July 14, 2020

Mr. John Spellman, P.E.
Project Manager
New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau C, 11th floor, 625 Broadway
Albany, NY 12233-7014

Re: 2019 Remedial Action Report
Former Dennison Monarch Systems Site - Operable Unit 01
New Windsor, New York
NYSDEC Site No. 336090

Dear Mr. Spellman,

On behalf of Avery Dennison Corporation, please find enclosed the *2019 Remedial Action Report* for the Operable Unit 01 (OU01) Remedial Action at the Former Dennison/Monarch Systems Facility in New Windsor, New York (NYSDEC Site No. 336090). This report presents information related to the performance of the OU01 Remedial Action as well as data collected during the spring 2019 and fall 2019 semi-annual monitoring events performed in OU01 and OU02.

The OU01 Remedial Action is performing as designed, achieving successful groundwater containment within the installed Waterloo Barrier® footprint and meeting the requirements for the discharge of treated groundwater.

If you have any questions regarding the information presented in this transmittal, please do not hesitate to contact Mr. Paul Gallagher of ADC at 440-534-4734.

Sincerely,

George Lester, PE (NY)
Senior Project Engineer

CC: Paul Gallagher, Avery Dennison Corporation
Glen Kirkpatrick, VHB

Enclosures: 2019 Remedial Action Report

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2019 REMEDIAL ACTION REPORT
FORMER DENNISON/MONARCH SYSTEMS SITE
OPERABLE UNIT 01

Former Dennison/Monarch Systems Site – OU01
15-21 Ruscitti Road
New Windsor, New York 12553

NYSDEC Site No. 336090

Prepared for:

Avery Dennison Corporation
8080 Norton Parkway
Mentor, Ohio 44060

VHB Project 58300.00

July 2020

Prepared by:

VHB Engineering, Survey, Landscape Architecture and Geology, P.C.
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New York, NY 110119
212.857.7350



Certification Statement

I, George Lester, certify that I am a New York State registered professional engineer and that for each institutional or engineering control identified in this report, I certify that all of the following statements are true:

- The inspection of the site to confirm the effectiveness of the engineering controls required by the OU01 RA was performed under my direction.
- The engineering controls employed at this site are:
  - in-place;
  - performing as designed; and
  - nothing has occurred that would impair the ability of the controls to protect the public health and environment.
- Access to the site continues to be available to evaluate and maintain the engineering controls and continues to be available to NYSDEC to evaluate the remedy.
- Nothing has occurred that would constitute a violation or failure to comply with the Draft Site Management Plan (SMP) for the engineering controls.
- This report and all attachments were prepared under the direction of, and reviewed by, me.
- To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with generally accepted engineering practices.
- The information presented in this report is accurate and complete.



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1.0 INTRODUCTION

This report is submitted by VHB Engineering, Survey, Landscape Architecture and Geology, P.C. (VHB) on behalf of Avery Dennison Corporation (ADC) and presents information related to the performance of the Operable Unit 1 Remedial Action (OU01 RA) at the Former Dennison/Monarch Systems Site (NYSDEC Site No. 336090) during the 2019 calendar year (the reporting period). The OU01 RA operates as described in the OU01 Site Management Plan (OU01 SMP; JCO, 2018a) submitted to New York State Department of Environmental Conservation (NYSDEC) on November 20, 2018.[1]

OU01 is located at 15-21 Ruscitti Road in New Windsor, New York (see **Figure 1-1**). The OU01 boundary is contiguous with the 15-21 Ruscitti Road property boundary as shown on **Figure 1-2**. The September 27, 2018 Order on Consent between ADC and NYSDEC (the Order) and the March 2014 OU01 Decision Document (DD; NYSDEC, 2014) defines Operable Unit 2 (OU02) as the downgradient and off-Property (i.e., outside of OU01) portion of the Facility groundwater plume (Facility Plume) resulting from the Constituents of Concern (COCs) source area within OU01. The NYSDEC-issued DD lists three COCs to be addressed by the OU01 RA: 1,1,1-trichloroethane (TCA), trichloroethene (TCE), and 1,1-dichloroethane (1,1-DCA), which is a breakdown product of TCA.

This 2019 Remedial Action Report (RAR) is submitted as an interim review and certification of institutional and engineering controls; this interim review and certification is in place of the Periodic Review Report (PRR) described in the OU01 SMP. A PRR will be submitted to NYSDEC on an annual basis after NYSDEC issues a Certificate of Completion for both the OU01 RA and OU02 RA.[2]

As presented herein, the OU01 RA is performing as designed, achieving successful groundwater containment within the Waterloo Barrier® footprint and meeting the requirements for the discharge of treated groundwater. As a result of ongoing natural attenuation and the effective source isolation by the OU01 RA, attenuation of primary COC in groundwater has been observed in the Facility Plume.

[1] NYSDEC provided a letter on April 15, 2019 stating that approval of the November 20, 2018 OU01 SMP will follow recording of the Environmental Easement. The Environmental Easement package was executed by ADC and NYSDEC on July 17, 2019, was filed with the Orange County Clerk's Office on August 8, 2019, and was provided to the New Windsor Town Clerk on August 28, 2019; formal approval from NYSDEC has not yet been provided.

[2] An Alternatives Analysis Report for OU02 was provided to NYSDEC on July 5, 2019 and is presently under review.

2.0 SUMMARY OF OU01 REMEDIAL ACTION

2.1 Engineering Controls

The OU01 SMP (JCO, 2018a) outlines the engineering controls for the OU01 RA. The engineering controls include the Waterloo Barrier® containment cell, the low permeability cap system, and the groundwater extraction and treatment system (the System). Details of the engineering controls are outlined in the Operation, Maintenance and Monitoring Plan (OMMP; JCO, 2018b) provided to NYSDEC as a subdocument of the OU01 SMP on November 20, 2018.

The OU01 RA is designed to achieve and maintain inward hydraulic gradients across a vertical Waterloo Barrier® containment wall installed through alluvium into low permeability till, hydraulically containing the source of the Facility Plume, as defined in the NYSDEC-approved AAR/RAWP (JCO, 2013) and Remedial Design Report (RDR; JCO, 2015). A low permeability cap and drainage system minimizes infiltration of precipitation into the containment cell, further enhancing remedy performance. The OU01 RA Construction Completion Report (CCR; JCO, 2017) was provided to NYSDEC in June 2017 and approved by NYSDEC on November 28, 2017; it provides additional and detailed information regarding construction of the OU01 RA, its operating configuration, and its implementation schedule.[1]

Figure 1-2 shows site features relevant to the OU01 RA. To achieve and maintain the inward hydraulic gradients along the perimeter of the containment cell, the System is utilized to continuously extract groundwater from within the containment cell and thus depress the water table. The current Process and Instrumentation Diagram (P&ID) of the System is provided as **Appendix A**. A general description of the System is provided below, and additional detail is provided in the OMMP.

As shown in **Figure 1-2** and the P&ID in **Appendix A**, the System consists of four groundwater extraction wells (EW-1 to EW-4) located within a low-permeability Waterloo Barrier® containment cell. Pneumatic submersible pumps installed in each groundwater extraction well deliver groundwater to the System influent equalization (EQ) tank. The water is pumped from the EQ tank to the air stripper by a transfer pump. Within the air stripper, process water cascades downward as air is forced upward by the air stripper blower through perforated trays, causing volatile organic compounds (VOCs) dissolved in the extracted groundwater to volatilize into the air stream. Treated water from the air stripper is gravity-fed through a discharge pipe to a small perennial stream located on-property per the State Pollutant Discharge Elimination System (SPDES) permit equivalent (the Permit) originally issued by NYSDEC on January 20, 2015 and reissued by NYSDEC on October 1, 2019.[2]

The System includes an anti-scalant storage tank and metering pump used to dose the extracted groundwater with anti-scalant (Redux 390) to minimize scaling (suspected calcium carbonate) within the air stripper. The anti-scalant is injected downstream of the transfer pump, and an in-line static mixer is located downstream of the anti-scalant injection point. A Water Treatment Chemical (WTC) Notification Form for use of the anti-scalant was approved by NYSDEC on September 26, 2016.

[1] The System operated in a startup and shakedown phase from December 3, 2015 through January 13, 2016; and, after verification of successful performance, the System was placed into full-time operation on January 14, 2016. Construction of the low permeability cap was completed in November 2016.

[2] The SPDES permit equivalent approval was provided by NYSDEC to ADC in letters dated January 20, 2015 and October 1, 2019.

Operation of the System is automated by a Programmable Logic Controller (PLC) and Human Machine Interface (HMI). The System can be monitored and controlled remotely through an internet data connection to the HMI. The PLC monitors and stores System operational data that is regularly downloaded and stored in an electronic database. Key operational parameters are routinely analyzed to confirm the System is operating properly.

2.2 Institutional Controls

An IC in the form of the Environmental Easement[1] provides the administrative requirements to monitor and maintain the EC on the OU01 property, prevent potential future exposure to remaining contamination, and limit the use of OU01 to the types specified in the OU01 Decision Document (OU01 DD; NYSDEC, 2014). The Environmental Easement includes the following restrictions:

- the property owner must complete and submit to the NYSDEC a periodic certification of institutional and engineering controls in accordance with 6 NYCRR Part 375-1.8 (h)(3);
- the property may only be developed for commercial or industrial use as defined by 6 NYCRR Part 375-1.8(g), to the extent allowed by local zoning laws;
- groundwater may not be used as a source of potable or process water without necessary water quality treatment as determined by the NYS Department of Health (DOH) or Orange County DOH; and
- the property owner must comply with the NYSDEC-approved OU01 SMP, including its Institutional and Engineering Control Plan and its OMMP.

[1] The Environmental Easement package executed on behalf of ADC was submitted to NYSDEC on June 27, 2019, executed by NYSDEC on July 17, 2019, was filed on the Orange County land records on August 8, 2019, and a copy was provided to the Town of New Windsor Clerk on August 28, 2019.

3.0 REMEDIAL ACTION MONITORING

Per the OMMP, the primary indicator of the effectiveness of the OU01 RA is maintenance of inward hydraulic gradients across the Waterloo Barrier®. Additionally, System monitoring is conducted to monitor its performance and compliance with the SPDES permit equivalent. Semi-annual sampling of groundwater, surface water, and sediment pore water was also completed in OU01 and OU02, per the OMMP.

3.1 Inward Hydraulic Gradients Across the Waterloo Barrier®

Inward hydraulic gradients across the Waterloo Barrier® are indicated by demonstrating a higher hydraulic head outside of the Waterloo Barrier® than inside of it, as measured by groundwater levels in an array of seven pairs of piezometers – see **Figure 1-2**. Each piezometer is equipped with a pressure transducer that transmits the groundwater level data to the PLC via radio frequency, which provides nearly continuous monitoring of the hydraulic gradients across the Waterloo Barrier®. Manual water level measurements and secondary pressure transducers are used to supplement the remote pressure transducer data when necessary.

Figure 3-1 presents summary plots of observed hydraulic head difference for each piezometer pair during 2019. These data demonstrate inward gradients were maintained at all piezometer pair locations for the entirety of 2019.[1]

3.2 GWE&T System Operation and Performance

3.2.1 System Operation and Optimization

The System operated continuously during the reporting period, 365 days, except for short-duration shutdowns related to System maintenance and brief power outages. The groundwater extraction well pumps operated 98.7 percent of the time, providing an average daily flow rate of 20.1 gallons per minute. **Table 3-2** presents a summary of the daily System operational uptime and average daily flow rates.

The System was inspected on a weekly basis by a local operator; routine maintenance was performed in conjunction with those inspections, the scope and schedule of which are outlined in the OMMP. In addition, the operator and/or the Engineer or his representatives performed System optimization activities and non-routine maintenance of System components, as required. The operator and/or the Engineer or his representatives also responded to any upset conditions. **Table 3-3** provides a log of System upset conditions, as well as the associated corrective response actions; it does not include limited downtime associated with routine monitoring and maintenance. Inspection forms for the weekly maintenance events and other operator logs are provided as **Appendix B**.

3.2.2 System Inspection and Performance

Per the OMMP, an annual inspection was conducted on June 3 and 4, 2019. Additionally, in 2019 the System was inspected monthly by the Engineer. The inspections found that the OU01 RA components are in good

[1] The piezometer pressure transducers that transmit data via radio frequency occasionally record data intermittently due to signal interference. Based on the complete 2019 piezometer dataset, it appears the subsurface hydraulic conditions in the vicinity of the Waterloo Barrier® have reached steady-state conditions with seasonal fluctuations due to regional groundwater elevations. Therefore, despite the occasional absence of data at some piezometer locations, it can be concluded that inward hydraulic gradients were maintained throughout 2019.

condition, fully functional, and continue to perform effectively and as designed. There are no recommendations for a change in OU01 RA management activities.

Each month, samples were collected from the influent of each of the extraction wells, from the combined System influent, and from the System effluent and sent to a laboratory for the analyses outlined in the November 20, 2018 Sampling and Analysis Plan (SAP; JCO, 2018c). Quarterly Discharge Monitoring Reports (QDMRs) that were previously submitted to NYSDEC provide the results and details of each sampling event, including laboratory analytical reports. **Table 3-4** provides a summary of analytical results for individual extraction well influent. **Table 3-5** provides a summary of analytical results for the combined System influent and the System effluent, as well as calculated VOCs removal efficiency. The concentrations of total VOCs in the combined System influent were approximately stable throughout the reporting period, and average air stripper efficiency for the reporting period was 99.92 percent. All permit equivalent requirements for the System effluent were adhered to in 2019, and an estimated 78 pounds of VOCs were removed by the air stripper during the reporting period – see **Table 3-6**. A total of approximately 318 pounds of VOCs have been removed since system startup.

3.3 Semi-Annual Monitoring of Groundwater, Surface Water, and Sediment Pore Water Monitoring

3.3.1 Site Constituents

Per the OMMP and SAP, semi-annual monitoring events were completed in OU01 and OU02 in May 2019 and November 2019.

Table 3-7 provides a summary of potentiometric data collected during the monitoring events. **Figures 3-2A and 3-2B** show mapped water-table potentiometric surfaces as observed on May 7, 2019 and November 12, 2019, respectively; and **Figures 3-3A and 3-3B** show mapped deep unconsolidated deposits potentiometric surfaces as observed on those same respective dates. **Figures 3-4A and 3-4B** show potentiometric surfaces for shallow bedrock groundwater for the same respective dates, and **Figures 3-5A and 3-5B** show them for deep bedrock groundwater.

Laboratory reports for analytical results and the associated data validation and Data Usability Summary Reports (DUSR) are provided in **Appendix C** and **Appendix D**. These data were previously submitted electronically to the NYSDEC Environmental Information Management System (EIMS) in EQuIS format. **Table 3-8** provides a summary of analytical results for groundwater samples; **Table 3-9** provides a summary of analytical results for surface water samples; and **Table 3-10** provides a summary of analytical results for streambed groundwater samples.

Figures 3-6A and 3-6B show, on a semi-logarithmic scale, concentrations of OU01 COCs[1] 1,1,1-trichloroethane (TCA), trichloroethene (TCE), and 1,1-dichloroethane (1,1-DCA), as well as concentrations of other constituents tetrachloroethene (PCE), 1,1-dichloroethene (1,1-DCE), and cis-1,2-dichloroethene (cis-1,2-DCE), in OU01 unconsolidated deposits groundwater since 2011. Concentrations of all constituents shown over that period appear stable or have decreased overall; in the case of MW-1S and MW-1D, concentrations have already decreased significantly since installation and completion of the Waterloo Barrier® - see **Figures 3-6A and 3-6B**. Note: the PCE, TCE, and TCA in J01-UC01 groundwater are attributable to South Plume #1, which is not associated with the Facility plume, as discussed in the NYSDEC-approved AAR/RAWP.

[1] As identified in the March 2014 Decision Document.

Figures 3-7A and 3-7B show, on a semi-logarithmic scale, concentrations of OU01 COCs TCA, TCE, and 1,1-DCA, as well as concentrations of other Site constituents PCE, 1,1-DCE, and cis-1,2-DCE, in OU02 unconsolidated deposits groundwater since 2011. The data indicate that the OU01 RA is performing as designed, effectively isolating the OU01 COCs from on-going contribution to OU02. At the OU02 shallow monitoring well that is most proximate to the OU01 RA: J13-UC02 – see **Figures 3-7A and 3-7B** – concentrations have significantly attenuated since the OU01 RA was completed. Overall, the effective source isolation and ongoing natural attenuation have resulted in stabilized or decreasing trend in OU02 groundwater concentrations, and an overall shrinkage of the Facility Plume.

4.0 EVALUATION OF INSTITUTIONAL AND ENGINEERING CONTROLS

4.1 Institutional Controls

The institutional control for the OU01 RA is the Environmental Easement. In its April 15, 2019 letter, NYSDEC stated that the November 20, 2018 OU01 SMP will be approved following the recording of the Environmental Easement. The Environmental Easement package was executed by ADC and NYSDEC on July 17, 2019, was filed with the Orange County Clerk's Office on August 8, 2019 and was provided to the New Windsor Town Clerk on August 28, 2019; formal approval from NYSDEC has not yet been provided for the OU01 SMP.

This notwithstanding, the institutional controls components presented in the OU01 SMP for the Environmental Easement have been adhered to during the reporting period. They are:

1. This RAR serves in place of the PRR as a certification of institutional and engineering controls.
2. The property has not been developed for any use other than commercial or industrial.
3. OU01 groundwater has not been used as a source of potable or process water.
4. The property owner has complied with the OU01 SMP, including the OMMP.

There has been no change in use of the OU01 property during the reporting period.

4.2 Engineering Controls

In addition to the annual inspection, the Engineer or his representatives were on Site at least once per month throughout the reporting period, and System data was monitored remotely even more frequently. As described in **Section 3.0** and based on the inspections results, the OU01 RA is performing as designed, achieving successful groundwater containment within the Waterloo Barrier® footprint, and meeting the requirements for the discharge of treated groundwater.

5.0 REFERENCES

JCO, 2013. Alternatives Analysis Report and Remedial Action Work Plan, Former Dennison/Monarch Systems Site, New Windsor, NY. The Johnson Company, Inc., May.

JCO, 2015. Remedial Design Report, Revised April 2015, Former Dennison/Monarch Systems Site, New Windsor, NY. The Johnson Company, Inc., April.

JCO, 2017. Construction Completion Report, Former Dennison/Monarch Systems Site, New Windsor, NY. The Johnson Company, Inc., June.

JCO, 2018a. Site Management Plan, Former Dennison/Monarch Systems Site, New Windsor, NY. The Johnson Company, Inc. November.

JCO, 2018b. Operation, Maintenance and Monitoring Plan, Former Dennison/Monarch Systems Site, New Windsor, NY. The Johnson Company, Inc. November.

JCO, 2018c. Sampling and Analysis Plan Former Dennison/Monarch Systems Site, New Windsor, NY. The Johnson Company, Inc. November.

NYSDEC, 2014. Decision Document, Dennison Monarch Systems Facility, Operable Unit Number 01: Remedial Program, Voluntary Cleanup Program, New Windsor, Orange County, Site No. V00135. New York State Department of Environmental Conservation, March.

TABLES

Table 3-1 - Hydraulic Head at Waterloo Barrier® Piezometer Pairs: 2019
2019 Remedial Action Report
NYSDEC Site No. 336090

	Piezometer Pairs																			
	J04			J05			J06			J07			J08			J09			J10		
	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)
Date	J04-PZ-IN	J04-PZ-OUT		J05-PZ-IN	J05-PZ-OUT		J06-PZ-IN	J06-UC01		J07-PZ-IN	J07-PZ-OUT		J08-PZ-IN	J08-UC01		J09-PZ-IN	J09-PZ-OUT		J10-PZ-IN	J10-PZ-OUT	
1/1/2019	139.55	142.33	2.78	139.99	141.57	1.57	143.73	151.30	7.58	143.70	150.69	6.99	143.60	150.08	6.48		146.84		143.15	148.46	5.32
1/2/2019	139.42	142.05	2.63	139.87	141.41	1.54	143.89	151.29	7.40	143.71	150.76	7.05	143.57	150.93	7.36		147.11		143.12	148.41	5.29
1/3/2019	139.43	141.99	2.56	139.87	141.37	1.50	143.94	151.29	7.36	143.76	150.81	7.05	143.62	150.58	6.96		147.12		143.17	148.39	5.23
1/4/2019	139.37	141.93	2.56	139.79	141.32	1.53	143.93	151.25	7.31	143.76	150.78	7.02	143.62	150.58	6.96		147.08		143.15	148.32	5.17
1/5/2019	139.43	142.23	2.80	139.84	141.49	1.65	143.83	151.38	7.55	143.78	150.82	7.04	143.65	150.34	6.70		147.08		143.19	148.47	5.28
1/6/2019	139.48	142.33	2.85	139.96	141.64	1.69	144.03	151.85	7.82	143.78	151.06	7.28	143.64	150.80	7.16		147.38		143.21	148.82	5.61
1/7/2019	139.42	142.11	2.69	139.85	141.49	1.64	143.98	151.70	7.72	143.78	151.14	7.35	143.63	151.43	7.80		147.27		143.20	148.69	5.50
1/8/2019	139.51	142.10	2.59	139.93	141.50	1.57	144.04	151.70	7.67	143.84	151.20	7.36	143.69	151.04	7.35		147.31		143.27	148.71	5.44
1/9/2019	139.70	142.27	2.57	140.11	141.58	1.47	143.99	151.71	7.73	143.88	151.24	7.36	143.73	150.61	6.88		147.36		143.29	148.75	5.45
1/10/2019	139.74	142.13	2.40	140.17	141.49	1.32	144.06	151.64	7.58	143.89	151.21	7.32	143.74	150.92	7.18		147.31		143.28	148.63	5.36
1/11/2019	139.61	142.01	2.41	140.07	141.40	1.34	144.02	151.53	7.51	143.86	151.11	7.25	143.71	151.20	7.49		147.22		143.22	148.51	5.29
1/12/2019	139.71	141.96	2.25	140.14	141.35	1.21	144.00	151.46	7.46	143.86	151.05	7.19	143.72	151.56	7.84		147.19		143.22	148.43	5.21
1/13/2019	139.80	141.95	2.15	140.22	141.34	1.11	144.03	151.44	7.40	143.89	151.03	7.14	143.75	151.44	7.69		147.19		143.25	148.41	5.15
1/14/2019	140.01	141.93	1.93	140.32	141.32	1.00	144.05	151.42	7.37	143.91	151.02	7.11	143.77	151.32	7.55		147.18		143.28	148.38	5.09
1/15/2019	140.16	141.92	1.75	140.34	141.30	0.96	144.06	151.38	7.32	143.93	150.98	7.06	143.79	151.08	7.29		147.17		143.31	148.34	5.03
1/16/2019	139.66	141.90	2.24	140.06	141.28	1.22	144.07	151.34	7.27	143.93	150.94	7.01	143.80	150.81	7.01		147.14		143.28	148.31	5.02
1/17/2019	139.48	141.85	2.37	139.87	141.23	1.36	144.01	151.26	7.25	143.87	150.86	6.99	143.75	151.10	7.35		147.07		143.20	148.22	5.02
1/18/2019	139.46	141.86	2.40	139.83	141.23	1.40	144.01	151.23	7.22	143.86	150.83	6.97	143.74	150.67	6.93		147.08		143.21	148.22	5.01
1/19/2019	139.40	141.83	2.43	139.74	141.20	1.46	143.96	151.17	7.21	143.82	150.77	6.95	143.69	150.83	7.13		147.03		143.16	148.16	5.00
1/20/2019	139.47	141.88	2.41	139.76	141.23	1.47	143.99	151.20	7.21	143.84	150.77	6.93	143.72				147.03		143.20	148.21	5.01
1/21/2019	139.33	141.80	2.47	139.59	141.15	1.56	143.87	151.06	7.19	143.74	150.64	6.90	143.61				146.92		143.07	148.06	4.99
1/22/2019	139.27	141.73	2.46	139.49	141.08	1.60	143.79	150.95	7.16	143.66	150.53	6.87	143.54				146.85		143.00	147.96	4.96
1/23/2019	139.33	141.75	2.42	139.51	141.10	1.59	143.81	150.93	7.12	143.67	150.49	6.82	143.55	150.20	6.66		146.86		143.04	147.98	4.94
1/24/2019	139.40	142.13	2.73	139.61	141.39	1.78	143.76	151.07	7.31	143.71	150.51	6.81	143.59				146.85		143.11	148.21	5.10
1/25/2019	139.39	142.28	2.90	139.74	141.57	1.83	143.88	151.49	7.61	143.70	150.78	7.08	143.54	150.49	6.95		147.22		143.11	148.59	5.48
1/26/2019	139.37	142.05	2.68	139.69	141.41	1.73	143.88	151.32	7.44	143.69	150.76	7.07	143.54	150.68	7.14		147.10		143.11	148.42	5.31
1/27/2019	139.41	141.99	2.58	139.68	141.36	1.68	143.90	151.25	7.35	143.71	150.73	7.02	143.57	150.54	6.97		147.06		143.14	148.36	5.22
1/28/2019	139.36	141.93	2.57	139.61	141.30	1.69	143.86	151.17	7.30	143.69	150.65	6.97	143.55	150.71	7.16		147.00		143.10	148.27	5.18
1/29/2019	139.37	141.90	2.52	139.58	141.26	1.68	143.85	151.11	7.26	143.68	150.60	6.92	143.54	150.60	7.06		146.96		143.09	148.22	5.12
1/30/2019	139.34	141.87	2.53	139.53	141.22	1.69	143.82	151.04	7.22	143.66	150.55	6.89	143.53	150.27	6.74		146.92		143.06	148.16	5.10
1/31/2019	139.27	141.80	2.54	139.45	141.15	1.70	143.74	150.94	7.20	143.60	150.43	6.84	143.46				146.83		142.98	148.04	5.07
2/1/2019	139.27	141.77	2.50	139.43	141.11	1.68	143.71	150.88	7.16	143.57			143.44				146.80		142.96	147.98	5.02
2/2/2019	139.29	141.75	2.47	139.42	141.10	1.68	143.71	150.83	7.12	143.56	150.35	6.78	143.44				146.78		142.97	147.95	4.99
2/3/2019	139.26	141.75	2.49	139.39	141.09	1.70	143.70	150.78	7.08	143.55	150.30	6.75	143.42				146.76		142.95	147.93	4.98
2/4/2019	139.25	141.86	2.61	139.41	141.13	1.72	143.68	150.74	7.06	143.53	150.25	6.73	143.41				146.74		142.94	147.93	5.00
2/5/2019	139.26	141.92	2.66	139.48	141.19	1.71	143.67	150.72	7.05	143.51	150.22	6.71	143.39	149.80	6.41		146.75		142.93	147.95	5.02
2/6/2019	139.43	141.85	2.42	139.72	141.15	1.43	143.63	150.66	7.03	143.49	150.16	6.67	143.36				146.71		142.91	147.89	4.98
2/7/2019	139.34	142.12	2.78	139.60	141.34	1.73	143.66	150.68	7.02	143.49	150.14	6.65	143.37				146.72		142.92	148.00	5.08
2/8/2019	139.41	142.17	2.77	139.67	141.39	1.72	143.62	150.72	7.10	143.46	150.16	6.70	143.38	149.49	6.11		146.83		142.95	148.07	5.12
2/9/2019	139.34	141.95	2.61	139.58	141.24	1.66	143.60	150.66	7.06	143.45	150.11	6.66	143.31	150.60	7.29		146.75		142.87	147.97	5.10
2/10/2019	139.33	141.83	2.49	139.53	141.17	1.63	143.61	150.65	7.04	143.45	150.10	6.65	143.32	150.68	7.36		146.71		142.90	147.94	5.04
2/11/2019	139.31	141.79	2.48	139.50	141.14	1.64	143.63	150.64	7.01	143.46	150.11	6.65	143.33				146.71		142.91	147.92	5.01
2/12/2019	139.27	141.75	2.48	139.43	141.09	1.66	143.60	150.61	7.01	143.44	150.08	6.64	143.30	150.13	6.83		146.68		142.89	147.86	4.97
2/13/2019	139.32	141.77	2.45	139.45	141.11	1.66	143.66	150.64	6.99	143.48	150.11	6.63	143.35	149.77	6.43		146.70		142.93	147.89	4.96
2/14/2019	139.21	141.75	2.54	139.34	141.06	1.72	143.58	150.55	6.98	143.41	150.03	6.62	143.28	149.95	6.67		146.63		142.85	147.80	4.95
2/15/2019	139.25	141.85	2.60	139.35	141.12	1.77	143.59	150.55	6.96	143.42	150.02	6.60	143.29	149.70	6.41		146.66		142.88	147.85	4.97
2/16/2019	139.27	142.03	2.76	139.40	141.25	1.86	143.55	150.53	6.97	143.39	149.99	6.61	143.25				146.69		142.84	147.86	5.02
2/17/2019	139.31	141.88	2.57	139.40	141.16	1.76	143.53	150.51	6.98	143.36	149.96	6.60	143.23	149.70	6.47		146.63		142.82	147.82	5.00
2/18/2019	139.30	141.83	2.52	139.39	141.13	1.74	143.54	150.51	6.96	143.37	149.96	6.59	143.23	149.62	6.39		146.63		142.84	147.83	4.99
2/19/2019	139.20	141.78	2.58	139.32	141.08	1.76	143.47	150.43	6.95	143.31	149.89	6.58	143.17	150.12	6.94		146.55		142.76	147.73	4.97
2/20/2019	139.21	141.69	2.48	139.31	141.03	1.73	143.47	150.41	6.94	143.31	149.87	6.56	143.17	150.14	6.97		146.54		142.77	147.71	4.94
2/21/2019	139.27	141.91	2.64	139.39	141.16	1.77	143.52	150.45	6.93	143.35	149.90	6.55	143.21	149.49	6.28		146.61		142.83	147.82	4.99
2/22/2019	139.23	141.91	2.68	139.45	141.18	1.73	143.46	150.45	6.99	143.29	149.87	6.58	143.15	149.78	6.63		146.60		142.77	147.82	5.05
2/23/2019	139.23	141.75	2.52	139.44	141.10	1.66	143.46	150.42	6.96	143.29	149.86	6.57	143.15	149.83	6.68		146.57		142.77	147.77	5.00
2/24/2019	139.35	141.95	2.61	139.54	141.23	1.69	143.49	150.51	7.02	143.35	149.94	6.58	143.23	149.47	6.24		146.64		142.88	147.90	5.02

Table 3-1 - Hydraulic Head at Waterloo Barrier® Piezometer Pairs: 2019
2019 Remedial Action Report
NYSDEC Site No. 336090

	Piezometer Pairs																			
	J04			J05			J06			J07			J08			J09			J10		
	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)
Date	J04-PZ-IN	J04-PZ-OUT		J05-PZ-IN	J05-PZ-OUT		J06-PZ-IN	J06-UC01		J07-PZ-IN	J07-PZ-OUT		J08-PZ-IN	J08-UC01		J09-PZ-IN	J09-PZ-OUT		J10-PZ-IN	J10-PZ-OUT	
2/25/2019	139.30	141.92	2.62	139.53	141.22	1.69	143.52	150.54	7.02	143.34	149.95	6.62	143.19	149.36	6.17		146.69		142.82	147.89	5.07
2/26/2019	139.19	141.74	2.55	139.41	141.09	1.68	143.45	150.43	6.99	143.27	149.87	6.60	143.13				146.59		142.75	147.77	5.02
2/27/2019	139.19	141.69	2.50	139.41	141.05	1.64	143.45	150.42	6.97	143.28	149.86	6.58	143.13				146.57		142.76	147.75	4.99
2/28/2019	139.19	141.67	2.47	139.40	141.03	1.63	143.47	150.42	6.94	143.29	149.88	6.58	143.15				146.57		142.77	147.73	4.95
3/1/2019	139.14	141.63	2.49	139.33	140.99	1.66	143.43	150.36	6.93	143.26	149.83	6.57	143.12				146.52		142.73	147.66	4.93
3/2/2019	139.17	141.68	2.52	139.31	141.01	1.70	143.45	150.36	6.90	143.27	149.82	6.55	143.13				146.54		142.76	147.68	4.92
3/3/2019	139.21	141.71	2.50	139.69	141.02	1.34	143.44	150.34	6.90	143.26	149.80	6.54	143.12				146.53		142.74	147.66	4.92
3/4/2019	139.50	141.78	2.29	140.35	141.07	0.73	143.48	150.35	6.87	143.33	149.81	6.47	143.19				146.56		142.80	147.69	4.89
3/5/2019	139.49	141.82	2.32	139.83	141.08	1.26	143.48	150.33	6.86	143.36	149.78	6.42	143.23	149.29	6.06		146.53		142.79	147.67	4.89
3/6/2019	139.37	141.68	2.31	139.69	141.02	1.33	143.48	150.29	6.82	143.35	149.76	6.41	143.23	149.58	6.36		146.50		142.77	147.63	4.86
3/7/2019	139.30	141.60	2.30	139.62	140.96	1.34	143.45	150.25	6.81	143.32	149.73	6.41	143.19	149.77	6.58		146.46		142.74	147.58	4.84
3/8/2019	139.27	141.57	2.30	139.58	140.93	1.35	143.43	150.23	6.80	143.30	149.70	6.41	143.17	149.71	6.54		146.44		142.73	147.55	4.82
3/9/2019	139.25	141.56	2.31	139.56	140.92	1.36	143.43	150.20	6.77	143.29	149.66	6.38	143.16	149.33	6.17		146.42		142.73	147.53	4.80
3/10/2019	139.28	141.64	2.36	139.58	140.95	1.37	143.42	150.19	6.77	143.29	149.65	6.37	143.16	149.41	6.24		146.33		142.74	147.55	4.81
3/11/2019	139.31	141.84	2.53	139.65	141.07	1.42	143.43	150.18	6.75	143.28	149.63	6.35	143.16	149.09	5.93		146.45		142.73	147.57	4.84
3/12/2019	139.30	141.70	2.40	139.62	141.00	1.38	143.40	150.15	6.75	143.25	149.59	6.34	143.12	149.32	6.20		146.40		142.70	147.52	4.82
3/13/2019	139.27	141.58	2.31	139.58	140.94	1.36	143.38	150.11	6.73	143.24	149.55	6.32	143.11	149.42	6.31		146.37		142.69	147.48	4.79
3/14/2019	139.27	141.56	2.28	139.56	140.92	1.36	143.39	150.10	6.70	143.24	149.53	6.29	143.12	149.09	5.97		146.36		142.71	147.47	4.76
3/15/2019	139.31	141.58	2.27	139.59	140.94	1.35	143.43	150.10	6.66	143.26	149.52	6.26	143.15	148.64	5.49		146.37		142.74	147.49	4.75
3/16/2019	139.26	141.60	2.34	139.53	140.94	1.40	143.40	150.07	6.67	143.22	149.48	6.25	143.10	148.81	5.70		146.34		142.68	147.46	4.78
3/17/2019	139.26	141.52	2.27	139.49	140.87	1.38	143.34	150.03	6.69	143.20	149.44	6.24	143.07	149.11	6.03		146.29		142.66	147.40	4.75
3/18/2019	139.19	141.49	2.30	139.46	140.84	1.38	143.32	149.99	6.67	143.18	149.40	6.22	143.05	149.11	6.06		146.25		142.63	147.37	4.73
3/19/2019	139.16	141.46	2.29	139.44	140.80	1.37	143.31	149.95	6.64	143.16	149.36	6.20	143.04	149.15	6.11		146.21		142.62	147.33	4.71
3/20/2019	139.16	141.44	2.28	139.43	140.79	1.36	143.30	149.91	6.61	143.15	149.32	6.17	143.03	148.99	5.96		146.20		142.61	147.30	4.69
3/21/2019	139.19	141.46	2.27	139.45	140.80	1.35	143.27	149.89	6.63	143.16	149.30	6.14	143.04	148.78	5.74		146.19		142.63	147.30	4.67
3/22/2019	139.32	141.85	2.53	139.58	141.03	1.45	143.29	149.97	6.68	143.18	149.33	6.15	143.08	148.20	5.12				142.69	147.48	4.78
3/23/2019	139.31	141.67	2.36	139.54	140.95	1.42	143.29	149.95	6.66	143.15	149.30	6.16	143.01	148.56	5.54		146.26		142.62	147.41	4.79
3/24/2019	139.22	141.52	2.30	139.45	140.87	1.41	143.27	149.88	6.61	143.13	149.26	6.14	143.00	148.72	5.73		146.18		142.60	147.33	4.72
3/25/2019	139.19	141.47	2.28	139.43	140.83	1.40	143.27	149.86	6.59	143.12	149.24	6.12	142.99	148.58	5.59		146.16		142.60	147.30	4.70
3/26/2019	139.14	141.42	2.29	139.38	140.78	1.40	143.24	149.82	6.58	143.09	149.20	6.11	142.96	148.78	5.81		146.11		142.56	147.25	4.69
3/27/2019	139.11	141.39	2.28	139.35	140.74	1.39	143.22	149.78	6.56	143.07	149.15	6.08	142.94	148.91	5.97		146.07		142.54	147.20	4.66
3/28/2019	139.13	141.39	2.26	139.36	140.74	1.38	143.22	149.76	6.54	143.07	149.13	6.06	142.94	148.73	5.79		146.07		142.55	147.19	4.64
3/29/2019	139.14	141.39	2.24	139.37	140.73	1.37	143.22	149.74	6.52	143.07	149.11	6.04	142.95	148.40	5.45		146.06		142.56	147.18	4.62
3/30/2019	139.12	141.37	2.25	139.33	140.72	1.38	143.22	149.72	6.50	143.06	149.08	6.02	142.94	148.18	5.24		146.04		142.55	147.16	4.62
3/31/2019	139.13	141.37	2.24	139.33	140.71	1.38	143.21	149.70	6.49	143.06	149.06	6.00	142.94	148.02	5.08		146.02		142.55	147.15	4.60
4/1/2019	139.06	141.31	2.26	139.31	140.65	1.34	143.16	149.65	6.49	143.01	149.00	5.99	142.88	148.43	5.55		145.95		142.47	147.06	4.59
4/2/2019	139.03	141.29	2.26	139.37	140.63	1.25	143.14	149.60	6.47	143.00	148.95	5.96	142.86	148.53	5.67		145.92		142.47	147.02	4.56
4/3/2019	139.04	141.30	2.26	139.38	140.64	1.26	143.16	149.59	6.43	143.00	148.93	5.93	142.88	148.01	5.13		145.90		142.49	147.03	4.54
4/4/2019	138.96	141.25	2.28	139.26	140.59	1.33	143.11	149.53	6.42	142.96	148.87	5.91	142.84	148.31	5.47		145.85		142.42	146.95	4.53
4/5/2019	138.97	141.24	2.27	139.33	140.57	1.24	143.08	149.50	6.42	142.94	148.83	5.89	142.82	148.51	5.70		145.80		142.41	146.92	4.51
4/6/2019	139.18	141.35	2.16	139.98	140.64	0.66	143.02	149.50	6.47	142.95	148.81	5.86	142.85	148.08	5.22		145.80		142.45	146.96	4.51
4/7/2019	139.28	141.26	1.98	140.11	140.60	0.49	143.11	149.47	6.36	143.02	148.78	5.77	142.90	148.01	5.10		145.81		142.46	146.92	4.46
4/8/2019	139.39	141.30	1.91	140.17	140.62	0.45	143.16	149.48	6.32	143.06	148.77	5.71	142.98	147.81	4.83		145.82		142.52	146.95	4.42
4/9/2019	139.22	141.26	2.04	139.28	140.58	1.30	143.20	149.46	6.26	143.09	148.75	5.65	143.00	148.38	5.38		145.79		142.52	146.92	4.40
4/10/2019	139.02	141.21	2.19	139.02	140.54	1.51	143.13	149.42	6.28	143.01	148.70	5.69	142.91	148.39	5.48		145.74		142.44	146.86	4.42
4/11/2019	138.90	141.16	2.26	138.86	140.49	1.63	143.06	149.36	6.30	142.92	148.64	5.72	142.81	148.66	5.85		145.66		142.37	146.80	4.42
4/12/2019	138.86	141.16	2.30	138.77	140.48	1.71	143.04	149.34	6.29	142.90	148.60	5.71	142.78	148.50	5.72		145.63		142.36	146.78	4.42
4/13/2019	138.91	141.70	2.78	138.85	140.82	1.97	143.04	149.48	6.44	142.84	148.63	5.79	142.76	148.17	5.41		145.96		142.39	147.06	4.67
4/14/2019	139.01	141.50	2.49	139.04	140.80	1.76	143.05	149.66	6.61	142.87	148.78	5.91	142.75	148.39	5.64		145.92		142.42	147.19	4.77
4/15/2019	139.01	141.69	2.68	139.19	140.89	1.70	143.15	149.73	6.58	142.86	148.84	5.98	142.75	148.13	5.39		145.95		142.44	147.31	4.87
4/16/2019	138.95	141.53	2.58	139.12	140.81	1.69	143.00	149.75	6.74	142.82	148.86	6.03	142.69	148.48	5.79		145.92		142.38	147.32	4.94
4/17/2019	138.86	141.37	2.51	139.05	140.73	1.67	143.00	149.72	6.72	142.81	148.87	6.06	142.68	148.50	5.82		145.87		142.36	147.25	4.89
4/18/2019	138.83	141.33	2.49	138.99	140.68	1.69	143.00	149.70	6.70	142.80	148.86	6.06	142.67	148.59	5.92		145.85		142.36	147.22	4.86
4/19/2019	138.82	141.31	2.49	138.94	140.66	1.72	143.00	149.70	6.70	142.80	148.88	6.08	142.67	148.18	5.50		145.85		142.37	147.21	4.84
4/20/2019	138.79	141.39	2.59	138.86	140.68	1.82	142.98	149.70	6.71	142.78	148.86	6.08	142.66	148.28	5.62		145.86		142.35	147.22	4.87

Table 3-1 - Hydraulic Head at Waterloo Barrier® Piezometer Pairs: 2019
2019 Remedial Action Report
NYSDEC Site No. 336090

	Piezometer Pairs																			
	J04			J05			J06			J07			J08			J09			J10		
	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)
Date	J04-PZ-IN	J04-PZ-OUT		J05-PZ-IN	J05-PZ-OUT		J06-PZ-IN	J06-UC01		J07-PZ-IN	J07-PZ-OUT		J08-PZ-IN	J08-UC01		J09-PZ-IN	J09-PZ-OUT		J10-PZ-IN	J10-PZ-OUT	
4/21/2019	138.76	141.33	2.57	138.80	140.65	1.85	142.96	149.71	6.75	142.76	148.86	6.10	142.63	148.48	5.85		145.84		142.31	147.19	4.87
4/22/2019	138.75	141.28	2.53	138.75	140.61	1.87	142.95	149.69	6.74	142.75	148.86	6.11	142.62	148.50	5.88		145.82		142.31	147.16	4.85
4/23/2019	138.75	141.27	2.52	138.71	140.60	1.89	142.95	149.69	6.74	142.75	148.86	6.12	142.62	148.25	5.63		145.83		142.31	147.15	4.84
4/24/2019	138.74	141.25	2.51	138.67	140.58	1.91	142.94	149.68	6.74	142.74	148.86	6.13	142.61	148.22	5.61		145.80		142.30	147.14	4.84
4/25/2019	138.70	141.21	2.51	138.61	140.54	1.93	142.91	149.64	6.73	142.72	148.82	6.11	142.59	148.29	5.70		145.77		142.27	147.09	4.82
4/26/2019	138.73	141.29	2.56	138.62	140.59	1.98	142.92	149.67	6.74	142.73	148.84	6.11	142.60	148.25	5.65		145.77		142.29	147.13	4.83
4/27/2019	138.72	141.59	2.86	138.62	140.75	2.14	143.08	149.75	6.66	142.72	148.88	6.16	142.58	148.15	5.57		145.95		142.28	147.27	4.99
4/28/2019	138.69	141.39	2.70	138.58	140.68	2.10	142.87	149.75	6.87	142.69	148.90	6.21	142.55	148.63	6.08		145.85		142.24	147.22	4.98
4/29/2019	138.65	141.29	2.63	138.52	140.62	2.10	142.86	149.70	6.84	142.67	148.89	6.21	142.53	148.57	6.04		145.85		142.22	147.15	4.93
4/30/2019	138.65	141.28	2.63	138.51	140.61	2.10	142.87	149.71	6.84	142.64	148.90	6.26	142.54	148.52	5.98		145.84		142.24	147.16	4.92
5/1/2019	138.63	141.24	2.61	138.48	140.57	2.09	142.85	149.68	6.83	142.66	148.88	6.22	142.52	148.64	6.12		145.83		142.21	147.12	4.90
5/2/2019	138.65	141.24	2.59	138.49	140.56	2.07	142.86	149.68	6.82	142.67	148.89	6.22	142.53	148.32	5.79		145.82		142.24	147.12	4.89
5/3/2019	138.62	141.23	2.60	138.45	140.55	2.09	142.84	149.66	6.81	142.65	148.87	6.21	142.52	148.53	6.01		145.80		142.21	147.09	4.88
5/4/2019	138.66	141.43	2.77	138.51	140.66	2.15	142.84	149.70	6.86	142.64	148.89	6.25	142.53	148.22	5.69		145.86		142.23	147.17	4.94
5/5/2019	138.69	141.56	2.87	138.58	140.77	2.19	142.90	149.74	6.84	142.64	148.92	6.28	142.53	148.38	5.85		145.94		142.23	147.25	5.02
5/6/2019	138.88	141.73	2.85	138.83	140.83	2.00	143.08	149.82	6.74	142.67	148.97	6.30	142.54	148.47	5.93		146.02		142.27	147.41	5.14
5/7/2019	138.91	141.45	2.54	138.93	140.71	1.78	142.90	149.84	6.94	142.72	149.02	6.30	142.59	148.56	5.97	140.87	146.03	5.16	142.29	147.35	5.06
5/8/2019	138.86	141.36	2.50	138.86	140.68	1.82	142.92	149.83	6.91	142.78	149.04	6.26	142.65	148.57	5.92		145.96		142.30	147.31	5.01
5/9/2019	138.81	141.31	2.50	138.82	140.64	1.82	142.93	149.82	6.89	142.79	149.04	6.25	142.66	148.65	5.99		145.94		142.29	147.27	4.98
5/10/2019	138.83	141.31	2.48	138.84	140.63	1.79	142.96	149.84	6.87	142.82	149.06	6.24	142.70	148.51	5.81		145.95		142.33	147.28	4.95
5/11/2019	138.80	141.33	2.53	138.82	140.64	1.82	143.15	149.83	6.68	142.83	149.06	6.23	142.71	148.43	5.72		146.58		142.32	147.27	4.95
5/12/2019	138.80	141.54	2.74	138.80	140.69	1.89	143.09	149.86	6.77	142.83	149.07	6.24	142.71	148.66	5.94		145.94		142.32	147.34	5.01
5/13/2019	138.95	141.81	2.85	138.99	141.03	2.03	143.13	150.03	6.90	142.87	149.16	6.29	142.73	148.70	5.97				142.38	147.59	5.21
5/14/2019	139.10	141.85	2.75	139.18	141.03	1.86	143.16	150.15	6.99	142.90	149.28	6.38	142.77	148.71	5.94				142.45	147.82	5.38
5/15/2019	139.14	141.73	2.59	139.25	140.37	1.11	143.19	150.20	7.01	142.91	149.37	6.46	142.81	148.62	5.80		146.29		142.49	147.85	5.36
5/16/2019	139.08	141.57	2.48	139.22			143.14	150.23	7.09	142.99	149.43	6.45	142.85	148.69	5.84		146.27		142.51	147.71	5.21
5/17/2019	139.06	141.51	2.46	139.20			143.17	150.24	7.07	143.02	149.47	6.46	142.89	148.77	5.89				142.52	147.70	5.17
5/18/2019	139.00	141.46	2.47	139.15			143.17	150.22	7.05	143.03	149.48	6.45	142.90	148.72	5.81				142.51	147.64	5.14
5/19/2019	139.19	141.45	2.25	139.48			143.19	150.21	7.02	143.05	149.49	6.44	142.92	148.75	5.83				142.53	147.63	5.10
5/20/2019	139.12	141.55	2.43	139.20			143.33	150.25	6.91	143.04	149.52	6.47	142.97	148.79	5.83				142.57	147.69	5.12
5/21/2019	139.04	141.48	2.44	139.16	140.74	1.58	143.22	150.24	7.01	143.09	149.53	6.43	142.97	149.04	6.07				142.54	147.65	5.10
5/22/2019	139.00	141.42	2.41	139.15			143.21	150.20	6.99	143.08	149.51	6.43	142.97	148.89	5.92				142.52	147.58	5.07
5/23/2019	139.05	141.43	2.38	139.20			143.23	150.20	6.97	143.11	149.52	6.41	142.99	148.83	5.84				142.55	147.60	5.05
5/24/2019	139.06	141.41	2.35	139.21			143.25	150.20	6.96	143.11	149.53	6.41	143.01	148.70	5.69				142.56	147.59	5.03
5/25/2019	139.02	141.37	2.35	139.15			143.22	150.15	6.92	143.11	149.48	6.37	142.99	148.90	5.90				142.53	147.52	5.00
5/26/2019	139.18	141.39	2.21	139.25			143.25	150.15	6.90	143.13	149.48	6.35	143.02	148.74	5.72				142.57	147.55	4.98
5/27/2019	139.34	141.37	2.03	139.38			143.25	150.12	6.87	143.14	149.45	6.31	143.03	149.25	6.22				142.58	147.51	4.93
5/28/2019	139.42	141.40	1.98	139.44			143.27	150.11	6.84		149.42		143.05	149.19	6.14				142.60	147.51	4.91
5/29/2019	139.48	141.45	1.97	139.49			143.28	150.11	6.83		149.42		143.06	149.07	6.01				142.61	147.52	4.91
5/30/2019	139.53	141.60	2.07	139.53	140.77	1.24	143.38	150.21	6.83		149.46		143.08	149.20	6.12				142.63	147.64	5.02
5/31/2019	139.32	141.47	2.16	139.32			143.33	150.19	6.86		149.49		143.10	148.90	5.81				142.63	147.61	4.98
6/1/2019	139.18	141.41	2.23	139.22			143.29	150.12	6.83		149.43		143.07	149.13	6.06				142.60	147.54	4.94
6/2/2019	139.13	141.41	2.28	139.18			143.28	150.08	6.80		149.40		143.07	148.91	5.83				142.59	147.52	4.93
6/3/2019	139.07	141.35	2.28	139.14			143.24	150.02	6.79		149.34		143.03	149.00	5.97				142.54	147.45	4.91
6/4/2019	139.05	141.31	2.27	139.11	140.44	1.33	143.19	149.97	6.77		149.28		142.99	148.74	5.75				142.51	147.39	4.89
6/5/2019	139.06	141.31	2.26	139.11			143.20	149.94	6.74		149.25		143.00	148.90	5.91				142.52	147.39	4.87
6/6/2019	139.03	141.29	2.26	139.10			143.18	149.90	6.71		149.21		142.98	148.66	5.69				142.50	147.35	4.86
6/7/2019	138.99	141.25	2.26	139.05			143.14	149.83	6.69		149.14		142.93	148.67	5.74				142.45	147.29	4.84
6/8/2019	138.95	141.22	2.27	138.99			143.10	149.76	6.67		149.05		142.89	148.61	5.73				142.41	147.23	4.82
6/9/2019	138.91	141.19	2.27	138.93			143.06	149.70	6.64		148.98		142.85	148.57	5.71				142.38	147.17	4.79
6/10/2019	138.92	141.21	2.29	138.91			143.05	149.65	6.60		148.95		142.84	148.43	5.59				142.38	147.15	4.77
6/11/2019	138.90	141.35	2.45	138.90			143.02	149.64	6.62		148.90		142.83	147.99	5.16				142.37	147.19	4.82
6/12/2019	138.86	141.21	2.35	138.85			142.99	149.60	6.61		148.87		142.77	148.43	5.66				142.32	147.11	4.78
6/13/2019	138.87	141.30	2.43	138.85	140.42	1.57	142.94	149.59	6.65		148.81		142.77	148.47	5.70				142.34	147.13	4.80
6/14/2019	138.84	141.26	2.42	138.83			142.96	149.59	6.63		148.82		142.75	148.40	5.64				142.30	147.13	4.82

Table 3-1 - Hydraulic Head at Waterloo Barrier® Piezometer Pairs: 2019
2019 Remedial Action Report
NYSDEC Site No. 336090

	Piezometer Pairs																			
	J04			J05			J06			J07			J08			J09			J10		
	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)
Date	J04-PZ-IN	J04-PZ-OUT		J05-PZ-IN	J05-PZ-OUT		J06-PZ-IN	J06-UC01		J07-PZ-IN	J07-PZ-OUT		J08-PZ-IN	J08-UC01		J09-PZ-IN	J09-PZ-OUT		J10-PZ-IN	J10-PZ-OUT	
6/15/2019	138.82	141.18	2.36	138.80			142.93	149.52	6.59		148.77			148.51					142.27	147.05	4.78
6/16/2019	138.82	141.17	2.36	138.79			142.92	149.48	6.56		148.73			148.40					142.27	147.02	4.76
6/17/2019	138.78	141.14	2.36	138.76			142.89	149.42	6.52		148.65		142.66	148.33	5.67				142.23	146.97	4.73
6/18/2019	138.78	141.36	2.58	138.75			142.85	149.42	6.57		148.65			148.28					142.23	147.02	4.79
6/19/2019	138.80	141.46	2.65	138.82			142.94	149.61	6.67		148.75			148.34					142.24	147.24	5.00
6/20/2019	138.83	141.31	2.48	138.86			142.87	149.59	6.72		148.77			148.18					142.25	147.19	4.94
6/21/2019	138.78	141.30	2.52	138.78			142.87	149.52	6.64		148.70			148.13					142.22	147.13	4.91
6/22/2019	138.73	141.21	2.48	138.72	140.25	1.53	142.81	149.43	6.62	142.70	148.62	5.92		148.10					142.19	147.04	4.85
6/23/2019	138.72	141.16	2.44	138.70			142.95	149.38	6.42	142.69	148.59	5.90		148.13					142.18	146.97	4.79
6/24/2019	138.71	141.13	2.42	138.68			142.68	149.34	6.66	142.68	148.55	5.88		148.02					142.17	146.93	4.76
6/25/2019	138.69	141.15	2.45	138.67	140.11	1.44	142.76	149.30	6.54	142.65	148.51	5.86		148.10					142.15	146.90	4.75
6/26/2019	138.67	141.11	2.44	138.64			142.95	149.25	6.30	142.56	148.46	5.90		147.90					142.13	146.85	4.73
6/27/2019	138.65	141.07	2.41	138.61			142.67	149.21	6.54	142.61	148.41	5.80		147.93					142.11	146.80	4.69
6/28/2019	138.64	141.04	2.40	138.59			142.66	149.16	6.50	142.51	148.36	5.86		147.88					142.09	146.75	4.66
6/29/2019	138.64	141.03	2.39	138.58			142.63	149.12	6.49	142.58	148.32	5.74		147.77					142.09	146.72	4.63
6/30/2019	138.63	141.00	2.38	138.56			142.70	149.07	6.37	142.56	148.27	5.71		147.73					142.07	146.68	4.61
7/1/2019	138.59	140.96	2.37	138.52			142.67	149.01	6.34	142.54	148.21	5.67		147.62					142.04	146.61	4.57
7/2/2019	138.59	140.95	2.36	138.51			142.65	148.95	6.31	142.52	148.15	5.64		147.62					142.03	146.57	4.54
7/3/2019	138.57	140.92	2.35	138.49			142.62	148.89	6.27	142.44	148.09	5.64		147.47					142.01	146.51	4.51
7/4/2019	138.55	140.88	2.33	138.47			142.59	148.82	6.22	142.46	148.01	5.56		147.50					141.97	146.44	4.47
7/5/2019	138.70	140.85	2.16	138.58			142.57	148.75	6.18	142.44	147.94	5.51		147.45					141.96	146.39	4.42
7/6/2019	138.84	140.85	2.00	138.73	139.91	1.18	142.56	148.70	6.14	142.43	147.89	5.46		147.34					141.98	146.35	4.37
7/7/2019	139.39	140.83	1.43	139.68			142.54	148.63	6.09	142.45	147.82	5.37		147.29					142.00	146.29	4.29
7/8/2019	139.15	140.79	1.64	138.99	139.84	0.85	142.55	148.56	6.01	142.47	147.75	5.28		147.31					142.00	146.23	4.23
7/9/2019	139.04	140.76	1.71	138.90			142.54	148.49	5.95	142.46	147.68	5.22		147.18					141.98	146.17	4.19
7/10/2019	138.81	140.72	1.91	138.65			142.53	148.42	5.89	142.42	147.61	5.18		147.09					141.95	146.12	4.17
7/11/2019	138.67	140.70	2.03	138.52	139.94	1.42	142.51	148.35	5.84	142.40	147.54	5.14		147.02					141.92	146.06	4.14
7/12/2019	138.59	140.68	2.09	138.45	139.89	1.44	142.49	148.29	5.80	142.36	147.47	5.10		146.81					141.89	146.01	4.12
7/13/2019	138.51	140.63	2.12	138.38			142.44	148.21	5.76	142.32	147.38	5.07		146.83					141.85	145.93	4.08
7/14/2019	138.88	140.61	1.73	139.21	139.75	0.54	142.41	148.13	5.72	142.28	147.31	5.02		146.69					141.83	145.87	4.03
7/15/2019	138.85	140.57	1.72	138.68	139.80	1.12	142.39	148.05	5.66	142.28	147.23	4.95		146.67					141.84	145.80	3.96
7/16/2019	138.60	140.54	1.94	138.41	139.77	1.35	142.37	147.97	5.61	142.25	147.15	4.90		146.56					141.80	145.74	3.94
7/17/2019	138.48	140.52	2.03	138.30	139.73	1.43	142.34	147.90	5.56	142.22	147.07	4.86		146.47					141.77	145.68	3.91
7/18/2019	138.41	140.54	2.13	138.22	139.75	1.53	142.30	147.83	5.53	142.17	146.99	4.82		146.58					141.73	145.63	3.90
7/19/2019	138.35	140.53	2.18	138.16	139.75	1.59	142.27	147.77	5.51	142.13	146.92	4.79		146.30					141.69	145.58	3.89
7/20/2019	138.31	140.48	2.17	138.10	139.70	1.60	142.23	147.70	5.47	142.09	146.85	4.77		146.13					141.66	145.52	3.86
7/21/2019	138.26	140.44	2.18	138.04	139.66	1.62	142.19	147.63	5.44	142.04	146.78	4.74		146.18					141.62	145.45	3.83
7/22/2019	138.31	140.54	2.23	138.23	139.62	1.39	142.15	147.57	5.42	142.00	146.70	4.71		146.30					141.58	145.42	3.84
7/23/2019	138.51	141.41	2.90	138.37			142.12	147.80	5.68	141.98	146.81	4.83		146.49					141.63	145.91	4.29
7/24/2019	138.41	140.94	2.53	138.30	140.16	1.86	142.12	147.95	5.83	141.97	146.93	4.95		146.39					141.61	145.84	4.23
7/25/2019	138.29	140.74	2.45	138.15	139.99	1.84	142.09	147.95	5.85	141.95	146.92	4.97		146.26					141.57	145.75	4.18
7/26/2019	138.21	140.65	2.44	138.04	139.89	1.85	142.07	147.88	5.82	141.92	146.86	4.94		146.13					141.54	145.68	4.15
7/27/2019	138.17	140.60	2.43	137.95			142.05	147.82	5.78	141.89	146.80	4.91		146.16					141.51	145.63	4.11
7/28/2019	138.14	140.56	2.42	137.89	139.79	1.90	142.02	147.76	5.74	141.87	146.75	4.88		146.06					141.49	145.58	4.09
7/29/2019	138.10	140.51	2.41	137.81			142.00	147.70	5.70	141.84	146.69	4.86		146.06					141.46	145.52	4.05
7/30/2019	138.06	140.46	2.40	137.74	139.67	1.93	141.96	147.63	5.67	141.80	146.64	4.84		146.11					141.43	145.45	4.02
7/31/2019	138.03	140.42	2.39	137.70			141.93	147.57	5.65	141.76	146.59	4.83		146.17					141.40	145.39	3.99
8/1/2019	138.64	140.40	1.76	139.01			141.89	147.52	5.63	141.75	146.54	4.79		145.71					141.39	145.34	3.94
8/2/2019	139.14	140.37	1.23	139.42			141.90	147.47	5.57	141.81	146.49	4.68		145.83					141.46	145.30	3.84
8/3/2019	138.61	140.34	1.74	138.24	139.56	1.32	141.93	147.41	5.48	141.85	146.44	4.59		145.69					141.46	145.26	3.80
8/4/2019	138.36	140.31	1.96	138.01	139.51	1.49	141.90	147.34	5.44	141.77	146.38	4.61		145.68					141.40	145.20	3.79
8/5/2019	138.23	140.27	2.04	137.92	139.47	1.55	141.86	147.27	5.41	141.73	146.32	4.59		145.64					141.35	145.13	3.78
8/6/2019	138.14	140.25	2.11	137.77	139.45	1.68	141.83	147.20	5.37	141.70	146.26	4.56		145.50					141.32	145.07	3.75
8/7/2019	138.04	140.23	2.19	137.64	139.43	1.80	141.80	147.13	5.34	141.65	146.19	4.54		145.83					141.28	145.01	3.72
8/8/2019	137.97	140.25	2.28	137.55	139.46	1.91	141.76	147.08	5.32	141.62	146.13	4.51		145.63					141.25	144.97	3.72

Table 3-1 - Hydraulic Head at Waterloo Barrier® Piezometer Pairs: 2019
2019 Remedial Action Report
NYSDEC Site No. 336090

	Piezometer Pairs																			
	J04			J05			J06			J07			J08			J09			J10		
	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)
Date	J04-PZ-IN	J04-PZ-OUT		J05-PZ-IN	J05-PZ-OUT		J06-PZ-IN	J06-UC01		J07-PZ-IN	J07-PZ-OUT		J08-PZ-IN	J08-UC01		J09-PZ-IN	J09-PZ-OUT		J10-PZ-IN	J10-PZ-OUT	
8/9/2019	137.91	140.26	2.34	137.48	139.44	1.96	141.72	147.03	5.31	141.57	146.07	4.50		145.62					141.21	144.93	3.72
8/10/2019	137.86	140.19	2.33	137.42	139.40	1.99	141.68	146.98	5.30	141.52	146.01	4.49		145.53					141.17	144.86	3.69
8/11/2019	137.82	140.15	2.34	137.35	139.35	2.00	141.63	146.91	5.27	141.48	145.95	4.48		145.30					141.13	144.80	3.67
8/12/2019	137.78	140.12	2.34	137.30	139.32	2.02	141.60	146.84	5.25	141.44	145.89	4.46		145.23					141.09	144.74	3.65
8/13/2019	137.75	140.11	2.36	137.26	139.30	2.04	141.56	146.78	5.22	141.40	145.83	4.43		145.47					141.06	144.69	3.63
8/14/2019	137.70	140.09	2.39	137.19	139.28	2.09	141.52	146.71	5.19	141.35	145.77	4.41		145.43					141.02	144.64	3.62
8/15/2019	137.66	140.05	2.39	137.13	139.24	2.11	141.47	146.64	5.17	141.31	145.69	4.39		145.08					140.98	144.57	3.60
8/16/2019	137.62	140.02	2.39	137.06	139.19	2.13	141.43	146.57	5.14	141.26	145.63	4.36		144.72					140.94	144.51	3.57
8/17/2019	137.58	139.99	2.41	136.96	139.16	2.20	141.39	146.50	5.11	141.22	145.56	4.34		144.66					140.90	144.46	3.55
8/18/2019	137.54	140.13	2.59	136.92	139.26	2.35	141.35	146.47	5.12	141.15	145.50	4.35		144.81					140.87	144.46	3.59
8/19/2019	137.51	140.22	2.71	136.88	139.35	2.47	141.31	146.48	5.17	141.10	145.46	4.36		144.79					140.84	144.46	3.63
8/20/2019	137.47	140.07	2.60	136.83	139.24	2.41	141.27	146.45	5.18	141.10	145.43	4.33		144.77					140.80	144.40	3.60
8/21/2019	137.44	140.04	2.60	136.81	139.20	2.39	141.24	146.40	5.17	141.06	145.39	4.32		144.72					140.77	144.37	3.60
8/22/2019	137.40	140.01	2.61	136.77	139.17	2.40	141.20	146.35	5.15	141.02	145.34	4.32		144.87					140.73	144.33	3.59
8/23/2019	137.36	139.97	2.60	136.72	139.13	2.42	141.15	146.30	5.14	140.98	145.29	4.31		144.61					140.69	144.27	3.58
8/24/2019	137.32	139.93	2.60	136.65	139.09	2.44	141.11	146.24	5.13	140.93	145.23	4.29		144.53					140.65	144.21	3.57
8/25/2019	137.29	139.89	2.60	136.60	139.05	2.45	141.07	146.18	5.11	140.89	145.17	4.28		144.57					140.61	144.17	3.55
8/26/2019	137.26	139.86	2.60	136.56	139.01	2.45	141.03	146.12	5.09	140.85	145.14	4.28		144.46					140.58	144.12	3.54
8/27/2019	137.23	139.83	2.61	136.52	138.99	2.46	141.00	146.06	5.06	140.82				144.35					140.55	144.07	3.52
8/28/2019	137.20	139.81	2.61	136.49	138.96	2.47	140.96	145.99	5.03	140.78				144.27					140.52	144.02	3.50
8/29/2019	137.17	139.83	2.67	136.43	138.98	2.55	140.92	145.94	5.02	140.74				144.32					140.49	143.99	3.50
8/30/2019	137.13	139.77	2.64	136.38	138.93	2.55	140.88	145.88	5.00	140.70				144.23					140.45	143.92	3.48
8/31/2019	137.09	139.73	2.64	136.34	138.87	2.53	140.84	145.82	4.98	140.66				144.10					140.40	143.86	3.46
9/1/2019	137.07	139.70	2.64	136.30	138.85	2.55	140.80	145.76	4.96	140.62				144.19					140.37	143.81	3.44
9/2/2019	137.04	139.70	2.65	136.27	138.86	2.59	140.77	145.70	4.93	140.58				143.99					140.34	143.77	3.43
9/3/2019	137.02	139.68	2.66	136.23	138.82	2.58	140.73	145.64	4.91	140.54				143.98					140.30	143.72	3.42
9/4/2019	136.99	139.64	2.65	136.18	138.78	2.60	140.69	145.58	4.89	140.51				143.89					140.27	143.67	3.39
9/5/2019	136.95	139.60	2.65	136.11	138.74	2.63	140.65	145.51	4.87	140.46				143.84					140.23	143.60	3.38
9/6/2019	136.92	139.58	2.66	136.06	138.72	2.65	140.61	145.46	4.84	140.43				143.76					140.20	143.55	3.36
9/7/2019	136.89	139.56	2.67	136.02	138.70	2.67	140.57	145.40	4.82	140.39				143.52					140.16	143.50	3.34
9/8/2019	136.86	139.52	2.66	135.97	138.66	2.68	140.53	145.33	4.80	140.35				143.59					140.12	143.45	3.32
9/9/2019	136.83	139.48	2.66	135.93	138.62	2.69	140.49	145.27	4.78	140.30				143.68					140.08	143.39	3.30
9/10/2019	136.80	139.46	2.66	135.90	138.60	2.70	140.45	145.20	4.75	140.26				143.69					140.05	143.33	3.29
9/11/2019	136.78	139.44	2.66	135.88	138.58	2.69	140.42	145.14	4.72	140.23				143.52					140.02	143.29	3.27
9/12/2019	136.75	139.41	2.66	135.84	138.54	2.70	140.38	145.08	4.70	140.19	144.02	3.83	140.07	143.67	3.60		141.59		139.98	143.23	3.25
9/13/2019	136.72	139.39	2.66	135.79	138.52	2.73	140.33	145.01	4.68	140.16	143.98	3.82	140.04	143.57	3.53		141.54		139.94	143.17	3.23
9/14/2019	136.71	139.37	2.66	135.76	138.50	2.74	140.30	144.95	4.66		143.92		140.01	143.45	3.44		141.52		139.91	143.12	3.21
9/15/2019	136.69	139.36	2.67	135.74	138.50	2.75	140.26	144.90	4.63		143.86		139.97	143.31	3.34		141.47		139.88	143.08	3.20
9/16/2019	136.67	139.33	2.66	135.72	138.46	2.74	140.23	144.84	4.61		143.80		139.93	143.16	3.23		141.40		139.85	143.03	3.18
9/17/2019	136.64	139.30	2.66	135.68	138.38	2.71	140.19	144.78	4.59		143.74		139.89	143.13	3.24		141.38		139.81	142.97	3.16
9/18/2019	136.61	139.27	2.65	135.63	138.39	2.77	140.15	144.72	4.57		143.67		139.85	143.18	3.33		141.28		139.77	142.92	3.15
9/19/2019	136.59	139.24	2.65	135.59	138.36	2.78	140.11	144.66	4.55		143.61		139.81	143.18	3.37		141.23		139.74	142.87	3.13
9/20/2019	136.56	139.22	2.66	135.55	138.34	2.79	140.07	144.60	4.53		143.55		139.78	143.02	3.24		141.19		139.71	142.82	3.11
9/21/2019	136.53	139.19	2.66	135.51	138.32	2.80	140.04	144.54	4.50		143.49		139.74	142.97	3.23		141.14		139.68	142.77	3.09
9/22/2019	136.51	139.16	2.66	135.47	138.29	2.82	140.00	144.48	4.48		143.43		139.70	142.89	3.18		141.08		139.64	142.72	3.08
9/23/2019	136.48	139.14	2.66	135.44	138.27	2.83	139.97	144.42	4.45		143.37		139.67	142.88	3.21		141.04		139.62	142.68	3.06
9/24/2019	136.45	139.11	2.66	135.40	138.23	2.83	139.93	144.37	4.44		143.31		139.63	142.86	3.23		141.02		139.58	142.62	3.04
9/25/2019	136.42	139.08	2.67	135.36	138.20	2.84	139.89	144.31	4.42		143.25		139.59	142.70	3.11		140.92		139.54	142.57	3.02
9/26/2019	136.39	139.06	2.67	135.33	138.18	2.86	139.85	144.25	4.40		143.19		139.55	142.85	3.30		140.88		139.51	142.52	3.01
9/27/2019	136.35	139.05	2.70	135.27	138.17	2.90	139.81	144.20	4.39		143.13		139.51	142.54	3.04		140.81		139.47	142.47	3.00
9/28/2019	136.32	139.02	2.70	135.21	138.14	2.93	139.78	144.14	4.37		143.07		139.47	142.48	3.01		140.78		139.44	142.43	2.98
9/29/2019	136.28	138.99	2.71	135.16	138.11	2.95	139.74	144.09	4.35		143.01		139.43	142.43	3.00		140.73		139.40	142.38	2.97
9/30/2019	136.25	138.96	2.71	135.11	138.08	2.97	139.70	144.04	4.34		142.95		139.39	142.45	3.06		140.66		139.37	142.32	2.96
10/1/2019	136.22	138.94	2.72	135.08	138.08	3.00	139.66	143.99	4.32		142.90		139.35	142.33	2.98		140.62		139.34	142.28	2.94
10/2/2019	136.19	138.91	2.72	135.04	138.05	3.01	139.63	143.93	4.30		142.84		139.32	142.38	3.06		140.57		139.31	142.24	2.93

Table 3-1 - Hydraulic Head at Waterloo Barrier® Piezometer Pairs: 2019
2019 Remedial Action Report
NYSDEC Site No. 336090

	Piezometer Pairs																			
	J04			J05			J06			J07			J08			J09			J10		
	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)
Date	J04-PZ-IN	J04-PZ-OUT		J05-PZ-IN	J05-PZ-OUT		J06-PZ-IN	J06-UC01		J07-PZ-IN	J07-PZ-OUT		J08-PZ-IN	J08-UC01		J09-PZ-IN	J09-PZ-OUT		J10-PZ-IN	J10-PZ-OUT	
10/3/2019	136.15	138.92	2.77	134.99	138.03	3.04	139.58	143.88	4.30		142.78		139.27	142.28	3.02		140.55		139.27	142.19	2.93
10/4/2019	136.13	139.05	2.92	134.96	138.15	3.19	139.55	143.86	4.31		142.74		139.23	142.11	2.88		140.52		139.24	142.20	2.96
10/5/2019	136.10	138.94	2.84	134.92	138.09	3.17	139.51	143.85	4.34		142.70		139.19	142.27	3.08				139.20	142.15	2.95
10/6/2019	136.08	138.90	2.82	134.89	138.05	3.15	139.48	143.81	4.34		142.66		139.16	142.20	3.04				139.18	142.11	2.93
10/7/2019	136.06	138.87	2.82	134.87	138.03	3.16	139.45	143.77	4.32		142.62		139.13	141.97	2.84		140.39		139.15	142.08	2.93
10/8/2019	136.04	139.14	3.10	134.87	138.23	3.35	139.41	143.76	4.34		142.58		139.09	142.15	3.06				139.12	142.11	2.99
10/9/2019	136.02	139.03	3.01	134.86	138.16	3.30	139.38	143.79	4.40		142.55		139.06	142.21	3.15		140.40		139.10	142.07	2.98
10/10/2019	136.00	138.98	2.98	134.82	138.12	3.30	139.36	143.79	4.42		142.54		139.04	142.20	3.16				139.08	142.05	2.98
10/11/2019																					
10/12/2019																					
10/13/2019																					
10/14/2019	135.89	138.77	2.88	134.54	137.94	3.40	139.24	143.60	4.37		142.38		138.91	141.86	2.95				138.96	141.91	2.95
10/15/2019	135.87	138.74	2.88	134.61	137.91	3.30	139.21	143.58	4.37		142.35		138.88	141.75	2.86		140.15		138.93	141.87	2.94
10/16/2019	135.85	138.84	2.99	134.47	137.94	3.48	139.18	143.54	4.36		142.31		138.85	141.61	2.76		140.09		138.91	141.85	2.94
10/17/2019	136.01	140.14	4.13	135.32	138.91	3.59	139.17	143.75	4.57		142.43		138.84	141.96	3.12		140.40		138.94	142.53	3.59
10/18/2019	136.43	139.57	3.14	136.15	138.70	2.55	139.26	144.06	4.80		142.61		138.89	142.01	3.12		140.73		138.98	142.45	3.47
10/19/2019	136.22	139.41	3.19	135.34	138.56	3.22	139.16	144.21	5.05		142.71		138.96	142.19	3.23				139.00	142.41	3.41
10/20/2019	136.08	139.33	3.25	135.07	138.45	3.38	139.36	144.28	4.91		142.76		138.95	142.20	3.25		140.59		138.99	142.40	3.41
10/21/2019	135.97	139.37	3.40	134.85	138.46	3.61	139.34	144.32	4.98		142.78		138.93	142.17	3.24		140.55		138.98	142.42	3.45
10/22/2019	135.89	139.29	3.40	134.67	138.40	3.73	139.39	144.35	4.96		142.80		138.89	142.17	3.28				138.95	142.41	3.46
10/23/2019	135.83	139.45	3.62	134.53	138.48	3.95	139.11	144.38	5.26		142.81		138.86	142.02	3.16		140.72		138.93	142.45	3.51
10/24/2019	135.80	139.31	3.51	134.47	138.42	3.95	139.55	144.41	4.85		142.83		138.83	142.24	3.40				138.92	142.44	3.52
10/25/2019	135.79	139.23	3.45	134.39	138.34	3.95	139.13	144.43	5.29		142.84		138.82	142.30	3.48				138.90	142.42	3.51
10/26/2019	135.76	139.18	3.42	134.32	138.30	3.99	139.20	144.42	5.22		142.85		138.81	142.24	3.44		140.45		138.90	142.40	3.51
10/27/2019	135.80	139.43	3.64	134.54	138.39	3.85	139.14	144.40	5.25		142.85		138.80	142.11	3.31				138.89	142.44	3.55
10/28/2019	135.87	139.73	3.86	134.80	138.67	3.87	139.13	144.46	5.33		142.86		138.80	142.27	3.47				138.90	142.62	3.72
10/29/2019	135.82	139.44	3.62	134.69	138.54	3.86	139.30	144.52	5.22		142.90		138.80	142.40	3.60				138.90	142.55	3.65
10/30/2019	135.77	139.34	3.56	134.50	138.46	3.96	139.26	144.57	5.31		142.93		138.79	142.39	3.59		140.55		138.89	142.54	3.65
10/31/2019	135.75	139.72	3.97	134.41	138.68	4.27	138.86	144.60	5.74		142.96		138.77	142.10	3.33		139.74		138.90	142.59	3.69
11/1/2019	135.81	140.08	4.27	134.82	138.93	4.11	138.93	144.67	5.73		142.99		138.78	142.27	3.49		140.70		138.90	142.86	3.95
11/2/2019	135.86	139.71	3.85	134.80	138.78	3.98	139.14	144.78	5.65		143.06		138.80	142.31	3.51				138.93	142.85	3.91
11/3/2019	135.83	139.55	3.72	134.65	138.65	4.00	138.94	144.87	5.93		143.12		138.81	142.55	3.74				138.94	142.81	3.87
11/4/2019	135.79	139.45	3.66	134.63	138.55	3.92	139.18	144.92	5.73		143.18		138.82	142.40	3.58				138.94	142.80	3.86
11/5/2019	135.78	139.40	3.63	134.47	138.50	4.03	139.11	144.95	5.85		143.22		138.83	142.47	3.65				138.94	142.80	3.86
11/6/2019	135.75	139.34	3.60	134.46	138.45	3.99	139.23	144.97	5.74		143.25		138.83	142.45	3.63				138.93	142.79	3.85
11/7/2019	135.73	139.33	3.60	134.30	138.42	4.12	139.13	144.98	5.86		143.28		138.83	142.24	3.42				138.93	142.79	3.86
11/8/2019	135.73	139.56	3.83	134.38	138.56	4.18	139.22	145.00	5.78		143.30		138.82	142.32	3.50		140.72		138.92	142.83	3.90
11/9/2019	135.73	139.43	3.71	134.36	138.51	4.15	139.18	145.04	5.86		143.32		138.82	142.53	3.71		140.74		138.92	142.81	3.89
11/10/2019	135.72	139.38	3.66	134.22	138.46	4.24	139.12	145.06	5.94		143.35		138.83	142.43	3.60		140.74		138.93	142.81	3.89
11/11/2019	135.71	139.33	3.62	134.28	138.43	4.15	139.13	145.06	5.93		143.37		138.83	142.47	3.64				138.93	142.80	3.88
11/12/2019	135.69	139.30	3.61	134.22	138.40	4.17	139.10	145.05	5.95		143.38		138.83	142.64	3.82				138.91	142.79	3.88
11/13/2019	135.66	139.24	3.59	134.27	138.34	4.08	139.20	145.01	5.81		143.38		138.82	142.61	3.79		140.71		138.90	142.74	3.84
11/14/2019	135.64	139.22	3.57	134.20	138.32	4.12	139.19	144.97	5.78		143.37		138.81	142.71	3.89		140.71		138.90	142.72	3.82
11/15/2019	135.63	139.20	3.57	134.08	138.31	4.24	139.09	144.94	5.85		143.36		138.81	142.56	3.75		140.71		138.89	142.70	3.81
11/16/2019	135.62	139.17	3.55	134.19	138.28	4.09	139.10	144.89	5.79		143.34		138.80	142.59	3.79				138.88	142.66	3.78
11/17/2019	135.60	139.14	3.54	134.06	138.26	4.20	139.17	144.84	5.68		143.31		138.79	142.66	3.87		140.68		138.88	142.63	3.75
11/18/2019	135.59	139.14	3.54	134.00	138.25	4.25	139.16	144.81	5.65		143.29		138.79	142.32	3.53		140.68		138.87	142.61	3.74
11/19/2019	135.61	139.84	4.23	134.22	138.79	4.57	139.16	144.83	5.67		143.28		138.79	142.40	3.62				138.88	142.79	3.91
11/20/2019	135.71	139.68	3.97	134.63	138.71	4.08	139.38	144.96	5.58		143.34		138.81	142.40	3.59				138.91	142.87	3.96
11/21/2019	135.75	139.49	3.75	134.59	138.60	4.01	139.21	145.04	5.83		143.38		138.83	142.62	3.79				138.93	142.82	3.89
11/22/2019	135.75	139.43	3.68	134.46	138.54	4.08	138.67	145.09	6.42		143.42		138.85	142.56	3.70				138.95	142.83	3.88
11/23/2019	135.73	139.37	3.63	134.45	138.47	4.02	138.95	145.10	6.15		143.43		138.86	142.59	3.73		140.85		138.95	142.81	3.86
11/24/2019	135.74	139.95	4.21	134.48	138.79	4.31	138.56	145.13	6.58		143.46		138.88	142.59	3.71		141.02		138.97	143.04	4.07
11/25/2019	135.81	140.04	4.24	134.97	139.01	4.04	138.83	145.26	6.44		143.51		138.91	142.81	3.90				139.02	143.33	4.31
11/26/2019	135.85	139.81	3.96	134.96	138.89	3.93	139.20	145.37	6.17		143.60		138.96	142.81	3.85				139.08	143.24	4.16

Table 3-1 - Hydraulic Head at Waterloo Barrier® Piezometer Pairs: 2019
2019 Remedial Action Report
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	Piezometer Pairs																			
	J04			J05			J06			J07			J08			J09			J10		
	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)	Potentiometric Elevation (ft. AMSL)		Inward Hydraulic Head Difference (ft)
Date	J04-PZ-IN	J04-PZ-OUT		J05-PZ-IN	J05-PZ-OUT		J06-PZ-IN	J06-UC01		J07-PZ-IN	J07-PZ-OUT		J08-PZ-IN	J08-UC01		J09-PZ-IN	J09-PZ-OUT		J10-PZ-IN	J10-PZ-OUT	
11/27/2019	135.85	139.73	3.88	134.87	138.82	3.95	139.30	145.46	6.16		143.68		139.01	142.89	3.89				139.12	143.25	4.13
11/28/2019	135.83	139.66	3.82	134.85	138.75	3.90	139.20	145.52	6.32		143.75		139.03	142.95	3.92				139.15	143.25	4.10
11/29/2019	135.82	139.60	3.79	134.75	138.69	3.94	139.53	145.55	6.03		143.79		139.06	143.11	4.05		141.20		139.16	143.24	4.08
11/30/2019	135.81	139.59	3.78	134.62	138.66	4.05	139.43	145.60	6.17		143.84		139.08	143.07	4.00				139.17	143.26	4.08
12/1/2019	135.81	139.57	3.76	134.62	138.64	4.02	139.49	145.64	6.15		143.89		139.10	143.09	4.00		141.21		139.18	143.26	4.08
12/2/2019	135.81	139.58	3.77	134.57	138.65	4.08	139.51	145.68	6.16		143.93		139.11	142.74	3.63		141.23		139.20	143.27	4.08
12/3/2019	135.89	139.64	3.75	134.85	138.67	3.82	139.47	145.70	6.23		143.97		139.13	143.02	3.89		141.25		139.21	143.29	4.08
12/4/2019	135.89	139.68	3.79	134.73	138.70	3.97	139.49	145.73	6.25		144.01		139.16	142.97	3.81		141.26		139.23	143.32	4.09
12/5/2019	135.88	139.71	3.83	134.77	138.73	3.96	139.65	145.76	6.11		144.04		139.18	143.05	3.87				139.24	143.32	4.08
12/6/2019	135.91	139.81	3.90	134.88	138.81	3.94	140.10	145.77	5.67		144.07		139.20	143.35	4.15				139.26	143.34	4.08
12/7/2019	135.94	139.86	3.91	135.05	138.87	3.81	140.28	145.80	5.51		144.10		139.21	143.23	4.02		141.34		139.27	143.36	4.09
12/8/2019	135.97	139.77	3.80	135.05	138.82	3.77	139.68	145.82	6.15		144.13		139.23	143.15	3.92				139.29	143.38	4.09
12/9/2019	135.98	139.87	3.89	134.95	138.85	3.90	139.21	145.86	6.65		144.18		139.25	143.17	3.91				139.31	143.42	4.11
12/10/2019	136.04	140.34	4.30	135.24	139.25	4.01	139.13	145.92	6.78	139.46	144.23	4.77	139.27	143.35	4.07				139.34	143.74	4.40
12/11/2019	136.14	140.41	4.28	135.48	139.35	3.88	140.35	146.01	5.66	139.52	144.30	4.78	139.30	143.60	4.31		141.86		139.39	143.93	4.55
12/12/2019	136.19	140.24	4.05	135.57	139.26	3.69	140.91	146.12	5.22	139.57	144.39	4.82	139.37	143.66	4.29		141.96		139.45	143.90	4.46
12/13/2019	136.22	140.11	3.89	135.43	139.19	3.76	140.68	146.23	5.55	139.62	144.49	4.87	139.42	143.53	4.11		141.99		139.51	143.92	4.40
12/14/2019	136.26	140.63	4.37	135.56	139.66	4.11	140.62	146.38	5.77	139.68	144.62	4.94	139.51	143.53	4.02				139.59	144.32	4.73
12/15/2019	136.30	140.50	4.20	135.81	139.55	3.74	141.00	146.57	5.57	139.75	144.77	5.02	139.54	144.00	4.46				139.65	144.48	4.82
12/16/2019	136.33	140.36	4.03	135.79	139.45	3.66	141.86	146.69	4.83	139.81	144.92	5.11	139.61	144.06	4.45		142.48		139.72	144.41	4.68
12/17/2019	136.34	140.37	4.03	135.69	139.43	3.75	141.64	146.81	5.17	139.88	145.08	5.20	139.66	144.01	4.35		142.53		139.79	144.45	4.65
12/18/2019	136.36	140.43	4.07	135.82	139.34	3.52	141.59	146.91	5.32	139.94	145.21	5.27	139.74	144.58	4.84		142.57		139.84	144.47	4.63
12/19/2019	136.38	140.37	3.99	135.91	139.44	3.54	141.88	146.97	5.09	139.99	145.32	5.33	139.79	144.91	5.12		142.62		139.87	144.45	4.58
12/20/2019	136.38	140.28	3.90	135.87	139.39	3.52	141.75	147.04	5.29	140.04	145.43	5.39	139.84	144.83	4.99		142.67		139.90	144.46	4.55
12/21/2019	136.38	140.23	3.86	135.77	139.37	3.60	141.21	147.10	5.90	140.09	145.54	5.45	139.90	145.02	5.12		142.74		139.94	144.48	4.54
12/22/2019	136.38	140.22	3.84	135.66			141.25	147.18	5.92	140.15	145.65	5.50	139.95	144.92	4.97		142.83		139.98	144.51	4.54
12/23/2019	136.38	140.22	3.84	135.62			141.30	147.25	5.94	140.20	145.76	5.56	140.01	144.99	4.98		142.92		140.02	144.54	4.52
12/24/2019	136.39	140.21	3.83	135.66			141.34	147.29	5.96	140.24	145.84	5.60	140.05	145.19	5.15		143.01		140.04	144.54	4.50
12/25/2019	136.39	140.20	3.81	135.64			141.37	147.34	5.97	140.28	145.91	5.63	140.09	145.18	5.09		143.05		140.07	144.54	4.48
12/26/2019	136.40	140.18	3.78	135.64			141.40	147.37	5.97	140.32	145.99	5.67	140.13	145.27	5.14		143.12		140.09	144.54	4.45
12/27/2019	136.42	140.20	3.78	135.62			141.44	147.41	5.97	140.36	146.06	5.69	140.17	145.21	5.04		143.17		140.13	144.58	4.45
12/28/2019	136.43	140.20	3.77	135.64			141.48	147.45	5.97	140.40	146.12	5.72	140.21	145.32	5.11		143.30		140.15	144.59	4.43
12/29/2019	136.45	140.20	3.75	135.66			141.50	147.48	5.98	140.43	146.17	5.74	140.25	145.38	5.13				140.18	144.60	4.42
12/30/2019	136.50	140.78	4.28	135.80			141.54	147.54	6.00	140.47	146.24	5.77	140.30	145.30	5.01				140.22	144.79	4.57
12/31/2019	136.60	140.81	4.21	136.16			141.59	147.66	6.07	140.55	146.33	5.78	140.35	145.56	5.21		143.84		140.27	145.06	4.78

Table 3-2 - Extraction Well Pump Run Time and Average Daily System Flows
2019 Remedial Action Report
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Date	EW Pump Daily Run Time (%)	Average System Daily Flows (gpm)[1]
1/1/2019	100.00	23.5
1/2/2019	100.00	23.5
1/3/2019	99.65	24.8
1/4/2019	100.00	24.1
1/5/2019	100.00	24.6
1/6/2019	100.00	23.7
1/7/2019	100.00	24.5
1/8/2019	100.00	24.4
1/9/2019	100.00	22.6
1/10/2019	92.71	22.3
1/11/2019	100.00	23.4
1/12/2019	100.00	22.4
1/13/2019	100.00	21.5
1/14/2019	100.00	21.4
1/15/2019	96.53	21.5
1/16/2019	100.00	25.3
1/17/2019	100.00	25.4
1/18/2019	100.00	25.0
1/19/2019	100.00	25.1
1/20/2019	100.00	25.1
1/21/2019	100.00	24.9
1/22/2019	100.00	24.7
1/23/2019	100.00	24.7
1/24/2019	100.00	24.8
1/25/2019	100.00	24.8
1/26/2019	100.00	24.8
1/27/2019	100.00	24.9
1/28/2019	100.00	24.9
1/29/2019	100.00	24.9
1/30/2019	100.00	25.0
1/31/2019	100.00	25.0
2/1/2019	100.00	25.0
2/2/2019	100.00	24.9
2/3/2019	100.00	24.9
2/4/2019	100.00	24.9
2/5/2019	98.26	23.6
2/6/2019	88.54	21.4
2/7/2019	100.00	23.3
2/8/2019	100.00	23.7
2/9/2019	100.00	23.7
2/10/2019	100.00	23.6
2/11/2019	100.00	23.3
2/12/2019	100.00	23.1
2/13/2019	100.00	23.1
2/14/2019	100.00	23.2
2/15/2019	100.00	23.2
2/16/2019	100.00	23.2
2/17/2019	100.00	23.2
2/18/2019	100.00	23.2
2/19/2019	100.00	23.0
2/20/2019	100.00	22.7
2/21/2019	100.00	22.8
2/22/2019	100.00	23.0
2/23/2019	100.00	22.9
2/24/2019	100.00	22.9
2/25/2019	100.00	22.9
2/26/2019	100.00	22.9
2/27/2019	100.00	22.9
2/28/2019	100.00	22.9

Date	EW Pump Daily Run Time (%)	Average System Daily Flows (gpm)[1]
3/1/2019	100.00	22.8
3/2/2019	100.00	22.7
3/3/2019	100.00	19.3
3/4/2019	97.22	16.1
3/5/2019	98.61	22.0
3/6/2019	100.00	21.9
3/7/2019	100.00	21.9
3/8/2019	100.00	21.9
3/9/2019	100.00	21.9
3/10/2019	100.00	21.4
3/11/2019	100.00	21.8
3/12/2019	100.00	21.7
3/13/2019	100.00	21.8
3/14/2019	100.00	21.8
3/15/2019	100.00	21.8
3/16/2019	100.00	21.2
3/17/2019	100.00	21.8
3/18/2019	100.00	21.8
3/19/2019	100.00	21.7
3/20/2019	100.00	21.6
3/21/2019	100.00	21.5
3/22/2019	100.00	21.5
3/23/2019	100.00	21.6
3/24/2019	100.00	21.6
3/25/2019	100.00	21.7
3/26/2019	100.00	21.9
3/27/2019	100.00	21.7
3/28/2019	100.00	21.4
3/29/2019	100.00	21.2
3/30/2019	100.00	21.2
3/31/2019	100.00	21.2
4/1/2019	98.26	21.1
4/2/2019	100.00	21.2
4/3/2019	100.00	21.2
4/4/2019	100.00	21.2
4/5/2019	100.00	20.0
4/6/2019	100.00	15.7
4/7/2019	100.00	15.5
4/8/2019	98.26	16.5
4/9/2019	100.00	22.9
4/10/2019	100.00	23.3
4/11/2019	100.00	23.2
4/12/2019	100.00	22.9
4/13/2019	100.00	22.8
4/14/2019	100.00	22.8
4/15/2019	100.00	22.8
4/16/2019	100.00	22.8
4/17/2019	100.00	22.9
4/18/2019	100.00	22.9
4/19/2019	100.00	22.6
4/20/2019	100.00	22.4
4/21/2019	100.00	22.4
4/22/2019	100.00	22.3
4/23/2019	100.00	22.2
4/24/2019	100.00	22.2
4/25/2019	100.00	22.2
4/26/2019	100.00	22.2
4/27/2019	100.00	21.7
4/28/2019	100.00	22.2
4/29/2019	100.00	22.2
4/30/2019	100.00	22.4

Date	EW Pump Daily Run Time (%)	Average System Daily Flows (gpm)[1]
5/1/2019	100.00	22.3
5/2/2019	100.00	22.3
5/3/2019	100.00	22.1
5/4/2019	100.00	22.1
5/5/2019	100.00	21.6
5/6/2019	99.31	21.5
5/7/2019	93.40	20.3
5/8/2019	100.00	21.4
5/9/2019	100.00	21.4
5/10/2019	100.00	21.1
5/11/2019	100.00	21.3
5/12/2019	100.00	21.3
5/13/2019	100.00	21.3
5/14/2019	100.00	21.4
5/15/2019	100.00	21.6
5/16/2019	100.00	21.7
5/17/2019	100.00	21.8
5/18/2019	100.00	21.8
5/19/2019	81.25	18.5
5/20/2019	100.00	22.2
5/21/2019	100.00	22.1
5/22/2019	100.00	21.8
5/23/2019	100.00	21.6
5/24/2019	100.00	21.0
5/25/2019	100.00	21.5
5/26/2019	100.00	20.0
5/27/2019	100.00	19.0
5/28/2019	100.00	19.0
5/29/2019	100.00	18.9
5/30/2019	100.00	19.3
5/31/2019	100.00	21.9
6/1/2019	100.00	22.0
6/2/2019	100.00	22.0
6/3/2019	99.65	21.9
6/4/2019	100.00	21.8
6/5/2019	100.00	21.7
6/6/2019	100.00	21.6
6/7/2019	100.00	21.5
6/8/2019	100.00	21.4
6/9/2019	100.00	21.4
6/10/2019	100.00	22.1
6/11/2019	100.00	22.3
6/12/2019	100.00	21.9
6/13/2019	100.00	21.2
6/14/2019	100.00	21.5
6/15/2019	100.00	21.5
6/16/2019	100.00	21.5
6/17/2019	100.00	21.4
6/18/2019	100.00	21.3
6/19/2019	100.00	21.3
6/20/2019	97.57	21.3
6/21/2019	100.00	21.3
6/22/2019	100.00	21.4
6/23/2019	100.00	21.6
6/24/2019	100.00	21.6
6/25/2019	100.00	21.6
6/26/2019	100.00	21.0
6/27/2019	100.00	21.3
6/28/2019	100.00	21.0
6/29/2019	100.00	21.0
6/30/2019	100.00	21.0

Notes:
[1]Average Daily Flow Rate is calculated from the FIT-200 totalizer readings

Table 3-2 - Extraction Well Pump Run Time and Average Daily System Flows
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Date	EW Pump Daily Run Time (%)	Average System Daily Flows (gpm)[1]
7/1/2019	100.00	21.2
7/2/2019	100.00	21.2
7/3/2019	100.00	21.2
7/4/2019	100.00	21.2
7/5/2019	100.00	18.7
7/6/2019	98.61	15.8
7/7/2019	48.96	2.8
7/8/2019	95.14	5.9
7/9/2019	96.18	18.8
7/10/2019	99.65	20.2
7/11/2019	100.00	20.3
7/12/2019	100.00	20.2
7/13/2019	100.00	19.6
7/14/2019	44.79	8.9
7/15/2019	100.00	20.3
7/16/2019	100.00	20.6
7/17/2019	100.00	20.0
7/18/2019	100.00	19.8
7/19/2019	100.00	19.8
7/20/2019	100.00	19.3
7/21/2019	100.00	19.8
7/22/2019	81.25	15.7
7/23/2019	100.00	19.4
7/24/2019	100.00	19.7
7/25/2019	100.00	19.7
7/26/2019	100.00	19.7
7/27/2019	100.00	19.7
7/28/2019	100.00	19.7
7/29/2019	100.00	19.6
7/30/2019	100.00	19.5
7/31/2019	96.53	18.3
8/1/2019	27.78	7.0
8/2/2019	36.81	7.7
8/3/2019	100.00	21.1
8/4/2019	100.00	19.6
8/5/2019	95.49	18.4
8/6/2019	100.00	19.0
8/7/2019	100.00	19.2
8/8/2019	100.00	19.5
8/9/2019	100.00	19.6
8/10/2019	100.00	19.5
8/11/2019	100.00	18.7
8/12/2019	100.00	18.9
8/13/2019	100.00	18.8
8/14/2019	100.00	18.8
8/15/2019	100.00	18.8
8/16/2019	100.00	19.1
8/17/2019	100.00	18.9
8/18/2019	100.00	18.9
8/19/2019	100.00	19.0
8/20/2019	100.00	19.1
8/21/2019	100.00	19.0
8/22/2019	100.00	19.1
8/23/2019	100.00	19.2
8/24/2019	100.00	19.2
8/25/2019	100.00	19.2
8/26/2019	100.00	18.6
8/27/2019	100.00	18.9
8/28/2019	100.00	18.5
8/29/2019	100.00	18.5
8/30/2019	100.00	18.9
8/31/2019	100.00	18.5

Date	EW Pump Daily Run Time (%)	Average System Daily Flows (gpm)[1]
9/1/2019	100.00	18.0
9/2/2019	100.00	18.5
9/3/2019	100.00	18.0
9/4/2019	100.00	18.6
9/5/2019	100.00	18.4
9/6/2019	100.00	18.5
9/7/2019	100.00	18.5
9/8/2019	100.00	18.5
9/9/2019	100.00	18.5
9/10/2019	100.00	17.6
9/11/2019	100.00	17.6
9/12/2019	100.00	17.6
9/13/2019	100.00	17.9
9/14/2019	100.00	17.2
9/15/2019	100.00	17.5
9/16/2019	100.00	17.4
9/17/2019	100.00	17.2
9/18/2019	100.00	17.6
9/19/2019	100.00	17.6
9/20/2019	100.00	17.6
9/21/2019	100.00	17.2
9/22/2019	100.00	17.6
9/23/2019	100.00	17.5
9/24/2019	100.00	17.4
9/25/2019	100.00	17.4
9/26/2019	100.00	17.4
9/27/2019	100.00	17.4
9/28/2019	100.00	17.4
9/29/2019	100.00	17.4
9/30/2019	100.00	17.7
10/1/2019	100.00	17.9
10/2/2019	100.00	16.9
10/3/2019	100.00	16.6
10/4/2019	100.00	17.1
10/5/2019	100.00	16.5
10/6/2019	100.00	16.5
10/7/2019	100.00	16.4
10/8/2019	100.00	16.7
10/9/2019	100.00	16.6
10/10/2019	94.79	15.4
10/11/2019	100.00	16.6
10/12/2019	100.00	16.6
10/13/2019	100.00	16.8
10/14/2019	100.00	16.9
10/15/2019	100.00	16.9
10/16/2019	100.00	16.9
10/17/2019	71.53	13.2
10/18/2019	56.94	9.5
10/19/2019	99.31	19.7
10/20/2019	100.00	18.9
10/21/2019	100.00	18.4
10/22/2019	100.00	18.4
10/23/2019	100.00	18.4
10/24/2019	100.00	18.4
10/25/2019	100.00	18.4
10/26/2019	100.00	18.4
10/27/2019	80.84	15.4
10/28/2019	100.00	18.4
10/29/2019	100.00	18.4
10/30/2019	100.00	18.4
10/31/2019	100.00	18.4

Date	EW Pump Daily Run Time (%)	Average System Daily Flows (gpm)[1]
11/1/2019	100.00	18.4
11/2/2019	100.00	18.4
11/3/2019	100.00	18.4
11/4/2019	100.00	18.6
11/5/2019	100.00	18.6
11/6/2019	100.00	18.6
11/7/2019	100.00	18.6
11/8/2019	100.00	18.1
11/9/2019	100.00	18.1
11/10/2019	100.00	18.1
11/11/2019	100.00	18.5
11/12/2019	100.00	18.4
11/13/2019	100.00	18.4
11/14/2019	100.00	18.4
11/15/2019	100.00	18.4
11/16/2019	100.00	18.4
11/17/2019	100.00	18.4
11/18/2019	100.00	19.3
11/19/2019	100.00	19.2
11/20/2019	100.00	18.4
11/21/2019	100.00	18.4
11/22/2019	100.00	18.4
11/23/2019	100.00	18.1
11/24/2019	100.00	18.5
11/25/2019	100.00	18.4
11/26/2019	100.00	18.5
11/27/2019	100.00	18.6
11/28/2019	100.00	18.6
11/29/2019	100.00	18.7
11/30/2019	100.00	18.8
12/1/2019	100.00	19.0
12/2/2019	100.00	19.2
12/3/2019	84.72	16.2
12/4/2019	100.00	19.2
12/5/2019	100.00	19.2
12/6/2019	100.00	18.7
12/7/2019	100.00	19.2
12/8/2019	100.00	19.2
12/9/2019	100.00	19.3
12/10/2019	91.67	17.9
12/11/2019	100.00	18.0
12/12/2019	100.00	18.0
12/13/2019	100.00	18.5
12/14/2019	100.00	18.0
12/15/2019	100.00	18.5
12/16/2019	100.00	18.5
12/17/2019	100.00	18.3
12/18/2019	100.00	18.3
12/19/2019	100.00	18.4
12/20/2019	100.00	18.4
12/21/2019	100.00	18.7
12/22/2019	100.00	18.7
12/23/2019	100.00	18.7
12/24/2019	100.00	18.7
12/25/2019	100.00	18.7
12/26/2019	100.00	18.7
12/27/2019	100.00	18.7
12/28/2019	100.00	18.7
12/29/2019	100.00	18.3
12/30/2019	100.00	18.7
12/31/2019	100.00	18.7

Notes:
[1]Average Daily Flow Rate is calculated from the FIT-200 totalizer readings

Table 3-3 - Groundwater Extraction and Treatment System Upset Condition and Resolution Log
2019 Remedial Action Report
NYSDEC Site No. 336090

Date	Condition/Alarm	Response	Resolution
4/5/19	EW-1 high level warning	Operator visited the site and determined P-101 had stopped working	Operator shut off air supply to P-101 on arrival. P-101 was replaced with a refurbished pump
5/19/19	Transfer pump VFD fault	Determined bad weather was causing power outages	Operator visited the system, reset AC-401 and ensured the system was running
5/26/19	P-103 upset due to out of place exhaust poppet	VHB staff visisted the site	P-103 was replaced with a refurbished pump
6/20/19	Low system influent flow	Determined bad weather was causing power outages	System was accessed remotely and was reset
7/7/19	P-103 upset	VHB staff visisted the site	P-103 was replaced with a refurbished pump
7/14/19	AC-401 Fault	Operator visited the site	Operator reset AC-401
7/22/19	Transfer pump VFD fault	Determined bad weather was causing power outages	Operator visited the system, reset air compressor and switched over to running AC-400
10/17/19	Transfer pump VFD fault	Determined bad weather was causing power outages	Operator visited the system and restarted the compressor
10/27/19	Transfer pump VFD fault	Determined bad weather was causing power outages	Operator visited the system and restarted the compressor
12/3/19	Transfer pump VFD fault	Determined bad weather was causing power outages	Operator visited the system and restarted the compressor

Table 3-4 - Groundwater Extraction Well Analytical Results
2019 Remedial Action Report
NYSDEC Site No. 336090

Sample Location:		EW-1: SP-101					
Sample Date:		1/15/2019	2/6/2019	3/5/2019	4/1/2019	5/6/2019	6/3/2019
Analysis	**Units**	Results[1,2,3]					
Chloroethane	ug/l	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,1-Dichloroethane	ug/l	8	8	6	6	8	8
1,1-Dichloroethene	ug/l	11	3	9	3	3	10
cis-1,2-Dichloroethene	ug/l	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,4-Dioxane	ug/l	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29
Tetrachloroethene	ug/l	0.9 J	0.8 J	0.8 J	0.7 J	0.8 J	0.8 J
1,1,1-Trichloroethane	ug/l	190	170	130	99	160	240
Trichloroethene	ug/l	42	42	38	34	35	38
Vinyl chloride	ug/l	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Xylene (Total)	ug/l	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1

Notes:

[1]Non-detects are expressed as "ND < ##", where '##' is the laboratory method detection limit (MDL).

[2]'J' = Detection is approximate and is above the MDL, but below the laboratory limit of quantitation (LOQ).

[3]'NS' = Location was not sampled because the groundwater level was below the actuation level of the well pump.

Table 3-4 - Groundwater Extraction Well Analytical Results
2019 Remedial Action Report
NYSDEC Site No. 336090

Sample Location:		EW-1: SP-101						
Sample Date:		7/8/2019	8/5/2019	9/12/2019	10/10/2019	11/5/2019	12/10/2019	1/14/2020
Analysis	**Units**	Results[1,2,3]						
Chloroethane	ug/l	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.4	ND < 0.2	ND < 0.2	ND < 0.2
1,1-Dichloroethane	ug/l	9	9	11	12	13	14	13
1,1-Dichloroethene	ug/l	3	3	4	35	5	6	5
cis-1,2-Dichloroethene	ug/l	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.4	ND < 0.2	ND < 0.2	ND < 0.2
1,4-Dioxane	ug/l	ND < 29	ND < 29	ND < 29	ND < 58	ND < 29	ND < 29	ND < 29
Tetrachloroethene	ug/l	0.7 J	0.7 J	0.9 J	0.8 J	1 J	1	1
1,1,1-Trichloroethane	ug/l	270	280	380	590	680	650	680
Trichloroethene	ug/l	38	37	44	43	51	54	50
Vinyl chloride	ug/l	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.4	ND < 0.2	ND < 0.2	ND < 0.2
Xylene (Total)	ug/l	ND < 1	ND < 1	ND < 1	ND < 3	ND < 1	ND < 1	ND < 1

Notes:

[1]Non-detects are expressed as "ND < ##", where '##' is the laboratory method detection limit (MDL).

[2]'J' = Detection is approximate and is above the MDL, but below the laboratory limit of quantitation (LOQ).

[3]'NS' = Location was not sampled because the groundwater level was below the actuation level of the well pump.

Table 3-4 - Groundwater Extraction Well Analytical Results
2019 Remedial Action Report
NYSDEC Site No. 336090

Sample Location:		EW-2: SP-102					
Sample Date:		1/15/2019	2/6/2019	3/5/2019	4/1/2019	5/6/2019	6/3/2019
Analysis	**Units**	Results[1,2,3]					
Chloroethane	ug/l	ND < 0.4	1 J	ND < 1.0	ND < 0.4	ND < 1	ND < 1
1,1-Dichloroethane	ug/l	39	41	35	32	37	41
1,1-Dichloroethene	ug/l	86	19	92	16	16	94
cis-1,2-Dichloroethene	ug/l	0.9 J	ND < 1	ND < 1	0.8 J	1 J	1 J
1,4-Dioxane	ug/l	ND < 58	ND < 150	ND < 150	ND < 58	ND < 150	ND < 150
Tetrachloroethene	ug/l	4	4 J	4 J	4	4 J	5 J
1,1,1-Trichloroethane	ug/l	1700	1700	1700	1400	1500	1800
Trichloroethene	ug/l	330	360	310	300	330	340
Vinyl chloride	ug/l	ND < 0.4	ND < 1	ND < 1	ND < 0.4	ND < 1	ND < 1
Xylene (Total)	ug/l	ND < 2	ND < 5	ND < 5	ND < 2	ND < 5	ND < 5

Notes:

[1]Non-detects are expressed as "ND < ##", where '##' is the laboratory method detection limit (MDL).

[2]'J' = Detection is approximate and is above the MDL, but below the laboratory limit of quantitation (LOQ).

[3]'NS' = Location was not sampled because the groundwater level was below the actuation level of the well pump.

Table 3-4 - Groundwater Extraction Well Analytical Results
2019 Remedial Action Report
NYSDEC Site No. 336090

Sample Location:		EW-2: SP-102						
Sample Date:		7/8/2019	8/5/2019	9/12/2019	10/10/2019	11/5/2019	12/10/2019	1/14/2020
Analysis	**Units**	Results[1,2,3]						
Chloroethane	ug/l	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.2	ND < 0.2	ND < 0.2
1,1-Dichloroethane	ug/l	41	40	58	65	56	66	56
1,1-Dichloroethene	ug/l	18	12	19	95	22	25	21
cis-1,2-Dichloroethene	ug/l	1 J	1 J	2	2 J	2	2	3
1,4-Dioxane	ug/l	ND < 58	ND < 58	ND < 58	ND < 58	ND < 29	ND < 29	ND < 29
Tetrachloroethene	ug/l	4	4	4	4	4	4	4
1,1,1-Trichloroethane	ug/l	1900	1900	1400	1500	1000	680	750
Trichloroethene	ug/l	360	340	370	360	370	350	320
Vinyl chloride	ug/l	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.2	ND < 0.2	ND < 0.2
Xylene (Total)	ug/l	ND < 2	ND < 3	ND < 3	ND < 3	ND < 1	ND < 1	ND < 1

Notes:

[1]Non-detects are expressed as "ND < ##", where '##' is the laboratory method detection limit (MDL).

[2]'J' = Detection is approximate and is above the MDL, but below the laboratory limit of quantitation (LOQ).

[3]'NS' = Location was not sampled because the groundwater level was below the actuation level of the well pump.

Table 3-4 - Groundwater Extraction Well Analytical Results
2019 Remedial Action Report
NYSDEC Site No. 336090

Sample Location:		EW-3: SP-103					
Sample Date:		1/15/2019	2/6/2019	3/5/2019	4/1/2019	5/6/2019	6/3/2019
Analysis	**Units**	Results[1,2,3]					
Chloroethane	ug/l	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,1-Dichloroethane	ug/l	58	63	57	51	54	60
1,1-Dichloroethene	ug/l	38	20	40	18	18	29
cis-1,2-Dichloroethene	ug/l	4	4	4	4	4	4
1,4-Dioxane	ug/l	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29
Tetrachloroethene	ug/l	4	4	4	4	4	4
1,1,1-Trichloroethane	ug/l	420	410	400	360	250	420
Trichloroethene	ug/l	420	440	420	390	350	380
Vinyl chloride	ug/l	0.4 J	0.5 J	0.3 J	0.3 J	ND < 0.2	0.3 J
Xylene (Total)	ug/l	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1

Notes:

[1]Non-detects are expressed as "ND < ##", where '##' is the laboratory method detection limit (MDL).

[2]'J' = Detection is approximate and is above the MDL, but below the laboratory limit of quantitation (LOQ).

[3]'NS' = Location was not sampled because the groundwater level was below the actuation level of the well pump.

Table 3-4 - Groundwater Extraction Well Analytical Results
2019 Remedial Action Report
NYSDEC Site No. 336090

Sample Location:		EW-3: SP-103						
Sample Date:		7/8/2019	8/5/2019	9/12/2019	10/10/2019	11/5/2019	12/10/2019	1/14/2020
Analysis	**Units**	Results[1,2,3]						
Chloroethane	ug/l	ND < 0.2	ND < 0.2	NS	NS	NS	NS	ND < 0.2
1,1-Dichloroethane	ug/l	57	57	NS	NS	NS	NS	66
1,1-Dichloroethene	ug/l	19	12	NS	NS	NS	NS	18
cis-1,2-Dichloroethene	ug/l	3	4	NS	NS	NS	NS	2
1,4-Dioxane	ug/l	ND < 29	ND < 29	NS	NS	NS	NS	ND < 29
Tetrachloroethene	ug/l	3	3	NS	NS	NS	NS	3
1,1,1-Trichloroethane	ug/l	700	450	NS	NS	NS	NS	12
Trichloroethene	ug/l	300	350	NS	NS	NS	NS	420
Vinyl chloride	ug/l	ND < 0.2	ND < 0.2	NS	NS	NS	NS	0.6 J
Xylene (Total)	ug/l	ND < 1	ND < 1	NS	NS	NS	NS	ND < 1

Notes:

[1]Non-detects are expressed as "ND < ##", where '##' is the laboratory method detection limit (MDL).

[2]'J' = Detection is approximate and is above the MDL, but below the laboratory limit of quantitation (LOQ).

[3]'NS' = Location was not sampled because the groundwater level was below the actuation level of the well pump.

Table 3-4 - Groundwater Extraction Well Analytical Results
2019 Remedial Action Report
NYSDEC Site No. 336090

Sample Location:		EW-4: SP-104					
Sample Date:		1/15/2019	2/6/2019	3/5/2019	4/1/2019	5/6/2019	6/3/2019
Analysis	**Units**	Results[1,2,3]					
Chloroethane	ug/l	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,1-Dichloroethane	ug/l	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,1-Dichloroethene	ug/l	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
cis-1,2-Dichloroethene	ug/l	0.9 J	0.8 J	0.8 J	0.8 J	0.8 J	0.7 J
1,4-Dioxane	ug/l	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29
Tetrachloroethene	ug/l	0.4 J	0.4 J	0.3 J	0.3 J	0.3 J	0.3 J
1,1,1-Trichloroethane	ug/l	0.5 J	0.3 J	0.4 J	0.4 J	ND < 0.3	0.5 J
Trichloroethene	ug/l	29	29	28	26	25	27
Vinyl chloride	ug/l	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Xylene (Total)	ug/l	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1

Notes:

[1]Non-detects are expressed as "ND < ##", where '##' is the laboratory method detection limit (MDL).

[2]'J' = Detection is approximate and is above the MDL, but below the laboratory limit of quantitation (LOQ).

[3]'NS' = Location was not sampled because the groundwater level was below the actuation level of the well pump.

Table 3-4 - Groundwater Extraction Well Analytical Results
2019 Remedial Action Report
NYSDEC Site No. 336090

Sample Location:		EW-4: SP-104						
Sample Date:		7/8/2019	8/5/2019	9/12/2019	10/10/2019	11/5/2019	12/10/2019	1/14/2020
Analysis	**Units**	Results[1,2,3]						
Chloroethane	ug/l	ND < 0.2	ND < 0.2	NS	NS	NS	NS	ND < 0.2
1,1-Dichloroethane	ug/l	ND < 0.2	ND < 0.2	NS	NS	NS	NS	ND < 0.2
1,1-Dichloroethene	ug/l	ND < 0.2	ND < 0.2	NS	NS	NS	NS	ND < 0.2
cis-1,2-Dichloroethene	ug/l	0.6 J	0.8 J	NS	NS	NS	NS	1
1,4-Dioxane	ug/l	ND < 29	ND < 29	NS	NS	NS	NS	ND < 29
Tetrachloroethene	ug/l	0.3 J	0.3 J	NS	NS	NS	NS	0.2 J
1,1,1-Trichloroethane	ug/l	ND < 0.3	0.3 J	NS	NS	NS	NS	ND < 0.3
Trichloroethene	ug/l	28	24	NS	NS	NS	NS	23
Vinyl chloride	ug/l	ND < 0.2	ND < 0.2	NS	NS	NS	NS	ND < 0.2
Xylene (Total)	ug/l	ND < 1	ND < 1	NS	NS	NS	NS	ND < 1

Notes:

[1]Non-detects are expressed as "ND < ##", where '##' is the laboratory method detection limit (MDL).

[2]'J' = Detection is approximate and is above the MDL, but below the laboratory limit of quantitation (LOQ).

[3]'NS' = Location was not sampled because the groundwater level was below the actuation level of the well pump.

Table 3-5 - Groundwater Treatment System Influent and Effluent Analytical Results
2019 Remedial Action Report
NYSDEC Site No. 336090

		Sample Date:	1/15/2019	2/6/2019	3/5/2019	4/1/2019	5/6/2019	6/3/2019
		Process Flow Rate at Time of Sampling (gpm):	22	22.5	22.5	21.3	22.2	21.9
		Sample Location:	**System Effluent—Sample Port SP-202**					
Analysis	**Discharge Limit Daily Maximum**	**Units**	**Results**[1,2,3]					
Chloroethane	5	ug/l	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,1-Dichloroethane	5	ug/l	0.2 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,1-Dichloroethene	5	ug/l	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
cis-1,2-Dichloroethene	5	ug/l	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,4-Dioxane	Monitor	ug/l	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29
Tetrachloroethene	1	ug/l	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,1,1-Trichloroethane	5	ug/l	0.9 J	0.7 J	0.7 J	ND < 0.3	0.7 J	0.9 J
Trichloroethene	40	ug/l	0.8 J	0.6 J	0.6 J	0.5 J	0.7 J	0.7 J
Xylene (Total)	65	ug/l	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
Vinyl chloride	0.3	ug/l	ND < 0.0080	ND < 0.0080	ND < 0.0080	ND < 0.0080	ND < 0.0080	ND < 0.0080
Oil & Grease	15	mg/l	ND < 1.4	ND < 1.4	ND < 1.4	ND < 1.4	ND < 1.4	ND < 1.4
Total Suspended Solids	50	mg/l	ND < 2.00	1.04 J	ND < 1.00	ND < 1.00	ND < 1.00	ND < 1.00
pH[3]	6.5–8.5	S.U.	7.92	8.12	8.00	8.12	8.13	8.08
		Sample Location:	**System Influent—Sample Port SP-200**					
Chloroethane		ug/l	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,1-Dichloroethane		ug/l	26	27	26	23	23	26
1,1-Dichloroethene		ug/l	38	11	49	9	9	40
cis-1,2-Dichloroethene		ug/l	1	1	1	1	1 J	1
1,4-Dioxane		ug/l	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29
Tetrachloroethene		ug/l	2	3	3	2	2	2
1,1,1-Trichloroethane		ug/l	600	650	680	580	490	700
Trichloroethene		ug/l	220	230	230	210	180	200
Xylene (Total)		ug/l	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
Vinyl chloride		ug/l	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
			Air Stripper Efficiency[4]					
VOCs			99.79%	99.94%	99.94%	99.96%	99.91%	99.92%

Notes:

[1]Non-detects are expressed as "ND < ##", where '##' is the laboratory method detection limit (MDL).

[2]'J' = Detection is approximate and is above the MDL, but below the laboratory limit of quantitation (LOQ).

[3]pH was measured on site, following standard method SM 4500 H+B using a YSI pH10A meter.

[4]Non-detects were assumed to be zero for the purposes of calculating overall efficiency.

[5]pH meter bulb was expired, measurement may be inaccurate.

Table 3-5 - Groundwater Treatment System Influent and Effluent Analytical Results
2019 Remedial Action Report
NYSDEC Site No. 336090

		Sample Date:	7/8/2019	8/5/2019	9/12/2019	10/10/2019	11/5/2019	12/10/2019	1/14/2020
		Process Flow Rate at Time of Sampling (gpm):	20.5	22.5	18.2	16.7	18.7	19.7	19.8
		Sample Location:	**System Effluent—Sample Port SP-202**						
Analysis	**Discharge Limit Daily Maximum**	**Units**	**Results**[1,2,3]						
Chloroethane	5	ug/l	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,1-Dichloroethane	5	ug/l	ND < 0.2	0.2 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,1-Dichloroethene	5	ug/l	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
cis-1,2-Dichloroethene	5	ug/l	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,4-Dioxane	Monitor	ug/l	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29
Tetrachloroethene	1	ug/l	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,1,1-Trichloroethane	5	ug/l	1	1	ND < 0.3	ND < 0.3	0.8 J	ND < 0.3	0.4 J
Trichloroethene	40	ug/l	0.6 J	0.6 J	0.3 J	ND < 0.2	0.4 J	0.2 J	0.4 J
Xylene (Total)	65	ug/l	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
Vinyl chloride	0.3	ug/l	ND < 0.0080	ND < 0.0080	ND < 0.0080	ND < 0.0080	0.0086 J	0.027	ND < 0.0080
Oil & Grease	15	mg/l	ND < 1.4	ND < 1.4	ND < 1.4	ND < 1.4	ND < 1.4	ND < 1.4	ND < 1.4
Total Suspended Solids	50	mg/l	ND < 1.00	ND < 1.00	ND < 1.00	ND < 1.00	ND < 1.00	ND < 1.00	ND < 1.00
pH[3]	6.5–8.5	S.U.	7.44[5]	8.28	8.28	8.11	8.12	8.18	8.16
		Sample Location:	**System Influent—Sample Port SP-200**						
Chloroethane		ug/l	ND < 0.2	ND < 0.2	ND < 0.4	ND < 0.4	ND < 0.2	ND < 0.2	ND < 0.2
1,1-Dichloroethane		ug/l	19	26	27	33	34	35	29
1,1-Dichloroethene		ug/l	7	8	8	50	12	13	11
cis-1,2-Dichloroethene		ug/l	0.8 J	1	0.9 J	0.9 J	1 J	1 J	1
1,4-Dioxane		ug/l	ND < 29	ND < 29	ND < 58	ND < 58	ND < 29	ND < 29	ND < 29
Tetrachloroethene		ug/l	2	2	2 J	2 J	2	2	2
1,1,1-Trichloroethane		ug/l	640	730	710	810	780	570	590
Trichloroethene		ug/l	150	190	150	160	190	190	170
Xylene (Total)		ug/l	ND < 1	ND < 1	ND < 3	ND < 3	ND < 1	ND < 1	ND < 1
Vinyl chloride		ug/l	ND < 0.2	ND < 0.2	ND < 0.4	ND < 0.4	ND < 0.2	ND < 0.2	ND < 0.2
			Air Stripper Efficiency[4]						
VOCs			99.91%	99.80%	99.97%	100.00%	99.95%	99.98%	99.95%

Notes:

[1]Non-detects are expressed as "ND < ##", where '##' is the laboratory method detection limit (MDL).

[2]'J' = Detection is approximate and is above the MDL, but below the laboratory limit of quantitation (LOQ).

[3]pH was measured on site, following standard method SM 4500 H+B using a YSI pH10A meter.

[4]Non-detects were assumed to be zero for the purposes of calculating overall efficiency.

[5]pH meter bulb was expired, measurement may be inaccurate.

Table 3-6 - Estimated Mass of VOC Removed from Containment Cell
2019 Remedial Action Report
NYSDEC Site No. 336090

Period:	1/15 - 2/6/19	2/6 - 3/5/19	3/5 - 4/1/19	4/1 - 5/6/19	5/6 - 6/3/19	6/3 - 7/8/19	7/8 - 8/5/19	8/5 - 9/12/19	9/12 - 10/10/19	10/10 - 11/5/19	11/5 - 12/10/19	12/10/19 - 1/14/20	TOTAL
Volume Extracted (gallons)	774278	880911	852241	1092418	849457	1019771	736852	1013977	694289	651087	937174	957189	**10459644**
Days of System Operation	21.8	27.0	27.4	35.0	28.0	35.0	28.0	37.6	28.0	26.0	35.0	35.4	**364.2**
Average Extraction Flowrate (gpm)	24.7	22.7	21.6	21.7	21.0	20.2	18.3	18.7	17.2	17.4	18.6	18.8	**19.9**
Analysis[2]	**Estimated Mass Removed (pounds)[1]**												
Chloroethane	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	**0.000**
1,1-Dichloroethane	0.171	0.195	0.174	0.210	0.174	0.191	0.138	0.224	0.174	0.182	0.270	0.256	**2.359**
1,1-Dichloroethene	0.158	0.221	0.206	0.082	0.174	0.200	0.046	0.068	0.168	0.168	0.098	0.096	**1.685**
cis-1,2-Dichloroethene	0.006	0.007	0.007	0.009	0.007	0.008	0.006	0.008	0.005	0.005	0.008	0.008	**0.085**
1,4-Dioxane	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	**0.000**
Tetrachloroethene	0.016	0.022	0.018	0.018	0.014	0.017	0.012	0.017	0.012	0.011	0.016	0.016	**0.189**
1,1,1-Trichloroethane	4.039	4.889	4.481	4.877	4.218	5.702	4.212	6.093	4.404	4.320	5.279	4.633	**57.146**
Trichloroethene	1.454	1.691	1.565	1.778	1.347	1.489	1.045	1.439	0.898	0.951	1.486	1.438	**16.580**
Xylene (Total)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	**0.000**
Vinyl chloride	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	**0.000**

TOTAL MASS REMOVED (lbs) 78

[1]Estimated mass removed was calculated using the average of the combined influent parameter concentrations reported at the beginning and end of each period. Results that were reported as non-detectable by the laboratory were assumed to be zero for the mass removal calculations.

[2]Only compounds detected during the reporting period are shown.

Table 3-7 - Summary of Potentiometric Measurements: 2019
2019 Remedial Action Report
NYSDEC Site No. 336090

Structure Name	Groundsurface Elevation (ft AMSL)	Measuring Point Elevation (ft AMSL)	5/7/2019		11/12/2019	
			Depth Below Measuring Point (ft)	Potentiometric Elevation (ft. AMSL)	Depth Below Measuring Point (ft)	Potentiometric Elevation (ft. AMSL)
J01-BR01 [5]	147.60	147.26	1.91	145.35	5.29	141.97
J01-BR02	147.43	147.22	-3.41	150.63	0.96	146.26
J01-UC01	146.99	146.63	1.18	145.45	4.86	141.77
J01-UC02	147.27	147.09	1.62	145.47	5.13	141.96
J02-BR01 [4]	157.51	157.23	8.21	149.02	12.88	144.35
J02-BR02 [4]	157.45	156.92	7.25	149.67	11.90	145.02
J02-UC01 [4]	157.38	157.11	7.76	149.35	12.65	144.46
J04-BR01	143.57	143.36	-0.46	143.82	2.41	140.95
J04-BR02 [5]	143.50	143.19	-1.10	144.29	2.13	141.06
J05-BR01	142.30	150.13 [3]	7.86	142.27	11.14	138.99
J05-BR02	142.51	150.46 [3]	7.34	143.12	11.24	139.22
J06-UC01	158.02	160.73 [2]	10.83	149.90	15.61	145.12
J06-UC02	158.02	157.69	8.93	148.76	13.92	143.77
J07-UC02	158.06	157.80	8.96	148.84	14.46	143.34
J08-UC01	158.10	160.77 [2]	12.37	148.40	18.26	142.51
J08-UC02	158.10	157.84	9.45	148.39	15.34	142.50
J11-BR01 [5]	143.50	143.17	2.31	140.86	5.29	137.88
J11-BR02 [5]	143.50	143.18	1.17	142.01	4.95	138.23
J11-UC01 [5]	143.30	142.86	2.85	140.01	4.64	138.22
J11-UC02 [5]	143.50	143.06	3.47	139.59	5.90	137.16
J12-BR01	136.70	140.02	2.03	137.99	3.80	136.22
J12-BR02	136.60	139.88	0.06	139.82	2.59	137.29
J13-BR01	136.70	137.91	-1.67	139.58	0.45	137.46
J13-BR02	136.40	137.93	-1.89	139.82	0.28	137.65
J13-UC02	136.50	138.38	0.67	137.71	2.04	136.34
J13-UC03	136.70	138.30	0.43	137.87	1.88	136.42
J14-BR01 [5]	141.80	141.48	2.38	139.10	4.39	137.09
J14-BR02 [5]	142.00	141.53	2.62	138.91	4.43	137.10
J14-UC01 [5]	141.70	141.21	2.23	138.98	4.13	137.08
J14-UC02 [5]	141.80	141.06	2.95	138.11	4.04	137.02
J15-UC01	135.60	137.55	0.70	136.85	1.92	135.63
J15-UC02	135.50	136.33	1.13	135.20	3.03	133.30
J16-UC01	133.90	135.09	1.11	133.98	2.15	132.94
J16-UC02	133.80	135.25	0.75	134.50	2.13	133.12
J17-UC01	136.20	135.88	3.46	132.42	3.89	131.99
J17-UC02	135.92	135.54	2.35	133.19	3.49	132.05
J17-BR01	136.10	135.48	0.94	134.54	2.23	133.25
J18-UC02	136.61	136.36	3.83	132.53	4.92	131.44
J18-UC03	136.55	136.19	3.64	132.55	4.67	131.52
J19-UC01	138.10	140.57	7.39	133.18	8.02	132.55
J19-UC02	138.10	140.36	7.33	133.03	8.74	131.62
J20-BR01	136.90	138.81	25.25	113.56	26.01	112.80
J20-BR02	136.90	138.88	17.74	121.14	18.82	120.06
J20-UC01	136.50	138.83	13.09	125.74	13.72	125.11
J20-UC02	136.30	138.66	12.95	125.71	13.55	125.11

Notes:
1) Artesian conditions are indicated by negative depth relative to the measuring point, as determined by installation of temporary riser extensions.
2) Well casings in J06-UC01 & J08-UC01 were raised and resurveyed in December 2015.
3) Well casings in J04-PZ-IN, J05-BR01, J05-BR02, J10-PZ-IN, MW-1D, and MW-1S were raised and resurveyed in Fall 2016.
4) The J02 well cluster was resurveyed in December 2016.
5) Wells J01-BR01, J04-BR02, MW-1S, MW-2, MW-2I, and well clusters J11 and J14 were resurveyed in September 2017.

Table 3-7 - Summary of Potentiometric Measurements: 2019
2019 Remedial Action Report
NYSDEC Site No. 336090

Structure Name	Groundsurface Elevation (ft AMSL)	Measuring Point Elevation (ft AMSL)	5/7/2019		11/12/2019	
			Depth Below Measuring Point (ft)	Potentiometric Elevation (ft. AMSL)	Depth Below Measuring Point (ft)	Potentiometric Elevation (ft. AMSL)
J21-UC01	141.90	145.09	16.09	129.00	16.77	128.32
J21-UC02	141.20	144.80	15.70	129.10	16.39	128.41
J22-BR01	139.40	142.04	7.72	134.32	9.43	132.61
J22-BR02	139.50	142.02	6.94	135.08	8.85	133.17
J23-UC01	142.84	142.73	2.10	140.63	3.93	138.80
J23-UC02	142.97	142.55	0.99	141.56	3.50	139.05
MW-1D	142.94	144.69 [3]	2.49	142.20	6.18	138.51
MW-1S [5]	145.60	145.25	3.75	141.50	6.77	138.48
MW-2 [5]	142.70	142.59	2.18	140.41	3.81	138.78
MW-2I [5]	142.70	142.49	1.18	141.31	3.60	138.89
RIZ-7	146.78	146.24	1.44	144.80	4.44	141.80
RIZ-19	158.00	157.57	8.51	149.06	14.18	143.39
RS-01	120.00	122.74	5.11	117.63	5.28	117.46
RS-02	134.00	133.36	3.45	129.91	3.50	129.86
RS-03	132.00	136.00	-	-	-	-
RS-04	134.00	137.68	4.47	133.21	4.58	133.10
RS-05	134.00	136.49	4.49	132.00	4.18	132.31
RS-06	136.00	138.90	4.84	134.06	Dry	-
RS-07	136.00	139.61	4.39	135.22	4.47	135.14
RS-08	145.00	146.20	3.26	142.94	-	-
RS-12A	115.30	118.78	3.80	114.98	3.83	114.95
J04-PZ-IN	-	150.84 [3]	12.01	138.83	15.15	135.69
J04-PZ-OUT	-	146.69	5.18	141.51	7.32	139.37
J05-PZ-IN	-	150.58	11.67	138.91	16.27	134.31
J05-PZ-OUT	-	145.18	4.49	140.69	6.81	138.37
J06-PZ-IN	-	160.92	17.99	142.93	21.63	139.29
J07-PZ-IN	-	161.02	18.32	142.70	22.08	138.94
J07-PZ-OUT	-	160.97	11.95	149.02	17.51	143.46
J08-PZ-IN	-	161.03	18.44	142.59	22.20	138.83
J09-PZ-IN	-	160.79	19.92	140.87	24.66	136.13
J09-PZ-OUT	-	160.87	14.84	146.03	20.08	140.79
J10-PZ-IN	-	158.56 [3]	16.29	142.27	19.63	138.93
J10-PZ-OUT	-	155.75	8.38	147.37	12.93	142.82

Notes:
1) Artesian conditions are indicated by negative depth relative to the measuring point, as determined by installation of temporary riser extensions.
2) Well casings in J06-UC01 & J08-UC01 were raised and resurveyed in December 2015.
3) Well casings in J04-PZ-IN, J05-BR01, J05-BR02, J10-PZ-IN, MW-1D, and MW-1S were raised and resurveyed in Fall 2016.
4) The J02 well cluster was resurveyed in December 2016.
5) Wells J01-BR01, J04-BR02, MW-1S, MW-2, MW-2I, and well clusters J11 and J14 were resurveyed in September 2017.

Table 3-8 - Summary of Groundwater Analytical Results: 2019
2019 Remedial Action Report
NYSDEC Site No. 336090

		Sample Location ID	J01-BR01	J01-BR01	J01-BR02	J01-BR02	J01-UC01	J01-UC01	J01-UC02	J01-UC02	J02-BR01	J02-BR01	J02-BR02	J02-BR02	J02-UC01
		Date	5/8/2019	11/13/2019	5/8/2019	11/13/2019	5/8/2019	11/13/2019	5/8/2019	11/13/2019	5/13/2019	11/13/2019	5/13/2019	11/12/2019	5/13/2019
Compound (µg/L)	**NYSDEC Standards**	**Source**													
1,1,1-Trichloroethane	5	POC	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	2	1 J	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
1,1-Dichloroethane	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.3 J	0.3 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,2-Dichloroethane	0.6	GA Standard	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
1,1-Dichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Tetrachloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	13	4	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Trichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	4	2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
cis-1,2-Dichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	1	0.6 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
trans-1,2-Dichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.2 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Vinyl chloride	2	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Acetone	50	GA Guidance	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7
Benzene	1	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Carbon disulfide	120	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Chloroform	7	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,2-Dichlorobenzene	3	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Dichloromethane	5	GA Standard	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
Ethyl benzene	5	POC	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4
Freon-113	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
2-Butanone (MEK)	50	GA Guidance	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
Naphthalene	10	GA Guidance	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
Toluene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Xylenes, Total	5	POC	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
1,4-Dioxane	-	-	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29

Notes:

1. ND < ## = Compound not detected above laboratory Method Detection Limit (MDL), limit provided.
2. J = Value is estimated by the laboratory.
3. POC = NYSDEC Classification "Principal Organic Contaminant" for groundwater.
4. GA Standard = NYSDEC GA Standard.
5. GA Guidance = NYSDEC GA Guidance Value
6. "--" = No established NYSDEC GA Standard or Guidance

Table 3-8 - Summary of Groundwater Analytical Results: 2019
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NYSDEC Site No. 336090

		Sample Location ID	J02-UC01	J04-BR01	J04-BR01	J04-BR02	J04-BR02	J05-BR01	J05-BR01	J05-BR02	J05-BR02	J05-BR02	J05-BR02	J06-UC01	J06-UC01
		Date	11/12/2019	5/9/2019	11/13/2019	5/9/2019	11/13/2019	5/9/2019	11/15/2019	5/9/2019	5/9/2019	11/15/2019	11/15/2019	5/10/2019	11/15/2019
Compound (µg/L)	**NYSDEC Standards**	**Source**									Duplicate		Duplicate		
1,1,1-Trichloroethane	5	POC	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	0.8 J	0.9 J	0.6 J	0.6 J	ND < 0.3	ND < 0.3
1,1-Dichloroethane	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	2	1	2	2	1	1	ND < 0.2	ND < 0.2
1,2-Dichloroethane	0.6	GA Standard	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
1,1-Dichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.4 J	0.4 J	0.2 J	0.3 J	ND < 0.2	ND < 0.2
Tetrachloroethene	5	POC	0.2 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Trichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.5 J	0.4 J	11	11	7	7	0.5 J	0.7 J
cis-1,2-Dichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.9 J	0.9 J	1	1	ND < 0.2	ND < 0.2
trans-1,2-Dichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Vinyl chloride	2	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.4 J	0.4 J	ND < 0.2	ND < 0.2
Acetone	50	GA Guidance	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7
Benzene	1	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Carbon disulfide	120	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Chloroform	7	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,2-Dichlorobenzene	3	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Dichloromethane	5	GA Standard	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
Ethyl benzene	5	POC	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4
Freon-113	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
2-Butanone (MEK)	50	GA Guidance	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
Naphthalene	10	GA Guidance	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
Toluene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Xylenes, Total	5	POC	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
1,4-Dioxane	-	-	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29

Notes:

1. ND < ## = Compound not detected above laboratory Method Detection Limit (MDL), limit provided.
2. J = Value is estimated by the laboratory.
3. POC = NYSDEC Classification "Principal Organic Contaminant" for groundwater.
4. GA Standard = NYSDEC GA Standard.
5. GA Guidance = NYSDEC GA Guidance Value
6. "--" = No established NYSDEC GA Standard or Guidance

Table 3-8 - Summary of Groundwater Analytical Results: 2019
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		Sample Location ID	J06-UC02	J06-UC02	J07-UC02	J07-UC02	J08-UC01	J08-UC01	J08-UC02	J08-UC02	J11-BR01	J11-BR01	J11-BR02	J11-BR02	J11-UC01
		Date	5/10/2019	11/19/2019	5/10/2019	11/19/2019	5/7/2019	11/15/2019	5/7/2019	11/15/2019	5/11/2019	11/17/2019	5/11/2019	11/17/2019	5/11/2019
Compound (µg/L)	**NYSDEC Standards**	**Source**													
1,1,1-Trichloroethane	5	POC	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
1,1-Dichloroethane	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,2-Dichloroethane	0.6	GA Standard	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
1,1-Dichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Tetrachloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Trichloroethene	5	POC	ND < 0.2	ND < 0.2	1 J	2	0.7 J	1	2	2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
cis-1,2-Dichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
trans-1,2-Dichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Vinyl chloride	2	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Acetone	50	GA Guidance	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7
Benzene	1	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Carbon disulfide	120	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Chloroform	7	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,2-Dichlorobenzene	3	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Dichloromethane	5	GA Standard	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
Ethyl benzene	5	POC	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4
Freon-113	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
2-Butanone (MEK)	50	GA Guidance	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
Naphthalene	10	GA Guidance	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
Toluene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Xylenes, Total	5	POC	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
1,4-Dioxane	-	-	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29

Notes:

1. ND < ## = Compound not detected above laboratory Method Detection Limit (MDL), limit provided.
2. J = Value is estimated by the laboratory.
3. POC = NYSDEC Classification "Principal Organic Contaminant" for groundwater.
4. GA Standard = NYSDEC GA Standard.
5. GA Guidance = NYSDEC GA Guidance Value
6. "--" = No established NYSDEC GA Standard or Guidance

Table 3-8 - Summary of Groundwater Analytical Results: 2019
2019 Remedial Action Report
NYSDEC Site No. 336090

		Sample Location ID	J11-UC01	J11-UC02	J11-UC02	J12-BR01	J12-BR01	J12-BR02	J12-BR02	J13-BR01	J13-BR01	J13-BR02	J13-BR02	J13-UC02	J13-UC02
		Date	11/17/2019	5/11/2019	11/17/2019	5/9/2019	11/14/2019	5/9/2019	11/14/2019	5/9/2019	11/14/2019	5/9/2019	11/14/2019	5/9/2019	11/14/2019
Compound (µg/L)	**NYSDEC Standards**	**Source**													
1,1,1-Trichloroethane	5	POC	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	1	1	ND < 0.3	ND < 0.3	13	10
1,1-Dichloroethane	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	4	3	ND < 0.2	ND < 0.2	2	1
1,2-Dichloroethane	0.6	GA Standard	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
1,1-Dichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.9 J	1	ND < 0.2	ND < 0.2	2	1 J
Tetrachloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	2	2
Trichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	5	5	ND < 0.2	ND < 0.2	140	100
cis-1,2-Dichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	1	1
trans-1,2-Dichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Vinyl chloride	2	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Acetone	50	GA Guidance	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7
Benzene	1	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Carbon disulfide	120	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Chloroform	7	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,2-Dichlorobenzene	3	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Dichloromethane	5	GA Standard	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
Ethyl benzene	5	POC	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4
Freon-113	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
2-Butanone (MEK)	50	GA Guidance	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
Naphthalene	10	GA Guidance	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
Toluene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Xylenes, Total	5	POC	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
1,4-Dioxane	-	-	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29

Notes:

1. ND < ## = Compound not detected above laboratory Method Detection Limit (MDL), limit provided.
2. J = Value is estimated by the laboratory.
3. POC = NYSDEC Classification "Principal Organic Contaminant" for groundwater.
4. GA Standard = NYSDEC GA Standard.
5. GA Guidance = NYSDEC GA Guidance Value
6. "--" = No established NYSDEC GA Standard or Guidance

Table 3-8 - Summary of Groundwater Analytical Results: 2019
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NYSDEC Site No. 336090

		Sample Location ID	J13-UC03	J13-UC03	J14-BR01	J14-BR01	J14-BR02	J14-BR02	J14-UC01	J14-UC01	J14-UC02	J14-UC02	J15-UC01	J15-UC01	J15-UC02
		Date	5/9/2019	11/14/2019	5/8/2019	11/14/2019	5/8/2019	11/14/2019	5/8/2019	11/14/2019	5/8/2019	11/14/2019	5/7/2019	11/14/2019	5/7/2019
Compound (µg/L)	**NYSDEC Standards**	**Source**													
1,1,1-Trichloroethane	5	POC	6	7	3	4	ND < 0.3	ND < 0.3	ND < 3	0.7 J	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
1,1-Dichloroethane	5	POC	3	3	0.6 J	0.8 J	ND < 0.2	ND < 0.2	ND < 2	0.3 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,2-Dichloroethane	0.6	GA Standard	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
1,1-Dichloroethene	5	POC	0.8 J	0.7 J	ND < 0.2	0.2 J	ND < 0.2	ND < 0.2	ND < 2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Tetrachloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Trichloroethene	5	POC	1	2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
cis-1,2-Dichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
trans-1,2-Dichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Vinyl chloride	2	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Acetone	50	GA Guidance	ND < 0.7	ND < 0.7	1 J	ND < 0.7	ND < 0.7	ND < 0.7	ND < 7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7
Benzene	1	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Carbon disulfide	120	GA Standard	ND < 0.2	ND < 0.2	0.2 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Chloroform	7	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,2-Dichlorobenzene	3	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Dichloromethane	5	GA Standard	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
Ethyl benzene	5	POC	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4
Freon-113	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
2-Butanone (MEK)	50	GA Guidance	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
Naphthalene	10	GA Guidance	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 10	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
Toluene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Xylenes, Total	5	POC	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 10	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
1,4-Dioxane	-	-	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 290	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29

Notes:

1. ND < ## = Compound not detected above laboratory Method Detection Limit (MDL), limit provided.
2. J = Value is estimated by the laboratory.
3. POC = NYSDEC Classification "Principal Organic Contaminant" for groundwater.
4. GA Standard = NYSDEC GA Standard.
5. GA Guidance = NYSDEC GA Guidance Value
6. "--" = No established NYSDEC GA Standard or Guidance

Table 3-8 - Summary of Groundwater Analytical Results: 2019
2019 Remedial Action Report
NYSDEC Site No. 336090

		Sample Location ID	J15-UC02	J16-UC01	J16-UC01	J16-UC02	J16-UC02	J17-BR01	J17-BR01	J17-UC01	J17-UC01	J17-UC02	J17-UC02	J18-UC02	J18-UC02
		Date	11/14/2019	5/7/2019	11/13/2019	5/7/2019	11/13/2019	5/13/2019	11/18/2019	5/10/2019	11/13/2019	5/13/2019	11/12/2019	5/8/2019	11/14/2019
Compound (µg/L)	**NYSDEC Standards**	**Source**													
1,1,1-Trichloroethane	5	POC	ND < 0.3	20	15	14	11	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	15	19
1,1-Dichloroethane	5	POC	ND < 0.2	0.6 J	0.5 J	0.6 J	0.6 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.3 J	0.4 J
1,2-Dichloroethane	0.6	GA Standard	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
1,1-Dichloroethene	5	POC	ND < 0.2	1	1	0.9 J	0.9 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.9 J	1
Tetrachloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Trichloroethene	5	POC	ND < 0.2	36	38	45	41	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	36	36
cis-1,2-Dichloroethene	5	POC	ND < 0.2	0.4 J	0.6 J	ND < 0.2	0.2 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
trans-1,2-Dichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Vinyl chloride	2	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Acetone	50	GA Guidance	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7
Benzene	1	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Carbon disulfide	120	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Chloroform	7	GA Standard	ND < 0.2	ND < 0.2	0.7 J	ND < 0.2	0.5 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	1	ND < 0.2	0.6 J
1,2-Dichlorobenzene	3	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Dichloromethane	5	GA Standard	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
Ethyl benzene	5	POC	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4
Freon-113	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
2-Butanone (MEK)	50	GA Guidance	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
Naphthalene	10	GA Guidance	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
Toluene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Xylenes, Total	5	POC	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
1,4-Dioxane	-	-	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29

Notes:

1. ND < ## = Compound not detected above laboratory Method Detection Limit (MDL), limit provided.
2. J = Value is estimated by the laboratory.
3. POC = NYSDEC Classification "Principal Organic Contaminant" for groundwater.
4. GA Standard = NYSDEC GA Standard.
5. GA Guidance = NYSDEC GA Guidance Value
6. "--" = No established NYSDEC GA Standard or Guidance

Table 3-8 - Summary of Groundwater Analytical Results: 2019
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NYSDEC Site No. 336090

		Sample Location ID	J18-UC03	J18-UC03	J19-UC01	J19-UC01	J19-UC02	J19-UC02	J20-BR01	J20-BR01	J20-BR02	J20-BR02	J20-UC01	J20-UC01	J20-UC02
		Date	5/7/2019	11/13/2019	5/8/2019	11/16/2019	5/12/2019	11/16/2019	5/12/2019	11/15/2019	5/12/2019	11/15/2019	5/12/2019	11/15/2019	5/12/2019
Compound (µg/L)	**NYSDEC Standards**	**Source**													
1,1,1-Trichloroethane	5	POC	5	4	ND < 0.3	ND < 0.3	1	0.8 J	ND < 0.3	ND < 0.3	1	1	ND < 0.3	ND < 0.3	ND < 0.3
1,1-Dichloroethane	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	0.3 J	0.5 J	0.4 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.5 J	0.4 J	0.8 J
1,2-Dichloroethane	0.6	GA Standard	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
1,1-Dichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Tetrachloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Trichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.9 J	1	0.5 J
cis-1,2-Dichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.7 J	0.6 J	0.8 J
trans-1,2-Dichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.4 J
Vinyl chloride	2	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Acetone	50	GA Guidance	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7
Benzene	1	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Carbon disulfide	120	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Chloroform	7	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,2-Dichlorobenzene	3	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Dichloromethane	5	GA Standard	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
Ethyl benzene	5	POC	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4
Freon-113	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
2-Butanone (MEK)	50	GA Guidance	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
Naphthalene	10	GA Guidance	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
Toluene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Xylenes, Total	5	POC	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
1,4-Dioxane	-	-	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29

Notes:

1. ND < ## = Compound not detected above laboratory Method Detection Limit (MDL), limit provided.
2. J = Value is estimated by the laboratory.
3. POC = NYSDEC Classification "Principal Organic Contaminant" for groundwater.
4. GA Standard = NYSDEC GA Standard.
5. GA Guidance = NYSDEC GA Guidance Value
6. "--" = No established NYSDEC GA Standard or Guidance

Table 3-8 - Summary of Groundwater Analytical Results: 2019
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NYSDEC Site No. 336090

		Sample Location ID	J20-UC02	J21-UC01	J21-UC01	J21-UC02	J21-UC02	J22-BR01	J22-BR01	J22-BR02	J22-BR02	J23-UC01	J23-UC01	J23-UC02	J23-UC02
		Date	11/15/2019	5/7/2019	11/13/2019	5/7/2019	11/13/2019	5/10/2019	11/16/2019	5/10/2019	11/16/2019	5/9/2019	11/18/2019	5/9/2019	11/18/2019
Compound (µg/L)	**NYSDEC Standards**	**Source**													
1,1,1-Trichloroethane	5	POC	ND < 0.3	0.6 J	1	0.3 J	0.3 J	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	260	230	140	130
1,1-Dichloroethane	5	POC	0.9 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.9 J	0.9 J	ND < 0.2	ND < 0.2
1,2-Dichloroethane	0.6	GA Standard	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
1,1-Dichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	19	19	9	9
Tetrachloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	4	4	5	4
Trichloroethene	5	POC	0.4 J	0.8 J	1 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	460	460	550	530
cis-1,2-Dichloroethene	5	POC	0.8 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	2	1	0.8 J	0.7 J
trans-1,2-Dichloroethene	5	POC	0.4 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Vinyl chloride	2	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Acetone	50	GA Guidance	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7
Benzene	1	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Carbon disulfide	120	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Chloroform	7	GA Standard	ND < 0.2	ND < 0.2	0.3 J	ND < 0.2	0.3 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,2-Dichlorobenzene	3	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Dichloromethane	5	GA Standard	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
Ethyl benzene	5	POC	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4
Freon-113	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	1 J	0.9 J	0.4 J	0.4 J
2-Butanone (MEK)	50	GA Guidance	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
Naphthalene	10	GA Guidance	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
Toluene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Xylenes, Total	5	POC	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
1,4-Dioxane	-	-	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29

Notes:

1. ND < ## = Compound not detected above laboratory Method Detection Limit (MDL), limit provided.
2. J = Value is estimated by the laboratory.
3. POC = NYSDEC Classification "Principal Organic Contaminant" for groundwater.
4. GA Standard = NYSDEC GA Standard.
5. GA Guidance = NYSDEC GA Guidance Value
6. "--" = No established NYSDEC GA Standard or Guidance

Table 3-8 - Summary of Groundwater Analytical Results: 2019
2019 Remedial Action Report
NYSDEC Site No. 336090

		Sample Location ID	MW-1D	MW-1D	MW-1S	MW-1S	MW-1S	MW-1S	MW-2	MW-2	MW-2	MW-2	MW-2I	MW-2I	RIZ-19
		Date	5/11/2019	11/18/2019	5/11/2019	5/11/2019	11/18/2019	11/18/2019	5/8/2019	5/8/2019	11/17/2019	11/17/2019	5/8/2019	11/17/2019	5/12/2019
Compound (µg/L)	**NYSDEC Standards**	**Source**				Duplicate		Duplicate		Duplicate		Duplicate			
1,1,1-Trichloroethane	5	POC	0.7 J	1	ND < 0.3	ND < 0.3	1	1	66	58	60	58	ND < 0.3	2	ND < 0.3
1,1-Dichloroethane	5	POC	1	1	ND < 0.2	ND < 0.2	0.4 J	0.4 J	2	1	1	1	ND < 0.2	3	ND < 0.2
1,2-Dichloroethane	0.6	GA Standard	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
1,1-Dichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.4 J	0.4 J	7	7	7	7	ND < 0.2	0.4 J	ND < 0.2
Tetrachloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	3	3	3	3	ND < 0.2	ND < 0.2	0.8 J
Trichloroethene	5	POC	1	1	0.7 J	0.4 J	6	6	340	320	360	360	3	8	5
cis-1,2-Dichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	1	1	17	15	16	16	0.4 J	5	ND < 0.2
trans-1,2-Dichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.2 J	0.2 J	ND < 0.2	0.2 J	ND < 0.2	4	ND < 0.2
Vinyl chloride	2	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	1	ND < 0.2
Acetone	50	GA Guidance	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7
Benzene	1	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Carbon disulfide	120	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Chloroform	7	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,2-Dichlorobenzene	3	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Dichloromethane	5	GA Standard	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
Ethyl benzene	5	POC	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4
Freon-113	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.3 J	ND < 0.2	ND < 0.2	0.2 J	ND < 0.2	ND < 0.2	ND < 0.2
2-Butanone (MEK)	50	GA Guidance	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
Naphthalene	10	GA Guidance	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
Toluene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Xylenes, Total	5	POC	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
1,4-Dioxane	-	-	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29

Notes:

1. ND < ## = Compound not detected above laboratory Method Detection Limit (MDL), limit provided.
2. J = Value is estimated by the laboratory.
3. POC = NYSDEC Classification "Principal Organic Contaminant" for groundwater.
4. GA Standard = NYSDEC GA Standard.
5. GA Guidance = NYSDEC GA Guidance Value
6. "--" = No established NYSDEC GA Standard or Guidance

Table 3-8 - Summary of Groundwater Analytical Results: 2019
2019 Remedial Action Report
NYSDEC Site No. 336090

		Sample Location ID	RIZ-19	RIZ-7	RIZ-7
		Date	11/19/2019	5/9/2019	11/16/2019
Compound (µg/L)	**NYSDEC Standards**	**Source**			
1,1,1-Trichloroethane	5	POC	ND < 0.3	ND < 0.3	ND < 0.3
1,1-Dichloroethane	5	POC	ND < 0.2	ND < 0.2	ND < 0.2
1,2-Dichloroethane	0.6	GA Standard	ND < 0.3	ND < 0.3	ND < 0.3
1,1-Dichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2
Tetrachloroethene	5	POC	0.4 J	2	0.5 J
Trichloroethene	5	POC	1	2	1
cis-1,2-Dichloroethene	5	POC	ND < 0.2	0.3 J	0.4 J
trans-1,2-Dichloroethene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2
Vinyl chloride	2	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2
Acetone	50	GA Guidance	ND < 0.7	ND < 0.7	ND < 0.7
Benzene	1	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2
Carbon disulfide	120	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2
Chloroform	7	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2
1,2-Dichlorobenzene	3	GA Standard	ND < 0.2	ND < 0.2	ND < 0.2
Dichloromethane	5	GA Standard	ND < 0.3	ND < 0.3	ND < 0.3
Ethyl benzene	5	POC	ND < 0.4	ND < 0.4	ND < 0.4
Freon-113	5	POC	ND < 0.2	ND < 0.2	ND < 0.2
2-Butanone (MEK)	50	GA Guidance	ND < 0.3	ND < 0.3	ND < 0.3
Naphthalene	10	GA Guidance	ND < 1	ND < 1	ND < 1
Toluene	5	POC	ND < 0.2	ND < 0.2	ND < 0.2
Xylenes, Total	5	POC	ND < 1	ND < 1	ND < 1
1,4-Dioxane	-	-	ND < 29	ND < 29	ND < 29

Notes:
1. ND < ## = Compound not detected above laboratory Method Detection Limit (MDL), limit provided.
2. J = Value is estimated by the laboratory.
3. POC = NYSDEC Classification "Principal Organic Contaminant" for groundwater.
4. GA Standard = NYSDEC GA Standard.
5. GA Guidance = NYSDEC GA Guidance Value
6. "--" = No established NYSDEC GA Standard or Guidance

Table 3-9 - Summary of Surface Water Analytical Results: 2019
2019 Remedial Action Report
NYSDEC Site No. 336090

Sample Location ID		RS-01	RS-01	RS-02	RS-02	RS-03	RS-03	RS-03	RS-03	RS-04	RS-04	RS-05	RS-05	RS-06
Date		5/6/2019	11/12/2019	5/6/2019	11/12/2019	5/6/2019	5/6/2019	11/12/2019	11/12/2019	5/6/2019	11/11/2019	5/6/2019	11/11/2019	5/6/2019
Compound (µg/L)	NYSDEC Class C Standard or Guidance Value						Duplicate		Duplicate					
1,1,1-Trichloroethane	-	ND < 0.3	0.6 J	ND < 0.3	0.6 J	2 J	2 J	3 J	2 J	3	6	2	2	ND < 0.3
1,1-Dichloroethane	-	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.5 J	0.5 J	0.8 J	0.8 J	0.7 J	0.8 J	0.6 J	0.8 J	ND < 0.2
1,2-Dichloroethane	-	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
1,1-Dichloroethene	-	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.3 J	0.3 J	ND < 0.2	0.5 J	ND < 0.2	0.2 J	ND < 0.2
Tetrachloroethene	1	ND < 0.2	ND < 0.2	0.2 J	ND < 0.2	0.9 J	0.9 J	1	1	0.3 J	ND < 0.2	1	1	ND < 0.2
Trichloroethene	40	0.9 J	0.8 J	2	2	8	8	12	10	6	22	8	11	ND < 0.2
cis-1,2-Dichloroethene	-	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.5 J	0.5 J	1 J	1 J	0.2 J	0.8 J	1 J	1	ND < 0.2
trans-1,2-Dichloroethene	-	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.2 J	ND < 0.2	ND < 0.2	ND < 0.2
Vinyl chloride	-	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Acetone	-	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	3 J	ND < 0.7	ND < 0.7	ND < 0.7
Benzene	210	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Carbon disulfide	-	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Chloroform	-	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,2-Dichlorobenzene	5	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Dichloromethane	200	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
Ethyl benzene	17	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4
Freon-113	-	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
2-Butanone (MEK)	-	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
Naphthalene	13	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
Toluene	6000	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Xylenes, Total	65	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
1,4-Dioxane	-	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29

Notes:
1. "-" = No Class C NYSDEC Standard or Guidance Value.
2. ND < ## = Compound not detected above laboratory Method Detection Limit (MDL).
3. J = indicates value is estimated by the laboratory.

Table 3-9 - Summary of Surface Water Analytical Results: 2019
2019 Remedial Action Report
NYSDEC Site No. 336090

	Sample Location ID	RS-07	RS-07	RS-08	RS-08	RS-09	RS-09	RS-10	RS-10	RS-11	RS-11	RS-12	RS-12A	RS-13
	Date	5/6/2019	11/11/2019	5/6/2019	11/11/2019	5/6/2019	11/12/2019	5/6/2019	11/12/2019	5/6/2019	11/12/2019	5/6/2019	11/12/2019	5/6/2019
Compound (µg/L)	**NYSDEC Class C Standard or Guidance Value**													
1,1,1-Trichloroethane	-	0.4 J	0.4 J	ND < 0.3	ND < 0.3	ND < 0.3	0.5 J	ND < 0.3	0.6 J	0.3 J	0.4 J	ND < 0.3	0.5 J	2 J
1,1-Dichloroethane	-	0.3 J	0.7 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.2 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.6 J
1,2-Dichloroethane	-	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
1,1-Dichloroethene	-	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Tetrachloroethene	1	0.9 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.2 J	0.3 J	ND < 0.2	ND < 0.2	ND < 0.2	1 J
Trichloroethene	40	0.5 J	1	ND < 0.2	ND < 0.2	1	1	1	3	1	2	0.4 J	0.3 J	8
cis-1,2-Dichloroethene	-	1	2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.2 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.6 J
trans-1,2-Dichloroethene	-	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Vinyl chloride	-	0.2 J	0.6 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Acetone	-	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	0.9 J	ND < 0.7	8 J	ND < 0.7	ND < 0.7	ND < 0.7
Benzene	210	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Carbon disulfide	-	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Chloroform	-	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,2-Dichlorobenzene	5	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Dichloromethane	200	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
Ethyl benzene	17	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4
Freon-113	-	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
2-Butanone (MEK)	-	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	1 J	ND < 0.3	ND < 0.3	ND < 0.3
Naphthalene	13	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
Toluene	6000	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.3 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Xylenes, Total	65	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
1,4-Dioxane	-	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29

Notes:
1. "-" = No Class C NYSDEC Standard or Guidance Value.
2. ND < ## = Compound not detected above laboratory Method Detection Limit (MDL).
3. J = indicates value is estimated by the laboratory.

Table 3-9 - Summary of Surface Water Analytical Results: 2019
2019 Remedial Action Report
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Sample Location ID		RS-13	RS-14	RS-14	RS-15	RS-15	RS-16
Date		11/12/2019	5/6/2019	11/11/2019	5/6/2019	11/11/2019	5/6/2019
Compound (µg/L)	NYSDEC Class C Standard or Guidance Value						
1,1,1-Trichloroethane	-	3	ND < 0.3	ND < 0.3	1	2	ND < 0.3
1,1-Dichloroethane	-	0.8 J	ND < 0.2	ND < 0.2	0.4 J	0.5 J	ND < 0.2
1,2-Dichloroethane	-	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
1,1-Dichloroethene	-	0.3 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Tetrachloroethene	1	1	1	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Trichloroethene	40	13	0.6 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
cis-1,2-Dichloroethene	-	1	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
trans-1,2-Dichloroethene	-	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Vinyl chloride	-	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Acetone	-	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7
Benzene	210	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Carbon disulfide	-	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Chloroform	-	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
1,2-Dichlorobenzene	5	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Dichloromethane	200	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
Ethyl benzene	17	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4
Freon-113	-	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
2-Butanone (MEK)	-	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
Naphthalene	13	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
Toluene	6000	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Xylenes, Total	65	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
1,4-Dioxane	-	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29

Notes:
1. "-" = No Class C NYSDEC Standard or Guidance Value.
2. ND < ## = Compound not detected above laboratory Method Detection Limit (MDL).
3. J = indicates value is estimated by the laboratory.

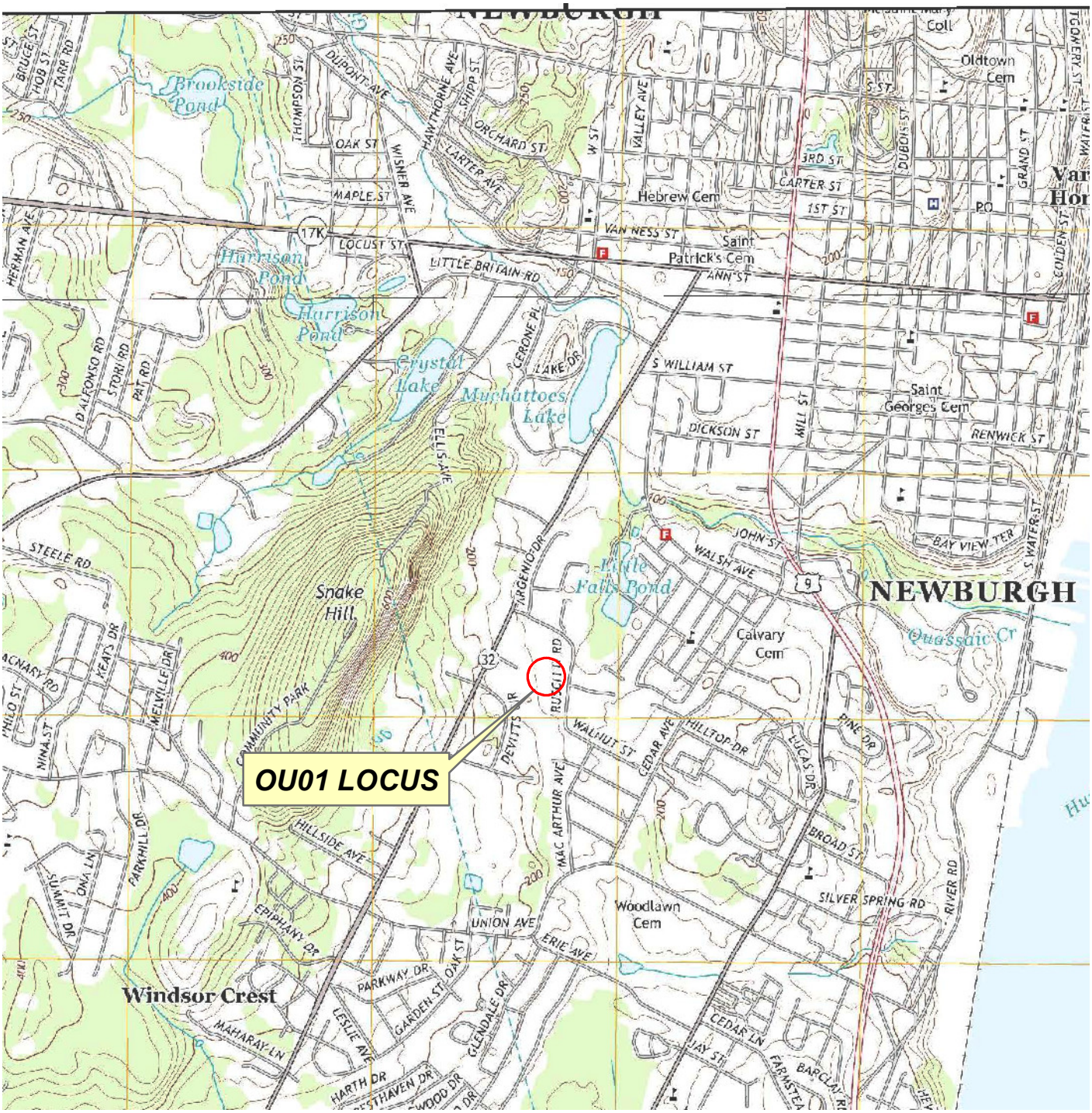
Table 3-10 - Summary of Sediment Pore Water Analytical Results: 2019
2019 Remedial Action Report
NYSDEC Site No. 336090

Sample Location ID	Diff-01	Diff-01	Diff-01	Diff-01	Diff-02	Diff-02	Diff-03	Diff-03	Diff-04	Diff-04	Diff-05	Diff-05	Diff-06	Diff-06	Diff-07	Diff-07
Date	5/21/2019	5/21/2019	11/26/2019	11/26/2019	5/21/2019	11/26/2019	5/21/2019	11/26/2019	5/21/2019	11/26/2019	5/21/2019	11/26/2019	5/21/2019	11/26/2019	5/21/2019	11/26/2019
Compound (µg/l)		Duplicate		Duplicate												
1,1,1-Trichloroethane	9	12	ND < 0.3	ND < 0.3	0.6 J	ND < 0.3	ND < 0.3	ND < 0.3	2	ND < 0.3	4	2	2	3	1	ND < 0.3
1,1-Dichloroethane	9	12	1	0.9 J	5	0.8 J	0.5 J	0.6 J	3	2	1	0.7 J	0.9 J	ND < 0.2	0.6 J	0.4 J
1,2-Dichloroethane	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
1,1-Dichloroethene	1	2	ND < 0.2	ND < 0.2	0.9 J	ND < 0.2	ND < 0.2	ND < 0.2	0.5 J	ND < 0.2	0.3 J	0.4 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Tetrachloroethene	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.4 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Trichloroethene	4	5	ND < 0.2	ND < 0.2	2	ND < 0.2	ND < 0.2	ND < 0.2	0.8 J	0.2 J	5	3	1	1	0.6 J	ND < 0.2
cis-1,2-Dichloroethene	18	25	0.3 J	ND < 0.2	23	0.2 J	0.3 J	0.3 J	0.3 J	ND < 0.2	3	5	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
trans-1,2-Dichloroethene	0.3 J	0.3 J	ND < 0.2	ND < 0.2	0.6 J	0.7 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Vinyl chloride	4	5	ND < 0.2	ND < 0.2	7	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Acetone	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7	ND < 0.7
Benzene	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Carbon disulfide	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Chloroform	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.3 J	ND < 0.2	ND < 0.2
1,2-Dichlorobenzene	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Dichloromethane	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
Ethyl benzene	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4	ND < 0.4
Freon-113	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
2-Butanone (MEK)	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3	ND < 0.3
Naphthalene	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
Toluene	0.6 J	0.4 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	0.4 J	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2	ND < 0.2
Xylenes, Total	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1
1,4-Dioxane	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29	ND < 29

Notes:
ND < ## = Compound not detected above Laboratory Method Detection Limit (MDL), limit provided.
J = Indicates value is estimated by the laboratory.
R = Result rejected during Data Usability Summary Report preparation.

FIGURES

\\vhb\gis\proj\Montpelier\58300.00 ADC New Windsor NY\gis\MXDs\OU01_RA_Annual\2018\Figure 1-1 - Site Location Map - OU01.mxd



N

1 0.5 0 1

MILES

1,000 0 1,000 2,000 3,000 4,000 5,000 6,000 7,000

FEET

CONTOUR INTERVAL: 20 FEET

NY

MAP LOCATION

BASE MAP: USGS 7.5 Minute Topographic Quadrangles Cornwall-on-Hudson and Newburgh, 2013

FIGURE 1-1: SITE LOCATION MAP: OU01
FORMER DENNISON/MONARCH SYSTEMS FACILITY
NEW WINDSOR, NEW YORK

VHB Engineering, Surveying, Landscape and Geology, P.C.
100 Great Oaks Boulevard, Suite 118
Albany, New York 12203

Drawn by: DEB Date: 12/20/18
Reviewed by: GAK Date: 01/11/19
Scale: 1:24,000 Project: 58300.00

\\vhb\gis\proj\Montpelier\58300.00 ADC New Windsor NY\gis\MXDs\OU01_RA_Annual\2019\Figure 1-2 - Site Plan - OU01.mxd



Sources:
Aerial photo taken in August 2017 (USDA Farm Service Agency - NAIP).

0 25 50 75 100
Scale in Feet

N

VHB Engineering, Surveying, Landscape and Geology, P.C.
100 Great Oaks Boulevard, Suite 118
Albany, New York 12203

Drawn by: TEH Date: 05/01/18
Reviewed by: GWL Date: 05/01/18
Scale:1 " = 60 feet Project: 58300.00

FIGURE 1-2: SITE PLAN: OU01
FORMER DENNISON/MONARCH SYSTEMS FACILITY
NEW WINDSOR, NEW YORK

\\vhb\gis\proj\Montpelier\58300.00 ADC New Windsor NY\gis\MXDs\OU01_RA_Annual\2019\Figure 3-1 - Hydraulic Head Differences at Piezometer Pairs - 2019.mxd



Sources:
Aerial photo taken in August 2017 (USDA Farm Service Agency - NAIP).

0 30 60 90 120
Scale in Feet

N

VHB Engineering, Surveying, Landscape and Geology, P.C.
100 Great Oaks Boulevard, Suite 118
Albany, New York 12203

Drawn by: TEH Date: 02/18/20
Reviewed by: GWL Date: 06/17/20
Scale:1 " = 70 feet Project: 58300.00

FIGURE 3-1: HYDRAULIC HEAD DIFFERENCES AT PIEZOMETER PAIRS (2019) FORMER DENNISON/MONARCH SYSTEMS FACILITY NEW WINDSOR, NEW YORK

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LEGEND

- 130 — INTERPOLATED POTENTIOMETRIC ISOCONTOUR (2 FT. INTERVAL, DASHED WHERE INFERRED)
- 130 — INTERPOLATED POTENTIOMETRIC ISOCONTOUR WITHIN CONTAINMENT CELL (1 FT. INTERVAL)
- 150 — TOPOGRAPHIC CONTOUR (2 FT. INTERVAL, SOURCE: ORANGE COUNTY WATER AUTHORITY, MARCH 2006)
- APPROXIMATE PARCEL BOUNDARY (SOURCE: TOWNS OF NEWBURGH AND NEW WINDSOR TAX MAPS, 2005)
- MW-2 135.6 — WATER TABLE WELL LOCATION AND WATER ELEVATION (FT. AMSL)
- RS-03 135.6 — STREAM GAUGE LOCATION AND SURFACE WATER ELEVATION (FT. AMSL)
- J04-PZ-IN 135.6 — WATER TABLE PIEZOMETER LOCATION AND WATER ELEVATION (FT. AMSL)
- EW-1 135.6 — GROUNDWATER EXTRACTION WELL LOCATION AND WATER ELEVATION (FT. AMSL)
- DIRECTION OF VERTICAL GRADIENT TO/FROM DEEP UNCONSOLIDATED DEPOSITS (– INDICATES NOT DETERMINABLE; HORIZONTAL ARROW INDICATES <0.1 FT. HEAD DIFFERENCE)
- SEALABLE SHEET PILE WALL (WATERLOO BARRIER)
- FORMER BUILDING FOOTPRINT
- STREAM/POND
- DRAINAGE SWALE
- CULVERT
- CATCH BASIN LOCATION
- [135.60] Elevation not used in contouring.

N

GRAPHIC SCALE

175 0 87.5 175 350

(IN FEET)

1 inch = 175 ft.

THIRD LITTLE FALLS POND
SECOND LITTLE FALLS POND
FIRST LITTLE FALLS POND
FORMER WELL HOUSE
CLANCY AVE.
KORAN AVENUE
CHERRY AVENUE
BRADFORD AVE.
MYRTLE AVENUE
MARILINE AVENUE
FOLEY AVENUE
RUSCITTI ROAD
PAVEMENT
GRASS
GRAVEL DRIVE

117.63 RS-01
J20-UC01 125.74
J21-UC01 129.00
RS-02 129.91
J19-UC01 133.18
J17-UC01 132.42
J16-UC01 133.98
NM RS-03
RS-06 134.06
[132.00] RS-05
RS-04 133.21
J11-UC01 140.01
J15-UC01 136.85
135.22 RS-07
J14-UC01 138.98
J08-UC01 148.40
J08-PZ-IN 142.59
J09-PZ-OUT 146.03
J09-PZ-IN 140.87
J05-PZ-IN 138.91
J05-PZ-OUT 140.69
[137.60] EW-1
MW-1S 141.50
[137.82] EW-2
J23-UC01 140.63
[136.42] EW-3
MW-2 140.41
J04-PZ-IN 138.83
J04-PZ-OUT 141.51
[136.20] EW-4
149.02 J07-PZ-OUT
J07-PZ-IN 142.70
RIZ-19 149.06
J06-PZ-IN 142.93
J06-UC01 149.90
J10-PZ-IN 142.27
147.37 J10-PZ-OUT
RIZ-17 144.80
J02-UC01 149.35
J01-UC01 145.45

FIGURE 3-2A: POTENTIOMETRIC MAP
WATER TABLE - MAY 7, 2019
FORMER DENNISON/MONARCH SYSTEMS FACILITY
NEW WINDSOR, NEW YORK

VHB Engineering, Surveying
Landscape and Geology, P.C.
100 Great Oaks Blvd, Ste 118, Albany, NY

Drawn by: TEH Date: 07/23/19
Chk'd by: TAH Date: 06/26/20
Scale: Shown Project: 58300.00

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LEGEND

- 130 — INTERPOLATED POTENTIOMETRIC ISOCONTOUR (2 FT. INTERVAL, DASHED WHERE INFERRED)
- 130 — INTERPOLATED POTENTIOMETRIC ISOCONTOUR WITHIN CONTAINMENT CELL (1 FT. INTERVAL)
- 150 — TOPOGRAPHIC CONTOUR (2 FT. INTERVAL, SOURCE: ORANGE COUNTY WATER AUTHORITY, MARCH 2006)
- APPROXIMATE PARCEL BOUNDARY (SOURCE: TOWNS OF NEWBURGH AND NEW WINDSOR TAX MAPS, 2005)
- MW-2 135.6 — WATER TABLE WELL LOCATION AND WATER ELEVATION (FT. AMSL)
- RS-03 135.6 — STREAM GAUGE LOCATION AND SURFACE WATER ELEVATION (FT. AMSL)
- J04-PZ-IN 135.6 — WATER TABLE PIEZOMETER LOCATION AND WATER ELEVATION (FT. AMSL)
- EW-1 135.6 — GROUNDWATER EXTRACTION WELL LOCATION AND WATER ELEVATION (FT. AMSL)
- DIRECTION OF VERTICAL GRADIENT TO/FROM DEEP UNCONSOLIDATED DEPOSITS (– INDICATES NOT DETERMINABLE; HORIZONTAL ARROW INDICATES <0.1 FT. HEAD DIFFERENCE)
- SEALABLE SHEET PILE WALL (WATERLOO BARRIER)
- FORMER BUILDING FOOTPRINT
- STREAM/POND
- DRAINAGE SWALE
- CULVERT
- CATCH BASIN LOCATION
- [135.60] Elevation not used in contouring.

N

GRAPHIC SCALE

175 0 87.5 175 350

(IN FEET)

1 inch = 175 ft.

THIRD LITTLE FALLS POND
SECOND LITTLE FALLS POND
FIRST LITTLE FALLS POND
FORMER WELL HOUSE
CLANCY AVE.
KORAN AVENUE
CHERRY AVENUE
BRADFORD AVE.
MYRTLE AVENUE
MARLINE AVENUE
FOLEY AVENUE
RUSCITTI ROAD
PAVEMENT
GRASS
GRAVEL DRIVE

117.46 RS-01
J20-UC01 125.11
J21-UC01 128.32
RS-02 129.86
J19-UC01 132.55
J17-UC01 131.99
J16-UC01 132.94
NM RS-03
RS-06 Dry
132.31 RS-05
RS-04 133.10
J11-UC01 138.22
J15-UC01 135.63
135.14 RS-07
J14-UC01 137.08
J08-UC01 142.51
J09-PZ-OUT 140.79
J08-PZ-IN 138.83
J09-PZ-IN 136.13
J05-PZ-IN 134.31
J05-PZ-OUT 138.37
[132.47] EW-1
MW-1S 138.48
[132.97] EW-2
J23-UC01 138.80
[134.66] EW-3
MW-2 138.78
143.46 J07-PZ-OUT
J07-PZ-IN 138.94
RIZ-19 143.39
J04-PZ-IN 135.69
J04-PZ-OUT 139.37
[135.96] EW-4
J06-PZ-IN 139.29
J10-PZ-IN 138.93
142.82 J10-PZ-OUT
J06-UC01 145.12
RIZ-17 141.80
J02-UC01 144.46
J01-UC01 141.77

FIGURE 3-2B: POTENTIOMETRIC MAP
WATER TABLE - NOVEMBER 12, 2019
FORMER DENNISON/MONARCH SYSTEMS FACILITY
NEW WINDSOR, NEW YORK

VHB Engineering, Surveying Landscape and Geology, P.C.
100 Great Oaks Blvd, Ste 118, Albany, NY

Drawn by: TEH Date: 02/18/20
Chk'd by: TAH Date: 06/26/20
Scale: Shown Project: 58300.00

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LEGEND

- 130 — INTERPOLATED POTENTIOMETRIC ISOCONTOUR (2 FT. INTERVAL, DASHED WHERE INFERRED)
- 150 — TOPOGRAPHIC CONTOUR (2 FT. INTERVAL, SOURCE: ORANGE COUNTY WATER AUTHORITY, MARCH 2006)
- APPROXIMATE PARCEL BOUNDARY (SOURCE: TOWNS OF NEWBURGH AND NEW WINDSOR TAX MAPS, 2005)
- J21–UC02 + 133.41 — DEEP UNCONSOLIDATED DEPOSITS WELL LOCATION AND WATER ELEVATION (FT. AMSL)
- DIRECTION OF VERTICAL GRADIENT TO/FROM SHALLOW UNCONSOLIDATED DEPOSITS (– INDICATES NOT DETERMINABLE; HORIZONTAL ARROW INDICATES <0.1 FT. HEAD DIFFERENCE)
- DIRECTION OF VERTICAL GRADIENT TO/FROM SHALLOW BEDROCK DEPOSITS (– INDICATES NOT DETERMINABLE; HORIZONTAL ARROW INDICATES <0.1 FT. HEAD DIFFERENCE)
- SEALABLE SHEET PILE WALL (WATERLOO BARRIER)
- FORMER BUILDING FOOTPRINT
- STREAM/POND
- DRAINAGE SWALE
- CULVERT
- CATCH BASIN LOCATION

N

GRAPHIC SCALE

175 0 87.5 175 350

(IN FEET)

1 inch = 175 ft.

THIRD LITTLE FALLS POND
SECOND LITTLE FALLS POND
FIRST LITTLE FALLS POND
FORMER WELL HOUSE
FORMER WELL HOUSE
CLANCY AVE.
KORAN AVENUE
CHERRY AVENUE
BRADFORD AVE.
MYRTLE AVENUE
MARILINE AVENUE
FOLEY AVENUE
RUSCITTI ROAD
PAVEMENT
GRASS
GRASS
GRAVEL DRIVE

J20–UC02 + 125.71
J21–UC02 + 129.10
J19–UC02 + 133.03
J18–UC03 + 132.55
J17–UC02 + 133.19
J16–UC02 + 134.50
J15–UC02 + 135.20
J14–UC02 + 138.11
J13–UC03 + 137.87
J11–UC02 + 139.59
J08–UC02 + 148.39
MW–1D + 142.20
141.56 + J23–UC02
MW–2I + 141.31
J07–UC02 + 148.84
J06–UC02 + 148.76
J01–UC02 + 145.47

FIGURE 3-3A: POTENTIOMETRIC MAP
DEEP UNCONSOLIDATED DEPOSITS - MAY 7, 2019
FORMER DENNISON/MONARCH SYSTEMS FACILITY
NEW WINDSOR, NEW YORK

VHB Engineering, Surveying Landscape and Geology, P.C.
100 Great Oaks Blvd, Ste 118, Albany, NY

Drawn by: TEH Date: 07/23/19
Chk'd by: TAH Date: 06/26/20
Scale: Shown Project: 58300.00

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LEGEND

- 130 — INTERPOLATED POTENTIOMETRIC ISOCONTOUR (2 FT. INTERVAL, DASHED WHERE INFERRED)
- 150 — TOPOGRAPHIC CONTOUR (2 FT. INTERVAL, SOURCE: ORANGE COUNTY WATER AUTHORITY, MARCH 2006)
- APPROXIMATE PARCEL BOUNDARY (SOURCE: TOWNS OF NEWBURGH AND NEW WINDSOR TAX MAPS, 2005)
- J21-UC02 + 133.41 — DEEP UNCONSOLIDATED DEPOSITS WELL LOCATION AND WATER ELEVATION (FT. AMSL)
- DIRECTION OF VERTICAL GRADIENT TO/FROM SHALLOW UNCONSOLIDATED DEPOSITS (– INDICATES NOT DETERMINABLE; HORIZONTAL ARROW INDICATES <0.1 FT. HEAD DIFFERENCE)
- DIRECTION OF VERTICAL GRADIENT TO/FROM SHALLOW BEDROCK DEPOSITS (– INDICATES NOT DETERMINABLE; HORIZONTAL ARROW INDICATES <0.1 FT. HEAD DIFFERENCE)
- SEALABLE SHEET PILE WALL (WATERLOO BARRIER)
- FORMER BUILDING FOOTPRINT
- STREAM/POND
- DRAINAGE SWALE
- CULVERT
- CATCH BASIN LOCATION

N

GRAPHIC SCALE

175 0 87.5 175 350

(IN FEET)

1 inch = 175 ft.

THIRD LITTLE FALLS POND
SECOND LITTLE FALLS POND
FIRST LITTLE FALLS POND
FORMER WELL HOUSE
FORMER WELL HOUSE
CLANCY AVE.
KORAN AVENUE
CHERRY AVENUE
BRADFORD AVE.
MYRTLE AVENUE
MARILINE AVENUE
FOLEY AVENUE
BUSCITTI ROAD
PAVEMENT
GRASS
GRASS
GRAVEL DRIVE

J20-UC02 + 125.11
J21-UC02 + 128.41
J19-UC02 + 131.62
J18-UC03 + 131.52
J17-UC02 + 132.05
J16-UC02 + 133.12
J15-UC02 + 133.30
J14-UC02 + 137.02
J13-UC03 + 136.42
J11-UC02 + 137.16
J08-UC02 + 142.50
MW-1D + 138.51
MW-2I + 138.89
J23-UC02 + 139.05
J07-UC02 + 143.34
J06-UC02 + 143.77
J01-UC02 + 141.96

126 126 128 128 130 132 132 134 136 138 140 140 142 142

FIGURE 3-3B: POTENTIOMETRIC MAP
DEEP UNCONSOLIDATED DEPOSITS - NOVEMBER 12, 2019
FORMER DENNISON/MONARCH SYSTEMS FACILITY
NEW WINDSOR, NEW YORK

VHB Engineering, Surveying Landscape and Geology, P.C.
100 Great Oaks Blvd, Ste 118, Albany, NY

Drawn by: TEH Date: 02/18/20
Chk'd by: TAH Date: 06/26/20
Scale: Shown Project: 58300.00

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LEGEND

- 130 — INTERPOLATED POTENTIOMETRIC ISOCONTOUR (2 FT. INTERVAL, DASHED WHERE INFERRED)
- 150 — TOPOGRAPHIC CONTOUR (2 FT. INTERVAL, SOURCE: ORANGE COUNTY WATER AUTHORITY, MARCH 2006)
- APPROXIMATE PARCEL BOUNDARY (SOURCE: TOWNS OF NEWBURGH AND NEW WINDSOR TAX MAPS, 2005)
- J12–BR01 + 137.97 — SHALLOW BEDROCK WELL LOCATION AND WATER ELEVATION (FT. AMSL)
- DIRECTION OF VERTICAL GRADIENT TO/FROM DEEP UNCONSOLIDATED DEPOSITS (– INDICATES NOT DETERMINABLE; HORIZONTAL ARROW INDICATES <0.1 FT. HEAD DIFFERENCE)
- DIRECTION OF VERTICAL GRADIENT TO/FROM DEEP BEDROCK
- SEALABLE SHEET PILE WALL (WATERLOO BARRIER)
- FORMER BUILDING FOOTPRINT
- STREAM/POND
- DRAINAGE SWALE
- CULVERT
- CATCH BASIN LOCATION

N

GRAPHIC SCALE

175 0 87.5 175 350

(IN FEET)

1 inch = 175 ft.

J20–BR01 + 113.56

J22–BR01 + 134.32

J17–BR01 + 134.54

J12–BR01 + 137.99

J11–BR01 + 140.86

J13–BR01 + 139.58 ARTESIAN

J05–BR01 + 142.27

139.10 + J14–BR01

J04–BR01 + 143.82 ARTESIAN

J02–BR01 + 149.02

145.35 + J01–BR01

THIRD LITTLE FALLS POND

SECOND LITTLE FALLS POND

FIRST LITTLE FALLS POND

FORMER WELL HOUSE

CLANCY AVE.

KORAN AVENUE

CHERRY AVENUE

BRADFORD AVE.

MYRTLE AVENUE

MARILINE AVENUE

FOLEY AVENUE

RUSCITTI ROAD

PAVEMENT

GRASS

GRAVEL DRIVE

FIGURE 3-4A: POTENTIOMETRIC MAP
SHALLOW BEDROCK - MAY 7, 2019
FORMER DENNISON/MONARCH SYSTEMS FACILITY
NEW WINDSOR, NEW YORK

VHB Engineering, Surveying Landscape and Geology, P.C.
100 Great Oaks Blvd, Ste 118, Albany, NY

Drawn by: TEH Date: 07/23/19
Chk'd by: TAH Date: 06/26/20
Scale: Shown Project: 58300.00

\\vhb\gbl\proj\Montpelier\58300.00 ADC New Windsor NY\JCOdata\CAD\Potentiometric Contour Maps\Potentiometric_2019.dwg

LEGEND

- 130 — INTERPOLATED POTENTIOMETRIC ISOCONTOUR (2 FT. INTERVAL, DASHED WHERE INFERRED)
- 150 — TOPOGRAPHIC CONTOUR (2 FT. INTERVAL, SOURCE: ORANGE COUNTY WATER AUTHORITY, MARCH 2006)
- APPROXIMATE PARCEL BOUNDARY (SOURCE: TOWNS OF NEWBURGH AND NEW WINDSOR TAX MAPS, 2005)
- J12–BR01 + 137.97 — SHALLOW BEDROCK WELL LOCATION AND WATER ELEVATION (FT. AMSL)
- DIRECTION OF VERTICAL GRADIENT TO/FROM DEEP UNCONSOLIDATED DEPOSITS (– INDICATES NOT DETERMINABLE; HORIZONTAL ARROW INDICATES <0.1 FT. HEAD DIFFERENCE)
- DIRECTION OF VERTICAL GRADIENT TO/FROM DEEP BEDROCK
- SEALABLE SHEET PILE WALL (WATERLOO BARRIER)
- FORMER BUILDING FOOTPRINT
- STREAM/POND
- DRAINAGE SWALE
- CULVERT
- CATCH BASIN LOCATION

N

GRAPHIC SCALE

175 0 87.5 175 350

(IN FEET)

1 inch = 175 ft.

THIRD LITTLE FALLS POND
SECOND LITTLE FALLS POND
FIRST LITTLE FALLS POND
FORMER WELL HOUSE
CLANCY AVE.
KORAN AVENUE
CHERRY AVENUE
BRADFORD AVE.
MYRTLE AVENUE
MARILINE AVENUE
FOLEY AVENUE
RUSCITTI ROAD
PAVEMENT
GRASS
GRAVEL DRIVE

J20–BR01 + 112.80
J22–BR01 + 132.61
J17–BR01 + 133.25
J12–BR01 + 136.22
J11–BR01 + 137.88
J13–BR01 + 137.46 ARTESIAN
J05–BR01 + 138.99
137.09 + J14–BR01
J04–BR01 + 140.95 ARTESIAN
J02–BR01 + 144.35
141.97 + J01–BR01

FIGURE 3-4B: POTENTIOMETRIC MAP SHALLOW BEDROCK - NOVEMBER 12, 2019 FORMER DENNISON/MONARCH SYSTEMS FACILITY NEW WINDSOR, NEW YORK

VHB Engineering, Surveying Landscape and Geology, P.C.
100 Great Oaks Blvd, Ste 118, Albany, NY

Drawn by: TEH Date: 02/18/20
Chk'd by: TAH Date: 06/26/20
Scale: Shown Project: 58300.00

\\vhb\gbl\proj\Montpelier\58300.00 ADC New Windsor NY\JCOdata\CAD\Potentiometric Contour Maps\Potentiometric_2019.dwg

LEGEND

- 130 — INTERPOLATED POTENTIOMETRIC ISOCONTOUR (2 FT. INTERVAL, DASHED WHERE INFERRED)
- 150 — TOPOGRAPHIC CONTOUR (2 FT. INTERVAL, SOURCE: ORANGE COUNTY WATER AUTHORITY, MARCH 2006)
- APPROXIMATE PARCEL BOUNDARY (SOURCE: TOWNS OF NEWBURGH AND NEW WINDSOR TAX MAPS, 2005)
- J12–BR02 + 139.62 — DEEP BEDROCK WELL LOCATION AND WATER ELEVATION (FT. AMSL)
- DIRECTION OF VERTICAL GRADIENT TO/FROM SHALLOW BEDROCK
- SEALABLE SHEET PILE WALL (WATERLOO BARRIER)
- FORMER BUILDING FOOTPRINT
- STREAM/POND
- DRAINAGE SWALE
- CULVERT
- CATCH BASIN LOCATION

N

Note: * = J17–BR02 is not included in the sample list.

GRAPHIC SCALE

175 0 87.5 175 350

(IN FEET)

1 inch = 175 ft.

THIRD LITTLE FALLS POND
SECOND LITTLE FALLS POND
FIRST LITTLE FALLS POND
FORMER WELL HOUSE
FORMER WELL HOUSE
CLANCY AVE.
KORAN AVENUE
CHERRY AVENUE
BRADFORD AVE.
MYRTLE AVENUE
MARILINE AVENUE
FOLEY AVENUE
RUSCITTI ROAD
PAVEMENT
GRASS
GRASS
GRAVEL DRIVE

121.14 J20–BR02
J22–BR02 135.08
+ NM J17–BR02*
J12–BR02 + 139.82
J11–BR02 142.01
ARTESIAN J13–BR02 + 139.82
J14–BR02 138.91
J05–BR02 143.12
J04–BR02 + 144.29 ARTESIAN
+ J02–BR02 149.67
150.63 J01–BR02 + ARTESIAN

FIGURE 3-5A: POTENTIOMETRIC MAP
DEEP BEDROCK - MAY 7, 2019
FORMER DENNISON/MONARCH SYSTEMS FACILITY
NEW WINDSOR, NEW YORK

VHB Engineering, Surveying Landscape and Geology, P.C.
100 Great Oaks Blvd, Ste 118, Albany, NY

Drawn by: TEH Date: 07/23/19
Chk'd by: TAH Date: 06/26/20
Scale: Shown Project: 58300.00

\\vhb\gbl\proj\Montpelier\58300.00 ADC New Windsor NY\JCOdata\CAD\Potentiometric Contour Maps\Potentiometric_2019.dwg

LEGEND

- 130 — INTERPOLATED POTENTIOMETRIC ISOCONTOUR (2 FT. INTERVAL, DASHED WHERE INFERRED)
- 150 — TOPOGRAPHIC CONTOUR (2 FT. INTERVAL, SOURCE: ORANGE COUNTY WATER AUTHORITY, MARCH 2006)
- APPROXIMATE PARCEL BOUNDARY (SOURCE: TOWNS OF NEWBURGH AND NEW WINDSOR TAX MAPS, 2005)
- J12–BR02 + 139.62 — DEEP BEDROCK WELL LOCATION AND WATER ELEVATION (FT. AMSL)
- DIRECTION OF VERTICAL GRADIENT TO/FROM SHALLOW BEDROCK
- SEALABLE SHEET PILE WALL (WATERLOO BARRIER)
- FORMER BUILDING FOOTPRINT
- STREAM/POND
- DRAINAGE SWALE
- CULVERT
- CATCH BASIN LOCATION

N

Note: * = J17–BR02 is not included in the sample list.

GRAPHIC SCALE

175 0 87.5 175 350

(IN FEET)

1 inch = 175 ft.

THIRD LITTLE FALLS POND
SECOND LITTLE FALLS POND
FIRST LITTLE FALLS POND
FORMER WELL HOUSE
CLANCY AVE.
KORAN AVENUE
CHERRY AVENUE
BRADFORD AVE.
MYRTLE AVENUE
MARILINE AVENUE
FOLEY AVENUE
RUSCITTI ROAD
PAVEMENT
GRASS
GRAVEL DRIVE

120.06 J20–BR02
122
124
126
128
130
132
134
136
138
140
142
144
146

J22–BR02 133.17
NM J17–BR02*
J01–BR02
J12–BR02 137.29
J11–BR02 138.23
ARTESIAN J13–BR02 137.65
J05–BR02 139.22
J14–BR02 137.10
J04–BR02 141.06
J02–BR02 145.02
146.26

FIGURE 3-5B: POTENTIOMETRIC MAP
DEEP BEDROCK - NOVEMBER 12, 2019
FORMER DENNISON/MONARCH SYSTEMS FACILITY
NEW WINDSOR, NEW YORK

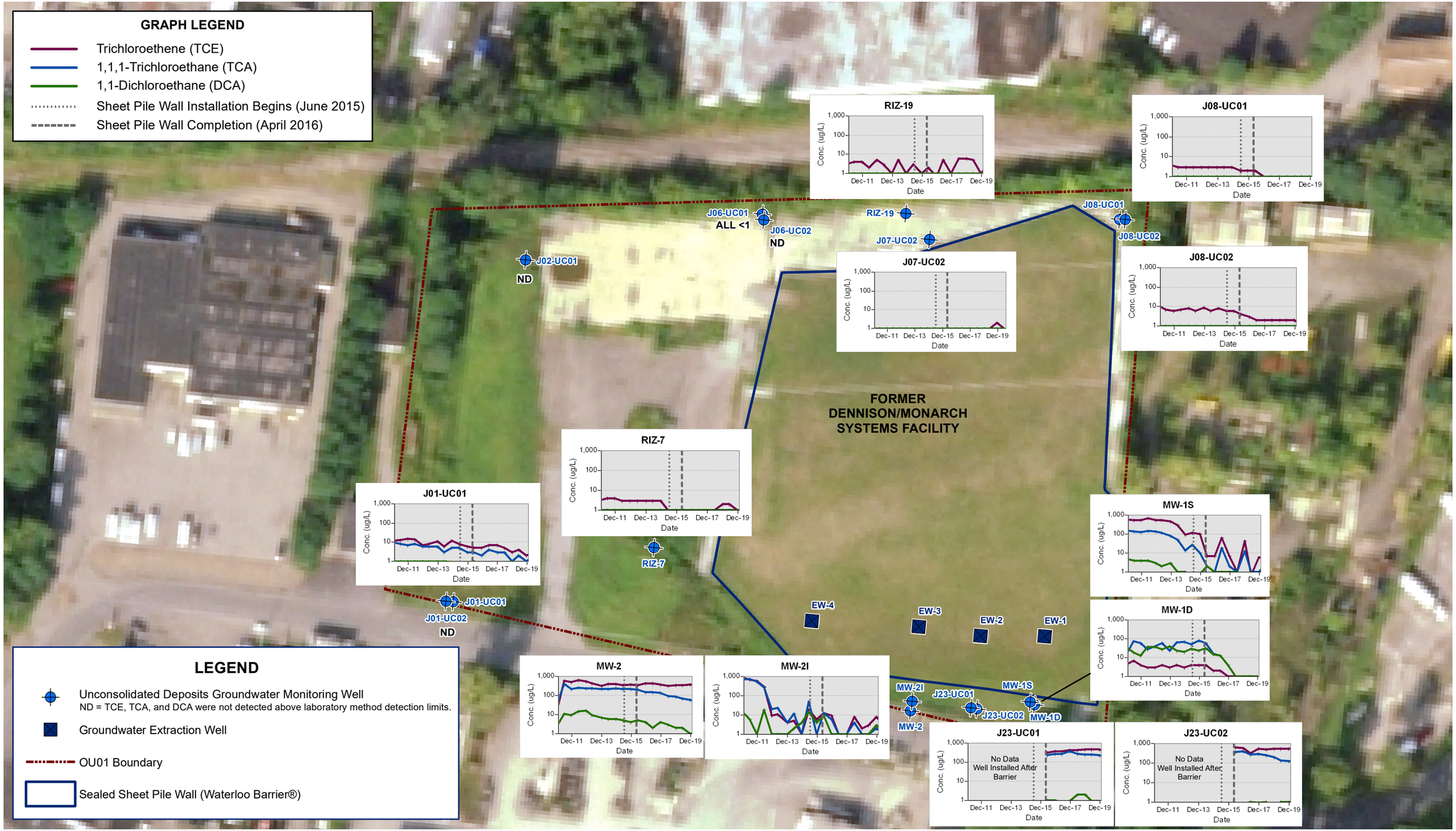
VHB Engineering, Surveying Landscape and Geology, P.C.
100 Great Oaks Blvd, Ste 118, Albany, NY

Drawn by: TEH Date: 02/18/20
Chk'd by: TAH Date: 06/26/20
Scale: Shown Project: 58300.00

\\vhb\gis\proj\Montpelier\58300.00 ADC New Windsor NY\gis\MXDs\OU01_RA_Annual\2019\Figure 3-6A - Concentrations Of Constituents Of Concern In UC Deposits GW - OU01.mxd

GRAPH LEGEND

- Trichloroethene (TCE)
- 1,1,1-Trichloroethane (TCA)
- 1,1-Dichloroethane (DCA)
- Sheet Pile Wall Installation Begins (June 2015)
- Sheet Pile Wall Completion (April 2016)



LEGEND

- Unconsolidated Deposits Groundwater Monitoring Well
  ND = TCE, TCA, and DCA were not detected above laboratory method detection limits.
- Groundwater Extraction Well
- OU01 Boundary
- Sealed Sheet Pile Wall (Waterloo Barrier®)

Sources:
Aerial photo taken in August 2017 (USDA Farm Service Agency - NAIP).

0 30 60 90 120
Scale in Feet

N

VHB Engineering, Surveying, Landscape and Geology, P.C.
100 Great Oaks Boulevard, Suite 118
Albany, New York 12203

Drawn by: TEH Date: 05/31/19
Reviewed by: QML Date: 06/24/20
Scale: 1 " = 80 feet Project: 58300.00

FIGURE 3-6A: CONCENTRATIONS OF OU01 CONSTITUENTS OF CONCERN IN UNCONSOLIDATED DEPOSITS GROUNDWATER: 2011-2019
FORMER DENNISON/MONARCH SYSTEMS FACILITY
NEW WINDSOR, NEW YORK

\\vhb\gis\proj\Montpelier\58300.00 ADC New Windsor NY\gis\MXDs\OU01_RA_Annual\2019\Figure 3-6B - Concentrations Of Other Constituents In UC Deposits GW - OU01.mxd

GRAPH LEGEND

- Tetrachloroethene (PCE)
- 1,1-Dichloroethene (DCE)
- cis-1,2-Dichloroethene (cDCE)
- Sheet Pile Wall Installation Begins (June 2015)
- Sheet Pile Wall Completion (April 2016)

J02-UC01
ALL <1

J06-UC01
ND

J06-UC02
ND

RIZ-19
ALL <1

J07-UC02
ND

J08-UC01
ND

J08-UC02
ALL <1

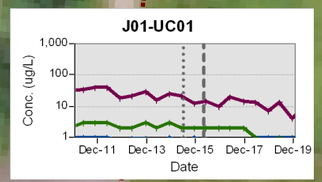
FORMER
DENNISON/MONARCH
SYSTEMS FACILITY

RIZ-7



RIZ-7

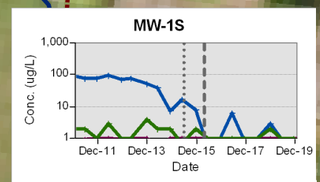
J01-UC01



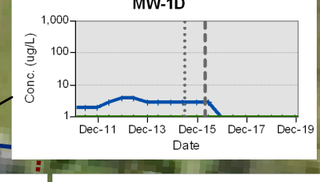
J01-UC01
J01-UC02
ND

EW-4
EW-3
EW-2
EW-1

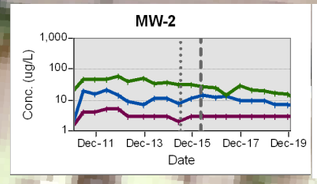
MW-1S



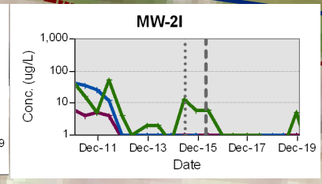
MW-1D



MW-2

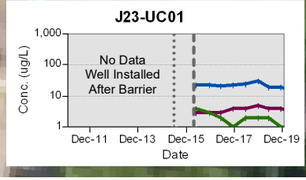


MW-2I

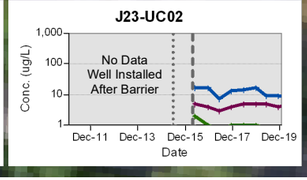


MW-2I
MW-2
J23-UC01
J23-UC02
MW-1S
MW-1D

J23-UC01



J23-UC02



LEGEND

- Unconsolidated Deposits Groundwater Monitoring Well
  ND = PCE, DCE, and cDCE were not detected above laboratory method detection limits.
- Groundwater Extraction Well
- OU01 Boundary
- Sealed Sheet Pile Wall (Waterloo Barrier®)

Sources:
Aerial photo taken in August 2017 (USDA Farm Service Agency - NAIP).

0 30 60 90 120
Scale in Feet

N

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100 Great Oaks Boulevard, Suite 118
Albany, New York 12203

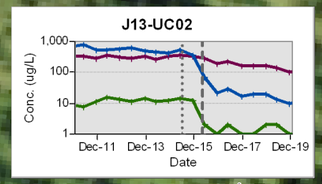
Drawn by: TEH Date: 05/31/19
Reviewed by: QML Date: 06/24/20
Scale: 1 " = 80 feet Project: 58300.00

**FIGURE 3-6B: CONCENTRATIONS OF OTHER CONSTITUENTS IN UNCONSOLIDATED DEPOSITS GROUNDWATER: OU01 (2011-2019)
FORMER DENNISON/MONARCH SYSTEMS FACILITY
NEW WINDSOR, NEW YORK**

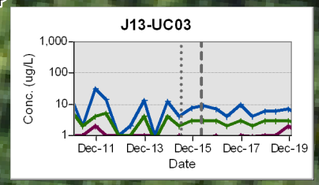
GRAPH LEGEND

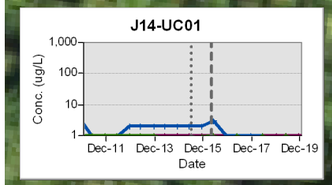
- Trichloroethene (TCE)
- 1,1,1-Trichloroethane (TCA)
- 1,1-Dichloroethane (DCA)
- Sheet Pile Wall Installation Begins (June 2015)
- Sheet Pile Wall Completion (April 2016)

J11-UC01 ND — J11-UC02 ND

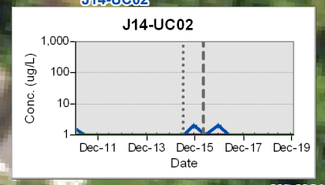


J13-UC03 — J13-UC02

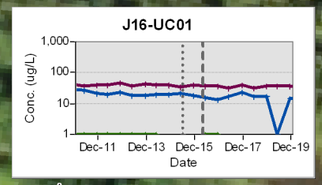




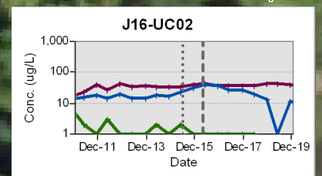
J14-UC01 — J14-UC02

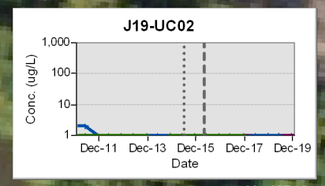


J15-UC02 ND — J15-UC01 ND

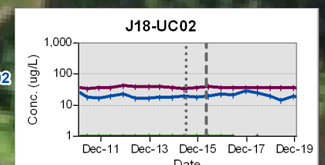


J16-UC02 — J16-UC01

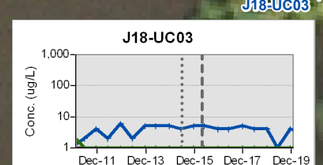


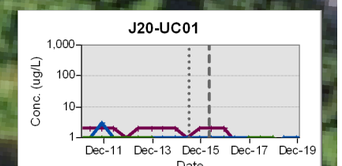


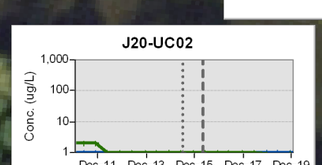
J19-UC02 — ALL <1 J19-UC01



J18-UC02 — J18-UC03







J20-UC02 — J20-UC01

J17-UC02 ND — J17-UC01 ND



ALL <1 J21-UC02 — J21-UC01

LEGEND

Unconsolidated Deposits Groundwater Monitoring Well
ND = TCE, TCA, and DCA were not detected above laboratory method detection limits.

Sources:
Aerial photo taken in August 2017 (USDA Farm Service Agency - NAIP).

0 50 100 150 200
Scale in Feet
N

VHB Engineering, Surveying, Landscape and Geology, P.C.
100 Great Oaks Boulevard, Suite 118
Albany, New York 12203

Drawn by: TEH Date: 06/03/19
Reviewed by: QML Date: 06/24/20
Scale: 1 " = 120 feet Project: 58300.00

**FIGURE 3-7A: CONCENTRATIONS OF OU01 CONSTITUENTS OF CONCERN IN UNCONSOLIDATED DEPOSITS GROUNDWATER: LITTLE FALLS PONDS PROPERTY (2011-2019)
FORMER DENNISON/MONARCH SYSTEMS FACILITY
NEW WINDSOR, NEW YORK**

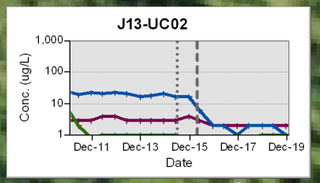
\\vhb\gis\proj\Montpelier\58300.00 ADC New Windsor NY\gis\MXDs\OU01_RA_Annual\2019\Figure 3-7B - Concentrations Of Other Constituents In UC Deposits GW - Little Falls Pond.mxd

GRAPH LEGEND

- Tetrachloroethene (PCE)
- 1,1-Dichloroethene (DCE)
- cis-1,2-Dichloroethene (cDCE)
- Sheet Pile Wall Installation Begins (June 2015)
- Sheet Pile Wall Completion (April 2016)

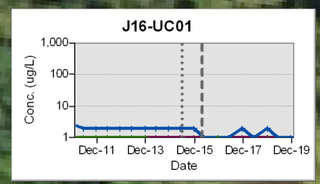
J11-UC01 ND — J11-UC02 ND

J13-UC02



J13-UC03 ALL <1 — J13-UC02

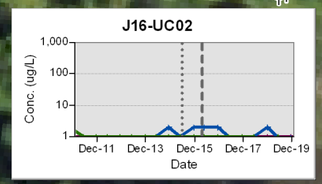
J16-UC01



J14-UC01 ND — J14-UC02 ND

J16-UC02 — J16-UC01

J16-UC02

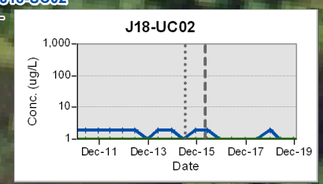


J15-UC02 ND — J15-UC01 ND

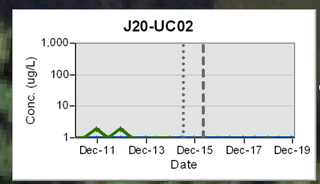
J19-UC02 ND — J19-UC01 ND

J18-UC02 — J18-UC03 ND

J18-UC02



J20-UC02



J20-UC02 ALL <1 — J20-UC01

J17-UC02 ND — J17-UC01 ND

ND — J21-UC02 — J21-UC01 ND

LEGEND

Unconsolidated Deposits Groundwater Monitoring Well
ND = PCE, DCE, and cDCE were not detected above laboratory method detection limits.

Sources:
Aerial photo taken in August 2017 (USDA Farm Service Agency - NAIP).

0 50 100 150 200
Scale in Feet

N

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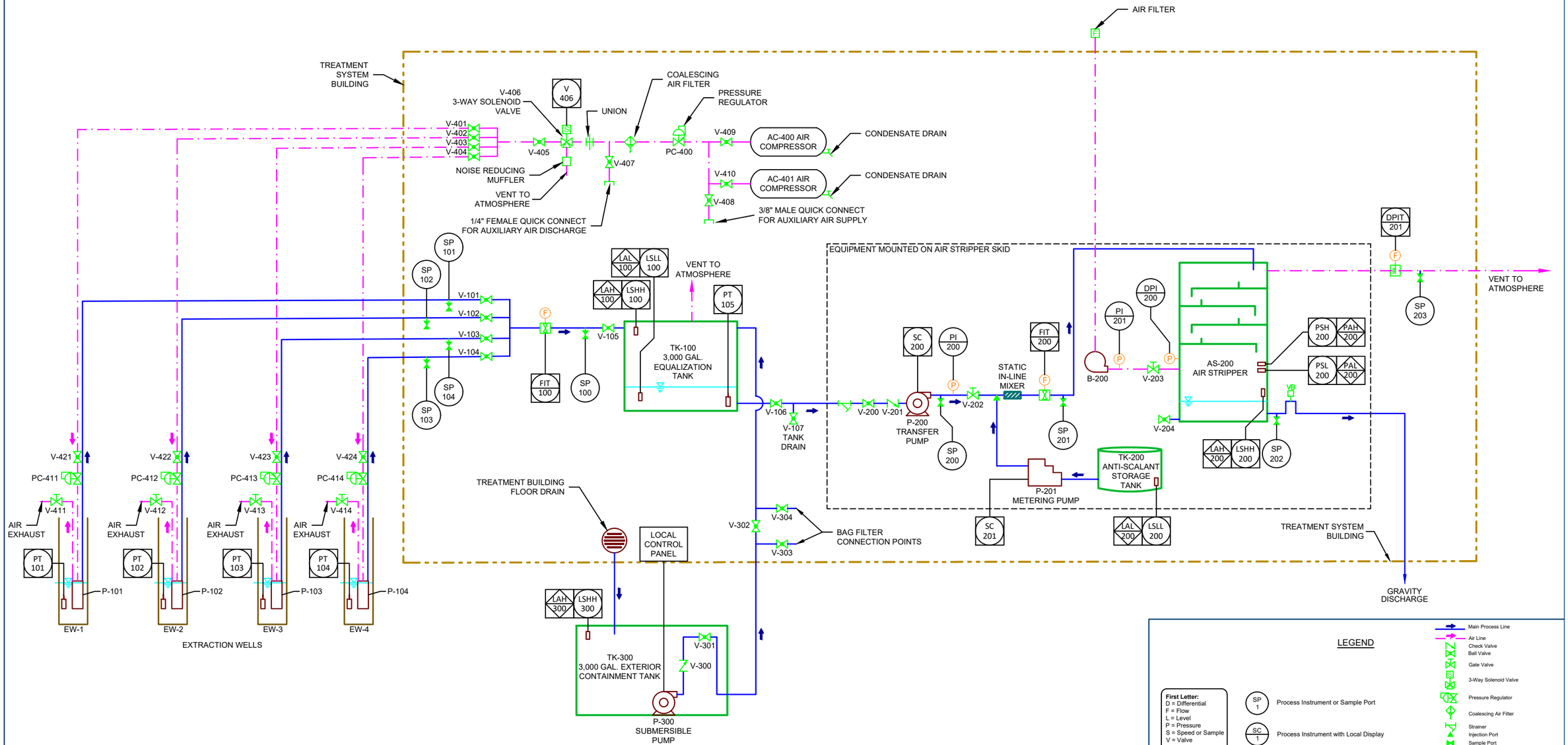
100 Great Oaks Boulevard, Suite 118
Albany, New York 12203

Drawn by: TEH Date: 06/03/19
Reviewed by: QML Date: 06/24/20
Scale: 1 " = 120 feet Project: 58300.00

FIGURE 3-7B: CONCENTRATIONS OF OTHER CONSTITUENTS IN UNCONSOLIDATED DEPOSITS GROUNDWATER: LITTLE FALLS PONDS PROPERTY (2011-2019) FORMER DENNISON/MONARCH SYSTEMS FACILITY NEW WINDSOR, NEW YORK

APPENDICES

APPENDIX A GWE&T SYSTEM PROCESS AND INSTRUMENTATION DIAGRAM



LEGEND

First Letter:
D = Differential
F = Flow
L = Level
P = Pressure
S = Speed or Sample
V = Valve

Second Letter:
A = Alarm
I = Indicator
C = Control
S = Switch
T = Transmitter
P = Port or Pressure

Third and Fourth Letters:
H = High
I = Indicator
L = Low
T = Transmitter

- SP 1 — Process Instrument or Sample Port
- SC 1 — Process Instrument with Local Display
- PT 1 — Instrument with PLC Data Connection
- SC 1 — Instrument with PLC Data Connection and Local Display
- FAL 1 — PLC Alarm

- Main Process Line
- Air Line
- Check Valve
- Ball Valve
- Gate Valve
- 3-Way Solenoid Valve
- Pressure Regulator
- Coalescing Air Filter
- Strainer
- Injection Port
- Sample Port
- Vapor Sample Port
- Vacuum Breaker
- Drain Valve
- Turbine Flow Meter
- Pitot Tube
- Pressure Gauge
- Flow Measurement Point
- Pressure Transducer
- Submersible Pneumatic Pump
- Blower
- Pump

REVISIONS	#	Date	Drwn	Chk'd	App'd	Description
	2	01/16/18	GWL	J-B	GWL	ADDED AC-401
	1	04/21/17	GWL	DAA	DAA	ADDED DETAIL

PREPARED FOR: AVERY DENNISON CORPORATION
8080 NORTON PARKWAY
MENTOR, OH 44060
Job#: 58300.00

PREPARED BY:
vhb
100 Great Oaks Blvd, Suite 118
Albany, New York 12203
518.389.3600 phone
518.452.0324 fax
www.vhb.com

DRAWING
Scale: NONE
Drawn On: 12/28/15
Drawn By: BMLK
Checked On:
Checked By: GWL
Print Date:

TITLE
PROCESS AND INSTRUMENTATION DIAGRAM GROUNDWATER EXTRACTION & TREATMENT SYSTEM FORMER DENNISON/MONSARCH SYSTEMS SITE NEW WINDSOR, NEW YORK

SHEET 1 OF 1

\\vhb\gbl\proj\Montpelier\58300.00 ADC New Windsor NY\JCOdata\OU1 Operation\P&ID_2019-04-18.dwg

APPENDIX B GWE&T SYSTEM INSPECTION FORMS

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 1/5/19

Arrival: 630 pm Departure: 730 pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	138.72	967214
EW-2	138.72	382422
EW-3	136.19	887414
EW-4	136.08	798223

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	24.33	8728348	

Water in Equalization Tank (TK-100)[2]	24 inches	750 gallons

Compressed Air Supply			
AC-400 Run Hours	7883.87	AC-401 Run Hours	2438.05
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	50

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	24.68	51	22.5

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	9730780	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	22.5	0.56	182

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	141 ml/hr	Anti-scalant Inventory (TK-200):	13 Gallons
		Anti-scalant Overstock:	40 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 1/5/19

Back-up Generator			
Back-up Generator Run Hours	50.6	Back-up Generator Fuel Level	54

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & Ops data
Checked outfall - Clear & Air Stripper Clear

Work Performed: Checked over Air Compressor operation.
Oil, Filters & Vents - OK

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 1/11/19

Arrival: 900 AM Departure: 1000 AM

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	138.67	—
EW-2	138.59	—
EW-3	136.20	936957
EW-4	136.26	831006

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	24.45	8938212	

Water in Equalization Tank (TK-100)[2]	45 inches	1,400 gallons

Compressed Air Supply			
AC-400 Run Hours	7957.99	AC-401 Run Hours	2438.05
Active Air Compressor (circle)	AC-400 (AC-401)	PC-400 Pressure (psi)	

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	24.00	49	22

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	9919812	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	23.5	0.60	190

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	141 ml/hr	Anti-scalant Inventory (TK-200):	4 → 20 Gallons
		Anti-scalant Overstock:	26 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 1/11/19

Back-up Generator			
Back-up Generator Run Hours	50.4	Back-up Generator Fuel Level	54

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)

MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & ops data
OutFall Clear & Air Stripper Clean
- Checked oil & filters & Air vents on
- Air Compressors

Work Performed:

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 1/17/19

Arrival: 400pm Departure: 500pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	138.40	224793
EW-2	138.61	623379
EW-3	136.25	987642
EW-4	136.20	867102

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	25.20	9185960	

Water in Equalization Tank (TK-100)[2]	34 inches	1,050 gallons

Compressed Air Supply			
AC-400 Run Hours	7957.99	AC-401 Run Hours	2530.89
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	54

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	25.20	48	20

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	128130	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	22.5	0.60	190

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	141 ml/hr	Anti-scalant Inventory (TK-200):	14 Gallons
		Anti-scalant Overstock:	26 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 1/17/19

Back-up Generator			
Back-up Generator Run Hours	514	Back-up Generator Fuel Level	52

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)

MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Air Stripper Clean & Outfall Clear
Recorded Meters & OPS data
- Checked oil & Air vents on Air Compressors.
-

Work Performed:

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassil Date: 1/24/19

Arrival: 500pm Departure: 630pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	138.20	352102
EW-2	138.44	734321
EW-3	136.43	043601
EW-4	136.54	920105

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	23.84	94292164	

Water in Equalization Tank (TK-100)[2]	40 inches	1,250 gallons

Compressed Air Supply			
AC-400 Run Hours	2530.89	AC-401 Run Hours	8042.73
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	55

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	24.91	47	~~5~~ 18.5

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	380105	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	21.5	0.55	183

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	141 ml/hr	Anti-scalant Inventory (TK-200):	5/25 Gallons
		Anti-scalant Overstock:	6 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 1/24/19

Back-up Generator			
Back-up Generator Run Hours	51.8	Back-up Generator Fuel Level	51

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)

MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Air Stripper & Outfall Clear
Recorded Meters & Ops. data.

Work Performed: Filled Redux Tank 5 → 25, overstock=
Checked Air Compressor oil, filters & Vents

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 1/30/19

Arrival: 500 pm Departure: 600 pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	138.19	—
EW-2	138.40	—
EW-3	136.27	—
EW-4	136.35	—

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	23.67	9634618	

Water in Equalization Tank (TK-100)[2]	49 inches	1,500 gallons

Compressed Air Supply			
AC-400 Run Hours	8042.73	AC-401 Run Hours	2606.34
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	53

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	25.19	47	20

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	595525	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	22.5	0.60	193

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	141 ml/hr	Anti-scalant Inventory (TK-200):	18 Gallons
		Anti-scalant Overstock:	6 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 1/30/19

Back-up Generator			
Back-up Generator Run Hours		Back-up Generator Fuel Level	

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: 5" Snow. Shoveled & plowed
Checked over treatment System
Recorded Meters & Ops data
Outfall & Air Stripper Clean & clear

Work Performed:

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 2/9/19

Arrival: 300pm Departure: 400pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	138.13	648227
EW-2	138.40	978604
EW-3	136.18	164083
EW-4	135.99	033187

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	23.37	9965824	

Water in Equalization Tank (TK-100)[2]	41 inches	1,250 gallons

Compressed Air Supply			
AC-400 Run Hours	8158.61	AC-401 Run Hours	2606.34
Active Air Compressor (circle)	AC-400 (AC-401)	PC-400 Pressure (psi)	55

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	23.81	46	17

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	938537	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	0.23	0.58	190

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	141 ml/hr	Anti-scalant Inventory (TK-200):	14 Gallons
		Anti-scalant Overstock:	110 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 2/9/19

Back-up Generator			
Back-up Generator Run Hours	52.8	Back-up Generator Fuel Level	47%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)

MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Outfall clear, Air Stripper Clean & clear.
Recorded Meters & Ops data

Work Performed:

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 2/16/19

Arrival: 900 Am Departure: 1000 Am

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	138.25	774328
EW-2	138.39	083686
EW-3	136.29	213931
EW-4	136.32	079420

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	23.43	192565	

Water in Equalization Tank (TK-100)[2]	31 inches	975 gallons

Compressed Air Supply			
AC-400 Run Hours	8158.61	AC-401 Run Hours	2689.62
Active Air Compressor (circle)	AC-400 (AC-401)	PC-400 Pressure (psi)	52

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	23.31	45	17

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	1164448	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	22.0	0.57"	184

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	141 ml/hr	Anti-scalant Inventory (TK-200):	6 20 Gallons
		Anti-scalant Overstock:	96 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 2/16/19

Back-up Generator			
Back-up Generator Run Hours	53.1	Back-up Generator Fuel Level	47%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & ops. data
Outfall & Air Stripper look Clean & Clear.

Work Performed: Filled Redux TR 200 to 20 gallons

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassett Date: 2/23/19

Arrival: 500pm Departure: 600pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	138.27	933612
EW-2	138.24	220013
EW-3	136.15	275210
EW-4	136.03	109923

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	23.24	436833	

Water in Equalization Tank (TK-100)[2]	32 inches	1,000 gallons

Compressed Air Supply			
AC-400 Run Hours	8158.61	AC-401 Run Hours	2779.03
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	55

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	23.00	45	17

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	1406788	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	22.5	0.57"	185

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	12 Gallons
		Anti-scalant Overstock:	99 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 2/23/19

Back-up Generator			
Back-up Generator Run Hours	5325	Back-up Generator Fuel Level	46%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)

MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & ops data.
Outfall & Air Stripper look Clean & clear.

Work Performed:

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 2/26/19

Arrival: 750 AM Departure: 850 AM

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	137.87	956913
EW-2	137.97	238229
EW-3	136.42	284763
EW-4	136.24	145608

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	22.68	524061	

Water in Equalization Tank (TK-100)[2]	36 inches	1,100 gallons

Compressed Air Supply			
AC-400 Run Hours	8189.28	AC-401 Run Hours	2779.07
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	52

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	23.10	45	17

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	1492993	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	23.0"	0.60"	189

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	141 ml/hr	Anti-scalant Inventory (TK-200):	8/20 Gallons
		Anti-scalant Overstock:	87 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 2/26/19

Back-up Generator			
Back-up Generator Run Hours	53.9	Back-up Generator Fuel Level	46%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & Ops data
Outfall & Air Stripper Clean & Clear.

Work Performed: * Rebooted PLC

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 3/3/19

Arrival: 220pm Departure: 250pm

Purpose of Site Visit (circle the appropriate condition):

Routine Sampling Event (Upset Condition[1]) Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	140.17	
EW-2	138.57	
EW-3	136.62	
EW-4	136.35	

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	26.94/16.66	699995	

Water in Equalization Tank (TK-100)[2]	26 inches	800 gallons

Compressed Air Supply			
AC-400 Run Hours	8251.28	AC-401 Run Hours	2779.07
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	100

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	16.45	32	10

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	1663338	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	21.0"	0.57"	184

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	93.7 ml/hr	Anti-scalant Inventory (TK-200):	15 Gallons
		Anti-scalant Overstock:	86 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 3/3/19

Back-up Generator			
Back-up Generator Run Hours		Back-up Generator Fuel Level	

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: EW-1 pump malfunction.
Shut off Air Supply & Discharge Valve on EW-1 - out of Service.
Increased System to 100 PSI
Checked over treatment System
~~Work Performed:~~ Recorded Meters & ops data.
Outfall & Air Stripper Clean & Clear.

Johnson Company, Inc. 2018

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 3/4/19

Arrival: 400pm Departure: 600pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	140.45	
EW-2	139.09	
EW-3	136.10	
EW-4	135.97	

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	16.60	725171	

Water in Equalization Tank (TK-100)[2]	26 inches	800 gallons

Compressed Air Supply			
AC-400 Run Hours	8261.02	AC-401 Run Hours	2779.97
Active Air Compressor (circle)	AC-400 (AC-401)	PC-400 Pressure (psi)	98/60

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	16.01	32	10

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	1687327	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	21.5	0.57	185

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	93.7 ml/hr	Anti-scalant Inventory (TK-200):	14 Gallons
		Anti-scalant Overstock:	86 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 3/4/19

Back-up Generator			
Back-up Generator Run Hours	53.9	Back-up Generator Fuel Level	46%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)

MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Inspect Air Compressor Outlet Filter	Exervise V-400	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & Ops data
Outfall & Air Stripper Clear & Clear.
System pressure Set to 60 PSI

Work Performed: - Pulled EW-1 pump & replaced with another refurbished pump.
- Bleed Air from Well lines

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 3/13/19

Arrival: 400pm Departure: 500pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	138.30	163876
EW-2	138.34	472586
EW-3	136.40	391728
EW-4	136.27	242978

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	22.95	1007031	

Water in Equalization Tank (TK-100)[2]	38 inches	1,150 gallons

Compressed Air Supply			
AC-400 Run Hours	2883.24	AC-401 Run Hours	8261.49
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	62

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	21.91	42	16

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	1968250	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	22.0	0.57	186

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	141 ml/hr	Anti-scalant Inventory (TK-200):	4→20 Gallons
		Anti-scalant Overstock:	70 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 3/13/19

Back-up Generator			
Back-up Generator Run Hours	54.4	Back-up Generator Fuel Level	45%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & OPS data
Outfall & Air Stripper are Clean & clear.

Work Performed: Filled Redux TK200 to 20.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 3/23/19

Arrival: 500pm Departure: 600pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	138.30	296069
EW-2	138.19	624612
EW-3	136.12	458199
EW-4	136.25	303698

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	20.60	1319625	

Water in Equalization Tank (TK-100)[2]	39 inches	1,200 gallons

Compressed Air Supply			
AC-400 Run Hours	8376.06	AC-401 Run Hours	2883.24
Active Air Compressor (circle)	AC-400 (AC-401)	PC-400 Pressure (psi)	65

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	21.71	42	15

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	2281071	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	21.5	0.56	185

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	10 Gallons
		Anti-scalant Overstock:	70 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 3/23/19

Back-up Generator			
Back-up Generator Run Hours	55.1	Back-up Generator Fuel Level	45%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)

MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & Ops. data
Outfall & Air Stripper are Clean & clear.

Work Performed:

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 3/30/19

Arrival: 530pm Departure: 700pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	138.40	403996
EW-2	137.92	798823
EW-3	136.09	499728
EW-4	136.12	353745

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	23.05	1534387	

Water in Equalization Tank (TK-100)[2]	49 inches	1,500 gallons

Compressed Air Supply			
AC-~~401~~ Run Hours (AC-401)	2963.54	AC-~~400~~ Run Hours (AC-400)	8376.06
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	65

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	21.32	41	14.5

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	2498514	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	21.0	0.53	178

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	3 → 20 Gallons
		Anti-scalant Overstock:	55 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 3/30/19

Back-up Generator			
Back-up Generator Run Hours	55.4	Back-up Generator Fuel Level	45%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & Ops Data
Outfall & Air Stripper look Clear

Filled Redux TK200 to 20.

Work Performed: AC-400 - Inspected interior Components - OK
Added 4 oz of Roto FG 0,1

AC-401 - Inspected interior Components - OK
Added 2 oz. of Roto FG oil

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 4/1/19
Arrival: 500 pm Departure: 630 pm

Purpose of Site Visit (circle the appropriate condition):

Routine Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	137.95	~~356502~~ 412734
EW-2	138.03	760371
EW-3	136.24	517616
EW-4	136.27	356502

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	22.14	1593930	

Water in Equalization Tank (TK-100)[2]	48 inches	1,500 gallons

Compressed Air Supply			
AC-~~400~~ Run Hours	AC-401 2963.66	AC-~~401~~ Run Hours	AC-400 8397.72
Active Air Compressor (circle)	AC-400 ~~AC-401~~	PC-400 Pressure (psi)	65

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	21.31	41	15

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	2558473	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	22.0"	0.57"	185

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	17 Gallons
		Anti-scalant Overstock:	55 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 4/1/19

Back-up Generator			
Back-up Generator Run Hours	55.4	Back-up Generator Fuel Level	45%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & Ops. data
Outfall & Air Stripper look Clear

Work Performed: - Assisted GL w/ JCO. to pull & replace EW-4 pump.
- Bleed air from Well lines.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 4/7/19
Arrival: 915 AM Departure: 945 AM

Purpose of Site Visit (circle the appropriate condition):

Routine Sampling Event (Upset Condition)[3] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	140.17	
EW-2	138.67	
EW-3	136.50	
EW-4	135.95	

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	16.44	1751727	

Water in Equalization Tank (TK-100)[2]	30 inches	950 gallons

Compressed Air Supply			
AC-400 Run Hours	8454.85	AC-401 Run Hours	2963.66
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	65

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	18.01	35	11.5

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	2717754	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	0.21.0	0.55	183

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	93.7 ml/hr	Anti-scalant Inventory (TK-200):	12 Gallons
		Anti-scalant Overstock:	55 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 4/7/19

Back-up Generator			
Back-up Generator Run Hours		Back-up Generator Fuel Level	

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: EW1 - high level - Not pumping.
Checked inside EW-1 vault - all look OK
Isolated pump - shut off Air Supply & disch. Valve.

Checked over treatment System
Recorded Meters & OPS data.
Outfall & Air Stripper look Clear.

Work Performed:

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel
Arrival: 515 pm
Date: 4/8/19
Departure: 615 pm

Purpose of Site Visit (circle the appropriate condition):

Routine Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	140.33	
EW-2	138.83	
EW-3	136.65	
EW-4	135.88	

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	16.48	1783225	

Water in Equalization Tank (TK-100)[2]	39 inches	1,200 gallons

Compressed Air Supply			
AC-400 Run Hours	8466.10	AC-401 Run Hours	2963.66
Active Air Compressor (circle)	AC-400 (AC-401)	PC-400 Pressure (psi)	65

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	16.52	32	9.5

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	2748071	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	20.0"	0.52	175

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	93.7 ml/hr	Anti-scalant Inventory (TK-200):	10 Gallons
		Anti-scalant Overstock:	55 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 4/8/19

Back-up Generator			
Back-up Generator Run Hours	56.6	Back-up Generator Fuel Level	44%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System.
Recorded Meters & Ops. data
Air Stripper & Outfall look Clear.

Work Performed: Assisted GL w/ JCo. in pulling and
Replacing EW-1 pump.
Bleed Air from lines. Pumping good.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 4/20/19

Arrival: 500pm Departure: 600pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	137.29	662107
EW-2	137.86	038360
EW-3	135.95	636277
EW-4	135.86	464879

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	21.02	2169260	

Water in Equalization Tank (TK-100)[2]	38 inches	1,200 gallons

Compressed Air Supply			
AC-400 Run Hours	8466.16	AC-401 Run Hours	3113.82
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	68

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	22.53	43	15

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	3142263	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	21.0	0.53	176

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	3→25 Gallons
		Anti-scalant Overstock:	25 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 4/20/19

Back-up Generator			
Back-up Generator Run Hours	57.4	Back-up Generator Fuel Level	44%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & Ops. data
Outfall & Air Stripper look Clear.
Filled Redux TK200 to 25.

Work Performed:

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 4/27/19

Arrival: 730 Am Departure: 830 Am

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	137.33	771410
EW-2	137.60	128242
EW-3	136.09	660095
EW-4	135.91	500291

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	21.52	2376030	

Water in Equalization Tank (TK-100)[2]	38 inches	1,200 gallons

Compressed Air Supply			
AC-400 Run Hours	8544.68	AC-401 Run Hours	3113.82
Active Air Compressor (circle)	AC-400 (AC-401)	PC-400 Pressure (psi)	68

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	22.31	42	15

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	3352918	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	22.5 "	0.54 "	180

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	141 ml/hr	Anti-scalant Inventory (TK-200):	25 Gallons
		Anti-scalant Overstock:	25 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 4/27/19

Back-up Generator			
Back-up Generator Run Hours	57.6	Back-up Generator Fuel Level	44%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & Ops data
Outfall & Air Stripper look Clear.

Work Performed:

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 5/4/19

Arrival: 530pm Departure: 630pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	137.25	892924
EW-2	137.54	232614
EW-3	136.32	691678
EW-4	136.06	539113

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	23.75	2609624	

Water in Equalization Tank (TK-100)[2]	30 inches	900 gallons

Compressed Air Supply			
AC-400 Run Hours	8544.69	AC-401 Run Hours	3202.36
Active Air Compressor (circle)	AC-400 (AC-401)	PC-400 Pressure (psi)	65

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	22.23	43	15

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	3590321	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	22.0"	0.52"	177

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	18 Gallons
		Anti-scalant Overstock:	25 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 5/4/19

Back-up Generator			
Back-up Generator Run Hours	58.0	Back-up Generator Fuel Level	42%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & Ops data.
Outfall & Air Stripper look Clear

Work Performed:

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: Cory Bassel Date: 5/11/19

Arrival: 430 pm Departure: 530 pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	137.49	004788
EW-2	137.90	320317
EW-3	136.40	706025
EW-4	135.95	577071

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	20.74	2820300	

Water in Equalization Tank (TK-100)[2]			
	26 inches	800	gallons

Compressed Air Supply			
AC-400 Run Hours	8544.39	AC-401 Run Hours	3282.89
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	65

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	21.43	45	21

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	3803652	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	20.5"	0.53"	178

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	11 Gallons
		Anti-scalant Overstock:	25 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 5/11/19

Back-up Generator			
Back-up Generator Run Hours	58.9	Back-up Generator Fuel Level	42%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)

MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & Ops. data
Inspected outfall & Air Stripper, Clean & Clear.
Sampling Personell on Site & Set up.

Work Performed:

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: Cory Bassil Date: 5/17/19

Arrival: 500pm Departure: 600pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	138.01	100373
EW-2	138.19	394697
EW-3	136.22	720400
EW-4	135.99	611863

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	22.31	3003492	

Water in Equalization Tank (TK-100)[2]	53 inches	1,600 gallons

Compressed Air Supply			
AC-400 Run Hours	8611.41	AC-401 Run Hours	3283.14
Active Air Compressor (circle)	AC-400 (AC-401)	PC-400 Pressure (psi)	70

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	21.92	45	21.5

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	3990451	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	20.5"	0.50	174

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	5→30 Gallons
		Anti-scalant Overstock:	5 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 5/17/19

Back-up Generator			
Back-up Generator Run Hours	59.3	Back-up Generator Fuel Level	42%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & Ops. data
Outfall & Air stripper are Clean.

Filled Redux TK to 30.
overstock = 5 gallons.

Work Performed:

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: Cory Bassel Date: 5/19/19

Arrival: 830 Am Departure: 900 Am

Purpose of Site Visit (circle the appropriate condition):

Routine Sampling Event (Upset Condition) Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	140.75	
EW-2	140.54	
EW-3	140.03	
EW-4	139.83	

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	26.14	3047385	

Water in Equalization Tank (TK-100)[2]	28 inches	900 gallons

Compressed Air Supply			
AC-400 Run Hours	8611.41	AC-401 Run Hours	3300.12
Active Air Compressor (circle)	AC-400 (AC-401)	PC-400 Pressure (psi)	72

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	22.10	46	22

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	4036985	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	20.5"	0.53"	178

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	141 ml/hr	Anti-scalant Inventory (TK-200):	30 Gallons
		Anti-scalant Overstock:	5 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 5/19/19

Back-up Generator			
Back-up Generator Run Hours	59.3	Back-up Generator Fuel Level	42%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
* Reset Air Compressor 401 -
Well pumps & Air Stripper operating OK
Recorded Meters & ops data
Outfall & Air Stripper are Clean.

Work Performed:

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 5/25/19

Arrival: 845 Am Departure: 945 Am

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	138.40	216574
EW-2	138.14	486318
EW-3	136.36	734597
EW-4	135.86	656165

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	20.16	3229967	

Water in Equalization Tank (TK-100)[2]	36 inches	1,100 gallons

Compressed Air Supply			
AC-400 Run Hours	8611.41	AC-401 Run Hours	3371.35
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	68

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	21.62	45	21.5

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	4224680	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	20.5"	0.54"	177

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	25 Gallons
		Anti-scalant Overstock:	5 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix 1: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 5/25/19

Back-up Generator			
Back-up Generator Run Hours	59.4	Back-up Generator Fuel Level	42%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & Ops data
Outfall & Air Stripper are Clear

Work Performed: replaced Blower filter.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassil Date: 5/28/19

Arrival: 600pm Departure: 630

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	138.30	
EW-2	138.72	
EW-3	139.73	
EW-4	135.92	

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	18.95	3323650	

Water in Equalization Tank (TK-100)[2]	37 inches	1,100 gallons

Compressed Air Supply			
AC-400 Run Hours	8670.81	AC-401 Run Hours	3371.35
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	80

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	19.03	40	16

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	4320550	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	20.5"	0.53"	176

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	22 Gallons
		Anti-scalant Overstock:	5 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 5/28/19

Back-up Generator			
Back-up Generator Run Hours	59.6	Back-up Generator Fuel Level	42%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & Ops. data
OutFall & Air Stripper are Clean.

Work Performed: - Isolated & took off line EW-3 pump
- Increased System pressure to 80.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 5/30/19

Arrival: 530pm Departure: 700pm

Purpose of Site Visit (circle the appropriate condition):

Routine Sampling Event Upset Condition[1] Modified Operation[1] (Other[1])

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	138.19	
EW-2	138.56	
EW-3	139.83	
EW-4	136.12	

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	20.23	3378314	

Water in Equalization Tank (TK-100)[2]	39 inches	1,200 gallons

Compressed Air Supply			
AC-400 Run Hours	8690.49	AC-401 Run Hours	3371.35
Active Air Compressor (circle)	AC-400 (AC-401)	PC-400 Pressure (psi)	84

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	19.51	41	17

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	4374531	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	20.5"	0.53"	178

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	20 Gallons
		Anti-scalant Overstock:	5 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 5/30/19

Back-up Generator			
Back-up Generator Run Hours	60.0	Back-up Generator Fuel Level	42%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Outfall & Air Stripper look Clear

Work Performed: Assisted GL in pulling & replacing
EW-3 pump.
Purged Air from well lines, all OK

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 6/8/19

Arrival: 445 pm Departure: 600 pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	137.81	434793
EW-2	138.17	657248
EW-3	136.52	780532
EW-4	136.01	742791

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	26.33	3653393	

Water in Equalization Tank (TK-100)[2]	43 inches	1,300 gallons

Compressed Air Supply			
AC-400 Run Hours	8690.54	AC-401 Run Hours	3482.96
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	80

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	21.53	45	21

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	4655384	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	20.5"	0.52"	175

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	16 Gallons
		Anti-scalant Overstock:	110 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

rator: CB Date: 6/8/19

Back-up Generator			
ack-up Generator Run Hours	60.6	Back-up Generator Fuel Level	42%

utine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air mpressor Tank and ryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)

MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Inspect Air ompressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

nments: Checked over treatment System
Recorded Meters & Ops. data
Outfall & Air Stripper look clear.

k Performed: Changed desicant tubes inside Well Vaults

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bacci Date: 6/13/19

Arrival: 445 pm Departure: 545 pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	137.61	511392
EW-2	138.03	714540
EW-3	136.52	789659
EW-4	135.98	770759

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	19.91	3805825	

Water in Equalization Tank (TK-100)[2]	41 inches	1,300 gallons

Compressed Air Supply			
AC-400 Run Hours	8748.15	AC-401 Run Hours	3482.96
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	82

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	21.62	45	21.5

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	4812412	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	20.5"	0.52"	176

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	11/25 Gallons
		Anti-scalant Overstock:	95 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 6/13/19

Back-up Generator			
Back-up Generator Run Hours	60.9	Back-up Generator Fuel Level	41%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & OPS. data
Outfall & Air Stripper looking clean.

~~X~~ Monitor Well J05-P2-Out level = 75.59

Work Performed:

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassil Date: 6/22/19

Arrival: 430pm Departure: 530pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	137.76	661507
EW-2	137.76	828676
EW-3	136.27	792596
EW-4	135.89	825378

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	22.93	4105098	

Water in Equalization Tank (TK-100)[2]	51 inches	1,550 gallons

Compressed Air Supply			
AC-400 Run Hours	8862.08	AC-401 Run Hours	3482.96
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	80

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	21.73	45	21

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	5119883	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	20.5"	0.52"	172

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	15 Gallons
		Anti-scalant Overstock:	95 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 6/22/19

Back-up Generator			
Back-up Generator Run Hours	61.3	Back-up Generator Fuel Level	41%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)

MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & Ops. data
Outfall & Air Stripper looking Clear.

Monitor Well - 305 - PZ - Out level = 73.51

Work Performed:

Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 6/29/19

Arrival: 8:30 Am Departure: 9:30 Am

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	137.76	746876
EW-2	137.76	894826
EW-3	136.05	792886
EW-4	136.10	855936

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	18.15	4274746	

Water in Equalization Tank (TK-100)[2]	51 inches	1,550 gallons

Compressed Air Supply			
AC-400 Run Hours	8862.08	AC-401 Run Hours	3551.60
Active Air Compressor (circle)	AC-400 (AC-401)	PC-400 Pressure (psi)	80

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	21.13	44	20

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	5294346	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	21.0"	0.50"	173

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	10 Gallons
		Anti-scalant Overstock:	95 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 6/29/19

Back-up Generator			
Back-up Generator Run Hours	61.6	Back-up Generator Fuel Level	40 %

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & Ops data
Outfall & Air Strippers looking clear,
Monitor Well JO5-PZ-Out level = 71.84

Work Performed:

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 7/6/19

Arrival: 500pm Departure: 600pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	137.60	855080
EW-2	138.19	980357
EW-3	139.13	793630
EW-4	135.88	894693

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	20.36	4486369	

Water in Equalization Tank (TK-100)[2]	37 inches	1,100 gallons

Compressed Air Supply			
AC-400 Run Hours	8862.08	AC-401 Run Hours	3636.24
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	80

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	24.0	40	16

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	Reset - 17	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	19.0"	0.50"	172

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	141 ml/hr	Anti-scalant Inventory (TK-200):	2/25 Gallons
		Anti-scalant Overstock:	75 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 7/6/19

Back-up Generator			
Back-up Generator Run Hours	62.0	Back-up Generator Fuel Level	40%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)

MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded meters & Ops data
Outfall & Air Stripper looking Clear.

Monitor Well J05-P2-Out level 69.52

Work Performed: Filled Redux TK200 to 25

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 7/13/19

Arrival: 415 pm Departure: 530 pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	137.35	930432 #4
EW-2	137.54	794206 #3
EW-3	136.29	054418 #2
EW-4	136.02	950403 #1

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	20.23	4670873	

Water in Equalization Tank (TK-100)[2]	25 inches	800 gallons

Compressed Air Supply			
AC-400 Run Hours	8931.86	AC-401 Run Hours	3636.24
Active Air Compressor (circle)	AC-400 (AC-401)	PC-400 Pressure (psi)	83

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	20.03	43	18.5

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	139332	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	20.5"	0.50"	169

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	19 Gallons
		Anti-scalant Overstock:	55 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 7/13/19

Back-up Generator			
Back-up Generator Run Hours	62.5	Back-up Generator Fuel Level	40%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & Ops data
Outfall & Air Stripper look clear
Monitor Well J05-PZ-out level 66-69" H2O

Work Performed: Weed Wacked around Extraction Well Vaults

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 7/14/19

Arrival: 800 pm Departure: 845 pm

Purpose of Site Visit (circle the appropriate condition):

Routine Sampling Event (Upset Condition[1]) Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	138.18	
EW-2	138.34	
EW-3	136.09	
EW-4	135.98	

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	23.60	4688966	

Water in Equalization Tank (TK-100)[2]	21 inches	625 gallons

Compressed Air Supply			
AC-400 Run Hours	8931.86	AC-401 Run Hours	3643.70
Active Air Compressor (circle)	AC-400 (AC-401)	PC-400 Pressure (psi)	82

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	20.11	43	17

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	156868	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	20.5"	0.52"	174

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	18 Gallons
		Anti-scalant Overstock:	55 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 7/14/19

Back-up Generator			
Back-up Generator Run Hours	62.5	Back-up Generator Fuel Level	40%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Air Compressor Unit 401 - Faulted.
On Site reset Air Compressor 401
- Extractions Wells 1, 2, 3 & 4 Pumping - OK
Released Air from Well Lines.
Started up Air Stripper process.
Recorded Meters & Ops data.

Work Performed:

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 7/22/19 Monday

Arrival: 815pm Departure: 845pm

Purpose of Site Visit (circle the appropriate condition):

Routine Sampling Event (Upset Condition[1]) Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	137.23	
EW-2	137.81	
EW-3	136.15	
EW-4	136.14	

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	21.93	4921853	

Water in Equalization Tank (TK-100)[2]	25 inches	800 gallons

Compressed Air Supply			
AC-400 Run Hours	8932.02	AC-401 Run Hours	3738.55
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	80

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	20.64	35	12

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	380469	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	21.5"	0.53"	178

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	11 Gallons
		Anti-scalant Overstock:	55 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 7/22/19 Monday

Back-up Generator			
Back-up Generator Run Hours	64.5	Back-up Generator Fuel Level	39%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Called in for Upset Condition.
Lost Power Briefly - Air Compressor faulted - Reset Air Compressor Running AC 400.
Released Air from Well-water lines
Started up treatment System.
Recorded Meters & OPS data

Work Performed:

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 8/1/19

Arrival: 800 Am Departure: 930 Am

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	139.47	218997
EW-2	139.25	256034
EW-3	138.93	794332
EW-4	138.22	015173

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	21.42	5189492	

Water in Equalization Tank (TK-100)[2]	69 inches	2,100 gallons

Compressed Air Supply			
AC-400 Run Hours	9032.41	AC-401 Run Hours	3738.55
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	84

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	9.77	20	6.5

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	636899	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	20.0"	0.52	176

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	70.5 ml/hr	Anti-scalant Inventory (TK-200):	3/25 Gallons
		Anti-scalant Overstock:	35 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 8/1/19

Back-up Generator			
Back-up Generator Run Hours	64.8	Back-up Generator Fuel Level	40%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
(Drain Air Compressor Tank and Dryer Condensate)	(Alternate Active Air Compressor and Dryer)	(Inspect Extraction Well Vaults)	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	(Exervise V-406)	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & Ops. data
Outfall & Air Stripper looking Clear

Work Performed: * Reset PLC & HMI multiple times.
Attempting to reJog program for
Transfer pump to run over 20hz

Monitor Well JOS-PZ-Out level = 64.08"

Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 8/8/19

Arrival: 330pm Departure: 430pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	136.21	316520
EW-2	136.58	329234
EW-3	136.10	794405
EW-4	136.10	121587

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	19.24	5373720	

Water in Equalization Tank (TK-100)[2]	59 inches	1,800 gallons

Compressed Air Supply			
AC-400 Run Hours	9032.41	AC-401 Run Hours	3813.25
Active Air Compressor (circle)	AC-400 (AC-401)	PC-400 Pressure (psi)	80

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	19.83	34	11

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	816518	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	22.0"	0.50"	172

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	19 Gallons
		Anti-scalant Overstock:	35 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 8/8/19

Back-up Generator			
Back-up Generator Run Hours	65.5	Back-up Generator Fuel Level	40%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & Ops data
Outfall & Air Stripper look clear.

Air Compressor 401 remaining in Service.

Work Performed: - Checked Filters & oil on Air Compressors

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 8/16/19 - Friday

Arrival: 530pm Departure: 630 pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	136.00	077077
EW-2	136.10	794476
EW-3	135.90	423778
EW-4	135.74	440587

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	17.74	5599960	

Water in Equalization Tank (TK-100)[2]	28 inches	850 gallons

Compressed Air Supply			
AC-400 Run Hours	9032.41	AC-401 Run Hours	3902.64
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	78

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	19.04	34	11

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	1037834	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	21.5"	0.51"	174

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	94.0 ml/hr	Anti-scalant Inventory (TK-200):	11 Gallons
		Anti-scalant Overstock:	35 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 8/16/19

Back-up Generator			
Back-up Generator Run Hours	65.8	Back-up Generator Fuel Level	41%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & Ops. data
Outfall & Air Stripper look Clear.

Work Performed: Swept treatment Bldg. floor
Wipped away Cobwebs & dust from Equip.

Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 8/23/19

Arrival: 715 Am Departure: 830 Am

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	135.67	099774
EW-2	135.83	794508
EW-3	136.01	500889
EW-4	135.96	548224

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	19.82	5782483	

Water in Equilibration Tank (TK-100)[2]		
	54" inches	1,850 gallons

Compressed Air Supply			
AC-400 Run Hours	9099.48	AC-401 Run Hours	3902.84
Active Air Compressor (circle)	AC-400 (AC-401)	PC-400 Pressure (psi)	82

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	19.32	33	11.5

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	1218025	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	21.5"	0.52"	177

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	5/25 Gallons
		Anti-scalant Overstock:	15 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 8/23/19

Back-up Generator			
Back-up Generator Run Hours	66.1	Back-up Generator Fuel Level	39%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & ops data
Outfall & Air Stripper look Clear
filled Redux TK to 25, overstock = 15 gallons.

Work Performed:

Appendix I: Operator Log

Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 8/31/19 Saturday

Arrival: 900 Am Departure: 1000 Am

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	134.77	683530
EW-2	135.19	596009
EW-3	136.10	794633
EW-4	135.90	124036

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	19.14	6002809	

Water in Equalization Tank (TK-100)[2]	34 inches	1,025 gallons

Compressed Air Supply			
AC-400 Run Hours	9099.48	AC-401 Run Hours	3987.10
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	80

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	19.03	34	11

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	1436615	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	21.5"	0.53"	176

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	17 Gallons
		Anti-scalant Overstock:	15 Gallons

Notes:

[1] Describe in Comments Section on Page 2.

[2] Reading taken from HMI located on the air stripper skid.

[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 8/31/19

Back-up Generator			
Back-up Generator Run Hours	66.5	Back-up Generator Fuel Level	41%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & Ops data
Outfall & Air Stripper look Clear.

Work Performed:

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 9/4/19

Arrival: 715 Am Departure: 815 Am

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	134.66	134676
EW-2	135.35	794673
EW-3	136.05	643142
EW-4	136.13	748200

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	19.02	6107844	

Water in Equalization Tank (TK-100)[2]	27 inches	850 gallons

Compressed Air Supply			
AC-400 Run Hours	9136.83	AC-401 Run Hours	3987.17
Active Air Compressor (circle)	AC-400 (AC-401)	PC-400 Pressure (psi)	80

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	18.57	33	11

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	1540313	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	21.5"	0.52"	174

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	94.0 ml/hr	Anti-scalant Inventory (TK-200):	13 Gallons
		Anti-scalant Overstock:	15 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 9/4/19

Back-up Generator			
Back-up Generator Run Hours	66.5	Back-up Generator Fuel Level	42%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & Ops data
Outfall & Air Stripper look Clear.
* Shutdown & rebooted PLC & remote Monitoring

ork Performed:

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 9/17/19

Arrival: 745 Am Departure: 845 Am

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	134.13	164589
EW-2	134.87	795018
EW-3	136.60	802003
EW-4	135.81	967034

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	18.31	6451084	

Water in Equalization Tank (TK-100)[2]	38 inches	1,150 gallons

Compressed Air Supply			
AC-400 Run Hours	9136.83	AC-401 Run Hours	4113.73
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	80

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	17.72	37	15

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	1876064	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	20.5"	0.54"	179

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	94.0 ml/hr	Anti-scalant Inventory (TK-200):	20 Gallons
		Anti-scalant Overstock:	110 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 9/17/19

Back-up Generator			
Back-up Generator Run Hours	67.3	Back-up Generator Fuel Level	41%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)

MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & Ops data
Outfall & Air Stripper looking Clear.

2 Full 55 gal. Drums of Redux on Site.

Checked Air Compressor oil, filters & piping - OK

Work Performed:

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 9/27/19

Arrival: 700 AM Departure: 800 AM

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	133.69	732508
EW-2	134.39	928915
EW-3	135.83	795018
EW-4	135.99	182626

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	18.59	6713874	

Water in Equalization Tank (TK-100)[2]	45 inches	1,400 gallons

Compressed Air Supply			
AC-400 Run Hours	9224.75	AC-401 Run Hours	4113.77
Active Air Compressor (circle)	AC-400 (AC-401)	PC-400 Pressure (psi)	80

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	17.52	36	14.5

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	2127309	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	20.5"	0.52"	175

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	94.0 ml/hr	Anti-scalant Inventory (TK-200):	12 Gallons
		Anti-scalant Overstock:	110 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 9/27/19

Back-up Generator			
Back-up Generator Run Hours	68.0	Back-up Generator Fuel Level	40%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & Ops data
Outfall & Air Stripper look Clear

Work Performed:

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 10/5/19

Arrival: 900 Am Departure: 1030 Am

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	133.56	267523
EW-2	134.07	034879
EW-3	135.55	795018
EW-4	136.01	193879

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	17.16	6924639	

Water in Equalization Tank (TK-100)[2]	22 inches	700 gallons

Compressed Air Supply			
AC-400 Run Hours	9224.76	AC-401 Run Hours	4188.54
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	80

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	17.01	37	15

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	2328542	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	21.0"	0.54"	180

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	94.0 ml/hr	Anti-scalant Inventory (TK-200):	5 → 30 Gallons
		Anti-scalant Overstock:	85 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 10/5/19

Back-up Generator			
Back-up Generator Run Hours	68.3	Back-up Generator Fuel Level	37%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & Ops data
Outfall & Air Stripper look Clear.

Work Performed: Replaced Blower filter

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 10/10/19

Arrival: 445 pm Departure: 545 pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	133.38	352419
EW-2	133.75	102449
EW-3	135.51	795018
EW-4	135.69	199511

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	19.49	7059374	

Water in Equalization Tank (TK-100)[2]	37 inches	1,100 gallons

Compressed Air Supply			
AC-400 Run Hours	9268.88	AC-401 Run Hours	4188.84
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	84

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	16.72	36	14

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	2452774	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	21.5	0.55	181

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	94.0 ml/hr	Anti-scalant Inventory (TK-200):	26 Gallons
		Anti-scalant Overstock:	85 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 10/10/19

Back-up Generator			
Back-up Generator Run Hours	68.6	Back-up Generator Fuel Level	37%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded all Meters & Ops data
Outfall & Air Stripper look clear

Work Performed: Pulled Vines off power Box outside

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 10/18/19

Arrival: 700 Am Departure: 800 Am

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	137.17	
EW-2	136.74	
EW-3	135.86	
EW-4	135.99	

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	18.86	7236777	

Water in Equalization Tank (TK-100)[2]	27 inches	800 gallons

Compressed Air Supply			
AC-400 Run Hours	926905	AC-401 Run Hours	~~4252~~ 4250.60
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	85

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	17.17	36	15

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	2620901	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	21.5"	0.56"	184

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	94.0 ml/hr	Anti-scalant Inventory (TK-200):	20 Gallons
		Anti-scalant Overstock:	85 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 10/18/19

Back-up Generator			
Back-up Generator Run Hours	69.0	Back-up Generator Fuel Level	35%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & Process Data
Outfall & Air Stripper look Clear.

Work Performed:

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 10/26/19

Arrival: 515 pm Departure: 615 pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	132.68	610132
EW-2	132.94	313894
EW-3	134.74	795020
EW-4	136.02	211177

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	18.21	7454673	

Water in Equalization Tank (TK-100)[2]	51" inches	1,550 gallons

Compressed Air Supply			
AC-400 Run Hours	9341.32	AC-401 Run Hours	4250.60
Active Air Compressor (circle)	AC-400 (AC-401)	PC-400 Pressure (psi)	80

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	18.51	39	16.5

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	2845585	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	21.5"	0.56"	182

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	94.0 ml/hr	Anti-scalant Inventory (TK-200):	12 Gallons
		Anti-scalant Overstock:	85 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C.B. Date: 10/26/19

Back-up Generator			
Back-up Generator Run Hours	69.3	Back-up Generator Fuel Level	35%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)

MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & Ops data
Outfall & Air Stripper look Clear

Checked oil levels & vents on Air Compressors.

Work Performed:

Day

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 10/27/19

Arrival: 545 pm Departure: 615 pm

Purpose of Site Visit (circle the appropriate condition):

Routine Sampling Event (Upset Condition[1]) Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	133.00	
EW-2	133.44	
EW-3	135.38	
EW-4	136.00	

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	19.00	7475926	

Water in Equalization Tank (TK-100)[2]	29 inches	900 gallons

Compressed Air Supply			
AC-400 Run Hours	9341.32	AC-401 Run Hours	4258.00
Active Air Compressor (circle)	AC-400 (AC-401)	PC-400 Pressure (psi)	80

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	19.51	40	17

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	2868364	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	21.5	0.55	180

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	11 Gallons
		Anti-scalant Overstock:	85 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 10/27/19

Back-up Generator			
Back-up Generator Run Hours	69.3	Back-up Generator Fuel Level	35%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Called out to reset the System & Air Compressor
Rebooted PLC, Reset Air Compressor 401
Observed Treatment System Running
Recorded Meters & Ops data

Work Performed:

Operations, Maint...

Operator: C. Bassel Date: 11/3/19

Arrival: 530pm Departure: 630pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	132.47	746446
EW-2	133.22	~~795020~~ 433310
EW-3	134.74	795020
EW-4	136.03	211680

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	18.04	7657495	550pm

Water in Equalization Tank (TK-100)[2]	61 inches	1,850 gallons

Compressed Air Supply			
AC-400 Run Hours	9341.32	AC-401 Run Hours	4321.73
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	82

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	18.71	39	17

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	3054657	550pm

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	22.5	0.56	184

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	5 → 25 Gallons
		Anti-scalant Overstock:	70 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 11/3/19

Back-up Generator			
Back-up Generator Run Hours	69.7	Back-up Generator Fuel Level	35%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if OI float inverted)

MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Chec

Comments: Checked over Treatment System
Recorded all Meters & Op's data
Checked outfall & Air Stripper are Clear.

Work Performed:

Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 11/10/19

Arrival: 630pm Departure: 730pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	132.57	870268
EW-2	132.90	541449
EW-3	134.68	795020
EW-4	135.98	214017

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	17.50 - 19.01	7837453	

Water in Equalization Tank (TK-100)[2]	39 inches	1,200 gallons

Compressed Air Supply			
AC-400 Run Hours	9355.39	AC-401 Run Hours	4369.29
Active Air Compressor (circle)	AC-400 (AC-401)	PC-400 Pressure (psi)	78

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	18.71	40	17

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	3241416	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	25"	0.57"	185

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	18 Gallons
		Anti-scalant Overstock:	70 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 11/10/15

Back-up Generator			
Back-up Generator Run Hours	70.0	Back-up Generator Fuel Level	35%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System. Recorded Meters & Process Data Outfall & Air Stripper look Clear.

Work Performed:

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 11/17/19

Arrival: 215 pm Departure: 315 pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	132.41	990970
EW-2	132.84	644661
EW-3	134.60	795040
EW-4	135.90	214017

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	18.10	8012013	

Water in Equilization Tank (TK-100)[2]	80 inches	2,400 gallons

Compressed Air Supply			
AC-400 Run Hours	9355.39	AC-401 Run Hours	4429.46
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	82

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	18.50	37	17

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	3421580	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	23.5"	0.57"	186

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	11 Gallons
		Anti-scalant Overstock:	70 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 11/17/19

Back-up Generator			
Back-up Generator Run Hours	70.3	Back-up Generator Fuel Level	34%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & Process Data
Outfall & Air Stripper look Clear

Work Performed: Replaced Blower Air inlet filter

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 11/22/19

Arrival: 200pm Departure: 300pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	132.57	095715
EW-2	133.05	730501
EW-3	134.73	795020
EW-4	136.02	214124

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	17.10	8165817	

Water in Equalization Tank (TK-100)[2]	36 inches	1,100 gallons

Compressed Air Supply			
AC-400 Run Hours	9406.28	AC-401 Run Hours	4429.47
Active Air Compressor (circle)	AC-400 (AC-401)	PC-400 Pressure (psi)	82

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	18.71	40	17

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	3582361	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	23.0"	0.56	182

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	5 → 20 Gallons
		Anti-scalant Overstock:	55 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] ... the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 11/22/19

Back-up Generator			
Back-up Generator Run Hours	70.6	Back-up Generator Fuel Level	34%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment Process. Recorded Meters & Process Data Outfall & Air Stripper look Clear.

Work Performed: -Filled Redux TK to 20 gallons
-1 Full 55 gal. drum in overstock

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 11/29/19

Arrival: 500pm Departure: 600pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	132.68	217547
EW-2	133.05	795020
EW-3	134.86	818329
EW-4	135.87	203065

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	19.17	8325283	

Water in Equalization Tank (TK-100)[2]	58 inches	2,100 gallons

Compressed Air Supply			
AC-400 Run Hours	9406.28	AC-401 Run Hours	4486.14
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	82

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	18.90	39	17

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	3745878	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	23.5"	0.58"	188

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	14 Gallons
		Anti-scalant Overstock:	55 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 11/29/19

Back-up Generator			
Back-up Generator Run Hours	71.0	Back-up Generator Fuel Level	33%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment System
Recorded Meters & process Data
OutFall & Air Stripper look Clear

Checked Air Compressor oil level & Vents

Work Performed:

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 12/13/19

Arrival: 815 Am Departure: 915 Am

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	133.61	324576
EW-2	133.53	810039
EW-3	135.33	956021
EW-4	135.83	375271

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	19.60	8679520	

Water in Equalization Tank (TK-100)[2]	24 inches	750 gallons

Compressed Air Supply			
AC-400 Run Hours	9525.13	AC-401 Run Hours	4486.15
Active Air Compressor (circle)	AC-400 (AC-401)	PC-400 Pressure (psi)	79

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	19.50	42	18

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	4111209	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	21.0"	0.62"	192

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	2 → 25 Gallons
		Anti-scalant Overstock:	55/35 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 12/13/19

Back-up Generator			
Back-up Generator ~~Run Hours~~ Fuel	3390	Back-up Generator ~~Fuel Level~~ Hours	71.6

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment Process
Recorded Meters & Operation Data
Outfall & Air Stripper look Clear

Work Performed:

Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 12/19/19

Arrival: 700 AM Departure: 800 AM

Purpose of Site Visit (circle the appropriate condition):

Routine Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	133.45	
EW-2	133.92	
EW-3	135.24	
EW-4	135.74	

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	19.7	8752890	

Water in Equalization Tank (TK-100)[2]	29 inches	800 gallons

Compressed Air Supply			
AC-400 Run Hours	9525.13	AC-401 Run Hours	4524.15
Active Air Compressor (circle)	AC-400 AC-401	PC-400 Pressure (psi)	78

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	19.6	41	17

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	4277240	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	21.0	0.58"	186

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	20 Gallons
		Anti-scalant Overstock:	35 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 12/19/19

Back-up Generator			
Back-up Generator Run Hours	71.9	Back-up Generator Fuel Level	33%

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)
MONTHLY	**MONTHLY**	**MONTHLY**	**MONTHLY**	**MONTHLY**
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment Process
Recorded Meters & Operation Data
Outfall & Air Stripper look Clear

Work Performed:

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: C. Bassel Date: 12/24/19

Arrival: 215 pm Departure: 315 pm

Purpose of Site Visit (circle the appropriate condition):

(Routine) Sampling Event Upset Condition[1] Modified Operation[1] Other[1]

Groundwater Extraction Wells		
Well	Water Level (ft AMSL)[2]	Well Cycle Count[3]
EW-1	133.85	637108
EW-2	134.07	167293
EW-3	135.68	795040
EW-4	135.70	253792

Influent Flow Meter	Flow Rate (gpm)	Totalizer Volume (gal)	Time
FIT-100	21.51	8989600	

Water in Equalization Tank (TK-100)[2]	32 inches	1,000 gallons

Compressed Air Supply			
AC-400 Run Hours	9525.13	AC-401 Run Hours	4597.30
Active Air Compressor (circle)	(AC-400) AC-401	PC-400 Pressure (psi)	79

Air Stripper			
Transfer Pump	Flow Rate (gpm)	Pump Speed (Hz)[2]	Discharge Press. (psi)
FIT-200/PI-200	18.81	41	17

Transfer Flow Meter	Totalizer Volume (gal)	Time
FIT-200	4410683	

Blower	Sump Pressure (in. H_2O)	Pitot Tube Pressure (in. H_2O)	Flow Rate (scfm)[2]
DPI-200/DPI-201	20.5	0.58	187

Chemical Injection System			
Metering Pump (P-201) Discharge Rate:	117 ml/hr	Anti-scalant Inventory (TK-200):	14 Gallons
		Anti-scalant Overstock:	35 Gallons

Notes:
[1] Describe in Comments Section on Page 2.
[2] Reading taken from HMI located on the air stripper skid.
[3] Counters are located inside the respective well vault.

Appendix I: Operator Log
Physical Containment with Groundwater Treatment
Former Dennison/Monarch Systems Site
Operable Unit 01
New Windsor, New York

Operator: CB Date: 12/24/15

Back-up Generator			
Back-up Generator Run ~~Hours~~	33% fuel	Back-up Generator ~~Fuel Level~~	hours 72.3

Routine Work (circle the routine work performed):

WEEKLY	WEEKLY	WEEKLY	MONTHLY	MONTHLY
Drain Air Compressor Tank and Dryer Condensate	Alternate Active Air Compressor and Dryer	Inspect Extraction Well Vaults	Inspect and Clean/Replace B-200 Inlet Filter	Inspect and Pump Down TK-300 (if ON float inverted)

MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Inspect Air Compressor Outlet Filter	Exervise V-406	Inspect Air Stripper Trays (with AS-200 shut down) and Clean if Necessary	Run Back-up Generator Under Load	Site Perimeter Check

Comments: Checked over treatment Process
Recorded Meters & Ops. data
Outfall & Air Stripper look Clear.

Work Performed:

APPENDIX C LABORATORY DATA PACKAGES AND DATA VALIDATION AND DATA USABILITY SUMMARY REPORTS – SPRING 2019 SEMI-ANNUAL MONITORING

DATA USABILITY SUMMARY REPORT

FOR

AD-NY Project (1-0145-5)
Former Dennison/Monarch System Site
New Windsor, NY
VCA No. D3-0006-99-04

ORGANIC ANALYSIS DATA
Volatile Compounds in Water Samples

Sample Delivery Group (SDG) Nos.
JCV87 through JCV94

Chemical Analyses Performed by:

Eurofins Lancaster Laboratories
Lancaster, PA 17605-2425

FOR

VHB
Montpelier, VT 05602

Data Validation By:

ddms, inc.
St. Paul, Minnesota 55108

July 23, 2019
Revised March 23, 2020

2091-0008/PSN/DAS
\Spring2019_Voa.docx

EXECUTIVE SUMMARY

Validation of the volatile organic data prepared by Eurofins Lancaster Laboratories Environmental (ELLE) for 85 water samples, four trip blanks (TBs), two equipment blanks (EBs), and one PDB-blank from the former Avery Dennison / Monarch Systems Site in New Windsor, NY (VCA No. D3-0006-99-04) has been completed by de maximis Data Management Solutions, Inc. (ddms). The data were reported by the laboratory under SDG Nos. JCV87 through JCV94. The following samples were reported:

JCV87

TB050619	J16-UC02	J16-UC01	J18-UC03
J08-UC01	J08-UC02	J15-UC01	J15-UC02
J21-UC01	J21-UC02		

JCV88

J01-UC02	J01-UC01	J01-BR02	J01-BR01

JCV89

RS-12	RS-01	RS-09	RS-DUP
RS-03	RS-13	RS-10	RS-02
RS-11	PDB Blank		

JCV90

RS-06	RS-05	RS-04	RS-15
RS-07	RS-14	RS-16	RS-08

JCV91

MW-1S	DUP-03	MW-1D	J11-BR01
J11-UC01	J11-UC02	J11-BR02	J02-BR01
EBAWR051319	TB051119	J20-UC02	J20-BR02
J20-UC01	J20-BR01	J19-UC02	RIZ-19
J17-UC02	J17-BR01	J02-UC01	J02-BR02

JCV92

DUP-02	J14-BR02	J14-BR01	J14-UC02
J14-UC01	MW-2	MW-2I	DUP-01
J04-BR02	J04-BR01	J05-BR02	J05-BR01

J23-UC01	J23-UC02	RIZ-7	J06-UC01
J06-UC02	EB051019TRO		

JCV93

J18-UC02	J19-UC01	J13-BR02	J13-BR01
J13-UC03	J13-UC02	J12-BR02	J12-BR01
TB050819	J22-BR02	J22-BR01	J17-UC01

J07-UC02

JCV94

TB052119	Diff-DUP	Diff-01	Diff-02
Diff-03	Diff-04	Diff-05	Diff-06
Diff-07			

Below is the Data Usability Summary Report (DUSR) associated with these samples.

	Data Usability Summary Report	
1.	Is the data package complete as defined under the requirements for the most current DEC ASP Category B or USEPA CLP data deliverables?	Yes
2.	Have all holding times been met?	Yes
3.	Do all the QC data; blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications?	No – See Calibration, Blanks, LCS, and MS/MSD sections
4.	Have all of the data been generated using established and agreed upon analytical protocols?	Yes
5.	Does an evaluation of the raw data confirm the results provided in the data summary sheet and the quality control verification forms?	Yes
6.	Have the correct data qualifiers been used and are they consistent with the most current DEC ASP?	Yes
7.	Have any quality control (QC) exceedances been specifically noted in the DUSR and have the corresponding QC summary sheets from the data packages been attached to the DUSR?	Yes – Attachment B to this report.

Based on the validation effort and professional judgement, results were qualified as summarized below:

- Results for all target analytes in TB050819 were qualified as estimated (J, UJ) because the container used for analysis contained headspace.

- Results for chloroform in J17-UC02, J18-UC02, J21-UC01, and J21-UC02 were qualified as not detected (U) based on detections in the EBs.

- Results for acetone and methyl ethyl ketone (MEK) in DIFF-01, DIFF-02, DIFF-03, DIFF-04, DIFF-05, DIFF-06, DIFF-07, and DIFF-DUP were qualified as not detected (U) based on detections in the PDB blank.

- Results for 1,1,1-trichloroethane in RS-03, RS-11, RS-13, and RS-DUP were qualified as estimated (J) with the potential for high bias, based on unacceptable recoveries in the associated matrix spike (MS) and MS duplicate (MSD).

- The result for acetone in PDB Blank was qualified as estimated (J) with the potential for high bias, based on unacceptable recovery in the associated laboratory control sample (LCS).

All other results were determined to be valid as reported. Details of the validation findings and conclusions based on review of the results for each quality control requirement are provided in the remaining sections of this report. This validation report was revised on March 23, 2020 to correct errors in the attached tables.

Documentation issues are discussed in Section XIII.

This report should be considered part of the data package for all future distributions of the volatiles data.

INTRODUCTION

Analyses were performed in accordance with USEPA SW846 Method 8260C Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS). The laboratory provided full (level 4) data packages for review.

The validation was performed in accordance with ddms' Standard Operating Procedure: Validation and Review of Volatile Organic Data (ECS-SOP-003-Rev.1) and the requirements of the analytical method. Professional judgment was applied as necessary and appropriate.

The data validation process is intended to evaluate data on a technical basis rather than a contract compliance basis, for chemical analyses conducted under the referenced methods. An initial assumption is that the data package represents the best efforts of the laboratory and has been subjected to adequate quality review before release, to ensure a complete and defensible data package has been submitted for validation.

During the validation process, laboratory data are verified against all available supporting documentation. Based on the findings of the evaluation, qualifier codes may be added by the data validator. Validated results are, therefore, either qualified or unqualified. Unqualified results mean that the reported values may be used without reservation. Final validated results are annotated with the following codes as defined by the National Function Guidelines:

U The analyte was analyzed for, but, was not detected above the level of the reported sample quantitation limit.

J The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

UJ - The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

R - The data are unusable. The sample results are rejected due to serious deficiencies. The analyte may or may not be present in the sample.

These codes are recorded on the data summary forms contained in Attachment A of this validation report to qualify the results as appropriate according to the review of the data package.

All data users should note two facts. First, the "R" qualifier means that the laboratory-reported value is unusable. In other words, due to significant quality control problems, the analysis is invalid and provides no information as to whether the analyte is present or not. Rejected values should not appear on data tables because they cannot be relied upon, even as a last resort. Second, no concentration is guaranteed to be accurate even if all associated quality control is acceptable. Strict quality control conformance serves only to increase confidence in reported results; any analytical result will always contain some error.

The data user is also cautioned that the validation effort is based on the raw data printouts as provided by the laboratory. Software manipulation cannot be routinely detected during validation; unless otherwise stated in the report, these kinds of issues are outside the scope of this review.

I. Holding Times, Preservation and Sample Integrity

Copies of the applicable chain of custody (COC) records were included in the data packages, documenting sample collection dates of May 6 through 13, and 21, 2019. Samples were received by the laboratory on May 9, 14, and 22, 2019. The temperatures of the sample coolers on receipt at the laboratory, as recorded on the individual COC records (1.2°C -2.3°C, criterion 4°C ±2°C), were acceptable or slightly below the lower acceptance limit. No data were qualified on the basis of the slightly low cooler temperatures as these would have no deleterious effects on the concentrations of the target analytes in these samples.

Documentation of appropriate sample preservation was present in each data package and pH values in all samples were reported as < 2. All samples were analyzed within the 14-day holding time for preserved water samples.

Results for all target analytes in TB050819 were qualified as estimated (UJ) because the sample vial used for the analysis contained headspace.

II. GC/MS Instrument Performance Check

Summary forms were provided for bromofluorobenzene (BFB) instrument performance checks representing each period during which the field and QC samples or associated standards were analyzed. All of the performance checks were fully documented and were acceptable.

III. Calibration

A. Initial Calibration (IC)

Summary results for five initial calibrations (ICs), one on each of five different instruments, were reported in support of the sample analyses. Documentation of all IC standards was present in the data package. Although the standards included more compounds than were specifically applicable to these analyses, only project-specified target analytes were reviewed. Percent relative standard deviations (RSD) and correlation coefficients were acceptable (<20%RSD and > 0.99, respectively) for all reported target analytes in the associated ICs.

B. Continuing Calibration (CC)

CC standards were run at the appropriate frequencies in support of sample analysis. Documentation for each CC was present in the data packages, and the percent differences (%D) were acceptable (<20%D) in most cases. Where the %D represented

an increase in sensitivity from the IC and the analyte was not detected, no data require qualification and the excursion is not further discussed.

Unacceptable percent differences (%Ds) indicating a loss in sensitivity, were observed for vinyl chloride in the CC standards analyzed on 5/19/19 @ 11:32 on instrument HP # 18 and 5/22/19 @ 20:38 on instrument HP # 04. The laboratory analyzed a low-level standard, and responses supported the systems' ability to measure this compound. No results were qualified on this basis.

IV. Blanks

Laboratory method blanks were analyzed with each analytical batch in support of these samples. Four trip blanks (TBs), one PDB (pre-diffusion bag) blank, and two equipment blanks (EBs), were submitted with the samples. No target analytes were detected in the method blanks or trip blanks. Detections in the PDB and EBs are detailed below:

Blank	Compound	Concentration (µg/L)	Samples Affected	Qualifier Applied
PDB Blank	Acetone	2.0	DIFF-01_05212019 DIFF-02_05212019 DIFF-03_05212019 DIFF-04_05212019 DIFF-05_05212019 DIFF-06_05212019 DIFF-07_05212019 DIFF-DUP_05212019	U
	Methyl ethyl ketone	0.7		
EBAWR051319	Chloroform	0.4	J17-UC02_05132019 J18-UC02_05082019 J21-UC01_05072019 J21-UC02_05072019	U
EB051019TRO	Chloroform	0.3		

Results for acetone, methyl ethyl ketone, and chloroform in the samples summarized above were qualified as not detected (U) at the analyte-specific reporting limit due to associated blank contamination.

V. Surrogate Compound Recovery

All surrogates in all field and QC samples, were correctly calculated, accurately reported, and within acceptance limits.

VI. Spike Analysis

A. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses were performed on the site samples summarized below.

Sample	SDG
RS-03	JCV89
J01-UC01	JCV88
J18-UC02	JCV93
J14-BR01	JCV92

Where the reported MS/MSD analyses were performed on samples from a site other than New Windsor, no meaningful information related to this site can be obtained from the recoveries or precision, and they are not further discussed.

Only those data quality excursions requiring qualification of data are summarized below. Where percent recoveries exhibited a high bias (even if the RPD between the paired results exceeded the criterion) and that compound was not detected in any of the associated samples, no qualification of data is necessary, and the excursion is not discussed. All %Rs were acceptable with the following exceptions:

Sample	Compound	MS/MSD %Rs	Samples Affected	Qualifier Applied
RS-03	1,1,1-Trichloroethane	152/149	RS-11 RS-DUP RS-03 RS-13	J Results may be biased high

LCS and LCS/LCS Duplicates (LCSD) were analyzed at the appropriate frequencies. All percent recoveries and relative percent differences (RPD) were acceptable with the following exception:

B. Laboratory Control Sample (LCS)

LCS	Compound	LCS %R	Samples Affected	Qualifier Applied
LCSW23	Acetone	155	PDB Blank	J potential high bias

VII. Field Duplicates

Field duplicates submitted are summarized below:

Duplicate ID	Location ID	SDG
DUP-01	J05-BR02	JCV92
DUP-02	MW-2	JCV92
DUP-03	MW-1S	JCV91
RS-DUP	RS-03	JCV89
DIFF-DUP	DIFF-01	JCV94

Precision between paired results was acceptable. Where the target analyte was detected in one of the samples at less than the limit of quantitation (LOQ) but was reported as not detected in the paired sample, no qualification of data was necessary.

VIII. Internal Standard Performance

All internal standard areas and retention times were within quality control limits for the applicable analyses.

IX. Target Compound Identification

Target analytes were detected in many of the samples in these SDGs, and an acceptable mass spectrum was provided for each sample in which the compound was detected.

It was assumed that the analyst reviewed all peaks for accuracy and, where applicable, manually searched for any compounds that were not detected by the software (requiring manual search) in the lowest calibration standard concentration(s).

X. Compound Quantitation and Reporting Limits

Target compound concentrations and RLs were correctly calculated and accurately reported for all samples and spiked samples.

Some target analyte peaks required manual integration due to co-elution, tailing, or poor peak shape (jagged peaks barely above the level of the noise). In all cases, documentation of the integration was provided. It was assumed that the analyst reviewed all peaks for accuracy. Results reported at concentrations below the LOQ were flagged as estimated by the laboratory and no further action was taken by the validator on this basis.

The Data Summary Forms in Attachment A list individual sample results. Where no result is listed, the compound was not detected and the RL was not qualified.

XI. Tentatively Identified Compounds (TIC)

Tentative identification of non-target compounds (TICs) was not requested for these analyses.

XII. System Performance

The analytical systems appear to have been working satisfactorily at the time of these analyses, based on evaluation of the available raw data. There was indication of poor peak shape, issues with integration caused by analyte co-elution, and significant tailing for some compounds observed in the chromatograms in the raw data, especially in at the lowest concentrations measured.

XIII. Documentation

The COC records were present and accurately completed for the samples reported in these data packages. The laboratory appended the sample date to the end of the sample location identification in order to meet database requirements. This report reflects the original sample identifications assigned at collection.

Several improper edits were observed in the COC records. Edits should be made by drawing a single line through the incorrect information, adding corrections, and initialing and dating the changes.

Some of the Form 1s supplied for the samples in the raw data section of the data package provided a reduced list of target analytes. Others included the complete target compound list. This was observed within the same data package and between the various package.

ATTACHMENT A

DATA SUMMARY FORMS
SDG Nos.
JCV87 through JCV94

Volatiles in Water

Data Summary Form
Job No. JCV87
Site Name: New Windsor
Sample Date Range: 5/7/2019

Field Sample ID			J08-UC01_05072019		J08-UC02_05072019		J15-UC01_05072019		J15-UC02_05072019		J16-UC01_05072019		J16-UC02_05072019		J18-UC03_05072019		J21-UC01_05072019	
Lab Sample ID			1053352		1053353		1053354		1053355		1053350		1053349		1053351		1053356	
Dilution Factor			1		1		1		1		1		1		1		1	
Analytical Method	Parameter	Unit																
SW8260C	1,1,1-Trichloroethane	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	20		14		5		0.6	J
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	1,1-Dichloroethane	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.6	J	0.6	J	0.2	U	0.2	U
SW8260C	1,1-Dichloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	1		0.9	J	0.2	U	0.2	U
SW8260C	1,2-Dichlorobenzene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	1,2-Dichloroethane	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	1,4-Dioxane	ug/L	29	U	29	U	29	U	29	U	29	U	29	U	29	U	29	U
SW8260C	Acetone	ug/L	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U
SW8260C	Benzene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Carbon Disulfide	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Chloroform	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	cis-1,2-Dichloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.4	J	0.2	U	0.2	U	0.2	U
SW8260C	Ethylbenzene	ug/L	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U
SW8260C	Methyl Ethyl Ketone	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	Methylene Chloride	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	Naphthalene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260C	Tetrachloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Toluene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	trans-1,2-Dichloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Trichloroethene	ug/L	0.7	J	2		0.2	U	0.2	U	36		45		0.2	U	0.8	J
SW8260C	Vinyl Chloride	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Xylenes, Total	ug/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U

Data Summary Form
Job No. JCV87
Site Name: New Windsor
Sample Date Range: 5/7/2019

Field Sample ID			J21-UC02_05072019		TB050619_05072019	
Lab Sample ID			1053357		1053348	
Dilution Factor			1		1	
Analytical Method	Parameter	Unit				
SW8260C	1,1,1-Trichloroethane	ug/L	0.3	J	0.3	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/L	0.2	U	0.2	U
SW8260C	1,1-Dichloroethane	ug/L	0.2	U	0.2	U
SW8260C	1,1-Dichloroethene	ug/L	0.2	U	0.2	U
SW8260C	1,2-Dichlorobenzene	ug/L	0.2	U	0.2	U
SW8260C	1,2-Dichloroethane	ug/L	0.3	U	0.3	U
SW8260C	1,4-Dioxane	ug/L	29	U	29	U
SW8260C	Acetone	ug/L	0.7	U	0.7	U
SW8260C	Benzene	ug/L	0.2	U	0.2	U
SW8260C	Carbon Disulfide	ug/L	0.2	U	0.2	U
SW8260C	Chloroform	ug/L	0.2	U	0.2	U
SW8260C	cis-1,2-Dichloroethene	ug/L	0.2	U	0.2	U
SW8260C	Ethylbenzene	ug/L	0.4	U	0.4	U
SW8260C	Methyl Ethyl Ketone	ug/L	0.3	U	0.3	U
SW8260C	Methylene Chloride	ug/L	0.3	U	0.3	U
SW8260C	Naphthalene	ug/L	1	U	1	U
SW8260C	Tetrachloroethene	ug/L	0.2	U	0.2	U
SW8260C	Toluene	ug/L	0.2	U	0.2	U
SW8260C	trans-1,2-Dichloroethene	ug/L	0.2	U	0.2	U
SW8260C	Trichloroethene	ug/L	0.2	U	0.2	U
SW8260C	Vinyl Chloride	ug/L	0.2	U	0.2	U
SW8260C	Xylenes, Total	ug/L	1	U	1	U

Data Summary Form

Job No. JCV88

Site Name: New Windsor

Sample Date Range: 5/8/2019

Field Sample ID			J01-BR01_05082019		J01-BR02_05082019		J01-UC01_05082019		J01-UC02_05082019	
Lab Sample ID			1053363		1053362		1053359		1053358	
Dilution Factor			1		1		1		1	
Analytical Method	Parameter	Unit								
SW8260C	1,1,1-Trichloroethane	ug/L	0.3	U	0.3	U	2		0.3	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/L	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	1,1-Dichloroethane	ug/L	0.2	U	0.2	U	0.3	J	0.2	U
SW8260C	1,1-Dichloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	1,2-Dichlorobenzene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	1,2-Dichloroethane	ug/L	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	1,4-Dioxane	ug/L	29	U	29	U	29	U	29	U
SW8260C	Acetone	ug/L	0.7	U	0.7	U	0.7	U	0.7	U
SW8260C	Benzene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Carbon Disulfide	ug/L	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Chloroform	ug/L	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	cis-1,2-Dichloroethene	ug/L	0.2	U	0.2	U	1		0.2	U
SW8260C	Ethylbenzene	ug/L	0.4	U	0.4	U	0.4	U	0.4	U
SW8260C	Methyl Ethyl Ketone	ug/L	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	Methylene Chloride	ug/L	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	Naphthalene	ug/L	1	U	1	U	1	U	1	U
SW8260C	Tetrachloroethene	ug/L	0.2	U	0.2	U	13		0.2	U
SW8260C	Toluene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	trans-1,2-Dichloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Trichloroethene	ug/L	0.2	U	0.2	U	4		0.2	U
SW8260C	Vinyl Chloride	ug/L	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Xylenes, Total	ug/L	1	U	1	U	1	U	1	U

Data Summary Form
Job No. JCV89
Site Name: New Windsor
Sample Date Range: 5/6/2019

Field Sample ID			PDB BLANK_05062019		RS-_05062019		RS-01_05062019		RS-02_05062019		RS-03_05062019		RS-09_05062019		RS-10_05062019	
Lab Sample ID			1053375		1053367		1053365		1053373		1053368		1053366		1053372	
Dilution Factor			1		1		1		1		1		1		1	
Analytical Method	Parameter	Unit														
SW8260C	1,1,1-Trichloroethane	ug/L	0.3	U	2	J	0.3	U	0.3	U	2	J	0.3	U	0.3	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	1,1-Dichloroethane	ug/L	0.2	U	0.5	J	0.2	U	0.2	U	0.5	J	0.2	U	0.2	U
SW8260C	1,1-Dichloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	1,2-Dichlorobenzene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	1,2-Dichloroethane	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	1,4-Dioxane	ug/L	29	U	29	U	29	U	29	U	29	U	29	U	29	U
SW8260C	Acetone	ug/L	2	J	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U
SW8260C	Benzene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Carbon Disulfide	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Chloroform	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	cis-1,2-Dichloroethene	ug/L	0.2	U	0.5	J	0.2	U	0.2	U	0.5	J	0.2	U	0.2	U
SW8260C	Ethylbenzene	ug/L	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U
SW8260C	Methyl Ethyl Ketone	ug/L	0.7	J	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	Methylene Chloride	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	Naphthalene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260C	Tetrachloroethene	ug/L	0.2	U	0.9	J	0.2	U	0.2	J	0.9	J	0.2	U	0.2	U
SW8260C	Toluene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	trans-1,2-Dichloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Trichloroethene	ug/L	0.2	U	8		0.9	J	2		8		1		1	
SW8260C	Vinyl Chloride	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Xylenes, Total	ug/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U

Data Summary Form
Job No. JCV89
Site Name: New Windsor
Sample Date Range: 5/6/2019

Field Sample ID			RS-11_05062019		RS-12_05062019		RS-13_05062019	
Lab Sample ID			1053374		1053364		1053371	
Dilution Factor			1		1		1	
Analytical Method	Parameter	Unit						
SW8260C	1,1,1-Trichloroethane	ug/L	0.3	J	0.3	U	2	J
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/L	0.2	U	0.2	U	0.2	U
SW8260C	1,1-Dichloroethane	ug/L	0.2	U	0.2	U	0.6	J
SW8260C	1,1-Dichloroethene	ug/L	0.2	U	0.2	U	0.2	U
SW8260C	1,2-Dichlorobenzene	ug/L	0.2	U	0.2	U	0.2	U
SW8260C	1,2-Dichloroethane	ug/L	0.3	U	0.3	U	0.3	U
SW8260C	1,4-Dioxane	ug/L	29	U	29	U	29	U
SW8260C	Acetone	ug/L	0.7	U	0.7	U	0.7	U
SW8260C	Benzene	ug/L	0.2	U	0.2	U	0.2	U
SW8260C	Carbon Disulfide	ug/L	0.2	U	0.2	U	0.2	U
SW8260C	Chloroform	ug/L	0.2	U	0.2	U	0.2	U
SW8260C	cis-1,2-Dichloroethene	ug/L	0.2	U	0.2	U	0.6	J
SW8260C	Ethylbenzene	ug/L	0.4	U	0.4	U	0.4	U
SW8260C	Methyl Ethyl Ketone	ug/L	0.3	U	0.3	U	0.3	U
SW8260C	Methylene Chloride	ug/L	0.3	U	0.3	U	0.3	U
SW8260C	Naphthalene	ug/L	1	U	1	U	1	U
SW8260C	Tetrachloroethene	ug/L	0.3	J	0.2	U	1	J
SW8260C	Toluene	ug/L	0.3	J	0.2	U	0.2	U
SW8260C	trans-1,2-Dichloroethene	ug/L	0.2	U	0.2	U	0.2	U
SW8260C	Trichloroethene	ug/L	1		0.4	J	8	
SW8260C	Vinyl Chloride	ug/L	0.2	U	0.2	U	0.2	U
SW8260C	Xylenes, Total	ug/L	1	U	1	U	1	U

Data Summary Form
Job No. JCV90
Site Name: New Windsor
Sample Date Range: 5/6/2019

Field Sample ID			RS-04_05062019		RS-05_05062019		RS-06_05062019		RS-07_05062019		RS-08_05062019		RS-14_05062019		RS-15_05062019		RS-16_05062019	
Lab Sample ID			1053378		1053377		1053376		1053380		1053383		1053381		1053379		1053382	
Dilution Factor			1		1		1		1		1		1		1		1	
Analytical Method	Parameter	Unit																
SW8260C	1,1,1-Trichloroethane	ug/L	3		2		0.3	U	0.4	J	0.3	U	0.3	U	1		0.3	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	1,1-Dichloroethane	ug/L	0.7	J	0.6	J	0.2	U	0.3	J	0.2	U	0.2	U	0.4	J	0.2	U
SW8260C	1,1-Dichloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	1,2-Dichlorobenzene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	1,2-Dichloroethane	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	1,4-Dioxane	ug/L	29	U	29	U	29	U	29	U	29	U	29	U	29	U	29	U
SW8260C	Acetone	ug/L	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U
SW8260C	Benzene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Carbon Disulfide	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Chloroform	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	cis-1,2-Dichloroethene	ug/L	0.2	J	1	J	0.2	U	1		0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Ethylbenzene	ug/L	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U
SW8260C	Methyl Ethyl Ketone	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	Methylene Chloride	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	Naphthalene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260C	Tetrachloroethene	ug/L	0.3	J	1		0.2	U	0.9	J	0.2	U	1		0.2	U	0.2	U
SW8260C	Toluene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	trans-1,2-Dichloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Trichloroethene	ug/L	6		8		0.2	U	0.5	J	0.2	U	0.6	J	0.2	U	0.2	U
SW8260C	Vinyl Chloride	ug/L	0.2	U	0.2	U	0.2	U	0.2	J	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Xylenes, Total	ug/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U

Data Summary Form
Job No. JCV91
Site Name: New Windsor
Sample Date Range: 5/11/2019 - 5/13/2019

Field Sample ID			DUP-03_05112019		EBAWR051319		J02-BR01_05132019		J02-BR02_05132019		J02-UC01_05132019		J11-BR01_05112019		J11-BR02_05112019	
Lab Sample ID			1057950		1057957		1057956		1057968		1057967		1057952		1057955	
Dilution Factor			1		1		1		1		1		1		1	
Analytical Method	Parameter	Unit														
SW8260C	1,1,1-Trichloroethane	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	1,1-Dichloroethane	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	1,1-Dichloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	1,2-Dichlorobenzene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	1,2-Dichloroethane	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	1,4-Dioxane	ug/L	29	U	29	U	29	U	29	U	29	U	29	U	29	U
SW8260C	Acetone	ug/L	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U
SW8260C	Benzene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Carbon Disulfide	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Chloroform	ug/L	0.2	U	0.4	J	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	cis-1,2-Dichloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Ethylbenzene	ug/L	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U
SW8260C	Methyl Ethyl Ketone	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	Methylene Chloride	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	Naphthalene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260C	Tetrachloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Toluene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	trans-1,2-Dichloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Trichloroethene	ug/L	0.4	J	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Vinyl Chloride	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Xylenes, Total	ug/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U

Data Summary Form
Job No. JCV91
Site Name: New Windsor
Sample Date Range: 5/11/2019 - 5/13/2019

Field Sample ID			J11-UC01_05112019		J11-UC02_05112019		J17-BR01_05132019		J17-UC02_05132019		J19-UC02_05122019		J20-BR01_05122019		J20-BR02_05122019		J20-UC01_05122019	
Lab Sample ID			1057953		1057954		1057966		1057965		1057963		1057962		1057960		1057961	
Dilution Factor			1		1		1		1		1		1		1		1	
Analytical Method	Parameter	Unit																
SW8260C	1,1,1-Trichloroethane	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	1		0.3	U	1		0.3	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	1,1-Dichloroethane	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.5	J	0.2	U	0.2	U	0.5	J
SW8260C	1,1-Dichloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	1,2-Dichlorobenzene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	1,2-Dichloroethane	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	1,4-Dioxane	ug/L	29	U	29	U	29	U	29	U	29	U	29	U	29	U	29	U
SW8260C	Acetone	ug/L	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U
SW8260C	Benzene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Carbon Disulfide	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Chloroform	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	cis-1,2-Dichloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.7	J
SW8260C	Ethylbenzene	ug/L	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U
SW8260C	Methyl Ethyl Ketone	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	Methylene Chloride	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	Naphthalene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260C	Tetrachloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Toluene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	trans-1,2-Dichloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Trichloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.9	J
SW8260C	Vinyl Chloride	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Xylenes, Total	ug/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U

Data Summary Form
Job No. JCV91
Site Name: New Windsor
Sample Date Range: 5/11/2019 - 5/13/2019

Field Sample ID			J20-UC02_05122019		MW-1D_05112019		MW-1S_05112019		RIZ-19_05122019		TB051119_05112019	
Lab Sample ID			1057959		1057951		1057949		1057964		1057958	
Dilution Factor			1		1		1		1		1	
Analytical Method	Parameter	Unit										
SW8260C	1,1,1-Trichloroethane	ug/L	0.3	U	0.7	J	0.3	U	0.3	U	0.3	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	1,1-Dichloroethane	ug/L	0.8	J	1		0.2	U	0.2	U	0.2	U
SW8260C	1,1-Dichloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	1,2-Dichlorobenzene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	1,2-Dichloroethane	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	1,4-Dioxane	ug/L	29	U	29	U	29	U	29	U	29	U
SW8260C	Acetone	ug/L	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U
SW8260C	Benzene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Carbon Disulfide	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Chloroform	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	cis-1,2-Dichloroethene	ug/L	0.8	J	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Ethylbenzene	ug/L	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U
SW8260C	Methyl Ethyl Ketone	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	Methylene Chloride	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	Naphthalene	ug/L	1	U	1	U	1	U	1	U	1	U
SW8260C	Tetrachloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.8	J	0.2	U
SW8260C	Toluene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	trans-1,2-Dichloroethene	ug/L	0.4	J	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Trichloroethene	ug/L	0.5	J	1		0.7	J	5		0.2	U
SW8260C	Vinyl Chloride	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Xylenes, Total	ug/L	1	U	1	U	1	U	1	U	1	U

Data Summary Form
Job No. JCV92
Site Name: New Windsor
Sample Date Range: 5/8/2019 - 5/10/2019

Field Sample ID			DUP-01_05092019		DUP-02_05082019		DUP-02_05082019		EB051019TRO_05102019		J04-BR01_05092019		J04-BR02_05092019		J05-BR01_05092019		J05-BR02_05092019	
Lab Sample ID			1058223		1058214		1058214		1058233		1058225		1058224		1058227		1058226	
Dilution Factor			1		1		10		1		1		1		1		1	
Analytical Method	Parameter	Unit																
SW8260C	1,1,1-Trichloroethane	ug/L	0.9	J	58		--		0.3	U	0.3	U	0.3	U	0.3	U	0.8	J
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/L	0.2	U	0.2	U	--		0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	1,1-Dichloroethane	ug/L	2		1		--		0.2	U	0.2	U	0.2	U	2		2	
SW8260C	1,1-Dichloroethene	ug/L	0.4	J	7		--		0.2	U	0.2	U	0.2	U	0.2	U	0.4	J
SW8260C	1,2-Dichlorobenzene	ug/L	0.2	U	0.2	U	--		0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	1,2-Dichloroethane	ug/L	0.3	U	0.3	U	--		0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	1,4-Dioxane	ug/L	29	U	29	U	--		29	U	29	U	29	U	29	U	29	U
SW8260C	Acetone	ug/L	0.7	U	0.7	U	--		0.7	U	0.7	U	0.7	U	0.7	U	0.7	U
SW8260C	Benzene	ug/L	0.2	U	0.2	U	--		0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Carbon Disulfide	ug/L	0.2	U	0.2	U	--		0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Chloroform	ug/L	0.2	U	0.2	U	--		0.3	J	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	cis-1,2-Dichloroethene	ug/L	0.9	J	15		--		0.2	U	0.2	U	0.2	U	0.2	U	0.9	J
SW8260C	Ethylbenzene	ug/L	0.4	U	0.4	U	--		0.4	U	0.4	U	0.4	U	0.4	U	0.4	U
SW8260C	Methyl Ethyl Ketone	ug/L	0.3	U	0.3	U	--		0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	Methylene Chloride	ug/L	0.3	U	0.3	U	--		0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	Naphthalene	ug/L	1	U	1	U	--		1	U	1	U	1	U	1	U	1	U
SW8260C	Tetrachloroethene	ug/L	0.2	U	3		--		0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Toluene	ug/L	0.2	U	0.2	U	--		0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	trans-1,2-Dichloroethene	ug/L	0.2	U	0.2	J	--		0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Trichloroethene	ug/L	11		--		320		0.2	U	0.2	U	0.2	U	0.5	J	11	
SW8260C	Vinyl Chloride	ug/L	0.2	U	0.2	U	--		0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Xylenes, Total	ug/L	1	U	1	U	--		1	U	1	U	1	U	1	U	1	U

Data Summary Form
Job No. JCV92
Site Name: New Windsor
Sample Date Range: 5/8/2019 - 5/10/2019

Field Sample ID			J06-UC01_05102019		J06-UC02_05102019		J14-BR01_05082019		J14-BR02_05082019		J14-UC01_05082019		J14-UC02_05082019		J23-UC01_05092019		J23-UC01_05092019	
Lab Sample ID			1058231		1058232		1058216		1058215		1058220		1058219		1058228		1058228	
Dilution Factor			1		1		1		1		10		1		1		10	
Analytical Method	Parameter	Unit																
SW8260C	1,1,1-Trichloroethane	ug/L	0.3	U	0.3	U	3		0.3	U	3	U	0.3	U	260		--	
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	2	U	0.2	U	1	J	--	
SW8260C	1,1-Dichloroethane	ug/L	0.2	U	0.2	U	0.6	J	0.2	U	2	U	0.2	U	0.9	J	--	
SW8260C	1,1-Dichloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	2	U	0.2	U	19		--	
SW8260C	1,2-Dichlorobenzene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	2	U	0.2	U	0.2	U	--	
SW8260C	1,2-Dichloroethane	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	3	U	0.3	U	0.3	U	--	
SW8260C	1,4-Dioxane	ug/L	29	U	29	U	29	U	29	U	290	U	29	U	29	U	--	
SW8260C	Acetone	ug/L	0.7	U	0.7	U	1	J	0.7	U	7	U	0.7	U	0.7	U	--	
SW8260C	Benzene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	2	U	0.2	U	0.2	U	--	
SW8260C	Carbon Disulfide	ug/L	0.2	U	0.2	U	0.2	J	0.2	U	2	U	0.2	U	0.2	U	--	
SW8260C	Chloroform	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	2	U	0.2	U	0.2	U	--	
SW8260C	cis-1,2-Dichloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	2	U	0.2	U	2		--	
SW8260C	Ethylbenzene	ug/L	0.4	U	0.4	U	0.4	U	0.4	U	4	U	0.4	U	0.4	U	--	
SW8260C	Methyl Ethyl Ketone	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	3	U	0.3	U	0.3	U	--	
SW8260C	Methylene Chloride	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	3	U	0.3	U	0.3	U	--	
SW8260C	Naphthalene	ug/L	1	U	1	U	1	U	1	U	10	U	1	U	1	U	--	
SW8260C	Tetrachloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	2	U	0.2	U	4		--	
SW8260C	Toluene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	2	U	0.2	U	0.2	U	--	
SW8260C	trans-1,2-Dichloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	2	U	0.2	U	0.2	U	--	
SW8260C	Trichloroethene	ug/L	0.5	J	0.2	U	0.2	U	0.2	U	2	U	0.2	U	--		460	
SW8260C	Vinyl Chloride	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	2	U	0.2	U	0.2	U	--	
SW8260C	Xylenes, Total	ug/L	1	U	1	U	1	U	1	U	10	U	1	U	1	U	--	

Data Summary Form
Job No. JCV92
Site Name: New Windsor
Sample Date Range: 5/8/2019 - 5/10/2019

Field Sample ID			J23-UC02_05092019		J23-UC02_05092019		MW-2_05082019		MW-2_05082019		MW-2I_05082019		RIZ-7_05092019	
Lab Sample ID			1058229		1058229		1058221		1058221		1058222		1058230	
Dilution Factor			1		10		1		10		1		1	
Analytical Method	Parameter	Unit												
SW8260C	1,1,1-Trichloroethane	ug/L	140		--		66		--		0.3	U	0.3	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/L	0.4	J	--		0.3	J	--		0.2	U	0.2	U
SW8260C	1,1-Dichloroethane	ug/L	0.2	U	--		2		--		0.2	U	0.2	U
SW8260C	1,1-Dichloroethene	ug/L	9		--		7		--		0.2	U	0.2	U
SW8260C	1,2-Dichlorobenzene	ug/L	0.2	U	--		0.2	U	--		0.2	U	0.2	U
SW8260C	1,2-Dichloroethane	ug/L	0.3	U	--		0.3	U	--		0.3	U	0.3	U
SW8260C	1,4-Dioxane	ug/L	29	U	--		29	U	--		29	U	29	U
SW8260C	Acetone	ug/L	0.7	U	--		0.7	U	--		0.7	U	0.7	U
SW8260C	Benzene	ug/L	0.2	U	--		0.2	U	--		0.2	U	0.2	U
SW8260C	Carbon Disulfide	ug/L	0.2	U	--		0.2	U	--		0.2	U	0.2	U
SW8260C	Chloroform	ug/L	0.2	U	--		0.2	U	--		0.2	U	0.2	U
SW8260C	cis-1,2-Dichloroethene	ug/L	0.8	J	--		17		--		0.4	J	0.3	J
SW8260C	Ethylbenzene	ug/L	0.4	U	--		0.4	U	--		0.4	U	0.4	U
SW8260C	Methyl Ethyl Ketone	ug/L	0.3	U	--		0.3	U	--		0.3	U	0.3	U
SW8260C	Methylene Chloride	ug/L	0.3	U	--		0.3	U	--		0.3	U	0.3	U
SW8260C	Naphthalene	ug/L	1	U	--		1	U	--		1	U	1	U
SW8260C	Tetrachloroethene	ug/L	5		--		3		--		0.2	U	2	
SW8260C	Toluene	ug/L	0.2	U	--		0.2	U	--		0.2	U	0.2	U
SW8260C	trans-1,2-Dichloroethene	ug/L	0.2	U	--		0.2	J	--		0.2	U	0.2	U
SW8260C	Trichloroethene	ug/L	--		550		--		340		3		2	
SW8260C	Vinyl Chloride	ug/L	0.2	U	--		0.2	U	--		0.2	U	0.2	U
SW8260C	Xylenes, Total	ug/L	1	U	--		1	U	--		1	U	1	U

Data Summary Form
Job No. JCV293
Site Name: New Windsor
Sample Date Range: 5/8/2019 - 5/10/2019

Field Sample ID			J07-UC02_05102019		J12-BR01_05092019		J12-BR02_05092019		J13-BR01_05092019		J13-BR02_05092019		J13-UC02_05092019		J13-UC03_05092019		J17-UC01_05102019	
Lab Sample ID			1058248		1058243		1058242		1058239		1058238		1058241		1058240		1058247	
Dilution Factor			1		1		1		1		1		1		1		1	
Analytical Method	Parameter	Unit																
SW8260C	1,1,1-Trichloroethane	ug/L	0.3	U	0.3	U	0.3	U	1		0.3	U	13		6		0.3	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	1,1-Dichloroethane	ug/L	0.2	U	0.2	U	0.2	U	4		0.2	U	2		3		0.2	U
SW8260C	1,1-Dichloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.9	J	0.2	U	2		0.8	J	0.2	U
SW8260C	1,2-Dichlorobenzene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	1,2-Dichloroethane	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	1,4-Dioxane	ug/L	29	U	29	U	29	U	29	U	29	U	29	U	29	U	29	U
SW8260C	Acetone	ug/L	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U
SW8260C	Benzene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Carbon Disulfide	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Chloroform	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	cis-1,2-Dichloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1		0.2	U	0.2	U
SW8260C	Ethylbenzene	ug/L	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U
SW8260C	Methyl Ethyl Ketone	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	Methylene Chloride	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	Naphthalene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260C	Tetrachloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	2		0.2	U	0.2	U
SW8260C	Toluene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	trans-1,2-Dichloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Trichloroethene	ug/L	1	J	0.2	U	0.2	U	5		0.2	U	140		1		0.2	U
SW8260C	Vinyl Chloride	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Xylenes, Total	ug/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U

Data Summary Form
Job No. JCV293
Site Name: New Windsor
Sample Date Range: 5/8/2019 - 5/10/2019

Field Sample ID			J18-UC02_05082019		J19-UC01_05082019		J22-BR01_05102019		J22-BR02_05102019		TB050819	
Lab Sample ID			1058234		1058237		1058246		1058245		1058244	
Dilution Factor			1		1		1		1		1	
Analytical Method	Parameter	Unit										
SW8260C	1,1,1-Trichloroethane	ug/L	15		0.3	U	0.3	U	0.3	U	0.3	UJ
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	UJ
SW8260C	1,1-Dichloroethane	ug/L	0.3	J	0.2	U	0.2	U	0.2	U	0.2	UJ
SW8260C	1,1-Dichloroethene	ug/L	0.9	J	0.2	U	0.2	U	0.2	U	0.2	UJ
SW8260C	1,2-Dichlorobenzene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	UJ
SW8260C	1,2-Dichloroethane	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	0.3	UJ
SW8260C	1,4-Dioxane	ug/L	29	U	29	U	29	U	29	U	29	UJ
SW8260C	Acetone	ug/L	0.7	U	0.7	U	0.7	U	0.7	U	0.7	UJ
SW8260C	Benzene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	UJ
SW8260C	Carbon Disulfide	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	UJ
SW8260C	Chloroform	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	UJ
SW8260C	cis-1,2-Dichloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	UJ
SW8260C	Ethylbenzene	ug/L	0.4	U	0.4	U	0.4	U	0.4	U	0.4	UJ
SW8260C	Methyl Ethyl Ketone	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	0.3	UJ
SW8260C	Methylene Chloride	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	0.3	UJ
SW8260C	Naphthalene	ug/L	1	U	1	U	1	U	1	U	1	UJ
SW8260C	Tetrachloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	UJ
SW8260C	Toluene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	UJ
SW8260C	trans-1,2-Dichloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	UJ
SW8260C	Trichloroethene	ug/L	36		0.2	U	0.2	U	0.2	U	0.2	UJ
SW8260C	Vinyl Chloride	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	UJ
SW8260C	Xylenes, Total	ug/L	1	U	1	U	1	U	1	U	1	UJ

Data Summary Form
Job No. JCV94
Site Name: New Windsor
Sample Date Range: 5/12/2019

Field Sample ID			DIFF-01_05212019		DIFF-02_05212019		DIFF-03_05212019		DIFF-04_05212019		DIFF-05_05212019		DIFF-06_05212019		DIFF-07_05212019	
Lab Sample ID			1063767		1063768		1063769		1063770		1063771		1063772		1063773	
Dilution Factor			1		1		1		1		1		1		1	
Analytical Method	Parameter	Unit														
SW8260C	1,1,1-Trichloroethane	ug/L	9		0.6	J	0.3	U	2		4		2		1	
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	1,1-Dichloroethane	ug/L	9		5		0.5	J	3		1		0.9	J	0.6	J
SW8260C	1,1-Dichloroethene	ug/L	1		0.9	J	0.2	U	0.5	J	0.3	J	0.2	U	0.2	U
SW8260C	1,2-Dichlorobenzene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	1,2-Dichloroethane	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	1,4-Dioxane	ug/L	29	U	29	U	29	U	29	U	29	U	29	U	29	U
SW8260C	Acetone	ug/L	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U
SW8260C	Benzene	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Carbon Disulfide	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Chloroform	ug/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	cis-1,2-Dichloroethene	ug/L	18		23		0.3	J	0.3	J	3		0.2	U	0.2	U
SW8260C	Ethylbenzene	ug/L	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U
SW8260C	Methyl Ethyl Ketone	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	Methylene Chloride	ug/L	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
SW8260C	Naphthalene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW8260C	Tetrachloroethene	ug/L	0.2	U	0.2	U	0.2	U	0.4	J	0.2	U	0.2	U	0.2	U
SW8260C	Toluene	ug/L	0.6	J	0.2	U	0.2	U	0.4	J	0.2	U	0.2	U	0.2	U
SW8260C	trans-1,2-Dichloroethene	ug/L	0.3	J	0.6	J	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Trichloroethene	ug/L	4		2		0.2	U	0.8	J	5		1		0.6	J
SW8260C	Vinyl Chloride	ug/L	4		7		0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
SW8260C	Xylenes, Total	ug/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U

Data Summary Form
Job No. JCV94
Site Name: New Windsor
Sample Date Range: 5/12/2019

Field Sample ID			DIFF-DUP_05212019		TB052119	
Lab Sample ID			1063766		1063765	
Dilution Factor			1		1	
Analytical Method	Parameter	Unit				
SW8260C	1,1,1-Trichloroethane	ug/L	12		0.3	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/L	0.2	U	0.2	U
SW8260C	1,1-Dichloroethane	ug/L	12		0.2	U
SW8260C	1,1-Dichloroethene	ug/L	2		0.2	U
SW8260C	1,2-Dichlorobenzene	ug/L	0.2	U	0.2	U
SW8260C	1,2-Dichloroethane	ug/L	0.3	U	0.3	U
SW8260C	1,4-Dioxane	ug/L	29	U	29	U
SW8260C	Acetone	ug/L	0.7	U	0.7	U
SW8260C	Benzene	ug/L	0.2	U	0.2	U
SW8260C	Carbon Disulfide	ug/L	0.2	U	0.2	U
SW8260C	Chloroform	ug/L	0.2	U	0.2	U
SW8260C	cis-1,2-Dichloroethene	ug/L	25		0.2	U
SW8260C	Ethylbenzene	ug/L	0.4	U	0.4	U
SW8260C	Methyl Ethyl Ketone	ug/L	0.3	U	0.3	U
SW8260C	Methylene Chloride	ug/L	0.3	U	0.3	U
SW8260C	Naphthalene	ug/L	1	U	1	U
SW8260C	Tetrachloroethene	ug/L	0.2	U	0.2	U
SW8260C	Toluene	ug/L	0.4	J	0.2	U
SW8260C	trans-1,2-Dichloroethene	ug/L	0.3	J	0.2	U
SW8260C	Trichloroethene	ug/L	5		0.2	U
SW8260C	Vinyl Chloride	ug/L	5		0.2	U
SW8260C	Xylenes, Total	ug/L	1	U	1	U

ATTACHMENT B

SUPPORTING DOCUMENTATION
SDG Nos.
JCV87 through JCV94

Volatiles in Water

eurofins | Lancaster Laboratories Environmental

Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCV93

GC/MS Volatiles

Fraction: Volatiles by GC/MS

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

LCS/LCSD

(Sample number(s): 1058234, 1058237, 1058244: Analysis: 11997)
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

Batch#: L191402AA (Sample number(s): 1058234-1058237, 1058244, UNSPK: 1058234)
The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: 1,4-Dioxane

SAMPLE ANALYSIS:

(Sample number(s): 1058244: Analysis: 11997)
The container used for this analysis was submitted with headspace.

No additional problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

RS010 Lancaster Laboratories 1053375
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may18a.b/wy18s02.d Injection date and time: **18-MAY-2019 23:41**
Data file Sample Info. Line: RS010;1053375;1;0;;JCV89;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:48 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.744(-0.006)	596	65	164279 (-13)	250.00	
66) Fluorobenzene	5.032(0.000)	1309	96	947536 (-8)	50.00	
101) Chlorobenzene-d5	8.161(0.000)	2284	117	733814 (-6)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041(0.000)	2870	152	371974 (-16)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.358(0.001)	113	212079	48.312	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.695(-0.001)	102	58953	50.497	101%		80 - 120
84) Toluene-d8	(3)	6.695(0.001)	98	921192	50.098	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162(0.000)	95	316427	43.015	86%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)	2.340(0.001)	58	1146	1.994	1.99		J	0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)	3.922(-0.002)	43	3116	0.655	0.65		J	0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)			Not Detected					0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Linda C. Pape on 05/28/2019 at 14:53. Target 3.5 esignature user ID: lcp00895

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23s34.d Injection date and time: **23-MAY-2019 20:36**
Data file Sample Info. Line: 91J09;1057957;1;0;;JCV91;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 20:52 Automation

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.493(-0.006)	247	65	180452 (-3)	250.00	
66) Fluorobenzene	4.736(0.000)	615	96	1039499 (-1)	50.00	
101) Chlorobenzene-d5	7.894(0.000)	1133	117	775846 (-1)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802(0.000)	1446	152	414421 (0)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.072(0.000)	113	230400	47.687	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.401(0.000)	102	60590	49.696	99%		80 - 120
84) Toluene-d8	(3)	6.382(0.000)	98	1045095	49.598	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918(0.000)	95	395451	48.819	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)	3.919(-0.000)	83	3017	0.360	0.36		J	0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)			Not Detected					0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may22b.b/4y22s46.d Injection date and time: **23-MAY-2019 03:27**
Data file Sample Info. Line: 92J18;1058233;1;0;;JCV92;;;4y22b05; Instrument ID: **HP23297.i** Batch: **4191422AA**
Date, time and analyst ID of latest file update: 23-May-2019 07:01 amd00492

Blank Data file reference: **/chem/HP23297.i/19may22b.b/4y22b05.d**

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 00:21
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may22b.b/4y22c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:9274

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.361	(0.006)	457	65	400064	(5)	250.00	
66) Fluorobenzene	7.865	(0.000)	1033	96	1235111	(0)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	978507	(0)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189	(0.000)	1908	152	526669	(-2)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977	(0.000)	113	292495	48.044	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.440	(-0.001)	102	75276	50.602	101%		80 - 120
83) Toluene-d8	(3)	9.867	(0.000)	98	1247930	49.691	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.306	(0.000)	95	448010	46.802	94%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)	6.752	(0.000)	83	2665	0.283	0.28		J	0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

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Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: JCV89
Matrix: LIQUID

GC/MS Volatiles
Fraction: Volatiles by GC/MS

LCS: LCS587	Batch: **5191371AA** (Sample number(s): 1053364-1053373)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	22.45	NA	112	NA	56-120	NA	NA
1,1-Dichloroethene	20	21.57	NA	108	NA	80-131	NA	NA
Acetone	150	171.23	NA	114	NA	54-157	NA	NA
Freon 113	20	25.15	NA	126	NA	73-139	NA	NA
Carbon Disulfide	20	19.01	NA	95	NA	65-128	NA	NA
Methylene Chloride	20	21.41	NA	107	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	21.31	NA	107	NA	80-126	NA	NA
1,1-Dichloroethane	20	21.91	NA	110	NA	80-120	NA	NA
2-Butanone	150	132.06	NA	88	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	22.31	NA	112	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	24.96	NA	125	NA	67-126	NA	NA
Chloroform	20	24.06	NA	120	NA	80-120	NA	NA
1,2-Dichloroethane	20	26.8	NA	134 *	NA	73-124	NA	NA
Benzene	20	21.25	NA	106	NA	80-120	NA	NA
Trichloroethene	20	22.68	NA	113	NA	80-120	NA	NA
1,4-Dioxane	500	655.6	NA	131	NA	63-146	NA	NA
Toluene	20	20.73	NA	104	NA	80-120	NA	NA
Tetrachloroethene	20	22.3	NA	112	NA	80-120	NA	NA
Ethylbenzene	20	22.05	NA	110	NA	80-120	NA	NA
Xylene (Total)	60	64.35	NA	107	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	20.84	NA	104	NA	80-120	NA	NA
Naphthalene	20	20.33	NA	102	NA	53-124	NA	NA

LCS: LCSW23	Batch: **W191381AA** (Sample number(s): 1053375)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	16.74	NA	84	NA	56-120	NA	NA
1,1-Dichloroethene	20	21.55	NA	108	NA	80-131	NA	NA
Acetone	150	232.25	NA	155	NA	54-157	NA	NA
Freon 113	20	20.75	NA	104	NA	73-139	NA	NA
Carbon Disulfide	20	14.84	NA	74	NA	65-128	NA	NA
Methylene Chloride	20	19.52	NA	98	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	21.31	NA	107	NA	80-126	NA	NA
1,1-Dichloroethane	20	20.55	NA	103	NA	80-120	NA	NA
2-Butanone	150	138.32	NA	92	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	22.59	NA	113	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	21.86	NA	109	NA	67-126	NA	NA
Chloroform	20	22.02	NA	110	NA	80-120	NA	NA
1,2-Dichloroethane	20	22.71	NA	114	NA	73-124	NA	NA
Benzene	20	21.23	NA	106	NA	80-120	NA	NA
Trichloroethene	20	21.31	NA	107	NA	80-120	NA	NA

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 1053368 MS: 1053369 MSD: 1053370 **Analyte**	Batch: **5191371AA** (Sample number(s): 1053364-1053373)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	N.D.	23.79	24.36	119	122 *	56-120	2	30
1,1-Dichloroethene	20	N.D.	24.21	23.98	121	120	80-131	1	30
Acetone	150	1.55 J	166.82	154.94	110	102	54-157	7	30
Freon 113	20	N.D.	30.1	29.3	151 *	146 *	73-139	3	30
Carbon Disulfide	20	N.D.	21.1	21.06	106	105	65-128	0	30
Methylene Chloride	20	N.D.	22.62	22.55	113	113	80-120	0	30
trans-1,2-Dichloroethene	20	N.D.	23.18	23.08	116	115	80-120	0	30
1,1-Dichloroethane	20	0.529 J	24.16	24.1	118	118	80-120	0	30
2-Butanone	150	N.D.	132.04	135.54	88	90	59-135	3	30
cis-1,2-Dichloroethene	20	0.507 J	24.41	24.4	120	119	80-120	0	30
1,1,1-Trichloroethane	20	N.D.	30.32	29.85	152 *	149 *	67-126	2	30
Chloroform	20	N.D.	26.01	25.84	130 *	129 *	80-120	1	30
1,2-Dichloroethane	20	N.D.	29.32	28.39	147 *	142 *	73-124	3	30
Benzene	20	N.D.	22.61	22.43	113	112	80-120	1	30
Trichloroethene	20	7.65	32.92	32.52	126 *	124 *	80-120	1	30
1,4-Dioxane	500	N.D.	652.52	655.81	131	131	63-146	1	30
Toluene	20	N.D.	21.84	22.19	109	111	80-120	2	30
Tetrachloroethene	20	0.928 J	24.98	24.79	120	119	80-120	1	30
Ethylbenzene	20	N.D.	23.69	23.47	118	117	80-120	1	30
Xylene (Total)	60	N.D.	68.69	68.93	114	115	80-120	0	30
1,2-Dichlorobenzene	20	N.D.	22.09	21.89	110	109	80-120	1	30
Naphthalene	20	N.D.	19.45	20.02	97	100	53-124	3	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

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NYSDEC ASP Category B Data Package

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Project: AD-NY/1-0145-5
Groundwater and Water Samples
Collected on 05/07/19

SDG# JCV87-V.2

GROUP	SAMPLE NUMBERS
2042993	1053348-1053357

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-18-27
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman **Date:** **08/05/2019**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Katherine Klinefelter at (717) 556-7256.

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Sample Reference List for SDG Number JCV87
with a Data Package Type of NYSDEC B

06556 - The Johnson Company, Inc.

Project: AD-NY/1-0145-5

Lab Sample Number	Client Sample ID	Collection Date	Date Received	Lab Sample Code
1053348	TB050619	05/07/2019 00:00	05/09/2019 10:30	VHBTB
1053349	J16-UC02	05/07/2019 12:28	05/09/2019 10:30	VHB01
1053350	J16-UC01	05/07/2019 13:22	05/09/2019 10:30	VHB02
1053351	J18-UC03	05/07/2019 16:32	05/09/2019 10:30	VHB03
1053352	J08-UC01	05/07/2019 17:18	05/09/2019 10:30	VHB04
1053353	J08-UC02	05/07/2019 16:33	05/09/2019 10:30	VHB05
1053354	J15-UC01	05/07/2019 12:58	05/09/2019 10:30	VHB06
1053355	J15-UC02	05/07/2019 12:08	05/09/2019 10:30	VHB07
1053356	J21-UC01	05/07/2019 14:43	05/09/2019 10:30	VHB08
1053357	J21-UC02	05/07/2019 14:03	05/09/2019 10:30	VHB09

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Sample pH Log

SDG: JCV87

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
1053348	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/20/2019 1:27:53PM	27445
1053349	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/20/2019 1:27:53PM	27445
1053350	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/20/2019 1:27:53PM	27445
1053351	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/20/2019 1:27:53PM	27445
1053352	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/19/2019 12:16:11PM	1947
1053353	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/19/2019 12:16:06PM	1947
1053354	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/19/2019 12:16:06PM	1947
1053355	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/19/2019 12:16:06PM	1947
1053356	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/19/2019 12:16:06PM	1947
1053357	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/19/2019 12:16:06PM	1947

*pH Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

**Chlorine Present Code Key
NA = Chlorine Not Checked
Y = Chlorine Present
N = Chlorine Not Present

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11997 VOCs- 5ml Water by 8260C/D

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Report Date: June 25, 2019 15:49

Project: AD-NY/1-0145-5

Account #: 06556
Group Number: 2042993
SDG: JCV87
PO Number: 1-0145-05
State of Sample Origin: NY

Electronic Copy To	The Johnson Company, Inc.	Attn: Tristan Hardy
Electronic Copy To	The Johnson Company, Inc.	Attn: George Lester

Respectfully Submitted,

Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

A previous version of this report was generated on 05/20/2019 23:27.

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
TB050619 Water	05/07/2019	1053348
J16-UC02 Grab Groundwater	05/07/2019 12:28	1053349
J16-UC01 Grab Groundwater	05/07/2019 13:22	1053350
J18-UC03 Grab Groundwater	05/07/2019 16:32	1053351
J08-UC01 Grab Groundwater	05/07/2019 17:18	1053352
J08-UC02 Grab Groundwater	05/07/2019 16:33	1053353
J15-UC01 Grab Groundwater	05/07/2019 12:58	1053354
J15-UC02 Grab Groundwater	05/07/2019 12:08	1053355
J21-UC01 Grab Groundwater	05/07/2019 14:43	1053356
J21-UC02 Grab Groundwater	05/07/2019 14:03	1053357

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

REVISED

Sample Description: **TB050619 Water**
New Windsor, NY

Project Name: **AD-NY/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/07/2019
SDG#: JCV87-01TB

The Johnson Company, Inc.
ELLE Sample #: GW 1053348
ELLE Group #: 2042993
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	5191392AA	05/19/2019 21:54	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5191392AA	05/19/2019 21:53	Don V Viray	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **J16-UC02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-NY/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/07/2019 12:28
SDG#: JCV87-02

The Johnson Company, Inc.
ELLE Sample #: GW 1053349
ELLE Group #: 2042993
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.6 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	0.9 J	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	14	0.3	1	1
11997	Trichloroethene	79-01-6	45	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	5191392AA	05/19/2019 22:15	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5191392AA	05/19/2019 22:14	Don V Viray	1

*=This limit was used in the evaluation of the final result

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Sample Description: **J16-UC01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-NY/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/07/2019 13:22
SDG#: JCV87-03

The Johnson Company, Inc.
ELLE Sample #: GW 1053350
ELLE Group #: 2042993
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.6 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	1	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	0.4 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	20	0.3	1	1
11997	Trichloroethene	79-01-6	36	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	5191392AA	05/19/2019 22:36	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5191392AA	05/19/2019 22:35	Don V Viray	1

*=This limit was used in the evaluation of the final result

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Sample Description: **J18-UC03 Grab Groundwater**
New Windsor, NY

Project Name: **AD-NY/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/07/2019 16:32
SDG#: JCV87-04

The Johnson Company, Inc.
ELLE Sample #: GW 1053351
ELLE Group #: 2042993
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	5	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	5191392AA	05/19/2019 22:57	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5191392AA	05/19/2019 22:56	Don V Viray	1

*=This limit was used in the evaluation of the final result

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Sample Description: **J08-UC01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-NY/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/07/2019 17:18
SDG#: JCV87-05

The Johnson Company, Inc.
ELLE Sample #: GW 1053352
ELLE Group #: 2042993
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	0.7 J	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191381AA	05/19/2019 04:50	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191381AA	05/19/2019 04:49	Sara E Johnson	1

*=This limit was used in the evaluation of the final result

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Sample Description: **J08-UC02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-NY/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/07/2019 16:33
SDG#: JCV87-06

The Johnson Company, Inc.
ELLE Sample #: GW 1053353
ELLE Group #: 2042993
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	2	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191381AA	05/19/2019 05:14	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191381AA	05/19/2019 05:13	Sara E Johnson	1

*=This limit was used in the evaluation of the final result

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Sample Description: **J15-UC01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-NY/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/07/2019 12:58
SDG#: JCV87-07

The Johnson Company, Inc.
ELLE Sample #: GW 1053354
ELLE Group #: 2042993
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191381AA	05/19/2019 05:38	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191381AA	05/19/2019 05:37	Sara E Johnson	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **J15-UC02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-NY/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/07/2019 12:08
SDG#: JCV87-08

The Johnson Company, Inc.
ELLE Sample #: GW 1053355
ELLE Group #: 2042993
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191381AA	05/19/2019 06:01	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191381AA	05/19/2019 06:00	Sara E Johnson	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **J21-UC01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-NY/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/07/2019 14:43
SDG#: JCV87-09

The Johnson Company, Inc.
ELLE Sample #: GW 1053356
ELLE Group #: 2042993
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	0.3 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	0.6 J	0.3	1	1
11997	Trichloroethene	79-01-6	0.8 J	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191381AA	05/19/2019 06:25	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191381AA	05/19/2019 06:24	Sara E Johnson	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **J21-UC02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-NY/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/07/2019 14:03
SDG#: JCV87-10

The Johnson Company, Inc.
ELLE Sample #: GW 1053357
ELLE Group #: 2042993
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	0.3 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	0.3 J	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191381AA	05/19/2019 06:49	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191381AA	05/19/2019 06:48	Sara E Johnson	1

*=This limit was used in the evaluation of the final result

REVISED

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2042993
Reported: 06/25/2019 15:49

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 5191392AA	Sample number(s): 1053348-1053351		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: W191381AA	Sample number(s): 1053352-1053357		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2042993
Reported: 06/25/2019 15:49

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 5191392AA	Sample number(s): 1053348-1053351								
Acetone	150	144.71	150	143.8	96	96	54-157	1	30
Benzene	20	20.33	20	20.16	102	101	80-120	1	30
2-Butanone	150	123.44	150	123.91	82	83	59-135	0	30
Carbon Disulfide	20	17.29	20	16.82	86	84	65-128	3	30
Chloroform	20	22.18	20	21.55	111	108	80-120	3	30
1,2-Dichlorobenzene	20	20.13	20	20.44	101	102	80-120	2	30
1,1-Dichloroethane	20	20.19	20	20.16	101	101	80-120	0	30
1,2-Dichloroethane	20	23.68	20	23.17	118	116	73-124	2	30
1,1-Dichloroethene	20	20.32	20	19.62	102	98	80-131	3	30
cis-1,2-Dichloroethene	20	21.63	20	21.36	108	107	80-125	1	30
trans-1,2-Dichloroethene	20	20.35	20	19.98	102	100	80-126	2	30
1,4-Dioxane	500	647.16	500	665.13	129	133	63-146	3	30
Ethylbenzene	20	20.69	20	20.79	103	104	80-120	1	30
Freon 113	20	21.98	20	21.65	110	108	73-139	1	30
Methylene Chloride	20	20.41	20	20.06	102	100	80-120	2	30
Naphthalene	20	19.68	20	19.72	98	99	53-124	0	30
Tetrachloroethene	20	21.18	20	21.44	106	107	80-120	1	30
Toluene	20	19.65	20	19.81	98	99	80-120	1	30
1,1,1-Trichloroethane	20	22.36	20	21.83	112	109	67-126	2	30
Trichloroethene	20	21.67	20	21.3	108	107	80-120	2	30
Vinyl Chloride	20	19.82	20	18.8	99	94	56-120	5	30
Xylene (Total)	60	62.05	60	62.01	103	103	80-120	0	30
Batch number: W191381AA	Sample number(s): 1053352-1053357								
Acetone	150	232.25			155		54-157		
Benzene	20	21.23			106		80-120		
2-Butanone	150	138.32			92		59-135		
Carbon Disulfide	20	14.84			74		65-128		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2042993
Reported: 06/25/2019 15:49

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Chloroform	20	22.02			110		80-120		
1,2-Dichlorobenzene	20	23.33			117		80-120		
1,1-Dichloroethane	20	20.55			103		80-120		
1,2-Dichloroethane	20	22.71			114		73-124		
1,1-Dichloroethene	20	21.55			108		80-131		
cis-1,2-Dichloroethene	20	22.59			113		80-125		
trans-1,2-Dichloroethene	20	21.31			107		80-126		
1,4-Dioxane	500	634.79			127		63-146		
Ethylbenzene	20	22.91			115		80-120		
Freon 113	20	20.75			104		73-139		
Methylene Chloride	20	19.52			98		80-120		
Naphthalene	20	19.87			99		53-124		
Tetrachloroethene	20	24.53			123*		80-120		
Toluene	20	23.74			119		80-120		
1,1,1-Trichloroethane	20	21.86			109		67-126		
Trichloroethene	20	21.31			107		80-120		
Vinyl Chloride	20	16.74			84		56-120		
Xylene (Total)	60	69.7			116		80-120		

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: 5191392AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1053348	116	107	98	97
1053349	118	107	97	97
1053350	120	108	99	98
1053351	119	109	97	97
Blank	111	106	97	97
LCS	108	104	98	104
LCSD	106	103	99	103
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: W191381AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1053352	97	100	100	87

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2042993
Reported: 06/25/2019 15:49

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: W191381AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1053353	96	102	100	86
1053354	98	101	99	85
1053355	98	103	99	85
1053356	99	102	100	85
1053357	100	100	99	85
Blank	97	99	100	86
LCS	96	93	103	93
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 6556 Group # 2042993 Sample # 1053348-57

COC #583005

Client Information

Client: The Johnson Company/VHB	Acct. #: 06556
Project Name/#: AD-New York/1-0145-05/58300	PWSID #:
Project Manager: George Lester	P.O. #:
Sampler: Adam Rostoy/Bob Osborne	Quote #:
State where samples were collected: NY	For Compliance: Yes ☐ No ☒

Sample Identification	Collected Date	Collected Time	Grab	Composite	Matrix: Soil	Sediment	Tissue	Water: Potable	Ground	Surface	NPDES	Other:	Total # of Containers	Analysis Requested: 8260-VOCs	Remarks
TB050619	—	—	1					DI				2	2	X	TRIP BLANK
J16-UC02	5/7/19	1228	X					X					3	X	
J16-UC01	5/7/19	1322	X					X					3	X	
J18-UC03	5/7/19	1632	X					X					3	X	
J08-UC01	5/7/19	1718	X					X					3	X	
J08-UC02	5/7/19	1633	X					X					3	X	
J15-UC01	5/7/19	1258	X					X					3	X	
J15-UC02	5/7/19	1208	X					X					3	X	
J21-UC01	5/7/19	1443	X					X					3	X	
J21-UC02	5/7/19	1403	X					X					3	X	

Preservation and Filtration Codes: H

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days:

E-mail address: Glester@jcomail.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)

Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13

NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	5/8/19	1730			
			[signature]	5.9.19	1030

EDD Required? Yes No

If yes, format: Excel

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS FedEx Other

Temperature upon receipt 2.3 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 248557

Group Number(s): 2042993

Client: The Johnson Company

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	05/09/2019 10:30
Number of Packages:	1	Number of Projects:	2
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Darian Jaynes (29952) at 19:46 on 05/09/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	2.3	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T 717-656-2300
F 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCV87

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
1053348	TB050619	X		1	Trip Blank
1053349	J16-UC02	X		1	
1053350	J16-UC01	X		1	
1053351	J18-UC03	X		1	
1053352	J08-UC01	X		1	
1053353	J08-UC02	X		1	
1053354	J15-UC01	X		1	
1053355	J15-UC02	X		1	
1053356	J21-UC01	X		1	
1053357	J21-UC02	X		1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

LCS/LCSD

(Sample number(s): 1053352-1053357: Analysis: 11997)
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCV87

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Batch#: W191381AA (Sample number(s): 1053352-1053357)
The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: Tetrachloroethene

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

1. Relative Response Factor (RRF)

$$RRF = \frac{AX}{Ais} \times \frac{Cis}{Cx}$$

Where:

Ax = Area of the characteristic ion for the compound to be measured
Ais = Area of the characteristic ion for the specific internal standard to be measured
Cis = Concentration of the internal standard
Cx = Concentration of the compound to be measured

2. % Relative Standard Deviation (%RSD)

$$\%RSD = \frac{standard\ deviation}{Mean} \times 100$$

3. % Difference

$$\%D = \frac{RRFc - RRFi}{RRFi} \times 100$$

Where:

RRFc = Relative response factor from the continuing calibration standard
RRFi = Mean relative response factor from the initial calibration

4. Concentration

$$Concentration\ (\mu g/L) = \frac{(Ax)(Is)(Df)}{(Ais)(RRF)}$$

Where:

Ax, Ais, and RRF are as given in 1. above
Is = Amount of internal standard added in parts per billion (µg/L)
Df = Dilution factor

5. % Recovery (% Rec)

$$\%Rec = \frac{SSR - SR}{SA} \times 100$$

Where:

SSR = Spiked sample result
SR = Sample result
SA = Spike added

6. Relative Percent Difference (RPD)

$$RPD = \frac{(MSR - MSRD)}{(1/2)(MSR + MSRD)} \times 100$$

Where:

MSR = Matrix spike recovery
MSRD = Matrix spike recovery duplicate

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: The Johnson Company, Inc.
SDG: JCV87

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
VOCs- 5ml Water by 8260C/D	5191392AA	VBLK590	05/19/2019 15:45
		LCS590	05/19/2019 13:59
		LCD590	05/19/2019 14:19
		1053348	05/19/2019 21:54
		1053349	05/19/2019 22:15
		1053350	05/19/2019 22:36
		1053351	05/19/2019 22:57
VOCs- 5ml Water by 8260C/D	W191381AA	VBLKW23	05/18/2019 23:17
		LCSW23	05/18/2019 22:29
		1053352	05/19/2019 04:50
		1053353	05/19/2019 05:14
		1053354	05/19/2019 05:38
		1053355	05/19/2019 06:01
		1053356	05/19/2019 06:25
		1053357	05/19/2019 06:49

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: JCV87
Matrix: LIQUID

Fraction: Volatiles by GC/MS

5191392AA / VBLK590 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	05/19/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	05/19/19	N.D.	ug/l	0.2	1
Acetone	05/19/19	N.D.	ug/l	0.7	20
Freon 113	05/19/19	N.D.	ug/l	0.2	10
Carbon Disulfide	05/19/19	N.D.	ug/l	0.2	5
Methylene Chloride	05/19/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	05/19/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	05/19/19	N.D.	ug/l	0.2	1
2-Butanone	05/19/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	05/19/19	N.D.	ug/l	0.2	1
Chloroform	05/19/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	05/19/19	N.D.	ug/l	0.3	1
Benzene	05/19/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	05/19/19	N.D.	ug/l	0.3	1
Trichloroethene	05/19/19	N.D.	ug/l	0.2	1
1,4-Dioxane	05/19/19	N.D.	ug/l	29	250
Toluene	05/19/19	N.D.	ug/l	0.2	1
Tetrachloroethene	05/19/19	N.D.	ug/l	0.2	1
Ethylbenzene	05/19/19	N.D.	ug/l	0.4	1
Xylene (Total)	05/19/19	N.D.	ug/l	1	5
1,2-Dichlorobenzene	05/19/19	N.D.	ug/l	0.2	5
Naphthalene	05/19/19	N.D.	ug/l	1	5

W191381AA / VBLKW23 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	05/18/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	05/18/19	N.D.	ug/l	0.2	1
Acetone	05/18/19	N.D.	ug/l	0.7	20
Freon 113	05/18/19	N.D.	ug/l	0.2	10
Carbon Disulfide	05/18/19	N.D.	ug/l	0.2	5
Methylene Chloride	05/18/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	05/18/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	05/18/19	N.D.	ug/l	0.2	1
2-Butanone	05/18/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	05/18/19	N.D.	ug/l	0.2	1
Chloroform	05/18/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	05/18/19	N.D.	ug/l	0.3	1
Benzene	05/18/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	05/18/19	N.D.	ug/l	0.3	1
Trichloroethene	05/18/19	N.D.	ug/l	0.2	1
1,4-Dioxane	05/18/19	N.D.	ug/l	29	250
Toluene	05/18/19	N.D.	ug/l	0.2	1
Tetrachloroethene	05/18/19	N.D.	ug/l	0.2	1
Ethylbenzene	05/18/19	N.D.	ug/l	0.4	1
Xylene (Total)	05/18/19	N.D.	ug/l	1	5

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: JCV87
Matrix: LIQUID

Fraction: Volatiles by GC/MS

W191381AA / VBLKW23 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
1,2-Dichlorobenzene	05/18/19	N.D.	ug/l	0.2	5
Naphthalene	05/18/19	N.D.	ug/l	1	5

Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: JCV87
Matrix: LIQUID

Fraction: Volatiles by GC/MS

5191392AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLK590	106	80 - 120	97	80 - 120	111	80 - 120	97	80 - 120
LCS590	104	80 - 120	104	80 - 120	108	80 - 120	98	80 - 120
LCD590	103	80 - 120	103	80 - 120	106	80 - 120	99	80 - 120
1053348	107	80 - 120	97	80 - 120	116	80 - 120	98	80 - 120
1053349	107	80 - 120	97	80 - 120	118	80 - 120	97	80 - 120
1053350	108	80 - 120	98	80 - 120	120	80 - 120	99	80 - 120
1053351	109	80 - 120	97	80 - 120	119	80 - 120	97	80 - 120

W191381AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKW23	99	80 - 120	86	80 - 120	97	80 - 120	100	80 - 120
LCSW23	93	80 - 120	93	80 - 120	96	80 - 120	103	80 - 120
1053352	100	80 - 120	87	80 - 120	97	80 - 120	100	80 - 120
1053353	102	80 - 120	86	80 - 120	96	80 - 120	100	80 - 120
1053354	101	80 - 120	85	80 - 120	98	80 - 120	99	80 - 120
1053355	103	80 - 120	85	80 - 120	98	80 - 120	99	80 - 120
1053356	102	80 - 120	85	80 - 120	99	80 - 120	100	80 - 120
1053357	100	80 - 120	85	80 - 120	100	80 - 120	99	80 - 120

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: JCV87
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCS590 LCSD: LCD590	Batch: **5191392AA** (Sample number(s): 1053348-1053351)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	19.82	18.8	99	94	56-120	5	30
1,1-Dichloroethene	20	20.32	19.62	102	98	80-131	3	30
Acetone	150	144.71	143.8	96	96	54-157	1	30
Freon 113	20	21.98	21.65	110	108	73-139	1	30
Carbon Disulfide	20	17.29	16.82	86	84	65-128	3	30
Methylene Chloride	20	20.41	20.06	102	100	80-120	2	30
trans-1,2-Dichloroethene	20	20.35	19.98	102	100	80-126	2	30
1,1-Dichloroethane	20	20.19	20.16	101	101	80-120	0	30
2-Butanone	150	123.44	123.91	82	83	59-135	0	30
cis-1,2-Dichloroethene	20	21.63	21.36	108	107	80-125	1	30
1,1,1-Trichloroethane	20	22.36	21.83	112	109	67-126	2	30
Chloroform	20	22.18	21.55	111	108	80-120	3	30
1,2-Dichloroethane	20	23.68	23.17	118	116	73-124	2	30
Benzene	20	20.33	20.16	102	101	80-120	1	30
Trichloroethene	20	21.67	21.3	108	107	80-120	2	30
1,4-Dioxane	500	647.16	665.13	129	133	63-146	3	30
Toluene	20	19.65	19.81	98	99	80-120	1	30
Tetrachloroethene	20	21.18	21.44	106	107	80-120	1	30
Ethylbenzene	20	20.69	20.79	103	104	80-120	1	30
Xylene (Total)	60	62.05	62.01	103	103	80-120	0	30
1,2-Dichlorobenzene	20	20.13	20.44	101	102	80-120	2	30
Naphthalene	20	19.68	19.72	98	99	53-124	0	30

LCS: LCSW23	Batch: **W191381AA** (Sample number(s): 1053352-1053357)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	16.74	NA	84	NA	56-120	NA	NA
1,1-Dichloroethene	20	21.55	NA	108	NA	80-131	NA	NA
Acetone	150	232.25	NA	155	NA	54-157	NA	NA
Freon 113	20	20.75	NA	104	NA	73-139	NA	NA
Carbon Disulfide	20	14.84	NA	74	NA	65-128	NA	NA
Methylene Chloride	20	19.52	NA	98	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	21.31	NA	107	NA	80-126	NA	NA
1,1-Dichloroethane	20	20.55	NA	103	NA	80-120	NA	NA
2-Butanone	150	138.32	NA	92	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	22.59	NA	113	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	21.86	NA	109	NA	67-126	NA	NA
Chloroform	20	22.02	NA	110	NA	80-120	NA	NA
1,2-Dichloroethane	20	22.71	NA	114	NA	73-124	NA	NA
Benzene	20	21.23	NA	106	NA	80-120	NA	NA
Trichloroethene	20	21.31	NA	107	NA	80-120	NA	NA

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: JCV87
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSW23	Batch: **W191381AA** (Sample number(s): 1053352-1053357)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
1,4-Dioxane	500	634.79	NA	127	NA	63-146	NA	NA
Toluene	20	23.74	NA	119	NA	80-120	NA	NA
Tetrachloroethene	20	24.53	NA	123 *	NA	80-120	NA	NA
Ethylbenzene	20	22.91	NA	115	NA	80-120	NA	NA
Xylene (Total)	60	69.7	NA	116	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	23.33	NA	117	NA	80-120	NA	NA
Naphthalene	20	19.87	NA	99	NA	53-124	NA	NA

Fraction: Volatiles by GC/MS

11997: VOCs- 5ml Water by 8260C/D Analyte Name	Default MDL	Default LOQ	Units
Vinyl Chloride	0.2	1	ug/l
1,1-Dichloroethene	0.2	1	ug/l
Acetone	0.7	20	ug/l
Freon 113	0.2	10	ug/l
Carbon Disulfide	0.2	5	ug/l
Methylene Chloride	0.3	1	ug/l
trans-1,2-Dichloroethene	0.2	1	ug/l
1,1-Dichloroethane	0.2	1	ug/l
2-Butanone	0.3	10	ug/l
cis-1,2-Dichloroethene	0.2	1	ug/l
Chloroform	0.2	1	ug/l
1,1,1-Trichloroethane	0.3	1	ug/l
Benzene	0.2	1	ug/l
1,2-Dichloroethane	0.3	1	ug/l
Trichloroethene	0.2	1	ug/l
1,4-Dioxane	29	250	ug/l
Toluene	0.2	1	ug/l
Tetrachloroethene	0.2	1	ug/l
Ethylbenzene	0.4	1	ug/l
Xylene (Total)	1	5	ug/l
1,2-Dichlorobenzene	0.2	5	ug/l
Naphthalene	1	5	ug/l

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: wf19t01.d BFB Injection Date: 02/19/19

Instrument ID: HP09137 BFB Injection Time: 11:32

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.42
75	30.0 - 60.0% of mass 95	45.48
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.75
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	82.25
175	5.0 - 9.0% of mass 174	5.88 (7.14)1
176	Greater than 95.0%, but less than 101.0% of mass 174	79.33 (96.46)1
177	5.0 - 9.0% of mass 176	5.24 (6.60)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	wf19i01.d	02/19/19	12:21
02	VSTD100	wf19i02.d	02/19/19	12:45
03	VSTD50	wf19i03.d	02/19/19	13:09
04	VSTD20	wf19i04.d	02/19/19	13:33
05	VSTD10	wf19i05.d	02/19/19	13:57
06	VSTD4	wf19i06.d	02/19/19	14:21
07	VSTD1	wf19i07.d	02/19/19	14:44

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: wf20t01.d BFB Injection Date: 02/20/19

Instrument ID: HP09137 BFB Injection Time: 08:47

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.92
75	30.0 - 60.0% of mass 95	44.90
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.65
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	88.14
175	5.0 - 9.0% of mass 174	6.26 (7.10)1
176	Greater than 95.0%, but less than 101.0% of mass 174	84.40 (95.75)1
177	5.0 - 9.0% of mass 176	5.69 (6.75)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	wf20c02.d	02/20/19	10:55
02	LCSW62	wf20l01.d	02/20/19	12:07

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: wy18t01.d BFB Injection Date: 05/18/19

Instrument ID: HP09137 BFB Injection Time: 21:44

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.64
75	30.0 - 60.0% of mass 95	46.44
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.84
173	Less than 2.0% of mass 174	0.33 (0.35)1
174	Greater than 50.0% of mass 95	92.20
175	5.0 - 9.0% of mass 174	6.62 (7.18)1
176	Greater than 95.0%, but less than 101.0% of mass 174	90.49 (98.15)1
177	5.0 - 9.0% of mass 176	5.78 (6.39)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	wy18c01.d	05/18/19	22:05
02	LCSW23	wy18s01.d	05/18/19	22:29
03	VBLKW23	wy18b01.d	05/18/19	23:17
04	1053375	wy18s02.d	05/18/19	23:41
05	1053376	wy18s04.d	05/19/19	00:28
06	1053379	wy18s07.d	05/19/19	01:39
07	1053382	wy18s10.d	05/19/19	02:51
08	1053383	wy18s11.d	05/19/19	03:15
09	1053360MS	wy18s13.d	05/19/19	04:02
10	1053361MSD	wy18s14.d	05/19/19	04:26
11	1053352	wy18s15.d	05/19/19	04:50
12	1053353	wy18s16.d	05/19/19	05:14
13	1053354	wy18s17.d	05/19/19	05:38
14	1053355	wy18s18.d	05/19/19	06:01
15	1053356	wy18s19.d	05/19/19	06:25
16	1053357	wy18s20.d	05/19/19	06:49
17	1053358	wy18s21.d	05/19/19	07:13
18	1053362	wy18s22.d	05/19/19	07:36
19	1053363	wy18s23.d	05/19/19	08:00

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: 5m25t01.d BFB Injection Date: 03/25/19

Instrument ID: HP26285 BFB Injection Time: 11:37

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.60
75	30.0 - 60.0% of mass 95	45.32
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.45
173	Less than 2.0% of mass 174	0.52 (0.59)1
174	Greater than 50.0% of mass 95	88.26
175	5.0 - 9.0% of mass 174	6.13 (6.95)1
176	Greater than 95.0%, but less than 101.0% of mass 174	85.76 (97.17)1
177	5.0 - 9.0% of mass 176	5.62 (6.55)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	5m25i01.d	03/25/19	12:48
02	VSTD100	5m25i02.d	03/25/19	13:10
03	VSTD50	5m25i03.d	03/25/19	13:31
04	VSTD20	5m25i04.d	03/25/19	13:52
05	VSTD10	5m25i05.d	03/25/19	14:13
06	VSTD4	5m25i06.d	03/25/19	14:34
07	VSTD1	5m25i07.d	03/25/19	14:55
08	LG5ICV	5c25v01.d	03/25/19	15:38
09	VSTD300	5m25i11.d	03/25/19	16:21
10	VSTD100	5m25i12.d	03/25/19	16:42
11	VSTD50	5m25i13.d	03/25/19	17:03
12	VSTD20	5m25i14.d	03/25/19	17:24
13	VSTD10	5m25i15.d	03/25/19	17:45
14	VSTD4	5m25i16.d	03/25/19	18:06
15	VSTD1	5m25i17.d	03/25/19	18:27
16	SM5ICV	5m25v11.d	03/25/19	19:09

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: 5y19t01.d BFB Injection Date: 05/19/19

Instrument ID: HP26285 BFB Injection Time: 12:40

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.95
75	30.0 - 60.0% of mass 95	45.60
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.72
173	Less than 2.0% of mass 174	0.47 (0.52)1
174	Greater than 50.0% of mass 95	90.51
175	5.0 - 9.0% of mass 174	6.31 (6.97)1
176	Greater than 95.0%, but less than 101.0% of mass 174	87.26 (96.42)1
177	5.0 - 9.0% of mass 176	5.74 (6.57)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	5y19c01.d	05/19/19	13:16
02	VSTD50	5y19c02.d	05/19/19	13:38
03	LCS588	5y19s01.d	05/19/19	13:59
04	LCS590	5y19s31.d	05/19/19	13:59
05	LCD588	5y19s02.d	05/19/19	14:19
06	LCD590	5y19s32.d	05/19/19	14:19
07	MDL588 - MDL588	5y19m01.d	05/19/19	14:41
08	MDL590 - MDL590	5y19m31.d	05/19/19	14:41
09	LCS589	5y19s03.d	05/19/19	15:02
10	LCD589	5y19s04.d	05/19/19	15:23
11	VBLK588	5y19b01.d	05/19/19	15:45
12	VBLK590	5y19b31.d	05/19/19	15:45
13	1051860	5y19s08.d	05/19/19	17:20
14	1051861	5y19s09.d	05/19/19	17:42
15	1051862	5y19s10.d	05/19/19	18:03
16	1051863	5y19s11.d	05/19/19	18:25
17	1051864	5y19s12.d	05/19/19	18:45
18	1051864DL	5y19s13.d	05/19/19	19:06
19	1057202	5y19s33.d	05/19/19	19:28
20	1057203	5y19s34.d	05/19/19	19:49
21	1057204	5y19s35.d	05/19/19	20:09
22	1057205	5y19s36.d	05/19/19	20:31

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: 5y19t01.d BFB Injection Date: 05/19/19

Instrument ID: HP26285 BFB Injection Time: 12:40

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.95
75	30.0 - 60.0% of mass 95	45.60
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.72
173	Less than 2.0% of mass 174	0.47 (0.52)1
174	Greater than 50.0% of mass 95	90.51
175	5.0 - 9.0% of mass 174	6.31 (6.97)1
176	Greater than 95.0%, but less than 101.0% of mass 174	87.26 (96.42)1
177	5.0 - 9.0% of mass 176	5.74 (6.57)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1057206	5y19s37.d	05/19/19	20:52
24	1057207	5y19s38.d	05/19/19	21:13
25	1057207DL	5y19s39.d	05/19/19	21:33
26	1053348	5y19s40.d	05/19/19	21:54
27	1053349	5y19s41.d	05/19/19	22:15
28	1053350	5y19s42.d	05/19/19	22:36
29	1053351	5y19s43.d	05/19/19	22:57
30	1055980	5y19s44.d	05/19/19	23:18
31	1051574	5y19s45.d	05/19/19	23:40

FORM V VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date(s): 02/19/19 02/19/19

Heated Purge: (Y/N) Y Calibration Times: 12:21 14:44

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = wf19i07.d RRF 4 = wf19i06.d RRF 10= wf19i05.d
RRF 20= wf19i04.d RRF 50= wf19i03.d RRF100= wf19i02.d RRF300= wf19i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Dichlorodifluoromethane	#0.2226	0.3389	0.3578	0.3419	0.3457	0.3161	0.3402	0.3233	14	AVG #
Chloromethane	#0.3772	0.4124	0.4406	0.3916	0.4019	0.3931	0.4012	0.4026	5	AVG #
1,3-Butadiene	0.2727	0.2671	0.2452	0.2384	0.2307	0.2227	0.2406	0.2453	7	AVG
Vinyl Chloride	#0.3158	0.3797	0.4161	0.3707	0.3685	0.3608	0.3718	0.3690	8	AVG #
Bromomethane	#0.2607	0.2971	0.3208	0.2821	0.2891	0.2884	0.2992	0.2911	6	AVG #
Chloroethane	#0.2701	0.2583	0.2600	0.2307	0.2292	0.2238	0.2277	0.2429	8	AVG #
Dichlorofluoromethane	0.4886	0.5016	0.4813	0.4622	0.4591	0.4389	0.4590	0.4701	5	AVG
n-Pentane	0.4044	0.3731	0.3987	0.3753	0.3549	0.3420	0.3610	0.3728	6	AVG
Trichlorofluoromethane	#0.2951	0.4078	0.4333	0.4060	0.4031	0.3866	0.4118	0.3920	11	AVG #
Ethanol	0.1591	0.1102	0.1024	0.1020	0.1116	0.1084	0.1044	0.1140	18	AVG
Freon 123a	0.3053	0.3155	0.3061	0.2927	0.2780	0.2657	0.2870	0.2929	6	AVG
Acrolein	1.7818	1.7469	1.6939	1.8036	1.8632	1.8293	1.8801	1.7998	4	AVG
1,1-Dichloroethene	#0.1644	0.2297	0.2356	0.2240	0.2253	0.2188	0.2454	0.2204	12	AVG #
1,1-Dichloroethene(2)	#0.0944	0.1178	0.1203	0.1102	0.1113	0.1062	0.1183	0.1112	8	AVG #
Acetone	#0.8713	0.8881	0.8570	0.9075	0.8853	0.8327	0.8818	0.8748	3	AVG #
Freon 113	#0.1356	0.1900	0.2095	0.2086	0.2085	0.1927	0.2102	0.1936	14	AVG #
2-Propanol	0.7040	0.6397	0.6307	0.6112	0.6739	0.6989	0.5915	0.6500	7	AVG
Methyl Iodide	0.3680	0.4205	0.4432	0.4290	0.4261	0.4180	0.4524	0.4225	6	AVG
Carbon Disulfide	#0.6814	0.7916	0.8333	0.7816	0.7719	0.7616	0.8153	0.7767	6	AVG #
Allyl Chloride	0.3347	0.3590	0.3960	0.3881	0.4091	0.3892	0.4123	0.3841	7	AVG
Methyl Acetate	#0.3825	0.3415	0.3321	0.3193	0.3250	0.3177	0.3090	0.3324	7	AVG #
Methylene Chloride	#0.2739	0.2658	0.2838	0.2674	0.2651	0.2543	0.2761	0.2695	4	AVG #
t-Butyl alcohol	1.1942	1.1621	1.1416	1.1288	1.2188	1.1948	1.0760	1.1595	4	AVG
Acrylonitrile	0.1426	0.1746	0.1772	0.1870	0.1886	0.1805	0.1736	0.1749	9	AVG
trans-1,2-Dichloroethene	#0.2033	0.2451	0.2573	0.2362	0.2397	0.2387	0.2541	0.2392	7	AVG #
Methyl Tertiary Butyl Ether	#0.5358	0.5943	0.6552	0.6031	0.5822	0.5615	0.5446	0.5824	7	AVG #
n-Hexane	0.2562	0.3096	0.3453	0.3150	0.3433	0.3197	0.3512	0.3200	10	AVG
1,1-Dichloroethane	#0.3763	0.4330	0.4590	0.4370	0.4397	0.4346	0.4543	0.4334	6	AVG #
di-Isopropyl ether	0.7905	0.8289	0.8791	0.8509	0.8427	0.8291	0.8074	0.8327	3	AVG
2-Chloro-1,3-butadiene	0.3177	0.3681	0.3999	0.3841	0.3837	0.3754	0.3986	0.3754	7	AVG
Ethyl t-butyl ether	0.5811	0.5848	0.6785	0.6482	0.6049	0.5702	0.5810	0.6069	7	AVG
cis-1,2-Dichloroethene	#0.2366	0.2640	0.2849	0.2696	0.2719	0.2682	0.2847	0.2686	6	AVG #
2-Butanone	#0.2598	0.2409	0.2472	0.2574	0.2591	0.2553	0.2390	0.2512	3	AVG #
2,2-Dichloropropane	0.1716	0.2099	0.2086	0.2054	0.1988	0.1927	0.1756	0.1946	8	AVG
Propionitrile	1.4394	1.4853	1.4411	1.3773	1.4094	1.3838	1.5509	1.4410	4	AVG
Methacrylonitrile	0.1810	0.1879	0.1975	0.1843	0.1904	0.1848	0.1904	0.1880	3	AVG
Bromochloromethane	0.1236	0.1333	0.1440	0.1403	0.1442	0.1406	0.1514	0.1396	6	AVG
Tetrahydrofuran	1.2918	1.3520	1.1750	1.3657	1.3933	1.3069	1.4514	1.3337	7	AVG
Chloroform	#0.3716	0.3946	0.4295	0.4104	0.4082	0.4049	0.4274	0.4067	5	AVG #
1,1,1-Trichloroethane	#0.2496	0.3108	0.3281	0.3146	0.3147	0.3057	0.3184	0.3060	8	AVG #
Cyclohexane	#0.3194	0.4199	0.4353	0.4172	0.4175	0.3935	0.4317	0.4049	10	AVG #
Cyclohexane(2)	#0.2653	0.3458	0.3537	0.3442	0.3514	0.3279	0.3581	0.3352	10	AVG #
Cyclohexane(3)	#0.0938	0.1266	0.1303	0.1244	0.1260	0.1188	0.1320	0.1217	11	AVG #
1,1-Dichloropropene	0.2874	0.3392	0.3424	0.3250	0.3270	0.3193	0.3419	0.3260	6	AVG
Carbon Tetrachloride	#0.2066	0.2621	0.2761	0.2668	0.2666	0.2671	0.2928	0.2626	10	AVG #
Isobutyl Alcohol	0.4146	0.4172	0.4158	0.3919	0.4443	0.4523	0.4228	0.4227	5	AVG
Benzene	#0.9632	1.0571	1.1117	1.0433	1.0439	1.0366	1.0801	1.0480	4	AVG #
1,2-Dichloroethane	#0.3396	0.3176	0.3369	0.3145	0.3171	0.3133	0.3272	0.3237	3	AVG #
1,2-Dichloroethane(2)	#0.0185	0.0303	0.0336	0.0330	0.0327	0.0326	0.0348	0.0308	18	AVG #<-
t-Amyl methyl ether	0.6040	0.6173	0.7089	0.6493	0.6388	0.5916	0.5427	0.6218	8	AVG
n-Heptane	0.2708	0.2864	0.3261	0.3135	0.3165	0.2938	0.3340	0.3059	7	AVG
n-Butanol	0.3330	0.3444	0.3646	0.3552	0.4049	0.4250	0.4001	0.3753	9	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date(s): 02/19/19 02/19/19

Heated Purge: (Y/N) Y Calibration Times: 12:21 14:44

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = wf19i07.d RRF 4 = wf19i06.d RRF 10= wf19i05.d
RRF 20= wf19i04.d RRF 50= wf19i03.d RRF100= wf19i02.d RRF300= wf19i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Trichloroethene	#0.2217	0.2561	0.2709	0.2546	0.2538	0.2533	0.2660	0.2538	6	AVG #
Methylcyclohexane	#0.2734	0.3769	0.3629	0.3936	0.4025	0.3619	0.4078	0.3684	12	AVG #
Methylcyclohexane(2)	#0.1290	0.1756	0.1682	0.1800	0.1871	0.1689	0.1904	0.1713	12	AVG #
1,2-Dichloropropane	#0.2298	0.2619	0.2854	0.2709	0.2752	0.2733	0.2870	0.2691	7	AVG #
Dibromomethane	0.1380	0.1607	0.1745	0.1685	0.1713	0.1705	0.1789	0.1661	8	AVG
1,4-Dioxane	0.1038	0.0985	0.1109	0.1097	0.1200	0.1211	0.1215	0.1122	8	AVG
Methyl Methacrylate	0.2548	0.2784	0.3021	0.2936	0.3109	0.3104	0.3196	0.2957	8	AVG
Bromodichloromethane	#0.2631	0.2827	0.3141	0.3042	0.3169	0.3198	0.3347	0.3051	8	AVG #
2-Nitropropane	0.0916	0.0888	0.0937	0.1060	0.1128	0.1166	0.1131	0.1032	11	AVG
2-Chloroethyl Vinyl Ether	0.1654	0.1740	0.2247	0.1981	0.2236	0.2230	0.2271	0.2051	13	AVG
cis-1,3-Dichloropropene	#0.3499	0.3892	0.4347	0.4211	0.4364	0.4412	0.4640	0.4195	9	AVG #
4-Methyl-2-pentanone	#0.4637	0.4627	0.4651	0.5077	0.5203	0.5569	0.4904	0.4953	7	AVG #
Toluene	#0.7057	0.7979	0.8800	0.8143	0.8160	0.7998	0.8359	0.8071	7	AVG #
trans-1,3-Dichloropropene	#0.4104	0.4287	0.5014	0.4799	0.5079	0.5047	0.5303	0.4805	9	AVG #
Ethyl Methacrylate	0.4511	0.5199	0.6156	0.6074	0.6469	0.6374	0.6547	0.5904	13	AVG
1,1,2-Trichloroethane	#0.2754	0.2925	0.3295	0.3107	0.3229	0.3186	0.3248	0.3106	6	AVG #
Tetrachloroethene	#0.2816	0.3316	0.3587	0.3284	0.3286	0.3219	0.3417	0.3275	7	AVG #
1,3-Dichloropropane	0.4849	0.4956	0.5806	0.5425	0.5594	0.5482	0.5658	0.5396	7	AVG
2-Hexanone	#0.4121	0.4279	0.4482	0.4830	0.5015	0.5532	0.4643	0.4700	10	AVG #
Dibromochloromethane	#0.2298	0.2541	0.3136	0.3074	0.3296	0.3340	0.3552	0.3034	15	AVG #
1,2-Dibromoethane	#0.2827	0.3112	0.3677	0.3476	0.3597	0.3529	0.3672	0.3413	9	AVG #
Chlorobenzene	#0.8240	0.8700	0.9551	0.8867	0.9011	0.8865	0.9441	0.8953	5	AVG #
1,1,1,2-Tetrachloroethane	0.2351	0.2578	0.3031	0.2863	0.3021	0.3027	0.3270	0.2877	11	AVG
Ethylbenzene	#1.3787	1.5070	1.6572	1.5278	1.5471	1.5272	1.5927	1.5340	6	AVG #
m+p-Xylene	#0.5272	0.5947	0.6616	0.6035	0.6158	0.6113	0.6551	0.6099	7	AVG #
o-Xylene	#0.5222	0.5852	0.6352	0.5944	0.6073	0.6020	0.6538	0.6000	7	AVG #
Styrene	#0.8130	0.9226	1.0653	1.0097	1.0480	1.0521	1.1351	1.0065	11	AVG #
Bromoform	#0.1670	0.1865	0.2373	0.2340	0.2615	0.2709	0.2958	0.2361	19	AVG #
Isopropylbenzene	#1.2646	1.4512	1.6012	1.4685	1.5055	1.4811	1.5487	1.4744	7	AVG #
Cyclohexanone	0.4871	0.4705	0.4632	0.4991	0.5298	0.5229	0.5703	0.5061	7	AVG
Bromobenzene	0.6884	0.7016	0.7569	0.7144	0.7206	0.7135	0.7459	0.7202	3	AVG
1,1,2,2-Tetrachloroethane	#0.8529	0.9108	1.0222	0.9763	1.0290	1.0105	0.9966	0.9712	7	AVG #
1,2,3-Trichloropropane	0.2565	0.2870	0.3041	0.2966	0.3075	0.3006	0.2955	0.2925	6	AVG
trans-1,4-Dichloro-2-butene	0.2803	0.2931	0.3278	0.3106	0.3327	0.3236	0.3120	0.3114	6	AVG
n-Propylbenzene	3.0849	3.2193	3.4353	3.1761	3.1834	3.0968	3.0275	3.1748	4	AVG
2-Chlorotoluene	0.5675	0.6619	0.7096	0.6632	0.6587	0.6474	0.6756	0.6548	7	AVG
4-Chlorotoluene	0.6413	0.6892	0.7427	0.6924	0.7052	0.6961	0.7401	0.7010	5	AVG
1,3,5-Trimethylbenzene	2.0444	2.2573	2.4632	2.2970	2.3331	2.2914	2.3411	2.2896	6	AVG
tert-Butylbenzene	0.4703	0.5351	0.5407	0.5160	0.5213	0.5108	0.5473	0.5202	5	AVG
Pentachloroethane	0.3257	0.3550	0.4283	0.4067	0.4432	0.4300	0.4897	0.4112	13	AVG
1,2,4-Trimethylbenzene	2.2643	2.3364	2.5982	2.4027	2.4540	2.4060	2.4275	2.4127	4	AVG
sec-Butylbenzene	2.5679	2.8763	3.0392	2.8375	2.8520	2.7620	2.7387	2.8105	5	AVG
1,3-Dichlorobenzene	#1.3306	1.3313	1.4637	1.3552	1.3825	1.3548	1.3951	1.3733	3	AVG #
p-Isopropyltoluene	2.2653	2.4890	2.6827	2.4932	2.5293	2.4796	2.4764	2.4879	5	AVG
1,4-Dichlorobenzene	#1.4127	1.3985	1.4925	1.4162	1.4209	1.4000	1.4251	1.4237	2	AVG #
1,2,3-Trimethylbenzene	2.4036	2.5068	2.7437	2.6464	2.7318	2.5569	2.5827	2.5960	5	AVG
Benzyl Chloride	1.4522	1.6615	2.0559	2.0662	2.2489	2.2481	2.2162	1.9927	16	AVG
1,3-Diethylbenzene	1.4093	1.4939	1.6403	1.5871	1.6504	1.5517	1.6100	1.5632	6	AVG
1,4-Diethylbenzene	1.5014	1.6231	1.7666	1.7078	1.7631	1.6440	1.7181	1.6748	6	AVG
1,2-Dichlorobenzene	#1.2870	1.3049	1.4555	1.3483	1.3827	1.3600	1.3989	1.3625	4	AVG #
n-Butylbenzene	1.1573	1.2337	1.3627	1.2429	1.2674	1.2393	1.2867	1.2557	5	AVG
1,2-Diethylbenzene	1.1418	1.3161	1.4034	1.3496	1.3840	1.2953	1.3485	1.3198	7	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date(s): 02/19/19 02/19/19

Heated Purge: (Y/N) Y Calibration Times: 12:21 14:44

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = wf19i07.d RRF 4 = wf19i06.d RRF 10= wf19i05.d
RRF 20= wf19i04.d RRF 50= wf19i03.d RRF100= wf19i02.d RRF300= wf19i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
1,2-Dibromo-3-chloropropane#	0.1739	0.2010	0.2236	0.2274	0.2466	0.2404	0.2321	0.2207	11	AVG #
1,3,5-Trichlorobenzene	1.0015	1.0168	1.1029	1.0404	1.0698	1.0395	1.0425	1.0448	3	AVG
1,2,4-Trichlorobenzene #	0.9276	0.9375	1.0673	1.0091	1.0550	1.0242	1.0006	1.0030	5	AVG #
Hexachlorobutadiene	0.3772	0.3543	0.3867	0.3591	0.3537	0.3359	0.3340	0.3573	5	AVG
Naphthalene	3.0094	3.0778	3.6431	3.5139	3.7449	3.5758	3.1927	3.3939	9	AVG
1,2,3-Trichlorobenzene	0.9349	0.9398	1.0277	0.9764	1.0247	0.9888	0.9609	0.9790	4	AVG
2-Methylnaphthalene	1.6516	1.5794	2.0834	1.9918	2.1930	2.1016	1.9535	1.9363	12	AVG
Dibromofluoromethane	0.2302	0.2343	0.2297	0.2314	0.2334	0.2302	0.2322	0.2316	1	AVG
Dibromofluoromethane(2)	0.2350	0.2399	0.2348	0.2383	0.2371	0.2401	0.2394	0.2378	1	AVG
1,2-Dichloroethane-d4	0.0612	0.0633	0.0610	0.0634	0.0611	0.0615	0.0597	0.0616	2	AVG
1,2-Dichloroethane-d4(2)	0.2724	0.2724	0.2690	0.2741	0.2626	0.2666	0.2602	0.2682	2	AVG
1,2-Dichloroethane-d4(3)	0.0393	0.0399	0.0398	0.0385	0.0385	0.0391	0.0395	0.0392	1	AVG
Toluene-d8	1.2422	1.2652	1.2667	1.2556	1.2661	1.2478	1.2267	1.2529	1	AVG
Toluene-d8(2)	0.8164	0.8263	0.8295	0.8323	0.8287	0.8363	0.8467	0.8309	1	AVG
4-Bromofluorobenzene	0.4965	0.4997	0.5047	0.4992	0.4989	0.5008	0.5088	0.5012	1	AVG
4-Bromofluorobenzene(2)	0.4175	0.4231	0.4261	0.4206	0.4231	0.4215	0.4287	0.4229	1	AVG

Average %RSD 7

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP09137.i/19feb19i.b/wf19i01.d	VSTD300
/chem2/HP09137.i/19feb19i.b/wf19i02.d	VSTD100
/chem2/HP09137.i/19feb19i.b/wf19i03.d	VSTD050
/chem2/HP09137.i/19feb19i.b/wf19i04.d	VSTD020
/chem2/HP09137.i/19feb19i.b/wf19i05.d	VSTD010
/chem2/HP09137.i/19feb19i.b/wf19i06.d	VSTD004
/chem2/HP09137.i/19feb19i.b/wf19i07.d	VSTD001

Area Summary

File ID:

Internal Standard Name	wf19i01.d	wf19i02.d	wf19i03.d	wf19i04.d	wf19i05.d	wf19i06.d	wf19i07.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	208793	220310	221988	226145	235698	216574	213467	220425	4	Yes
Fluorobenzene	896646	842063	858650	878585	872867	867920	823064	862828	3	Yes
Chlorobenzene-d5	750584	700579	703812	722592	709147	717501	683121	712477	3	Yes
1,4-Dichlorobenzene-d4	447340	397731	393177	398717	394276	394254	368100	399085	6	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	wf19i01.d	wf19i02.d	wf19i03.d	wf19i04.d	wf19i05.d	wf19i06.d	wf19i07.d	Avg. RT
t-Butyl alcohol-d10	2.735	2.732	2.728	2.732	2.725	2.728	2.732	2.730
Fluorobenzene	5.029	5.029	5.029	5.029	5.029	5.029	5.029	5.029
Chlorobenzene-d5	8.161	8.161	8.161	8.161	8.161	8.161	8.161	8.161
1,4-Dichlorobenzene-d4	10.041	10.041	10.038	10.038	10.041	10.038	10.038	10.040

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 02/20/2019 at 10:32.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 ICV Date: 02/20/19 Time: 12:07

Lab File ID: wf20l01.d Init. Calib. Date(s): 02/20/19 02/20/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3233	0.2795	17.29	20	-14	#
# Chloromethane	0.4026	0.3901	19.38	20	-3	#
1,3-Butadiene	0.2453	0.2559	20.86	20	4	
# Vinyl Chloride	0.3690	0.3679	19.94	20	0	#
# Bromomethane	0.2911	0.2538	17.44	20	-13	#
# Chloroethane	0.2429	0.2141	17.63	20	-12	#
Dichlorofluoromethane	0.4701	0.4241	18.04	20	-10	
n-Pentane	0.3728	0.3323	17.83	20	-11	
# Trichlorofluoromethane	0.3920	0.3507	17.89	20	-11	#
Ethanol	0.1140	0.1305	572.10	500	14	
Freon 123a	0.2929	0.2989	20.41	20	2	
Acrolein	1.7998	1.6198	135.00	150	-10	
# 1,1-Dichloroethene	0.2204	0.2572	23.34	20	17	#
# Acetone	0.8748	0.8401	144.04	150	-4	#
# Freon 113	0.1936	0.2153	22.24	20	11	#
2-Propanol	0.6500	0.6597	152.24	150	1	
Methyl Iodide	0.4225	0.4552	21.55	20	8	
# Carbon Disulfide	0.7767	0.8165	21.03	20	5	#
Allyl Chloride	0.3841	0.3808	19.83	20	-1	
# Methyl Acetate	0.3324	0.3222	19.38	20	-3	#
# Methylene Chloride	0.2695	0.2912	21.61	20	8	#
t-Butyl alcohol	1.1595	1.1387	196.42	200	-2	
Acrylonitrile	0.1749	0.1762	100.78	100	1	
# trans-1,2-Dichloroethene	0.2392	0.2692	22.51	20	13	#
# Methyl Tertiary Butyl Ether	0.5824	0.6000	20.61	20	3	#
n-Hexane	0.3200	0.3383	21.14	20	6	
# 1,1-Dichloroethane	0.4334	0.4754	21.94	20	10	#
di-Isopropyl ether	0.8327	0.9095	21.85	20	9	
2-Chloro-1,3-butadiene	0.3754	0.4010	21.36	20	7	
Ethyl t-butyl ether	0.6069	0.6397	21.08	20	5	
# cis-1,2-Dichloroethene	0.2686	0.3060	22.79	20	14	#
# 2-Butanone	0.2512	0.2467	147.26	150	-2	#
2,2-Dichloropropane	0.1946	0.2191	22.51	20	13	
Propionitrile	1.4410	1.4646	152.45	150	2	
Methacrylonitrile	0.1880	0.1915	152.73	150	2	
Bromochloromethane	0.1396	0.1402	20.08	20	0	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 ICV Date: 02/20/19 Time: 12:07

Lab File ID: wf20l01.d Init. Calib. Date(s): 02/20/19 02/20/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Tetrahydrofuran	1.3337	1.2743	95.54	100	-4	
#	Chloroform	0.4067	0.4516	22.21	20	11	#
#	1,1,1-Trichloroethane	0.3060	0.3471	22.69	20	13	#
#	Cyclohexane	0.4049	0.4112	20.31	20	2	#
	1,1-Dichloropropene	0.3260	0.3579	21.96	20	10	
#	Carbon Tetrachloride	0.2626	0.2742	20.89	20	4	#
	Isobutyl Alcohol	0.4227	0.4079	482.47	500	-4	
#	Benzene	1.0480	1.1347	21.66	20	8	#
#	1,2-Dichloroethane	0.3237	0.3597	22.22	20	11	#
	t-Amyl methyl ether	0.6218	0.6386	20.54	20	3	
	n-Heptane	0.3059	0.3099	20.26	20	1	
	n-Butanol	0.3753	0.3610	961.94	1000	-4	
#	Trichloroethene	0.2538	0.2812	22.16	20	11	#
#	Methylcyclohexane	0.3684	0.3776	20.50	20	2	#
#	1,2-Dichloropropane	0.2691	0.3032	22.54	20	13	#
	Dibromomethane	0.1661	0.1822	21.94	20	10	
	1,4-Dioxane	0.1122	0.1124	501.07	500	0	
	Methyl Methacrylate	0.2957	0.2953	19.97	20	0	
#	Bromodichloromethane	0.3051	0.3279	21.49	20	7	#
	2-Nitropropane	0.1032	0.0871	16.88	20	-16	
	2-Chloroethyl Vinyl Ether	0.2051	0.1921	18.73	20	-6	
#	cis-1,3-Dichloropropene	0.4195	0.4588	21.87	20	9	#
#	4-Methyl-2-pentanone	0.4953	0.4880	98.53	100	-1	#
#	Toluene	0.8071	0.8843	21.91	20	10	#
#	trans-1,3-Dichloropropene	0.4805	0.4960	20.65	20	3	#
	Ethyl Methacrylate	0.5904	0.6116	20.72	20	4	
#	1,1,2-Trichloroethane	0.3106	0.3563	22.94	20	15	#
#	Tetrachloroethene	0.3275	0.3603	22.00	20	10	#
	1,3-Dichloropropane	0.5396	0.5927	21.97	20	10	
#	2-Hexanone	0.4700	0.4573	97.29	100	-3	#
#	Dibromochloromethane	0.3034	0.3279	21.62	20	8	#
#	1,2-Dibromoethane	0.3413	0.3744	21.94	20	10	#
#	Chlorobenzene	0.8953	0.9820	21.94	20	10	#
	1,1,1,2-Tetrachloroethane	0.2877	0.3058	21.25	20	6	
#	Ethylbenzene	1.5340	1.6678	21.74	20	9	#
#	m+p-Xylene	0.6099	0.6667	43.72	40	9	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 ICV Date: 02/20/19 Time: 12:07

Lab File ID: wf20l01.d Init. Calib. Date(s): 02/20/19 02/20/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	o-Xylene	0.6000	0.6435	21.45	20	7	#
#	Styrene	1.0065	1.1147	22.15	20	11	#
#	Bromoform	0.2361	0.2357	19.96	20	0	#
#	Isopropylbenzene	1.4744	1.6362	22.19	20	11	#
	Cyclohexanone	0.5061	0.3977	392.85	500	-21	
	Bromobenzene	0.7202	0.7749	21.52	20	8	
#	1,1,2,2-Tetrachloroethane	0.9712	1.0477	21.58	20	8	#
	1,2,3-Trichloropropane	0.2925	0.3208	21.93	20	10	
	trans-1,4-Dichloro-2-butene	0.3114	0.3263	104.76	100	5	
	n-Propylbenzene	3.1748	3.5193	22.17	20	11	
	2-Chlorotoluene	0.6548	0.7224	22.06	20	10	
	4-Chlorotoluene	0.7010	0.7635	21.78	20	9	
	1,3,5-Trimethylbenzene	2.2896	2.4970	21.81	20	9	
	tert-Butylbenzene	0.5202	0.5611	21.57	20	8	
	Pentachloroethane	0.4112	0.4164	20.25	20	1	
	1,2,4-Trimethylbenzene	2.4127	2.5891	21.46	20	7	
	sec-Butylbenzene	2.8105	3.0779	21.90	20	10	
#	1,3-Dichlorobenzene	1.3733	1.4796	21.55	20	8	#
	p-Isopropyltoluene	2.4879	2.7111	21.79	20	9	
#	1,4-Dichlorobenzene	1.4237	1.5451	21.71	20	9	#
	1,2,3-Trimethylbenzene	2.5960	2.7701	21.34	20	7	
	Benzyl Chloride	1.9927	1.9670	19.74	20	-1	
	1,3-Diethylbenzene	1.5632	1.6430	21.02	20	5	
	1,4-Diethylbenzene	1.6748	1.7017	20.32	20	2	
#	1,2-Dichlorobenzene	1.3625	1.4843	21.79	20	9	#
	n-Butylbenzene	1.2557	1.3468	21.45	20	7	
	1,2-Diethylbenzene	1.3198	1.4051	21.29	20	6	
#	1,2-Dibromo-3-chloropropane	0.2207	0.2278	20.64	20	3	#
	1,3,5-Trichlorobenzene	1.0448	1.0980	21.02	20	5	
#	1,2,4-Trichlorobenzene	1.0030	1.0774	21.48	20	7	#
	Hexachlorobutadiene	0.3573	0.3703	20.73	20	4	
	Naphthalene	3.3939	3.6416	21.46	20	7	
	1,2,3-Trichlorobenzene	0.9790	1.0505	21.46	20	7	
	2-Methylnaphthalene	1.9363	1.9106	19.73	20	-1	
				Average %Drift		7	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

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6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 Calibration Date(s): 03/25/19 03/25/19

Heated Purge: (Y/N) Y Calibration Times: 12:48 14:55

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = 5m25i07.d RRF 4 = 5m25i06.d RRF 10= 5m25i05.d
RRF 20= 5m25i04.d RRF 50= 5m25i03.d RRF100= 5m25i02.d RRF300= 5m25i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
Dichlorodifluoromethane	#0.2690	0.4319	0.4370	0.3955	0.4468	0.4347	0.3997	0.4021	15	AVG	#
Chloromethane	#0.2629	0.3113	0.3102	0.2852	0.2994	0.2878	0.2889	0.2922	6	AVG	#
1,3-Butadiene	0.2055	0.2359	0.2142	0.1901	0.1927	0.1979	0.1850	0.2030	9	AVG	
Vinyl Chloride	#0.2507	0.3137	0.3058	0.2818	0.2948	0.2793	0.2752	0.2859	7	AVG	#
Bromomethane	#0.2291	0.2454	0.2508	0.2278	0.2378	0.2200	0.2016	0.2304	7	AVG	#
Chloroethane	#0.1355	0.1508	0.1489	0.1358	0.1396	0.1300	0.1186	0.1370	8	AVG	#
Dichlorofluoromethane	0.3851	0.4043	0.4032	0.3519	0.3680	0.3508	0.3459	0.3728	7	AVG	
n-Pentane	0.2611	0.2595	0.2652	0.2295	0.2529	0.2656	0.2209	0.2506	7	AVG	
Trichlorofluoromethane	#0.3063	0.4436	0.4317	0.3954	0.4227	0.4065	0.3758	0.3974	12	AVG	#
Ethyl ether	0.1799	0.1973	0.2328	0.2127	0.2101	0.2027	0.2052	0.2058	8	AVG	
Freon 123a	0.2863	0.3427	0.3317	0.3067	0.3045	0.2992	0.2912	0.3089	7	AVG	
Acrolein	1.9075	1.8350	1.8961	1.7015	1.9112	1.6592	1.4431	1.7648	10	AVG	
1,1-Dichloroethene	#0.2021	0.2455	0.2440	0.2268	0.2326	0.2303	0.2345	0.2308	6	AVG	#
1,1-Dichloroethene(2)	#0.0986	0.1246	0.1206	0.1132	0.1136	0.1119	0.1123	0.1136	7	AVG	#
Acetone	#0.6982	0.7970	0.8830	0.8307	0.8575	0.7977	0.7845	0.8069	7	AVG	#
Freon 113	#0.1592	0.2485	0.2511	0.2298	0.2517	0.2618	0.2418	0.2348	15	AVG	#
2-Propanol	0.5755	0.6109	0.6080	0.5771	0.5710	0.5764	0.5862	0.5864	3	AVG	
Methyl Iodide	0.4319	0.4920	0.5037	0.4729	0.4842	0.4892	0.5004	0.4821	5	AVG	
Carbon Disulfide	#0.6171	0.7564	0.7917	0.7528	0.7973	0.8084	0.8410	0.7664	9	AVG	#
Allyl Chloride	0.4114	0.4350	0.4177	0.4024	0.4099	0.4091	0.4174	0.4147	3	AVG	
Methyl Acetate	#0.4488	0.3524	0.3537	0.3436	0.3307	0.3343	0.3391	0.3575	12	AVG	#
Methylene Chloride	#0.2604	0.2684	0.2698	0.2570	0.2573	0.2590	0.2633	0.2622	2	AVG	#
t-Butyl alcohol	1.1300	1.2203	1.1923	1.1556	1.1396	1.1352	1.1228	1.1566	3	AVG	
Acrylonitrile	0.1700	0.1909	0.2093	0.1913	0.1955	0.1849	0.1810	0.1890	6	AVG	
trans-1,2-Dichloroethene	#0.2252	0.2668	0.2731	0.2558	0.2617	0.2610	0.2651	0.2584	6	AVG	#
Methyl Tertiary Butyl Ether	#0.7009	0.7725	0.7842	0.7448	0.7314	0.7219	0.7059	0.7373	4	AVG	#
n-Hexane	0.2400	0.3626	0.3893	0.3520	0.3855	0.4079	0.3647	0.3574	15	AVG	
1,1-Dichloroethane	#0.4046	0.4625	0.4838	0.4536	0.4633	0.4579	0.4629	0.4555	5	AVG	#
di-Isopropyl ether	0.7906	0.8643	0.8849	0.8330	0.8286	0.8170	0.7940	0.8303	4	AVG	
2-Chloro-1,3-butadiene	0.3460	0.4237	0.4256	0.3993	0.4123	0.4081	0.4066	0.4031	7	AVG	
Ethyl t-butyl ether	0.7370	0.8057	0.8136	0.7751	0.7668	0.7506	0.7325	0.7687	4	AVG	
cis-1,2-Dichloroethene	#0.2795	0.3001	0.3044	0.2861	0.2898	0.2917	0.2947	0.2923	3	AVG	#
2-Butanone	#0.2991	0.2925	0.3015	0.2780	0.3021	0.2714	0.2529	0.2854	7	AVG	#
2,2-Dichloropropane	0.3085	0.3759	0.3840	0.3616	0.3717	0.3728	0.3757	0.3643	7	AVG	
Propionitrile	1.2353	1.2830	1.2976	1.2388	1.2559	1.2262	1.2688	1.2579	2	AVG	
Methacrylonitrile	0.1803	0.1916	0.1911	0.1865	0.1860	0.1845	0.1816	0.1859	2	AVG	
Bromochloromethane	0.1314	0.1476	0.1519	0.1455	0.1465	0.1481	0.1529	0.1463	5	AVG	
Tetrahydrofuran	1.2374	1.2091	1.3698	1.2744	1.3771	1.2496	1.2276	1.2779	5	AVG	
Chloroform	#0.4226	0.4603	0.4685	0.4445	0.4532	0.4528	0.4599	0.4517	3	AVG	#
1,1,1-Trichloroethane	#0.3254	0.4169	0.4194	0.3929	0.4062	0.4047	0.4171	0.3975	8	AVG	#
Cyclohexane	#0.3699	0.4976	0.4869	0.4418	0.4745	0.4889	0.4576	0.4596	10	AVG	#
Cyclohexane(2)	#0.2982	0.4298	0.4135	0.3792	0.4069	0.4184	0.3955	0.3916	11	AVG	#
Cyclohexane(3)	#0.1024	0.1582	0.1520	0.1380	0.1482	0.1535	0.1445	0.1424	13	AVG	#
1,1-Dichloropropene	0.3111	0.3864	0.3911	0.3610	0.3713	0.3663	0.3706	0.3654	7	AVG	
Carbon Tetrachloride	#0.2673	0.3431	0.3570	0.3396	0.3598	0.3649	0.3763	0.3440	10	AVG	#
Isobutyl Alcohol	0.3870	0.3907	0.3822	0.3727	0.3713	0.3740	0.3733	0.3788	2	AVG	
Benzene	#1.0334	1.1395	1.1703	1.0944	1.1160	1.1101	1.1063	1.1100	4	AVG	#
1,2-Dichloroethane	#0.3591	0.3368	0.3364	0.3168	0.3169	0.3140	0.3163	0.3280	5	AVG	#
1,2-Dichloroethane(2)	#0.0151	0.0325	0.0316	0.0308	0.0300	0.0301	0.0309	0.0287	21	AVG	#<-
t-Amyl methyl ether	0.7637	0.7977	0.8235	0.7914	0.7754	0.7519	0.7195	0.7747	4	AVG	
n-Heptane	0.3058	0.4240	0.4289	0.3836	0.4268	0.4561	0.3962	0.4030	12	AVG	
n-Butanol	0.3008	0.3193	0.3221	0.3157	0.3166	0.3188	0.3173	0.3158	2	AVG	

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 Calibration Date(s): 03/25/19 03/25/19

Heated Purge: (Y/N) Y Calibration Times: 12:48 14:55

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = 5m25i07.d RRF 4 = 5m25i06.d RRF 10= 5m25i05.d
RRF 20= 5m25i04.d RRF 50= 5m25i03.d RRF100= 5m25i02.d RRF300= 5m25i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Trichloroethene	#0.2619	0.2946	0.3014	0.2836	0.2901	0.2888	0.2945	0.2879	4	AVG #
Methylcyclohexane	#0.3466	0.5058	0.4959	0.4653	0.5017	0.5289	0.4925	0.4766	13	AVG #
Methylcyclohexane(2)	#0.1481	0.2152	0.2106	0.2020	0.2159	0.2284	0.2152	0.2050	13	AVG #
1,2-Dichloropropane	#0.2589	0.2809	0.2889	0.2720	0.2770	0.2759	0.2723	0.2751	3	AVG #
Dibromomethane	0.1598	0.1785	0.1808	0.1738	0.1740	0.1742	0.1771	0.1740	4	AVG
1,4-Dioxane	0.0497	0.0763	0.0793	0.0751	0.0756	0.0759	0.0810	0.0733	14	AVG
Methyl Methacrylate	0.2636	0.2910	0.2961	0.2916	0.2886	0.2896	0.2903	0.2872	4	AVG
Bromodichloromethane	#0.2768	0.3080	0.3313	0.3185	0.3344	0.3403	0.3546	0.3234	8	AVG #
2-Nitropropane	0.1214	0.1257	0.1301	0.1253	0.1582	0.1376	0.1310	0.1328	9	AVG
2-Chloroethyl Vinyl Ether	0.2027	0.2236	0.2400	0.2280	0.2368	0.2367	0.2395	0.2296	6	AVG
cis-1,3-Dichloropropene	#0.3551	0.4154	0.4385	0.4280	0.4398	0.4463	0.4556	0.4255	8	AVG #
4-Methyl-2-pentanone	#0.6015	0.6357	0.5689	0.5322	0.7074	0.5648	0.4810	0.5845	13	AVG #
Toluene	#0.8635	0.9779	0.9973	0.9286	0.9421	0.9362	0.9302	0.9394	5	AVG #
trans-1,3-Dichloropropene	#0.4537	0.4812	0.5102	0.5068	0.5254	0.5346	0.5416	0.5076	6	AVG #
Ethyl Methacrylate	0.5412	0.5937	0.6317	0.6292	0.6219	0.6222	0.6207	0.6086	5	AVG
1,1,2-Trichloroethane	#0.3269	0.3376	0.3474	0.3324	0.3378	0.3339	0.3366	0.3361	2	AVG #
Tetrachloroethene	#0.3715	0.4464	0.4441	0.4281	0.4254	0.4253	0.4495	0.4272	6	AVG #
1,3-Dichloropropane	0.5233	0.5682	0.5735	0.5500	0.5478	0.5435	0.5474	0.5505	3	AVG
2-Hexanone	#0.7100	0.7685	0.6165	0.5795	0.8293	0.6386	0.5082	0.6644	17	AVG #
Dibromochloromethane	#0.2620	0.3094	0.3471	0.3453	0.3667	0.3786	0.3994	0.3441	13	AVG #
1,2-Dibromoethane	#0.3566	0.3755	0.3850	0.3742	0.3761	0.3753	0.3842	0.3753	2	AVG #
1-Chlorohexane	0.5472	0.5824	0.5652	0.5288	0.5433	0.5393	0.5249	0.5473	4	AVG
Chlorobenzene	#0.9762	1.0704	1.0988	1.0319	1.0605	1.0606	1.0595	1.0511	4	AVG #
1,1,1,2-Tetrachloroethane	0.2903	0.3337	0.3648	0.3521	0.3714	0.3822	0.3891	0.3548	10	AVG
Ethylbenzene	#1.6638	1.8801	1.9354	1.8329	1.8797	1.8716	1.7811	1.8349	5	AVG #
m+p-Xylene	#0.6576	0.7406	0.7674	0.7174	0.7409	0.7410	0.7007	0.7237	5	AVG #
o-Xylene	#0.6291	0.7247	0.7449	0.7011	0.7211	0.7208	0.7080	0.7071	5	AVG #
Styrene	#1.0198	1.1588	1.2148	1.1741	1.2101	1.2140	1.1817	1.1676	6	AVG #
Bromoform	#0.2027	0.2287	0.2598	0.2712	0.2947	0.3080	0.3361	0.2716	17	AVG #
Isopropylbenzene	#1.5663	1.9109	1.9536	1.8507	1.8941	1.8797	1.7992	1.8363	7	AVG #
Cyclohexanone	0.3216	0.3101	0.2987	0.2980	0.3061	0.3010	0.3100	0.3065	3	AVG
Bromobenzene	0.7812	0.8639	0.8893	0.8546	0.8778	0.8798	0.8910	0.8625	4	AVG
1,1,2,2-Tetrachloroethane	#1.0031	1.1164	1.1452	1.1172	1.1061	1.1004	1.0565	1.0921	4	AVG #
1,2,3-Trichloropropane	0.3126	0.3470	0.3392	0.3333	0.3281	0.3272	0.3159	0.3290	4	AVG
trans-1,4-Dichloro-2-butene	0.3156	0.3535	0.3628	0.3560	0.3548	0.3514	0.3135	0.3439	6	AVG
n-Propylbenzene	3.6297	4.2848	4.4032	4.0943	4.1959	4.1079	3.6986	4.0592	7	AVG
2-Chlorotoluene	0.7504	0.8376	0.8740	0.8269	0.8465	0.8540	0.8685	0.8368	5	AVG
4-Chlorotoluene	0.7722	0.8625	0.8946	0.8474	0.8686	0.8781	0.8906	0.8591	5	AVG
1,3,5-Trimethylbenzene	2.5979	3.0095	3.1110	2.9293	3.0283	3.0078	2.8216	2.9293	6	AVG
tert-Butylbenzene	0.5364	0.6357	0.6435	0.6062	0.6387	0.6349	0.6376	0.6190	6	AVG
Pentachloroethane	0.3785	0.4566	0.5017	0.4916	0.5452	0.5703	0.5946	0.5055	15	AVG
1,2,4-Trimethylbenzene	2.7457	3.0651	3.1562	2.9890	3.0890	3.0834	2.8996	3.0040	5	AVG
sec-Butylbenzene	3.2512	4.0143	4.0533	3.8459	3.9800	3.9265	3.4948	3.7951	8	AVG
1,3-Dichlorobenzene	#1.5056	1.6419	1.7188	1.6323	1.6819	1.6909	1.6917	1.6518	4	AVG #
p-Isopropyltoluene	2.7611	3.3847	3.4766	3.3190	3.4681	3.4407	3.1824	3.2904	8	AVG
1,4-Dichlorobenzene	#1.5655	1.6995	1.7142	1.6508	1.6952	1.7074	1.6863	1.6741	3	AVG #
1,2,3-Trimethylbenzene	2.8082	3.1740	3.1989	3.1334	3.1975	3.2230	2.9870	3.1031	5	AVG
Benzyl Chloride	1.6188	1.9239	2.1663	2.2404	2.3271	2.4149	2.3694	2.1515	13	AVG
1,3-Diethylbenzene	1.6815	2.0021	2.0735	2.0210	2.1002	2.1119	2.0478	2.0054	7	AVG
1,4-Diethylbenzene	1.7367	2.1236	2.2053	2.1460	2.2612	2.2675	2.1577	2.1283	9	AVG
1,2-Dichlorobenzene	#1.4248	1.5692	1.6216	1.5471	1.5863	1.5914	1.5911	1.5617	4	AVG #
n-Butylbenzene	1.3454	1.7085	1.7580	1.6878	1.7525	1.7479	1.6181	1.6597	9	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 Calibration Date(s): 03/25/19 03/25/19

Heated Purge: (Y/N) Y Calibration Times: 12:48 14:55

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = 5m25i07.d RRF 4 = 5m25i06.d RRF 10= 5m25i05.d
RRF 20= 5m25i04.d RRF 50= 5m25i03.d RRF100= 5m25i02.d RRF300= 5m25i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
1,2-Diethylbenzene	1.4154	1.6870	1.7096	1.6815	1.7367	1.7457	1.6948	1.6672	7	AVG
1,2-Dibromo-3-chloropropane#	0.2349	0.2599	0.2802	0.2792	0.2825	0.2895	0.2836	0.2728	7	AVG #
1,3,5-Trichlorobenzene	1.0797	1.2241	1.2755	1.2327	1.2909	1.3294	1.3552	1.2553	7	AVG
1,2,4-Trichlorobenzene #	1.0157	1.0920	1.1440	1.1131	1.1603	1.1982	1.2312	1.1363	6	AVG #
Hexachlorobutadiene	0.4910	0.5155	0.5264	0.5036	0.5433	0.5703	0.6040	0.5363	7	AVG
Naphthalene	3.6503	3.8489	4.0539	3.9463	3.9618	3.9848	3.5452	3.8559	5	AVG
1,2,3-Trichlorobenzene	1.0091	1.0481	1.0921	1.0683	1.1027	1.1311	1.1701	1.0888	5	AVG
2-Methylnaphthalene	1.9468	2.0714	2.2375	2.2936	2.3900	2.4659	2.4766	2.2688	9	AVG
Dibromofluoromethane	0.2369	0.2377	0.2377	0.2394	0.2381	0.2422	0.2430	0.2393	1	AVG
Dibromofluoromethane(2)	0.2430	0.2438	0.2436	0.2452	0.2459	0.2471	0.2504	0.2456	1	AVG
1,2-Dichloroethane-d4	0.0561	0.0561	0.0562	0.0557	0.0560	0.0559	0.0559	0.0560	0	AVG
1,2-Dichloroethane-d4(2)	0.2611	0.2634	0.2587	0.2597	0.2574	0.2581	0.2557	0.2592	1	AVG
1,2-Dichloroethane-d4(3)	0.0355	0.0357	0.0358	0.0355	0.0359	0.0357	0.0356	0.0357	0	AVG
Toluene-d8	1.2727	1.2738	1.2738	1.2689	1.2600	1.2504	1.2349	1.2621	1	AVG
Toluene-d8(2)	0.8340	0.8332	0.8344	0.8309	0.8295	0.8246	0.8200	0.8295	1	AVG
4-Bromofluorobenzene	0.4904	0.4884	0.4916	0.4929	0.4913	0.4905	0.4924	0.4911	0	AVG
4-Bromofluorobenzene(2)	0.4272	0.4263	0.4292	0.4287	0.4305	0.4258	0.4271	0.4278	0	AVG

Average %RSD 7

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

FORM VI VOA

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP26285.i/19mar25i.b/5m25i01.d	VSTD300
/chem2/HP26285.i/19mar25i.b/5m25i02.d	VSTD100
/chem2/HP26285.i/19mar25i.b/5m25i03.d	VSTD050
/chem2/HP26285.i/19mar25i.b/5m25i04.d	VSTD020
/chem2/HP26285.i/19mar25i.b/5m25i05.d	VSTD010
/chem2/HP26285.i/19mar25i.b/5m25i06.d	VSTD004
/chem2/HP26285.i/19mar25i.b/5m25i07.d	VSTD001

Area Summary

File ID:

Internal Standard Name	5m25i01.d	5m25i02.d	5m25i03.d	5m25i04.d	5m25i05.d	5m25i06.d	5m25i07.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	326405	333791	324947	335255	327405	330891	317402	328014	2	Yes
Fluorobenzene	1087768	1089311	1083032	1089387	1076914	1063233	1068211	1079694	1	Yes
Chlorobenzene-d5	848957	843152	831607	830336	817143	805759	807725	826383	2	Yes
1,4-Dichlorobenzene-d4	472197	456264	445741	445129	435506	427216	425367	443917	4	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	5m25i01.d	5m25i02.d	5m25i03.d	5m25i04.d	5m25i05.d	5m25i06.d	5m25i07.d	Avg. RT
t-Butyl alcohol-d10	3.527	3.527	3.533	3.545	3.533	3.527	3.533	3.532
Fluorobenzene	6.996	6.995	7.002	7.001	6.996	6.996	7.002	6.998
Chlorobenzene-d5	10.745	10.745	10.745	10.745	10.745	10.745	10.745	10.745
1,4-Dichlorobenzene-d4	12.738	12.738	12.738	12.738	12.738	12.738	12.738	12.738

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 03/25/2019 at 21:55.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 ICV Date: 03/25/19 Time: 15:38

Lab File ID: 5c25v01.d Init. Calib. Date(s): 03/25/19 03/25/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.4021	0.3292	16.37	20	-18	#
# Chloromethane	0.2922	0.2748	18.80	20	-6	#
1,3-Butadiene	0.2030	0.1982	19.53	20	-2	
# Vinyl Chloride	0.2859	0.2807	19.64	20	-2	#
# Bromomethane	0.2304	0.1644	14.27	20	-29	#
# Chloroethane	0.1370	0.1052	15.35	20	-23	#
Dichlorofluoromethane	0.3728	0.3417	18.33	20	-8	
n-Pentane	0.2506	0.2068	16.50	20	-17	
# Trichlorofluoromethane	0.3974	0.3389	17.06	20	-15	#
Ethyl ether	0.2058	0.2087	20.28	20	1	
Freon 123a	0.3089	0.2975	19.27	20	-4	
Acrolein	1.7648	1.6208	137.76	150	-8	
# 1,1-Dichloroethene	0.2308	0.2517	21.81	20	9	#
# Acetone	0.8069	0.7999	148.69	150	-1	#
# Freon 113	0.2348	0.2455	20.91	20	5	#
2-Propanol	0.5864	0.5673	145.11	150	-3	
Methyl Iodide	0.4821	0.4866	20.19	20	1	
# Carbon Disulfide	0.7664	0.7297	19.04	20	-5	#
Allyl Chloride	0.4147	0.3933	18.97	20	-5	
# Methyl Acetate	0.3575	0.3470	19.41	20	-3	#
# Methylene Chloride	0.2622	0.2801	21.37	20	7	#
t-Butyl alcohol	1.1566	1.1343	196.14	200	-2	
Acrylonitrile	0.1890	0.1768	93.55	100	-6	
# trans-1,2-Dichloroethene	0.2584	0.2820	21.83	20	9	#
# Methyl Tertiary Butyl Ether	0.7373	0.7262	19.70	20	-2	#
n-Hexane	0.3574	0.3542	19.82	20	-1	
# 1,1-Dichloroethane	0.4555	0.4786	21.02	20	5	#
di-Isopropyl ether	0.8303	0.8512	20.50	20	3	
2-Chloro-1,3-butadiene	0.4031	0.4066	20.17	20	1	
Ethyl t-butyl ether	0.7687	0.7566	19.68	20	-2	
# cis-1,2-Dichloroethene	0.2923	0.3126	21.39	20	7	#
# 2-Butanone	0.2854	0.2587	135.99	150	-9	#
2,2-Dichloropropane	0.3643	0.3801	20.87	20	4	
Propionitrile	1.2579	1.3076	155.92	150	4	
Methacrylonitrile	0.1859	0.1852	149.39	150	0	
Bromochloromethane	0.1463	0.1442	19.71	20	-1	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 ICV Date: 03/25/19 Time: 15:38

Lab File ID: 5c25v01.d Init. Calib. Date(s): 03/25/19 03/25/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Tetrahydrofuran	1.2779	1.2765	99.89	100	0	
#	Chloroform	0.4517	0.4749	21.03	20	5	#
#	1,1,1-Trichloroethane	0.3975	0.4196	21.11	20	6	#
#	Cyclohexane	0.4596	0.4459	19.40	20	-3	#
	1,1-Dichloropropene	0.3654	0.3801	20.80	20	4	
#	Carbon Tetrachloride	0.3440	0.3566	20.73	20	4	#
	Isobutyl Alcohol	0.3788	0.3785	499.68	500	0	
#	Benzene	1.1100	1.1628	20.95	20	5	#
#	1,2-Dichloroethane	0.3280	0.3441	20.98	20	5	#
	t-Amyl methyl ether	0.7747	0.7802	20.14	20	1	
	n-Heptane	0.4030	0.3853	19.12	20	-4	
	n-Butanol	0.3158	0.3147	996.55	1000	0	
#	Trichloroethene	0.2879	0.2982	20.72	20	4	#
#	Methylcyclohexane	0.4766	0.4725	19.82	20	-1	#
#	1,2-Dichloropropane	0.2751	0.2943	21.39	20	7	#
	Dibromomethane	0.1740	0.1811	20.81	20	4	
	1,4-Dioxane	0.0733	0.0791	539.72	500	8	
	Methyl Methacrylate	0.2872	0.2743	19.10	20	-5	
#	Bromodichloromethane	0.3234	0.3390	20.96	20	5	#
	2-Nitropropane	0.1328	0.1096	16.52	20	-17	
	2-Chloroethyl Vinyl Ether	0.2296	0.2373	20.67	20	3	
#	cis-1,3-Dichloropropene	0.4255	0.4494	21.12	20	6	#
#	4-Methyl-2-pentanone	0.5845	0.4951	84.70	100	-15	#
#	Toluene	0.9394	0.9974	21.23	20	6	#
#	trans-1,3-Dichloropropene	0.5076	0.5083	20.02	20	0	#
	Ethyl Methacrylate	0.6086	0.5947	19.54	20	-2	
#	1,1,2-Trichloroethane	0.3361	0.3571	21.25	20	6	#
#	Tetrachloroethene	0.4272	0.4421	20.70	20	3	#
	1,3-Dichloropropane	0.5505	0.5665	20.58	20	3	
#	2-Hexanone	0.6644	0.5276	79.41	100	-21	#
#	Dibromochloromethane	0.3441	0.3601	20.93	20	5	#
#	1,2-Dibromoethane	0.3753	0.3807	20.29	20	1	#
	1-Chlorohexane	0.5473	0.5537	20.23	20	1	
#	Chlorobenzene	1.0511	1.0973	20.88	20	4	#
	1,1,1,2-Tetrachloroethane	0.3548	0.3713	20.93	20	5	
#	Ethylbenzene	1.8349	1.9294	21.03	20	5	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 ICV Date: 03/25/19 Time: 15:38

Lab File ID: 5c25v01.d Init. Calib. Date(s): 03/25/19 03/25/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	m+p-Xylene	0.7237	0.7651	42.29	40	6	#
#	o-Xylene	0.7071	0.7425	21.00	20	5	#
#	Styrene	1.1676	1.2412	21.26	20	6	#
#	Bromoform	0.2716	0.2671	19.67	20	-2	#
#	Isopropylbenzene	1.8363	1.9669	21.42	20	7	#
	Cyclohexanone	0.3065	0.3238	528.16	500	6	
	Bromobenzene	0.8625	0.9100	21.10	20	6	
#	1,1,2,2-Tetrachloroethane	1.0921	1.1571	21.19	20	6	#
	1,2,3-Trichloropropane	0.3290	0.3423	20.81	20	4	
	trans-1,4-Dichloro-2-butene	0.3439	0.3663	106.50	100	6	
	n-Propylbenzene	4.0592	4.3876	21.62	20	8	
	2-Chlorotoluene	0.8368	0.8757	20.93	20	5	
	4-Chlorotoluene	0.8591	0.9002	20.96	20	5	
	1,3,5-Trimethylbenzene	2.9293	3.1080	21.22	20	6	
	tert-Butylbenzene	0.6190	0.6450	20.84	20	4	
	Pentachloroethane	0.5055	0.5276	20.87	20	4	
	1,2,4-Trimethylbenzene	3.0040	3.1429	20.92	20	5	
	sec-Butylbenzene	3.7951	4.0625	21.41	20	7	
#	1,3-Dichlorobenzene	1.6518	1.7183	20.80	20	4	#
	p-Isopropyltoluene	3.2904	3.5292	21.45	20	7	
#	1,4-Dichlorobenzene	1.6741	1.7776	21.24	20	6	#
	1,2,3-Trimethylbenzene	3.1031	3.2693	21.07	20	5	
	Benzyl Chloride	2.1515	2.0491	19.05	20	-5	
	1,3-Diethylbenzene	2.0054	2.0759	20.70	20	4	
	1,4-Diethylbenzene	2.1283	2.1509	20.21	20	1	
#	1,2-Dichlorobenzene	1.5617	1.6591	21.25	20	6	#
	n-Butylbenzene	1.6597	1.7472	21.05	20	5	
	1,2-Diethylbenzene	1.6672	1.7496	20.99	20	5	
#	1,2-Dibromo-3-chloropropane	0.2728	0.2869	21.03	20	5	#
	1,3,5-Trichlorobenzene	1.2553	1.2992	20.70	20	3	
#	1,2,4-Trichlorobenzene	1.1363	1.1826	20.81	20	4	#
	Hexachlorobutadiene	0.5363	0.5345	19.93	20	0	
	Naphthalene	3.8559	4.0301	20.90	20	5	
	1,2,3-Trichlorobenzene	1.0888	1.1250	20.67	20	3	
	2-Methylnaphthalene	2.2688	2.3251	20.50	20	2	
				Average %Drift		5	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

^

Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP09137.i/19feb19i.b/wf19i07.d
/chem2/HP09137.i/19feb19i.b/wf19i06.d
/chem2/HP09137.i/19feb19i.b/wf19i05.d
/chem2/HP09137.i/19feb19i.b/wf19i04.d
/chem2/HP09137.i/19feb19i.b/wf19i03.d
/chem2/HP09137.i/19feb19i.b/wf19i02.d
/chem2/HP09137.i/19feb19i.b/wf19i01.d

File /chem2/HP09137.i/19feb19i.b/wf19i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP09137.i/19may18a.b/wy18c01.d

RT Summary

Internal Standard Name	File ID: wy18c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	2.738	2.728	Yes
Fluorobenzene	5.032	5.029	Yes
Chlorobenzene-d5	8.161	8.161	Yes
1,4-Dichlorobenzene-d4	10.041	10.038	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: wy18c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	189811	221988	110994	443976	Yes
Fluorobenzene	1026490	858650	429325	1717300	Yes
Chlorobenzene-d5	778376	703812	351906	1407624	Yes
1,4-Dichlorobenzene-d4	444015	393177	196588	786354	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 05/18/2019 at 22:28

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/18/19 Time: 22:05

Lab File ID: wy18c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
# Dichlorodifluoromethane	0.3233	0.3794	58.68	50	17	#
# Chloromethane	0.4026	0.3395	42.16	50	-16	#
1,3-Butadiene	0.2453	0.1978	40.30	50	-19	
# Vinyl Chloride	0.3690	0.3286	44.52	50	-11	#
# Bromomethane	0.2911	0.2702	46.41	50	-7	#
# Chloroethane	0.2429	0.2027	41.73	50	-17	#
n-Pentane	0.3728	0.3018	40.48	50	-19	
# Trichlorofluoromethane	0.3920	0.4147	52.90	50	6	#
Ethanol	0.1140	0.0601	659.20	1250	-47	<-
Freon 123a	0.2929	0.2637	45.01	50	-10	
Acrolein	1.7998	2.2411	622.59	500	25	<-
# 1,1-Dichloroethene	0.2204	0.2283	51.78	50	4	#
# 1,1-Dichloroethene(2)	0.1112	0.0866	38.95	50	-22	#<-
# Acetone	0.8748	1.0760	123.00	100	23	#<-
# Freon 113	0.1936	0.1979	51.11	50	2	#
2-Propanol	0.6500	0.6260	240.80	250	-4	
Methyl Iodide	0.4225	0.4272	50.56	50	1	
# Carbon Disulfide	0.7767	0.6706	43.17	50	-14	#
Allyl Chloride	0.3841	0.3558	46.33	50	-7	
# Methyl Acetate	0.3324	0.2877	43.28	50	-13	#
# Methylene Chloride	0.2695	0.2493	46.25	50	-7	#
t-Butyl alcohol	1.1595	1.2247	264.07	250	6	
Acrylonitrile	0.1749	0.1626	46.48	50	-7	
# trans-1,2-Dichloroethene	0.2392	0.2366	49.47	50	-1	#
# Methyl Tertiary Butyl Ether	0.5824	0.6339	54.42	50	9	#
n-Hexane	0.3200	0.3091	48.29	50	-3	
# 1,1-Dichloroethane	0.4334	0.4045	46.67	50	-7	#
di-Isopropyl ether	0.8327	0.7418	44.54	50	-11	
2-Chloro-1,3-butadiene	0.3754	0.3717	49.51	50	-1	
Ethyl t-butyl ether	0.6069	0.6070	50.01	50	0	
# cis-1,2-Dichloroethene	0.2686	0.2575	47.94	50	-4	#
# 2-Butanone	0.2512	0.2200	87.58	100	-12	#
2,2-Dichloropropane	0.1946	0.1613	41.43	50	-17	
Propionitrile	1.4410	1.7102	296.70	250	19	
Methacrylonitrile	0.1880	0.1662	110.47	125	-12	
Bromochloromethane	0.1396	0.1454	52.07	50	4	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

page 1 of 4

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/18/19 Time: 22:05

Lab File ID: wy18c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
Tetrahydrofuran	1.3337	1.7007	127.51	100	28	<-
# Chloroform	0.4067	0.4047	49.76	50	0	#
# 1,1,1-Trichloroethane	0.3060	0.3026	49.45	50	-1	#
# Cyclohexane	0.4049	0.3793	46.84	50	-6	#
# Cyclohexane(2)	0.3352	0.3080	45.95	50	-8	#
# Cyclohexane(3)	0.1217	0.1158	47.58	50	-5	#
1,1-Dichloropropene	0.3260	0.3138	48.13	50	-4	
# Carbon Tetrachloride	0.2626	0.2577	49.07	50	-2	#
Isobutyl Alcohol	0.4227	0.4660	688.95	625	10	
# Benzene	1.0480	0.9891	47.19	50	-6	#
# 1,2-Dichloroethane	0.3237	0.3186	49.21	50	-2	#
# 1,2-Dichloroethane(2)	0.0308	0.0317	51.46	50	3	#<-
t-Amyl methyl ether	0.6218	0.6140	49.37	50	-1	
n-Heptane	0.3059	0.2836	46.37	50	-7	
n-Butanol	0.3753	0.3815	1270.61	1250	2	
# Trichloroethene	0.2538	0.2501	49.27	50	-1	#
# Methylcyclohexane	0.3684	0.3769	51.15	50	2	#
# Methylcyclohexane(2)	0.1713	0.1752	51.13	50	2	#
# 1,2-Dichloropropane	0.2691	0.2454	45.61	50	-9	#
Dibromomethane	0.1661	0.1662	50.05	50	0	
1,4-Dioxane	0.1122	0.1247	694.87	625	11	
Methyl Methacrylate	0.2957	0.2695	45.57	50	-9	
# Bromodichloromethane	0.3051	0.2973	48.73	50	-3	#
2-Nitropropane	0.1032	0.1059	102.60	100	3	
2-Chloroethyl Vinyl Ether	0.2051	0.1920	46.81	50	-6	
# cis-1,3-Dichloropropene	0.4195	0.3941	46.98	50	-6	#
# 4-Methyl-2-pentanone	0.4953	0.4705	95.00	100	-5	#
# Toluene	0.8071	0.8480	52.53	50	5	#
# trans-1,3-Dichloropropene	0.4805	0.4836	50.32	50	1	#
Ethyl Methacrylate	0.5904	0.6088	51.56	50	3	
# 1,1,2-Trichloroethane	0.3106	0.3331	53.62	50	7	#
# Tetrachloroethene	0.3275	0.3665	55.96	50	12	#
1,3-Dichloropropane	0.5396	0.5572	51.63	50	3	
# 2-Hexanone	0.4700	0.4953	105.37	100	5	#
# Dibromochloromethane	0.3034	0.3366	55.47	50	11	#
# 1,2-Dibromoethane	0.3413	0.3667	53.72	50	7	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/18/19 Time: 22:05

Lab File ID: wy18c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF50	CONC.	CONC.	DRIFT	
# Chlorobenzene	0.8953	0.9513	53.13	50	6	#
1,1,1,2-Tetrachloroethane	0.2877	0.3128	54.36	50	9	
# Ethylbenzene	1.5340	1.6077	52.40	50	5	#
# m+p-Xylene	0.6099	0.6537	107.18	100	7	#
# o-Xylene	0.6000	0.6309	52.57	50	5	#
# Styrene	1.0065	1.0897	54.13	50	8	#
# Bromoform	0.2361	0.2586	54.77	50	10	#
# Isopropylbenzene	1.4744	1.5602	52.91	50	6	#
Cyclohexanone	0.5061	0.4968	613.49	625	-2	
Bromobenzene	0.7202	0.7701	53.47	50	7	
# 1,1,2,2-Tetrachloroethane	0.9712	0.9943	51.19	50	2	#
1,2,3-Trichloropropane	0.2925	0.3123	53.38	50	7	
trans-1,4-Dichloro-2-butene	0.3114	0.2807	112.68	125	-10	
n-Propylbenzene	3.1748	3.1983	50.37	50	1	
2-Chlorotoluene	0.6548	0.6917	52.82	50	6	
4-Chlorotoluene	0.7010	0.7464	53.24	50	6	
1,3,5-Trimethylbenzene	2.2896	2.3484	51.28	50	3	
tert-Butylbenzene	0.5202	0.5327	51.20	50	2	
Pentachloroethane	0.4112	0.4592	55.83	50	12	
1,2,4-Trimethylbenzene	2.4127	2.4677	51.14	50	2	
sec-Butylbenzene	2.8105	2.8006	49.82	50	0	
# 1,3-Dichlorobenzene	1.3733	1.4454	52.62	50	5	#
p-Isopropyltoluene	2.4879	2.5375	51.00	50	2	
# 1,4-Dichlorobenzene	1.4237	1.4982	52.62	50	5	#
1,2,3-Trimethylbenzene	2.5960	2.7197	52.38	50	5	
Benzyl Chloride	1.9927	1.9922	49.99	50	0	
1,3-Diethylbenzene	1.5632	1.5957	51.04	50	2	
1,4-Diethylbenzene	1.6748	1.6814	50.20	50	0	
# 1,2-Dichlorobenzene	1.3625	1.4448	53.02	50	6	#
n-Butylbenzene	1.2557	1.2037	47.93	50	-4	
1,2-Diethylbenzene	1.3198	1.3620	51.60	50	3	
# 1,2-Dibromo-3-chloropropane	0.2207	0.2180	49.39	50	-1	#
1,3,5-Trichlorobenzene	1.0448	1.0111	48.39	50	-3	
# 1,2,4-Trichlorobenzene	1.0030	0.9514	47.43	50	-5	#
Hexachlorobutadiene	0.3573	0.3469	48.55	50	-3	
Naphthalene	3.3939	3.3341	49.12	50	-2	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/18/19 Time: 22:05

Lab File ID: wy18c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

COMPOUND	$\overline{RRF}$	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
1,2,3-Trichlorobenzene	0.9790	0.9324	47.62	50	-5	
2-Methylnaphthalene	1.9363	1.5318	39.55	50	-21	<-
Dibromofluoromethane	0.2316	0.2234	48.22	50	-4	
Dibromofluoromethane(2)	0.2378	0.2276	47.87	50	-4	
1,2-Dichloroethane-d4	0.0616	0.0601	48.77	50	-2	
1,2-Dichloroethane-d4(2)	0.2682	0.2683	50.01	50	0	
1,2-Dichloroethane-d4(3)	0.0392	0.0393	50.03	50	0	
Toluene-d8	1.2529	1.2877	51.39	50	3	
Toluene-d8(2)	0.8309	0.8503	51.17	50	2	
4-Bromofluorobenzene	0.5012	0.4733	47.22	50	-6	
4-Bromofluorobenzene(2)	0.4229	0.4293	50.75	50	1	

Average %Drift 7

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

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Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP26285.i/19mar25i.b/5m25i07.d
/chem2/HP26285.i/19mar25i.b/5m25i06.d
/chem2/HP26285.i/19mar25i.b/5m25i05.d
/chem2/HP26285.i/19mar25i.b/5m25i04.d
/chem2/HP26285.i/19mar25i.b/5m25i03.d
/chem2/HP26285.i/19mar25i.b/5m25i02.d
/chem2/HP26285.i/19mar25i.b/5m25i01.d

File /chem2/HP26285.i/19mar25i.b/5m25i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP26285.i/19may19a.b/5y19c01.d

RT Summary

Internal Standard Name	File ID: 5y19c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	3.551	3.533	Yes
Fluorobenzene	7.002	7.002	Yes
Chlorobenzene-d5	10.720	10.745	Yes
1,4-Dichlorobenzene-d4	12.702	12.738	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: 5y19c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	332790	324947	162474	649894	Yes
Fluorobenzene	1104862	1083032	541516	2166064	Yes
Chlorobenzene-d5	905502	831607	415804	1663214	Yes
1,4-Dichlorobenzene-d4	534596	445741	222870	891482	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 05/19/2019 at 13:59

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 Calibration Date: 05/19/19 Time: 13:16

Lab File ID: 5y19c01.d Init. Calib. Date(s): 03/25/19 03/25/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
# Dichlorodifluoromethane	0.4021	0.5114	63.59	50	27	#<-
# Chloromethane	0.2922	0.3043	52.07	50	4	#
| 1,3-Butadiene	0.2030	0.2282	56.21	50	12	|
# Vinyl Chloride	0.2859	0.3078	53.83	50	8	#
# Bromomethane	0.2304	0.2611	56.66	50	13	#
# Chloroethane	0.1370	0.1536	56.03	50	12	#
| n-Pentane	0.2506	0.2926	58.36	50	17	|
# Trichlorofluoromethane	0.3974	0.5423	68.23	50	36	#<-
| Ethyl ether	0.2058	0.1729	42.00	50	-16	|
| Freon 123a	0.3089	0.3194	51.70	50	3	|
| Acrolein	1.7648	1.5082	427.28	500	-15	|
# 1,1-Dichloroethene	0.2308	0.2350	50.90	50	2	#
# 1,1-Dichloroethene(2)	0.1136	0.1227	54.03	50	8	#
# Acetone	0.8069	0.7838	97.13	100	-3	#
# Freon 113	0.2348	0.2791	59.42	50	19	#
| 2-Propanol	0.5864	0.6530	278.38	250	11	|
| Methyl Iodide	0.4821	0.5050	52.38	50	5	|
# Carbon Disulfide	0.7664	0.8035	52.42	50	5	#
| Allyl Chloride	0.4147	0.3751	45.22	50	-10	|
# Methyl Acetate	0.3575	0.3167	44.29	50	-11	#
# Methylene Chloride	0.2622	0.2592	49.43	50	-1	#
| t-Butyl alcohol	1.1566	1.1354	245.44	250	-2	|
| Acrylonitrile	0.1890	0.1687	44.63	50	-11	|
# trans-1,2-Dichloroethene	0.2584	0.2657	51.43	50	3	#
# Methyl Tertiary Butyl Ether	0.7373	0.6794	46.07	50	-8	#
| n-Hexane	0.3574	0.3649	51.05	50	2	|
# 1,1-Dichloroethane	0.4555	0.4697	51.55	50	3	#
| di-Isopropyl ether	0.8303	0.7475	45.01	50	-10	|
| 2-Chloro-1,3-butadiene	0.4031	0.4192	51.99	50	4	|
| Ethyl t-butyl ether	0.7687	0.6693	43.53	50	-13	|
# cis-1,2-Dichloroethene	0.2923	0.2970	50.79	50	2	#
# 2-Butanone	0.2854	0.2424	84.93	100	-15	#
| 2,2-Dichloropropane	0.3643	0.4082	56.03	50	12	|
| Propionitrile	1.2579	1.2451	247.44	250	-1	|
| Methacrylonitrile	0.1859	0.1744	117.24	125	-6	|
| Bromochloromethane	0.1463	0.1600	54.69	50	9	|

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 Calibration Date: 05/19/19 Time: 13:16

Lab File ID: 5y19c01.d Init. Calib. Date(s): 03/25/19 03/25/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
Tetrahydrofuran	1.2779	1.1674	91.35	100	-9	
# Chloroform	0.4517	0.4927	54.55	50	9	#
# 1,1,1-Trichloroethane	0.3975	0.4536	57.06	50	14	#
# Cyclohexane	0.4596	0.4619	50.25	50	0	#
# Cyclohexane(2)	0.3916	0.4196	53.57	50	7	#
# Cyclohexane(3)	0.1424	0.1480	51.95	50	4	#
1,1-Dichloropropene	0.3654	0.3953	54.09	50	8	
# Carbon Tetrachloride	0.3440	0.4159	60.44	50	21	#<-
Isobutyl Alcohol	0.3788	0.4039	666.49	625	7	
# Benzene	1.1100	1.1260	50.72	50	1	#
# 1,2-Dichloroethane	0.3280	0.3743	57.05	50	14	#
# 1,2-Dichloroethane(2)	0.0287	0.0304	52.98	50	6	#<-
t-Amyl methyl ether	0.7747	0.6997	45.16	50	-10	
n-Heptane	0.4030	0.3788	47.00	50	-6	
n-Butanol	0.3158	0.3397	1344.48	1250	8	
# Trichloroethene	0.2879	0.3058	53.12	50	6	#
# Methylcyclohexane	0.4766	0.5175	54.28	50	9	#
# Methylcyclohexane(2)	0.2050	0.2270	55.35	50	11	#
# 1,2-Dichloropropane	0.2751	0.2761	50.18	50	0	#
Dibromomethane	0.1740	0.1875	53.87	50	8	
1,4-Dioxane	0.0733	0.1037	884.54	625	42	<-
Methyl Methacrylate	0.2872	0.2756	47.97	50	-4	
# Bromodichloromethane	0.3234	0.3639	56.25	50	13	#
2-Nitropropane	0.1328	0.1320	99.47	100	-1	
2-Chloroethyl Vinyl Ether	0.2296	0.2269	49.41	50	-1	
# cis-1,3-Dichloropropene	0.4255	0.4546	53.41	50	7	#
# 4-Methyl-2-pentanone	0.5845	0.4897	83.79	100	-16	#
# Toluene	0.9394	0.9098	48.43	50	-3	#
# trans-1,3-Dichloropropene	0.5076	0.5182	51.04	50	2	#
Ethyl Methacrylate	0.6086	0.5721	47.00	50	-6	
# 1,1,2-Trichloroethane	0.3361	0.3392	50.46	50	1	#
# Tetrachloroethene	0.4272	0.4401	51.51	50	3	#
1,3-Dichloropropane	0.5505	0.5515	50.09	50	0	
# 2-Hexanone	0.6644	0.4965	74.73	100	-25	#<-
# Dibromochloromethane	0.3441	0.3815	55.44	50	11	#
# 1,2-Dibromoethane	0.3753	0.3832	51.05	50	2	#

Compounds with required minimum RRF.

All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 Calibration Date: 05/19/19 Time: 13:16

Lab File ID: 5y19c01.d Init. Calib. Date(s): 03/25/19 03/25/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
1-Chlorohexane	0.5473	0.5322	48.62	50	-3	
# Chlorobenzene	1.0511	1.0970	52.18	50	4	#
1,1,1,2-Tetrachloroethane	0.3548	0.3887	54.78	50	10	
# Ethylbenzene	1.8349	1.9229	52.40	50	5	#
# m+p-Xylene	0.7237	0.7508	103.75	100	4	#
# o-Xylene	0.7071	0.7216	51.03	50	2	#
# Styrene	1.1676	1.1926	51.07	50	2	#
# Bromoform	0.2716	0.3021	55.61	50	11	#
# Isopropylbenzene	1.8363	1.9425	52.89	50	6	#
Cyclohexanone	0.3065	0.4205	857.49	625	37	<-
Bromobenzene	0.8625	0.8256	47.86	50	-4	
# 1,1,2,2-Tetrachloroethane	1.0921	1.0537	48.24	50	-4	#
1,2,3-Trichloropropane	0.3290	0.3234	49.14	50	-2	
trans-1,4-Dichloro-2-butene	0.3439	0.3345	121.56	125	-3	
n-Propylbenzene	4.0592	3.9621	48.80	50	-2	
2-Chlorotoluene	0.8368	0.7943	47.46	50	-5	
4-Chlorotoluene	0.8591	0.8154	47.46	50	-5	
1,3,5-Trimethylbenzene	2.9293	2.8318	48.33	50	-3	
tert-Butylbenzene	0.6190	0.5721	46.21	50	-8	
Pentachloroethane	0.5055	0.5451	53.92	50	8	
1,2,4-Trimethylbenzene	3.0040	2.9051	48.35	50	-3	
sec-Butylbenzene	3.7951	3.5643	46.96	50	-6	
# 1,3-Dichlorobenzene	1.6518	1.5877	48.06	50	-4	#
p-Isopropyltoluene	3.2904	3.1162	47.35	50	-5	
# 1,4-Dichlorobenzene	1.6741	1.6109	48.11	50	-4	#
1,2,3-Trimethylbenzene	3.1031	3.1020	49.98	50	0	
Benzyl Chloride	2.1515	2.2871	53.15	50	6	
1,3-Diethylbenzene	2.0054	1.8770	46.80	50	-6	
1,4-Diethylbenzene	2.1283	1.9914	46.78	50	-6	
# 1,2-Dichlorobenzene	1.5617	1.4993	48.00	50	-4	#
n-Butylbenzene	1.6597	1.5259	45.97	50	-8	
1,2-Diethylbenzene	1.6672	1.5555	46.65	50	-7	
# 1,2-Dibromo-3-chloropropane	0.2728	0.2866	52.51	50	5	#
1,3,5-Trichlorobenzene	1.2553	1.0950	43.61	50	-13	
# 1,2,4-Trichlorobenzene	1.1363	1.0013	44.06	50	-12	#
Hexachlorobutadiene	0.5363	0.4696	43.78	50	-12	

Compounds with required minimum RRF.

All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 Calibration Date: 05/19/19 Time: 13:16

Lab File ID: 5y19c01.d Init. Calib. Date(s): 03/25/19 03/25/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Naphthalene	3.8559	3.8881	50.42	50	1
1,2,3-Trichlorobenzene	1.0888	1.0071	46.25	50	-8
2-Methylnaphthalene	2.2688	2.1944	48.36	50	-3
Dibromofluoromethane	0.2393	0.2598	54.29	50	9
Dibromofluoromethane(2)	0.2456	0.2650	53.95	50	8
1,2-Dichloroethane-d4	0.0560	0.0576	51.46	50	3
1,2-Dichloroethane-d4(2)	0.2592	0.3060	59.03	50	18
1,2-Dichloroethane-d4(3)	0.0357	0.0362	50.70	50	1
Toluene-d8	1.2621	1.2308	48.76	50	-2
Toluene-d8(2)	0.8295	0.7929	47.80	50	-4
4-Bromofluorobenzene	0.4911	0.5121	52.14	50	4
4-Bromofluorobenzene(2)	0.4278	0.4568	53.39	50	7

Average %Drift 8

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): wy18c01.d Date Analyzed: 05/18/19

Instrument ID: HP09137 Time Analyzed: 22:05

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	189811	2.738	1026490	5.032	778376	8.161	444015	10.041
UPPER LIMIT	379622	3.238	2052980	5.532	1556752	8.661	888030	10.541
LOWER LIMIT	94906	2.238	513245	4.532	389188	7.661	222008	9.541
LAB SAMPLE ID								
01 LCSW23	185223	2.732	1049302	5.032	796496	8.161	447919	10.042
02 VBLKW23	177555	2.744	947707	5.032	739589	8.161	377751	10.045
03 1053375	164279	2.744	947536	5.032	733814	8.161	371974	10.041
04 1053376	162632	2.741	947368	5.032	724356	8.161	373316	10.041
05 1053379	159659	2.744	911949	5.029	705020	8.161	363154	10.042
06 1053382	129701	2.738	887744	5.032	694656	8.161	348961	10.041
07 1053383	152533	2.741	879049	5.032	672115	8.161	348025	10.042
08 1053360MS	182190	2.738	951889	5.032	736014	8.161	416077	10.041
09 1053361MSD	186782	2.738	972725	5.032	734147	8.161	421474	10.041
10 1053352	178385	2.741	928725	5.032	717617	8.161	371056	10.041
11 1053353	157253	2.741	917983	5.032	710608	8.161	363159	10.041
12 1053354	147925	2.744	925895	5.032	721769	8.161	368493	10.042
13 1053355	166431	2.744	910763	5.032	705796	8.161	359701	10.041
14 1053356	169028	2.744	883199	5.032	686111	8.161	345609	10.041
15 1053357	162426	2.741	874167	5.032	681629	8.161	347282	10.042
16 1053358	138607	2.738	877279	5.032	676081	8.161	353388	10.041
17 1053362	151916	2.744	856060	5.032	666355	8.164	337861	10.041
18 1053363	127654	2.744	871075	5.032	670686	8.161	342923	10.041

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

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8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): 5y19c01.d Date Analyzed: 05/19/19

Instrument ID: HP26285 Time Analyzed: 13:16

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	332790	3.551	1104862	7.002	905502	10.720	534596	12.702
UPPER LIMIT	665580	4.051	2209724	7.502	1811004	11.220	1069192	13.202
LOWER LIMIT	166395	3.051	552431	6.502	452751	10.220	267298	12.202
LAB SAMPLE ID								
01 LCS588	324398	3.551	1125362	7.008	917486	10.726	535409	12.708
02 LCS590	324398	3.551	1125362	7.008	917486	10.726	535409	12.708
03 LCD588	337461	3.563	1180068	7.008	959601	10.726	560214	12.702
04 LCD590	337461	3.563	1180068	7.008	959601	10.726	560214	12.702
05 MDL588 - MD	329655	3.539	1169729	7.002	938590	10.726	529192	12.708
06 MDL590 - MD	329655	3.539	1169729	7.002	938590	10.726	529192	12.708
07 LCS589	319693	3.551	1126930	7.002	909485	10.726	490975	12.708
08 LCD589	304278	3.551	1053135	7.008	836836	10.726	450184	12.708
09 VBLK588	277103	3.557	944104	7.008	753835	10.726	417366	12.708
10 VBLK590	277103	3.557	944104	7.008	753835	10.726	417366	12.708
11 1051860	246737	3.569	803211	7.014	644646	10.726	347981	12.708
12 1051861	236961	3.551	779720	7.008	613158	10.726	338204	12.708
13 1051862	234670	3.551	761768	7.008	604365	10.726	335460	12.708
14 1051863	228360	3.557	767432	7.008	642337	10.726	350312	12.708
15 1051864	241494	3.557	828148	7.014	699329	10.726	404667	12.708
16 1051864DL	308987	3.551	1022585	7.008	811729	10.726	460571	12.708
17 1057202	297393	3.557	1008445	7.014	791208	10.726	437373	12.708
18 1057203	294354	3.557	957566	7.014	755232	10.726	415218	12.708
19 1057204	256742	3.563	891854	7.014	702136	10.726	383532	12.708
20 1057205	268324	3.545	841756	7.008	667006	10.726	365376	12.708
21 1057206	242697	3.557	809130	7.008	643234	10.726	351138	12.708
22 1057207	252345	3.551	805789	7.008	630066	10.726	379144	12.708

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): 5y19c01.d Date Analyzed: 05/19/19

Instrument ID: HP26285 Time Analyzed: 13:16

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	332790	3.551	1104862	7.002	905502	10.720	534596	12.702
UPPER LIMIT	665580	4.051	2209724	7.502	1811004	11.220	1069192	13.202
LOWER LIMIT	166395	3.051	552431	6.502	452751	10.220	267298	12.202
LAB SAMPLE ID								
23 1057207DL	238163	3.557	801025	7.008	630478	10.726	368284	12.708
24 1053348	238034	3.545	778505	7.008	617457	10.726	341176	12.708
25 1053349	230902	3.551	755569	7.008	606373	10.726	331268	12.708
26 1053350	226441	3.563	732436	7.008	581081	10.726	318823	12.708
27 1053351	227879	3.551	719223	7.008	572273	10.726	314654	12.708
28 1055980	215120	3.551	755662	7.008	616014	10.726	351682	12.708
29 1051574	260064	3.551	819912	7.008	648450	10.726	351831	12.714

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

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Sample Data

Volatiles by GC/MS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VHBTB

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053348

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP26285.i/19may19a.b/5y19s40.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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VHBTB

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1053348

Data file: /chem2/HP26285.i/19may19a.b/5y19s40.d
Data file Sample Info. Line: VHBTB;1053348;1;0;;JCV87;;;5y19b31;
Date, time and analyst ID of latest file update: 25-May-2019 11:19 clm27445

Injection date and time: **19-MAY-2019 21:54**
Instrument ID: **HP26285.i** Batch: **5191392AA**

Blank Data file reference: **/chem2/HP26285.i/19may19a.b/5y19b31.d**

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 19-MAY-2019 16:11
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may19a.b/5y19c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.545	(0.006)	354	65	238034	(-28)	250.00	
66) Fluorobenzene	7.008	(-0.006)	922	96	778505	(-30)	50.00	
101) Chlorobenzene-d5	10.726	(-0.006)	1532	117	617457	(-32)	50.00	
132) 1,4-Dichlorobenzene-d4	12.708	(-0.006)	1857	152	341176	(-36)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.093	(0.000)	113	216477	58.109	116%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.563	(0.000)	102	46650	53.518	107%		80 - 120
84) Toluene-d8	(3)	9.135	(0.000)	98	762176	48.903	98%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.793	(0.000)	95	295442	48.718	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Corie L. Mellinger on 05/25/2019 at 11:21. Target 3.5 esignature user ID: clm27445

VHBTB

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1053348

Data file: /chem2/HP26285.i/19may19a.b/5y19s40.d Injection date and time: **19-MAY-2019 21:54**
Data file Sample Info. Line: VHBTB;1053348;1;0;;JCV87;;;5y19b31; Instrument ID: **HP26285.i** Batch: **5191392AA**
Date, time and analyst ID of latest file update: 25-May-2019 11:19 clm27445

Blank Data file reference: **/chem2/HP26285.i/19may19a.b/5y19b31.d**

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 19-MAY-2019 16:11
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may19a.b/5y19c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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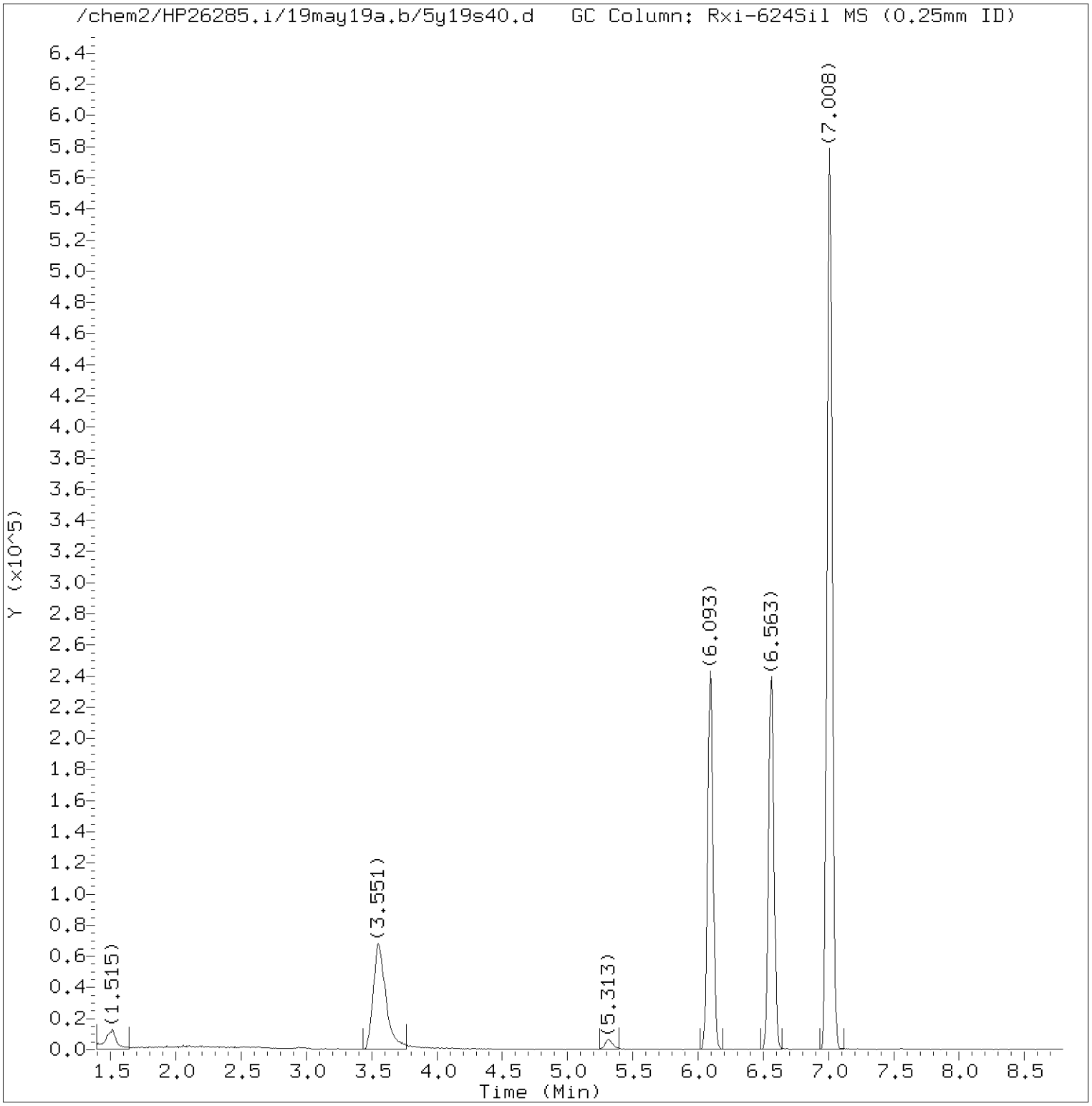
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Corie L. Mellinger on 05/25/2019 at 11:21. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 14:10. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

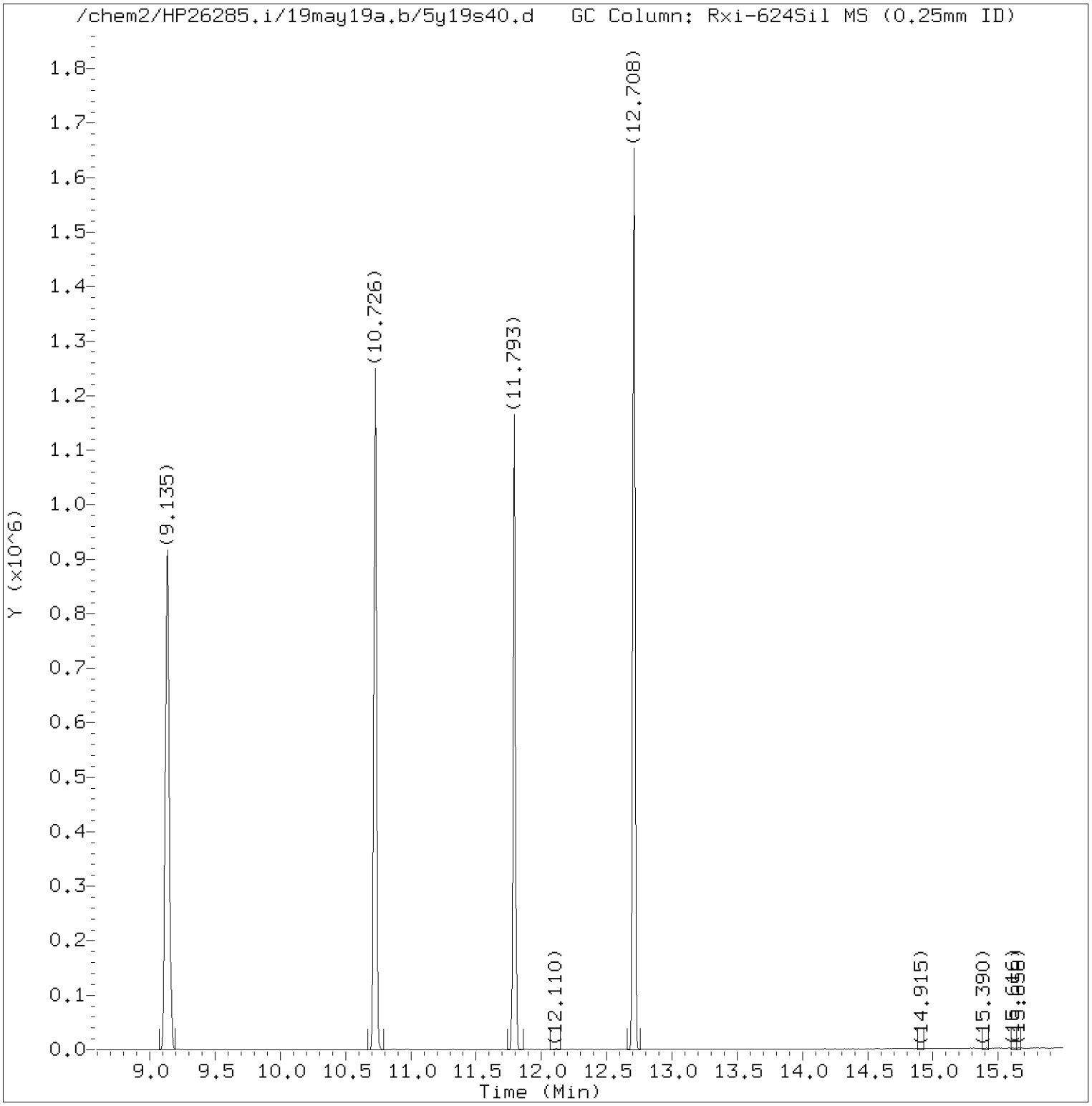
Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19s40.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 21:54 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 25-May-2019 11:19 clm27445

Sample Name: VHBTB Lab Sample ID: 1053348

Digitally signed by Corie L. Mellinger
on 05/25/2019 at 11:21.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19s40.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 21:54 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 25-May-2019 11:19 clm27445

Sample Name: VHBTB Lab Sample ID: 1053348

Digitally signed by Corie L. Mellinger
on 05/25/2019 at 11:21.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19s40.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 21:54 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 25-May-2019 11:19 clm27445

Sample Name: VHBTB Lab Sample ID: 1053348

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.545	65	238034	250.000
52)$Dibromofluoromethane	(2)	6.093	113	216477	58.109
57)$1,2-Dichloroethane-d4	(2)	6.563	102	46650	53.518
66)*Fluorobenzene	(2)	7.008	96	778505	50.000
84)$Toluene-d8	(3)	9.135	98	762176	48.903
101)*Chlorobenzene-d5	(3)	10.726	117	617457	50.000
115)$4-Bromofluorobenzene	(3)	11.793	95	295442	48.718
132)*1,4-Dichlorobenzene-d4	(4)	12.708	152	341176	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 05/25/2019 at 11:21.
Target 3.5 esignature user ID: clm27445

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VHB01

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053349

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP26285.i/19may19a.b/5y19s41.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	0.9	J
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.6	J
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	14	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	45	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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VHB01 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1053349

Data file: /chem2/HP26285.i/19may19a.b/5y19s41.d Injection date and time: **19-MAY-2019 22:15**
Data file Sample Info. Line: VHB01;1053349;1;0;;JCV87;;;5y19b31; Instrument ID: **HP26285.i** Batch: **5191392AA**
Date, time and analyst ID of latest file update: 04-Jun-2019 14:11 rrm00219

Blank Data file reference: **/chem2/HP26285.i/19may19a.b/5y19b31.d**

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 19-MAY-2019 16:11
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may19a.b/5y19c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.551	(0.000)	355	65	230902	(-31)	250.00	
66) Fluorobenzene	7.008	(-0.006)	922	96	755569	(-32)	50.00	
101) Chlorobenzene-d5	10.726	(-0.006)	1532	117	606373	(-33)	50.00	
132) 1,4-Dichlorobenzene-d4	12.708	(-0.006)	1857	152	331268	(-38)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.093	(0.000)	113	212595	58.799	118%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.563	(0.000)	102	45347	53.602	107%		80 - 120
84) Toluene-d8	(3)	9.135	(0.000)	98	744000	48.609	97%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.793	(0.000)	95	288128	48.380	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	2.954	(0.001)	96	3133	0.898	0.90		J	0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	4.490	(0.000)	63	3950	0.574	0.57		J	0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	6.087	(-0.000)	97	83948A	13.975	13.97			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	7.501	(0.000)	95	194336	44.675	44.67			0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

A = User selected an alternate peak.

Digitally signed by Kevin A. Sposito on 06/04/2019 at 14:12. Target 3.5 esignature user ID: kas02648

VHB01 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1053349

Data file: /chem2/HP26285.i/19may19a.b/5y19s41.d Injection date and time: **19-MAY-2019 22:15**
Data file Sample Info. Line: VHB01;1053349;1;0;;JCV87;;;5y19b31; Instrument ID: **HP26285.i** Batch: **5191392AA**
Date, time and analyst ID of latest file update: 04-Jun-2019 14:11 rrm00219

Blank Data file reference: **/chem2/HP26285.i/19may19a.b/5y19b31.d**

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 19-MAY-2019 16:11
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may19a.b/5y19c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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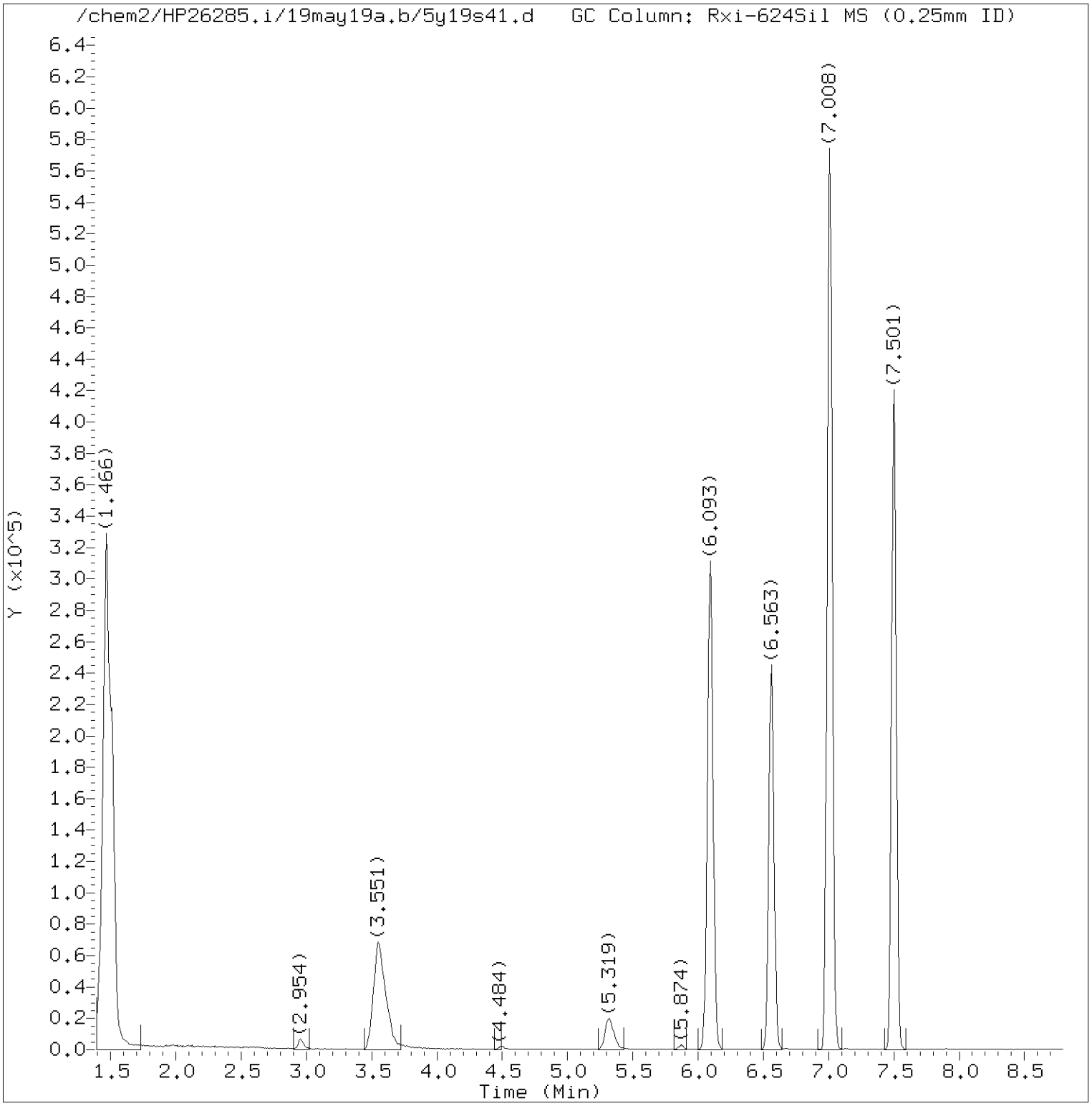
Total number of targets = 24

Digitally signed by Kevin A. Sposito on 06/04/2019 at 14:12. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 14:19. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

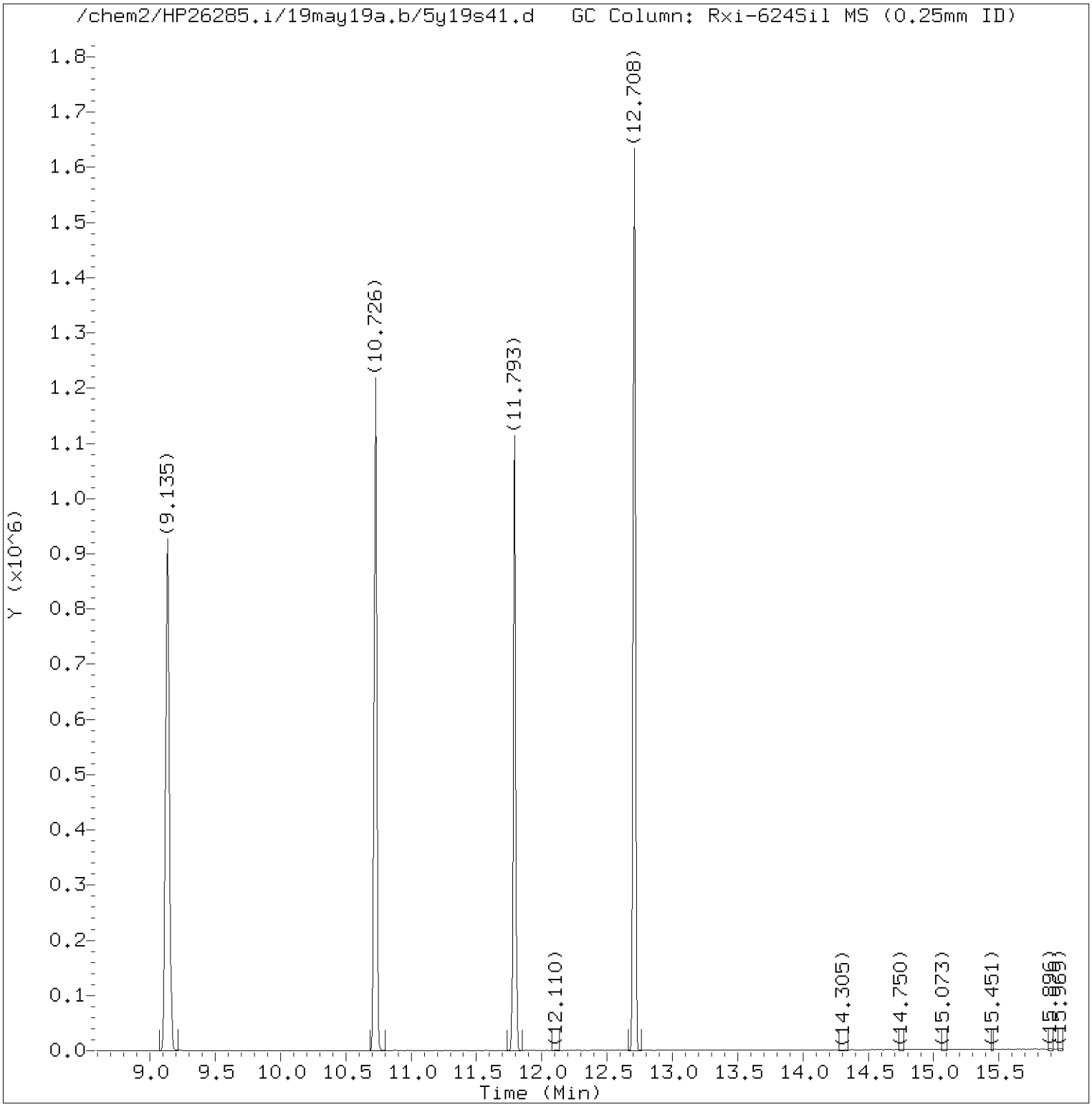
Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19s41.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 22:15 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 04-Jun-2019 14:11 rrm00219

Sample Name: VHB01 Lab Sample ID: 1053349

Digitally signed by Kevin A. Sposito
on 06/04/2019 at 14:12.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19s41.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 22:15 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 04-Jun-2019 14:11 rrm00219

Sample Name: VHB01 Lab Sample ID: 1053349

Digitally signed by Kevin A. Sposito
on 06/04/2019 at 14:12.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19s41.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 22:15 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 04-Jun-2019 14:11 rrm00219

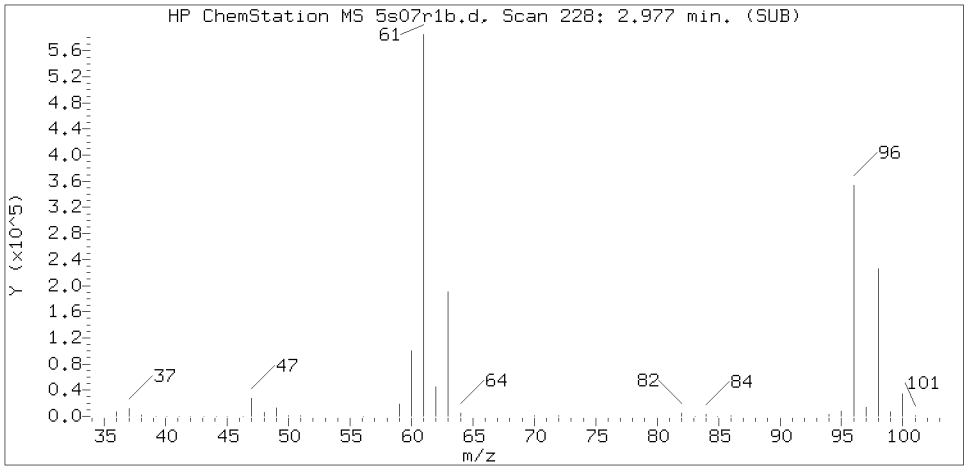
Sample Name: VHB01 Lab Sample ID: 1053349

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	2.954	96	3133	0.898
29)*t-Butyl alcohol-d10	(1)	3.551	65	230902	250.000
36) 1,1-Dichloroethane	(2)	4.490	63	3950	0.574
53) 1,1,1-Trichloroethane	(2)	6.087	97	83948A	13.975
52)$Dibromofluoromethane	(2)	6.093	113	212595	58.799
57)$1,2-Dichloroethane-d4	(2)	6.563	102	45347	53.602
66)*Fluorobenzene	(2)	7.008	96	755569	50.000
71) Trichloroethene	(2)	7.501	95	194336	44.675
84)$Toluene-d8	(3)	9.135	98	744000	48.609
101)*Chlorobenzene-d5	(3)	10.726	117	606373	50.000
115)$4-Bromofluorobenzene	(3)	11.793	95	288128	48.380
132)*1,4-Dichlorobenzene-d4	(4)	12.708	152	331268	50.000

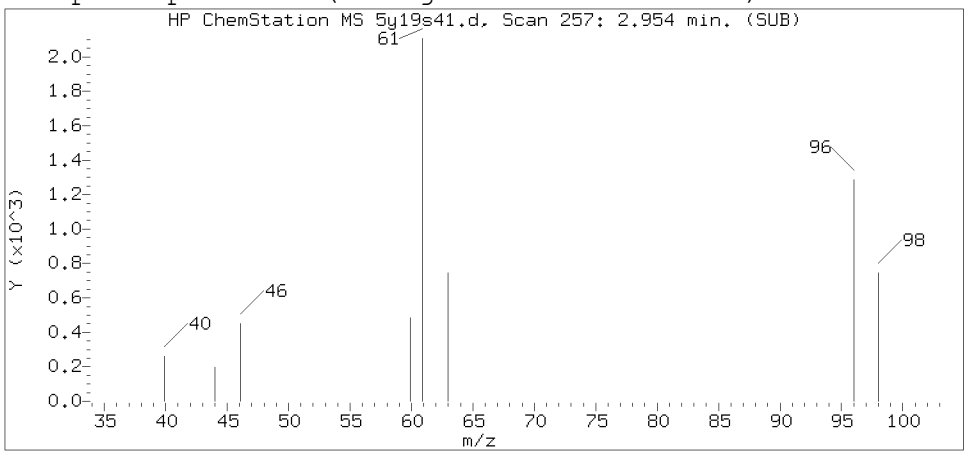
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 06/04/2019 at 14:12.
Target 3.5 esignature user ID: kas02648

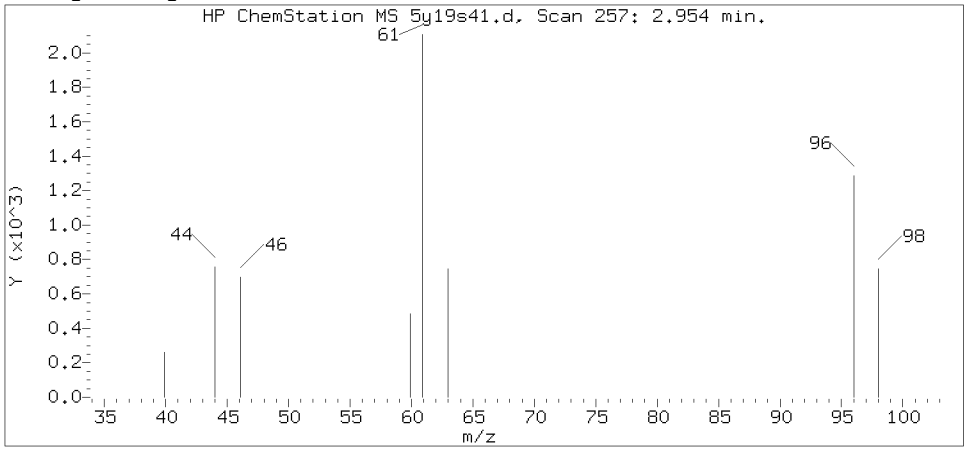
Reference Standard Spectrum for 1,1-Dichloroethene

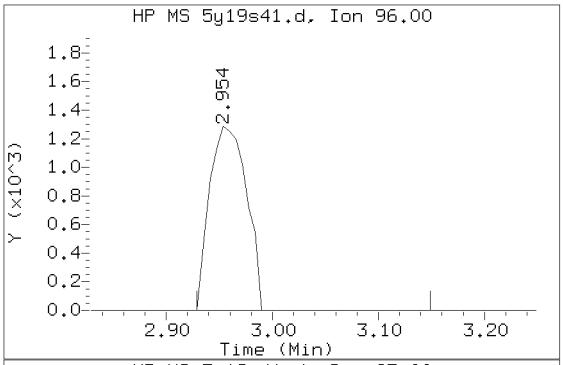


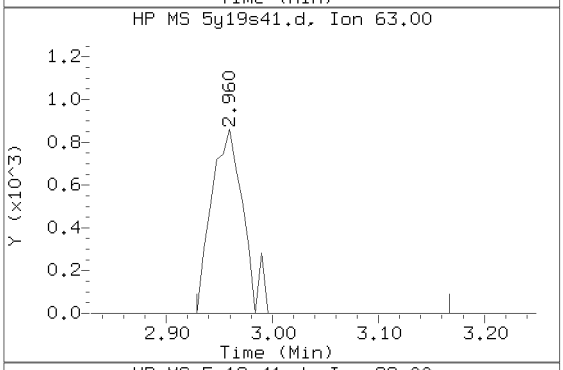
Sample Spectrum (Background Subtracted)

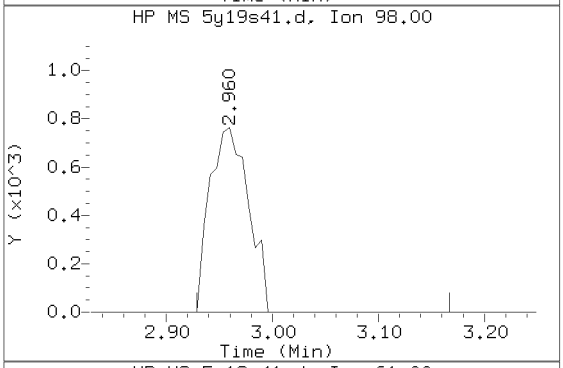


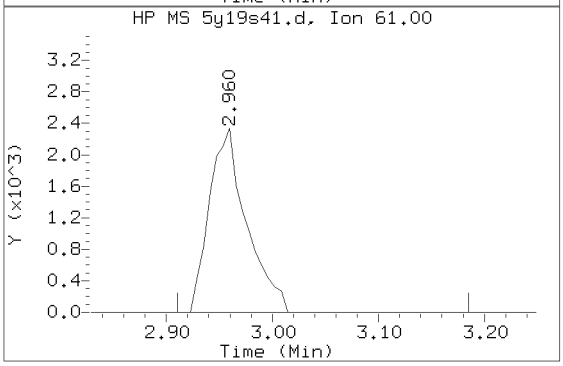
Sample Spectrum (Unaltered)











Data File: /chem2/HP26285.i/19may19a.b/5y19s41.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 22:15 Analyst ID: DVV10203

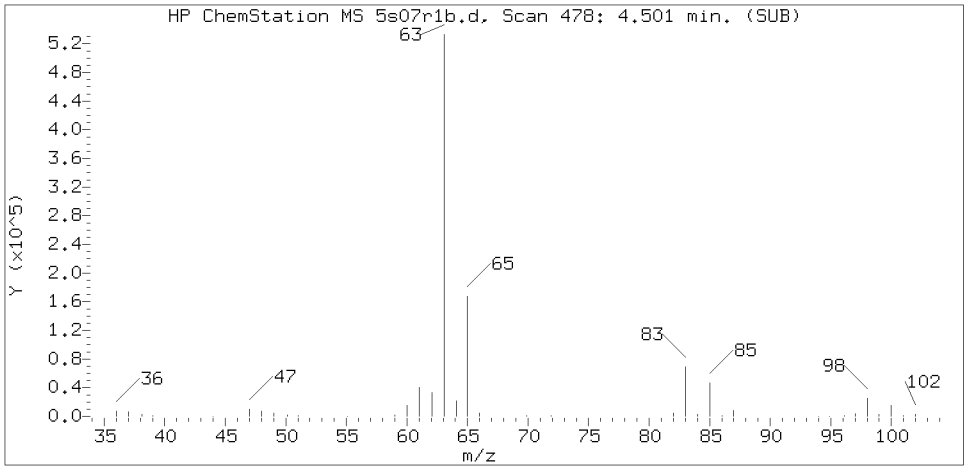
Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 04-Jun-2019 14:11 rrm00219

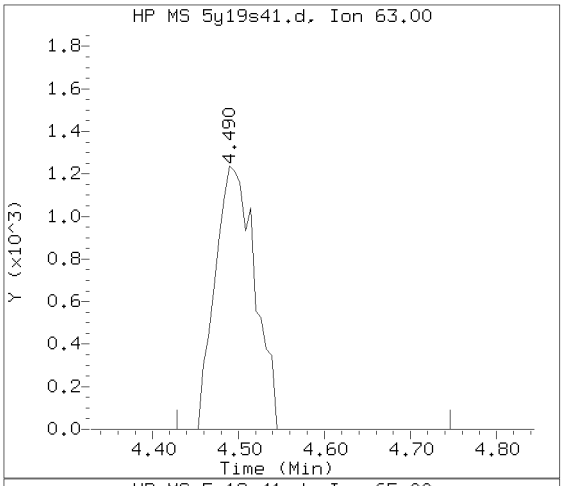
Sample Name: VHB01 Lab Sample ID: 1053349

Compound Number	: 17
Compound Name	: 1,1-Dichloroethene
Scan Number	: 257
Retention Time (minutes)	: 2.954
Relative Retention Time	: 0.00124
Quant Ion	: 96.00
Area (flag)	: 3133
On-Column Amount (ng)	: 0.8982

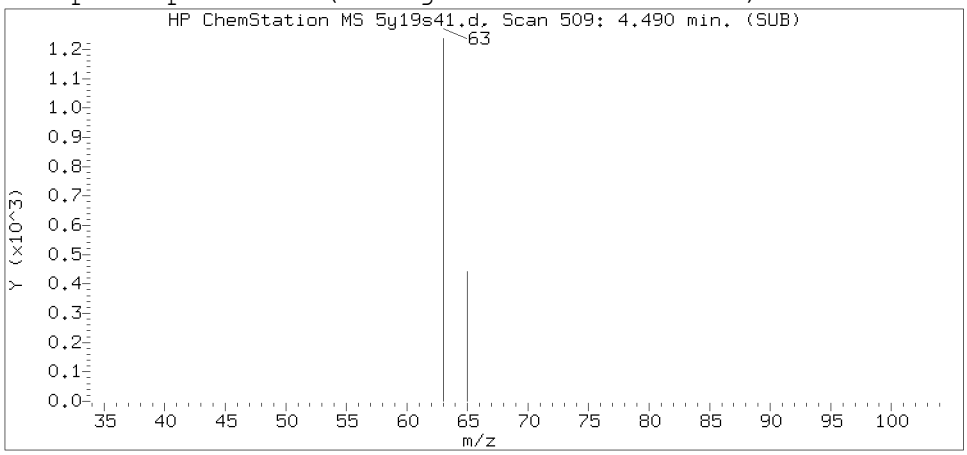
Digitally signed by Kevin A. Sposito on 06/04/2019 at 14:12.
Target 3.5 esignature user ID: kas02648

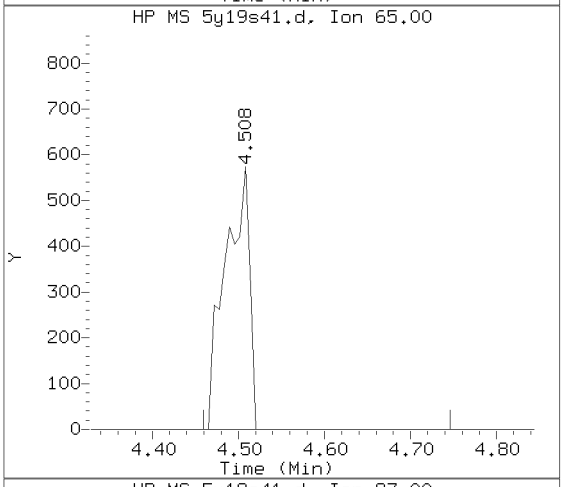
Reference Standard Spectrum for 1,1-Dichloroethane



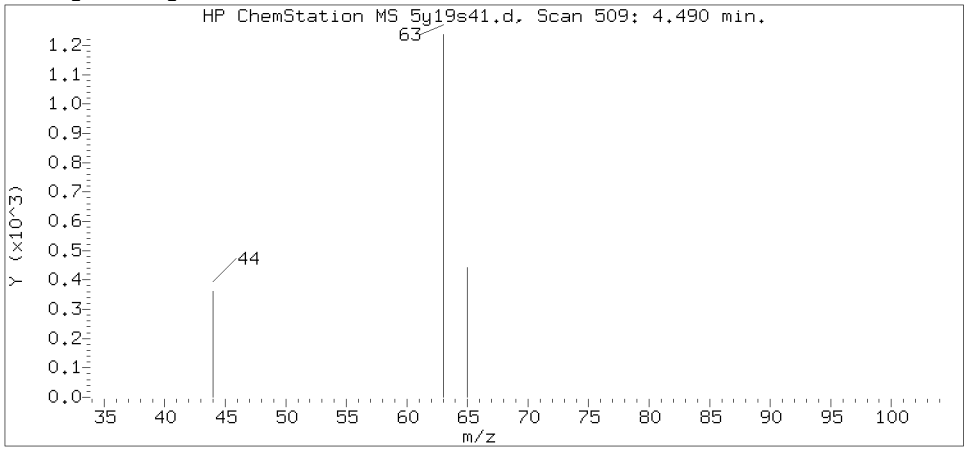


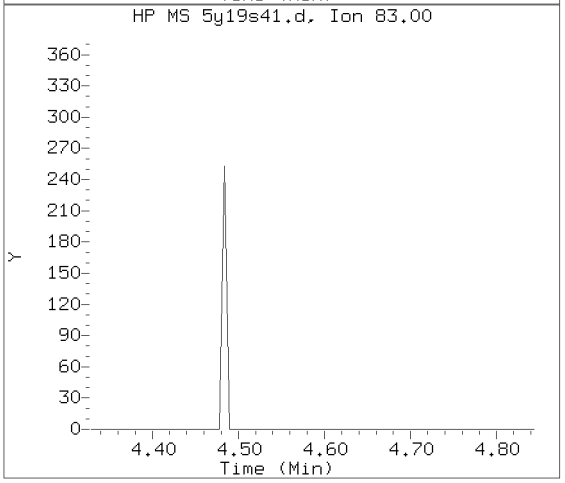
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP26285.i/19may19a.b/5y19s41.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 22:15 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 04-Jun-2019 14:11 rrm00219

Sample Name: VHB01 Lab Sample ID: 1053349

Compound Number	: 36
Compound Name	: 1,1-Dichloroethane
Scan Number	: 509
Retention Time (minutes)	: 4.490
Relative Retention Time	: 0.00056
Quant Ion	: 63.00
Area (flag)	: 3950
On-Column Amount (ng)	: 0.5738

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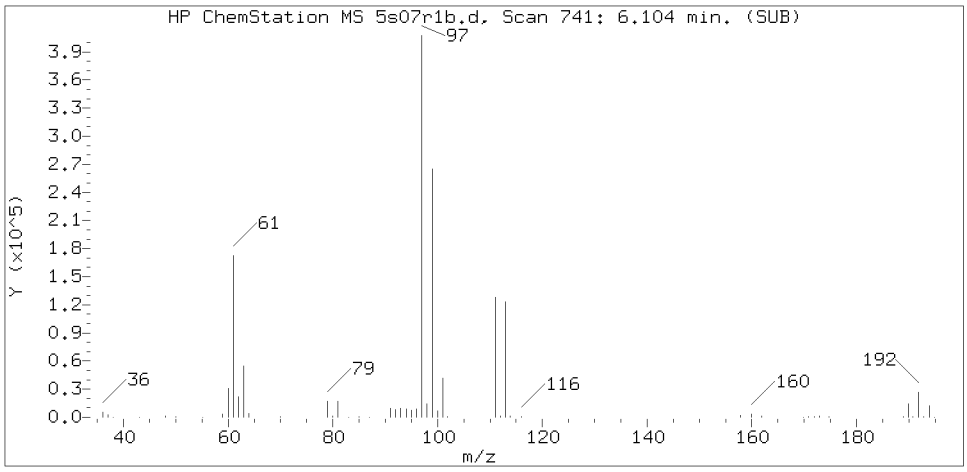
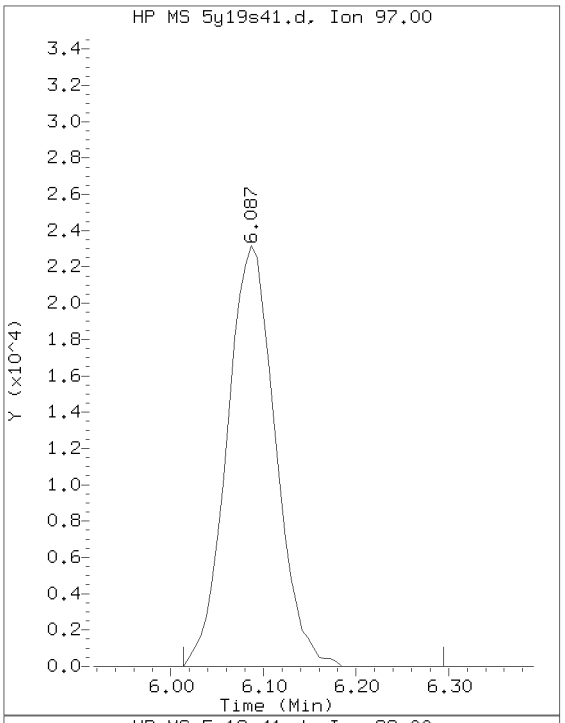
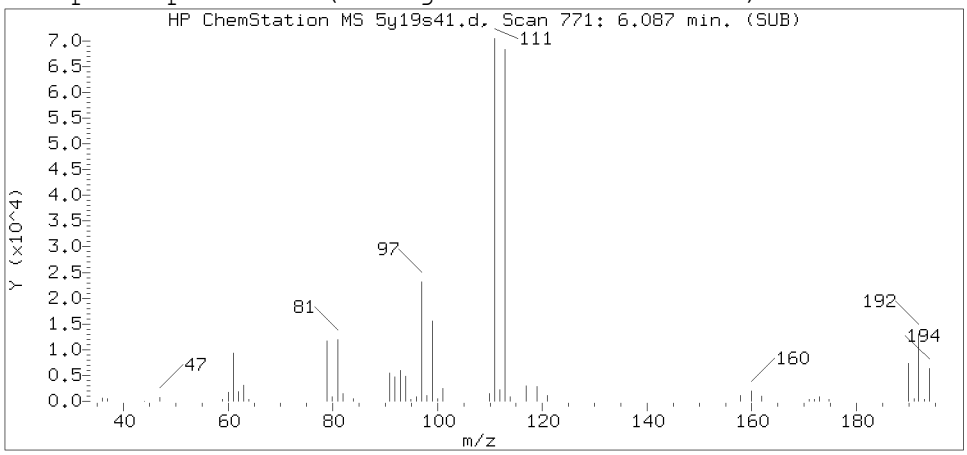
Target 3.5 esignature user ID: kas02648

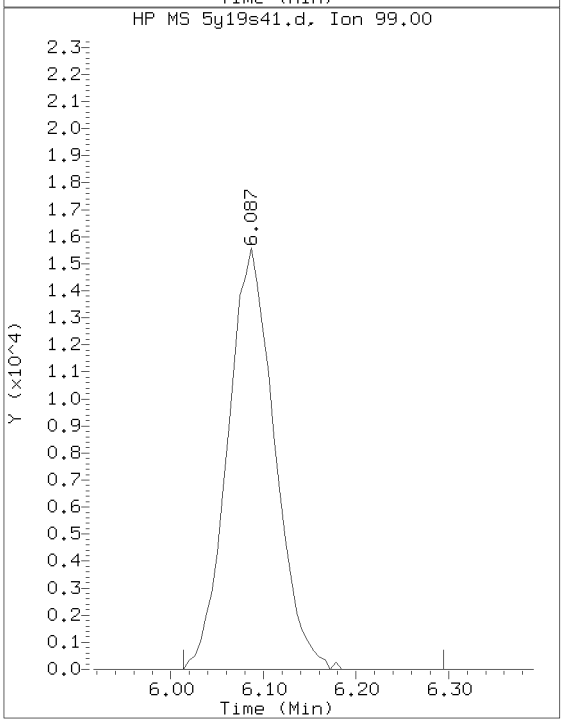
Reference Standard Spectrum for 1,1,1-Trichloroethane



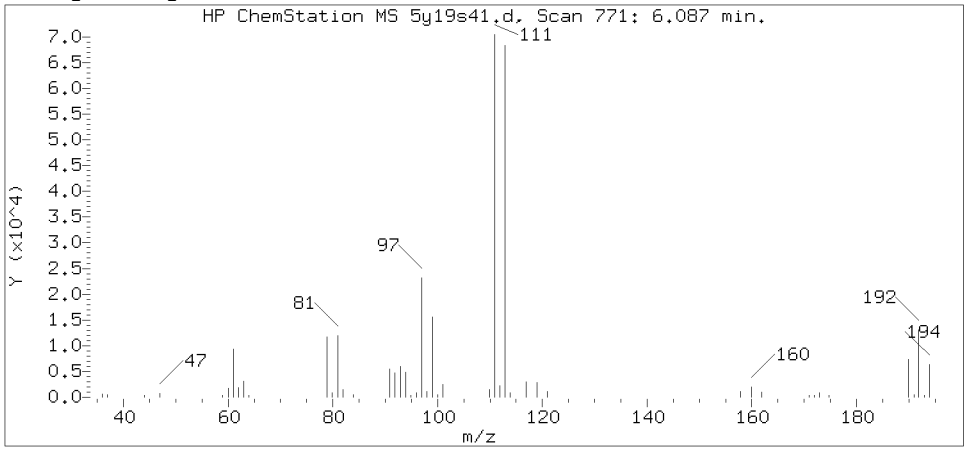


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP26285.i/19may19a.b/5y19s41.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 22:15 Analyst ID: DVV10203

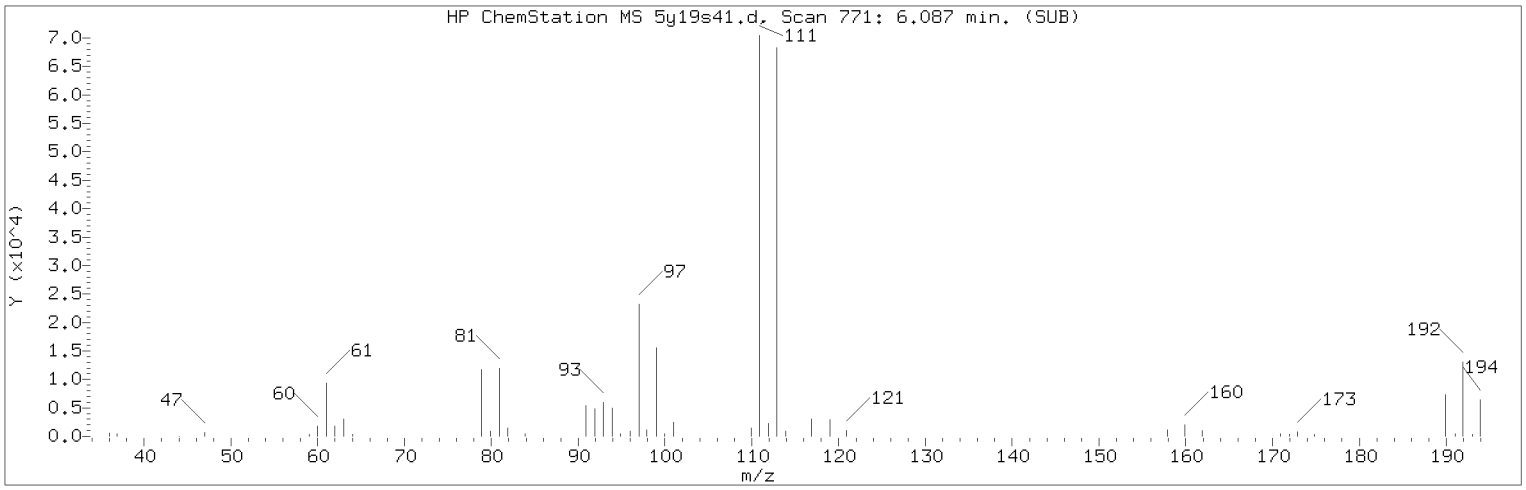
Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 04-Jun-2019 14:11 rrm00219

Sample Name: VHB01 Lab Sample ID: 1053349

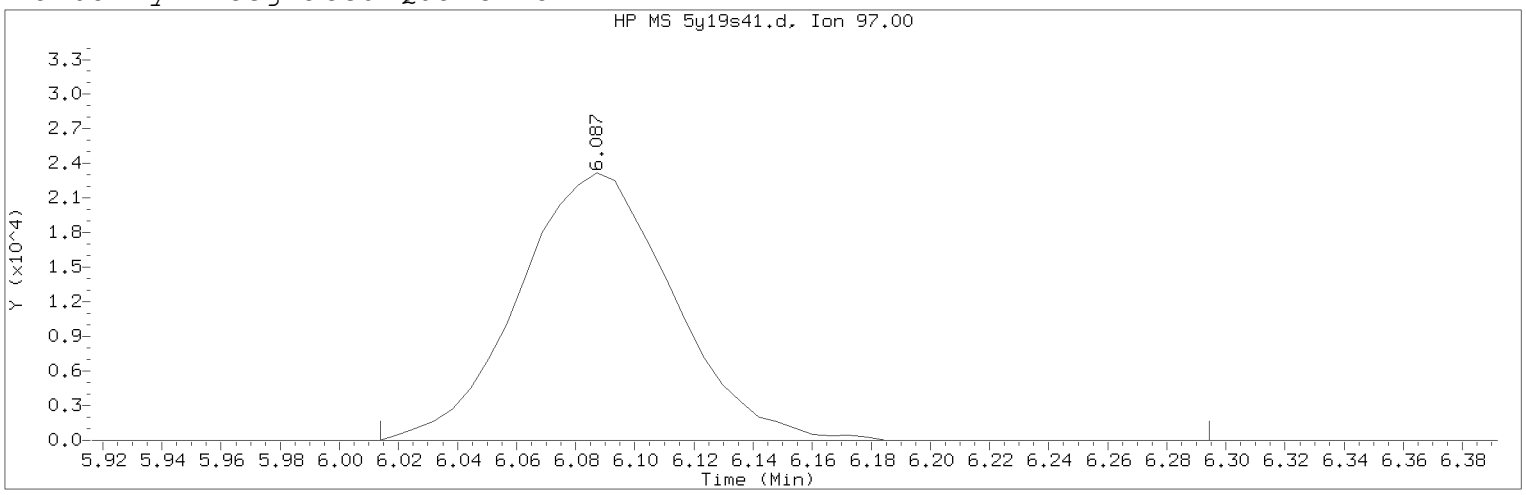
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 771
Retention Time (minutes): 6.087
Relative Retention Time :-0.00011
Quant Ion : 97.00
Area (flag) : 83948A
On-Column Amount (ng) : 13.9750

Digitally signed by Kevin A. Sposito on 06/04/2019 at 14:12.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s41.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 22:15 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 04-Jun-2019 14:11 rrm00219

Sample Name: VHB01 Lab Sample ID: 1053349

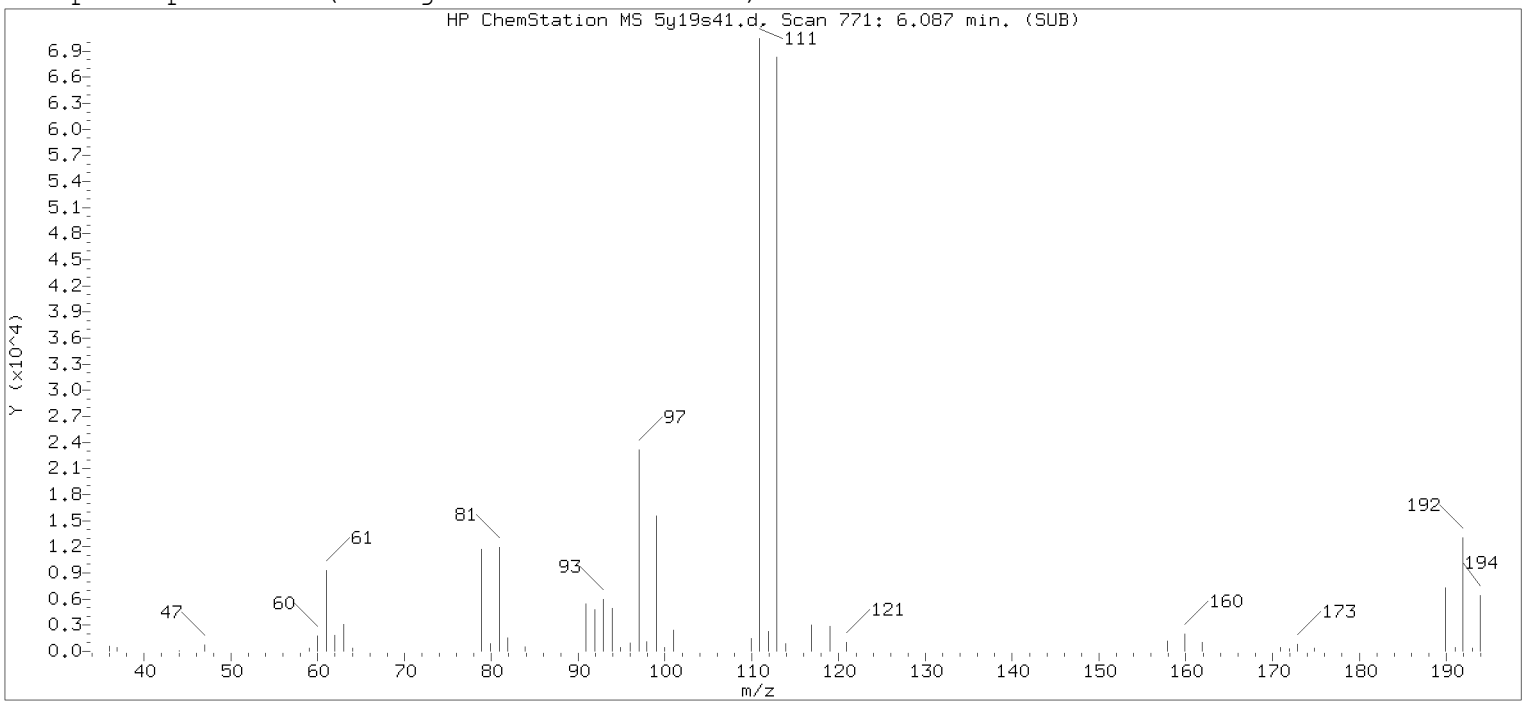
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 771
Retention Time (minutes): 6.087
Quant Ion : 97.00
Area (flag) : 83948A
On-Column Amount (ng) : 13.9750
Integration start scan : 758 Integration stop scan: 804
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

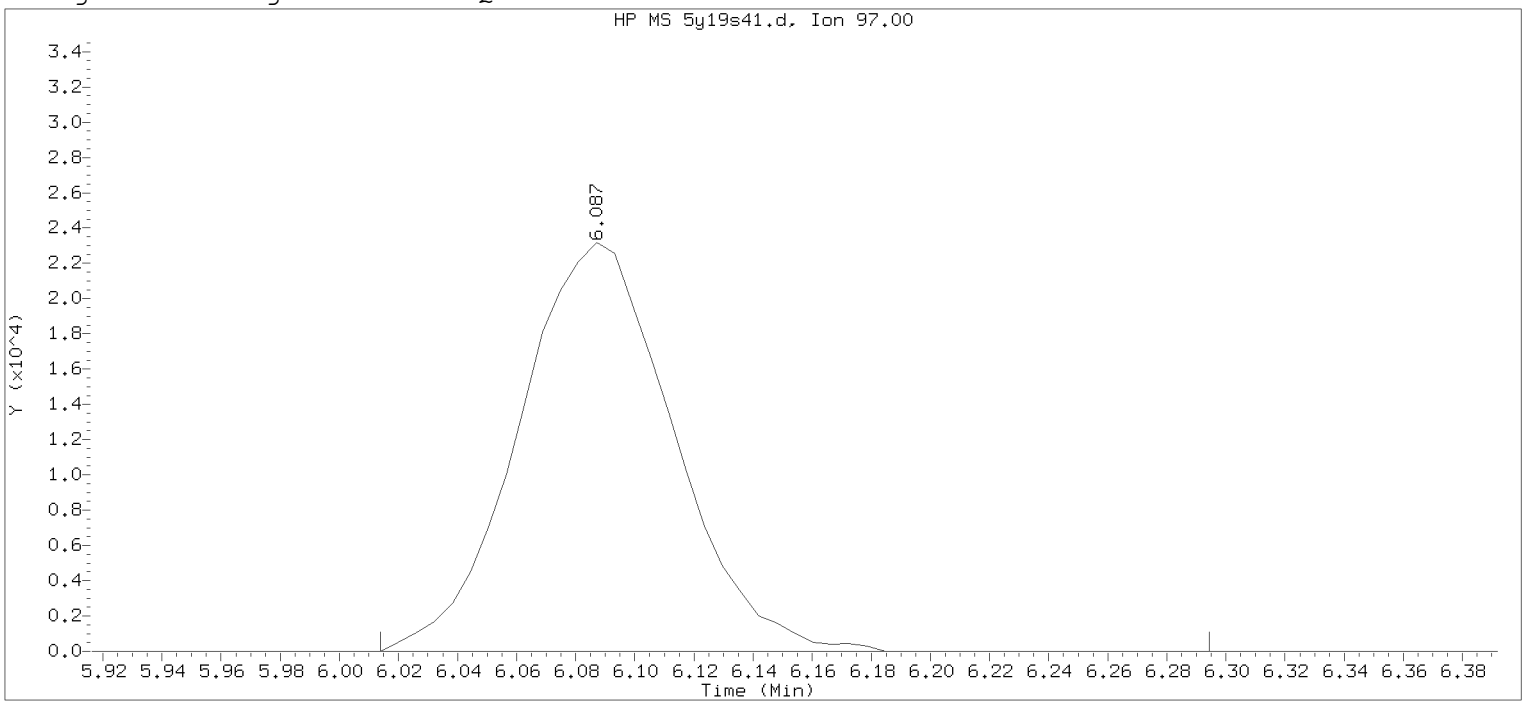
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 06/04/2019 at 14:12.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 14:19.
PARALLAX ID: rrm00219

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s41.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 22:15 Analyst ID: DVV10203

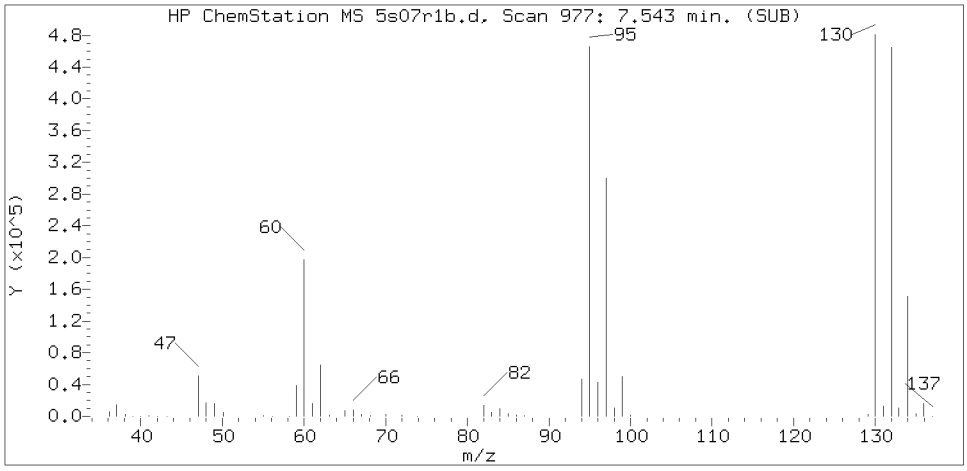
Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 19-May-2019 22:34 Unknown

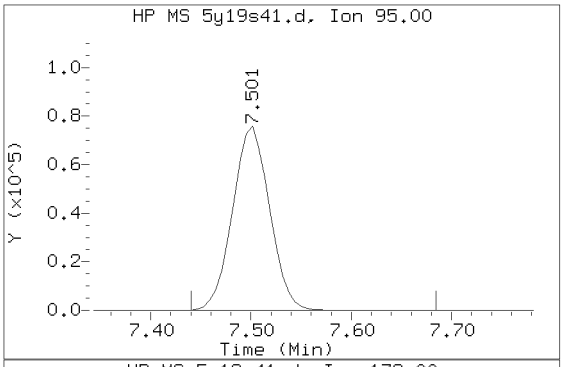
Sample Name: VHB01 Lab Sample ID: 1053349

Compound Number	: 53		
Compound Name	: 1,1,1-Trichloroethane		
Scan Number	: 771		
Retention Time (minutes)	: 6.087		
Quant Ion	: 97.00		
Area	: 83948		
On-column Amount (ng)	: 13.9751		
Integration start scan	: 758	Integration stop scan:	804
Y at integration start	: 0	Y at integration end:	0

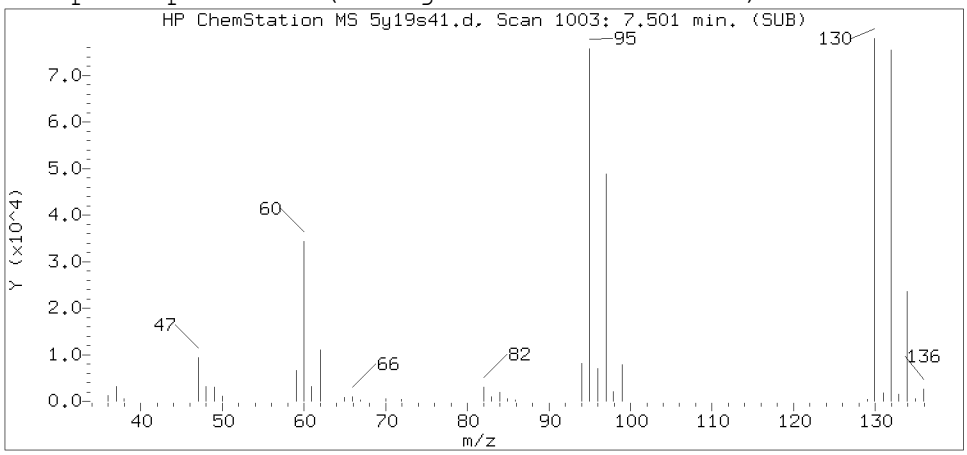
Digitally signed by Kevin A. Sposito on 06/04/2019 at 14:12.
Target 3.5 esignature user ID: kasposito

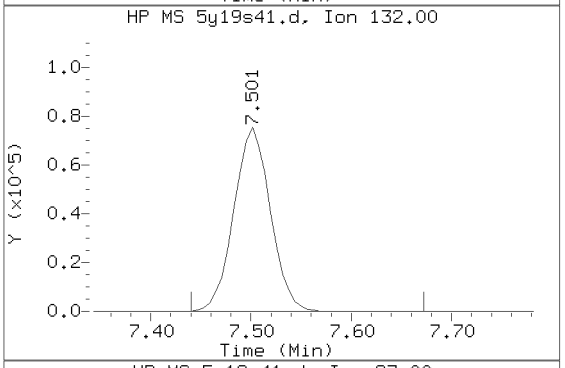
Reference Standard Spectrum for Trichloroethene

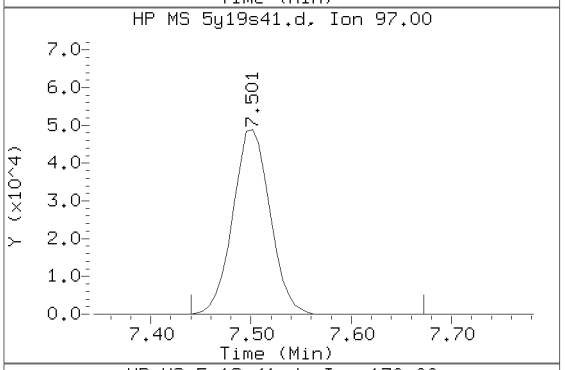




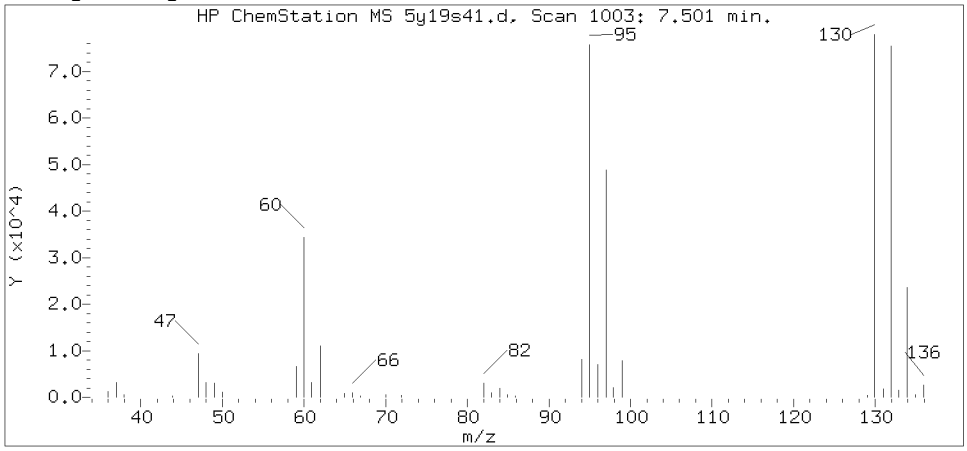
Sample Spectrum (Background Subtracted)

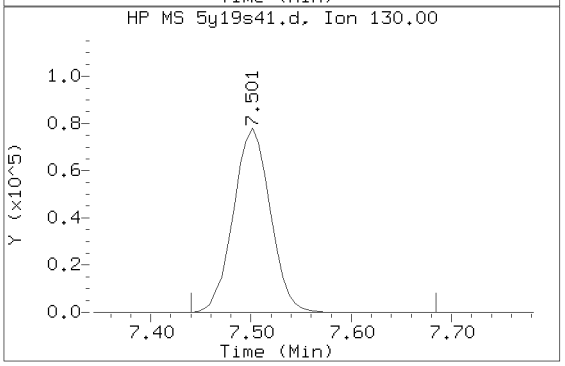






Sample Spectrum (Unaltered)





Data File: /chem2/HP26285.i/19may19a.b/5y19s41.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 22:15 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 04-Jun-2019 14:11 rrm00219

Sample Name: VHB01 Lab Sample ID: 1053349

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 1003
Retention Time (minutes)	: 7.501
Relative Retention Time	: 0.00006
Quant Ion	: 95.00
Area (flag)	: 194336
On-Column Amount (ng)	: 44.6746

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Target 3.5 esignature user ID: kas02648

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VHB02

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053350

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP26285.i/19may19a.b/5y19s42.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.6	J
156-59-2	cis-1,2-Dichloroethene	0.4	J
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	20	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	36	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

^

VHB02 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1053350

Data file: /chem2/HP26285.i/19may19a.b/5y19s42.d Injection date and time: **19-MAY-2019 22:36**
Data file Sample Info. Line: VHB02;1053350;1;0;;JCV87;;;5y19b31; Instrument ID: **HP26285.i** Batch: **5191392AA**
Date, time and analyst ID of latest file update: 04-Jun-2019 14:12 rrm00219

Blank Data file reference: **/chem2/HP26285.i/19may19a.b/5y19b31.d**

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 19-MAY-2019 16:11
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may19a.b/5y19c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.563(-0.012)	357	65	226441 (-32)	250.00	
66) Fluorobenzene	7.008(-0.006)	922	96	732436 (-34)	50.00	
101) Chlorobenzene-d5	10.726(-0.006)	1532	117	581081 (-36)	50.00	
132) 1,4-Dichlorobenzene-d4	12.708(-0.006)	1857	152	318823 (-40)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.099(-0.001)	113	210647	60.101	120%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.563(0.000)	102	44294	54.011	108%		80 - 120
84) Toluene-d8	(3)	9.135(0.000)	98	725668	49.475	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.793(0.000)	95	279512	48.976	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	2.966(-0.000)	96	4112	1.216	1.22			0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	4.490(0.000)	63	3742	0.561	0.56		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	5.362(-0.000)	96	1914	0.447	0.45		J	0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	6.087(-0.000)	97	117733A	20.218	20.22			0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	7.502(0.000)	95	153138	36.316	36.32			0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

A = User selected an alternate peak.

Digitally signed by Kevin A. Sposito on 06/04/2019 at 14:12. Target 3.5 esignature user ID: kas02648

Data file: /chem2/HP26285.i/19may19a.b/5y19s42.d Injection date and time: **19-MAY-2019 22:36**
Data file Sample Info. Line: VHB02;1053350;1;0;;JCV87;;;5y19b31; Instrument ID: **HP26285.i** Batch: **5191392AA**
Date, time and analyst ID of latest file update: 04-Jun-2019 14:12 rrm00219

Blank Data file reference: **/chem2/HP26285.i/19may19a.b/5y19b31.d**

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 19-MAY-2019 16:11
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may19a.b/5y19c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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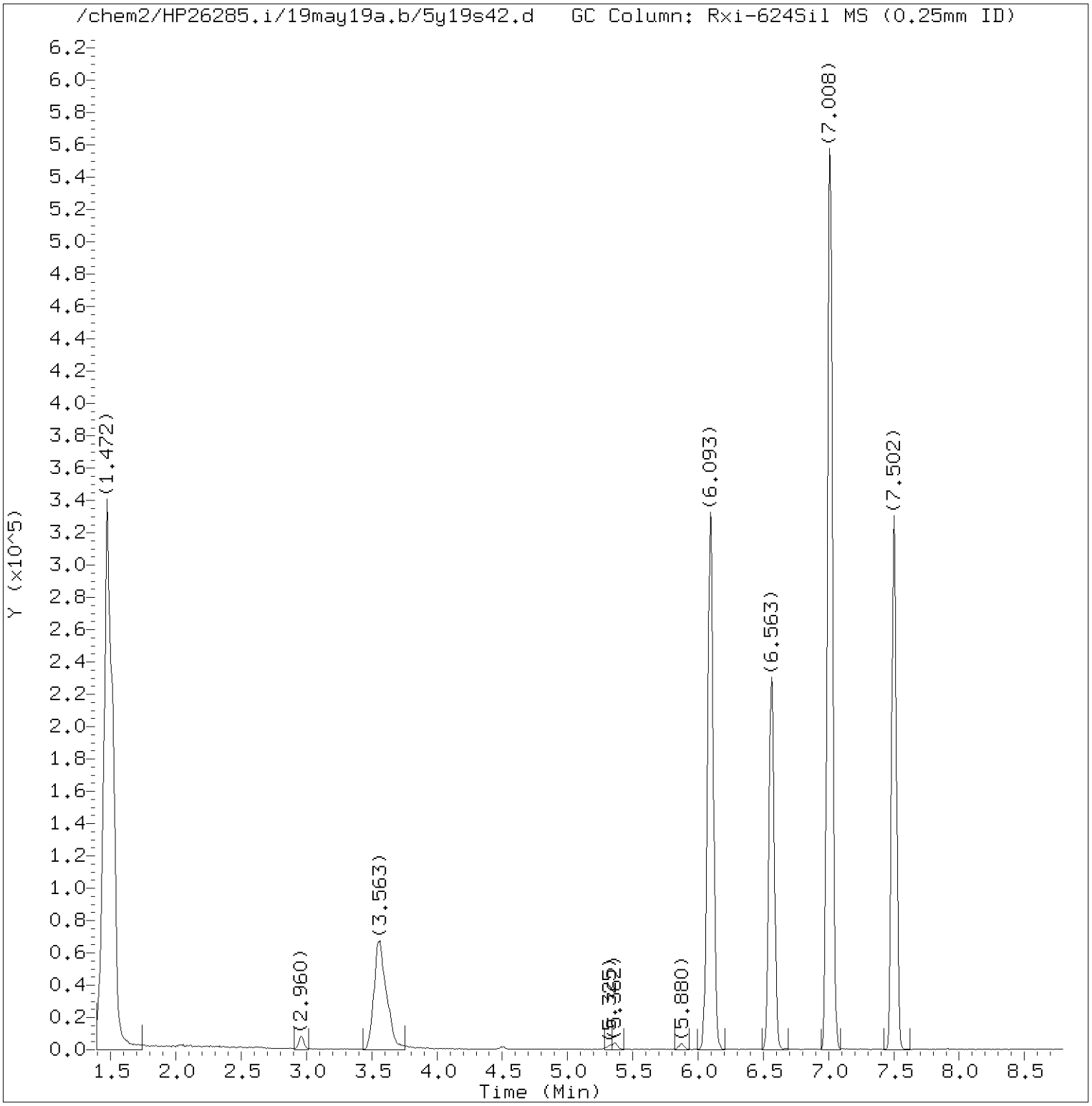
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Kevin A. Sposito on 06/04/2019 at 14:12. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 14:19. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

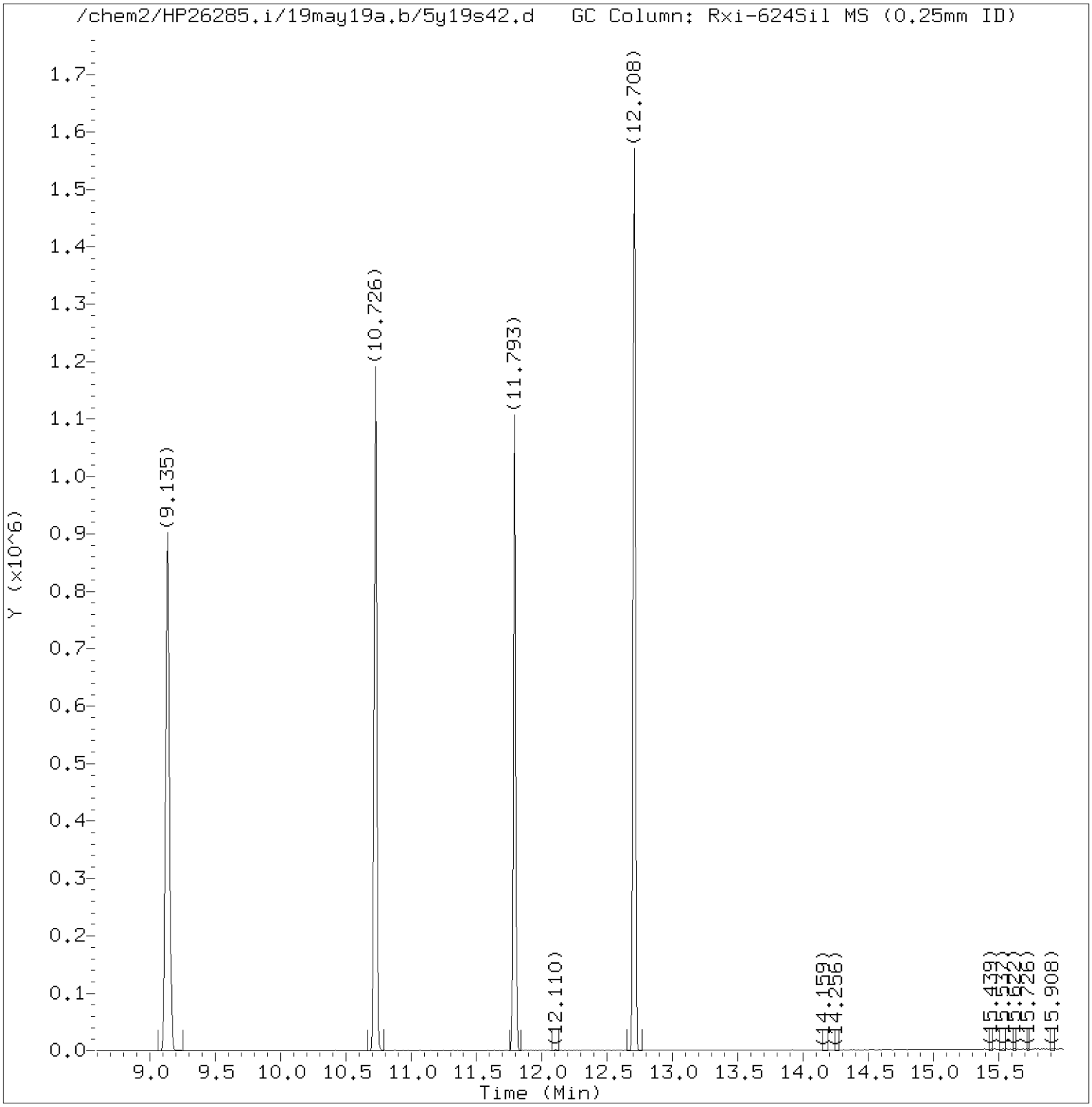
Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19s42.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 22:36 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 04-Jun-2019 14:12 rrm00219

Sample Name: VHB02 Lab Sample ID: 1053350

Digitally signed by Kevin A. Sposito
on 06/04/2019 at 14:12.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19s42.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 22:36 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 04-Jun-2019 14:12 rrm00219

Sample Name: VHB02 Lab Sample ID: 1053350

Digitally signed by Kevin A. Sposito
on 06/04/2019 at 14:12.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19s42.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 22:36 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 04-Jun-2019 14:12 rrm00219

Sample Name: VHB02 Lab Sample ID: 1053350

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	2.966	96	4112	1.216
29)*t-Butyl alcohol-d10	(1)	3.563	65	226441	250.000
36) 1,1-Dichloroethane	(2)	4.490	63	3742	0.561
42) cis-1,2-Dichloroethene	(2)	5.362	96	1914	0.447
53) 1,1,1-Trichloroethane	(2)	6.087	97	117733A	20.218
52)$Dibromofluoromethane	(2)	6.099	113	210647	60.101
57)$1,2-Dichloroethane-d4	(2)	6.563	102	44294	54.011
66)*Fluorobenzene	(2)	7.008	96	732436	50.000
71) Trichloroethene	(2)	7.502	95	153138	36.316
84)$Toluene-d8	(3)	9.135	98	725668	49.475
101)*Chlorobenzene-d5	(3)	10.726	117	581081	50.000
115)$4-Bromofluorobenzene	(3)	11.793	95	279512	48.976
132)*1,4-Dichlorobenzene-d4	(4)	12.708	152	318823	50.000

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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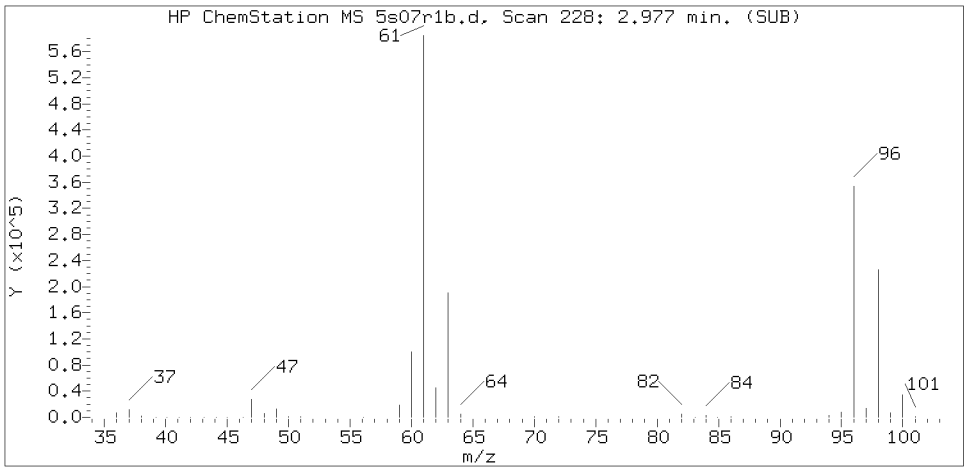
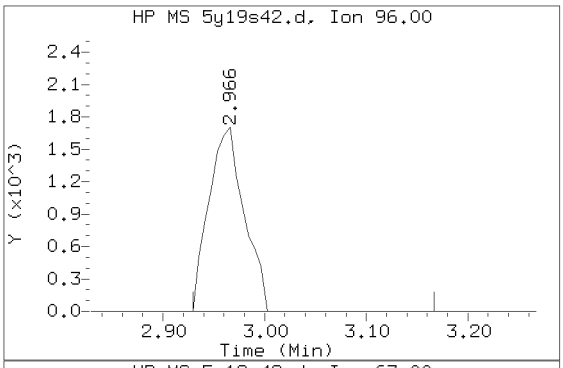
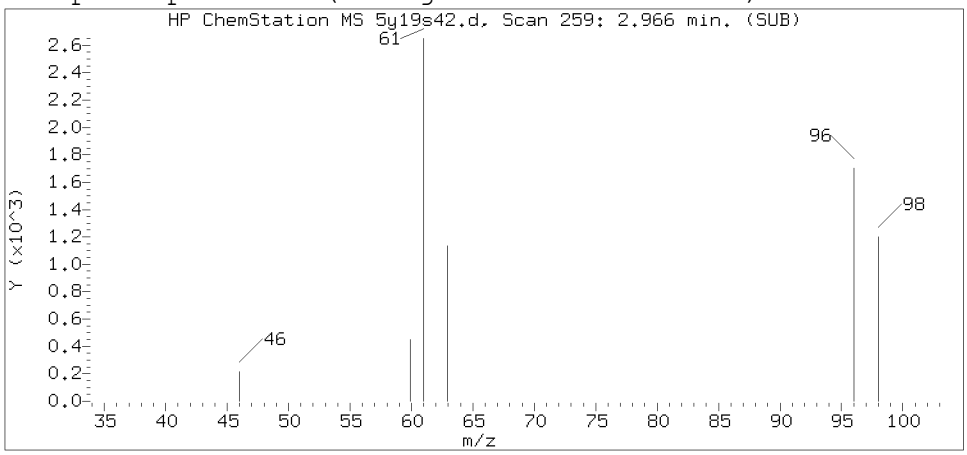
on 06/04/2019 at 14:12.
Target 3.5 esignature user ID: kas02648

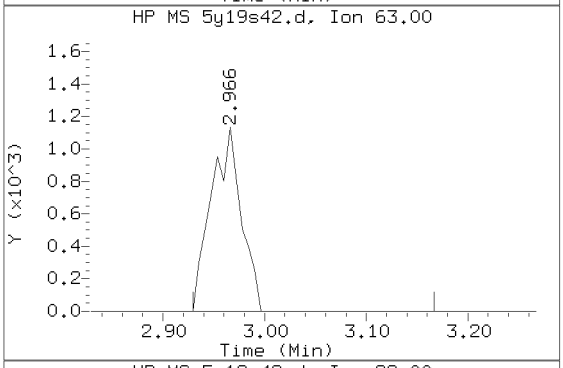
Reference Standard Spectrum for 1,1-Dichloroethene

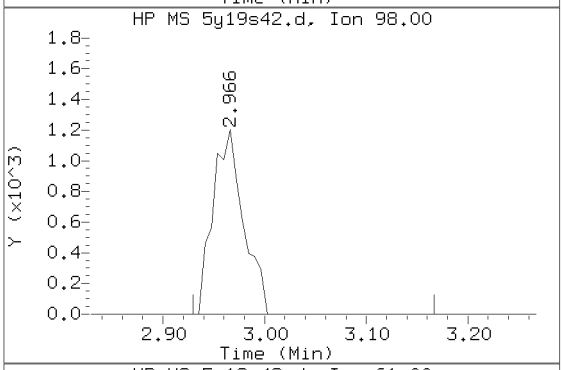




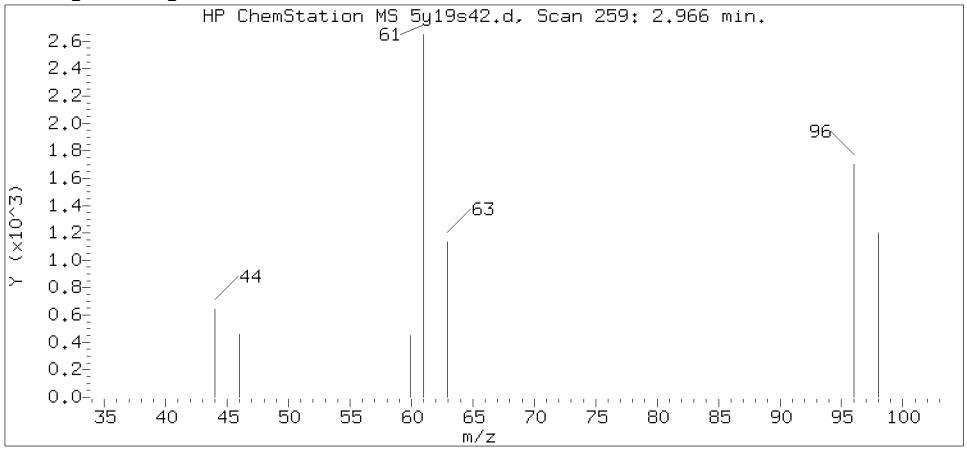
Sample Spectrum (Background Subtracted)

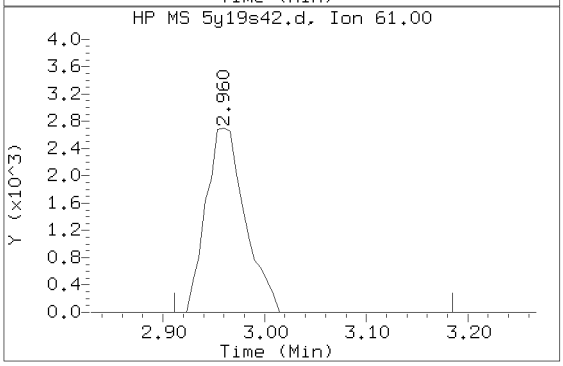






Sample Spectrum (Unaltered)





Data File: /chem2/HP26285.i/19may19a.b/5y19s42.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 22:36 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 04-Jun-2019 14:12 rrm00219

Sample Name: VHB02 Lab Sample ID: 1053350

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 259
Retention Time (minutes): 2.966
Relative Retention Time :-0.00051
Quant Ion : 96.00
Area (flag) : 4112
On-Column Amount (ng) : 1.2161

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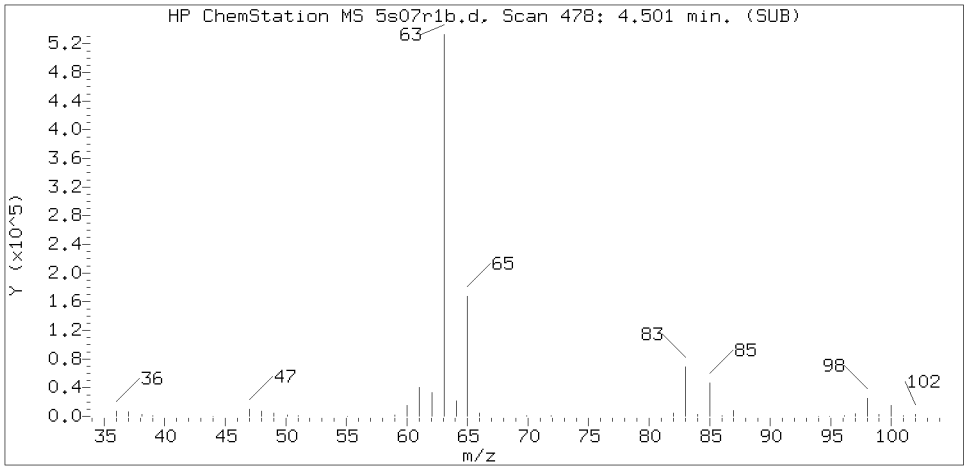
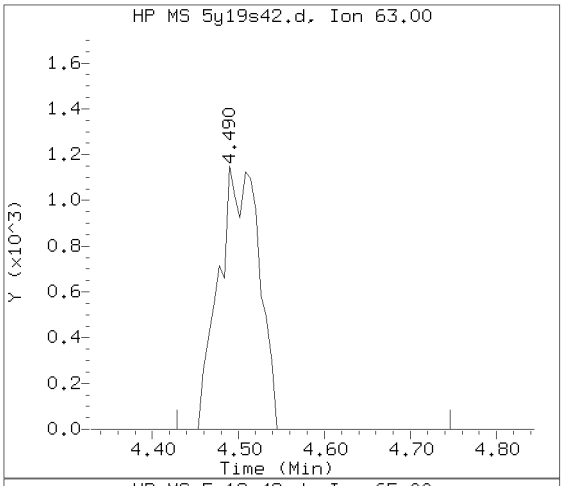
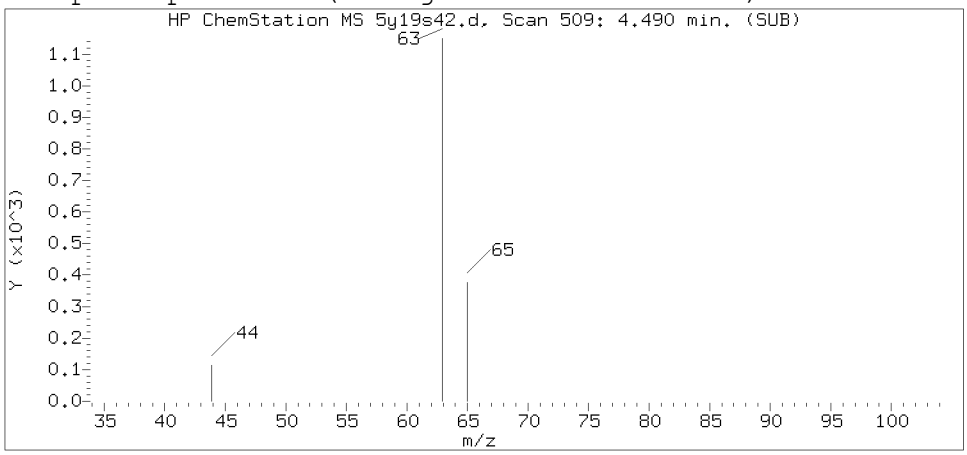
Target 3.5 esignature user ID: kas02648

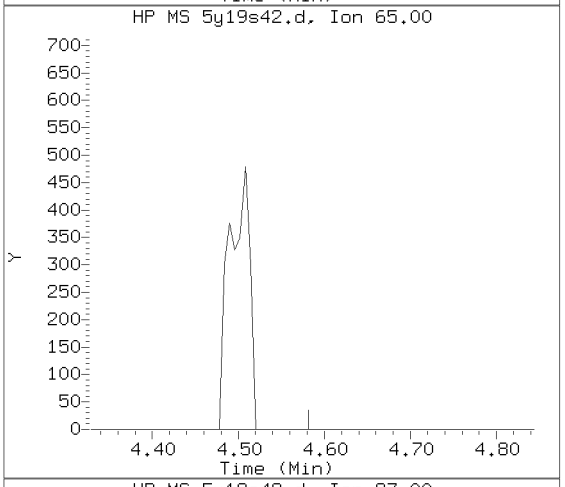
Reference Standard Spectrum for 1,1-Dichloroethane



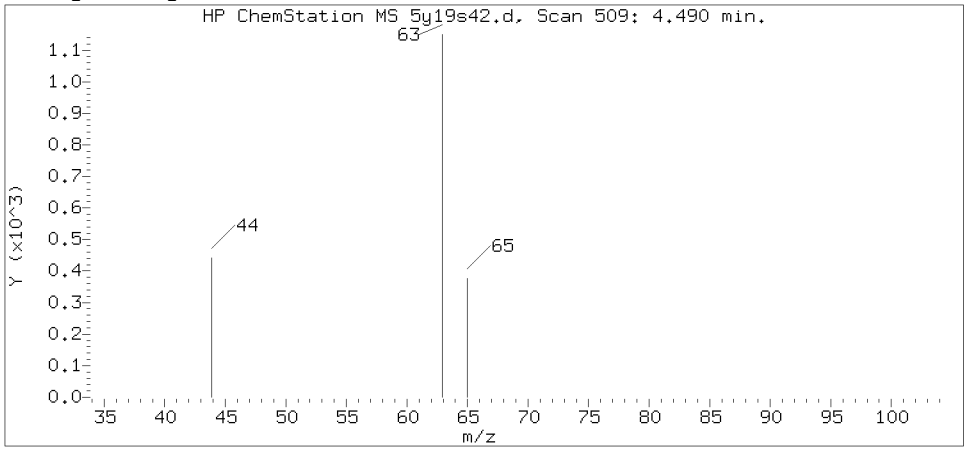


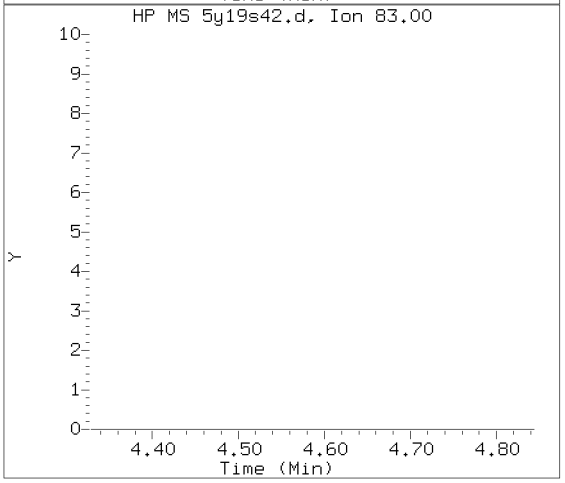
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP26285.i/19may19a.b/5y19s42.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 22:36 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 04-Jun-2019 14:12 rrm00219

Sample Name: VHB02 Lab Sample ID: 1053350

Compound Number	: 36
Compound Name	: 1,1-Dichloroethane
Scan Number	: 509
Retention Time (minutes)	: 4.490
Relative Retention Time	: 0.00055
Quant Ion	: 63.00
Area (flag)	: 3742
On-Column Amount (ng)	: 0.5608

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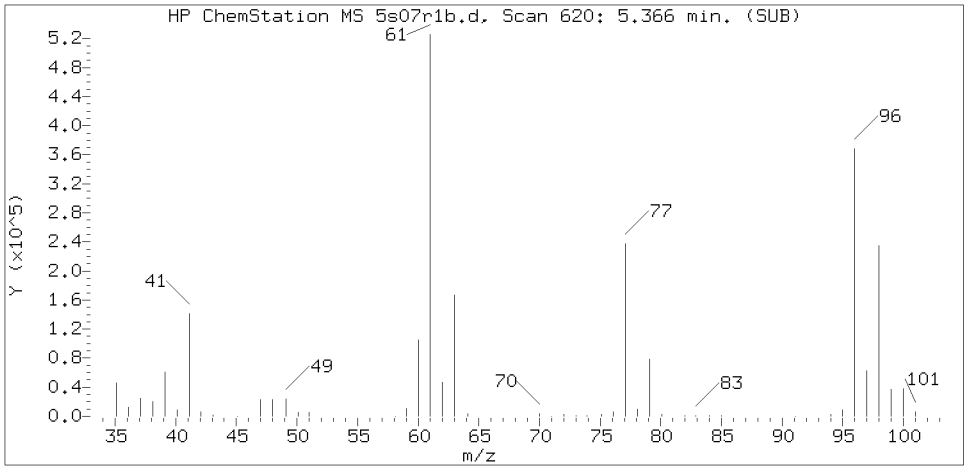
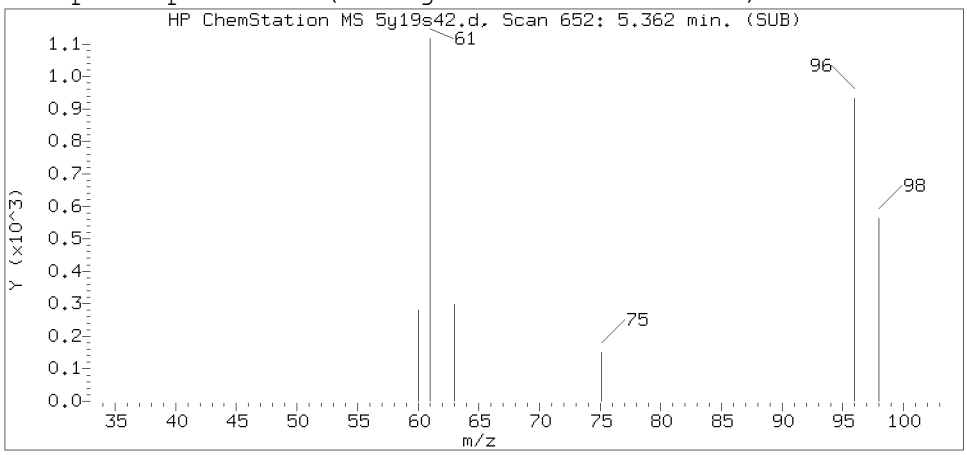
Target 3.5 esignature user ID: kas02648

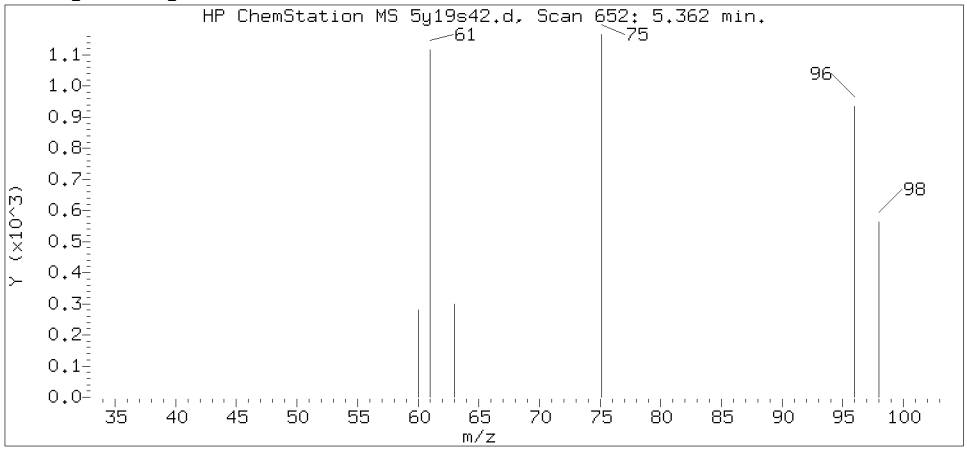
Reference Standard Spectrum for cis-1,2-Dichloroethene

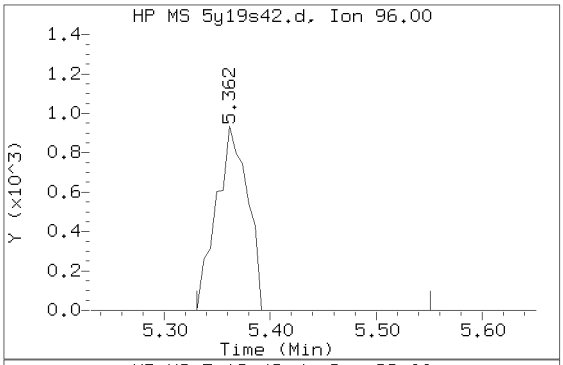


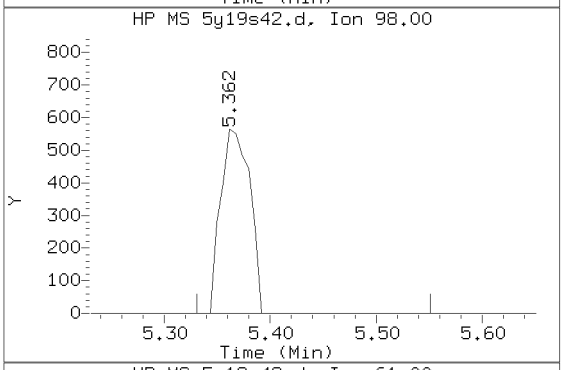
Sample Spectrum (Background Subtracted)

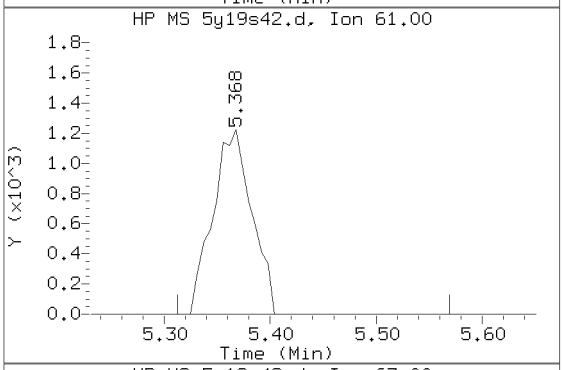


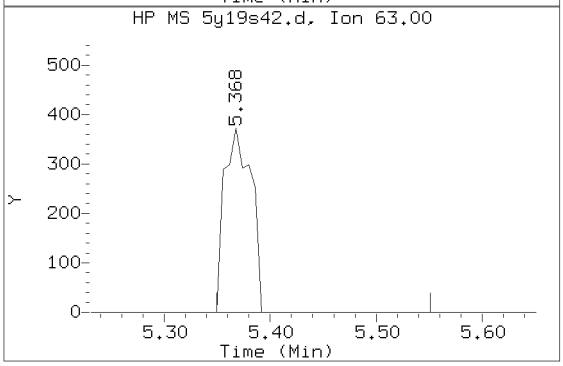
Sample Spectrum (Unaltered)











Data File: /chem2/HP26285.i/19may19a.b/5y19s42.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 22:36 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 04-Jun-2019 14:12 rrm00219

Sample Name: VHB02 Lab Sample ID: 1053350

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 652
Retention Time (minutes): 5.362
Relative Retention Time :-0.00020
Quant Ion : 96.00
Area (flag) : 1914
On-Column Amount (ng) : 0.4470

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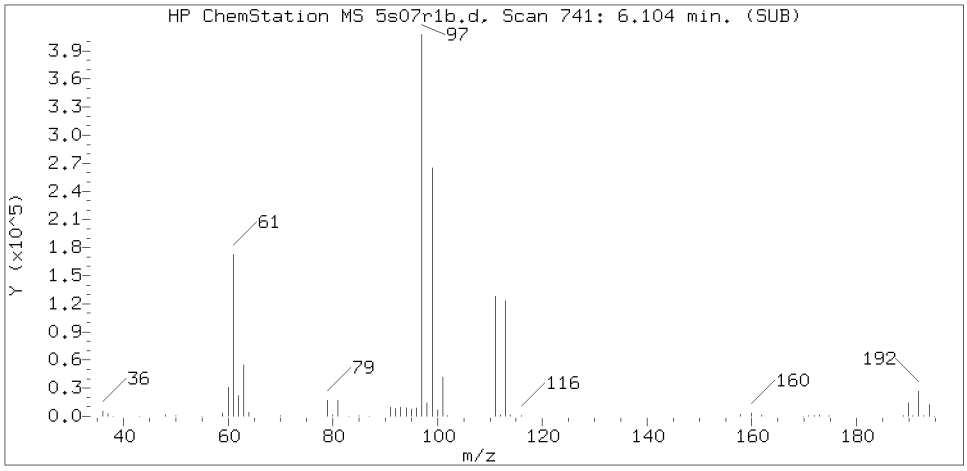
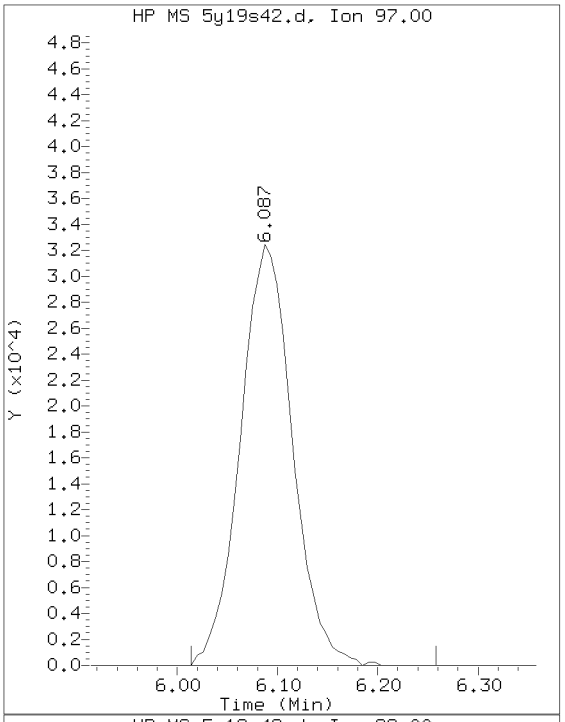
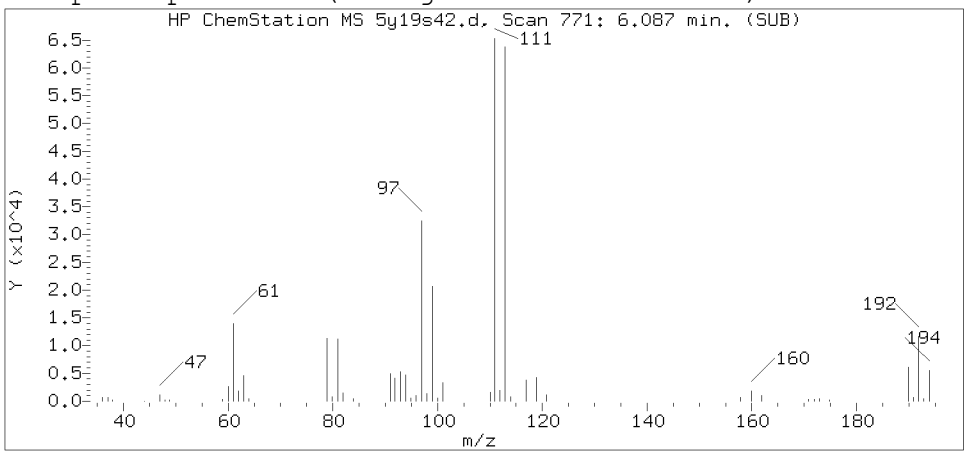
Target 3.5 esignature user ID: kas02648

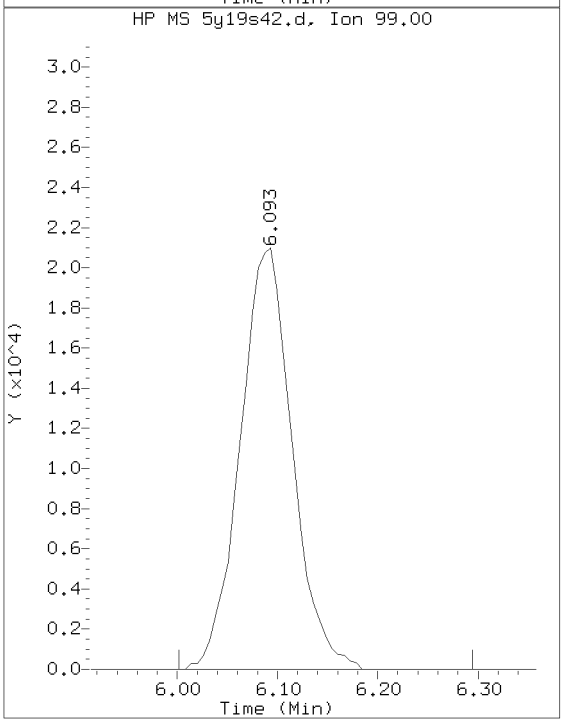
Reference Standard Spectrum for 1,1,1-Trichloroethane



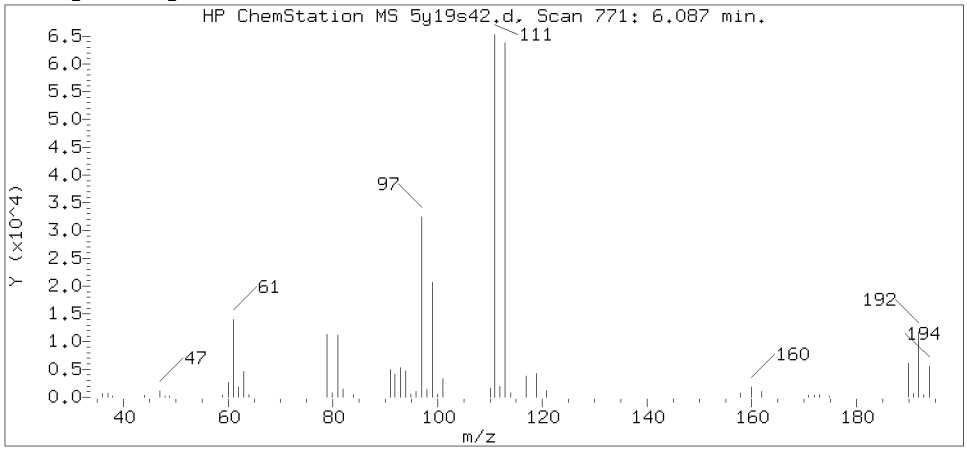


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP26285.i/19may19a.b/5y19s42.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 22:36 Analyst ID: DVV10203

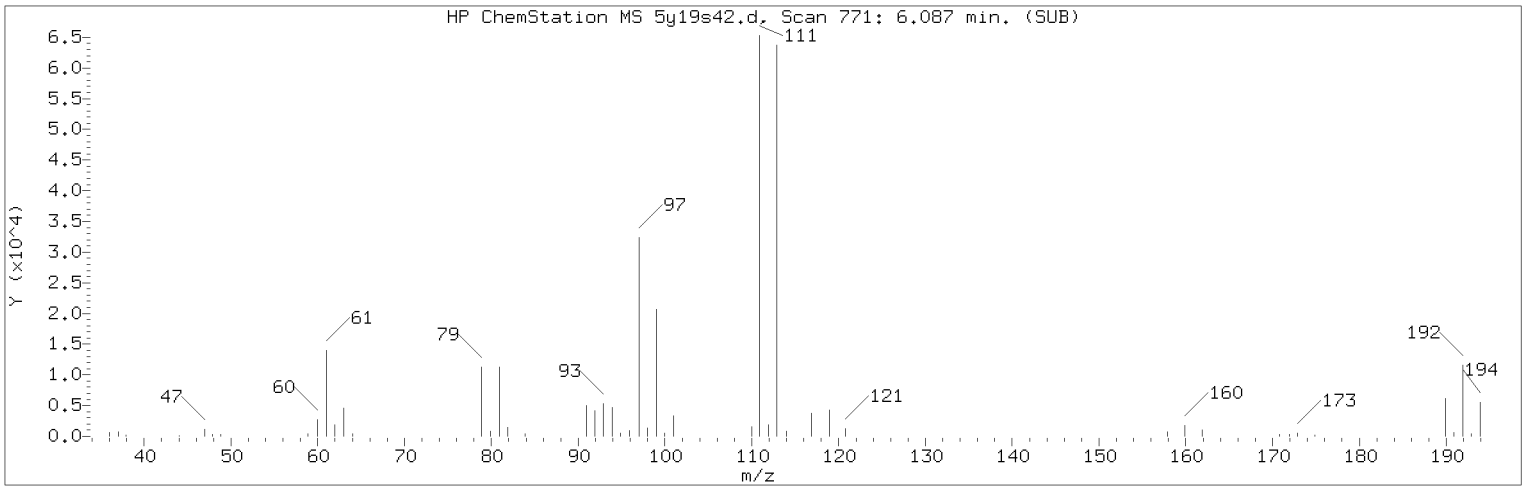
Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 04-Jun-2019 14:12 rrm00219

Sample Name: VHB02 Lab Sample ID: 1053350

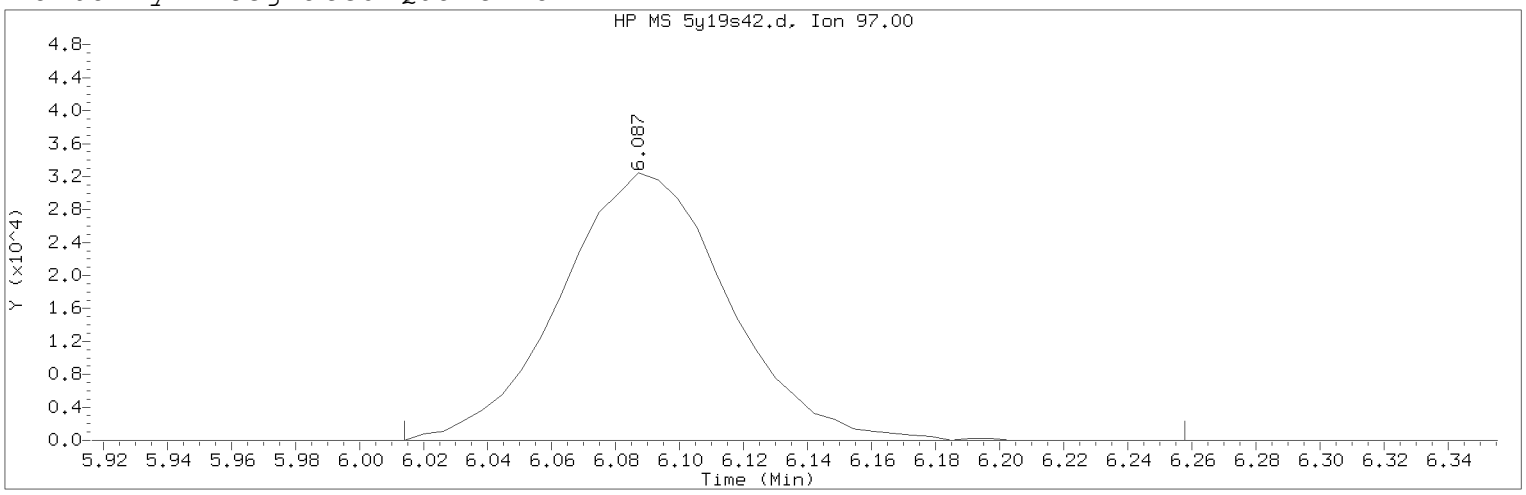
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 771
Retention Time (minutes): 6.087
Relative Retention Time :-0.00011
Quant Ion : 97.00
Area (flag) : 117733A
On-Column Amount (ng) : 20.2182

Digitally signed by Kevin A. Sposito on 06/04/2019 at 14:12.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s42.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 22:36 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 04-Jun-2019 14:12 rrm00219

Sample Name: VHB02 Lab Sample ID: 1053350

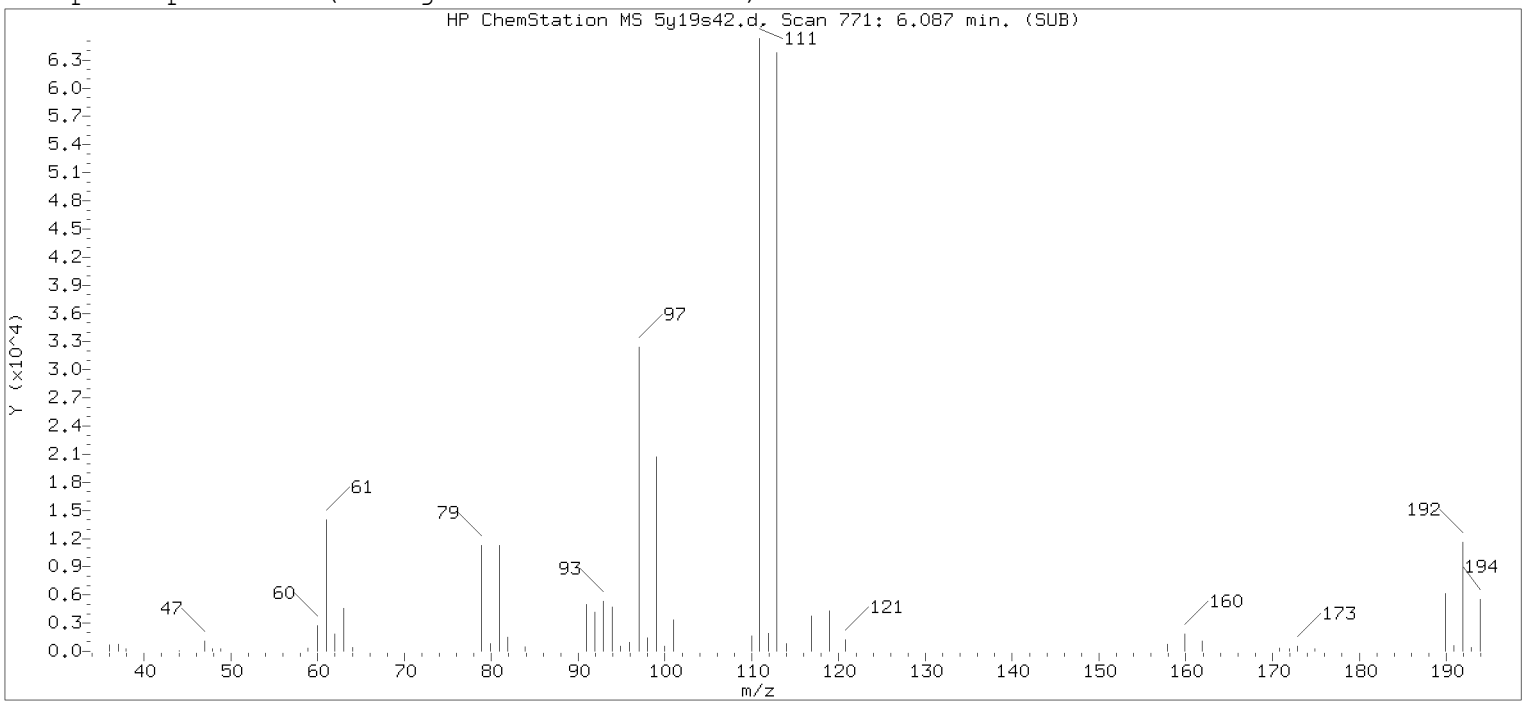
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 771
Retention Time (minutes): 6.087
Quant Ion : 97.00
Area (flag) : 117733A
On-Column Amount (ng) : 20.2182
Integration start scan : 758 Integration stop scan: 798
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

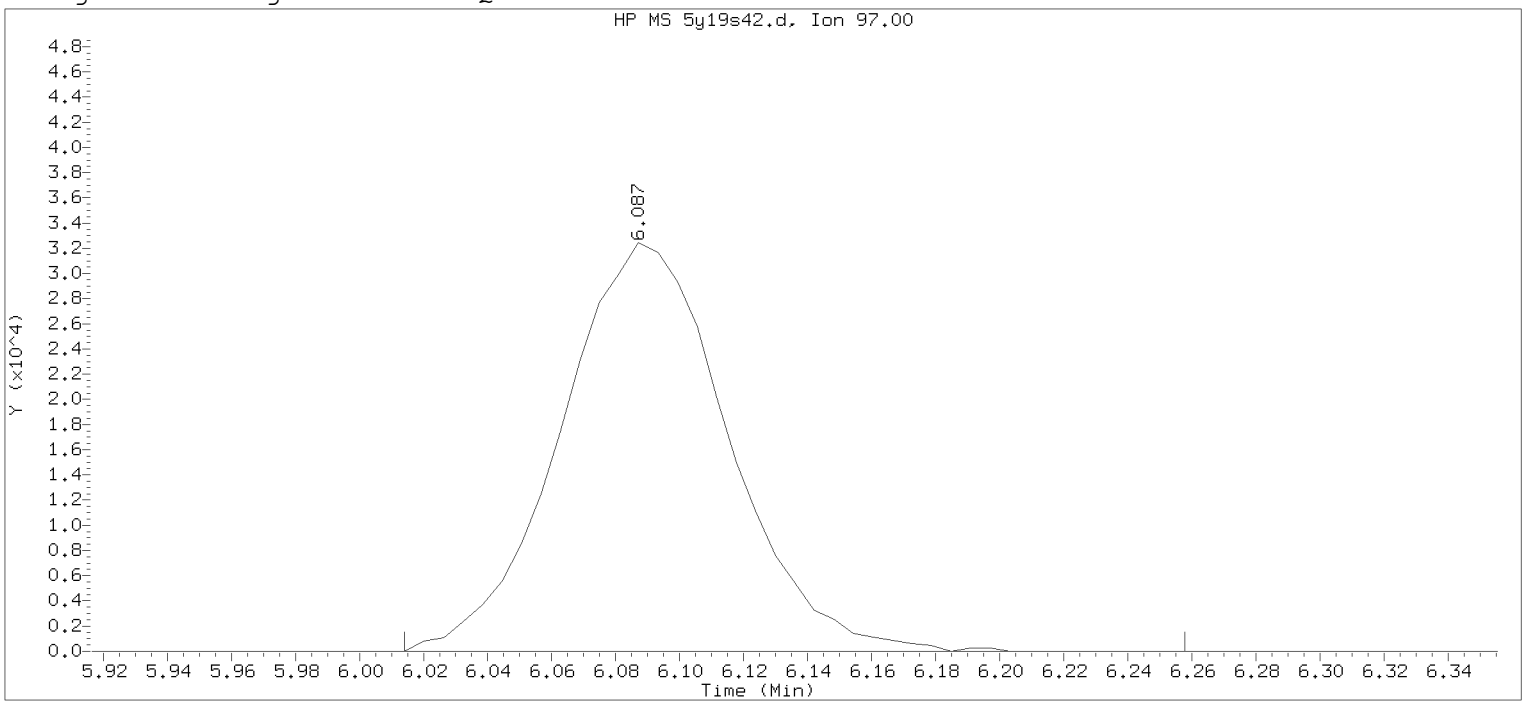
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 06/04/2019 at 14:12.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 14:19.
PARALLAX ID: rrm00219

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s42.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 22:36 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 19-May-2019 22:55 Unknown

Sample Name: VHB02 Lab Sample ID: 1053350

Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 771
Retention Time (minutes): 6.087
Quant Ion : 97.00
Area : 117733
On-column Amount (ng) : 20.2182
Integration start scan : 758 Integration stop scan: 798
Y at integration start : 0 Y at integration end: 0

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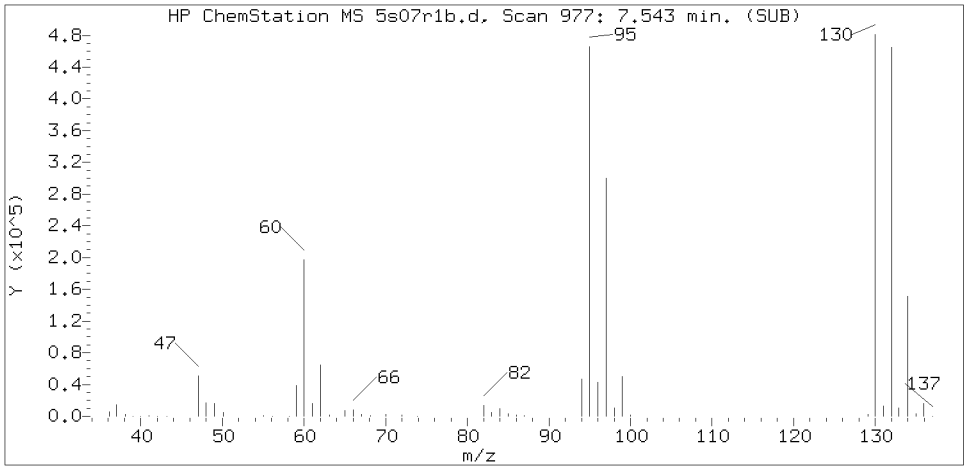
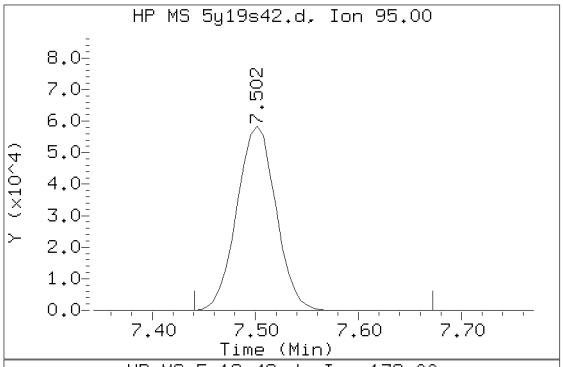
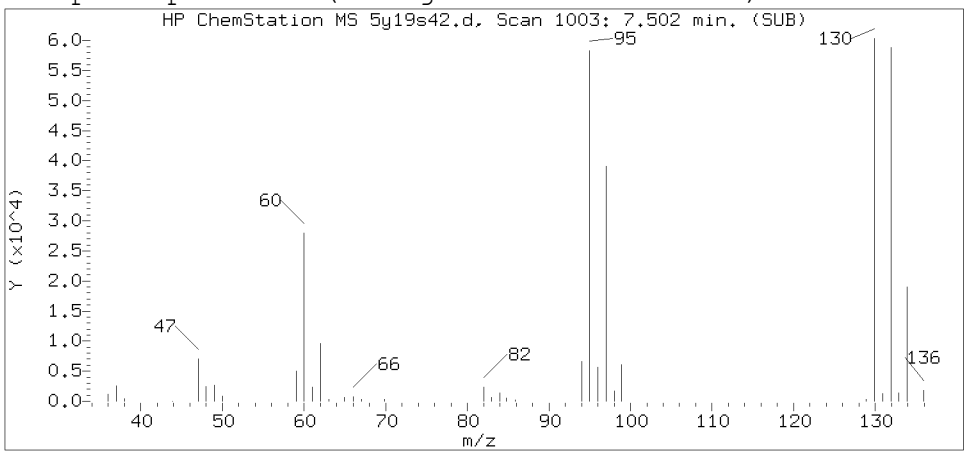
Target 3.5 esignature user: kevin.sposito

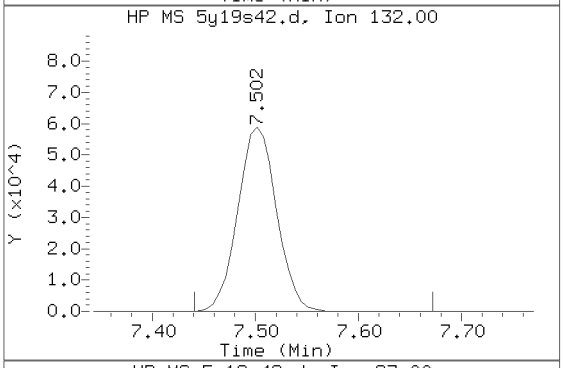
Reference Standard Spectrum for Trichloroethene

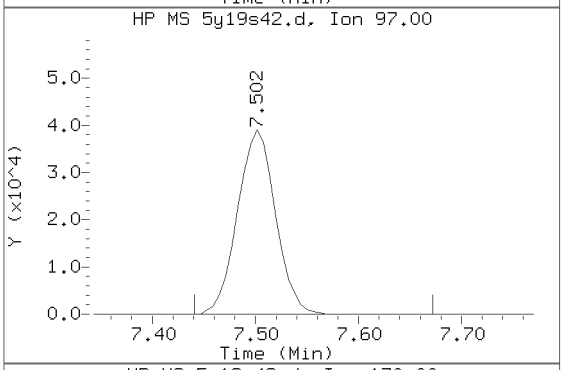




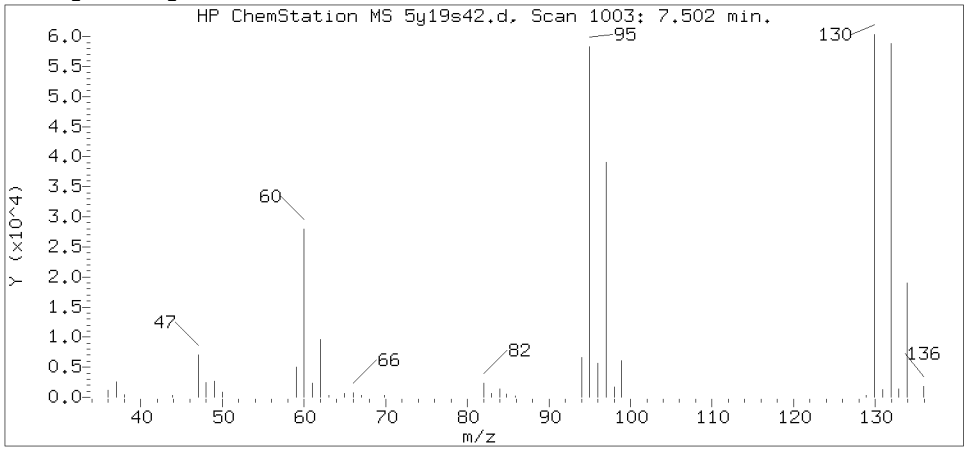
Sample Spectrum (Background Subtracted)

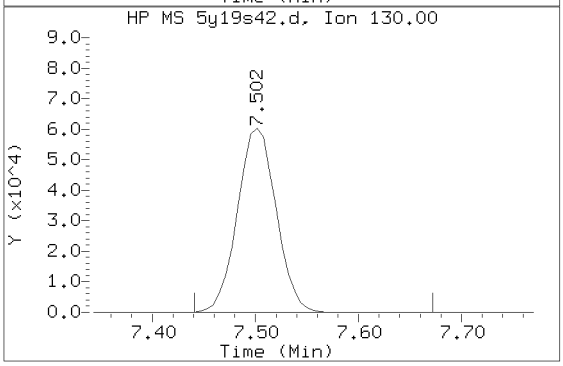






Sample Spectrum (Unaltered)





Data File: /chem2/HP26285.i/19may19a.b/5y19s42.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 22:36 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 04-Jun-2019 14:12 rrm00219

Sample Name: VHB02 Lab Sample ID: 1053350

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 1003
Retention Time (minutes)	: 7.502
Relative Retention Time	: 0.00006
Quant Ion	: 95.00
Area (flag)	: 153138
On-Column Amount (ng)	: 36.3157

Digitally signed by Kevin A. Sposito on 06/04/2019 at 14:12.
Target 3.5 esignature user ID: kas02648

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VHB03

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053351

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP26285.i/19may19a.b/5y19s43.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L		Q
75-01-4	Vinyl Chloride		1	U
75-35-4	1,1-Dichloroethene		1	U
67-64-1	Acetone		20	U
76-13-1	Freon 113		10	U
75-15-0	Carbon Disulfide		5	U
75-09-2	Methylene Chloride		1	U
156-60-5	trans-1,2-Dichloroethene		1	U
75-34-3	1,1-Dichloroethane		1	U
156-59-2	cis-1,2-Dichloroethene		1	U
78-93-3	2-Butanone		10	U
67-66-3	Chloroform		1	U
71-55-6	1,1,1-Trichloroethane		5	
71-43-2	Benzene		1	U
107-06-2	1,2-Dichloroethane		1	U
79-01-6	Trichloroethene		1	U
123-91-1	1,4-Dioxane		250	U
108-88-3	Toluene		1	U
127-18-4	Tetrachloroethene		1	U
100-41-4	Ethylbenzene		1	U
179601-23-1	m+p-Xylene		5	U
95-47-6	o-Xylene		1	U
1330-20-7	Xylene (Total)		5	U
95-50-1	1,2-Dichlorobenzene		5	U
91-20-3	Naphthalene		5	U

FORM I VOA

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VHB03 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1053351

Data file: /chem2/HP26285.i/19may19a.b/5y19s43.d Injection date and time: **19-MAY-2019 22:57**
Data file Sample Info. Line: VHB03;1053351;1;0;;JCV87;;;5y19b31; Instrument ID: **HP26285.i** Batch: **5191392AA**
Date, time and analyst ID of latest file update: 04-Jun-2019 14:12 rrm00219

Blank Data file reference: **/chem2/HP26285.i/19may19a.b/5y19b31.d**

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 19-MAY-2019 16:11
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may19a.b/5y19c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.551	(0.000)	355	65	227879	(-32)	250.00	
66) Fluorobenzene	7.008	(-0.006)	922	96	719223	(-35)	50.00	
101) Chlorobenzene-d5	10.726	(-0.006)	1532	117	572273	(-37)	50.00	
132) 1,4-Dichlorobenzene-d4	12.708	(-0.006)	1857	152	314654	(-41)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.099	(-0.001)	113	205120	59.599	119%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.569	(-0.001)	102	43902	54.517	109%		80 - 120
84) Toluene-d8	(3)	9.135	(0.000)	98	702903	48.661	97%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.793	(0.000)	95	271993	48.392	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	6.087	(-0.000)	97	28890A	5.052	5.05			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

A = User selected an alternate peak.

Digitally signed by Kevin A. Sposito on 06/04/2019 at 14:13. Target 3.5 esignature user ID: kas02648

VHB03 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1053351

Data file: /chem2/HP26285.i/19may19a.b/5y19s43.d Injection date and time: **19-MAY-2019 22:57**
Data file Sample Info. Line: VHB03;1053351;1;0;;JCV87;;;5y19b31; Instrument ID: **HP26285.i** Batch: **5191392AA**
Date, time and analyst ID of latest file update: 04-Jun-2019 14:12 rrm00219

Blank Data file reference: **/chem2/HP26285.i/19may19a.b/5y19b31.d**

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 19-MAY-2019 16:11
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may19a.b/5y19c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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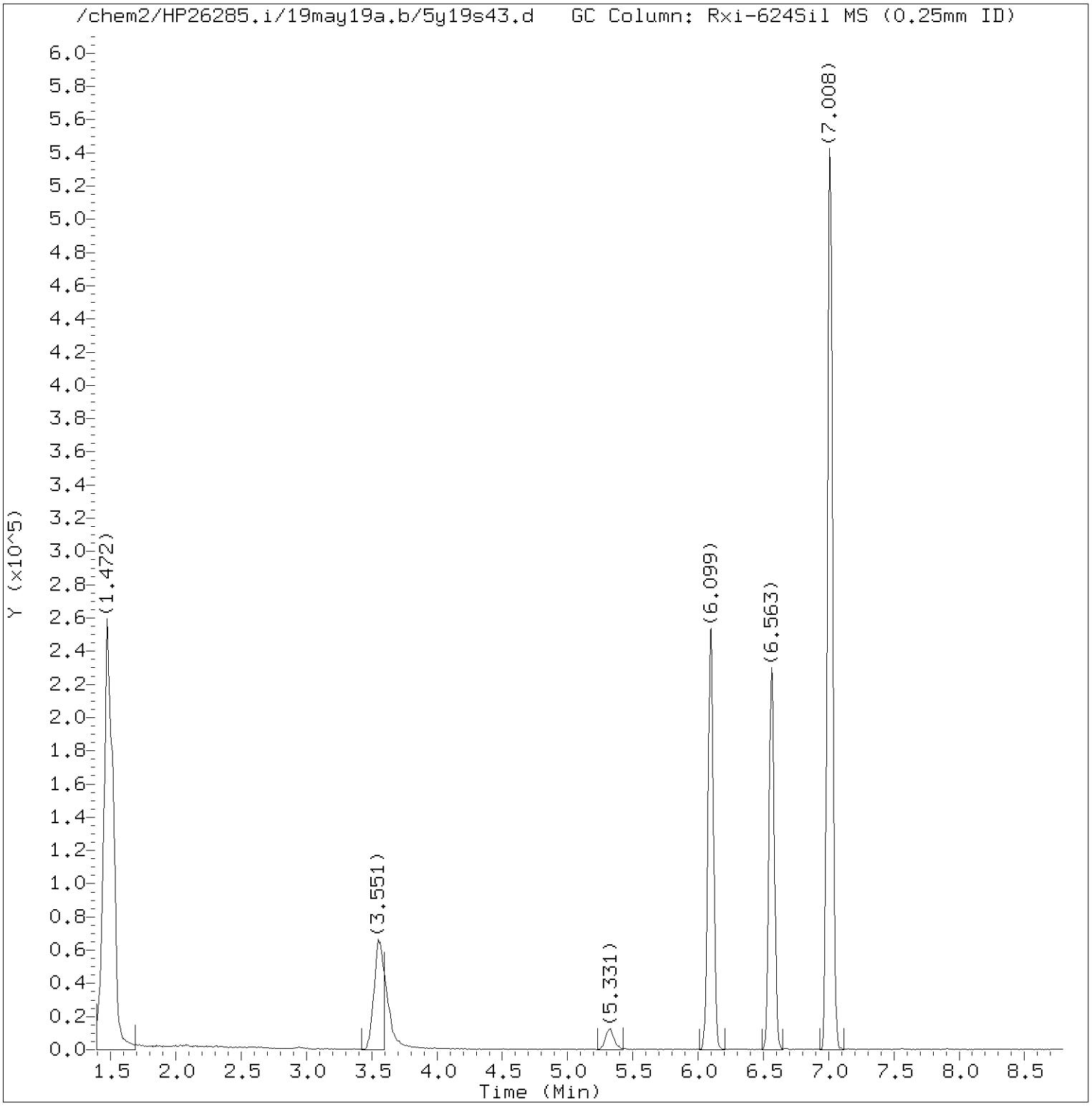
WAS LEFT

BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Kevin A. Sposito on 06/04/2019 at 14:13. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 14:19. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

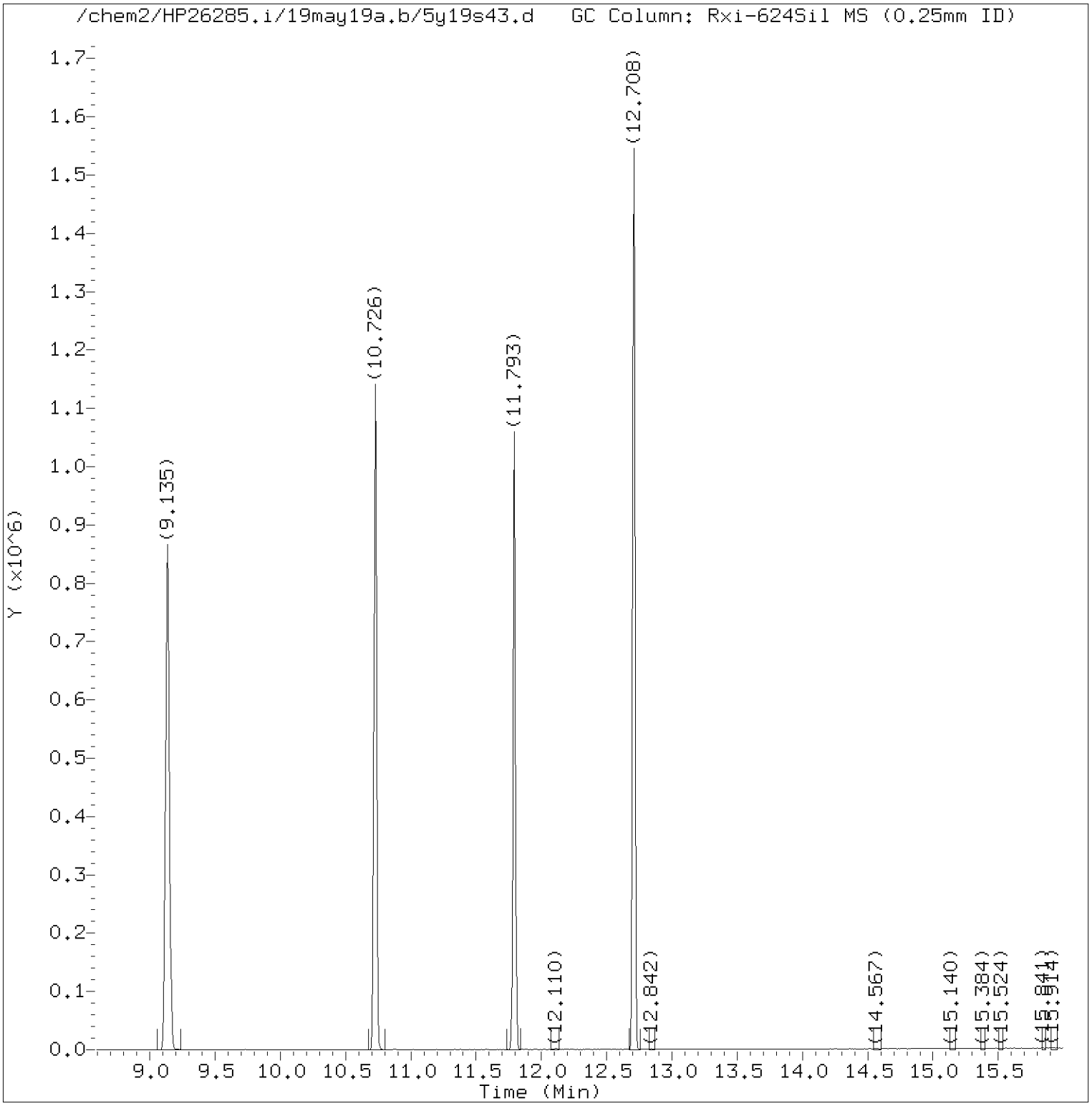
Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19s43.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 22:57 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 04-Jun-2019 14:12 rrm00219

Sample Name: VHB03 Lab Sample ID: 1053351

Digitally signed by Kevin A. Sposito
on 06/04/2019 at 14:13.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19s43.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 22:57 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 04-Jun-2019 14:12 rrm00219

Sample Name: VHB03 Lab Sample ID: 1053351

Digitally signed by Kevin A. Sposito
on 06/04/2019 at 14:13.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19s43.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 22:57 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 04-Jun-2019 14:12 rrm00219

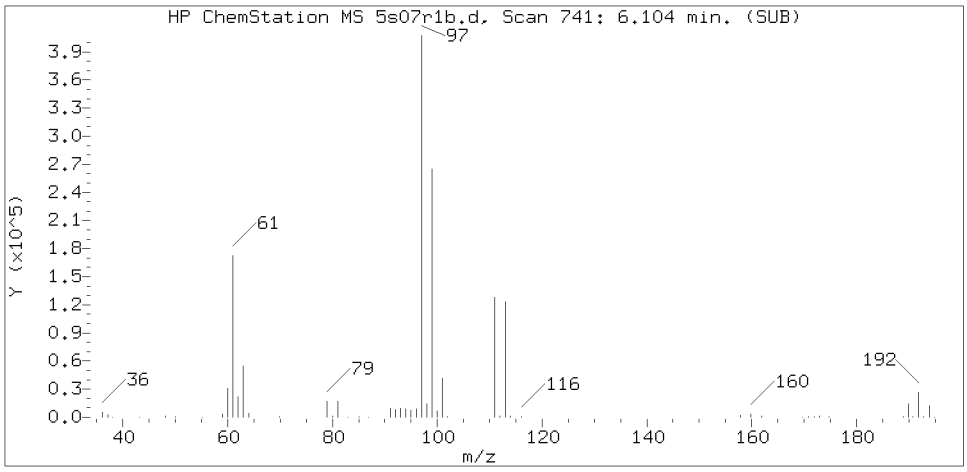
Sample Name: VHB03 Lab Sample ID: 1053351

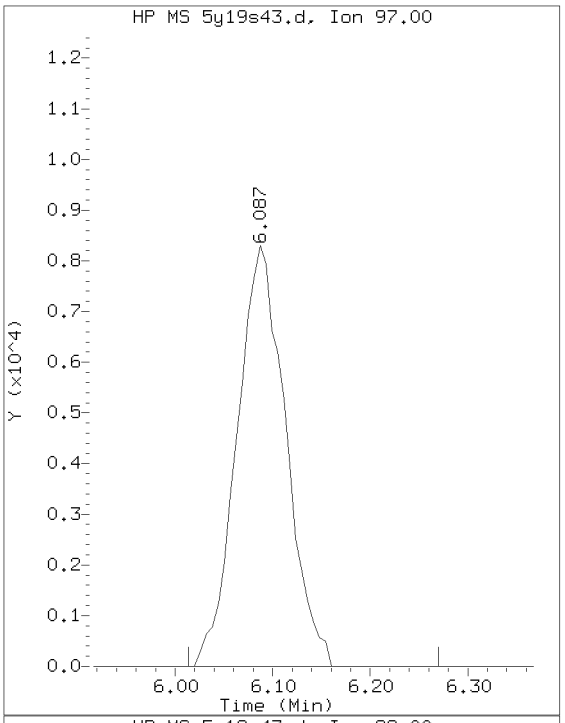
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.551	65	227879	250.000
53) 1,1,1-Trichloroethane	(2)	6.087	97	28890A	5.052
52)$Dibromofluoromethane	(2)	6.099	113	205120	59.599
57)$1,2-Dichloroethane-d4	(2)	6.569	102	43902	54.517
66)*Fluorobenzene	(2)	7.008	96	719223	50.000
84)$Toluene-d8	(3)	9.135	98	702903	48.661
101)*Chlorobenzene-d5	(3)	10.726	117	572273	50.000
115)$4-Bromofluorobenzene	(3)	11.793	95	271993	48.392
132)*1,4-Dichlorobenzene-d4	(4)	12.708	152	314654	50.000

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

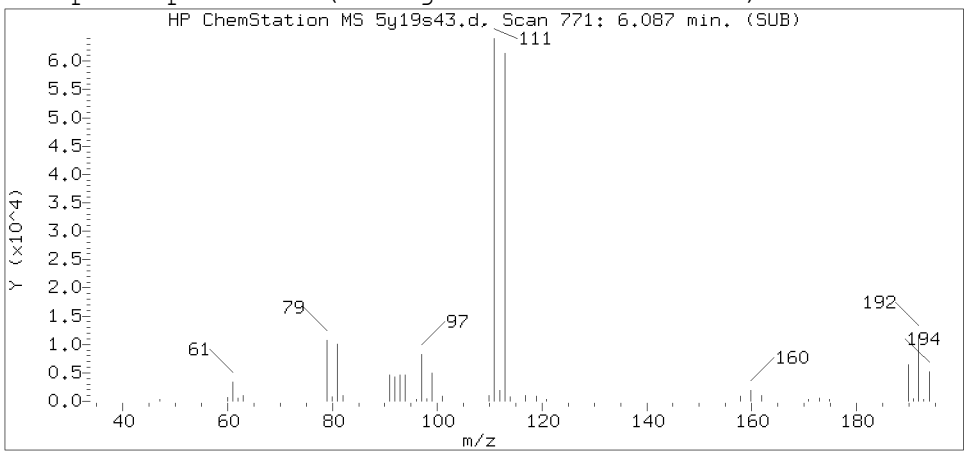
Digitally signed by Kevin A. Sposito
on 06/04/2019 at 14:13.
Target 3.5 esignature user ID: kas02648

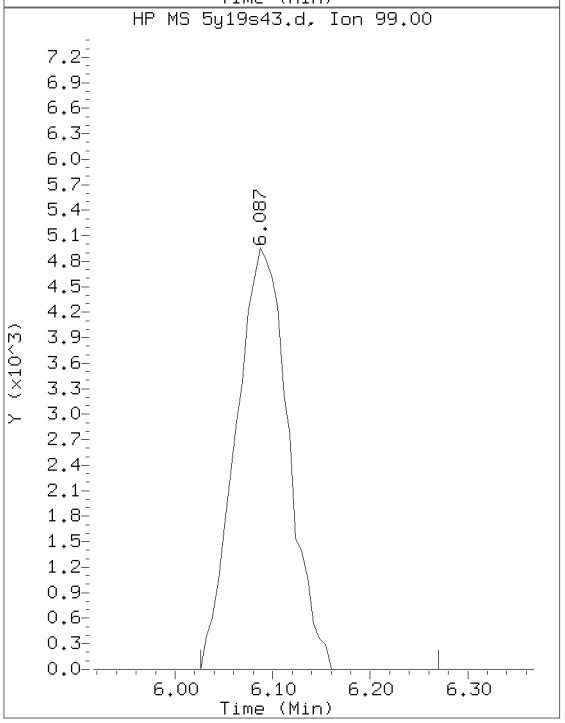
Reference Standard Spectrum for 1,1,1-Trichloroethane



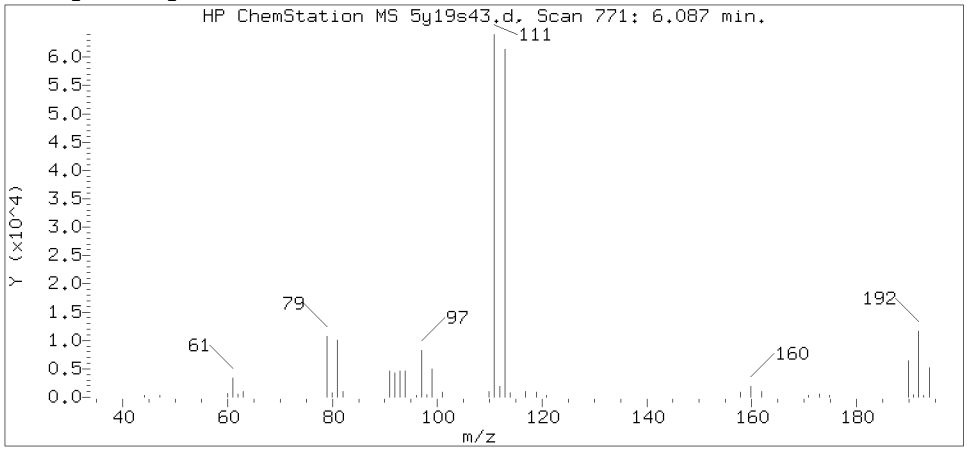


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP26285.i/19may19a.b/5y19s43.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 22:57 Analyst ID: DVV10203

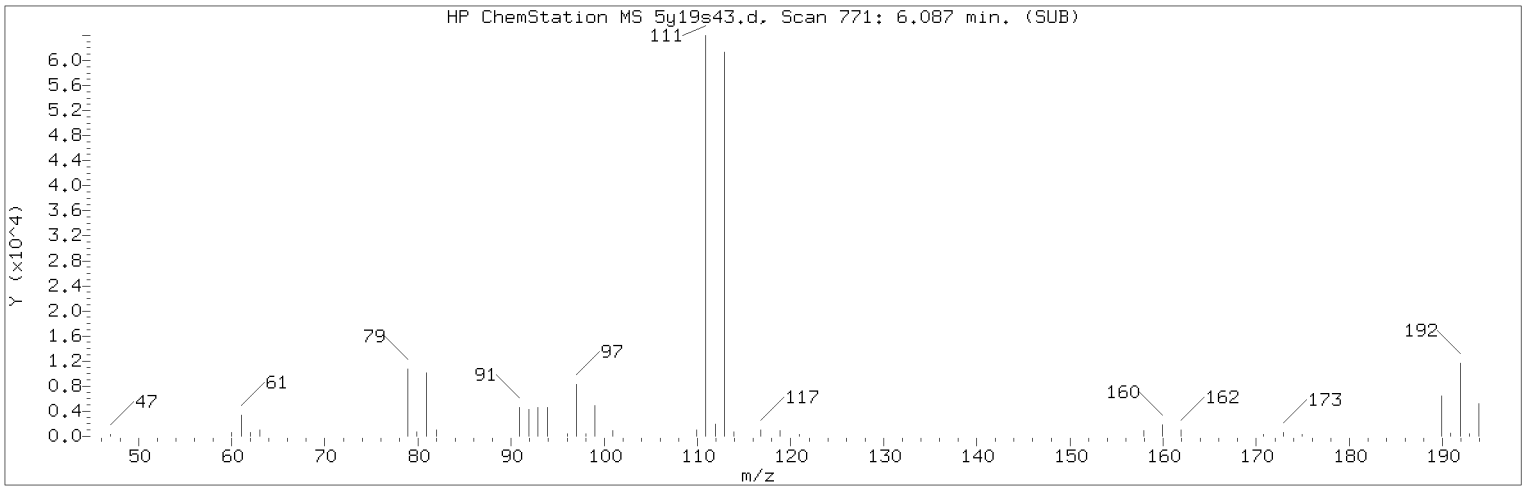
Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 04-Jun-2019 14:12 rrm00219

Sample Name: VHB03 Lab Sample ID: 1053351

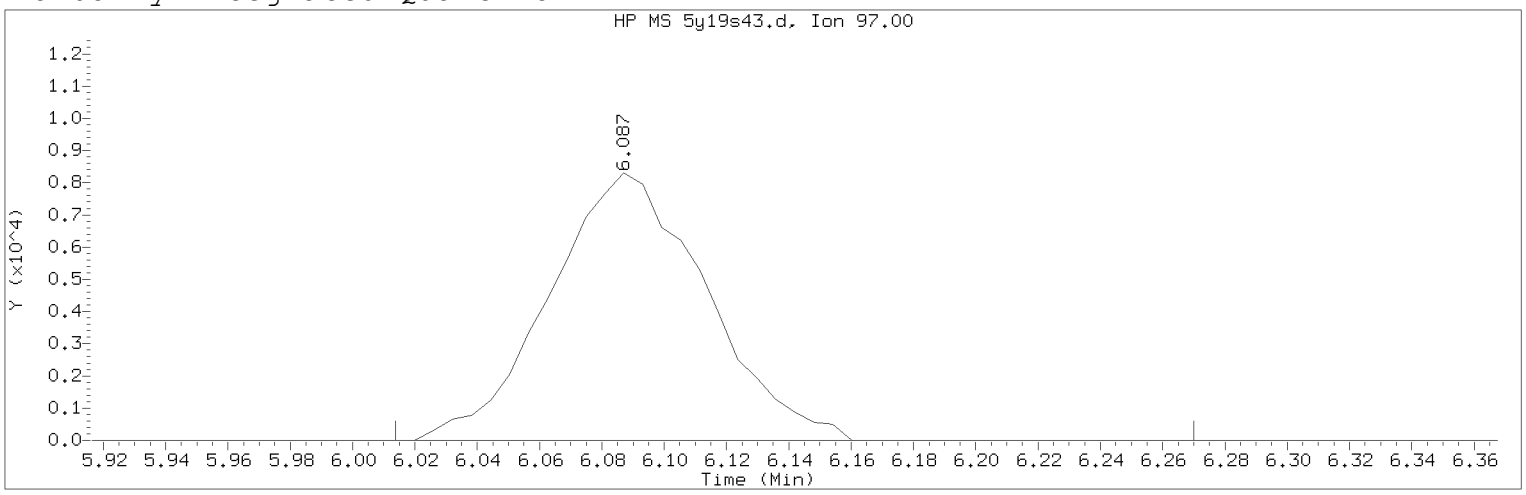
Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 771
Retention Time (minutes)	: 6.087
Relative Retention Time	:-0.00011
Quant Ion	: 97.00
Area (flag)	: 28890A
On-Column Amount (ng)	: 5.0524

Digitally signed by Kevin A. Sposito on 06/04/2019 at 14:13.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s43.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 22:57 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 04-Jun-2019 14:12 rrm00219

Sample Name: VHB03 Lab Sample ID: 1053351

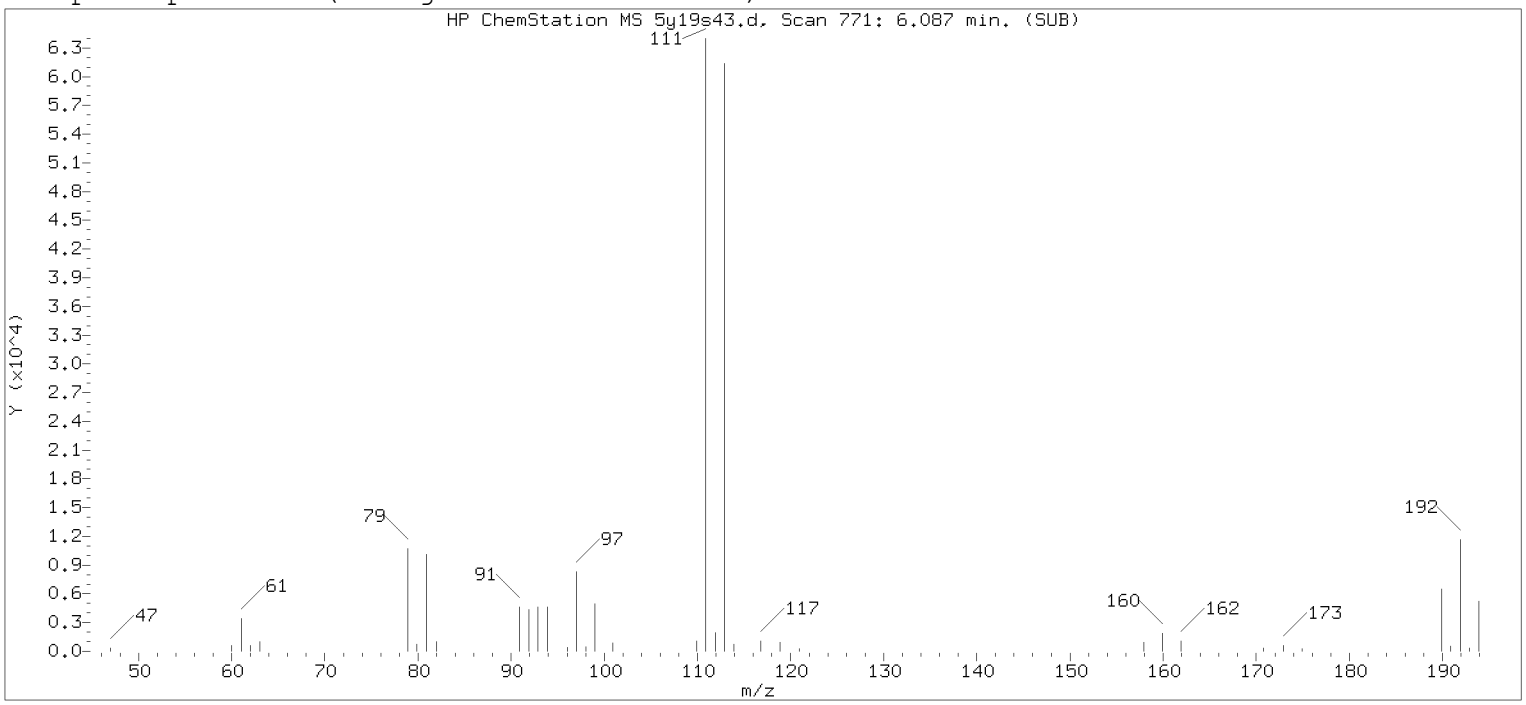
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 771
Retention Time (minutes): 6.087
Quant Ion : 97.00
Area (flag) : 28890A
On-Column Amount (ng) : 5.0524
Integration start scan : 758 Integration stop scan: 800
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

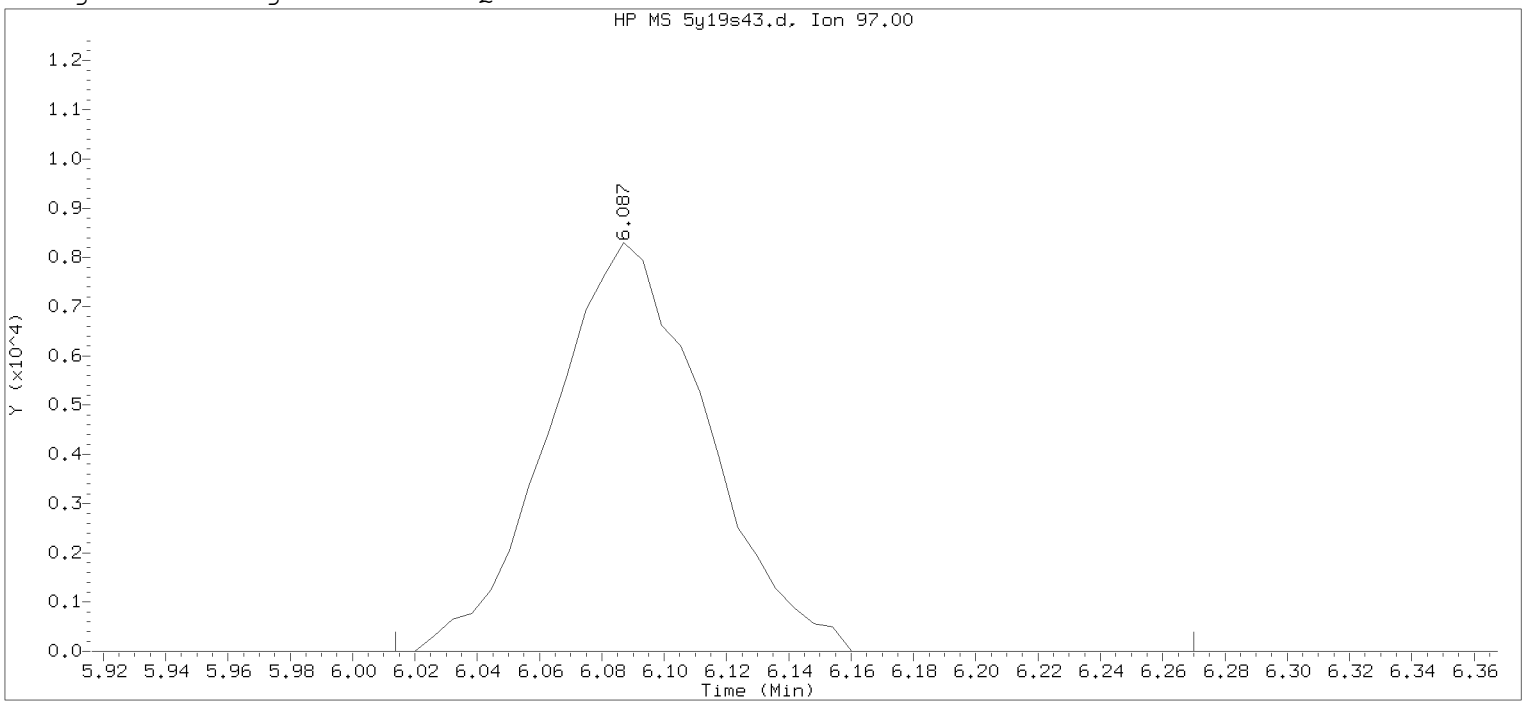
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 06/04/2019 at 14:13.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 14:19.
PARALLAX ID: rrm00219

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s43.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 22:57 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 19-MAY-2019 16:11
Date, time and analyst ID of latest file update: 19-May-2019 23:16 Unknown

Sample Name: VHB03 Lab Sample ID: 1053351

Compound Number	: 53		
Compound Name	: 1,1,1-Trichloroethane		
Scan Number	: 771		
Retention Time (minutes)	: 6.087		
Quant Ion	: 97.00		
Area	: 28890		
On-column Amount (ng)	: 5.0525		
Integration start scan	: 758	Integration stop scan:	800
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 06/04/2019 at 14:13.
Target 3.5 esignature user ID: KASPOSITO

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VHB04

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053352

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s15.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	0.7	J
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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VHB04 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1053352

Data file: /chem2/HP09137.i/19may18a.b/wy18s15.d Injection date and time: **19-MAY-2019 04:50**
Data file Sample Info. Line: VHB04;1053352;1;0;;JCV87;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.741	(-0.003)	595	65	178385	(-6)	250.00	
66) Fluorobenzene	5.032	(0.000)	1309	96	928725	(-10)	50.00	
101) Chlorobenzene-d5	8.161	(0.000)	2284	117	717617	(-8)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041	(0.000)	2870	152	371056	(-16)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.358	(0.001)	113	209009	48.577	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692	(0.000)	102	56986	49.800	100%		80 - 120
84) Toluene-d8	(3)	6.698	(0.000)	98	900527	50.079	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.000)	95	314249	43.683	87%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	5.408	(0.000)	95	3394	0.720	0.72		J	0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Linda C. Pape on 05/28/2019 at 15:01. Target 3.5 esignature user ID: lcp00895

Data file: /chem2/HP09137.i/19may18a.b/wy18s15.d Injection date and time: **19-MAY-2019 04:50**
Data file Sample Info. Line: VHB04;1053352;1;0;;JCV87;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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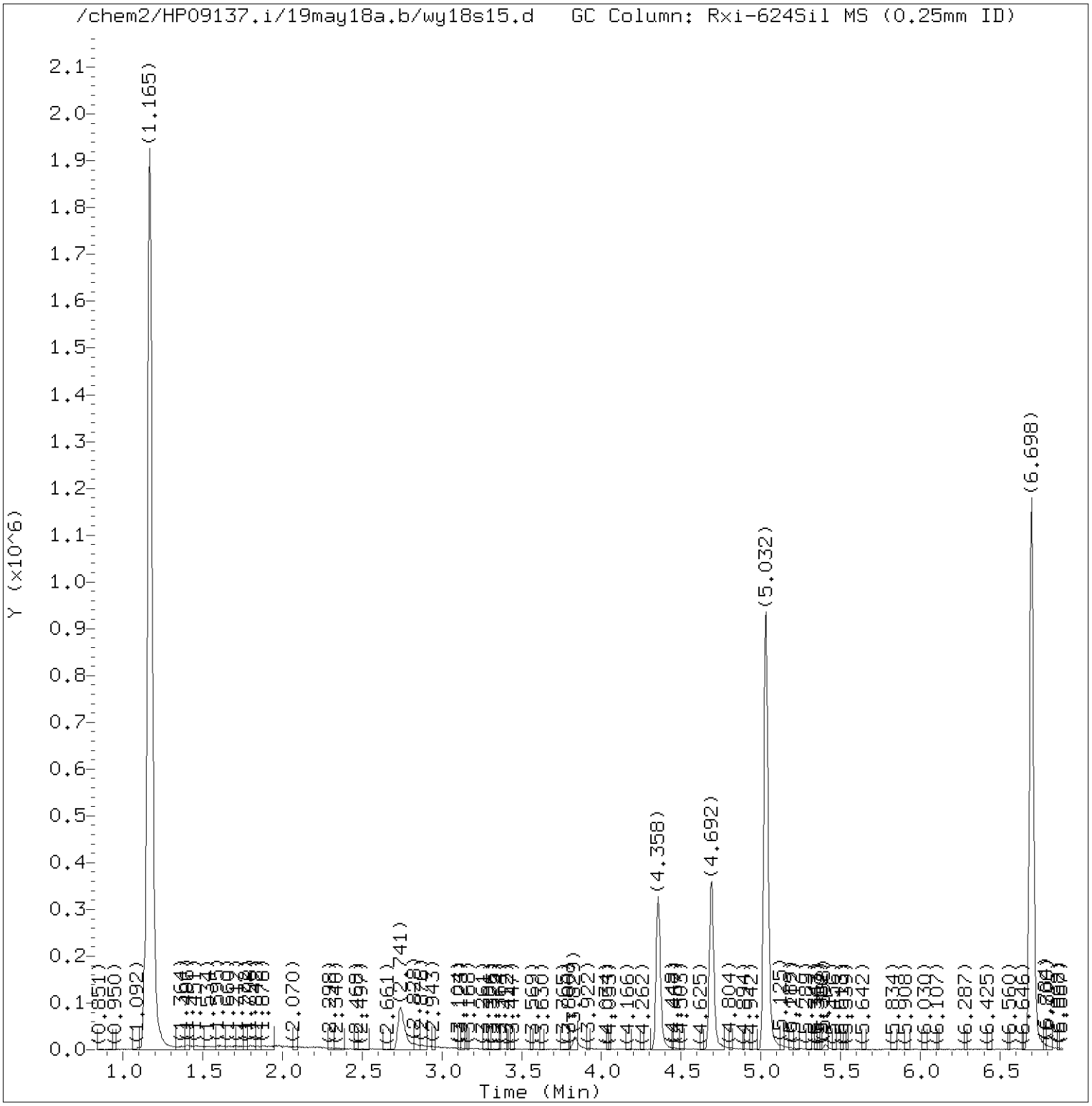
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Linda C. Pape on 05/28/2019 at 15:01. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 15:40. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

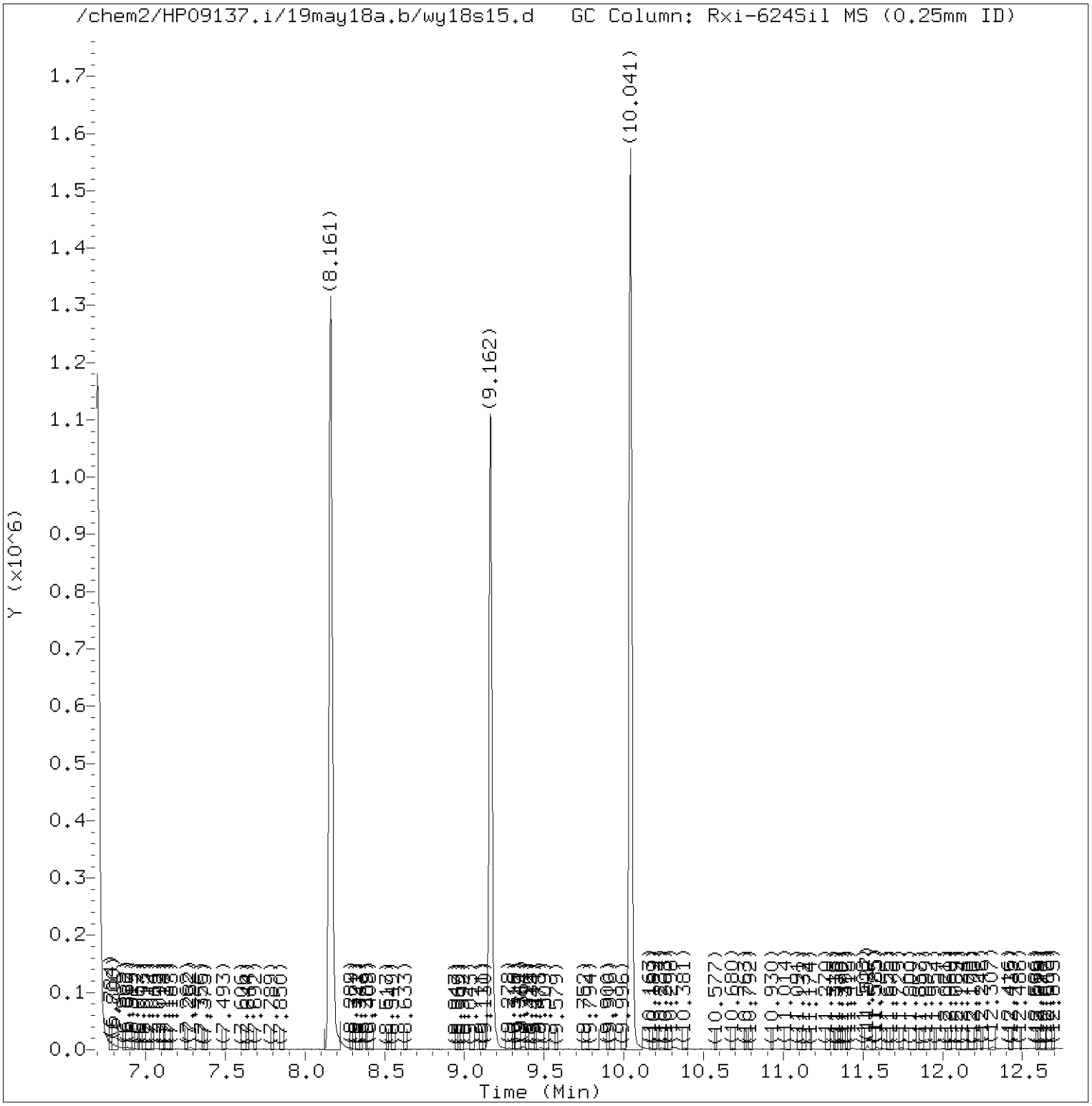
Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s15.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 04:50 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: VHB04 Lab Sample ID: 1053352

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:01.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s15.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 04:50 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: VHB04 Lab Sample ID: 1053352

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:01.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s15.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 04:50 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

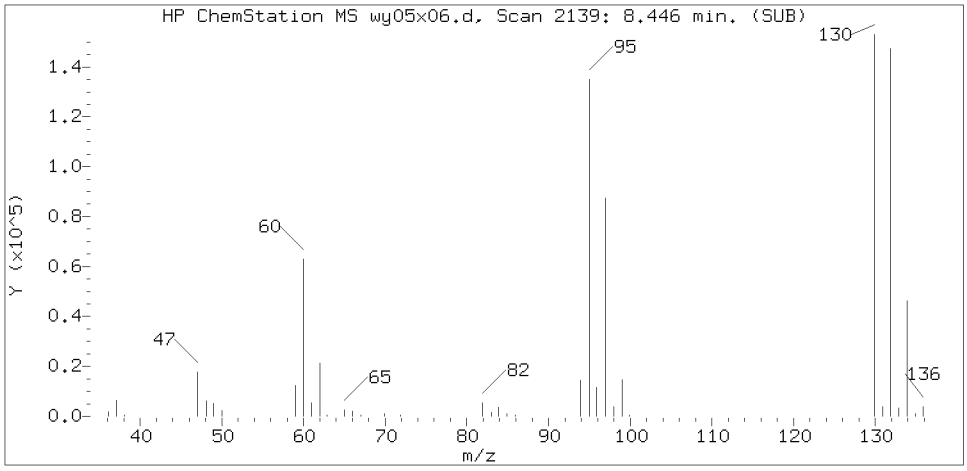
Sample Name: VHB04 Lab Sample ID: 1053352

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.741	65	178385	250.000
52)$Dibromofluoromethane	(2)	4.358	113	209009	48.577
57)$1,2-Dichloroethane-d4	(2)	4.692	102	56986	49.800
66)*Fluorobenzene	(2)	5.032	96	928725	50.000
71) Trichloroethene	(2)	5.408	95	3394	0.720
84)$Toluene-d8	(3)	6.698	98	900527	50.079
101)*Chlorobenzene-d5	(3)	8.161	117	717617	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	314249	43.683
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	371056	50.000

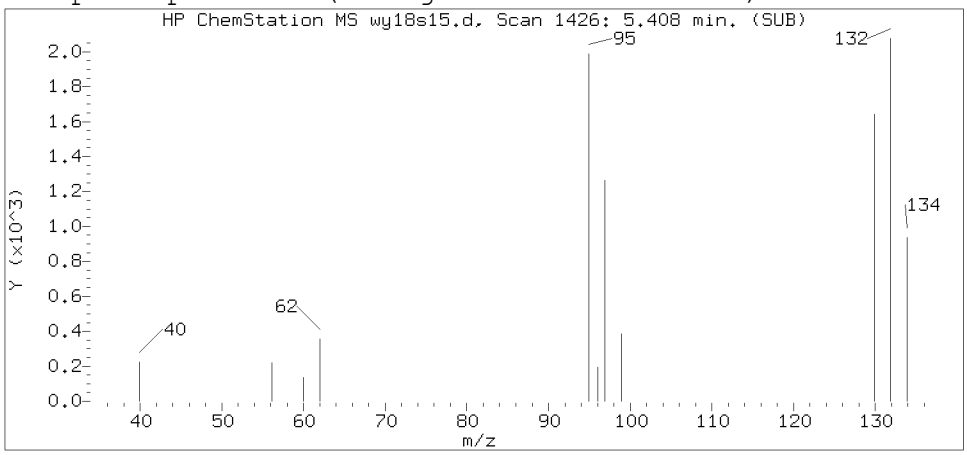
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:01.
Target 3.5 esignature user ID: lcp00895

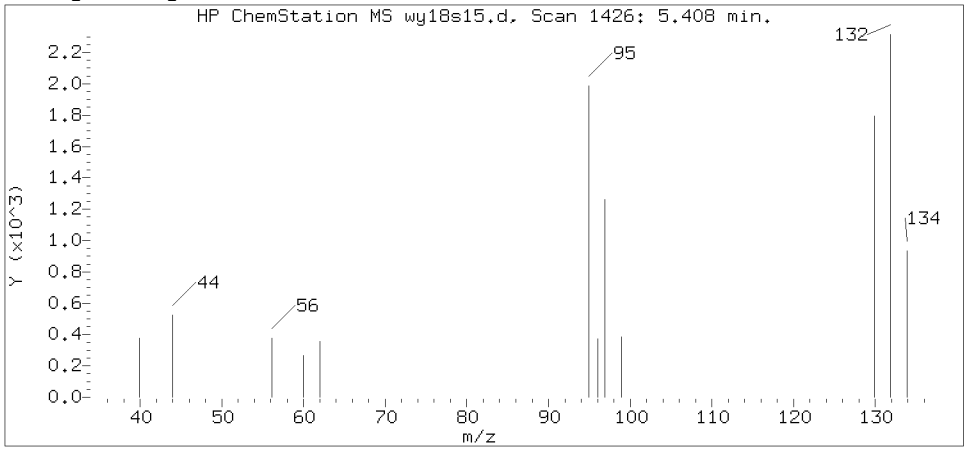
Reference Standard Spectrum for Trichloroethene

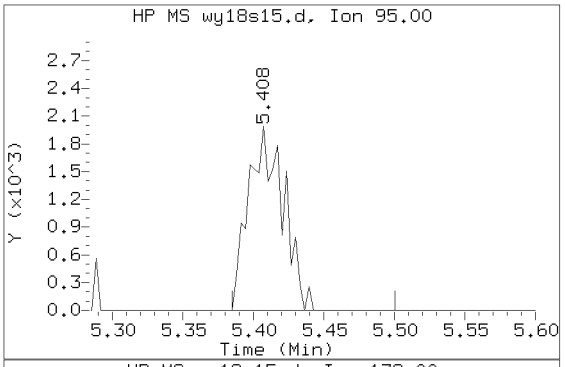


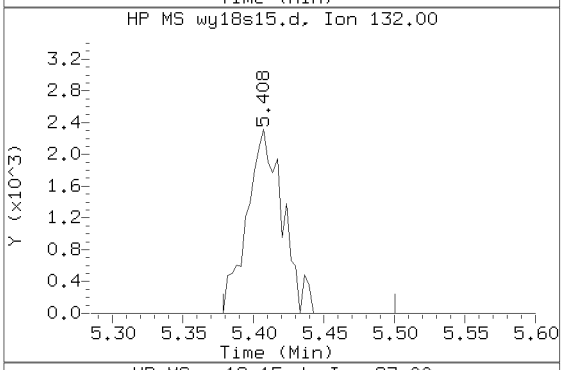
Sample Spectrum (Background Subtracted)

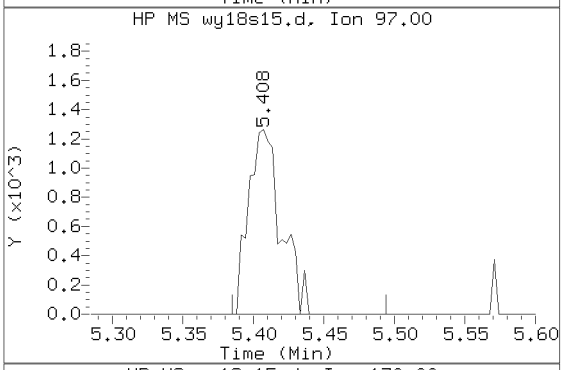


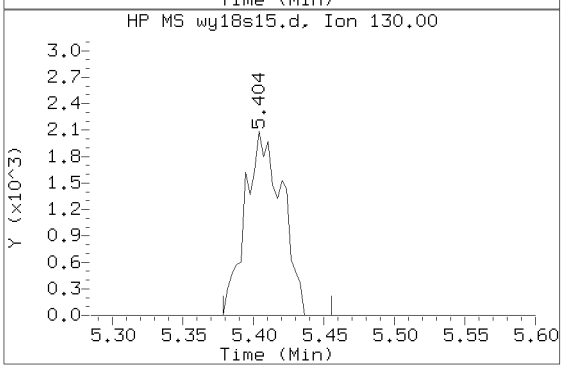
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/19may18a.b/wy18s15.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 04:50 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: VHB04 Lab Sample ID: 1053352

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 1426
Retention Time (minutes)	: 5.408
Relative Retention Time	: 0.00000
Quant Ion	: 95.00
Area (flag)	: 3394
On-Column Amount (ng)	: 0.7201

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Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VHB05

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053353

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s16.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L		Q
75-01-4	Vinyl Chloride		1	U
75-35-4	1,1-Dichloroethene		1	U
67-64-1	Acetone		20	U
76-13-1	Freon 113		10	U
75-15-0	Carbon Disulfide		5	U
75-09-2	Methylene Chloride		1	U
156-60-5	trans-1,2-Dichloroethene		1	U
75-34-3	1,1-Dichloroethane		1	U
156-59-2	cis-1,2-Dichloroethene		1	U
78-93-3	2-Butanone		10	U
67-66-3	Chloroform		1	U
71-55-6	1,1,1-Trichloroethane		1	U
71-43-2	Benzene		1	U
107-06-2	1,2-Dichloroethane		1	U
79-01-6	Trichloroethene		2	
123-91-1	1,4-Dioxane		250	U
108-88-3	Toluene		1	U
127-18-4	Tetrachloroethene		1	U
100-41-4	Ethylbenzene		1	U
179601-23-1	m+p-Xylene		5	U
95-47-6	o-Xylene		1	U
1330-20-7	Xylene (Total)		5	U
95-50-1	1,2-Dichlorobenzene		5	U
91-20-3	Naphthalene		5	U

VHB05 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1053353

Data file: /chem2/HP09137.i/19may18a.b/wy18s16.d Injection date and time: **19-MAY-2019 05:14**
Data file Sample Info. Line: VHB05;1053353;1;0;;JCV87;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.741	(-0.003)	595	65	157253	(-17)	250.00	
66) Fluorobenzene	5.032	(0.000)	1309	96	917983	(-11)	50.00	
101) Chlorobenzene-d5	8.161	(0.000)	2284	117	710608	(-9)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041	(0.000)	2870	152	363159	(-18)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.355	(0.001)	113	204162	48.006	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692	(0.000)	102	57943	51.229	102%		80 - 120
84) Toluene-d8	(3)	6.698	(0.000)	98	885882	49.751	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.165	(0.000)	95	305834	42.932	86%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	5.404	(0.000)	95	7952	1.707	1.71			0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Linda C. Pape on 05/28/2019 at 15:03. Target 3.5 esignature user ID: lcp00895

Data file: /chem2/HP09137.i/19may18a.b/wy18s16.d Injection date and time: **19-MAY-2019 05:14**
Data file Sample Info. Line: VHB05;1053353;1;0;;JCV87;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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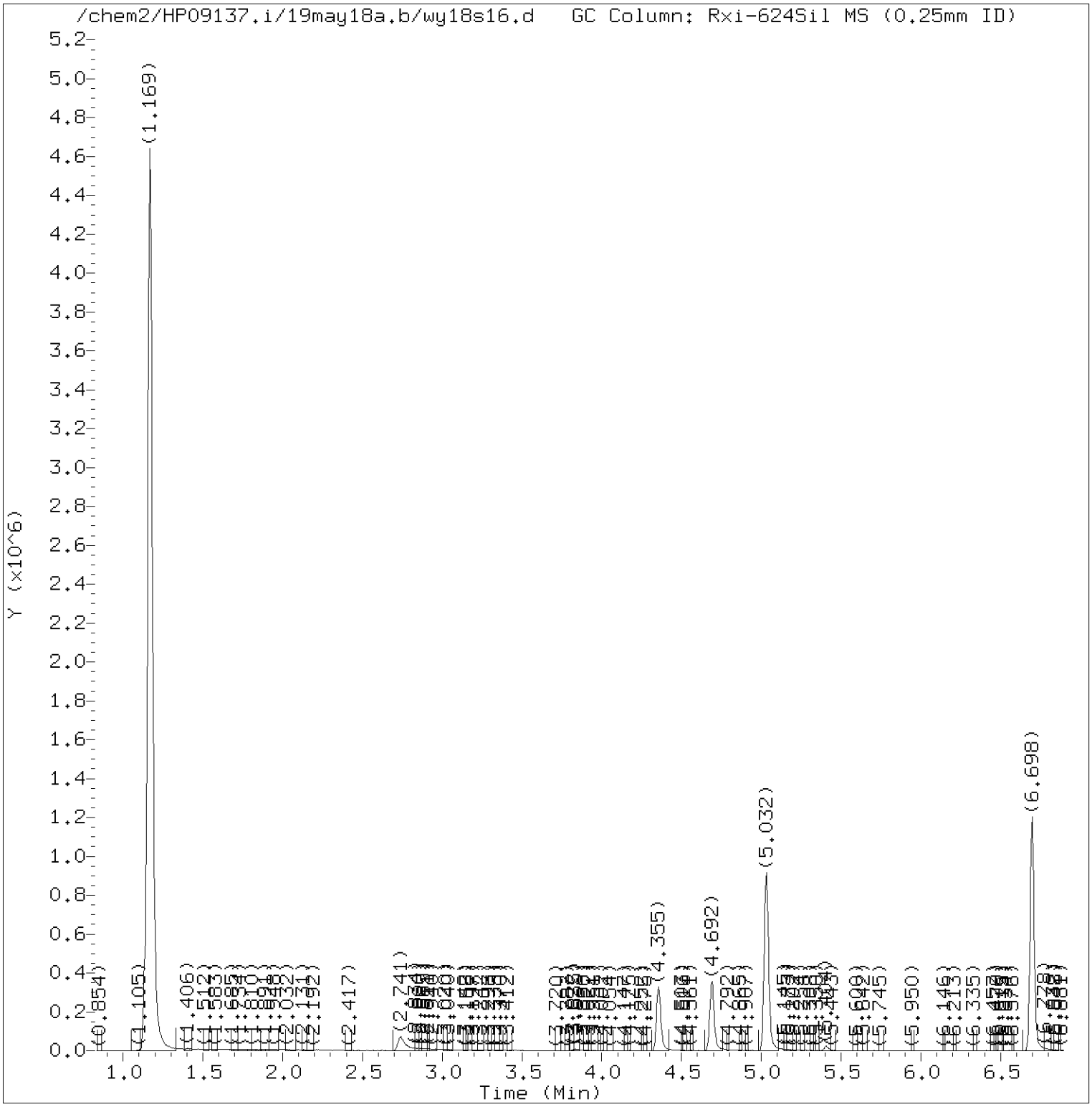
Total number of targets = 24

Digitally signed by Linda C. Pape on 05/28/2019 at 15:03. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 15:40. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

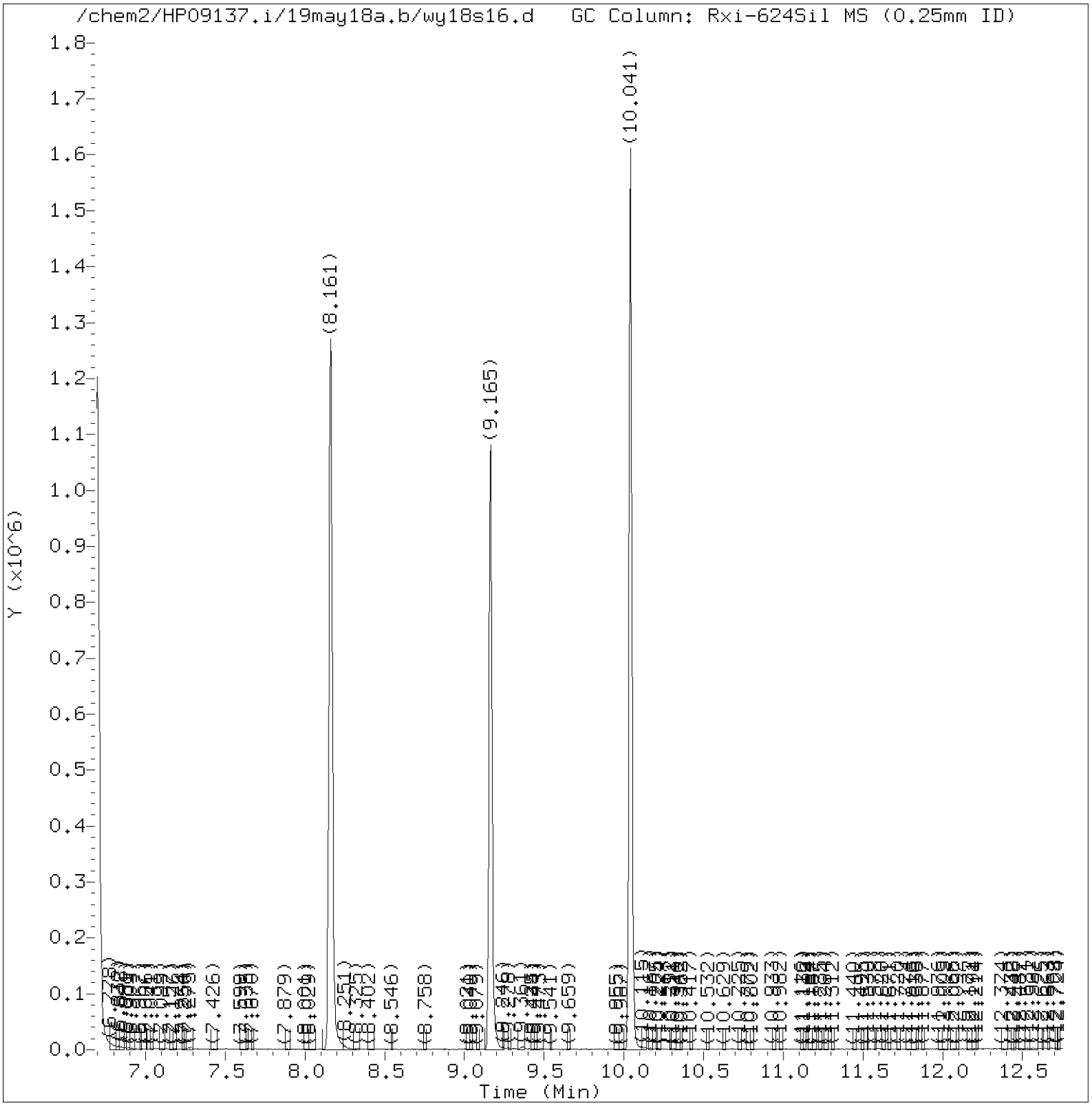
Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s16.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 05:14 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: VHB05 Lab Sample ID: 1053353

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:03.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s16.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 05:14 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: VHB05 Lab Sample ID: 1053353

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:03.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s16.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 05:14 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

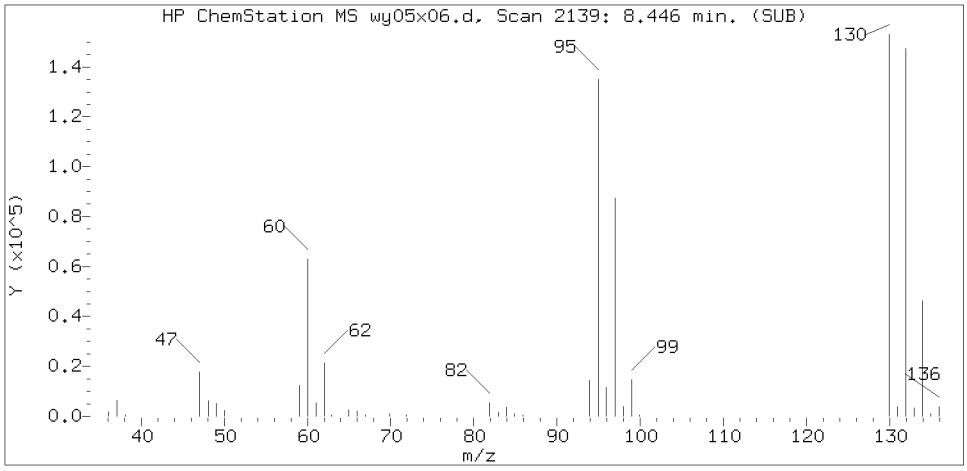
Sample Name: VHB05 Lab Sample ID: 1053353

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.741	65	157253	250.000
52)$Dibromofluoromethane	(2)	4.355	113	204162	48.006
57)$1,2-Dichloroethane-d4	(2)	4.692	102	57943	51.229
66)*Fluorobenzene	(2)	5.032	96	917983	50.000
71) Trichloroethene	(2)	5.404	95	7952	1.707
84)$Toluene-d8	(3)	6.698	98	885882	49.751
101)*Chlorobenzene-d5	(3)	8.161	117	710608	50.000
115)$4-Bromofluorobenzene	(3)	9.165	95	305834	42.932
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	363159	50.000

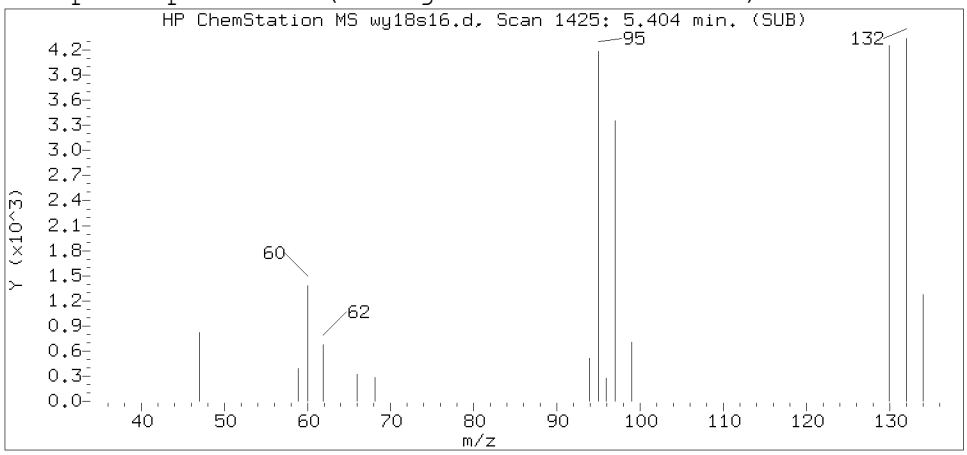
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:03.
Target 3.5 esignature user ID: lcp00895

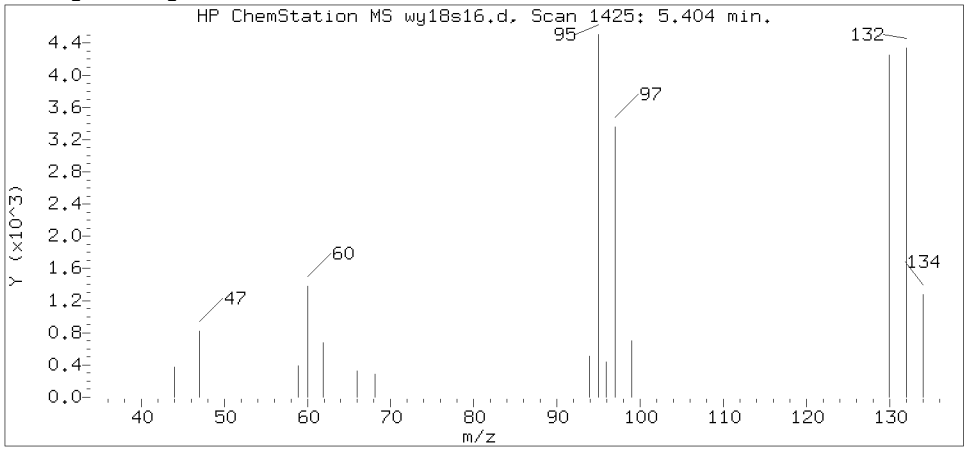
Reference Standard Spectrum for Trichloroethene

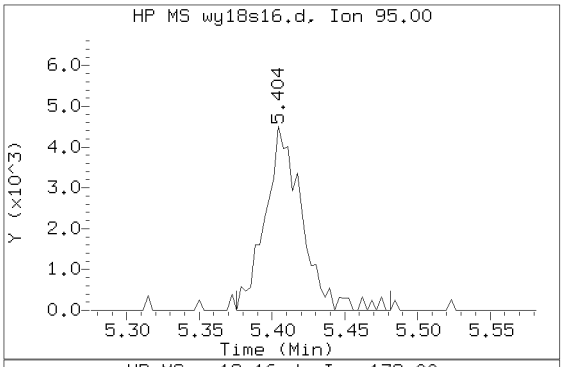


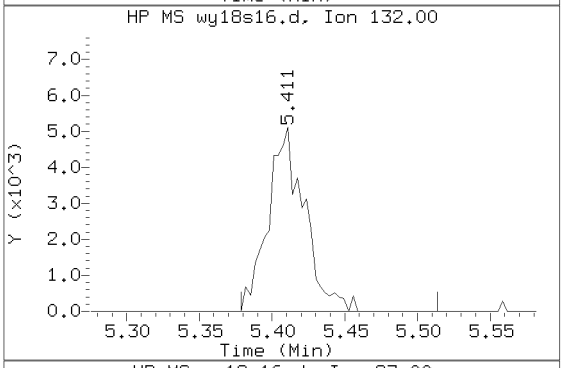
Sample Spectrum (Background Subtracted)

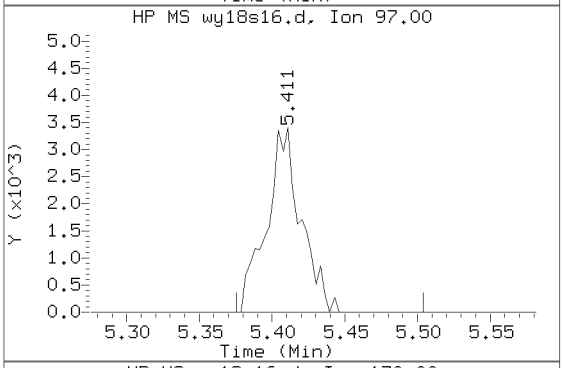


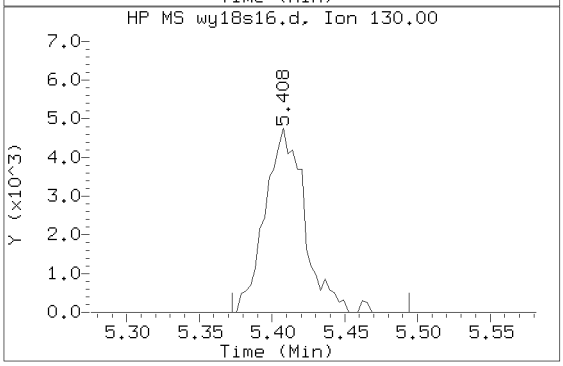
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/19may18a.b/wy18s16.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 05:14 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: VHB05 Lab Sample ID: 1053353

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 1425
Retention Time (minutes)	: 5.404
Relative Retention Time	: 0.00064
Quant Ion	: 95.00
Area (flag)	: 7952
On-Column Amount (ng)	: 1.7067

Digitally signed by Linda C. Pape on 05/28/2019 at 15:03.
Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VHB06

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053354

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s17.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

VHB06 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1053354

Data file: /chem2/HP09137.i/19may18a.b/wy18s17.d Injection date and time: **19-MAY-2019 05:38**
Data file Sample Info. Line: VHB06;1053354;1;0;;JCV87;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.744 (-0.007)	596	65	147925 (-22)	250.00	
66) Fluorobenzene	5.032 (0.000)	1309	96	925895 (-10)	50.00	
101) Chlorobenzene-d5	8.161 (0.000)	2284	117	721769 (-7)	50.00	
132) 1,4-Dichlorobenzene-d4	10.042 (0.000)	2870	152	368493 (-17)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.355 (0.001)	113	210006	48.958	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.686 (0.001)	102	57440	50.350	101%		80 - 120
84) Toluene-d8	(3)	6.698 (0.000)	98	897518	49.625	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.165 (0.000)	95	306087	42.303	85%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)			Not Detected					0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Linda C. Pape on 05/28/2019 at 15:03. Target 3.5 esignature user ID: lcp00895

VHB06 Lancaster Laboratories 1053354
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may18a.b/wy18s17.d Injection date and time: **19-MAY-2019 05:38**
Data file Sample Info. Line: VHB06;1053354;1;0;;JCV87;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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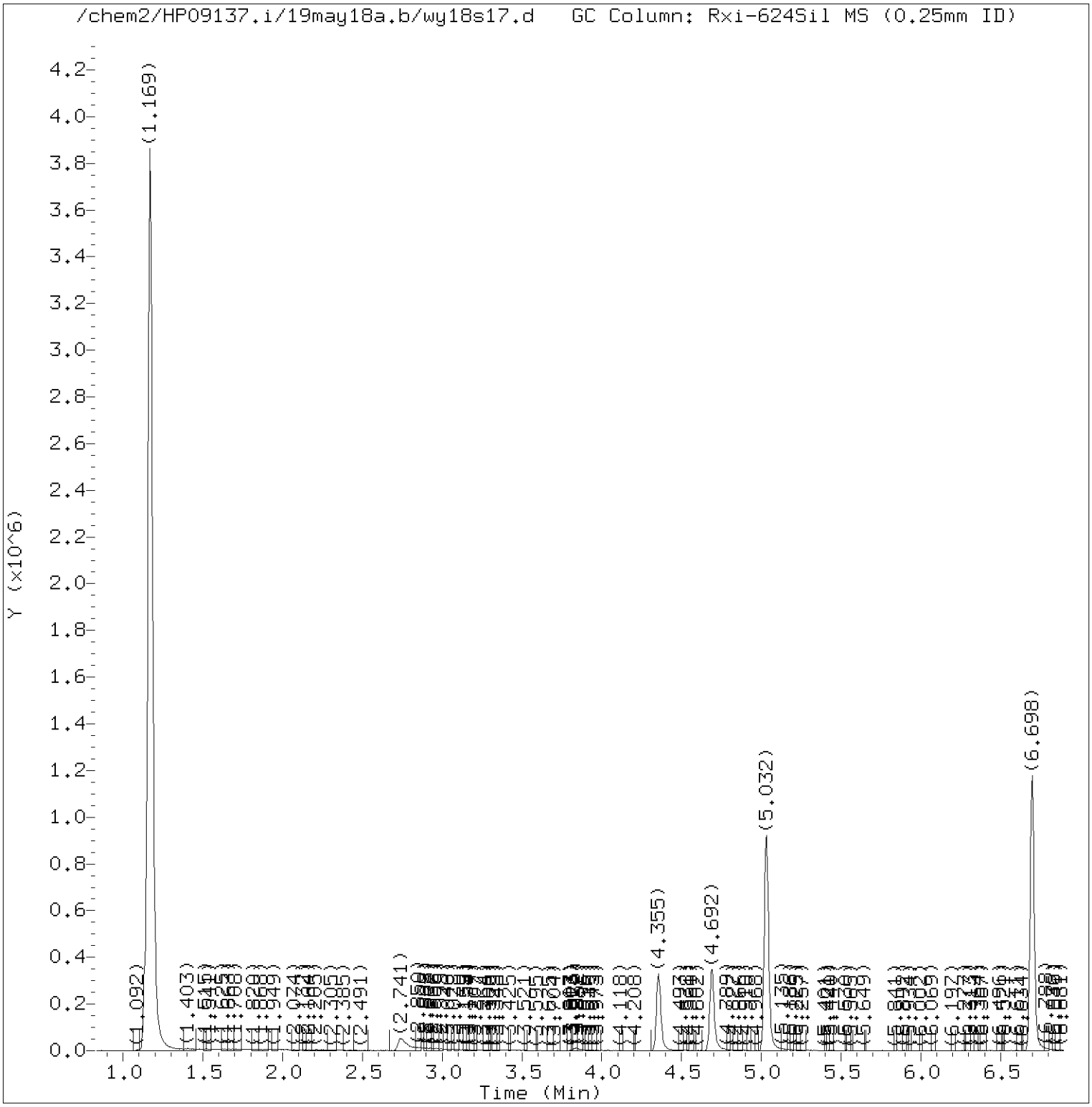
Total number of targets = 24

Digitally signed by Linda C. Pape on 05/28/2019 at 15:03. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 15:40. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

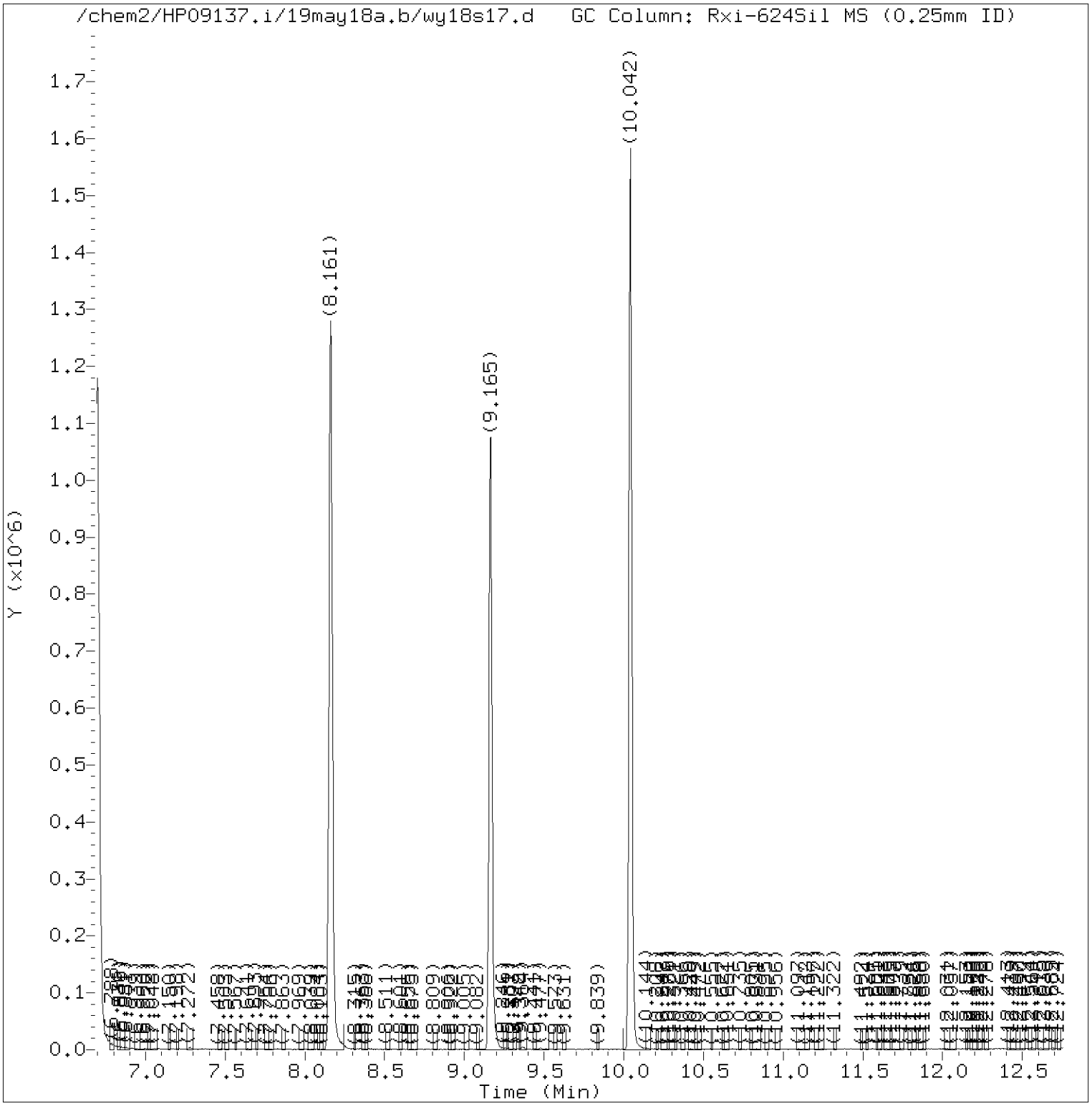
Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s17.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 05:38 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: VHB06 Lab Sample ID: 1053354

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:03.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s17.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 05:38 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: VHB06 Lab Sample ID: 1053354

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:03.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s17.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 05:38 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: VHB06 Lab Sample ID: 1053354

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.744	65	147925	250.000
52)$Dibromofluoromethane	(2)	4.355	113	210006	48.958
57)$1,2-Dichloroethane-d4	(2)	4.686	102	57440	50.350
66)*Fluorobenzene	(2)	5.032	96	925895	50.000
84)$Toluene-d8	(3)	6.698	98	897518	49.625
101)*Chlorobenzene-d5	(3)	8.161	117	721769	50.000
115)$4-Bromofluorobenzene	(3)	9.165	95	306087	42.303
132)*1,4-Dichlorobenzene-d4	(4)	10.042	152	368493	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:03.
Target 3.5 esignature user ID: lcp00895

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
VHB07

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053355

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s18.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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VHB07 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1053355

Data file: /chem2/HP09137.i/19may18a.b/wy18s18.d Injection date and time: **19-MAY-2019 06:01**
Data file Sample Info. Line: VHB07;1053355;1;0;;JCV87;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.744 (-0.006)	596	65	166431 (-12)	250.00	
66) Fluorobenzene	5.032 (0.000)	1309	96	910763 (-11)	50.00	
101) Chlorobenzene-d5	8.161 (0.000)	2284	117	705796 (-9)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041 (0.000)	2870	152	359701 (-19)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.355 (0.001)	113	206831	49.019	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.689 (0.001)	102	57903	51.599	103%		80 - 120
84) Toluene-d8	(3)	6.695 (0.001)	98	874127	49.425	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162 (0.000)	95	301642	42.633	85%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)			Not Detected					0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Linda C. Pape on 05/28/2019 at 15:03. Target 3.5 esignature user ID: lcp00895

VHB07 Lancaster Laboratories 1053355
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may18a.b/wy18s18.d Injection date and time: **19-MAY-2019 06:01**
Data file Sample Info. Line: VHB07;1053355;1;0;;JCV87;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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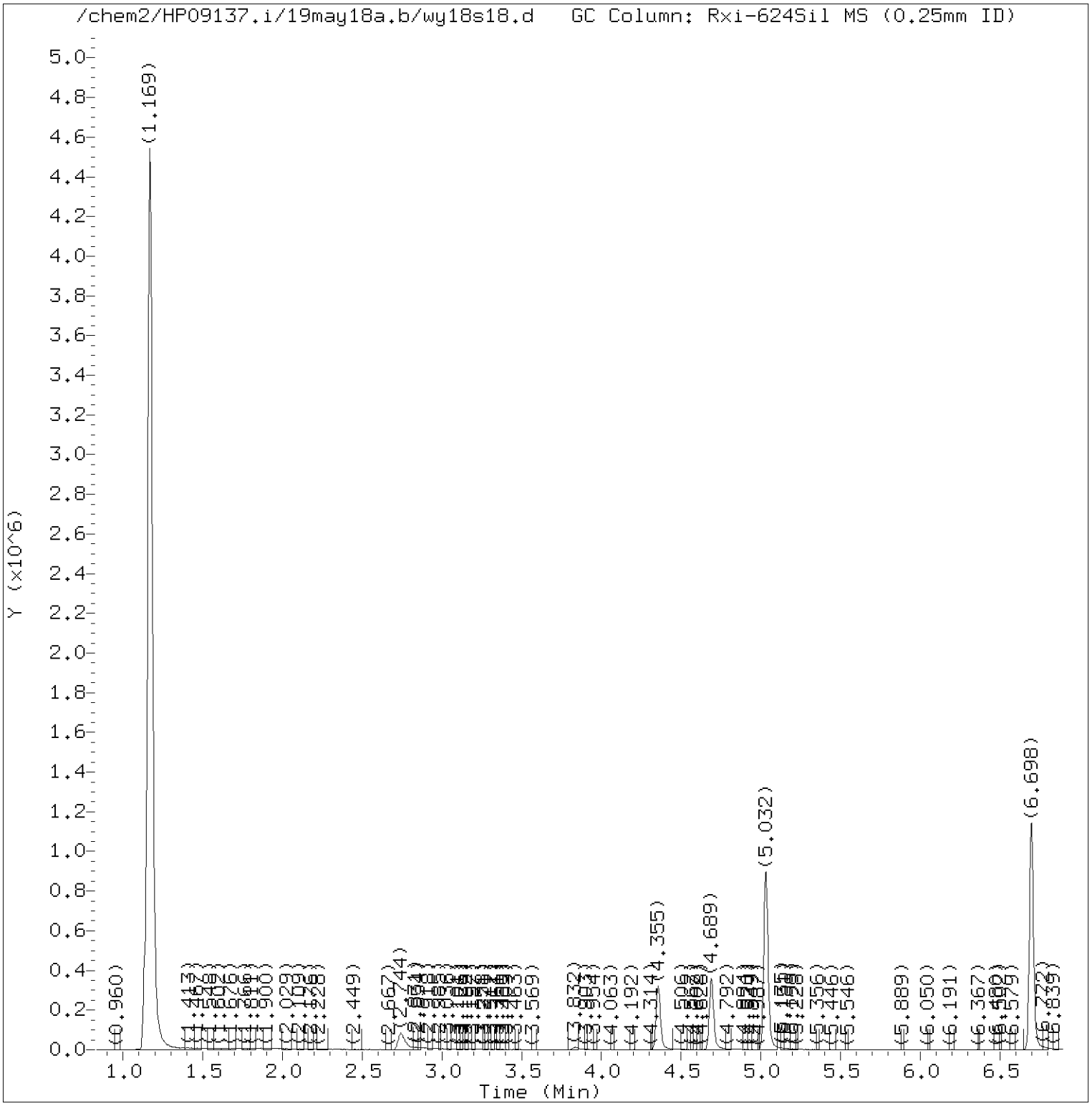
Total number of targets = 24

Digitally signed by Linda C. Pape on 05/28/2019 at 15:03. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 15:40. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

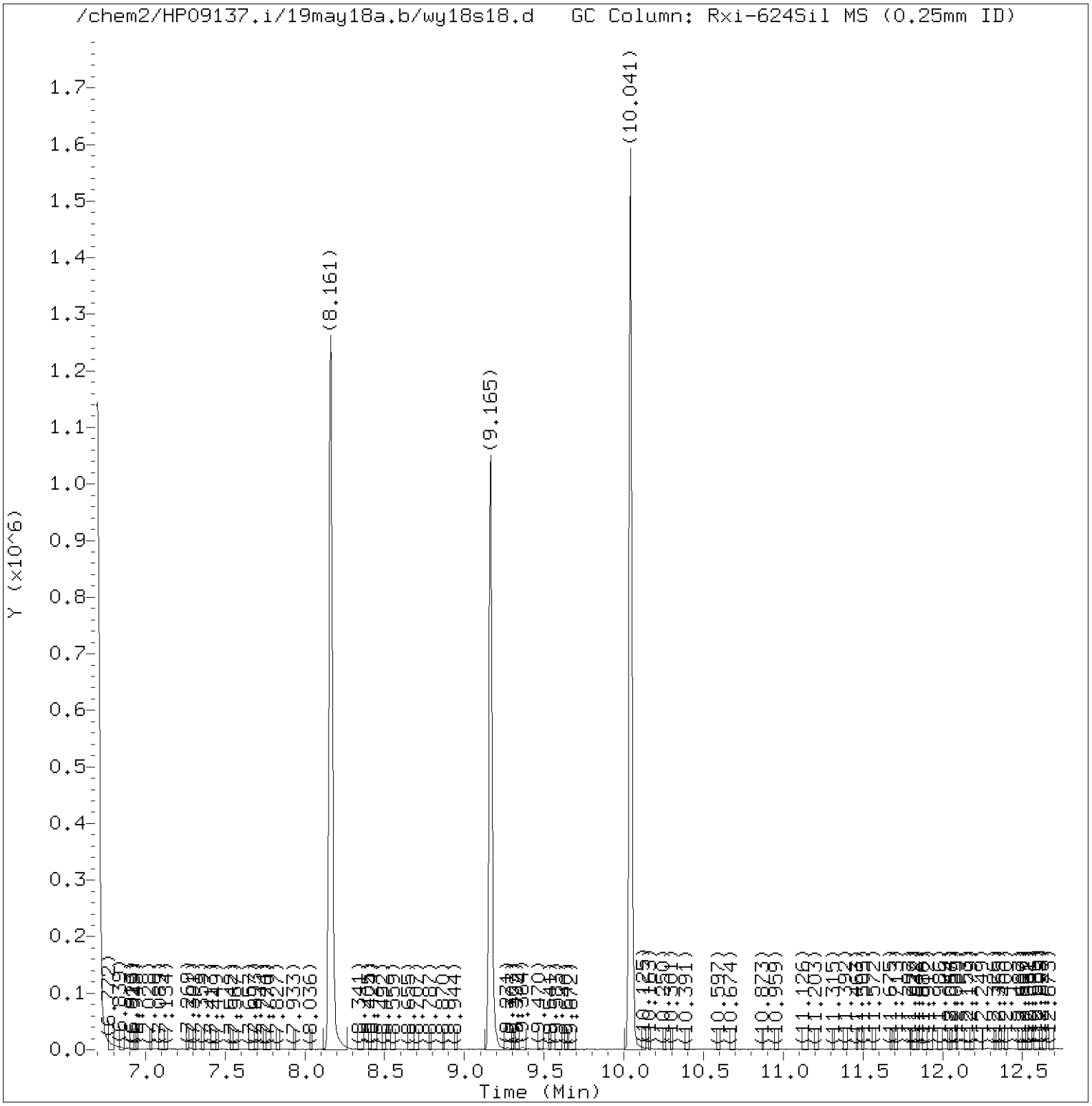
Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s18.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 06:01 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: VHB07 Lab Sample ID: 1053355

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:03.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s18.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 06:01 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: VHB07 Lab Sample ID: 1053355

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:03.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s18.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 06:01 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: VHB07 Lab Sample ID: 1053355

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.744	65	166431	250.000
52)$Dibromofluoromethane	(2)	4.355	113	206831	49.019
57)$1,2-Dichloroethane-d4	(2)	4.689	102	57903	51.599
66)*Fluorobenzene	(2)	5.032	96	910763	50.000
84)$Toluene-d8	(3)	6.695	98	874127	49.425
101)*Chlorobenzene-d5	(3)	8.161	117	705796	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	301642	42.633
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	359701	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:03.
Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VHB08

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053356

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s19.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	0.3	J
71-55-6	1,1,1-Trichloroethane	0.6	J
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	0.8	J
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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VHB08 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1053356

Data file: /chem2/HP09137.i/19may18a.b/wy18s19.d Injection date and time: **19-MAY-2019 06:25**
Data file Sample Info. Line: VHB08;1053356;1;0;;JCV87;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.744 (-0.006)	596	65	169028 (-11)	250.00	
66) Fluorobenzene	5.032 (0.000)	1309	96	883199 (-14)	50.00	
101) Chlorobenzene-d5	8.161 (0.000)	2284	117	686111 (-12)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041 (0.000)	2870	152	345609 (-22)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.355 (0.001)	113	202472	49.484	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.689 (0.001)	102	55689	51.175	102%		80 - 120
84) Toluene-d8	(3)	6.698 (0.000)	98	855910	49.784	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162 (0.000)	95	292849	42.577	85%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)	4.204 (-0.000)	83	1912	0.266	0.27		J	0.2	1
53) 1,1,1-Trichloroethane	(2)	4.371 (0.002)	97	3118	0.577	0.58		J	0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	5.408 (0.000)	95	3773	0.842	0.84		J	0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Linda C. Pape on 05/28/2019 at 15:04. Target 3.5 esignature user ID: lcp00895

Data file: /chem2/HP09137.i/19may18a.b/wy18s19.d Injection date and time: **19-MAY-2019 06:25**
Data file Sample Info. Line: VHB08;1053356;1;0;;JCV87;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

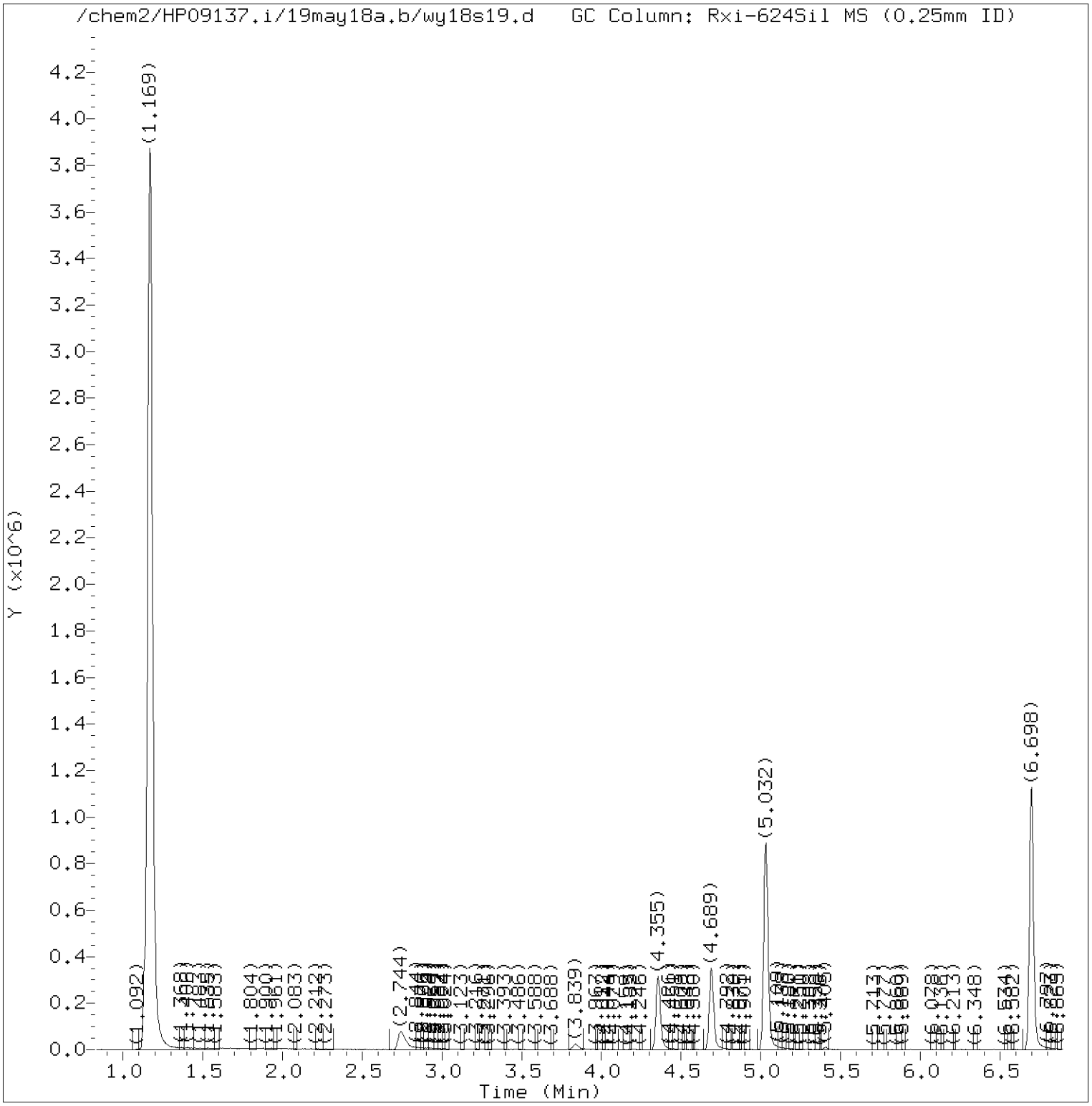
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Linda C. Pape on 05/28/2019 at 15:04. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 15:40. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

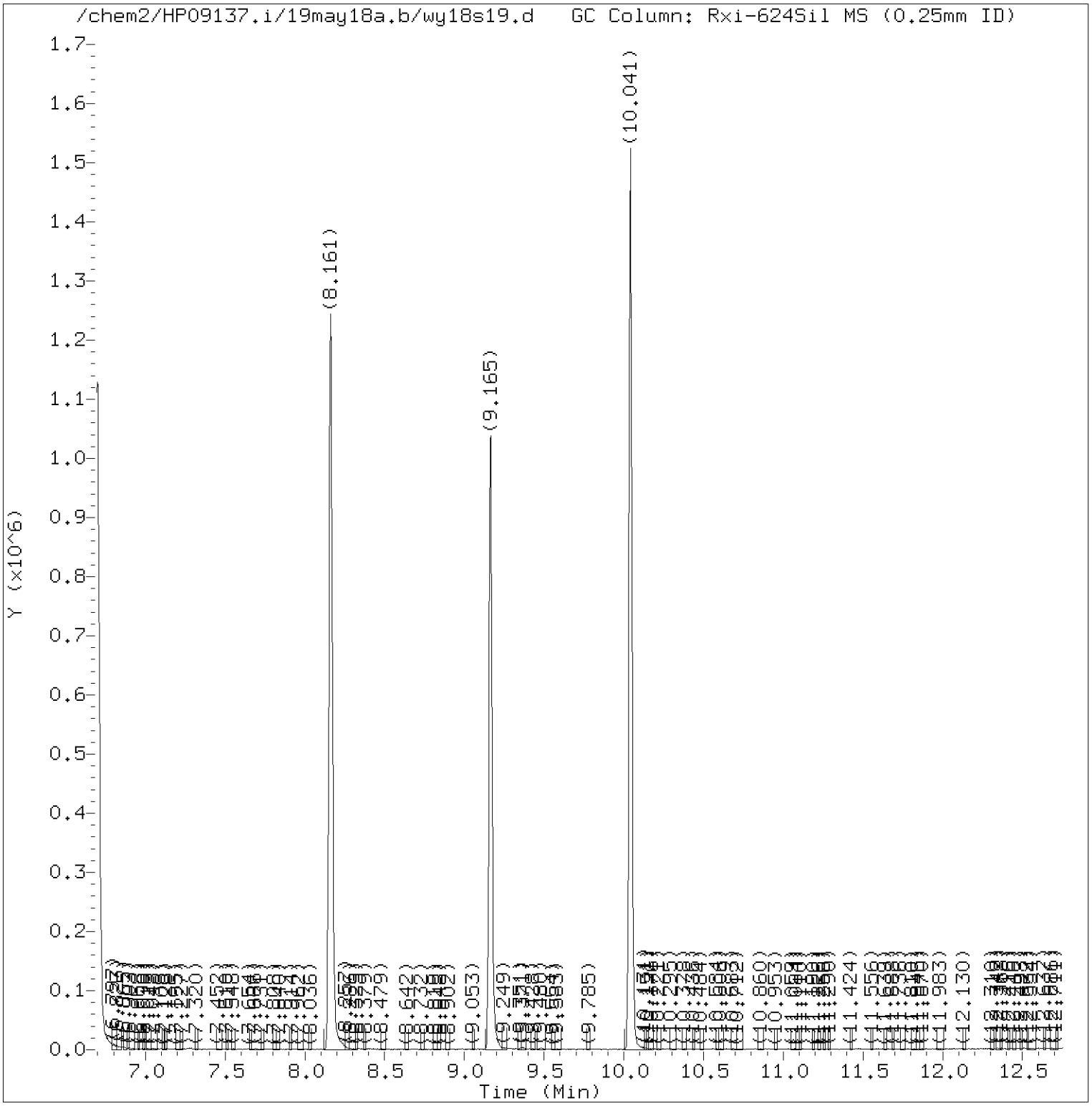
Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s19.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 06:25 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: VHB08 Lab Sample ID: 1053356

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:04.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s19.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 06:25 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: VHB08 Lab Sample ID: 1053356

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:04.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s19.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 06:25 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: VHB08 Lab Sample ID: 1053356

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.744	65	169028	250.000
51) Chloroform	(2)	4.204	83	1912	0.266
52)$Dibromofluoromethane	(2)	4.355	113	202472	49.484
53) 1,1,1-Trichloroethane	(2)	4.371	97	3118	0.577
57)$1,2-Dichloroethane-d4	(2)	4.689	102	55689	51.175
66)*Fluorobenzene	(2)	5.032	96	883199	50.000
71) Trichloroethene	(2)	5.408	95	3773	0.842
84)$Toluene-d8	(3)	6.698	98	855910	49.784
101)*Chlorobenzene-d5	(3)	8.161	117	686111	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	292849	42.577
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	345609	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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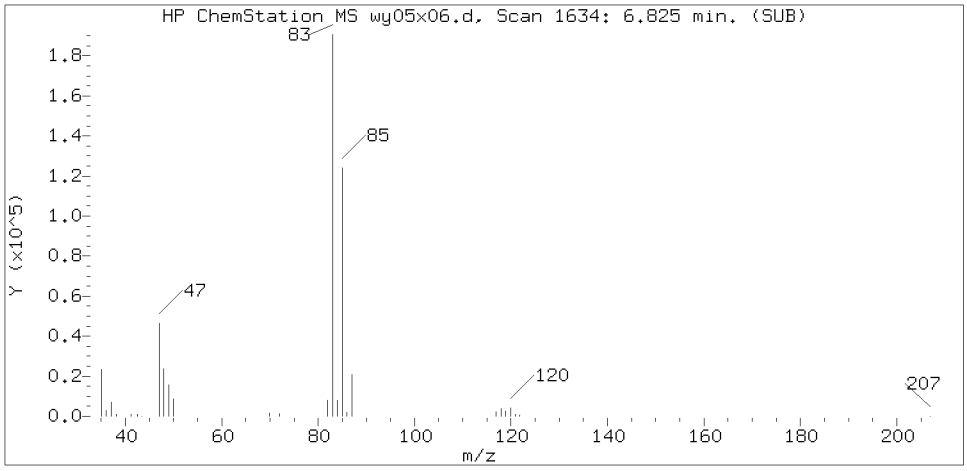
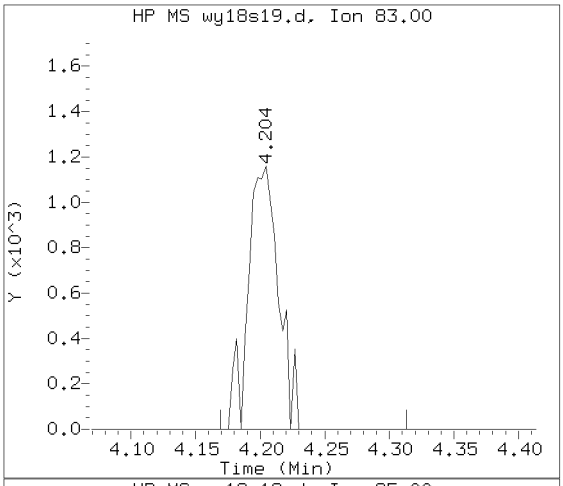
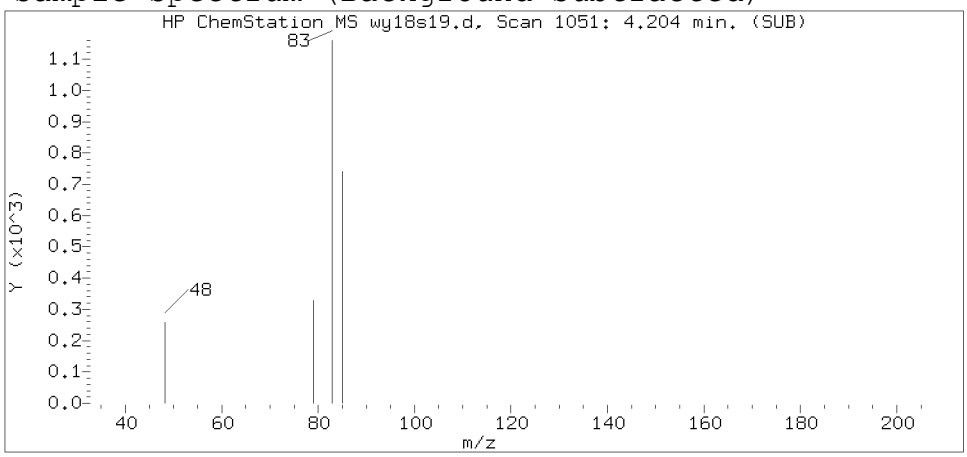
on 05/28/2019 at 15:04.
Target 3.5 esignature user ID: lcp00895

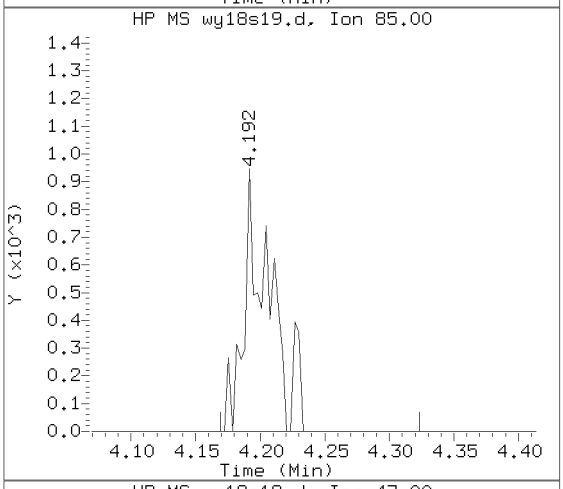
Reference Standard Spectrum for Chloroform



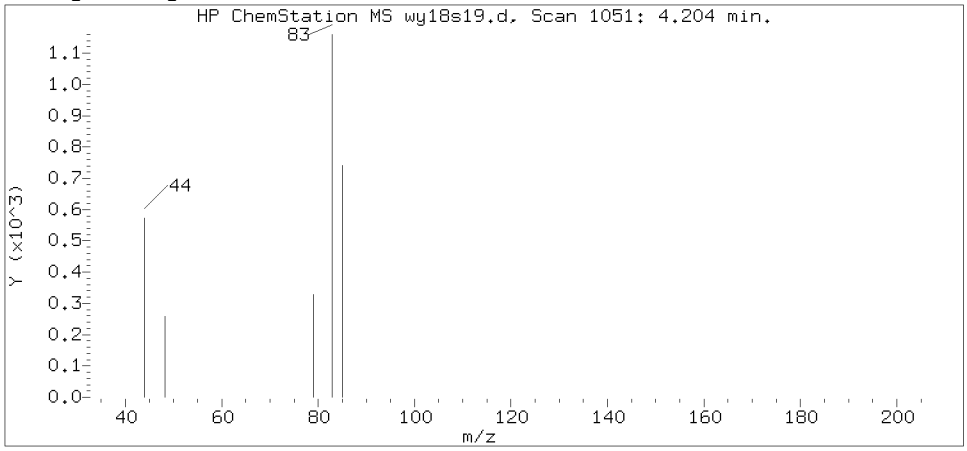


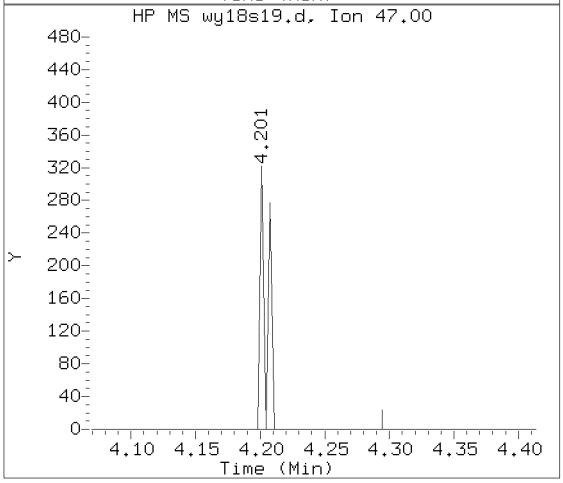
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP09137.i/19may18a.b/wy18s19.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 06:25 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: VHB08 Lab Sample ID: 1053356

Compound Number : 51
Compound Name : Chloroform
Scan Number : 1051
Retention Time (minutes): 4.204
Relative Retention Time :-0.00064
Quant Ion : 83.00
Area (flag) : 1912
On-Column Amount (ng) : 0.2662

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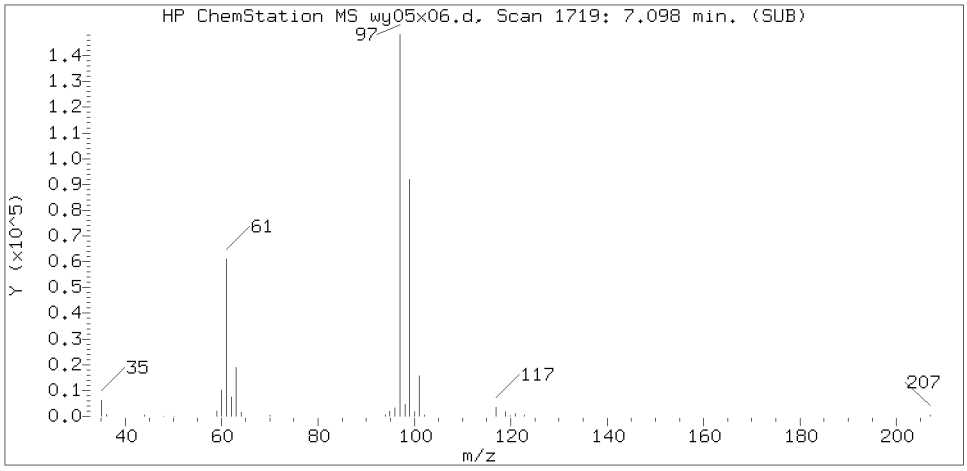
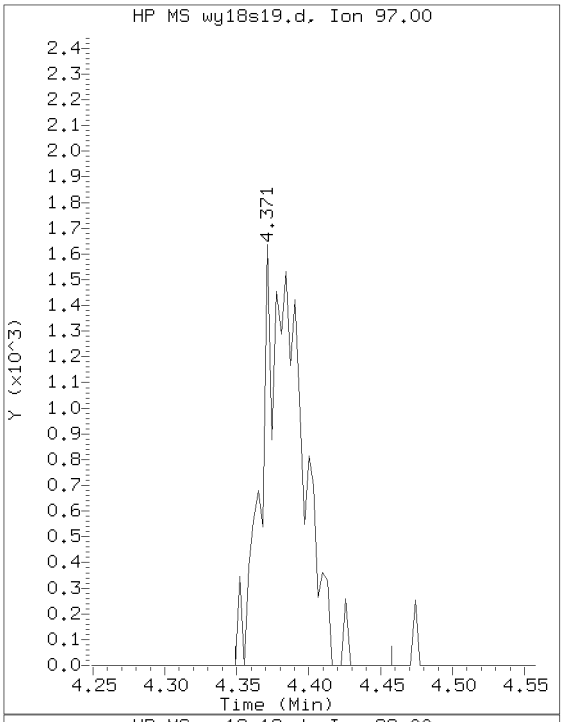
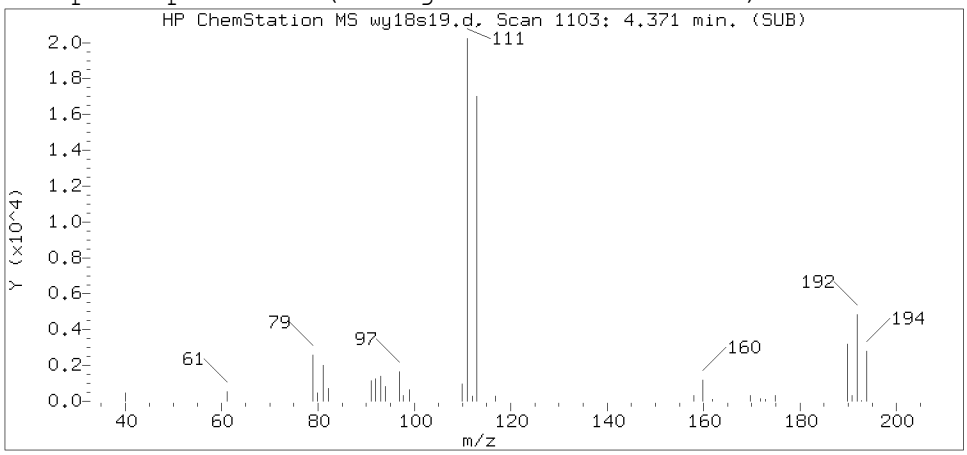
Target 3.5 esignature user ID: lcp00895

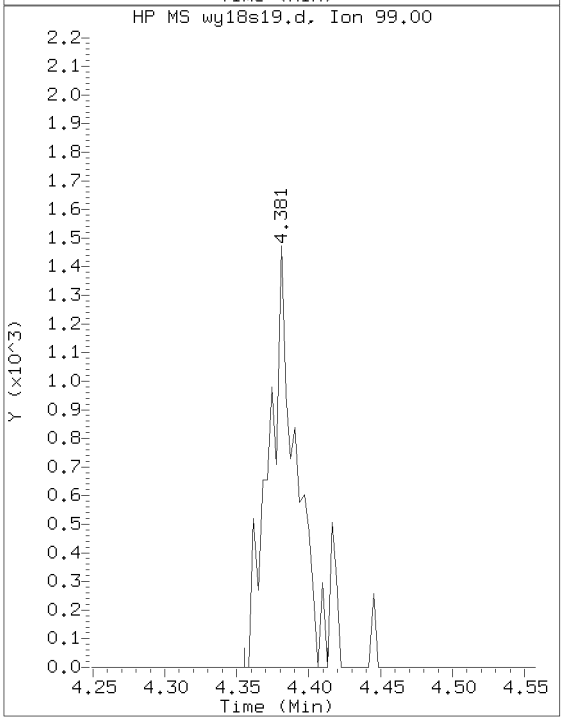
Reference Standard Spectrum for 1,1,1-Trichloroethane



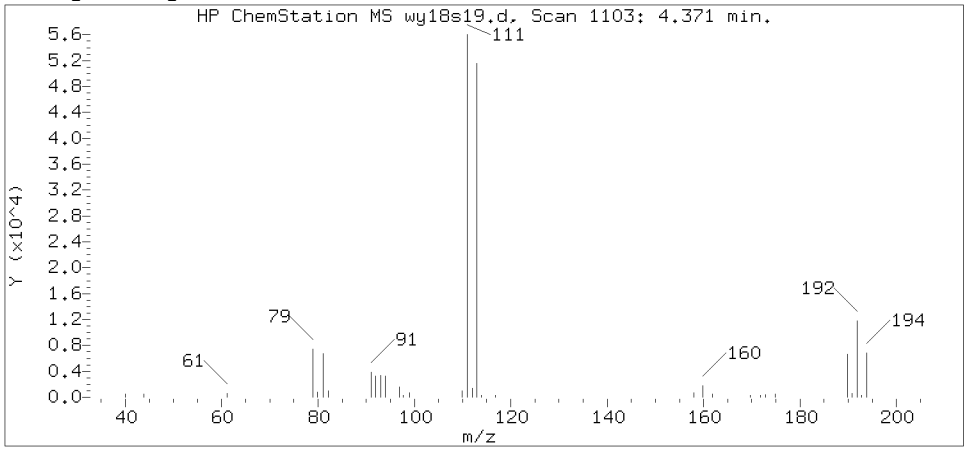


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09137.i/19may18a.b/wy18s19.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 06:25 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: VHB08 Lab Sample ID: 1053356

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1103
Retention Time (minutes)	: 4.371
Relative Retention Time	: 0.00255
Quant Ion	: 97.00
Area (flag)	: 3118
On-Column Amount (ng)	: 0.5769

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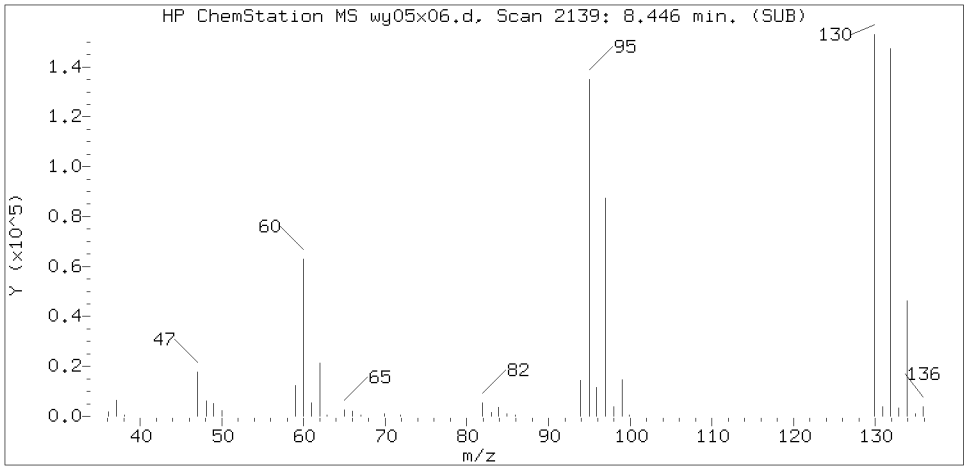
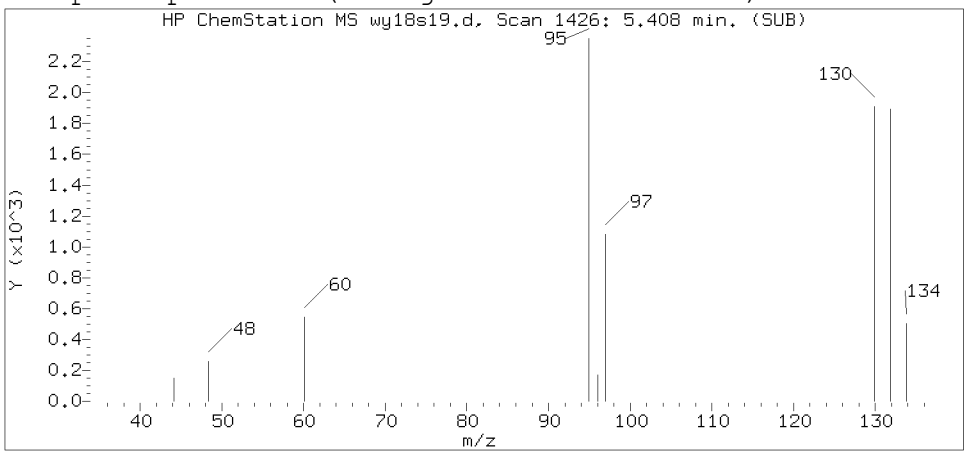
Target 3.5 esignature user ID: lcp00895

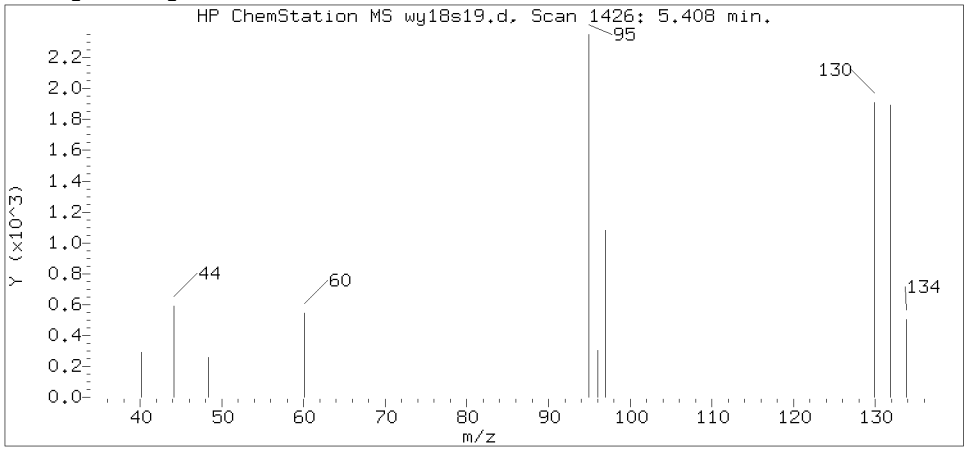
Reference Standard Spectrum for Trichloroethene

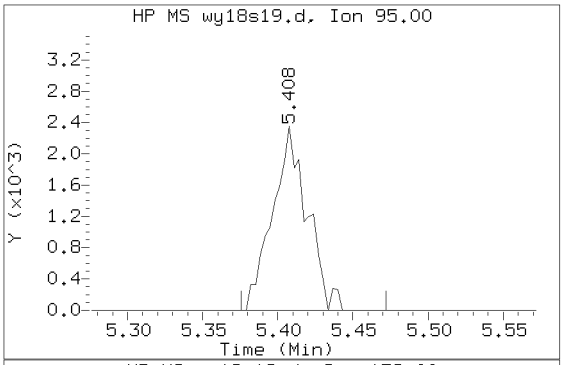


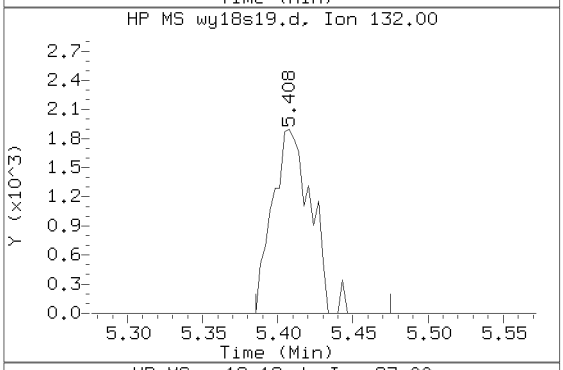
Sample Spectrum (Background Subtracted)

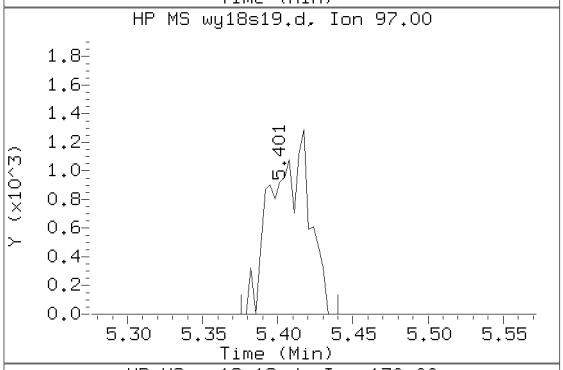


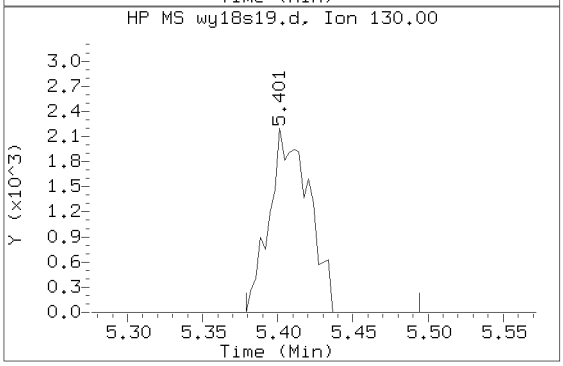
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/19may18a.b/wy18s19.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 06:25 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: VHB08 Lab Sample ID: 1053356

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 1426
Retention Time (minutes)	: 5.408
Relative Retention Time	: 0.00000
Quant Ion	: 95.00
Area (flag)	: 3773
On-Column Amount (ng)	: 0.8417

Digitally signed by Linda C. Pape on 05/28/2019 at 15:04.
Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VHB09

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053357

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s20.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	0.3	J
71-55-6	1,1,1-Trichloroethane	0.3	J
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

VHB09 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1053357

Data file: /chem2/HP09137.i/19may18a.b/wy18s20.d Injection date and time: **19-MAY-2019 06:49**
Data file Sample Info. Line: VHB09;1053357;1;0;;JCV87;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.741(-0.003)	595	65	162426 (-14)	250.00	
66) Fluorobenzene	5.032(0.000)	1309	96	874167 (-15)	50.00	
101) Chlorobenzene-d5	8.161(0.000)	2284	117	681629 (-12)	50.00	
132) 1,4-Dichlorobenzene-d4	10.042(0.000)	2870	152	347282 (-22)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.359(0.001)	113	201787	49.826	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.689(0.001)	102	53937	50.077	100%		80 - 120
84) Toluene-d8	(3)	6.698(0.000)	98	843036	49.357	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162(0.000)	95	288698	42.250	84%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)	4.198(0.000)	83	2456	0.345	0.35		J	0.2	1
53) 1,1,1-Trichloroethane	(2)	4.381(0.000)	97	1789	0.335	0.33		J	0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)			Not Detected					0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Linda C. Pape on 05/28/2019 at 15:04. Target 3.5 esignature user ID: lcp00895

Data file: /chem2/HP09137.i/19may18a.b/wy18s20.d Injection date and time: **19-MAY-2019 06:49**
Data file Sample Info. Line: VHB09;1053357;1;0;;JCV87;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

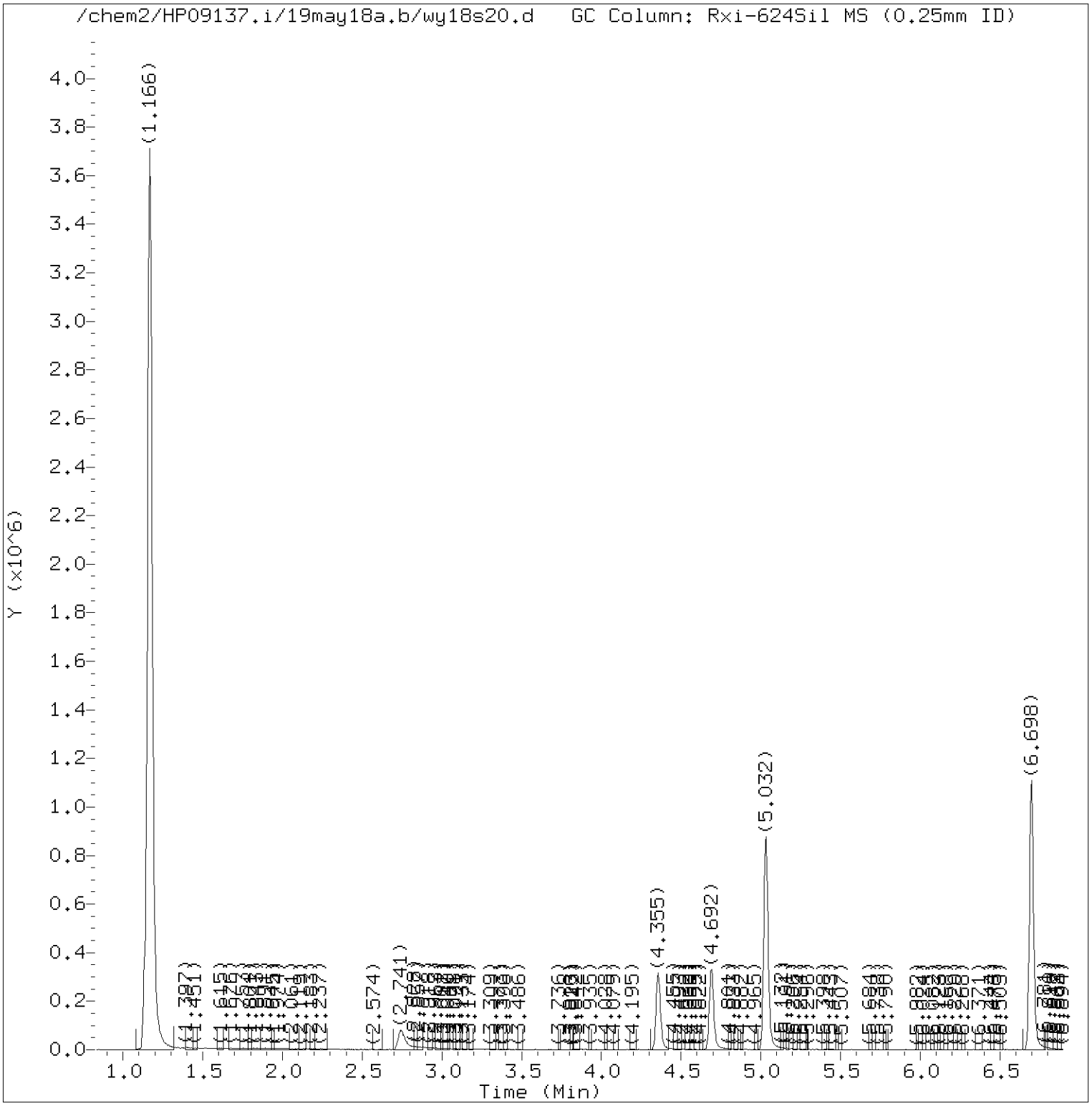
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Linda C. Pape on 05/28/2019 at 15:04. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 15:40. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

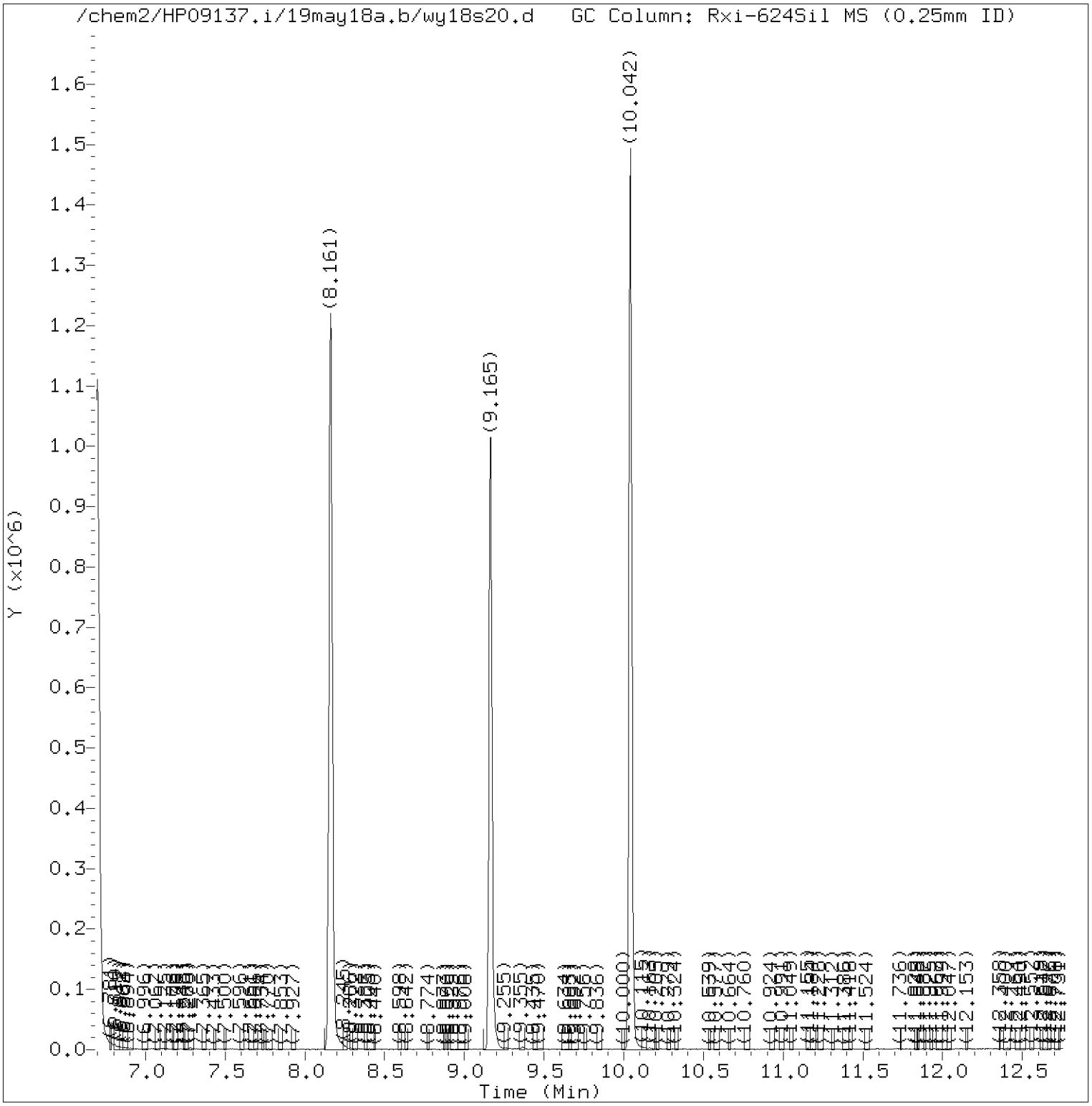
Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s20.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 06:49 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: VHB09 Lab Sample ID: 1053357

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:04.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s20.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 06:49 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: VHB09 Lab Sample ID: 1053357

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:04.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s20.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 06:49 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

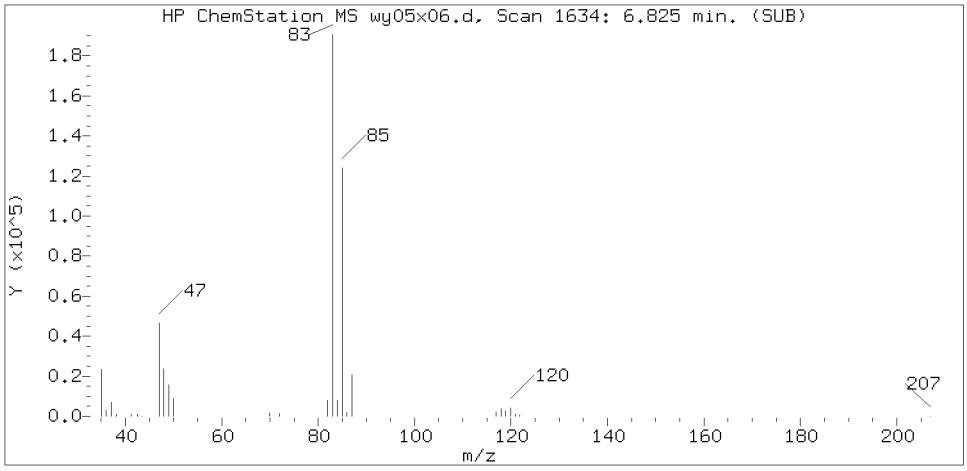
Sample Name: VHB09 Lab Sample ID: 1053357

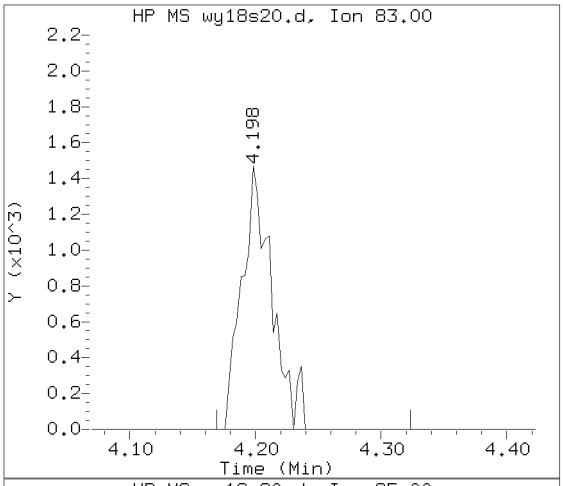
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.741	65	162426	250.000
51) Chloroform	(2)	4.198	83	2456	0.345
52)$Dibromofluoromethane	(2)	4.359	113	201787	49.826
53) 1,1,1-Trichloroethane	(2)	4.381	97	1789	0.335
57)$1,2-Dichloroethane-d4	(2)	4.689	102	53937	50.077
66)*Fluorobenzene	(2)	5.032	96	874167	50.000
84)$Toluene-d8	(3)	6.698	98	843036	49.357
101)*Chlorobenzene-d5	(3)	8.161	117	681629	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	288698	42.250
132)*1,4-Dichlorobenzene-d4	(4)	10.042	152	347282	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

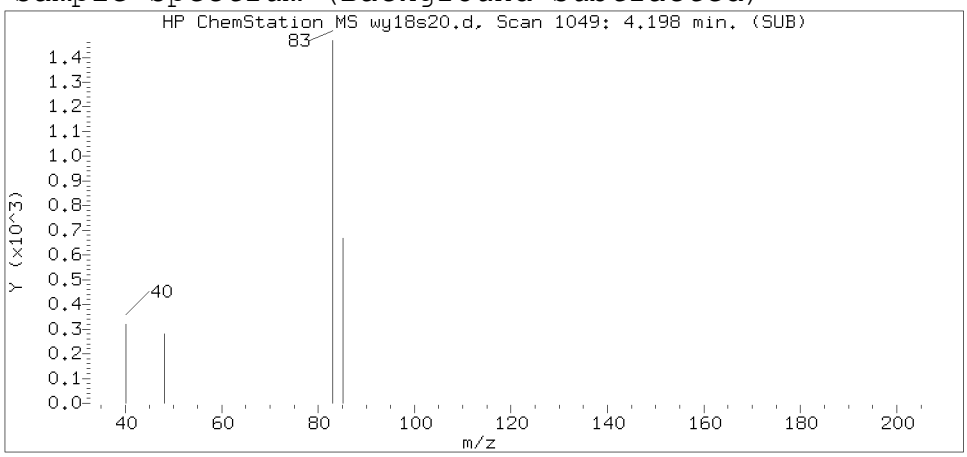
Digitally signed by Linda C. Pape
on 05/28/2019 at 15:04.
Target 3.5 esignature user ID: lcp00895

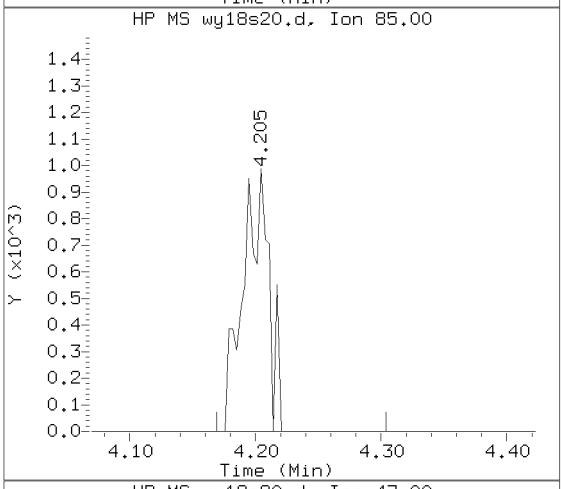
Reference Standard Spectrum for Chloroform



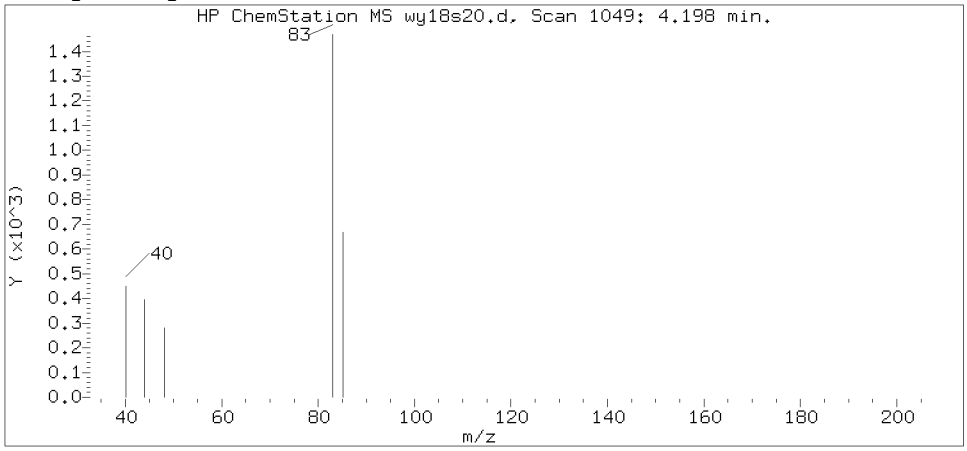


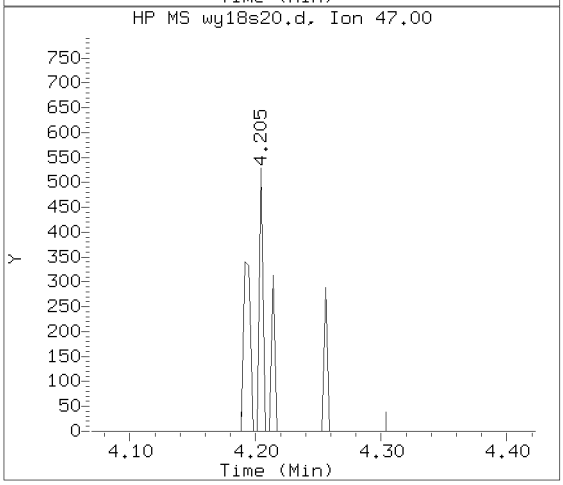
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP09137.i/19may18a.b/wy18s20.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 06:49 Analyst ID: SEJ02002

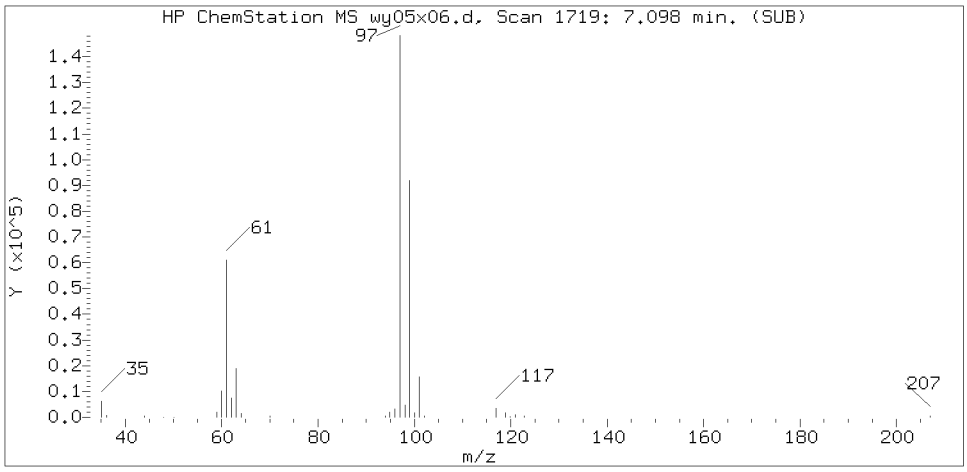
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

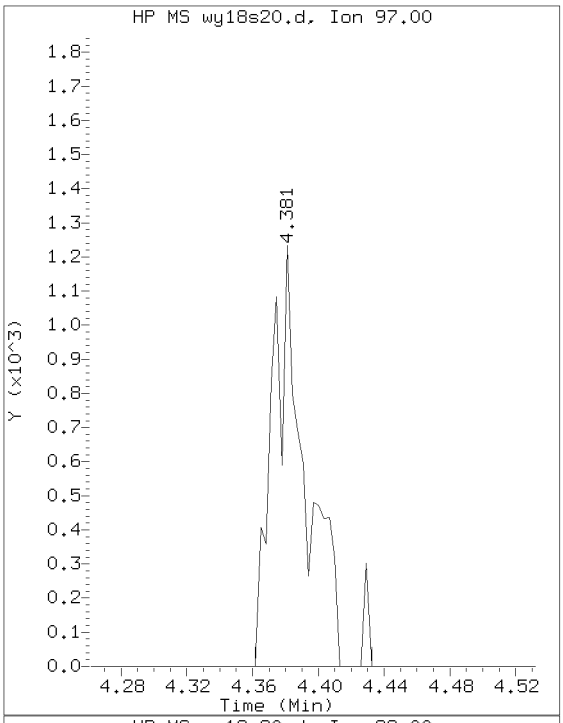
Sample Name: VHB09 Lab Sample ID: 1053357

Compound Number	: 51
Compound Name	: Chloroform
Scan Number	: 1049
Retention Time (minutes)	: 4.198
Relative Retention Time	: 0.00063
Quant Ion	: 83.00
Area (flag)	: 2456
On-Column Amount (ng)	: 0.3455

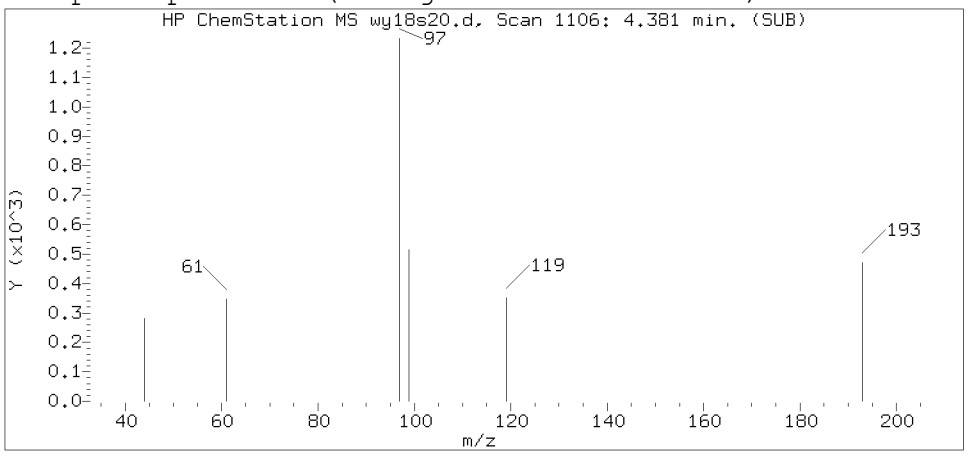
Digitally signed by Linda C. Pape on 05/28/2019 at 15:04.
Target 3.5 esignature user ID: lcp00895

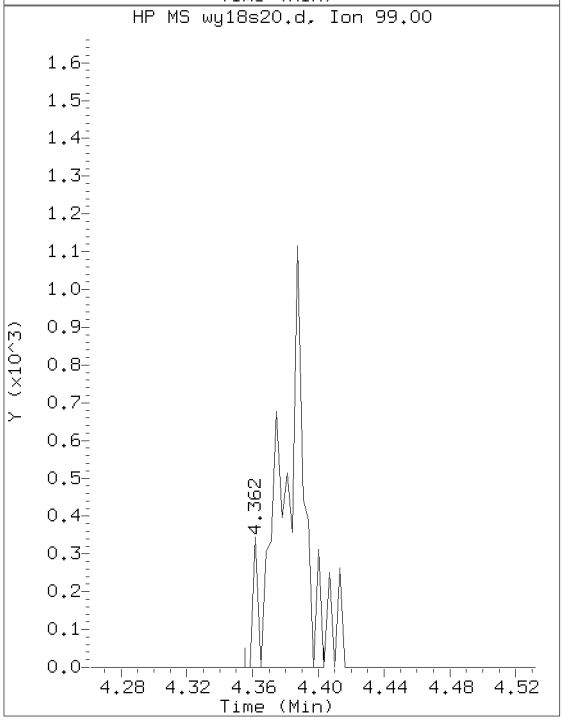
Reference Standard Spectrum for 1,1,1-Trichloroethane



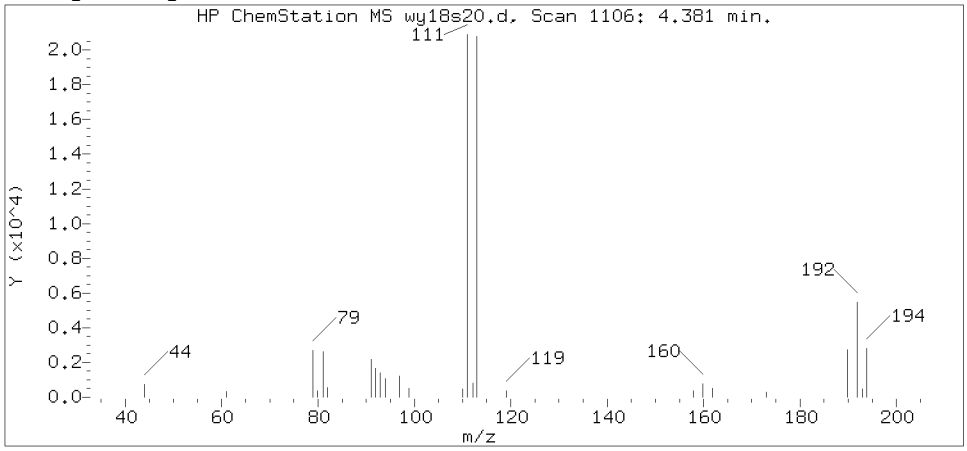


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09137.i/19may18a.b/wy18s20.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 06:49 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: VHB09 Lab Sample ID: 1053357

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1106
Retention Time (minutes)	: 4.381
Relative Retention Time	: 0.00063
Quant Ion	: 97.00
Area (flag)	: 1789
On-Column Amount (ng)	: 0.3346

Digitally signed by Linda C. Pape on 05/28/2019 at 15:04.
Target 3.5 esignature user ID: lcp00895

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09137 **HP #18**

Data Directory Path is - D:\DATA\19FEB19I\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
apr27582	WF19T01.D	50NGBFB	02/19/2019	11:32	W183623AA	
APR27582	WF19I01.D	VSTD300	02/19/2019	12:21		
APR27582	WF19I02.D	VSTD100	02/19/2019	12:45		
APR27582	WF19I03.D	VSTD050	02/19/2019	13:09		
APR27582	WF19I04.D	VSTD020	02/19/2019	13:33		
APR27582	WF19I05.D	VSTD010	02/19/2019	13:57		
APR27582	WF19I06.D	VSTD004	02/19/2019	14:21		
APR27582	WF19I07.D	VSTD001	02/19/2019	14:44		
APR27582	WF19X02.D	CLNBLK	02/19/2019	15:08		
APR27582	WF19V01.D	LCSWICV	02/19/2019	15:32		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09137 **HP #18**

Data Directory Path is - D:\DATA\19FEB20A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
apr27582	WF20T01.D	50NGBFB	02/20/2019	08:47	W183623AA	
APR27582	WF20X01.D	VBLKW62	02/20/2019	09:13	W190511AA	
APR27582	WF20C01.D	VSTD050	02/20/2019	09:37	W190511AA	
APR27582	WF20X02.D	VBLKW62	02/20/2019	10:01	W190511AA	
APR27582	WF20X03.D	VBLKW62	02/20/2019	10:31	W190511AA	
APR27582	WF20C02.D	VSTD050	02/20/2019	10:55	W190511AA	
APR27582	WF20X04.D	VBLKW62	02/20/2019	11:19	W190511AA	
APR27582	WF20B01.D	VBLKW62	02/20/2019	11:43	W190511AA	
APR27582	WF20L01.D	LCSW62	02/20/2019	12:07	W190511AA	
APR27582	WF20B02.D	VBLKW62	02/20/2019	12:30	W190511AA	
APR27582	WF20S02.D	9979095	02/20/2019	12:57	W190511AA	
APR27582	WF20S03.D	9979096	02/20/2019	13:21	W190511AA	
APR27582	WF20S04.D	9979097	02/20/2019	13:45	W190511AA	
APR27582	WF20S05.D	9979099	02/20/2019	14:09	W190511AA	
APR27582	WF20S06.D	9979107	02/20/2019	14:32	W190511AA	
APR27582	WF20S07.D	9979108	02/20/2019	14:56	W190511AA	
APR27582	WF20S08.D	9979109	02/20/2019	15:20	W190511AA	
APR27582	WF20S09.D	9979090	02/20/2019	15:44	W190511AA	
APR27582	WF20S10.D	9979091	02/20/2019	16:08	W190511AA	
APR27582	WF20S17.D	9985342	02/20/2019	16:32	W190511AA	
APR27582	WF20S18.D	9985343MS	02/20/2019	16:56	W190511AA	
APR27582	WF20S19.D	9985344MSD	02/20/2019	17:20	W190511AA	
APR27582	WF20S11.D	9979112	02/20/2019	17:43	W190511AA	
APR27582	WF20S12.D	9987236	02/20/2019	18:07	W190511AA	
APR27582	WF20S13.D	9986162	02/20/2019	18:31	W190511AA	
APR27582	WF20S20.D	9987235	02/20/2019	18:55	W190511AA	
APR27582	WF20S21.D	9985346	02/20/2019	19:19	W190511AA	

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP26285 **HP #05**

Data Directory Path is - C:\DATA\19MAR25I\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
APR27582	5M25T01.D	50 ng BFB	03/25/2019	11:37		
APR27582	5M25X05.D	BLK	03/25/2019	12:27		
APR27582	5M25I01.D	VSTD300	03/25/2019	12:48		
APR27582	5M25I02.D	VSTD100	03/25/2019	13:10		
APR27582	5M25I03.D	VSTD050	03/25/2019	13:31		
APR27582	5M25I04.D	VSTD020	03/25/2019	13:52		
APR27582	5M25I05.D	VSTD010	03/25/2019	14:13		
APR27582	5M25I06.D	VSTD004	03/25/2019	14:34		
APR27582	5M25I07.D	VSTD001	03/25/2019	14:55		
APR27582	5M25X06.D	BLK	03/25/2019	15:17		
APR27582	5C25V01.D	LG5ICV	03/25/2019	15:38		
APR27582	5C25X10.D	BLK	03/25/2019	16:00		
APR27582	5M25I11.D	VSTD300	03/25/2019	16:21		
APR27582	5M25I12.D	VSTD100	03/25/2019	16:42		
APR27582	5M25I13.D	VSTD050	03/25/2019	17:03		
APR27582	5M25I14.D	VSTD020	03/25/2019	17:24		
APR27582	5M25I15.D	VSTD010	03/25/2019	17:45		
APR27582	5M25I16.D	VSTD004	03/25/2019	18:06		
APR27582	5M25I17.D	VSTD001	03/25/2019	18:27		
APR27582	5M25X11.D	BLK	03/25/2019	18:48		
APR27582	5M25V11.D	SM5ICV	03/25/2019	19:09		
APR27582	5M25X12.D	BLK	03/25/2019	22:25		
APR27582	5M25V12.D	SM5ICV	03/25/2019	22:47		

1. Relative Response Factor (RRF)

$$RRF = \frac{AX}{Ais} \times \frac{Cis}{Cx}$$

Where:

Ax = Area of the characteristic ion for the compound to be measured
Ais = Area of the characteristic ion for the specific internal standard to be measured
Cis = Concentration of the internal standard
Cx = Concentration of the compound to be measured

2. % Relative Standard Deviation (%RSD)

$$\%RSD = \frac{standard\ deviation}{Mean} \times 100$$

3. % Difference

$$\%D = \frac{RRFc - RRFi}{RRFi} \times 100$$

Where:

RRFc = Relative response factor from the continuing calibration standard
RRFi = Mean relative response factor from the initial calibration

4. Concentration

$$Concentration\ (\mu g/L) = \frac{(Ax)(Is)(Df)}{(Ais)(RRF)}$$

Where:

Ax, Ais, and RRF are as given in 1. above
Is = Amount of internal standard added in parts per billion (µg/L)
Df = Dilution factor

5. % Recovery (% Rec)

$$\%Rec = \frac{SSR - SR}{SA} \times 100$$

Where:

SSR = Spiked sample result
SR = Sample result
SA = Spike added

6. Relative Percent Difference (RPD)

$$RPD = \frac{(MSR - MSRD)}{(1/2)(MSR + MSRD)} \times 100$$

Where:

MSR = Matrix spike recovery
MSRD = Matrix spike recovery duplicate

Data File: /chem2/HP09137.i/19feb19i.b/wf19t01.d

Page 1

Date : 19-FEB-2019 11:32

Client ID: FEB05-19

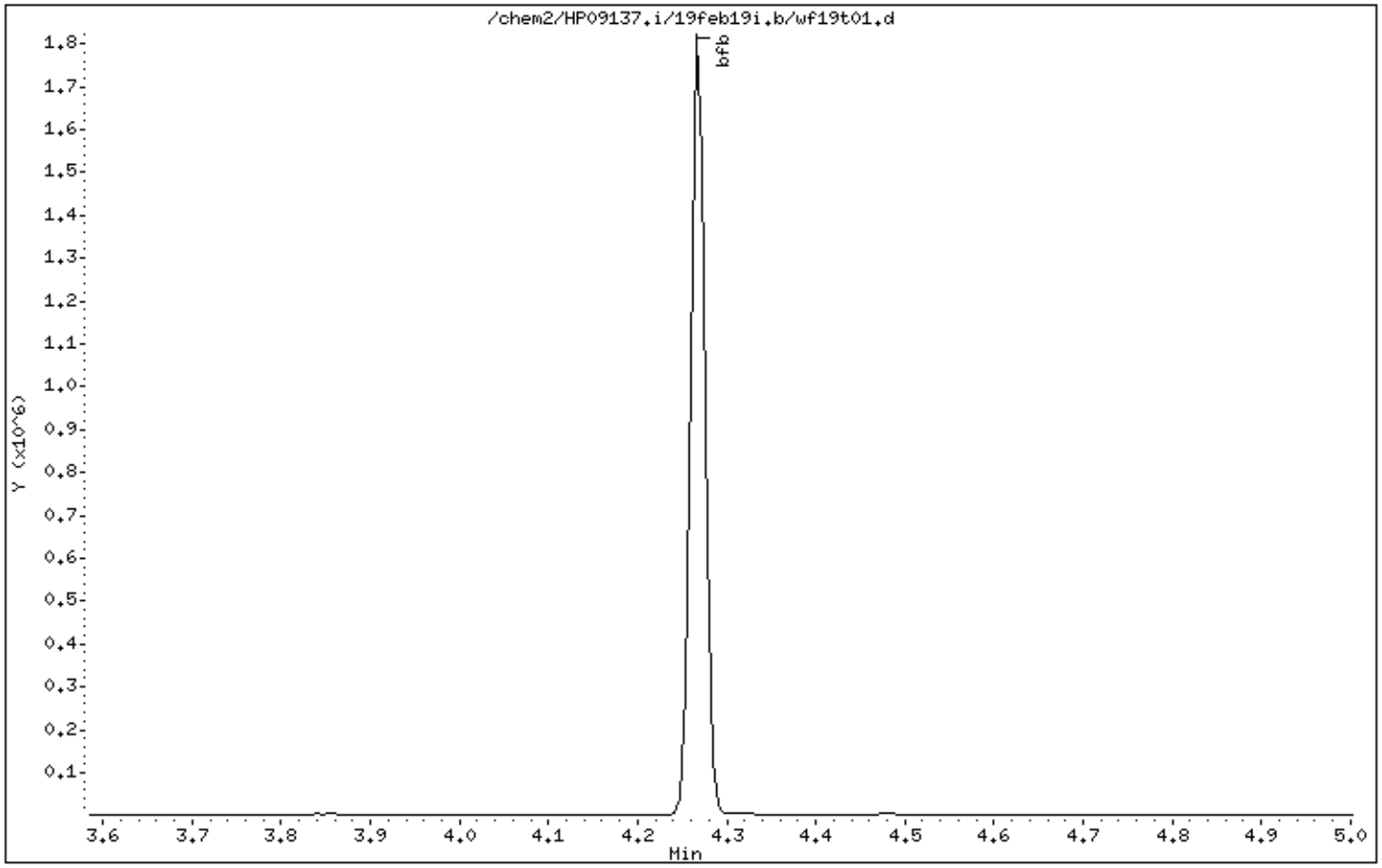
Instrument: HP09137.i

Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: DB-624

Column diameter: 0.18



Digitally signed by Abigail P. Roselli on 02/20/2019 at 07:15.
Target 3.5 esignature user ID: apr27582

Data File: /chem2/HP09137.i/19feb19i.b/wf19t01.d

Date : 19-FEB-2019 11:32

Client ID: FEB05-19

Instrument: HP09137.i

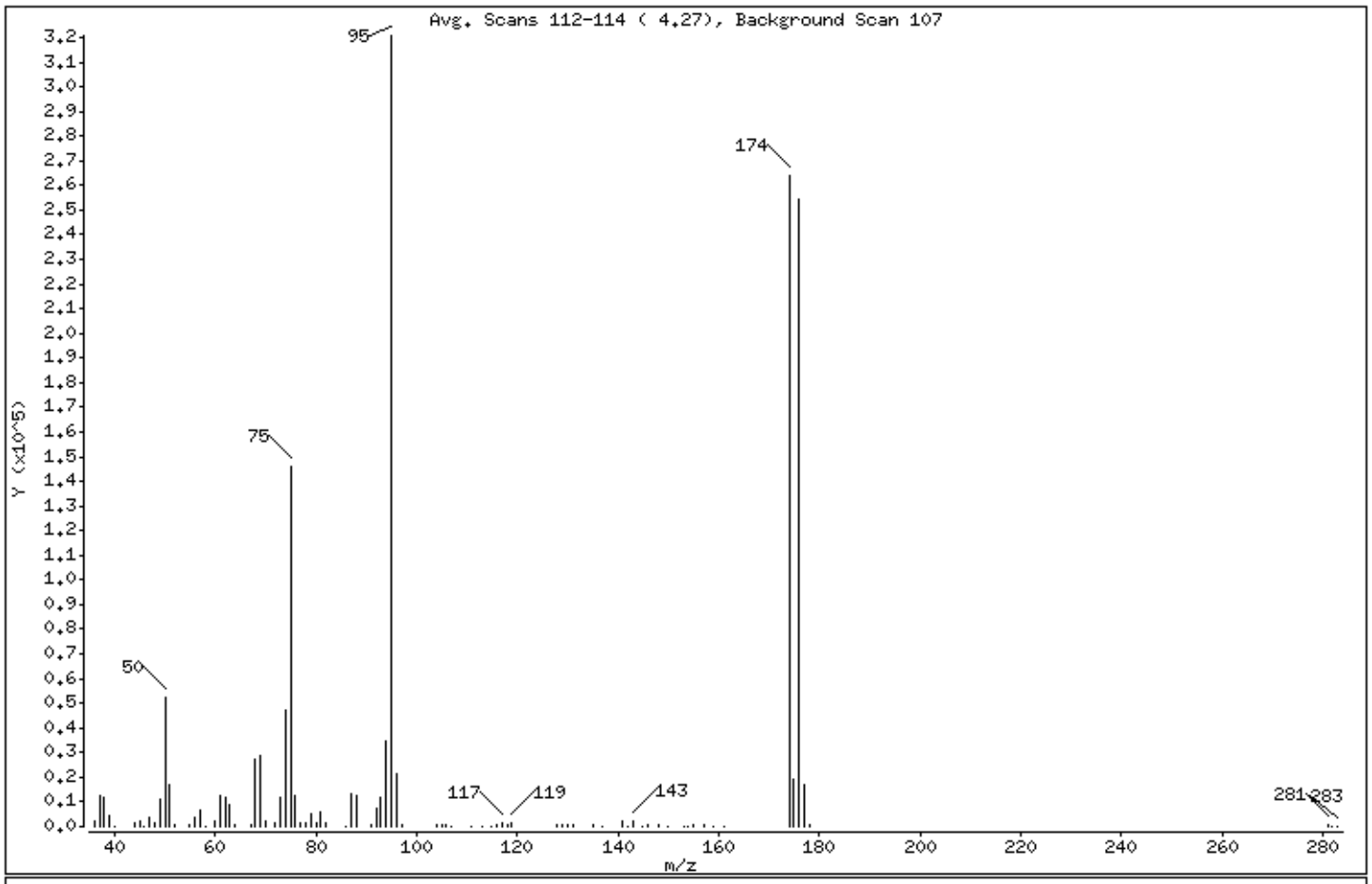
Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.42
75	30.00 - 60.00% of mass 95	45.48
96	5.00 - 9.00% of mass 95	6.75
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	82.25
175	5.00 - 9.00% of mass 174	5.88 (7.14)
176	95.00 - 101.00% of mass 174	79.33 (96.46)
177	5.00 - 9.00% of mass 176	5.24 (6.60)

Digitally signed by Abigail P. Roselli on 02/20/2019 at 07:15.
Target 3.5 esignature user ID: apr27582

Date : 19-FEB-2019 11:32

Client ID: FEB05-19 Instrument: HP09137.i

Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: DB-624 Column diameter: 0.18

Data File: wf19t01.d
Spectrum: Avg. Scans 112-114 (4.27), Background Scan 107
Location of Maximum: 95.00
Number of points: 86

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2356	64.00	874	94.00	34376	142.00	237
37.00	12838	67.00	749	95.00	320704	143.00	2536
38.00	11819	68.00	27600	96.00	21656	145.00	91
39.00	4563	69.00	28600	97.00	523	146.00	422
40.00	251	70.00	2130	104.00	986	148.00	700
44.00	1477	72.00	1518	105.00	386	150.00	200
45.00	2478	73.00	11806	106.00	927	153.00	196
46.00	111	74.00	47328	107.00	206	154.00	192
47.00	3965	75.00	145792	111.00	83	155.00	738
48.00	1623	76.00	12750	113.00	91	157.00	589
49.00	11149	77.00	1800	115.00	323	159.00	135
50.00	52656	78.00	1254	116.00	863	161.00	111
51.00	16816	79.00	5441	117.00	1520	174.00	263744
52.00	769	80.00	1674	118.00	967	175.00	18840
55.00	679	81.00	5606	119.00	1205	176.00	254400
56.00	3605	82.00	1114	128.00	1016	177.00	16800
57.00	6852	86.00	238	129.00	498	178.00	482
58.00	344	87.00	13069	130.00	1029	281.00	452
60.00	2409	88.00	12389	131.00	439	282.00	187
61.00	12379	91.00	929	135.00	476	283.00	87
62.00	12164	92.00	7681	137.00	303		
63.00	9186	93.00	11661	141.00	2259		

Digitally signed by Abigail P. Roselli on 02/20/2019 at 07:15.
Target 3.5 esignature user ID: apr27582

Data File: /chem2/HP09137.i/19feb20a.b/wf20t01.d

Date : 20-FEB-2019 08:47

Client ID: FEB05-19

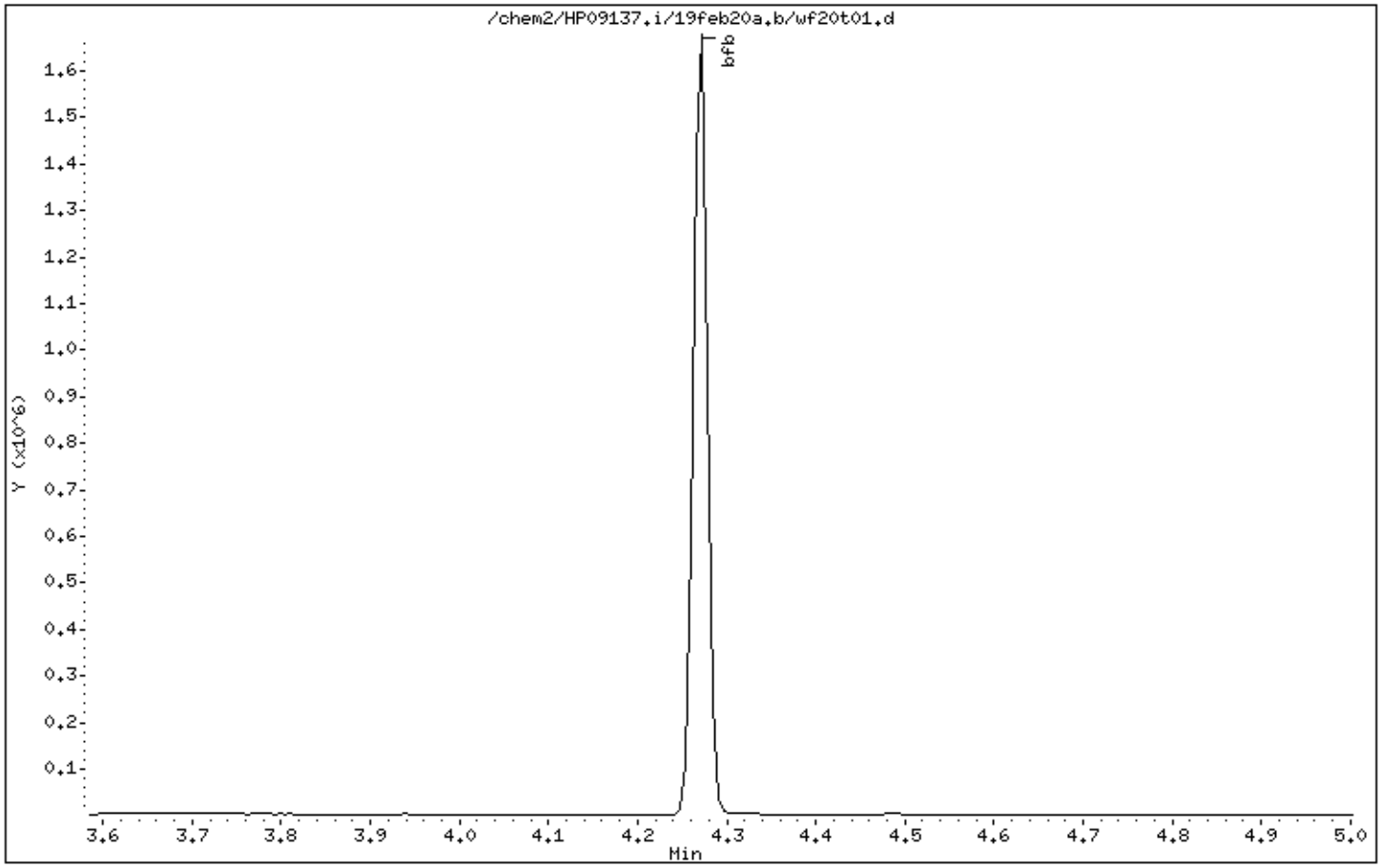
Instrument: HP09137.i

Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: DB-624

Column diameter: 0.18



Digitally signed by Abigail P. Roselli on 02/20/2019 at 08:52.
Target 3.5 esignature user ID: apr27582

Data File: /chem2/HP09137.i/19feb20a.b/wf20t01.d

Date : 20-FEB-2019 08:47

Client ID: FEB05-19

Instrument: HP09137.i

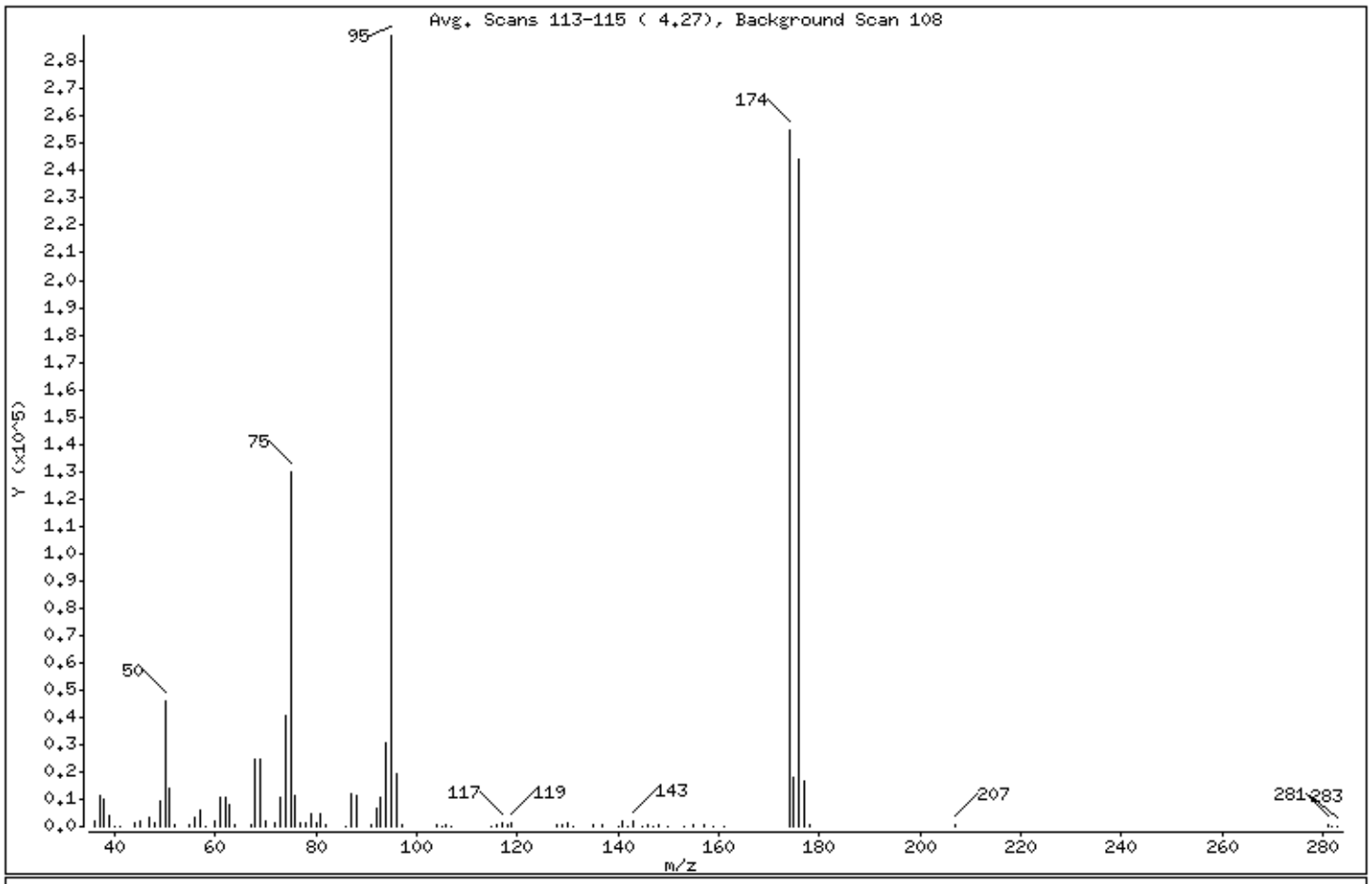
Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.92
75	30.00 - 60.00% of mass 95	44.90
96	5.00 - 9.00% of mass 95	6.65
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	88.14
175	5.00 - 9.00% of mass 174	6.26 (7.10)
176	95.00 - 101.00% of mass 174	84.40 (95.75)
177	5.00 - 9.00% of mass 176	5.69 (6.75)

Digitally signed by Abigail P. Roselli on 02/20/2019 at 08:52.
Target 3.5 esignature user ID: apr27582

Data File: /chem2/HP09137.i/19feb20a.b/wf20t01.d

Date : 20-FEB-2019 08:47

Client ID: FEB05-19 Instrument: HP09137.i

Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

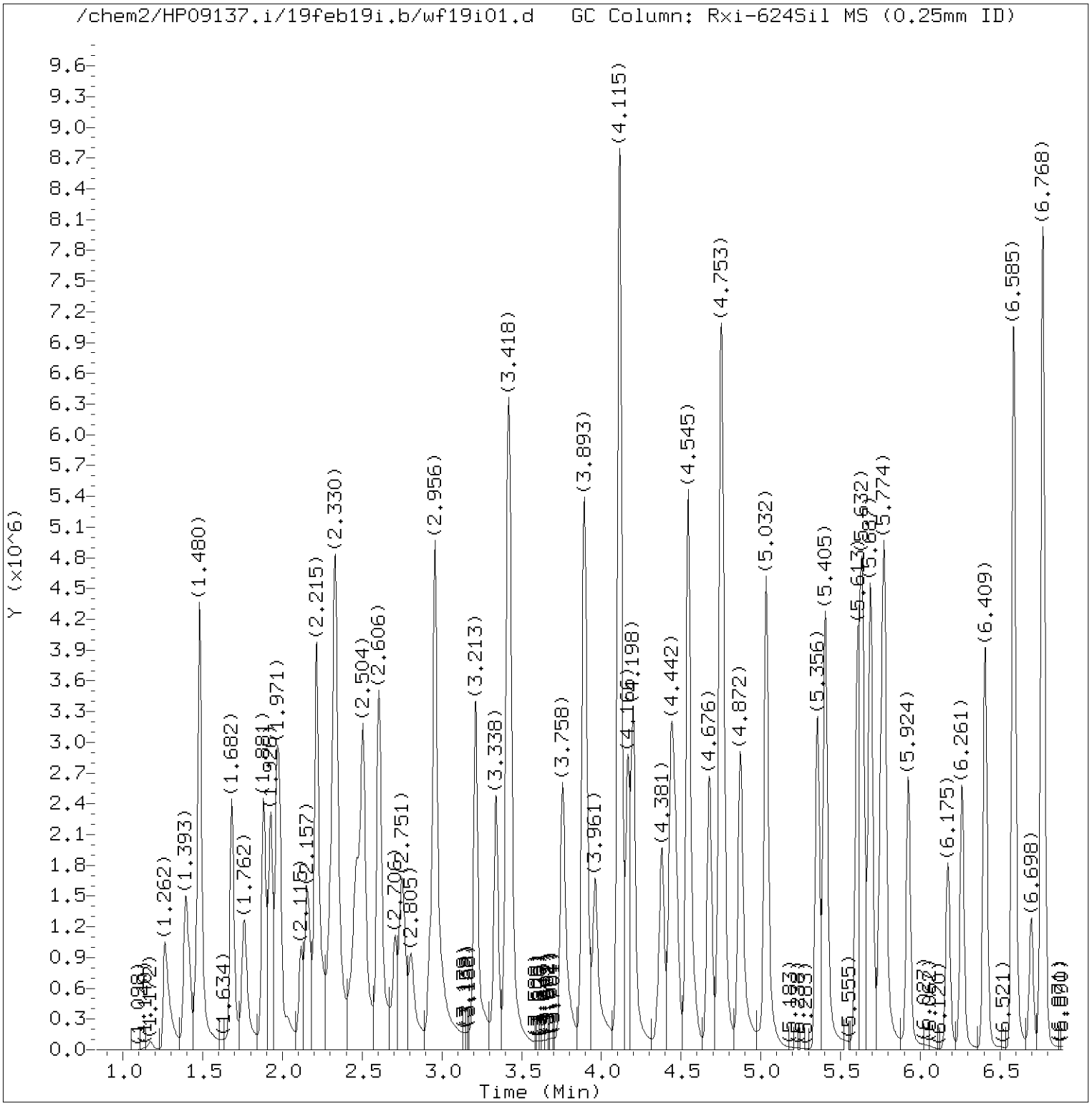
Operator: apr27582

Column phase: DB-624 Column diameter: 0.18

Data File: wf20t01.d
Spectrum: Avg. Scans 113-115 (4.27), Background Scan 108
Location of Maximum: 95.00
Number of points: 86

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2292	64.00	695	94.00	30424	143.00	2131
37.00	11519	67.00	726	95.00	289536	145.00	94
38.00	9778	68.00	24528	96.00	19248	146.00	357
39.00	4147	69.00	24696	97.00	419	147.00	91
40.00	149	70.00	1808	104.00	965	148.00	663
41.00	87	72.00	1344	105.00	326	150.00	173
44.00	1189	73.00	10669	106.00	967	153.00	101
45.00	1920	74.00	40824	107.00	84	155.00	589
47.00	3364	75.00	130008	115.00	92	157.00	513
48.00	1406	76.00	11448	116.00	835	159.00	90
49.00	9232	77.00	1437	117.00	1540	161.00	91
50.00	46088	78.00	1188	118.00	791	174.00	255168
51.00	14176	79.00	4689	119.00	1240	175.00	18112
52.00	576	80.00	1560	128.00	847	176.00	244352
55.00	691	81.00	4855	129.00	488	177.00	16480
56.00	3214	82.00	958	130.00	1039	178.00	430
57.00	5972	86.00	111	131.00	293	207.00	456
58.00	199	87.00	11697	135.00	469	281.00	512
60.00	2132	88.00	11140	137.00	365	282.00	331
61.00	10802	91.00	846	140.00	85	283.00	115
62.00	10922	92.00	6597	141.00	1968		
63.00	8073	93.00	10620	142.00	274		

Digitally signed by Abigail P. Roselli on 02/20/2019 at 08:52.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

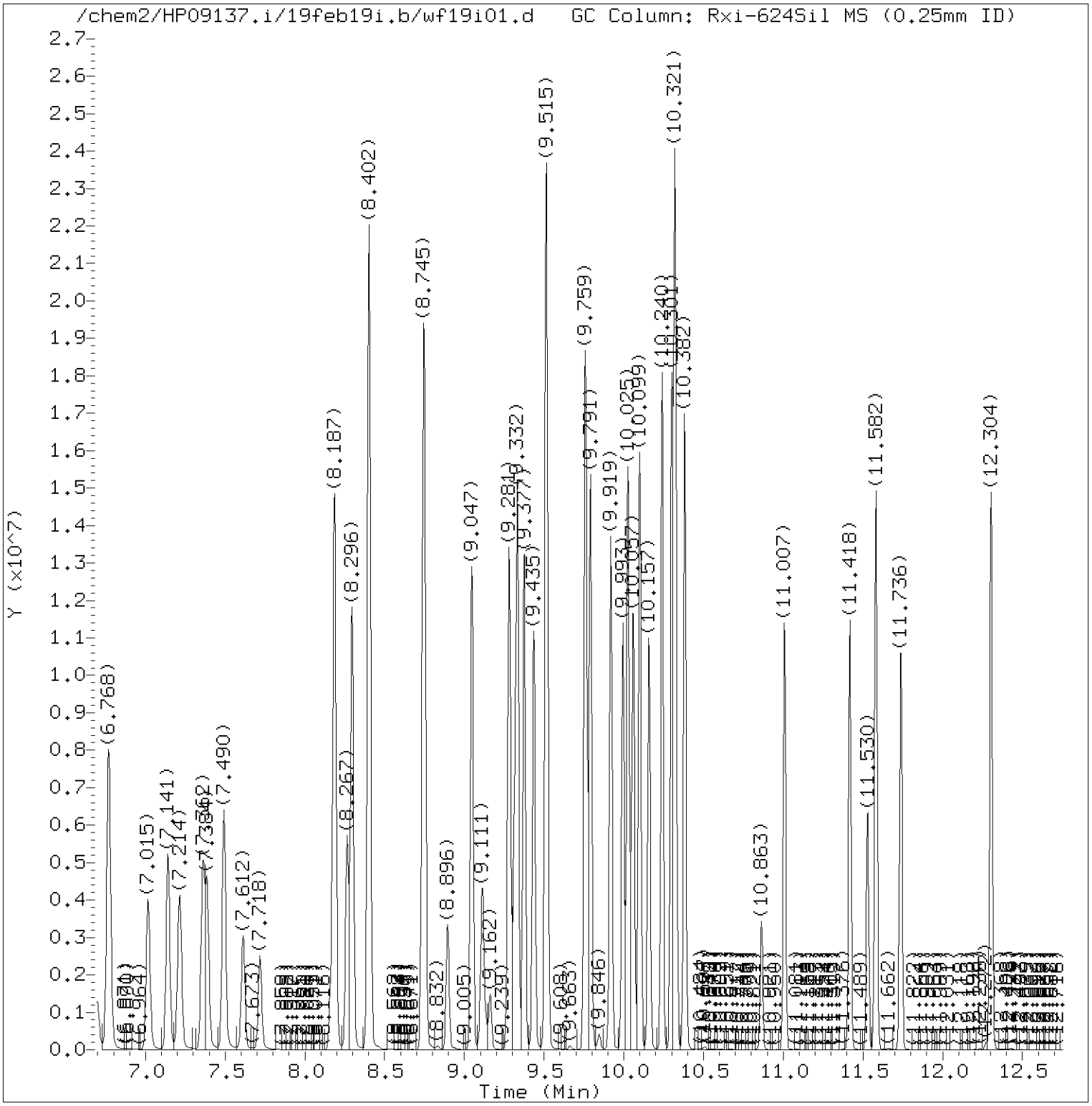
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.262	85	1830028	315.641
4) Chloromethane	(2)	1.397	50	2158390	298.969
6) Vinyl Chloride	(2)	1.467	62	2000231	302.231
5) 1,3-Butadiene	(2)	1.480	39	1294624	294.252
8) Bromomethane	(2)	1.682	94	1609891	308.431
9) Chloroethane	(2)	1.762	64	1225210	281.328
10) Dichlorofluoromethane	(2)	1.881	67	2469513	292.949
12) Trichlorofluoromethane	(2)	1.926	101	2215418	315.186
11) n-Pentane	(2)	1.981	43	1941951	290.504
13) Ethanol	(1)	2.032	45	654026	6868.269
15) Freon 123a	(2)	2.154	67	1544263M	294.005
16) Acrolein	(1)	2.215	56	4710694	3133.863
17) 1,1-Dichloroethene	(2)	2.324	96	1320043	333.906
17) 1,1-Dichloroethene	(2)	2.327	63	636364	319.054
19) Freon 113	(2)	2.330	101	1130965	325.785
18) Acetone	(1)	2.334	58	441895	604.809
21) 2-Propanol	(1)	2.449	45	740976	1364.990
22) Methyl Iodide	(2)	2.465	142	2433926	321.275
23) Carbon Disulfide	(2)	2.504	76	4385958	314.909
25) Allyl Chloride	(2)	2.600	41	2218296M	322.090
27) Methyl Acetate	(2)	2.616	43	1662446	278.873
29)*t-Butyl alcohol-d10	(1)	2.735	65	208793	250.000
28) Methylene Chloride	(2)	2.751	84	1485309M	307.373
30) t-Butyl alcohol	(1)	2.809	59	1347926	1391.981
31) Acrylonitrile	(2)	2.924	53	933874	297.783
32) trans-1,2-Dichloroethene	(2)	2.956	96	1367169	318.737
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	2930120	280.555
34) n-Hexane	(2)	3.213	57	1889144	329.160
36) 1,1-Dichloroethane	(2)	3.338	63	2443808	314.424
38) di-Isopropyl ether	(2)	3.412	45	4343522	290.888
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	2144637	318.591
40) Ethyl t-butyl ether	(2)	3.758	59	3125600	287.165
42) cis-1,2-Dichloroethene	(2)	3.890	96	1531613	318.027
45) 2,2-Dichloropropane	(2)	3.890	77	944483	270.575
44) 2-Butanone	(2)	3.906	43	2571903	570.822
47) Propionitrile	(1)	3.964	54	1942887	1614.356
48) Methacrylonitrile	(2)	4.115	67	2560168	759.258
49) Bromochloromethane	(2)	4.121	128	814405	325.314

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.166	71	727306	652.948
51) Chloroform	(2)	4.201	83	2299180	315.278
52)$Dibromofluoromethane	(2)	4.355	113	208205	50.122
52)$Dibromofluoromethane	(2)	4.355	111	214672	50.342
53) 1,1,1-Trichloroethane	(2)	4.381	97	1712874	312.162
54) Cyclohexane	(2)	4.442	56	2322517	319.833
54) Cyclohexane	(2)	4.445	84	1926454	320.494
54) Cyclohexane	(2)	4.442	69	709917	325.297
55) 1,1-Dichloropropene	(2)	4.545	75	1839194	314.568
56) Carbon Tetrachloride	(2)	4.545	117	1575192	334.514
58) Isobutyl Alcohol	(1)	4.673	41	1324103	3750.712
57)$1,2-Dichloroethane-d4	(2)	4.689	102	53519	48.443
57)$1,2-Dichloroethane-d4	(2)	4.692	65	233334	48.518
57)$1,2-Dichloroethane-d4	(2)	4.689	104	35388	50.297
60) Benzene	(2)	4.750	78	5810714	309.188
61) 1,2-Dichloroethane	(2)	4.766	62	1760449	303.238
61) 1,2-Dichloroethane	(2)	4.766	98	187445	339.366
65) t-Amyl methyl ether	(2)	4.872	73	2919577	261.832
66)*Fluorobenzene	(2)	5.029	96	896646	50.000
67) n-Heptane	(2)	5.036	43	1797080	327.627
69) n-Butanol	(1)	5.356	56	2506205	7995.614
71) Trichloroethene	(2)	5.405	95	1430931	314.409
73) Methylcyclohexane	(2)	5.607	83	2193871	332.036
73) Methylcyclohexane	(2)	5.607	98	1024331	333.422
74) 1,2-Dichloropropane	(2)	5.636	63	1543836	319.971
75) Dibromomethane	(2)	5.754	93	962248	323.143
77) Methyl Methacrylate	(2)	5.774	69	1719359	324.268
76) 1,4-Dioxane	(1)	5.783	88	380560M	4061.259
79) Bromodichloromethane	(2)	5.924	83	1800616	329.105
43) 1,2-Dichloroethene (Total)	(2)		96	2898782	636.764
80) 2-Nitropropane	(2)	6.175	41	1216565	657.181
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	1221742	332.128
82) cis-1,3-Dichloropropene	(2)	6.406	75	2496178	331.820
83) 4-Methyl-2-pentanone	(2)	6.585	43	5276419	594.089
84)$Toluene-d8	(3)	6.698	98	920754	48.955
84)$Toluene-d8	(3)	6.698	100	635513	50.952
89) Toluene	(3)	6.768	92	3764381	310.699
90) trans-1,3-Dichloropropene	(3)	7.015	75	2388350	331.125

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.141	69	2948418	332.666
93) 1,1,2-Trichloroethane	(3)	7.214	97	1462902	313.709
94) Tetrachloroethene	(3)	7.359	166	1538643	312.966
95) 1,3-Dichloropropane	(3)	7.384	76	2548018	314.585
97) 2-Hexanone	(3)	7.490	43	4182184	592.716
98) Dibromochloromethane	(3)	7.612	129	1599809	351.250
100) 1,2-Dibromoethane	(3)	7.718	107	1653551	322.750
101)*Chlorobenzene-d5	(3)	8.161	117	750584	50.000
103) Chlorobenzene	(3)	8.187	112	4251585	316.321
104) 1,1,1,2-Tetrachloroethane	(3)	8.267	131	1472432	340.894
105) Ethylbenzene	(3)	8.296	91	7172946	311.494
107) m+p-Xylene	(3)	8.402	106	5900396	644.458
108) o-Xylene	(3)	8.742	106	2944288	326.885
110) Styrene	(3)	8.751	104	5111867	338.315
111) Bromoform	(3)	8.896	173	1332048	375.784
112) Isopropylbenzene	(3)	9.047	105	6974372	315.109
113) Cyclohexanone	(1)	9.114	55	1785966	4225.220
115)$4-Bromofluorobenzene	(3)	9.162	95	381876	50.752
115)$4-Bromofluorobenzene	(3)	9.165	174	321796	50.682
116) Bromobenzene	(4)	9.278	156	2001950	310.704
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	2675009	307.862
118) 1,2,3-Trichloropropane	(4)	9.313	110	793023	303.003
119) trans-1,4-Dichloro-2-butene	(4)	9.332	53	2093586	751.374
120) n-Propylbenzene	(4)	9.377	91	8126022	286.087
121) 2-Chlorotoluene	(4)	9.435	126	1813407	309.524
123) 1,3,5-Trimethylbenzene	(4)	9.512	105	6283549	306.739
122) 4-Chlorotoluene	(4)	9.518	126	1986374	316.718
125) tert-Butylbenzene	(4)	9.756	134	1469098	315.656
126) Pentachloroethane	(4)	9.765	167	1314293	357.228
127) 1,2,4-Trimethylbenzene	(4)	9.791	105	6515518	301.836
128) sec-Butylbenzene	(4)	9.919	105	7350716	292.333
130) 1,3-Dichlorobenzene	(4)	9.993	146	3744438	304.756
131) p-Isopropyltoluene	(4)	10.025	119	6646629	298.604
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	447340	50.000
134) 1,4-Dichlorobenzene	(4)	10.061	146	3824950	300.290
91) 1,3-Dichloropropene (total)	(3)		100	4884528	662.945
135) 1,2,3-Trimethylbenzene	(4)	10.099	105	6932082	298.464
136) Benzyl Chloride	(4)	10.157	91	5948413	333.650

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

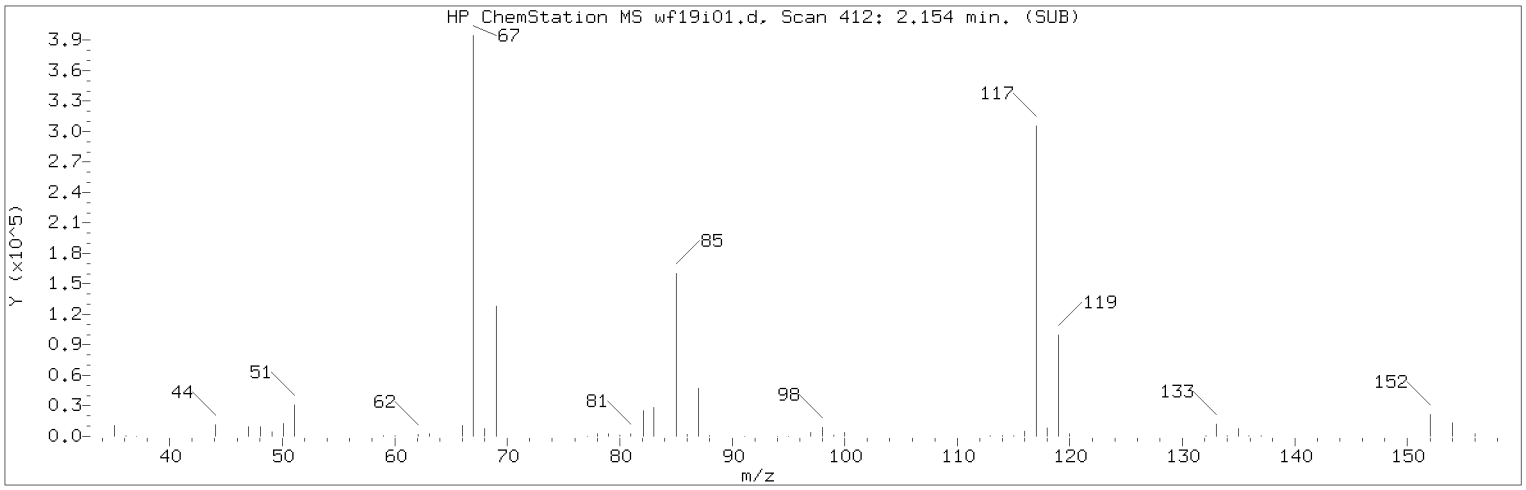
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

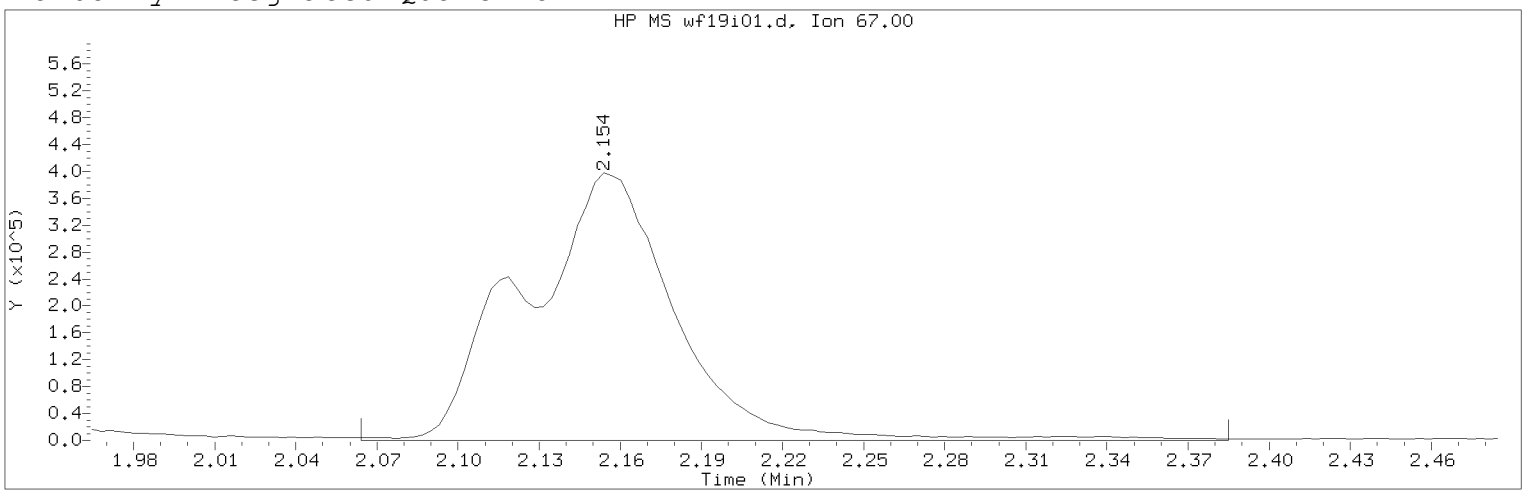
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.240	119	4321366	308.975
138) 1,4-Diethylbenzene	(4)	10.301	119	4611431	307.745
140) n-Butylbenzene	(4)	10.317	92	3453634	307.409
139) 1,2-Dichlorobenzene	(4)	10.324	146	3754829	308.029
141) 1,2-Diethylbenzene	(4)	10.382	119	3619472	306.525
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	622910	315.447
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	2798024	299.339
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	2685608	299.261
148) Hexachlorobutadiene	(4)	11.530	225	896485	280.479
149) Naphthalene	(4)	11.582	128	8569412	282.213
150) 1,2,3-Trichlorobenzene	(4)	11.739	180	2579036	294.437
109) Xylene (Total)	(3)		106	8844684	971.343
151) 2-Methylnaphthalene	(4)	12.304	142	5243189	302.657
142) Diethylbenzene (total)	(4)		100	12552269	923.245

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

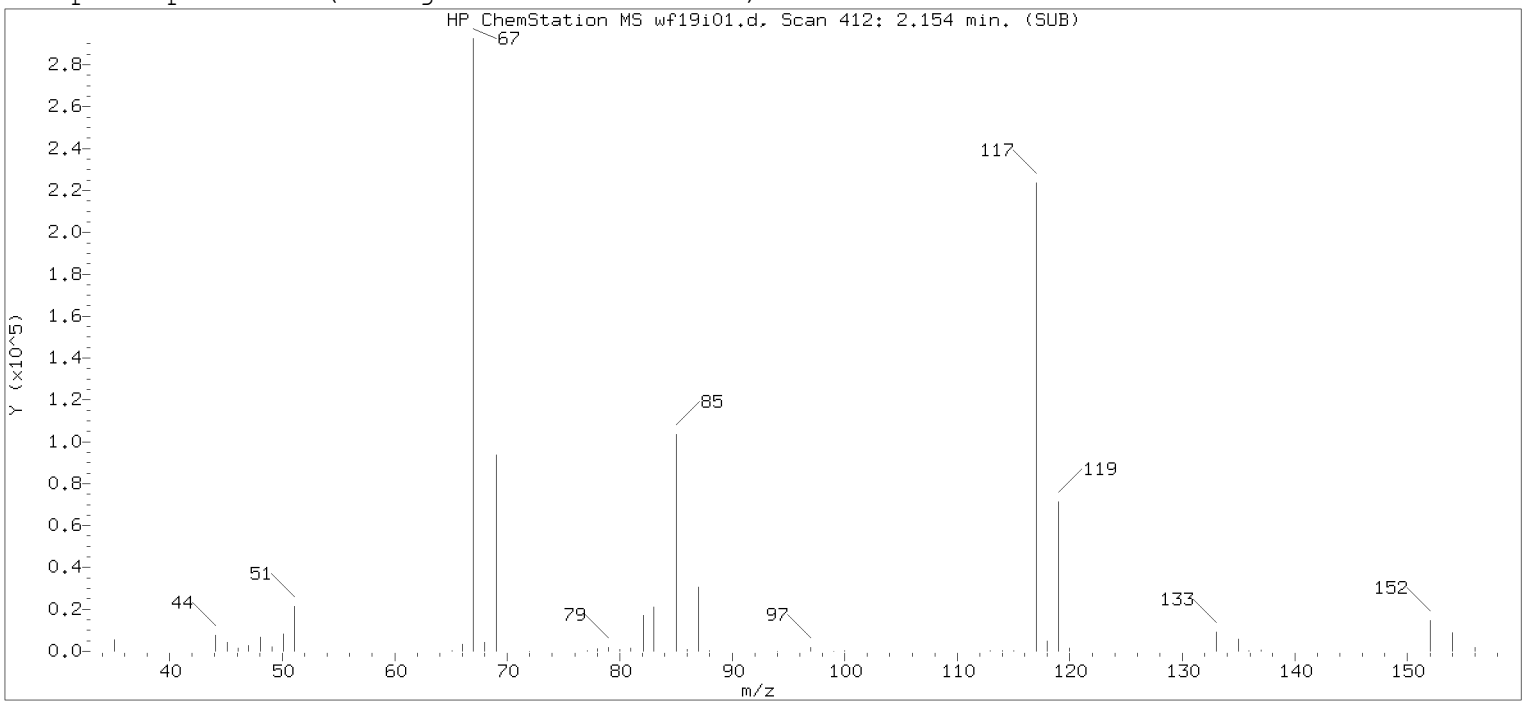
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 412
Retention Time (minutes): 2.154
Quant Ion : 67.00
Area (flag) : 1544263M
On-Column Amount (ng) : 294.0053
Integration start scan : 383 Integration stop scan: 483
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

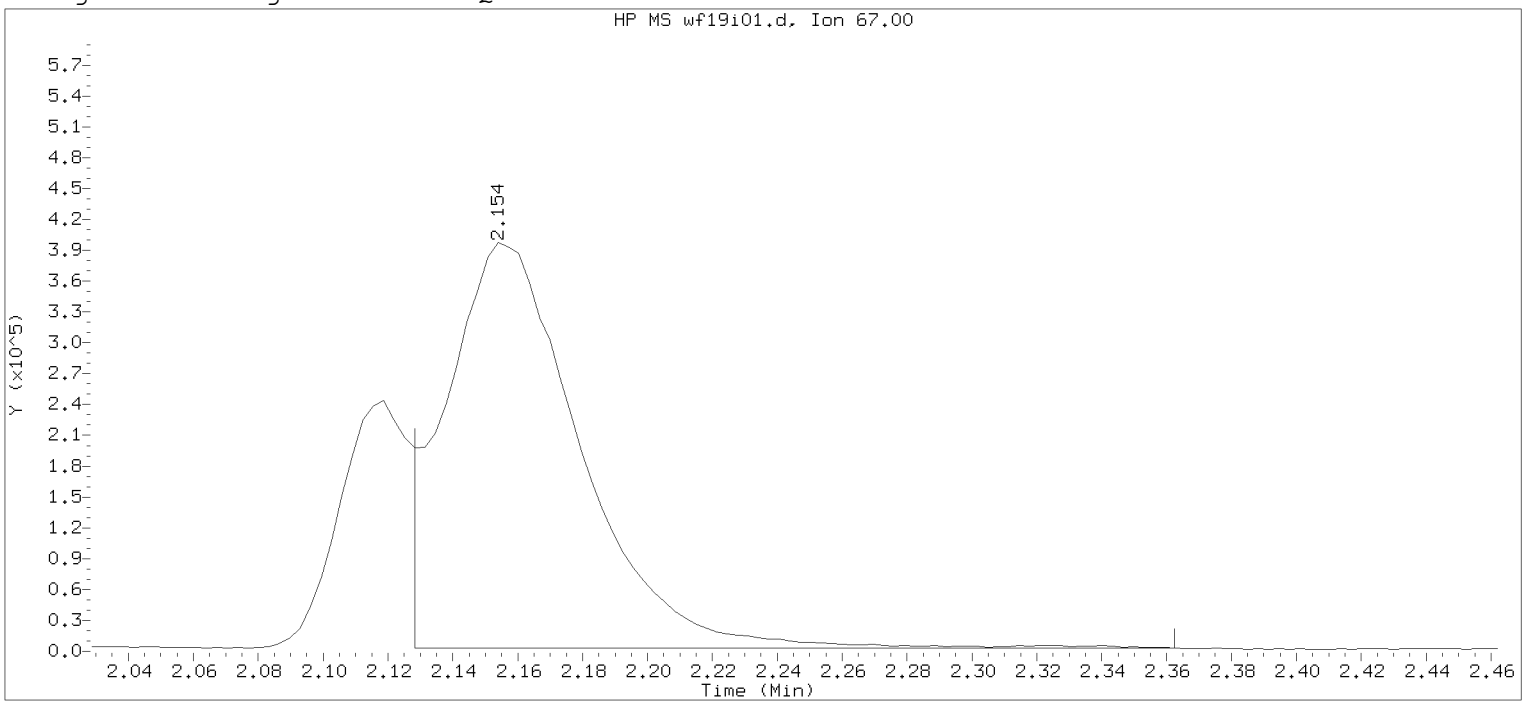
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

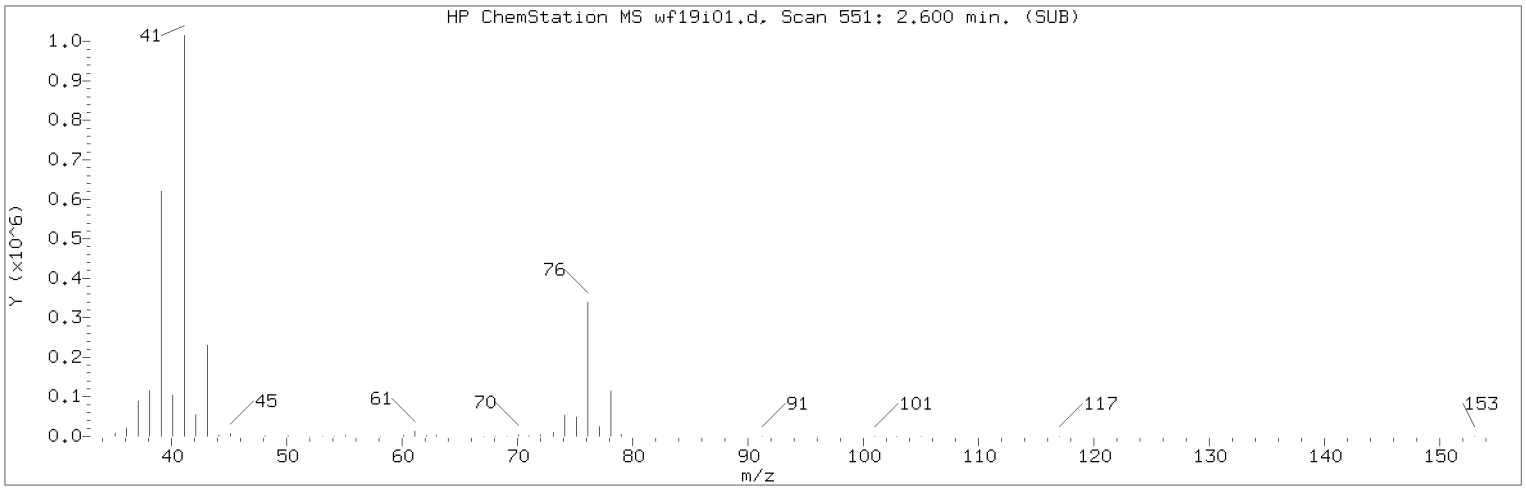
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

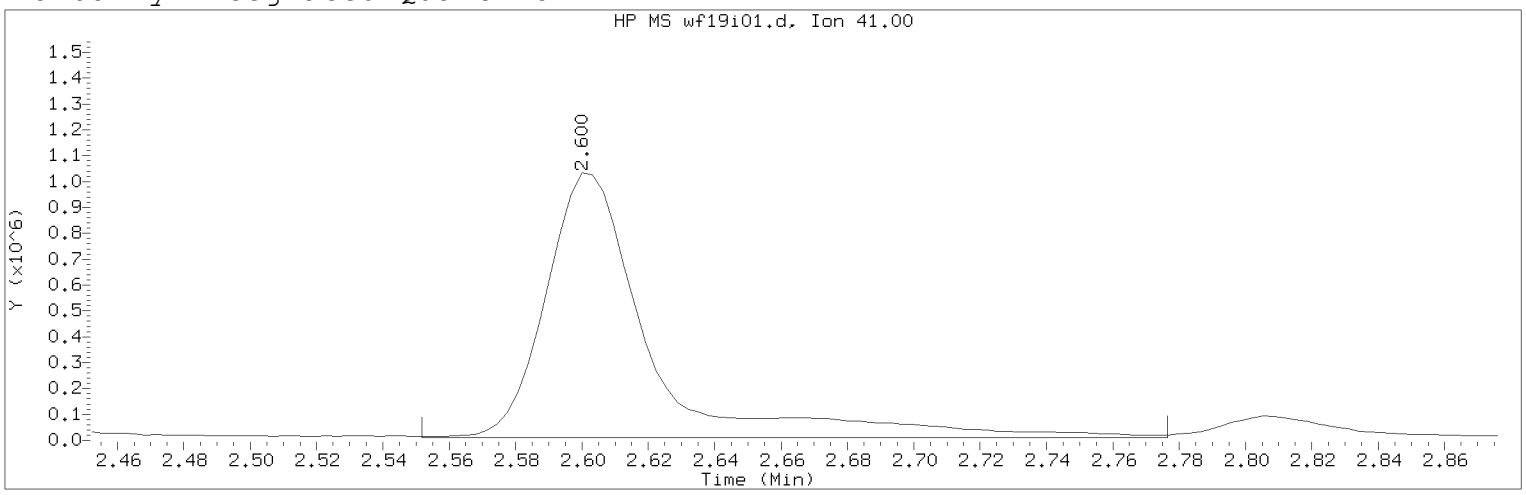
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 412
Retention Time (minutes): 2.154
Quant Ion : 67.00
Area : 1136730
On-column Amount (ng) : 300.0000
Integration start scan : 403 Integration stop scan: 476
Y at integration start : 3233 Y at integration end: 2941

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

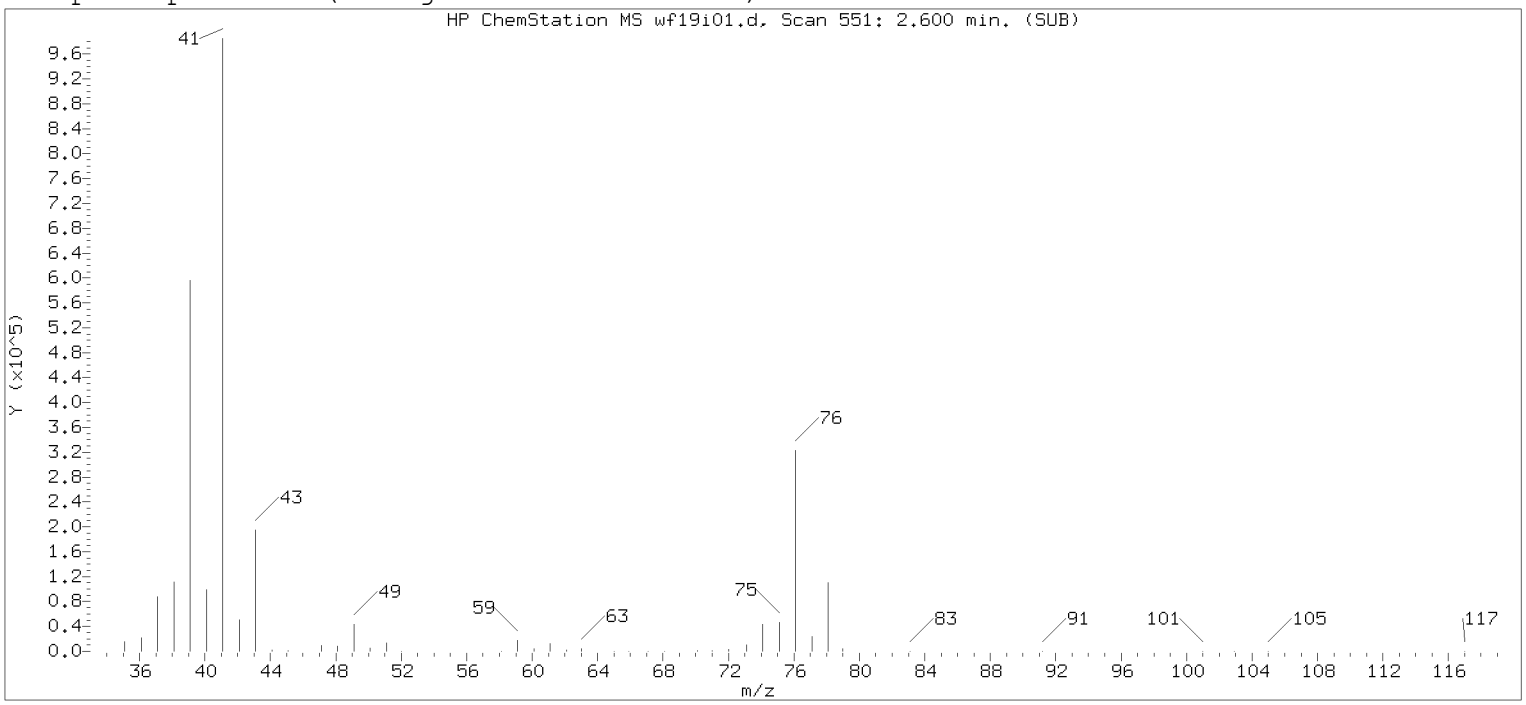
Compound Number : 25
Compound Name : Allyl Chloride
Scan Number : 551
Retention Time (minutes): 2.600
Quant Ion : 41.00
Area (flag) : 2218296M
On-Column Amount (ng) : 322.0900
Integration start scan : 535 Integration stop scan: 605
Y at integration start : 10829 Y at integration end: 10829

Reason for manual integration: improper integration

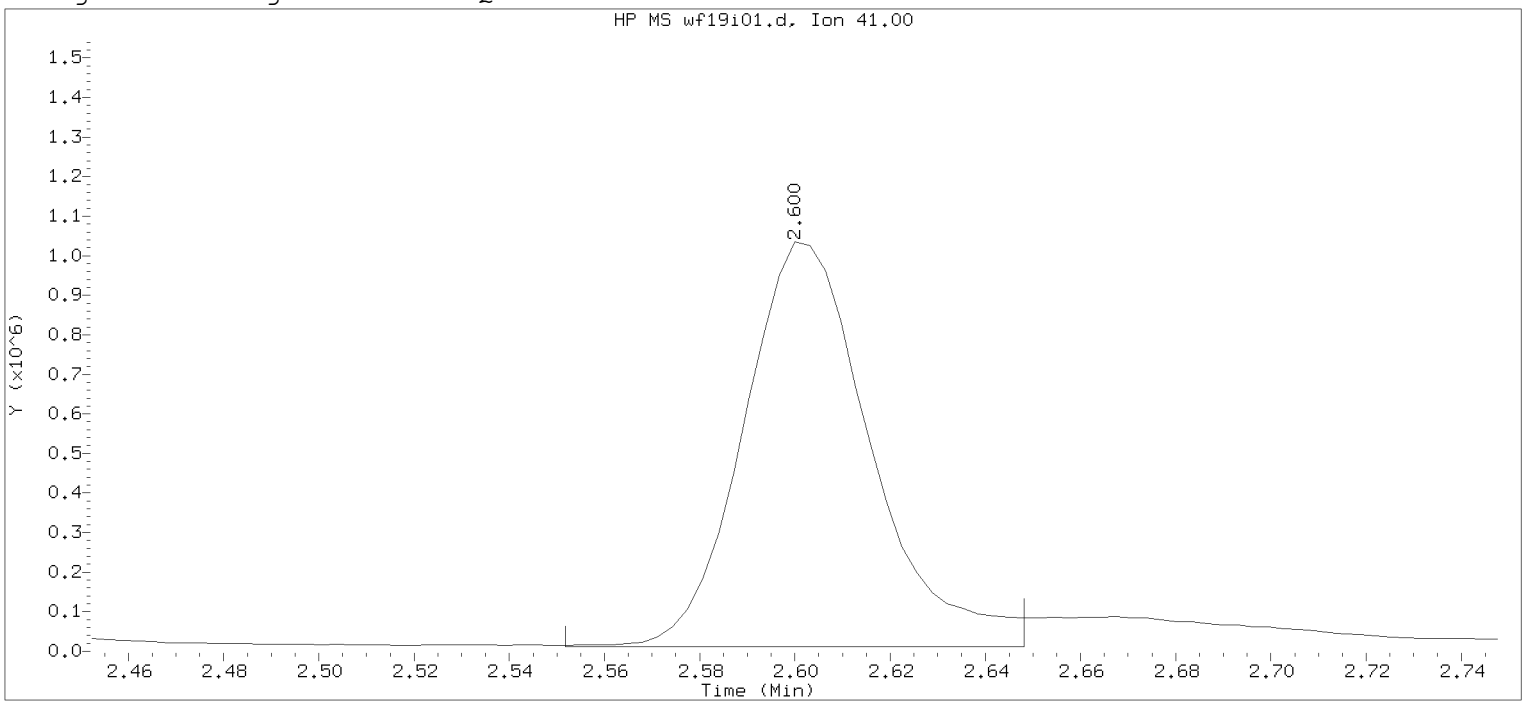
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

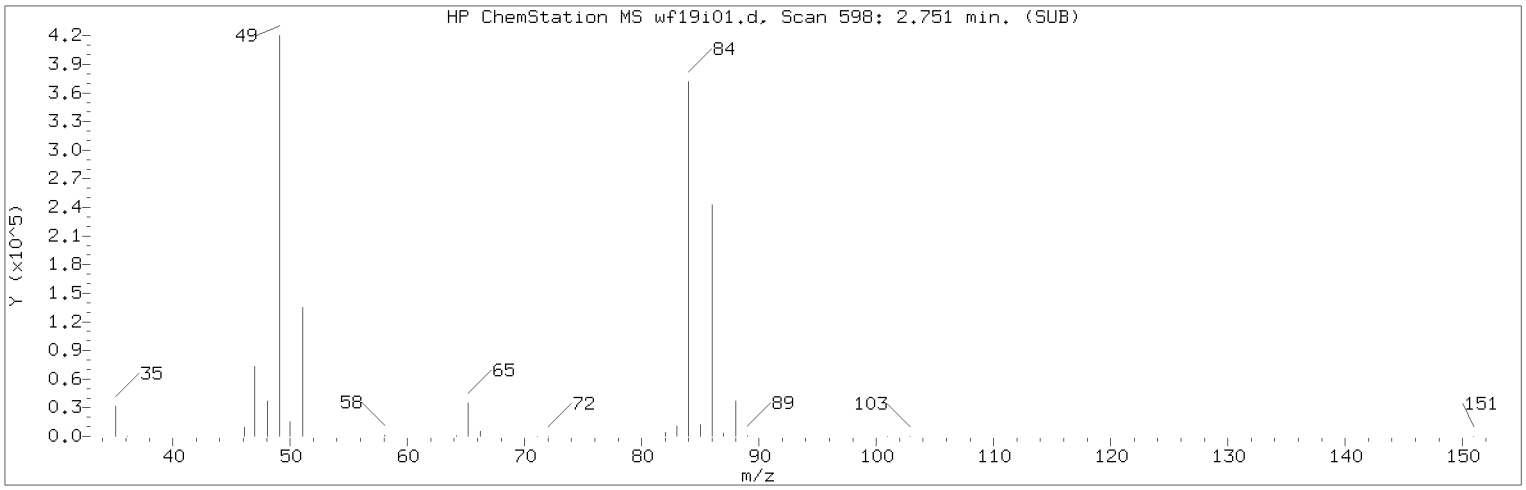
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

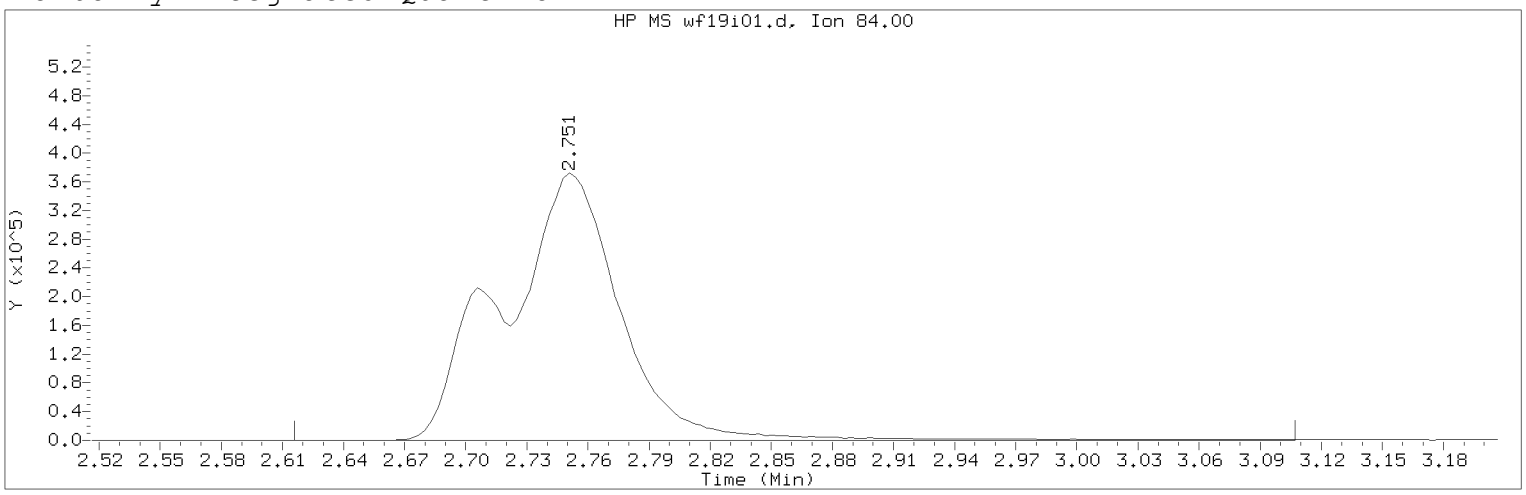
Compound Number : 25
Compound Name : Allyl Chloride
Scan Number : 551
Retention Time (minutes): 2.600
Quant Ion : 41.00
Area : 1896643
On-column Amount (ng) : 300.0000
Integration start scan : 535 Integration stop scan: 565
Y at integration start : 11574 Y at integration end: 11574

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

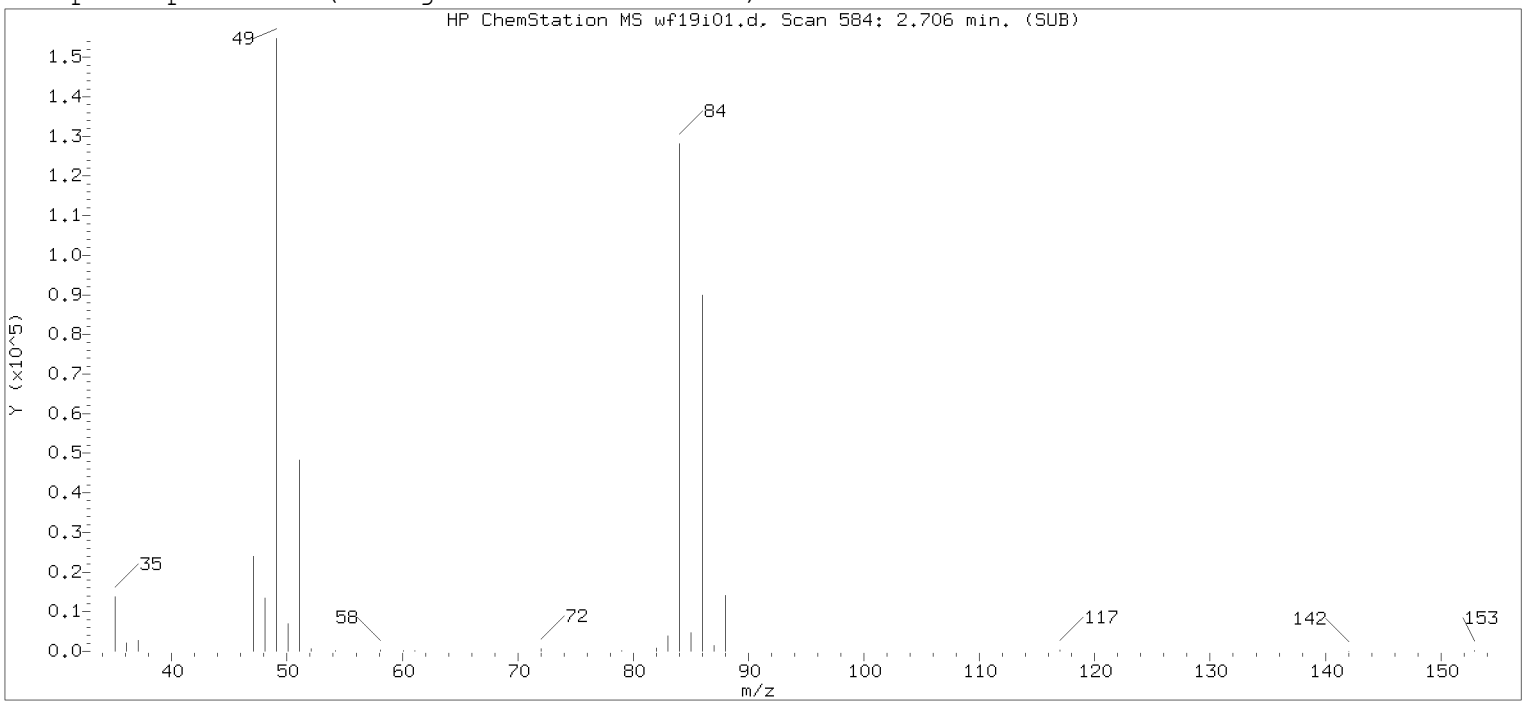
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 598
Retention Time (minutes): 2.751
Quant Ion : 84.00
Area (flag) : 1485309M
On-Column Amount (ng) : 307.3734
Integration start scan : 555 Integration stop scan: 708
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

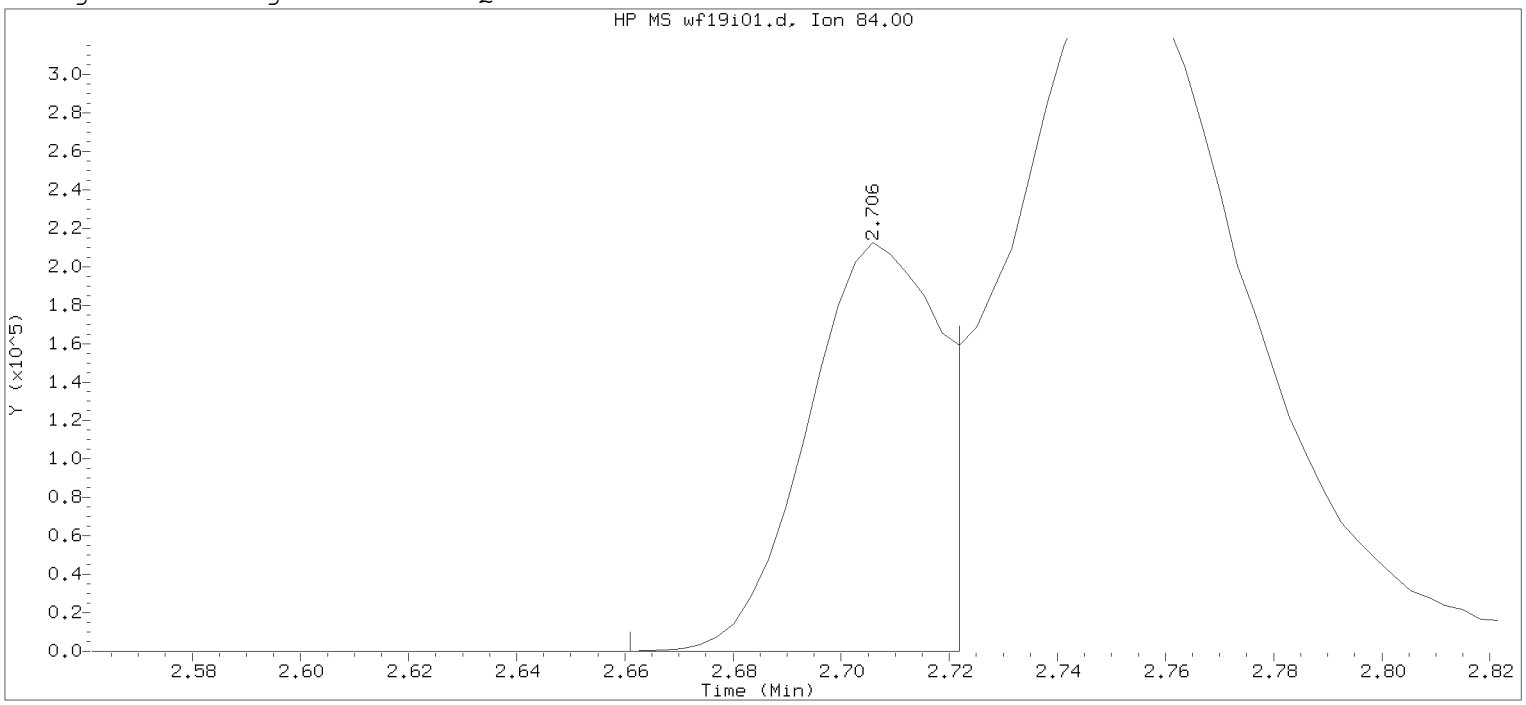
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 584
Retention Time (minutes): 2.706
Quant Ion : 84.00
Area : 358731
On-column Amount (ng) : 300.0000
Integration start scan : 569 Integration stop scan: 588
Y at integration start : 0 Y at integration end: 0

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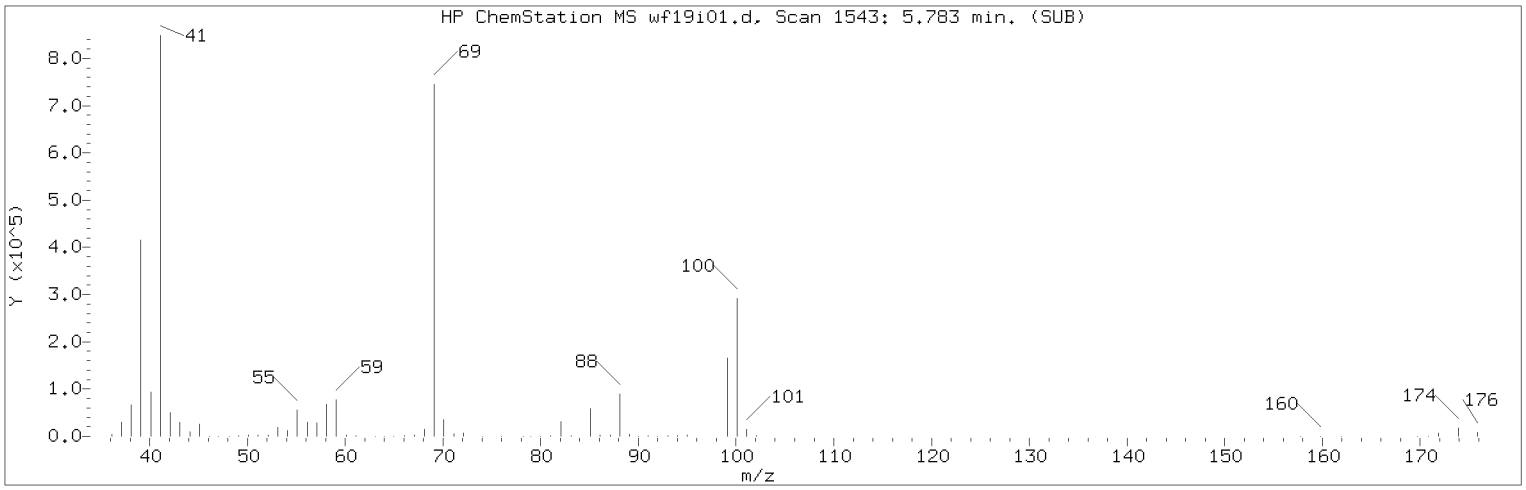
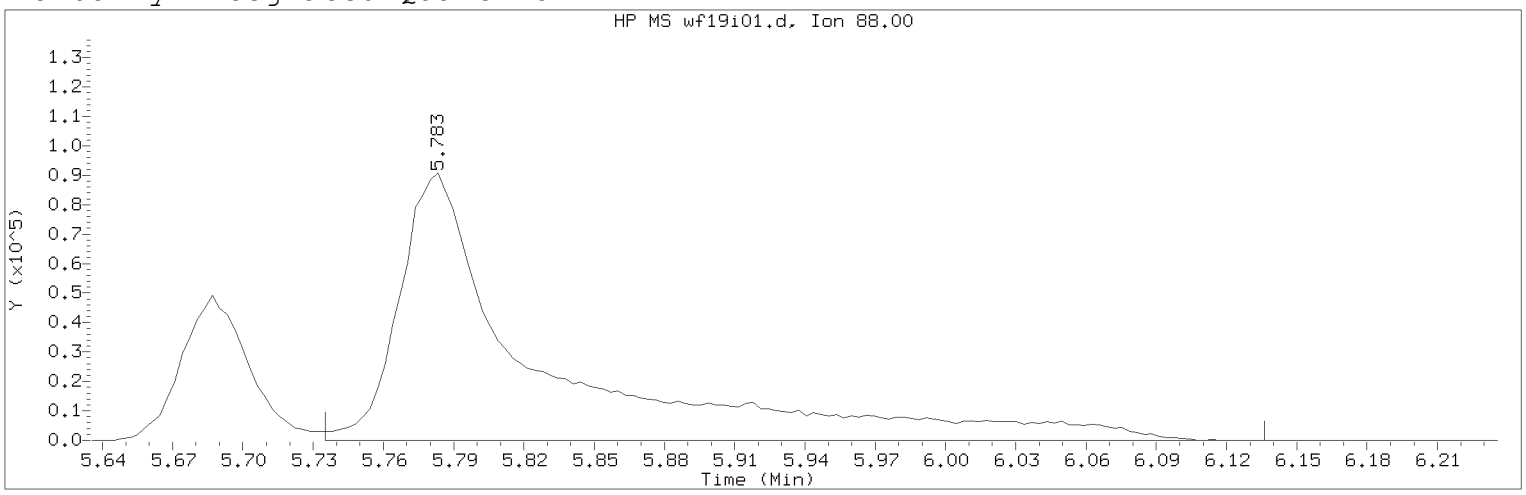
Target 3.5 esignature user: Abigail P. Roselli

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

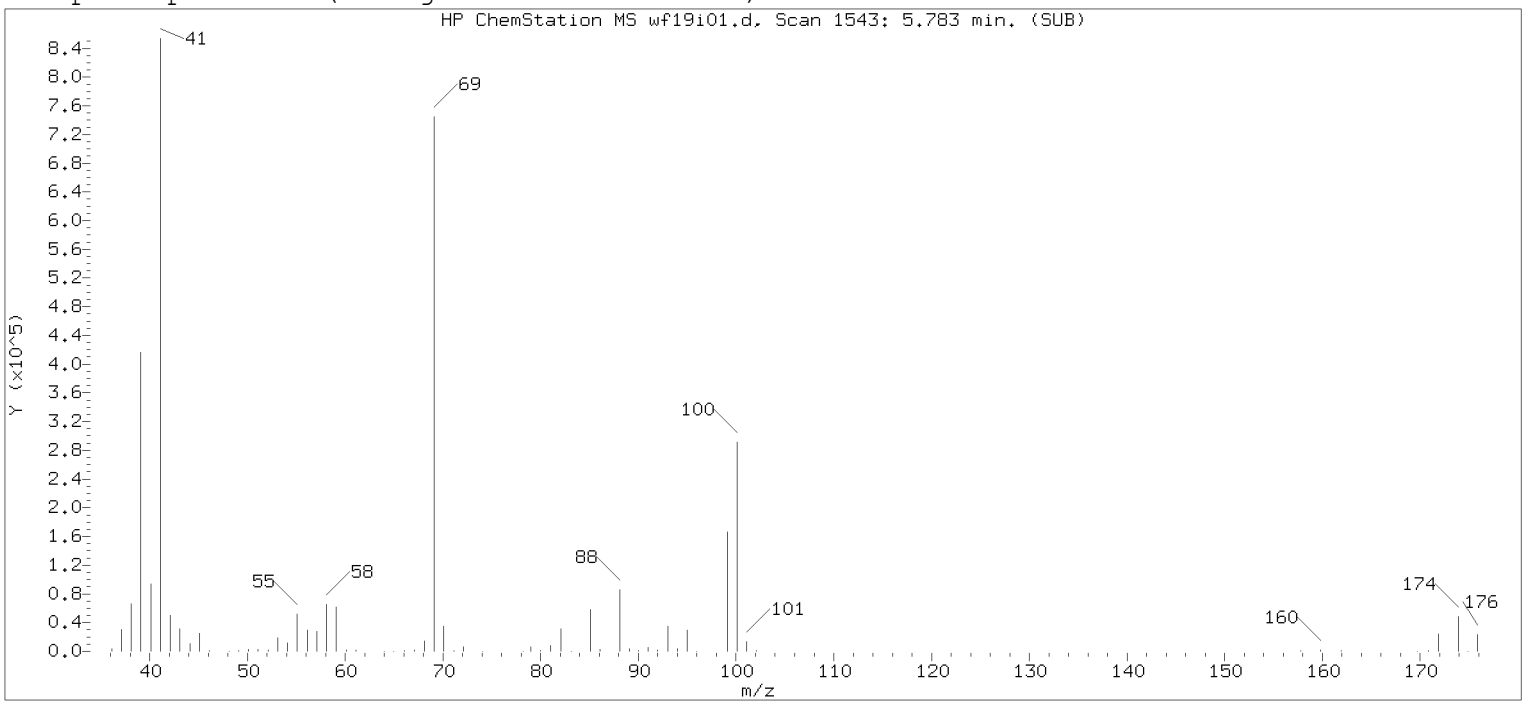
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1543
Retention Time (minutes): 5.783
Quant Ion : 88.00
Area (flag) : 380560M
On-Column Amount (ng) : 4061.2594
Integration start scan : 1527 Integration stop scan: 1652
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

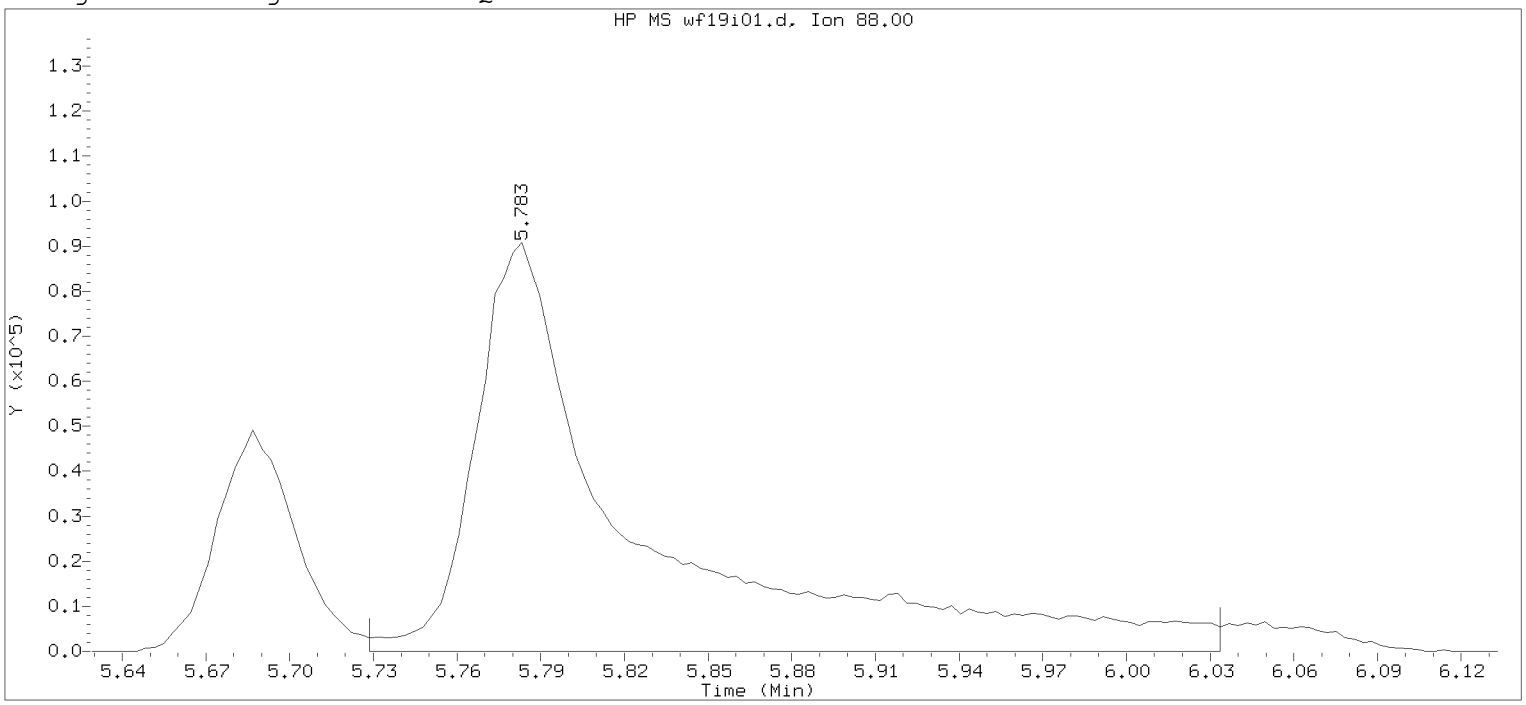
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



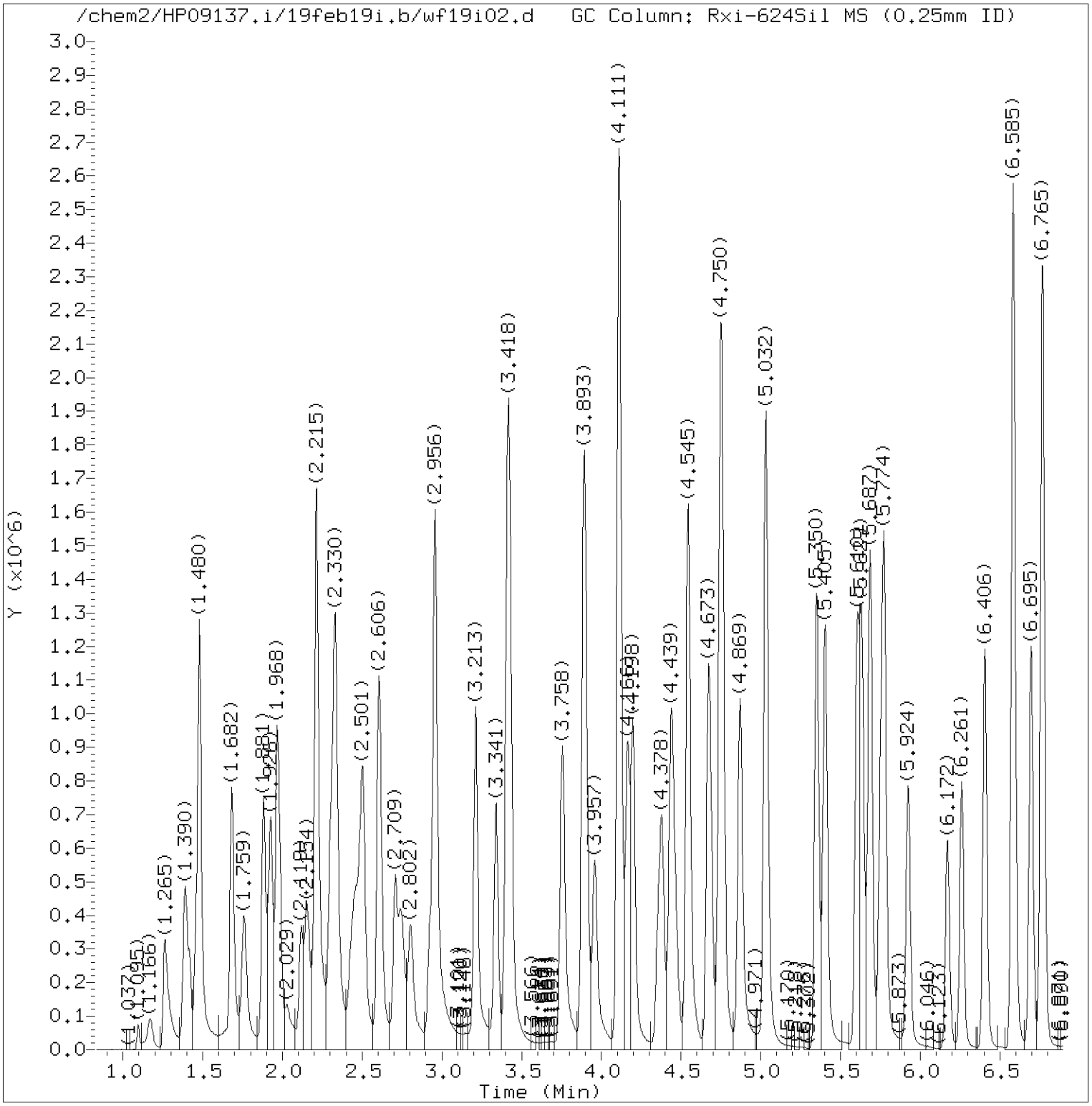
Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1543
Retention Time (minutes): 5.783
Quant Ion : 88.00
Area : 364823
On-column Amount (ng) : 3750.0000
Integration start scan : 1525 Integration stop scan: 1620
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user apr27582



Total Ion Chromatogram (TIC)

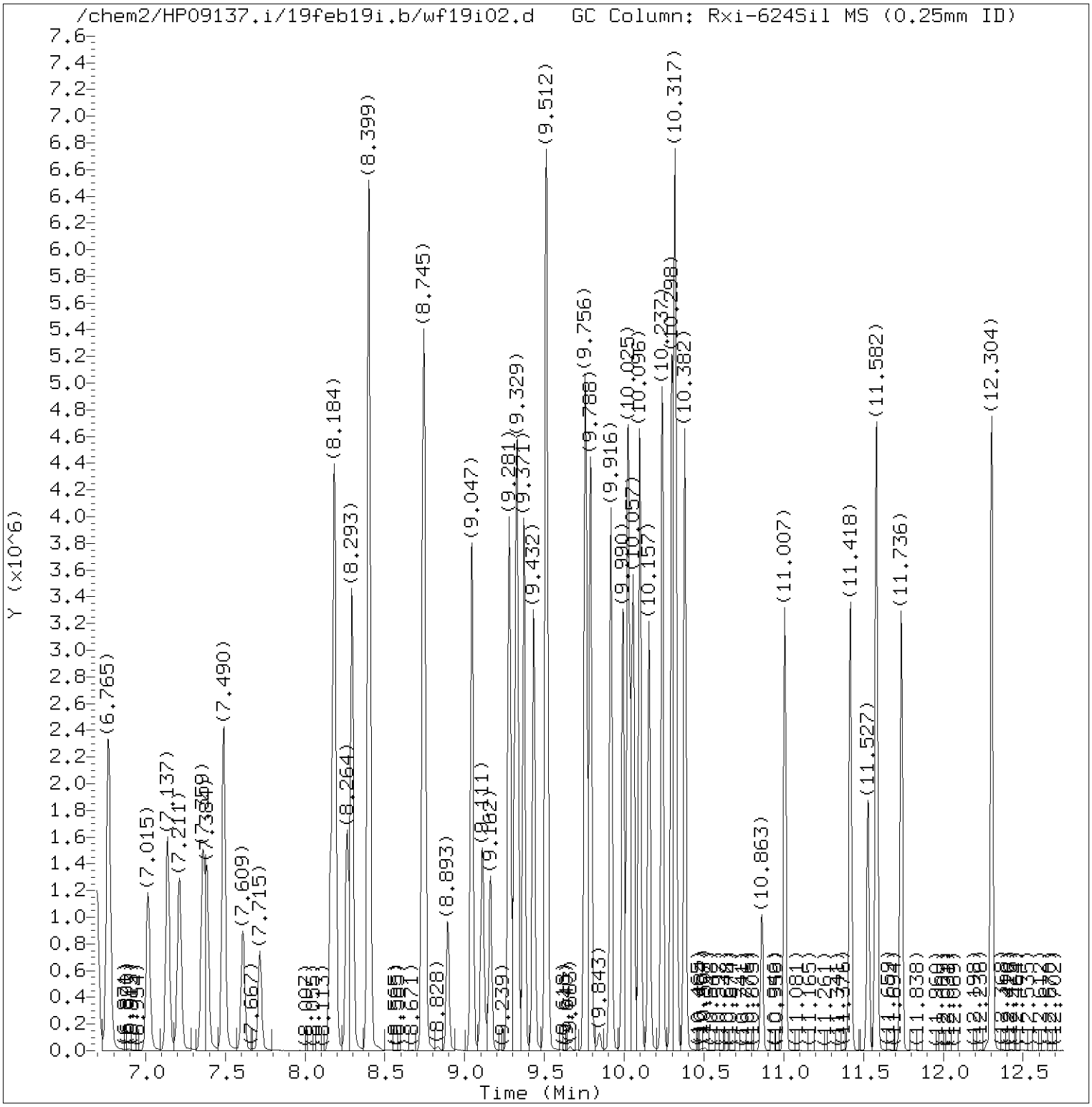
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.265	85	532286	97.759
4) Chloromethane	(2)	1.390	50	662027	97.645
6) Vinyl Chloride	(2)	1.461	62	607652	97.766
5) 1,3-Butadiene	(2)	1.480	39	375111	90.785
8) Bromomethane	(2)	1.682	94	485723	99.089
9) Chloroethane	(2)	1.756	64	376986	92.173
10) Dichlorofluoromethane	(2)	1.881	67	739116	93.362
12) Trichlorofluoromethane	(2)	1.926	101	651101	98.636
11) n-Pentane	(2)	1.968	43	576023	91.755
13) Ethanol	(1)	2.032	45	238813	2376.796
15) Freon 123a	(2)	2.154	67	447423M	90.704
16) Acrolein	(1)	2.215	56	1612064	1016.387
17) 1,1-Dichloroethene	(2)	2.321	96	368528	99.262
17) 1,1-Dichloroethene	(2)	2.324	63	178834	95.474
19) Freon 113	(2)	2.327	101	324542	99.547
18) Acetone	(1)	2.334	58	146760	190.366
21) 2-Propanol	(1)	2.446	45	307931	537.602
22) Methyl Iodide	(2)	2.462	142	704010M	98.952
23) Carbon Disulfide	(2)	2.504	76	1282599	98.059
25) Allyl Chloride	(2)	2.603	41	655452	101.339
27) Methyl Acetate	(2)	2.619	43	535082	95.578
28) Methylene Chloride	(2)	2.709	84	428209	94.359
29)*t-Butyl alcohol-d10	(1)	2.732	65	220310	250.000
30) t-Butyl alcohol	(1)	2.805	59	526469	515.255
31) Acrylonitrile	(2)	2.924	53	304031	103.230
32) trans-1,2-Dichloroethene	(2)	2.956	96	402067	99.813
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	945603	96.409
34) n-Hexane	(2)	3.213	57	538355	99.882
36) 1,1-Dichloroethane	(2)	3.341	63	732003	100.285
38) di-Isopropyl ether	(2)	3.412	45	1396389	99.579
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	632191	100.001
40) Ethyl t-butyl ether	(2)	3.758	59	960285	93.945
42) cis-1,2-Dichloroethene	(2)	3.890	96	451707	99.873
45) 2,2-Dichloropropane	(2)	3.890	77	324555	99.005
44) 2-Butanone	(2)	3.903	43	860004	203.247
47) Propionitrile	(1)	3.961	54	609727	480.141
48) Methacrylonitrile	(2)	4.108	67	777971	245.675
49) Bromochloromethane	(2)	4.118	128	236720	100.687

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.166	71	230330	195.972
51) Chloroform	(2)	4.198	83	681837	99.558
52)$Dibromofluoromethane	(2)	4.352	113	193818	49.683
52)$Dibromofluoromethane	(2)	4.355	111	202190	50.488
53) 1,1,1-Trichloroethane	(2)	4.378	97	514779	99.897
54) Cyclohexane	(2)	4.442	56	662674	97.172
54) Cyclohexane	(2)	4.439	84	552208	97.823
54) Cyclohexane	(2)	4.442	69	200038	97.603
55) 1,1-Dichloropropene	(2)	4.545	75	537698	97.927
56) Carbon Tetrachloride	(2)	4.545	117	449800	101.713
58) Isobutyl Alcohol	(1)	4.670	41	498266	1337.627
57)$1,2-Dichloroethane-d4	(2)	4.689	102	51772	49.899
57)$1,2-Dichloroethane-d4	(2)	4.689	65	224469	49.700
57)$1,2-Dichloroethane-d4	(2)	4.689	104	32929	49.836
60) Benzene	(2)	4.747	78	1745793	98.915
61) 1,2-Dichloroethane	(2)	4.766	62	527693	96.787
61) 1,2-Dichloroethane	(2)	4.763	98	54900	105.839
65) t-Amyl methyl ether	(2)	4.869	73	996307	95.142
66)*Fluorobenzene	(2)	5.029	96	842063	50.000
67) n-Heptane	(2)	5.036	43	494804	96.055
69) n-Butanol	(1)	5.353	56	936370	2831.160
71) Trichloroethene	(2)	5.405	95	426587	99.807
73) Methylcyclohexane	(2)	5.607	83	609561	98.235
73) Methylcyclohexane	(2)	5.604	98	284401	98.574
74) 1,2-Dichloropropane	(2)	5.632	63	460305	101.585
75) Dibromomethane	(2)	5.754	93	287206	102.702
77) Methyl Methacrylate	(2)	5.774	69	522673	104.965
76) 1,4-Dioxane	(1)	5.780	88	133422M	1349.419
79) Bromodichloromethane	(2)	5.924	83	538662	104.835
43) 1,2-Dichloroethene (Total)	(2)		96	853774	199.686
80) 2-Nitropropane	(2)	6.172	41	392793	225.938
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	375619	108.730
82) cis-1,3-Dichloropropene	(2)	6.406	75	742975	105.167
83) 4-Methyl-2-pentanone	(2)	6.582	43	1875717	224.883
84)$Toluene-d8	(3)	6.695	98	874156	49.795
84)$Toluene-d8	(3)	6.695	100	585880	50.326
89) Toluene	(3)	6.765	92	1120657	99.097
90) trans-1,3-Dichloropropene	(3)	7.015	75	707175	105.042

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.137	69	893065	107.955
93) 1,1,2-Trichloroethane	(3)	7.211	97	446415	102.563
94) Tetrachloroethene	(3)	7.359	166	451061	98.296
95) 1,3-Dichloropropane	(3)	7.388	76	768151	101.607
97) 2-Hexanone	(3)	7.490	43	1550240	235.388
98) Dibromochloromethane	(3)	7.609	129	468005	110.088
100) 1,2-Dibromoethane	(3)	7.715	107	494533	103.416
101)*Chlorobenzene-d5	(3)	8.161	117	700579	50.000
103) Chlorobenzene	(3)	8.187	112	1242086	99.008
104) 1,1,1,2-Tetrachloroethane	(3)	8.264	131	424147	105.206
105) Ethylbenzene	(3)	8.293	91	2139903	99.561
107) m+p-Xylene	(3)	8.399	106	1713085	200.463
108) o-Xylene	(3)	8.739	106	843483	100.330
110) Styrene	(3)	8.748	104	1474099	104.523
111) Bromoform	(3)	8.893	173	379562	114.721
112) Isopropylbenzene	(3)	9.047	105	2075316	100.458
113) Cyclohexanone	(1)	9.111	55	575999	1291.456
115)$4-Bromofluorobenzene	(3)	9.162	95	350858	49.958
115)$4-Bromofluorobenzene	(3)	9.162	174	295274	49.824
116) Bromobenzene	(4)	9.278	156	567523	99.066
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	803775	104.043
118) 1,2,3-Trichloropropane	(4)	9.313	110	239124	102.762
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	643492	259.751
120) n-Propylbenzene	(4)	9.371	91	2463393	97.544
121) 2-Chlorotoluene	(4)	9.432	126	515018	98.871
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	1822759	100.079
122) 4-Chlorotoluene	(4)	9.515	126	553747	99.305
125) tert-Butylbenzene	(4)	9.756	134	406285	98.184
126) Pentachloroethane	(4)	9.765	167	342023	104.558
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	1913889	99.721
128) sec-Butylbenzene	(4)	9.916	105	2197034	98.273
130) 1,3-Dichlorobenzene	(4)	9.993	146	1077708	98.654
131) p-Isopropyltoluene	(4)	10.022	119	1972426	99.665
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	397731	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	1113649	98.336
91) 1,3-Dichloropropene (total)	(3)		100	1450150	210.209
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	2033938	98.495
136) Benzyl Chloride	(4)	10.157	91	1788288	112.817

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.237	119	1234343	99.263
138) 1,4-Diethylbenzene	(4)	10.298	119	1307716	98.156
140) n-Butylbenzene	(4)	10.314	92	985822	98.693
139) 1,2-Dichlorobenzene	(4)	10.324	146	1081811	99.816
141) 1,2-Diethylbenzene	(4)	10.382	119	1030347	98.141
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	191235	108.922
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	826857	99.492
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	814746	102.112
148) Hexachlorobutadiene	(4)	11.530	225	267172	94.015
149) Naphthalene	(4)	11.582	128	2844431	105.359
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	786584	101.001
109) Xylene (Total)	(3)		106	2556568	300.794
151) 2-Methylnaphthalene	(4)	12.304	142	1671753	108.536
142) Diethylbenzene (total)	(4)		100	3572406	295.560

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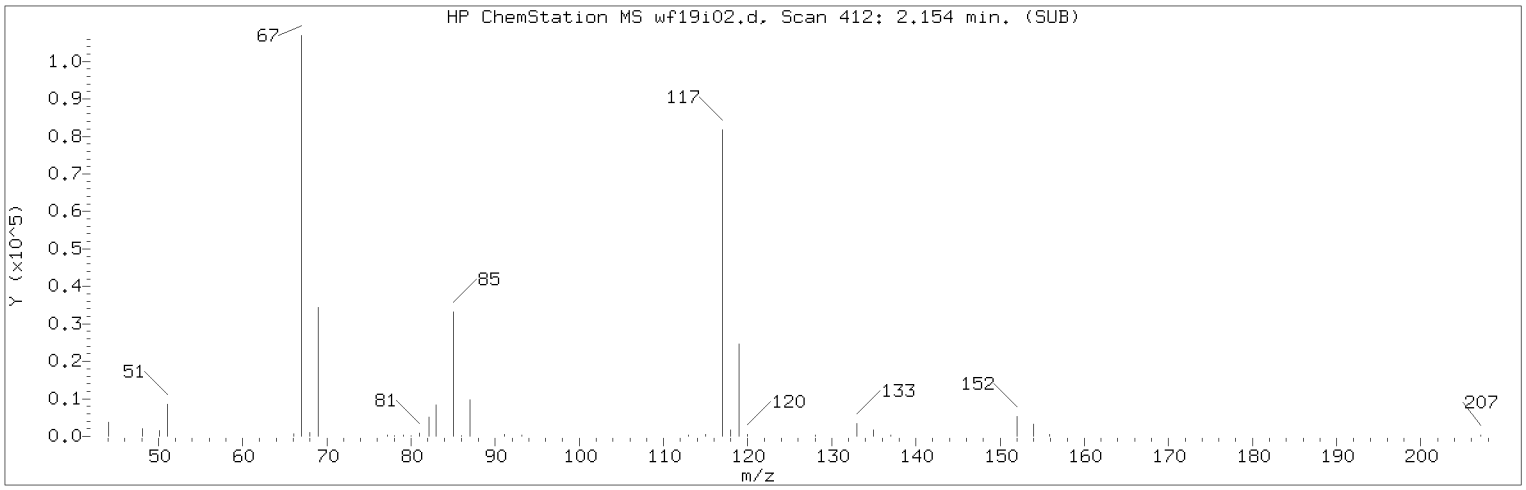
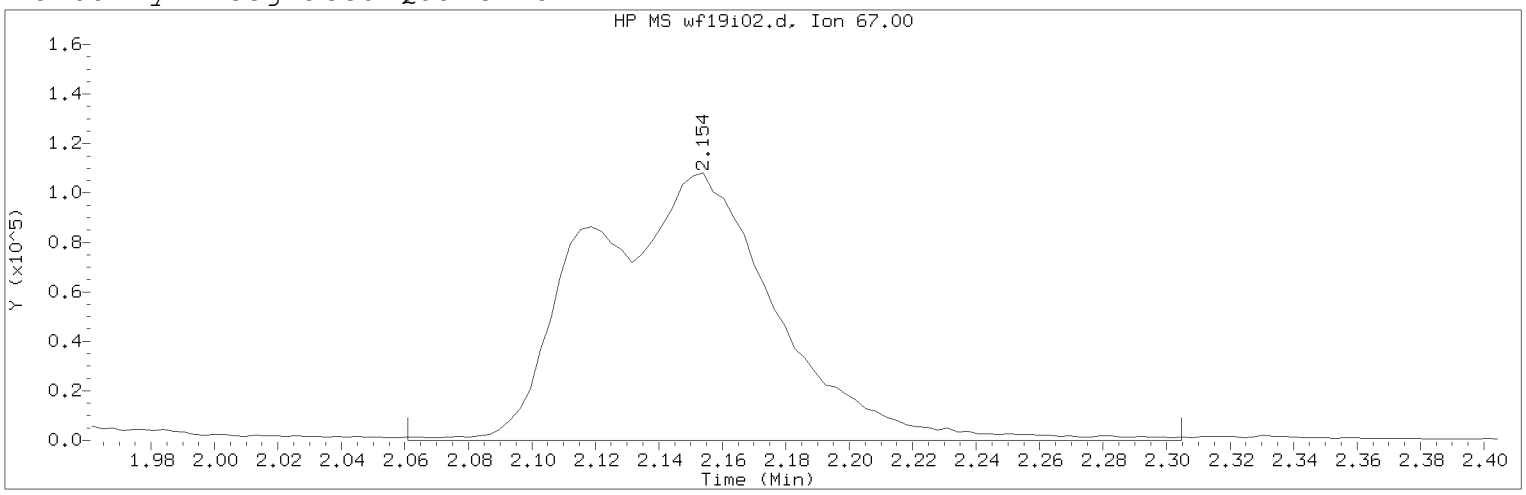
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

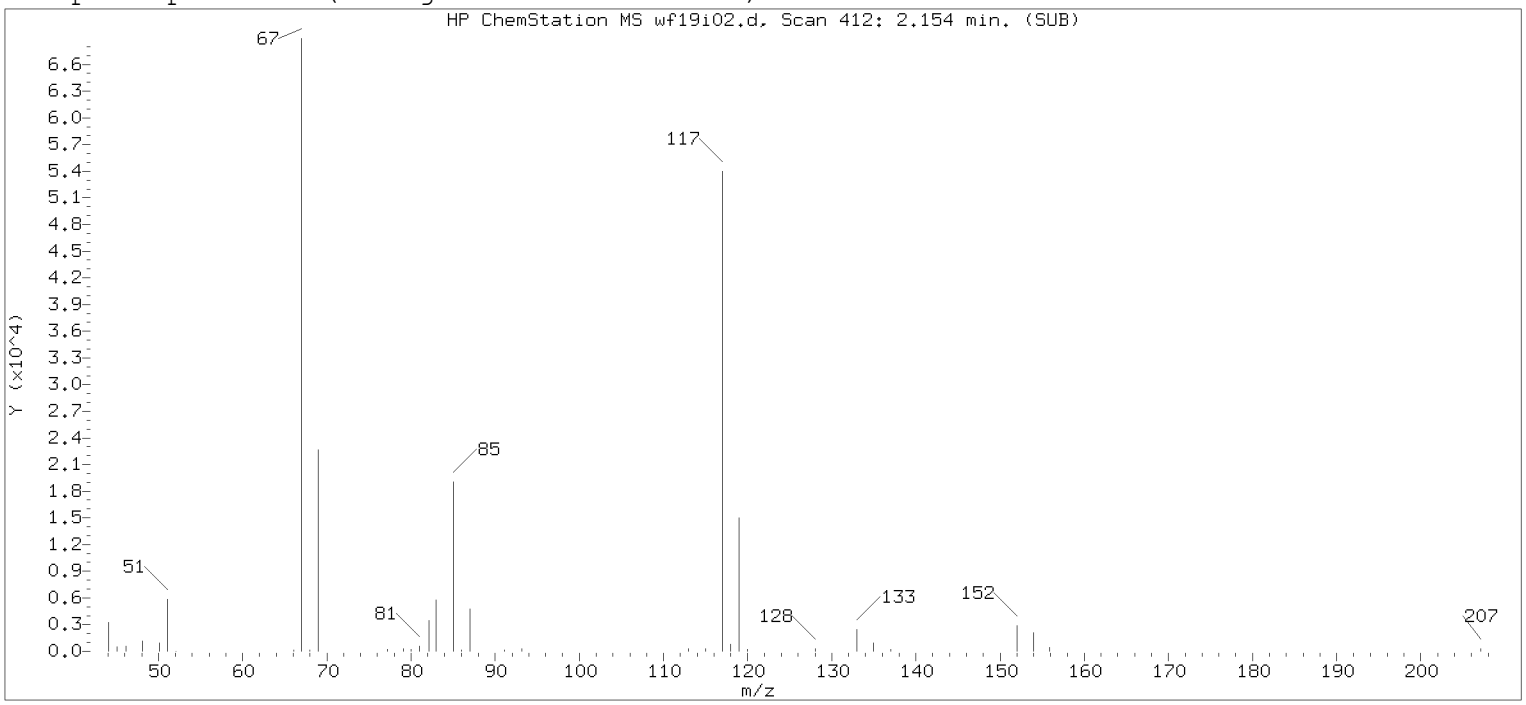
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 412
Retention Time (minutes): 2.154
Quant Ion : 67.00
Area (flag) : 447423M
On-Column Amount (ng) : 90.7045
Integration start scan : 382 Integration stop scan: 458
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

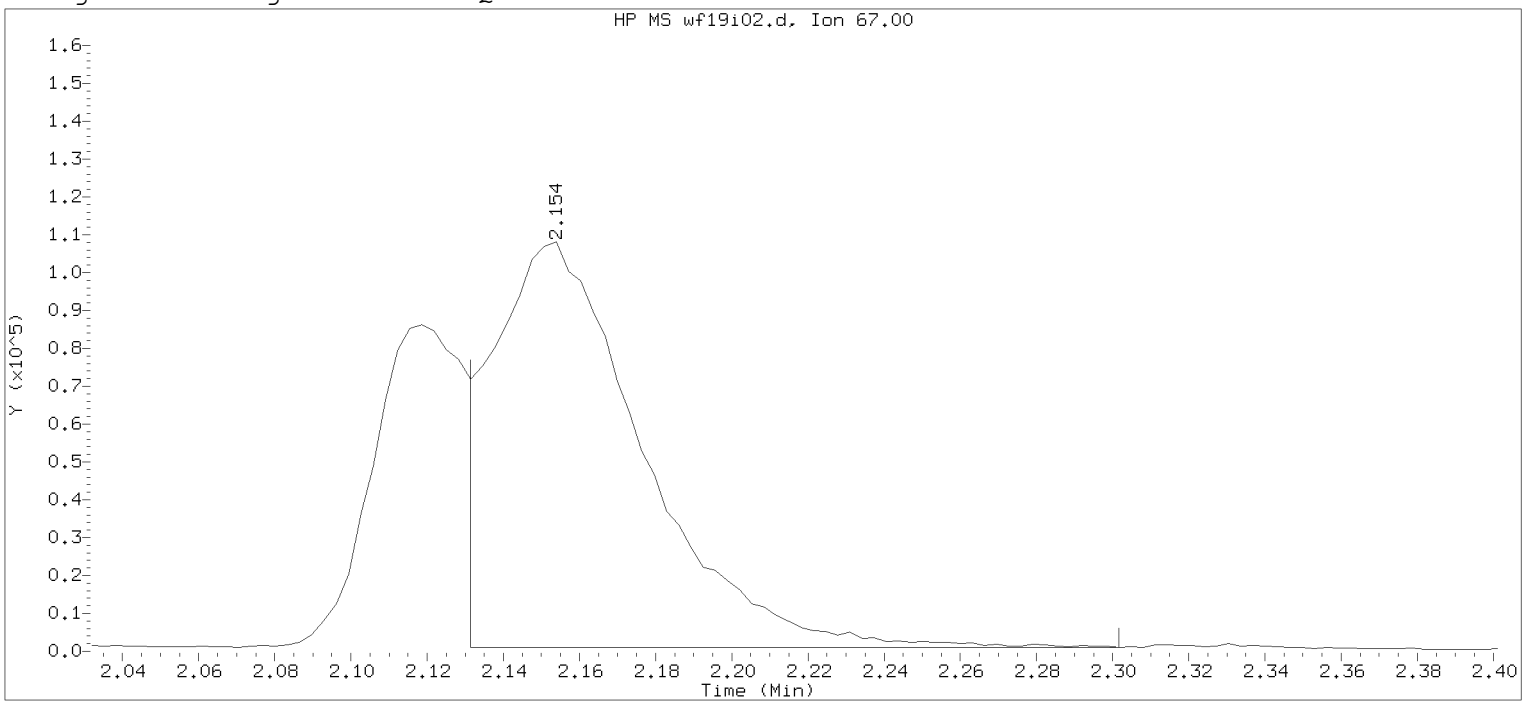
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 412		
Retention Time (minutes)	: 2.154		
Quant Ion	: 67.00		
Area	: 294632		
On-column Amount (ng)	: 90.5897		
Integration start scan	: 404	Integration stop scan:	457
Y at integration start	: 1032	Y at integration end:	981

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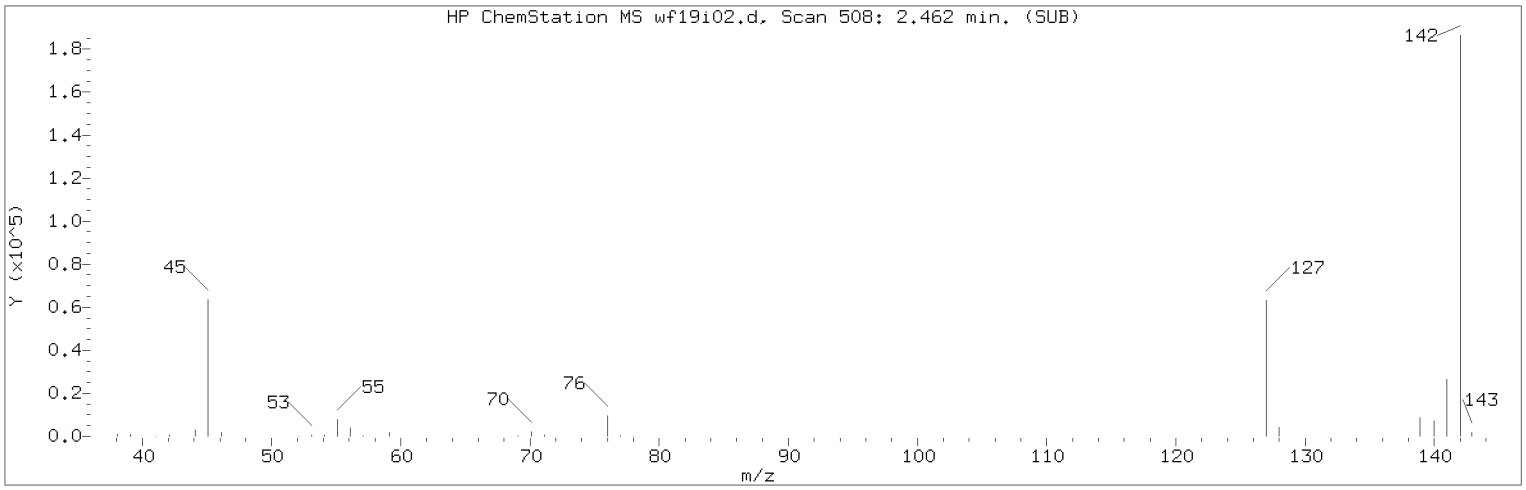
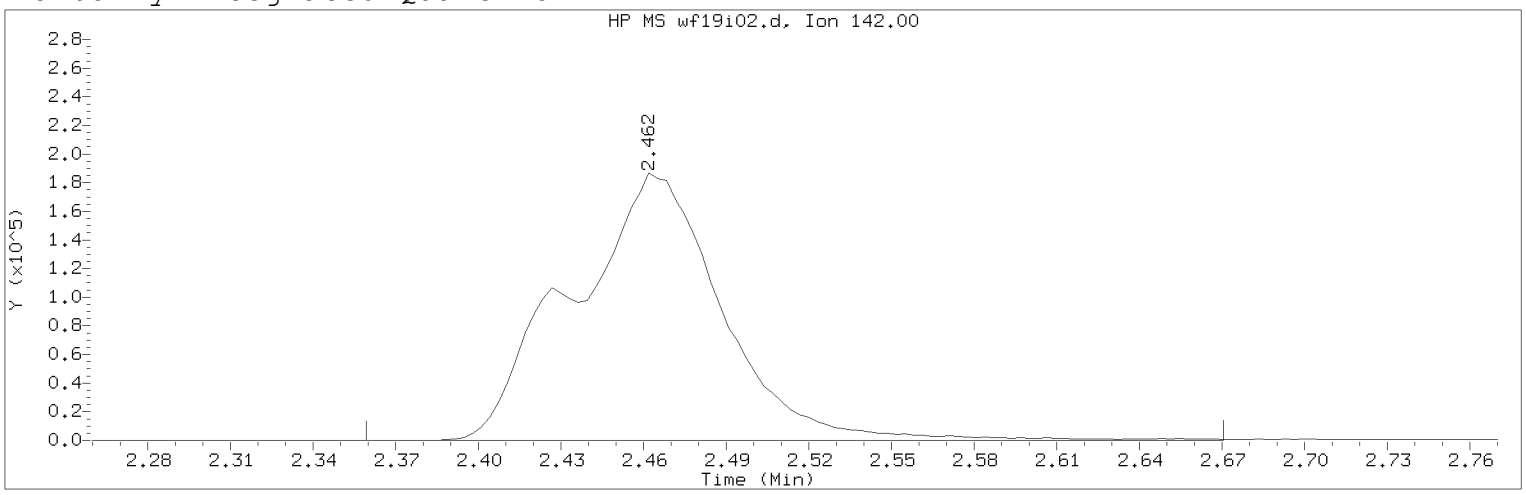
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

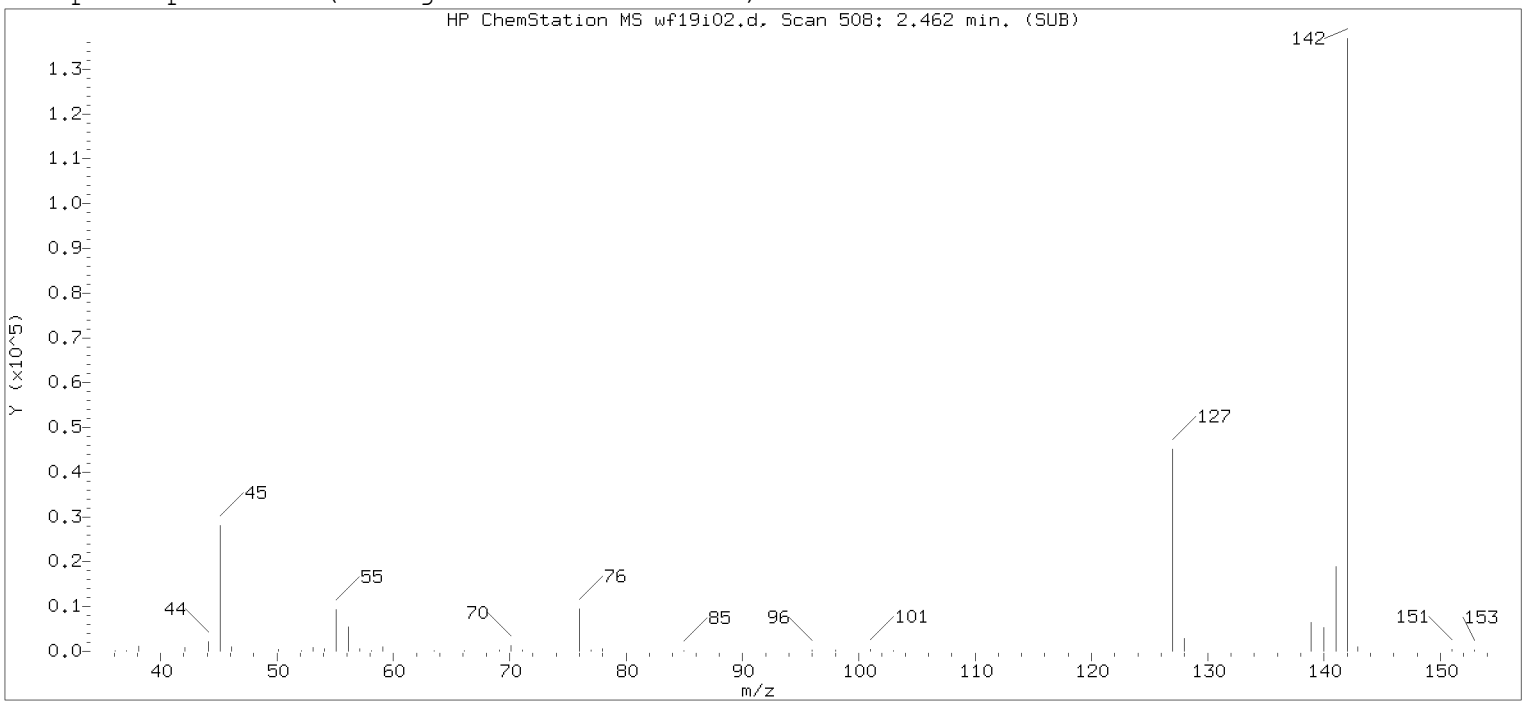
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 508
Retention Time (minutes): 2.462
Quant Ion : 142.00
Area (flag) : 704010M
On-Column Amount (ng) : 98.9520
Integration start scan : 475 Integration stop scan: 572
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

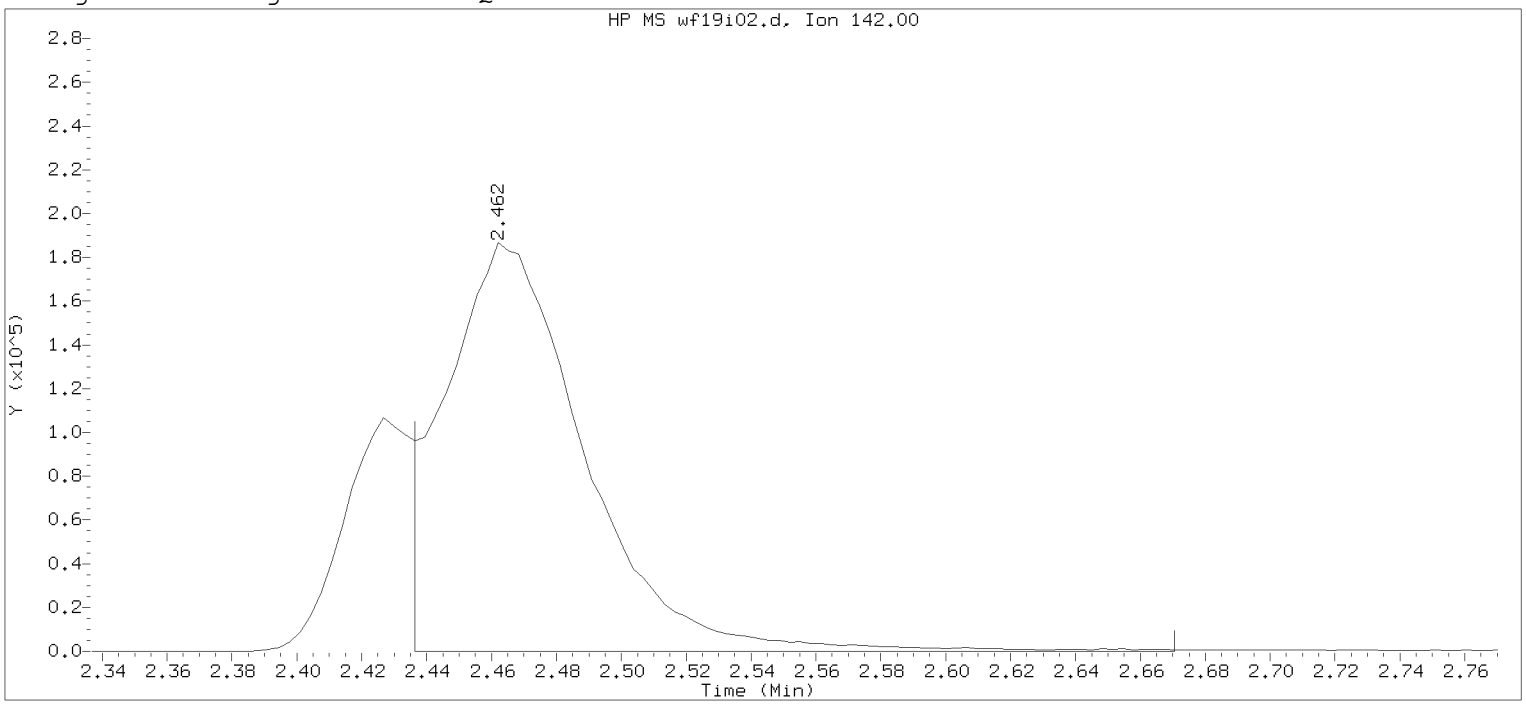
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 508
Retention Time (minutes): 2.462
Quant Ion : 142.00
Area : 554735
On-column Amount (ng) : 84.2643
Integration start scan : 499 Integration stop scan: 572
Y at integration start : 0 Y at integration end: 0

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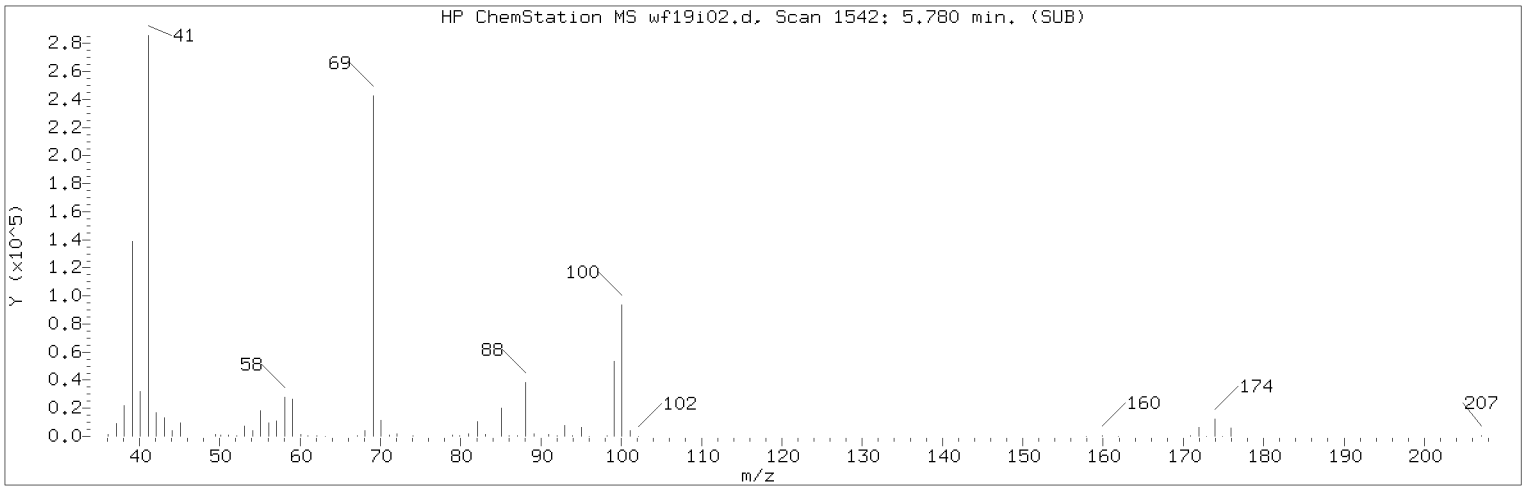
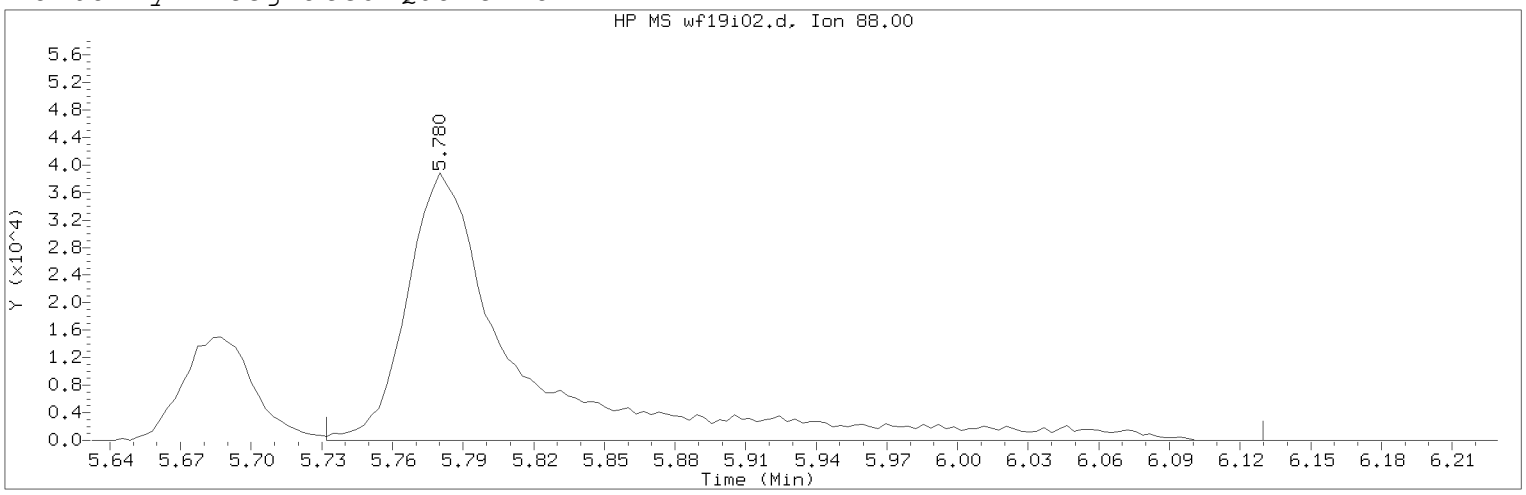
Target 3.5 esignature user apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

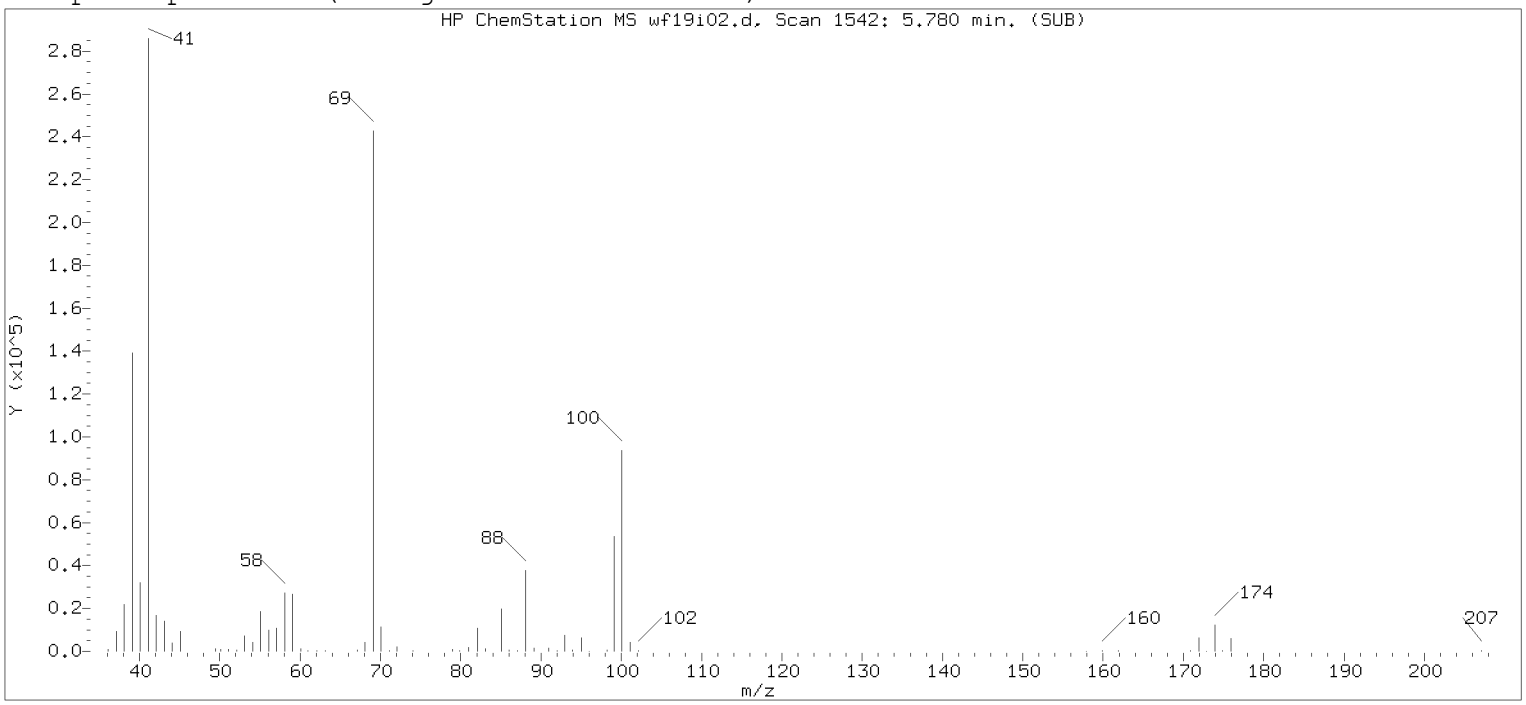
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area (flag) : 133422M
On-Column Amount (ng) : 1349.4188
Integration start scan : 1526 Integration stop scan: 1650
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

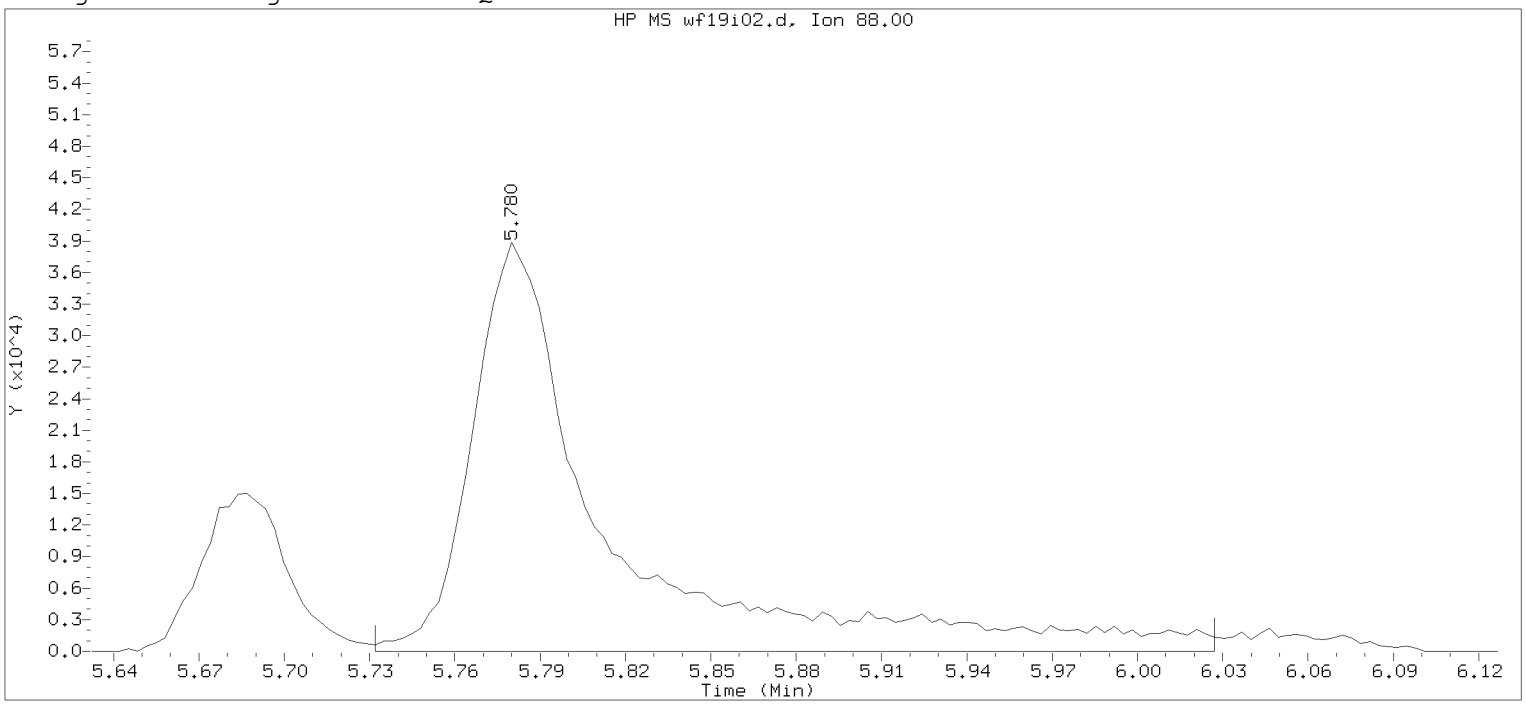
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



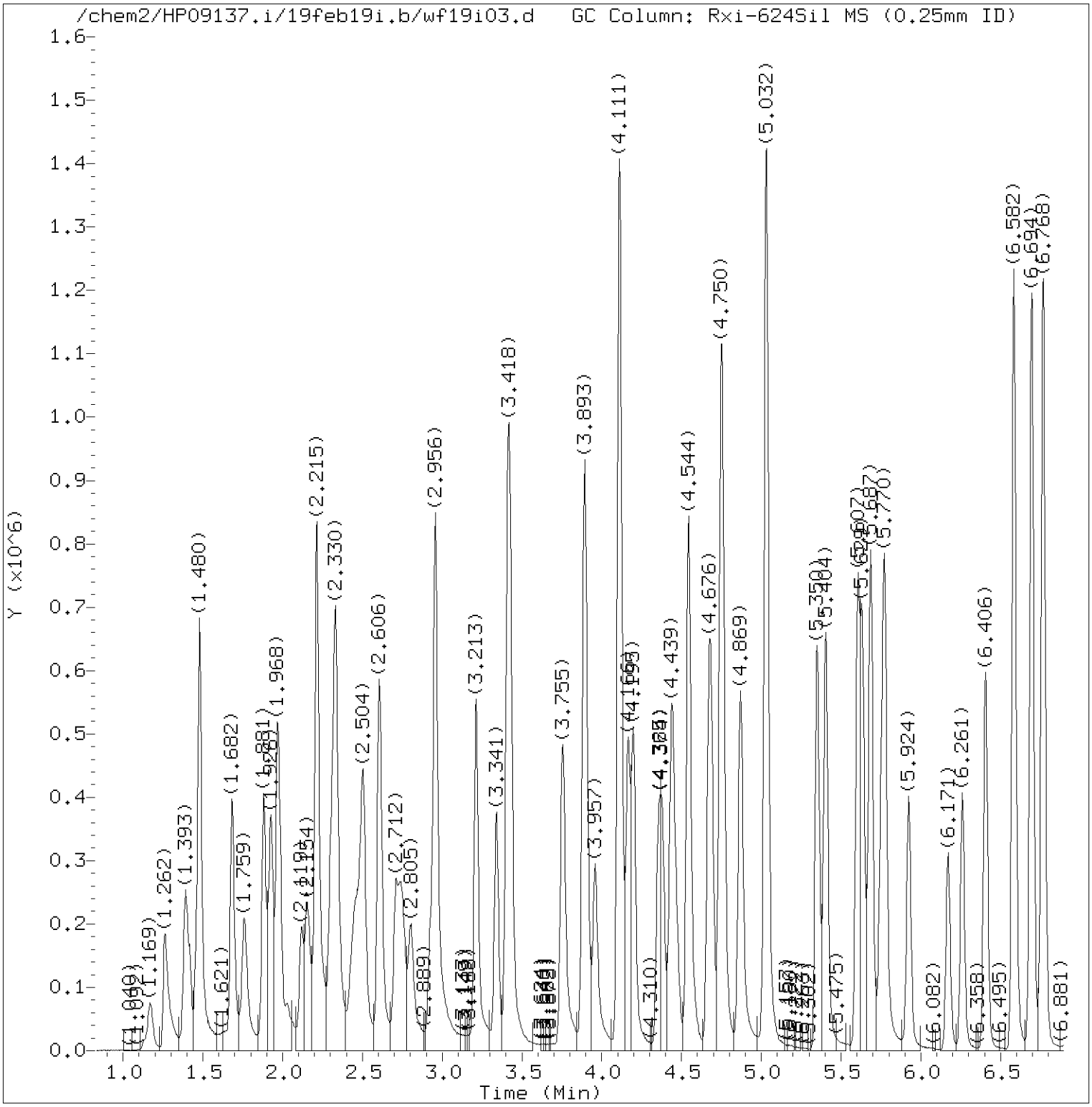
Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area : 128356
On-column Amount (ng) : 1250.1973
Integration start scan : 1526 Integration stop scan: 1618
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user apr27582



Total Ion Chromatogram (TIC)

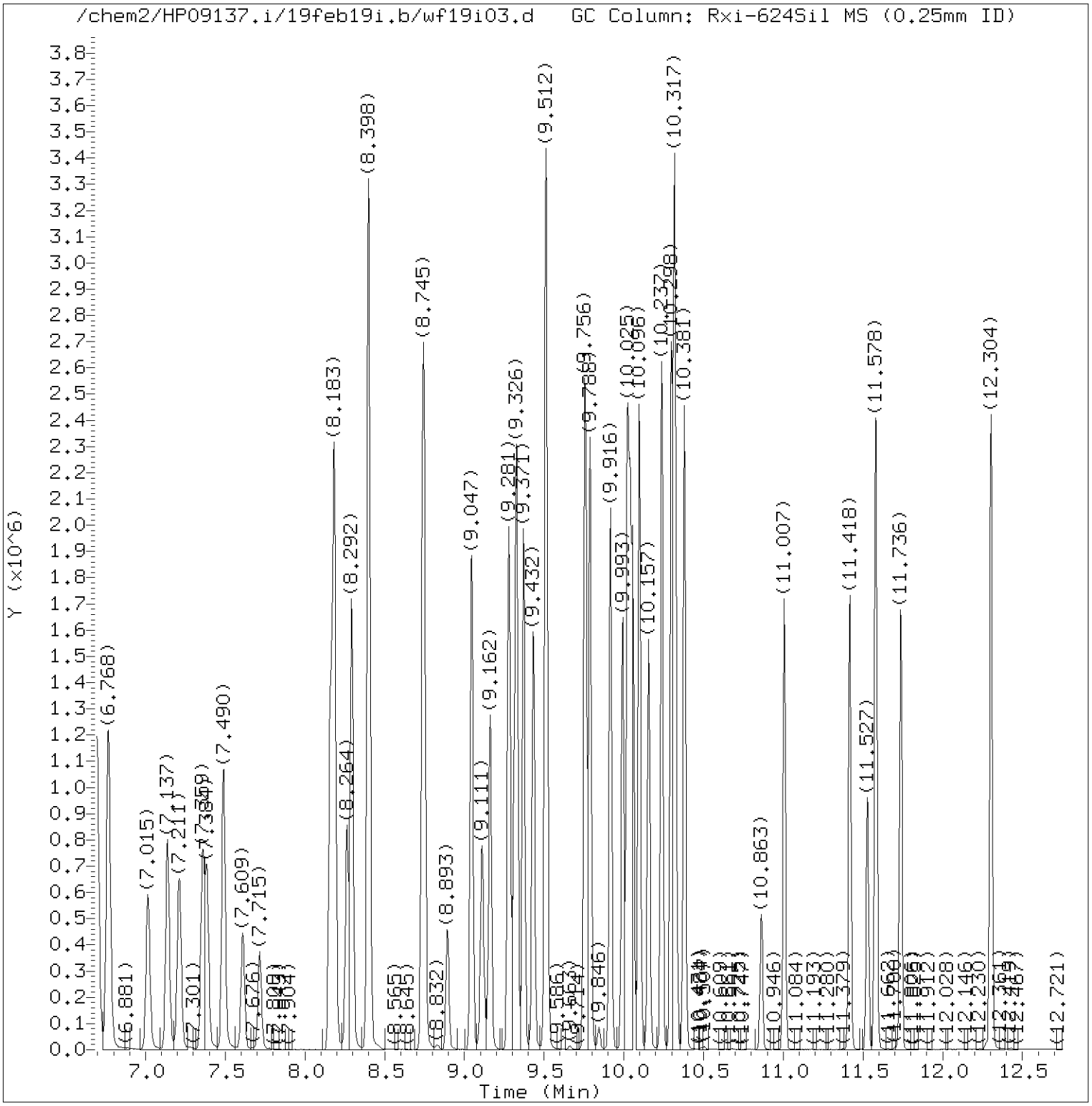
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.262	85	296826	53.462
4) Chloromethane	(2)	1.393	50	345066	49.912
6) Vinyl Chloride	(2)	1.467	62	316392	49.922
5) 1,3-Butadiene	(2)	1.480	39	198055	47.007
8) Bromomethane	(2)	1.682	94	248203	49.656
9) Chloroethane	(2)	1.759	64	196842	47.198
10) Dichlorofluoromethane	(2)	1.881	67	394164	48.827
12) Trichlorofluoromethane	(2)	1.926	101	346119	51.421
11) n-Pentane	(2)	1.971	43	304724	47.602
13) Ethanol	(1)	2.029	45	123880	1223.601
15) Freon 123a	(2)	2.154	67	238678M	47.452
16) Acrolein	(1)	2.215	56	827202	517.599
17) 1,1-Dichloroethene	(2)	2.324	96	193424	51.092
17) 1,1-Dichloroethene	(2)	2.321	63	95600	50.052
19) Freon 113	(2)	2.330	101	179017	53.849
18) Acetone	(1)	2.334	58	78612	101.199
21) 2-Propanol	(1)	2.443	45	149590	259.188
22) Methyl Iodide	(2)	2.465	142	365873	50.432
23) Carbon Disulfide	(2)	2.507	76	662769	49.692
25) Allyl Chloride	(2)	2.600	41	351245	53.257
27) Methyl Acetate	(2)	2.619	43	279026	48.878
28) Methylene Chloride	(2)	2.706	84	227605M	49.185
29)*t-Butyl alcohol-d10	(1)	2.728	65	221988	250.000
30) t-Butyl alcohol	(1)	2.805	59	270559	262.794
31) Acrylonitrile	(2)	2.924	53	161927	53.918
32) trans-1,2-Dichloroethene	(2)	2.956	96	205818	50.107
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	499906	49.983
34) n-Hexane	(2)	3.213	57	294788	53.636
36) 1,1-Dichloroethane	(2)	3.341	63	377579	50.730
38) di-Isopropyl ether	(2)	3.412	45	723571	50.602
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	329496	51.113
40) Ethyl t-butyl ether	(2)	3.755	59	519380	49.830
42) cis-1,2-Dichloroethene	(2)	3.890	96	233468	50.623
45) 2,2-Dichloropropane	(2)	3.893	77	170659	51.054
44) 2-Butanone	(2)	3.906	43	444981	103.132
47) Propionitrile	(1)	3.960	54	312875	244.517
48) Methacrylonitrile	(2)	4.111	67	408760	126.588
49) Bromochloromethane	(2)	4.118	128	123779	51.631

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.166	71	123715	104.465
51) Chloroform	(2)	4.198	83	350541	50.195
52)$Dibromofluoromethane	(2)	4.352	113	200440	50.388
52)$Dibromofluoromethane	(2)	4.352	111	203587	49.855
53) 1,1,1-Trichloroethane	(2)	4.378	97	270255	51.432
54) Cyclohexane	(2)	4.442	56	358513	51.555
54) Cyclohexane	(2)	4.439	84	301750	52.422
54) Cyclohexane	(2)	4.442	69	108191	51.769
55) 1,1-Dichloropropene	(2)	4.544	75	280799	50.152
56) Carbon Tetrachloride	(2)	4.544	117	228944	50.771
58) Isobutyl Alcohol	(1)	4.670	41	246561	656.905
57)$1,2-Dichloroethane-d4	(2)	4.689	102	52492	49.616
57)$1,2-Dichloroethane-d4	(2)	4.686	65	225475	48.958
57)$1,2-Dichloroethane-d4	(2)	4.689	104	33040	49.038
60) Benzene	(2)	4.750	78	896329	49.804
61) 1,2-Dichloroethane	(2)	4.763	62	272237	48.968
61) 1,2-Dichloroethane	(2)	4.766	98	28104	53.133
65) t-Amyl methyl ether	(2)	4.869	73	548486	51.366
66)*Fluorobenzene	(2)	5.029	96	858650	50.000
67) n-Heptane	(2)	5.035	43	271771	51.739
69) n-Butanol	(1)	5.350	56	449377	1348.443
71) Trichloroethene	(2)	5.404	95	217955	50.009
73) Methylcyclohexane	(2)	5.603	83	345616	54.623
73) Methylcyclohexane	(2)	5.607	98	160647	54.605
74) 1,2-Dichloropropane	(2)	5.636	63	236274	51.136
75) Dibromomethane	(2)	5.751	93	147111	51.589
77) Methyl Methacrylate	(2)	5.773	69	266970	52.578
76) 1,4-Dioxane	(1)	5.780	88	66583M	668.325
79) Bromodichloromethane	(2)	5.924	83	272148	51.943
43) 1,2-Dichloroethene (Total)	(2)		96	439286	100.730
80) 2-Nitropropane	(2)	6.171	41	193740	109.288
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	192007	54.506
82) cis-1,3-Dichloropropene	(2)	6.406	75	374689	52.012
83) 4-Methyl-2-pentanone	(2)	6.582	43	893533	105.058
84)$Toluene-d8	(3)	6.694	98	891117	50.528
84)$Toluene-d8	(3)	6.694	100	583239	49.869
89) Toluene	(3)	6.765	92	574331	50.554
90) trans-1,3-Dichloropropene	(3)	7.015	75	357488	52.857

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.137	69	455291	54.784
93) 1,1,2-Trichloroethane	(3)	7.211	97	227274	51.976
94) Tetrachloroethene	(3)	7.359	166	231262	50.166
95) 1,3-Dichloropropane	(3)	7.384	76	393691	51.836
97) 2-Hexanone	(3)	7.490	43	705936	106.697
98) Dibromochloromethane	(3)	7.609	129	231994	54.321
100) 1,2-Dibromoethane	(3)	7.715	107	253132	52.691
101)*Chlorobenzene-d5	(3)	8.161	117	703812	50.000
103) Chlorobenzene	(3)	8.187	112	634213	50.322
104) 1,1,1,2-Tetrachloroethane	(3)	8.264	131	212636	52.500
105) Ethylbenzene	(3)	8.292	91	1088867	50.428
107) m+p-Xylene	(3)	8.398	106	866772	100.963
108) o-Xylene	(3)	8.739	106	427426	50.608
110) Styrene	(3)	8.751	104	737561	52.057
111) Bromoform	(3)	8.893	173	184052	55.373
112) Isopropylbenzene	(3)	9.047	105	1059585	51.055
113) Cyclohexanone	(1)	9.111	55	294000	654.199
115)$4-Bromofluorobenzene	(3)	9.162	95	351157	49.771
115)$4-Bromofluorobenzene	(3)	9.162	174	297817	50.023
116) Bromobenzene	(4)	9.278	156	283326	50.030
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	404581	52.977
118) 1,2,3-Trichloropropane	(4)	9.313	110	120905	52.560
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	326983	133.518
120) n-Propylbenzene	(4)	9.371	91	1251632	50.136
121) 2-Chlorotoluene	(4)	9.435	126	258976	50.293
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	917303	50.948
122) 4-Chlorotoluene	(4)	9.518	126	277283	50.302
125) tert-Butylbenzene	(4)	9.756	134	204946	50.102
126) Pentachloroethane	(4)	9.765	167	174259	53.889
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	964859	50.855
128) sec-Butylbenzene	(4)	9.916	105	1121349	50.739
130) 1,3-Dichlorobenzene	(4)	9.993	146	543558	50.334
131) p-Isopropyltoluene	(4)	10.022	119	994480	50.832
132)*1,4-Dichlorobenzene-d4	(4)	10.038	152	393177	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	558679	49.903
91) 1,3-Dichloropropene (total)	(3)		100	732177	104.868
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	1074098	52.617
136) Benzyl Chloride	(4)	10.157	91	884205	56.428

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.237	119	648916	52.789
138) 1,4-Diethylbenzene	(4)	10.298	119	693198	52.634
140) n-Butylbenzene	(4)	10.314	92	498295	50.463
139) 1,2-Dichlorobenzene	(4)	10.324	146	543650	50.742
141) 1,2-Diethylbenzene	(4)	10.381	119	544138	52.430
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	96961	55.866
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	420610	51.197
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	414796	52.589
148) Hexachlorobutadiene	(4)	11.527	225	139053	49.498
149) Naphthalene	(4)	11.582	128	1472414	55.170
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	402903	52.334
109) Xylene (Total)	(3)		106	1294198	151.571
151) 2-Methylnaphthalene	(4)	12.304	142	862234	56.628
142) Diethylbenzene (total)	(4)		100	1886252	157.852

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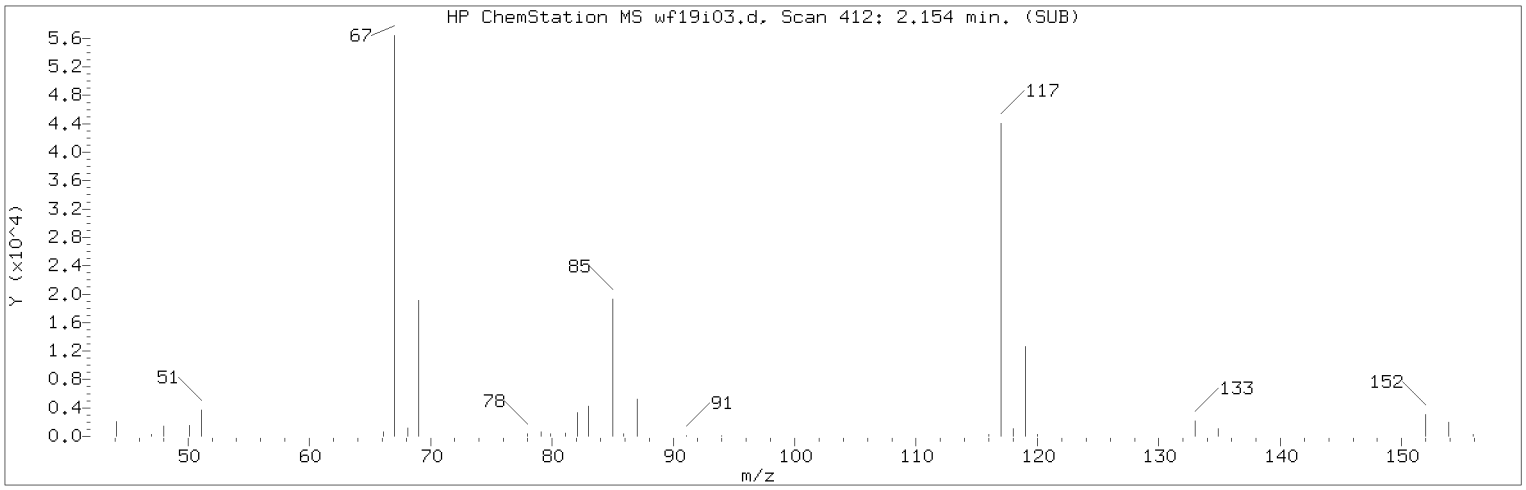
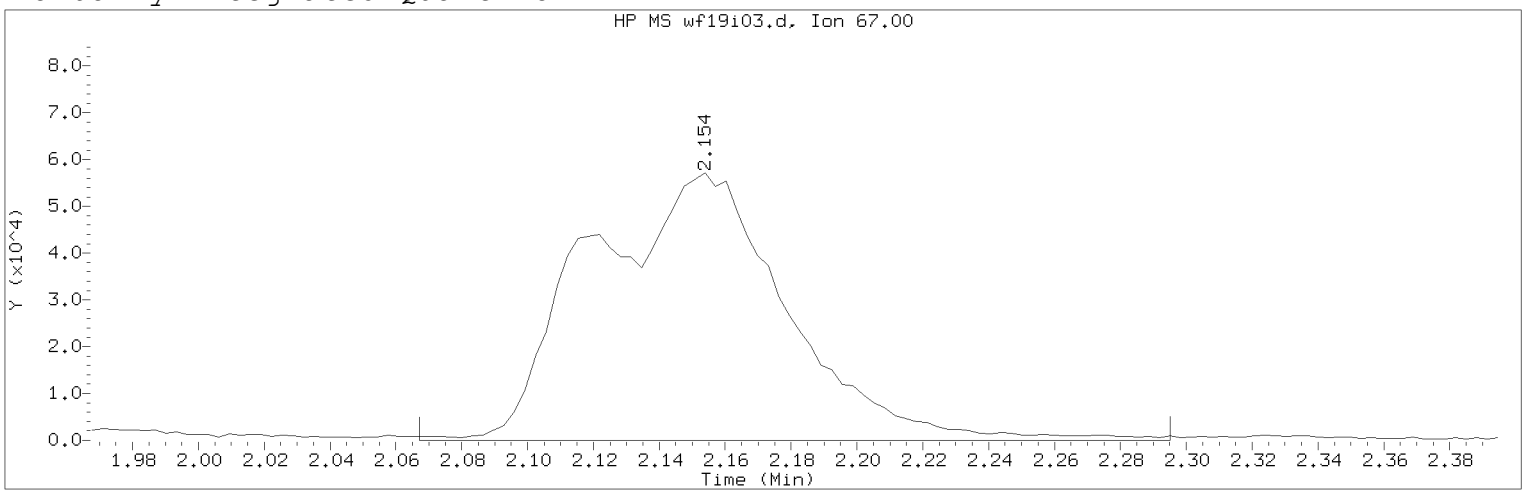
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

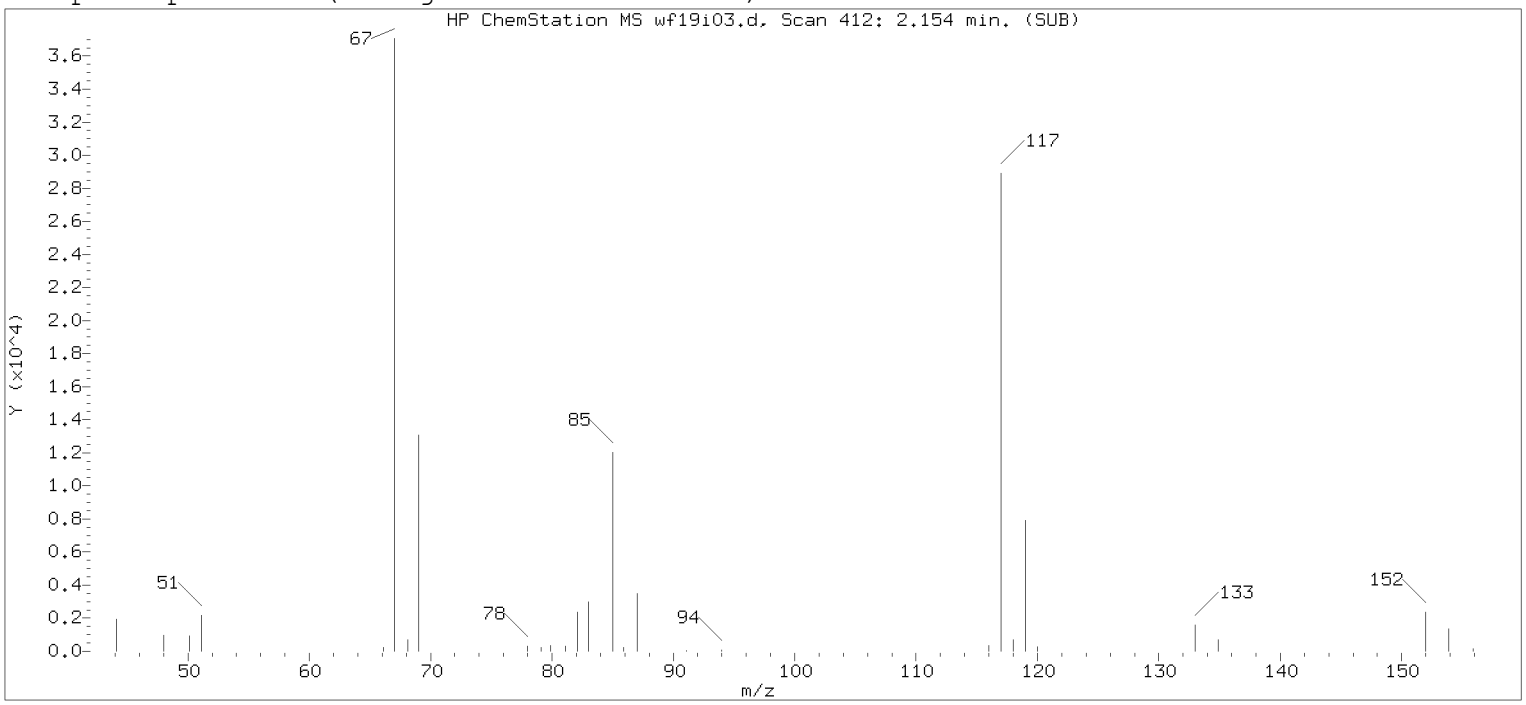
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 412
Retention Time (minutes): 2.154
Quant Ion : 67.00
Area (flag) : 238678M
On-Column Amount (ng) : 47.4516
Integration start scan : 384 Integration stop scan: 455
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

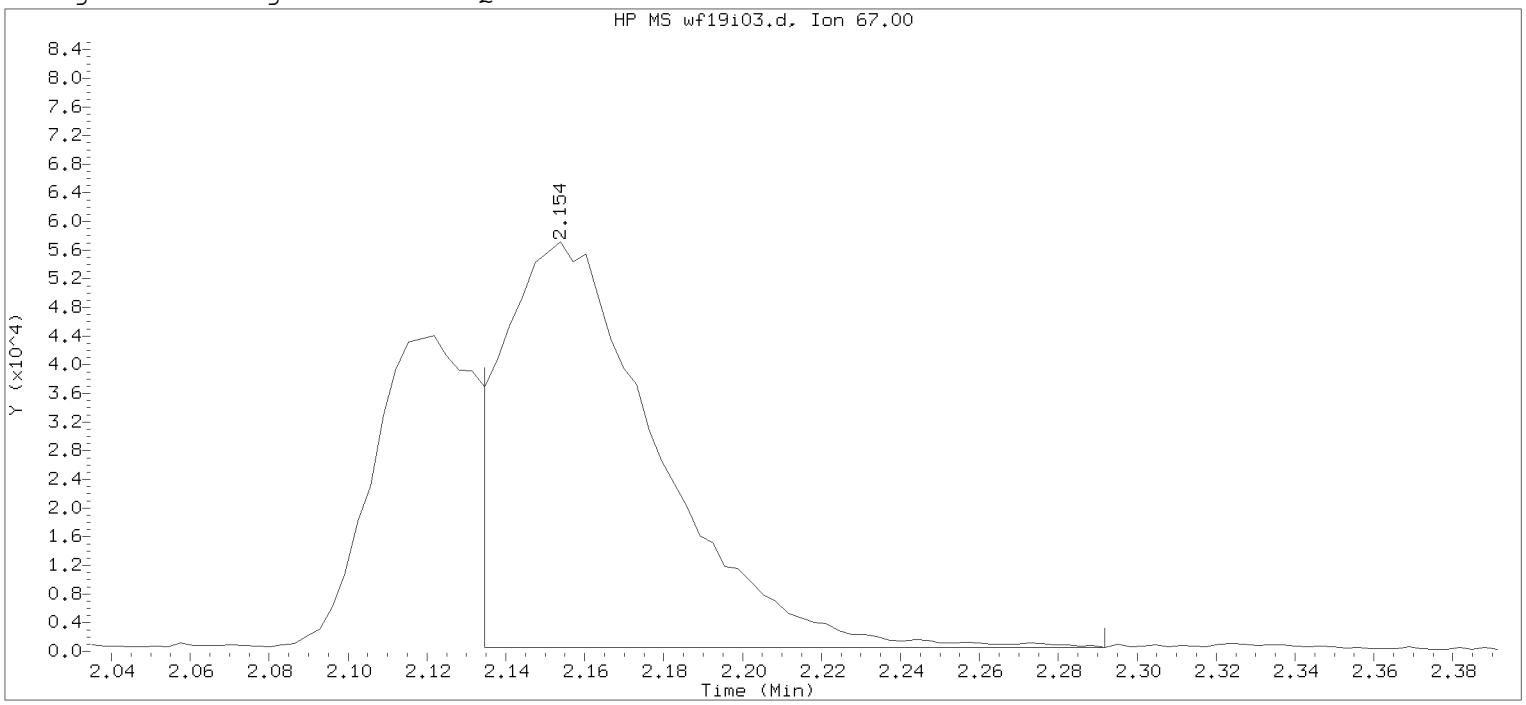
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 15
Compound Name : Freon 123a
Scan Number : 412
Retention Time (minutes): 2.154
Quant Ion : 67.00
Area : 154008
On-column Amount (ng) : 47.5673
Integration start scan : 405 Integration stop scan: 454
Y at integration start : 574 Y at integration end: 555

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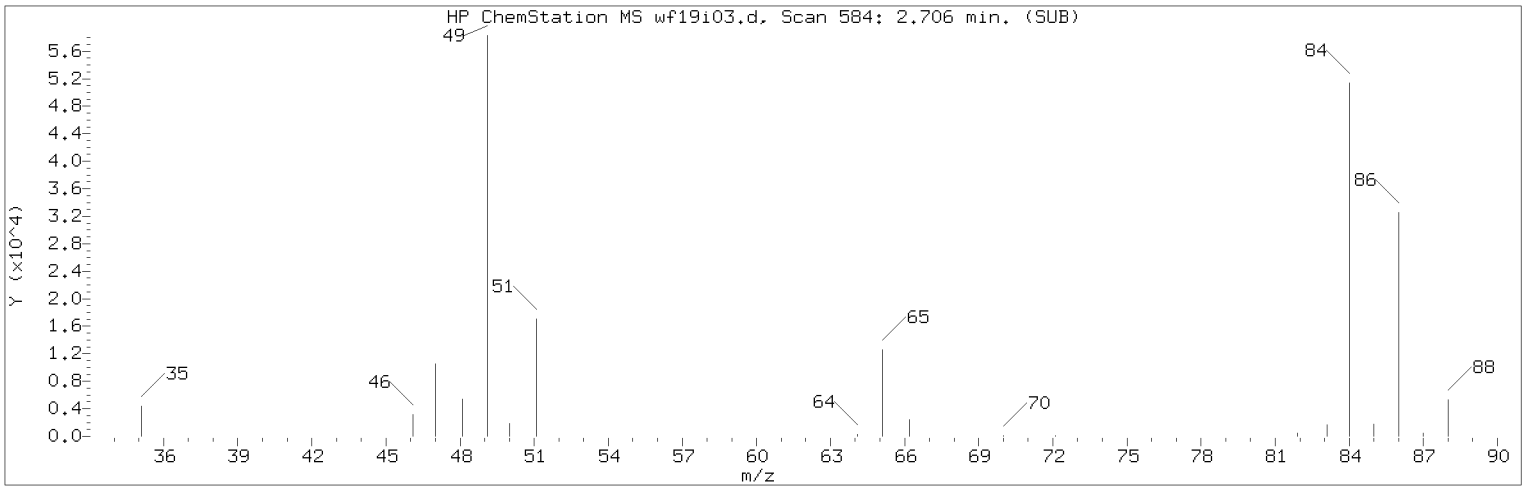
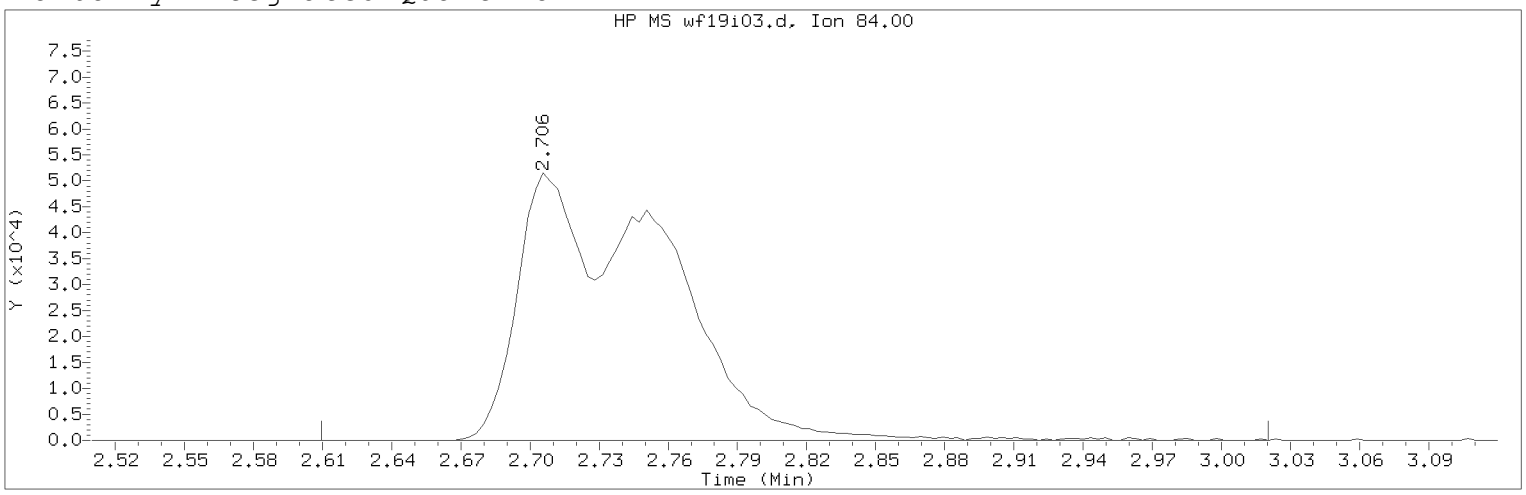
Target 3.5 esignature user Abigail P. Roselli

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

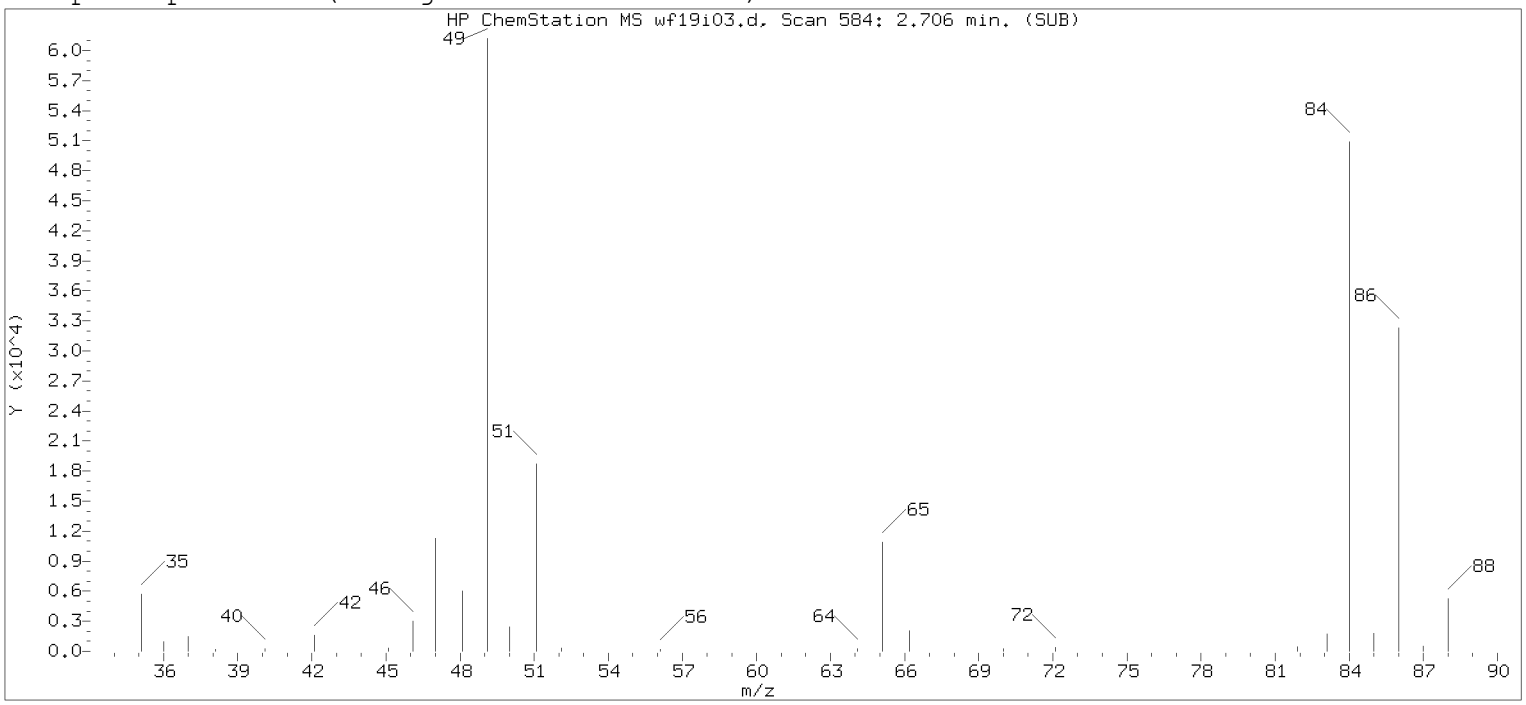
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 584
Retention Time (minutes): 2.706
Quant Ion : 84.00
Area (flag) : 227605M
On-Column Amount (ng) : 49.1854
Integration start scan : 553 Integration stop scan: 681
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

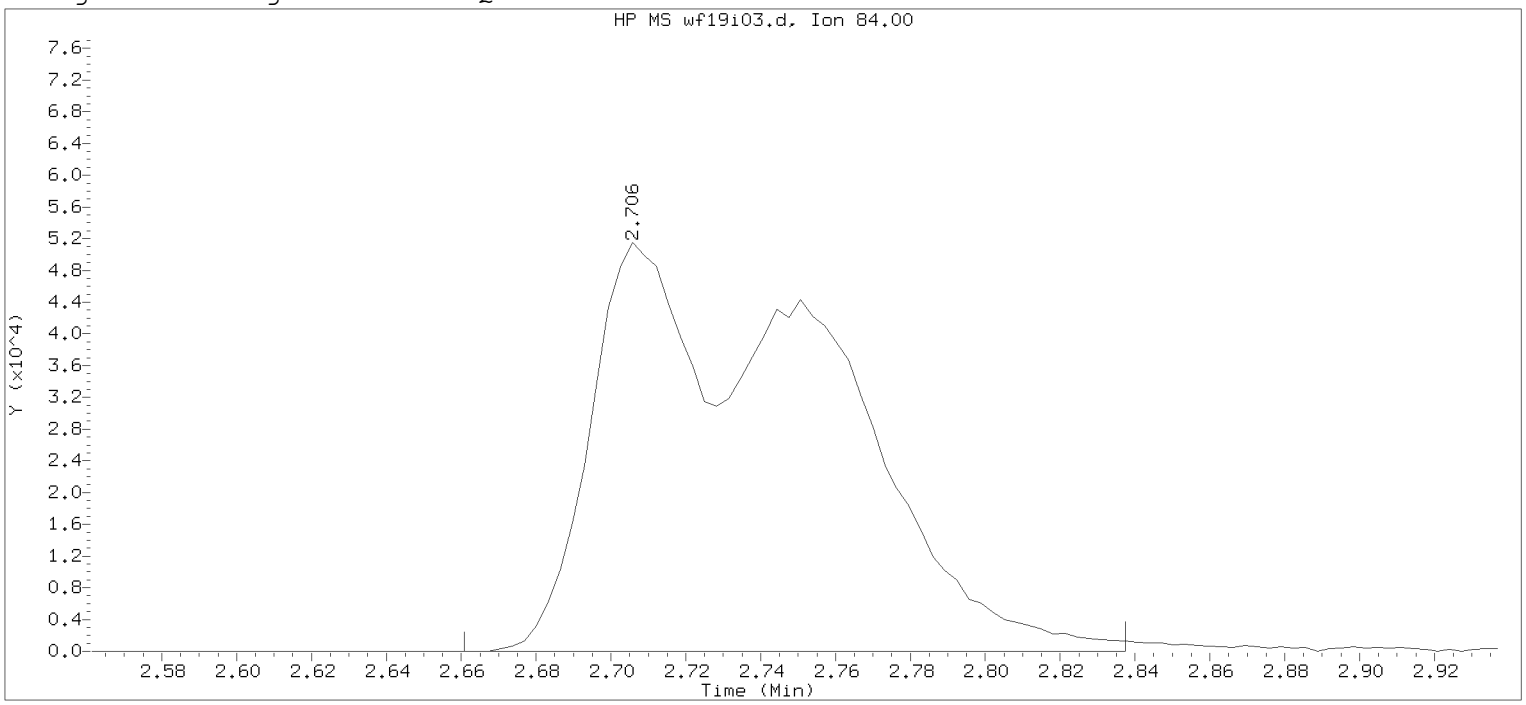
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 584
Retention Time (minutes): 2.706
Quant Ion : 84.00
Area : 223774
On-column Amount (ng) : 67.2195
Integration start scan : 569 Integration stop scan: 624
Y at integration start : 0 Y at integration end: 0

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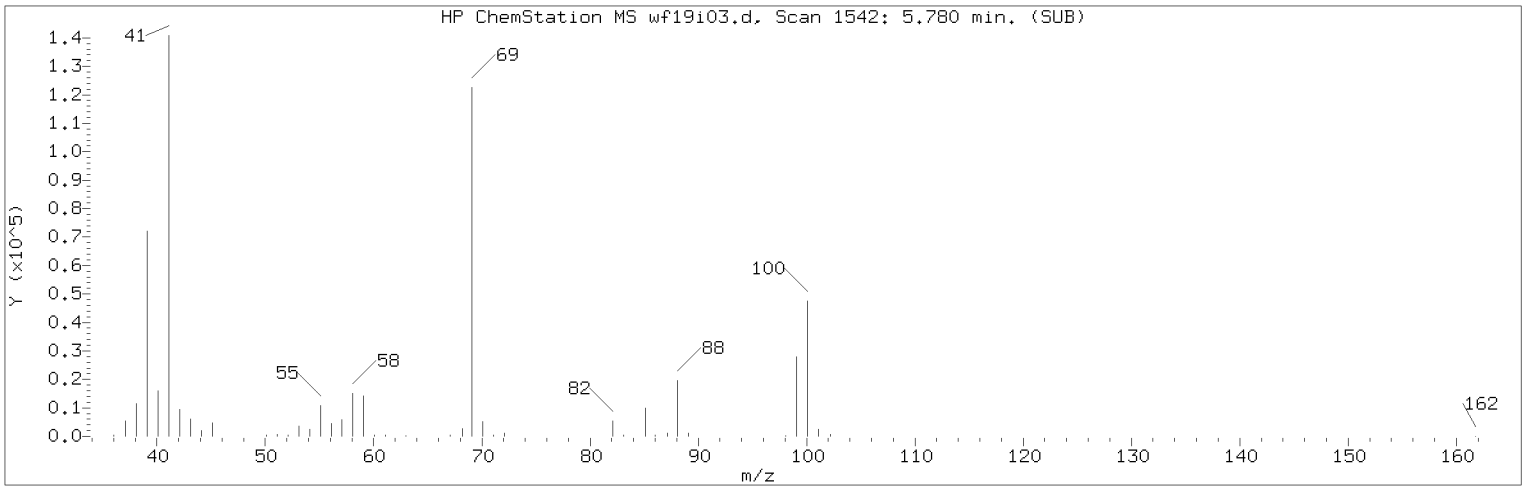
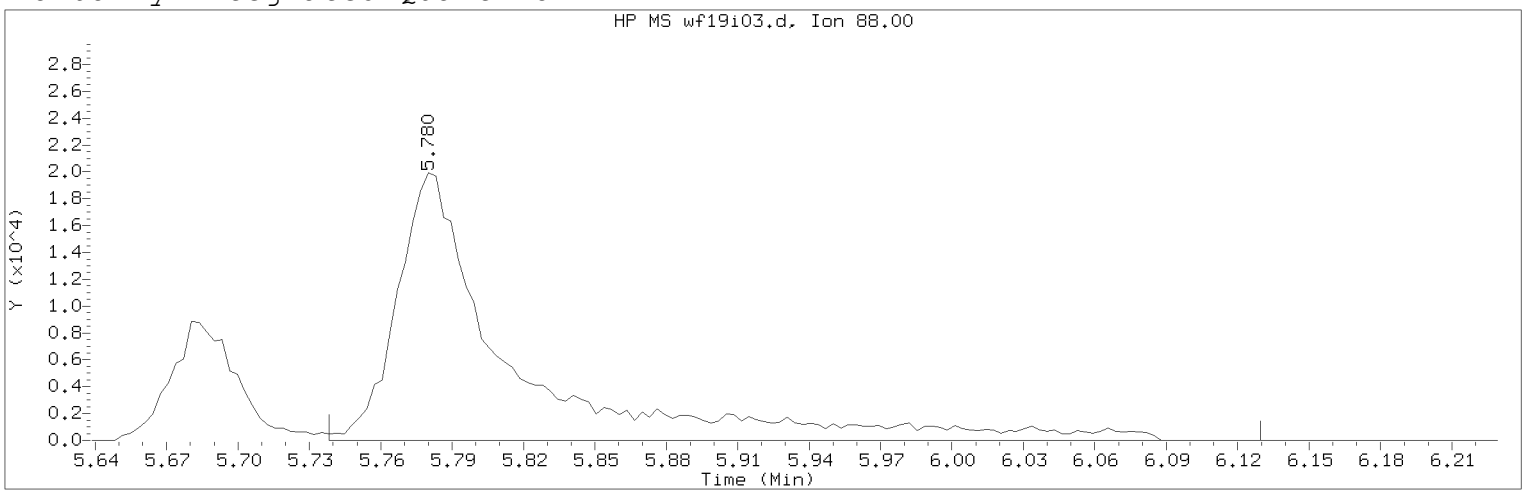
Target 3.5 esignature user apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

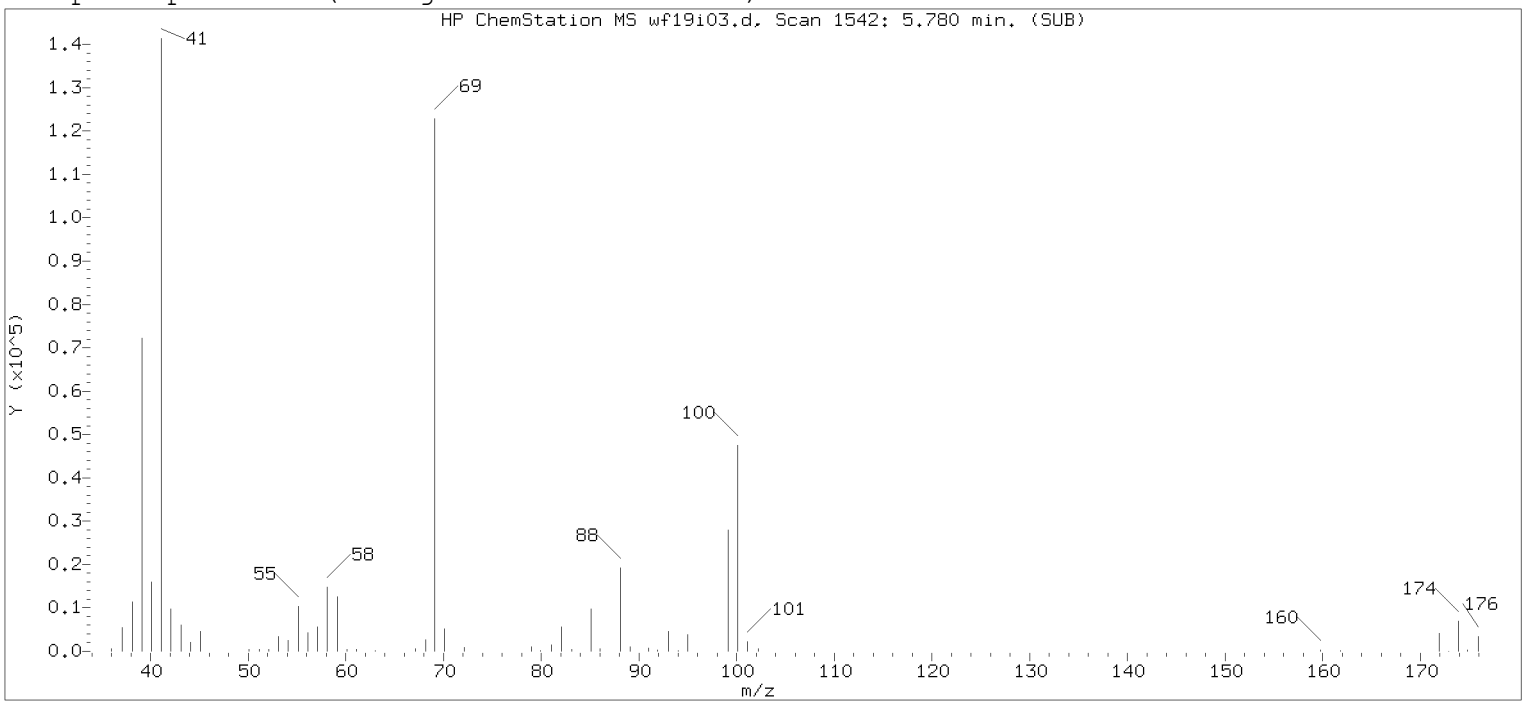
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area (flag) : 66583M
On-Column Amount (ng) : 668.3245
Integration start scan : 1528 Integration stop scan: 1650
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

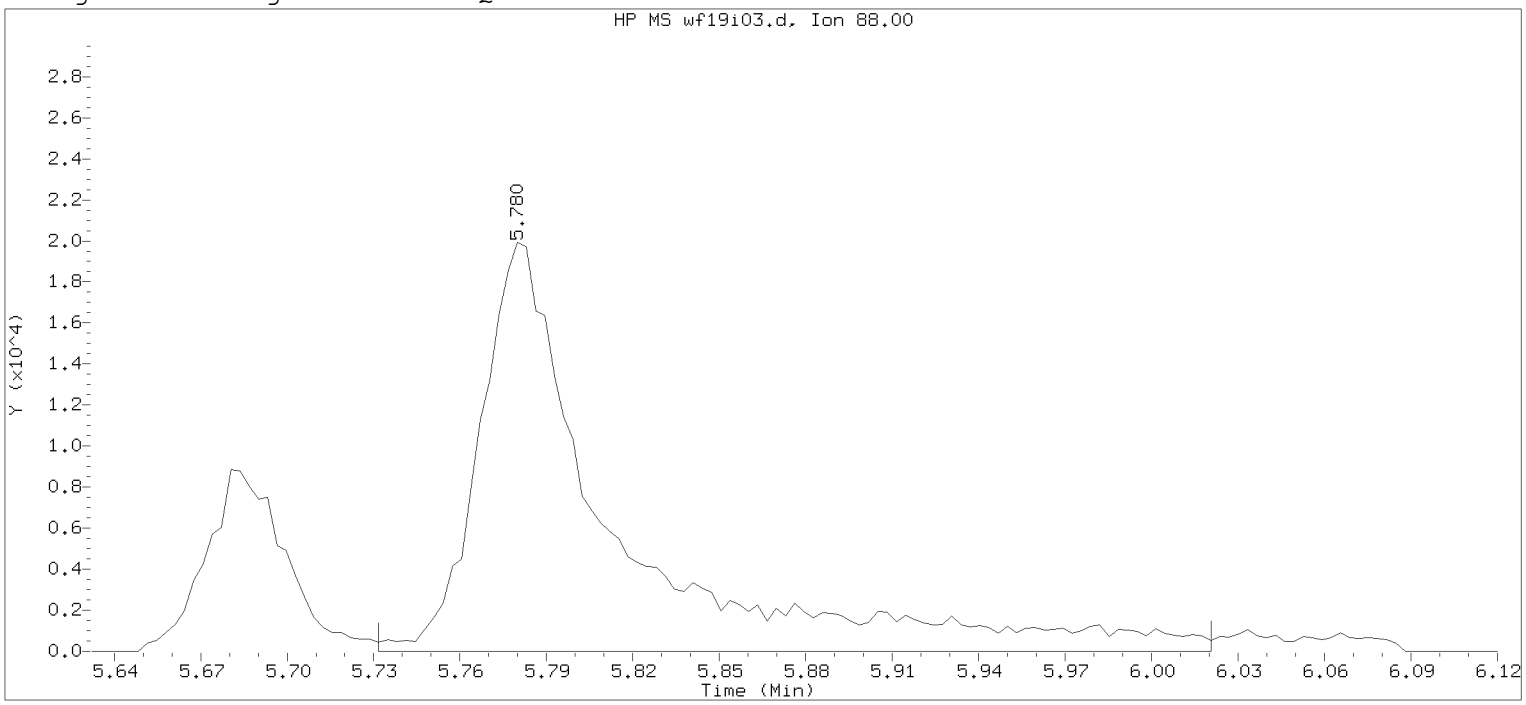
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area : 64091
On-column Amount (ng) : 621.3434
Integration start scan : 1526 Integration stop scan: 1616
Y at integration start : 0 Y at integration end: 0

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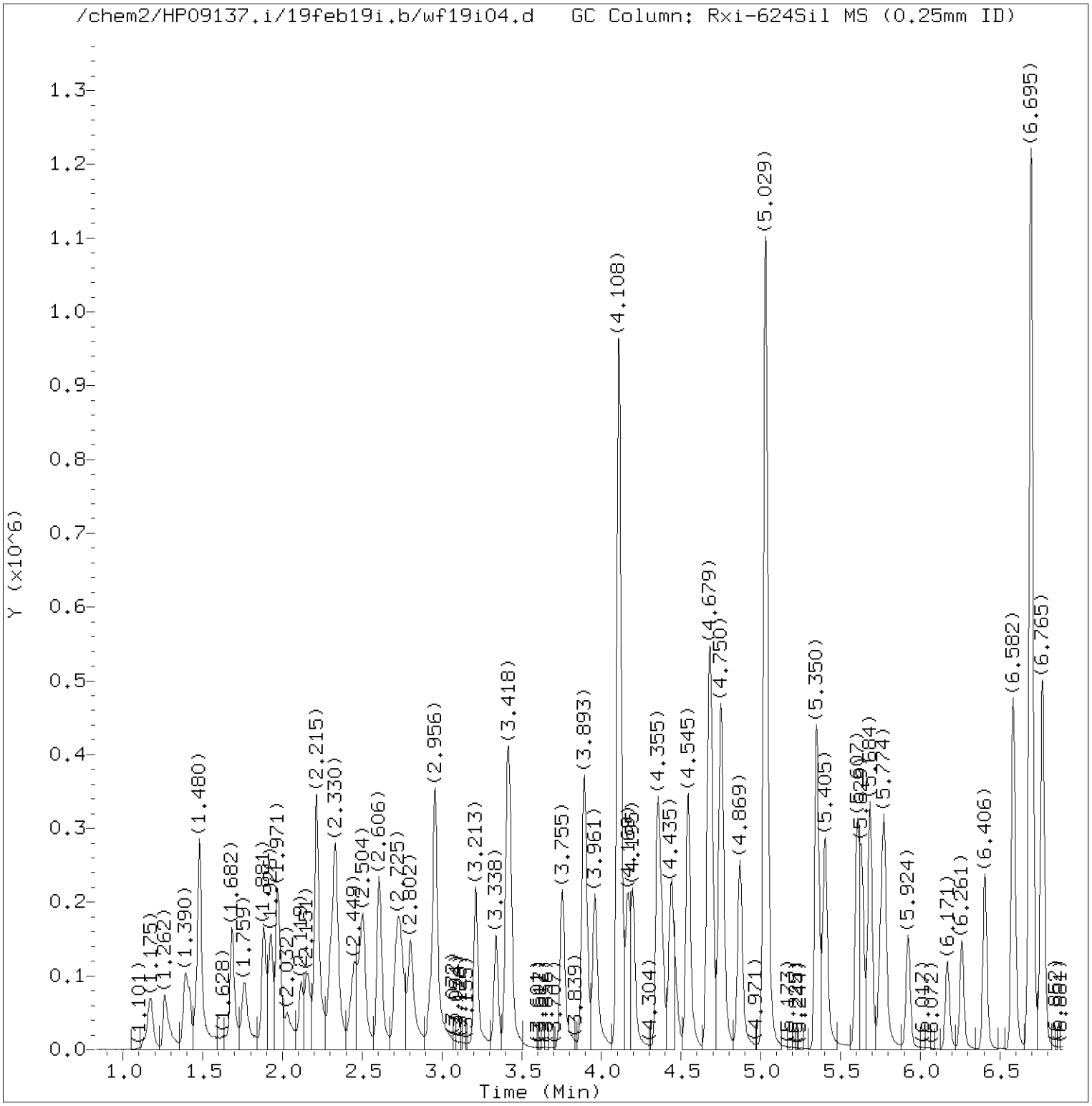
Target 3.5 esignature user: apr27582



Total Ion Chromatogram (TIC)

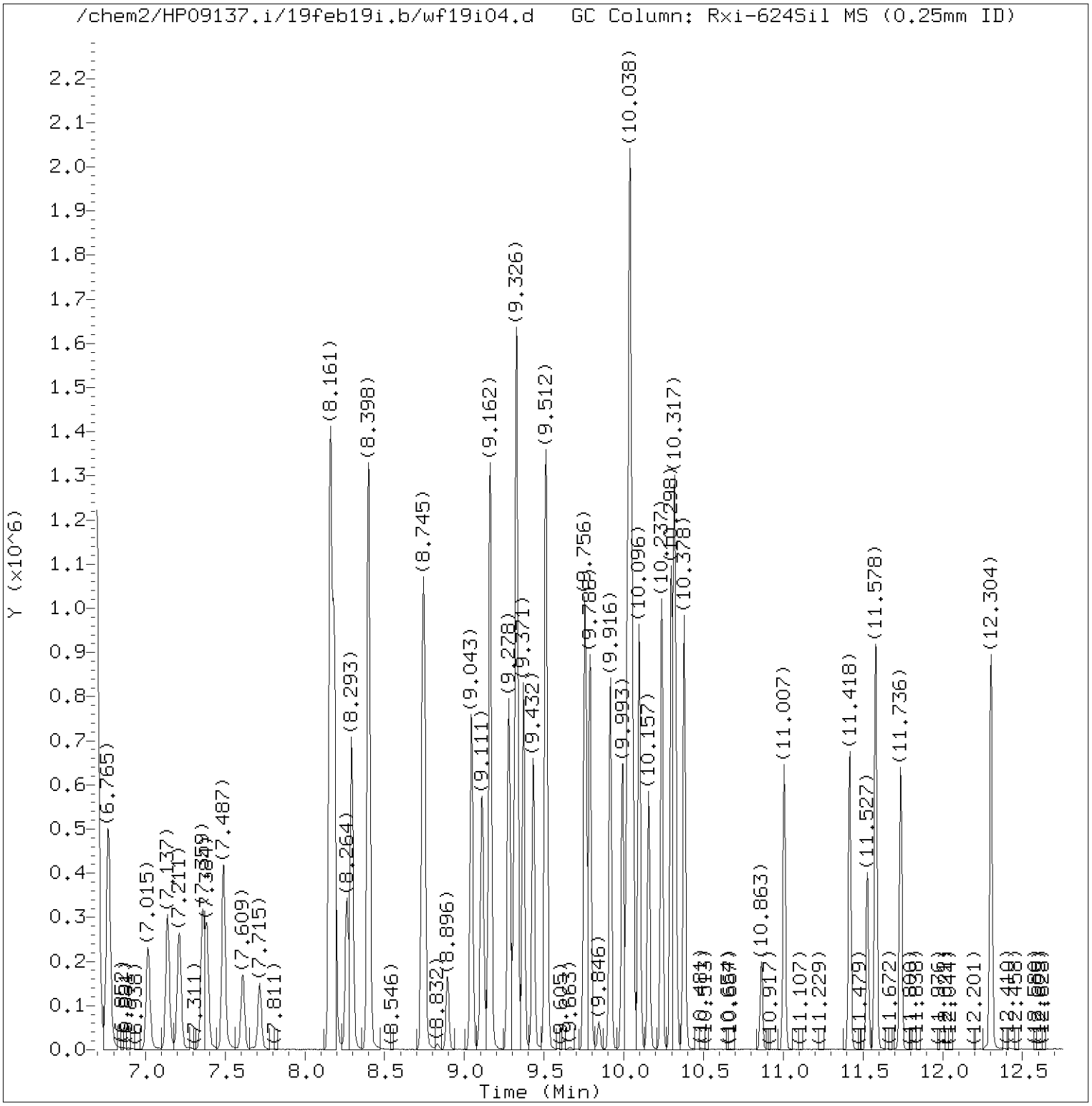
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.262	85	120158	21.151
4) Chloromethane	(2)	1.393	50	137638	19.457
6) Vinyl Chloride	(2)	1.467	62	130261	20.087
5) 1,3-Butadiene	(2)	1.480	39	83783	19.434
8) Bromomethane	(2)	1.682	94	99153	19.387
9) Chloroethane	(2)	1.762	64	81090	19.002
10) Dichlorofluoromethane	(2)	1.881	67	162421	19.663
12) Trichlorofluoromethane	(2)	1.926	101	142691	20.718
11) n-Pentane	(2)	1.971	43	131885	20.135
13) Ethanol	(1)	2.032	45	92307	894.985
15) Freon 123a	(2)	2.160	67	102866M	19.987
16) Acrolein	(1)	2.215	56	326307	200.424
17) 1,1-Dichloroethene	(2)	2.324	96	78708	20.319
17) 1,1-Dichloroethene	(2)	2.324	63	38728	19.816
18) Acetone	(1)	2.334	58	32836	41.493
19) Freon 113	(2)	2.334	101	73317	21.554
21) 2-Propanol	(1)	2.446	45	110569	188.056
22) Methyl Iodide	(2)	2.465	142	150767M	20.310
23) Carbon Disulfide	(2)	2.507	76	274687	20.128
25) Allyl Chloride	(2)	2.603	41	136398	20.212
27) Methyl Acetate	(2)	2.616	43	112197	19.208
28) Methylene Chloride	(2)	2.709	84	93973M	19.847
29)*t-Butyl alcohol-d10	(1)	2.732	65	226145	250.000
30) t-Butyl alcohol	(1)	2.802	59	204216	194.709
31) Acrylonitrile	(2)	2.927	53	65725	21.388
32) trans-1,2-Dichloroethene	(2)	2.956	96	83001	19.748
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	211952	20.711
34) n-Hexane	(2)	3.213	57	110706	19.686
36) 1,1-Dichloroethane	(2)	3.341	63	153564	20.164
38) di-Isopropyl ether	(2)	3.409	45	299035	20.438
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	134999	20.467
40) Ethyl t-butyl ether	(2)	3.755	59	227792	21.359
42) cis-1,2-Dichloroethene	(2)	3.890	96	94743	20.077
45) 2,2-Dichloropropane	(2)	3.890	77	72171	21.101
44) 2-Butanone	(2)	3.903	43	180906	40.977
47) Propionitrile	(1)	3.961	54	249181	191.159
48) Methacrylonitrile	(2)	4.108	67	323877	98.025
49) Bromochloromethane	(2)	4.118	128	49307	20.101

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.169	71	49416	40.960
51) Chloroform	(2)	4.198	83	144225	20.184
52)$Dibromofluoromethane	(2)	4.355	113	203311	49.950
52)$Dibromofluoromethane	(2)	4.355	111	209328	50.098
53) 1,1,1-Trichloroethane	(2)	4.381	97	110547	20.561
54) Cyclohexane	(2)	4.442	56	146608	20.604
54) Cyclohexane	(2)	4.442	84	120950	20.535
54) Cyclohexane	(2)	4.442	69	43702	20.437
55) 1,1-Dichloropropene	(2)	4.545	75	114224	19.938
56) Carbon Tetrachloride	(2)	4.545	117	93746	20.318
58) Isobutyl Alcohol	(1)	4.670	41	177235	463.522
57)$1,2-Dichloroethane-d4	(2)	4.689	102	55712	51.465
57)$1,2-Dichloroethane-d4	(2)	4.689	65	240858	51.112
57)$1,2-Dichloroethane-d4	(2)	4.689	104	33860	49.115
60) Benzene	(2)	4.747	78	366659	19.911
61) 1,2-Dichloroethane	(2)	4.763	62	110518	19.428
61) 1,2-Dichloroethane	(2)	4.760	98	11609	21.450
65) t-Amyl methyl ether	(2)	4.869	73	228200	20.886
66)*Fluorobenzene	(2)	5.029	96	878585	50.000
67) n-Heptane	(2)	5.036	43	110175	20.499
69) n-Butanol	(1)	5.350	56	321265	946.297
71) Trichloroethene	(2)	5.405	95	89487	20.067
73) Methylcyclohexane	(2)	5.604	83	138339	21.368
73) Methylcyclohexane	(2)	5.607	98	63264	21.016
74) 1,2-Dichloropropane	(2)	5.636	63	95210	20.139
75) Dibromomethane	(2)	5.748	93	59218	20.295
77) Methyl Methacrylate	(2)	5.774	69	103170	19.858
76) 1,4-Dioxane	(1)	5.780	88	49606M	488.766
79) Bromodichloromethane	(2)	5.924	83	106910	19.942
43) 1,2-Dichloroethene (Total)	(2)		96	177744	39.825
80) 2-Nitropropane	(2)	6.171	41	74529	41.088
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	69606	19.311
82) cis-1,3-Dichloropropene	(2)	6.406	75	147991	20.077
83) 4-Methyl-2-pentanone	(2)	6.582	43	356841	41.004
84)$Toluene-d8	(3)	6.695	98	907310	50.109
84)$Toluene-d8	(3)	6.695	100	601432	50.088
89) Toluene	(3)	6.765	92	235354	20.178
90) trans-1,3-Dichloropropene	(3)	7.015	75	138713	19.976

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.137	69	175549	20.574
93) 1,1,2-Trichloroethane	(3)	7.208	97	89810	20.005
94) Tetrachloroethene	(3)	7.359	166	94924	20.056
95) 1,3-Dichloropropane	(3)	7.384	76	156793	20.108
97) 2-Hexanone	(3)	7.490	43	279190	41.101
98) Dibromochloromethane	(3)	7.612	129	88860	20.266
100) 1,2-Dibromoethane	(3)	7.715	107	100482	20.372
101)*Chlorobenzene-d5	(3)	8.161	117	722592	50.000
103) Chlorobenzene	(3)	8.183	112	256275	19.806
104) 1,1,1,2-Tetrachloroethane	(3)	8.264	131	82744	19.899
105) Ethylbenzene	(3)	8.293	91	441592	19.920
107) m+p-Xylene	(3)	8.398	106	348881	39.582
108) o-Xylene	(3)	8.735	106	171798	19.812
110) Styrene	(3)	8.748	104	291848	20.063
111) Bromoform	(3)	8.896	173	67627	19.817
112) Isopropylbenzene	(3)	9.043	105	424442	19.920
113) Cyclohexanone	(1)	9.111	55	225728	493.049
115)$4-Bromofluorobenzene	(3)	9.162	95	360726	49.798
115)$4-Bromofluorobenzene	(3)	9.162	174	303950	49.726
116) Bromobenzene	(4)	9.278	156	113938	19.840
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	155706	20.105
118) 1,2,3-Trichloropropane	(4)	9.313	110	47306	20.279
119) trans-1,4-Dichloro-2-butene	(4)	9.326	53	247692	99.736
120) n-Propylbenzene	(4)	9.371	91	506549	20.009
121) 2-Chlorotoluene	(4)	9.432	126	105764	20.254
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	366349	20.065
122) 4-Chlorotoluene	(4)	9.515	126	110429	19.755
125) tert-Butylbenzene	(4)	9.756	134	82290	19.837
126) Pentachloroethane	(4)	9.765	167	64856	19.778
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	383195	19.917
128) sec-Butylbenzene	(4)	9.916	105	452546	20.192
130) 1,3-Dichlorobenzene	(4)	9.993	146	216134	19.736
131) p-Isopropyltoluene	(4)	10.022	119	397632	20.042
132)*1,4-Dichlorobenzene-d4	(4)	10.038	152	398717	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	225862	19.894
91) 1,3-Dichloropropene (total)	(3)		100	286704	40.053
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	422072	20.389
136) Benzyl Chloride	(4)	10.157	91	329533	20.738

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.237	119	253126	20.305
138) 1,4-Diethylbenzene	(4)	10.298	119	272367	20.393
140) n-Butylbenzene	(4)	10.314	92	198233	19.797
139) 1,2-Dichlorobenzene	(4)	10.324	146	215032	19.791
141) 1,2-Diethylbenzene	(4)	10.378	119	215245	20.452
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	36271	20.608
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	165935	19.917
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	160946	20.121
148) Hexachlorobutadiene	(4)	11.527	225	57264	20.101
149) Naphthalene	(4)	11.582	128	560423	20.707
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	155725	19.946
109) Xylene (Total)	(3)		106	520679	59.394
151) 2-Methylnaphthalene	(4)	12.304	142	317668	20.573
142) Diethylbenzene (total)	(4)		100	740738	61.150

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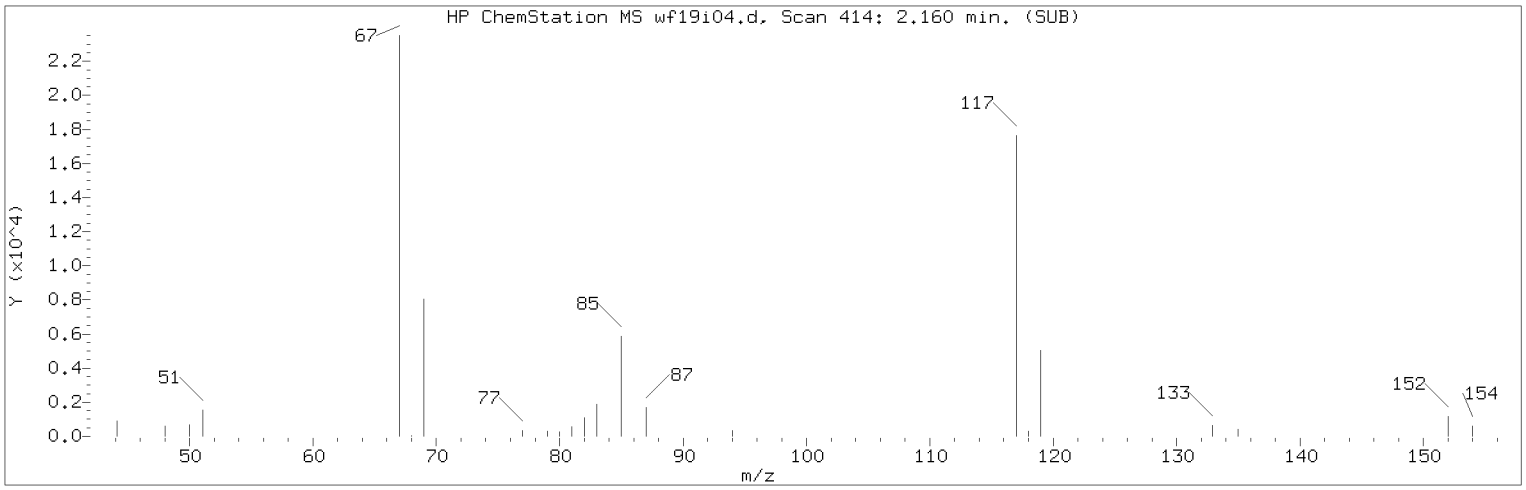
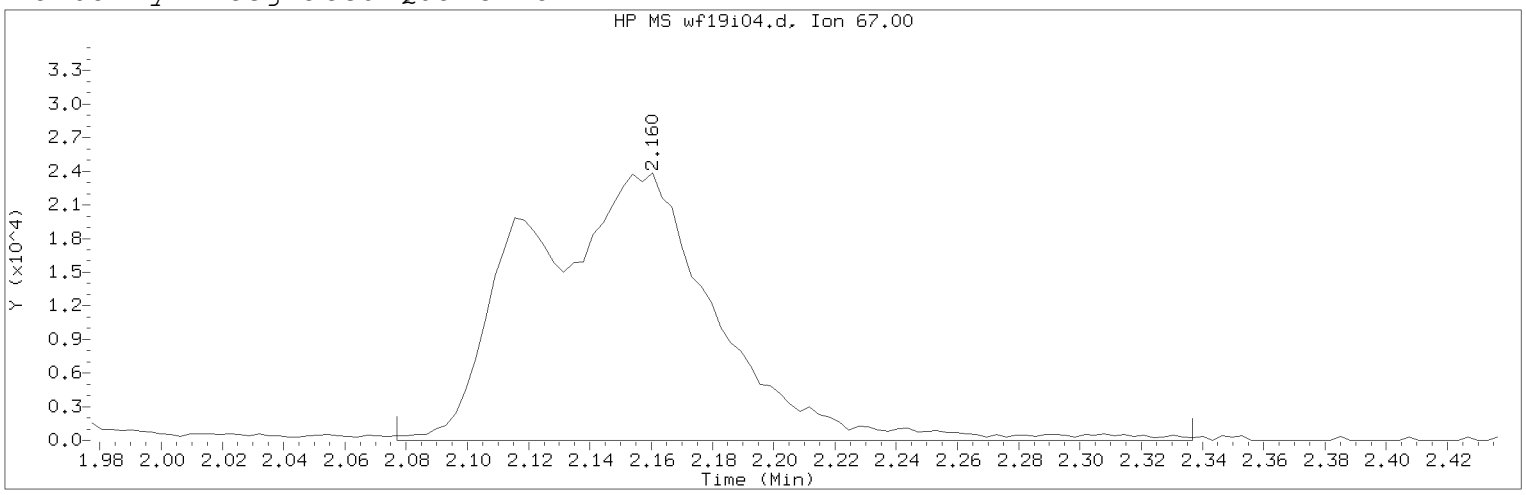
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

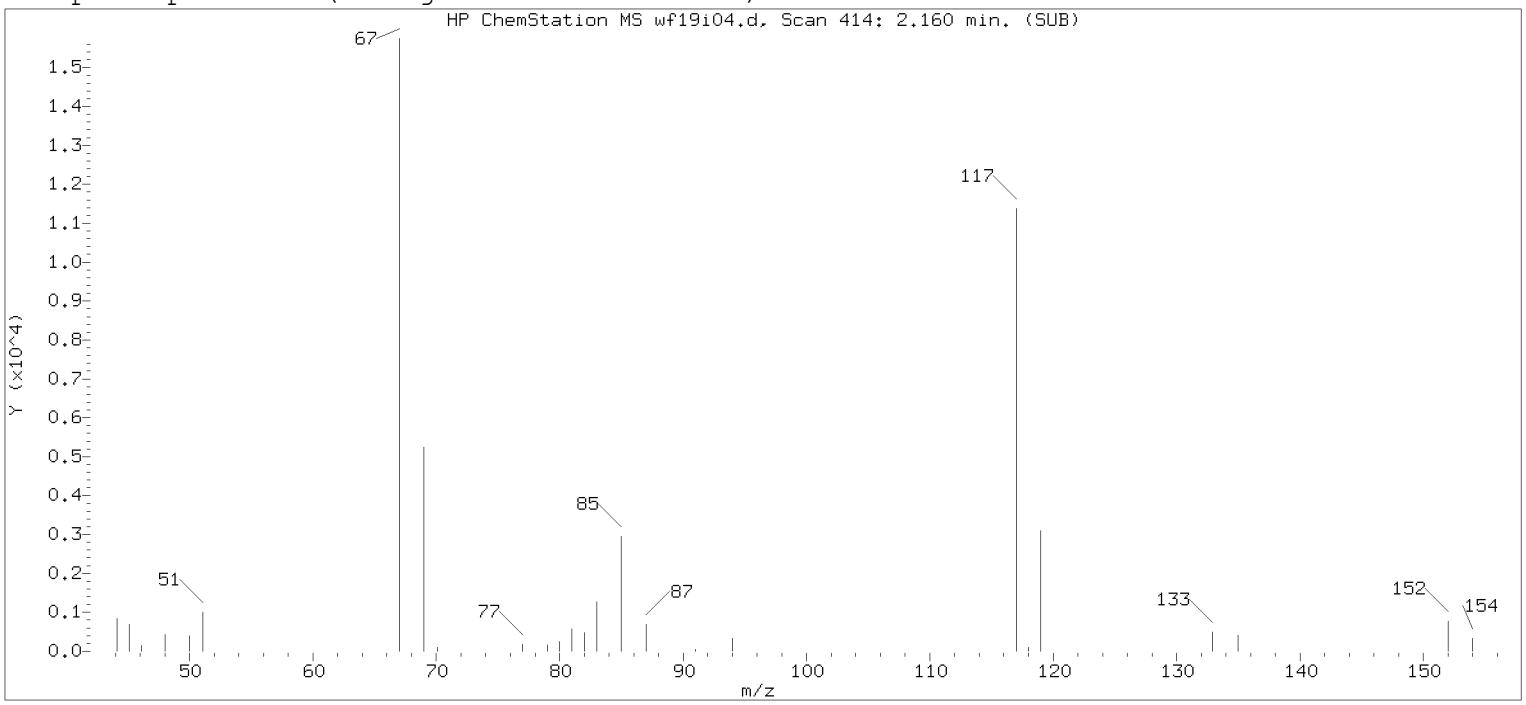
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 414
Retention Time (minutes): 2.160
Quant Ion : 67.00
Area (flag) : 102866M
On-Column Amount (ng) : 19.9868
Integration start scan : 387 Integration stop scan: 468
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

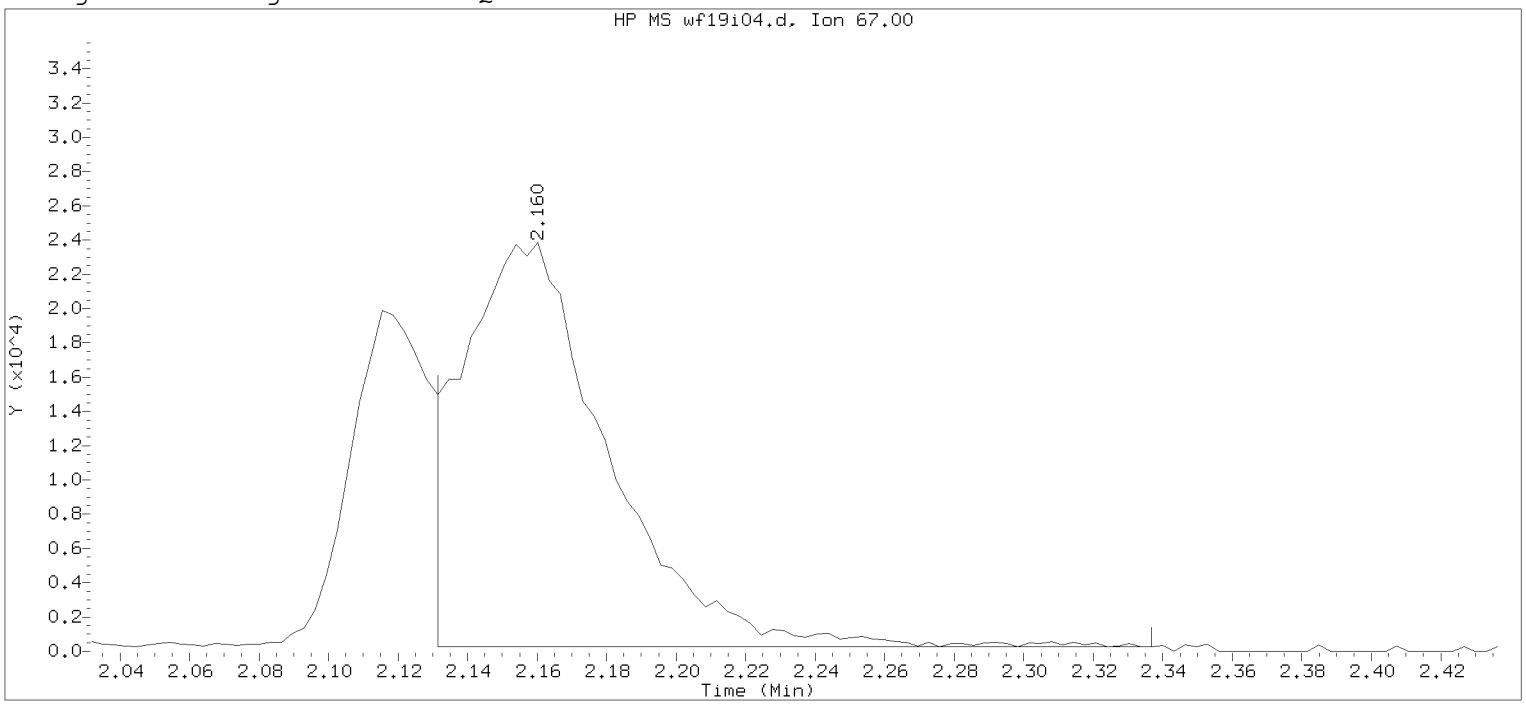
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

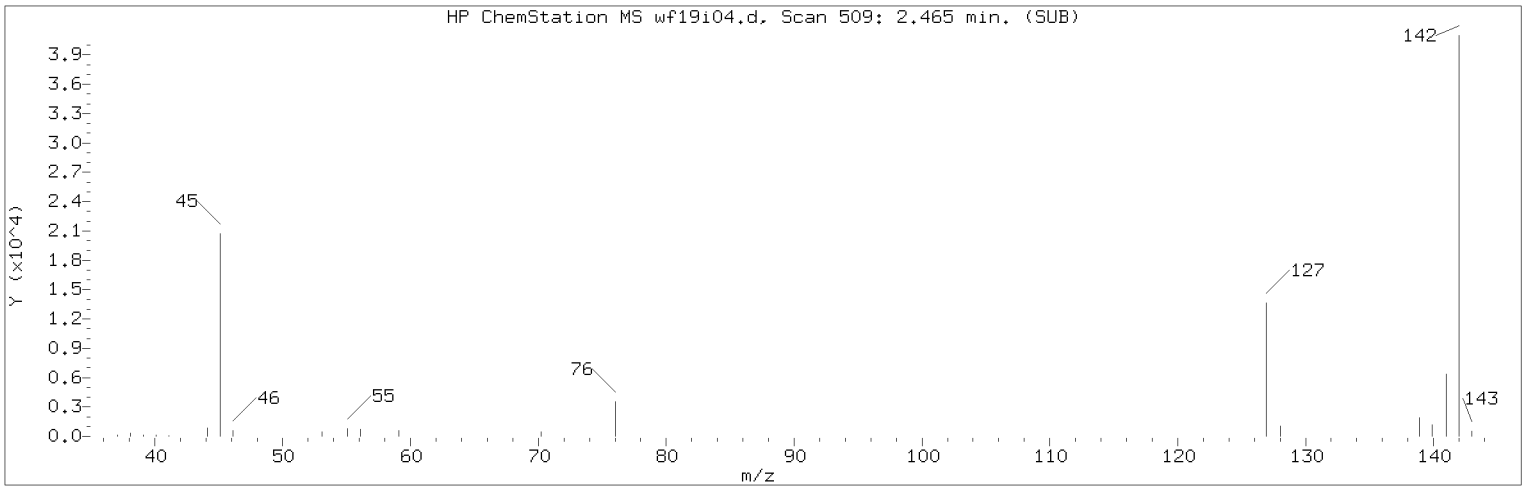
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:48
Date, time and analyst ID of latest file update: 19-Feb-2019 13:48 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

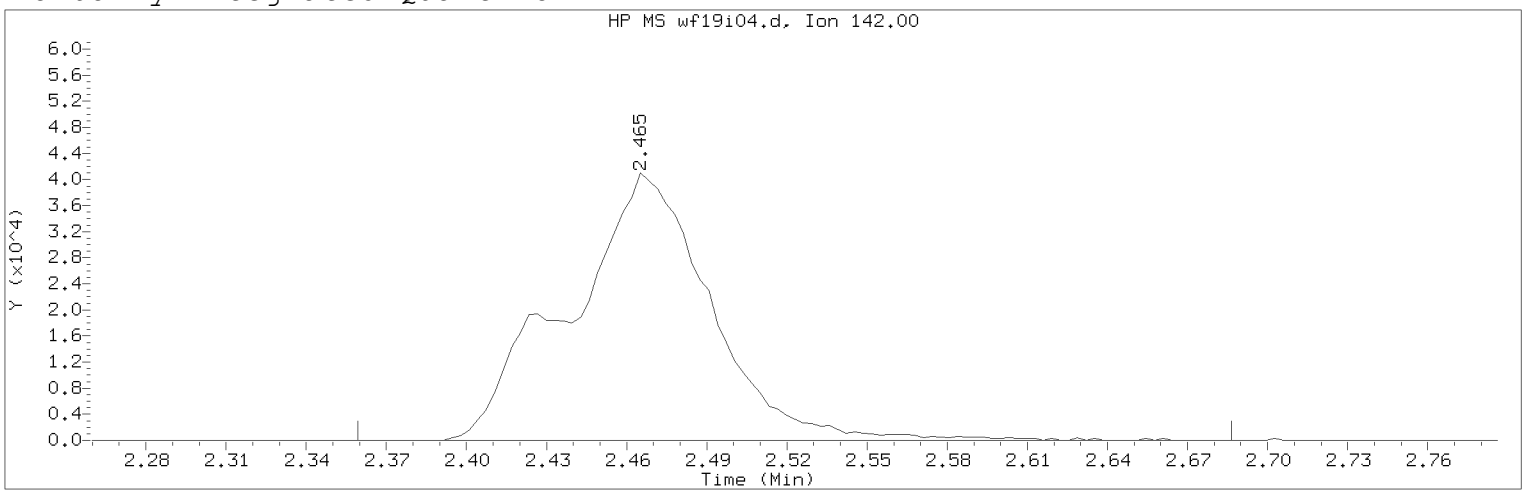
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 414
Retention Time (minutes): 2.160
Quant Ion : 67.00
Area : 68962
On-column Amount (ng) : 20.6064
Integration start scan : 404 Integration stop scan: 468
Y at integration start : 260 Y at integration end: 253

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user at 07:17

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

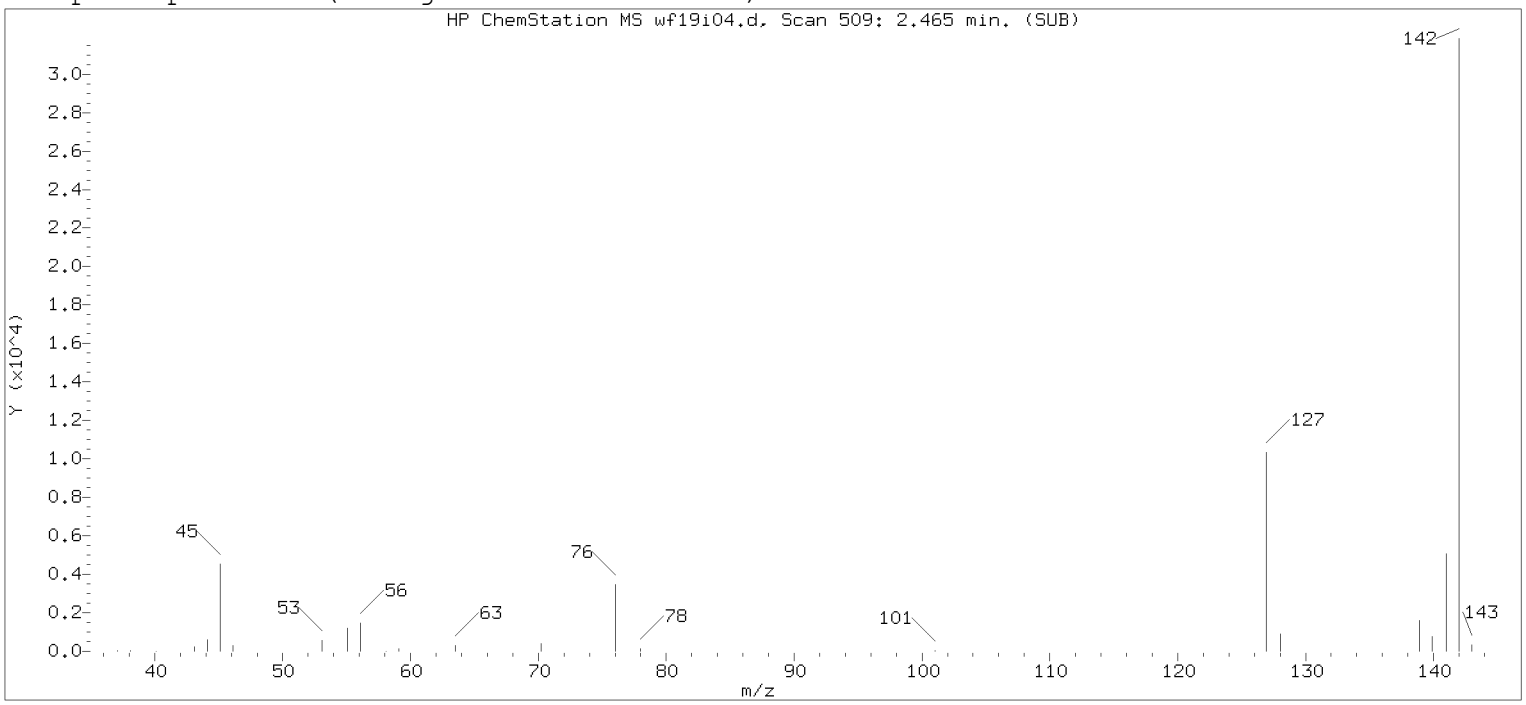
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area (flag) : 150767M
On-Column Amount (ng) : 20.3101
Integration start scan : 475 Integration stop scan: 577
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

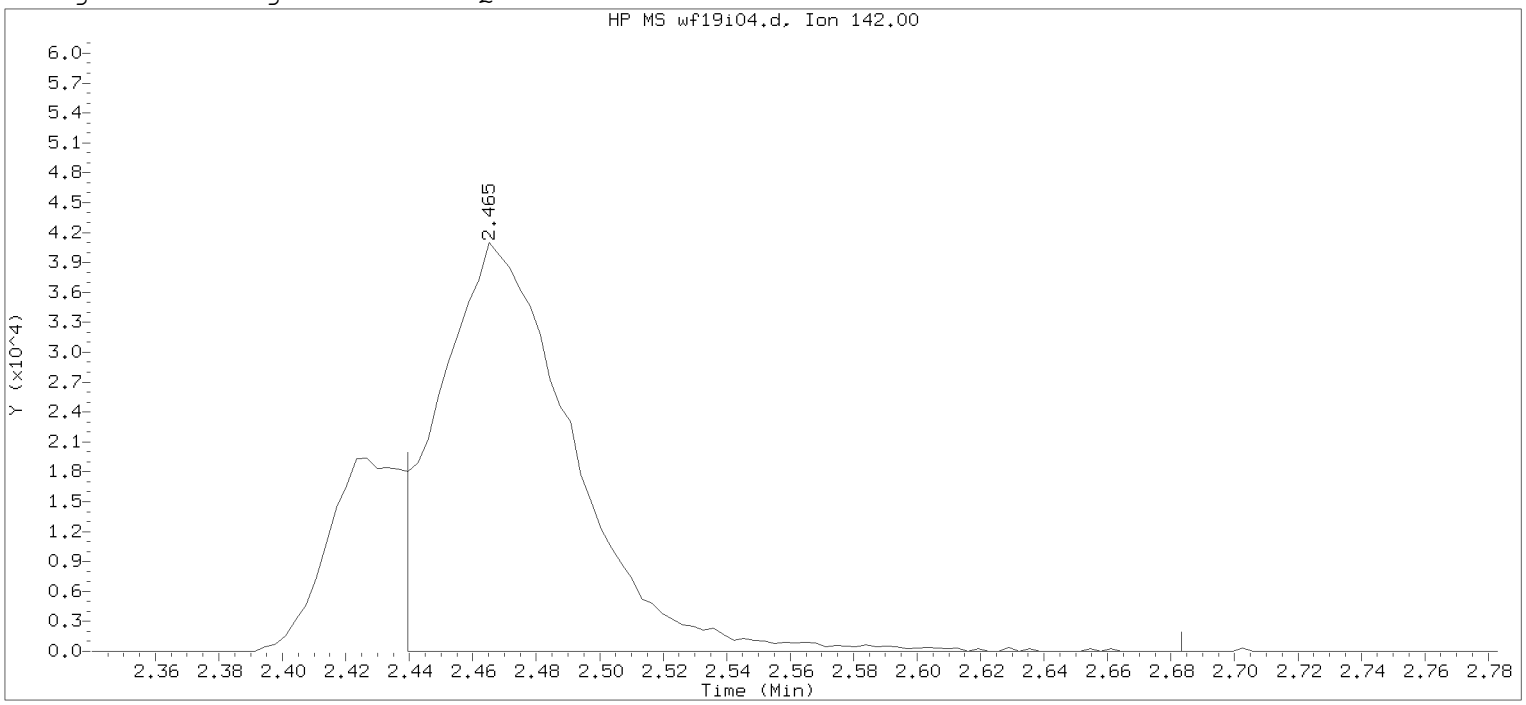
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

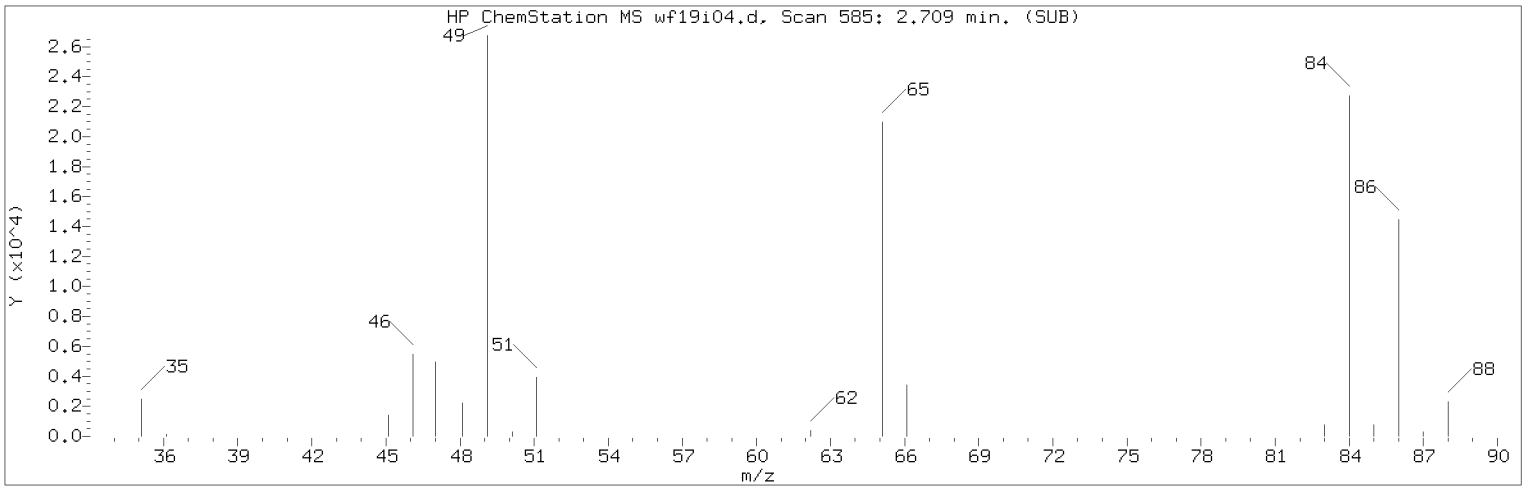
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:48
Date, time and analyst ID of latest file update: 19-Feb-2019 13:48 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

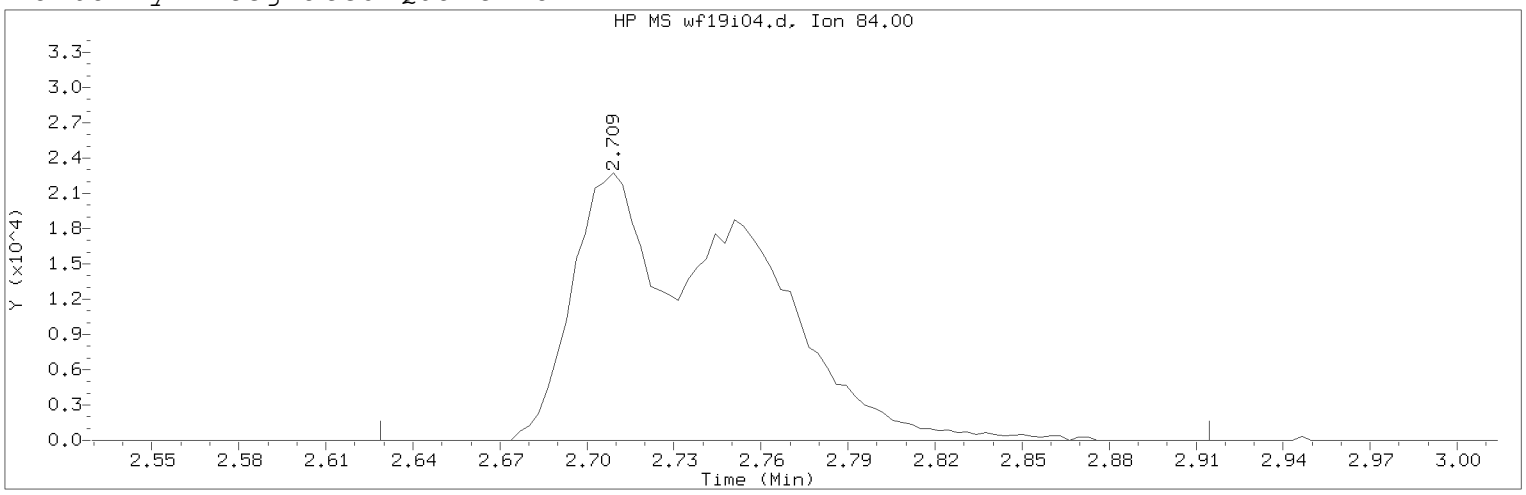
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area : 119508
On-column Amount (ng) : 17.5745
Integration start scan : 500 Integration stop scan: 576
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

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Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

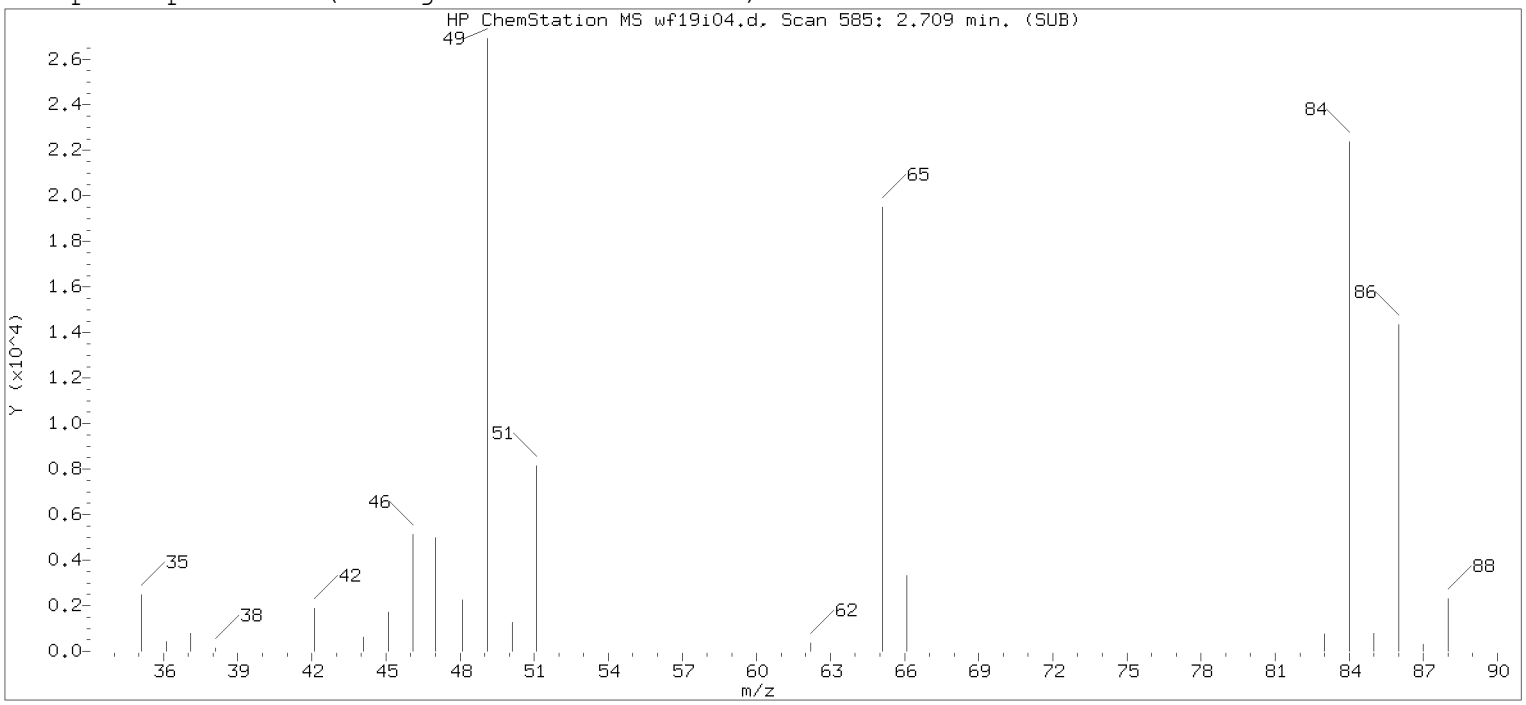
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area (flag) : 93973M
On-Column Amount (ng) : 19.8468
Integration start scan : 559 Integration stop scan: 648
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

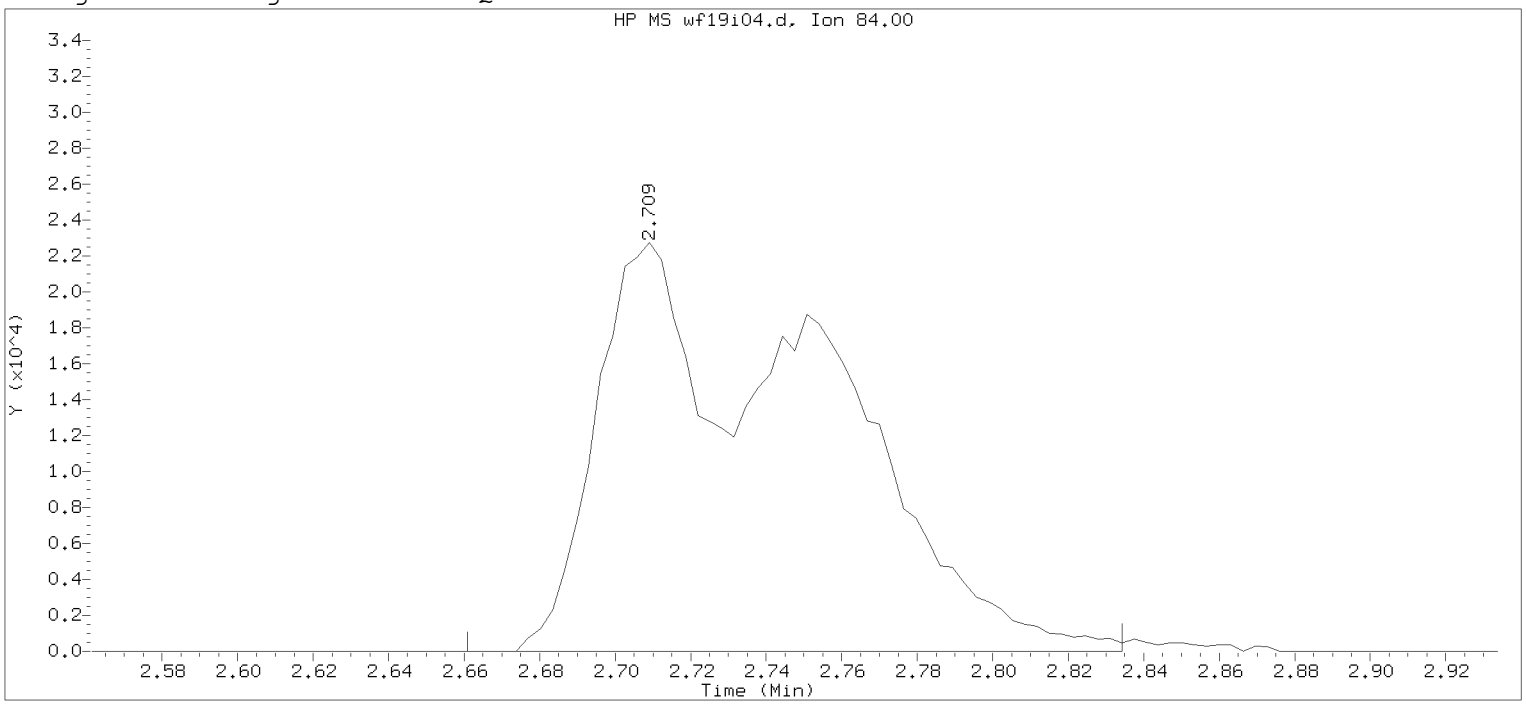
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

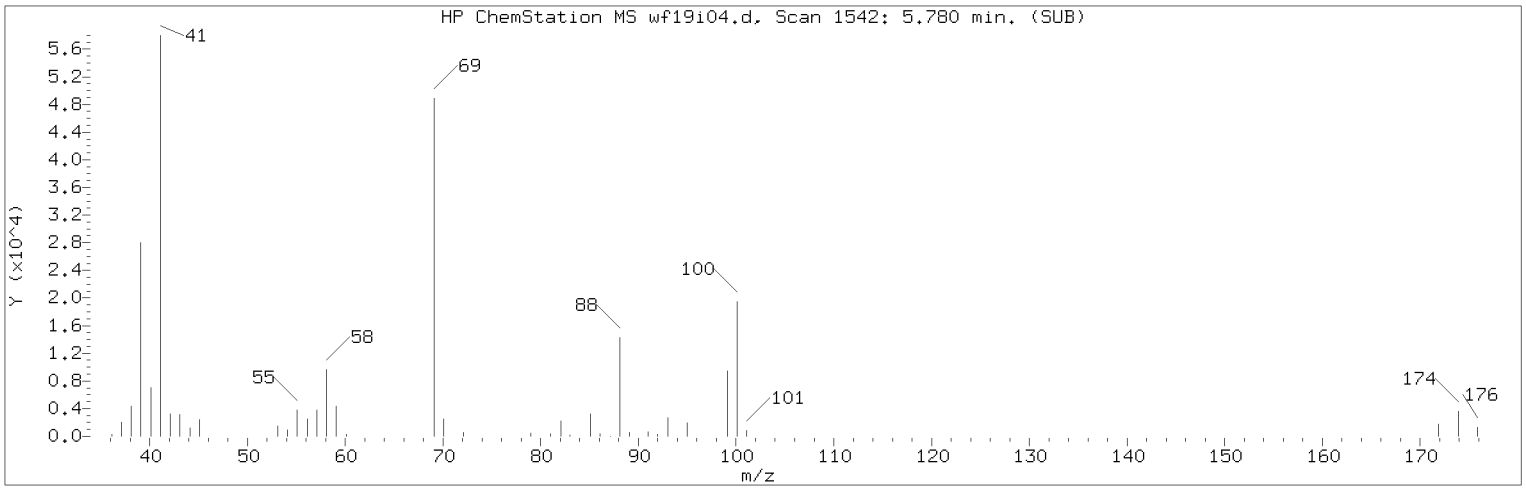
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:48
Date, time and analyst ID of latest file update: 19-Feb-2019 13:48 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

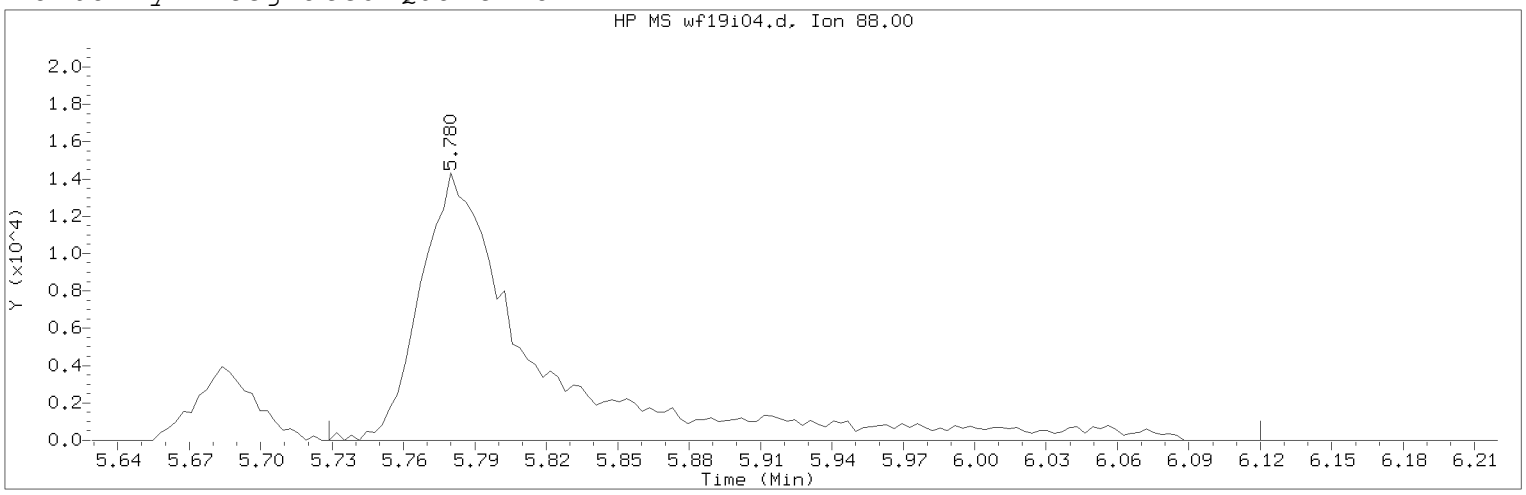
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area : 93088
On-column Amount (ng) : 25.0351
Integration start scan : 569 Integration stop scan: 623
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

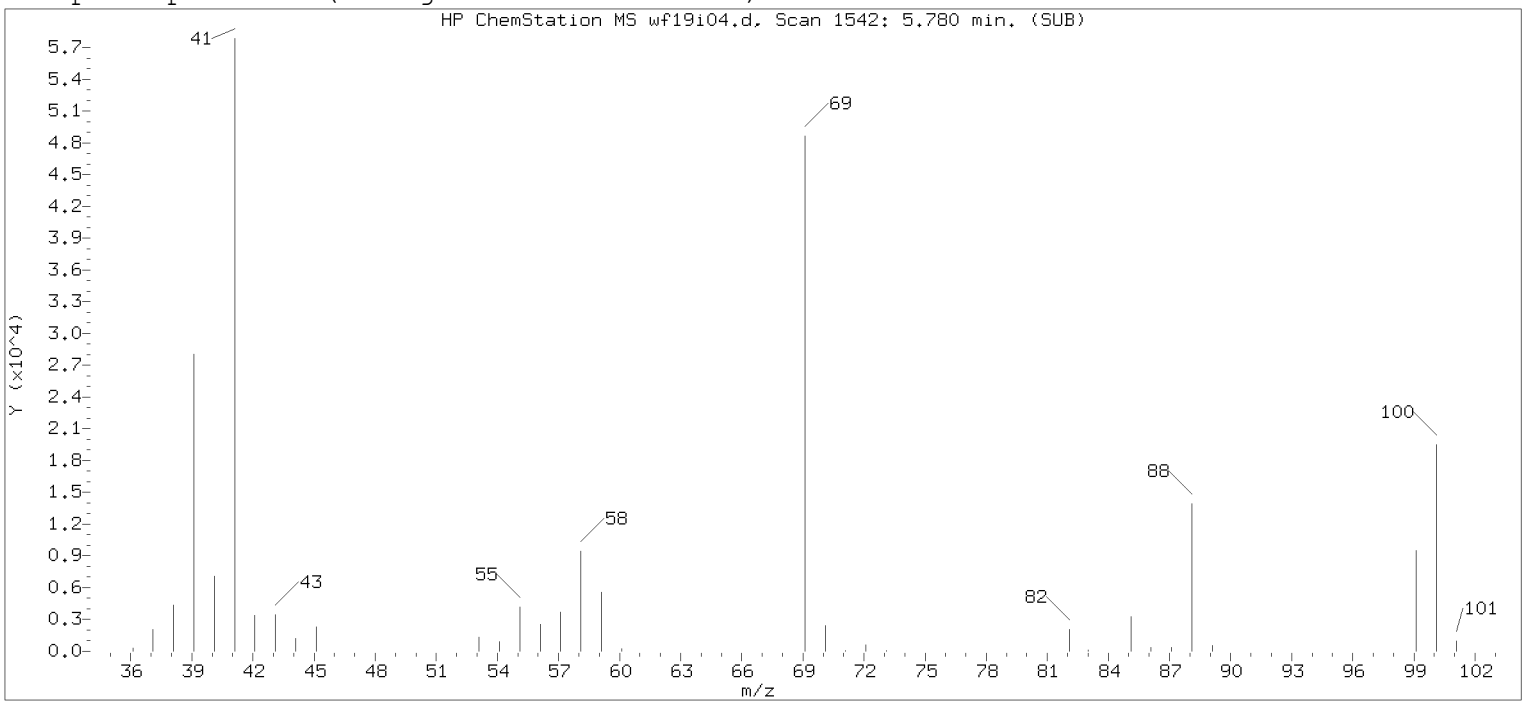
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area (flag) : 49606M
On-Column Amount (ng) : 488.7657
Integration start scan : 1525 Integration stop scan: 1647
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

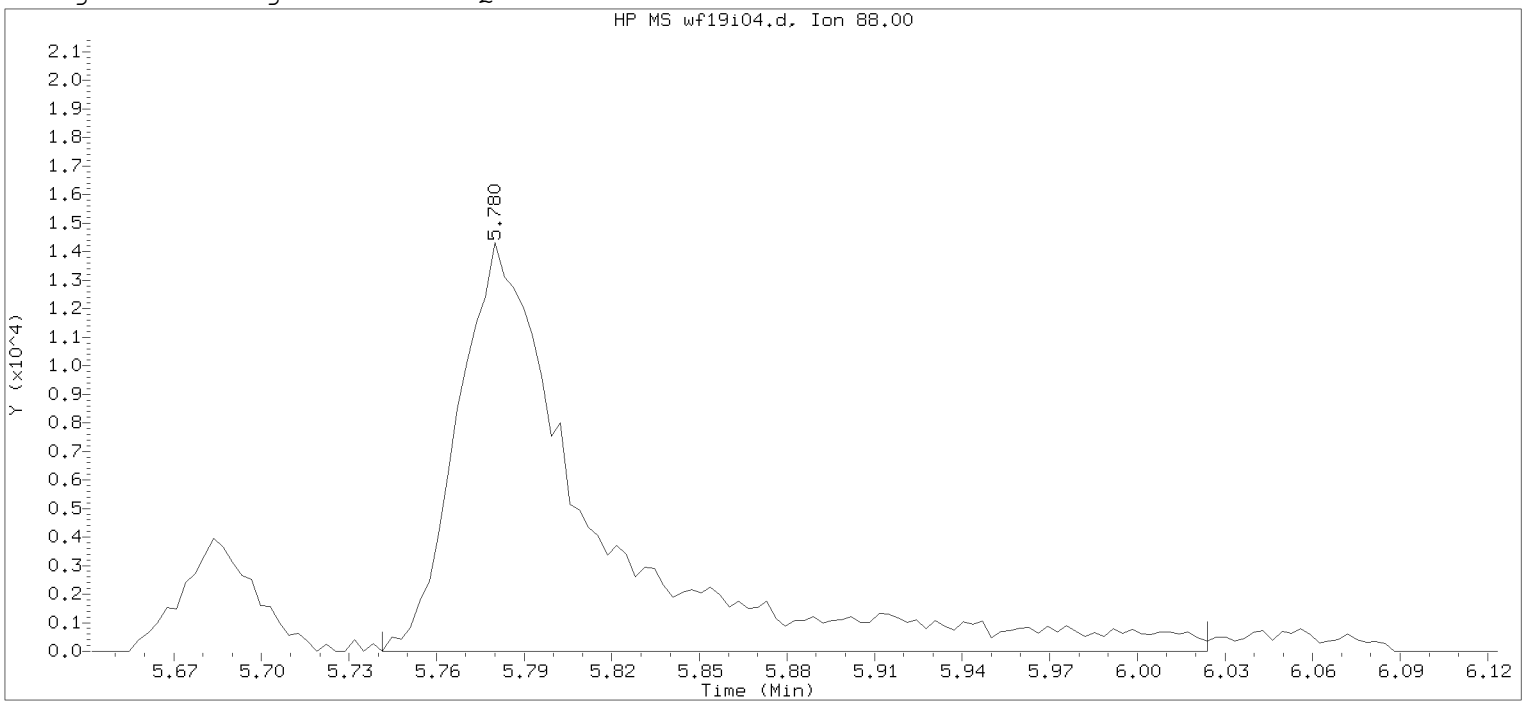
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:48
Date, time and analyst ID of latest file update: 19-Feb-2019 13:48 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1542		
Retention Time (minutes)	: 5.780		
Quant Ion	: 88.00		
Area	: 47644		
On-column Amount (ng)	: 464.2245		
Integration start scan	: 1529	Integration stop scan:	1617
Y at integration start	: 0	Y at integration end:	0

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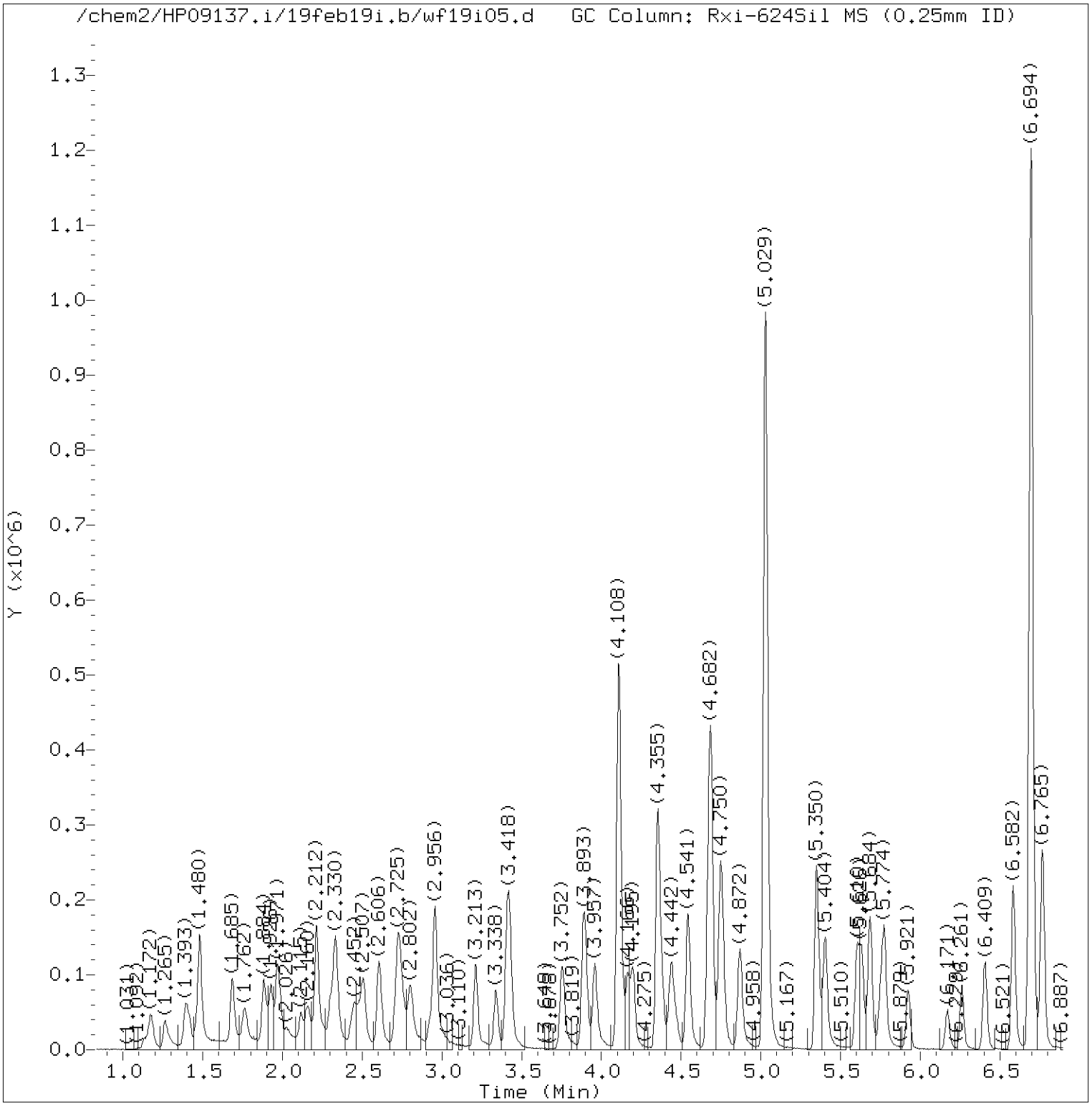
Target 3.5 esignature user Capacity



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

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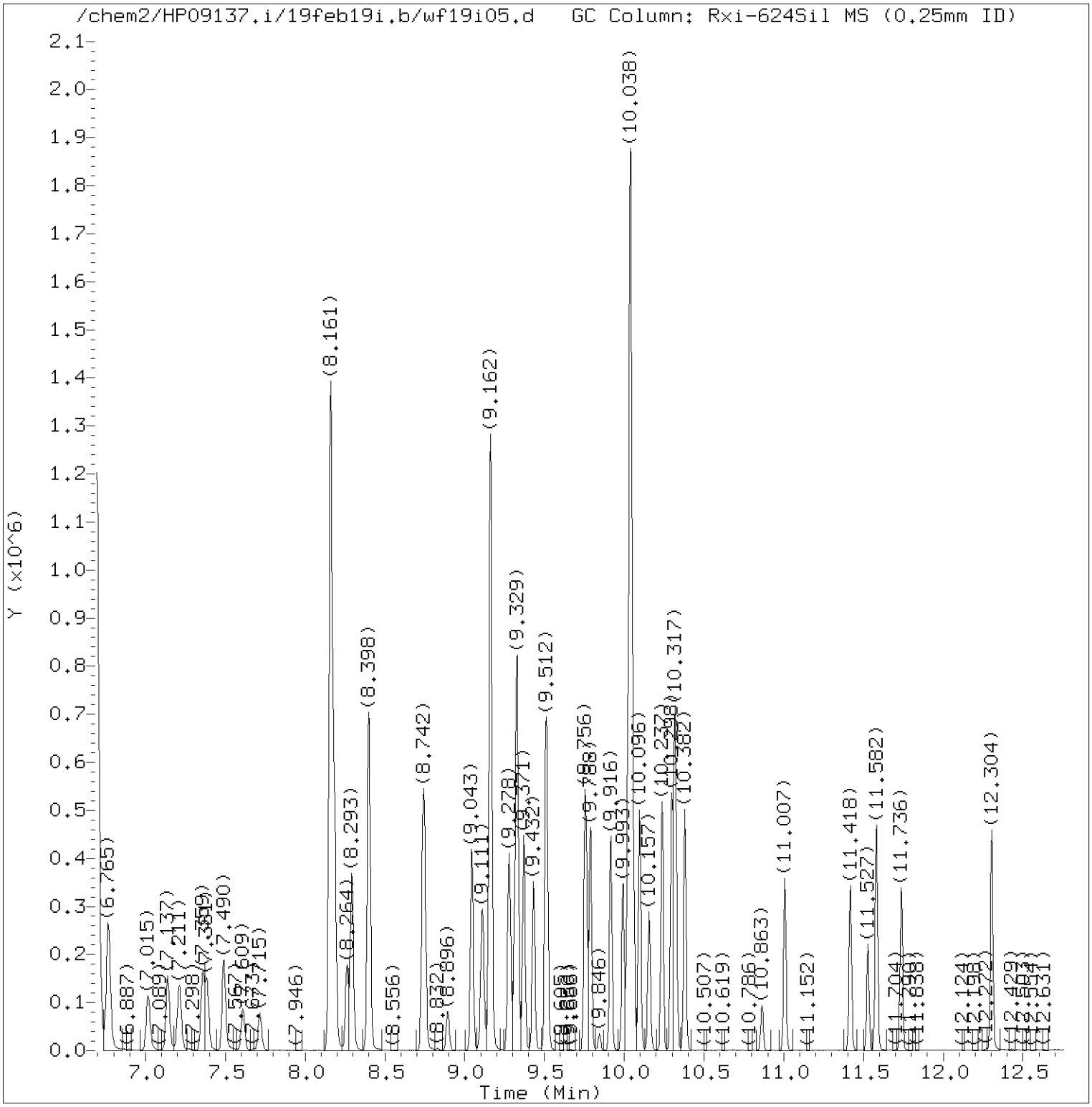
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.262	85	62458	11.066
4) Chloromethane	(2)	1.393	50	76916	10.944
6) Vinyl Chloride	(2)	1.470	62	72647	11.276
5) 1,3-Butadiene	(2)	1.480	39	42800	9.993
8) Bromomethane	(2)	1.682	94	56000	11.021
9) Chloroethane	(2)	1.762	64	45389	10.706
10) Dichlorofluoromethane	(2)	1.884	67	84015	10.238
12) Trichlorofluoromethane	(2)	1.929	101	75649	11.056
11) n-Pentane	(2)	1.971	43	69602	10.696
13) Ethanol	(1)	2.029	45	48262	448.970
15) Freon 123a	(2)	2.160	67	53443M	10.452
16) Acrolein	(1)	2.212	56	159695	94.112
17) 1,1-Dichloroethene	(2)	2.330	96	41128	10.687
17) 1,1-Dichloroethene	(2)	2.330	63	21001	10.816
18) Acetone	(1)	2.334	58	16160M	19.593
19) Freon 113	(2)	2.334	101	36566	10.820
21) 2-Propanol	(1)	2.443	45	59465	97.039
22) Methyl Iodide	(2)	2.468	142	77364	10.490
23) Carbon Disulfide	(2)	2.507	76	145480	10.730
25) Allyl Chloride	(2)	2.600	41	69127	10.310
27) Methyl Acetate	(2)	2.616	43	57968	9.989
29)*t-Butyl alcohol-d10	(1)	2.725	65	235698	250.000
28) Methylene Chloride	(2)	2.744	84	49542M	10.532
30) t-Butyl alcohol	(1)	2.802	59	107632	98.462
31) Acrylonitrile	(2)	2.930	53	30932	10.132
32) trans-1,2-Dichloroethene	(2)	2.956	96	44909	10.755
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	114387	11.251
34) n-Hexane	(2)	3.210	57	60284	10.790
36) 1,1-Dichloroethane	(2)	3.338	63	80127	10.590
38) di-Isopropyl ether	(2)	3.412	45	153463	10.557
39) 2-Chloro-1,3-butadiene	(2)	3.431	53	69810	10.653
40) Ethyl t-butyl ether	(2)	3.758	59	118447	11.179
42) cis-1,2-Dichloroethene	(2)	3.887	96	49735	10.608
45) 2,2-Dichloropropane	(2)	3.887	77	36418	10.717
44) 2-Butanone	(2)	3.903	43	86295	19.675
47) Propionitrile	(1)	3.957	54	135864	100.004
48) Methacrylonitrile	(2)	4.111	67	172352	52.506
49) Bromochloromethane	(2)	4.114	128	25130	10.312

M = Compound was manually integrated.
* = Compound is an internal standard.

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Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.166	71	22155	17.619
51) Chloroform	(2)	4.198	83	74987	10.563
52)$Dibromofluoromethane	(2)	4.355	113	200531	49.589
52)$Dibromofluoromethane	(2)	4.355	111	204921	49.364
53) 1,1,1-Trichloroethane	(2)	4.381	97	57282	10.724
54) Cyclohexane	(2)	4.442	56	75994	10.750
54) Cyclohexane	(2)	4.442	84	61745	10.552
54) Cyclohexane	(2)	4.442	69	22755	10.711
55) 1,1-Dichloropropene	(2)	4.541	75	59776	10.502
56) Carbon Tetrachloride	(2)	4.545	117	48197	10.514
58) Isobutyl Alcohol	(1)	4.670	41	97996	245.901
57)$1,2-Dichloroethane-d4	(2)	4.686	102	53213	49.478
57)$1,2-Dichloroethane-d4	(2)	4.686	65	234803	50.153
57)$1,2-Dichloroethane-d4	(2)	4.689	104	34768	50.762
60) Benzene	(2)	4.747	78	194070	10.608
61) 1,2-Dichloroethane	(2)	4.766	62	58810	10.406
61) 1,2-Dichloroethane	(2)	4.760	98	5873	10.923
65) t-Amyl methyl ether	(2)	4.872	73	123749	11.400
66)*Fluorobenzene	(2)	5.029	96	872867	50.000
67) n-Heptane	(2)	5.035	43	56932	10.662
69) n-Butanol	(1)	5.350	56	171859	485.699
71) Trichloroethene	(2)	5.404	95	47297	10.675
73) Methylcyclohexane	(2)	5.610	83	63355	9.850
73) Methylcyclohexane	(2)	5.603	98	29361	9.817
74) 1,2-Dichloropropane	(2)	5.632	63	49822	10.607
75) Dibromomethane	(2)	5.754	93	30462	10.508
77) Methyl Methacrylate	(2)	5.774	69	52747	10.219
76) 1,4-Dioxane	(1)	5.780	88	26130M	247.023
79) Bromodichloromethane	(2)	5.921	83	54837	10.296
43) 1,2-Dichloroethene (Total)	(2)		96	94644	21.364
80) 2-Nitropropane	(2)	6.171	41	32706	18.149
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	39229	10.955
82) cis-1,3-Dichloropropene	(2)	6.409	75	75893	10.363
83) 4-Methyl-2-pentanone	(2)	6.585	43	162394	18.783
84)$Toluene-d8	(3)	6.694	98	898296	50.552
84)$Toluene-d8	(3)	6.694	100	588219	49.916
89) Toluene	(3)	6.765	92	124809	10.903
90) trans-1,3-Dichloropropene	(3)	7.015	75	71110	10.435

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.137	69	87307	10.426
93) 1,1,2-Trichloroethane	(3)	7.211	97	46734	10.607
94) Tetrachloroethene	(3)	7.359	166	50876	10.953
95) 1,3-Dichloropropane	(3)	7.384	76	82341	10.760
97) 2-Hexanone	(3)	7.490	43	127140	19.072
98) Dibromochloromethane	(3)	7.609	129	44473	10.335
100) 1,2-Dibromoethane	(3)	7.715	107	52152	10.774
101)*Chlorobenzene-d5	(3)	8.161	117	709147	50.000
103) Chlorobenzene	(3)	8.187	112	135467	10.668
104) 1,1,1,2-Tetrachloroethane	(3)	8.260	131	42994	10.535
105) Ethylbenzene	(3)	8.293	91	235037	10.803
107) m+p-Xylene	(3)	8.398	106	187670	21.696
108) o-Xylene	(3)	8.735	106	90084	10.586
110) Styrene	(3)	8.751	104	151094	10.584
111) Bromoform	(3)	8.893	173	33660	10.051
112) Isopropylbenzene	(3)	9.043	105	227103	10.860
113) Cyclohexanone	(1)	9.111	55	109179	228.810
115)$4-Bromofluorobenzene	(3)	9.162	95	357932	50.349
115)$4-Bromofluorobenzene	(3)	9.162	174	302192	50.376
116) Bromobenzene	(4)	9.278	156	59684	10.510
117) 1,1,2,2-Tetrachloroethane	(4)	9.281	83	80608	10.526
118) 1,2,3-Trichloropropane	(4)	9.310	110	23980	10.396
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	129246	52.628
120) n-Propylbenzene	(4)	9.371	91	270892	10.821
121) 2-Chlorotoluene	(4)	9.432	126	55953	10.836
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	194234	10.758
122) 4-Chlorotoluene	(4)	9.515	126	58566	10.595
125) tert-Butylbenzene	(4)	9.756	134	42636	10.394
126) Pentachloroethane	(4)	9.765	167	33777	10.416
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	204882	10.769
128) sec-Butylbenzene	(4)	9.916	105	239653	10.814
130) 1,3-Dichlorobenzene	(4)	9.993	146	115418	10.658
131) p-Isopropyltoluene	(4)	10.022	119	211548	10.783
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	394276	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	117695	10.484
91) 1,3-Dichloropropene (total)	(3)		100	147003	20.798
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	216354	10.569
136) Benzyl Chloride	(4)	10.157	91	162115	10.317

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.237	119	129345	10.493
138) 1,4-Diethylbenzene	(4)	10.295	119	139309	10.548
140) n-Butylbenzene	(4)	10.314	92	107453	10.852
139) 1,2-Dichlorobenzene	(4)	10.324	146	114774	10.683
141) 1,2-Diethylbenzene	(4)	10.382	119	110669	10.634
143) 1,2-Dibromo-3-chloropropane	(4)	10.866	75	17630	10.130
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	86972	10.557
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	84162	10.640
148) Hexachlorobutadiene	(4)	11.527	225	30490	10.823
149) Naphthalene	(4)	11.582	128	287278	10.734
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	81036	10.497
109) Xylene (Total)	(3)		106	277754	32.281
151) 2-Methylnaphthalene	(4)	12.304	142	164287	10.760
142) Diethylbenzene (total)	(4)		100	379323	31.674

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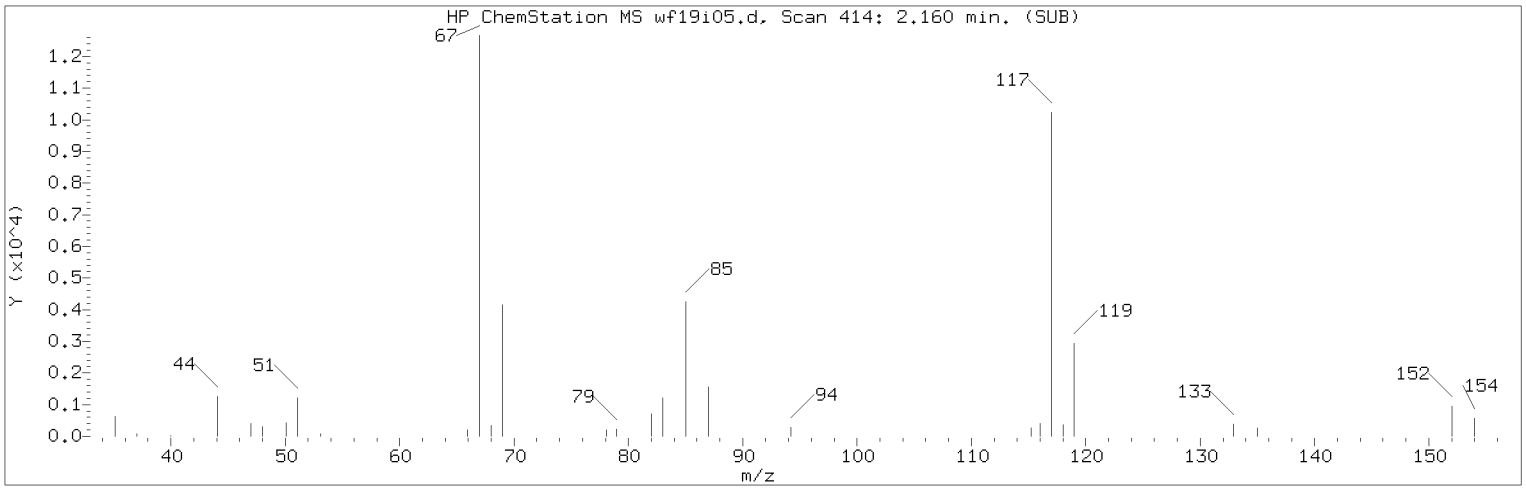
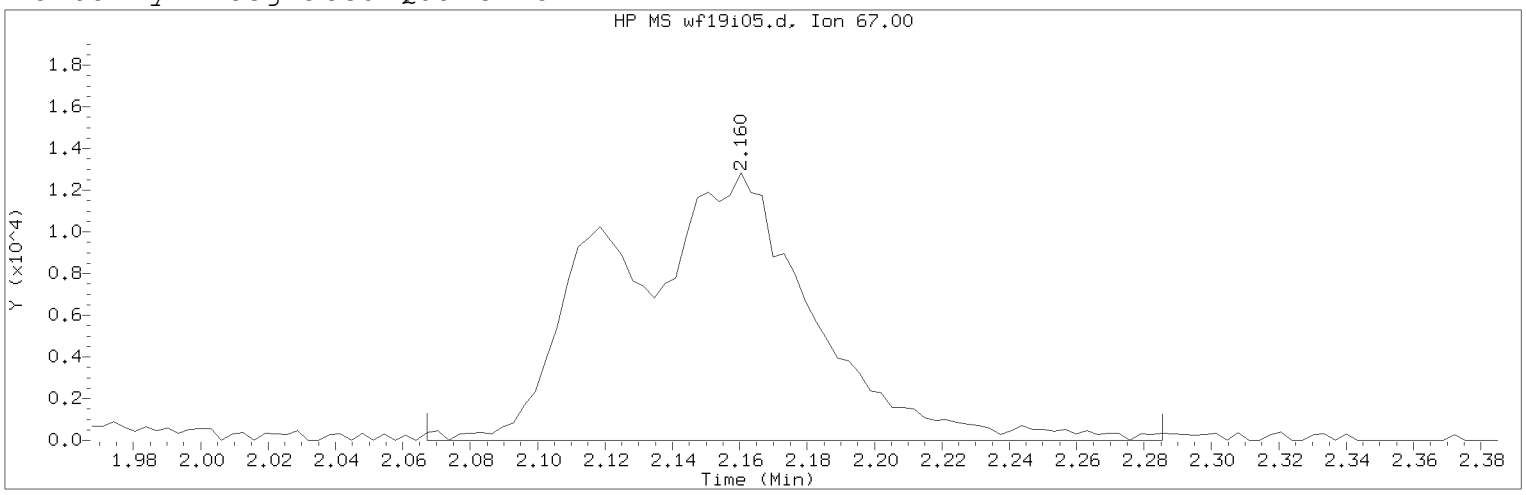
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

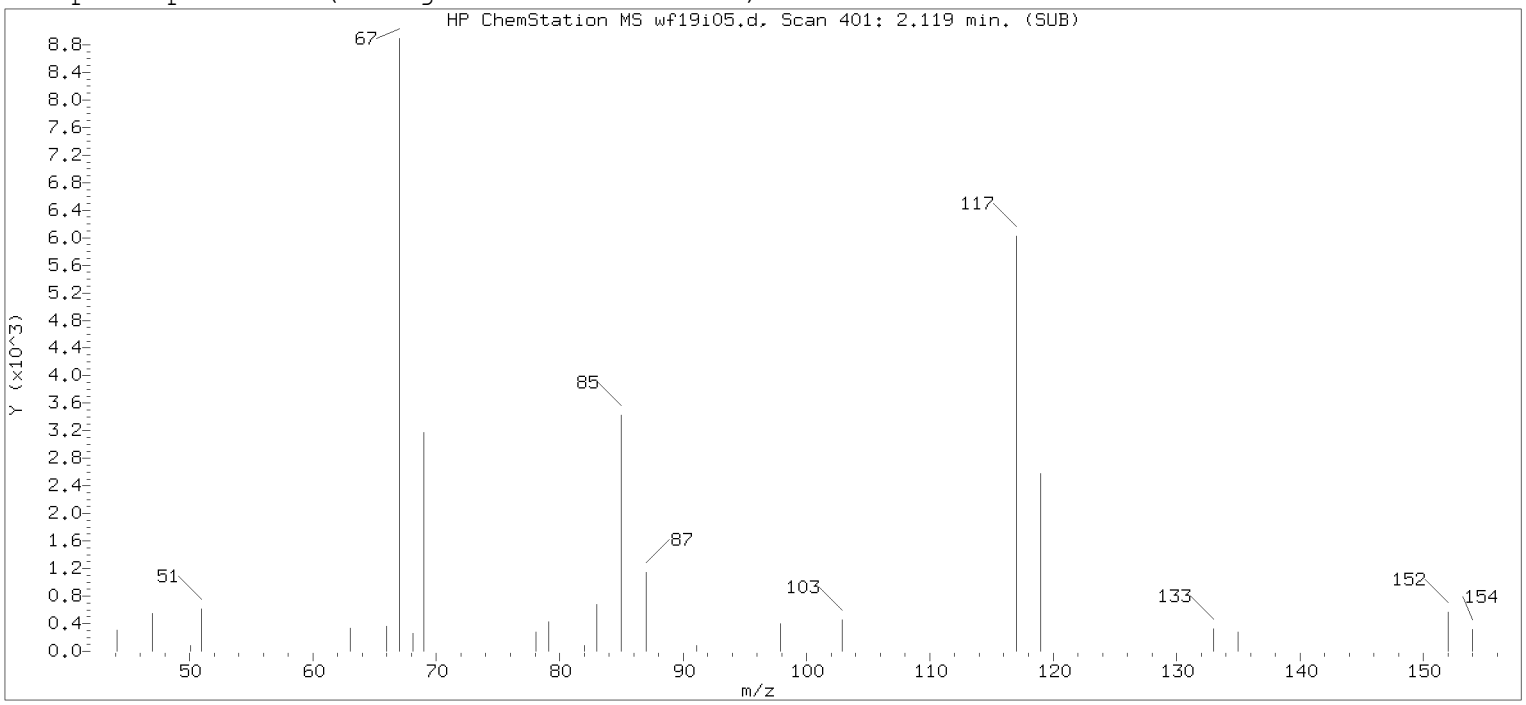
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 414
Retention Time (minutes): 2.160
Quant Ion : 67.00
Area (flag) : 53443M
On-Column Amount (ng) : 10.4520
Integration start scan : 384 Integration stop scan: 452
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

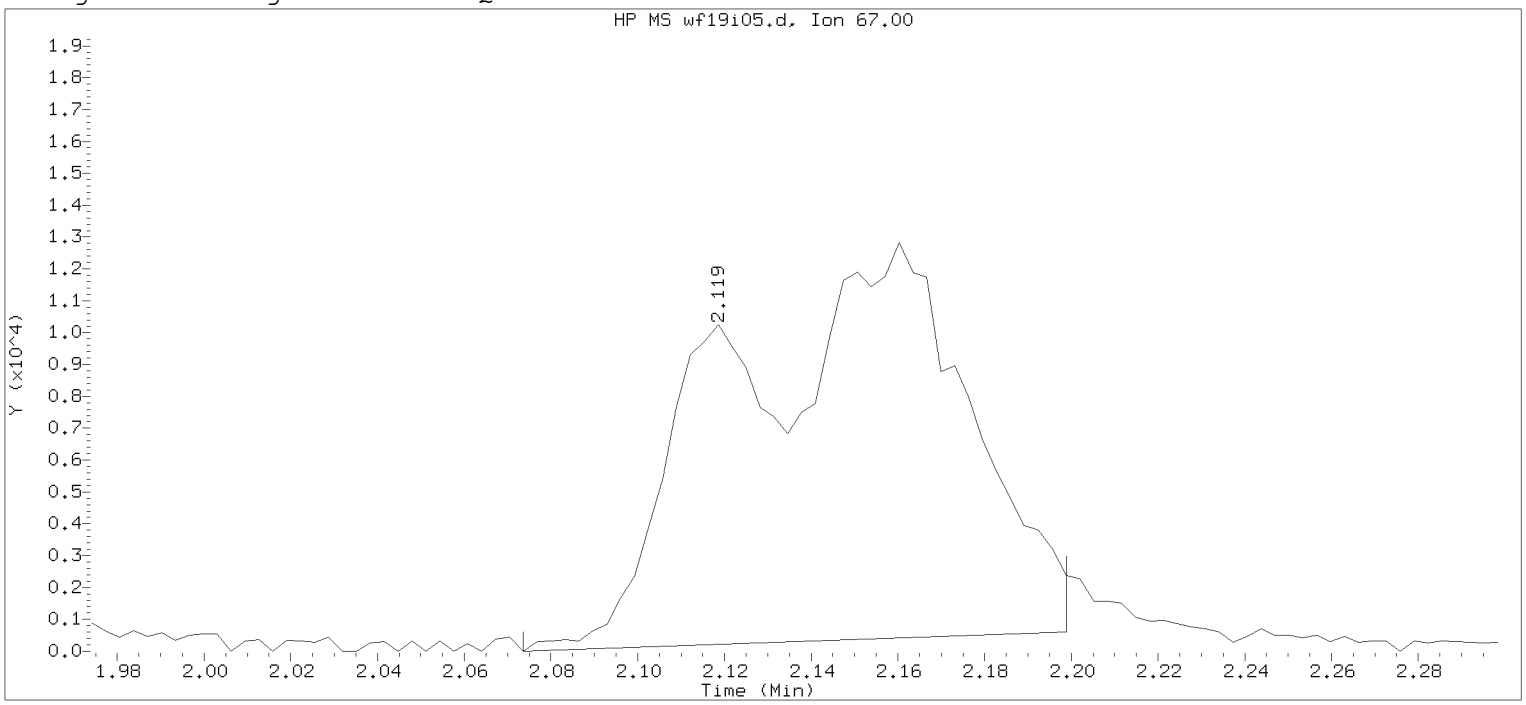
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:12
Date, time and analyst ID of latest file update: 19-Feb-2019 14:12 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 401		
Retention Time (minutes)	: 2.119		
Quant Ion	: 67.00		
Area	: 47122		
On-column Amount (ng)	: 13.0811		
Integration start scan	: 386	Integration stop scan:	425
Y at integration start	: 0	Y at integration end:	613

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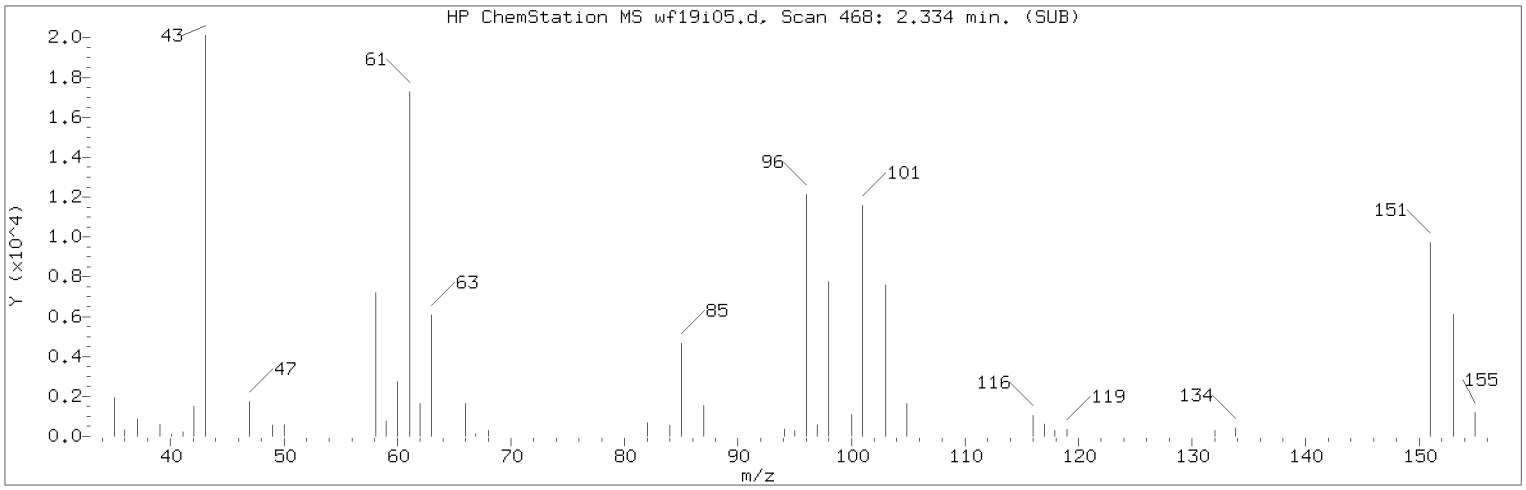
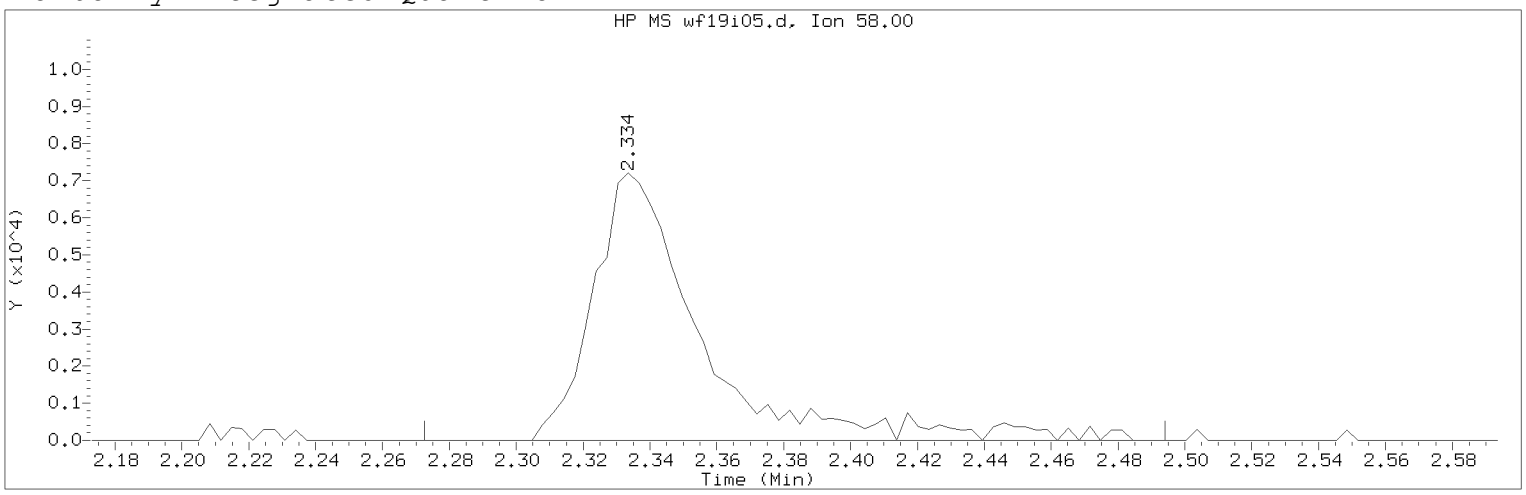
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

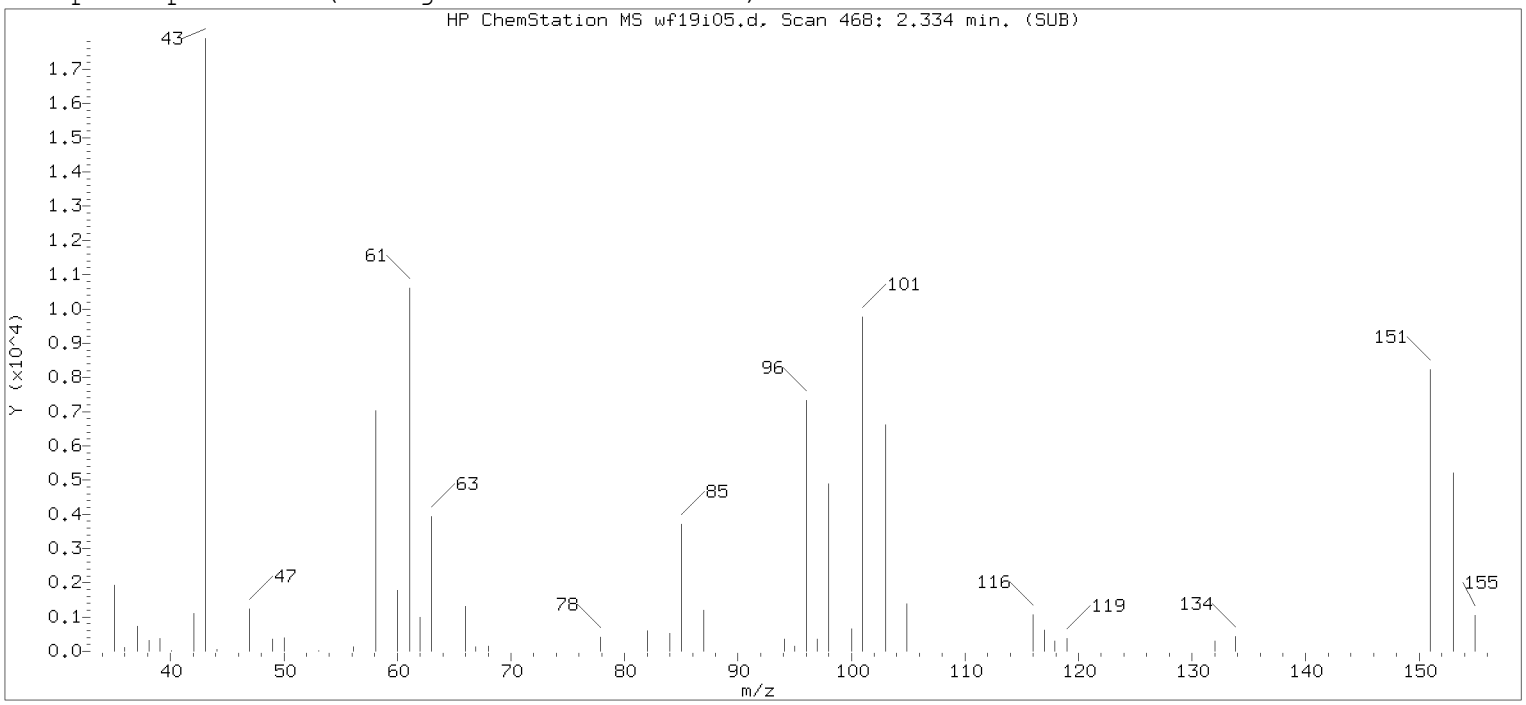
Compound Number : 18
Compound Name : Acetone
Scan Number : 468
Retention Time (minutes): 2.334
Quant Ion : 58.00
Area (flag) : 16160M
On-Column Amount (ng) : 19.5930
Integration start scan : 448 Integration stop scan: 517
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

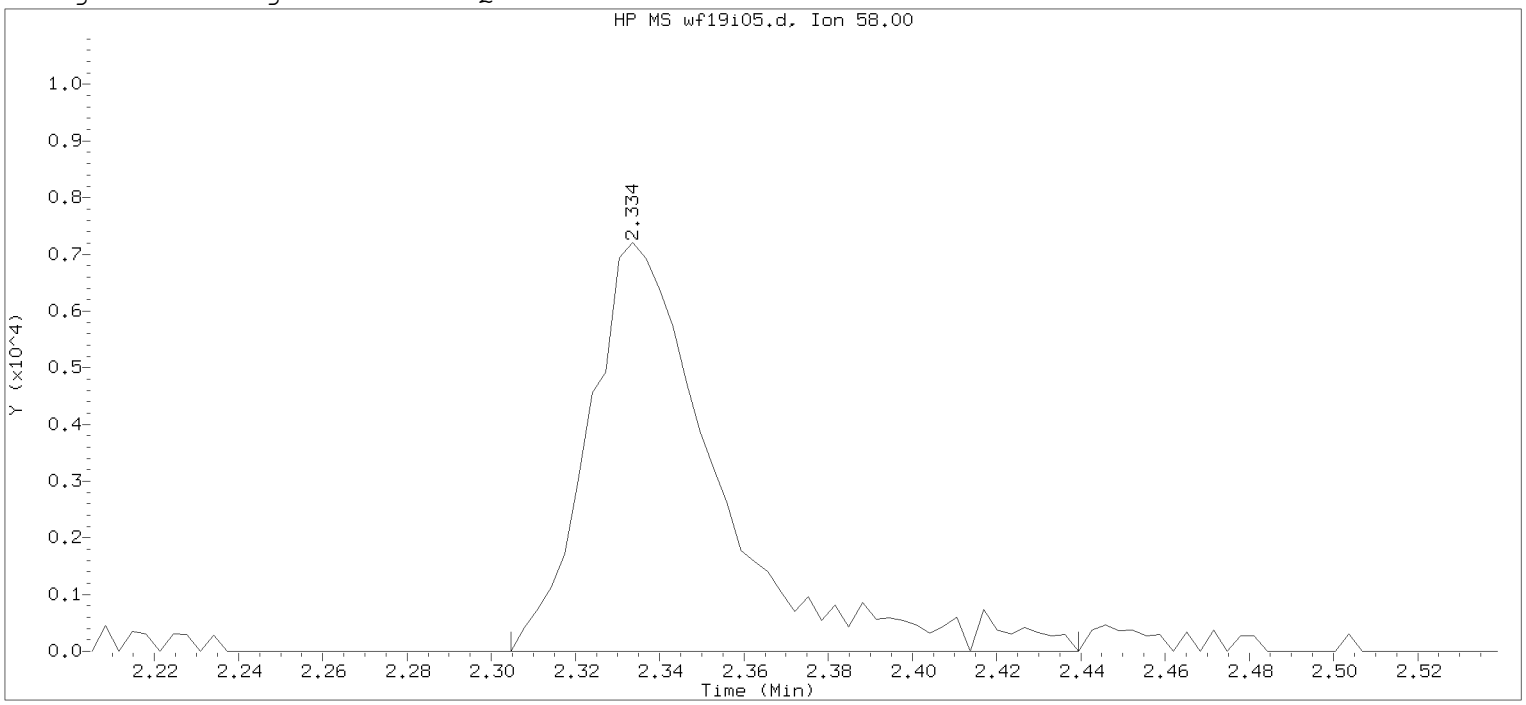
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

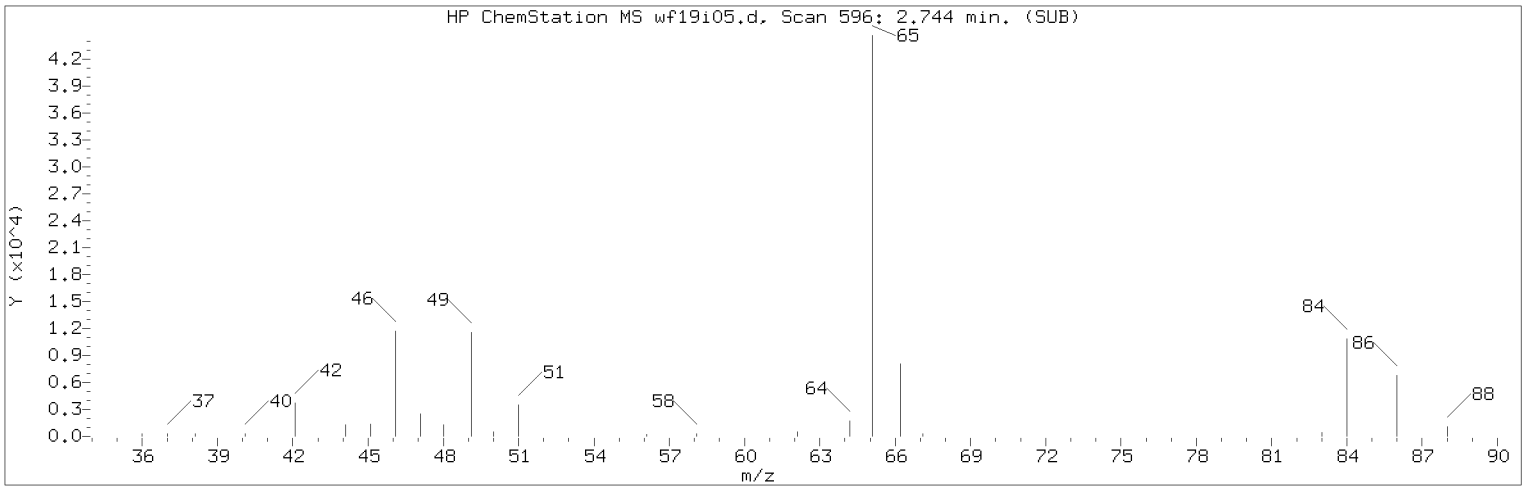
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:12
Date, time and analyst ID of latest file update: 19-Feb-2019 14:12 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

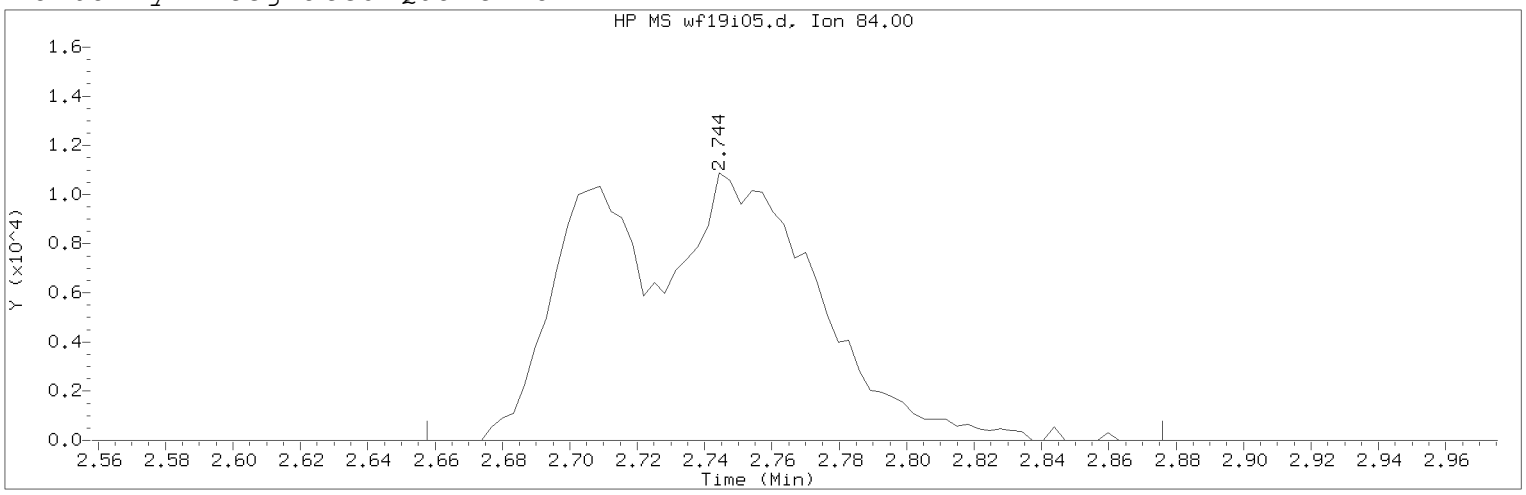
Compound Number : 18
Compound Name : Acetone
Scan Number : 468
Retention Time (minutes): 2.334
Quant Ion : 58.00
Area : 15508
On-column Amount (ng) : 18.9951
Integration start scan : 458 Integration stop scan: 500
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

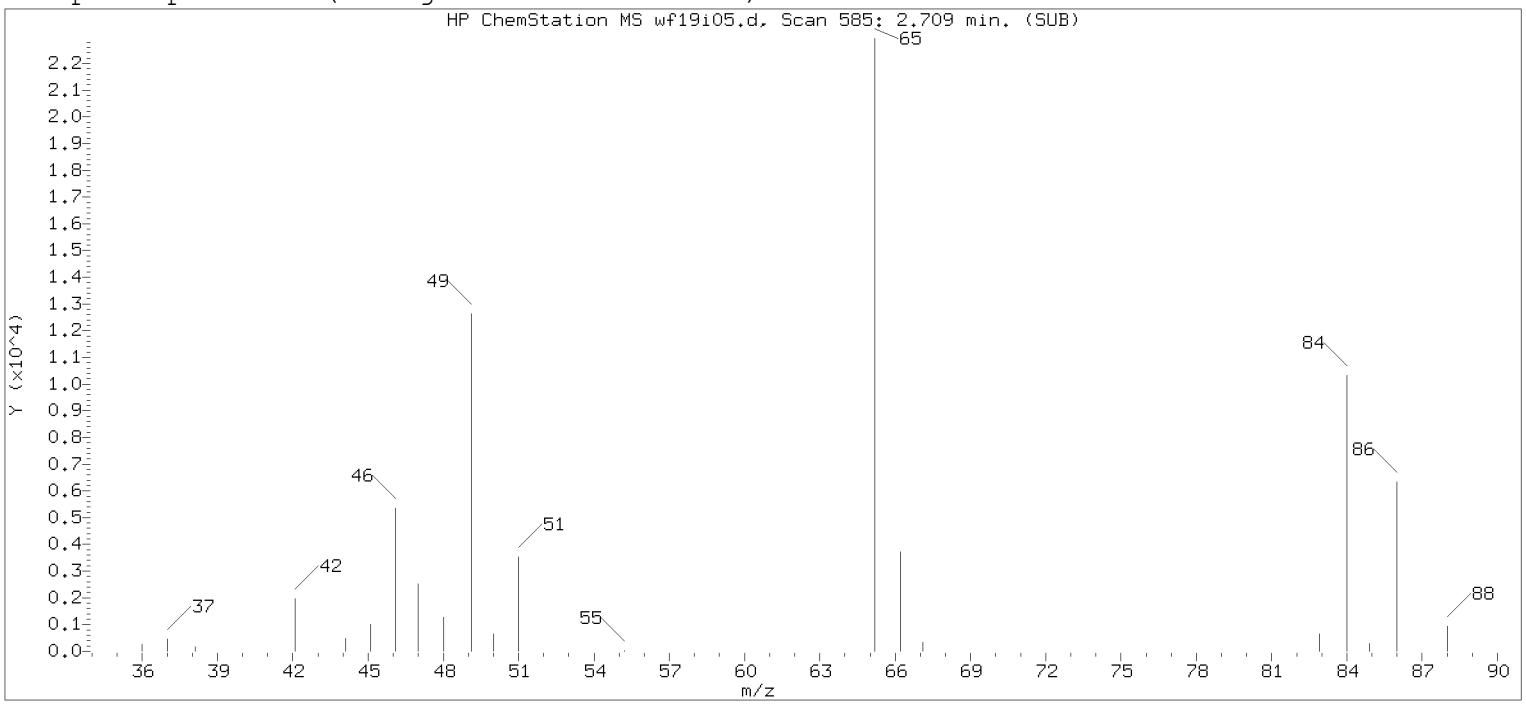
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 596
Retention Time (minutes): 2.744
Quant Ion : 84.00
Area (flag) : 49542M
On-Column Amount (ng) : 10.5316
Integration start scan : 568 Integration stop scan: 636
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

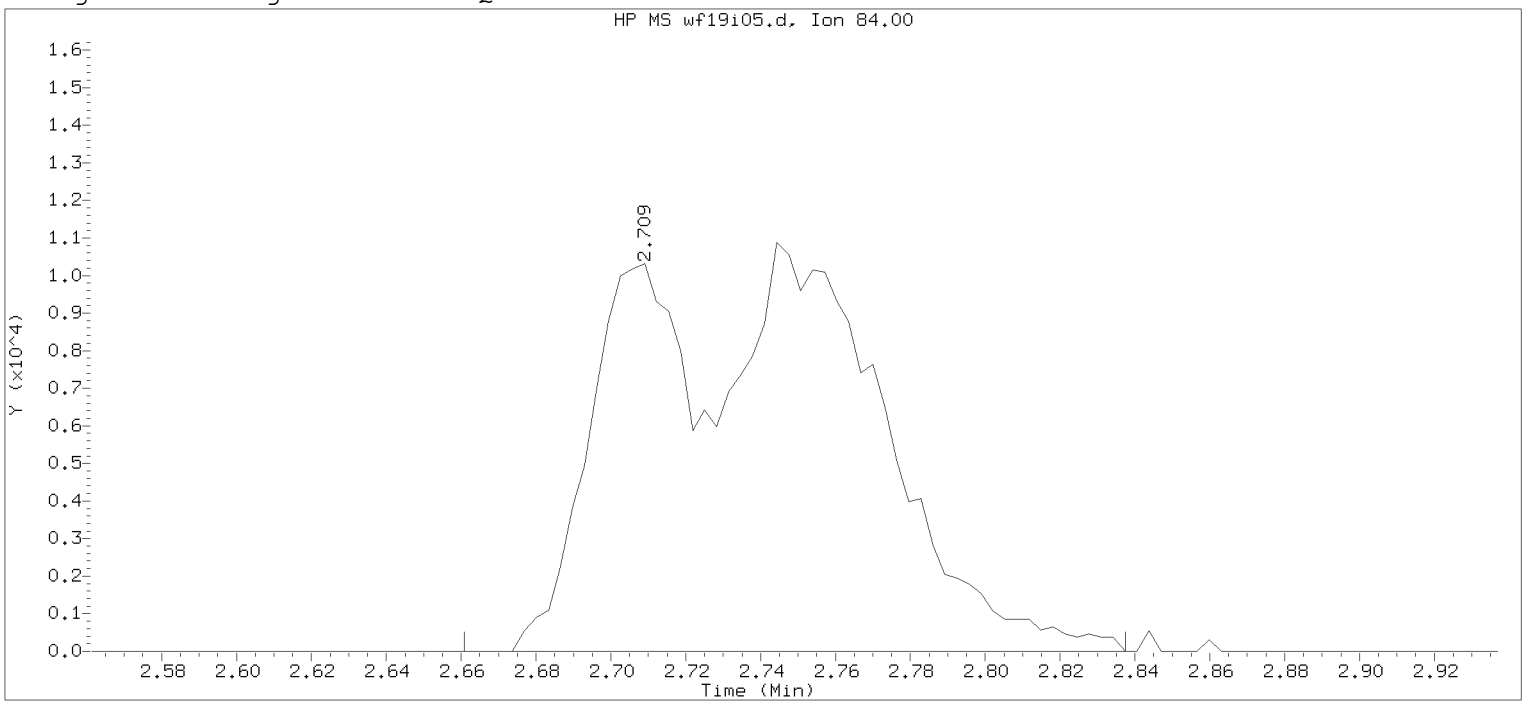
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

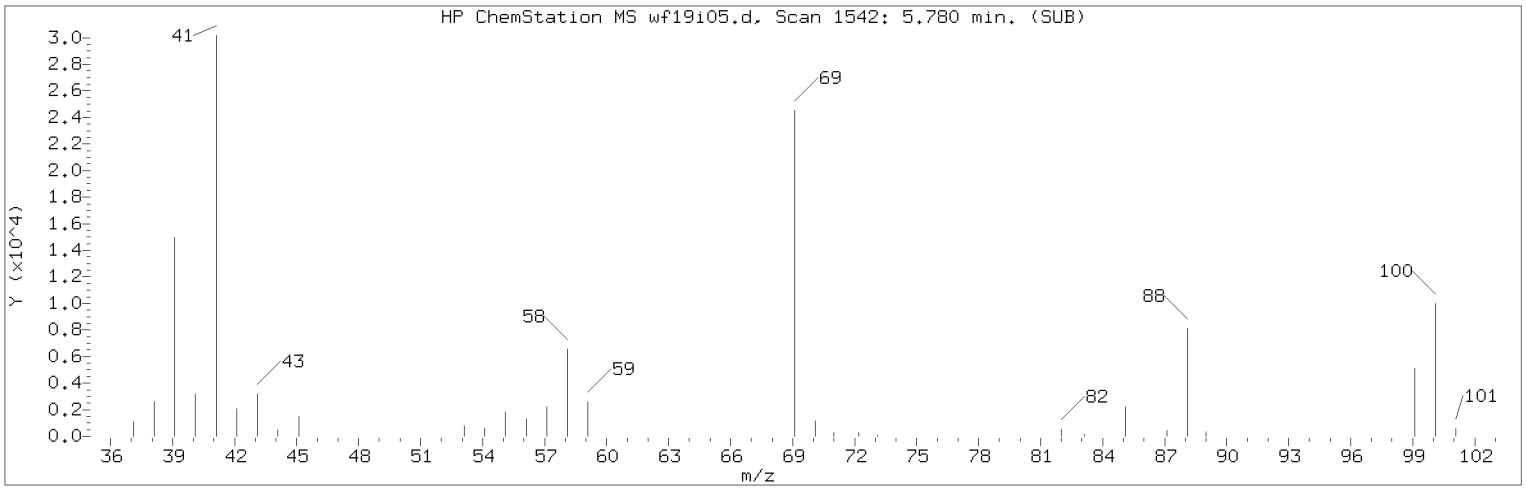
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:12
Date, time and analyst ID of latest file update: 19-Feb-2019 14:12 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

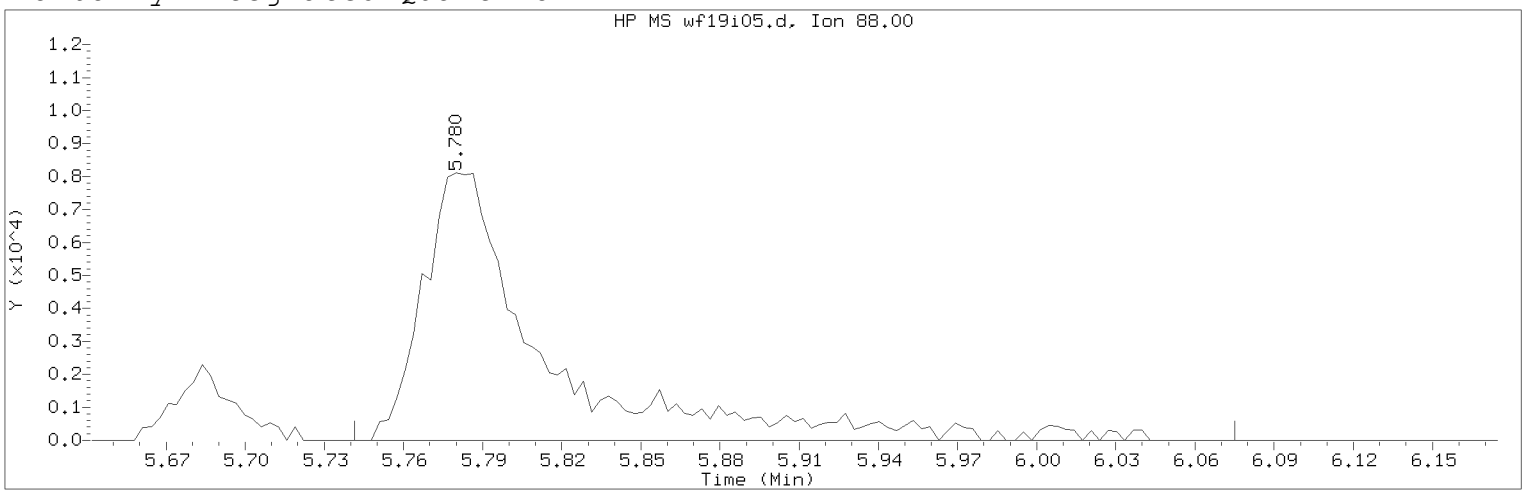
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area : 49378
On-column Amount (ng) : 12.5234
Integration start scan : 569 Integration stop scan: 624
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user at 07:35

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

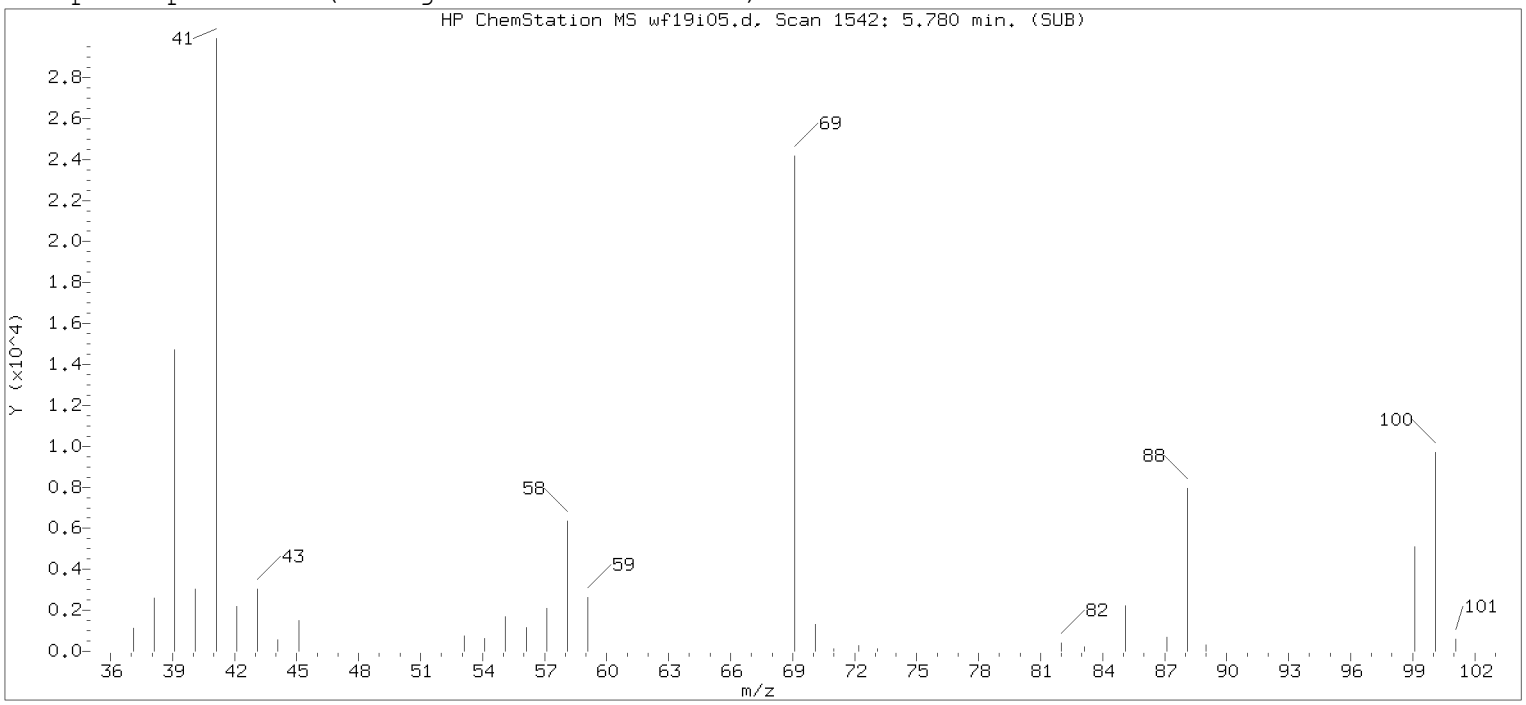
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area (flag) : 26130M
On-Column Amount (ng) : 247.0228
Integration start scan : 1529 Integration stop scan: 1633
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

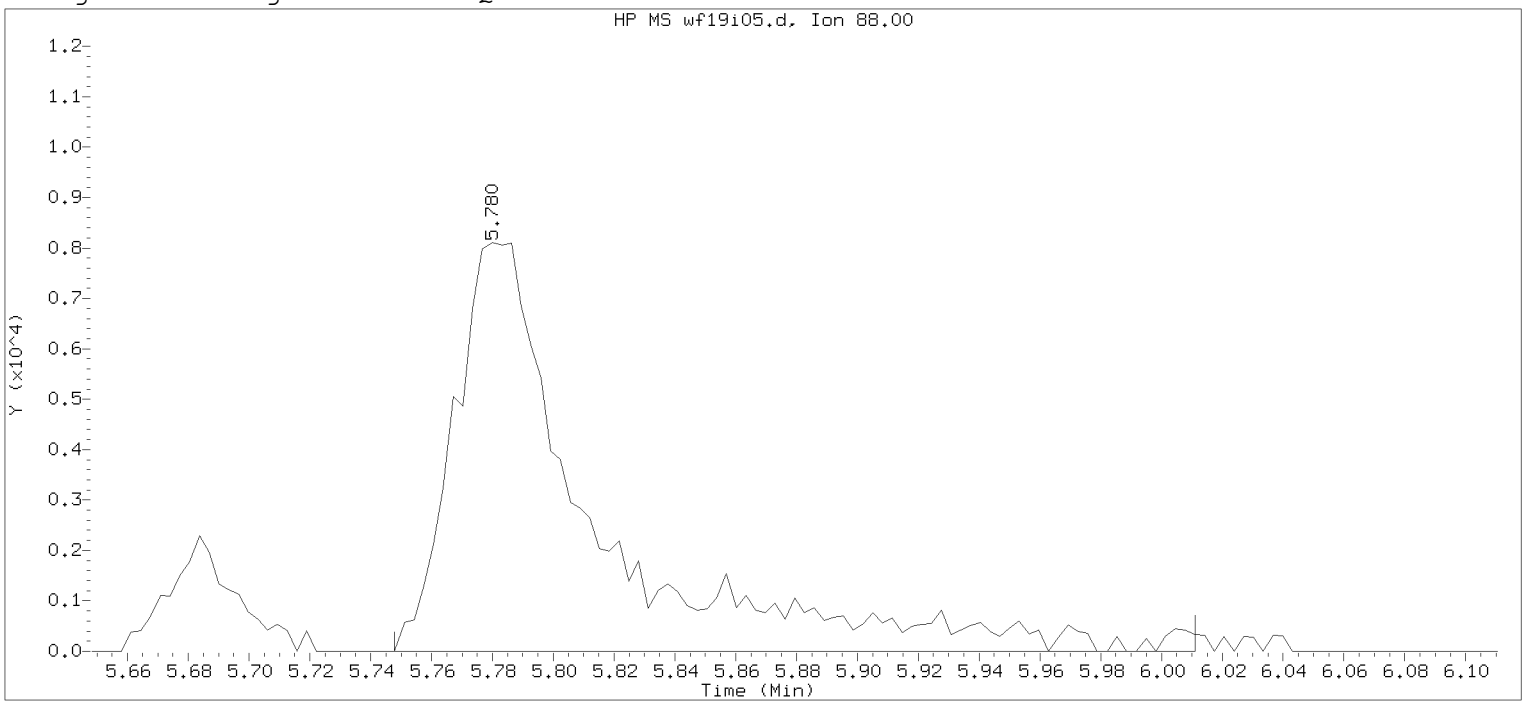
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
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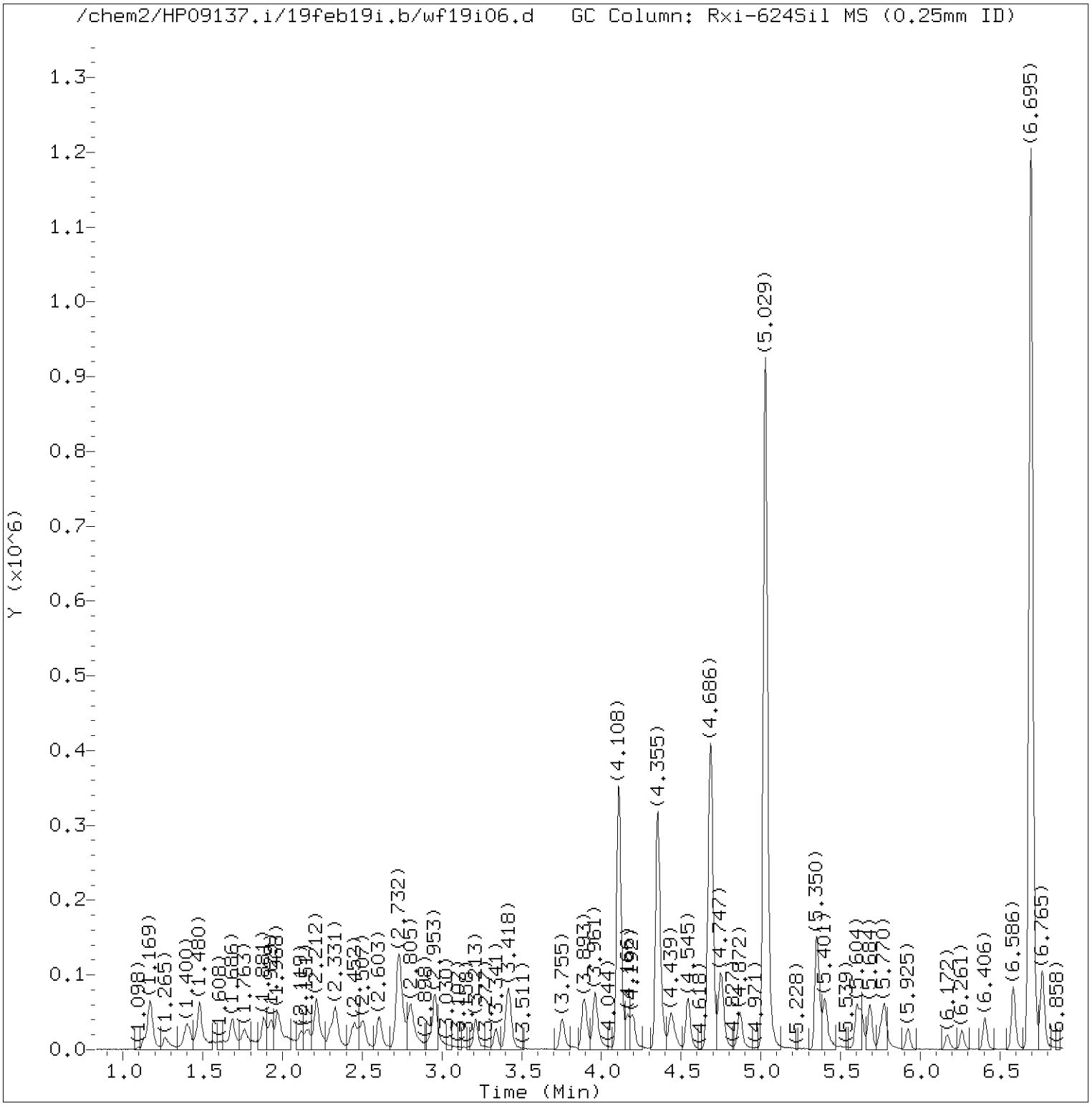
Calibration date and time: 19-FEB-2019 14:12
Date, time and analyst ID of latest file update: 19-Feb-2019 14:12 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area : 25752
On-column Amount (ng) : 242.5421
Integration start scan : 1531 Integration stop scan: 1613
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

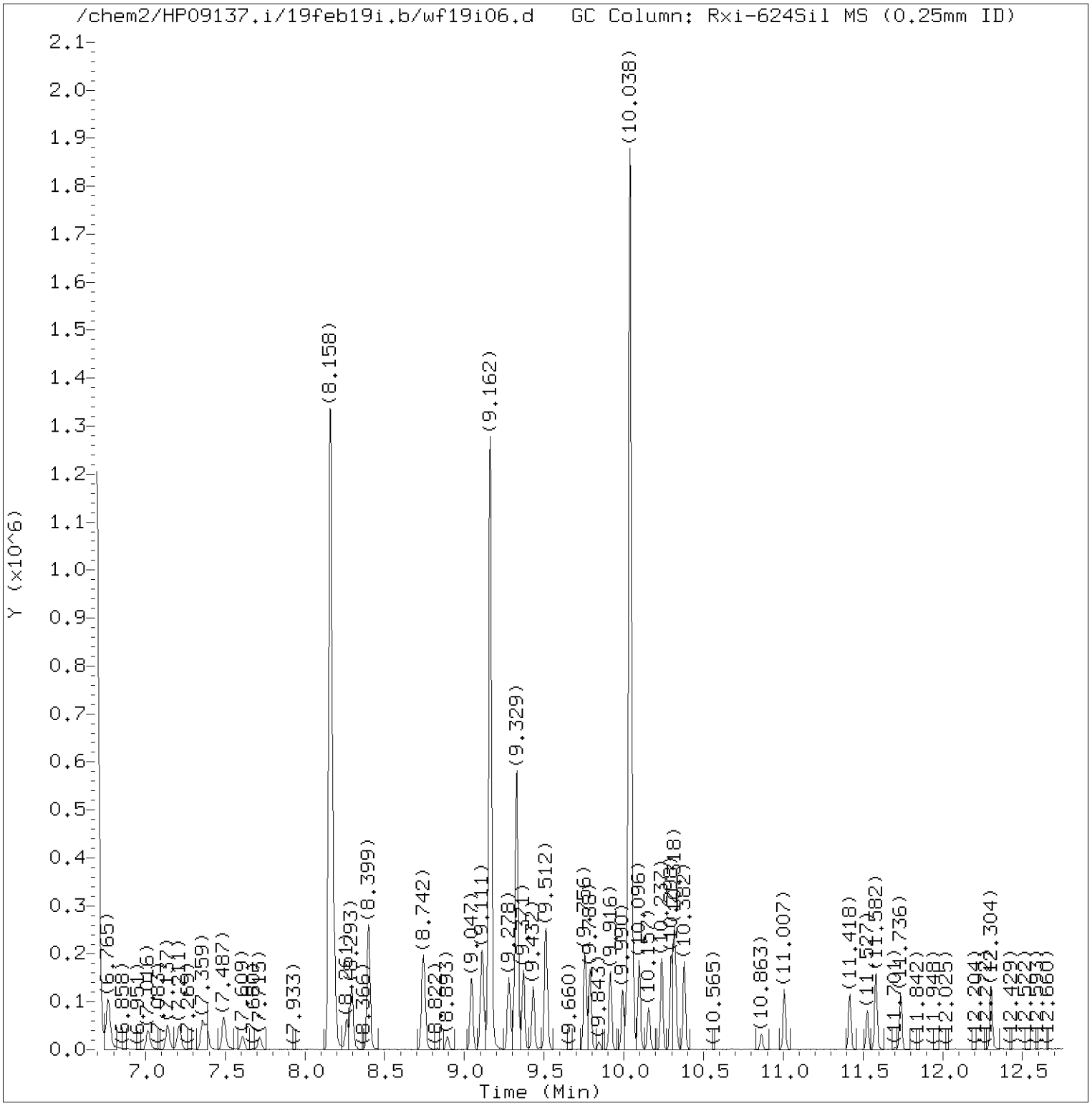
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.259	85	23531	4.193
4) Chloromethane	(2)	1.394	50	28635	4.098
6) Vinyl Chloride	(2)	1.471	62	26366	4.116
5) 1,3-Butadiene	(2)	1.483	39	18545	4.355
8) Bromomethane	(2)	1.686	94	20627	4.083
9) Chloroethane	(2)	1.763	64	17932	4.254
10) Dichlorofluoromethane	(2)	1.881	67	34825	4.268
12) Trichlorofluoromethane	(2)	1.929	101	28313	4.161
11) n-Pentane	(2)	1.968	43	25905	4.003
13) Ethanol	(1)	2.032	45	23872	241.686
15) Freon 123a	(2)	2.160	67	21906M	4.309
16) Acrolein	(1)	2.215	56	60532	38.823
17) 1,1-Dichloroethene	(2)	2.321	96	15949	4.168
17) 1,1-Dichloroethene	(2)	2.331	63	8182	4.238
19) Freon 113	(2)	2.331	101	13192	3.926
18) Acetone	(1)	2.343	58	6155	8.122
21) 2-Propanol	(1)	2.452	45	44335	78.738
22) Methyl Iodide	(2)	2.465	142	29198M	3.982
23) Carbon Disulfide	(2)	2.510	76	54961	4.077
25) Allyl Chloride	(2)	2.600	41	24928	3.739
27) Methyl Acetate	(2)	2.623	43	23710	4.109
28) Methylene Chloride	(2)	2.709	84	18454	3.945
29)*t-Butyl alcohol-d10	(1)	2.728	65	216574	250.000
30) t-Butyl alcohol	(1)	2.802	59	80535	80.179
31) Acrylonitrile	(2)	2.924	53	12124	3.994
32) trans-1,2-Dichloroethene	(2)	2.956	96	17015	4.098
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	41263	4.082
34) n-Hexane	(2)	3.213	57	21496	3.869
36) 1,1-Dichloroethane	(2)	3.341	63	30062	3.996
38) di-Isopropyl ether	(2)	3.412	45	57557	3.982
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	25562	3.923
40) Ethyl t-butyl ether	(2)	3.758	59	40603	3.854
42) cis-1,2-Dichloroethene	(2)	3.890	96	18329	3.932
45) 2,2-Dichloropropane	(2)	3.893	77	14577	4.314
44) 2-Butanone	(2)	3.906	43	33453	7.670
47) Propionitrile	(1)	3.961	54	102936	82.457
48) Methacrylonitrile	(2)	4.111	67	130439	39.964
49) Bromochloromethane	(2)	4.118	128	9255	3.819

M = Compound was manually integrated.
* = Compound is an internal standard.

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Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

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Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.166	71	9370	8.110
51) Chloroform	(2)	4.195	83	27398	3.881
52)$Dibromofluoromethane	(2)	4.355	113	203360	50.576
52)$Dibromofluoromethane	(2)	4.352	111	208230	50.447
53) 1,1,1-Trichloroethane	(2)	4.378	97	21578	4.063
54) Cyclohexane	(2)	4.436	56	29157	4.148
54) Cyclohexane	(2)	4.439	84	24008	4.126
54) Cyclohexane	(2)	4.439	69	8793	4.162
55) 1,1-Dichloropropene	(2)	4.541	75	23554	4.162
56) Carbon Tetrachloride	(2)	4.545	117	18201	3.993
58) Isobutyl Alcohol	(1)	4.670	41	72292	197.420
57)$1,2-Dichloroethane-d4	(2)	4.686	102	54956	51.390
57)$1,2-Dichloroethane-d4	(2)	4.689	65	236381	50.778
57)$1,2-Dichloroethane-d4	(2)	4.689	104	34670	50.908
60) Benzene	(2)	4.747	78	73397	4.035
61) 1,2-Dichloroethane	(2)	4.766	62	22051	3.924
61) 1,2-Dichloroethane	(2)	4.756	98	2103	3.933
65) t-Amyl methyl ether	(2)	4.872	73	42864	3.971
66)*Fluorobenzene	(2)	5.029	96	867920	50.000
67) n-Heptane	(2)	5.032	43	19883	3.745
69) n-Butanol	(1)	5.353	56	119356	367.104
71) Trichloroethene	(2)	5.408	95	17783	4.037
73) Methylcyclohexane	(2)	5.604	83	26169	4.092
73) Methylcyclohexane	(2)	5.607	98	12193	4.100
74) 1,2-Dichloropropane	(2)	5.632	63	18182	3.893
75) Dibromomethane	(2)	5.751	93	11156	3.870
77) Methyl Methacrylate	(2)	5.777	69	19327M	3.766
76) 1,4-Dioxane	(1)	5.777	88	17062M	175.540
79) Bromodichloromethane	(2)	5.928	83	19632	3.707
43) 1,2-Dichloroethene (Total)	(2)		96	35344	8.030
80) 2-Nitropropane	(2)	6.172	41	12333M	6.883
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	12078	3.392
82) cis-1,3-Dichloropropene	(2)	6.409	75	27021	3.711
83) 4-Methyl-2-pentanone	(2)	6.586	43	64259	7.475
84)$Toluene-d8	(3)	6.695	98	907781	50.491
84)$Toluene-d8	(3)	6.695	100	592851	49.723
89) Toluene	(3)	6.768	92	45802	3.955
90) trans-1,3-Dichloropropene	(3)	7.012	75	24608	3.569

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* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.141	69	29840	3.522
93) 1,1,2-Trichloroethane	(3)	7.211	97	16788	3.766
94) Tetrachloroethene	(3)	7.359	166	19036	4.051
95) 1,3-Dichloropropane	(3)	7.388	76	28445	3.674
97) 2-Hexanone	(3)	7.490	43	49126	7.283
98) Dibromochloromethane	(3)	7.612	129	14587	3.350
100) 1,2-Dibromoethane	(3)	7.718	107	17864	3.648
101)*Chlorobenzene-d5	(3)	8.161	117	717501	50.000
103) Chlorobenzene	(3)	8.187	112	49939	3.887
104) 1,1,1,2-Tetrachloroethane	(3)	8.264	131	14799	3.584
105) Ethylbenzene	(3)	8.296	91	86503	3.930
107) m+p-Xylene	(3)	8.399	106	68276	7.801
108) o-Xylene	(3)	8.736	106	33591	3.901
110) Styrene	(3)	8.752	104	52960	3.667
111) Bromoform	(3)	8.893	173	10704	3.159
112) Isopropylbenzene	(3)	9.047	105	83300	3.937
113) Cyclohexanone	(1)	9.111	55	81513	185.914
115)$4-Bromofluorobenzene	(3)	9.162	95	358508	49.843
115)$4-Bromofluorobenzene	(3)	9.162	174	303553	50.013
116) Bromobenzene	(4)	9.278	156	22129	3.897
117) 1,1,2,2-Tetrachloroethane	(4)	9.281	83	28726	3.751
118) 1,2,3-Trichloropropane	(4)	9.316	110	9051	3.924
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	92446	37.646
120) n-Propylbenzene	(4)	9.371	91	101539	4.056
121) 2-Chlorotoluene	(4)	9.432	126	20876	4.043
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	71196	3.943
122) 4-Chlorotoluene	(4)	9.518	126	21738	3.933
125) tert-Butylbenzene	(4)	9.756	134	16878	4.115
126) Pentachloroethane	(4)	9.766	167	11197	3.453
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	73692	3.874
128) sec-Butylbenzene	(4)	9.916	105	90719	4.094
130) 1,3-Dichlorobenzene	(4)	9.993	146	41989	3.878
131) p-Isopropyltoluene	(4)	10.022	119	78503	4.002
132)*1,4-Dichlorobenzene-d4	(4)	10.038	152	394254	50.000
134) 1,4-Dichlorobenzene	(4)	10.058	146	44108	3.929
91) 1,3-Dichloropropene (total)	(3)		100	51629	7.280
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	79065	3.863
136) Benzyl Chloride	(4)	10.157	91	52403	3.335

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Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

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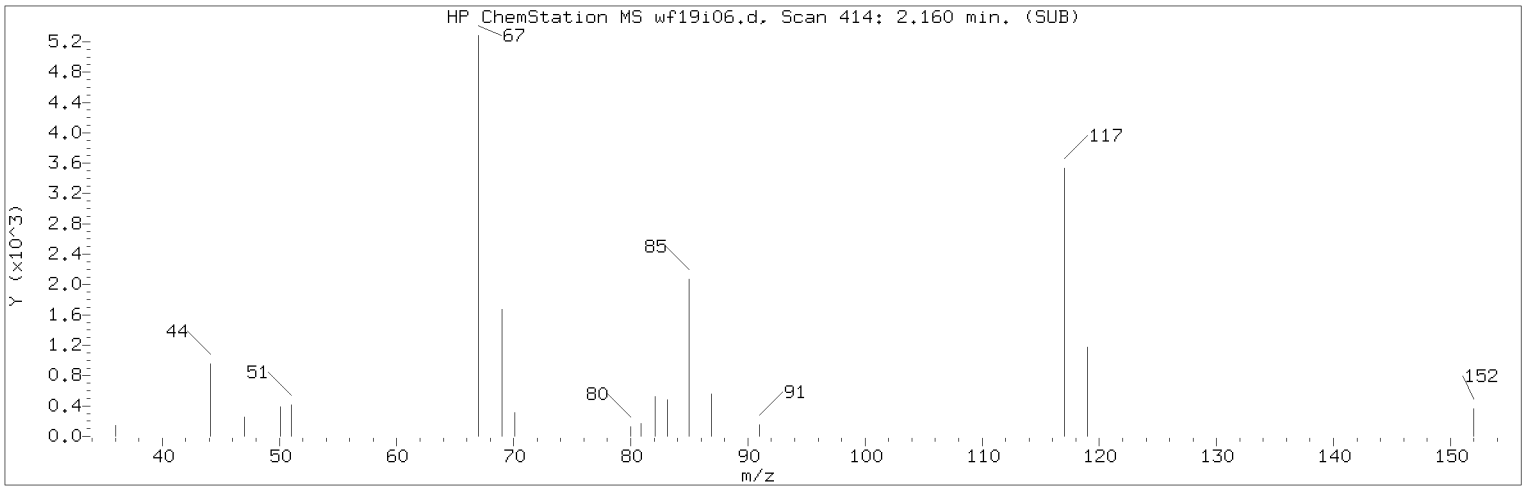
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

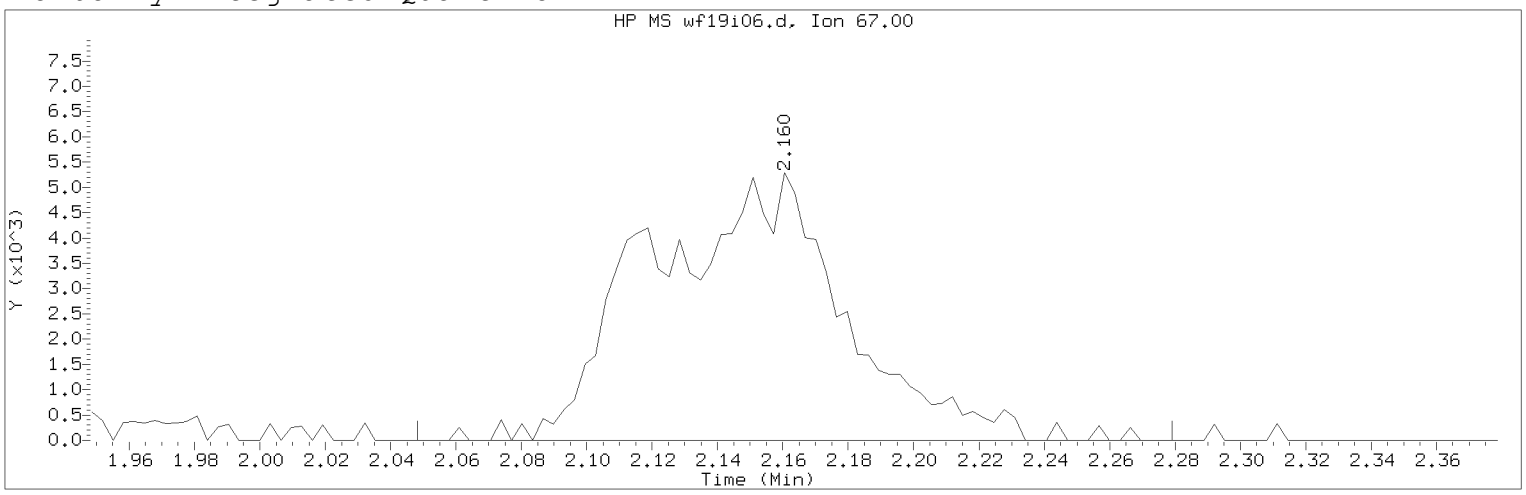
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.237	119	47119	3.823
138) 1,4-Diethylbenzene	(4)	10.295	119	51192	3.876
140) n-Butylbenzene	(4)	10.314	92	38912	3.930
139) 1,2-Dichlorobenzene	(4)	10.321	146	41158	3.831
141) 1,2-Diethylbenzene	(4)	10.382	119	41509	3.989
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	6341	3.644
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	32071	3.893
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	29570	3.739
148) Hexachlorobutadiene	(4)	11.527	225	11175	3.967
149) Naphthalene	(4)	11.582	128	97075	3.627
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	29641	3.840
109) Xylene (Total)	(3)		106	101867	11.702
151) 2-Methylnaphthalene	(4)	12.304	142	49814	3.263
142) Diethylbenzene (total)	(4)		100	139820	11.688

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

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Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

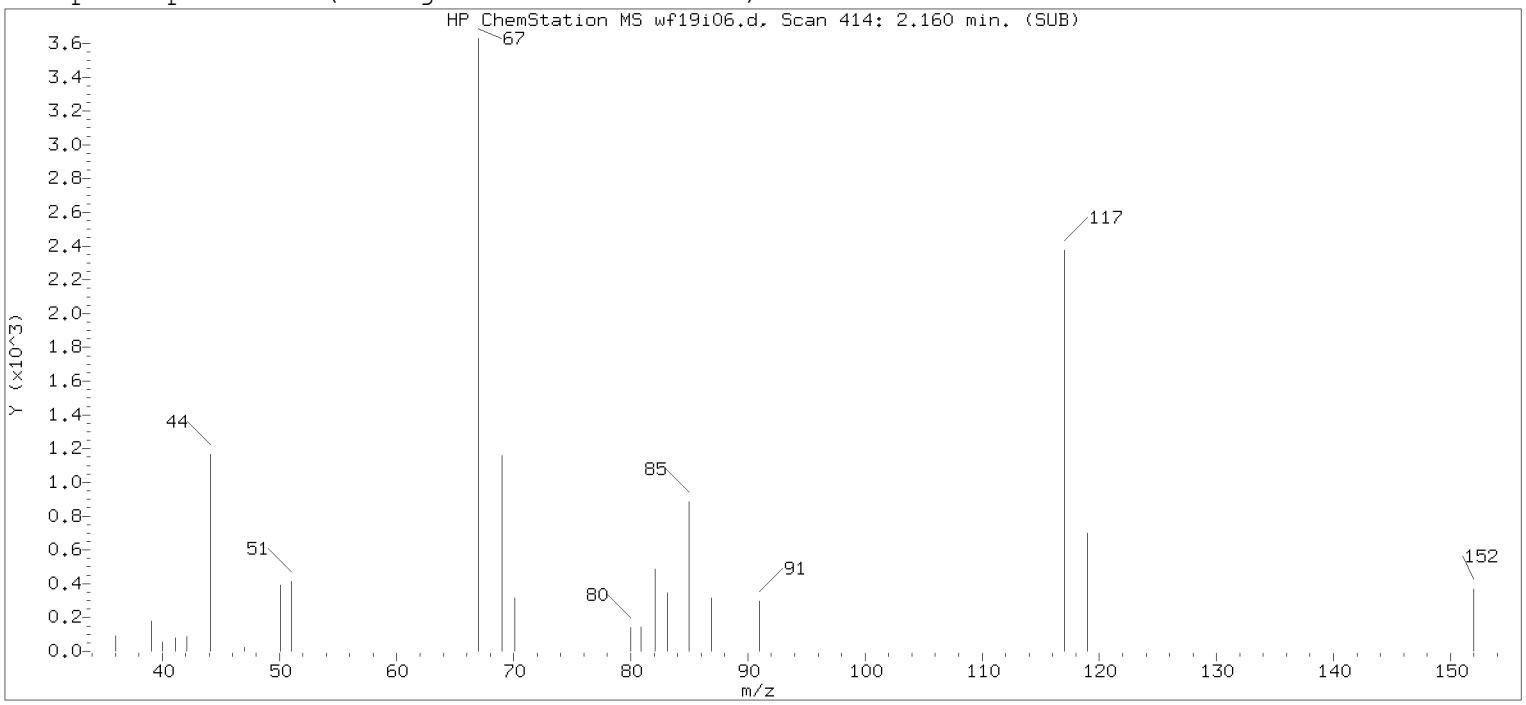
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 414
Retention Time (minutes): 2.160
Quant Ion : 67.00
Area (flag) : 21906M
On-Column Amount (ng) : 4.3086
Integration start scan : 378 Integration stop scan: 450
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

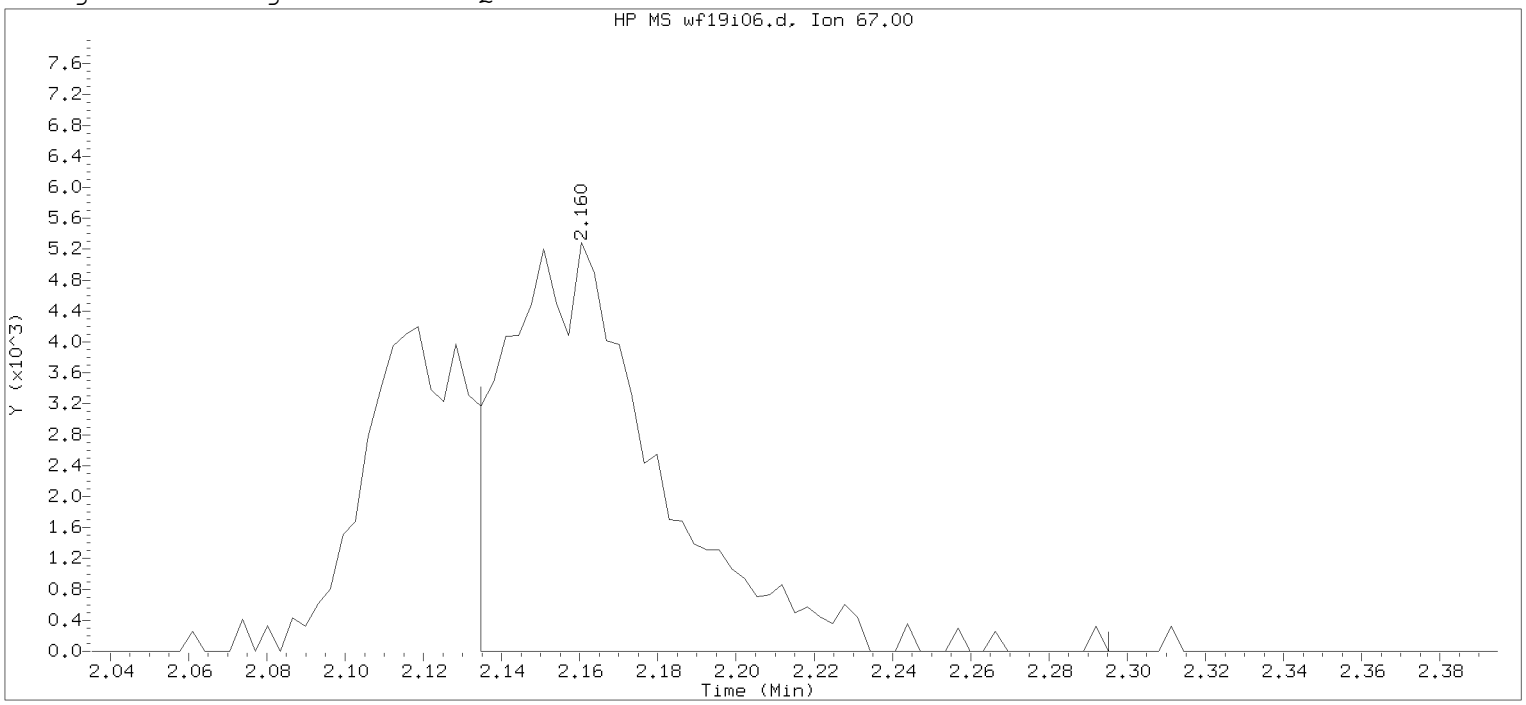
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

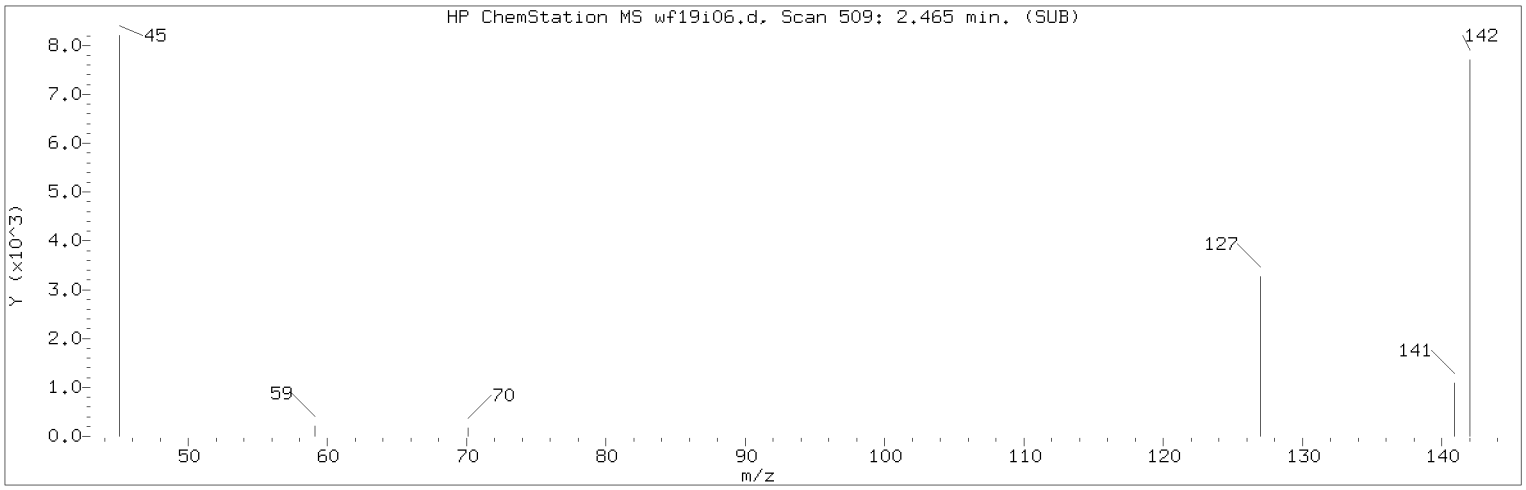
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:36
Date, time and analyst ID of latest file update: 19-Feb-2019 14:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

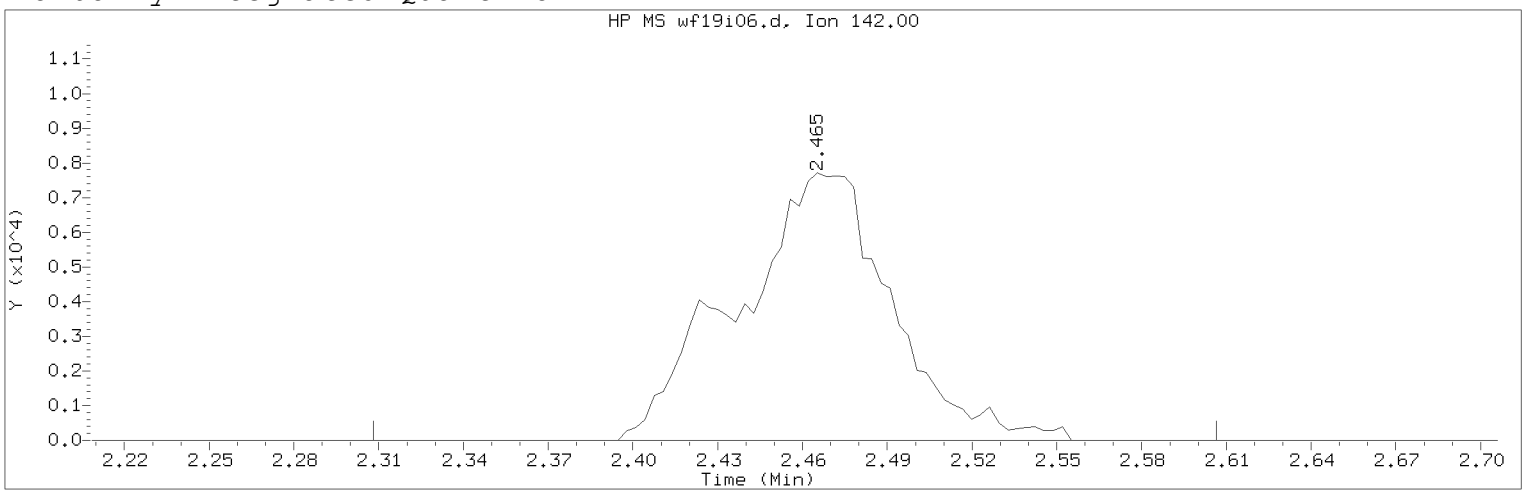
Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 414		
Retention Time (minutes)	: 2.160		
Quant Ion	: 67.00		
Area	: 14214		
On-column Amount (ng)	: 3.9735		
Integration start scan	: 405	Integration stop scan:	455
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

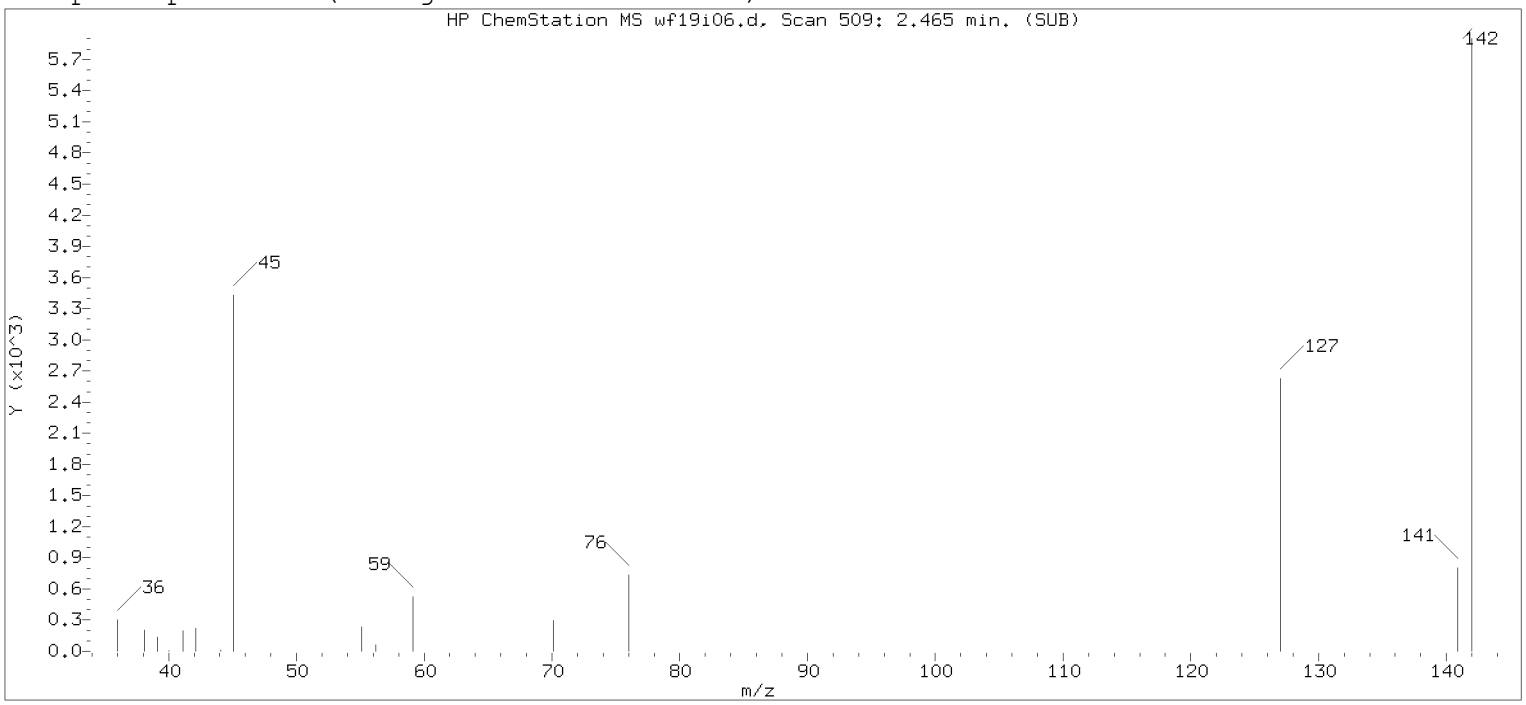
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area (flag) : 29198M
On-Column Amount (ng) : 3.9817
Integration start scan : 459 Integration stop scan: 552
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

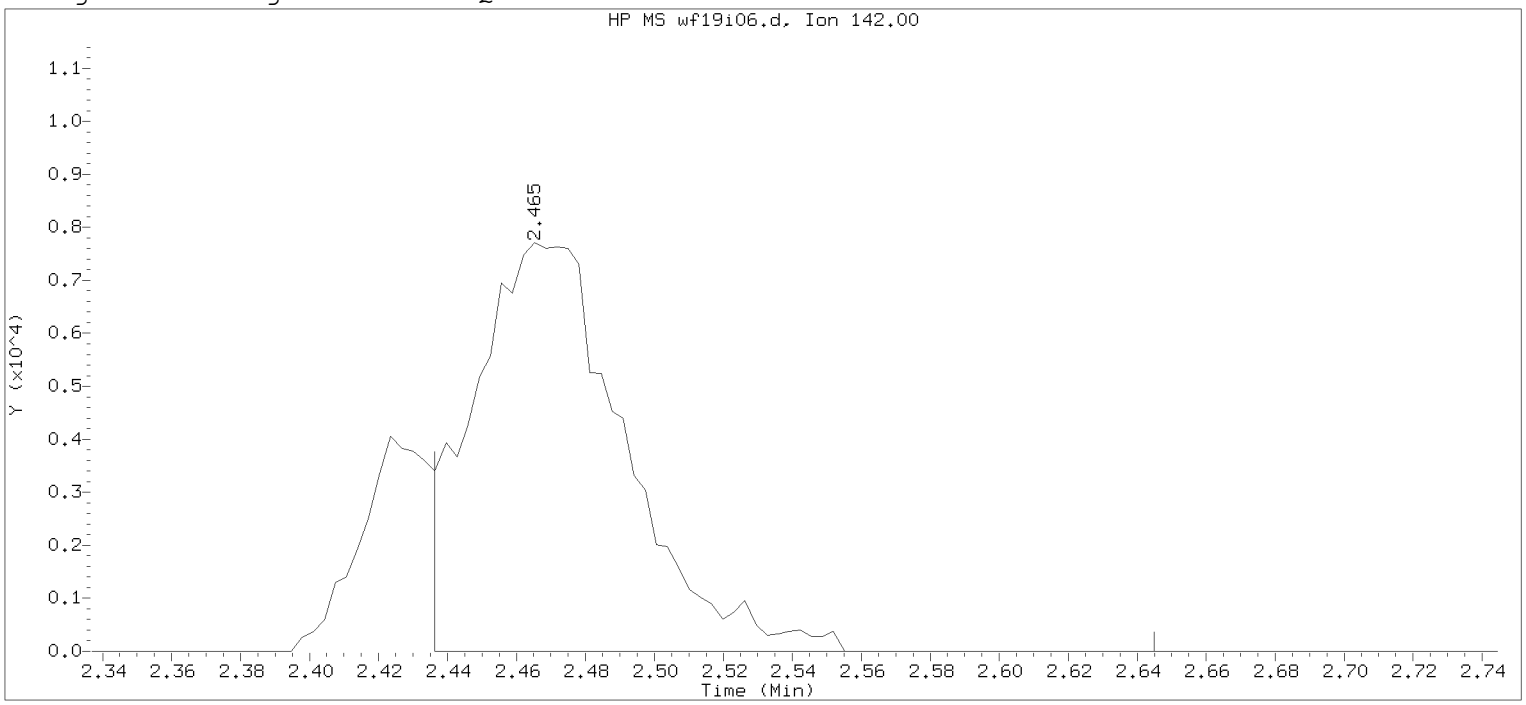
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

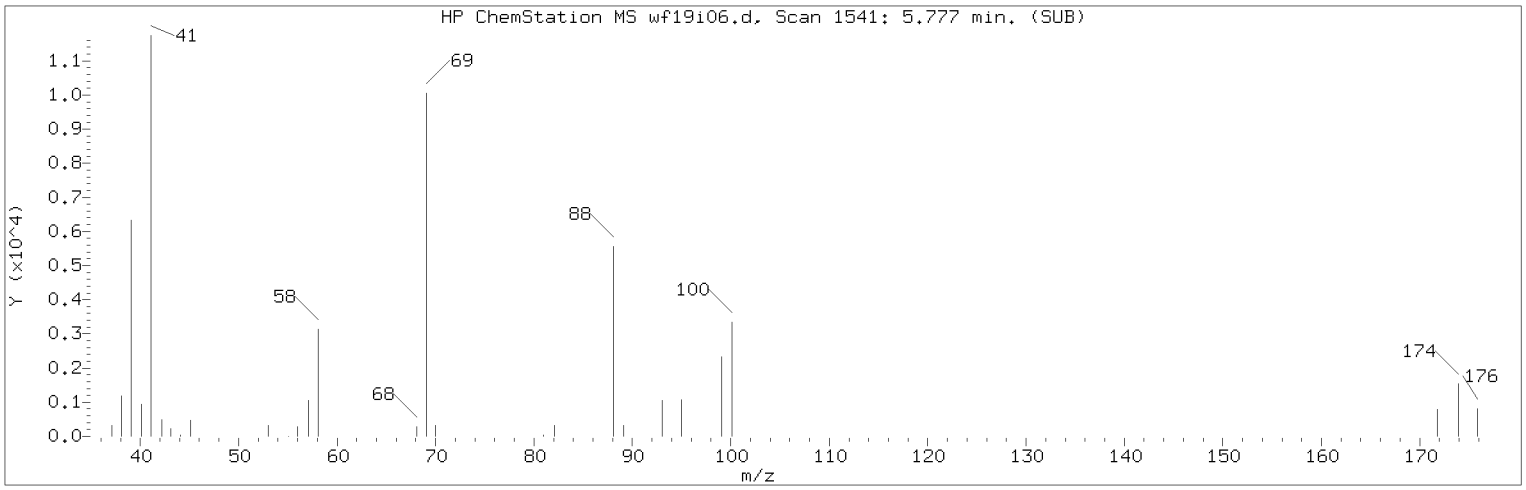
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:36
Date, time and analyst ID of latest file update: 19-Feb-2019 14:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

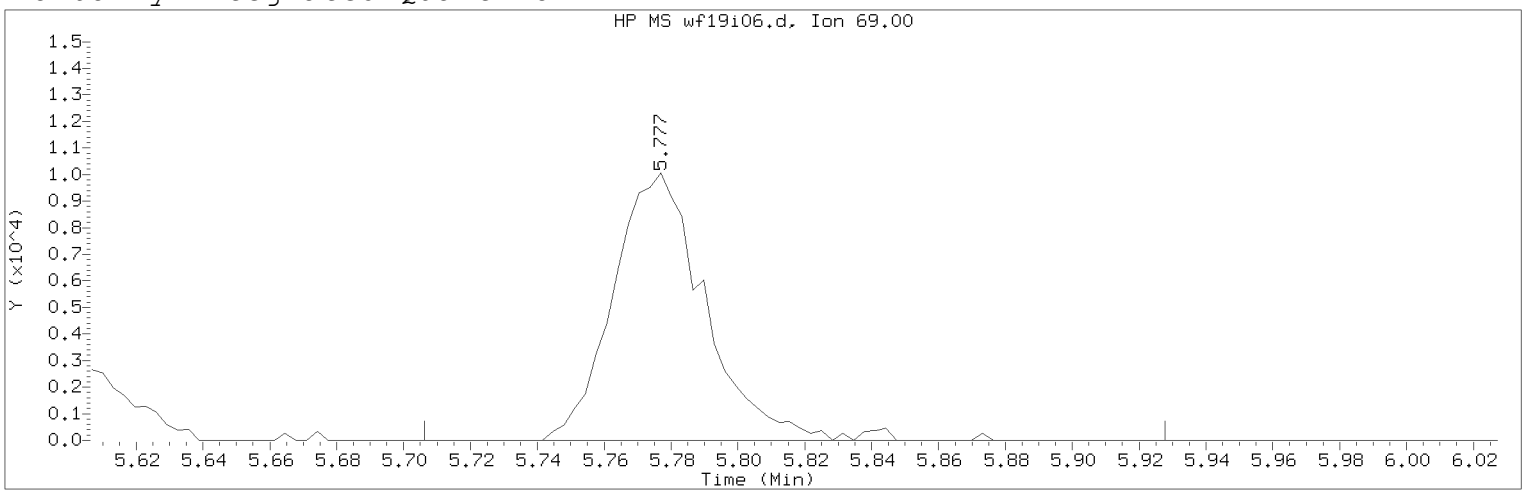
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area : 23663
On-column Amount (ng) : 3.5076
Integration start scan : 499 Integration stop scan: 564
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

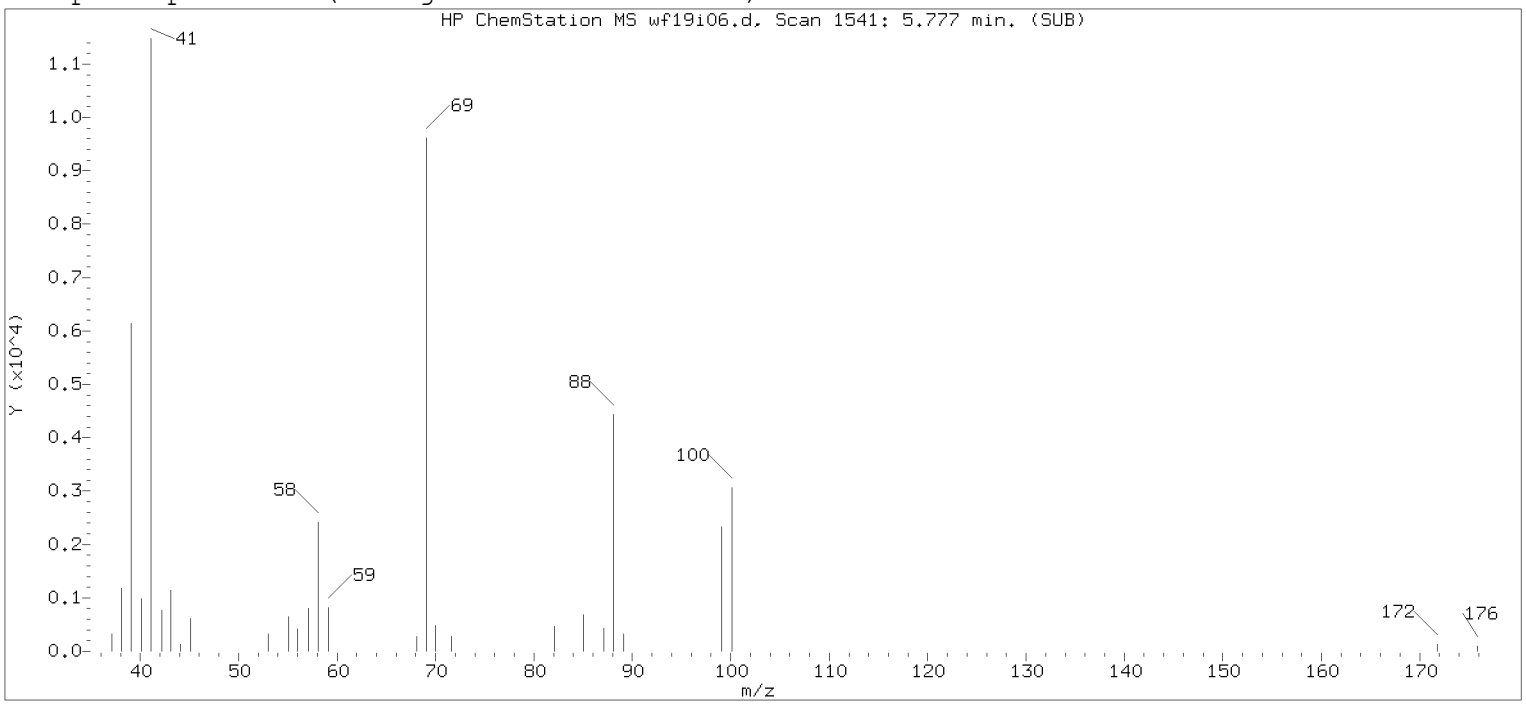
Compound Number : 77
Compound Name : Methyl Methacrylate
Scan Number : 1541
Retention Time (minutes): 5.777
Quant Ion : 69.00
Area (flag) : 19327M
On-Column Amount (ng) : 3.7657
Integration start scan : 1518 Integration stop scan: 1587
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

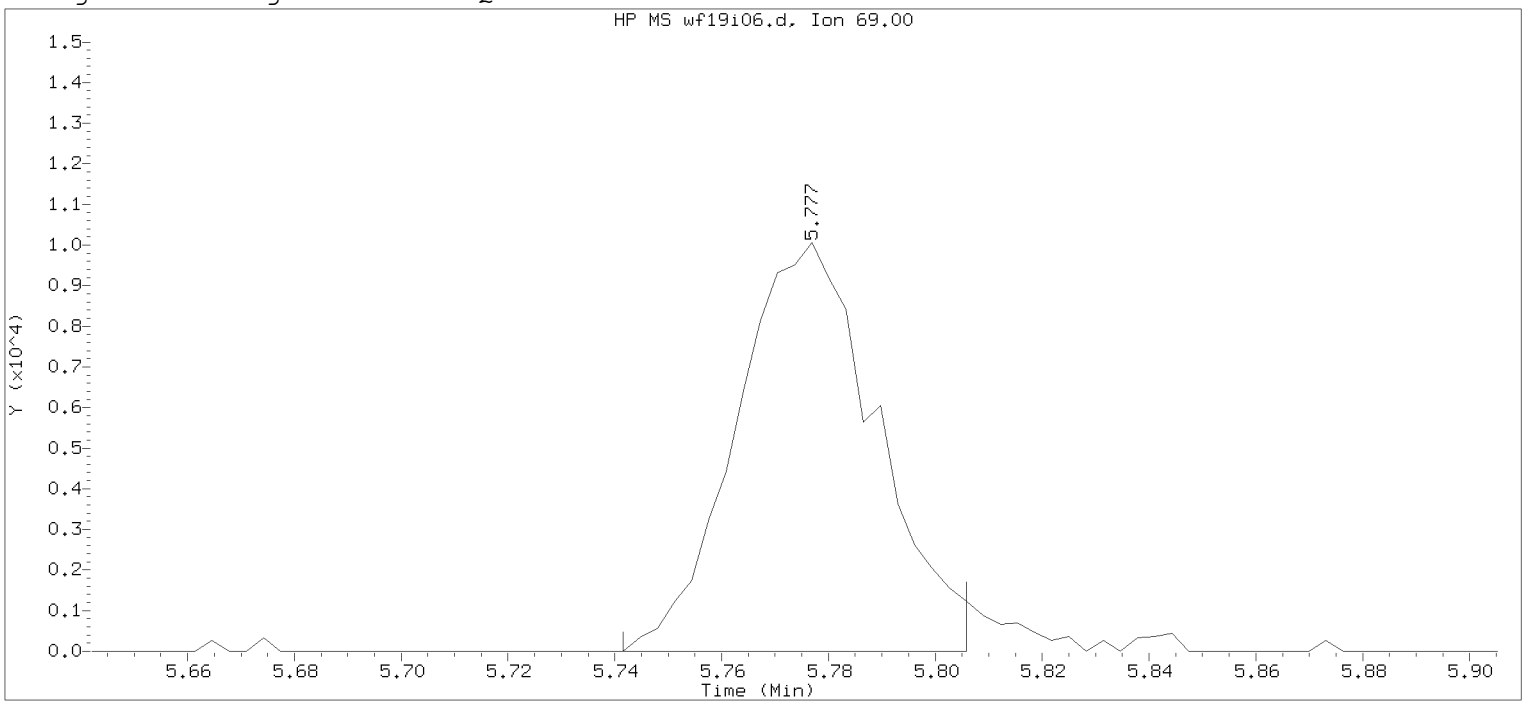
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:36
Date, time and analyst ID of latest file update: 19-Feb-2019 14:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 77
Compound Name : Methyl Methacrylate
Scan Number : 1541
Retention Time (minutes): 5.777
Quant Ion : 69.00
Area : 18238
On-column Amount (ng) : 3.5038
Integration start scan : 1529 Integration stop scan: 1549
Y at integration start : 0 Y at integration end: 0

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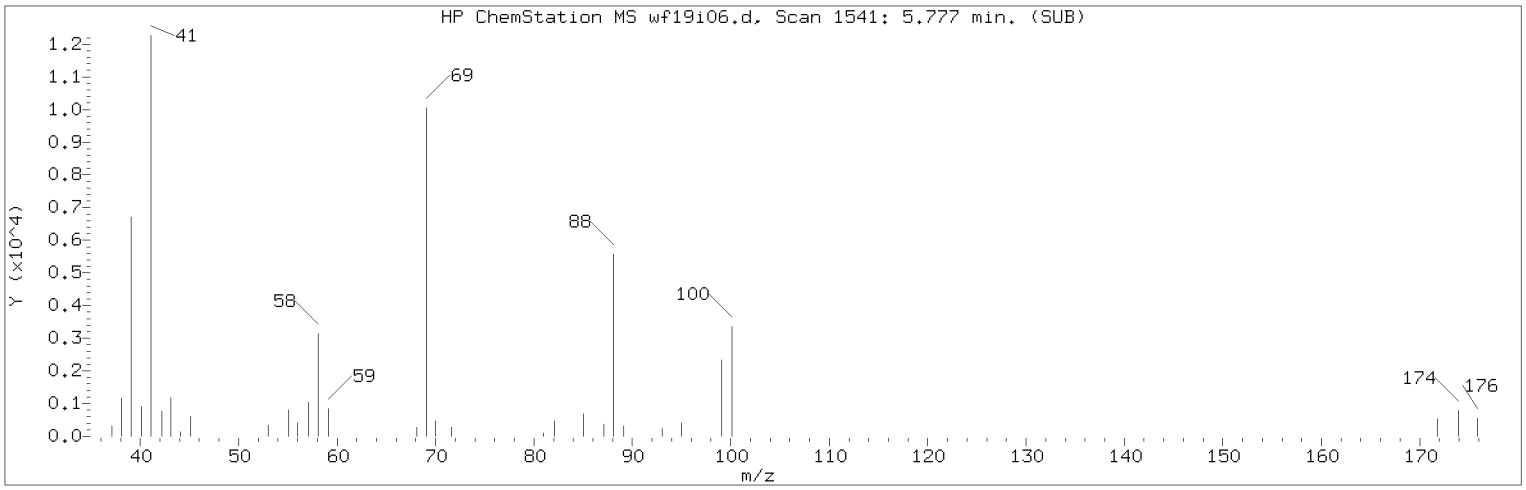
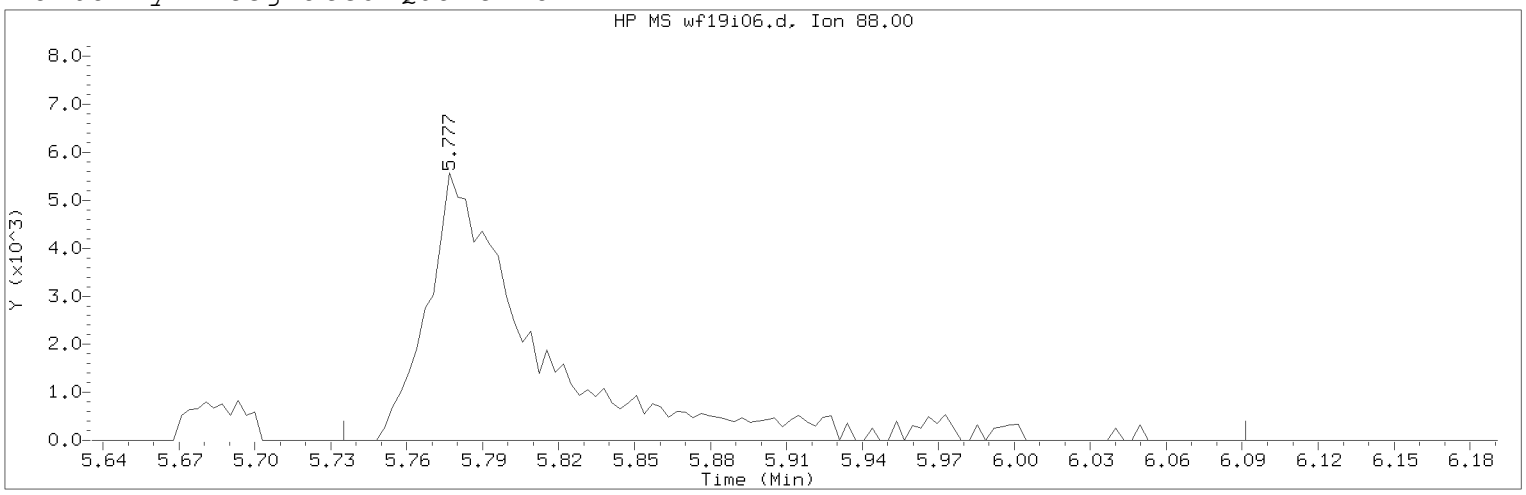
Target 3.5 esignature user ap 27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

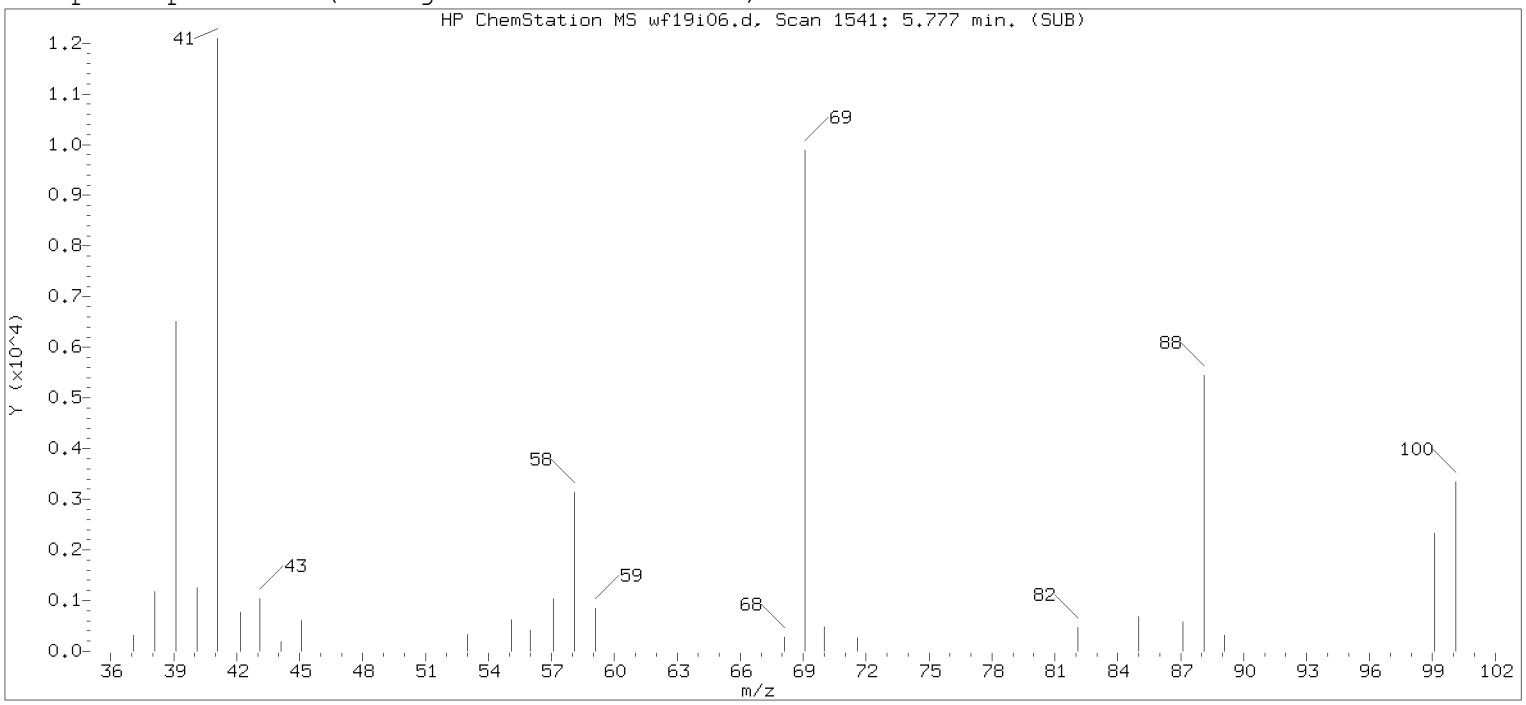
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1541
Retention Time (minutes): 5.777
Quant Ion : 88.00
Area (flag) : 17062M
On-Column Amount (ng) : 175.5404
Integration start scan : 1527 Integration stop scan: 1638
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

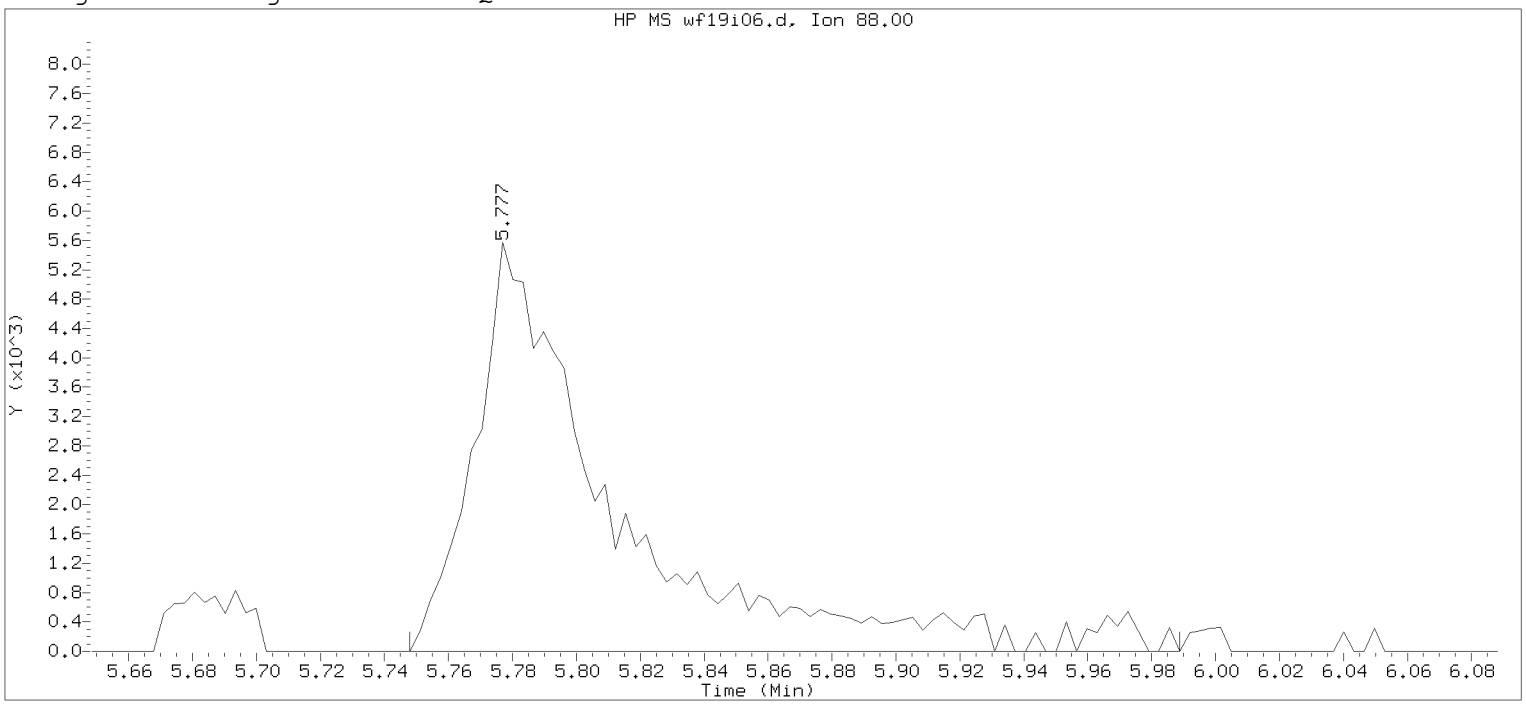
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:36
Date, time and analyst ID of latest file update: 19-Feb-2019 14:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1541		
Retention Time (minutes)	: 5.777		
Quant Ion	: 88.00		
Area	: 16725		
On-column Amount (ng)	: 175.6192		
Integration start scan	: 1531	Integration stop scan:	1606
Y at integration start	: 0	Y at integration end:	0

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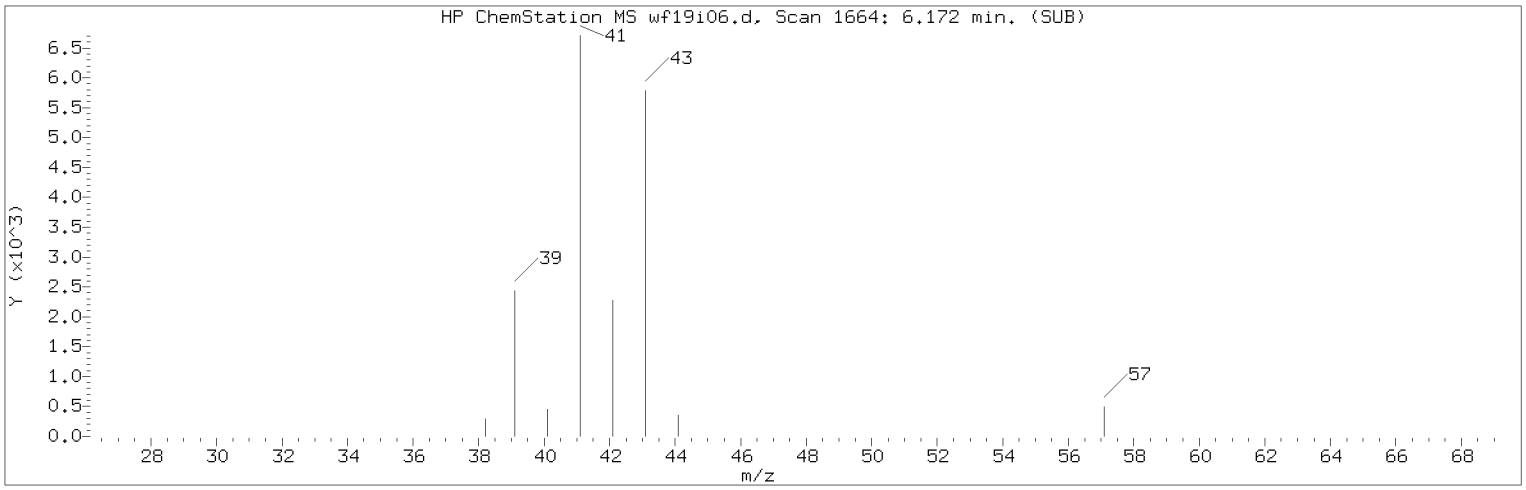
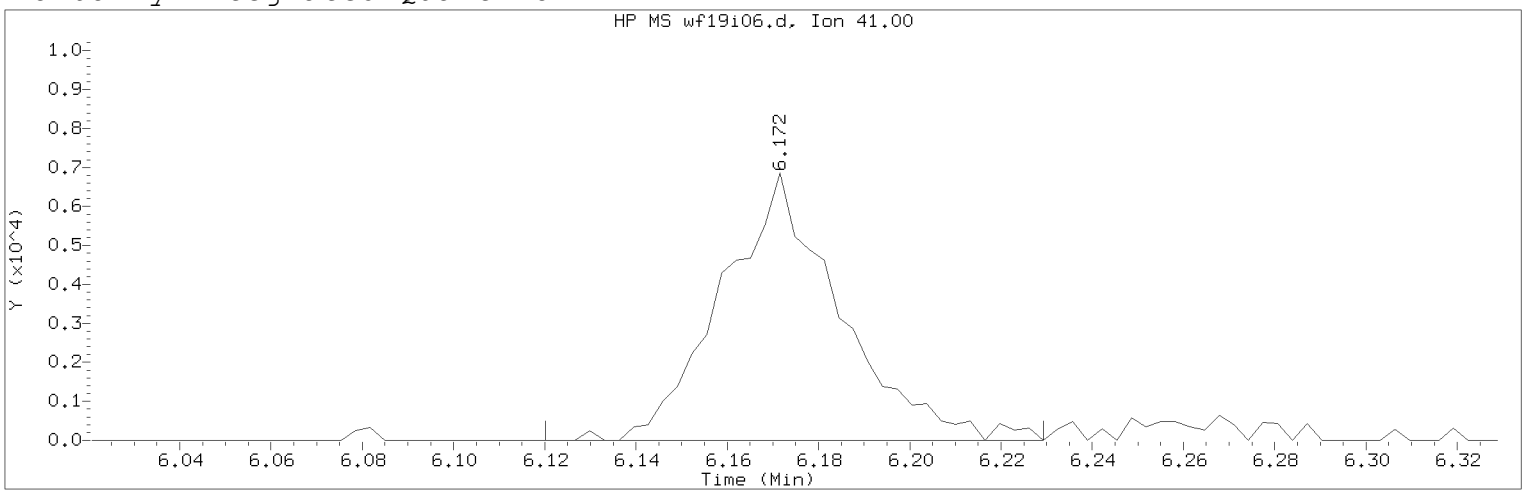
Target 3.5 esignature user agreement

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

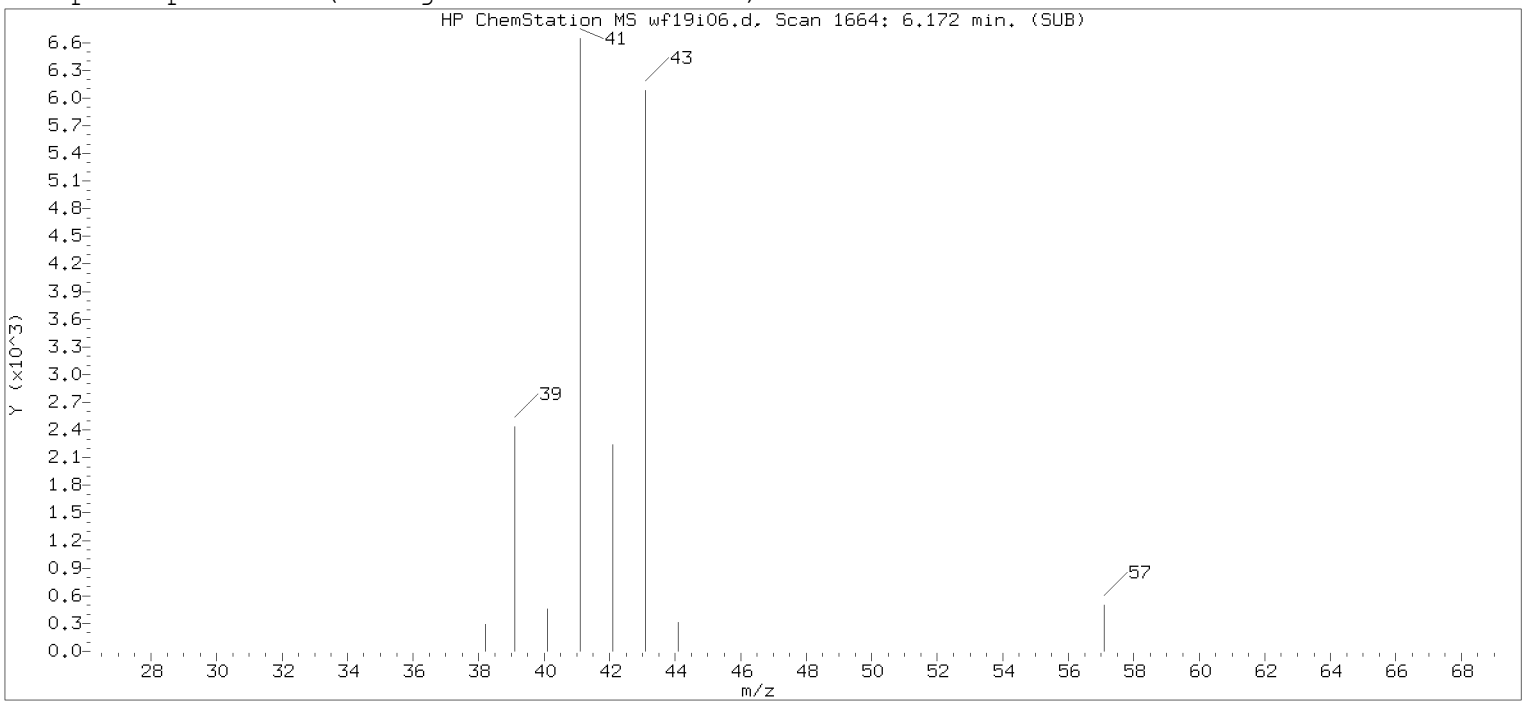
Compound Number : 80
Compound Name : 2-Nitropropane
Scan Number : 1664
Retention Time (minutes): 6.172
Quant Ion : 41.00
Area (flag) : 12333M
On-Column Amount (ng) : 6.8827
Integration start scan : 1647 Integration stop scan: 1681
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

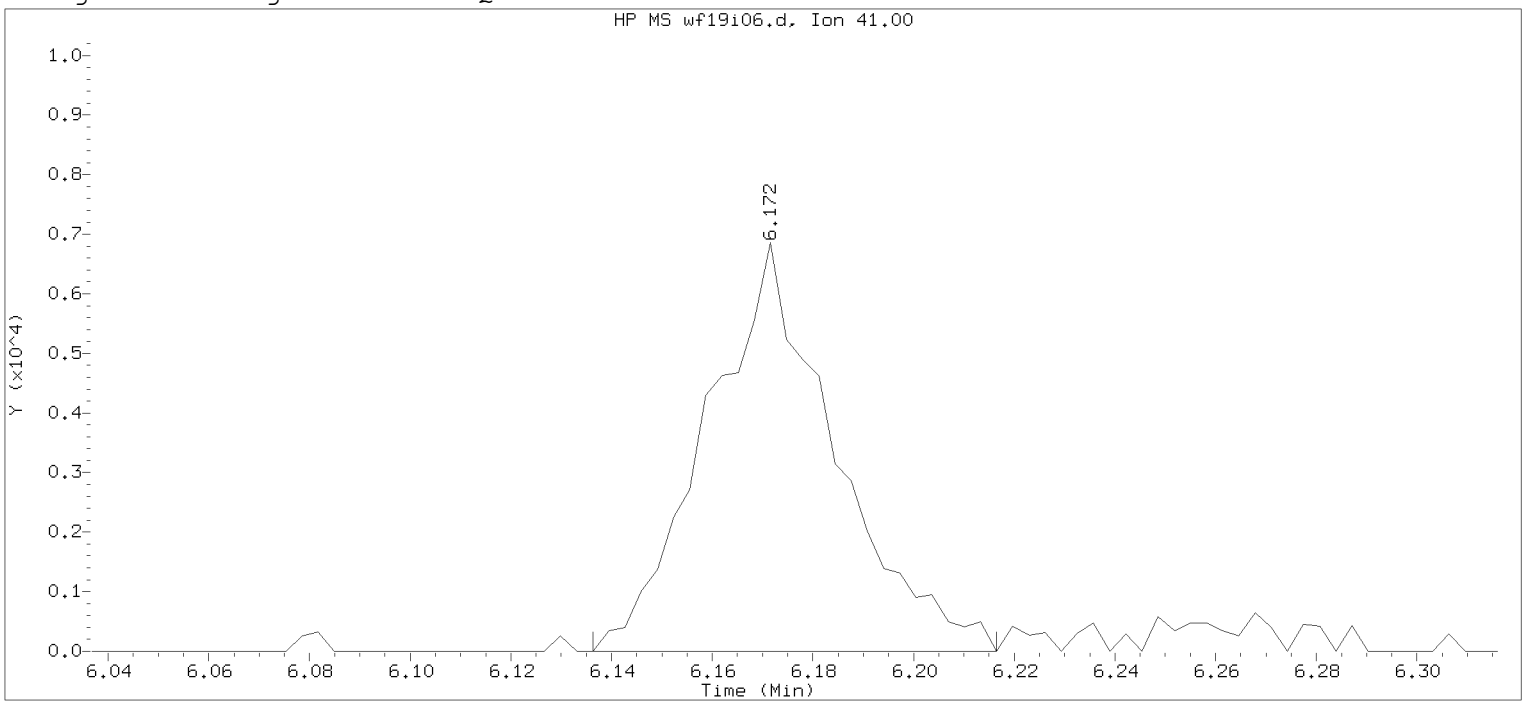
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



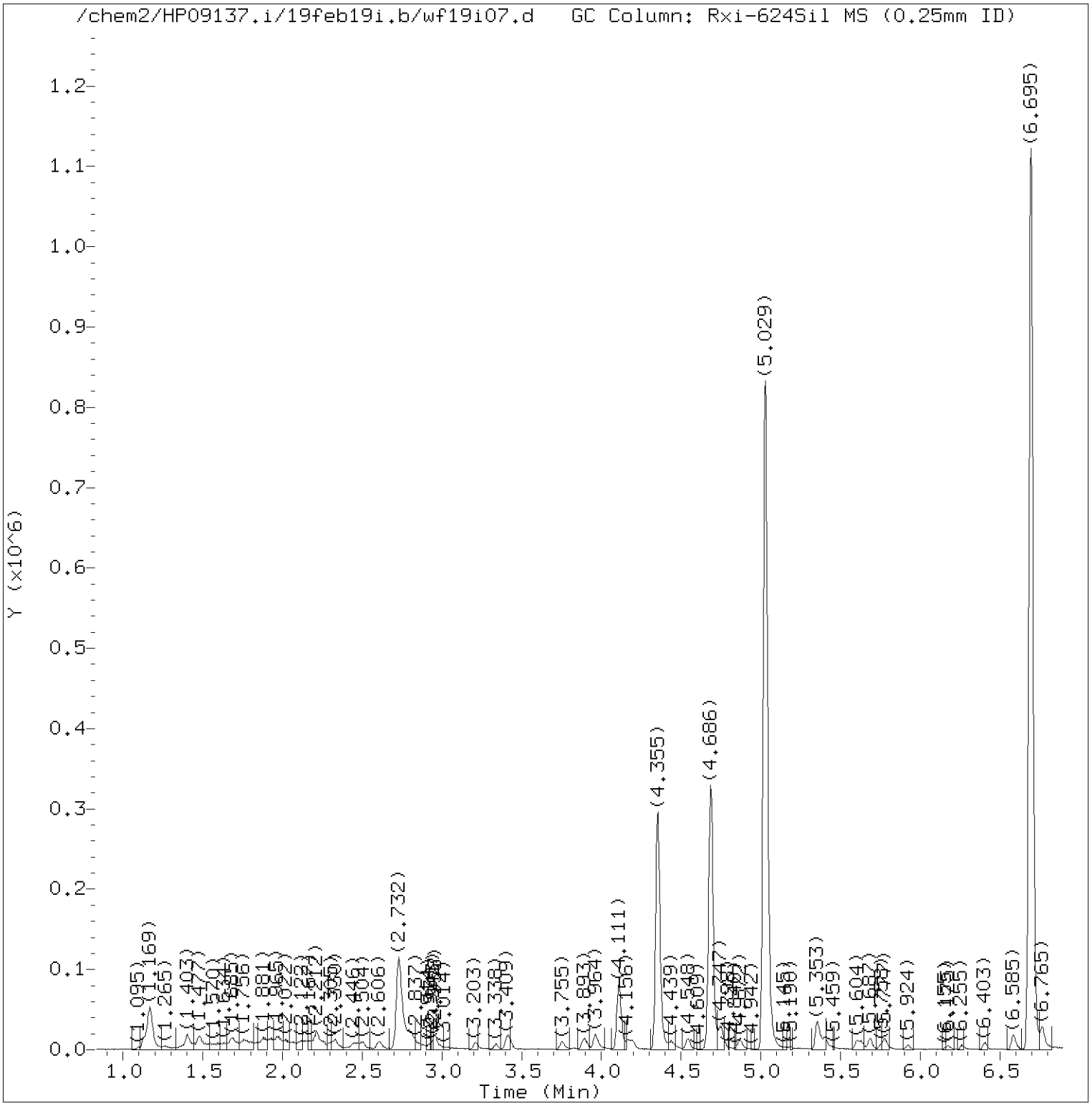
Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:36
Date, time and analyst ID of latest file update: 19-Feb-2019 14:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 80
Compound Name : 2-Nitropropane
Scan Number : 1664
Retention Time (minutes): 6.172
Quant Ion : 41.00
Area : 12090
On-column Amount (ng) : 6.6411
Integration start scan : 1652 Integration stop scan: 1677
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: APR27582



Total Ion Chromatogram (TIC)

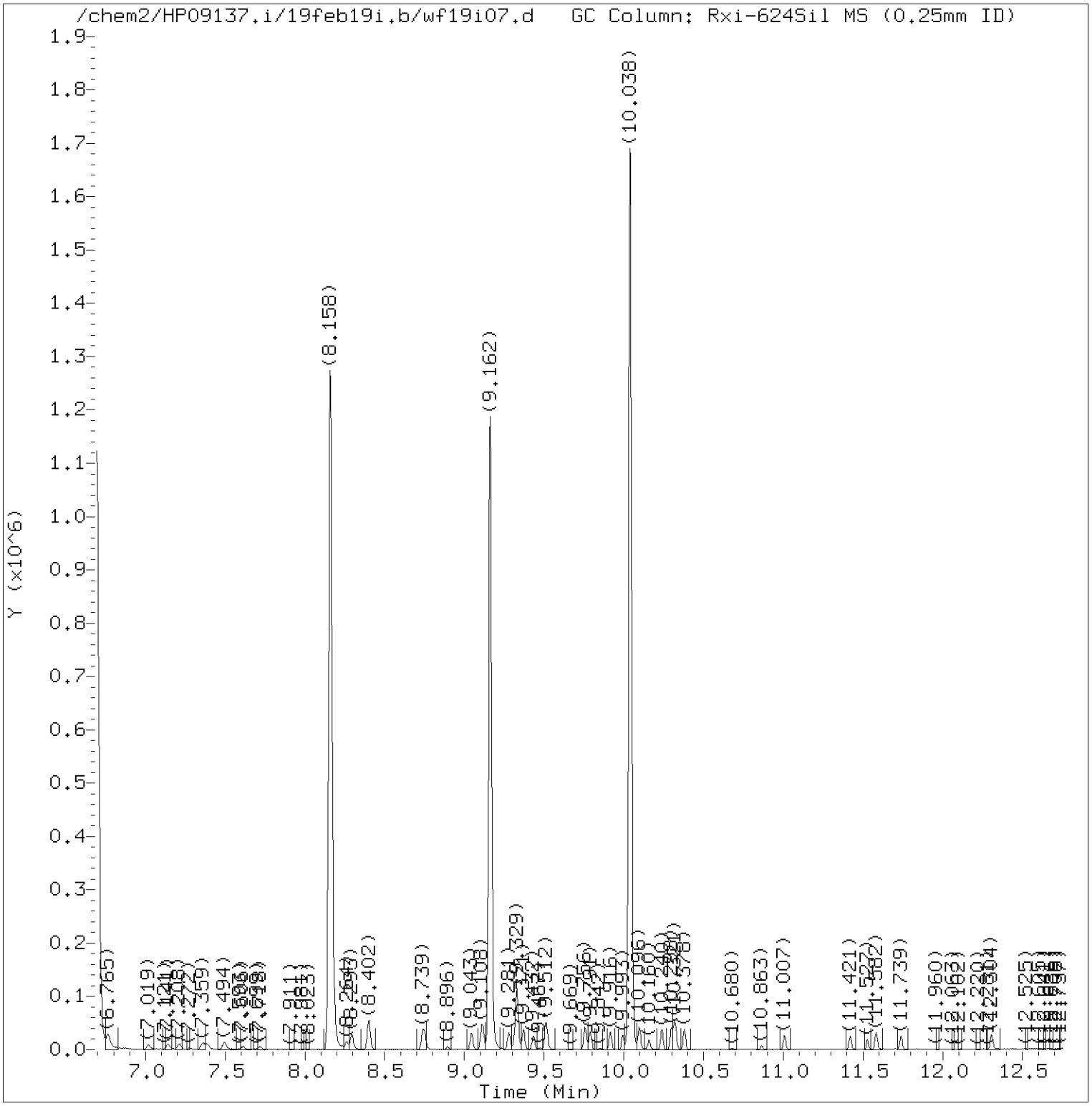
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.262	85	3665	0.689
4) Chloromethane	(2)	1.400	50	6210	0.937
6) Vinyl Chloride	(2)	1.470	62	5198	0.856
5) 1,3-Butadiene	(2)	1.477	39	4489M	1.112
8) Bromomethane	(2)	1.682	94	4292	0.896
9) Chloroethane	(2)	1.762	64	4447	1.112
10) Dichlorofluoromethane	(2)	1.888	67	8043	1.039
12) Trichlorofluoromethane	(2)	1.923	101	4857	0.753
11) n-Pentane	(2)	1.968	43	6657	1.085
13) Ethanol	(1)	2.051	45	8488	87.185
15) Freon 123a	(2)	2.141	67	5025M	1.042
16) Acrolein	(1)	2.218	56	15214	9.900
17) 1,1-Dichloroethene	(2)	2.321	96	2707	0.746
17) 1,1-Dichloroethene	(2)	2.314	63	1554	0.849
18) Acetone	(1)	2.334	58	1488	1.992
19) Freon 113	(2)	2.334	101	2232	0.700
21) 2-Propanol	(1)	2.446	45	12023	21.663
22) Methyl Iodide	(2)	2.472	142	6057M	0.871
23) Carbon Disulfide	(2)	2.504	76	11216	0.877
25) Allyl Chloride	(2)	2.603	41	5509	0.871
27) Methyl Acetate	(2)	2.619	43	6296	1.151
28) Methylene Chloride	(2)	2.709	84	4508M	1.016
29)*t-Butyl alcohol-d10	(1)	2.732	65	213467	250.000
30) t-Butyl alcohol	(1)	2.805	59	20393M	20.598
31) Acrylonitrile	(2)	2.918	53	2348	0.816
33) Methyl Tertiary Butyl Ether	(2)	2.956	73	8820	0.920
32) trans-1,2-Dichloroethene	(2)	2.959	96	3346	0.850
34) n-Hexane	(2)	3.213	57	4218	0.801
36) 1,1-Dichloroethane	(2)	3.338	63	6195	0.868
38) di-Isopropyl ether	(2)	3.409	45	13012	0.949
39) 2-Chloro-1,3-butadiene	(2)	3.425	53	5230	0.846
40) Ethyl t-butyl ether	(2)	3.752	59	9566	0.957
42) cis-1,2-Dichloroethene	(2)	3.890	96	3895	0.881
45) 2,2-Dichloropropane	(2)	3.890	77	2825	0.882
44) 2-Butanone	(2)	3.909	43	8554	2.068
47) Propionitrile	(1)	3.964	54	24581	19.977
48) Methacrylonitrile	(2)	4.108	67	29800	9.628
49) Bromochloromethane	(2)	4.111	128	2034	0.885

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.172	71	2206	1.937
51) Chloroform	(2)	4.195	83	6117	0.914
52)$Dibromofluoromethane	(2)	4.355	113	189485	49.693
52)$Dibromofluoromethane	(2)	4.355	111	193391	49.406
53) 1,1,1-Trichloroethane	(2)	4.378	97	4109	0.816
54) Cyclohexane	(2)	4.439	56	5258	0.789
54) Cyclohexane	(2)	4.439	84	4367	0.791
54) Cyclohexane	(2)	4.429	69	1544	0.771
55) 1,1-Dichloropropene	(2)	4.541	75	4731	0.882
56) Carbon Tetrachloride	(2)	4.545	117	3401	0.787
58) Isobutyl Alcohol	(1)	4.676	41	17702	49.046
57)$1,2-Dichloroethane-d4	(2)	4.686	102	50410	49.708
57)$1,2-Dichloroethane-d4	(2)	4.689	65	224184	50.782
57)$1,2-Dichloroethane-d4	(2)	4.689	104	32320	50.043
60) Benzene	(2)	4.750	78	15856	0.919
61) 1,2-Dichloroethane	(2)	4.769	62	5590	1.049
61) 1,2-Dichloroethane	(2)	4.763	98	304	0.600
65) t-Amyl methyl ether	(2)	4.869	73	9942	0.971
66)*Fluorobenzene	(2)	5.029	96	823064	50.000
67) n-Heptane	(2)	5.032	43	4457	0.885
69) n-Butanol	(1)	5.353	56	28433	88.724
71) Trichloroethene	(2)	5.405	95	3650	0.874
73) Methylcyclohexane	(2)	5.604	83	4501	0.742
73) Methylcyclohexane	(2)	5.600	98	2124	0.753
74) 1,2-Dichloropropane	(2)	5.632	63	3782	0.854
75) Dibromomethane	(2)	5.748	93	2271	0.831
77) Methyl Methacrylate	(2)	5.780	69	4194M	0.862
76) 1,4-Dioxane	(1)	5.783	88	4430	46.241
79) Bromodichloromethane	(2)	5.924	83	4331	0.862
43) 1,2-Dichloroethene (Total)	(2)		96	7241	1.731
80) 2-Nitropropane	(2)	6.162	41	3015	1.774
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	2723	0.806
82) cis-1,3-Dichloropropene	(2)	6.409	75	5760	0.834
83) 4-Methyl-2-pentanone	(2)	6.585	43	15267	1.873
84)$Toluene-d8	(3)	6.695	98	848544	49.571
84)$Toluene-d8	(3)	6.695	100	557676	49.127
89) Toluene	(3)	6.762	92	9642	0.874
90) trans-1,3-Dichloropropene	(3)	7.019	75	5607	0.854

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.137	69	6163	0.764
93) 1,1,2-Trichloroethane	(3)	7.214	97	3763	0.887
94) Tetrachloroethene	(3)	7.359	166	3847	0.860
95) 1,3-Dichloropropane	(3)	7.384	76	6625	0.899
97) 2-Hexanone	(3)	7.494	43	11260M	1.753
98) Dibromochloromethane	(3)	7.612	129	3140	0.757
100) 1,2-Dibromoethane	(3)	7.715	107	3862	0.828
101)*Chlorobenzene-d5	(3)	8.161	117	683121	50.000
103) Chlorobenzene	(3)	8.183	112	11258	0.920
104) 1,1,1,2-Tetrachloroethane	(3)	8.267	131	3212	0.817
105) Ethylbenzene	(3)	8.293	91	18837	0.899
107) m+p-Xylene	(3)	8.405	106	14407	1.729
108) o-Xylene	(3)	8.739	106	7135	0.870
110) Styrene	(3)	8.751	104	11107	0.808
111) Bromoform	(3)	8.896	173	2281	0.707
112) Isopropylbenzene	(3)	9.047	105	17277	0.858
113) Cyclohexanone	(1)	9.111	55	20797	48.124
115)$4-Bromofluorobenzene	(3)	9.162	95	339181	49.529
115)$4-Bromofluorobenzene	(3)	9.162	174	285212	49.356
116) Bromobenzene	(4)	9.278	156	5068	0.956
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	6279	0.878
118) 1,2,3-Trichloropropane	(4)	9.313	110	1888	0.877
119) trans-1,4-Dichloro-2-butene	(4)	9.332	53	20634	9.000
120) n-Propylbenzene	(4)	9.371	91	22711	0.972
121) 2-Chlorotoluene	(4)	9.432	126	4178	0.867
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	15051	0.893
122) 4-Chlorotoluene	(4)	9.515	126	4721	0.915
125) tert-Butylbenzene	(4)	9.753	134	3462	0.904
126) Pentachloroethane	(4)	9.765	167	2398	0.792
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	16670	0.938
128) sec-Butylbenzene	(4)	9.916	105	18905	0.914
130) 1,3-Dichlorobenzene	(4)	9.993	146	9796	0.969
131) p-Isopropyltoluene	(4)	10.022	119	16677	0.911
132)*1,4-Dichlorobenzene-d4	(4)	10.038	152	368100	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	10400	0.992
91) 1,3-Dichloropropene (total)	(3)		100	11367	1.688
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	17695	0.926
136) Benzyl Chloride	(4)	10.160	91	10691	0.729

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on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.240	119	10375	0.901
138) 1,4-Diethylbenzene	(4)	10.298	119	11053	0.896
140) n-Butylbenzene	(4)	10.314	92	8520	0.922
139) 1,2-Dichlorobenzene	(4)	10.324	146	9475	0.945
141) 1,2-Diethylbenzene	(4)	10.378	119	8406	0.865
143) 1,2-Dibromo-3-chloropropane	(4)	10.866	75	1280	0.788
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	7373	0.959
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	6829	0.925
148) Hexachlorobutadiene	(4)	11.527	225	2777	1.056
149) Naphthalene	(4)	11.582	128	22155	0.887
150) 1,2,3-Trichlorobenzene	(4)	11.739	180	6883	0.955
109) Xylene (Total)	(3)		106	21542	2.599
151) 2-Methylnaphthalene	(4)	12.304	142	12159	0.853
142) Diethylbenzene (total)	(4)		100	29834	2.663

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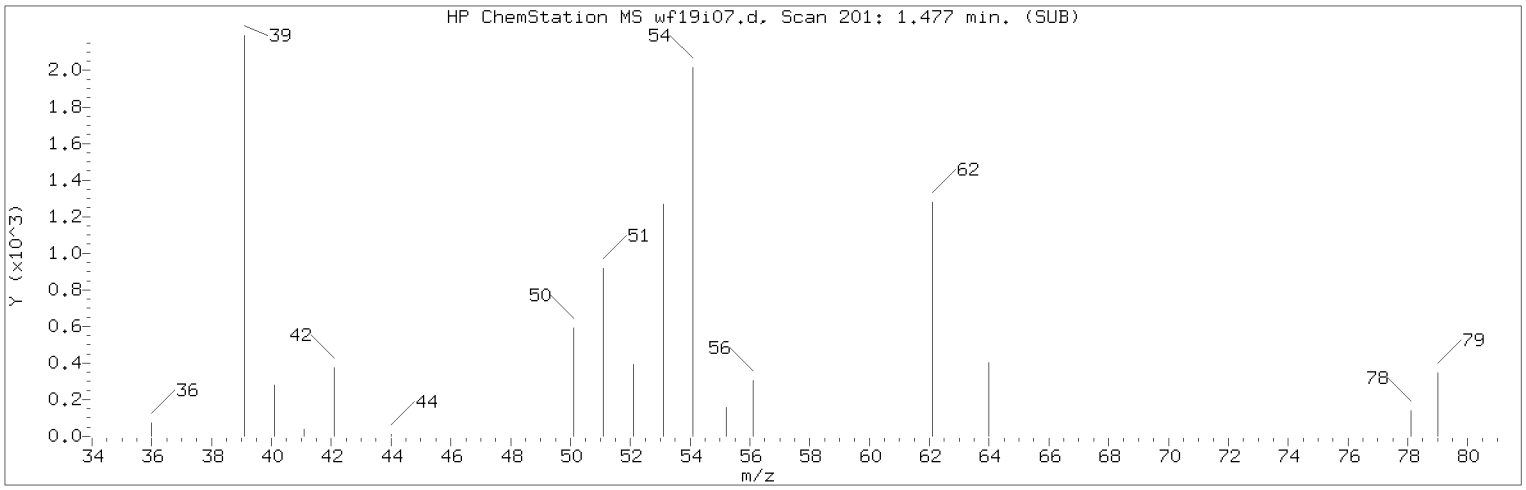
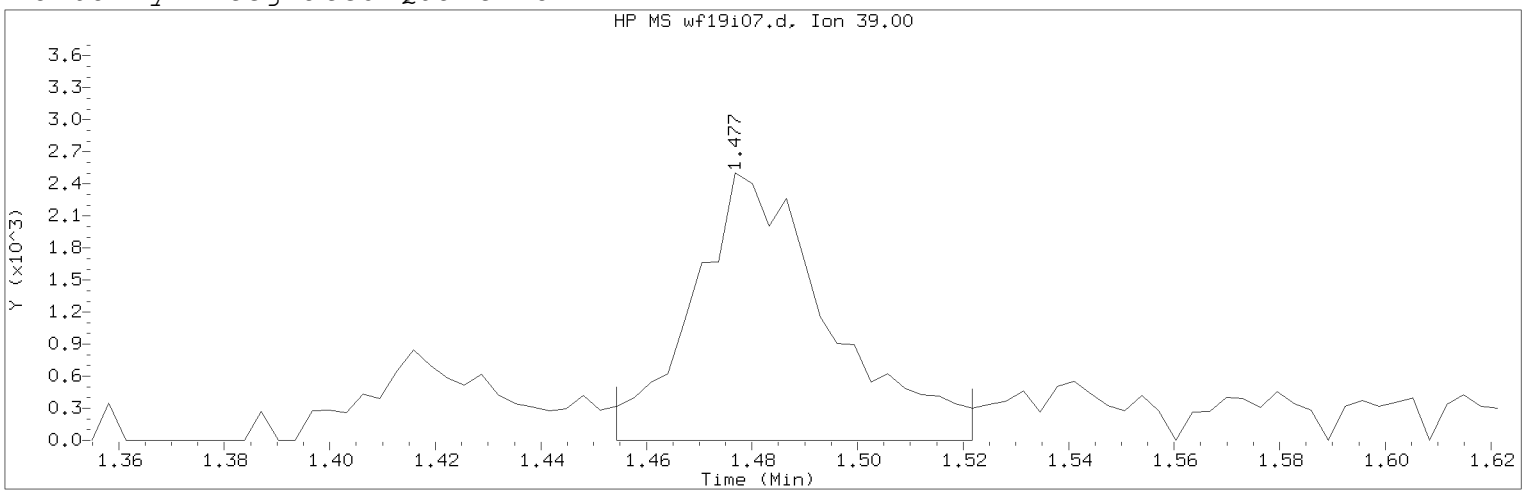
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

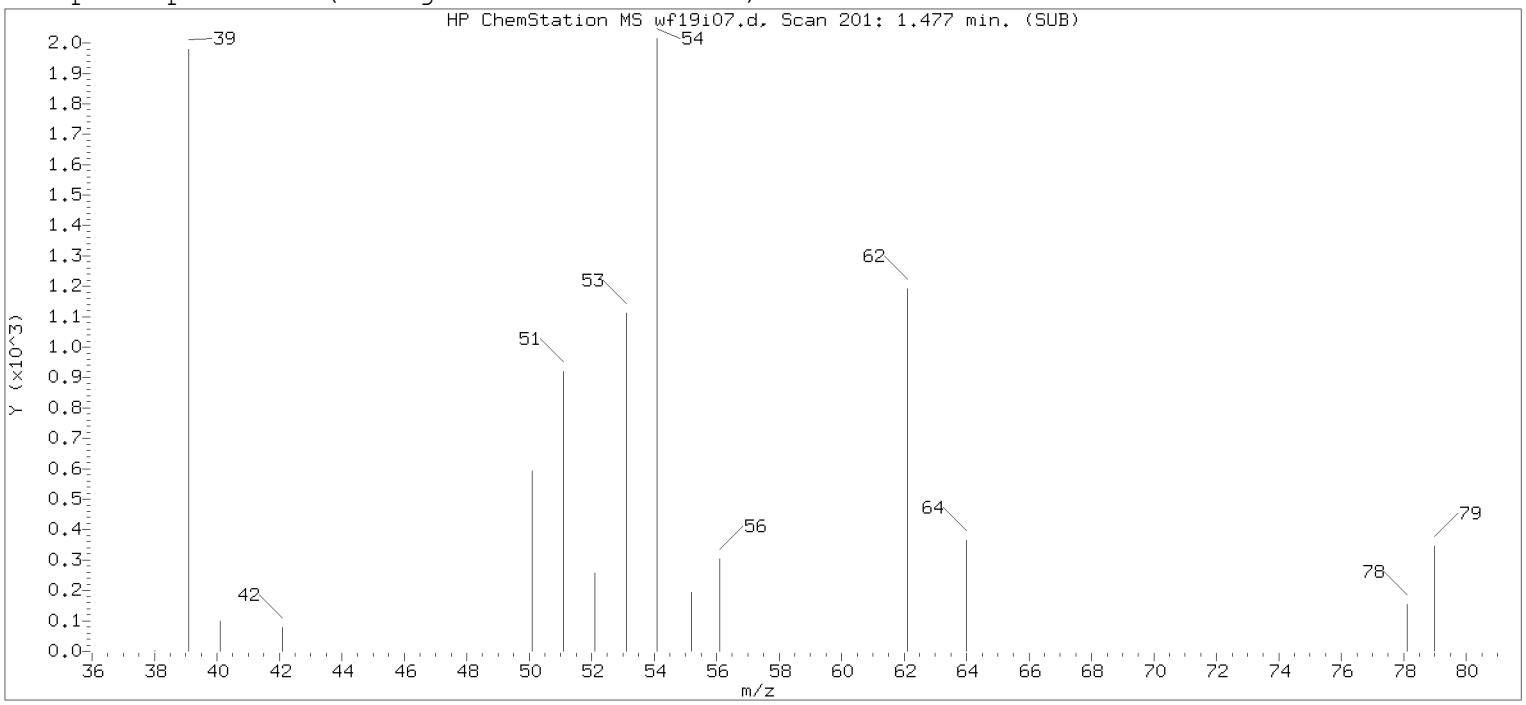
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 201
Retention Time (minutes): 1.477
Quant Ion : 39.00
Area (flag) : 4489M
On-Column Amount (ng) : 1.1115
Integration start scan : 193 Integration stop scan: 214
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

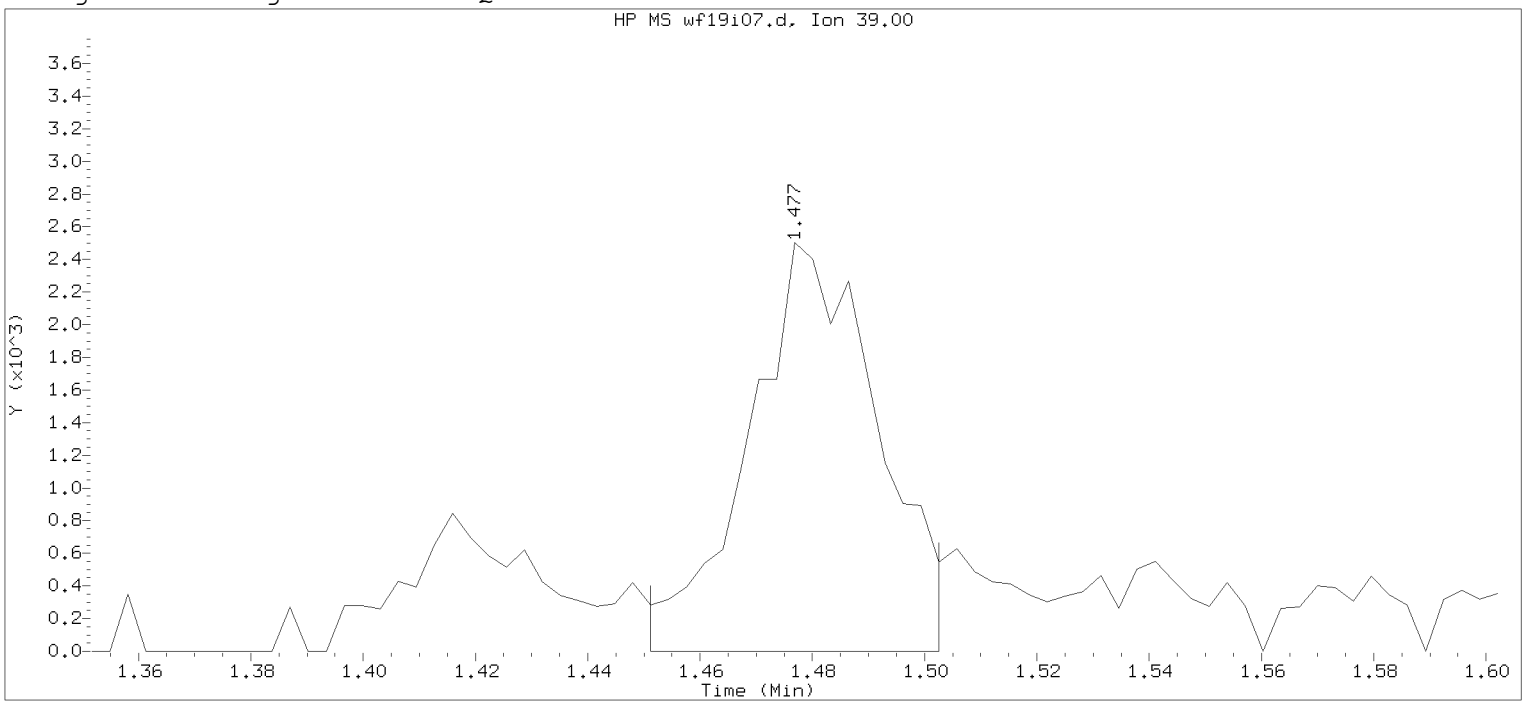
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

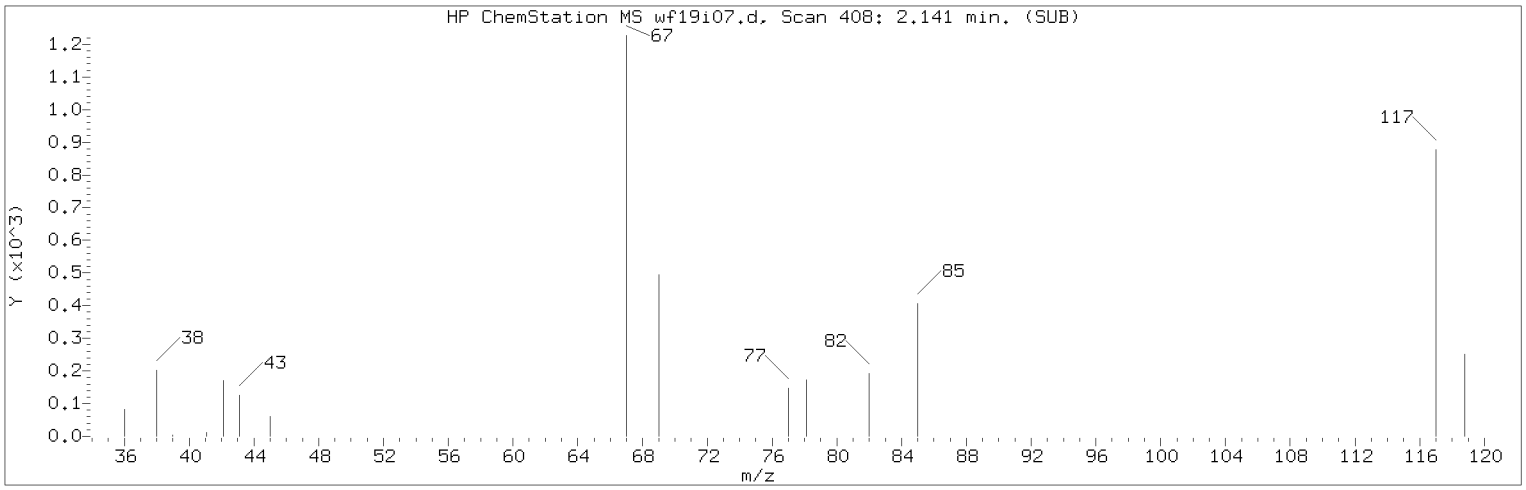
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

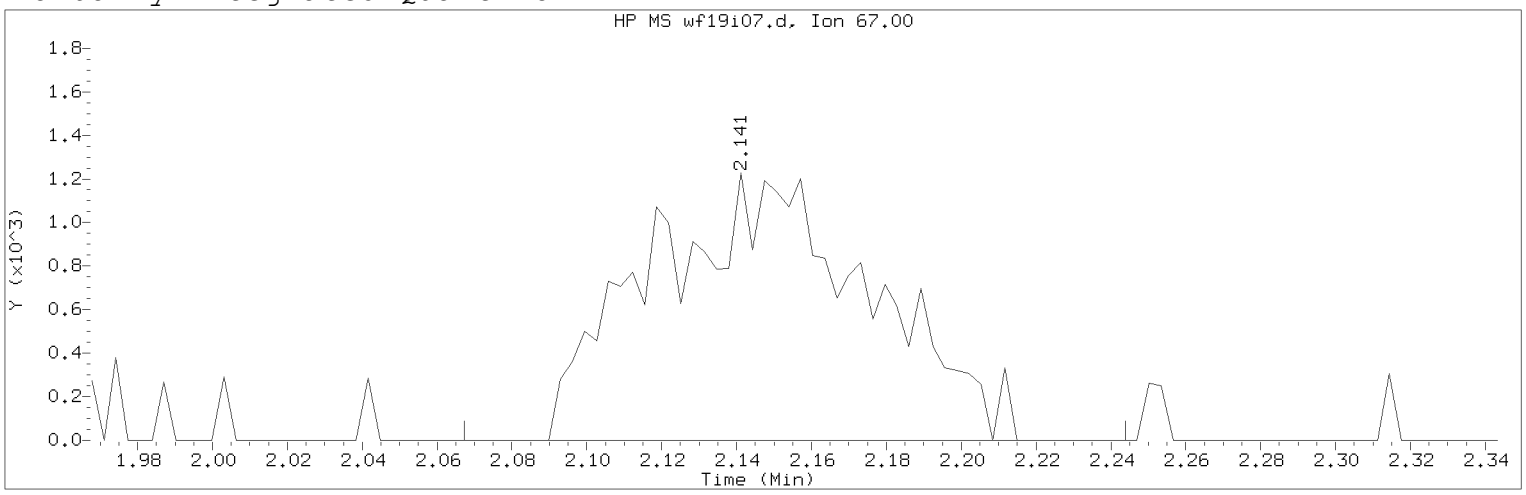
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 201
Retention Time (minutes): 1.477
Quant Ion : 39.00
Area : 3964
On-column Amount (ng) : 1.0001
Integration start scan : 192 Integration stop scan: 208
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

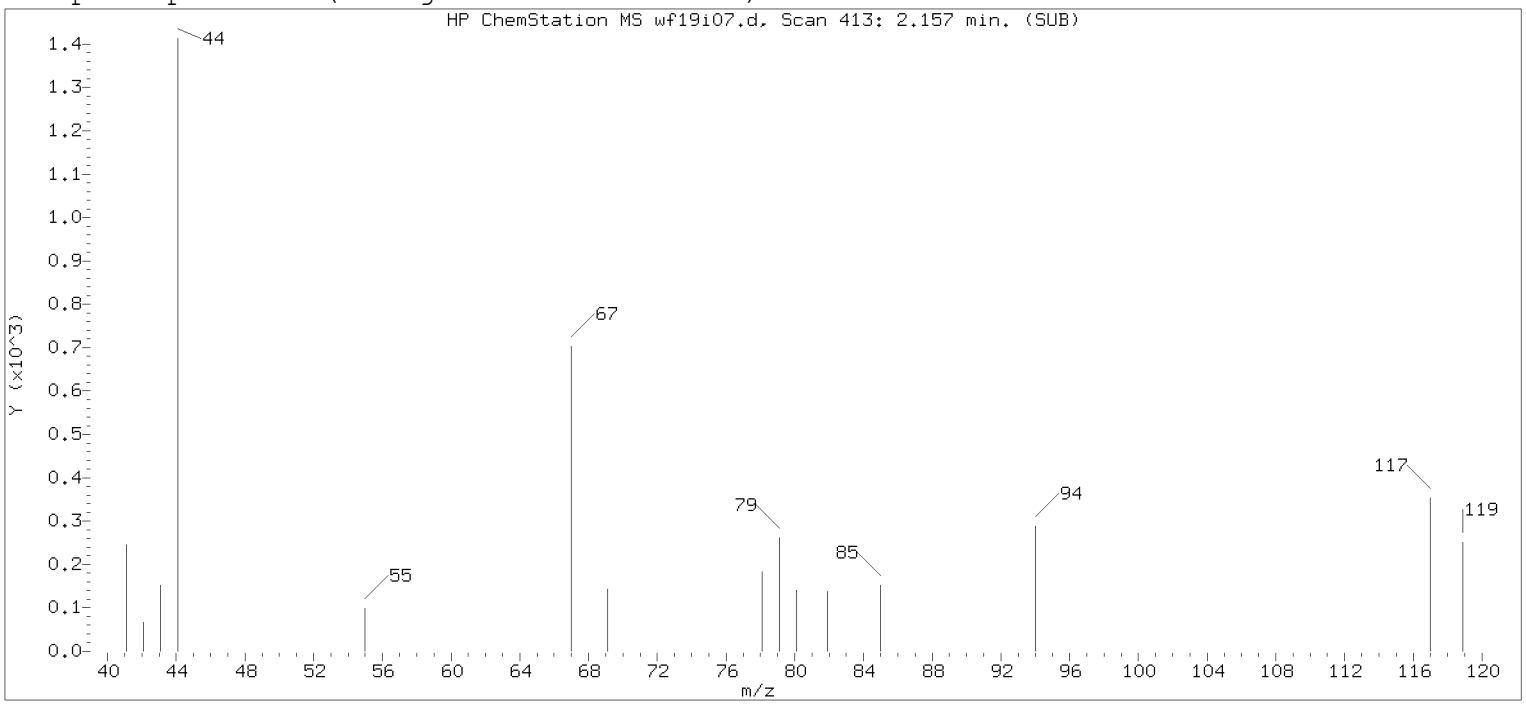
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 408
Retention Time (minutes): 2.141
Quant Ion : 67.00
Area (flag) : 5025M
On-Column Amount (ng) : 1.0422
Integration start scan : 384 Integration stop scan: 439
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

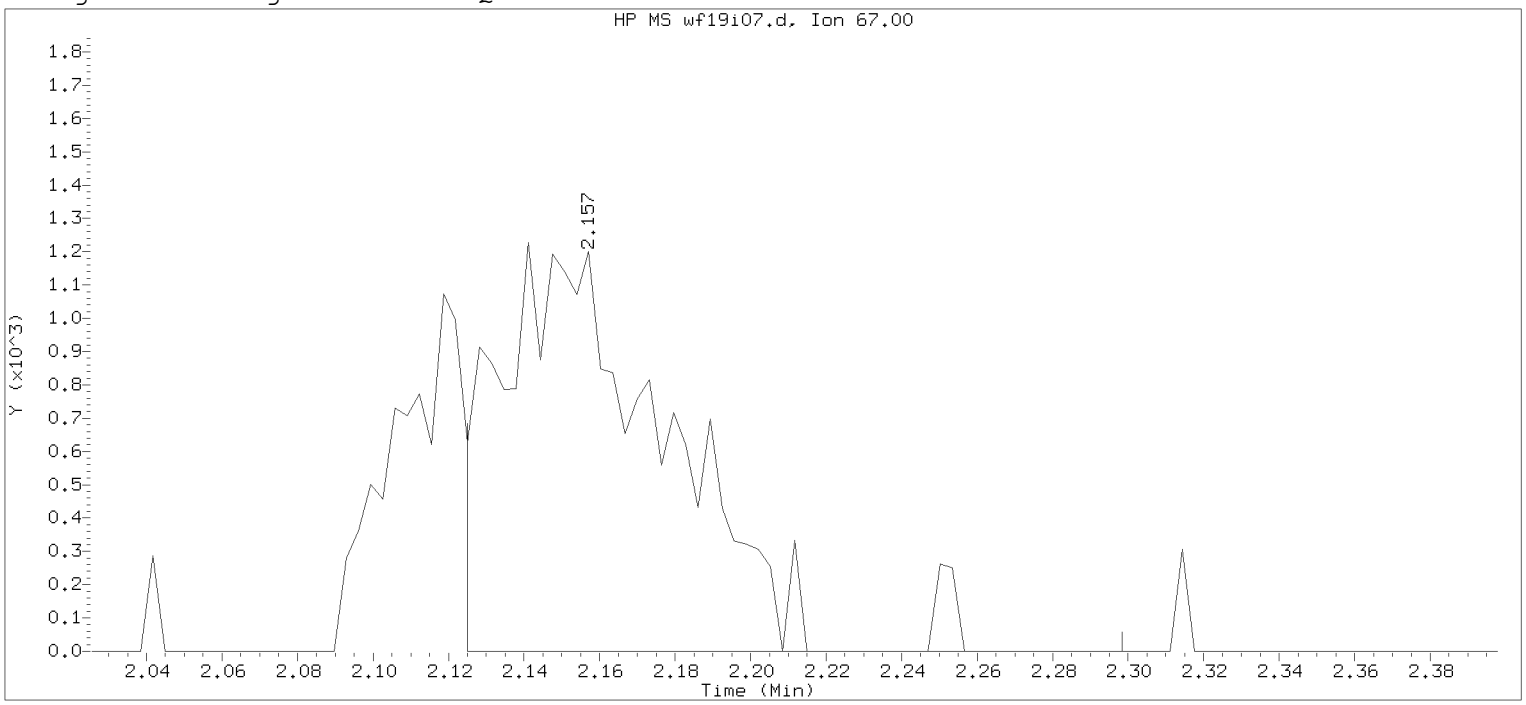
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 15
Compound Name : Freon 123a
Scan Number : 413
Retention Time (minutes): 2.157
Quant Ion : 67.00
Area : 3812
On-column Amount (ng) : 1.1043
Integration start scan : 402 Integration stop scan: 456
Y at integration start : 0 Y at integration end: 0

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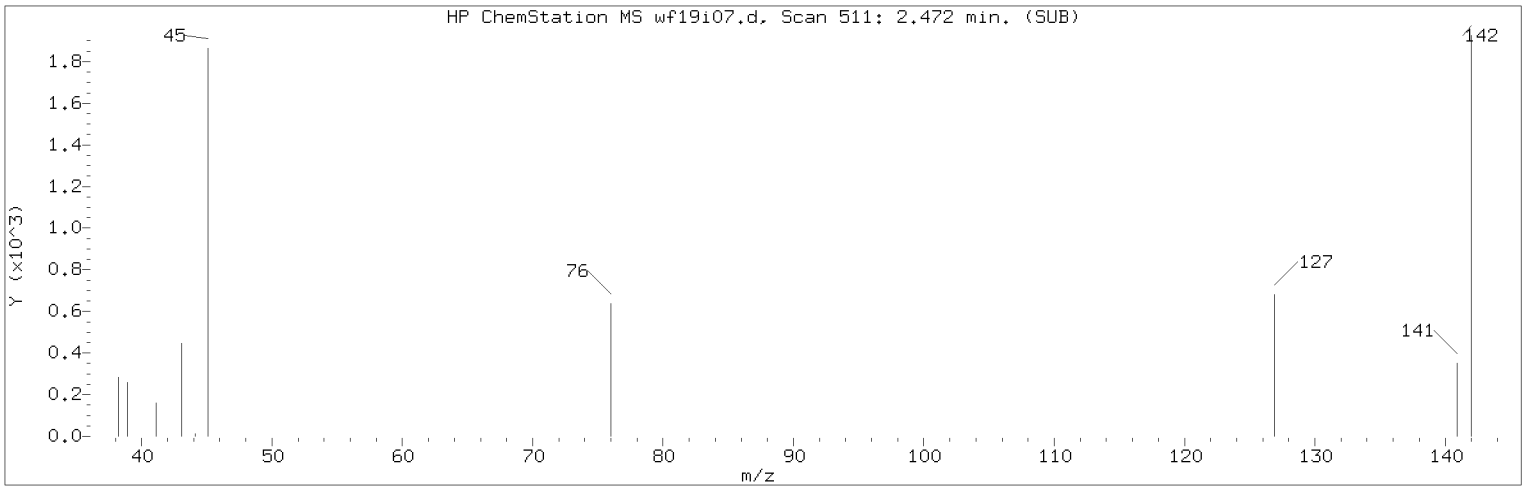
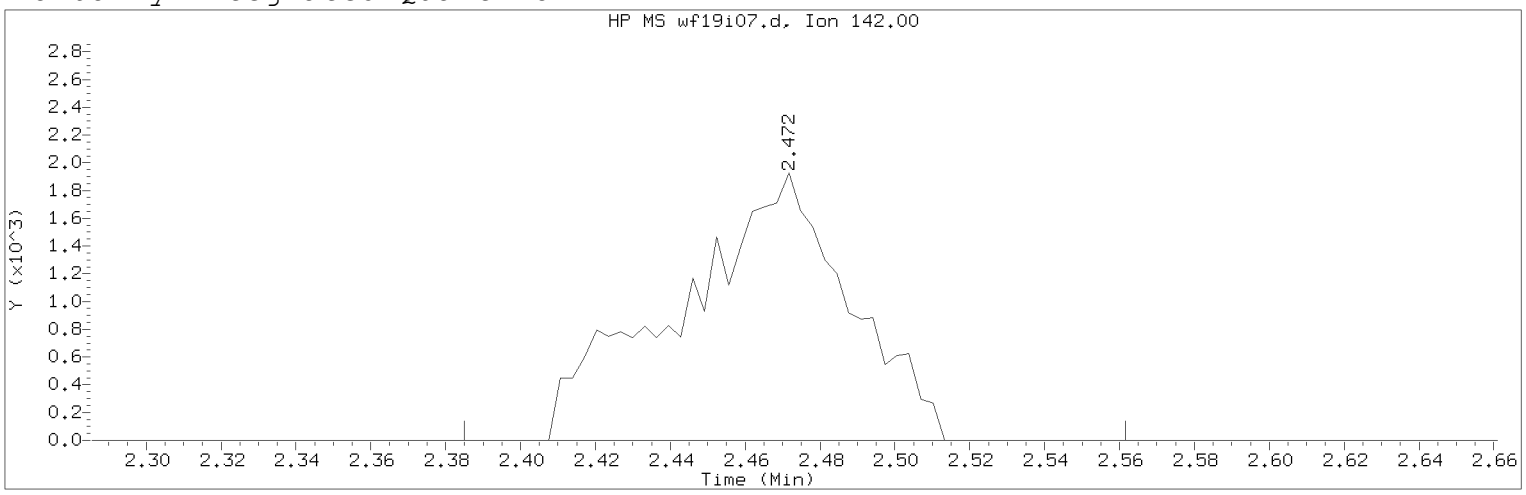
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

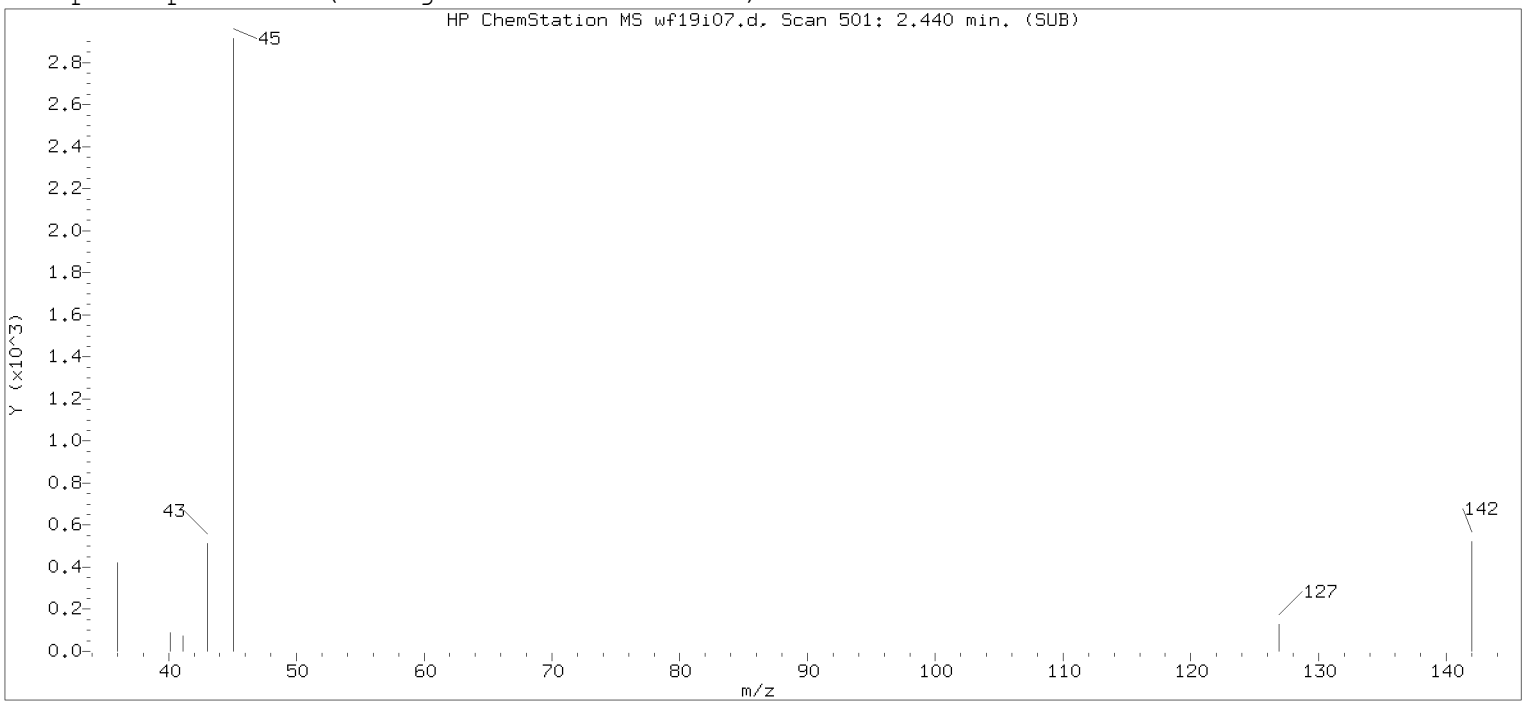
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 511
Retention Time (minutes): 2.472
Quant Ion : 142.00
Area (flag) : 6057M
On-Column Amount (ng) : 0.8710
Integration start scan : 483 Integration stop scan: 538
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

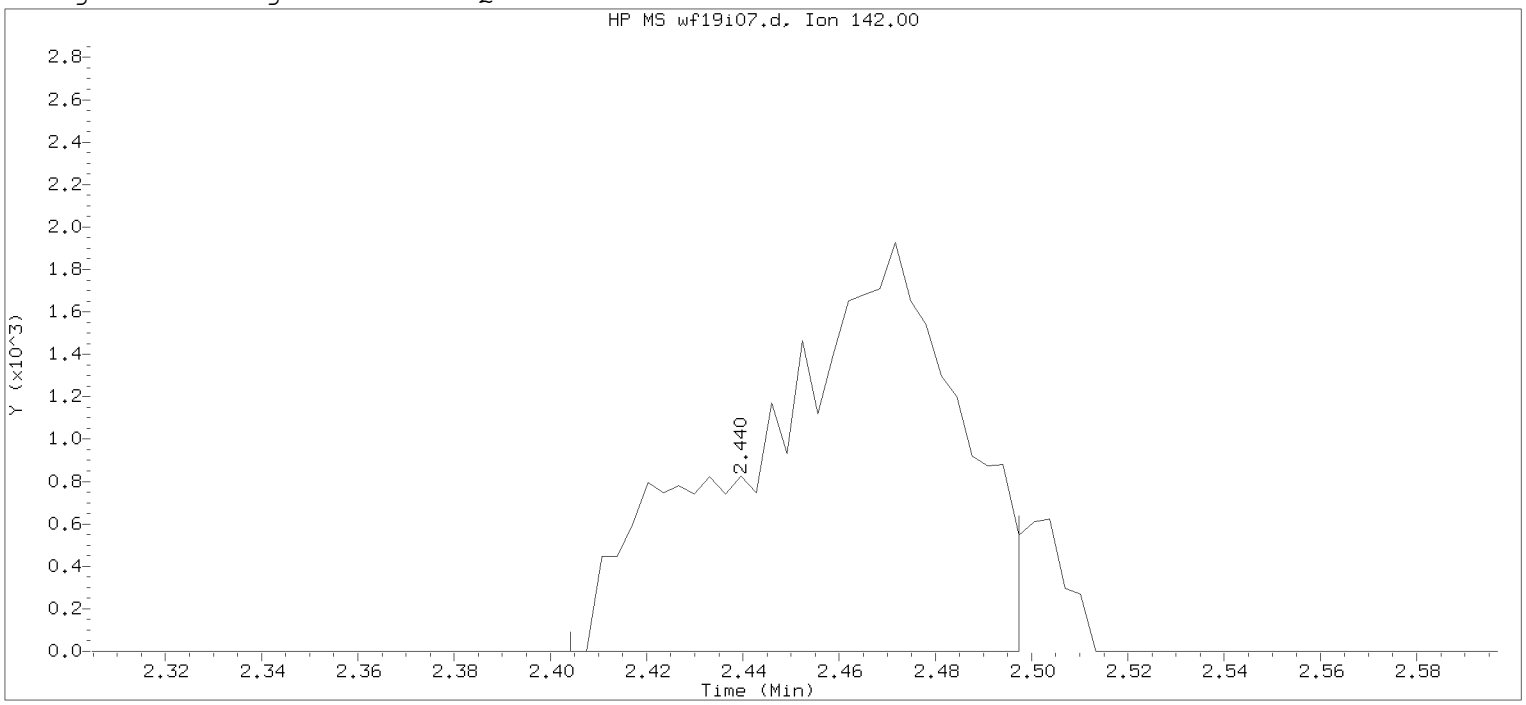
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 501
Retention Time (minutes): 2.440
Quant Ion : 142.00
Area : 5658
On-column Amount (ng) : 0.8993
Integration start scan : 489 Integration stop scan: 518
Y at integration start : 0 Y at integration end: 0

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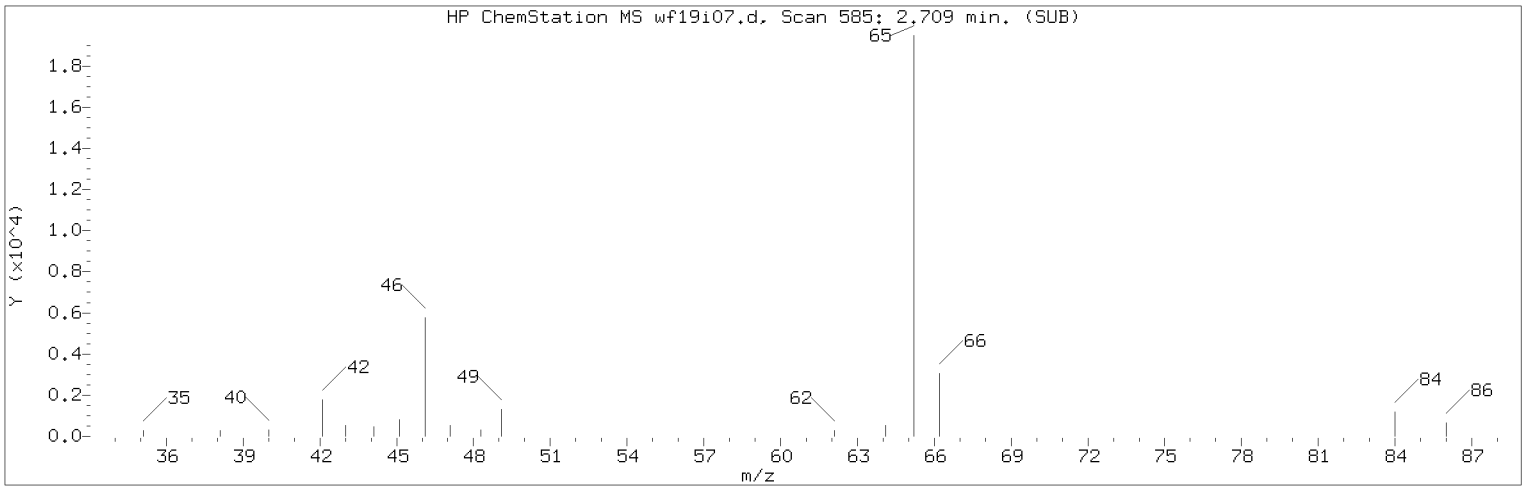
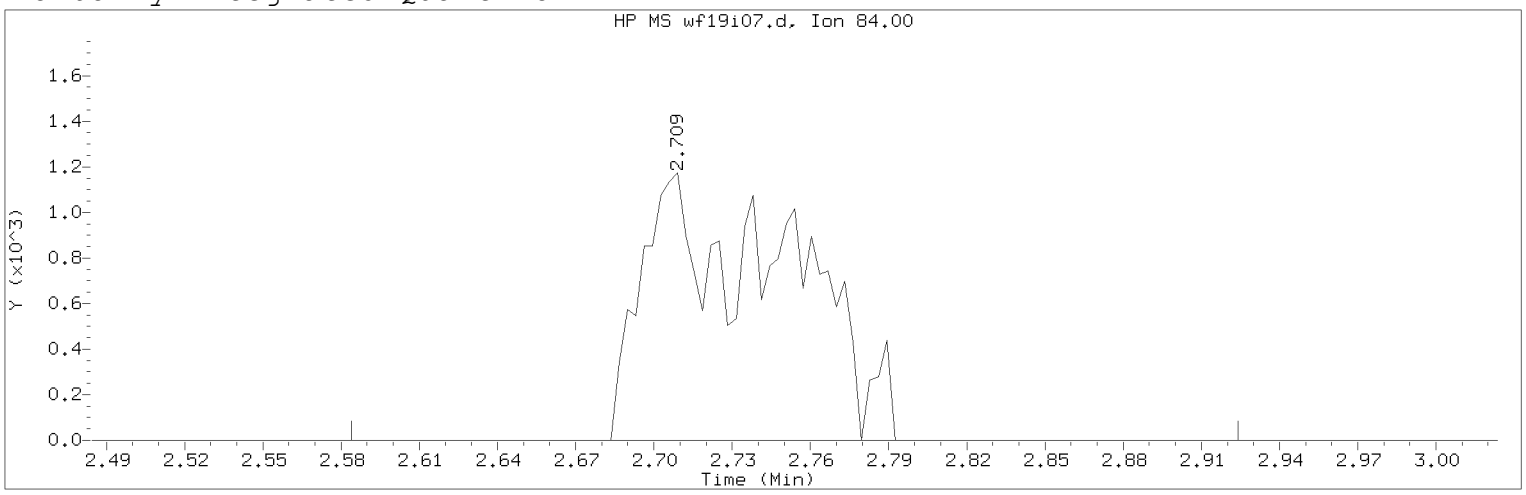
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

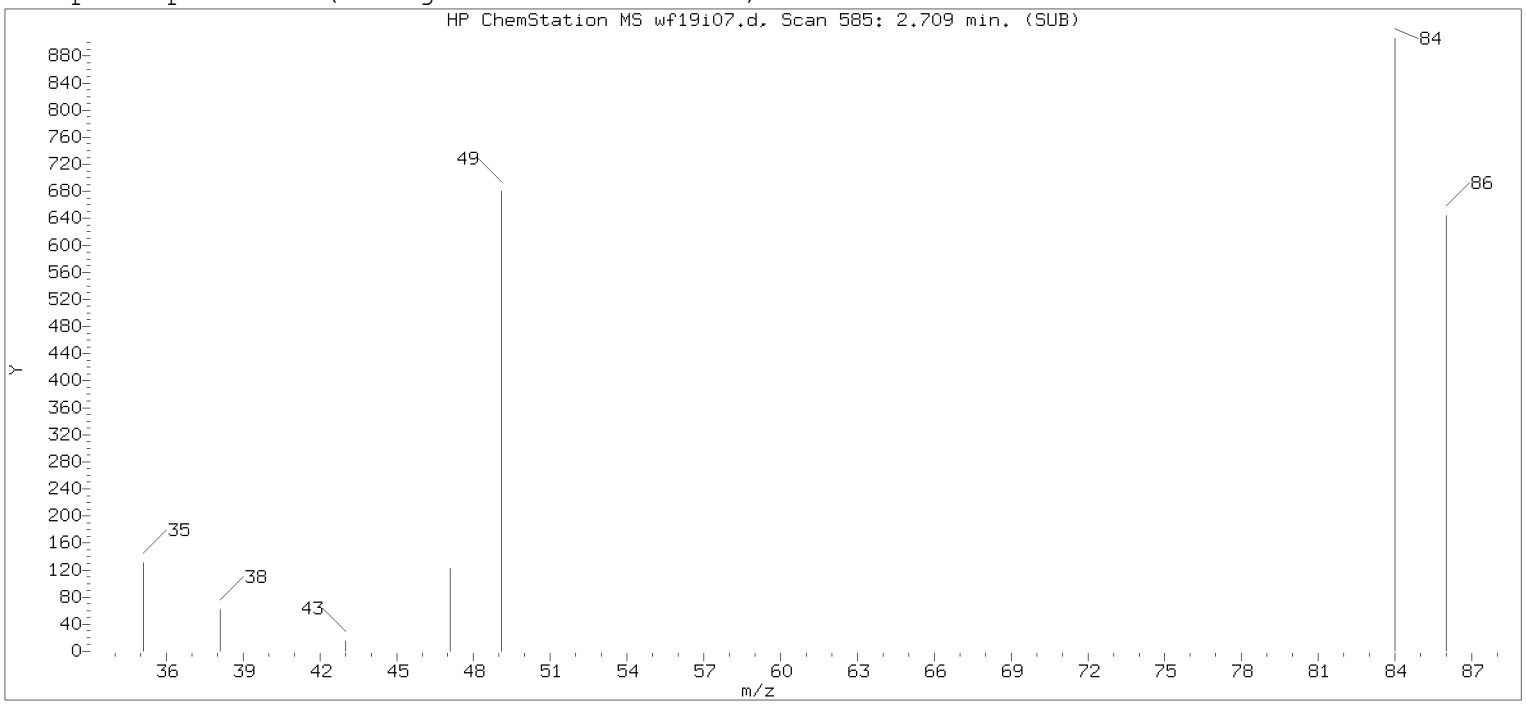
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area (flag) : 4508M
On-Column Amount (ng) : 1.0163
Integration start scan : 545 Integration stop scan: 651
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

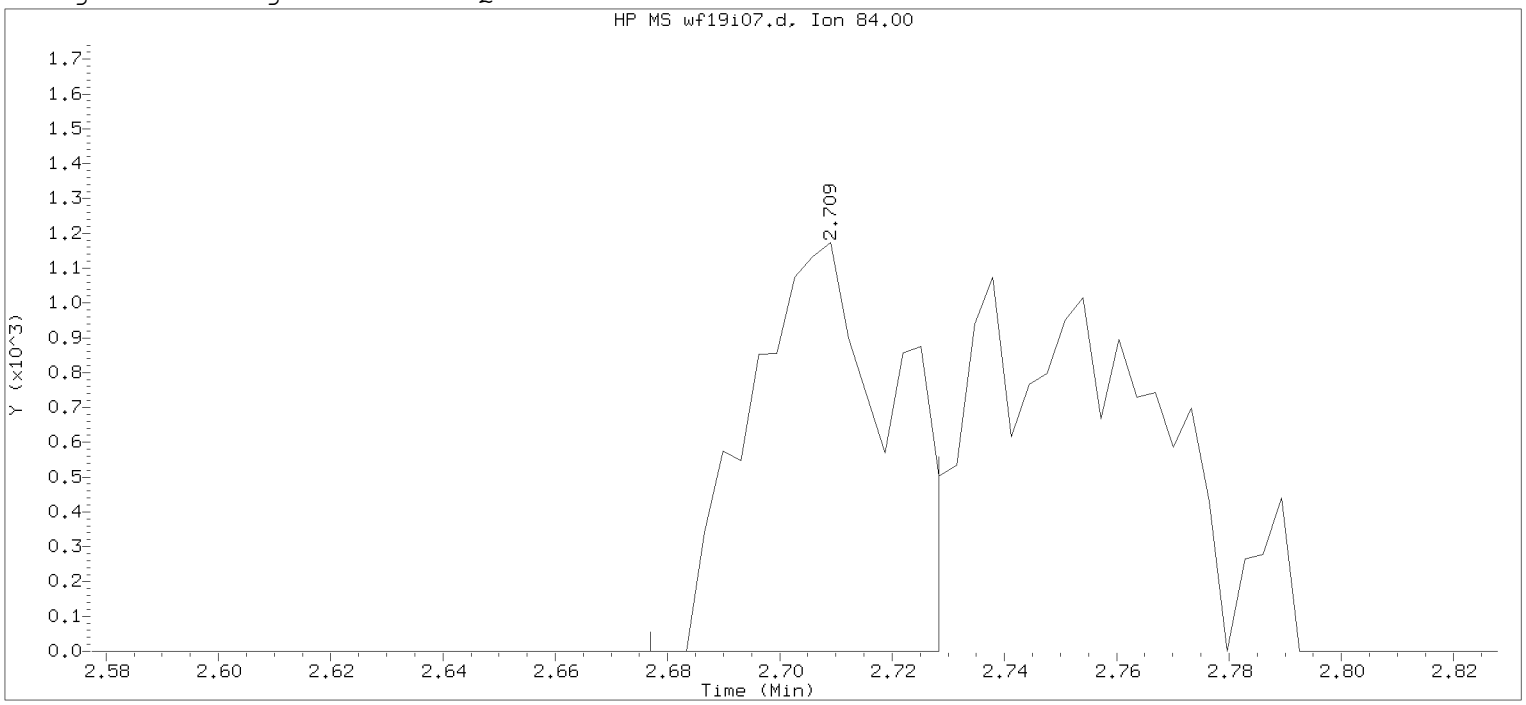
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

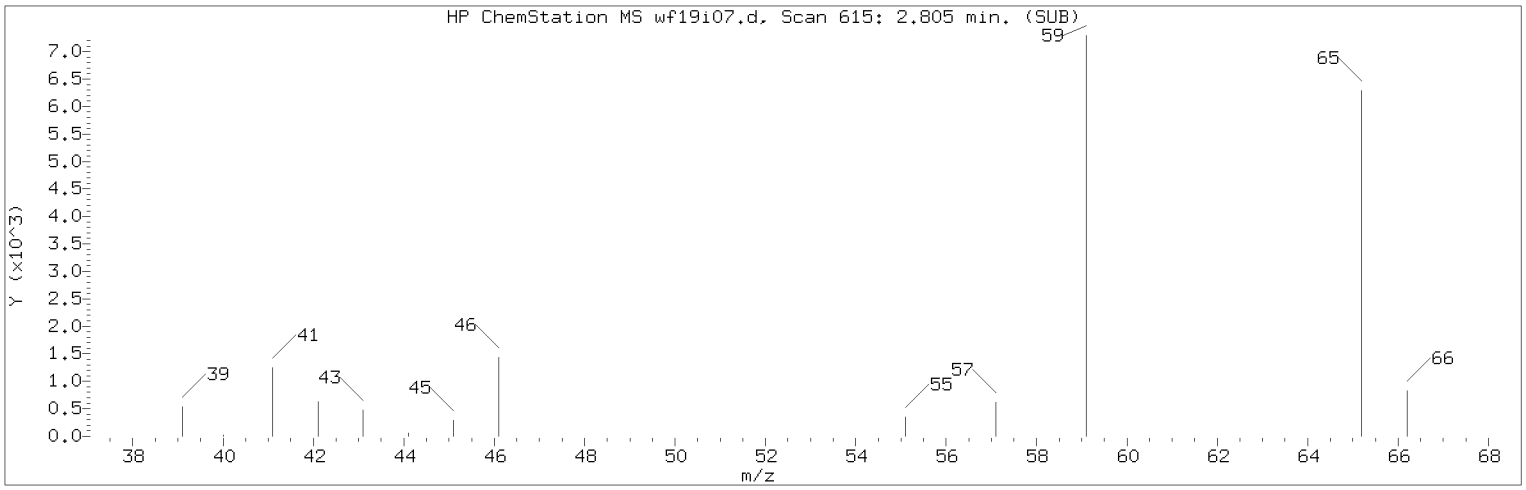
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

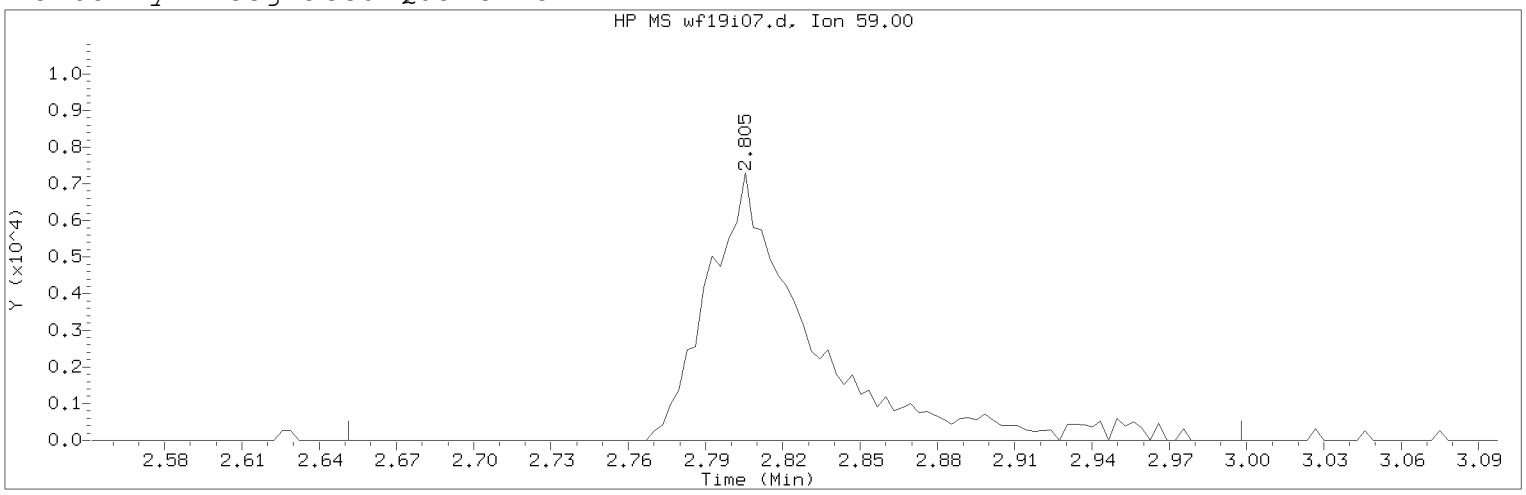
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area : 2067
On-column Amount (ng) : 0.5781
Integration start scan : 574 Integration stop scan: 590
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

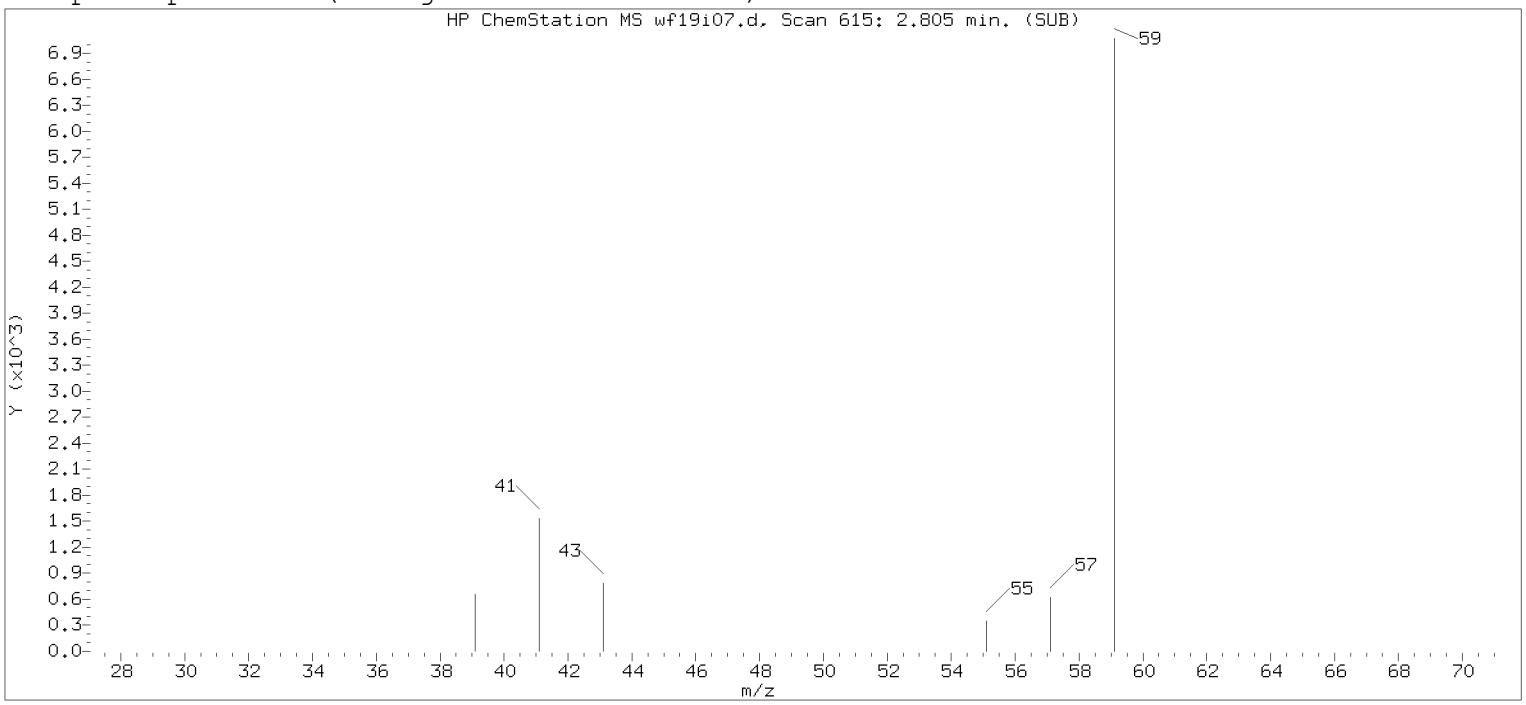
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 615
Retention Time (minutes): 2.805
Quant Ion : 59.00
Area (flag) : 20393M
On-Column Amount (ng) : 20.5984
Integration start scan : 566 Integration stop scan: 674
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

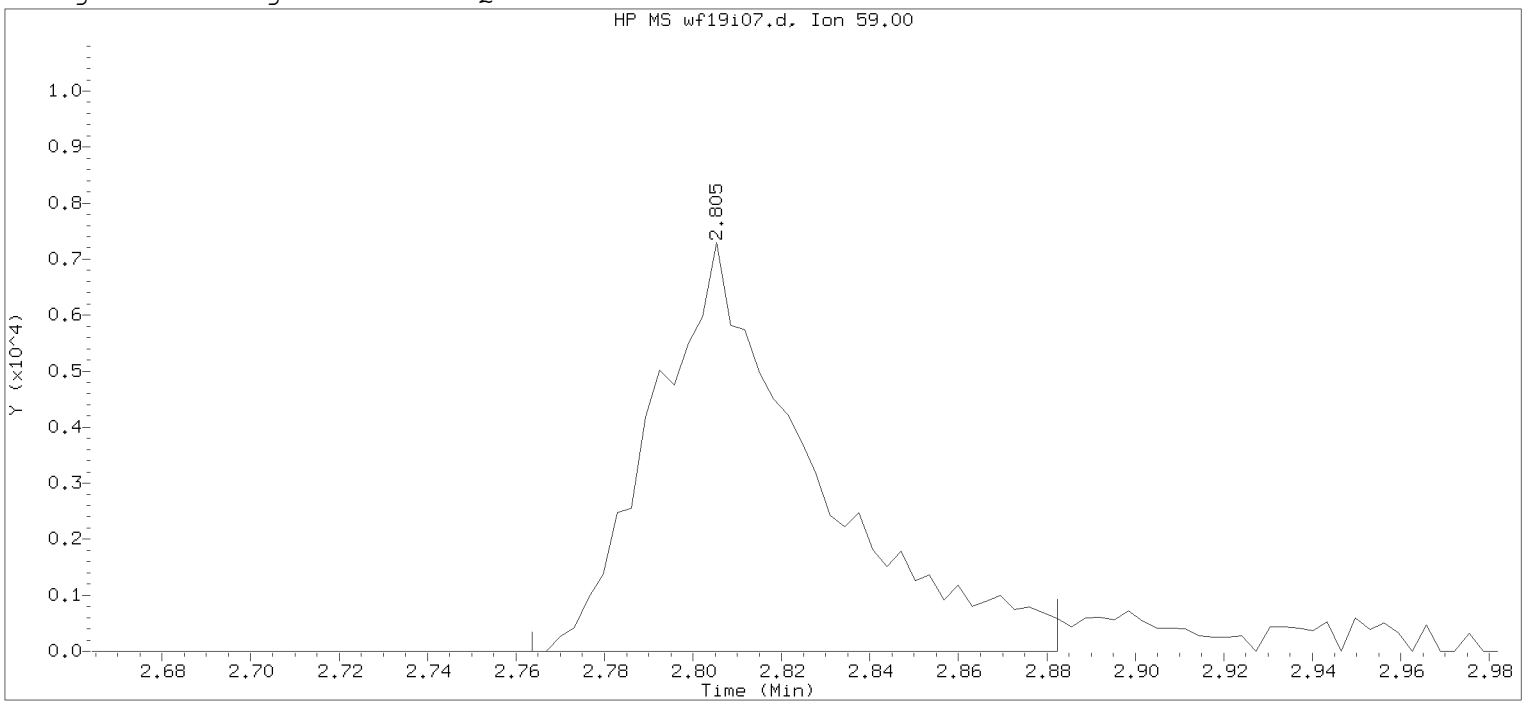
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

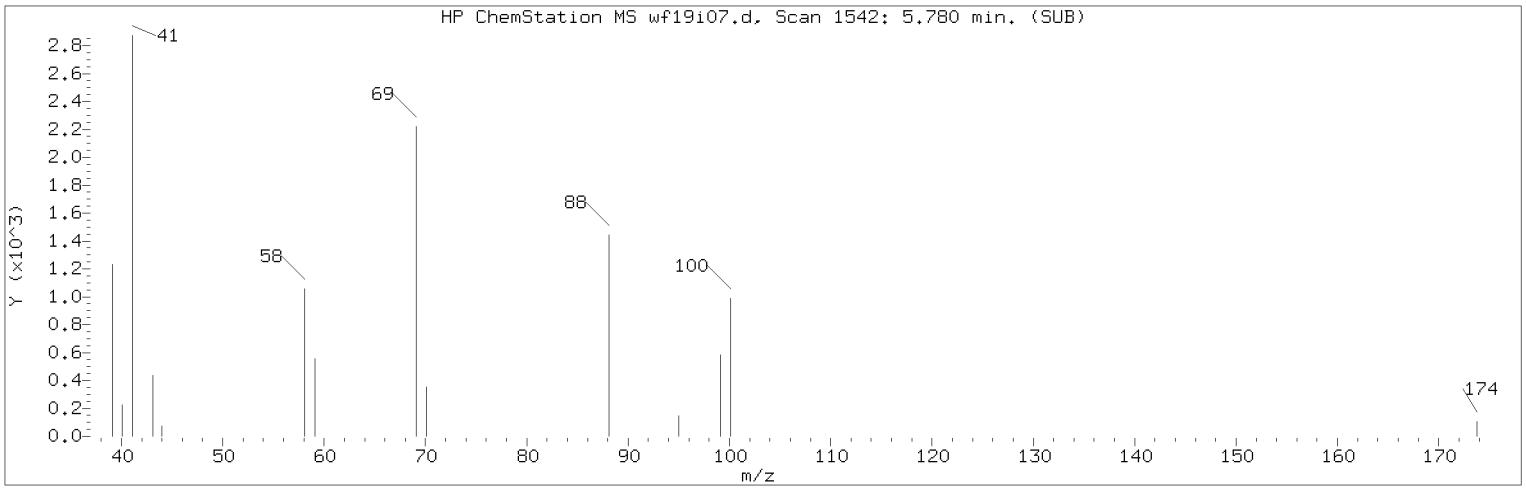
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

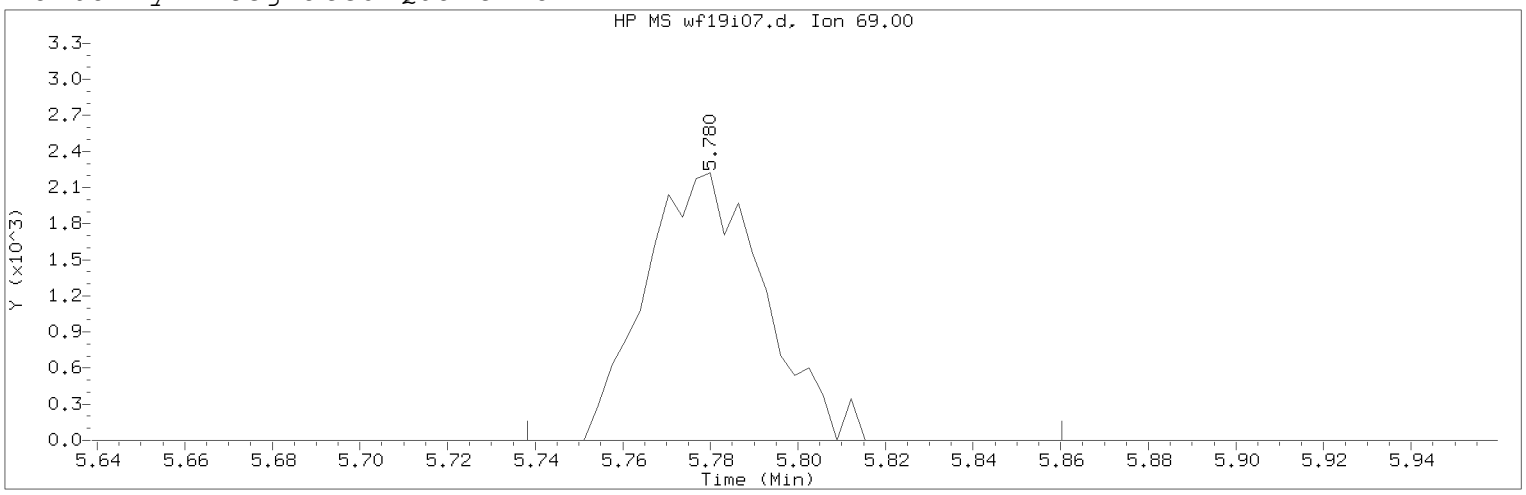
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 615
Retention Time (minutes): 2.805
Quant Ion : 59.00
Area : 18308
On-column Amount (ng) : 18.7752
Integration start scan : 601 Integration stop scan: 638
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

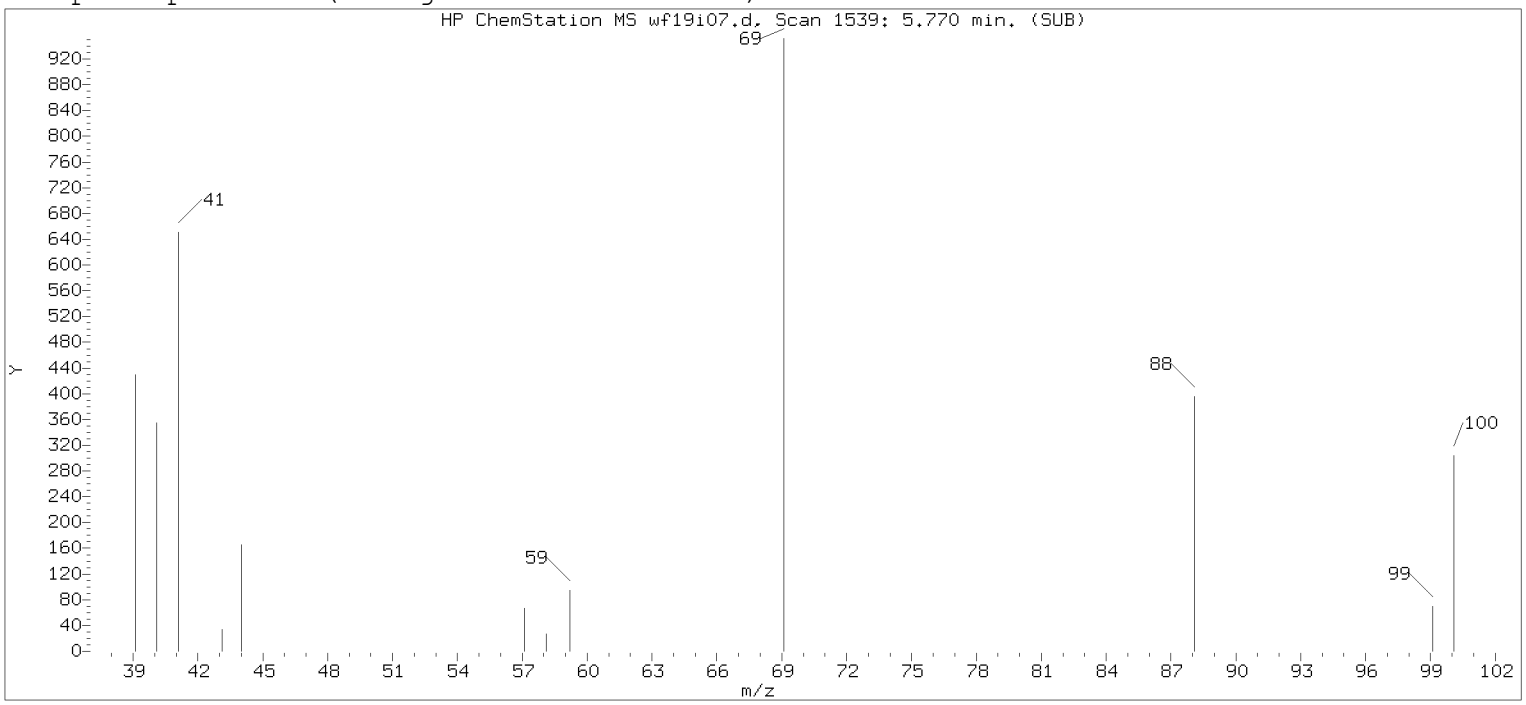
Compound Number : 77
Compound Name : Methyl Methacrylate
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 69.00
Area (flag) : 4194M
On-Column Amount (ng) : 0.8617
Integration start scan : 1528 Integration stop scan: 1566
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

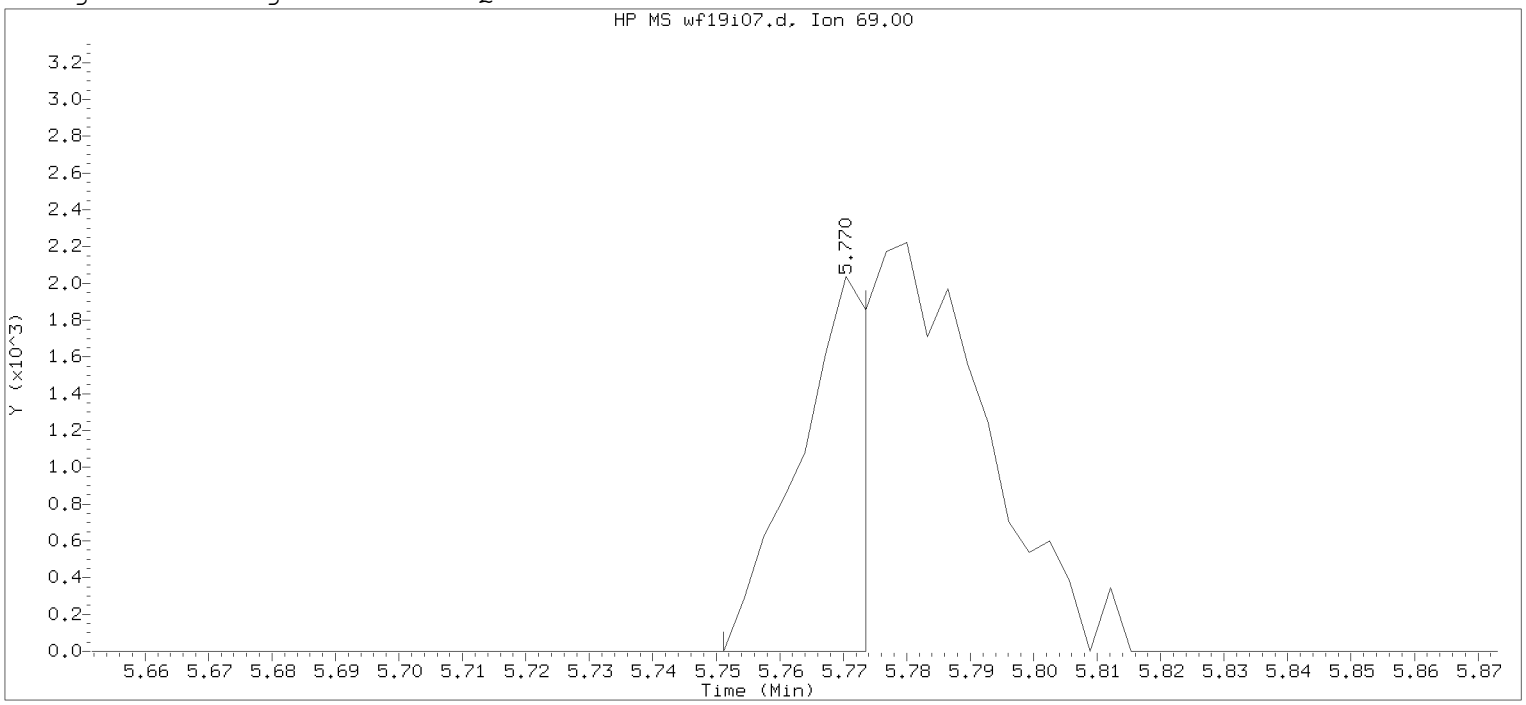
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

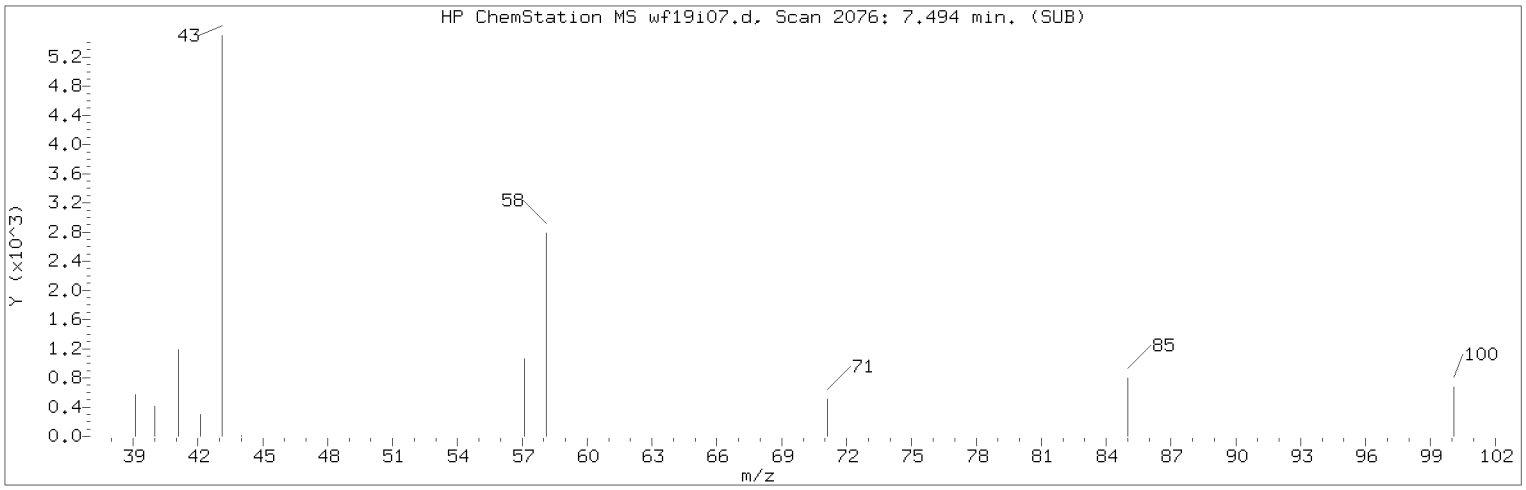
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

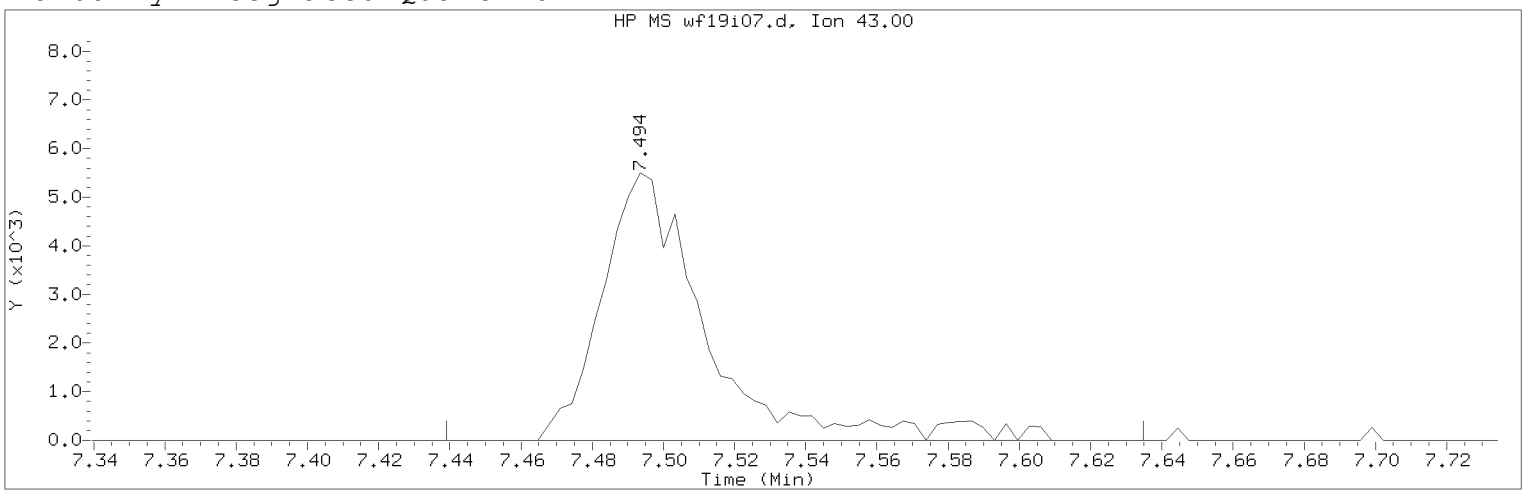
Compound Number : 77
Compound Name : Methyl Methacrylate
Scan Number : 1539
Retention Time (minutes): 5.770
Quant Ion : 69.00
Area : 1428
On-column Amount (ng) : 0.3220
Integration start scan : 1532 Integration stop scan: 1539
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

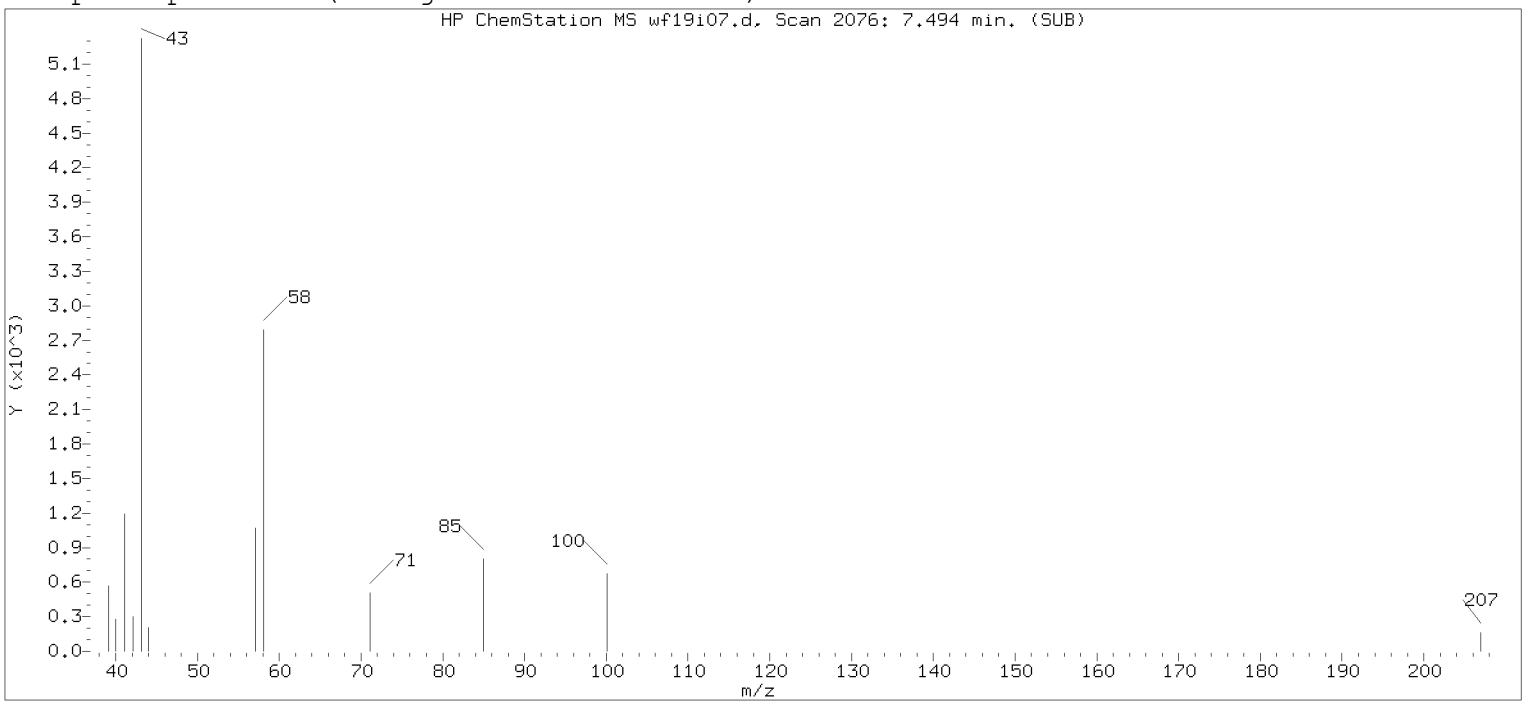
Compound Number : 97
Compound Name : 2-Hexanone
Scan Number : 2076
Retention Time (minutes): 7.494
Quant Ion : 43.00
Area (flag) : 11260M
On-Column Amount (ng) : 1.7534
Integration start scan : 2058 Integration stop scan: 2119
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

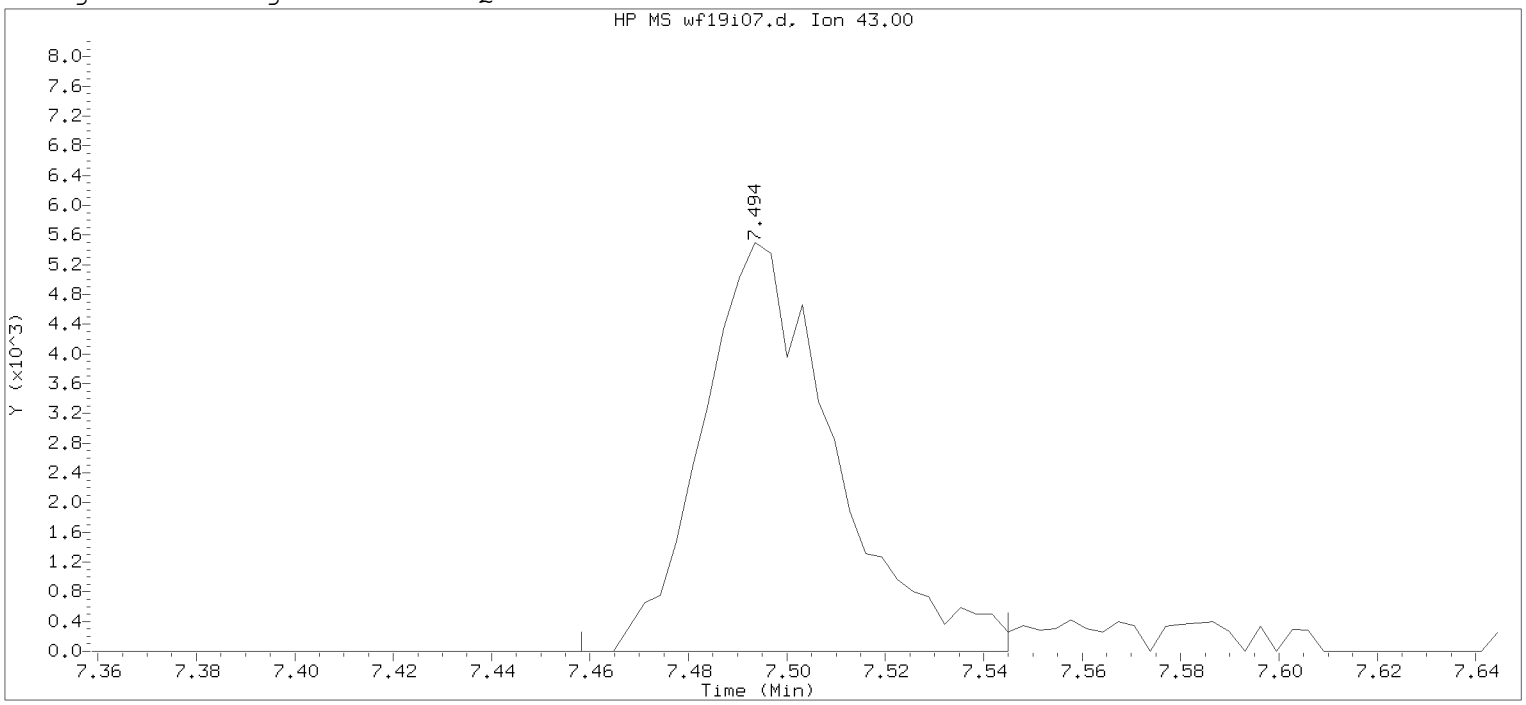
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

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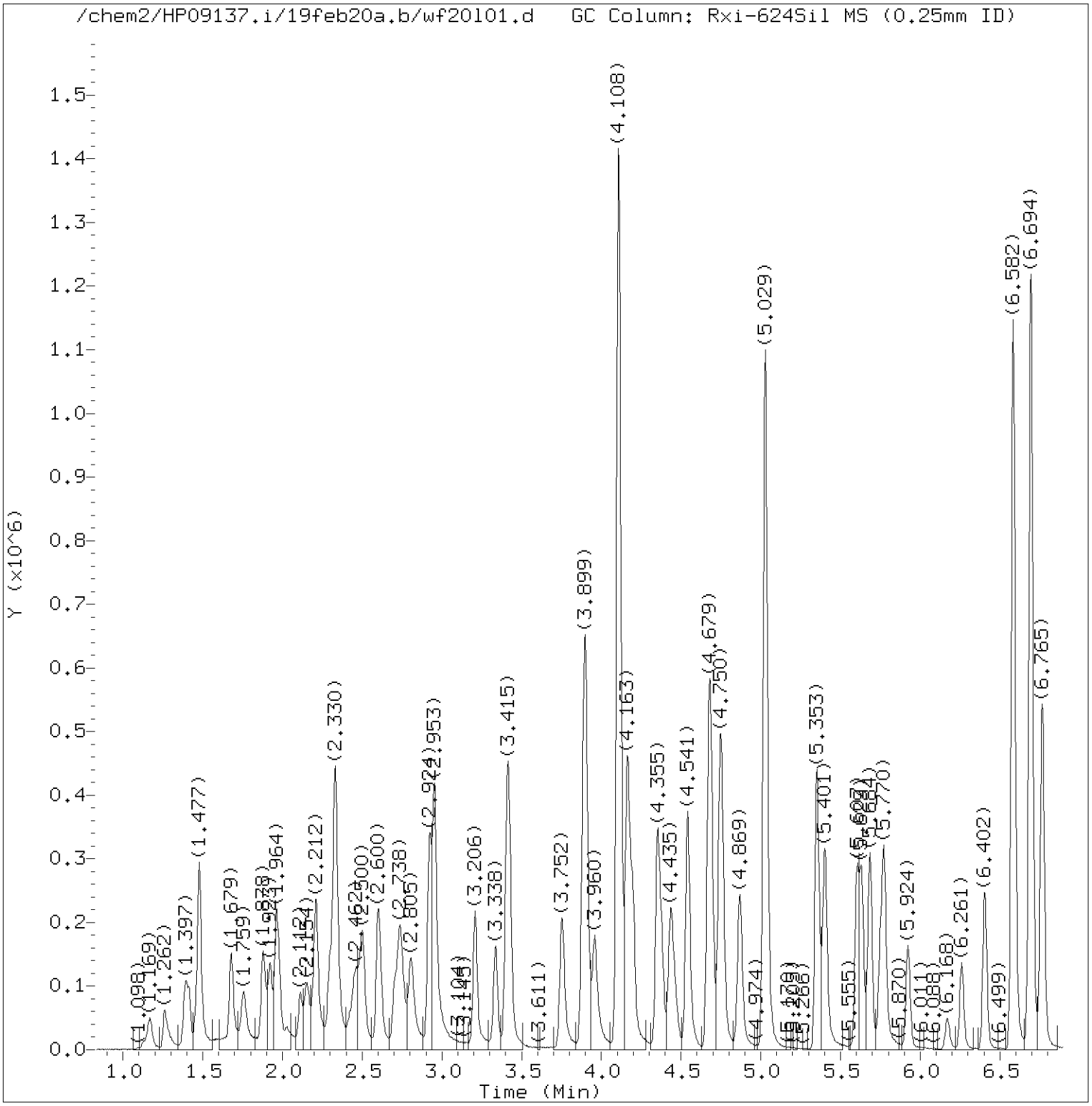
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 97
Compound Name : 2-Hexanone
Scan Number : 2076
Retention Time (minutes): 7.494
Quant Ion : 43.00
Area : 10210
On-column Amount (ng) : 1.6088
Integration start scan : 2064 Integration stop scan: 2091
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

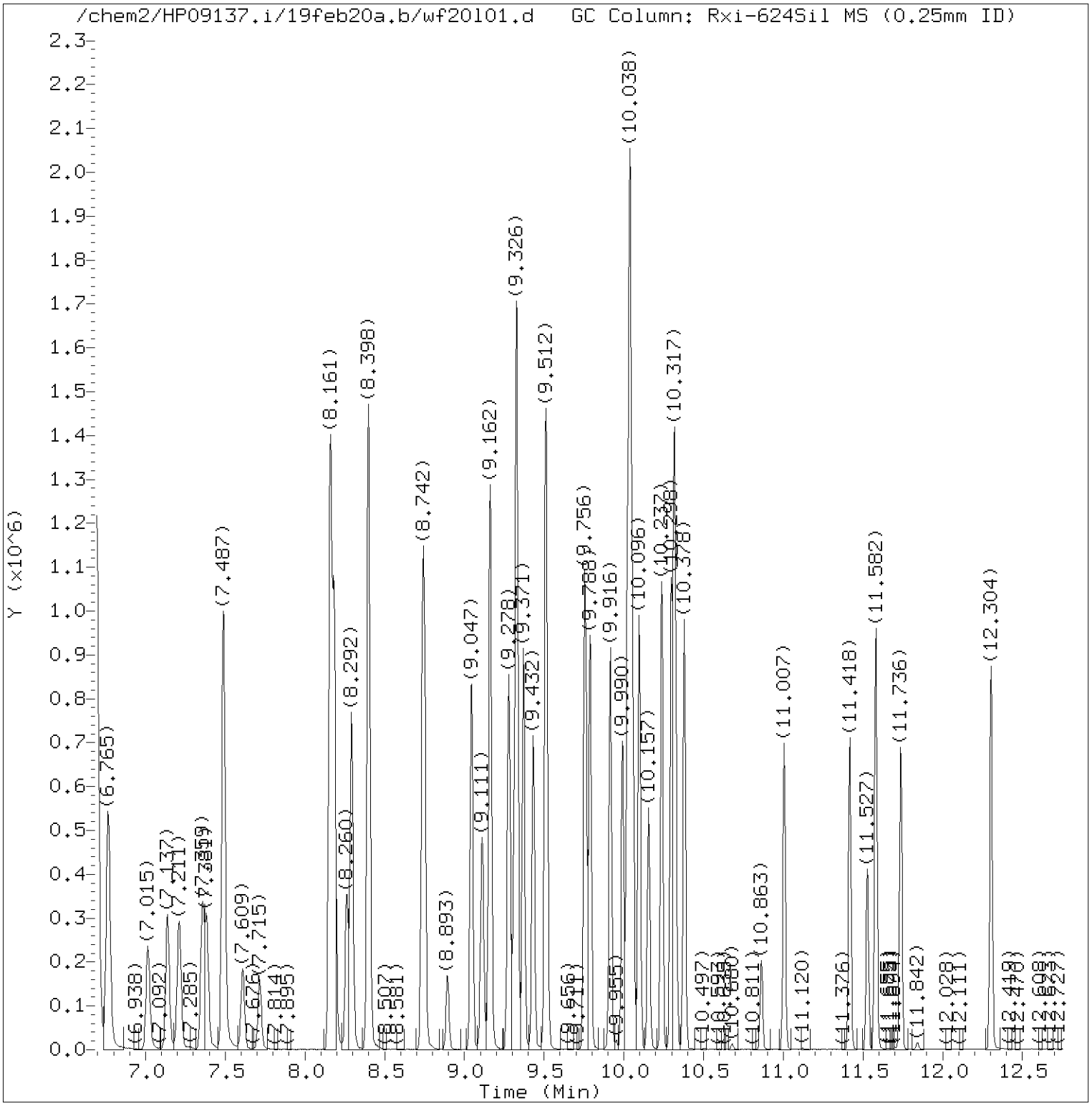
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

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Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.259	85	96568	17.290
4) Chloromethane	(2)	1.390	50	134773	19.379
6) Vinyl Chloride	(2)	1.467	62	127103	19.936
5) 1,3-Butadiene	(2)	1.480	39	88405	20.858
8) Bromomethane	(2)	1.679	94	87704	17.442
9) Chloroethane	(2)	1.756	64	73983	17.634
10) Dichlorofluoromethane	(2)	1.878	67	146532	18.044
12) Trichlorofluoromethane	(2)	1.923	101	121162	17.894
11) n-Pentane	(2)	1.961	43	114802	17.828
13) Ethanol	(1)	2.035	45	59325	572.099
15) Freon 123a	(2)	2.147	67	103271M	20.410
16) Acrolein	(1)	2.212	56	220979	134.998
17) 1,1-Dichloroethene	(2)	2.324	96	88878	23.338
19) Freon 113	(2)	2.327	101	74386	22.243
18) Acetone	(1)	2.337	58	114607	144.043
21) 2-Propanol	(1)	2.446	45	89998	152.244
22) Methyl Iodide	(2)	2.465	142	157275M	21.550
23) Carbon Disulfide	(2)	2.504	76	282096	21.025
25) Allyl Chloride	(2)	2.600	41	131552	19.828
27) Methyl Acetate	(2)	2.616	43	111319	19.385
28) Methylene Chloride	(2)	2.703	84	100603M	21.612
29)*t-Butyl alcohol-d10	(1)	2.731	65	227371	250.000
30) t-Butyl alcohol	(1)	2.805	59	207128	196.421
31) Acrylonitrile	(2)	2.921	53	304471	100.782
32) trans-1,2-Dichloroethene	(2)	2.953	96	92997	22.506
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	207314	20.606
34) n-Hexane	(2)	3.206	57	116893	21.143
36) 1,1-Dichloroethane	(2)	3.338	63	164243	21.936
38) di-Isopropyl ether	(2)	3.409	45	314239	21.846
39) 2-Chloro-1,3-butadiene	(2)	3.425	53	138541	21.364
40) Ethyl t-butyl ether	(2)	3.752	59	221032	21.080
45) 2,2-Dichloropropane	(2)	3.883	77	75689	22.509
42) cis-1,2-Dichloroethene	(2)	3.887	96	105718	22.787
44) 2-Butanone	(2)	3.899	43	639144	147.256
47) Propionitrile	(1)	3.960	54	199803	152.452
48) Methacrylonitrile	(2)	4.108	67	496119	152.733
49) Bromochloromethane	(2)	4.114	128	48427	20.081
50) Tetrahydrofuran	(1)	4.169	71	115894	95.544

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	4.195	83	156016	22.208
52)$Dibromofluoromethane	(2)	4.352	113	198099	49.504
53) 1,1,1-Trichloroethane	(2)	4.378	97	119941	22.691
54) Cyclohexane	(2)	4.439	56	142075	20.310
55) 1,1-Dichloropropene	(2)	4.541	75	123671	21.957
56) Carbon Tetrachloride	(2)	4.541	117	94740	20.885
58) Isobutyl Alcohol	(1)	4.673	41	185481	482.472
57)$1,2-Dichloroethane-d4	(2)	4.686	102	52871	49.678
60) Benzene	(2)	4.747	78	392054	21.655
61) 1,2-Dichloroethane	(2)	4.763	62	124290	22.224
65) t-Amyl methyl ether	(2)	4.869	73	220654	20.542
66)*Fluorobenzene	(2)	5.029	96	863762	50.000
67) n-Heptane	(2)	5.032	43	107071	20.263
69) n-Butanol	(1)	5.353	56	328345	961.937
71) Trichloroethene	(2)	5.404	95	97160	22.161
73) Methylcyclohexane	(2)	5.607	83	130478	20.499
74) 1,2-Dichloropropane	(2)	5.632	63	104752	22.537
75) Dibromomethane	(2)	5.751	93	62949	21.944
77) Methyl Methacrylate	(2)	5.773	69	102016	19.973
76) 1,4-Dioxane	(1)	5.783	88	51130M	501.065
79) Bromodichloromethane	(2)	5.924	83	113283	21.493
43) 1,2-Dichloroethene (Total)	(2)		96	198715	45.294
80) 2-Nitropropane	(2)	6.171	41	30099	16.878
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	66371	18.730
82) cis-1,3-Dichloropropene	(2)	6.406	75	158517	21.874
83) 4-Methyl-2-pentanone	(2)	6.582	43	843026	98.533
84)$Toluene-d8	(3)	6.694	98	904644	50.573
89) Toluene	(3)	6.765	92	252495	21.912
90) trans-1,3-Dichloropropene	(3)	7.012	75	141627	20.646
92) Ethyl Methacrylate	(3)	7.137	69	174648	20.719
93) 1,1,2-Trichloroethane	(3)	7.208	97	101734	22.938
94) Tetrachloroethene	(3)	7.359	166	102889	22.005
95) 1,3-Dichloropropane	(3)	7.388	76	169229	21.968
97) 2-Hexanone	(3)	7.487	43	652921	97.295
98) Dibromochloromethane	(3)	7.609	129	93639	21.617
100) 1,2-Dibromoethane	(3)	7.715	107	106921	21.943
101)*Chlorobenzene-d5	(3)	8.161	117	713862	50.000
103) Chlorobenzene	(3)	8.183	112	280419	21.937

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
104) 1,1,1,2-Tetrachloroethane	(3)	8.260	131	87309	21.253
105) Ethylbenzene	(3)	8.292	91	476224	21.744
107) m+p-Xylene	(3)	8.398	106	380724	43.723
108) o-Xylene	(3)	8.735	106	183750	21.450
110) Styrene	(3)	8.748	104	318309	22.150
111) Bromoform	(3)	8.896	173	67300	19.963
112) Isopropylbenzene	(3)	9.047	105	467195	22.194
113) Cyclohexanone	(1)	9.111	55	180831	392.853
115)$4-Bromofluorobenzene	(3)	9.162	95	356184	49.772
116) Bromobenzene	(4)	9.278	156	123084	21.520
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	166416	21.576
118) 1,2,3-Trichloropropane	(4)	9.310	110	50955	21.933
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	259117	104.764
120) n-Propylbenzene	(4)	9.371	91	558993	22.171
121) 2-Chlorotoluene	(4)	9.432	126	114743	22.064
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	396619	21.812
122) 4-Chlorotoluene	(4)	9.518	126	121267	21.782
125) tert-Butylbenzene	(4)	9.753	134	89119	21.572
126) Pentachloroethane	(4)	9.765	167	66140	20.252
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	411236	21.462
128) sec-Butylbenzene	(4)	9.916	105	488887	21.903
130) 1,3-Dichlorobenzene	(4)	9.990	146	235017	21.548
131) p-Isopropyltoluene	(4)	10.022	119	430620	21.794
132)*1,4-Dichlorobenzene-d4	(4)	10.038	152	397089	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	245420	21.706
91) 1,3-Dichloropropene (total)	(3)		100	300144	42.520
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	439986	21.341
136) Benzyl Chloride	(4)	10.157	91	312431	19.742
137) 1,3-Diethylbenzene	(4)	10.237	119	260974	21.021
138) 1,4-Diethylbenzene	(4)	10.298	119	270284	20.320
140) n-Butylbenzene	(4)	10.314	92	213919	21.451
139) 1,2-Dichlorobenzene	(4)	10.324	146	235762	21.788
141) 1,2-Diethylbenzene	(4)	10.381	119	223186	21.293
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	36179	20.640
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	174405	21.019
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	171135	21.483
148) Hexachlorobutadiene	(4)	11.530	225	58819	20.731
149) Naphthalene	(4)	11.582	128	578423	21.460

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

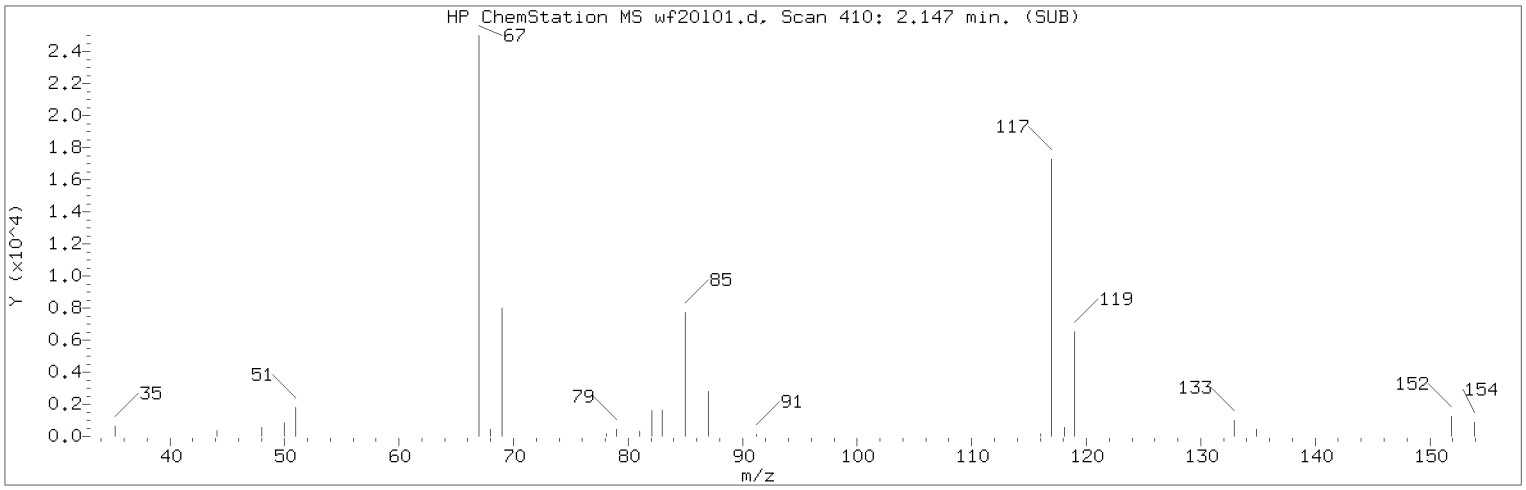
Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

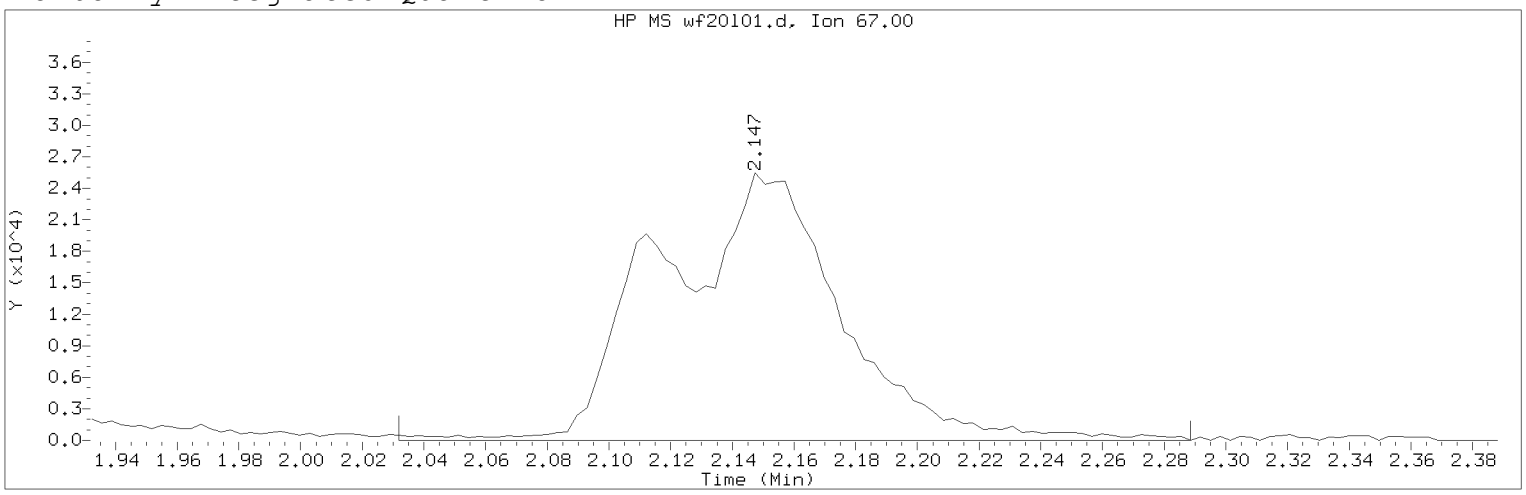
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	166855	21.460
109) Xylene (Total)	(3)		106	564474	65.173
151) 2-Methylnaphthalene	(4)	12.304	142	303477	19.735
142) Diethylbenzene (total)	(4)		100	754444	62.634

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20101.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

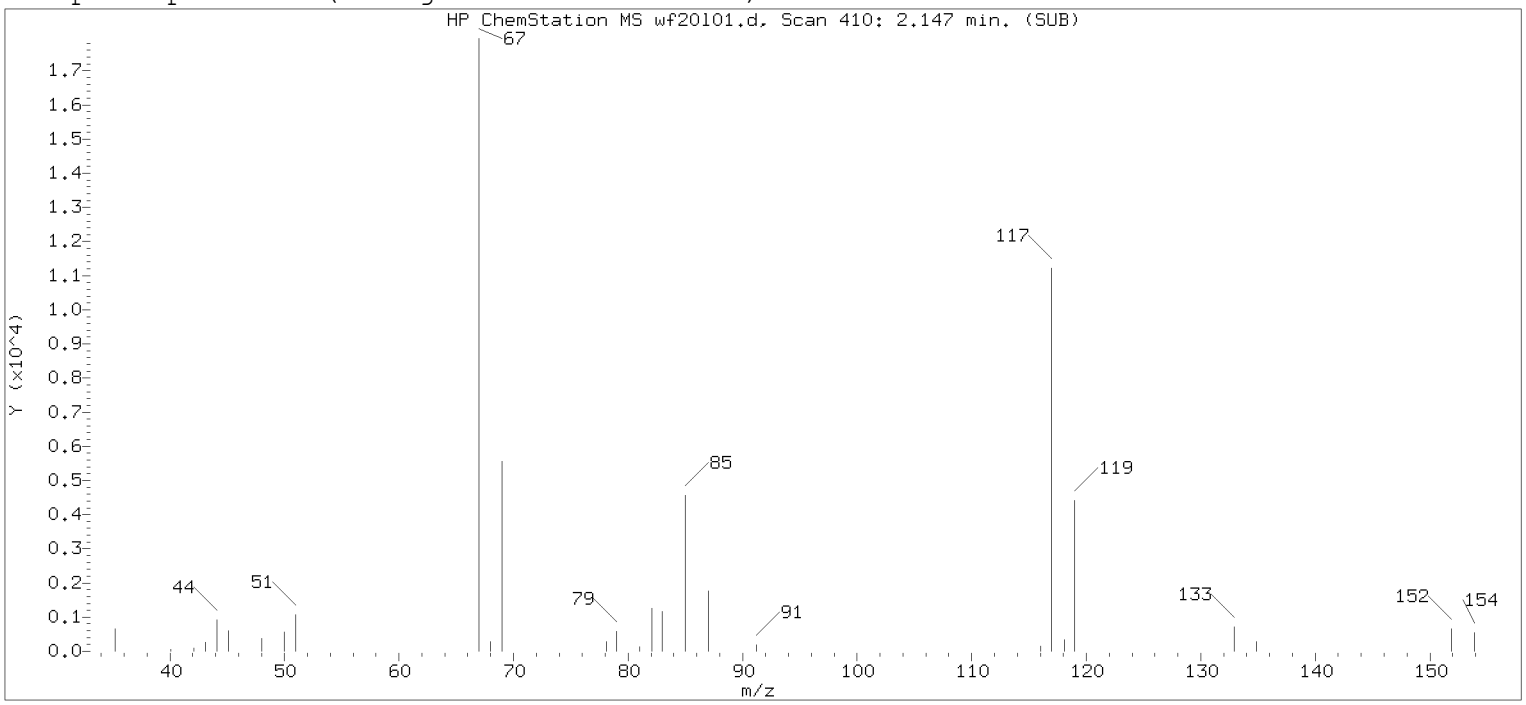
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 410
Retention Time (minutes): 2.147
Quant Ion : 67.00
Area (flag) : 103271M
On-Column Amount (ng) : 20.4098
Integration start scan : 373 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

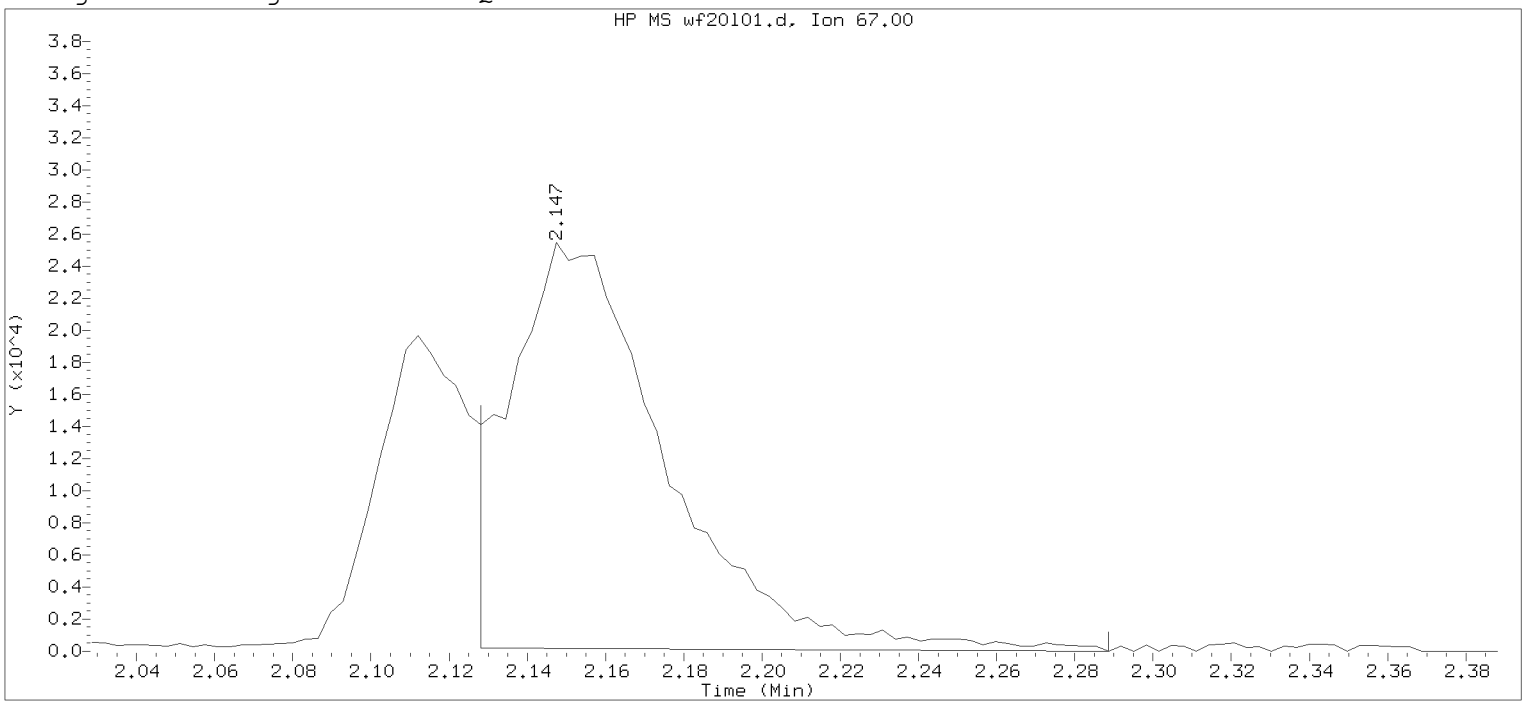
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:55.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20101.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

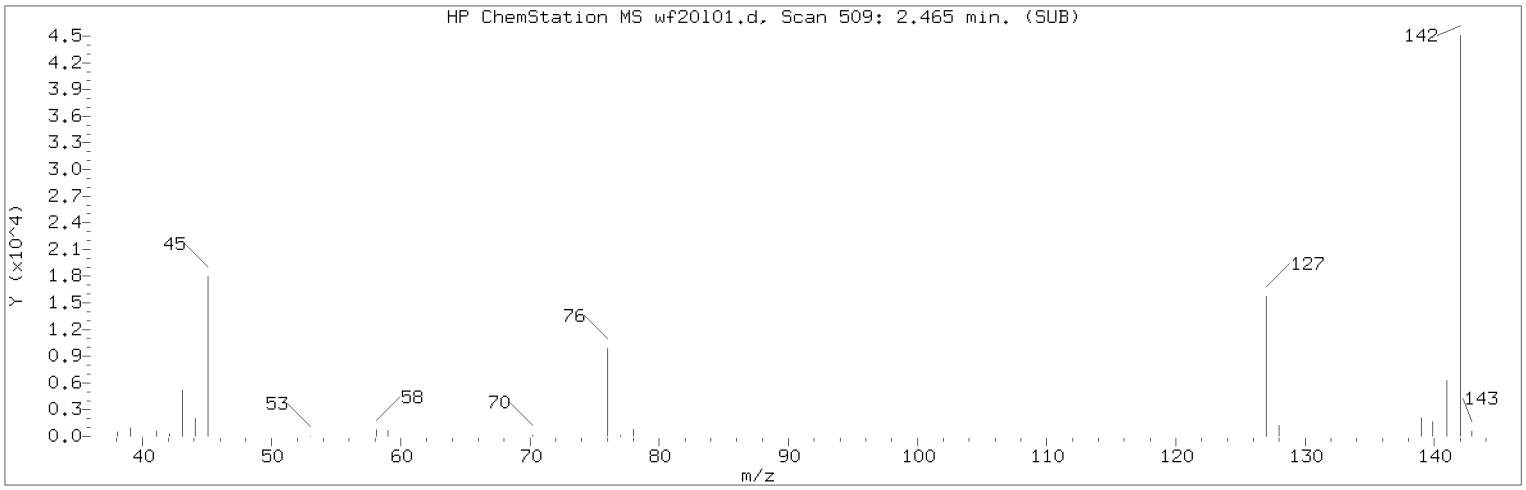
Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-FEB-2019 11:23
Date, time and analyst ID of latest file update: 20-Feb-2019 12:22 Automation

Sample Name: LCSW62 Lab Sample ID: LCSW62

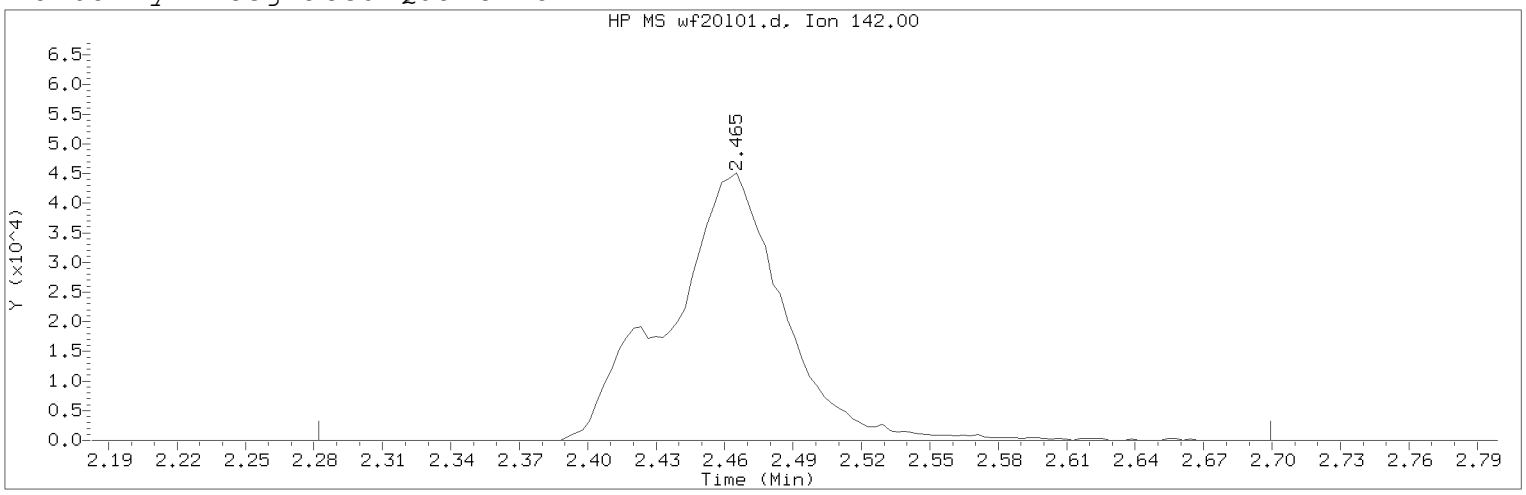
Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 410		
Retention Time (minutes)	: 2.147		
Quant Ion	: 67.00		
Area	: 69986		
On-column Amount (ng)	: 13.8316		
Integration start scan	: 403	Integration stop scan:	453
Y at integration start	: 195	Y at integration end:	0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20101.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

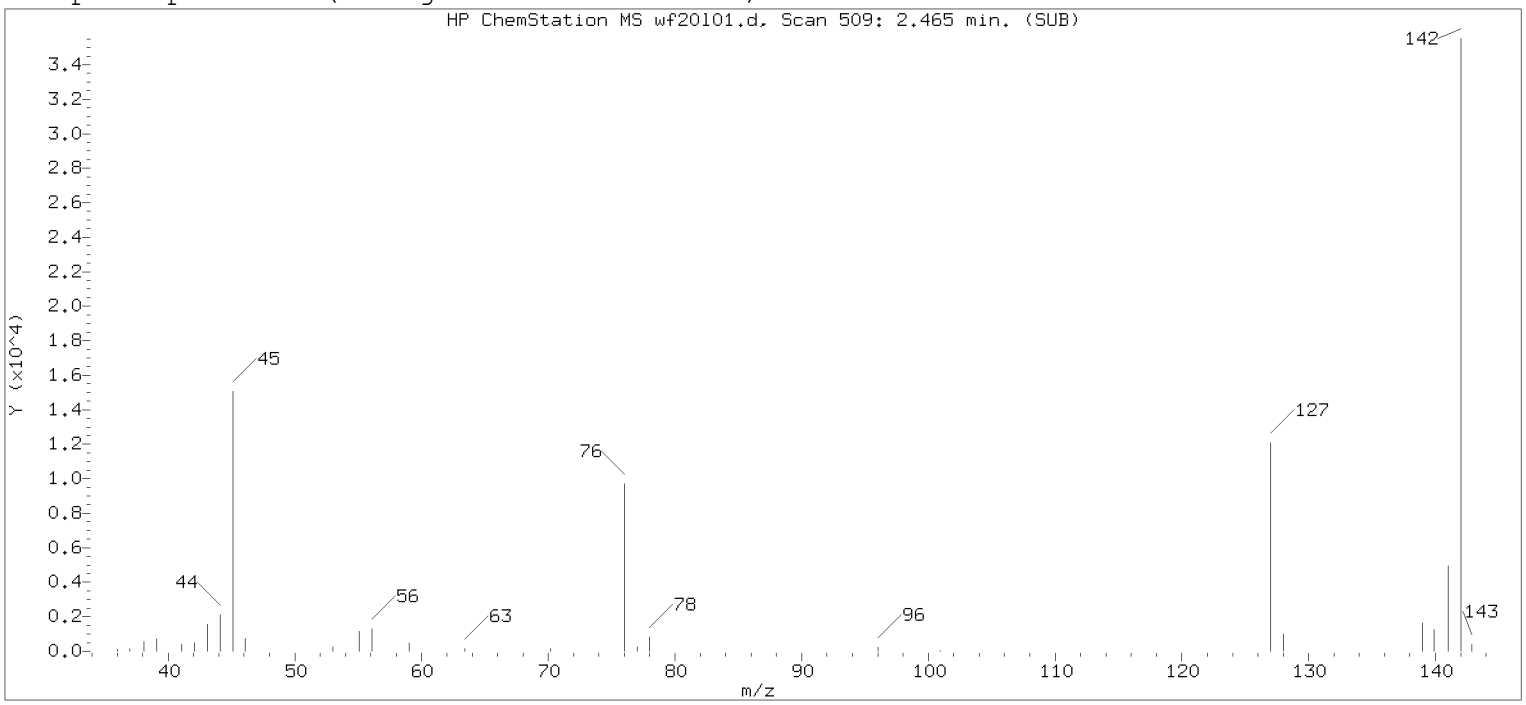
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area (flag) : 157275M
On-Column Amount (ng) : 21.5504
Integration start scan : 451 Integration stop scan: 581
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

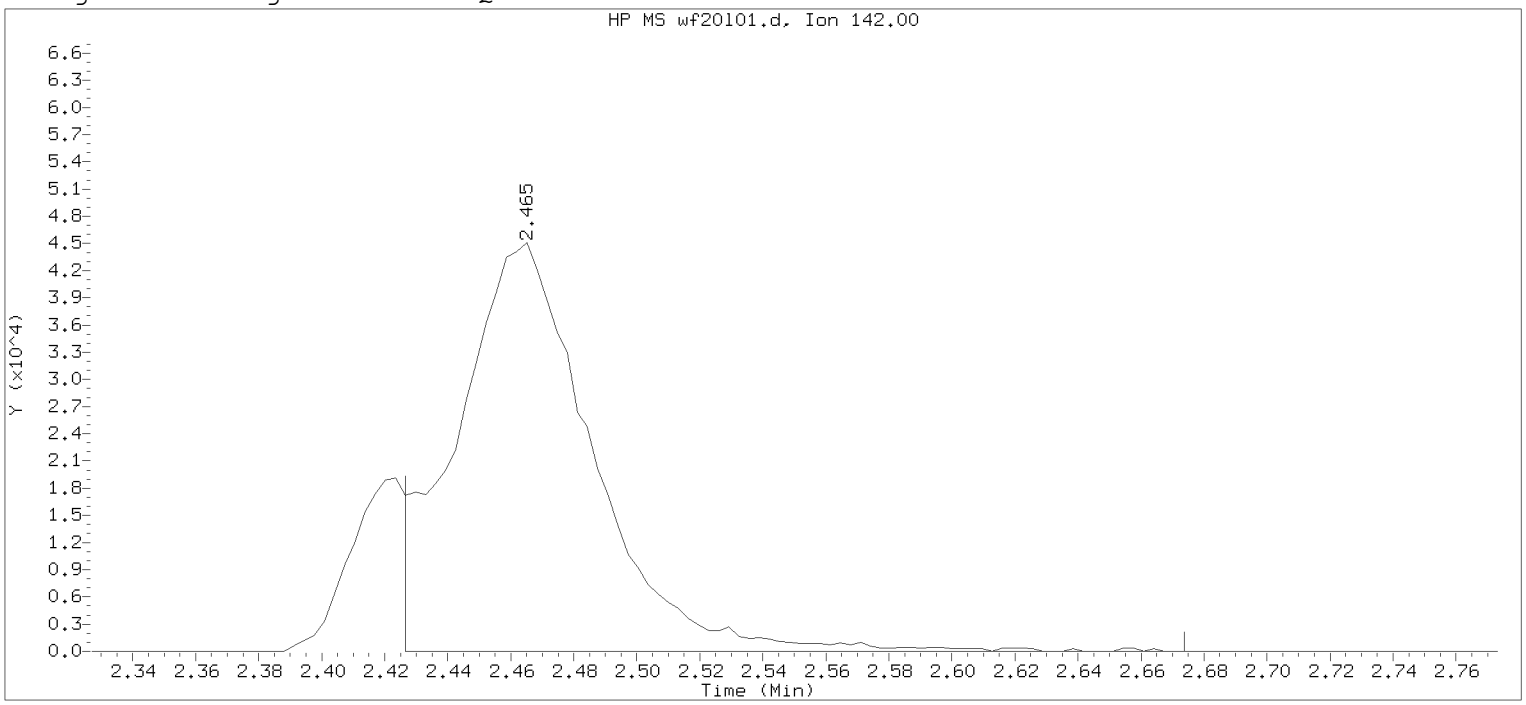
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:55.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

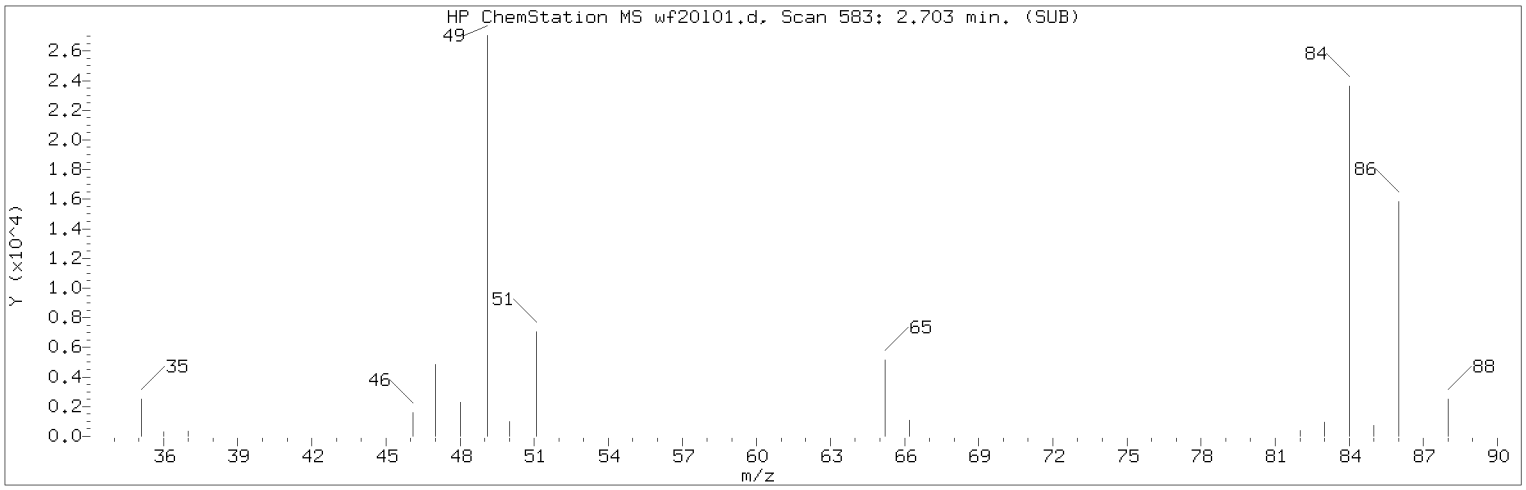
Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-FEB-2019 11:23
Date, time and analyst ID of latest file update: 20-Feb-2019 12:22 Automation

Sample Name: LCSW62 Lab Sample ID: LCSW62

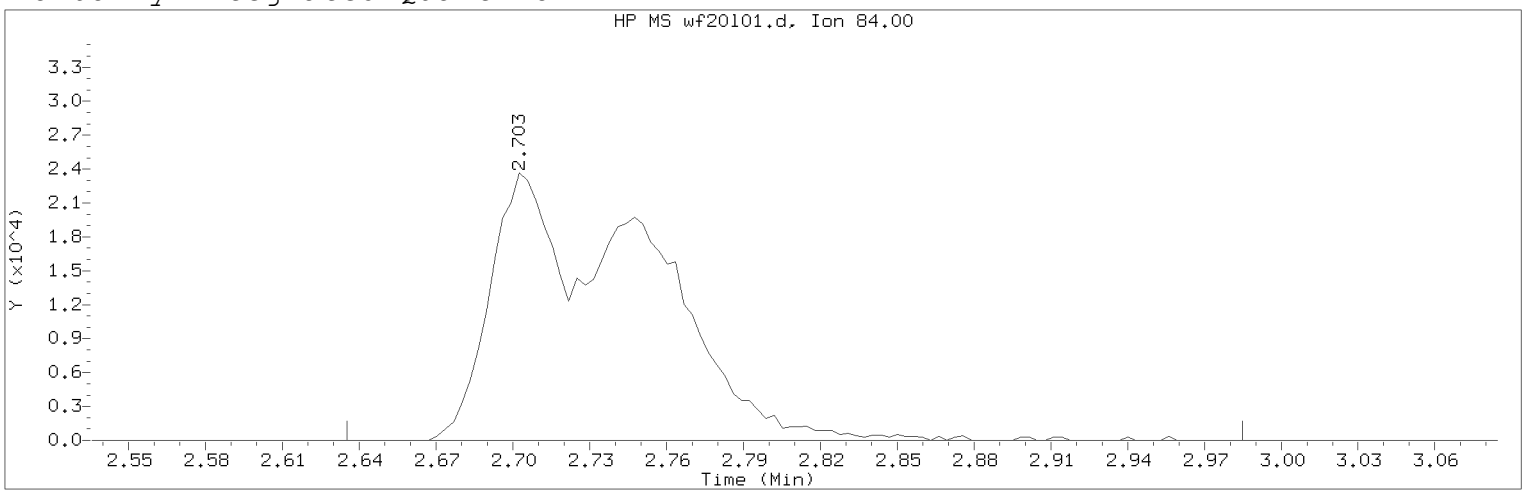
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area : 135289
On-column Amount (ng) : 18.5378
Integration start scan : 496 Integration stop scan: 573
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20101.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

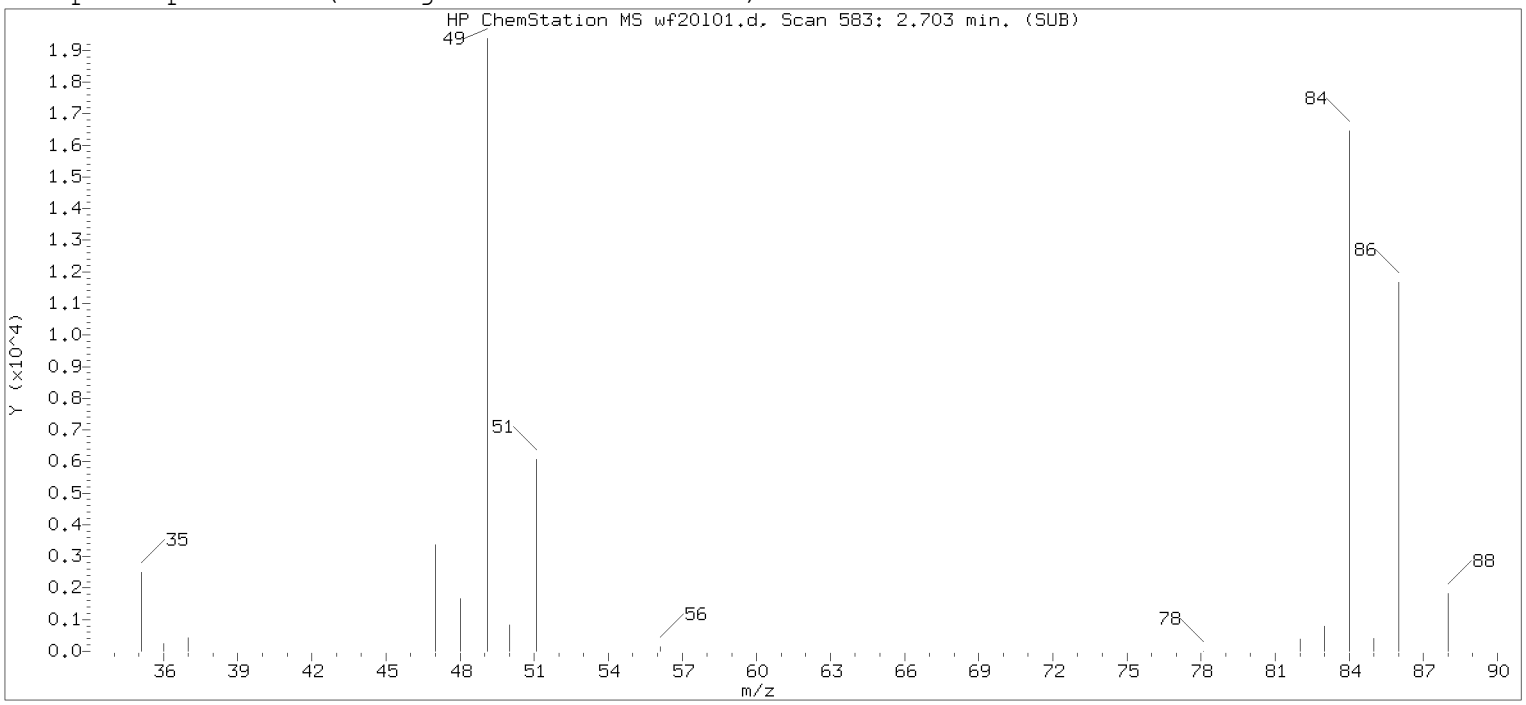
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 583
Retention Time (minutes): 2.703
Quant Ion : 84.00
Area (flag) : 100603M
On-Column Amount (ng) : 21.6116
Integration start scan : 561 Integration stop scan: 670
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

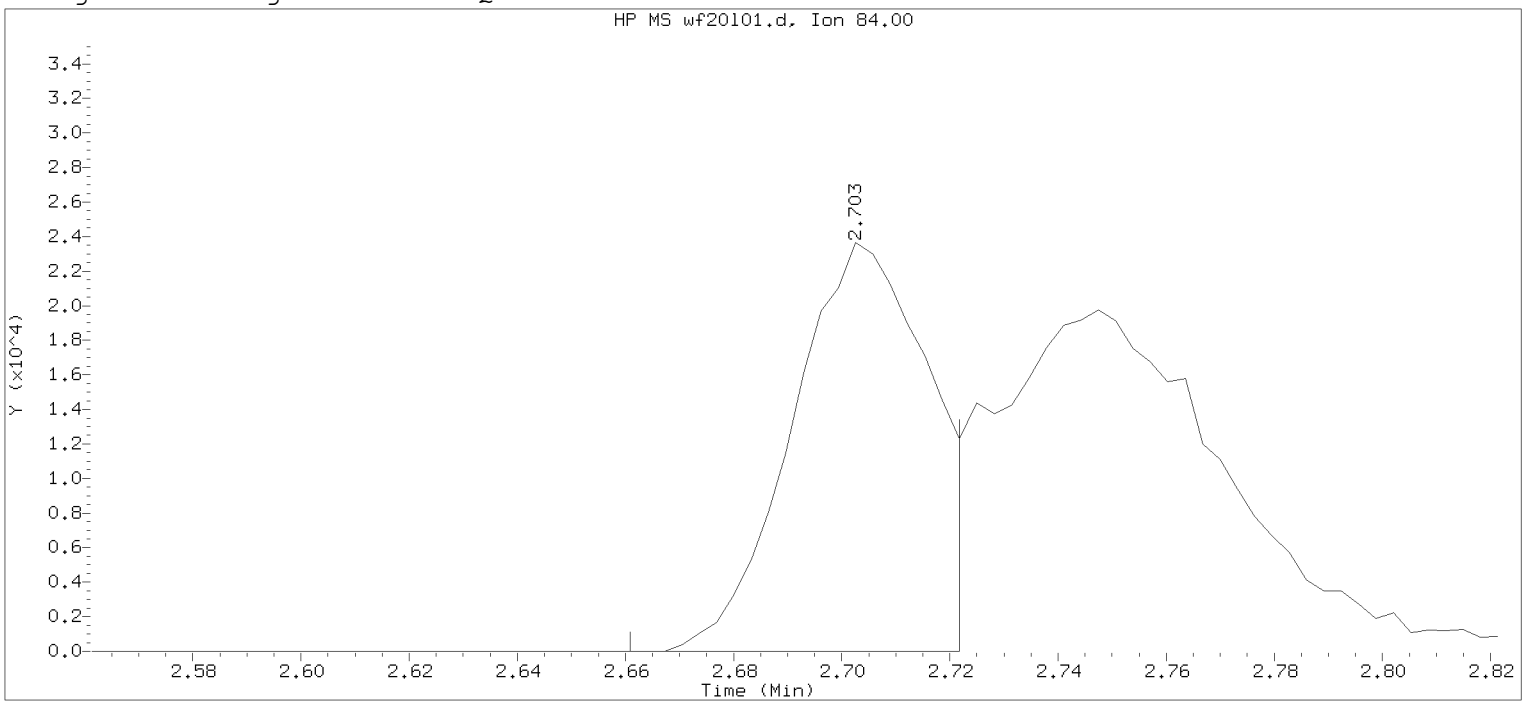
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:55.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

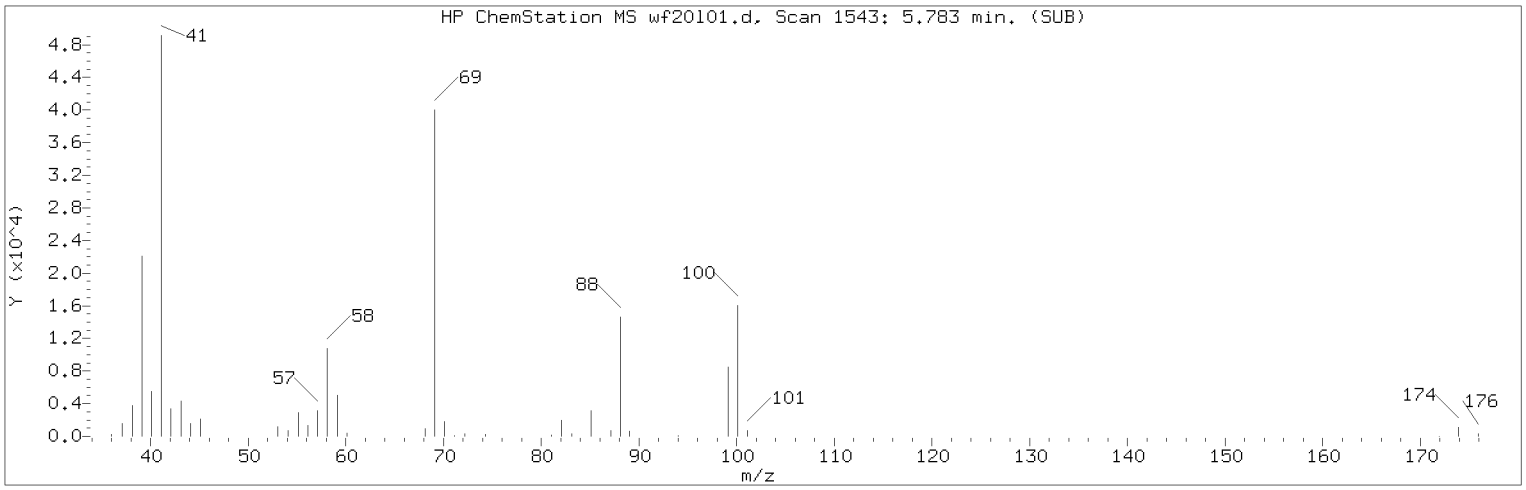
Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-FEB-2019 11:23
Date, time and analyst ID of latest file update: 20-Feb-2019 12:22 Automation

Sample Name: LCSW62 Lab Sample ID: LCSW62

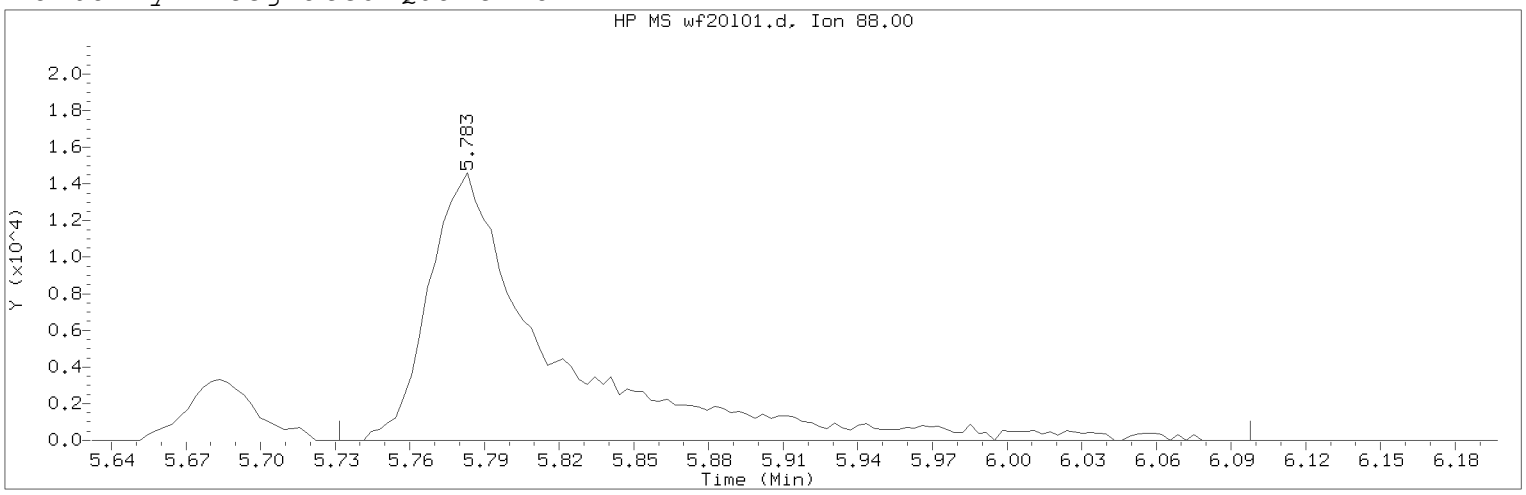
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 583
Retention Time (minutes): 2.703
Quant Ion : 84.00
Area : 40948
On-column Amount (ng) : 8.7967
Integration start scan : 569 Integration stop scan: 588
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20101.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

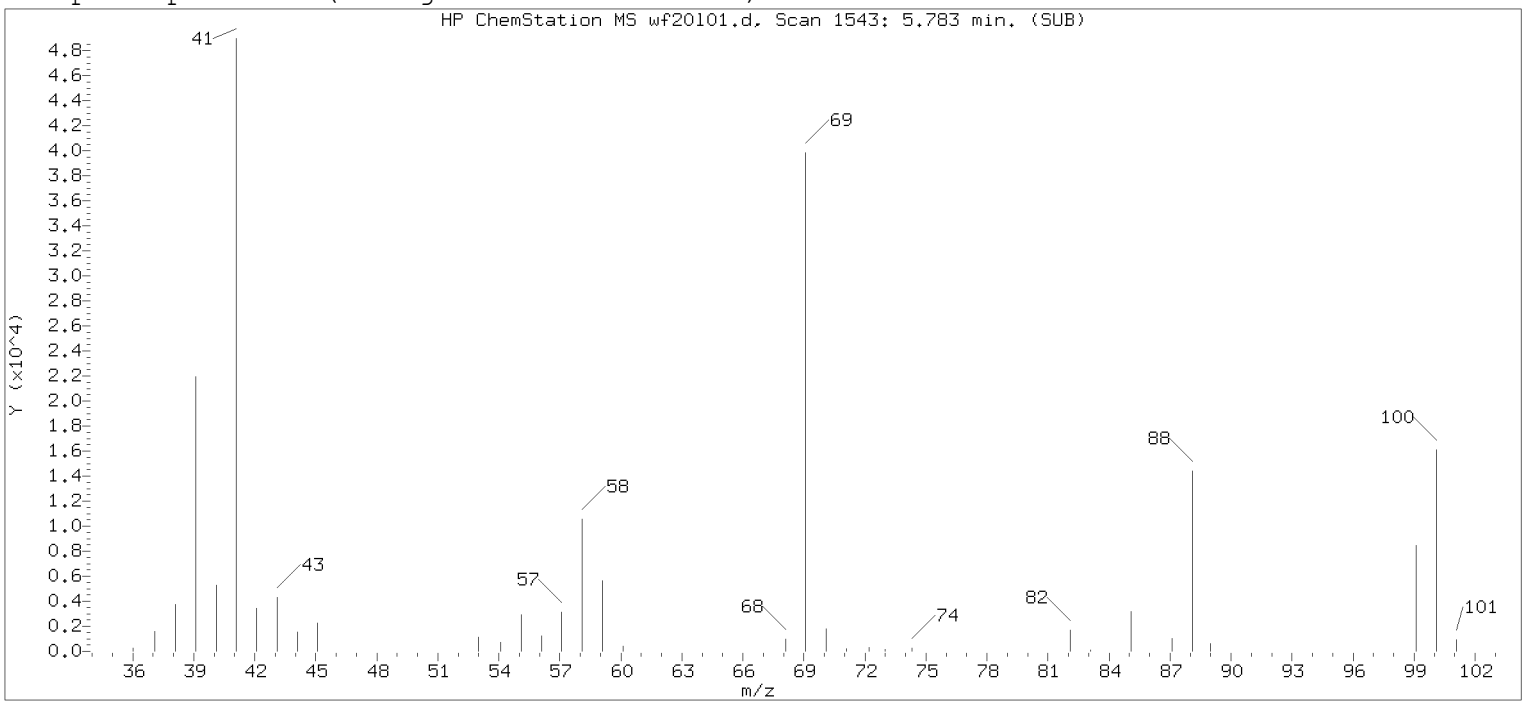
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1543
Retention Time (minutes): 5.783
Quant Ion : 88.00
Area (flag) : 51130M
On-Column Amount (ng) : 501.0652
Integration start scan : 1526 Integration stop scan: 1640
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

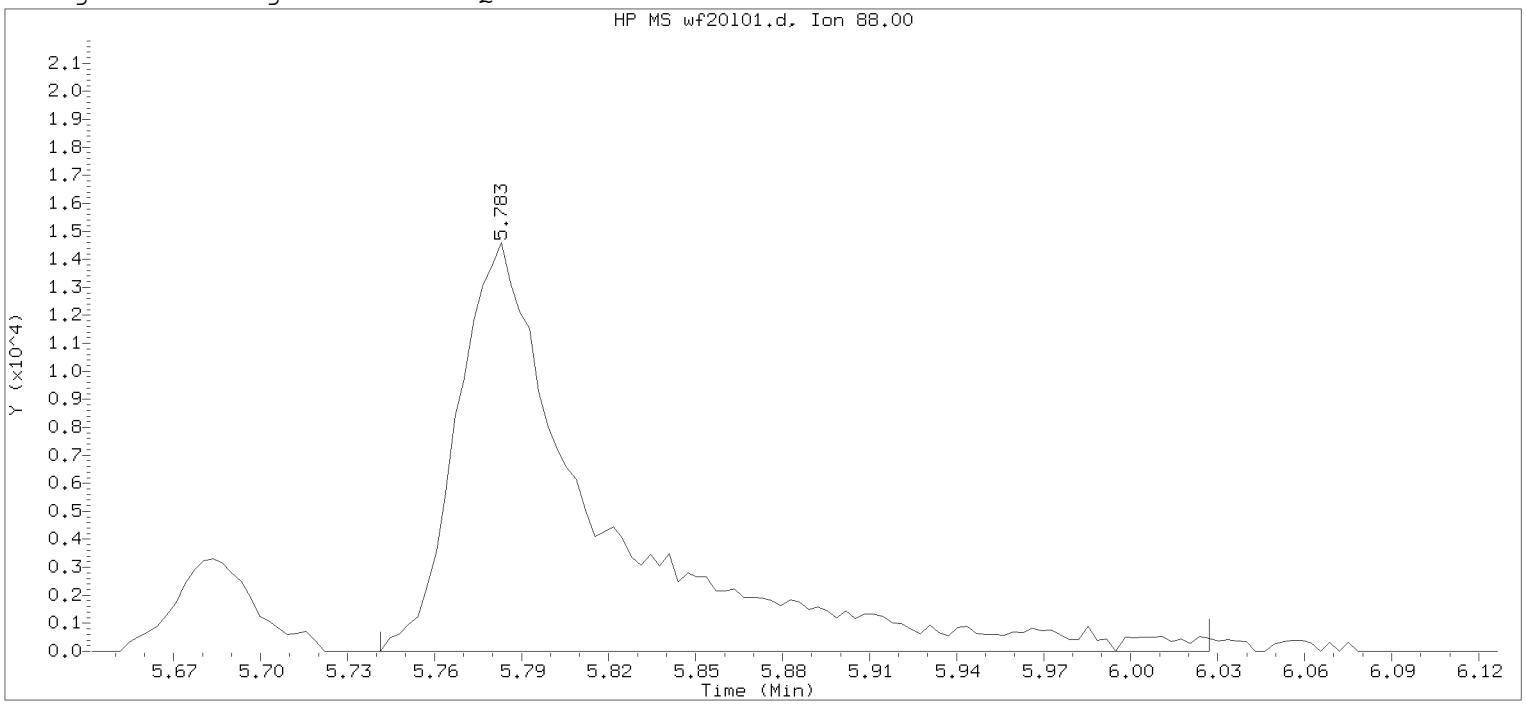
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:55.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-FEB-2019 11:23
Date, time and analyst ID of latest file update: 20-Feb-2019 12:22 Automation

Sample Name: LCSW62 Lab Sample ID: LCSW62

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1543
Retention Time (minutes): 5.783
Quant Ion : 88.00
Area : 50345
On-column Amount (ng) : 493.3796
Integration start scan : 1529 Integration stop scan: 1618
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Data File: /chem2/HP09137.i/19may18a.b/wy18t01.d

Date : 18-MAY-2019 21:44

Client ID: BFB FEB05-19

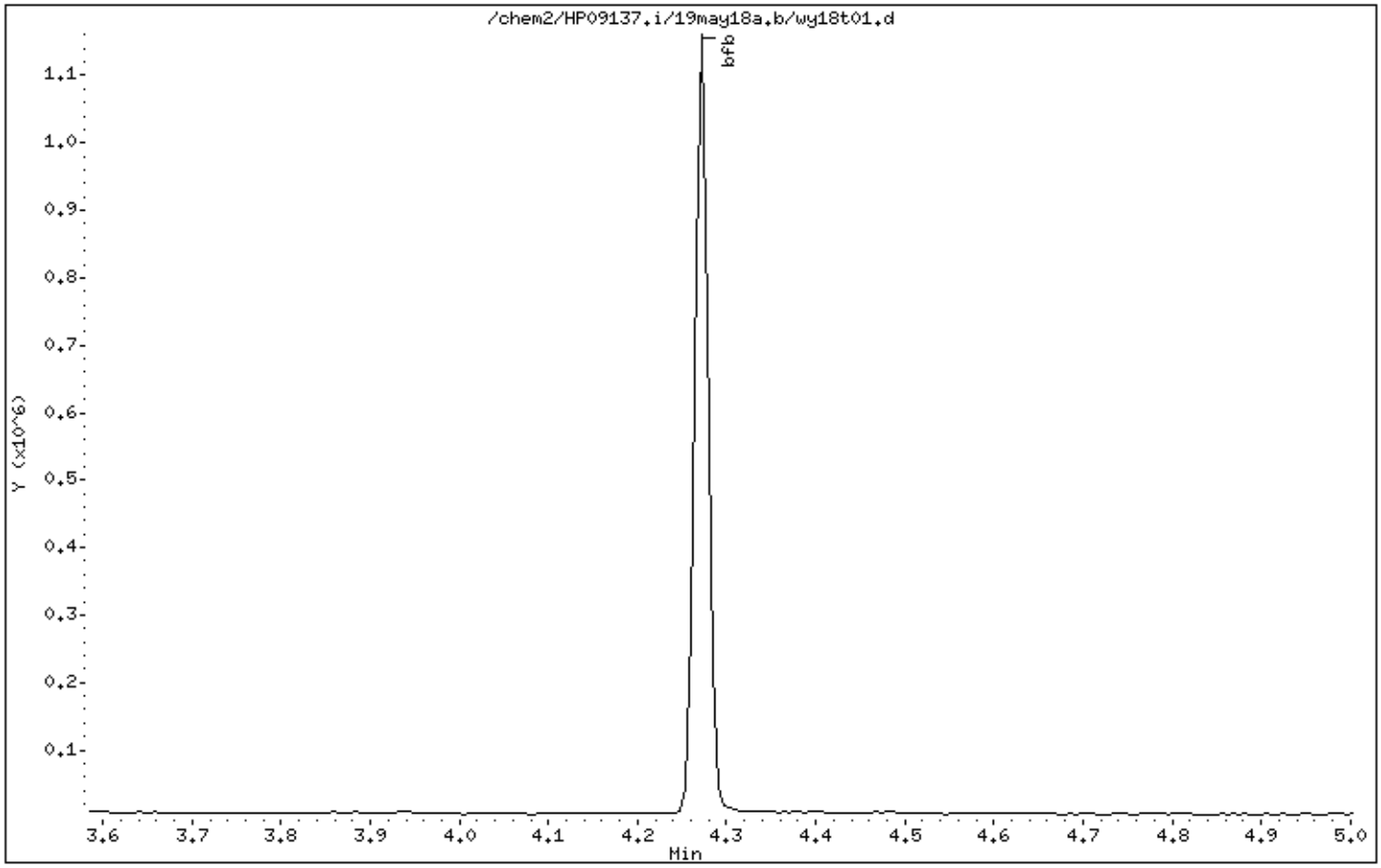
Instrument: HP09137.i

Sample Info: BFB FEB05-19;BFB 50NG;1;3;;;;;;

Operator: SEJ02002

Column phase: DB-624

Column diameter: 0.18



Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Data File: /chem2/HP09137.i/19may18a.b/wy18t01.d

Date : 18-MAY-2019 21:44

Client ID: BFB FEB05-19

Instrument: HP09137.i

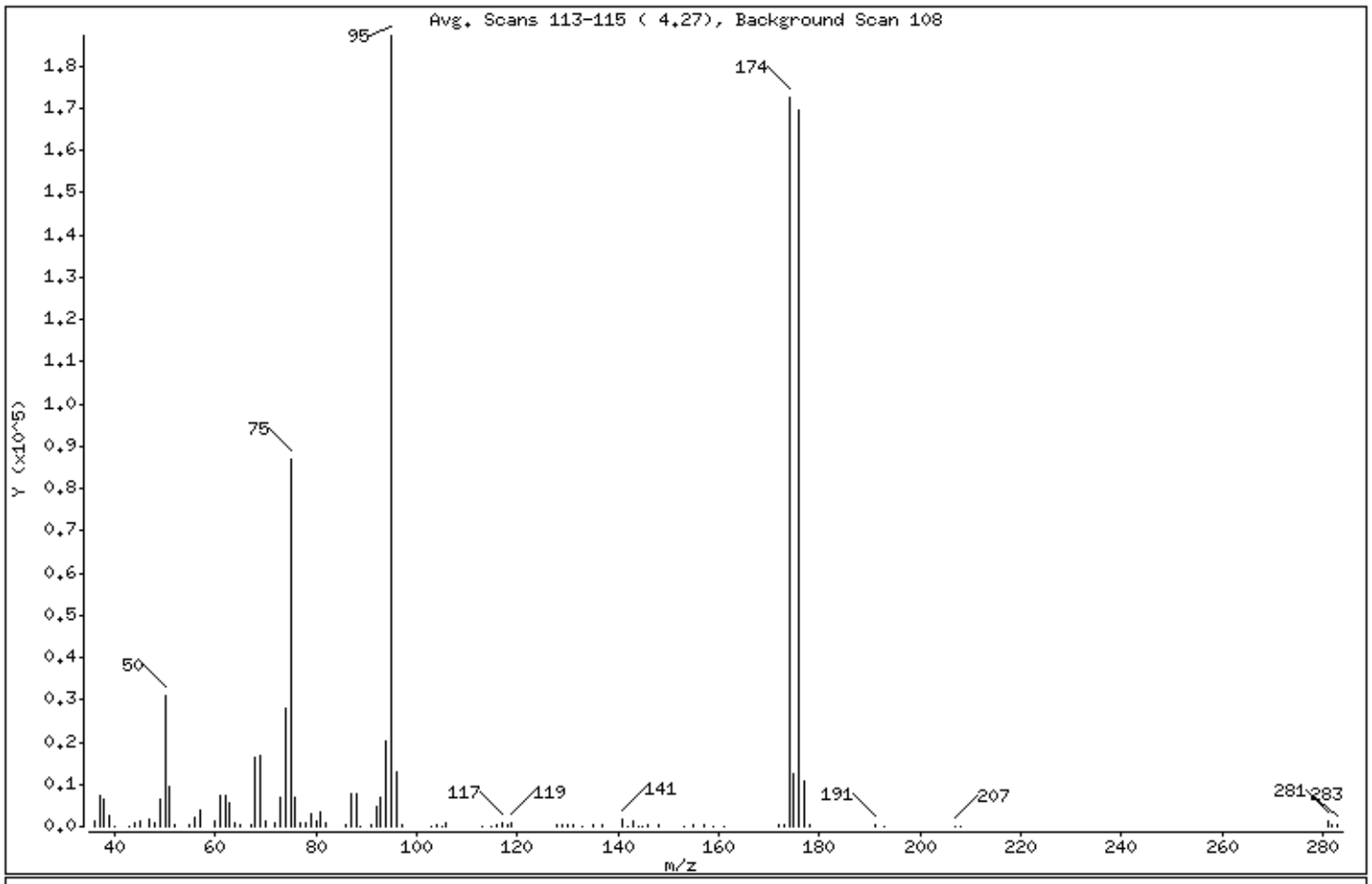
Sample Info: BFB FEB05-19;BFB 50NG;1;3;;;;;;

Operator: SEJ02002

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.64
75	30.00 - 60.00% of mass 95	46.44
96	5.00 - 9.00% of mass 95	6.84
173	Less than 2.00% of mass 174	0.33 (0.35)
174	50.00 - 100.00% of mass 95	92.20
175	5.00 - 9.00% of mass 174	6.62 (7.18)
176	95.00 - 101.00% of mass 174	90.49 (98.15)
177	5.00 - 9.00% of mass 176	5.78 (6.39)

Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Data File: /chem2/HP09137.i/19may18a.b/wy18t01.d

Date : 18-MAY-2019 21:44

Client ID: BFB FEB05-19 Instrument: HP09137.i

Sample Info: BFB FEB05-19;BFB 50NG;1;3;;;;;;

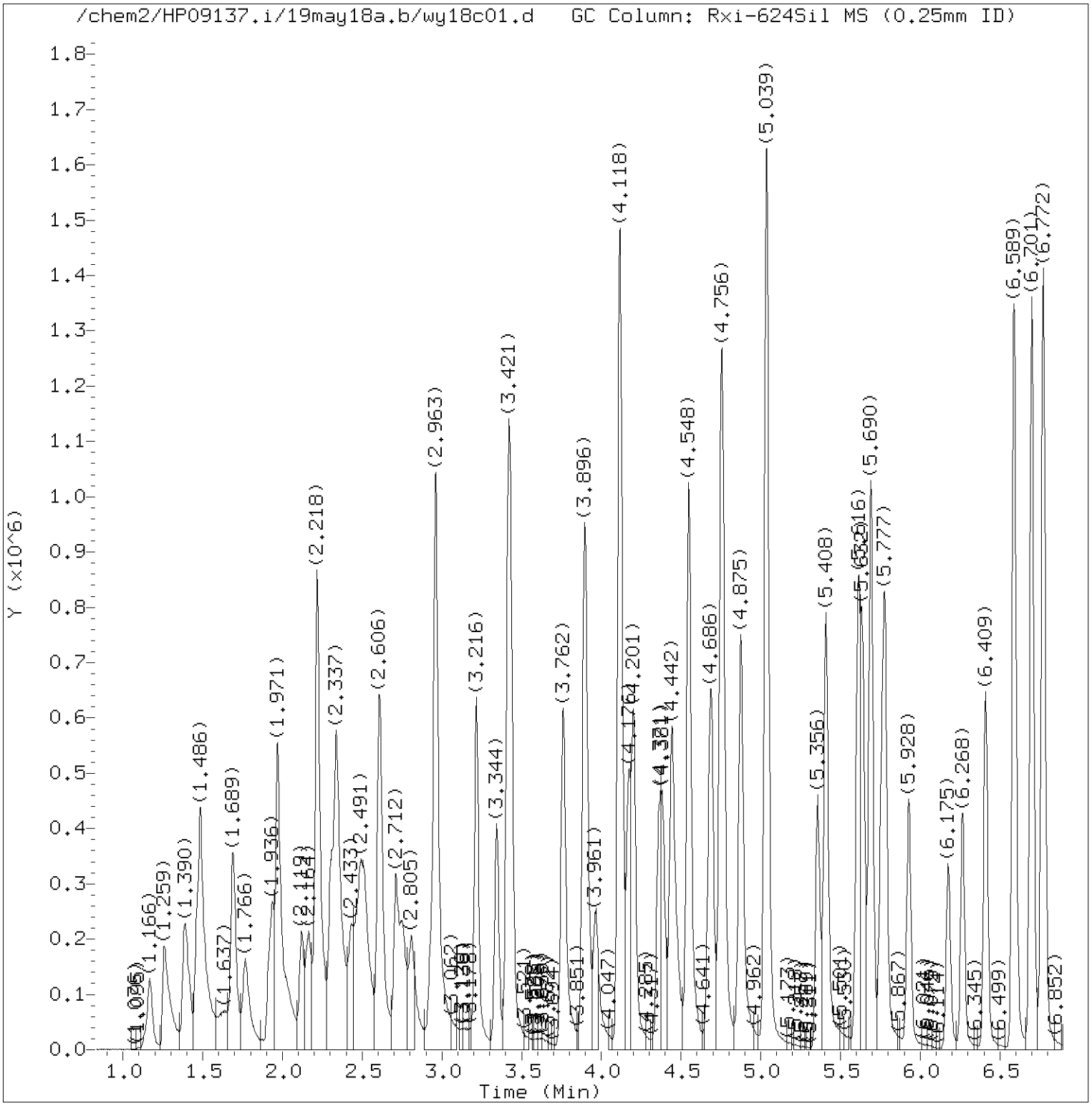
Operator: SEJ02002

Column phase: DB-624 Column diameter: 0.18

Data File: wy18t01.d
Spectrum: Avg. Scans 113-115 (4.27), Background Scan 108
Location of Maximum: 95.00
Number of points: 92

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1414	68.00	16311	97.00	533	148.00	466
37.00	7288	69.00	16776	103.00	96	153.00	192
38.00	6360	70.00	1438	104.00	608	155.00	524
39.00	2795	72.00	980	105.00	87	157.00	343
40.00	170	73.00	6743	106.00	720	159.00	126
43.00	84	74.00	27880	113.00	116	161.00	88
44.00	721	75.00	86912	115.00	83	172.00	581
45.00	1255	76.00	7035	116.00	245	173.00	612
47.00	1797	77.00	979	117.00	826	174.00	172544
48.00	1056	78.00	855	118.00	540	175.00	12390
49.00	6270	79.00	3149	119.00	742	176.00	169344
50.00	31136	80.00	1130	128.00	458	177.00	10814
51.00	9678	81.00	3355	129.00	226	178.00	239
52.00	540	82.00	664	130.00	571	191.00	391
55.00	418	86.00	282	131.00	309	193.00	114
56.00	2342	87.00	7726	133.00	152	207.00	198
57.00	4063	88.00	7828	135.00	308	208.00	108
60.00	1375	89.00	106	137.00	244	281.00	1125
61.00	7524	91.00	526	141.00	1515	282.00	357
62.00	7305	92.00	4844	142.00	90	283.00	276
63.00	5378	93.00	7062	143.00	1365		
64.00	712	94.00	20424	144.00	85		
65.00	289	95.00	187136	145.00	84		
67.00	539	96.00	12793	146.00	273		

Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

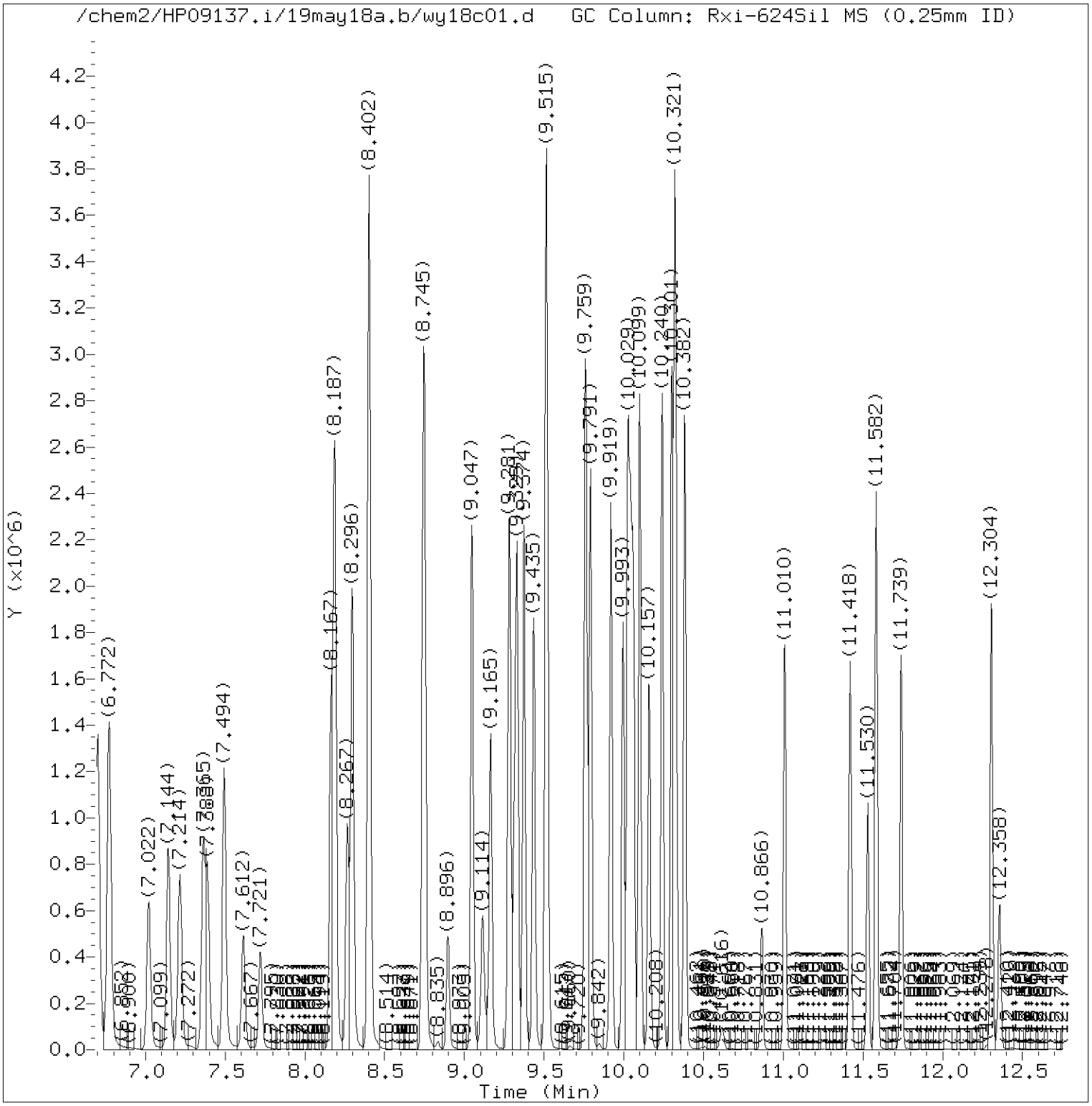
Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.259	85	389477	58.679
4) Chloromethane	(2)	1.384	50	348458	42.161
6) Vinyl Chloride	(2)	1.461	62	337342	44.524
5) 1,3-Butadiene	(2)	1.486	39	202998	40.303
8) Bromomethane	(2)	1.692	94	277344	46.414
9) Chloroethane	(2)	1.769	64	208032	41.725
12) Trichlorofluoromethane	(2)	1.932	101	425684	52.901
11) n-Pentane	(2)	1.971	43	309759	40.477
13) Ethanol	(1)	2.035	45	57065	659.199
15) Freon 123a	(2)	2.119	67	270649M	45.010
16) Acrolein	(1)	2.218	56	850771	622.590
17) 1,1-Dichloroethene	(2)	2.308	96	234343M	51.779
17) 1,1-Dichloroethene	(2)	2.301	63	88931	38.947
18) Acetone	(1)	2.340	58	81695	122.996
19) Freon 113	(2)	2.343	101	203135	51.113
21) 2-Propanol	(1)	2.449	45	118831	240.796
22) Methyl Iodide	(2)	2.478	142	438530M	50.563
23) Carbon Disulfide	(2)	2.513	76	688325M	43.170
25) Allyl Chloride	(2)	2.606	41	365252	46.325
27) Methyl Acetate	(2)	2.622	43	295355	43.278
28) Methylene Chloride	(2)	2.712	84	255875M	46.253
29)*t-Butyl alcohol-d10	(1)	2.738	65	189811	250.000
30) t-Butyl alcohol	(1)	2.812	59	232462	264.067
31) Acrylonitrile	(2)	2.930	53	166868	46.478
32) trans-1,2-Dichloroethene	(2)	2.963	96	242897	49.465
33) Methyl Tertiary Butyl Ether	(2)	2.963	73	650683	54.421
34) n-Hexane	(2)	3.219	57	317302	48.293
36) 1,1-Dichloroethane	(2)	3.344	63	415239	46.667
38) di-Isopropyl ether	(2)	3.415	45	761418	44.542
39) 2-Chloro-1,3-butadiene	(2)	3.431	53	381575	49.514
40) Ethyl t-butyl ether	(2)	3.762	59	623126	50.008
42) cis-1,2-Dichloroethene	(2)	3.893	96	264290	47.936
45) 2,2-Dichloropropane	(2)	3.893	77	165548	41.427
44) 2-Butanone	(2)	3.909	43	451723	87.576
47) Propionitrile	(1)	3.967	54	324612	296.695
48) Methacrylonitrile	(2)	4.115	67	426452	110.473
49) Bromochloromethane	(2)	4.124	128	149245	52.075
50) Tetrahydrofuran	(1)	4.172	71	129121	127.513

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	4.201	83	415434	49.761
52)$Dibromofluoromethane	(2)	4.362	113	229325	48.223
52)$Dibromofluoromethane	(2)	4.358	111	233674	47.866
53) 1,1,1-Trichloroethane	(2)	4.384	97	310606	49.446
54) Cyclohexane	(2)	4.442	56	389364	46.837
54) Cyclohexane	(2)	4.442	84	316164	45.945
54) Cyclohexane	(2)	4.442	69	118873	47.580
55) 1,1-Dichloropropene	(2)	4.548	75	322157	48.131
56) Carbon Tetrachloride	(2)	4.551	117	264516	49.068
58) Isobutyl Alcohol	(1)	4.679	41	221106M	688.951
57)$1,2-Dichloroethane-d4	(2)	4.692	102	61687	48.774
57)$1,2-Dichloroethane-d4	(2)	4.692	65	275360	50.014
57)$1,2-Dichloroethane-d4	(2)	4.695	104	40301	50.035
60) Benzene	(2)	4.753	78	1015277	47.189
61) 1,2-Dichloroethane	(2)	4.769	62	327047	49.208
61) 1,2-Dichloroethane	(2)	4.769	98	32539	51.460
65) t-Amyl methyl ether	(2)	4.875	73	630268	49.374
66)*Fluorobenzene	(2)	5.032	96	1026490	50.000
67) n-Heptane	(2)	5.039	43	291159	46.367
69) n-Butanol	(1)	5.356	56	362062	1270.611
71) Trichloroethene	(2)	5.408	95	256734	49.275
73) Methylcyclohexane	(2)	5.610	83	386933	51.154
73) Methylcyclohexane	(2)	5.613	98	179823	51.129
74) 1,2-Dichloropropane	(2)	5.639	63	251947	45.613
75) Dibromomethane	(2)	5.758	93	170629	50.053
77) Methyl Methacrylate	(2)	5.777	69	276637	45.574
76) 1,4-Dioxane	(1)	5.783	88	59193M	694.875
79) Bromodichloromethane	(2)	5.928	83	305197	48.726
43) 1,2-Dichloroethene (Total)	(2)		96	507187	97.401
80) 2-Nitropropane	(2)	6.175	41	217430	102.597
81) 2-Chloroethyl Vinyl Ether	(2)	6.264	63	197123	46.809
82) cis-1,3-Dichloropropene	(2)	6.409	75	404573	46.978
83) 4-Methyl-2-pentanone	(2)	6.589	43	965889	94.996
84)$Toluene-d8	(3)	6.701	98	1002334	51.390
84)$Toluene-d8	(3)	6.701	100	661862	51.170
89) Toluene	(3)	6.772	92	660052	52.533
90) trans-1,3-Dichloropropene	(3)	7.019	75	376388	50.320
92) Ethyl Methacrylate	(3)	7.144	69	473852	51.555

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on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) 1,1,2-Trichloroethane	(3)	7.218	97	259285	53.617
94) Tetrachloroethene	(3)	7.362	166	285295	55.958
95) 1,3-Dichloropropane	(3)	7.388	76	433682	51.632
97) 2-Hexanone	(3)	7.494	43	771018	105.370
98) Dibromochloromethane	(3)	7.615	129	262007	55.472
100) 1,2-Dibromoethane	(3)	7.718	107	285438	53.724
101)*Chlorobenzene-d5	(3)	8.161	117	778376	50.000
103) Chlorobenzene	(3)	8.190	112	740508	53.127
104) 1,1,1,2-Tetrachloroethane	(3)	8.267	131	243504	54.363
105) Ethylbenzene	(3)	8.296	91	1251399	52.403
107) m+p-Xylene	(3)	8.402	106	1017623	107.179
108) o-Xylene	(3)	8.739	106	491071	52.574
110) Styrene	(3)	8.751	104	848188	54.131
111) Bromoform	(3)	8.896	173	201322	54.767
112) Isopropylbenzene	(3)	9.047	105	1214414	52.909
113) Cyclohexanone	(1)	9.114	55	235742	613.490
115)$4-Bromofluorobenzene	(3)	9.165	95	368437	47.217
115)$4-Bromofluorobenzene	(3)	9.165	174	334133	50.746
116) Bromobenzene	(4)	9.281	156	341954	53.469
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	441469	51.188
118) 1,2,3-Trichloropropane	(4)	9.316	110	138660	53.377
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	311625	112.678
120) n-Propylbenzene	(4)	9.374	91	1420091	50.371
121) 2-Chlorotoluene	(4)	9.435	126	307146	52.818
123) 1,3,5-Trimethylbenzene	(4)	9.512	105	1042743	51.284
122) 4-Chlorotoluene	(4)	9.518	126	331412	53.238
125) tert-Butylbenzene	(4)	9.759	134	236534	51.203
126) Pentachloroethane	(4)	9.769	167	203886	55.832
127) 1,2,4-Trimethylbenzene	(4)	9.791	105	1095700	51.139
128) sec-Butylbenzene	(4)	9.919	105	1243502	49.824
130) 1,3-Dichlorobenzene	(4)	9.993	146	641768	52.624
131) p-Isopropyltoluene	(4)	10.025	119	1126699	50.997
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	444015	50.000
134) 1,4-Dichlorobenzene	(4)	10.061	146	665243	52.618
91) 1,3-Dichloropropene (total)	(3)		100	780961	97.297
135) 1,2,3-Trimethylbenzene	(4)	10.099	105	1207600	52.383
136) Benzyl Chloride	(4)	10.157	91	884562	49.987
137) 1,3-Diethylbenzene	(4)	10.240	119	708507	51.037

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$ = Compound is a surrogate standard.

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on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
138) 1,4-Diethylbenzene	(4)	10.301	119	746561	50.195
140) n-Butylbenzene	(4)	10.317	92	534448	47.928
139) 1,2-Dichlorobenzene	(4)	10.327	146	641494	53.019
141) 1,2-Diethylbenzene	(4)	10.382	119	604765	51.600
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	96797	49.386
145) 1,3,5-Trichlorobenzene	(4)	11.010	180	448931	48.387
147) 1,2,4-Trichlorobenzene	(4)	11.421	180	422444	47.426
148) Hexachlorobutadiene	(4)	11.530	225	154012	48.546
149) Naphthalene	(4)	11.585	128	1480377	49.118
150) 1,2,3-Trichlorobenzene	(4)	11.739	180	414019	47.621
109) Xylene (Total)	(3)		106	1508694	159.753
151) 2-Methylnaphthalene	(4)	12.304	142	680143	39.554
142) Diethylbenzene (total)	(4)		100	2059833	152.832

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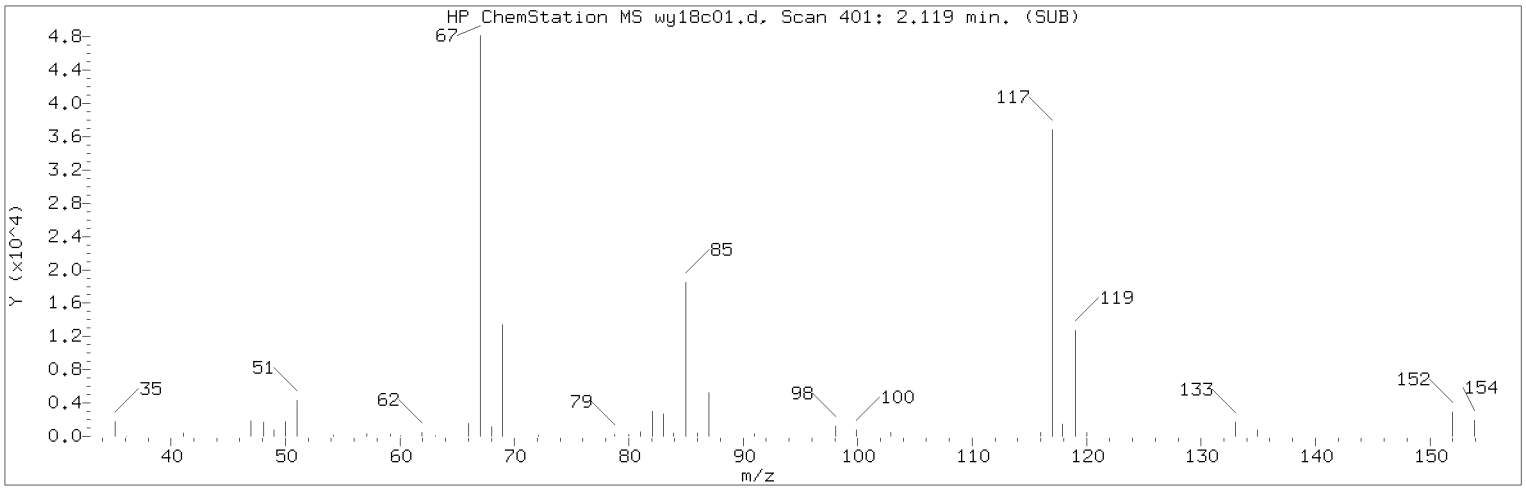
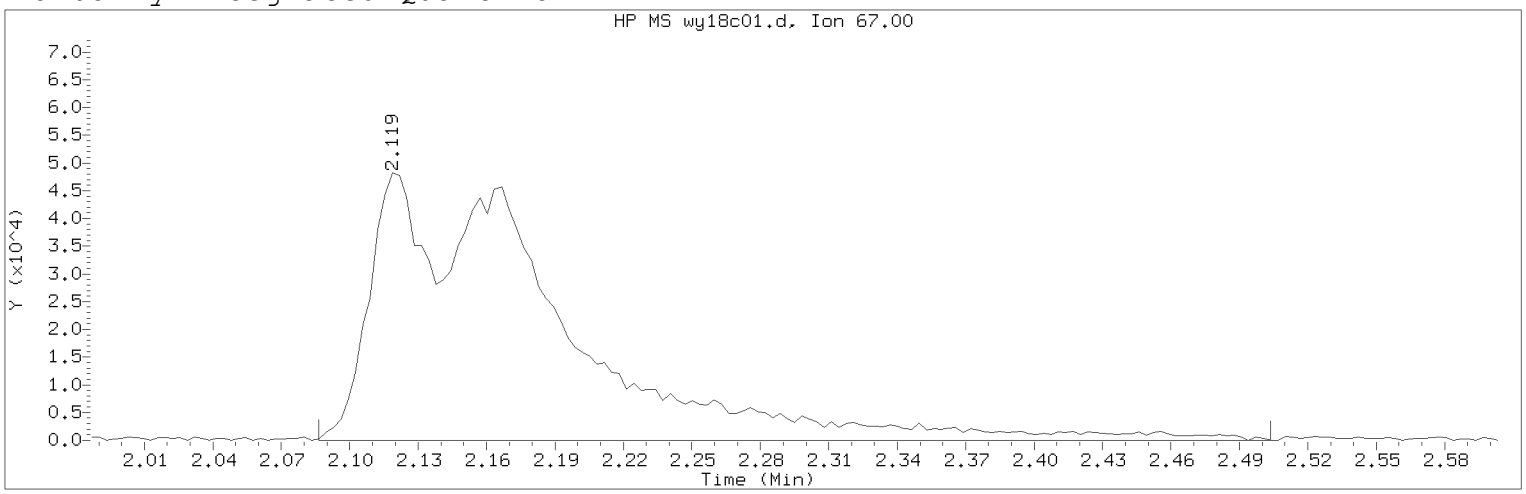
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

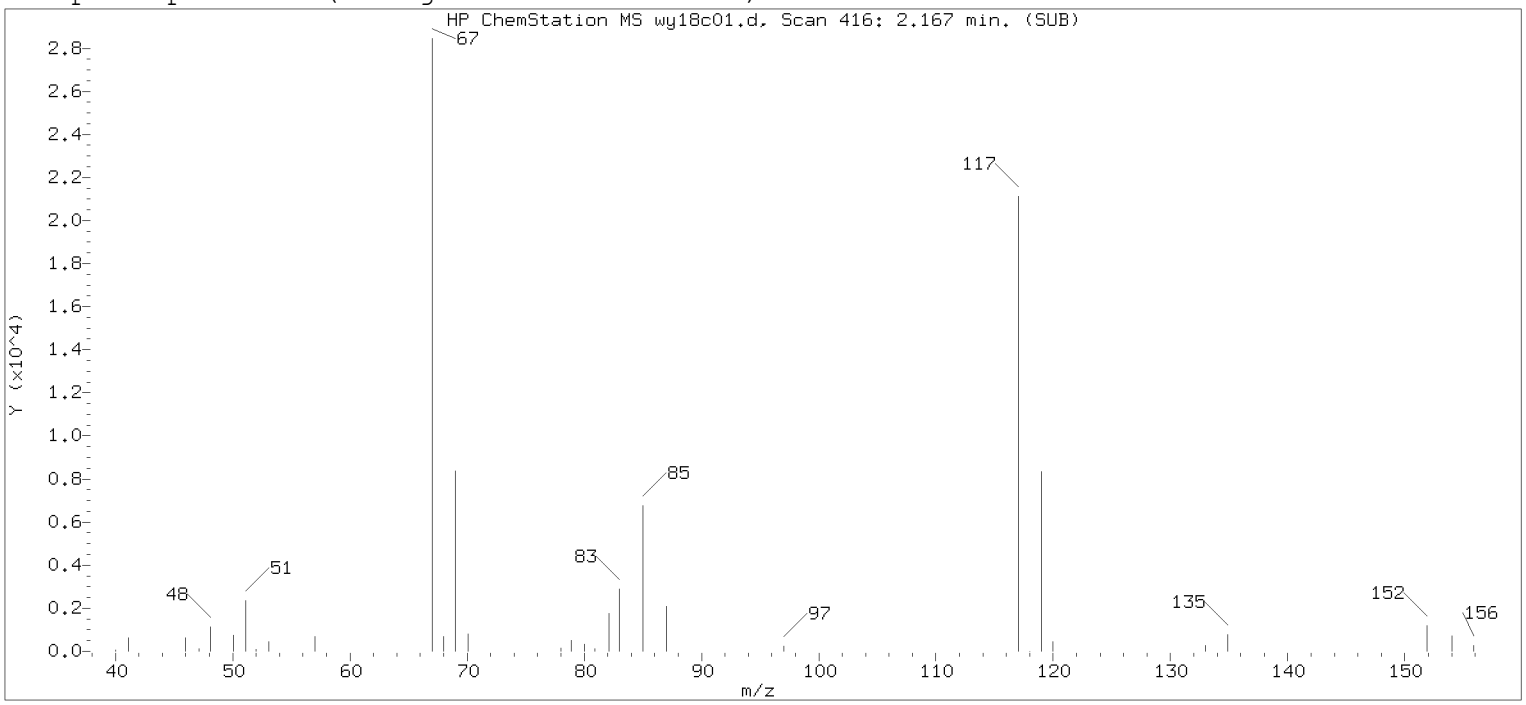
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 401
Retention Time (minutes): 2.119
Quant Ion : 67.00
Area (flag) : 270649M
On-Column Amount (ng) : 45.0099
Integration start scan : 390 Integration stop scan: 520
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

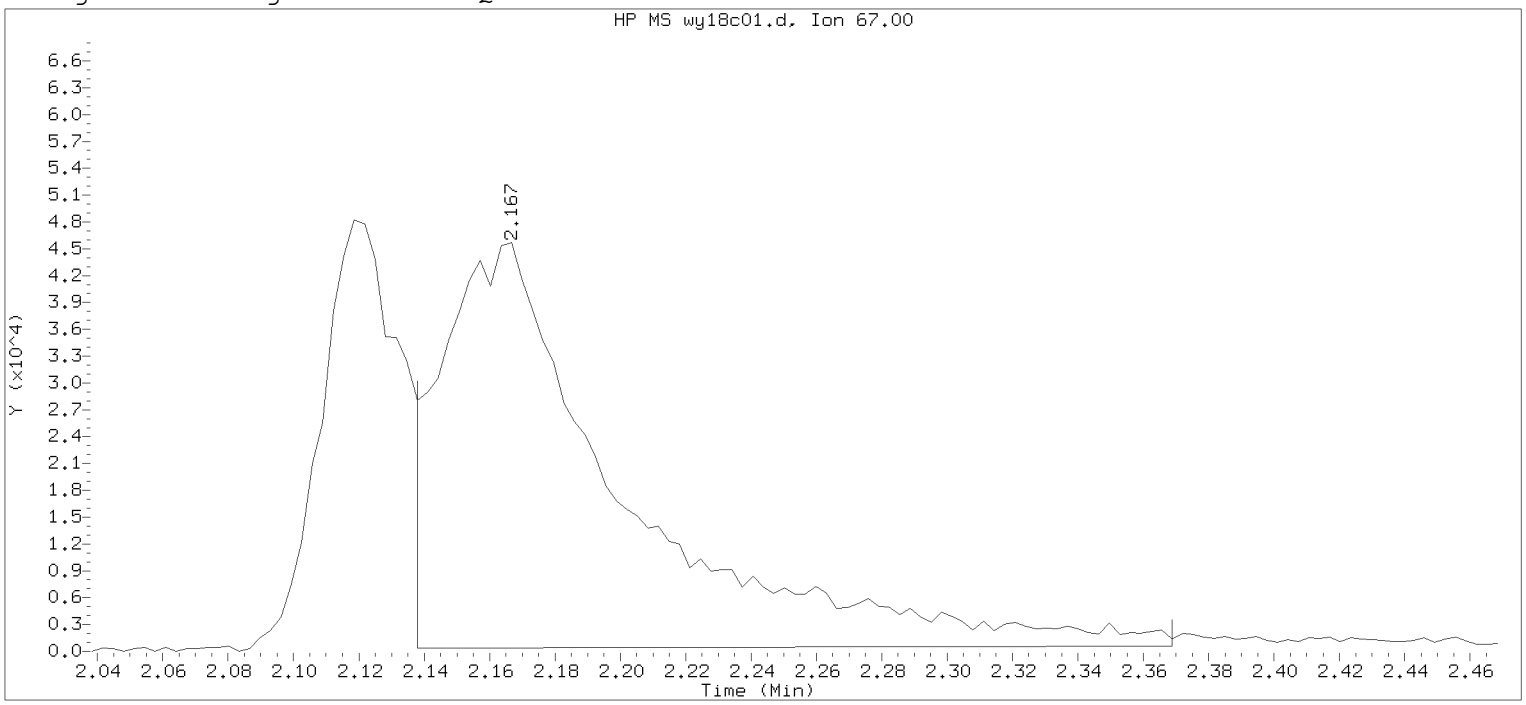
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 15
Compound Name : Freon 123a
Scan Number : 416
Retention Time (minutes): 2.167
Quant Ion : 67.00
Area : 175550
On-column Amount (ng) : 29.1946
Integration start scan : 406 Integration stop scan: 478
Y at integration start : 337 Y at integration end: 564

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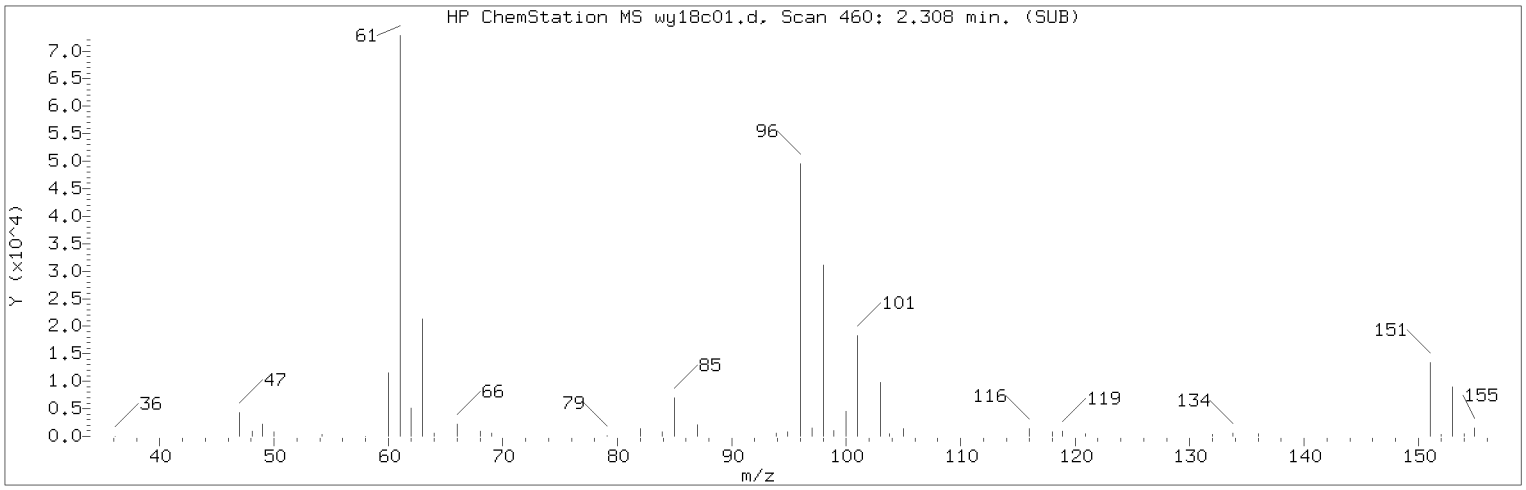
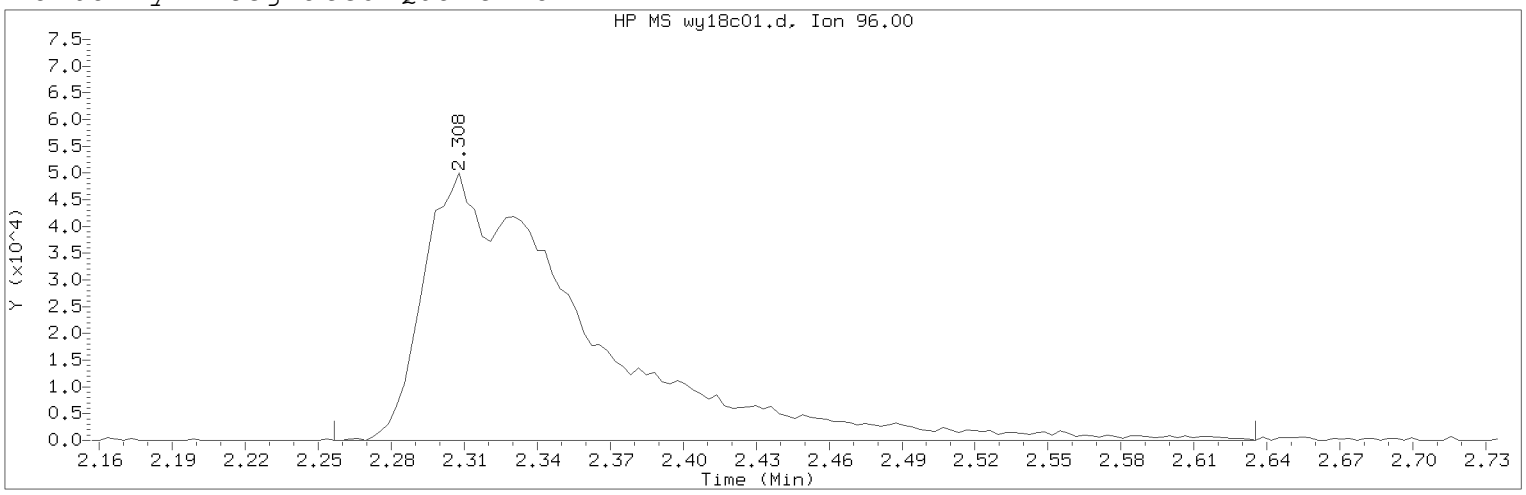
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

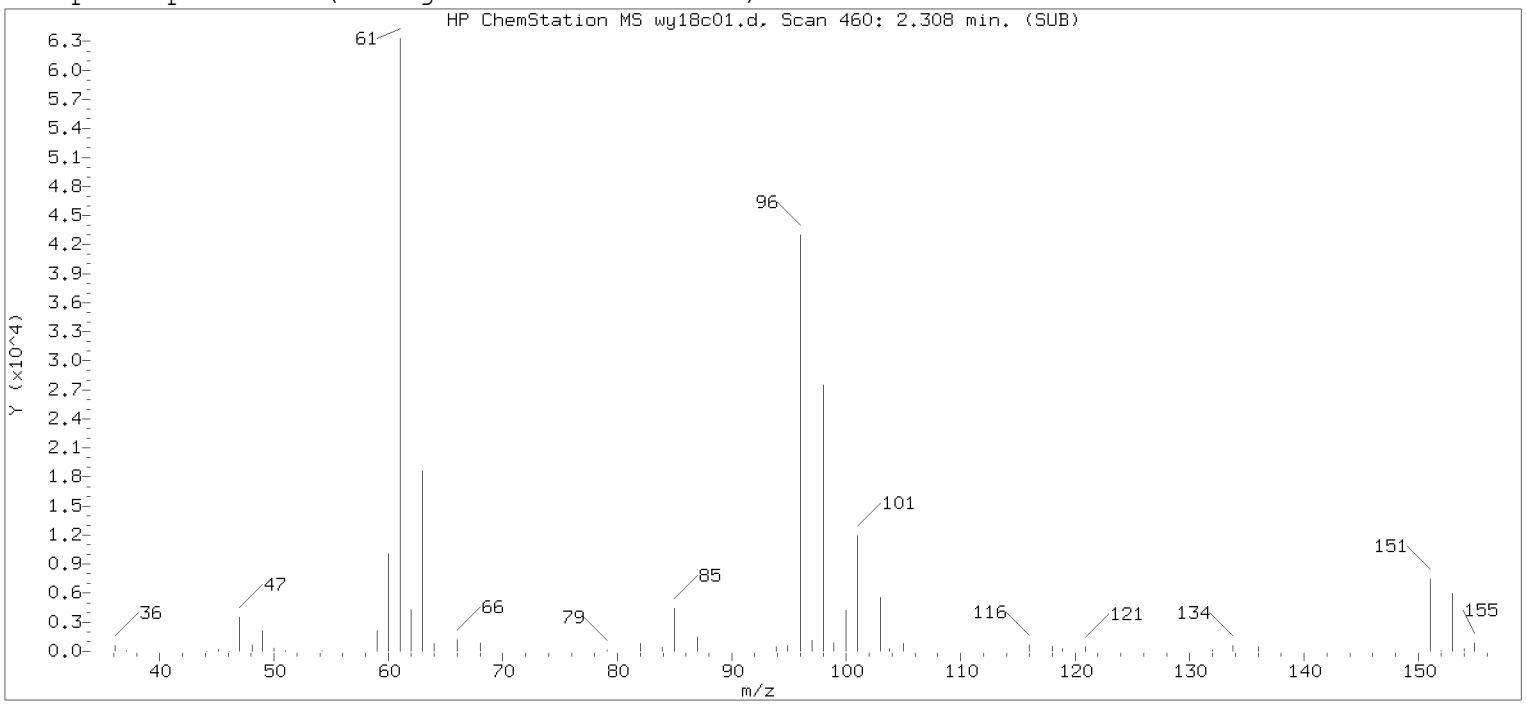
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 460
Retention Time (minutes): 2.308
Quant Ion : 96.00
Area (flag) : 234343M
On-Column Amount (ng) : 51.7791
Integration start scan : 443 Integration stop scan: 561
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

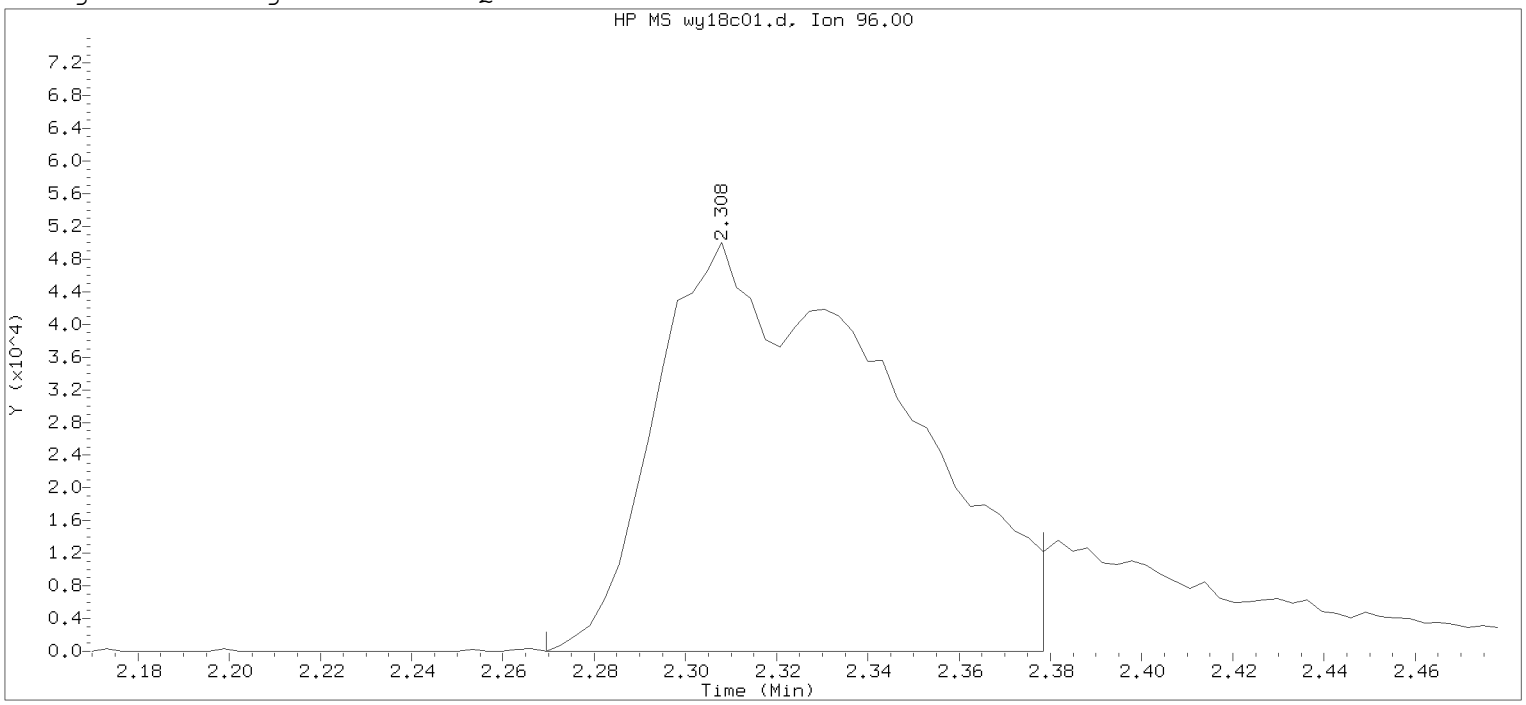
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

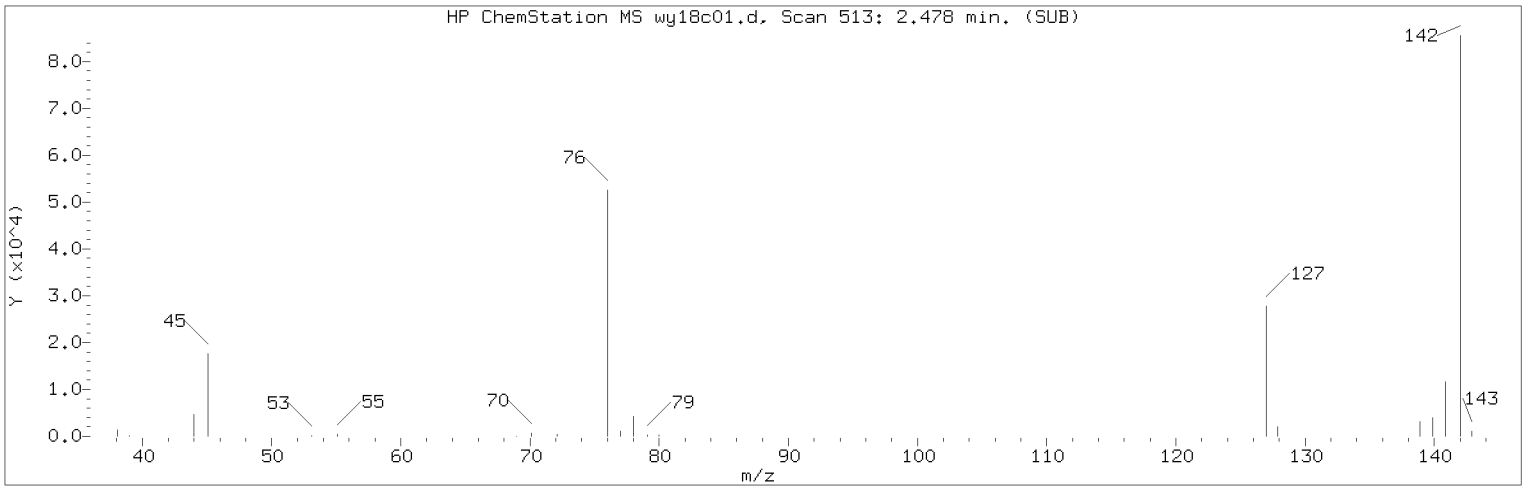
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

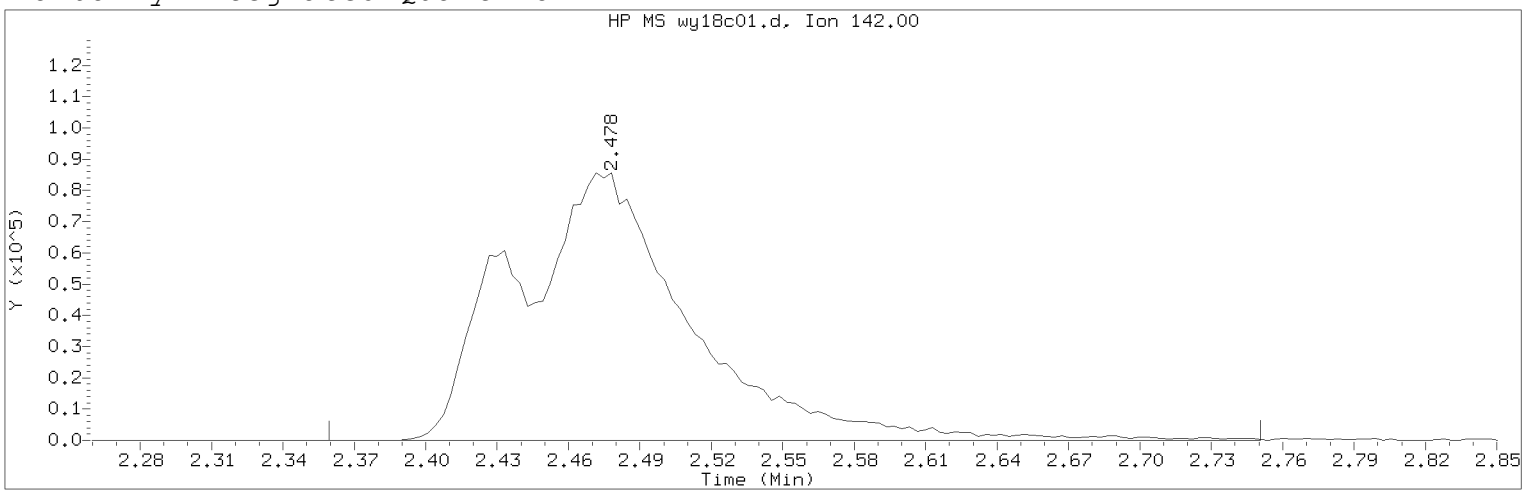
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 460
Retention Time (minutes): 2.308
Quant Ion : 96.00
Area : 181112
On-column Amount (ng) : 40.0175
Integration start scan : 447 Integration stop scan: 481
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

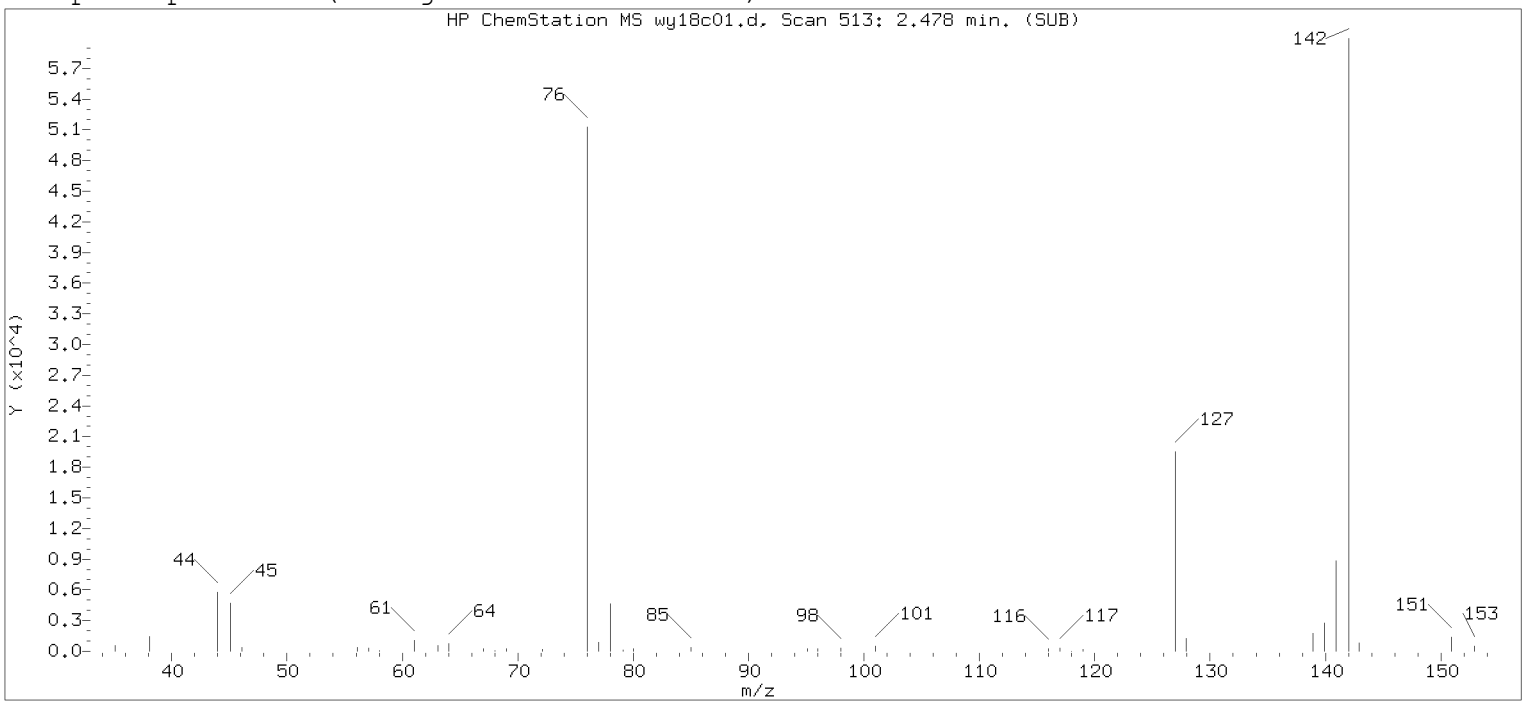
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 513
Retention Time (minutes): 2.478
Quant Ion : 142.00
Area (flag) : 438530M
On-Column Amount (ng) : 50.5633
Integration start scan : 475 Integration stop scan: 597
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

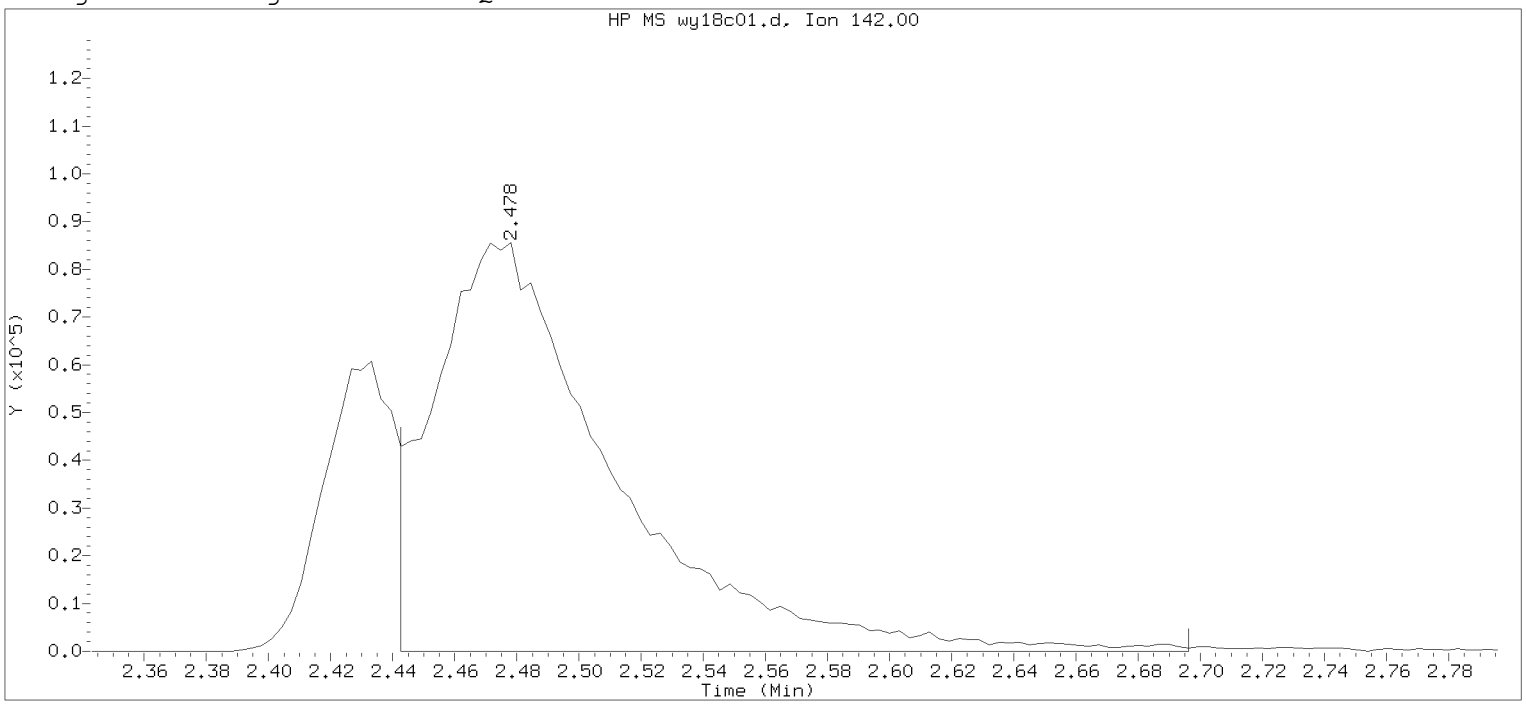
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

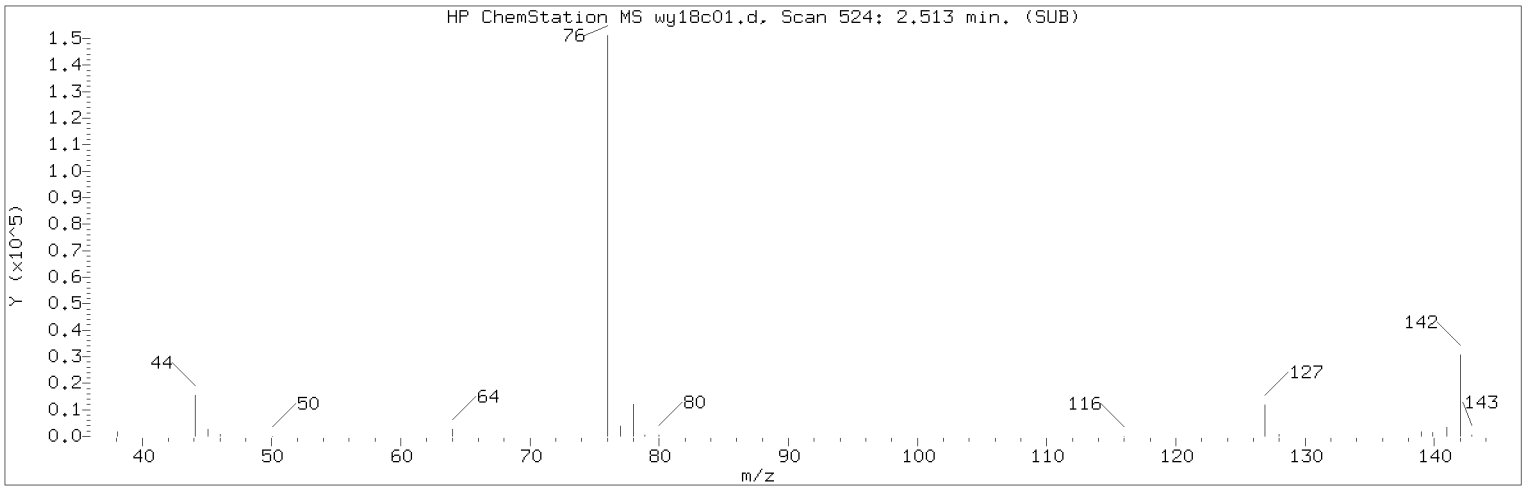
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

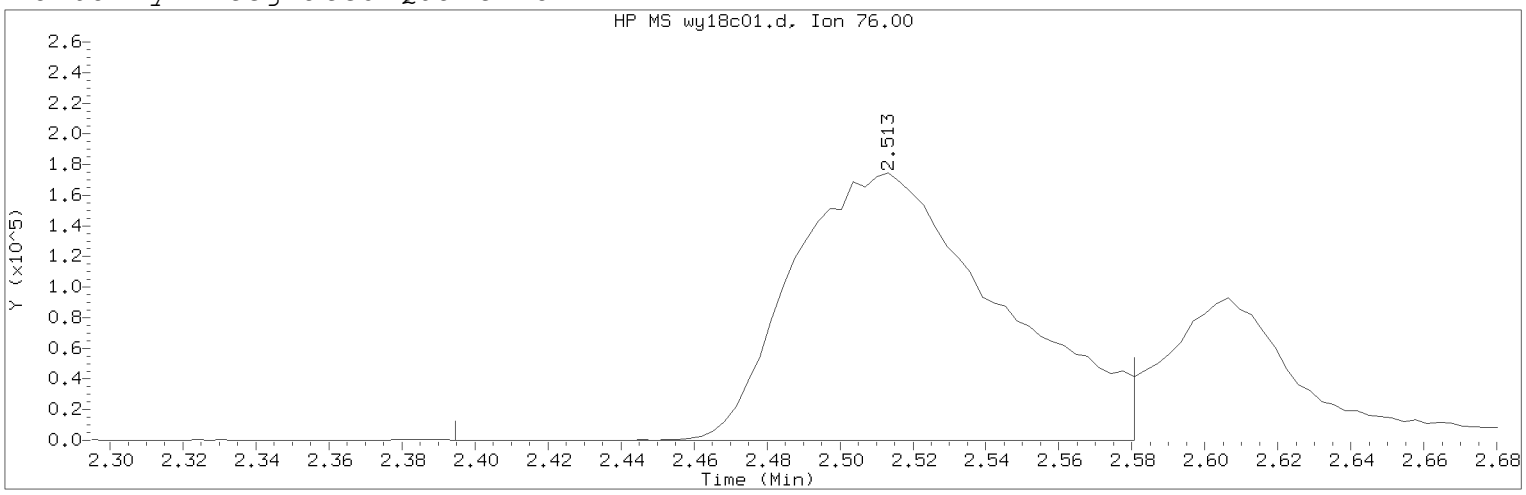
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 513
Retention Time (minutes): 2.478
Quant Ion : 142.00
Area : 343036
On-column Amount (ng) : 39.5527
Integration start scan : 501 Integration stop scan: 580
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

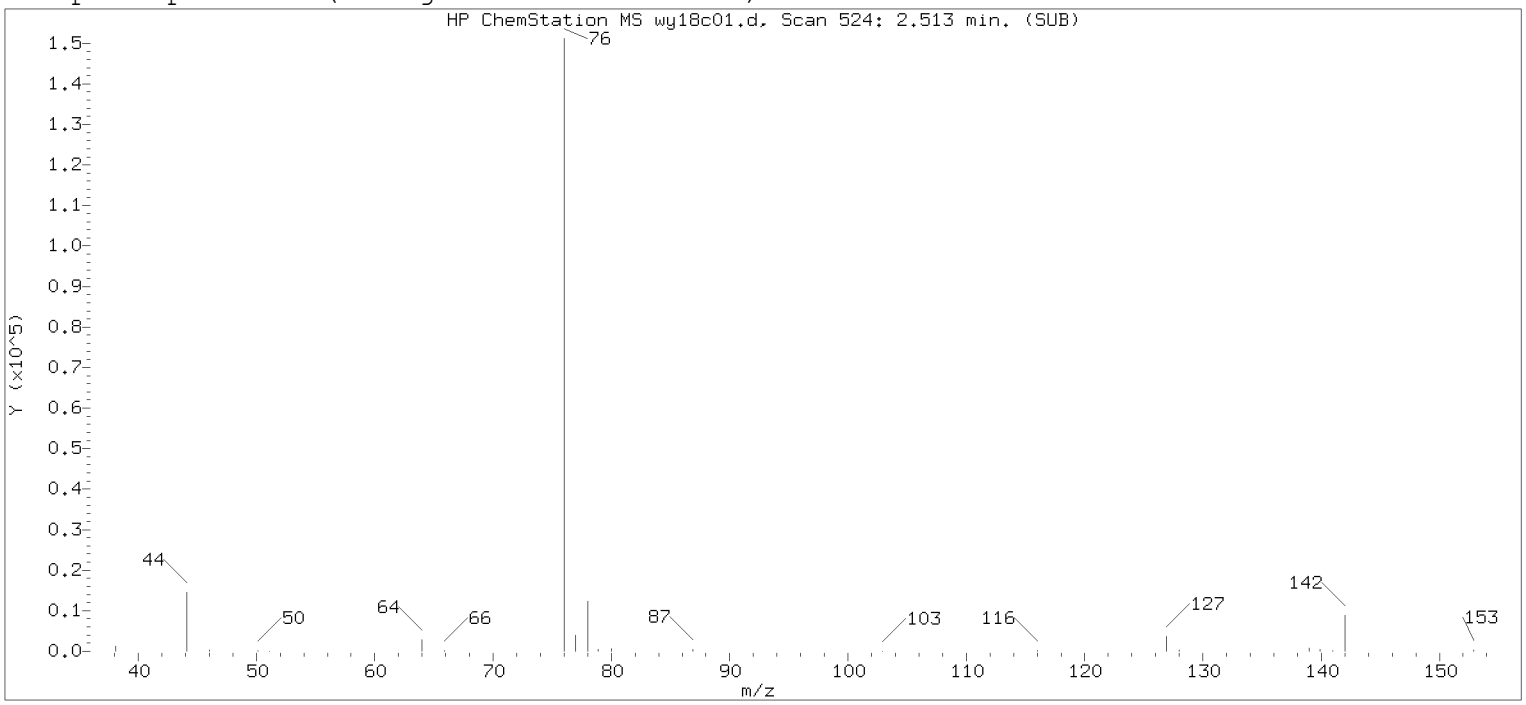
Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 524
Retention Time (minutes): 2.513
Quant Ion : 76.00
Area (flag) : 688325M
On-Column Amount (ng) : 43.1699
Integration start scan : 486 Integration stop scan: 544
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

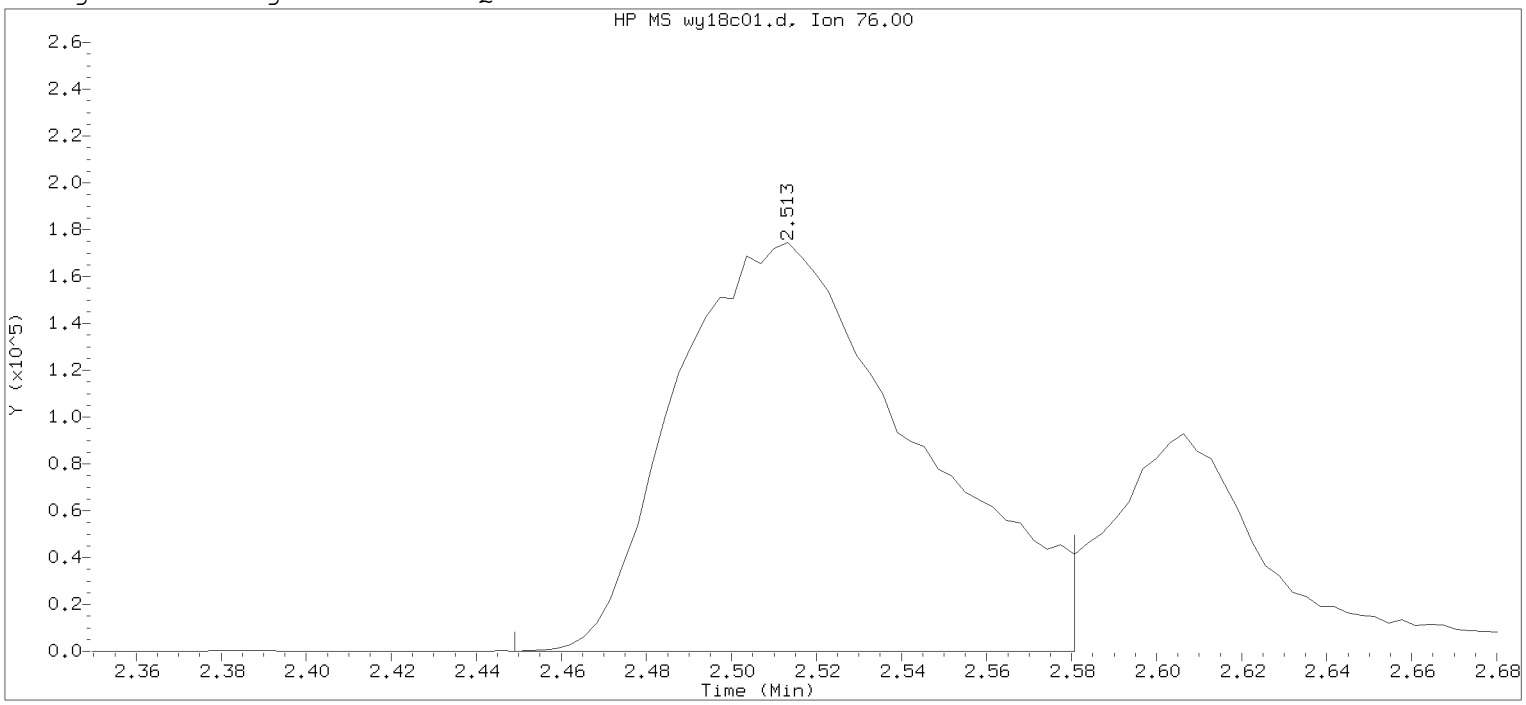
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

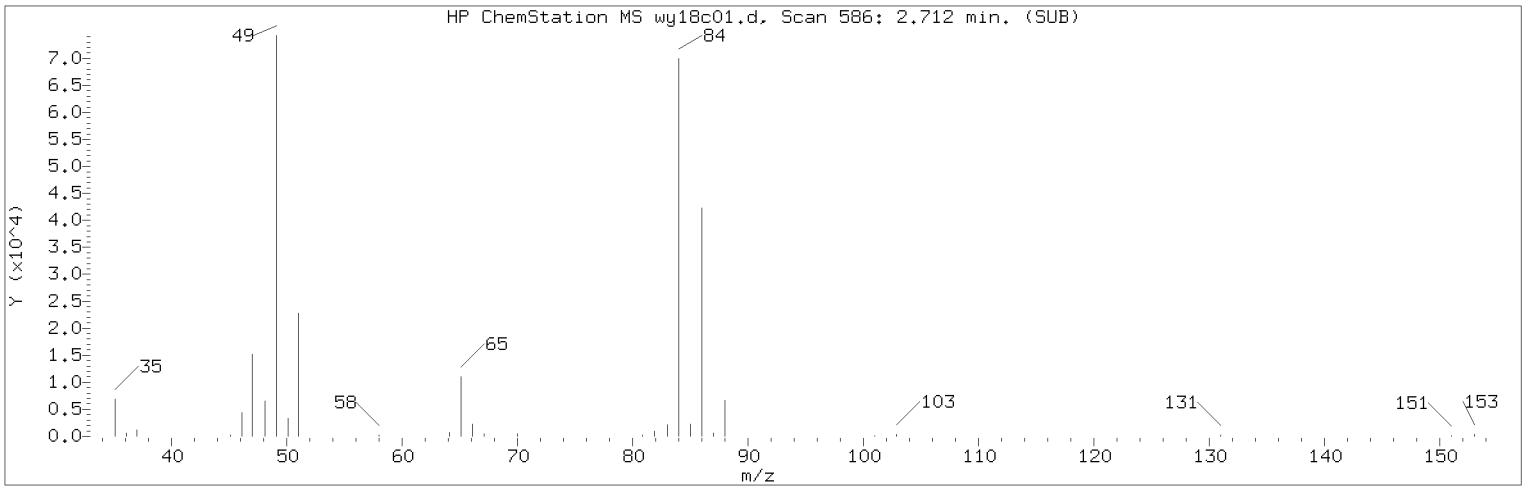
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

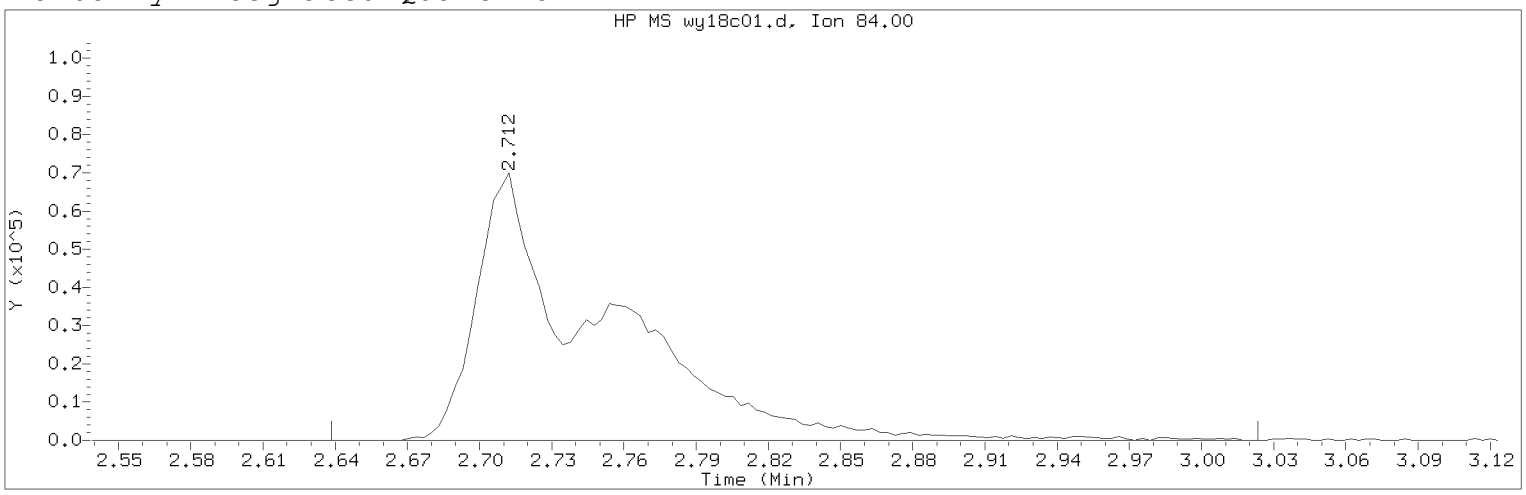
Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 524
Retention Time (minutes): 2.513
Quant Ion : 76.00
Area : 684283
On-column Amount (ng) : 42.9163
Integration start scan : 503 Integration stop scan: 544
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

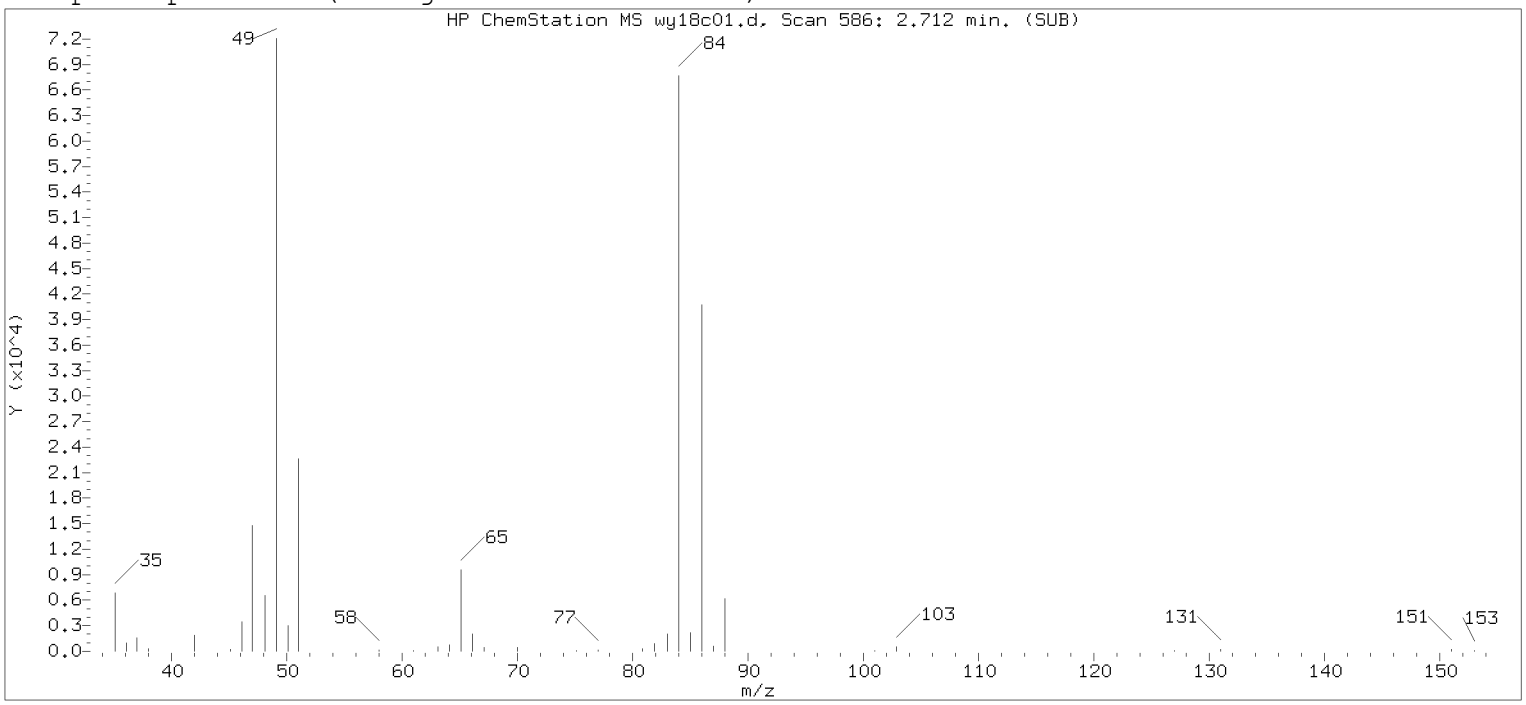
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 586
Retention Time (minutes): 2.712
Quant Ion : 84.00
Area (flag) : 255875M
On-Column Amount (ng) : 46.2534
Integration start scan : 562 Integration stop scan: 682
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

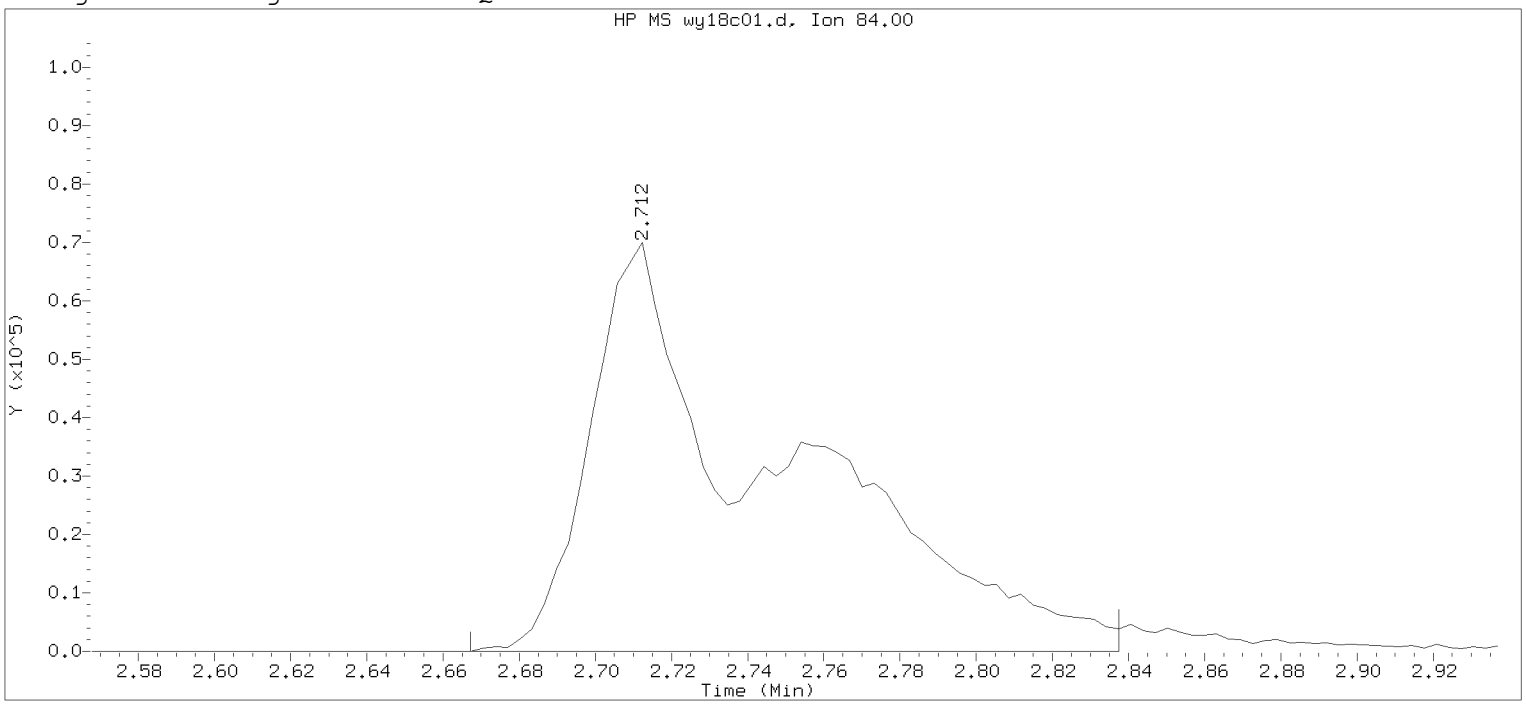
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

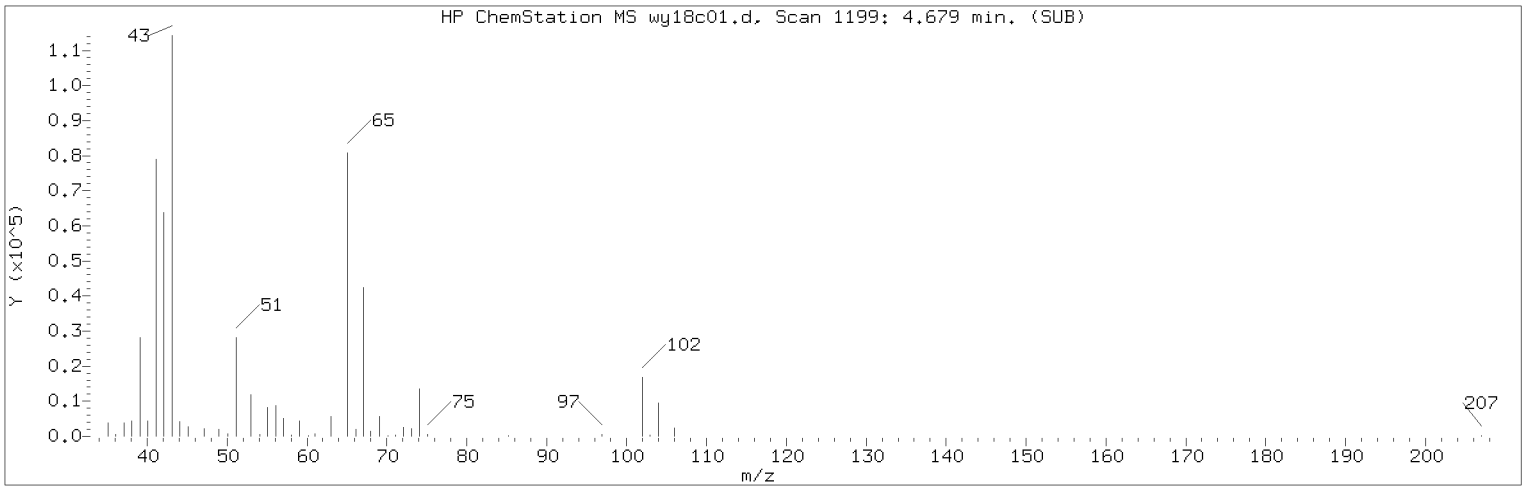
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

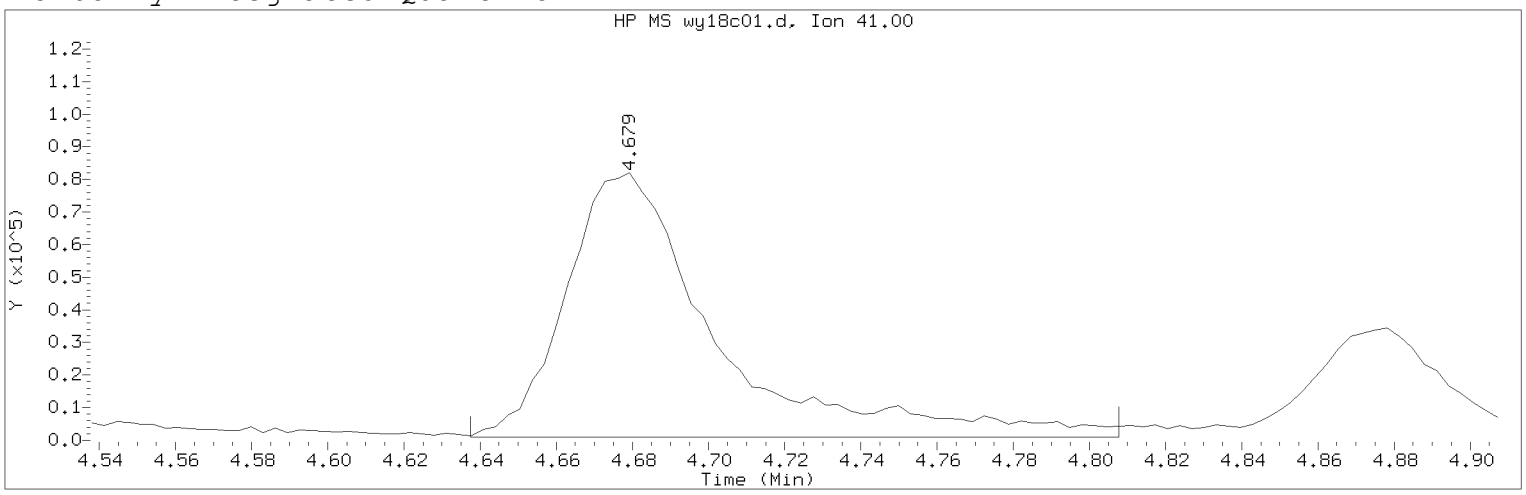
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 586
Retention Time (minutes): 2.712
Quant Ion : 84.00
Area : 242758
On-column Amount (ng) : 43.8824
Integration start scan : 571 Integration stop scan: 624
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

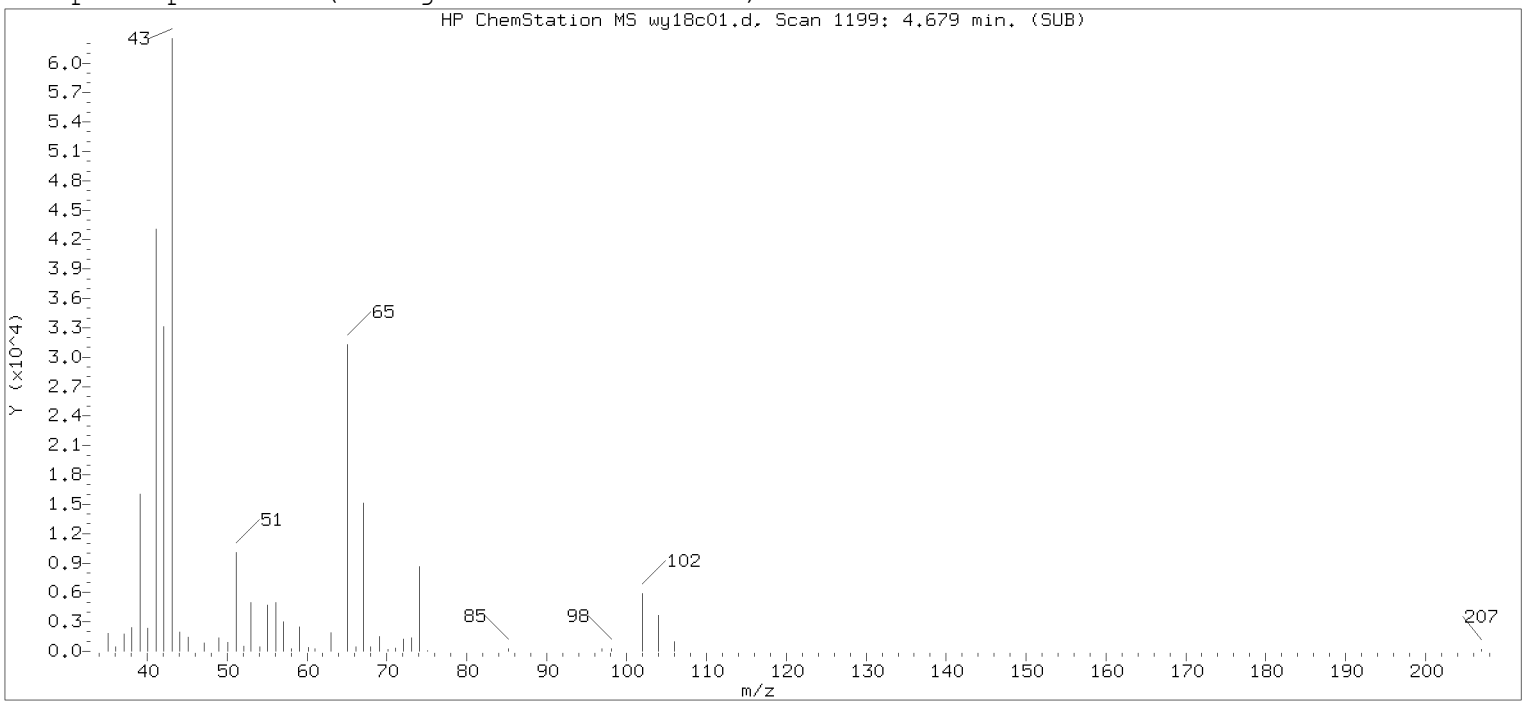
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 1199
Retention Time (minutes): 4.679
Quant Ion : 41.00
Area (flag) : 221106M
On-Column Amount (ng) : 688.9512
Integration start scan : 1185 Integration stop scan: 1238
Y at integration start : 974 Y at integration end: 974

Reason for manual integration: improper integration

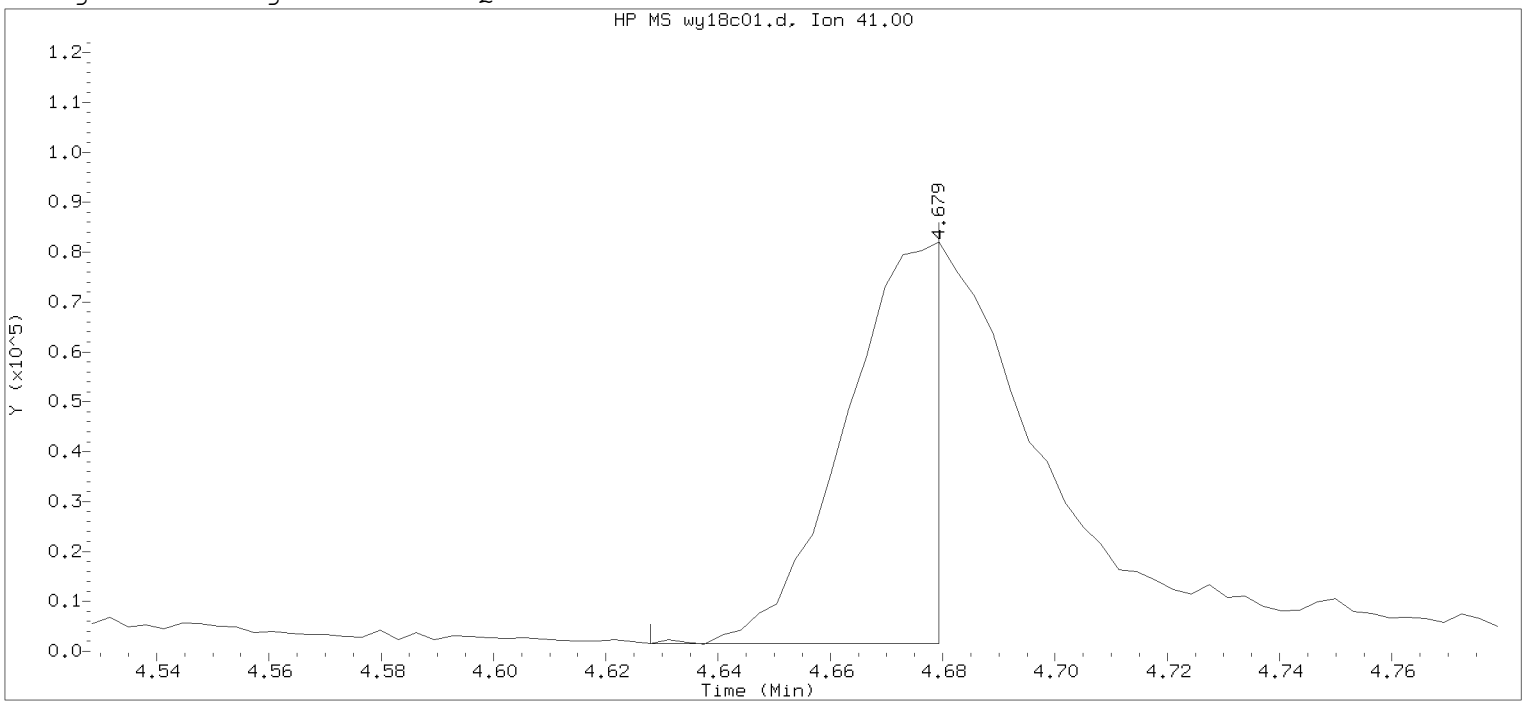
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

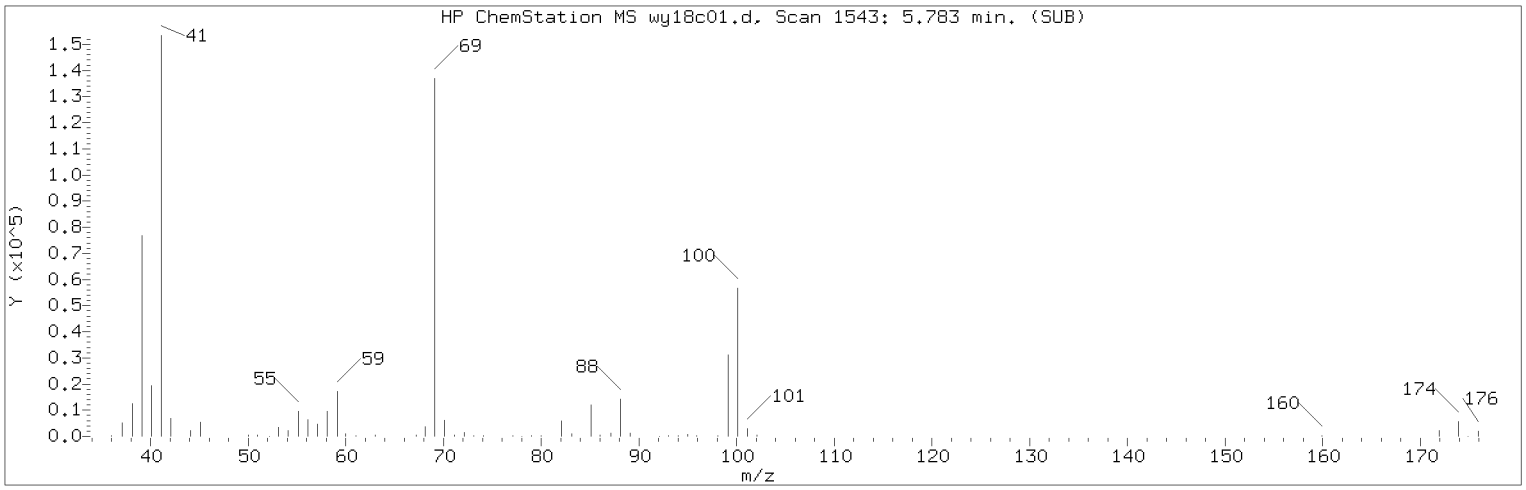
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

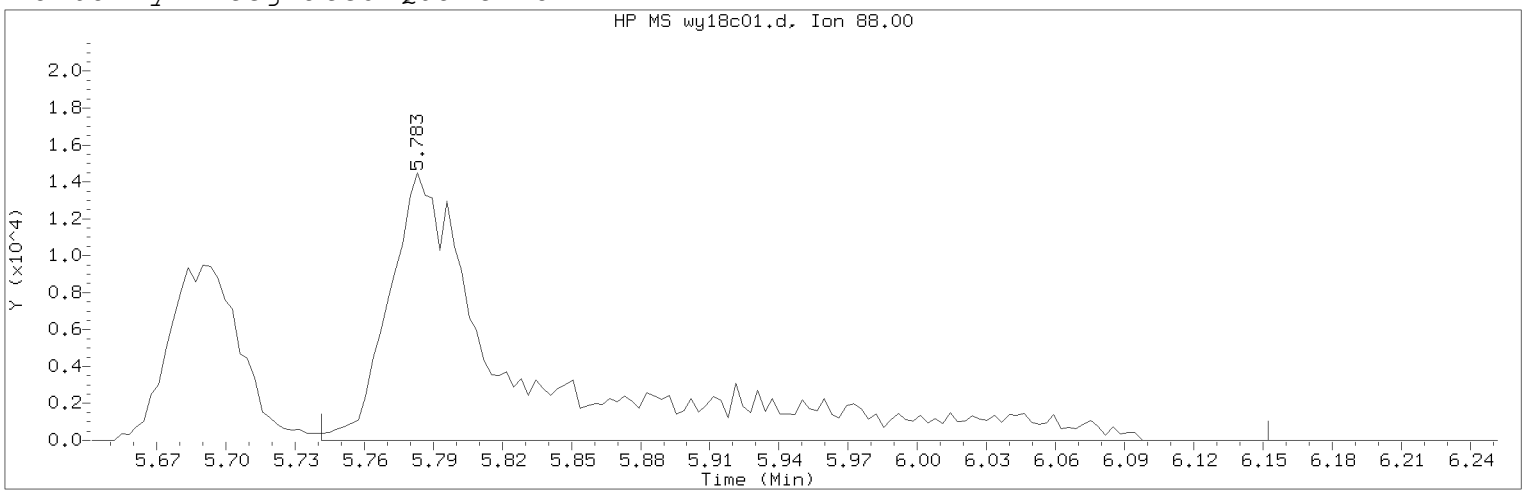
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 1199
Retention Time (minutes): 4.679
Quant Ion : 41.00
Area : 89313
On-column Amount (ng) : 278.2945
Integration start scan : 1182 Integration stop scan: 1198
Y at integration start : 1601 Y at integration end: 1601

Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

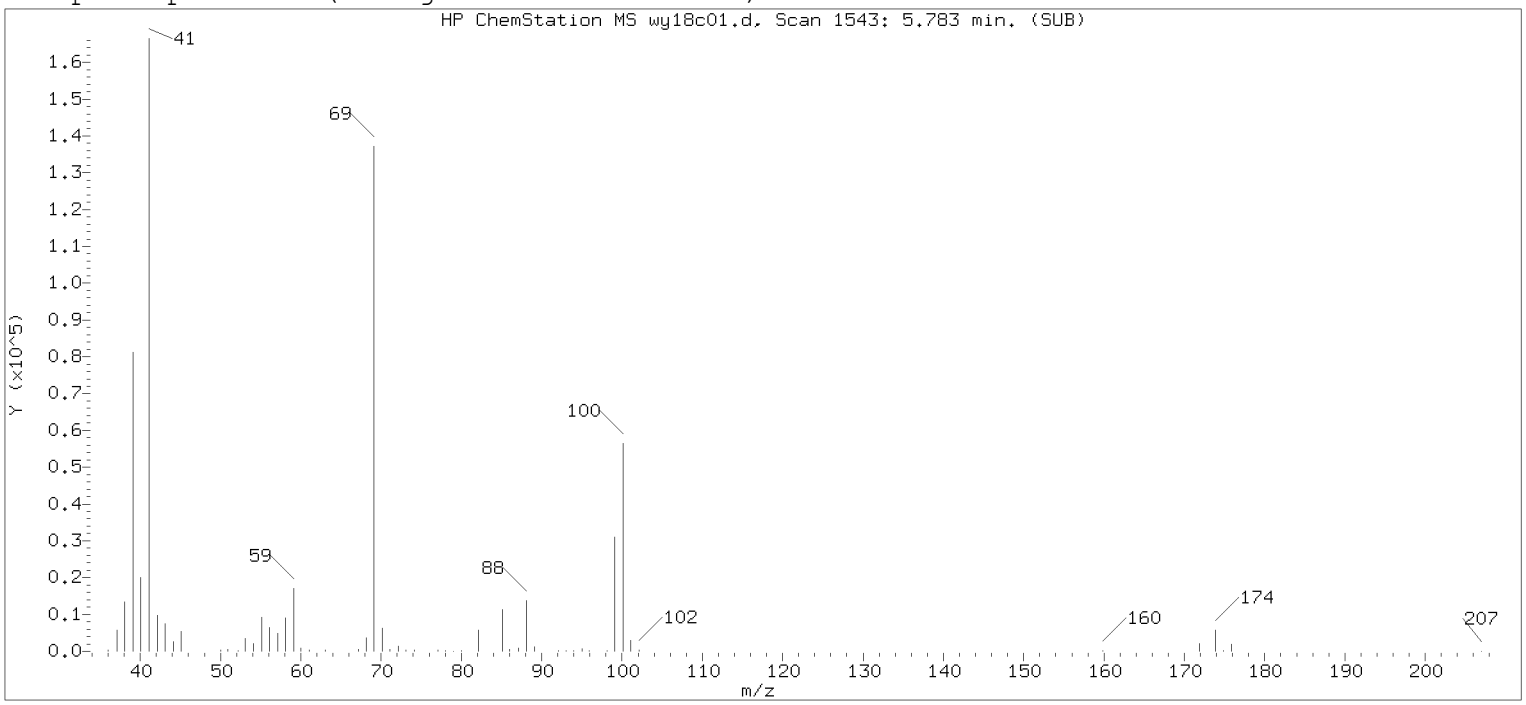
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1543
Retention Time (minutes): 5.783
Quant Ion : 88.00
Area (flag) : 59193M
On-Column Amount (ng) : 694.8747
Integration start scan : 1529 Integration stop scan: 1657
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

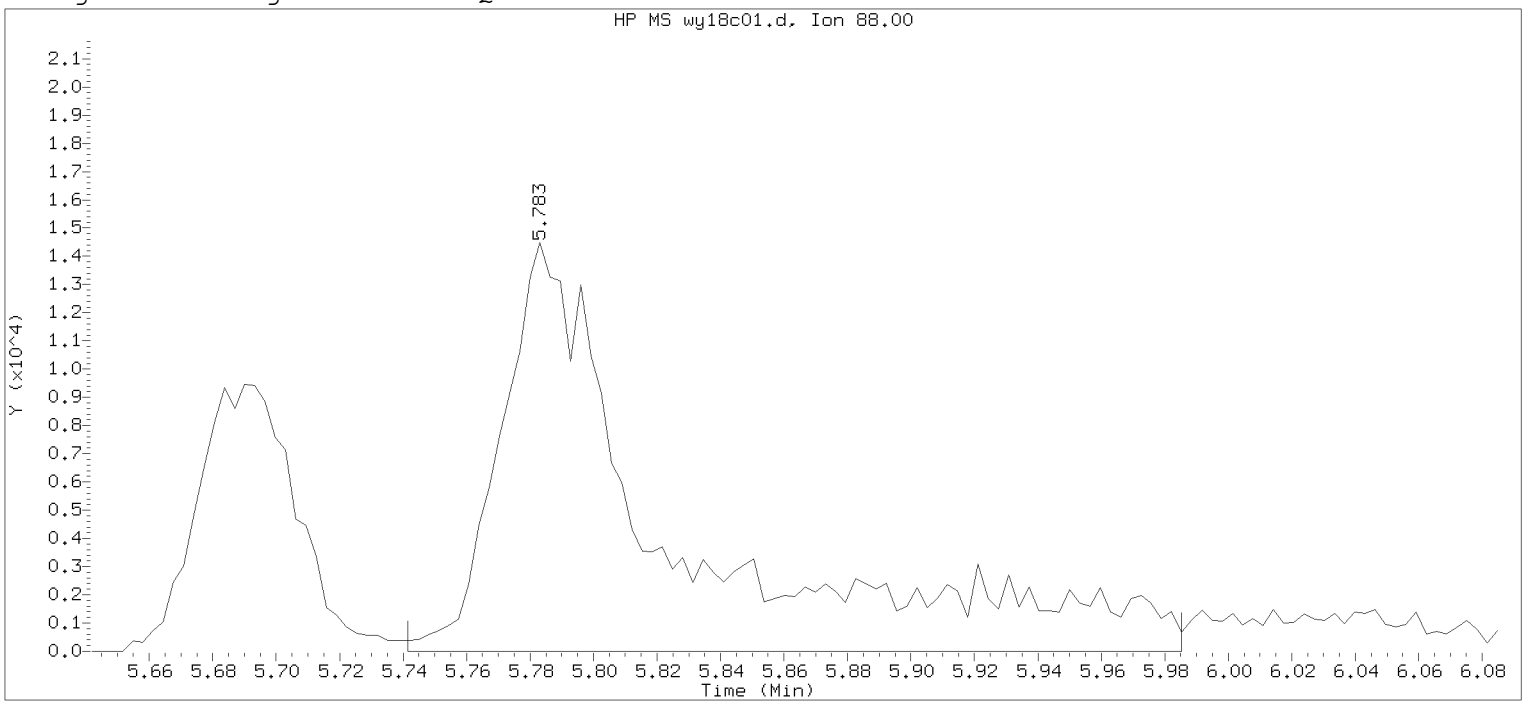
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1543		
Retention Time (minutes)	: 5.783		
Quant Ion	: 88.00		
Area	: 52617		
On-column Amount (ng)	: 617.6776		
Integration start scan	: 1529	Integration stop scan:	1605
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user's signature

Data File: /chem2/HP26285.i/19mar25i.b/5m25t01.d

Date : 25-MAR-2019 11:37

Client ID: BFB Feb05-19

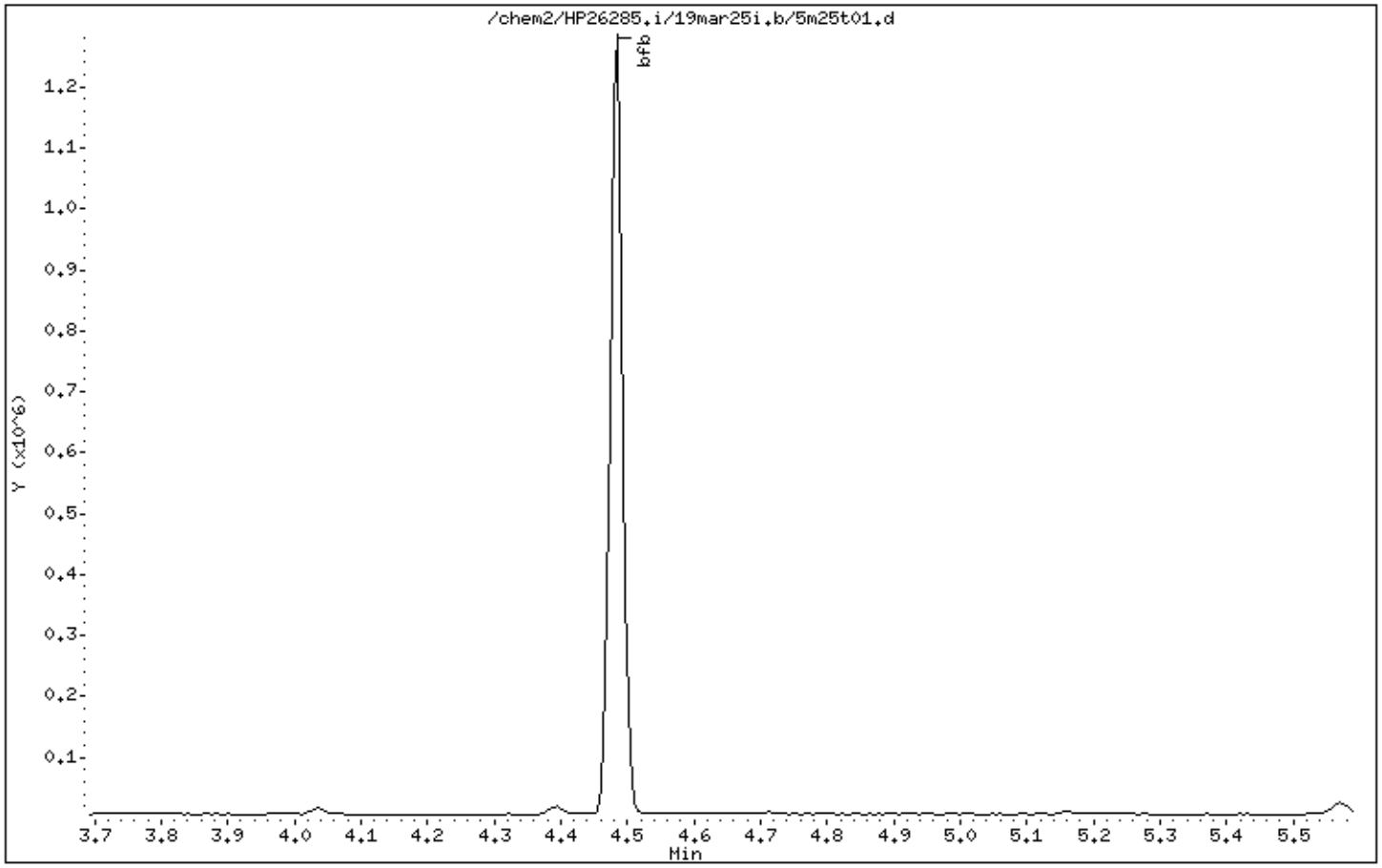
Instrument: HP26285.i

Sample Info: BFB Feb05-19;50 ng BFB;1;3;;;;;;

Operator: APR27582

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Kevin Kelly on 03/25/2019 at 21:53.
Target 3.5 esignature user ID: kk10002

Data File: /chem2/HP26285.i/19mar25i.b/5m25t01.d

Date : 25-MAR-2019 11:37

Client ID: BFB Feb05-19

Instrument: HP26285.i

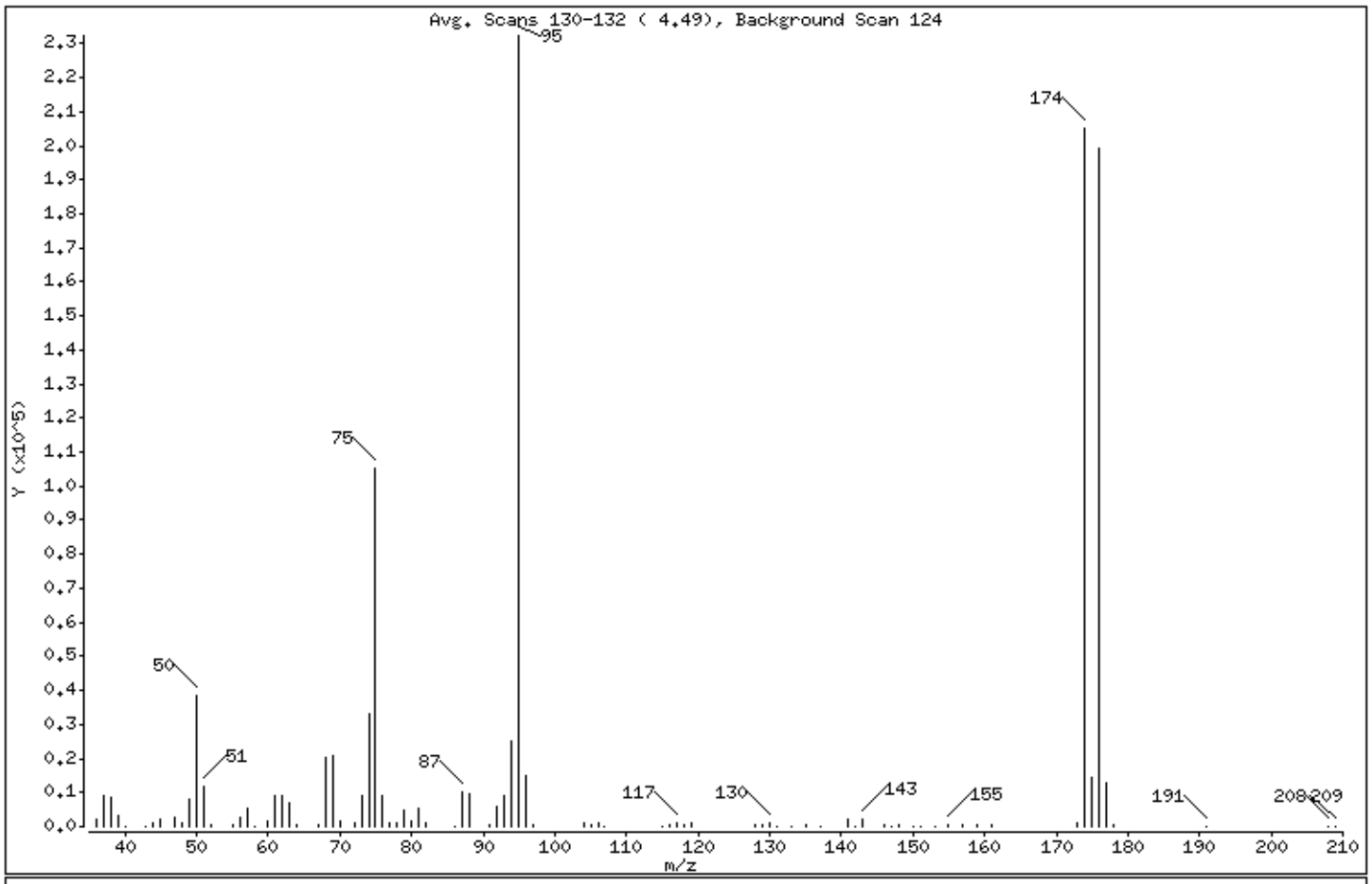
Sample Info: BFB Feb05-19;50 ng BFB;1;3;;;;;;

Operator: APR27582

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.60
75	30.00 - 60.00% of mass 95	45.32
96	5.00 - 9.00% of mass 95	6.45
173	Less than 2.00% of mass 174	0.52 (0.59)
174	50.00 - 100.00% of mass 95	88.26
175	5.00 - 9.00% of mass 174	6.13 (6.95)
176	95.00 - 101.00% of mass 174	85.76 (97.17)
177	5.00 - 9.00% of mass 176	5.62 (6.55)

Digitally signed by Kevin Kelly on 03/25/2019 at 21:53.
Target 3.5 esignature user ID: kk10002

Data File: /chem2/HP26285.i/19mar25i.b/5m25t01.d

Date : 25-MAR-2019 11:37

Client ID: BFB Feb05-19

Instrument: HP26285.i

Sample Info: BFB Feb05-19;50 ng BFB;1;3;;;;;;

Operator: APR27582

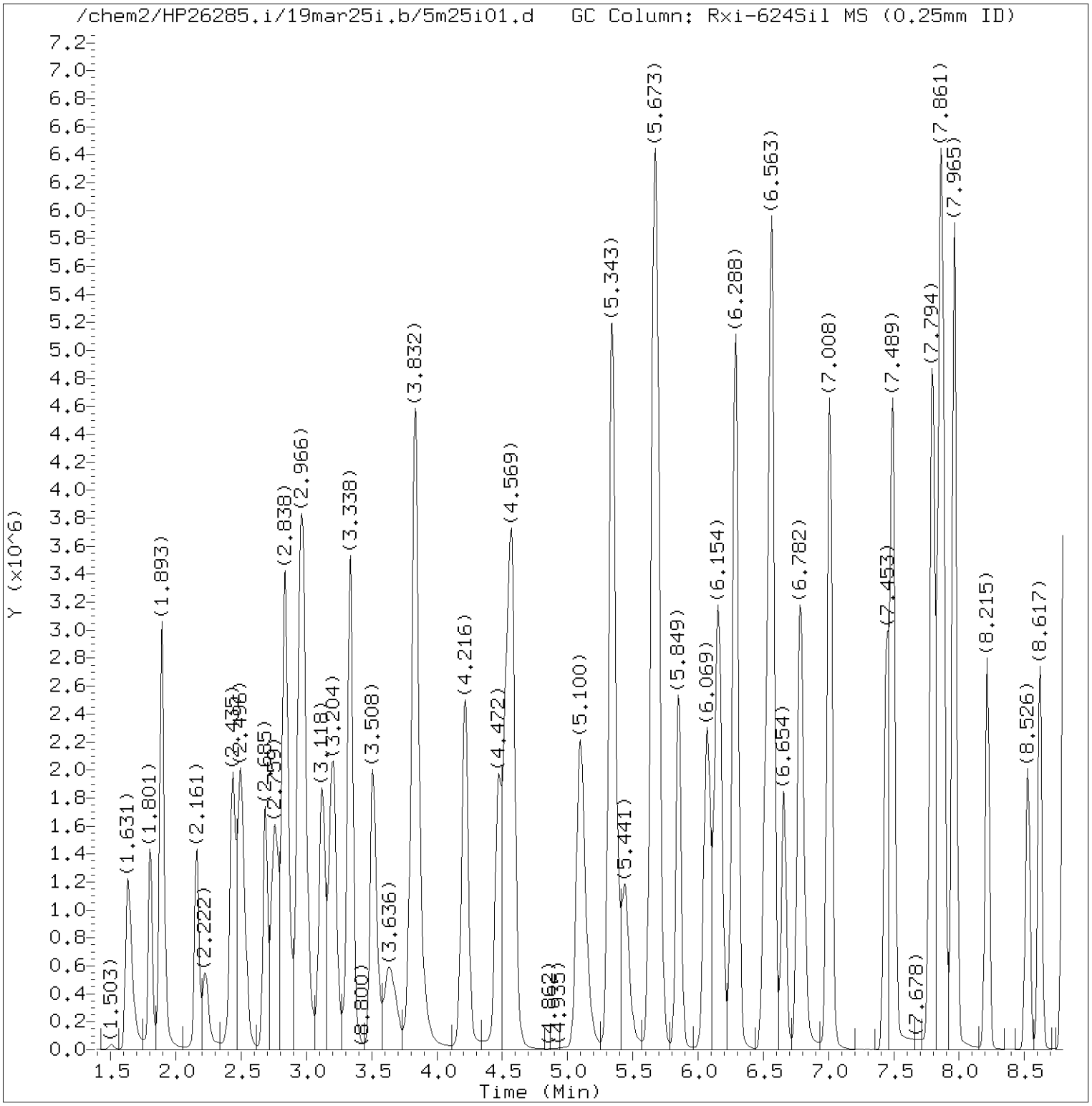
Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: 5m25t01.d
Spectrum: Avg. Scans 130-132 (4.49), Background Scan 124
Location of Maximum: 95.00
Number of points: 86

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1872	64.00	636	94.00	25024	143.00	2121
37.00	9327	67.00	571	95.00	232320	146.00	313
38.00	8303	68.00	20536	96.00	14984	147.00	86
39.00	3466	69.00	21064	97.00	502	148.00	506
40.00	116	70.00	1589	104.00	840	150.00	101
43.00	88	72.00	1029	105.00	366	151.00	92
44.00	928	73.00	8819	106.00	907	153.00	85
45.00	1933	74.00	33296	107.00	97	155.00	499
47.00	2716	75.00	105296	115.00	193	157.00	433
48.00	1099	76.00	8991	116.00	662	159.00	268
49.00	7937	77.00	1230	117.00	1274	161.00	306
50.00	38560	78.00	810	118.00	730	173.00	1202
51.00	11672	79.00	4904	119.00	1189	174.00	205056
52.00	518	80.00	1545	128.00	721	175.00	14247
55.00	630	81.00	5199	129.00	378	176.00	199232
56.00	2897	82.00	1179	130.00	805	177.00	13057
57.00	5157	86.00	221	131.00	247	178.00	366
58.00	108	87.00	9894	133.00	241	191.00	17
60.00	1767	88.00	9700	135.00	453	208.00	22
61.00	8907	91.00	709	137.00	257	209.00	92
62.00	8843	92.00	5770	141.00	2002		
63.00	6818	93.00	8903	142.00	87		

Digitally signed by Kevin Kelly on 03/25/2019 at 21:53.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

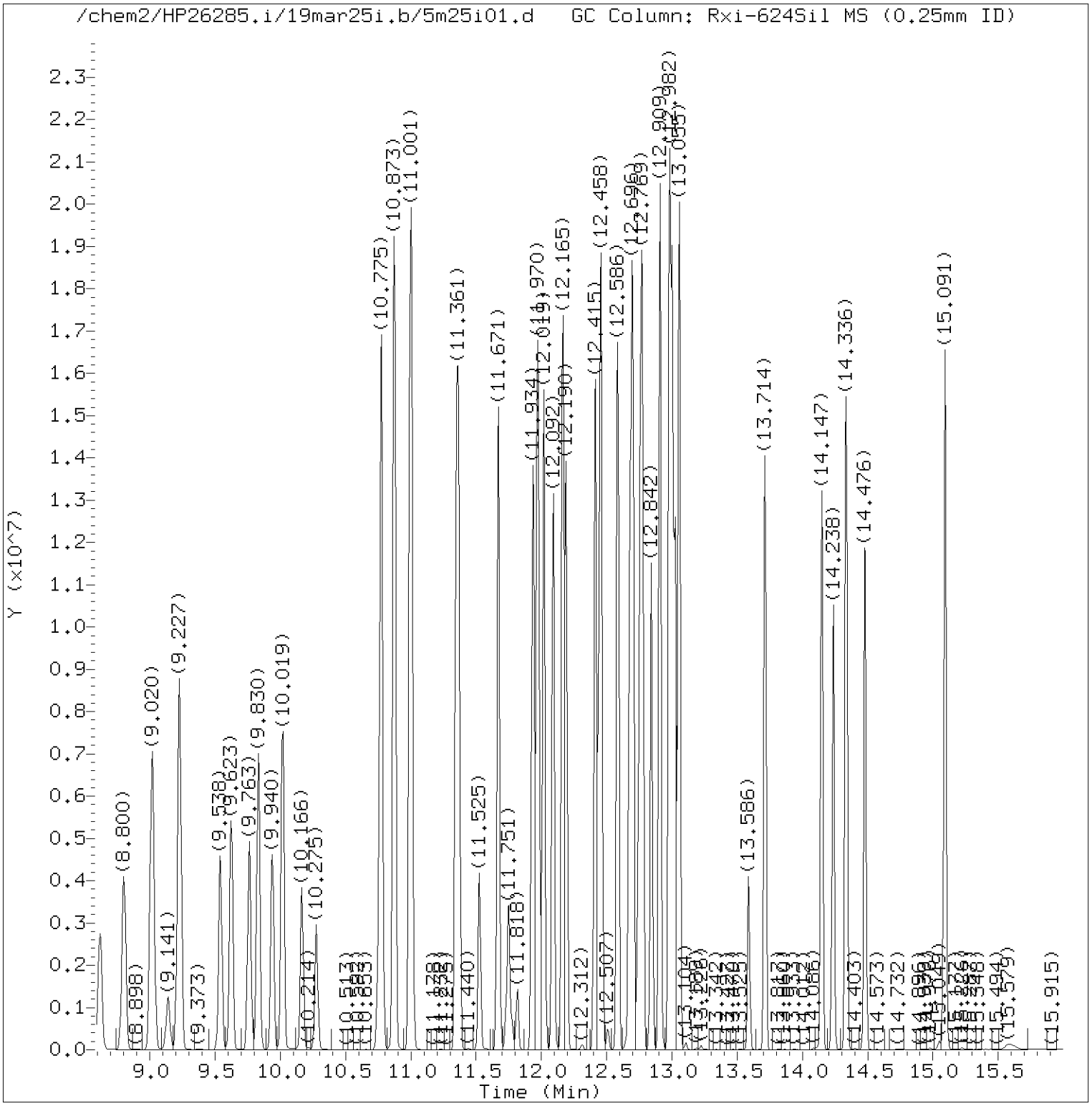
Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.631	85	2608976	298.233
4) Chloromethane	(2)	1.801	50	1885335	296.555
5) 1,3-Butadiene	(2)	1.887	39	1207662	273.412
6) Vinyl Chloride	(2)	1.899	62	1796066	288.783
8) Bromomethane	(2)	2.161	94	1315987	262.582
9) Chloroethane	(2)	2.228	64	774079	259.633
10) Dichlorofluoromethane	(2)	2.435	67	2257730	278.411
12) Trichlorofluoromethane	(2)	2.478	101	2452676	283.683
11) n-Pentane	(2)	2.502	43	1441914	264.422
14) Ethyl ether	(2)	2.685	59	1339417	299.117
15) Freon 123a	(2)	2.759	67	1900361	282.805
16) Acrolein	(1)	2.838	56	5652571	2453.178
17) 1,1-Dichloroethene	(2)	2.948	96	1530237	304.722
17) 1,1-Dichloroethene	(2)	2.948	63	733044	296.717
19) Freon 113	(2)	2.972	101	1577863	308.865
18) Acetone	(1)	2.978	58	614571	583.331
22) Methyl Iodide	(2)	3.118	142	3266197	311.437
21) 2-Propanol	(1)	3.130	45	1148076	1499.402
23) Carbon Disulfide	(2)	3.204	76	5488758	329.204
27) Methyl Acetate	(2)	3.319	43	2213072	284.537
25) Allyl Chloride	(2)	3.338	41	2724004	301.920
28) Methylene Chloride	(2)	3.508	84	1718176	301.236
29)*t-Butyl alcohol-d10	(1)	3.527	65	326405M	250.000
30) t-Butyl alcohol	(1)	3.636	59	2198992	1456.269
31) Acrylonitrile	(2)	3.795	53	1181402	287.366
32) trans-1,2-Dichloroethene	(2)	3.838	96	1730092	307.785
33) Methyl Tertiary Butyl Ether	(2)	3.838	73	4606831	287.188
34) n-Hexane	(2)	4.216	57	2380242M	306.100
36) 1,1-Dichloroethane	(2)	4.466	63	3021317	304.879
38) di-Isopropyl ether	(2)	4.539	45	5182208	286.873
39) 2-Chloro-1,3-butadiene	(2)	4.575	53	2653748	302.623
40) Ethyl t-butyl ether	(2)	5.100	59	4780560	285.844
42) cis-1,2-Dichloroethene	(2)	5.337	96	1923358	302.424
44) 2-Butanone	(2)	5.337	43	3300993	531.702
45) 2,2-Dichloropropane	(2)	5.349	77	2451763	309.356
47) Propionitrile	(1)	5.441	54	2484795	1512.909
48) Methacrylonitrile	(2)	5.660	67	2963539	732.608
49) Bromochloromethane	(2)	5.685	128	998148	313.646

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.697	71	961681	576.408
51) Chloroform	(2)	5.849	83	3001870	305.492
53) 1,1,1-Trichloroethane	(2)	6.069	97	2722547	314.814
52)$Dibromofluoromethane	(2)	6.075	113	264278	50.771
52)$Dibromofluoromethane	(2)	6.075	111	272340	50.972
54) Cyclohexane	(2)	6.154	56	2986431	298.688
54) Cyclohexane	(2)	6.154	84	2581462	302.977
54) Cyclohexane	(2)	6.154	69	943241	304.477
43) 1,2-Dichloroethene (Total)	(2)		96	3653450	610.209
56) Carbon Tetrachloride	(2)	6.276	117	2455823	328.151
55) 1,1-Dichloropropene	(2)	6.288	75	2418643	304.260
58) Isobutyl Alcohol	(1)	6.520	41	1827801	3696.125
57)$1,2-Dichloroethane-d4	(2)	6.550	102	60834	49.948
57)$1,2-Dichloroethane-d4	(2)	6.544	65	278152	49.333
57)$1,2-Dichloroethane-d4	(2)	6.544	104	38778	49.961
60) Benzene	(2)	6.569	78	7220430	298.998
61) 1,2-Dichloroethane	(2)	6.654	62	2064048	289.218
61) 1,2-Dichloroethane	(2)	6.654	98	201723	323.085
65) t-Amyl methyl ether	(2)	6.782	73	4696079	278.618
66)*Fluorobenzene	(2)	6.996	96	1087768	50.000
67) n-Heptane	(2)	7.008	43	2585604	294.881
69) n-Butanol	(1)	7.447	56	3106764	7534.738
71) Trichloroethene	(2)	7.489	95	1922262	306.943
73) Methylcyclohexane	(2)	7.794	83	3214324	309.972
73) Methylcyclohexane	(2)	7.794	98	1404428	314.831
74) 1,2-Dichloropropane	(2)	7.849	63	1777461	296.943
76) 1,4-Dioxane	(1)	7.947	88	396729M	4147.928
75) Dibromomethane	(2)	7.959	93	1155706	305.258
77) Methyl Methacrylate	(2)	7.965	69	1894820	303.212
79) Bromodichloromethane	(2)	8.215	83	2314317	328.927
80) 2-Nitropropane	(2)	8.526	41	1709944	592.076
81) 2-Chloroethyl Vinyl Ether	(2)	8.617	63	1563074	312.890
82) cis-1,3-Dichloropropene	(2)	8.800	75	2973312	321.180
83) 4-Methyl-2-pentanone	(2)	9.020	43	6278506	493.771
84)$Toluene-d8	(3)	9.141	98	1048402	48.925
84)$Toluene-d8	(3)	9.141	100	696153	49.428
89) Toluene	(3)	9.227	92	4738284	297.064
90) trans-1,3-Dichloropropene	(3)	9.538	75	2758950	320.093

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	9.623	69	3161608	305.933
93) 1,1,2-Trichloroethane	(3)	9.763	97	1714381	300.442
94) Tetrachloroethene	(3)	9.830	166	2289853	315.688
95) 1,3-Dichloropropane	(3)	9.940	76	2788173	298.281
97) 2-Hexanone	(3)	10.019	43	5177326	458.958
91) 1,3-Dichloropropene (total)	(3)		100	5732262	641.273
98) Dibromochloromethane	(3)	10.166	129	2034347	348.221
100) 1,2-Dibromoethane	(3)	10.275	107	1957239	307.152
101)*Chlorobenzene-d5	(3)	10.745	117	848957	50.000
103) Chlorobenzene	(3)	10.775	112	5396966	302.398
102) 1-Chlorohexane	(3)	10.775	91	2673818	287.729
104) 1,1,1,2-Tetrachloroethane	(3)	10.867	131	1981799	328.955
105) Ethylbenzene	(3)	10.873	91	9072597	291.199
107) m+p-Xylene	(3)	11.001	106	7138359	580.958
108) o-Xylene	(3)	11.348	106	3606230	300.372
110) Styrene	(3)	11.367	104	6019504	303.627
111) Bromoform	(3)	11.525	173	1712237	371.284
112) Isopropylbenzene	(3)	11.671	105	9164479	293.927
113) Cyclohexanone	(1)	11.751	55	1517972	3793.222
109) Xylene (Total)	(3)		106	10744589	881.330
115)$4-Bromofluorobenzene	(3)	11.818	95	418035	50.136
115)$4-Bromofluorobenzene	(3)	11.818	174	362609	49.920
116) Bromobenzene	(4)	11.934	156	2524267	309.892
117) 1,1,2,2-Tetrachloroethane	(4)	11.940	83	2993179	290.204
119) trans-1,4-Dichloro-2-butene	(4)	11.970	53	2220765	683.700
118) 1,2,3-Trichloropropane	(4)	11.982	110	895099	288.057
120) n-Propylbenzene	(4)	12.019	91	10478728	273.347
121) 2-Chlorotoluene	(4)	12.092	126	2460607	311.345
123) 1,3,5-Trimethylbenzene	(4)	12.165	105	7994133	288.968
122) 4-Chlorotoluene	(4)	12.190	126	2523342	310.997
125) tert-Butylbenzene	(4)	12.415	134	1806450M	309.014
126) Pentachloroethane	(4)	12.440	167	1684552	352.870
127) 1,2,4-Trimethylbenzene	(4)	12.458	105	8215076	289.574
128) sec-Butylbenzene	(4)	12.586	105	9901365	276.257
130) 1,3-Dichlorobenzene	(4)	12.677	146	4792778	307.228
131) p-Isopropyltoluene	(4)	12.702	119	9016411	290.158
132)*1,4-Dichlorobenzene-d4	(4)	12.738	152	472197	50.000
134) 1,4-Dichlorobenzene	(4)	12.757	146	4777736	302.190

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

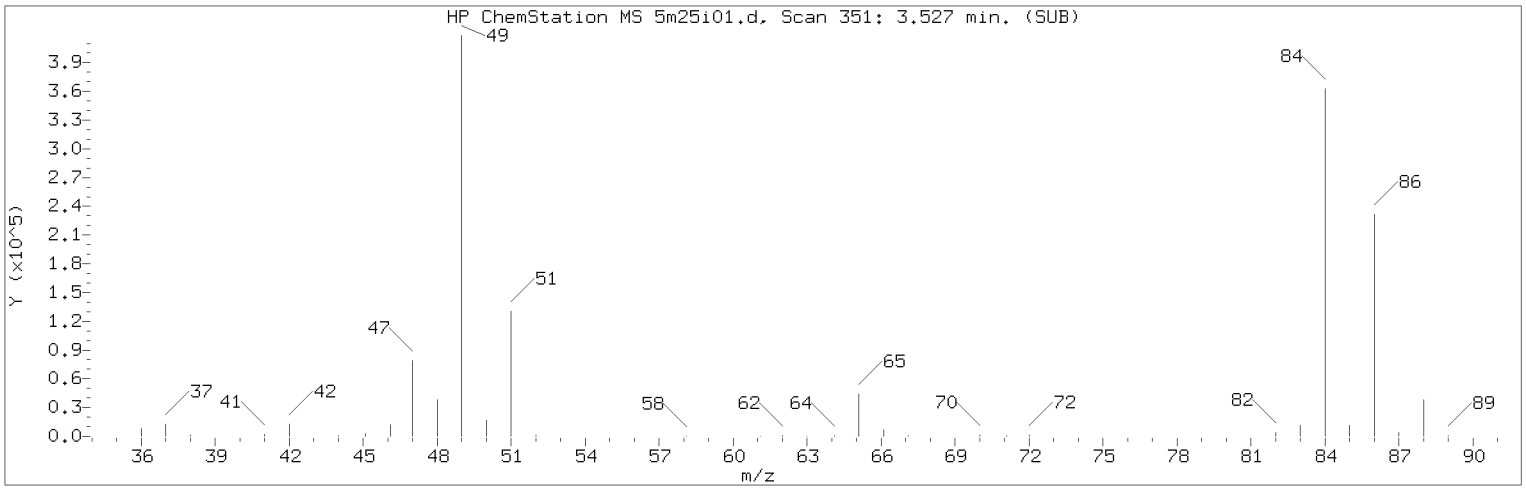
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

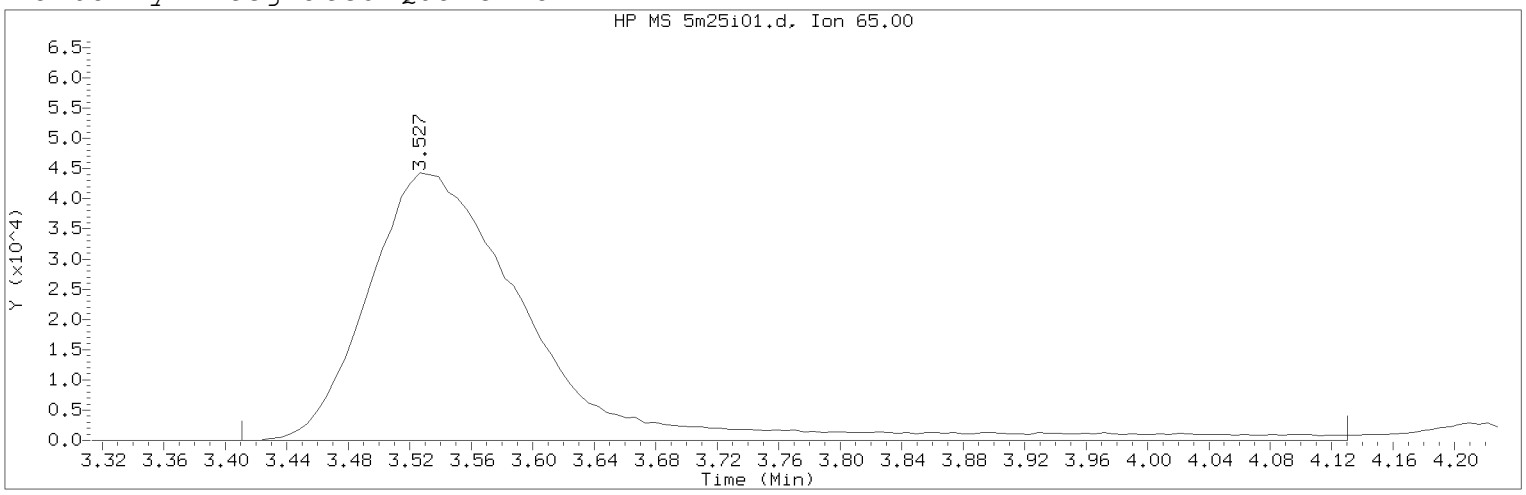
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	12.775	105	8462817	288.777
136) Benzyl Chloride	(4)	12.842	91	6712885	330.375
137) 1,3-Diethylbenzene	(4)	12.909	119	5801927	306.345
138) 1,4-Diethylbenzene	(4)	12.982	119	6113132	304.143
140) n-Butylbenzene	(4)	13.000	92	4584278	292.468
139) 1,2-Dichlorobenzene	(4)	13.025	146	4507989	305.665
141) 1,2-Diethylbenzene	(4)	13.055	119	4801598	304.957
142) Diethylbenzene (total)	(4)		100	16716657	915.446
143) 1,2-Dibromo-3-chloropropane	(4)	13.586	75	803623	311.890
145) 1,3,5-Trichlorobenzene	(4)	13.714	180	3839402	323.855
147) 1,2,4-Trichlorobenzene	(4)	14.147	180	3488143	325.036
148) Hexachlorobutadiene	(4)	14.238	225	1711354	337.896
149) Naphthalene	(4)	14.336	128	10044106	275.826
150) 1,2,3-Trichlorobenzene	(4)	14.482	180	3315138	322.404
151) 2-Methylnaphthalene	(4)	15.091	142	7016729	327.477

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

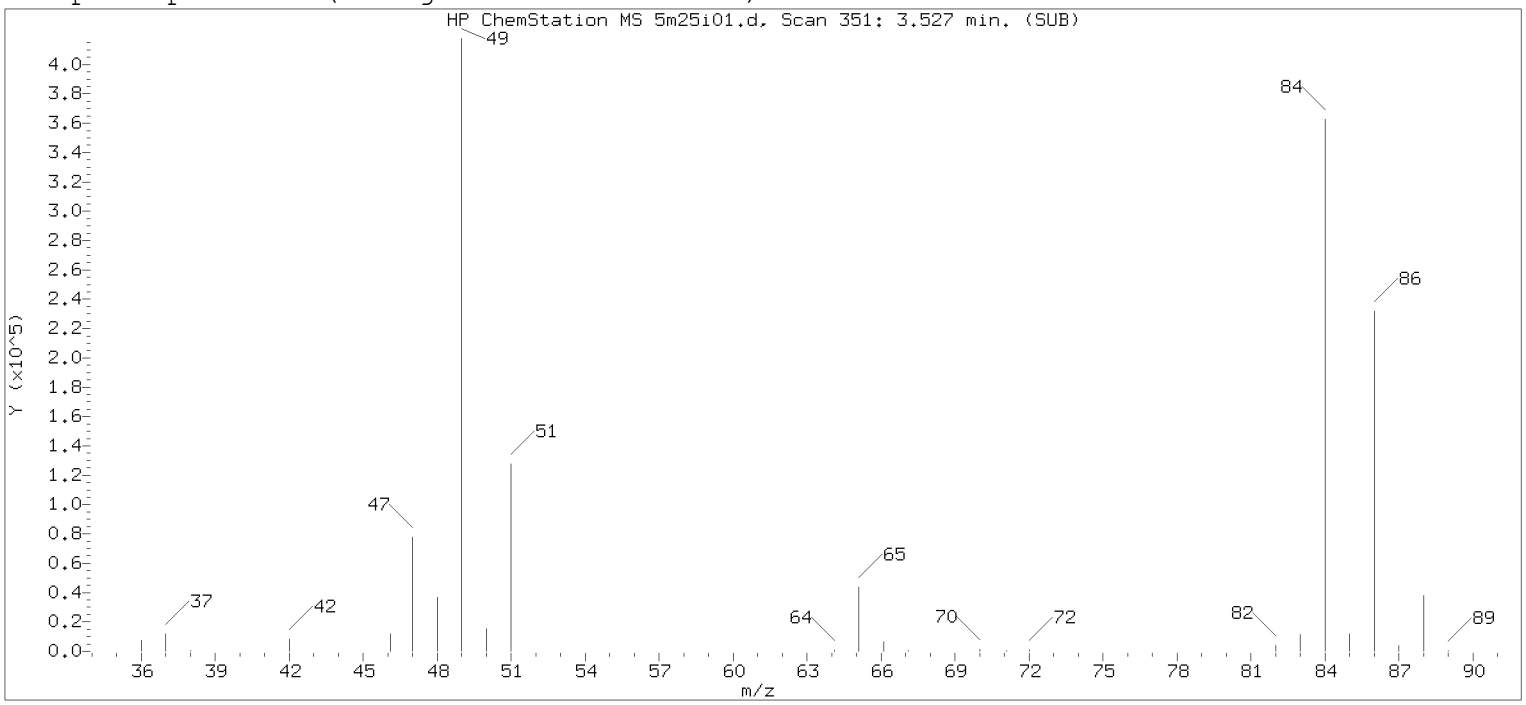
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 351
Retention Time (minutes): 3.527
Quant Ion : 65.00
Area (flag) : 326405M
On-Column Amount (ng) : 250.0000
Integration start scan : 331 Integration stop scan: 449
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

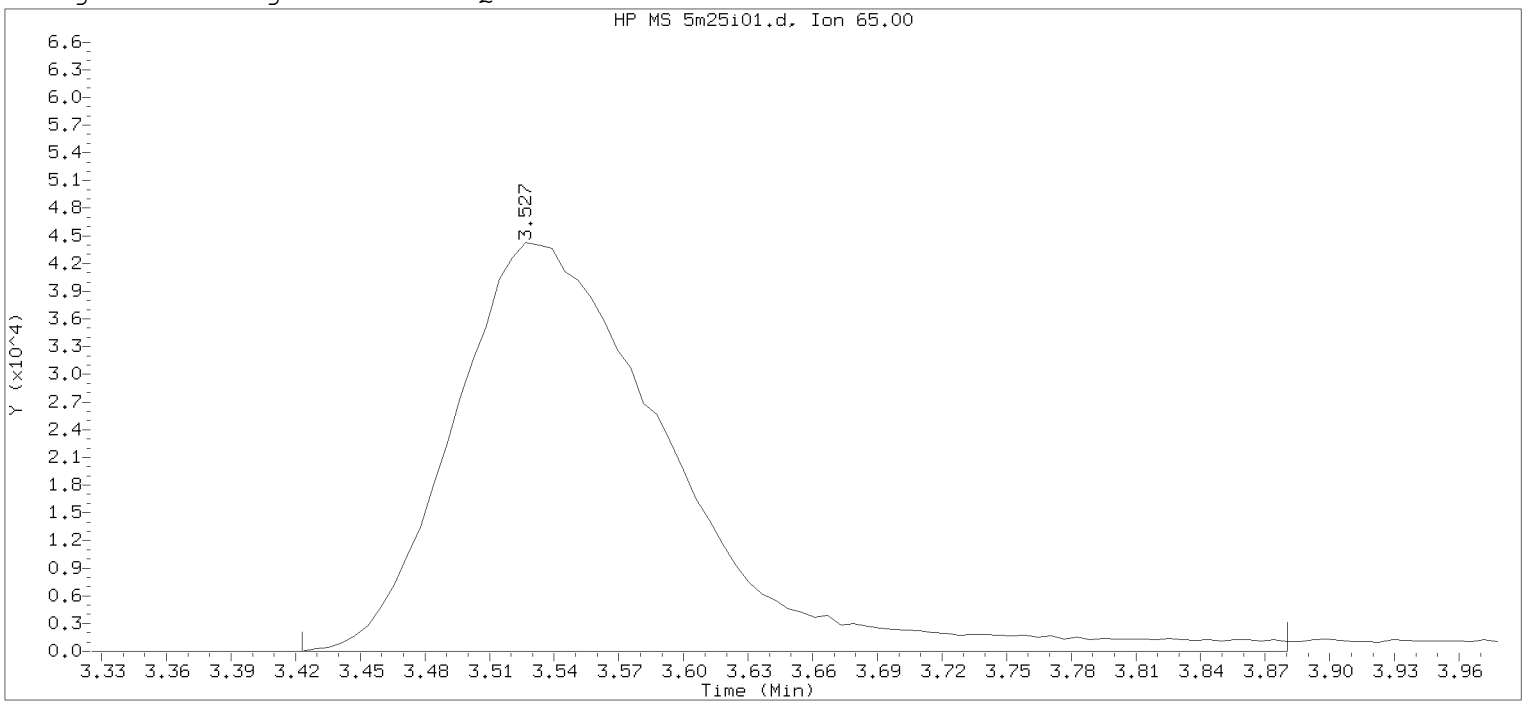
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

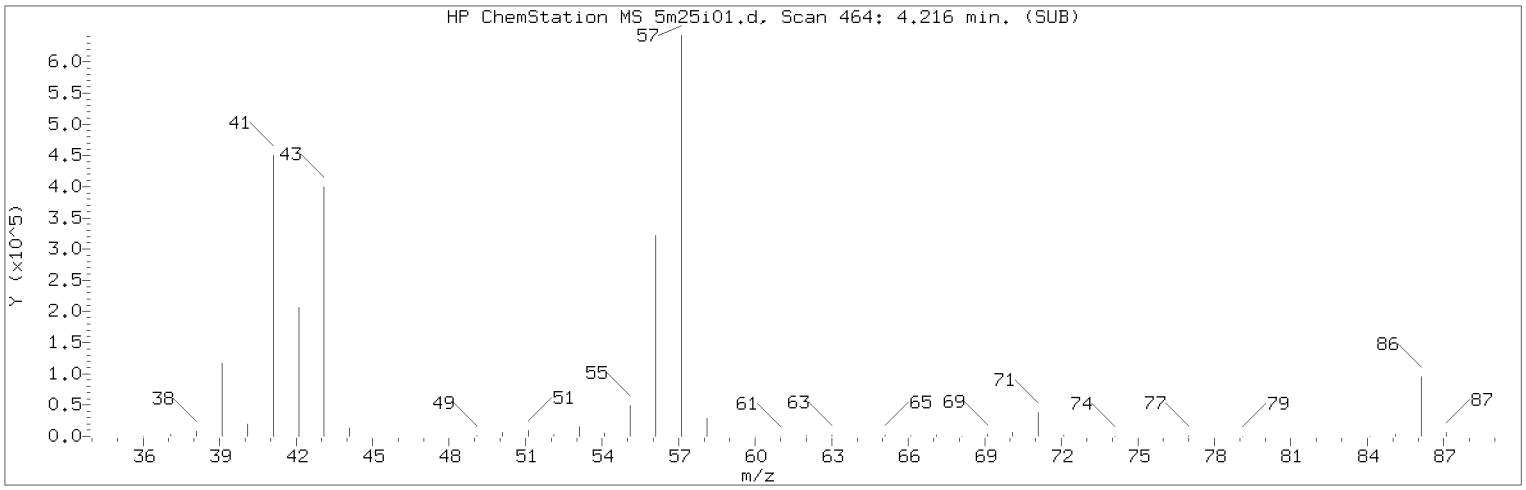
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:26
Date, time and analyst ID of latest file update: 25-Mar-2019 14:26 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

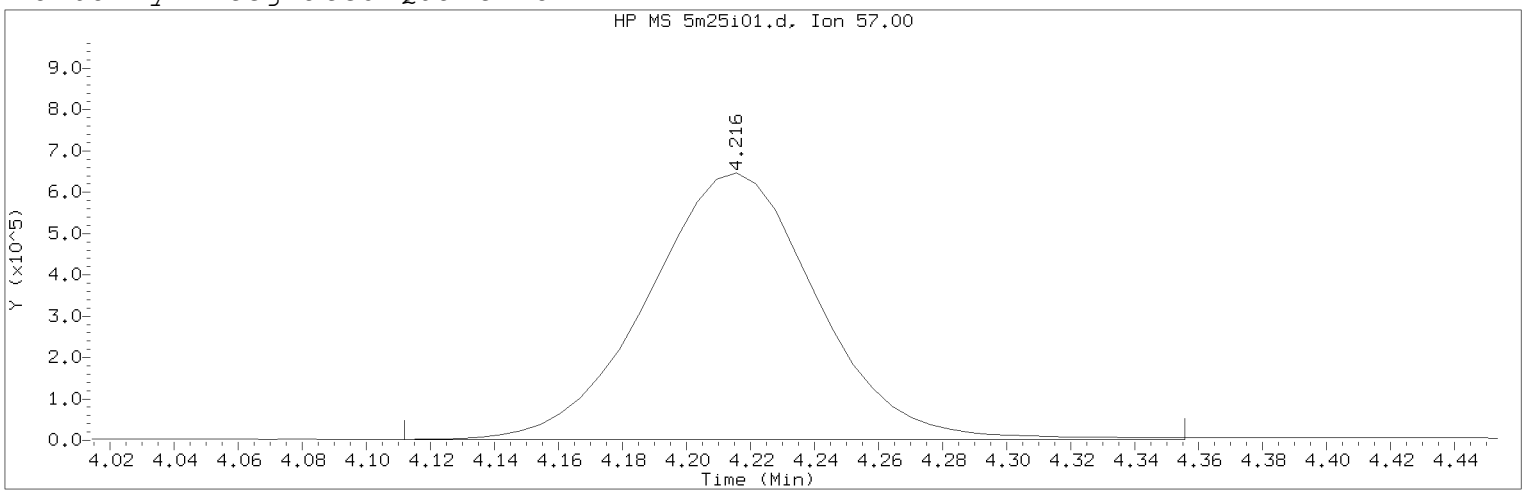
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 351
Retention Time (minutes): 3.527
Quant Ion : 65.00
Area : 310989
On-column Amount (ng) : 250.0000
Integration start scan : 333 Integration stop scan: 408
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user: KEVIN KELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

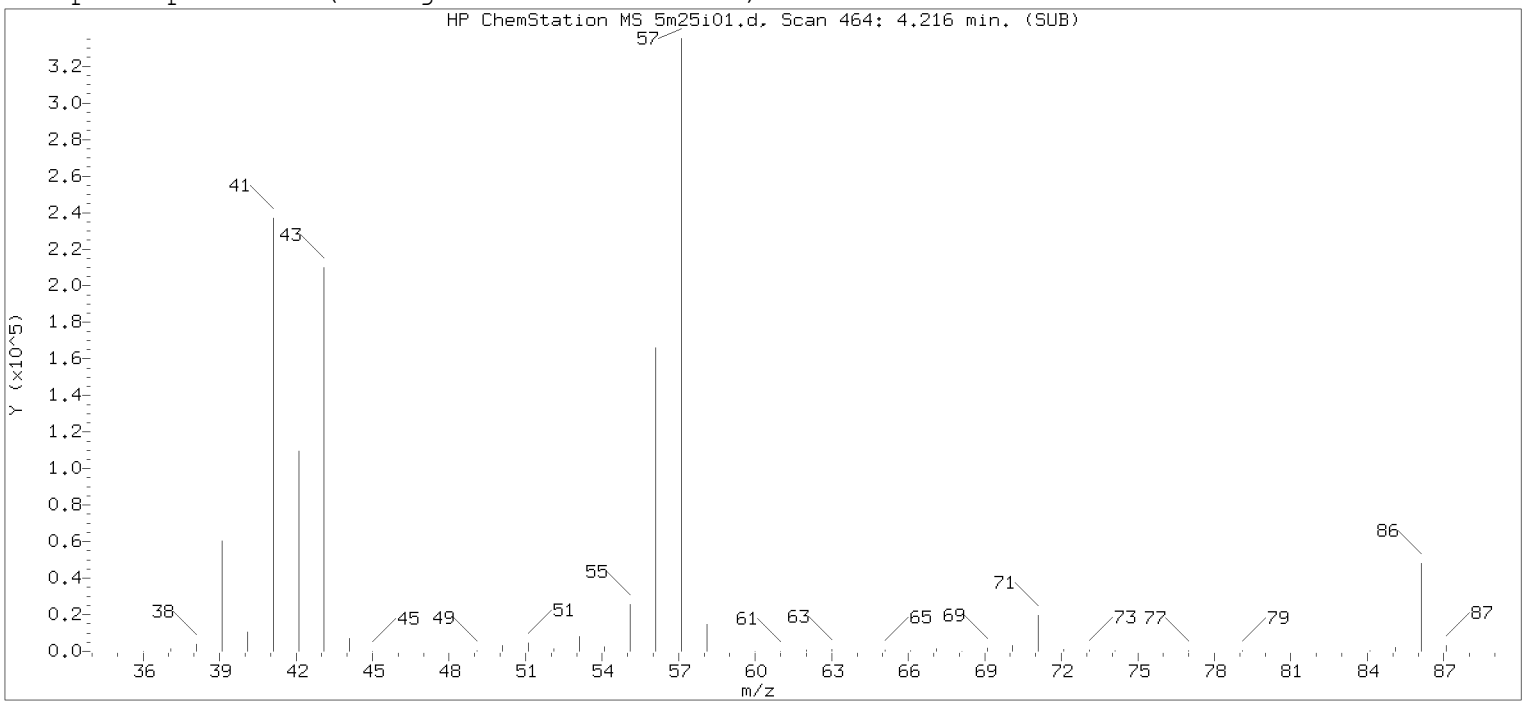
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 464
Retention Time (minutes): 4.216
Quant Ion : 57.00
Area (flag) : 2380242M
On-Column Amount (ng) : 306.0997
Integration start scan : 446 Integration stop scan: 486
Y at integration start : 1421 Y at integration end: 1421

Reason for manual integration: improper integration

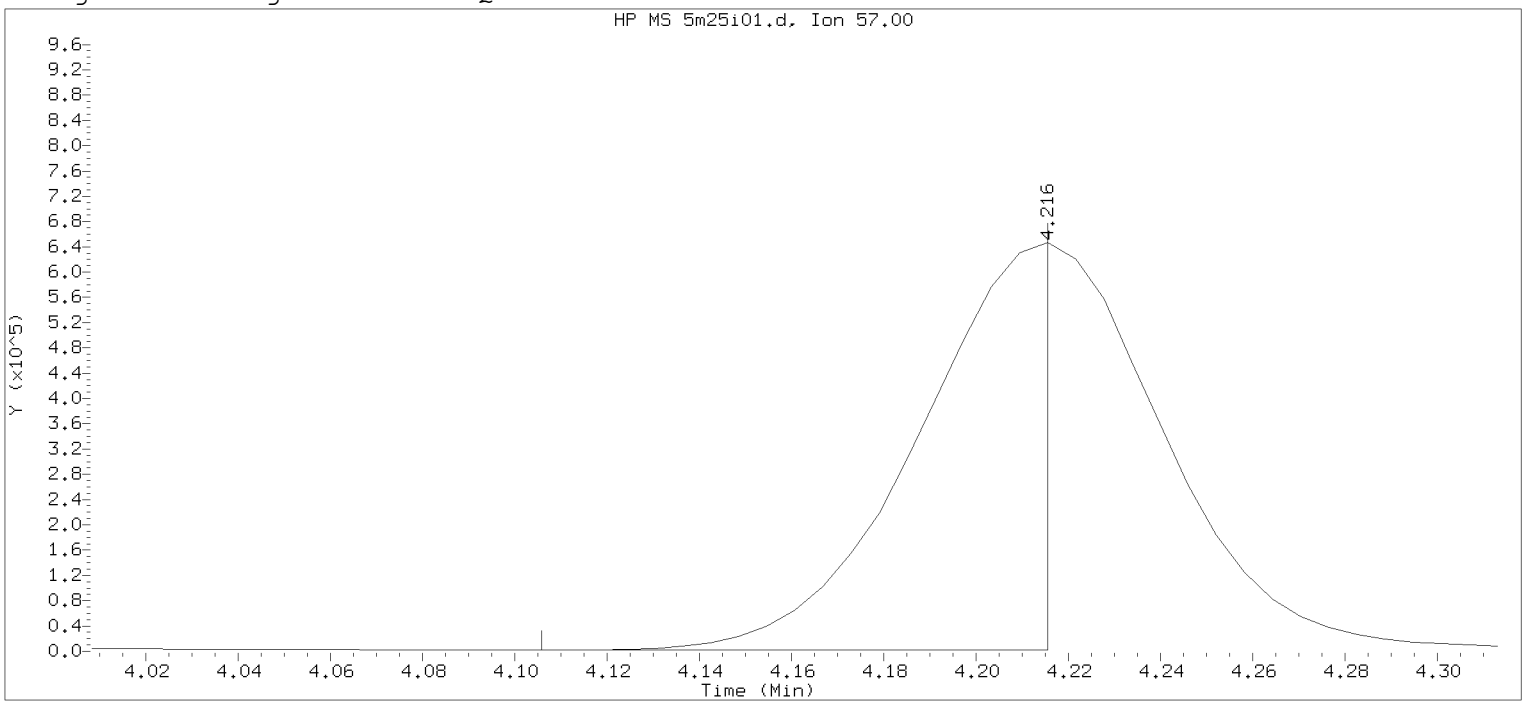
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

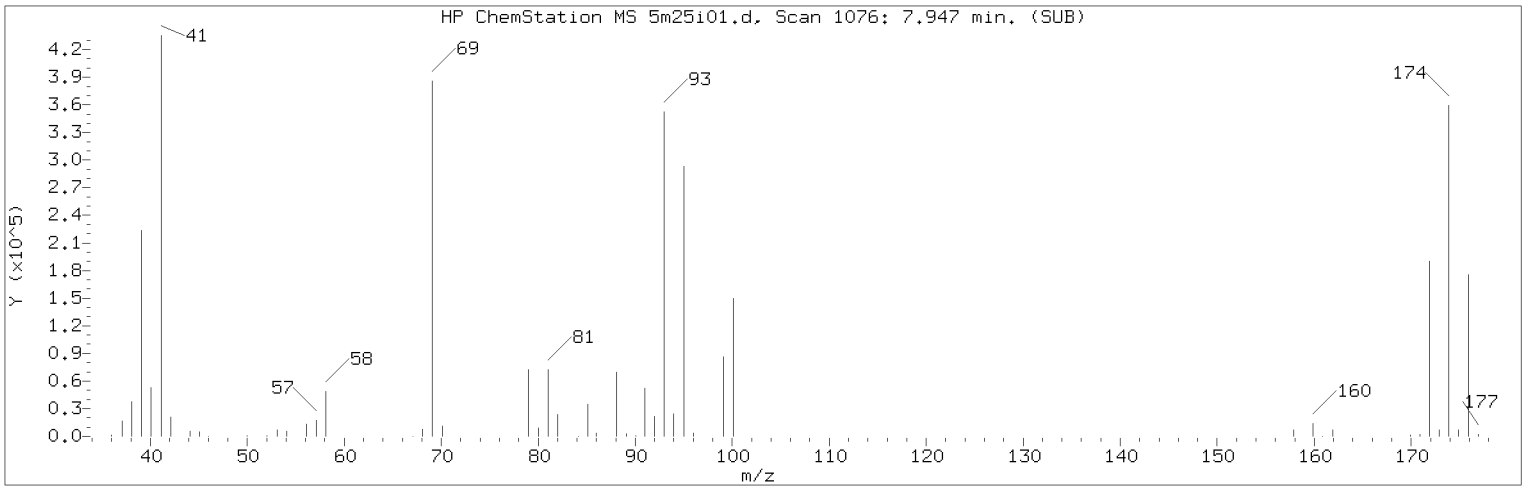
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:26
Date, time and analyst ID of latest file update: 25-Mar-2019 14:26 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

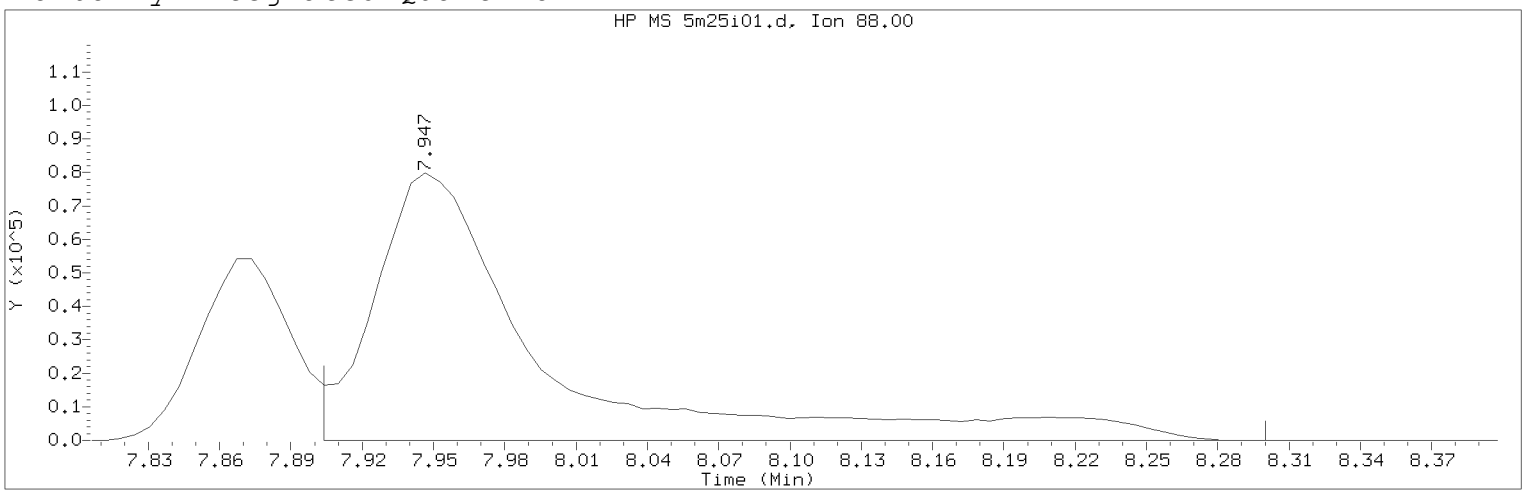
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 464
Retention Time (minutes): 4.216
Quant Ion : 57.00
Area : 1215284
On-column Amount (ng) : 167.2526
Integration start scan : 445 Integration stop scan: 463
Y at integration start : 2141 Y at integration end: 2141

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kkelly100

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

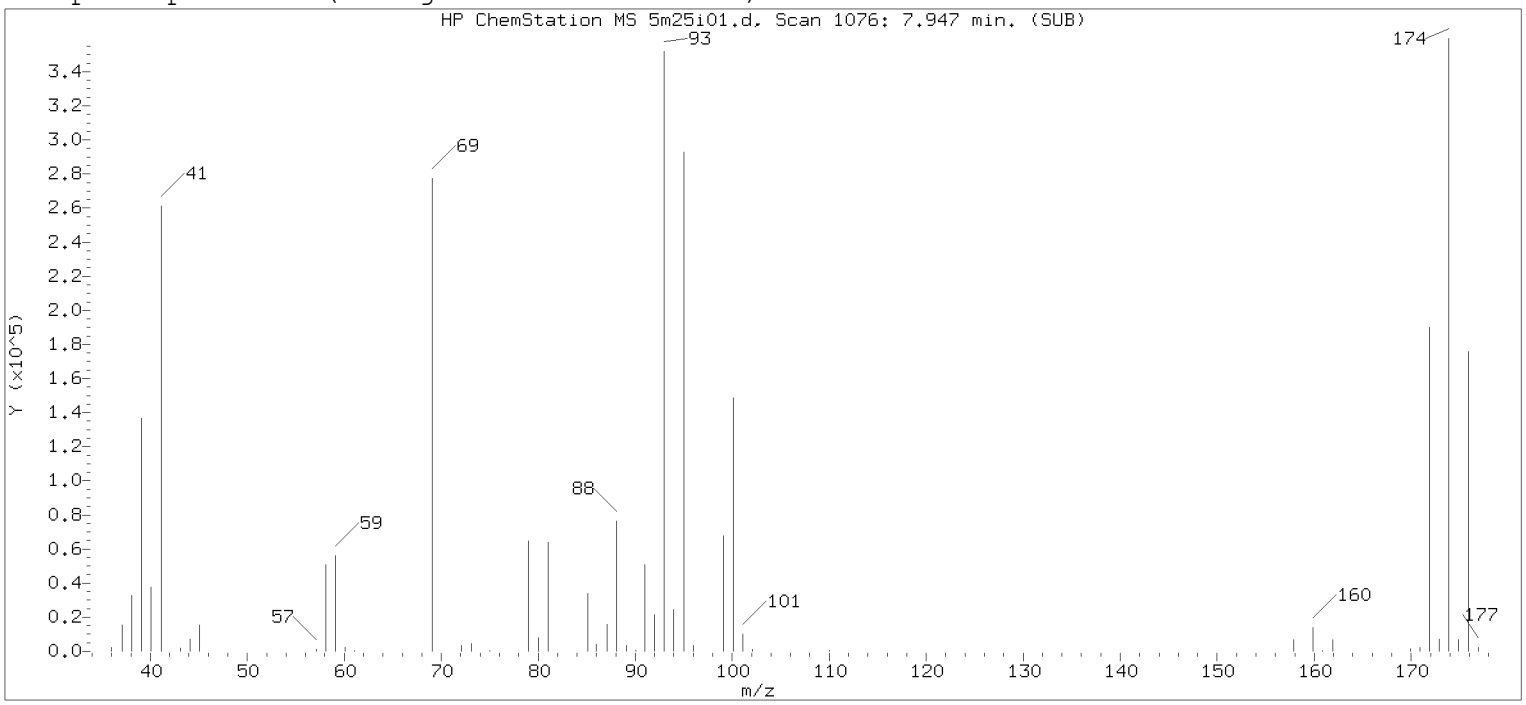
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1076
Retention Time (minutes): 7.947
Quant Ion : 88.00
Area (flag) : 396729M
On-Column Amount (ng) : 4147.9280
Integration start scan : 1068 Integration stop scan: 1133
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

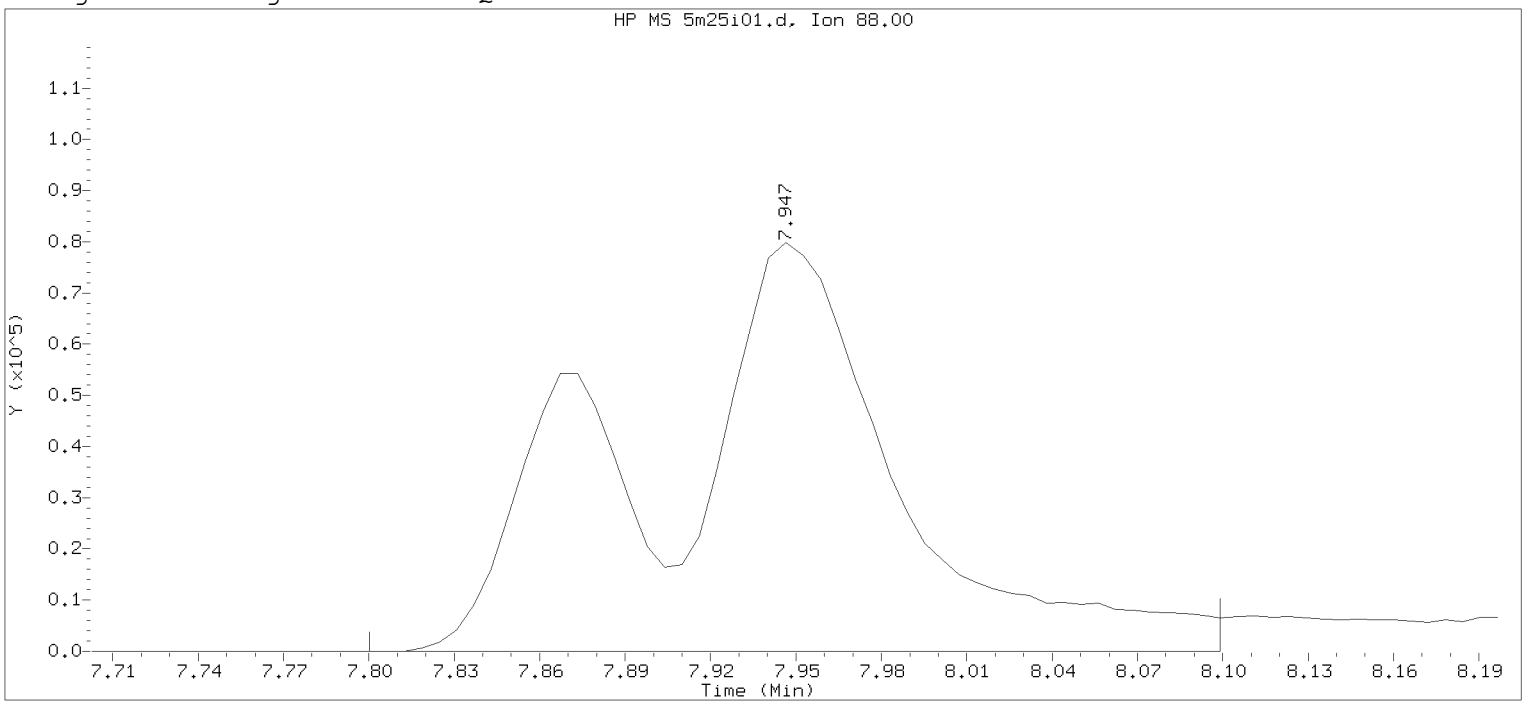
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

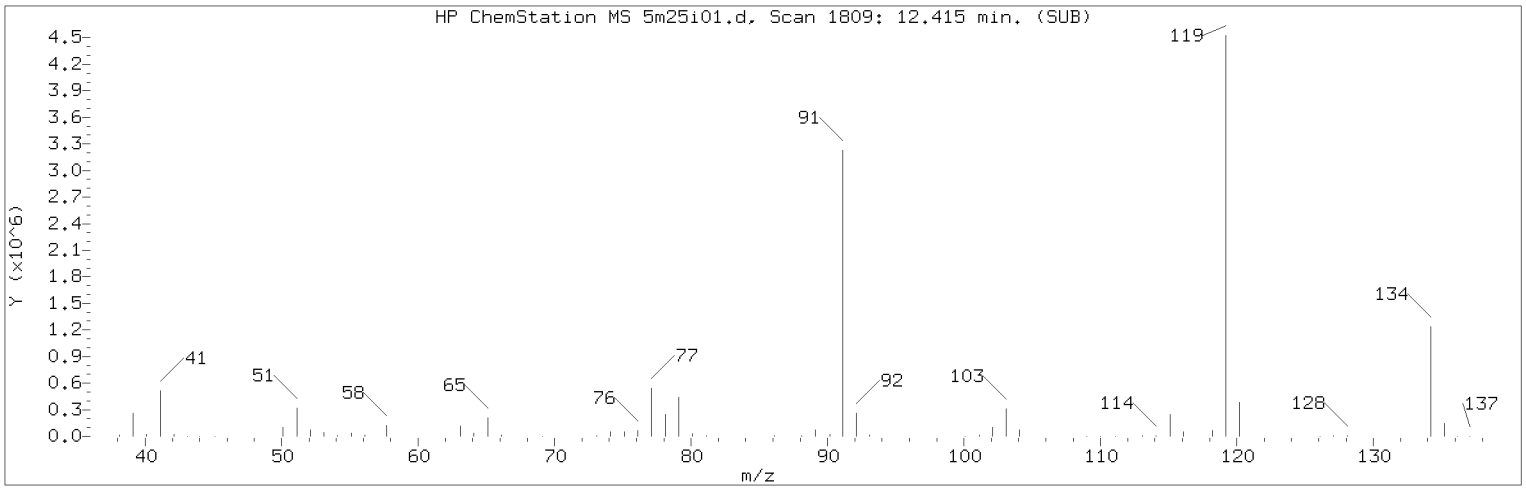
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:26
Date, time and analyst ID of latest file update: 25-Mar-2019 14:26 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

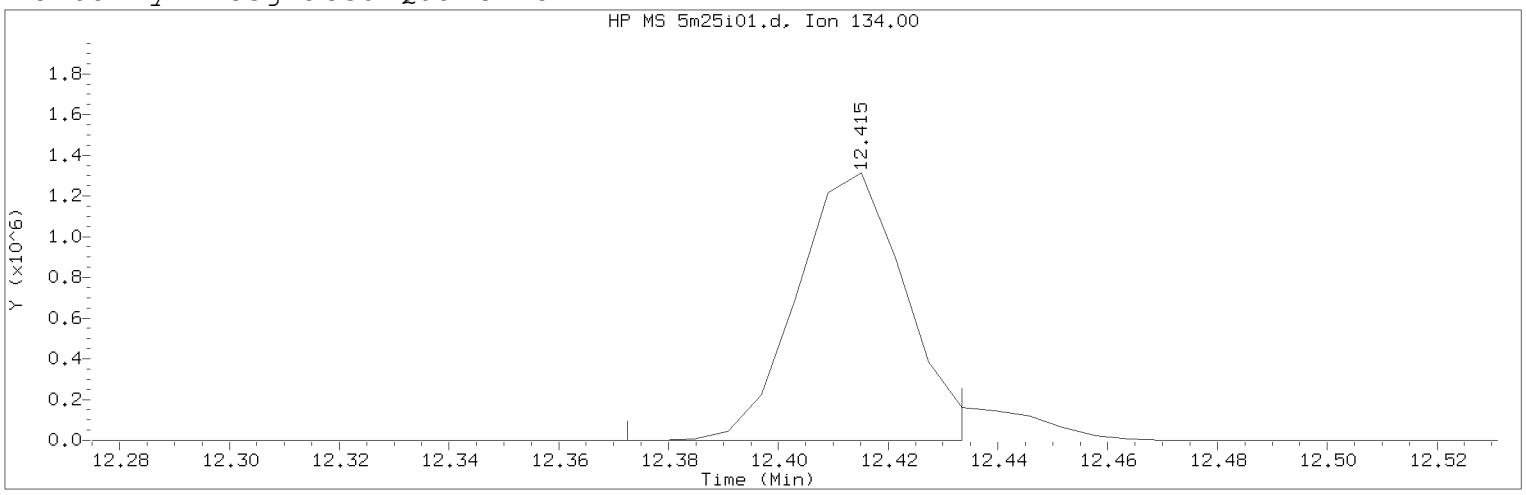
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1076
Retention Time (minutes): 7.947
Quant Ion : 88.00
Area : 478982
On-column Amount (ng) : 3936.7372
Integration start scan : 1051 Integration stop scan: 1100
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: KKELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

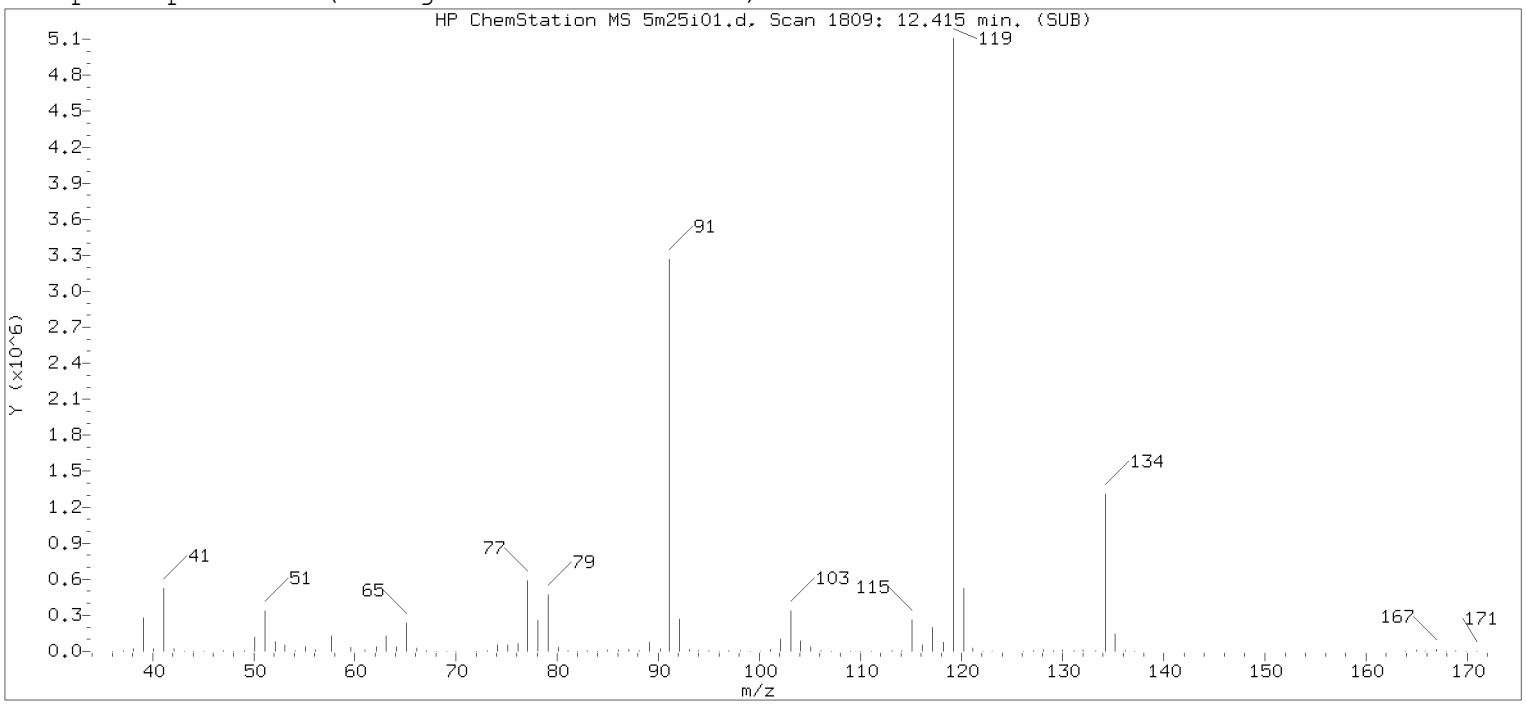
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1809
Retention Time (minutes): 12.415
Quant Ion : 134.00
Area (flag) : 1806450M
On-Column Amount (ng) : 309.0136
Integration start scan : 1801 Integration stop scan: 1811
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

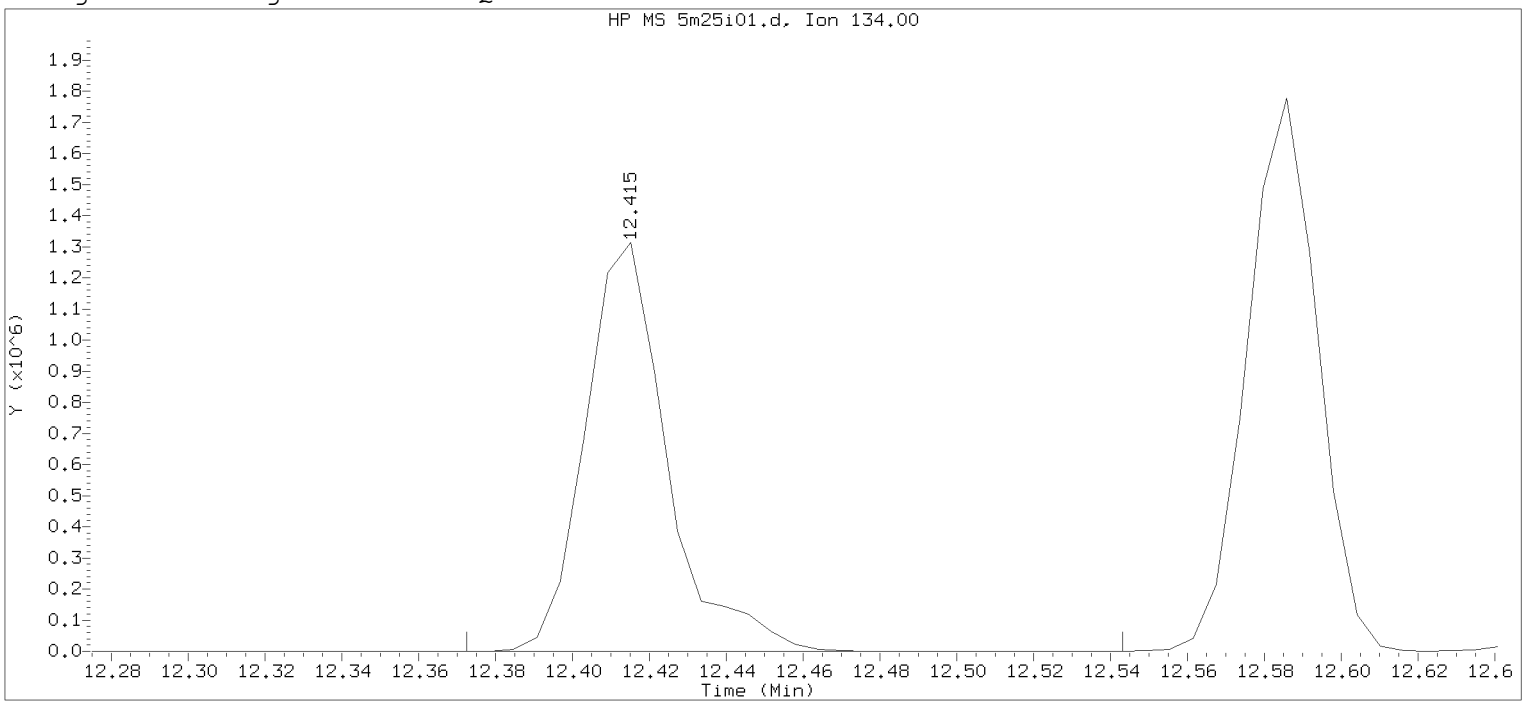
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



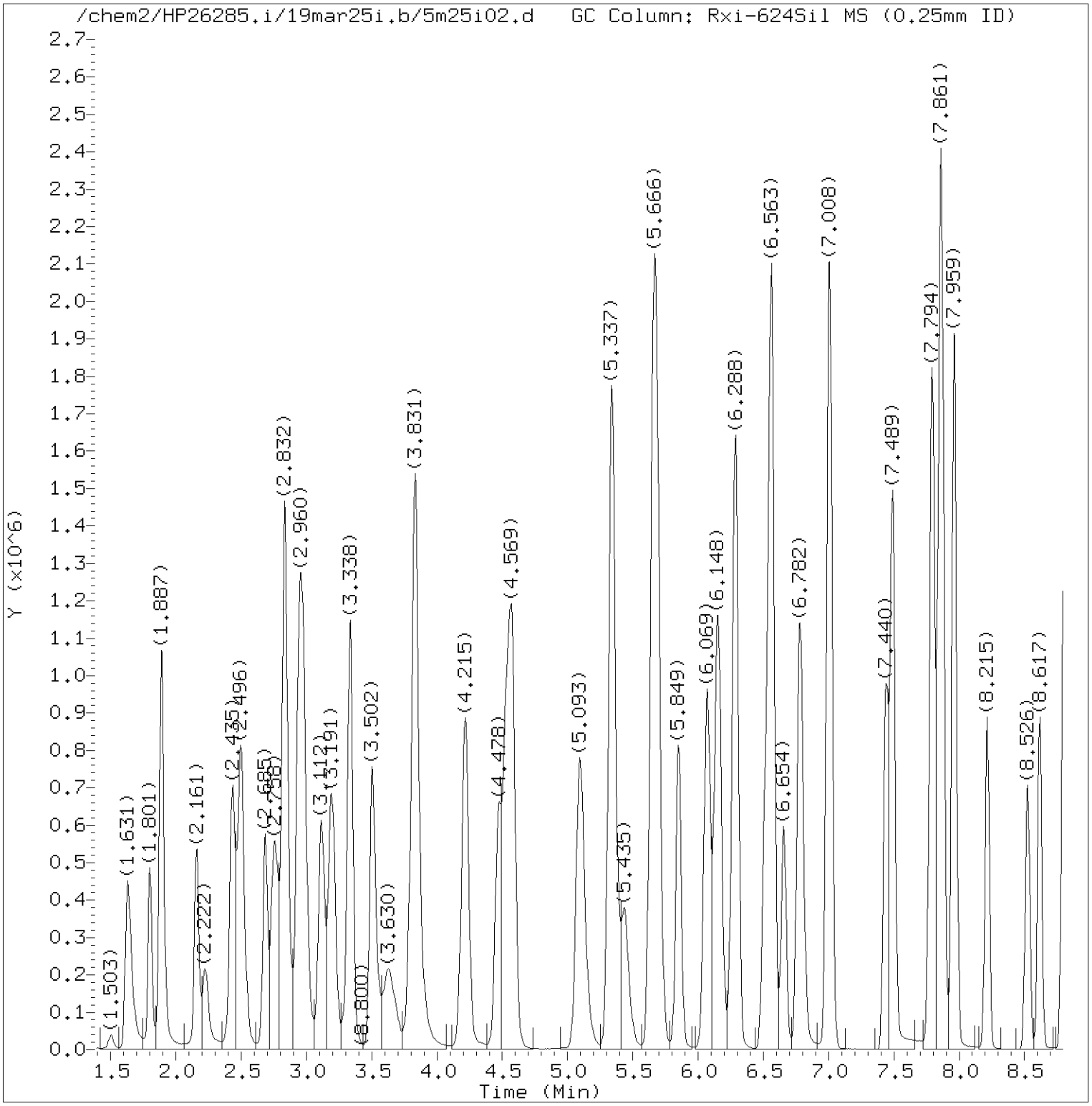
Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:26
Date, time and analyst ID of latest file update: 25-Mar-2019 14:26 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1809
Retention Time (minutes): 12.415
Quant Ion : 134.00
Area : 1936751
On-column Amount (ng) : 304.5814
Integration start scan : 1801 Integration stop scan: 1829
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user: KKELLY



Total Ion Chromatogram (TIC)

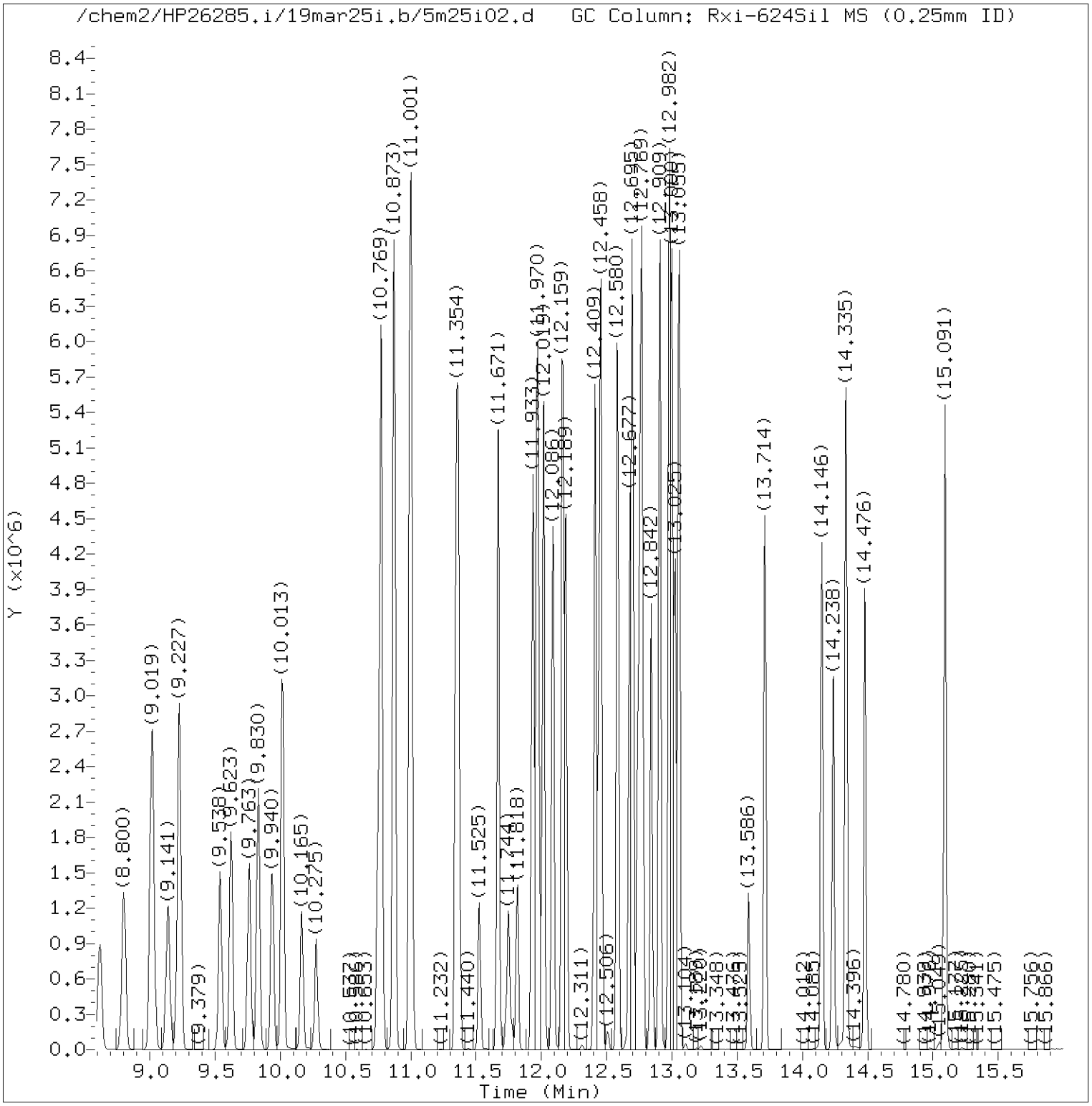
Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i02.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:10 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i02.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:10 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Kevin Kelly
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Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i02.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:10 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.631	85	947106	108.111
4) Chloromethane	(2)	1.801	50	627048	98.492
5) 1,3-Butadiene	(2)	1.887	39	431065	97.454
6) Vinyl Chloride	(2)	1.893	62	608412	97.686
8) Bromomethane	(2)	2.161	94	479369	95.514
9) Chloroethane	(2)	2.222	64	283263	94.874
10) Dichlorofluoromethane	(2)	2.435	67	764311	94.117
12) Trichlorofluoromethane	(2)	2.478	101	885624	102.288
11) n-Pentane	(2)	2.502	43	578540	105.944
14) Ethyl ether	(2)	2.685	59	441637	98.486
15) Freon 123a	(2)	2.752	67	651851	96.869
16) Acrolein	(1)	2.832	56	2215338	940.167
17) 1,1-Dichloroethene	(2)	2.941	96	501724	99.769
17) 1,1-Dichloroethene	(2)	2.941	63	243817	98.551
19) Freon 113	(2)	2.966	101	570277	111.473
18) Acetone	(1)	2.978	58	213000	197.699
22) Methyl Iodide	(2)	3.112	142	1065819	101.483
21) 2-Propanol	(1)	3.130	45	384805	491.440
23) Carbon Disulfide	(2)	3.191	76	1761154	105.481
27) Methyl Acetate	(2)	3.319	43	728327	93.509
25) Allyl Chloride	(2)	3.338	41	891320	98.651
28) Methylene Chloride	(2)	3.502	84	564344	98.803
29)*t-Butyl alcohol-d10	(1)	3.527	65	333791M	250.000
30) t-Butyl alcohol	(1)	3.630	59	757859	490.782
31) Acrylonitrile	(2)	3.795	53	402849	97.851
33) Methyl Tertiary Butyl Ether	(2)	3.831	73	1572643	97.899
32) trans-1,2-Dichloroethene	(2)	3.837	96	568718	101.032
34) n-Hexane	(2)	4.215	57	888708	114.126
36) 1,1-Dichloroethane	(2)	4.465	63	997684	100.533
38) di-Isopropyl ether	(2)	4.532	45	1779894	98.390
39) 2-Chloro-1,3-butadiene	(2)	4.575	53	889035	101.238
40) Ethyl t-butyl ether	(2)	5.093	59	1635297	97.641
42) cis-1,2-Dichloroethene	(2)	5.337	96	635497	99.782
44) 2-Butanone	(2)	5.337	43	1182768	190.243
45) 2,2-Dichloropropane	(2)	5.349	77	812128	102.327
47) Propionitrile	(1)	5.441	54	818601	487.390
48) Methacrylonitrile	(2)	5.654	67	1004915	248.070
49) Bromochloromethane	(2)	5.685	128	322677	101.250

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i02.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:10 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.697	71	333685	195.577
51) Chloroform	(2)	5.849	83	986469	100.248
53) 1,1,1-Trichloroethane	(2)	6.069	97	881670	101.805
52)$Dibromofluoromethane	(2)	6.075	113	263803	50.608
52)$Dibromofluoromethane	(2)	6.075	111	269211	50.315
54) Cyclohexane	(2)	6.154	56	1065235	106.389
54) Cyclohexane	(2)	6.154	84	911601	106.840
54) Cyclohexane	(2)	6.154	69	334510	107.827
43) 1,2-Dichloroethene (Total)	(2)		96	1204215	200.815
56) Carbon Tetrachloride	(2)	6.276	117	794895	106.065
55) 1,1-Dichloropropene	(2)	6.294	75	798059	100.252
58) Isobutyl Alcohol	(1)	6.520	41	624171	1234.251
57)$1,2-Dichloroethane-d4	(2)	6.550	102	60921	49.949
57)$1,2-Dichloroethane-d4	(2)	6.550	65	281201	49.803
57)$1,2-Dichloroethane-d4	(2)	6.550	104	38896	50.043
60) Benzene	(2)	6.563	78	2418592	100.012
61) 1,2-Dichloroethane	(2)	6.654	62	684116	95.724
61) 1,2-Dichloroethane	(2)	6.654	98	65543	104.827
65) t-Amyl methyl ether	(2)	6.776	73	1638155	97.054
66)*Fluorobenzene	(2)	6.995	96	1089311	50.000
67) n-Heptane	(2)	7.014	43	993585	113.155
69) n-Butanol	(1)	7.440	56	1064242	2523.960
71) Trichloroethene	(2)	7.489	95	629240	100.334
73) Methylcyclohexane	(2)	7.794	83	1152245	110.959
73) Methylcyclohexane	(2)	7.794	98	497566	111.382
74) 1,2-Dichloropropane	(2)	7.849	63	600986	100.259
76) 1,4-Dioxane	(1)	7.946	88	126609M	1294.446
75) Dibromomethane	(2)	7.959	93	379623	100.128
77) Methyl Methacrylate	(2)	7.965	69	630978	100.827
79) Bromodichloromethane	(2)	8.215	83	741449	105.231
80) 2-Nitropropane	(2)	8.526	41	599567	207.309
81) 2-Chloroethyl Vinyl Ether	(2)	8.617	63	515724	103.089
82) cis-1,3-Dichloropropene	(2)	8.800	75	972230	104.873
83) 4-Methyl-2-pentanone	(2)	9.019	43	2460855	193.259
84)$Toluene-d8	(3)	9.141	98	1054296	49.538
84)$Toluene-d8	(3)	9.141	100	695227	49.702
89) Toluene	(3)	9.227	92	1578747	99.660
90) trans-1,3-Dichloropropene	(3)	9.538	75	901452	105.306

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on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i02.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:10 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	9.623	69	1049219	102.227
93) 1,1,2-Trichloroethane	(3)	9.763	97	563055	99.354
94) Tetrachloroethene	(3)	9.830	166	717193	99.556
95) 1,3-Dichloropropane	(3)	9.940	76	916525	98.726
97) 2-Hexanone	(3)	10.013	43	2153880	192.251
91) 1,3-Dichloropropene (total)	(3)		100	1873682	210.179
98) Dibromochloromethane	(3)	10.165	129	638423	110.032
100) 1,2-Dibromoethane	(3)	10.275	107	632949	100.013
101)*Chlorobenzene-d5	(3)	10.745	117	843152	50.000
102) 1-Chlorohexane	(3)	10.769	91	909373	98.531
103) Chlorobenzene	(3)	10.775	112	1788455	100.899
104) 1,1,1,2-Tetrachloroethane	(3)	10.867	131	644573	107.728
105) Ethylbenzene	(3)	10.873	91	3156171	102.000
107) m+p-Xylene	(3)	11.001	106	2499205	204.799
108) o-Xylene	(3)	11.348	106	1215550	101.943
110) Styrene	(3)	11.366	104	2047254	103.975
111) Bromoform	(3)	11.525	173	519370	113.396
112) Isopropylbenzene	(3)	11.671	105	3169698	102.360
113) Cyclohexanone	(1)	11.744	55	502388	1227.626
109) Xylene (Total)	(3)		106	3714755	306.742
115)$4-Bromofluorobenzene	(3)	11.811	95	413588	49.944
115)$4-Bromofluorobenzene	(3)	11.818	174	358984	49.761
116) Bromobenzene	(4)	11.933	156	802876	102.007
117) 1,1,2,2-Tetrachloroethane	(4)	11.940	83	1004145	100.757
119) trans-1,4-Dichloro-2-butene	(4)	11.964	53	801613	255.408
118) 1,2,3-Trichloropropane	(4)	11.982	110	298540	99.430
120) n-Propylbenzene	(4)	12.019	91	3748557	101.199
121) 2-Chlorotoluene	(4)	12.086	126	779328	102.053
123) 1,3,5-Trimethylbenzene	(4)	12.159	105	2744711	102.679
122) 4-Chlorotoluene	(4)	12.189	126	801291	102.206
125) tert-Butylbenzene	(4)	12.409	134	579376M	102.570
126) Pentachloroethane	(4)	12.439	167	520425	112.823
127) 1,2,4-Trimethylbenzene	(4)	12.458	105	2813650	102.642
128) sec-Butylbenzene	(4)	12.580	105	3583040	103.461
130) 1,3-Dichlorobenzene	(4)	12.677	146	1542952	102.361
131) p-Isopropyltoluene	(4)	12.695	119	3139715	104.568
132)*1,4-Dichlorobenzene-d4	(4)	12.738	152	456264	50.000
134) 1,4-Dichlorobenzene	(4)	12.756	146	1558057	101.988

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on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i02.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:10 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	12.769	105	2941038	103.862
136) Benzyl Chloride	(4)	12.842	91	2203704	112.243
137) 1,3-Diethylbenzene	(4)	12.909	119	1927150	105.308
138) 1,4-Diethylbenzene	(4)	12.982	119	2069181	106.542
140) n-Butylbenzene	(4)	13.000	92	1595051	105.315
139) 1,2-Dichlorobenzene	(4)	13.025	146	1452235	101.908
141) 1,2-Diethylbenzene	(4)	13.055	119	1592965	104.705
142) Diethylbenzene (total)	(4)		100	5589296	316.555
143) 1,2-Dibromo-3-chloropropane	(4)	13.586	75	264178	106.109
145) 1,3,5-Trichlorobenzene	(4)	13.714	180	1213074	105.897
147) 1,2,4-Trichlorobenzene	(4)	14.146	180	1093350	105.439
148) Hexachlorobutadiene	(4)	14.238	225	520452	106.348
149) Naphthalene	(4)	14.335	128	3636278	103.345
150) 1,2,3-Trichlorobenzene	(4)	14.482	180	1032205	103.889
151) 2-Methylnaphthalene	(4)	15.091	142	2250219	108.687

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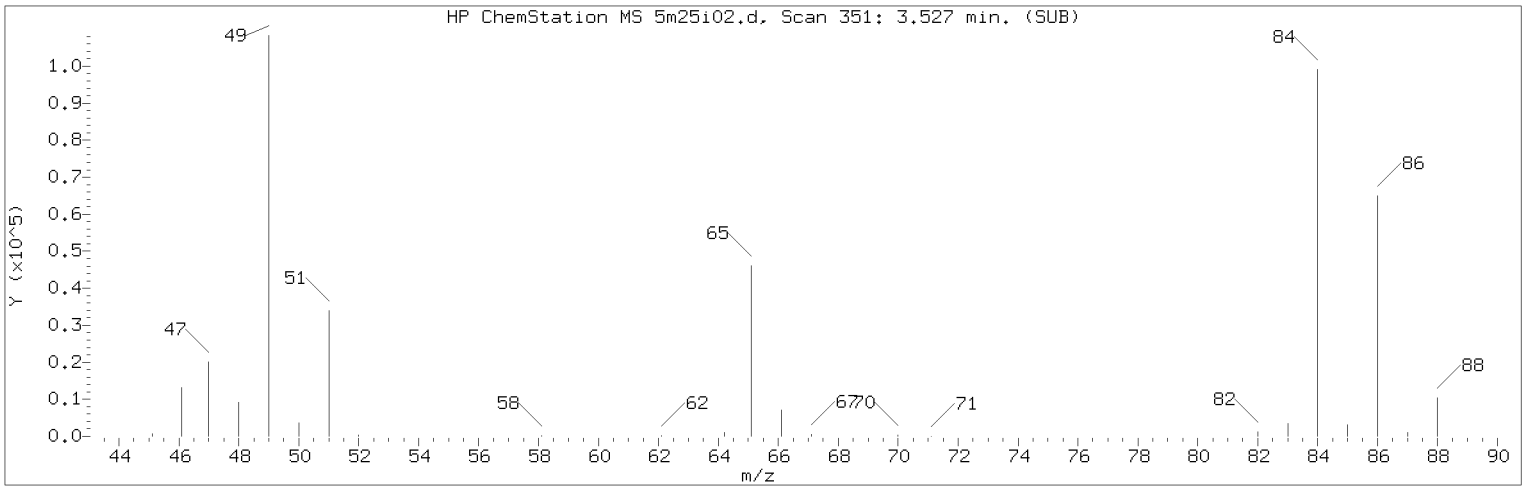
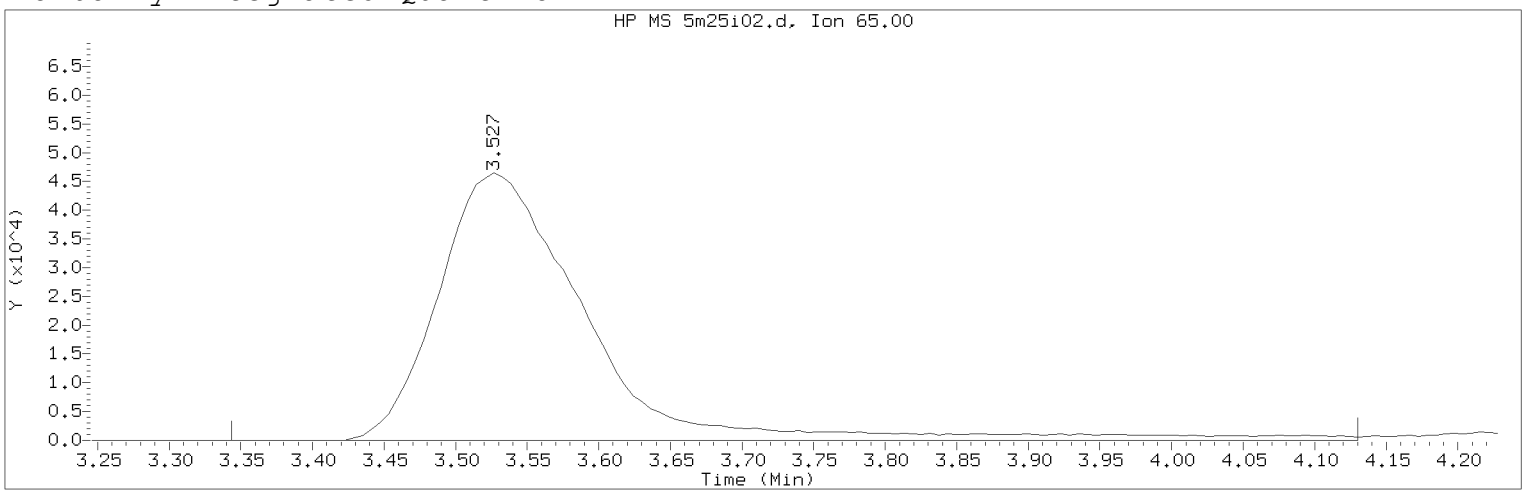
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i02.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:10 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

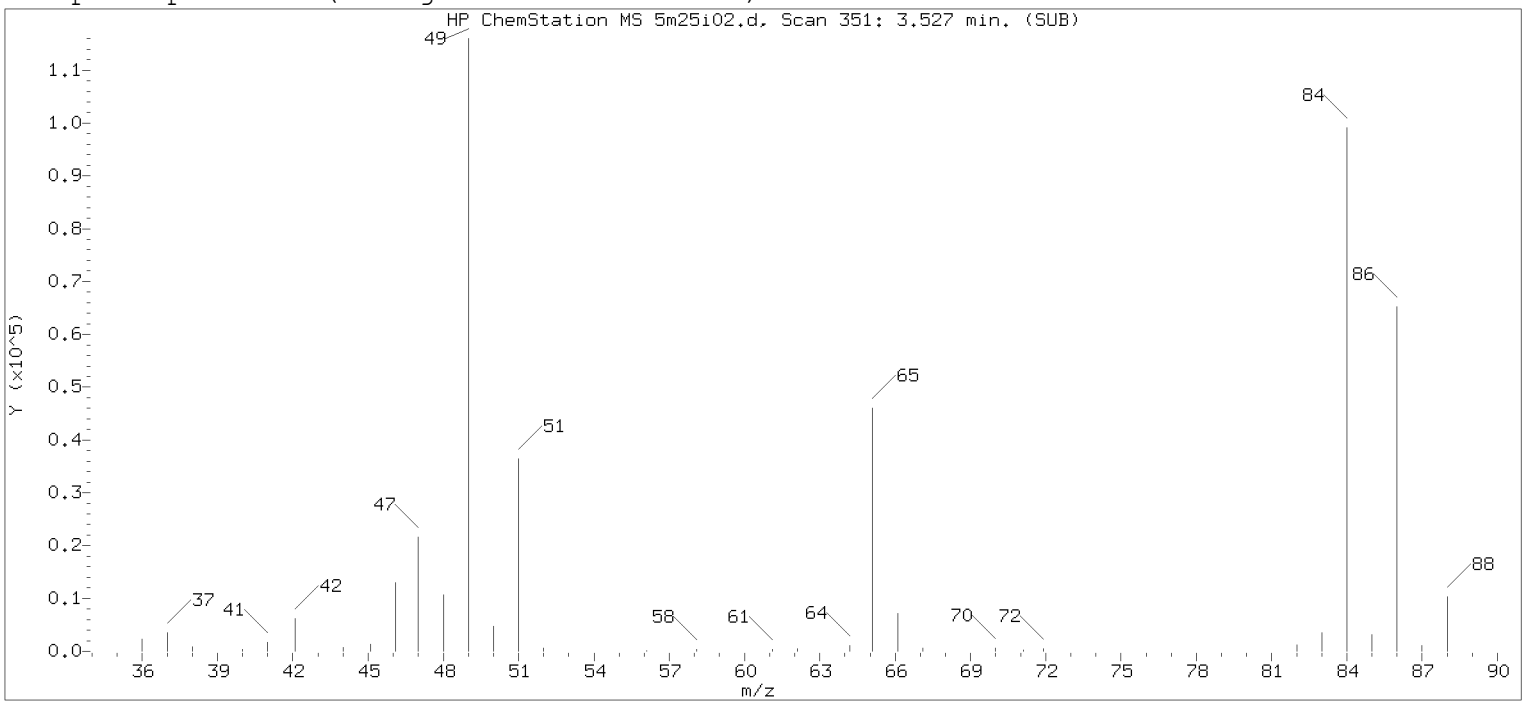
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 351
Retention Time (minutes): 3.527
Quant Ion : 65.00
Area (flag) : 333791M
On-Column Amount (ng) : 250.0000
Integration start scan : 320 Integration stop scan: 449
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

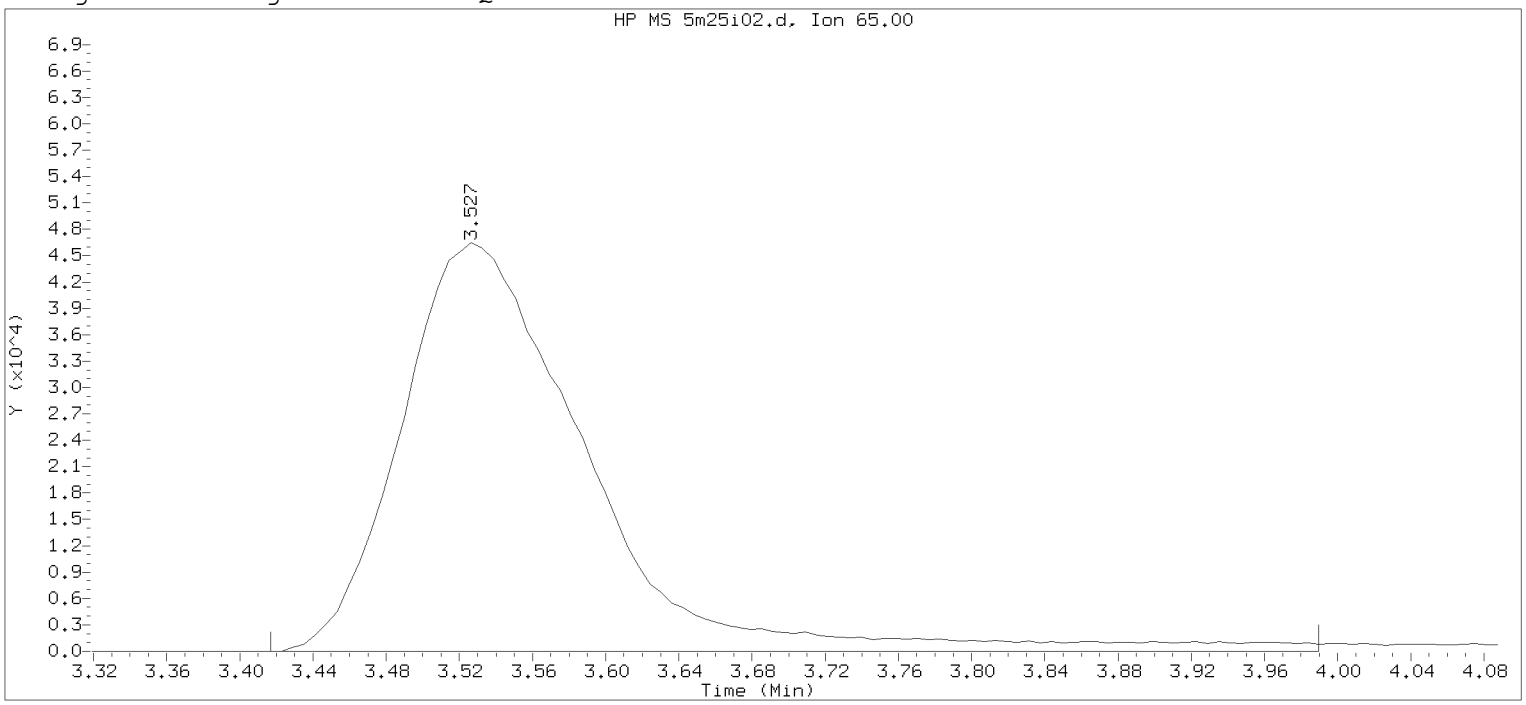
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i02.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:10 Analyst ID: APR27582

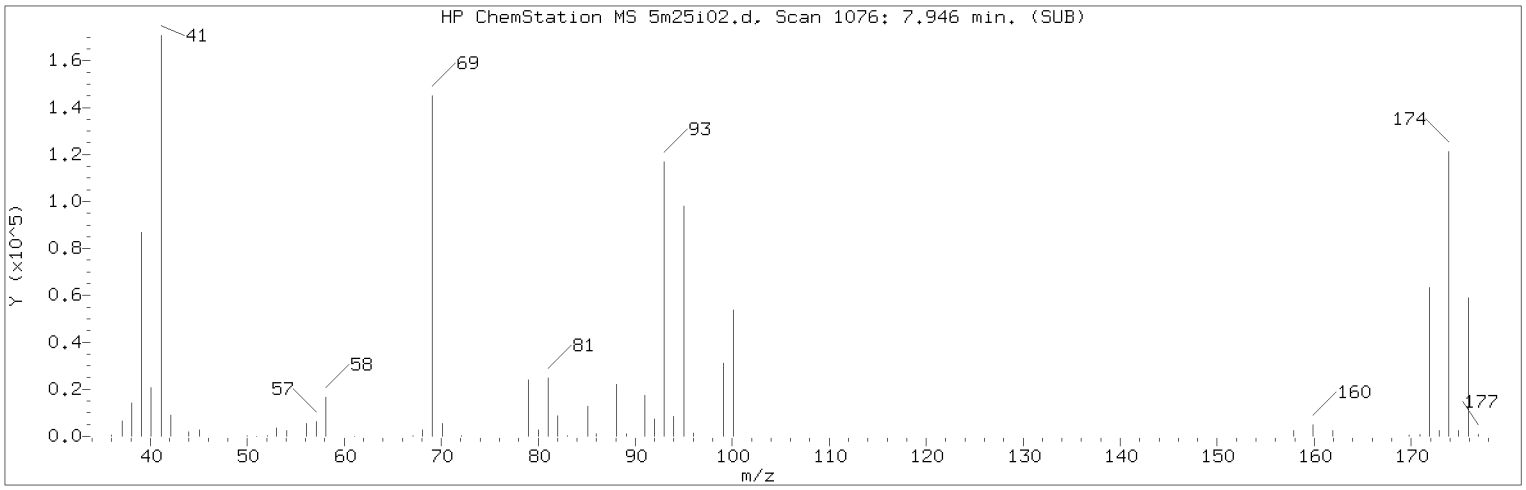
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:26
Date, time and analyst ID of latest file update: 25-Mar-2019 14:26 apr27582

Sample Name: VSTD100 Lab Sample ID: VSTD100

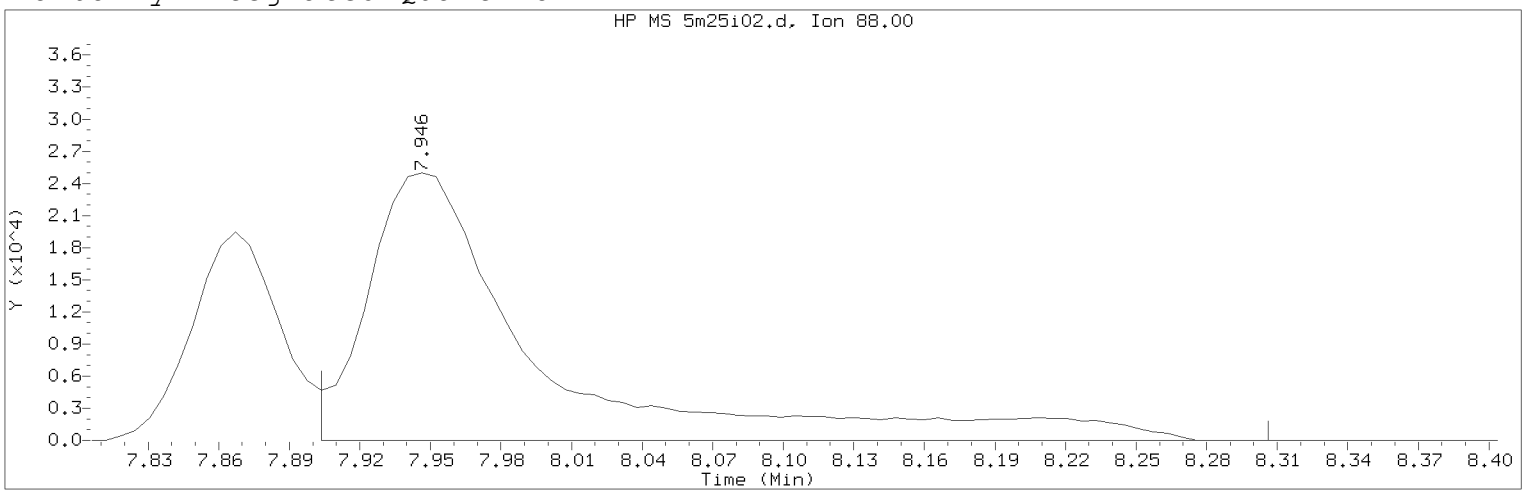
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 351
Retention Time (minutes): 3.527
Quant Ion : 65.00
Area : 327159
On-column Amount (ng) : 250.0000
Integration start scan : 332 Integration stop scan: 426
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kkelly100

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i02.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:10 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

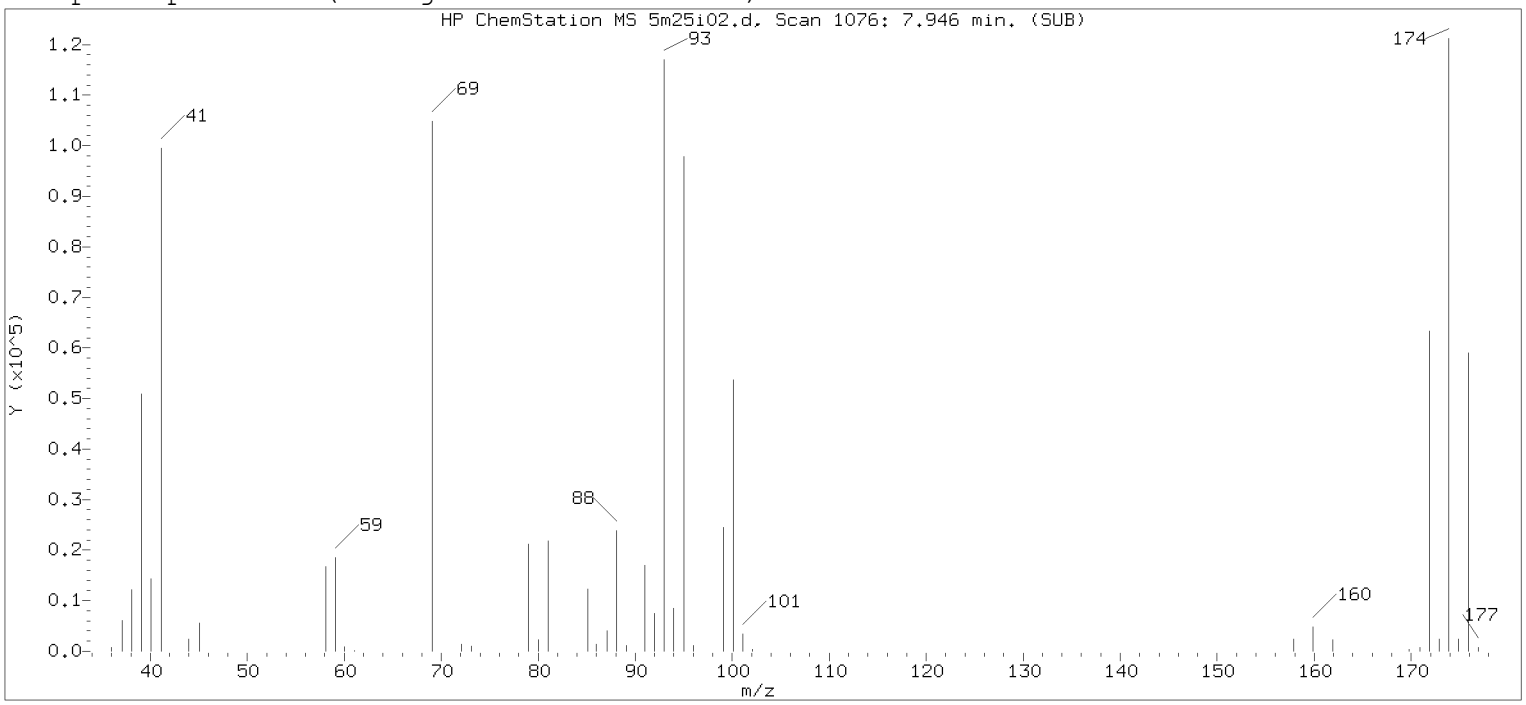
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1076
Retention Time (minutes): 7.946
Quant Ion : 88.00
Area (flag) : 126609M
On-Column Amount (ng) : 1294.4462
Integration start scan : 1068 Integration stop scan: 1134
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

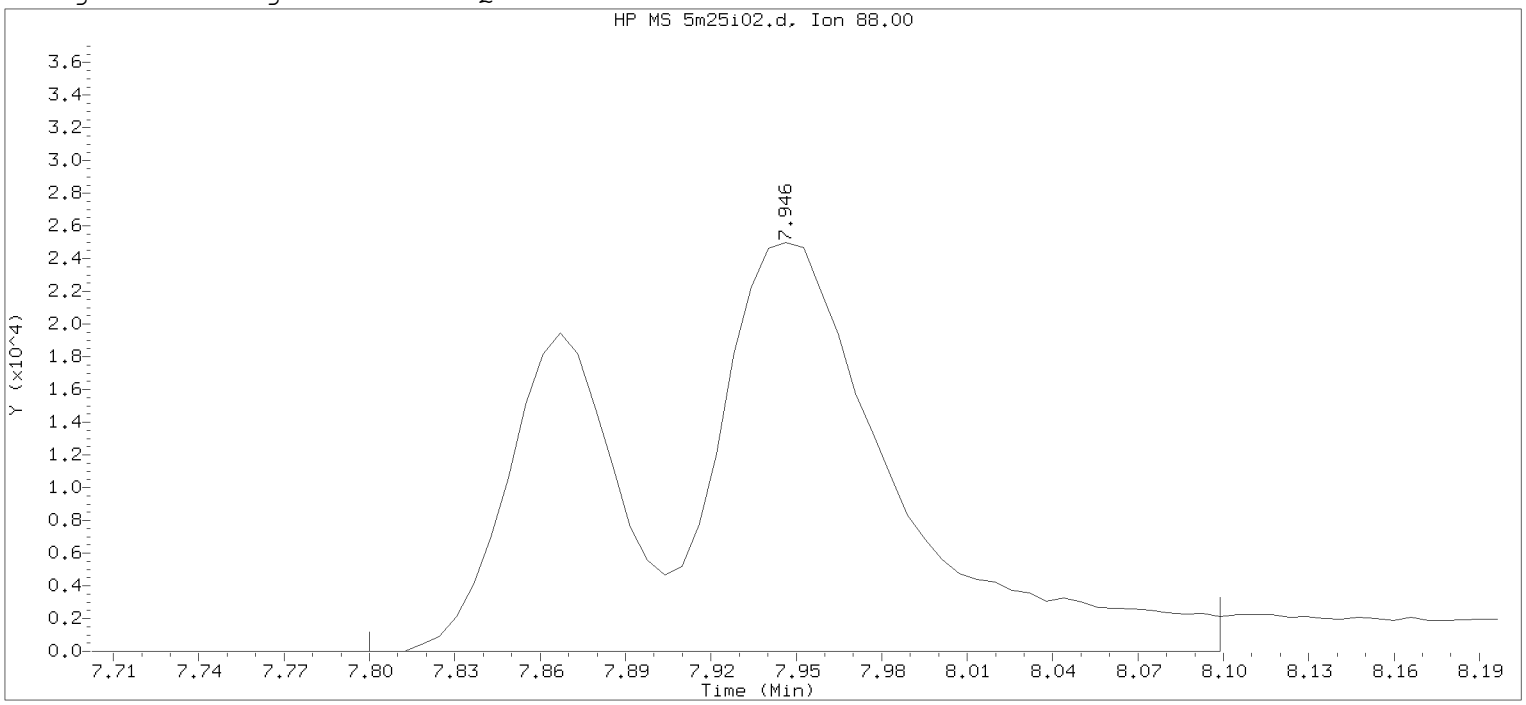
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i02.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:10 Analyst ID: APR27582

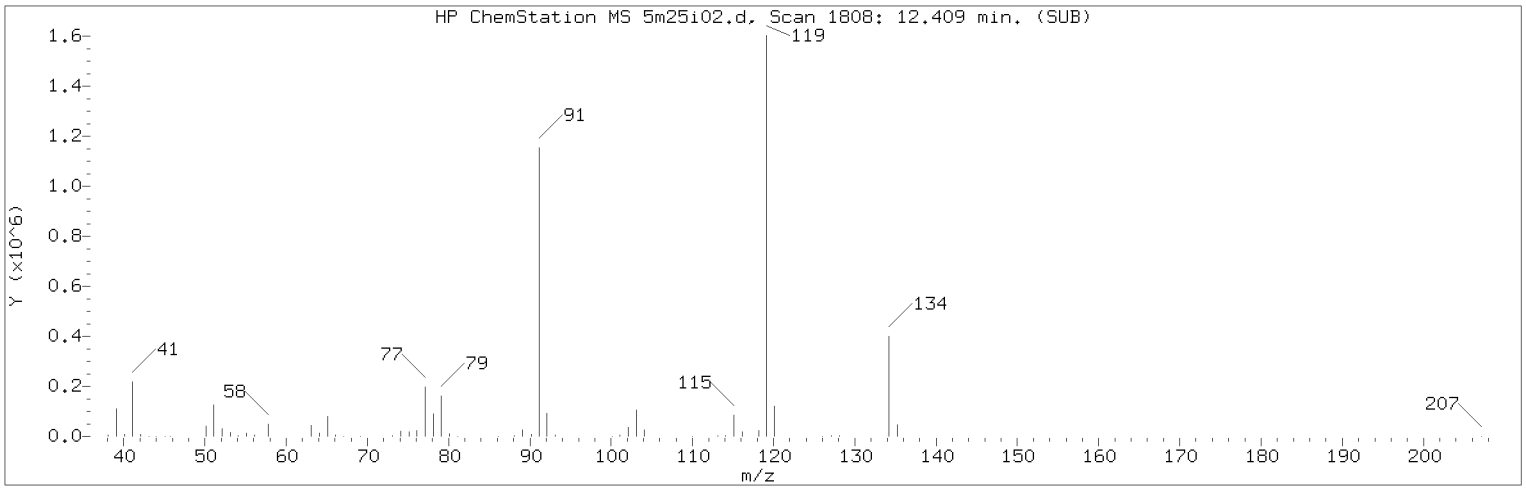
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:26
Date, time and analyst ID of latest file update: 25-Mar-2019 14:26 apr27582

Sample Name: VSTD100 Lab Sample ID: VSTD100

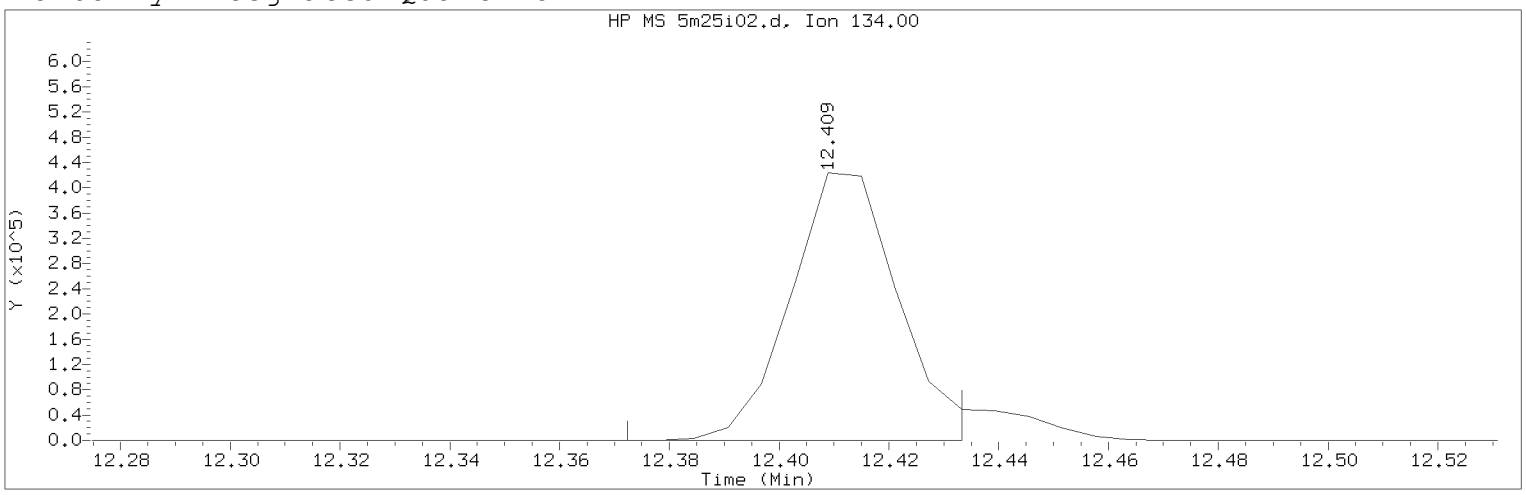
Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1076		
Retention Time (minutes)	: 7.946		
Quant Ion	: 88.00		
Area	: 157415		
On-column Amount (ng)	: 1247.6112		
Integration start scan	: 1051	Integration stop scan:	1100
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user: KKELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i02.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:10 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

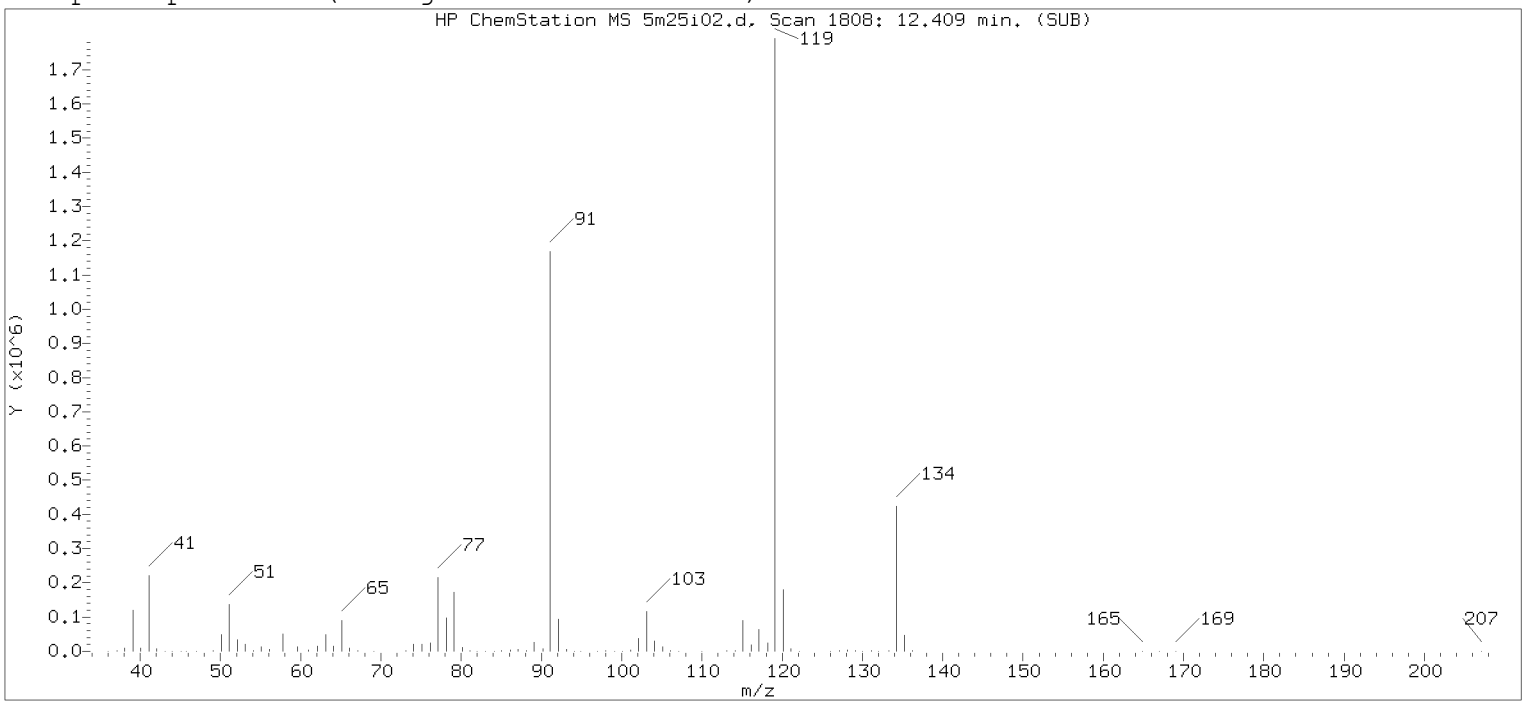
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1808
Retention Time (minutes): 12.409
Quant Ion : 134.00
Area (flag) : 579376M
On-Column Amount (ng) : 102.5697
Integration start scan : 1801 Integration stop scan: 1811
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

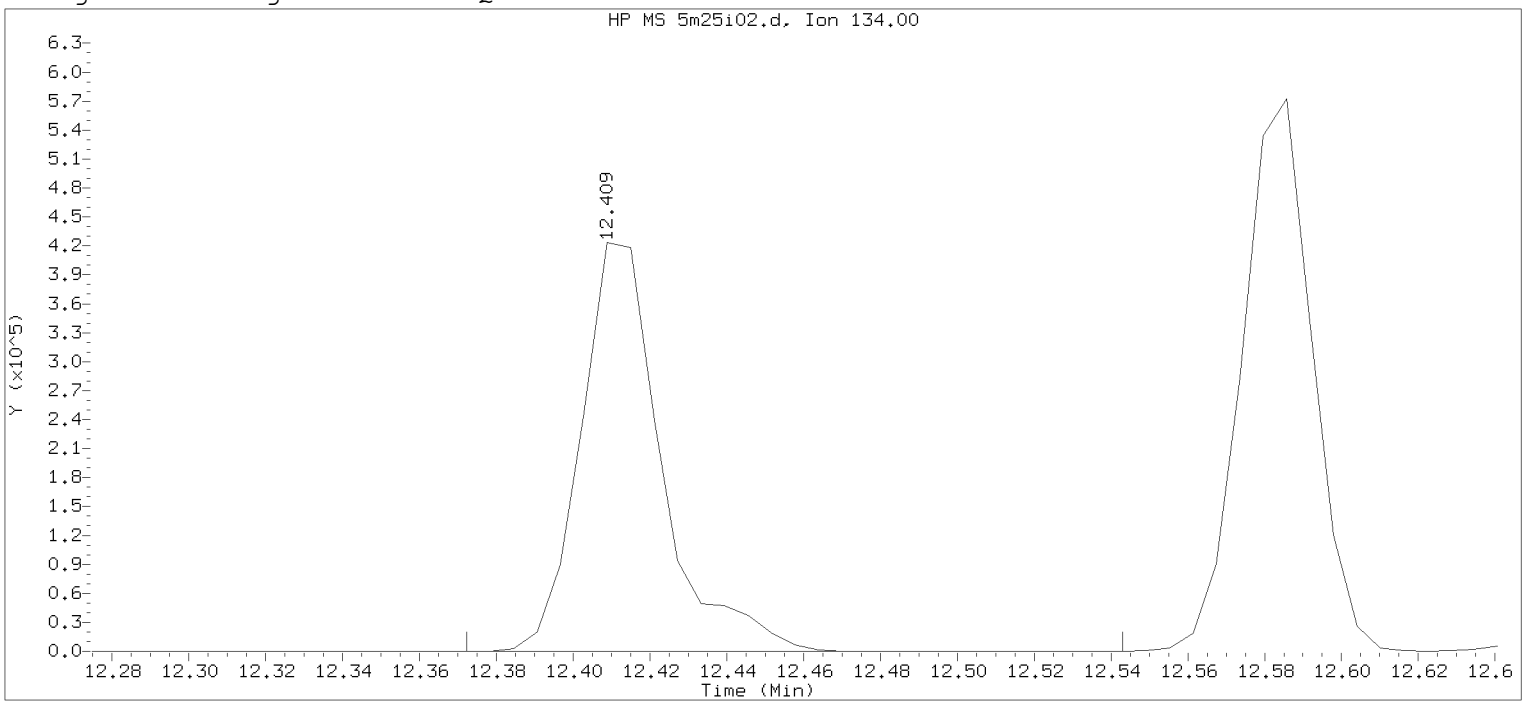
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



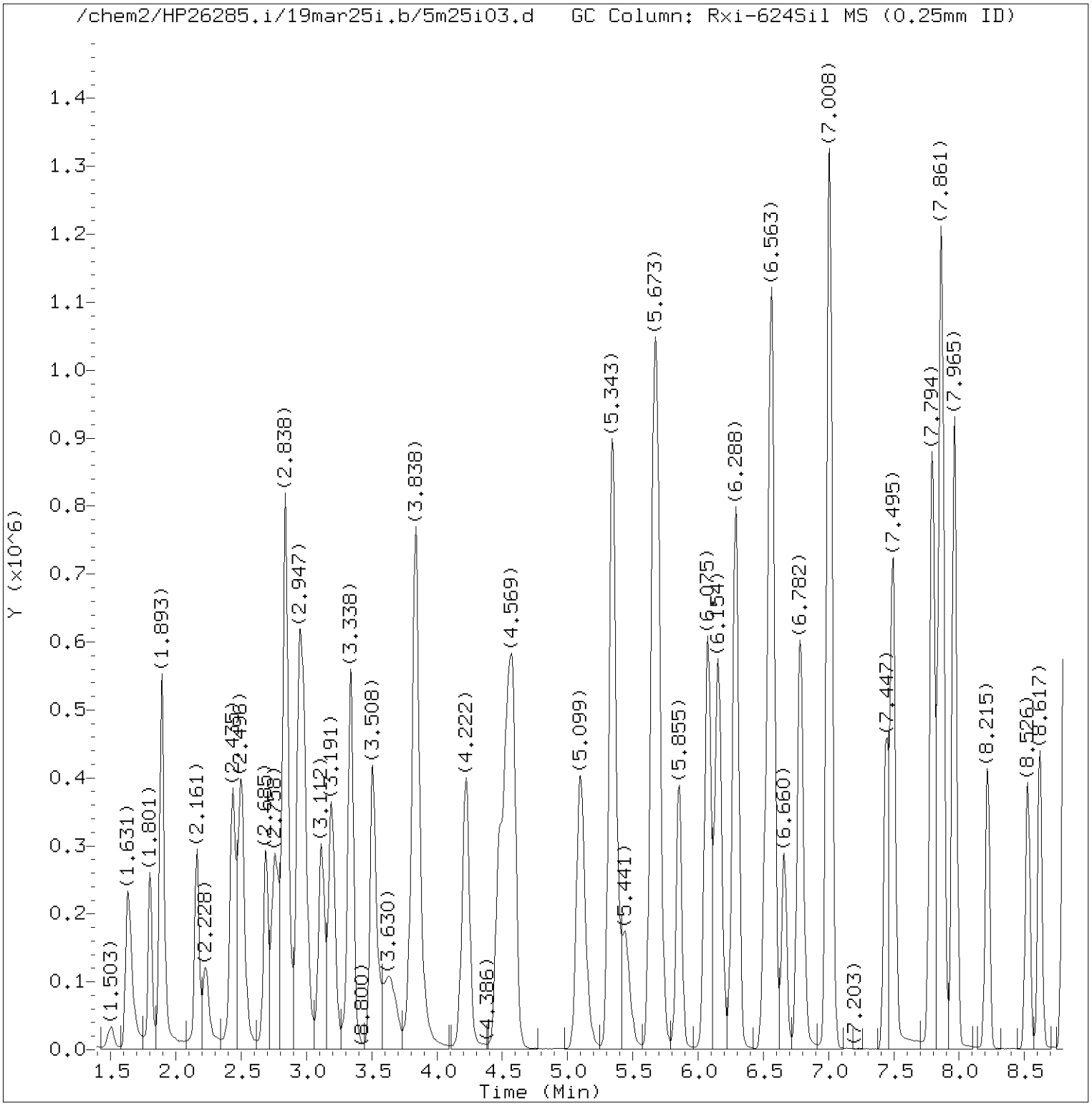
Data File: /chem2/HP26285.i/19mar25i.b/5m25i02.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:10 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:26
Date, time and analyst ID of latest file update: 25-Mar-2019 14:26 apr27582

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1808
Retention Time (minutes): 12.409
Quant Ion : 134.00
Area : 619931
On-column Amount (ng) : 100.8973
Integration start scan : 1801 Integration stop scan: 1829
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user: KKELLY



Total Ion Chromatogram (TIC)

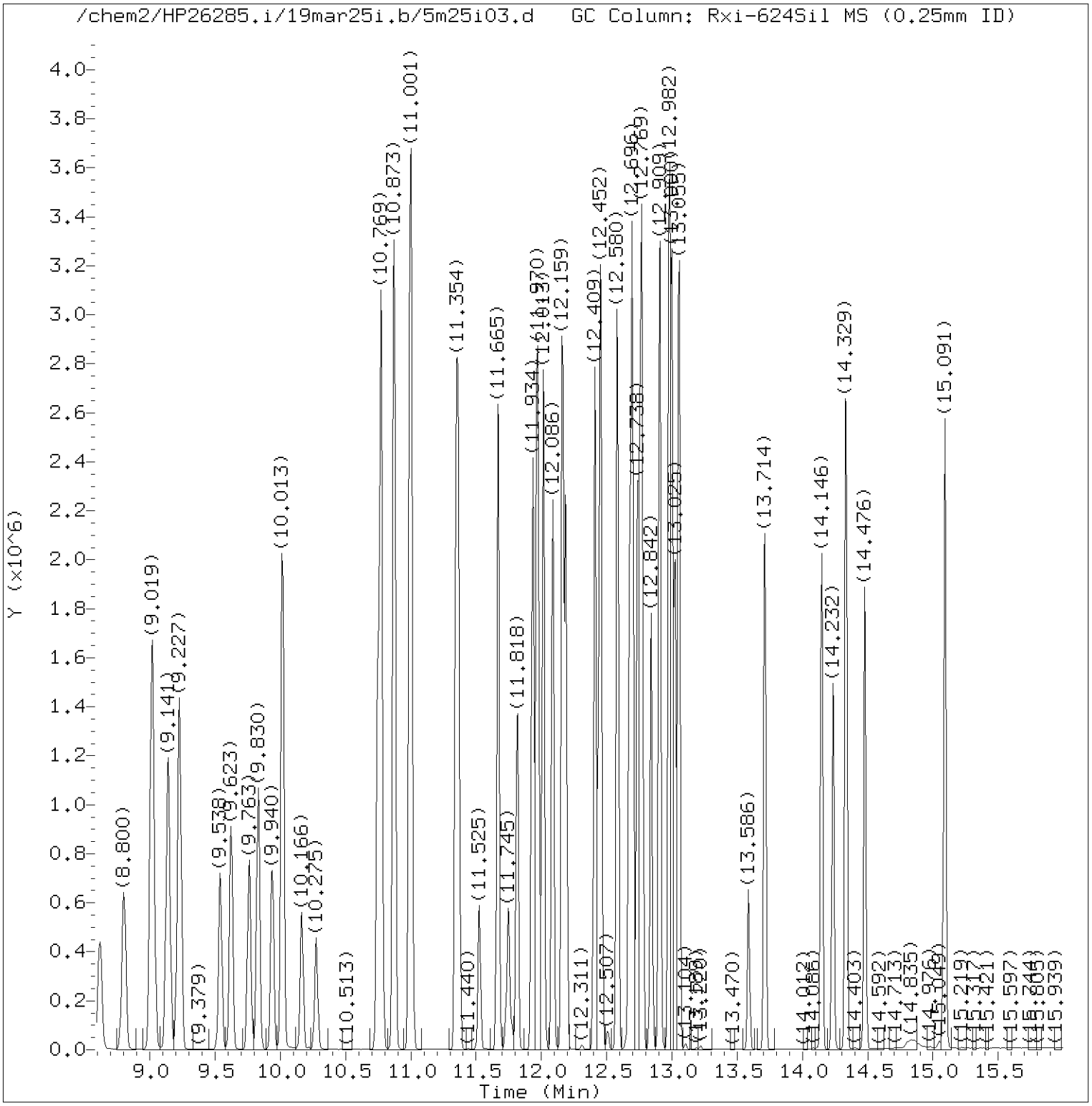
Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.631	85	483939	55.561
4) Chloromethane	(2)	1.801	50	324228	51.223
5) 1,3-Butadiene	(2)	1.887	39	208651	47.445
6) Vinyl Chloride	(2)	1.899	62	319263	51.558
8) Bromomethane	(2)	2.161	94	257539	51.612
9) Chloroethane	(2)	2.228	64	151210	50.939
10) Dichlorofluoromethane	(2)	2.435	67	398534	49.360
12) Trichlorofluoromethane	(2)	2.478	101	457802	53.182
11) n-Pentane	(2)	2.509	43	273848	50.439
14) Ethyl ether	(2)	2.685	59	227566	51.042
15) Freon 123a	(2)	2.758	67	329755	49.288
16) Acrolein	(1)	2.838	56	1242070	541.469
17) 1,1-Dichloroethene	(2)	2.947	96	251920	50.385
17) 1,1-Dichloroethene	(2)	2.947	63	123077	50.036
19) Freon 113	(2)	2.972	101	272548	53.584
18) Acetone	(1)	2.984	58	111456	106.265
22) Methyl Iodide	(2)	3.112	142	524378	50.219
21) 2-Propanol	(1)	3.130	45	185557	243.427
23) Carbon Disulfide	(2)	3.191	76	863530	52.019
27) Methyl Acetate	(2)	3.325	43	358107	46.244
25) Allyl Chloride	(2)	3.344	41	443936	49.420
28) Methylene Chloride	(2)	3.502	84	278637	49.065
29)*t-Butyl alcohol-d10	(1)	3.533	65	324947M	250.000
30) t-Butyl alcohol	(1)	3.642	59	370315	246.339
31) Acrylonitrile	(2)	3.801	53	211683	51.715
32) trans-1,2-Dichloroethene	(2)	3.838	96	283390	50.636
33) Methyl Tertiary Butyl Ether	(2)	3.838	73	792156	49.599
34) n-Hexane	(2)	4.222	57	417489	53.924
36) 1,1-Dichloroethane	(2)	4.472	63	501781	50.856
38) di-Isopropyl ether	(2)	4.539	45	897377	49.894
39) 2-Chloro-1,3-butadiene	(2)	4.581	53	446500	51.140
40) Ethyl t-butyl ether	(2)	5.093	59	830508	49.876
42) cis-1,2-Dichloroethene	(2)	5.343	96	313812	49.559
44) 2-Butanone	(2)	5.343	43	654454	105.876
45) 2,2-Dichloropropane	(2)	5.349	77	402605	51.022
47) Propionitrile	(1)	5.441	54	408108	249.598
48) Methacrylonitrile	(2)	5.660	67	503688	125.060
49) Bromochloromethane	(2)	5.691	128	158668	50.076

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.697	71	178992	107.765
51) Chloroform	(2)	5.855	83	490791	50.165
53) 1,1,1-Trichloroethane	(2)	6.069	97	439972	51.097
52)$Dibromofluoromethane	(2)	6.081	113	257854	49.754
52)$Dibromofluoromethane	(2)	6.075	111	266367	50.072
54) Cyclohexane	(2)	6.154	56	513901	51.623
54) Cyclohexane	(2)	6.154	84	440664	51.945
54) Cyclohexane	(2)	6.154	69	160500	52.036
43) 1,2-Dichloroethene (Total)	(2)		96	597202	100.195
56) Carbon Tetrachloride	(2)	6.276	117	389667	52.296
55) 1,1-Dichloropropene	(2)	6.294	75	402118	50.807
58) Isobutyl Alcohol	(1)	6.520	41	301673	612.771
57)$1,2-Dichloroethane-d4	(2)	6.550	102	60641	50.007
57)$1,2-Dichloroethane-d4	(2)	6.550	65	278798	49.664
57)$1,2-Dichloroethane-d4	(2)	6.550	104	38905	50.344
60) Benzene	(2)	6.569	78	1208690	50.271
61) 1,2-Dichloroethane	(2)	6.660	62	343258	48.308
61) 1,2-Dichloroethane	(2)	6.654	98	32442	52.187
65) t-Amyl methyl ether	(2)	6.782	73	839811	50.044
66)*Fluorobenzene	(2)	7.002	96	1083032	50.000
67) n-Heptane	(2)	7.014	43	462229	52.946
69) n-Butanol	(1)	7.440	56	514329	1252.983
71) Trichloroethene	(2)	7.495	95	314205	50.391
73) Methylcyclohexane	(2)	7.794	83	543348	52.627
73) Methylcyclohexane	(2)	7.794	98	233844	52.650
74) 1,2-Dichloropropane	(2)	7.849	63	300047	50.345
76) 1,4-Dioxane	(1)	7.946	88	61393M	644.763
75) Dibromomethane	(2)	7.959	93	188443	49.991
77) Methyl Methacrylate	(2)	7.965	69	312567	50.236
79) Bromodichloromethane	(2)	8.215	83	362178	51.700
80) 2-Nitropropane	(2)	8.526	41	342647	119.162
81) 2-Chloroethyl Vinyl Ether	(2)	8.617	63	256509M	51.571
82) cis-1,3-Dichloropropene	(2)	8.800	75	476342	51.680
83) 4-Methyl-2-pentanone	(2)	9.019	43	1532192	121.026
84)$Toluene-d8	(3)	9.141	98	1047807	49.917
84)$Toluene-d8	(3)	9.141	100	689804	49.999
89) Toluene	(3)	9.227	92	783467	50.144
90) trans-1,3-Dichloropropene	(3)	9.538	75	436918	51.749

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$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	9.623	69	517168	51.088
93) 1,1,2-Trichloroethane	(3)	9.763	97	280901	50.254
94) Tetrachloroethene	(3)	9.830	166	353801	49.794
95) 1,3-Dichloropropane	(3)	9.940	76	455595	49.757
97) 2-Hexanone	(3)	10.013	43	1379228	124.816
91) 1,3-Dichloropropene (total)	(3)		100	913260	103.429
98) Dibromochloromethane	(3)	10.166	129	304984	53.294
100) 1,2-Dibromoethane	(3)	10.275	107	312796	50.112
101)*Chlorobenzene-d5	(3)	10.745	117	831607	50.000
102) 1-Chlorohexane	(3)	10.769	91	451844	49.637
103) Chlorobenzene	(3)	10.775	112	881919	50.446
104) 1,1,1,2-Tetrachloroethane	(3)	10.867	131	308865	52.337
105) Ethylbenzene	(3)	10.873	91	1563175	51.219
107) m+p-Xylene	(3)	11.001	106	1232325	102.386
108) o-Xylene	(3)	11.348	106	599659	50.989
110) Styrene	(3)	11.367	104	1006299	51.817
111) Bromoform	(3)	11.525	173	245060	54.248
112) Isopropylbenzene	(3)	11.665	105	1575153	51.573
113) Cyclohexanone	(1)	11.745	55	248635	624.095
109) Xylene (Total)	(3)		106	1831984	153.375
115)$4-Bromofluorobenzene	(3)	11.812	95	408552	50.021
115)$4-Bromofluorobenzene	(3)	11.818	174	357976	50.310
116) Bromobenzene	(4)	11.934	156	391268	50.885
117) 1,1,2,2-Tetrachloroethane	(4)	11.940	83	493030	50.639
119) trans-1,4-Dichloro-2-butene	(4)	11.964	53	395416	128.961
118) 1,2,3-Trichloropropane	(4)	11.982	110	146234	49.854
120) n-Propylbenzene	(4)	12.013	91	1870288	51.684
121) 2-Chlorotoluene	(4)	12.086	126	377302	50.574
123) 1,3,5-Trimethylbenzene	(4)	12.159	105	1349847	51.690
122) 4-Chlorotoluene	(4)	12.190	126	387178	50.551
125) tert-Butylbenzene	(4)	12.409	134	284706M	51.593
126) Pentachloroethane	(4)	12.440	167	243019	53.928
127) 1,2,4-Trimethylbenzene	(4)	12.458	105	1376882	51.415
128) sec-Butylbenzene	(4)	12.580	105	1774045	52.435
130) 1,3-Dichlorobenzene	(4)	12.677	146	749694	50.909
131) p-Isopropyltoluene	(4)	12.696	119	1545878	52.701
132)*1,4-Dichlorobenzene-d4	(4)	12.738	152	445741	50.000
134) 1,4-Dichlorobenzene	(4)	12.757	146	755607	50.628

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

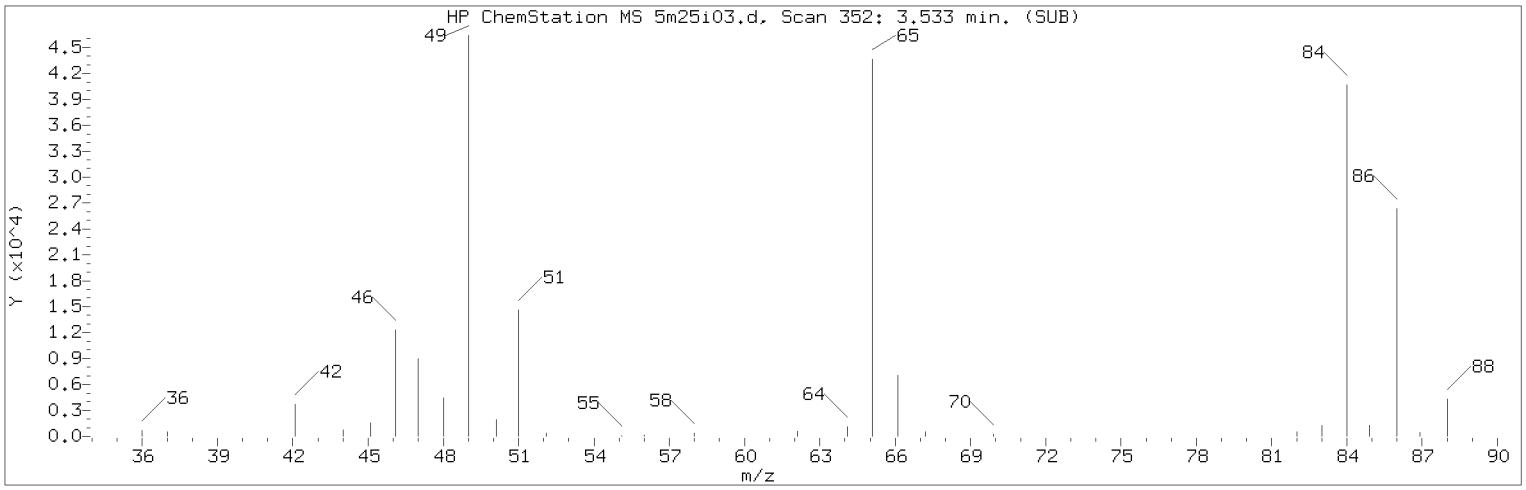
Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	12.769	105	1425258	51.521
136) Benzyl Chloride	(4)	12.842	91	1037262	54.079
137) 1,3-Diethylbenzene	(4)	12.909	119	936156	52.363
138) 1,4-Diethylbenzene	(4)	12.982	119	1007901	53.122
140) n-Butylbenzene	(4)	13.000	92	781143M	52.793
139) 1,2-Dichlorobenzene	(4)	13.025	146	707099	50.791
141) 1,2-Diethylbenzene	(4)	13.055	119	774136	52.085
142) Diethylbenzene (total)	(4)		100	2718193	157.570
143) 1,2-Dibromo-3-chloropropane	(4)	13.586	75	125918	51.770
145) 1,3,5-Trichlorobenzene	(4)	13.714	180	575391	51.415
147) 1,2,4-Trichlorobenzene	(4)	14.146	180	517183	51.053
148) Hexachlorobutadiene	(4)	14.238	225	242154	50.650
149) Naphthalene	(4)	14.335	128	1765929	51.373
150) 1,2,3-Trichlorobenzene	(4)	14.476	180	491532	50.640
151) 2-Methylnaphthalene	(4)	15.091	142	1065299	52.669

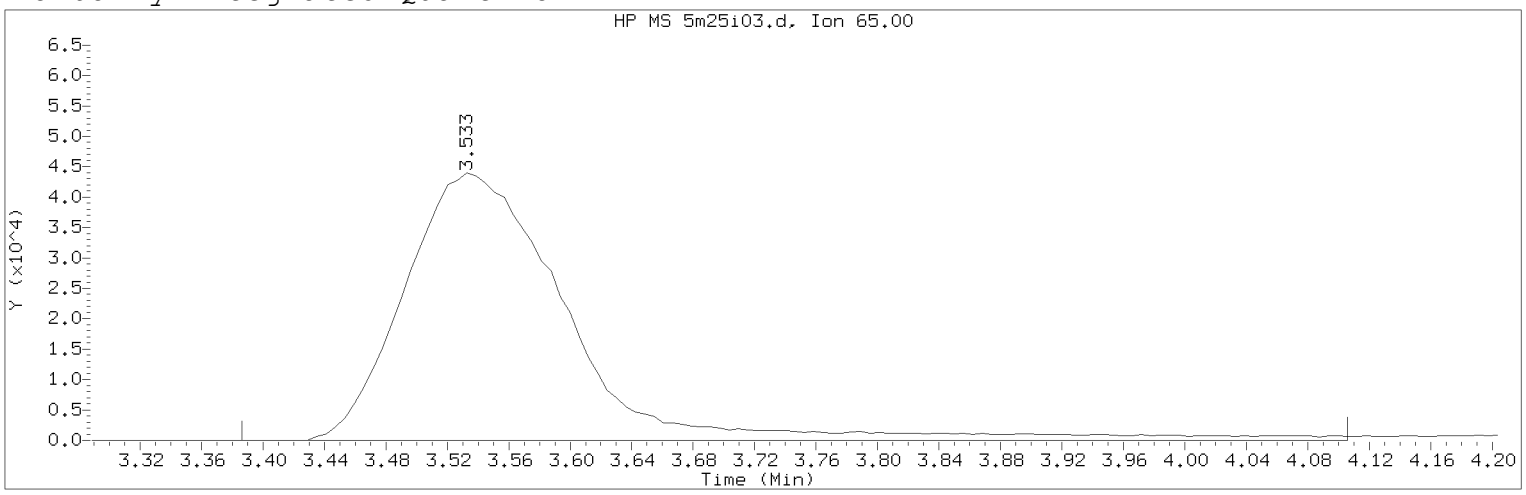
M = Compound was manually integrated.

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

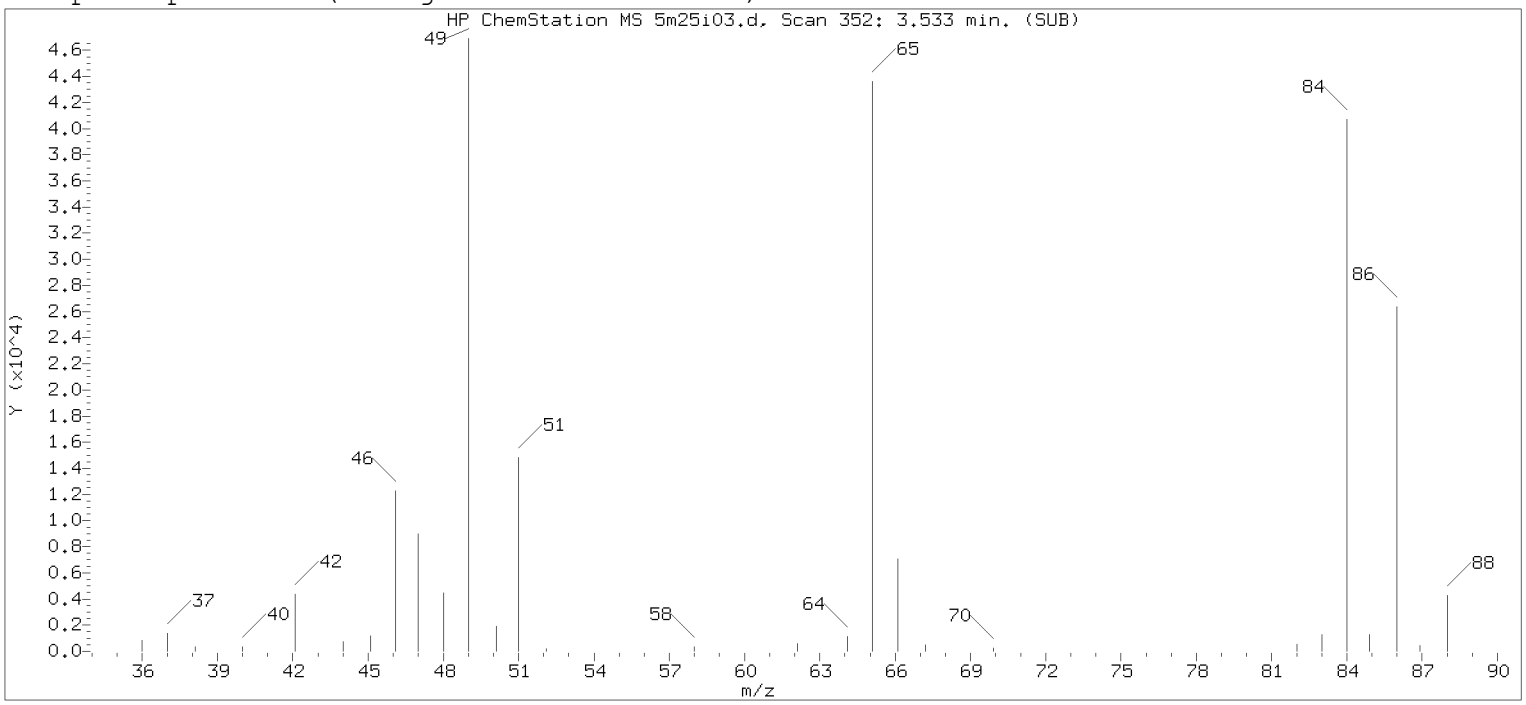
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 352
Retention Time (minutes): 3.533
Quant Ion : 65.00
Area (flag) : 324947M
On-Column Amount (ng) : 250.0000
Integration start scan : 327 Integration stop scan: 445
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

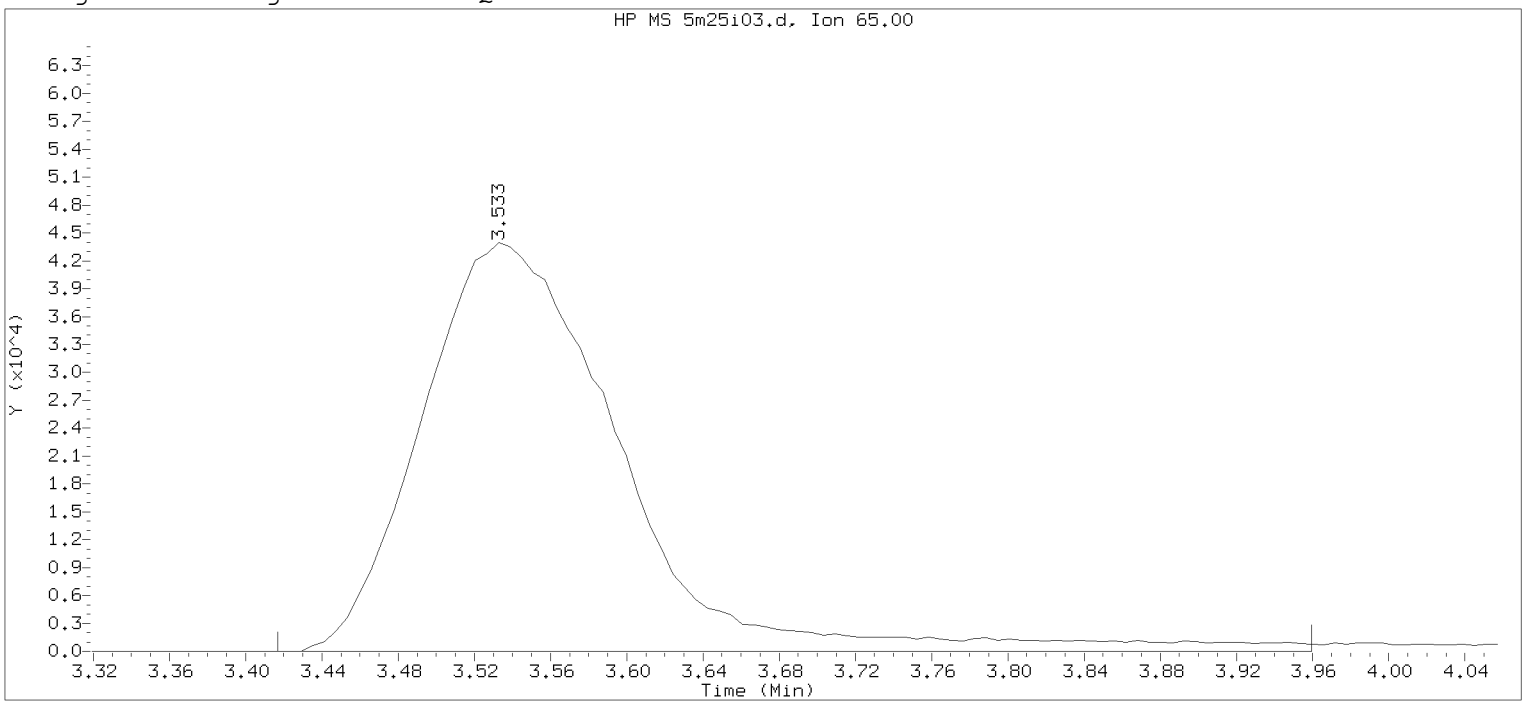
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

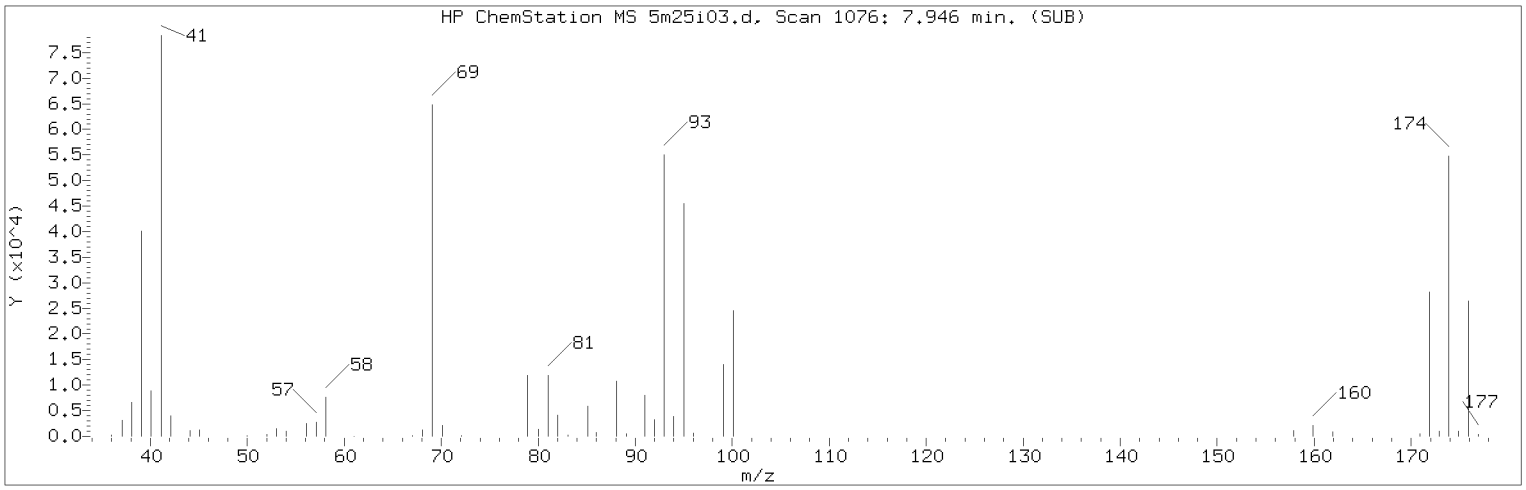
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:26
Date, time and analyst ID of latest file update: 25-Mar-2019 14:27 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

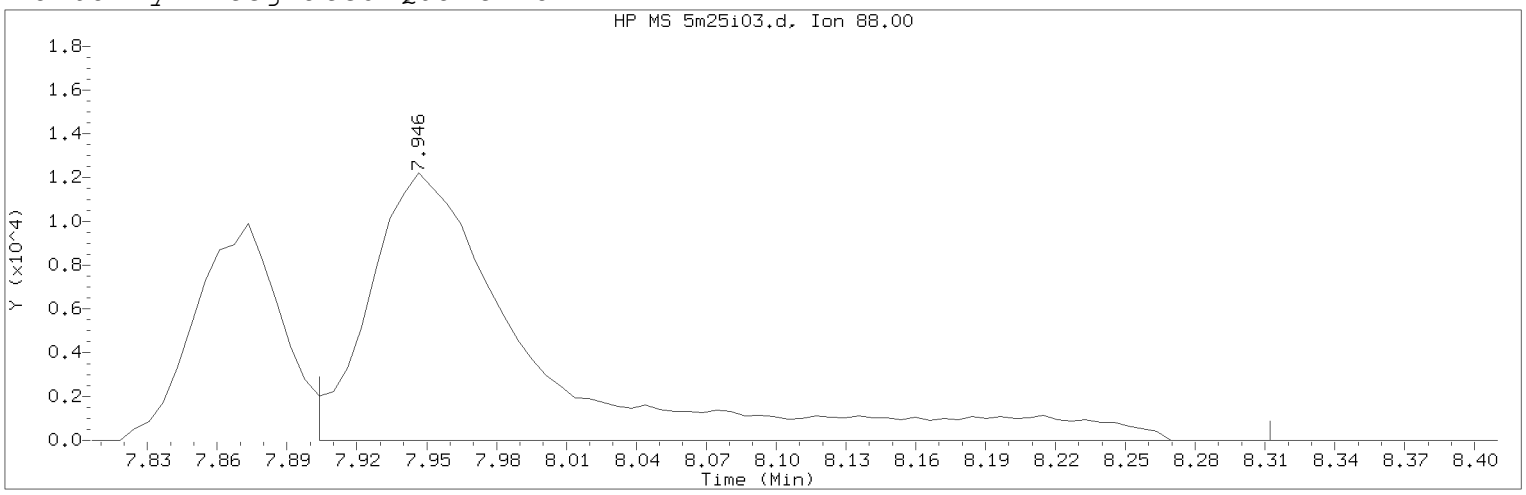
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 352
Retention Time (minutes): 3.533
Quant Ion : 65.00
Area : 318391
On-column Amount (ng) : 250.0000
Integration start scan : 332 Integration stop scan: 421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user: KEVIN KELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

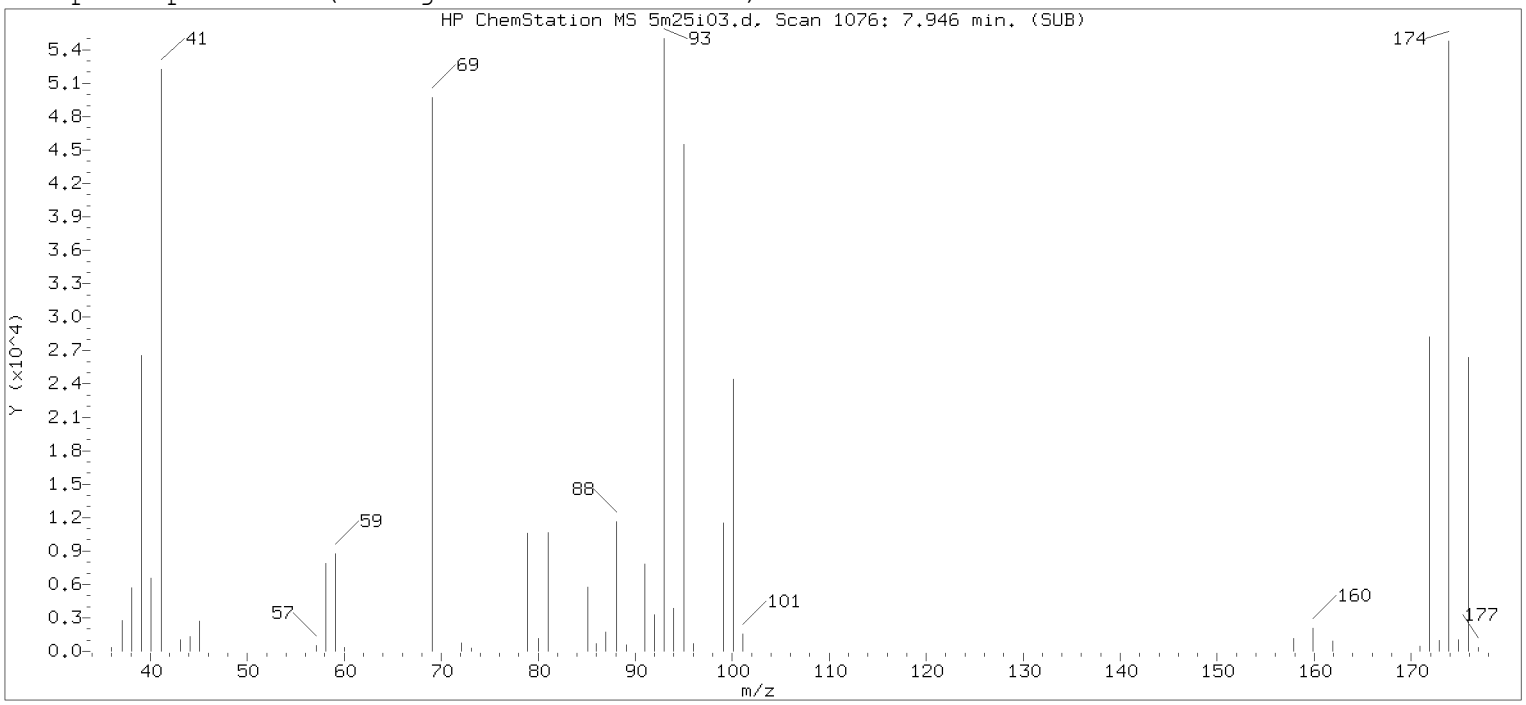
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1076
Retention Time (minutes): 7.946
Quant Ion : 88.00
Area (flag) : 61393M
On-Column Amount (ng) : 644.7634
Integration start scan : 1068 Integration stop scan: 1135
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

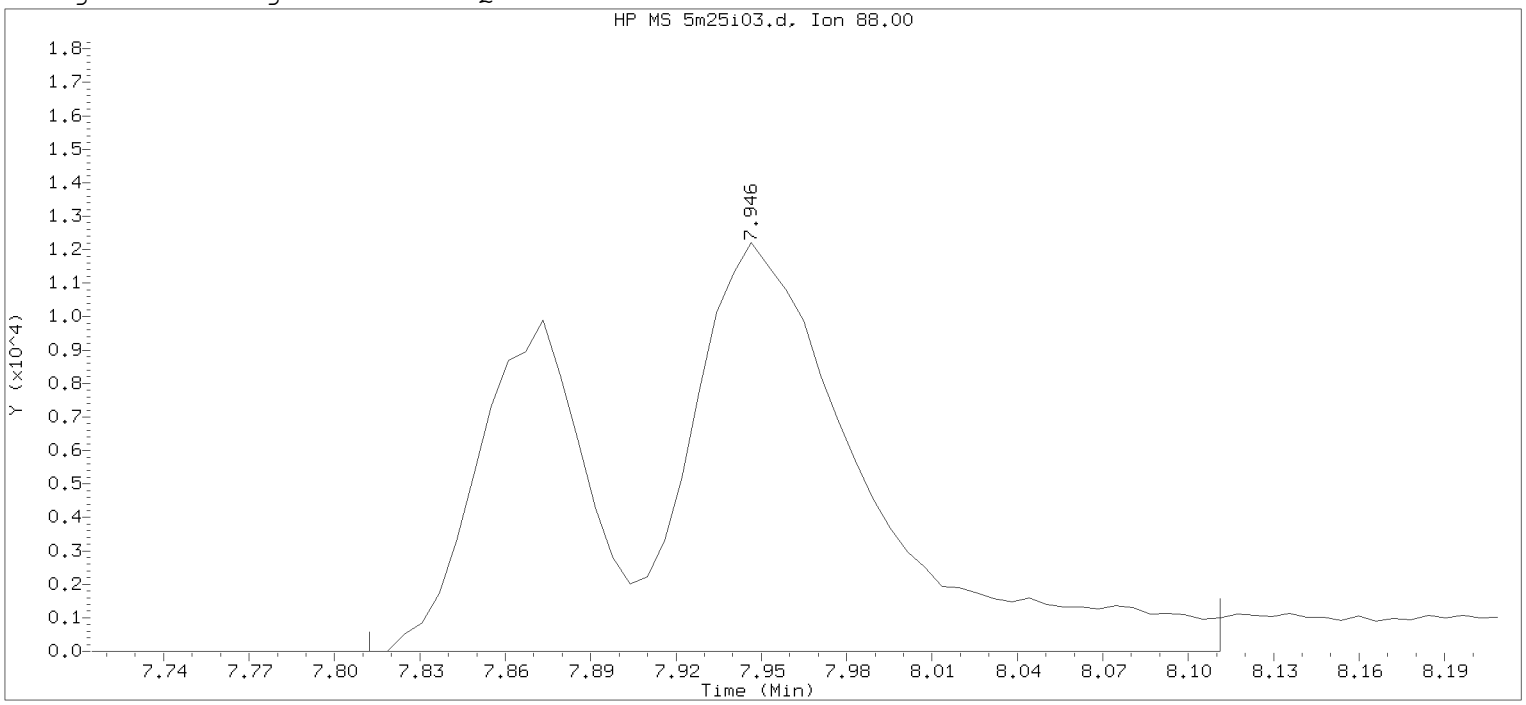
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

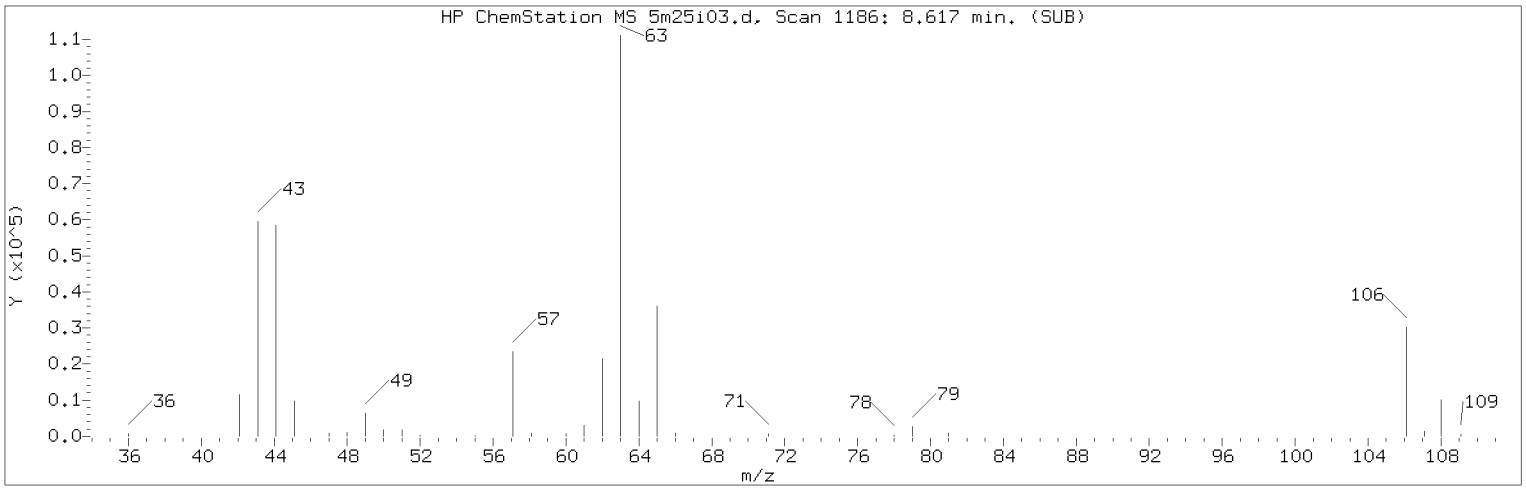
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:26
Date, time and analyst ID of latest file update: 25-Mar-2019 14:27 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

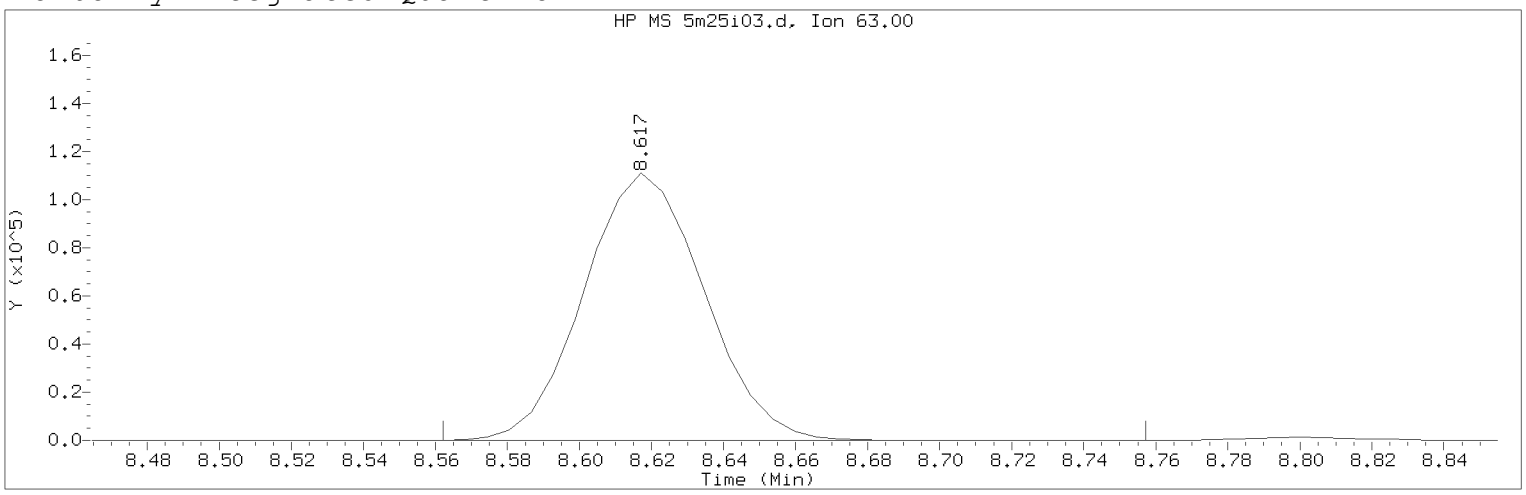
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1076
Retention Time (minutes): 7.946
Quant Ion : 88.00
Area : 77570
On-column Amount (ng) : 638.7899
Integration start scan : 1053 Integration stop scan: 1102
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kkelly0034

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

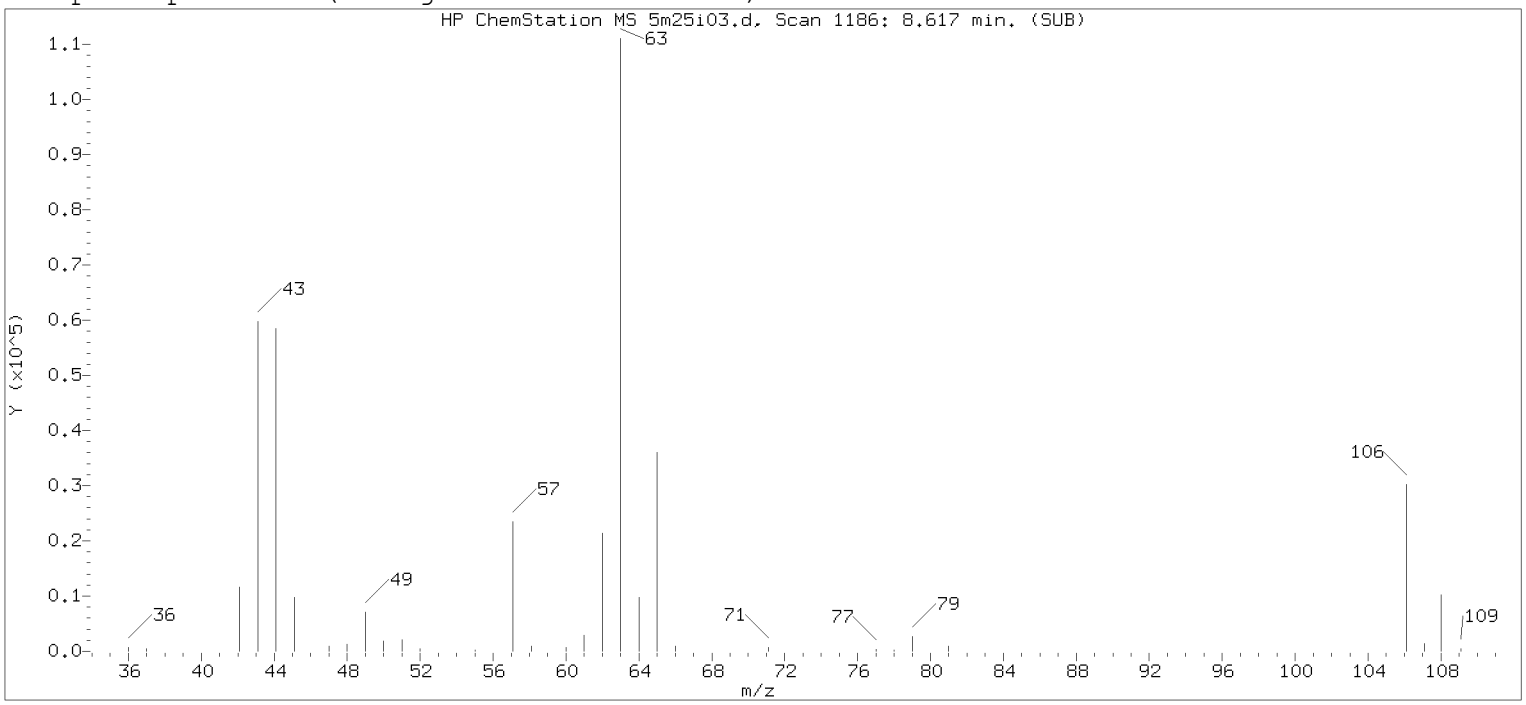
Compound Number : 81
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1186
Retention Time (minutes): 8.617
Quant Ion : 63.00
Area (flag) : 256509M
On-Column Amount (ng) : 51.5714
Integration start scan : 1176 Integration stop scan: 1208
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

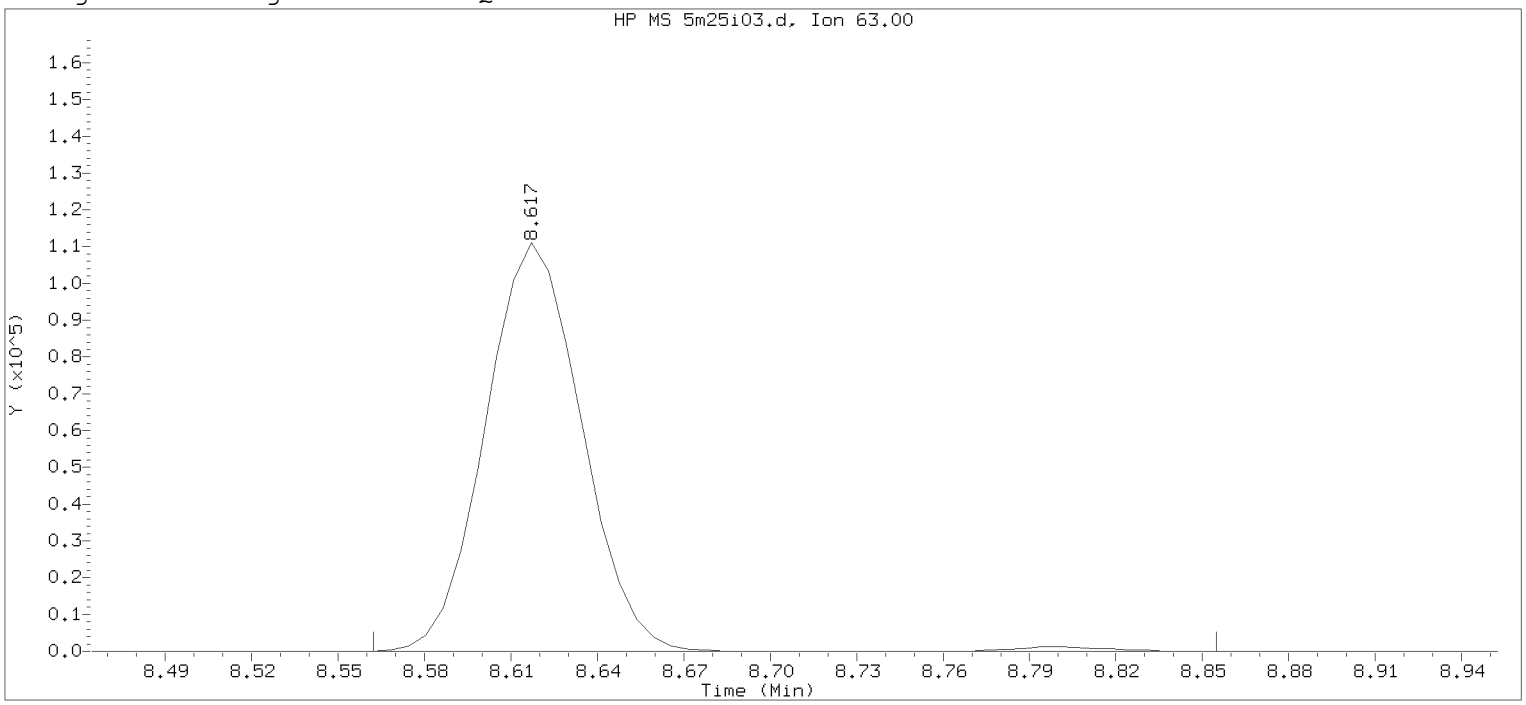
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

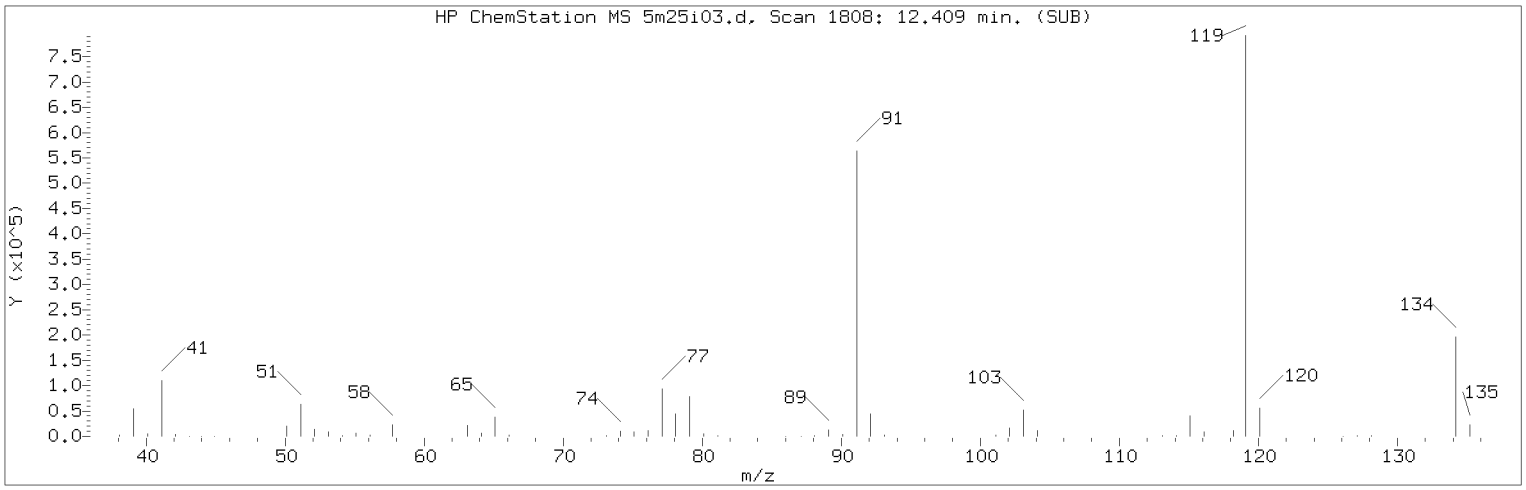
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:26
Date, time and analyst ID of latest file update: 25-Mar-2019 14:27 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

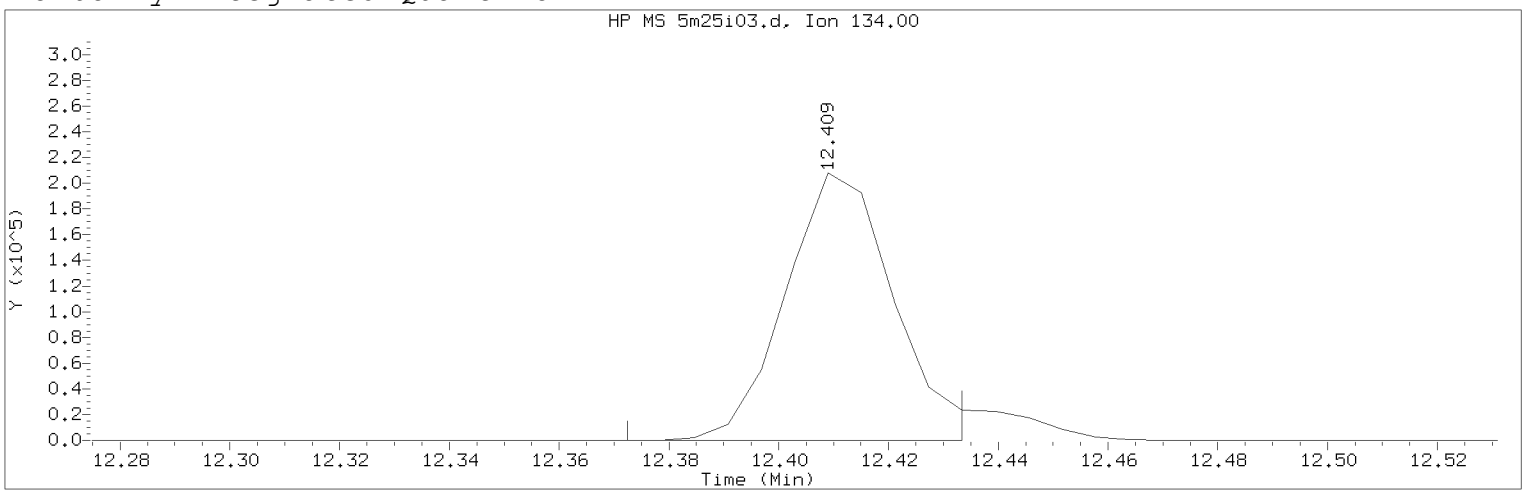
Compound Number : 81
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1186
Retention Time (minutes): 8.617
Quant Ion : 63.00
Area : 259176
On-column Amount (ng) : 50.6106
Integration start scan : 1176 Integration stop scan: 1224
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: KKELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

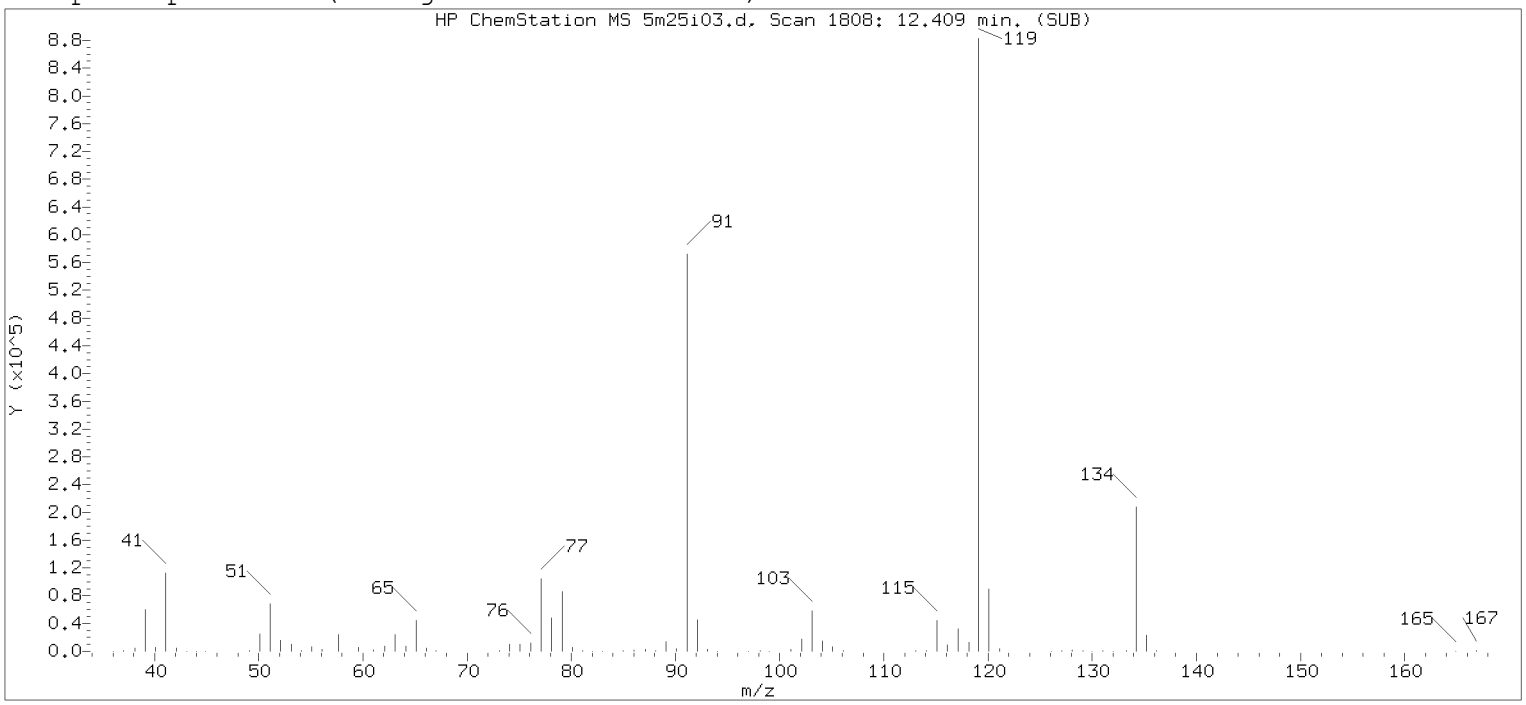
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1808
Retention Time (minutes): 12.409
Quant Ion : 134.00
Area (flag) : 284706M
On-Column Amount (ng) : 51.5928
Integration start scan : 1801 Integration stop scan: 1811
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

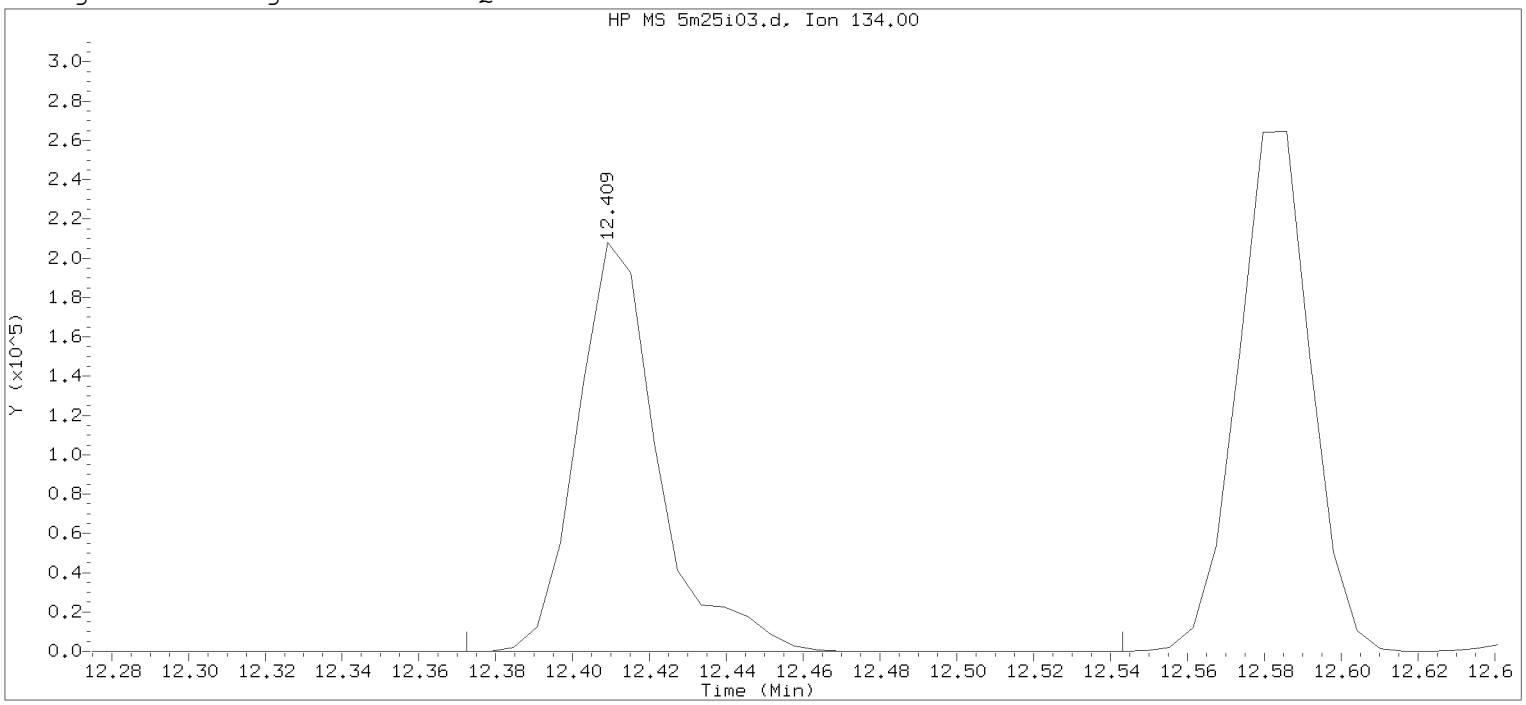
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

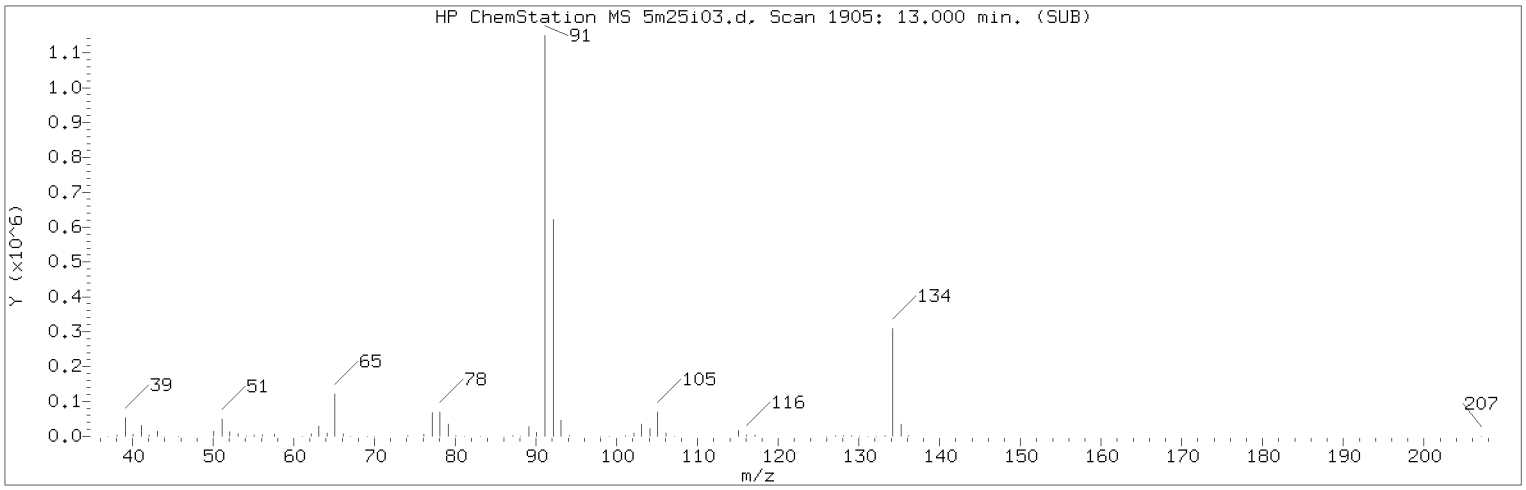
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:26
Date, time and analyst ID of latest file update: 25-Mar-2019 14:27 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

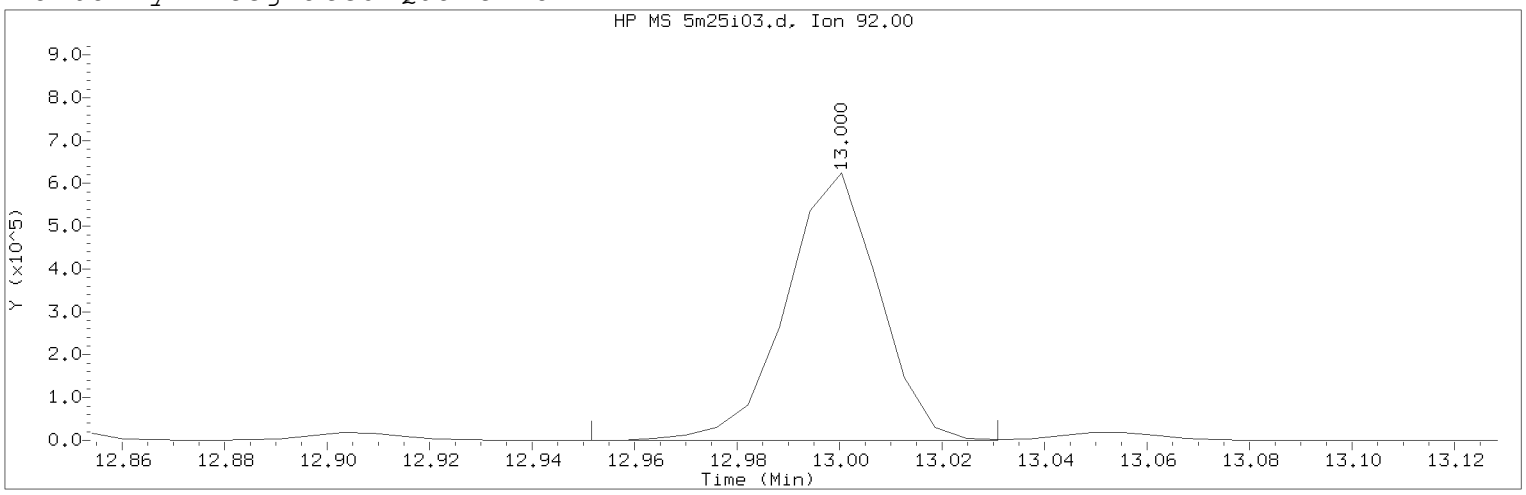
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1808
Retention Time (minutes): 12.409
Quant Ion : 134.00
Area : 303736
On-column Amount (ng) : 50.6019
Integration start scan : 1801 Integration stop scan: 1829
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kkelly100355

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

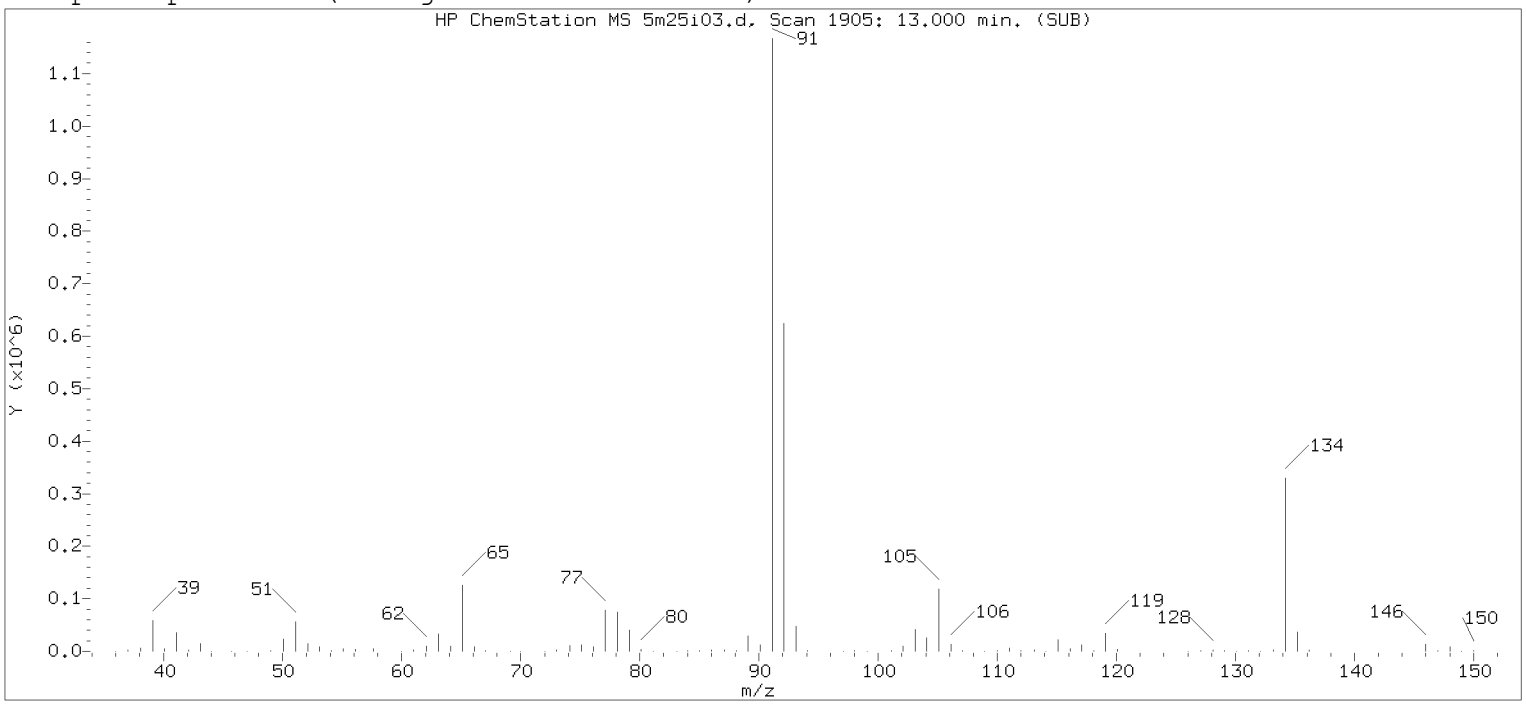
Compound Number : 140
Compound Name : n-Butylbenzene
Scan Number : 1905
Retention Time (minutes): 13.000
Quant Ion : 92.00
Area (flag) : 781143M
On-Column Amount (ng) : 52.7932
Integration start scan : 1896 Integration stop scan: 1909
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

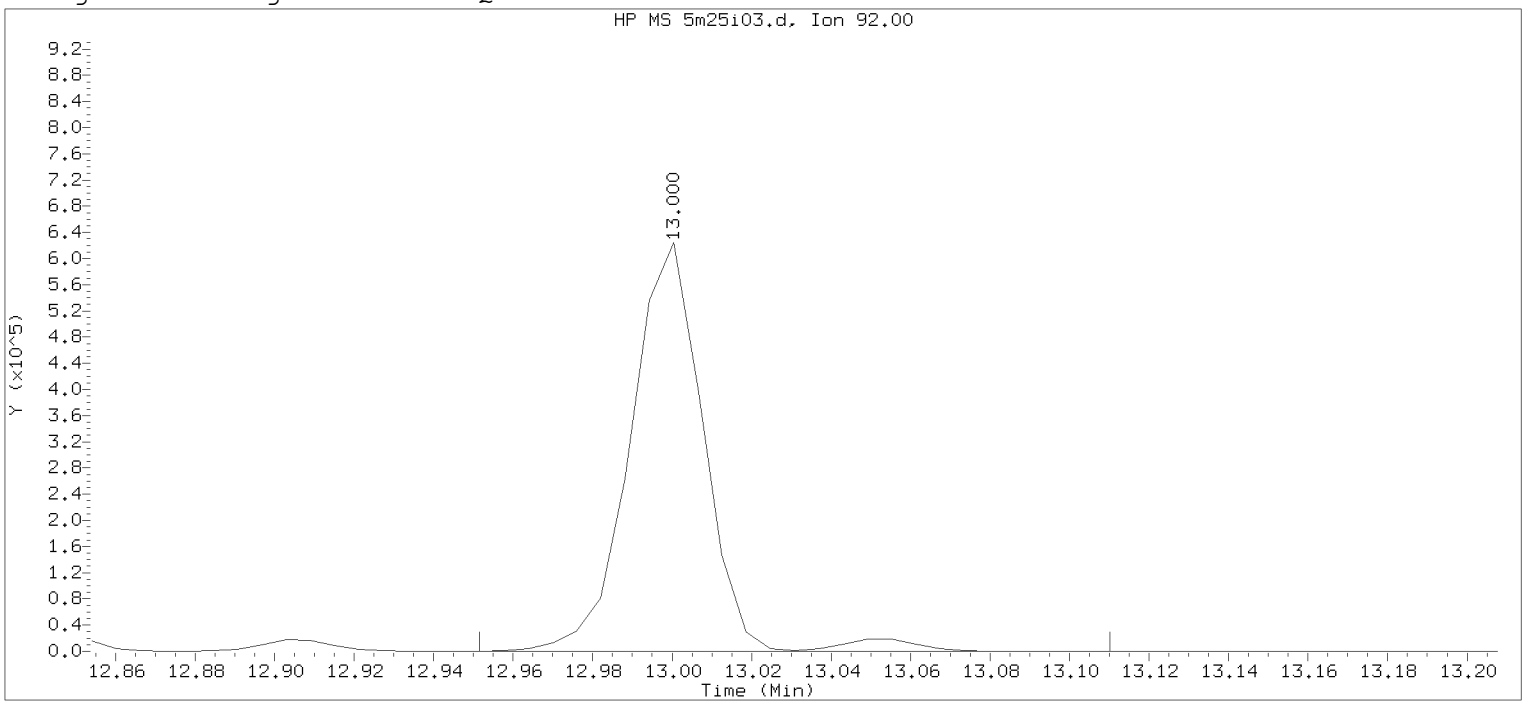
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



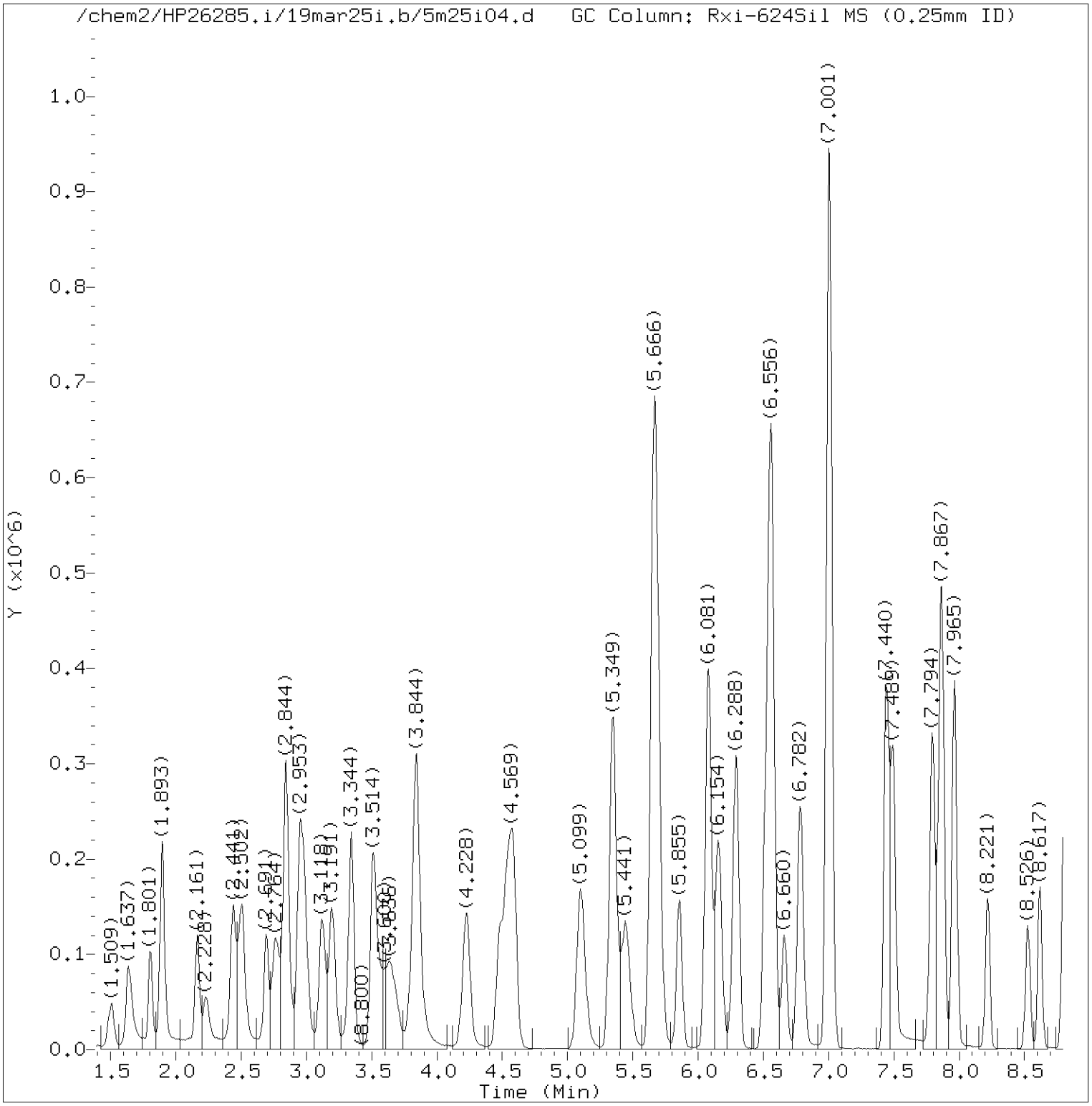
Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:26
Date, time and analyst ID of latest file update: 25-Mar-2019 14:27 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 140
Compound Name : n-Butylbenzene
Scan Number : 1905
Retention Time (minutes): 13.000
Quant Ion : 92.00
Area : 805625
On-column Amount (ng) : 52.6838
Integration start scan : 1896 Integration stop scan: 1922
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kkelly100355



Total Ion Chromatogram (TIC)

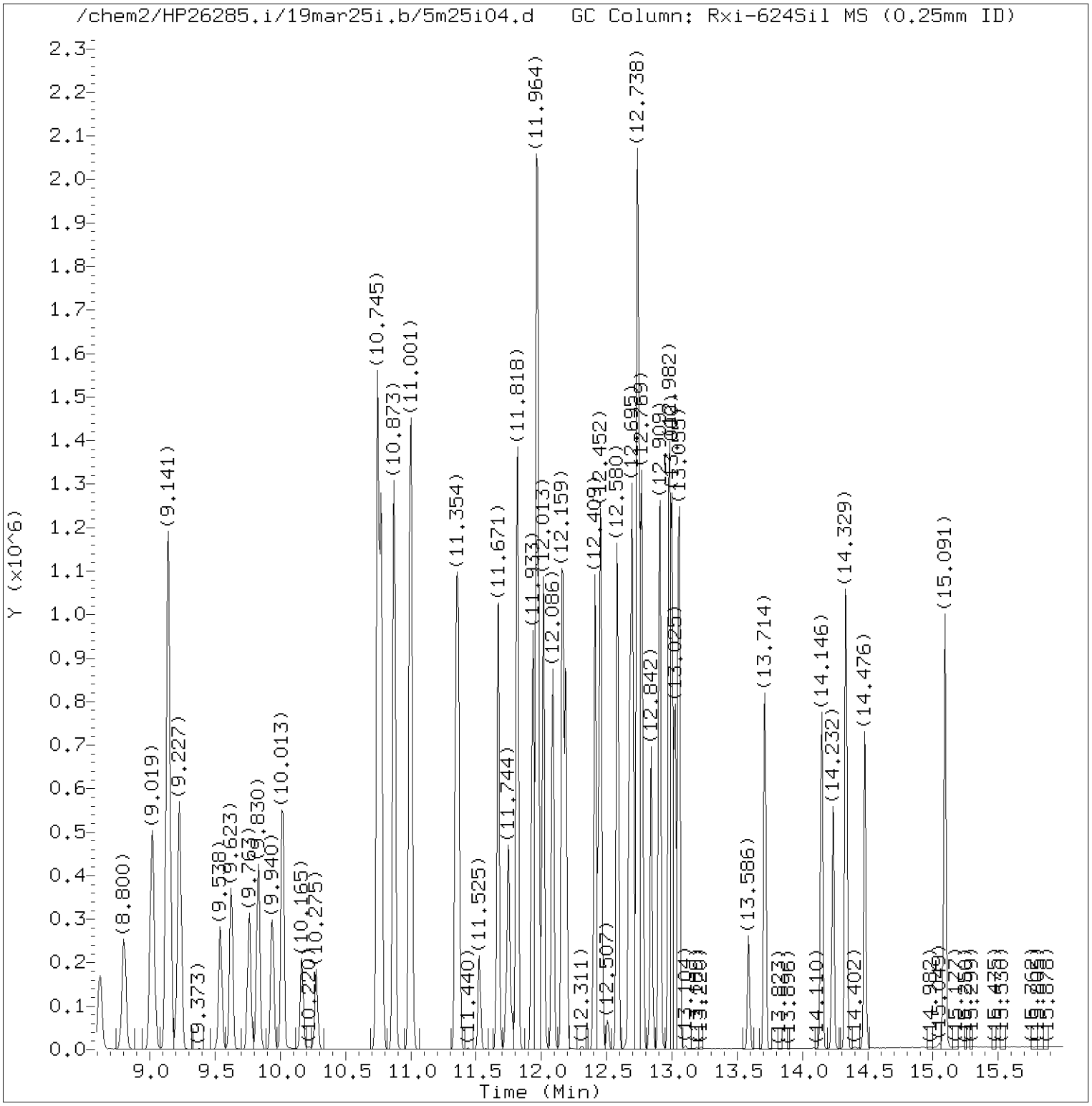
Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.637	85	172350	19.672
4) Chloromethane	(2)	1.801	50	124257	19.516
5) 1,3-Butadiene	(2)	1.893	39	82818	18.722
6) Vinyl Chloride	(2)	1.899	62	122775	19.711
8) Bromomethane	(2)	2.161	94	99284	19.781
9) Chloroethane	(2)	2.228	64	59194	19.825
10) Dichlorofluoromethane	(2)	2.441	67	153345	18.882
12) Trichlorofluoromethane	(2)	2.478	101	172291	19.898
11) n-Pentane	(2)	2.508	43	100005	18.312
14) Ethyl ether	(2)	2.691	59	92693	20.669
15) Freon 123a	(2)	2.764	67	133641	19.858
16) Acrolein	(1)	2.844	56	456356	192.827
17) 1,1-Dichloroethene	(2)	2.947	96	98846	19.654
17) 1,1-Dichloroethene	(2)	2.947	63	49339	19.941
19) Freon 113	(2)	2.972	101	100158	19.577
18) Acetone	(1)	2.990	58	44559	41.177
22) Methyl Iodide	(2)	3.118	142	206073	19.620
21) 2-Propanol	(1)	3.136	45	154771M	196.797
23) Carbon Disulfide	(2)	3.191	76	328031	19.645
27) Methyl Acetate	(2)	3.331	43	149732	19.223
25) Allyl Chloride	(2)	3.344	41	175341	19.405
28) Methylene Chloride	(2)	3.508	84	112010	19.609
29)*t-Butyl alcohol-d10	(1)	3.545	65	335255M	250.000
30) t-Butyl alcohol	(1)	3.642	59	309939	199.837
31) Acrylonitrile	(2)	3.807	53	83355	20.245
32) trans-1,2-Dichloroethene	(2)	3.844	96	111445	19.797
33) Methyl Tertiary Butyl Ether	(2)	3.844	73	324532	20.201
34) n-Hexane	(2)	4.228	57	153368	19.694
36) 1,1-Dichloroethane	(2)	4.478	63	197644	19.914
38) di-Isopropyl ether	(2)	4.545	45	363000	20.065
39) 2-Chloro-1,3-butadiene	(2)	4.587	53	173985	19.811
40) Ethyl t-butyl ether	(2)	5.099	59	337736	20.164
44) 2-Butanone	(2)	5.343	43	242274	38.966
42) cis-1,2-Dichloroethene	(2)	5.349	96	124688	19.576
45) 2,2-Dichloropropane	(2)	5.355	77	157570	19.852
47) Propionitrile	(1)	5.441	54	332262	196.963
48) Methacrylonitrile	(2)	5.660	67	406258	100.281
49) Bromochloromethane	(2)	5.691	128	63414	19.897

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.703	71	68361	39.892
51) Chloroform	(2)	5.855	83	193684	19.681
53) 1,1,1-Trichloroethane	(2)	6.069	97	171194	19.766
52)$Dibromofluoromethane	(2)	6.081	113	260793	50.027
52)$Dibromofluoromethane	(2)	6.081	111	267093	49.916
54) Cyclohexane	(2)	6.154	56	192496	19.224
54) Cyclohexane	(2)	6.160	84	165247	19.366
54) Cyclohexane	(2)	6.154	69	60128	19.380
43) 1,2-Dichloroethene (Total)	(2)		96	236133	39.373
56) Carbon Tetrachloride	(2)	6.282	117	148002	19.747
55) 1,1-Dichloropropene	(2)	6.300	75	157290	19.757
58) Isobutyl Alcohol	(1)	6.520	41	249927	492.054
57)$1,2-Dichloroethane-d4	(2)	6.550	102	60643	49.717
57)$1,2-Dichloroethane-d4	(2)	6.550	65	282883	50.097
57)$1,2-Dichloroethane-d4	(2)	6.556	104	38696	49.782
60) Benzene	(2)	6.569	78	476885	19.718
61) 1,2-Dichloroethane	(2)	6.660	62	138060	19.316
61) 1,2-Dichloroethane	(2)	6.666	98	13401	21.431
65) t-Amyl methyl ether	(2)	6.782	73	344866	20.430
66)*Fluorobenzene	(2)	7.001	96	1089387	50.000
67) n-Heptane	(2)	7.014	43	167146	19.034
69) n-Butanol	(1)	7.440	56	423388	999.724
71) Trichloroethene	(2)	7.495	95	123567	19.702
73) Methylcyclohexane	(2)	7.794	83	202738	19.522
73) Methylcyclohexane	(2)	7.794	98	88037	19.706
74) 1,2-Dichloropropane	(2)	7.849	63	118545	19.775
76) 1,4-Dioxane	(1)	7.952	88	50360M	512.631
75) Dibromomethane	(2)	7.959	93	75717	19.970
77) Methyl Methacrylate	(2)	7.965	69	127050	20.301
79) Bromodichloromethane	(2)	8.215	83	138779	19.695
80) 2-Nitropropane	(2)	8.526	41	109183	37.749
81) 2-Chloroethyl Vinyl Ether	(2)	8.617	63	99372M	19.862
82) cis-1,3-Dichloropropene	(2)	8.800	75	186521	20.118
83) 4-Methyl-2-pentanone	(2)	9.019	43	463778	36.419
84)$Toluene-d8	(3)	9.141	98	1053591	50.269
84)$Toluene-d8	(3)	9.141	100	689904	50.082
89) Toluene	(3)	9.227	92	308430	19.770
90) trans-1,3-Dichloropropene	(3)	9.538	75	168331	19.968

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	9.623	69	208968	20.674
93) 1,1,2-Trichloroethane	(3)	9.763	97	110389	19.779
94) Tetrachloroethene	(3)	9.830	166	142190	20.042
95) 1,3-Dichloropropane	(3)	9.940	76	182687	19.982
97) 2-Hexanone	(3)	10.013	43	384955	34.891
91) 1,3-Dichloropropene (total)	(3)		100	354852	40.086
98) Dibromochloromethane	(3)	10.165	129	114693	20.072
100) 1,2-Dibromoethane	(3)	10.275	107	124284	19.941
101)*Chlorobenzene-d5	(3)	10.745	117	830336	50.000
102) 1-Chlorohexane	(3)	10.769	91	175644	19.325
103) Chlorobenzene	(3)	10.775	112	342720	19.634
104) 1,1,1,2-Tetrachloroethane	(3)	10.867	131	116961	19.849
105) Ethylbenzene	(3)	10.873	91	608758	19.977
107) m+p-Xylene	(3)	11.001	106	476538	39.653
108) o-Xylene	(3)	11.348	106	232867	19.831
110) Styrene	(3)	11.366	104	389965	20.111
111) Bromoform	(3)	11.525	173	90078	19.971
112) Isopropylbenzene	(3)	11.671	105	614683	20.156
113) Cyclohexanone	(1)	11.744	55	199819M	486.142
109) Xylene (Total)	(3)		106	709405	59.484
115)$4-Bromofluorobenzene	(3)	11.812	95	409296	50.189
115)$4-Bromofluorobenzene	(3)	11.818	174	355930	50.099
116) Bromobenzene	(4)	11.933	156	152170	19.817
117) 1,1,2,2-Tetrachloroethane	(4)	11.940	83	198926	20.460
119) trans-1,4-Dichloro-2-butene	(4)	11.964	53	316965	103.517
118) 1,2,3-Trichloropropane	(4)	11.982	110	59339	20.257
120) n-Propylbenzene	(4)	12.013	91	728999	20.173
121) 2-Chlorotoluene	(4)	12.086	126	147229	19.762
123) 1,3,5-Trimethylbenzene	(4)	12.159	105	521567	20.000
122) 4-Chlorotoluene	(4)	12.189	126	150883	19.727
125) tert-Butylbenzene	(4)	12.409	134	107942M	19.588
126) Pentachloroethane	(4)	12.439	167	87523	19.449
127) 1,2,4-Trimethylbenzene	(4)	12.458	105	532189	19.900
128) sec-Butylbenzene	(4)	12.580	105	684768	20.267
130) 1,3-Dichlorobenzene	(4)	12.677	146	290633	19.763
131) p-Isopropyltoluene	(4)	12.695	119	590948	20.174
132)*1,4-Dichlorobenzene-d4	(4)	12.738	152	445129	50.000
134) 1,4-Dichlorobenzene	(4)	12.756	146	293930	19.721

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	12.769	105	557905	20.195
136) Benzyl Chloride	(4)	12.842	91	398908	20.826
137) 1,3-Diethylbenzene	(4)	12.909	119	359837	20.155
138) 1,4-Diethylbenzene	(4)	12.982	119	382107	20.167
140) n-Butylbenzene	(4)	13.000	92	300522	20.339
139) 1,2-Dichlorobenzene	(4)	13.025	146	275468	19.814
141) 1,2-Diethylbenzene	(4)	13.055	119	299389	20.171
142) Diethylbenzene (total)	(4)		100	1041333	60.493
143) 1,2-Dibromo-3-chloropropane	(4)	13.586	75	49716	20.468
145) 1,3,5-Trichlorobenzene	(4)	13.714	180	219476	19.639
147) 1,2,4-Trichlorobenzene	(4)	14.146	180	198195	19.591
148) Hexachlorobutadiene	(4)	14.238	225	89661	18.780
149) Naphthalene	(4)	14.335	128	702642	20.469
150) 1,2,3-Trichlorobenzene	(4)	14.476	180	190219	19.624
151) 2-Methylnaphthalene	(4)	15.091	142	408373	20.218

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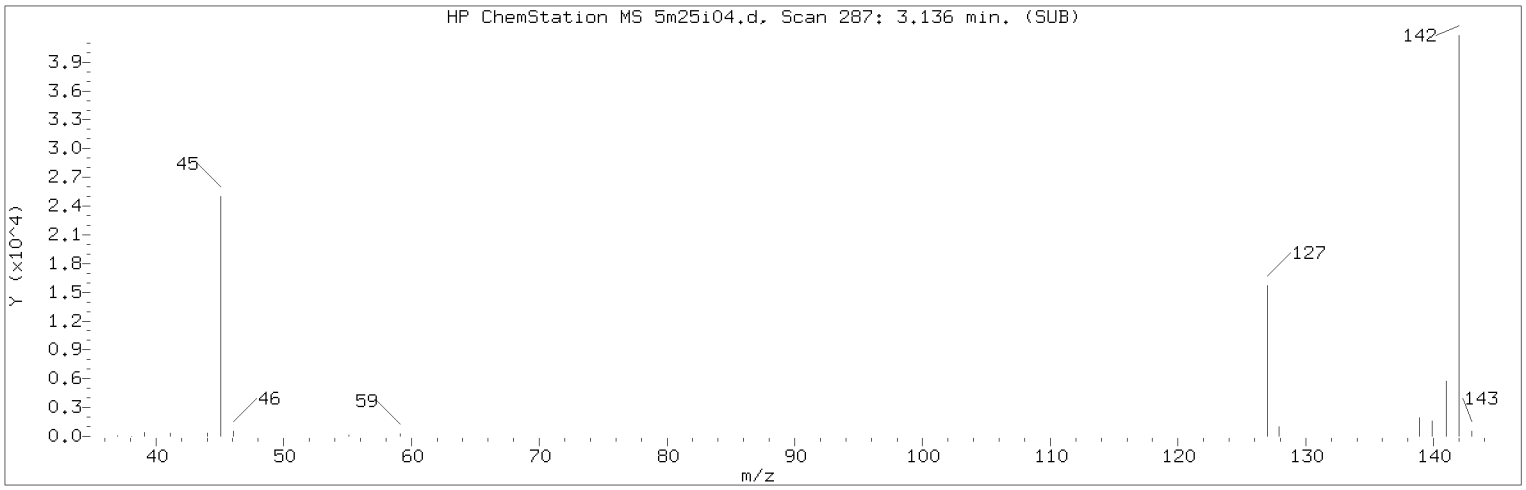
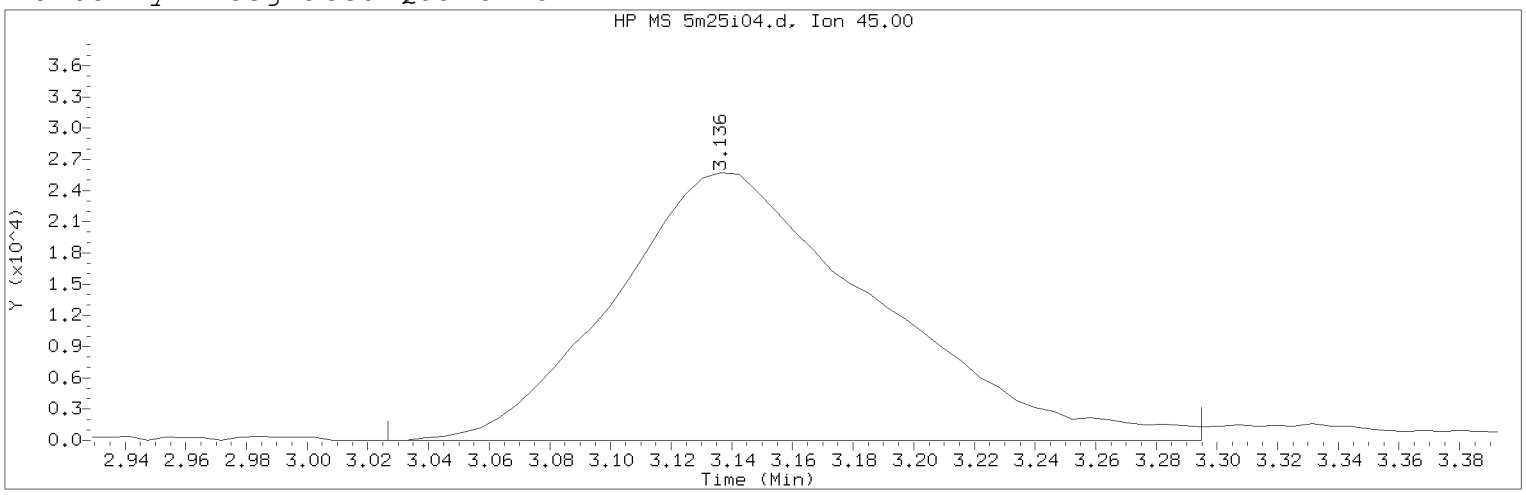
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

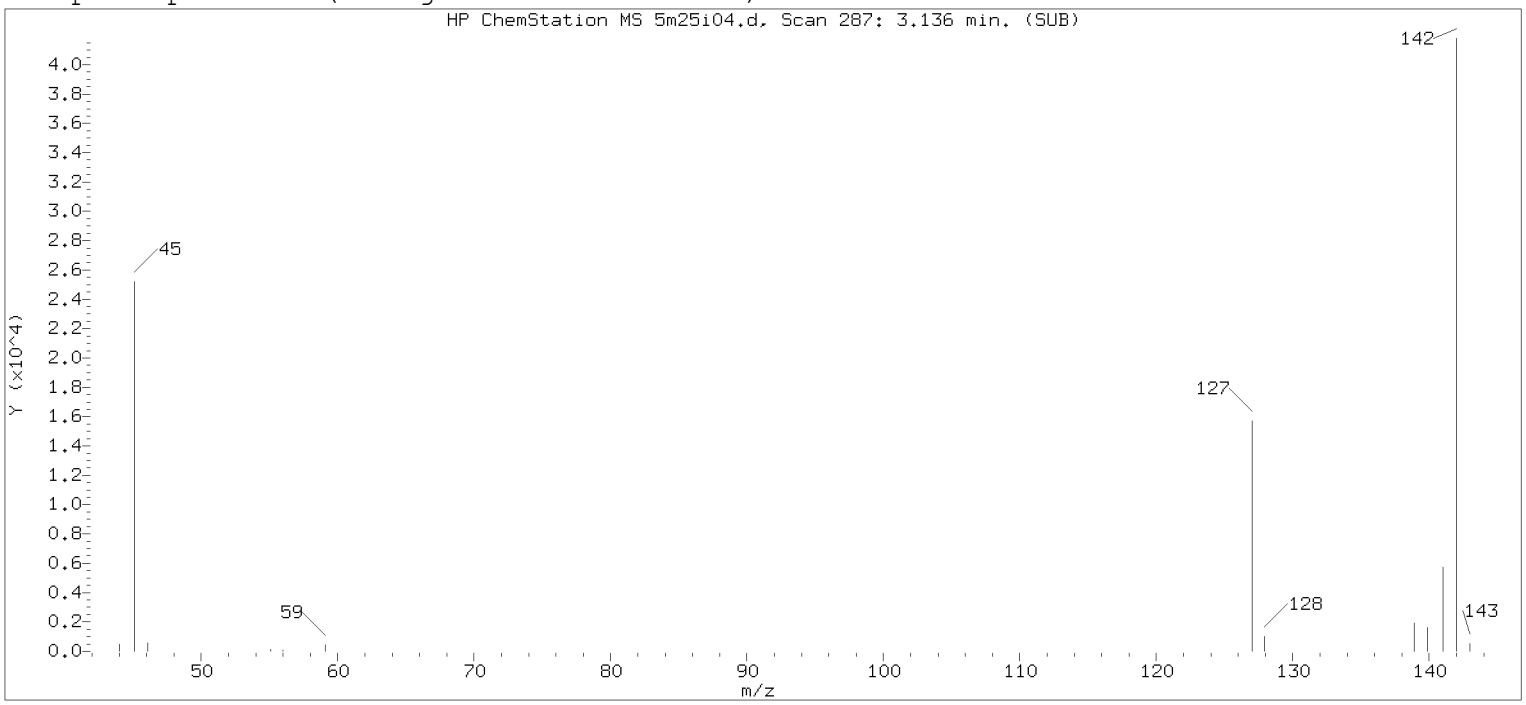
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 287
Retention Time (minutes): 3.136
Quant Ion : 45.00
Area (flag) : 154771M
On-Column Amount (ng) : 196.7971
Integration start scan : 268 Integration stop scan: 312
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

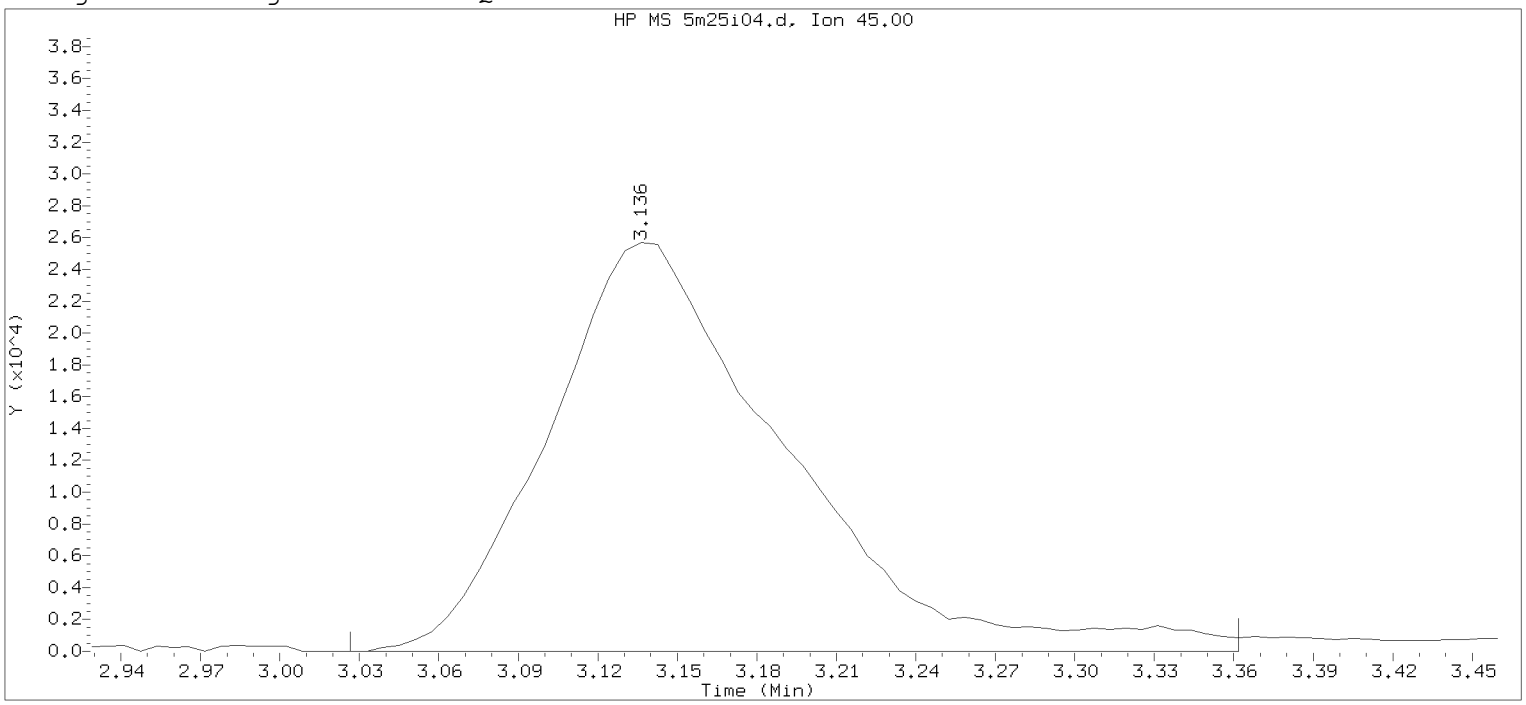
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

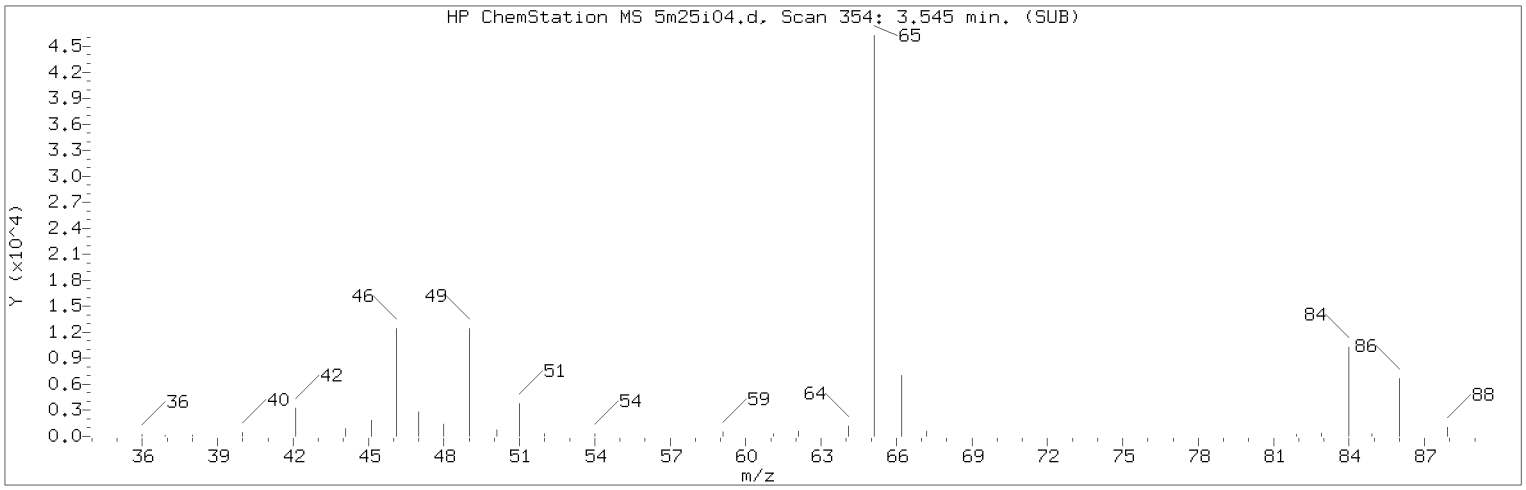
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:27
Date, time and analyst ID of latest file update: 25-Mar-2019 14:27 apr27582

Sample Name: VSTD020 Lab Sample ID: VSTD020

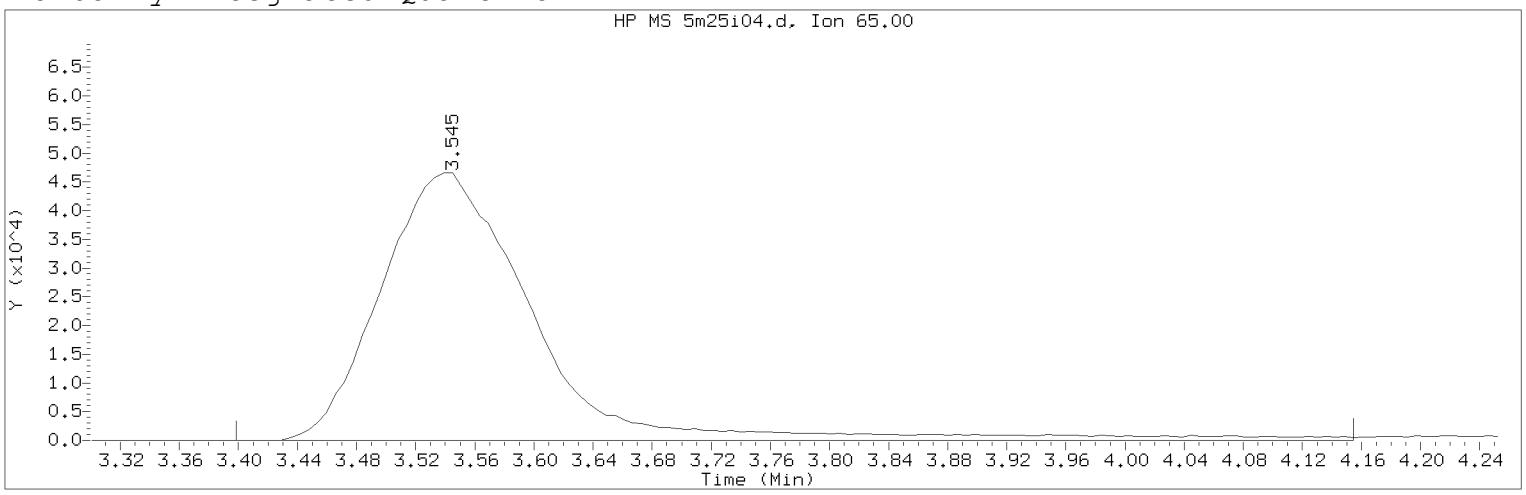
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 287
Retention Time (minutes): 3.136
Quant Ion : 45.00
Area : 159786
On-column Amount (ng) : 206.6331
Integration start scan : 268 Integration stop scan: 323
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10036

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

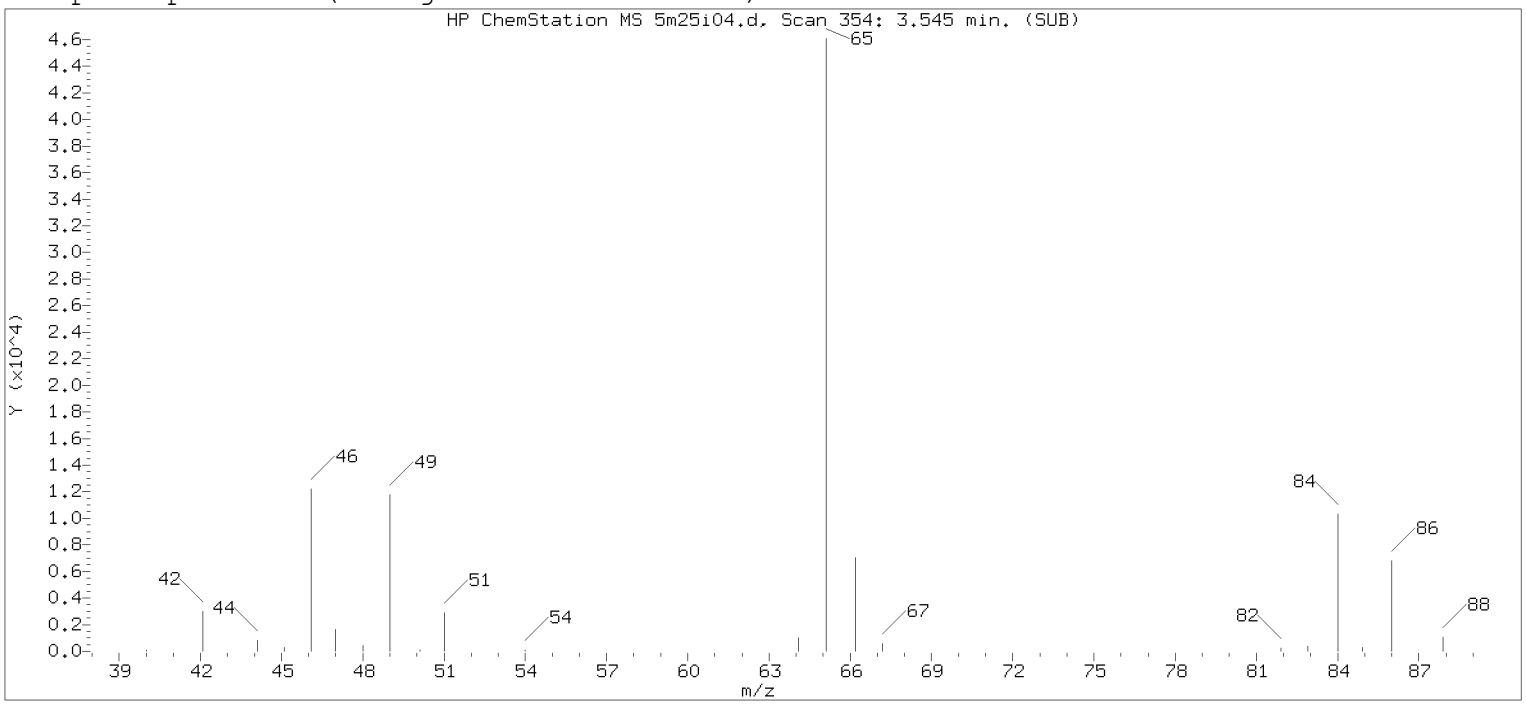
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 354
Retention Time (minutes): 3.545
Quant Ion : 65.00
Area (flag) : 335255M
On-Column Amount (ng) : 250.0000
Integration start scan : 329 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

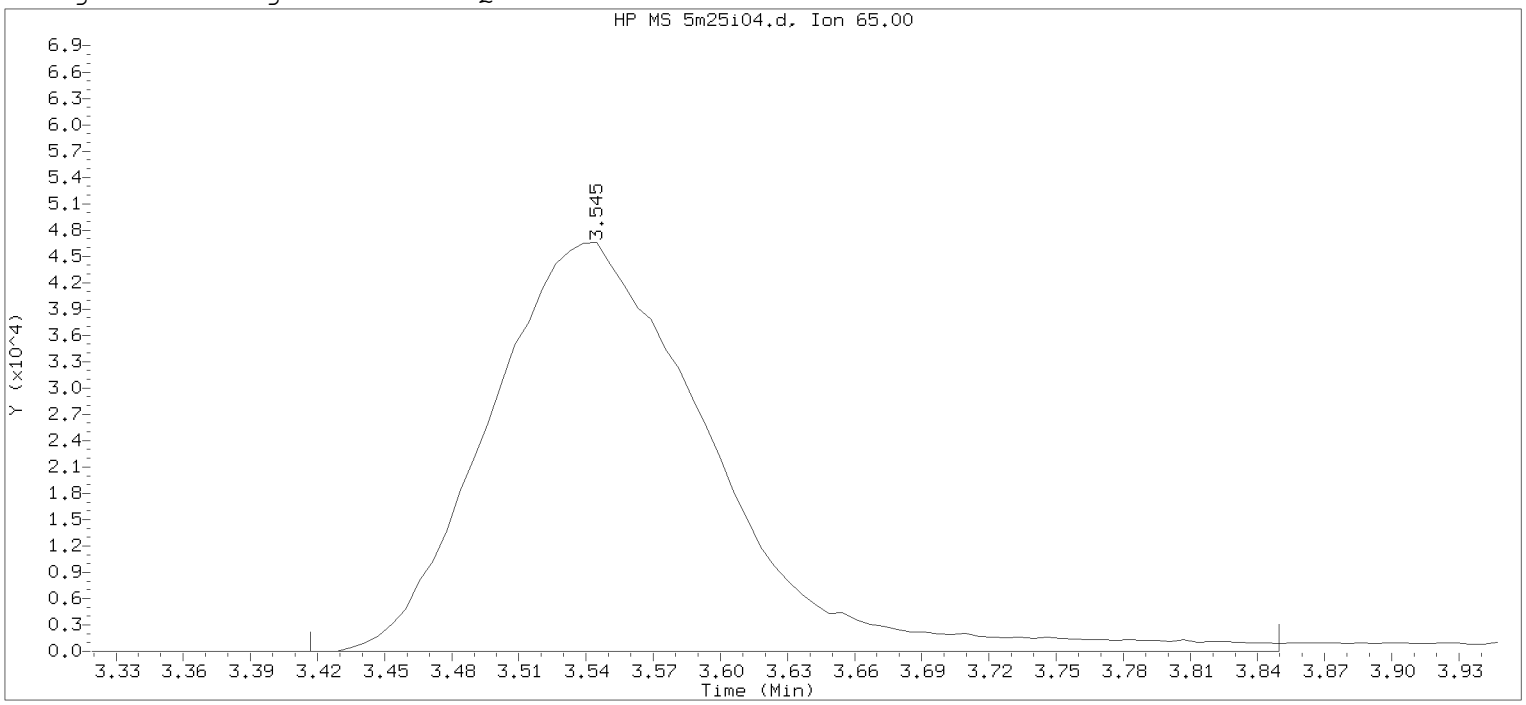
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

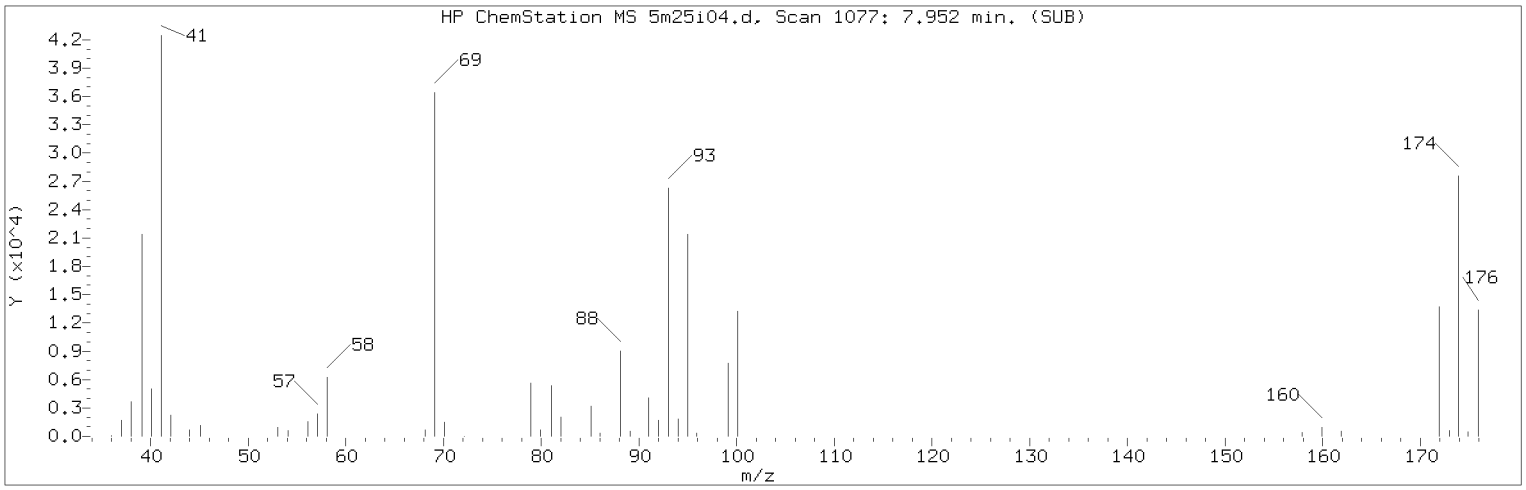
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:27
Date, time and analyst ID of latest file update: 25-Mar-2019 14:27 apr27582

Sample Name: VSTD020 Lab Sample ID: VSTD020

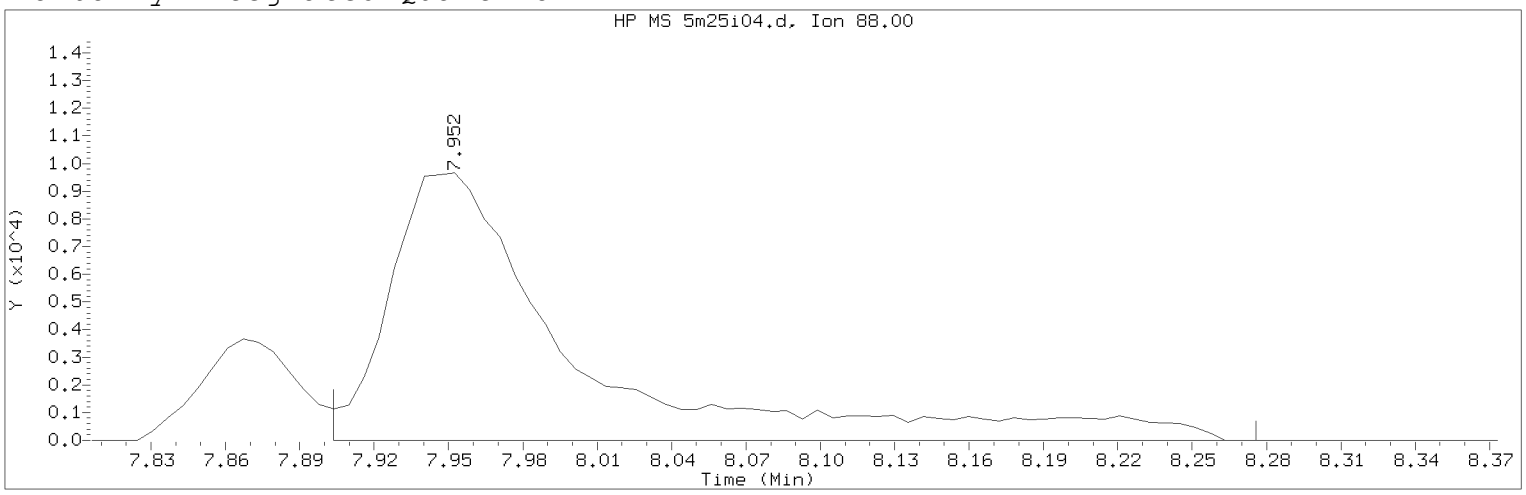
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 354
Retention Time (minutes): 3.545
Quant Ion : 65.00
Area : 321106
On-column Amount (ng) : 250.0000
Integration start scan : 332 Integration stop scan: 403
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10036

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

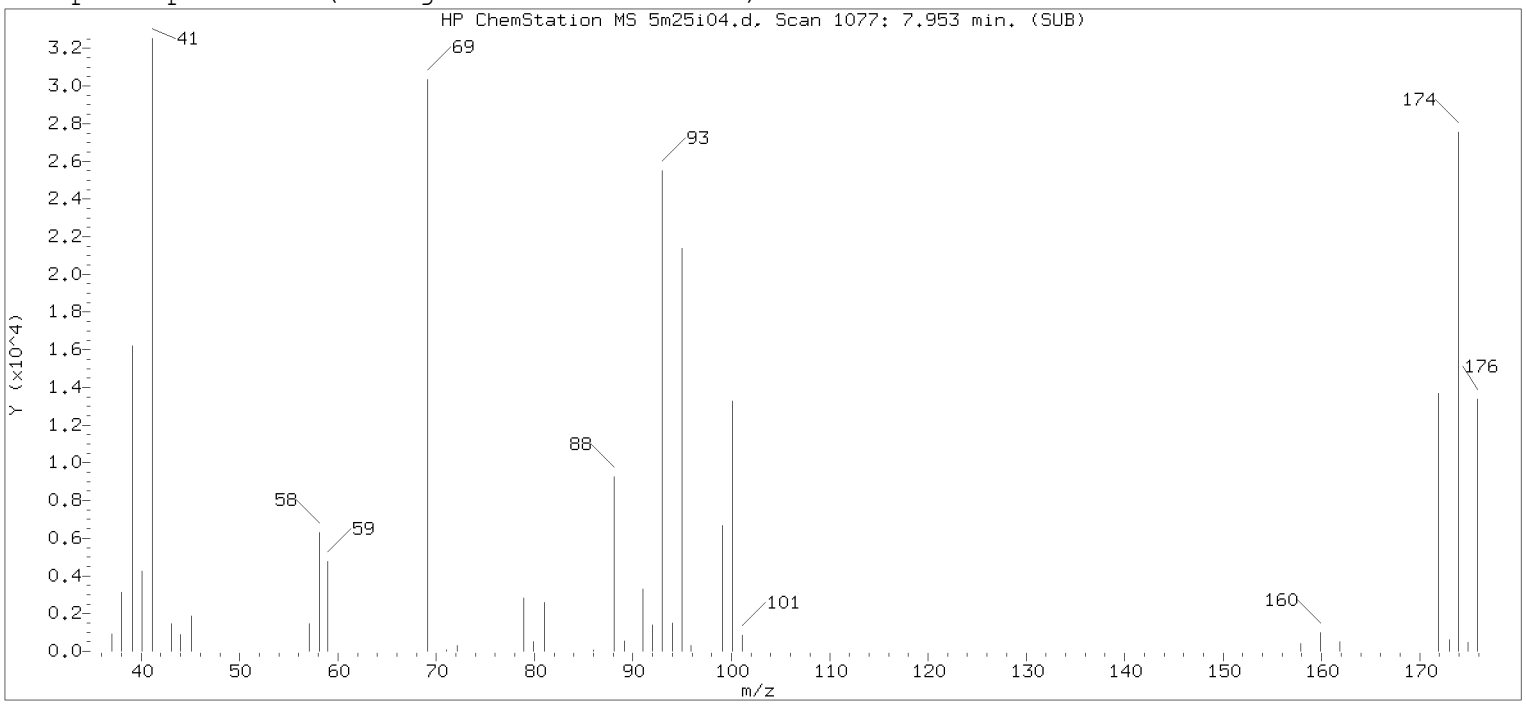
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1077
Retention Time (minutes): 7.952
Quant Ion : 88.00
Area (flag) : 50360M
On-Column Amount (ng) : 512.6306
Integration start scan : 1068 Integration stop scan: 1129
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

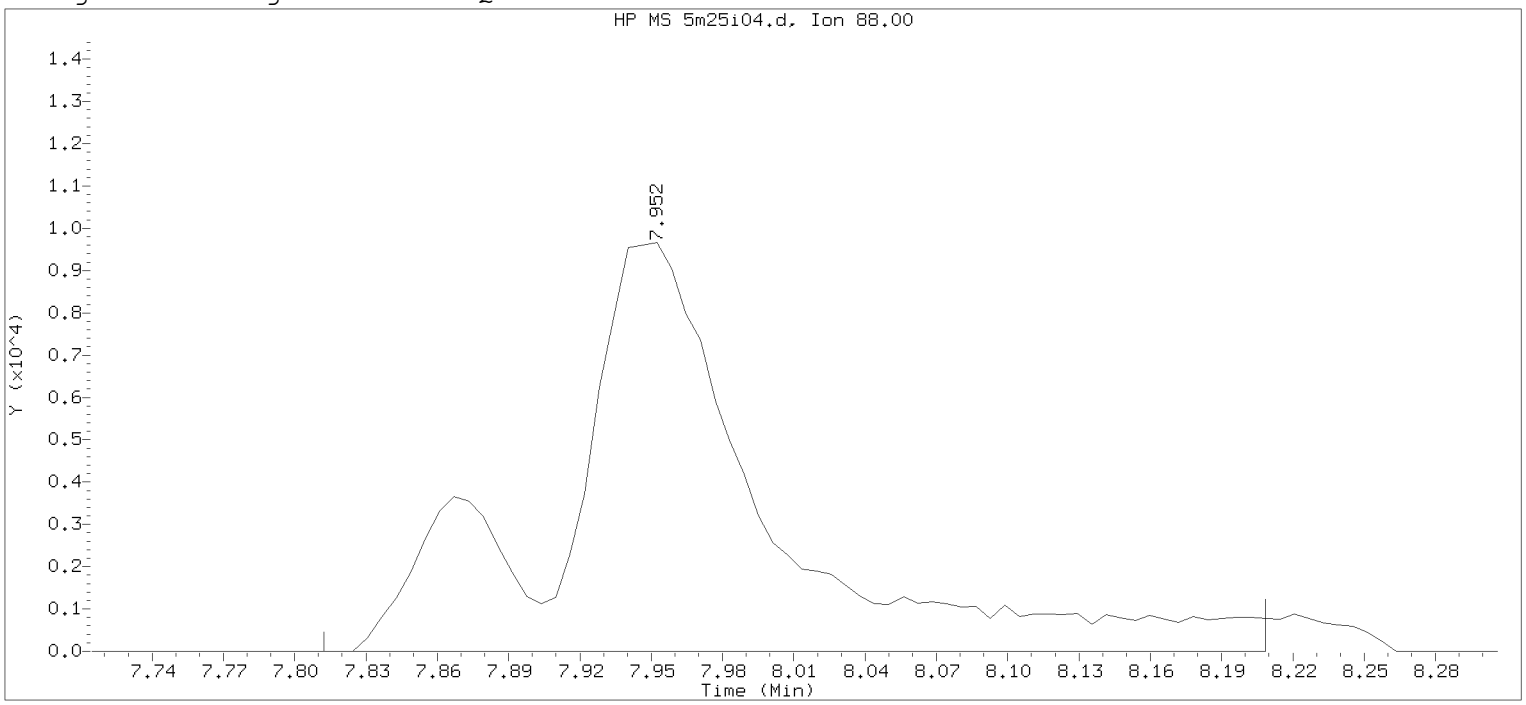
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

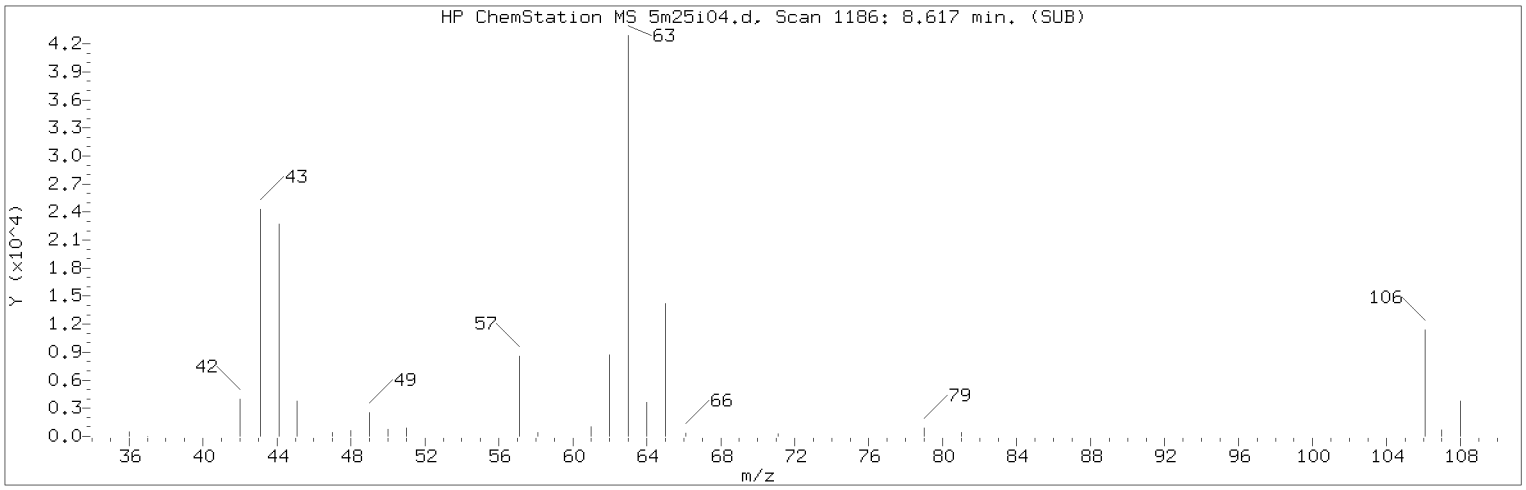
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:27
Date, time and analyst ID of latest file update: 25-Mar-2019 14:27 apr27582

Sample Name: VSTD020 Lab Sample ID: VSTD020

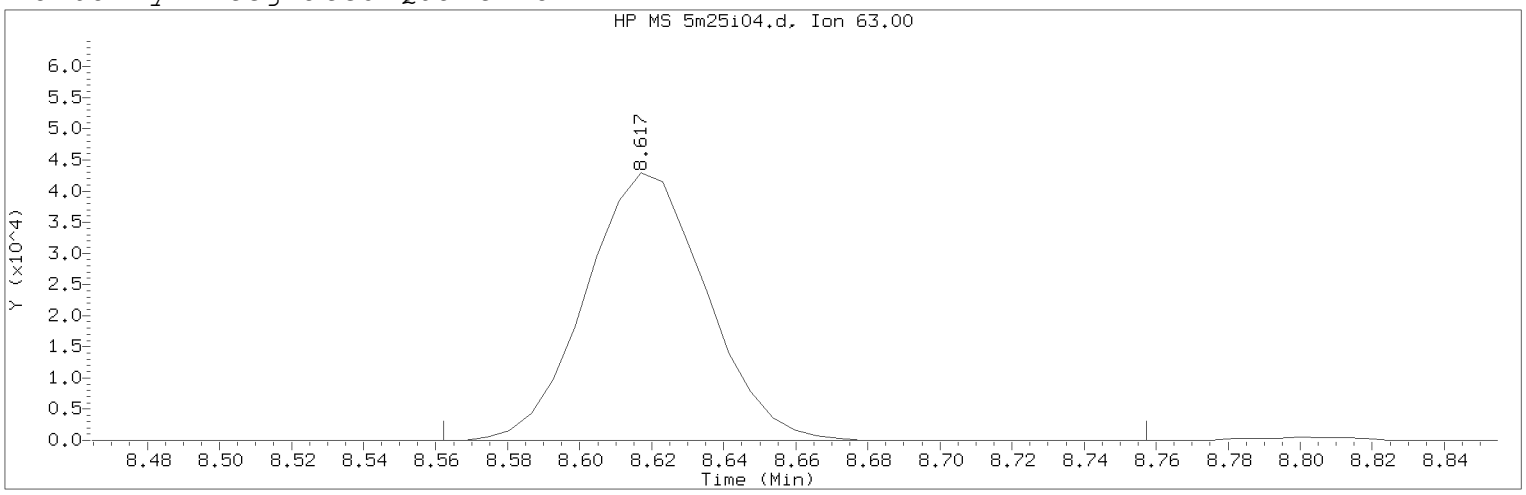
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1077
Retention Time (minutes): 7.952
Quant Ion : 88.00
Area : 58019
On-column Amount (ng) : 467.2427
Integration start scan : 1053 Integration stop scan: 1118
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10036

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

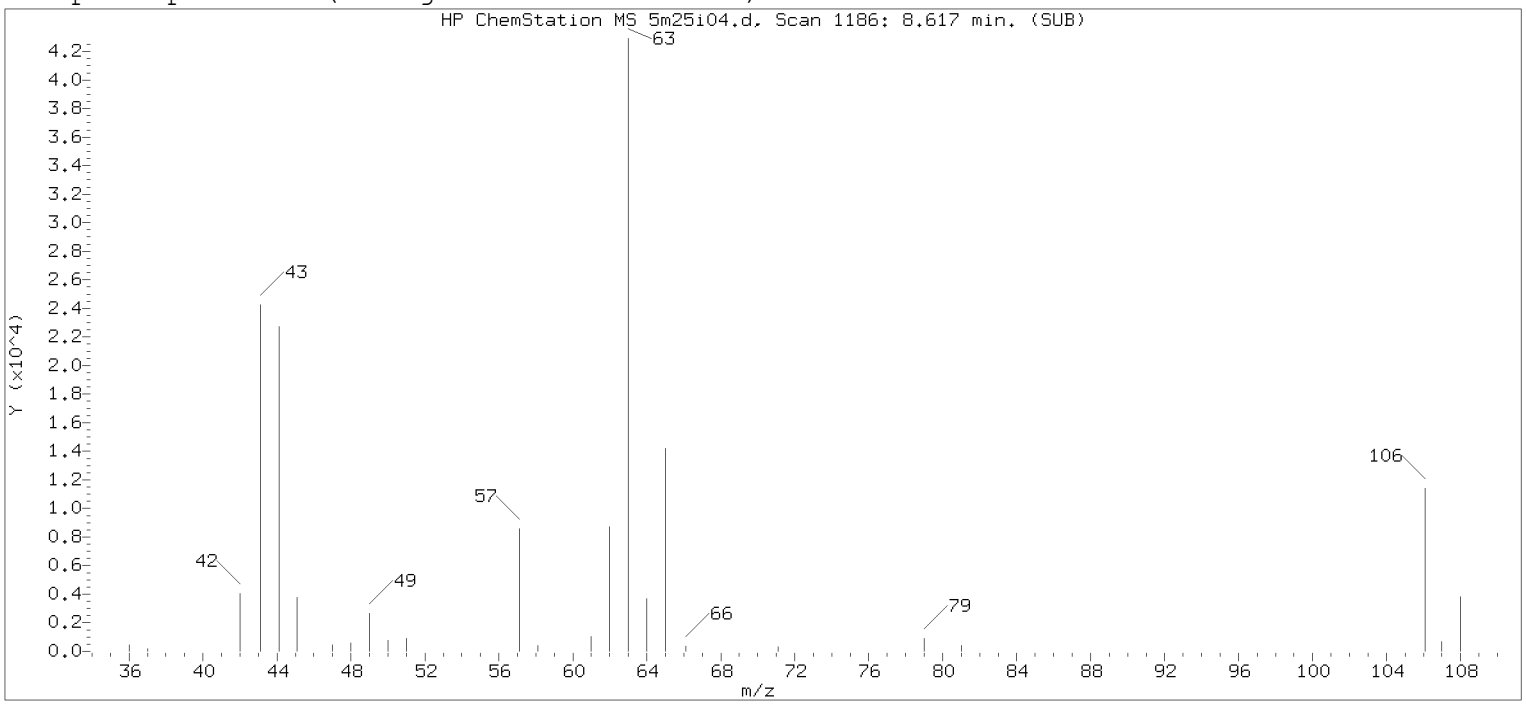
Compound Number : 81
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1186
Retention Time (minutes): 8.617
Quant Ion : 63.00
Area (flag) : 99372M
On-Column Amount (ng) : 19.8623
Integration start scan : 1176 Integration stop scan: 1208
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

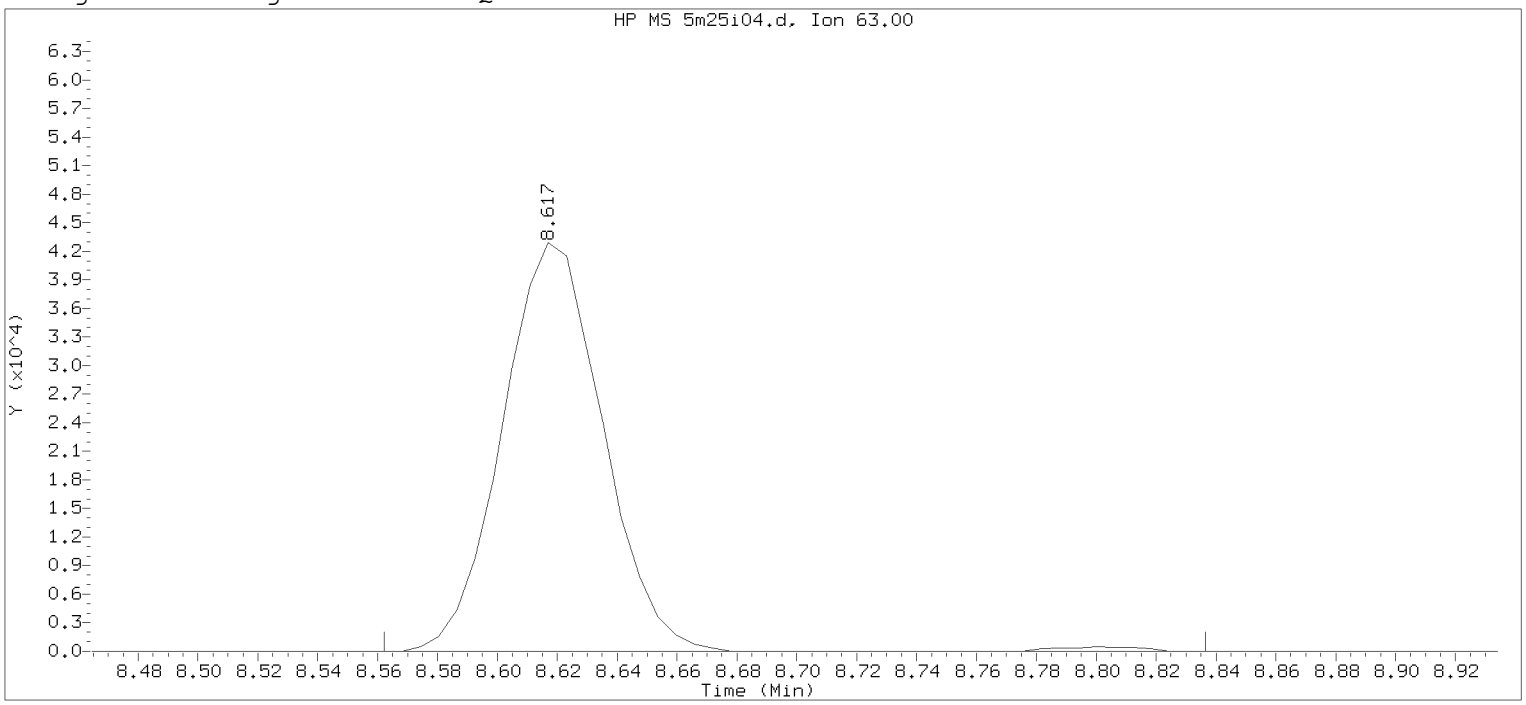
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

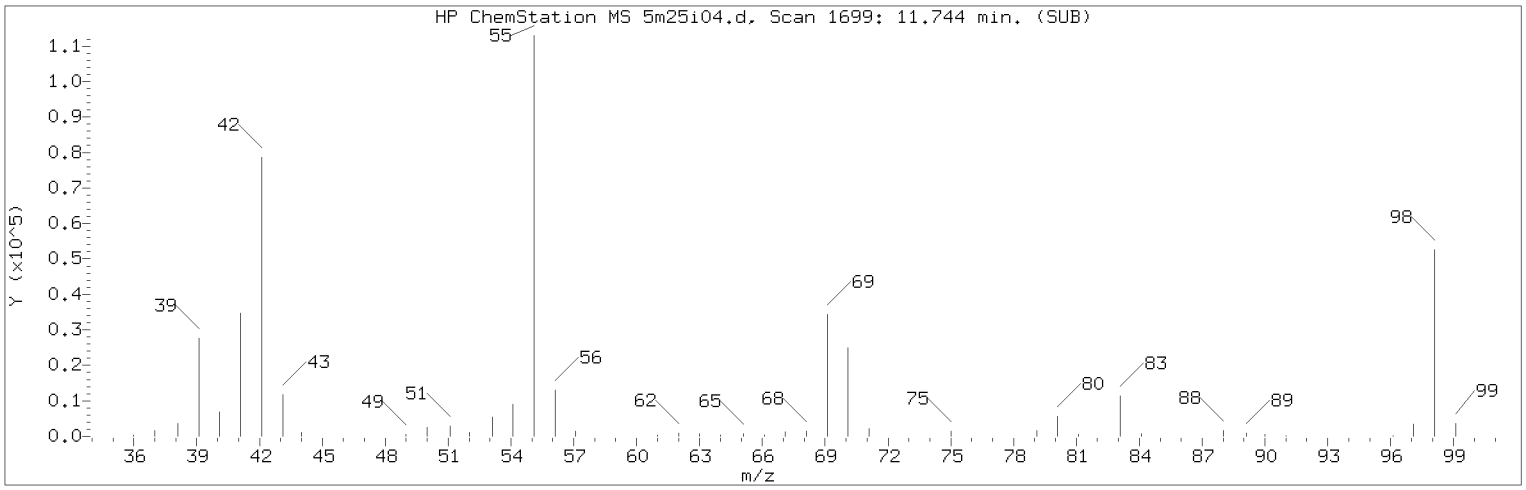
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:27
Date, time and analyst ID of latest file update: 25-Mar-2019 14:27 apr27582

Sample Name: VSTD020 Lab Sample ID: VSTD020

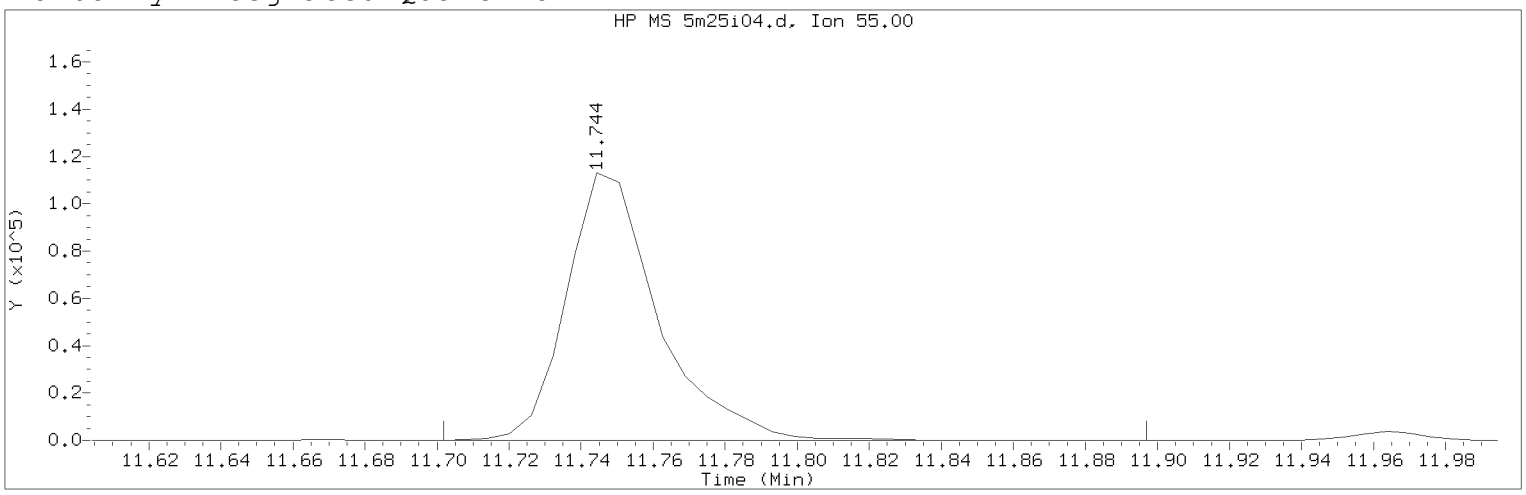
Compound Number : 81
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1186
Retention Time (minutes): 8.617
Quant Ion : 63.00
Area : 100292
On-column Amount (ng) : 19.4703
Integration start scan : 1176 Integration stop scan: 1221
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: KKELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

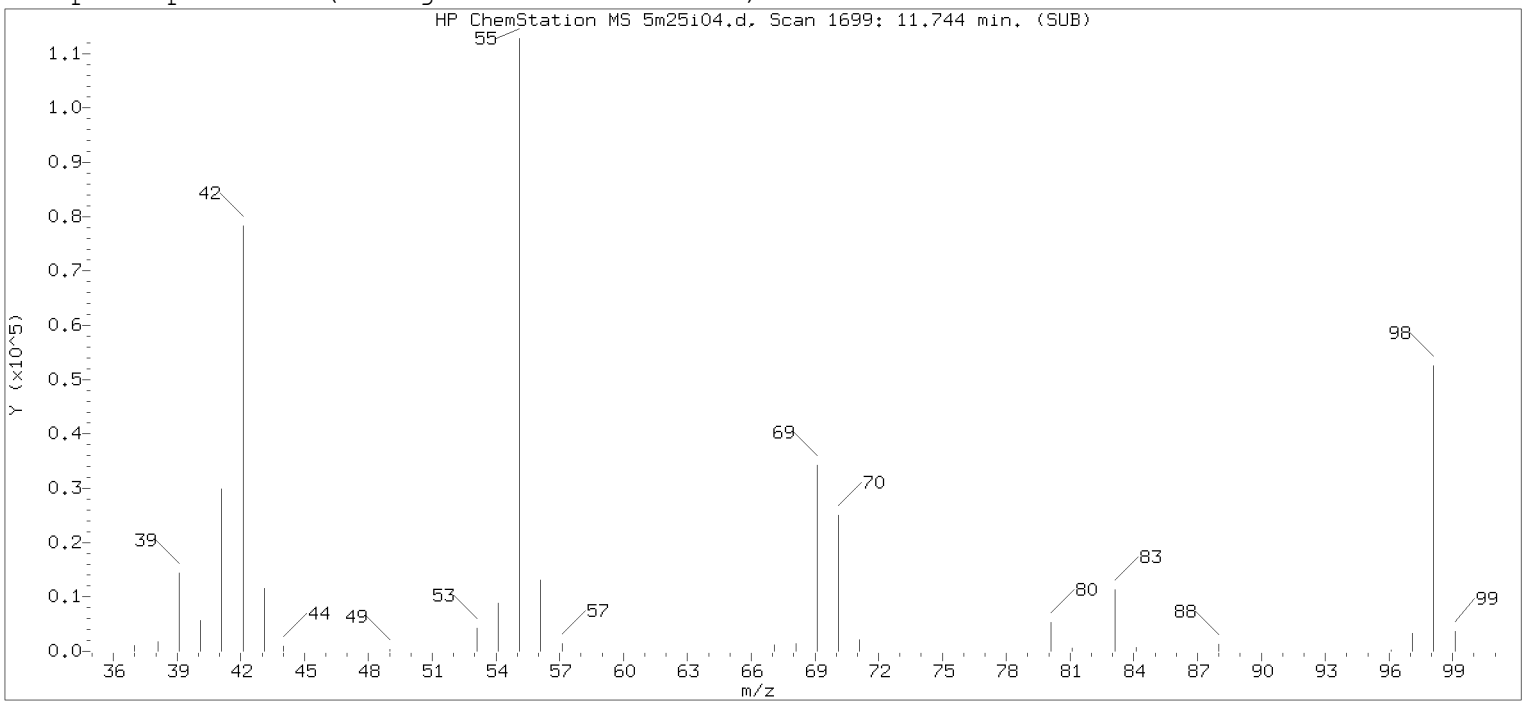
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1699
Retention Time (minutes): 11.744
Quant Ion : 55.00
Area (flag) : 199819M
On-Column Amount (ng) : 486.1416
Integration start scan : 1691 Integration stop scan: 1723
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

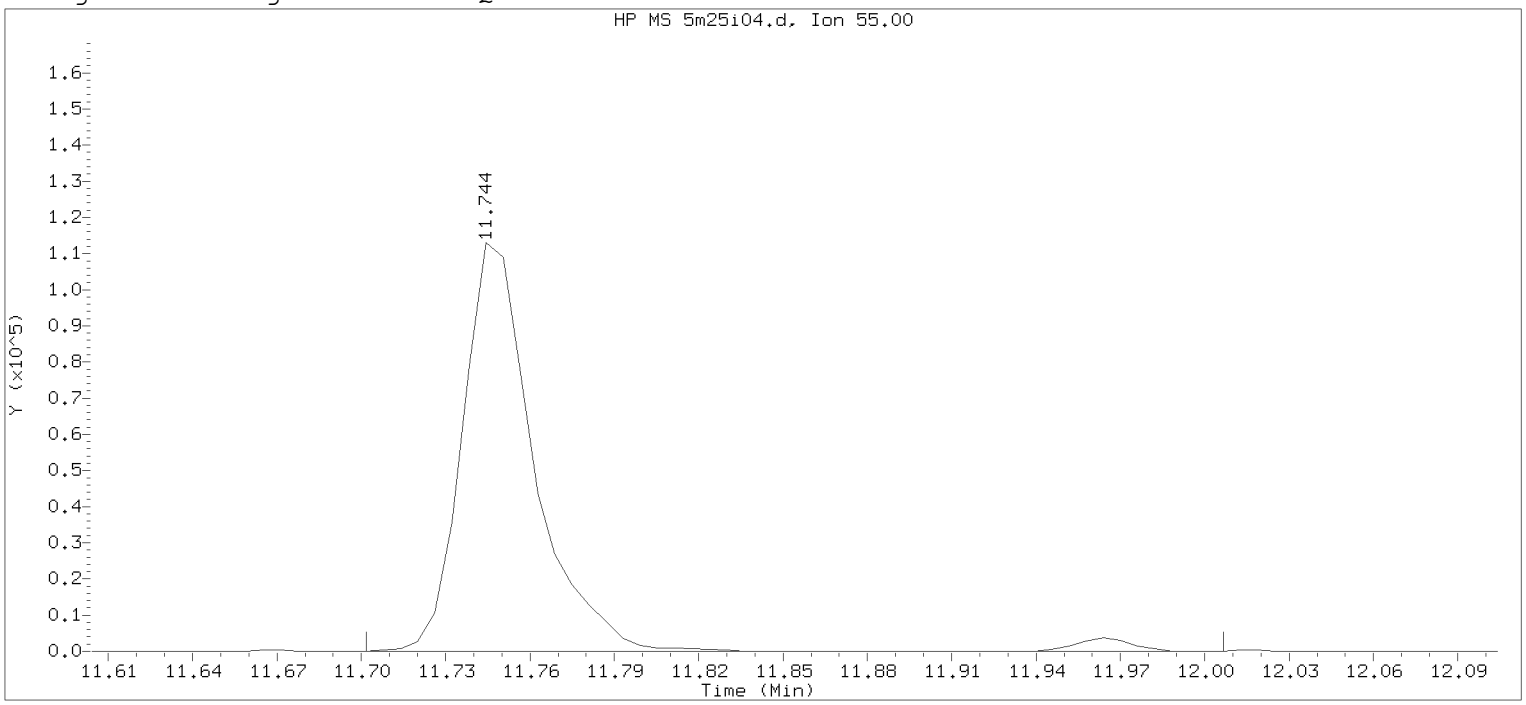
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

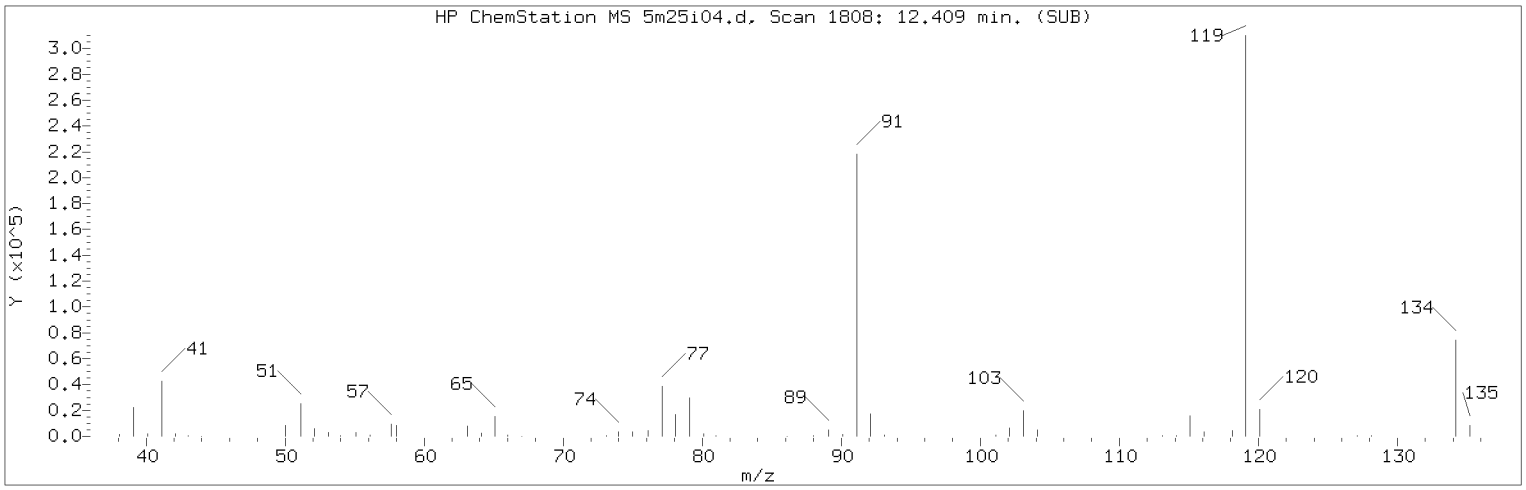
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:27
Date, time and analyst ID of latest file update: 25-Mar-2019 14:27 apr27582

Sample Name: VSTD020 Lab Sample ID: VSTD020

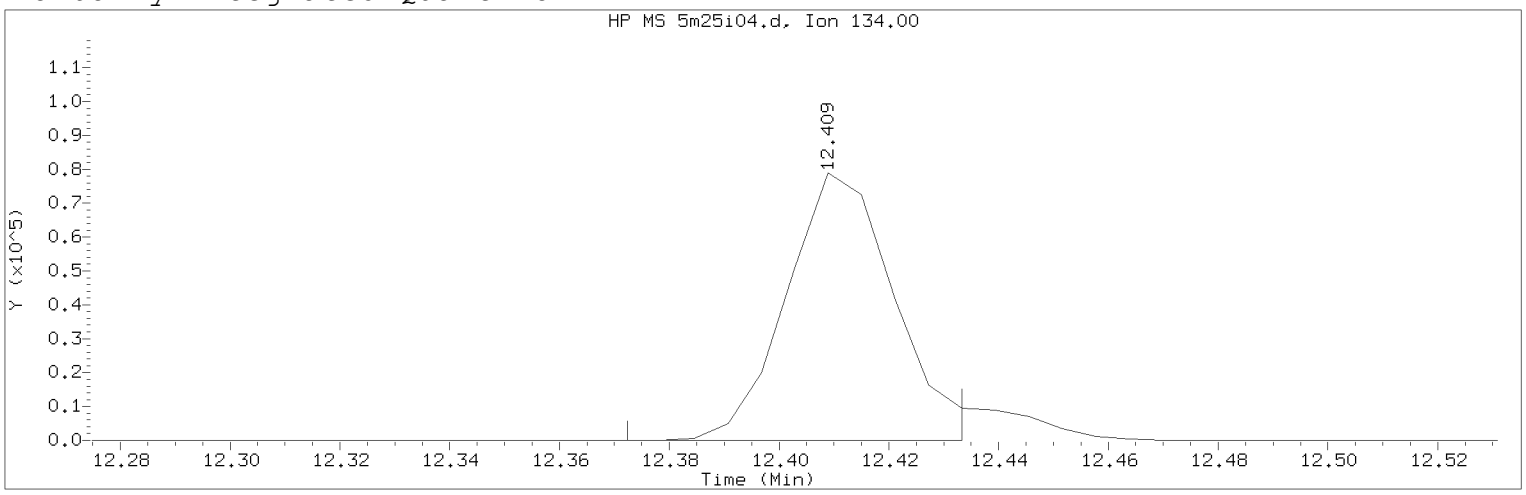
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1699
Retention Time (minutes): 11.744
Quant Ion : 55.00
Area : 204771
On-column Amount (ng) : 504.6157
Integration start scan : 1691 Integration stop scan: 1741
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user kkelly100

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

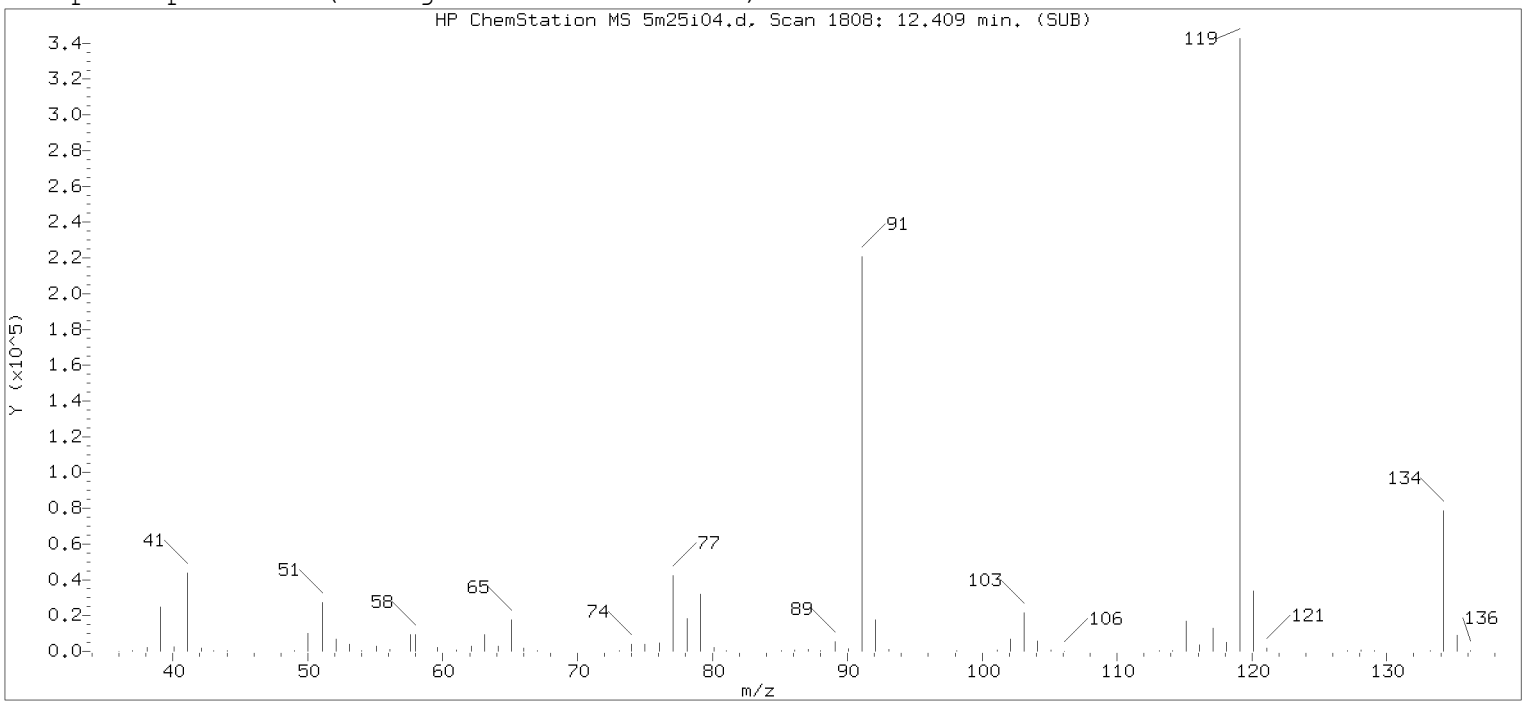
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1808
Retention Time (minutes): 12.409
Quant Ion : 134.00
Area (flag) : 107942M
On-Column Amount (ng) : 19.5875
Integration start scan : 1801 Integration stop scan: 1811
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

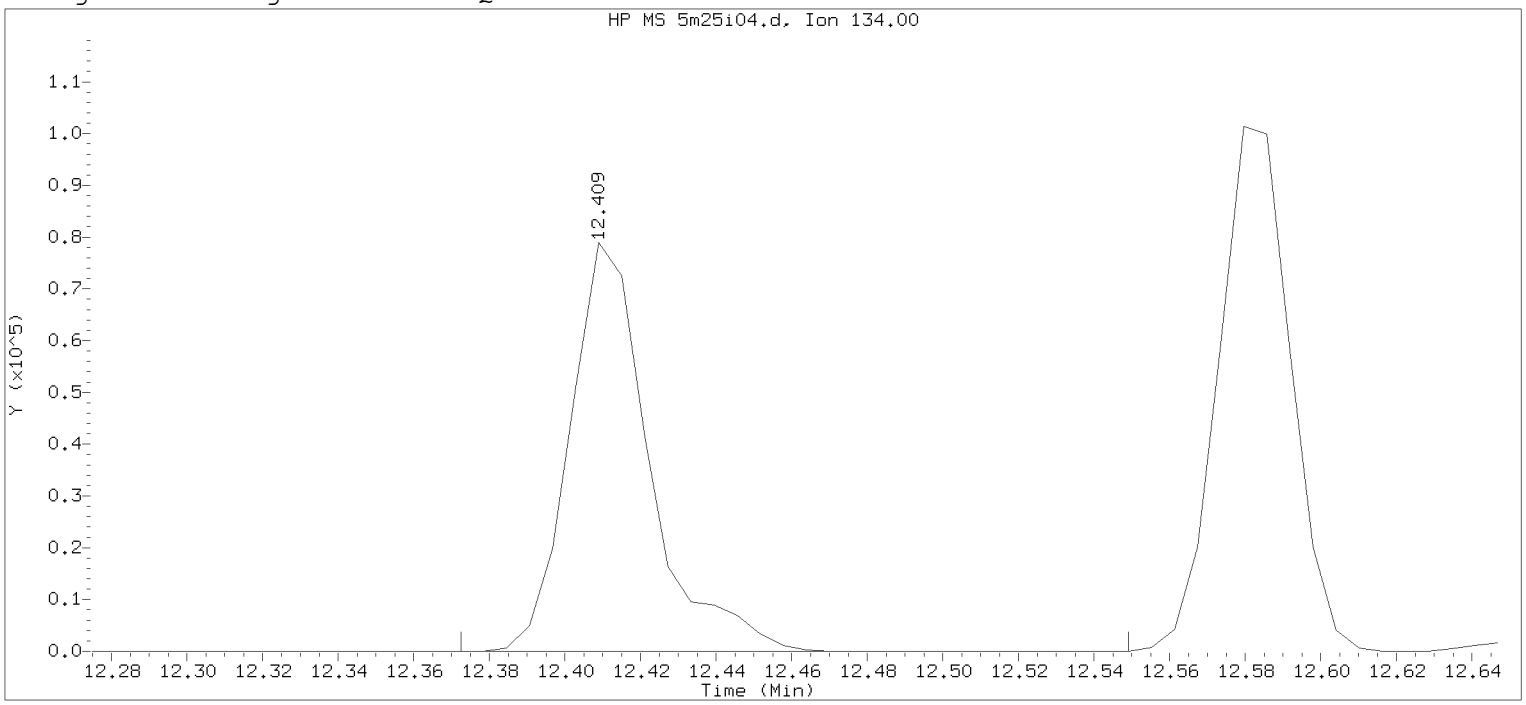
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



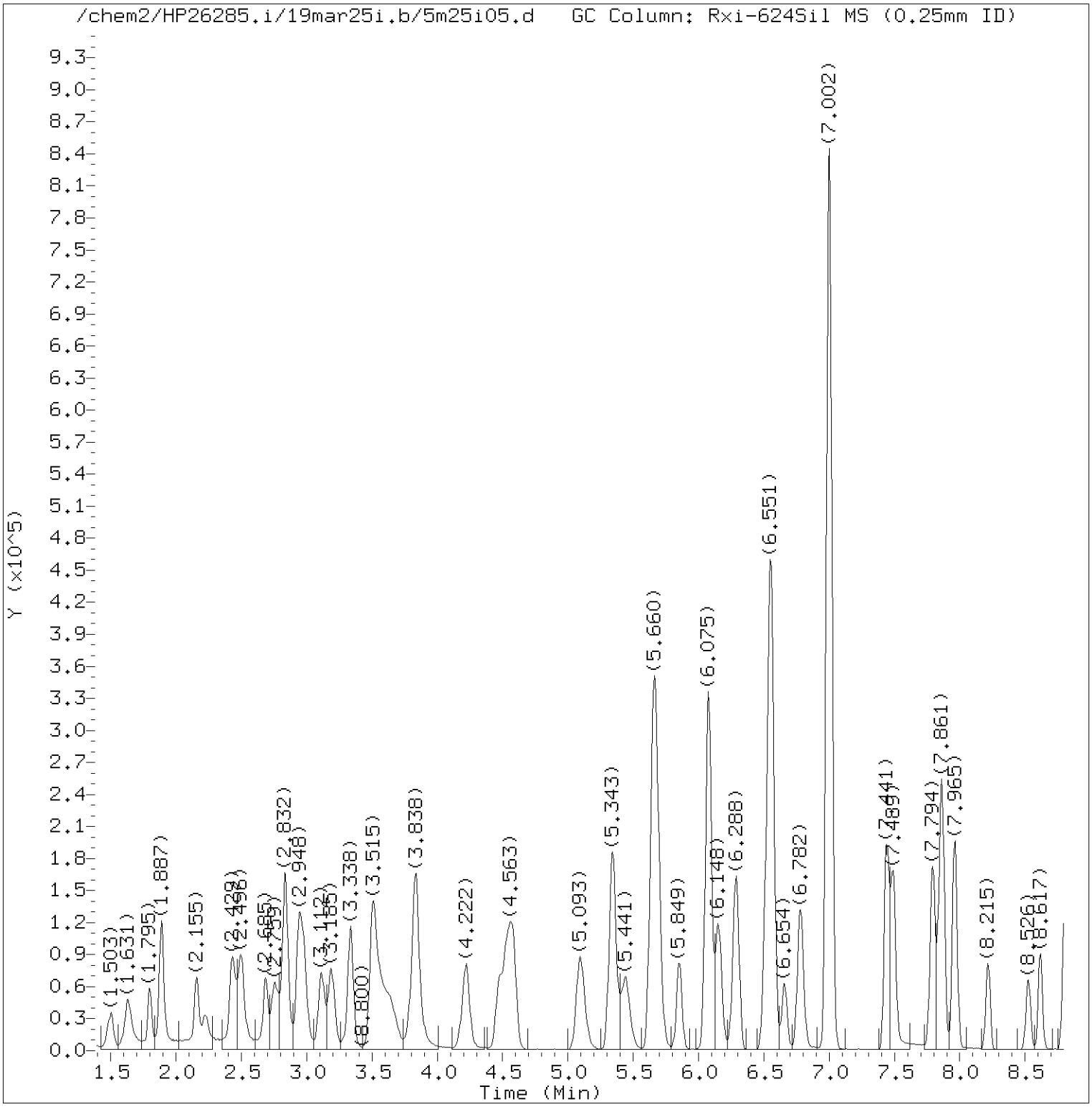
Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:27
Date, time and analyst ID of latest file update: 25-Mar-2019 14:27 apr27582

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1808
Retention Time (minutes): 12.409
Quant Ion : 134.00
Area : 115535
On-column Amount (ng) : 19.2744
Integration start scan : 1801 Integration stop scan: 1830
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user: KKELLY



Total Ion Chromatogram (TIC)

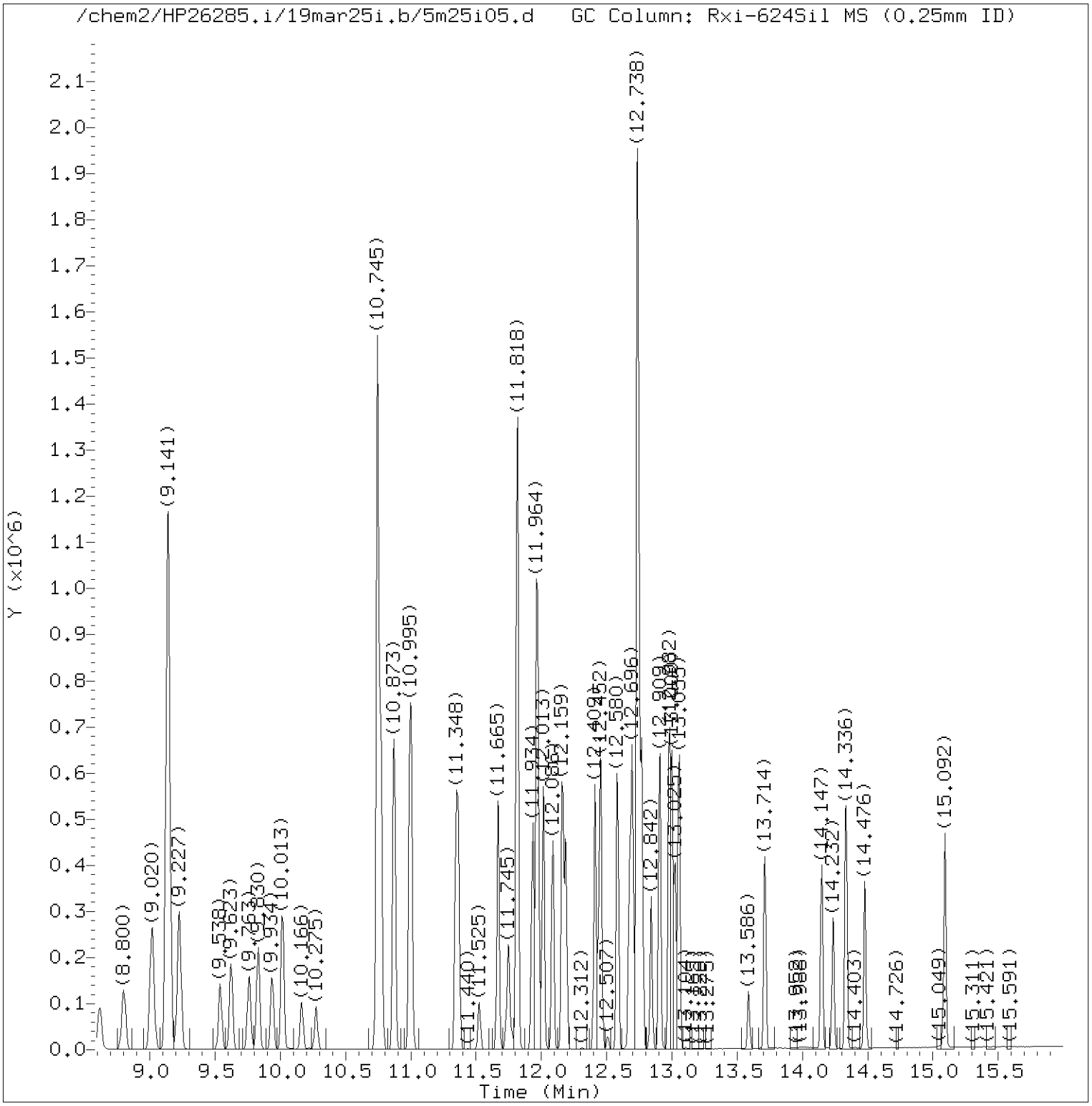
Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.631	85	94119	10.867
4) Chloromethane	(2)	1.795	50	66804	10.614
5) 1,3-Butadiene	(2)	1.887	39	46141M	10.551
6) Vinyl Chloride	(2)	1.893	62	65864	10.697
8) Bromomethane	(2)	2.155	94	54012	10.886
9) Chloroethane	(2)	2.222	64	32076	10.867
10) Dichlorofluoromethane	(2)	2.429	67	86847	10.817
12) Trichlorofluoromethane	(2)	2.478	101	92976	10.862
11) n-Pentane	(2)	2.503	43	57109	10.578
14) Ethyl ether	(2)	2.685	59	50150	11.312
15) Freon 123a	(2)	2.759	67	71433	10.738
16) Acrolein	(1)	2.832	56	248316	107.438
17) 1,1-Dichloroethene	(2)	2.941	96	52544	10.569
17) 1,1-Dichloroethene	(2)	2.941	63	25969	10.618
19) Freon 113	(2)	2.966	101	54074	10.692
18) Acetone	(1)	2.978	58	23127	21.884
22) Methyl Iodide	(2)	3.106	142	108497	10.450
21) 2-Propanol	(1)	3.124	45	79627M	103.676
23) Carbon Disulfide	(2)	3.191	76	170510	10.330
27) Methyl Acetate	(2)	3.326	43	76180	9.893
25) Allyl Chloride	(2)	3.338	41	89976	10.073
28) Methylene Chloride	(2)	3.502	84	58106	10.290
29)*t-Butyl alcohol-d10	(1)	3.533	65	327405M	250.000
30) t-Butyl alcohol	(1)	3.636	59	156152	103.095
31) Acrylonitrile	(2)	3.807	53	45074	11.074
32) trans-1,2-Dichloroethene	(2)	3.838	96	58818	10.569
33) Methyl Tertiary Butyl Ether	(2)	3.838	73	168895	10.635
34) n-Hexane	(2)	4.222	57	83855	10.892
36) 1,1-Dichloroethane	(2)	4.472	63	104202	10.621
38) di-Isopropyl ether	(2)	4.533	45	190591	10.657
39) 2-Chloro-1,3-butadiene	(2)	4.581	53	91675	10.560
40) Ethyl t-butyl ether	(2)	5.093	59	175231	10.583
42) cis-1,2-Dichloroethene	(2)	5.337	96	65570	10.414
44) 2-Butanone	(2)	5.337	43	129887	21.132
45) 2,2-Dichloropropane	(2)	5.350	77	82703	10.540
47) Propionitrile	(1)	5.447	54	169933	103.151
48) Methacrylonitrile	(2)	5.654	67	205805	51.389
49) Bromochloromethane	(2)	5.685	128	32707	10.381

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.703	71	35878	21.439
51) Chloroform	(2)	5.849	83	100898	10.372
53) 1,1,1-Trichloroethane	(2)	6.069	97	90322	10.549
52)$Dibromofluoromethane	(2)	6.075	113	255943	49.666
52)$Dibromofluoromethane	(2)	6.075	111	262388	49.604
54) Cyclohexane	(2)	6.154	56	104862	10.593
54) Cyclohexane	(2)	6.154	84	89057	10.558
54) Cyclohexane	(2)	6.148	69	32737	10.674
43) 1,2-Dichloroethene (Total)	(2)		96	124388	20.983
56) Carbon Tetrachloride	(2)	6.276	117	76883	10.377
55) 1,1-Dichloropropene	(2)	6.294	75	84233	10.703
58) Isobutyl Alcohol	(1)	6.520	41	125141	252.284
57)$1,2-Dichloroethane-d4	(2)	6.551	102	60548	50.214
57)$1,2-Dichloroethane-d4	(2)	6.551	65	278650	49.919
57)$1,2-Dichloroethane-d4	(2)	6.551	104	38514	50.121
60) Benzene	(2)	6.569	78	252073	10.544
61) 1,2-Dichloroethane	(2)	6.654	62	72447	10.254
61) 1,2-Dichloroethane	(2)	6.660	98	6802	11.004
65) t-Amyl methyl ether	(2)	6.782	73	177362	10.629
66)*Fluorobenzene	(2)	6.996	96	1076914	50.000
67) n-Heptane	(2)	7.014	43	92368	10.640
69) n-Butanol	(1)	7.441	56	210925	509.987
71) Trichloroethene	(2)	7.489	95	64927	10.472
73) Methylcyclohexane	(2)	7.794	83	106801	10.403
73) Methylcyclohexane	(2)	7.788	98	45351	10.269
74) 1,2-Dichloropropane	(2)	7.843	63	62224	10.500
76) 1,4-Dioxane	(1)	7.947	88	25954M	270.529
75) Dibromomethane	(2)	7.959	93	38941	10.389
77) Methyl Methacrylate	(2)	7.965	69	63773	10.308
79) Bromodichloromethane	(2)	8.215	83	71347	10.243
80) 2-Nitropropane	(2)	8.526	41	56052	19.604
81) 2-Chloroethyl Vinyl Ether	(2)	8.617	63	51694	10.452
82) cis-1,3-Dichloropropene	(2)	8.800	75	94445	10.305
83) 4-Methyl-2-pentanone	(2)	9.020	43	245048	19.466
84)$Toluene-d8	(3)	9.141	98	1040894	50.465
84)$Toluene-d8	(3)	9.141	100	681849	50.297
89) Toluene	(3)	9.227	92	162986	10.616
90) trans-1,3-Dichloropropene	(3)	9.538	75	83380	10.050

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	9.623	69	103239	10.379
93) 1,1,2-Trichloroethane	(3)	9.763	97	56777	10.337
94) Tetrachloroethene	(3)	9.830	166	72586	10.397
95) 1,3-Dichloropropane	(3)	9.934	76	93721	10.417
97) 2-Hexanone	(3)	10.013	43	201517	18.560
91) 1,3-Dichloropropene (total)	(3)		100	177825	20.355
98) Dibromochloromethane	(3)	10.166	129	56725	10.088
100) 1,2-Dibromoethane	(3)	10.275	107	62928	10.260
101)*Chlorobenzene-d5	(3)	10.745	117	817143	50.000
102) 1-Chlorohexane	(3)	10.769	91	92374	10.327
103) Chlorobenzene	(3)	10.775	112	179579	10.454
104) 1,1,1,2-Tetrachloroethane	(3)	10.867	131	59624	10.282
105) Ethylbenzene	(3)	10.873	91	316305	10.548
107) m+p-Xylene	(3)	10.995	106	250815	21.207
108) o-Xylene	(3)	11.348	106	121737	10.535
110) Styrene	(3)	11.367	104	198532	10.404
111) Bromoform	(3)	11.525	173	42466	9.567
112) Isopropylbenzene	(3)	11.665	105	319274	10.639
113) Cyclohexanone	(1)	11.745	55	97782M	243.599
109) Xylene (Total)	(3)		106	372552	31.742
115)$4-Bromofluorobenzene	(3)	11.812	95	401683	50.050
115)$4-Bromofluorobenzene	(3)	11.818	174	350688	50.158
116) Bromobenzene	(4)	11.934	156	77462	10.311
117) 1,1,2,2-Tetrachloroethane	(4)	11.940	83	99747	10.486
119) trans-1,4-Dichloro-2-butene	(4)	11.964	53	157982	52.735
118) 1,2,3-Trichloropropane	(4)	11.982	110	29545	10.309
120) n-Propylbenzene	(4)	12.013	91	383528	10.848
121) 2-Chlorotoluene	(4)	12.086	126	76128	10.444
123) 1,3,5-Trimethylbenzene	(4)	12.159	105	270969	10.620
122) 4-Chlorotoluene	(4)	12.190	126	77920	10.413
125) tert-Butylbenzene	(4)	12.409	134	56051M	10.396
126) Pentachloroethane	(4)	12.440	167	43703	9.926
127) 1,2,4-Trimethylbenzene	(4)	12.458	105	274908	10.507
128) sec-Butylbenzene	(4)	12.580	105	353049	10.680
130) 1,3-Dichlorobenzene	(4)	12.677	146	149707	10.405
131) p-Isopropyltoluene	(4)	12.696	119	302818	10.566
132)*1,4-Dichlorobenzene-d4	(4)	12.738	152	435506	50.000
134) 1,4-Dichlorobenzene	(4)	12.757	146	149307	10.239

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

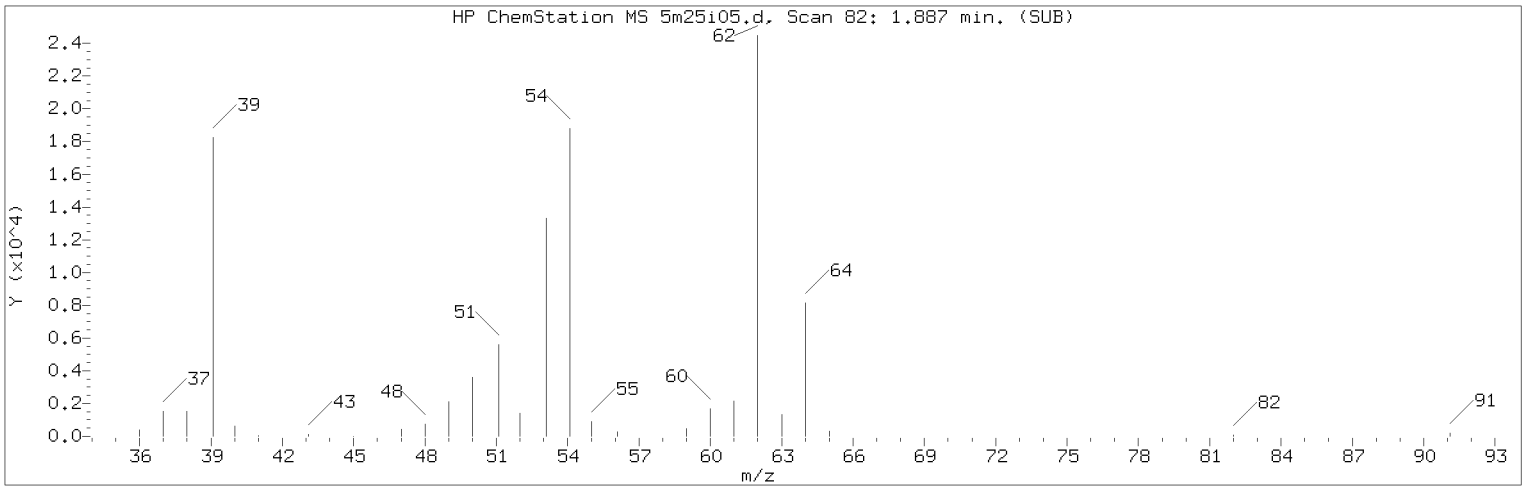
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

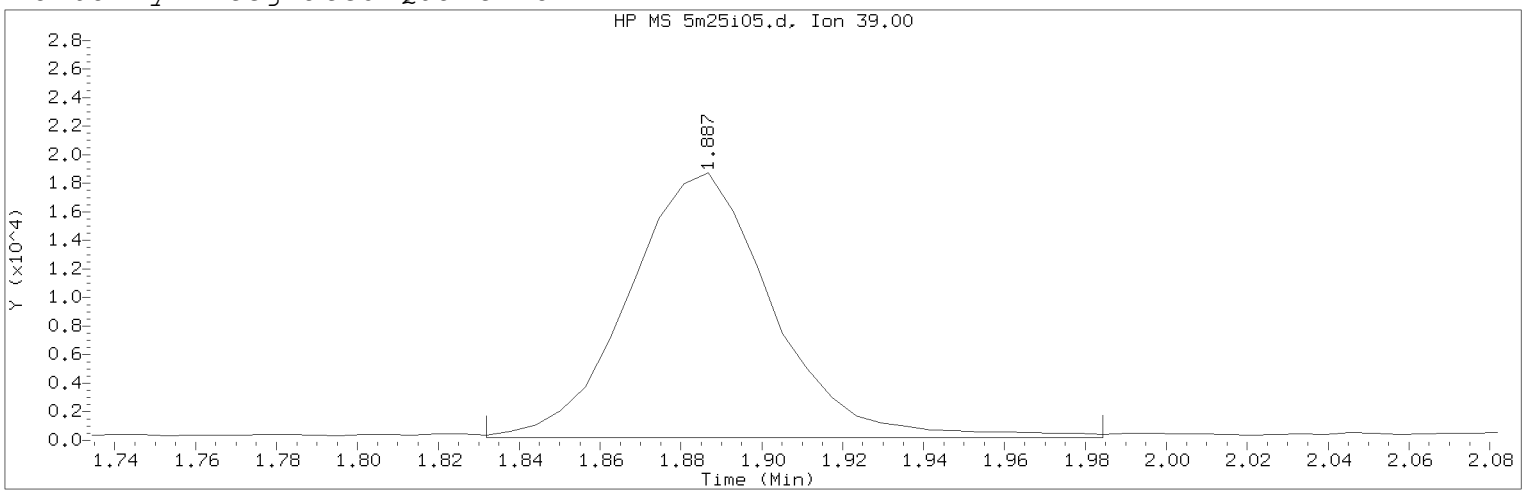
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	12.769	105	278625	10.309
136) Benzyl Chloride	(4)	12.842	91	188685	10.068
137) 1,3-Diethylbenzene	(4)	12.909	119	180608	10.340
138) 1,4-Diethylbenzene	(4)	12.982	119	192086	10.362
140) n-Butylbenzene	(4)	13.000	92	153121	10.592
139) 1,2-Dichlorobenzene	(4)	13.025	146	141240	10.384
141) 1,2-Diethylbenzene	(4)	13.055	119	148906	10.254
142) Diethylbenzene (total)	(4)		100	521600	30.956
143) 1,2-Dibromo-3-chloropropane	(4)	13.586	75	24404	10.269
145) 1,3,5-Trichlorobenzene	(4)	13.714	180	111098	10.161
147) 1,2,4-Trichlorobenzene	(4)	14.147	180	99642	10.067
148) Hexachlorobutadiene	(4)	14.238	225	45848	9.815
149) Naphthalene	(4)	14.336	128	353097	10.514
150) 1,2,3-Trichlorobenzene	(4)	14.482	180	95122	10.030
151) 2-Methylnaphthalene	(4)	15.092	142	194887	9.862

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

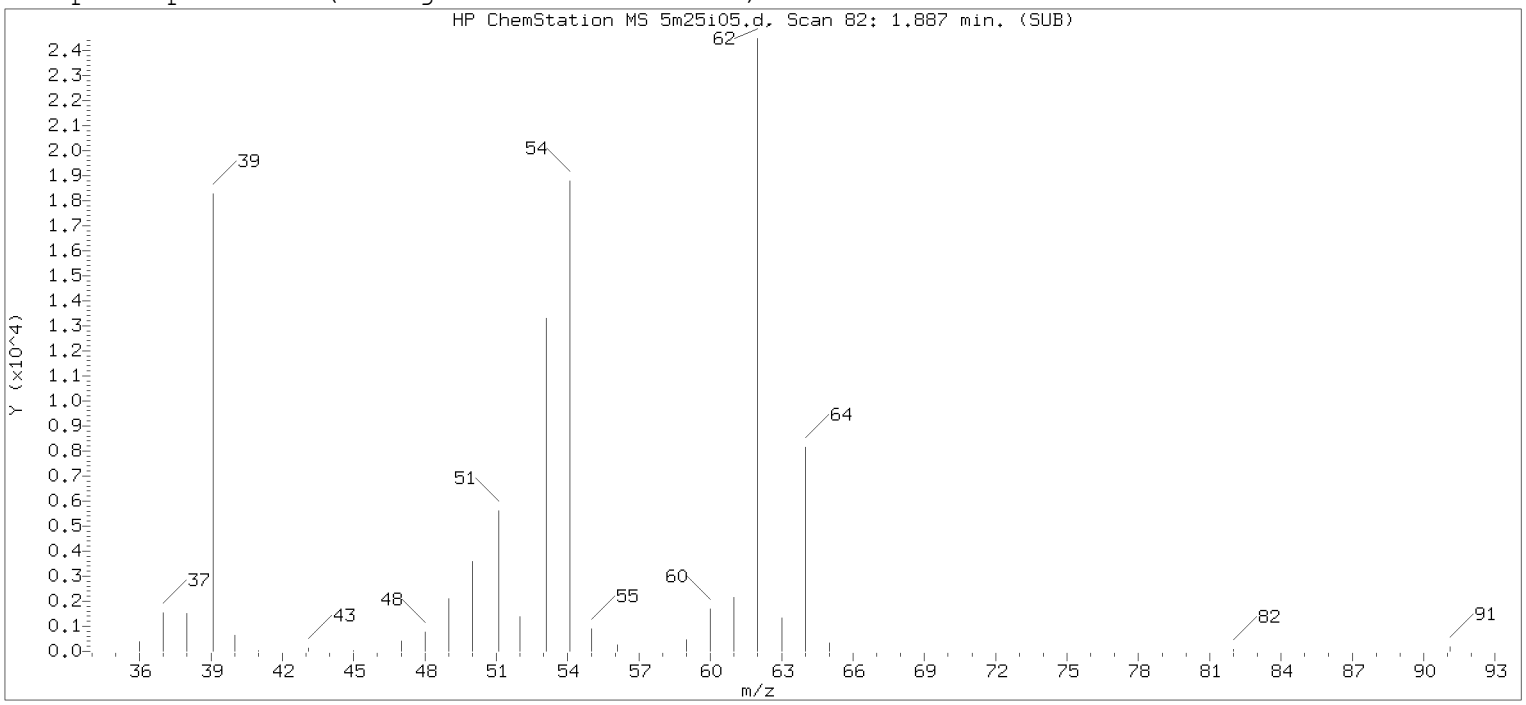
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 82
Retention Time (minutes): 1.887
Quant Ion : 39.00
Area (flag) : 46141M
On-Column Amount (ng) : 10.5515
Integration start scan : 72 Integration stop scan: 97
Y at integration start : 168 Y at integration end: 168

Reason for manual integration: improper integration

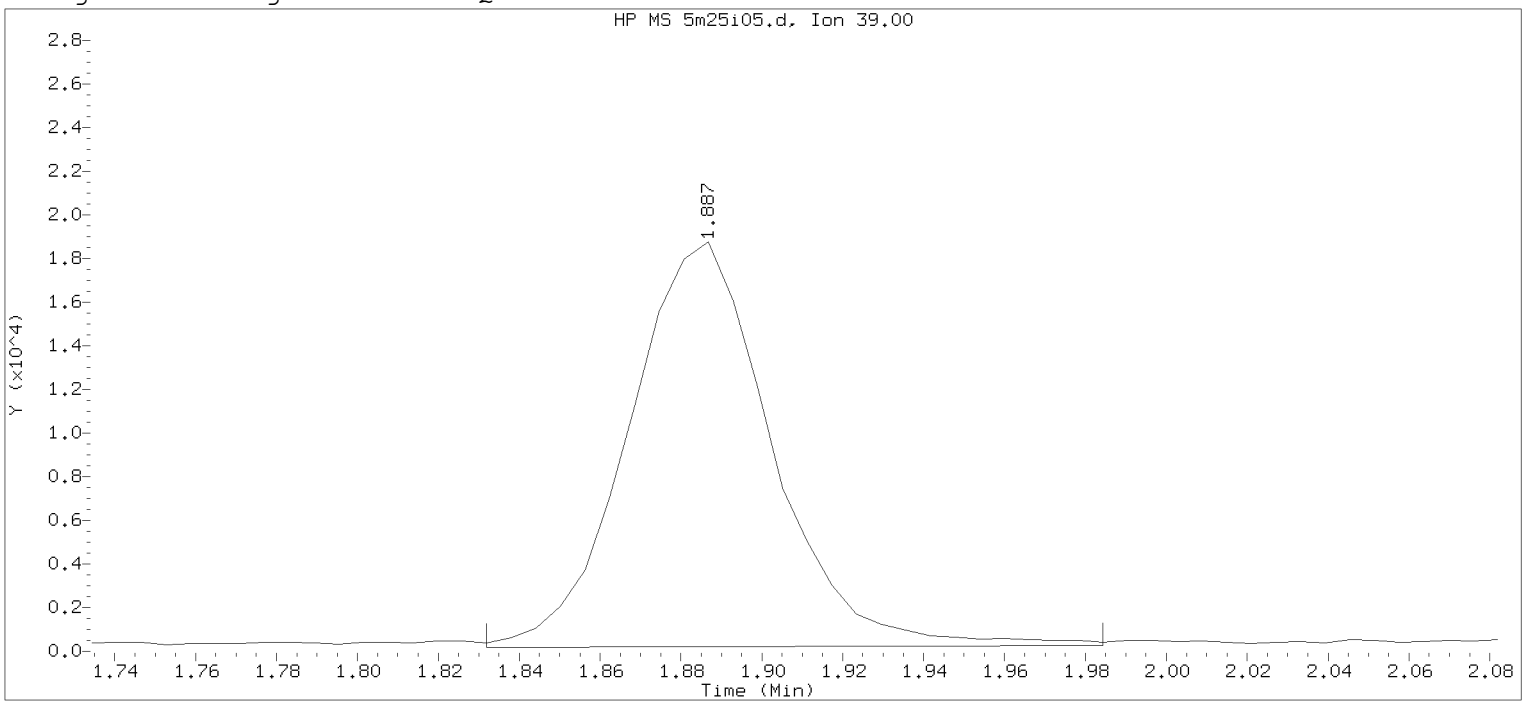
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

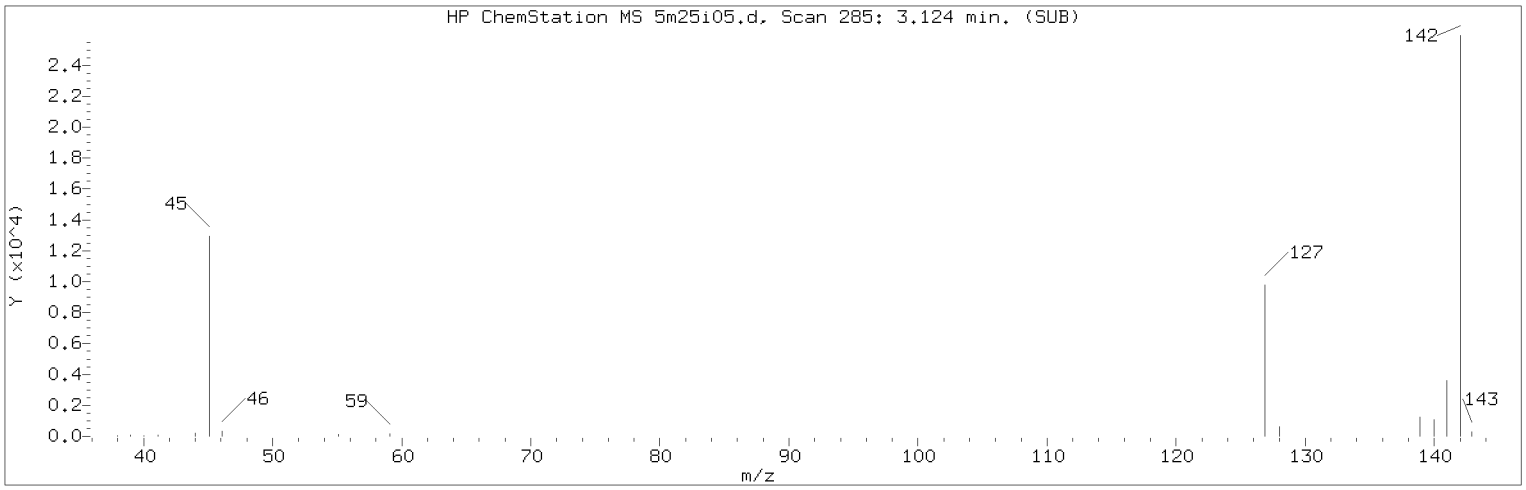
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:32
Date, time and analyst ID of latest file update: 25-Mar-2019 14:32 Unknown

Sample Name: VSTD010 Lab Sample ID: VSTD010

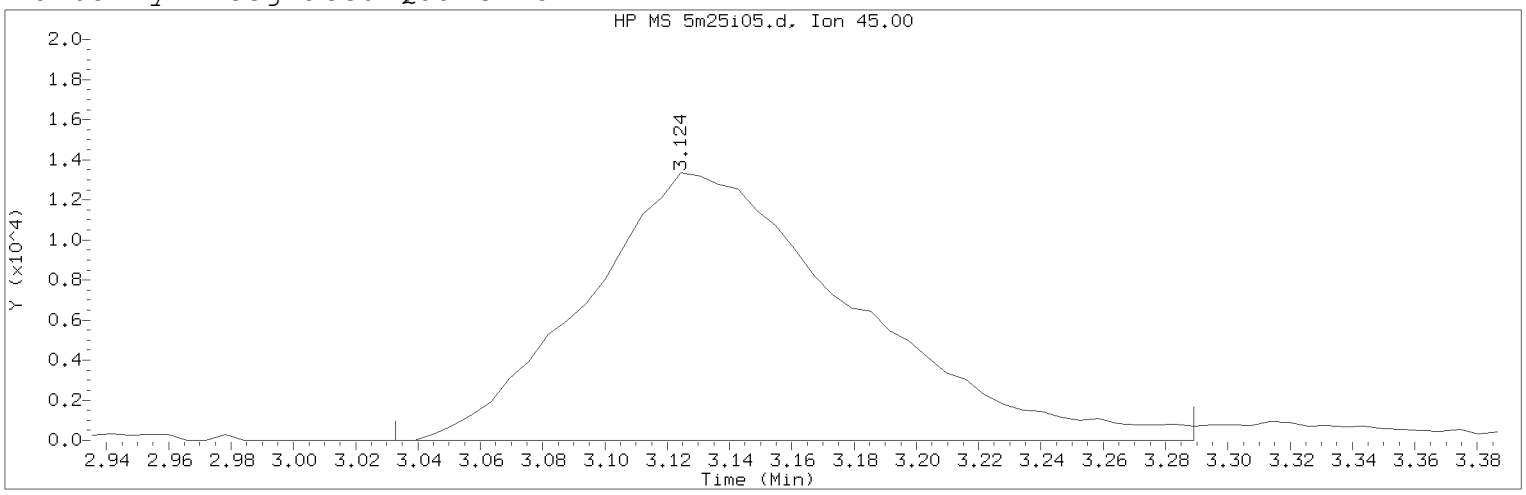
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 82
Retention Time (minutes): 1.887
Quant Ion : 39.00
Area : 45668
On-column Amount (ng) : 10.8442
Integration start scan : 72 Integration stop scan: 97
Y at integration start : 166 Y at integration end: 255

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kkelly100

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

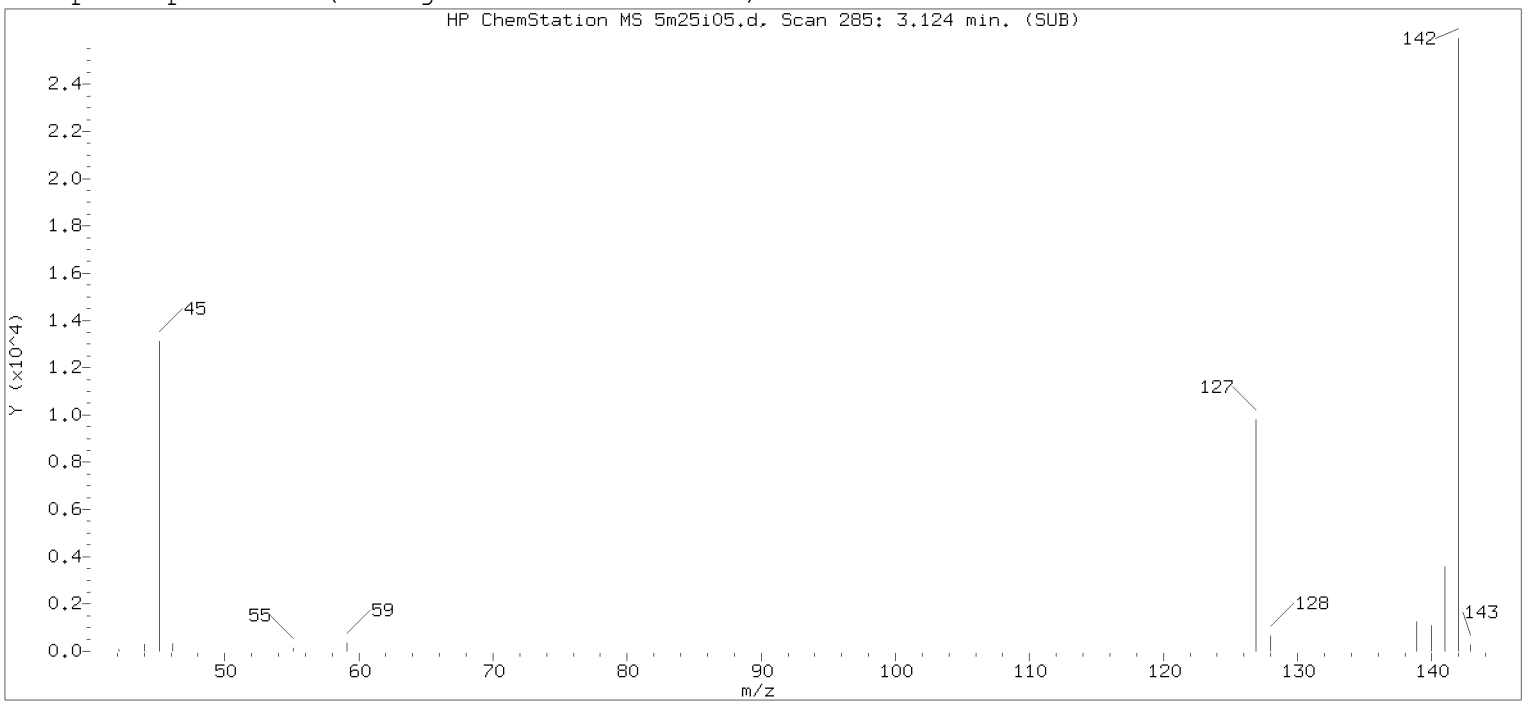
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 285
Retention Time (minutes): 3.124
Quant Ion : 45.00
Area (flag) : 79627M
On-Column Amount (ng) : 103.6763
Integration start scan : 269 Integration stop scan: 311
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

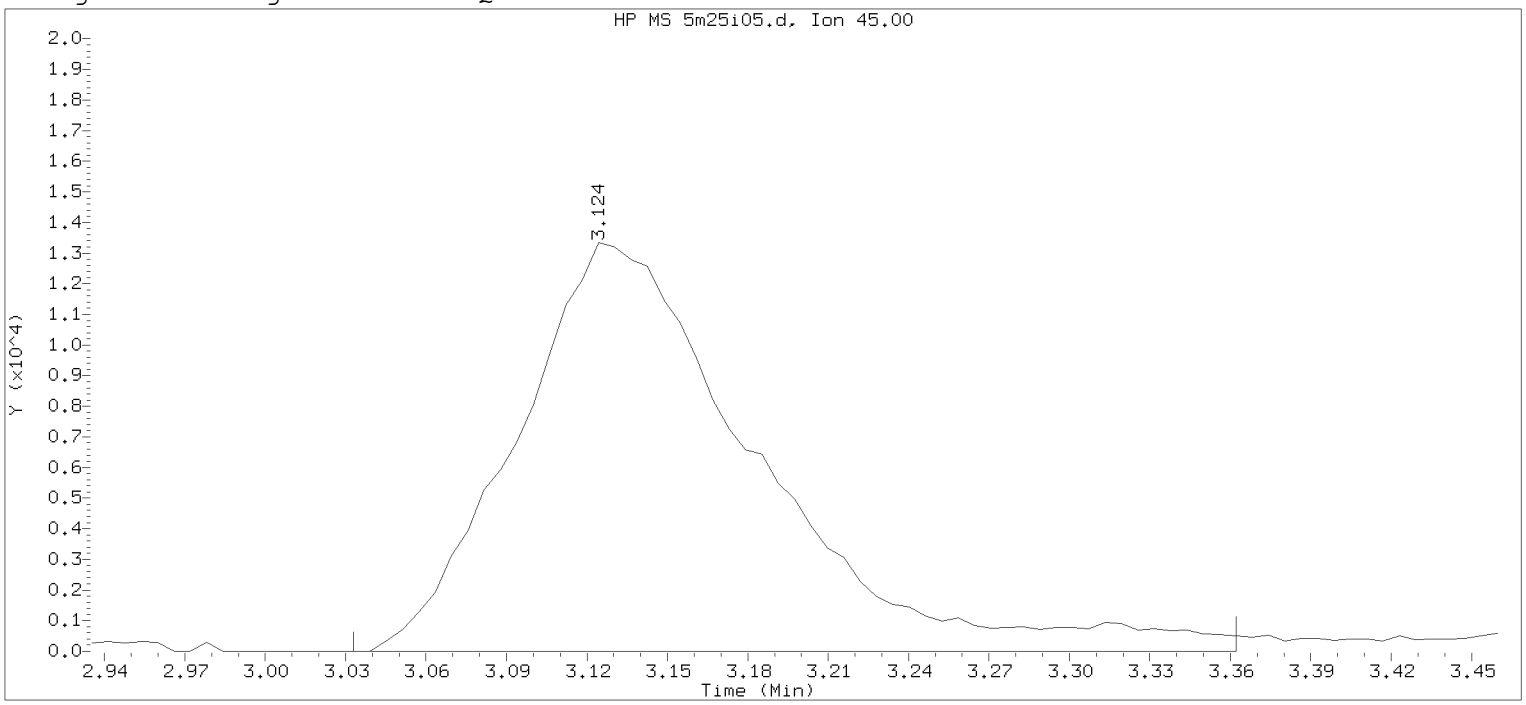
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

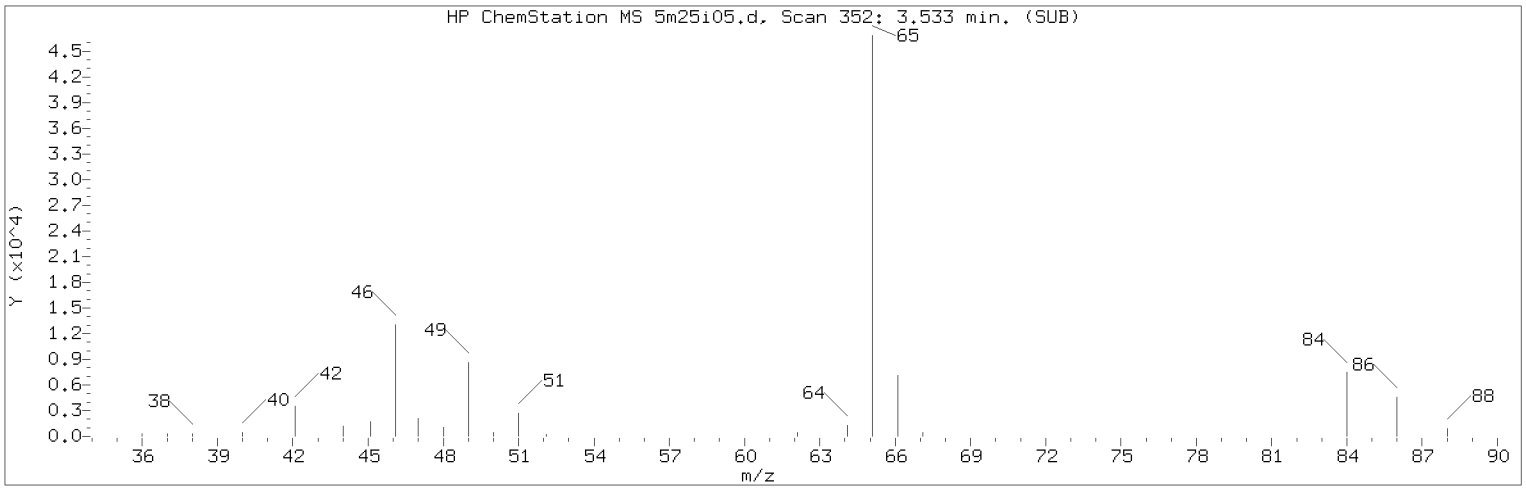
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:32
Date, time and analyst ID of latest file update: 25-Mar-2019 14:32 Unknown

Sample Name: VSTD010 Lab Sample ID: VSTD010

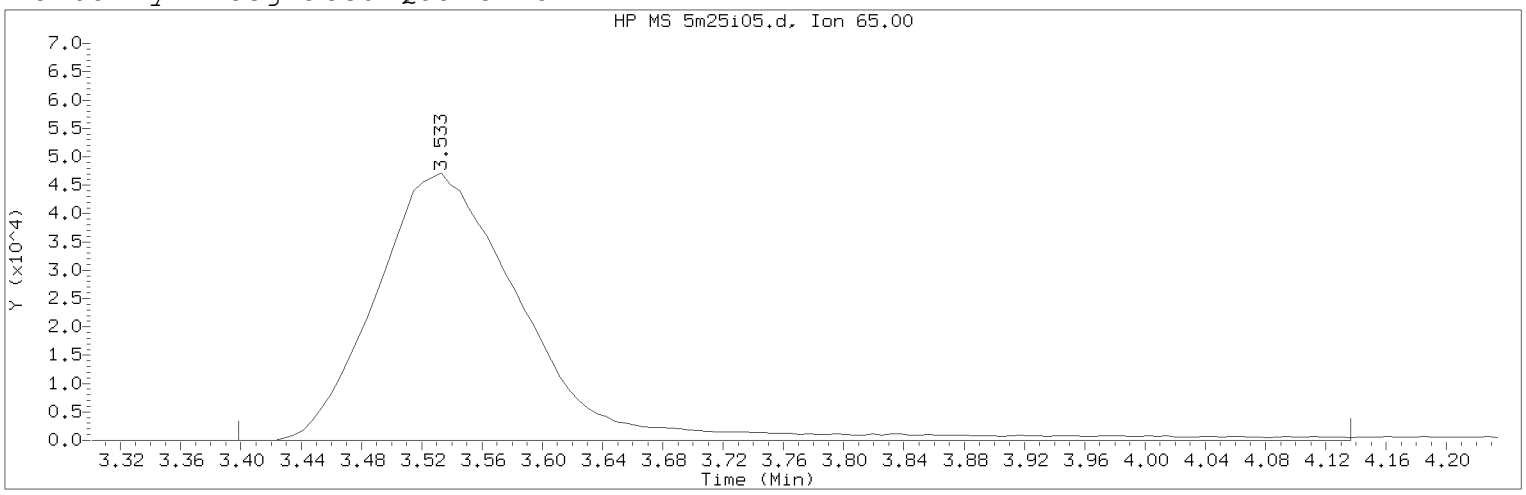
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 285
Retention Time (minutes): 3.124
Quant Ion : 45.00
Area : 82655
On-column Amount (ng) : 104.8368
Integration start scan : 269 Integration stop scan: 323
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user: KKELLY100

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

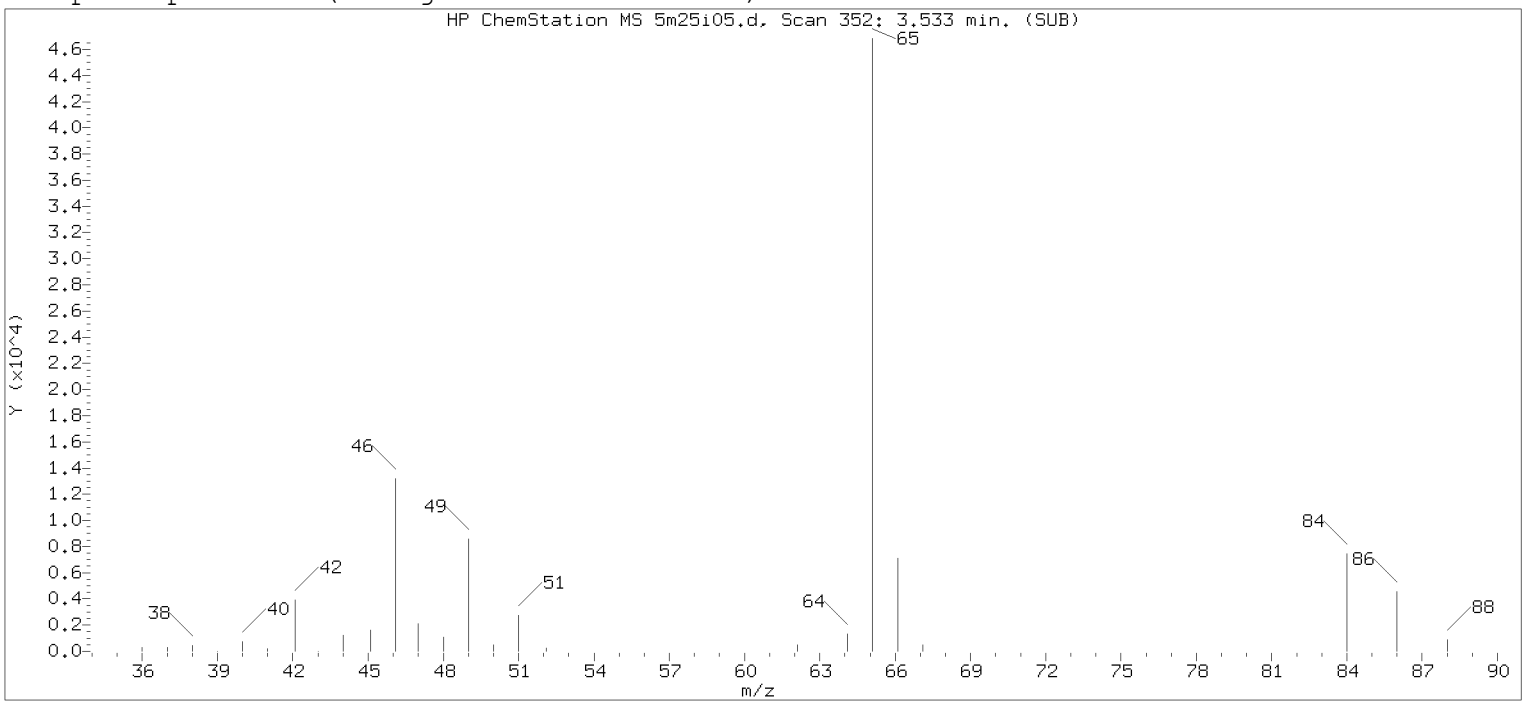
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 352
Retention Time (minutes): 3.533
Quant Ion : 65.00
Area (flag) : 327405M
On-Column Amount (ng) : 250.0000
Integration start scan : 329 Integration stop scan: 450
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

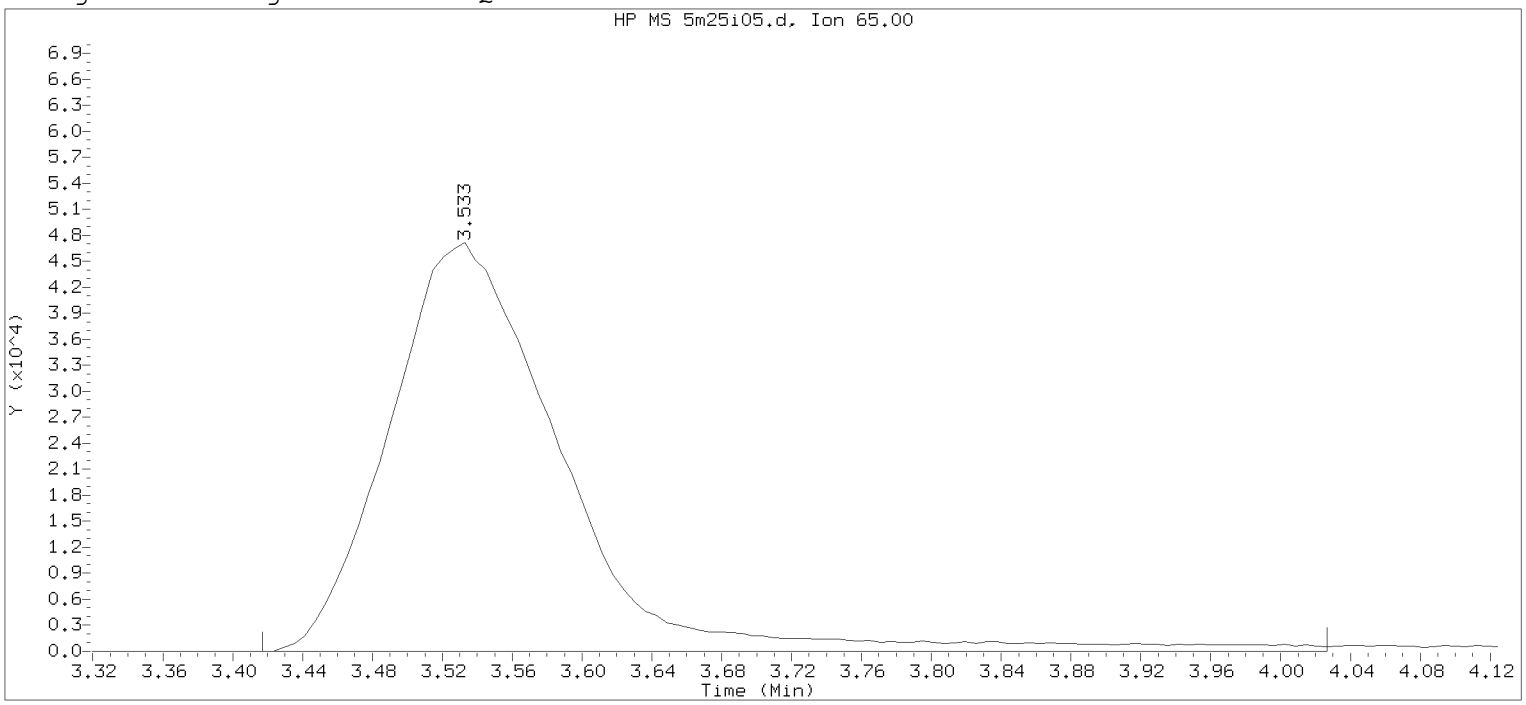
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

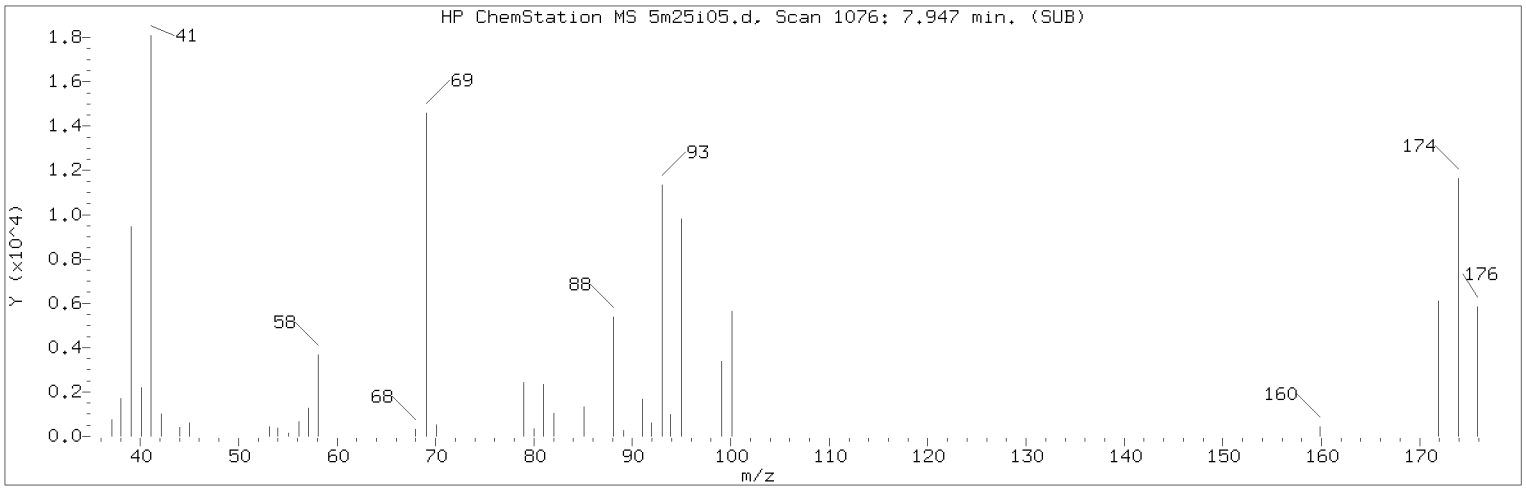
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:32
Date, time and analyst ID of latest file update: 25-Mar-2019 14:32 Unknown

Sample Name: VSTD010 Lab Sample ID: VSTD010

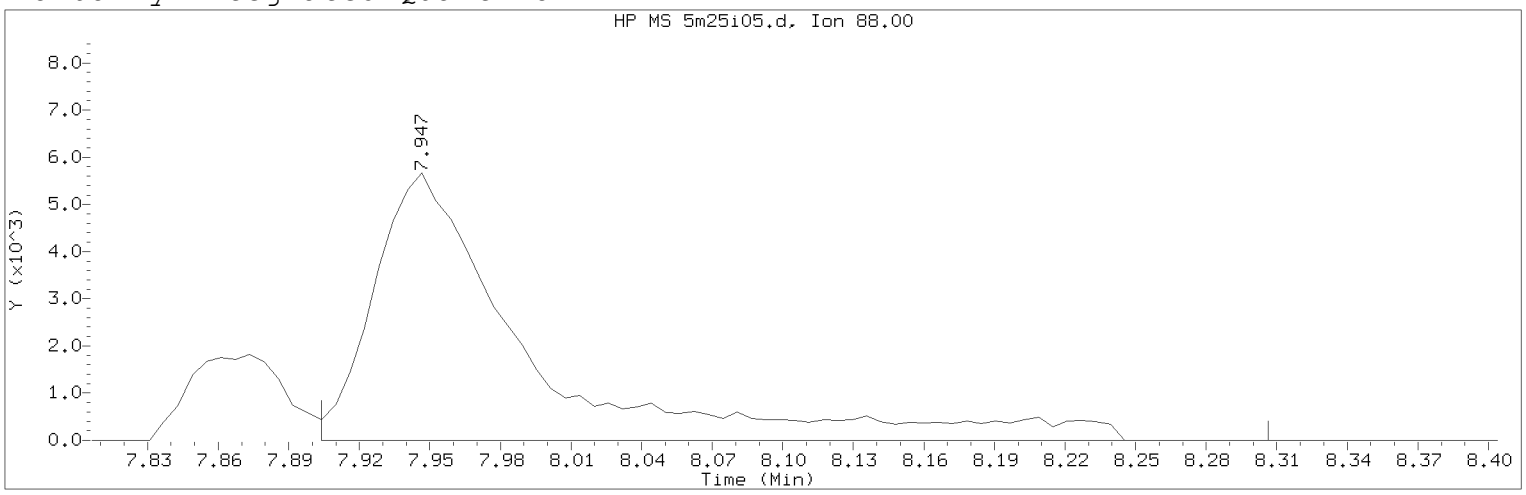
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 352
Retention Time (minutes): 3.533
Quant Ion : 65.00
Area : 323431
On-column Amount (ng) : 250.0000
Integration start scan : 332 Integration stop scan: 432
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user: KEVIN KELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

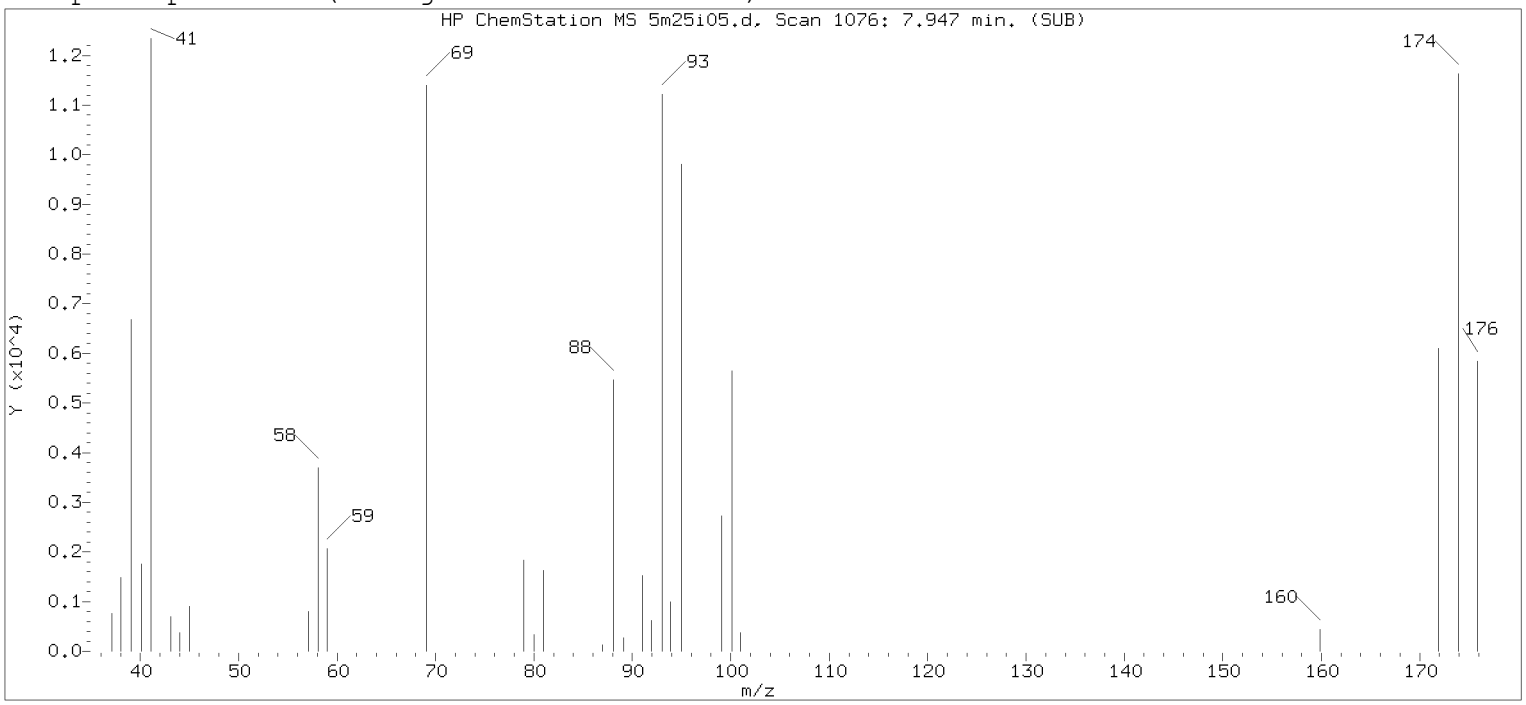
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1076
Retention Time (minutes): 7.947
Quant Ion : 88.00
Area (flag) : 25954M
On-Column Amount (ng) : 270.5285
Integration start scan : 1068 Integration stop scan: 1134
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

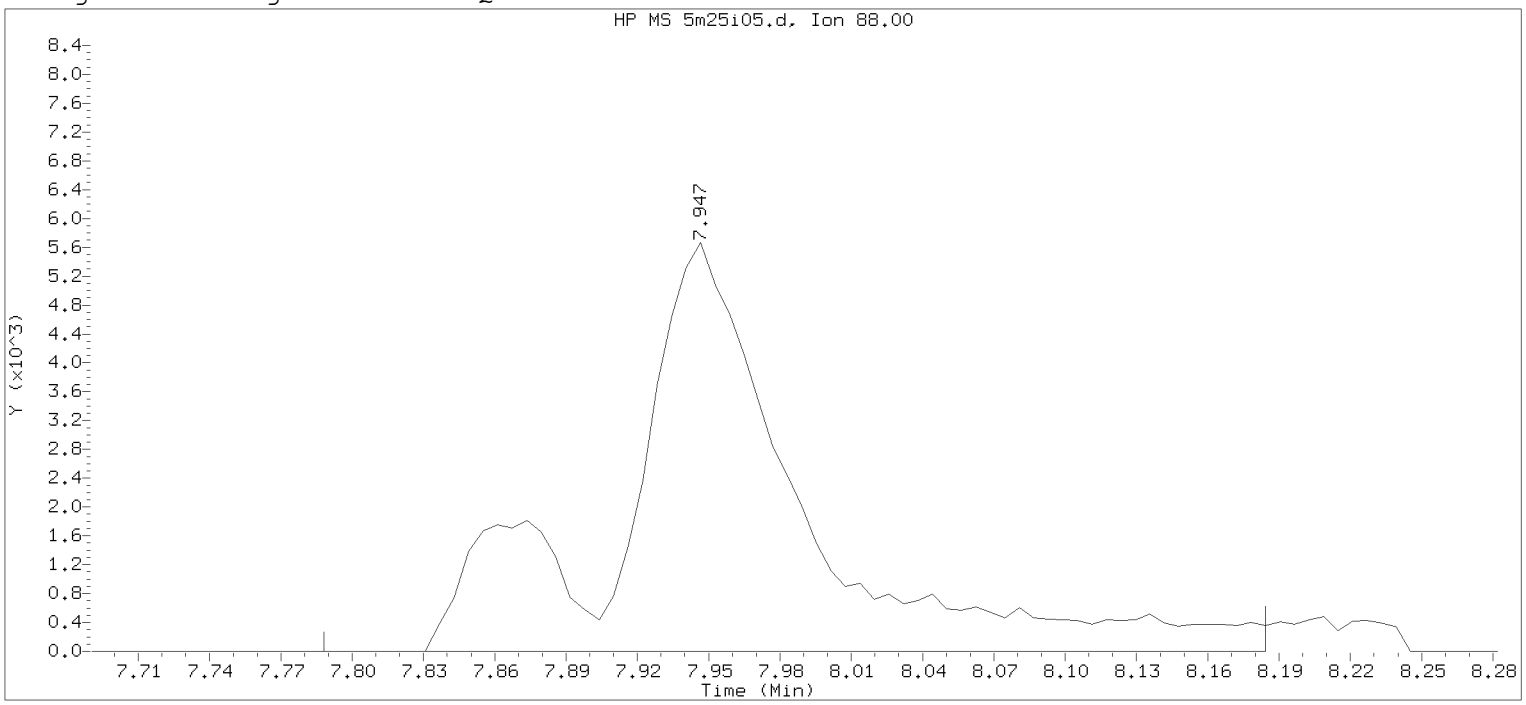
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

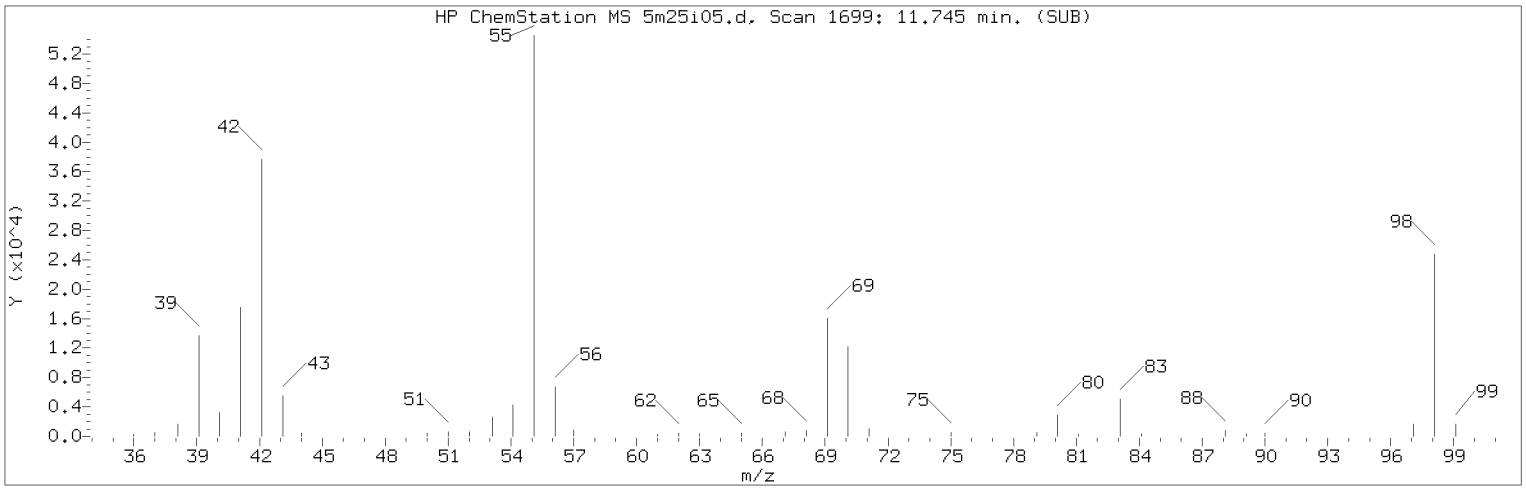
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:32
Date, time and analyst ID of latest file update: 25-Mar-2019 14:32 Unknown

Sample Name: VSTD010 Lab Sample ID: VSTD010

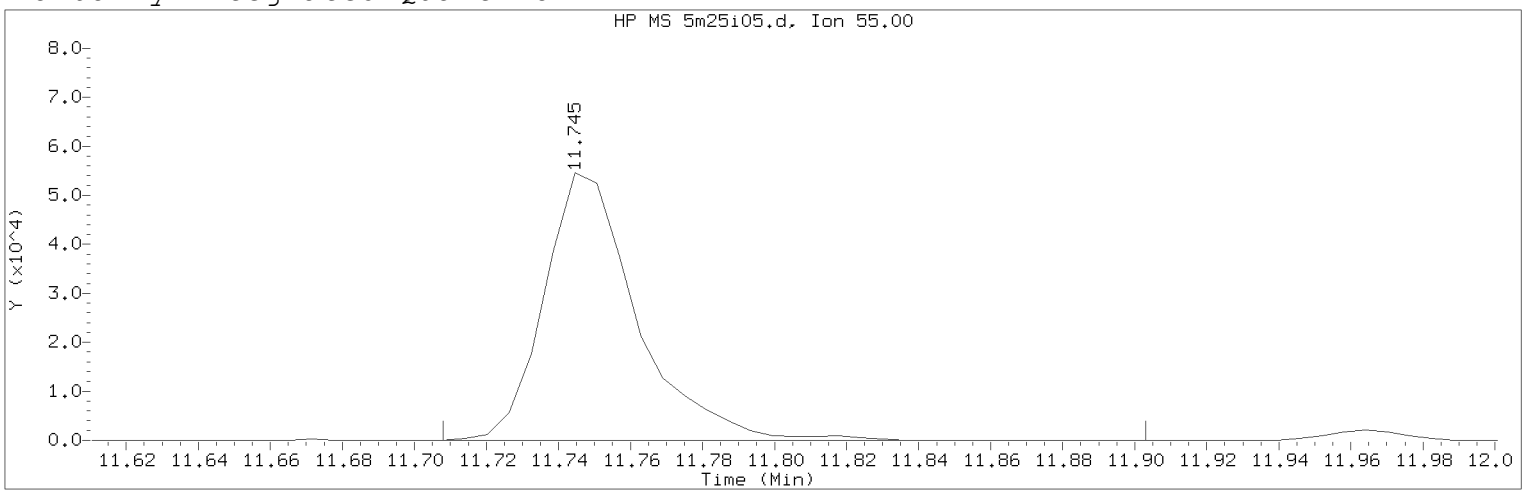
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1076
Retention Time (minutes): 7.947
Quant Ion : 88.00
Area : 29623
On-column Amount (ng) : 239.3666
Integration start scan : 1049 Integration stop scan: 1114
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10032

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

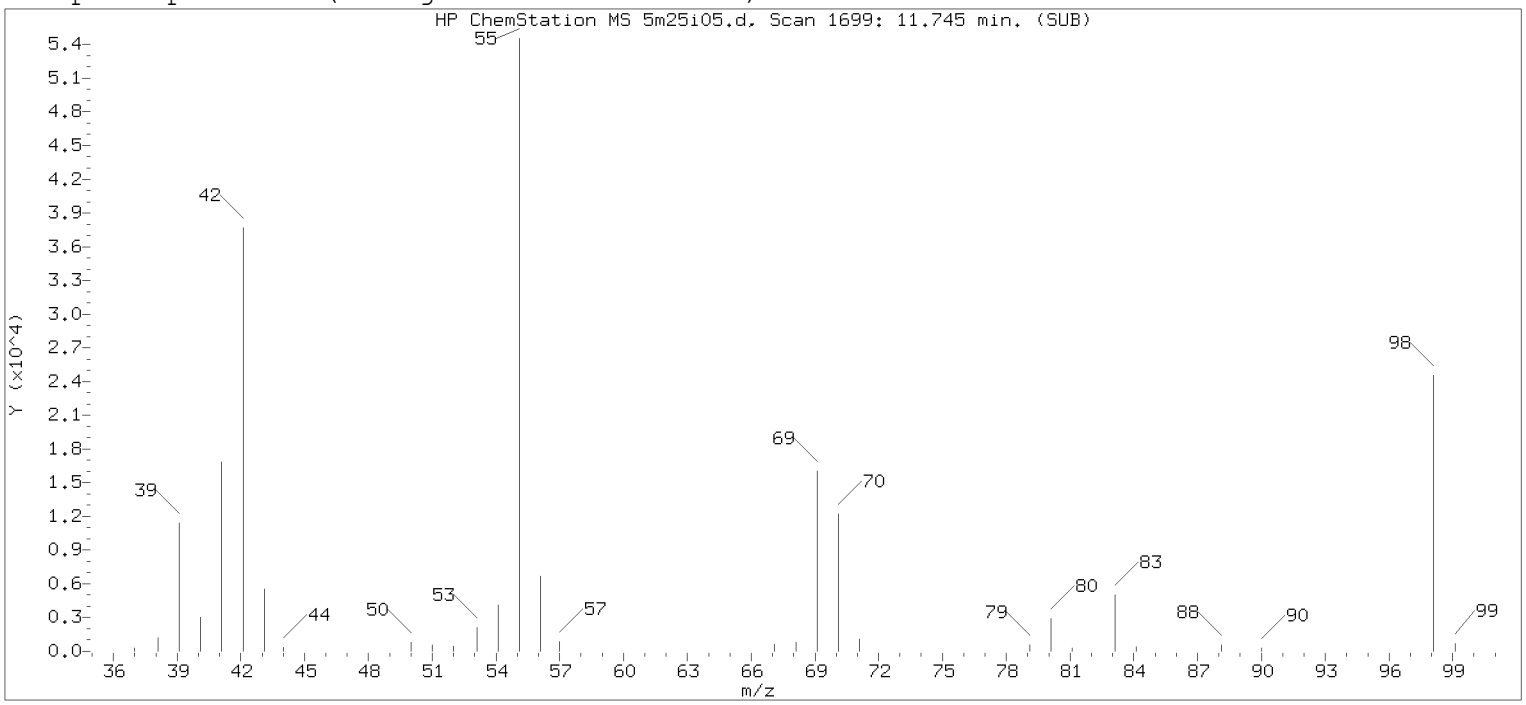
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1699
Retention Time (minutes): 11.745
Quant Ion : 55.00
Area (flag) : 97782M
On-Column Amount (ng) : 243.5987
Integration start scan : 1692 Integration stop scan: 1724
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

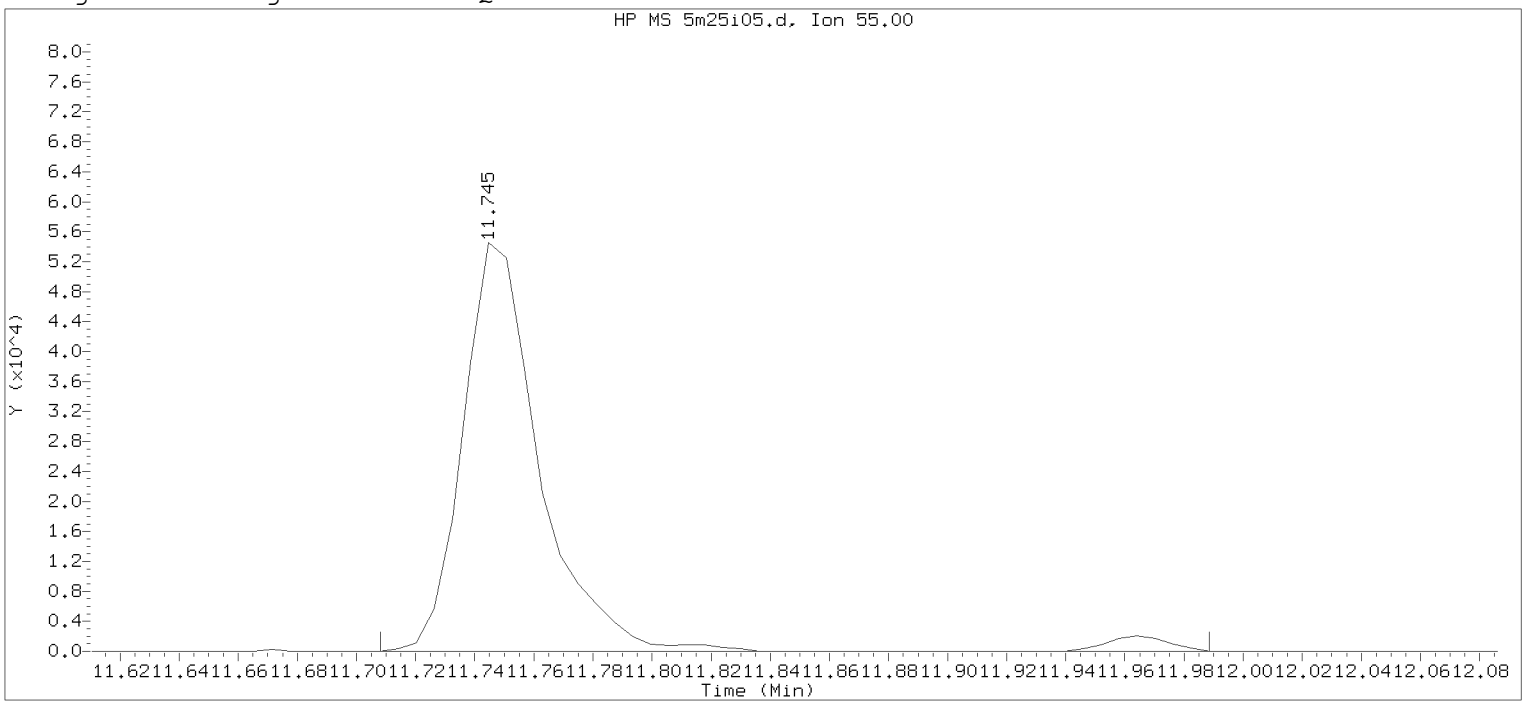
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

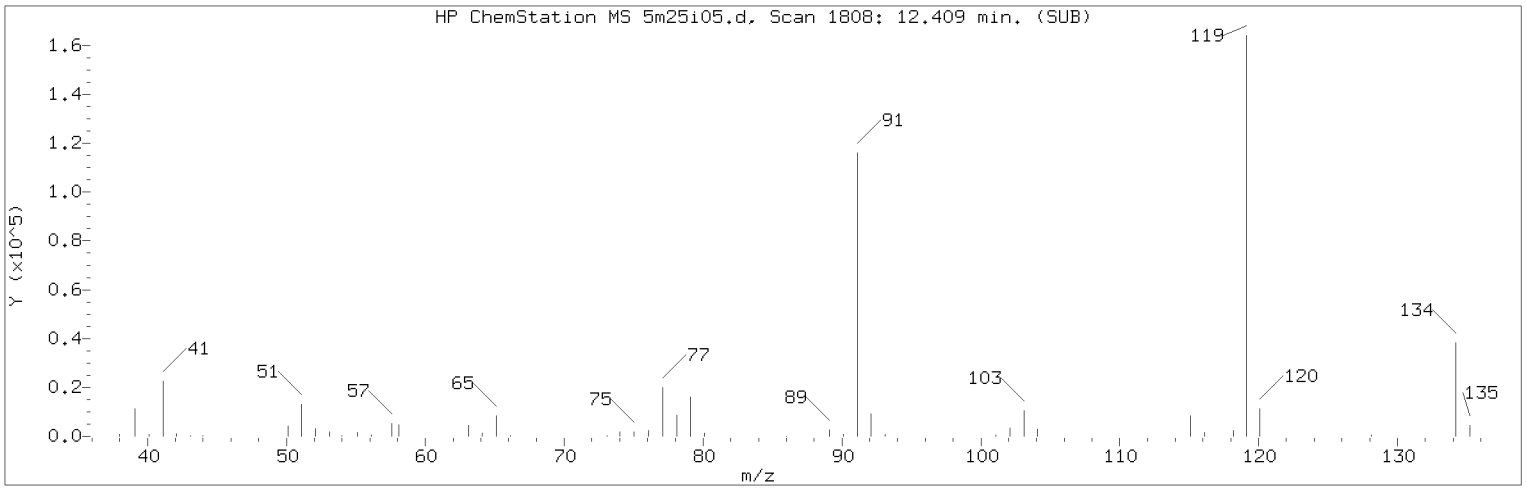
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:32
Date, time and analyst ID of latest file update: 25-Mar-2019 14:32 Unknown

Sample Name: VSTD010 Lab Sample ID: VSTD010

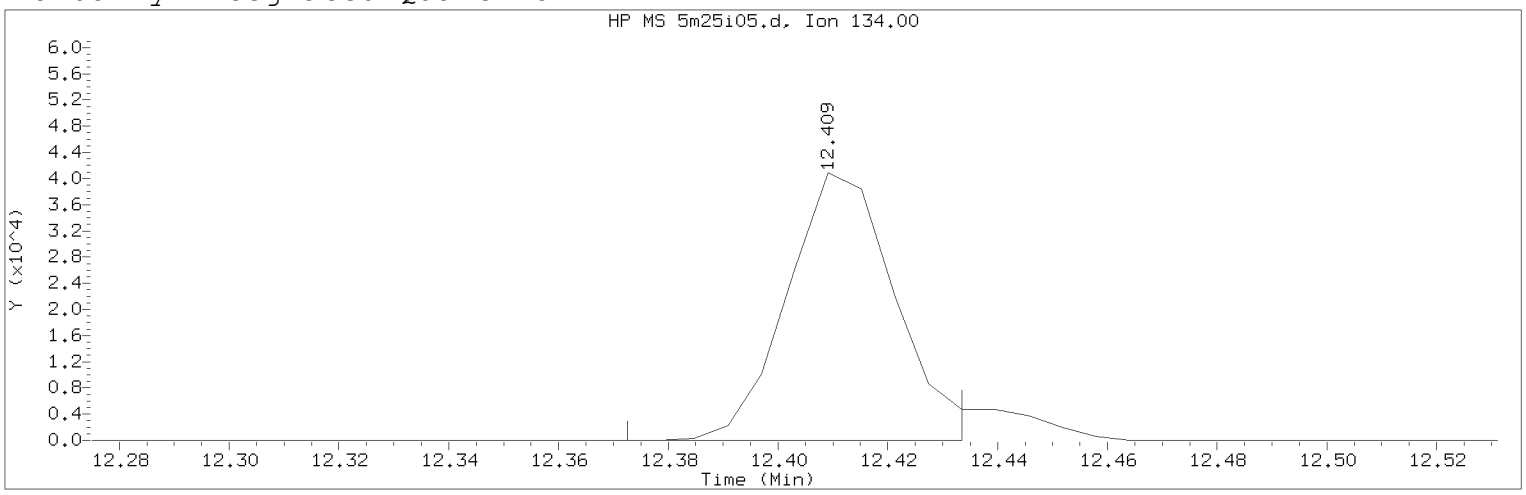
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1699
Retention Time (minutes): 11.745
Quant Ion : 55.00
Area : 100707
On-column Amount (ng) : 247.1018
Integration start scan : 1692 Integration stop scan: 1738
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user: Kevin Kelly

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

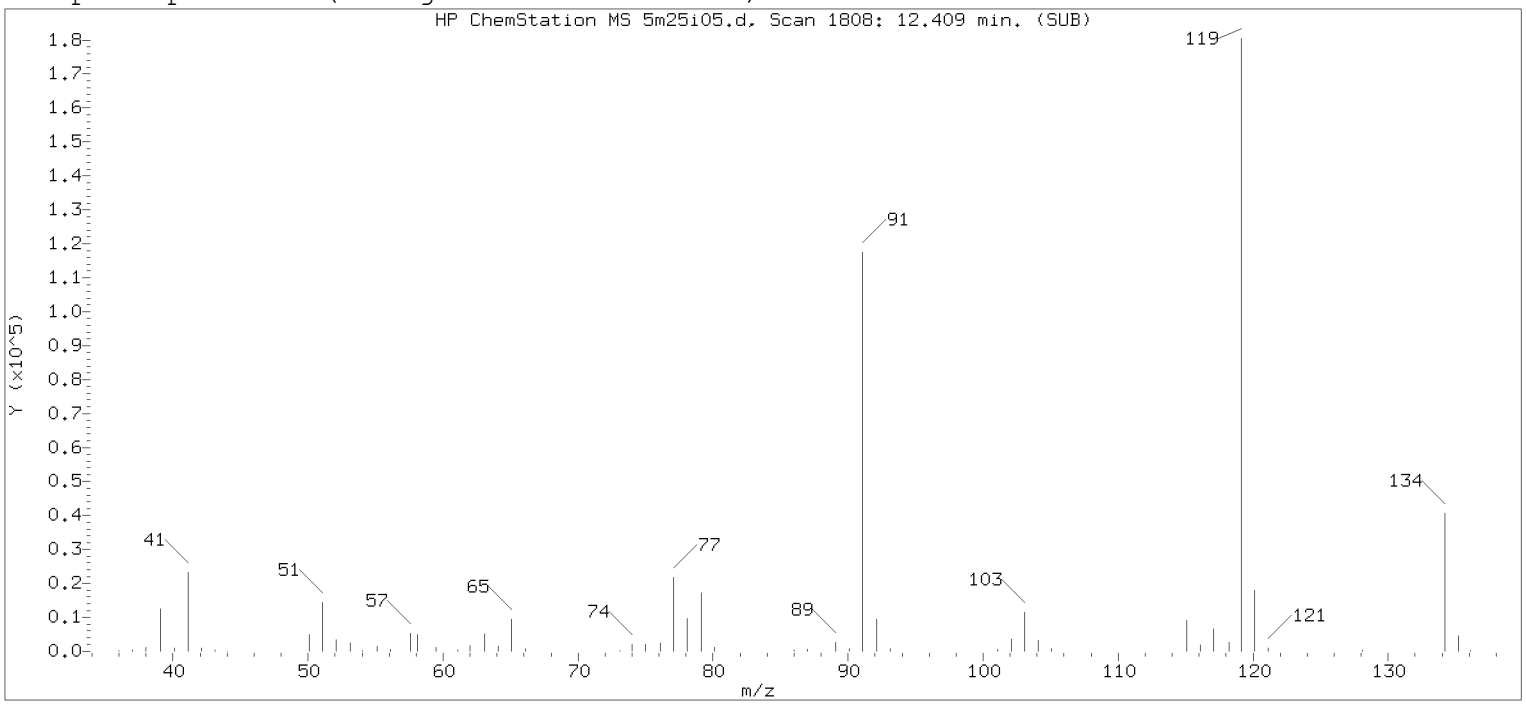
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1808
Retention Time (minutes): 12.409
Quant Ion : 134.00
Area (flag) : 56051M
On-Column Amount (ng) : 10.3959
Integration start scan : 1801 Integration stop scan: 1811
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

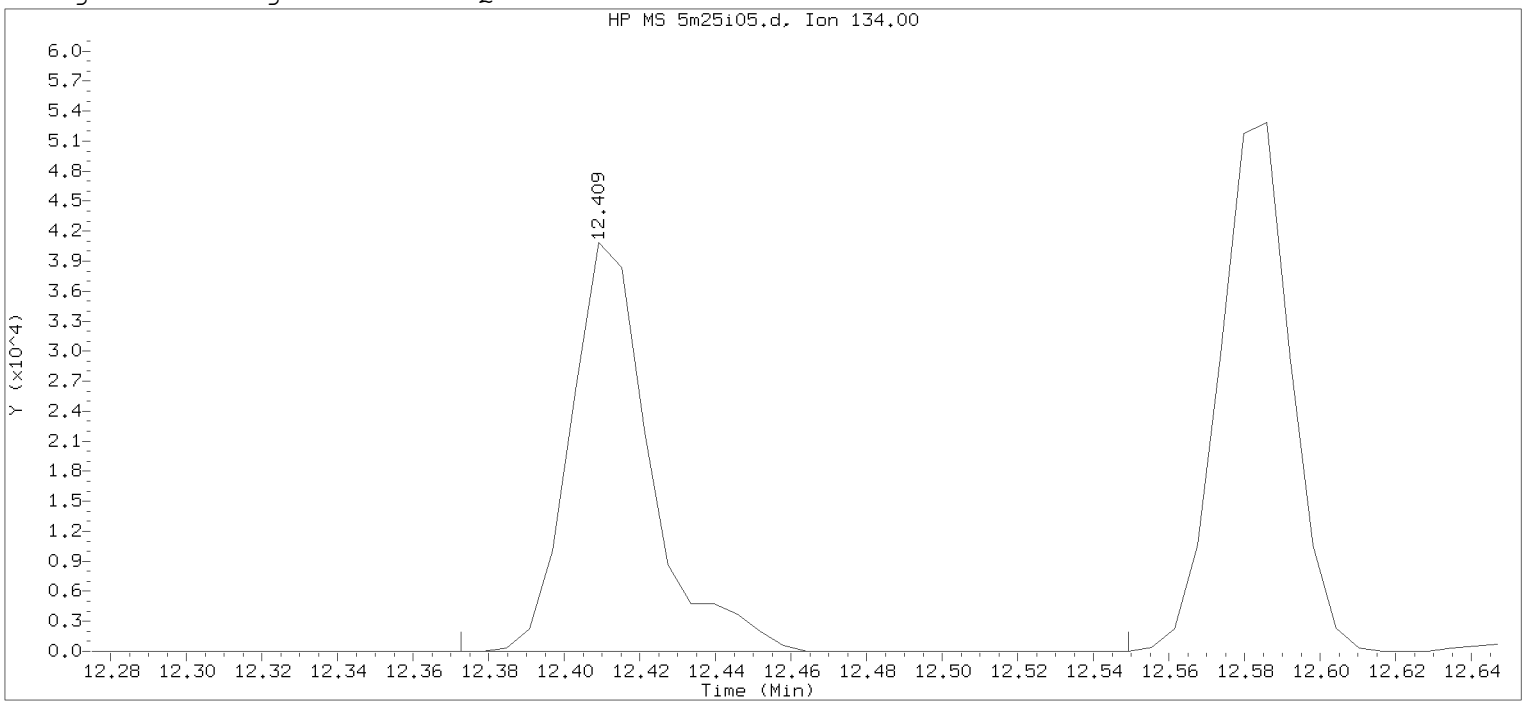
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



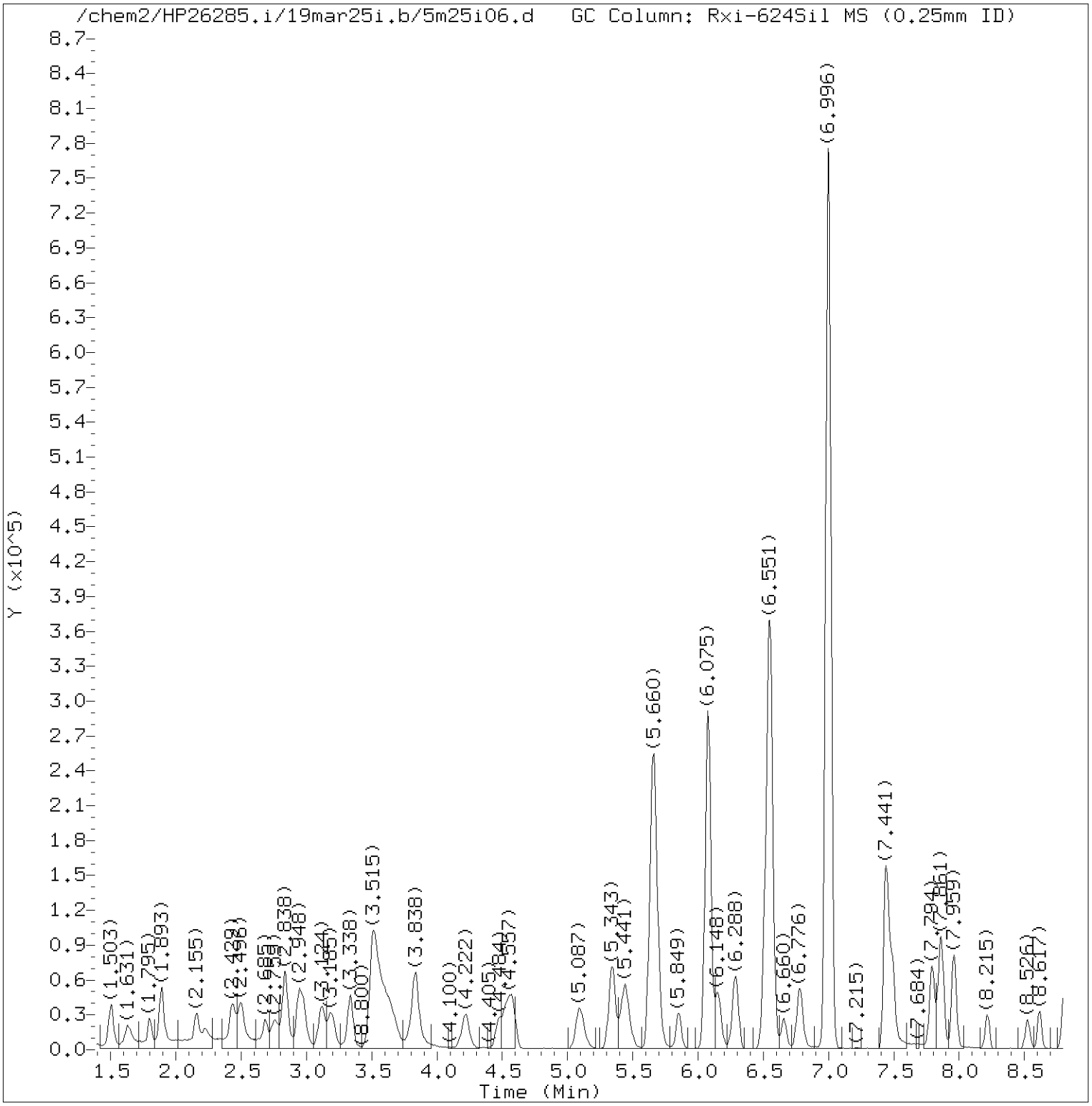
Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:32
Date, time and analyst ID of latest file update: 25-Mar-2019 14:32 Unknown

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1808
Retention Time (minutes): 12.409
Quant Ion : 134.00
Area : 60082
On-column Amount (ng) : 10.1949
Integration start scan : 1801 Integration stop scan: 1830
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user: KKELLY



Total Ion Chromatogram (TIC)

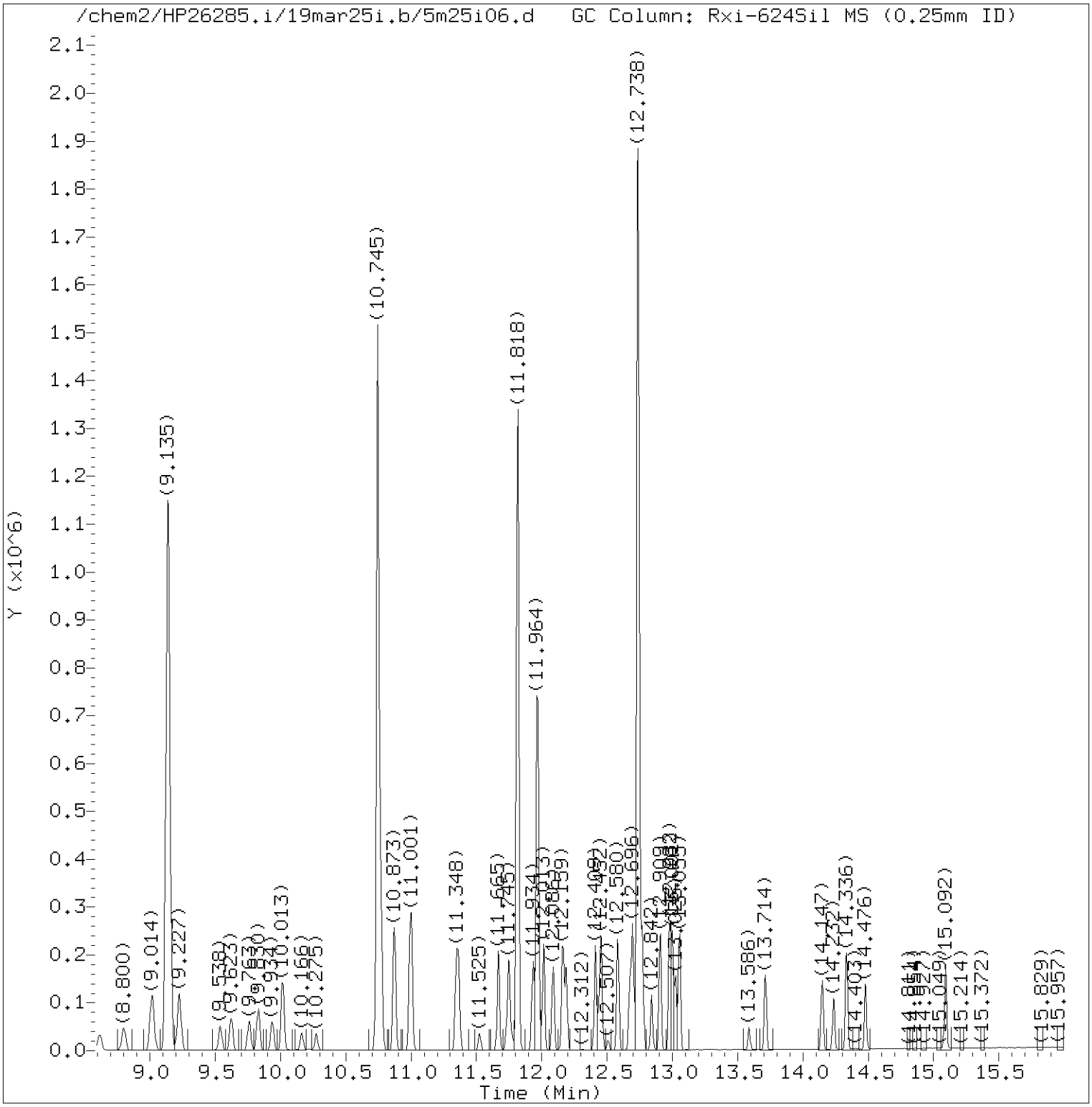
Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.625	85	36739	4.297
4) Chloromethane	(2)	1.802	50	26477	4.261
5) 1,3-Butadiene	(2)	1.887	39	20065M	4.647
6) Vinyl Chloride	(2)	1.893	62	26684	4.389
8) Bromomethane	(2)	2.155	94	20875	4.261
9) Chloroethane	(2)	2.222	64	12826	4.401
10) Dichlorofluoromethane	(2)	2.436	67	34391	4.339
12) Trichlorofluoromethane	(2)	2.472	101	37728	4.464
11) n-Pentane	(2)	2.503	43	22069	4.140
14) Ethyl ether	(2)	2.685	59	16779	3.834
15) Freon 123a	(2)	2.759	67	29146	4.437
16) Acrolein	(1)	2.838	56	97152	41.592
17) 1,1-Dichloroethene	(2)	2.942	96	20884	4.255
17) 1,1-Dichloroethene	(2)	2.942	63	10600	4.390
18) Acetone	(1)	2.978	58	8439	7.901
19) Freon 113	(2)	2.978	101	21134	4.232
22) Methyl Iodide	(2)	3.112	142	41852	4.083
21) 2-Propanol	(1)	3.124	45	64690M	83.341
23) Carbon Disulfide	(2)	3.191	76	64338	3.948
27) Methyl Acetate	(2)	3.326	43	29978	3.943
25) Allyl Chloride	(2)	3.338	41	37004	4.196
28) Methylene Chloride	(2)	3.502	84	22834	4.096
29)*t-Butyl alcohol-d10	(1)	3.527	65	330891M	250.000
30) t-Butyl alcohol	(1)	3.630	59	129209	84.408
31) Acrylonitrile	(2)	3.801	53	16238	4.041
33) Methyl Tertiary Butyl Ether	(2)	3.832	73	65704	4.190
32) trans-1,2-Dichloroethene	(2)	3.838	96	22696	4.131
34) n-Hexane	(2)	4.222	57	30842	4.058
36) 1,1-Dichloroethane	(2)	4.466	63	39340	4.061
38) di-Isopropyl ether	(2)	4.533	45	73520	4.164
39) 2-Chloro-1,3-butadiene	(2)	4.575	53	36040	4.205
40) Ethyl t-butyl ether	(2)	5.087	59	68531	4.192
42) cis-1,2-Dichloroethene	(2)	5.337	96	25524	4.106
44) 2-Butanone	(2)	5.337	43	49756	8.199
45) 2,2-Dichloropropane	(2)	5.350	77	31970	4.127
47) Propionitrile	(1)	5.441	54	135848	81.592
48) Methacrylonitrile	(2)	5.654	67	162944	41.210
49) Bromochloromethane	(2)	5.685	128	12555	4.036

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.709	71	12803	7.570
51) Chloroform	(2)	5.849	83	39149	4.076
53) 1,1,1-Trichloroethane	(2)	6.069	97	35462	4.195
52)$Dibromofluoromethane	(2)	6.075	113	252710	49.669
52)$Dibromofluoromethane	(2)	6.075	111	259244	49.641
54) Cyclohexane	(2)	6.148	56	42321	4.330
54) Cyclohexane	(2)	6.154	84	36558	4.390
54) Cyclohexane	(2)	6.160	69	13454	4.443
43) 1,2-Dichloroethene (Total)	(2)		96	48220	8.237
56) Carbon Tetrachloride	(2)	6.270	117	29187	3.990
55) 1,1-Dichloropropene	(2)	6.295	75	32870	4.230
58) Isobutyl Alcohol	(1)	6.520	41	103433	206.324
57)$1,2-Dichloroethane-d4	(2)	6.544	102	59639	50.097
57)$1,2-Dichloroethane-d4	(2)	6.551	65	280003	50.807
57)$1,2-Dichloroethane-d4	(2)	6.551	104	37936	50.005
60) Benzene	(2)	6.569	78	96926	4.106
61) 1,2-Dichloroethane	(2)	6.660	62	28650	4.107
61) 1,2-Dichloroethane	(2)	6.660	98	2768	4.536
65) t-Amyl methyl ether	(2)	6.782	73	67855	4.119
66)*Fluorobenzene	(2)	6.996	96	1063233	50.000
67) n-Heptane	(2)	7.008	43	36065	4.208
69) n-Butanol	(1)	7.441	56	169060	404.457
71) Trichloroethene	(2)	7.489	95	25061	4.094
73) Methylcyclohexane	(2)	7.788	83	43023	4.245
73) Methylcyclohexane	(2)	7.794	98	18301	4.197
74) 1,2-Dichloropropane	(2)	7.849	63	23892	4.084
76) 1,4-Dioxane	(1)	7.941	88	20189M	208.221
75) Dibromomethane	(2)	7.959	93	15187	4.104
77) Methyl Methacrylate	(2)	7.965	69	24748	4.052
79) Bromodichloromethane	(2)	8.215	83	26198	3.809
80) 2-Nitropropane	(2)	8.520	41	21379	7.573
81) 2-Chloroethyl Vinyl Ether	(2)	8.617	63	19019	3.895
82) cis-1,3-Dichloropropene	(2)	8.800	75	35330	3.904
83) 4-Methyl-2-pentanone	(2)	9.014	43	108145	8.701
84)$Toluene-d8	(3)	9.135	98	1026397	50.466
84)$Toluene-d8	(3)	9.135	100	671370	50.223
89) Toluene	(3)	9.227	92	63034	4.164
90) trans-1,3-Dichloropropene	(3)	9.544	75	31016	3.791

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	9.623	69	38269	3.902
93) 1,1,2-Trichloroethane	(3)	9.763	97	21760	4.018
94) Tetrachloroethene	(3)	9.830	166	28775	4.180
95) 1,3-Dichloropropane	(3)	9.940	76	36626	4.128
97) 2-Hexanone	(3)	10.013	43	99080	9.254
91) 1,3-Dichloropropene (total)	(3)		100	66346	7.696
98) Dibromochloromethane	(3)	10.166	129	19946	3.597
100) 1,2-Dibromoethane	(3)	10.275	107	24204	4.002
101)*Chlorobenzene-d5	(3)	10.745	117	805759	50.000
102) 1-Chlorohexane	(3)	10.769	91	37539	4.256
103) Chlorobenzene	(3)	10.775	112	68998	4.073
104) 1,1,1,2-Tetrachloroethane	(3)	10.867	131	21512	3.762
105) Ethylbenzene	(3)	10.873	91	121194	4.098
107) m+p-Xylene	(3)	11.001	106	95481	8.187
108) o-Xylene	(3)	11.348	106	46715	4.100
110) Styrene	(3)	11.367	104	74697	3.970
111) Bromoform	(3)	11.525	173	14739	3.367
112) Isopropylbenzene	(3)	11.665	105	123176	4.162
113) Cyclohexanone	(1)	11.751	55	82090	202.352
109) Xylene (Total)	(3)		106	142196	12.287
115)$4-Bromofluorobenzene	(3)	11.818	95	393555	49.730
115)$4-Bromofluorobenzene	(3)	11.818	174	343461	49.819
116) Bromobenzene	(4)	11.934	156	29526	4.006
117) 1,1,2,2-Tetrachloroethane	(4)	11.940	83	38156	4.089
119) trans-1,4-Dichloro-2-butene	(4)	11.964	53	120804	41.107
118) 1,2,3-Trichloropropane	(4)	11.982	110	11861	4.219
120) n-Propylbenzene	(4)	12.013	91	146443	4.222
121) 2-Chlorotoluene	(4)	12.086	126	28628	4.004
123) 1,3,5-Trimethylbenzene	(4)	12.159	105	102855	4.109
122) 4-Chlorotoluene	(4)	12.190	126	29478	4.016
125) tert-Butylbenzene	(4)	12.409	134	21726M	4.108
126) Pentachloroethane	(4)	12.440	167	15604	3.613
127) 1,2,4-Trimethylbenzene	(4)	12.458	105	104757	4.081
128) sec-Butylbenzene	(4)	12.580	105	137198	4.231
130) 1,3-Dichlorobenzene	(4)	12.677	146	56115	3.976
131) p-Isopropyltoluene	(4)	12.696	119	115679	4.115
132)*1,4-Dichlorobenzene-d4	(4)	12.738	152	427216	50.000
134) 1,4-Dichlorobenzene	(4)	12.757	146	58085	4.061

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

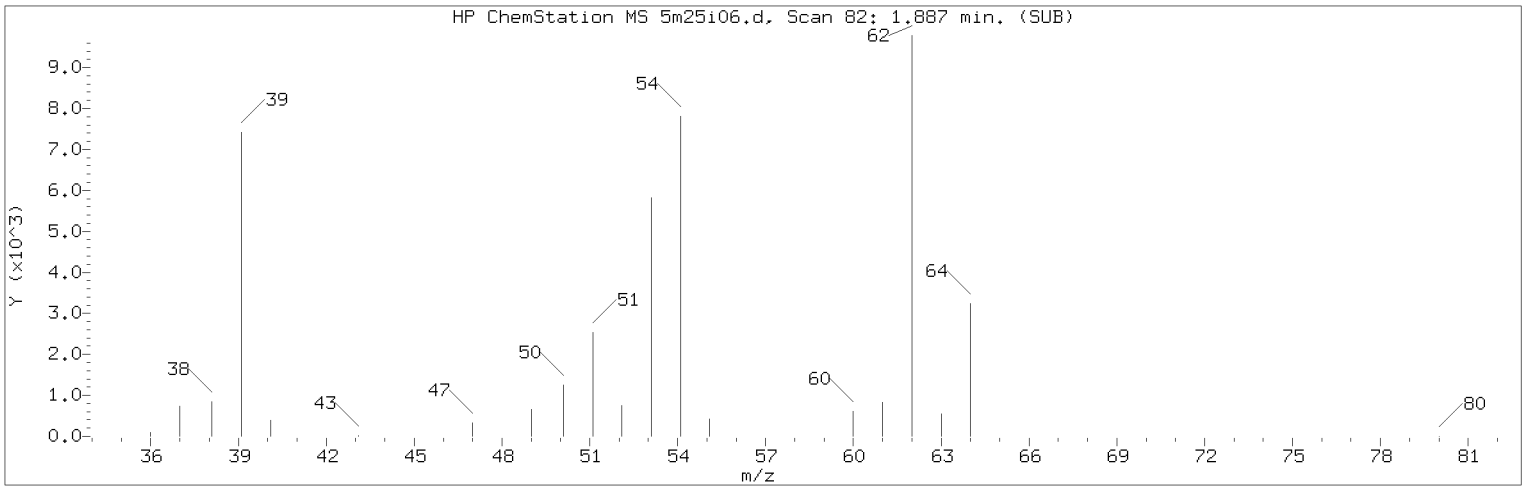
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

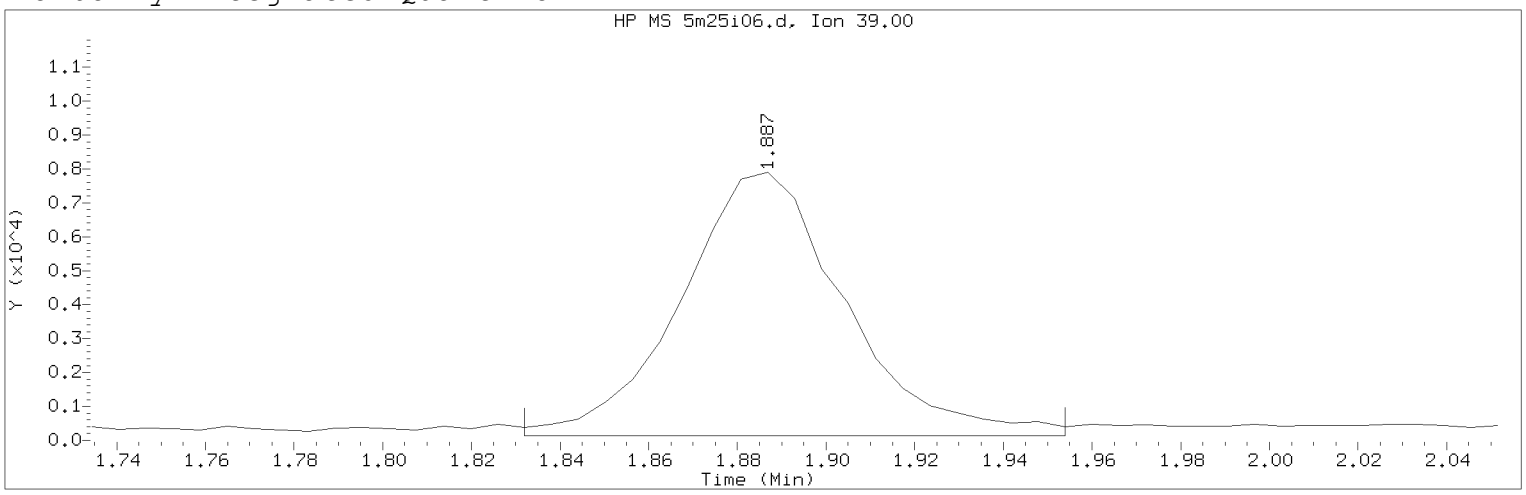
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	12.769	105	108478	4.091
136) Benzyl Chloride	(4)	12.842	91	65753	3.577
137) 1,3-Diethylbenzene	(4)	12.909	119	68425	3.993
138) 1,4-Diethylbenzene	(4)	12.982	119	72578	3.991
140) n-Butylbenzene	(4)	13.001	92	58391	4.117
139) 1,2-Dichlorobenzene	(4)	13.025	146	53630	4.019
141) 1,2-Diethylbenzene	(4)	13.055	119	57656	4.047
142) Diethylbenzene (total)	(4)		100	198659	12.032
143) 1,2-Dibromo-3-chloropropane	(4)	13.586	75	8884	3.811
145) 1,3,5-Trichlorobenzene	(4)	13.714	180	41838	3.901
147) 1,2,4-Trichlorobenzene	(4)	14.147	180	37321	3.844
148) Hexachlorobutadiene	(4)	14.238	225	17618	3.845
149) Naphthalene	(4)	14.336	128	131544	3.993
150) 1,2,3-Trichlorobenzene	(4)	14.482	180	35820	3.850
151) 2-Methylnaphthalene	(4)	15.092	142	70796	3.652

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

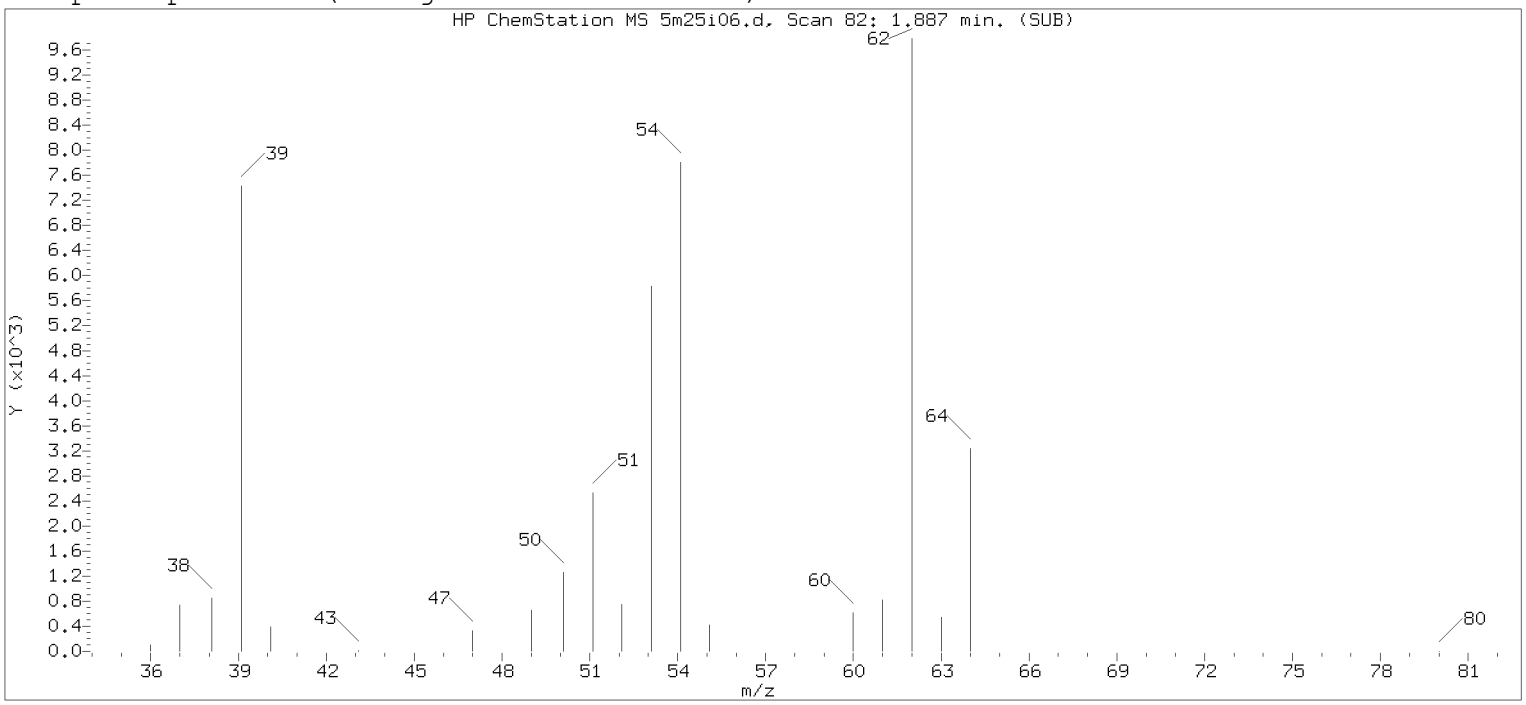
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 82
Retention Time (minutes): 1.887
Quant Ion : 39.00
Area (flag) : 20065M
On-Column Amount (ng) : 4.6475
Integration start scan : 72 Integration stop scan: 92
Y at integration start : 128 Y at integration end: 128

Reason for manual integration: improper integration

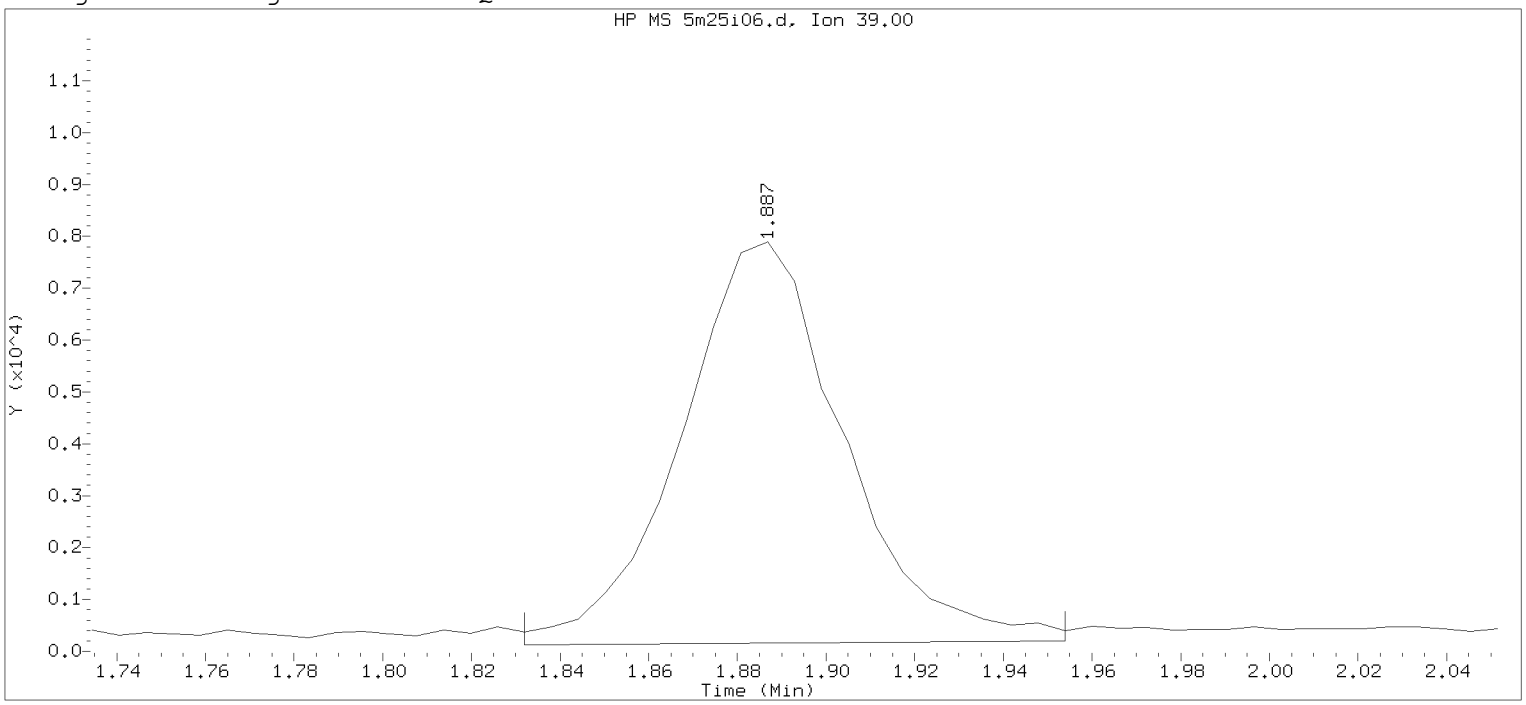
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

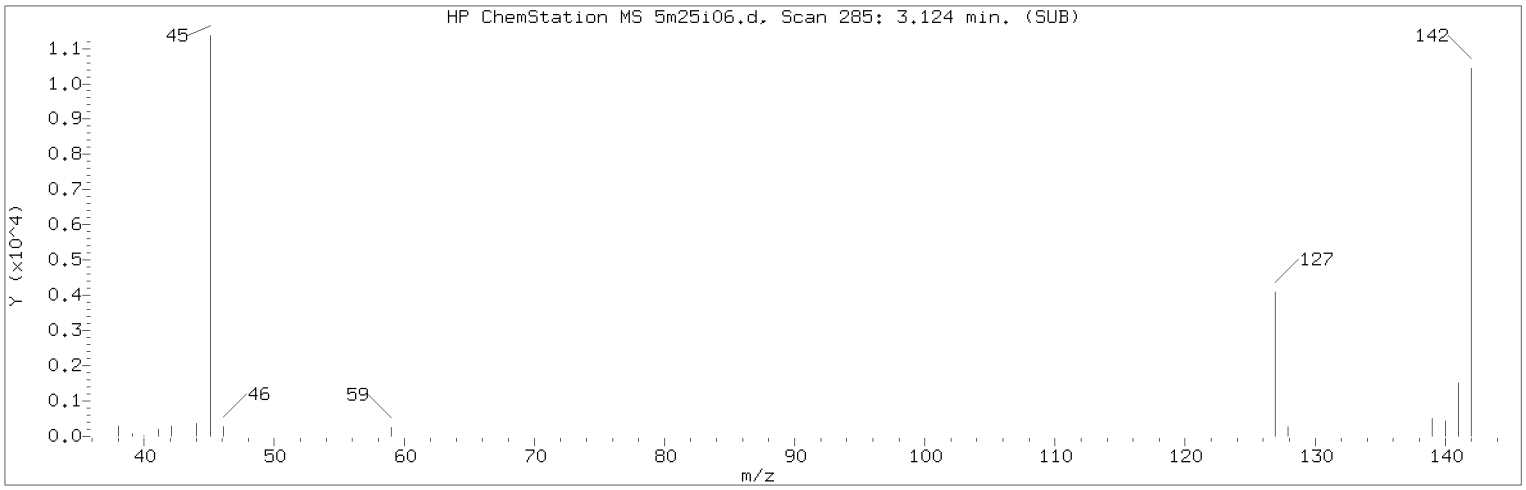
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:53
Date, time and analyst ID of latest file update: 25-Mar-2019 14:53 Unknown

Sample Name: VSTD004 Lab Sample ID: VSTD004

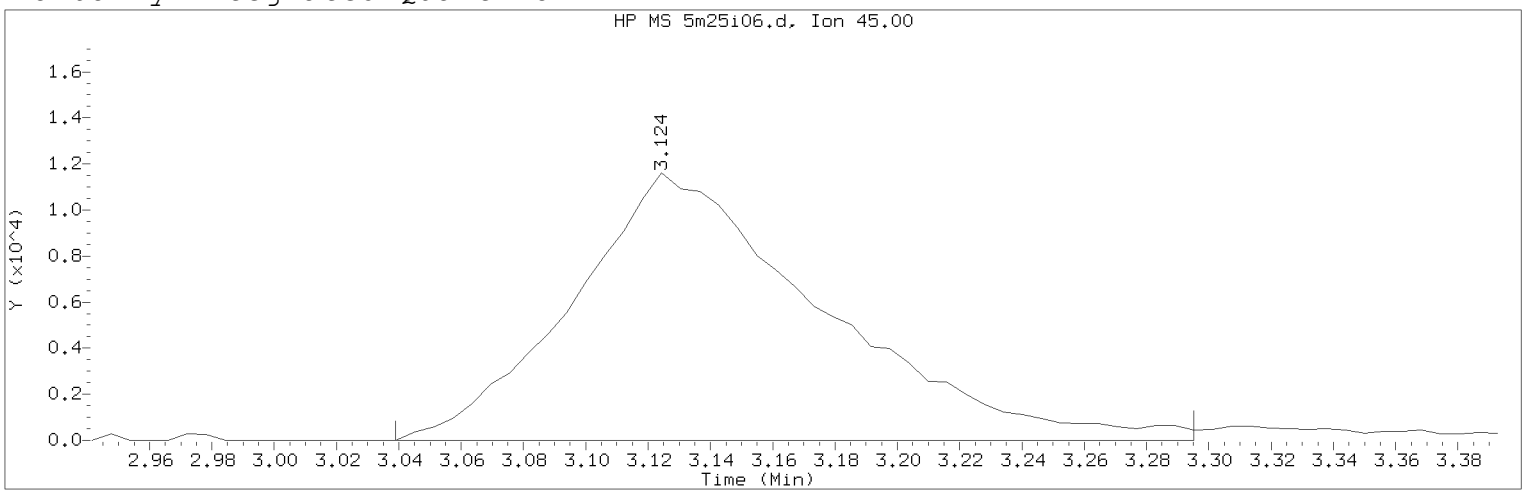
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 82
Retention Time (minutes): 1.887
Quant Ion : 39.00
Area : 19730
On-column Amount (ng) : 4.6025
Integration start scan : 72 Integration stop scan: 92
Y at integration start : 129 Y at integration end: 193

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: KKELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

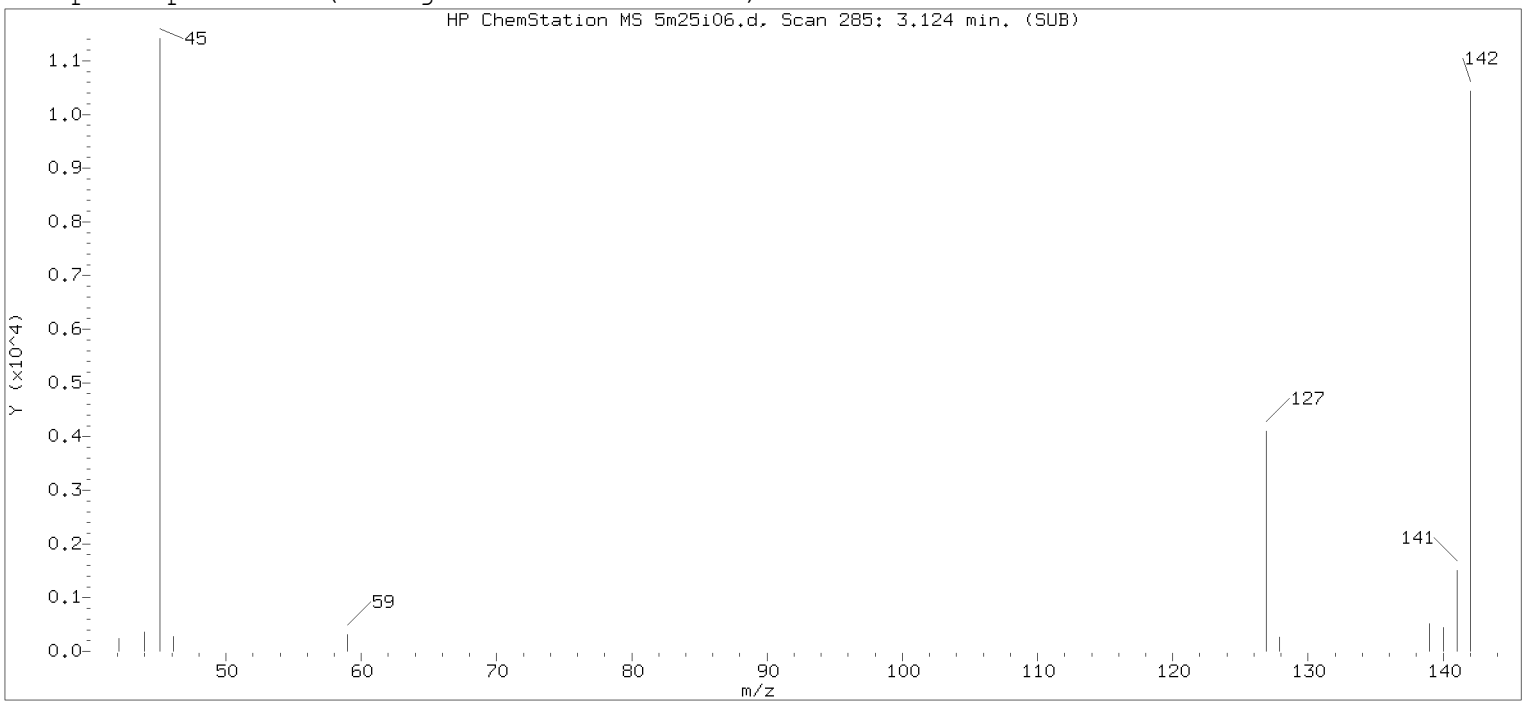
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 285
Retention Time (minutes): 3.124
Quant Ion : 45.00
Area (flag) : 64690M
On-Column Amount (ng) : 83.3406
Integration start scan : 270 Integration stop scan: 312
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

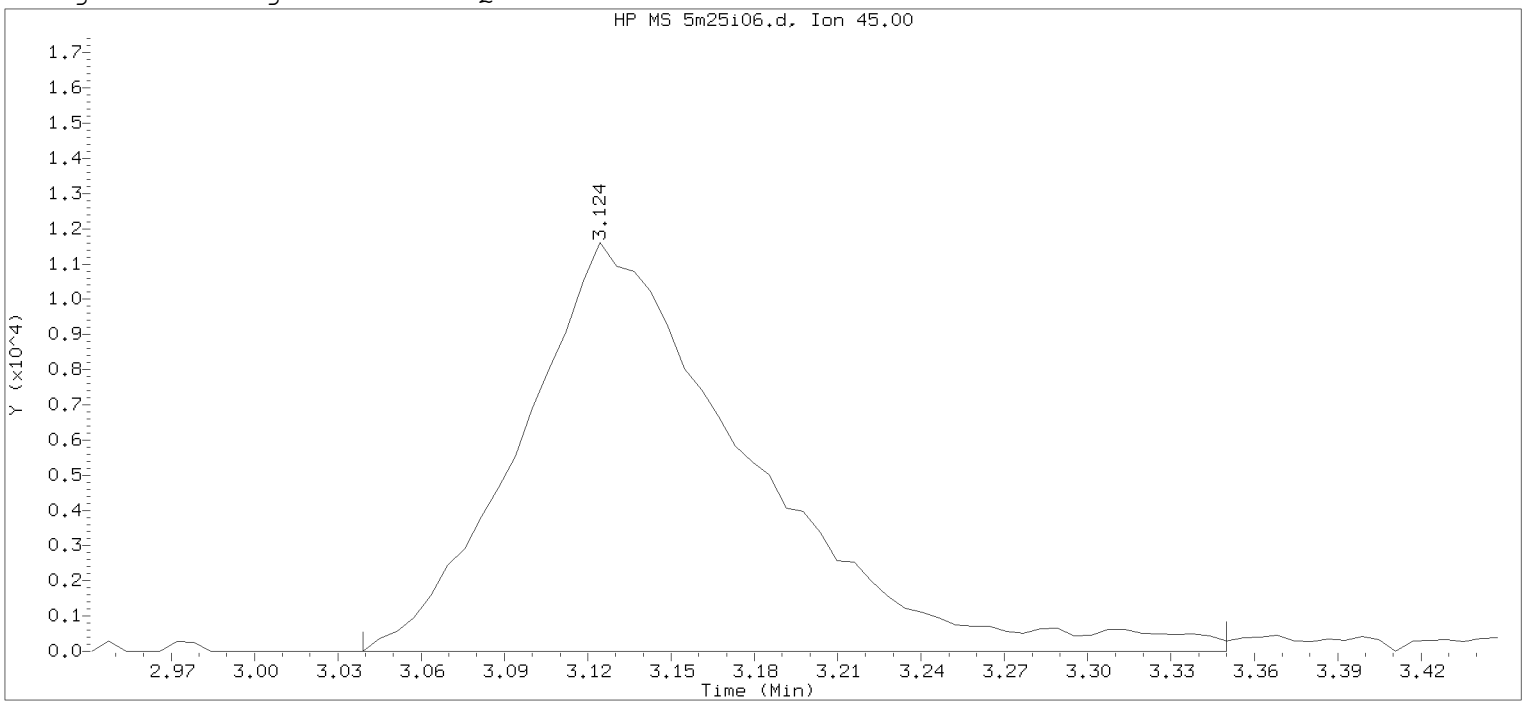
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

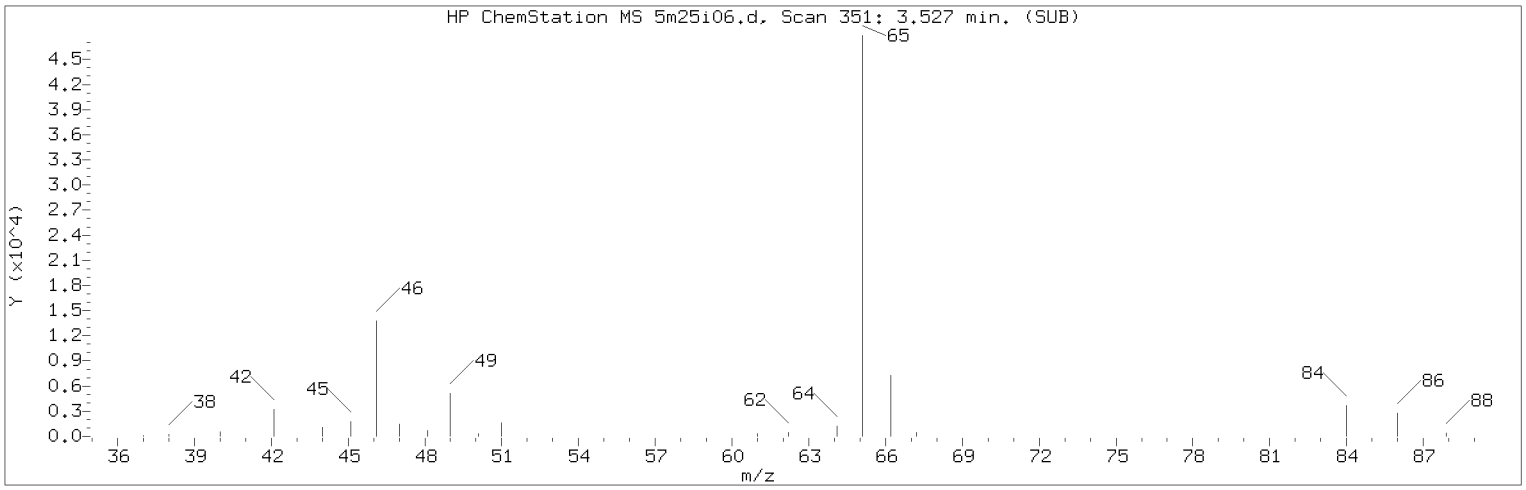
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:53
Date, time and analyst ID of latest file update: 25-Mar-2019 14:53 Unknown

Sample Name: VSTD004 Lab Sample ID: VSTD004

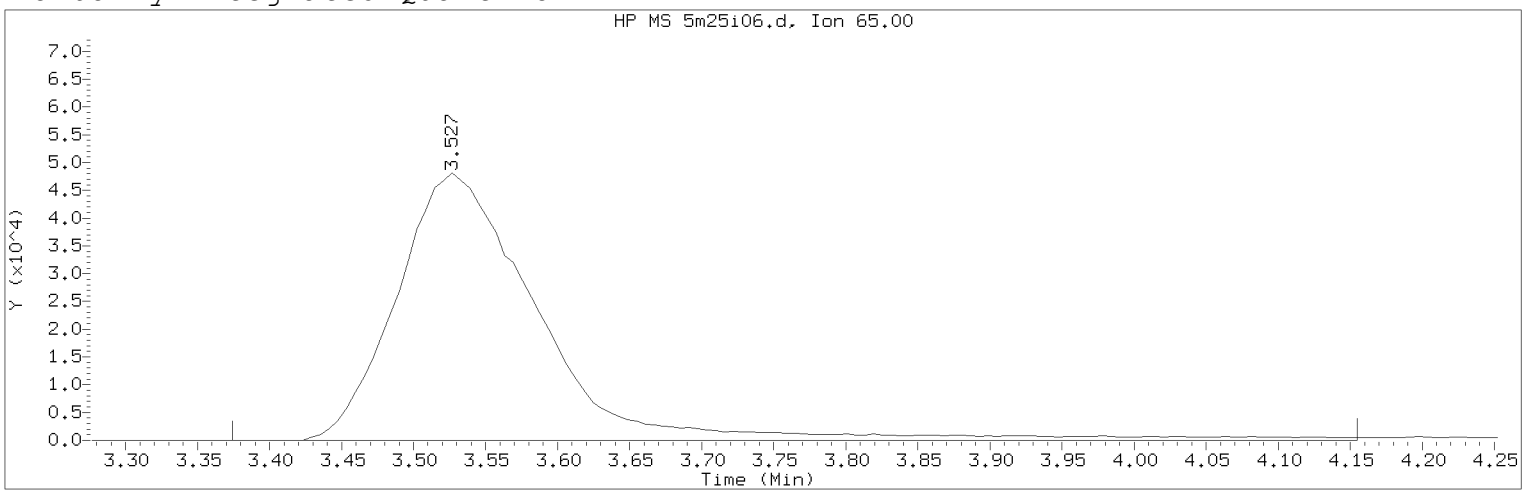
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 285
Retention Time (minutes): 3.124
Quant Ion : 45.00
Area : 66248
On-column Amount (ng) : 82.9265
Integration start scan : 270 Integration stop scan: 321
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kkelly100

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

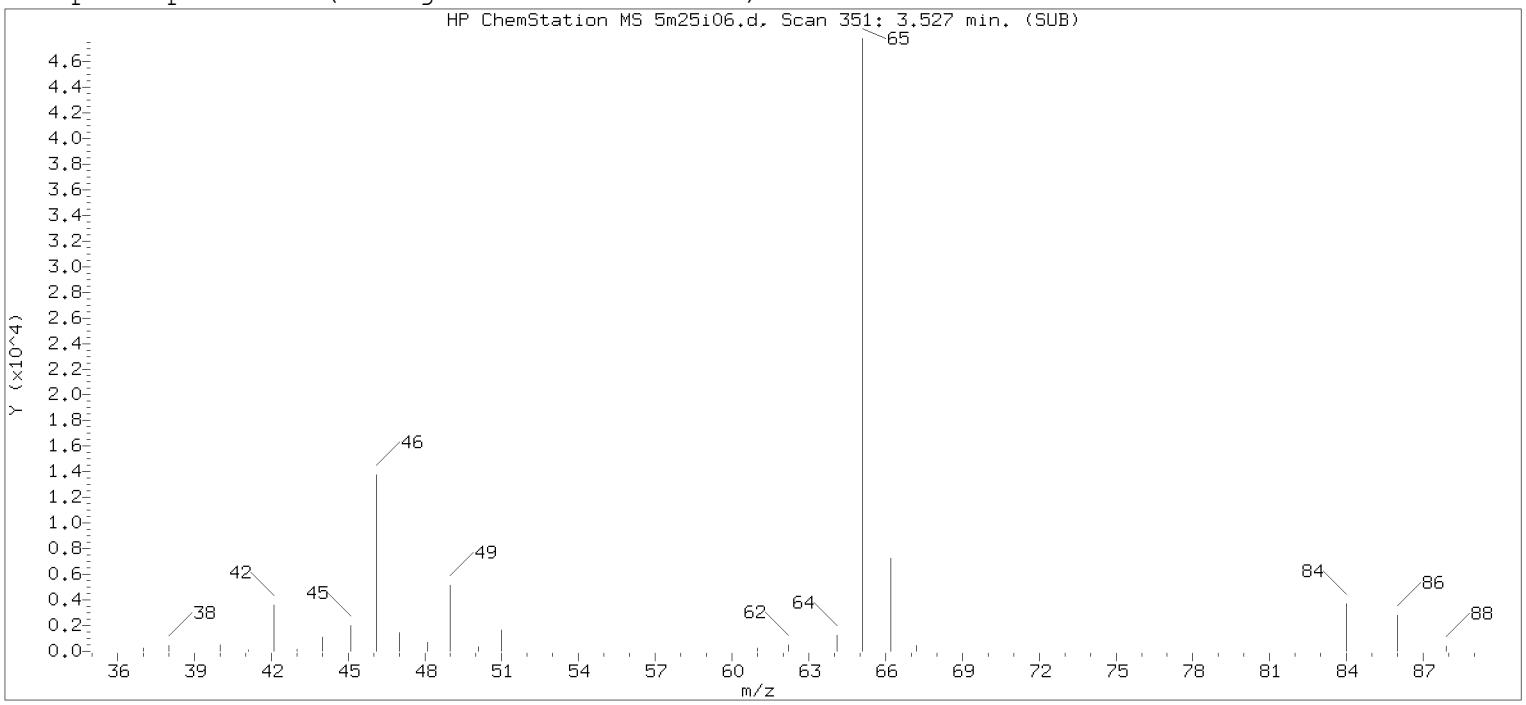
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 351
Retention Time (minutes): 3.527
Quant Ion : 65.00
Area (flag) : 330891M
On-Column Amount (ng) : 250.0000
Integration start scan : 325 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

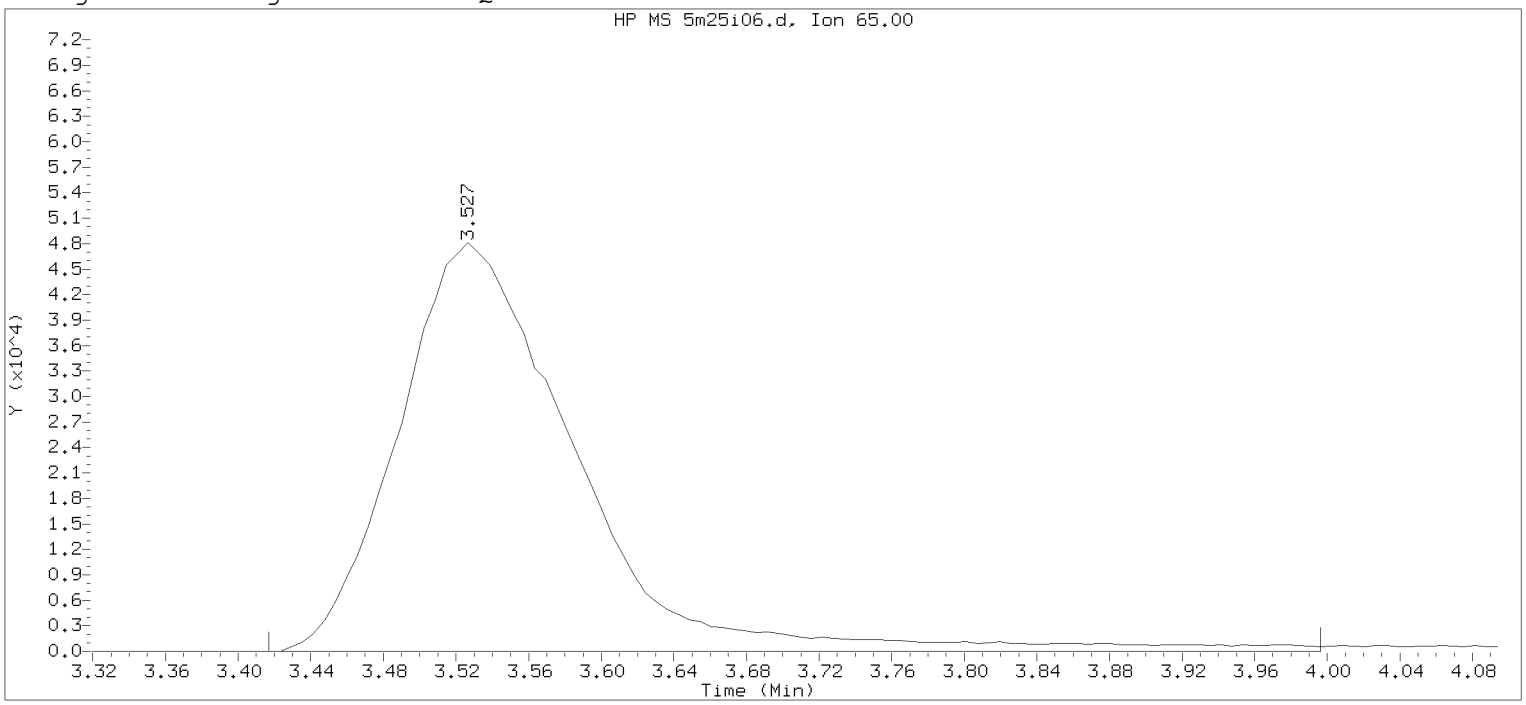
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

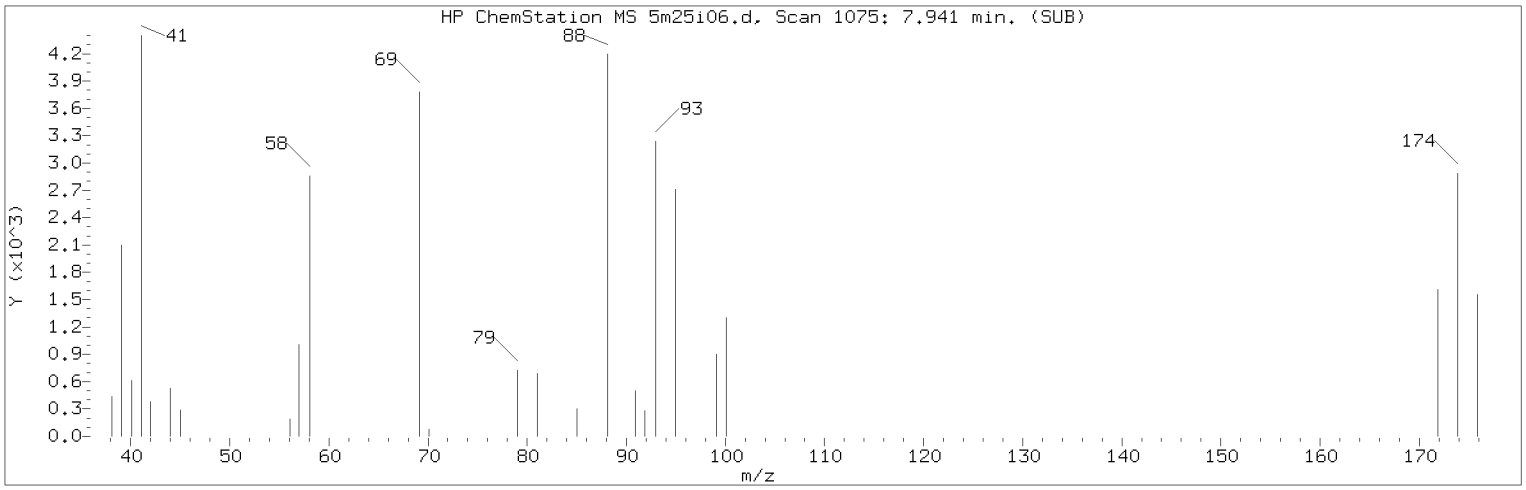
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:53
Date, time and analyst ID of latest file update: 25-Mar-2019 14:53 Unknown

Sample Name: VSTD004 Lab Sample ID: VSTD004

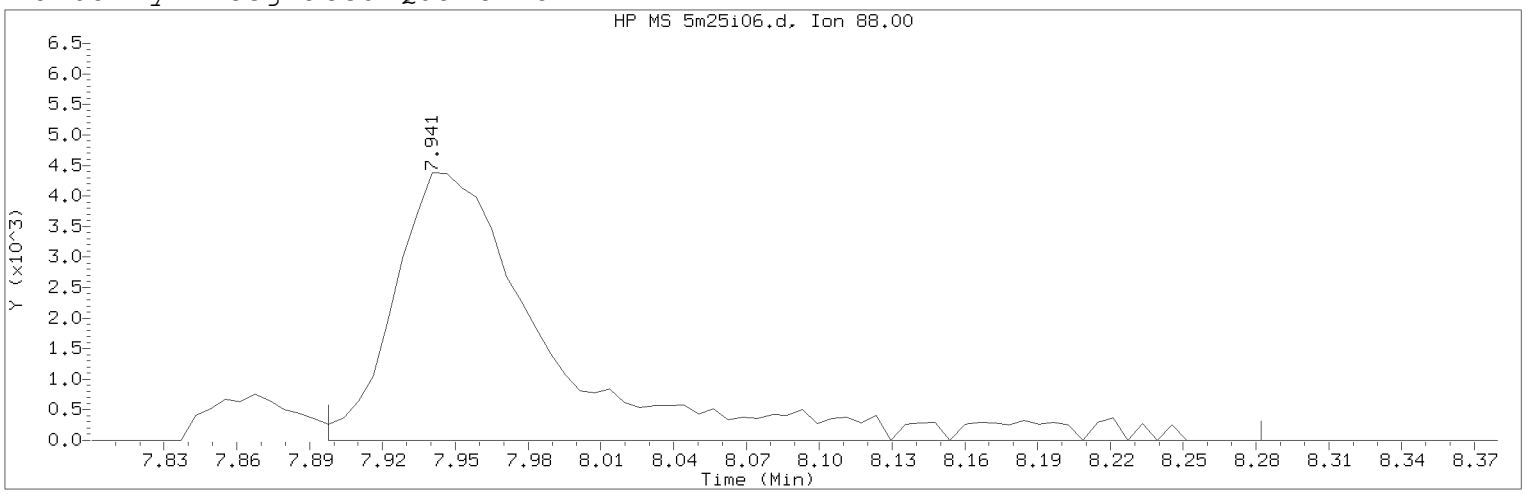
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 351
Retention Time (minutes): 3.527
Quant Ion : 65.00
Area : 325324
On-column Amount (ng) : 250.0000
Integration start scan : 332 Integration stop scan: 427
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user: KKELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

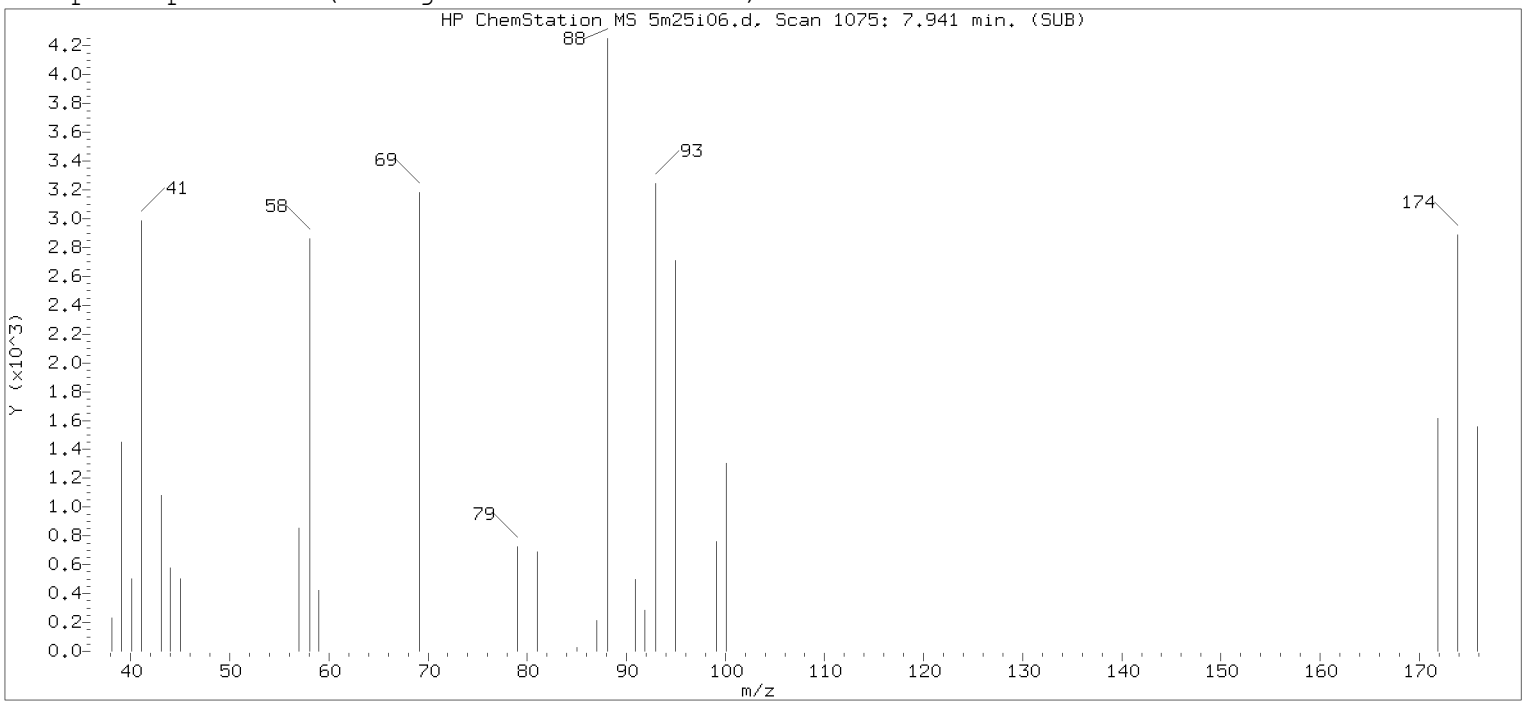
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1075
Retention Time (minutes): 7.941
Quant Ion : 88.00
Area (flag) : 20189M
On-Column Amount (ng) : 208.2207
Integration start scan : 1067 Integration stop scan: 1130
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

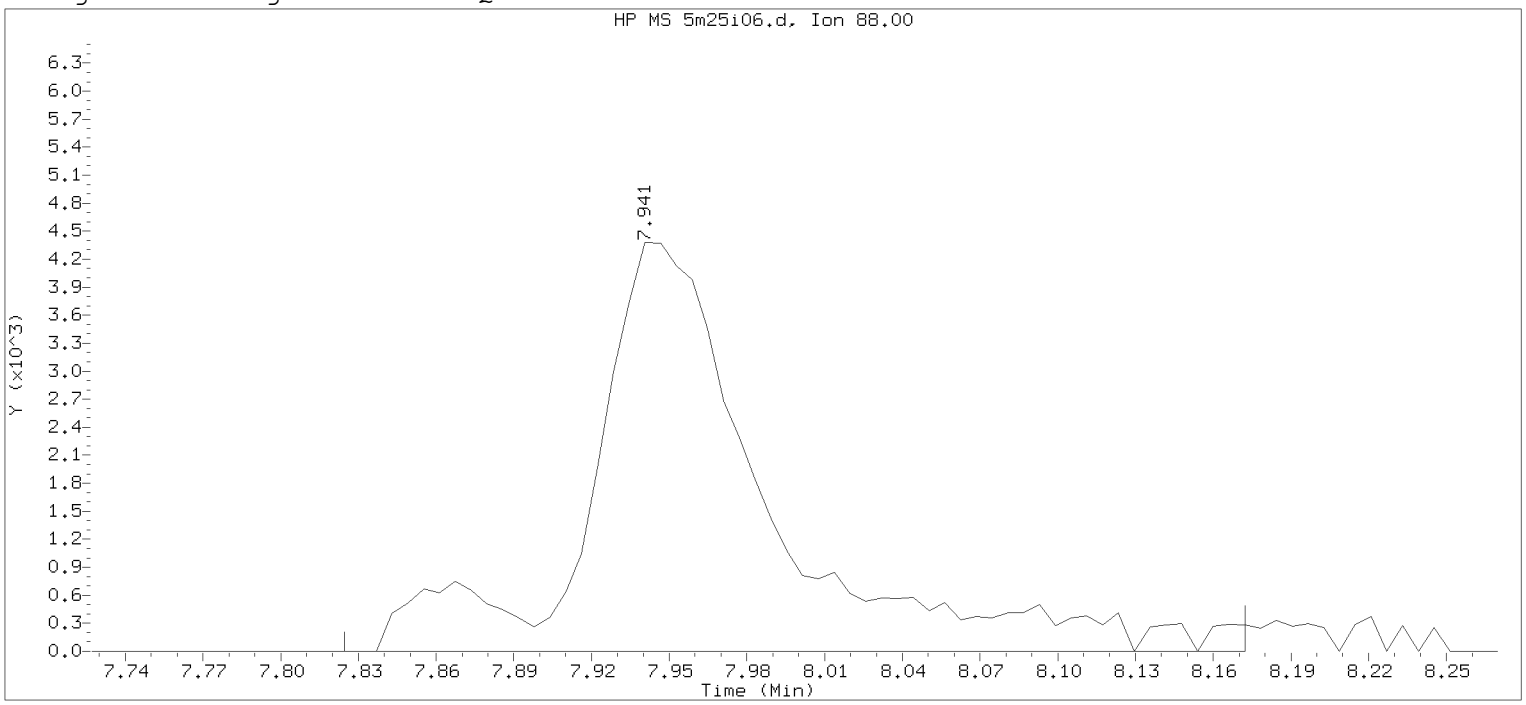
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

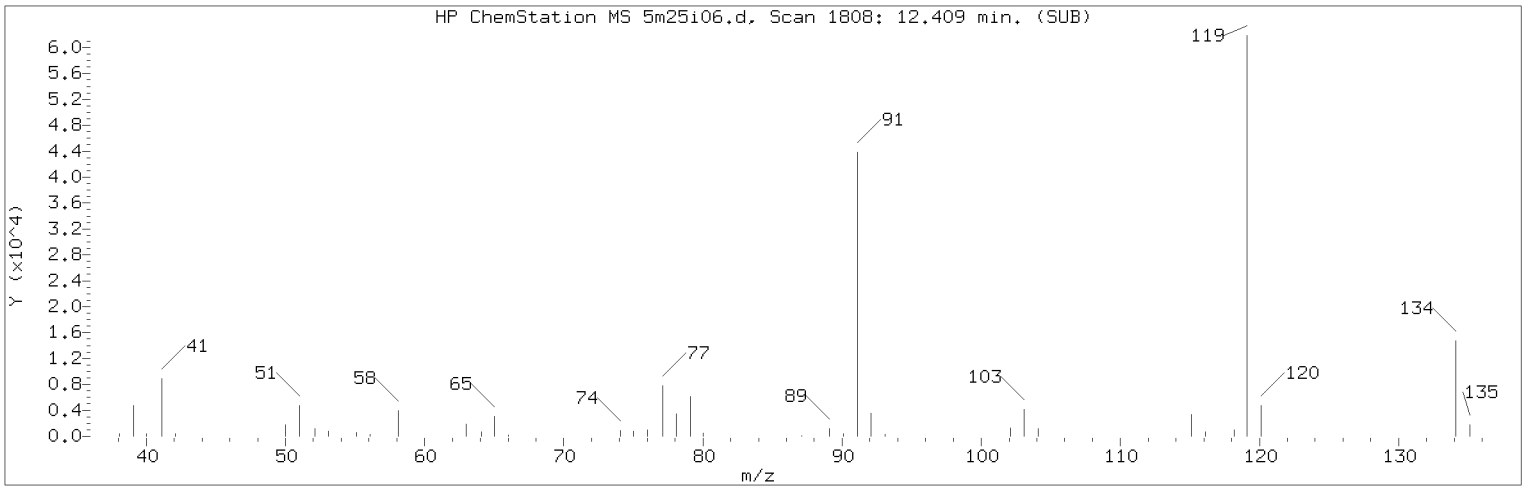
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:53
Date, time and analyst ID of latest file update: 25-Mar-2019 14:53 Unknown

Sample Name: VSTD004 Lab Sample ID: VSTD004

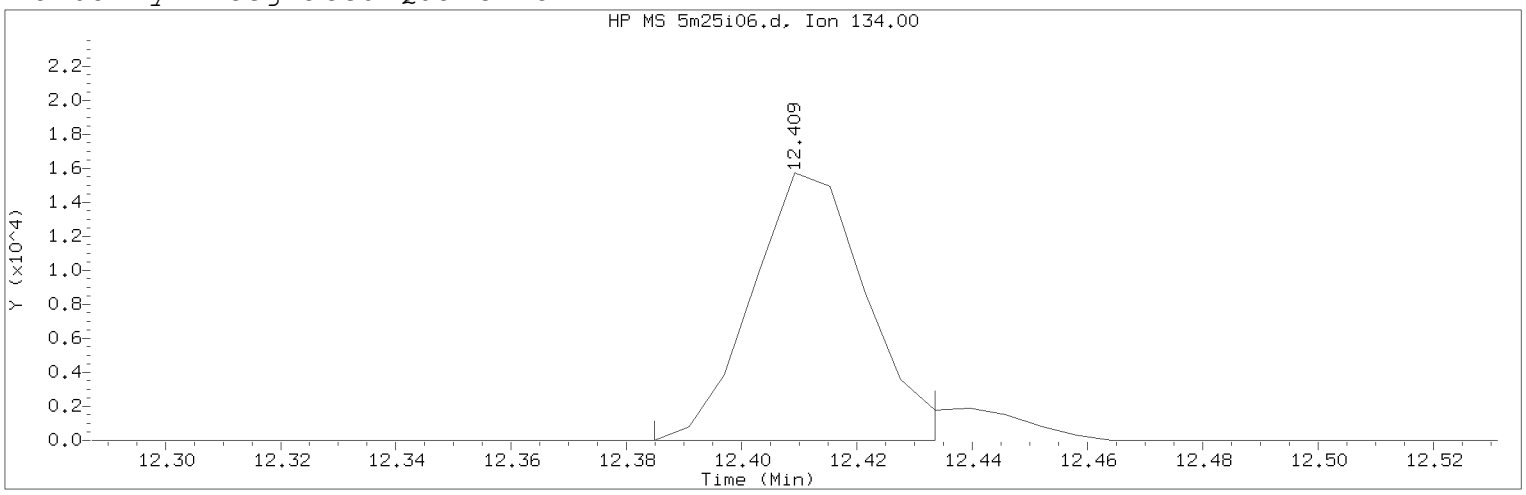
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1075
Retention Time (minutes): 7.941
Quant Ion : 88.00
Area : 20996
On-column Amount (ng) : 173.1914
Integration start scan : 1055 Integration stop scan: 1112
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: KKELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

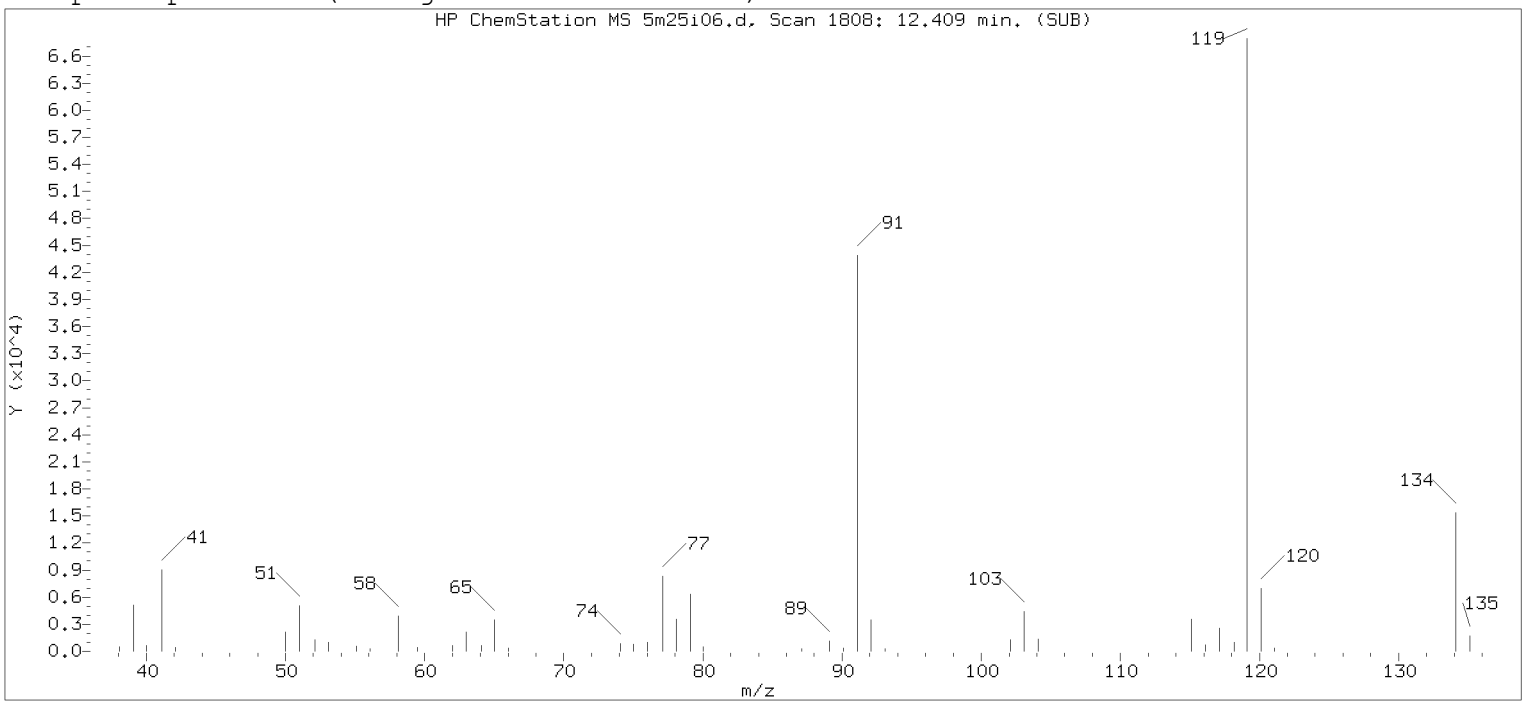
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1808
Retention Time (minutes): 12.409
Quant Ion : 134.00
Area (flag) : 21726M
On-Column Amount (ng) : 4.1078
Integration start scan : 1803 Integration stop scan: 1811
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

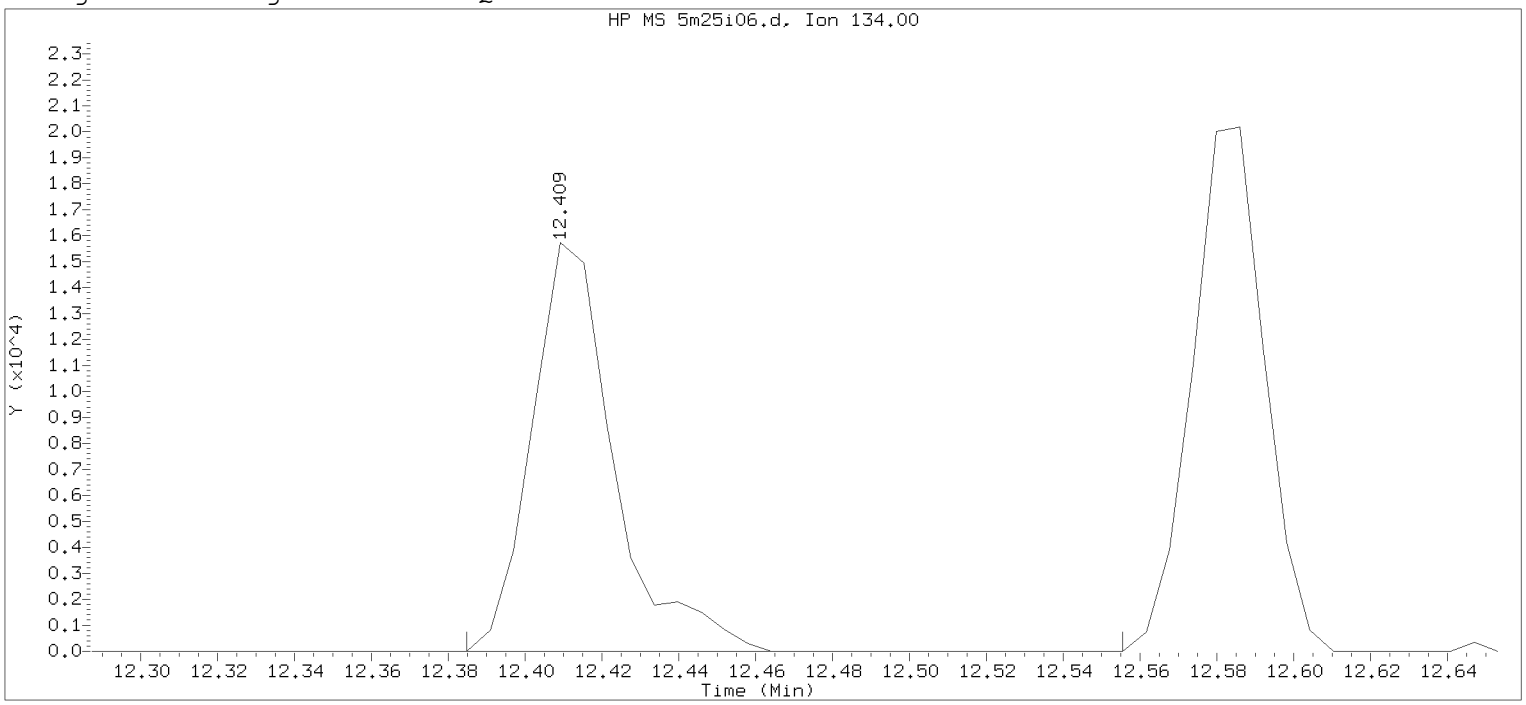
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



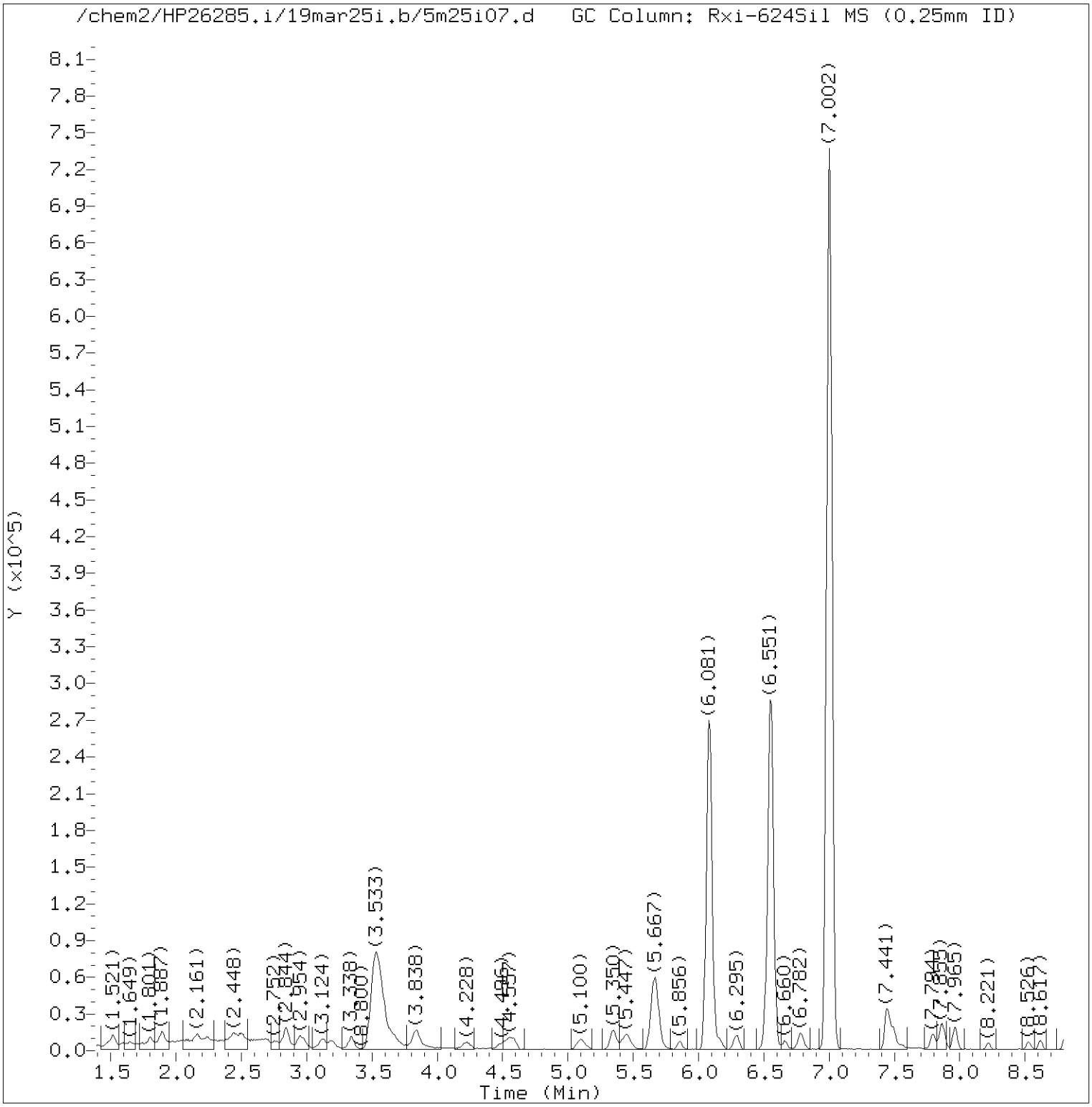
Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:53
Date, time and analyst ID of latest file update: 25-Mar-2019 14:53 Unknown

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1808
Retention Time (minutes): 12.409
Quant Ion : 134.00
Area : 23399
On-column Amount (ng) : 4.0395
Integration start scan : 1803 Integration stop scan: 1831
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10042



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

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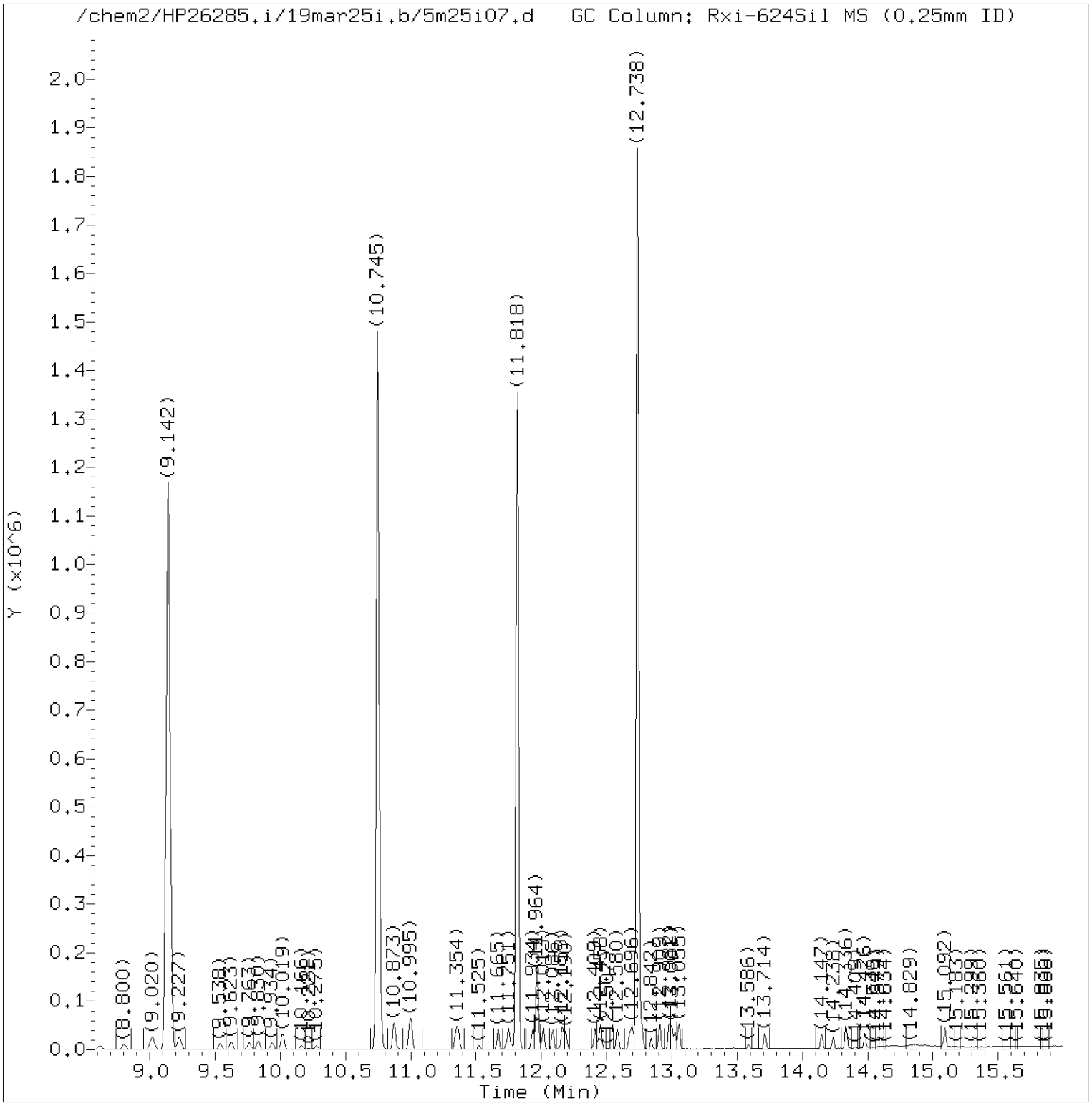
on 03/25/2019 at 21:53.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.631	85	5748	0.669
4) Chloromethane	(2)	1.801	50	5617	0.900
5) 1,3-Butadiene	(2)	1.893	39	4390M	1.012
6) Vinyl Chloride	(2)	1.899	62	5355	0.877
8) Bromomethane	(2)	2.161	94	4894	0.994
9) Chloroethane	(2)	2.222	64	2895	0.989
10) Dichlorofluoromethane	(2)	2.442	67	8227	1.033
12) Trichlorofluoromethane	(2)	2.484	101	6543	0.771
11) n-Pentane	(2)	2.509	43	5579	1.042
14) Ethyl ether	(2)	2.692	59	3844	0.874
15) Freon 123a	(2)	2.752	67	6116	0.927
16) Acrolein	(1)	2.844	56	24218	10.809
17) 1,1-Dichloroethene	(2)	2.954	96	4318	0.876
17) 1,1-Dichloroethene	(2)	2.942	63	2107	0.868
19) Freon 113	(2)	2.972	101	3401	0.678
18) Acetone	(1)	2.990	58	1773	1.731
22) Methyl Iodide	(2)	3.118	142	9228	0.896
21) 2-Propanol	(1)	3.137	45	14613	19.626
23) Carbon Disulfide	(2)	3.191	76	13184	0.805
27) Methyl Acetate	(2)	3.332	43	9588	1.255
25) Allyl Chloride	(2)	3.344	41	8790	0.992
28) Methylene Chloride	(2)	3.508	84	5563	0.993
29)*t-Butyl alcohol-d10	(1)	3.533	65	317402M	250.000
30) t-Butyl alcohol	(1)	3.636	59	28692	19.540
31) Acrylonitrile	(2)	3.813	53	3631	0.899
33) Methyl Tertiary Butyl Ether	(2)	3.838	73	14974	0.951
32) trans-1,2-Dichloroethene	(2)	3.850	96	4811	0.872
34) n-Hexane	(2)	4.222	57	5128	0.672
36) 1,1-Dichloroethane	(2)	4.484	63	8643	0.888
38) di-Isopropyl ether	(2)	4.545	45	16890	0.952
39) 2-Chloro-1,3-butadiene	(2)	4.594	53	7392	0.858
40) Ethyl t-butyl ether	(2)	5.100	59	15745	0.959
44) 2-Butanone	(2)	5.343	43	12781	2.096
45) 2,2-Dichloropropane	(2)	5.350	77	6590	0.847
42) cis-1,2-Dichloroethene	(2)	5.350	96	5972	0.956
47) Propionitrile	(1)	5.441	54	31367	19.640
48) Methacrylonitrile	(2)	5.654	67	38516	9.696
49) Bromochloromethane	(2)	5.691	128	2808	0.899

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.709	71	3142	1.937
51) Chloroform	(2)	5.856	83	9029	0.936
53) 1,1,1-Trichloroethane	(2)	6.075	97	6952	0.819
52)$Dibromofluoromethane	(2)	6.081	113	253048	49.504
52)$Dibromofluoromethane	(2)	6.081	111	259616	49.480
43) 1,2-Dichloroethene (Total)	(2)		96	10783	1.828
54) Cyclohexane	(2)	6.160	56	7903	0.805
54) Cyclohexane	(2)	6.148	84	6370	0.761
54) Cyclohexane	(2)	6.154	69	2187	0.719
56) Carbon Tetrachloride	(2)	6.270	117	5711	0.777
55) 1,1-Dichloropropene	(2)	6.301	75	6646	0.851
58) Isobutyl Alcohol	(1)	6.526	41	24565	51.084
57)$1,2-Dichloroethane-d4	(2)	6.557	102	59883	50.067
57)$1,2-Dichloroethane-d4	(2)	6.551	65	278937	50.378
57)$1,2-Dichloroethane-d4	(2)	6.551	104	37915	49.744
60) Benzene	(2)	6.575	78	22077	0.931
61) 1,2-Dichloroethane	(2)	6.660	62	7671	1.095
61) 1,2-Dichloroethane	(2)	6.666	98	322	0.525
65) t-Amyl methyl ether	(2)	6.782	73	16316	0.986
66)*Fluorobenzene	(2)	7.002	96	1068211	50.000
67) n-Heptane	(2)	7.014	43	6534	0.759
69) n-Butanol	(1)	7.441	56	38193	95.256
71) Trichloroethene	(2)	7.495	95	5596	0.910
73) Methylcyclohexane	(2)	7.800	83	7404	0.727
73) Methylcyclohexane	(2)	7.794	98	3164	0.722
74) 1,2-Dichloropropane	(2)	7.843	63	5532	0.941
76) 1,4-Dioxane	(1)	7.947	88	3154	33.911
77) Methyl Methacrylate	(2)	7.965	69	5631	0.918
75) Dibromomethane	(2)	7.965	93	3413	0.918
79) Bromodichloromethane	(2)	8.221	83	5914	0.856
80) 2-Nitropropane	(2)	8.526	41	5187	1.829
81) 2-Chloroethyl Vinyl Ether	(2)	8.617	63	4330	0.883
82) cis-1,3-Dichloropropene	(2)	8.800	75	7587	0.835
83) 4-Methyl-2-pentanone	(2)	9.020	43	25699	2.058
84)$Toluene-d8	(3)	9.142	98	1027959	50.419
84)$Toluene-d8	(3)	9.142	100	673629	50.270
89) Toluene	(3)	9.227	92	13950	0.919
90) trans-1,3-Dichloropropene	(3)	9.538	75	7329	0.894

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	9.623	69	8743	0.889
93) 1,1,2-Trichloroethane	(3)	9.763	97	5281	0.973
94) Tetrachloroethene	(3)	9.830	166	6001	0.870
95) 1,3-Dichloropropane	(3)	9.940	76	8453	0.950
97) 2-Hexanone	(3)	10.013	43	22939	2.137
91) 1,3-Dichloropropene (total)	(3)		100	14916	1.728
98) Dibromochloromethane	(3)	10.166	129	4232	0.761
100) 1,2-Dibromoethane	(3)	10.275	107	5761	0.950
101)*Chlorobenzene-d5	(3)	10.745	117	807725	50.000
102) 1-Chlorohexane	(3)	10.769	91	8840	1.000
103) Chlorobenzene	(3)	10.775	112	15770	0.929
104) 1,1,1,2-Tetrachloroethane	(3)	10.873	131	4690	0.818
105) Ethylbenzene	(3)	10.873	91	26878	0.907
107) m+p-Xylene	(3)	10.995	106	21248	1.818
108) o-Xylene	(3)	11.348	106	10162	0.890
110) Styrene	(3)	11.367	104	16475	0.873
111) Bromoform	(3)	11.525	173	3275	0.746
112) Isopropylbenzene	(3)	11.665	105	25302	0.853
113) Cyclohexanone	(1)	11.745	55	20418M	52.469
109) Xylene (Total)	(3)		106	31410	2.707
115)$4-Bromofluorobenzene	(3)	11.818	95	396103	49.930
115)$4-Bromofluorobenzene	(3)	11.818	174	345086	49.933
116) Bromobenzene	(4)	11.934	156	6646	0.906
117) 1,1,2,2-Tetrachloroethane	(4)	11.940	83	8534	0.919
119) trans-1,4-Dichloro-2-butene	(4)	11.964	53	26847	9.175
118) 1,2,3-Trichloropropane	(4)	11.982	110	2659	0.950
120) n-Propylbenzene	(4)	12.013	91	30879	0.894
121) 2-Chlorotoluene	(4)	12.092	126	6384	0.897
123) 1,3,5-Trimethylbenzene	(4)	12.159	105	22101	0.887
122) 4-Chlorotoluene	(4)	12.190	126	6569	0.899
125) tert-Butylbenzene	(4)	12.409	134	4563M	0.866
126) Pentachloroethane	(4)	12.440	167	3220	0.749
127) 1,2,4-Trimethylbenzene	(4)	12.458	105	23359	0.914
128) sec-Butylbenzene	(4)	12.580	105	27659	0.857
130) 1,3-Dichlorobenzene	(4)	12.677	146	12809	0.911
131) p-Isopropyltoluene	(4)	12.696	119	23490	0.839
132)*1,4-Dichlorobenzene-d4	(4)	12.738	152	425367	50.000
134) 1,4-Dichlorobenzene	(4)	12.757	146	13318	0.935

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

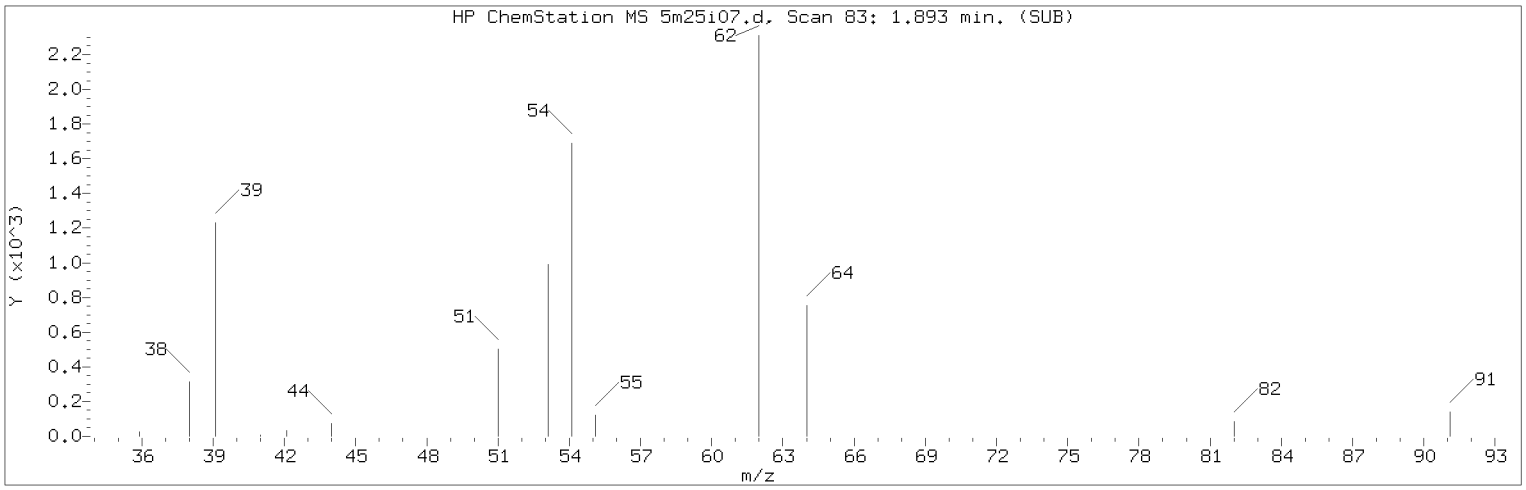
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

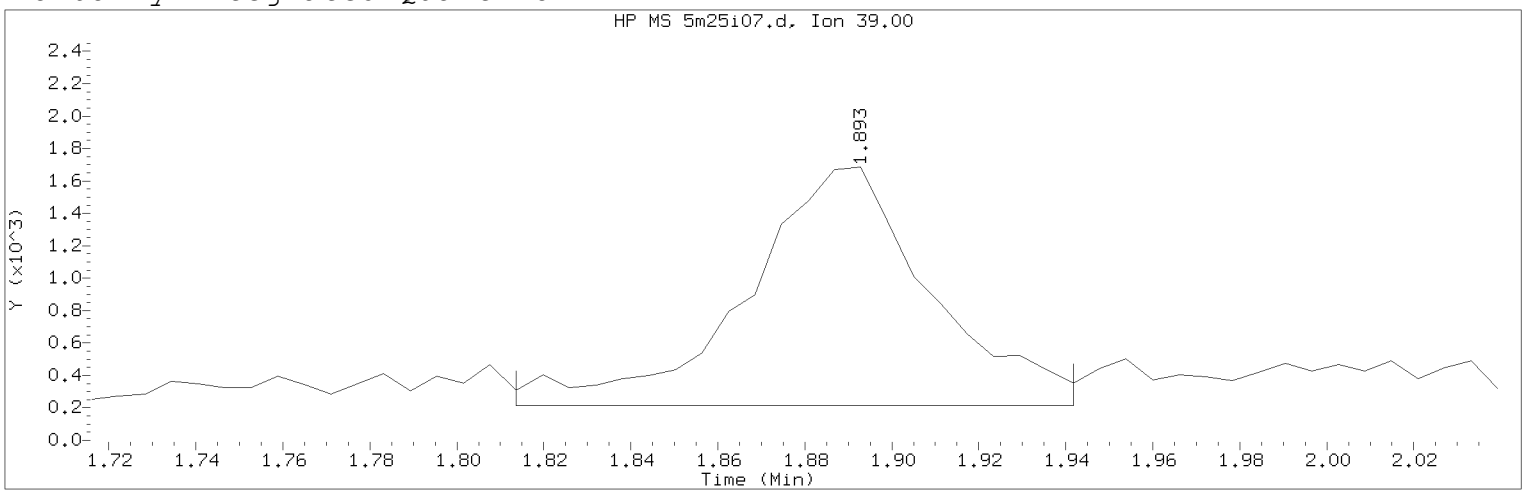
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	12.769	105	23890	0.905
136) Benzyl Chloride	(4)	12.842	91	13772	0.752
137) 1,3-Diethylbenzene	(4)	12.909	119	14305	0.838
138) 1,4-Diethylbenzene	(4)	12.982	119	14775	0.816
140) n-Butylbenzene	(4)	13.001	92	11446	0.811
139) 1,2-Dichlorobenzene	(4)	13.025	146	12121	0.912
141) 1,2-Diethylbenzene	(4)	13.055	119	12041	0.849
142) Diethylbenzene (total)	(4)		100	41121	2.503
143) 1,2-Dibromo-3-chloropropane	(4)	13.586	75	1998	0.861
145) 1,3,5-Trichlorobenzene	(4)	13.714	180	9185	0.860
147) 1,2,4-Trichlorobenzene	(4)	14.147	180	8641	0.894
148) Hexachlorobutadiene	(4)	14.238	225	4177	0.916
149) Naphthalene	(4)	14.336	128	31054	0.947
150) 1,2,3-Trichlorobenzene	(4)	14.476	180	8585	0.927
151) 2-Methylnaphthalene	(4)	15.092	142	16562	0.858

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

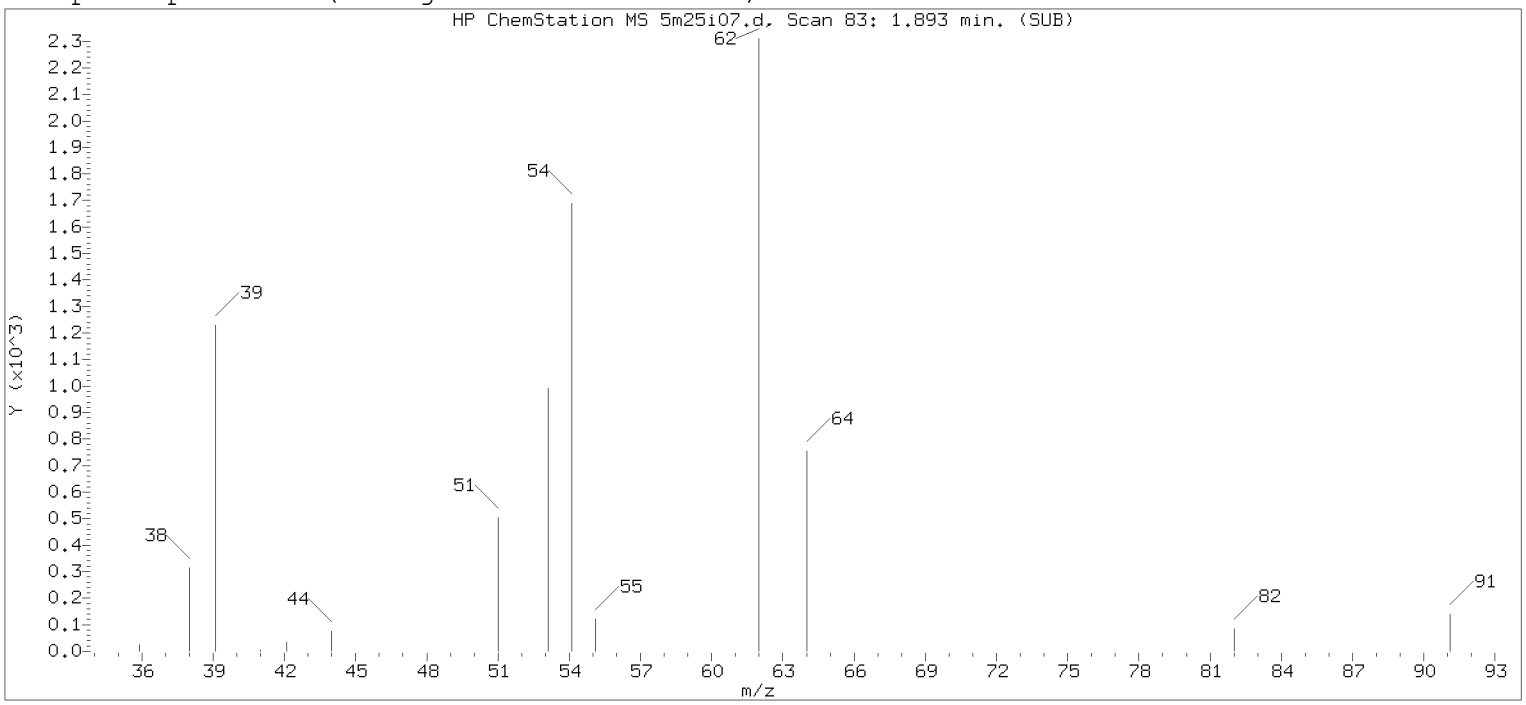
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 83
Retention Time (minutes): 1.893
Quant Ion : 39.00
Area (flag) : 4390M
On-Column Amount (ng) : 1.0121
Integration start scan : 69 Integration stop scan: 90
Y at integration start : 212 Y at integration end: 212

Reason for manual integration: improper integration

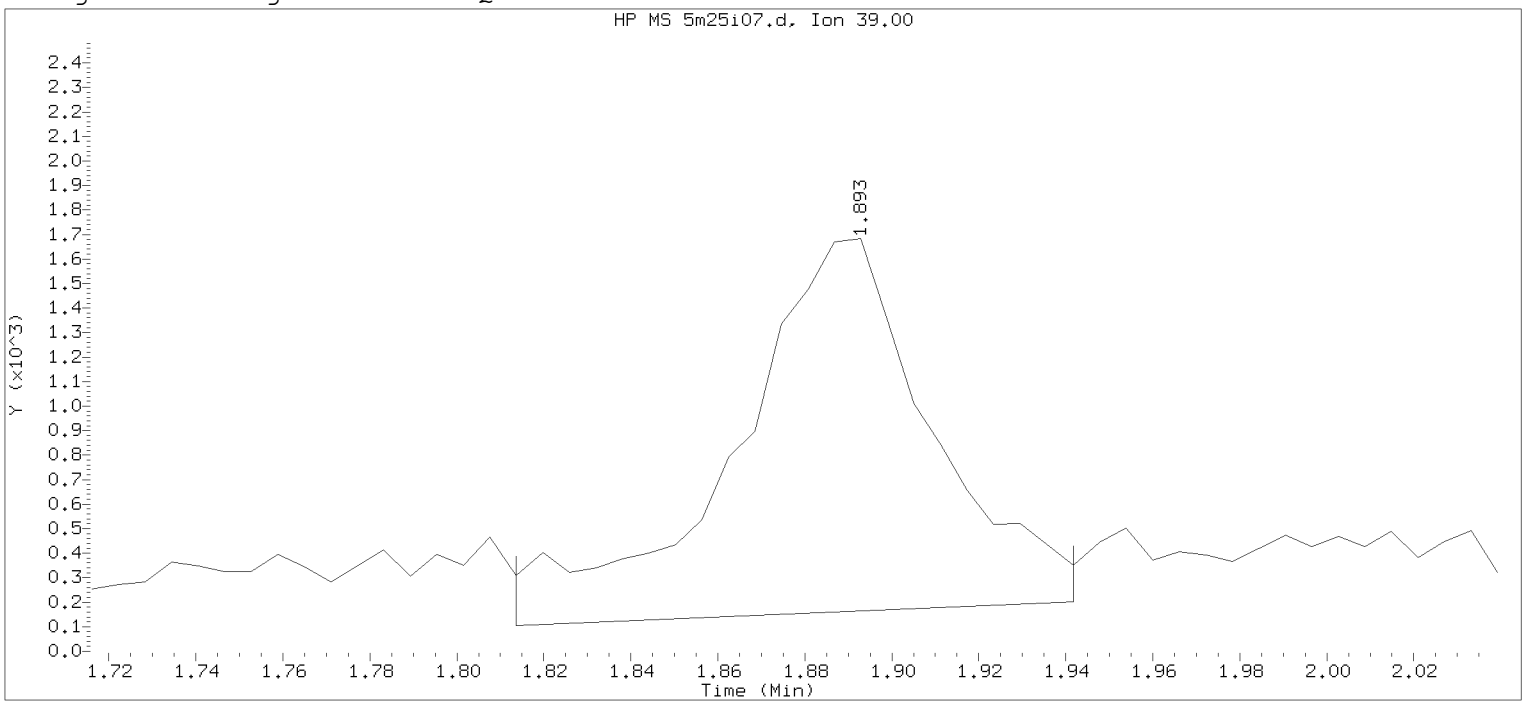
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

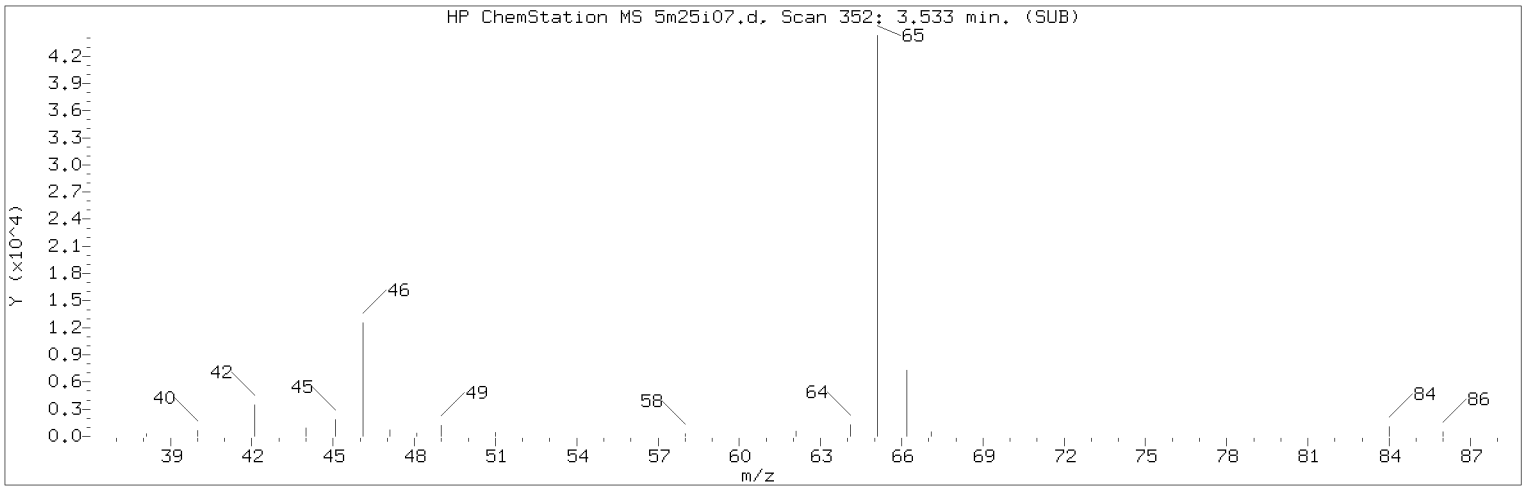
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 15:14
Date, time and analyst ID of latest file update: 25-Mar-2019 15:14 Unknown

Sample Name: VSTD001 Lab Sample ID: VSTD001

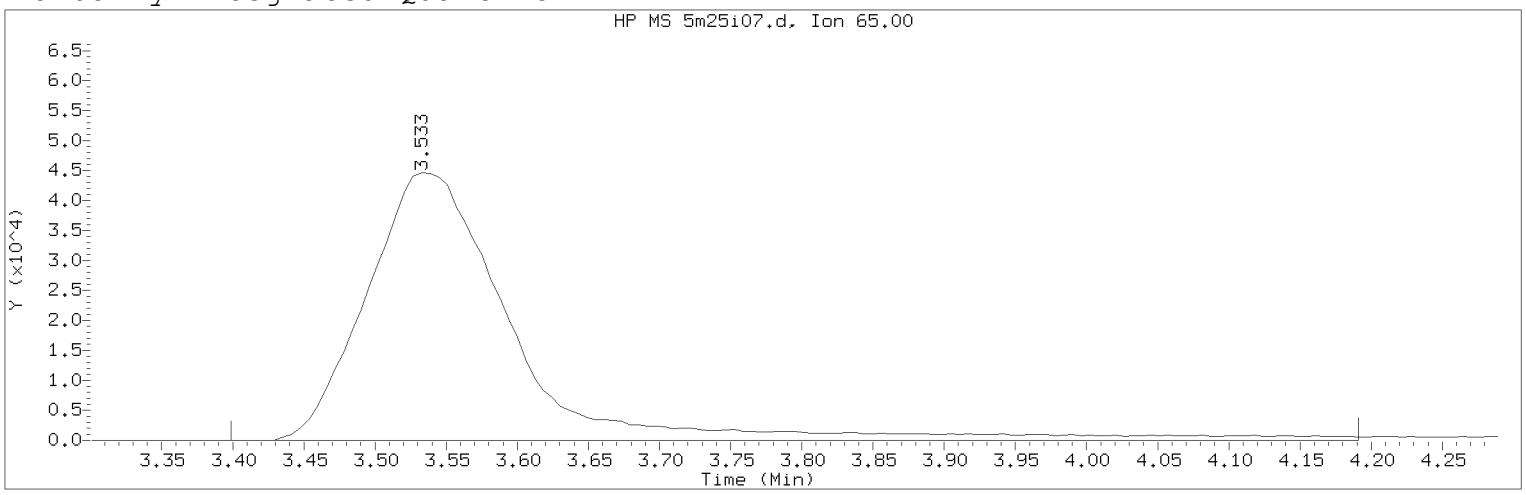
Compound Number	: 5		
Compound Name	: 1,3-Butadiene		
Scan Number	: 83		
Retention Time (minutes)	: 1.893		
Quant Ion	: 39.00		
Area	: 4796		
On-column Amount (ng)	: 1.0958		
Integration start scan	: 69	Integration stop scan:	90
Y at integration start	: 105	Y at integration end:	202

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: KKELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

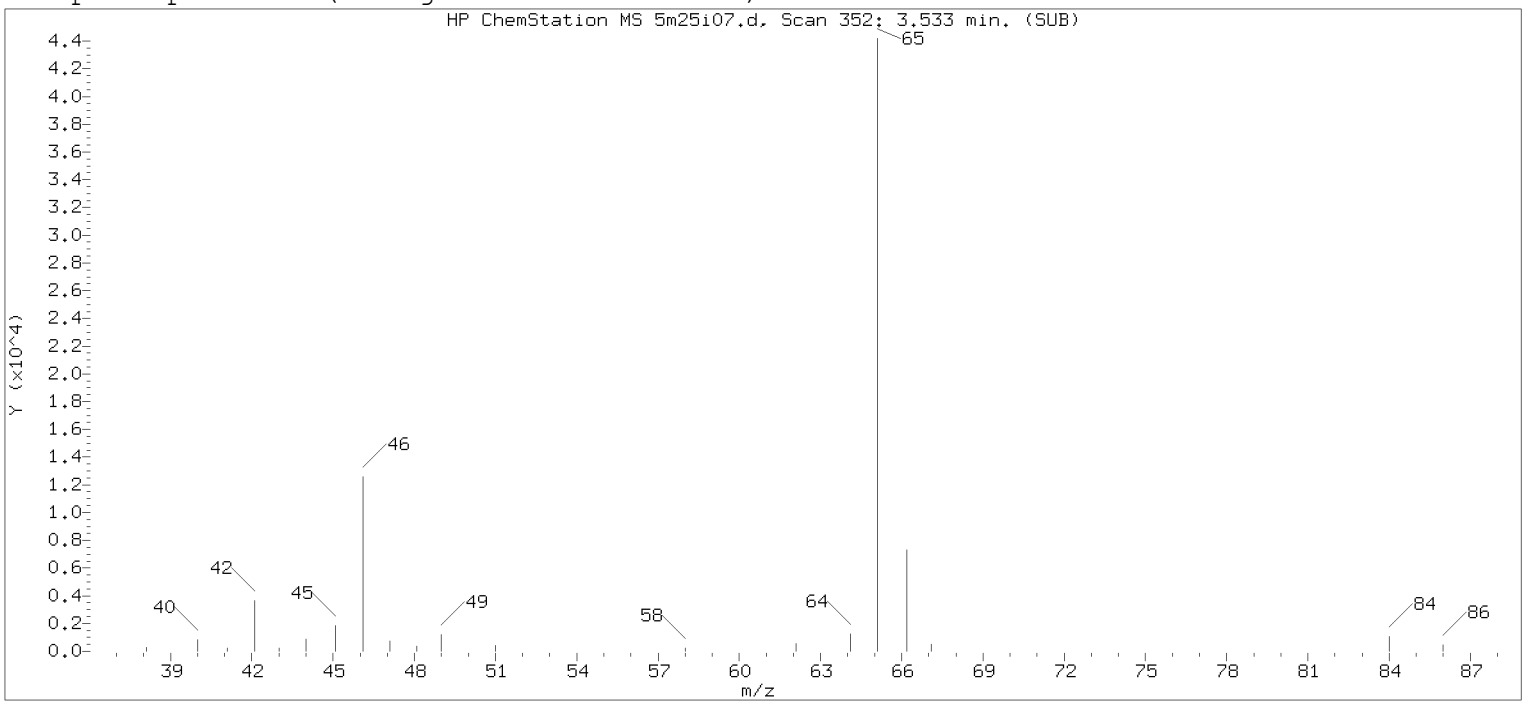
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 352
Retention Time (minutes): 3.533
Quant Ion : 65.00
Area (flag) : 317402M
On-Column Amount (ng) : 250.0000
Integration start scan : 329 Integration stop scan: 459
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

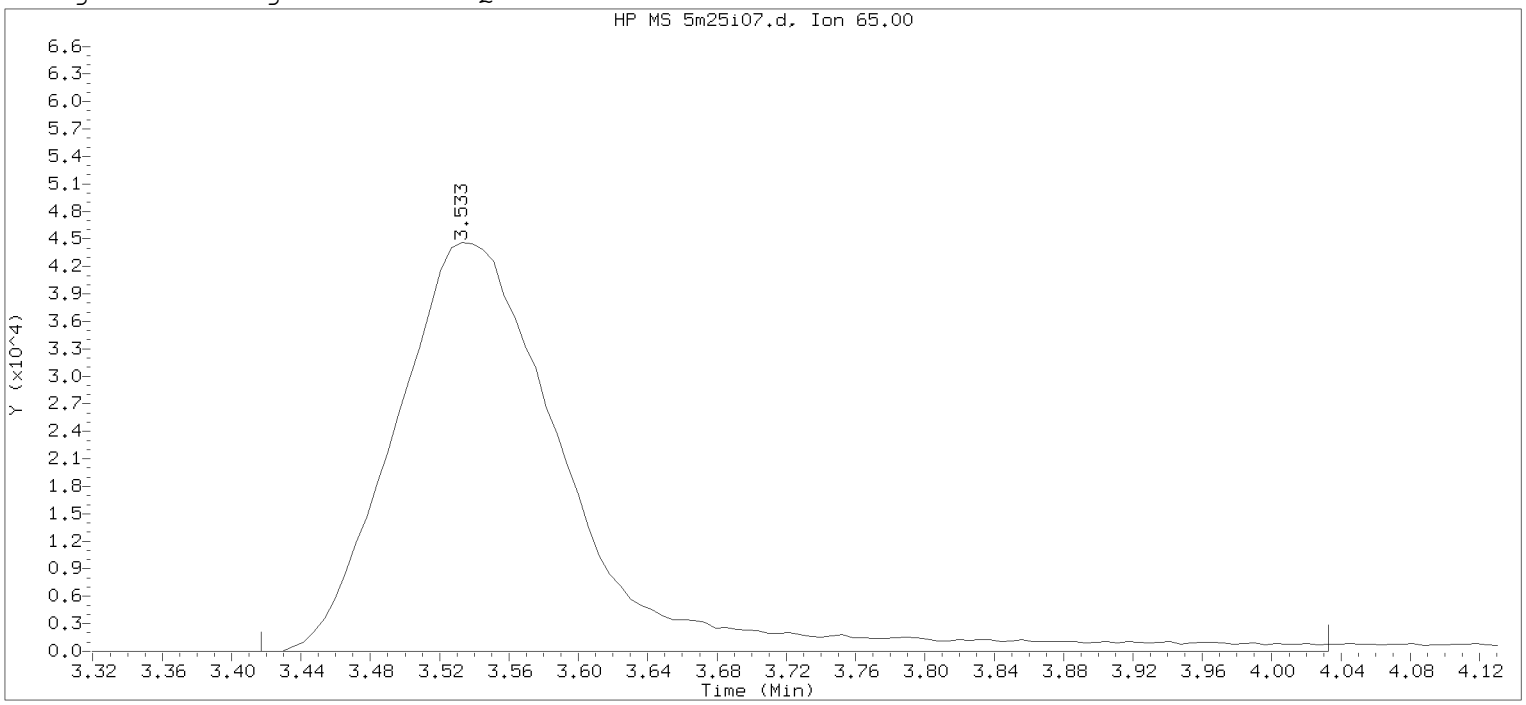
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

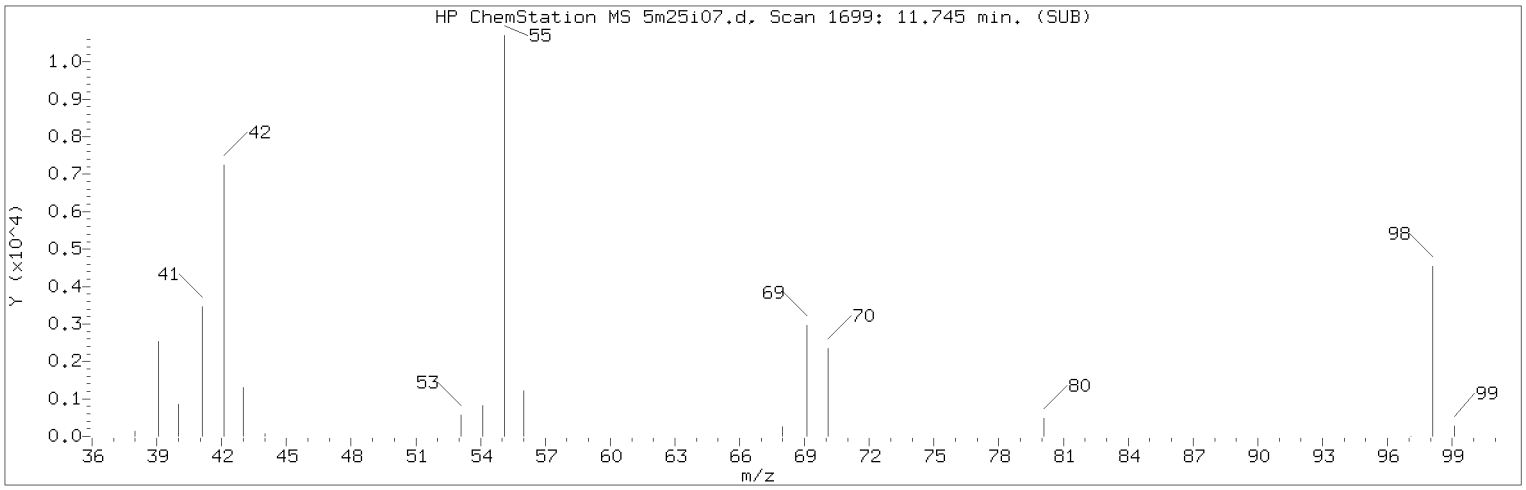
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 15:14
Date, time and analyst ID of latest file update: 25-Mar-2019 15:14 Unknown

Sample Name: VSTD001 Lab Sample ID: VSTD001

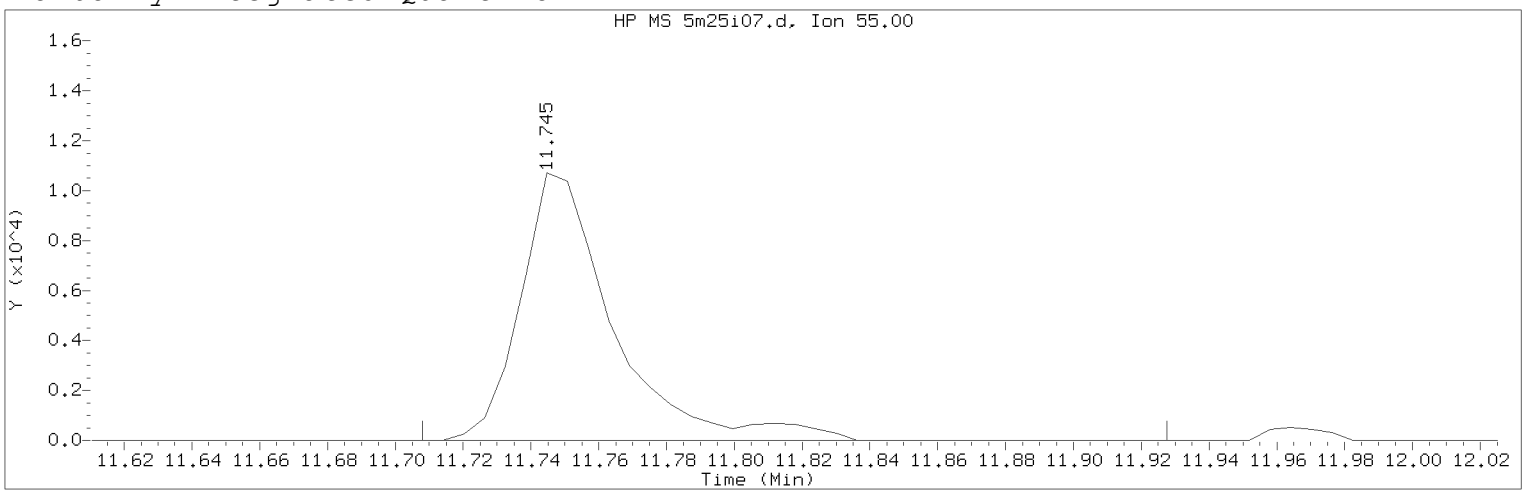
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 352
Retention Time (minutes): 3.533
Quant Ion : 65.00
Area : 310510
On-column Amount (ng) : 250.0000
Integration start scan : 332 Integration stop scan: 433
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10042

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

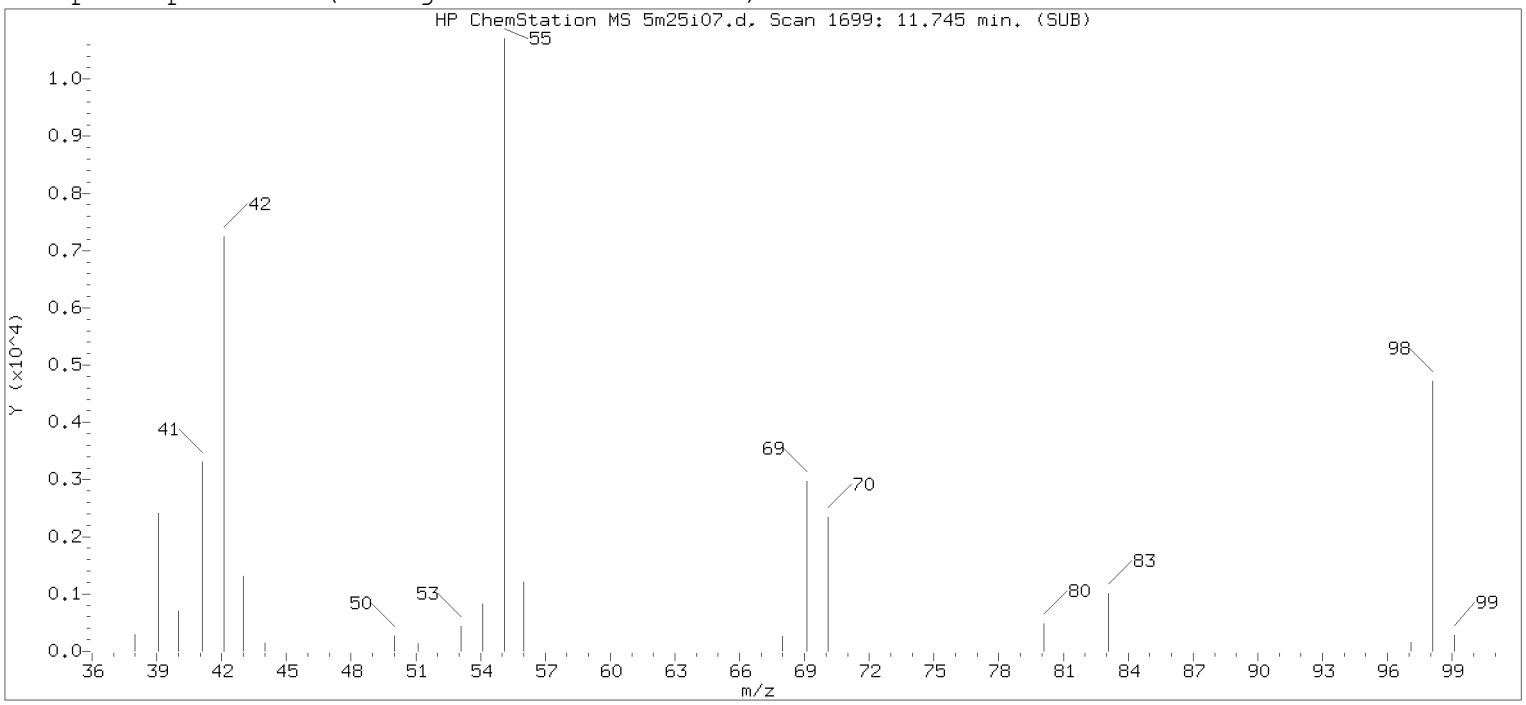
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1699
Retention Time (minutes): 11.745
Quant Ion : 55.00
Area (flag) : 20418M
On-Column Amount (ng) : 52.4692
Integration start scan : 1692 Integration stop scan: 1728
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

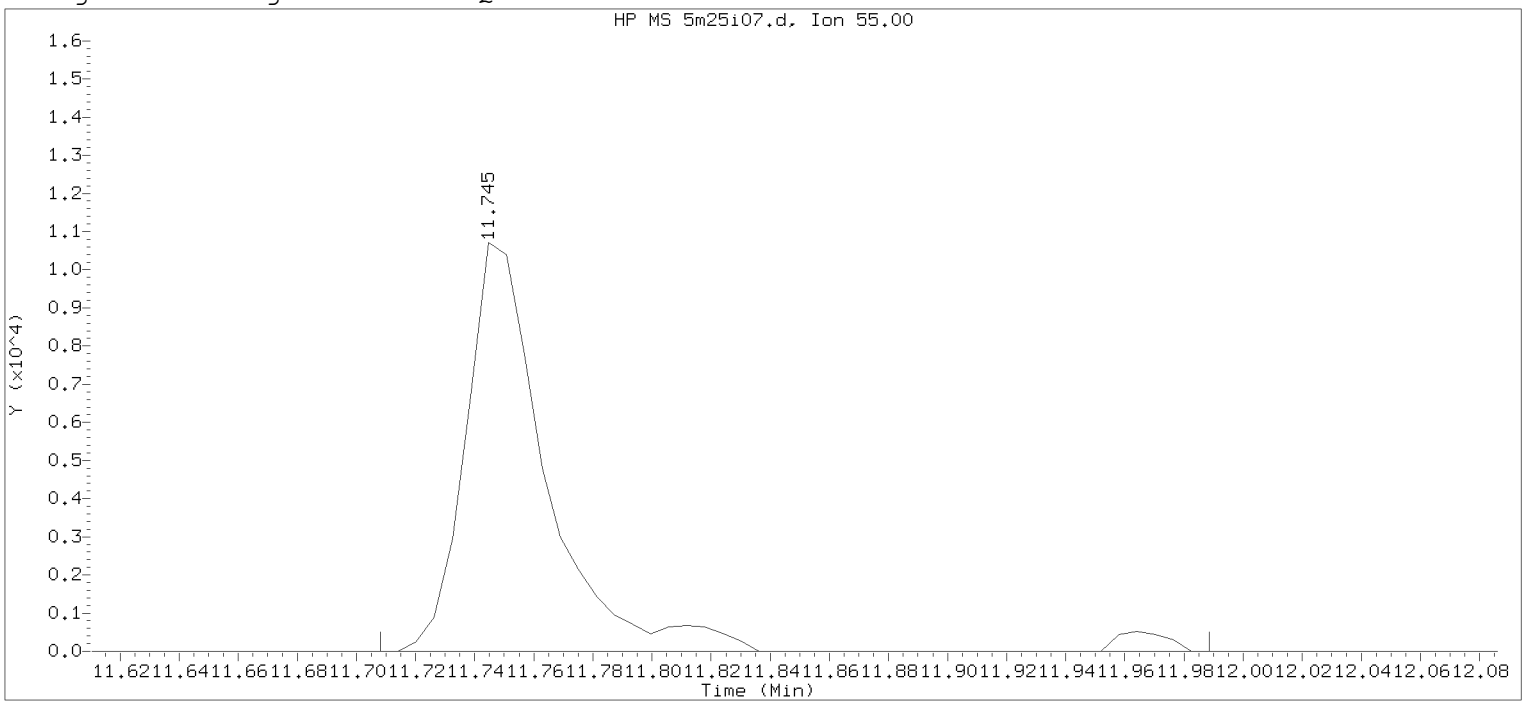
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

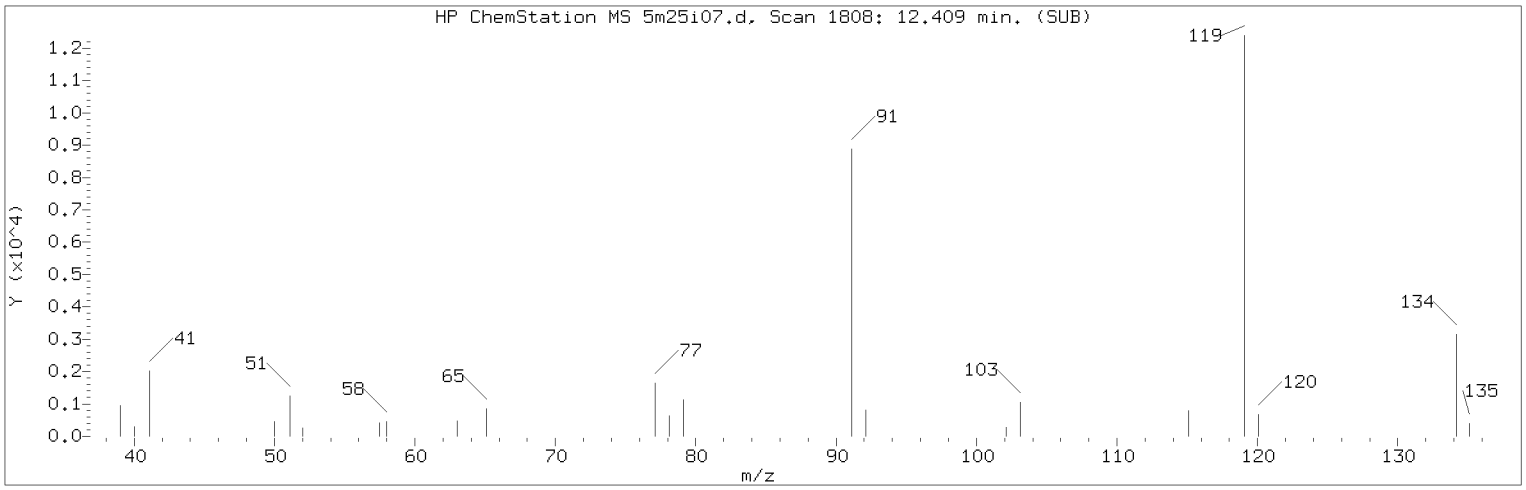
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 15:14
Date, time and analyst ID of latest file update: 25-Mar-2019 15:14 Unknown

Sample Name: VSTD001 Lab Sample ID: VSTD001

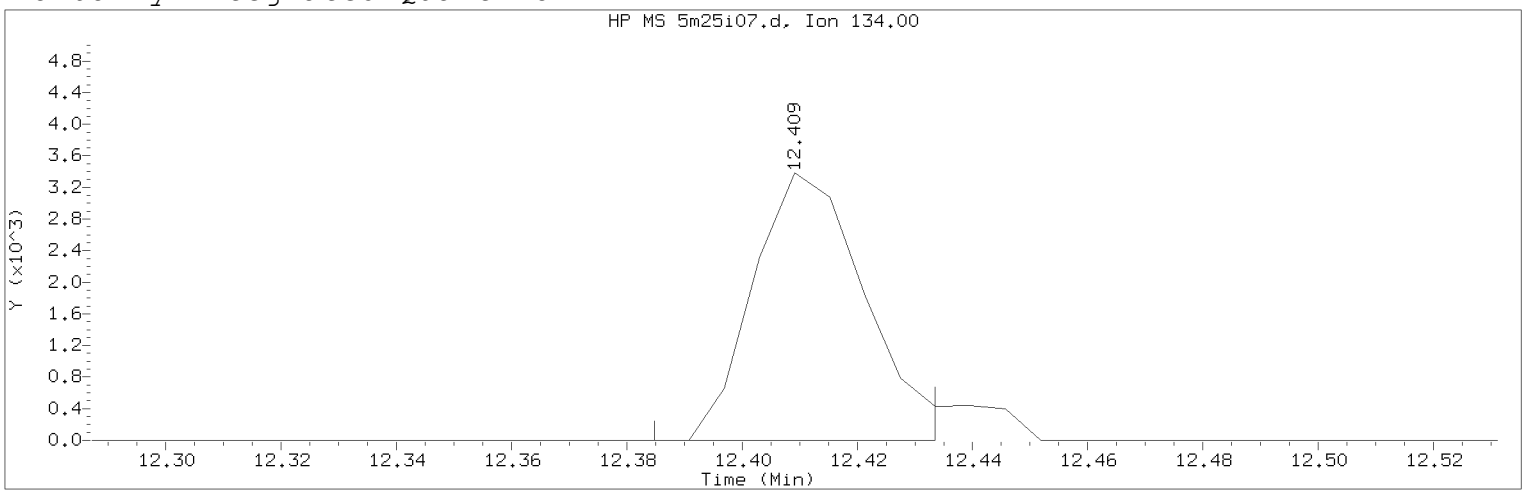
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1699
Retention Time (minutes): 11.745
Quant Ion : 55.00
Area : 21041
On-column Amount (ng) : 53.1937
Integration start scan : 1692 Integration stop scan: 1738
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kkelly1007

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

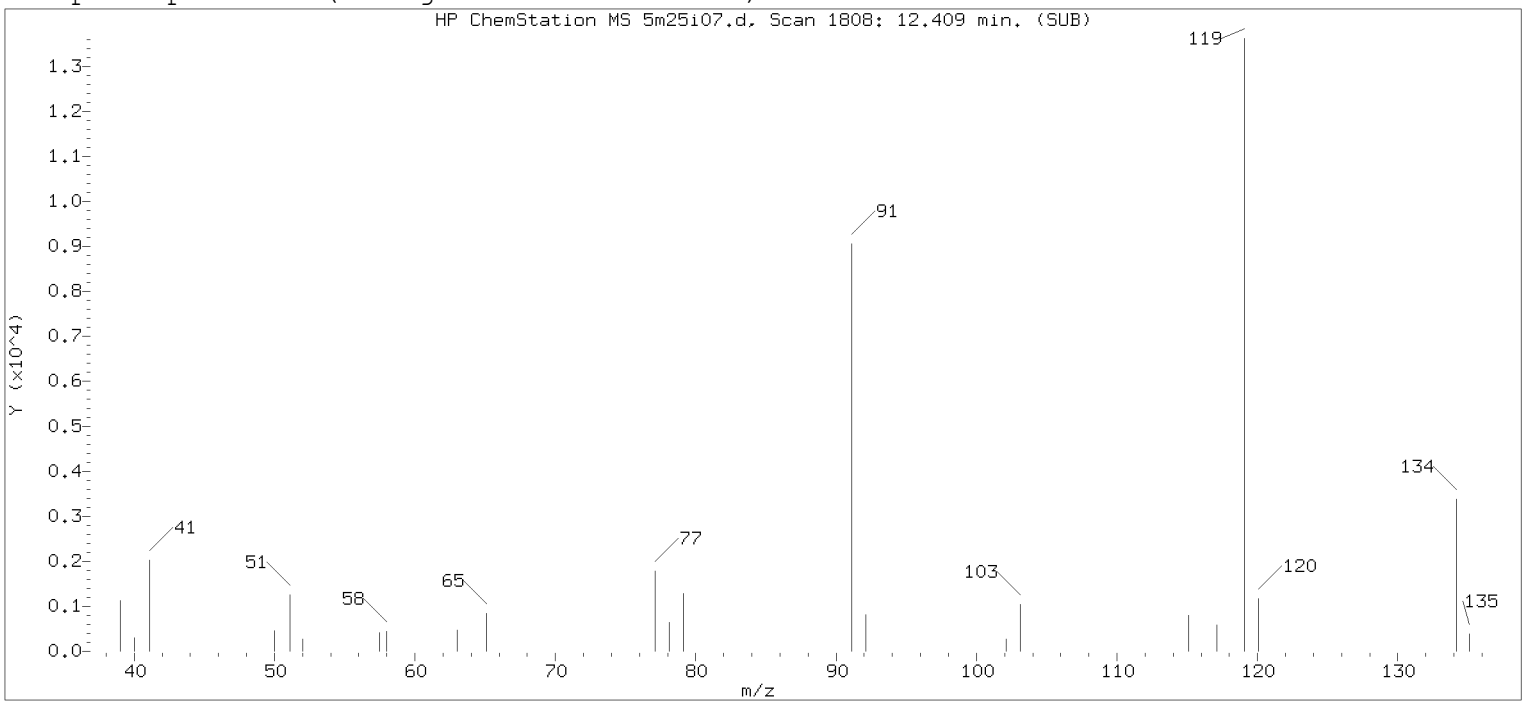
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1808
Retention Time (minutes): 12.409
Quant Ion : 134.00
Area (flag) : 4563M
On-Column Amount (ng) : 0.8665
Integration start scan : 1803 Integration stop scan: 1811
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

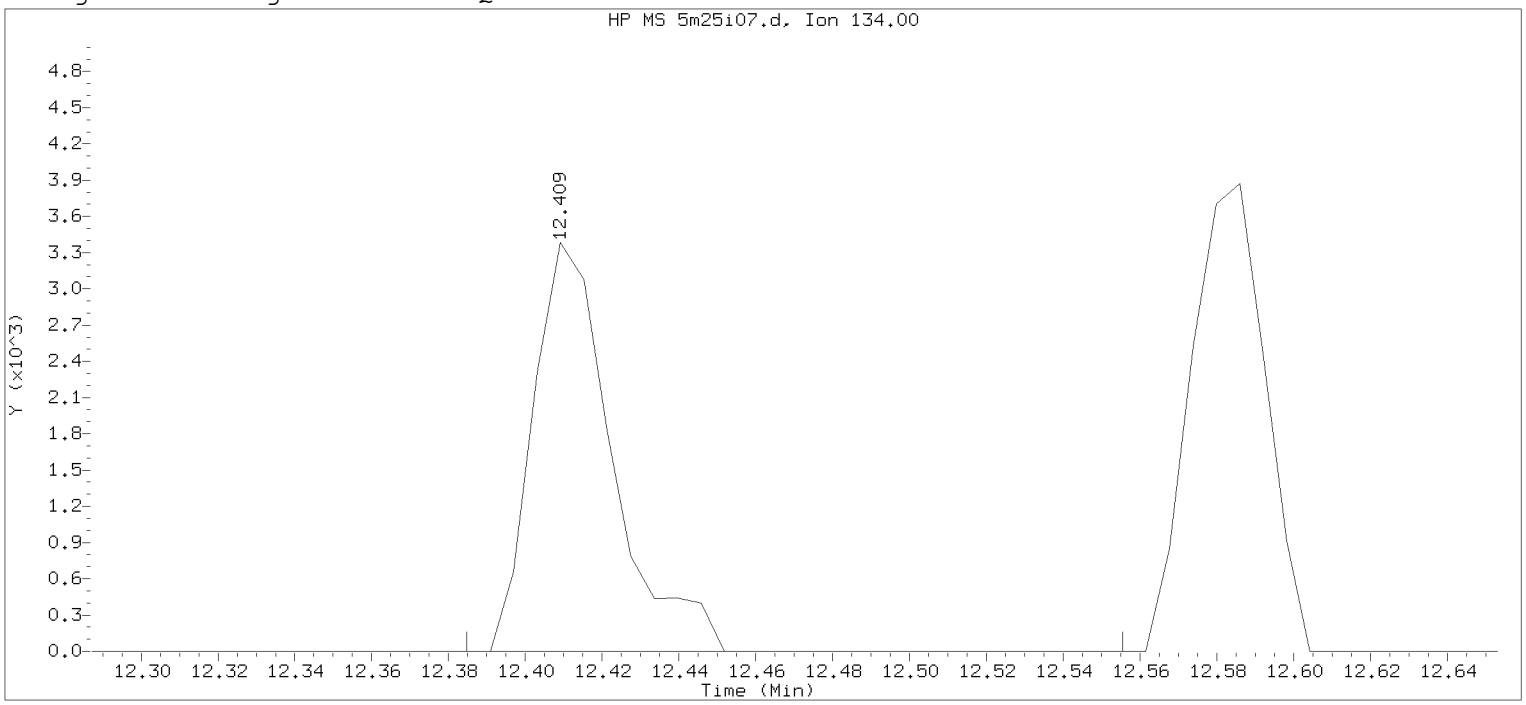
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



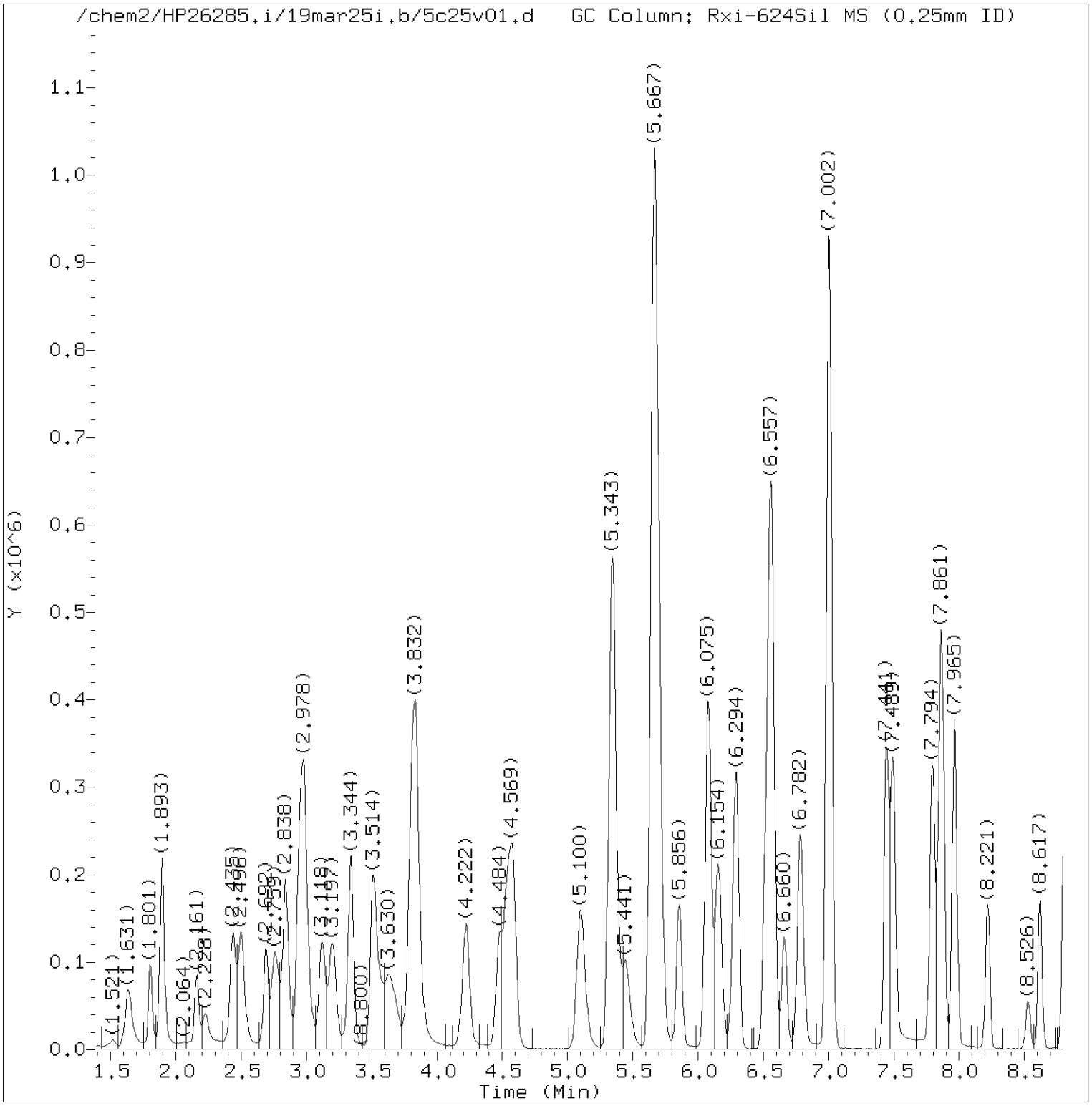
Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 15:14
Date, time and analyst ID of latest file update: 25-Mar-2019 15:14 Unknown

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1808
Retention Time (minutes): 12.409
Quant Ion : 134.00
Area : 4871
On-column Amount (ng) : 0.8638
Integration start scan : 1803 Integration stop scan: 1831
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk1004



Total Ion Chromatogram (TIC)

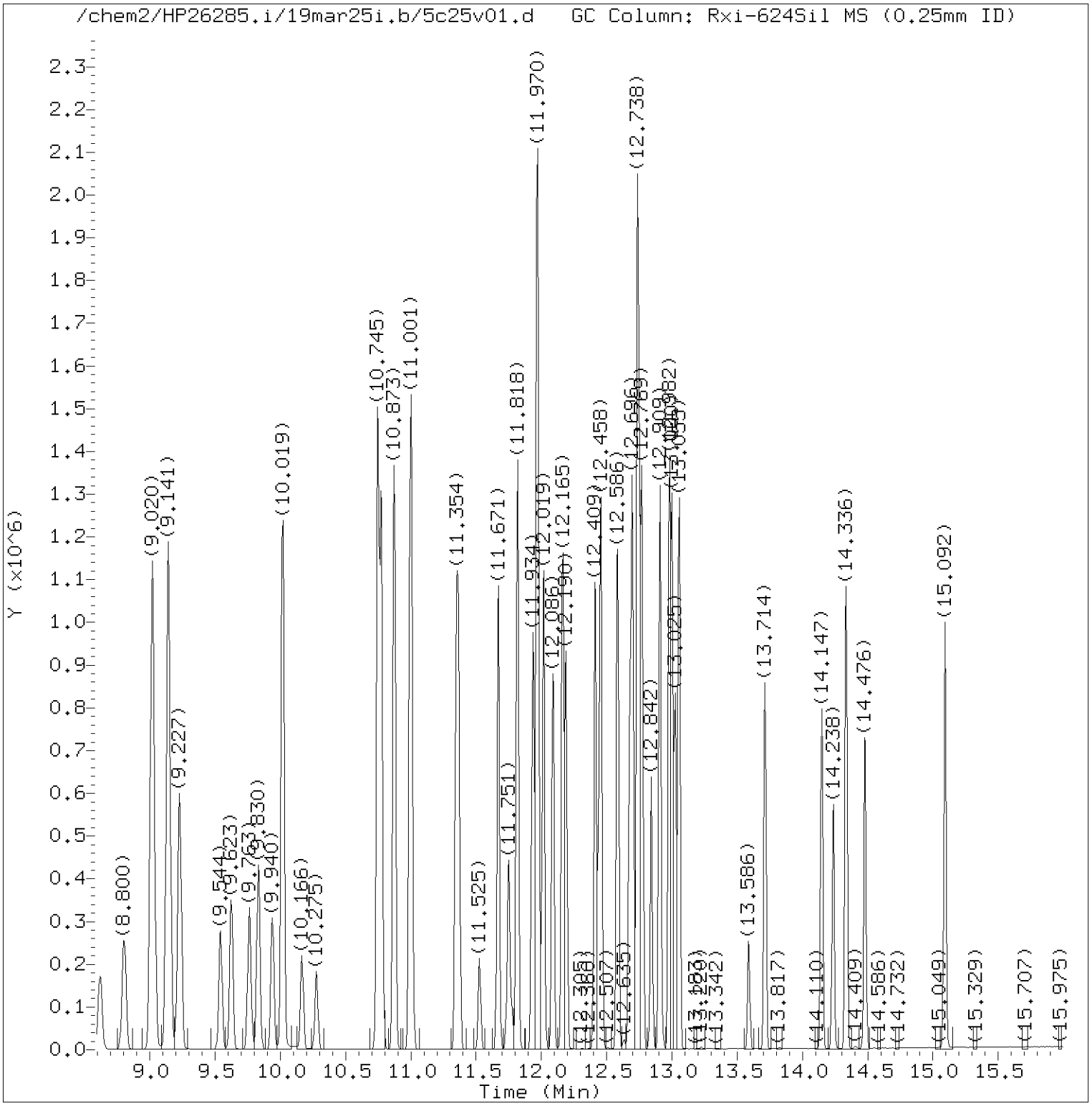
Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 26-Mar-2019 11:37 kek01027

Sample Name: LG5ICV Lab Sample ID: LG5ICV

Digitally signed by Jennifer K. Howe
on 03/26/2019 at 11:39.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 26-Mar-2019 11:37 kek01027

Sample Name: LG5ICV Lab Sample ID: LG5ICV

Digitally signed by Jennifer K. Howe
on 03/26/2019 at 11:39.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 26-Mar-2019 11:37 kek01027

Sample Name: LG5ICV Lab Sample ID: LG5ICV

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.637	85	139216	16.373
4) Chloromethane	(2)	1.801	50	116200	18.805
5) 1,3-Butadiene	(2)	1.893	39	83831	19.526
6) Vinyl Chloride	(2)	1.899	62	118724	19.639
8) Bromomethane	(2)	2.161	94	69534	14.274
9) Chloroethane	(2)	2.222	64	44481	15.349
10) Dichlorofluoromethane	(2)	2.435	67	144496	18.332
12) Trichlorofluoromethane	(2)	2.484	101	143342	17.057
11) n-Pentane	(2)	2.502	43	87480	16.505
14) Ethyl ether	(2)	2.685	59	88280	20.283
15) Freon 123a	(2)	2.759	67	125838	19.267
16) Acrolein	(1)	2.838	56	294986	137.757
17) 1,1-Dichloroethene	(2)	2.948	96	106465	21.812
19) Freon 113	(2)	2.966	101	103809	20.906
18) Acetone	(1)	2.984	58	145584	148.691
22) Methyl Iodide	(2)	3.118	142	205804	20.189
21) 2-Propanol	(1)	3.130	45	103259	145.112
23) Carbon Disulfide	(2)	3.197	76	308592	19.042
27) Methyl Acetate	(2)	3.332	43	146764	19.413
25) Allyl Chloride	(2)	3.344	41	166322	18.966
28) Methylene Chloride	(2)	3.508	84	118456	21.367
29)*t-Butyl alcohol-d10	(1)	3.533	65	303339	250.000
30) t-Butyl alcohol	(1)	3.636	59	275250	196.143
31) Acrylonitrile	(2)	3.801	53	373810	93.547
32) trans-1,2-Dichloroethene	(2)	3.838	96	119263	21.829
33) Methyl Tertiary Butyl Ether	(2)	3.838	73	307118	19.697
34) n-Hexane	(2)	4.222	57	149777	19.817
36) 1,1-Dichloroethane	(2)	4.472	63	202427	21.016
38) di-Isopropyl ether	(2)	4.539	45	359972	20.501
39) 2-Chloro-1,3-butadiene	(2)	4.581	53	171956	20.174
40) Ethyl t-butyl ether	(2)	5.100	59	319972	19.684
42) cis-1,2-Dichloroethene	(2)	5.343	96	132220	21.389
44) 2-Butanone	(2)	5.343	43	820618	135.989
45) 2,2-Dichloropropane	(2)	5.350	77	160731	20.865
47) Propionitrile	(1)	5.447	54	237981	155.917
48) Methacrylonitrile	(2)	5.667	67	587383	149.391
49) Bromochloromethane	(2)	5.685	128	60975	19.712
50) Tetrahydrofuran	(1)	5.703	71	154887	99.895

* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 03/26/2019 at 11:39.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 26-Mar-2019 11:37 kek01027

Sample Name: LG5ICV Lab Sample ID: LG5ICV

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	5.856	83	200837	21.028
53) 1,1,1-Trichloroethane	(2)	6.069	97	177471	21.113
52)$Dibromofluoromethane	(2)	6.081	113	251990	49.806
54) Cyclohexane	(2)	6.154	56	188561	19.403
43) 1,2-Dichloroethene (Total)	(2)		96	251483	43.218
56) Carbon Tetrachloride	(2)	6.282	117	150826	20.734
55) 1,1-Dichloropropene	(2)	6.294	75	160744	20.804
58) Isobutyl Alcohol	(1)	6.520	41	229638	499.678
57)$1,2-Dichloroethane-d4	(2)	6.551	102	58948	49.795
60) Benzene	(2)	6.569	78	491780	20.952
61) 1,2-Dichloroethane	(2)	6.660	62	145518	20.978
65) t-Amyl methyl ether	(2)	6.782	73	329968	20.141
66)*Fluorobenzene	(2)	7.002	96	1057294	50.000
67) n-Heptane	(2)	7.014	43	162946	19.119
69) n-Butanol	(1)	7.441	56	381865	996.548
71) Trichloroethene	(2)	7.495	95	126099	20.716
73) Methylcyclohexane	(2)	7.794	83	199819	19.825
74) 1,2-Dichloropropane	(2)	7.849	63	124457	21.391
76) 1,4-Dioxane	(1)	7.947	88	47974M	539.724
77) Methyl Methacrylate	(2)	7.965	69	116009	19.099
75) Dibromomethane	(2)	7.965	93	76595	20.814
79) Bromodichloromethane	(2)	8.221	83	143365	20.963
80) 2-Nitropropane	(2)	8.526	41	46372	16.519
81) 2-Chloroethyl Vinyl Ether	(2)	8.617	63	100356M	20.668
82) cis-1,3-Dichloropropene	(2)	8.800	75	190041	21.120
83) 4-Methyl-2-pentanone	(2)	9.020	43	1046828	84.700
84)$Toluene-d8	(3)	9.141	98	1022700	50.034
89) Toluene	(3)	9.227	92	323057	21.234
90) trans-1,3-Dichloropropene	(3)	9.544	75	164633	20.025
92) Ethyl Methacrylate	(3)	9.623	69	192638	19.542
93) 1,1,2-Trichloroethane	(3)	9.763	97	115685	21.254
94) Tetrachloroethene	(3)	9.830	166	143203	20.698
95) 1,3-Dichloropropane	(3)	9.940	76	183487	20.579
97) 2-Hexanone	(3)	10.019	43	854408	79.406
91) 1,3-Dichloropropene (total)	(3)		100	354674	41.145
98) Dibromochloromethane	(3)	10.166	129	116649	20.933
100) 1,2-Dibromoethane	(3)	10.275	107	123329	20.291
101)*Chlorobenzene-d5	(3)	10.745	117	809780	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 03/26/2019 at 11:39.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 26-Mar-2019 11:37 kek01027

Sample Name: LG5ICV Lab Sample ID: LG5ICV

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
103) Chlorobenzene	(3)	10.775	112	355435	20.879
102) 1-Chlorohexane	(3)	10.775	91	179350	20.234
104) 1,1,1,2-Tetrachloroethane	(3)	10.867	131	120284	20.932
105) Ethylbenzene	(3)	10.873	91	624941	21.029
107) m+p-Xylene	(3)	11.001	106	495654	42.291
108) o-Xylene	(3)	11.348	106	240502	21.001
110) Styrene	(3)	11.367	104	402044	21.260
111) Bromoform	(3)	11.525	173	86518	19.668
112) Isopropylbenzene	(3)	11.671	105	637091	21.422
113) Cyclohexanone	(1)	11.751	55	196422M	528.157
109) Xylene (Total)	(3)		106	736156	63.292
115)$4-Bromofluorobenzene	(3)	11.818	95	394758	49.635
116) Bromobenzene	(4)	11.934	156	157768	21.101
117) 1,1,2,2-Tetrachloroethane	(4)	11.940	83	200610	21.190
119) trans-1,4-Dichloro-2-butene	(4)	11.964	53	317521	106.499
118) 1,2,3-Trichloropropane	(4)	11.982	110	59342	20.806
120) n-Propylbenzene	(4)	12.019	91	760673	21.618
121) 2-Chlorotoluene	(4)	12.092	126	151815	20.928
123) 1,3,5-Trimethylbenzene	(4)	12.165	105	538830	21.220
122) 4-Chlorotoluene	(4)	12.190	126	156067	20.956
125) tert-Butylbenzene	(4)	12.415	134	111818M	20.839
126) Pentachloroethane	(4)	12.440	167	91465	20.873
127) 1,2,4-Trimethylbenzene	(4)	12.458	105	544880	20.925
128) sec-Butylbenzene	(4)	12.586	105	704316	21.409
130) 1,3-Dichlorobenzene	(4)	12.677	146	297904	20.805
131) p-Isopropyltoluene	(4)	12.696	119	611860	21.452
132)*1,4-Dichlorobenzene-d4	(4)	12.738	152	433425	50.000
134) 1,4-Dichlorobenzene	(4)	12.757	146	308182	21.236
135) 1,2,3-Trimethylbenzene	(4)	12.769	105	566794	21.071
136) Benzyl Chloride	(4)	12.842	91	355261	19.048
137) 1,3-Diethylbenzene	(4)	12.909	119	359893	20.702
138) 1,4-Diethylbenzene	(4)	12.982	119	372905	20.213
140) n-Butylbenzene	(4)	13.000	92	302908	21.054
139) 1,2-Dichlorobenzene	(4)	13.025	146	287642	21.248
141) 1,2-Diethylbenzene	(4)	13.055	119	303333	20.989
142) Diethylbenzene (total)	(4)		100	1036131	61.904
143) 1,2-Dibromo-3-chloropropane	(4)	13.586	75	49737	21.030
145) 1,3,5-Trichlorobenzene	(4)	13.714	180	225250	20.700

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 03/26/2019 at 11:39.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

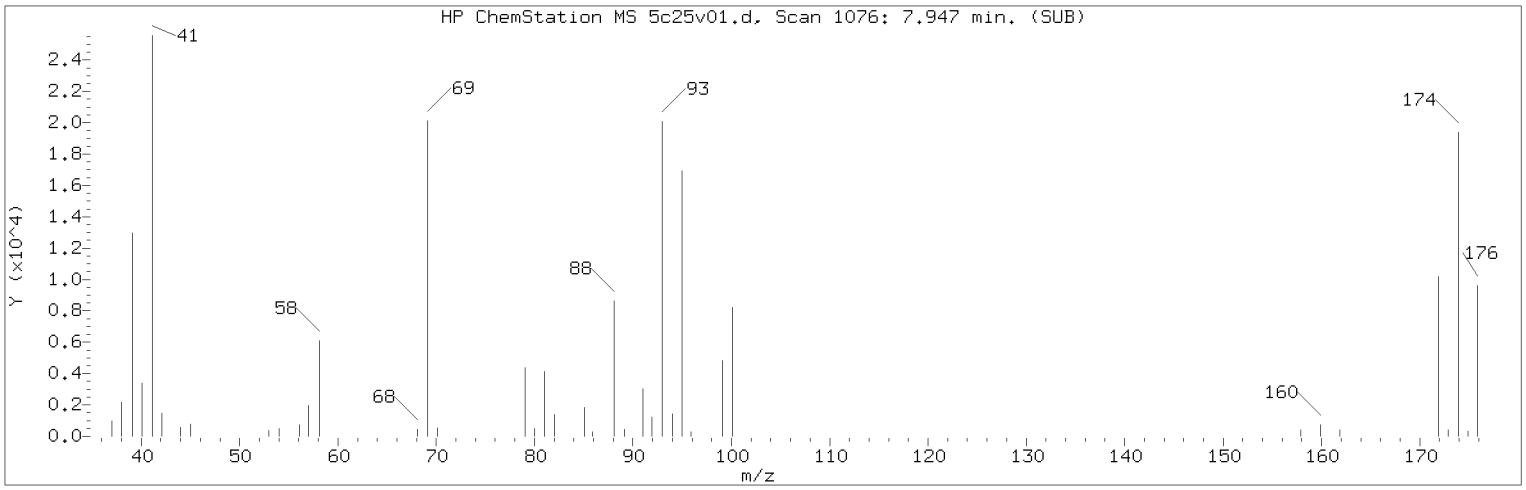
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 26-Mar-2019 11:37 kek01027

Sample Name: LG5ICV Lab Sample ID: LG5ICV

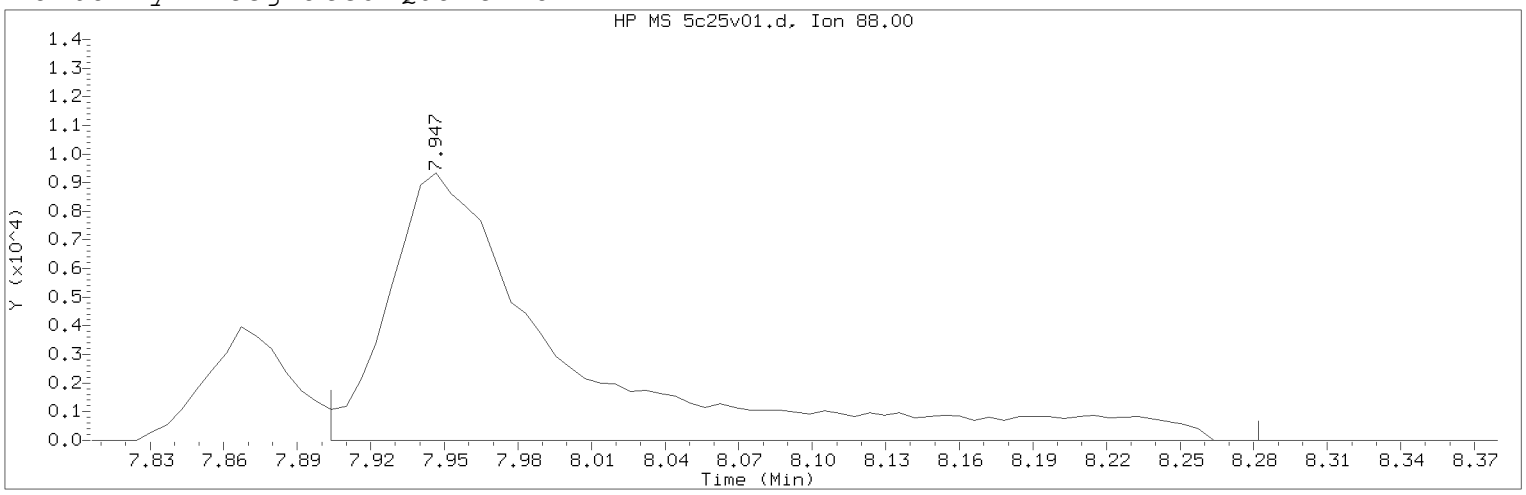
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) 1,2,4-Trichlorobenzene	(4)	14.147	180	205023	20.814
148) Hexachlorobutadiene	(4)	14.238	225	92670	19.934
149) Naphthalene	(4)	14.336	128	698702	20.904
150) 1,2,3-Trichlorobenzene	(4)	14.482	180	195042	20.665
151) 2-Methylnaphthalene	(4)	15.092	142	403100	20.496

Digitally signed by Jennifer K. Howe
on 03/26/2019 at 11:39.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 26-Mar-2019 11:37 kek01027

Sample Name: LG5ICV Lab Sample ID: LG5ICV

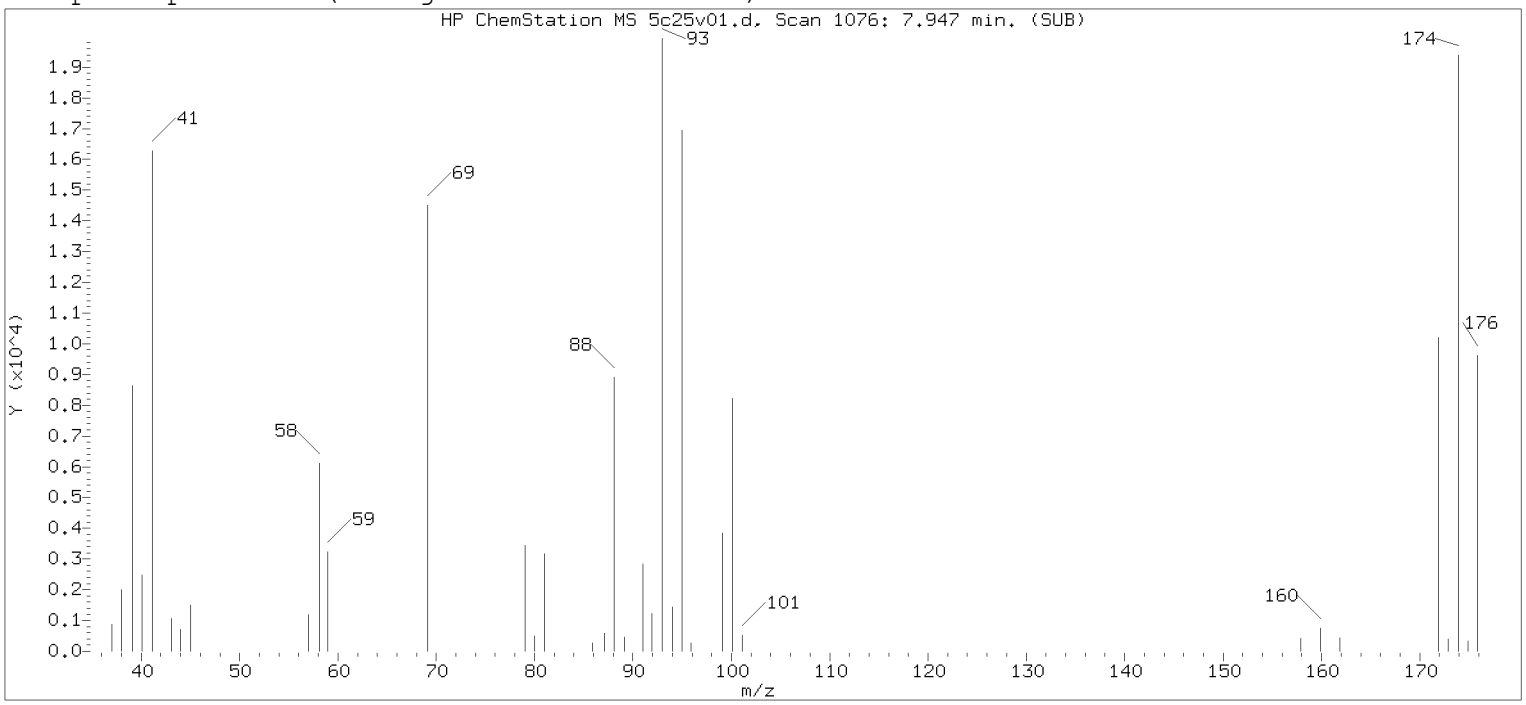
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1076
Retention Time (minutes): 7.947
Quant Ion : 88.00
Area (flag) : 47974M
On-Column Amount (ng) : 539.7240
Integration start scan : 1068 Integration stop scan: 1130
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

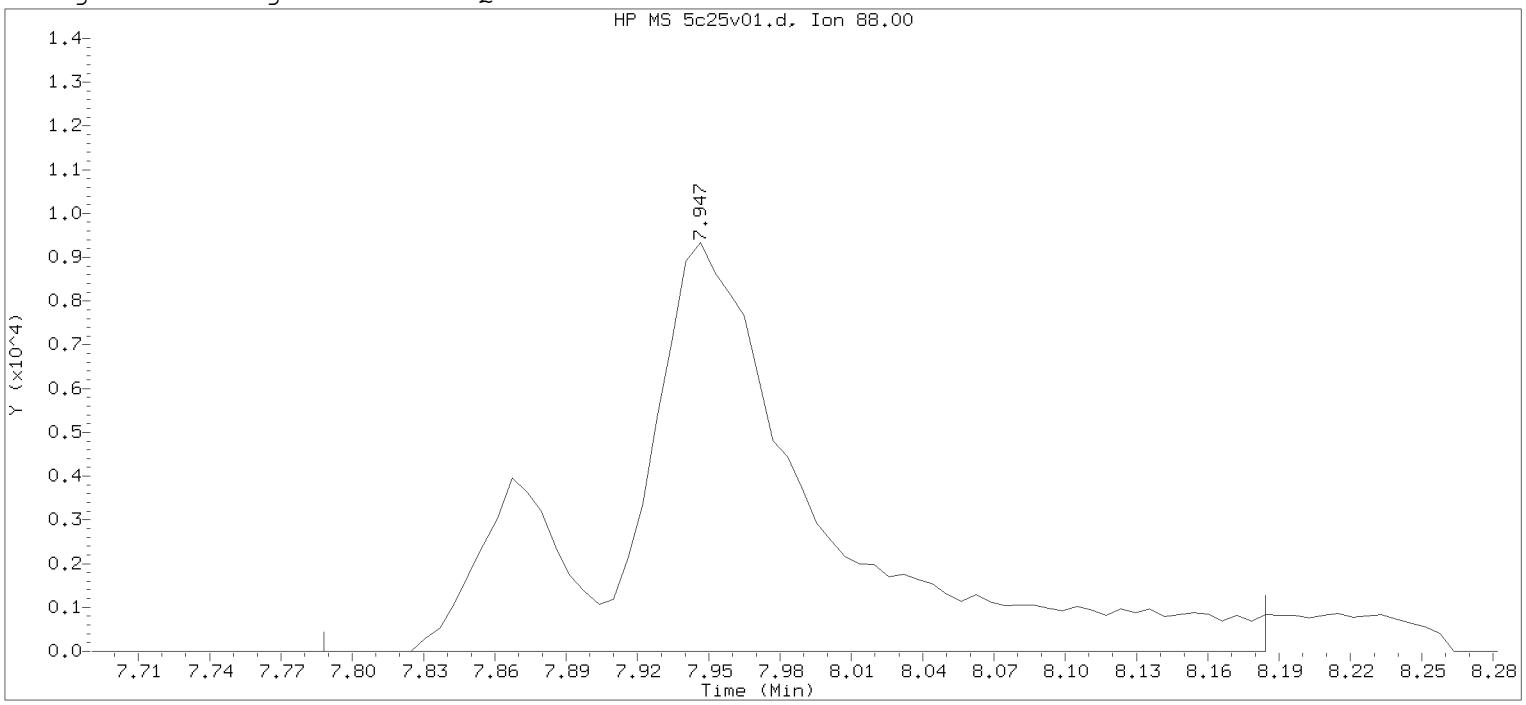
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 03/26/2019 at 11:39.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:54.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

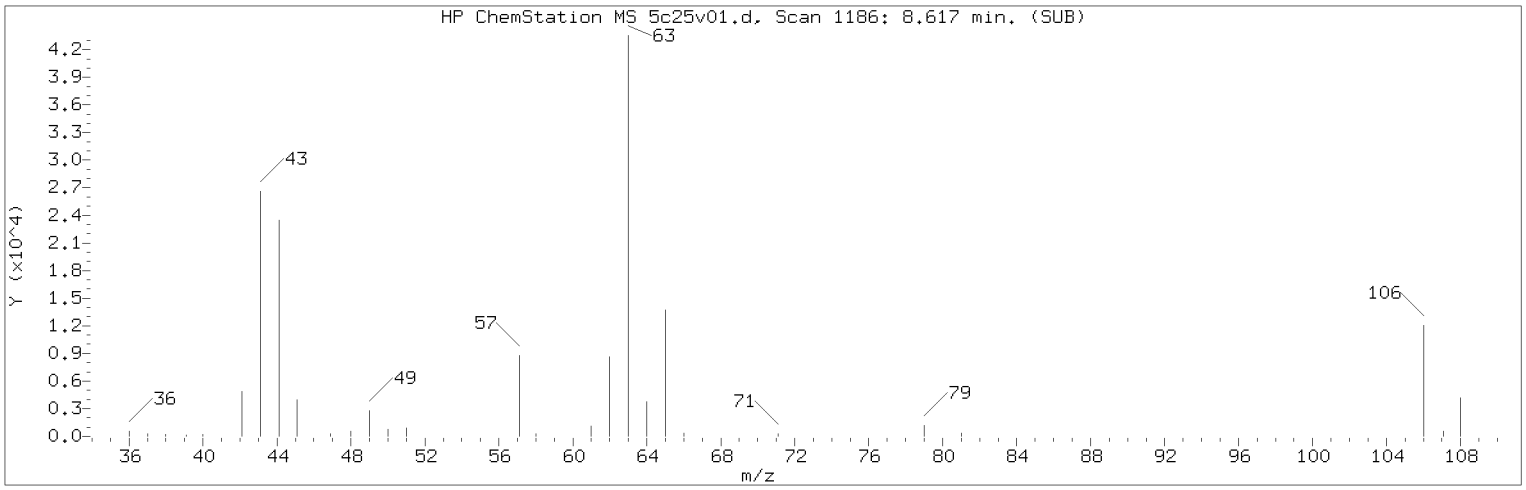
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 25-Mar-2019 21:52 kk10002

Sample Name: LG5ICV Lab Sample ID: LG5ICV

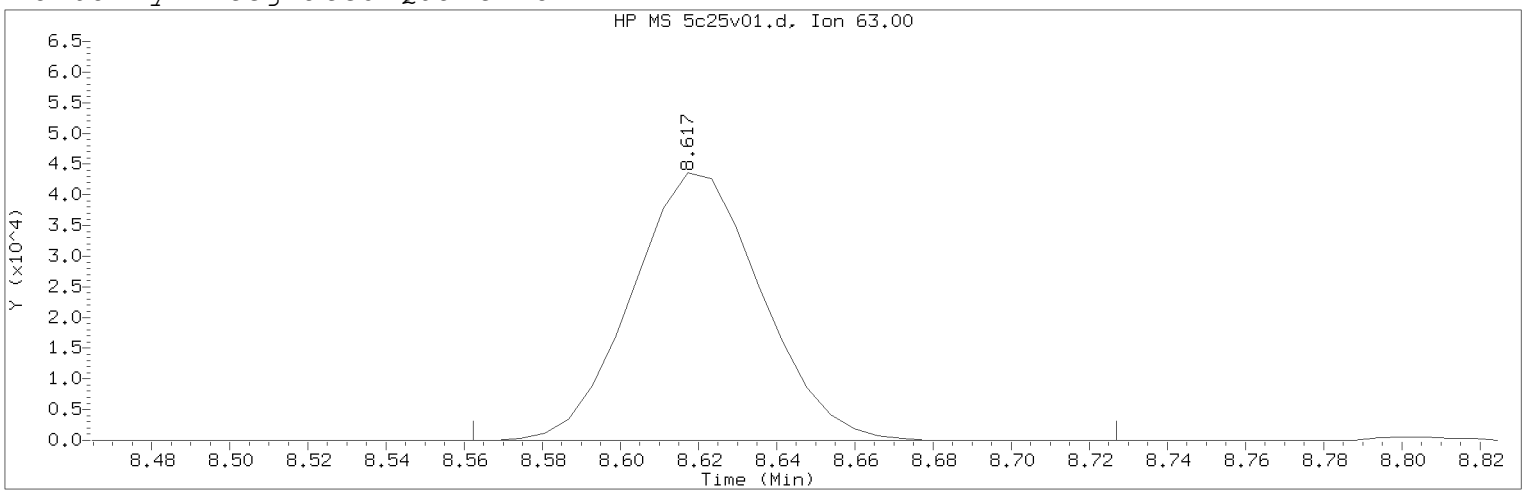
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1076
Retention Time (minutes): 7.947
Quant Ion : 88.00
Area : 53880
On-column Amount (ng) : 606.1681
Integration start scan : 1049 Integration stop scan: 1114
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 03/26/2019 at 11:39.
Target 3.5 esignature user: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 26-Mar-2019 11:37 kek01027

Sample Name: LG5ICV Lab Sample ID: LG5ICV

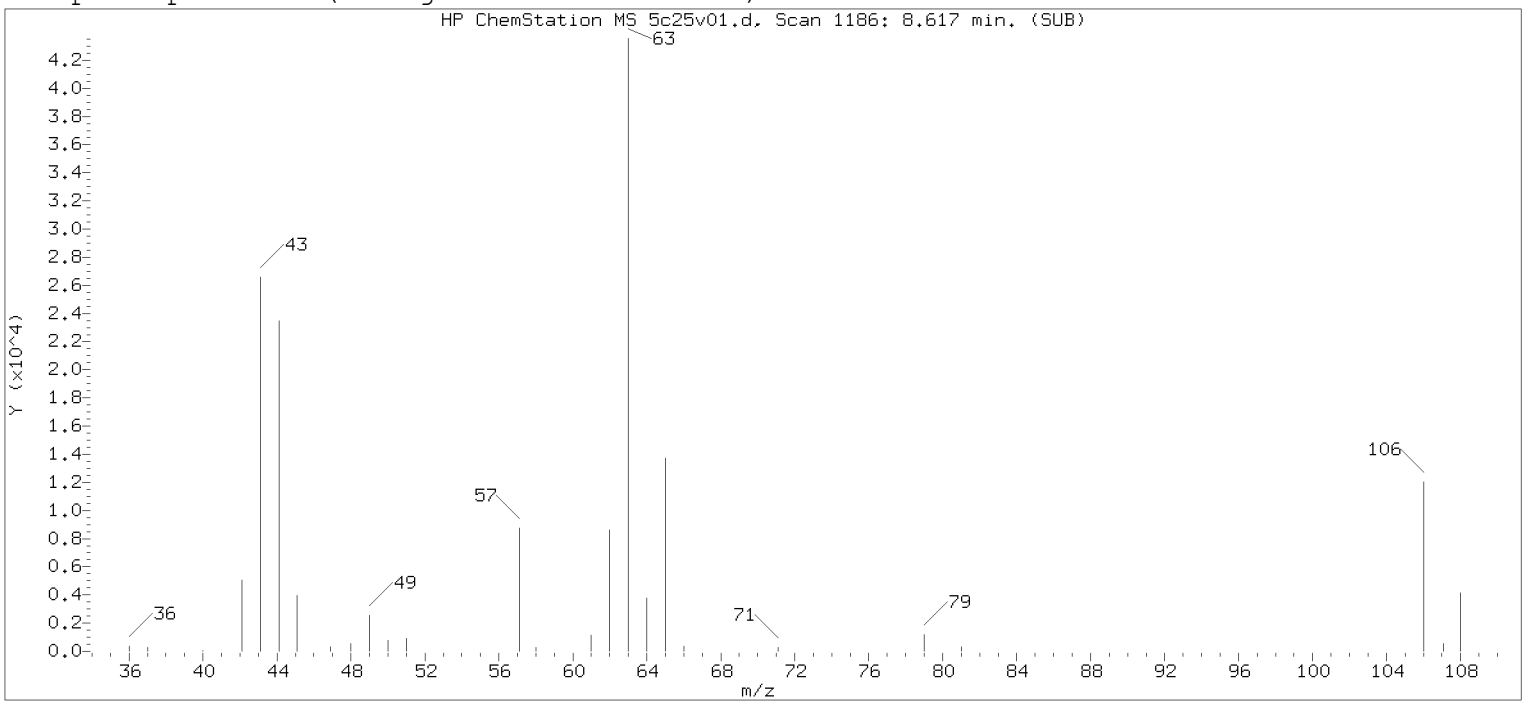
Compound Number : 81
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1186
Retention Time (minutes): 8.617
Quant Ion : 63.00
Area (flag) : 100356M
On-Column Amount (ng) : 20.6679
Integration start scan : 1176 Integration stop scan: 1203
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

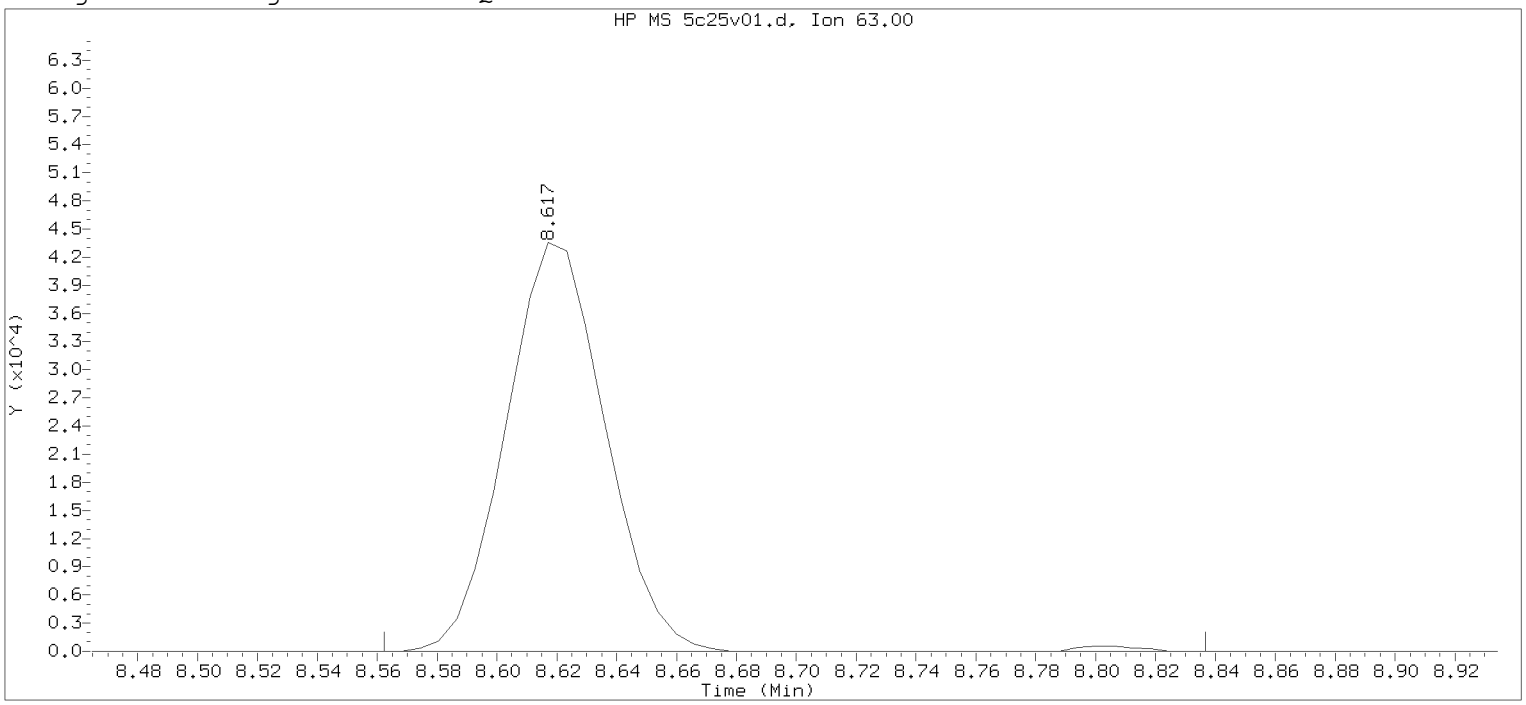
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 03/26/2019 at 11:39.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:54.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

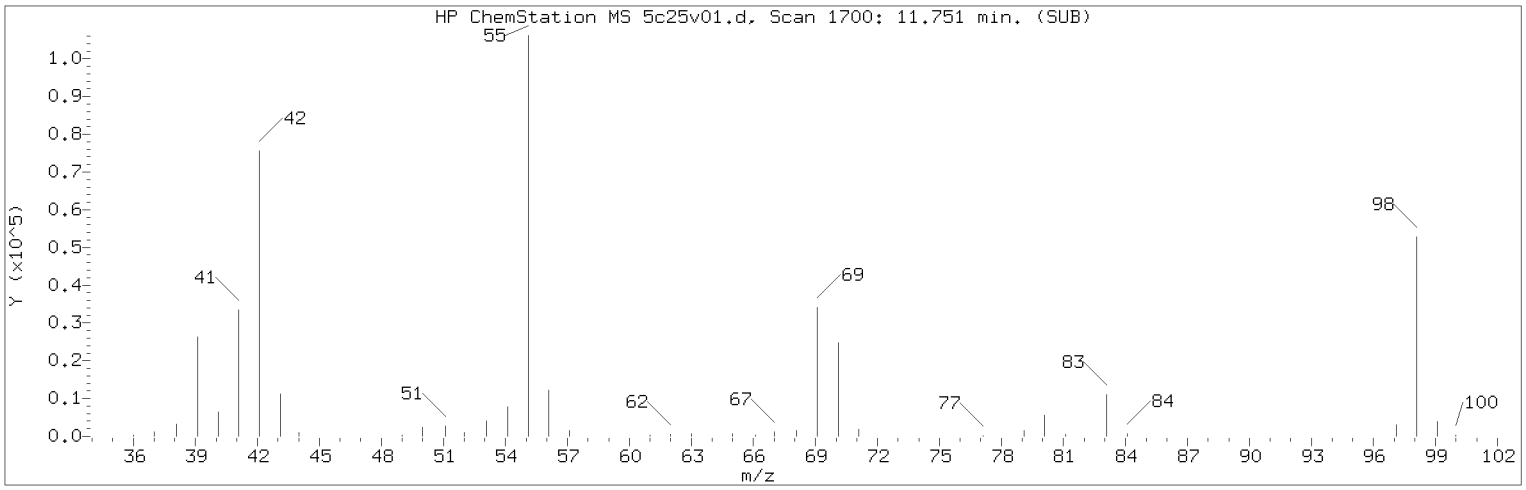
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 25-Mar-2019 21:52 kk10002

Sample Name: LG5ICV Lab Sample ID: LG5ICV

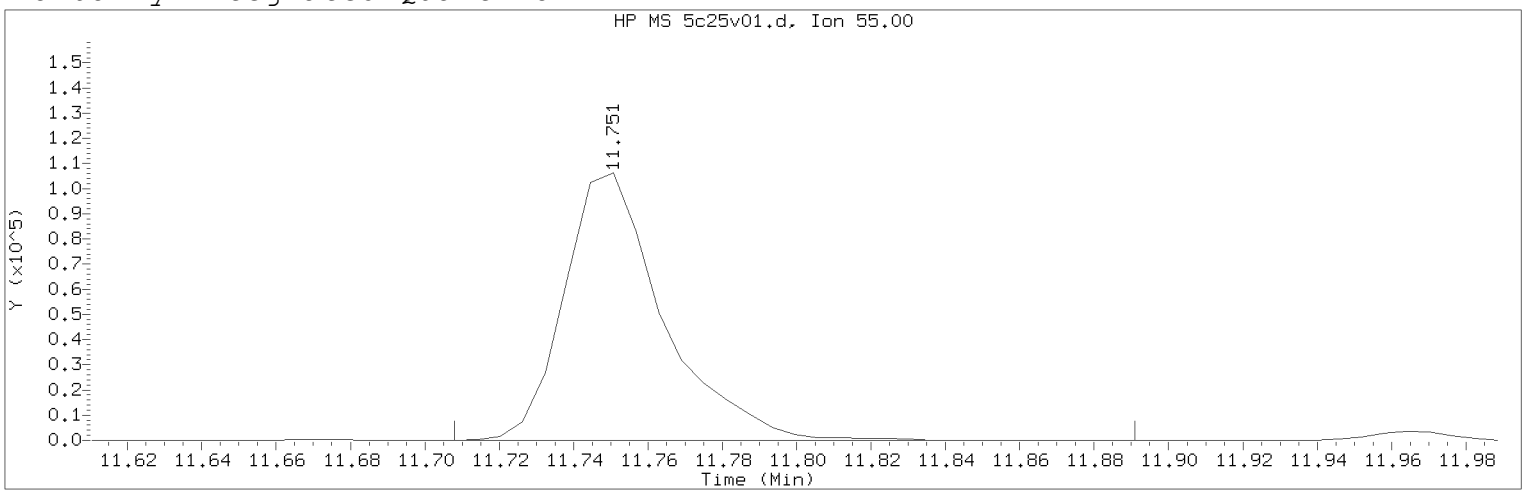
Compound Number : 81
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1186
Retention Time (minutes): 8.617
Quant Ion : 63.00
Area : 101128
On-column Amount (ng) : 20.8269
Integration start scan : 1176 Integration stop scan: 1221
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 03/26/2019 at 11:39.
Target 3.5 esignature user: JHOWE

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 26-Mar-2019 11:37 kek01027

Sample Name: LG5ICV Lab Sample ID: LG5ICV

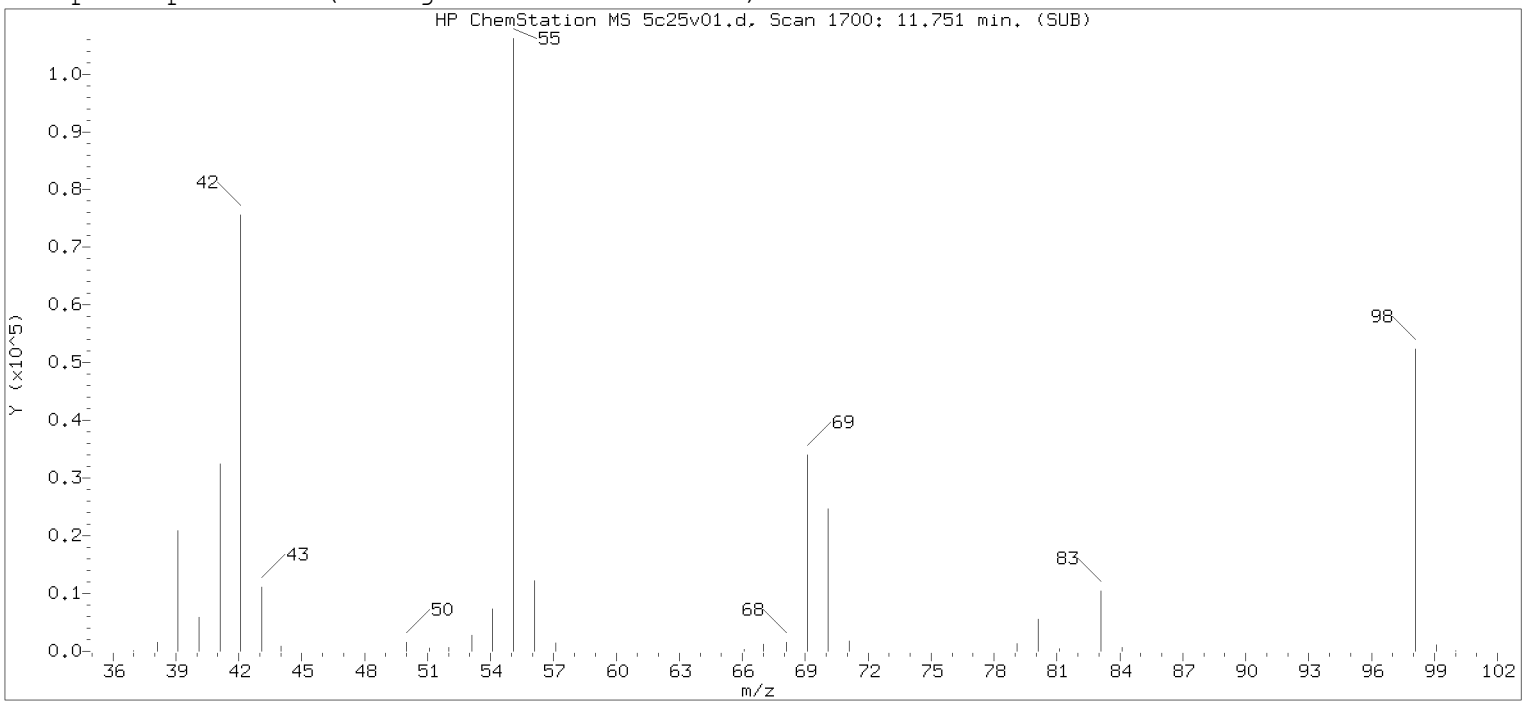
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1700
Retention Time (minutes): 11.751
Quant Ion : 55.00
Area (flag) : 196422M
On-Column Amount (ng) : 528.1572
Integration start scan : 1692 Integration stop scan: 1722
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

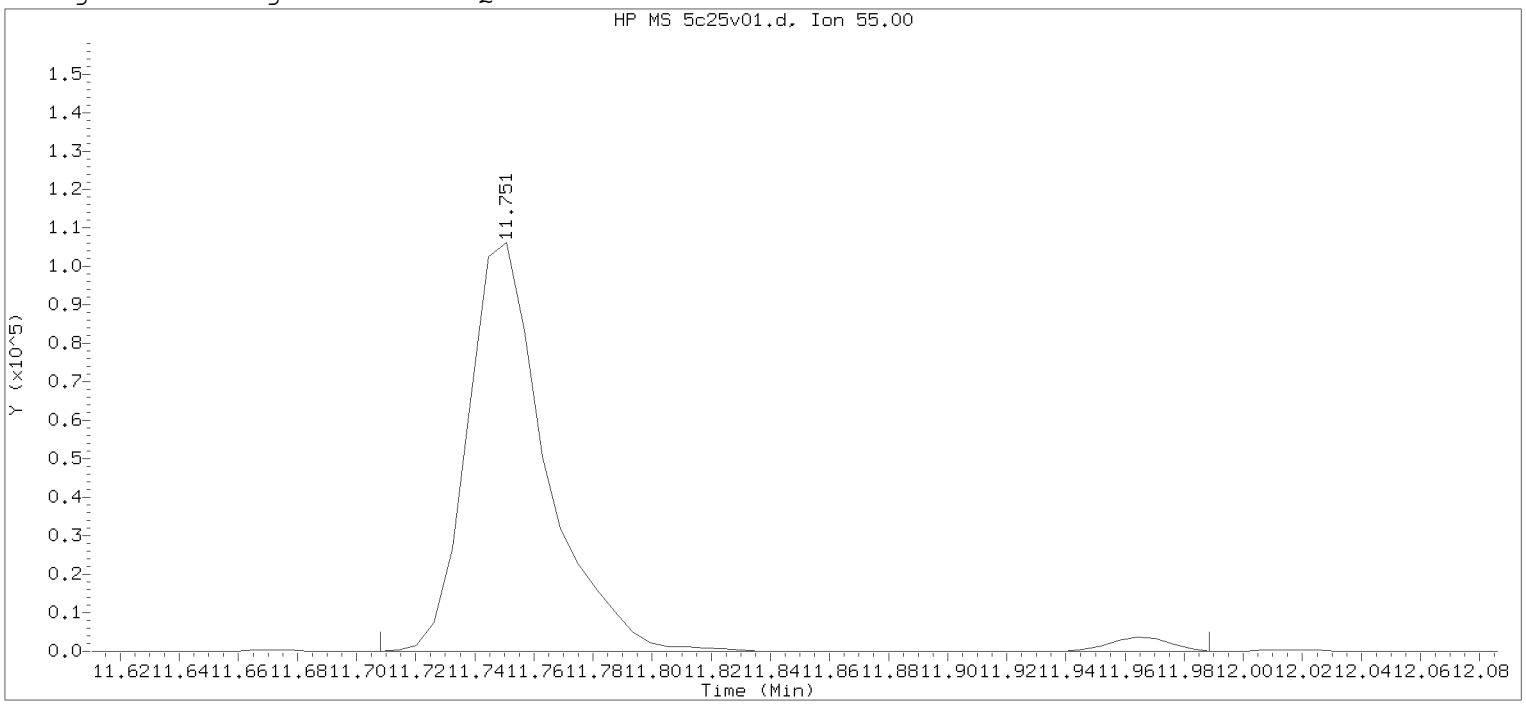
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 03/26/2019 at 11:39.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:54.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

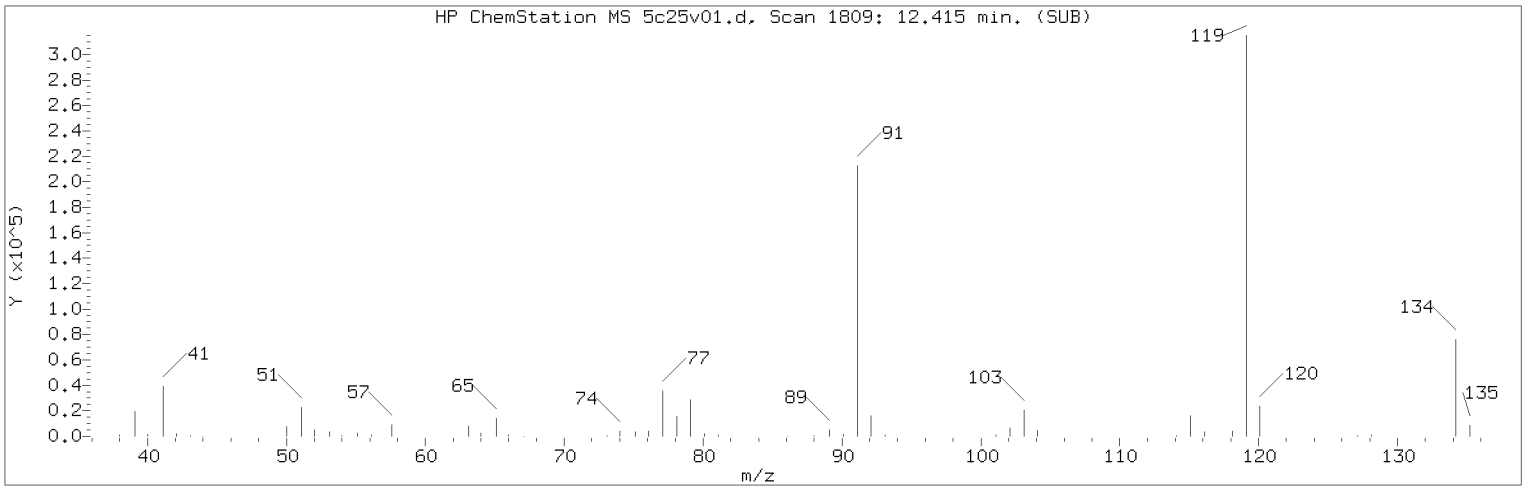
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 25-Mar-2019 21:52 kk10002

Sample Name: LG5ICV Lab Sample ID: LG5ICV

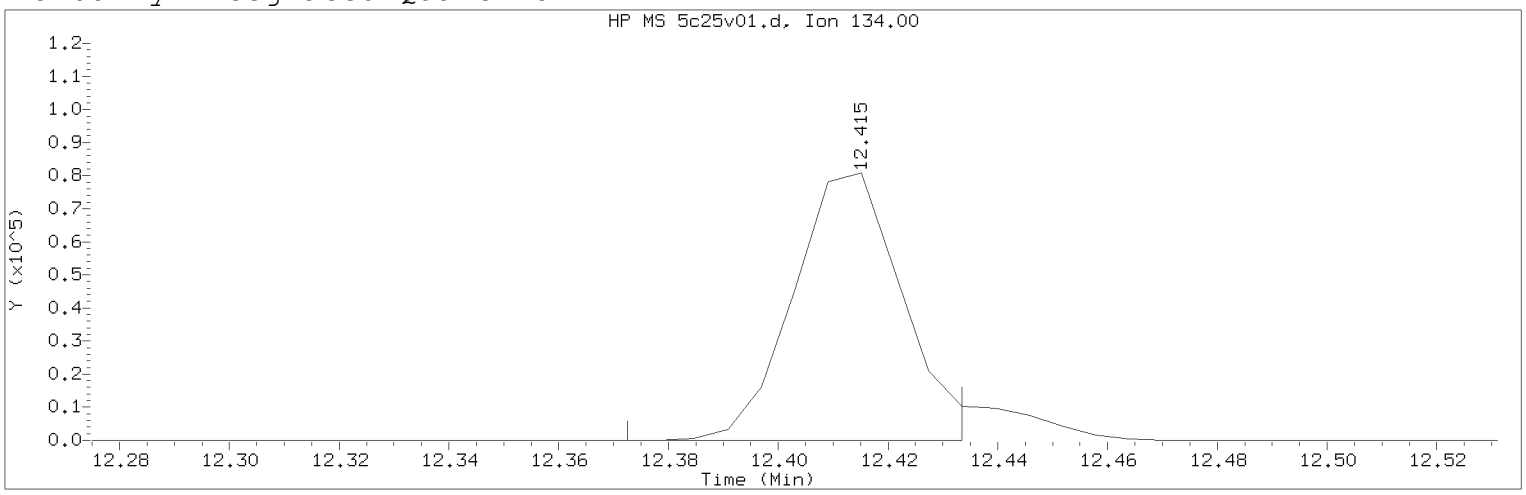
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1700
Retention Time (minutes): 11.751
Quant Ion : 55.00
Area : 201506
On-column Amount (ng) : 541.8277
Integration start scan : 1692 Integration stop scan: 1738
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 03/26/2019 at 11:39.
Target 3.5 esignature user ID: jkh0003

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 26-Mar-2019 11:37 kek01027

Sample Name: LG5ICV Lab Sample ID: LG5ICV

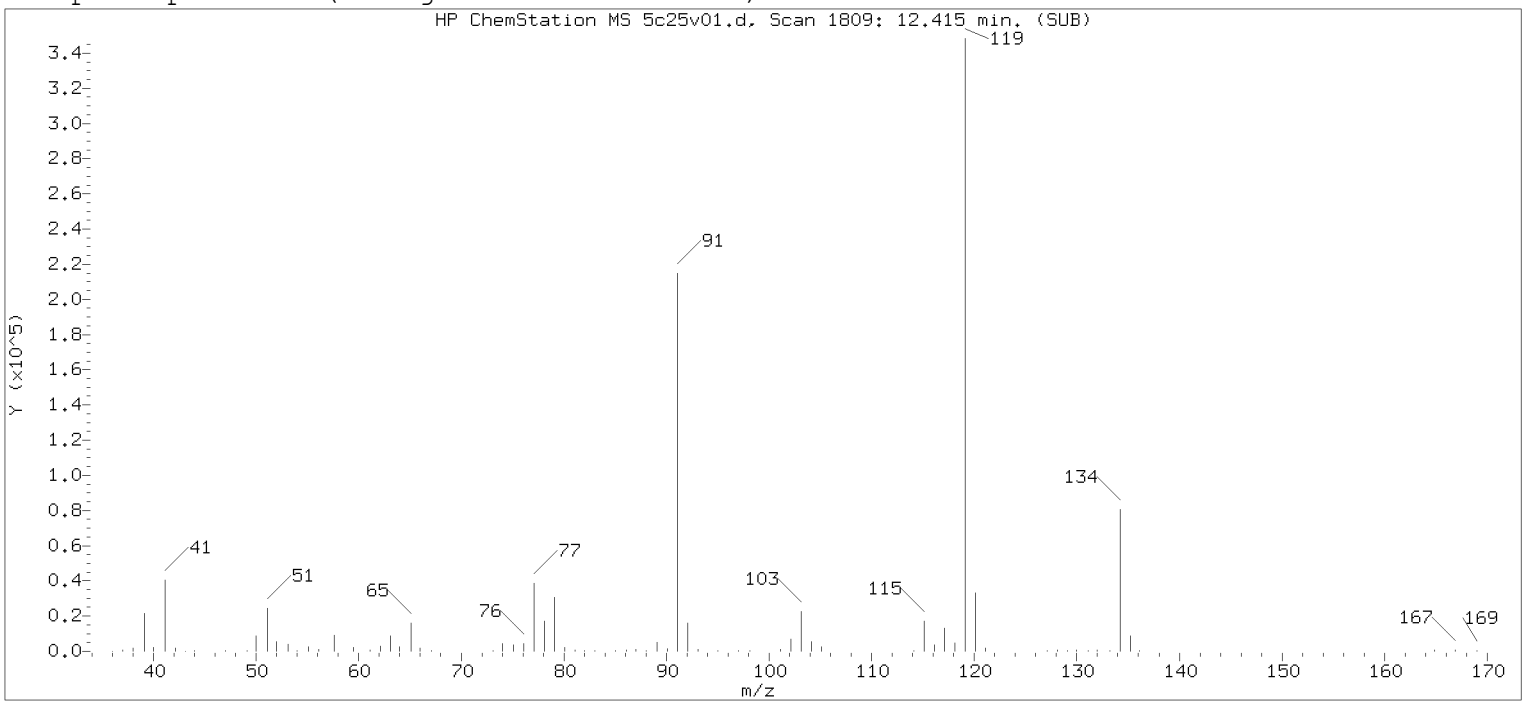
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1809
Retention Time (minutes): 12.415
Quant Ion : 134.00
Area (flag) : 111818M
On-Column Amount (ng) : 20.8389
Integration start scan : 1801 Integration stop scan: 1811
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

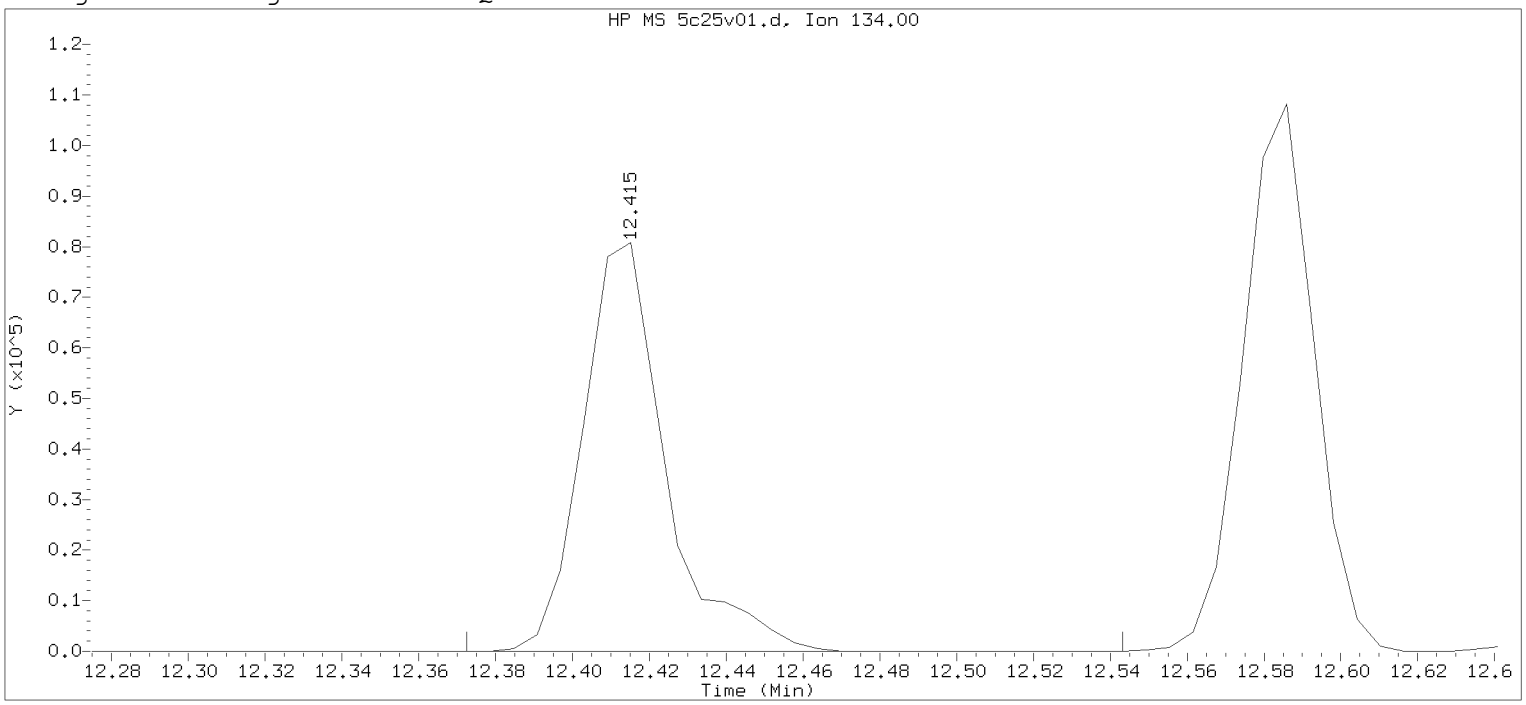
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 03/26/2019 at 11:39.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:54.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 25-Mar-2019 21:52 kk10002

Sample Name: LG5ICV Lab Sample ID: LG5ICV

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1809
Retention Time (minutes): 12.415
Quant Ion : 134.00
Area : 120508
On-column Amount (ng) : 22.4583
Integration start scan : 1801 Integration stop scan: 1829
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 03/26/2019 at 11:39.
Target 3.5 esignature user: jkhowe

Data File: /chem2/HP26285.i/19may19a.b/5y19t01.d

Page 1

Date : 19-MAY-2019 12:40

Client ID: BFB Feb05-19

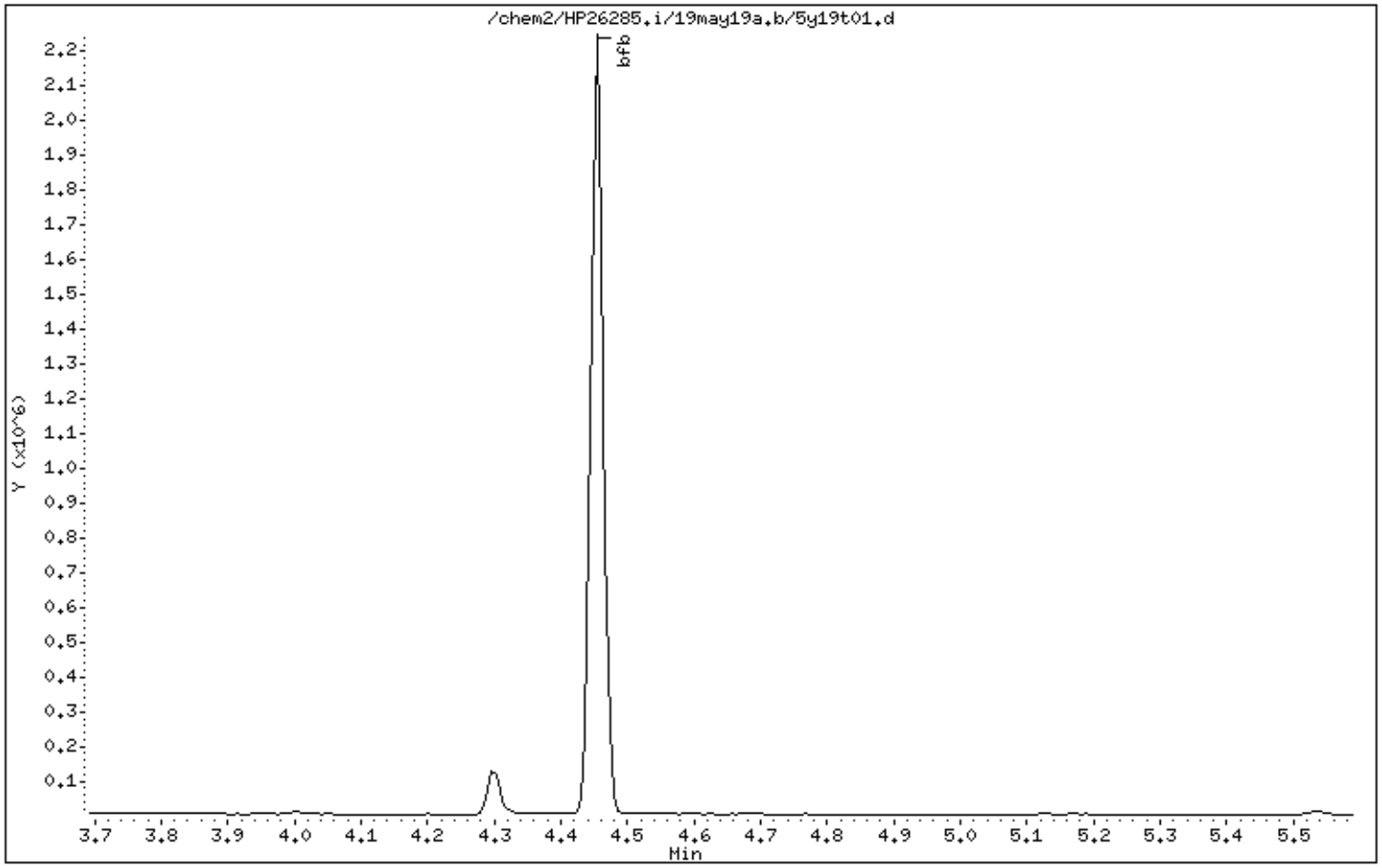
Instrument: HP26285.i

Sample Info: BFB Feb05-19;50 ng BFB;1;3;;;;;;

Operator: DVV10203

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Don V. Viray on 05/19/2019 at 12:47.
Target 3.5 esignature user ID: dvv10203

Data File: /chem2/HP26285.i/19may19a.b/5y19t01.d

Date : 19-MAY-2019 12:40

Client ID: BFB Feb05-19

Instrument: HP26285.i

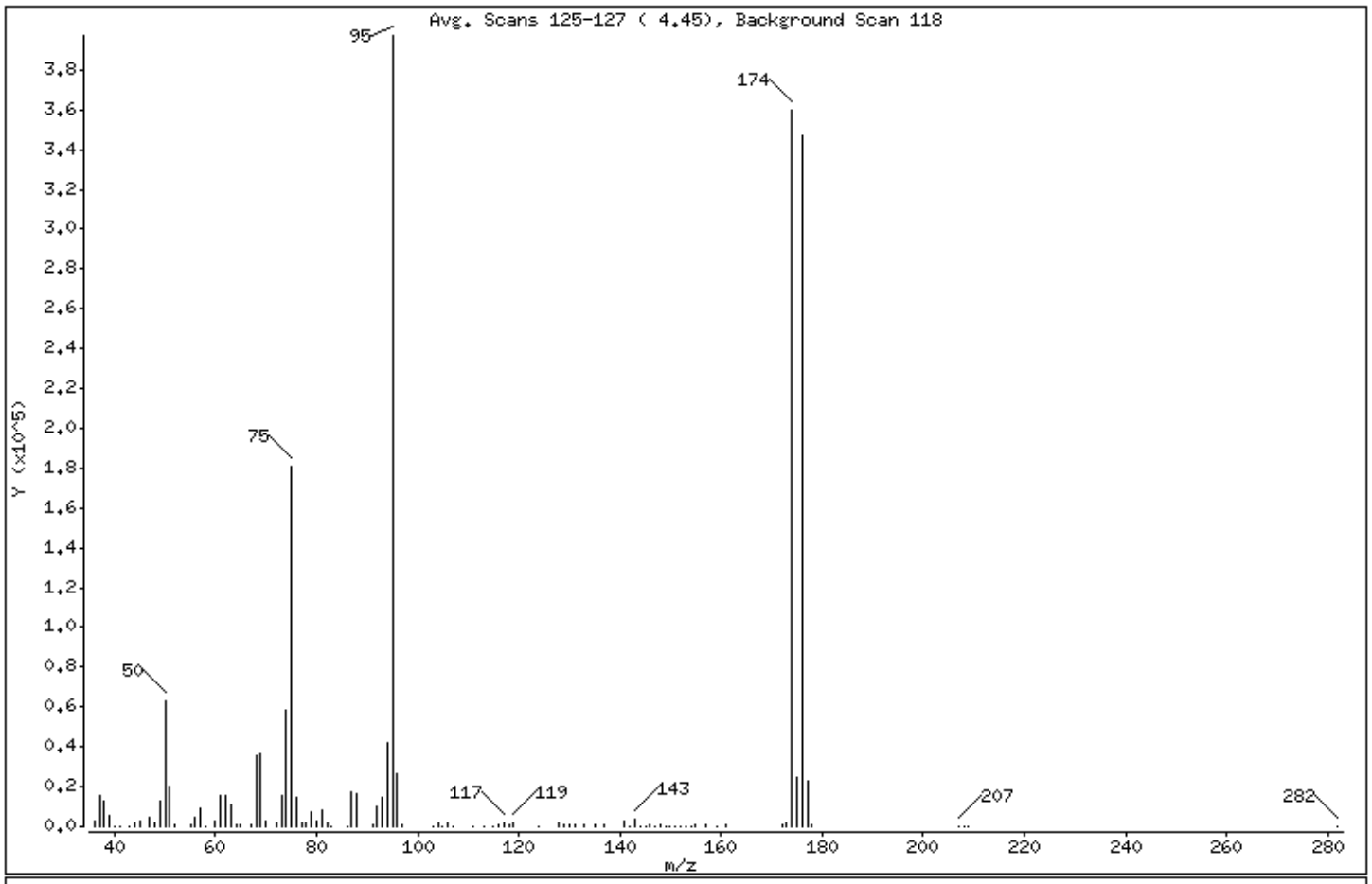
Sample Info: BFB Feb05-19;50 ng BFB;1;3;;;;;;

Operator: DVV10203

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.95
75	30.00 - 60.00% of mass 95	45.60
96	5.00 - 9.00% of mass 95	6.72
173	Less than 2.00% of mass 174	0.47 (0.52)
174	50.00 - 100.00% of mass 95	90.51
175	5.00 - 9.00% of mass 174	6.31 (6.97)
176	95.00 - 101.00% of mass 174	87.26 (96.42)
177	5.00 - 9.00% of mass 176	5.74 (6.57)

Digitally signed by Don V. Viray on 05/19/2019 at 12:47.
Target 3.5 esignature user ID: dvv10203

Data File: /chem2/HP26285.i/19may19a.b/5y19t01.d

Date : 19-MAY-2019 12:40

Client ID: BFB Feb05-19 Instrument: HP26285.i

Sample Info: BFB Feb05-19;50 ng BFB;1;3;;;;;;

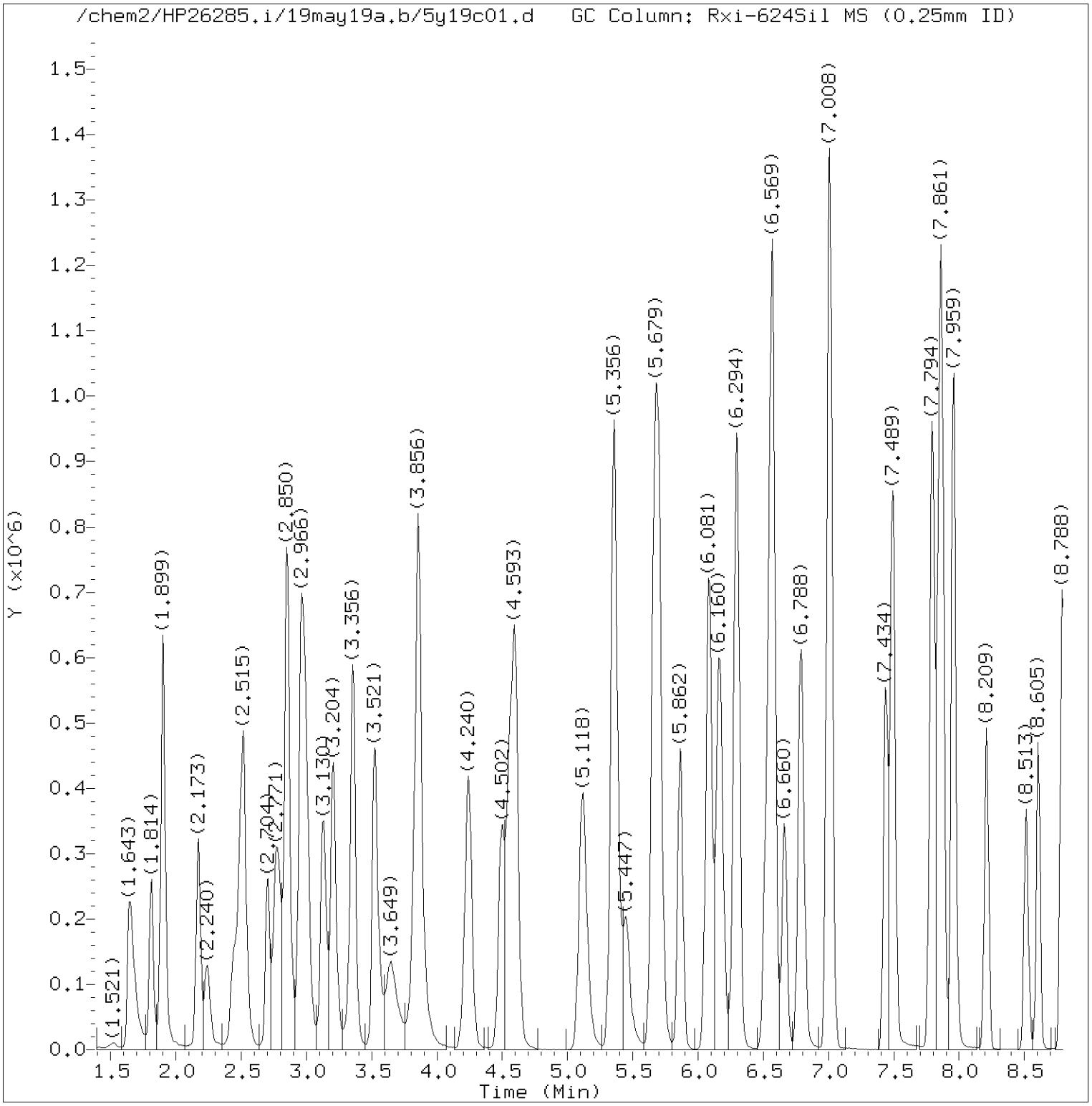
Operator: DVV10203

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: 5y19t01.d
Spectrum: Avg. Scans 125-127 (4.45), Background Scan 118
Location of Maximum: 95.00
Number of points: 100

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2784	68.00	35256	104.00	1407	148.00	849
37.00	15084	69.00	36096	105.00	455	149.00	209
38.00	13079	70.00	2891	106.00	1376	150.00	380
39.00	5447	72.00	1831	107.00	338	151.00	110
40.00	169	73.00	15111	111.00	200	152.00	110
41.00	61	74.00	58192	113.00	90	153.00	320
43.00	184	75.00	181056	115.00	392	154.00	100
44.00	1644	76.00	14772	116.00	1172	155.00	1022
45.00	3058	77.00	2077	117.00	2023	157.00	711
47.00	4356	78.00	1576	118.00	1207	159.00	446
48.00	1666	79.00	7586	119.00	1793	161.00	493
49.00	12809	80.00	2482	124.00	143	172.00	953
50.00	63336	81.00	7918	128.00	1414	173.00	1878
51.00	20032	82.00	1614	129.00	671	174.00	359488
52.00	789	83.00	84	130.00	1217	175.00	25064
55.00	711	86.00	454	131.00	477	176.00	346560
56.00	4602	87.00	16920	133.00	652	177.00	22776
57.00	8726	88.00	16137	135.00	699	178.00	709
58.00	366	91.00	1163	137.00	664	207.00	224
60.00	3025	92.00	9945	141.00	3137	208.00	104
61.00	15548	93.00	15040	142.00	418	209.00	148
62.00	15128	94.00	42320	143.00	3427	282.00	92
63.00	11304	95.00	397184	144.00	93		
64.00	1131	96.00	26704	145.00	380		
65.00	588	97.00	757	146.00	614		
67.00	850	103.00	115	147.00	182		

Digitally signed by Don V. Viray on 05/19/2019 at 12:47.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

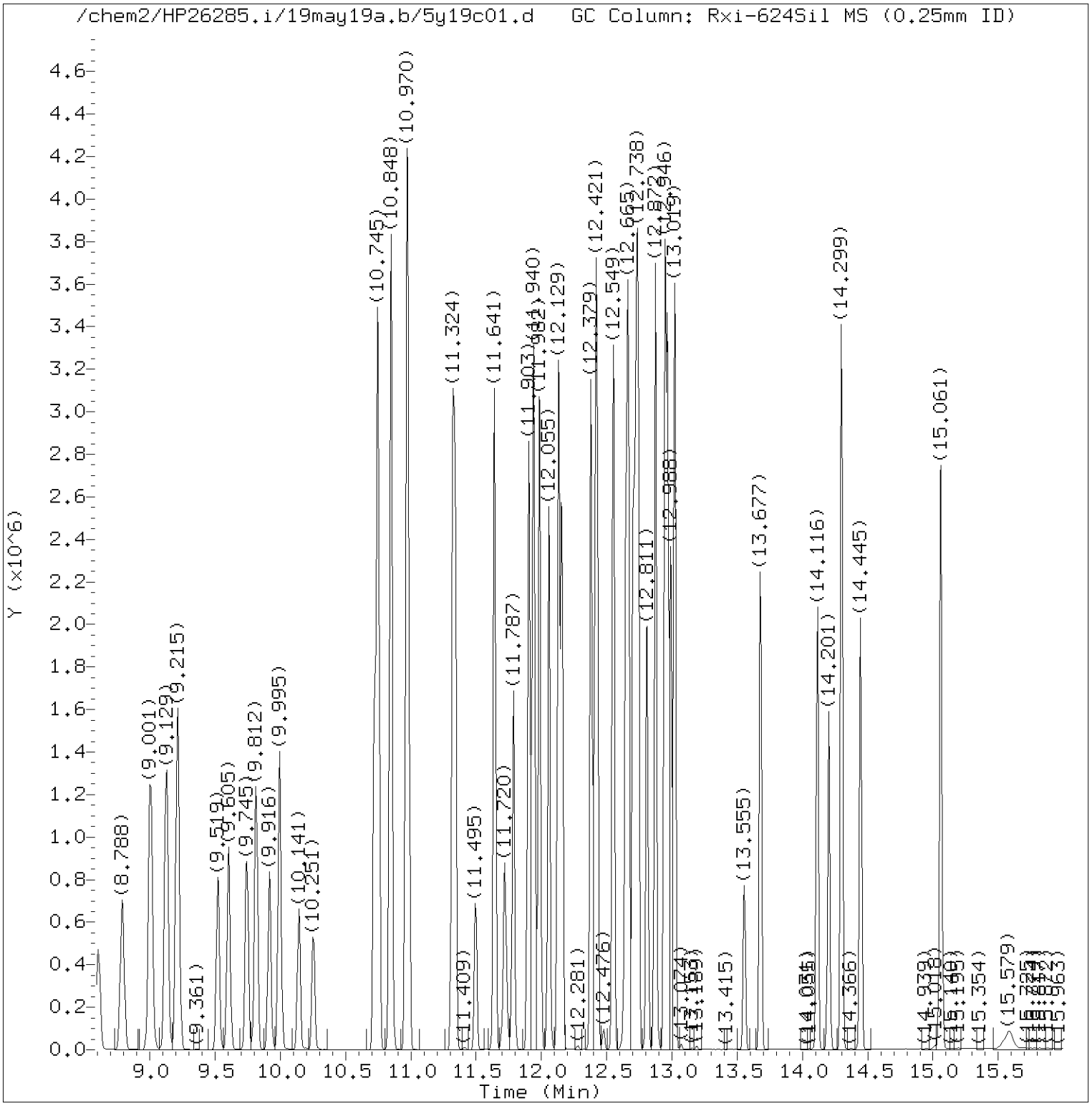
Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19c01.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:16 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-MAY-2019 13:58
Date, time and analyst ID of latest file update: 19-May-2019 13:58 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Don V. Viray
on 05/19/2019 at 13:58.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19c01.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:16 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-MAY-2019 13:58
Date, time and analyst ID of latest file update: 19-May-2019 13:58 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Don V. Viray
on 05/19/2019 at 13:58.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19c01.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:16 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-MAY-2019 13:58
Date, time and analyst ID of latest file update: 19-May-2019 13:58 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.649	85	565033	63.590
4) Chloromethane	(2)	1.814	50	336252	52.073
5) 1,3-Butadiene	(2)	1.899	39	252179	56.209
6) Vinyl Chloride	(2)	1.905	62	340050	53.830
8) Bromomethane	(2)	2.173	94	288444	56.663
9) Chloroethane	(2)	2.240	64	169688	56.034
12) Trichlorofluoromethane	(2)	2.490	101	599214	68.234
11) n-Pentane	(2)	2.521	43	323260	58.363
14) Ethyl ether	(2)	2.698	59	191034	42.001
15) Freon 123a	(2)	2.771	67	352868	51.700
16) Acrolein	(1)	2.850	56	1003799	427.284
17) 1,1-Dichloroethene	(2)	2.960	96	259633	50.902
17) 1,1-Dichloroethene	(2)	2.960	63	135590	54.034
19) Freon 113	(2)	2.984	101	308321	59.420
18) Acetone	(1)	2.996	58	104332	97.129
22) Methyl Iodide	(2)	3.124	142	557984	52.381
21) 2-Propanol	(1)	3.149	45	217319	278.376
23) Carbon Disulfide	(2)	3.204	76	887798	52.424
27) Methyl Acetate	(2)	3.344	43	349913	44.293
25) Allyl Chloride	(2)	3.356	41	414409	45.221
28) Methylene Chloride	(2)	3.521	84	286387	49.433
29)*t-Butyl alcohol-d10	(1)	3.551	65	332790M	250.000
30) t-Butyl alcohol	(1)	3.649	59	377863M	245.436
31) Acrylonitrile	(2)	3.813	53	186384	44.635
32) trans-1,2-Dichloroethene	(2)	3.856	96	293613	51.426
33) Methyl Tertiary Butyl Ether	(2)	3.856	73	750688	46.074
34) n-Hexane	(2)	4.240	57	403196	51.049
36) 1,1-Dichloroethane	(2)	4.490	63	518902	51.552
38) di-Isopropyl ether	(2)	4.557	45	825899	45.012
39) 2-Chloro-1,3-butadiene	(2)	4.600	53	463104	51.993
40) Ethyl t-butyl ether	(2)	5.118	59	739429	43.529
44) 2-Butanone	(2)	5.349	43	535585	84.934
42) cis-1,2-Dichloroethene	(2)	5.356	96	328113	50.793
45) 2,2-Dichloropropane	(2)	5.368	77	451023	56.028
47) Propionitrile	(1)	5.447	54	414347	247.442
48) Methacrylonitrile	(2)	5.666	67	481729	117.244
49) Bromochloromethane	(2)	5.697	128	176771	54.687
50) Tetrahydrofuran	(1)	5.709	71	155398	91.355

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 05/19/2019 at 13:58.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19c01.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:16 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-MAY-2019 13:58
Date, time and analyst ID of latest file update: 19-May-2019 13:58 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	5.862	83	544418	54.547
53) 1,1,1-Trichloroethane	(2)	6.081	97	501200	57.058
52)$Dibromofluoromethane	(2)	6.087	113	287035	54.290
52)$Dibromofluoromethane	(2)	6.087	111	292776	53.949
43) 1,2-Dichloroethene (Total)	(2)		96	621726	102.219
54) Cyclohexane	(2)	6.160	56	510313	50.249
54) Cyclohexane	(2)	6.166	84	463583	53.567
54) Cyclohexane	(2)	6.160	69	163470	51.952
56) Carbon Tetrachloride	(2)	6.288	117	459463	60.444
55) 1,1-Dichloropropene	(2)	6.300	75	436713	54.088
58) Isobutyl Alcohol	(1)	6.520	41	336040	666.493
57)$1,2-Dichloroethane-d4	(2)	6.557	102	63658	51.458
57)$1,2-Dichloroethane-d4	(2)	6.557	65	338074	59.033
57)$1,2-Dichloroethane-d4	(2)	6.557	104	39972	50.703
60) Benzene	(2)	6.575	78	1244079	50.720
61) 1,2-Dichloroethane	(2)	6.660	62	413563	57.053
61) 1,2-Dichloroethane	(2)	6.660	98	33596	52.976
65) t-Amyl methyl ether	(2)	6.788	73	773115	45.159
66)*Fluorobenzene	(2)	7.002	96	1104862	50.000
67) n-Heptane	(2)	7.014	43	418544	46.995
69) n-Butanol	(1)	7.434	56	565207	1344.479
71) Trichloroethene	(2)	7.495	95	337913	53.123
73) Methylcyclohexane	(2)	7.794	83	571742	54.283
73) Methylcyclohexane	(2)	7.794	98	250792	55.350
74) 1,2-Dichloropropane	(2)	7.843	63	305068	50.176
76) 1,4-Dioxane	(1)	7.940	88	86257M	884.541
75) Dibromomethane	(2)	7.953	93	207147	53.867
77) Methyl Methacrylate	(2)	7.959	69	304510	47.974
79) Bromodichloromethane	(2)	8.209	83	402028	56.255
80) 2-Nitropropane	(2)	8.513	41	291793	99.471
81) 2-Chloroethyl Vinyl Ether	(2)	8.605	63	250722M	49.412
82) cis-1,3-Dichloropropene	(2)	8.788	75	502245	53.414
83) 4-Methyl-2-pentanone	(2)	9.001	43	1082163	83.790
84)$Toluene-d8	(3)	9.129	98	1114460	48.760
84)$Toluene-d8	(3)	9.129	100	718003	47.795
89) Toluene	(3)	9.215	92	823845	48.425
90) trans-1,3-Dichloropropene	(3)	9.519	75	469200	51.037
92) Ethyl Methacrylate	(3)	9.605	69	518068	47.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/19/2019 at 13:58.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19c01.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:16 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-MAY-2019 13:58
Date, time and analyst ID of latest file update: 19-May-2019 13:58 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) 1,1,2-Trichloroethane	(3)	9.745	97	307141	50.465
94) Tetrachloroethene	(3)	9.812	166	398531	51.512
95) 1,3-Dichloropropane	(3)	9.916	76	499382	50.088
97) 2-Hexanone	(3)	9.995	43	899143	74.730
91) 1,3-Dichloropropene (total)	(3)		100	971445	104.451
98) Dibromochloromethane	(3)	10.141	129	345474	55.442
100) 1,2-Dibromoethane	(3)	10.251	107	346974	51.051
101)*Chlorobenzene-d5	(3)	10.720	117	905502	50.000
102) 1-Chlorohexane	(3)	10.745	91	481923	48.621
103) Chlorobenzene	(3)	10.751	112	993355	52.183
104) 1,1,1,2-Tetrachloroethane	(3)	10.842	131	351988	54.777
105) Ethylbenzene	(3)	10.848	91	1741222	52.397
107) m+p-Xylene	(3)	10.970	106	1359773	103.755
108) o-Xylene	(3)	11.318	106	653422	51.027
110) Styrene	(3)	11.336	104	1079934	51.071
111) Bromoform	(3)	11.495	173	273541	55.611
112) Isopropylbenzene	(3)	11.641	105	1758897	52.889
113) Cyclohexanone	(1)	11.720	55	349863M	857.490
109) Xylene (Total)	(3)		106	2013195	154.782
115)$4-Bromofluorobenzene	(3)	11.787	95	463682	52.138
115)$4-Bromofluorobenzene	(3)	11.787	174	413656	53.391
116) Bromobenzene	(4)	11.903	156	441340	47.857
117) 1,1,2,2-Tetrachloroethane	(4)	11.909	83	563313	48.241
119) trans-1,4-Dichloro-2-butene	(4)	11.934	53	447035	121.563
118) 1,2,3-Trichloropropane	(4)	11.952	110	172879	49.141
120) n-Propylbenzene	(4)	11.982	91	2118104	48.803
121) 2-Chlorotoluene	(4)	12.055	126	424635	47.458
123) 1,3,5-Trimethylbenzene	(4)	12.129	105	1513844	48.334
122) 4-Chlorotoluene	(4)	12.159	126	435925	47.456
125) tert-Butylbenzene	(4)	12.379	134	305863M	46.214
126) Pentachloroethane	(4)	12.409	167	291417	53.919
127) 1,2,4-Trimethylbenzene	(4)	12.427	105	1553077	48.355
128) sec-Butylbenzene	(4)	12.549	105	1905473	46.959
130) 1,3-Dichlorobenzene	(4)	12.647	146	848783	48.058
131) p-Isopropyltoluene	(4)	12.665	119	1665921	47.354
132)*1,4-Dichlorobenzene-d4	(4)	12.702	152	534596	50.000
134) 1,4-Dichlorobenzene	(4)	12.720	146	861191	48.112
135) 1,2,3-Trimethylbenzene	(4)	12.738	105	1658337	49.982

M = Compound was manually integrated.
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Digitally signed by Don V. Viray
on 05/19/2019 at 13:58.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19c01.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:16 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-MAY-2019 13:58
Date, time and analyst ID of latest file update: 19-May-2019 13:58 dvv10203

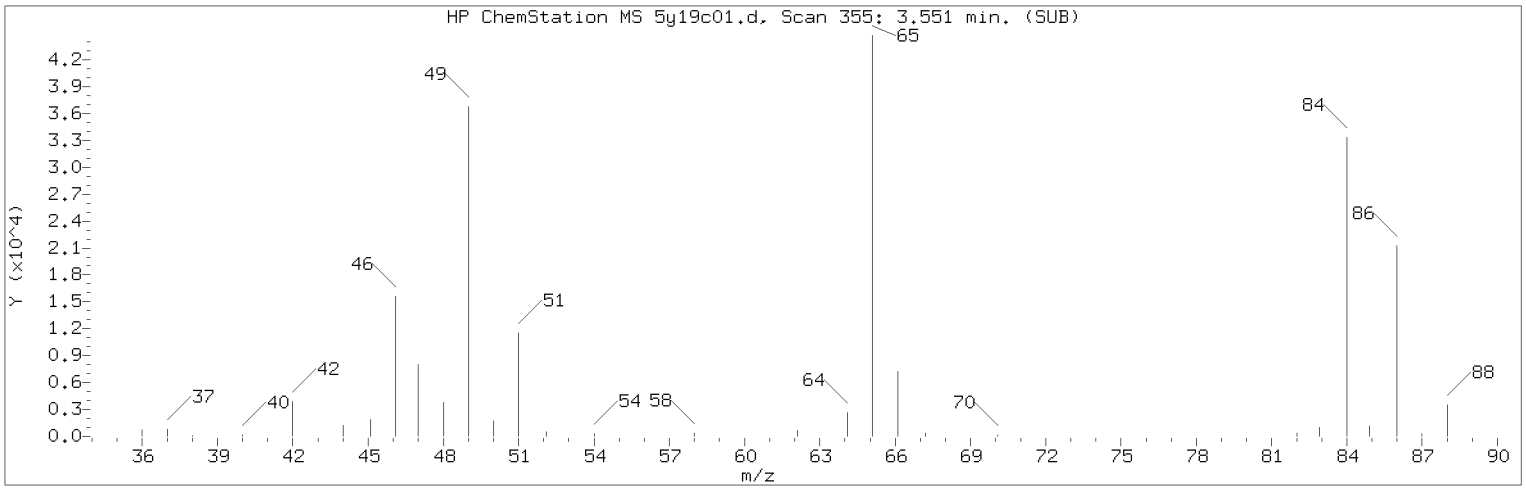
Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
136) Benzyl Chloride	(4)	12.811	91	1222678	53.150
137) 1,3-Diethylbenzene	(4)	12.872	119	1003450	46.799
138) 1,4-Diethylbenzene	(4)	12.946	119	1064574	46.783
140) n-Butylbenzene	(4)	12.964	92	815750	45.969
139) 1,2-Dichlorobenzene	(4)	12.994	146	801525	48.004
141) 1,2-Diethylbenzene	(4)	13.019	119	831551M	46.649
142) Diethylbenzene (total)	(4)		100	2899575	140.230
143) 1,2-Dibromo-3-chloropropane	(4)	13.555	75	153191	52.515
145) 1,3,5-Trichlorobenzene	(4)	13.677	180	585387	43.614
147) 1,2,4-Trichlorobenzene	(4)	14.116	180	535310	44.060
148) Hexachlorobutadiene	(4)	14.201	225	251032	43.779
149) Naphthalene	(4)	14.299	128	2078568	50.418
150) 1,2,3-Trichlorobenzene	(4)	14.445	180	538413	46.250
151) 2-Methylnaphthalene	(4)	15.061	142	1173127	48.360

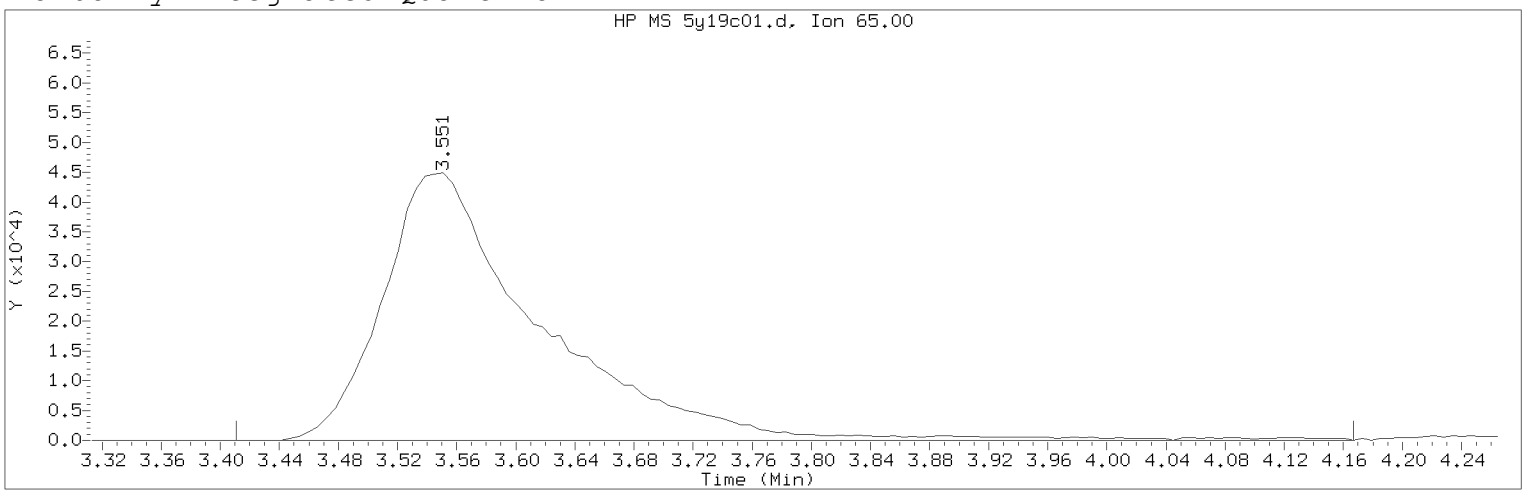
M = Compound was manually integrated.

Digitally signed by Don V. Viray
on 05/19/2019 at 13:58.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19c01.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:16 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-MAY-2019 13:58
Date, time and analyst ID of latest file update: 19-May-2019 13:58 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

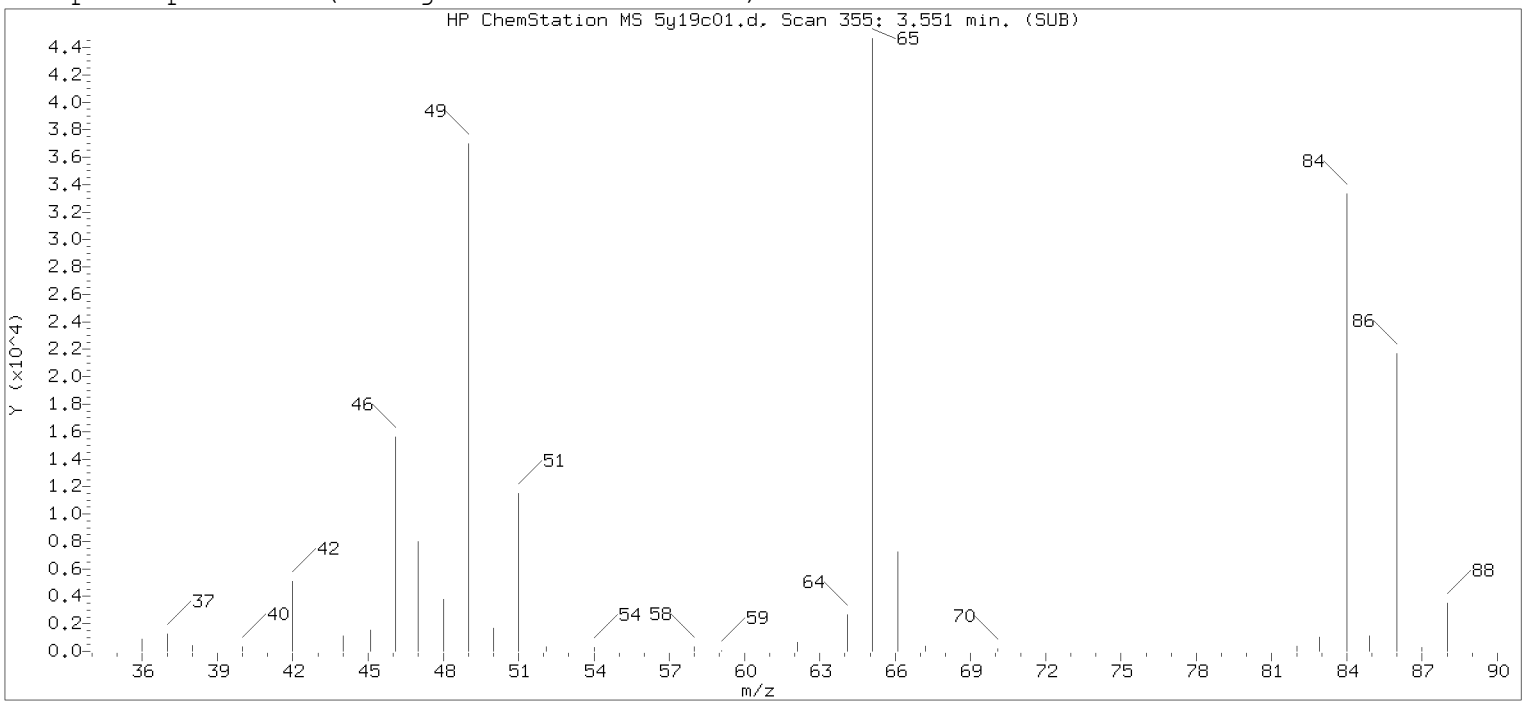
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 355
Retention Time (minutes): 3.551
Quant Ion : 65.00
Area (flag) : 332790M
On-Column Amount (ng) : 250.0000
Integration start scan : 331 Integration stop scan: 455
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

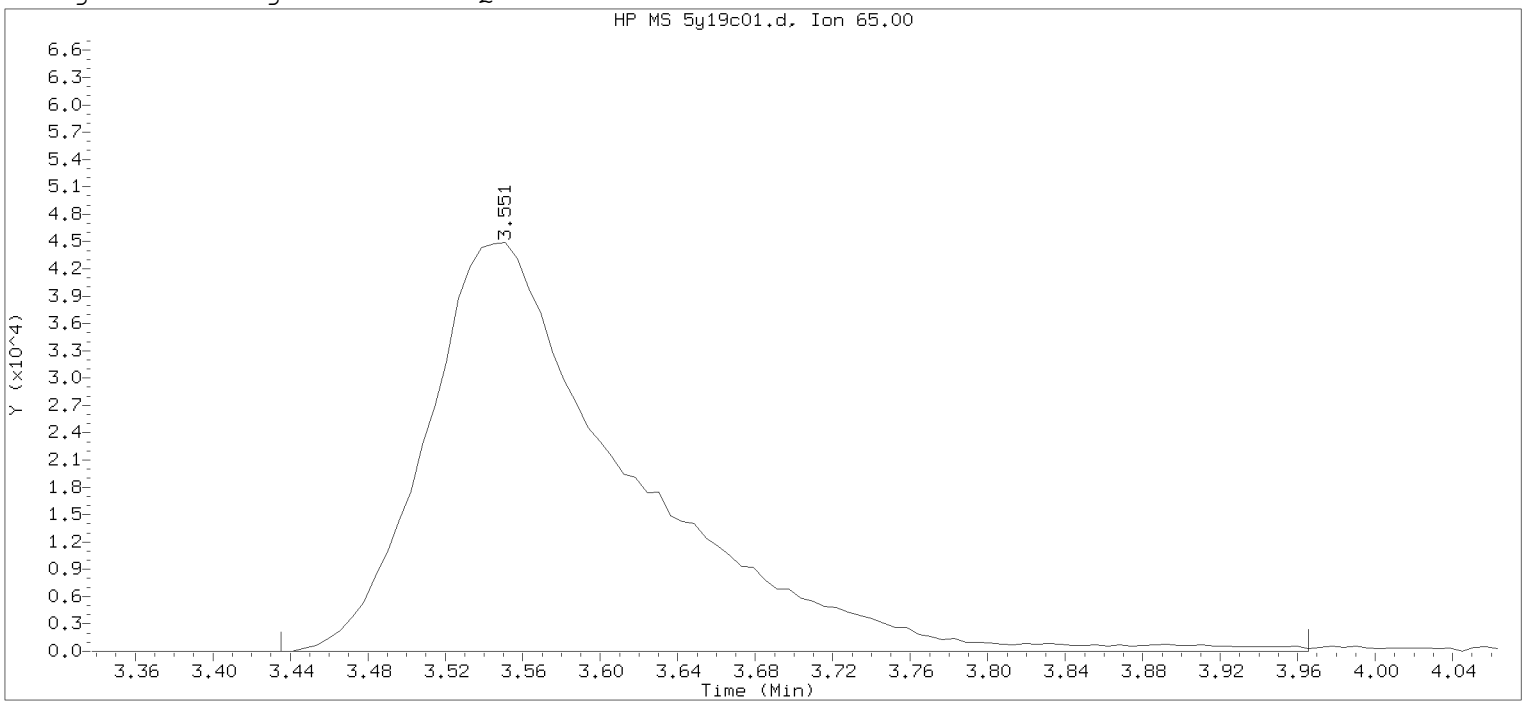
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/19/2019 at 13:58.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 19:58.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19c01.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:16 Analyst ID: DVV10203

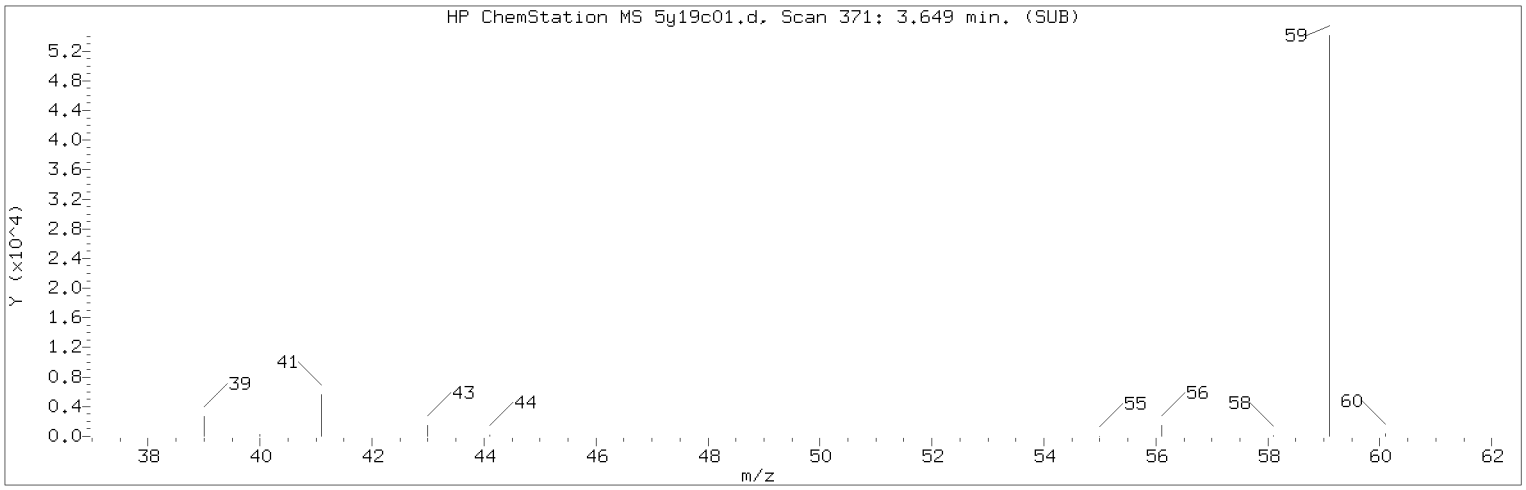
Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-MAY-2019 13:35
Date, time and analyst ID of latest file update: 19-May-2019 13:35 Unknown

Sample Name: VSTD050 Lab Sample ID: VSTD050

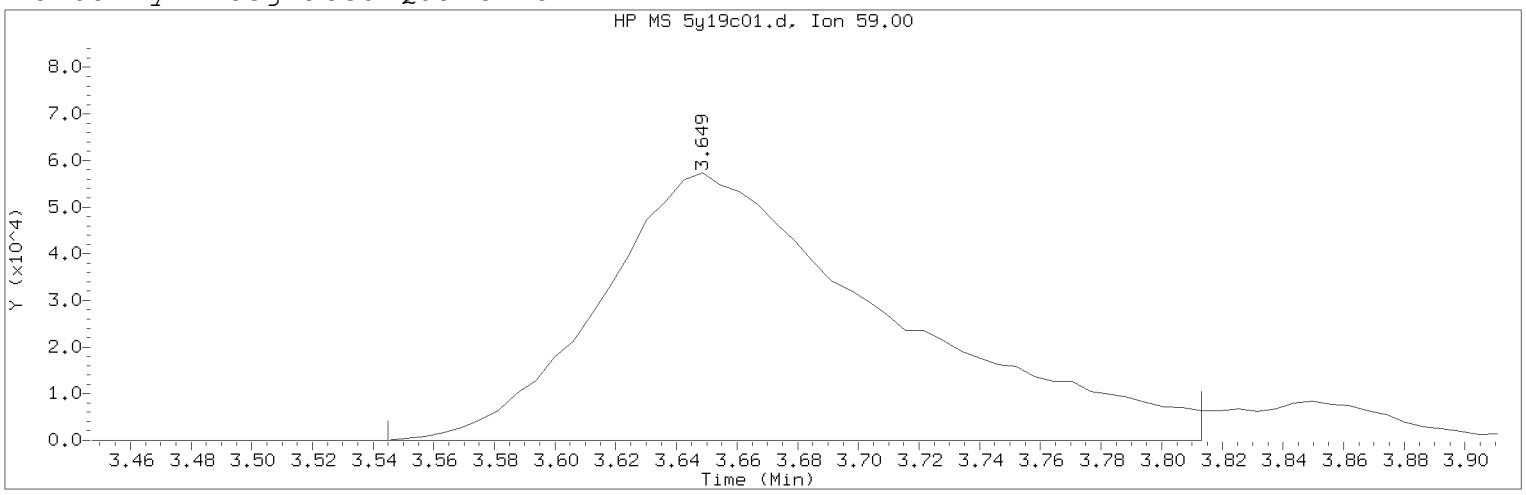
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 355
Retention Time (minutes): 3.551
Quant Ion : 65.00
Area : 328518
On-column Amount (ng) : 250.0000
Integration start scan : 335 Integration stop scan: 422
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/19/2019 at 13:58.
Target 3.5 esignature user id: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19c01.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:16 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-MAY-2019 13:58
Date, time and analyst ID of latest file update: 19-May-2019 13:58 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

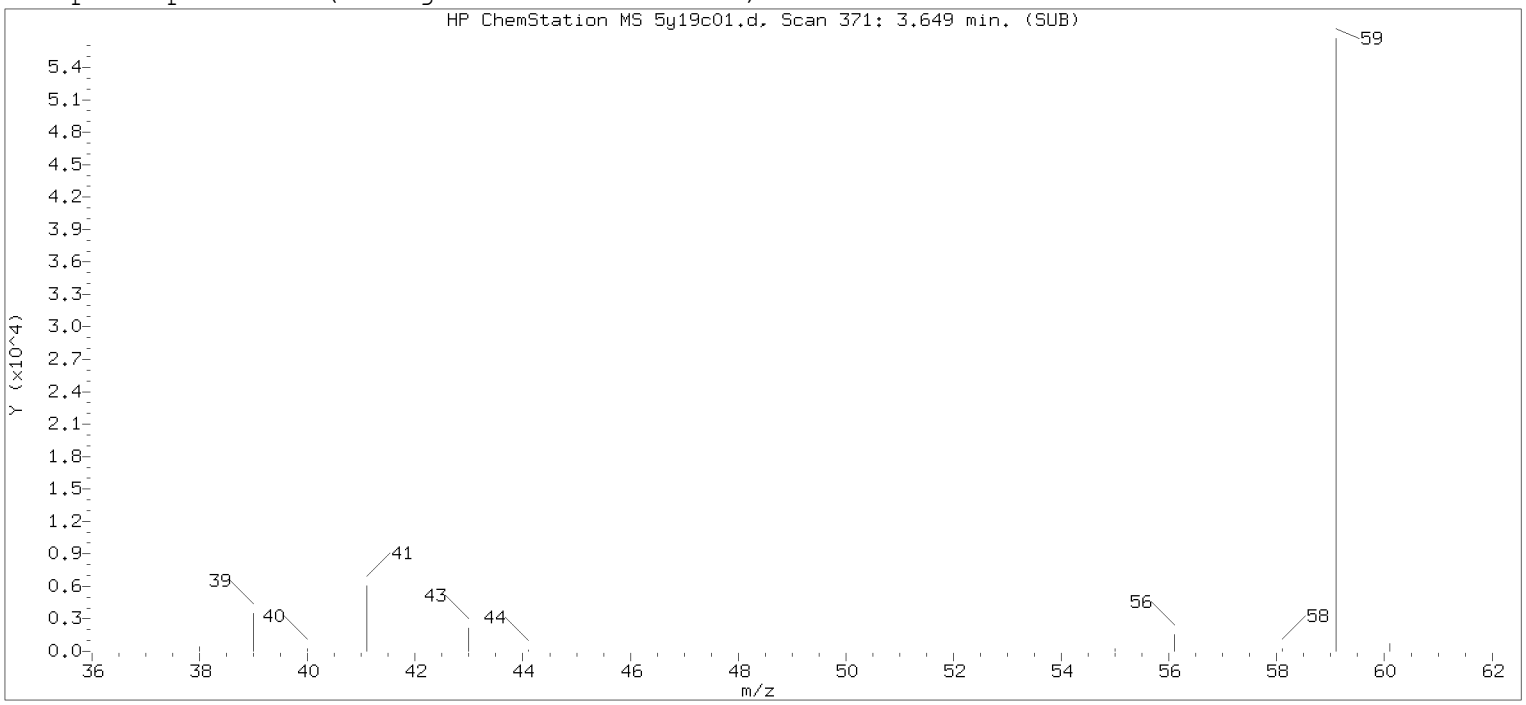
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 371
Retention Time (minutes): 3.649
Quant Ion : 59.00
Area (flag) : 377863M
On-Column Amount (ng) : 245.4363
Integration start scan : 353 Integration stop scan: 397
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

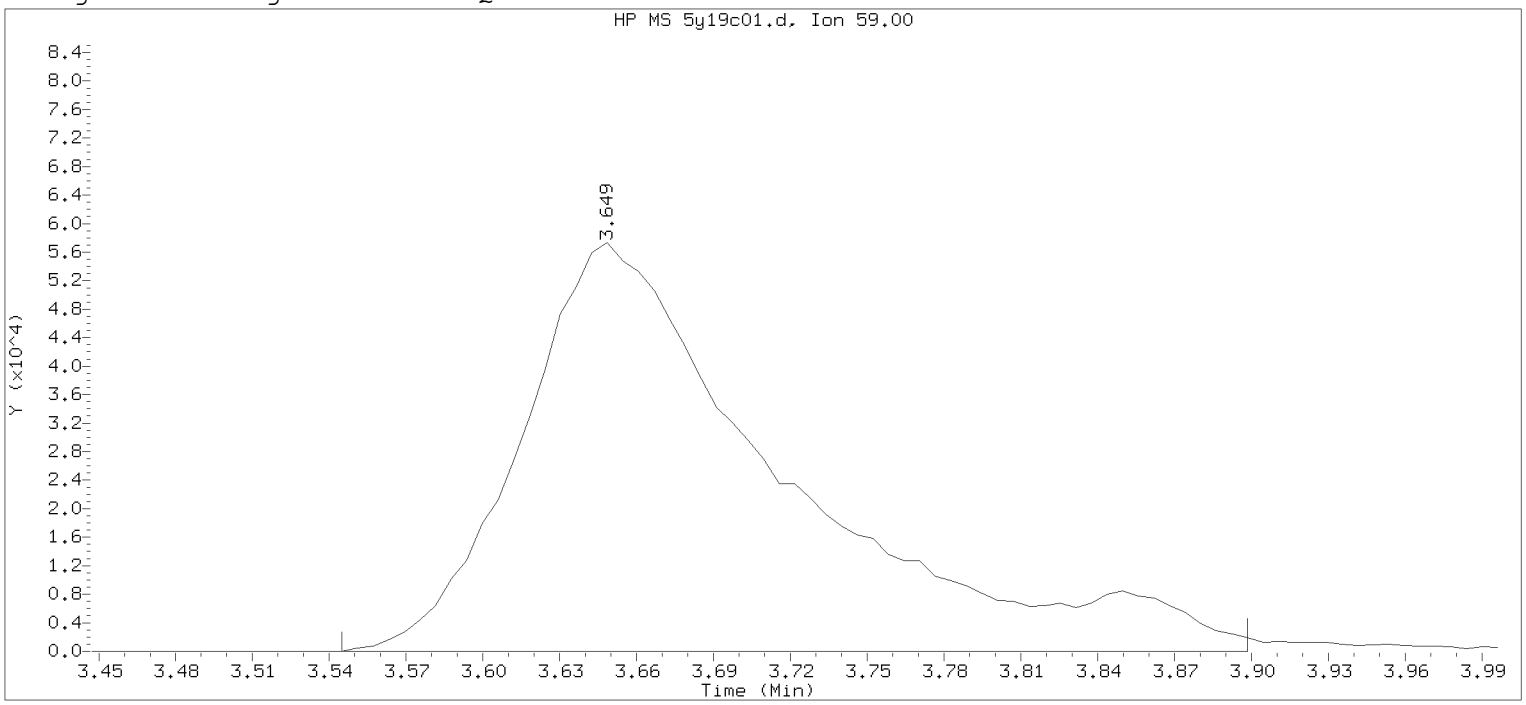
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/19/2019 at 13:58.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 19:58.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19c01.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:16 Analyst ID: DVV10203

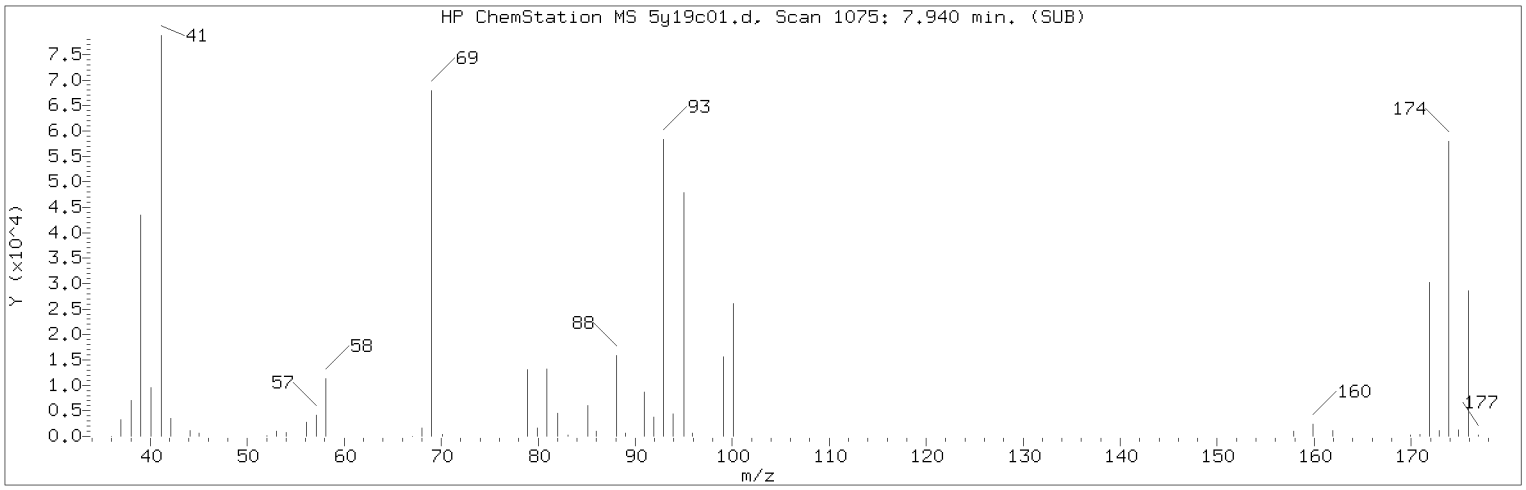
Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-MAY-2019 13:35
Date, time and analyst ID of latest file update: 19-May-2019 13:35 Unknown

Sample Name: VSTD050 Lab Sample ID: VSTD050

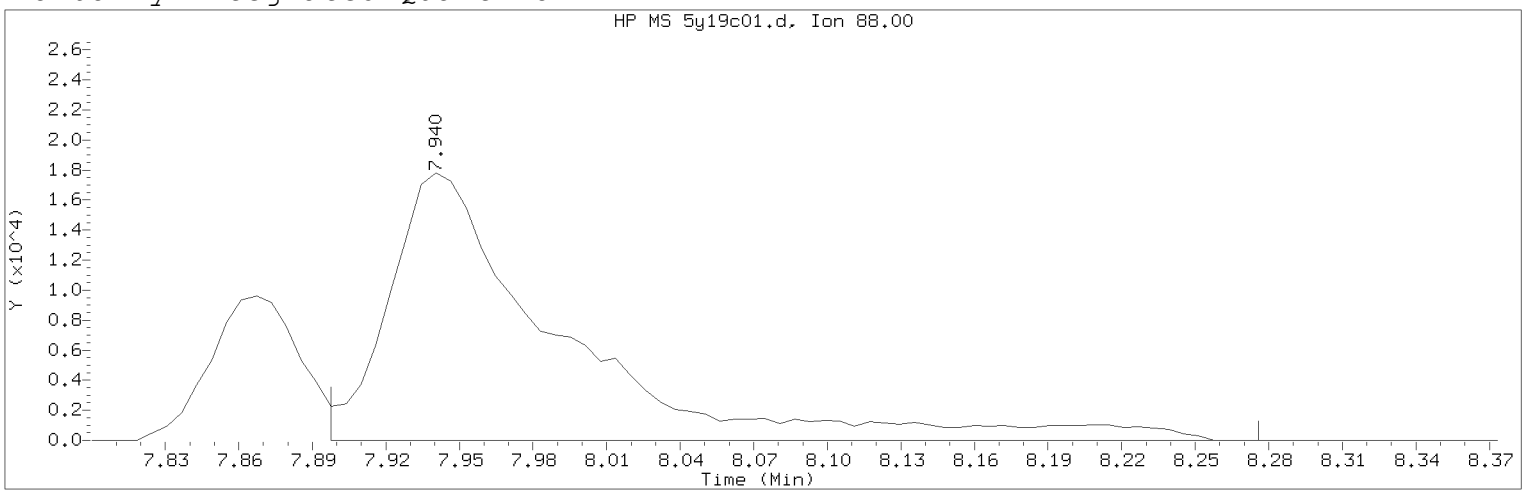
Compound Number	: 30		
Compound Name	: t-Butyl alcohol		
Scan Number	: 371		
Retention Time (minutes)	: 3.649		
Quant Ion	: 59.00		
Area	: 406982		
On-column Amount (ng)	: 267.7877		
Integration start scan	: 353	Integration stop scan:	411
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 05/19/2019 at 13:58.
Target 3.5 esignature user id: dvviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19c01.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:16 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-MAY-2019 13:58
Date, time and analyst ID of latest file update: 19-May-2019 13:58 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

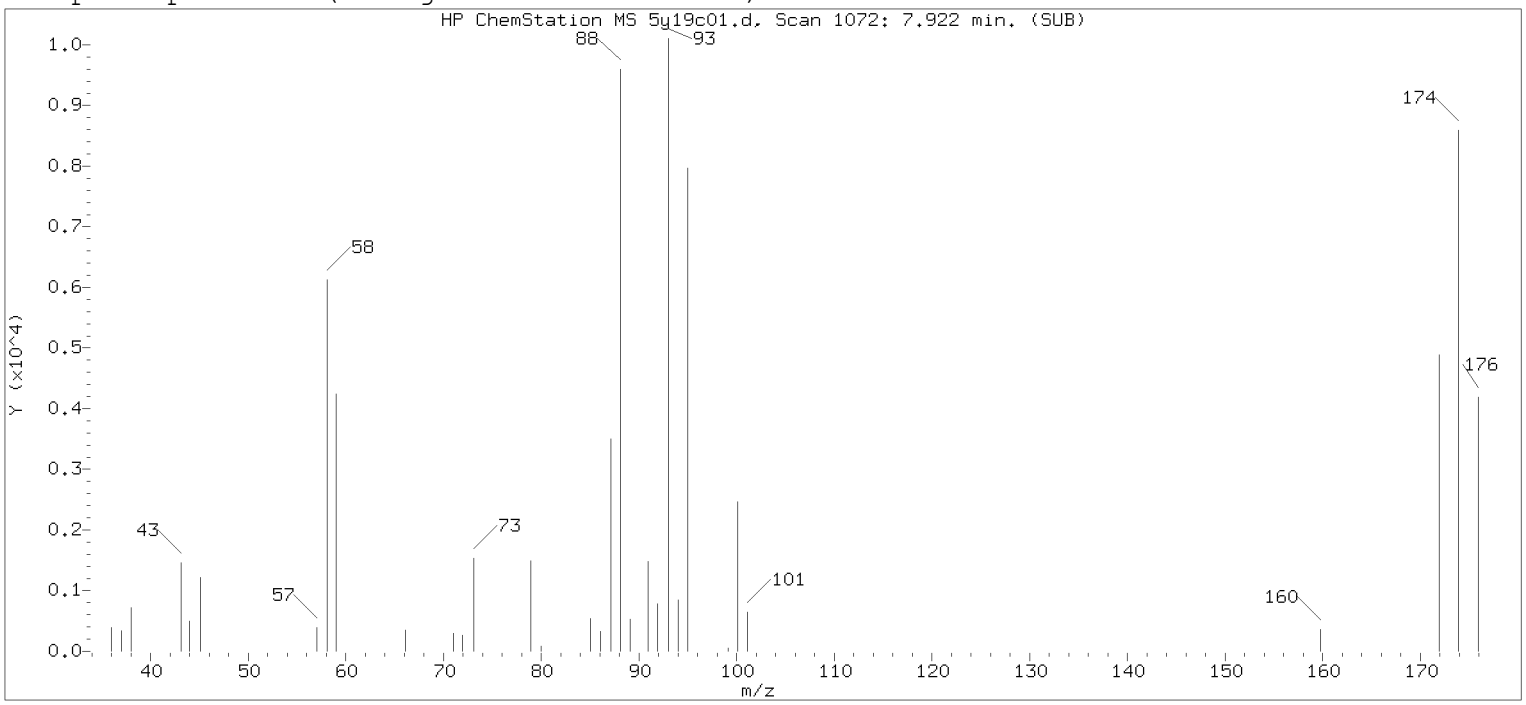
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1075
Retention Time (minutes): 7.940
Quant Ion : 88.00
Area (flag) : 86257M
On-Column Amount (ng) : 884.5414
Integration start scan : 1067 Integration stop scan: 1129
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

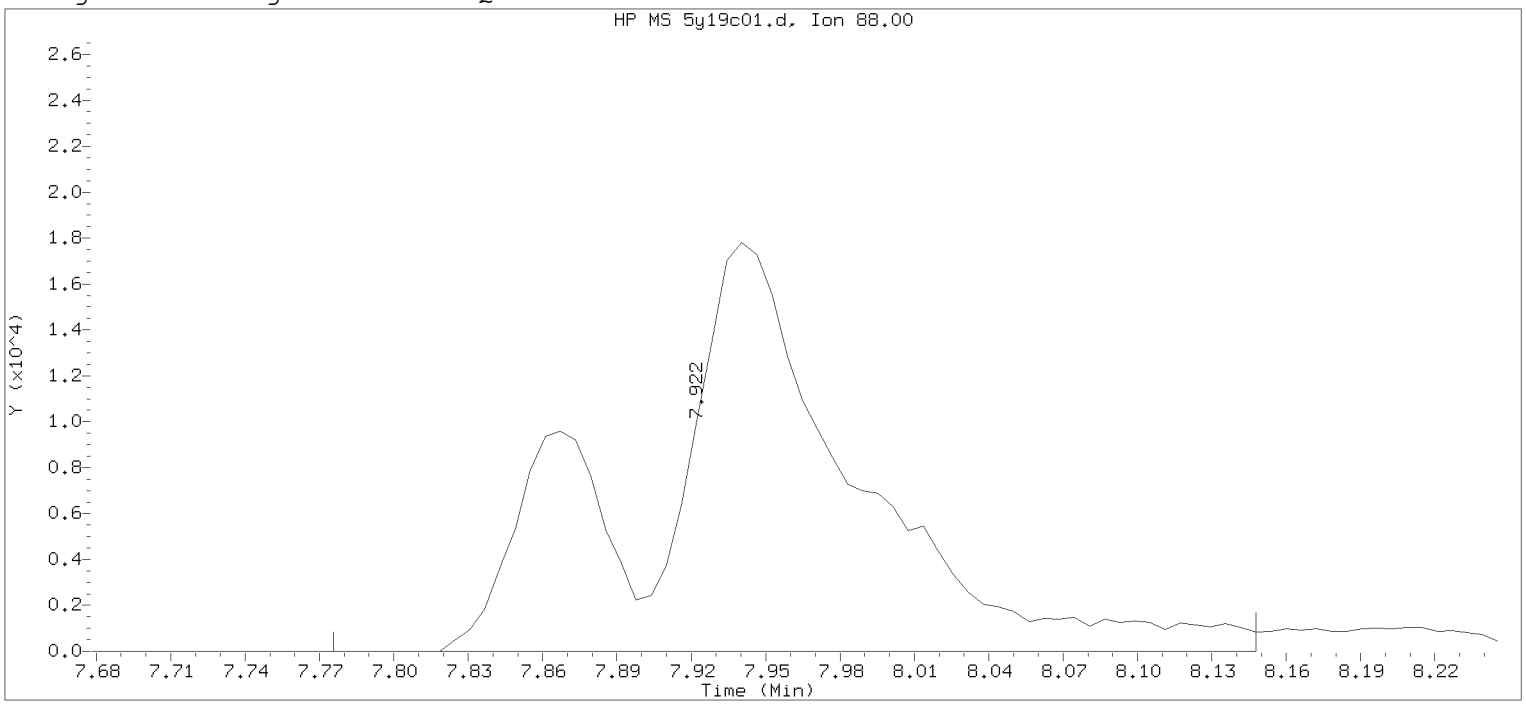
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/19/2019 at 13:58.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 19:58.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19c01.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:16 Analyst ID: DVV10203

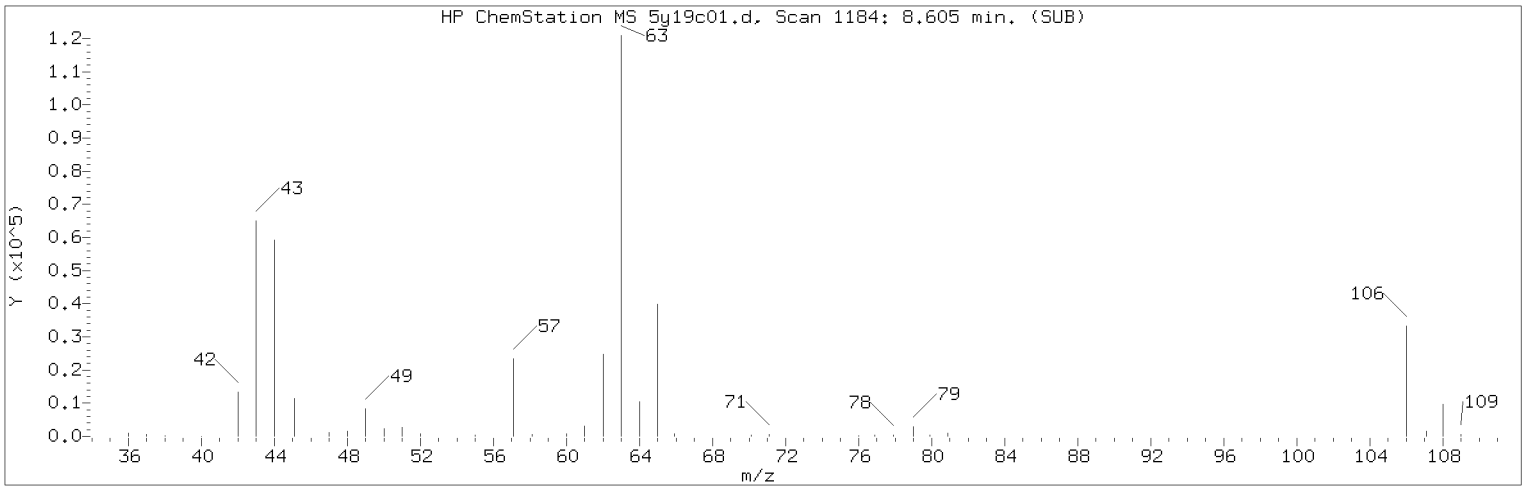
Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-MAY-2019 13:35
Date, time and analyst ID of latest file update: 19-May-2019 13:35 Unknown

Sample Name: VSTD050 Lab Sample ID: VSTD050

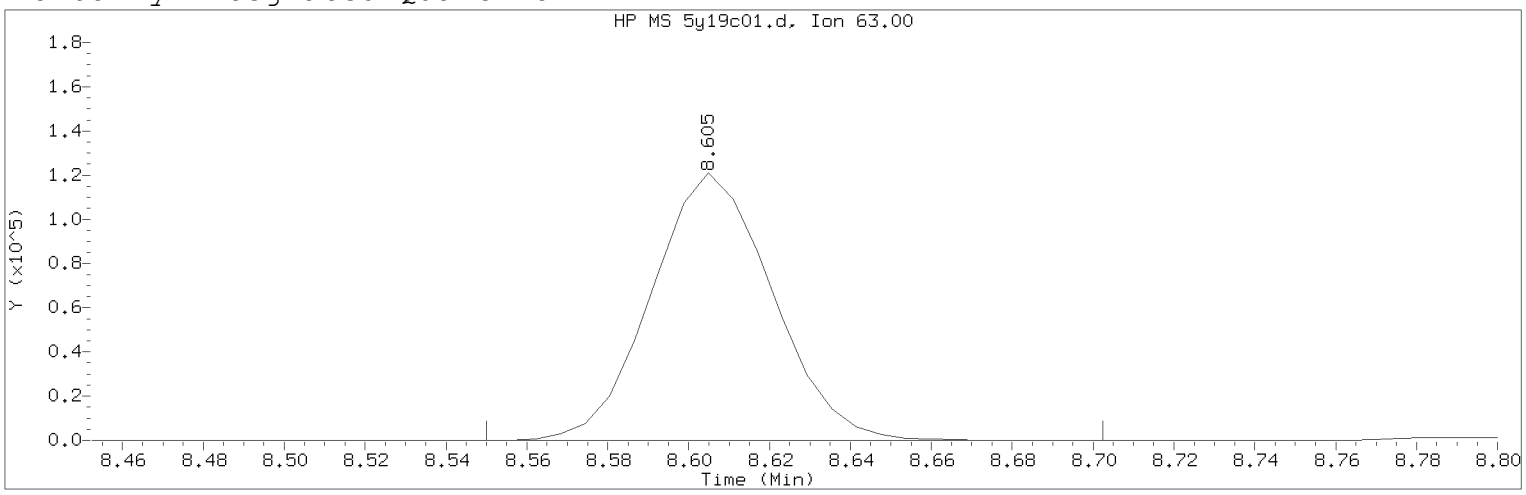
Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1072		
Retention Time (minutes)	: 7.922		
Quant Ion	: 88.00		
Area	: 104600		
On-column Amount (ng)	: 1086.5919		
Integration start scan	: 1047	Integration stop scan:	1108
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 05/19/2019 at 13:58.
Target 3.5 esignature user id: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19c01.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:16 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-MAY-2019 13:58
Date, time and analyst ID of latest file update: 19-May-2019 13:58 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

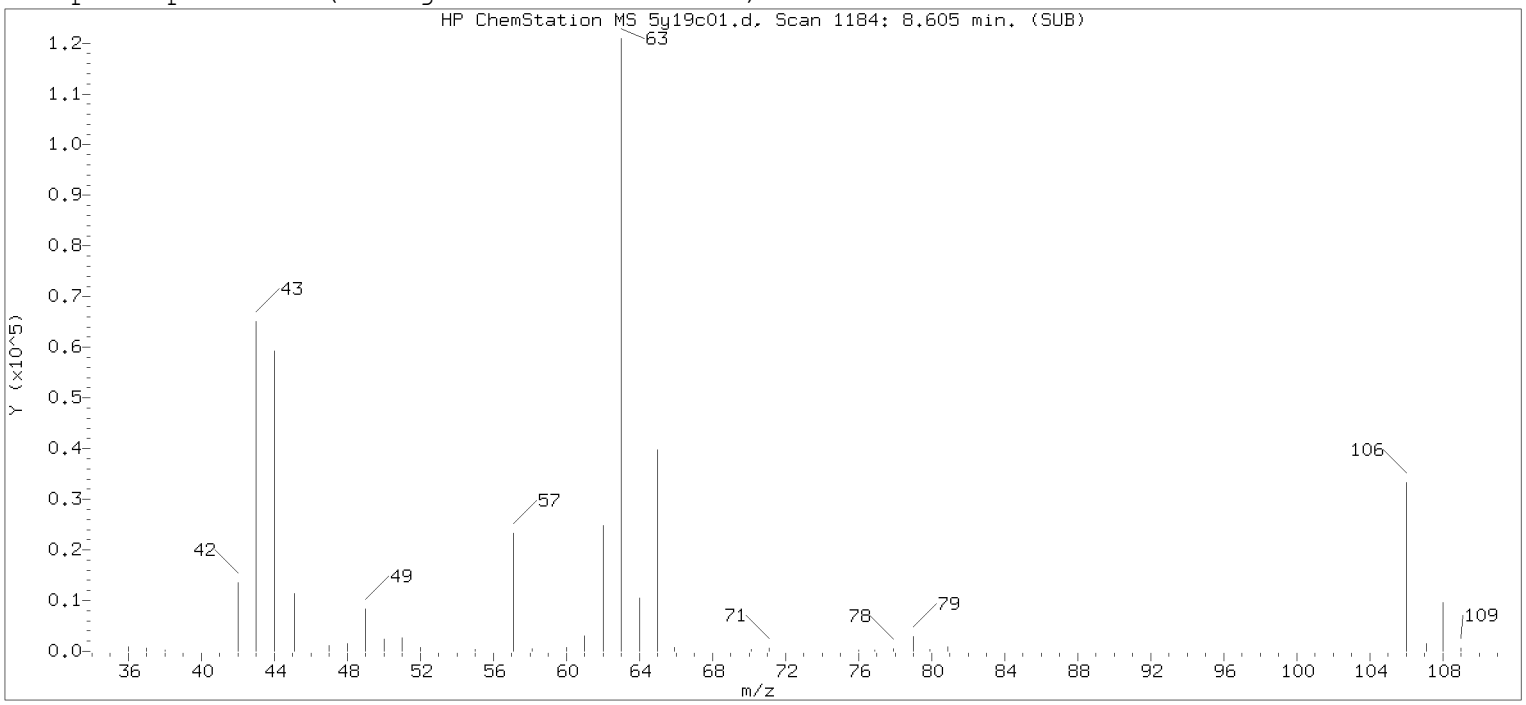
Compound Number : 81
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1184
Retention Time (minutes): 8.605
Quant Ion : 63.00
Area (flag) : 250722M
On-Column Amount (ng) : 49.4120
Integration start scan : 1174 Integration stop scan: 1199
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

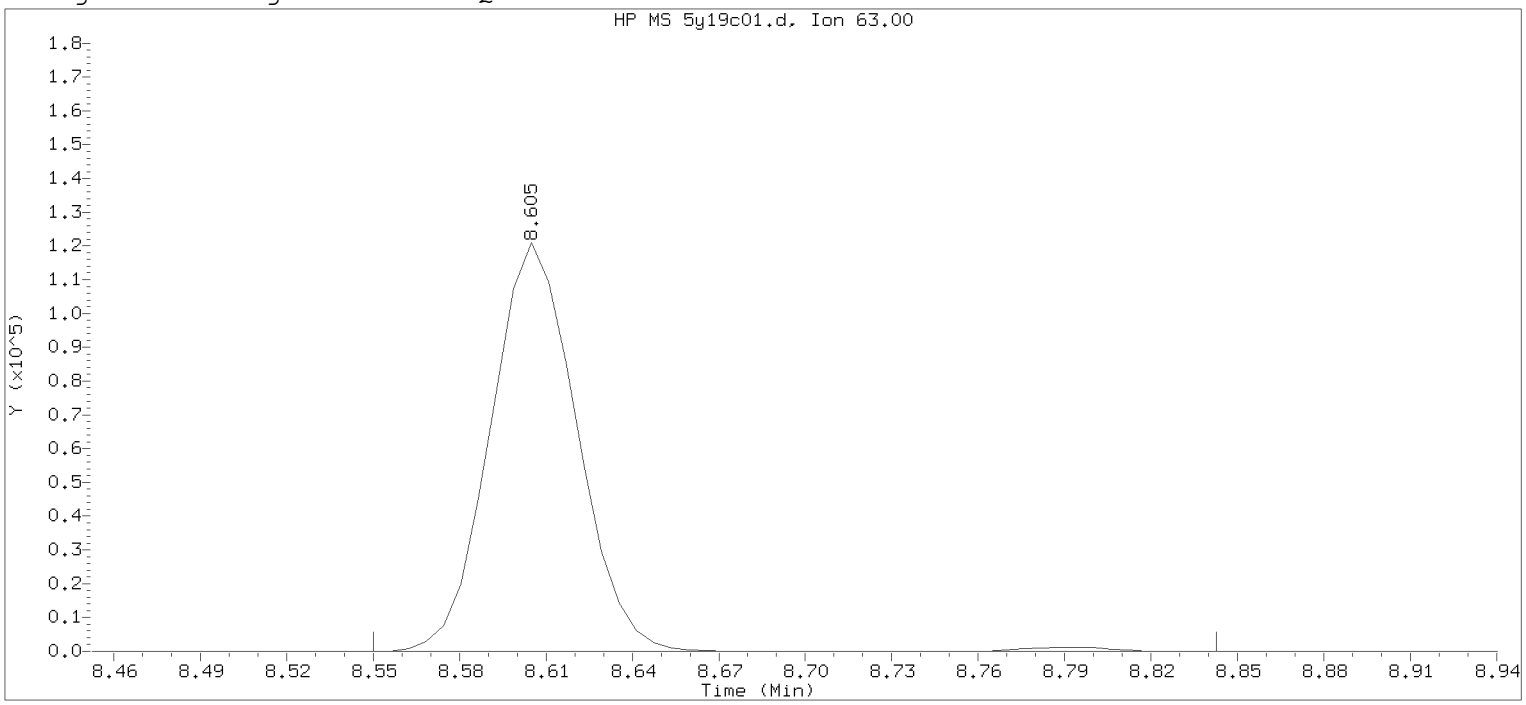
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/19/2019 at 13:58.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 19:58.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19c01.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:16 Analyst ID: DVV10203

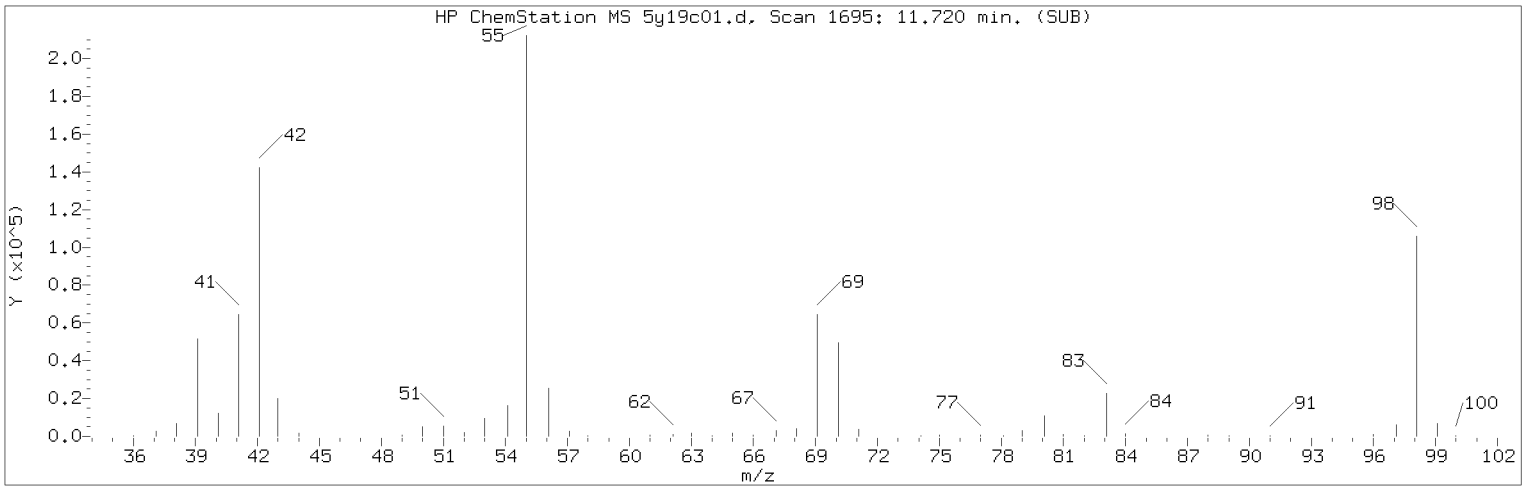
Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-MAY-2019 13:35
Date, time and analyst ID of latest file update: 19-May-2019 13:35 Unknown

Sample Name: VSTD050 Lab Sample ID: VSTD050

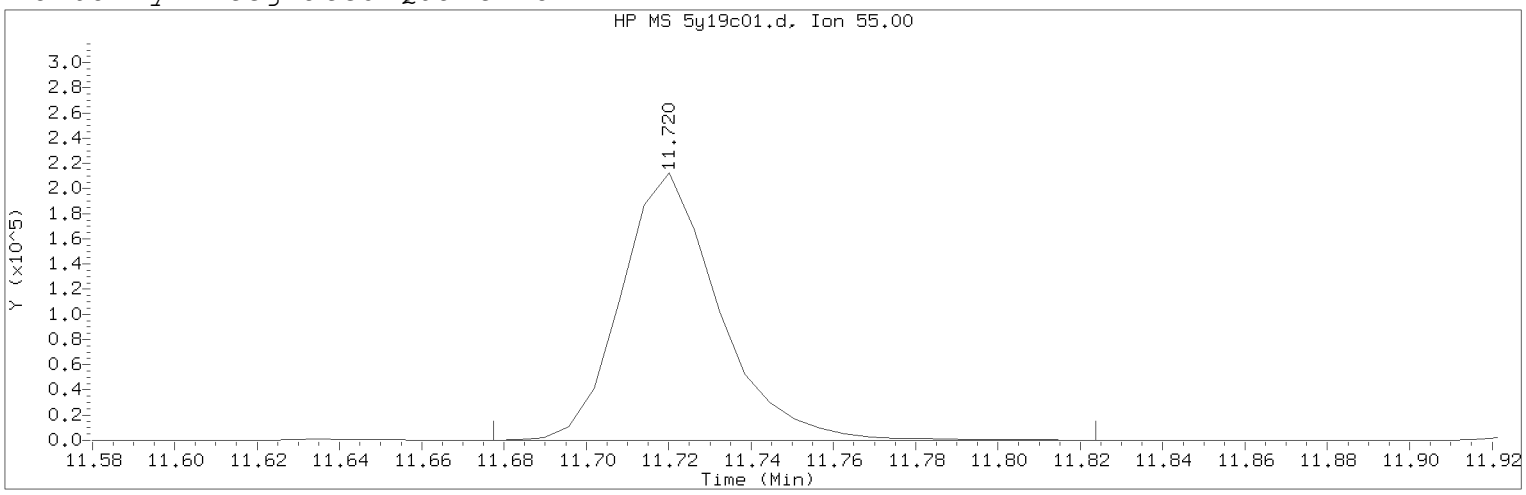
Compound Number : 81
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1184
Retention Time (minutes): 8.605
Quant Ion : 63.00
Area : 253037
On-column Amount (ng) : 49.8682
Integration start scan : 1174 Integration stop scan: 1222
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/19/2019 at 13:58.
Target 3.5 esignature user id: dviray0252

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19c01.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:16 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-MAY-2019 13:58
Date, time and analyst ID of latest file update: 19-May-2019 13:58 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

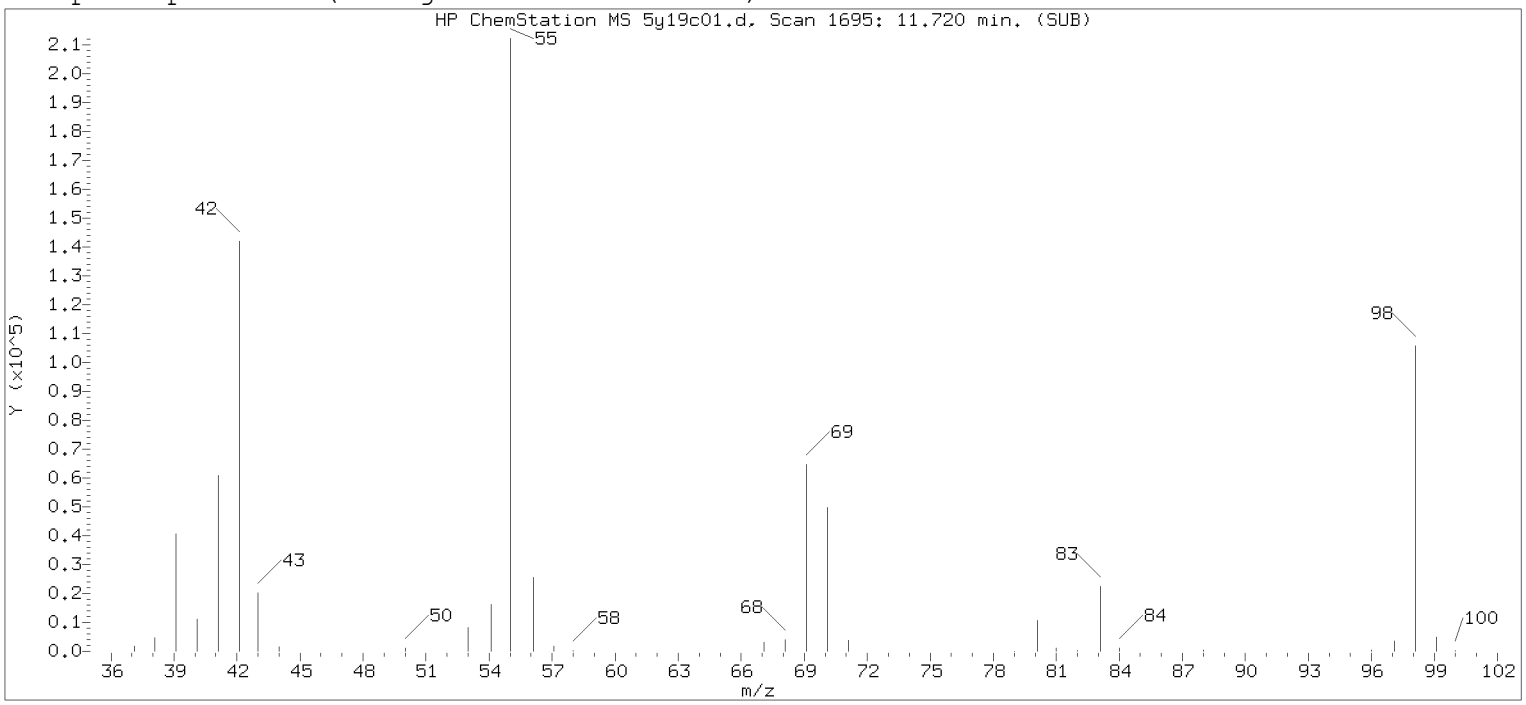
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1695
Retention Time (minutes): 11.720
Quant Ion : 55.00
Area (flag) : 349863M
On-Column Amount (ng) : 857.4900
Integration start scan : 1687 Integration stop scan: 1711
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

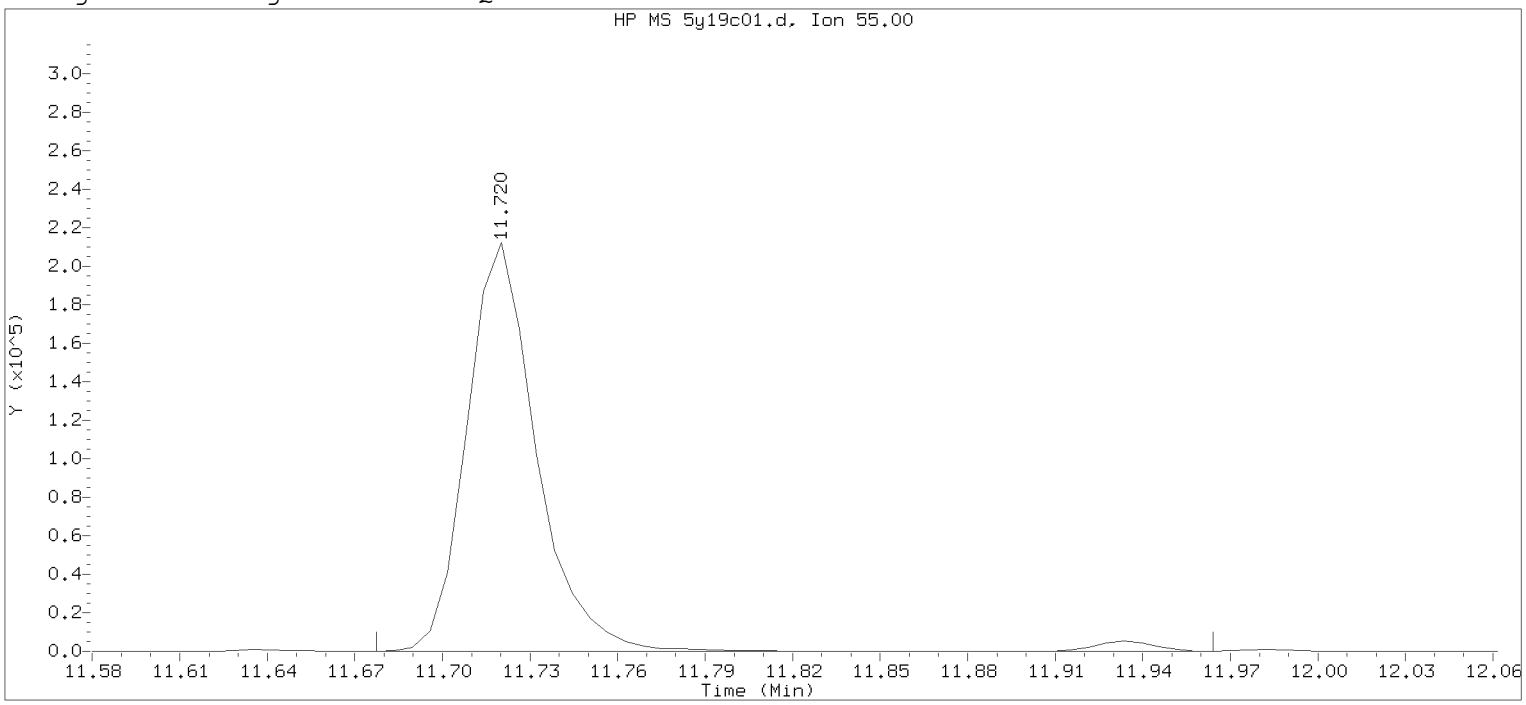
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/19/2019 at 13:58.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 19:58.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19c01.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:16 Analyst ID: DVV10203

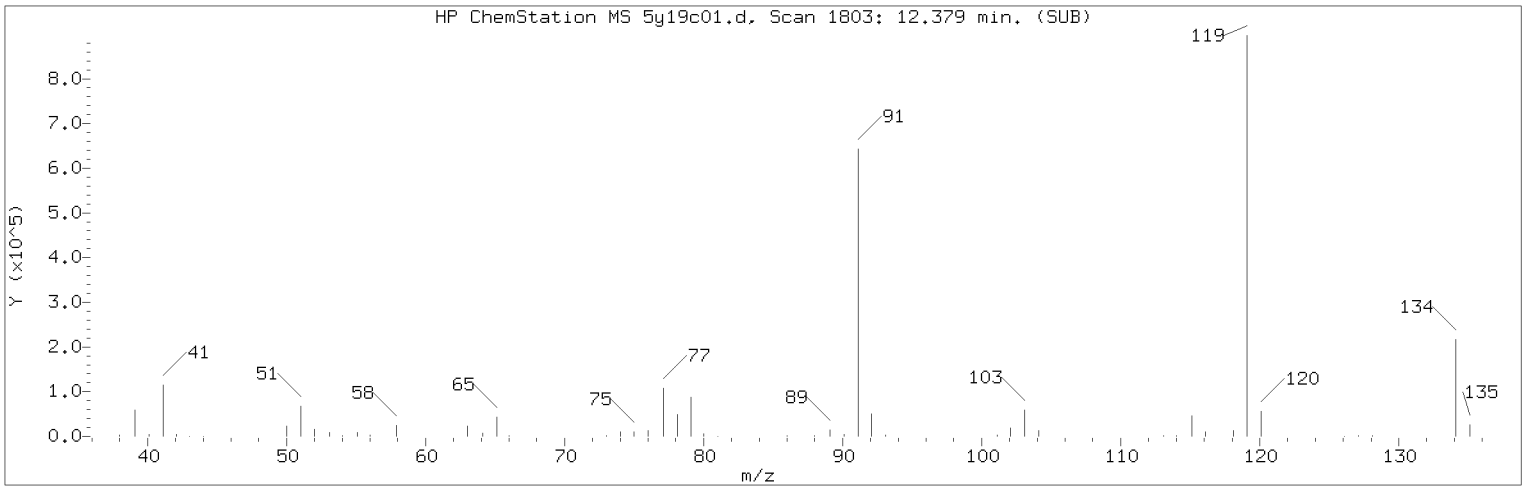
Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-MAY-2019 13:35
Date, time and analyst ID of latest file update: 19-May-2019 13:35 Unknown

Sample Name: VSTD050 Lab Sample ID: VSTD050

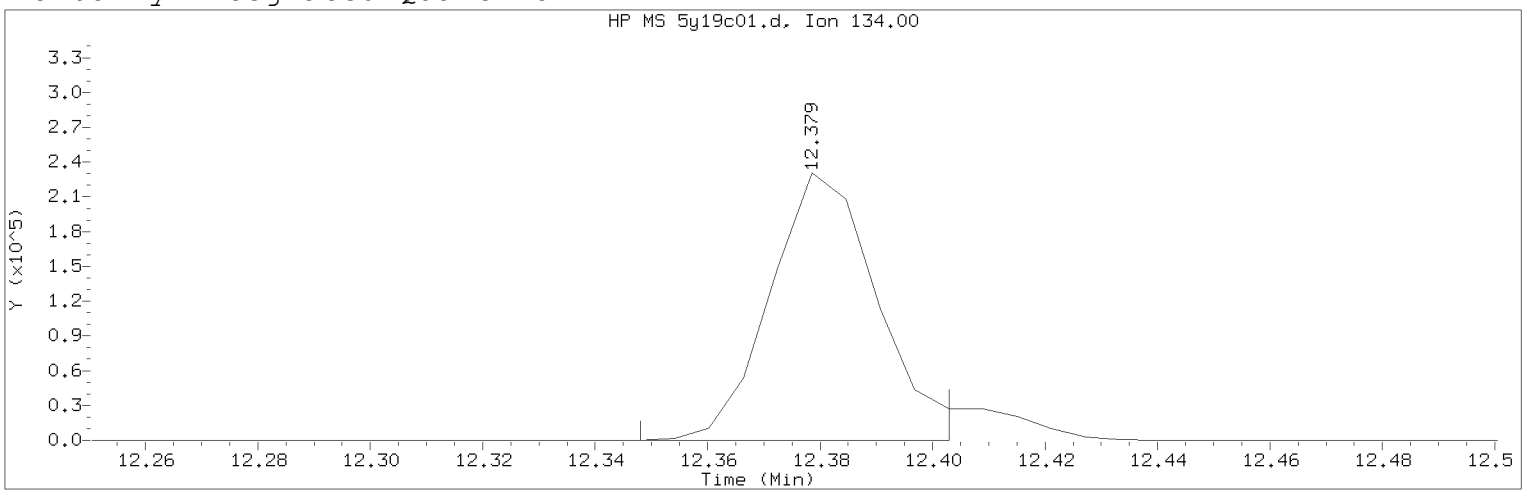
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1695
Retention Time (minutes): 11.720
Quant Ion : 55.00
Area : 357093
On-column Amount (ng) : 886.5921
Integration start scan : 1687 Integration stop scan: 1734
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/19/2019 at 13:58.
Target 3.5 esignature user id: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19c01.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:16 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-MAY-2019 13:58
Date, time and analyst ID of latest file update: 19-May-2019 13:58 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

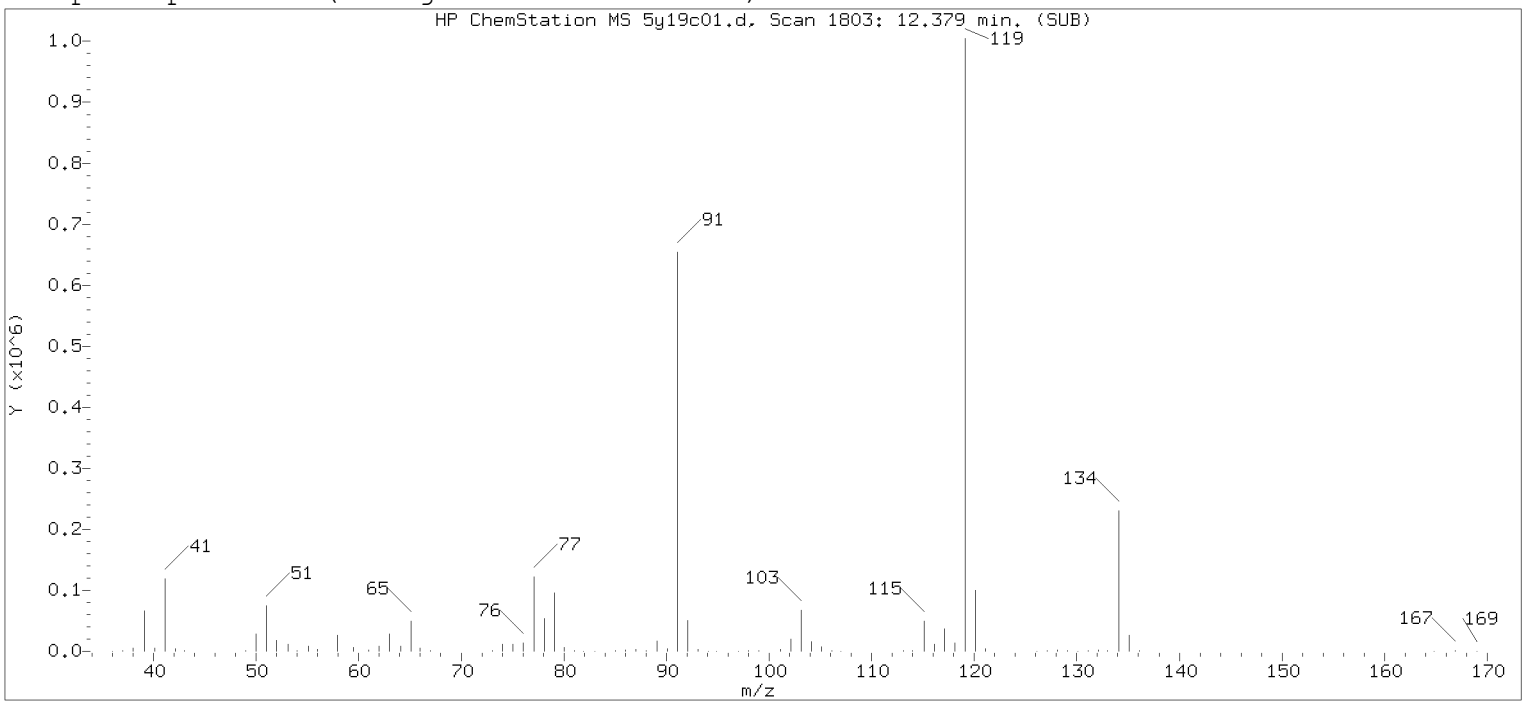
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1803
Retention Time (minutes): 12.379
Quant Ion : 134.00
Area (flag) : 305863M
On-Column Amount (ng) : 46.2143
Integration start scan : 1797 Integration stop scan: 1806
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

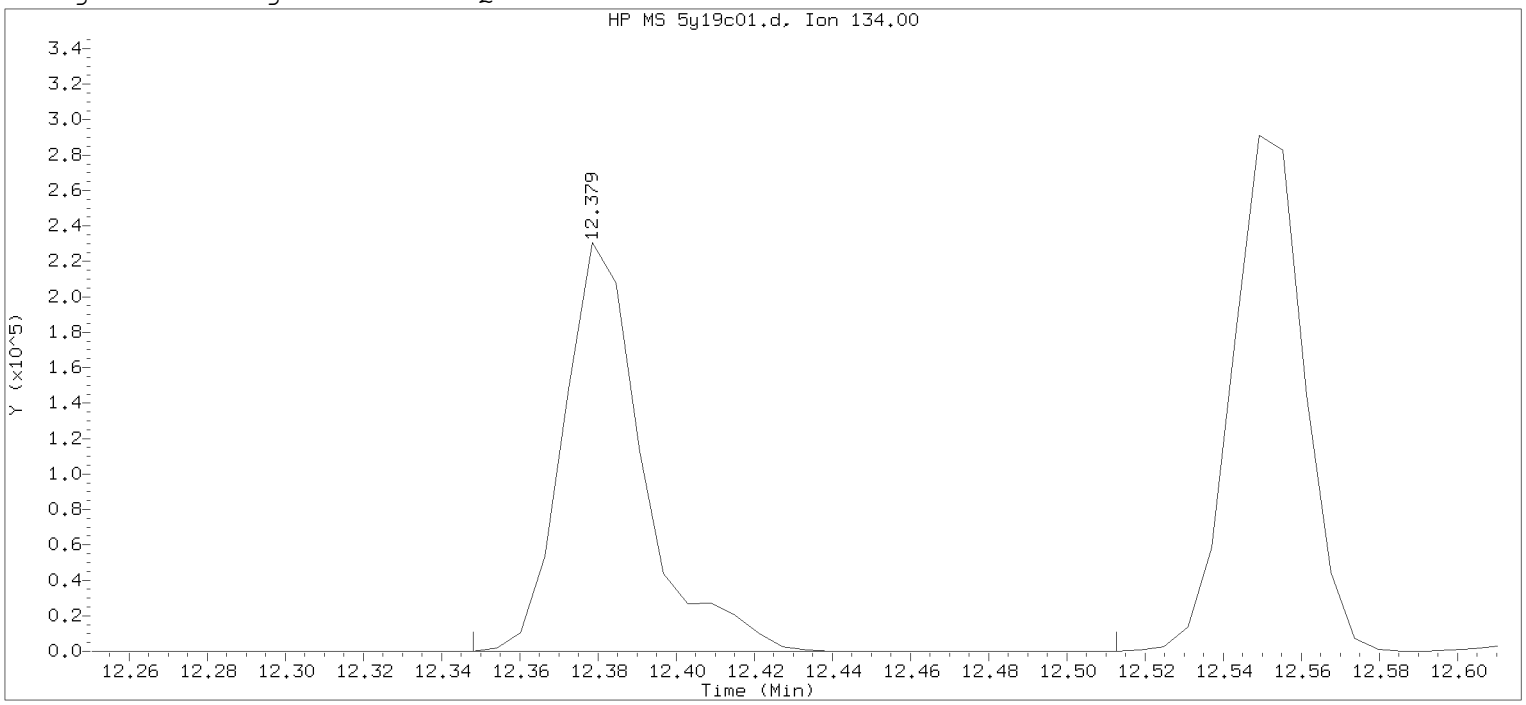
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/19/2019 at 13:58.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 19:58.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19c01.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:16 Analyst ID: DVV10203

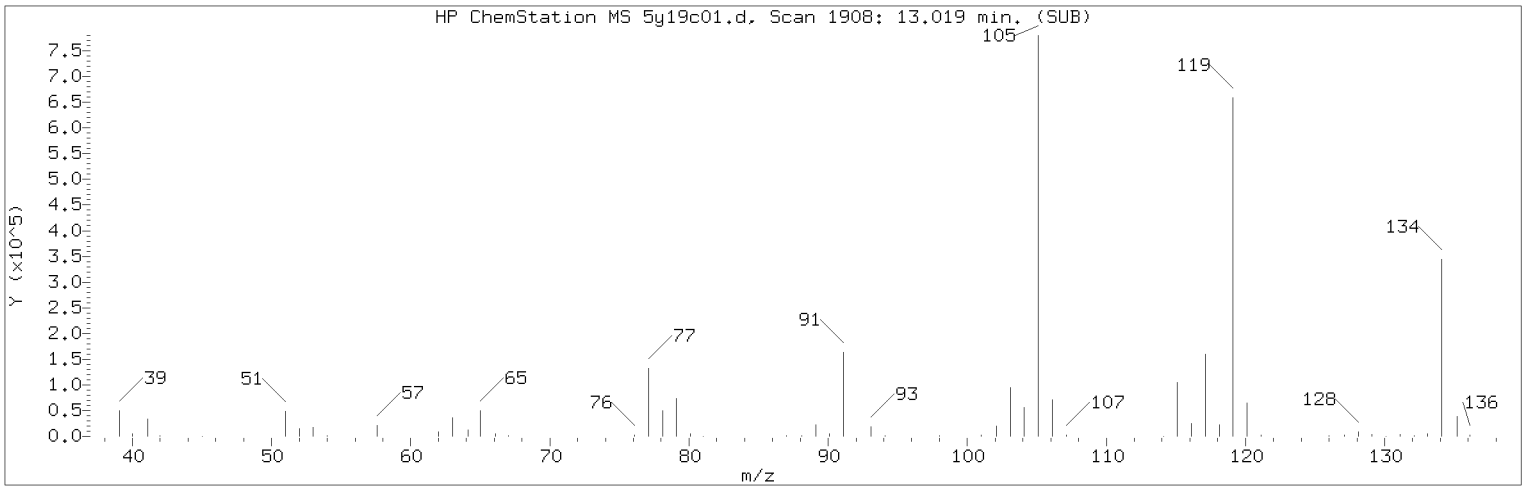
Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-MAY-2019 13:35
Date, time and analyst ID of latest file update: 19-May-2019 13:35 Unknown

Sample Name: VSTD050 Lab Sample ID: VSTD050

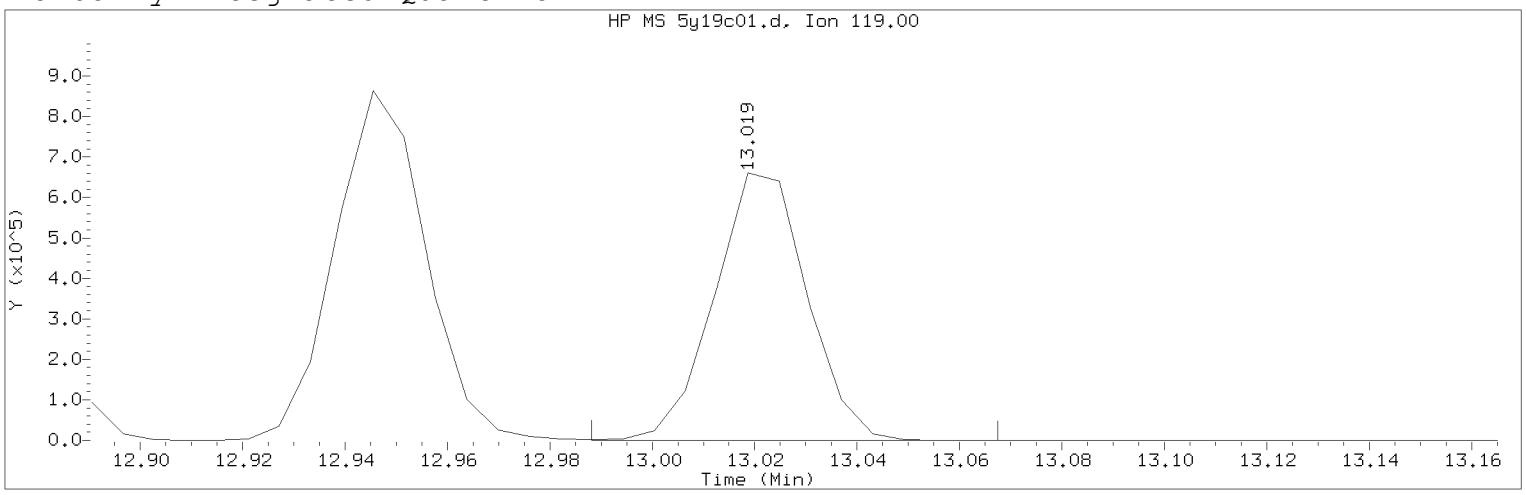
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1803
Retention Time (minutes): 12.379
Quant Ion : 134.00
Area : 328075
On-column Amount (ng) : 49.5705
Integration start scan : 1797 Integration stop scan: 1824
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/19/2019 at 13:58.
Target 3.5 esignature user id: dvviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19c01.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:16 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-MAY-2019 13:58
Date, time and analyst ID of latest file update: 19-May-2019 13:58 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

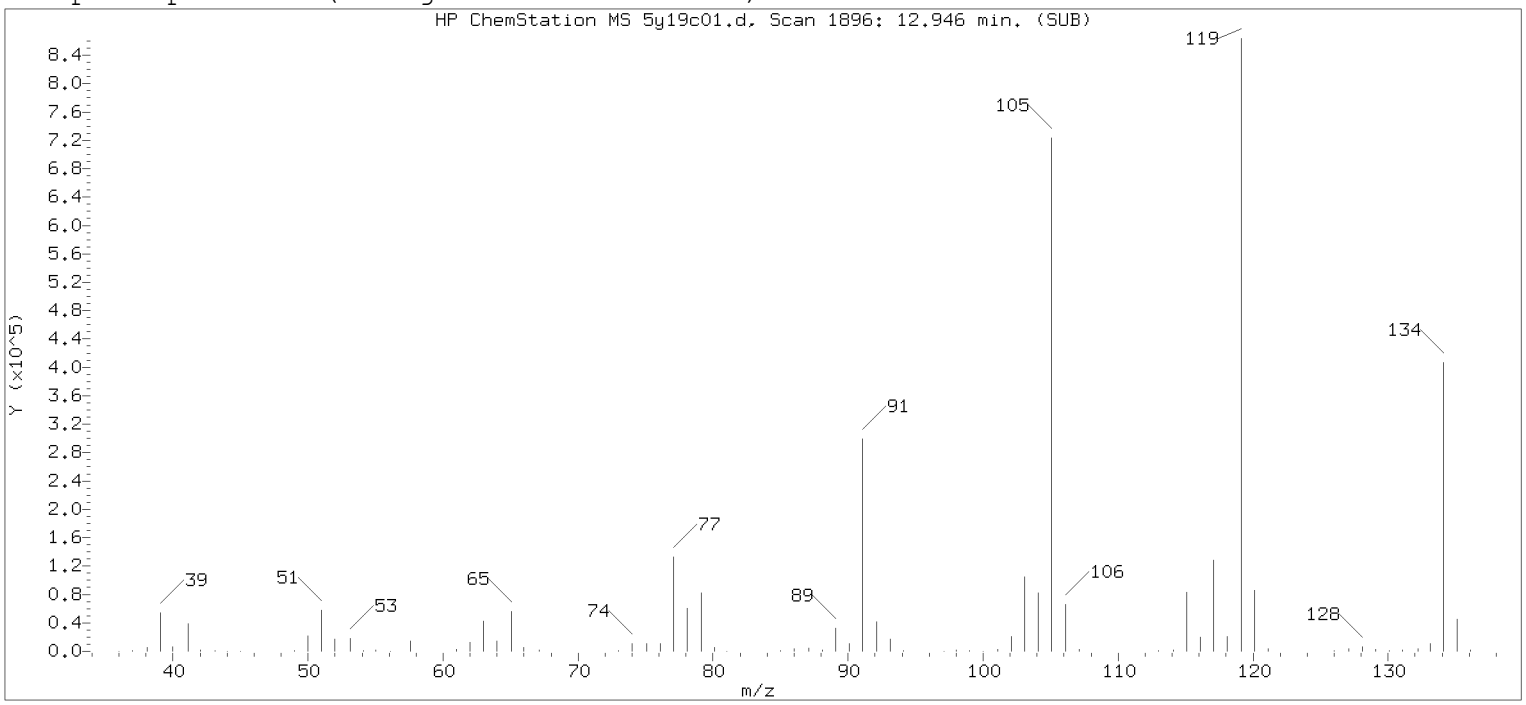
Compound Number : 141
Compound Name : 1,2-Diethylbenzene
Scan Number : 1908
Retention Time (minutes): 13.019
Quant Ion : 119.00
Area (flag) : 831551M
On-Column Amount (ng) : 46.6487
Integration start scan : 1902 Integration stop scan: 1915
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

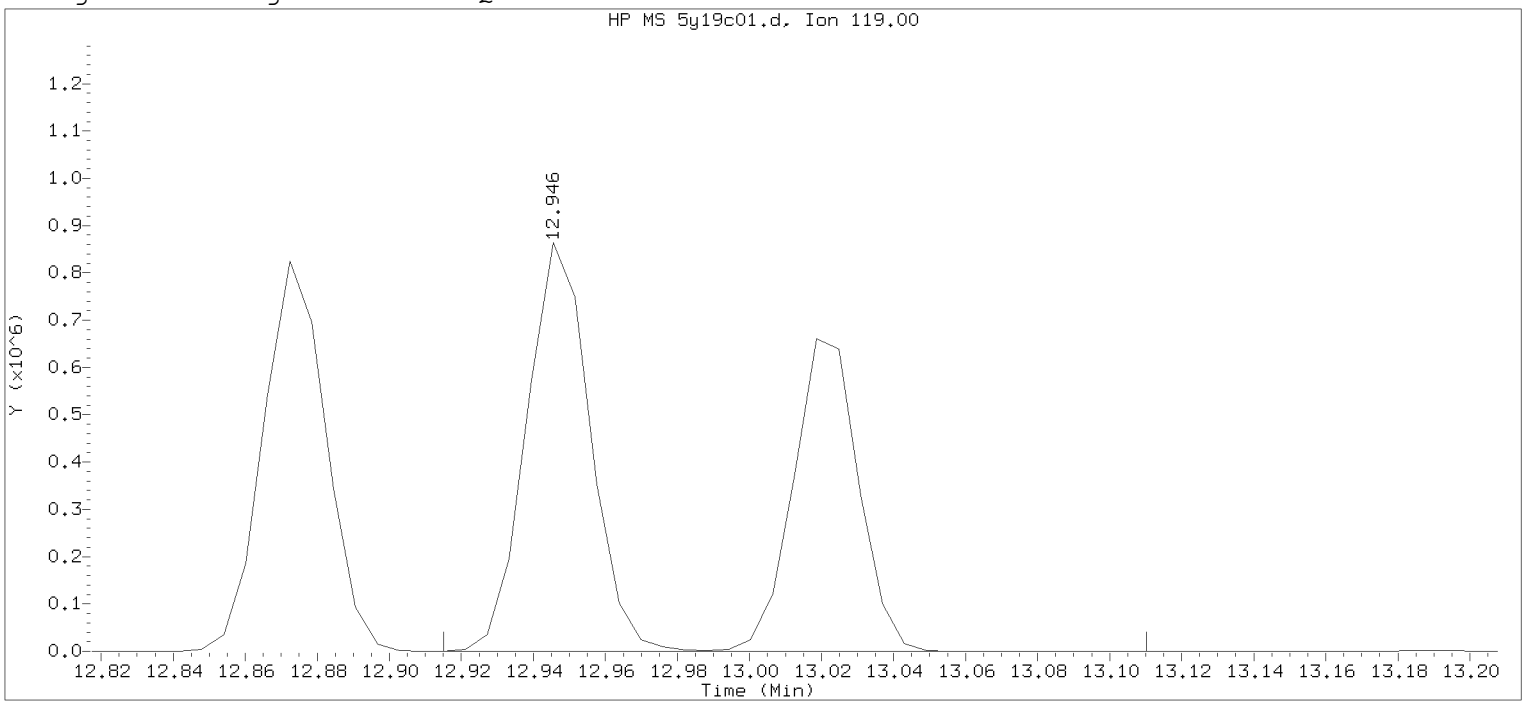
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/19/2019 at 13:58.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 19:58.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19c01.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:16 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-MAY-2019 13:35
Date, time and analyst ID of latest file update: 19-May-2019 13:35 Unknown

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 141
Compound Name : 1,2-Diethylbenzene
Scan Number : 1896
Retention Time (minutes): 12.946
Quant Ion : 119.00
Area : 1895838
On-column Amount (ng) : 106.3535
Integration start scan : 1890 Integration stop scan: 1922
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/19/2019 at 13:58.
Target 3.5 esignature user id: dviray0255

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

MDL590

Data file: /chem2/HP26285.i/19may19a.b/5y19m31.d Injection date and time: **19-MAY-2019 14:41**
Data file Sample Info. Line: MDL590;MDL590;1;3;MDL/LOQ;;;;5y19b31; Instrument ID: **HP26285.i** Batch: **5191392AA**
Date, time and analyst ID of latest file update: 19-May-2019 16:07 dvv10203

Blank Data file reference: **/chem2/HP26285.i/19may19a.b/5y19b31.d**

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: **MDL590**
Calibration date and time (Last Method Edit): 19-MAY-2019 14:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may19a.b/5y19c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.539(0.012)	353	65	329655 (-1)	250.00	
66) Fluorobenzene	7.002(0.000)	921	96	1169729 (6)	50.00	
101) Chlorobenzene-d5	10.726(-0.006)	1532	117	938590 (4)	50.00	
132) 1,4-Dichlorobenzene-d4	12.708(-0.006)	1857	152	529192 (-1)	50.00	

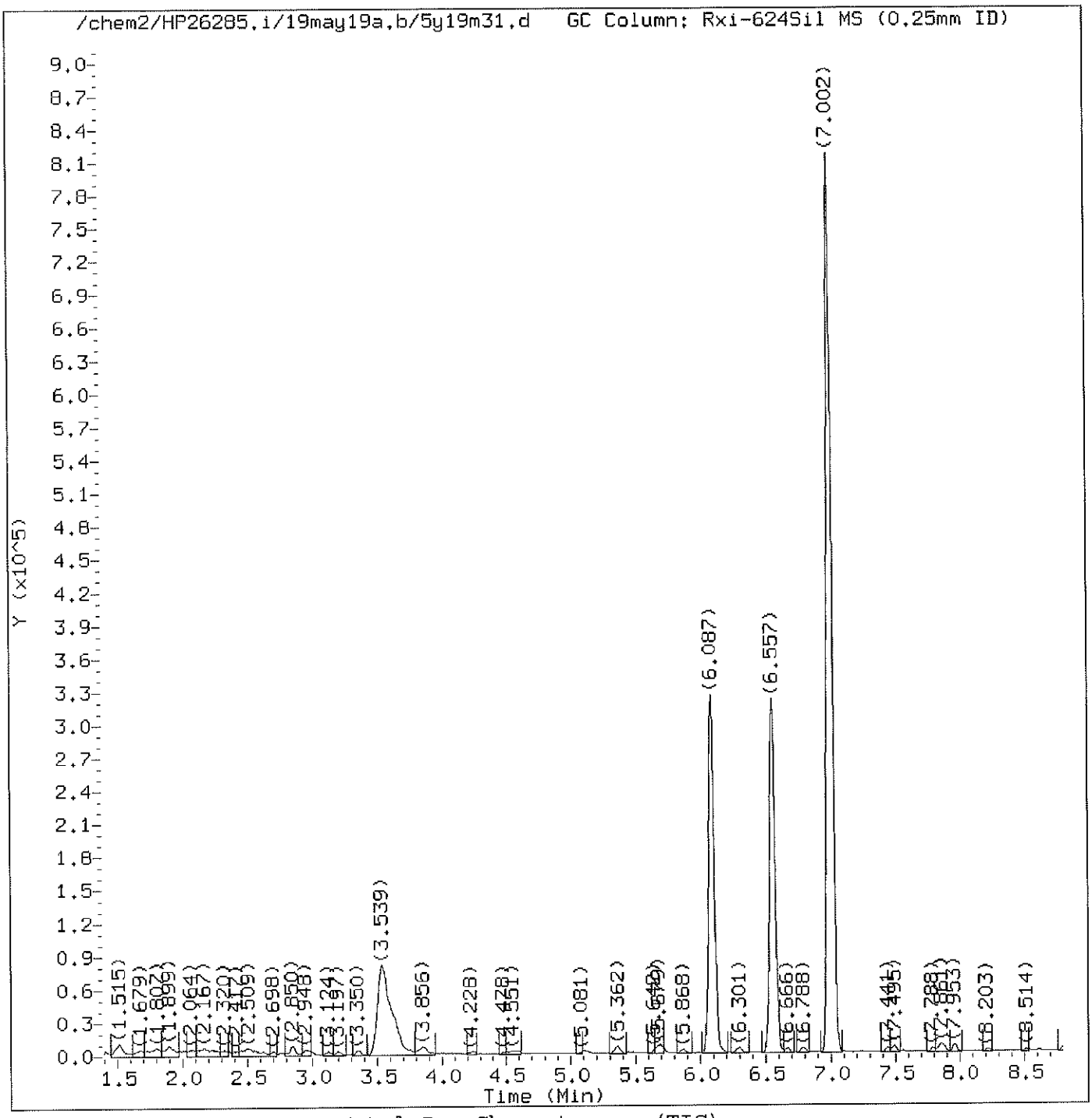
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC Flags	QC Limits
52) Dibromofluoromethane	(2)	6.087(0.000)	113	295571	52.804	106%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.557(0.000)	102	68671	52.432	105%		80 - 120
84) Toluene-d8	(3)	9.129(0.000)	98	1148359	48.472	97%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.787(0.001)	95	452797	49.119	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit LOQ (in sample)
97) 2-Hexanone	(3)	10.001(-0.000)	43	5558	0.446	0.45		J	0.3 10

Total number of targets = 1

Digitally signed by Don V. Viray on 05/19/2019 at 16:12. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Karl Becker on 05/20/2019 at 22:32. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

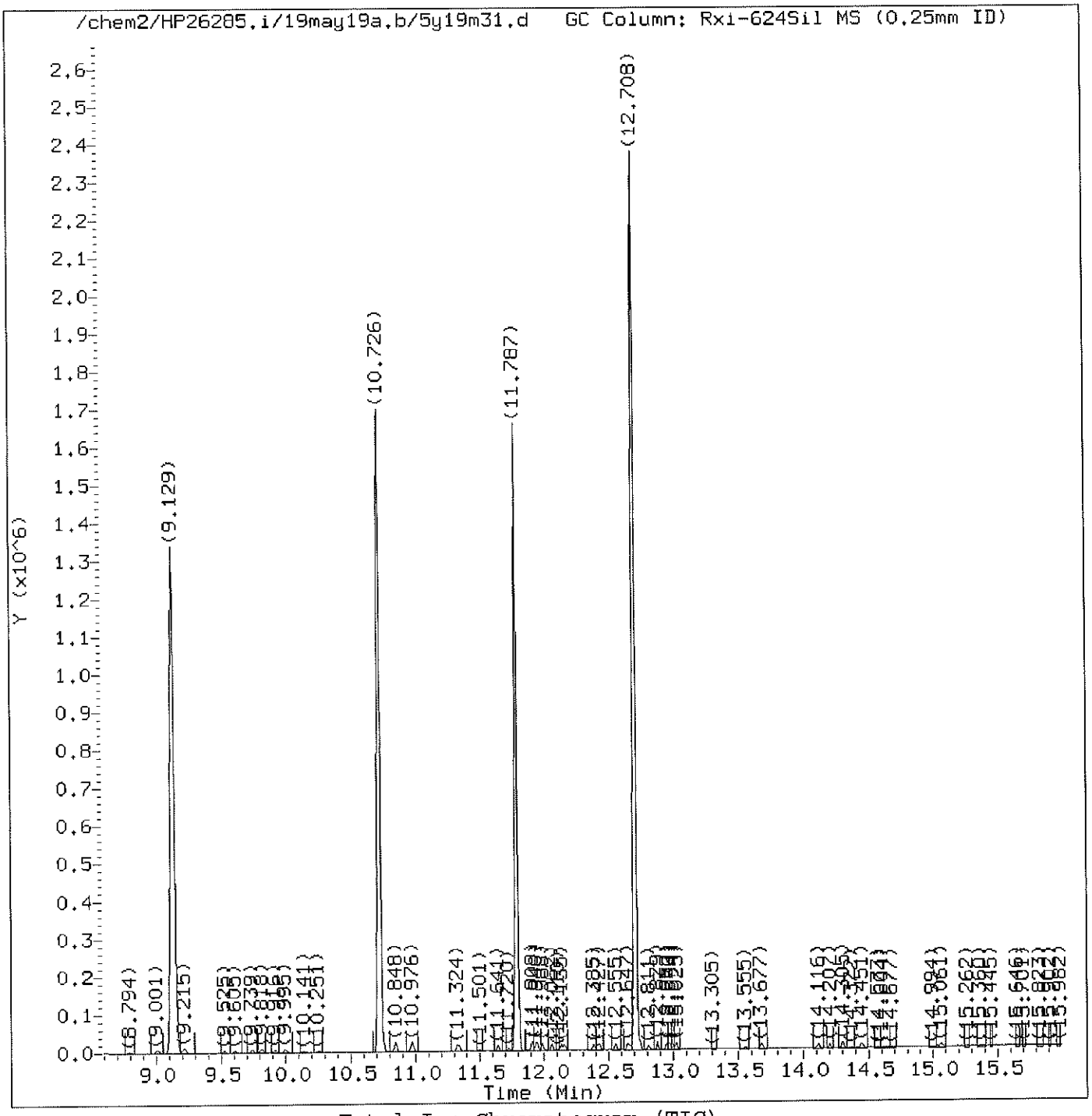
Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19m31.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 14:41 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: MDL590
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:07 dvv10203

Sample Name: MDL590 Lab Sample ID: MDL590

Digitally signed by Don V. Viray
on 05/19/2019 at 16:12.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19m31.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 14:41 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: MDL590
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:07 dvv10203

Sample Name: MDL590 Lab Sample ID: MDL590

Digitally signed by Don V. Viray
on 05/19/2019 at 16:12.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19m31.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 14:41 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: MDL590
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:07 dvv10203

Sample Name: MDL590 Lab Sample ID: MDL590

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.539	65	329655	250.000
52)$Dibromofluoromethane	(2)	6.087	113	295571	52.804
57)$1,2-Dichloroethane-d4	(2)	6.557	102	68671	52.432
66)*Fluorobenzene	(2)	7.002	96	1169729	50.000
84)$Toluene-d8	(3)	9.129	98	1148359	48.472
97) 2-Hexanone	(3)	10.001	43	5558	0.446
101)*Chlorobenzene-d5	(3)	10.726	117	938590	50.000
115)$4-Bromofluorobenzene	(3)	11.787	95	452797	49.119
132)*1,4-Dichlorobenzene-d4	(4)	12.708	152	529192	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/19/2019 at 16:12.
Target 3.5 esignature user ID: dvv10203

Raw QC Data

Volatiles by GC/MS

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP26285.i/19may19a.b/5y19b31.d
Data file Sample Info. Line: VBLK590;VBLK590;1;3;;;;;;
Date, time and analyst ID of latest file update: 19-May-2019 16:11 dvv10203

Injection date and time: **19-MAY-2019 15:45**
Instrument ID: **HP26285.i** Batch: **5191392AA**

Blank Data file reference: **/chem2/HP26285.i/19may19a.b/5y19b31.d**

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 19-MAY-2019 14:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may19a.b/5y19c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.557	(-0.006)	356	65	277103	(-17)	250.00	
66) Fluorobenzene	7.008	(-0.006)	922	96	944104	(-15)	50.00	
101) Chlorobenzene-d5	10.726	(-0.006)	1532	117	753835	(-17)	50.00	
132) 1,4-Dichlorobenzene-d4	12.708	(-0.006)	1857	152	417366	(-22)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.093	(0.000)	113	250739	55.500	111%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.563	(0.000)	102	55957	52.935	106%		80 - 120
84) Toluene-d8	(3)	9.135	(0.000)	98	922745	48.494	97%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.787	(0.001)	95	358692	48.447	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)				Not Detected					0.2	1
4) Chloromethane	(2)				Not Detected					0.2	1
5) 1,3-Butadiene	(2)				Not Detected					1	3
6) Vinyl Chloride	(2)				Not Detected					0.2	1
8) Bromomethane	(2)				Not Detected					0.3	1
9) Chloroethane	(2)				Not Detected					0.2	1
11) n-Pentane	(2)				Not Detected					0.4	10
12) Trichlorofluoromethane	(2)				Not Detected					0.2	1
14) Ethyl ether	(2)				Not Detected					0.2	5
15) Freon 123a	(2)				Not Detected					0.4	5
16) Acrolein	(1)				Not Detected					2	100
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
21) 2-Propanol	(1)				Not Detected					18	100
22) Methyl Iodide	(2)				Not Detected					0.2	1
23) Carbon Disulfide	(2)				Not Detected					0.2	5
25) Allyl Chloride	(2)				Not Detected					0.3	5
27) Methyl Acetate	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
30) t-Butyl alcohol	(1)				Not Detected					12	50
31) Acrylonitrile	(2)				Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.2	1
34) n-Hexane	(2)				Not Detected					0.2	5
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
38) di-Isopropyl ether	(2)				Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)				Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)				Not Detected					0.2	2

Digitally signed by Don V. Viray on 05/19/2019 at 16:12. Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP26285.i/19may19a.b/5y19b31.d Injection date and time: **19-MAY-2019 15:45**
Data file Sample Info. Line: VBLK590;VBLK590;1;3;;;;;; Instrument ID: **HP26285.i** Batch: **5191392AA**
Date, time and analyst ID of latest file update: 19-May-2019 16:11 dvv10203

Blank Data file reference: **/chem2/HP26285.i/19may19a.b/5y19b31.d**

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 19-MAY-2019 14:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may19a.b/5y19c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)				Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					0.2	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					0.2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
73) Methylcyclohexane	(2)				Not Detected					0.2	5
74) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
75) Dibromomethane	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
77) Methyl Methacrylate	(2)				Not Detected					0.2	5
79) Bromodichloromethane	(2)				Not Detected					0.2	1
80) 2-Nitropropane	(2)				Not Detected					0.8	10
81) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
82) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
83) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
89) Toluene	(3)				Not Detected					0.2	1
90) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
91) 1,3-Dichloropropene (total)	(3)				Not Detected					0.2	5
92) Ethyl Methacrylate	(3)				Not Detected					0.2	5
93) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
95) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
97) 2-Hexanone	(3)				Not Detected					0.3	10
98) Dibromochloromethane	(3)				Not Detected					0.2	1
100) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
102) 1-Chlorohexane	(3)				Not Detected					0.3	5
103) Chlorobenzene	(3)				Not Detected					0.2	1
104) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
110) Styrene	(3)				Not Detected					0.2	5
111) Bromoform	(3)				Not Detected					0.2	4
112) Isopropylbenzene	(3)				Not Detected					0.2	5
113) Cyclohexanone	(1)				Not Detected					25	100
116) Bromobenzene	(4)				Not Detected					0.2	5
117) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
118) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
119) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50
120) n-Propylbenzene	(4)				Not Detected					0.2	5

Digitally signed by Don V. Viray on 05/19/2019 at 16:12. Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP26285.i/19may19a.b/5y19b31.d Injection date and time: **19-MAY-2019 15:45**
Data file Sample Info. Line: VBLK590;VBLK590;1;3;;;;;; Instrument ID: **HP26285.i** Batch: **5191392AA**
Date, time and analyst ID of latest file update: 19-May-2019 16:11 dvv10203

Blank Data file reference: **/chem2/HP26285.i/19may19a.b/5y19b31.d**

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 19-MAY-2019 14:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may19a.b/5y19c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

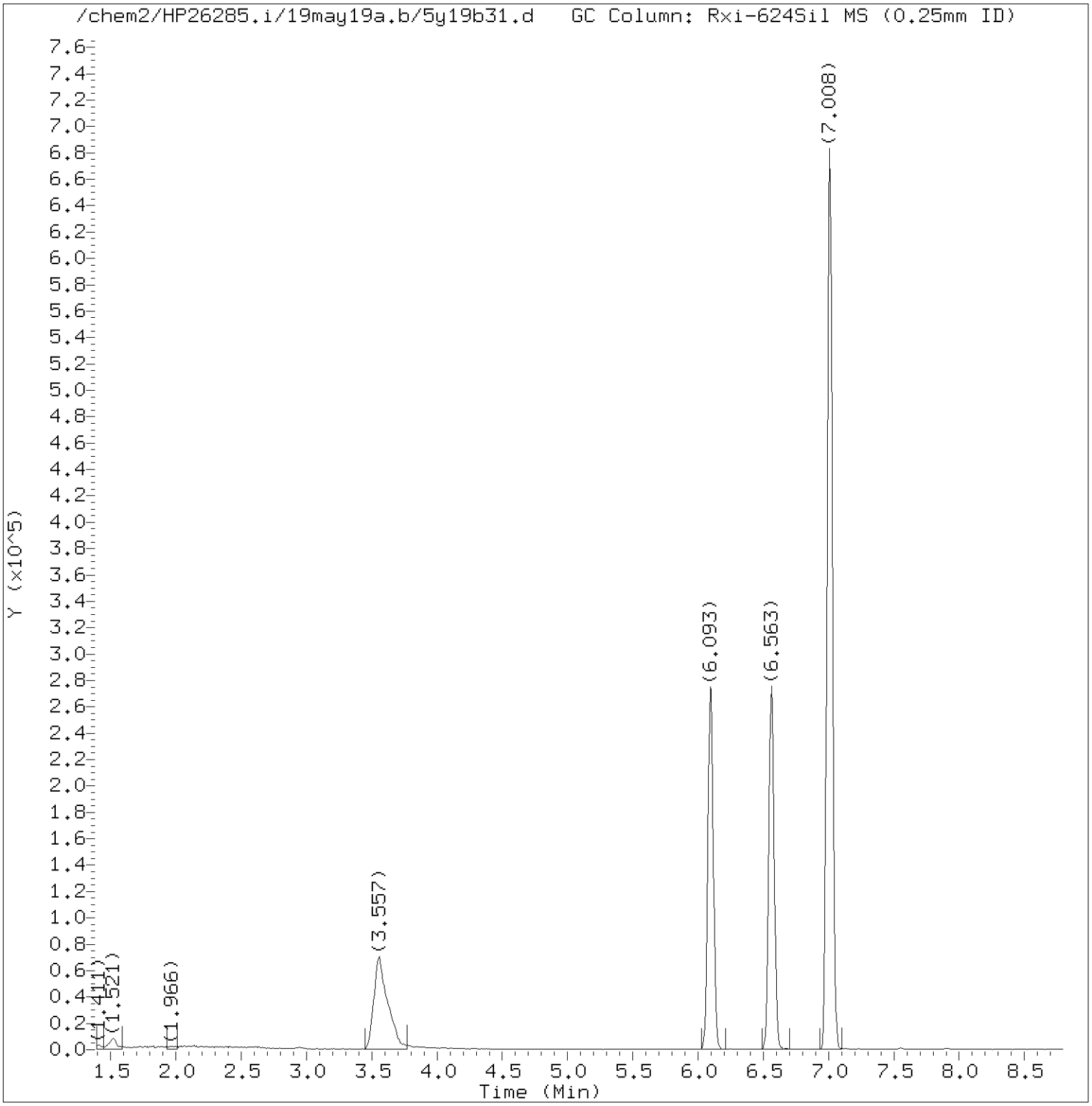
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
121) 2-Chlorotoluene	(4)				Not Detected					0.2	5
122) 4-Chlorotoluene	(4)				Not Detected					0.2	5
123) 1,3,5-Trimethylbenzene	(4)				Not Detected					0.3	5
125) tert-Butylbenzene	(4)				Not Detected					0.3	5
126) Pentachloroethane	(4)				Not Detected					0.2	5
127) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5
128) sec-Butylbenzene	(4)				Not Detected					0.2	5
130) 1,3-Dichlorobenzene	(4)				Not Detected					0.2	5
131) p-Isopropyltoluene	(4)				Not Detected					0.2	5
134) 1,4-Dichlorobenzene	(4)				Not Detected					0.2	5
135) 1,2,3-Trimethylbenzene	(4)				Not Detected					0.3	5
136) Benzyl Chloride	(4)				Not Detected					0.3	5
137) 1,3-Diethylbenzene	(4)				Not Detected					0.2	5
138) 1,4-Diethylbenzene	(4)				Not Detected					0.2	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
140) n-Butylbenzene	(4)				Not Detected					0.2	5
141) 1,2-Diethylbenzene	(4)				Not Detected					0.2	5
142) Diethylbenzene (total)	(4)				Not Detected					0.2	5
143) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.3	5
145) 1,3,5-Trichlorobenzene	(4)				Not Detected					0.2	5
147) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	5
148) Hexachlorobutadiene	(4)				Not Detected					0.7	5
149) Naphthalene	(4)				Not Detected					1	5
150) 1,2,3-Trichlorobenzene	(4)				Not Detected					0.4	5
151) 2-Methylnaphthalene	(4)				Not Detected					0.7	5

Total number of targets = 110

Digitally signed by Don V. Viray on 05/19/2019 at 16:12. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:32. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

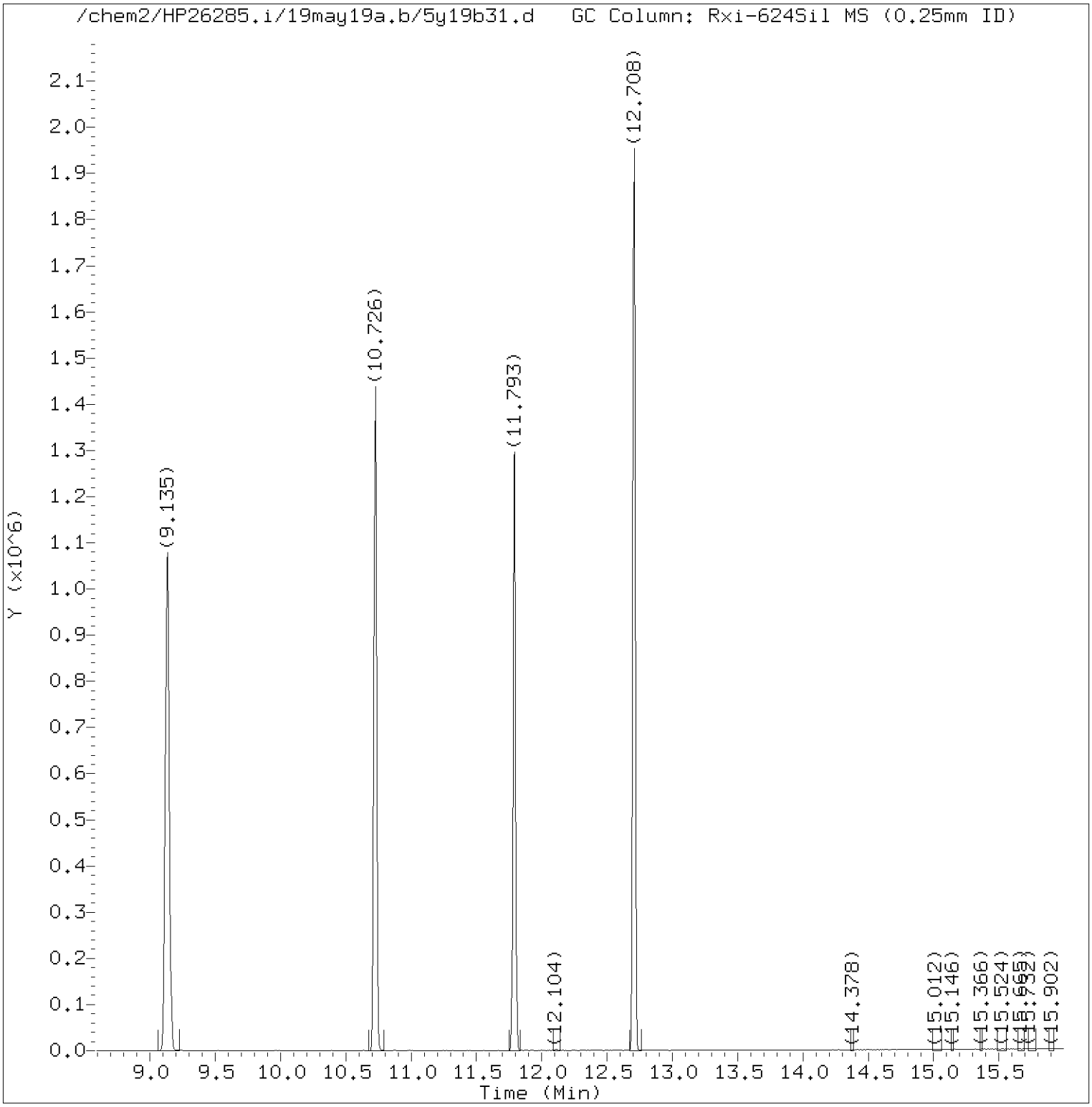
Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19b31.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 15:45 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:11 dvv10203

Sample Name: VBLK590 Lab Sample ID: VBLK590

Digitally signed by Don V. Viray
on 05/19/2019 at 16:12.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19b31.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 15:45 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:11 dvv10203

Sample Name: VBLK590 Lab Sample ID: VBLK590

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on 05/19/2019 at 16:12.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19b31.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 15:45 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:11 dvv10203

Sample Name: VBLK590 Lab Sample ID: VBLK590

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.557	65	277103	250.000
52)$Dibromofluoromethane	(2)	6.093	113	250739	55.500
57)$1,2-Dichloroethane-d4	(2)	6.563	102	55957	52.935
66)*Fluorobenzene	(2)	7.008	96	944104	50.000
84)$Toluene-d8	(3)	9.135	98	922745	48.494
101)*Chlorobenzene-d5	(3)	10.726	117	753835	50.000
115)$4-Bromofluorobenzene	(3)	11.787	95	358692	48.447
132)*1,4-Dichlorobenzene-d4	(4)	12.708	152	417366	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/19/2019 at 16:12.
Target 3.5 esignature user ID: dvv10203

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKW23

Data file: /chem2/HP09137.i/19may18a.b/wy18b01.d
Data file Sample Info. Line: VBLKW23;VBLKW23;1;3;;;;;;
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Injection date and time: **18-MAY-2019 23:17**
Instrument ID: **HP09137.i** Batch: **W191381AA**

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.744 (-0.006)	596	65	177555 (-6)	250.00	
66) Fluorobenzene	5.032 (0.000)	1309	96	947707 (-8)	50.00	
101) Chlorobenzene-d5	8.161 (0.000)	2284	117	739589 (-5)	50.00	
132) 1,4-Dichlorobenzene-d4	10.045 (-0.003)	2871	152	377751 (-15)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.358 (0.001)	113	213781	48.691	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692 (0.000)	102	57565	49.298	99%		80 - 120
84) Toluene-d8	(3)	6.698 (0.000)	98	928949	50.125	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.165 (0.000)	95	320336	43.206	86%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)			Not Detected					0.2	1
4) Chloromethane	(2)			Not Detected					0.2	1
5) 1,3-Butadiene	(2)			Not Detected					1	3
6) Vinyl Chloride	(2)			Not Detected					0.2	1
8) Bromomethane	(2)			Not Detected					0.3	1
9) Chloroethane	(2)			Not Detected					0.2	1
11) n-Pentane	(2)			Not Detected					0.4	10
12) Trichlorofluoromethane	(2)			Not Detected					0.2	1
13) Ethanol	(1)			Not Detected					280	750
15) Freon 123a	(2)			Not Detected					0.4	5
16) Acrolein	(1)			Not Detected					2	100
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
21) 2-Propanol	(1)			Not Detected					18	100
22) Methyl Iodide	(2)			Not Detected					0.2	1
23) Carbon Disulfide	(2)			Not Detected					0.2	5
25) Allyl Chloride	(2)			Not Detected					0.3	5
27) Methyl Acetate	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
30) t-Butyl alcohol	(1)			Not Detected					12	50
31) Acrylonitrile	(2)			Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)			Not Detected					0.2	1
34) n-Hexane	(2)			Not Detected					0.2	5
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
38) di-Isopropyl ether	(2)			Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)			Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)			Not Detected					0.2	2

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:42. Target 3.5 esignature user ID: sej02002

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may18a.b/wy18b01.d Injection date and time: **18-MAY-2019 23:17**
Data file Sample Info. Line: VBLKW23;VBLKW23;1;3;;;;;; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)				Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					0.2	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					0.2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
73) Methylcyclohexane	(2)				Not Detected					0.2	5
74) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
75) Dibromomethane	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
77) Methyl Methacrylate	(2)				Not Detected					0.2	5
79) Bromodichloromethane	(2)				Not Detected					0.2	1
80) 2-Nitropropane	(2)				Not Detected					0.8	10
81) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
82) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
83) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
89) Toluene	(3)				Not Detected					0.2	1
90) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
91) 1,3-Dichloropropene (total)	(3)				Not Detected					0.2	5
92) Ethyl Methacrylate	(3)				Not Detected					0.2	5
93) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
95) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
97) 2-Hexanone	(3)				Not Detected					0.3	10
98) Dibromochloromethane	(3)				Not Detected					0.2	1
100) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
103) Chlorobenzene	(3)				Not Detected					0.2	1
104) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
110) Styrene	(3)				Not Detected					0.2	5
111) Bromoform	(3)				Not Detected					0.2	4
112) Isopropylbenzene	(3)				Not Detected					0.2	5
113) Cyclohexanone	(1)				Not Detected					25	100
116) Bromobenzene	(4)				Not Detected					0.2	5
117) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
118) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
119) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50
120) n-Propylbenzene	(4)				Not Detected					0.2	5
121) 2-Chlorotoluene	(4)				Not Detected					0.2	5

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:42. Target 3.5 esignature user ID: sej02002

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may18a.b/wy18b01.d Injection date and time: **18-MAY-2019 23:17**
Data file Sample Info. Line: VBLKW23;VBLKW23;1;3;;;;;; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

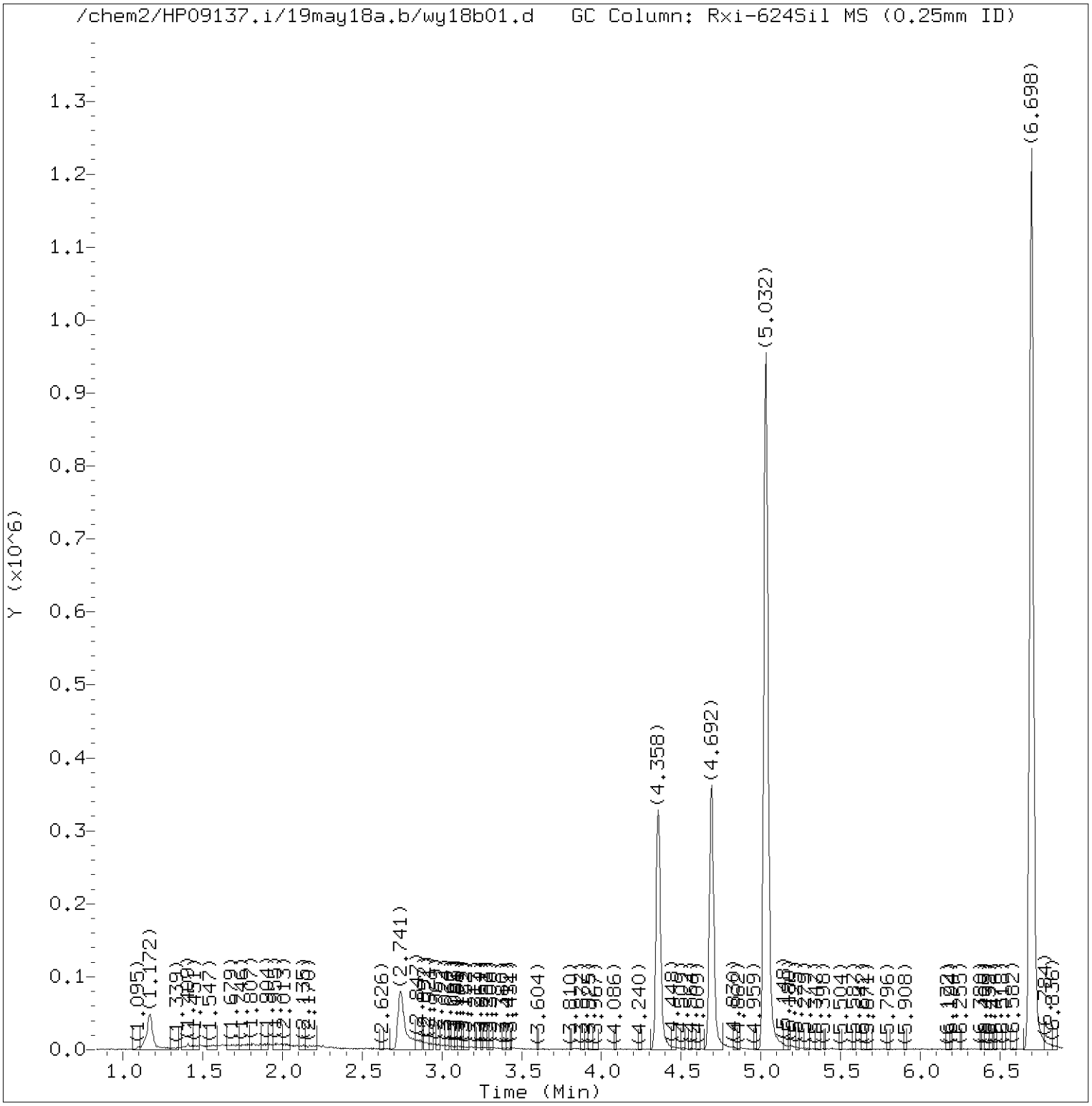
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
122) 4-Chlorotoluene	(4)				Not Detected					0.2	5
123) 1,3,5-Trimethylbenzene	(4)				Not Detected					0.3	5
125) tert-Butylbenzene	(4)				Not Detected					0.3	5
126) Pentachloroethane	(4)				Not Detected					0.2	5
127) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5
128) sec-Butylbenzene	(4)				Not Detected					0.2	5
130) 1,3-Dichlorobenzene	(4)				Not Detected					0.2	5
131) p-Isopropyltoluene	(4)				Not Detected					0.2	5
134) 1,4-Dichlorobenzene	(4)				Not Detected					0.2	5
135) 1,2,3-Trimethylbenzene	(4)				Not Detected					0.3	5
136) Benzyl Chloride	(4)				Not Detected					0.3	5
137) 1,3-Diethylbenzene	(4)				Not Detected					0.2	5
138) 1,4-Diethylbenzene	(4)				Not Detected					0.2	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
140) n-Butylbenzene	(4)				Not Detected					0.2	5
141) 1,2-Diethylbenzene	(4)				Not Detected					0.2	5
142) Diethylbenzene (total)	(4)				Not Detected					0.2	5
143) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.3	5
145) 1,3,5-Trichlorobenzene	(4)				Not Detected					0.2	5
147) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	5
148) Hexachlorobutadiene	(4)				Not Detected					0.7	5
149) Naphthalene	(4)				Not Detected					1	5
150) 1,2,3-Trichlorobenzene	(4)				Not Detected					0.4	5
151) 2-Methylnaphthalene	(4)				Not Detected					0.7	5

Total number of targets = 109

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:42. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

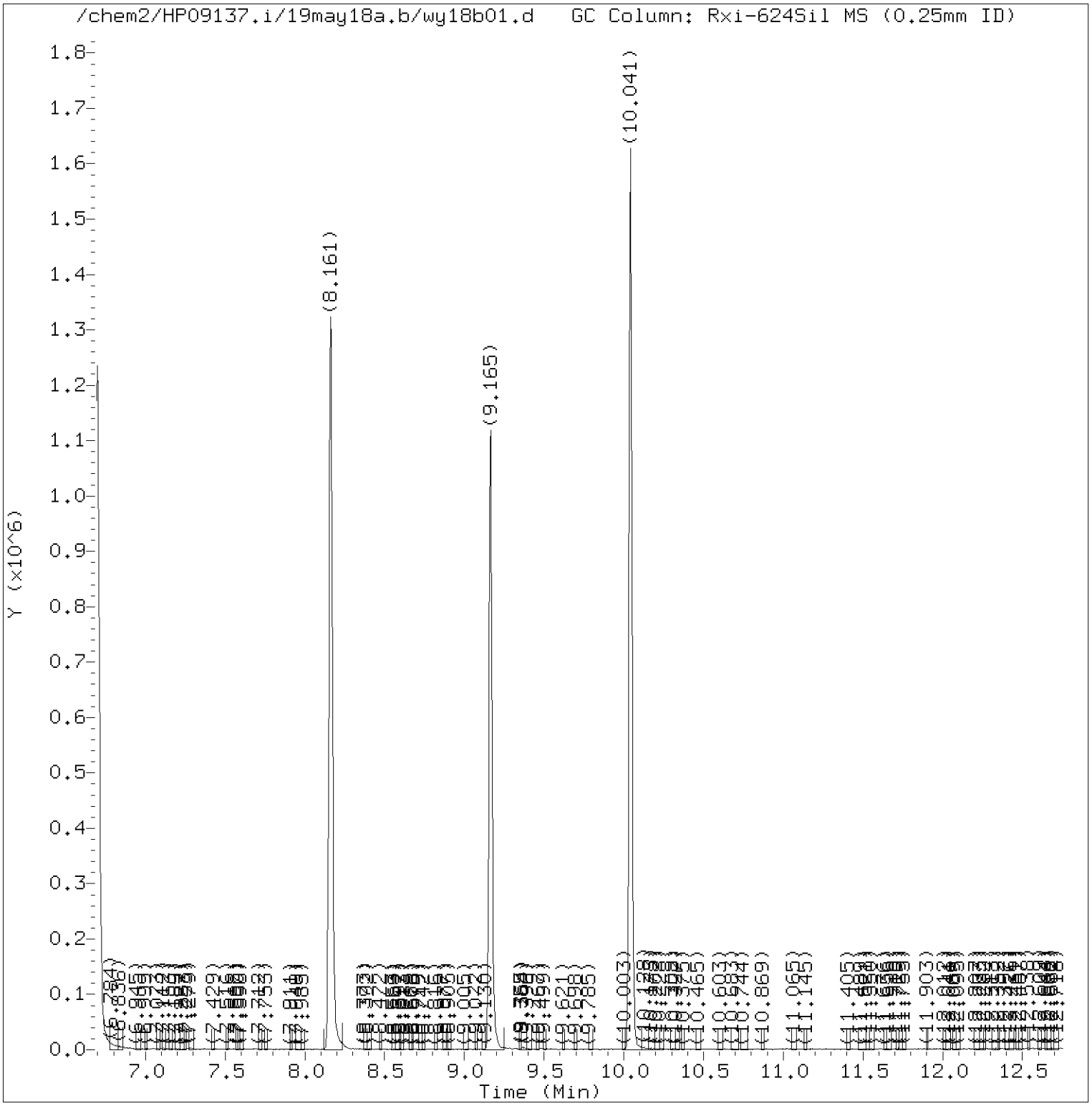
Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18b01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 23:17 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: VBLKW23 Lab Sample ID: VBLKW23

Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:42.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18b01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 23:17 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: VBLKW23 Lab Sample ID: VBLKW23

Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:42.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18b01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 23:17 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: VBLKW23 Lab Sample ID: VBLKW23

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.744	65	177555	250.000
52)$Dibromofluoromethane	(2)	4.358	113	213781	48.691
57)$1,2-Dichloroethane-d4	(2)	4.692	102	57565	49.298
66)*Fluorobenzene	(2)	5.032	96	947707	50.000
84)$Toluene-d8	(3)	6.698	98	928949	50.125
101)*Chlorobenzene-d5	(3)	8.161	117	739589	50.000
115)$4-Bromofluorobenzene	(3)	9.165	95	320336	43.206
132)*1,4-Dichlorobenzene-d4	(4)	10.045	152	377751	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:42.
Target 3.5 esignature user ID: sej02002

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS590

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCS590

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP26285.i/19may19a.b/5y19s31.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	19	
74-87-3	Chloromethane	19	
106-99-0	1,3-Butadiene	18	
75-01-4	Vinyl Chloride	20	
74-83-9	Bromomethane	18	
75-00-3	Chloroethane	19	
109-66-0	n-Pentane	18	
75-69-4	Trichlorofluoromethane	23	
60-29-7	Ethyl ether	18	
354-23-4	Freon 123a	19	
107-02-8	Acrolein	120	
75-35-4	1,1-Dichloroethene	20	
67-64-1	Acetone	140	
76-13-1	Freon 113	22	
67-63-0	2-Propanol	150	
74-88-4	Methyl Iodide	19	
75-15-0	Carbon Disulfide	17	
107-05-1	Allyl Chloride	17	
79-20-9	Methyl Acetate	18	
75-09-2	Methylene Chloride	20	
75-65-0	t-Butyl alcohol	200	
107-13-1	Acrylonitrile	85	
156-60-5	trans-1,2-Dichloroethene	20	
1634-04-4	Methyl Tertiary Butyl Ether	17	
110-54-3	n-Hexane	17	
75-34-3	1,1-Dichloroethane	20	
108-20-3	di-Isopropyl ether	17	
126-99-8	2-Chloro-1,3-butadiene	19	
637-92-3	Ethyl t-butyl ether	16	
156-59-2	cis-1,2-Dichloroethene	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS590

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCS590

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP26285.i/19may19a.b/5y19s31.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	42	
78-93-3	2-Butanone	120	
594-20-7	2,2-Dichloropropane	22	
107-12-0	Propionitrile	150	
126-98-7	Methacrylonitrile	140	
74-97-5	Bromochloromethane	21	
109-99-9	Tetrahydrofuran	93	
67-66-3	Chloroform	22	
71-55-6	1,1,1-Trichloroethane	22	
110-82-7	Cyclohexane	18	
563-58-6	1,1-Dichloropropene	21	
56-23-5	Carbon Tetrachloride	23	
78-83-1	Isobutyl Alcohol	520	
71-43-2	Benzene	20	
107-06-2	1,2-Dichloroethane	24	
994-05-8	t-Amyl methyl ether	17	
142-82-5	n-Heptane	16	
71-36-3	n-Butanol	1000	
79-01-6	Trichloroethene	22	
108-87-2	Methylcyclohexane	19	
78-87-5	1,2-Dichloropropane	21	
74-95-3	Dibromomethane	22	
123-91-1	1,4-Dioxane	650	
80-62-6	Methyl Methacrylate	18	
75-27-4	Bromodichloromethane	22	
79-46-9	2-Nitropropane	15	
110-75-8	2-Chloroethyl Vinyl Ether	18	
10061-01-5	cis-1,3-Dichloropropene	20	
108-10-1	4-Methyl-2-pentanone	81	
108-88-3	Toluene	20	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS590

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCS590

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP26285.i/19may19a.b/5y19s31.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	19	
542-75-6	1,3-Dichloropropene (total)	39	
97-63-2	Ethyl Methacrylate	16	
79-00-5	1,1,2-Trichloroethane	21	
127-18-4	Tetrachloroethene	21	
142-28-9	1,3-Dichloropropane	20	
591-78-6	2-Hexanone	74	
124-48-1	Dibromochloromethane	21	
106-93-4	1,2-Dibromoethane	20	
544-10-5	1-Chlorohexane	19	
108-90-7	Chlorobenzene	21	
630-20-6	1,1,1,2-Tetrachloroethane	21	
100-41-4	Ethylbenzene	21	
179601-23-1	m+p-Xylene	42	
95-47-6	o-Xylene	20	
1330-20-7	Xylene (Total)	62	
100-42-5	Styrene	20	
75-25-2	Bromoform	20	
98-82-8	Isopropylbenzene	21	
108-94-1	Cyclohexanone	610	
108-86-1	Bromobenzene	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	
96-18-4	1,2,3-Trichloropropane	21	
110-57-6	trans-1,4-Dichloro-2-butene	100	
103-65-1	n-Propylbenzene	20	
95-49-8	2-Chlorotoluene	19	
106-43-4	4-Chlorotoluene	19	
108-67-8	1,3,5-Trimethylbenzene	19	
98-06-6	tert-Butylbenzene	18	
76-01-7	Pentachloroethane	20	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS590

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCS590

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP26285.i/19may19a.b/5y19s31.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
95-63-6	1,2,4-Trimethylbenzene	19	
135-98-8	sec-Butylbenzene	19	
541-73-1	1,3-Dichlorobenzene	20	
99-87-6	p-Isopropyltoluene	18	
106-46-7	1,4-Dichlorobenzene	20	
526-73-8	1,2,3-Trimethylbenzene	19	
100-44-7	Benzyl Chloride	19	
141-93-5	1,3-Diethylbenzene	18	
105-05-5	1,4-Diethylbenzene	17	
95-50-1	1,2-Dichlorobenzene	20	
104-51-8	n-Butylbenzene	18	
135-01-3	1,2-Diethylbenzene	18	
25340-17-4	Diethylbenzene (total)	53	
96-12-8	1,2-Dibromo-3-chloropropane	21	
108-70-3	1,3,5-Trichlorobenzene	17	
120-82-1	1,2,4-Trichlorobenzene	17	
87-68-3	Hexachlorobutadiene	17	
91-20-3	Naphthalene	20	
87-61-6	1,2,3-Trichlorobenzene	19	
91-57-6	2-Methylnaphthalene	16	

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP26285.i/19may19a.b/5y19s31.d Injection date and time: **19-MAY-2019 13:59**
Data file Sample Info. Line: LCS590;LCS590;1;3;LCS;;;;5y19b31; Instrument ID: **HP26285.i** Batch: **5191392AA**
Date, time and analyst ID of latest file update: 19-May-2019 16:08 dvv10203

Blank Data file reference: **/chem2/HP26285.i/19may19a.b/5y19b31.d**

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 19-MAY-2019 14:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may19a.b/5y19c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.551	(0.000)	355	65	324398M	(-3)	250.00	
66) Fluorobenzene	7.008	(-0.006)	922	96	1125362	(2)	50.00	
101) Chlorobenzene-d5	10.727	(-0.006)	1532	117	917486	(1)	50.00	
132) 1,4-Dichlorobenzene-d4	12.708	(-0.006)	1857	152	535409	(0)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.087	(0.001)	113	290497	53.944	108%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.557	(0.001)	102	65815	52.233	104%		80 - 120
84) Toluene-d8	(3)	9.129	(0.000)	98	1138517	49.162	98%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.787	(0.001)	95	468936	52.040	104%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	1.637	(0.001)	85	168370	18.604	18.60			0.2	1
4) Chloromethane	(2)	1.808	(0.001)	50	124371	18.910	18.91			0.2	1
5) 1,3-Butadiene	(2)	1.893	(0.001)	39	83513	18.276	18.28			1	3
6) Vinyl Chloride	(2)	1.899	(0.001)	62	127559	19.825	19.82			0.2	1
8) Bromomethane	(2)	2.167	(0.001)	94	95694	18.456	18.46			0.3	1
9) Chloroethane	(2)	2.234	(0.001)	64	57822	18.746	18.75			0.2	1
11) n-Pentane	(2)	2.515	(0.001)	43	100570	17.827	17.83			0.4	10
12) Trichlorofluoromethane	(2)	2.490	(0.000)	101	204516	22.865	22.86			0.2	1
14) Ethyl ether	(2)	2.698	(0.000)	59	84665	18.276	18.28			0.2	5
15) Freon 123a	(2)	2.771	(0.000)	67	132247	19.023	19.02			0.4	5
16) Acrolein	(1)	2.850	(-0.000)	56	283511	123.803	123.80			2	100
17) 1,1-Dichloroethene	(2)	2.954	(0.001)	96	105567	20.320	20.32			0.2	1
18) Acetone	(1)	2.996	(-0.000)	58	151522	144.710	144.71			0.7	20
19) Freon 113	(2)	2.978	(0.001)	101	116153	21.977	21.98			0.2	10
21) 2-Propanol	(1)	3.149	(-0.000)	45	110882	145.709	145.71			18	100
22) Methyl Iodide	(2)	3.124	(0.000)	142	203504	18.756	18.76			0.2	1
23) Carbon Disulfide	(2)	3.204	(0.000)	76	298160	17.286	17.29			0.2	5
25) Allyl Chloride	(2)	3.356	(0.000)	41	154468	16.549	16.55			0.3	5
27) Methyl Acetate	(2)	3.338	(0.001)	43	143957	17.890	17.89			0.2	5
28) Methylene Chloride	(2)	3.521	(0.000)	84	120457	20.413	20.41			0.3	1
30) t-Butyl alcohol	(1)	3.661	(-0.003)	59	295338M	196.796	196.80			12	50
31) Acrylonitrile	(2)	3.819	(-0.000)	53	363643	85.498	85.50			0.3	20
32) trans-1,2-Dichloroethene	(2)	3.856	(0.000)	96	118340	20.350	20.35			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	3.856	(0.000)	73	290346	17.495	17.50			0.2	1
34) n-Hexane	(2)	4.240	(0.000)	57	139964	17.398	17.40			0.2	5
36) 1,1-Dichloroethane	(2)	4.490	(0.000)	63	206994	20.190	20.19			0.2	1
38) di-Isopropyl ether	(2)	4.563	(-0.000)	45	320305	17.139	17.14			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	4.600	(0.000)	53	168866	18.614	18.61			0.2	5
40) Ethyl t-butyl ether	(2)	5.118	(0.000)	59	271192	15.674	15.67			0.2	1
42) cis-1,2-Dichloroethene	(2)	5.362	(-0.000)	96	142289	21.626	21.63			0.2	1

M = Compound was manually integrated.

Digitally signed by Don V. Viray on 05/19/2019 at 16:13. Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP26285.i/19may19a.b/5y19s31.d Injection date and time: **19-MAY-2019 13:59**
Data file Sample Info. Line: LCS590;LCS590;1;3;LCS;;;;5y19b31; Instrument ID: **HP26285.i** Batch: **5191392AA**
Date, time and analyst ID of latest file update: 19-May-2019 16:08 dvv10203

Blank Data file reference: **/chem2/HP26285.i/19may19a.b/5y19b31.d**

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 19-MAY-2019 14:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may19a.b/5y19c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
43) 1,2-Dichloroethene (Total)	(2)		96	260629	41.975	41.98			0.2	2
44) 2-Butanone	(2)	5.356(-0.000)	43	792830	123.438	123.44			0.3	10
45) 2,2-Dichloropropane	(2)	5.368(0.000)	77	180839	22.055	22.06			0.3	1
47) Propionitrile	(1)	5.459(-0.003)	54	248154	152.027	152.03			14	100
48) Methacrylonitrile	(2)	5.667(0.000)	67	580244	138.649	138.65			6	50
49) Bromochloromethane	(2)	5.703(-0.000)	128	68865	20.916	20.92			0.2	5
50) Tetrahydrofuran	(1)	5.709(0.000)	71	153464	92.552	92.55			0.7	10
51) Chloroform	(2)	5.868(-0.000)	83	225495	22.181	22.18			0.2	1
53) 1,1,1-Trichloroethane	(2)	6.081(0.000)	97	200021	22.356	22.36			0.3	1
54) Cyclohexane	(2)	6.166(-0.000)	56	182738	17.666	17.67			0.2	5
55) 1,1-Dichloropropene	(2)	6.301(0.000)	75	172312	20.952	20.95			0.2	5
56) Carbon Tetrachloride	(2)	6.288(0.000)	117	178987	23.118	23.12			0.2	1
58) Isobutyl Alcohol	(1)	6.526(-0.001)	41	257186	523.292	523.29			36	250
60) Benzene	(2)	6.575(0.000)	78	507940	20.331	20.33			0.2	1
61) 1,2-Dichloroethane	(2)	6.666(-0.000)	62	174868	23.684	23.68			0.3	1
65) t-Amyl methyl ether	(2)	6.788(0.000)	73	299788	17.192	17.19			0.8	5
67) n-Heptane	(2)	7.014(0.000)	43	144383	15.916	15.92			0.2	5
69) n-Butanol	(1)	7.441(-0.001)	56	422627	1031.325	1031.33			61	250
71) Trichloroethene	(2)	7.496(0.000)	95	140399	21.670	21.67			0.2	1
73) Methylcyclohexane	(2)	7.794(0.000)	83	206762	19.273	19.27			0.2	5
74) 1,2-Dichloropropane	(2)	7.843(0.000)	63	128560	20.760	20.76			0.2	1
75) Dibromomethane	(2)	7.959(0.000)	93	86274	22.026	22.03			0.2	1
76) 1,4-Dioxane	(1)	7.940(0.000)	88	61517M	647.159	647.16			29	250
77) Methyl Methacrylate	(2)	7.959(0.000)	69	114442	17.701	17.70			0.2	5
79) Bromodichloromethane	(2)	8.215(0.000)	83	159330	21.889	21.89			0.2	1
80) 2-Nitropropane	(2)	8.514(0.001)	41	45998	15.395	15.39			0.8	10
81) 2-Chloroethyl Vinyl Ether	(2)	8.611(0.000)	63	95167M	18.414	18.41			0.2	10
82) cis-1,3-Dichloropropene	(2)	8.794(0.000)	75	194564	20.315	20.31			0.2	1
83) 4-Methyl-2-pentanone	(2)	9.007(0.000)	43	1067305	81.134	81.13			0.5	10
89) Toluene	(3)	9.215(0.000)	92	338802	19.654	19.65			0.2	1
90) trans-1,3-Dichloropropene	(3)	9.526(-0.000)	75	176972	18.999	19.00			0.2	1
91) 1,3-Dichloropropene (total)	(3)		100	371536	39.314	39.31			0.2	5
92) Ethyl Methacrylate	(3)	9.605(0.000)	69	181699	16.269	16.27			0.2	5
93) 1,1,2-Trichloroethane	(3)	9.745(0.000)	97	130316	21.132	21.13			0.2	1
94) Tetrachloroethene	(3)	9.812(0.000)	166	166008	21.177	21.18			0.2	1
95) 1,3-Dichloropropane	(3)	9.922(-0.000)	76	204882	20.281	20.28			0.2	1
97) 2-Hexanone	(3)	9.995(0.000)	43	908113	74.489	74.49			0.3	10
98) Dibromochloromethane	(3)	10.147(-0.000)	129	134974	21.378	21.38			0.2	1
100) 1,2-Dibromoethane	(3)	10.257(-0.000)	107	140727	20.435	20.43			0.2	1
102) 1-Chlorohexane	(3)	10.751(0.000)	91	193195	19.237	19.24			0.3	5
103) Chlorobenzene	(3)	10.751(0.000)	112	411816	21.351	21.35			0.2	1
104) 1,1,1,2-Tetrachloroethane	(3)	10.842(0.000)	131	139672	21.452	21.45			0.2	1
105) Ethylbenzene	(3)	10.848(0.000)	91	696523	20.686	20.69			0.4	1
107) m+p-Xylene	(3)	10.976(0.000)	106	556603	41.916	41.92			1	5
108) o-Xylene	(3)	11.324(0.000)	106	261227	20.133	20.13			0.4	1
109) Xylene (Total)	(3)		106	817830	62.049	62.05			1	5
110) Styrene	(3)	11.342(0.000)	104	428362	19.993	19.99			0.2	5
111) Bromoform	(3)	11.501(0.000)	173	99838	20.032	20.03			0.2	4
112) Isopropylbenzene	(3)	11.641(0.000)	105	704513	20.908	20.91			0.2	5
113) Cyclohexanone	(1)	11.720(0.000)	55	241511M	607.240	607.24			25	100
116) Bromobenzene	(4)	11.903(0.000)	156	182024	19.708	19.71			0.2	5
117) 1,1,2,2-Tetrachloroethane	(4)	11.909(0.000)	83	237089	20.273	20.27			0.2	1
118) 1,2,3-Trichloropropane	(4)	11.952(0.000)	110	75541	21.440	21.44			0.2	5
119) trans-1,4-Dichloro-2-butene	(4)	11.934(0.000)	53	370297	100.543	100.54			6	50

M = Compound was manually integrated.

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP26285.i/19may19a.b/5y19s31.d Injection date and time: **19-MAY-2019 13:59**
Data file Sample Info. Line: LCS590;LCS590;1;3;LCS;;;;5y19b31; Instrument ID: **HP26285.i** Batch: **5191392AA**
Date, time and analyst ID of latest file update: 19-May-2019 16:08 dvv10203

Blank Data file reference: **/chem2/HP26285.i/19may19a.b/5y19b31.d**

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 19-MAY-2019 14:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may19a.b/5y19c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) n-Propylbenzene	(4)	11.988(-0.000)	91	871160	20.042	20.04			0.2	5
121) 2-Chlorotoluene	(4)	12.062(-0.000)	126	173680	19.381	19.38			0.2	5
122) 4-Chlorotoluene	(4)	12.159(0.000)	126	177875	19.334	19.33			0.2	5
123) 1,3,5-Trimethylbenzene	(4)	12.135(-0.000)	105	599287	19.105	19.11			0.3	5
125) tert-Butylbenzene	(4)	12.385(-0.000)	134	120436M	18.170	18.17			0.3	5
126) Pentachloroethane	(4)	12.409(0.000)	167	108591	20.061	20.06			0.2	5
127) 1,2,4-Trimethylbenzene	(4)	12.427(0.000)	105	616446	19.164	19.16			1	5
128) sec-Butylbenzene	(4)	12.549(0.000)	105	751858	18.501	18.50			0.2	5
130) 1,3-Dichlorobenzene	(4)	12.647(0.000)	146	345559	19.536	19.54			0.2	5
131) p-Isopropyltoluene	(4)	12.665(0.000)	119	644490	18.292	18.29			0.2	5
134) 1,4-Dichlorobenzene	(4)	12.726(0.000)	146	357329	19.933	19.93			0.2	5
135) 1,2,3-Trimethylbenzene	(4)	12.738(0.000)	105	636619	19.159	19.16			0.3	5
136) Benzyl Chloride	(4)	12.812(0.000)	91	439682	19.084	19.08			0.3	5
137) 1,3-Diethylbenzene	(4)	12.879(0.000)	119	380359	17.712	17.71			0.2	5
138) 1,4-Diethylbenzene	(4)	12.946(0.000)	119	396279	17.388	17.39			0.2	5
139) 1,2-Dichlorobenzene	(4)	12.994(0.000)	146	336584	20.128	20.13			0.2	5
140) n-Butylbenzene	(4)	12.970(0.000)	92	320152	18.014	18.01			0.2	5
141) 1,2-Diethylbenzene	(4)	13.025(0.000)	119	319638	17.904	17.90			0.2	5
142) Diethylbenzene (total)	(4)		100	1096276	53.004	53.00			0.2	5
143) 1,2-Dibromo-3-chloropropane	(4)	13.555(0.000)	75	61606	21.087	21.09			0.3	5
145) 1,3,5-Trichlorobenzene	(4)	13.683(0.000)	180	234302	17.430	17.43			0.2	5
147) 1,2,4-Trichlorobenzene	(4)	14.116(0.000)	180	211148	17.352	17.35			0.3	5
148) Hexachlorobutadiene	(4)	14.208(0.000)	225	98579	17.166	17.17			0.7	5
149) Naphthalene	(4)	14.305(0.000)	128	812473	19.678	19.68			1	5
150) 1,2,3-Trichlorobenzene	(4)	14.445(0.000)	180	218541	18.744	18.74			0.4	5
151) 2-Methylnaphthalene	(4)	15.061(0.000)	142	398718	16.412	16.41			0.7	5

M = Compound was manually integrated.

Total number of targets = 110

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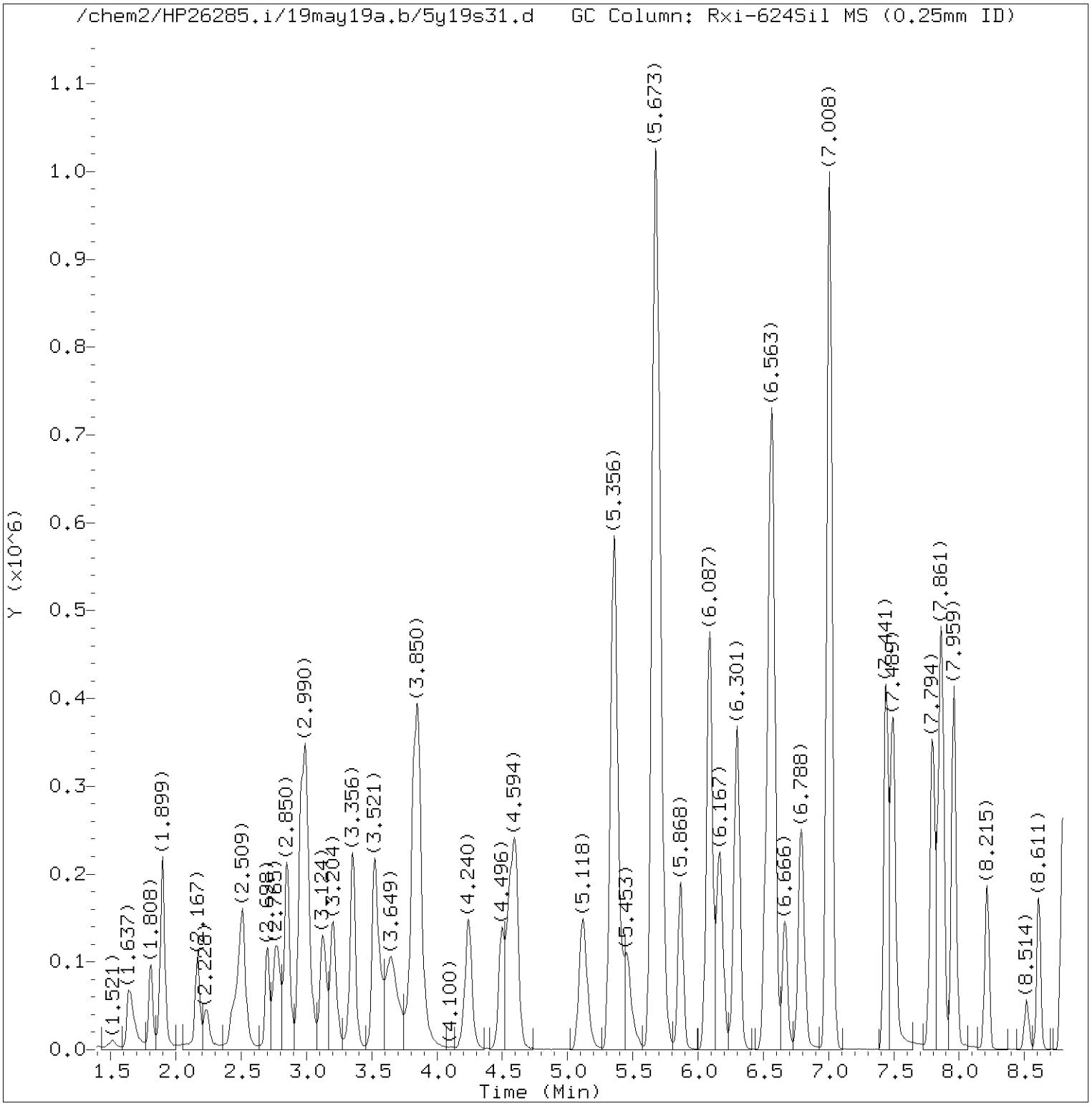
Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:32. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

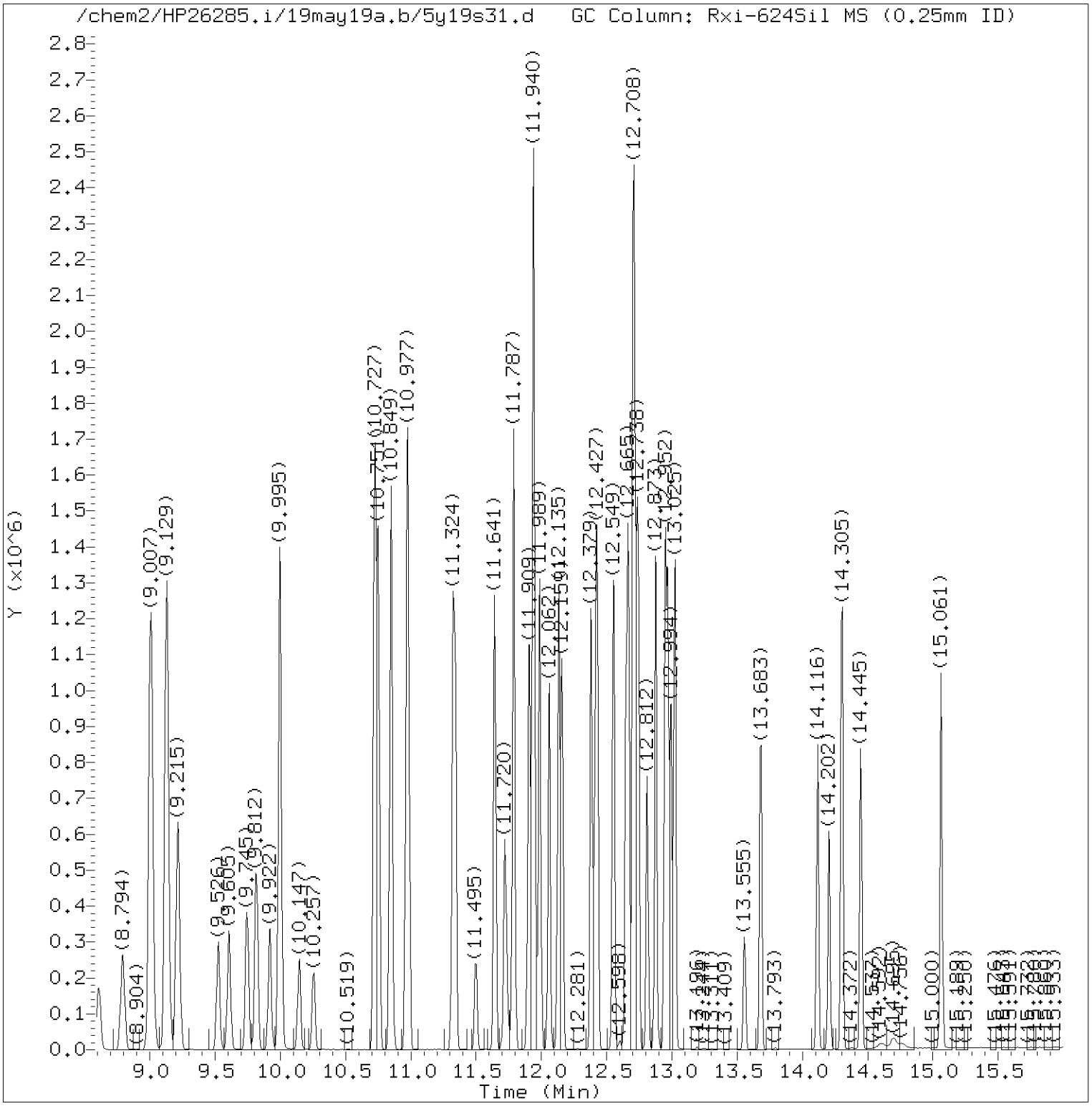
Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19s31.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:59 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:08 dvv10203

Sample Name: LCS590 Lab Sample ID: LCS590

Digitally signed by Don V. Viray
on 05/19/2019 at 16:13.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19s31.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:59 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:08 dvv10203

Sample Name: LCS590 Lab Sample ID: LCS590

Digitally signed by Don V. Viray
on 05/19/2019 at 16:13.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19s31.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:59 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:08 dvv10203

Sample Name: LCS590 Lab Sample ID: LCS590

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.637	85	168370	18.604
4) Chloromethane	(2)	1.808	50	124371	18.910
5) 1,3-Butadiene	(2)	1.893	39	83513	18.276
6) Vinyl Chloride	(2)	1.899	62	127559	19.825
8) Bromomethane	(2)	2.167	94	95694	18.456
9) Chloroethane	(2)	2.234	64	57822	18.746
12) Trichlorofluoromethane	(2)	2.490	101	204516	22.865
11) n-Pentane	(2)	2.515	43	100570	17.827
14) Ethyl ether	(2)	2.698	59	84665	18.276
15) Freon 123a	(2)	2.771	67	132247	19.023
16) Acrolein	(1)	2.850	56	283511	123.803
17) 1,1-Dichloroethene	(2)	2.954	96	105567	20.320
19) Freon 113	(2)	2.978	101	116153	21.977
18) Acetone	(1)	2.996	58	151522	144.710
22) Methyl Iodide	(2)	3.124	142	203504	18.756
21) 2-Propanol	(1)	3.149	45	110882	145.709
23) Carbon Disulfide	(2)	3.204	76	298160	17.286
27) Methyl Acetate	(2)	3.338	43	143957	17.890
25) Allyl Chloride	(2)	3.356	41	154468	16.549
28) Methylene Chloride	(2)	3.521	84	120457	20.413
29)*t-Butyl alcohol-d10	(1)	3.551	65	324398M	250.000
30) t-Butyl alcohol	(1)	3.661	59	295338M	196.796
31) Acrylonitrile	(2)	3.819	53	363643	85.498
32) trans-1,2-Dichloroethene	(2)	3.856	96	118340	20.350
33) Methyl Tertiary Butyl Ether	(2)	3.856	73	290346	17.495
34) n-Hexane	(2)	4.240	57	139964	17.398
36) 1,1-Dichloroethane	(2)	4.490	63	206994	20.190
38) di-Isopropyl ether	(2)	4.563	45	320305	17.139
39) 2-Chloro-1,3-butadiene	(2)	4.600	53	168866	18.614
40) Ethyl t-butyl ether	(2)	5.118	59	271192	15.674
44) 2-Butanone	(2)	5.356	43	792830	123.438
42) cis-1,2-Dichloroethene	(2)	5.362	96	142289	21.626
45) 2,2-Dichloropropane	(2)	5.368	77	180839	22.055
47) Propionitrile	(1)	5.459	54	248154	152.027
48) Methacrylonitrile	(2)	5.667	67	580244	138.649
49) Bromochloromethane	(2)	5.703	128	68865	20.916
50) Tetrahydrofuran	(1)	5.709	71	153464	92.552
51) Chloroform	(2)	5.868	83	225495	22.181

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 05/19/2019 at 16:13.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19s31.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:59 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:08 dvv10203

Sample Name: LCS590 Lab Sample ID: LCS590

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
53) 1,1,1-Trichloroethane	(2)	6.081	97	200021	22.356
52)$Dibromofluoromethane	(2)	6.087	113	290497	53.944
43) 1,2-Dichloroethene (Total)	(2)		96	260629	41.975
54) Cyclohexane	(2)	6.167	56	182738	17.666
56) Carbon Tetrachloride	(2)	6.288	117	178987	23.118
55) 1,1-Dichloropropene	(2)	6.301	75	172312	20.952
58) Isobutyl Alcohol	(1)	6.526	41	257186	523.292
57)$1,2-Dichloroethane-d4	(2)	6.557	102	65815	52.233
60) Benzene	(2)	6.575	78	507940	20.331
61) 1,2-Dichloroethane	(2)	6.666	62	174868	23.684
65) t-Amyl methyl ether	(2)	6.788	73	299788	17.192
66)*Fluorobenzene	(2)	7.008	96	1125362	50.000
67) n-Heptane	(2)	7.014	43	144383	15.916
69) n-Butanol	(1)	7.441	56	422627	1031.325
71) Trichloroethene	(2)	7.496	95	140399	21.670
73) Methylcyclohexane	(2)	7.794	83	206762	19.273
74) 1,2-Dichloropropane	(2)	7.843	63	128560	20.760
76) 1,4-Dioxane	(1)	7.941	88	61517M	647.159
75) Dibromomethane	(2)	7.959	93	86274	22.026
77) Methyl Methacrylate	(2)	7.959	69	114442	17.701
79) Bromodichloromethane	(2)	8.215	83	159330	21.889
80) 2-Nitropropane	(2)	8.514	41	45998	15.395
81) 2-Chloroethyl Vinyl Ether	(2)	8.611	63	95167M	18.414
82) cis-1,3-Dichloropropene	(2)	8.794	75	194564	20.315
83) 4-Methyl-2-pentanone	(2)	9.007	43	1067305	81.134
84)$Toluene-d8	(3)	9.129	98	1138517	49.162
89) Toluene	(3)	9.215	92	338802	19.654
90) trans-1,3-Dichloropropene	(3)	9.526	75	176972	18.999
92) Ethyl Methacrylate	(3)	9.605	69	181699	16.269
93) 1,1,2-Trichloroethane	(3)	9.745	97	130316	21.132
94) Tetrachloroethene	(3)	9.812	166	166008	21.177
95) 1,3-Dichloropropane	(3)	9.922	76	204882	20.281
97) 2-Hexanone	(3)	9.995	43	908113	74.489
91) 1,3-Dichloropropene (total)	(3)		100	371536	39.314
98) Dibromochloromethane	(3)	10.147	129	134974	21.378
100) 1,2-Dibromoethane	(3)	10.257	107	140727	20.435
101)*Chlorobenzene-d5	(3)	10.727	117	917486	50.000
102) 1-Chlorohexane	(3)	10.751	91	193195	19.237

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/19/2019 at 16:13.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19s31.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:59 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:08 dvv10203

Sample Name: LCS590 Lab Sample ID: LCS590

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
103) Chlorobenzene	(3)	10.751	112	411816	21.351
104) 1,1,1,2-Tetrachloroethane	(3)	10.842	131	139672	21.452
105) Ethylbenzene	(3)	10.849	91	696523	20.686
107) m+p-Xylene	(3)	10.977	106	556603	41.916
108) o-Xylene	(3)	11.324	106	261227	20.133
110) Styrene	(3)	11.342	104	428362	19.993
111) Bromoform	(3)	11.501	173	99838	20.032
112) Isopropylbenzene	(3)	11.641	105	704513	20.908
113) Cyclohexanone	(1)	11.720	55	241511M	607.240
109) Xylene (Total)	(3)		106	817830	62.049
115)$4-Bromofluorobenzene	(3)	11.787	95	468936	52.040
116) Bromobenzene	(4)	11.903	156	182024	19.708
117) 1,1,2,2-Tetrachloroethane	(4)	11.909	83	237089	20.273
119) trans-1,4-Dichloro-2-butene	(4)	11.934	53	370297	100.543
118) 1,2,3-Trichloropropane	(4)	11.952	110	75541	21.440
120) n-Propylbenzene	(4)	11.989	91	871160	20.042
121) 2-Chlorotoluene	(4)	12.062	126	173680	19.381
123) 1,3,5-Trimethylbenzene	(4)	12.135	105	599287	19.105
122) 4-Chlorotoluene	(4)	12.159	126	177875	19.334
125) tert-Butylbenzene	(4)	12.385	134	120436M	18.170
126) Pentachloroethane	(4)	12.409	167	108591	20.061
127) 1,2,4-Trimethylbenzene	(4)	12.427	105	616446	19.164
128) sec-Butylbenzene	(4)	12.549	105	751858	18.501
130) 1,3-Dichlorobenzene	(4)	12.647	146	345559	19.536
131) p-Isopropyltoluene	(4)	12.665	119	644490	18.292
132)*1,4-Dichlorobenzene-d4	(4)	12.708	152	535409	50.000
134) 1,4-Dichlorobenzene	(4)	12.726	146	357329	19.933
135) 1,2,3-Trimethylbenzene	(4)	12.738	105	636619	19.159
136) Benzyl Chloride	(4)	12.812	91	439682	19.084
137) 1,3-Diethylbenzene	(4)	12.879	119	380359	17.712
138) 1,4-Diethylbenzene	(4)	12.946	119	396279	17.388
140) n-Butylbenzene	(4)	12.970	92	320152	18.014
139) 1,2-Dichlorobenzene	(4)	12.994	146	336584	20.128
141) 1,2-Diethylbenzene	(4)	13.025	119	319638	17.904
142) Diethylbenzene (total)	(4)		100	1096276	53.004
143) 1,2-Dibromo-3-chloropropane	(4)	13.555	75	61606	21.087
145) 1,3,5-Trichlorobenzene	(4)	13.683	180	234302	17.430
147) 1,2,4-Trichlorobenzene	(4)	14.116	180	211148	17.352

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/19/2019 at 16:13.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19s31.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:59 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:08 dvv10203

Sample Name: LCS590 Lab Sample ID: LCS590

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) Hexachlorobutadiene	(4)	14.208	225	98579	17.166
149) Naphthalene	(4)	14.305	128	812473	19.678
150) 1,2,3-Trichlorobenzene	(4)	14.445	180	218541	18.744
151) 2-Methylnaphthalene	(4)	15.061	142	398718	16.412

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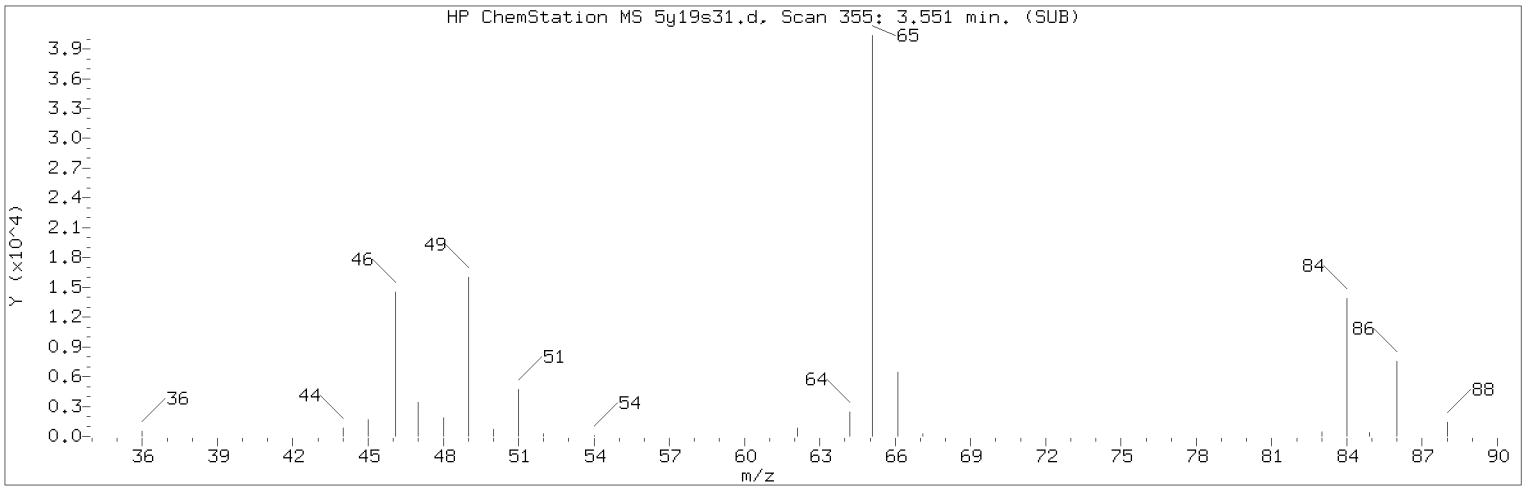
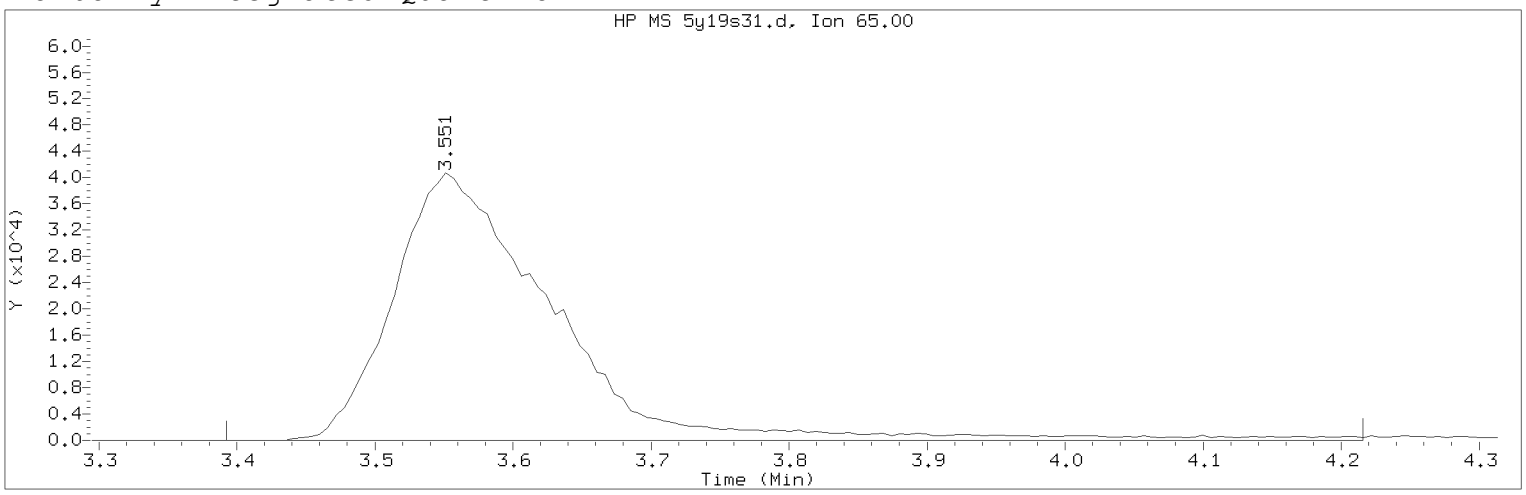
on 05/19/2019 at 16:13.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s31.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:59 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:08 dvv10203

Sample Name: LCS590 Lab Sample ID: LCS590

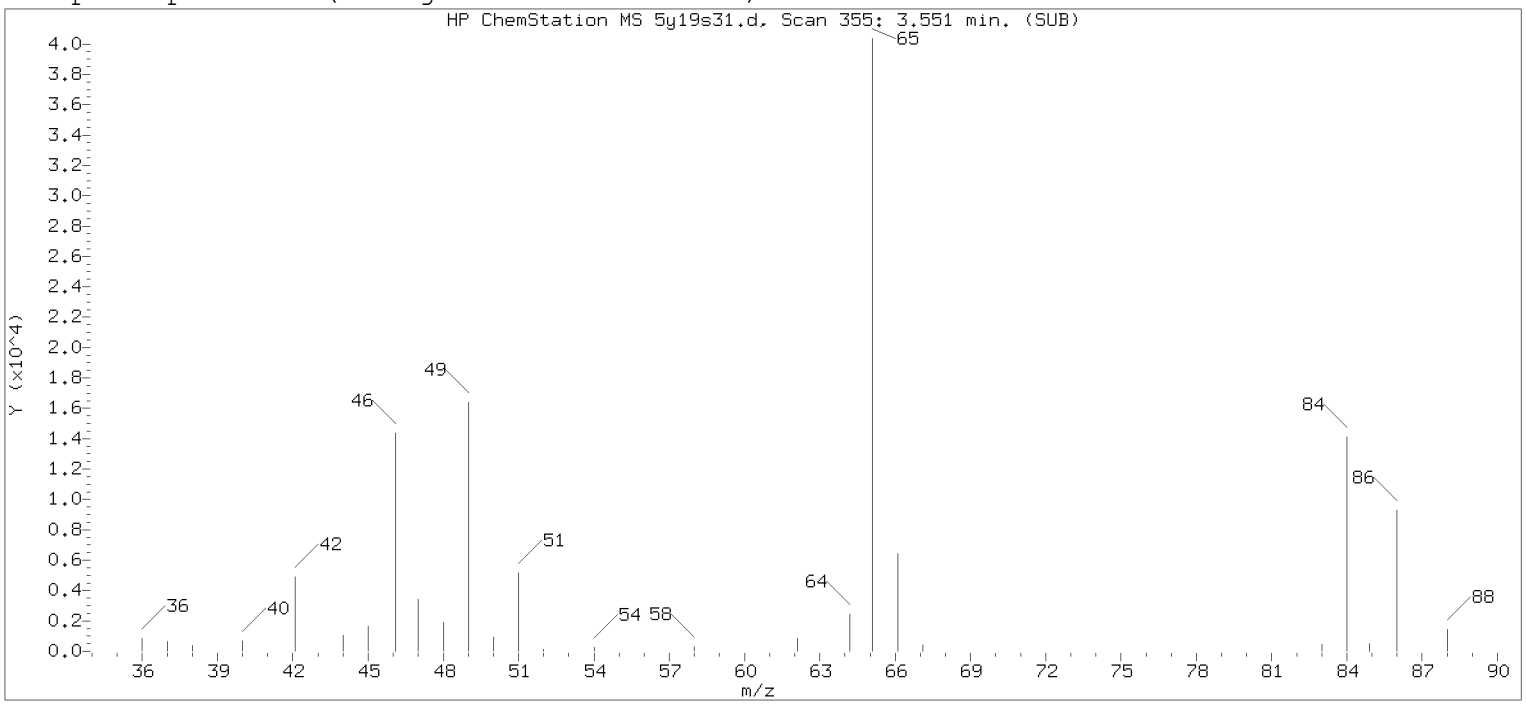
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 355
Retention Time (minutes): 3.551
Quant Ion : 65.00
Area (flag) : 324398M
On-Column Amount (ng) : 250.0000
Integration start scan : 328 Integration stop scan: 463
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

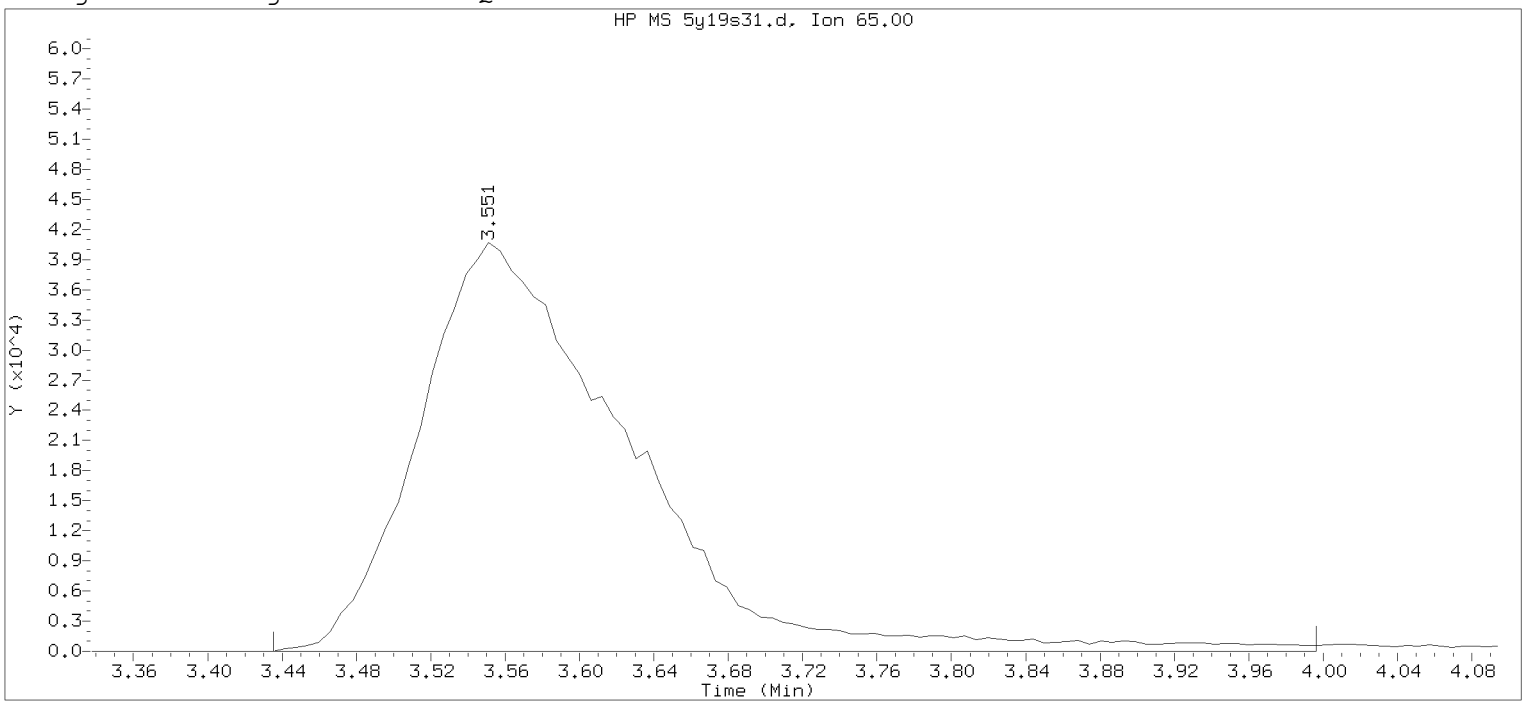
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/19/2019 at 16:13.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:32.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s31.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:59 Analyst ID: DVV10203

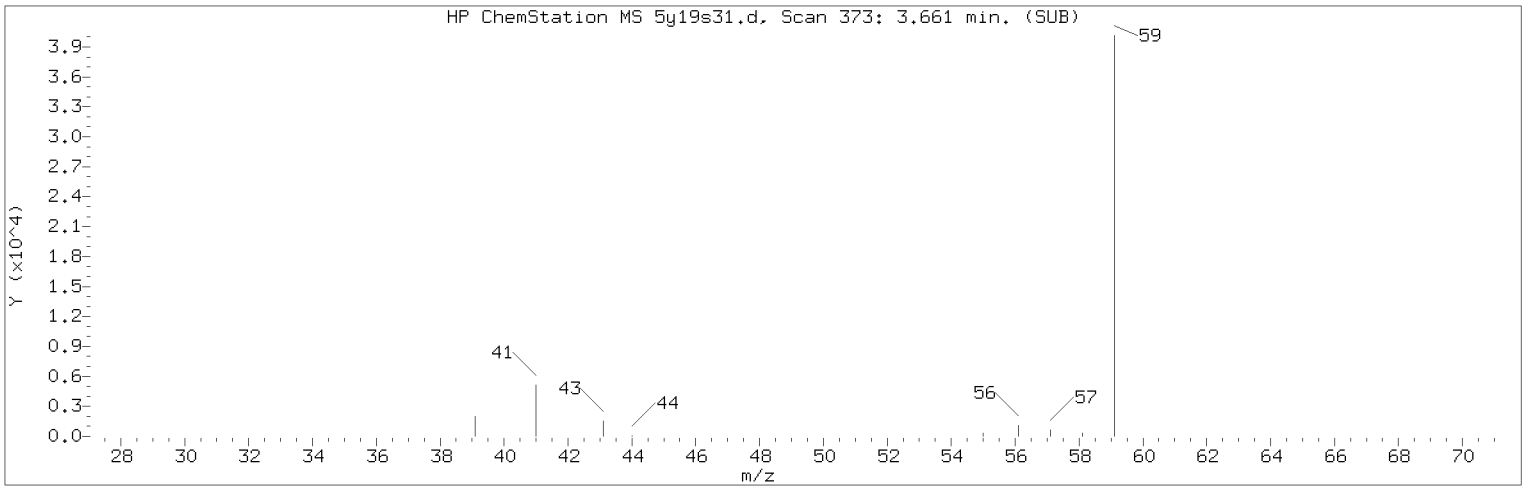
Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 14:21 dvv10203

Sample Name: LCS590 Lab Sample ID: LCS590

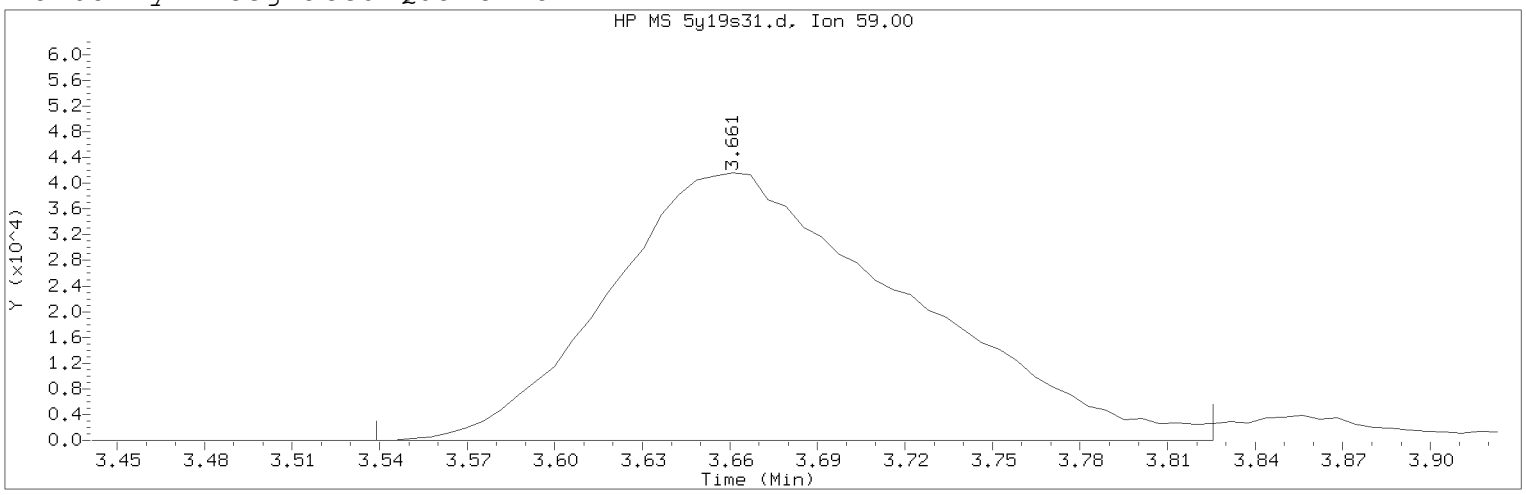
Compound Number	: 29		
Compound Name	: t-Butyl alcohol-d10		
Scan Number	: 355		
Retention Time (minutes)	: 3.551		
Quant Ion	: 65.00		
Area	: 317334		
On-column Amount (ng)	: 250.0000		
Integration start scan	: 335	Integration stop scan:	427
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 05/19/2019 at 16:13.
Target 3.5 esignature user id: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s31.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:59 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:08 dvv10203

Sample Name: LCS590 Lab Sample ID: LCS590

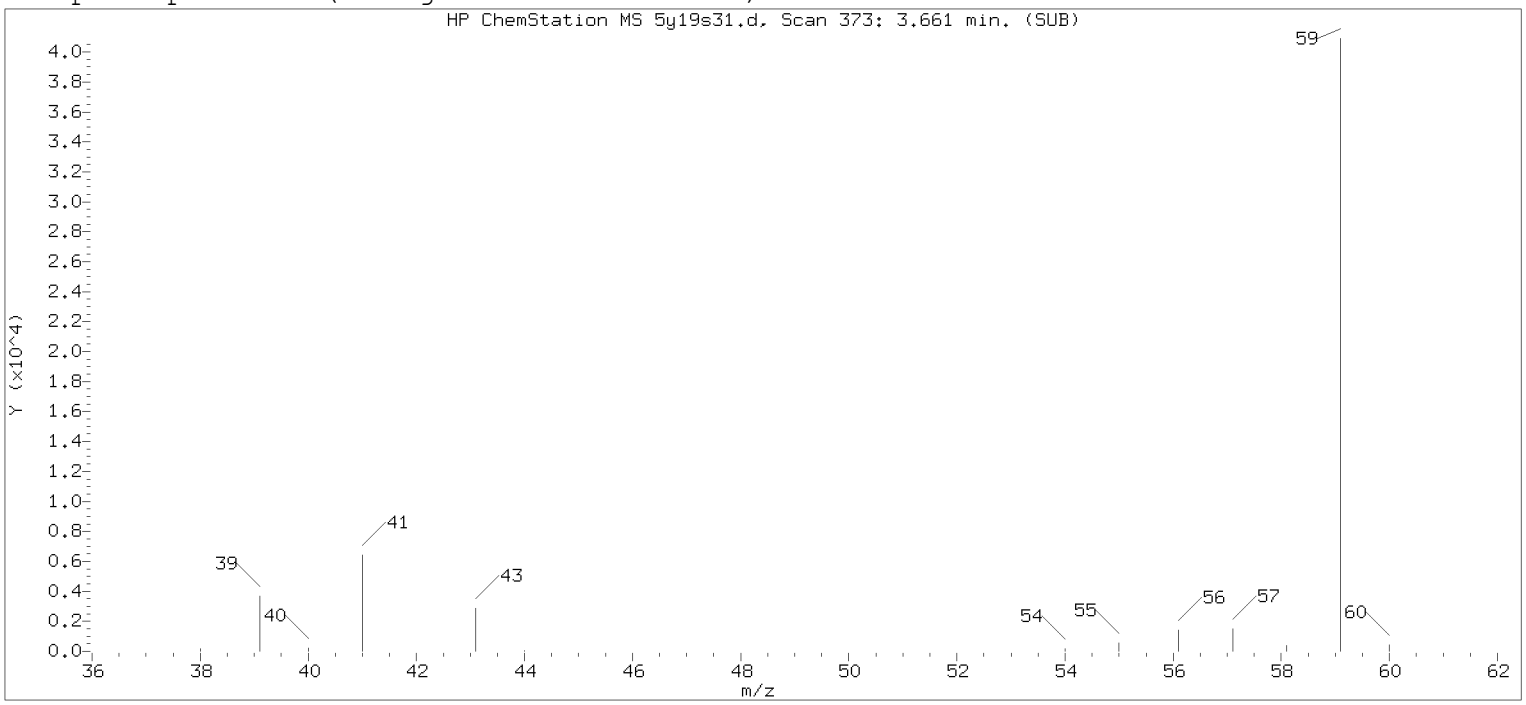
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 373
Retention Time (minutes): 3.661
Quant Ion : 59.00
Area (flag) : 295338M
On-Column Amount (ng) : 196.7958
Integration start scan : 352 Integration stop scan: 399
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

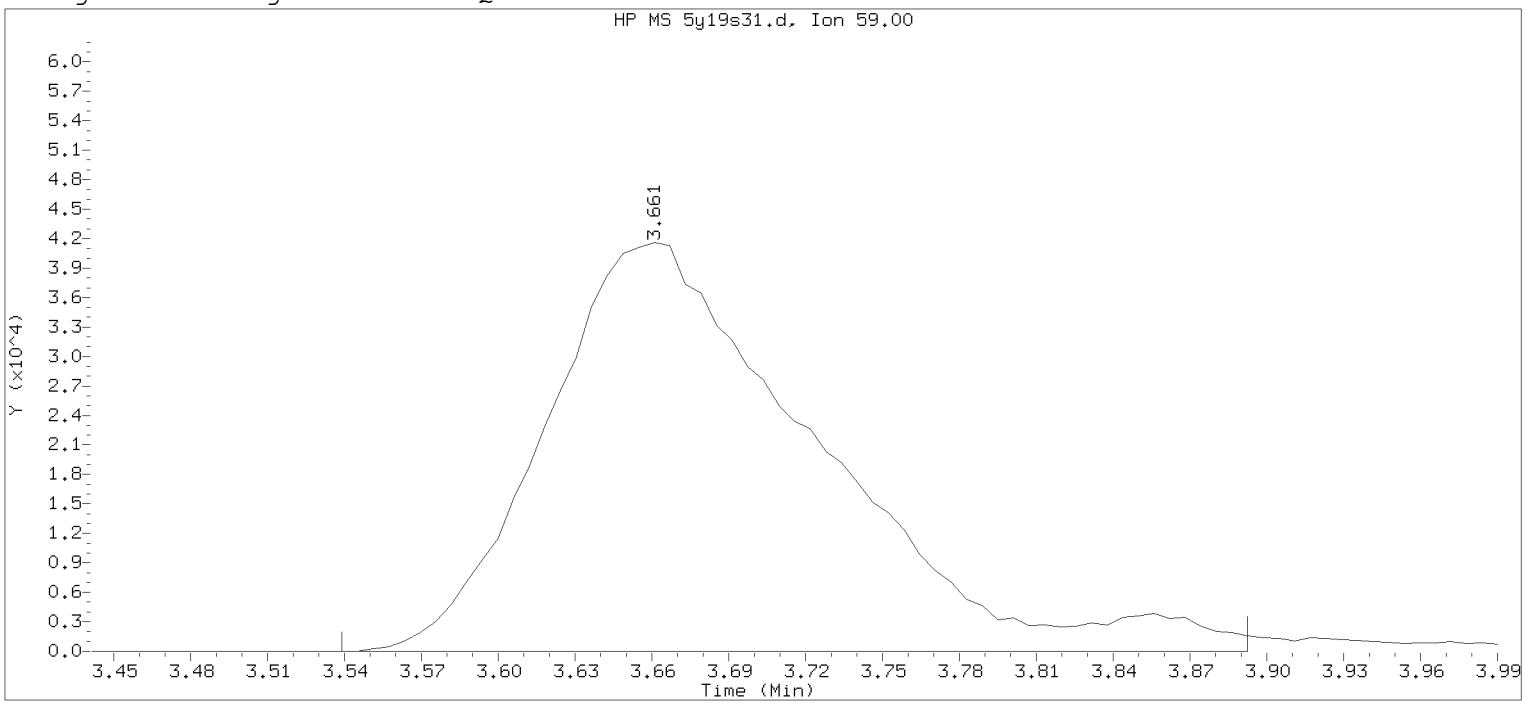
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/19/2019 at 16:13.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:32.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s31.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:59 Analyst ID: DVV10203

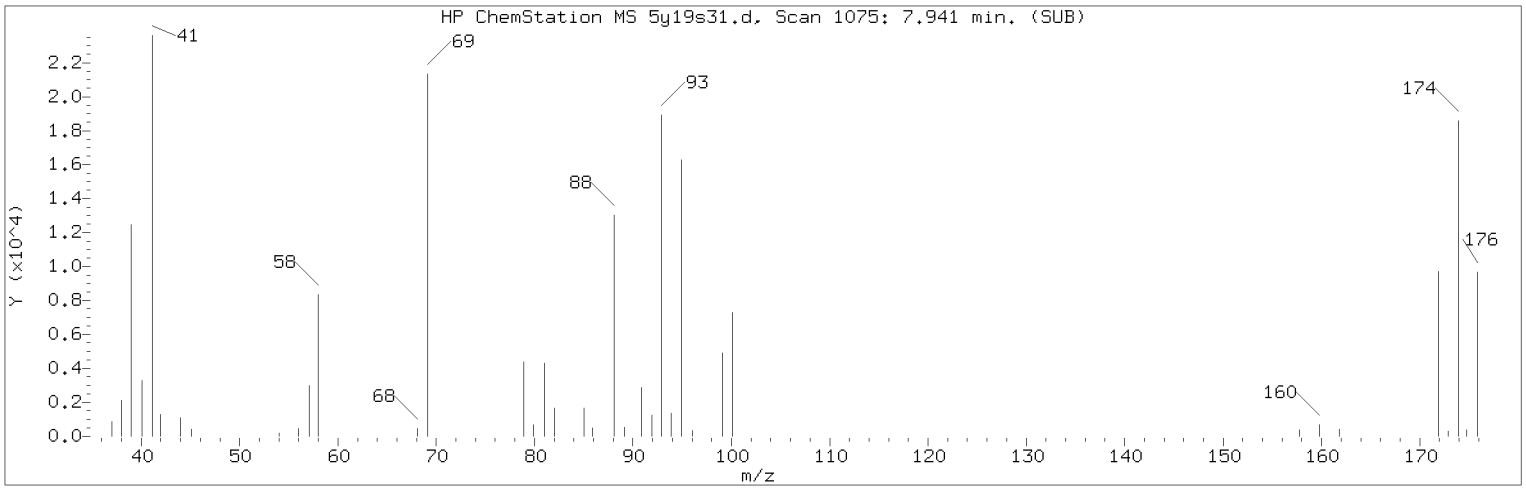
Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 14:21 dvv10203

Sample Name: LCS590 Lab Sample ID: LCS590

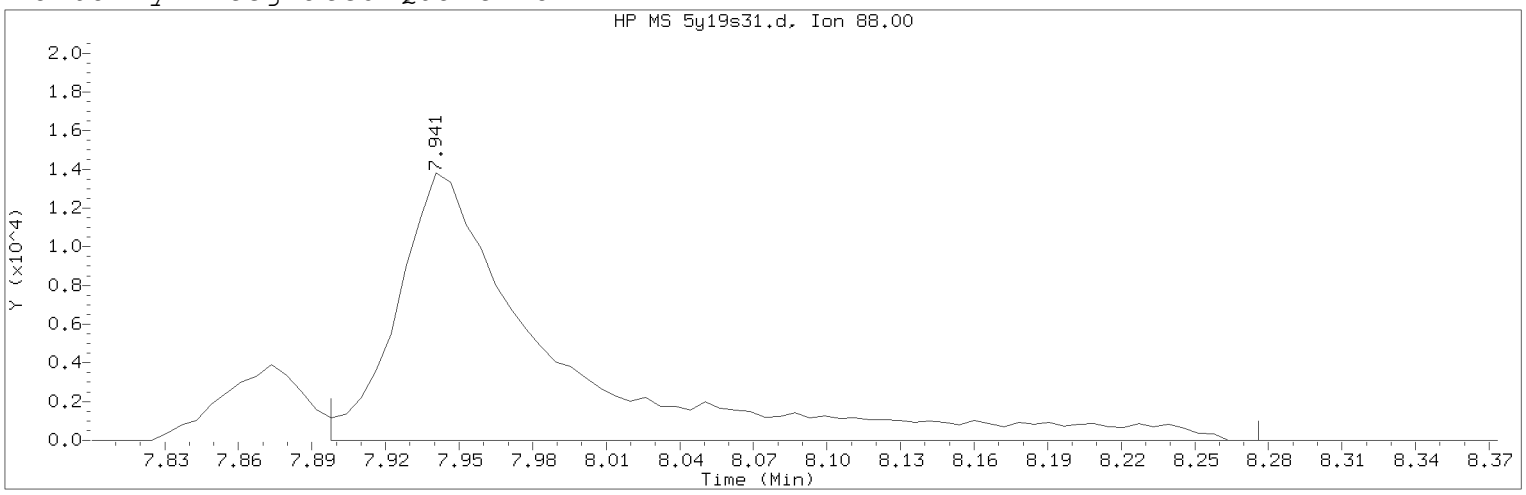
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 373
Retention Time (minutes): 3.661
Quant Ion : 59.00
Area : 306491
On-column Amount (ng) : 208.7736
Integration start scan : 352 Integration stop scan: 410
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/19/2019 at 16:13.
Target 3.5 esignature user id: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s31.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:59 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:08 dvv10203

Sample Name: LCS590 Lab Sample ID: LCS590

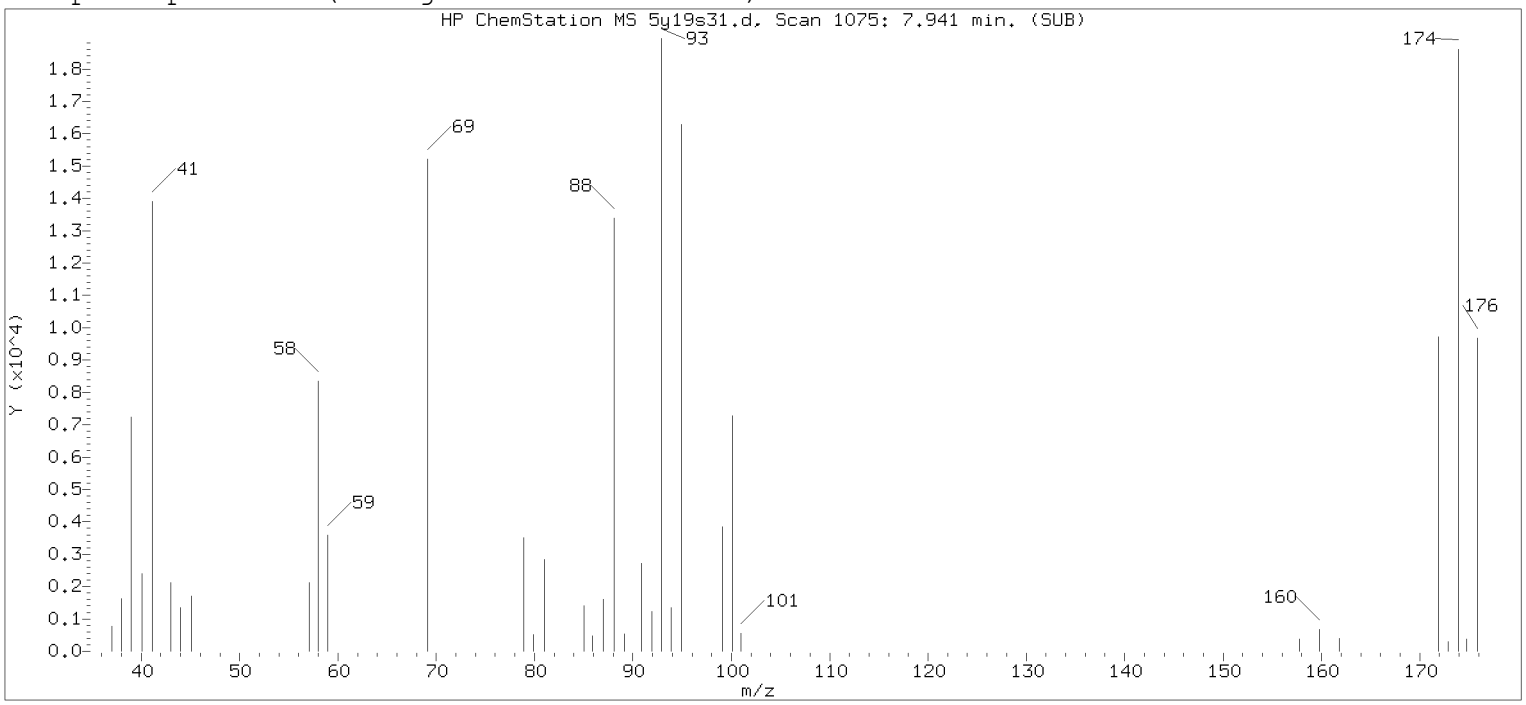
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1075
Retention Time (minutes): 7.941
Quant Ion : 88.00
Area (flag) : 61517M
On-Column Amount (ng) : 647.1591
Integration start scan : 1067 Integration stop scan: 1129
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

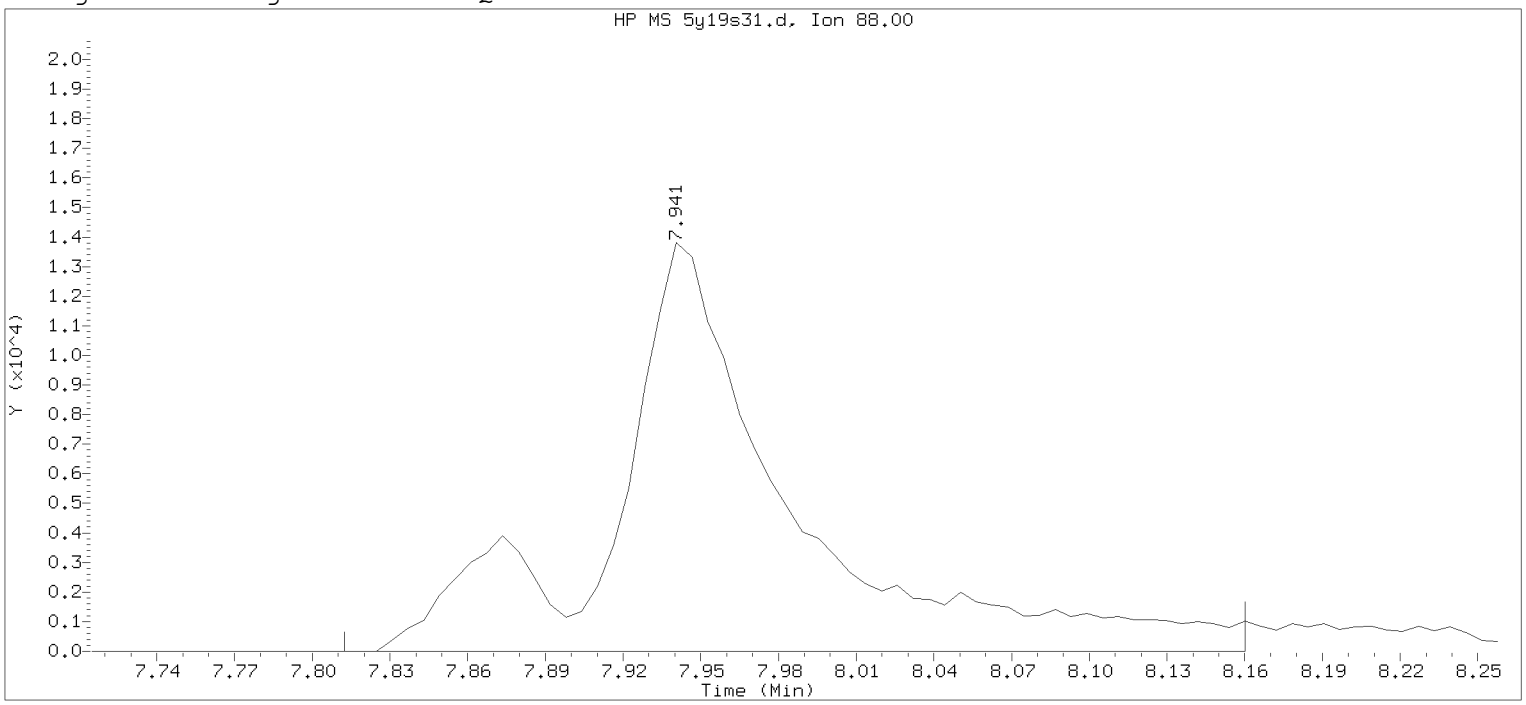
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/19/2019 at 16:13.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:32.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s31.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:59 Analyst ID: DVV10203

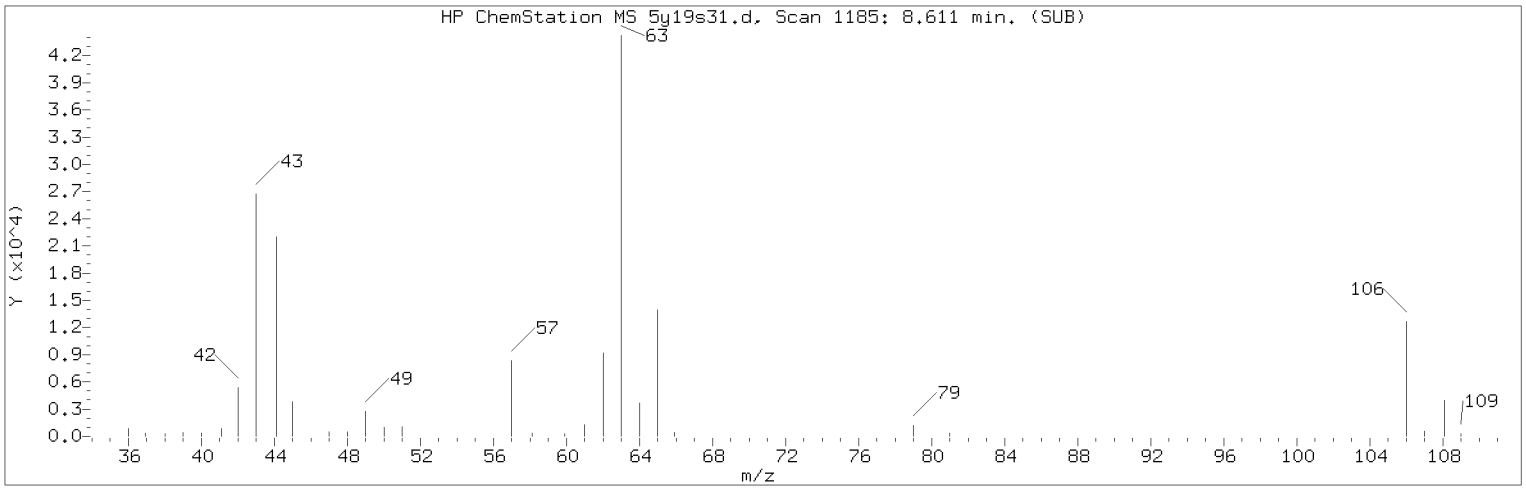
Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 14:21 dvv10203

Sample Name: LCS590 Lab Sample ID: LCS590

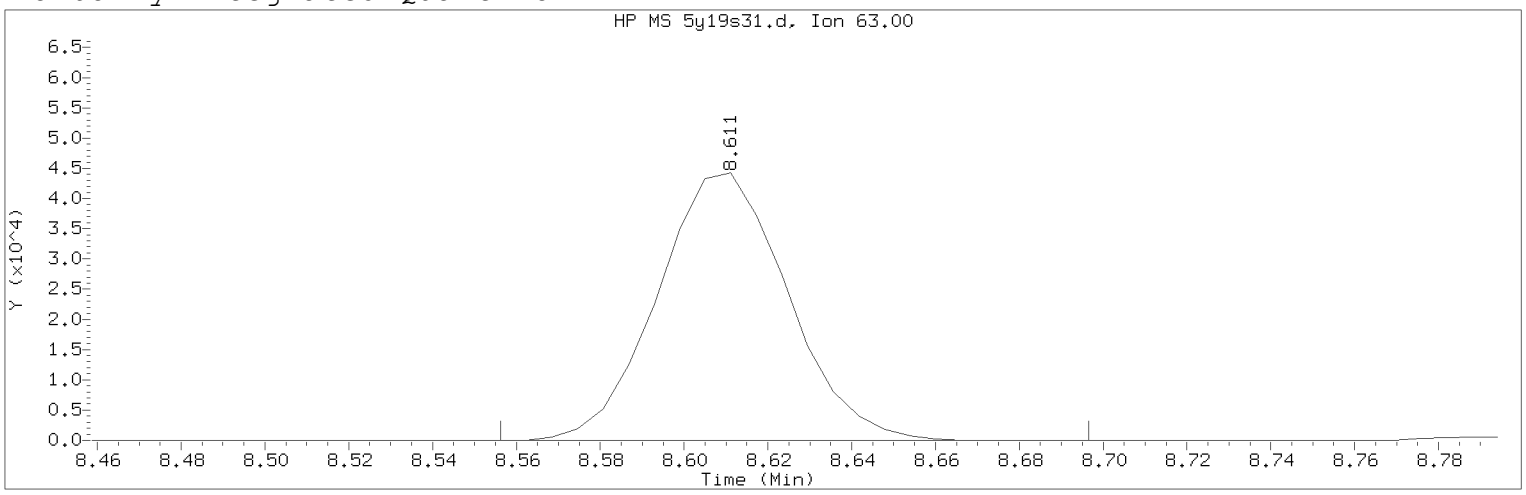
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1075
Retention Time (minutes): 7.941
Quant Ion : 88.00
Area : 65901
On-column Amount (ng) : 708.7122
Integration start scan : 1053 Integration stop scan: 1110
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/19/2019 at 16:13.
Target 3.5 esignature user id: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s31.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:59 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:08 dvv10203

Sample Name: LCS590 Lab Sample ID: LCS590

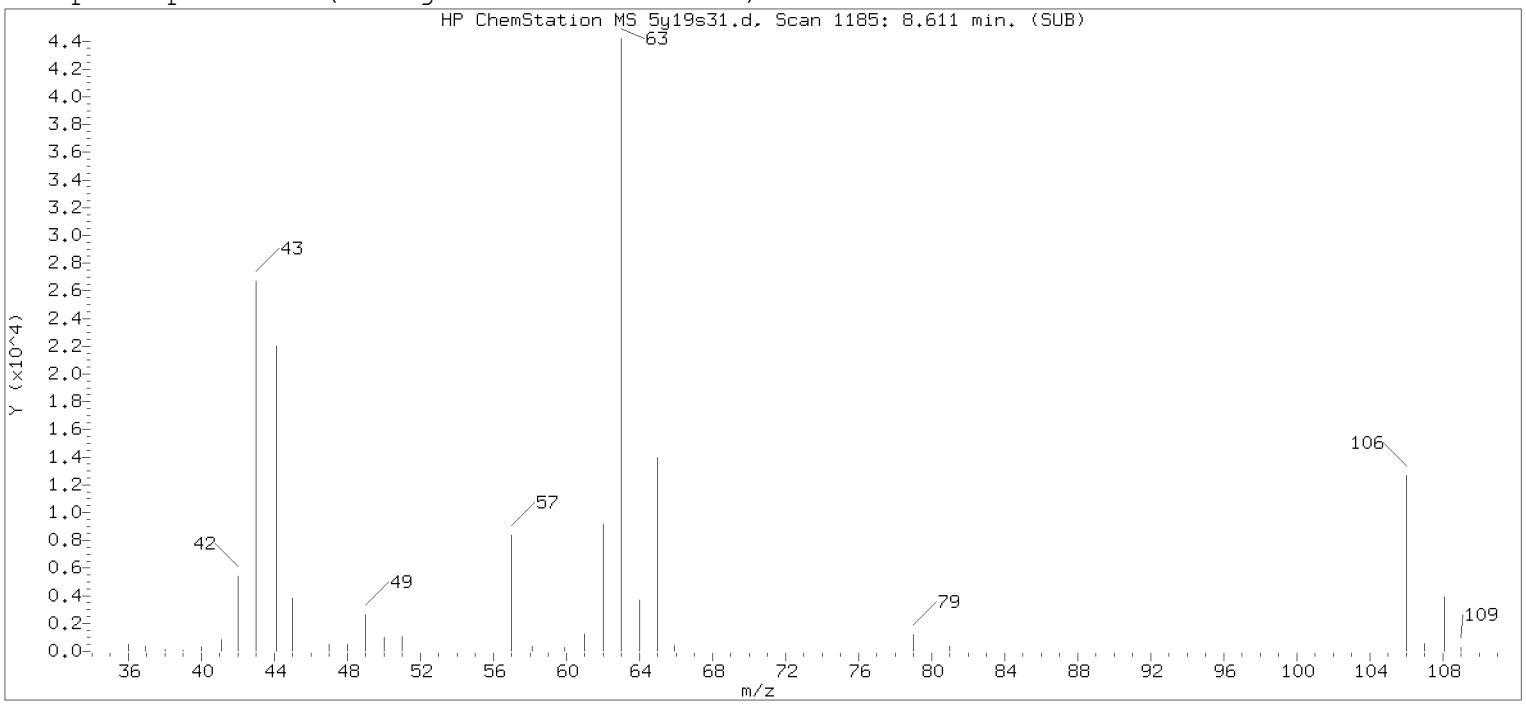
Compound Number : 81
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1185
Retention Time (minutes): 8.611
Quant Ion : 63.00
Area (flag) : 95167M
On-Column Amount (ng) : 18.4137
Integration start scan : 1175 Integration stop scan: 1198
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

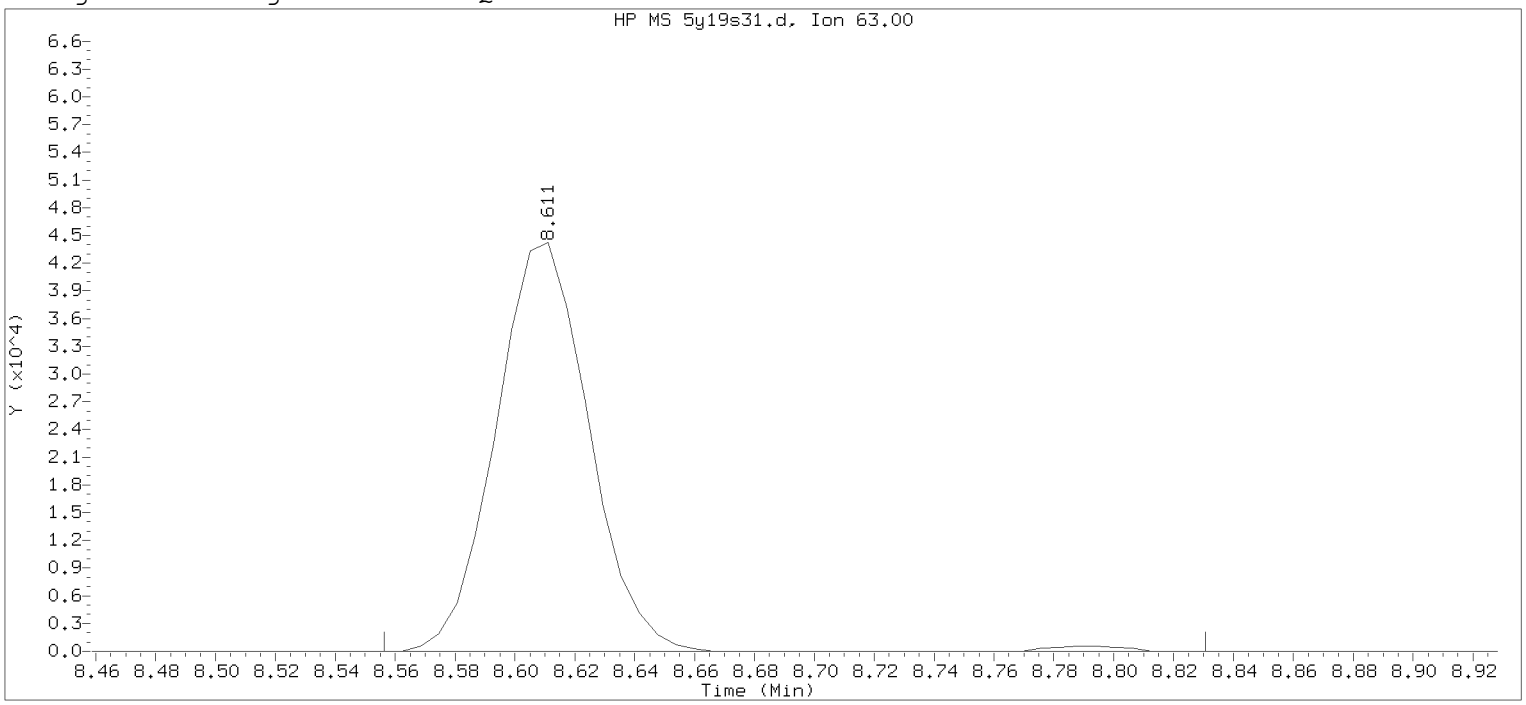
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/19/2019 at 16:13.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:32.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s31.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:59 Analyst ID: DVV10203

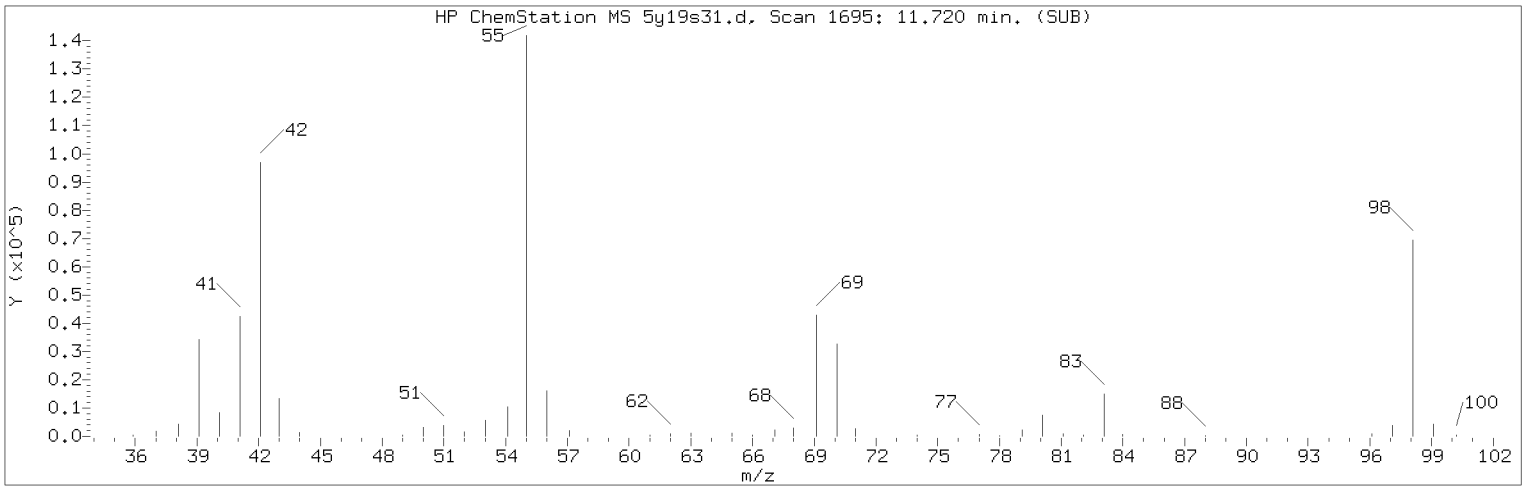
Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 14:21 dvv10203

Sample Name: LCS590 Lab Sample ID: LCS590

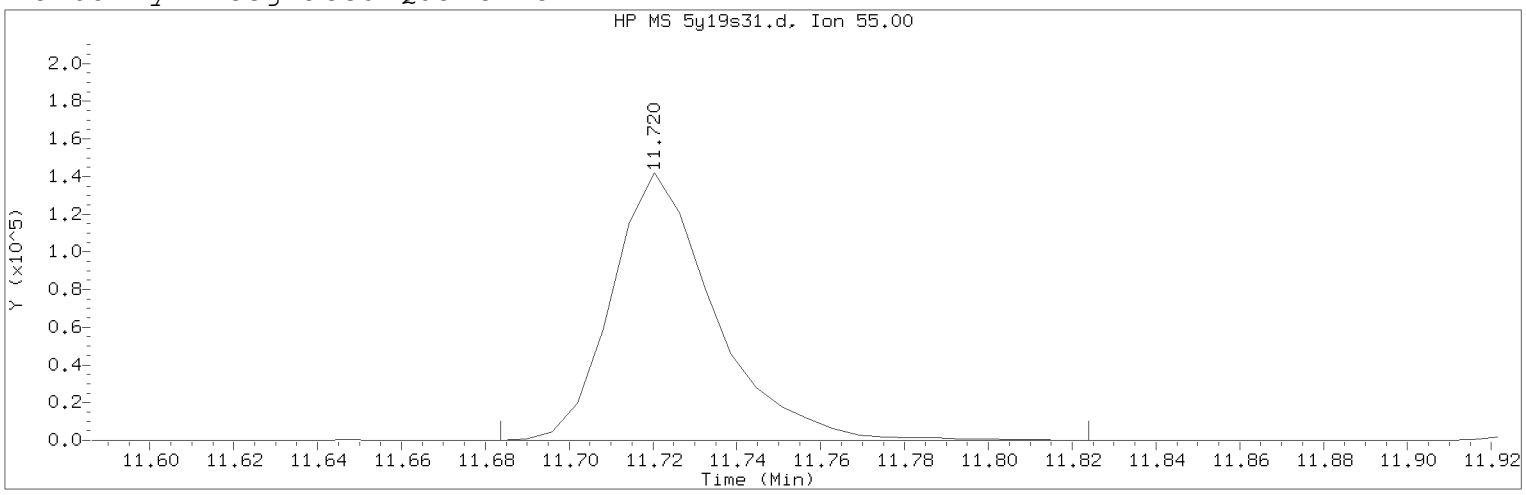
Compound Number : 81
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1185
Retention Time (minutes): 8.611
Quant Ion : 63.00
Area : 96099
On-column Amount (ng) : 18.5941
Integration start scan : 1175 Integration stop scan: 1220
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/19/2019 at 16:13.
Target 3.5 esignature user id: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s31.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:59 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:08 dvv10203

Sample Name: LCS590 Lab Sample ID: LCS590

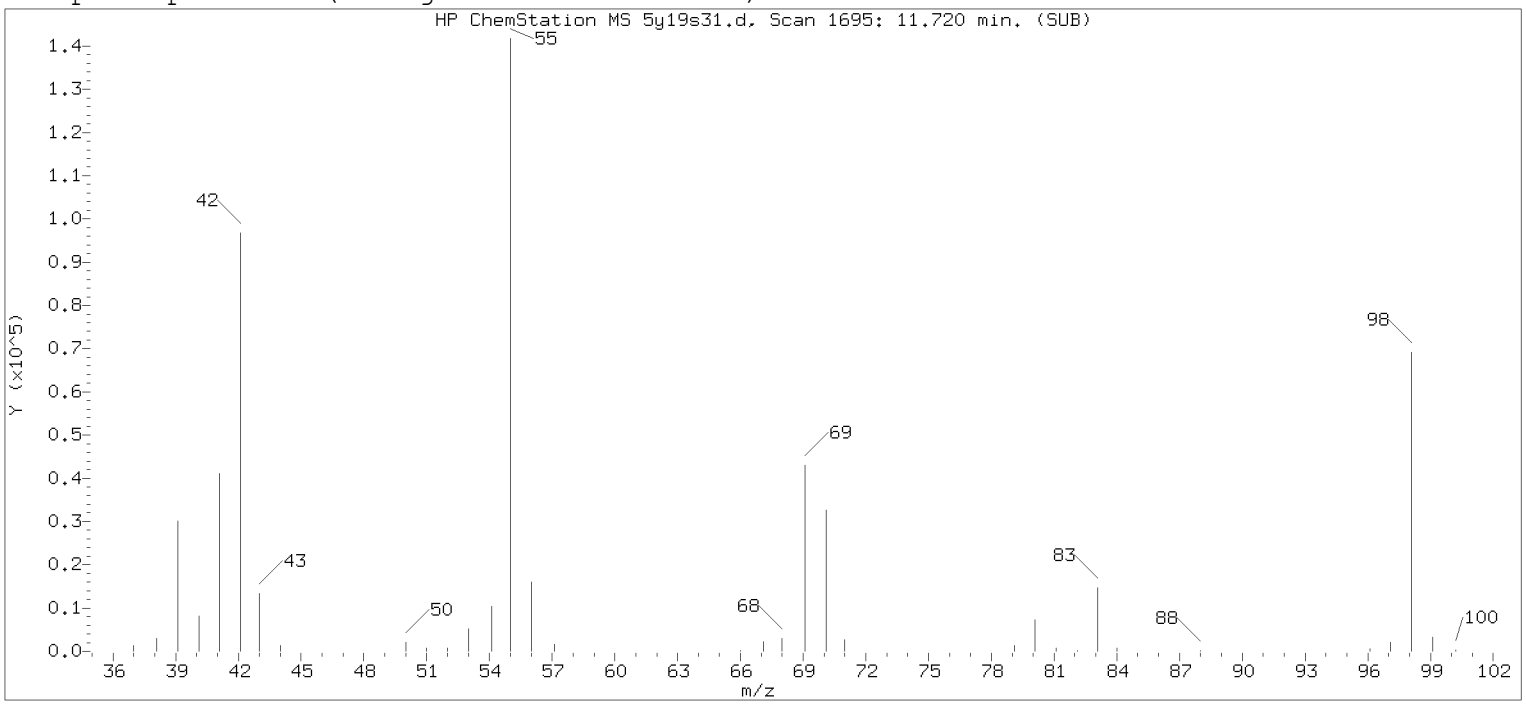
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1695
Retention Time (minutes): 11.720
Quant Ion : 55.00
Area (flag) : 241511M
On-Column Amount (ng) : 607.2396
Integration start scan : 1688 Integration stop scan: 1711
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

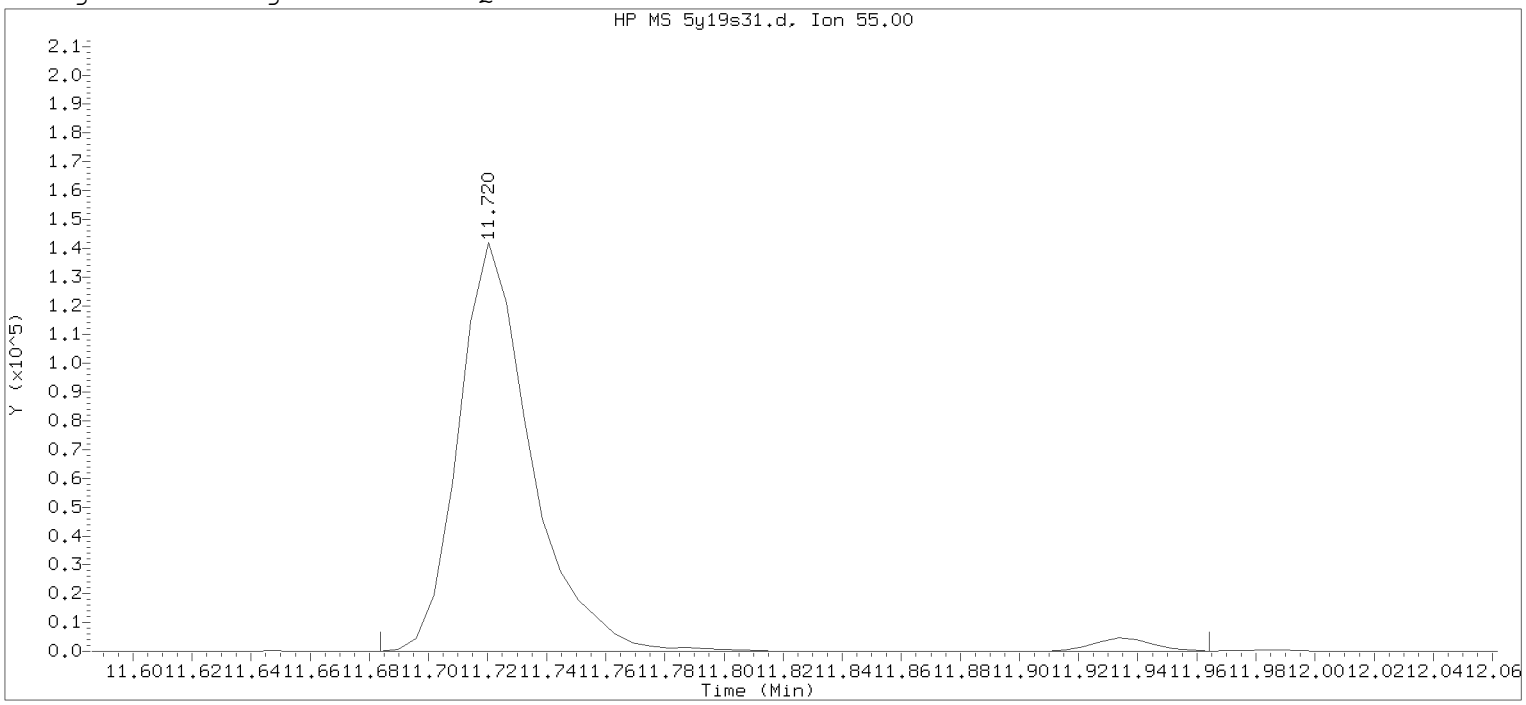
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/19/2019 at 16:13.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:32.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s31.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:59 Analyst ID: DVV10203

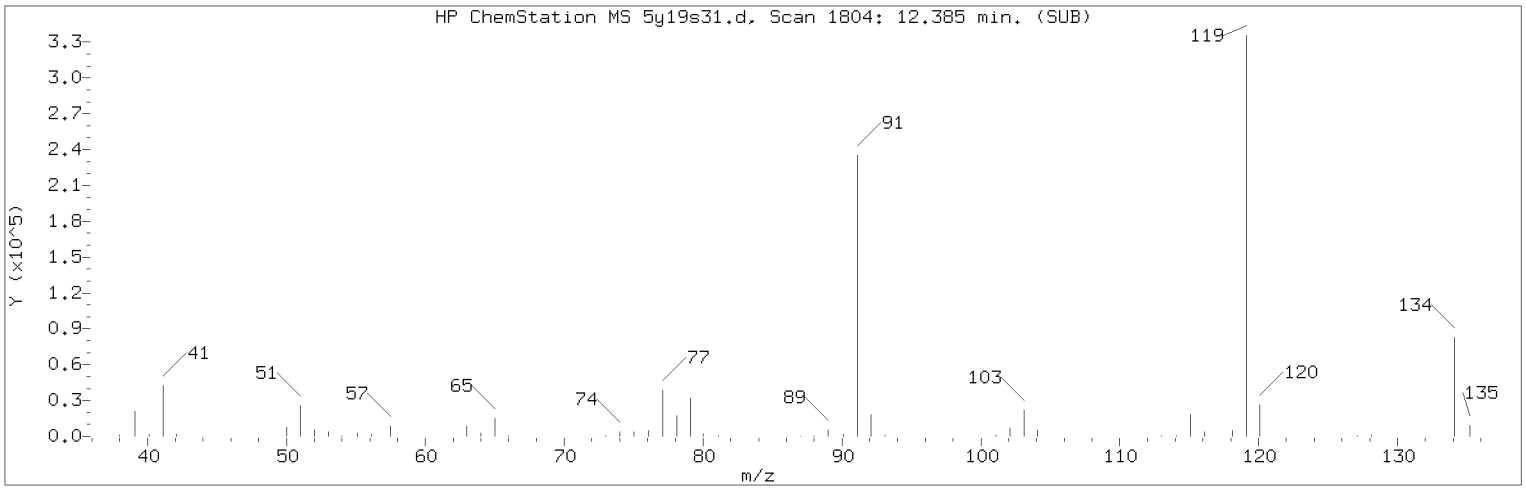
Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 14:21 dvv10203

Sample Name: LCS590 Lab Sample ID: LCS590

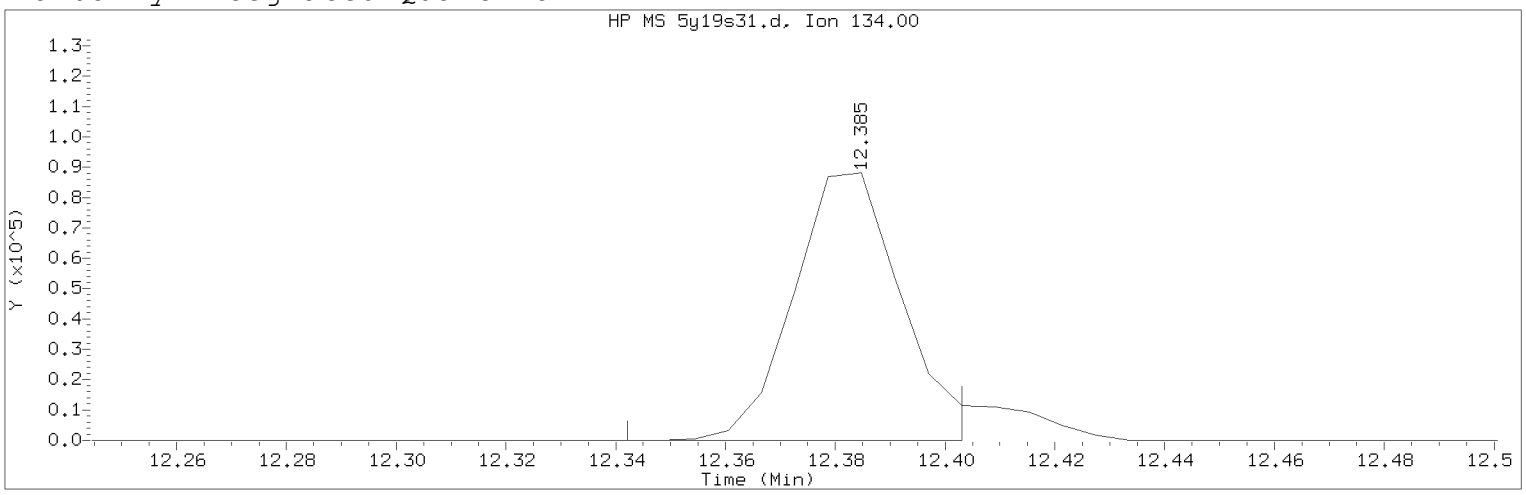
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1695
Retention Time (minutes): 11.720
Quant Ion : 55.00
Area : 247921
On-column Amount (ng) : 637.2319
Integration start scan : 1688 Integration stop scan: 1734
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/19/2019 at 16:13.
Target 3.5 esignature user id: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s31.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:59 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:08 dvv10203

Sample Name: LCS590 Lab Sample ID: LCS590

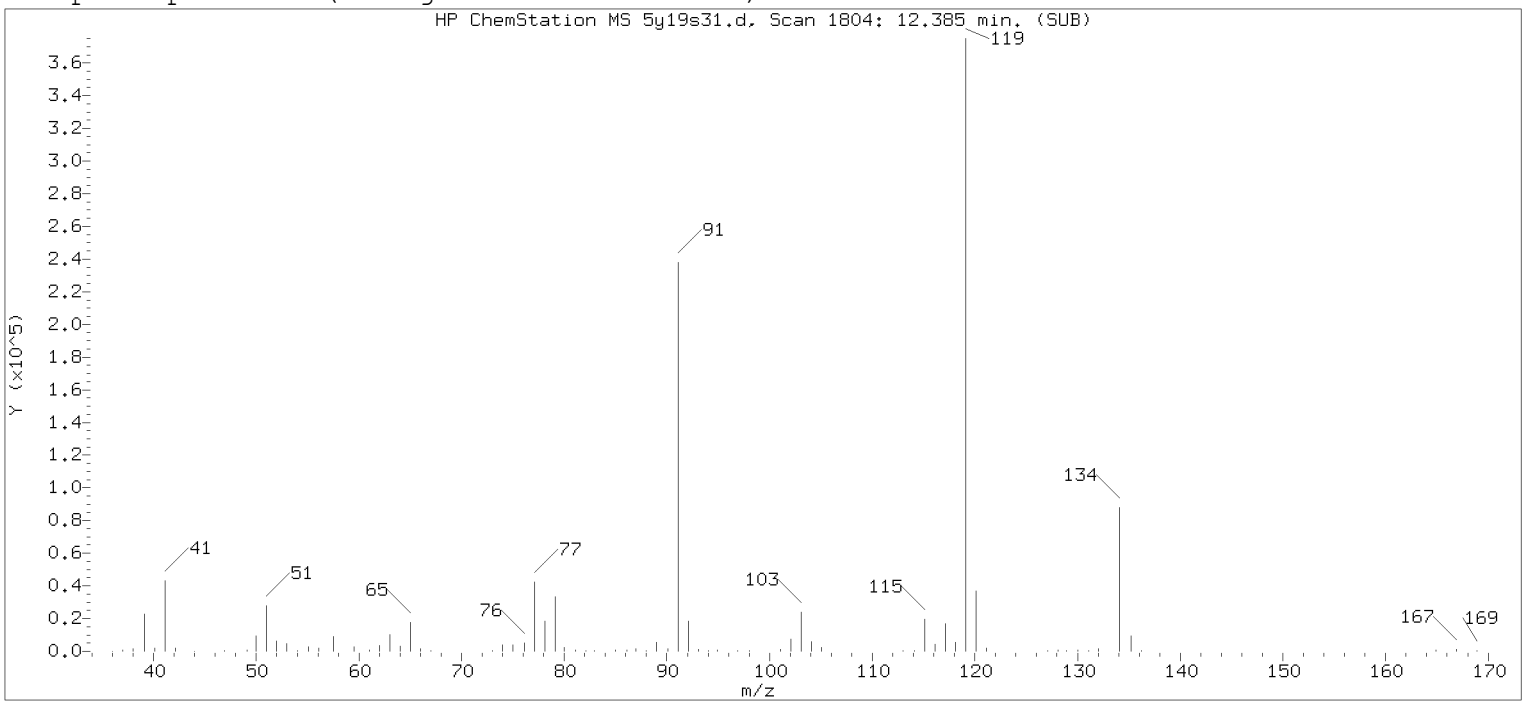
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1804
Retention Time (minutes): 12.385
Quant Ion : 134.00
Area (flag) : 120436M
On-Column Amount (ng) : 18.1696
Integration start scan : 1796 Integration stop scan: 1806
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

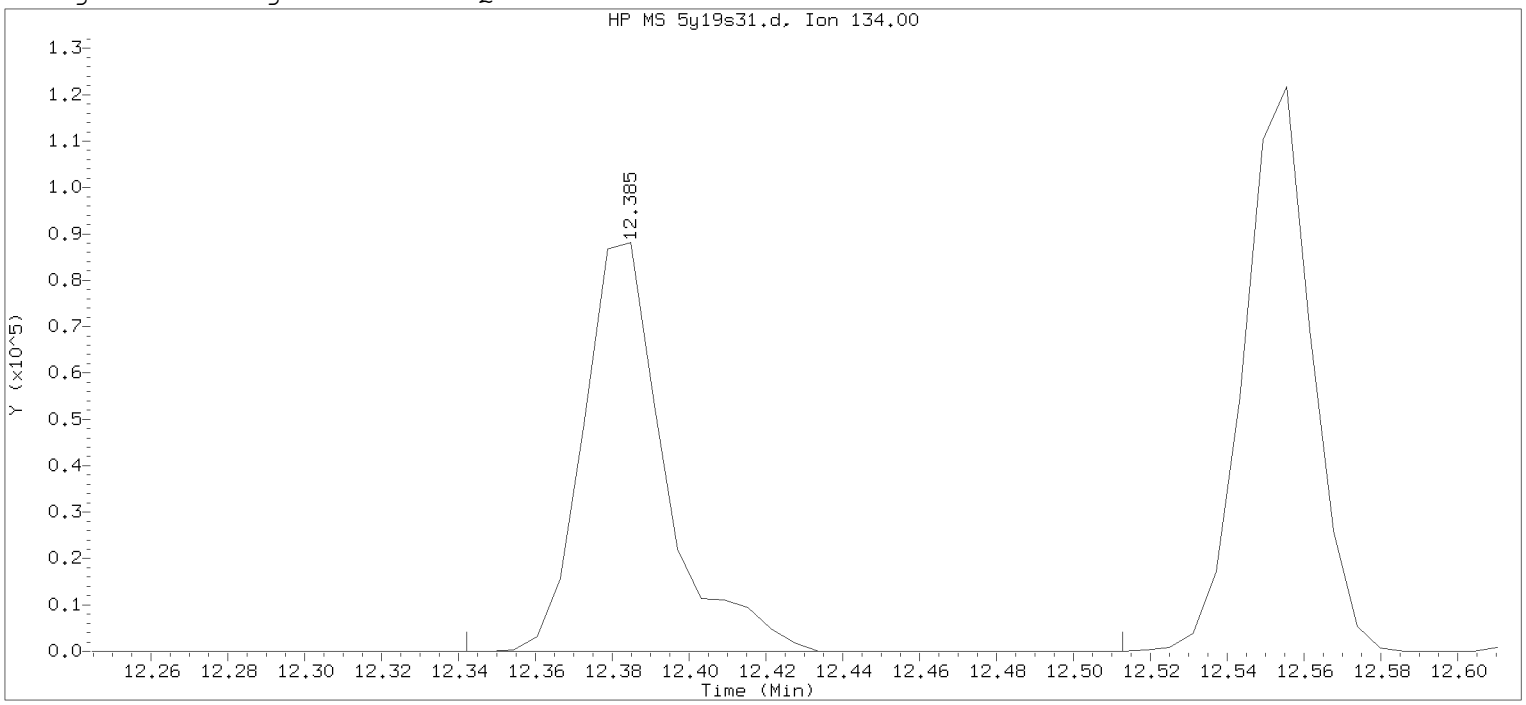
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/19/2019 at 16:13.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:32.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s31.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 13:59 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 14:21 dvv10203

Sample Name: LCS590 Lab Sample ID: LCS590

Compound Number	: 125		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1804		
Retention Time (minutes)	: 12.385		
Quant Ion	: 134.00		
Area	: 130311		
On-column Amount (ng)	: 19.6595		
Integration start scan	: 1796	Integration stop scan:	1824
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 05/19/2019 at 16:13.
Target 3.5 esignature user id: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCD590

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCD590

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP26285.i/19may19a.b/5y19s32.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	18	
74-87-3	Chloromethane	18	
106-99-0	1,3-Butadiene	18	
75-01-4	Vinyl Chloride	19	
74-83-9	Bromomethane	18	
75-00-3	Chloroethane	17	
109-66-0	n-Pentane	17	
75-69-4	Trichlorofluoromethane	22	
60-29-7	Ethyl ether	18	
354-23-4	Freon 123a	19	
107-02-8	Acrolein	120	
75-35-4	1,1-Dichloroethene	20	
67-64-1	Acetone	140	
76-13-1	Freon 113	22	
67-63-0	2-Propanol	150	
74-88-4	Methyl Iodide	18	
75-15-0	Carbon Disulfide	17	
107-05-1	Allyl Chloride	16	
79-20-9	Methyl Acetate	18	
75-09-2	Methylene Chloride	20	
75-65-0	t-Butyl alcohol	190	
107-13-1	Acrylonitrile	84	
156-60-5	trans-1,2-Dichloroethene	20	
1634-04-4	Methyl Tertiary Butyl Ether	17	
110-54-3	n-Hexane	17	
75-34-3	1,1-Dichloroethane	20	
108-20-3	di-Isopropyl ether	17	
126-99-8	2-Chloro-1,3-butadiene	18	
637-92-3	Ethyl t-butyl ether	16	
156-59-2	cis-1,2-Dichloroethene	21	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCD590

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCD590

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP26285.i/19may19a.b/5y19s32.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	41	
78-93-3	2-Butanone	120	
594-20-7	2,2-Dichloropropane	21	
107-12-0	Propionitrile	150	
126-98-7	Methacrylonitrile	140	
74-97-5	Bromochloromethane	21	
109-99-9	Tetrahydrofuran	93	
67-66-3	Chloroform	22	
71-55-6	1,1,1-Trichloroethane	22	
110-82-7	Cyclohexane	18	
563-58-6	1,1-Dichloropropene	21	
56-23-5	Carbon Tetrachloride	23	
78-83-1	Isobutyl Alcohol	520	
71-43-2	Benzene	20	
107-06-2	1,2-Dichloroethane	23	
994-05-8	t-Amyl methyl ether	17	
142-82-5	n-Heptane	16	
71-36-3	n-Butanol	1100	
79-01-6	Trichloroethene	21	
108-87-2	Methylcyclohexane	19	
78-87-5	1,2-Dichloropropane	21	
74-95-3	Dibromomethane	21	
123-91-1	1,4-Dioxane	670	
80-62-6	Methyl Methacrylate	18	
75-27-4	Bromodichloromethane	22	
79-46-9	2-Nitropropane	16	
110-75-8	2-Chloroethyl Vinyl Ether	18	
10061-01-5	cis-1,3-Dichloropropene	20	
108-10-1	4-Methyl-2-pentanone	81	
108-88-3	Toluene	20	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCD590

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCD590

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP26285.i/19may19a.b/5y19s32.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	19	
542-75-6	1,3-Dichloropropene (total)	39	
97-63-2	Ethyl Methacrylate	16	
79-00-5	1,1,2-Trichloroethane	22	
127-18-4	Tetrachloroethene	21	
142-28-9	1,3-Dichloropropane	20	
591-78-6	2-Hexanone	74	
124-48-1	Dibromochloromethane	21	
106-93-4	1,2-Dibromoethane	21	
544-10-5	1-Chlorohexane	19	
108-90-7	Chlorobenzene	21	
630-20-6	1,1,1,2-Tetrachloroethane	21	
100-41-4	Ethylbenzene	21	
179601-23-1	m+p-Xylene	42	
95-47-6	o-Xylene	20	
1330-20-7	Xylene (Total)	62	
100-42-5	Styrene	20	
75-25-2	Bromoform	20	
98-82-8	Isopropylbenzene	21	
108-94-1	Cyclohexanone	630	
108-86-1	Bromobenzene	20	
79-34-5	1,1,2,2-Tetrachloroethane	21	
96-18-4	1,2,3-Trichloropropane	21	
110-57-6	trans-1,4-Dichloro-2-butene	99	
103-65-1	n-Propylbenzene	20	
95-49-8	2-Chlorotoluene	19	
106-43-4	4-Chlorotoluene	19	
108-67-8	1,3,5-Trimethylbenzene	19	
98-06-6	tert-Butylbenzene	18	
76-01-7	Pentachloroethane	20	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCD590

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCD590

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP26285.i/19may19a.b/5y19s32.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
95-63-6	1,2,4-Trimethylbenzene	19	
135-98-8	sec-Butylbenzene	19	
541-73-1	1,3-Dichlorobenzene	20	
99-87-6	p-Isopropyltoluene	18	
106-46-7	1,4-Dichlorobenzene	20	
526-73-8	1,2,3-Trimethylbenzene	19	
100-44-7	Benzyl Chloride	19	
141-93-5	1,3-Diethylbenzene	18	
105-05-5	1,4-Diethylbenzene	17	
95-50-1	1,2-Dichlorobenzene	20	
104-51-8	n-Butylbenzene	18	
135-01-3	1,2-Diethylbenzene	18	
25340-17-4	Diethylbenzene (total)	53	
96-12-8	1,2-Dibromo-3-chloropropane	21	
108-70-3	1,3,5-Trichlorobenzene	17	
120-82-1	1,2,4-Trichlorobenzene	17	
87-68-3	Hexachlorobutadiene	17	
91-20-3	Naphthalene	20	
87-61-6	1,2,3-Trichlorobenzene	18	
91-57-6	2-Methylnaphthalene	16	

FORM I VOA

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP26285.i/19may19a.b/5y19s32.d Injection date and time: **19-MAY-2019 14:19**
Data file Sample Info. Line: LCD590;LCD590;1;3;LCSD;;;;5y19b31; Instrument ID: **HP26285.i** Batch: **5191392AA**
Date, time and analyst ID of latest file update: 19-May-2019 16:09 dvv10203

Blank Data file reference: **/chem2/HP26285.i/19may19a.b/5y19b31.d**

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 19-MAY-2019 14:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may19a.b/5y19c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.563(-0.012)	357	65	337461M (1)	250.00	
66) Fluorobenzene	7.008(-0.006)	922	96	1180068 (7)	50.00	
101) Chlorobenzene-d5	10.727(-0.006)	1532	117	959601 (6)	50.00	
132) 1,4-Dichlorobenzene-d4	12.702(0.000)	1856	152	560214 (5)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.093(0.000)	113	298039	52.779	106%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.563(0.000)	102	68126	51.560	103%		80 - 120
84) Toluene-d8	(3)	9.135(0.000)	98	1195394	49.352	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.787(0.001)	95	485841	51.549	103%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	1.649(0.000)	85	169579	17.868	17.87			0.2	1
4) Chloromethane	(2)	1.808(0.001)	50	124856	18.103	18.10			0.2	1
5) 1,3-Butadiene	(2)	1.899(0.000)	39	85068	17.753	17.75			1	3
6) Vinyl Chloride	(2)	1.905(0.000)	62	126840	18.799	18.80			0.2	1
8) Bromomethane	(2)	2.167(0.001)	94	96737	17.792	17.79			0.3	1
9) Chloroethane	(2)	2.240(0.000)	64	55858	17.270	17.27			0.2	1
11) n-Pentane	(2)	2.521(0.000)	43	99977	16.900	16.90			0.4	10
12) Trichlorofluoromethane	(2)	2.490(0.000)	101	202449	21.584	21.58			0.2	1
14) Ethyl ether	(2)	2.704(-0.000)	59	87763	18.066	18.07			0.2	5
15) Freon 123a	(2)	2.771(0.000)	67	136581	18.736	18.74			0.4	5
16) Acrolein	(1)	2.856(0.001)	56	289142	121.374	121.37			2	100
17) 1,1-Dichloroethene	(2)	2.960(0.000)	96	106892	19.621	19.62			0.2	1
18) Acetone	(1)	3.002(0.001)	58	156636	143.803	143.80			0.7	20
19) Freon 113	(2)	2.990(-0.000)	101	119988	21.650	21.65			0.2	10
21) 2-Propanol	(1)	3.161(-0.000)	45	119923	151.490	151.49			18	100
22) Methyl Iodide	(2)	3.130(-0.000)	142	210421	18.495	18.49			0.2	1
23) Carbon Disulfide	(2)	3.210(-0.000)	76	304165	16.816	16.82			0.2	5
25) Allyl Chloride	(2)	3.362(-0.000)	41	157301	16.071	16.07			0.3	5
27) Methyl Acetate	(2)	3.350(-0.000)	43	148964	17.654	17.65			0.2	5
28) Methylene Chloride	(2)	3.527(-0.000)	84	124131	20.061	20.06			0.3	1
30) t-Butyl alcohol	(1)	3.661(0.000)	59	302161	193.548	193.55			12	50
31) Acrylonitrile	(2)	3.825(-0.001)	53	374045	83.867	83.87			0.3	20
32) trans-1,2-Dichloroethene	(2)	3.862(-0.000)	96	121820	19.977	19.98			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	3.868(-0.001)	73	298023	17.126	17.13			0.2	1
34) n-Hexane	(2)	4.246(-0.000)	57	142837	16.932	16.93			0.2	5
36) 1,1-Dichloroethane	(2)	4.502(-0.001)	63	216732	20.160	20.16			0.2	1
38) di-Isopropyl ether	(2)	4.569(-0.001)	45	331984	16.940	16.94			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	4.612(-0.001)	53	172103	18.091	18.09			0.2	5
40) Ethyl t-butyl ether	(2)	5.124(-0.000)	59	285195	15.719	15.72			0.2	1
42) cis-1,2-Dichloroethene	(2)	5.368(-0.001)	96	147357	21.358	21.36			0.2	1

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP26285.i/19may19a.b/5y19s32.d Injection date and time: **19-MAY-2019 14:19**
Data file Sample Info. Line: LCD590;LCD590;1;3;LCSD;;;;5y19b31; Instrument ID: **HP26285.i** Batch: **5191392AA**
Date, time and analyst ID of latest file update: 19-May-2019 16:09 dvv10203

Blank Data file reference: **/chem2/HP26285.i/19may19a.b/5y19b31.d**

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 19-MAY-2019 14:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may19a.b/5y19c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
43) 1,2-Dichloroethene (Total)	(2)		96	269177	41.335	41.33			0.2	2
44) 2-Butanone	(2)	5.356(-0.000)	43	834535	123.908	123.91			0.3	10
45) 2,2-Dichloropropane	(2)	5.368(0.000)	77	184679	21.480	21.48			0.3	1
47) Propionitrile	(1)	5.465(0.000)	54	256711	151.182	151.18			14	100
48) Methacrylonitrile	(2)	5.679(-0.001)	67	609590	138.908	138.91			6	50
49) Bromochloromethane	(2)	5.709(-0.001)	128	70967	20.556	20.56			0.2	5
50) Tetrahydrofuran	(1)	5.715(0.003)	71	161067	93.377	93.38			0.7	10
51) Chloroform	(2)	5.874(-0.001)	83	229734	21.551	21.55			0.2	1
53) 1,1,1-Trichloroethane	(2)	6.087(-0.000)	97	204850	21.835	21.83			0.3	1
54) Cyclohexane	(2)	6.166(-0.000)	56	191399	17.646	17.65			0.2	5
55) 1,1-Dichloropropene	(2)	6.307(-0.000)	75	178167	20.660	20.66			0.2	5
56) Carbon Tetrachloride	(2)	6.294(-0.000)	117	184081	22.673	22.67			0.2	1
58) Isobutyl Alcohol	(1)	6.538(0.001)	41	267580	523.365	523.36			36	250
60) Benzene	(2)	6.581(-0.000)	78	528146	20.160	20.16			0.2	1
61) 1,2-Dichloroethane	(2)	6.672(-0.000)	62	179406	23.172	23.17			0.3	1
65) t-Amyl methyl ether	(2)	6.794(-0.000)	73	316450	17.306	17.31			0.8	5
67) n-Heptane	(2)	7.020(-0.000)	43	152696	16.052	16.05			0.2	5
69) n-Butanol	(1)	7.441(0.005)	56	450769	1057.419	1057.42			61	250
71) Trichloroethene	(2)	7.502(0.000)	95	144718	21.301	21.30			0.2	1
73) Methylcyclohexane	(2)	7.800(0.000)	83	217720	19.354	19.35			0.2	5
74) 1,2-Dichloropropane	(2)	7.849(0.000)	63	133825	20.608	20.61			0.2	1
75) Dibromomethane	(2)	7.965(-0.000)	93	88205	21.475	21.48			0.2	1
76) 1,4-Dioxane	(1)	7.947(0.005)	88	65771M	665.128	665.13			29	250
77) Methyl Methacrylate	(2)	7.965(0.000)	69	119140	17.574	17.57			0.2	5
79) Bromodichloromethane	(2)	8.215(0.000)	83	165037	21.622	21.62			0.2	1
80) 2-Nitropropane	(2)	8.520(0.000)	41	48653	15.529	15.53			0.8	10
81) 2-Chloroethyl Vinyl Ether	(2)	8.611(0.000)	63	99322M	18.327	18.33			0.2	10
82) cis-1,3-Dichloropropene	(2)	8.794(0.000)	75	205530	20.465	20.47			0.2	1
83) 4-Methyl-2-pentanone	(2)	9.007(0.000)	43	1114429	80.789	80.79			0.5	10
89) Toluene	(3)	9.221(-0.000)	92	357082	19.806	19.81			0.2	1
90) trans-1,3-Dichloropropene	(3)	9.526(-0.000)	75	183968	18.883	18.88			0.2	1
91) 1,3-Dichloropropene (total)	(3)		100	389498	39.348	39.35			0.2	5
92) Ethyl Methacrylate	(3)	9.611(-0.000)	69	191908	16.429	16.43			0.2	5
93) 1,1,2-Trichloroethane	(3)	9.745(0.000)	97	139395	21.612	21.61			0.2	1
94) Tetrachloroethene	(3)	9.818(-0.000)	166	175755	21.436	21.44			0.2	1
95) 1,3-Dichloropropane	(3)	9.922(-0.000)	76	214141	20.268	20.27			0.2	1
97) 2-Hexanone	(3)	10.001(-0.000)	43	947203	74.286	74.29			0.3	10
98) Dibromochloromethane	(3)	10.147(-0.000)	129	141806	21.474	21.47			0.2	1
100) 1,2-Dibromoethane	(3)	10.257(-0.000)	107	148835	20.664	20.66			0.2	1
102) 1-Chlorohexane	(3)	10.751(0.000)	91	203062	19.332	19.33			0.3	5
103) Chlorobenzene	(3)	10.751(0.000)	112	429379	21.285	21.28			0.2	1
104) 1,1,1,2-Tetrachloroethane	(3)	10.842(0.000)	131	143338	21.049	21.05			0.2	1
105) Ethylbenzene	(3)	10.848(0.000)	91	732205	20.791	20.79			0.4	1
107) m+p-Xylene	(3)	10.976(0.000)	106	580480	41.795	41.80			1	5
108) o-Xylene	(3)	11.324(0.000)	106	274289	20.212	20.21			0.4	1
109) Xylene (Total)	(3)		106	854769	62.007	62.01			1	5
110) Styrene	(3)	11.342(0.000)	104	449853	20.075	20.07			0.2	5
111) Bromoform	(3)	11.501(0.000)	173	104537	20.054	20.05			0.2	4
112) Isopropylbenzene	(3)	11.641(0.000)	105	735037	20.856	20.86			0.2	5
113) Cyclohexanone	(1)	11.720(0.011)	55	259882M	628.136	628.14			25	100
116) Bromobenzene	(4)	11.903(-0.000)	156	190919	19.756	19.76			0.2	5
117) 1,1,2,2-Tetrachloroethane	(4)	11.909(0.000)	83	251840	20.581	20.58			0.2	1
118) 1,2,3-Trichloropropane	(4)	11.952(-0.000)	110	78005	21.159	21.16			0.2	5
119) trans-1,4-Dichloro-2-butene	(4)	11.934(0.000)	53	381193	98.918	98.92			6	50

M = Compound was manually integrated.

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP26285.i/19may19a.b/5y19s32.d Injection date and time: **19-MAY-2019 14:19**
Data file Sample Info. Line: LCD590;LCD590;1;3;LCSD;;;;5y19b31; Instrument ID: **HP26285.i** Batch: **5191392AA**
Date, time and analyst ID of latest file update: 19-May-2019 16:09 dvv10203

Blank Data file reference: **/chem2/HP26285.i/19may19a.b/5y19b31.d**

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 19-MAY-2019 14:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may19a.b/5y19c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

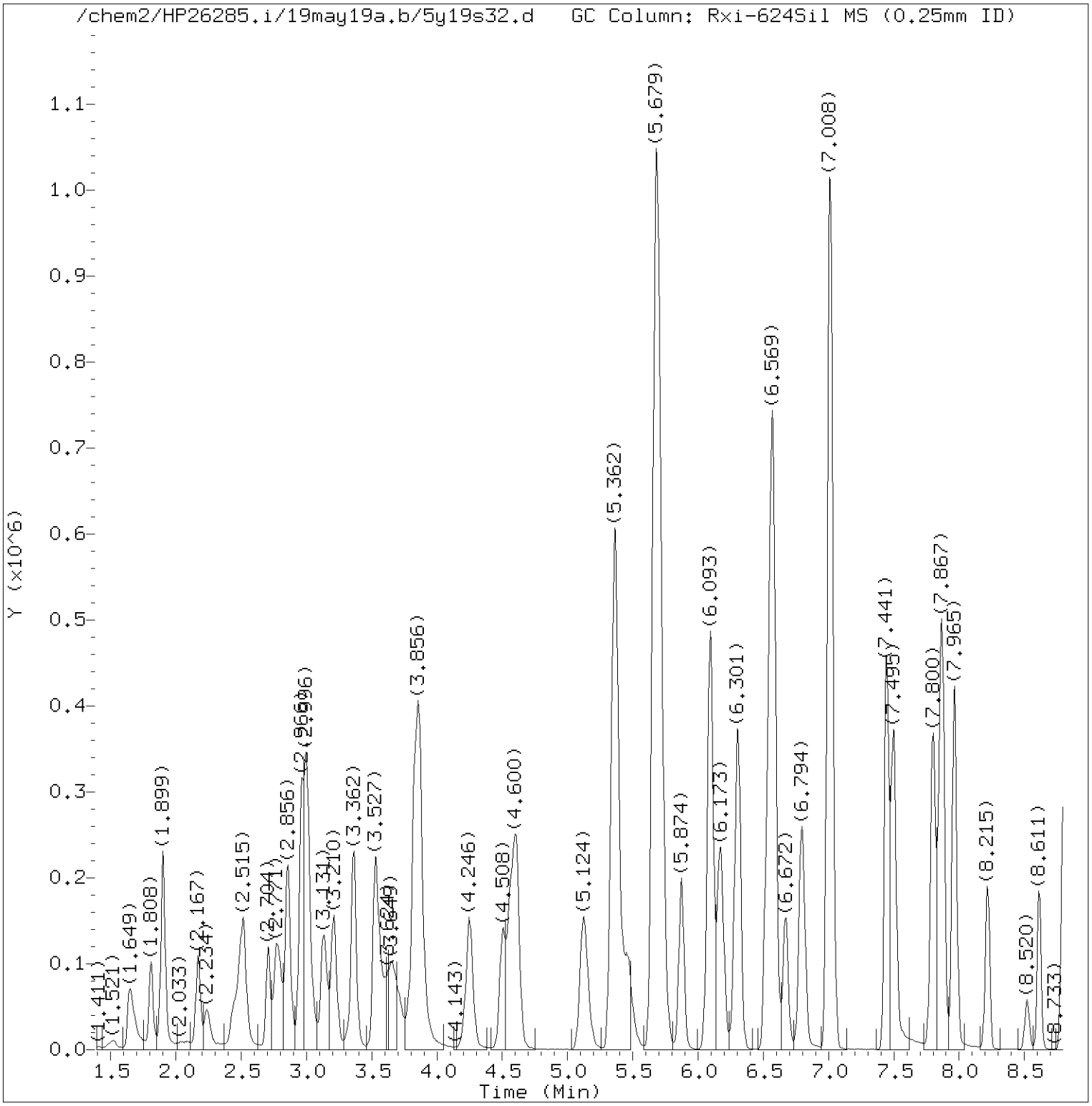
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) n-Propylbenzene	(4)	11.988(-0.000)	91	908547	19.977	19.98			0.2	5
121) 2-Chlorotoluene	(4)	12.062(-0.000)	126	181808	19.390	19.39			0.2	5
122) 4-Chlorotoluene	(4)	12.159(0.000)	126	187071	19.434	19.43			0.2	5
123) 1,3,5-Trimethylbenzene	(4)	12.135(-0.000)	105	626202	19.079	19.08			0.3	5
125) tert-Butylbenzene	(4)	12.379(-0.000)	134	126113M	18.184	18.18			0.3	5
126) Pentachloroethane	(4)	12.409(0.000)	167	113165	19.981	19.98			0.2	5
127) 1,2,4-Trimethylbenzene	(4)	12.427(-0.000)	105	644710	19.155	19.15			1	5
128) sec-Butylbenzene	(4)	12.549(0.000)	105	788374	18.540	18.54			0.2	5
130) 1,3-Dichlorobenzene	(4)	12.647(-0.000)	146	365166	19.730	19.73			0.2	5
131) p-Isopropyltoluene	(4)	12.665(0.000)	119	677051	18.365	18.37			0.2	5
134) 1,4-Dichlorobenzene	(4)	12.726(-0.000)	146	377325	20.116	20.12			0.2	5
135) 1,2,3-Trimethylbenzene	(4)	12.738(0.000)	105	664303	19.107	19.11			0.3	5
136) Benzyl Chloride	(4)	12.812(0.000)	91	457712	18.987	18.99			0.3	5
137) 1,3-Diethylbenzene	(4)	12.872(0.000)	119	396040	17.626	17.63			0.2	5
138) 1,4-Diethylbenzene	(4)	12.946(0.000)	119	416171	17.452	17.45			0.2	5
139) 1,2-Dichlorobenzene	(4)	12.994(0.000)	146	357712	20.444	20.44			0.2	5
140) n-Butylbenzene	(4)	12.970(-0.000)	92	334072	17.965	17.96			0.2	5
141) 1,2-Diethylbenzene	(4)	13.025(-0.000)	119	335992	17.987	17.99			0.2	5
142) Diethylbenzene (total)	(4)		100	1148203	53.065	53.06			0.2	5
143) 1,2-Dibromo-3-chloropropane	(4)	13.555(0.000)	75	63609	20.808	20.81			0.3	5
145) 1,3,5-Trichlorobenzene	(4)	13.677(0.000)	180	244351	17.373	17.37			0.2	5
147) 1,2,4-Trichlorobenzene	(4)	14.116(0.000)	180	221089	17.365	17.36			0.3	5
148) Hexachlorobutadiene	(4)	14.202(0.000)	225	100726	16.763	16.76			0.7	5
149) Naphthalene	(4)	14.299(0.000)	128	851779	19.716	19.72			1	5
150) 1,2,3-Trichlorobenzene	(4)	14.445(0.000)	180	224593	18.410	18.41			0.4	5
151) 2-Methylnaphthalene	(4)	15.061(0.000)	142	395020	15.539	15.54			0.7	5

M = Compound was manually integrated.

Total number of targets = 110

Digitally signed by Don V. Viray on 05/19/2019 at 16:15. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:32. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

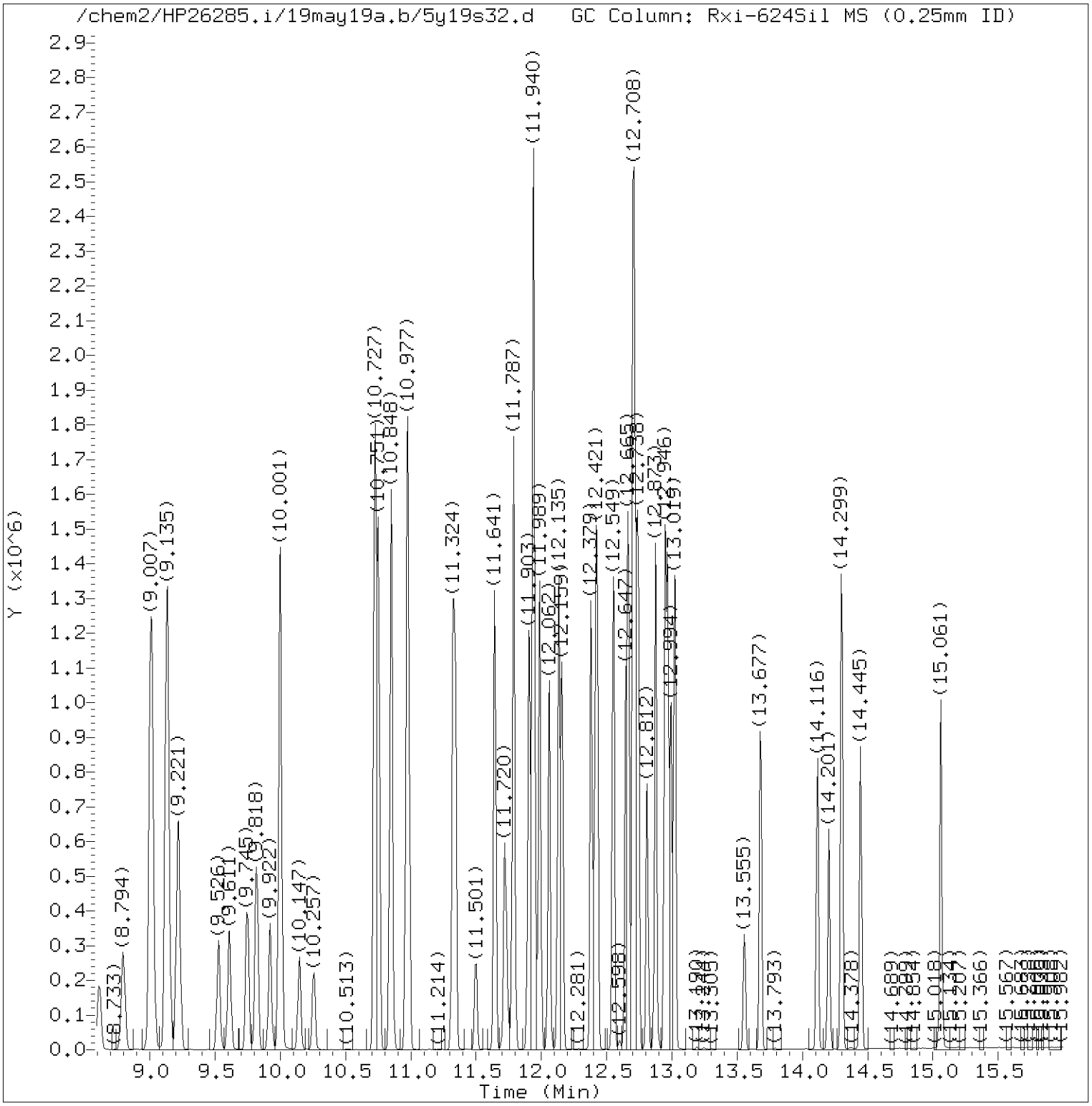
Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19s32.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 14:19 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:09 dvv10203

Sample Name: LCD590 Lab Sample ID: LCD590

Digitally signed by Don V. Viray
on 05/19/2019 at 16:15.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19s32.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 14:19 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:09 dvv10203

Sample Name: LCD590 Lab Sample ID: LCD590

Digitally signed by Don V. Viray
on 05/19/2019 at 16:15.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19s32.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 14:19 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:09 dvv10203

Sample Name: LCD590 Lab Sample ID: LCD590

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.649	85	169579	17.868
4) Chloromethane	(2)	1.808	50	124856	18.103
5) 1,3-Butadiene	(2)	1.899	39	85068	17.753
6) Vinyl Chloride	(2)	1.905	62	126840	18.799
8) Bromomethane	(2)	2.167	94	96737	17.792
9) Chloroethane	(2)	2.240	64	55858	17.270
12) Trichlorofluoromethane	(2)	2.490	101	202449	21.584
11) n-Pentane	(2)	2.521	43	99977	16.900
14) Ethyl ether	(2)	2.704	59	87763	18.066
15) Freon 123a	(2)	2.771	67	136581	18.736
16) Acrolein	(1)	2.856	56	289142	121.374
17) 1,1-Dichloroethene	(2)	2.960	96	106892	19.621
19) Freon 113	(2)	2.990	101	119988	21.650
18) Acetone	(1)	3.002	58	156636	143.803
22) Methyl Iodide	(2)	3.131	142	210421	18.495
21) 2-Propanol	(1)	3.161	45	119923	151.490
23) Carbon Disulfide	(2)	3.210	76	304165	16.816
27) Methyl Acetate	(2)	3.350	43	148964	17.654
25) Allyl Chloride	(2)	3.362	41	157301	16.071
28) Methylene Chloride	(2)	3.527	84	124131	20.061
29)*t-Butyl alcohol-d10	(1)	3.563	65	337461M	250.000
30) t-Butyl alcohol	(1)	3.661	59	302161	193.548
31) Acrylonitrile	(2)	3.825	53	374045	83.867
32) trans-1,2-Dichloroethene	(2)	3.862	96	121820	19.977
33) Methyl Tertiary Butyl Ether	(2)	3.868	73	298023	17.126
34) n-Hexane	(2)	4.246	57	142837	16.932
36) 1,1-Dichloroethane	(2)	4.502	63	216732	20.160
38) di-Isopropyl ether	(2)	4.569	45	331984	16.940
39) 2-Chloro-1,3-butadiene	(2)	4.612	53	172103	18.091
40) Ethyl t-butyl ether	(2)	5.124	59	285195	15.719
44) 2-Butanone	(2)	5.356	43	834535	123.908
45) 2,2-Dichloropropane	(2)	5.368	77	184679	21.480
42) cis-1,2-Dichloroethene	(2)	5.368	96	147357	21.358
47) Propionitrile	(1)	5.465	54	256711	151.182
48) Methacrylonitrile	(2)	5.679	67	609590	138.908
49) Bromochloromethane	(2)	5.709	128	70967	20.556
50) Tetrahydrofuran	(1)	5.715	71	161067	93.377
51) Chloroform	(2)	5.874	83	229734	21.551

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 05/19/2019 at 16:15.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19s32.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 14:19 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:09 dvv10203

Sample Name: LCD590 Lab Sample ID: LCD590

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
53) 1,1,1-Trichloroethane	(2)	6.087	97	204850	21.835
52)$Dibromofluoromethane	(2)	6.093	113	298039	52.779
43) 1,2-Dichloroethene (Total)	(2)		96	269177	41.335
54) Cyclohexane	(2)	6.166	56	191399	17.646
56) Carbon Tetrachloride	(2)	6.295	117	184081	22.673
55) 1,1-Dichloropropene	(2)	6.307	75	178167	20.660
58) Isobutyl Alcohol	(1)	6.538	41	267580	523.365
57)$1,2-Dichloroethane-d4	(2)	6.563	102	68126	51.560
60) Benzene	(2)	6.581	78	528146	20.160
61) 1,2-Dichloroethane	(2)	6.672	62	179406	23.172
65) t-Amyl methyl ether	(2)	6.794	73	316450	17.306
66)*Fluorobenzene	(2)	7.008	96	1180068	50.000
67) n-Heptane	(2)	7.020	43	152696	16.052
69) n-Butanol	(1)	7.441	56	450769	1057.419
71) Trichloroethene	(2)	7.502	95	144718	21.301
73) Methylcyclohexane	(2)	7.800	83	217720	19.354
74) 1,2-Dichloropropane	(2)	7.849	63	133825	20.608
76) 1,4-Dioxane	(1)	7.947	88	65771M	665.128
75) Dibromomethane	(2)	7.965	93	88205	21.475
77) Methyl Methacrylate	(2)	7.965	69	119140	17.574
79) Bromodichloromethane	(2)	8.215	83	165037	21.622
80) 2-Nitropropane	(2)	8.520	41	48653	15.529
81) 2-Chloroethyl Vinyl Ether	(2)	8.611	63	99322M	18.327
82) cis-1,3-Dichloropropene	(2)	8.794	75	205530	20.465
83) 4-Methyl-2-pentanone	(2)	9.007	43	1114429	80.789
84)$Toluene-d8	(3)	9.135	98	1195394	49.352
89) Toluene	(3)	9.221	92	357082	19.806
90) trans-1,3-Dichloropropene	(3)	9.526	75	183968	18.883
92) Ethyl Methacrylate	(3)	9.611	69	191908	16.429
93) 1,1,2-Trichloroethane	(3)	9.745	97	139395	21.612
94) Tetrachloroethene	(3)	9.818	166	175755	21.436
95) 1,3-Dichloropropane	(3)	9.922	76	214141	20.268
97) 2-Hexanone	(3)	10.001	43	947203	74.286
91) 1,3-Dichloropropene (total)	(3)		100	389498	39.348
98) Dibromochloromethane	(3)	10.147	129	141806	21.474
100) 1,2-Dibromoethane	(3)	10.257	107	148835	20.664
101)*Chlorobenzene-d5	(3)	10.727	117	959601	50.000
102) 1-Chlorohexane	(3)	10.751	91	203062	19.332

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/19/2019 at 16:15.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19s32.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 14:19 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:09 dvv10203

Sample Name: LCD590 Lab Sample ID: LCD590

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
103) Chlorobenzene	(3)	10.751	112	429379	21.285
104) 1,1,1,2-Tetrachloroethane	(3)	10.842	131	143338	21.049
105) Ethylbenzene	(3)	10.848	91	732205	20.791
107) m+p-Xylene	(3)	10.977	106	580480	41.795
108) o-Xylene	(3)	11.324	106	274289	20.212
110) Styrene	(3)	11.342	104	449853	20.075
111) Bromoform	(3)	11.501	173	104537	20.054
112) Isopropylbenzene	(3)	11.641	105	735037	20.856
113) Cyclohexanone	(1)	11.720	55	259882M	628.136
109) Xylene (Total)	(3)		106	854769	62.007
115)$4-Bromofluorobenzene	(3)	11.787	95	485841	51.549
116) Bromobenzene	(4)	11.903	156	190919	19.756
117) 1,1,2,2-Tetrachloroethane	(4)	11.909	83	251840	20.581
119) trans-1,4-Dichloro-2-butene	(4)	11.934	53	381193	98.918
118) 1,2,3-Trichloropropane	(4)	11.952	110	78005	21.159
120) n-Propylbenzene	(4)	11.989	91	908547	19.977
121) 2-Chlorotoluene	(4)	12.062	126	181808	19.390
123) 1,3,5-Trimethylbenzene	(4)	12.135	105	626202	19.079
122) 4-Chlorotoluene	(4)	12.159	126	187071	19.434
125) tert-Butylbenzene	(4)	12.379	134	126113M	18.184
126) Pentachloroethane	(4)	12.409	167	113165	19.981
127) 1,2,4-Trimethylbenzene	(4)	12.427	105	644710	19.155
128) sec-Butylbenzene	(4)	12.549	105	788374	18.540
130) 1,3-Dichlorobenzene	(4)	12.647	146	365166	19.730
131) p-Isopropyltoluene	(4)	12.665	119	677051	18.365
132)*1,4-Dichlorobenzene-d4	(4)	12.702	152	560214	50.000
134) 1,4-Dichlorobenzene	(4)	12.726	146	377325	20.116
135) 1,2,3-Trimethylbenzene	(4)	12.738	105	664303	19.107
136) Benzyl Chloride	(4)	12.812	91	457712	18.987
137) 1,3-Diethylbenzene	(4)	12.873	119	396040	17.626
138) 1,4-Diethylbenzene	(4)	12.946	119	416171	17.452
140) n-Butylbenzene	(4)	12.970	92	334072	17.965
139) 1,2-Dichlorobenzene	(4)	12.994	146	357712	20.444
141) 1,2-Diethylbenzene	(4)	13.025	119	335992	17.987
142) Diethylbenzene (total)	(4)		100	1148203	53.065
143) 1,2-Dibromo-3-chloropropane	(4)	13.555	75	63609	20.808
145) 1,3,5-Trichlorobenzene	(4)	13.677	180	244351	17.373
147) 1,2,4-Trichlorobenzene	(4)	14.116	180	221089	17.365

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/19/2019 at 16:15.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may19a.b/5y19s32.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 14:19 Analyst ID: DVV10203

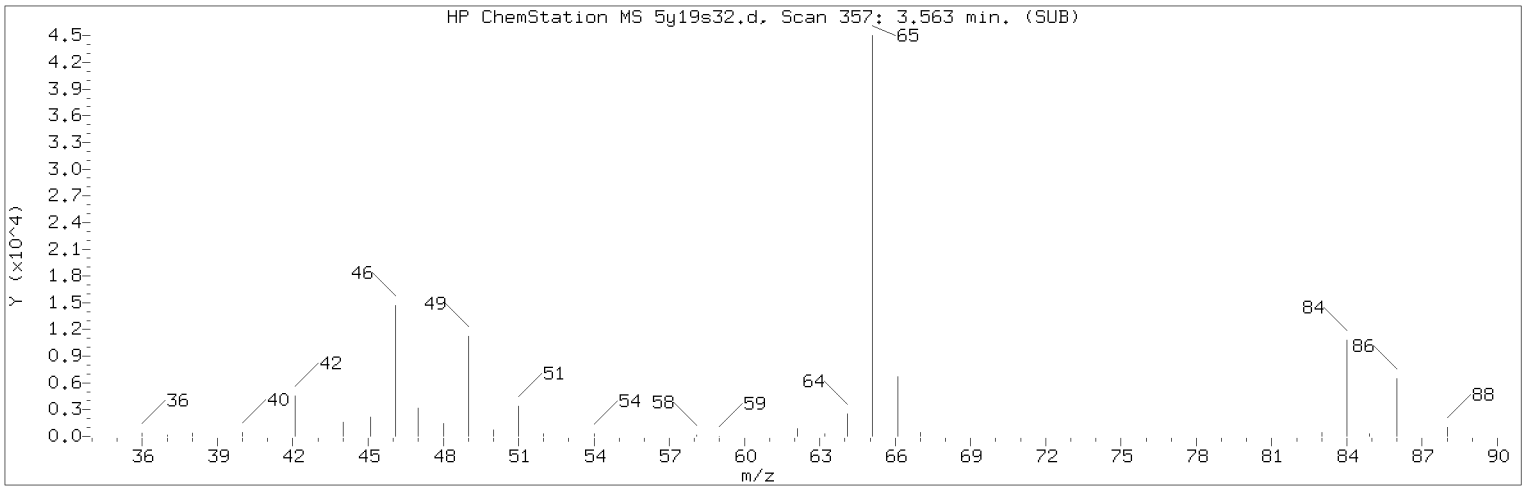
Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:09 dvv10203

Sample Name: LCD590 Lab Sample ID: LCD590

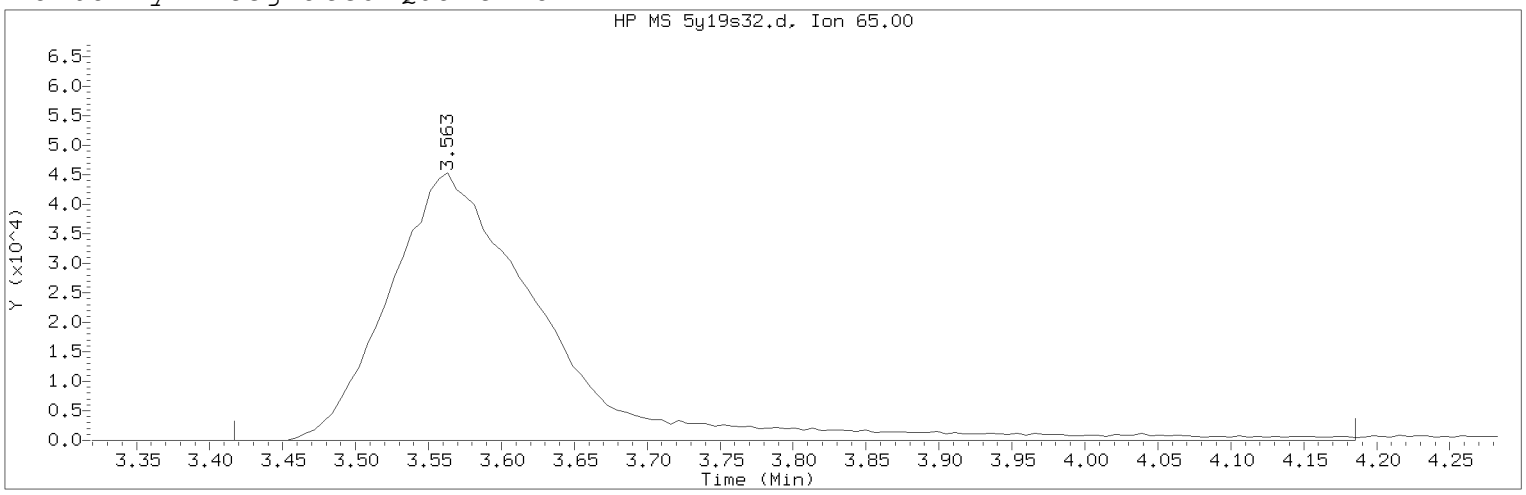
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) Hexachlorobutadiene	(4)	14.201	225	100726	16.763
149) Naphthalene	(4)	14.299	128	851779	19.716
150) 1,2,3-Trichlorobenzene	(4)	14.445	180	224593	18.410
151) 2-Methylnaphthalene	(4)	15.061	142	395020	15.539

Digitally signed by Don V. Viray
on 05/19/2019 at 16:15.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s32.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 14:19 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:09 dvv10203

Sample Name: LCD590 Lab Sample ID: LCD590

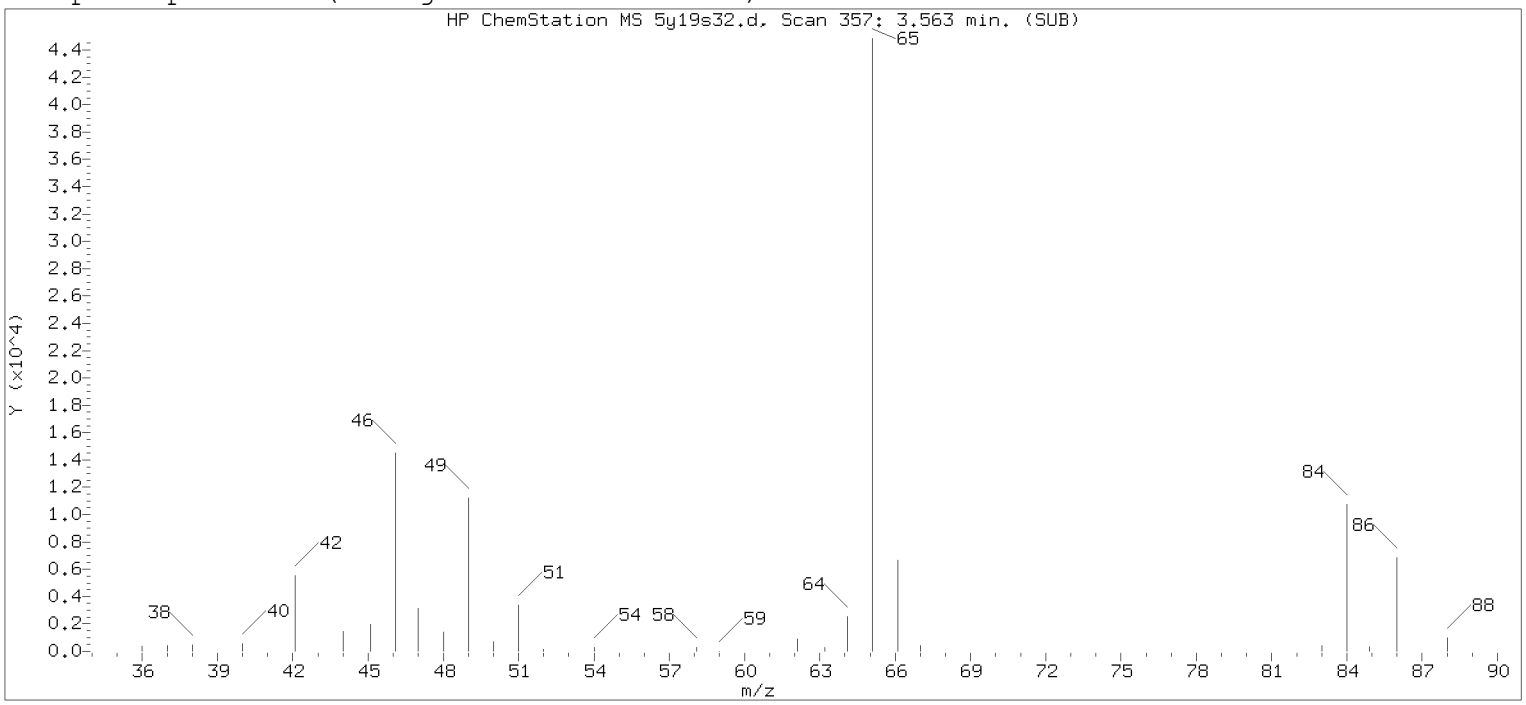
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 357
Retention Time (minutes): 3.563
Quant Ion : 65.00
Area (flag) : 337461M
On-Column Amount (ng) : 250.0000
Integration start scan : 332 Integration stop scan: 458
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

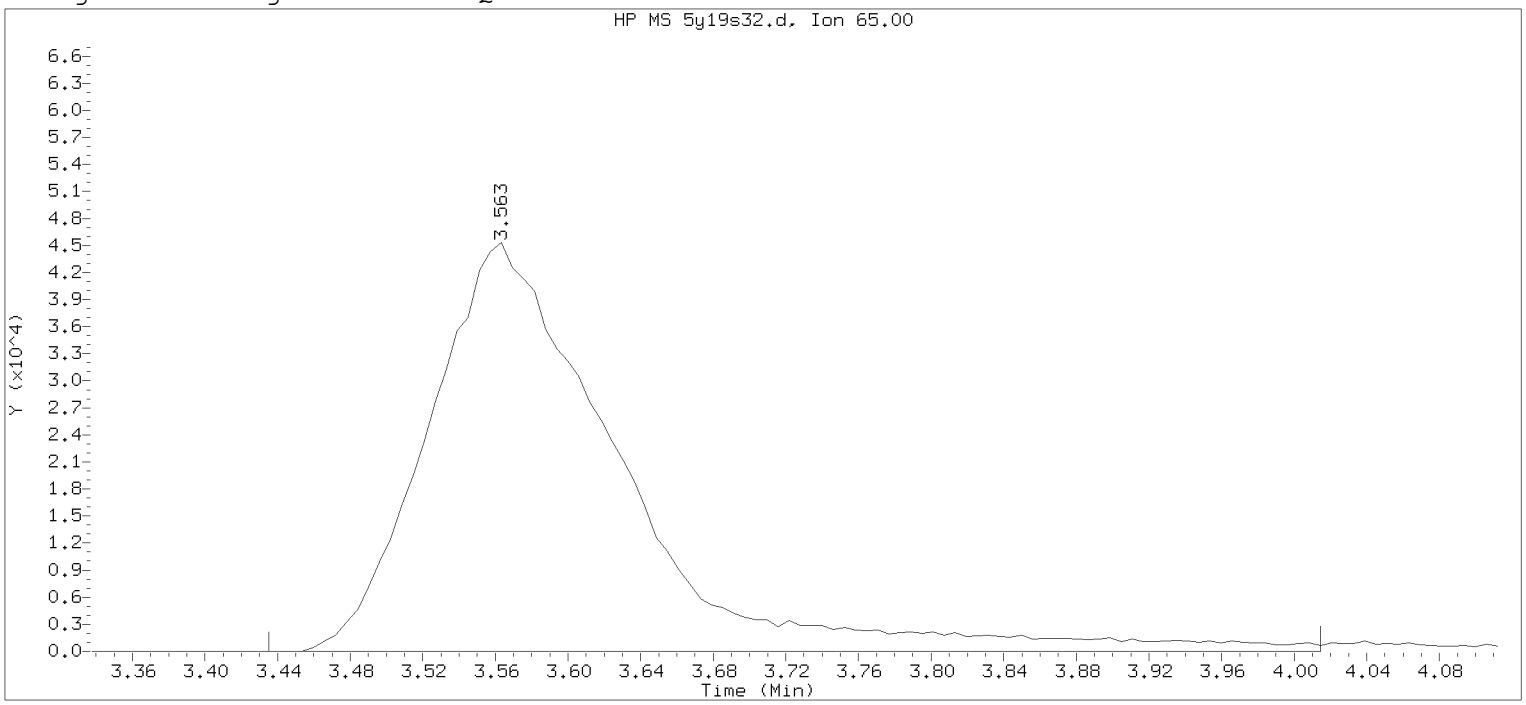
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/19/2019 at 16:15.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:32.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s32.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 14:19 Analyst ID: DVV10203

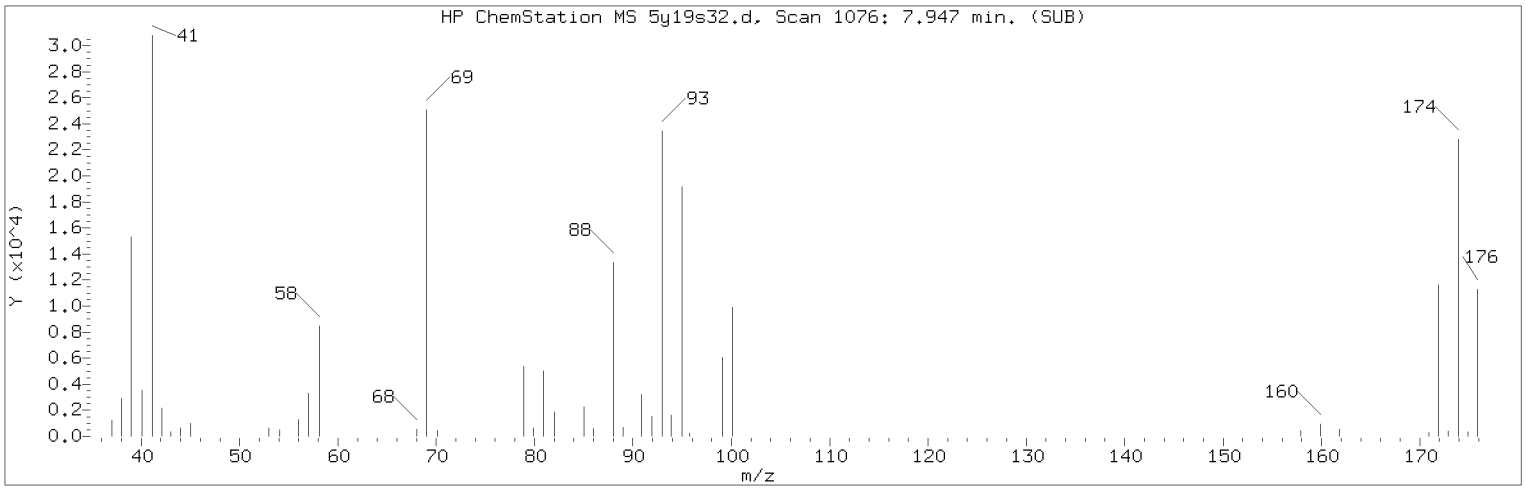
Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 14:44 dvv10203

Sample Name: LCD590 Lab Sample ID: LCD590

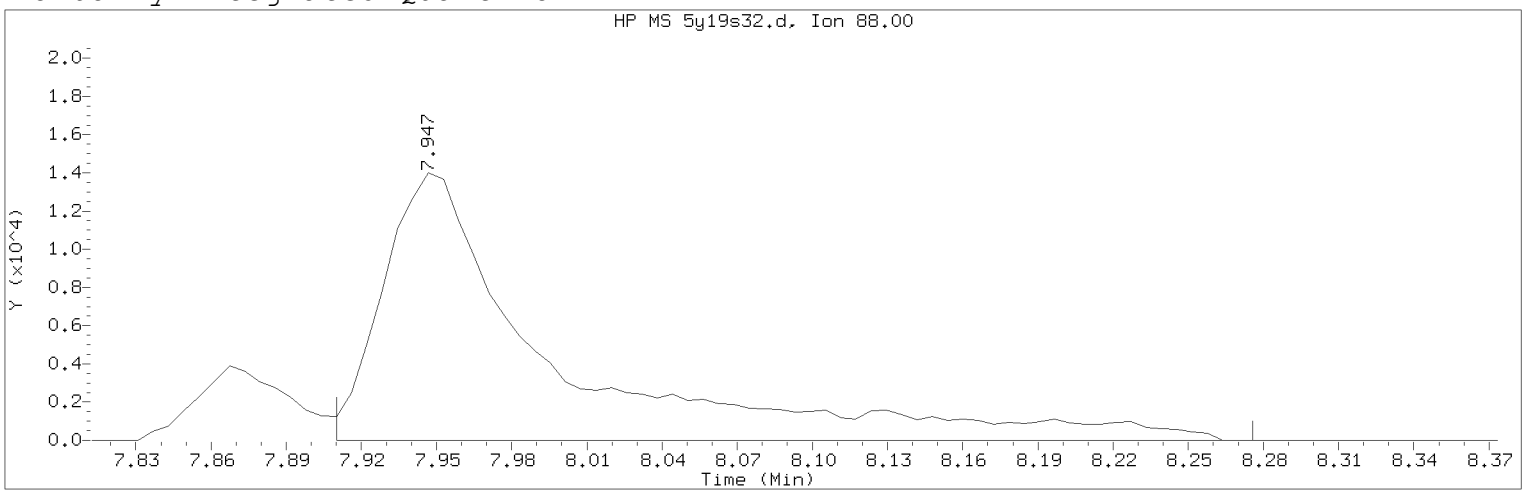
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 357
Retention Time (minutes): 3.563
Quant Ion : 65.00
Area : 330224
On-column Amount (ng) : 250.0000
Integration start scan : 335 Integration stop scan: 430
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/19/2019 at 16:15.
Target 3.5 esignature user id: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s32.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 14:19 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:09 dvv10203

Sample Name: LCD590 Lab Sample ID: LCD590

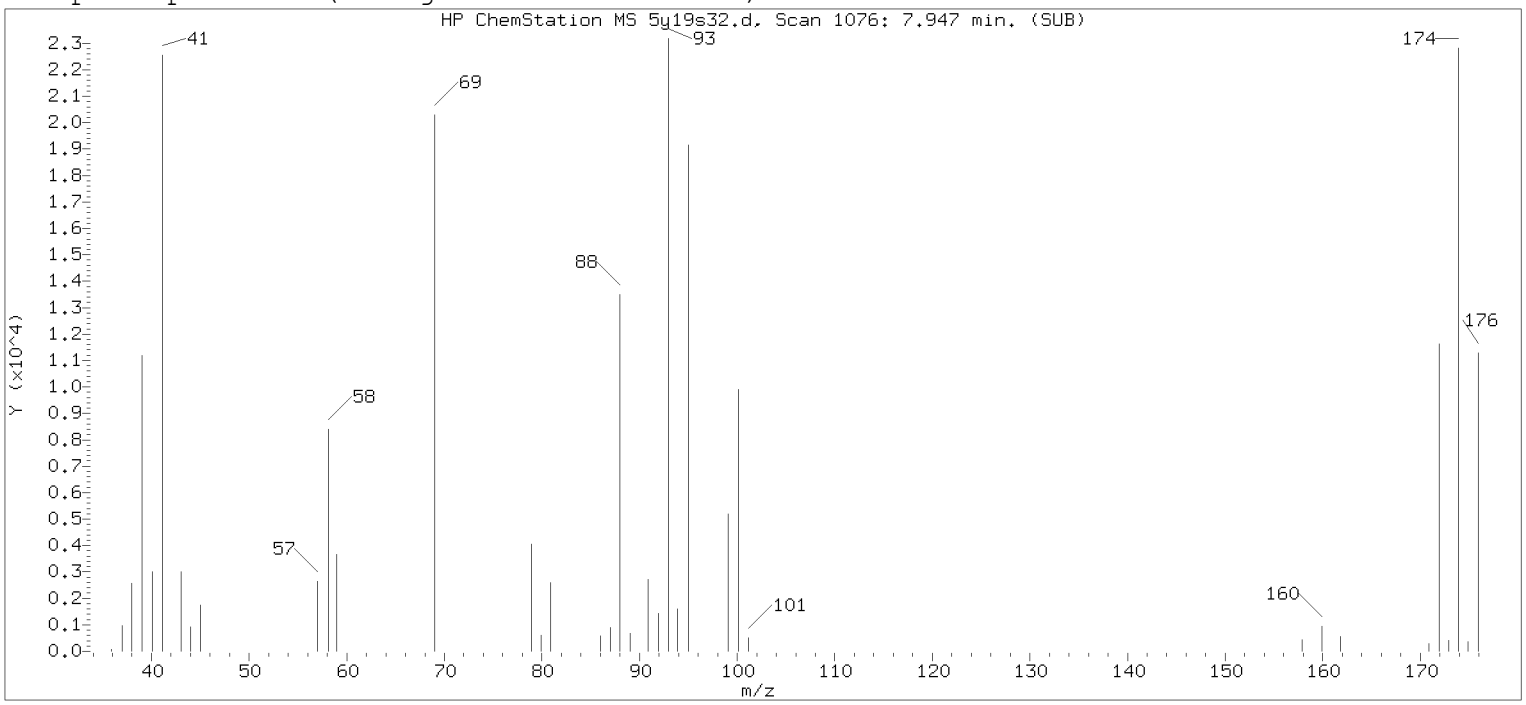
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1076
Retention Time (minutes): 7.947
Quant Ion : 88.00
Area (flag) : 65771M
On-Column Amount (ng) : 665.1275
Integration start scan : 1069 Integration stop scan: 1129
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

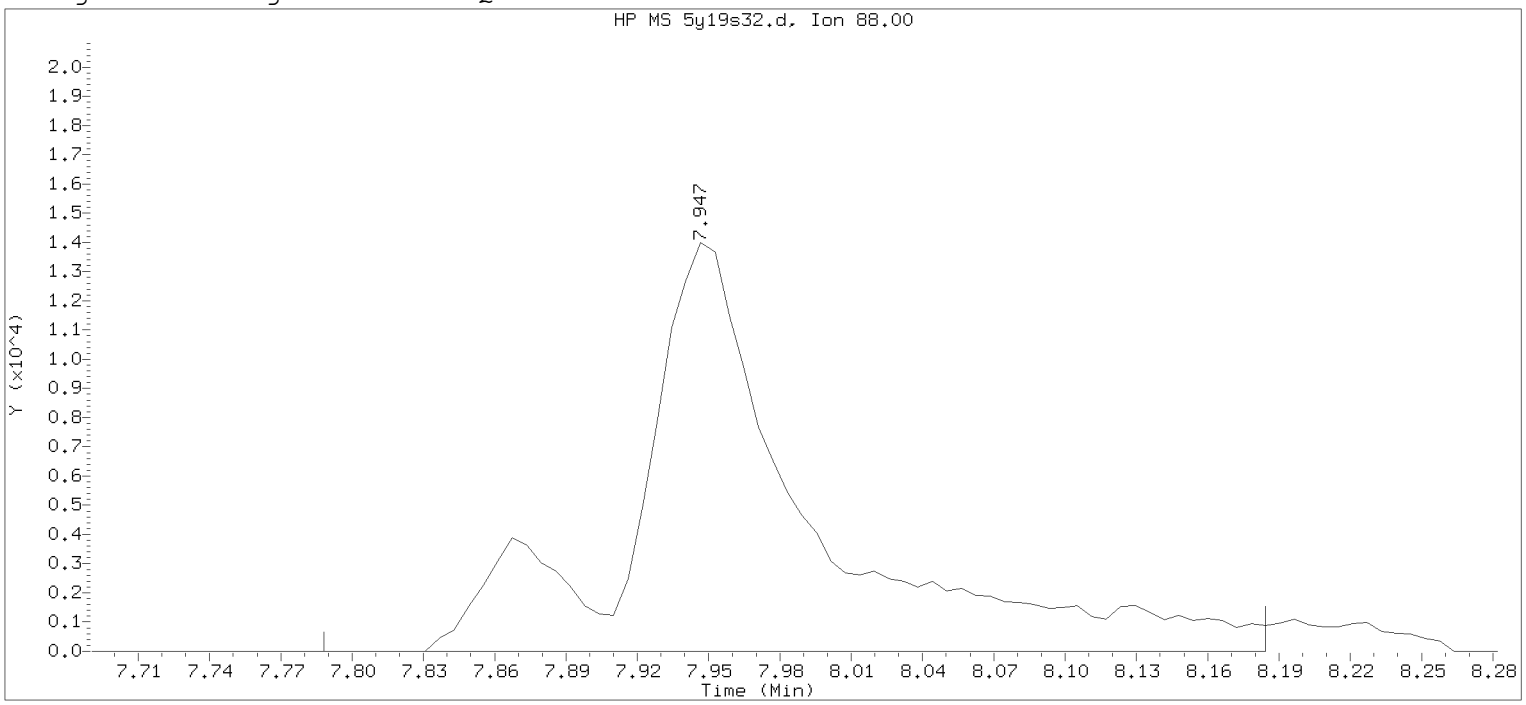
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/19/2019 at 16:15.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:32.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s32.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 14:19 Analyst ID: DVV10203

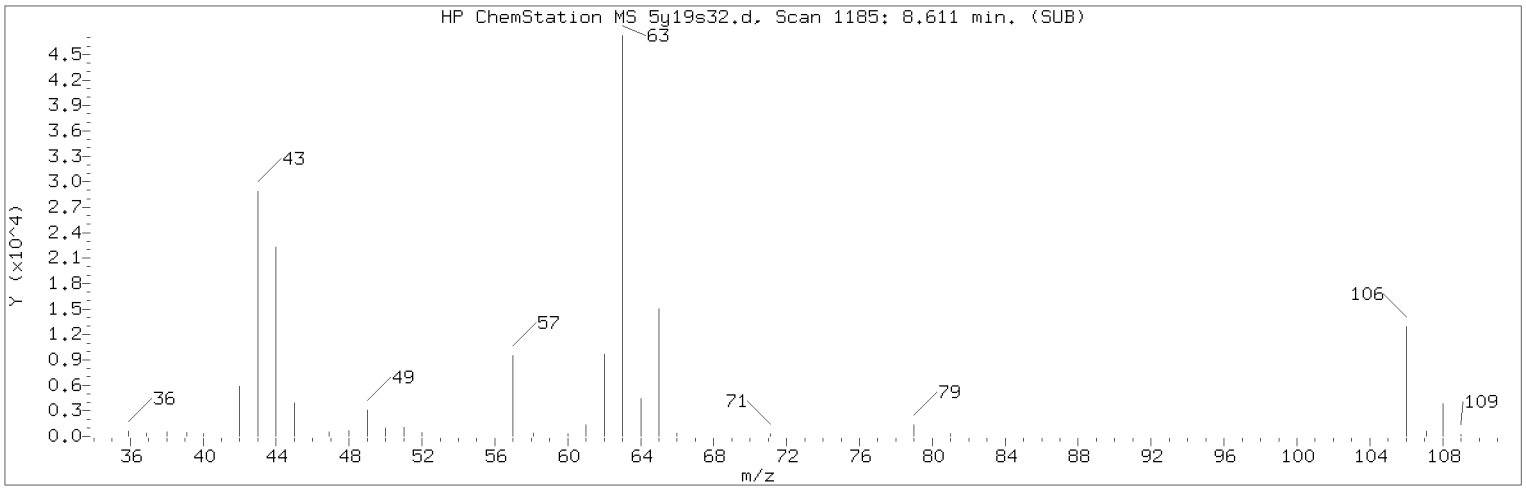
Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 14:44 dvv10203

Sample Name: LCD590 Lab Sample ID: LCD590

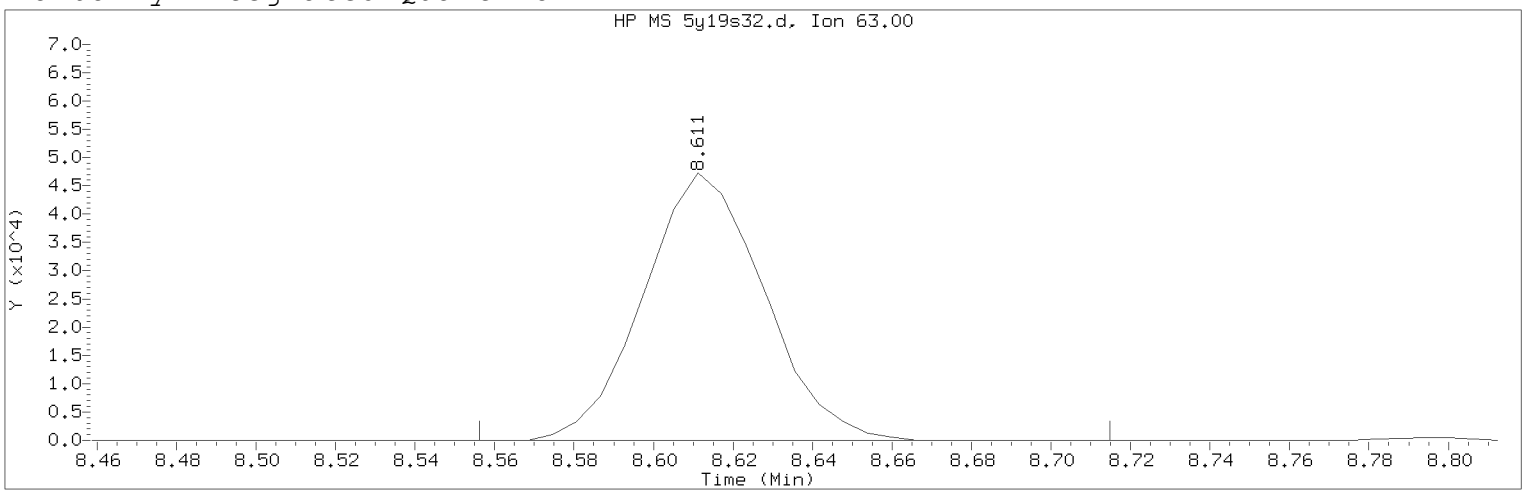
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1076
Retention Time (minutes): 7.947
Quant Ion : 88.00
Area : 71906
On-column Amount (ng) : 743.1077
Integration start scan : 1049 Integration stop scan: 1114
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/19/2019 at 16:15.
Target 3.5 esignature user id: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s32.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 14:19 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:09 dvv10203

Sample Name: LCD590 Lab Sample ID: LCD590

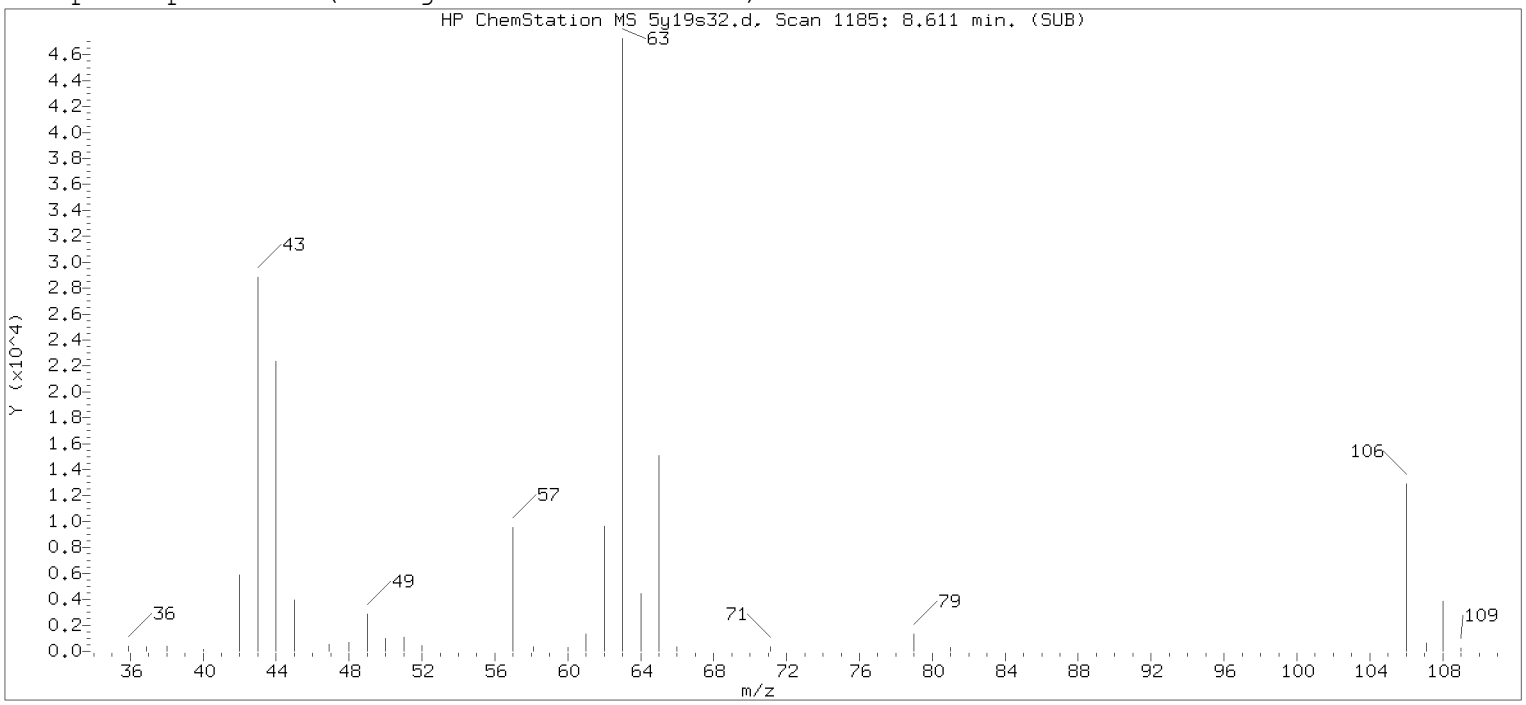
Compound Number : 81
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1185
Retention Time (minutes): 8.611
Quant Ion : 63.00
Area (flag) : 99322M
On-Column Amount (ng) : 18.3268
Integration start scan : 1175 Integration stop scan: 1201
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

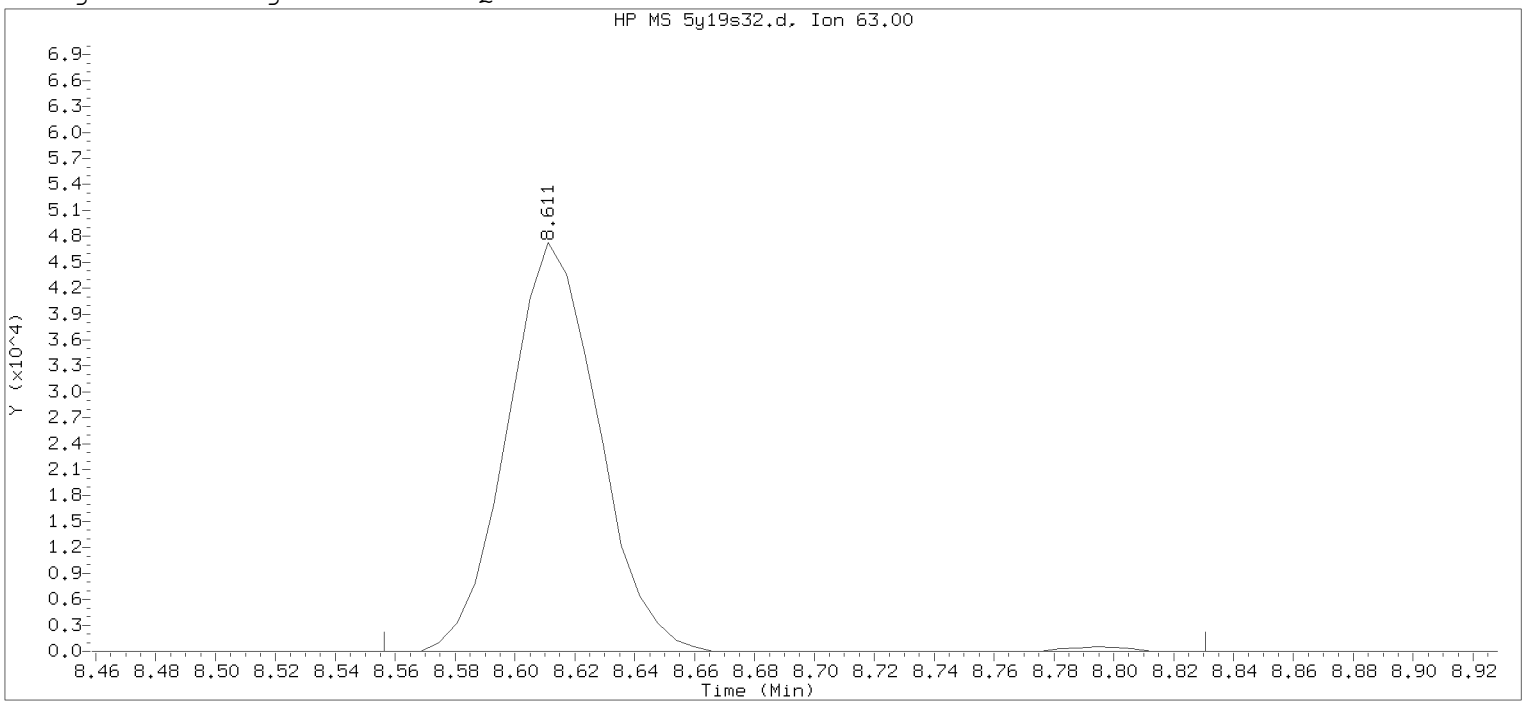
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/19/2019 at 16:15.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:32.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s32.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 14:19 Analyst ID: DVV10203

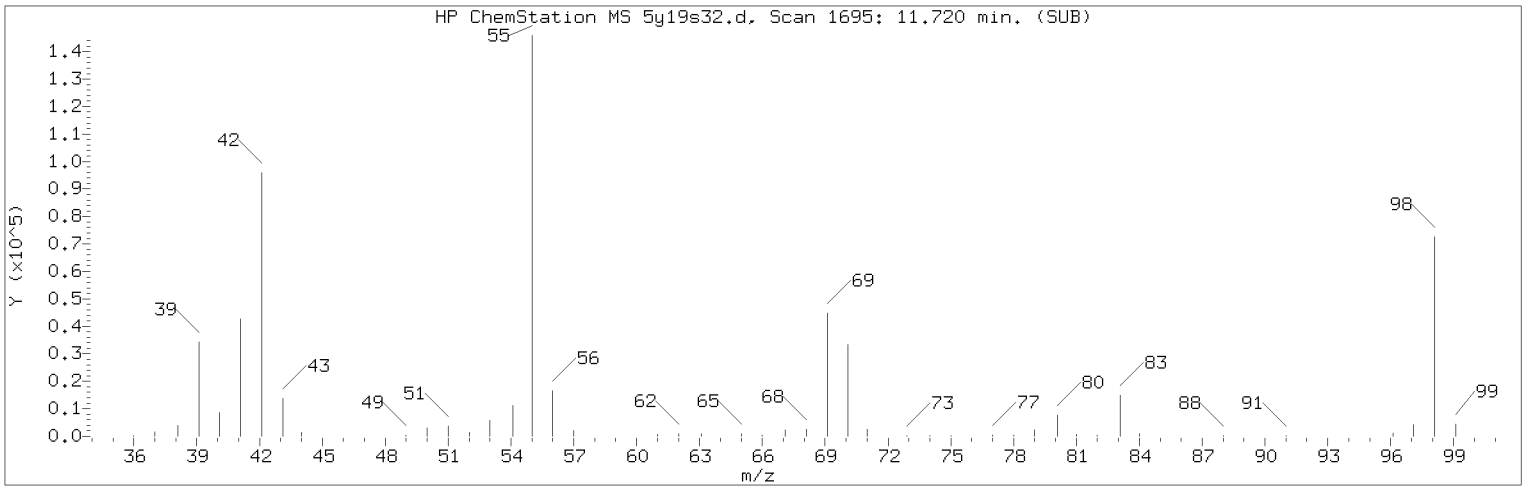
Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 14:44 dvv10203

Sample Name: LCD590 Lab Sample ID: LCD590

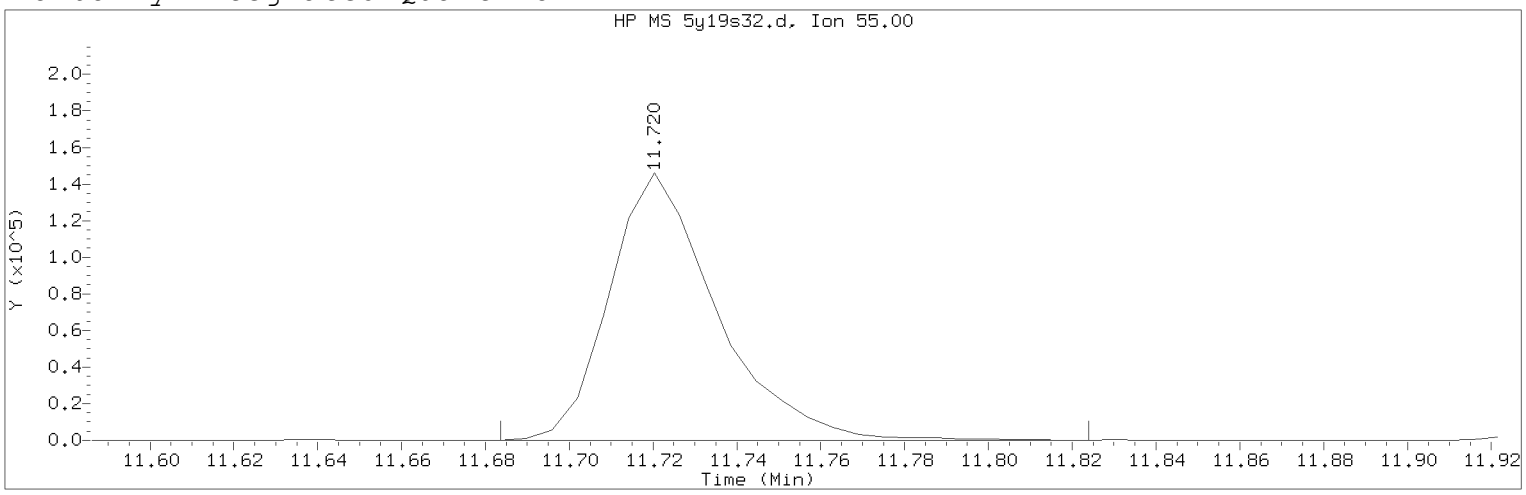
Compound Number : 81
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1185
Retention Time (minutes): 8.611
Quant Ion : 63.00
Area : 99990
On-column Amount (ng) : 18.4502
Integration start scan : 1175 Integration stop scan: 1220
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/19/2019 at 16:15.
Target 3.5 esignature user id: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s32.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 14:19 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:09 dvv10203

Sample Name: LCD590 Lab Sample ID: LCD590

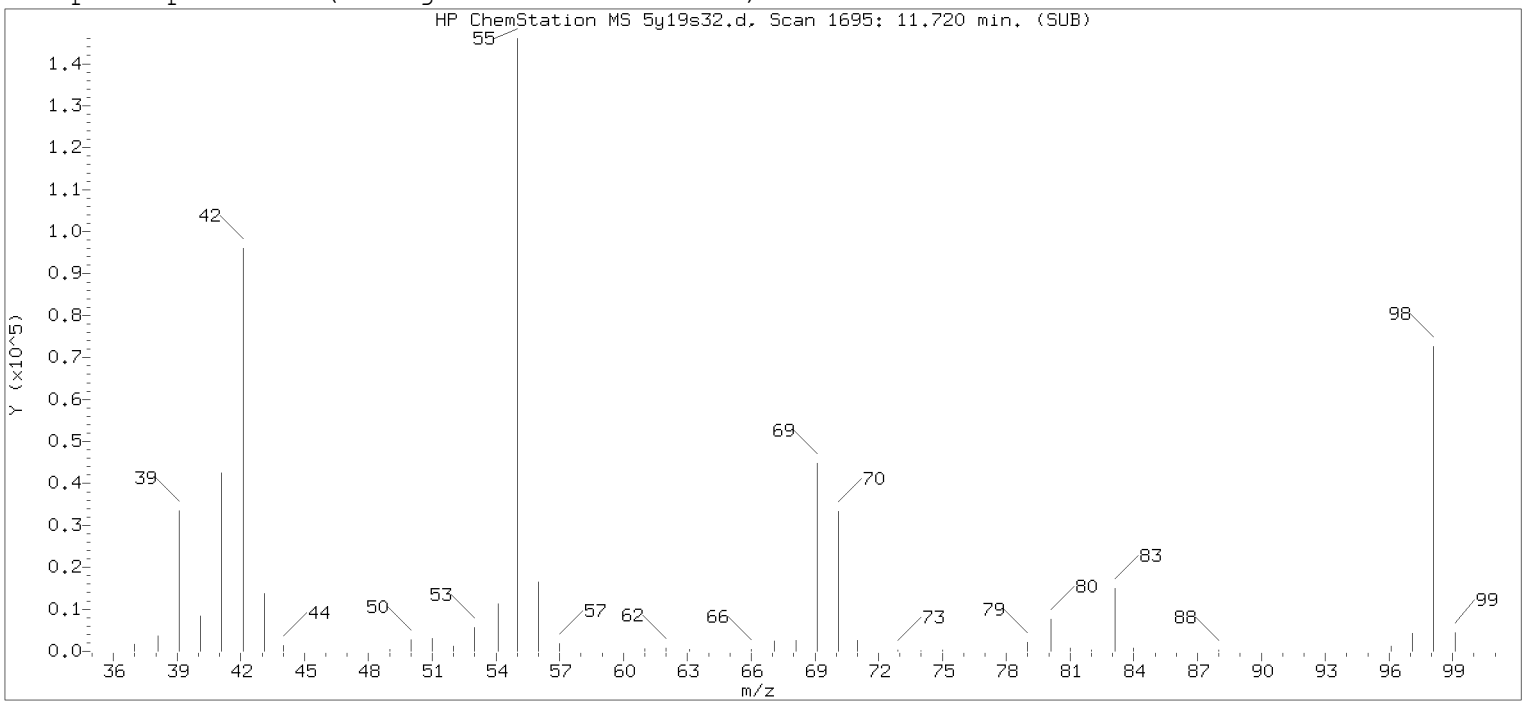
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1695
Retention Time (minutes): 11.720
Quant Ion : 55.00
Area (flag) : 259882M
On-Column Amount (ng) : 628.1363
Integration start scan : 1688 Integration stop scan: 1711
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

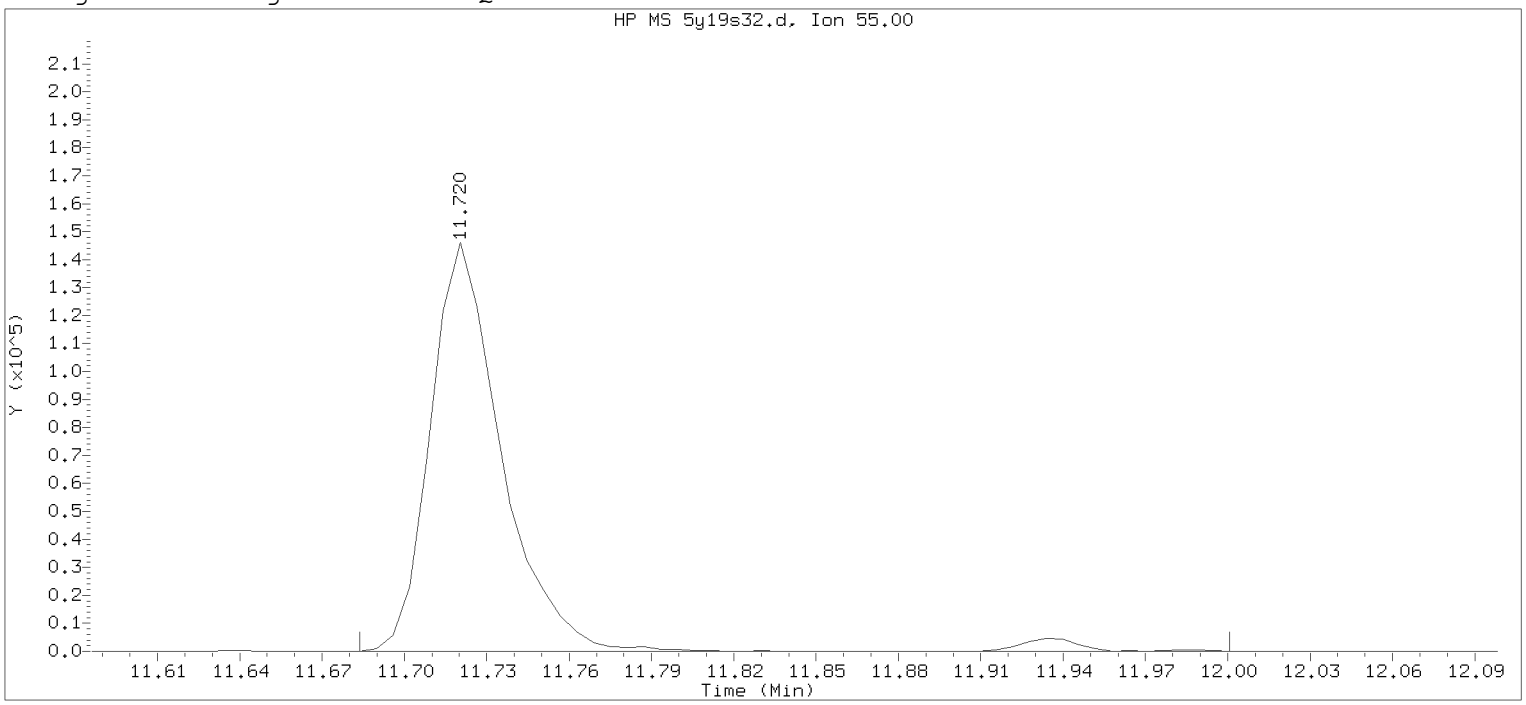
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/19/2019 at 16:15.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:32.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s32.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 14:19 Analyst ID: DVV10203

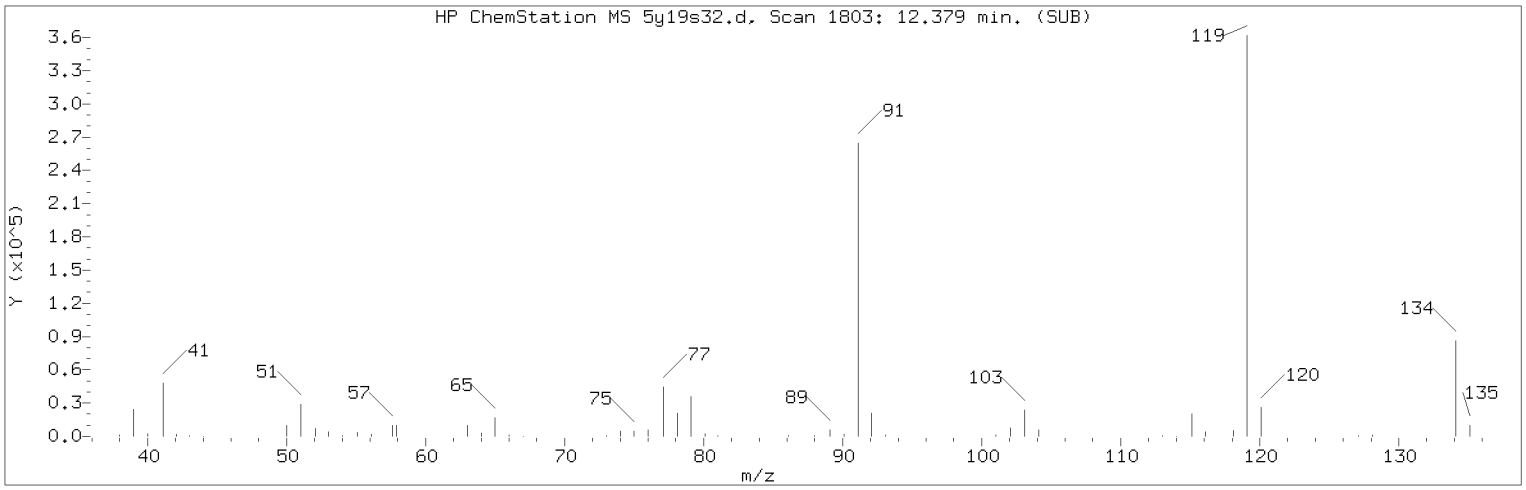
Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 14:44 dvv10203

Sample Name: LCD590 Lab Sample ID: LCD590

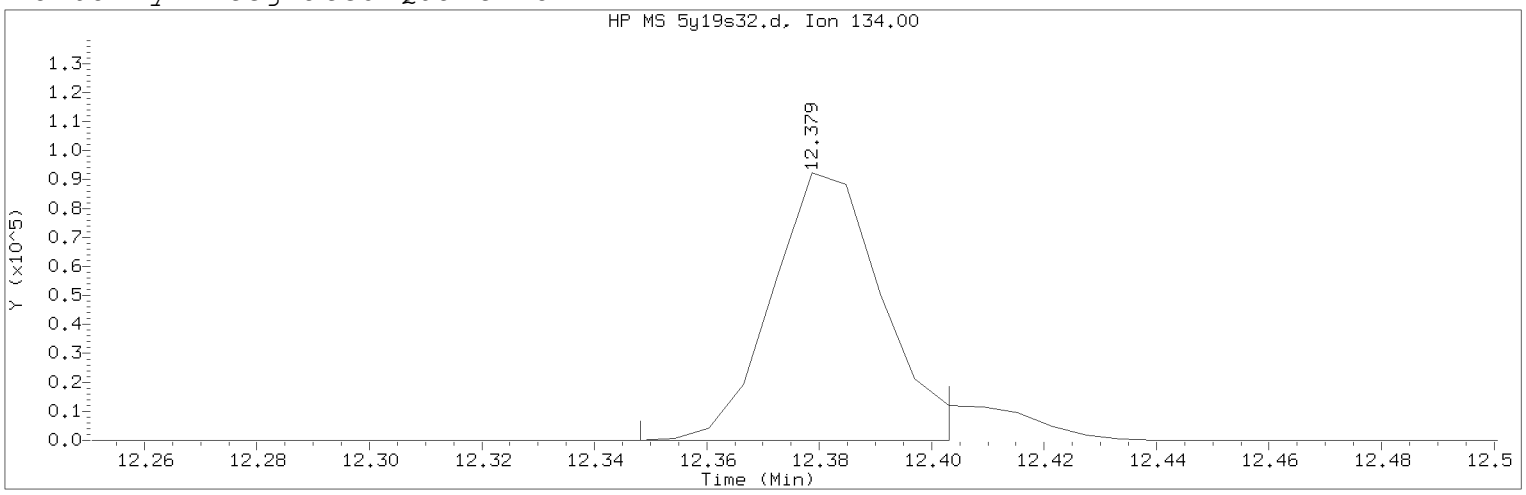
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1695
Retention Time (minutes): 11.720
Quant Ion : 55.00
Area : 267060
On-column Amount (ng) : 659.6309
Integration start scan : 1688 Integration stop scan: 1740
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/19/2019 at 16:15.
Target 3.5 esignature user id: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s32.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 14:19 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 16:09 dvv10203

Sample Name: LCD590 Lab Sample ID: LCD590

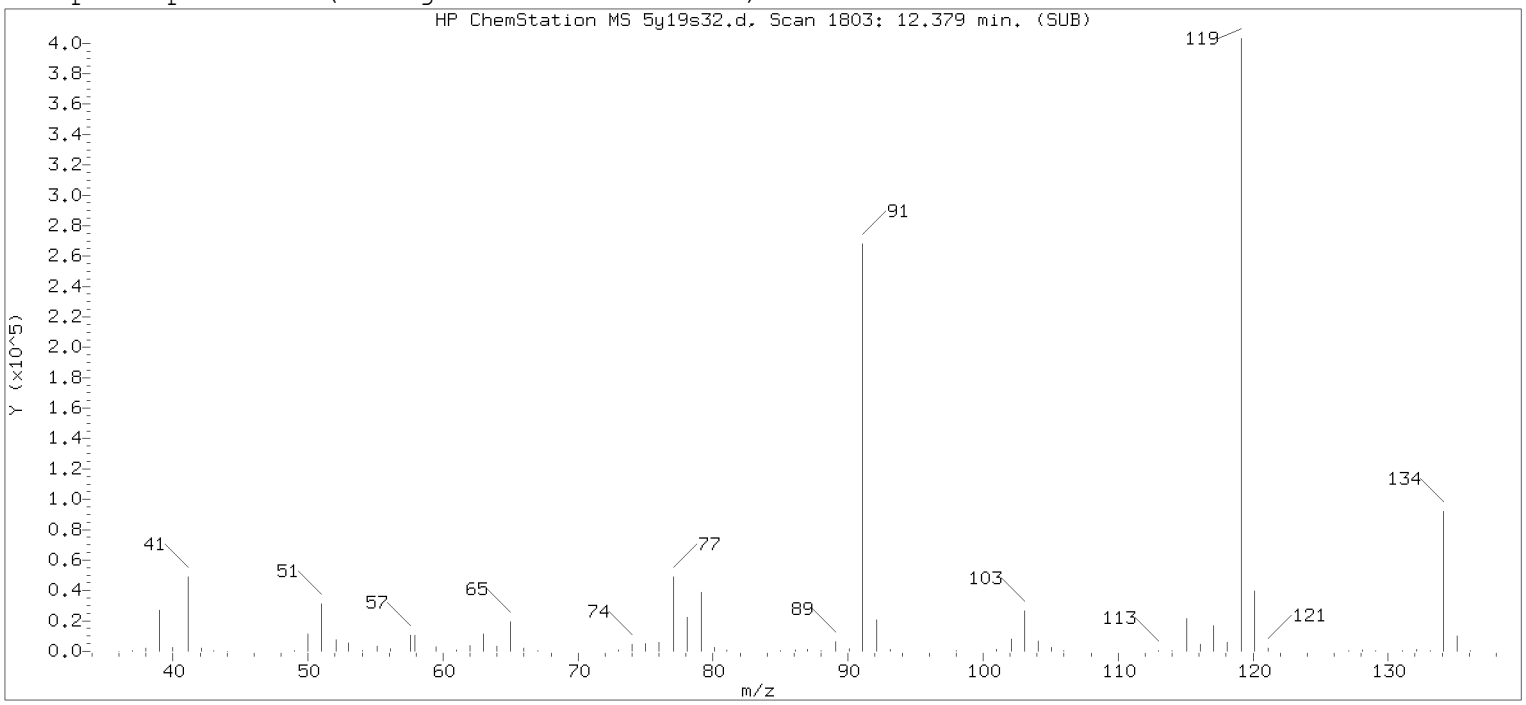
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1803
Retention Time (minutes): 12.379
Quant Ion : 134.00
Area (flag) : 126113M
On-Column Amount (ng) : 18.1836
Integration start scan : 1797 Integration stop scan: 1806
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

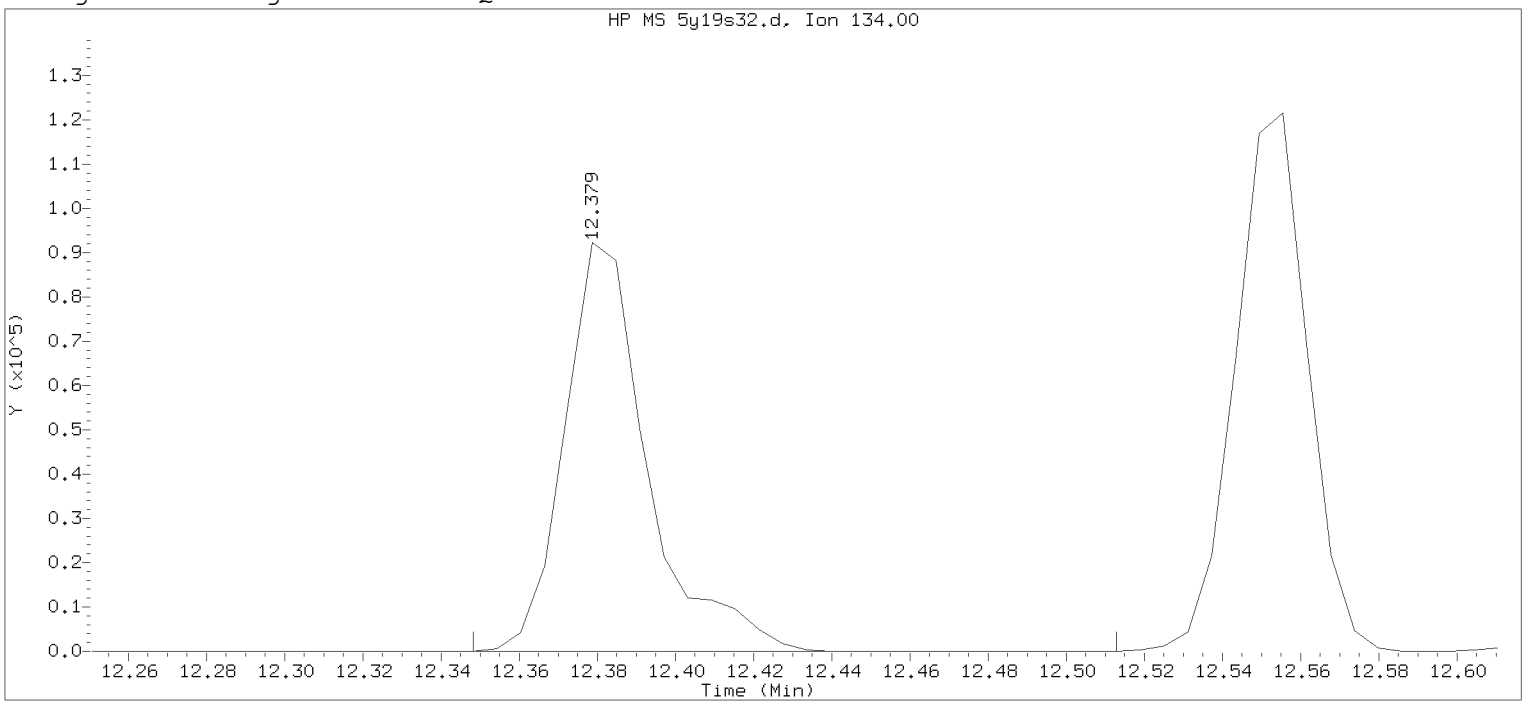
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/19/2019 at 16:15.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:32.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may19a.b/5y19s32.d Instrument ID: HP26285.i
Injection date and time: 19-MAY-2019 14:19 Analyst ID: DVV10203

Method used: /chem2/HP26285.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 14:19
Date, time and analyst ID of latest file update: 19-May-2019 14:44 dvv10203

Sample Name: LCD590 Lab Sample ID: LCD590

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1803
Retention Time (minutes): 12.379
Quant Ion : 134.00
Area : 136402
On-column Amount (ng) : 19.6673
Integration start scan : 1797 Integration stop scan: 1824
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/19/2019 at 16:15.
Target 3.5 esignature user id: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSW23

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSW23

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/18/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	18	
74-87-3	Chloromethane	16	
106-99-0	1,3-Butadiene	26	
75-01-4	Vinyl Chloride	17	
74-83-9	Bromomethane	16	
75-00-3	Chloroethane	16	
109-66-0	n-Pentane	14	
75-69-4	Trichlorofluoromethane	18	
64-17-5	Ethanol	380	J
354-23-4	Freon 123a	19	
107-02-8	Acrolein	150	
75-35-4	1,1-Dichloroethene	22	
67-64-1	Acetone	230	
76-13-1	Freon 113	21	
67-63-0	2-Propanol	160	
74-88-4	Methyl Iodide	20	
75-15-0	Carbon Disulfide	15	
107-05-1	Allyl Chloride	19	
79-20-9	Methyl Acetate	18	
75-09-2	Methylene Chloride	20	
75-65-0	t-Butyl alcohol	210	
107-13-1	Acrylonitrile	90	
156-60-5	trans-1,2-Dichloroethene	21	
1634-04-4	Methyl Tertiary Butyl Ether	24	
110-54-3	n-Hexane	19	
75-34-3	1,1-Dichloroethane	21	
108-20-3	di-Isopropyl ether	20	
126-99-8	2-Chloro-1,3-butadiene	21	
637-92-3	Ethyl t-butyl ether	22	
156-59-2	cis-1,2-Dichloroethene	23	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSW23

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSW23

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/18/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	44	
78-93-3	2-Butanone	140	
594-20-7	2,2-Dichloropropane	20	
107-12-0	Propionitrile	200	
126-98-7	Methacrylonitrile	140	
74-97-5	Bromochloromethane	21	
109-99-9	Tetrahydrofuran	130	
67-66-3	Chloroform	22	
71-55-6	1,1,1-Trichloroethane	22	
110-82-7	Cyclohexane	17	
563-58-6	1,1-Dichloropropene	21	
56-23-5	Carbon Tetrachloride	21	
78-83-1	Isobutyl Alcohol	560	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	23	
994-05-8	t-Amyl methyl ether	23	
142-82-5	n-Heptane	19	
71-36-3	n-Butanol	1000	
79-01-6	Trichloroethene	21	
108-87-2	Methylcyclohexane	20	
78-87-5	1,2-Dichloropropane	21	
74-95-3	Dibromomethane	22	
123-91-1	1,4-Dioxane	630	
80-62-6	Methyl Methacrylate	18	
75-27-4	Bromodichloromethane	21	
79-46-9	2-Nitropropane	17	
110-75-8	2-Chloroethyl Vinyl Ether	19	
10061-01-5	cis-1,3-Dichloropropene	20	
108-10-1	4-Methyl-2-pentanone	91	
108-88-3	Toluene	24	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSW23

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSW23

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/18/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	20	
542-75-6	1,3-Dichloropropene (total)	40	
97-63-2	Ethyl Methacrylate	20	
79-00-5	1,1,2-Trichloroethane	24	
127-18-4	Tetrachloroethene	25	
142-28-9	1,3-Dichloropropane	22	
591-78-6	2-Hexanone	99	
124-48-1	Dibromochloromethane	23	
106-93-4	1,2-Dibromoethane	23	
108-90-7	Chlorobenzene	24	
630-20-6	1,1,1,2-Tetrachloroethane	23	
100-41-4	Ethylbenzene	23	
179601-23-1	m+p-Xylene	47	
95-47-6	o-Xylene	23	
1330-20-7	Xylene (Total)	70	
100-42-5	Styrene	23	
75-25-2	Bromoform	21	
98-82-8	Isopropylbenzene	23	
108-94-1	Cyclohexanone	520	
108-86-1	Bromobenzene	24	
79-34-5	1,1,2,2-Tetrachloroethane	23	
96-18-4	1,2,3-Trichloropropane	24	
110-57-6	trans-1,4-Dichloro-2-butene	75	
103-65-1	n-Propylbenzene	23	
95-49-8	2-Chlorotoluene	23	
106-43-4	4-Chlorotoluene	23	
108-67-8	1,3,5-Trimethylbenzene	22	
98-06-6	tert-Butylbenzene	22	
76-01-7	Pentachloroethane	22	
95-63-6	1,2,4-Trimethylbenzene	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSW23

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSW23

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/18/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
135-98-8	sec-Butylbenzene	21	
541-73-1	1,3-Dichlorobenzene	23	
99-87-6	p-Isopropyltoluene	21	
106-46-7	1,4-Dichlorobenzene	23	
526-73-8	1,2,3-Trimethylbenzene	21	
100-44-7	Benzyl Chloride	18	
141-93-5	1,3-Diethylbenzene	20	
105-05-5	1,4-Diethylbenzene	19	
95-50-1	1,2-Dichlorobenzene	23	
104-51-8	n-Butylbenzene	20	
135-01-3	1,2-Diethylbenzene	21	
25340-17-4	Diethylbenzene (total)	60	
96-12-8	1,2-Dibromo-3-chloropropane	20	
108-70-3	1,3,5-Trichlorobenzene	20	
120-82-1	1,2,4-Trichlorobenzene	20	
87-68-3	Hexachlorobutadiene	19	
91-20-3	Naphthalene	20	
87-61-6	1,2,3-Trichlorobenzene	20	
91-57-6	2-Methylnaphthalene	14	

Data file: /chem2/HP09137.i/19may18a.b/wy18s01.d Injection date and time: **18-MAY-2019 22:29**
Data file Sample Info. Line: LCSW23;LCSW23;1;3;LCS;;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.732(0.006)	592	65	185223	(-2)	250.00	
66) Fluorobenzene	5.032(0.000)	1309	96	1049302	(2)	50.00	
101) Chlorobenzene-d5	8.161(0.000)	2284	117	796496	(2)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041(0.000)	2870	152	447919	(1)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.359(0.001)	113	232125	47.750	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692(0.000)	102	60342	46.673	93%		80 - 120
84) Toluene-d8	(3)	6.698(0.000)	98	1024508	51.332	103%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162(0.000)	95	372564	46.660	93%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
3) Dichlorodifluoromethane	(2)	1.259(-0.000)	85	122405	18.041	18.04			0.2	1
4) Chloromethane	(2)	1.390(-0.001)	50	131544	15.570	15.57			0.2	1
5) 1,3-Butadiene	(2)	1.464(0.004)	39	134278M	26.080	26.08			1	3
6) Vinyl Chloride	(2)	1.464(-0.000)	62	129632	16.738	16.74			0.2	1
8) Bromomethane	(2)	1.692(-0.000)	94	96074M	15.728	15.73			0.3	1
9) Chloroethane	(2)	1.766(0.000)	64	80293	15.754	15.75			0.2	1
11) n-Pentane	(2)	1.965(0.001)	43	110412	14.114	14.11			0.4	10
12) Trichlorofluoromethane	(2)	1.932(-0.000)	101	151761	18.450	18.45			0.2	1
13) Ethanol	(1)	2.032(-0.000)	45	32125M	380.291	380.29		J	280	750
15) Freon 123a	(2)	2.119(-0.000)	67	114541M	18.634	18.63			0.4	5
16) Acrolein	(1)	2.215(-0.000)	56	203467	152.584	152.58			2	100
17) 1,1-Dichloroethene	(2)	2.298(0.001)	96	99685M	21.547	21.55			0.2	1
18) Acetone	(1)	2.340(-0.002)	58	150531M	232.245	232.25			0.7	20
19) Freon 113	(2)	2.334(0.001)	101	84299	20.750	20.75			0.2	10
21) 2-Propanol	(1)	2.456(-0.004)	45	76314M	158.471	158.47			18	100
22) Methyl Iodide	(2)	2.475(0.000)	142	178264M	20.107	20.11			0.2	1
23) Carbon Disulfide	(2)	2.507(0.001)	76	241845	14.838	14.84			0.2	5
25) Allyl Chloride	(2)	2.603(0.000)	41	149787	18.585	18.58			0.3	5
27) Methyl Acetate	(2)	2.619(0.000)	43	128160	18.371	18.37			0.2	5
28) Methylene Chloride	(2)	2.709(0.000)	84	110369	19.517	19.52			0.3	1
30) t-Butyl alcohol	(1)	2.812(-0.002)	59	183621	213.752	213.75			12	50
31) Acrylonitrile	(2)	2.924(0.001)	53	329808	89.865	89.87			0.3	20
32) trans-1,2-Dichloroethene	(2)	2.959(0.000)	96	106977	21.312	21.31			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	2.963(-0.000)	73	291896M	23.883	23.88			0.2	1
34) n-Hexane	(2)	3.213(0.001)	57	128915	19.194	19.19			0.2	5
36) 1,1-Dichloroethane	(2)	3.341(0.000)	63	186937	20.552	20.55			0.2	1
38) di-Isopropyl ether	(2)	3.415(-0.000)	45	348753	19.958	19.96			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	3.431(-0.000)	53	166663	21.156	21.16			0.2	5
40) Ethyl t-butyl ether	(2)	3.758(0.000)	59	277001	21.747	21.75			0.2	1
42) cis-1,2-Dichloroethene	(2)	3.890(0.000)	96	127328	22.592	22.59			0.2	1
43) 1,2-Dichloroethene (Total)	(2)		96	234305	43.904	43.90			0.2	2

M = Compound was manually integrated.

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may18a.b/wy18s01.d Injection date and time: **18-MAY-2019 22:29**
Data file Sample Info. Line: LCSW23;LCSW23;1;3;LCS;;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	3.906(0.000)	43	729335	138.323	138.32			0.3	10
45) 2,2-Dichloropropane	(2)	3.893(-0.000)	77	80613	19.734	19.73			0.3	1
47) Propionitrile	(1)	3.961(-0.001)	54	209125	195.875	195.87			14	100
48) Methacrylonitrile	(2)	4.111(0.000)	67	565031	143.190	143.19			6	50
49) Bromochloromethane	(2)	4.121(0.000)	128	61890	21.125	21.13			0.2	5
50) Tetrahydrofuran	(1)	4.169(-0.002)	71	132152	133.738	133.74			0.7	10
51) Chloroform	(2)	4.201(-0.000)	83	187903	22.018	22.02			0.2	1
53) 1,1,1-Trichloroethane	(2)	4.381(0.000)	97	140386	21.862	21.86			0.3	1
54) Cyclohexane	(2)	4.442(0.000)	56	148098	17.427	17.43			0.2	5
55) 1,1-Dichloropropene	(2)	4.548(-0.000)	75	143514	20.975	20.98			0.2	5
56) Carbon Tetrachloride	(2)	4.548(0.000)	117	113827	20.656	20.66			0.2	1
58) Isobutyl Alcohol	(1)	4.679(-0.003)	41	176096	562.293	562.29			36	250
60) Benzene	(2)	4.750(0.000)	78	466958	21.232	21.23			0.2	1
61) 1,2-Dichloroethane	(2)	4.769(-0.000)	62	154308	22.713	22.71			0.3	1
65) t-Amyl methyl ether	(2)	4.875(0.000)	73	300472	23.026	23.03			0.8	5
67) n-Heptane	(2)	5.032(0.001)	43	121659	18.953	18.95			0.2	5
69) n-Butanol	(1)	5.356(-0.004)	56	277598	998.326	998.33			61	250
71) Trichloroethene	(2)	5.405(0.000)	95	113492	21.309	21.31			0.2	1
73) Methylcyclohexane	(2)	5.604(0.001)	83	158337	20.478	20.48			0.2	5
74) 1,2-Dichloropropane	(2)	5.636(0.000)	63	117626	20.832	20.83			0.2	1
75) Dibromomethane	(2)	5.754(0.000)	93	76975	22.089	22.09			0.2	1
76) 1,4-Dioxane	(1)	5.790(-0.007)	88	52768M	634.789	634.79			29	250
77) Methyl Methacrylate	(2)	5.777(0.000)	69	111925	18.038	18.04			0.2	5
79) Bromodichloromethane	(2)	5.928(0.000)	83	133551	20.858	20.86			0.2	1
80) 2-Nitropropane	(2)	6.172(0.000)	41	35846	16.547	16.55			0.8	10
81) 2-Chloroethyl Vinyl Ether	(2)	6.265(0.000)	63	83042	19.291	19.29			0.2	10
82) cis-1,3-Dichloropropene	(2)	6.409(0.000)	75	173429	19.700	19.70			0.2	1
83) 4-Methyl-2-pentanone	(2)	6.586(0.000)	43	948076	91.217	91.22			0.5	10
89) Toluene	(3)	6.768(0.000)	92	305184	23.737	23.74			0.2	1
90) trans-1,3-Dichloropropene	(3)	7.019(-0.000)	75	156038	20.386	20.39			0.2	1
91) 1,3-Dichloropropene (total)	(3)		100	329467	40.087	40.09			0.2	5
92) Ethyl Methacrylate	(3)	7.137(0.000)	69	186320	19.810	19.81			0.2	5
93) 1,1,2-Trichloroethane	(3)	7.214(0.000)	97	120891	24.430	24.43			0.2	1
94) Tetrachloroethene	(3)	7.359(0.000)	166	127987	24.532	24.53			0.2	1
95) 1,3-Dichloropropane	(3)	7.388(0.000)	76	193133	22.470	22.47			0.2	1
97) 2-Hexanone	(3)	7.490(0.000)	43	742042	99.103	99.10			0.3	10
98) Dibromochloromethane	(3)	7.612(0.000)	129	111188	23.005	23.00			0.2	1
100) 1,2-Dibromoethane	(3)	7.718(0.000)	107	126964	23.353	23.35			0.2	1
103) Chlorobenzene	(3)	8.187(0.000)	112	337353	23.653	23.65			0.2	1
104) 1,1,1,2-Tetrachloroethane	(3)	8.267(0.000)	131	105671	23.054	23.05			0.2	1
105) Ethylbenzene	(3)	8.296(0.000)	91	559952	22.915	22.91			0.4	1
107) m+p-Xylene	(3)	8.402(0.000)	106	455044	46.836	46.84			1	5
108) o-Xylene	(3)	8.739(0.000)	106	218577	22.868	22.87			0.4	1
109) Xylene (Total)	(3)		106	673621	69.705	69.70			1	5
110) Styrene	(3)	8.752(0.000)	104	365013	22.765	22.76			0.2	5
111) Bromoform	(3)	8.896(0.000)	173	79455	21.123	21.12			0.2	4
112) Isopropylbenzene	(3)	9.047(0.000)	105	540716	23.022	23.02			0.2	5
113) Cyclohexanone	(1)	9.114(-0.007)	55	193408	515.788	515.79			25	100
116) Bromobenzene	(4)	9.278(0.000)	156	153402	23.777	23.78			0.2	5
117) 1,1,2,2-Tetrachloroethane	(4)	9.284(-0.000)	83	195987	22.527	22.53			0.2	1
118) 1,2,3-Trichloropropane	(4)	9.313(0.000)	110	63106	24.081	24.08			0.2	5
119) trans-1,4-Dichloro-2-butene	(4)	9.329(-0.000)	53	210559	75.471	75.47			6	50
120) n-Propylbenzene	(4)	9.371(0.000)	91	640815	22.532	22.53			0.2	5
121) 2-Chlorotoluene	(4)	9.435(-0.000)	126	136708	23.304	23.30			0.2	5

M = Compound was manually integrated.

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may18a.b/wy18s01.d Injection date and time: **18-MAY-2019 22:29**
Data file Sample Info. Line: LCSW23;LCSW23;1;3;LCS;;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
122) 4-Chlorotoluene	(4)	9.518(-0.000)	126	144449	23.002	23.00			0.2	5
123) 1,3,5-Trimethylbenzene	(4)	9.509(0.000)	105	460582	22.455	22.45			0.3	5
125) tert-Butylbenzene	(4)	9.759(-0.000)	134	102225	21.936	21.94			0.3	5
126) Pentachloroethane	(4)	9.766(0.000)	167	80695	21.905	21.90			0.2	5
127) 1,2,4-Trimethylbenzene	(4)	9.791(-0.000)	105	476442	22.043	22.04			1	5
128) sec-Butylbenzene	(4)	9.920(-0.000)	105	534870	21.244	21.24			0.2	5
130) 1,3-Dichlorobenzene	(4)	9.993(-0.000)	146	282658	22.976	22.98			0.2	5
131) p-Isopropyltoluene	(4)	10.022(0.000)	119	474445	21.287	21.29			0.2	5
134) 1,4-Dichlorobenzene	(4)	10.058(0.000)	146	297886	23.356	23.36			0.2	5
135) 1,2,3-Trimethylbenzene	(4)	10.099(-0.000)	105	495935	21.325	21.33			0.3	5
136) Benzyl Chloride	(4)	10.157(0.000)	91	327217	18.330	18.33			0.3	5
137) 1,3-Diethylbenzene	(4)	10.240(0.000)	119	280737	20.047	20.05			0.2	5
138) 1,4-Diethylbenzene	(4)	10.298(0.000)	119	291396	19.421	19.42			0.2	5
139) 1,2-Dichlorobenzene	(4)	10.324(0.000)	146	284707	23.326	23.33			0.2	5
140) n-Butylbenzene	(4)	10.317(0.000)	92	221191	19.663	19.66			0.2	5
141) 1,2-Diethylbenzene	(4)	10.382(-0.000)	119	248487	21.017	21.02			0.2	5
142) Diethylbenzene (total)	(4)		100	820620	60.484	60.48			0.2	5
143) 1,2-Dibromo-3-chloropropane	(4)	10.866(-0.000)	75	40024	20.242	20.24			0.3	5
145) 1,3,5-Trichlorobenzene	(4)	11.007(0.000)	180	189511	20.248	20.25			0.2	5
147) 1,2,4-Trichlorobenzene	(4)	11.418(0.000)	180	178556	19.871	19.87			0.3	5
148) Hexachlorobutadiene	(4)	11.527(0.000)	225	61764	19.299	19.30			0.7	5
149) Naphthalene	(4)	11.582(0.000)	128	604155	19.871	19.87			1	5
150) 1,2,3-Trichlorobenzene	(4)	11.739(0.000)	180	177733	20.265	20.26			0.4	5
151) 2-Methylnaphthalene	(4)	12.307(-0.000)	142	234395	13.513	13.51			0.7	5

Total number of targets = 109

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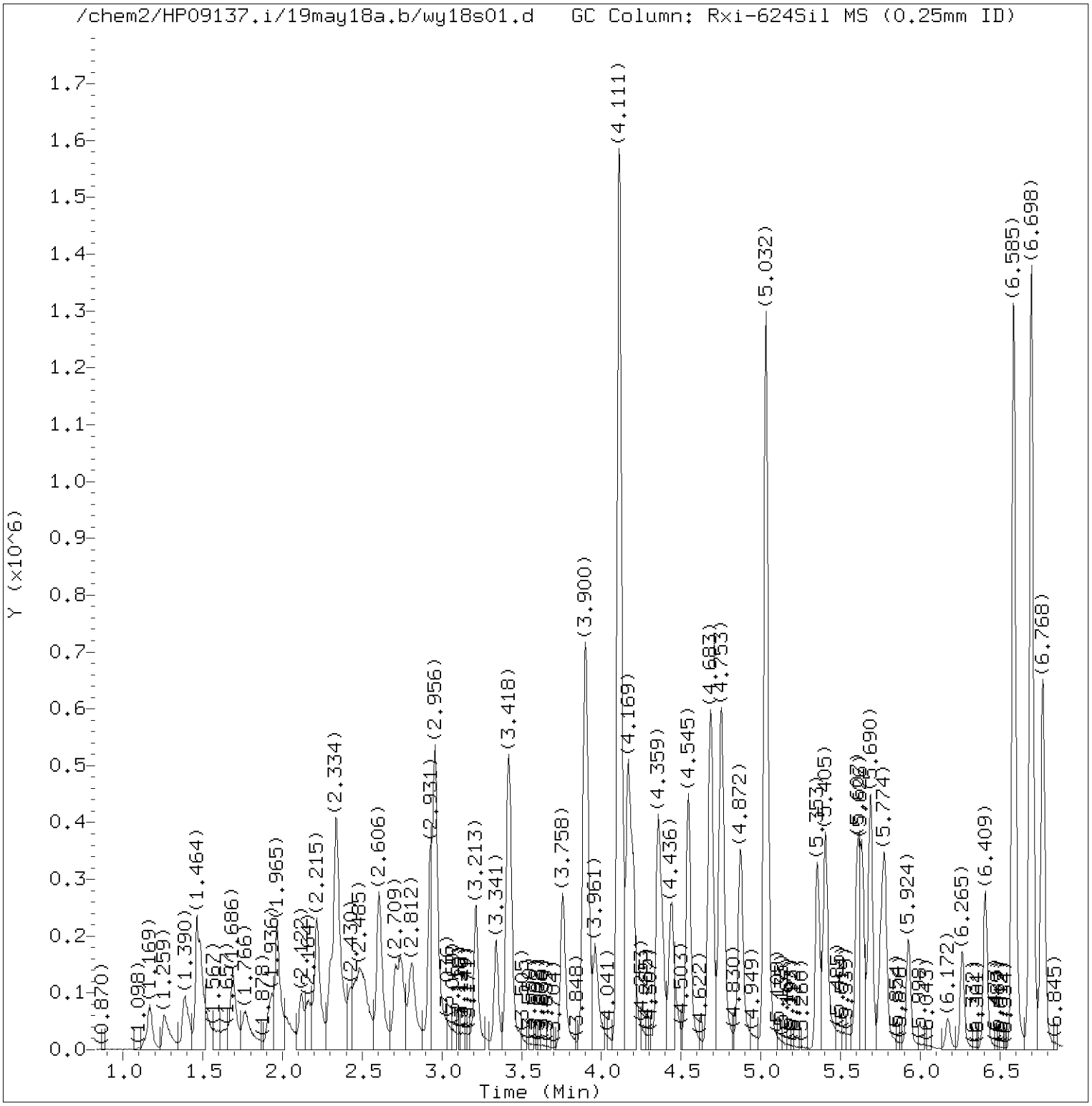
Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

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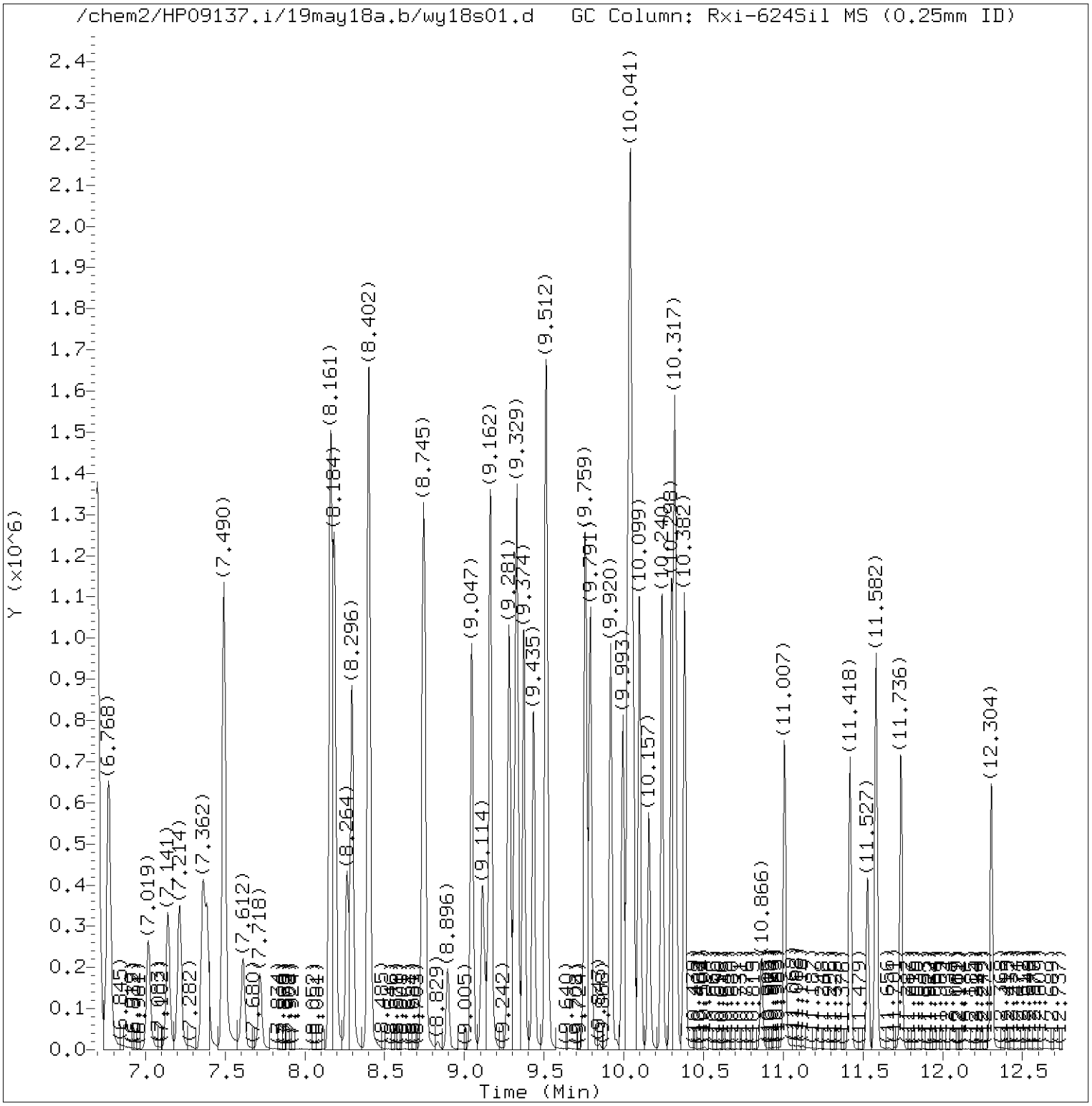
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.259	85	122405	18.041
4) Chloromethane	(2)	1.390	50	131544	15.570
5) 1,3-Butadiene	(2)	1.464	39	134278M	26.080
6) Vinyl Chloride	(2)	1.464	62	129632	16.738
8) Bromomethane	(2)	1.692	94	96074M	15.728
9) Chloroethane	(2)	1.766	64	80293	15.754
12) Trichlorofluoromethane	(2)	1.933	101	151761	18.450
11) n-Pentane	(2)	1.965	43	110412	14.114
13) Ethanol	(1)	2.032	45	32125M	380.291
15) Freon 123a	(2)	2.119	67	114541M	18.634
16) Acrolein	(1)	2.215	56	203467	152.584
17) 1,1-Dichloroethene	(2)	2.298	96	99685M	21.547
19) Freon 113	(2)	2.334	101	84299	20.750
18) Acetone	(1)	2.340	58	150531M	232.245
21) 2-Propanol	(1)	2.456	45	76314M	158.471
22) Methyl Iodide	(2)	2.475	142	178264M	20.107
23) Carbon Disulfide	(2)	2.507	76	241845	14.838
25) Allyl Chloride	(2)	2.603	41	149787	18.585
27) Methyl Acetate	(2)	2.619	43	128160	18.371
28) Methylene Chloride	(2)	2.709	84	110369	19.517
29)*t-Butyl alcohol-d10	(1)	2.732	65	185223	250.000
30) t-Butyl alcohol	(1)	2.812	59	183621	213.752
31) Acrylonitrile	(2)	2.924	53	329808	89.865
32) trans-1,2-Dichloroethene	(2)	2.959	96	106977	21.312
33) Methyl Tertiary Butyl Ether	(2)	2.963	73	291896M	23.883
34) n-Hexane	(2)	3.213	57	128915	19.194
36) 1,1-Dichloroethane	(2)	3.341	63	186937	20.552
38) di-Isopropyl ether	(2)	3.415	45	348753	19.958
39) 2-Chloro-1,3-butadiene	(2)	3.431	53	166663	21.156
40) Ethyl t-butyl ether	(2)	3.758	59	277001	21.747
42) cis-1,2-Dichloroethene	(2)	3.890	96	127328	22.592
45) 2,2-Dichloropropane	(2)	3.893	77	80613	19.734
44) 2-Butanone	(2)	3.906	43	729335	138.323
47) Propionitrile	(1)	3.961	54	209125	195.875
48) Methacrylonitrile	(2)	4.111	67	565031	143.190
49) Bromochloromethane	(2)	4.121	128	61890	21.125
50) Tetrahydrofuran	(1)	4.169	71	132152	133.738
51) Chloroform	(2)	4.201	83	187903	22.018

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
52)$Dibromofluoromethane	(2)	4.359	113	232125	47.750
53) 1,1,1-Trichloroethane	(2)	4.381	97	140386	21.862
54) Cyclohexane	(2)	4.442	56	148098	17.427
55) 1,1-Dichloropropene	(2)	4.548	75	143514	20.975
56) Carbon Tetrachloride	(2)	4.548	117	113827	20.656
58) Isobutyl Alcohol	(1)	4.679	41	176096	562.293
57)$1,2-Dichloroethane-d4	(2)	4.692	102	60342	46.673
60) Benzene	(2)	4.750	78	466958	21.232
61) 1,2-Dichloroethane	(2)	4.769	62	154308	22.713
65) t-Amyl methyl ether	(2)	4.875	73	300472	23.026
67) n-Heptane	(2)	5.032	43	121659	18.953
66)*Fluorobenzene	(2)	5.032	96	1049302	50.000
69) n-Butanol	(1)	5.356	56	277598	998.326
71) Trichloroethene	(2)	5.405	95	113492	21.309
73) Methylcyclohexane	(2)	5.604	83	158337	20.478
74) 1,2-Dichloropropane	(2)	5.636	63	117626	20.832
75) Dibromomethane	(2)	5.754	93	76975	22.089
77) Methyl Methacrylate	(2)	5.777	69	111925	18.038
76) 1,4-Dioxane	(1)	5.790	88	52768M	634.789
79) Bromodichloromethane	(2)	5.928	83	133551	20.858
43) 1,2-Dichloroethene (Total)	(2)		96	234305	43.904
80) 2-Nitropropane	(2)	6.172	41	35846	16.547
81) 2-Chloroethyl Vinyl Ether	(2)	6.265	63	83042	19.291
82) cis-1,3-Dichloropropene	(2)	6.409	75	173429	19.700
83) 4-Methyl-2-pentanone	(2)	6.585	43	948076	91.217
84)$Toluene-d8	(3)	6.698	98	1024508	51.332
89) Toluene	(3)	6.768	92	305184	23.737
90) trans-1,3-Dichloropropene	(3)	7.019	75	156038	20.386
92) Ethyl Methacrylate	(3)	7.137	69	186320	19.810
93) 1,1,2-Trichloroethane	(3)	7.214	97	120891	24.430
94) Tetrachloroethene	(3)	7.359	166	127987	24.532
95) 1,3-Dichloropropane	(3)	7.388	76	193133	22.470
97) 2-Hexanone	(3)	7.490	43	742042	99.103
98) Dibromochloromethane	(3)	7.612	129	111188	23.005
100) 1,2-Dibromoethane	(3)	7.718	107	126964	23.353
101)*Chlorobenzene-d5	(3)	8.161	117	796496	50.000
103) Chlorobenzene	(3)	8.187	112	337353	23.653
104) 1,1,1,2-Tetrachloroethane	(3)	8.267	131	105671	23.054

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
105) Ethylbenzene	(3)	8.296	91	559952	22.915
107) m+p-Xylene	(3)	8.402	106	455044	46.836
108) o-Xylene	(3)	8.739	106	218577	22.868
110) Styrene	(3)	8.752	104	365013	22.765
111) Bromoform	(3)	8.896	173	79455	21.123
112) Isopropylbenzene	(3)	9.047	105	540716	23.022
113) Cyclohexanone	(1)	9.114	55	193408	515.788
115)$4-Bromofluorobenzene	(3)	9.162	95	372564	46.660
116) Bromobenzene	(4)	9.278	156	153402	23.777
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	195987	22.527
118) 1,2,3-Trichloropropane	(4)	9.313	110	63106	24.081
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	210559	75.471
120) n-Propylbenzene	(4)	9.371	91	640815	22.532
121) 2-Chlorotoluene	(4)	9.435	126	136708	23.304
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	460582	22.455
122) 4-Chlorotoluene	(4)	9.518	126	144449	23.002
125) tert-Butylbenzene	(4)	9.759	134	102225	21.936
126) Pentachloroethane	(4)	9.766	167	80695	21.905
127) 1,2,4-Trimethylbenzene	(4)	9.791	105	476442	22.043
128) sec-Butylbenzene	(4)	9.920	105	534870	21.244
130) 1,3-Dichlorobenzene	(4)	9.993	146	282658	22.976
131) p-Isopropyltoluene	(4)	10.022	119	474445	21.287
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	447919	50.000
134) 1,4-Dichlorobenzene	(4)	10.058	146	297886	23.356
91) 1,3-Dichloropropene (total)	(3)		100	329467	40.087
135) 1,2,3-Trimethylbenzene	(4)	10.099	105	495935	21.325
136) Benzyl Chloride	(4)	10.157	91	327217	18.330
137) 1,3-Diethylbenzene	(4)	10.240	119	280737	20.047
138) 1,4-Diethylbenzene	(4)	10.298	119	291396	19.421
140) n-Butylbenzene	(4)	10.317	92	221191	19.663
139) 1,2-Dichlorobenzene	(4)	10.324	146	284707	23.326
141) 1,2-Diethylbenzene	(4)	10.382	119	248487	21.017
143) 1,2-Dibromo-3-chloropropane	(4)	10.866	75	40024	20.242
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	189511	20.248
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	178556	19.871
148) Hexachlorobutadiene	(4)	11.527	225	61764	19.299
149) Naphthalene	(4)	11.582	128	604155	19.871
150) 1,2,3-Trichlorobenzene	(4)	11.739	180	177733	20.265

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
109) Xylene (Total)	(3)		106	673621	69.705
151) 2-Methylnaphthalene	(4)	12.307	142	234395	13.513
142) Diethylbenzene (total)	(4)		100	820620	60.484

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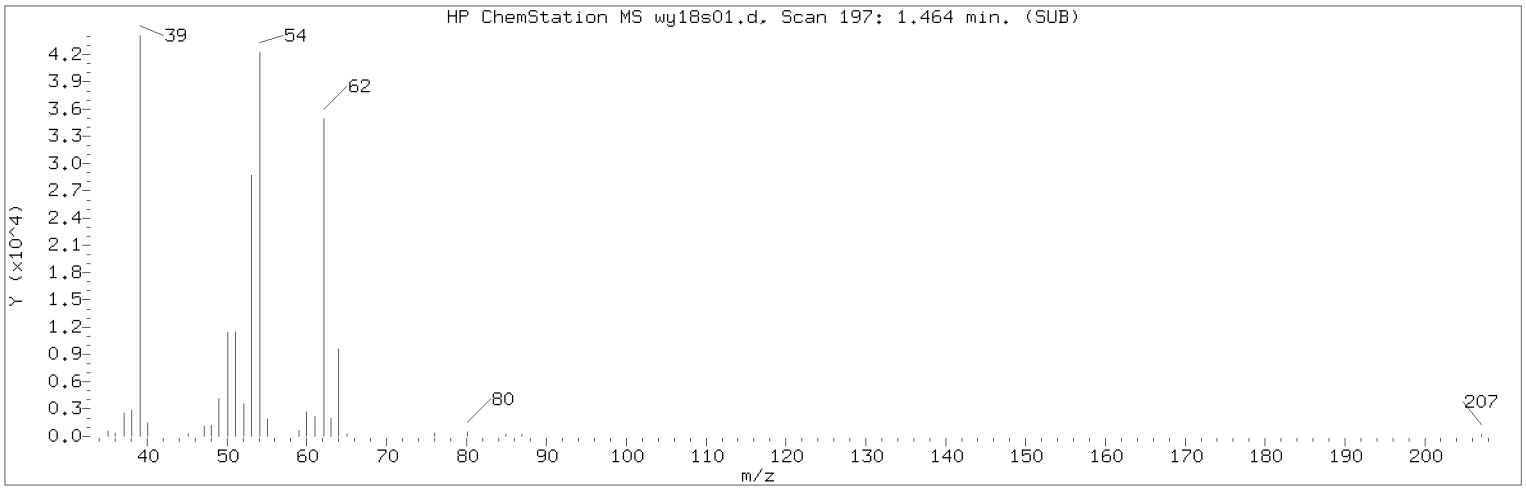
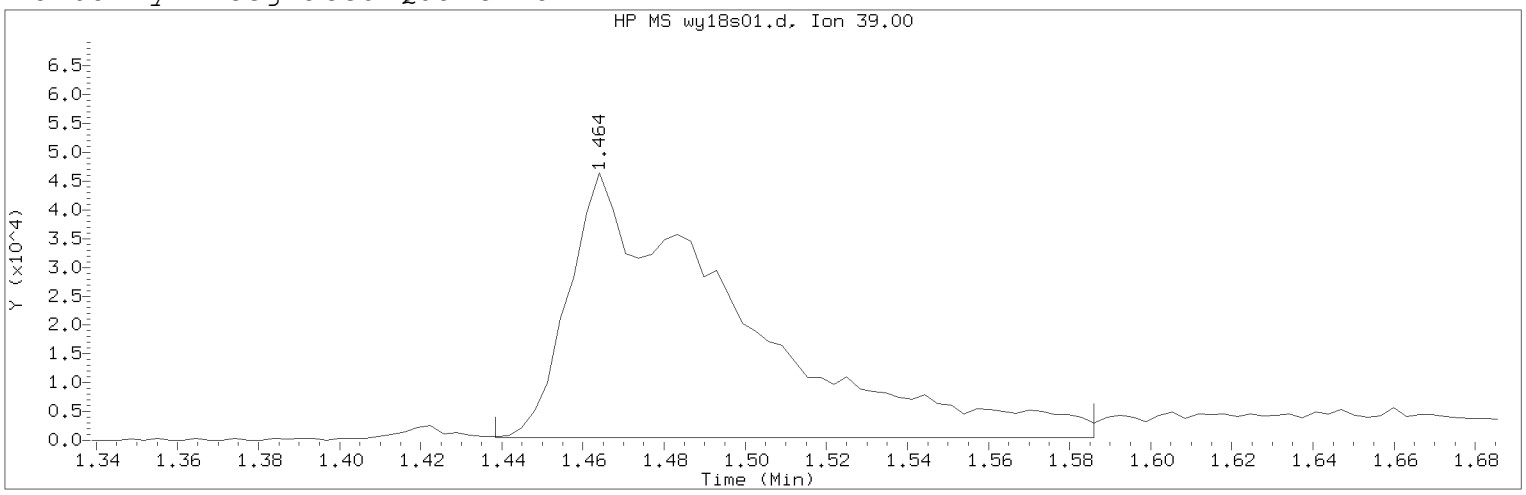
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

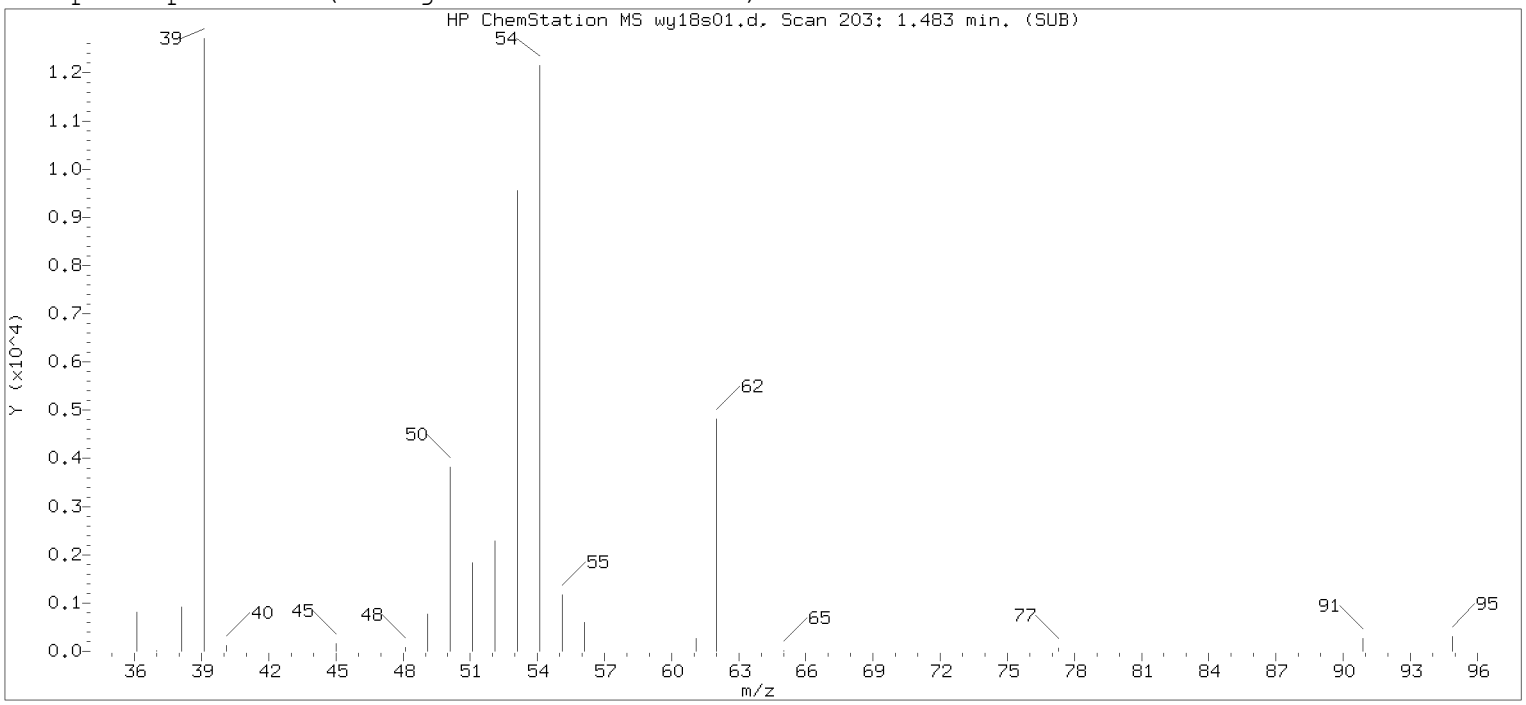
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 197
Retention Time (minutes): 1.464
Quant Ion : 39.00
Area (flag) : 134278M
On-Column Amount (ng) : 26.0797
Integration start scan : 188 Integration stop scan: 234
Y at integration start : 473 Y at integration end: 473

Reason for manual integration: improper integration

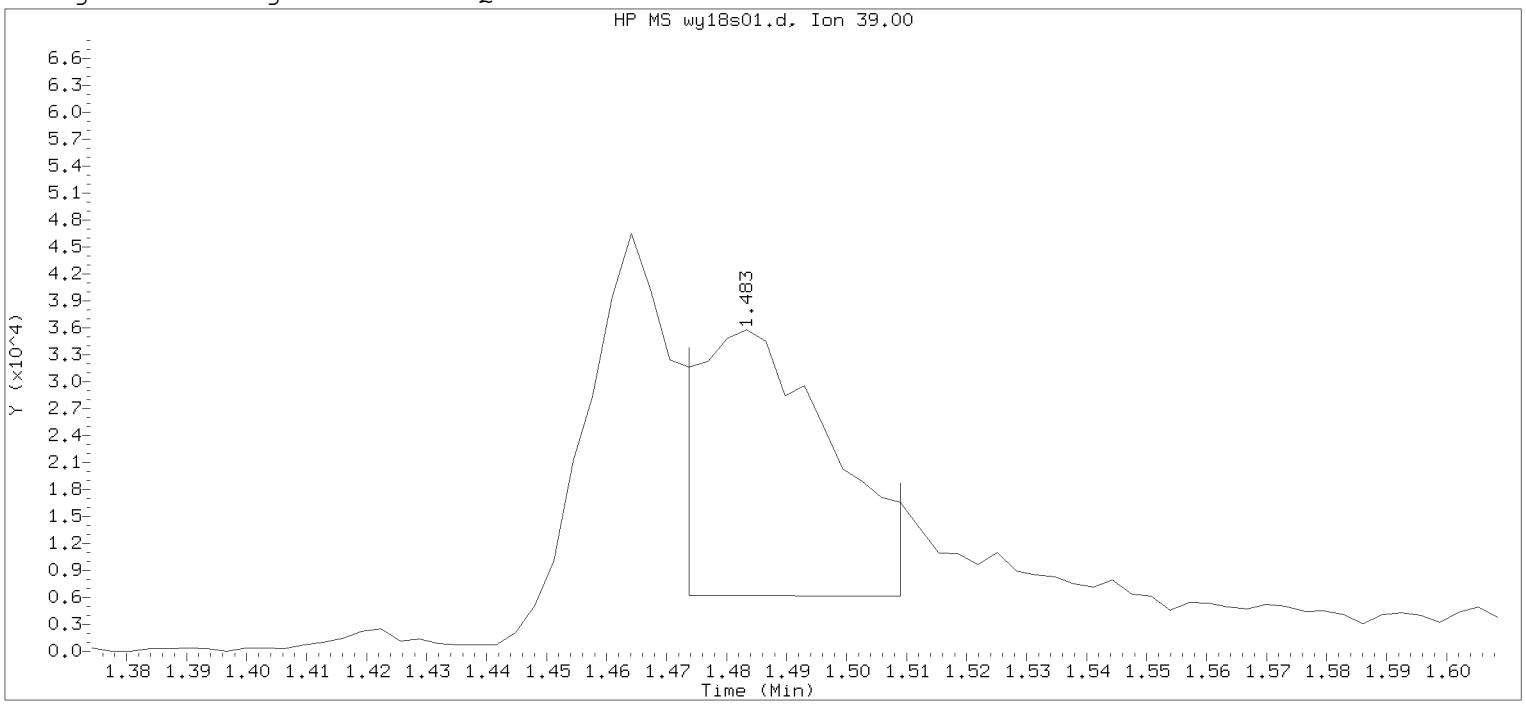
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 203
Retention Time (minutes): 1.483
Quant Ion : 39.00
Area : 44904
On-column Amount (ng) : 8.7215
Integration start scan : 199 Integration stop scan: 210
Y at integration start : 6187 Y at integration end: 6121

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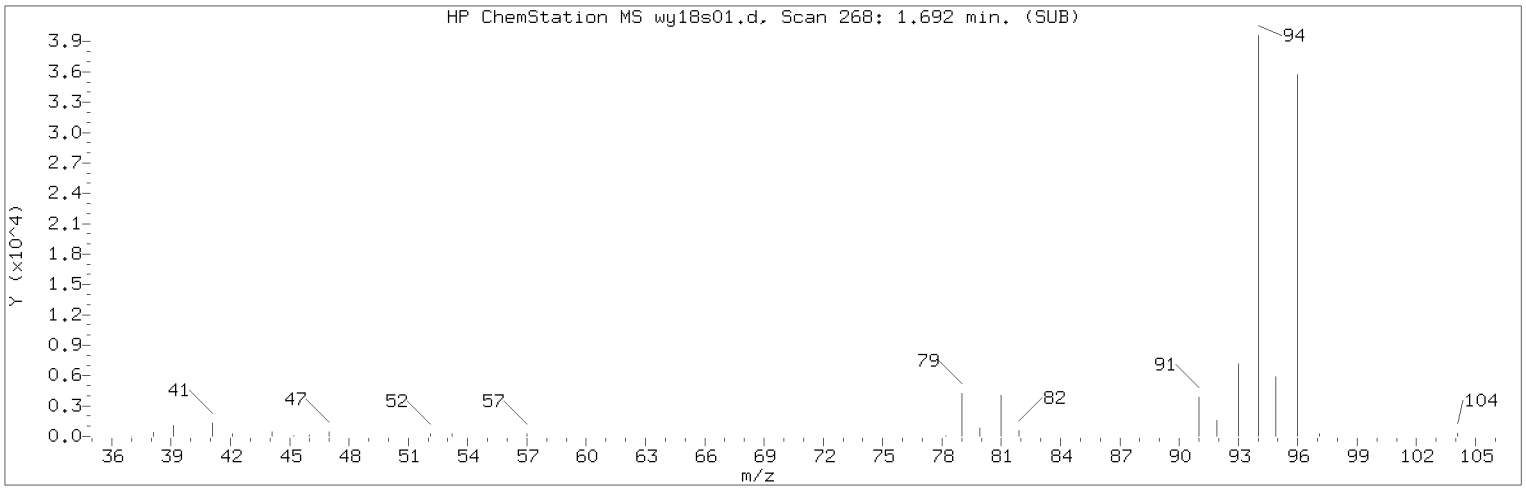
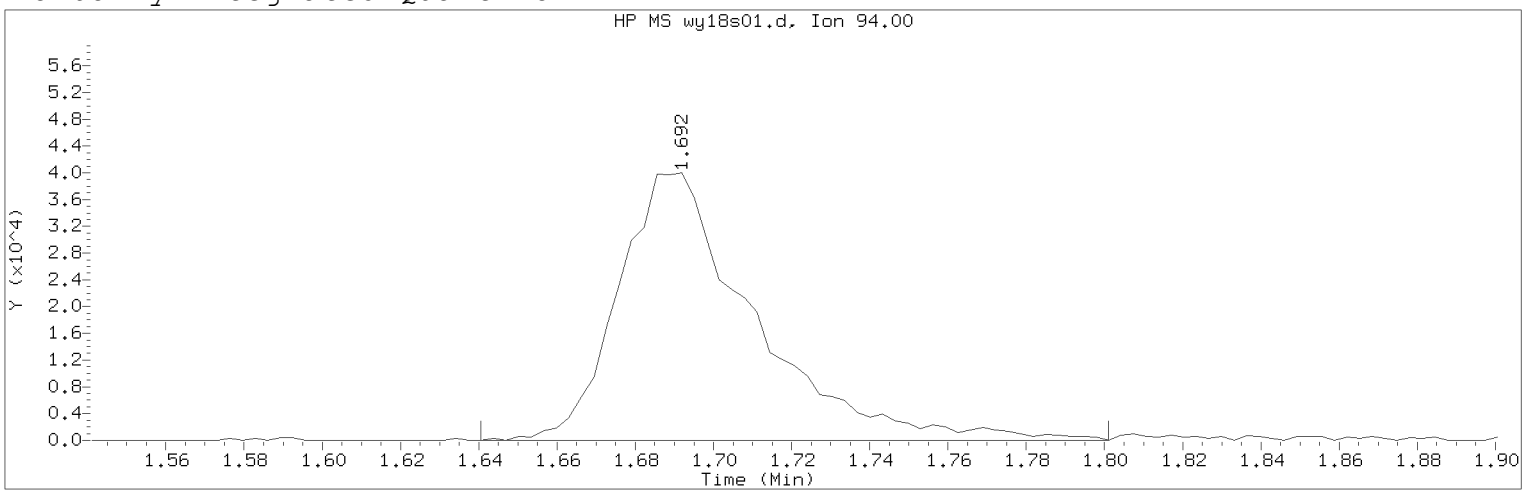
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

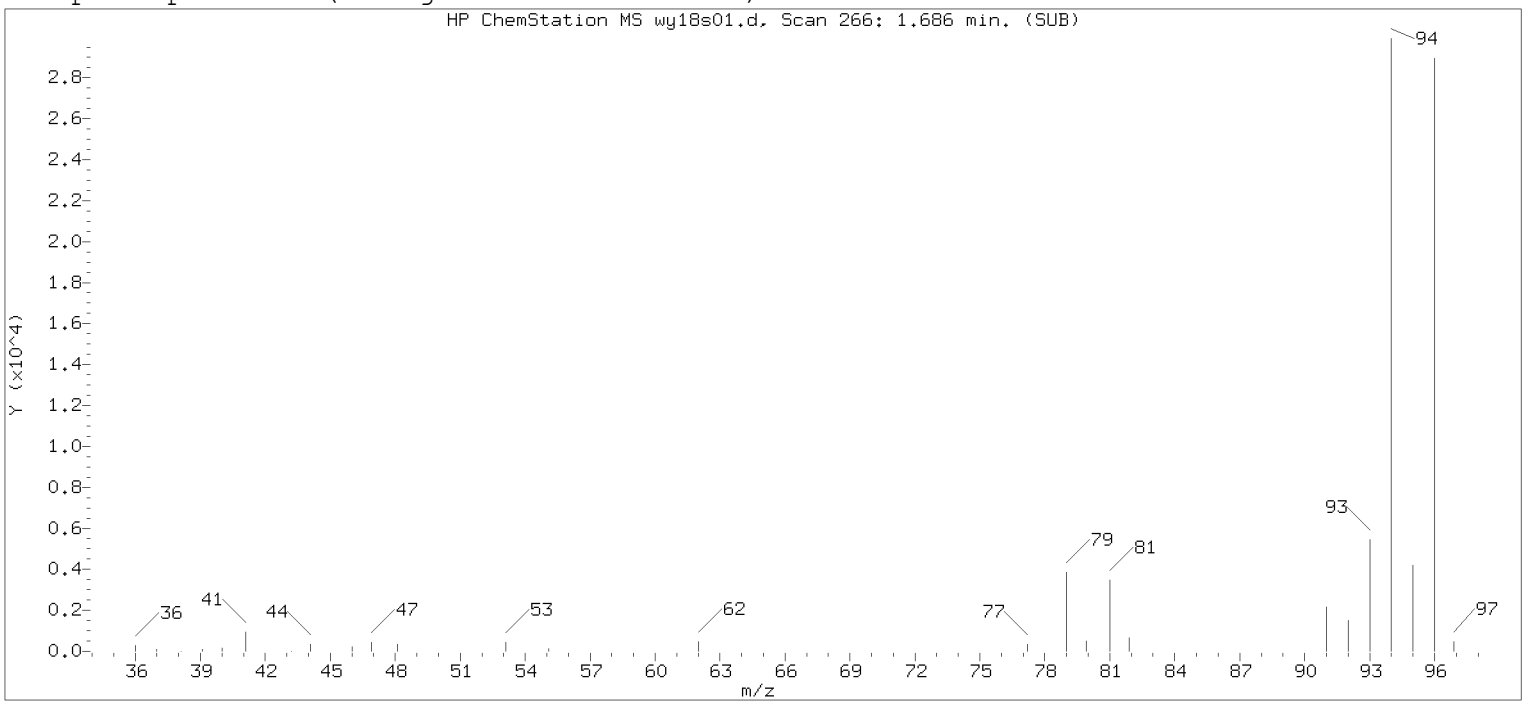
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 268
Retention Time (minutes): 1.692
Quant Ion : 94.00
Area (flag) : 96074M
On-Column Amount (ng) : 15.7285
Integration start scan : 251 Integration stop scan: 301
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

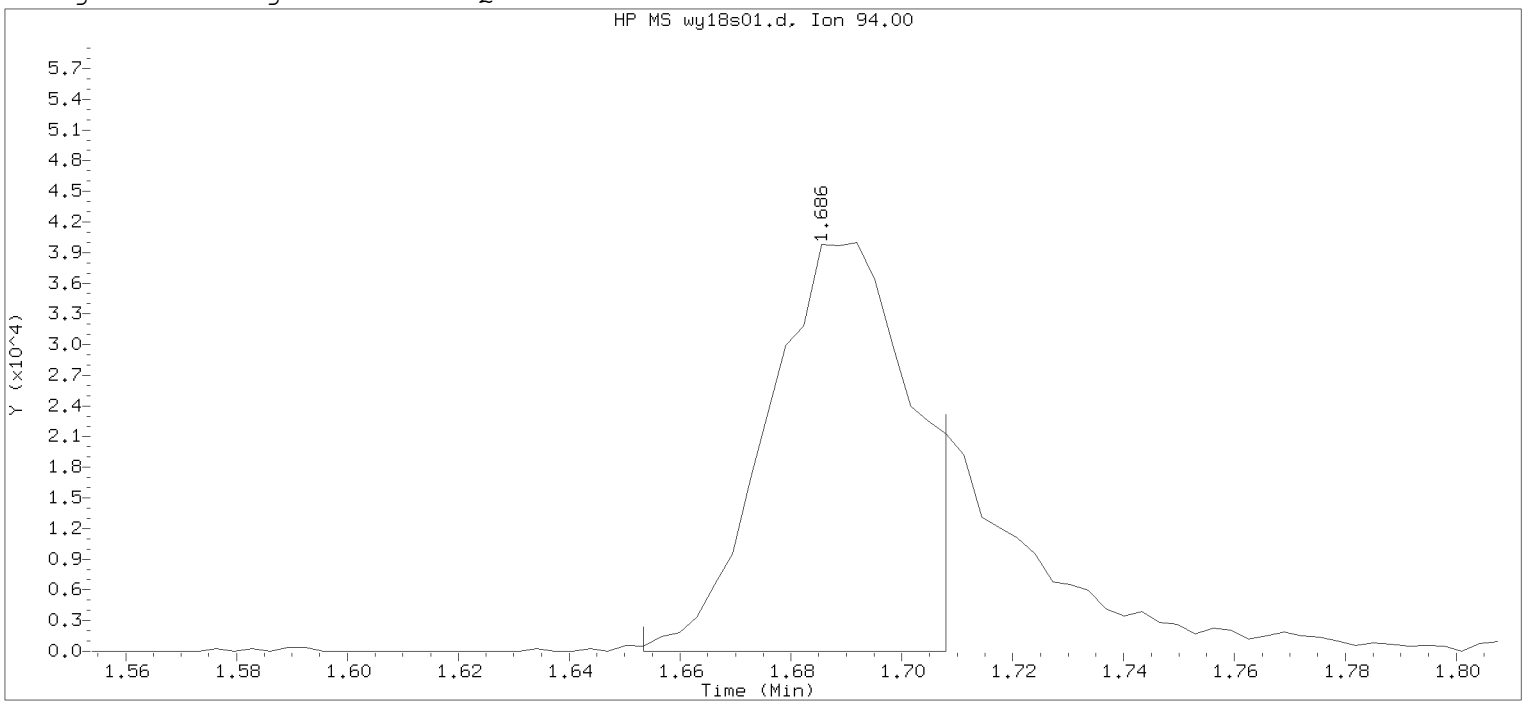
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compound Number : 8
Compound Name : Bromomethane
Scan Number : 266
Retention Time (minutes): 1.686
Quant Ion : 94.00
Area : 70808
On-column Amount (ng) : 11.5922
Integration start scan : 255 Integration stop scan: 272
Y at integration start : 0 Y at integration end: 0

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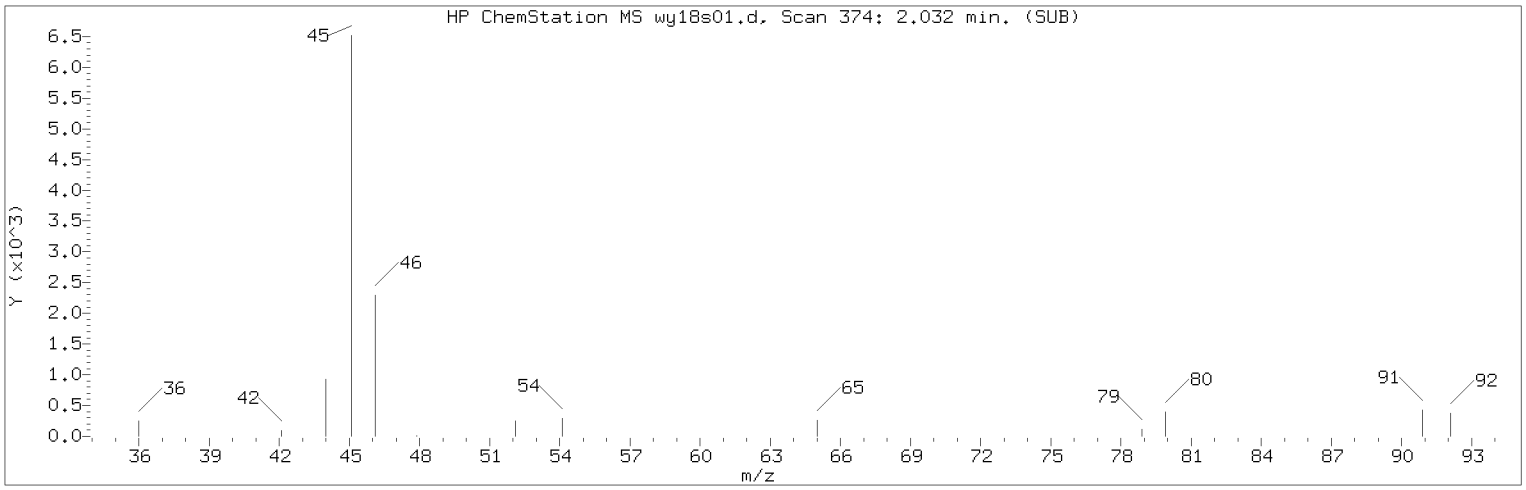
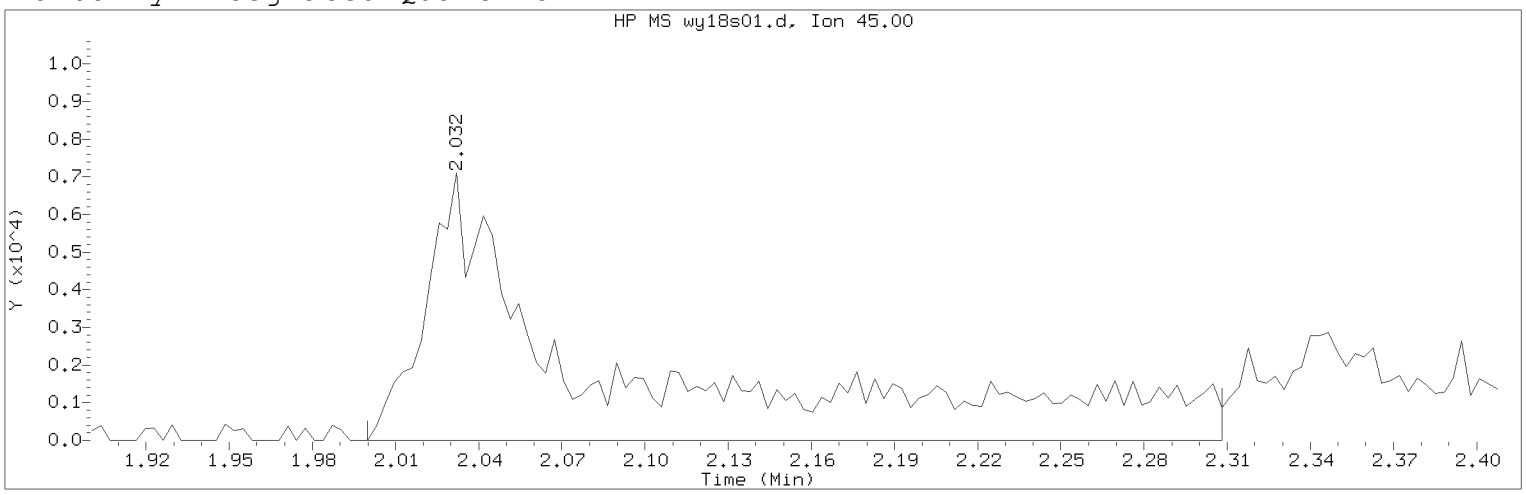
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

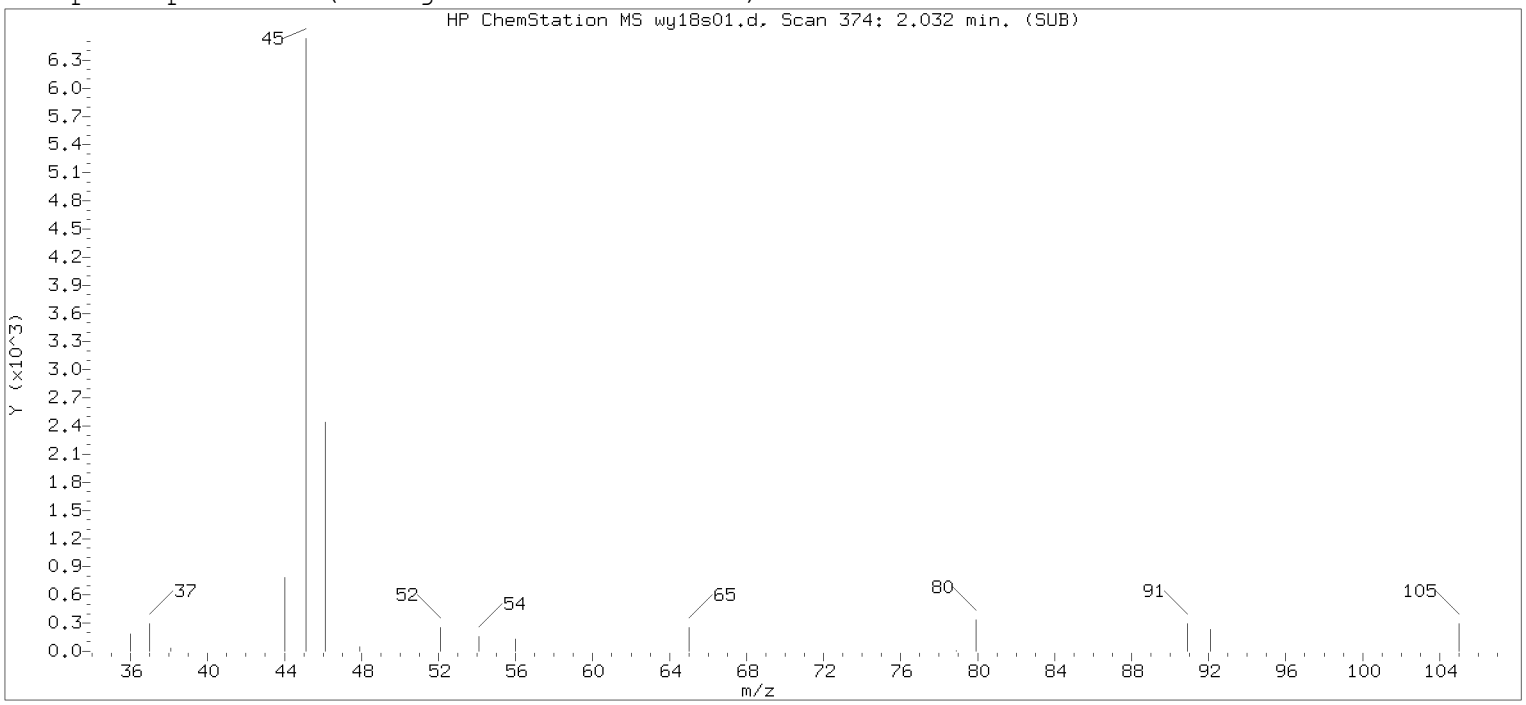
Compound Number : 13
Compound Name : Ethanol
Scan Number : 374
Retention Time (minutes): 2.032
Quant Ion : 45.00
Area (flag) : 32125M
On-Column Amount (ng) : 380.2913
Integration start scan : 363 Integration stop scan: 459
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

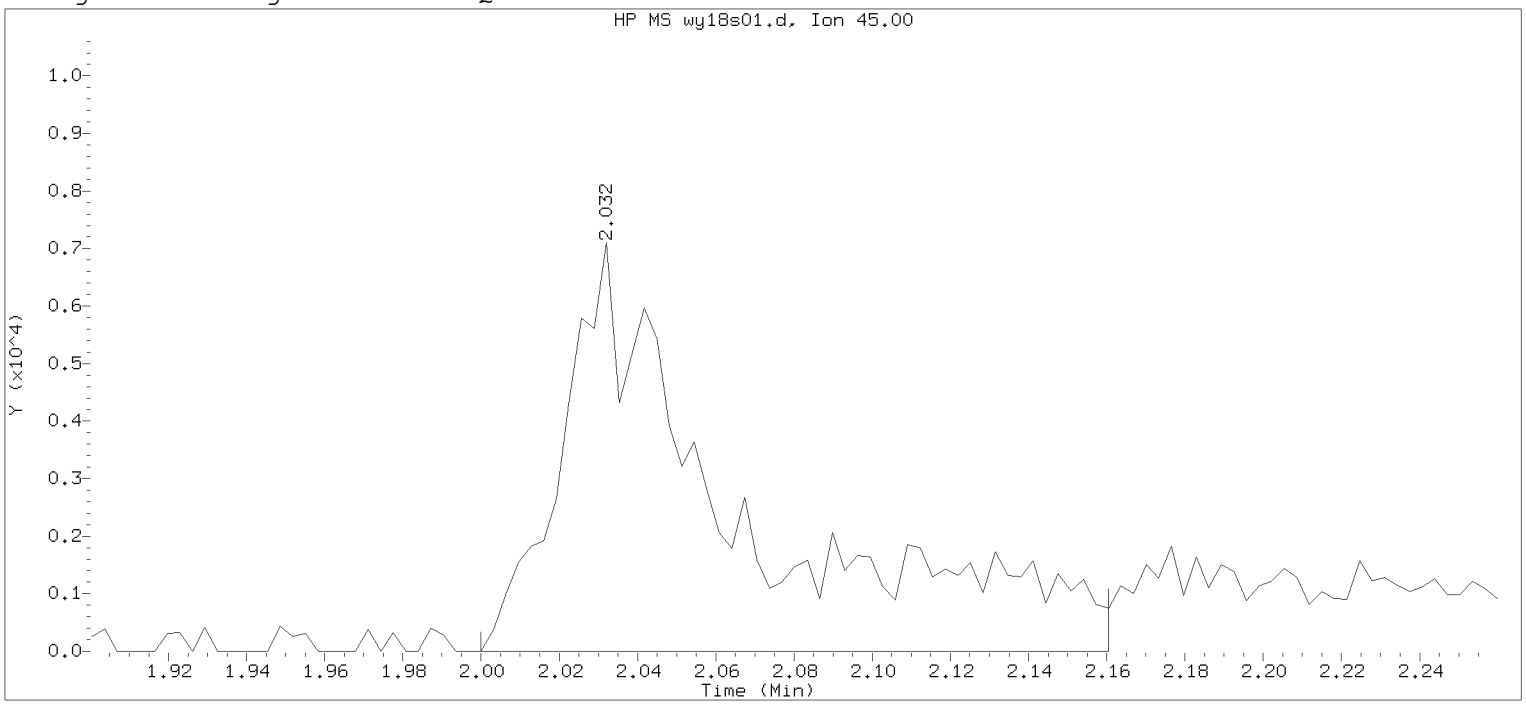
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compound Number : 13
Compound Name : Ethanol
Scan Number : 374
Retention Time (minutes): 2.032
Quant Ion : 45.00
Area : 21467
On-column Amount (ng) : 254.1253
Integration start scan : 363 Integration stop scan: 413
Y at integration start : 0 Y at integration end: 0

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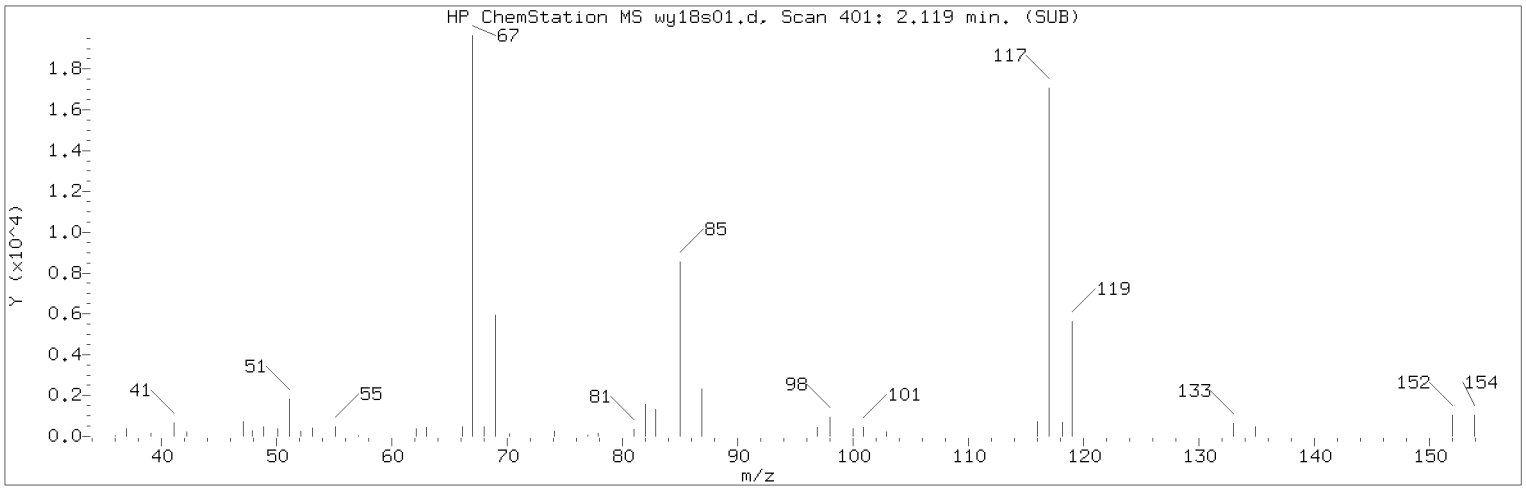
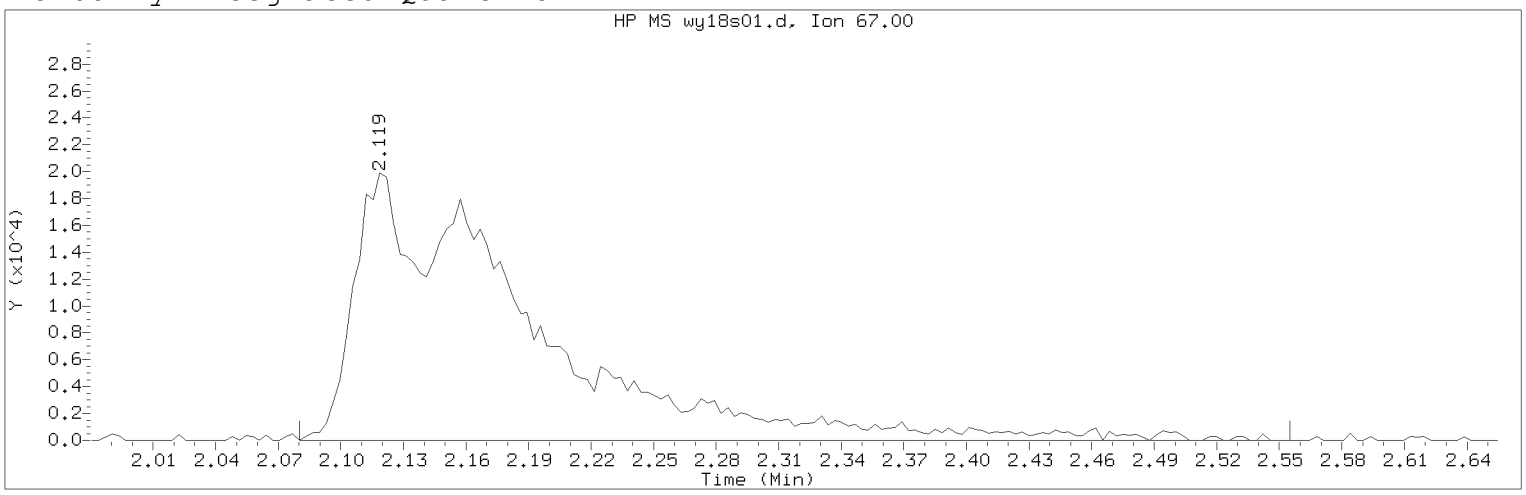
Target 3.5 esignature user's name

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

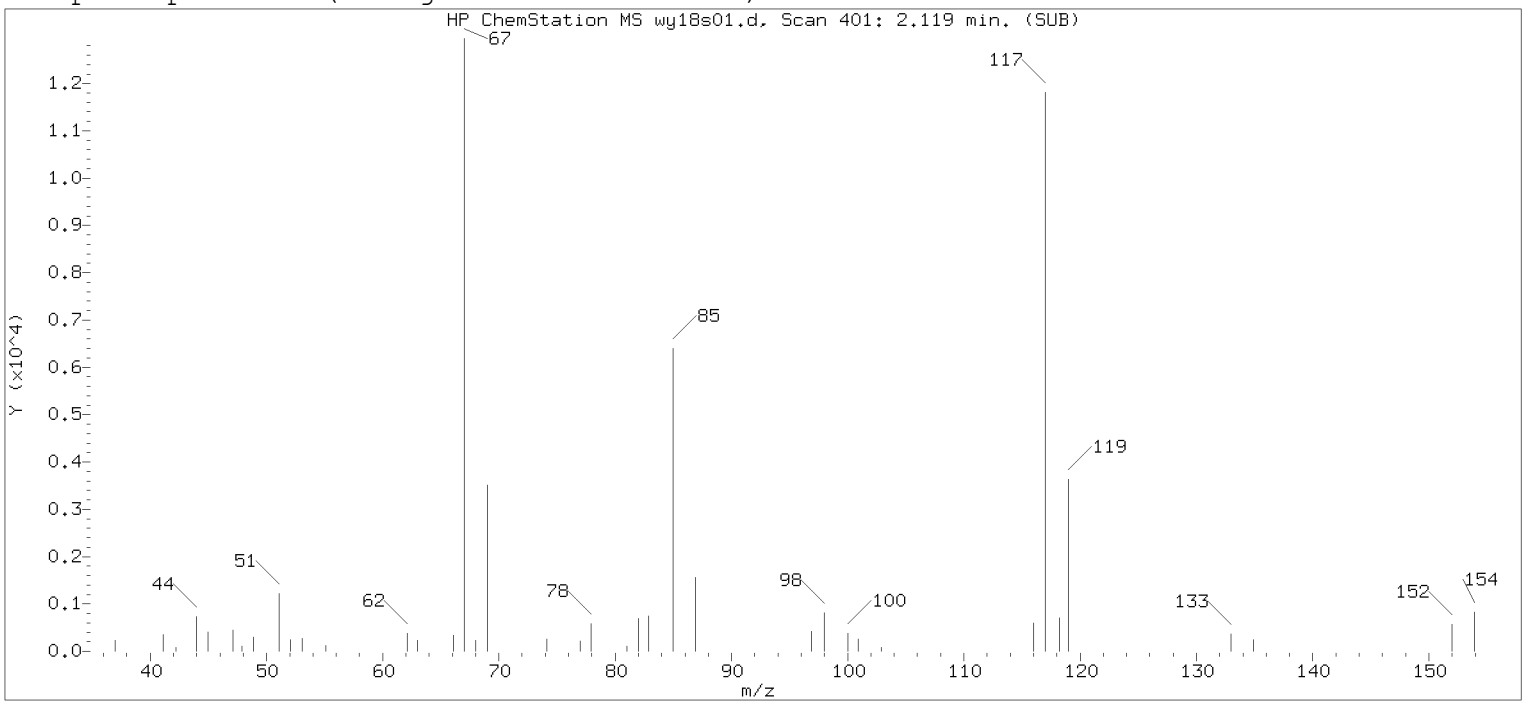
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 401
Retention Time (minutes): 2.119
Quant Ion : 67.00
Area (flag) : 114541M
On-Column Amount (ng) : 18.6344
Integration start scan : 388 Integration stop scan: 536
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

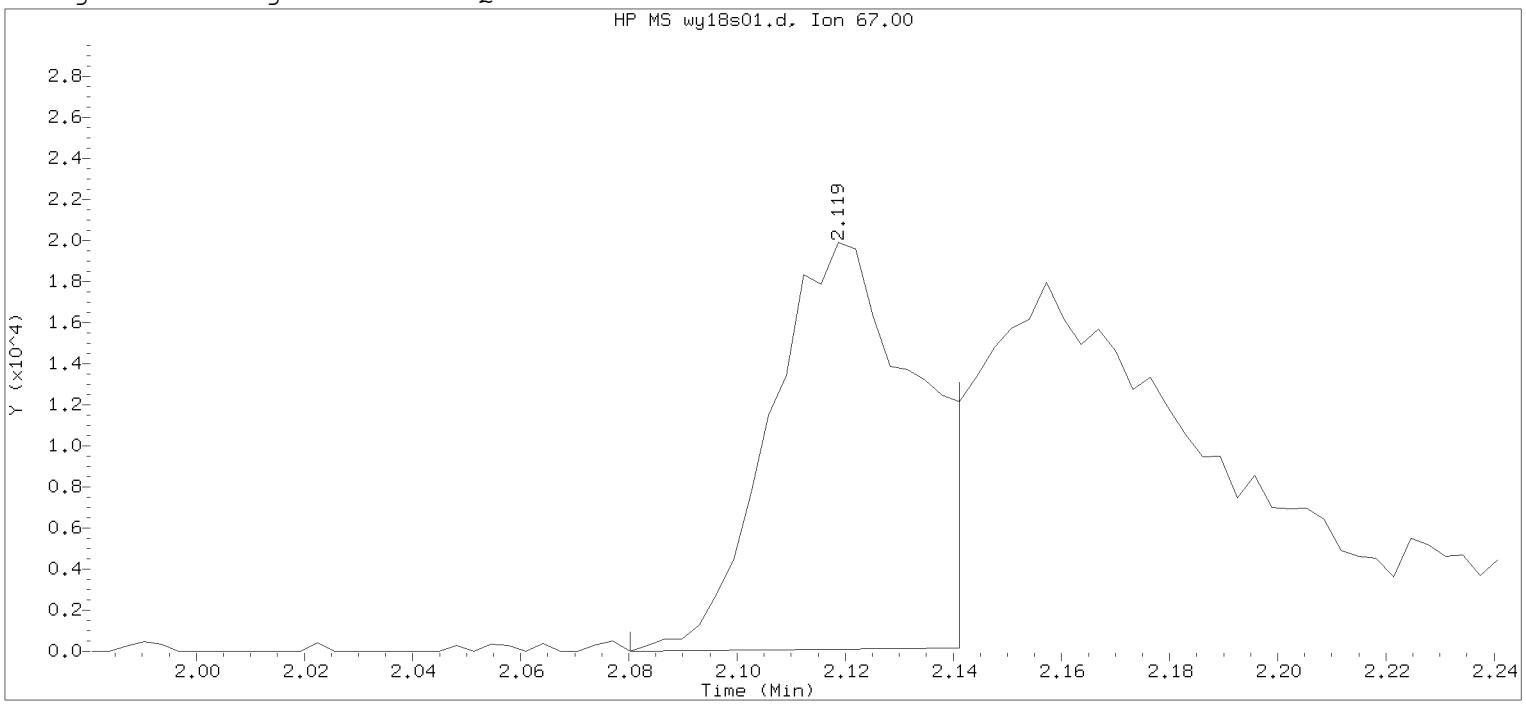
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 401		
Retention Time (minutes)	: 2.119		
Quant Ion	: 67.00		
Area	: 37059		
On-column Amount (ng)	: 6.0292		
Integration start scan	: 388	Integration stop scan:	407
Y at integration start	: 0	Y at integration end:	164

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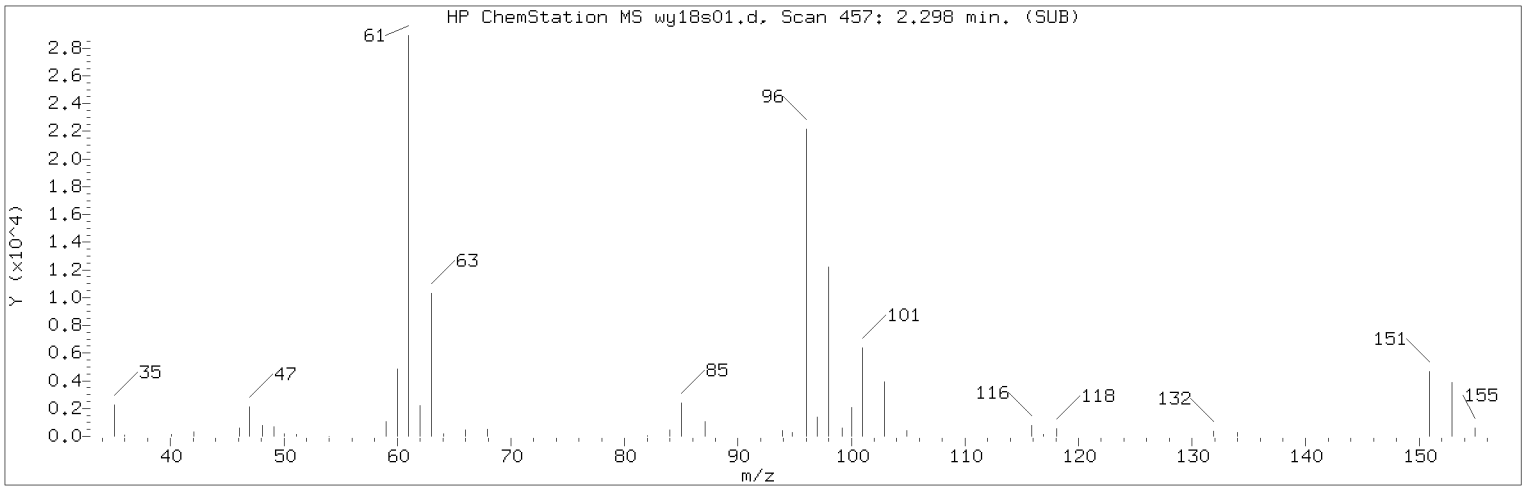
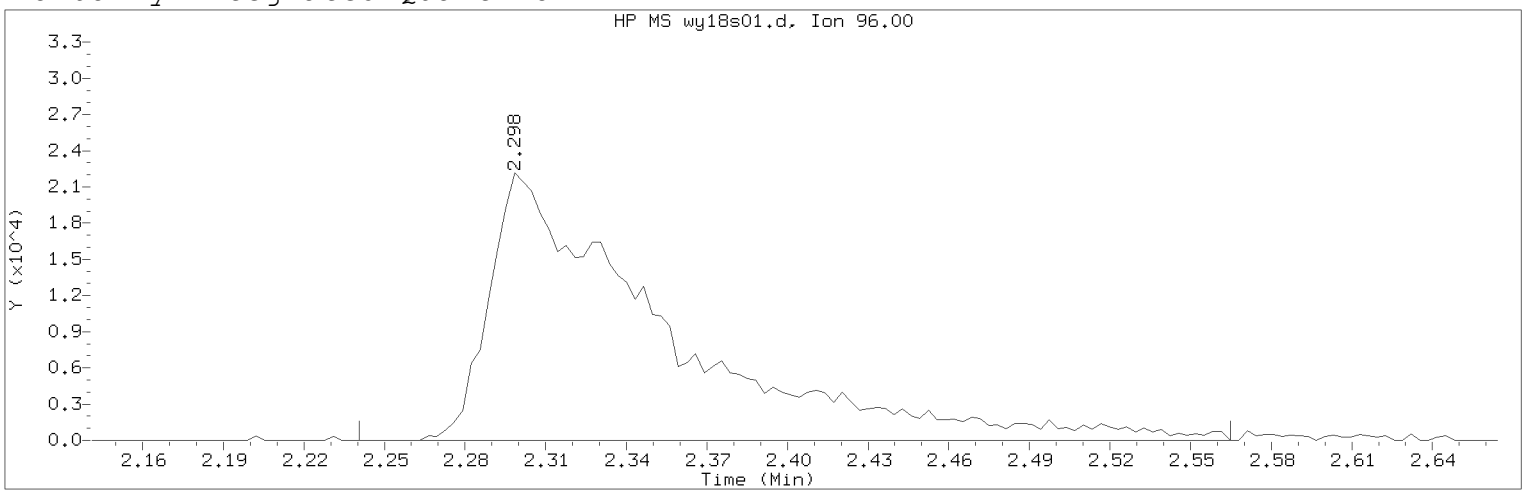
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

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Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

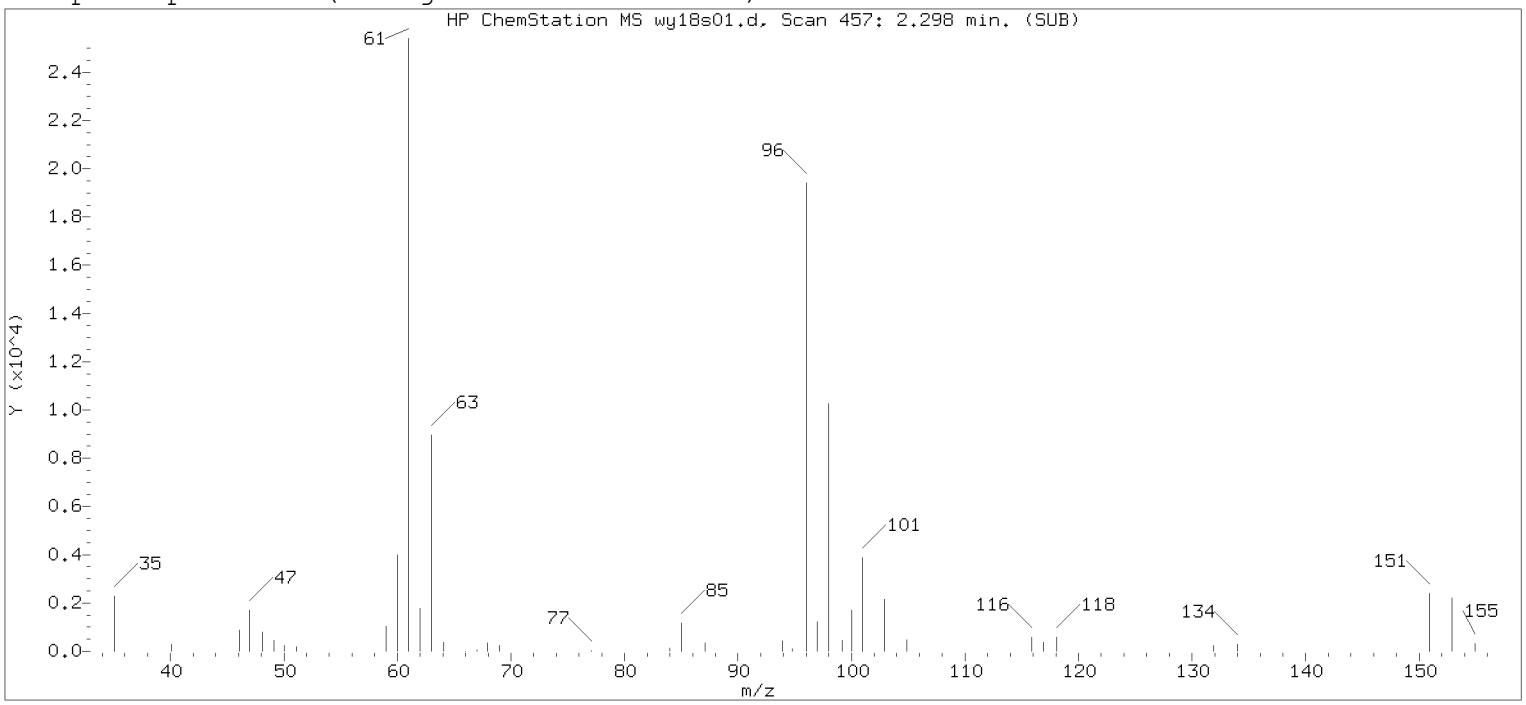
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 457
Retention Time (minutes): 2.298
Quant Ion : 96.00
Area (flag) : 99685M
On-Column Amount (ng) : 21.5470
Integration start scan : 438 Integration stop scan: 539
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

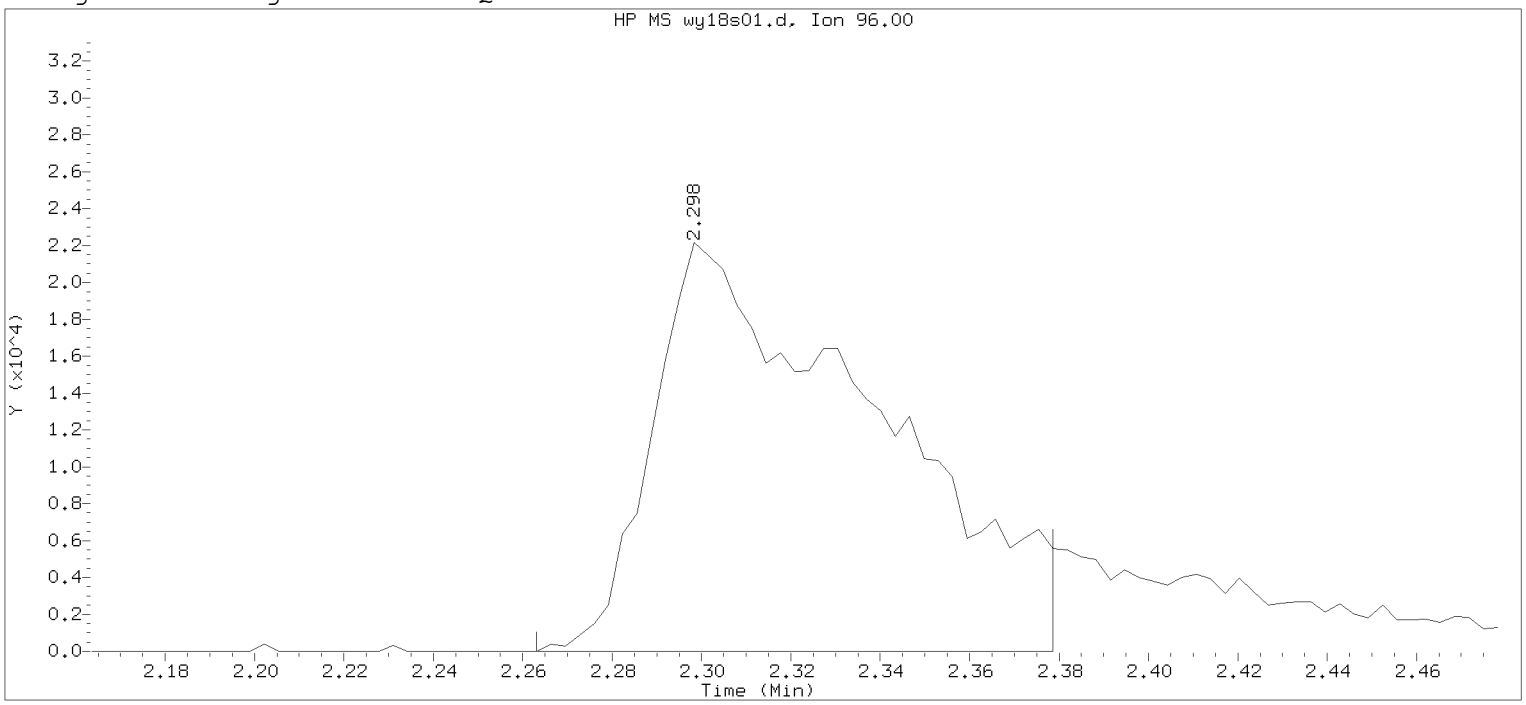
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

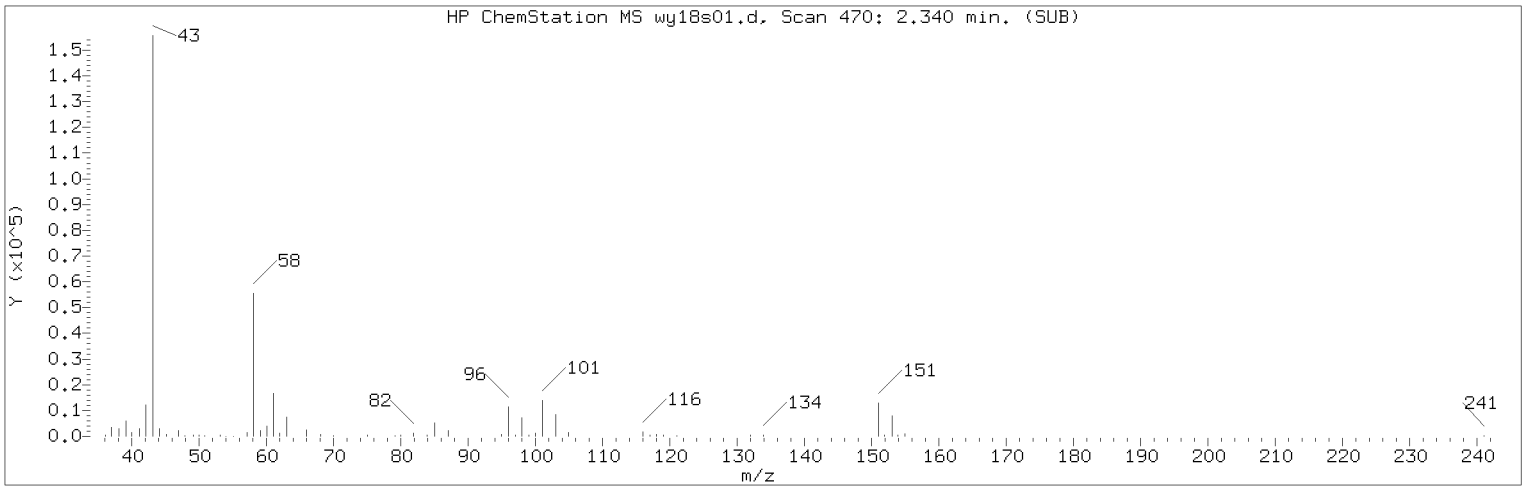
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

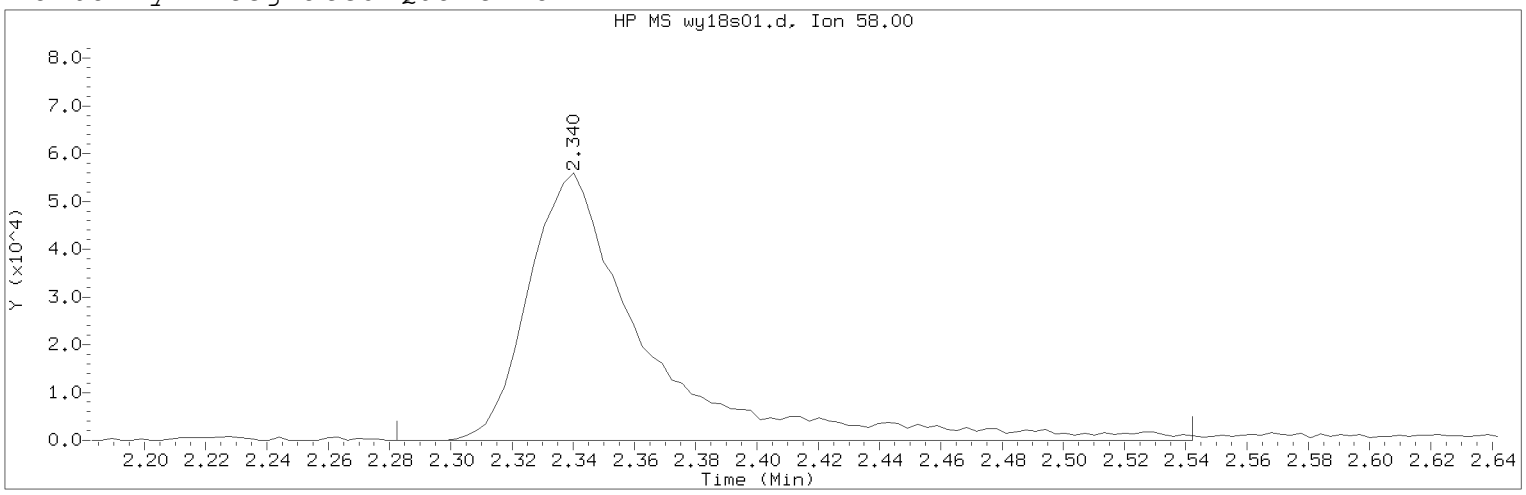
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 457
Retention Time (minutes): 2.298
Quant Ion : 96.00
Area : 76748
On-column Amount (ng) : 16.5892
Integration start scan : 445 Integration stop scan: 481
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

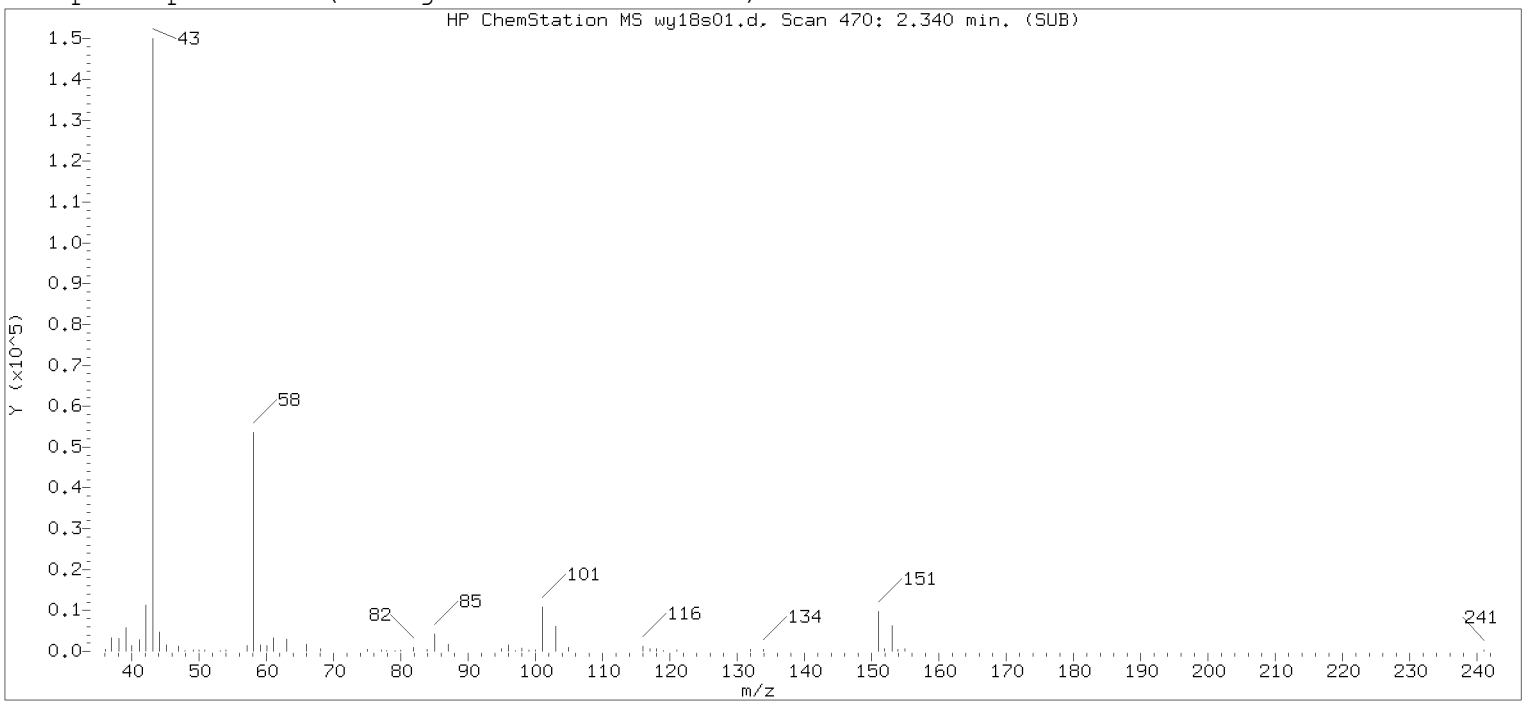
Compound Number : 18
Compound Name : Acetone
Scan Number : 470
Retention Time (minutes): 2.340
Quant Ion : 58.00
Area (flag) : 150531M
On-Column Amount (ng) : 232.2450
Integration start scan : 451 Integration stop scan: 532
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

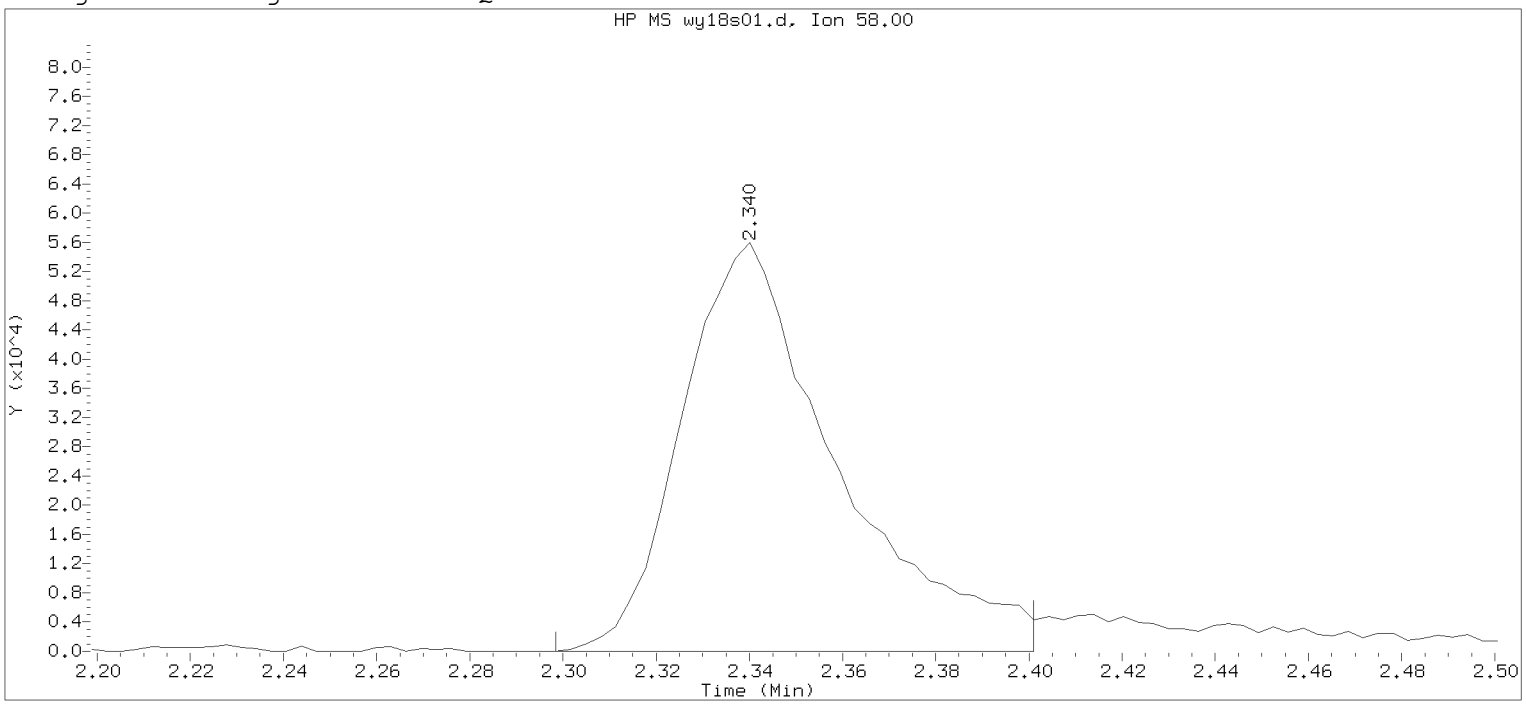
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

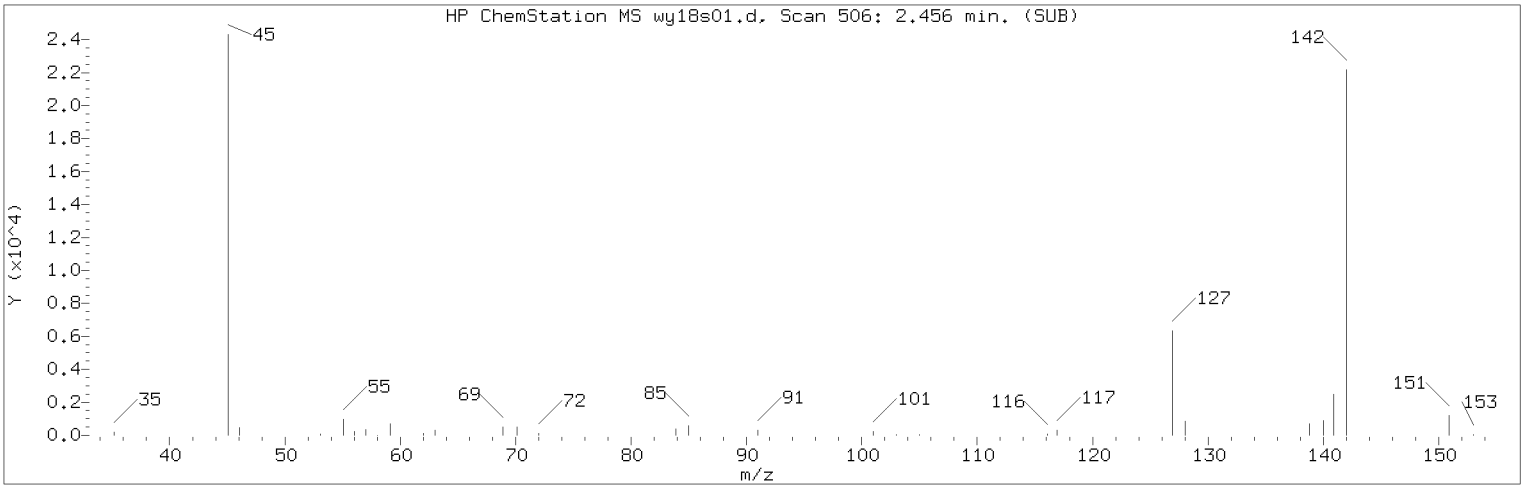
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

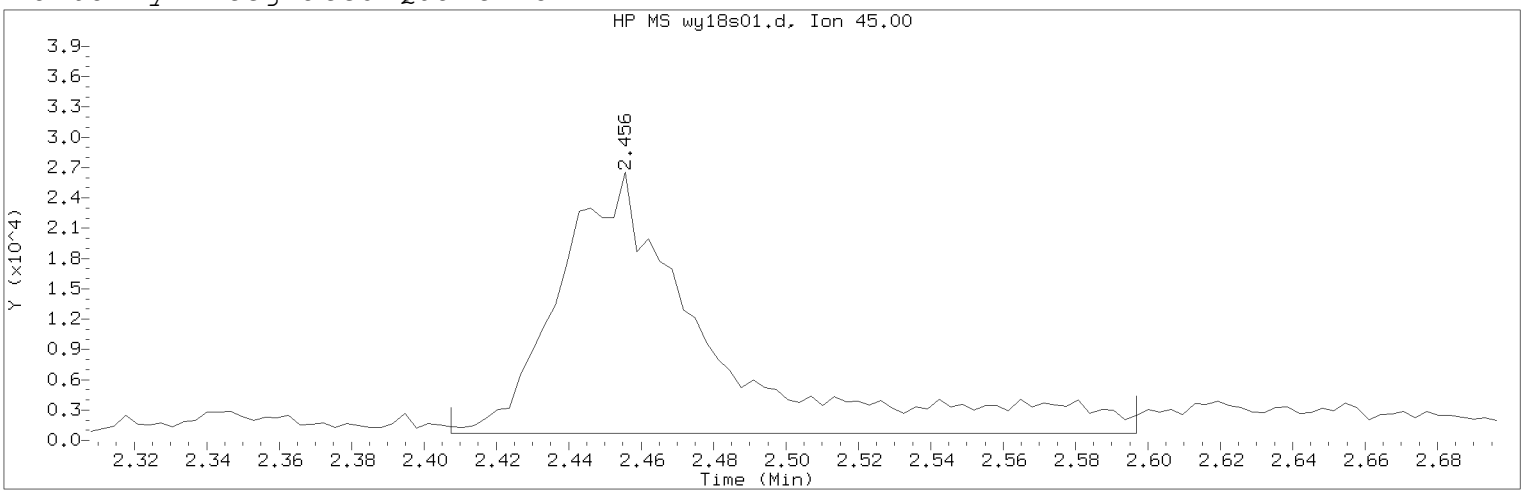
Compound Number : 18
Compound Name : Acetone
Scan Number : 470
Retention Time (minutes): 2.340
Quant Ion : 58.00
Area : 128903
On-column Amount (ng) : 198.8773
Integration start scan : 456 Integration stop scan: 488
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

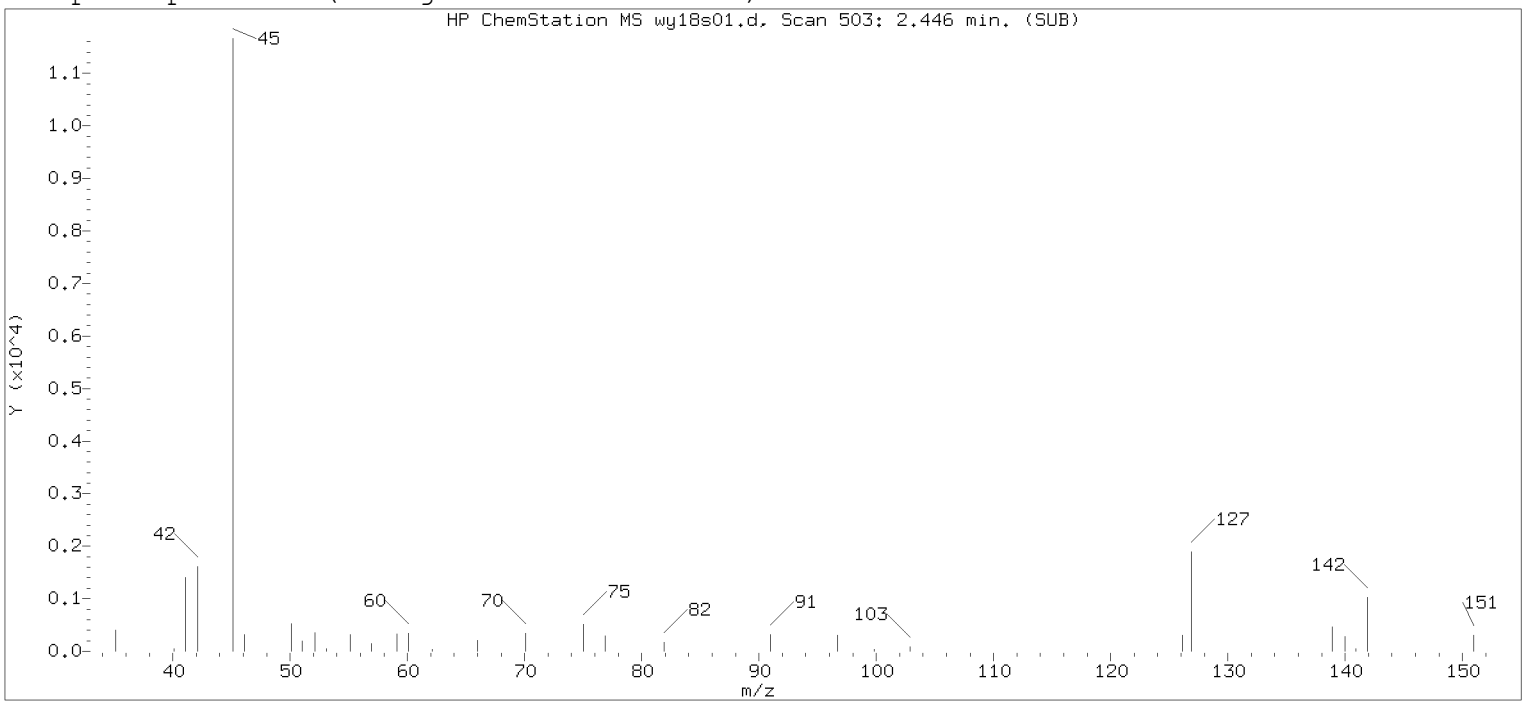
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 506
Retention Time (minutes): 2.456
Quant Ion : 45.00
Area (flag) : 76314M
On-Column Amount (ng) : 158.4713
Integration start scan : 490 Integration stop scan: 549
Y at integration start : 676 Y at integration end: 676

Reason for manual integration: improper integration

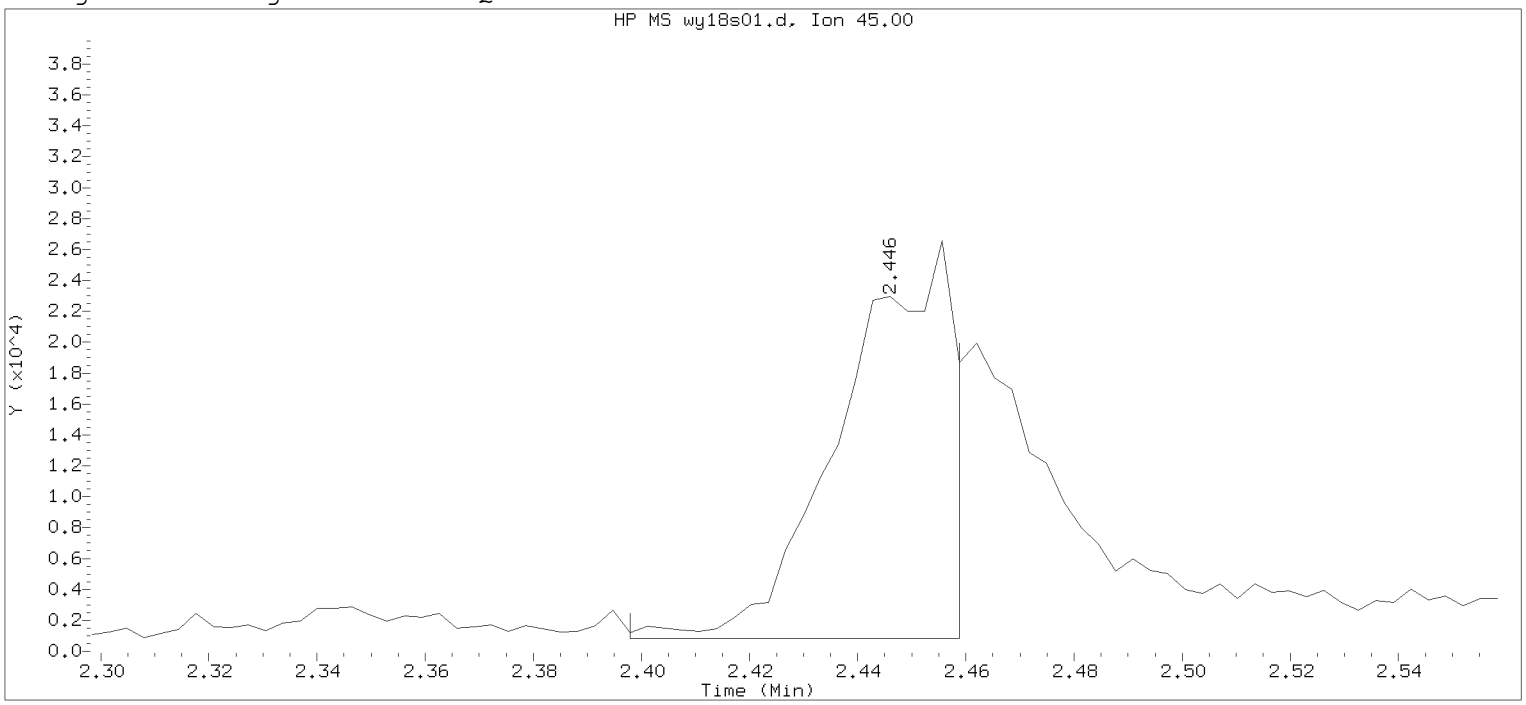
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 503
Retention Time (minutes): 2.446
Quant Ion : 45.00
Area : 35429
On-column Amount (ng) : 73.5706
Integration start scan : 487 Integration stop scan: 506
Y at integration start : 815 Y at integration end: 815

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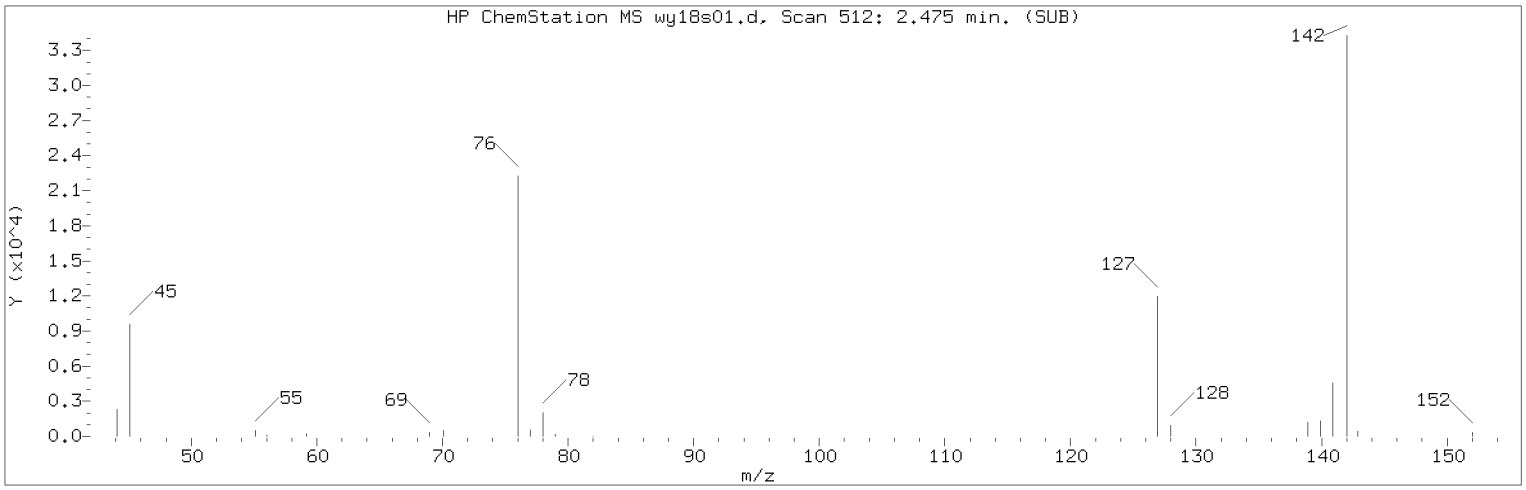
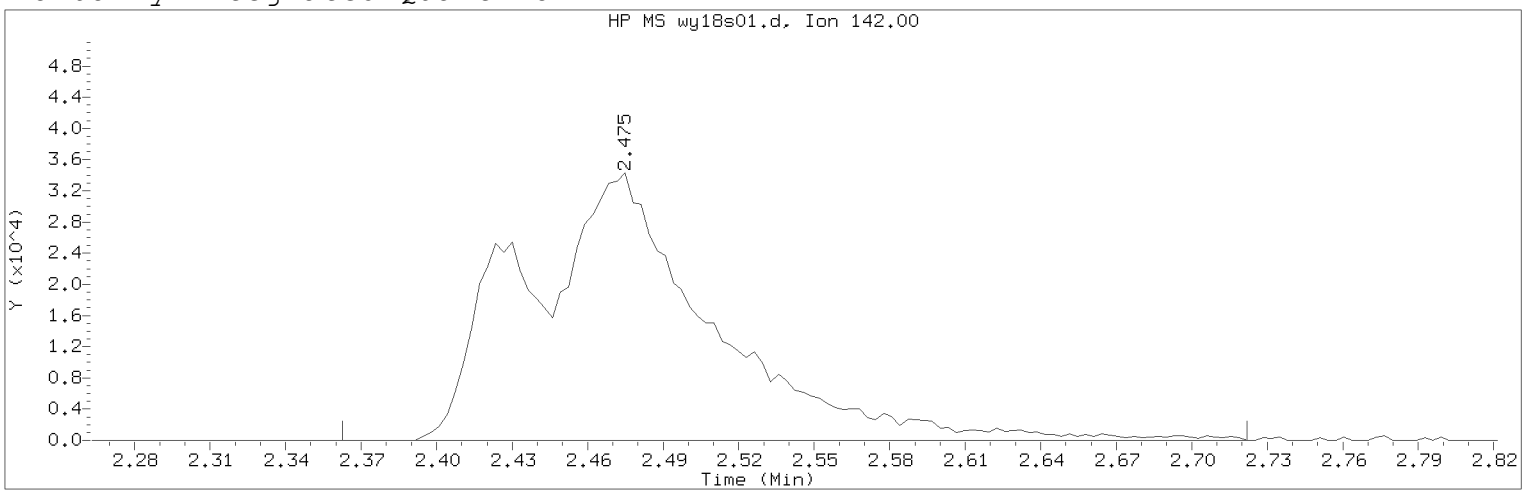
Target 3.5 esignature user signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

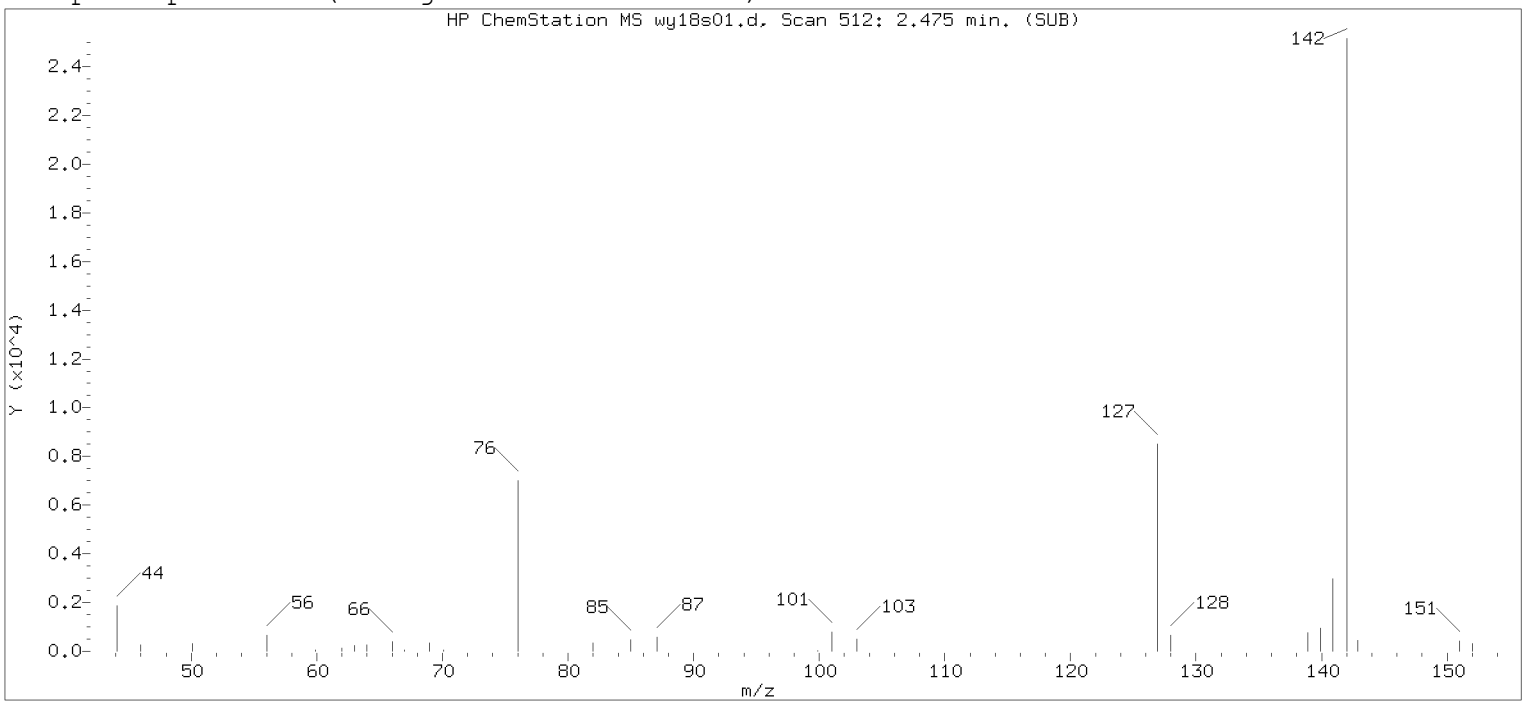
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 512
Retention Time (minutes): 2.475
Quant Ion : 142.00
Area (flag) : 178264M
On-Column Amount (ng) : 20.1073
Integration start scan : 476 Integration stop scan: 588
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

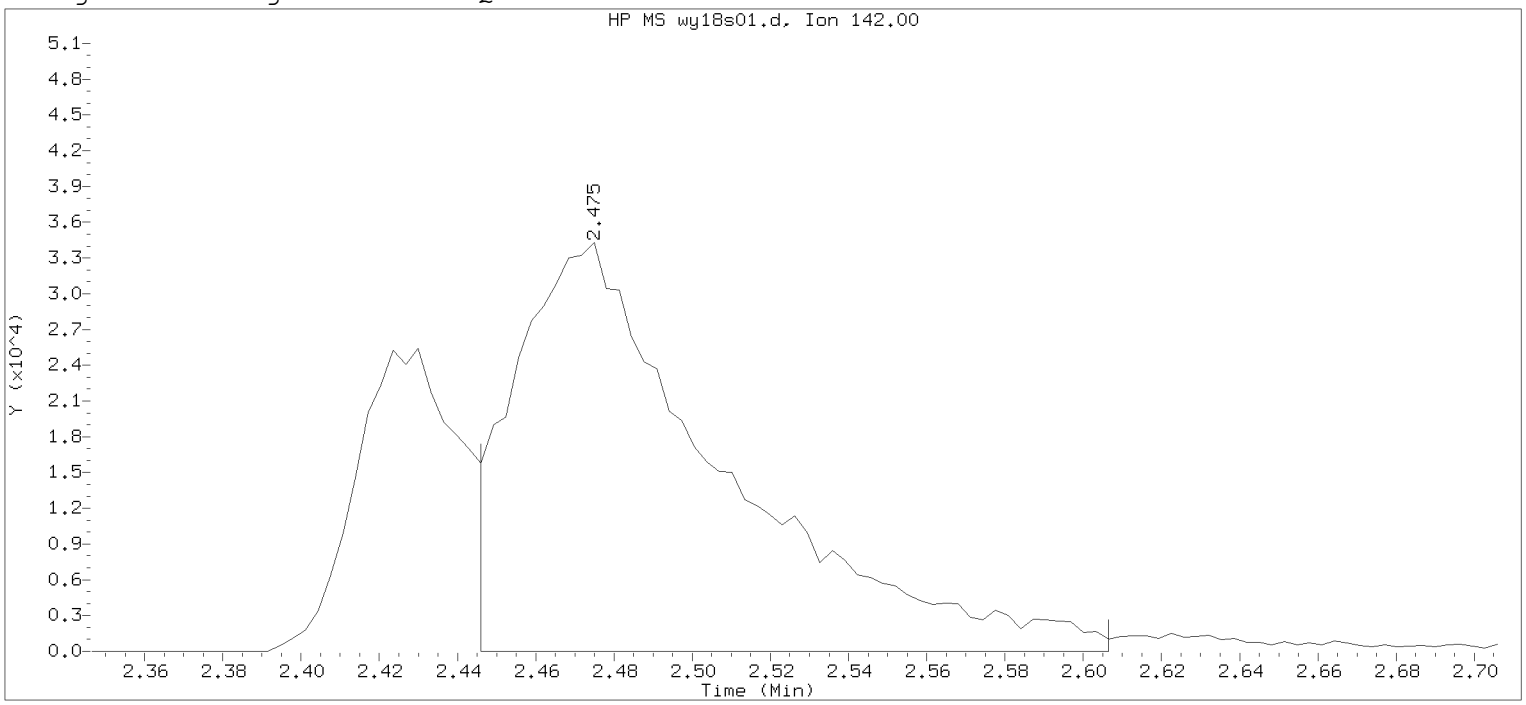
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

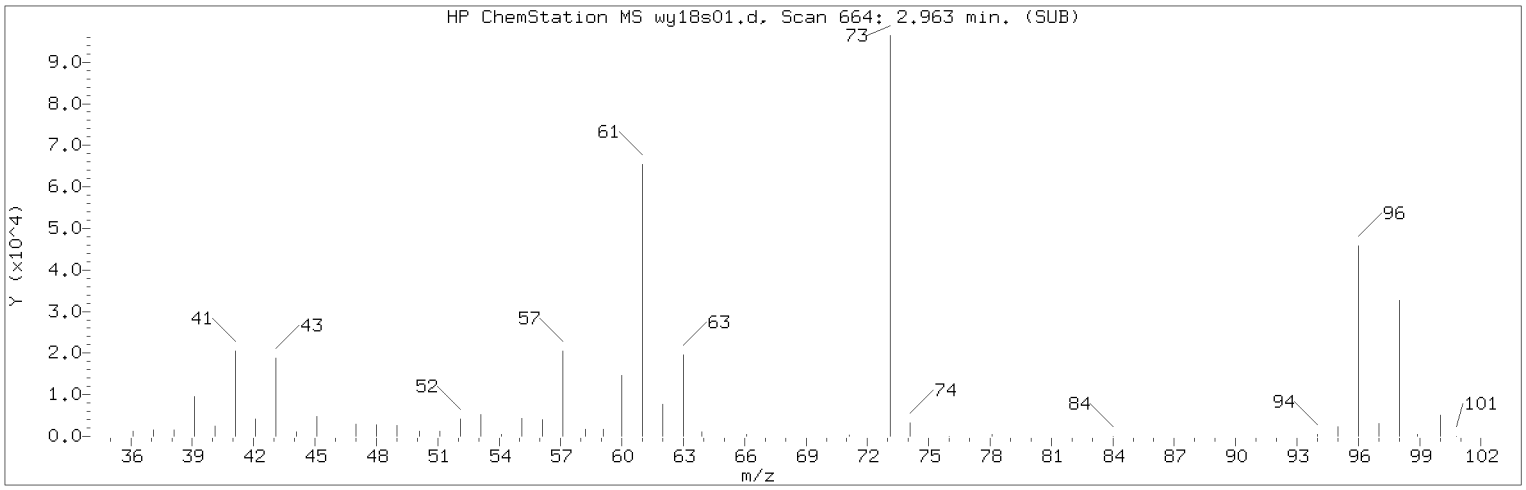
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

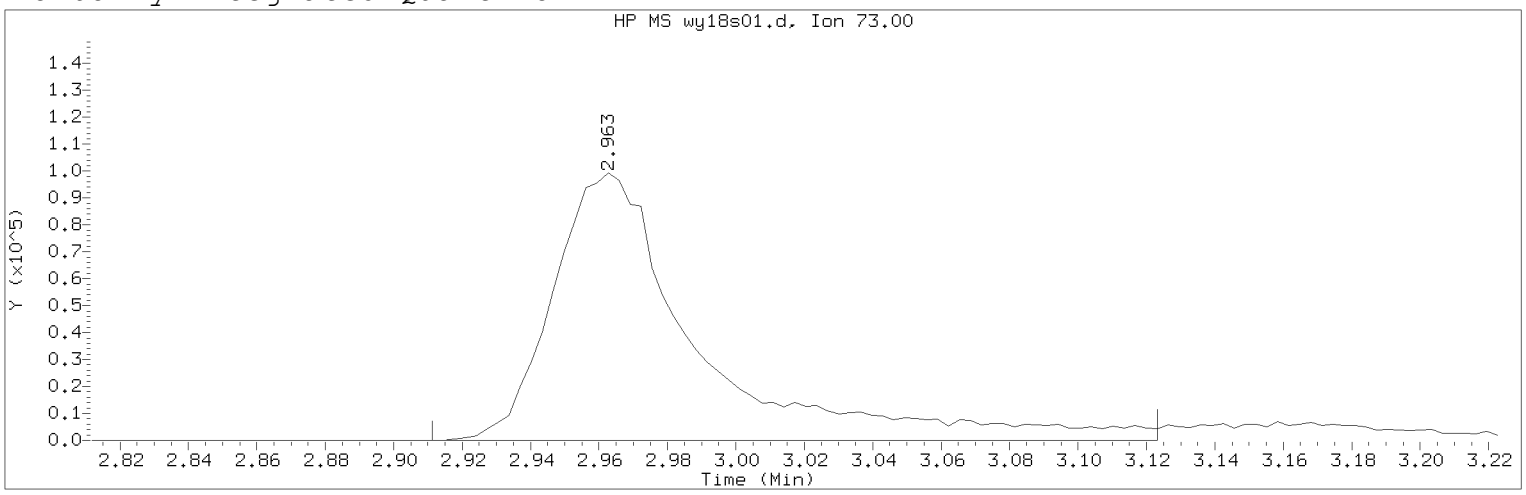
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 512
Retention Time (minutes): 2.475
Quant Ion : 142.00
Area : 127323
On-column Amount (ng) : 14.3615
Integration start scan : 502 Integration stop scan: 552
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user's name

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

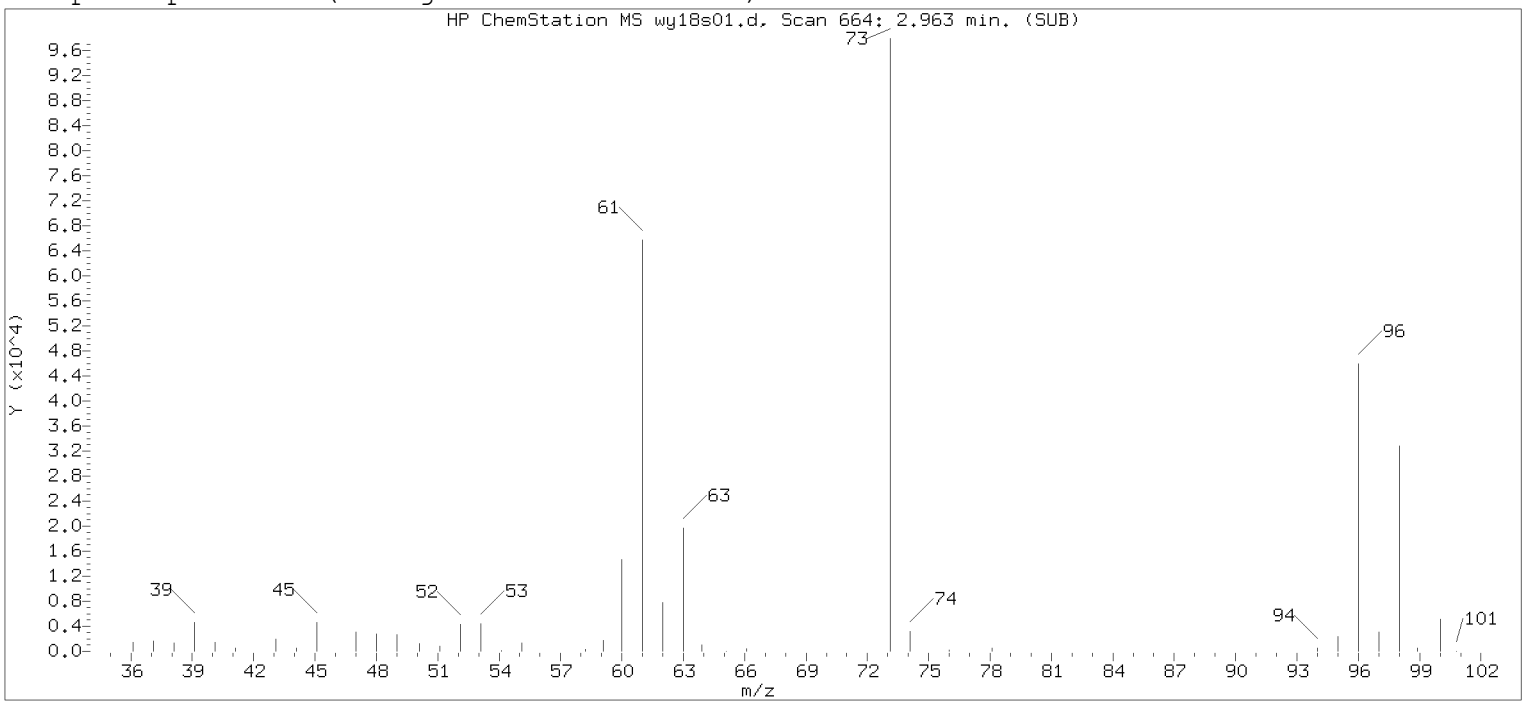
Compound Number : 33
Compound Name : Methyl Tertiary Butyl Ether
Scan Number : 664
Retention Time (minutes): 2.963
Quant Ion : 73.00
Area (flag) : 291896M
On-Column Amount (ng) : 23.8826
Integration start scan : 647 Integration stop scan: 713
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

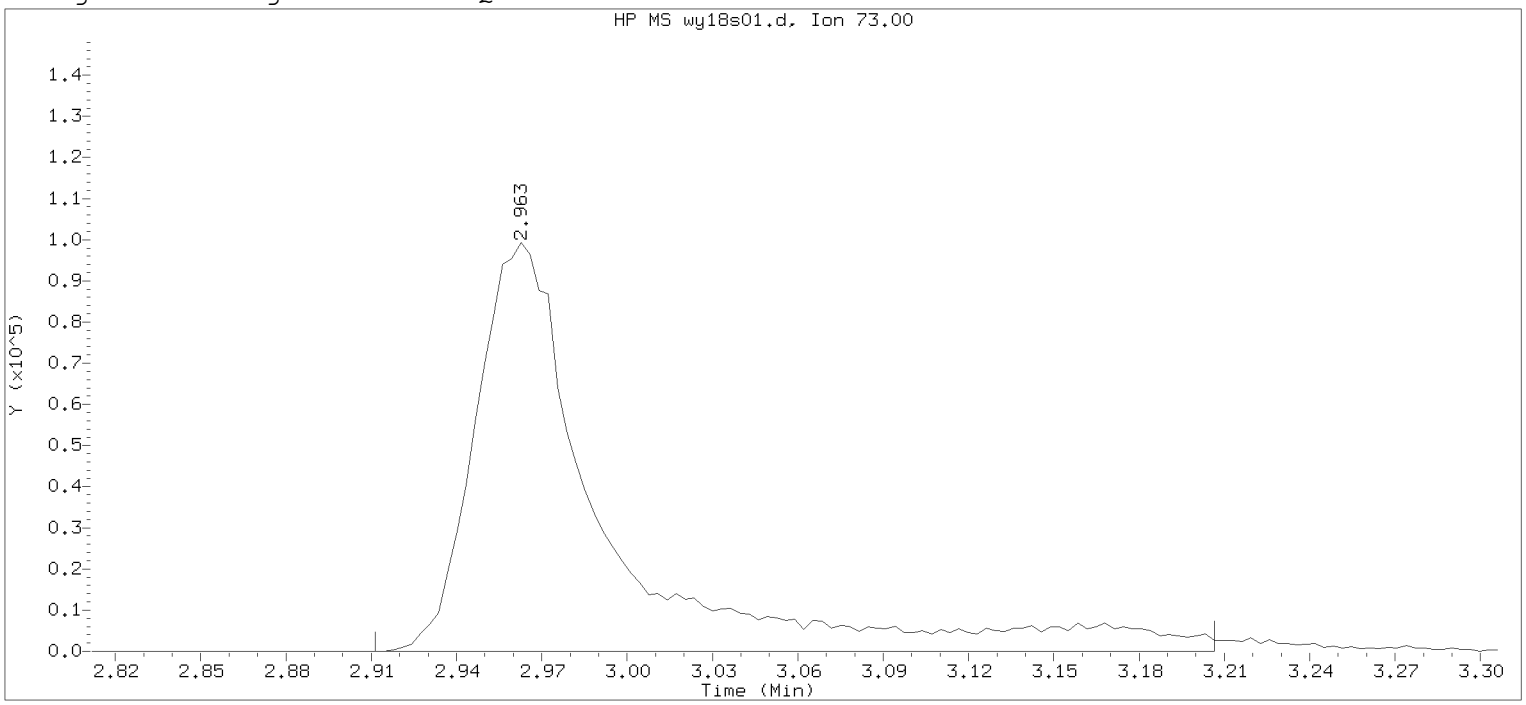
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

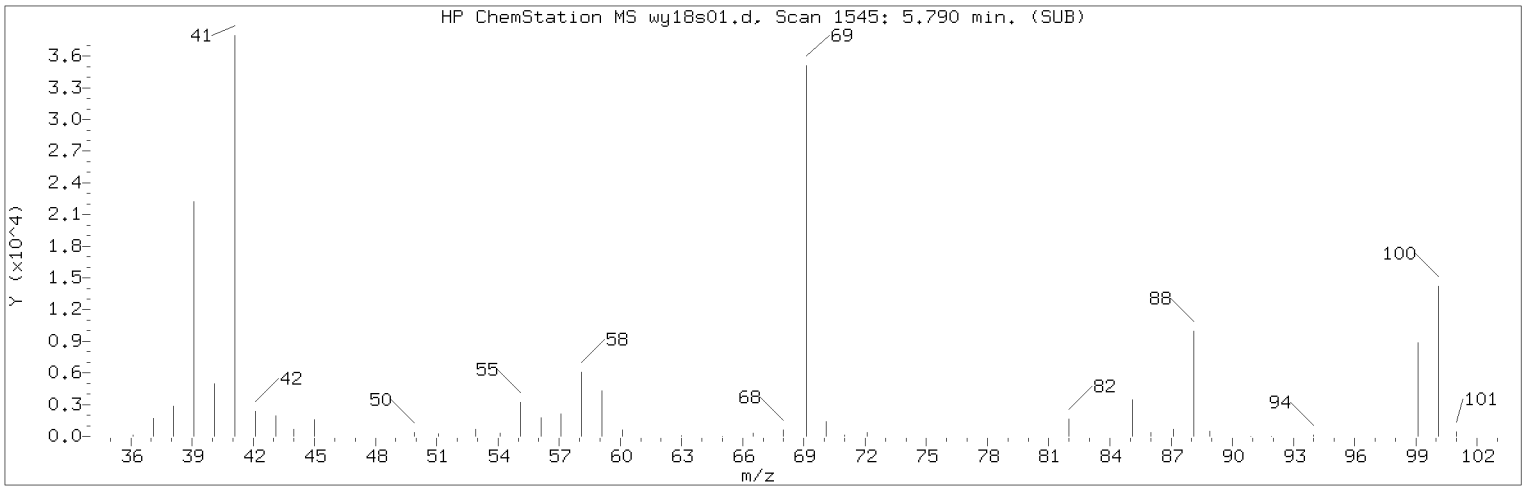
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

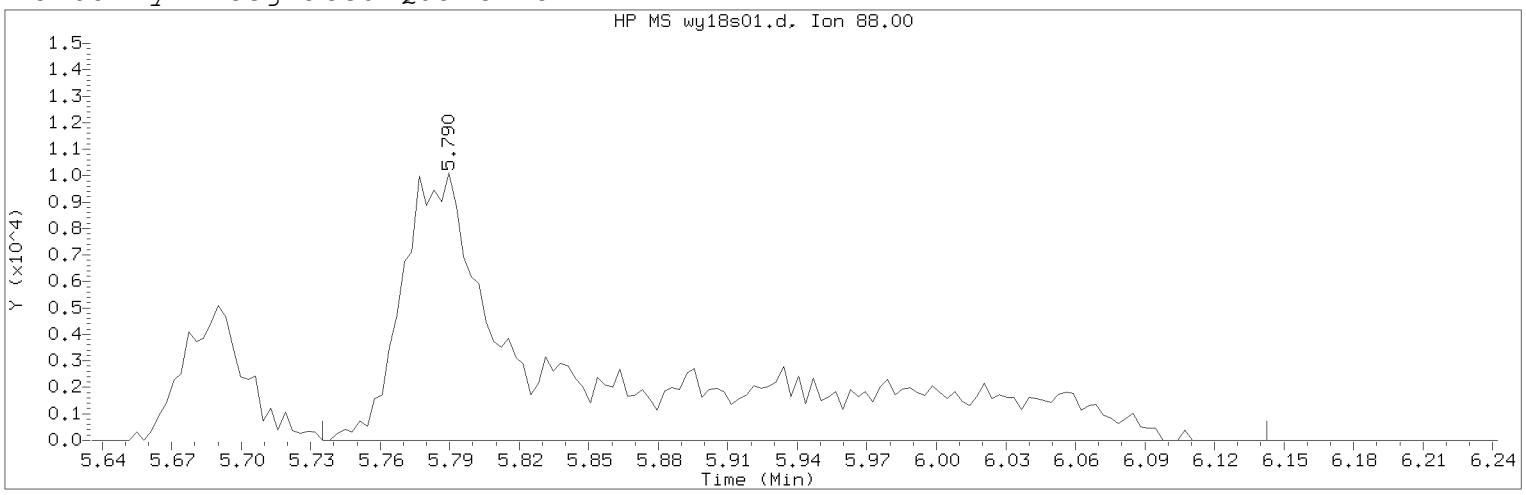
Compound Number : 33
Compound Name : Methyl Tertiary Butyl Ether
Scan Number : 664
Retention Time (minutes): 2.963
Quant Ion : 73.00
Area : 317126
On-column Amount (ng) : 25.9469
Integration start scan : 647 Integration stop scan: 739
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

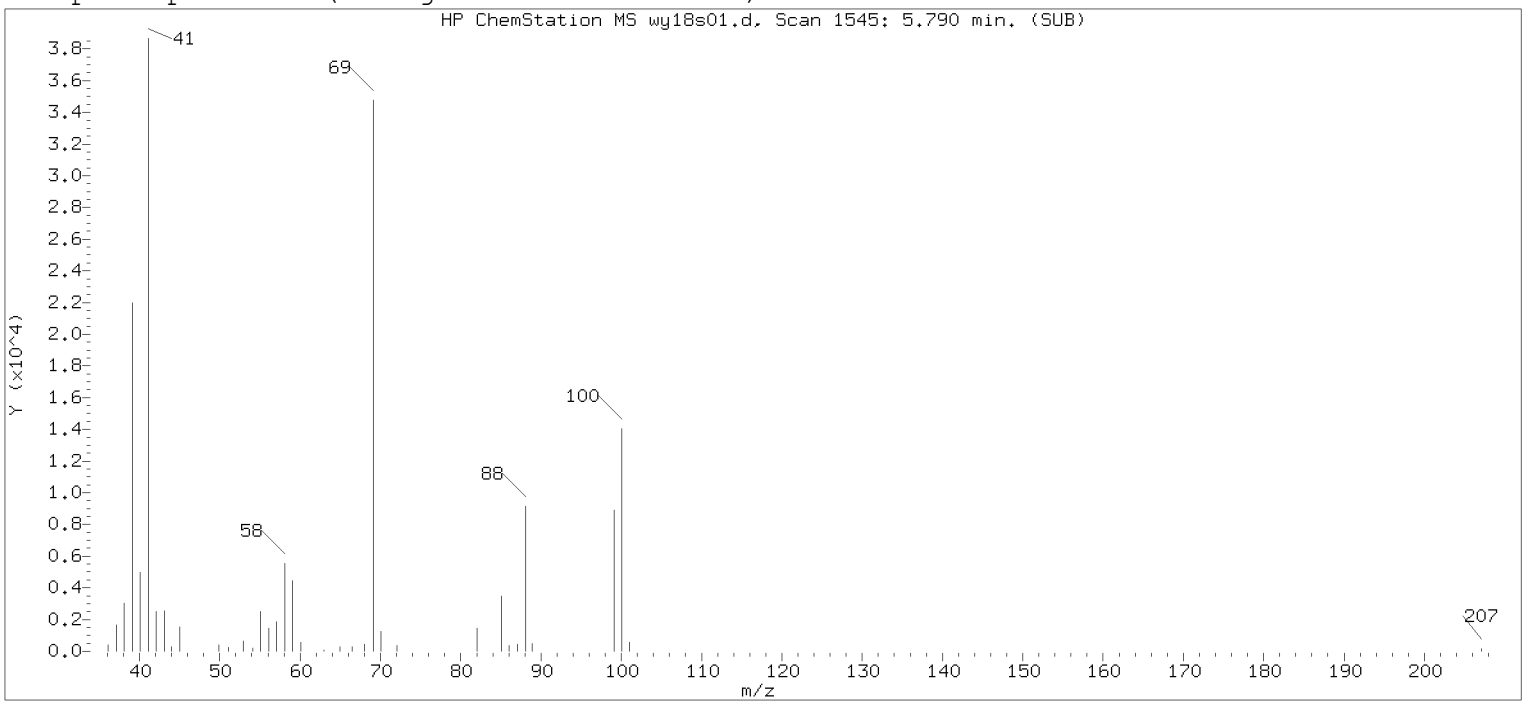
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1545
Retention Time (minutes): 5.790
Quant Ion : 88.00
Area (flag) : 52768M
On-Column Amount (ng) : 634.7888
Integration start scan : 1527 Integration stop scan: 1654
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

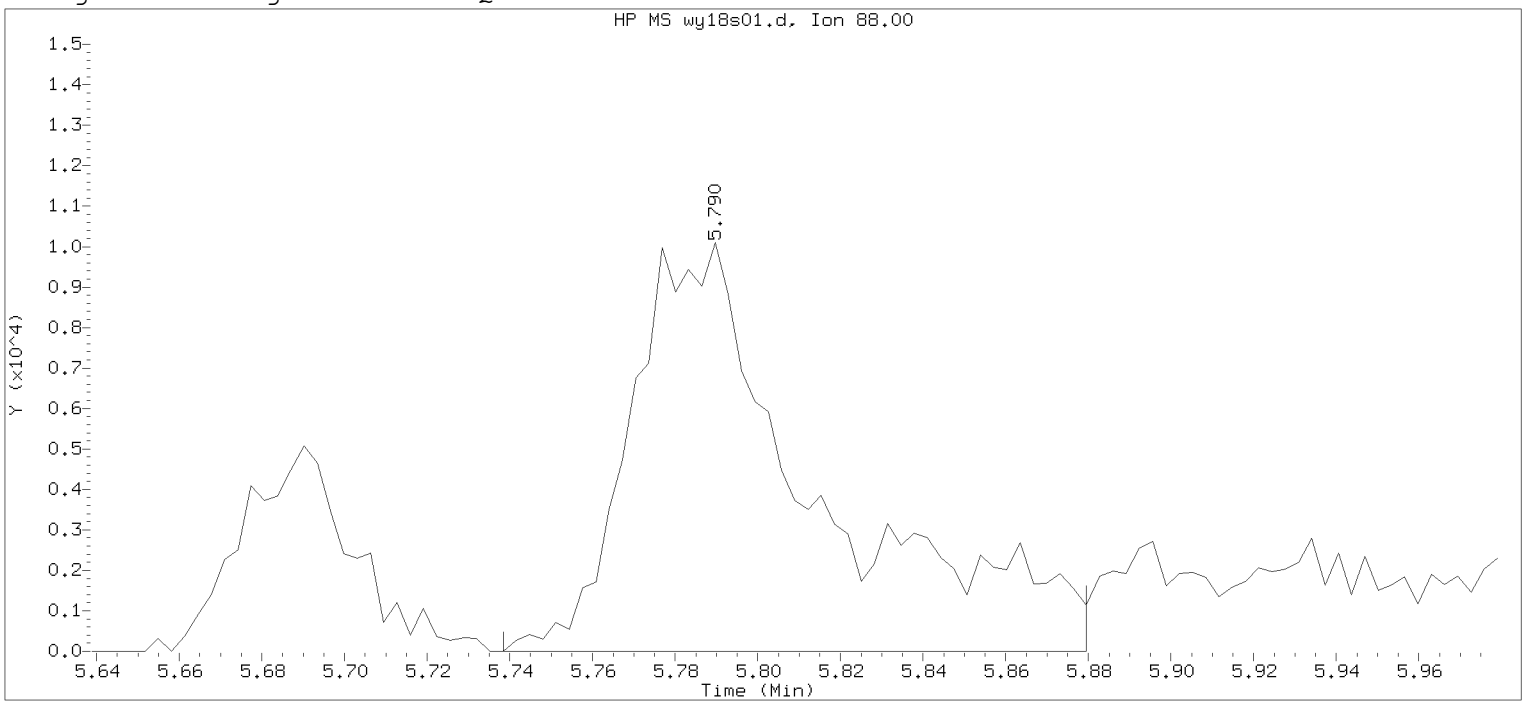
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1545
Retention Time (minutes): 5.790
Quant Ion : 88.00
Area : 31240
On-column Amount (ng) : 375.8212
Integration start scan : 1528 Integration stop scan: 1572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user's signature

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NYSDEC ASP Category B Data Package

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Project: AD-NY/1-0145-5
Groundwater Samples
Collected on 05/08/19

SDG# JCV88-V.2

GROUP	SAMPLE NUMBERS
2042994	1053358-1053363

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-18-27
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman **Date:** **08/12/2019**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Katherine Klinefelter at (717) 556-7256.

2425 New Holland Pike, Lancaster, PA 17601 | 717-656-2300 | Fax: 717-656-2681 | www.LancasterLabs.com

Table of Contents for SDG# JCV88

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3. Methodology Summary/Reference 5
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   d. Standards Data 100
   e. Raw QC Data 277

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Sample Reference List for SDG Number JCV88
with a Data Package Type of NYSDEC B

06556 - The Johnson Company, Inc.

Project: AD-NY/1-0145-5

Lab Sample Number	Client Sample ID	Collection Date	Date Received	Lab Sample Code
1053358	J01-UC02	05/08/2019 09:33	05/09/2019 10:30	J0101
1053359	J01-UC01	05/08/2019 10:36	05/09/2019 10:30	J0102
1053360	J01-UC01 MS	05/08/2019 10:36	05/09/2019 10:30	J0102
1053361	J01-UC01 MSD	05/08/2019 10:36	05/09/2019 10:30	J0102
1053362	J01-BR02	05/08/2019 12:00	05/09/2019 10:30	J0103
1053363	J01-BR01	05/08/2019 13:44	05/09/2019 10:30	J0104

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Sample pH Log

SDG: JCV88

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
1053358	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/19/2019 12:16:06PM	1947
1053359	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/20/2019 1:22:13PM	895
1053360	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/19/2019 12:16:06PM	1947
1053361	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/19/2019 12:16:06PM	1947
1053362	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/19/2019 12:16:06PM	1947
1053363	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/19/2019 12:16:07PM	1947

*pH Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

**Chlorine Present Code Key
NA = Chlorine Not Checked
Y = Chlorine Present
N = Chlorine Not Present

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11997 VOCs- 5ml Water by 8260C/D

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

Analysis Reports / Field Chain of Custody

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REVISED

ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Report Date: June 25, 2019 15:50

Project: AD-NY/1-0145-5

Account #: 06556
Group Number: 2042994
SDG: JCV88
PO Number: 1-0145-05
State of Sample Origin: NY

Electronic Copy To	The Johnson Company, Inc.	Attn: Tristan Hardy
Electronic Copy To	The Johnson Company, Inc.	Attn: George Lester

Respectfully Submitted,

Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

A previous version of this report was generated on 05/20/2019 23:27.

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
J01-UC02 Grab Groundwater	05/08/2019 09:33	1053358
J01-UC01 Grab Groundwater	05/08/2019 10:36	1053359
J01-UC01 MS Grab Groundwater	05/08/2019 10:36	1053360
J01-UC01 MSD Grab Groundwater	05/08/2019 10:36	1053361
J01-BR02 Grab Groundwater	05/08/2019 12:00	1053362
J01-BR01 Grab Groundwater	05/08/2019 13:44	1053363

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

REVISED

Sample Description: **J01-UC02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-NY/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/08/2019 09:33
SDG#: JCV88-01

The Johnson Company, Inc.
ELLE Sample #: GW 1053358
ELLE Group #: 2042994
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191381AA	05/19/2019 07:13	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191381AA	05/19/2019 07:12	Sara E Johnson	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **J01-UC01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-NY/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/08/2019 10:36
SDG#: JCV88-02BKG

The Johnson Company, Inc.
ELLE Sample #: GW 1053359
ELLE Group #: 2042994
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.3 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	1	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	13	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	2	0.3	1	1
11997	Trichloroethene	79-01-6	4	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191381AB	05/19/2019 15:30	Chelsea B Riehl	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191381AB	05/19/2019 15:29	Chelsea B Riehl	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **J01-UC01 MS Grab Groundwater**
New Windsor, NY

Project Name: **AD-NY/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/08/2019 10:36
SDG#: JCV88-02MS

The Johnson Company, Inc.
ELLE Sample #: GW 1053360
ELLE Group #: 2042994
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	150	0.7	20	1
11997	Benzene	71-43-2	21	0.2	1	1
11997	2-Butanone	78-93-3	120	0.3	10	1
11997	Carbon Disulfide	75-15-0	15	0.2	5	1
11997	Chloroform	67-66-3	23	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	23	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	21	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	23	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	24	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	24	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	22	0.2	1	1
11997	1,4-Dioxane	123-91-1	560	29	250	1
11997	Ethylbenzene	100-41-4	23	0.4	1	1
11997	Freon 113	76-13-1	23	0.2	10	1
11997	Methylene Chloride	75-09-2	22	0.3	1	1
11997	Naphthalene	91-20-3	18	1	5	1
11997	Tetrachloroethene	127-18-4	35	0.2	1	1
11997	Toluene	108-88-3	23	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	25	0.3	1	1
11997	Trichloroethene	79-01-6	26	0.2	1	1
11997	Vinyl Chloride	75-01-4	16	0.2	1	1
11997	Xylene (Total)	1330-20-7	70	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191381AA	05/19/2019 04:02	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191381AA	05/19/2019 04:01	Sara E Johnson	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **J01-UC01 MSD Grab Groundwater**
New Windsor, NY

Project Name: **AD-NY/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/08/2019 10:36
SDG#: JCV88-03MSD

The Johnson Company, Inc.
ELLE Sample #: GW 1053361
ELLE Group #: 2042994
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	160	0.7	20	1
11997	Benzene	71-43-2	22	0.2	1	1
11997	2-Butanone	78-93-3	130	0.3	10	1
11997	Carbon Disulfide	75-15-0	24	0.2	5	1
11997	Chloroform	67-66-3	23	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	24	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	22	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	23	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	25	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	24	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	22	0.2	1	1
11997	1,4-Dioxane	123-91-1	600	29	250	1
11997	Ethylbenzene	100-41-4	24	0.4	1	1
11997	Freon 113	76-13-1	22	0.2	10	1
11997	Methylene Chloride	75-09-2	22	0.3	1	1
11997	Naphthalene	91-20-3	19	1	5	1
11997	Tetrachloroethene	127-18-4	38	0.2	1	1
11997	Toluene	108-88-3	25	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	26	0.3	1	1
11997	Trichloroethene	79-01-6	27	0.2	1	1
11997	Vinyl Chloride	75-01-4	18	0.2	1	1
11997	Xylene (Total)	1330-20-7	73	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191381AA	05/19/2019 04:26	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191381AA	05/19/2019 04:25	Sara E Johnson	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **J01-BR02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-NY/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/08/2019 12:00
SDG#: JCV88-04

The Johnson Company, Inc.
ELLE Sample #: GW 1053362
ELLE Group #: 2042994
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191381AA	05/19/2019 07:36	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191381AA	05/19/2019 07:35	Sara E Johnson	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **J01-BR01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-NY/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/08/2019 13:44
SDG#: JCV88-05

The Johnson Company, Inc.
ELLE Sample #: GW 1053363
ELLE Group #: 2042994
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191381AA	05/19/2019 08:00	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191381AA	05/19/2019 07:59	Sara E Johnson	1

*=This limit was used in the evaluation of the final result

REVISED

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2042994
Reported: 06/25/2019 15:50

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: W191381AA	Sample number(s): 1053358,1053360-1053363		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: W191381AB	Sample number(s): 1053359		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2042994
Reported: 06/25/2019 15:50

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: W191381AA	Sample number(s): 1053358,1053360-1053363								
Acetone	150	232.25			155		54-157		
Benzene	20	21.23			106		80-120		
2-Butanone	150	138.32			92		59-135		
Carbon Disulfide	20	14.84			74		65-128		
Chloroform	20	22.02			110		80-120		
1,2-Dichlorobenzene	20	23.33			117		80-120		
1,1-Dichloroethane	20	20.55			103		80-120		
1,2-Dichloroethane	20	22.71			114		73-124		
1,1-Dichloroethene	20	21.55			108		80-131		
cis-1,2-Dichloroethene	20	22.59			113		80-125		
trans-1,2-Dichloroethene	20	21.31			107		80-126		
1,4-Dioxane	500	634.79			127		63-146		
Ethylbenzene	20	22.91			115		80-120		
Freon 113	20	20.75			104		73-139		
Methylene Chloride	20	19.52			98		80-120		
Naphthalene	20	19.87			99		53-124		
Tetrachloroethene	20	24.53			123*		80-120		
Toluene	20	23.74			119		80-120		
1,1,1-Trichloroethane	20	21.86			109		67-126		
Trichloroethene	20	21.31			107		80-120		
Vinyl Chloride	20	16.74			84		56-120		
Xylene (Total)	60	69.7			116		80-120		
Batch number: W191381AB	Sample number(s): 1053359								
Acetone	150	191.15			127		54-157		
Benzene	20	19.95			100		80-120		
2-Butanone	150	122.11			81		59-135		
Carbon Disulfide	20	14.45			72		65-128		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2042994
Reported: 06/25/2019 15:50

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Chloroform	20	21.88			109		80-120		
1,2-Dichlorobenzene	20	22.23			111		80-120		
1,1-Dichloroethane	20	20.13			101		80-120		
1,2-Dichloroethane	20	22.6			113		73-124		
1,1-Dichloroethene	20	19.42			97		80-131		
cis-1,2-Dichloroethene	20	21.76			109		80-125		
trans-1,2-Dichloroethene	20	20.47			102		80-126		
1,4-Dioxane	500	685.86			137		63-146		
Ethylbenzene	20	21.55			108		80-120		
Freon 113	20	20.75			104		73-139		
Methylene Chloride	20	19.62			98		80-120		
Naphthalene	20	17.52			88		53-124		
Tetrachloroethene	20	23.67			118		80-120		
Toluene	20	22.06			110		80-120		
1,1,1-Trichloroethane	20	20.62			103		67-126		
Trichloroethene	20	20.36			102		80-120		
Vinyl Chloride	20	15.37			77		56-120		
Xylene (Total)	60	66.49			111		80-120		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: W191381AA	Sample number(s): 1053358,1053360-1053363 UNSPK: 1053359									
Acetone	N.D.	150	150.26	150	164.12	100	109	54-157	9	30
Benzene	N.D.	20	21.37	20	21.68	107	108	80-120	1	30
2-Butanone	N.D.	150	122.48	150	126.95	82	85	59-135	4	30
Carbon Disulfide	N.D.	20	15.39	20	23.77	77	119	65-128	43*	30
Chloroform	N.D.	20	23.17	20	23.32	116	117	80-120	1	30
1,2-Dichlorobenzene	N.D.	20	23.36	20	23.89	117	119	80-120	2	30
1,1-Dichloroethane	0.314	20	20.89	20	22.09	103	109	80-120	6	30
1,2-Dichloroethane	N.D.	20	23.27	20	23.32	116	117	73-124	0	30
1,1-Dichloroethene	N.D.	20	20.7	20	23.36	103	117	80-131	12	30
cis-1,2-Dichloroethene	1.01	20	23.82	20	24.12	114	116	80-120	1	30
trans-1,2-Dichloroethene	N.D.	20	22.18	20	22.21	111	111	80-120	0	30
1,4-Dioxane	N.D.	500	561.67	500	596.24	112	119	63-146	6	30
Ethylbenzene	N.D.	20	23.15	20	23.87	116	119	80-120	3	30
Freon 113	N.D.	20	22.99	20	22.31	115	112	73-139	3	30
Methylene Chloride	N.D.	20	21.57	20	21.99	108	110	80-120	2	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2042994
Reported: 06/25/2019 15:50

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Naphthalene	N.D.	20	18.04	20	18.88	90	94	53-124	5	30
Tetrachloroethene	13.17	20	35.14	20	37.76	110	123*	80-120	7	30
Toluene	N.D.	20	23.19	20	24.67	116	123*	80-120	6	30
1,1,1-Trichloroethane	2.37	20	25.22	20	25.65	114	116	67-126	2	30
Trichloroethene	4.50	20	25.72	20	26.88	106	112	80-120	4	30
Vinyl Chloride	N.D.	20	16.46	20	18.38	82	92	56-120	11	30
Xylene (Total)	N.D.	60	69.66	60	72.98	116	122*	80-120	5	30
Batch number: W191381AB	Sample number(s): 1053359 UNSPK: 1053359									
Acetone	N.D.	150	150.26	150	164.12	100	109	54-157	9	30
Benzene	N.D.	20	21.37	20	21.68	107	108	80-120	1	30
2-Butanone	N.D.	150	122.48	150	126.95	82	85	59-135	4	30
Carbon Disulfide	N.D.	20	15.39	20	23.77	77	119	65-128	43*	30
Chloroform	N.D.	20	23.17	20	23.32	116	117	80-120	1	30
1,2-Dichlorobenzene	N.D.	20	23.36	20	23.89	117	119	80-120	2	30
1,1-Dichloroethane	0.314	20	20.89	20	22.09	103	109	80-120	6	30
1,2-Dichloroethane	N.D.	20	23.27	20	23.32	116	117	73-124	0	30
1,1-Dichloroethene	N.D.	20	20.7	20	23.36	103	117	80-131	12	30
cis-1,2-Dichloroethene	1.01	20	23.82	20	24.12	114	116	80-120	1	30
trans-1,2-Dichloroethene	N.D.	20	22.18	20	22.21	111	111	80-120	0	30
1,4-Dioxane	N.D.	500	561.67	500	596.24	112	119	63-146	6	30
Ethylbenzene	N.D.	20	23.15	20	23.87	116	119	80-120	3	30
Freon 113	N.D.	20	22.99	20	22.31	115	112	73-139	3	30
Methylene Chloride	N.D.	20	21.57	20	21.99	108	110	80-120	2	30
Naphthalene	N.D.	20	18.04	20	18.88	90	94	53-124	5	30
Tetrachloroethene	13.17	20	35.14	20	37.76	110	123*	80-120	7	30
Toluene	N.D.	20	23.19	20	24.67	116	123*	80-120	6	30
1,1,1-Trichloroethane	2.37	20	25.22	20	25.65	114	116	67-126	2	30
Trichloroethene	4.50	20	25.72	20	26.88	106	112	80-120	4	30
Vinyl Chloride	N.D.	20	16.46	20	18.38	82	92	56-120	11	30
Xylene (Total)	N.D.	60	69.66	60	72.98	116	122*	80-120	5	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2042994
Reported: 06/25/2019 15:50

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: W191381AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1053358	100	102	101	87
1053360	98	97	102	94
1053361	95	101	104	96
1053362	100	102	99	85
1053363	100	101	100	85
Blank	97	99	100	86
LCS	96	93	103	93
MS	98	97	102	94
MSD	95	101	104	96
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: W191381AB

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1053359	98	101	100	87
Blank	97	99	100	87
LCS	97	101	103	94
MS	98	97	102	94
MSD	95	101	104	96
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 6556 Group # 2042994 Sample # 1053358-63

COC # 583006

Client Information

Client: The Johnson Company / VHB	Acct. #: 06556
Project Name/#: AD-New York / 1-0145-05 / 58300	PWSID #:
Project Manager: George Lester	P.O. #:
Sampler: Adam Robtoy	Quote #:
State where samples were collected: NY	For Compliance: Yes ☐ No ☒

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water ☒ Potable ☐ Ground ☒ NPDES ☐ Surface ☐ | Other: ____

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	8260-VOCs	Remarks
J01-UC02	5/8/19	933	X		3	X	
J01-UC01	5/8/19	1036	X		9	X	MS/MSD
J01-BR02	5/8/19	1200	X		3	X	
J01-BR01	5/8/19	1344	X		3	X	

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: ____

E-mail address: Glester@vhb.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	5/8/19	1730			
				5.9.19	1030

EDD Required? Yes No

If yes, format: Excel

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ____ Other ____

Temperature upon receipt 2-3 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 248557

Group Number(s): 2042994

Client: The Johnson Company

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	05/09/2019 10:30
Number of Packages:	1	Number of Projects:	2
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Darian Jaynes (29952) at 19:46 on 05/09/2019

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	2.3	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17601-5994
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCV88

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
1053358	J01-UC02	X		1	
1053359	J01-UC01	X		1	Unspiked
1053360	J01-UC01 MS	X		1	Matrix Spike
1053361	J01-UC01 MSD	X		1	Matrix Spike Duplicate
1053362	J01-BR02	X		1	
1053363	J01-BR01	X		1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

(Sample number(s): 1053359: Analysis: 11997)
A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

LCS/LCSD

(Sample number(s): 1053358, 1053362-1053363: Analysis: 11997)
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCV88

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Batch#: W191381AA (Sample number(s): 1053358, 1053360-1053363, UNSPK: 1053360)
The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: Tetrachloroethene

MS/MSD

Batch#: W191381AA (Sample number(s): 1053358, 1053360-1053363, UNSPK: 1053360)
The relative percent difference(s) for the following analyte(s) in the MS/MSD is outside the acceptance window: Carbon Disulfide
The recovery(ies) for the following analyte(s) in the MSD exceeded the acceptance window indicating a positive bias:Tetrachloroethene, Toluene, Xylene (Total)

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

1. Relative Response Factor (RRF)

$$RRF = \frac{AX}{Ais} \times \frac{Cis}{Cx}$$

Where:

Ax = Area of the characteristic ion for the compound to be measured
Ais = Area of the characteristic ion for the specific internal standard to be measured
Cis = Concentration of the internal standard
Cx = Concentration of the compound to be measured

2. % Relative Standard Deviation (%RSD)

$$\%RSD = \frac{standard\ deviation}{Mean} \times 100$$

3. % Difference

$$\%D = \frac{RRFc - RRFi}{RRFi} \times 100$$

Where:

RRFc = Relative response factor from the continuing calibration standard
RRFi = Mean relative response factor from the initial calibration

4. Concentration

$$Concentration\ (\mu g / L) = \frac{(Ax)(Is)(Df)}{(Ais)(RRF)}$$

Where:

Ax, Ais, and RRF are as given in 1. above
Is = Amount of internal standard added in parts per billion (µg/L)
Df = Dilution factor

5. % Recovery (% Rec)

$$\%Rec = \frac{SSR - SR}{SA} \times 100$$

Where:

SSR = Spiked sample result
SR = Sample result
SA = Spike added

6. Relative Percent Difference (RPD)

$$RPD = \frac{(MSR - MSRD)}{(1/2)(MSR + MSRD)} \times 100$$

Where:

MSR = Matrix spike recovery
MSRD = Matrix spike recovery duplicate

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: The Johnson Company, Inc.
SDG: JCV88

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
VOCs- 5ml Water by 8260C/D	W191381AA	VBLKW23	05/18/2019 23:17
		LCSW23	05/18/2019 22:29
		1053358	05/19/2019 07:13
		1053360 MS	05/19/2019 04:02
		1053361 MSD	05/19/2019 04:26
		1053362	05/19/2019 07:36
		1053363	05/19/2019 08:00
VOCs- 5ml Water by 8260C/D	W191381AB	VBLKW24	05/19/2019 12:20
		LCSW24	05/19/2019 12:44
		1053359 UNSPK	05/19/2019 15:30

Fraction: Volatiles by GC/MS

W191381AA / VBLKW23 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	05/18/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	05/18/19	N.D.	ug/l	0.2	1
Acetone	05/18/19	N.D.	ug/l	0.7	20
Freon 113	05/18/19	N.D.	ug/l	0.2	10
Carbon Disulfide	05/18/19	N.D.	ug/l	0.2	5
Methylene Chloride	05/18/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	05/18/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	05/18/19	N.D.	ug/l	0.2	1
2-Butanone	05/18/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	05/18/19	N.D.	ug/l	0.2	1
Chloroform	05/18/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	05/18/19	N.D.	ug/l	0.3	1
Benzene	05/18/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	05/18/19	N.D.	ug/l	0.3	1
Trichloroethene	05/18/19	N.D.	ug/l	0.2	1
1,4-Dioxane	05/18/19	N.D.	ug/l	29	250
Toluene	05/18/19	N.D.	ug/l	0.2	1
Tetrachloroethene	05/18/19	N.D.	ug/l	0.2	1
Ethylbenzene	05/18/19	N.D.	ug/l	0.4	1
Xylene (Total)	05/18/19	N.D.	ug/l	1	5
1,2-Dichlorobenzene	05/18/19	N.D.	ug/l	0.2	5
Naphthalene	05/18/19	N.D.	ug/l	1	5

W191381AB / VBLKW24 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	05/19/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	05/19/19	N.D.	ug/l	0.2	1
Acetone	05/19/19	N.D.	ug/l	0.7	20
Freon 113	05/19/19	N.D.	ug/l	0.2	10
Carbon Disulfide	05/19/19	N.D.	ug/l	0.2	5
Methylene Chloride	05/19/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	05/19/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	05/19/19	N.D.	ug/l	0.2	1
2-Butanone	05/19/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	05/19/19	N.D.	ug/l	0.2	1
Chloroform	05/19/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	05/19/19	N.D.	ug/l	0.3	1
Benzene	05/19/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	05/19/19	N.D.	ug/l	0.3	1
Trichloroethene	05/19/19	N.D.	ug/l	0.2	1
1,4-Dioxane	05/19/19	N.D.	ug/l	29	250
Toluene	05/19/19	N.D.	ug/l	0.2	1
Tetrachloroethene	05/19/19	N.D.	ug/l	0.2	1
Ethylbenzene	05/19/19	N.D.	ug/l	0.4	1
Xylene (Total)	05/19/19	N.D.	ug/l	1	5

Fraction: Volatiles by GC/MS

W191381AB / VBLKW24 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
1,2-Dichlorobenzene	05/19/19	N.D.	ug/l	0.2	5
Naphthalene	05/19/19	N.D.	ug/l	1	5

Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: JCV88
Matrix: LIQUID

Fraction: Volatiles by GC/MS

W191381AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKW23	99	80 - 120	86	80 - 120	97	80 - 120	100	80 - 120
LCSW23	93	80 - 120	93	80 - 120	96	80 - 120	103	80 - 120
1053358	102	80 - 120	87	80 - 120	100	80 - 120	101	80 - 120
1053360 MS	97	80 - 120	94	80 - 120	98	80 - 120	102	80 - 120
1053361 MSD	101	80 - 120	96	80 - 120	95	80 - 120	104	80 - 120
1053362	102	80 - 120	85	80 - 120	100	80 - 120	99	80 - 120
1053363	101	80 - 120	85	80 - 120	100	80 - 120	100	80 - 120

W191381AB	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKW24	99	80 - 120	87	80 - 120	97	80 - 120	100	80 - 120
LCSW24	101	80 - 120	94	80 - 120	97	80 - 120	103	80 - 120
1053359 UNSPK	101	80 - 120	87	80 - 120	98	80 - 120	100	80 - 120

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 1053359 MS: 1053360 MSD: 1053361 **Analyte**	Batch: **W191381AA** (Sample number(s): 1053358, 1053360-1053363) Batch: **W191381AB** (Sample number(s): 1053359) **Spike Added ug/l**	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	N.D.	16.46	18.38	82	92	56-120	11	30
1,1-Dichloroethene	20	N.D.	20.7	23.36	103	117	80-131	12	30
Acetone	150	N.D.	150.26	164.12	100	109	54-157	9	30
Freon 113	20	N.D.	22.99	22.31	115	112	73-139	3	30
Carbon Disulfide	20	N.D.	15.39	23.77	77	119	65-128	43 *	30
Methylene Chloride	20	N.D.	21.57	21.99	108	110	80-120	2	30
trans-1,2-Dichloroethene	20	N.D.	22.18	22.21	111	111	80-120	0	30
1,1-Dichloroethane	20	0.314 J	20.89	22.09	103	109	80-120	6	30
2-Butanone	150	N.D.	122.48	126.95	82	85	59-135	4	30
cis-1,2-Dichloroethene	20	1.01	23.82	24.12	114	116	80-120	1	30
1,1,1-Trichloroethane	20	2.37	25.22	25.65	114	116	67-126	2	30
Chloroform	20	N.D.	23.17	23.32	116	117	80-120	1	30
1,2-Dichloroethane	20	N.D.	23.27	23.32	116	117	73-124	0	30
Benzene	20	N.D.	21.37	21.68	107	108	80-120	1	30
Trichloroethene	20	4.50	25.72	26.88	106	112	80-120	4	30
1,4-Dioxane	500	N.D.	561.67	596.24	112	119	63-146	6	30
Toluene	20	N.D.	23.19	24.67	116	123 *	80-120	6	30
Tetrachloroethene	20	13.17	35.14	37.76	110	123 *	80-120	7	30
Ethylbenzene	20	N.D.	23.15	23.87	116	119	80-120	3	30
Xylene (Total)	60	N.D.	69.66	72.98	116	122 *	80-120	5	30
1,2-Dichlorobenzene	20	N.D.	23.36	23.89	117	119	80-120	2	30
Naphthalene	20	N.D.	18.04	18.88	90	94	53-124	5	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSW23	Batch: **W191381AA** (Sample number(s): 1053358, 1053360-1053363)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	16.74	NA	84	NA	56-120	NA	NA
1,1-Dichloroethene	20	21.55	NA	108	NA	80-131	NA	NA
Acetone	150	232.25	NA	155	NA	54-157	NA	NA
Freon 113	20	20.75	NA	104	NA	73-139	NA	NA
Carbon Disulfide	20	14.84	NA	74	NA	65-128	NA	NA
Methylene Chloride	20	19.52	NA	98	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	21.31	NA	107	NA	80-126	NA	NA
1,1-Dichloroethane	20	20.55	NA	103	NA	80-120	NA	NA
2-Butanone	150	138.32	NA	92	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	22.59	NA	113	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	21.86	NA	109	NA	67-126	NA	NA
Chloroform	20	22.02	NA	110	NA	80-120	NA	NA
1,2-Dichloroethane	20	22.71	NA	114	NA	73-124	NA	NA
Benzene	20	21.23	NA	106	NA	80-120	NA	NA
Trichloroethene	20	21.31	NA	107	NA	80-120	NA	NA
1,4-Dioxane	500	634.79	NA	127	NA	63-146	NA	NA
Toluene	20	23.74	NA	119	NA	80-120	NA	NA
Tetrachloroethene	20	24.53	NA	123 *	NA	80-120	NA	NA
Ethylbenzene	20	22.91	NA	115	NA	80-120	NA	NA
Xylene (Total)	60	69.7	NA	116	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	23.33	NA	117	NA	80-120	NA	NA
Naphthalene	20	19.87	NA	99	NA	53-124	NA	NA

LCS: LCSW24	Batch: **W191381AB** (Sample number(s): 1053359)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	15.37	NA	77	NA	56-120	NA	NA
1,1-Dichloroethene	20	19.42	NA	97	NA	80-131	NA	NA
Acetone	150	191.15	NA	127	NA	54-157	NA	NA
Freon 113	20	20.75	NA	104	NA	73-139	NA	NA
Carbon Disulfide	20	14.45	NA	72	NA	65-128	NA	NA
Methylene Chloride	20	19.62	NA	98	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	20.47	NA	102	NA	80-126	NA	NA
1,1-Dichloroethane	20	20.13	NA	101	NA	80-120	NA	NA
2-Butanone	150	122.11	NA	81	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	21.76	NA	109	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	20.62	NA	103	NA	67-126	NA	NA
Chloroform	20	21.88	NA	109	NA	80-120	NA	NA
1,2-Dichloroethane	20	22.6	NA	113	NA	73-124	NA	NA
Benzene	20	19.95	NA	100	NA	80-120	NA	NA
Trichloroethene	20	20.36	NA	102	NA	80-120	NA	NA

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: JCV88
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSW24	Batch: **W191381AB** (Sample number(s): 1053359)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
1,4-Dioxane	500	685.86	NA	137	NA	63-146	NA	NA
Toluene	20	22.06	NA	110	NA	80-120	NA	NA
Tetrachloroethene	20	23.67	NA	118	NA	80-120	NA	NA
Ethylbenzene	20	21.55	NA	108	NA	80-120	NA	NA
Xylene (Total)	60	66.49	NA	111	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	22.23	NA	111	NA	80-120	NA	NA
Naphthalene	20	17.52	NA	88	NA	53-124	NA	NA

Fraction: Volatiles by GC/MS

11997: VOCs- 5ml Water by 8260C/D Analyte Name	Default MDL	Default LOQ	Units
Vinyl Chloride	0.2	1	ug/l
1,1-Dichloroethene	0.2	1	ug/l
Acetone	0.7	20	ug/l
Freon 113	0.2	10	ug/l
Carbon Disulfide	0.2	5	ug/l
Methylene Chloride	0.3	1	ug/l
trans-1,2-Dichloroethene	0.2	1	ug/l
1,1-Dichloroethane	0.2	1	ug/l
2-Butanone	0.3	10	ug/l
cis-1,2-Dichloroethene	0.2	1	ug/l
Chloroform	0.2	1	ug/l
1,1,1-Trichloroethane	0.3	1	ug/l
Benzene	0.2	1	ug/l
1,2-Dichloroethane	0.3	1	ug/l
Trichloroethene	0.2	1	ug/l
1,4-Dioxane	29	250	ug/l
Toluene	0.2	1	ug/l
Tetrachloroethene	0.2	1	ug/l
Ethylbenzene	0.4	1	ug/l
Xylene (Total)	1	5	ug/l
1,2-Dichlorobenzene	0.2	5	ug/l
Naphthalene	1	5	ug/l

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: wf19t01.d BFB Injection Date: 02/19/19

Instrument ID: HP09137 BFB Injection Time: 11:32

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.42
75	30.0 - 60.0% of mass 95	45.48
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.75
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	82.25
175	5.0 - 9.0% of mass 174	5.88 (7.14)1
176	Greater than 95.0%, but less than 101.0% of mass 174	79.33 (96.46)1
177	5.0 - 9.0% of mass 176	5.24 (6.60)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	wf19i01.d	02/19/19	12:21
02	VSTD100	wf19i02.d	02/19/19	12:45
03	VSTD50	wf19i03.d	02/19/19	13:09
04	VSTD20	wf19i04.d	02/19/19	13:33
05	VSTD10	wf19i05.d	02/19/19	13:57
06	VSTD4	wf19i06.d	02/19/19	14:21
07	VSTD1	wf19i07.d	02/19/19	14:44

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: wf20t01.d BFB Injection Date: 02/20/19

Instrument ID: HP09137 BFB Injection Time: 08:47

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.92
75	30.0 - 60.0% of mass 95	44.90
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.65
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	88.14
175	5.0 - 9.0% of mass 174	6.26 (7.10)1
176	Greater than 95.0%, but less than 101.0% of mass 174	84.40 (95.75)1
177	5.0 - 9.0% of mass 176	5.69 (6.75)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	wf20c02.d	02/20/19	10:55
02	LCSW62	wf20l01.d	02/20/19	12:07

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: wy18t01.d BFB Injection Date: 05/18/19

Instrument ID: HP09137 BFB Injection Time: 21:44

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.64
75	30.0 - 60.0% of mass 95	46.44
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.84
173	Less than 2.0% of mass 174	0.33 (0.35)1
174	Greater than 50.0% of mass 95	92.20
175	5.0 - 9.0% of mass 174	6.62 (7.18)1
176	Greater than 95.0%, but less than 101.0% of mass 174	90.49 (98.15)1
177	5.0 - 9.0% of mass 176	5.78 (6.39)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	wy18c01.d	05/18/19	22:05
02	LCSW23	wy18s01.d	05/18/19	22:29
03	VBLKW23	wy18b01.d	05/18/19	23:17
04	1053375	wy18s02.d	05/18/19	23:41
05	1053376	wy18s04.d	05/19/19	00:28
06	1053379	wy18s07.d	05/19/19	01:39
07	1053382	wy18s10.d	05/19/19	02:51
08	1053383	wy18s11.d	05/19/19	03:15
09	1053360MS	wy18s13.d	05/19/19	04:02
10	1053361MSD	wy18s14.d	05/19/19	04:26
11	1053352	wy18s15.d	05/19/19	04:50
12	1053353	wy18s16.d	05/19/19	05:14
13	1053354	wy18s17.d	05/19/19	05:38
14	1053355	wy18s18.d	05/19/19	06:01
15	1053356	wy18s19.d	05/19/19	06:25
16	1053357	wy18s20.d	05/19/19	06:49
17	1053358	wy18s21.d	05/19/19	07:13
18	1053362	wy18s22.d	05/19/19	07:36
19	1053363	wy18s23.d	05/19/19	08:00

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: wy19t01.d BFB Injection Date: 05/19/19

Instrument ID: HP09137 BFB Injection Time: 11:04

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.56
75	30.0 - 60.0% of mass 95	45.66
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.73
173	Less than 2.0% of mass 174	0.17 (0.18)1
174	Greater than 50.0% of mass 95	94.07
175	5.0 - 9.0% of mass 174	6.39 (6.80)1
176	Greater than 95.0%, but less than 101.0% of mass 174	90.96 (96.69)1
177	5.0 - 9.0% of mass 176	6.02 (6.62)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	wy19c01.d	05/19/19	11:32
02	VBLKW24	wy19b02.d	05/19/19	12:20
03	VBLKW25	wy19b10.d	05/19/19	12:20
04	LCSW24	wy19l01.d	05/19/19	12:44
05	LCSW25	wy19l10.d	05/19/19	12:44
06	MDL0.5 - MDL0.5	wy19m01.d	05/19/19	13:07
07	MDL0.5 - MDL0.5	wy19m10.d	05/19/19	13:07
08	1053374	wy19s02.d	05/19/19	13:31
09	1053377	wy19s03.d	05/19/19	13:55
10	1053378	wy19s04.d	05/19/19	14:18
11	1053380	wy19s05.d	05/19/19	14:42
12	1053381	wy19s06.d	05/19/19	15:06
13	1053359	wy19s07.d	05/19/19	15:30
14	1052544	wy19s11.d	05/19/19	16:17
15	1052546	wy19s13.d	05/19/19	17:05
16	1052547MS	wy19s14.d	05/19/19	17:29
17	1052548MSD	wy19s15.d	05/19/19	17:52
18	1052549	wy19s16.d	05/19/19	18:16
19	1052550	wy19s17.d	05/19/19	18:40
20	1052551	wy19s18.d	05/19/19	19:04
21	1052552	wy19s19.d	05/19/19	19:28
22	1052553	wy19s20.d	05/19/19	19:52

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: wy19t01.d BFB Injection Date: 05/19/19

Instrument ID: HP09137 BFB Injection Time: 11:04

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.56
75	30.0 - 60.0% of mass 95	45.66
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.73
173	Less than 2.0% of mass 174	0.17 (0.18)1
174	Greater than 50.0% of mass 95	94.07
175	5.0 - 9.0% of mass 174	6.39 (6.80)1
176	Greater than 95.0%, but less than 101.0% of mass 174	90.96 (96.69)1
177	5.0 - 9.0% of mass 176	6.02 (6.62)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1052554	wy19s21.d	05/19/19	20:15
24	1052556	wy19s23.d	05/19/19	21:03
25	1052987	wy19s24.d	05/19/19	21:27
26	SECC050	wy19ec1.d	05/19/19	22:14

FORM V VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date(s): 02/19/19 02/19/19

Heated Purge: (Y/N) Y Calibration Times: 12:21 14:44

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = wf19i07.d RRF 4 = wf19i06.d RRF 10= wf19i05.d
RRF 20= wf19i04.d RRF 50= wf19i03.d RRF100= wf19i02.d RRF300= wf19i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
Dichlorodifluoromethane	#0.2226	0.3389	0.3578	0.3419	0.3457	0.3161	0.3402	0.3233	14	AVG	#
Chloromethane	#0.3772	0.4124	0.4406	0.3916	0.4019	0.3931	0.4012	0.4026	5	AVG	#
1,3-Butadiene	0.2727	0.2671	0.2452	0.2384	0.2307	0.2227	0.2406	0.2453	7	AVG	
Vinyl Chloride	#0.3158	0.3797	0.4161	0.3707	0.3685	0.3608	0.3718	0.3690	8	AVG	#
Bromomethane	#0.2607	0.2971	0.3208	0.2821	0.2891	0.2884	0.2992	0.2911	6	AVG	#
Chloroethane	#0.2701	0.2583	0.2600	0.2307	0.2292	0.2238	0.2277	0.2429	8	AVG	#
Dichlorofluoromethane	0.4886	0.5016	0.4813	0.4622	0.4591	0.4389	0.4590	0.4701	5	AVG	
n-Pentane	0.4044	0.3731	0.3987	0.3753	0.3549	0.3420	0.3610	0.3728	6	AVG	
Trichlorofluoromethane	#0.2951	0.4078	0.4333	0.4060	0.4031	0.3866	0.4118	0.3920	11	AVG	#
Ethanol	0.1591	0.1102	0.1024	0.1020	0.1116	0.1084	0.1044	0.1140	18	AVG	
Freon 123a	0.3053	0.3155	0.3061	0.2927	0.2780	0.2657	0.2870	0.2929	6	AVG	
Acrolein	1.7818	1.7469	1.6939	1.8036	1.8632	1.8293	1.8801	1.7998	4	AVG	
1,1-Dichloroethene	#0.1644	0.2297	0.2356	0.2240	0.2253	0.2188	0.2454	0.2204	12	AVG	#
1,1-Dichloroethene(2)	#0.0944	0.1178	0.1203	0.1102	0.1113	0.1062	0.1183	0.1112	8	AVG	#
Acetone	#0.8713	0.8881	0.8570	0.9075	0.8853	0.8327	0.8818	0.8748	3	AVG	#
Freon 113	#0.1356	0.1900	0.2095	0.2086	0.2085	0.1927	0.2102	0.1936	14	AVG	#
2-Propanol	0.7040	0.6397	0.6307	0.6112	0.6739	0.6989	0.5915	0.6500	7	AVG	
Methyl Iodide	0.3680	0.4205	0.4432	0.4290	0.4261	0.4180	0.4524	0.4225	6	AVG	
Carbon Disulfide	#0.6814	0.7916	0.8333	0.7816	0.7719	0.7616	0.8153	0.7767	6	AVG	#
Allyl Chloride	0.3347	0.3590	0.3960	0.3881	0.4091	0.3892	0.4123	0.3841	7	AVG	
Methyl Acetate	#0.3825	0.3415	0.3321	0.3193	0.3250	0.3177	0.3090	0.3324	7	AVG	#
Methylene Chloride	#0.2739	0.2658	0.2838	0.2674	0.2651	0.2543	0.2761	0.2695	4	AVG	#
t-Butyl alcohol	1.1942	1.1621	1.1416	1.1288	1.2188	1.1948	1.0760	1.1595	4	AVG	
Acrylonitrile	0.1426	0.1746	0.1772	0.1870	0.1886	0.1805	0.1736	0.1749	9	AVG	
trans-1,2-Dichloroethene	#0.2033	0.2451	0.2573	0.2362	0.2397	0.2387	0.2541	0.2392	7	AVG	#
Methyl Tertiary Butyl Ether	#0.5358	0.5943	0.6552	0.6031	0.5822	0.5615	0.5446	0.5824	7	AVG	#
n-Hexane	0.2562	0.3096	0.3453	0.3150	0.3433	0.3197	0.3512	0.3200	10	AVG	
1,1-Dichloroethane	#0.3763	0.4330	0.4590	0.4370	0.4397	0.4346	0.4543	0.4334	6	AVG	#
di-Isopropyl ether	0.7905	0.8289	0.8791	0.8509	0.8427	0.8291	0.8074	0.8327	3	AVG	
2-Chloro-1,3-butadiene	0.3177	0.3681	0.3999	0.3841	0.3837	0.3754	0.3986	0.3754	7	AVG	
Ethyl t-butyl ether	0.5811	0.5848	0.6785	0.6482	0.6049	0.5702	0.5810	0.6069	7	AVG	
cis-1,2-Dichloroethene	#0.2366	0.2640	0.2849	0.2696	0.2719	0.2682	0.2847	0.2686	6	AVG	#
2-Butanone	#0.2598	0.2409	0.2472	0.2574	0.2591	0.2553	0.2390	0.2512	3	AVG	#
2,2-Dichloropropane	0.1716	0.2099	0.2086	0.2054	0.1988	0.1927	0.1756	0.1946	8	AVG	
Propionitrile	1.4394	1.4853	1.4411	1.3773	1.4094	1.3838	1.5509	1.4410	4	AVG	
Methacrylonitrile	0.1810	0.1879	0.1975	0.1843	0.1904	0.1848	0.1904	0.1880	3	AVG	
Bromochloromethane	0.1236	0.1333	0.1440	0.1403	0.1442	0.1406	0.1514	0.1396	6	AVG	
Tetrahydrofuran	1.2918	1.3520	1.1750	1.3657	1.3933	1.3069	1.4514	1.3337	7	AVG	
Chloroform	#0.3716	0.3946	0.4295	0.4104	0.4082	0.4049	0.4274	0.4067	5	AVG	#
1,1,1-Trichloroethane	#0.2496	0.3108	0.3281	0.3146	0.3147	0.3057	0.3184	0.3060	8	AVG	#
Cyclohexane	#0.3194	0.4199	0.4353	0.4172	0.4175	0.3935	0.4317	0.4049	10	AVG	#
Cyclohexane(2)	#0.2653	0.3458	0.3537	0.3442	0.3514	0.3279	0.3581	0.3352	10	AVG	#
Cyclohexane(3)	#0.0938	0.1266	0.1303	0.1244	0.1260	0.1188	0.1320	0.1217	11	AVG	#
1,1-Dichloropropene	0.2874	0.3392	0.3424	0.3250	0.3270	0.3193	0.3419	0.3260	6	AVG	
Carbon Tetrachloride	#0.2066	0.2621	0.2761	0.2668	0.2666	0.2671	0.2928	0.2626	10	AVG	#
Isobutyl Alcohol	0.4146	0.4172	0.4158	0.3919	0.4443	0.4523	0.4228	0.4227	5	AVG	
Benzene	#0.9632	1.0571	1.1117	1.0433	1.0439	1.0366	1.0801	1.0480	4	AVG	#
1,2-Dichloroethane	#0.3396	0.3176	0.3369	0.3145	0.3171	0.3133	0.3272	0.3237	3	AVG	#
1,2-Dichloroethane(2)	#0.0185	0.0303	0.0336	0.0330	0.0327	0.0326	0.0348	0.0308	18	AVG	#<-
t-Amyl methyl ether	0.6040	0.6173	0.7089	0.6493	0.6388	0.5916	0.5427	0.6218	8	AVG	
n-Heptane	0.2708	0.2864	0.3261	0.3135	0.3165	0.2938	0.3340	0.3059	7	AVG	
n-Butanol	0.3330	0.3444	0.3646	0.3552	0.4049	0.4250	0.4001	0.3753	9	AVG	

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date(s): 02/19/19 02/19/19

Heated Purge: (Y/N) Y Calibration Times: 12:21 14:44

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = wf19i07.d RRF 4 = wf19i06.d RRF 10= wf19i05.d
RRF 20= wf19i04.d RRF 50= wf19i03.d RRF100= wf19i02.d RRF300= wf19i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Trichloroethene	#0.2217	0.2561	0.2709	0.2546	0.2538	0.2533	0.2660	0.2538	6	AVG #
Methylcyclohexane	#0.2734	0.3769	0.3629	0.3936	0.4025	0.3619	0.4078	0.3684	12	AVG #
Methylcyclohexane(2)	#0.1290	0.1756	0.1682	0.1800	0.1871	0.1689	0.1904	0.1713	12	AVG #
1,2-Dichloropropane	#0.2298	0.2619	0.2854	0.2709	0.2752	0.2733	0.2870	0.2691	7	AVG #
Dibromomethane	0.1380	0.1607	0.1745	0.1685	0.1713	0.1705	0.1789	0.1661	8	AVG
1,4-Dioxane	0.1038	0.0985	0.1109	0.1097	0.1200	0.1211	0.1215	0.1122	8	AVG
Methyl Methacrylate	0.2548	0.2784	0.3021	0.2936	0.3109	0.3104	0.3196	0.2957	8	AVG
Bromodichloromethane	#0.2631	0.2827	0.3141	0.3042	0.3169	0.3198	0.3347	0.3051	8	AVG #
2-Nitropropane	0.0916	0.0888	0.0937	0.1060	0.1128	0.1166	0.1131	0.1032	11	AVG
2-Chloroethyl Vinyl Ether	0.1654	0.1740	0.2247	0.1981	0.2236	0.2230	0.2271	0.2051	13	AVG
cis-1,3-Dichloropropene	#0.3499	0.3892	0.4347	0.4211	0.4364	0.4412	0.4640	0.4195	9	AVG #
4-Methyl-2-pentanone	#0.4637	0.4627	0.4651	0.5077	0.5203	0.5569	0.4904	0.4953	7	AVG #
Toluene	#0.7057	0.7979	0.8800	0.8143	0.8160	0.7998	0.8359	0.8071	7	AVG #
trans-1,3-Dichloropropene	#0.4104	0.4287	0.5014	0.4799	0.5079	0.5047	0.5303	0.4805	9	AVG #
Ethyl Methacrylate	0.4511	0.5199	0.6156	0.6074	0.6469	0.6374	0.6547	0.5904	13	AVG
1,1,2-Trichloroethane	#0.2754	0.2925	0.3295	0.3107	0.3229	0.3186	0.3248	0.3106	6	AVG #
Tetrachloroethene	#0.2816	0.3316	0.3587	0.3284	0.3286	0.3219	0.3417	0.3275	7	AVG #
1,3-Dichloropropane	0.4849	0.4956	0.5806	0.5425	0.5594	0.5482	0.5658	0.5396	7	AVG
2-Hexanone	#0.4121	0.4279	0.4482	0.4830	0.5015	0.5532	0.4643	0.4700	10	AVG #
Dibromochloromethane	#0.2298	0.2541	0.3136	0.3074	0.3296	0.3340	0.3552	0.3034	15	AVG #
1,2-Dibromoethane	#0.2827	0.3112	0.3677	0.3476	0.3597	0.3529	0.3672	0.3413	9	AVG #
Chlorobenzene	#0.8240	0.8700	0.9551	0.8867	0.9011	0.8865	0.9441	0.8953	5	AVG #
1,1,1,2-Tetrachloroethane	0.2351	0.2578	0.3031	0.2863	0.3021	0.3027	0.3270	0.2877	11	AVG
Ethylbenzene	#1.3787	1.5070	1.6572	1.5278	1.5471	1.5272	1.5927	1.5340	6	AVG #
m+p-Xylene	#0.5272	0.5947	0.6616	0.6035	0.6158	0.6113	0.6551	0.6099	7	AVG #
o-Xylene	#0.5222	0.5852	0.6352	0.5944	0.6073	0.6020	0.6538	0.6000	7	AVG #
Styrene	#0.8130	0.9226	1.0653	1.0097	1.0480	1.0521	1.1351	1.0065	11	AVG #
Bromoform	#0.1670	0.1865	0.2373	0.2340	0.2615	0.2709	0.2958	0.2361	19	AVG #
Isopropylbenzene	#1.2646	1.4512	1.6012	1.4685	1.5055	1.4811	1.5487	1.4744	7	AVG #
Cyclohexanone	0.4871	0.4705	0.4632	0.4991	0.5298	0.5229	0.5703	0.5061	7	AVG
Bromobenzene	0.6884	0.7016	0.7569	0.7144	0.7206	0.7135	0.7459	0.7202	3	AVG
1,1,2,2-Tetrachloroethane	#0.8529	0.9108	1.0222	0.9763	1.0290	1.0105	0.9966	0.9712	7	AVG #
1,2,3-Trichloropropane	0.2565	0.2870	0.3041	0.2966	0.3075	0.3006	0.2955	0.2925	6	AVG
trans-1,4-Dichloro-2-butene	0.2803	0.2931	0.3278	0.3106	0.3327	0.3236	0.3120	0.3114	6	AVG
n-Propylbenzene	3.0849	3.2193	3.4353	3.1761	3.1834	3.0968	3.0275	3.1748	4	AVG
2-Chlorotoluene	0.5675	0.6619	0.7096	0.6632	0.6587	0.6474	0.6756	0.6548	7	AVG
4-Chlorotoluene	0.6413	0.6892	0.7427	0.6924	0.7052	0.6961	0.7401	0.7010	5	AVG
1,3,5-Trimethylbenzene	2.0444	2.2573	2.4632	2.2970	2.3331	2.2914	2.3411	2.2896	6	AVG
tert-Butylbenzene	0.4703	0.5351	0.5407	0.5160	0.5213	0.5108	0.5473	0.5202	5	AVG
Pentachloroethane	0.3257	0.3550	0.4283	0.4067	0.4432	0.4300	0.4897	0.4112	13	AVG
1,2,4-Trimethylbenzene	2.2643	2.3364	2.5982	2.4027	2.4540	2.4060	2.4275	2.4127	4	AVG
sec-Butylbenzene	2.5679	2.8763	3.0392	2.8375	2.8520	2.7620	2.7387	2.8105	5	AVG
1,3-Dichlorobenzene	#1.3306	1.3313	1.4637	1.3552	1.3825	1.3548	1.3951	1.3733	3	AVG #
p-Isopropyltoluene	2.2653	2.4890	2.6827	2.4932	2.5293	2.4796	2.4764	2.4879	5	AVG
1,4-Dichlorobenzene	#1.4127	1.3985	1.4925	1.4162	1.4209	1.4000	1.4251	1.4237	2	AVG #
1,2,3-Trimethylbenzene	2.4036	2.5068	2.7437	2.6464	2.7318	2.5569	2.5827	2.5960	5	AVG
Benzyl Chloride	1.4522	1.6615	2.0559	2.0662	2.2489	2.2481	2.2162	1.9927	16	AVG
1,3-Diethylbenzene	1.4093	1.4939	1.6403	1.5871	1.6504	1.5517	1.6100	1.5632	6	AVG
1,4-Diethylbenzene	1.5014	1.6231	1.7666	1.7078	1.7631	1.6440	1.7181	1.6748	6	AVG
1,2-Dichlorobenzene	#1.2870	1.3049	1.4555	1.3483	1.3827	1.3600	1.3989	1.3625	4	AVG #
n-Butylbenzene	1.1573	1.2337	1.3627	1.2429	1.2674	1.2393	1.2867	1.2557	5	AVG
1,2-Diethylbenzene	1.1418	1.3161	1.4034	1.3496	1.3840	1.2953	1.3485	1.3198	7	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date(s): 02/19/19 02/19/19

Heated Purge: (Y/N) Y Calibration Times: 12:21 14:44

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = wf19i07.d RRF 4 = wf19i06.d RRF 10= wf19i05.d
RRF 20= wf19i04.d RRF 50= wf19i03.d RRF100= wf19i02.d RRF300= wf19i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
1,2-Dibromo-3-chloropropane#	0.1739	0.2010	0.2236	0.2274	0.2466	0.2404	0.2321	0.2207	11	AVG #
1,3,5-Trichlorobenzene	1.0015	1.0168	1.1029	1.0404	1.0698	1.0395	1.0425	1.0448	3	AVG
1,2,4-Trichlorobenzene #	0.9276	0.9375	1.0673	1.0091	1.0550	1.0242	1.0006	1.0030	5	AVG #
Hexachlorobutadiene	0.3772	0.3543	0.3867	0.3591	0.3537	0.3359	0.3340	0.3573	5	AVG
Naphthalene	3.0094	3.0778	3.6431	3.5139	3.7449	3.5758	3.1927	3.3939	9	AVG
1,2,3-Trichlorobenzene	0.9349	0.9398	1.0277	0.9764	1.0247	0.9888	0.9609	0.9790	4	AVG
2-Methylnaphthalene	1.6516	1.5794	2.0834	1.9918	2.1930	2.1016	1.9535	1.9363	12	AVG
Dibromofluoromethane	0.2302	0.2343	0.2297	0.2314	0.2334	0.2302	0.2322	0.2316	1	AVG
Dibromofluoromethane(2)	0.2350	0.2399	0.2348	0.2383	0.2371	0.2401	0.2394	0.2378	1	AVG
1,2-Dichloroethane-d4	0.0612	0.0633	0.0610	0.0634	0.0611	0.0615	0.0597	0.0616	2	AVG
1,2-Dichloroethane-d4(2)	0.2724	0.2724	0.2690	0.2741	0.2626	0.2666	0.2602	0.2682	2	AVG
1,2-Dichloroethane-d4(3)	0.0393	0.0399	0.0398	0.0385	0.0385	0.0391	0.0395	0.0392	1	AVG
Toluene-d8	1.2422	1.2652	1.2667	1.2556	1.2661	1.2478	1.2267	1.2529	1	AVG
Toluene-d8(2)	0.8164	0.8263	0.8295	0.8323	0.8287	0.8363	0.8467	0.8309	1	AVG
4-Bromofluorobenzene	0.4965	0.4997	0.5047	0.4992	0.4989	0.5008	0.5088	0.5012	1	AVG
4-Bromofluorobenzene(2)	0.4175	0.4231	0.4261	0.4206	0.4231	0.4215	0.4287	0.4229	1	AVG

Average %RSD 7

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP09137.i/19feb19i.b/wf19i01.d	VSTD300
/chem2/HP09137.i/19feb19i.b/wf19i02.d	VSTD100
/chem2/HP09137.i/19feb19i.b/wf19i03.d	VSTD050
/chem2/HP09137.i/19feb19i.b/wf19i04.d	VSTD020
/chem2/HP09137.i/19feb19i.b/wf19i05.d	VSTD010
/chem2/HP09137.i/19feb19i.b/wf19i06.d	VSTD004
/chem2/HP09137.i/19feb19i.b/wf19i07.d	VSTD001

Area Summary

File ID:

Internal Standard Name	wf19i01.d	wf19i02.d	wf19i03.d	wf19i04.d	wf19i05.d	wf19i06.d	wf19i07.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	208793	220310	221988	226145	235698	216574	213467	220425	4	Yes
Fluorobenzene	896646	842063	858650	878585	872867	867920	823064	862828	3	Yes
Chlorobenzene-d5	750584	700579	703812	722592	709147	717501	683121	712477	3	Yes
1,4-Dichlorobenzene-d4	447340	397731	393177	398717	394276	394254	368100	399085	6	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	wf19i01.d	wf19i02.d	wf19i03.d	wf19i04.d	wf19i05.d	wf19i06.d	wf19i07.d	Avg. RT
t-Butyl alcohol-d10	2.735	2.732	2.728	2.732	2.725	2.728	2.732	2.730
Fluorobenzene	5.029	5.029	5.029	5.029	5.029	5.029	5.029	5.029
Chlorobenzene-d5	8.161	8.161	8.161	8.161	8.161	8.161	8.161	8.161
1,4-Dichlorobenzene-d4	10.041	10.041	10.038	10.038	10.041	10.038	10.038	10.040

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 02/20/2019 at 10:32.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 ICV Date: 02/20/19 Time: 12:07

Lab File ID: wf20l01.d Init. Calib. Date(s): 02/20/19 02/20/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3233	0.2795	17.29	20	-14	#
# Chloromethane	0.4026	0.3901	19.38	20	-3	#
1,3-Butadiene	0.2453	0.2559	20.86	20	4	
# Vinyl Chloride	0.3690	0.3679	19.94	20	0	#
# Bromomethane	0.2911	0.2538	17.44	20	-13	#
# Chloroethane	0.2429	0.2141	17.63	20	-12	#
Dichlorofluoromethane	0.4701	0.4241	18.04	20	-10	
n-Pentane	0.3728	0.3323	17.83	20	-11	
# Trichlorofluoromethane	0.3920	0.3507	17.89	20	-11	#
Ethanol	0.1140	0.1305	572.10	500	14	
Freon 123a	0.2929	0.2989	20.41	20	2	
Acrolein	1.7998	1.6198	135.00	150	-10	
# 1,1-Dichloroethene	0.2204	0.2572	23.34	20	17	#
# Acetone	0.8748	0.8401	144.04	150	-4	#
# Freon 113	0.1936	0.2153	22.24	20	11	#
2-Propanol	0.6500	0.6597	152.24	150	1	
Methyl Iodide	0.4225	0.4552	21.55	20	8	
# Carbon Disulfide	0.7767	0.8165	21.03	20	5	#
Allyl Chloride	0.3841	0.3808	19.83	20	-1	
# Methyl Acetate	0.3324	0.3222	19.38	20	-3	#
# Methylene Chloride	0.2695	0.2912	21.61	20	8	#
t-Butyl alcohol	1.1595	1.1387	196.42	200	-2	
Acrylonitrile	0.1749	0.1762	100.78	100	1	
# trans-1,2-Dichloroethene	0.2392	0.2692	22.51	20	13	#
# Methyl Tertiary Butyl Ether	0.5824	0.6000	20.61	20	3	#
n-Hexane	0.3200	0.3383	21.14	20	6	
# 1,1-Dichloroethane	0.4334	0.4754	21.94	20	10	#
di-Isopropyl ether	0.8327	0.9095	21.85	20	9	
2-Chloro-1,3-butadiene	0.3754	0.4010	21.36	20	7	
Ethyl t-butyl ether	0.6069	0.6397	21.08	20	5	
# cis-1,2-Dichloroethene	0.2686	0.3060	22.79	20	14	#
# 2-Butanone	0.2512	0.2467	147.26	150	-2	#
2,2-Dichloropropane	0.1946	0.2191	22.51	20	13	
Propionitrile	1.4410	1.4646	152.45	150	2	
Methacrylonitrile	0.1880	0.1915	152.73	150	2	
Bromochloromethane	0.1396	0.1402	20.08	20	0	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 ICV Date: 02/20/19 Time: 12:07

Lab File ID: wf20l01.d Init. Calib. Date(s): 02/20/19 02/20/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Tetrahydrofuran	1.3337	1.2743	95.54	100	-4	
#	Chloroform	0.4067	0.4516	22.21	20	11	#
#	1,1,1-Trichloroethane	0.3060	0.3471	22.69	20	13	#
#	Cyclohexane	0.4049	0.4112	20.31	20	2	#
	1,1-Dichloropropene	0.3260	0.3579	21.96	20	10	
#	Carbon Tetrachloride	0.2626	0.2742	20.89	20	4	#
	Isobutyl Alcohol	0.4227	0.4079	482.47	500	-4	
#	Benzene	1.0480	1.1347	21.66	20	8	#
#	1,2-Dichloroethane	0.3237	0.3597	22.22	20	11	#
	t-Amyl methyl ether	0.6218	0.6386	20.54	20	3	
	n-Heptane	0.3059	0.3099	20.26	20	1	
	n-Butanol	0.3753	0.3610	961.94	1000	-4	
#	Trichloroethene	0.2538	0.2812	22.16	20	11	#
#	Methylcyclohexane	0.3684	0.3776	20.50	20	2	#
#	1,2-Dichloropropane	0.2691	0.3032	22.54	20	13	#
	Dibromomethane	0.1661	0.1822	21.94	20	10	
	1,4-Dioxane	0.1122	0.1124	501.07	500	0	
	Methyl Methacrylate	0.2957	0.2953	19.97	20	0	
#	Bromodichloromethane	0.3051	0.3279	21.49	20	7	#
	2-Nitropropane	0.1032	0.0871	16.88	20	-16	
	2-Chloroethyl Vinyl Ether	0.2051	0.1921	18.73	20	-6	
#	cis-1,3-Dichloropropene	0.4195	0.4588	21.87	20	9	#
#	4-Methyl-2-pentanone	0.4953	0.4880	98.53	100	-1	#
#	Toluene	0.8071	0.8843	21.91	20	10	#
#	trans-1,3-Dichloropropene	0.4805	0.4960	20.65	20	3	#
	Ethyl Methacrylate	0.5904	0.6116	20.72	20	4	
#	1,1,2-Trichloroethane	0.3106	0.3563	22.94	20	15	#
#	Tetrachloroethene	0.3275	0.3603	22.00	20	10	#
	1,3-Dichloropropane	0.5396	0.5927	21.97	20	10	
#	2-Hexanone	0.4700	0.4573	97.29	100	-3	#
#	Dibromochloromethane	0.3034	0.3279	21.62	20	8	#
#	1,2-Dibromoethane	0.3413	0.3744	21.94	20	10	#
#	Chlorobenzene	0.8953	0.9820	21.94	20	10	#
	1,1,1,2-Tetrachloroethane	0.2877	0.3058	21.25	20	6	
#	Ethylbenzene	1.5340	1.6678	21.74	20	9	#
#	m+p-Xylene	0.6099	0.6667	43.72	40	9	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 ICV Date: 02/20/19 Time: 12:07

Lab File ID: wf20l01.d Init. Calib. Date(s): 02/20/19 02/20/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	o-Xylene	0.6000	0.6435	21.45	20	7	#
#	Styrene	1.0065	1.1147	22.15	20	11	#
#	Bromoform	0.2361	0.2357	19.96	20	0	#
#	Isopropylbenzene	1.4744	1.6362	22.19	20	11	#
	Cyclohexanone	0.5061	0.3977	392.85	500	-21	
	Bromobenzene	0.7202	0.7749	21.52	20	8	
#	1,1,2,2-Tetrachloroethane	0.9712	1.0477	21.58	20	8	#
	1,2,3-Trichloropropane	0.2925	0.3208	21.93	20	10	
	trans-1,4-Dichloro-2-butene	0.3114	0.3263	104.76	100	5	
	n-Propylbenzene	3.1748	3.5193	22.17	20	11	
	2-Chlorotoluene	0.6548	0.7224	22.06	20	10	
	4-Chlorotoluene	0.7010	0.7635	21.78	20	9	
	1,3,5-Trimethylbenzene	2.2896	2.4970	21.81	20	9	
	tert-Butylbenzene	0.5202	0.5611	21.57	20	8	
	Pentachloroethane	0.4112	0.4164	20.25	20	1	
	1,2,4-Trimethylbenzene	2.4127	2.5891	21.46	20	7	
	sec-Butylbenzene	2.8105	3.0779	21.90	20	10	
#	1,3-Dichlorobenzene	1.3733	1.4796	21.55	20	8	#
	p-Isopropyltoluene	2.4879	2.7111	21.79	20	9	
#	1,4-Dichlorobenzene	1.4237	1.5451	21.71	20	9	#
	1,2,3-Trimethylbenzene	2.5960	2.7701	21.34	20	7	
	Benzyl Chloride	1.9927	1.9670	19.74	20	-1	
	1,3-Diethylbenzene	1.5632	1.6430	21.02	20	5	
	1,4-Diethylbenzene	1.6748	1.7017	20.32	20	2	
#	1,2-Dichlorobenzene	1.3625	1.4843	21.79	20	9	#
	n-Butylbenzene	1.2557	1.3468	21.45	20	7	
	1,2-Diethylbenzene	1.3198	1.4051	21.29	20	6	
#	1,2-Dibromo-3-chloropropane	0.2207	0.2278	20.64	20	3	#
	1,3,5-Trichlorobenzene	1.0448	1.0980	21.02	20	5	
#	1,2,4-Trichlorobenzene	1.0030	1.0774	21.48	20	7	#
	Hexachlorobutadiene	0.3573	0.3703	20.73	20	4	
	Naphthalene	3.3939	3.6416	21.46	20	7	
	1,2,3-Trichlorobenzene	0.9790	1.0505	21.46	20	7	
	2-Methylnaphthalene	1.9363	1.9106	19.73	20	-1	
				Average %Drift		7	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

^

Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP09137.i/19feb19i.b/wf19i07.d
/chem2/HP09137.i/19feb19i.b/wf19i06.d
/chem2/HP09137.i/19feb19i.b/wf19i05.d
/chem2/HP09137.i/19feb19i.b/wf19i04.d
/chem2/HP09137.i/19feb19i.b/wf19i03.d
/chem2/HP09137.i/19feb19i.b/wf19i02.d
/chem2/HP09137.i/19feb19i.b/wf19i01.d

File /chem2/HP09137.i/19feb19i.b/wf19i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP09137.i/19may18a.b/wy18c01.d

RT Summary

Internal Standard Name	File ID: wy18c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	2.738	2.728	Yes
Fluorobenzene	5.032	5.029	Yes
Chlorobenzene-d5	8.161	8.161	Yes
1,4-Dichlorobenzene-d4	10.041	10.038	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: wy18c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	189811	221988	110994	443976	Yes
Fluorobenzene	1026490	858650	429325	1717300	Yes
Chlorobenzene-d5	778376	703812	351906	1407624	Yes
1,4-Dichlorobenzene-d4	444015	393177	196588	786354	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 05/18/2019 at 22:28

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/18/19 Time: 22:05

Lab File ID: wy18c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
# Dichlorodifluoromethane	0.3233	0.3794	58.68	50	17	#
# Chloromethane	0.4026	0.3395	42.16	50	-16	#
1,3-Butadiene	0.2453	0.1978	40.30	50	-19	
# Vinyl Chloride	0.3690	0.3286	44.52	50	-11	#
# Bromomethane	0.2911	0.2702	46.41	50	-7	#
# Chloroethane	0.2429	0.2027	41.73	50	-17	#
n-Pentane	0.3728	0.3018	40.48	50	-19	
# Trichlorofluoromethane	0.3920	0.4147	52.90	50	6	#
Ethanol	0.1140	0.0601	659.20	1250	-47	<-
Freon 123a	0.2929	0.2637	45.01	50	-10	
Acrolein	1.7998	2.2411	622.59	500	25	<-
# 1,1-Dichloroethene	0.2204	0.2283	51.78	50	4	#
# 1,1-Dichloroethene(2)	0.1112	0.0866	38.95	50	-22	#<-
# Acetone	0.8748	1.0760	123.00	100	23	#<-
# Freon 113	0.1936	0.1979	51.11	50	2	#
2-Propanol	0.6500	0.6260	240.80	250	-4	
Methyl Iodide	0.4225	0.4272	50.56	50	1	
# Carbon Disulfide	0.7767	0.6706	43.17	50	-14	#
Allyl Chloride	0.3841	0.3558	46.33	50	-7	
# Methyl Acetate	0.3324	0.2877	43.28	50	-13	#
# Methylene Chloride	0.2695	0.2493	46.25	50	-7	#
t-Butyl alcohol	1.1595	1.2247	264.07	250	6	
Acrylonitrile	0.1749	0.1626	46.48	50	-7	
# trans-1,2-Dichloroethene	0.2392	0.2366	49.47	50	-1	#
# Methyl Tertiary Butyl Ether	0.5824	0.6339	54.42	50	9	#
n-Hexane	0.3200	0.3091	48.29	50	-3	
# 1,1-Dichloroethane	0.4334	0.4045	46.67	50	-7	#
di-Isopropyl ether	0.8327	0.7418	44.54	50	-11	
2-Chloro-1,3-butadiene	0.3754	0.3717	49.51	50	-1	
Ethyl t-butyl ether	0.6069	0.6070	50.01	50	0	
# cis-1,2-Dichloroethene	0.2686	0.2575	47.94	50	-4	#
# 2-Butanone	0.2512	0.2200	87.58	100	-12	#
2,2-Dichloropropane	0.1946	0.1613	41.43	50	-17	
Propionitrile	1.4410	1.7102	296.70	250	19	
Methacrylonitrile	0.1880	0.1662	110.47	125	-12	
Bromochloromethane	0.1396	0.1454	52.07	50	4	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

page 1 of 4

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/18/19 Time: 22:05

Lab File ID: wy18c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
Tetrahydrofuran	1.3337	1.7007	127.51	100	28	<-
# Chloroform	0.4067	0.4047	49.76	50	0	#
# 1,1,1-Trichloroethane	0.3060	0.3026	49.45	50	-1	#
# Cyclohexane	0.4049	0.3793	46.84	50	-6	#
# Cyclohexane(2)	0.3352	0.3080	45.95	50	-8	#
# Cyclohexane(3)	0.1217	0.1158	47.58	50	-5	#
1,1-Dichloropropene	0.3260	0.3138	48.13	50	-4	
# Carbon Tetrachloride	0.2626	0.2577	49.07	50	-2	#
Isobutyl Alcohol	0.4227	0.4660	688.95	625	10	
# Benzene	1.0480	0.9891	47.19	50	-6	#
# 1,2-Dichloroethane	0.3237	0.3186	49.21	50	-2	#
# 1,2-Dichloroethane(2)	0.0308	0.0317	51.46	50	3	#<-
t-Amyl methyl ether	0.6218	0.6140	49.37	50	-1	
n-Heptane	0.3059	0.2836	46.37	50	-7	
n-Butanol	0.3753	0.3815	1270.61	1250	2	
# Trichloroethene	0.2538	0.2501	49.27	50	-1	#
# Methylcyclohexane	0.3684	0.3769	51.15	50	2	#
# Methylcyclohexane(2)	0.1713	0.1752	51.13	50	2	#
# 1,2-Dichloropropane	0.2691	0.2454	45.61	50	-9	#
Dibromomethane	0.1661	0.1662	50.05	50	0	
1,4-Dioxane	0.1122	0.1247	694.87	625	11	
Methyl Methacrylate	0.2957	0.2695	45.57	50	-9	
# Bromodichloromethane	0.3051	0.2973	48.73	50	-3	#
2-Nitropropane	0.1032	0.1059	102.60	100	3	
2-Chloroethyl Vinyl Ether	0.2051	0.1920	46.81	50	-6	
# cis-1,3-Dichloropropene	0.4195	0.3941	46.98	50	-6	#
# 4-Methyl-2-pentanone	0.4953	0.4705	95.00	100	-5	#
# Toluene	0.8071	0.8480	52.53	50	5	#
# trans-1,3-Dichloropropene	0.4805	0.4836	50.32	50	1	#
Ethyl Methacrylate	0.5904	0.6088	51.56	50	3	
# 1,1,2-Trichloroethane	0.3106	0.3331	53.62	50	7	#
# Tetrachloroethene	0.3275	0.3665	55.96	50	12	#
1,3-Dichloropropane	0.5396	0.5572	51.63	50	3	
# 2-Hexanone	0.4700	0.4953	105.37	100	5	#
# Dibromochloromethane	0.3034	0.3366	55.47	50	11	#
# 1,2-Dibromoethane	0.3413	0.3667	53.72	50	7	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/18/19 Time: 22:05

Lab File ID: wy18c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Chlorobenzene	0.8953	0.9513	53.13	50	6	#
	1,1,1,2-Tetrachloroethane	0.2877	0.3128	54.36	50	9	
#	Ethylbenzene	1.5340	1.6077	52.40	50	5	#
#	m+p-Xylene	0.6099	0.6537	107.18	100	7	#
#	o-Xylene	0.6000	0.6309	52.57	50	5	#
#	Styrene	1.0065	1.0897	54.13	50	8	#
#	Bromoform	0.2361	0.2586	54.77	50	10	#
#	Isopropylbenzene	1.4744	1.5602	52.91	50	6	#
	Cyclohexanone	0.5061	0.4968	613.49	625	-2	
	Bromobenzene	0.7202	0.7701	53.47	50	7	
#	1,1,2,2-Tetrachloroethane	0.9712	0.9943	51.19	50	2	#
	1,2,3-Trichloropropane	0.2925	0.3123	53.38	50	7	
	trans-1,4-Dichloro-2-butene	0.3114	0.2807	112.68	125	-10	
	n-Propylbenzene	3.1748	3.1983	50.37	50	1	
	2-Chlorotoluene	0.6548	0.6917	52.82	50	6	
	4-Chlorotoluene	0.7010	0.7464	53.24	50	6	
	1,3,5-Trimethylbenzene	2.2896	2.3484	51.28	50	3	
	tert-Butylbenzene	0.5202	0.5327	51.20	50	2	
	Pentachloroethane	0.4112	0.4592	55.83	50	12	
	1,2,4-Trimethylbenzene	2.4127	2.4677	51.14	50	2	
	sec-Butylbenzene	2.8105	2.8006	49.82	50	0	
#	1,3-Dichlorobenzene	1.3733	1.4454	52.62	50	5	#
	p-Isopropyltoluene	2.4879	2.5375	51.00	50	2	
#	1,4-Dichlorobenzene	1.4237	1.4982	52.62	50	5	#
	1,2,3-Trimethylbenzene	2.5960	2.7197	52.38	50	5	
	Benzyl Chloride	1.9927	1.9922	49.99	50	0	
	1,3-Diethylbenzene	1.5632	1.5957	51.04	50	2	
	1,4-Diethylbenzene	1.6748	1.6814	50.20	50	0	
#	1,2-Dichlorobenzene	1.3625	1.4448	53.02	50	6	#
	n-Butylbenzene	1.2557	1.2037	47.93	50	-4	
	1,2-Diethylbenzene	1.3198	1.3620	51.60	50	3	
#	1,2-Dibromo-3-chloropropane	0.2207	0.2180	49.39	50	-1	#
	1,3,5-Trichlorobenzene	1.0448	1.0111	48.39	50	-3	
#	1,2,4-Trichlorobenzene	1.0030	0.9514	47.43	50	-5	#
	Hexachlorobutadiene	0.3573	0.3469	48.55	50	-3	
	Naphthalene	3.3939	3.3341	49.12	50	-2	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/18/19 Time: 22:05

Lab File ID: wy18c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

COMPOUND	$\overline{RRF}$	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
1,2,3-Trichlorobenzene	0.9790	0.9324	47.62	50	-5	
2-Methylnaphthalene	1.9363	1.5318	39.55	50	-21	<-
Dibromofluoromethane	0.2316	0.2234	48.22	50	-4	
Dibromofluoromethane(2)	0.2378	0.2276	47.87	50	-4	
1,2-Dichloroethane-d4	0.0616	0.0601	48.77	50	-2	
1,2-Dichloroethane-d4(2)	0.2682	0.2683	50.01	50	0	
1,2-Dichloroethane-d4(3)	0.0392	0.0393	50.03	50	0	
Toluene-d8	1.2529	1.2877	51.39	50	3	
Toluene-d8(2)	0.8309	0.8503	51.17	50	2	
4-Bromofluorobenzene	0.5012	0.4733	47.22	50	-6	
4-Bromofluorobenzene(2)	0.4229	0.4293	50.75	50	1	

Average %Drift 7

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

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Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP09137.i/19feb19i.b/wf19i07.d
/chem2/HP09137.i/19feb19i.b/wf19i06.d
/chem2/HP09137.i/19feb19i.b/wf19i05.d
/chem2/HP09137.i/19feb19i.b/wf19i04.d
/chem2/HP09137.i/19feb19i.b/wf19i03.d
/chem2/HP09137.i/19feb19i.b/wf19i02.d
/chem2/HP09137.i/19feb19i.b/wf19i01.d

File /chem2/HP09137.i/19feb19i.b/wf19i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP09137.i/19may19a.b/wy19c01.d

RT Summary

Internal Standard Name	File ID: wy19c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	2.735	2.728	Yes
Fluorobenzene	5.036	5.029	Yes
Chlorobenzene-d5	8.161	8.161	Yes
1,4-Dichlorobenzene-d4	10.041	10.038	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: wy19c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	188008	221988	110994	443976	Yes
Fluorobenzene	964374	858650	429325	1717300	Yes
Chlorobenzene-d5	743223	703812	351906	1407624	Yes
1,4-Dichlorobenzene-d4	427964	393177	196588	786354	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 05/19/2019 at 12:06

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/19/19 Time: 11:32

Lab File ID: wy19c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	$\overline{RRF}$	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Dichlorodifluoromethane	0.3233	0.3657	56.55	50	13	#
#	Chloromethane	0.4026	0.2944	36.57	50	-27	#<-
|	1,3-Butadiene	0.2453	0.1852	37.74	50	-25	|<-
#	Vinyl Chloride	0.3690	0.2924	39.62	50	-21	#<-
#	Bromomethane	0.2911	0.2532	43.50	50	-13	#
#	Chloroethane	0.2429	0.1832	37.72	50	-25	#<-
|	n-Pentane	0.3728	0.2999	40.23	50	-20	|
#	Trichlorofluoromethane	0.3920	0.3947	50.35	50	1	#
|	Ethanol	0.1140	0.0670	734.17	1250	-41	|<-
|	Freon 123a	0.2929	0.2696	46.03	50	-8	|
|	Acrolein	1.7998	1.7033	473.19	500	-5	|
#	1,1-Dichloroethene	0.2204	0.2188	49.63	50	-1	#
#	1,1-Dichloroethene(2)	0.1112	0.0910	40.92	50	-18	#<-
#	Acetone	0.8748	0.9094	103.95	100	4	#
#	Freon 113	0.1936	0.1932	49.89	50	0	#
|	2-Propanol	0.6500	0.6252	240.47	250	-4	|
|	Methyl Iodide	0.4225	0.4326	51.20	50	2	|
#	Carbon Disulfide	0.7767	0.6482	41.73	50	-17	#
|	Allyl Chloride	0.3841	0.3612	47.02	50	-6	|
#	Methyl Acetate	0.3324	0.2875	43.25	50	-14	#
#	Methylene Chloride	0.2695	0.2561	47.53	50	-5	#
|	t-Butyl alcohol	1.1595	1.1956	257.79	250	3	|
|	Acrylonitrile	0.1749	0.1437	41.08	50	-18	|
#	trans-1,2-Dichloroethene	0.2392	0.2329	48.68	50	-3	#
#	Methyl Tertiary Butyl Ether	0.5824	0.6782	58.22	50	16	#
|	n-Hexane	0.3200	0.2866	44.78	50	-10	|
#	1,1-Dichloroethane	0.4334	0.4032	46.52	50	-7	#
|	di-Isopropyl ether	0.8327	0.7485	44.94	50	-10	|
|	2-Chloro-1,3-butadiene	0.3754	0.3756	50.02	50	0	|
|	Ethyl t-butyl ether	0.6069	0.6332	52.16	50	4	|
#	cis-1,2-Dichloroethene	0.2686	0.2565	47.76	50	-4	#
#	2-Butanone	0.2512	0.2005	79.81	100	-20	#
|	2,2-Dichloropropane	0.1946	0.1570	40.34	50	-19	|
|	Propionitrile	1.4410	1.6529	286.76	250	15	|
|	Methacrylonitrile	0.1880	0.1657	110.13	125	-12	|
|	Bromochloromethane	0.1396	0.1490	53.38	50	7	|

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/19/19 Time: 11:32

Lab File ID: wy19c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	$\overline{RRF}$	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Tetrahydrofuran	1.3337	1.4592	109.41	100	9	
#	Chloroform	0.4067	0.4099	50.39	50	1	#
#	1,1,1-Trichloroethane	0.3060	0.3102	50.69	50	1	#
#	Cyclohexane	0.4049	0.3470	42.85	50	-14	#
#	Cyclohexane(2)	0.3352	0.2839	42.35	50	-15	#
#	Cyclohexane(3)	0.1217	0.1071	43.98	50	-12	#
	1,1-Dichloropropene	0.3260	0.3080	47.23	50	-6	
#	Carbon Tetrachloride	0.2626	0.2633	50.14	50	0	#
	Isobutyl Alcohol	0.4227	0.4462	659.73	625	6	
#	Benzene	1.0480	0.9918	47.32	50	-5	#
#	1,2-Dichloroethane	0.3237	0.3356	51.82	50	4	#
#	1,2-Dichloroethane(2)	0.0308	0.0321	52.14	50	4	#<-
	t-Amyl methyl ether	0.6218	0.6176	49.67	50	-1	
	n-Heptane	0.3059	0.2658	43.45	50	-13	
	n-Butanol	0.3753	0.3537	1178.19	1250	-6	
#	Trichloroethene	0.2538	0.2497	49.19	50	-2	#
#	Methylcyclohexane	0.3684	0.3888	52.77	50	6	#
#	Methylcyclohexane(2)	0.1713	0.1842	53.75	50	7	#
#	1,2-Dichloropropane	0.2691	0.2476	46.01	50	-8	#
	Dibromomethane	0.1661	0.1668	50.24	50	0	
	1,4-Dioxane	0.1122	0.1328	739.49	625	18	
	Methyl Methacrylate	0.2957	0.2684	45.39	50	-9	
#	Bromodichloromethane	0.3051	0.3060	50.16	50	0	#
	2-Nitropropane	0.1032	0.0967	93.64	100	-6	
	2-Chloroethyl Vinyl Ether	0.2051	0.1657	40.39	50	-19	
#	cis-1,3-Dichloropropene	0.4195	0.3877	46.21	50	-8	#
#	4-Methyl-2-pentanone	0.4953	0.4264	86.10	100	-14	#
#	Toluene	0.8071	0.8302	51.43	50	3	#
#	trans-1,3-Dichloropropene	0.4805	0.4802	49.97	50	0	#
	Ethyl Methacrylate	0.5904	0.5759	48.77	50	-2	
#	1,1,2-Trichloroethane	0.3106	0.3318	53.40	50	7	#
#	Tetrachloroethene	0.3275	0.3492	53.31	50	7	#
	1,3-Dichloropropane	0.5396	0.5582	51.73	50	3	
#	2-Hexanone	0.4700	0.4282	91.10	100	-9	#
#	Dibromochloromethane	0.3034	0.3351	55.23	50	10	#
#	1,2-Dibromoethane	0.3413	0.3670	53.77	50	8	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/19/19 Time: 11:32

Lab File ID: wy19c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	$\overline{RRF}$	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Chlorobenzene	0.8953	0.9491	53.00	50	6	#
	1,1,1,2-Tetrachloroethane	0.2877	0.3134	54.46	50	9	
#	Ethylbenzene	1.5340	1.5468	50.42	50	1	#
#	m+p-Xylene	0.6099	0.6289	103.11	100	3	#
#	o-Xylene	0.6000	0.6172	51.43	50	3	#
#	Styrene	1.0065	1.0651	52.91	50	6	#
#	Bromoform	0.2361	0.2526	53.49	50	7	#
#	Isopropylbenzene	1.4744	1.4612	49.55	50	-1	#
	Cyclohexanone	0.5061	0.4194	517.97	625	-17	
	Bromobenzene	0.7202	0.7560	52.49	50	5	
#	1,1,2,2-Tetrachloroethane	0.9712	0.9618	49.52	50	-1	#
	1,2,3-Trichloropropane	0.2925	0.3068	52.44	50	5	
	trans-1,4-Dichloro-2-butene	0.3114	0.2870	115.21	125	-8	
	n-Propylbenzene	3.1748	2.9437	46.36	50	-7	
	2-Chlorotoluene	0.6548	0.6549	50.01	50	0	
	4-Chlorotoluene	0.7010	0.7137	50.91	50	2	
	1,3,5-Trimethylbenzene	2.2896	2.1945	47.92	50	-4	
	tert-Butylbenzene	0.5202	0.4905	47.15	50	-6	
	Pentachloroethane	0.4112	0.4426	53.82	50	8	
	1,2,4-Trimethylbenzene	2.4127	2.3454	48.60	50	-3	
	sec-Butylbenzene	2.8105	2.5067	44.59	50	-11	
#	1,3-Dichlorobenzene	1.3733	1.3801	50.25	50	0	#
	p-Isopropyltoluene	2.4879	2.2678	45.58	50	-9	
#	1,4-Dichlorobenzene	1.4237	1.4427	50.67	50	1	#
	1,2,3-Trimethylbenzene	2.5960	2.6042	50.16	50	0	
	Benzyl Chloride	1.9927	1.9301	48.43	50	-3	
	1,3-Diethylbenzene	1.5632	1.5314	48.98	50	-2	
	1,4-Diethylbenzene	1.6748	1.5932	47.56	50	-5	
#	1,2-Dichlorobenzene	1.3625	1.3845	50.81	50	2	#
	n-Butylbenzene	1.2557	1.0925	43.50	50	-13	
	1,2-Diethylbenzene	1.3198	1.2856	48.70	50	-3	
#	1,2-Dibromo-3-chloropropane	0.2207	0.2101	47.60	50	-5	#
	1,3,5-Trichlorobenzene	1.0448	0.9422	45.09	50	-10	
#	1,2,4-Trichlorobenzene	1.0030	0.8909	44.41	50	-11	#
	Hexachlorobutadiene	0.3573	0.3523	49.31	50	-1	
	Naphthalene	3.3939	3.1862	46.94	50	-6	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/19/19 Time: 11:32

Lab File ID: wy19c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

COMPOUND	$\overline{RRF}$	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
1,2,3-Trichlorobenzene	0.9790	0.8871	45.30	50	-9	
2-Methylnaphthalene	1.9363	1.5117	39.04	50	-22	<-
Dibromofluoromethane	0.2316	0.2266	48.91	50	-2	
Dibromofluoromethane(2)	0.2378	0.2342	49.25	50	-1	
1,2-Dichloroethane-d4	0.0616	0.0612	49.68	50	-1	
1,2-Dichloroethane-d4(2)	0.2682	0.2786	51.95	50	4	
1,2-Dichloroethane-d4(3)	0.0392	0.0395	50.33	50	1	
Toluene-d8	1.2529	1.2855	51.30	50	3	
Toluene-d8(2)	0.8309	0.8457	50.89	50	2	
4-Bromofluorobenzene	0.5012	0.4794	47.83	50	-4	
4-Bromofluorobenzene(2)	0.4229	0.4378	51.75	50	4	

Average %Drift 8

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): wy18c01.d Date Analyzed: 05/18/19

Instrument ID: HP09137 Time Analyzed: 22:05

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	189811	2.738	1026490	5.032	778376	8.161	444015	10.041
UPPER LIMIT	379622	3.238	2052980	5.532	1556752	8.661	888030	10.541
LOWER LIMIT	94906	2.238	513245	4.532	389188	7.661	222008	9.541
LAB SAMPLE ID								
01 LCSW23	185223	2.732	1049302	5.032	796496	8.161	447919	10.042
02 VBLKW23	177555	2.744	947707	5.032	739589	8.161	377751	10.045
03 1053375	164279	2.744	947536	5.032	733814	8.161	371974	10.041
04 1053376	162632	2.741	947368	5.032	724356	8.161	373316	10.041
05 1053379	159659	2.744	911949	5.029	705020	8.161	363154	10.042
06 1053382	129701	2.738	887744	5.032	694656	8.161	348961	10.041
07 1053383	152533	2.741	879049	5.032	672115	8.161	348025	10.042
08 1053360MS	182190	2.738	951889	5.032	736014	8.161	416077	10.041
09 1053361MSD	186782	2.738	972725	5.032	734147	8.161	421474	10.041
10 1053352	178385	2.741	928725	5.032	717617	8.161	371056	10.041
11 1053353	157253	2.741	917983	5.032	710608	8.161	363159	10.041
12 1053354	147925	2.744	925895	5.032	721769	8.161	368493	10.042
13 1053355	166431	2.744	910763	5.032	705796	8.161	359701	10.041
14 1053356	169028	2.744	883199	5.032	686111	8.161	345609	10.041
15 1053357	162426	2.741	874167	5.032	681629	8.161	347282	10.042
16 1053358	138607	2.738	877279	5.032	676081	8.161	353388	10.041
17 1053362	151916	2.744	856060	5.032	666355	8.164	337861	10.041
18 1053363	127654	2.744	871075	5.032	670686	8.161	342923	10.041

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

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8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): wy19c01.d Date Analyzed: 05/19/19

Instrument ID: HP09137 Time Analyzed: 11:32

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	188008	2.735	964374	5.036	743223	8.161	427964	10.042
UPPER LIMIT	376016	3.235	1928748	5.536	1486446	8.661	855928	10.542
LOWER LIMIT	94004	2.235	482187	4.536	371612	7.661	213982	9.542
LAB SAMPLE ID								
01 VBLKW24	161128	2.741	907592	5.032	688339	8.164	358292	10.042
02 VBLKW25	161128	2.741	907592	5.032	688339	8.164	358292	10.042
03 LCSW25	145218	2.738	948146	5.032	728644	8.161	414799	10.042
04 LCSW24	145218	2.738	948146	5.032	728644	8.161	414799	10.042
05 MDL0.5 - MD	169887	2.738	917398	5.032	708870	8.164	361566	10.042
06 MDL0.5 - MD	169887	2.738	917398	5.032	708870	8.164	361566	10.042
07 1053374	140048	2.741	882636	5.032	680257	8.164	351344	10.041
08 1053377	128737	2.744	857690	5.032	666191	8.161	342215	10.041
09 1053378	135799	2.741	848569	5.032	666891	8.164	338640	10.041
10 1053380	124134	2.738	852058	5.032	658002	8.161	341161	10.042
11 1053381	124381	2.741	861333	5.029	665001	8.161	340579	10.041
12 1053359	148557	2.744	856880	5.036	661965	8.161	342278	10.041
13 1052544	169696	2.748	831394	5.032	650814	8.161	334236	10.042
14 1052546	128981	2.734	830171	5.032	643794	8.161	336801	10.041
15 1052547MS	145234	2.741	909156	5.032	696482	8.161	404082	10.041
16 1052548MSD	160669	2.738	922034	5.032	701245	8.161	408875	10.041
17 1052549	159340	2.738	879768	5.032	679937	8.161	346825	10.042
18 1052550	134349	2.741	863162	5.032	664463	8.161	341845	10.041
19 1052551	116338	2.741	854134	5.032	657360	8.161	339157	10.041
20 1052552	162777	2.741	854183	5.032	660366	8.161	339742	10.041
21 1052553	150089	2.748	851946	5.032	670129	8.161	345630	10.042
22 1052554	155827	2.744	843676	5.032	653069	8.161	338201	10.041

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): wy19c01.d Date Analyzed: 05/19/19

Instrument ID: HP09137 Time Analyzed: 11:32

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA) AREA #	RT #	IS2(FBZ) AREA #	RT #	IS3(CBZ) AREA #	RT #	IS4(DCB) AREA #	RT #
12 HOUR STD	188008	2.735	964374	5.036	743223	8.161	427964	10.042
UPPER LIMIT	376016	3.235	1928748	5.536	1486446	8.661	855928	10.542
LOWER LIMIT	94004	2.235	482187	4.536	371612	7.661	213982	9.542
LAB SAMPLE ID								
23 1052556	154081	2.741	835482	5.032	653803	8.161	331767	10.041
24 1052987	156447	2.744	828795	5.032	642931	8.161	332591	10.042
25 SECC050	175459	2.738	898393	5.032	699815	8.161	405307	10.041

IS1 (TBA)=t-Butyl alcohol-d10 UPPER LIMIT = + 100%
IS2 (FBZ)=Fluorobenzene of internal standard area.
IS3 (CBZ)=Chlorobenzene-d5 LOWER LIMIT = - 50%
IS4 (DCB)=1,4-Dichlorobenzene-d4 of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

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Sample Data

Volatiles by GC/MS

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
J0101

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053358

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s21.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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J0101 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1053358

Data file: /chem2/HP09137.i/19may18a.b/wy18s21.d Injection date and time: **19-MAY-2019 07:13**
Data file Sample Info. Line: J0101;1053358;1;0;;JCV88;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.738	(0.000)	594	65	138607	(-27)	250.00	
66) Fluorobenzene	5.032	(0.000)	1309	96	877279	(-15)	50.00	
101) Chlorobenzene-d5	8.161	(0.000)	2284	117	676081	(-13)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041	(0.000)	2870	152	353388	(-20)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.358	(0.001)	113	202363	49.791	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692	(0.000)	102	55162	51.033	102%		80 - 120
84) Toluene-d8	(3)	6.698	(0.000)	98	851463	50.260	101%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.000)	95	293665	43.329	87%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Linda C. Pape on 05/28/2019 at 15:04. Target 3.5 esignature user ID: lcp00895

Data file: /chem2/HP09137.i/19may18a.b/wy18s21.d Injection date and time: **19-MAY-2019 07:13**
Data file Sample Info. Line: J0101;1053358;1;0;;JCV88;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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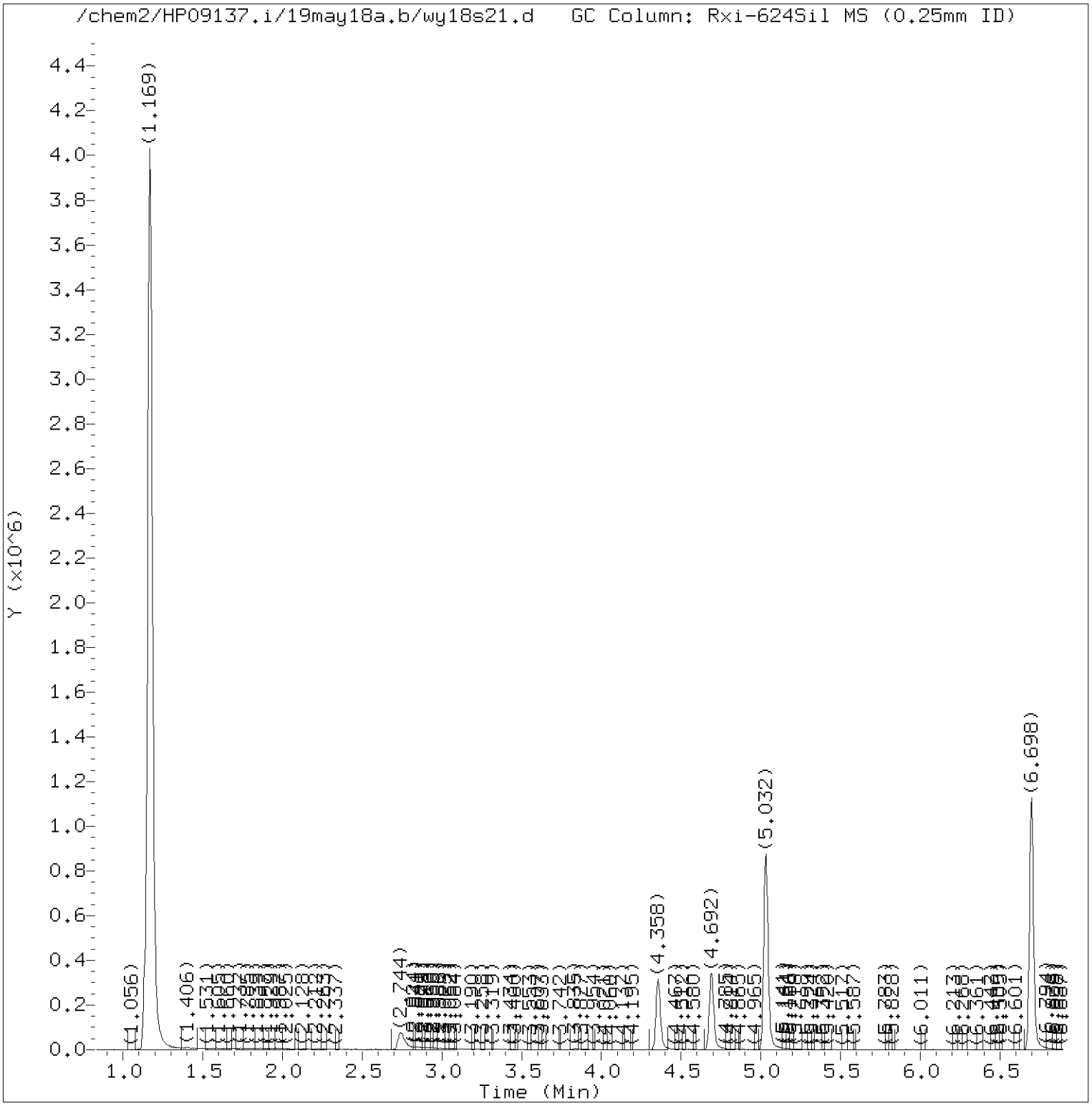
Total number of targets = 24

Digitally signed by Linda C. Pape on 05/28/2019 at 15:04. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 15:40. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

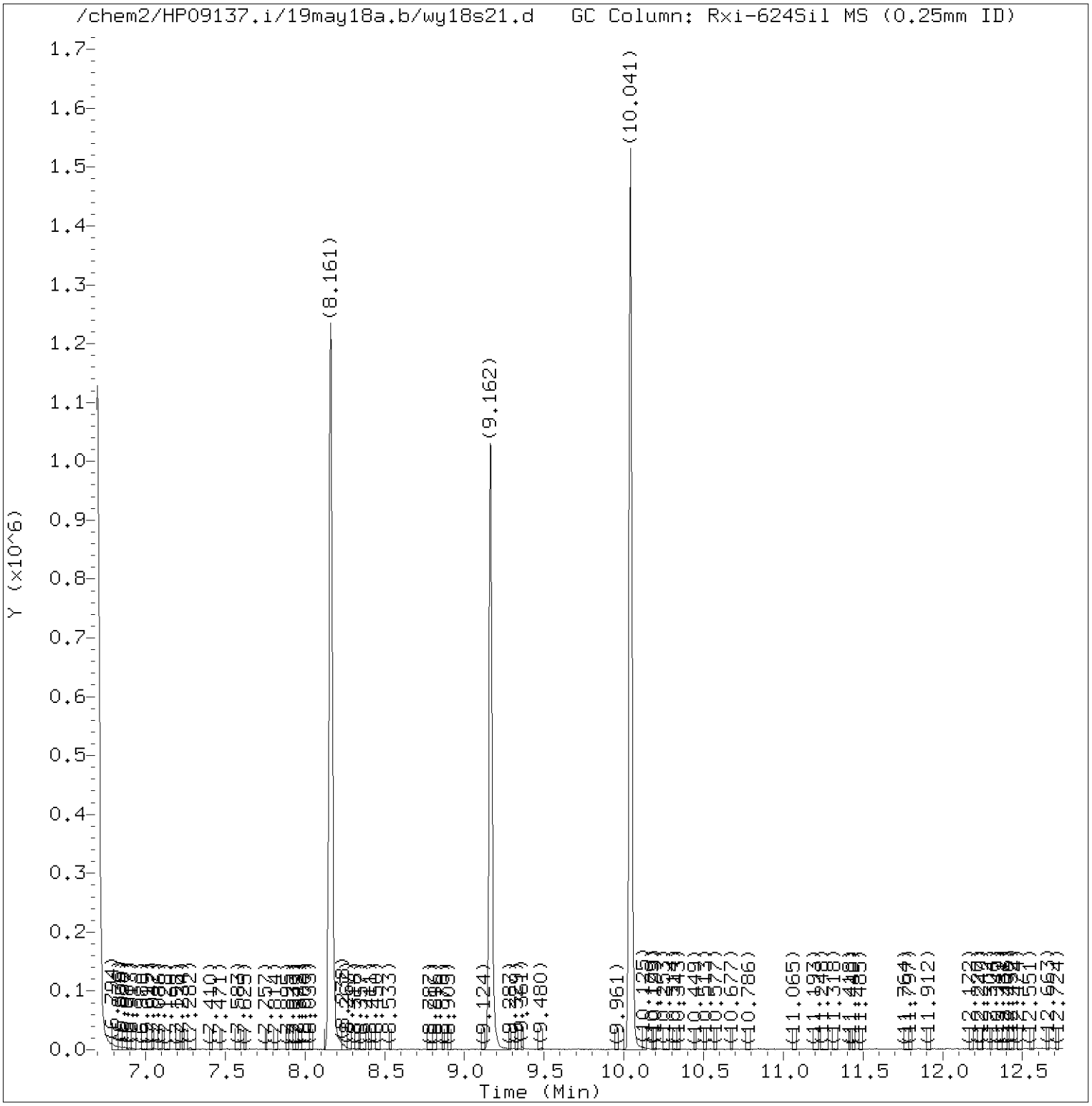
Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s21.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 07:13 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: J0101 Lab Sample ID: 1053358

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:04.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s21.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 07:13 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: J0101 Lab Sample ID: 1053358

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:04.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s21.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 07:13 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: J0101 Lab Sample ID: 1053358

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.738	65	138607	250.000
52)$Dibromofluoromethane	(2)	4.358	113	202363	49.791
57)$1,2-Dichloroethane-d4	(2)	4.692	102	55162	51.033
66)*Fluorobenzene	(2)	5.032	96	877279	50.000
84)$Toluene-d8	(3)	6.698	98	851463	50.260
101)*Chlorobenzene-d5	(3)	8.161	117	676081	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	293665	43.329
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	353388	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:04.
Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J0102

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053359

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may19a.b/wy19s07.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.3	J
156-59-2	cis-1,2-Dichloroethene	1	
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	2	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	4	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	13	
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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J0102 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1053359

Data file: /chem2/HP09137.i/19may19a.b/wy19s07.d Injection date and time: **19-MAY-2019 15:30**
Data file Sample Info. Line: J0102;1053359;1;0;;JCV88;;;wy19b02; Instrument ID: **HP09137.i** Batch: **W191381AB**
Date, time and analyst ID of latest file update: 07-Jun-2019 00:10 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may19a.b/wy19b02.d**

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 04-JUN-2019 15:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may19a.b/wy19c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:9274

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.744	(-0.010)	596	65	148557	(-21)	250.00	
66) Fluorobenzene	5.036	(0.000)	1310	96	856880	(-11)	50.00	
101) Chlorobenzene-d5	8.161	(0.000)	2284	117	661965	(-11)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041	(0.000)	2870	152	342278	(-20)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.358	(0.000)	113	194712	49.049	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692	(0.000)	102	53316	50.499	101%		80 - 120
84) Toluene-d8	(3)	6.698	(0.000)	98	832716	50.201	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.000)	95	287715	43.357	87%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	3.335	(0.001)	63	2334M	0.314	0.31		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	3.893	(0.000)	96	4634	1.007	1.01			0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	4.381	(0.000)	97	12733M	2.428	2.43			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	5.404	(0.000)	95	19555	4.496	4.50			0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)	7.359	(0.000)	166	57093	13.168	13.17			0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

M = Compound was manually integrated.

Digitally signed by Kevin A. Sposito on 06/07/2019 at 15:29. Target 3.5 esignature user ID: kas02648

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may19a.b/wy19s07.d Injection date and time: **19-MAY-2019 15:30**
Data file Sample Info. Line: J0102;1053359;1;0;;JCV88;;;wy19b02; Instrument ID: **HP09137.i** Batch: **W191381AB**
Date, time and analyst ID of latest file update: 07-Jun-2019 00:10 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may19a.b/wy19b02.d**

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 04-JUN-2019 15:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may19a.b/wy19c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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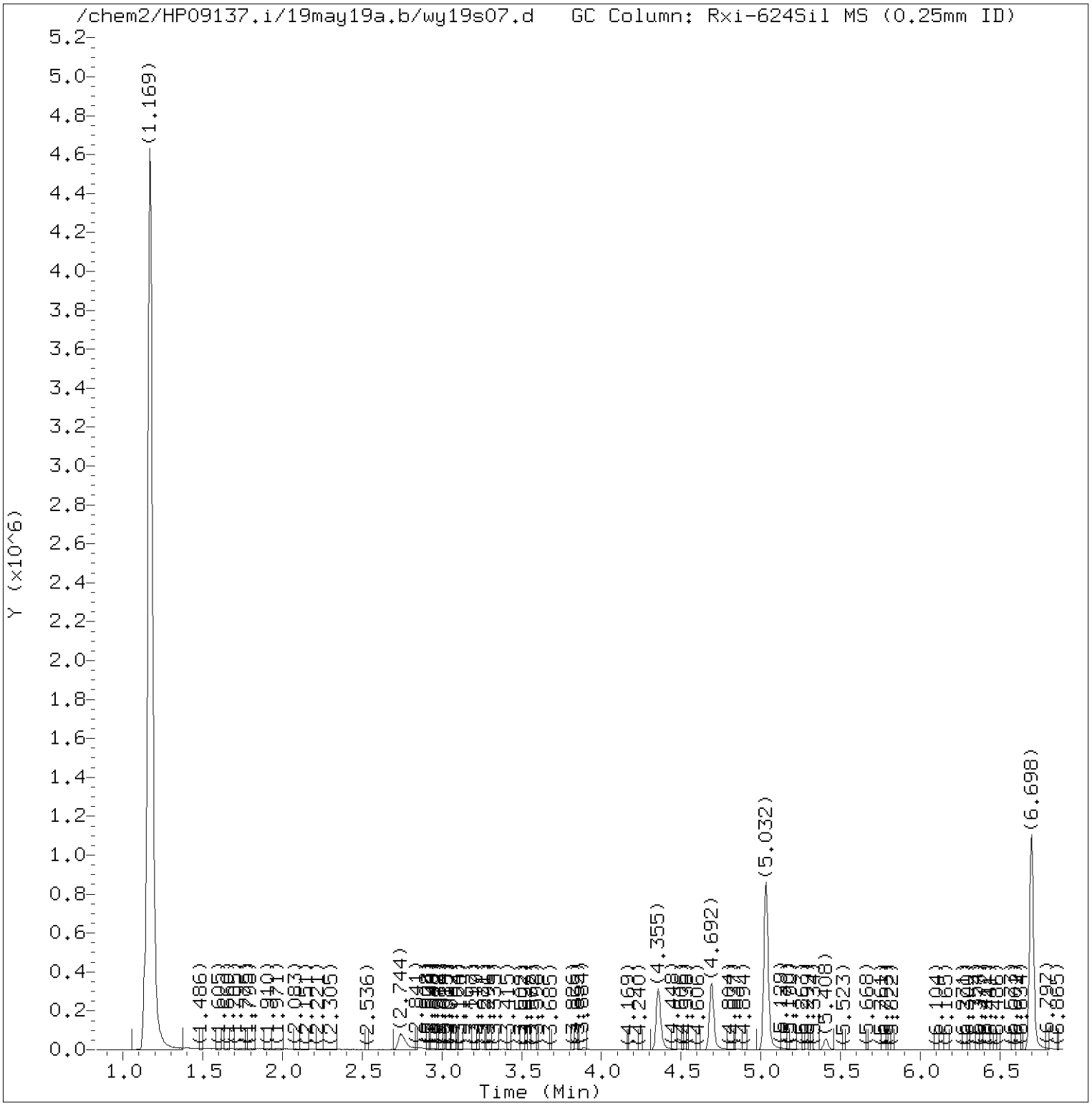
Total number of targets = 24

Digitally signed by Kevin A. Sposito on 06/07/2019 at 15:29. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Roy R. Mellott on 06/12/2019 at 17:05. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

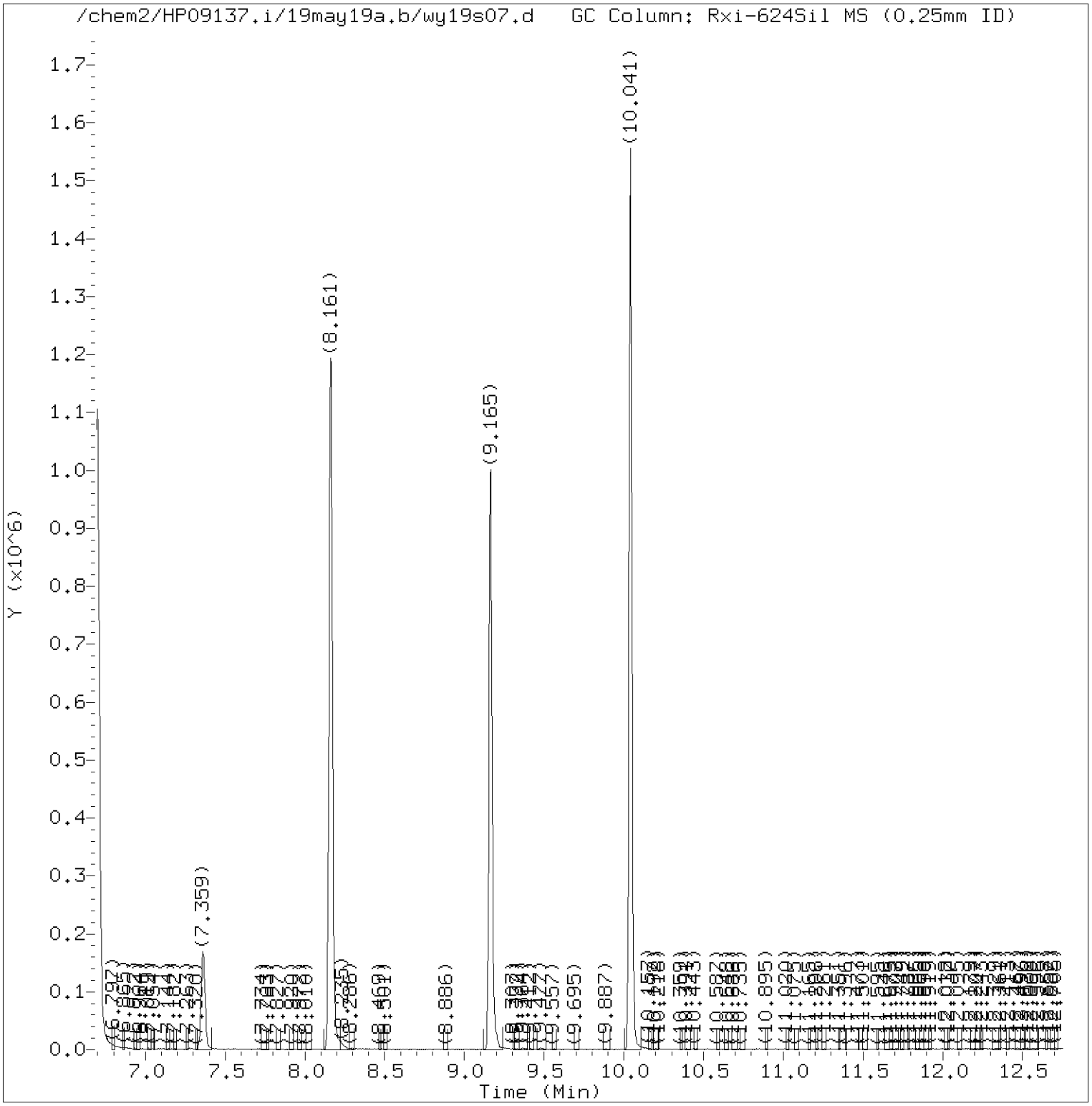
Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19s07.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 15:30 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:10 sej02002

Sample Name: J0102 Lab Sample ID: 1053359

Digitally signed by Kevin A. Sposito
on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19s07.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 15:30 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:10 sej02002

Sample Name: J0102 Lab Sample ID: 1053359

Digitally signed by Kevin A. Sposito
on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19s07.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 15:30 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:10 sej02002

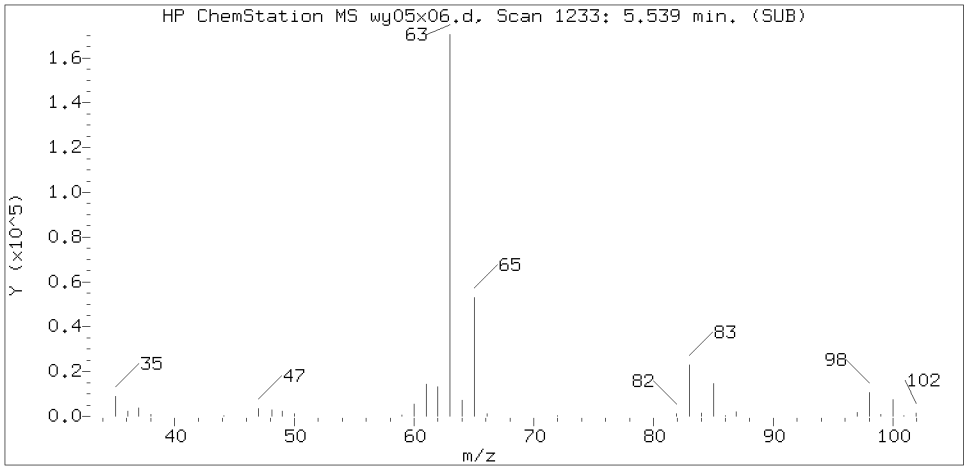
Sample Name: J0102 Lab Sample ID: 1053359

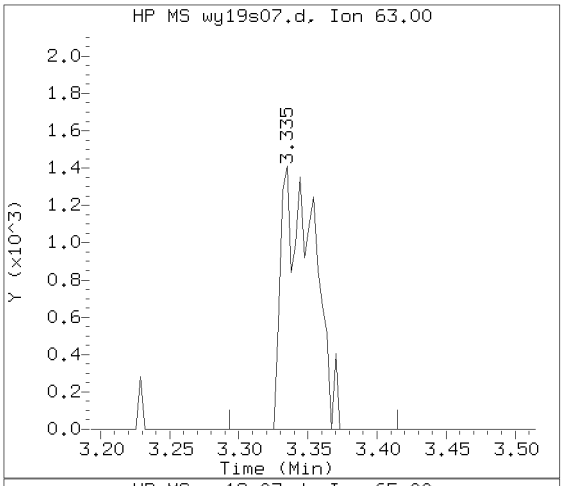
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.744	65	148557	250.000
36) 1,1-Dichloroethane	(2)	3.335	63	2334M	0.314
42) cis-1,2-Dichloroethene	(2)	3.893	96	4634	1.007
52)$Dibromofluoromethane	(2)	4.358	113	194712	49.049
53) 1,1,1-Trichloroethane	(2)	4.381	97	12733M	2.428
57)$1,2-Dichloroethane-d4	(2)	4.692	102	53316	50.499
66)*Fluorobenzene	(2)	5.036	96	856880	50.000
71) Trichloroethene	(2)	5.405	95	19555	4.496
84)$Toluene-d8	(3)	6.698	98	832716	50.201
94) Tetrachloroethene	(3)	7.359	166	57093	13.168
101)*Chlorobenzene-d5	(3)	8.161	117	661965	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	287715	43.357
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	342278	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

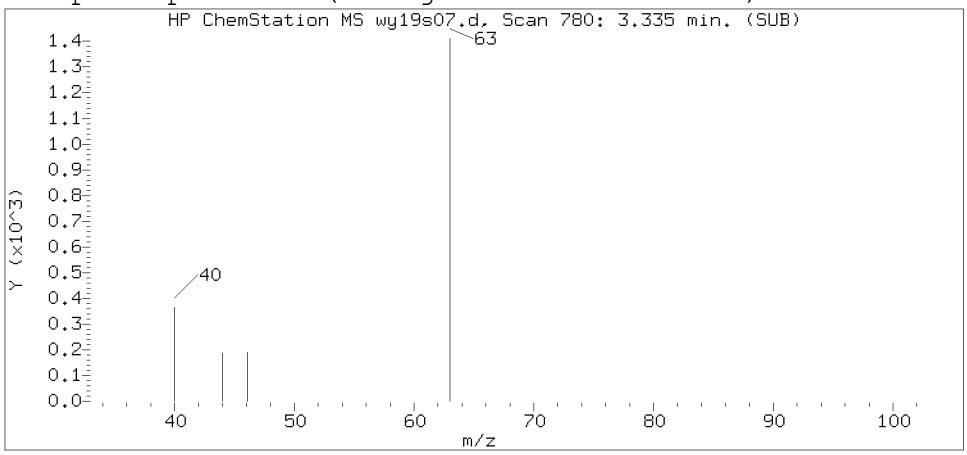
Digitally signed by Kevin A. Sposito
on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648

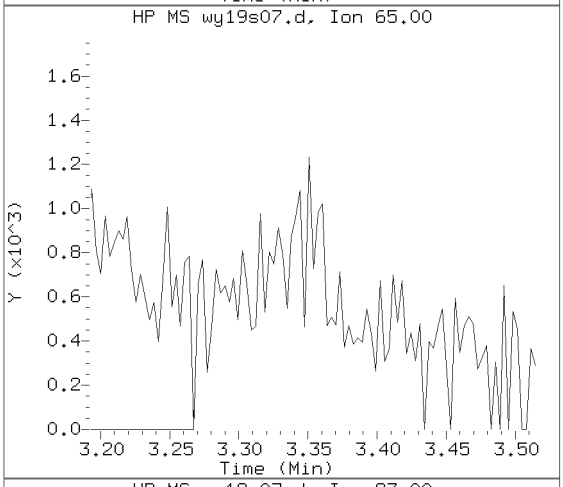
Reference Standard Spectrum for 1,1-Dichloroethane



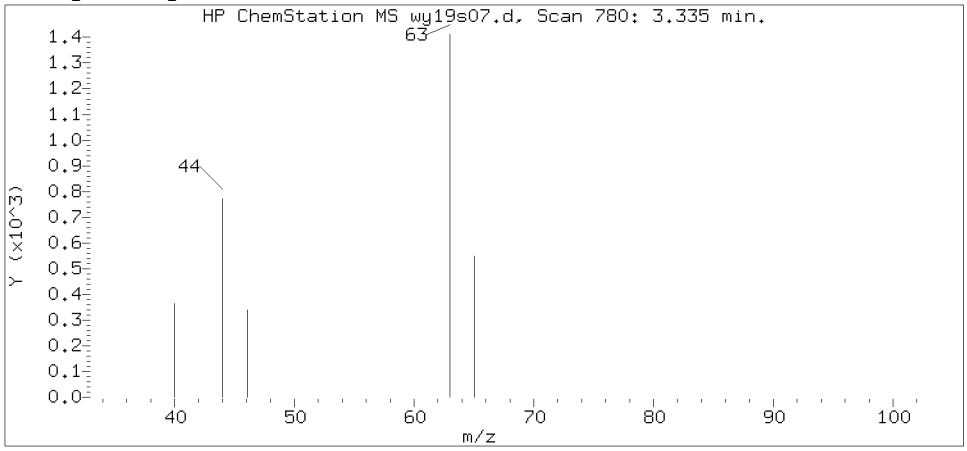


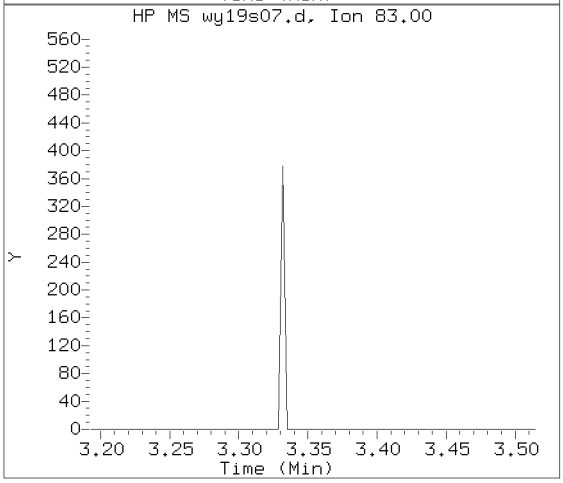
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP09137.i/19may19a.b/wy19s07.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 15:30 Analyst ID: CBR01947

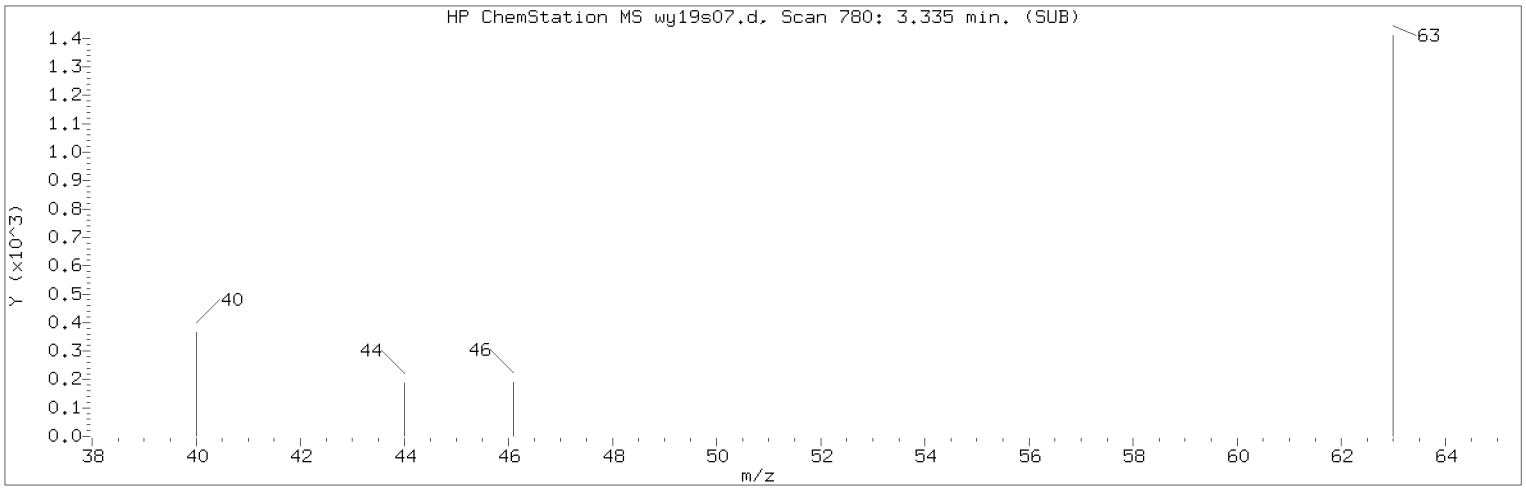
Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:10 sej02002

Sample Name: J0102 Lab Sample ID: 1053359

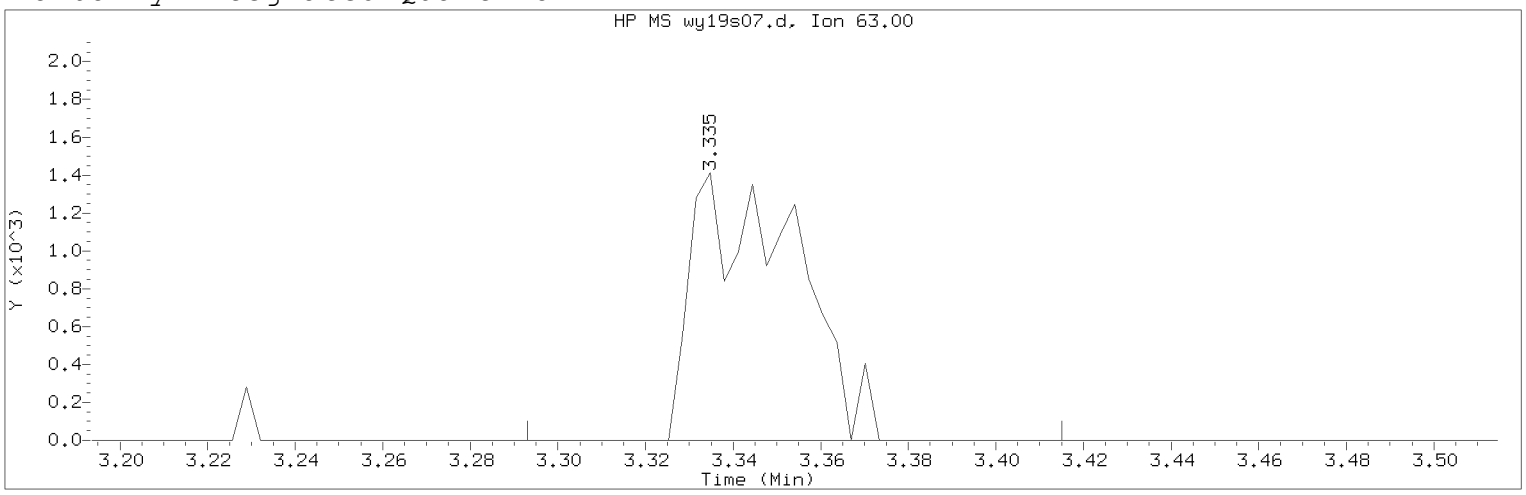
Compound Number	: 36
Compound Name	: 1,1-Dichloroethane
Scan Number	: 780
Retention Time (minutes)	: 3.335
Relative Retention Time	: 0.00191
Quant Ion	: 63.00
Area (flag)	: 2334M
On-Column Amount (ng)	: 0.3143

Digitally signed by Kevin A. Sposito on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19s07.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 15:30 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:10 sej02002

Sample Name: J0102 Lab Sample ID: 1053359

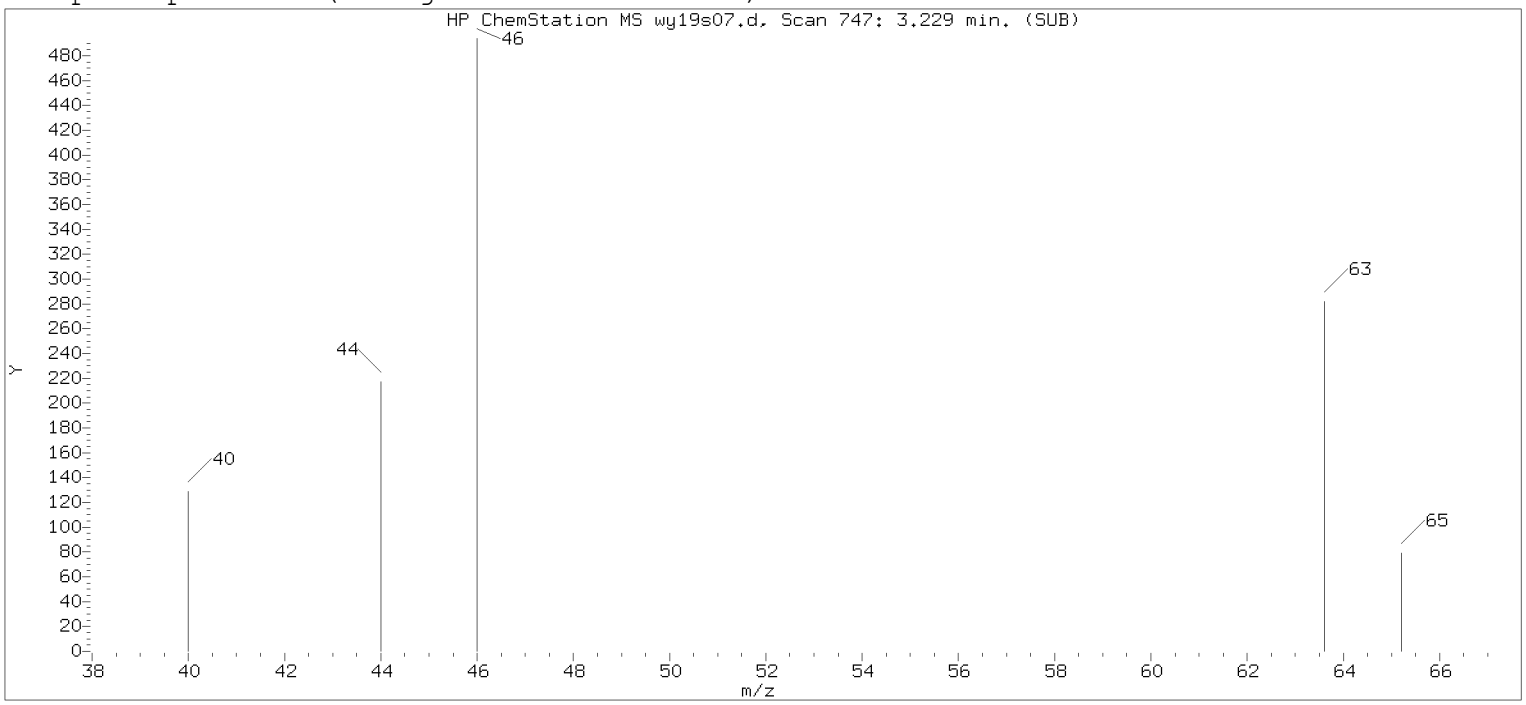
Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 780
Retention Time (minutes): 3.335
Quant Ion : 63.00
Area (flag) : 2334M
On-Column Amount (ng) : 0.3143
Integration start scan : 766 Integration stop scan: 804
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

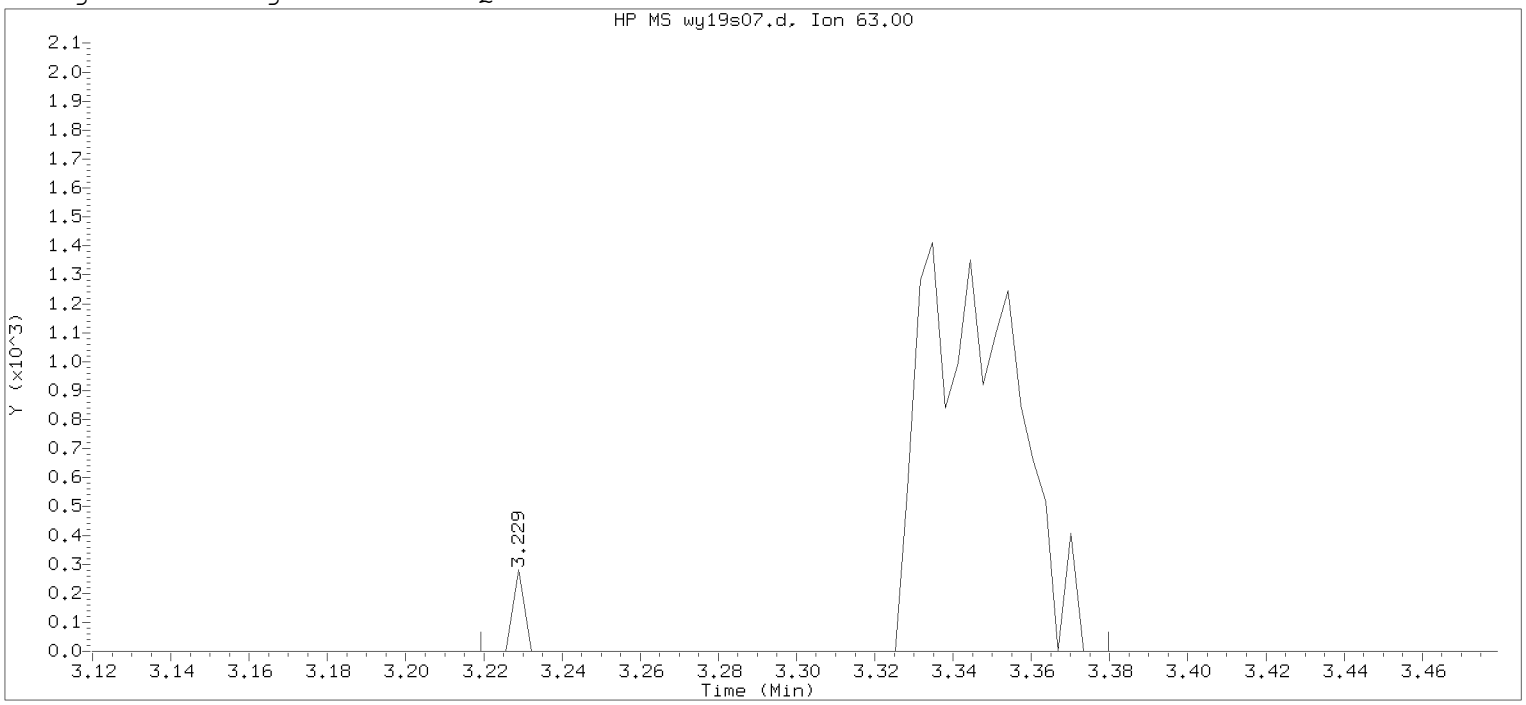
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Roy R. Mellott on 06/12/2019 at 17:05.
PARALLAX ID: rrm00219

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19s07.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 15:30 Analyst ID: CBR01947

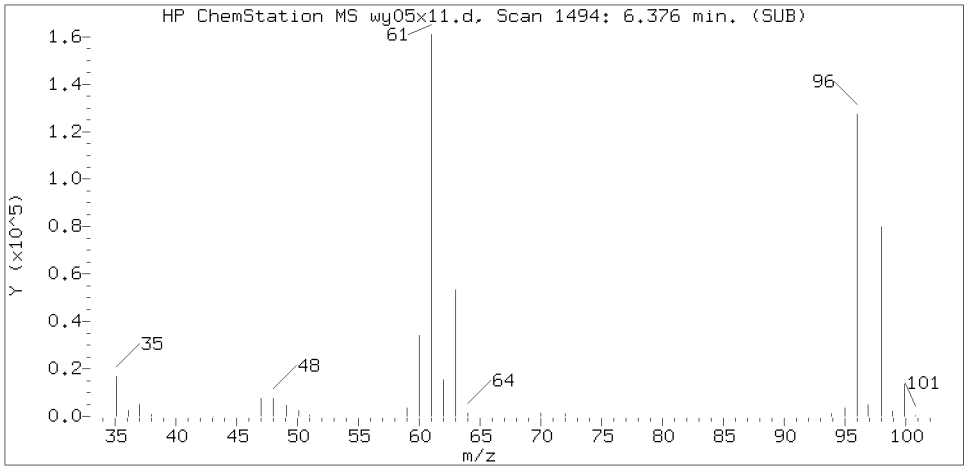
Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Sample Name: J0102 Lab Sample ID: 1053359

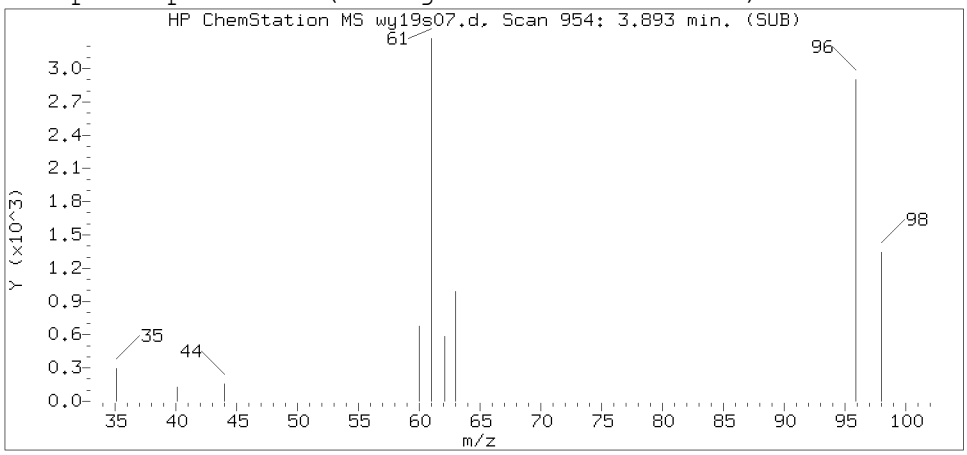
Compound Number	: 36		
Compound Name	: 1,1-Dichloroethane		
Scan Number	: 747		
Retention Time (minutes)	: 3.229		
Quant Ion	: 63.00		
Area	: 2388		
On-column Amount (ng)	: 0.3216		
Integration start scan	: 743	Integration stop scan:	793
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: KASPOSITO

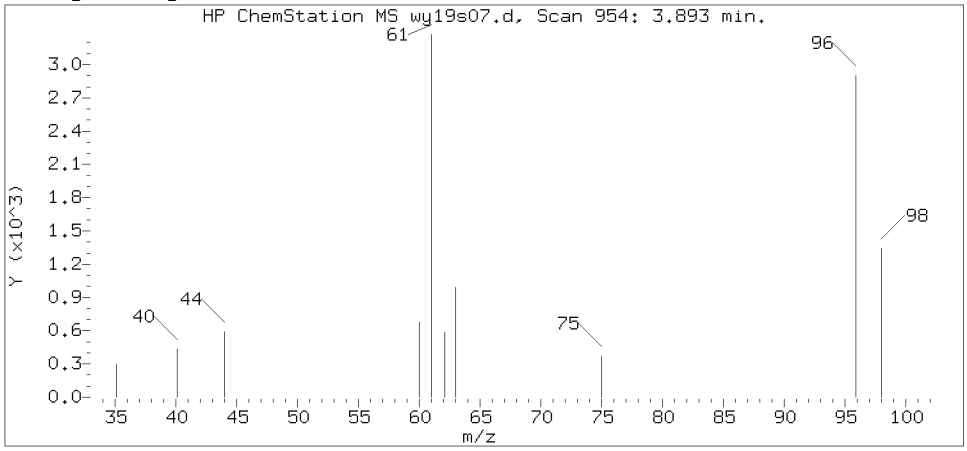
Reference Standard Spectrum for cis-1,2-Dichloroethene

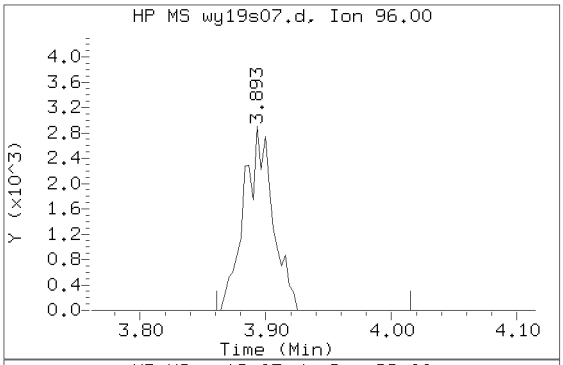


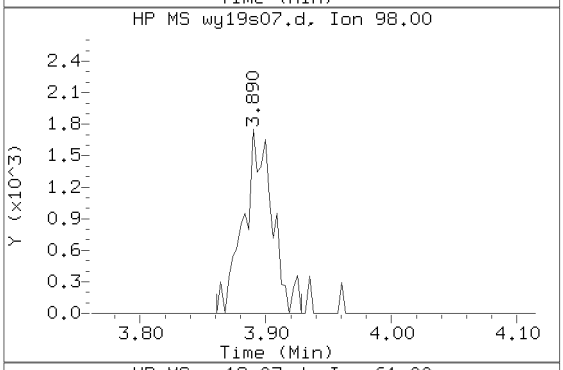
Sample Spectrum (Background Subtracted)

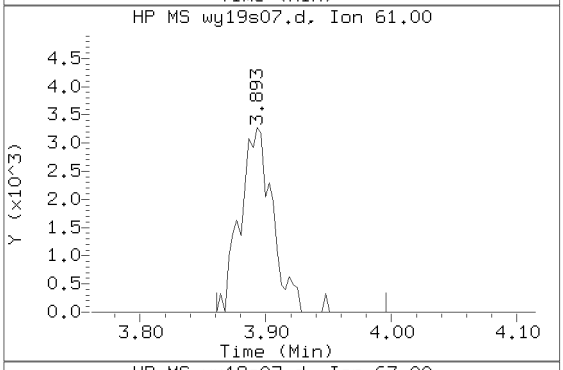


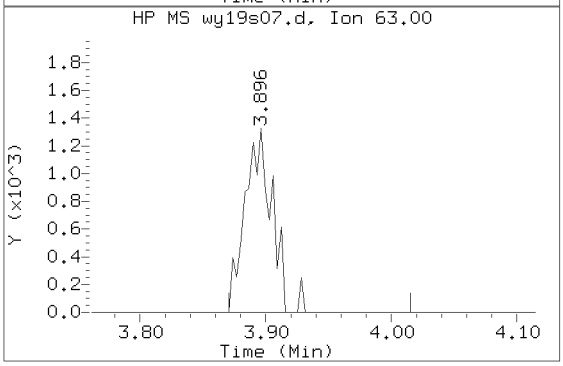
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/19may19a.b/wy19s07.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 15:30 Analyst ID: CBR01947

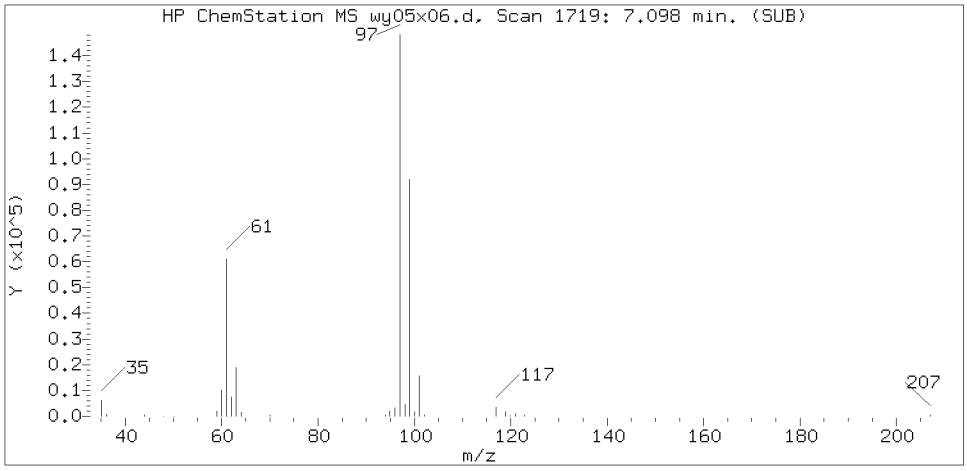
Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:10 sej02002

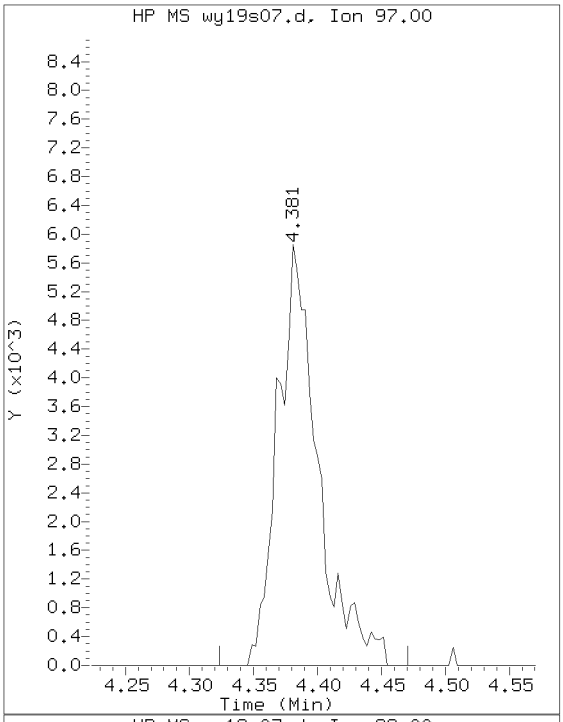
Sample Name: J0102 Lab Sample ID: 1053359

Compound Number	: 42
Compound Name	: cis-1,2-Dichloroethene
Scan Number	: 954
Retention Time (minutes)	: 3.893
Relative Retention Time	: 0.00000
Quant Ion	: 96.00
Area (flag)	: 4634
On-Column Amount (ng)	: 1.0069

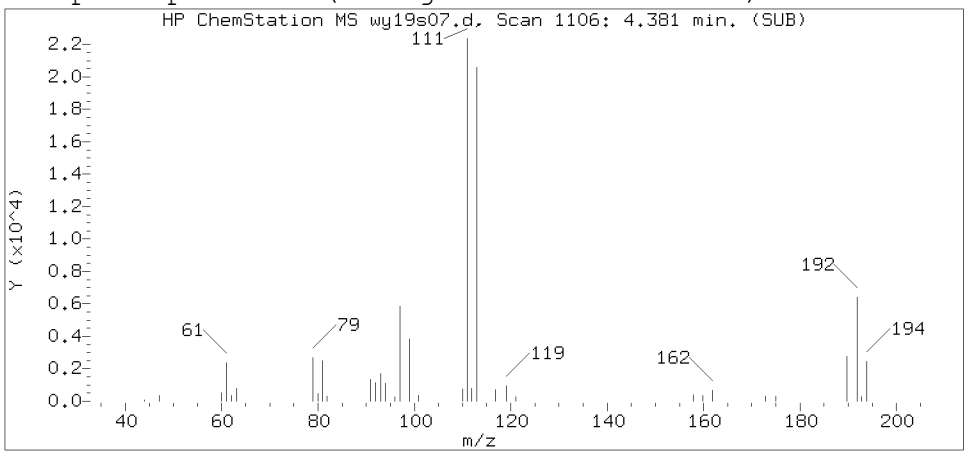
Digitally signed by Kevin A. Sposito on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648

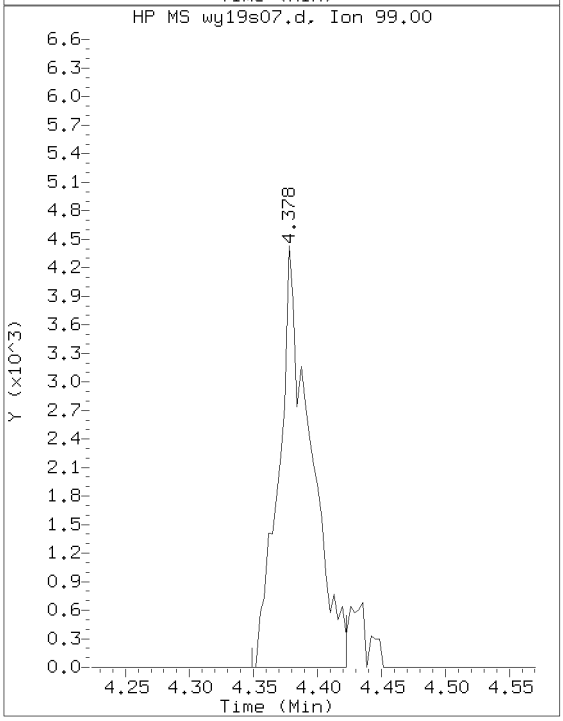
Reference Standard Spectrum for 1,1,1-Trichloroethane



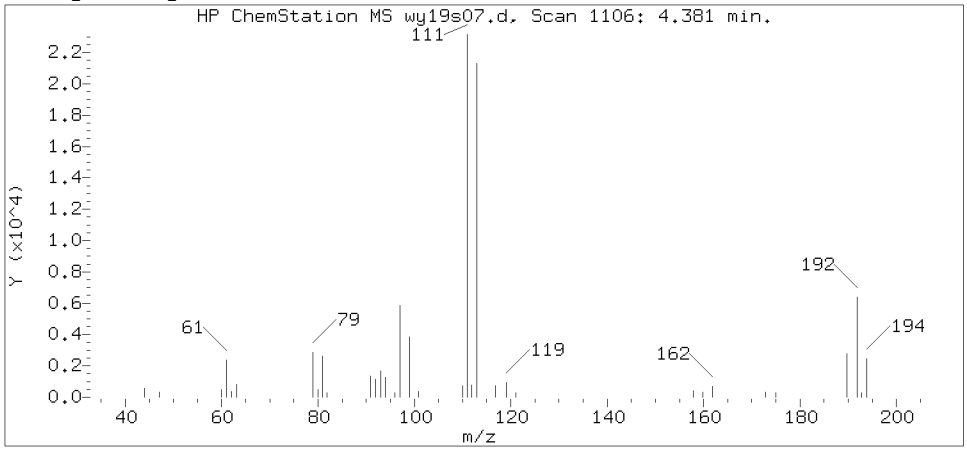


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09137.i/19may19a.b/wy19s07.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 15:30 Analyst ID: CBR01947

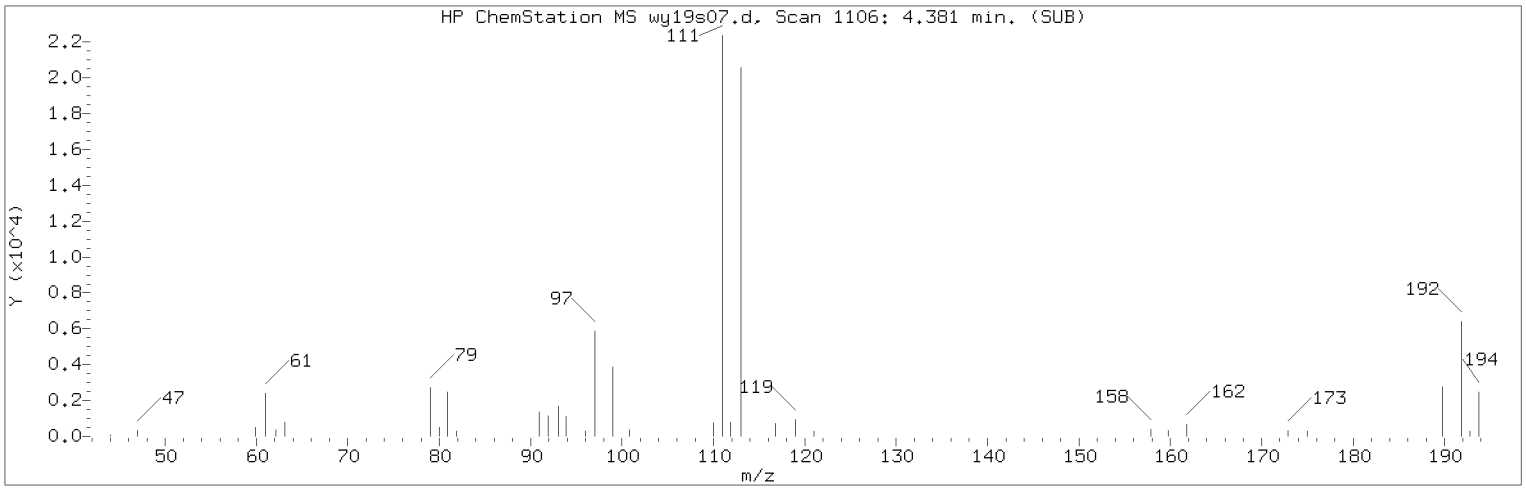
Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:10 sej02002

Sample Name: J0102 Lab Sample ID: 1053359

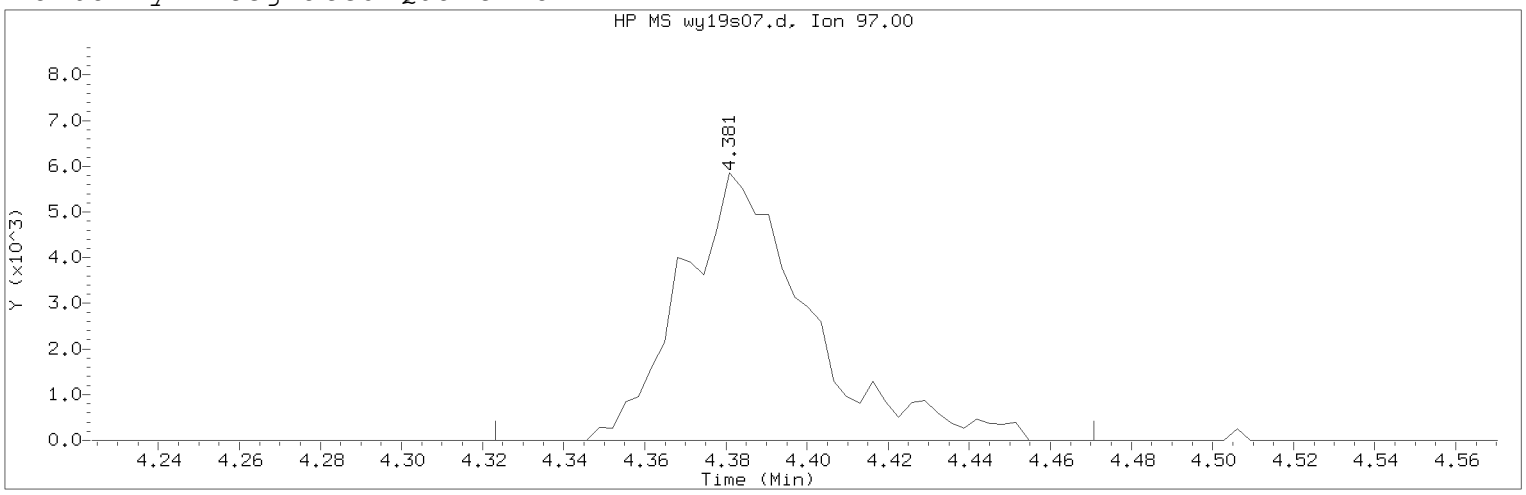
Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1106
Retention Time (minutes)	: 4.381
Relative Retention Time	: 0.00064
Quant Ion	: 97.00
Area (flag)	: 12733M
On-Column Amount (ng)	: 2.4283

Digitally signed by Kevin A. Sposito on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19s07.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 15:30 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:10 sej02002

Sample Name: J0102 Lab Sample ID: 1053359

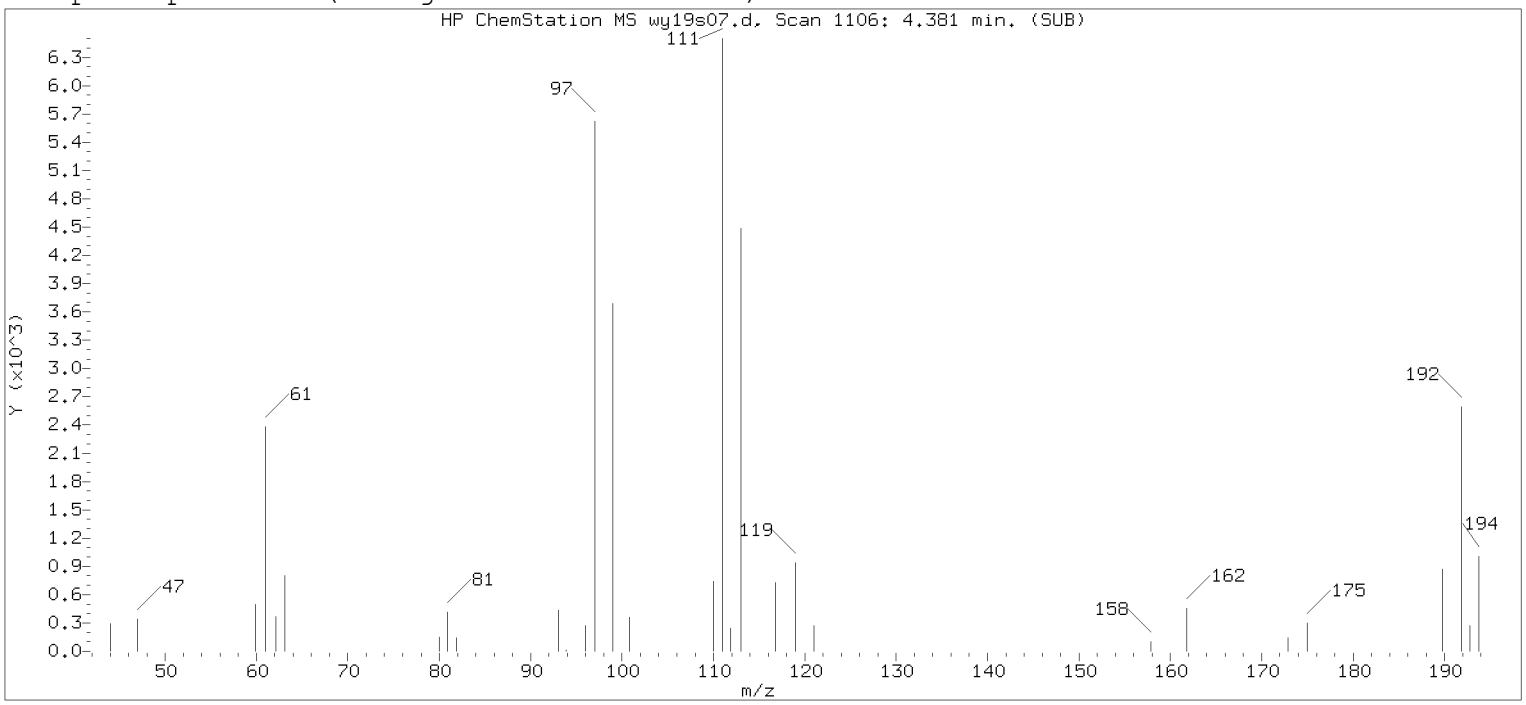
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 1106
Retention Time (minutes): 4.381
Quant Ion : 97.00
Area (flag) : 12733M
On-Column Amount (ng) : 2.4283
Integration start scan : 1087 Integration stop scan: 1133
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

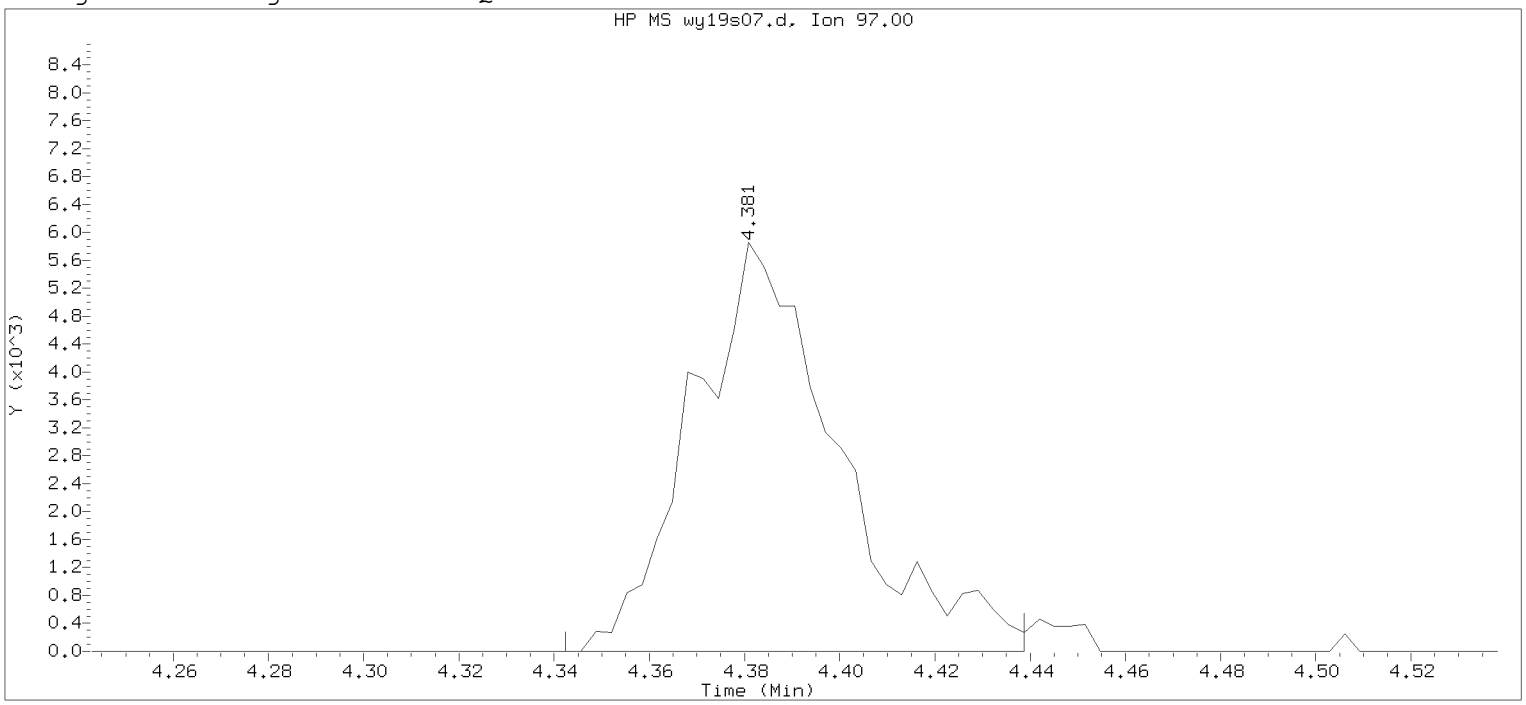
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Roy R. Mellott on 06/12/2019 at 17:05.
PARALLAX ID: rrm00219

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19s07.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 15:30 Analyst ID: CBR01947

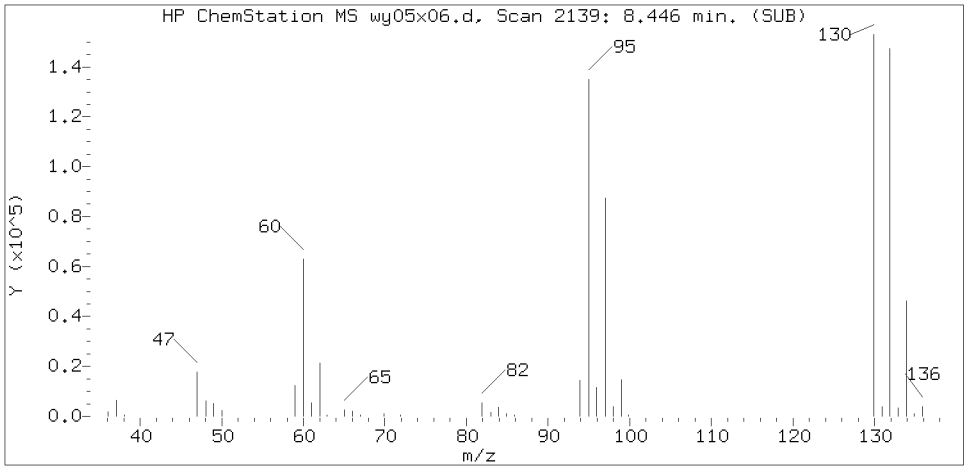
Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Sample Name: J0102 Lab Sample ID: 1053359

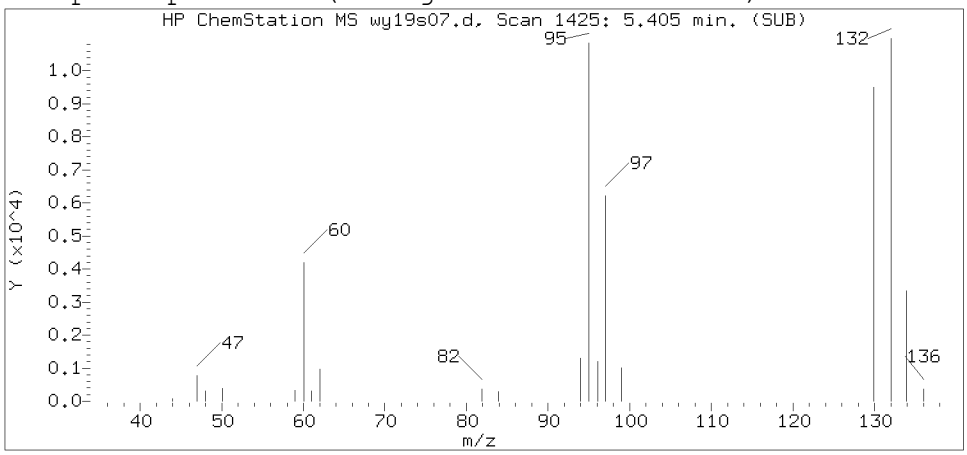
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 1106
Retention Time (minutes): 4.381
Quant Ion : 97.00
Area : 12405
On-column Amount (ng) : 2.3658
Integration start scan : 1093 Integration stop scan: 1123
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kasposito

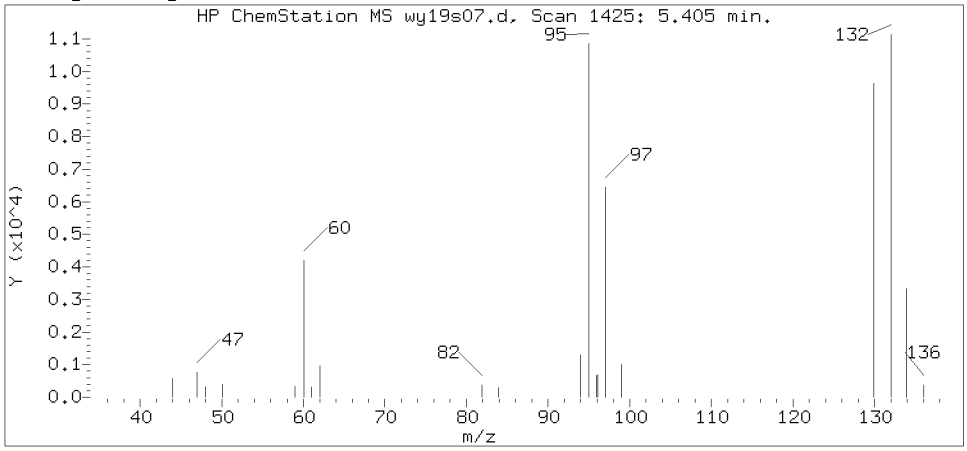
Reference Standard Spectrum for Trichloroethene

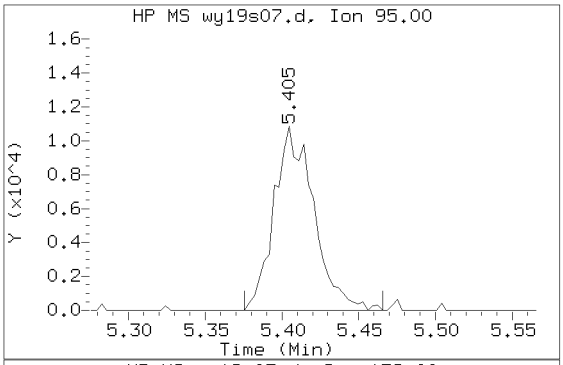


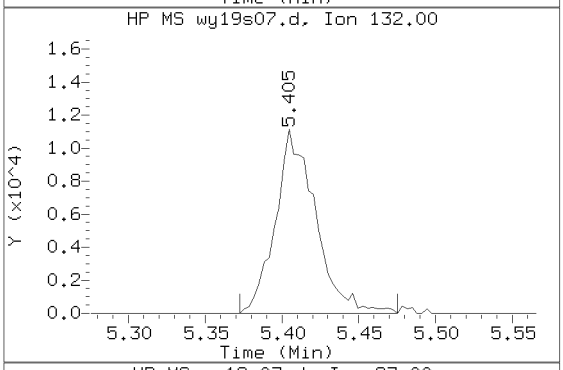
Sample Spectrum (Background Subtracted)

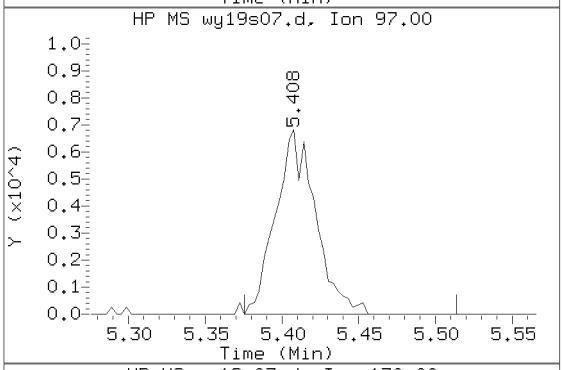


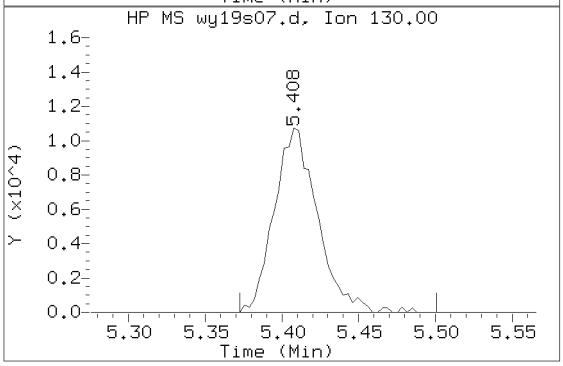
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/19may19a.b/wy19s07.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 15:30 Analyst ID: CBR01947

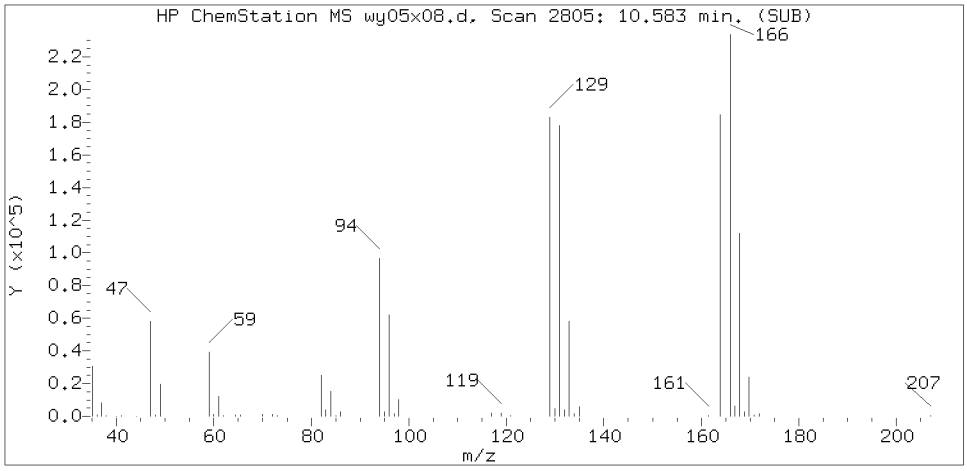
Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:10 sej02002

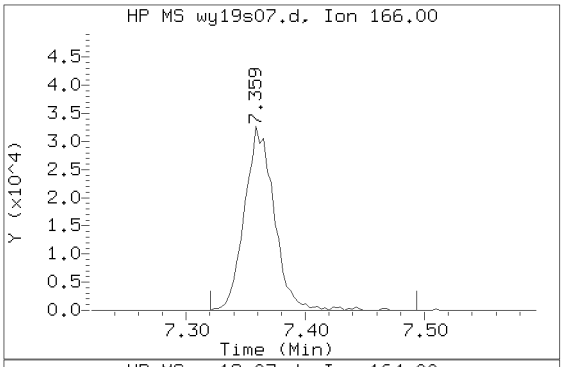
Sample Name: J0102 Lab Sample ID: 1053359

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 1425
Retention Time (minutes)	: 5.405
Relative Retention Time	: 0.00063
Quant Ion	: 95.00
Area (flag)	: 19555
On-Column Amount (ng)	: 4.4961

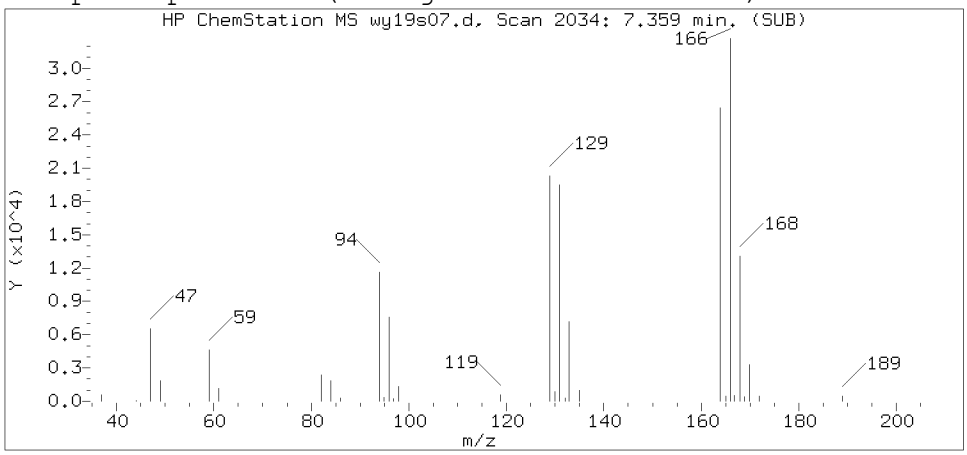
Digitally signed by Kevin A. Sposito on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648

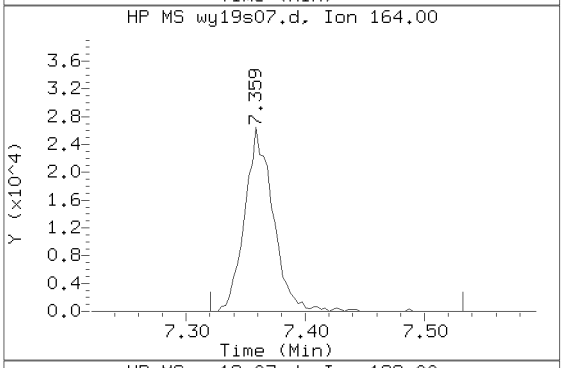
Reference Standard Spectrum for Tetrachloroethene

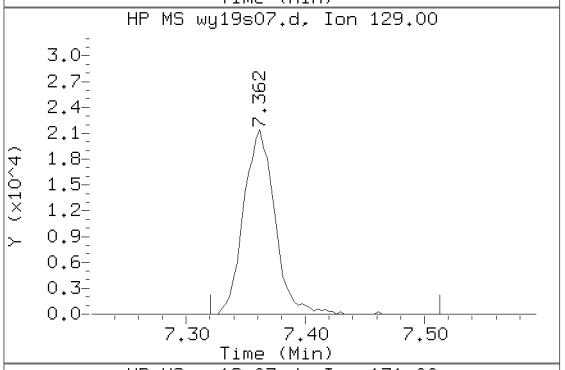




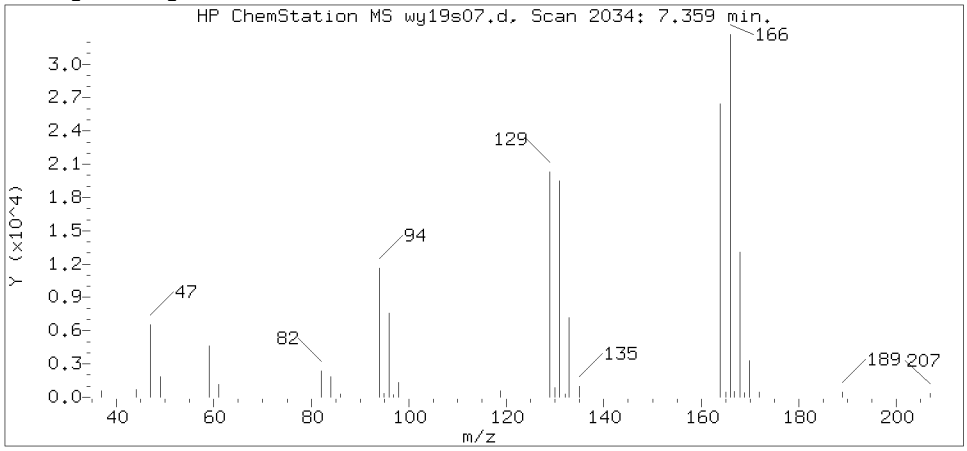
Sample Spectrum (Background Subtracted)

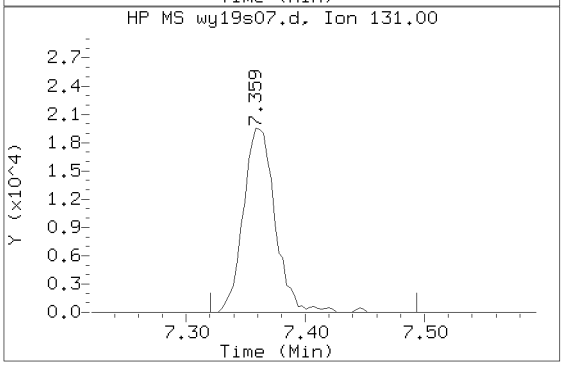






Sample Spectrum (Unaltered)





Data File: /chem2/HP09137.i/19may19a.b/wy19s07.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 15:30 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:10 sej02002

Sample Name: J0102 Lab Sample ID: 1053359

Compound Number : 94
Compound Name : Tetrachloroethene
Scan Number : 2034
Retention Time (minutes): 7.359
Relative Retention Time : 0.00039
Quant Ion : 166.00
Area (flag) : 57093
On-Column Amount (ng) : 13.1676

Digitally signed by Kevin A. Sposito on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
J0103

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053362

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s22.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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J0103 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1053362

Data file: /chem2/HP09137.i/19may18a.b/wy18s22.d Injection date and time: **19-MAY-2019 07:36**
Data file Sample Info. Line: J0103;1053362;1;0;;JCV88;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.744	(-0.006)	596	65	151916	(-20)	250.00	
66) Fluorobenzene	5.032	(0.000)	1309	96	856060	(-17)	50.00	
101) Chlorobenzene-d5	8.164	(-0.003)	2285	117	666355	(-14)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041	(0.000)	2870	152	337861	(-24)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.355	(0.001)	113	198258	49.990	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.689	(0.001)	102	54001	51.197	102%		80 - 120
84) Toluene-d8	(3)	6.698	(0.001)	98	829077	49.653	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.165	(0.000)	95	283225	42.399	85%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Linda C. Pape on 05/28/2019 at 15:05. Target 3.5 esignature user ID: lcp00895

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may18a.b/wy18s22.d Injection date and time: **19-MAY-2019 07:36**
Data file Sample Info. Line: J0103;1053362;1;0;;JCV88;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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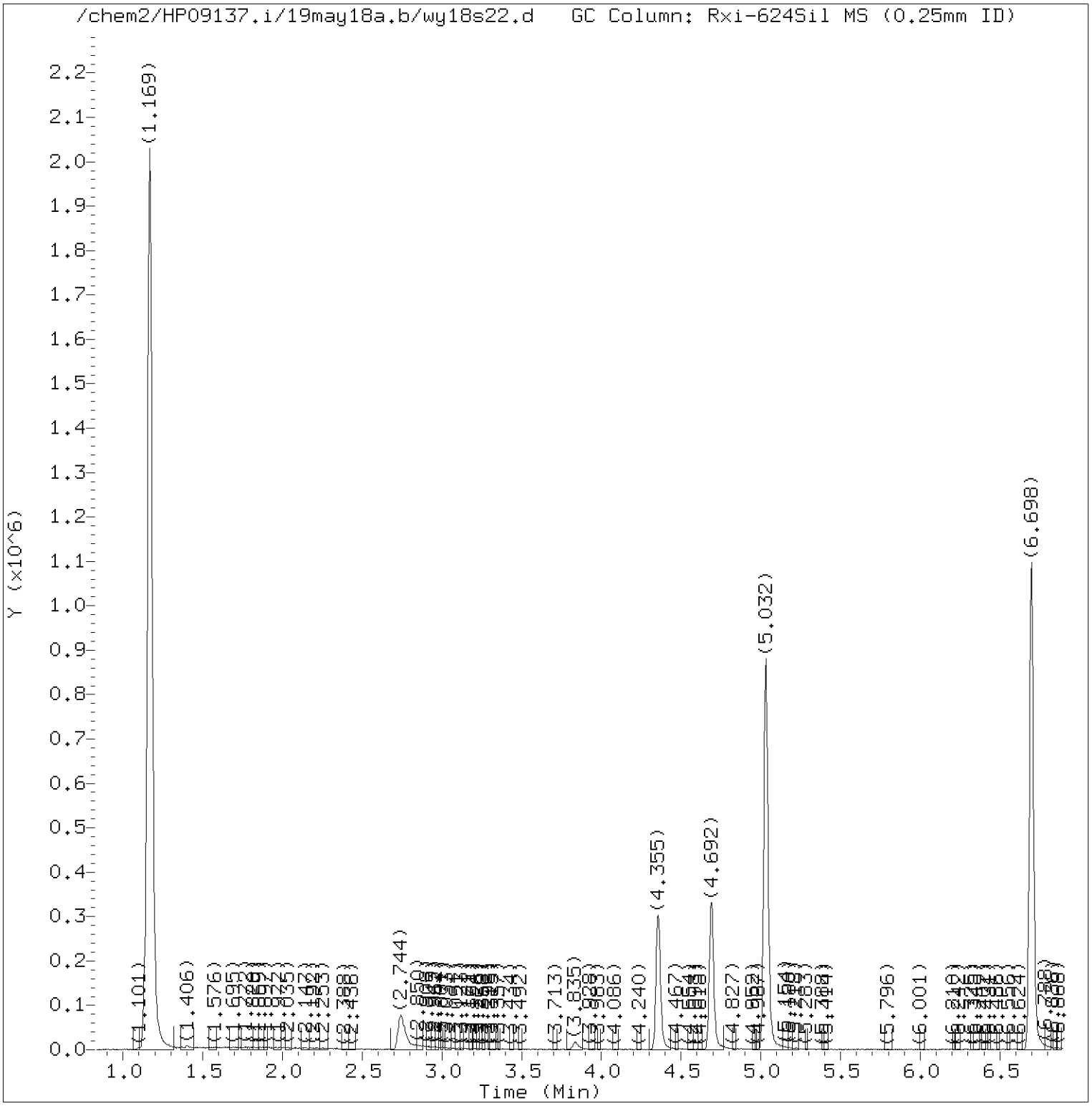
Total number of targets = 24

Digitally signed by Linda C. Pape on 05/28/2019 at 15:05. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 15:40. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

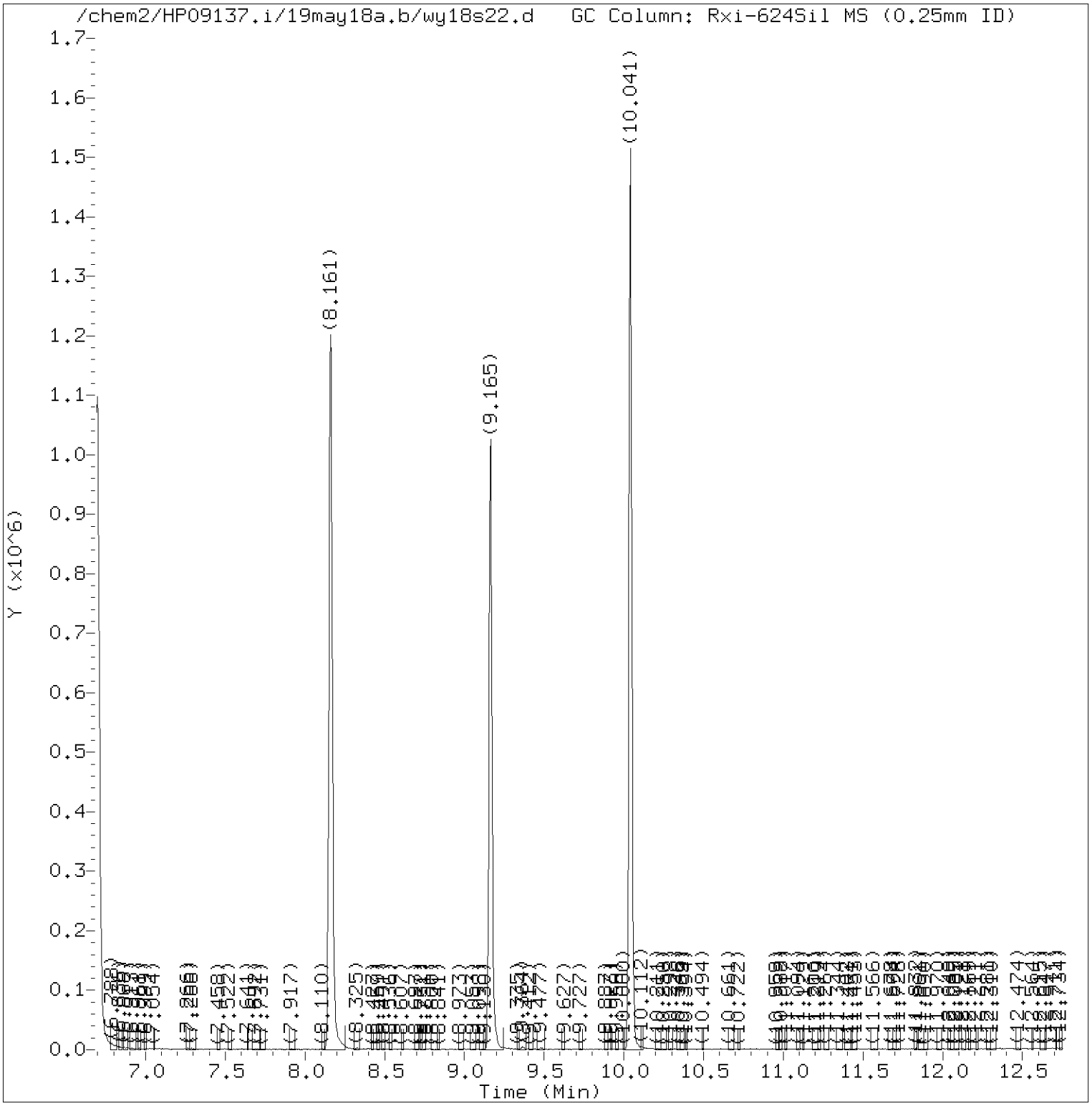
Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s22.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 07:36 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: J0103 Lab Sample ID: 1053362

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:05.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s22.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 07:36 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: J0103 Lab Sample ID: 1053362

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:05.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s22.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 07:36 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: J0103 Lab Sample ID: 1053362

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.744	65	151916	250.000
52)$Dibromofluoromethane	(2)	4.355	113	198258	49.990
57)$1,2-Dichloroethane-d4	(2)	4.689	102	54001	51.197
66)*Fluorobenzene	(2)	5.032	96	856060	50.000
84)$Toluene-d8	(3)	6.698	98	829077	49.653
101)*Chlorobenzene-d5	(3)	8.164	117	666355	50.000
115)$4-Bromofluorobenzene	(3)	9.165	95	283225	42.399
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	337861	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:05.
Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J0104

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053363

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s23.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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J0104 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1053363

Data file: /chem2/HP09137.i/19may18a.b/wy18s23.d Injection date and time: **19-MAY-2019 08:00**
Data file Sample Info. Line: J0104;1053363;1;0;;JCV88;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.744 (-0.006)	596	65	127654 (-33)	250.00	
66) Fluorobenzene	5.032 (0.000)	1309	96	871075 (-15)	50.00	
101) Chlorobenzene-d5	8.161 (0.000)	2284	117	670686 (-14)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041 (0.000)	2870	152	342923 (-23)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.358 (0.001)	113	202566	50.196	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.686 (0.001)	102	54345	50.635	101%		80 - 120
84) Toluene-d8	(3)	6.698 (0.000)	98	838513	49.893	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162 (0.000)	95	287275	42.728	85%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)			Not Detected					0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Linda C. Pape on 05/28/2019 at 15:05. Target 3.5 esignature user ID: lcp00895

Data file: /chem2/HP09137.i/19may18a.b/wy18s23.d Injection date and time: **19-MAY-2019 08:00**
Data file Sample Info. Line: J0104;1053363;1;0;;JCV88;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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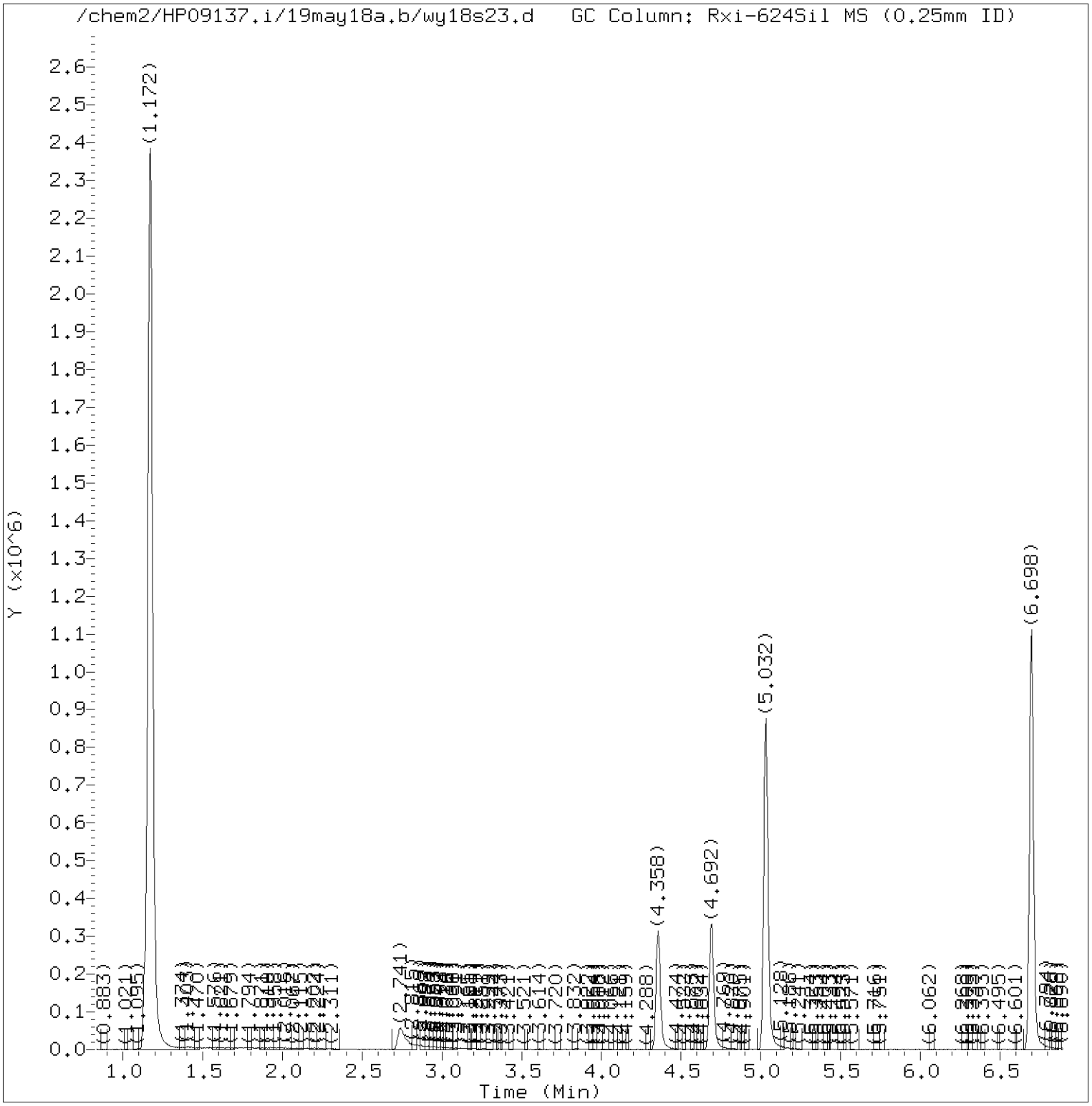
Total number of targets = 24

Digitally signed by Linda C. Pape on 05/28/2019 at 15:05. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 15:40. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

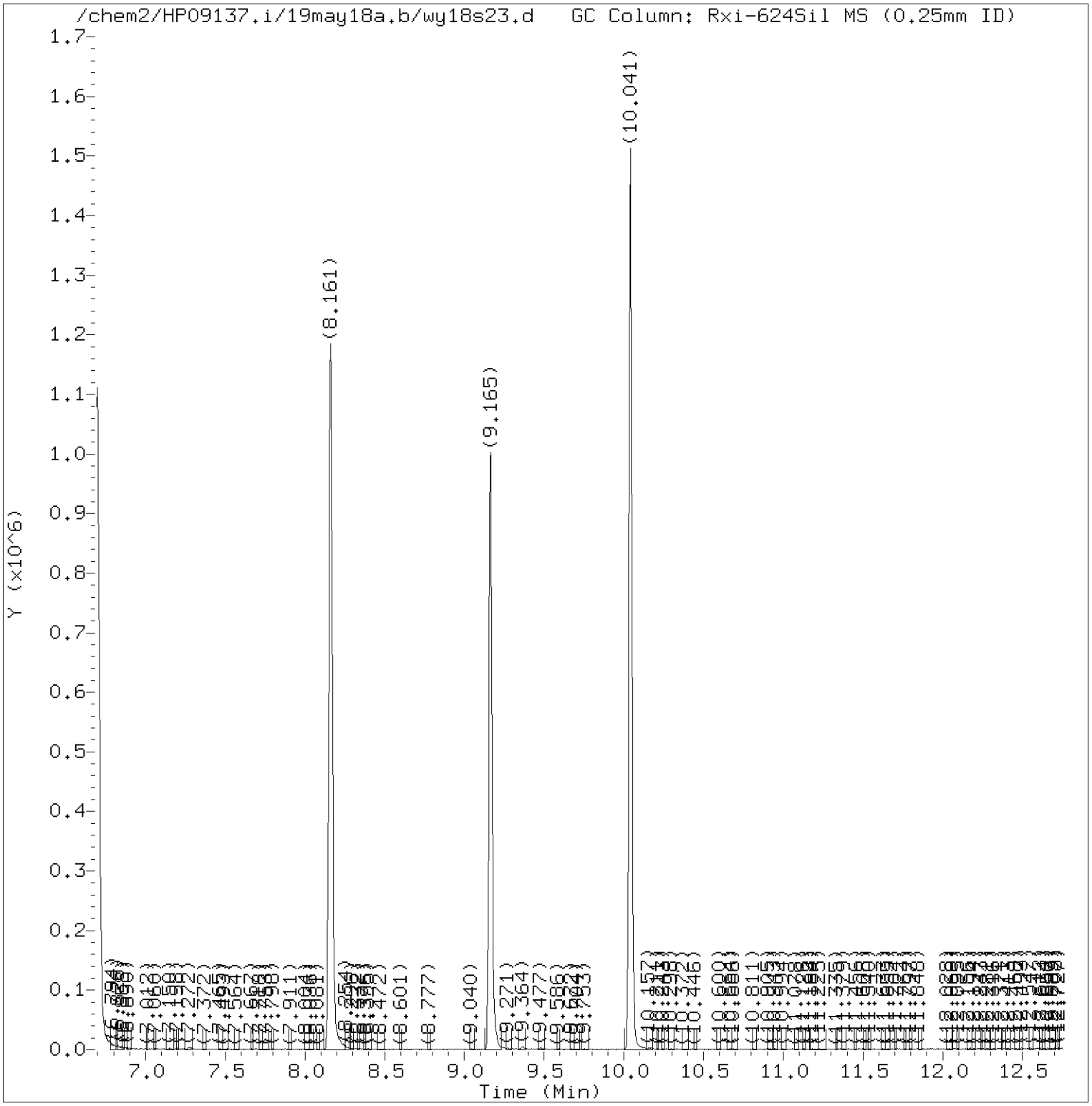
Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s23.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 08:00 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: J0104 Lab Sample ID: 1053363

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:05.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s23.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 08:00 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: J0104 Lab Sample ID: 1053363

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:05.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s23.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 08:00 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:50 lcp00895

Sample Name: J0104 Lab Sample ID: 1053363

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.744	65	127654	250.000
52)$Dibromofluoromethane	(2)	4.358	113	202566	50.196
57)$1,2-Dichloroethane-d4	(2)	4.686	102	54345	50.635
66)*Fluorobenzene	(2)	5.032	96	871075	50.000
84)$Toluene-d8	(3)	6.698	98	838513	49.893
101)*Chlorobenzene-d5	(3)	8.161	117	670686	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	287275	42.728
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	342923	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:05.
Target 3.5 esignature user ID: lcp00895

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09137 **HP #18**

Data Directory Path is - D:\DATA\19FEB19I\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
apr27582	WF19T01.D	50NGBFB	02/19/2019	11:32	W183623AA	
APR27582	WF19I01.D	VSTD300	02/19/2019	12:21		
APR27582	WF19I02.D	VSTD100	02/19/2019	12:45		
APR27582	WF19I03.D	VSTD050	02/19/2019	13:09		
APR27582	WF19I04.D	VSTD020	02/19/2019	13:33		
APR27582	WF19I05.D	VSTD010	02/19/2019	13:57		
APR27582	WF19I06.D	VSTD004	02/19/2019	14:21		
APR27582	WF19I07.D	VSTD001	02/19/2019	14:44		
APR27582	WF19X02.D	CLNBLK	02/19/2019	15:08		
APR27582	WF19V01.D	LCSWICV	02/19/2019	15:32		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09137 **HP #18**

Data Directory Path is - D:\DATA\19FEB20A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
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APR27582	WF20X01.D	VBLKW62	02/20/2019	09:13	W190511AA	
APR27582	WF20C01.D	VSTD050	02/20/2019	09:37	W190511AA	
APR27582	WF20X02.D	VBLKW62	02/20/2019	10:01	W190511AA	
APR27582	WF20X03.D	VBLKW62	02/20/2019	10:31	W190511AA	
APR27582	WF20C02.D	VSTD050	02/20/2019	10:55	W190511AA	
APR27582	WF20X04.D	VBLKW62	02/20/2019	11:19	W190511AA	
APR27582	WF20B01.D	VBLKW62	02/20/2019	11:43	W190511AA	
APR27582	WF20L01.D	LCSW62	02/20/2019	12:07	W190511AA	
APR27582	WF20B02.D	VBLKW62	02/20/2019	12:30	W190511AA	
APR27582	WF20S02.D	9979095	02/20/2019	12:57	W190511AA	
APR27582	WF20S03.D	9979096	02/20/2019	13:21	W190511AA	
APR27582	WF20S04.D	9979097	02/20/2019	13:45	W190511AA	
APR27582	WF20S05.D	9979099	02/20/2019	14:09	W190511AA	
APR27582	WF20S06.D	9979107	02/20/2019	14:32	W190511AA	
APR27582	WF20S07.D	9979108	02/20/2019	14:56	W190511AA	
APR27582	WF20S08.D	9979109	02/20/2019	15:20	W190511AA	
APR27582	WF20S09.D	9979090	02/20/2019	15:44	W190511AA	
APR27582	WF20S10.D	9979091	02/20/2019	16:08	W190511AA	
APR27582	WF20S17.D	9985342	02/20/2019	16:32	W190511AA	
APR27582	WF20S18.D	9985343MS	02/20/2019	16:56	W190511AA	
APR27582	WF20S19.D	9985344MSD	02/20/2019	17:20	W190511AA	
APR27582	WF20S11.D	9979112	02/20/2019	17:43	W190511AA	
APR27582	WF20S12.D	9987236	02/20/2019	18:07	W190511AA	
APR27582	WF20S13.D	9986162	02/20/2019	18:31	W190511AA	
APR27582	WF20S20.D	9987235	02/20/2019	18:55	W190511AA	
APR27582	WF20S21.D	9985346	02/20/2019	19:19	W190511AA	

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09137 **HP #18**

Data Directory Path is - D:\DATA\19MAY18a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
SEJ02002	WY18T01.D	BFB 50NG	05/18/2019	21:44		
SEJ02002	WY18C01.D	VSTD050	05/18/2019	22:05	W191381AA	
SEJ02002	WY18S01.D	LCSW23	05/18/2019	22:29	W191381AA	
SEJ02002	WY18B00.D	VBLKW23	05/18/2019	22:53	W191381AA	
SEJ02002	WY18B01.D	VBLKW23	05/18/2019	23:17	W191381AA	
SEJ02002	WY18S02.D	1053375	05/18/2019	23:41	W191381AA	
SEJ02002	WY18S03.D	1053374	05/19/2019	00:04	W191381AA	
SEJ02002	WY18S04.D	1053376	05/19/2019	00:28	W191381AA	
SEJ02002	WY18S05.D	1053377	05/19/2019	00:52	W191381AA	
SEJ02002	WY18S06.D	1053378	05/19/2019	01:16	W191381AA	
SEJ02002	WY18S07.D	1053379	05/19/2019	01:39	W191381AA	
SEJ02002	WY18S08.D	1053380	05/19/2019	02:03	W191381AA	
SEJ02002	WY18S09.D	1053381	05/19/2019	02:27	W191381AA	
SEJ02002	WY18S10.D	1053382	05/19/2019	02:51	W191381AA	
SEJ02002	WY18S11.D	1053383	05/19/2019	03:15	W191381AA	
SEJ02002	WY18S12.D	1053359	05/19/2019	03:39	W191381AA	
SEJ02002	WY18S13.D	1053360MS	05/19/2019	04:02	W191381AA	
SEJ02002	WY18S14.D	1053361MSD	05/19/2019	04:26	W191381AA	
SEJ02002	WY18S15.D	1053352	05/19/2019	04:50	W191381AA	
SEJ02002	WY18S16.D	1053353	05/19/2019	05:14	W191381AA	
SEJ02002	WY18S17.D	1053354	05/19/2019	05:38	W191381AA	
SEJ02002	WY18S18.D	1053355	05/19/2019	06:01	W191381AA	
SEJ02002	WY18S19.D	1053356	05/19/2019	06:25	W191381AA	
SEJ02002	WY18S20.D	1053357	05/19/2019	06:49	W191381AA	
SEJ02002	WY18S21.D	1053358	05/19/2019	07:13	W191381AA	
SEJ02002	WY18S22.D	1053362	05/19/2019	07:36	W191381AA	
SEJ02002	WY18S23.D	1053363	05/19/2019	08:00	W191381AA	

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09137 **HP #18**

Data Directory Path is - d:\data\19may19A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
ANYONE	WY19X05.D	BLK	05/19/2019	09:35		
ANYONE	WY19X06.D	BLK	05/19/2019	09:59		
CBR01947	WY19T01.D	BFB 50NG	05/19/2019	11:04		
CBR01947	WY19C01.D	VSTD050	05/19/2019	11:32	W191381AB	
CBR01947	WY19B01.D	VBLKW24	05/19/2019	11:56	W191381AB	
CBR01947	WY19B02.D	VBLKW24	05/19/2019	12:20	W191381AB	
CBR01947	WY19L01.D	LCSW24	05/19/2019	12:44	W191381AB	
CBR01947	WY19M01.D	MDL0.5	05/19/2019	13:07	W191381AB	
CBR01947	WY19S02.D	1053374	05/19/2019	13:31	W191381AB	
CBR01947	WY19S03.D	1053377	05/19/2019	13:55	W191381AB	
CBR01947	WY19S04.D	1053378	05/19/2019	14:18	W191381AB	
CBR01947	WY19S05.D	1053380	05/19/2019	14:42	W191381AB	
CBR01947	WY19S06.D	1053381	05/19/2019	15:06	W191381AB	
CBR01947	WY19S07.D	1053359	05/19/2019	15:30	W191381AB	
CBR01947	WY19S10.D	1052543	05/19/2019	15:53	W191391AA	
CBR01947	WY19S11.D	1052544	05/19/2019	16:17	W191391AA	
CBR01947	WY19S12.D	1052545	05/19/2019	16:41	W191391AA	
CBR01947	WY19S13.D	1052546	05/19/2019	17:05	W191391AA	
CBR01947	WY19S14.D	1052547MS	05/19/2019	17:29	W191391AA	
CBR01947	WY19S15.D	1052548MSD	05/19/2019	17:52	W191391AA	
CBR01947	WY19S16.D	1052549	05/19/2019	18:16	W191391AA	
CBR01947	WY19S17.D	1052550	05/19/2019	18:40	W191391AA	
CBR01947	WY19S18.D	1052551	05/19/2019	19:04	W191391AA	
CBR01947	WY19S19.D	1052552	05/19/2019	19:28	W191391AA	
CBR01947	WY19S20.D	1052553	05/19/2019	19:52	W191391AA	
CBR01947	WY19S21.D	1052554	05/19/2019	20:15	W191391AA	
CBR01947	WY19S22.D	1052555	05/19/2019	20:39	W191391AA	
CBR01947	WY19S23.D	1052556	05/19/2019	21:03	W191391AA	
CBR01947	WY19S24.D	1052987	05/19/2019	21:27	W191391AA	
CBR01947	WY19S25.D	1052988	05/19/2019	21:50	W191391AA	
CBR01947	WY19EC1.D	SECC050	05/19/2019	22:14	W191391AA	

Data File: /chem2/HP09137.i/19feb19i.b/wf19t01.d

Page 1

Date : 19-FEB-2019 11:32

Client ID: FEB05-19

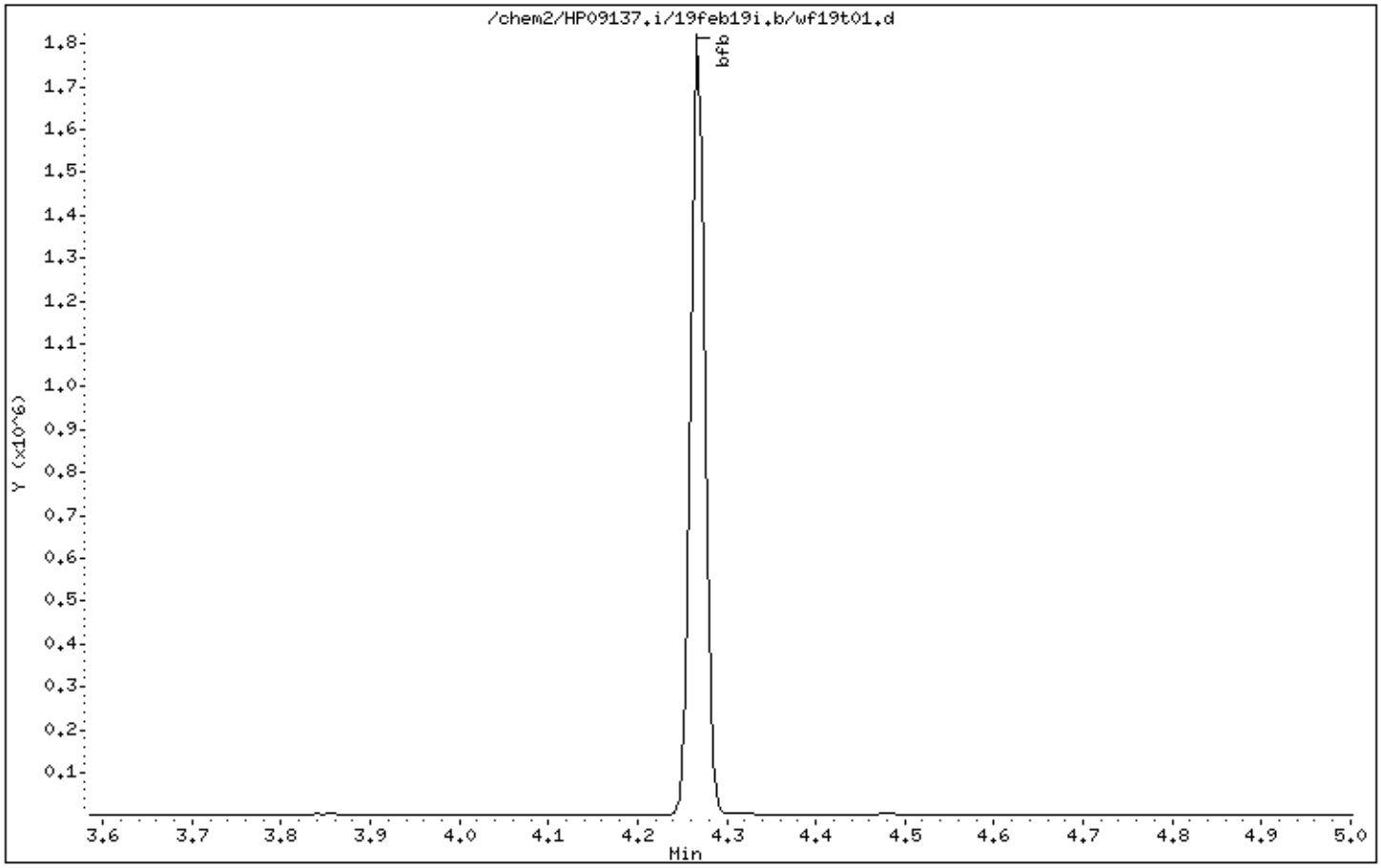
Instrument: HP09137.i

Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: DB-624

Column diameter: 0.18



Digitally signed by Abigail P. Roselli on 02/20/2019 at 07:15.
Target 3.5 esignature user ID: apr27582

Data File: /chem2/HP09137.i/19feb19i.b/wf19t01.d

Date : 19-FEB-2019 11:32

Client ID: FEB05-19

Instrument: HP09137.i

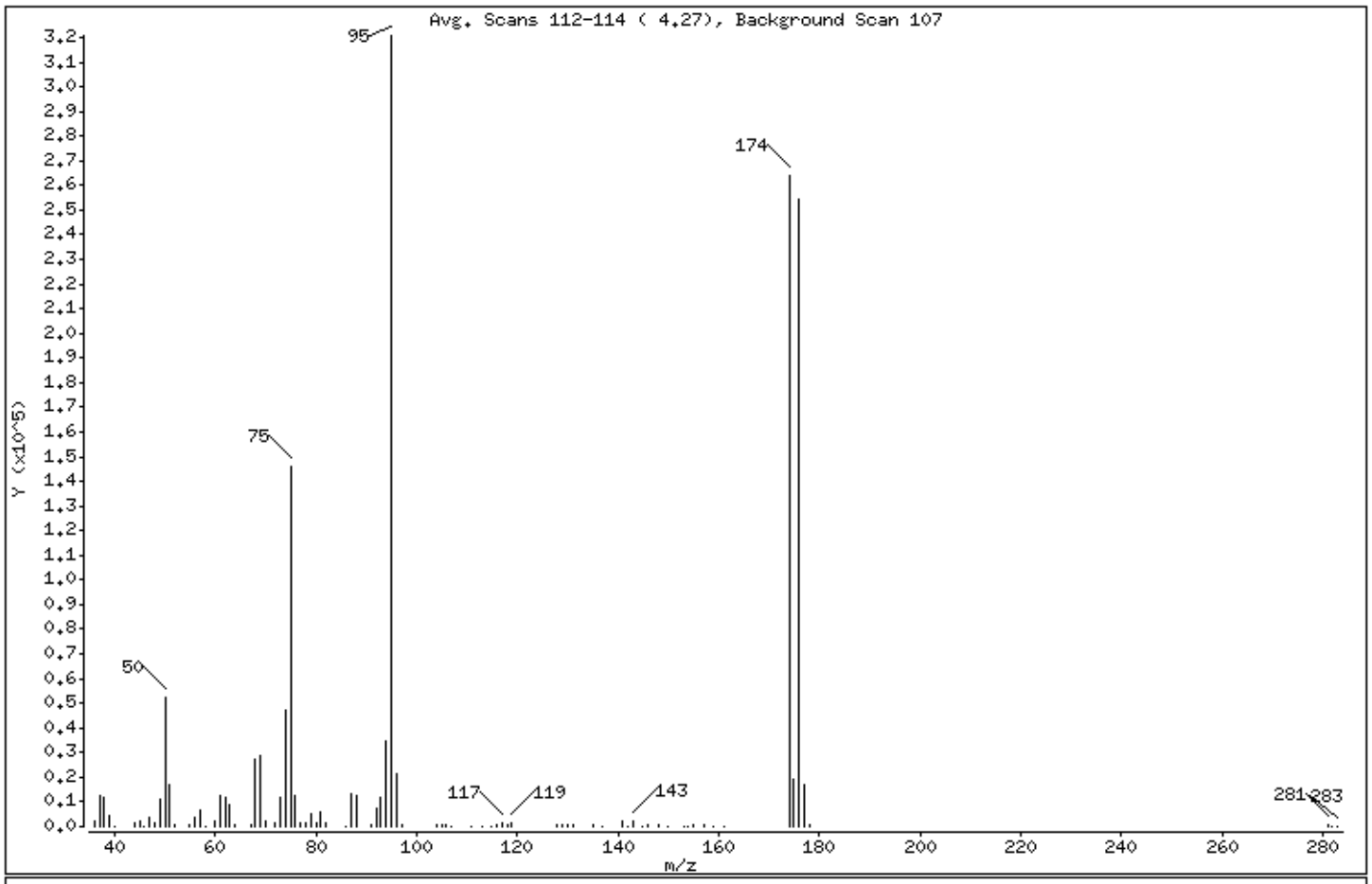
Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.42
75	30.00 - 60.00% of mass 95	45.48
96	5.00 - 9.00% of mass 95	6.75
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	82.25
175	5.00 - 9.00% of mass 174	5.88 (7.14)
176	95.00 - 101.00% of mass 174	79.33 (96.46)
177	5.00 - 9.00% of mass 176	5.24 (6.60)

Digitally signed by Abigail P. Roselli on 02/20/2019 at 07:15.
Target 3.5 esignature user ID: apr27582

Data File: /chem2/HP09137.i/19feb19i.b/wf19t01.d

Date : 19-FEB-2019 11:32

Client ID: FEB05-19 Instrument: HP09137.i

Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: DB-624 Column diameter: 0.18

Data File: wf19t01.d
Spectrum: Avg. Scans 112-114 (4.27), Background Scan 107
Location of Maximum: 95.00
Number of points: 86

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2356	64.00	874	94.00	34376	142.00	237
37.00	12838	67.00	749	95.00	320704	143.00	2536
38.00	11819	68.00	27600	96.00	21656	145.00	91
39.00	4563	69.00	28600	97.00	523	146.00	422
40.00	251	70.00	2130	104.00	986	148.00	700
44.00	1477	72.00	1518	105.00	386	150.00	200
45.00	2478	73.00	11806	106.00	927	153.00	196
46.00	111	74.00	47328	107.00	206	154.00	192
47.00	3965	75.00	145792	111.00	83	155.00	738
48.00	1623	76.00	12750	113.00	91	157.00	589
49.00	11149	77.00	1800	115.00	323	159.00	135
50.00	52656	78.00	1254	116.00	863	161.00	111
51.00	16816	79.00	5441	117.00	1520	174.00	263744
52.00	769	80.00	1674	118.00	967	175.00	18840
55.00	679	81.00	5606	119.00	1205	176.00	254400
56.00	3605	82.00	1114	128.00	1016	177.00	16800
57.00	6852	86.00	238	129.00	498	178.00	482
58.00	344	87.00	13069	130.00	1029	281.00	452
60.00	2409	88.00	12389	131.00	439	282.00	187
61.00	12379	91.00	929	135.00	476	283.00	87
62.00	12164	92.00	7681	137.00	303		
63.00	9186	93.00	11661	141.00	2259		

Digitally signed by Abigail P. Roselli on 02/20/2019 at 07:15.
Target 3.5 esignature user ID: apr27582

Data File: /chem2/HP09137.i/19feb20a.b/wf20t01.d

Page 1

Date : 20-FEB-2019 08:47

Client ID: FEB05-19

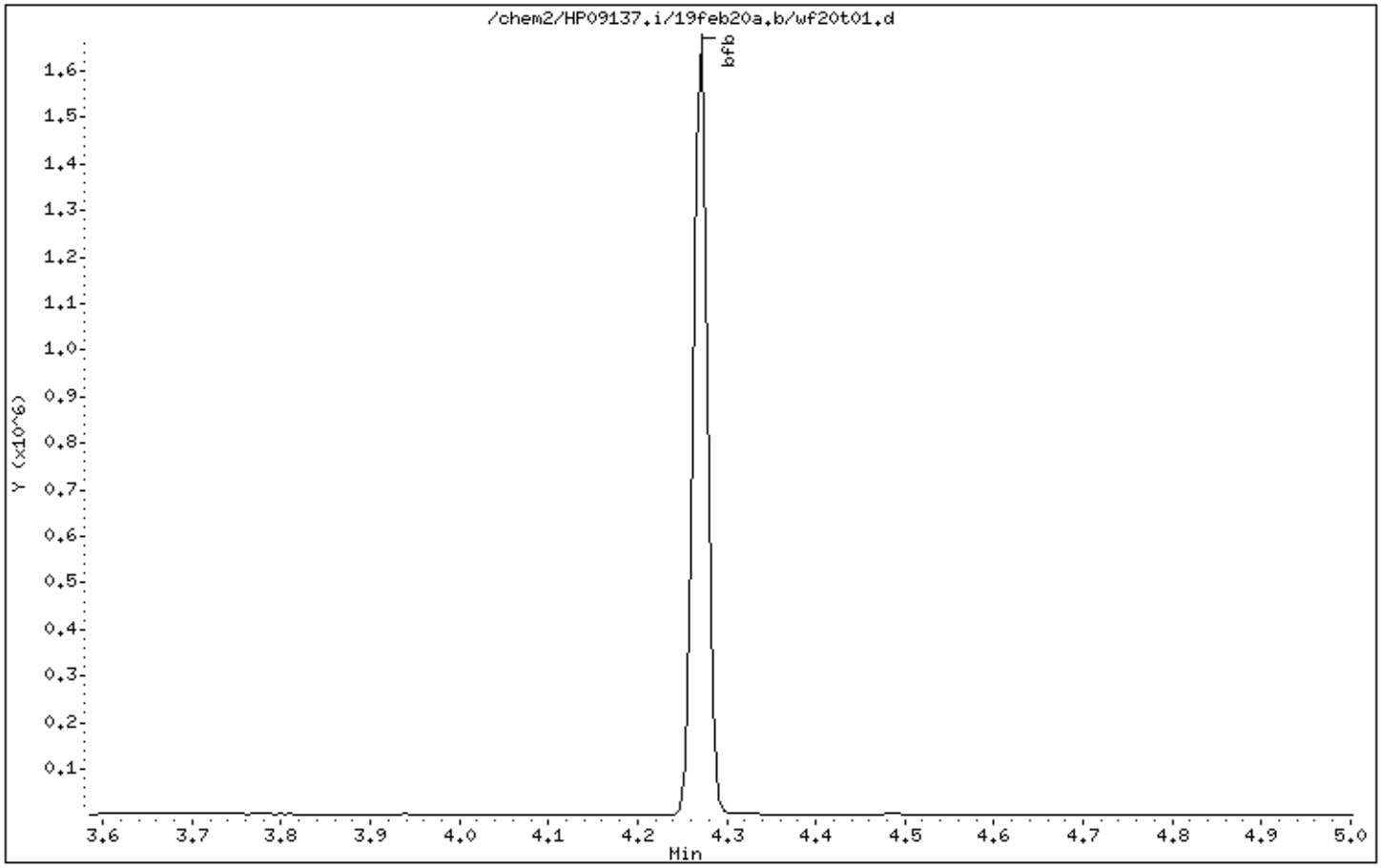
Instrument: HP09137.i

Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: DB-624

Column diameter: 0.18



Digitally signed by Abigail P. Roselli on 02/20/2019 at 08:52.
Target 3.5 esignature user ID: apr27582

Data File: /chem2/HP09137.i/19feb20a.b/wf20t01.d

Date : 20-FEB-2019 08:47

Client ID: FEB05-19

Instrument: HP09137.i

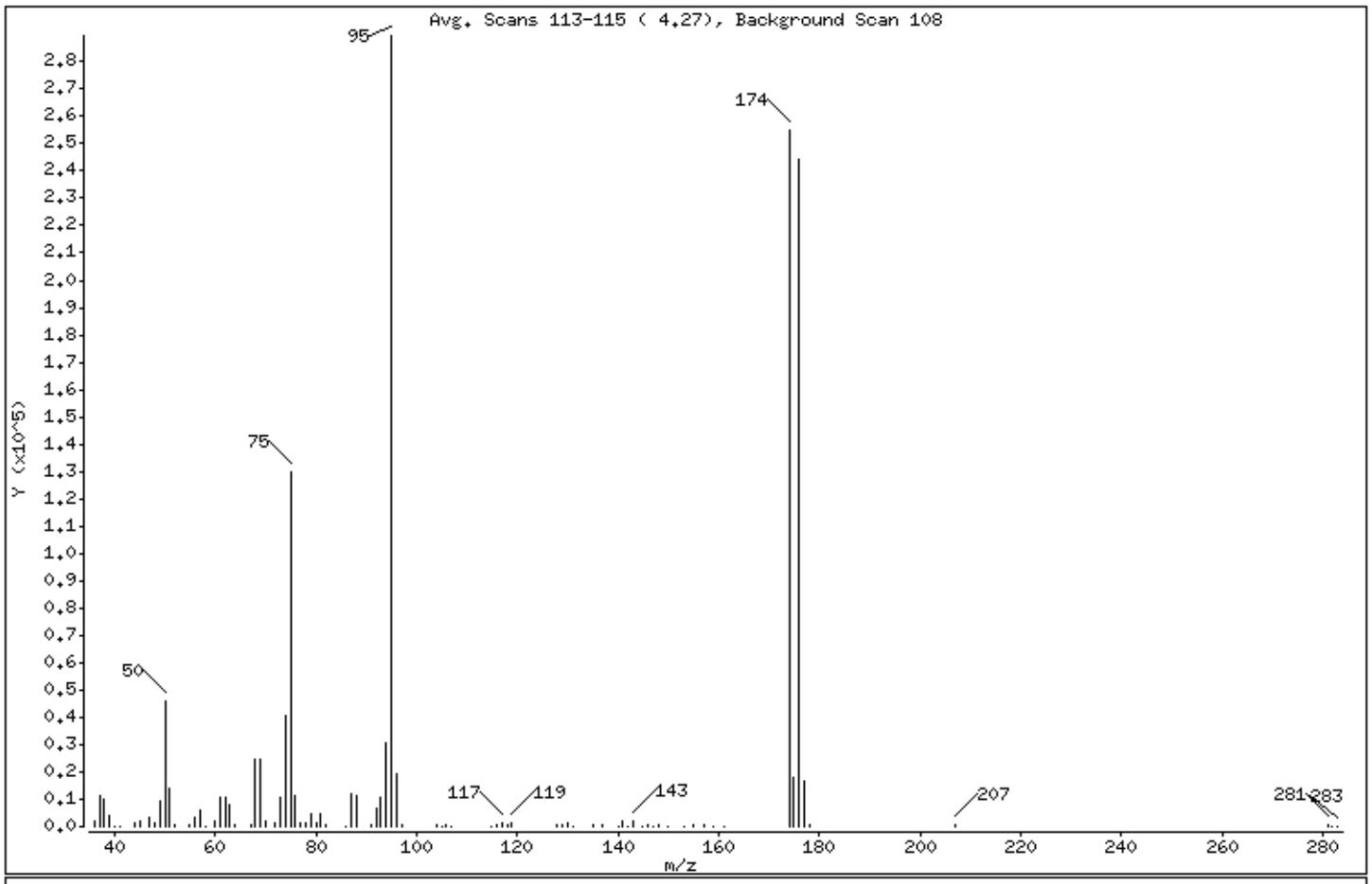
Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.92
75	30.00 - 60.00% of mass 95	44.90
96	5.00 - 9.00% of mass 95	6.65
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	88.14
175	5.00 - 9.00% of mass 174	6.26 (7.10)
176	95.00 - 101.00% of mass 174	84.40 (95.75)
177	5.00 - 9.00% of mass 176	5.69 (6.75)

Digitally signed by Abigail P. Roselli on 02/20/2019 at 08:52.
Target 3.5 esignature user ID: apr27582

Date : 20-FEB-2019 08:47

Client ID: FEB05-19 Instrument: HP09137.i

Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

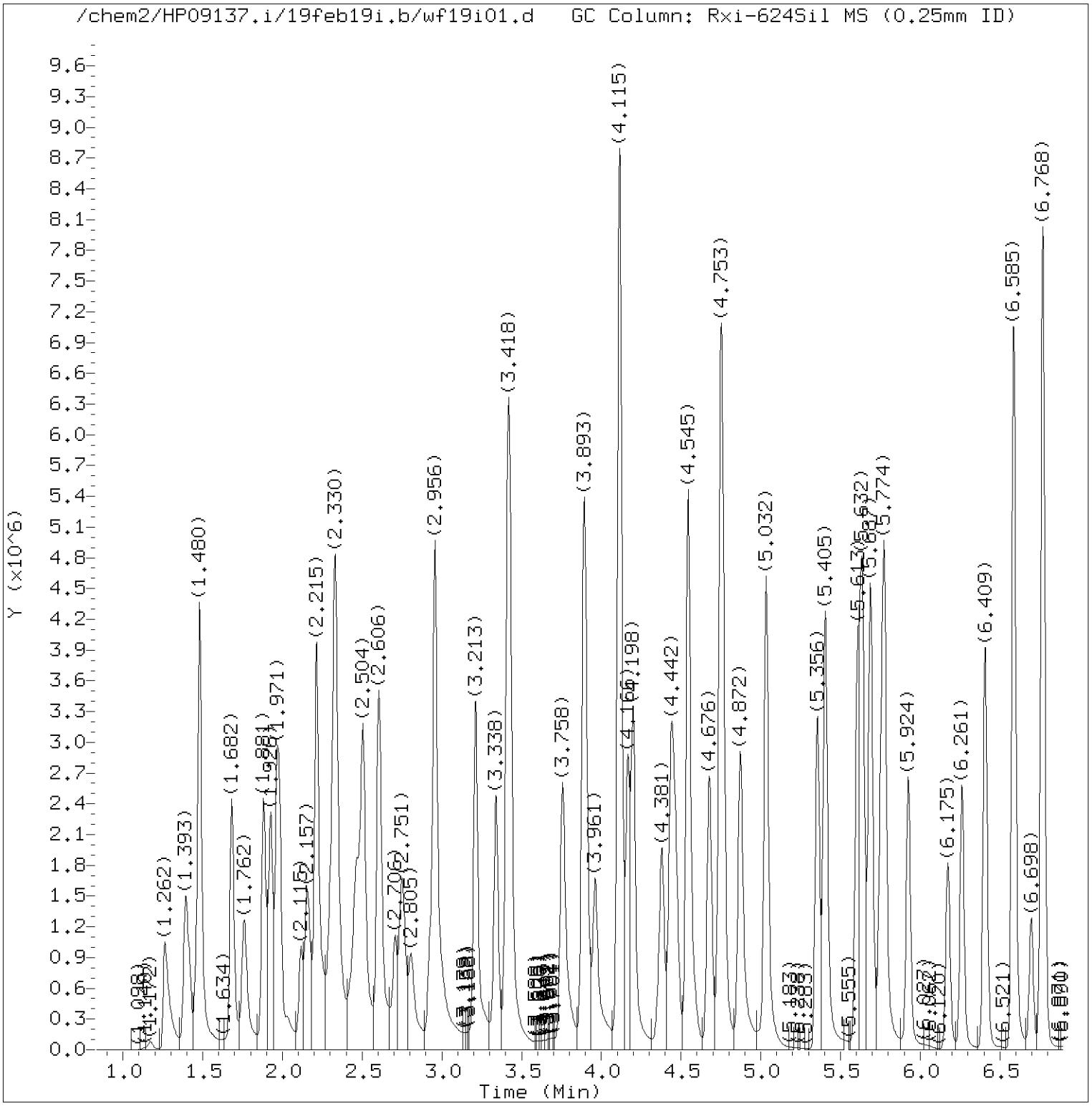
Operator: apr27582

Column phase: DB-624 Column diameter: 0.18

Data File: wf20t01.d
Spectrum: Avg. Scans 113-115 (4.27), Background Scan 108
Location of Maximum: 95.00
Number of points: 86

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2292	64.00	695	94.00	30424	143.00	2131
37.00	11519	67.00	726	95.00	289536	145.00	94
38.00	9778	68.00	24528	96.00	19248	146.00	357
39.00	4147	69.00	24696	97.00	419	147.00	91
40.00	149	70.00	1808	104.00	965	148.00	663
41.00	87	72.00	1344	105.00	326	150.00	173
44.00	1189	73.00	10669	106.00	967	153.00	101
45.00	1920	74.00	40824	107.00	84	155.00	589
47.00	3364	75.00	130008	115.00	92	157.00	513
48.00	1406	76.00	11448	116.00	835	159.00	90
49.00	9232	77.00	1437	117.00	1540	161.00	91
50.00	46088	78.00	1188	118.00	791	174.00	255168
51.00	14176	79.00	4689	119.00	1240	175.00	18112
52.00	576	80.00	1560	128.00	847	176.00	244352
55.00	691	81.00	4855	129.00	488	177.00	16480
56.00	3214	82.00	958	130.00	1039	178.00	430
57.00	5972	86.00	111	131.00	293	207.00	456
58.00	199	87.00	11697	135.00	469	281.00	512
60.00	2132	88.00	11140	137.00	365	282.00	331
61.00	10802	91.00	846	140.00	85	283.00	115
62.00	10922	92.00	6597	141.00	1968		
63.00	8073	93.00	10620	142.00	274		

Digitally signed by Abigail P. Roselli on 02/20/2019 at 08:52.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

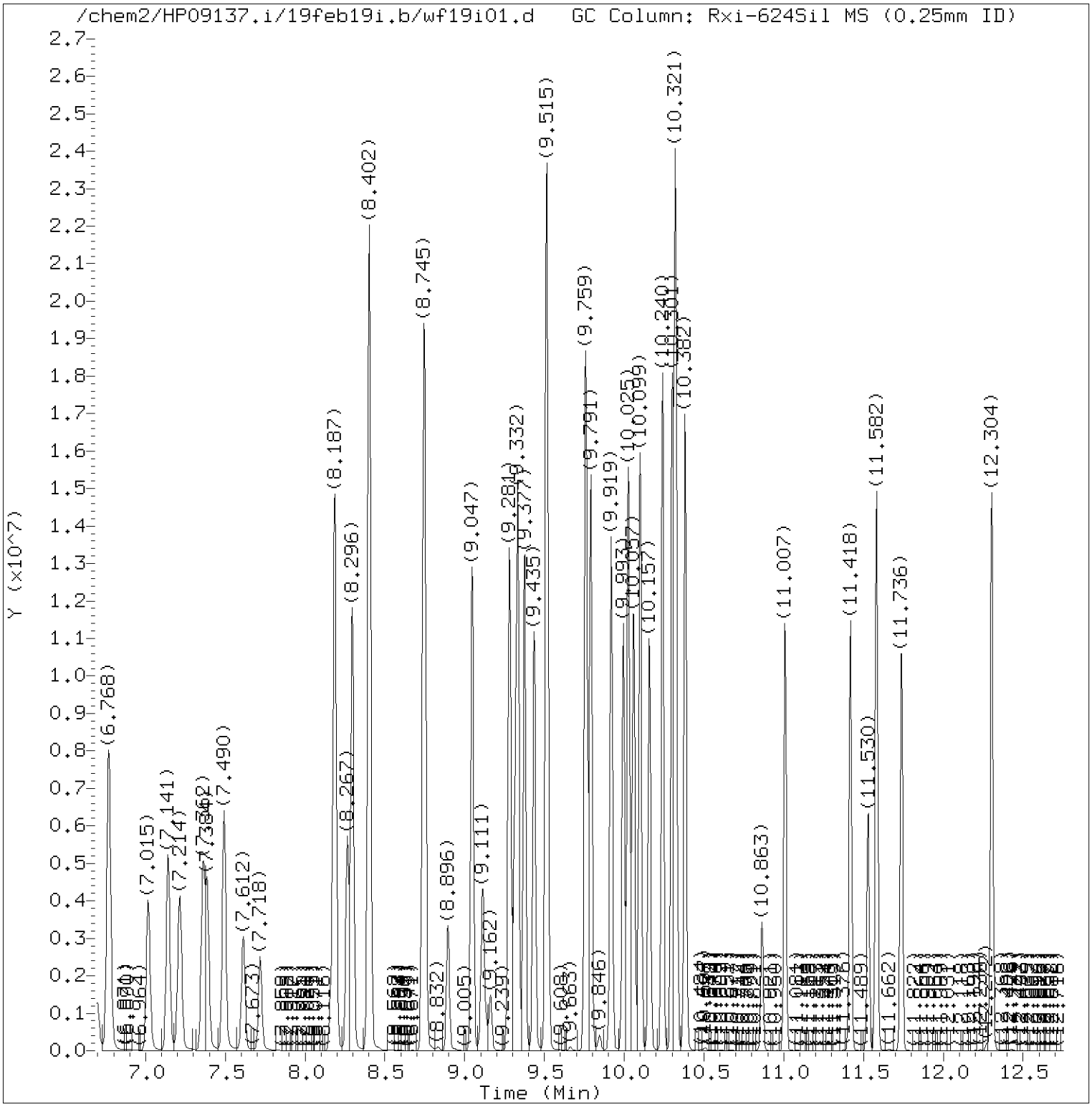
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.262	85	1830028	315.641
4) Chloromethane	(2)	1.397	50	2158390	298.969
6) Vinyl Chloride	(2)	1.467	62	2000231	302.231
5) 1,3-Butadiene	(2)	1.480	39	1294624	294.252
8) Bromomethane	(2)	1.682	94	1609891	308.431
9) Chloroethane	(2)	1.762	64	1225210	281.328
10) Dichlorofluoromethane	(2)	1.881	67	2469513	292.949
12) Trichlorofluoromethane	(2)	1.926	101	2215418	315.186
11) n-Pentane	(2)	1.981	43	1941951	290.504
13) Ethanol	(1)	2.032	45	654026	6868.269
15) Freon 123a	(2)	2.154	67	1544263M	294.005
16) Acrolein	(1)	2.215	56	4710694	3133.863
17) 1,1-Dichloroethene	(2)	2.324	96	1320043	333.906
17) 1,1-Dichloroethene	(2)	2.327	63	636364	319.054
19) Freon 113	(2)	2.330	101	1130965	325.785
18) Acetone	(1)	2.334	58	441895	604.809
21) 2-Propanol	(1)	2.449	45	740976	1364.990
22) Methyl Iodide	(2)	2.465	142	2433926	321.275
23) Carbon Disulfide	(2)	2.504	76	4385958	314.909
25) Allyl Chloride	(2)	2.600	41	2218296M	322.090
27) Methyl Acetate	(2)	2.616	43	1662446	278.873
29)*t-Butyl alcohol-d10	(1)	2.735	65	208793	250.000
28) Methylene Chloride	(2)	2.751	84	1485309M	307.373
30) t-Butyl alcohol	(1)	2.809	59	1347926	1391.981
31) Acrylonitrile	(2)	2.924	53	933874	297.783
32) trans-1,2-Dichloroethene	(2)	2.956	96	1367169	318.737
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	2930120	280.555
34) n-Hexane	(2)	3.213	57	1889144	329.160
36) 1,1-Dichloroethane	(2)	3.338	63	2443808	314.424
38) di-Isopropyl ether	(2)	3.412	45	4343522	290.888
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	2144637	318.591
40) Ethyl t-butyl ether	(2)	3.758	59	3125600	287.165
42) cis-1,2-Dichloroethene	(2)	3.890	96	1531613	318.027
45) 2,2-Dichloropropane	(2)	3.890	77	944483	270.575
44) 2-Butanone	(2)	3.906	43	2571903	570.822
47) Propionitrile	(1)	3.964	54	1942887	1614.356
48) Methacrylonitrile	(2)	4.115	67	2560168	759.258
49) Bromochloromethane	(2)	4.121	128	814405	325.314

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.166	71	727306	652.948
51) Chloroform	(2)	4.201	83	2299180	315.278
52)$Dibromofluoromethane	(2)	4.355	113	208205	50.122
52)$Dibromofluoromethane	(2)	4.355	111	214672	50.342
53) 1,1,1-Trichloroethane	(2)	4.381	97	1712874	312.162
54) Cyclohexane	(2)	4.442	56	2322517	319.833
54) Cyclohexane	(2)	4.445	84	1926454	320.494
54) Cyclohexane	(2)	4.442	69	709917	325.297
55) 1,1-Dichloropropene	(2)	4.545	75	1839194	314.568
56) Carbon Tetrachloride	(2)	4.545	117	1575192	334.514
58) Isobutyl Alcohol	(1)	4.673	41	1324103	3750.712
57)$1,2-Dichloroethane-d4	(2)	4.689	102	53519	48.443
57)$1,2-Dichloroethane-d4	(2)	4.692	65	233334	48.518
57)$1,2-Dichloroethane-d4	(2)	4.689	104	35388	50.297
60) Benzene	(2)	4.750	78	5810714	309.188
61) 1,2-Dichloroethane	(2)	4.766	62	1760449	303.238
61) 1,2-Dichloroethane	(2)	4.766	98	187445	339.366
65) t-Amyl methyl ether	(2)	4.872	73	2919577	261.832
66)*Fluorobenzene	(2)	5.029	96	896646	50.000
67) n-Heptane	(2)	5.036	43	1797080	327.627
69) n-Butanol	(1)	5.356	56	2506205	7995.614
71) Trichloroethene	(2)	5.405	95	1430931	314.409
73) Methylcyclohexane	(2)	5.607	83	2193871	332.036
73) Methylcyclohexane	(2)	5.607	98	1024331	333.422
74) 1,2-Dichloropropane	(2)	5.636	63	1543836	319.971
75) Dibromomethane	(2)	5.754	93	962248	323.143
77) Methyl Methacrylate	(2)	5.774	69	1719359	324.268
76) 1,4-Dioxane	(1)	5.783	88	380560M	4061.259
79) Bromodichloromethane	(2)	5.924	83	1800616	329.105
43) 1,2-Dichloroethene (Total)	(2)		96	2898782	636.764
80) 2-Nitropropane	(2)	6.175	41	1216565	657.181
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	1221742	332.128
82) cis-1,3-Dichloropropene	(2)	6.406	75	2496178	331.820
83) 4-Methyl-2-pentanone	(2)	6.585	43	5276419	594.089
84)$Toluene-d8	(3)	6.698	98	920754	48.955
84)$Toluene-d8	(3)	6.698	100	635513	50.952
89) Toluene	(3)	6.768	92	3764381	310.699
90) trans-1,3-Dichloropropene	(3)	7.015	75	2388350	331.125

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.141	69	2948418	332.666
93) 1,1,2-Trichloroethane	(3)	7.214	97	1462902	313.709
94) Tetrachloroethene	(3)	7.359	166	1538643	312.966
95) 1,3-Dichloropropane	(3)	7.384	76	2548018	314.585
97) 2-Hexanone	(3)	7.490	43	4182184	592.716
98) Dibromochloromethane	(3)	7.612	129	1599809	351.250
100) 1,2-Dibromoethane	(3)	7.718	107	1653551	322.750
101)*Chlorobenzene-d5	(3)	8.161	117	750584	50.000
103) Chlorobenzene	(3)	8.187	112	4251585	316.321
104) 1,1,1,2-Tetrachloroethane	(3)	8.267	131	1472432	340.894
105) Ethylbenzene	(3)	8.296	91	7172946	311.494
107) m+p-Xylene	(3)	8.402	106	5900396	644.458
108) o-Xylene	(3)	8.742	106	2944288	326.885
110) Styrene	(3)	8.751	104	5111867	338.315
111) Bromoform	(3)	8.896	173	1332048	375.784
112) Isopropylbenzene	(3)	9.047	105	6974372	315.109
113) Cyclohexanone	(1)	9.114	55	1785966	4225.220
115)$4-Bromofluorobenzene	(3)	9.162	95	381876	50.752
115)$4-Bromofluorobenzene	(3)	9.165	174	321796	50.682
116) Bromobenzene	(4)	9.278	156	2001950	310.704
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	2675009	307.862
118) 1,2,3-Trichloropropane	(4)	9.313	110	793023	303.003
119) trans-1,4-Dichloro-2-butene	(4)	9.332	53	2093586	751.374
120) n-Propylbenzene	(4)	9.377	91	8126022	286.087
121) 2-Chlorotoluene	(4)	9.435	126	1813407	309.524
123) 1,3,5-Trimethylbenzene	(4)	9.512	105	6283549	306.739
122) 4-Chlorotoluene	(4)	9.518	126	1986374	316.718
125) tert-Butylbenzene	(4)	9.756	134	1469098	315.656
126) Pentachloroethane	(4)	9.765	167	1314293	357.228
127) 1,2,4-Trimethylbenzene	(4)	9.791	105	6515518	301.836
128) sec-Butylbenzene	(4)	9.919	105	7350716	292.333
130) 1,3-Dichlorobenzene	(4)	9.993	146	3744438	304.756
131) p-Isopropyltoluene	(4)	10.025	119	6646629	298.604
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	447340	50.000
134) 1,4-Dichlorobenzene	(4)	10.061	146	3824950	300.290
91) 1,3-Dichloropropene (total)	(3)		100	4884528	662.945
135) 1,2,3-Trimethylbenzene	(4)	10.099	105	6932082	298.464
136) Benzyl Chloride	(4)	10.157	91	5948413	333.650

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.240	119	4321366	308.975
138) 1,4-Diethylbenzene	(4)	10.301	119	4611431	307.745
140) n-Butylbenzene	(4)	10.317	92	3453634	307.409
139) 1,2-Dichlorobenzene	(4)	10.324	146	3754829	308.029
141) 1,2-Diethylbenzene	(4)	10.382	119	3619472	306.525
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	622910	315.447
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	2798024	299.339
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	2685608	299.261
148) Hexachlorobutadiene	(4)	11.530	225	896485	280.479
149) Naphthalene	(4)	11.582	128	8569412	282.213
150) 1,2,3-Trichlorobenzene	(4)	11.739	180	2579036	294.437
109) Xylene (Total)	(3)		106	8844684	971.343
151) 2-Methylnaphthalene	(4)	12.304	142	5243189	302.657
142) Diethylbenzene (total)	(4)		100	12552269	923.245

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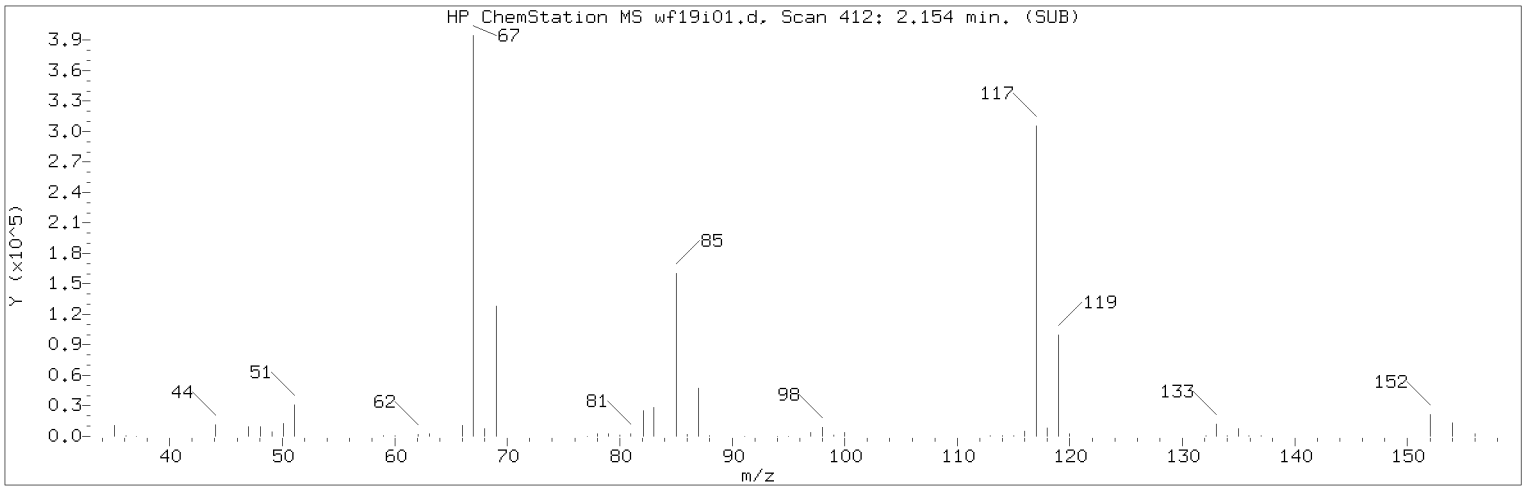
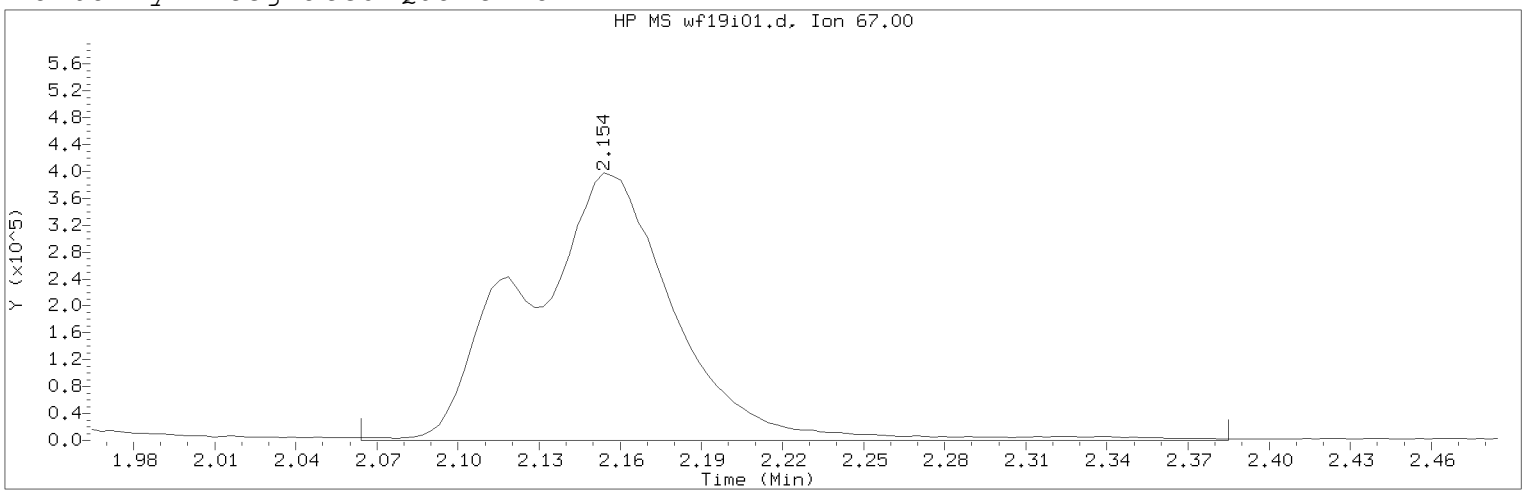
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

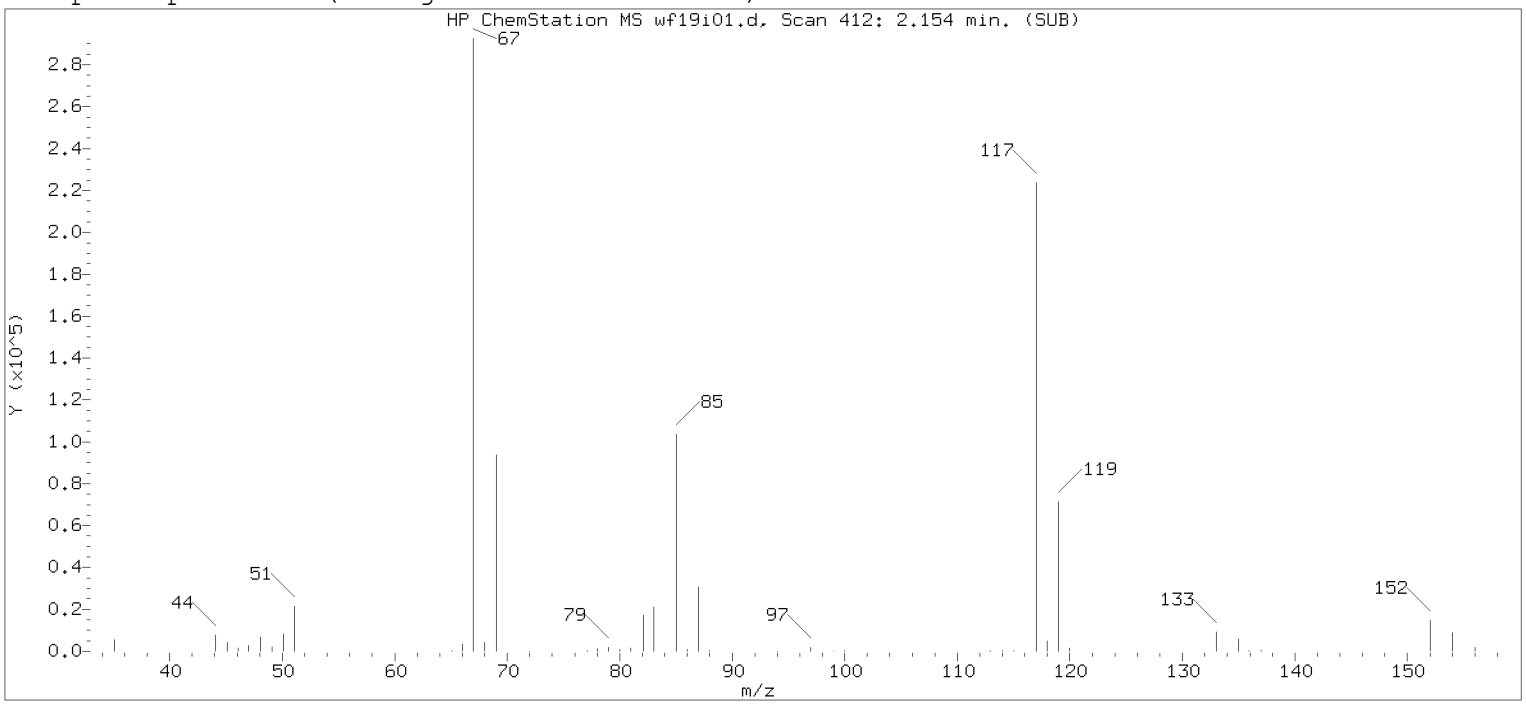
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 412
Retention Time (minutes): 2.154
Quant Ion : 67.00
Area (flag) : 1544263M
On-Column Amount (ng) : 294.0053
Integration start scan : 383 Integration stop scan: 483
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

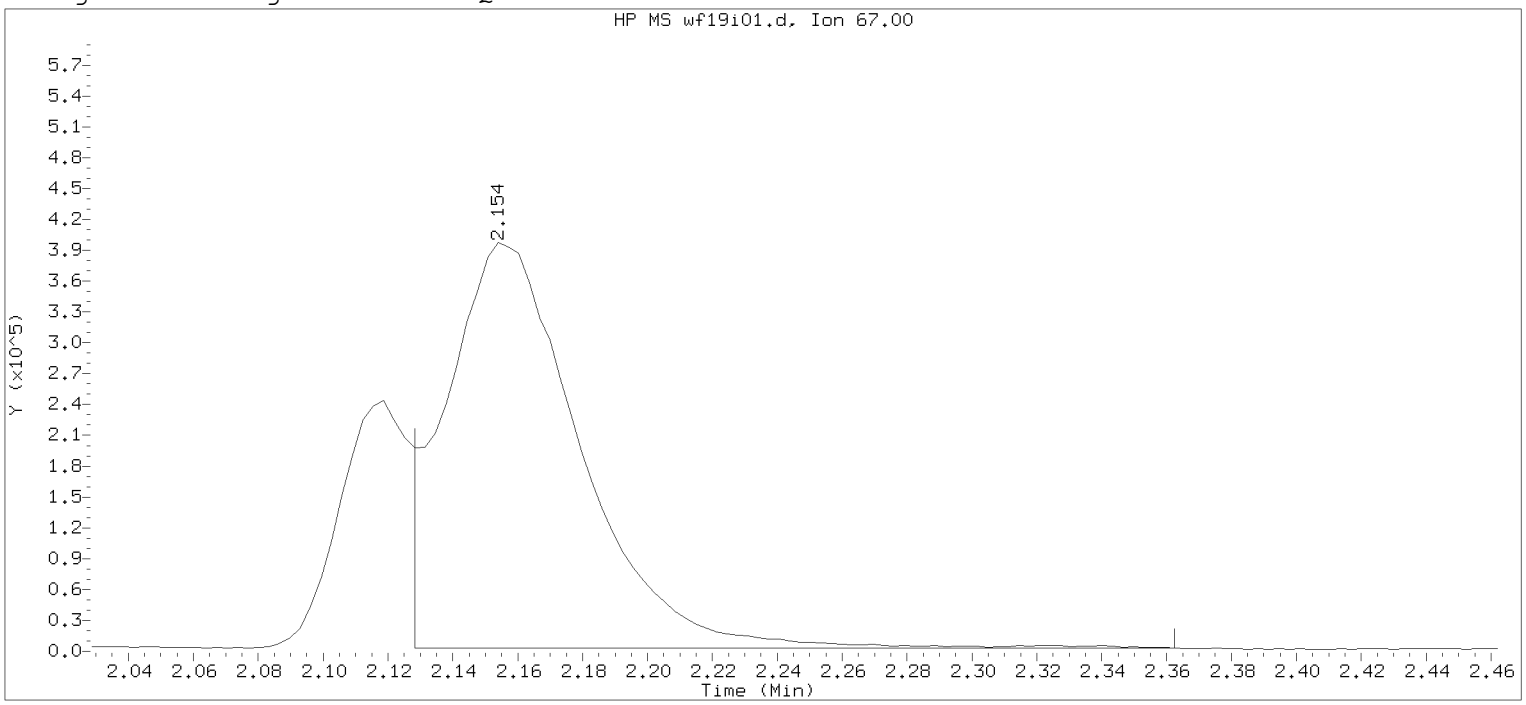
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



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Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

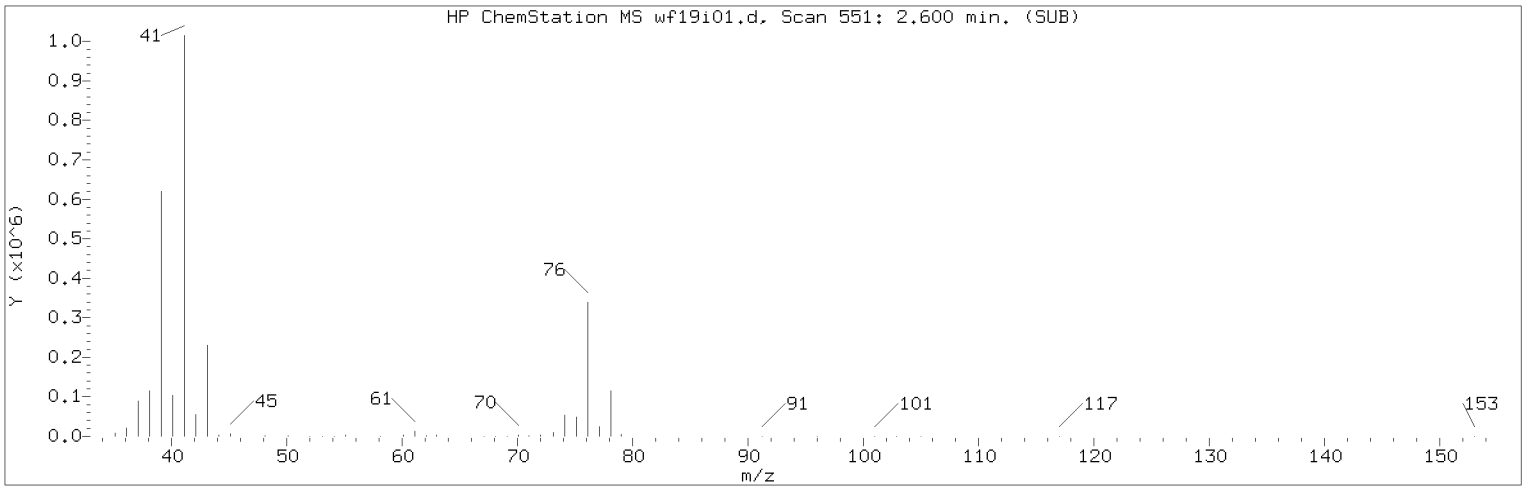
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

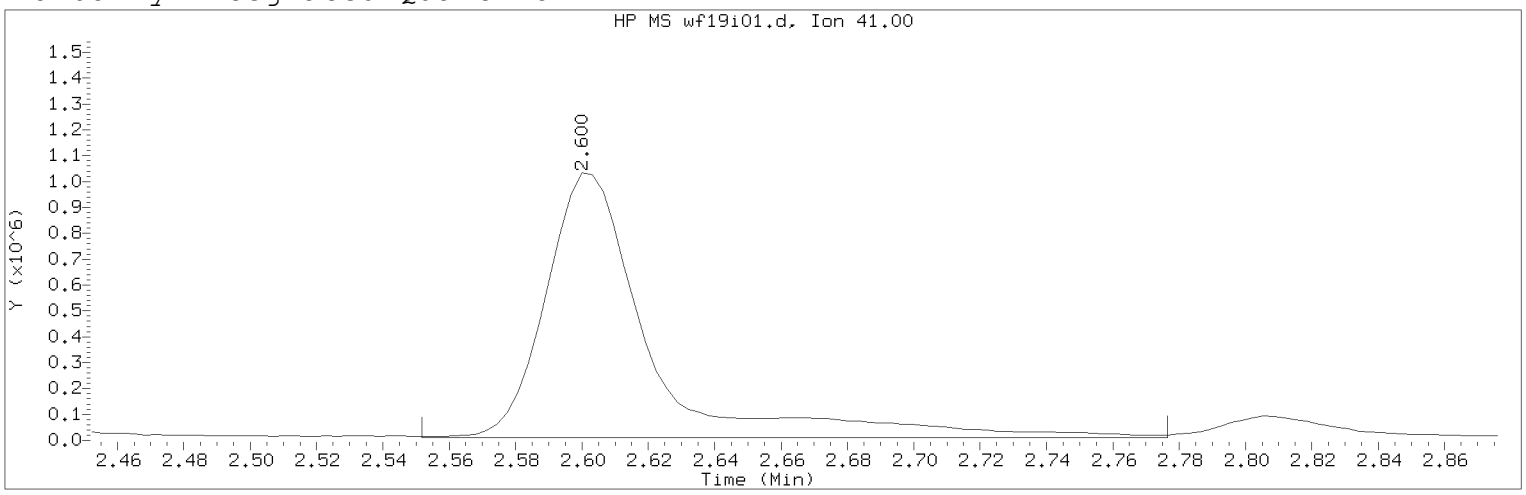
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 412
Retention Time (minutes): 2.154
Quant Ion : 67.00
Area : 1136730
On-column Amount (ng) : 300.0000
Integration start scan : 403 Integration stop scan: 476
Y at integration start : 3233 Y at integration end: 2941

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

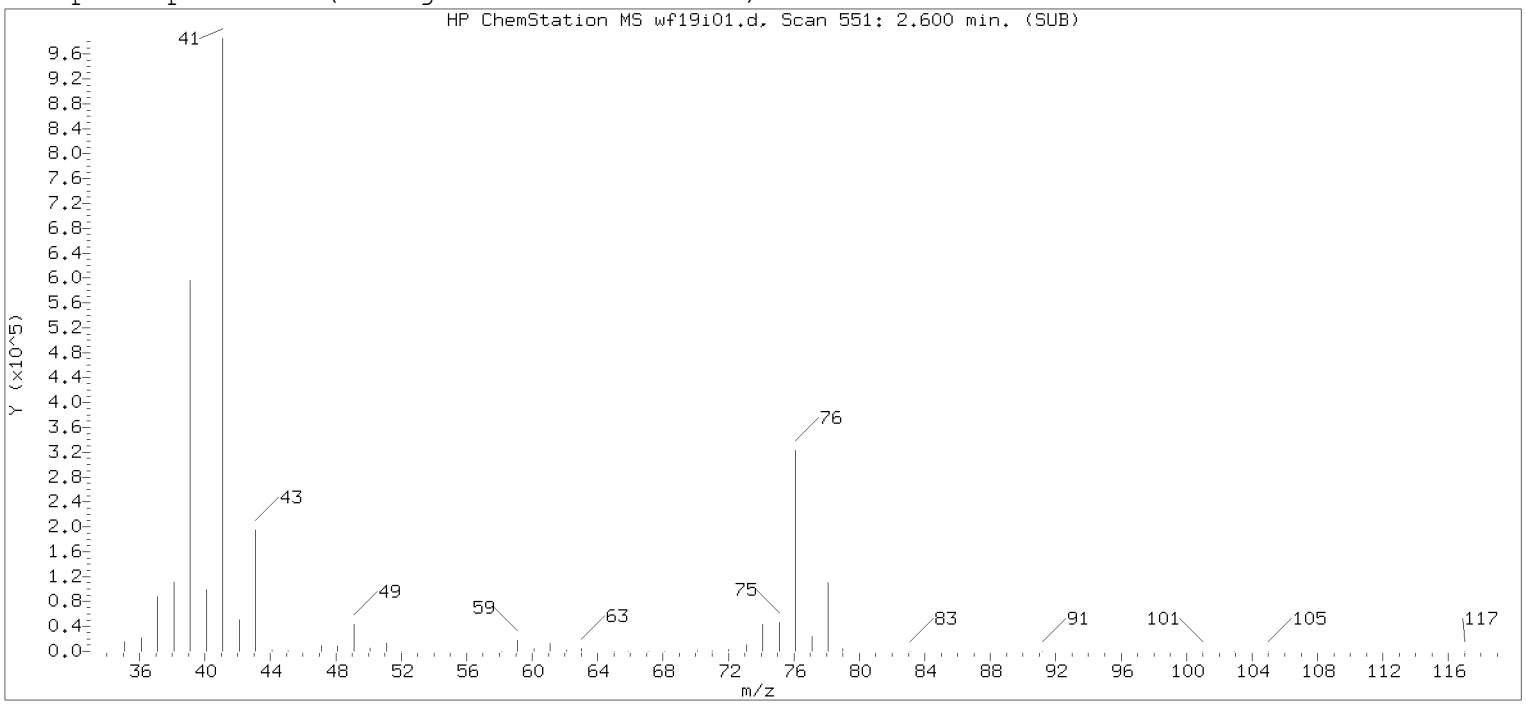
Compound Number : 25
Compound Name : Allyl Chloride
Scan Number : 551
Retention Time (minutes): 2.600
Quant Ion : 41.00
Area (flag) : 2218296M
On-Column Amount (ng) : 322.0900
Integration start scan : 535 Integration stop scan: 605
Y at integration start : 10829 Y at integration end: 10829

Reason for manual integration: improper integration

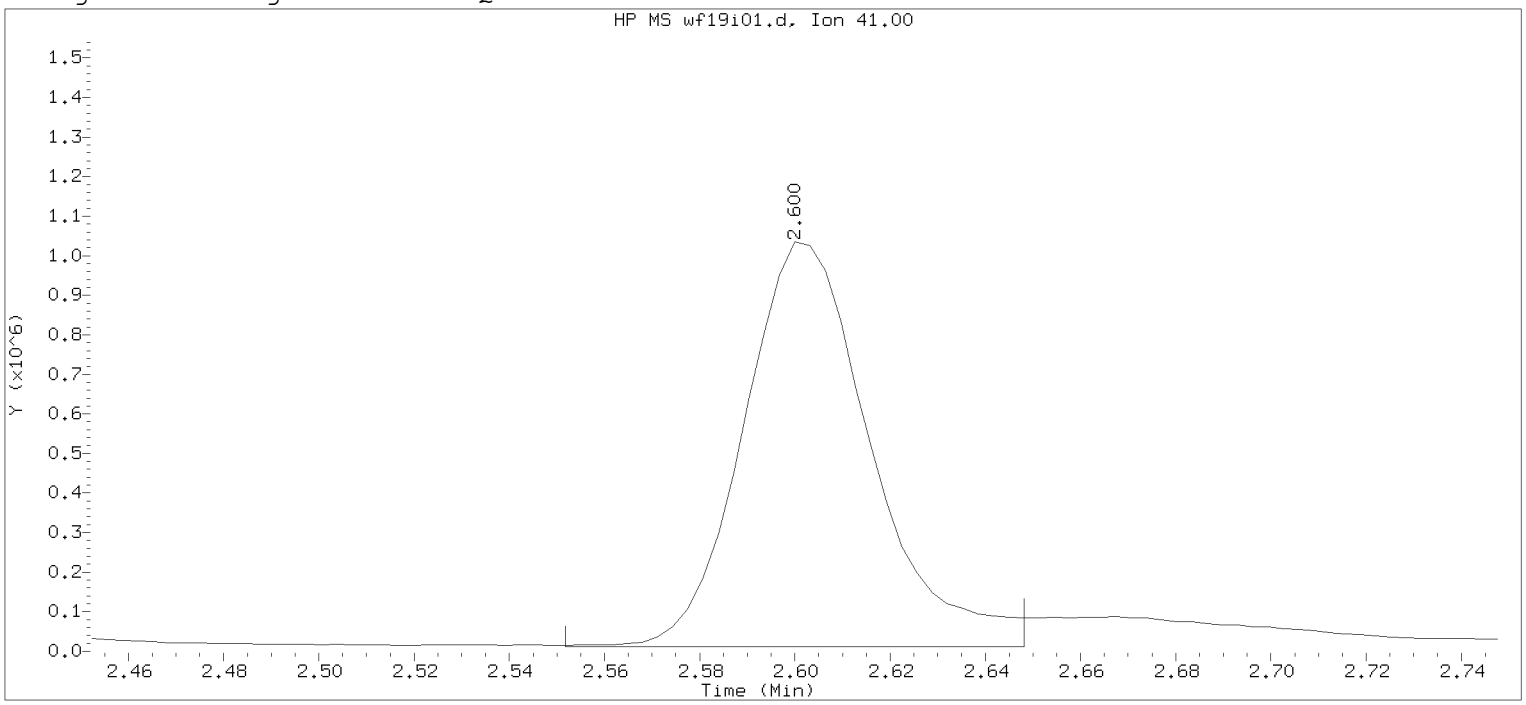
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 25
Compound Name : Allyl Chloride
Scan Number : 551
Retention Time (minutes): 2.600
Quant Ion : 41.00
Area : 1896643
On-column Amount (ng) : 300.0000
Integration start scan : 535 Integration stop scan: 565
Y at integration start : 11574 Y at integration end: 11574

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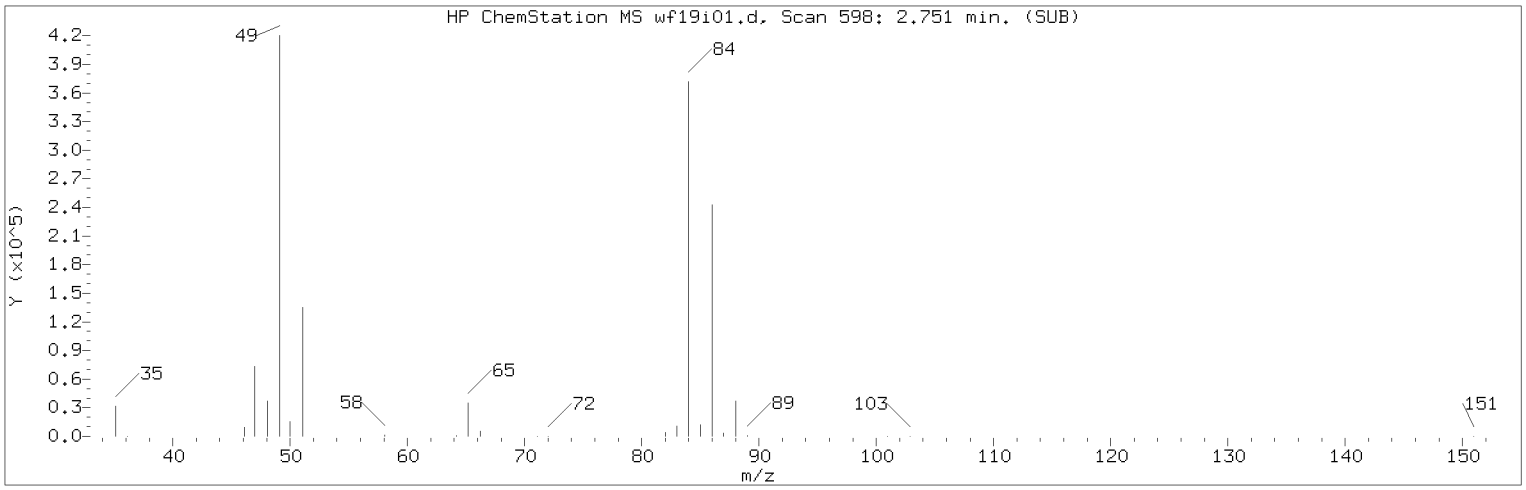
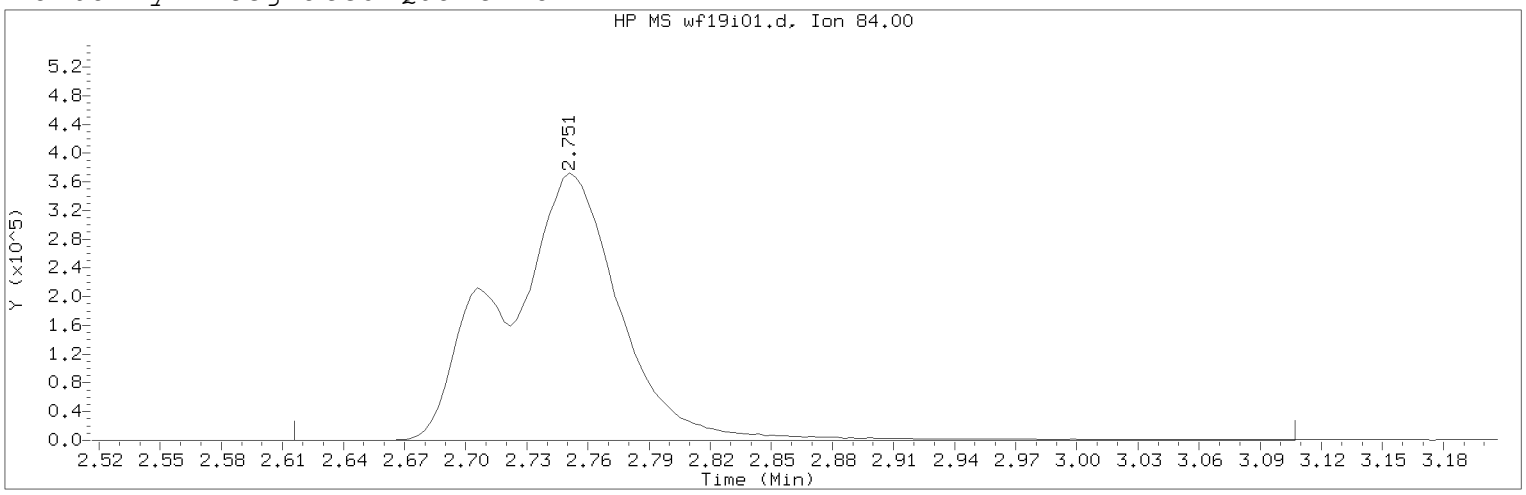
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

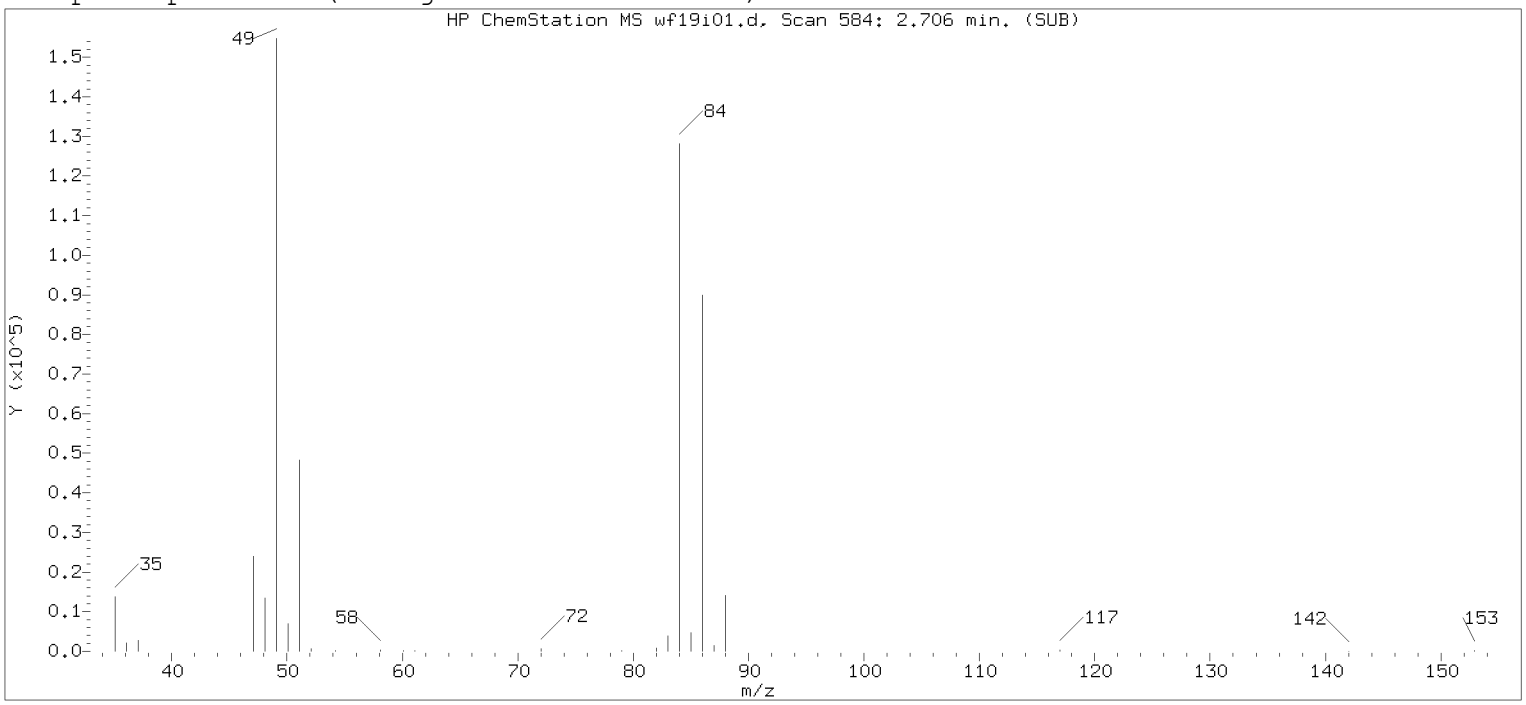
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 598
Retention Time (minutes): 2.751
Quant Ion : 84.00
Area (flag) : 1485309M
On-Column Amount (ng) : 307.3734
Integration start scan : 555 Integration stop scan: 708
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

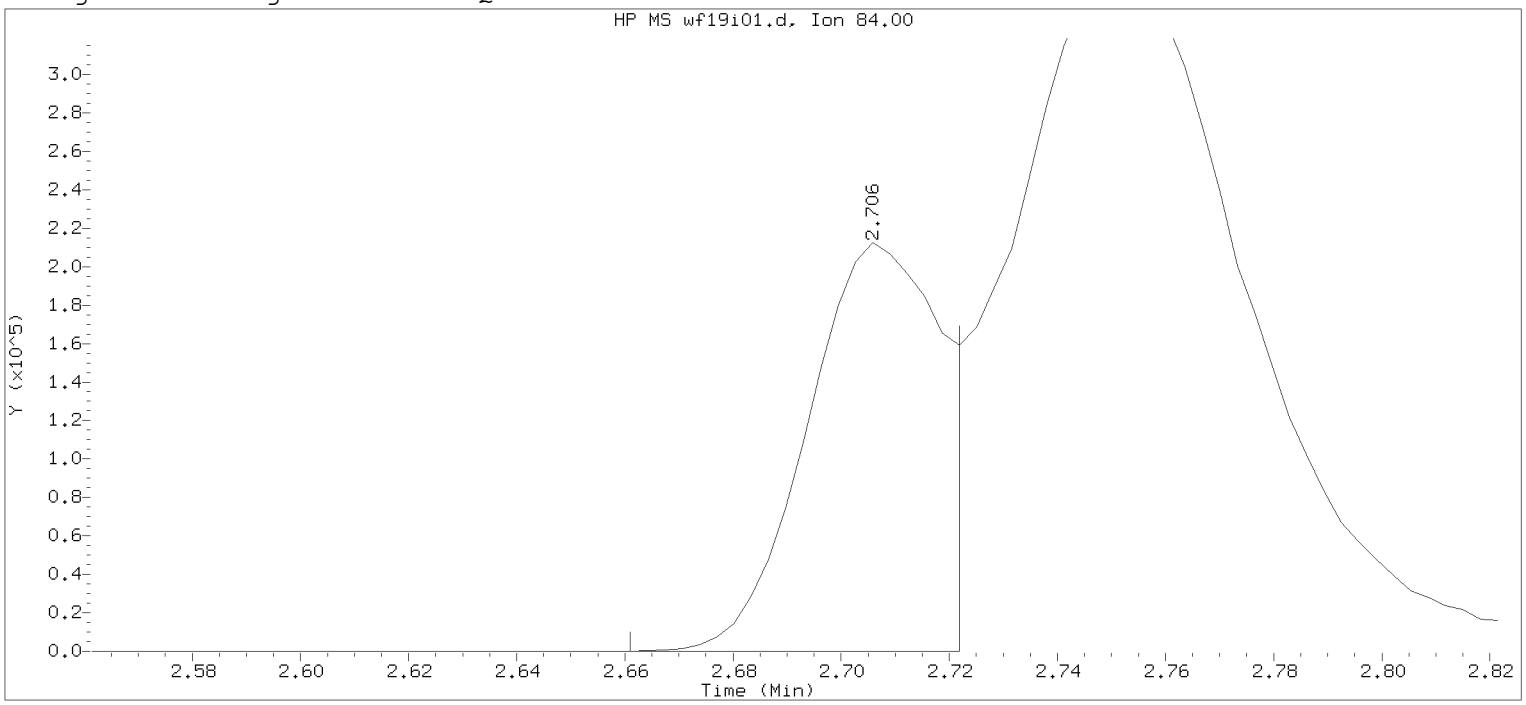
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

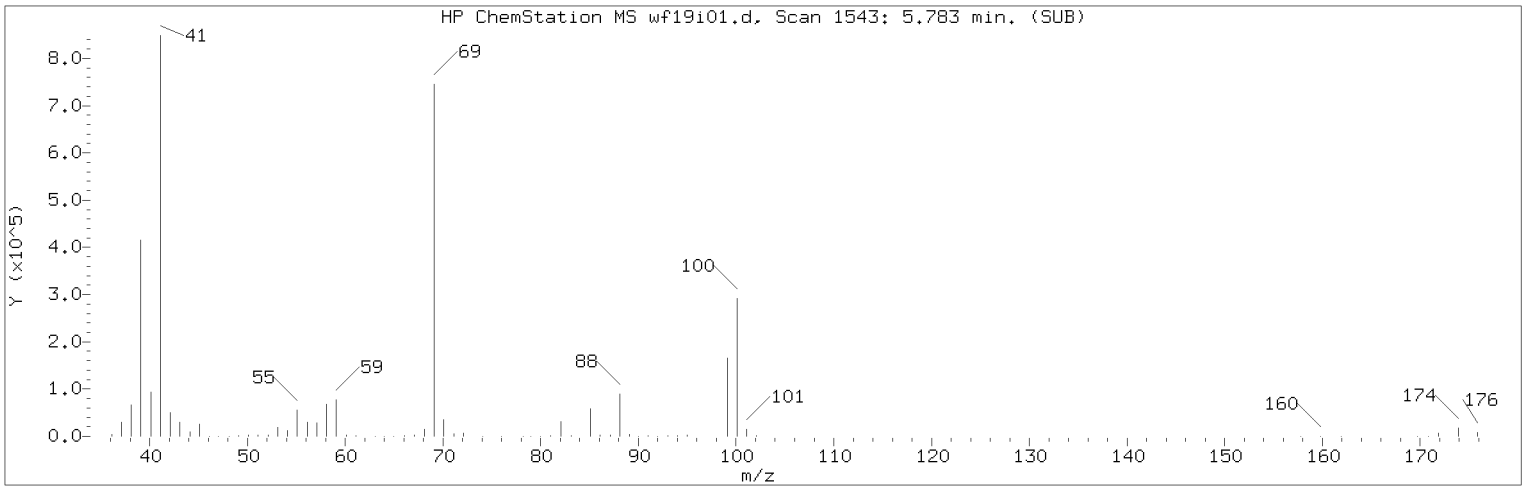
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

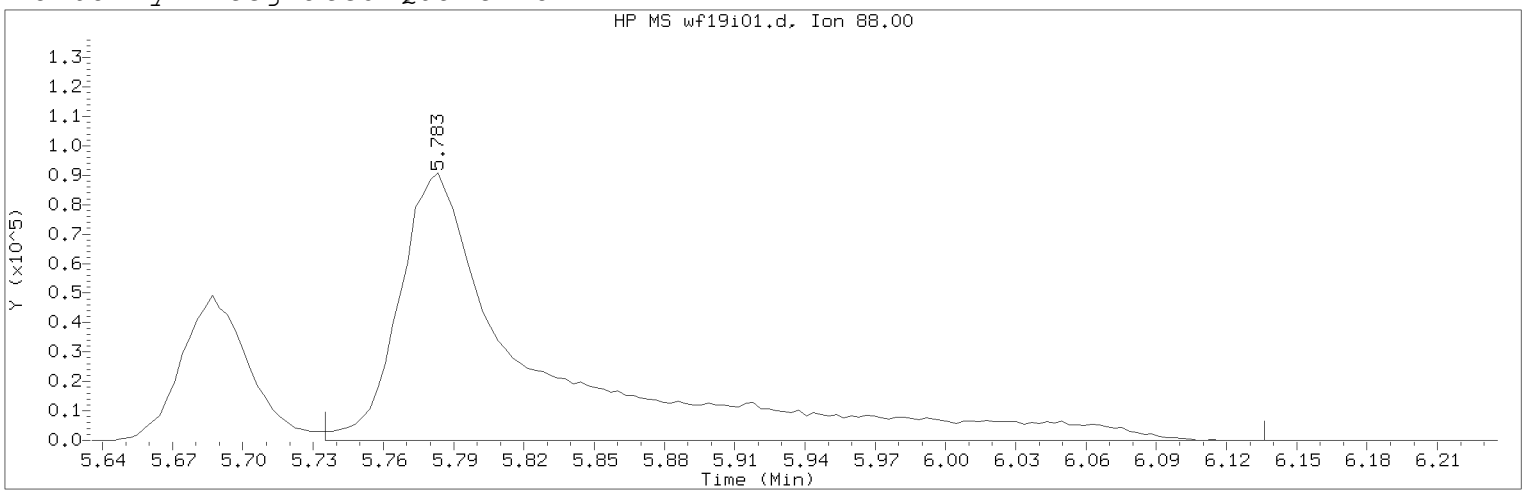
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 584
Retention Time (minutes): 2.706
Quant Ion : 84.00
Area : 358731
On-column Amount (ng) : 300.0000
Integration start scan : 569 Integration stop scan: 588
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user: Abigail P. Roselli

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

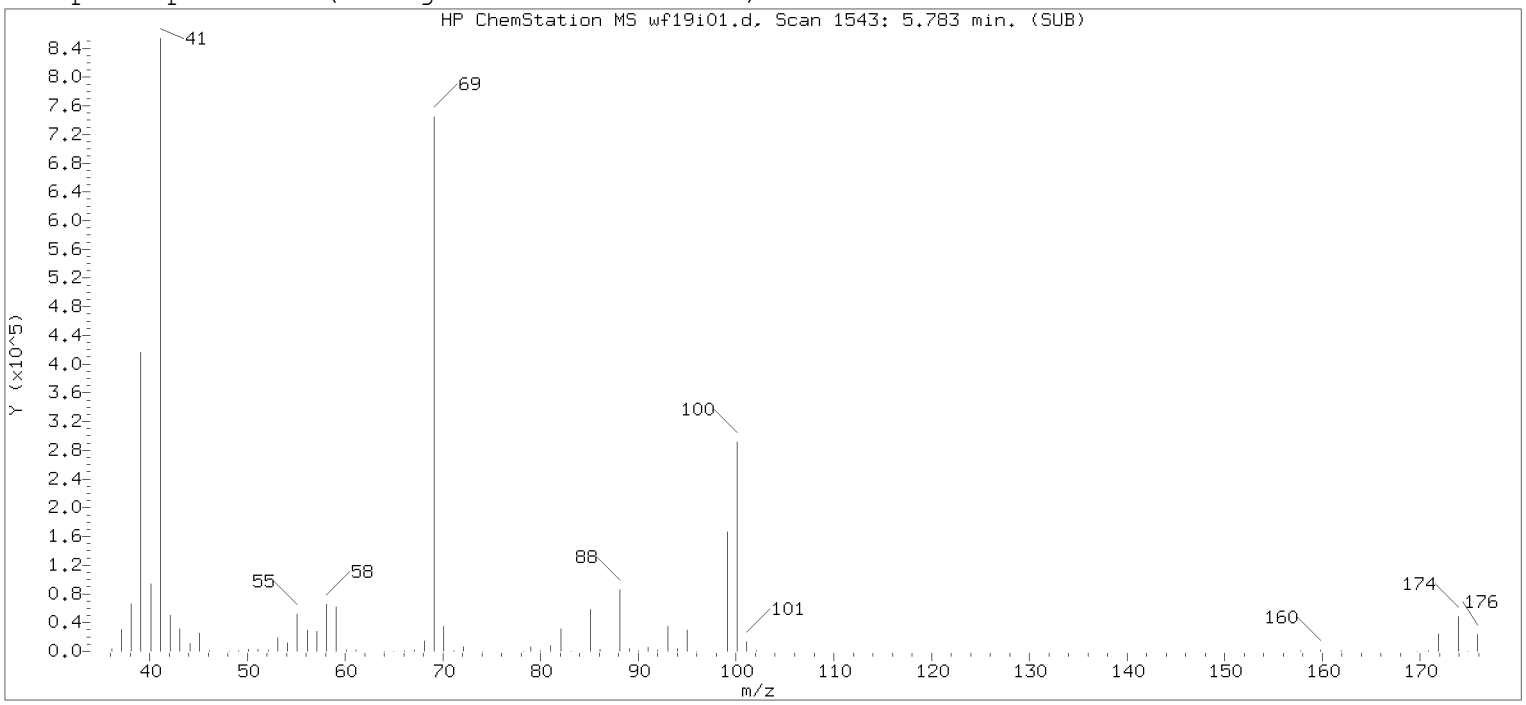
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1543
Retention Time (minutes): 5.783
Quant Ion : 88.00
Area (flag) : 380560M
On-Column Amount (ng) : 4061.2594
Integration start scan : 1527 Integration stop scan: 1652
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

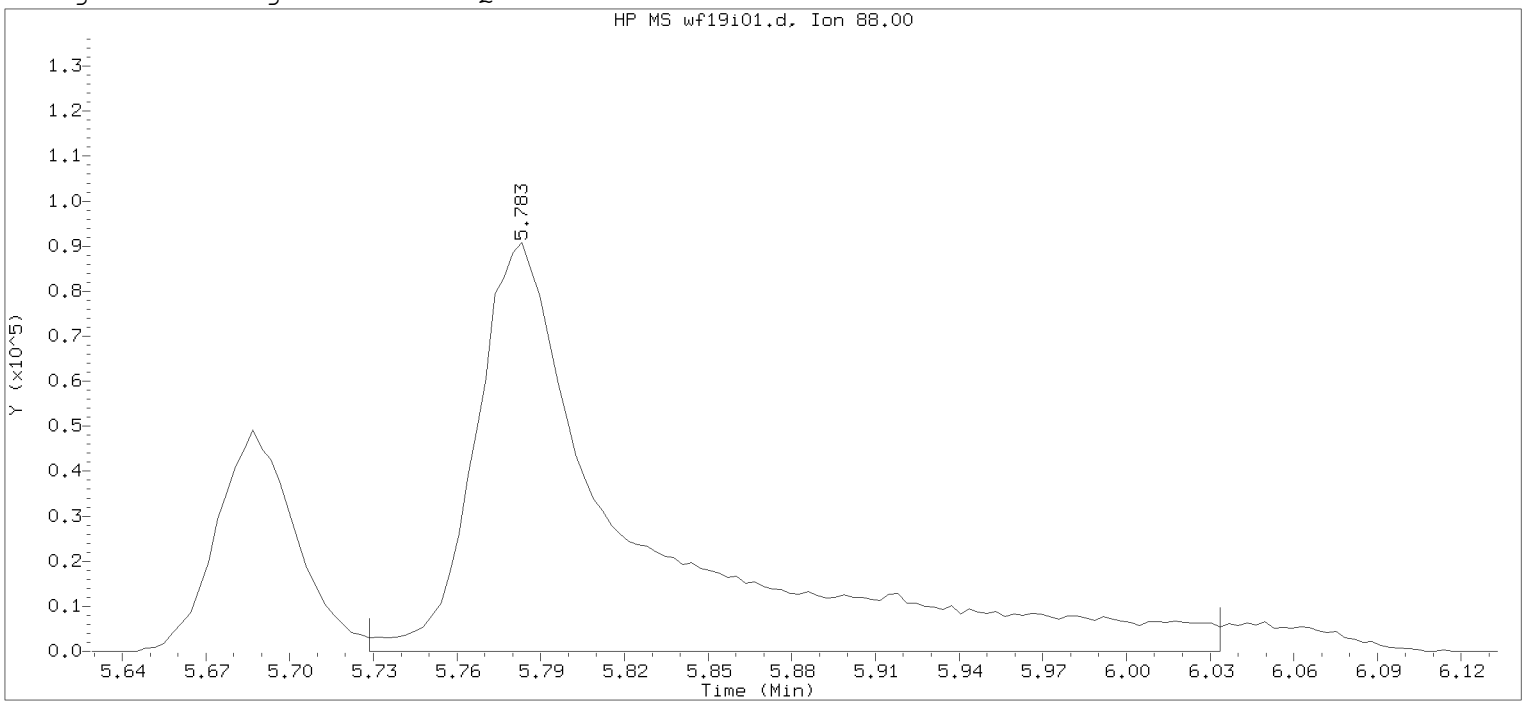
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



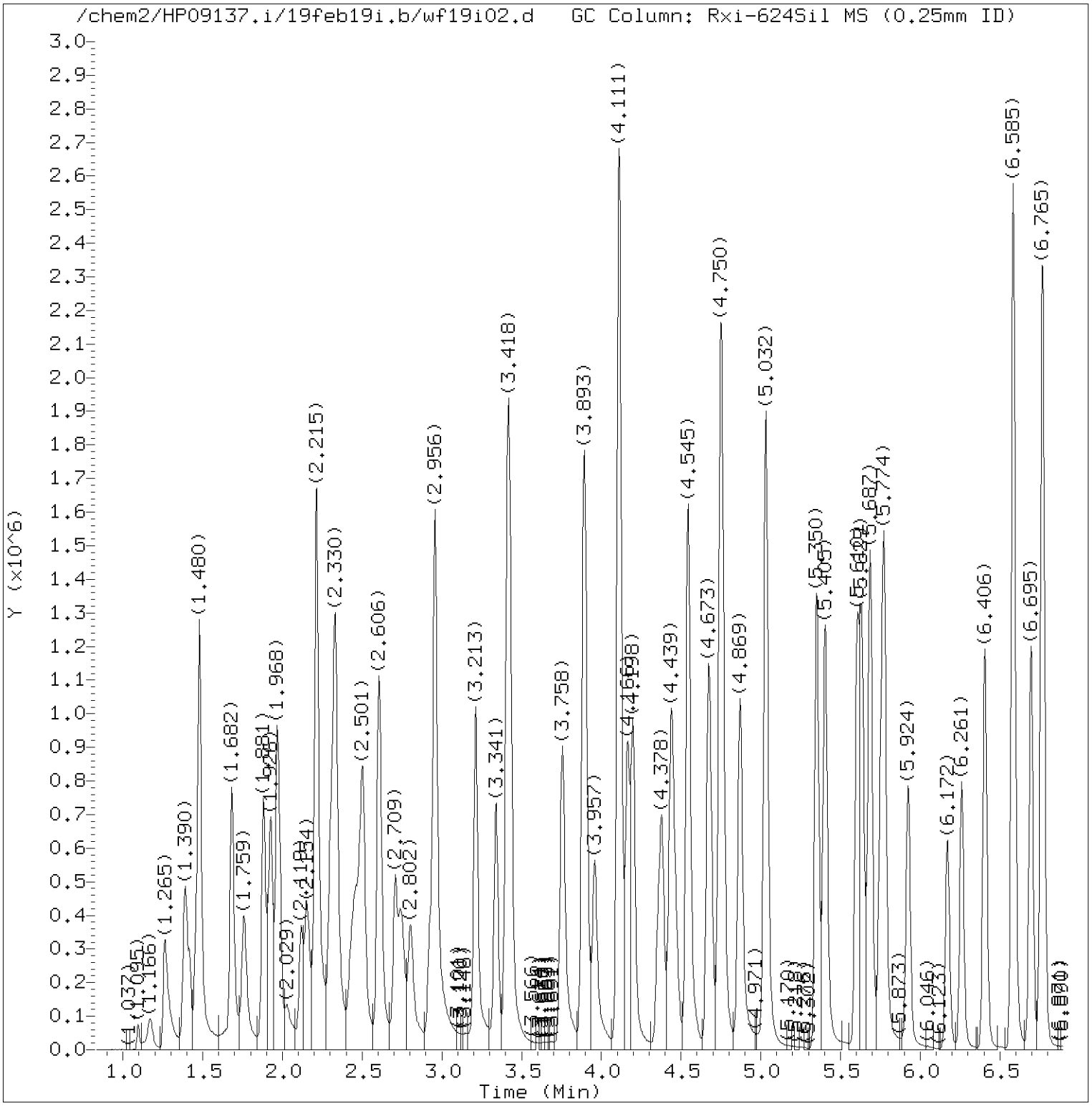
Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1543
Retention Time (minutes): 5.783
Quant Ion : 88.00
Area : 364823
On-column Amount (ng) : 3750.0000
Integration start scan : 1525 Integration stop scan: 1620
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

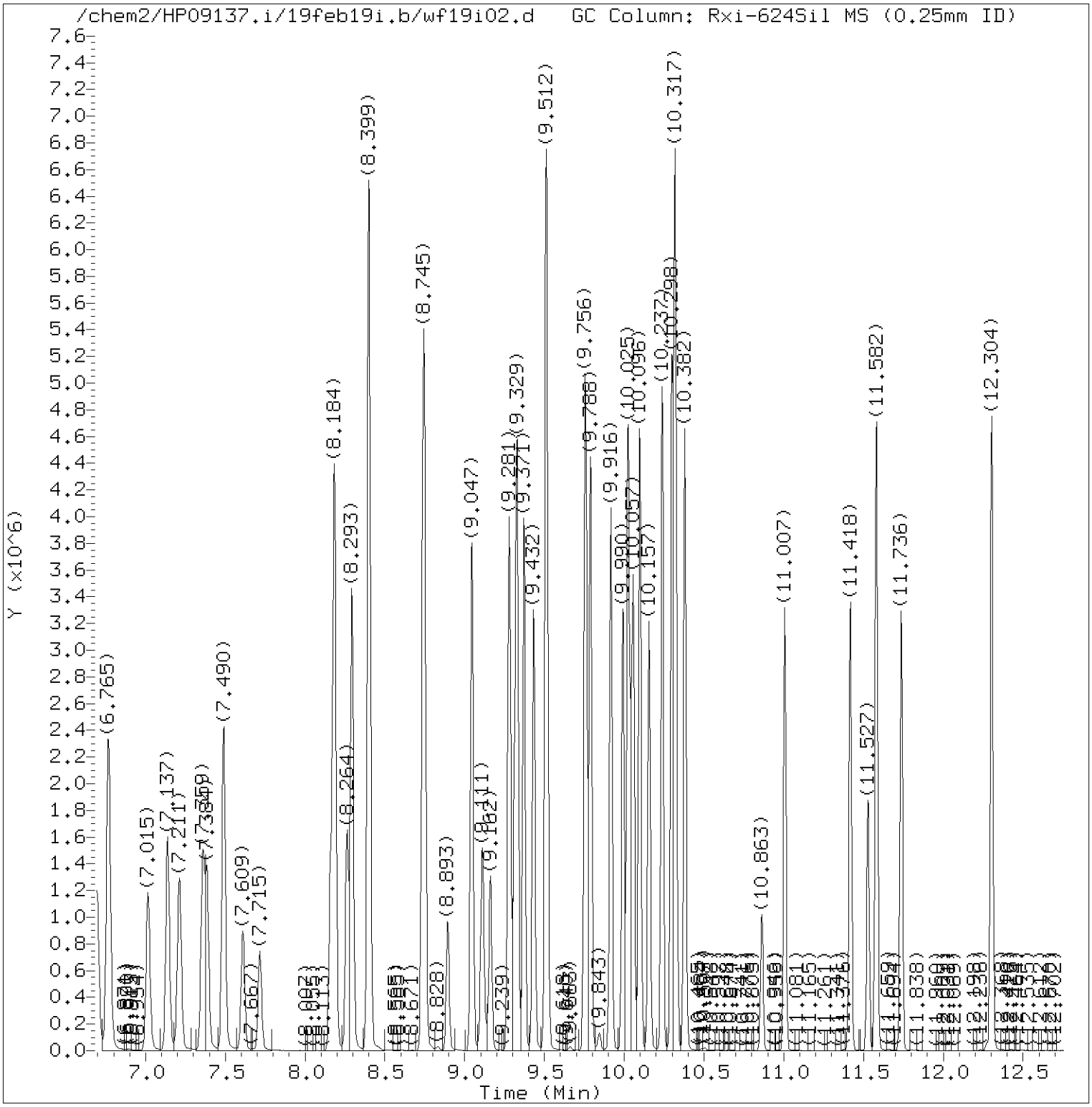
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.265	85	532286	97.759
4) Chloromethane	(2)	1.390	50	662027	97.645
6) Vinyl Chloride	(2)	1.461	62	607652	97.766
5) 1,3-Butadiene	(2)	1.480	39	375111	90.785
8) Bromomethane	(2)	1.682	94	485723	99.089
9) Chloroethane	(2)	1.756	64	376986	92.173
10) Dichlorofluoromethane	(2)	1.881	67	739116	93.362
12) Trichlorofluoromethane	(2)	1.926	101	651101	98.636
11) n-Pentane	(2)	1.968	43	576023	91.755
13) Ethanol	(1)	2.032	45	238813	2376.796
15) Freon 123a	(2)	2.154	67	447423M	90.704
16) Acrolein	(1)	2.215	56	1612064	1016.387
17) 1,1-Dichloroethene	(2)	2.321	96	368528	99.262
17) 1,1-Dichloroethene	(2)	2.324	63	178834	95.474
19) Freon 113	(2)	2.327	101	324542	99.547
18) Acetone	(1)	2.334	58	146760	190.366
21) 2-Propanol	(1)	2.446	45	307931	537.602
22) Methyl Iodide	(2)	2.462	142	704010M	98.952
23) Carbon Disulfide	(2)	2.504	76	1282599	98.059
25) Allyl Chloride	(2)	2.603	41	655452	101.339
27) Methyl Acetate	(2)	2.619	43	535082	95.578
28) Methylene Chloride	(2)	2.709	84	428209	94.359
29)*t-Butyl alcohol-d10	(1)	2.732	65	220310	250.000
30) t-Butyl alcohol	(1)	2.805	59	526469	515.255
31) Acrylonitrile	(2)	2.924	53	304031	103.230
32) trans-1,2-Dichloroethene	(2)	2.956	96	402067	99.813
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	945603	96.409
34) n-Hexane	(2)	3.213	57	538355	99.882
36) 1,1-Dichloroethane	(2)	3.341	63	732003	100.285
38) di-Isopropyl ether	(2)	3.412	45	1396389	99.579
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	632191	100.001
40) Ethyl t-butyl ether	(2)	3.758	59	960285	93.945
42) cis-1,2-Dichloroethene	(2)	3.890	96	451707	99.873
45) 2,2-Dichloropropane	(2)	3.890	77	324555	99.005
44) 2-Butanone	(2)	3.903	43	860004	203.247
47) Propionitrile	(1)	3.961	54	609727	480.141
48) Methacrylonitrile	(2)	4.108	67	777971	245.675
49) Bromochloromethane	(2)	4.118	128	236720	100.687

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.166	71	230330	195.972
51) Chloroform	(2)	4.198	83	681837	99.558
52)$Dibromofluoromethane	(2)	4.352	113	193818	49.683
52)$Dibromofluoromethane	(2)	4.355	111	202190	50.488
53) 1,1,1-Trichloroethane	(2)	4.378	97	514779	99.897
54) Cyclohexane	(2)	4.442	56	662674	97.172
54) Cyclohexane	(2)	4.439	84	552208	97.823
54) Cyclohexane	(2)	4.442	69	200038	97.603
55) 1,1-Dichloropropene	(2)	4.545	75	537698	97.927
56) Carbon Tetrachloride	(2)	4.545	117	449800	101.713
58) Isobutyl Alcohol	(1)	4.670	41	498266	1337.627
57)$1,2-Dichloroethane-d4	(2)	4.689	102	51772	49.899
57)$1,2-Dichloroethane-d4	(2)	4.689	65	224469	49.700
57)$1,2-Dichloroethane-d4	(2)	4.689	104	32929	49.836
60) Benzene	(2)	4.747	78	1745793	98.915
61) 1,2-Dichloroethane	(2)	4.766	62	527693	96.787
61) 1,2-Dichloroethane	(2)	4.763	98	54900	105.839
65) t-Amyl methyl ether	(2)	4.869	73	996307	95.142
66)*Fluorobenzene	(2)	5.029	96	842063	50.000
67) n-Heptane	(2)	5.036	43	494804	96.055
69) n-Butanol	(1)	5.353	56	936370	2831.160
71) Trichloroethene	(2)	5.405	95	426587	99.807
73) Methylcyclohexane	(2)	5.607	83	609561	98.235
73) Methylcyclohexane	(2)	5.604	98	284401	98.574
74) 1,2-Dichloropropane	(2)	5.632	63	460305	101.585
75) Dibromomethane	(2)	5.754	93	287206	102.702
77) Methyl Methacrylate	(2)	5.774	69	522673	104.965
76) 1,4-Dioxane	(1)	5.780	88	133422M	1349.419
79) Bromodichloromethane	(2)	5.924	83	538662	104.835
43) 1,2-Dichloroethene (Total)	(2)		96	853774	199.686
80) 2-Nitropropane	(2)	6.172	41	392793	225.938
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	375619	108.730
82) cis-1,3-Dichloropropene	(2)	6.406	75	742975	105.167
83) 4-Methyl-2-pentanone	(2)	6.582	43	1875717	224.883
84)$Toluene-d8	(3)	6.695	98	874156	49.795
84)$Toluene-d8	(3)	6.695	100	585880	50.326
89) Toluene	(3)	6.765	92	1120657	99.097
90) trans-1,3-Dichloropropene	(3)	7.015	75	707175	105.042

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.137	69	893065	107.955
93) 1,1,2-Trichloroethane	(3)	7.211	97	446415	102.563
94) Tetrachloroethene	(3)	7.359	166	451061	98.296
95) 1,3-Dichloropropane	(3)	7.388	76	768151	101.607
97) 2-Hexanone	(3)	7.490	43	1550240	235.388
98) Dibromochloromethane	(3)	7.609	129	468005	110.088
100) 1,2-Dibromoethane	(3)	7.715	107	494533	103.416
101)*Chlorobenzene-d5	(3)	8.161	117	700579	50.000
103) Chlorobenzene	(3)	8.187	112	1242086	99.008
104) 1,1,1,2-Tetrachloroethane	(3)	8.264	131	424147	105.206
105) Ethylbenzene	(3)	8.293	91	2139903	99.561
107) m+p-Xylene	(3)	8.399	106	1713085	200.463
108) o-Xylene	(3)	8.739	106	843483	100.330
110) Styrene	(3)	8.748	104	1474099	104.523
111) Bromoform	(3)	8.893	173	379562	114.721
112) Isopropylbenzene	(3)	9.047	105	2075316	100.458
113) Cyclohexanone	(1)	9.111	55	575999	1291.456
115)$4-Bromofluorobenzene	(3)	9.162	95	350858	49.958
115)$4-Bromofluorobenzene	(3)	9.162	174	295274	49.824
116) Bromobenzene	(4)	9.278	156	567523	99.066
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	803775	104.043
118) 1,2,3-Trichloropropane	(4)	9.313	110	239124	102.762
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	643492	259.751
120) n-Propylbenzene	(4)	9.371	91	2463393	97.544
121) 2-Chlorotoluene	(4)	9.432	126	515018	98.871
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	1822759	100.079
122) 4-Chlorotoluene	(4)	9.515	126	553747	99.305
125) tert-Butylbenzene	(4)	9.756	134	406285	98.184
126) Pentachloroethane	(4)	9.765	167	342023	104.558
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	1913889	99.721
128) sec-Butylbenzene	(4)	9.916	105	2197034	98.273
130) 1,3-Dichlorobenzene	(4)	9.993	146	1077708	98.654
131) p-Isopropyltoluene	(4)	10.022	119	1972426	99.665
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	397731	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	1113649	98.336
91) 1,3-Dichloropropene (total)	(3)		100	1450150	210.209
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	2033938	98.495
136) Benzyl Chloride	(4)	10.157	91	1788288	112.817

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

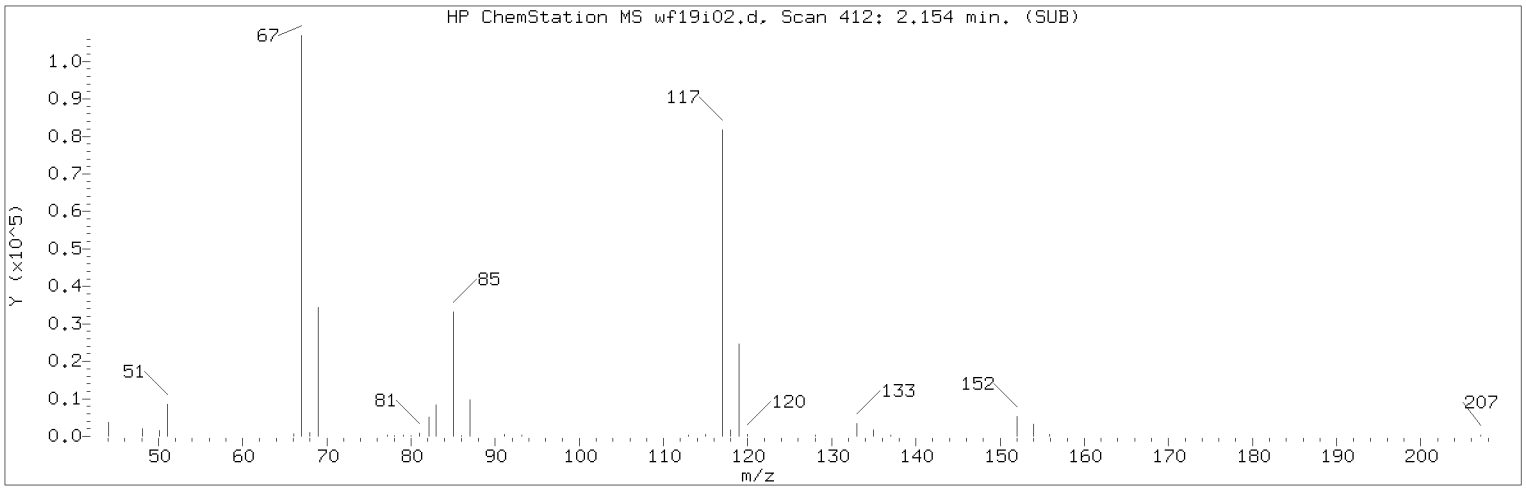
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

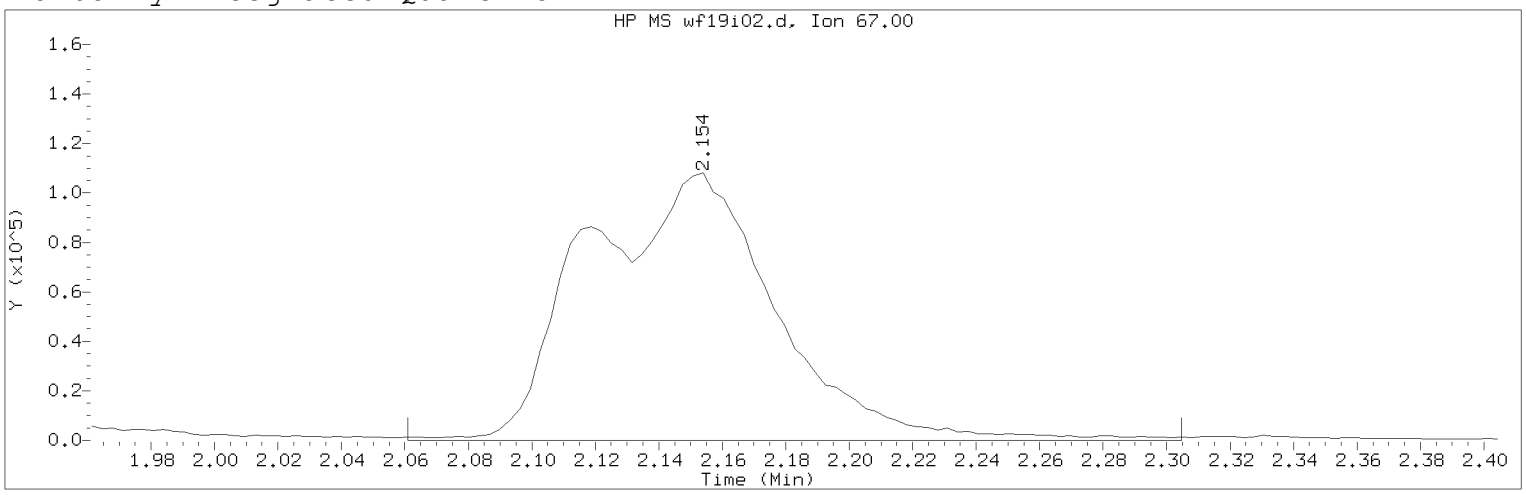
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.237	119	1234343	99.263
138) 1,4-Diethylbenzene	(4)	10.298	119	1307716	98.156
140) n-Butylbenzene	(4)	10.314	92	985822	98.693
139) 1,2-Dichlorobenzene	(4)	10.324	146	1081811	99.816
141) 1,2-Diethylbenzene	(4)	10.382	119	1030347	98.141
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	191235	108.922
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	826857	99.492
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	814746	102.112
148) Hexachlorobutadiene	(4)	11.530	225	267172	94.015
149) Naphthalene	(4)	11.582	128	2844431	105.359
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	786584	101.001
109) Xylene (Total)	(3)		106	2556568	300.794
151) 2-Methylnaphthalene	(4)	12.304	142	1671753	108.536
142) Diethylbenzene (total)	(4)		100	3572406	295.560

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

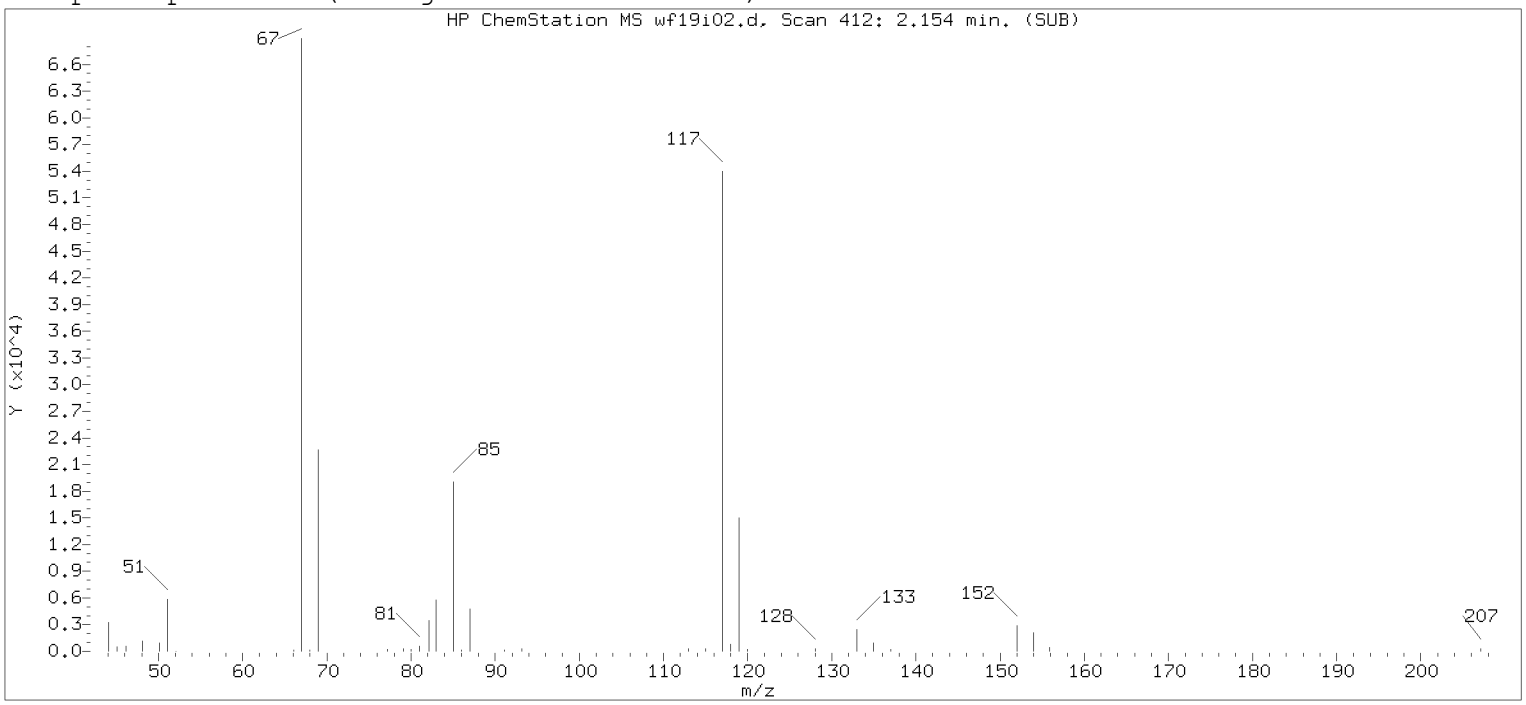
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 412
Retention Time (minutes): 2.154
Quant Ion : 67.00
Area (flag) : 447423M
On-Column Amount (ng) : 90.7045
Integration start scan : 382 Integration stop scan: 458
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

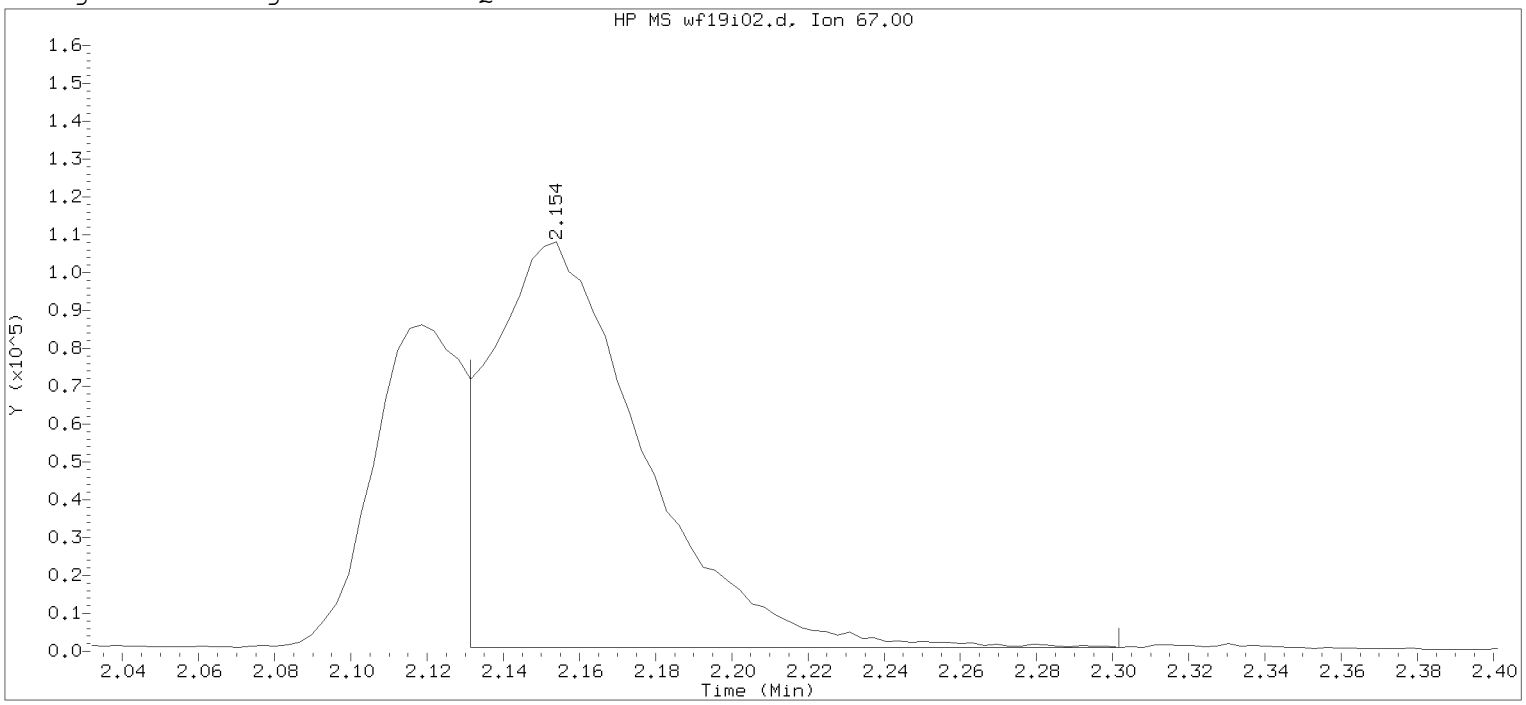
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

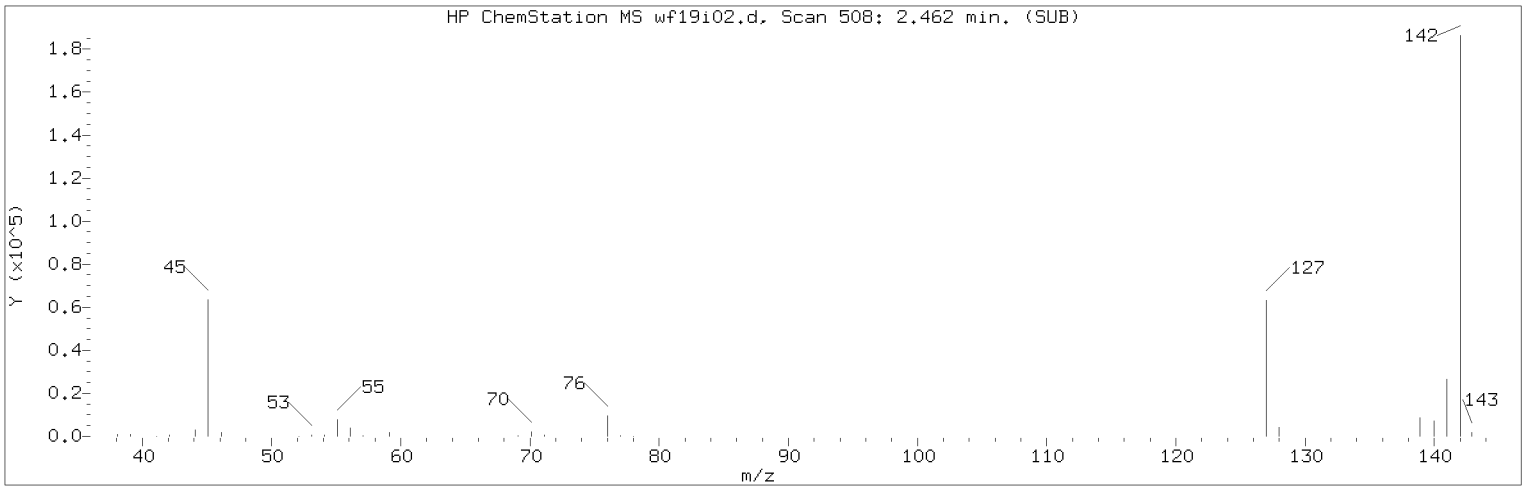
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD100 Lab Sample ID: VSTD100

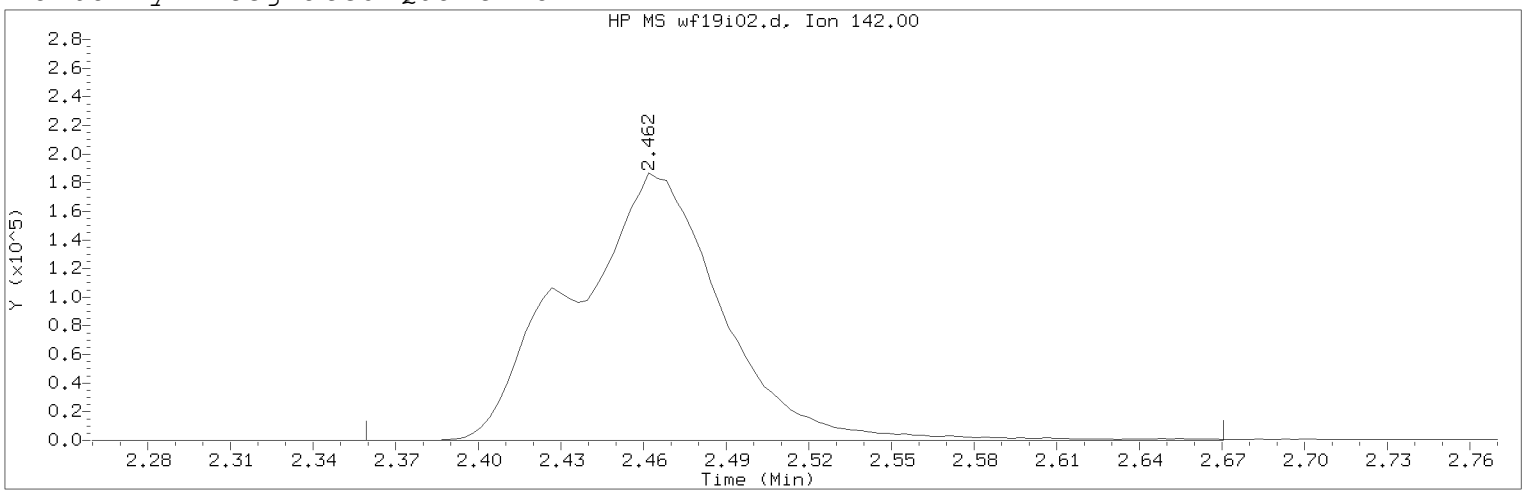
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 412
Retention Time (minutes): 2.154
Quant Ion : 67.00
Area : 294632
On-column Amount (ng) : 90.5897
Integration start scan : 404 Integration stop scan: 457
Y at integration start : 1032 Y at integration end: 981

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

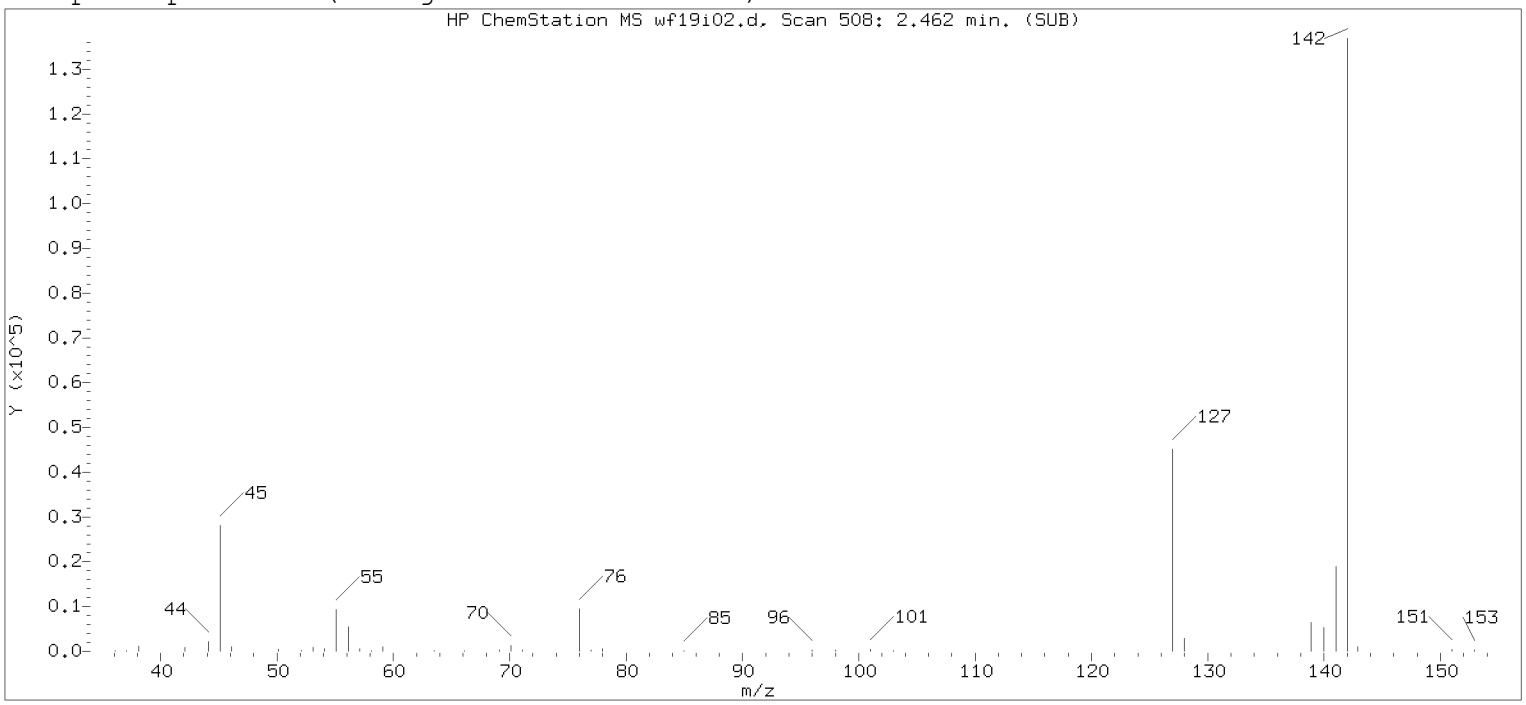
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 508
Retention Time (minutes): 2.462
Quant Ion : 142.00
Area (flag) : 704010M
On-Column Amount (ng) : 98.9520
Integration start scan : 475 Integration stop scan: 572
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

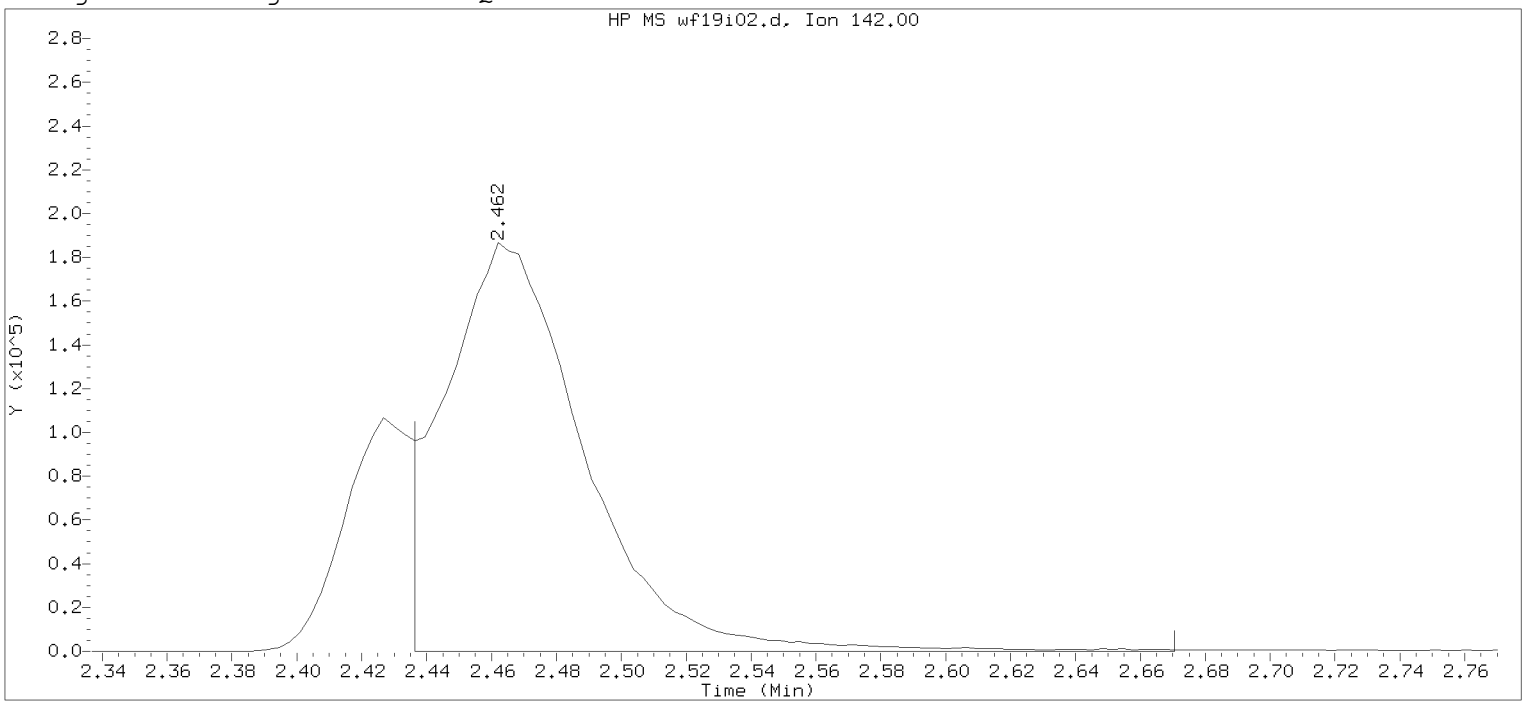
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

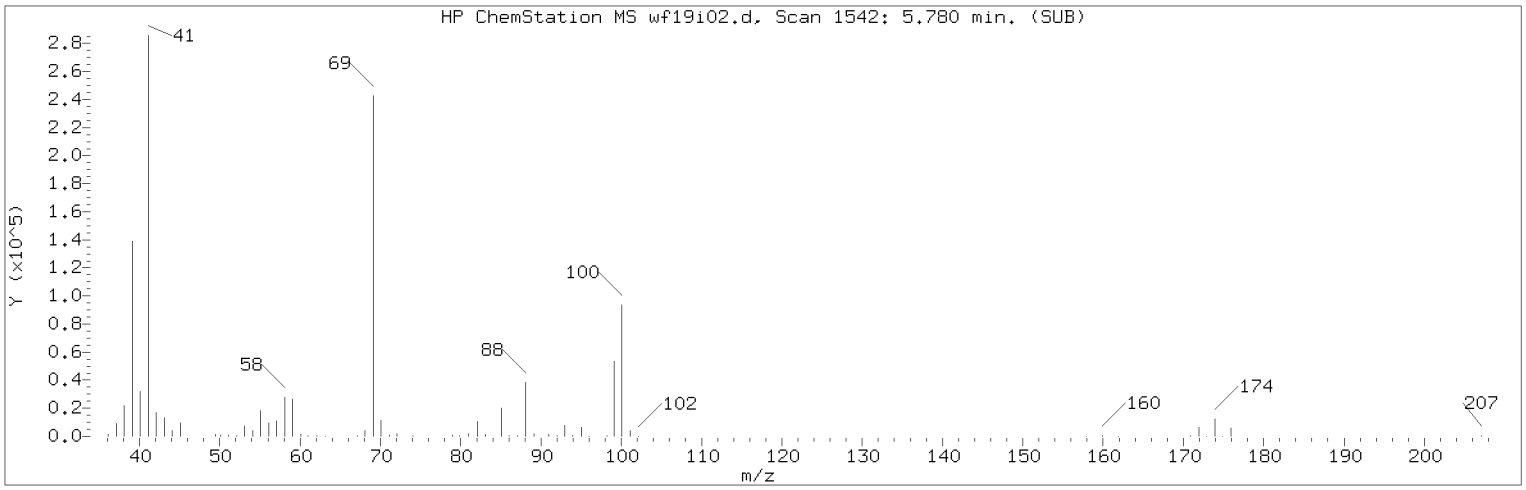
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD100 Lab Sample ID: VSTD100

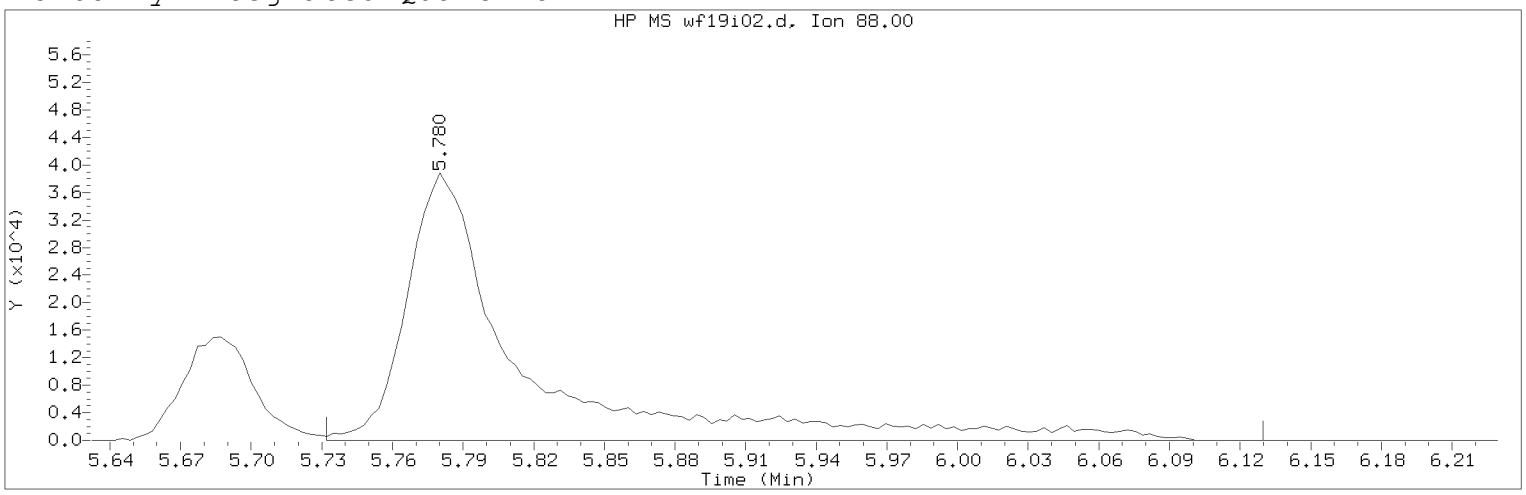
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 508
Retention Time (minutes): 2.462
Quant Ion : 142.00
Area : 554735
On-column Amount (ng) : 84.2643
Integration start scan : 499 Integration stop scan: 572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

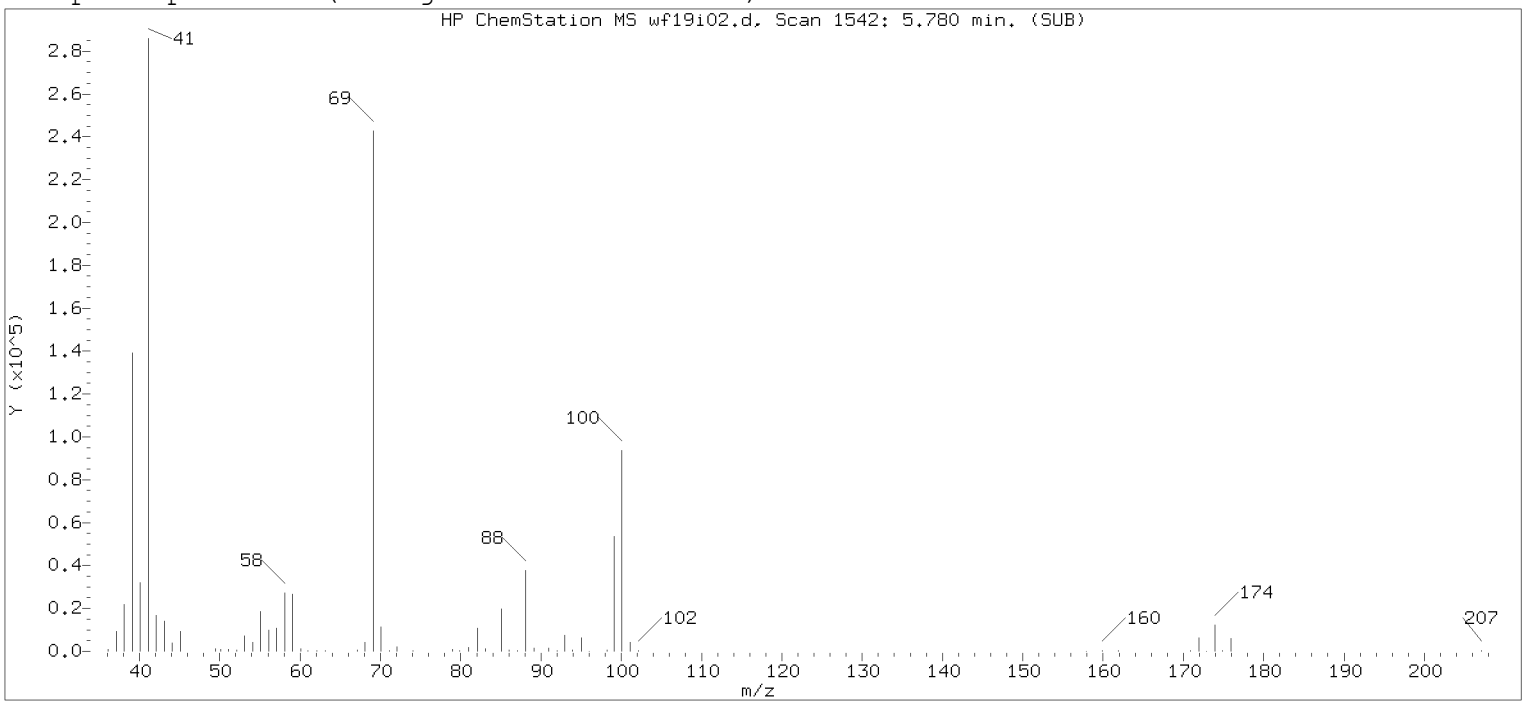
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area (flag) : 133422M
On-Column Amount (ng) : 1349.4188
Integration start scan : 1526 Integration stop scan: 1650
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

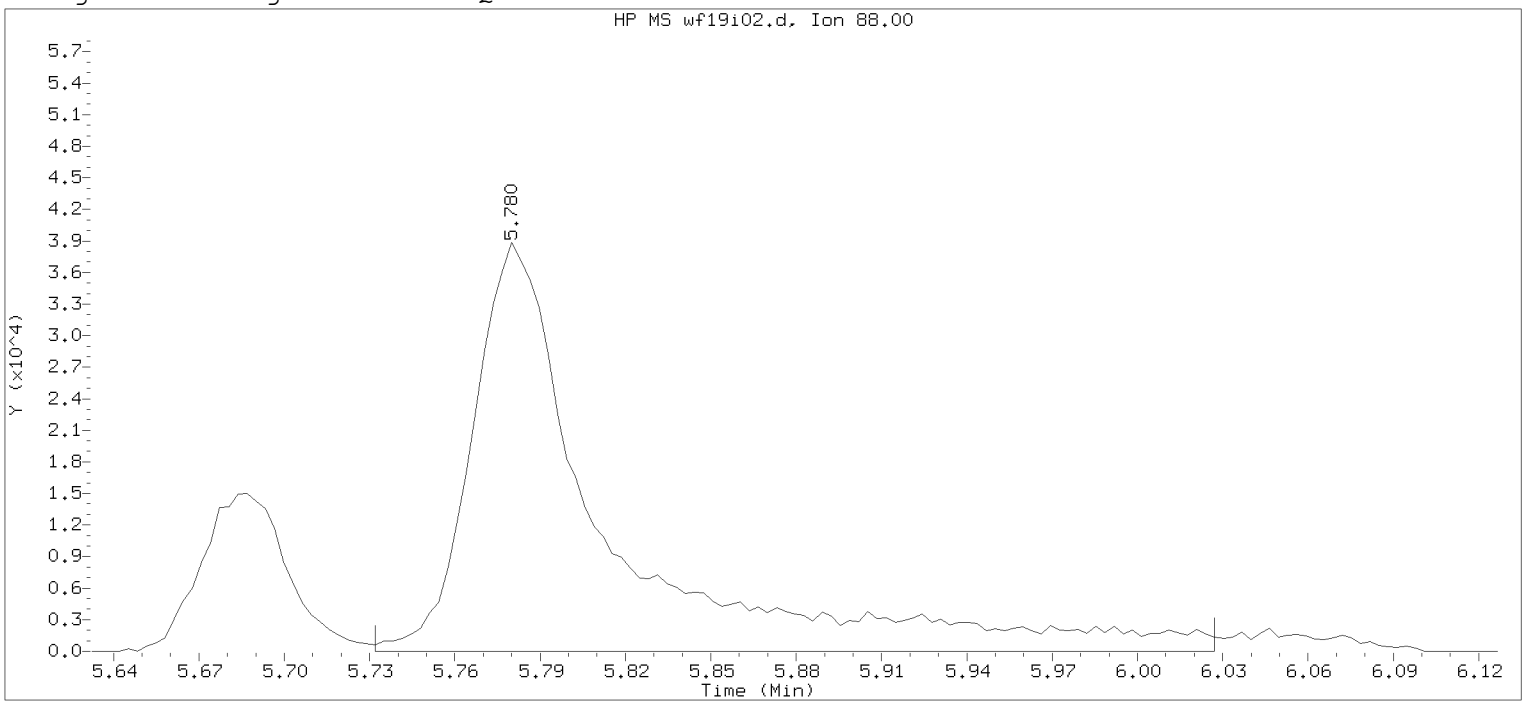
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



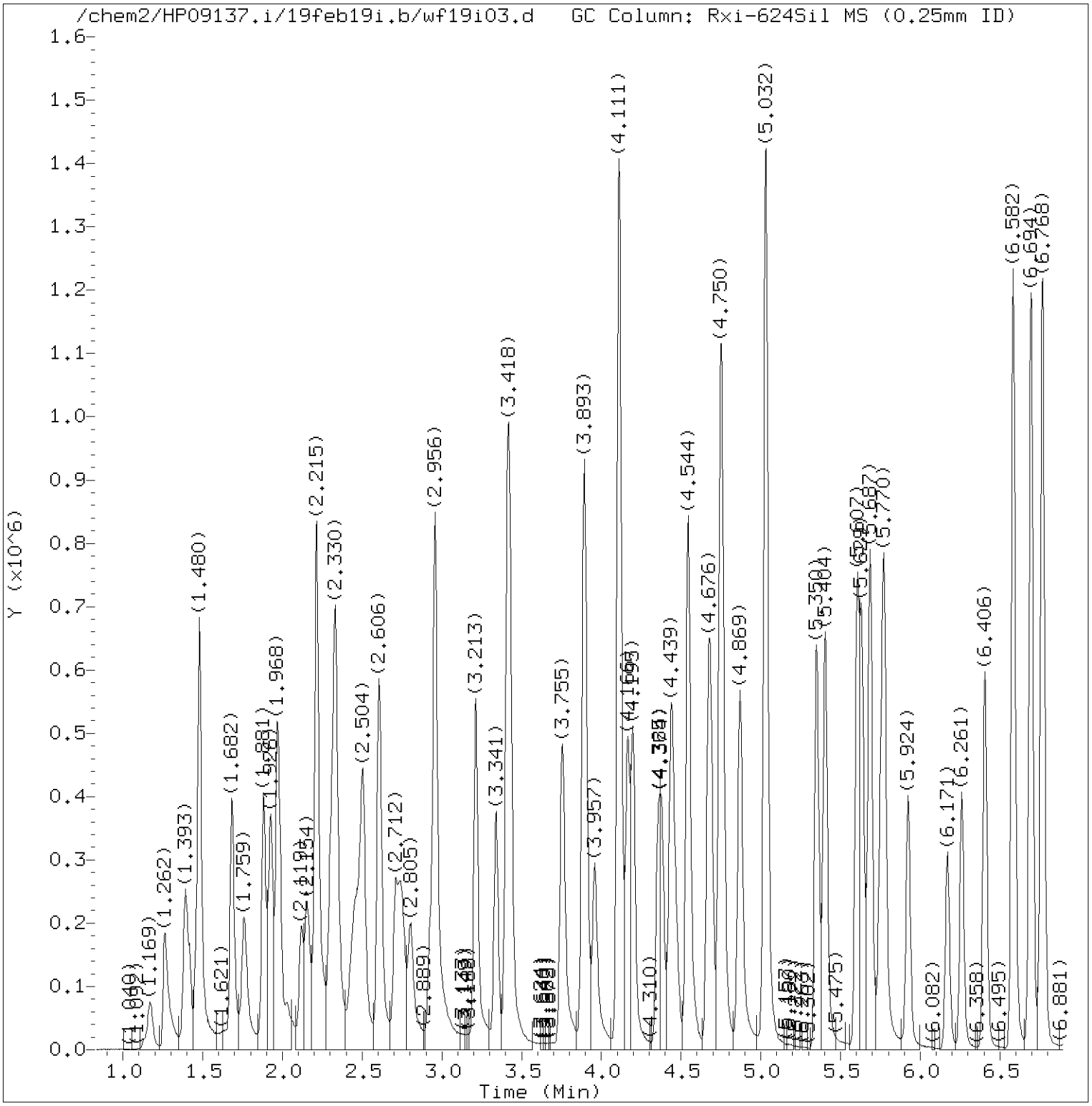
Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area : 128356
On-column Amount (ng) : 1250.1973
Integration start scan : 1526 Integration stop scan: 1618
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

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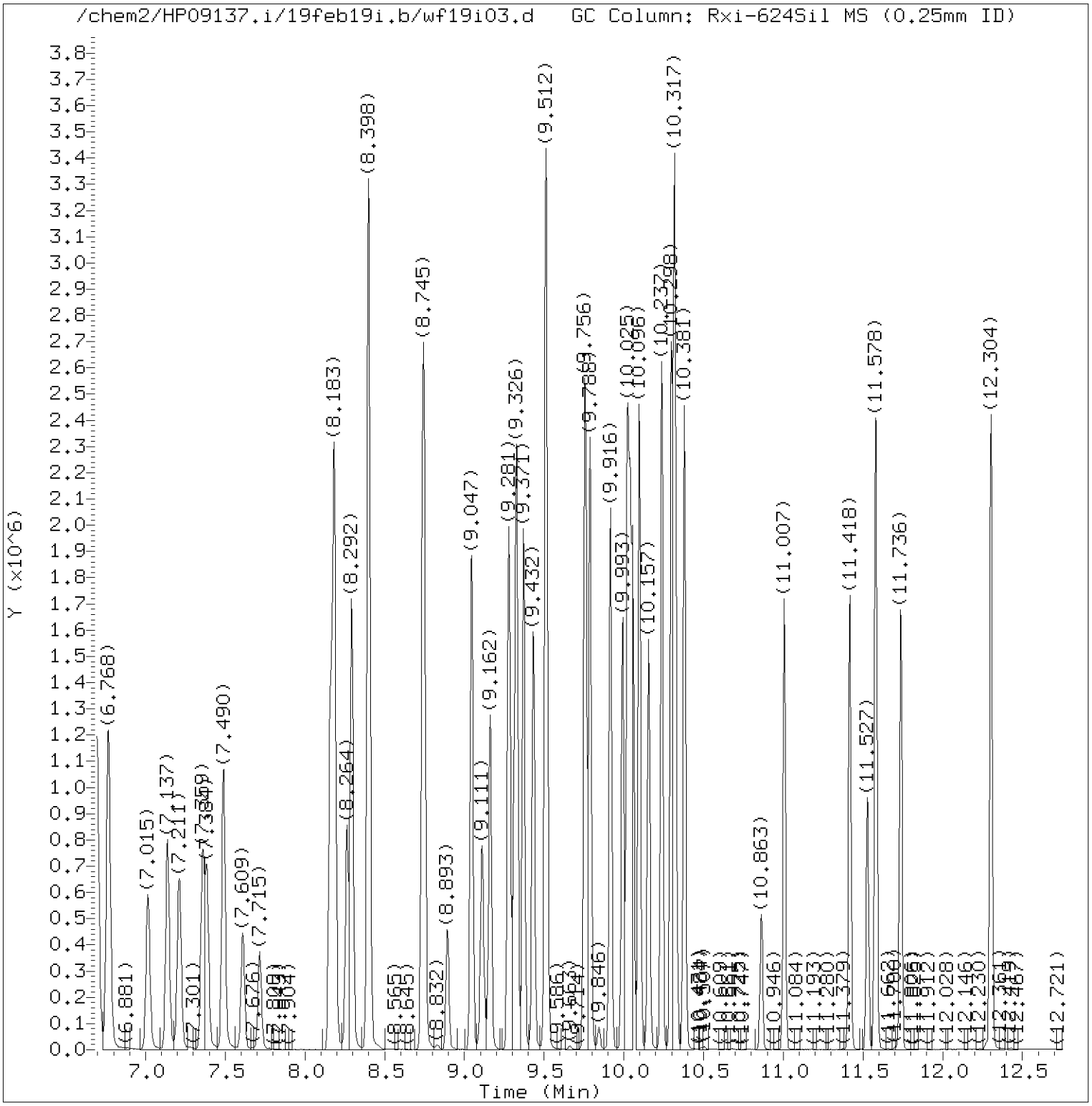
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.262	85	296826	53.462
4) Chloromethane	(2)	1.393	50	345066	49.912
6) Vinyl Chloride	(2)	1.467	62	316392	49.922
5) 1,3-Butadiene	(2)	1.480	39	198055	47.007
8) Bromomethane	(2)	1.682	94	248203	49.656
9) Chloroethane	(2)	1.759	64	196842	47.198
10) Dichlorofluoromethane	(2)	1.881	67	394164	48.827
12) Trichlorofluoromethane	(2)	1.926	101	346119	51.421
11) n-Pentane	(2)	1.971	43	304724	47.602
13) Ethanol	(1)	2.029	45	123880	1223.601
15) Freon 123a	(2)	2.154	67	238678M	47.452
16) Acrolein	(1)	2.215	56	827202	517.599
17) 1,1-Dichloroethene	(2)	2.324	96	193424	51.092
17) 1,1-Dichloroethene	(2)	2.321	63	95600	50.052
19) Freon 113	(2)	2.330	101	179017	53.849
18) Acetone	(1)	2.334	58	78612	101.199
21) 2-Propanol	(1)	2.443	45	149590	259.188
22) Methyl Iodide	(2)	2.465	142	365873	50.432
23) Carbon Disulfide	(2)	2.507	76	662769	49.692
25) Allyl Chloride	(2)	2.600	41	351245	53.257
27) Methyl Acetate	(2)	2.619	43	279026	48.878
28) Methylene Chloride	(2)	2.706	84	227605M	49.185
29)*t-Butyl alcohol-d10	(1)	2.728	65	221988	250.000
30) t-Butyl alcohol	(1)	2.805	59	270559	262.794
31) Acrylonitrile	(2)	2.924	53	161927	53.918
32) trans-1,2-Dichloroethene	(2)	2.956	96	205818	50.107
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	499906	49.983
34) n-Hexane	(2)	3.213	57	294788	53.636
36) 1,1-Dichloroethane	(2)	3.341	63	377579	50.730
38) di-Isopropyl ether	(2)	3.412	45	723571	50.602
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	329496	51.113
40) Ethyl t-butyl ether	(2)	3.755	59	519380	49.830
42) cis-1,2-Dichloroethene	(2)	3.890	96	233468	50.623
45) 2,2-Dichloropropane	(2)	3.893	77	170659	51.054
44) 2-Butanone	(2)	3.906	43	444981	103.132
47) Propionitrile	(1)	3.960	54	312875	244.517
48) Methacrylonitrile	(2)	4.111	67	408760	126.588
49) Bromochloromethane	(2)	4.118	128	123779	51.631

M = Compound was manually integrated.
* = Compound is an internal standard.

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Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.166	71	123715	104.465
51) Chloroform	(2)	4.198	83	350541	50.195
52)$Dibromofluoromethane	(2)	4.352	113	200440	50.388
52)$Dibromofluoromethane	(2)	4.352	111	203587	49.855
53) 1,1,1-Trichloroethane	(2)	4.378	97	270255	51.432
54) Cyclohexane	(2)	4.442	56	358513	51.555
54) Cyclohexane	(2)	4.439	84	301750	52.422
54) Cyclohexane	(2)	4.442	69	108191	51.769
55) 1,1-Dichloropropene	(2)	4.544	75	280799	50.152
56) Carbon Tetrachloride	(2)	4.544	117	228944	50.771
58) Isobutyl Alcohol	(1)	4.670	41	246561	656.905
57)$1,2-Dichloroethane-d4	(2)	4.689	102	52492	49.616
57)$1,2-Dichloroethane-d4	(2)	4.686	65	225475	48.958
57)$1,2-Dichloroethane-d4	(2)	4.689	104	33040	49.038
60) Benzene	(2)	4.750	78	896329	49.804
61) 1,2-Dichloroethane	(2)	4.763	62	272237	48.968
61) 1,2-Dichloroethane	(2)	4.766	98	28104	53.133
65) t-Amyl methyl ether	(2)	4.869	73	548486	51.366
66)*Fluorobenzene	(2)	5.029	96	858650	50.000
67) n-Heptane	(2)	5.035	43	271771	51.739
69) n-Butanol	(1)	5.350	56	449377	1348.443
71) Trichloroethene	(2)	5.404	95	217955	50.009
73) Methylcyclohexane	(2)	5.603	83	345616	54.623
73) Methylcyclohexane	(2)	5.607	98	160647	54.605
74) 1,2-Dichloropropane	(2)	5.636	63	236274	51.136
75) Dibromomethane	(2)	5.751	93	147111	51.589
77) Methyl Methacrylate	(2)	5.773	69	266970	52.578
76) 1,4-Dioxane	(1)	5.780	88	66583M	668.325
79) Bromodichloromethane	(2)	5.924	83	272148	51.943
43) 1,2-Dichloroethene (Total)	(2)		96	439286	100.730
80) 2-Nitropropane	(2)	6.171	41	193740	109.288
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	192007	54.506
82) cis-1,3-Dichloropropene	(2)	6.406	75	374689	52.012
83) 4-Methyl-2-pentanone	(2)	6.582	43	893533	105.058
84)$Toluene-d8	(3)	6.694	98	891117	50.528
84)$Toluene-d8	(3)	6.694	100	583239	49.869
89) Toluene	(3)	6.765	92	574331	50.554
90) trans-1,3-Dichloropropene	(3)	7.015	75	357488	52.857

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.137	69	455291	54.784
93) 1,1,2-Trichloroethane	(3)	7.211	97	227274	51.976
94) Tetrachloroethene	(3)	7.359	166	231262	50.166
95) 1,3-Dichloropropane	(3)	7.384	76	393691	51.836
97) 2-Hexanone	(3)	7.490	43	705936	106.697
98) Dibromochloromethane	(3)	7.609	129	231994	54.321
100) 1,2-Dibromoethane	(3)	7.715	107	253132	52.691
101)*Chlorobenzene-d5	(3)	8.161	117	703812	50.000
103) Chlorobenzene	(3)	8.187	112	634213	50.322
104) 1,1,1,2-Tetrachloroethane	(3)	8.264	131	212636	52.500
105) Ethylbenzene	(3)	8.292	91	1088867	50.428
107) m+p-Xylene	(3)	8.398	106	866772	100.963
108) o-Xylene	(3)	8.739	106	427426	50.608
110) Styrene	(3)	8.751	104	737561	52.057
111) Bromoform	(3)	8.893	173	184052	55.373
112) Isopropylbenzene	(3)	9.047	105	1059585	51.055
113) Cyclohexanone	(1)	9.111	55	294000	654.199
115)$4-Bromofluorobenzene	(3)	9.162	95	351157	49.771
115)$4-Bromofluorobenzene	(3)	9.162	174	297817	50.023
116) Bromobenzene	(4)	9.278	156	283326	50.030
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	404581	52.977
118) 1,2,3-Trichloropropane	(4)	9.313	110	120905	52.560
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	326983	133.518
120) n-Propylbenzene	(4)	9.371	91	1251632	50.136
121) 2-Chlorotoluene	(4)	9.435	126	258976	50.293
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	917303	50.948
122) 4-Chlorotoluene	(4)	9.518	126	277283	50.302
125) tert-Butylbenzene	(4)	9.756	134	204946	50.102
126) Pentachloroethane	(4)	9.765	167	174259	53.889
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	964859	50.855
128) sec-Butylbenzene	(4)	9.916	105	1121349	50.739
130) 1,3-Dichlorobenzene	(4)	9.993	146	543558	50.334
131) p-Isopropyltoluene	(4)	10.022	119	994480	50.832
132)*1,4-Dichlorobenzene-d4	(4)	10.038	152	393177	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	558679	49.903
91) 1,3-Dichloropropene (total)	(3)		100	732177	104.868
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	1074098	52.617
136) Benzyl Chloride	(4)	10.157	91	884205	56.428

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.237	119	648916	52.789
138) 1,4-Diethylbenzene	(4)	10.298	119	693198	52.634
140) n-Butylbenzene	(4)	10.314	92	498295	50.463
139) 1,2-Dichlorobenzene	(4)	10.324	146	543650	50.742
141) 1,2-Diethylbenzene	(4)	10.381	119	544138	52.430
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	96961	55.866
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	420610	51.197
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	414796	52.589
148) Hexachlorobutadiene	(4)	11.527	225	139053	49.498
149) Naphthalene	(4)	11.582	128	1472414	55.170
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	402903	52.334
109) Xylene (Total)	(3)		106	1294198	151.571
151) 2-Methylnaphthalene	(4)	12.304	142	862234	56.628
142) Diethylbenzene (total)	(4)		100	1886252	157.852

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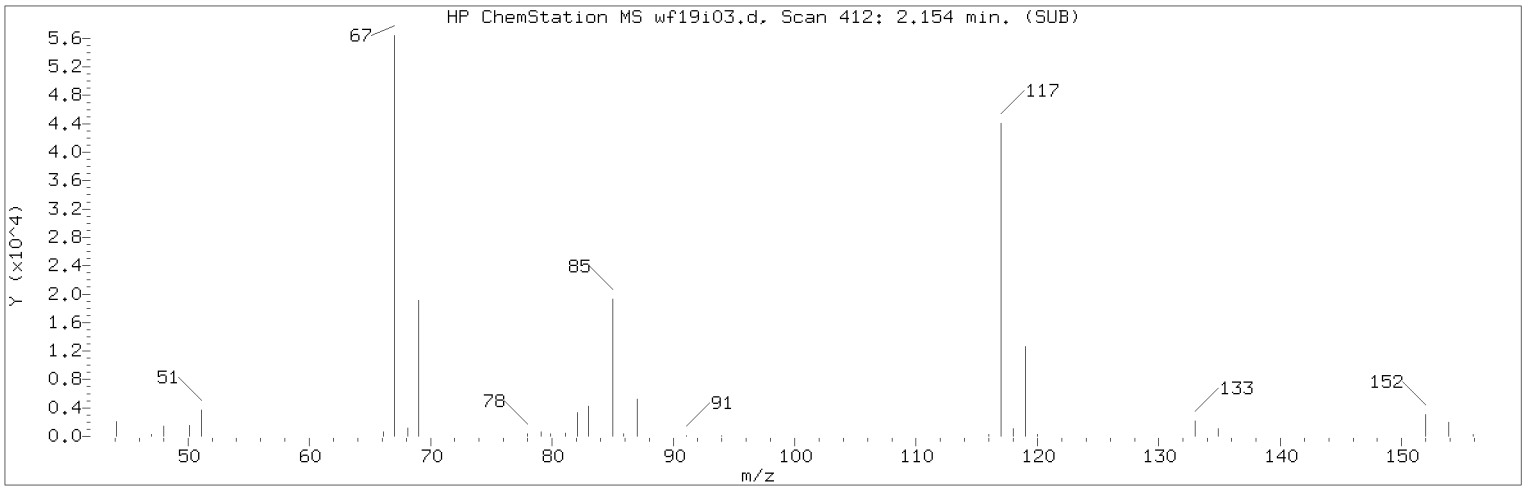
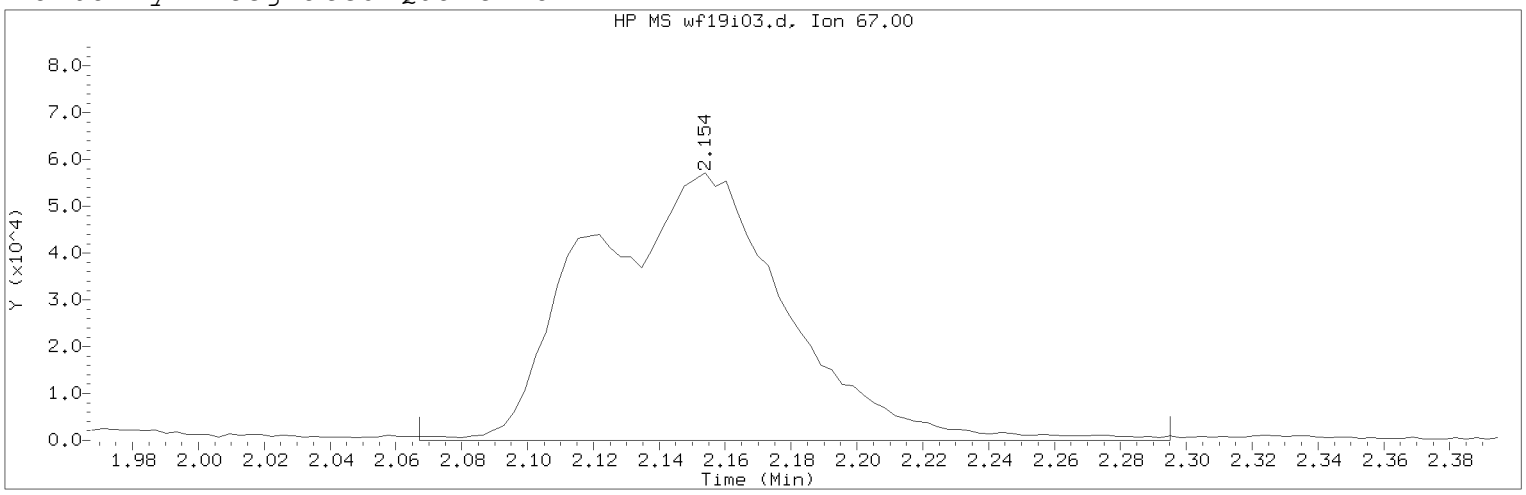
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

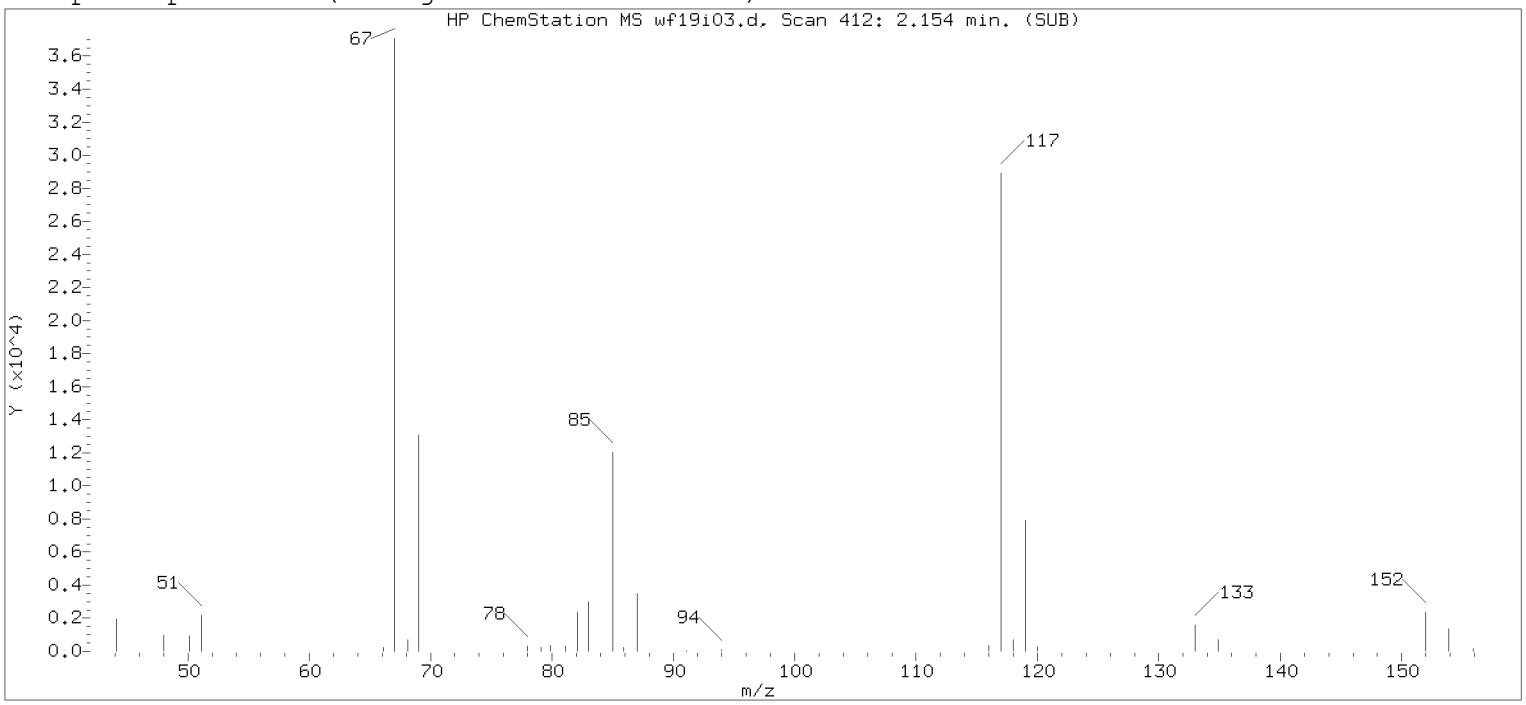
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 412
Retention Time (minutes): 2.154
Quant Ion : 67.00
Area (flag) : 238678M
On-Column Amount (ng) : 47.4516
Integration start scan : 384 Integration stop scan: 455
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

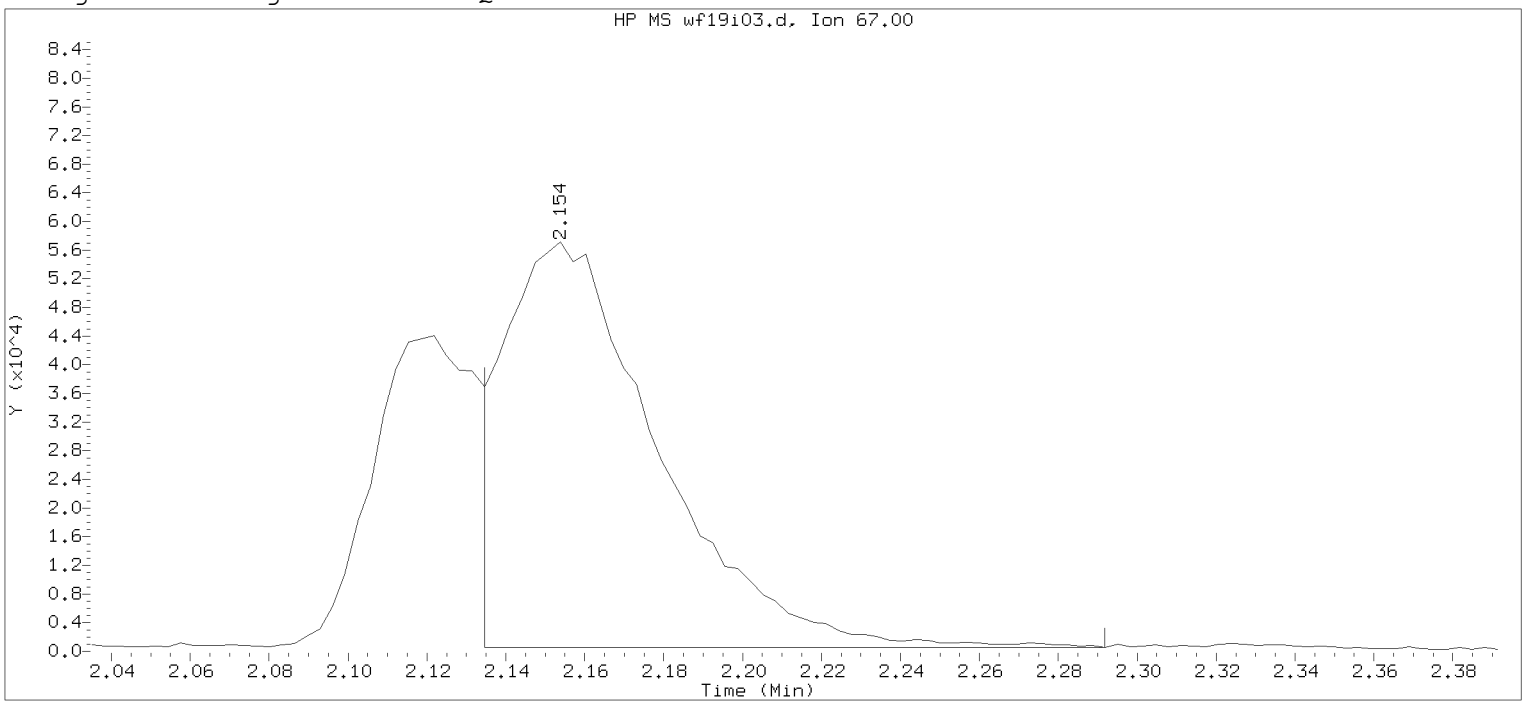
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

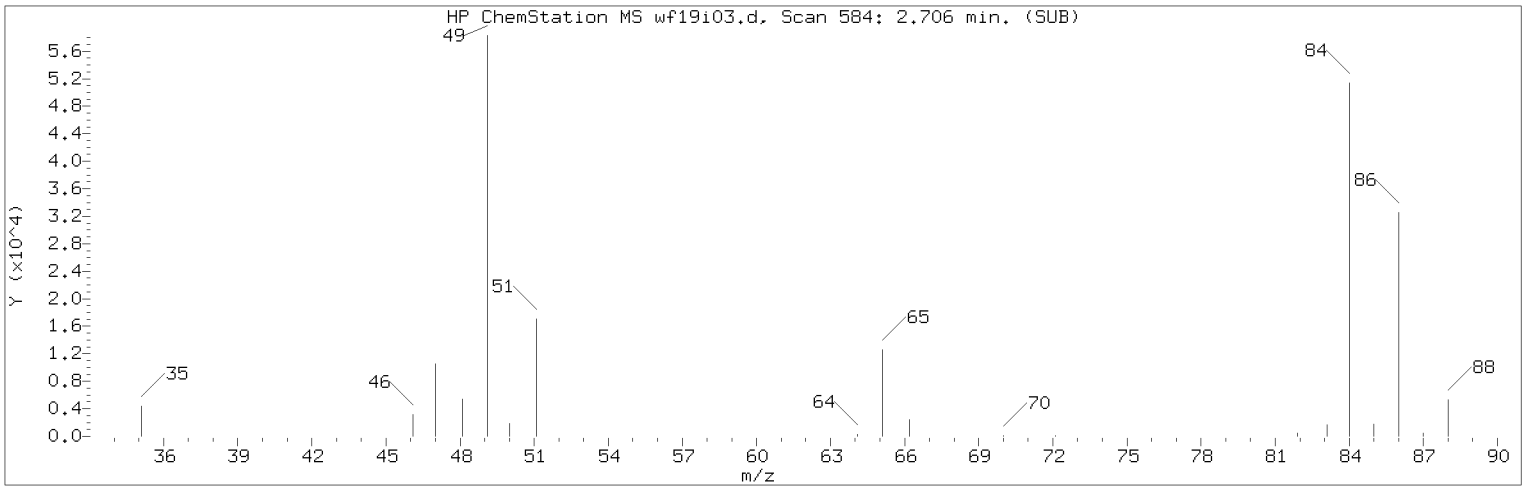
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

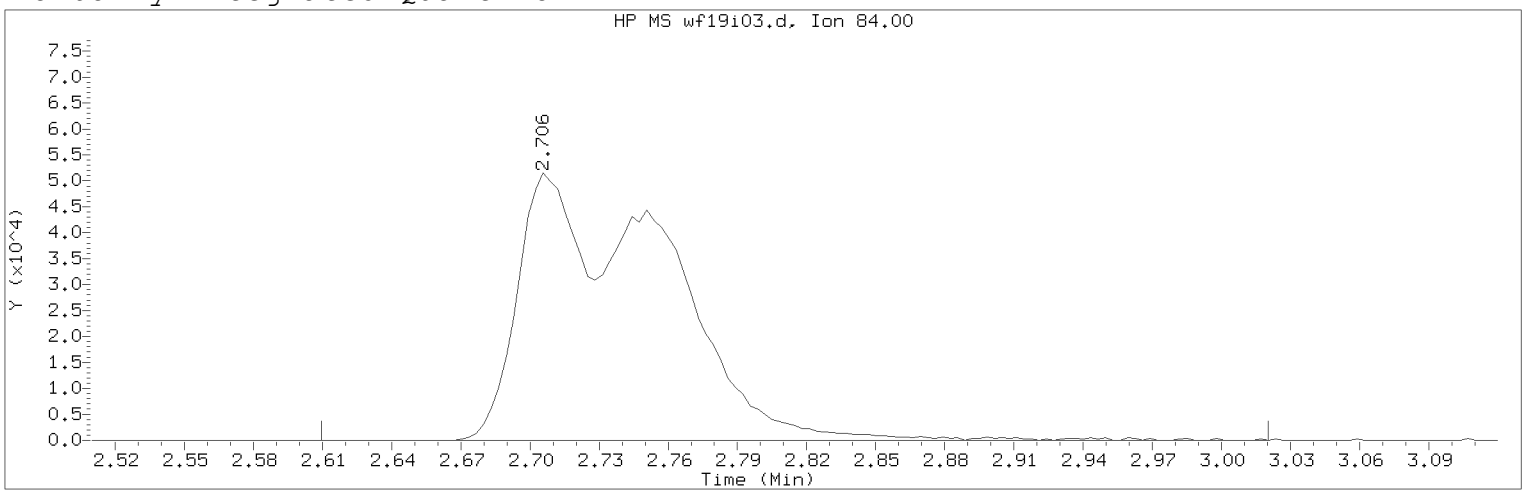
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 412
Retention Time (minutes): 2.154
Quant Ion : 67.00
Area : 154008
On-column Amount (ng) : 47.5673
Integration start scan : 405 Integration stop scan: 454
Y at integration start : 574 Y at integration end: 555

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user Abigail P. Roselli

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

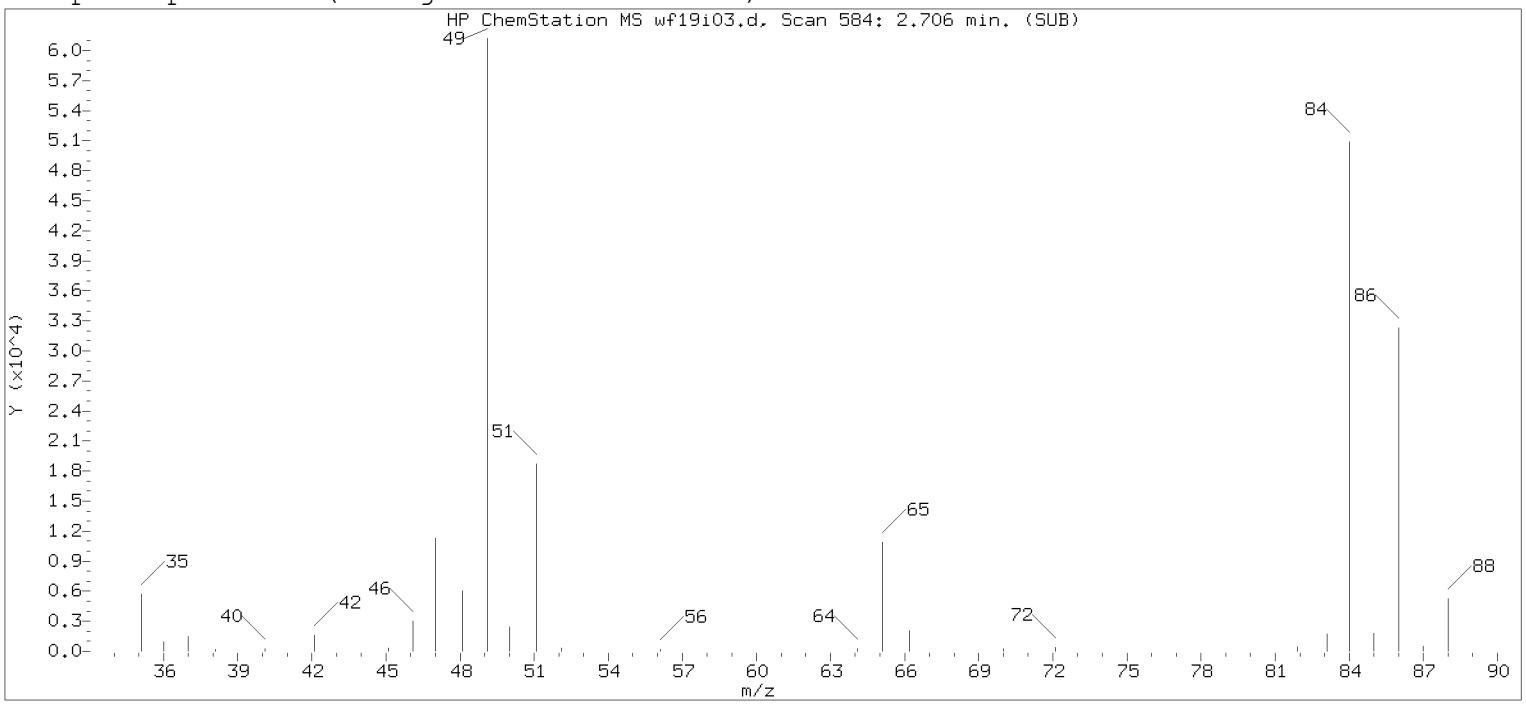
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 584
Retention Time (minutes): 2.706
Quant Ion : 84.00
Area (flag) : 227605M
On-Column Amount (ng) : 49.1854
Integration start scan : 553 Integration stop scan: 681
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

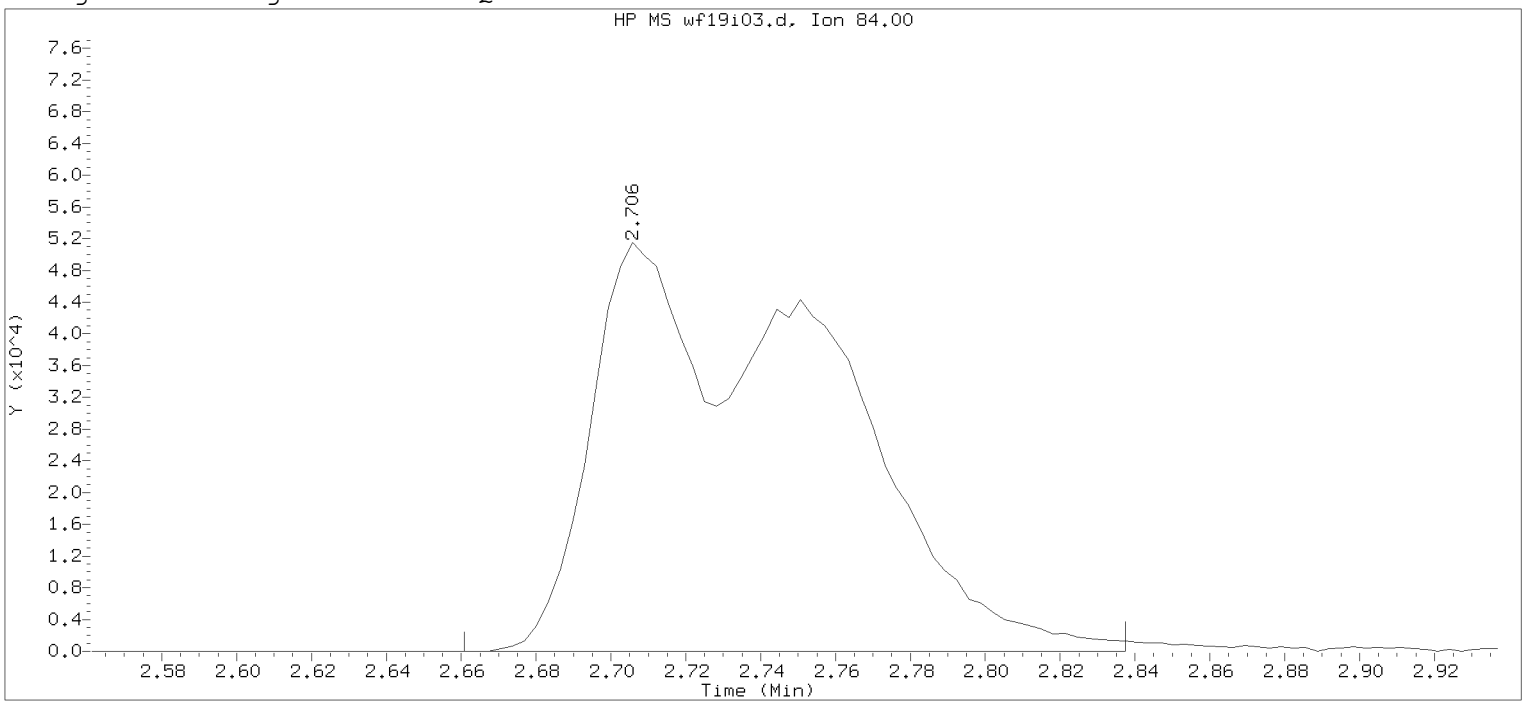
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

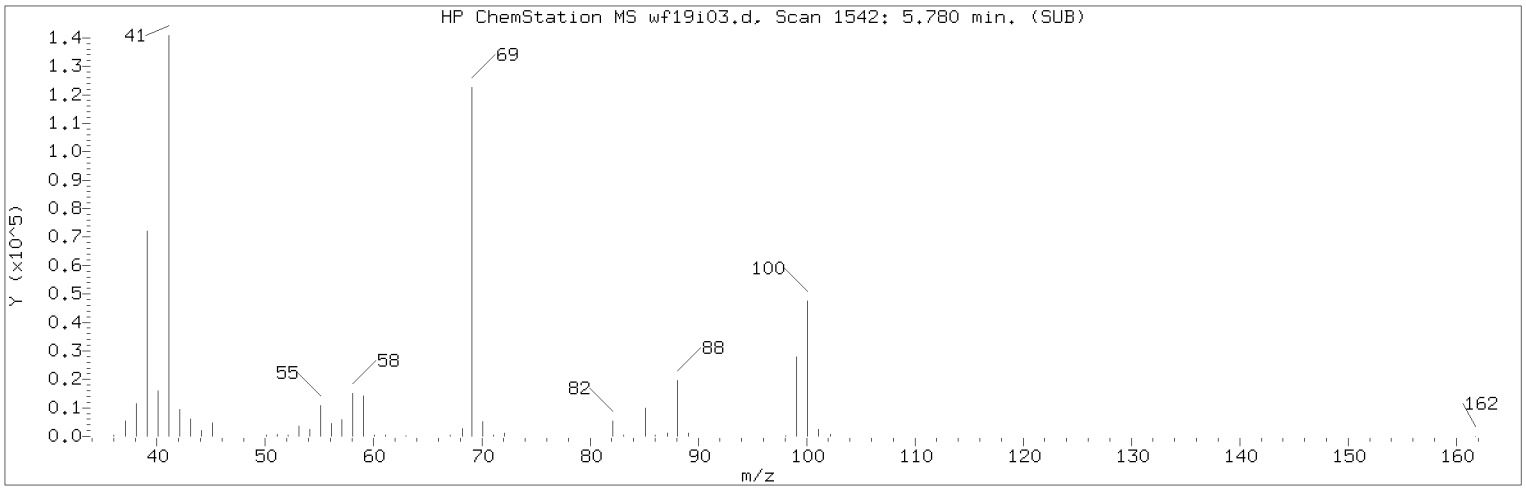
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

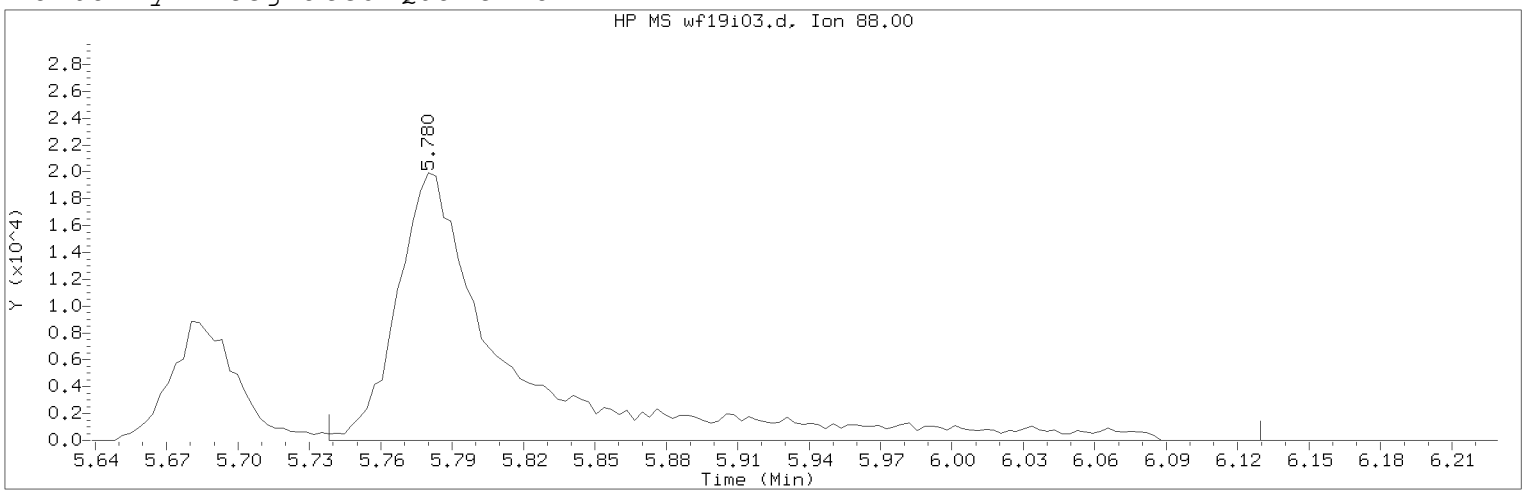
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 584
Retention Time (minutes): 2.706
Quant Ion : 84.00
Area : 223774
On-column Amount (ng) : 67.2195
Integration start scan : 569 Integration stop scan: 624
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

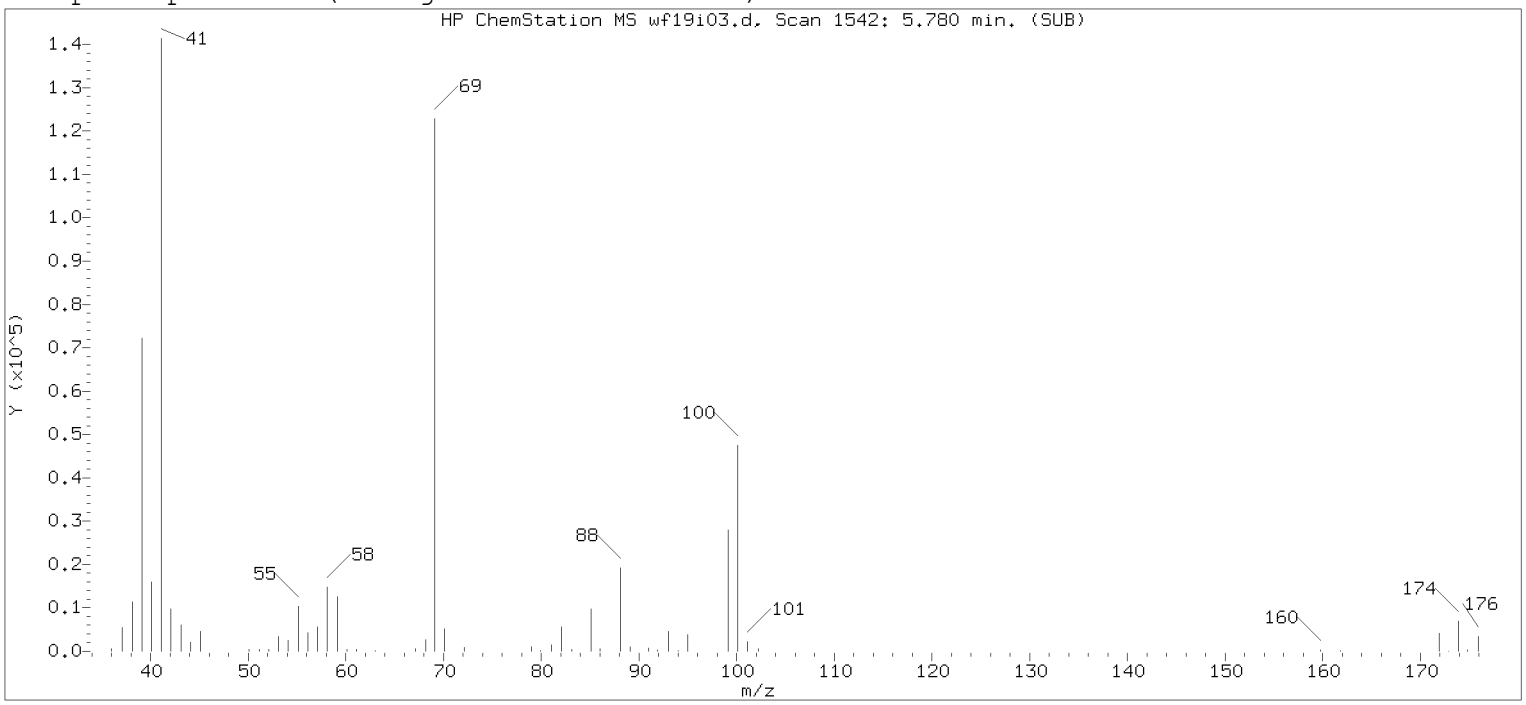
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area (flag) : 66583M
On-Column Amount (ng) : 668.3245
Integration start scan : 1528 Integration stop scan: 1650
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

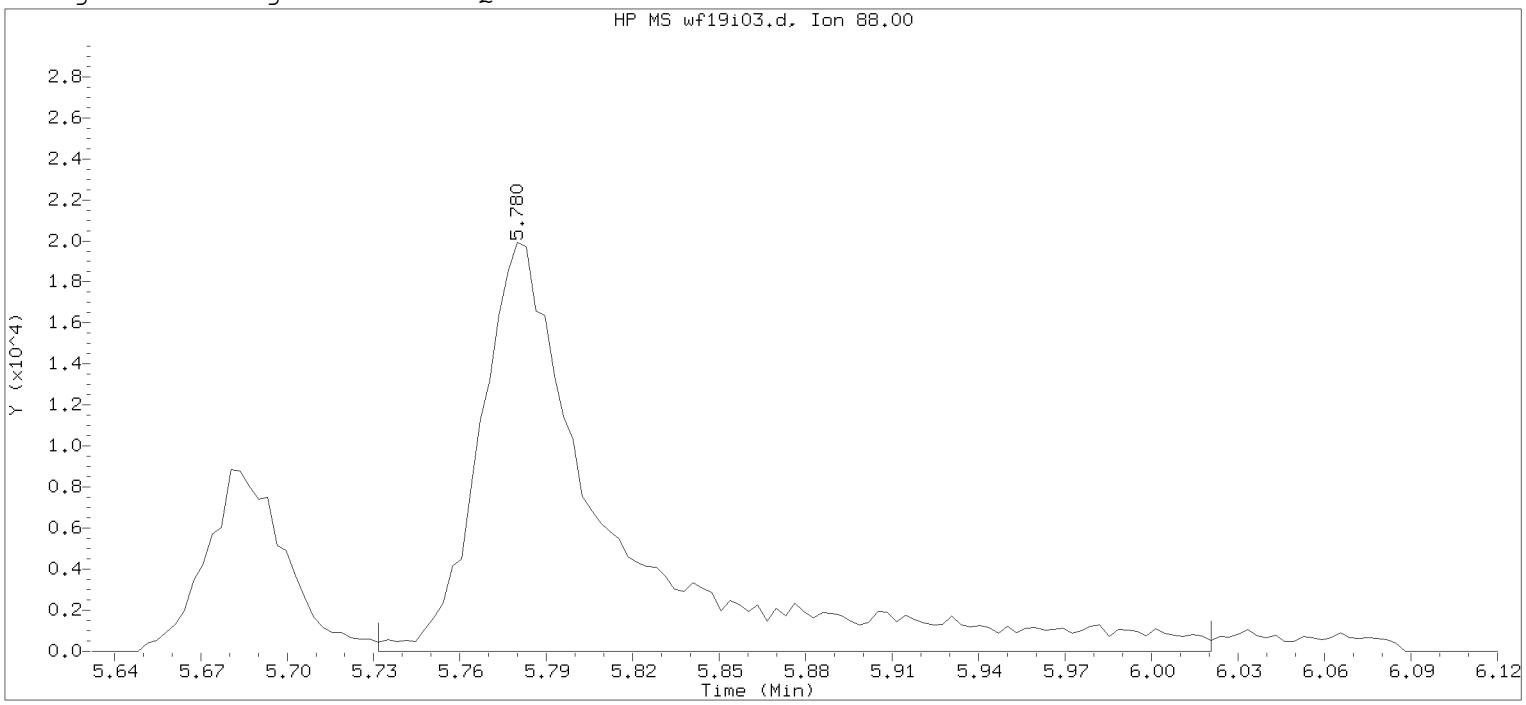
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



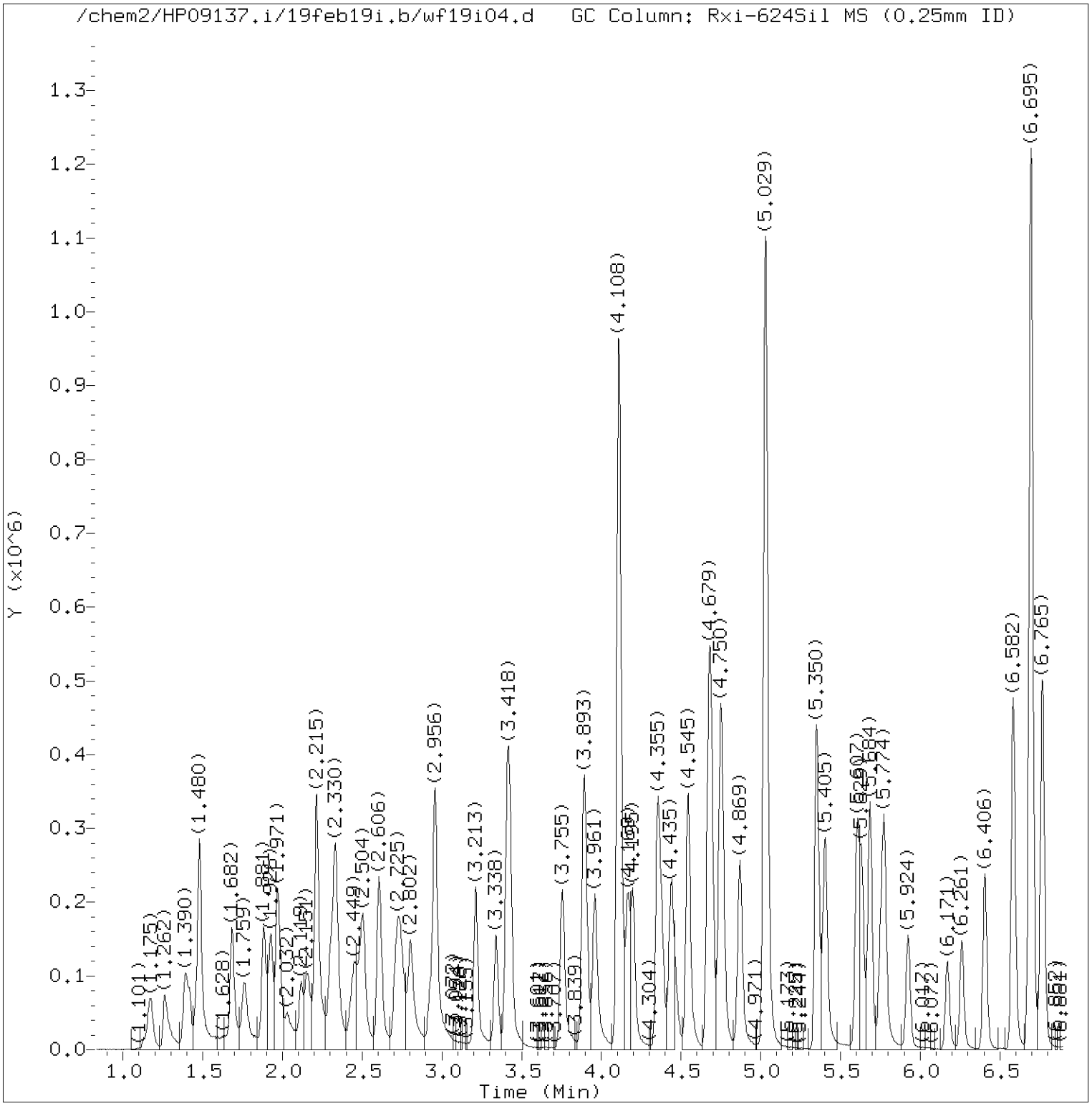
Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area : 64091
On-column Amount (ng) : 621.3434
Integration start scan : 1526 Integration stop scan: 1616
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user: apr27582



Total Ion Chromatogram (TIC)

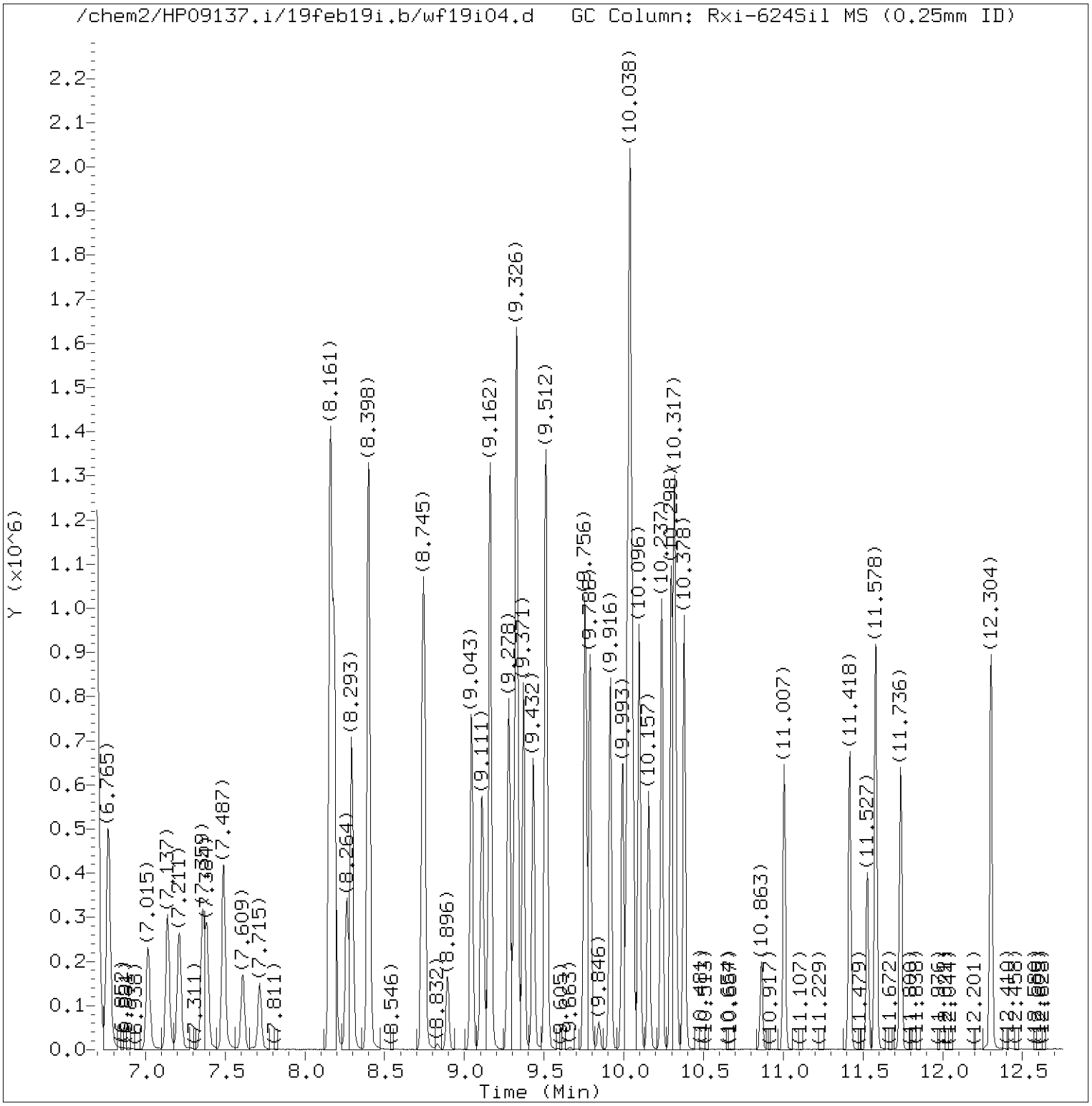
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.262	85	120158	21.151
4) Chloromethane	(2)	1.393	50	137638	19.457
6) Vinyl Chloride	(2)	1.467	62	130261	20.087
5) 1,3-Butadiene	(2)	1.480	39	83783	19.434
8) Bromomethane	(2)	1.682	94	99153	19.387
9) Chloroethane	(2)	1.762	64	81090	19.002
10) Dichlorofluoromethane	(2)	1.881	67	162421	19.663
12) Trichlorofluoromethane	(2)	1.926	101	142691	20.718
11) n-Pentane	(2)	1.971	43	131885	20.135
13) Ethanol	(1)	2.032	45	92307	894.985
15) Freon 123a	(2)	2.160	67	102866M	19.987
16) Acrolein	(1)	2.215	56	326307	200.424
17) 1,1-Dichloroethene	(2)	2.324	96	78708	20.319
17) 1,1-Dichloroethene	(2)	2.324	63	38728	19.816
18) Acetone	(1)	2.334	58	32836	41.493
19) Freon 113	(2)	2.334	101	73317	21.554
21) 2-Propanol	(1)	2.446	45	110569	188.056
22) Methyl Iodide	(2)	2.465	142	150767M	20.310
23) Carbon Disulfide	(2)	2.507	76	274687	20.128
25) Allyl Chloride	(2)	2.603	41	136398	20.212
27) Methyl Acetate	(2)	2.616	43	112197	19.208
28) Methylene Chloride	(2)	2.709	84	93973M	19.847
29)*t-Butyl alcohol-d10	(1)	2.732	65	226145	250.000
30) t-Butyl alcohol	(1)	2.802	59	204216	194.709
31) Acrylonitrile	(2)	2.927	53	65725	21.388
32) trans-1,2-Dichloroethene	(2)	2.956	96	83001	19.748
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	211952	20.711
34) n-Hexane	(2)	3.213	57	110706	19.686
36) 1,1-Dichloroethane	(2)	3.341	63	153564	20.164
38) di-Isopropyl ether	(2)	3.409	45	299035	20.438
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	134999	20.467
40) Ethyl t-butyl ether	(2)	3.755	59	227792	21.359
42) cis-1,2-Dichloroethene	(2)	3.890	96	94743	20.077
45) 2,2-Dichloropropane	(2)	3.890	77	72171	21.101
44) 2-Butanone	(2)	3.903	43	180906	40.977
47) Propionitrile	(1)	3.961	54	249181	191.159
48) Methacrylonitrile	(2)	4.108	67	323877	98.025
49) Bromochloromethane	(2)	4.118	128	49307	20.101

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.169	71	49416	40.960
51) Chloroform	(2)	4.198	83	144225	20.184
52)$Dibromofluoromethane	(2)	4.355	113	203311	49.950
52)$Dibromofluoromethane	(2)	4.355	111	209328	50.098
53) 1,1,1-Trichloroethane	(2)	4.381	97	110547	20.561
54) Cyclohexane	(2)	4.442	56	146608	20.604
54) Cyclohexane	(2)	4.442	84	120950	20.535
54) Cyclohexane	(2)	4.442	69	43702	20.437
55) 1,1-Dichloropropene	(2)	4.545	75	114224	19.938
56) Carbon Tetrachloride	(2)	4.545	117	93746	20.318
58) Isobutyl Alcohol	(1)	4.670	41	177235	463.522
57)$1,2-Dichloroethane-d4	(2)	4.689	102	55712	51.465
57)$1,2-Dichloroethane-d4	(2)	4.689	65	240858	51.112
57)$1,2-Dichloroethane-d4	(2)	4.689	104	33860	49.115
60) Benzene	(2)	4.747	78	366659	19.911
61) 1,2-Dichloroethane	(2)	4.763	62	110518	19.428
61) 1,2-Dichloroethane	(2)	4.760	98	11609	21.450
65) t-Amyl methyl ether	(2)	4.869	73	228200	20.886
66)*Fluorobenzene	(2)	5.029	96	878585	50.000
67) n-Heptane	(2)	5.036	43	110175	20.499
69) n-Butanol	(1)	5.350	56	321265	946.297
71) Trichloroethene	(2)	5.405	95	89487	20.067
73) Methylcyclohexane	(2)	5.604	83	138339	21.368
73) Methylcyclohexane	(2)	5.607	98	63264	21.016
74) 1,2-Dichloropropane	(2)	5.636	63	95210	20.139
75) Dibromomethane	(2)	5.748	93	59218	20.295
77) Methyl Methacrylate	(2)	5.774	69	103170	19.858
76) 1,4-Dioxane	(1)	5.780	88	49606M	488.766
79) Bromodichloromethane	(2)	5.924	83	106910	19.942
43) 1,2-Dichloroethene (Total)	(2)		96	177744	39.825
80) 2-Nitropropane	(2)	6.171	41	74529	41.088
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	69606	19.311
82) cis-1,3-Dichloropropene	(2)	6.406	75	147991	20.077
83) 4-Methyl-2-pentanone	(2)	6.582	43	356841	41.004
84)$Toluene-d8	(3)	6.695	98	907310	50.109
84)$Toluene-d8	(3)	6.695	100	601432	50.088
89) Toluene	(3)	6.765	92	235354	20.178
90) trans-1,3-Dichloropropene	(3)	7.015	75	138713	19.976

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.137	69	175549	20.574
93) 1,1,2-Trichloroethane	(3)	7.208	97	89810	20.005
94) Tetrachloroethene	(3)	7.359	166	94924	20.056
95) 1,3-Dichloropropane	(3)	7.384	76	156793	20.108
97) 2-Hexanone	(3)	7.490	43	279190	41.101
98) Dibromochloromethane	(3)	7.612	129	88860	20.266
100) 1,2-Dibromoethane	(3)	7.715	107	100482	20.372
101)*Chlorobenzene-d5	(3)	8.161	117	722592	50.000
103) Chlorobenzene	(3)	8.183	112	256275	19.806
104) 1,1,1,2-Tetrachloroethane	(3)	8.264	131	82744	19.899
105) Ethylbenzene	(3)	8.293	91	441592	19.920
107) m+p-Xylene	(3)	8.398	106	348881	39.582
108) o-Xylene	(3)	8.735	106	171798	19.812
110) Styrene	(3)	8.748	104	291848	20.063
111) Bromoform	(3)	8.896	173	67627	19.817
112) Isopropylbenzene	(3)	9.043	105	424442	19.920
113) Cyclohexanone	(1)	9.111	55	225728	493.049
115)$4-Bromofluorobenzene	(3)	9.162	95	360726	49.798
115)$4-Bromofluorobenzene	(3)	9.162	174	303950	49.726
116) Bromobenzene	(4)	9.278	156	113938	19.840
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	155706	20.105
118) 1,2,3-Trichloropropane	(4)	9.313	110	47306	20.279
119) trans-1,4-Dichloro-2-butene	(4)	9.326	53	247692	99.736
120) n-Propylbenzene	(4)	9.371	91	506549	20.009
121) 2-Chlorotoluene	(4)	9.432	126	105764	20.254
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	366349	20.065
122) 4-Chlorotoluene	(4)	9.515	126	110429	19.755
125) tert-Butylbenzene	(4)	9.756	134	82290	19.837
126) Pentachloroethane	(4)	9.765	167	64856	19.778
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	383195	19.917
128) sec-Butylbenzene	(4)	9.916	105	452546	20.192
130) 1,3-Dichlorobenzene	(4)	9.993	146	216134	19.736
131) p-Isopropyltoluene	(4)	10.022	119	397632	20.042
132)*1,4-Dichlorobenzene-d4	(4)	10.038	152	398717	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	225862	19.894
91) 1,3-Dichloropropene (total)	(3)		100	286704	40.053
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	422072	20.389
136) Benzyl Chloride	(4)	10.157	91	329533	20.738

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

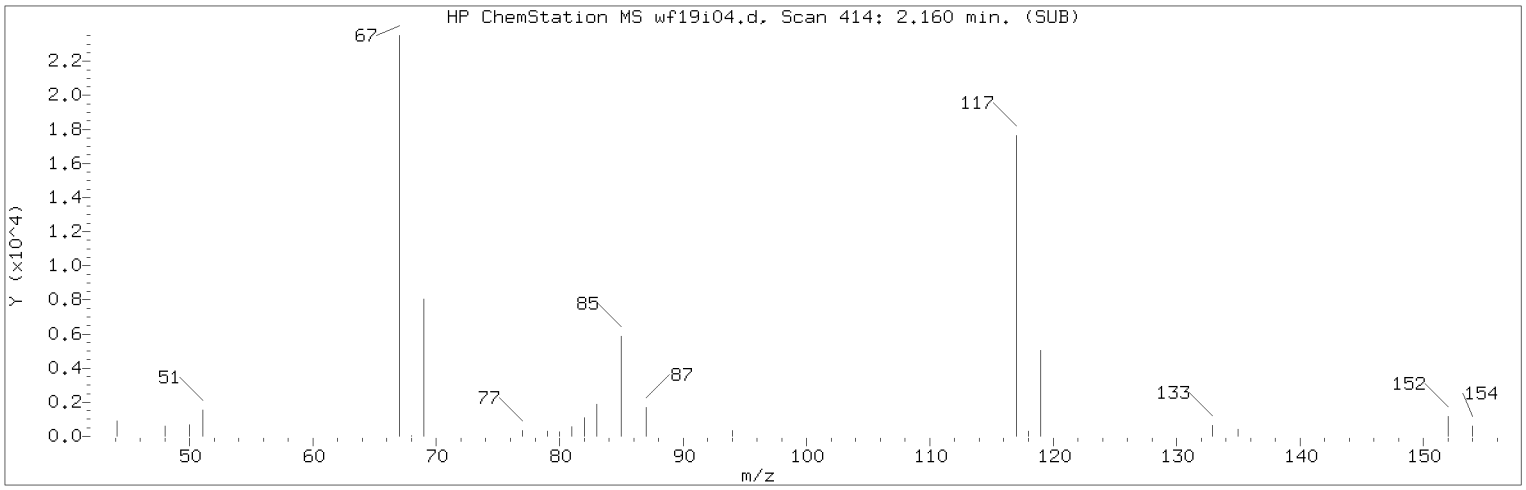
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

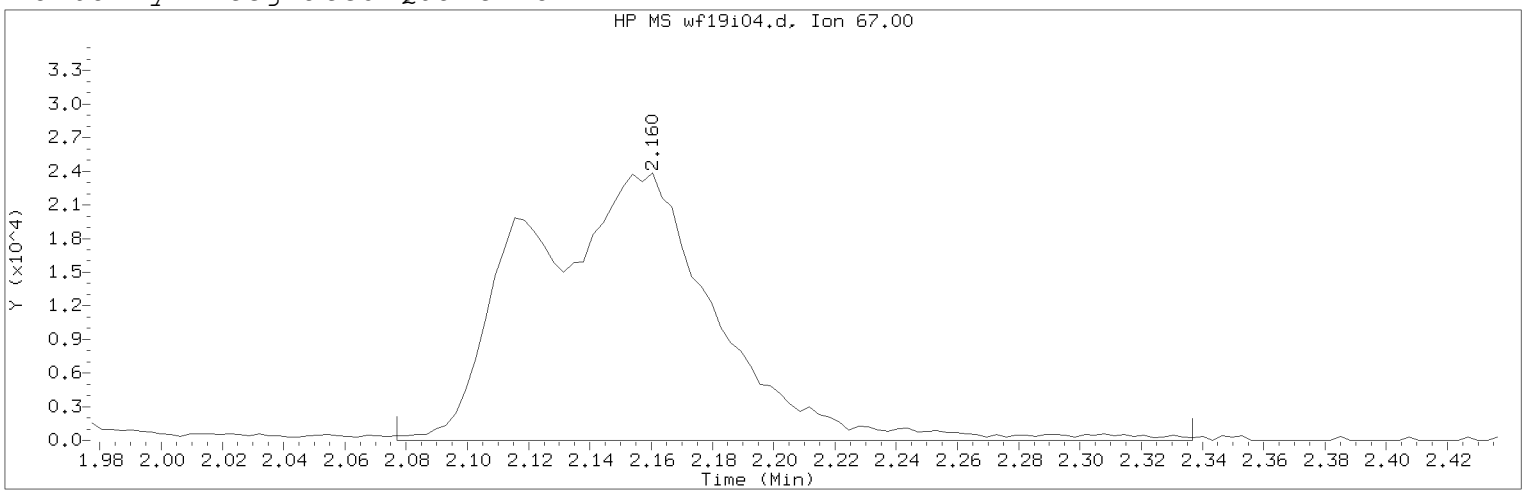
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.237	119	253126	20.305
138) 1,4-Diethylbenzene	(4)	10.298	119	272367	20.393
140) n-Butylbenzene	(4)	10.314	92	198233	19.797
139) 1,2-Dichlorobenzene	(4)	10.324	146	215032	19.791
141) 1,2-Diethylbenzene	(4)	10.378	119	215245	20.452
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	36271	20.608
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	165935	19.917
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	160946	20.121
148) Hexachlorobutadiene	(4)	11.527	225	57264	20.101
149) Naphthalene	(4)	11.582	128	560423	20.707
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	155725	19.946
109) Xylene (Total)	(3)		106	520679	59.394
151) 2-Methylnaphthalene	(4)	12.304	142	317668	20.573
142) Diethylbenzene (total)	(4)		100	740738	61.150

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

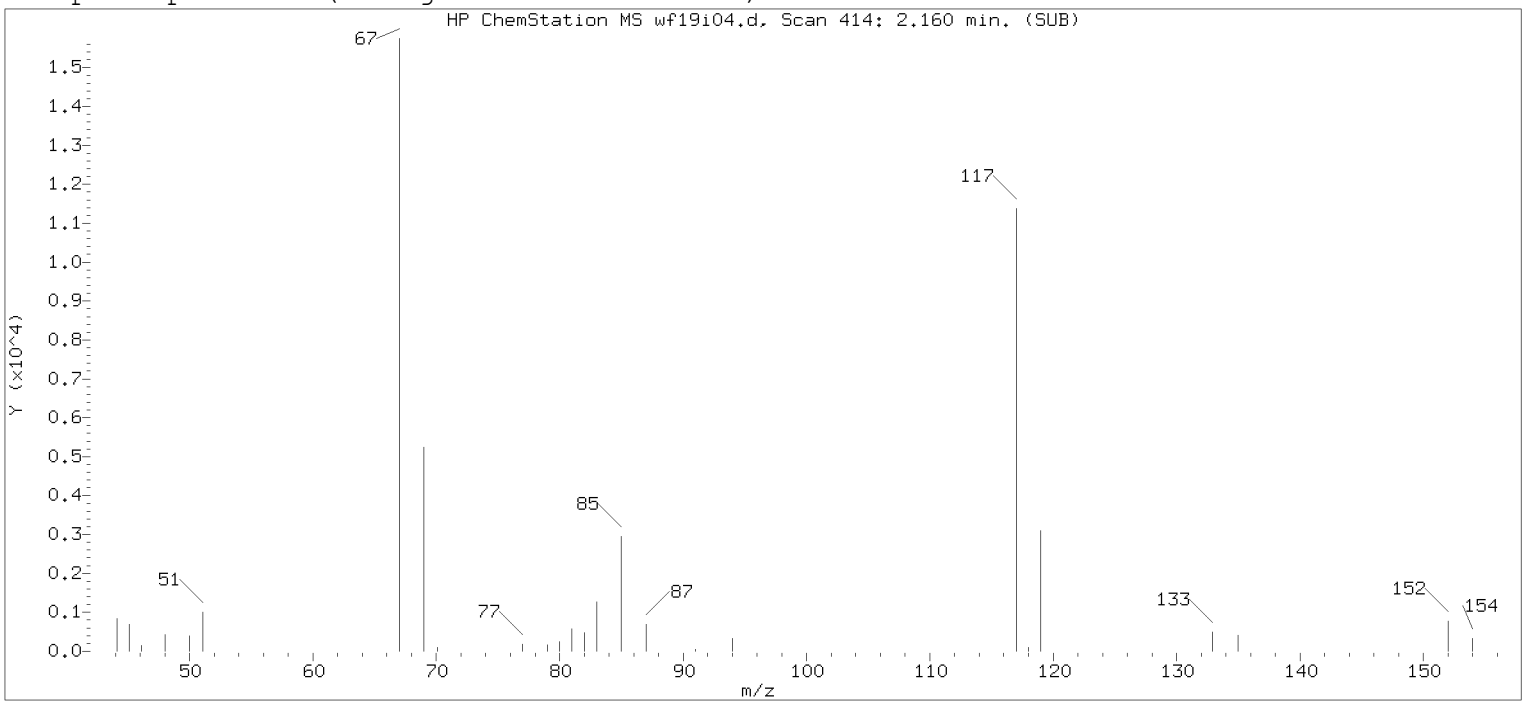
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 414
Retention Time (minutes): 2.160
Quant Ion : 67.00
Area (flag) : 102866M
On-Column Amount (ng) : 19.9868
Integration start scan : 387 Integration stop scan: 468
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

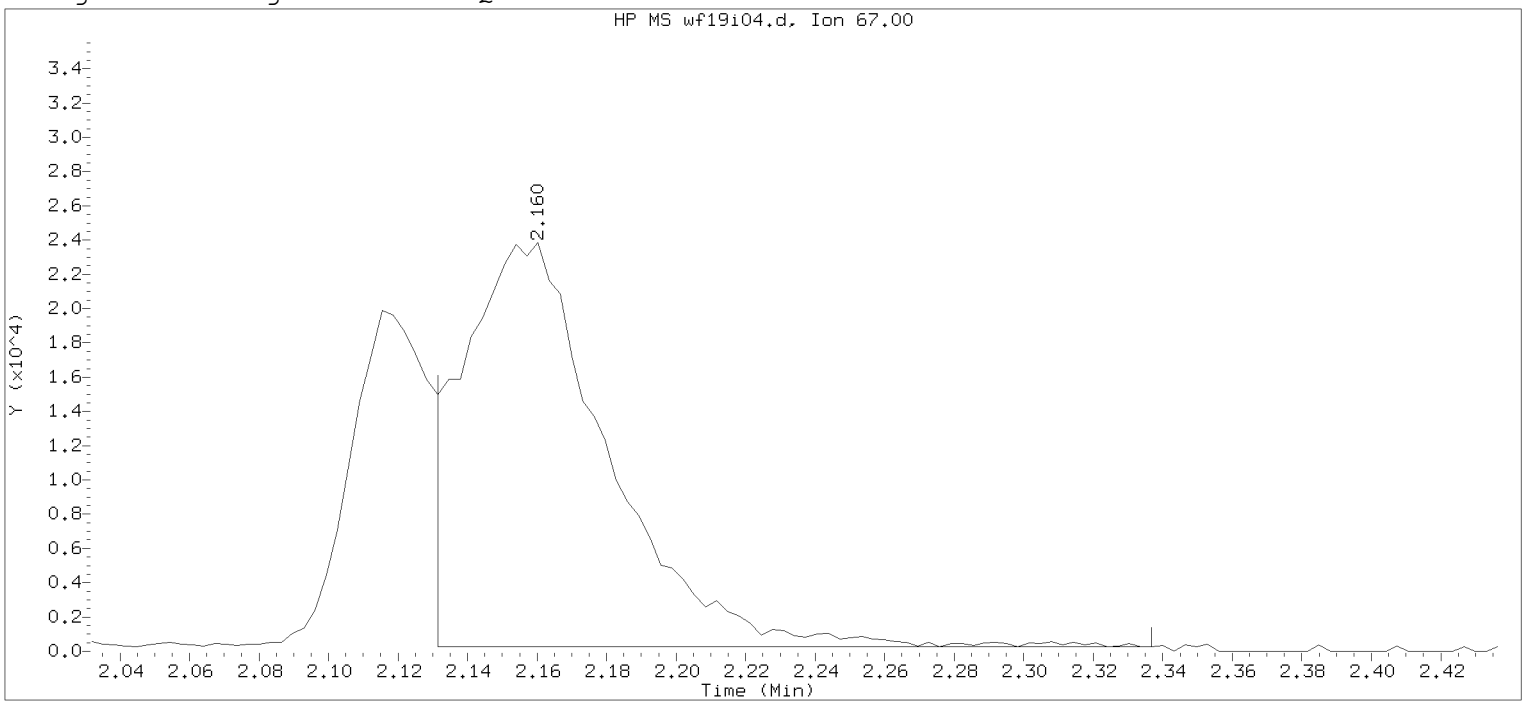
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

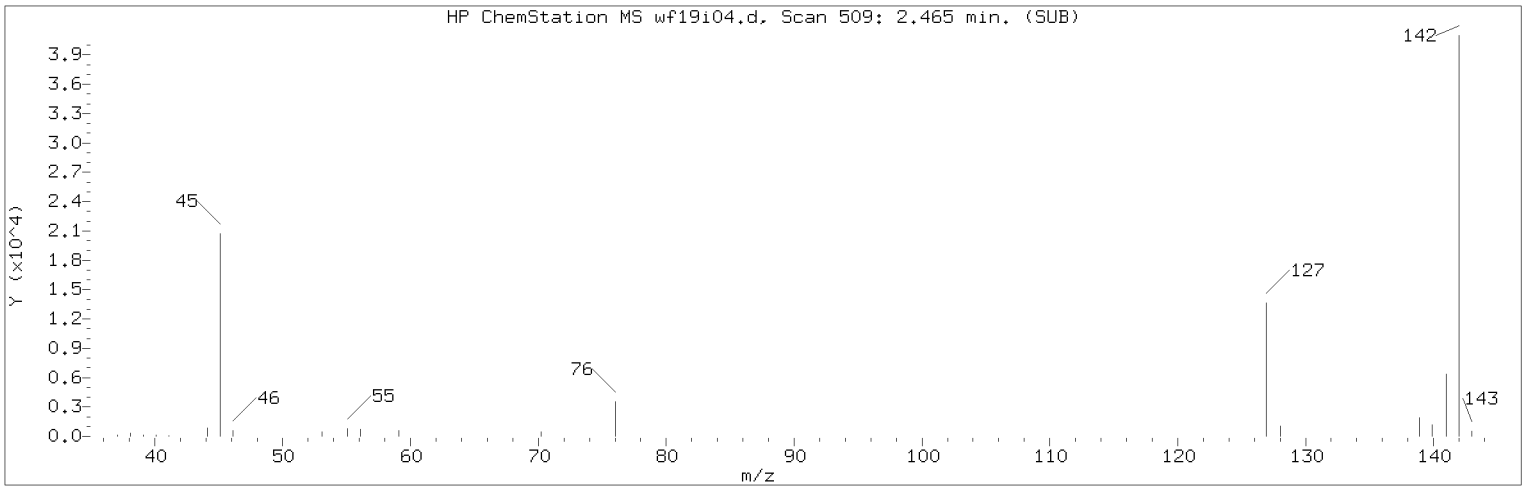
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:48
Date, time and analyst ID of latest file update: 19-Feb-2019 13:48 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

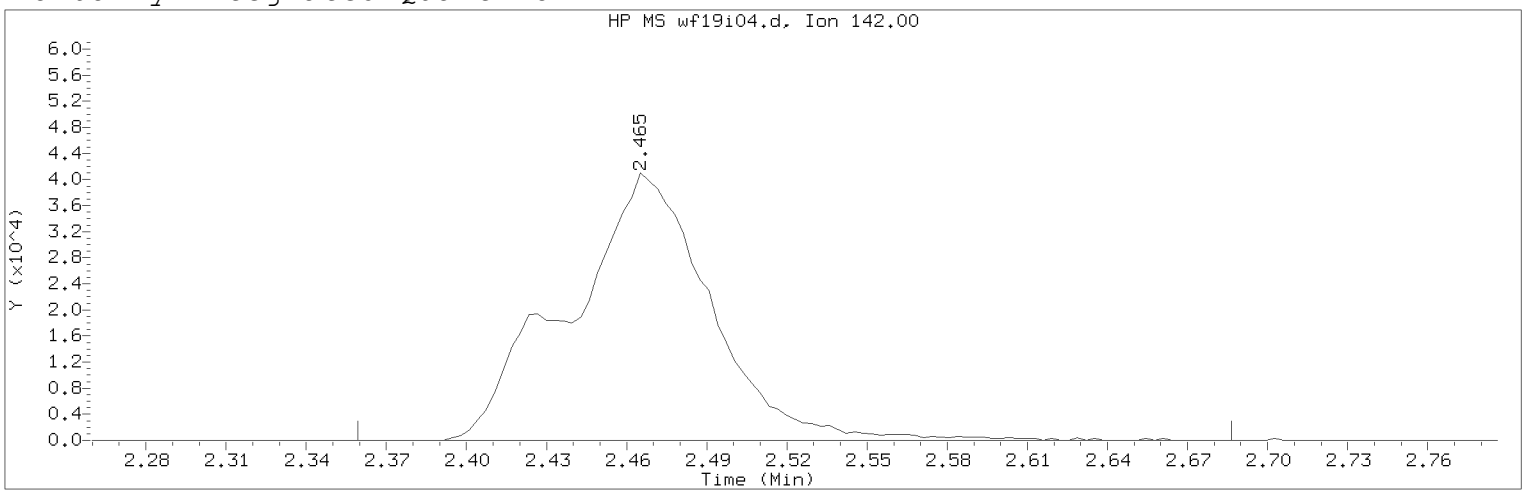
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 414
Retention Time (minutes): 2.160
Quant Ion : 67.00
Area : 68962
On-column Amount (ng) : 20.6064
Integration start scan : 404 Integration stop scan: 468
Y at integration start : 260 Y at integration end: 253

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user Abigail P. Roselli

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

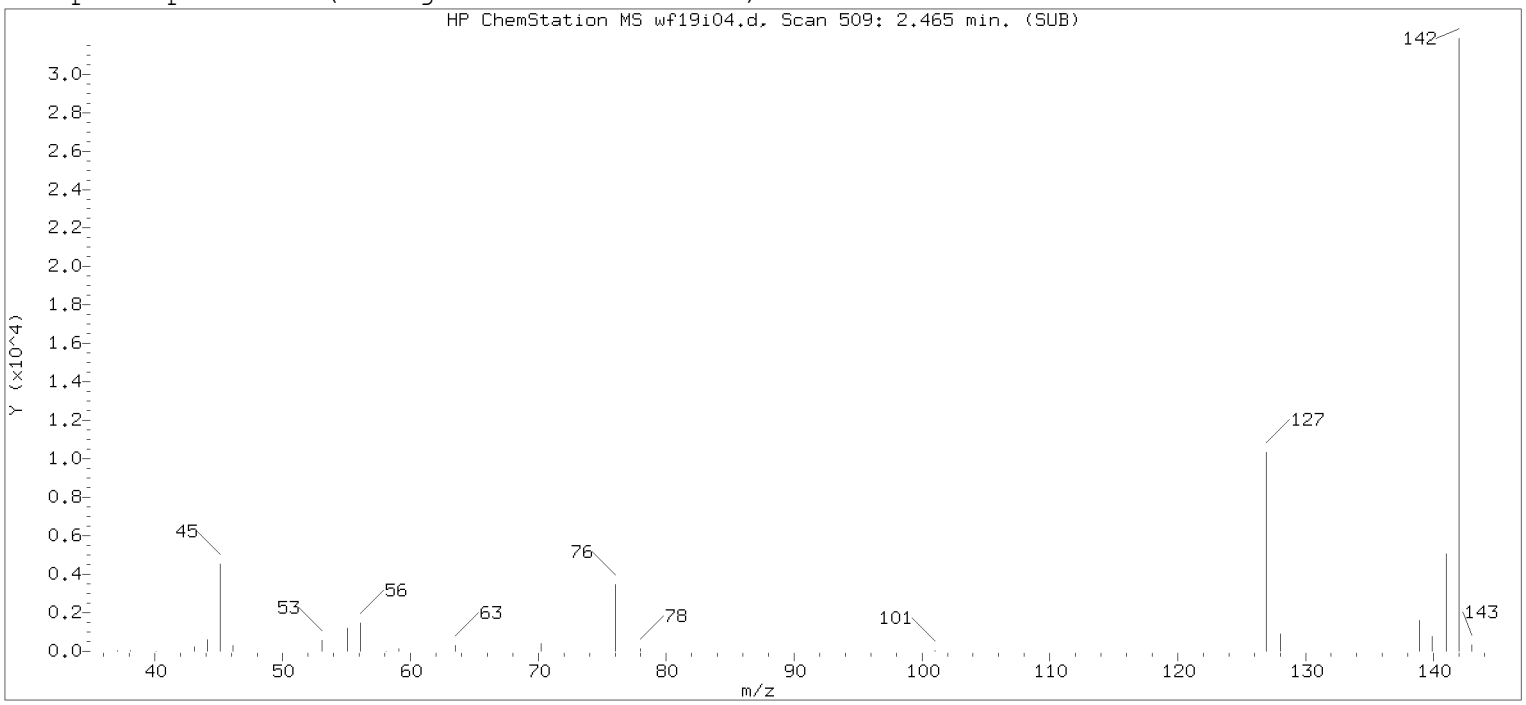
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area (flag) : 150767M
On-Column Amount (ng) : 20.3101
Integration start scan : 475 Integration stop scan: 577
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

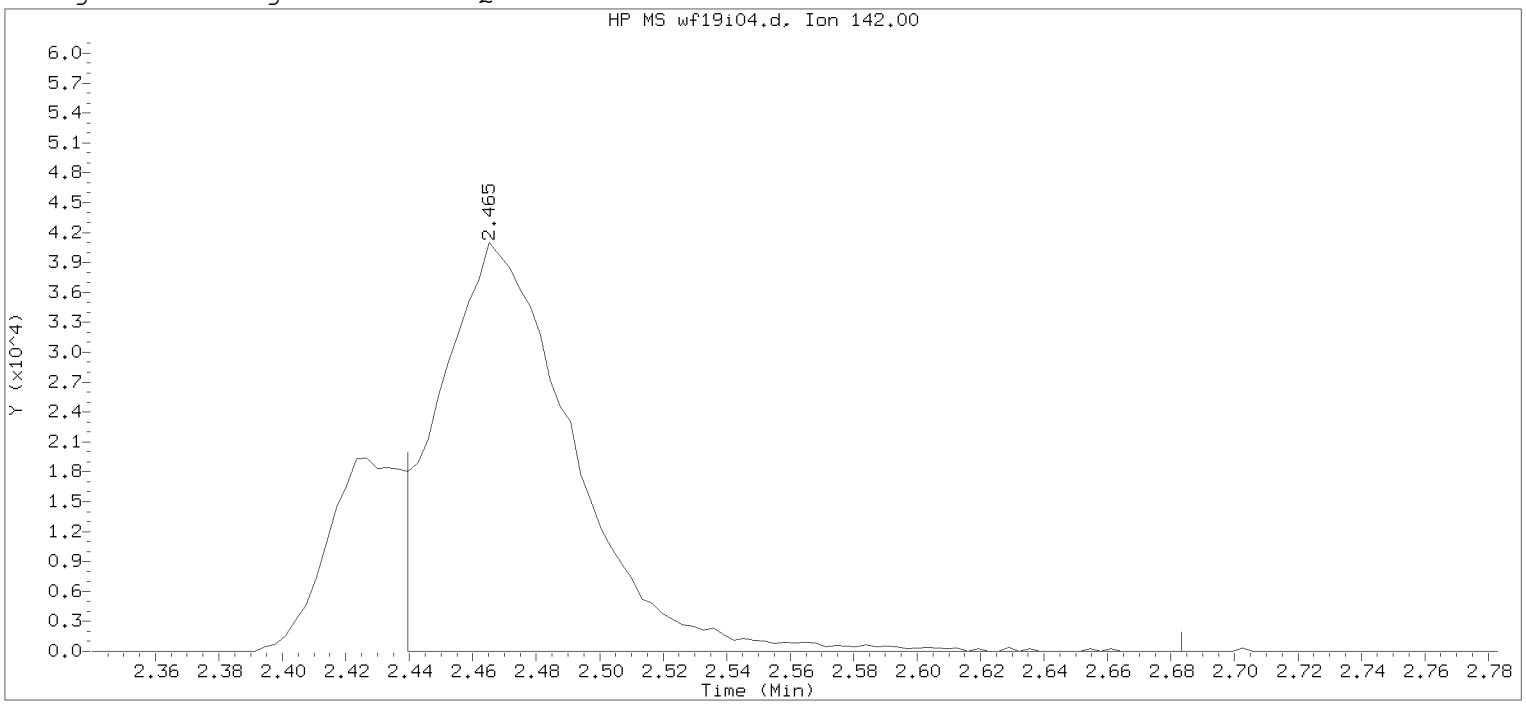
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

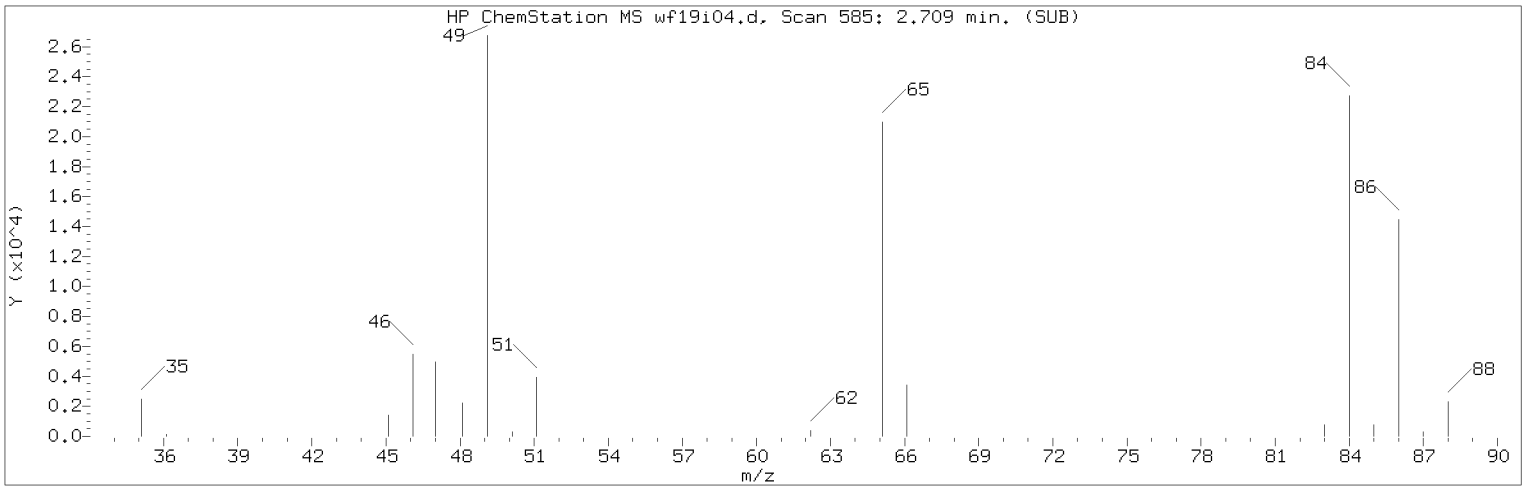
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:48
Date, time and analyst ID of latest file update: 19-Feb-2019 13:48 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

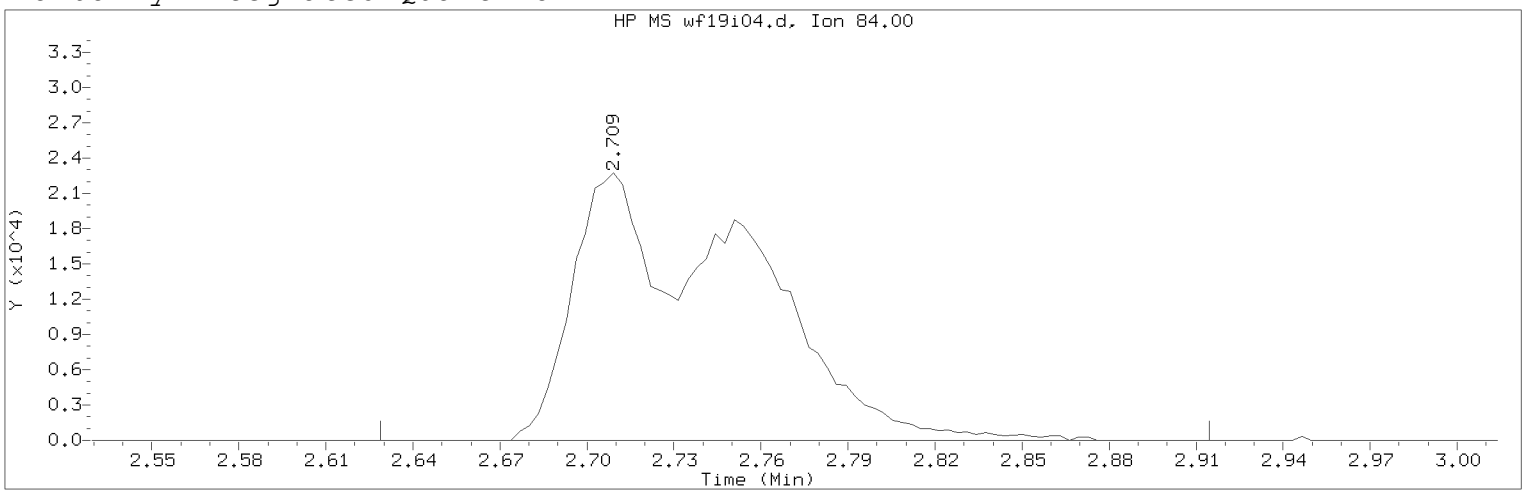
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area : 119508
On-column Amount (ng) : 17.5745
Integration start scan : 500 Integration stop scan: 576
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

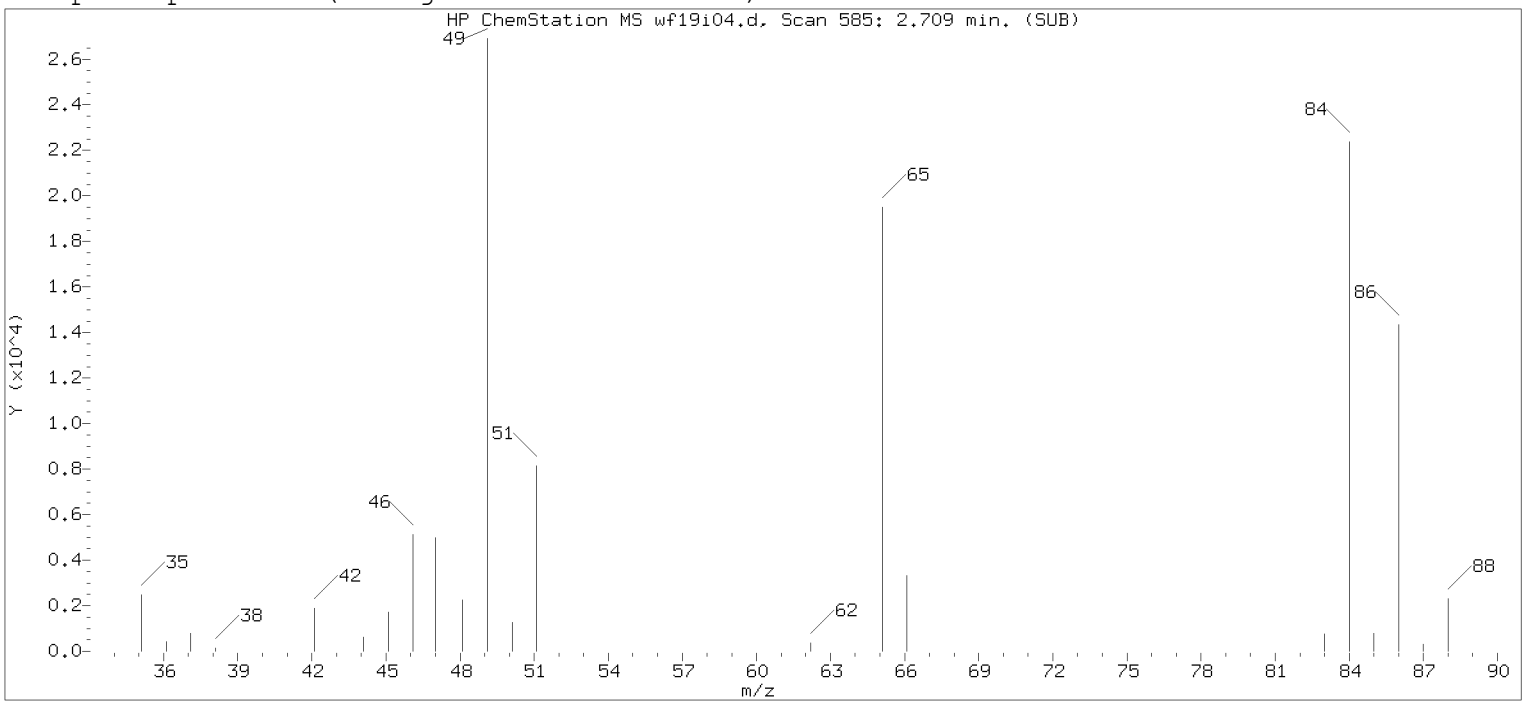
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area (flag) : 93973M
On-Column Amount (ng) : 19.8468
Integration start scan : 559 Integration stop scan: 648
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

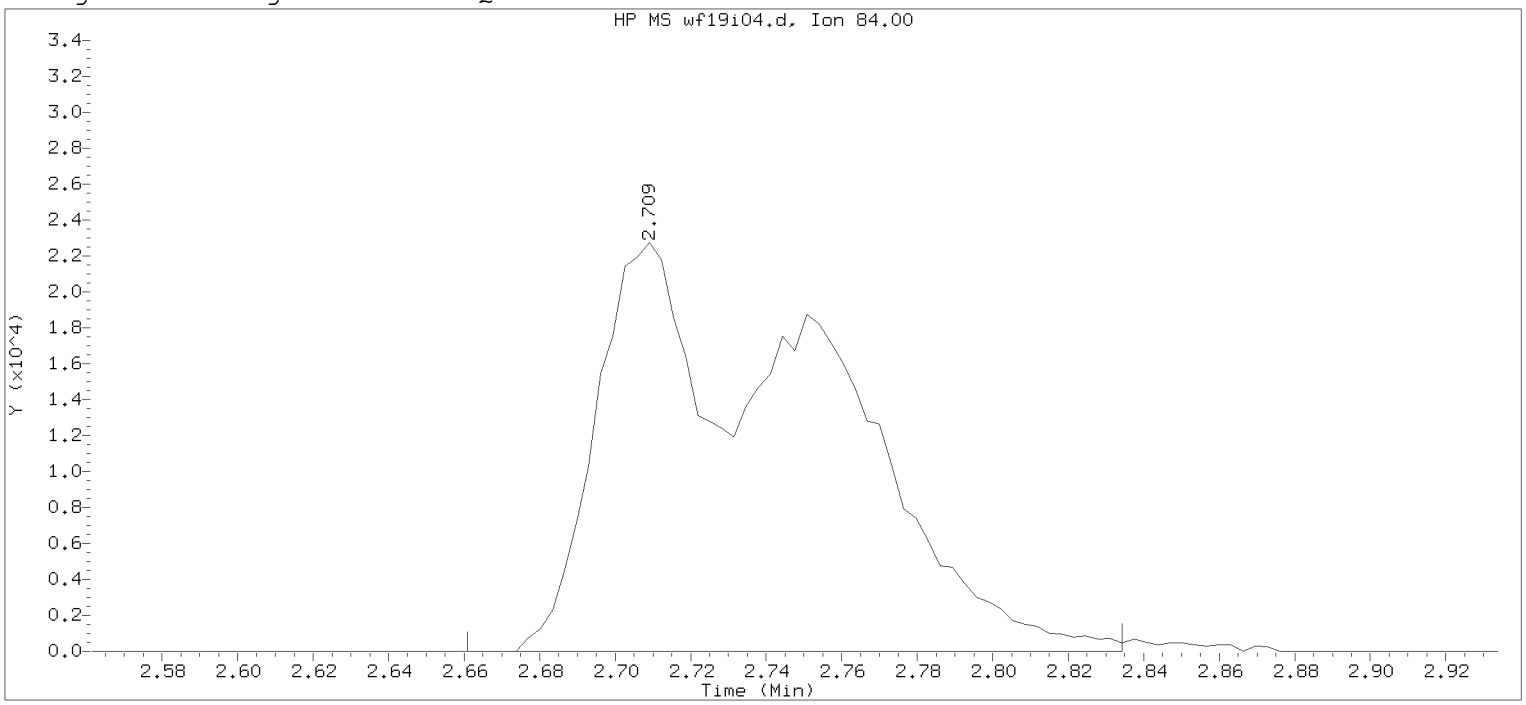
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

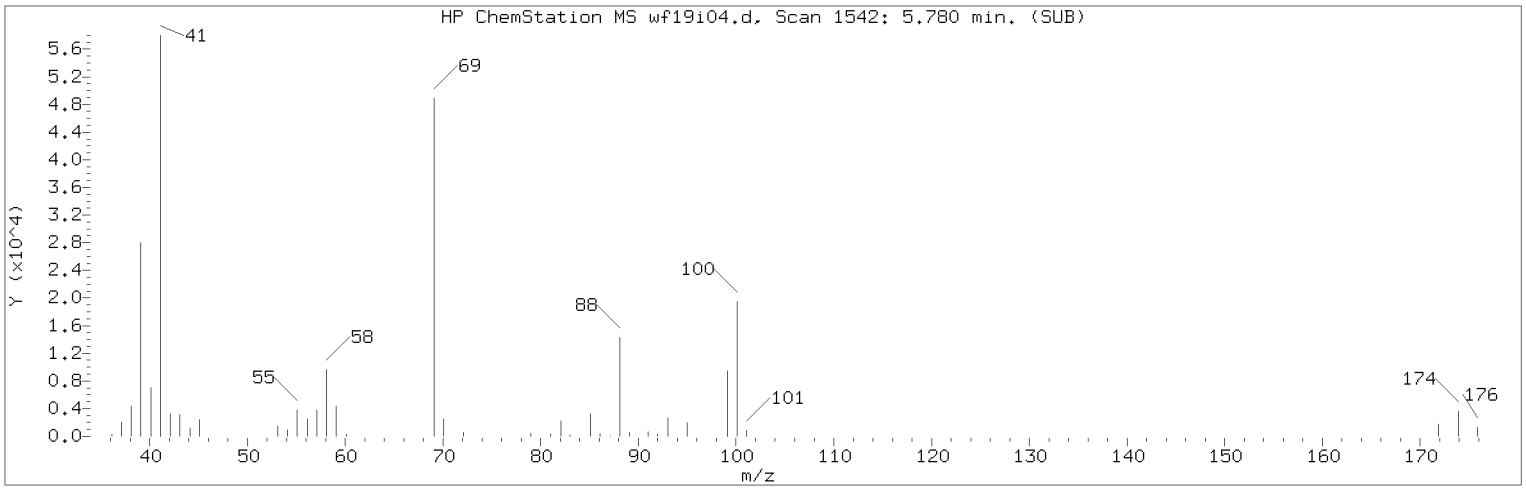
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:48
Date, time and analyst ID of latest file update: 19-Feb-2019 13:48 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

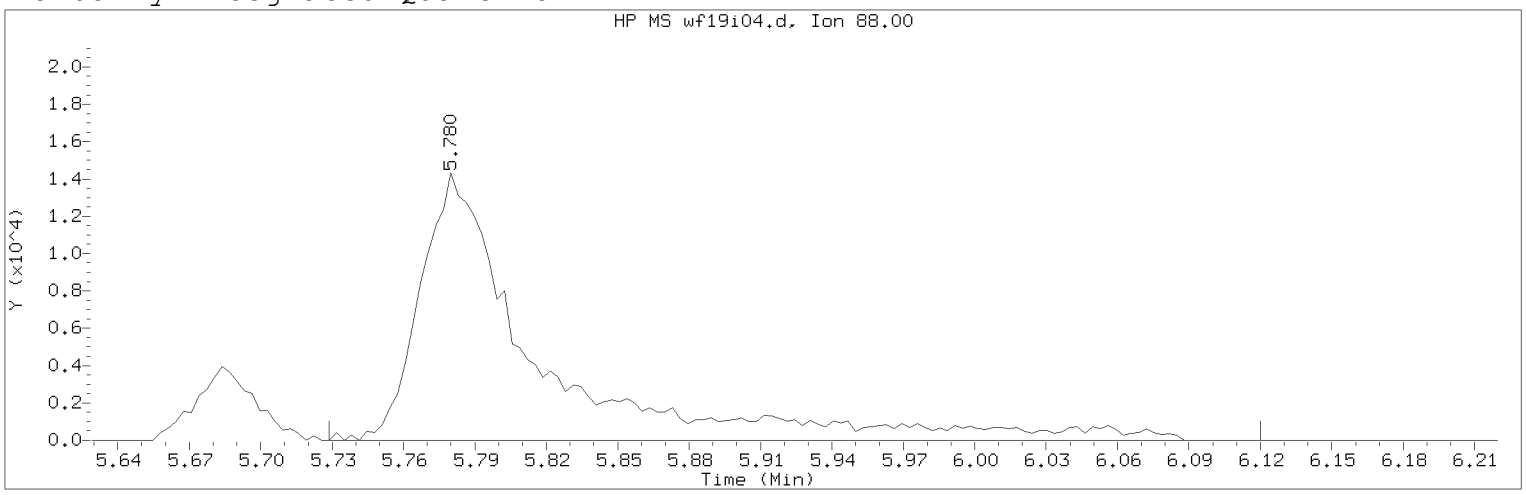
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area : 93088
On-column Amount (ng) : 25.0351
Integration start scan : 569 Integration stop scan: 623
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

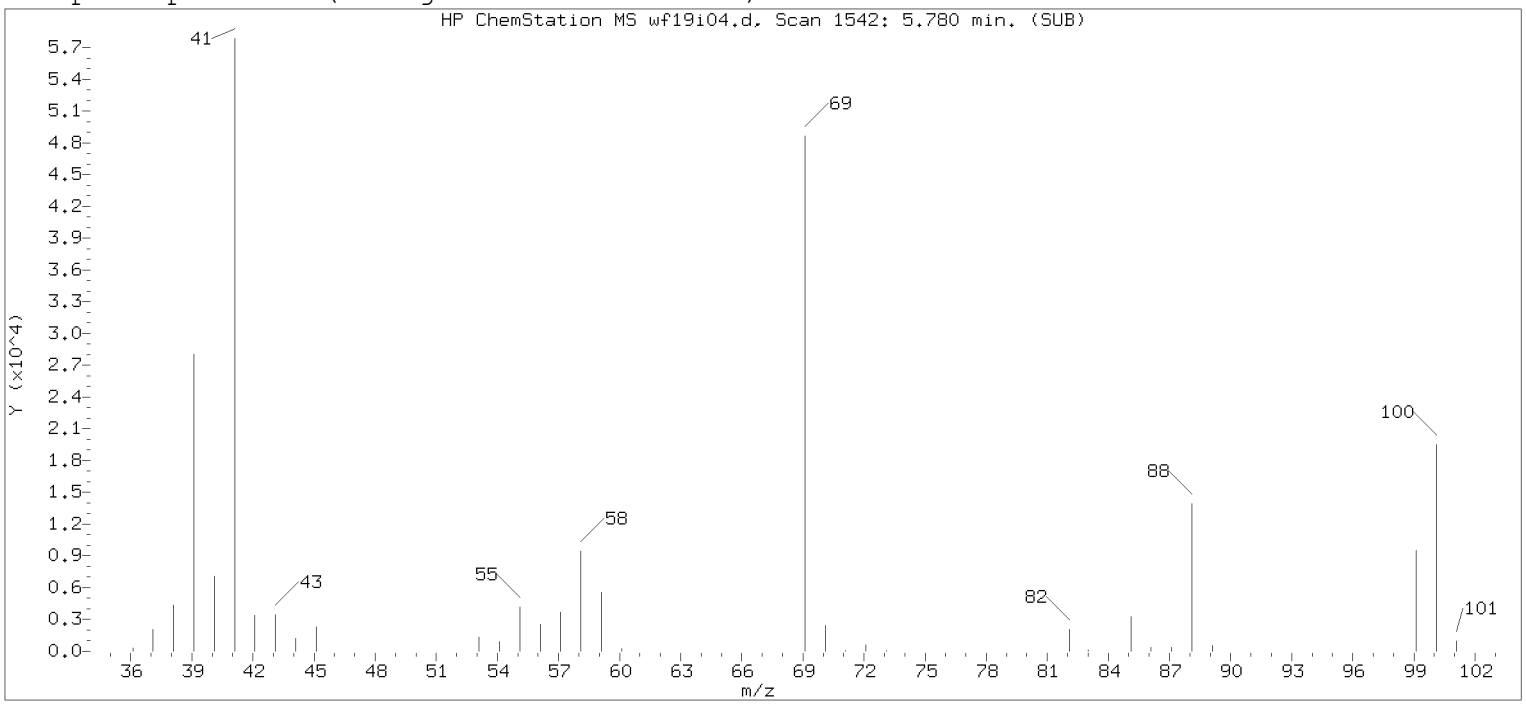
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area (flag) : 49606M
On-Column Amount (ng) : 488.7657
Integration start scan : 1525 Integration stop scan: 1647
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

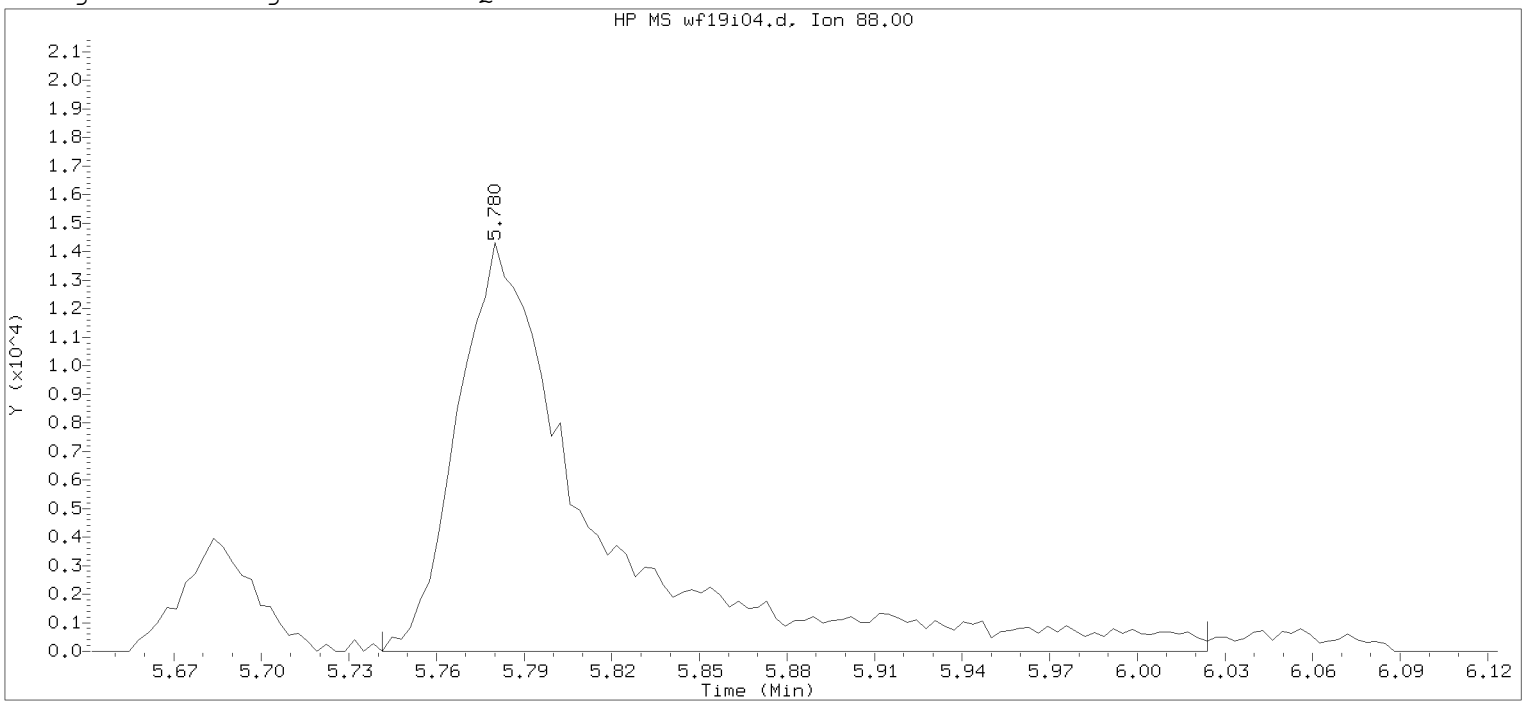
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



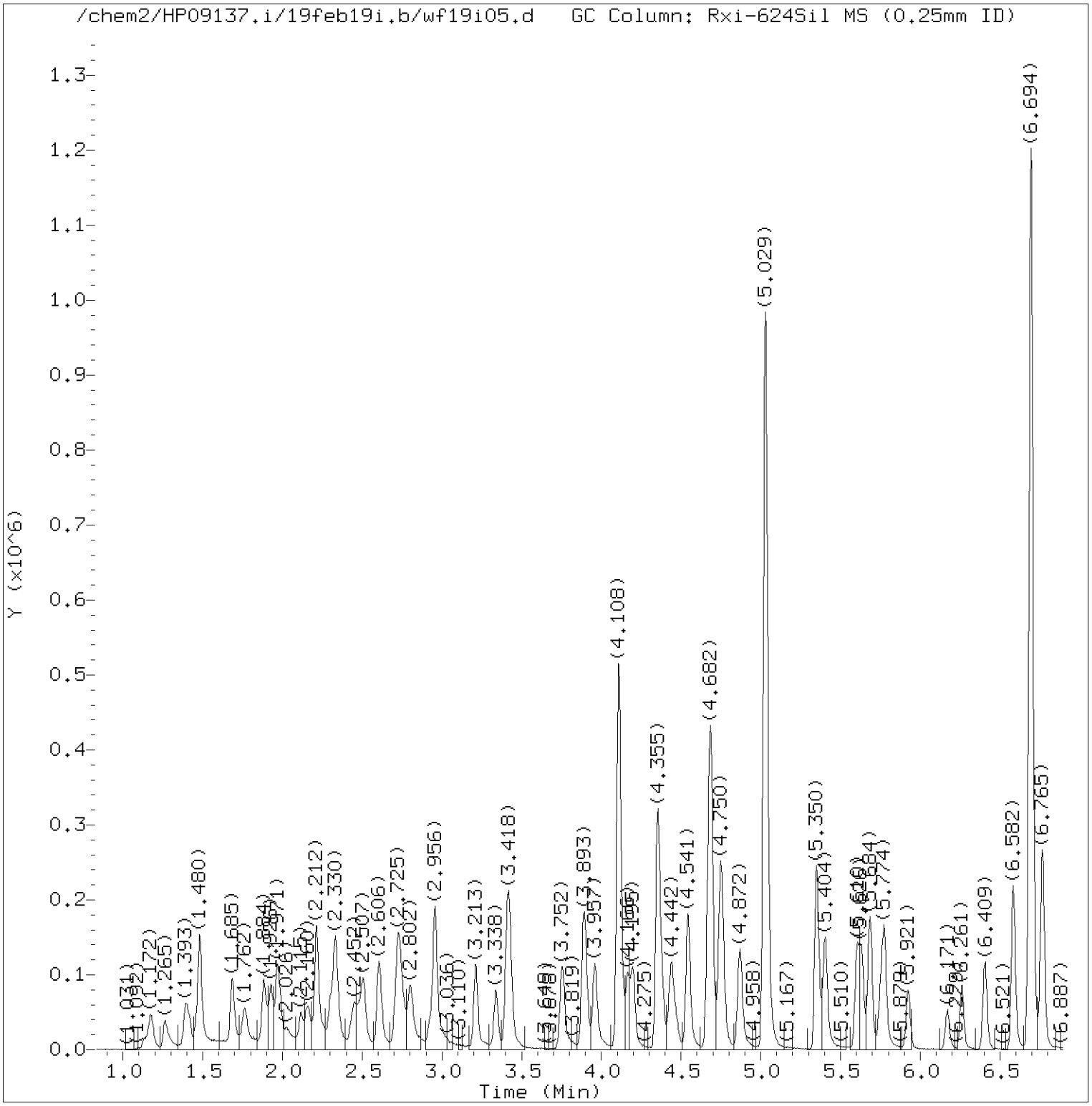
Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:48
Date, time and analyst ID of latest file update: 19-Feb-2019 13:48 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1542		
Retention Time (minutes)	: 5.780		
Quant Ion	: 88.00		
Area	: 47644		
On-column Amount (ng)	: 464.2245		
Integration start scan	: 1529	Integration stop scan:	1617
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user Capacity



Total Ion Chromatogram (TIC)

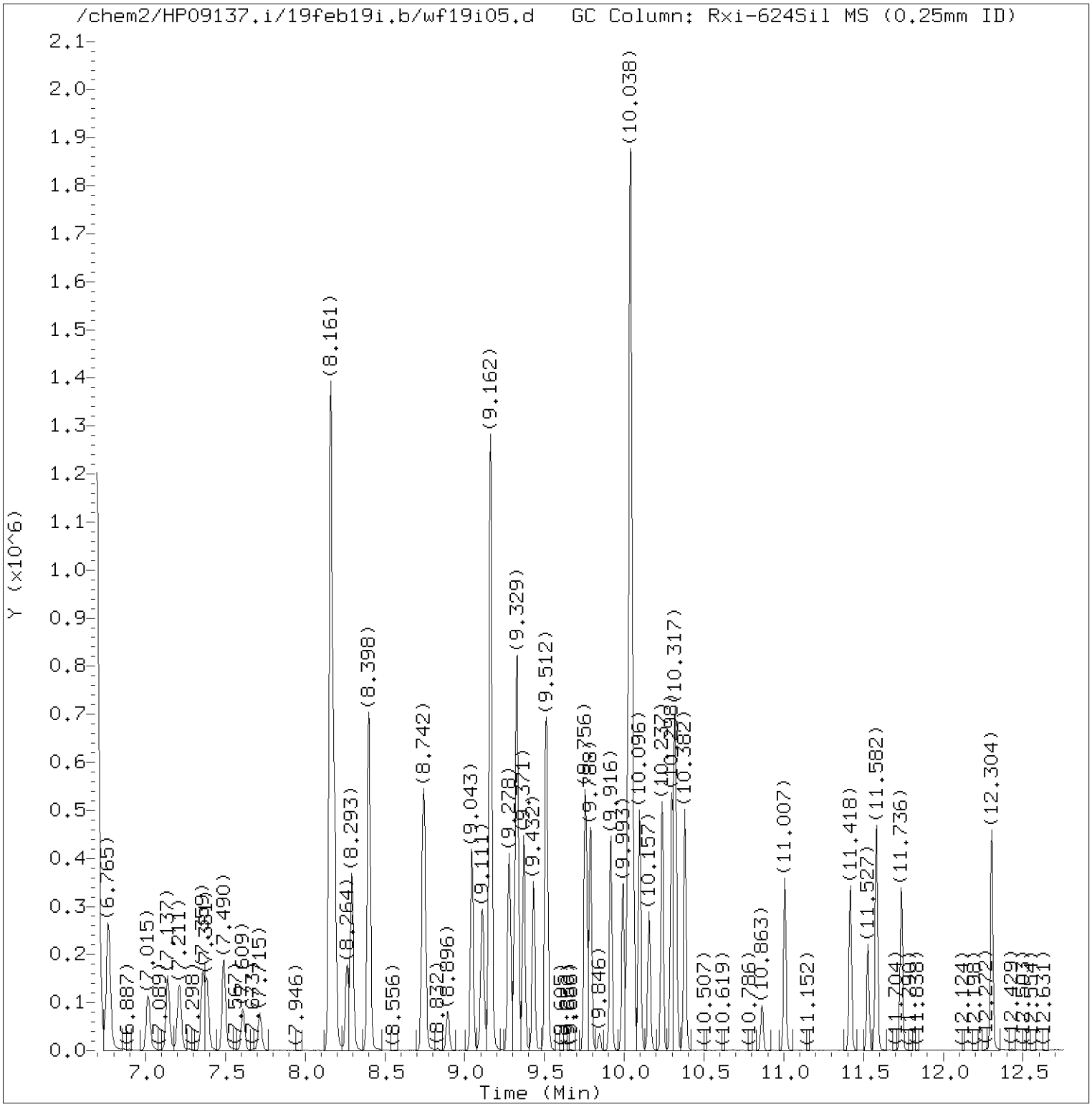
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.262	85	62458	11.066
4) Chloromethane	(2)	1.393	50	76916	10.944
6) Vinyl Chloride	(2)	1.470	62	72647	11.276
5) 1,3-Butadiene	(2)	1.480	39	42800	9.993
8) Bromomethane	(2)	1.682	94	56000	11.021
9) Chloroethane	(2)	1.762	64	45389	10.706
10) Dichlorofluoromethane	(2)	1.884	67	84015	10.238
12) Trichlorofluoromethane	(2)	1.929	101	75649	11.056
11) n-Pentane	(2)	1.971	43	69602	10.696
13) Ethanol	(1)	2.029	45	48262	448.970
15) Freon 123a	(2)	2.160	67	53443M	10.452
16) Acrolein	(1)	2.212	56	159695	94.112
17) 1,1-Dichloroethene	(2)	2.330	96	41128	10.687
17) 1,1-Dichloroethene	(2)	2.330	63	21001	10.816
18) Acetone	(1)	2.334	58	16160M	19.593
19) Freon 113	(2)	2.334	101	36566	10.820
21) 2-Propanol	(1)	2.443	45	59465	97.039
22) Methyl Iodide	(2)	2.468	142	77364	10.490
23) Carbon Disulfide	(2)	2.507	76	145480	10.730
25) Allyl Chloride	(2)	2.600	41	69127	10.310
27) Methyl Acetate	(2)	2.616	43	57968	9.989
29)*t-Butyl alcohol-d10	(1)	2.725	65	235698	250.000
28) Methylene Chloride	(2)	2.744	84	49542M	10.532
30) t-Butyl alcohol	(1)	2.802	59	107632	98.462
31) Acrylonitrile	(2)	2.930	53	30932	10.132
32) trans-1,2-Dichloroethene	(2)	2.956	96	44909	10.755
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	114387	11.251
34) n-Hexane	(2)	3.210	57	60284	10.790
36) 1,1-Dichloroethane	(2)	3.338	63	80127	10.590
38) di-Isopropyl ether	(2)	3.412	45	153463	10.557
39) 2-Chloro-1,3-butadiene	(2)	3.431	53	69810	10.653
40) Ethyl t-butyl ether	(2)	3.758	59	118447	11.179
42) cis-1,2-Dichloroethene	(2)	3.887	96	49735	10.608
45) 2,2-Dichloropropane	(2)	3.887	77	36418	10.717
44) 2-Butanone	(2)	3.903	43	86295	19.675
47) Propionitrile	(1)	3.957	54	135864	100.004
48) Methacrylonitrile	(2)	4.111	67	172352	52.506
49) Bromochloromethane	(2)	4.114	128	25130	10.312

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.166	71	22155	17.619
51) Chloroform	(2)	4.198	83	74987	10.563
52)$Dibromofluoromethane	(2)	4.355	113	200531	49.589
52)$Dibromofluoromethane	(2)	4.355	111	204921	49.364
53) 1,1,1-Trichloroethane	(2)	4.381	97	57282	10.724
54) Cyclohexane	(2)	4.442	56	75994	10.750
54) Cyclohexane	(2)	4.442	84	61745	10.552
54) Cyclohexane	(2)	4.442	69	22755	10.711
55) 1,1-Dichloropropene	(2)	4.541	75	59776	10.502
56) Carbon Tetrachloride	(2)	4.545	117	48197	10.514
58) Isobutyl Alcohol	(1)	4.670	41	97996	245.901
57)$1,2-Dichloroethane-d4	(2)	4.686	102	53213	49.478
57)$1,2-Dichloroethane-d4	(2)	4.686	65	234803	50.153
57)$1,2-Dichloroethane-d4	(2)	4.689	104	34768	50.762
60) Benzene	(2)	4.747	78	194070	10.608
61) 1,2-Dichloroethane	(2)	4.766	62	58810	10.406
61) 1,2-Dichloroethane	(2)	4.760	98	5873	10.923
65) t-Amyl methyl ether	(2)	4.872	73	123749	11.400
66)*Fluorobenzene	(2)	5.029	96	872867	50.000
67) n-Heptane	(2)	5.035	43	56932	10.662
69) n-Butanol	(1)	5.350	56	171859	485.699
71) Trichloroethene	(2)	5.404	95	47297	10.675
73) Methylcyclohexane	(2)	5.610	83	63355	9.850
73) Methylcyclohexane	(2)	5.603	98	29361	9.817
74) 1,2-Dichloropropane	(2)	5.632	63	49822	10.607
75) Dibromomethane	(2)	5.754	93	30462	10.508
77) Methyl Methacrylate	(2)	5.774	69	52747	10.219
76) 1,4-Dioxane	(1)	5.780	88	26130M	247.023
79) Bromodichloromethane	(2)	5.921	83	54837	10.296
43) 1,2-Dichloroethene (Total)	(2)		96	94644	21.364
80) 2-Nitropropane	(2)	6.171	41	32706	18.149
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	39229	10.955
82) cis-1,3-Dichloropropene	(2)	6.409	75	75893	10.363
83) 4-Methyl-2-pentanone	(2)	6.585	43	162394	18.783
84)$Toluene-d8	(3)	6.694	98	898296	50.552
84)$Toluene-d8	(3)	6.694	100	588219	49.916
89) Toluene	(3)	6.765	92	124809	10.903
90) trans-1,3-Dichloropropene	(3)	7.015	75	71110	10.435

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.137	69	87307	10.426
93) 1,1,2-Trichloroethane	(3)	7.211	97	46734	10.607
94) Tetrachloroethene	(3)	7.359	166	50876	10.953
95) 1,3-Dichloropropane	(3)	7.384	76	82341	10.760
97) 2-Hexanone	(3)	7.490	43	127140	19.072
98) Dibromochloromethane	(3)	7.609	129	44473	10.335
100) 1,2-Dibromoethane	(3)	7.715	107	52152	10.774
101)*Chlorobenzene-d5	(3)	8.161	117	709147	50.000
103) Chlorobenzene	(3)	8.187	112	135467	10.668
104) 1,1,1,2-Tetrachloroethane	(3)	8.260	131	42994	10.535
105) Ethylbenzene	(3)	8.293	91	235037	10.803
107) m+p-Xylene	(3)	8.398	106	187670	21.696
108) o-Xylene	(3)	8.735	106	90084	10.586
110) Styrene	(3)	8.751	104	151094	10.584
111) Bromoform	(3)	8.893	173	33660	10.051
112) Isopropylbenzene	(3)	9.043	105	227103	10.860
113) Cyclohexanone	(1)	9.111	55	109179	228.810
115)$4-Bromofluorobenzene	(3)	9.162	95	357932	50.349
115)$4-Bromofluorobenzene	(3)	9.162	174	302192	50.376
116) Bromobenzene	(4)	9.278	156	59684	10.510
117) 1,1,2,2-Tetrachloroethane	(4)	9.281	83	80608	10.526
118) 1,2,3-Trichloropropane	(4)	9.310	110	23980	10.396
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	129246	52.628
120) n-Propylbenzene	(4)	9.371	91	270892	10.821
121) 2-Chlorotoluene	(4)	9.432	126	55953	10.836
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	194234	10.758
122) 4-Chlorotoluene	(4)	9.515	126	58566	10.595
125) tert-Butylbenzene	(4)	9.756	134	42636	10.394
126) Pentachloroethane	(4)	9.765	167	33777	10.416
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	204882	10.769
128) sec-Butylbenzene	(4)	9.916	105	239653	10.814
130) 1,3-Dichlorobenzene	(4)	9.993	146	115418	10.658
131) p-Isopropyltoluene	(4)	10.022	119	211548	10.783
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	394276	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	117695	10.484
91) 1,3-Dichloropropene (total)	(3)		100	147003	20.798
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	216354	10.569
136) Benzyl Chloride	(4)	10.157	91	162115	10.317

* = Compound is an internal standard.
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Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

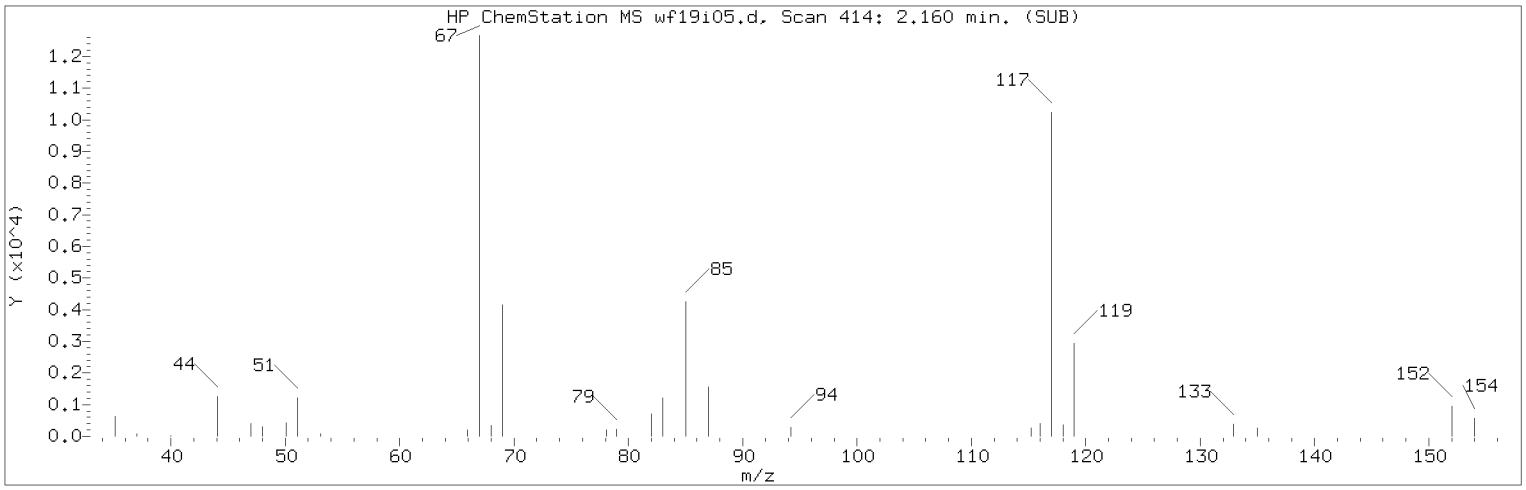
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

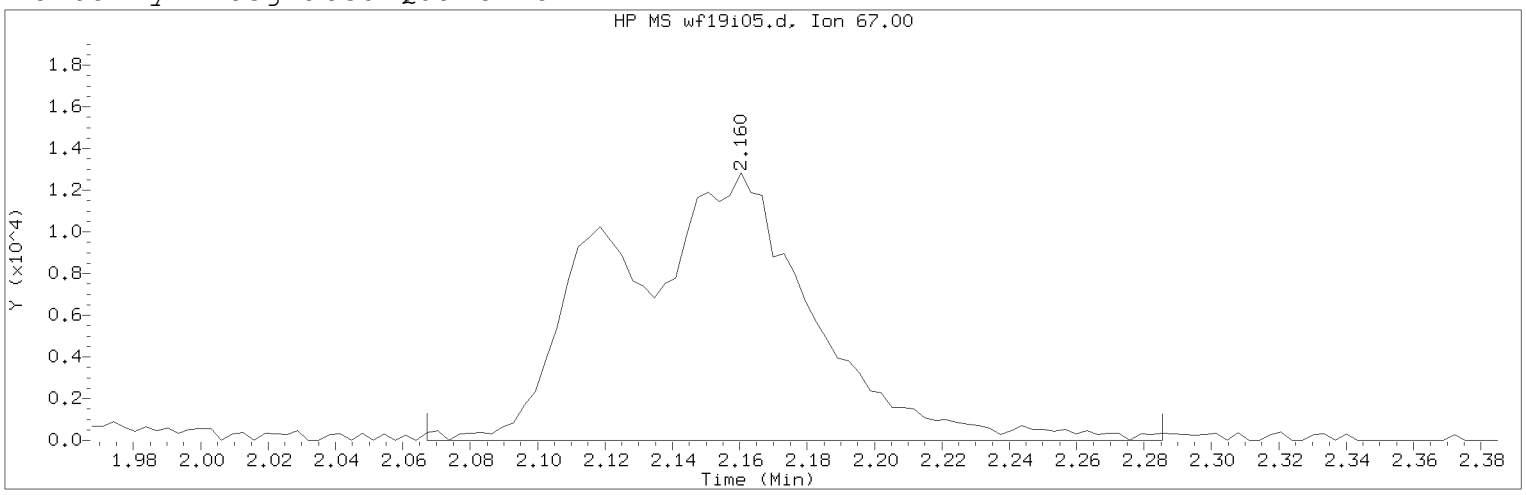
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.237	119	129345	10.493
138) 1,4-Diethylbenzene	(4)	10.295	119	139309	10.548
140) n-Butylbenzene	(4)	10.314	92	107453	10.852
139) 1,2-Dichlorobenzene	(4)	10.324	146	114774	10.683
141) 1,2-Diethylbenzene	(4)	10.382	119	110669	10.634
143) 1,2-Dibromo-3-chloropropane	(4)	10.866	75	17630	10.130
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	86972	10.557
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	84162	10.640
148) Hexachlorobutadiene	(4)	11.527	225	30490	10.823
149) Naphthalene	(4)	11.582	128	287278	10.734
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	81036	10.497
109) Xylene (Total)	(3)		106	277754	32.281
151) 2-Methylnaphthalene	(4)	12.304	142	164287	10.760
142) Diethylbenzene (total)	(4)		100	379323	31.674

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

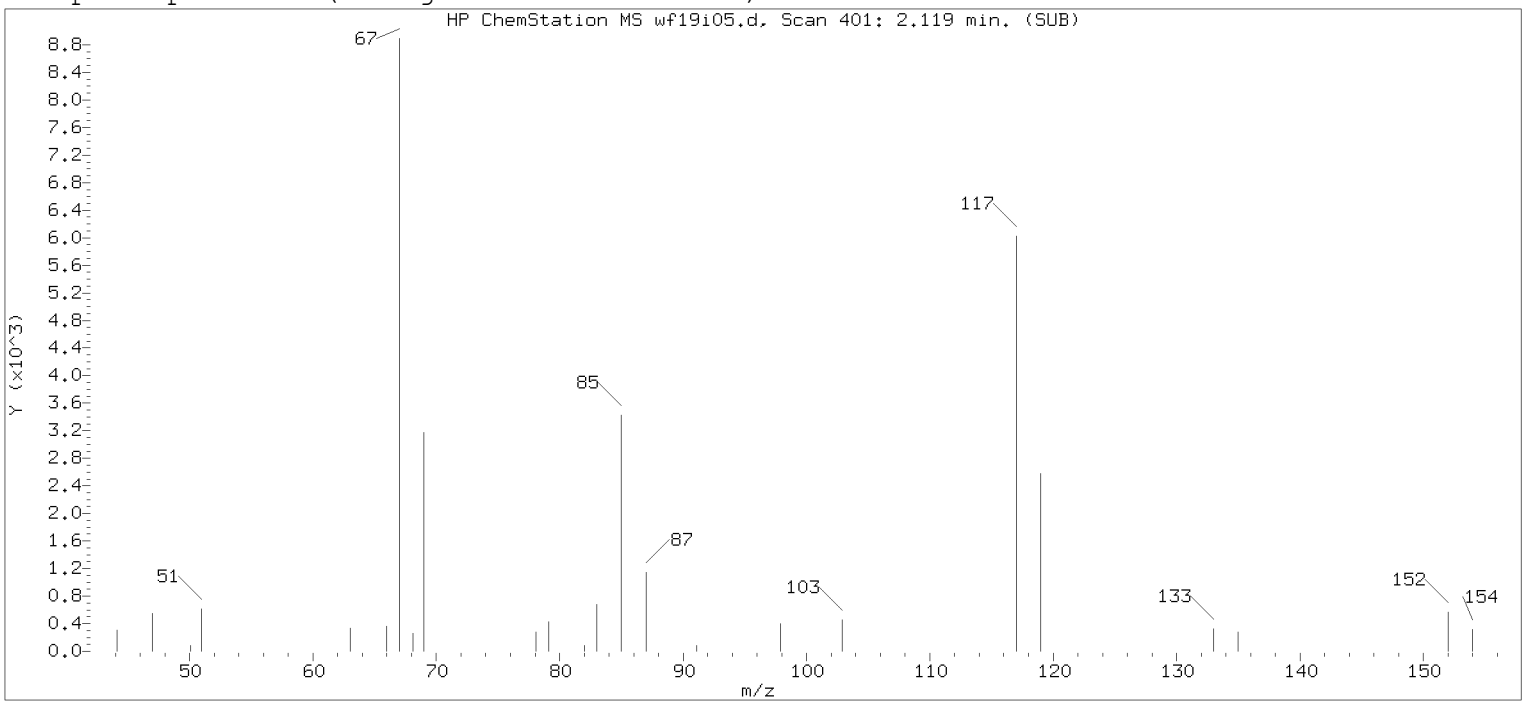
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 414
Retention Time (minutes): 2.160
Quant Ion : 67.00
Area (flag) : 53443M
On-Column Amount (ng) : 10.4520
Integration start scan : 384 Integration stop scan: 452
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

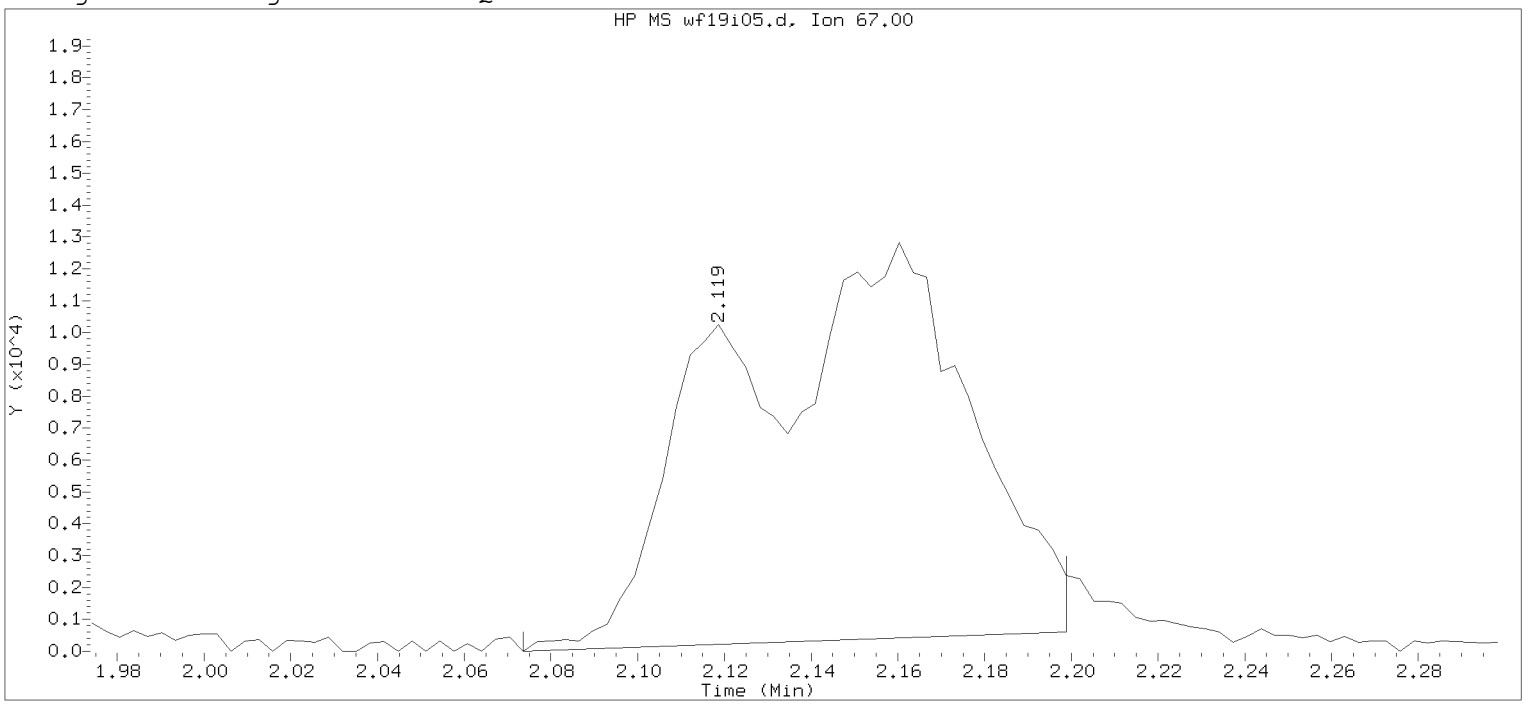
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:12
Date, time and analyst ID of latest file update: 19-Feb-2019 14:12 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 15
Compound Name : Freon 123a
Scan Number : 401
Retention Time (minutes): 2.119
Quant Ion : 67.00
Area : 47122
On-column Amount (ng) : 13.0811
Integration start scan : 386 Integration stop scan: 425
Y at integration start : 0 Y at integration end: 613

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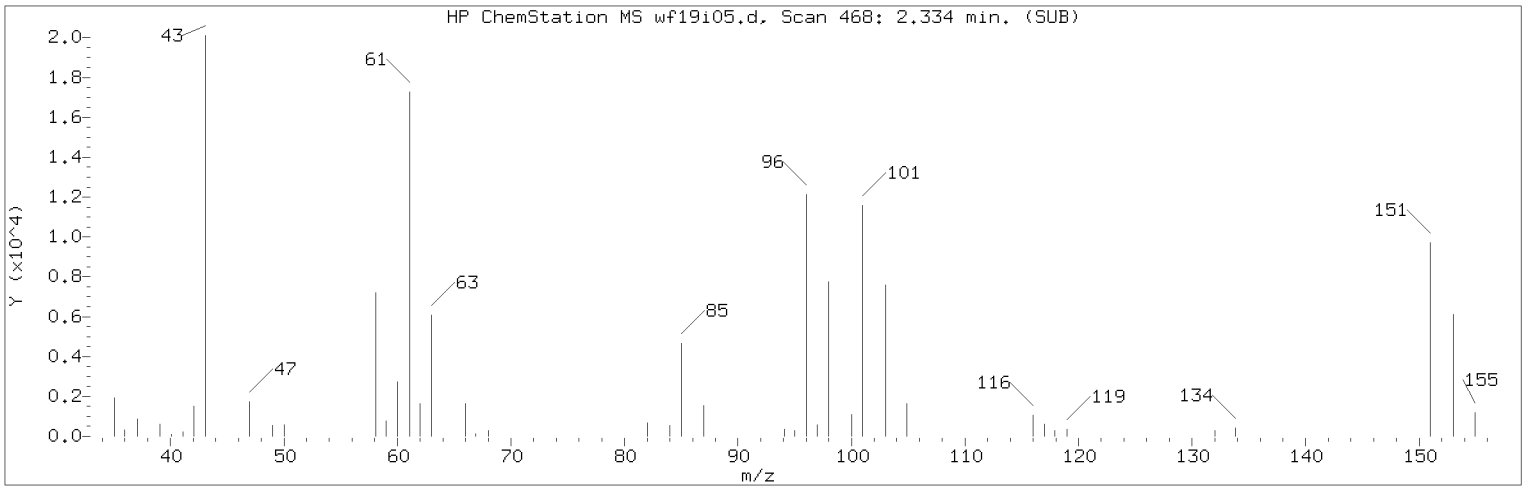
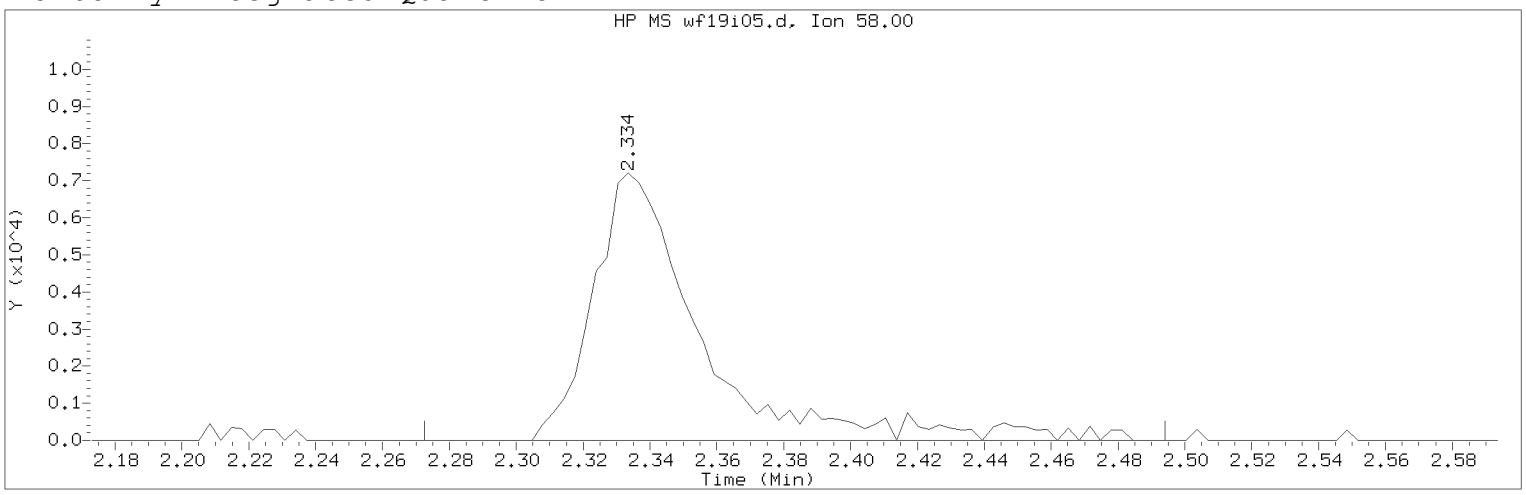
Target 3.5 esignature user Capacity

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

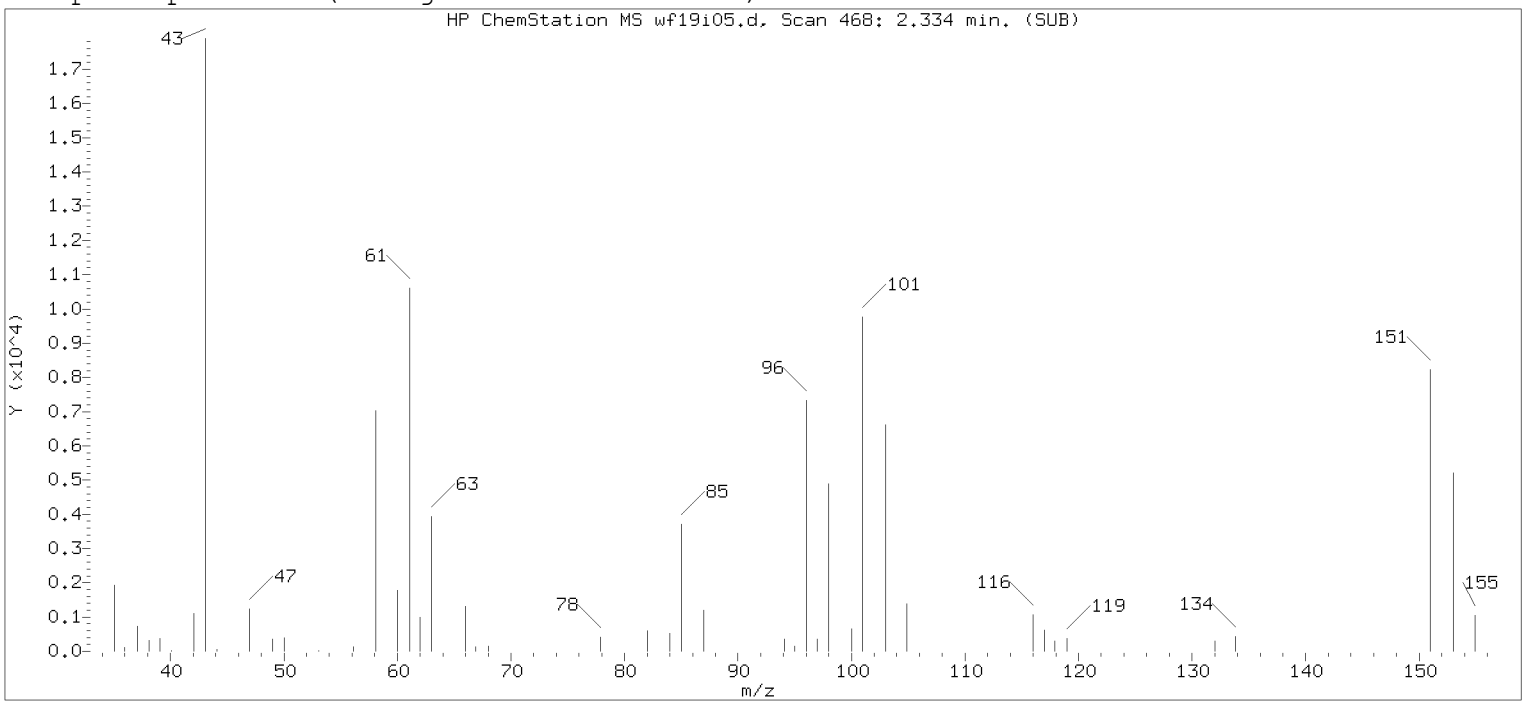
Compound Number : 18
Compound Name : Acetone
Scan Number : 468
Retention Time (minutes): 2.334
Quant Ion : 58.00
Area (flag) : 16160M
On-Column Amount (ng) : 19.5930
Integration start scan : 448 Integration stop scan: 517
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

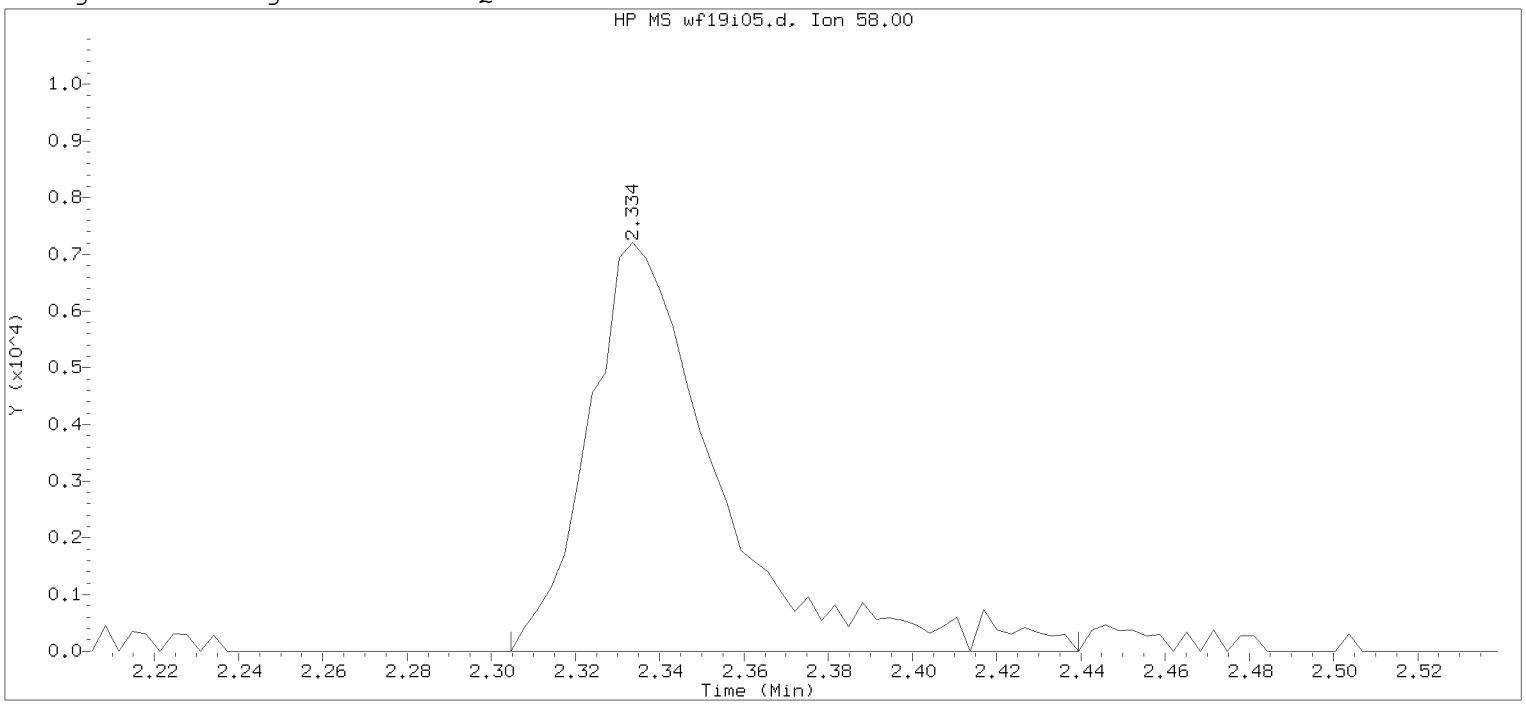
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:12
Date, time and analyst ID of latest file update: 19-Feb-2019 14:12 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 18
Compound Name : Acetone
Scan Number : 468
Retention Time (minutes): 2.334
Quant Ion : 58.00
Area : 15508
On-column Amount (ng) : 18.9951
Integration start scan : 458 Integration stop scan: 500
Y at integration start : 0 Y at integration end: 0

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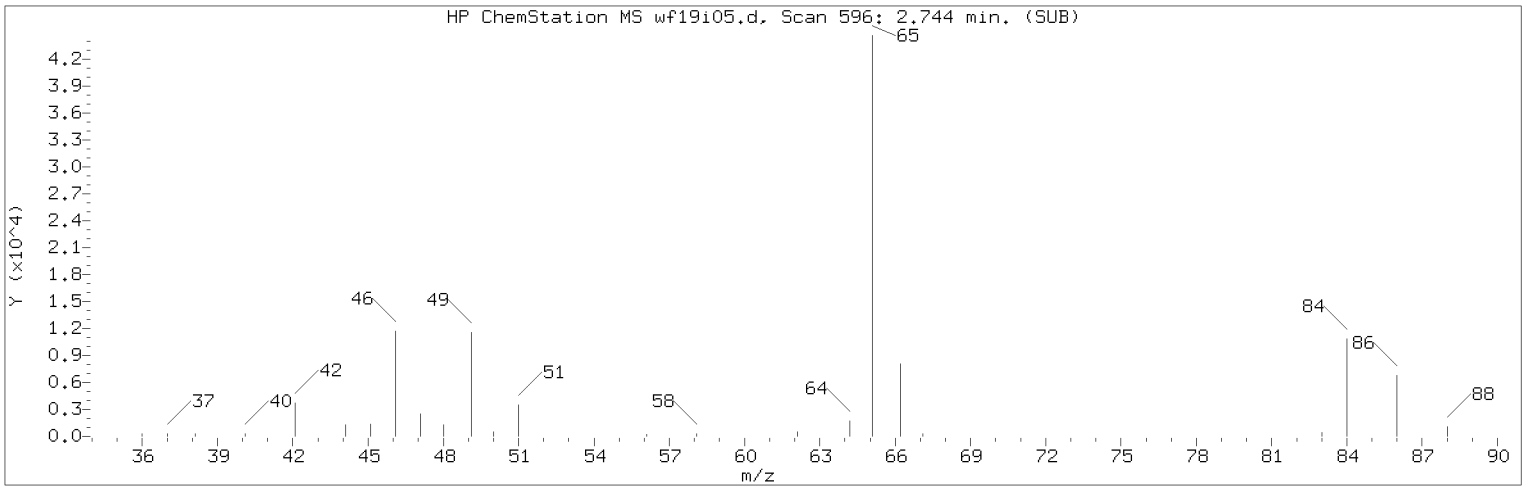
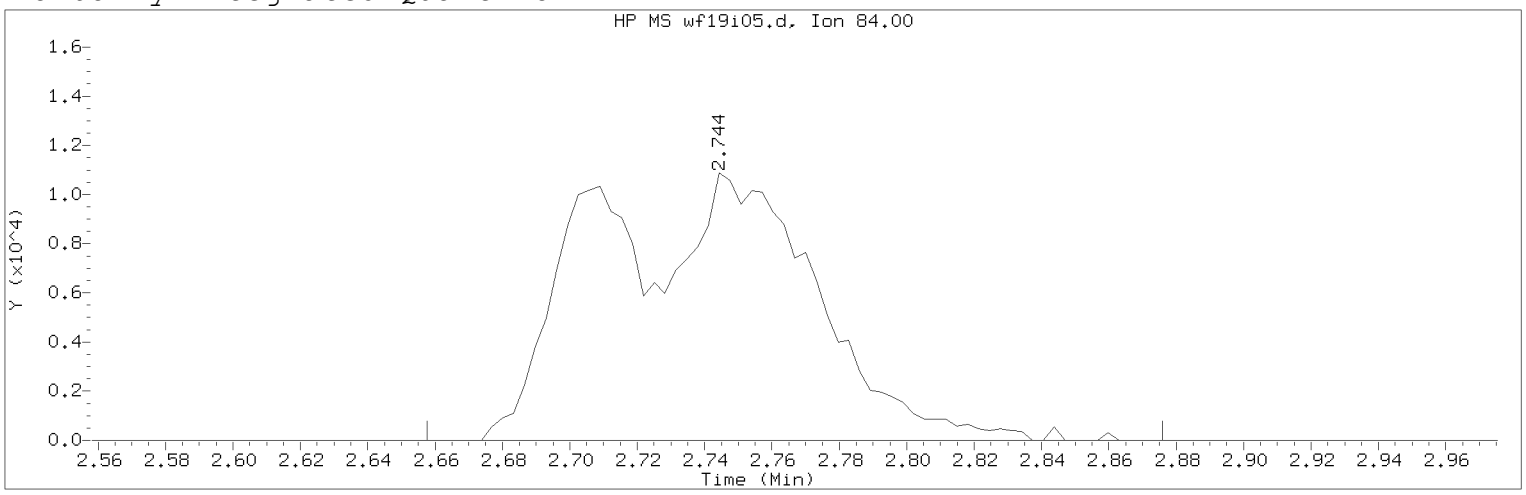
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

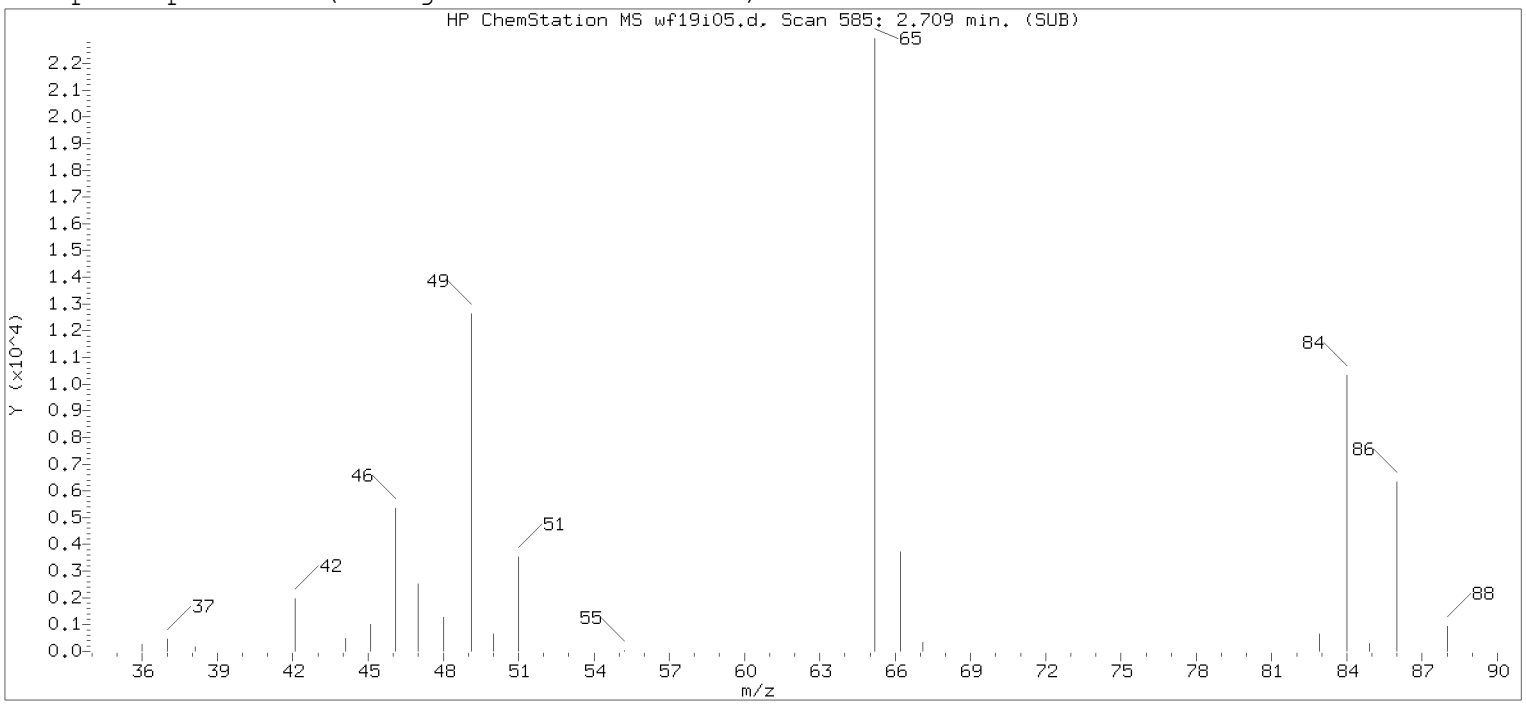
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 596
Retention Time (minutes): 2.744
Quant Ion : 84.00
Area (flag) : 49542M
On-Column Amount (ng) : 10.5316
Integration start scan : 568 Integration stop scan: 636
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

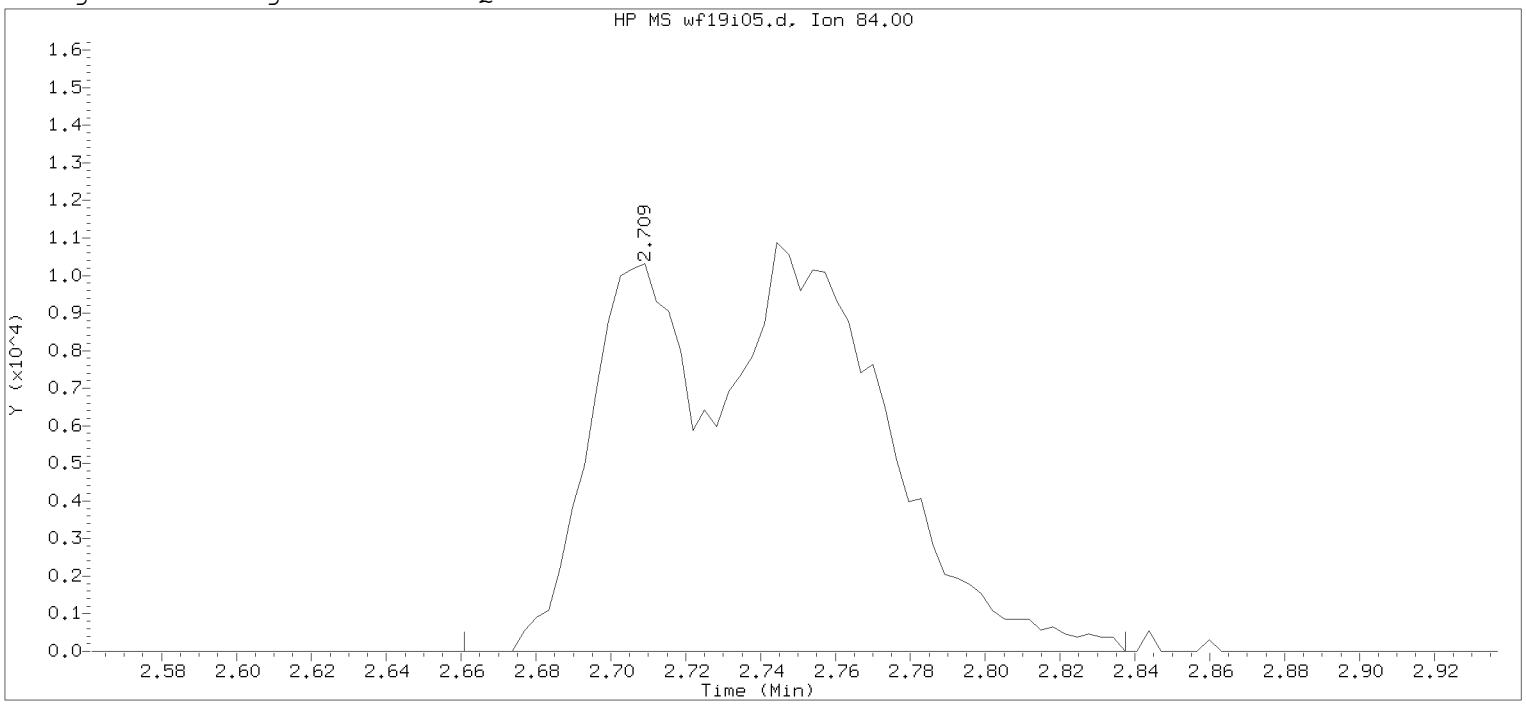
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:12
Date, time and analyst ID of latest file update: 19-Feb-2019 14:12 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area : 49378
On-column Amount (ng) : 12.5234
Integration start scan : 569 Integration stop scan: 624
Y at integration start : 0 Y at integration end: 0

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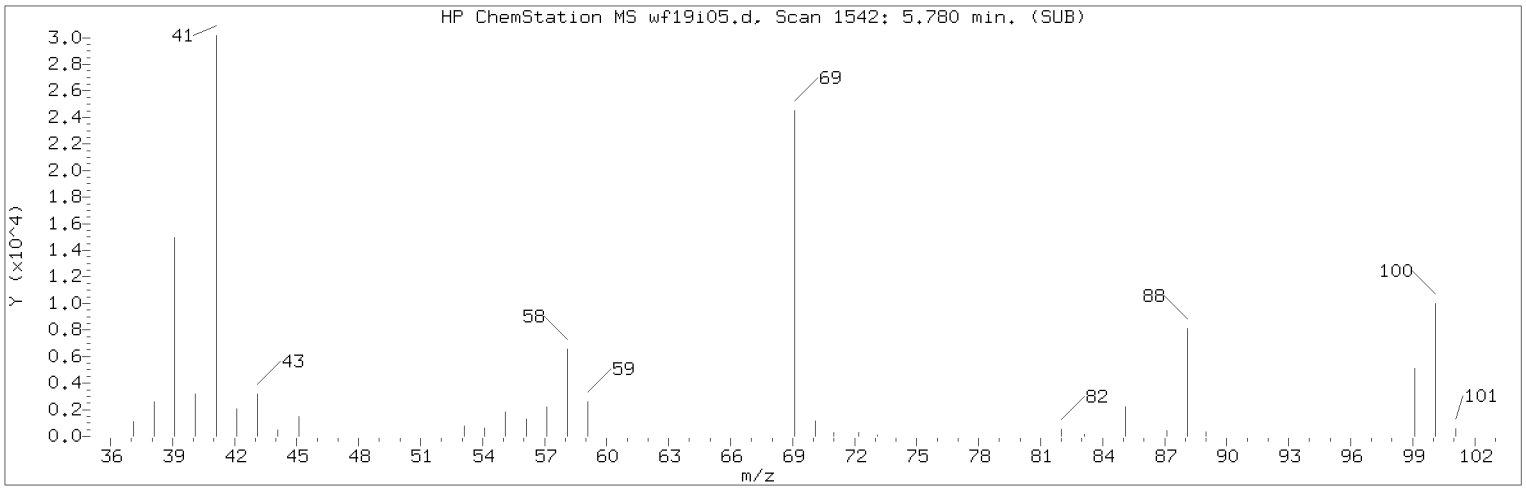
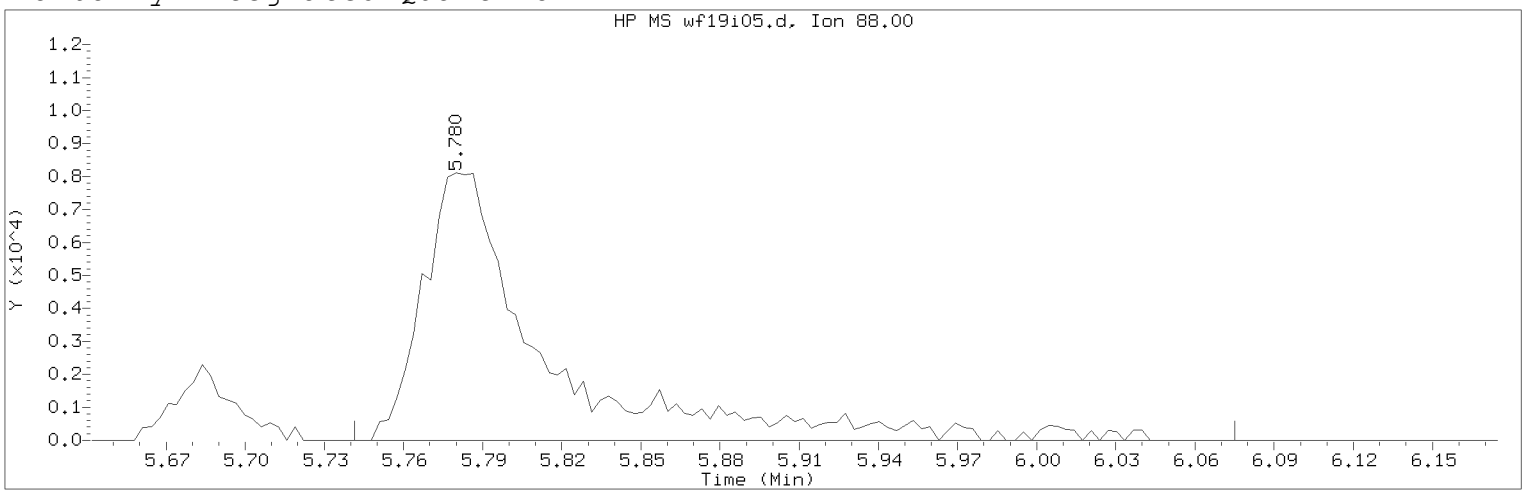
Target 3.5 esignature user Abigail P. Roselli

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

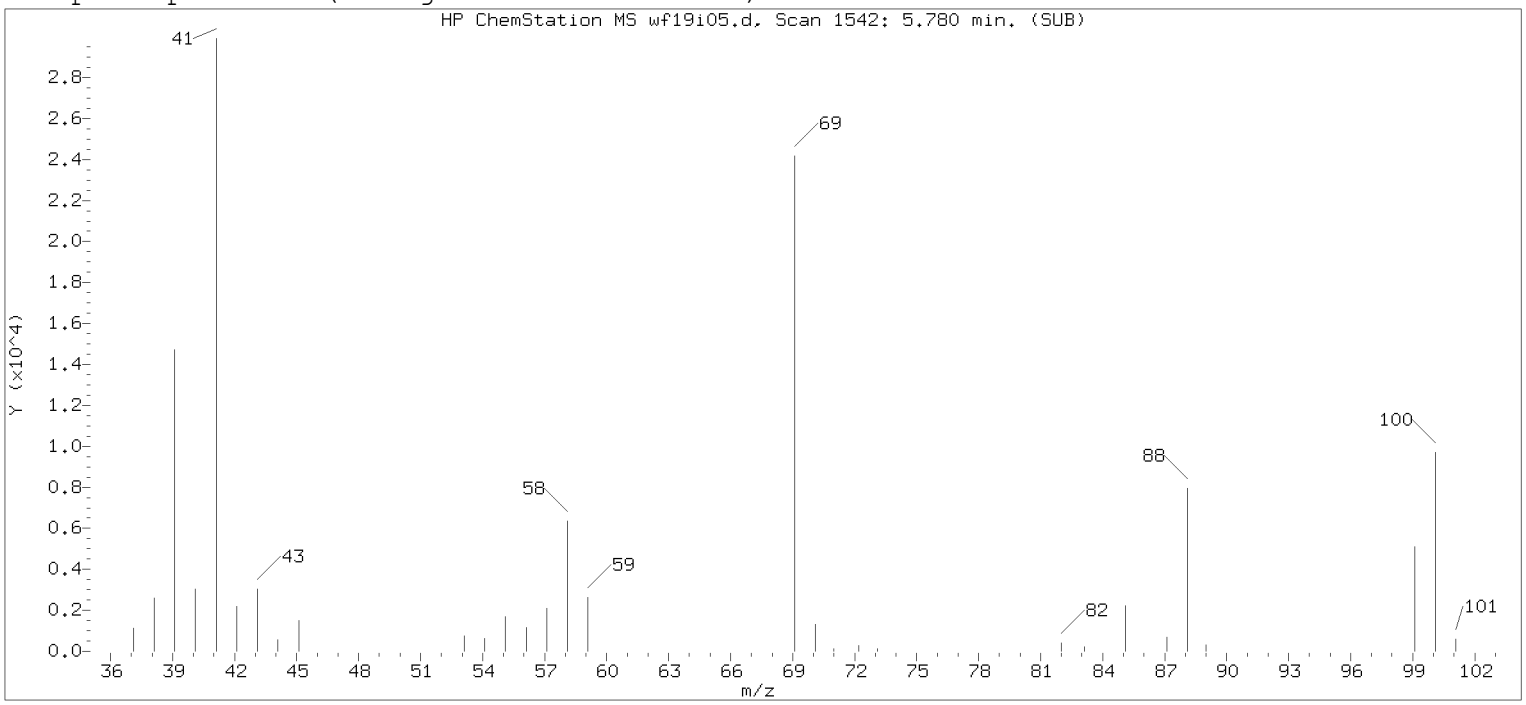
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area (flag) : 26130M
On-Column Amount (ng) : 247.0228
Integration start scan : 1529 Integration stop scan: 1633
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

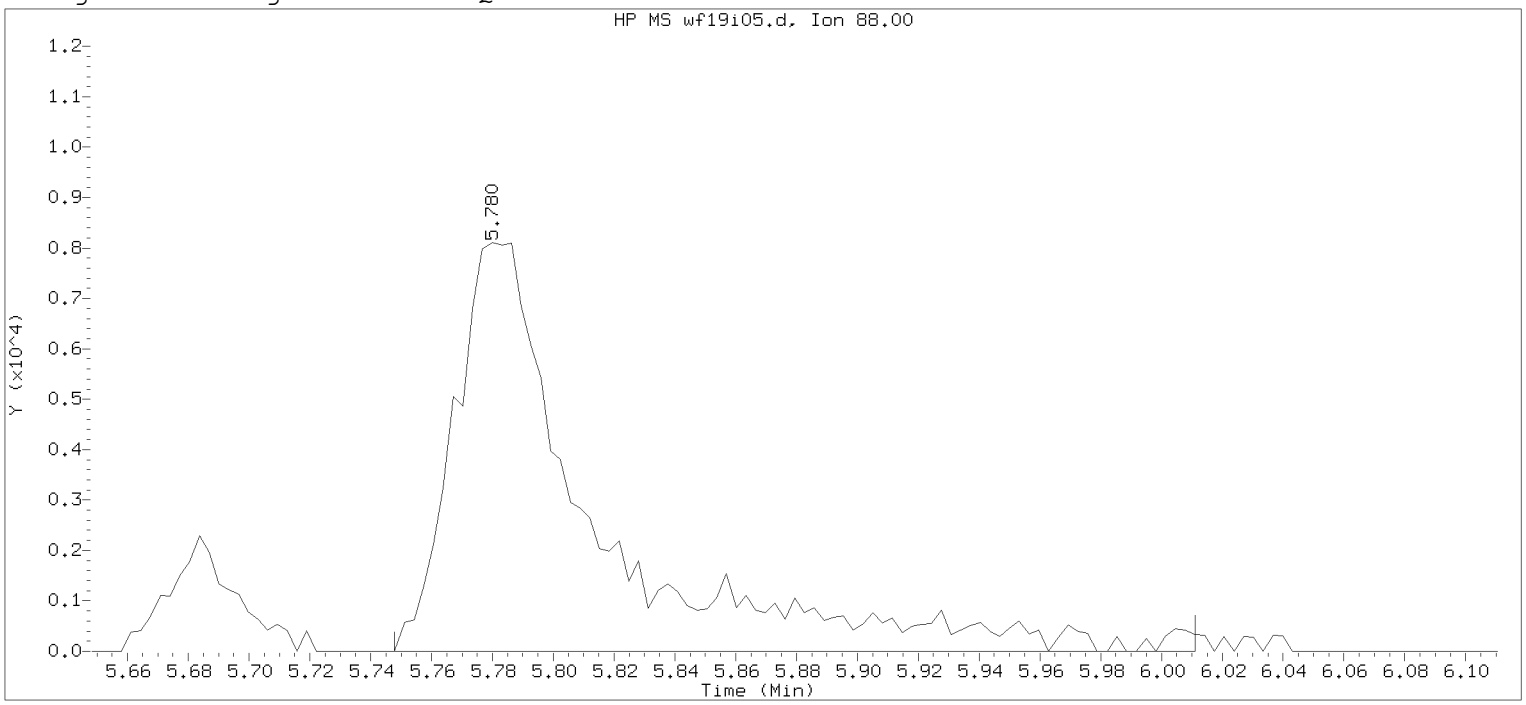
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



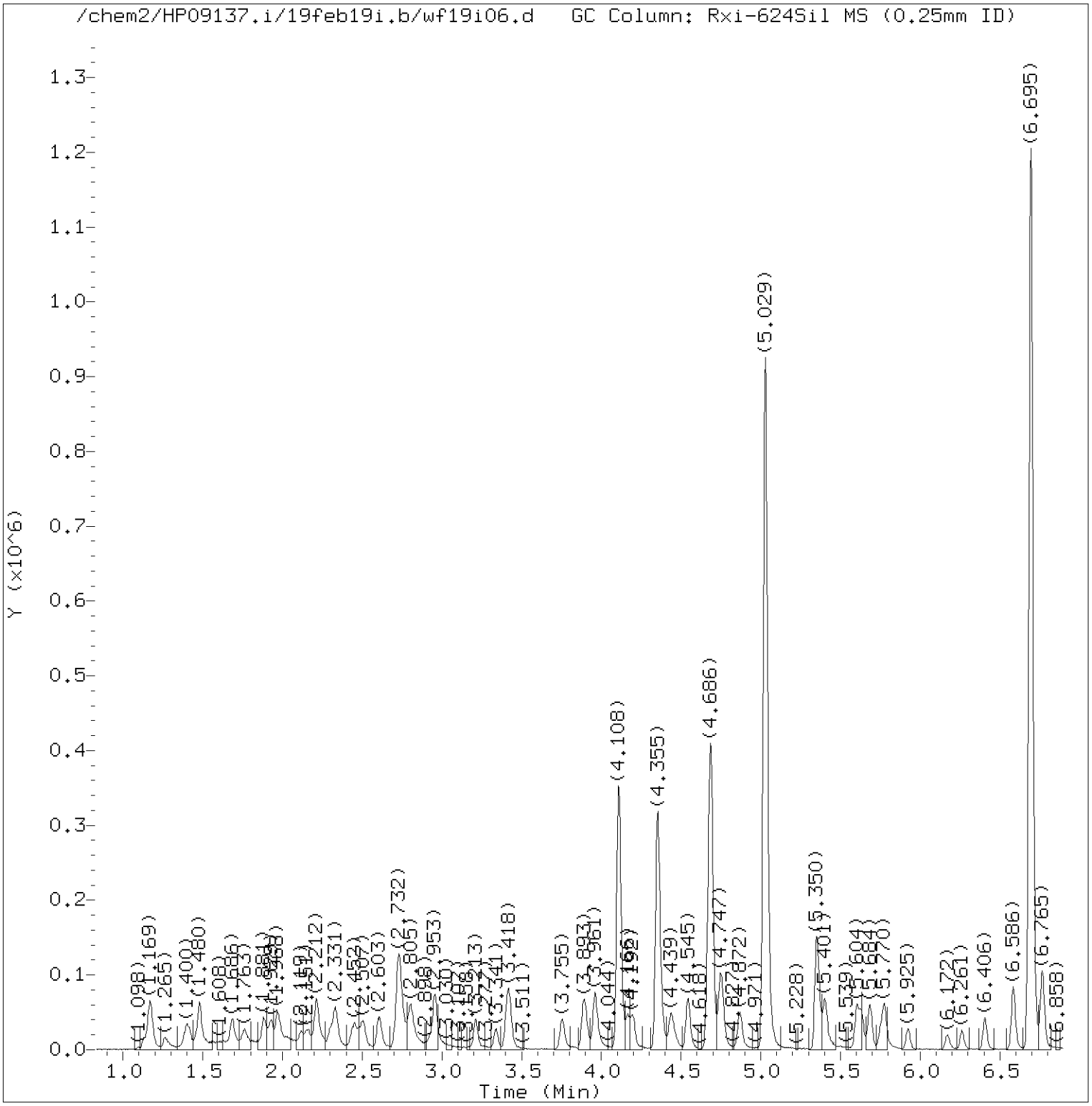
Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:12
Date, time and analyst ID of latest file update: 19-Feb-2019 14:12 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1542		
Retention Time (minutes)	: 5.780		
Quant Ion	: 88.00		
Area	: 25752		
On-column Amount (ng)	: 242.5421		
Integration start scan	: 1531	Integration stop scan:	1613
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: APR27582



Total Ion Chromatogram (TIC)

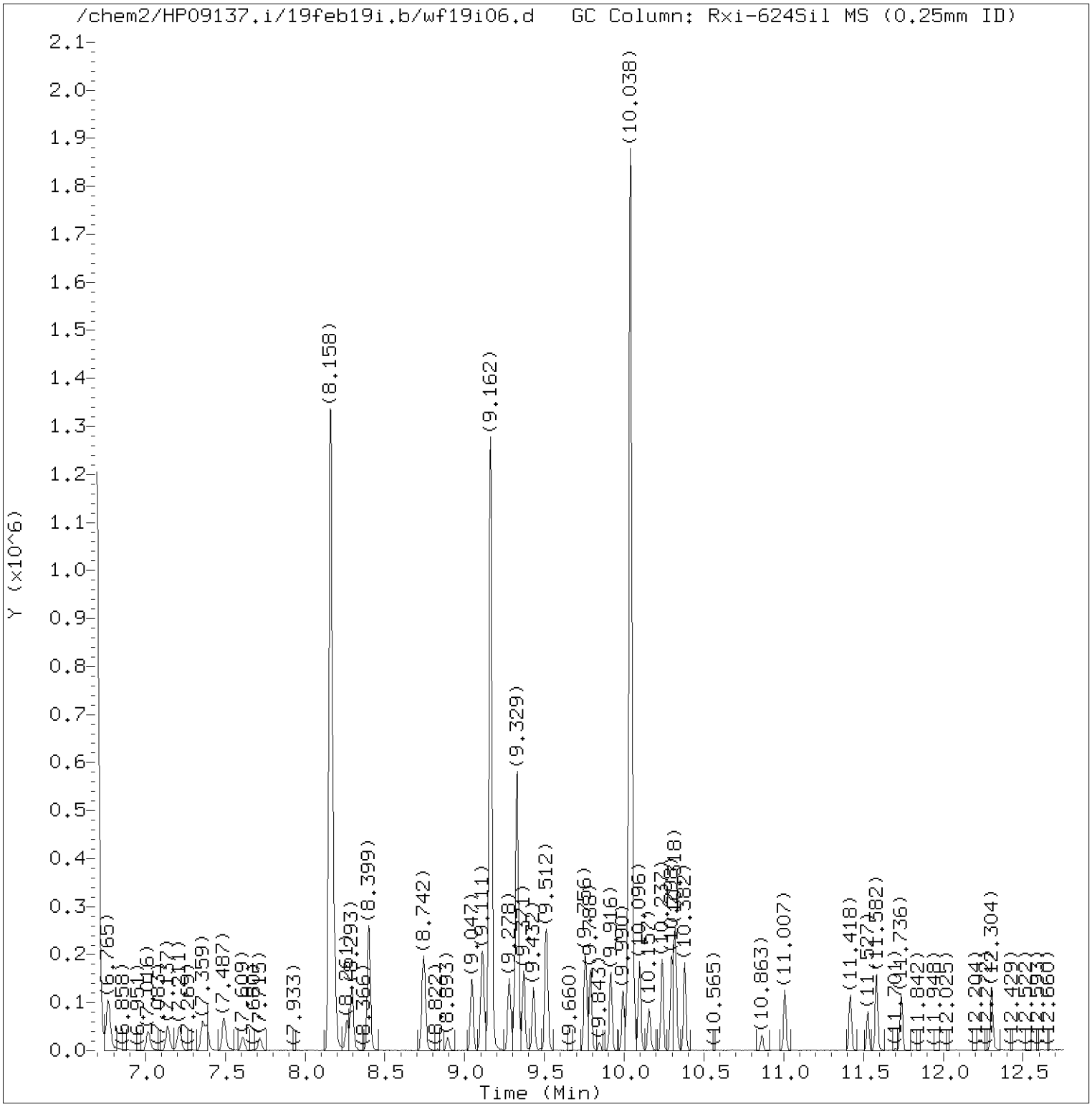
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.259	85	23531	4.193
4) Chloromethane	(2)	1.394	50	28635	4.098
6) Vinyl Chloride	(2)	1.471	62	26366	4.116
5) 1,3-Butadiene	(2)	1.483	39	18545	4.355
8) Bromomethane	(2)	1.686	94	20627	4.083
9) Chloroethane	(2)	1.763	64	17932	4.254
10) Dichlorofluoromethane	(2)	1.881	67	34825	4.268
12) Trichlorofluoromethane	(2)	1.929	101	28313	4.161
11) n-Pentane	(2)	1.968	43	25905	4.003
13) Ethanol	(1)	2.032	45	23872	241.686
15) Freon 123a	(2)	2.160	67	21906M	4.309
16) Acrolein	(1)	2.215	56	60532	38.823
17) 1,1-Dichloroethene	(2)	2.321	96	15949	4.168
17) 1,1-Dichloroethene	(2)	2.331	63	8182	4.238
19) Freon 113	(2)	2.331	101	13192	3.926
18) Acetone	(1)	2.343	58	6155	8.122
21) 2-Propanol	(1)	2.452	45	44335	78.738
22) Methyl Iodide	(2)	2.465	142	29198M	3.982
23) Carbon Disulfide	(2)	2.510	76	54961	4.077
25) Allyl Chloride	(2)	2.600	41	24928	3.739
27) Methyl Acetate	(2)	2.623	43	23710	4.109
28) Methylene Chloride	(2)	2.709	84	18454	3.945
29)*t-Butyl alcohol-d10	(1)	2.728	65	216574	250.000
30) t-Butyl alcohol	(1)	2.802	59	80535	80.179
31) Acrylonitrile	(2)	2.924	53	12124	3.994
32) trans-1,2-Dichloroethene	(2)	2.956	96	17015	4.098
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	41263	4.082
34) n-Hexane	(2)	3.213	57	21496	3.869
36) 1,1-Dichloroethane	(2)	3.341	63	30062	3.996
38) di-Isopropyl ether	(2)	3.412	45	57557	3.982
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	25562	3.923
40) Ethyl t-butyl ether	(2)	3.758	59	40603	3.854
42) cis-1,2-Dichloroethene	(2)	3.890	96	18329	3.932
45) 2,2-Dichloropropane	(2)	3.893	77	14577	4.314
44) 2-Butanone	(2)	3.906	43	33453	7.670
47) Propionitrile	(1)	3.961	54	102936	82.457
48) Methacrylonitrile	(2)	4.111	67	130439	39.964
49) Bromochloromethane	(2)	4.118	128	9255	3.819

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.166	71	9370	8.110
51) Chloroform	(2)	4.195	83	27398	3.881
52)$Dibromofluoromethane	(2)	4.355	113	203360	50.576
52)$Dibromofluoromethane	(2)	4.352	111	208230	50.447
53) 1,1,1-Trichloroethane	(2)	4.378	97	21578	4.063
54) Cyclohexane	(2)	4.436	56	29157	4.148
54) Cyclohexane	(2)	4.439	84	24008	4.126
54) Cyclohexane	(2)	4.439	69	8793	4.162
55) 1,1-Dichloropropene	(2)	4.541	75	23554	4.162
56) Carbon Tetrachloride	(2)	4.545	117	18201	3.993
58) Isobutyl Alcohol	(1)	4.670	41	72292	197.420
57)$1,2-Dichloroethane-d4	(2)	4.686	102	54956	51.390
57)$1,2-Dichloroethane-d4	(2)	4.689	65	236381	50.778
57)$1,2-Dichloroethane-d4	(2)	4.689	104	34670	50.908
60) Benzene	(2)	4.747	78	73397	4.035
61) 1,2-Dichloroethane	(2)	4.766	62	22051	3.924
61) 1,2-Dichloroethane	(2)	4.756	98	2103	3.933
65) t-Amyl methyl ether	(2)	4.872	73	42864	3.971
66)*Fluorobenzene	(2)	5.029	96	867920	50.000
67) n-Heptane	(2)	5.032	43	19883	3.745
69) n-Butanol	(1)	5.353	56	119356	367.104
71) Trichloroethene	(2)	5.408	95	17783	4.037
73) Methylcyclohexane	(2)	5.604	83	26169	4.092
73) Methylcyclohexane	(2)	5.607	98	12193	4.100
74) 1,2-Dichloropropane	(2)	5.632	63	18182	3.893
75) Dibromomethane	(2)	5.751	93	11156	3.870
77) Methyl Methacrylate	(2)	5.777	69	19327M	3.766
76) 1,4-Dioxane	(1)	5.777	88	17062M	175.540
79) Bromodichloromethane	(2)	5.928	83	19632	3.707
43) 1,2-Dichloroethene (Total)	(2)		96	35344	8.030
80) 2-Nitropropane	(2)	6.172	41	12333M	6.883
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	12078	3.392
82) cis-1,3-Dichloropropene	(2)	6.409	75	27021	3.711
83) 4-Methyl-2-pentanone	(2)	6.586	43	64259	7.475
84)$Toluene-d8	(3)	6.695	98	907781	50.491
84)$Toluene-d8	(3)	6.695	100	592851	49.723
89) Toluene	(3)	6.768	92	45802	3.955
90) trans-1,3-Dichloropropene	(3)	7.012	75	24608	3.569

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.141	69	29840	3.522
93) 1,1,2-Trichloroethane	(3)	7.211	97	16788	3.766
94) Tetrachloroethene	(3)	7.359	166	19036	4.051
95) 1,3-Dichloropropane	(3)	7.388	76	28445	3.674
97) 2-Hexanone	(3)	7.490	43	49126	7.283
98) Dibromochloromethane	(3)	7.612	129	14587	3.350
100) 1,2-Dibromoethane	(3)	7.718	107	17864	3.648
101)*Chlorobenzene-d5	(3)	8.161	117	717501	50.000
103) Chlorobenzene	(3)	8.187	112	49939	3.887
104) 1,1,1,2-Tetrachloroethane	(3)	8.264	131	14799	3.584
105) Ethylbenzene	(3)	8.296	91	86503	3.930
107) m+p-Xylene	(3)	8.399	106	68276	7.801
108) o-Xylene	(3)	8.736	106	33591	3.901
110) Styrene	(3)	8.752	104	52960	3.667
111) Bromoform	(3)	8.893	173	10704	3.159
112) Isopropylbenzene	(3)	9.047	105	83300	3.937
113) Cyclohexanone	(1)	9.111	55	81513	185.914
115)$4-Bromofluorobenzene	(3)	9.162	95	358508	49.843
115)$4-Bromofluorobenzene	(3)	9.162	174	303553	50.013
116) Bromobenzene	(4)	9.278	156	22129	3.897
117) 1,1,2,2-Tetrachloroethane	(4)	9.281	83	28726	3.751
118) 1,2,3-Trichloropropane	(4)	9.316	110	9051	3.924
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	92446	37.646
120) n-Propylbenzene	(4)	9.371	91	101539	4.056
121) 2-Chlorotoluene	(4)	9.432	126	20876	4.043
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	71196	3.943
122) 4-Chlorotoluene	(4)	9.518	126	21738	3.933
125) tert-Butylbenzene	(4)	9.756	134	16878	4.115
126) Pentachloroethane	(4)	9.766	167	11197	3.453
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	73692	3.874
128) sec-Butylbenzene	(4)	9.916	105	90719	4.094
130) 1,3-Dichlorobenzene	(4)	9.993	146	41989	3.878
131) p-Isopropyltoluene	(4)	10.022	119	78503	4.002
132)*1,4-Dichlorobenzene-d4	(4)	10.038	152	394254	50.000
134) 1,4-Dichlorobenzene	(4)	10.058	146	44108	3.929
91) 1,3-Dichloropropene (total)	(3)		100	51629	7.280
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	79065	3.863
136) Benzyl Chloride	(4)	10.157	91	52403	3.335

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.237	119	47119	3.823
138) 1,4-Diethylbenzene	(4)	10.295	119	51192	3.876
140) n-Butylbenzene	(4)	10.314	92	38912	3.930
139) 1,2-Dichlorobenzene	(4)	10.321	146	41158	3.831
141) 1,2-Diethylbenzene	(4)	10.382	119	41509	3.989
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	6341	3.644
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	32071	3.893
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	29570	3.739
148) Hexachlorobutadiene	(4)	11.527	225	11175	3.967
149) Naphthalene	(4)	11.582	128	97075	3.627
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	29641	3.840
109) Xylene (Total)	(3)		106	101867	11.702
151) 2-Methylnaphthalene	(4)	12.304	142	49814	3.263
142) Diethylbenzene (total)	(4)		100	139820	11.688

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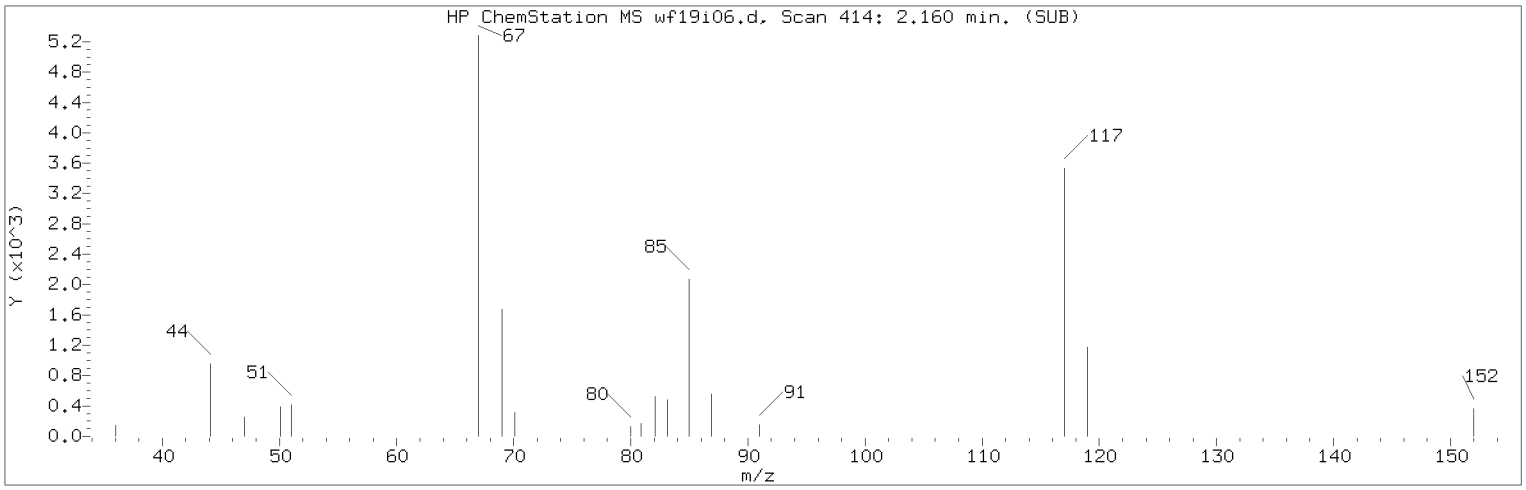
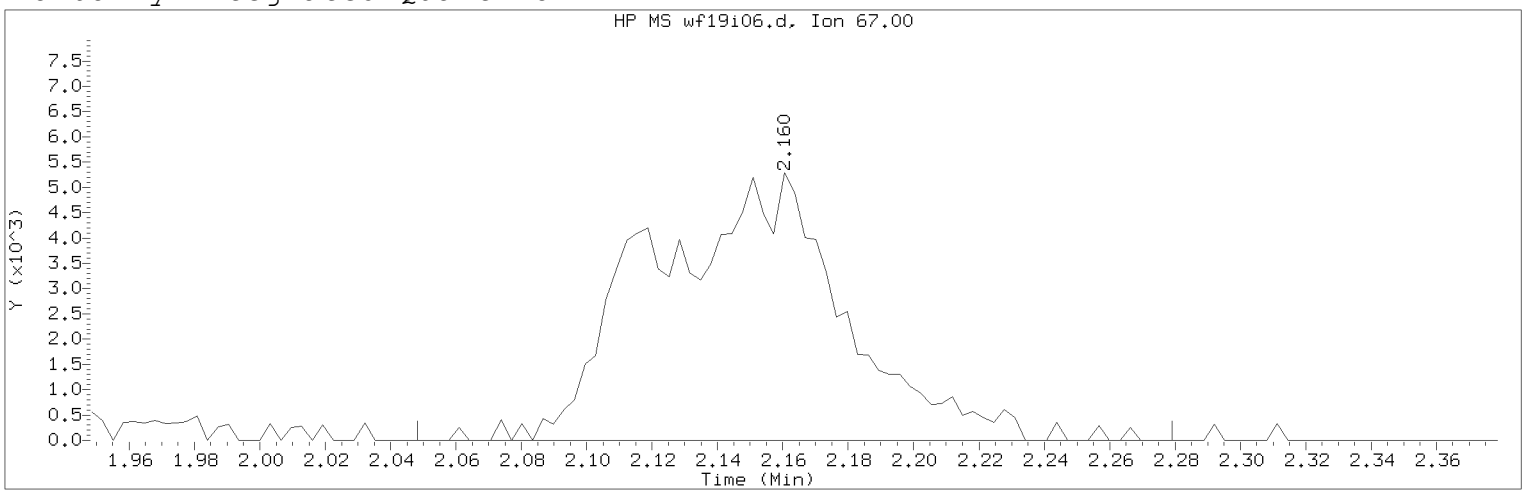
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

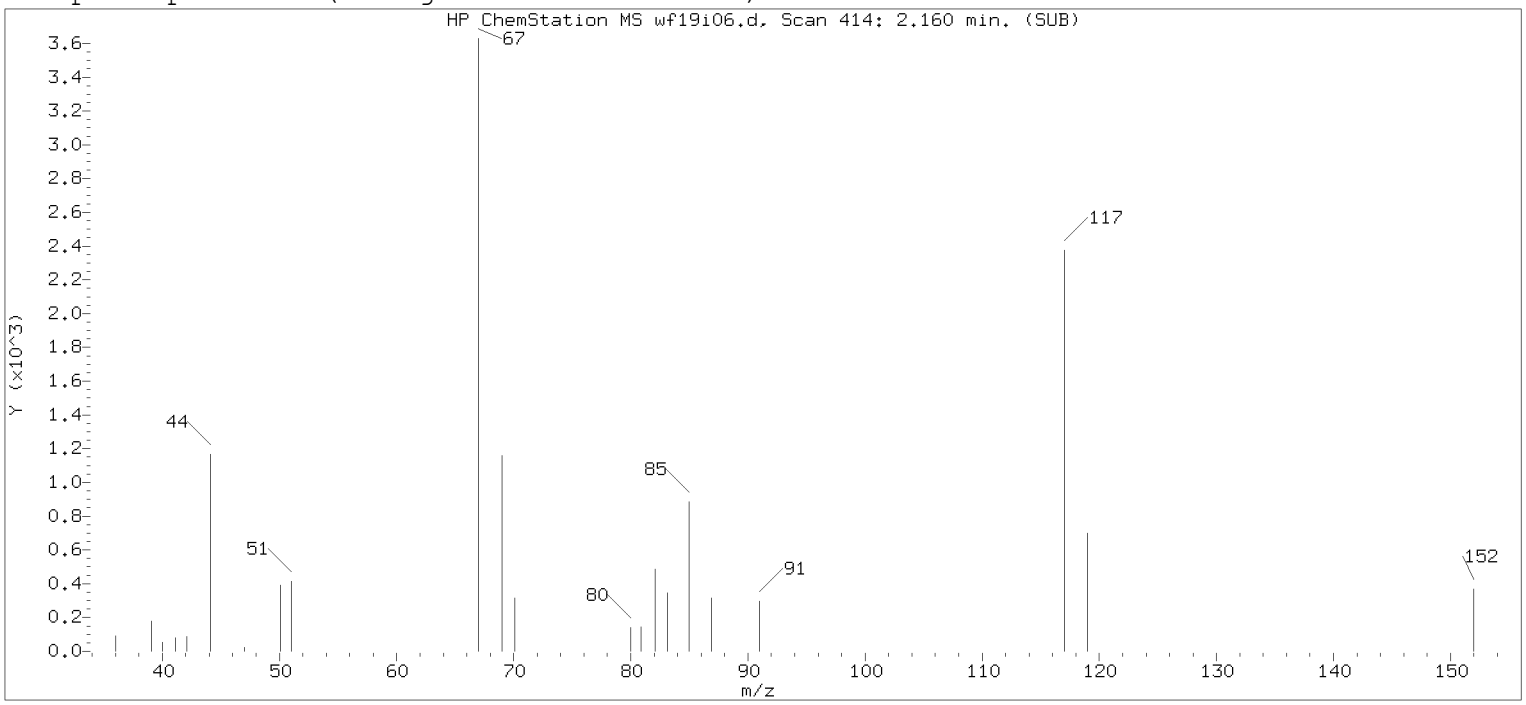
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 414
Retention Time (minutes): 2.160
Quant Ion : 67.00
Area (flag) : 21906M
On-Column Amount (ng) : 4.3086
Integration start scan : 378 Integration stop scan: 450
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

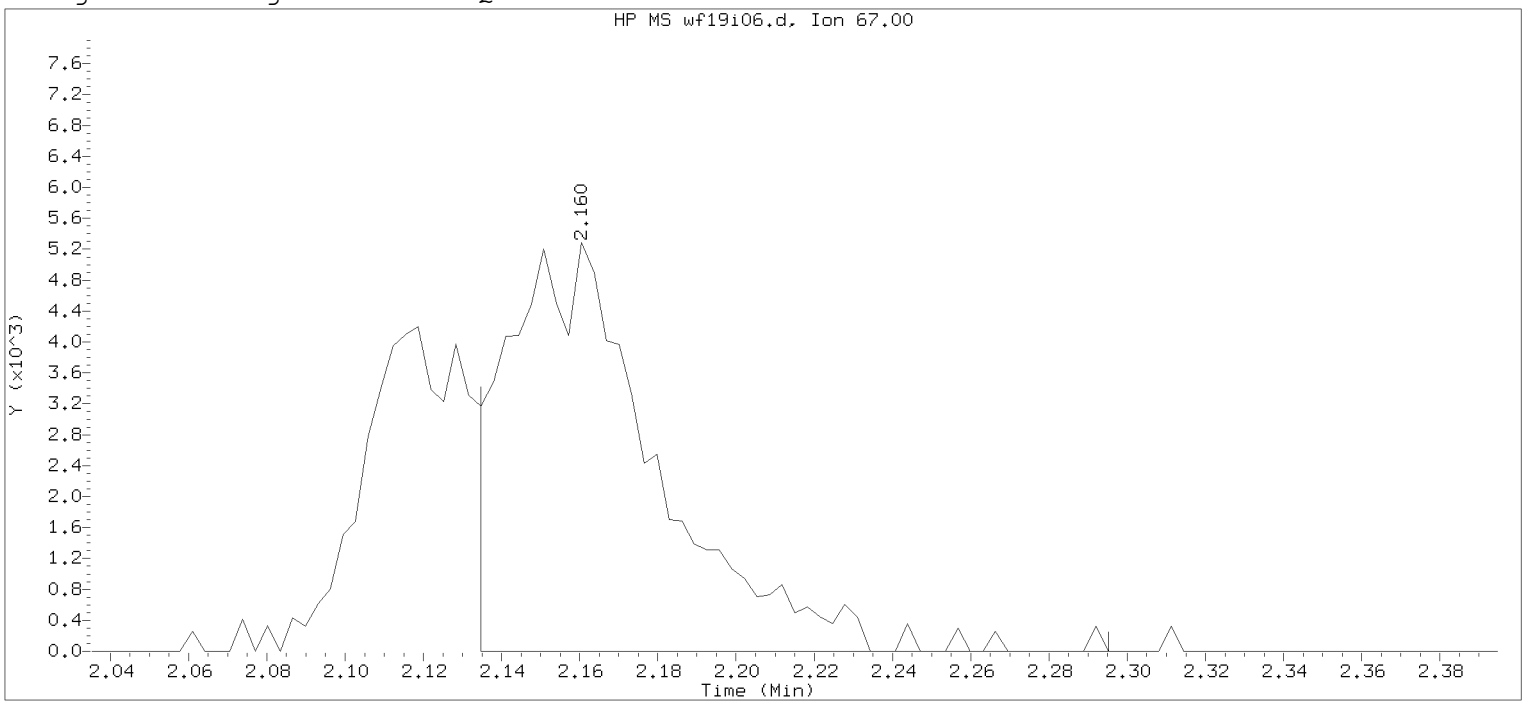
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



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Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

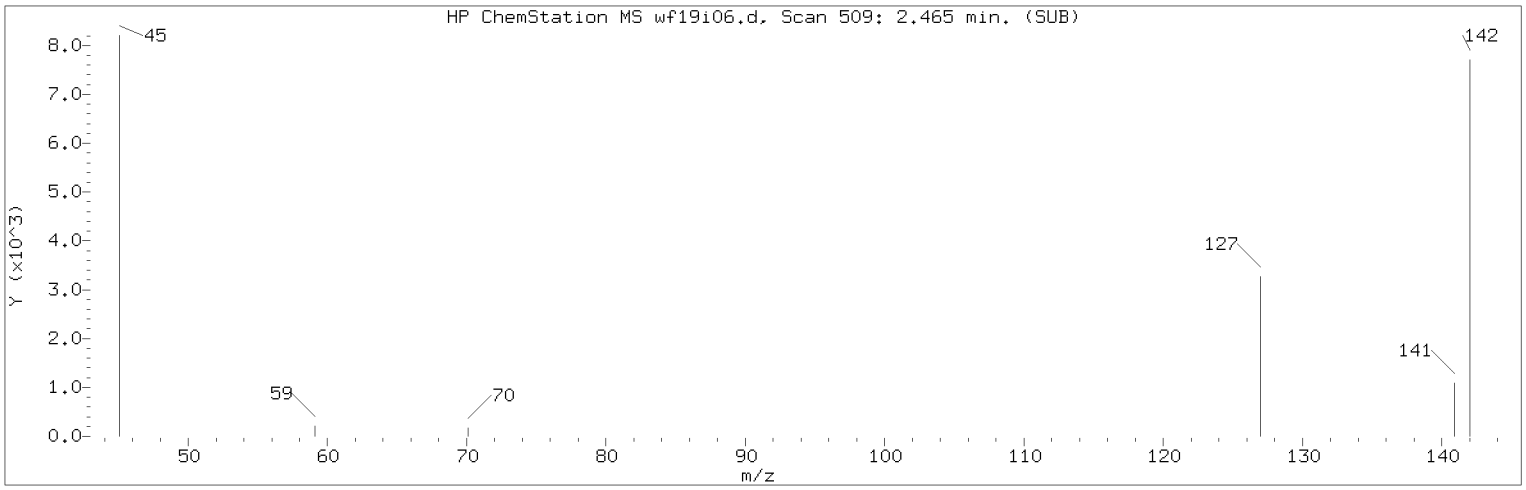
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:36
Date, time and analyst ID of latest file update: 19-Feb-2019 14:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

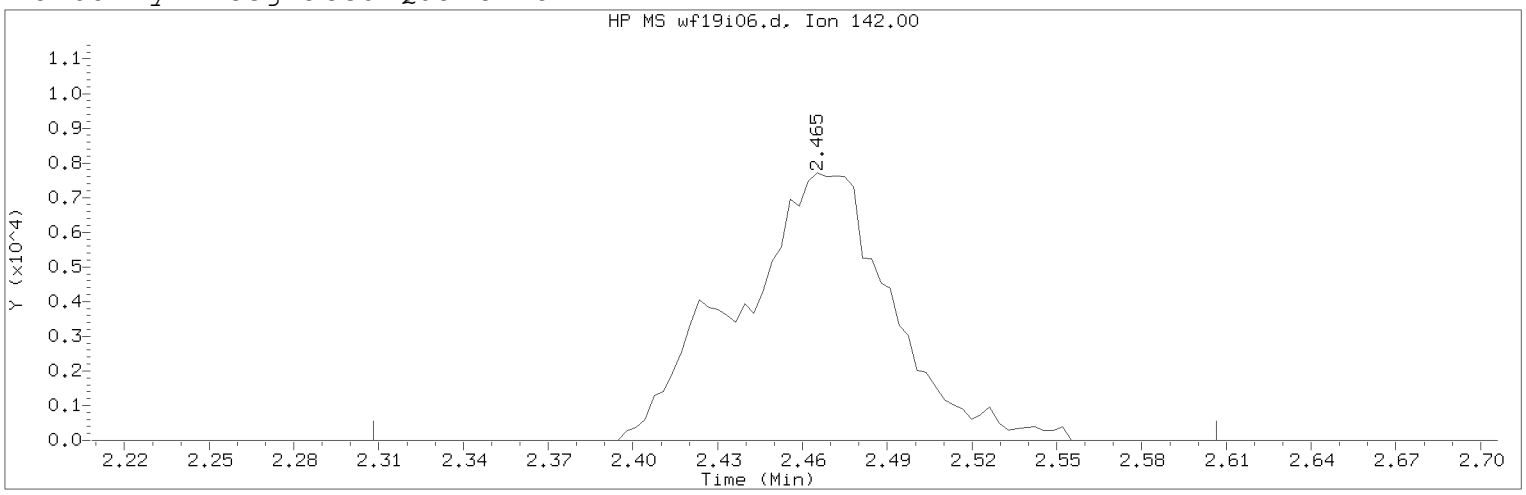
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 414
Retention Time (minutes): 2.160
Quant Ion : 67.00
Area : 14214
On-column Amount (ng) : 3.9735
Integration start scan : 405 Integration stop scan: 455
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

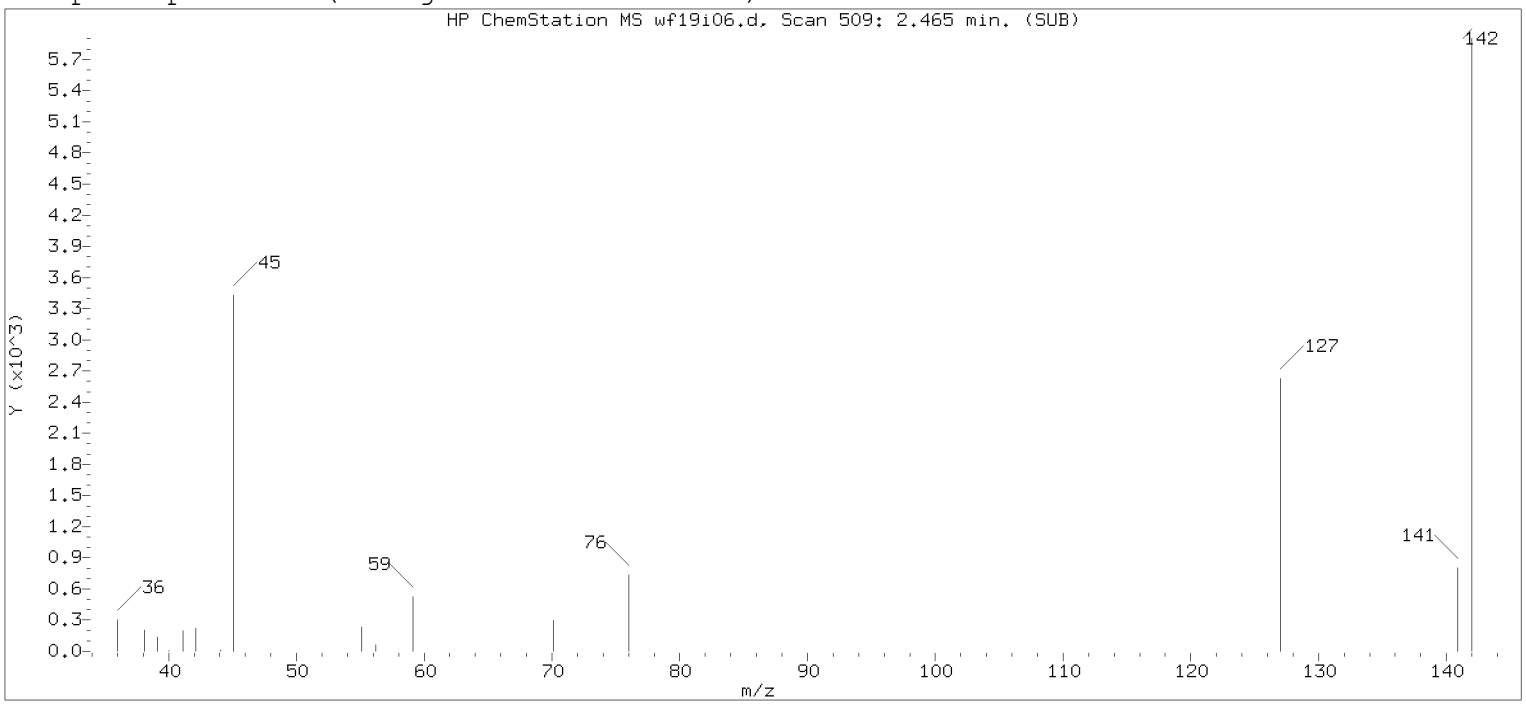
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area (flag) : 29198M
On-Column Amount (ng) : 3.9817
Integration start scan : 459 Integration stop scan: 552
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

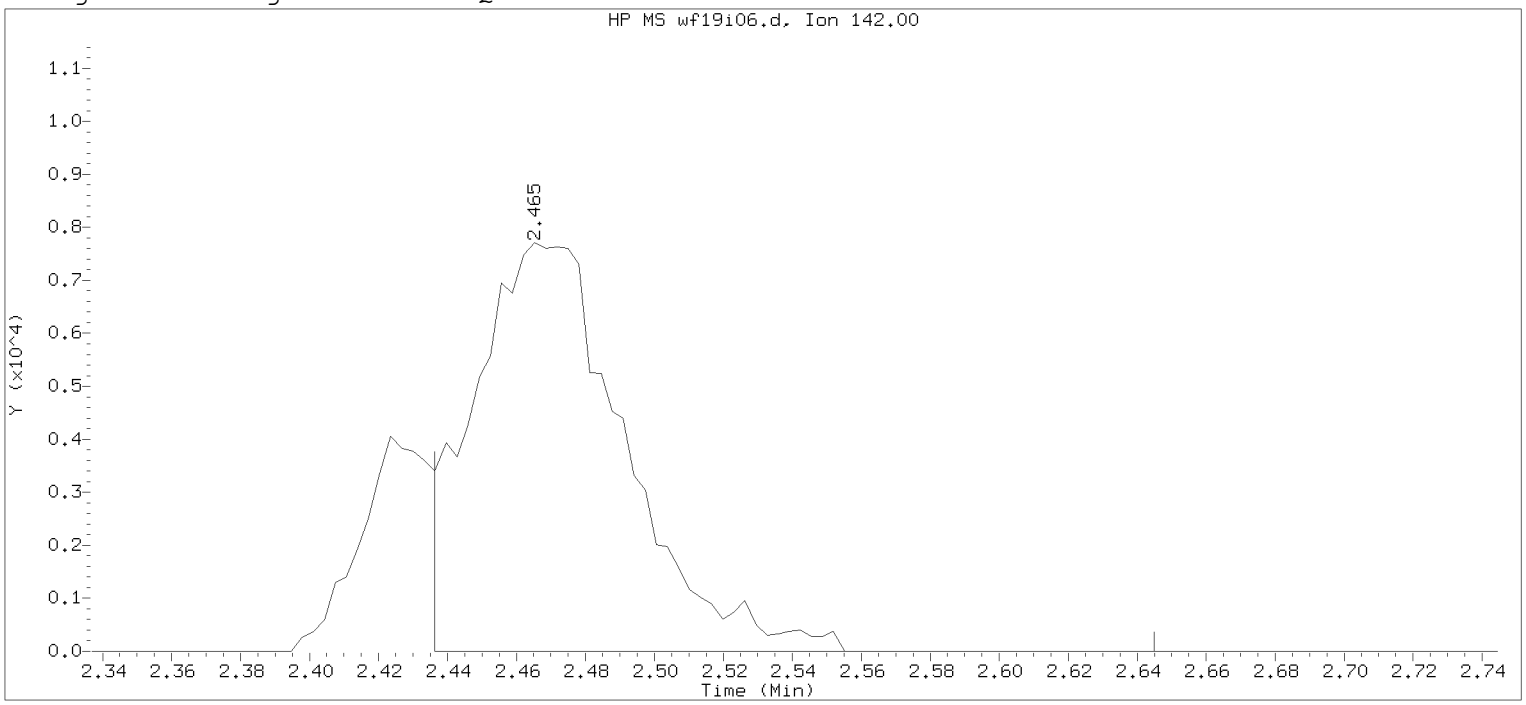
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:36
Date, time and analyst ID of latest file update: 19-Feb-2019 14:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area : 23663
On-column Amount (ng) : 3.5076
Integration start scan : 499 Integration stop scan: 564
Y at integration start : 0 Y at integration end: 0

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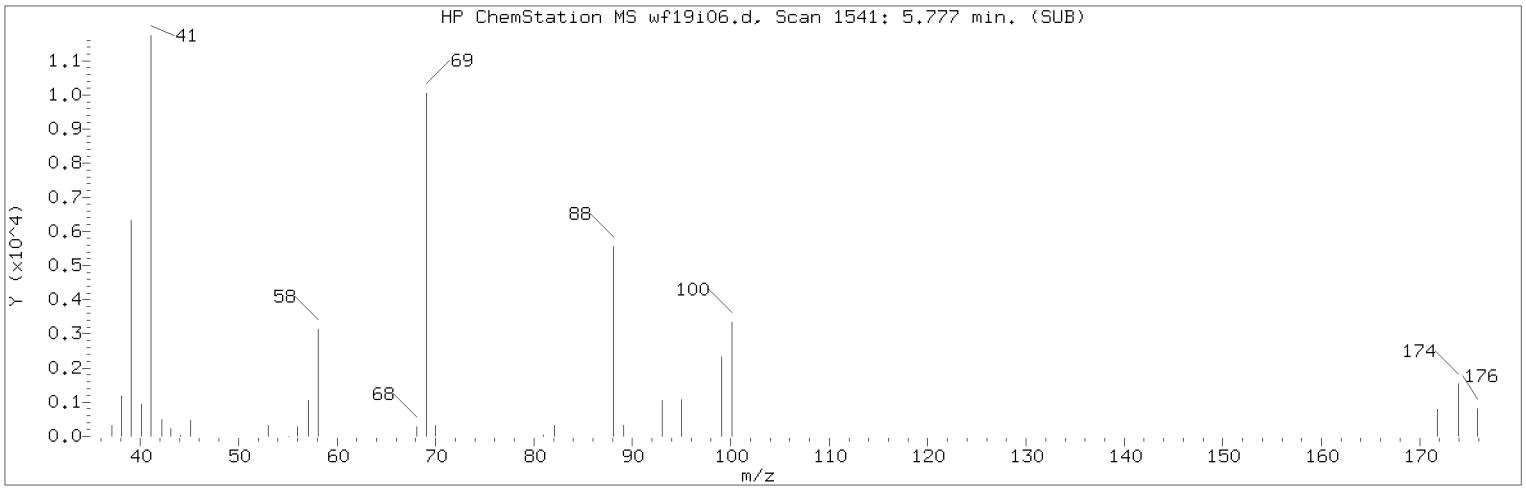
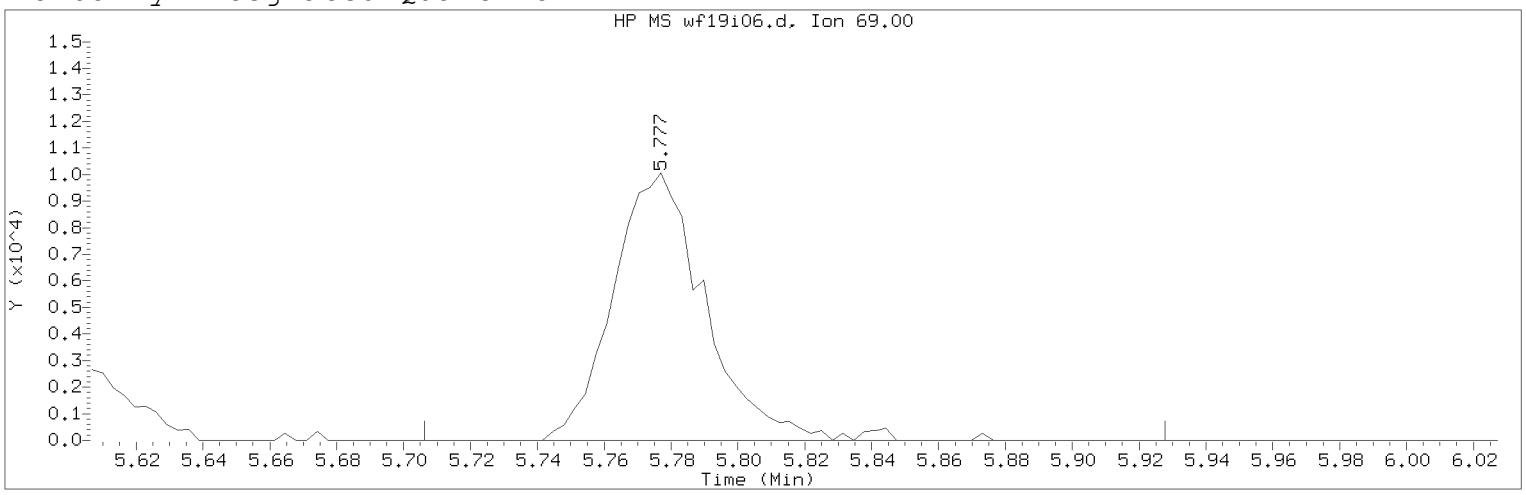
Target 3.5 esignature user ap 27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

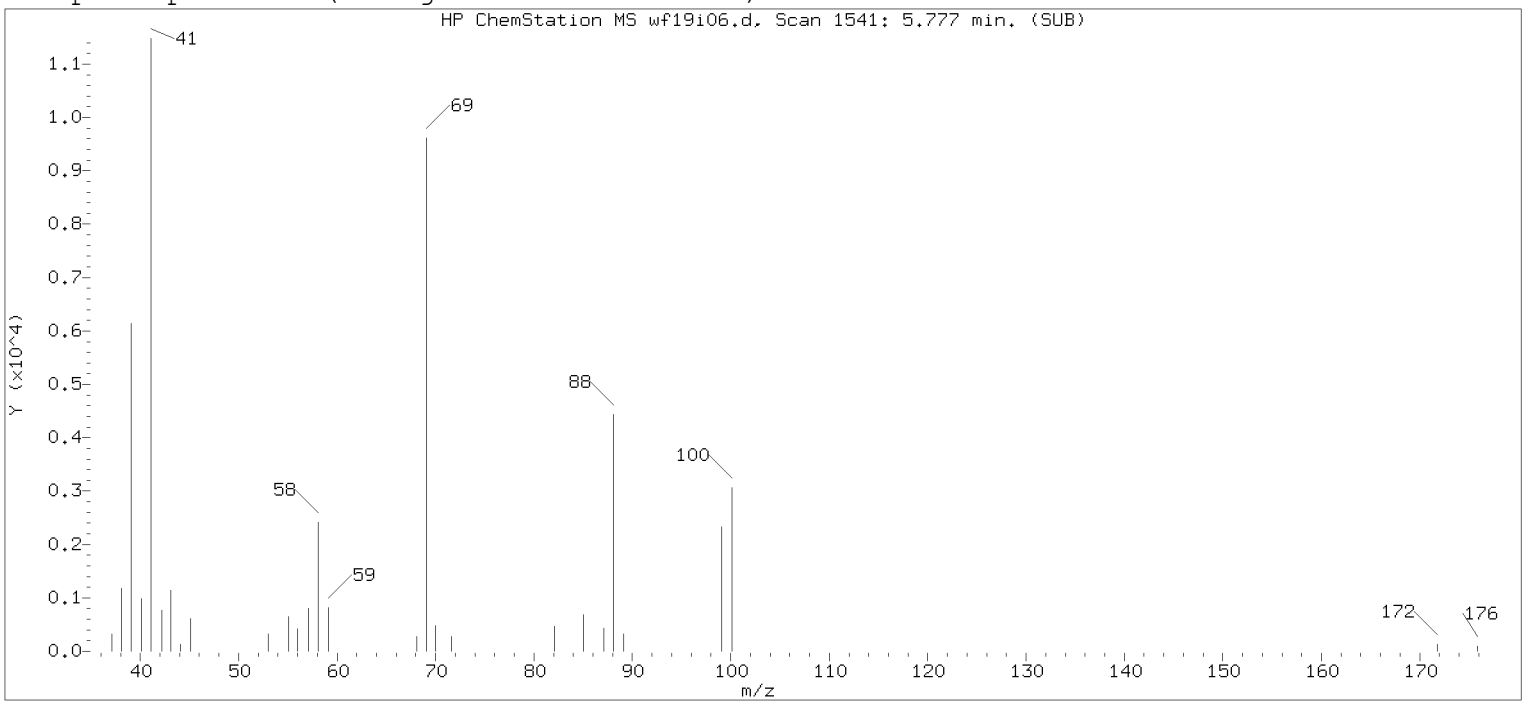
Compound Number : 77
Compound Name : Methyl Methacrylate
Scan Number : 1541
Retention Time (minutes): 5.777
Quant Ion : 69.00
Area (flag) : 19327M
On-Column Amount (ng) : 3.7657
Integration start scan : 1518 Integration stop scan: 1587
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

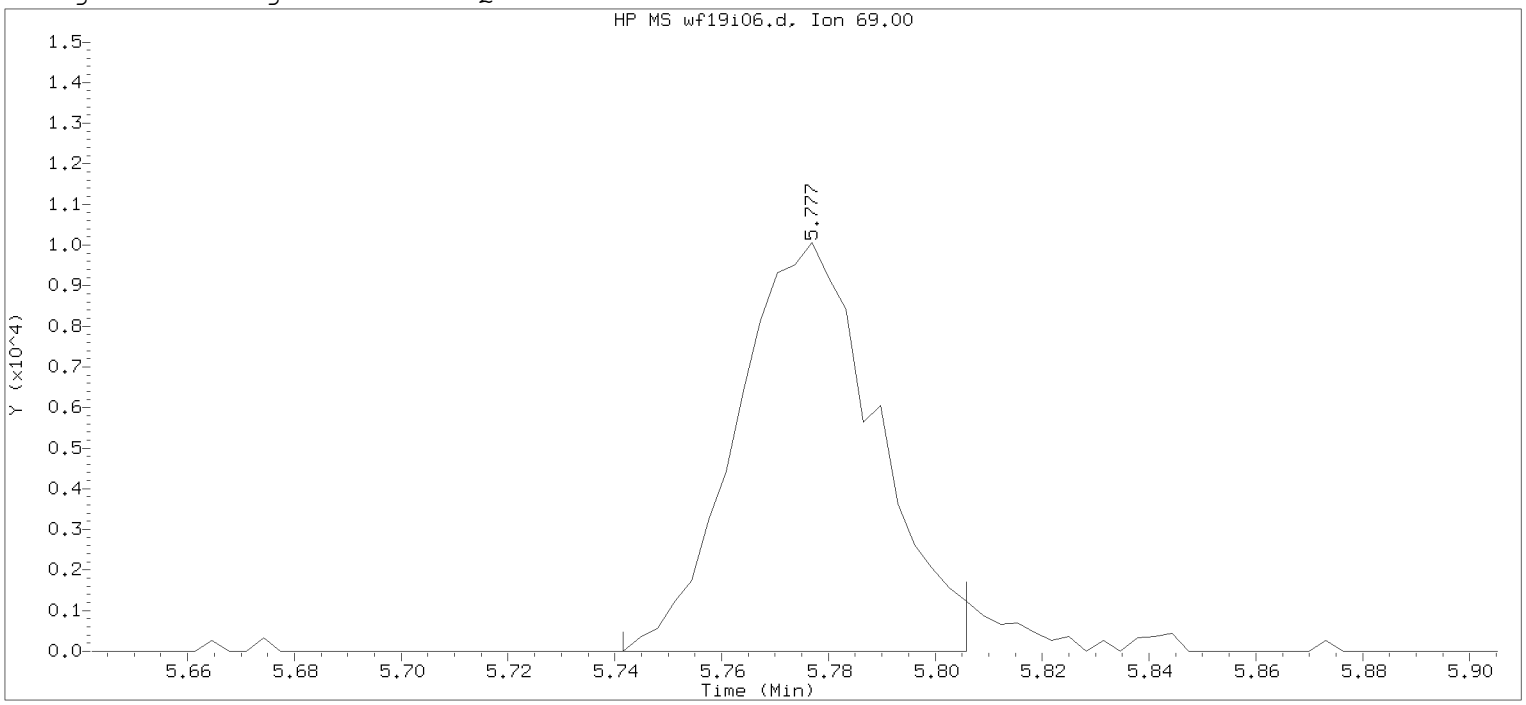
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:36
Date, time and analyst ID of latest file update: 19-Feb-2019 14:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 77
Compound Name : Methyl Methacrylate
Scan Number : 1541
Retention Time (minutes): 5.777
Quant Ion : 69.00
Area : 18238
On-column Amount (ng) : 3.5038
Integration start scan : 1529 Integration stop scan: 1549
Y at integration start : 0 Y at integration end: 0

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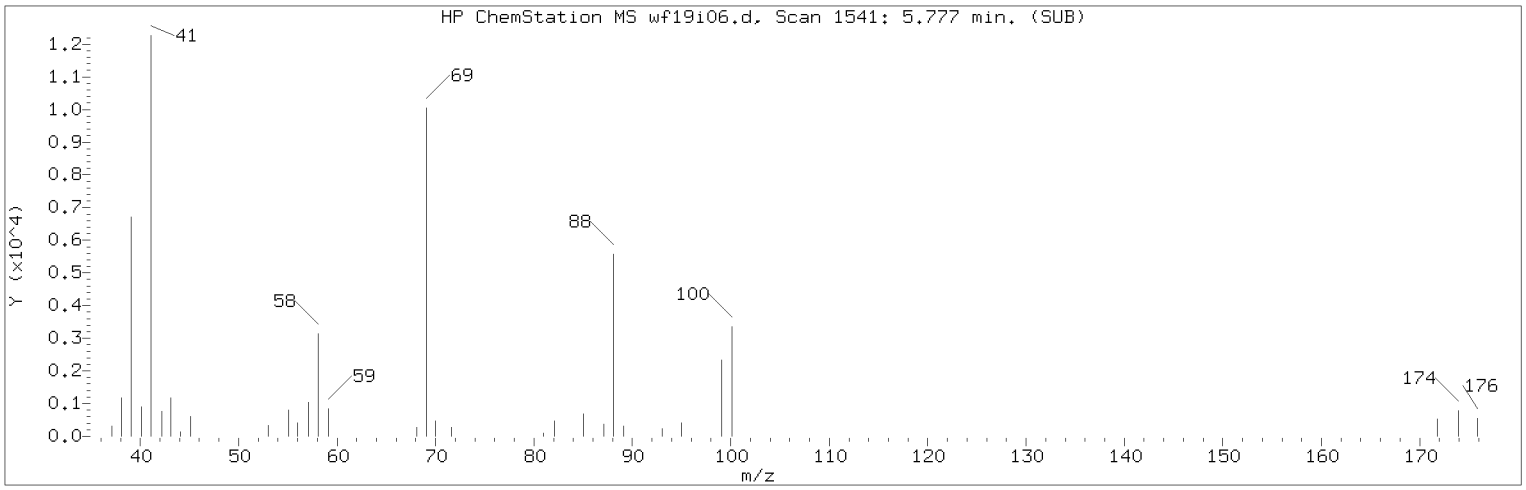
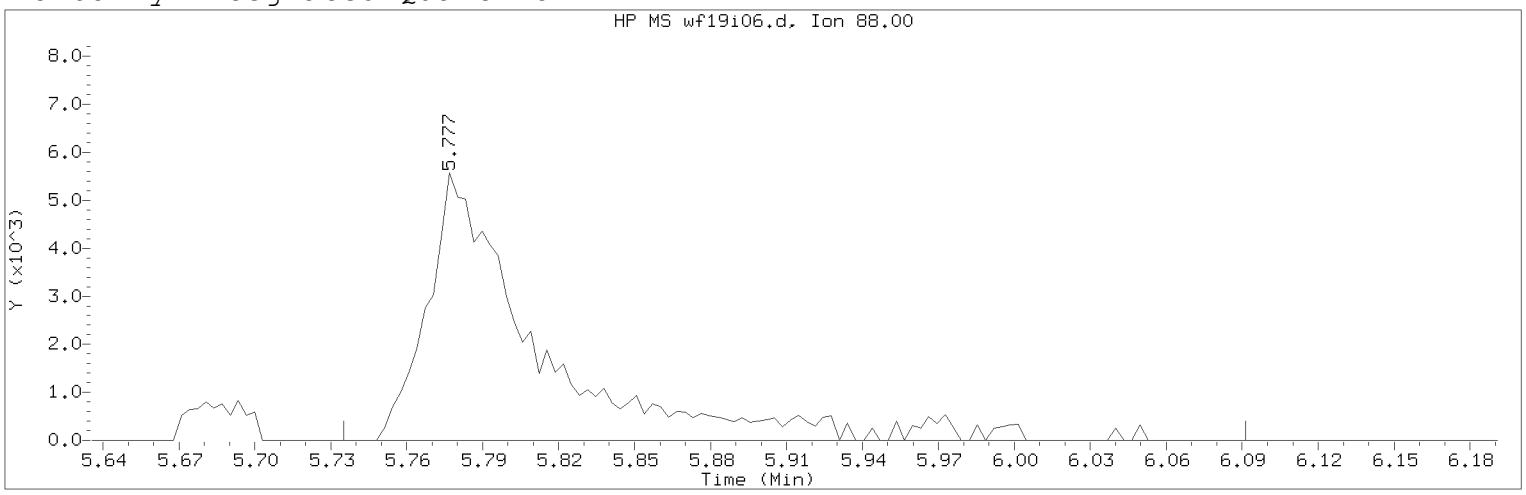
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

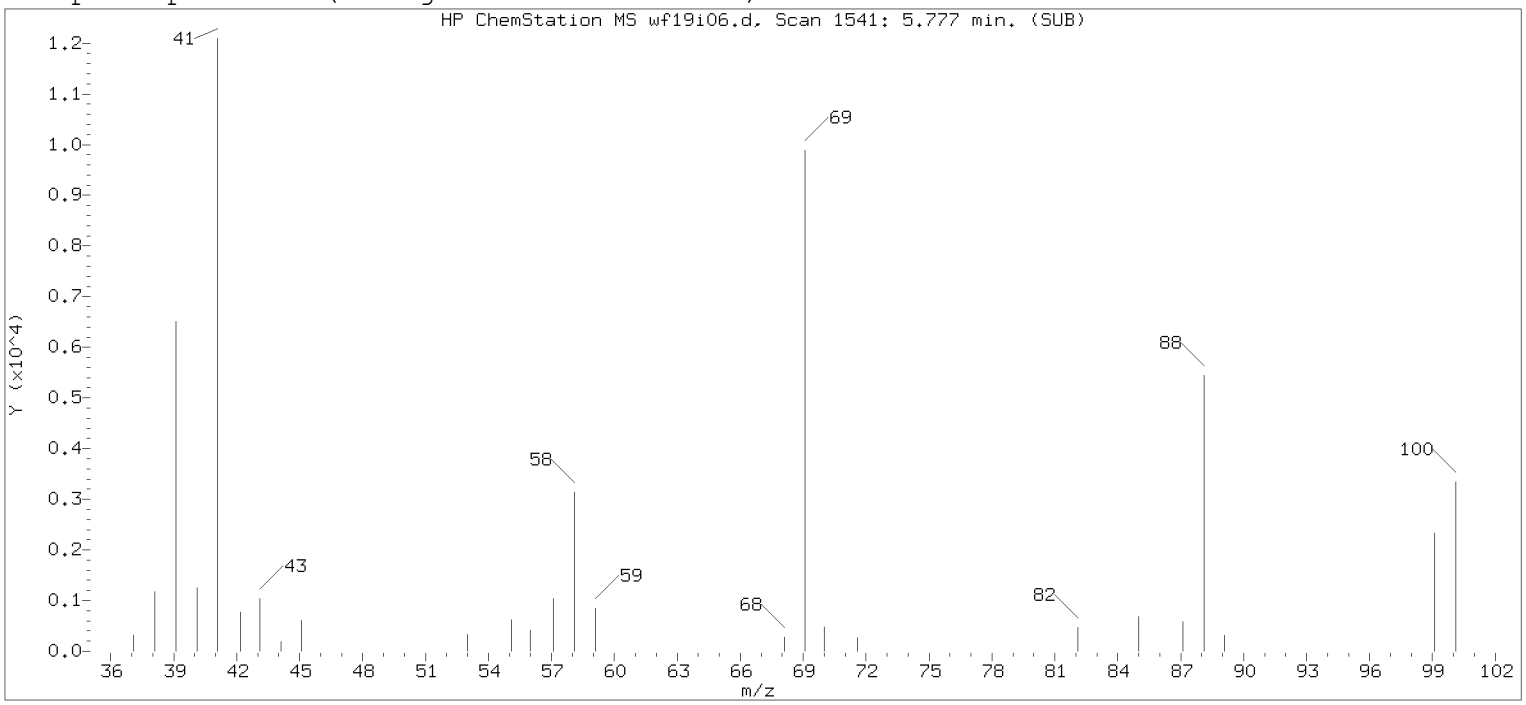
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1541
Retention Time (minutes): 5.777
Quant Ion : 88.00
Area (flag) : 17062M
On-Column Amount (ng) : 175.5404
Integration start scan : 1527 Integration stop scan: 1638
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

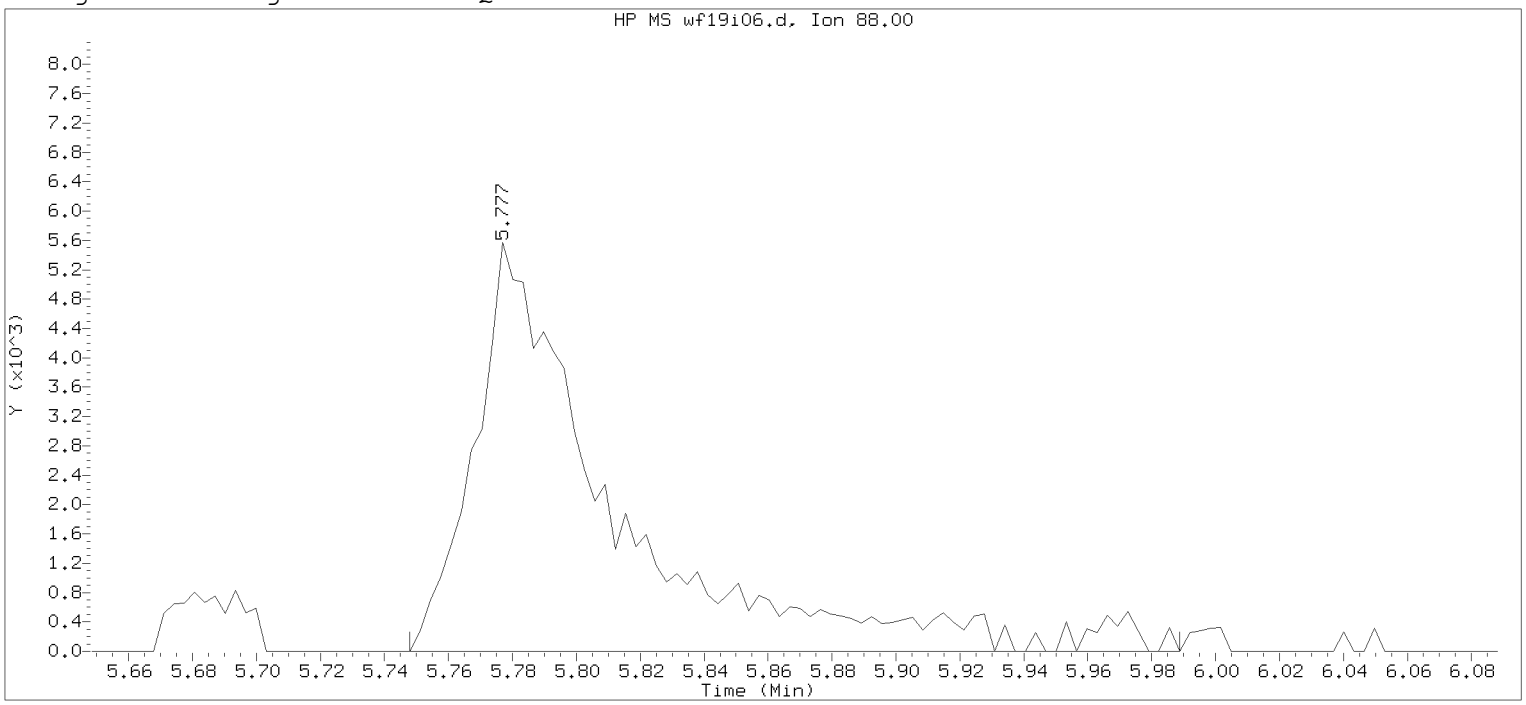
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

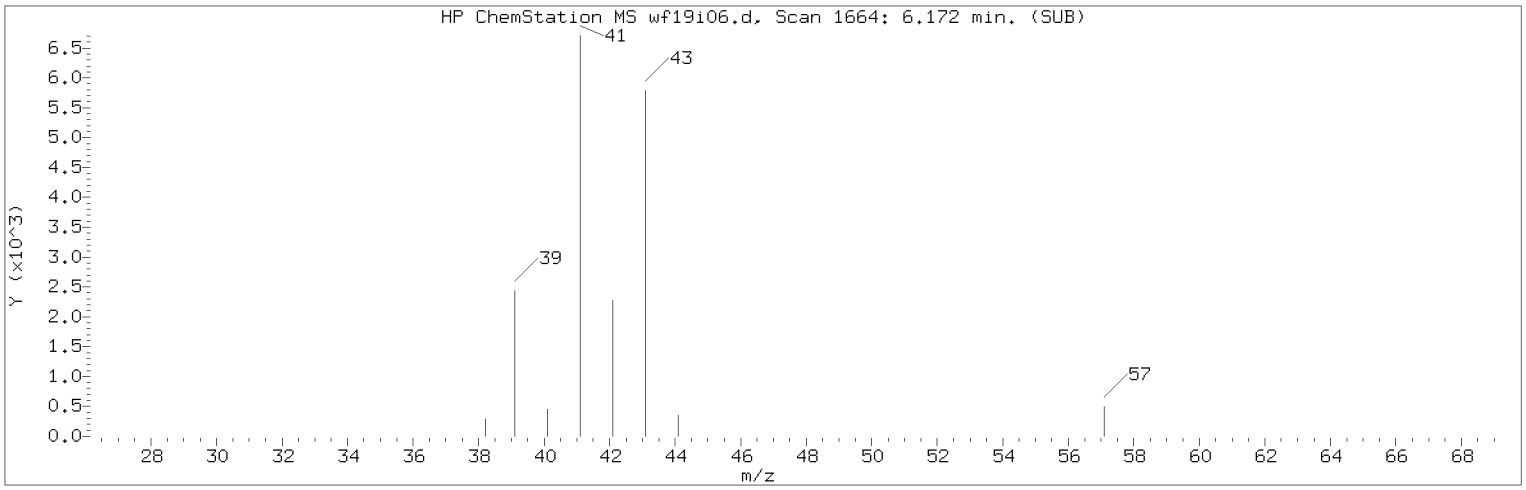
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:36
Date, time and analyst ID of latest file update: 19-Feb-2019 14:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

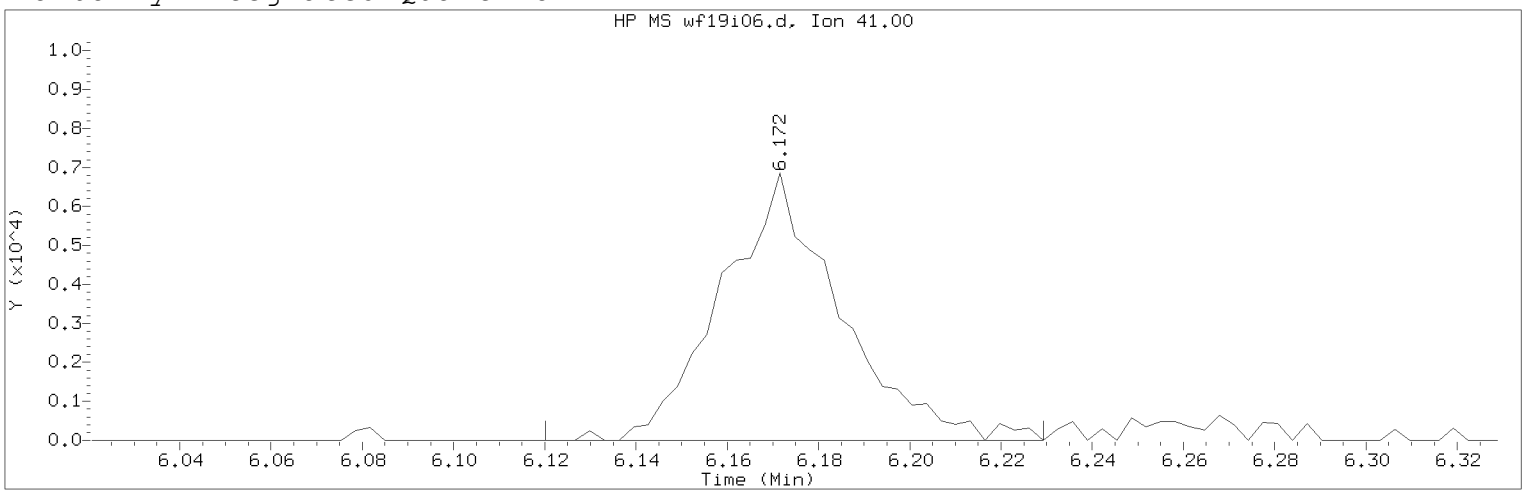
Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1541		
Retention Time (minutes)	: 5.777		
Quant Ion	: 88.00		
Area	: 16725		
On-column Amount (ng)	: 175.6192		
Integration start scan	: 1531	Integration stop scan:	1606
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

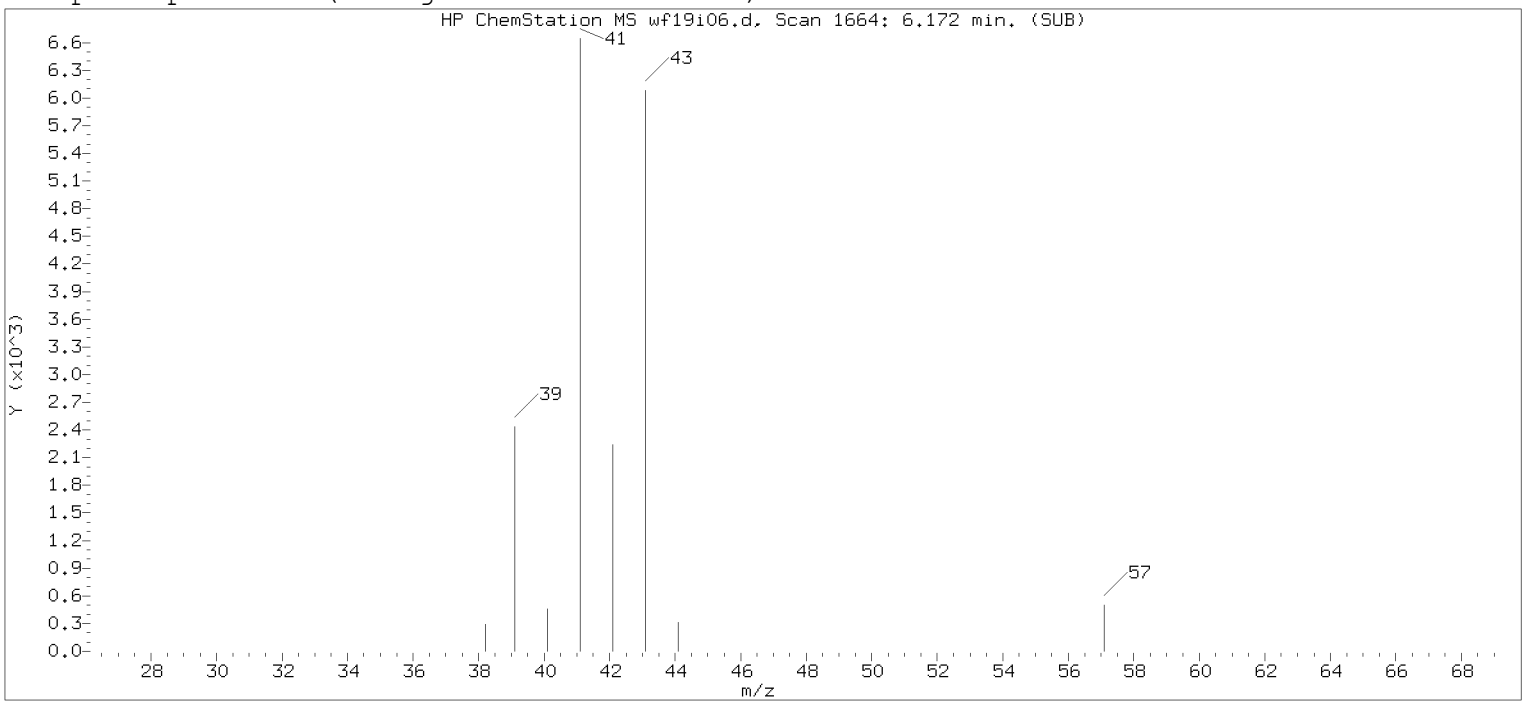
Compound Number : 80
Compound Name : 2-Nitropropane
Scan Number : 1664
Retention Time (minutes): 6.172
Quant Ion : 41.00
Area (flag) : 12333M
On-Column Amount (ng) : 6.8827
Integration start scan : 1647 Integration stop scan: 1681
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

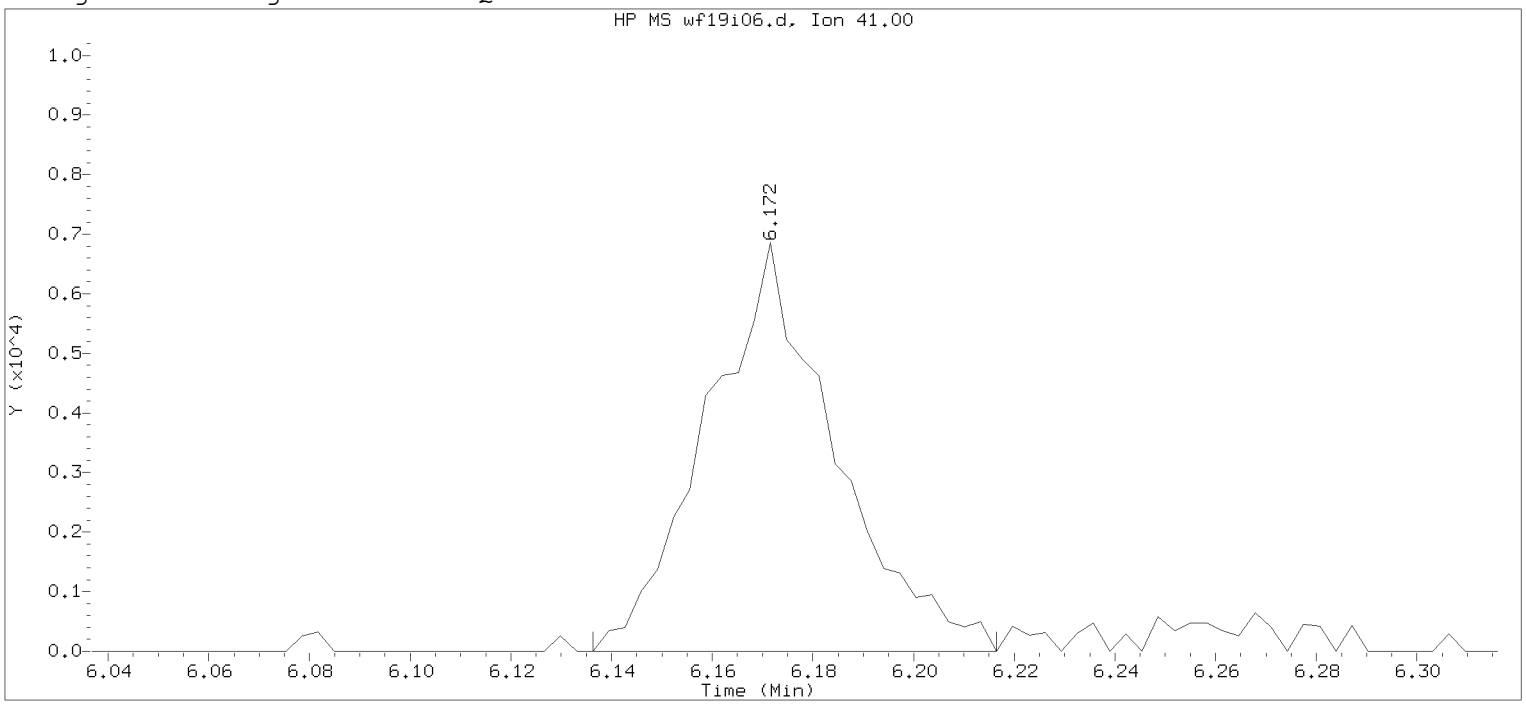
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



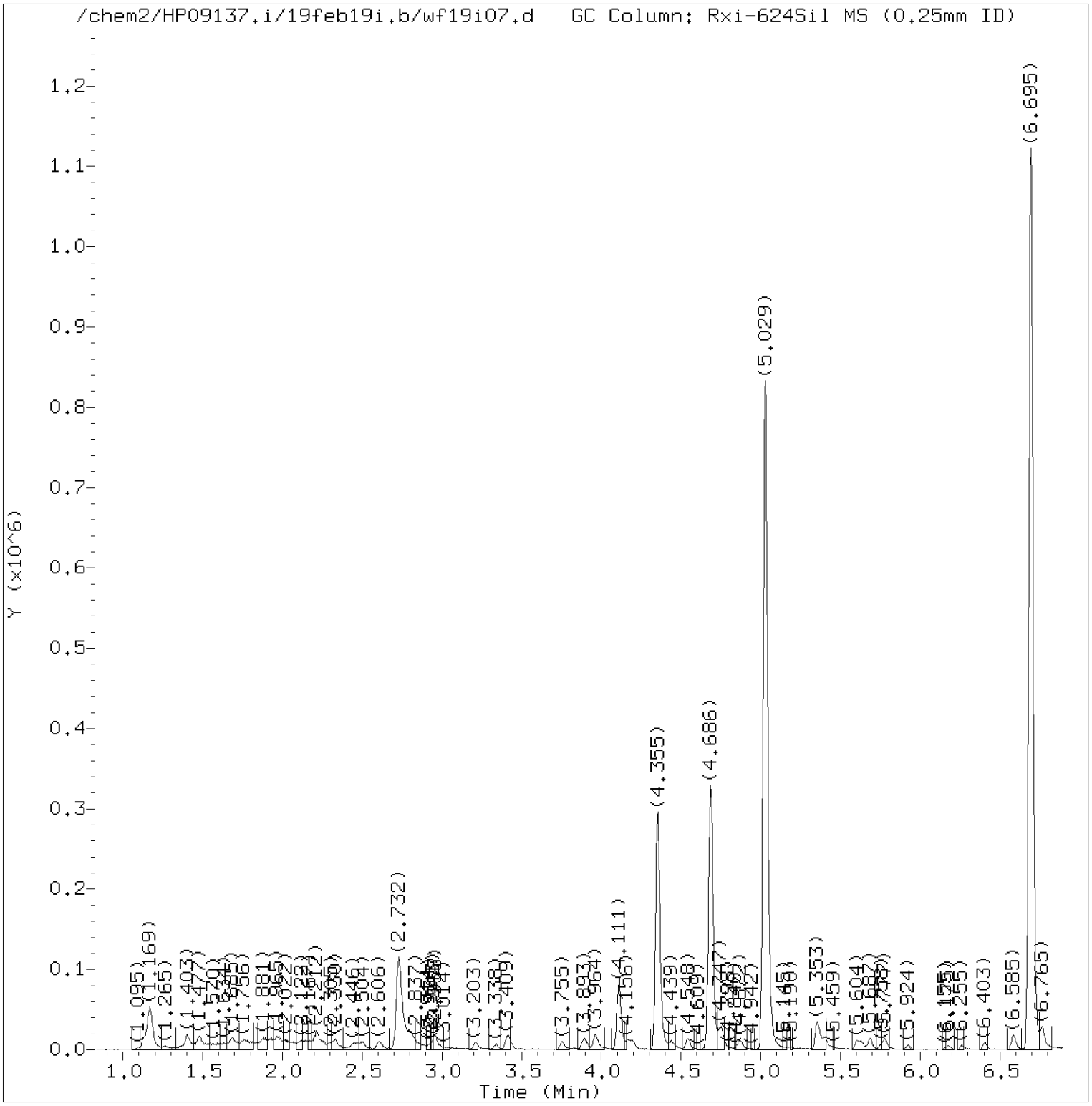
Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:36
Date, time and analyst ID of latest file update: 19-Feb-2019 14:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 80
Compound Name : 2-Nitropropane
Scan Number : 1664
Retention Time (minutes): 6.172
Quant Ion : 41.00
Area : 12090
On-column Amount (ng) : 6.6411
Integration start scan : 1652 Integration stop scan: 1677
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user Capacity



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

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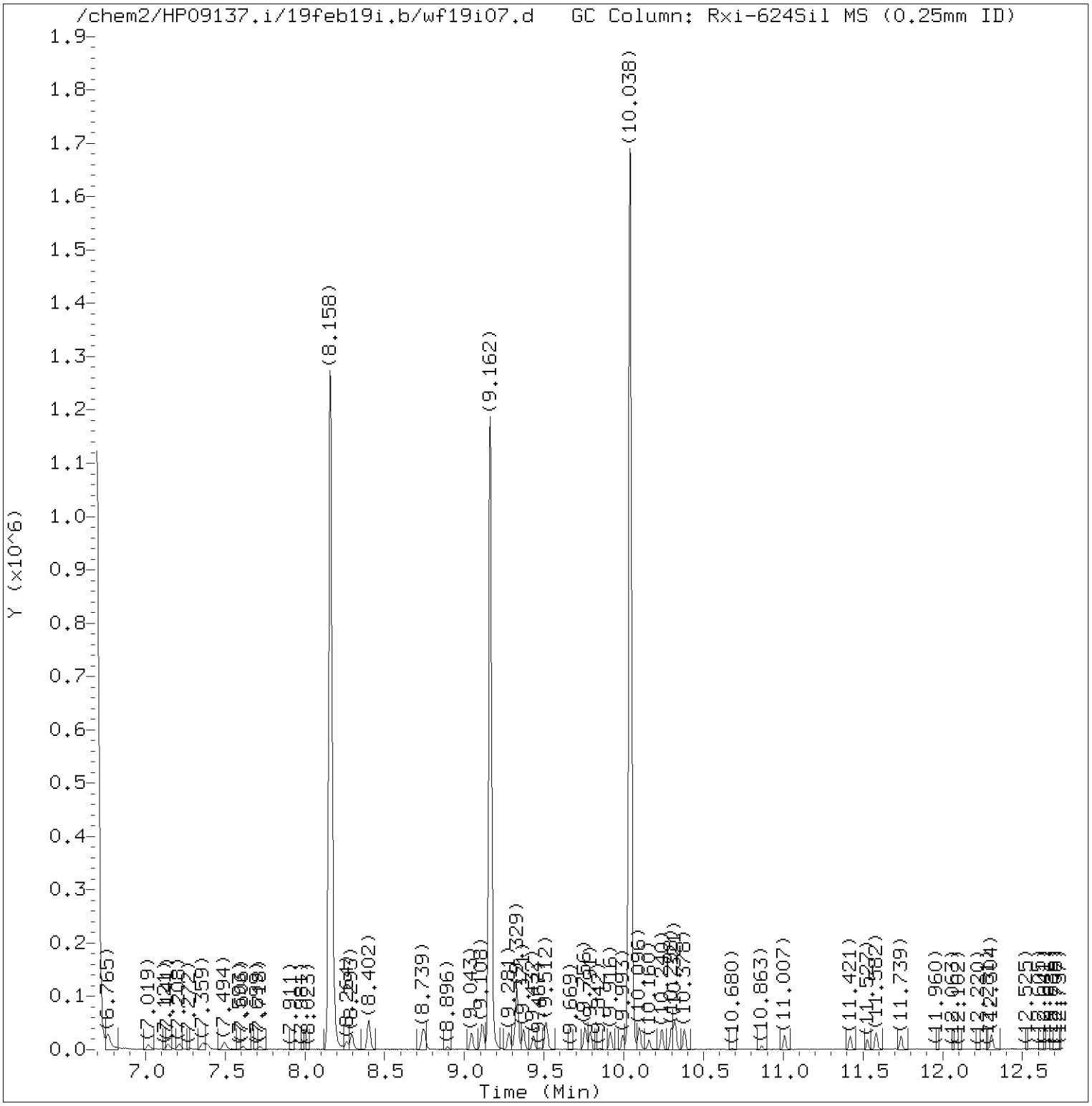
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.262	85	3665	0.689
4) Chloromethane	(2)	1.400	50	6210	0.937
6) Vinyl Chloride	(2)	1.470	62	5198	0.856
5) 1,3-Butadiene	(2)	1.477	39	4489M	1.112
8) Bromomethane	(2)	1.682	94	4292	0.896
9) Chloroethane	(2)	1.762	64	4447	1.112
10) Dichlorofluoromethane	(2)	1.888	67	8043	1.039
12) Trichlorofluoromethane	(2)	1.923	101	4857	0.753
11) n-Pentane	(2)	1.968	43	6657	1.085
13) Ethanol	(1)	2.051	45	8488	87.185
15) Freon 123a	(2)	2.141	67	5025M	1.042
16) Acrolein	(1)	2.218	56	15214	9.900
17) 1,1-Dichloroethene	(2)	2.321	96	2707	0.746
17) 1,1-Dichloroethene	(2)	2.314	63	1554	0.849
18) Acetone	(1)	2.334	58	1488	1.992
19) Freon 113	(2)	2.334	101	2232	0.700
21) 2-Propanol	(1)	2.446	45	12023	21.663
22) Methyl Iodide	(2)	2.472	142	6057M	0.871
23) Carbon Disulfide	(2)	2.504	76	11216	0.877
25) Allyl Chloride	(2)	2.603	41	5509	0.871
27) Methyl Acetate	(2)	2.619	43	6296	1.151
28) Methylene Chloride	(2)	2.709	84	4508M	1.016
29)*t-Butyl alcohol-d10	(1)	2.732	65	213467	250.000
30) t-Butyl alcohol	(1)	2.805	59	20393M	20.598
31) Acrylonitrile	(2)	2.918	53	2348	0.816
33) Methyl Tertiary Butyl Ether	(2)	2.956	73	8820	0.920
32) trans-1,2-Dichloroethene	(2)	2.959	96	3346	0.850
34) n-Hexane	(2)	3.213	57	4218	0.801
36) 1,1-Dichloroethane	(2)	3.338	63	6195	0.868
38) di-Isopropyl ether	(2)	3.409	45	13012	0.949
39) 2-Chloro-1,3-butadiene	(2)	3.425	53	5230	0.846
40) Ethyl t-butyl ether	(2)	3.752	59	9566	0.957
42) cis-1,2-Dichloroethene	(2)	3.890	96	3895	0.881
45) 2,2-Dichloropropane	(2)	3.890	77	2825	0.882
44) 2-Butanone	(2)	3.909	43	8554	2.068
47) Propionitrile	(1)	3.964	54	24581	19.977
48) Methacrylonitrile	(2)	4.108	67	29800	9.628
49) Bromochloromethane	(2)	4.111	128	2034	0.885

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.172	71	2206	1.937
51) Chloroform	(2)	4.195	83	6117	0.914
52)$Dibromofluoromethane	(2)	4.355	113	189485	49.693
52)$Dibromofluoromethane	(2)	4.355	111	193391	49.406
53) 1,1,1-Trichloroethane	(2)	4.378	97	4109	0.816
54) Cyclohexane	(2)	4.439	56	5258	0.789
54) Cyclohexane	(2)	4.439	84	4367	0.791
54) Cyclohexane	(2)	4.429	69	1544	0.771
55) 1,1-Dichloropropene	(2)	4.541	75	4731	0.882
56) Carbon Tetrachloride	(2)	4.545	117	3401	0.787
58) Isobutyl Alcohol	(1)	4.676	41	17702	49.046
57)$1,2-Dichloroethane-d4	(2)	4.686	102	50410	49.708
57)$1,2-Dichloroethane-d4	(2)	4.689	65	224184	50.782
57)$1,2-Dichloroethane-d4	(2)	4.689	104	32320	50.043
60) Benzene	(2)	4.750	78	15856	0.919
61) 1,2-Dichloroethane	(2)	4.769	62	5590	1.049
61) 1,2-Dichloroethane	(2)	4.763	98	304	0.600
65) t-Amyl methyl ether	(2)	4.869	73	9942	0.971
66)*Fluorobenzene	(2)	5.029	96	823064	50.000
67) n-Heptane	(2)	5.032	43	4457	0.885
69) n-Butanol	(1)	5.353	56	28433	88.724
71) Trichloroethene	(2)	5.405	95	3650	0.874
73) Methylcyclohexane	(2)	5.604	83	4501	0.742
73) Methylcyclohexane	(2)	5.600	98	2124	0.753
74) 1,2-Dichloropropane	(2)	5.632	63	3782	0.854
75) Dibromomethane	(2)	5.748	93	2271	0.831
77) Methyl Methacrylate	(2)	5.780	69	4194M	0.862
76) 1,4-Dioxane	(1)	5.783	88	4430	46.241
79) Bromodichloromethane	(2)	5.924	83	4331	0.862
43) 1,2-Dichloroethene (Total)	(2)		96	7241	1.731
80) 2-Nitropropane	(2)	6.162	41	3015	1.774
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	2723	0.806
82) cis-1,3-Dichloropropene	(2)	6.409	75	5760	0.834
83) 4-Methyl-2-pentanone	(2)	6.585	43	15267	1.873
84)$Toluene-d8	(3)	6.695	98	848544	49.571
84)$Toluene-d8	(3)	6.695	100	557676	49.127
89) Toluene	(3)	6.762	92	9642	0.874
90) trans-1,3-Dichloropropene	(3)	7.019	75	5607	0.854

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.137	69	6163	0.764
93) 1,1,2-Trichloroethane	(3)	7.214	97	3763	0.887
94) Tetrachloroethene	(3)	7.359	166	3847	0.860
95) 1,3-Dichloropropane	(3)	7.384	76	6625	0.899
97) 2-Hexanone	(3)	7.494	43	11260M	1.753
98) Dibromochloromethane	(3)	7.612	129	3140	0.757
100) 1,2-Dibromoethane	(3)	7.715	107	3862	0.828
101)*Chlorobenzene-d5	(3)	8.161	117	683121	50.000
103) Chlorobenzene	(3)	8.183	112	11258	0.920
104) 1,1,1,2-Tetrachloroethane	(3)	8.267	131	3212	0.817
105) Ethylbenzene	(3)	8.293	91	18837	0.899
107) m+p-Xylene	(3)	8.405	106	14407	1.729
108) o-Xylene	(3)	8.739	106	7135	0.870
110) Styrene	(3)	8.751	104	11107	0.808
111) Bromoform	(3)	8.896	173	2281	0.707
112) Isopropylbenzene	(3)	9.047	105	17277	0.858
113) Cyclohexanone	(1)	9.111	55	20797	48.124
115)$4-Bromofluorobenzene	(3)	9.162	95	339181	49.529
115)$4-Bromofluorobenzene	(3)	9.162	174	285212	49.356
116) Bromobenzene	(4)	9.278	156	5068	0.956
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	6279	0.878
118) 1,2,3-Trichloropropane	(4)	9.313	110	1888	0.877
119) trans-1,4-Dichloro-2-butene	(4)	9.332	53	20634	9.000
120) n-Propylbenzene	(4)	9.371	91	22711	0.972
121) 2-Chlorotoluene	(4)	9.432	126	4178	0.867
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	15051	0.893
122) 4-Chlorotoluene	(4)	9.515	126	4721	0.915
125) tert-Butylbenzene	(4)	9.753	134	3462	0.904
126) Pentachloroethane	(4)	9.765	167	2398	0.792
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	16670	0.938
128) sec-Butylbenzene	(4)	9.916	105	18905	0.914
130) 1,3-Dichlorobenzene	(4)	9.993	146	9796	0.969
131) p-Isopropyltoluene	(4)	10.022	119	16677	0.911
132)*1,4-Dichlorobenzene-d4	(4)	10.038	152	368100	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	10400	0.992
91) 1,3-Dichloropropene (total)	(3)		100	11367	1.688
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	17695	0.926
136) Benzyl Chloride	(4)	10.160	91	10691	0.729

M = Compound was manually integrated.
* = Compound is an internal standard.
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Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

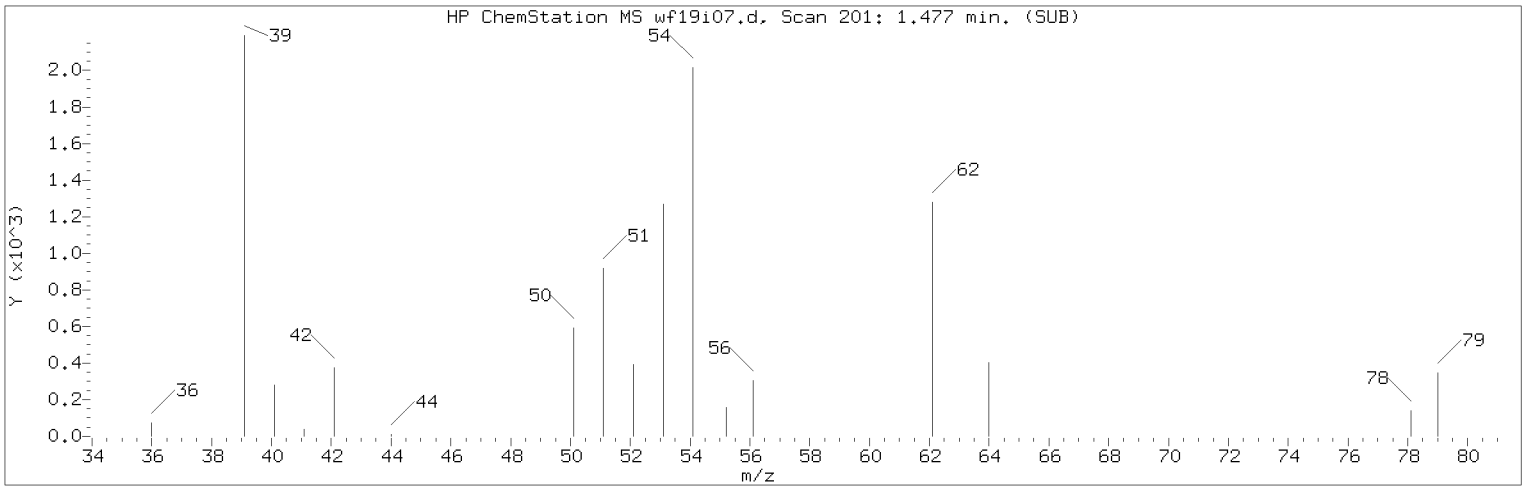
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

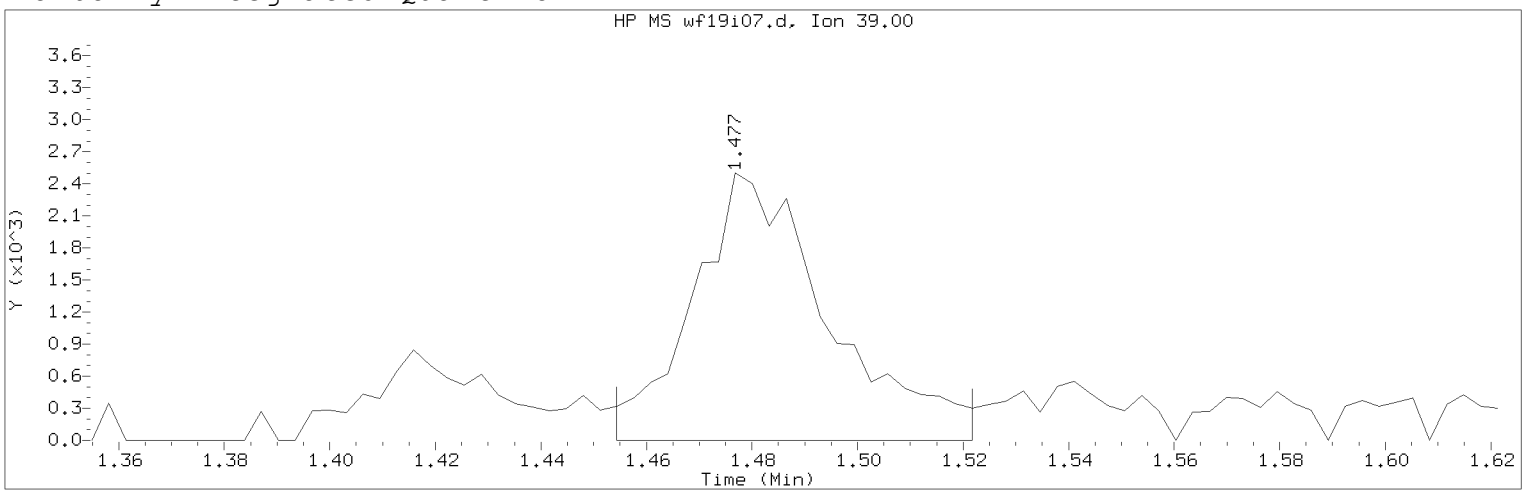
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.240	119	10375	0.901
138) 1,4-Diethylbenzene	(4)	10.298	119	11053	0.896
140) n-Butylbenzene	(4)	10.314	92	8520	0.922
139) 1,2-Dichlorobenzene	(4)	10.324	146	9475	0.945
141) 1,2-Diethylbenzene	(4)	10.378	119	8406	0.865
143) 1,2-Dibromo-3-chloropropane	(4)	10.866	75	1280	0.788
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	7373	0.959
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	6829	0.925
148) Hexachlorobutadiene	(4)	11.527	225	2777	1.056
149) Naphthalene	(4)	11.582	128	22155	0.887
150) 1,2,3-Trichlorobenzene	(4)	11.739	180	6883	0.955
109) Xylene (Total)	(3)		106	21542	2.599
151) 2-Methylnaphthalene	(4)	12.304	142	12159	0.853
142) Diethylbenzene (total)	(4)		100	29834	2.663

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

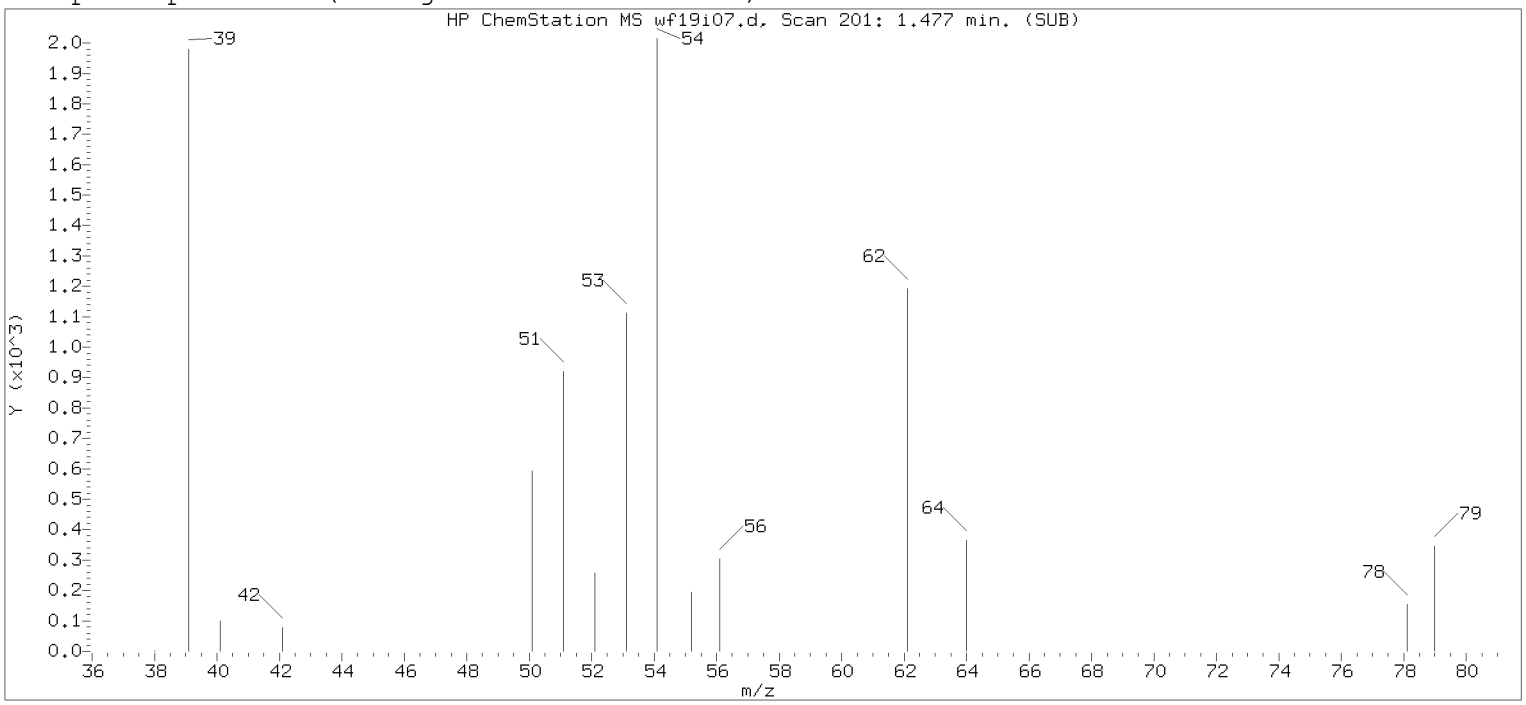
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 201
Retention Time (minutes): 1.477
Quant Ion : 39.00
Area (flag) : 4489M
On-Column Amount (ng) : 1.1115
Integration start scan : 193 Integration stop scan: 214
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

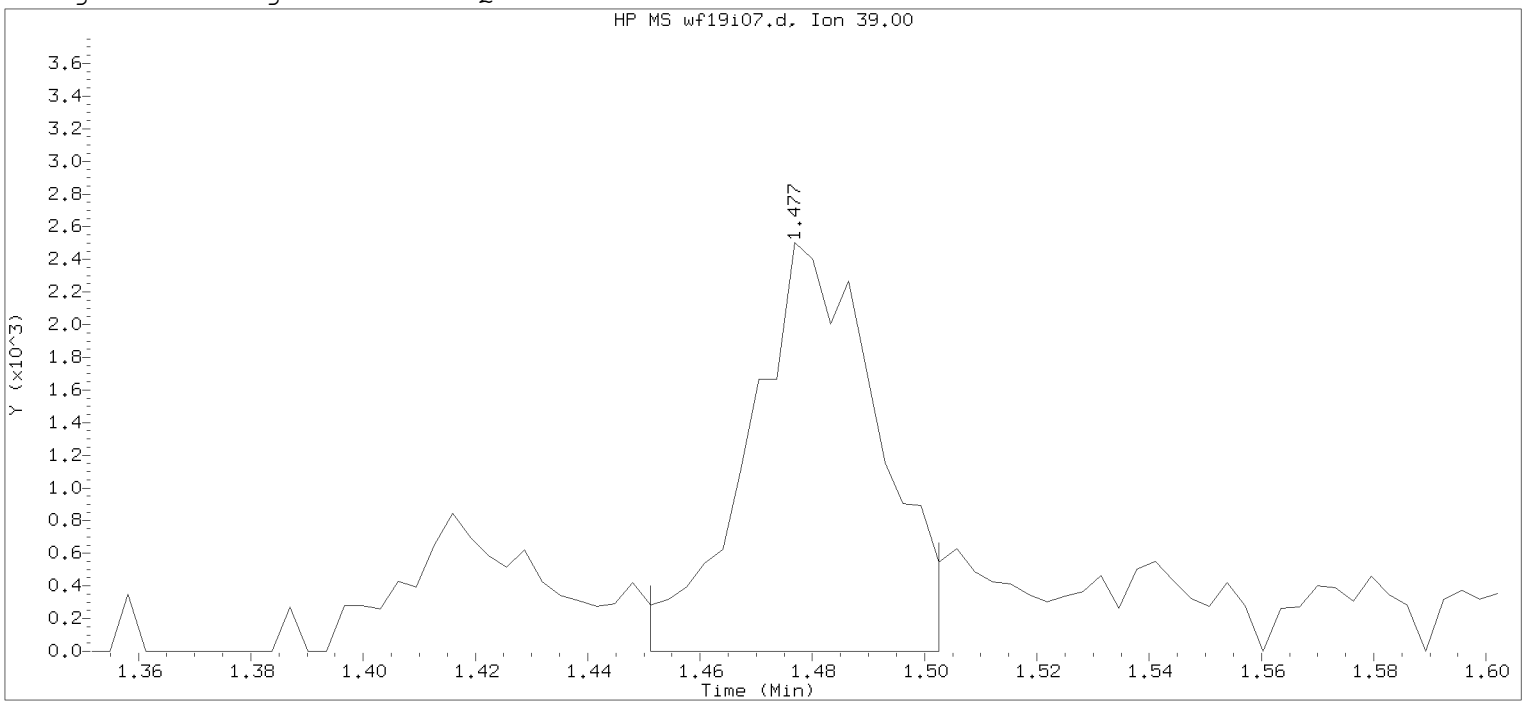
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

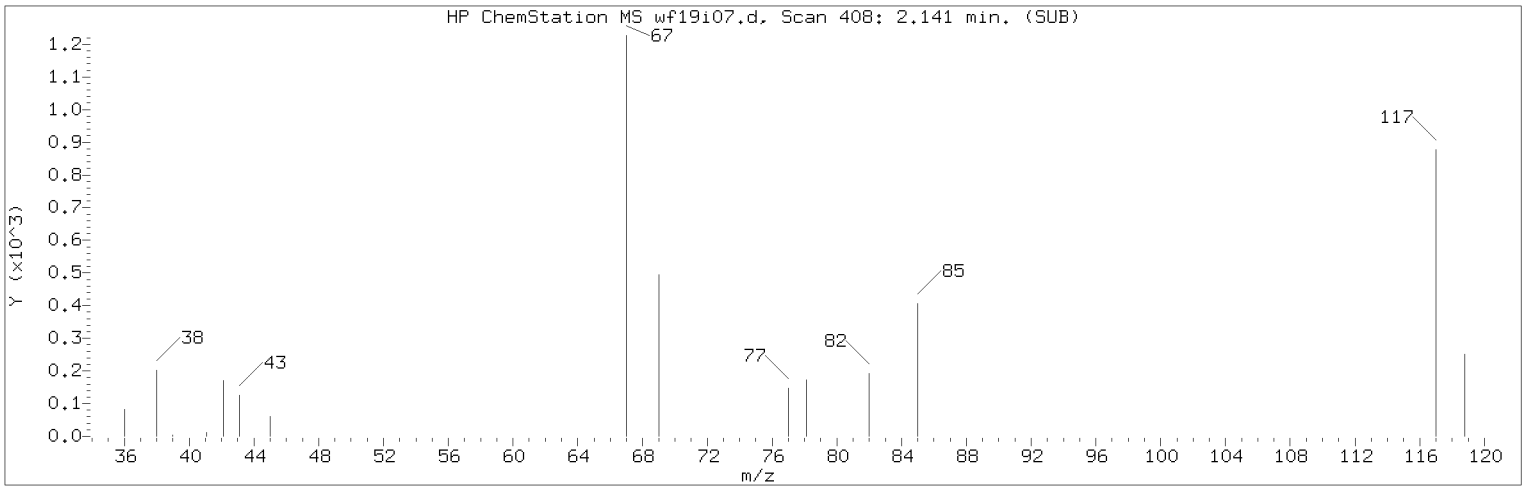
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

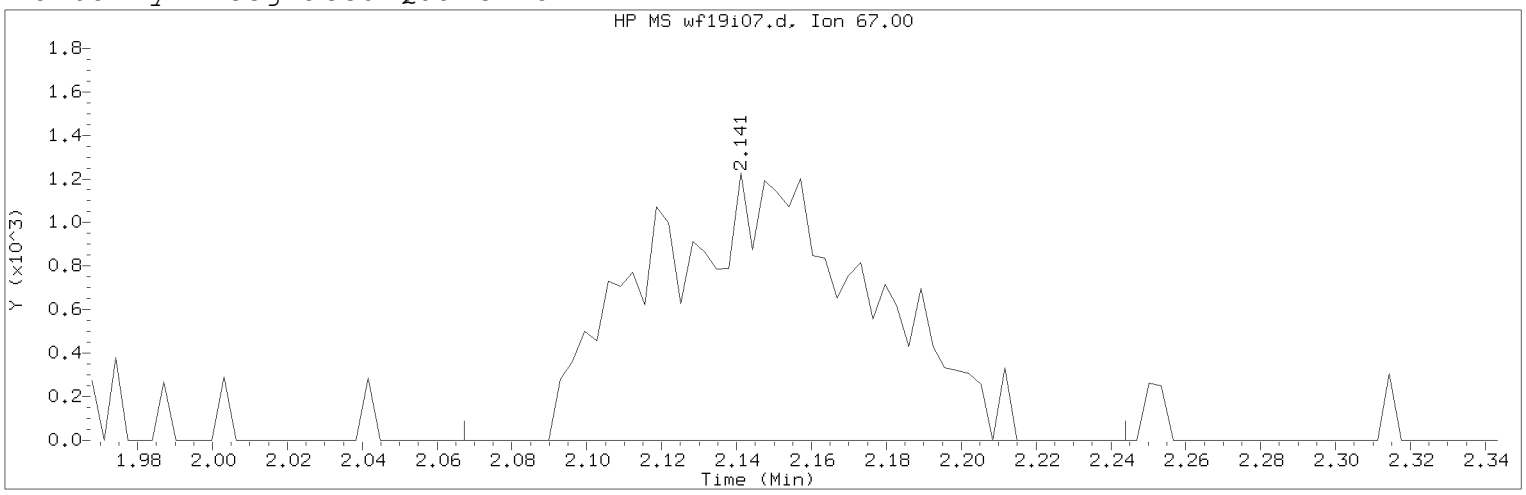
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 201
Retention Time (minutes): 1.477
Quant Ion : 39.00
Area : 3964
On-column Amount (ng) : 1.0001
Integration start scan : 192 Integration stop scan: 208
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

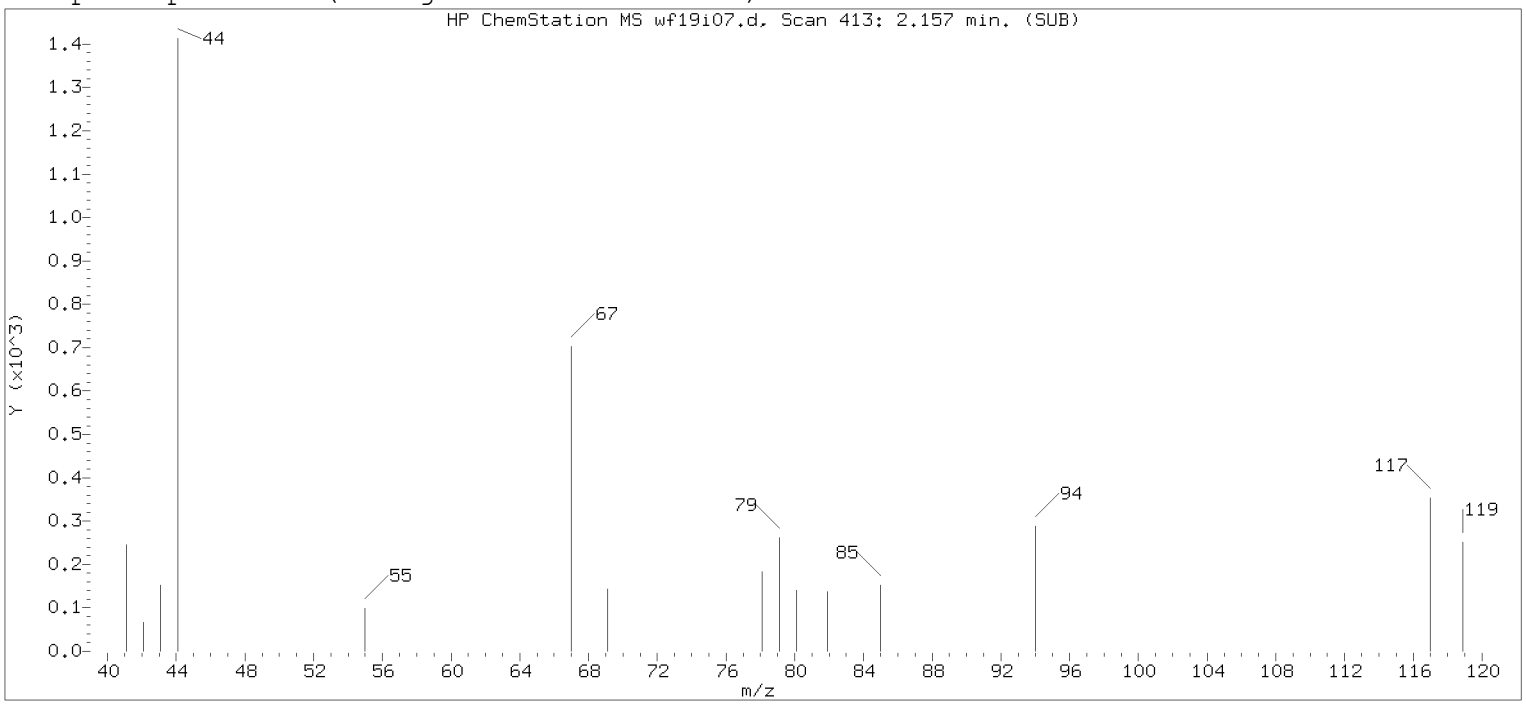
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 408
Retention Time (minutes): 2.141
Quant Ion : 67.00
Area (flag) : 5025M
On-Column Amount (ng) : 1.0422
Integration start scan : 384 Integration stop scan: 439
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

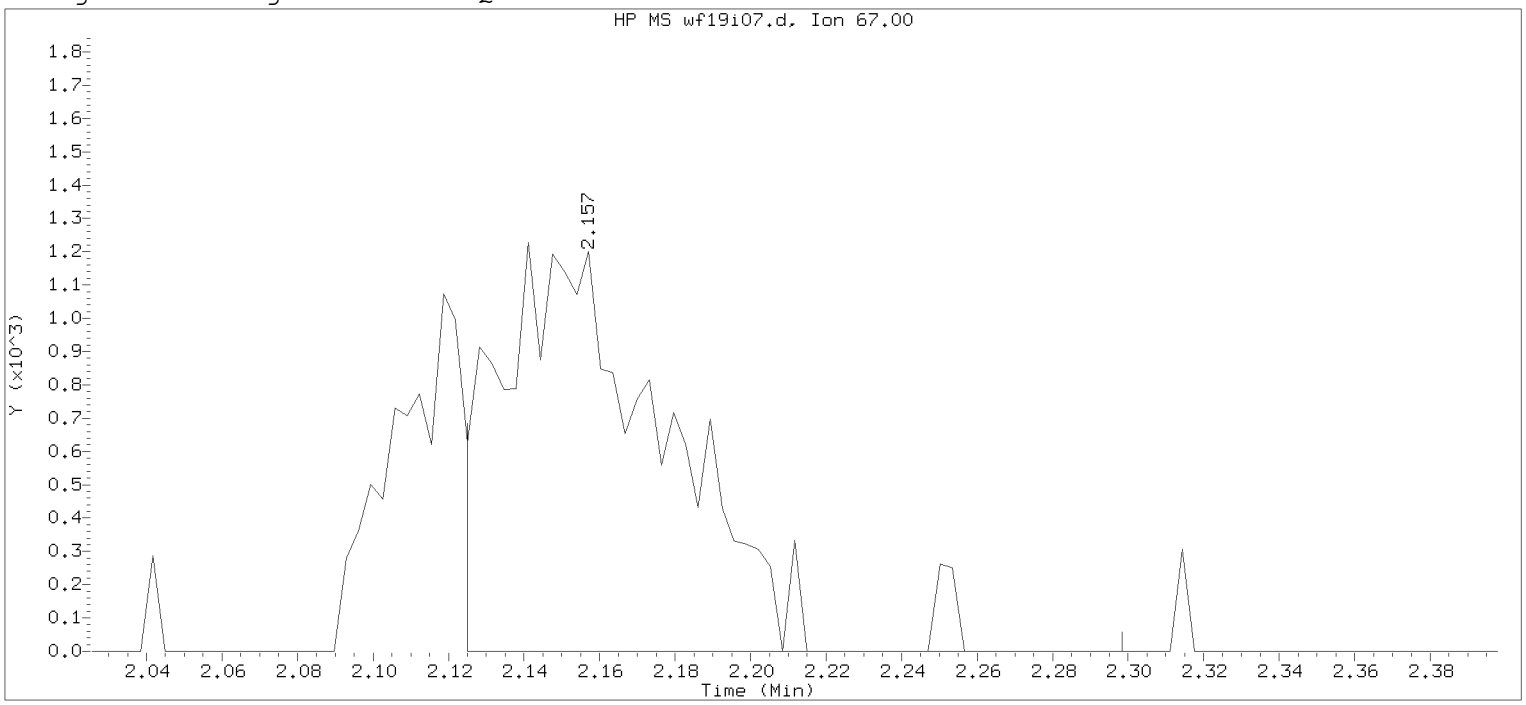
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

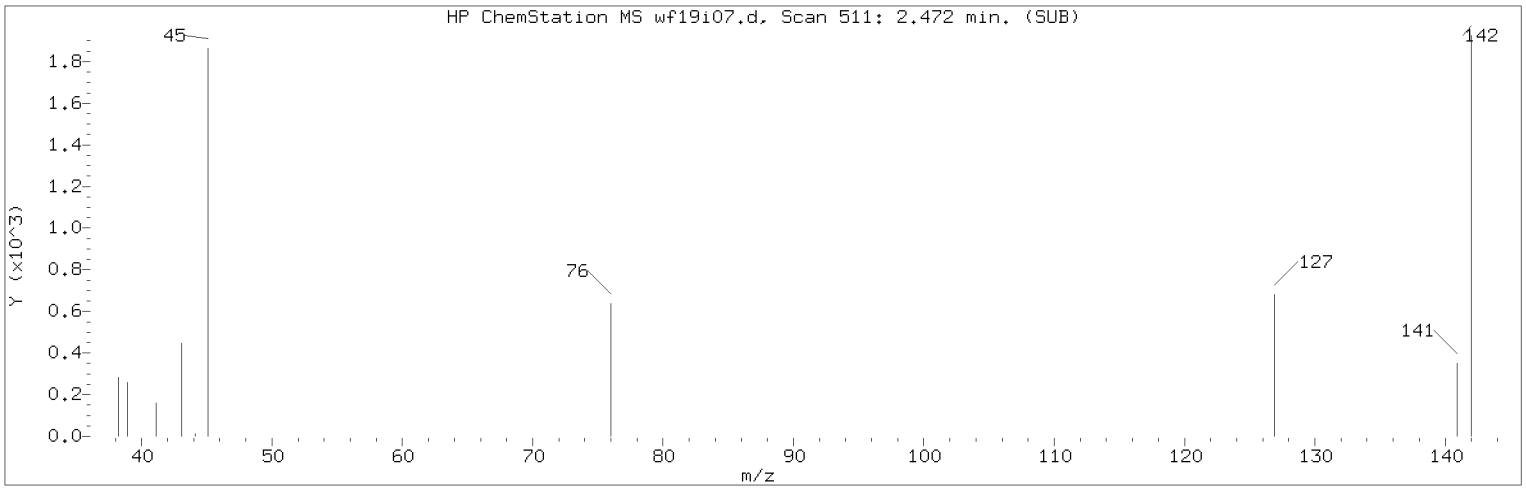
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

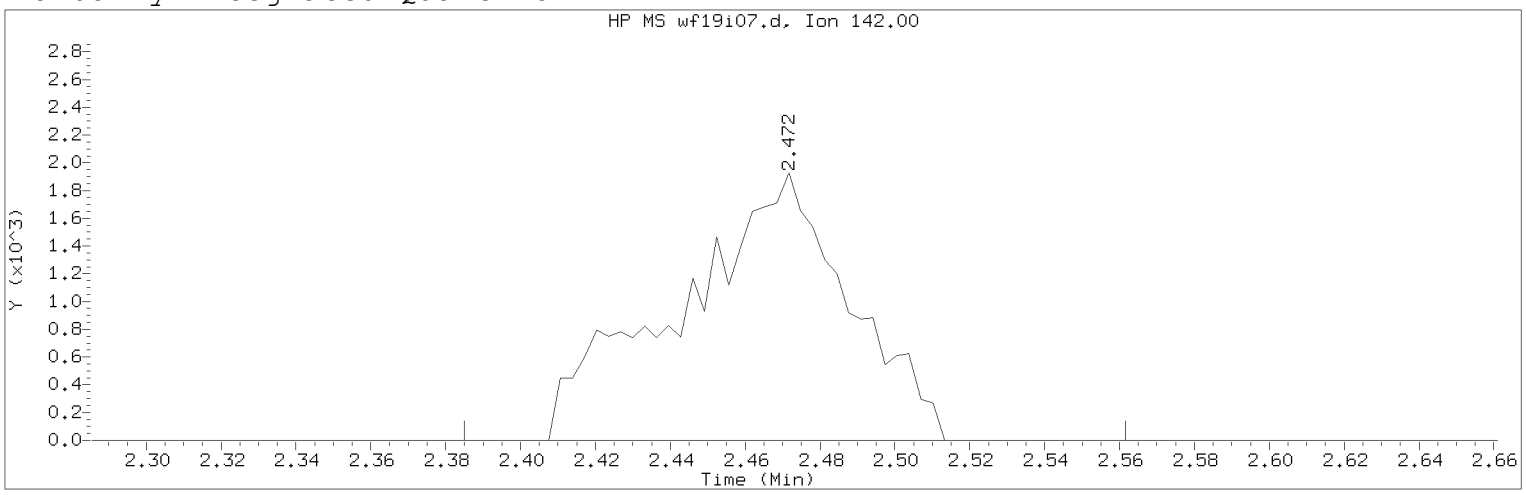
Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 413		
Retention Time (minutes)	: 2.157		
Quant Ion	: 67.00		
Area	: 3812		
On-column Amount (ng)	: 1.1043		
Integration start scan	: 402	Integration stop scan:	456
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user Capacity

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

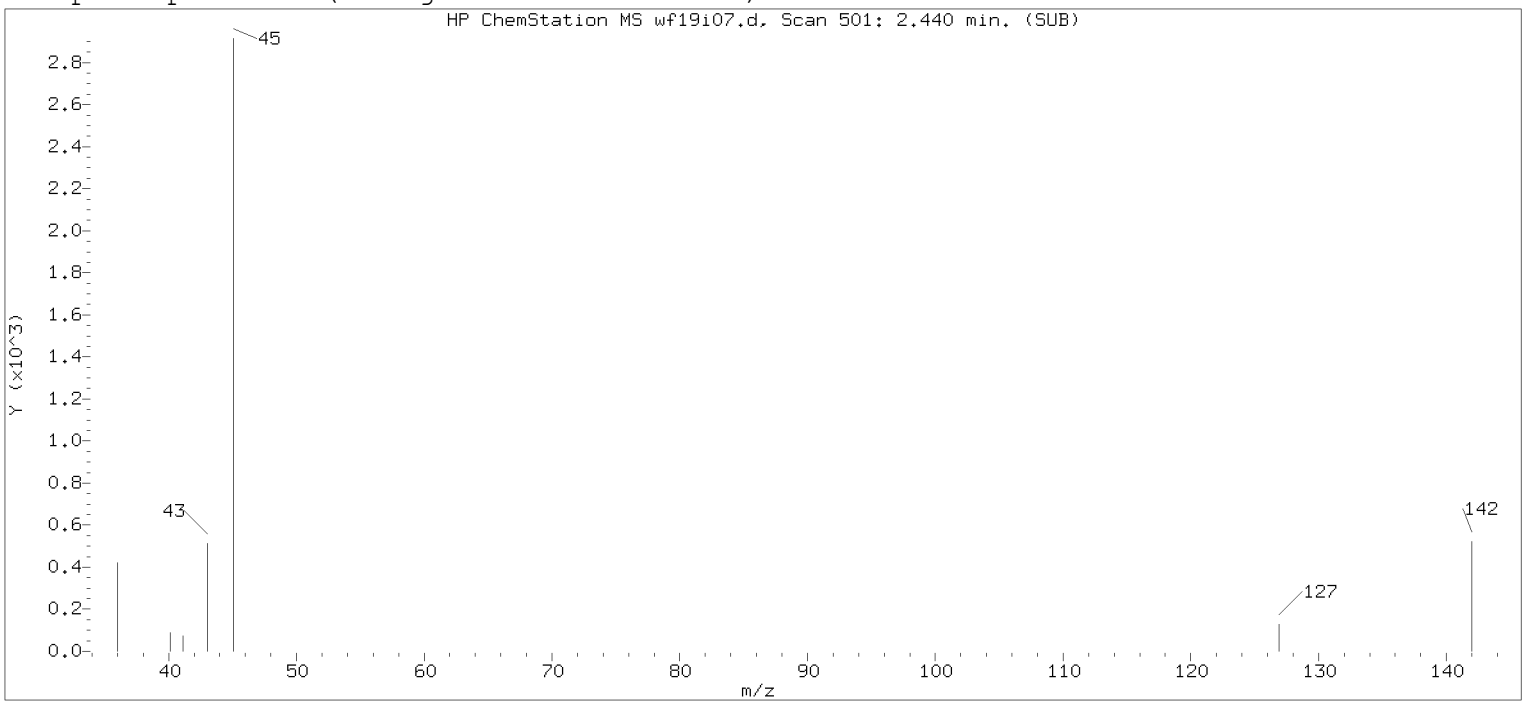
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 511
Retention Time (minutes): 2.472
Quant Ion : 142.00
Area (flag) : 6057M
On-Column Amount (ng) : 0.8710
Integration start scan : 483 Integration stop scan: 538
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

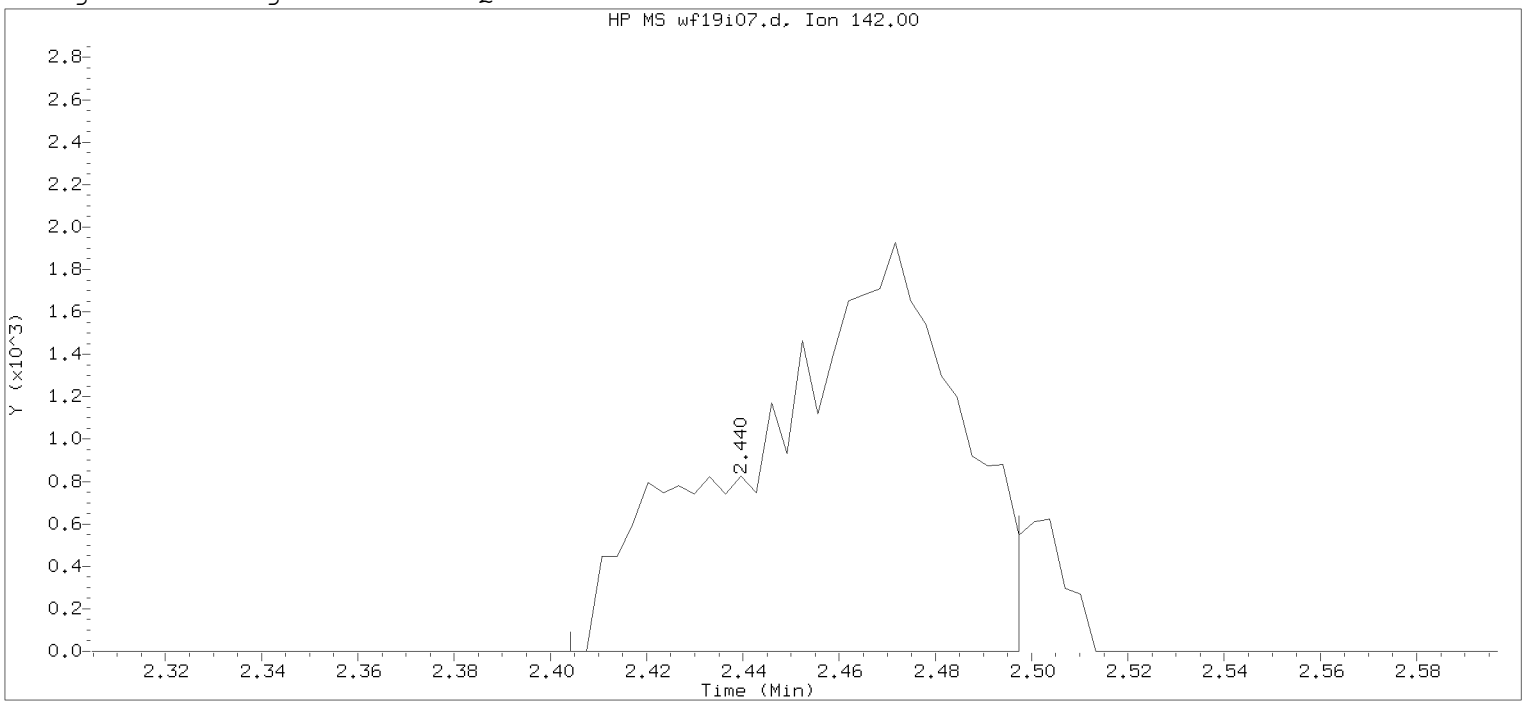
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

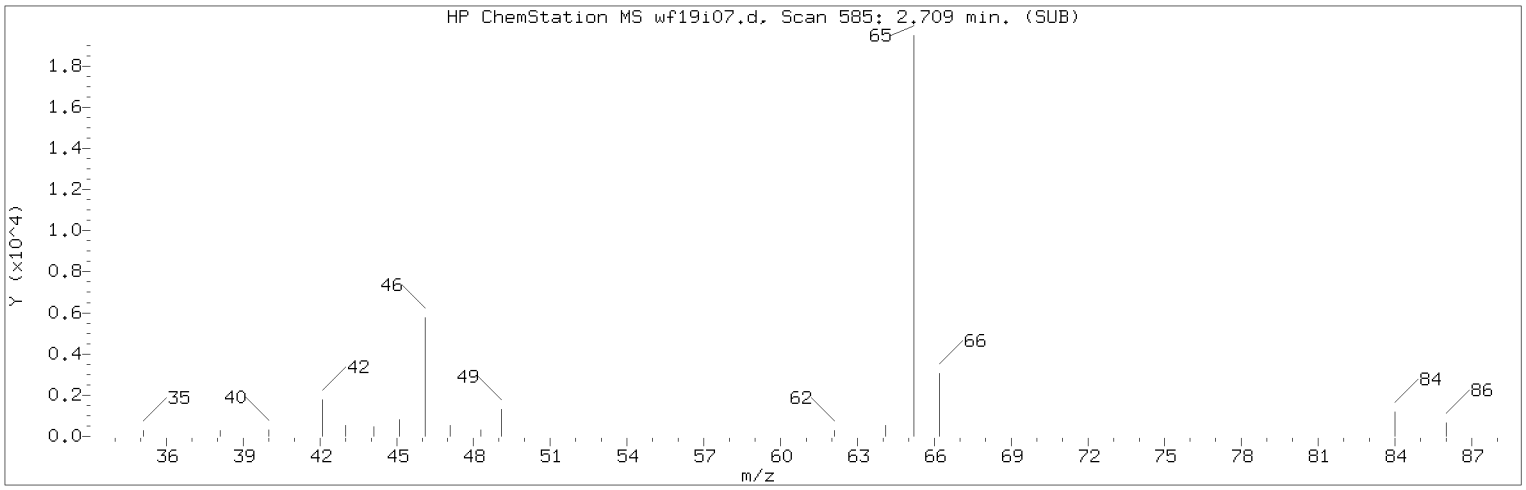
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

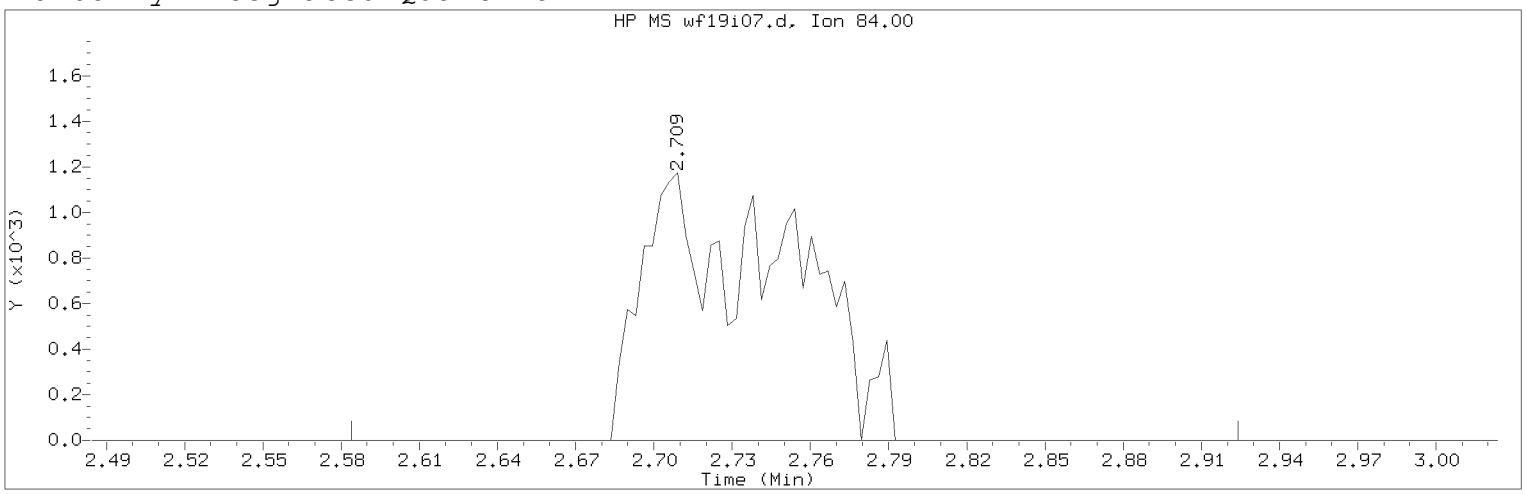
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 501
Retention Time (minutes): 2.440
Quant Ion : 142.00
Area : 5658
On-column Amount (ng) : 0.8993
Integration start scan : 489 Integration stop scan: 518
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user Abigail P. Roselli

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

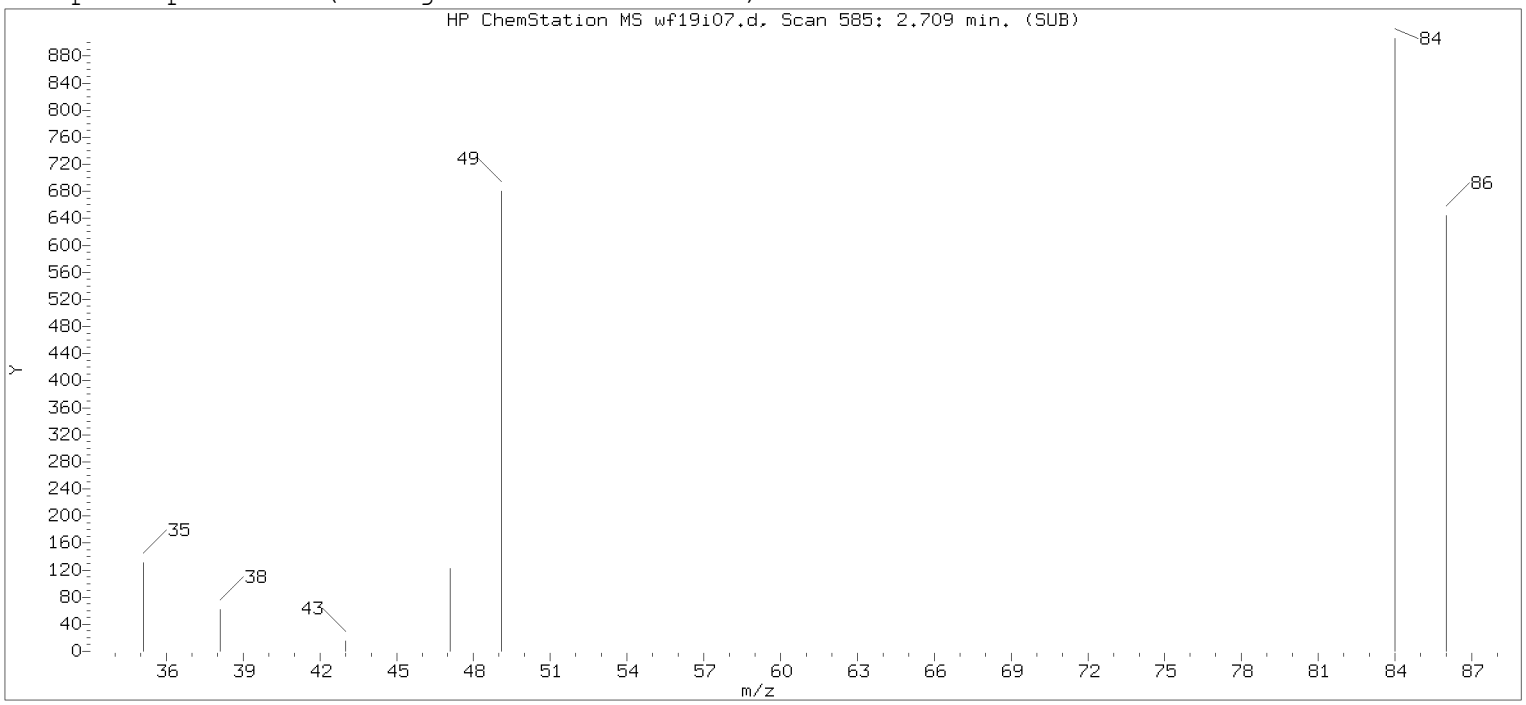
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area (flag) : 4508M
On-Column Amount (ng) : 1.0163
Integration start scan : 545 Integration stop scan: 651
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

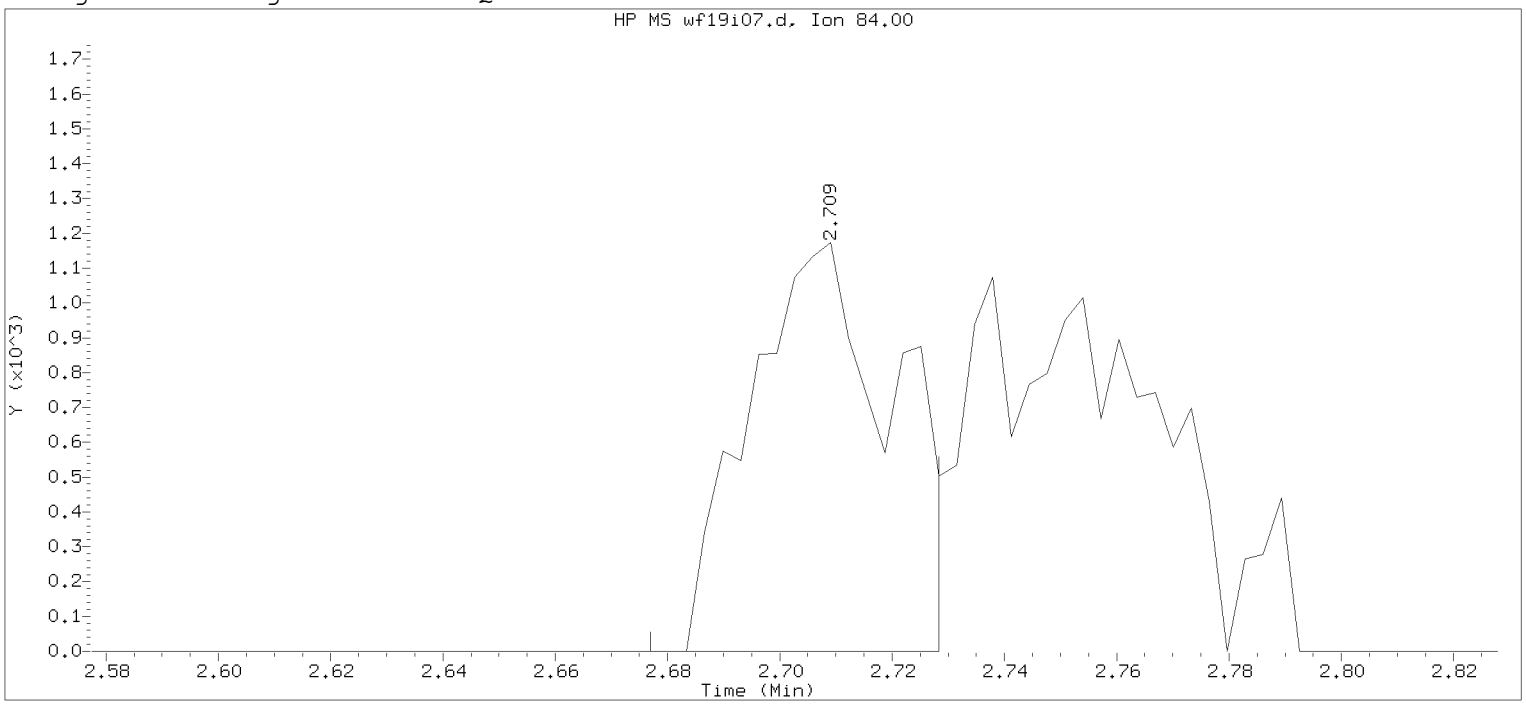
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

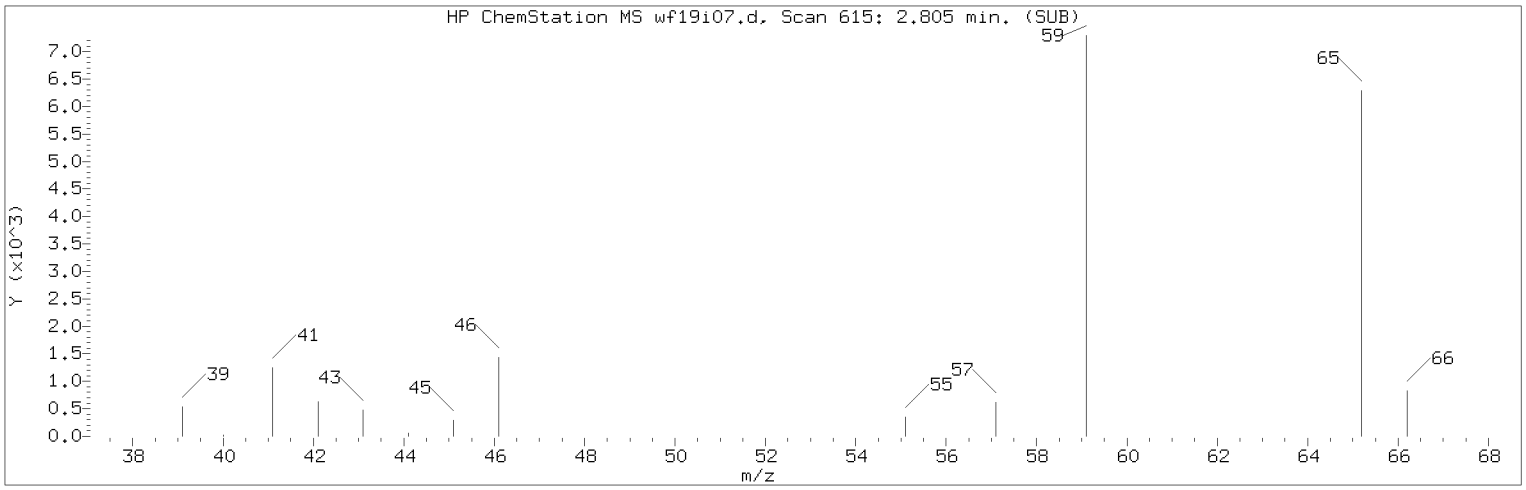
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

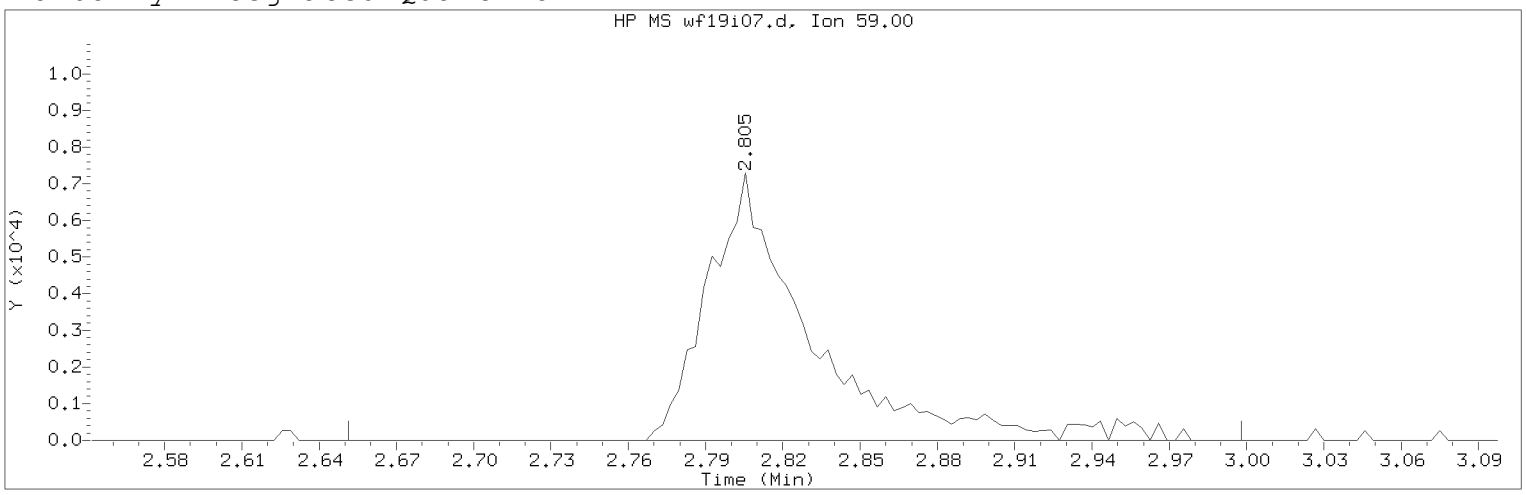
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area : 2067
On-column Amount (ng) : 0.5781
Integration start scan : 574 Integration stop scan: 590
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

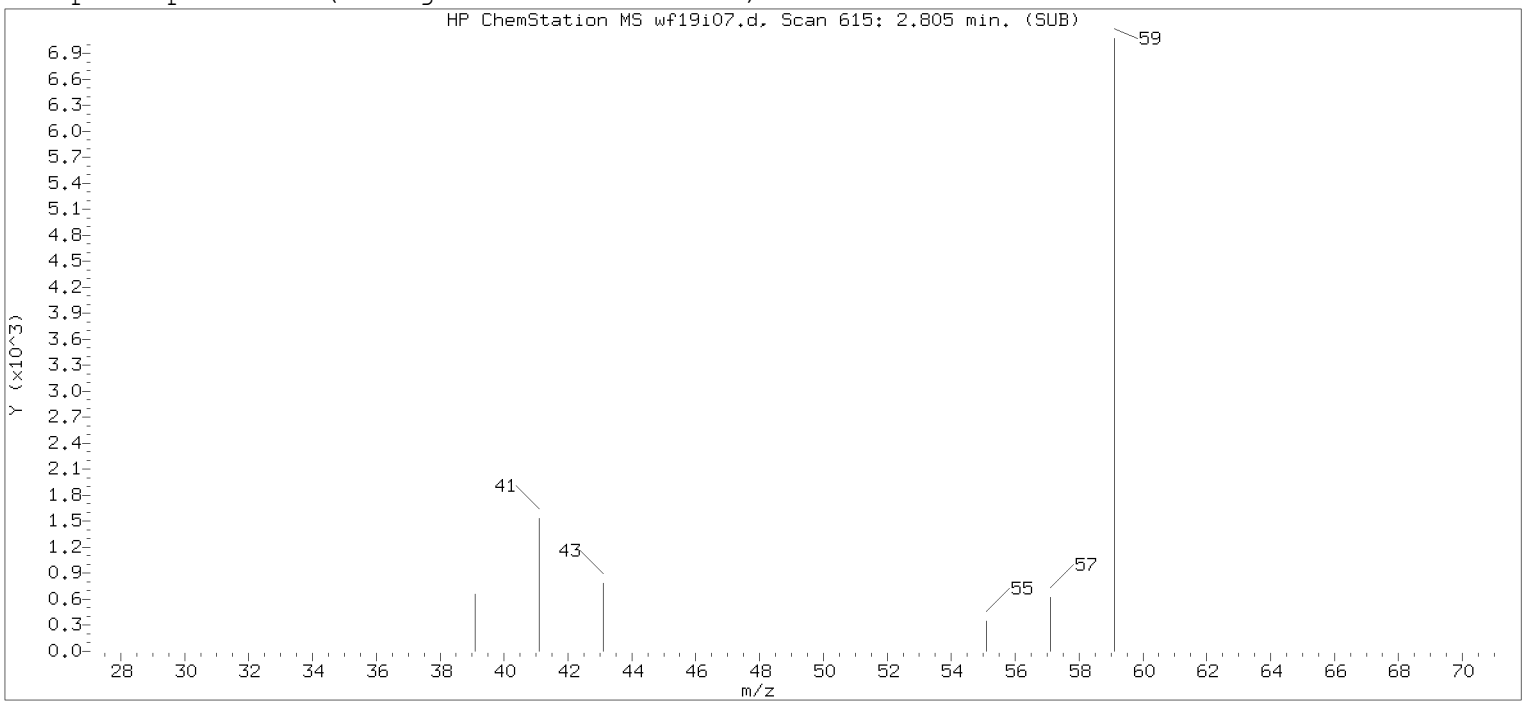
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 615
Retention Time (minutes): 2.805
Quant Ion : 59.00
Area (flag) : 20393M
On-Column Amount (ng) : 20.5984
Integration start scan : 566 Integration stop scan: 674
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

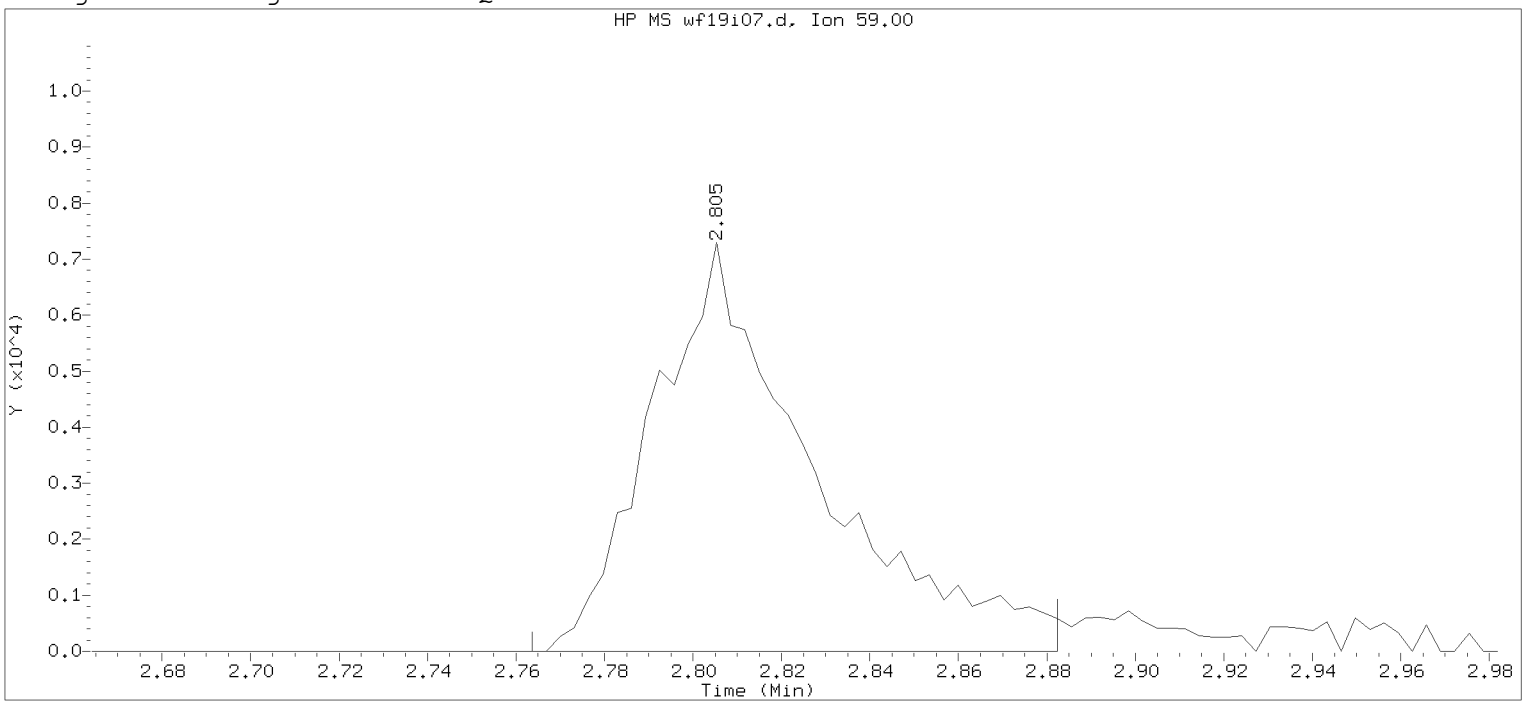
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

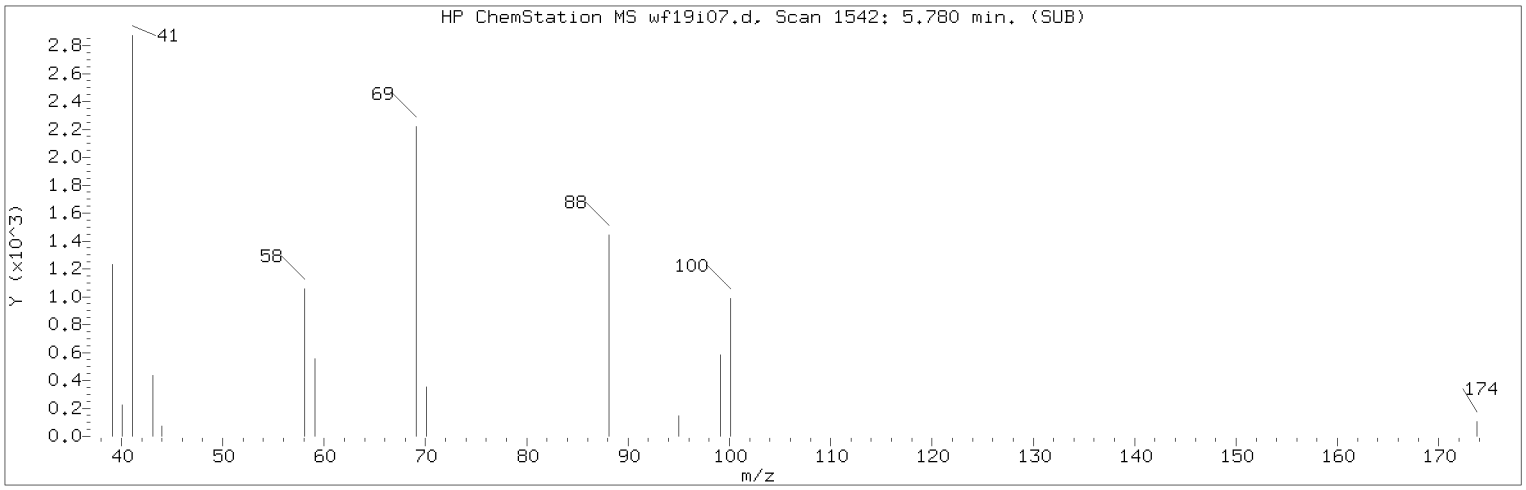
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

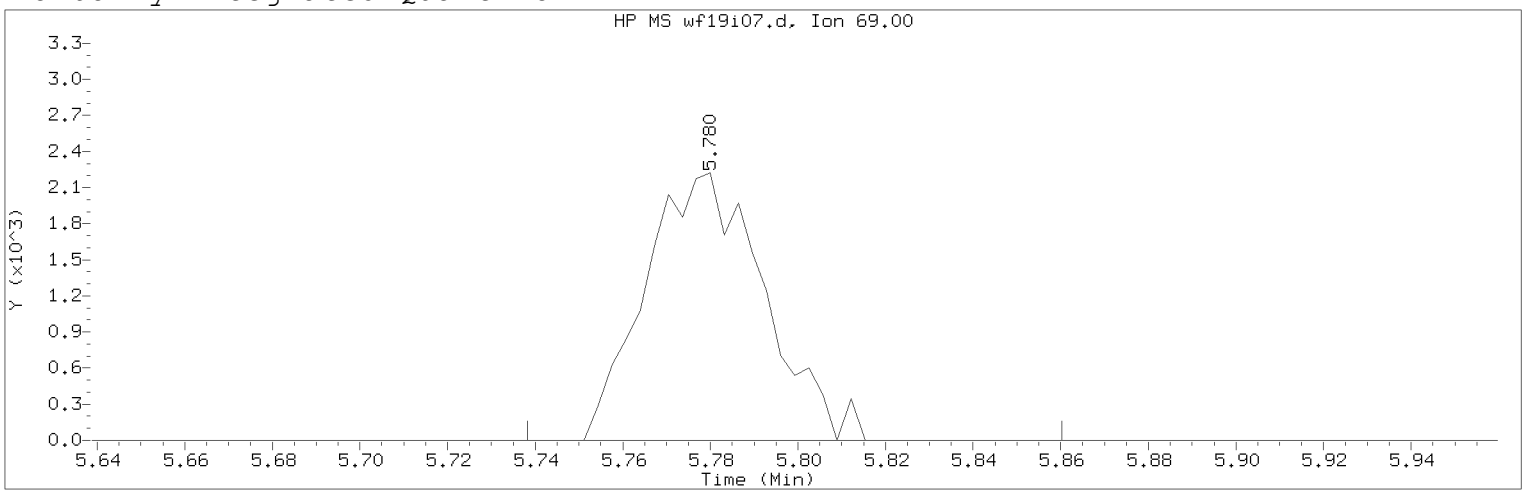
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 615
Retention Time (minutes): 2.805
Quant Ion : 59.00
Area : 18308
On-column Amount (ng) : 18.7752
Integration start scan : 601 Integration stop scan: 638
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

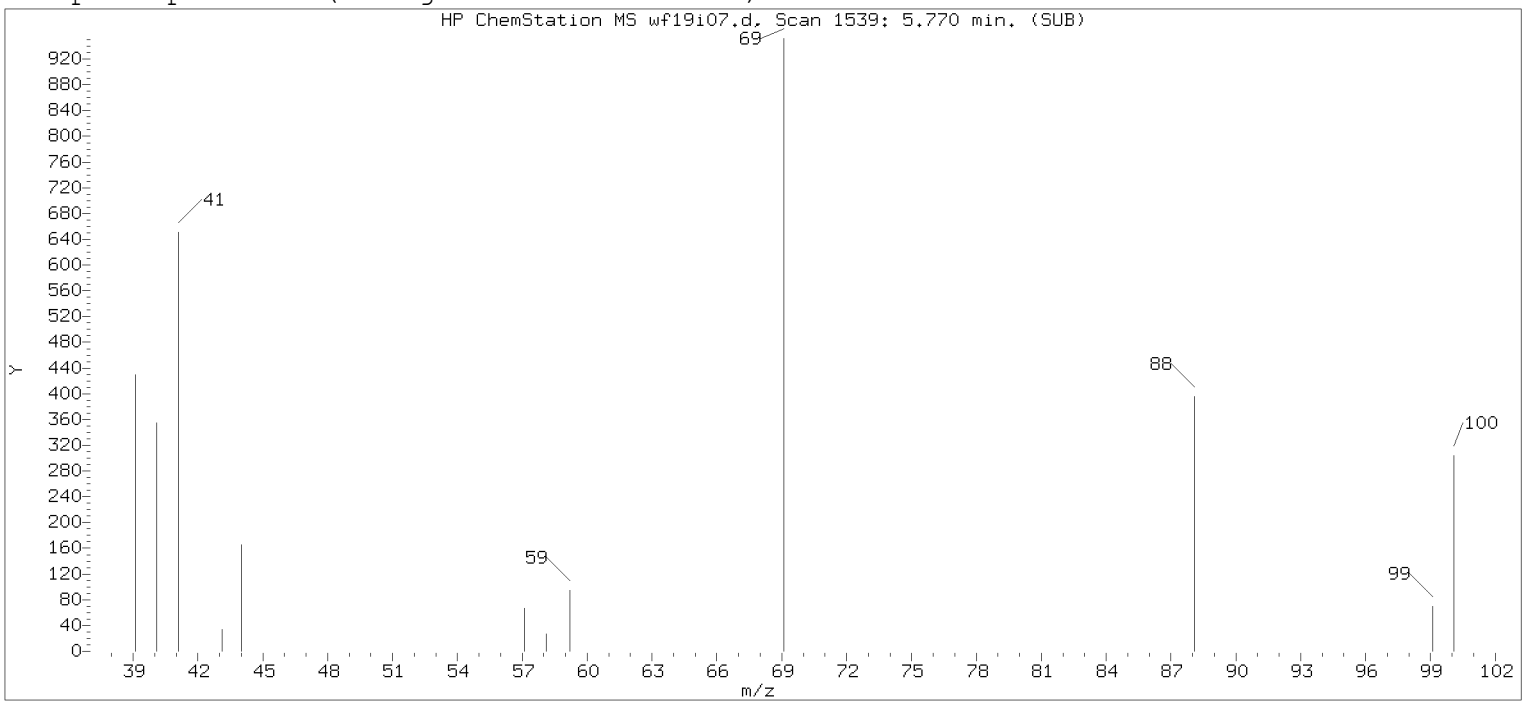
Compound Number : 77
Compound Name : Methyl Methacrylate
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 69.00
Area (flag) : 4194M
On-Column Amount (ng) : 0.8617
Integration start scan : 1528 Integration stop scan: 1566
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

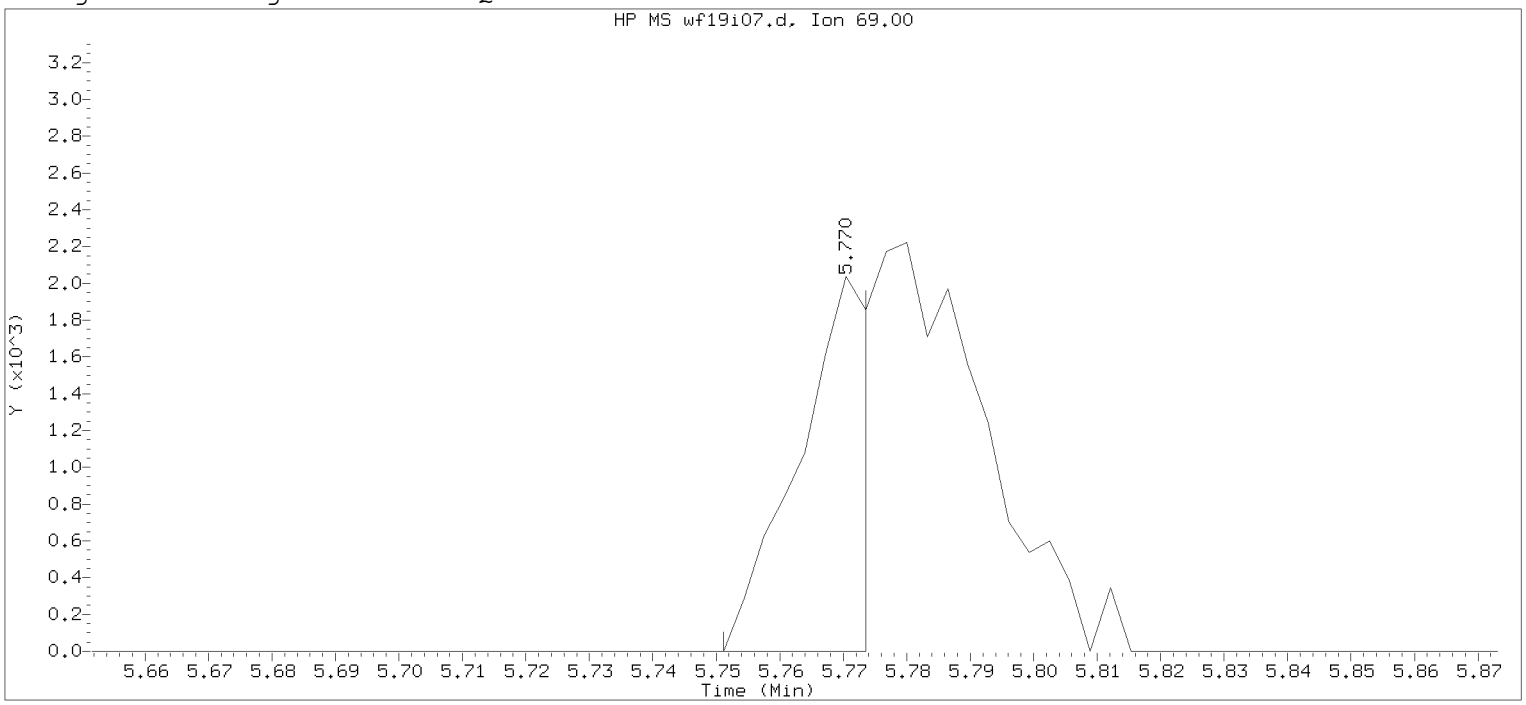
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

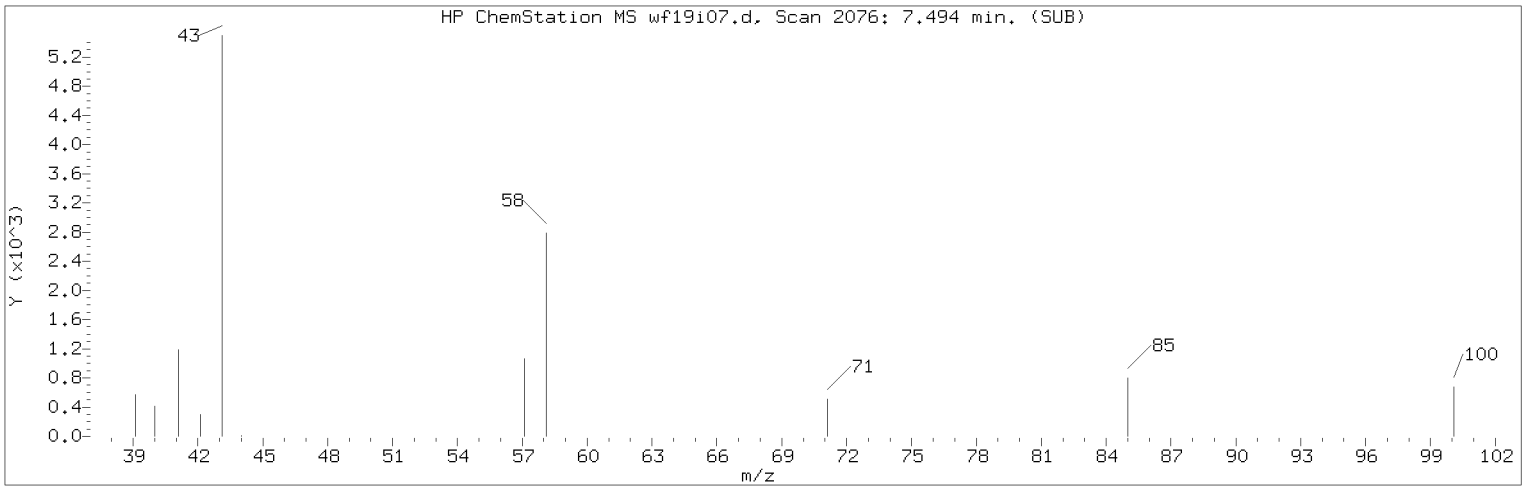
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

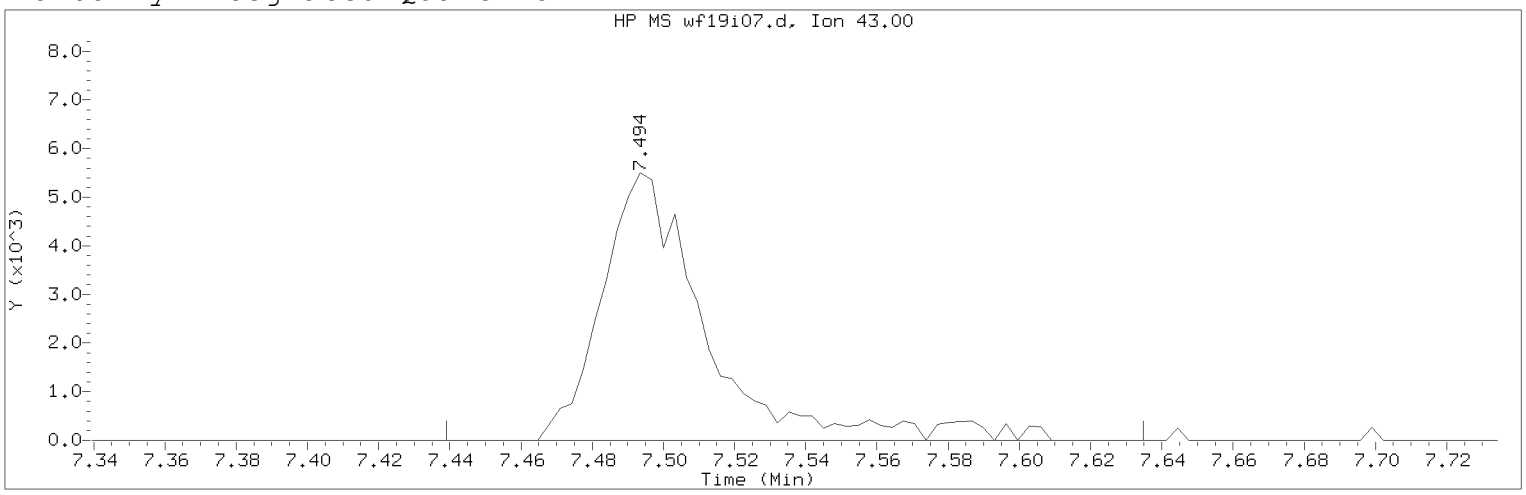
Compound Number : 77
Compound Name : Methyl Methacrylate
Scan Number : 1539
Retention Time (minutes): 5.770
Quant Ion : 69.00
Area : 1428
On-column Amount (ng) : 0.3220
Integration start scan : 1532 Integration stop scan: 1539
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

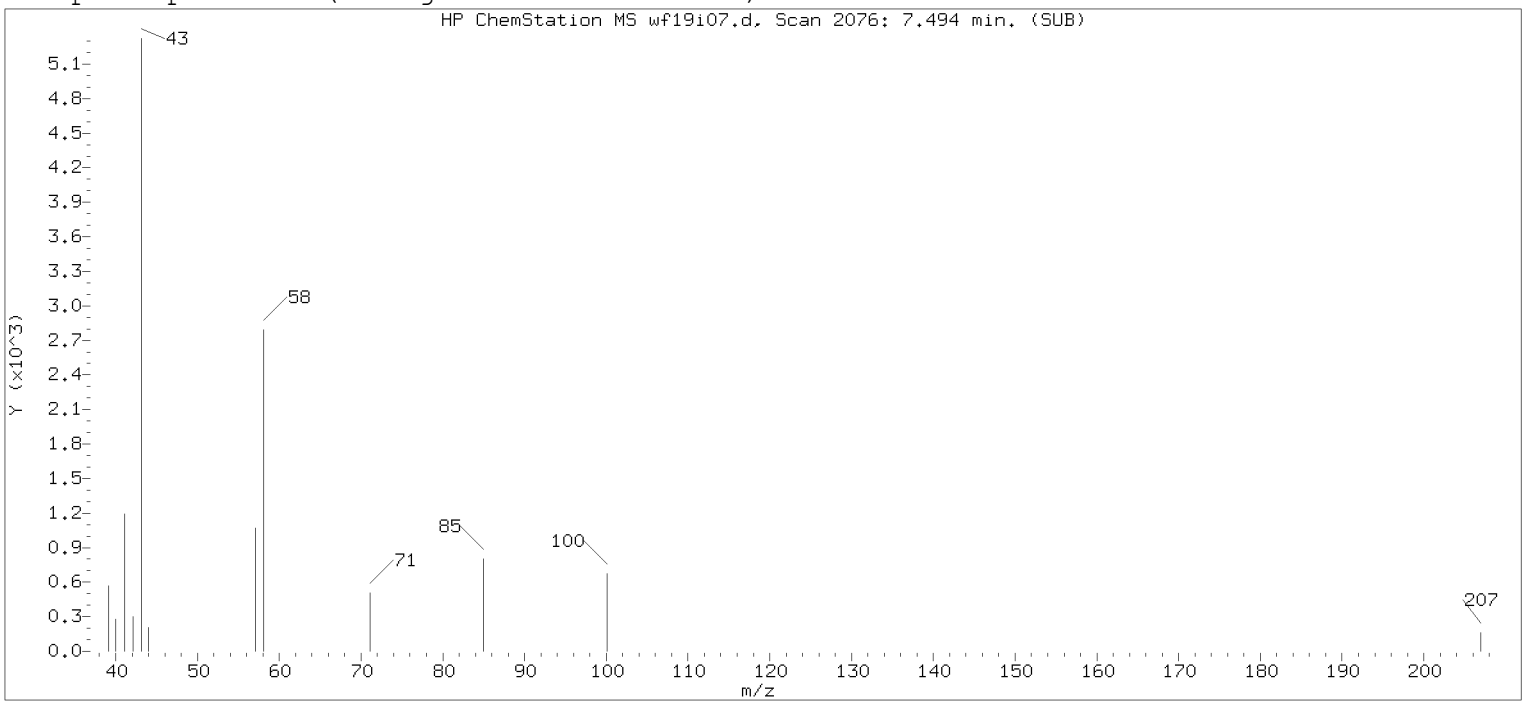
Compound Number : 97
Compound Name : 2-Hexanone
Scan Number : 2076
Retention Time (minutes): 7.494
Quant Ion : 43.00
Area (flag) : 11260M
On-Column Amount (ng) : 1.7534
Integration start scan : 2058 Integration stop scan: 2119
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

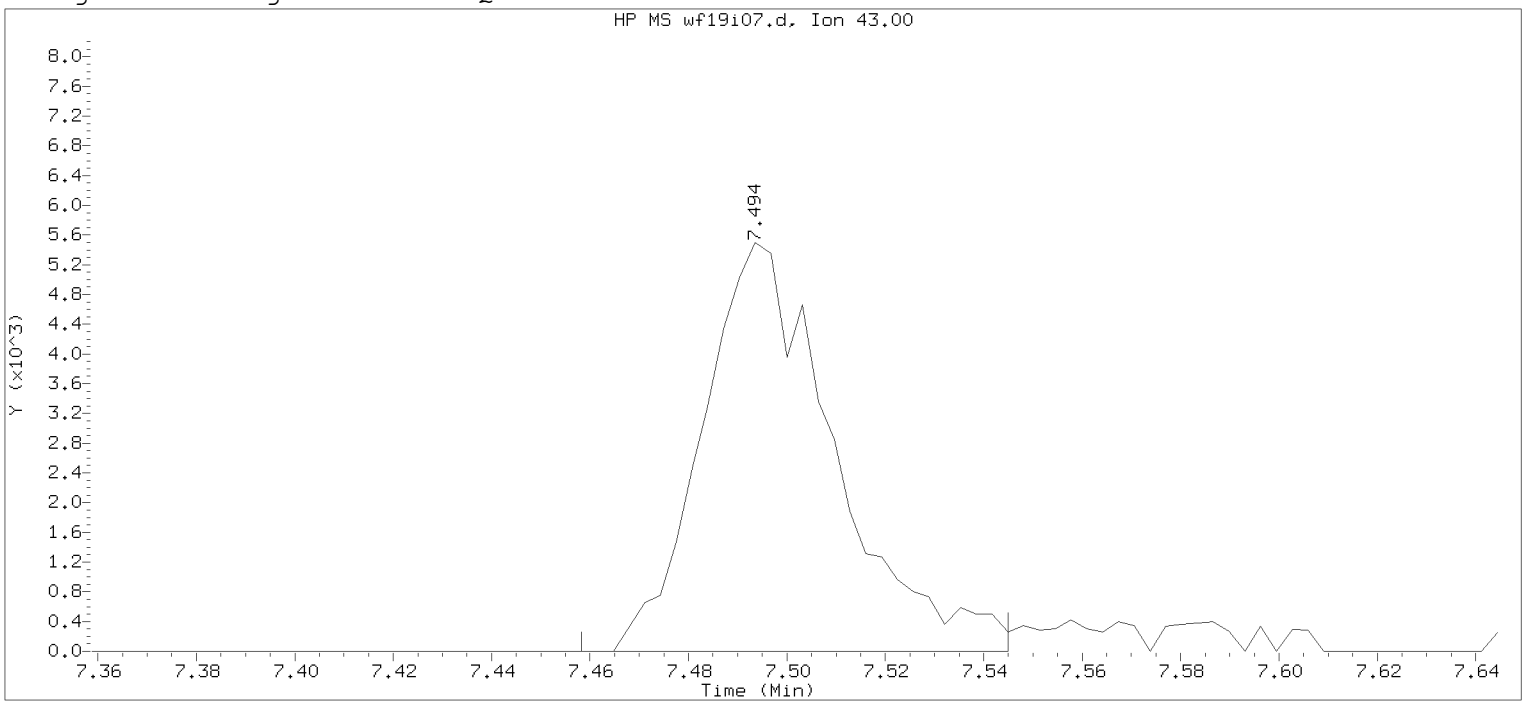
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



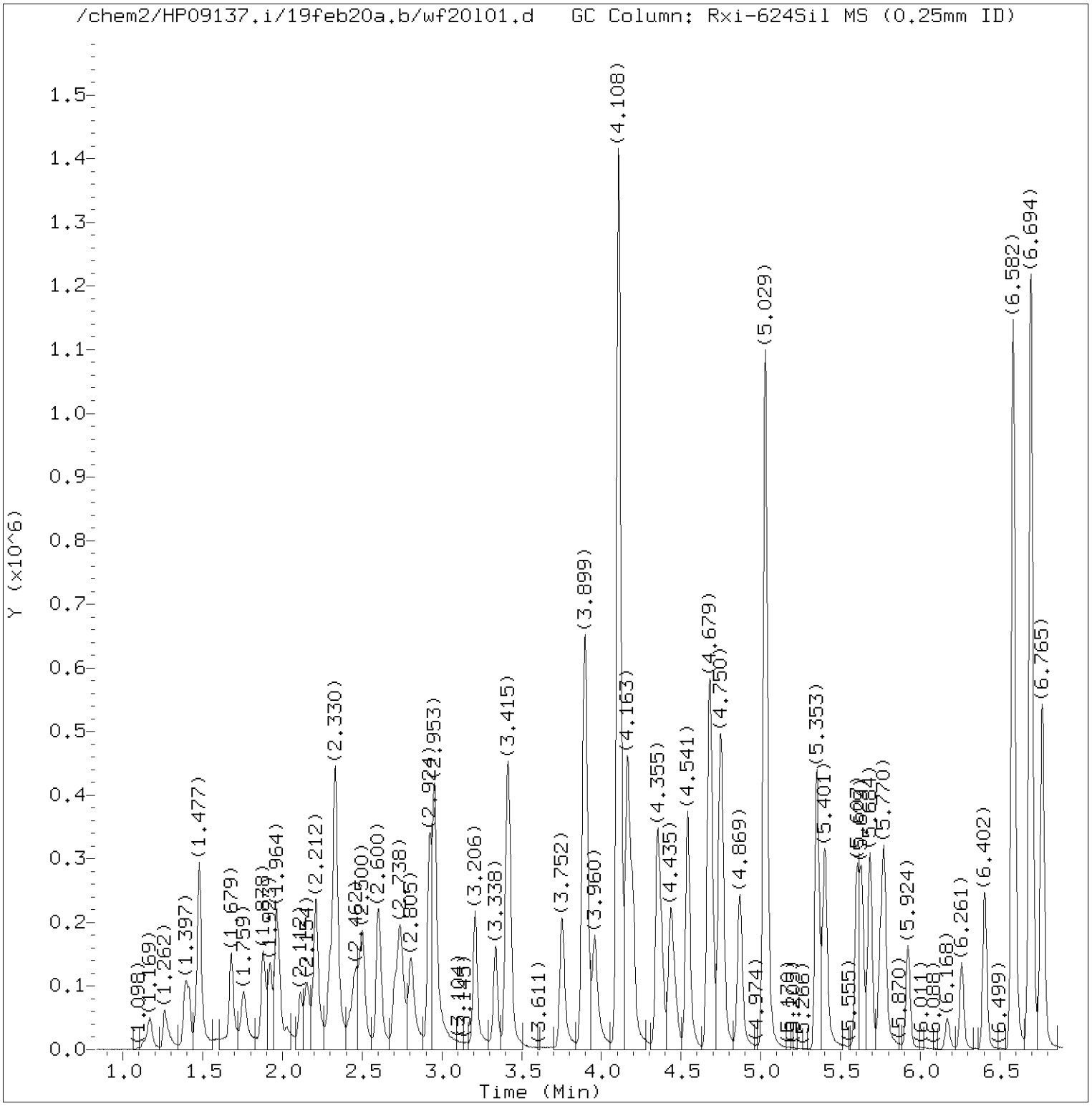
Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 97
Compound Name : 2-Hexanone
Scan Number : 2076
Retention Time (minutes): 7.494
Quant Ion : 43.00
Area : 10210
On-column Amount (ng) : 1.6088
Integration start scan : 2064 Integration stop scan: 2091
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

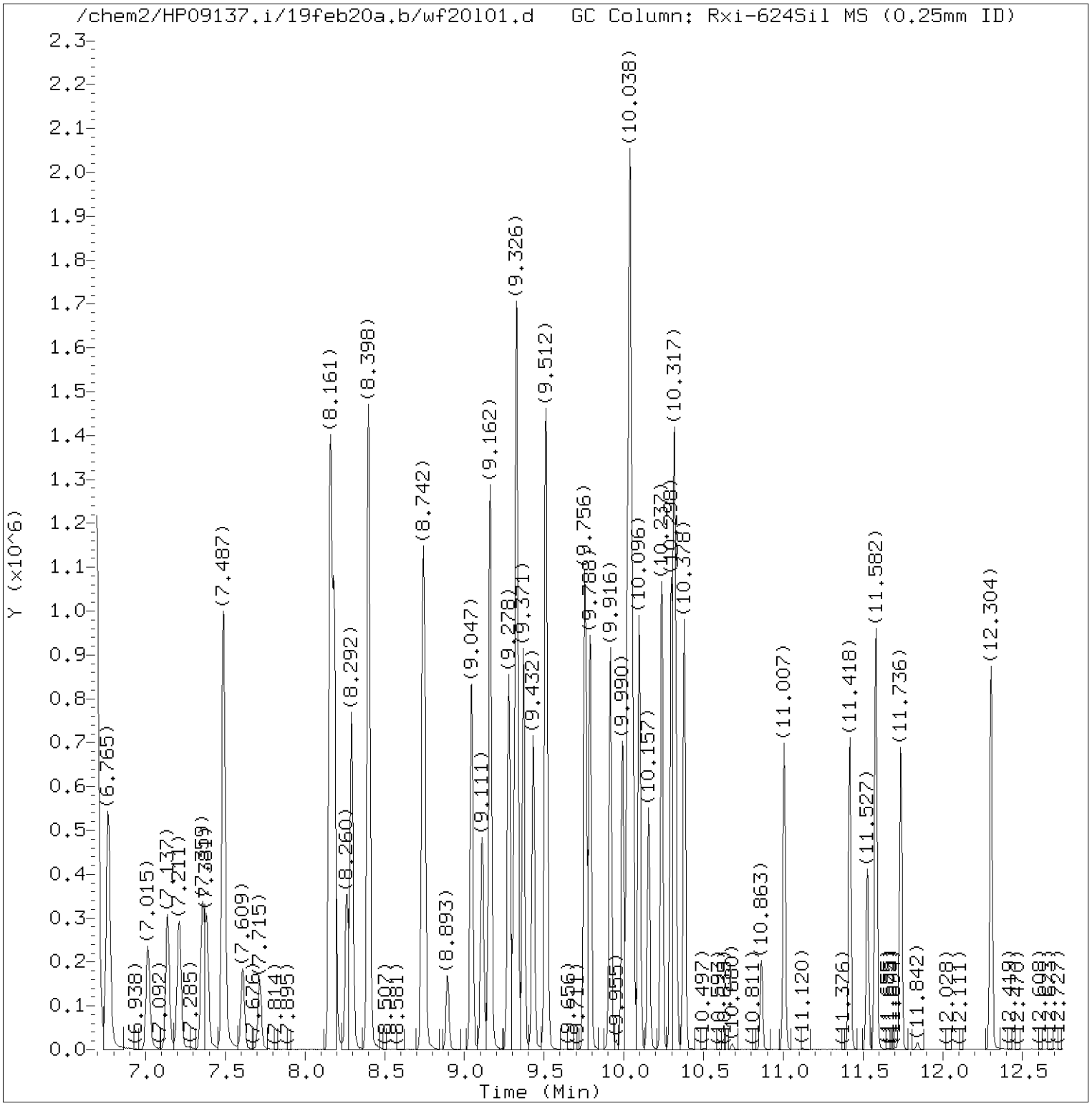
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.259	85	96568	17.290
4) Chloromethane	(2)	1.390	50	134773	19.379
6) Vinyl Chloride	(2)	1.467	62	127103	19.936
5) 1,3-Butadiene	(2)	1.480	39	88405	20.858
8) Bromomethane	(2)	1.679	94	87704	17.442
9) Chloroethane	(2)	1.756	64	73983	17.634
10) Dichlorofluoromethane	(2)	1.878	67	146532	18.044
12) Trichlorofluoromethane	(2)	1.923	101	121162	17.894
11) n-Pentane	(2)	1.961	43	114802	17.828
13) Ethanol	(1)	2.035	45	59325	572.099
15) Freon 123a	(2)	2.147	67	103271M	20.410
16) Acrolein	(1)	2.212	56	220979	134.998
17) 1,1-Dichloroethene	(2)	2.324	96	88878	23.338
19) Freon 113	(2)	2.327	101	74386	22.243
18) Acetone	(1)	2.337	58	114607	144.043
21) 2-Propanol	(1)	2.446	45	89998	152.244
22) Methyl Iodide	(2)	2.465	142	157275M	21.550
23) Carbon Disulfide	(2)	2.504	76	282096	21.025
25) Allyl Chloride	(2)	2.600	41	131552	19.828
27) Methyl Acetate	(2)	2.616	43	111319	19.385
28) Methylene Chloride	(2)	2.703	84	100603M	21.612
29)*t-Butyl alcohol-d10	(1)	2.731	65	227371	250.000
30) t-Butyl alcohol	(1)	2.805	59	207128	196.421
31) Acrylonitrile	(2)	2.921	53	304471	100.782
32) trans-1,2-Dichloroethene	(2)	2.953	96	92997	22.506
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	207314	20.606
34) n-Hexane	(2)	3.206	57	116893	21.143
36) 1,1-Dichloroethane	(2)	3.338	63	164243	21.936
38) di-Isopropyl ether	(2)	3.409	45	314239	21.846
39) 2-Chloro-1,3-butadiene	(2)	3.425	53	138541	21.364
40) Ethyl t-butyl ether	(2)	3.752	59	221032	21.080
45) 2,2-Dichloropropane	(2)	3.883	77	75689	22.509
42) cis-1,2-Dichloroethene	(2)	3.887	96	105718	22.787
44) 2-Butanone	(2)	3.899	43	639144	147.256
47) Propionitrile	(1)	3.960	54	199803	152.452
48) Methacrylonitrile	(2)	4.108	67	496119	152.733
49) Bromochloromethane	(2)	4.114	128	48427	20.081
50) Tetrahydrofuran	(1)	4.169	71	115894	95.544

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	4.195	83	156016	22.208
52)$Dibromofluoromethane	(2)	4.352	113	198099	49.504
53) 1,1,1-Trichloroethane	(2)	4.378	97	119941	22.691
54) Cyclohexane	(2)	4.439	56	142075	20.310
55) 1,1-Dichloropropene	(2)	4.541	75	123671	21.957
56) Carbon Tetrachloride	(2)	4.541	117	94740	20.885
58) Isobutyl Alcohol	(1)	4.673	41	185481	482.472
57)$1,2-Dichloroethane-d4	(2)	4.686	102	52871	49.678
60) Benzene	(2)	4.747	78	392054	21.655
61) 1,2-Dichloroethane	(2)	4.763	62	124290	22.224
65) t-Amyl methyl ether	(2)	4.869	73	220654	20.542
66)*Fluorobenzene	(2)	5.029	96	863762	50.000
67) n-Heptane	(2)	5.032	43	107071	20.263
69) n-Butanol	(1)	5.353	56	328345	961.937
71) Trichloroethene	(2)	5.404	95	97160	22.161
73) Methylcyclohexane	(2)	5.607	83	130478	20.499
74) 1,2-Dichloropropane	(2)	5.632	63	104752	22.537
75) Dibromomethane	(2)	5.751	93	62949	21.944
77) Methyl Methacrylate	(2)	5.773	69	102016	19.973
76) 1,4-Dioxane	(1)	5.783	88	51130M	501.065
79) Bromodichloromethane	(2)	5.924	83	113283	21.493
43) 1,2-Dichloroethene (Total)	(2)		96	198715	45.294
80) 2-Nitropropane	(2)	6.171	41	30099	16.878
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	66371	18.730
82) cis-1,3-Dichloropropene	(2)	6.406	75	158517	21.874
83) 4-Methyl-2-pentanone	(2)	6.582	43	843026	98.533
84)$Toluene-d8	(3)	6.694	98	904644	50.573
89) Toluene	(3)	6.765	92	252495	21.912
90) trans-1,3-Dichloropropene	(3)	7.012	75	141627	20.646
92) Ethyl Methacrylate	(3)	7.137	69	174648	20.719
93) 1,1,2-Trichloroethane	(3)	7.208	97	101734	22.938
94) Tetrachloroethene	(3)	7.359	166	102889	22.005
95) 1,3-Dichloropropane	(3)	7.388	76	169229	21.968
97) 2-Hexanone	(3)	7.487	43	652921	97.295
98) Dibromochloromethane	(3)	7.609	129	93639	21.617
100) 1,2-Dibromoethane	(3)	7.715	107	106921	21.943
101)*Chlorobenzene-d5	(3)	8.161	117	713862	50.000
103) Chlorobenzene	(3)	8.183	112	280419	21.937

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
104) 1,1,1,2-Tetrachloroethane	(3)	8.260	131	87309	21.253
105) Ethylbenzene	(3)	8.292	91	476224	21.744
107) m+p-Xylene	(3)	8.398	106	380724	43.723
108) o-Xylene	(3)	8.735	106	183750	21.450
110) Styrene	(3)	8.748	104	318309	22.150
111) Bromoform	(3)	8.896	173	67300	19.963
112) Isopropylbenzene	(3)	9.047	105	467195	22.194
113) Cyclohexanone	(1)	9.111	55	180831	392.853
115)$4-Bromofluorobenzene	(3)	9.162	95	356184	49.772
116) Bromobenzene	(4)	9.278	156	123084	21.520
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	166416	21.576
118) 1,2,3-Trichloropropane	(4)	9.310	110	50955	21.933
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	259117	104.764
120) n-Propylbenzene	(4)	9.371	91	558993	22.171
121) 2-Chlorotoluene	(4)	9.432	126	114743	22.064
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	396619	21.812
122) 4-Chlorotoluene	(4)	9.518	126	121267	21.782
125) tert-Butylbenzene	(4)	9.753	134	89119	21.572
126) Pentachloroethane	(4)	9.765	167	66140	20.252
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	411236	21.462
128) sec-Butylbenzene	(4)	9.916	105	488887	21.903
130) 1,3-Dichlorobenzene	(4)	9.990	146	235017	21.548
131) p-Isopropyltoluene	(4)	10.022	119	430620	21.794
132)*1,4-Dichlorobenzene-d4	(4)	10.038	152	397089	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	245420	21.706
91) 1,3-Dichloropropene (total)	(3)		100	300144	42.520
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	439986	21.341
136) Benzyl Chloride	(4)	10.157	91	312431	19.742
137) 1,3-Diethylbenzene	(4)	10.237	119	260974	21.021
138) 1,4-Diethylbenzene	(4)	10.298	119	270284	20.320
140) n-Butylbenzene	(4)	10.314	92	213919	21.451
139) 1,2-Dichlorobenzene	(4)	10.324	146	235762	21.788
141) 1,2-Diethylbenzene	(4)	10.381	119	223186	21.293
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	36179	20.640
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	174405	21.019
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	171135	21.483
148) Hexachlorobutadiene	(4)	11.530	225	58819	20.731
149) Naphthalene	(4)	11.582	128	578423	21.460

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	166855	21.460
109) Xylene (Total)	(3)		106	564474	65.173
151) 2-Methylnaphthalene	(4)	12.304	142	303477	19.735
142) Diethylbenzene (total)	(4)		100	754444	62.634

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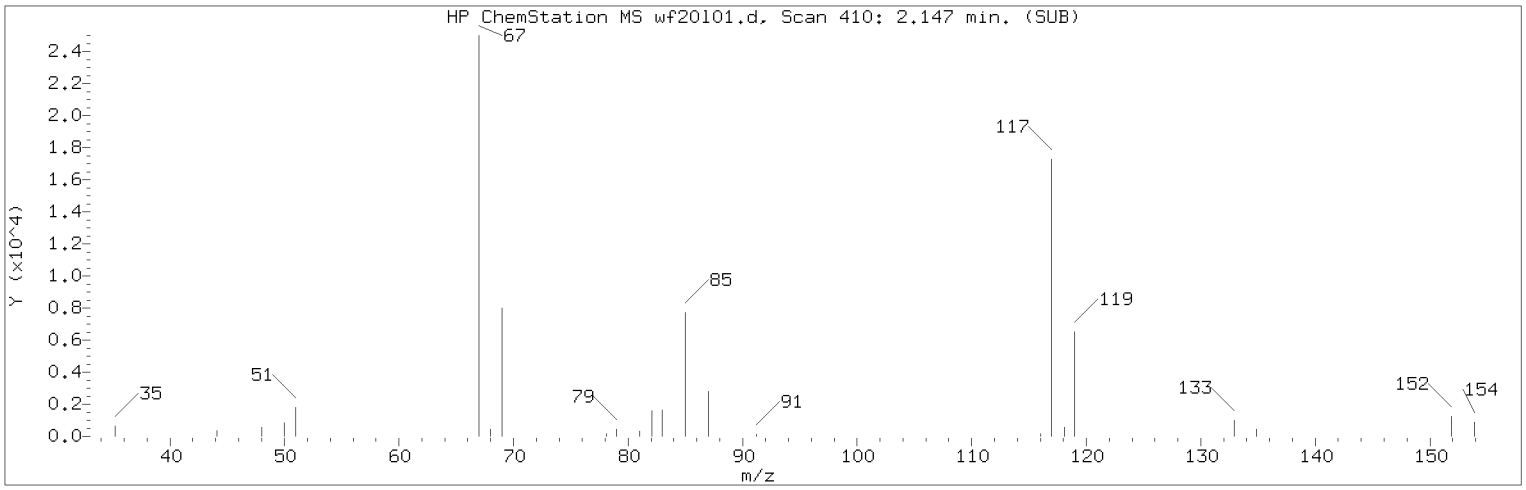
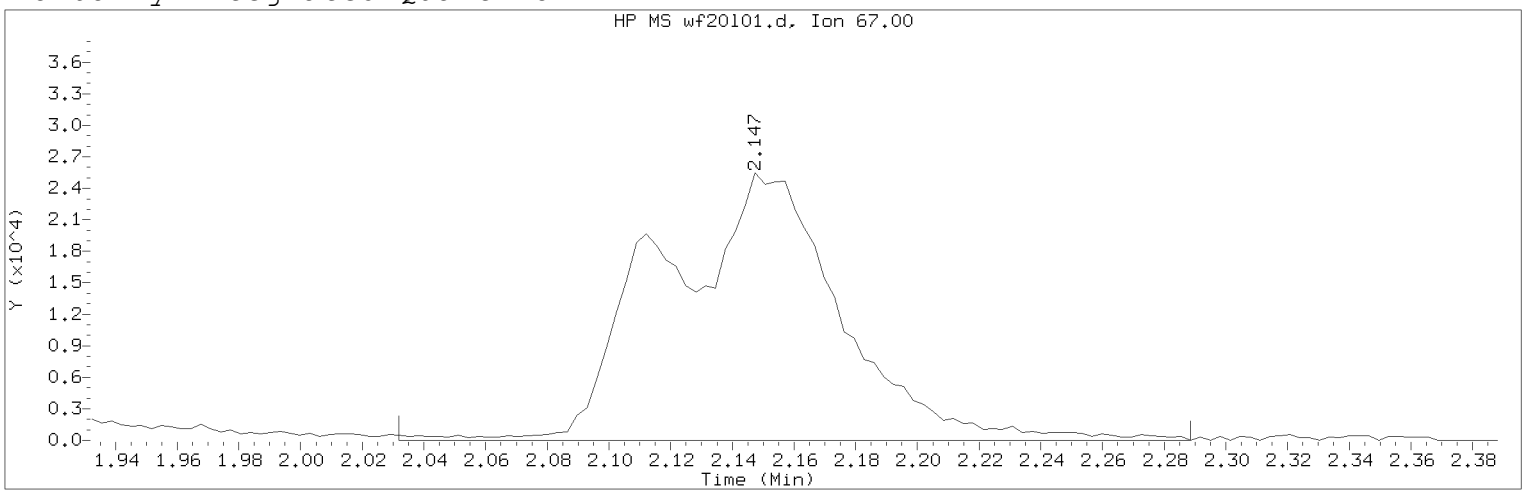
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

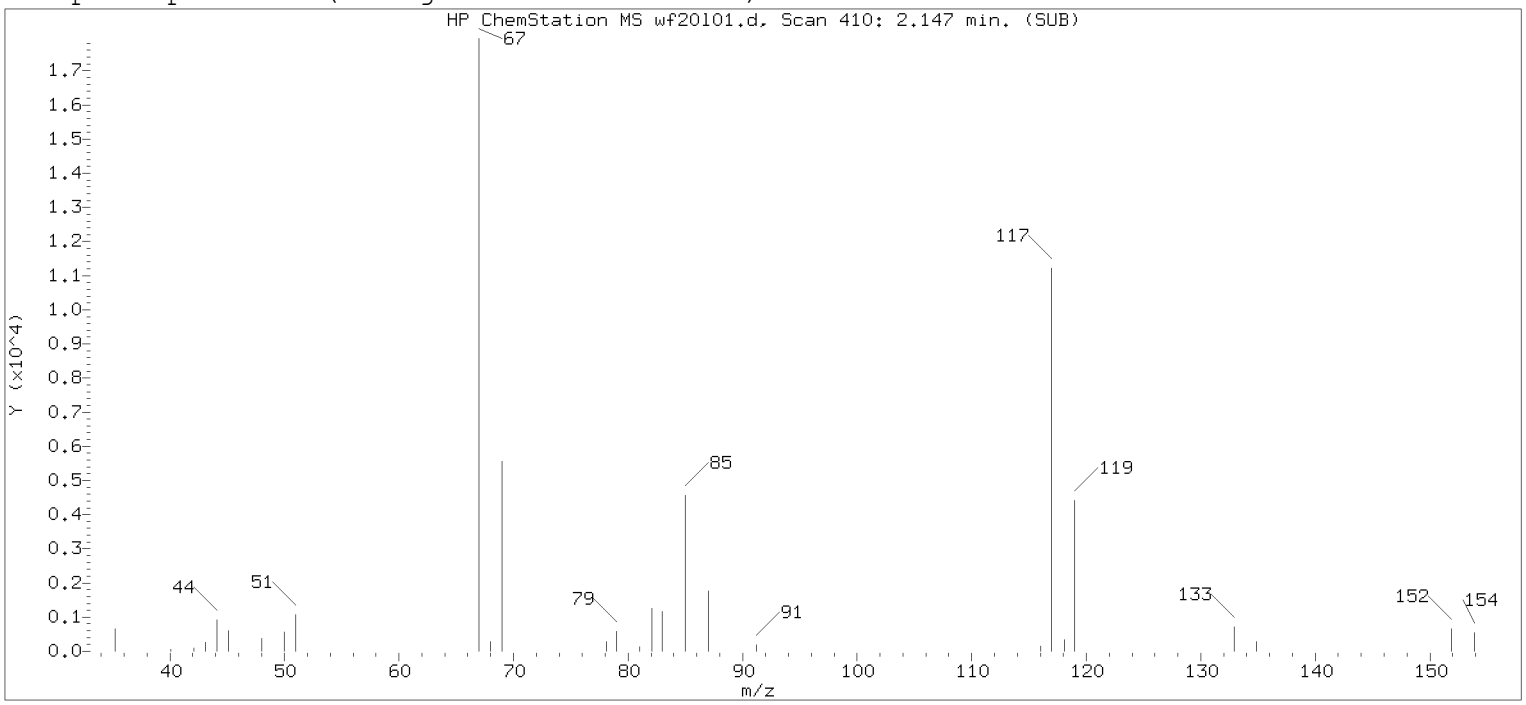
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 410
Retention Time (minutes): 2.147
Quant Ion : 67.00
Area (flag) : 103271M
On-Column Amount (ng) : 20.4098
Integration start scan : 373 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

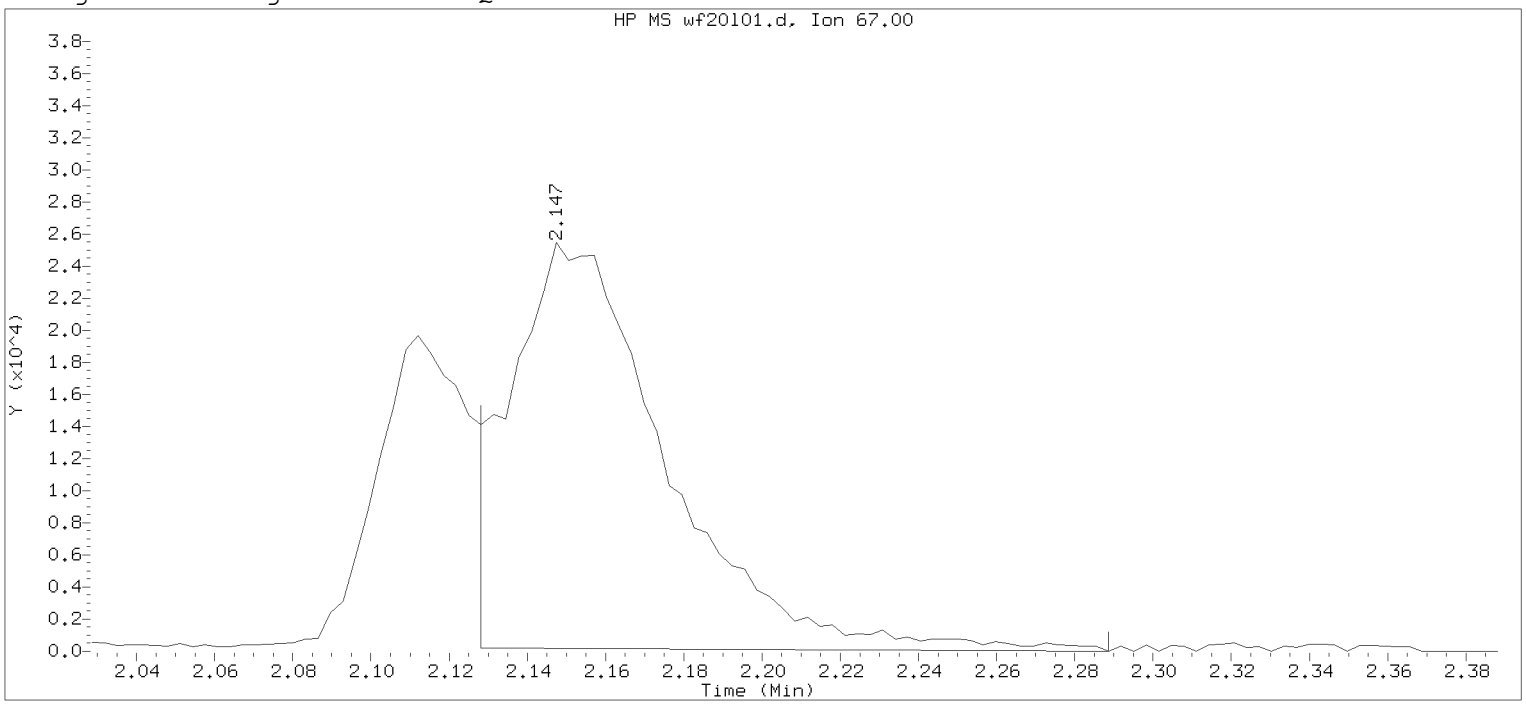
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:55.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



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Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-FEB-2019 11:23
Date, time and analyst ID of latest file update: 20-Feb-2019 12:22 Automation

Sample Name: LCSW62 Lab Sample ID: LCSW62

Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 410		
Retention Time (minutes)	: 2.147		
Quant Ion	: 67.00		
Area	: 69986		
On-column Amount (ng)	: 13.8316		
Integration start scan	: 403	Integration stop scan:	453
Y at integration start	: 195	Y at integration end:	0

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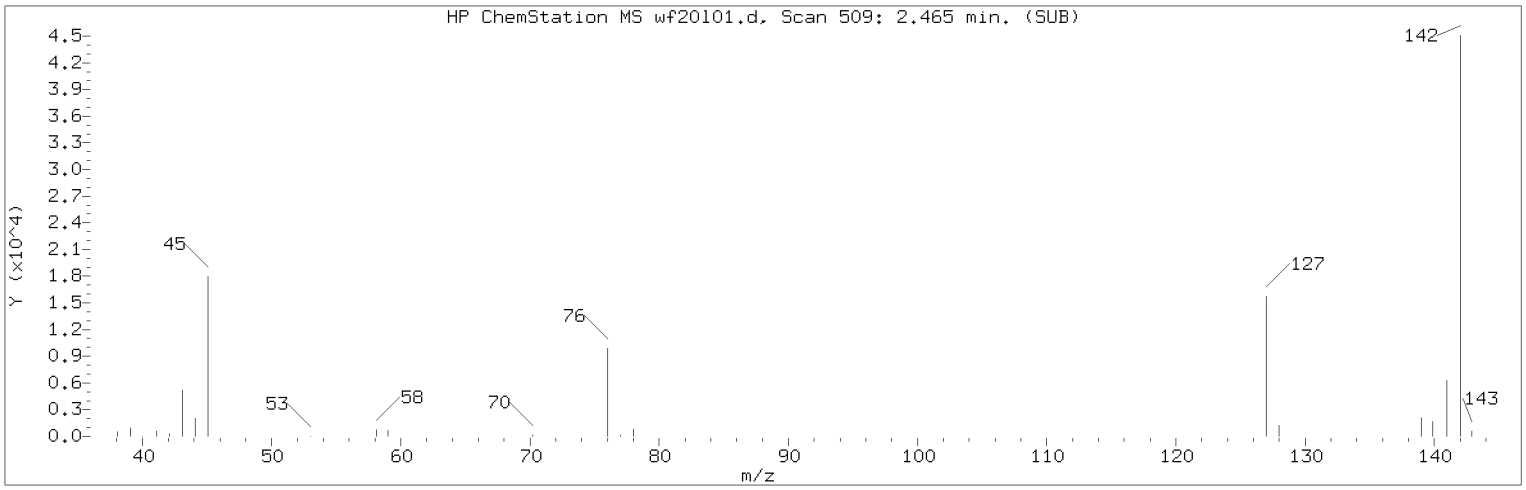
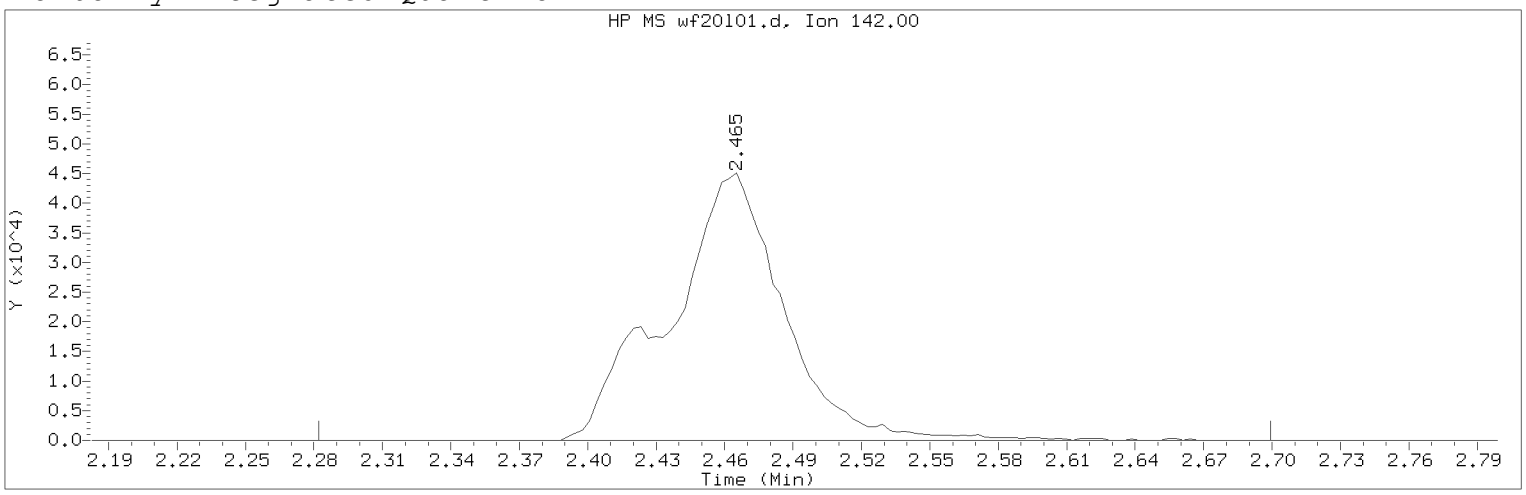
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

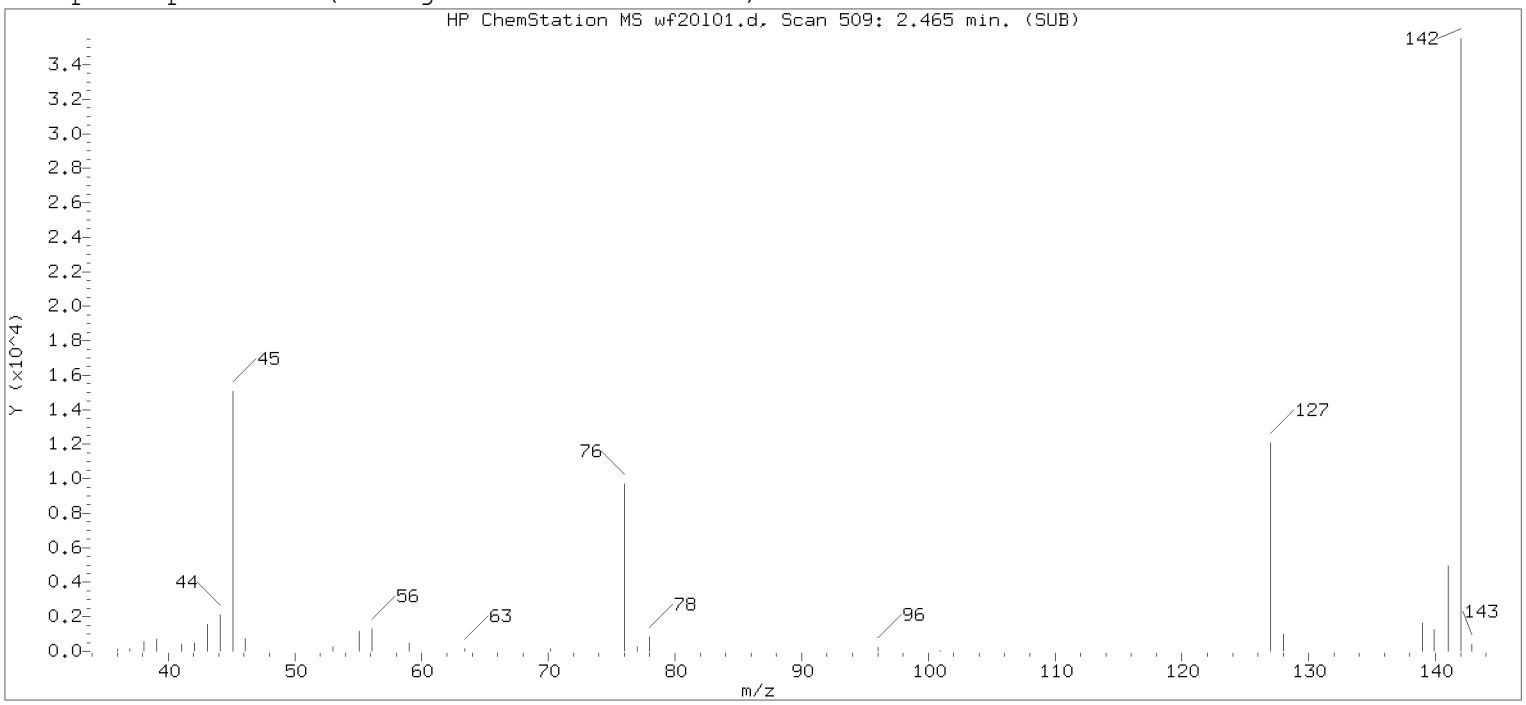
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area (flag) : 157275M
On-Column Amount (ng) : 21.5504
Integration start scan : 451 Integration stop scan: 581
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

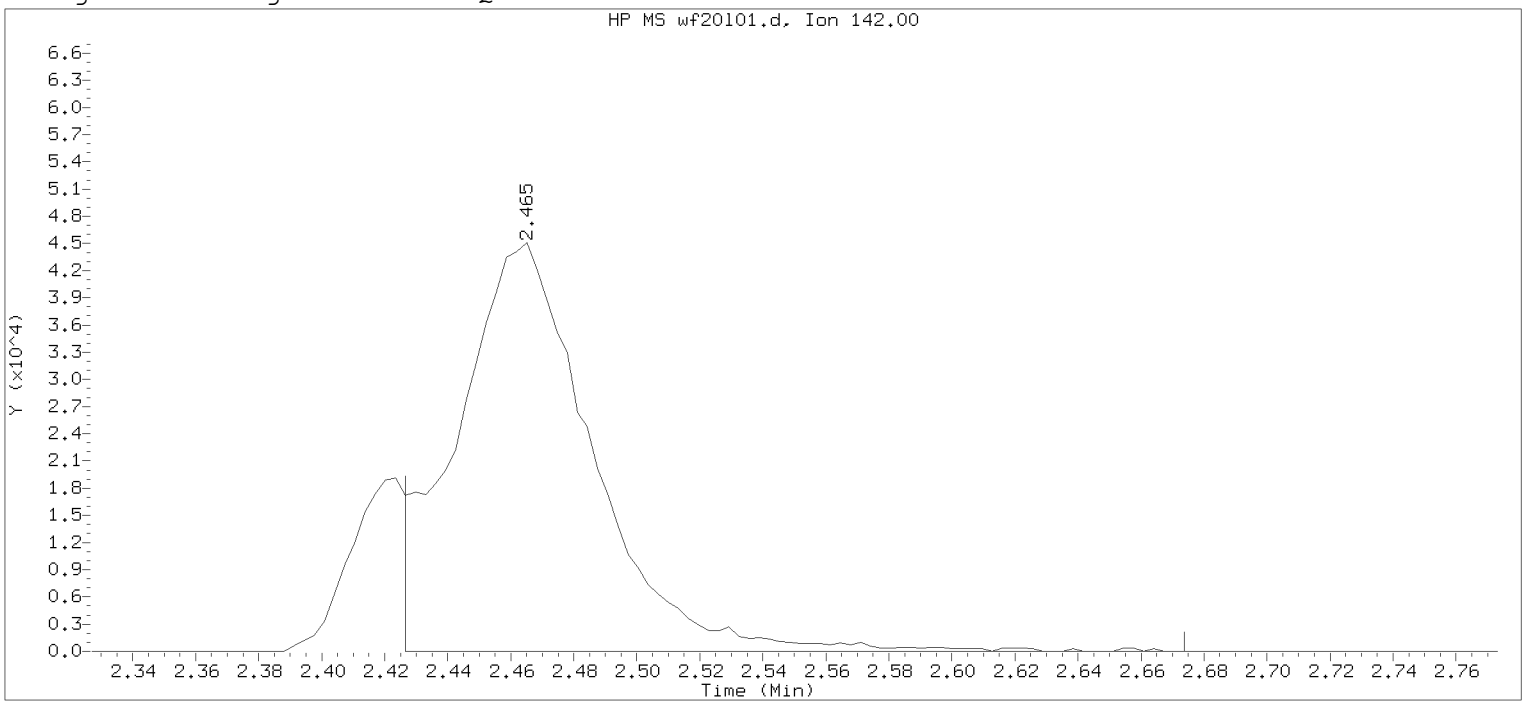
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:55.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



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Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-FEB-2019 11:23
Date, time and analyst ID of latest file update: 20-Feb-2019 12:22 Automation

Sample Name: LCSW62 Lab Sample ID: LCSW62

Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area : 135289
On-column Amount (ng) : 18.5378
Integration start scan : 496 Integration stop scan: 573
Y at integration start : 0 Y at integration end: 0

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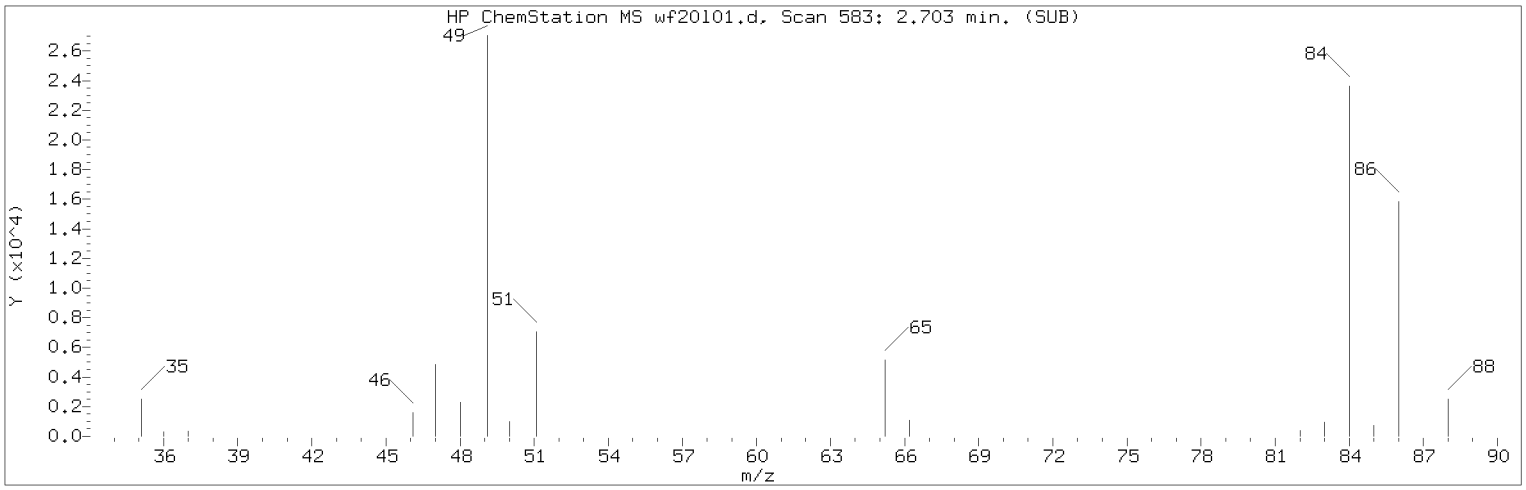
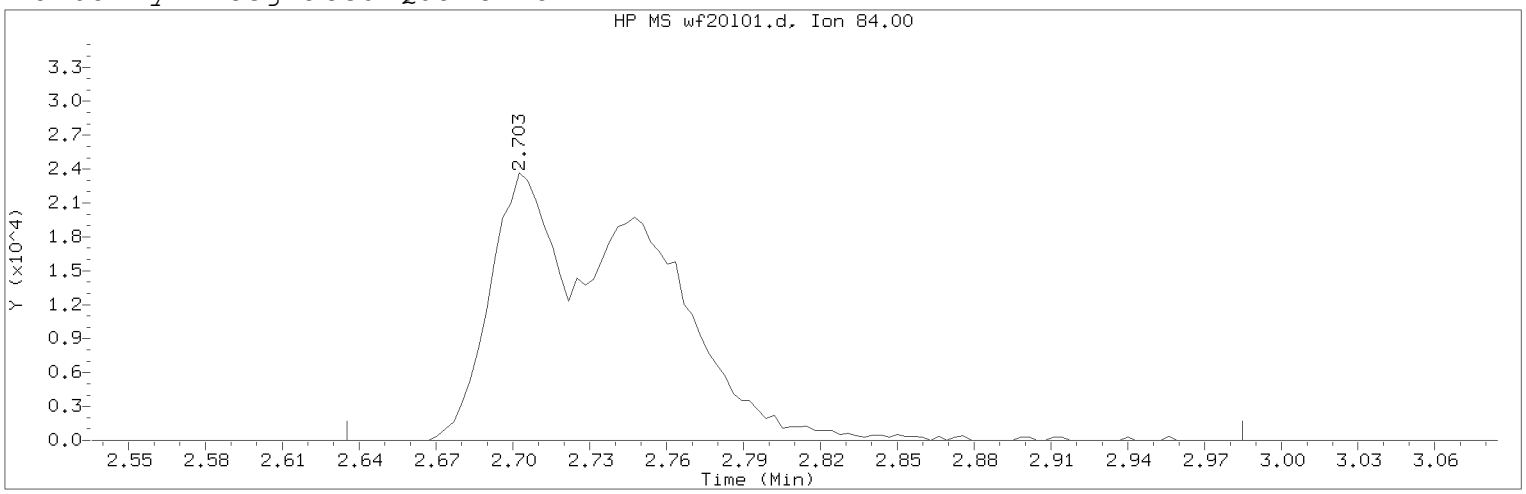
Target 3.5 esignature user Abigail P. Roselli

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20101.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

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Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

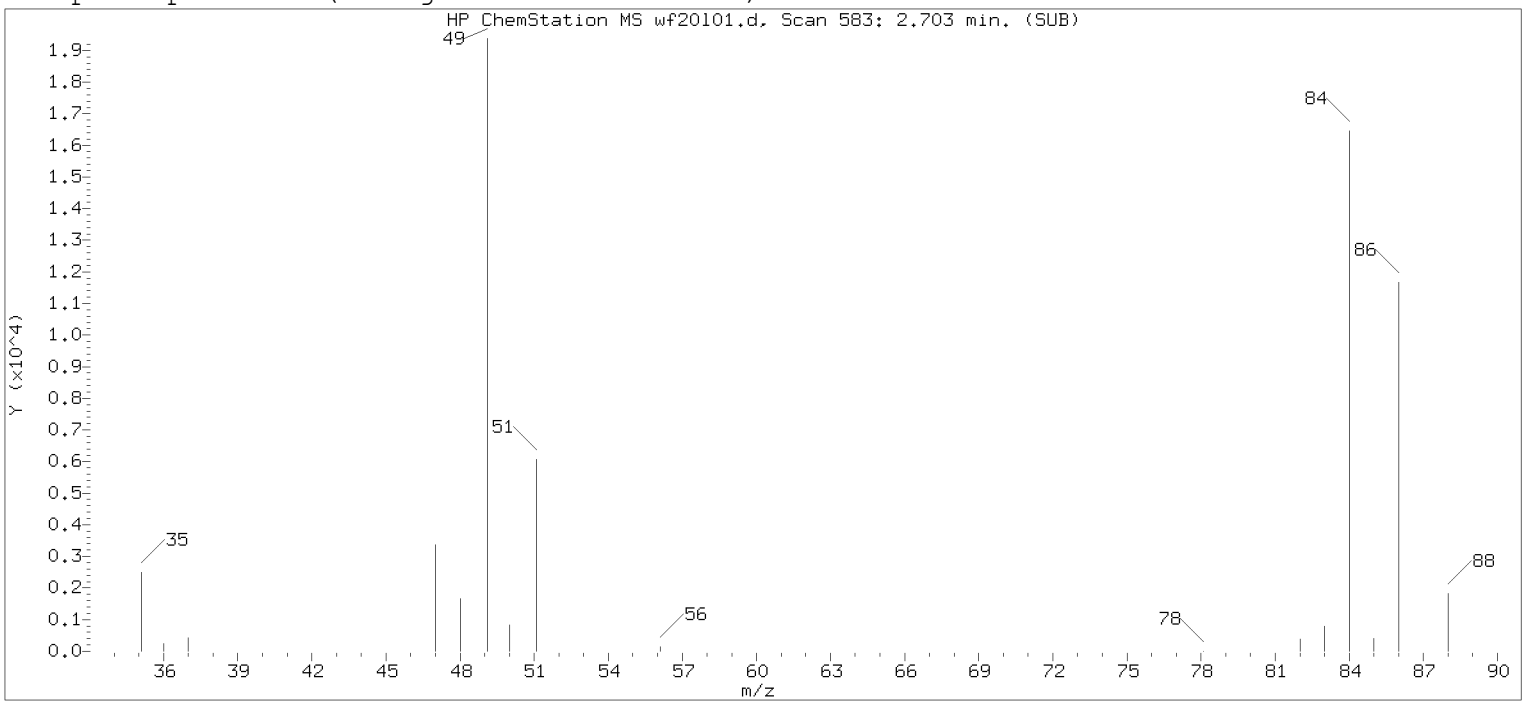
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 583
Retention Time (minutes): 2.703
Quant Ion : 84.00
Area (flag) : 100603M
On-Column Amount (ng) : 21.6116
Integration start scan : 561 Integration stop scan: 670
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

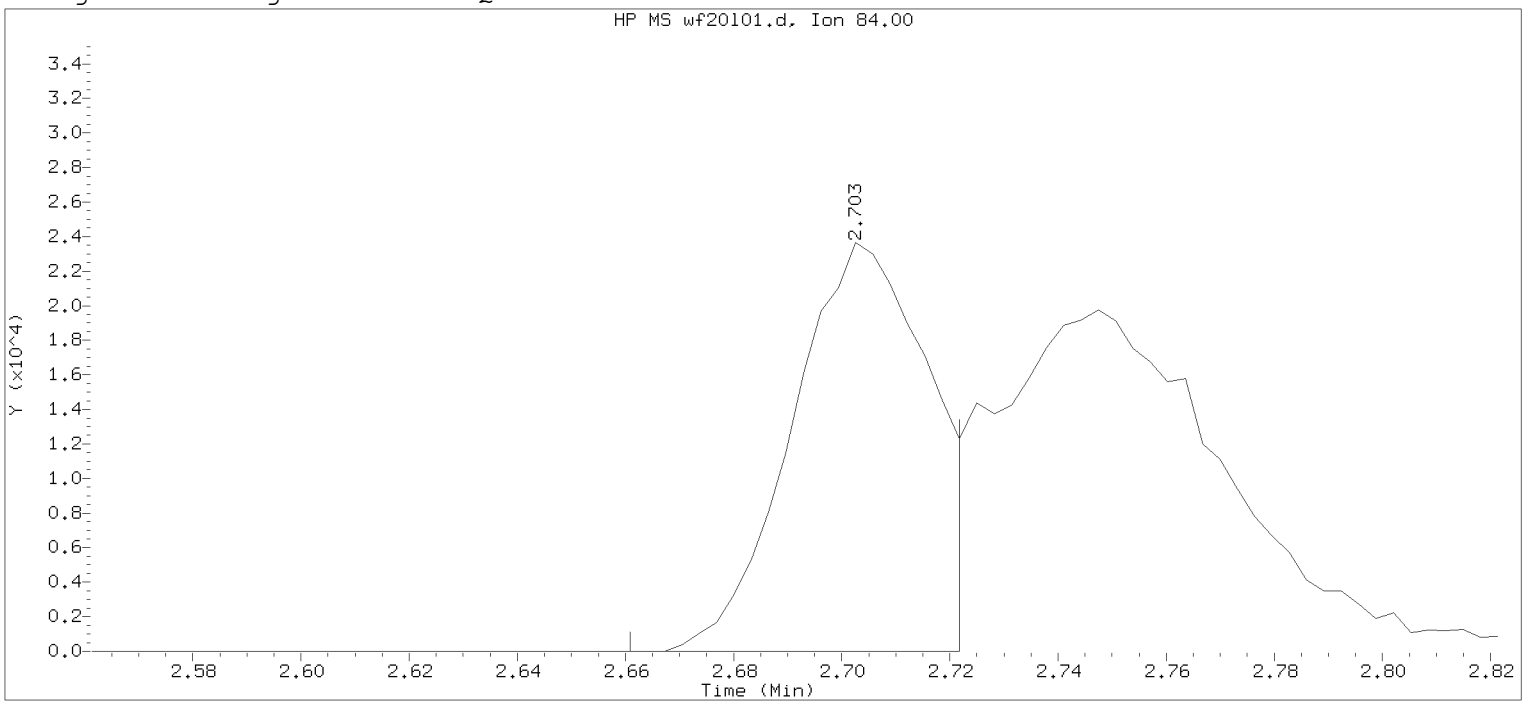
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:55.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20101.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

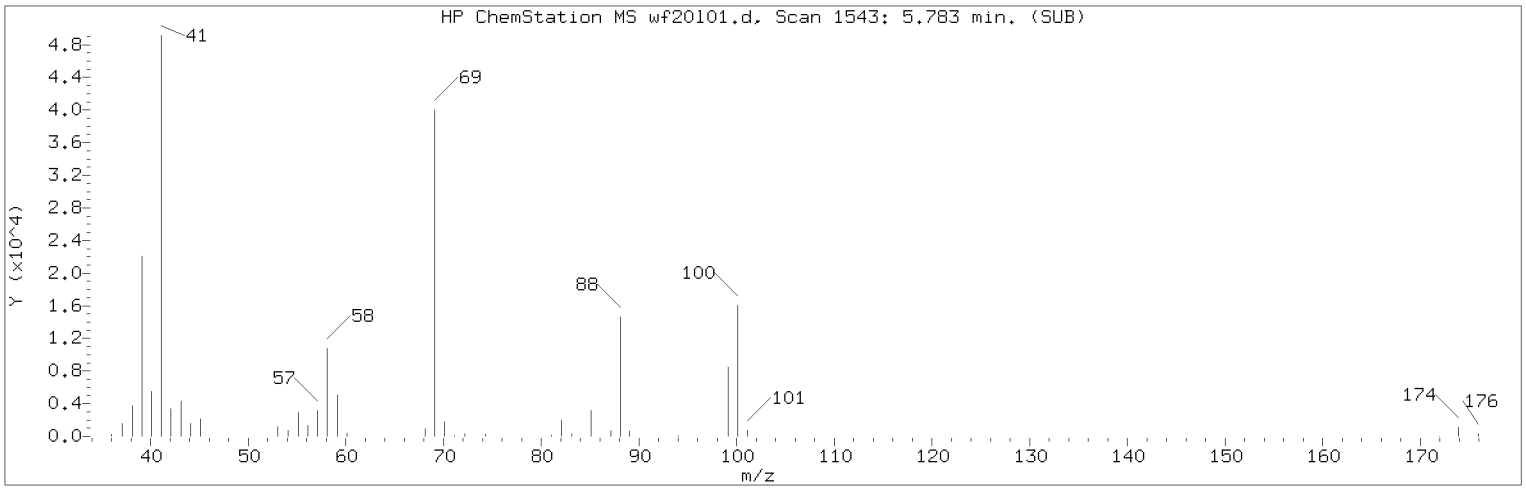
Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-FEB-2019 11:23
Date, time and analyst ID of latest file update: 20-Feb-2019 12:22 Automation

Sample Name: LCSW62 Lab Sample ID: LCSW62

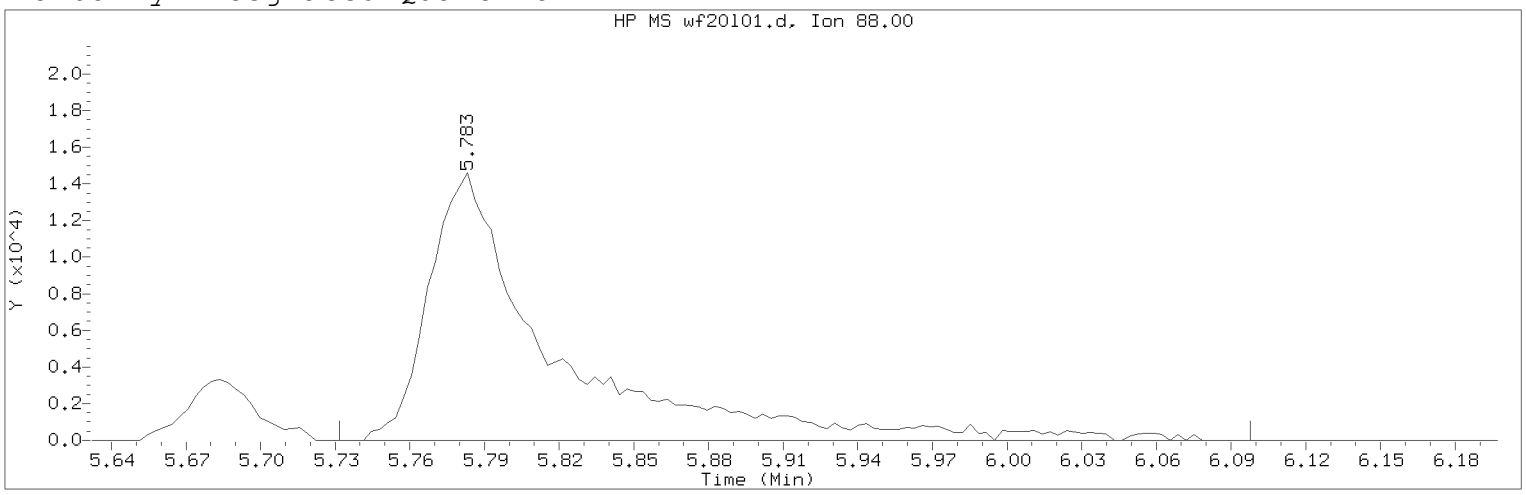
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 583
Retention Time (minutes): 2.703
Quant Ion : 84.00
Area : 40948
On-column Amount (ng) : 8.7967
Integration start scan : 569 Integration stop scan: 588
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:38.
Target 3.5 esignature user Abigail P. Roselli

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20101.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

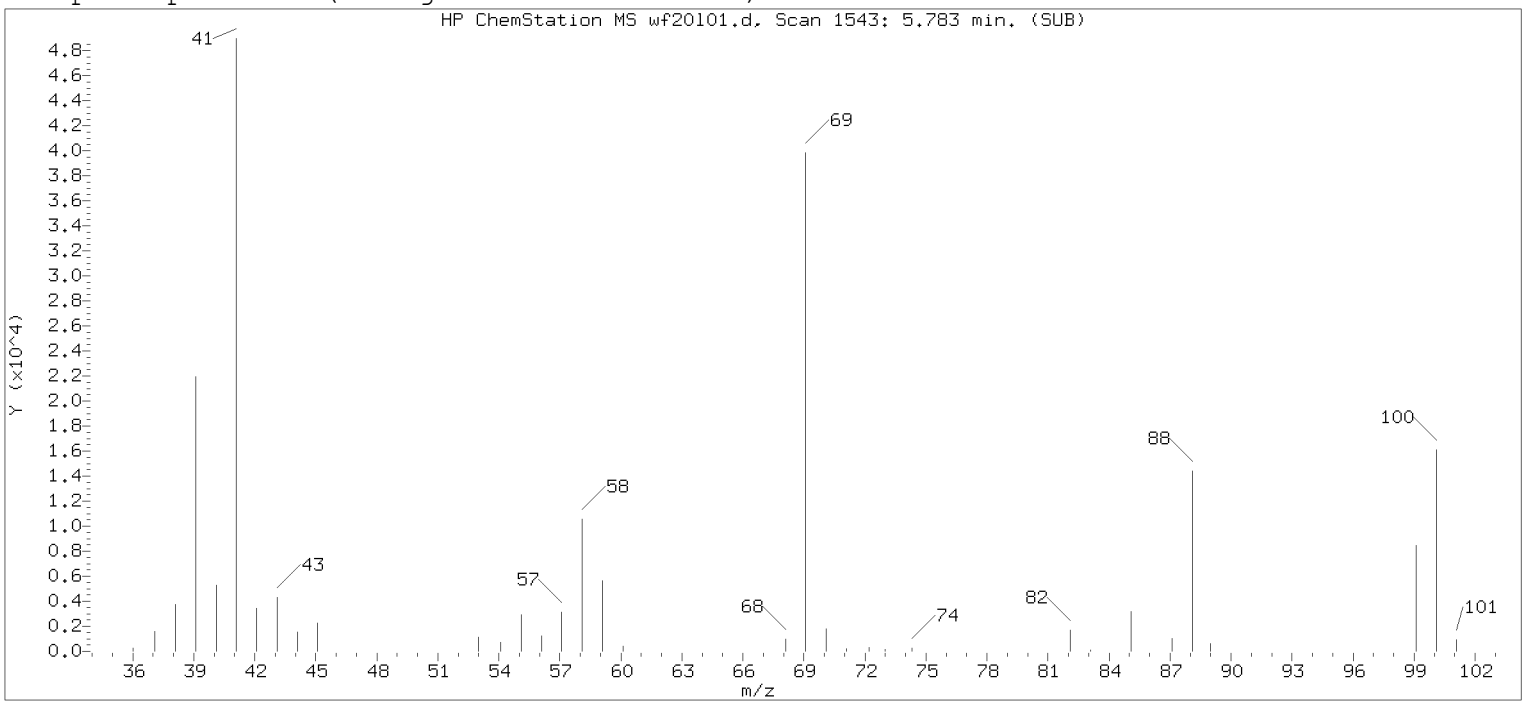
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1543
Retention Time (minutes): 5.783
Quant Ion : 88.00
Area (flag) : 51130M
On-Column Amount (ng) : 501.0652
Integration start scan : 1526 Integration stop scan: 1640
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

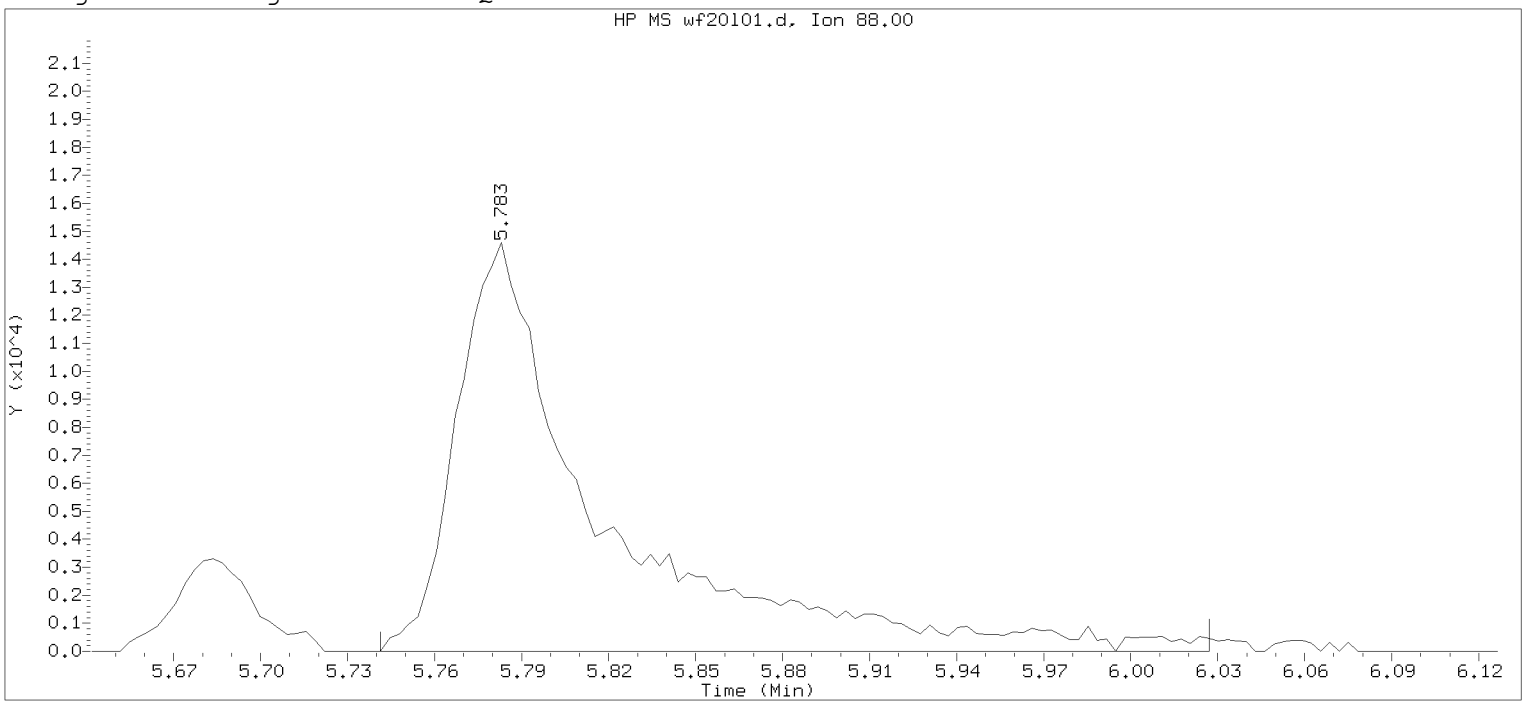
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:55.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-FEB-2019 11:23
Date, time and analyst ID of latest file update: 20-Feb-2019 12:22 Automation

Sample Name: LCSW62 Lab Sample ID: LCSW62

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1543
Retention Time (minutes): 5.783
Quant Ion : 88.00
Area : 50345
On-column Amount (ng) : 493.3796
Integration start scan : 1529 Integration stop scan: 1618
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Data File: /chem2/HP09137.i/19may18a.b/wy18t01.d

Date : 18-MAY-2019 21:44

Client ID: BFB FEB05-19

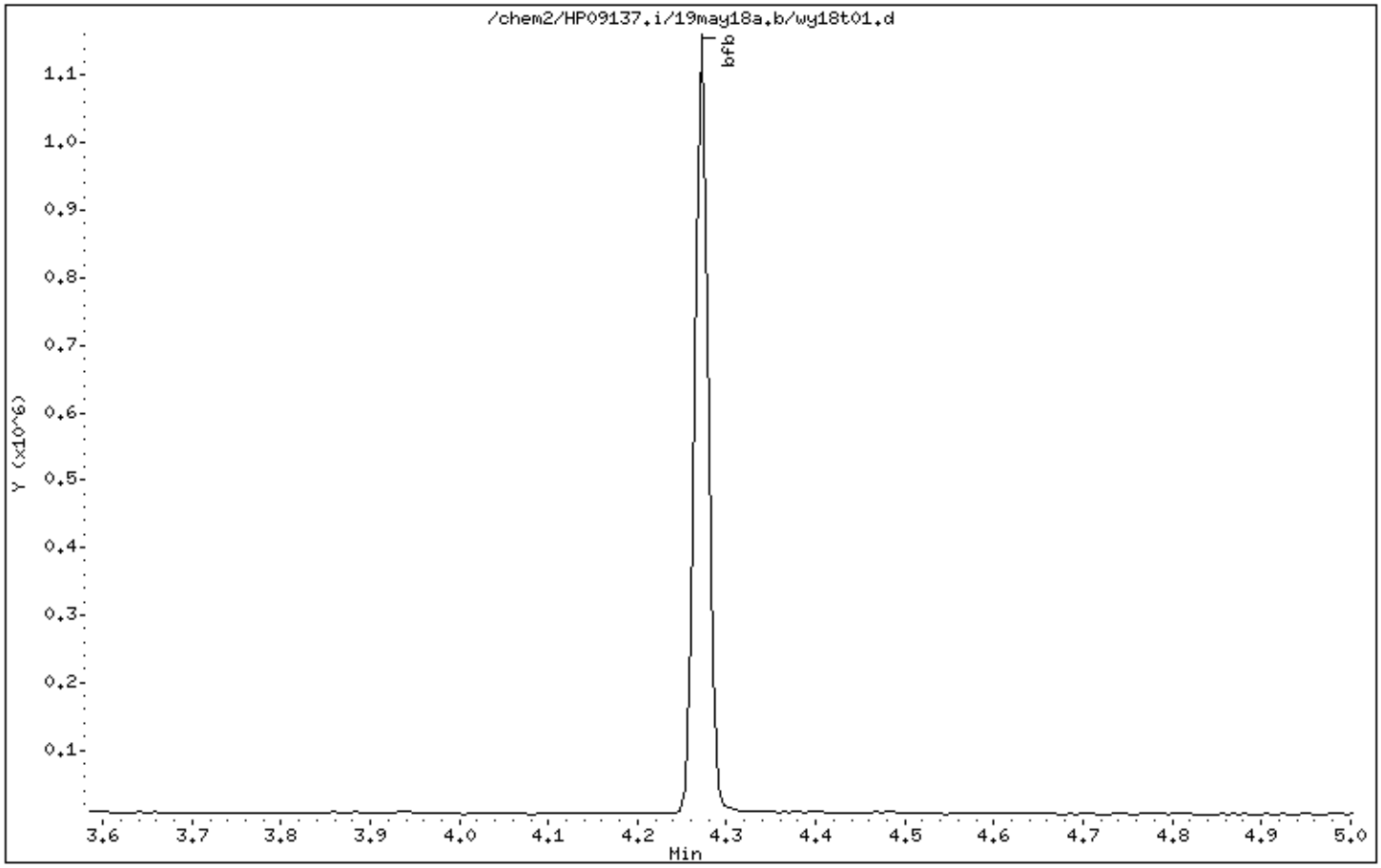
Instrument: HP09137.i

Sample Info: BFB FEB05-19;BFB 50NG;1;3;;;;;;

Operator: SEJ02002

Column phase: DB-624

Column diameter: 0.18



Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Data File: /chem2/HP09137.i/19may18a.b/wy18t01.d

Date : 18-MAY-2019 21:44

Client ID: BFB FEB05-19

Instrument: HP09137.i

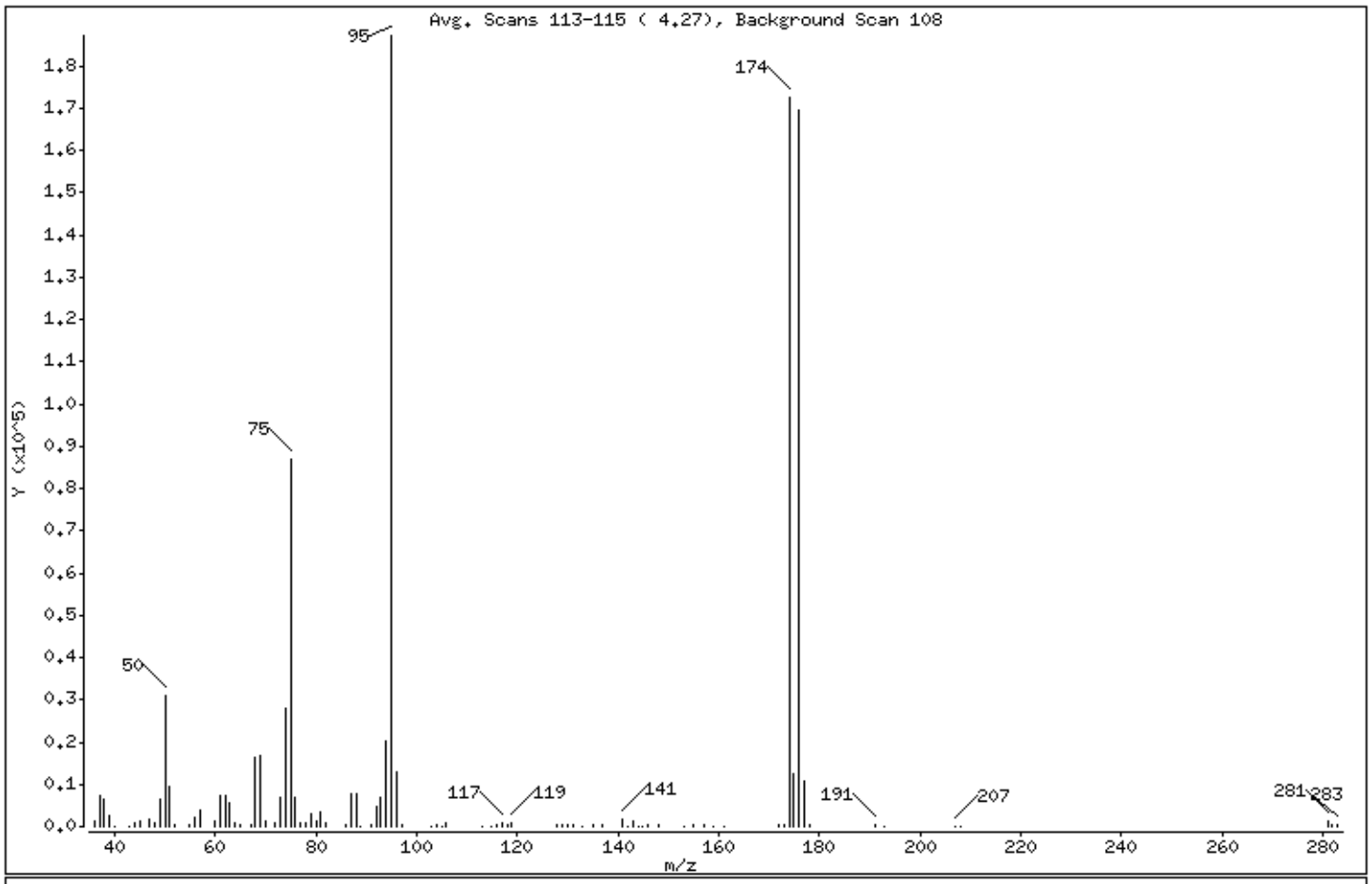
Sample Info: BFB FEB05-19;BFB 50NG;1;3;;;;;;

Operator: SEJ02002

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.64
75	30.00 - 60.00% of mass 95	46.44
96	5.00 - 9.00% of mass 95	6.84
173	Less than 2.00% of mass 174	0.33 (0.35)
174	50.00 - 100.00% of mass 95	92.20
175	5.00 - 9.00% of mass 174	6.62 (7.18)
176	95.00 - 101.00% of mass 174	90.49 (98.15)
177	5.00 - 9.00% of mass 176	5.78 (6.39)

Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Data File: /chem2/HP09137.i/19may18a.b/wy18t01.d

Date : 18-MAY-2019 21:44

Client ID: BFB FEB05-19 Instrument: HP09137.i

Sample Info: BFB FEB05-19;BFB 50NG;1;3;;;;;;

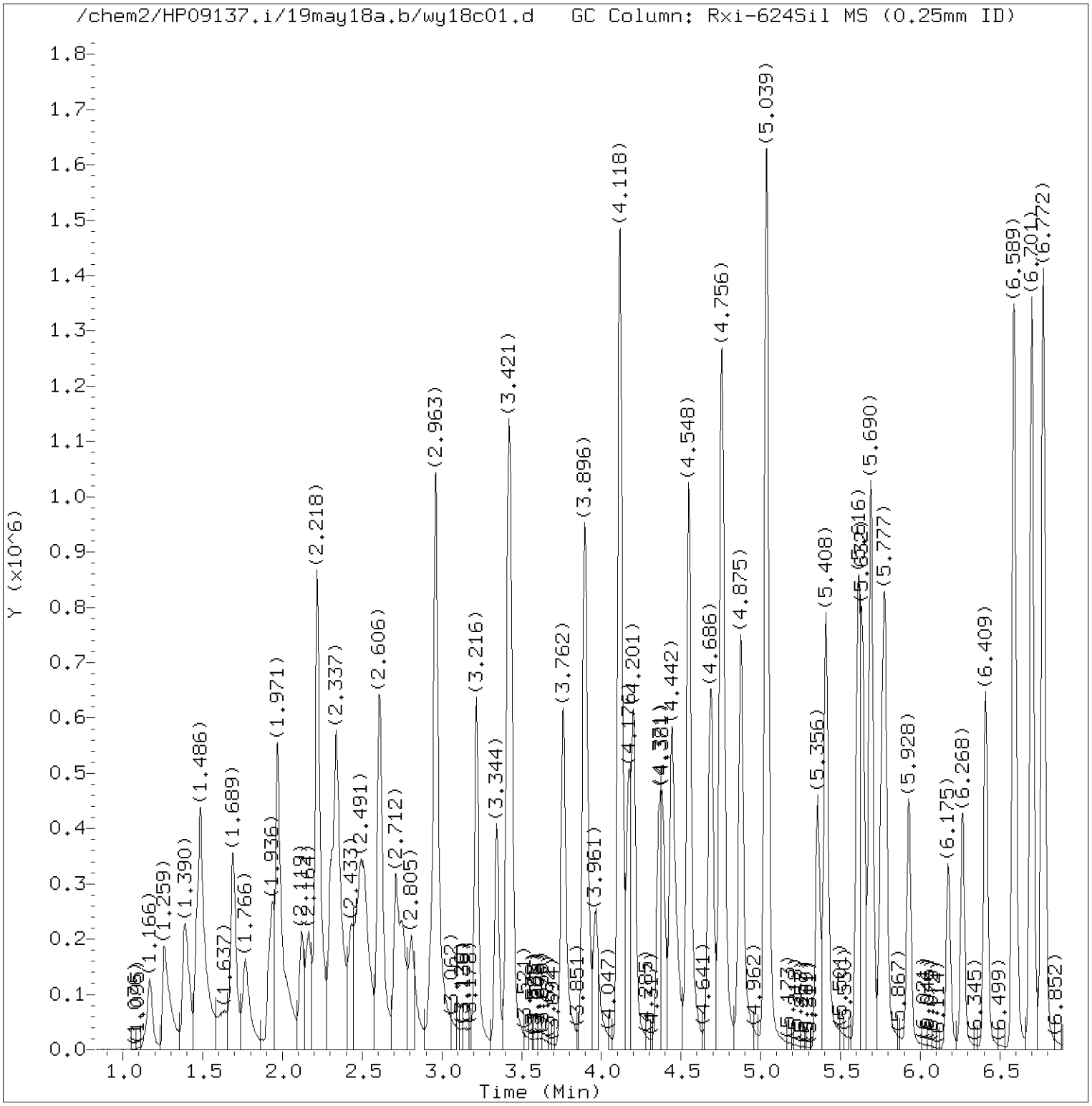
Operator: SEJ02002

Column phase: DB-624 Column diameter: 0.18

Data File: wy18t01.d
Spectrum: Avg. Scans 113-115 (4.27), Background Scan 108
Location of Maximum: 95.00
Number of points: 92

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1414	68.00	16311	97.00	533	148.00	466
37.00	7288	69.00	16776	103.00	96	153.00	192
38.00	6360	70.00	1438	104.00	608	155.00	524
39.00	2795	72.00	980	105.00	87	157.00	343
40.00	170	73.00	6743	106.00	720	159.00	126
43.00	84	74.00	27880	113.00	116	161.00	88
44.00	721	75.00	86912	115.00	83	172.00	581
45.00	1255	76.00	7035	116.00	245	173.00	612
47.00	1797	77.00	979	117.00	826	174.00	172544
48.00	1056	78.00	855	118.00	540	175.00	12390
49.00	6270	79.00	3149	119.00	742	176.00	169344
50.00	31136	80.00	1130	128.00	458	177.00	10814
51.00	9678	81.00	3355	129.00	226	178.00	239
52.00	540	82.00	664	130.00	571	191.00	391
55.00	418	86.00	282	131.00	309	193.00	114
56.00	2342	87.00	7726	133.00	152	207.00	198
57.00	4063	88.00	7828	135.00	308	208.00	108
60.00	1375	89.00	106	137.00	244	281.00	1125
61.00	7524	91.00	526	141.00	1515	282.00	357
62.00	7305	92.00	4844	142.00	90	283.00	276
63.00	5378	93.00	7062	143.00	1365		
64.00	712	94.00	20424	144.00	85		
65.00	289	95.00	187136	145.00	84		
67.00	539	96.00	12793	146.00	273		

Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

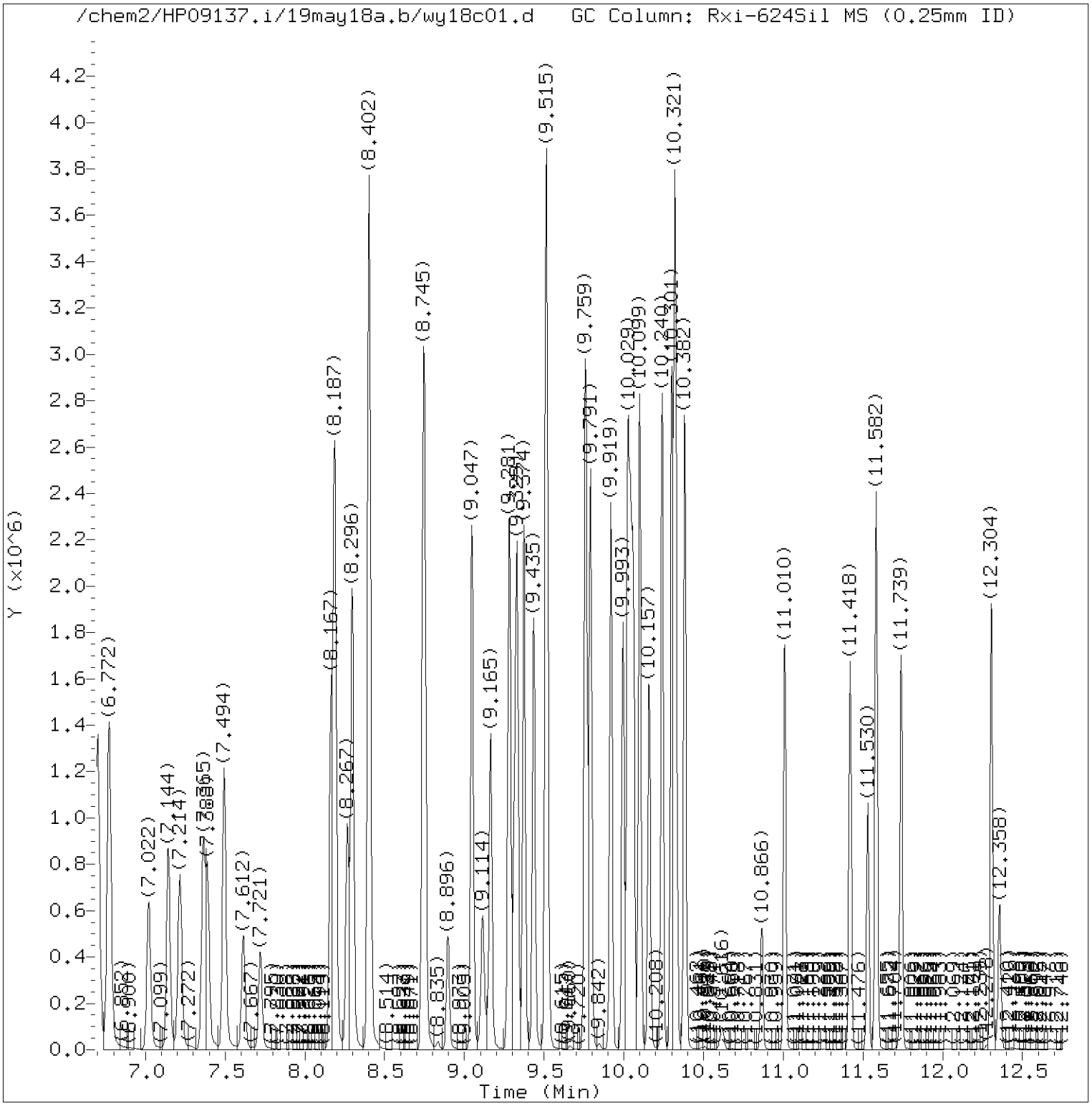
Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.259	85	389477	58.679
4) Chloromethane	(2)	1.384	50	348458	42.161
6) Vinyl Chloride	(2)	1.461	62	337342	44.524
5) 1,3-Butadiene	(2)	1.486	39	202998	40.303
8) Bromomethane	(2)	1.692	94	277344	46.414
9) Chloroethane	(2)	1.769	64	208032	41.725
12) Trichlorofluoromethane	(2)	1.932	101	425684	52.901
11) n-Pentane	(2)	1.971	43	309759	40.477
13) Ethanol	(1)	2.035	45	57065	659.199
15) Freon 123a	(2)	2.119	67	270649M	45.010
16) Acrolein	(1)	2.218	56	850771	622.590
17) 1,1-Dichloroethene	(2)	2.308	96	234343M	51.779
17) 1,1-Dichloroethene	(2)	2.301	63	88931	38.947
18) Acetone	(1)	2.340	58	81695	122.996
19) Freon 113	(2)	2.343	101	203135	51.113
21) 2-Propanol	(1)	2.449	45	118831	240.796
22) Methyl Iodide	(2)	2.478	142	438530M	50.563
23) Carbon Disulfide	(2)	2.513	76	688325M	43.170
25) Allyl Chloride	(2)	2.606	41	365252	46.325
27) Methyl Acetate	(2)	2.622	43	295355	43.278
28) Methylene Chloride	(2)	2.712	84	255875M	46.253
29)*t-Butyl alcohol-d10	(1)	2.738	65	189811	250.000
30) t-Butyl alcohol	(1)	2.812	59	232462	264.067
31) Acrylonitrile	(2)	2.930	53	166868	46.478
32) trans-1,2-Dichloroethene	(2)	2.963	96	242897	49.465
33) Methyl Tertiary Butyl Ether	(2)	2.963	73	650683	54.421
34) n-Hexane	(2)	3.219	57	317302	48.293
36) 1,1-Dichloroethane	(2)	3.344	63	415239	46.667
38) di-Isopropyl ether	(2)	3.415	45	761418	44.542
39) 2-Chloro-1,3-butadiene	(2)	3.431	53	381575	49.514
40) Ethyl t-butyl ether	(2)	3.762	59	623126	50.008
42) cis-1,2-Dichloroethene	(2)	3.893	96	264290	47.936
45) 2,2-Dichloropropane	(2)	3.893	77	165548	41.427
44) 2-Butanone	(2)	3.909	43	451723	87.576
47) Propionitrile	(1)	3.967	54	324612	296.695
48) Methacrylonitrile	(2)	4.115	67	426452	110.473
49) Bromochloromethane	(2)	4.124	128	149245	52.075
50) Tetrahydrofuran	(1)	4.172	71	129121	127.513

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	4.201	83	415434	49.761
52)$Dibromofluoromethane	(2)	4.362	113	229325	48.223
52)$Dibromofluoromethane	(2)	4.358	111	233674	47.866
53) 1,1,1-Trichloroethane	(2)	4.384	97	310606	49.446
54) Cyclohexane	(2)	4.442	56	389364	46.837
54) Cyclohexane	(2)	4.442	84	316164	45.945
54) Cyclohexane	(2)	4.442	69	118873	47.580
55) 1,1-Dichloropropene	(2)	4.548	75	322157	48.131
56) Carbon Tetrachloride	(2)	4.551	117	264516	49.068
58) Isobutyl Alcohol	(1)	4.679	41	221106M	688.951
57)$1,2-Dichloroethane-d4	(2)	4.692	102	61687	48.774
57)$1,2-Dichloroethane-d4	(2)	4.692	65	275360	50.014
57)$1,2-Dichloroethane-d4	(2)	4.695	104	40301	50.035
60) Benzene	(2)	4.753	78	1015277	47.189
61) 1,2-Dichloroethane	(2)	4.769	62	327047	49.208
61) 1,2-Dichloroethane	(2)	4.769	98	32539	51.460
65) t-Amyl methyl ether	(2)	4.875	73	630268	49.374
66)*Fluorobenzene	(2)	5.032	96	1026490	50.000
67) n-Heptane	(2)	5.039	43	291159	46.367
69) n-Butanol	(1)	5.356	56	362062	1270.611
71) Trichloroethene	(2)	5.408	95	256734	49.275
73) Methylcyclohexane	(2)	5.610	83	386933	51.154
73) Methylcyclohexane	(2)	5.613	98	179823	51.129
74) 1,2-Dichloropropane	(2)	5.639	63	251947	45.613
75) Dibromomethane	(2)	5.758	93	170629	50.053
77) Methyl Methacrylate	(2)	5.777	69	276637	45.574
76) 1,4-Dioxane	(1)	5.783	88	59193M	694.875
79) Bromodichloromethane	(2)	5.928	83	305197	48.726
43) 1,2-Dichloroethene (Total)	(2)		96	507187	97.401
80) 2-Nitropropane	(2)	6.175	41	217430	102.597
81) 2-Chloroethyl Vinyl Ether	(2)	6.264	63	197123	46.809
82) cis-1,3-Dichloropropene	(2)	6.409	75	404573	46.978
83) 4-Methyl-2-pentanone	(2)	6.589	43	965889	94.996
84)$Toluene-d8	(3)	6.701	98	1002334	51.390
84)$Toluene-d8	(3)	6.701	100	661862	51.170
89) Toluene	(3)	6.772	92	660052	52.533
90) trans-1,3-Dichloropropene	(3)	7.019	75	376388	50.320
92) Ethyl Methacrylate	(3)	7.144	69	473852	51.555

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) 1,1,2-Trichloroethane	(3)	7.218	97	259285	53.617
94) Tetrachloroethene	(3)	7.362	166	285295	55.958
95) 1,3-Dichloropropane	(3)	7.388	76	433682	51.632
97) 2-Hexanone	(3)	7.494	43	771018	105.370
98) Dibromochloromethane	(3)	7.615	129	262007	55.472
100) 1,2-Dibromoethane	(3)	7.718	107	285438	53.724
101)*Chlorobenzene-d5	(3)	8.161	117	778376	50.000
103) Chlorobenzene	(3)	8.190	112	740508	53.127
104) 1,1,1,2-Tetrachloroethane	(3)	8.267	131	243504	54.363
105) Ethylbenzene	(3)	8.296	91	1251399	52.403
107) m+p-Xylene	(3)	8.402	106	1017623	107.179
108) o-Xylene	(3)	8.739	106	491071	52.574
110) Styrene	(3)	8.751	104	848188	54.131
111) Bromoform	(3)	8.896	173	201322	54.767
112) Isopropylbenzene	(3)	9.047	105	1214414	52.909
113) Cyclohexanone	(1)	9.114	55	235742	613.490
115)$4-Bromofluorobenzene	(3)	9.165	95	368437	47.217
115)$4-Bromofluorobenzene	(3)	9.165	174	334133	50.746
116) Bromobenzene	(4)	9.281	156	341954	53.469
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	441469	51.188
118) 1,2,3-Trichloropropane	(4)	9.316	110	138660	53.377
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	311625	112.678
120) n-Propylbenzene	(4)	9.374	91	1420091	50.371
121) 2-Chlorotoluene	(4)	9.435	126	307146	52.818
123) 1,3,5-Trimethylbenzene	(4)	9.512	105	1042743	51.284
122) 4-Chlorotoluene	(4)	9.518	126	331412	53.238
125) tert-Butylbenzene	(4)	9.759	134	236534	51.203
126) Pentachloroethane	(4)	9.769	167	203886	55.832
127) 1,2,4-Trimethylbenzene	(4)	9.791	105	1095700	51.139
128) sec-Butylbenzene	(4)	9.919	105	1243502	49.824
130) 1,3-Dichlorobenzene	(4)	9.993	146	641768	52.624
131) p-Isopropyltoluene	(4)	10.025	119	1126699	50.997
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	444015	50.000
134) 1,4-Dichlorobenzene	(4)	10.061	146	665243	52.618
91) 1,3-Dichloropropene (total)	(3)		100	780961	97.297
135) 1,2,3-Trimethylbenzene	(4)	10.099	105	1207600	52.383
136) Benzyl Chloride	(4)	10.157	91	884562	49.987
137) 1,3-Diethylbenzene	(4)	10.240	119	708507	51.037

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

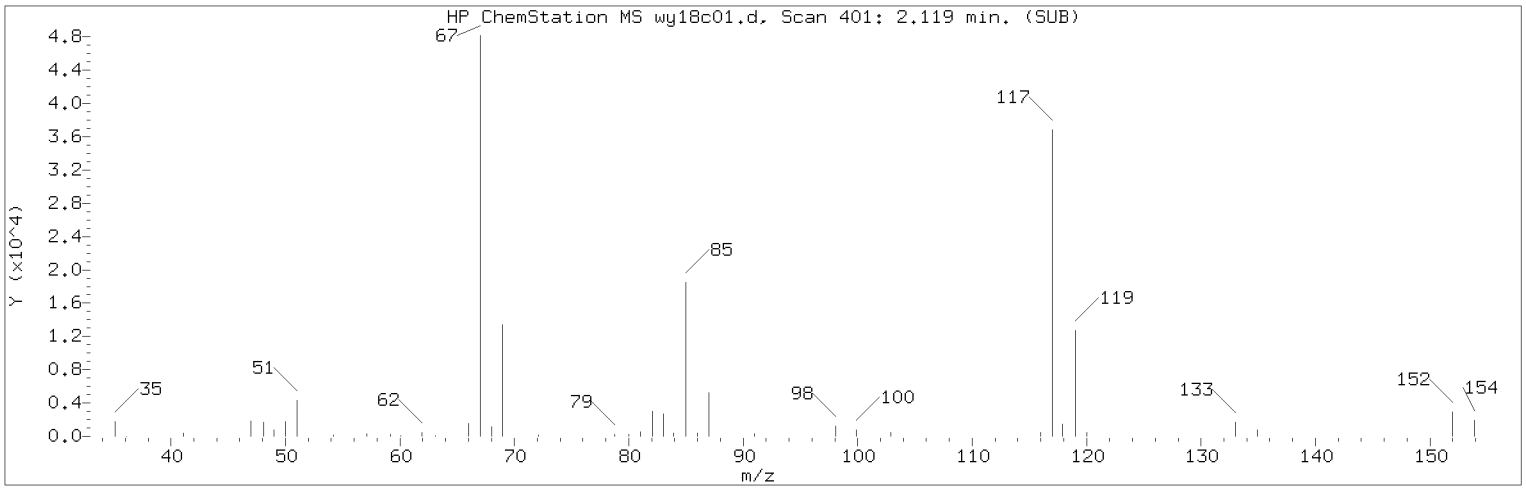
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

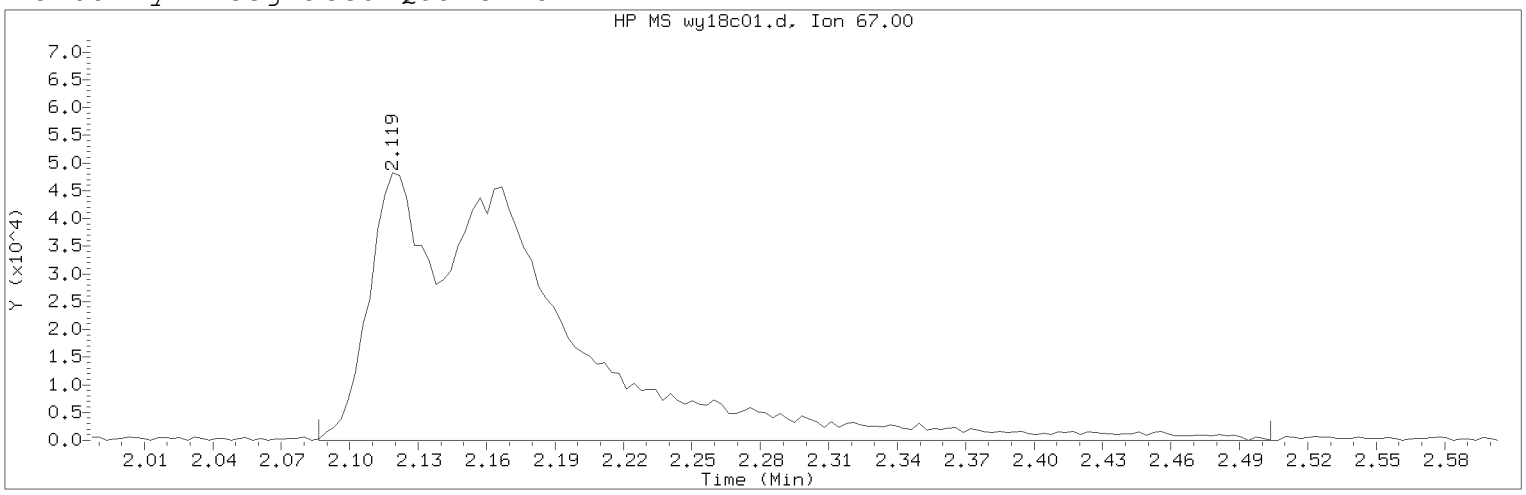
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
138) 1,4-Diethylbenzene	(4)	10.301	119	746561	50.195
140) n-Butylbenzene	(4)	10.317	92	534448	47.928
139) 1,2-Dichlorobenzene	(4)	10.327	146	641494	53.019
141) 1,2-Diethylbenzene	(4)	10.382	119	604765	51.600
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	96797	49.386
145) 1,3,5-Trichlorobenzene	(4)	11.010	180	448931	48.387
147) 1,2,4-Trichlorobenzene	(4)	11.421	180	422444	47.426
148) Hexachlorobutadiene	(4)	11.530	225	154012	48.546
149) Naphthalene	(4)	11.585	128	1480377	49.118
150) 1,2,3-Trichlorobenzene	(4)	11.739	180	414019	47.621
109) Xylene (Total)	(3)		106	1508694	159.753
151) 2-Methylnaphthalene	(4)	12.304	142	680143	39.554
142) Diethylbenzene (total)	(4)		100	2059833	152.832

Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

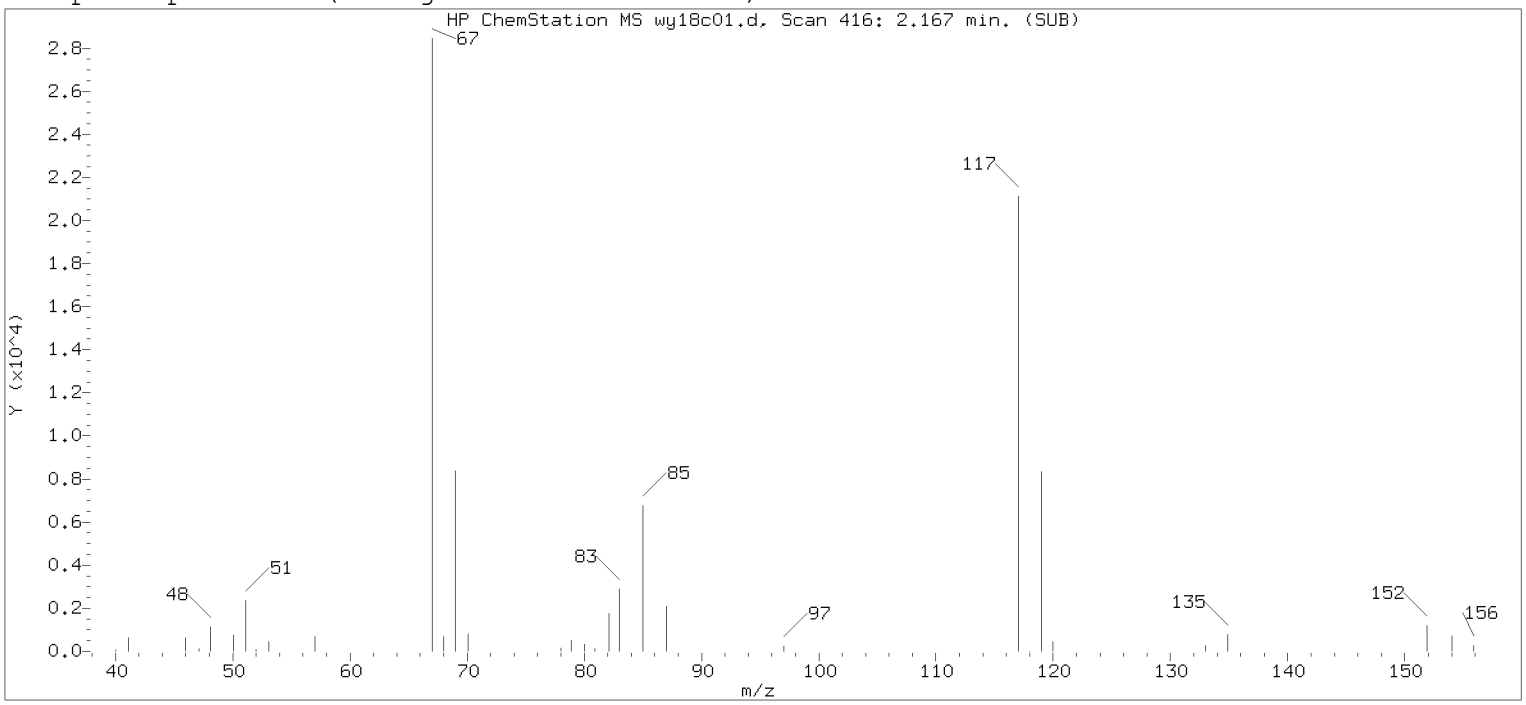
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 401
Retention Time (minutes): 2.119
Quant Ion : 67.00
Area (flag) : 270649M
On-Column Amount (ng) : 45.0099
Integration start scan : 390 Integration stop scan: 520
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

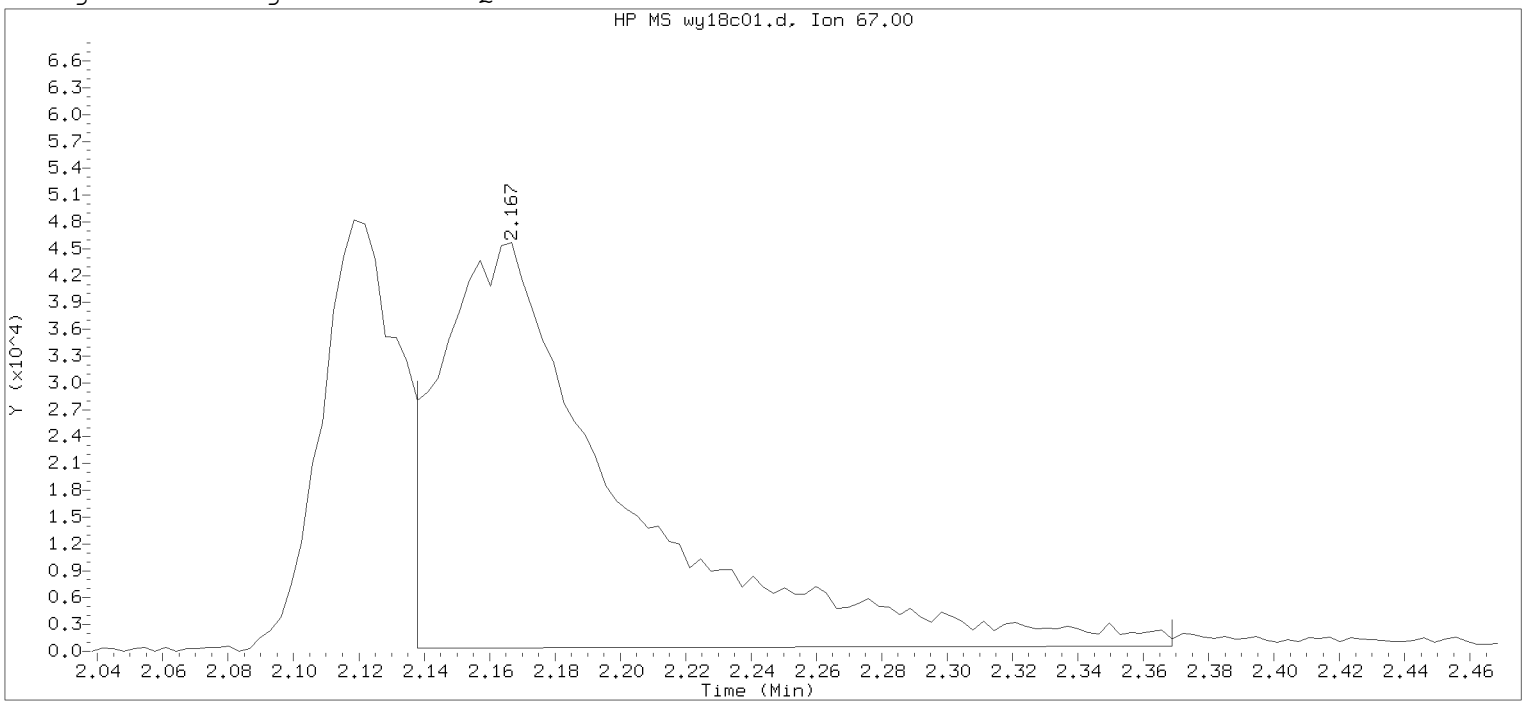
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 416		
Retention Time (minutes)	: 2.167		
Quant Ion	: 67.00		
Area	: 175550		
On-column Amount (ng)	: 29.1946		
Integration start scan	: 406	Integration stop scan:	478
Y at integration start	: 337	Y at integration end:	564

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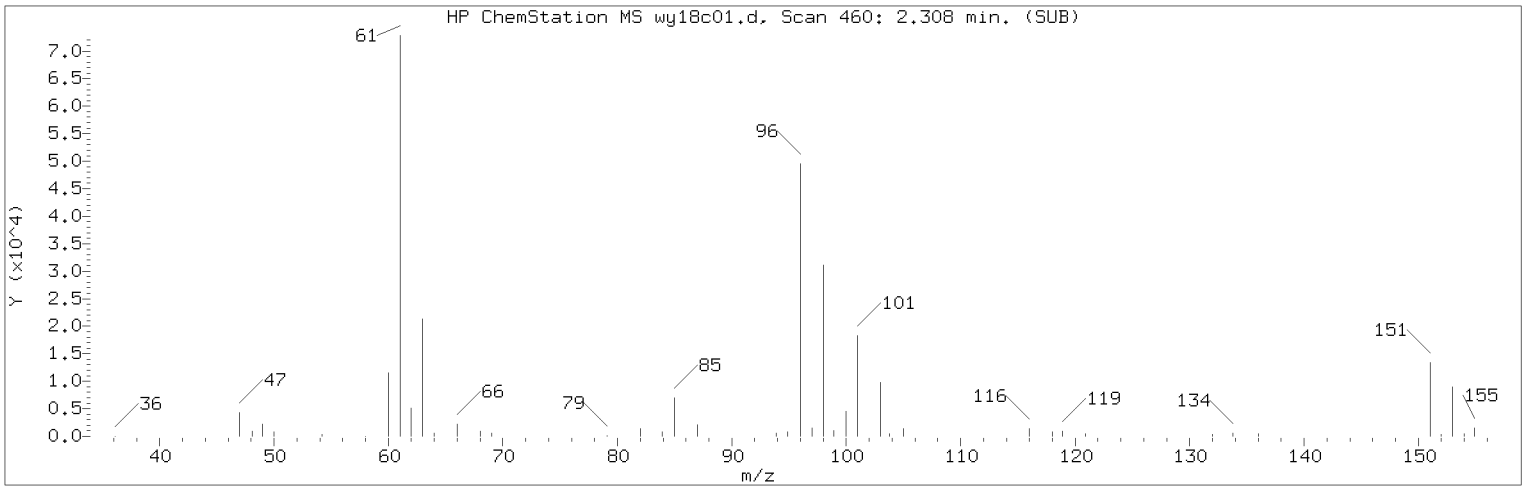
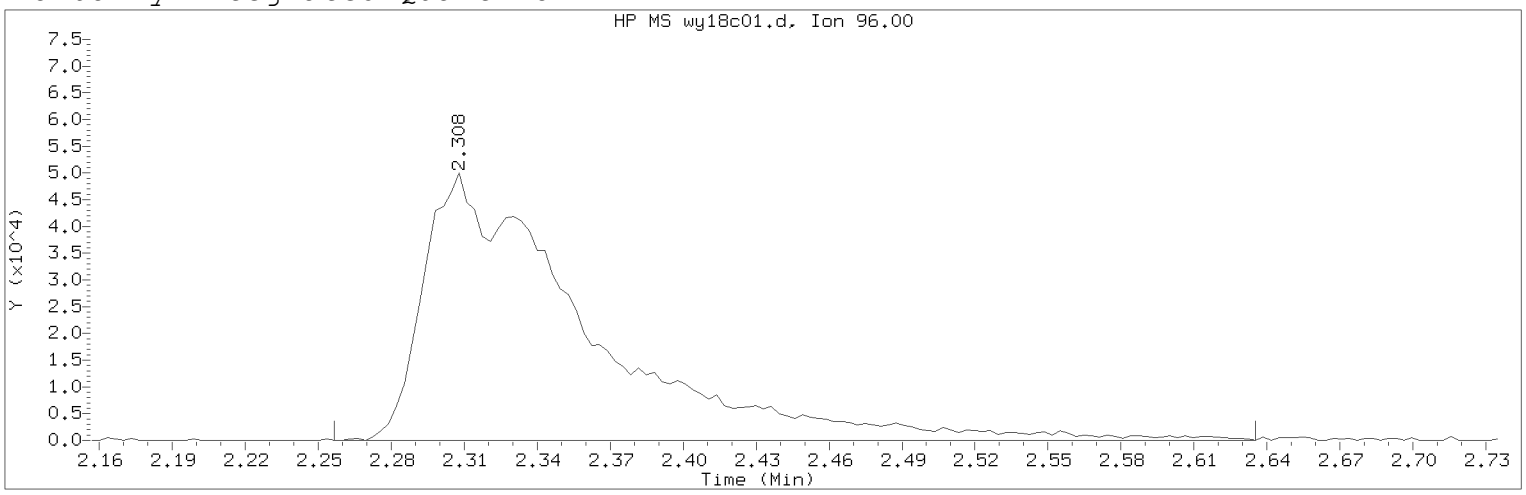
Target 3.5 esignature user's page 237

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

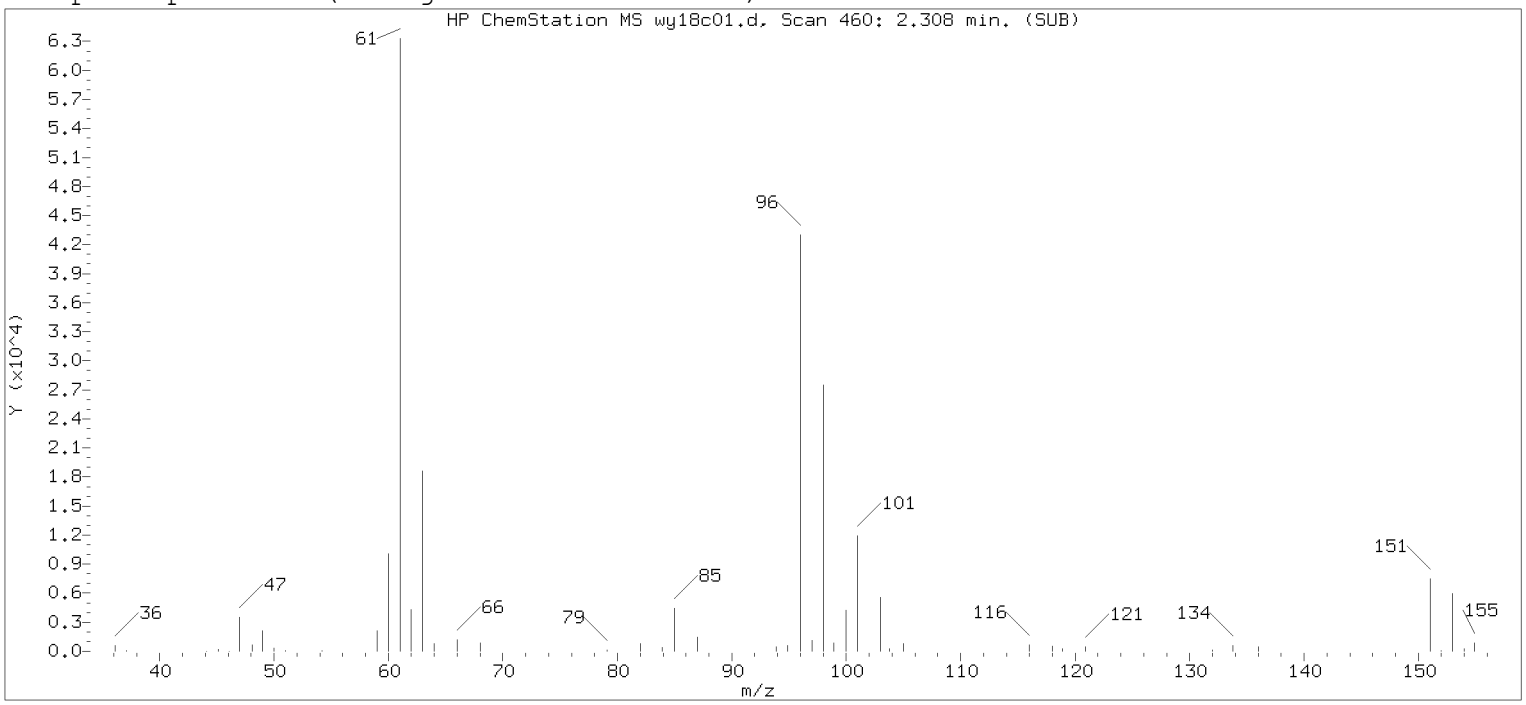
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 460
Retention Time (minutes): 2.308
Quant Ion : 96.00
Area (flag) : 234343M
On-Column Amount (ng) : 51.7791
Integration start scan : 443 Integration stop scan: 561
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

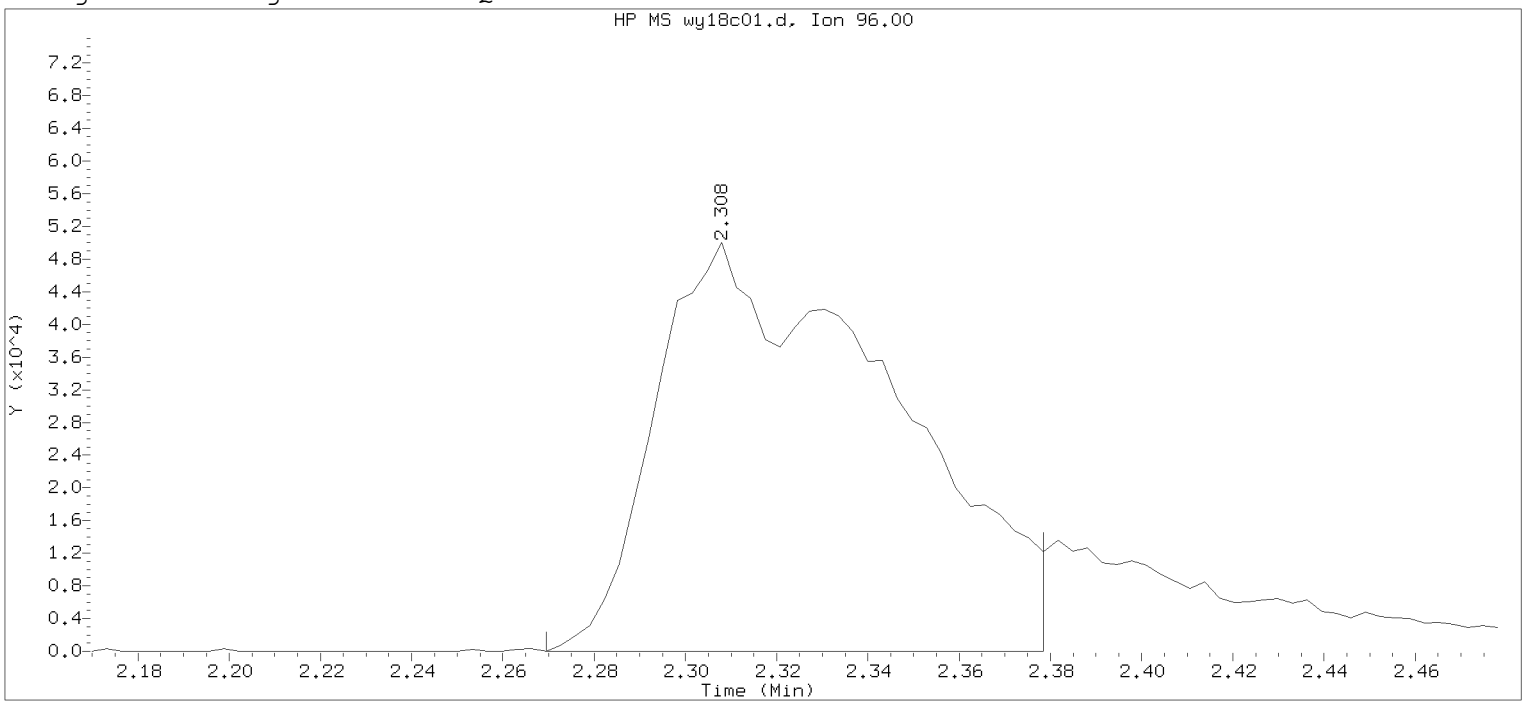
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 460
Retention Time (minutes): 2.308
Quant Ion : 96.00
Area : 181112
On-column Amount (ng) : 40.0175
Integration start scan : 447 Integration stop scan: 481
Y at integration start : 0 Y at integration end: 0

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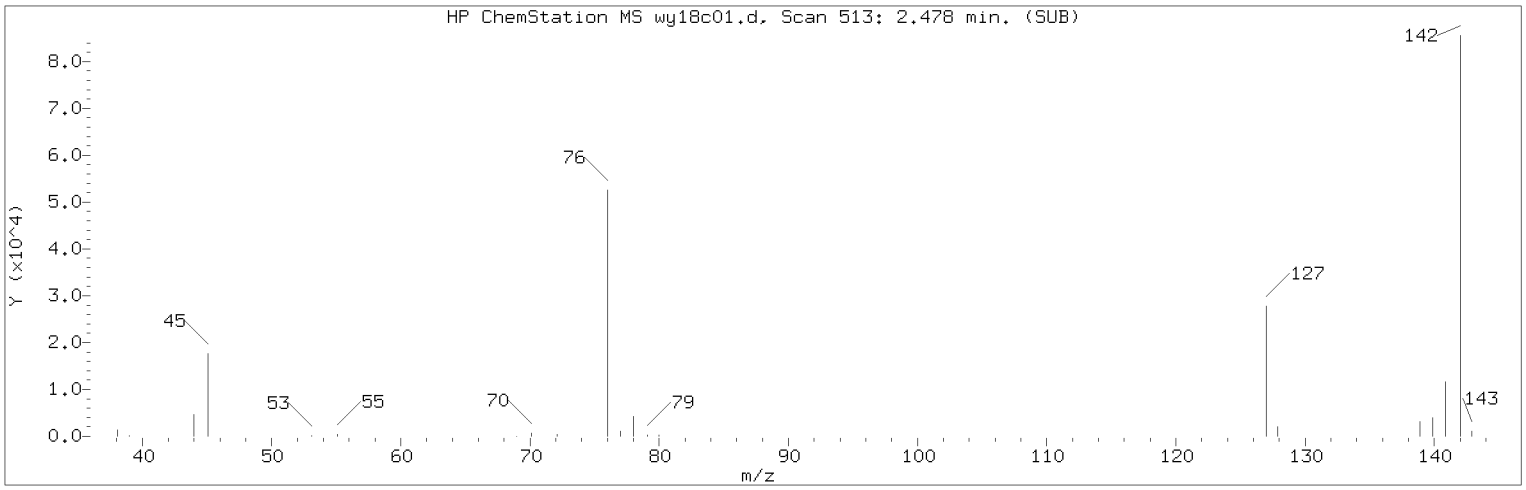
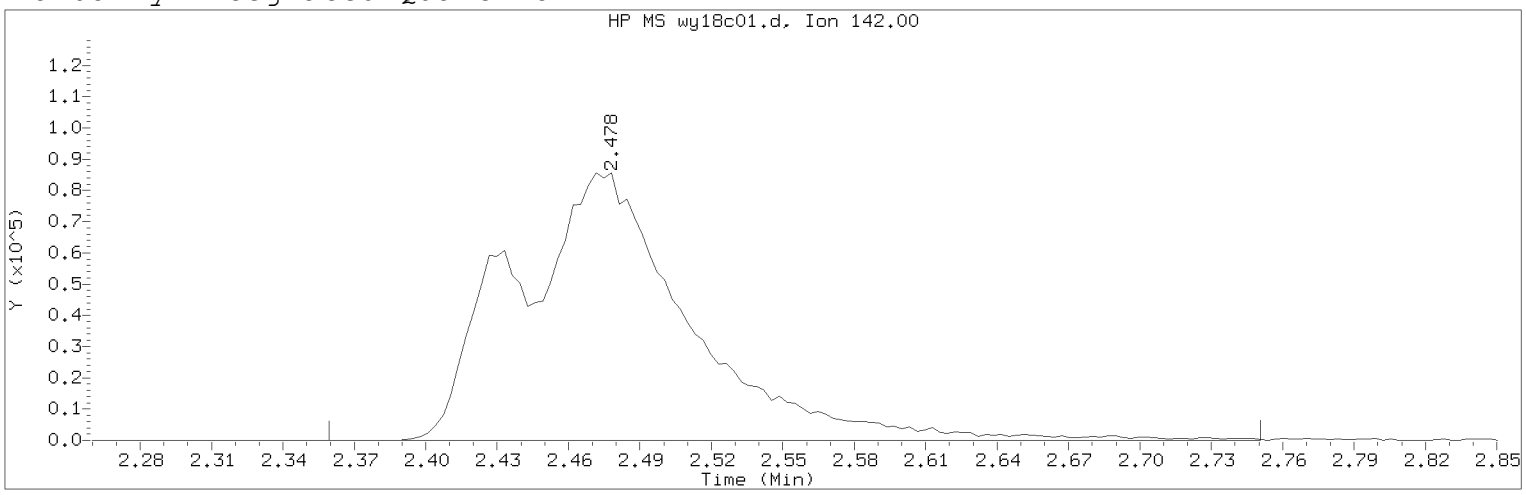
Target 3.5 esignature user signed on

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

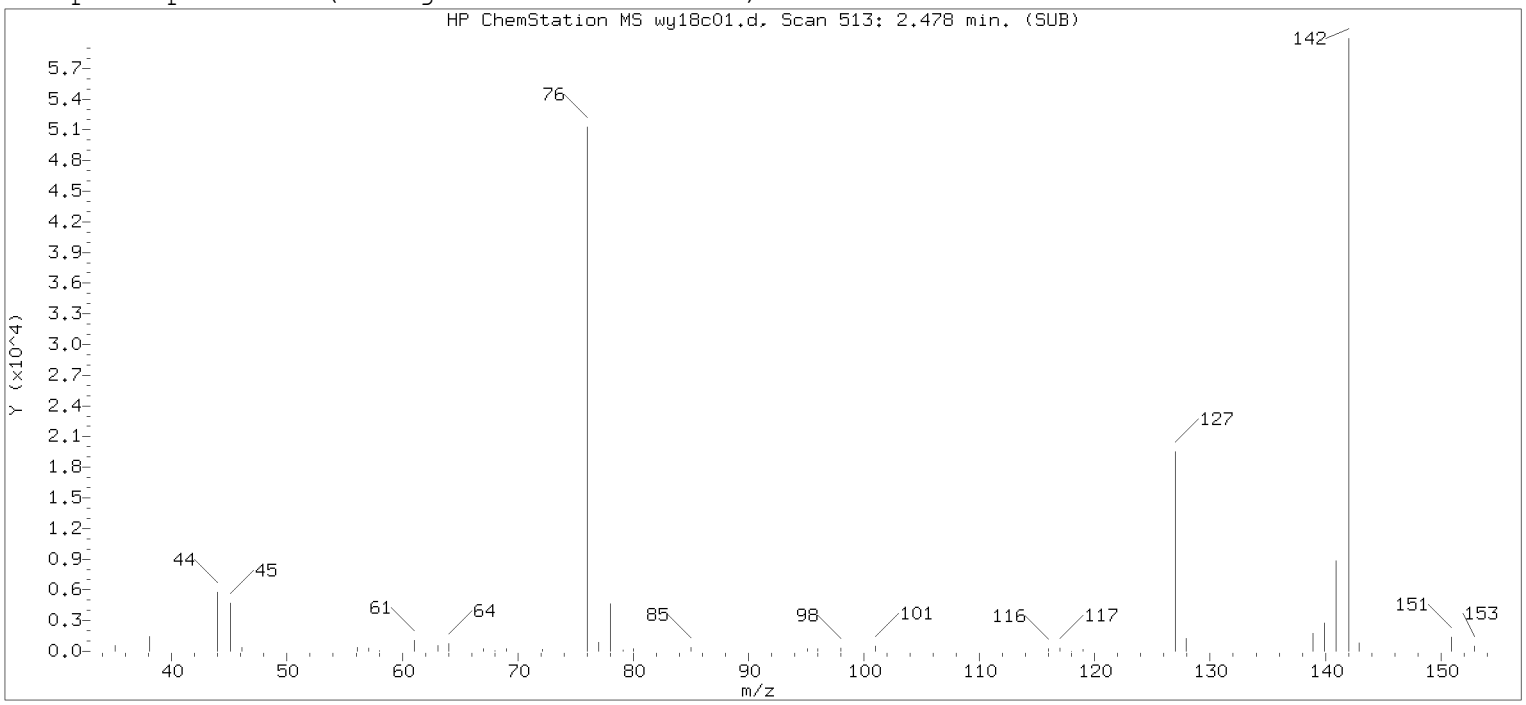
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 513
Retention Time (minutes): 2.478
Quant Ion : 142.00
Area (flag) : 438530M
On-Column Amount (ng) : 50.5633
Integration start scan : 475 Integration stop scan: 597
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

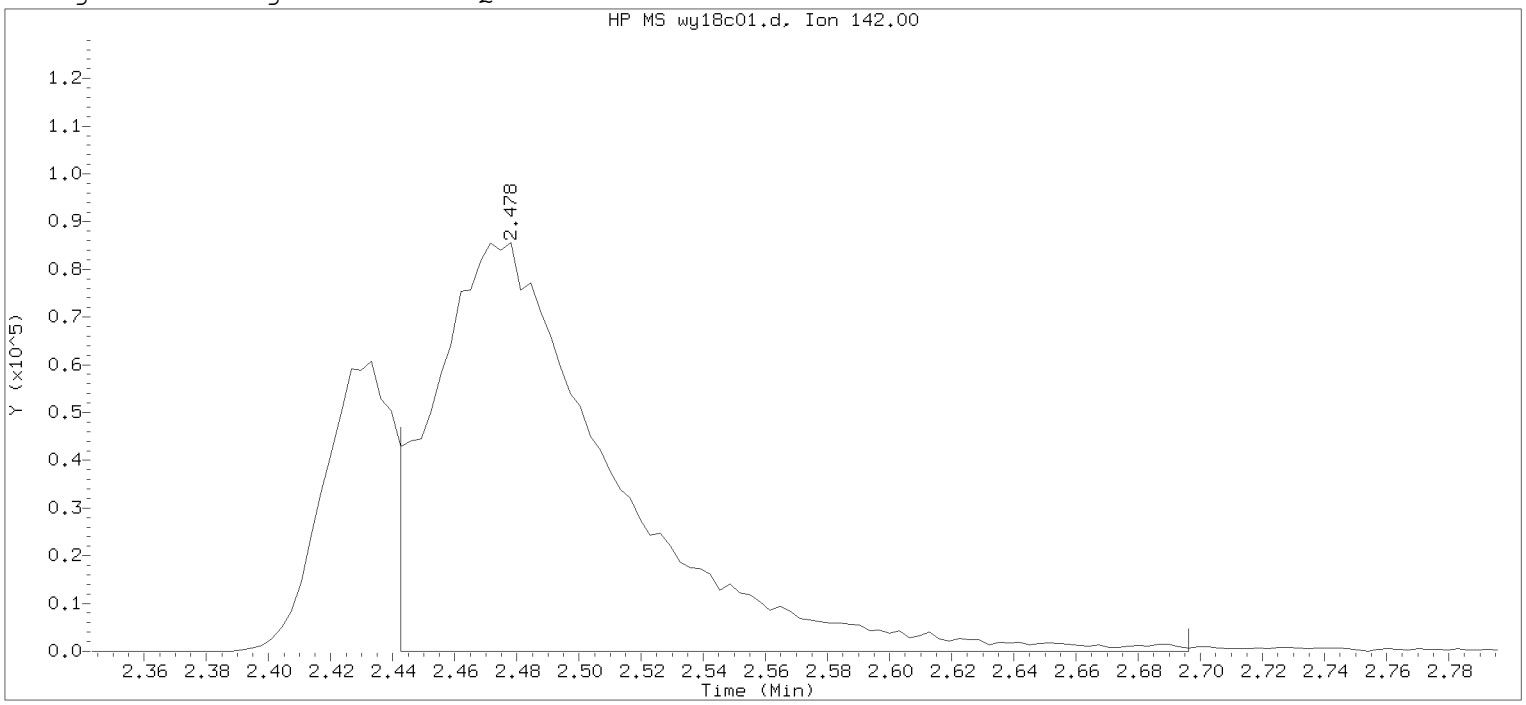
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

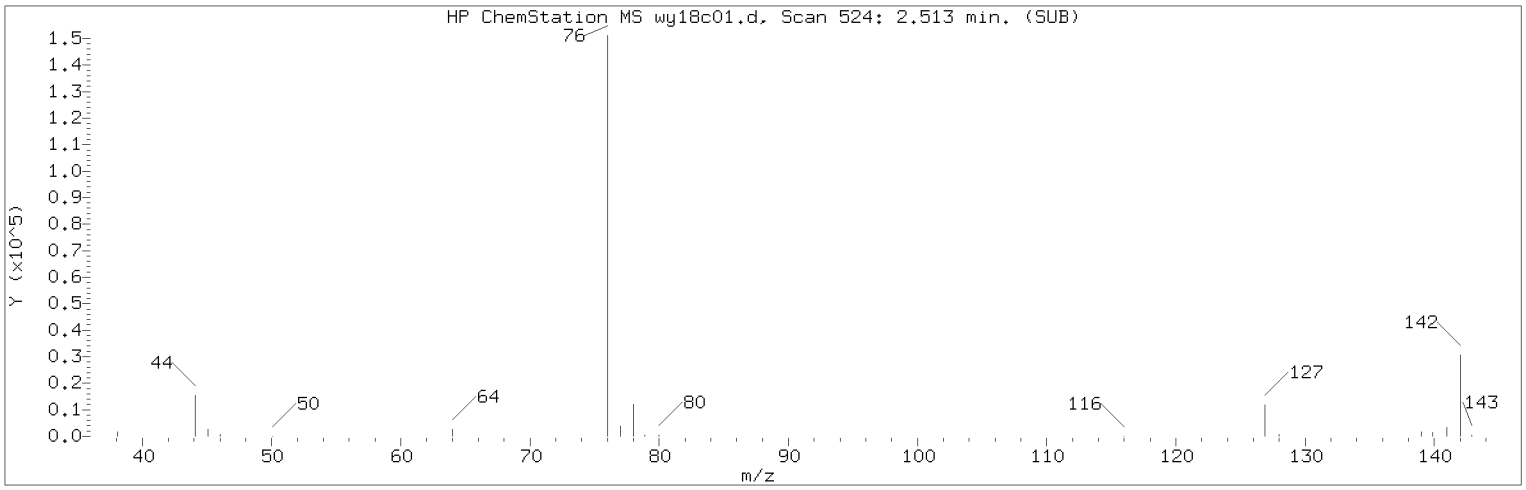
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

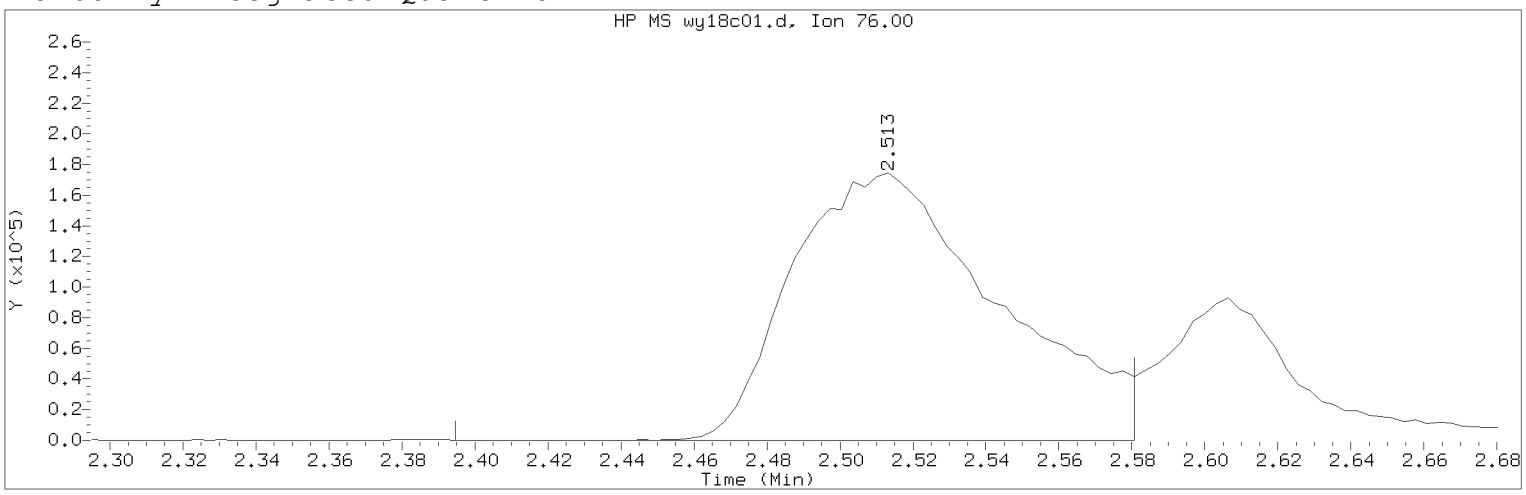
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 513
Retention Time (minutes): 2.478
Quant Ion : 142.00
Area : 343036
On-column Amount (ng) : 39.5527
Integration start scan : 501 Integration stop scan: 580
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

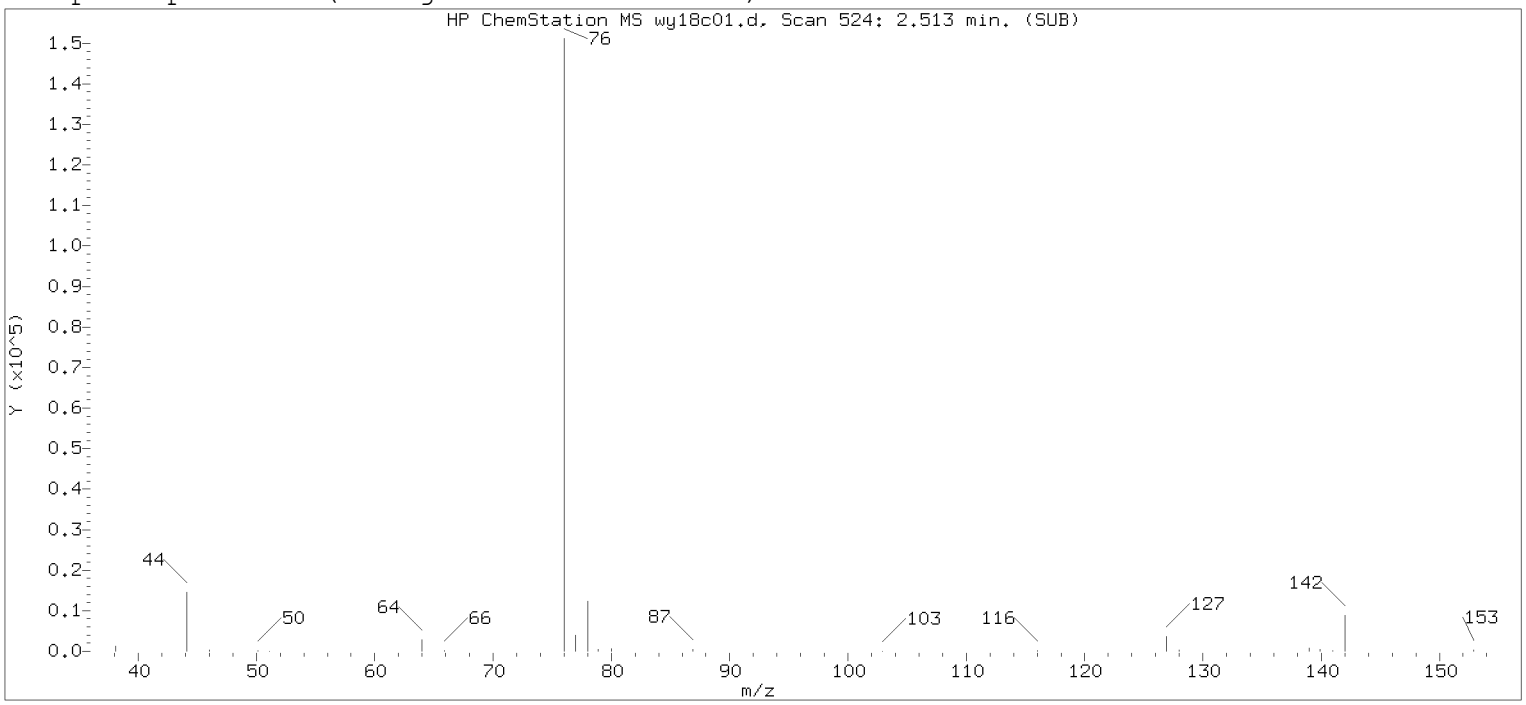
Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 524
Retention Time (minutes): 2.513
Quant Ion : 76.00
Area (flag) : 688325M
On-Column Amount (ng) : 43.1699
Integration start scan : 486 Integration stop scan: 544
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

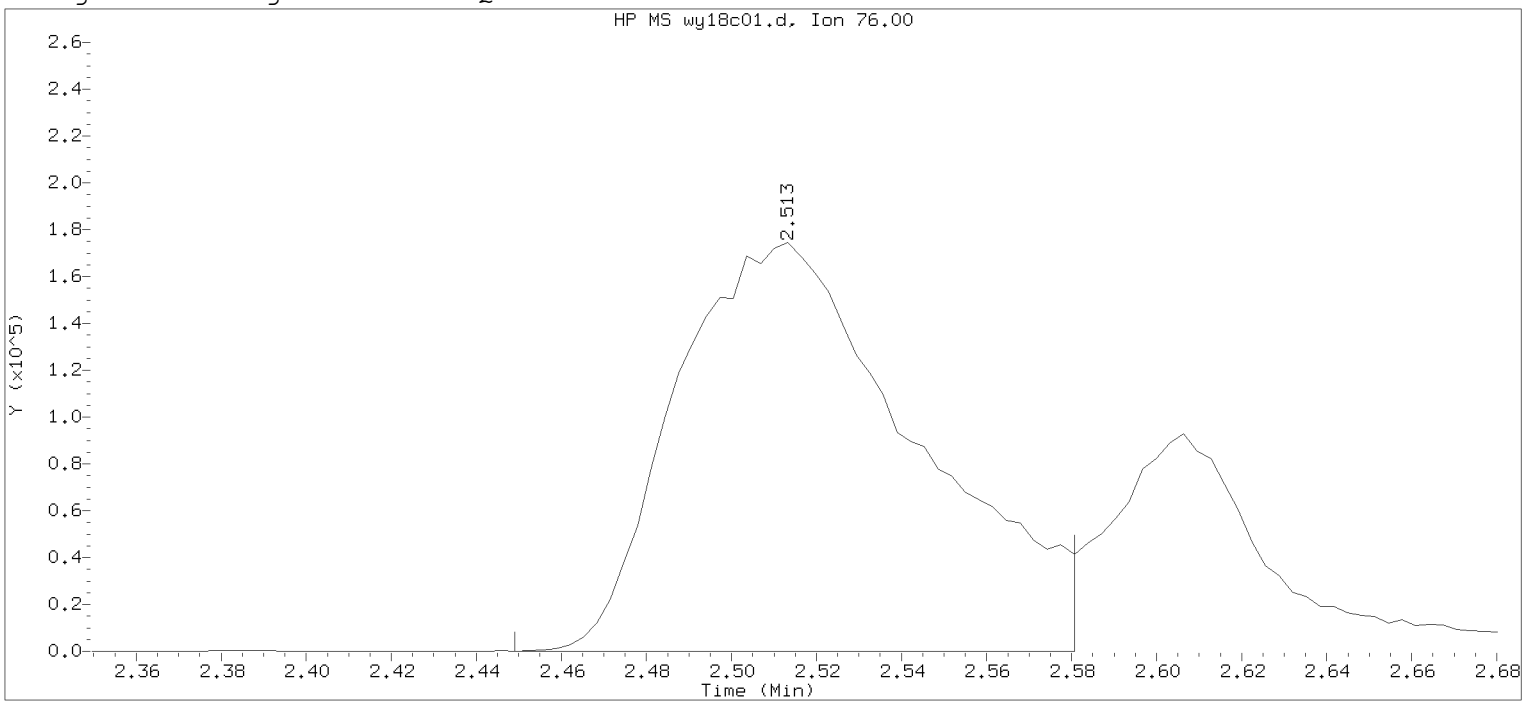
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

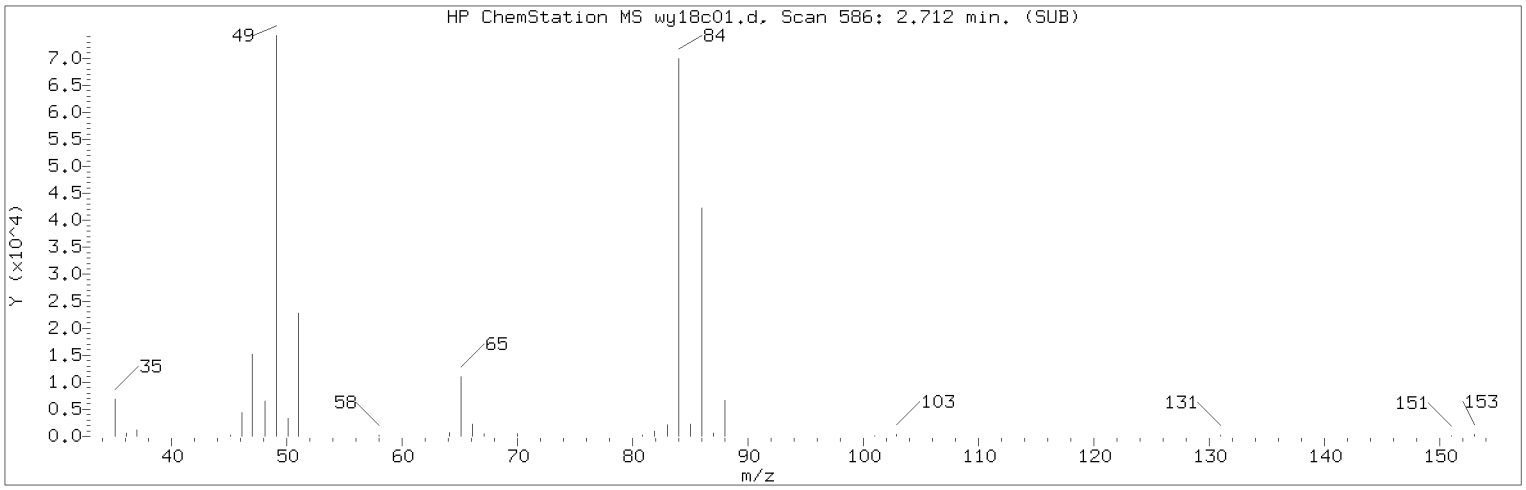
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

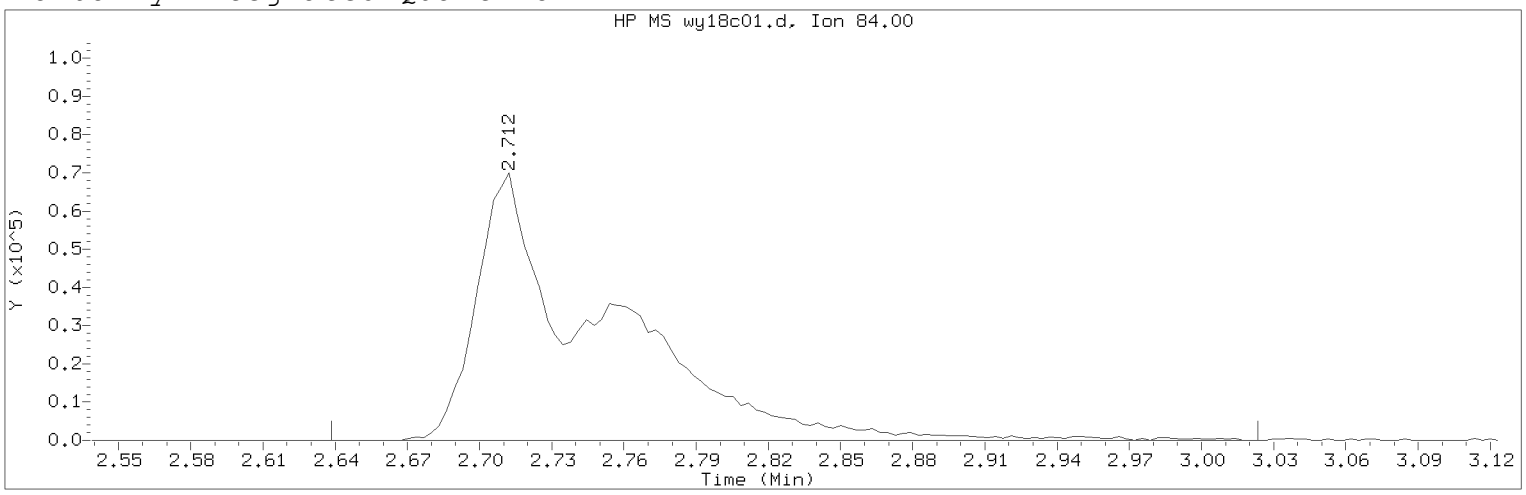
Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 524
Retention Time (minutes): 2.513
Quant Ion : 76.00
Area : 684283
On-column Amount (ng) : 42.9163
Integration start scan : 503 Integration stop scan: 544
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

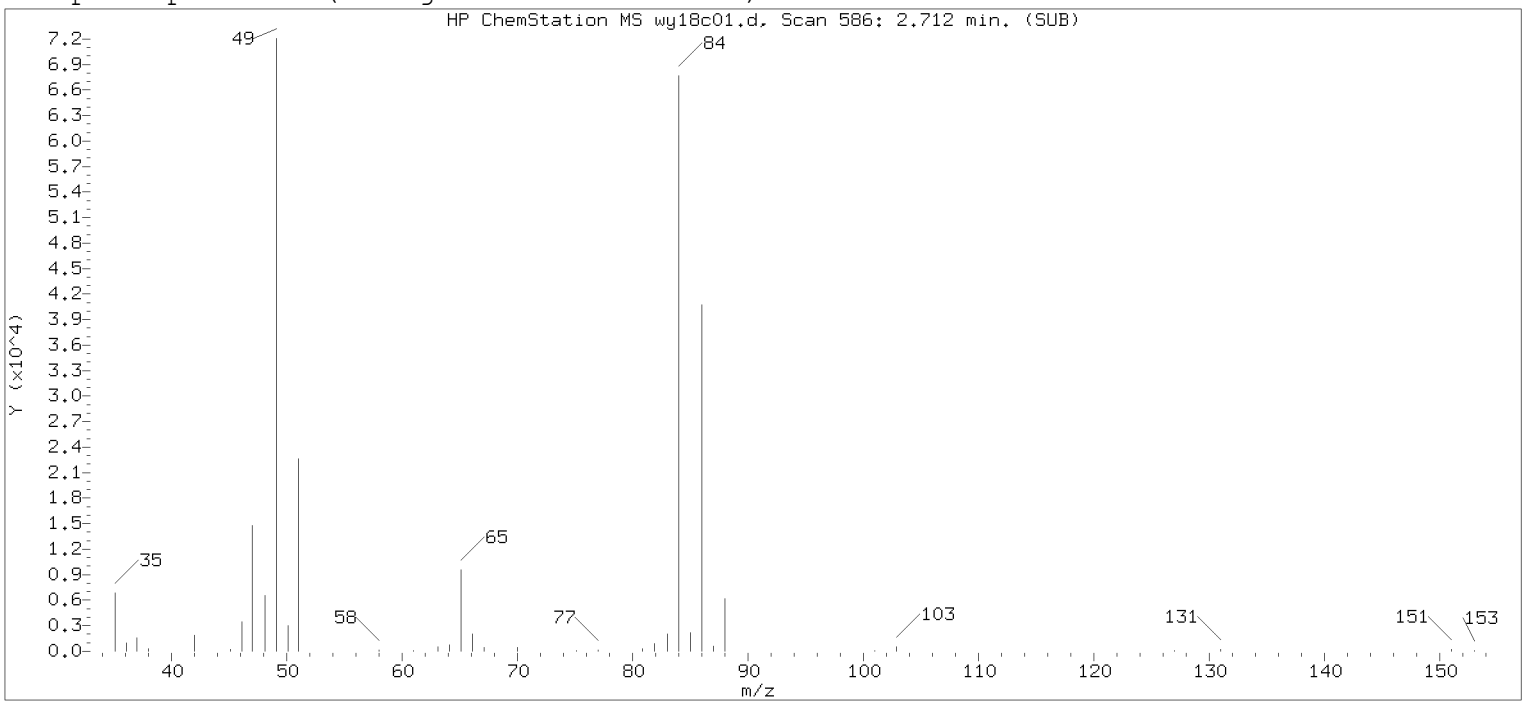
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 586
Retention Time (minutes): 2.712
Quant Ion : 84.00
Area (flag) : 255875M
On-Column Amount (ng) : 46.2534
Integration start scan : 562 Integration stop scan: 682
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

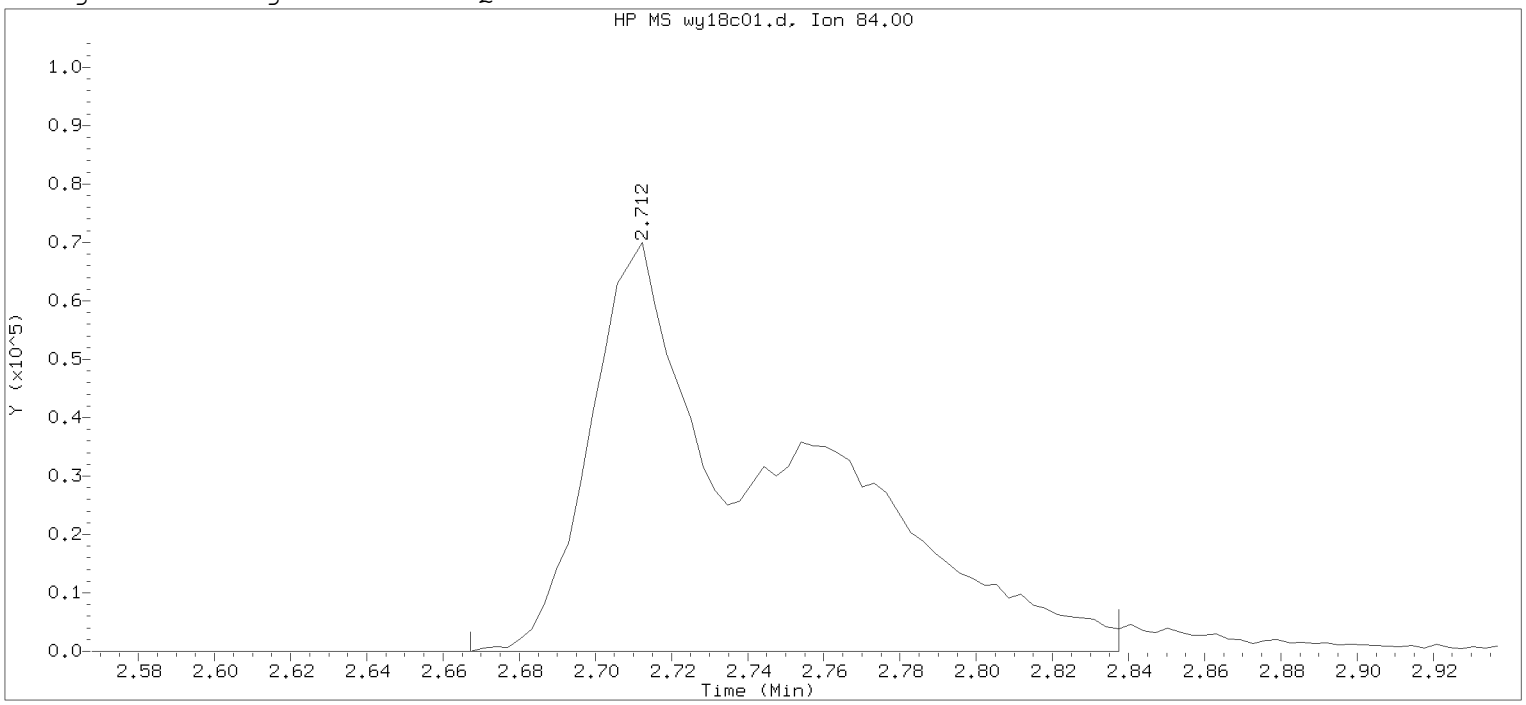
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

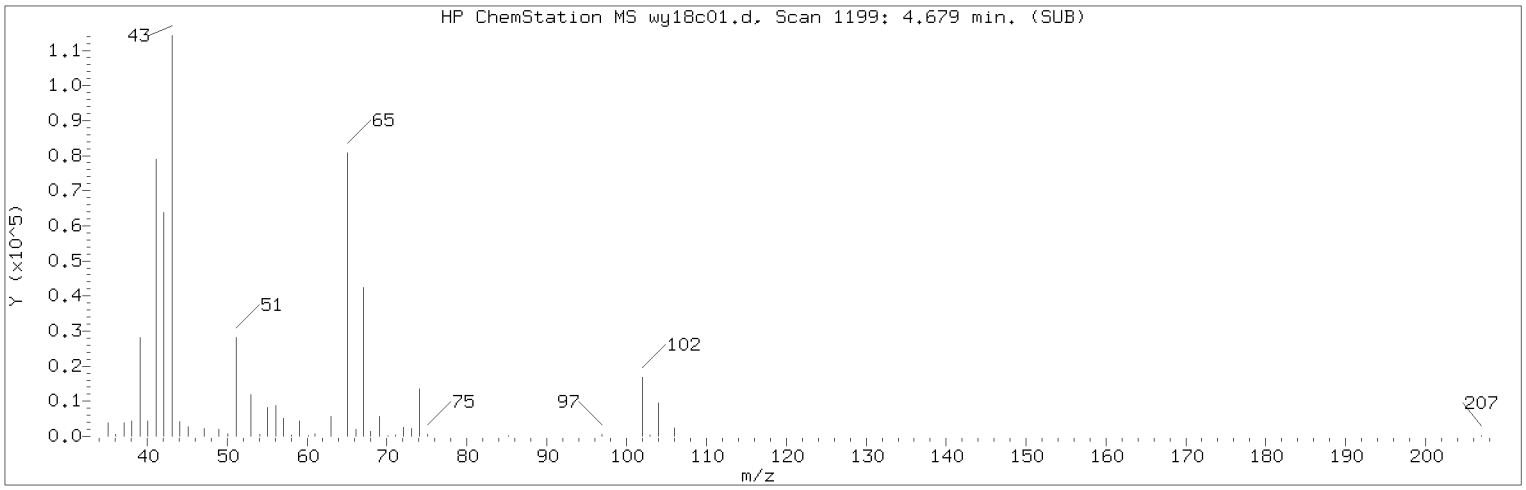
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

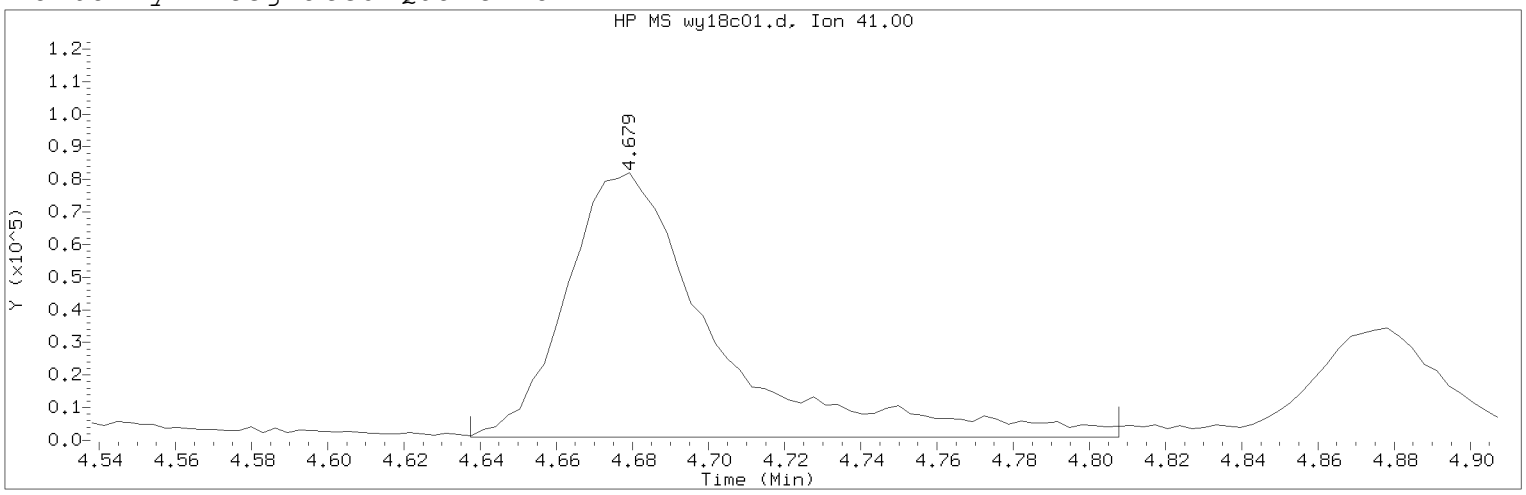
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 586
Retention Time (minutes): 2.712
Quant Ion : 84.00
Area : 242758
On-column Amount (ng) : 43.8824
Integration start scan : 571 Integration stop scan: 624
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

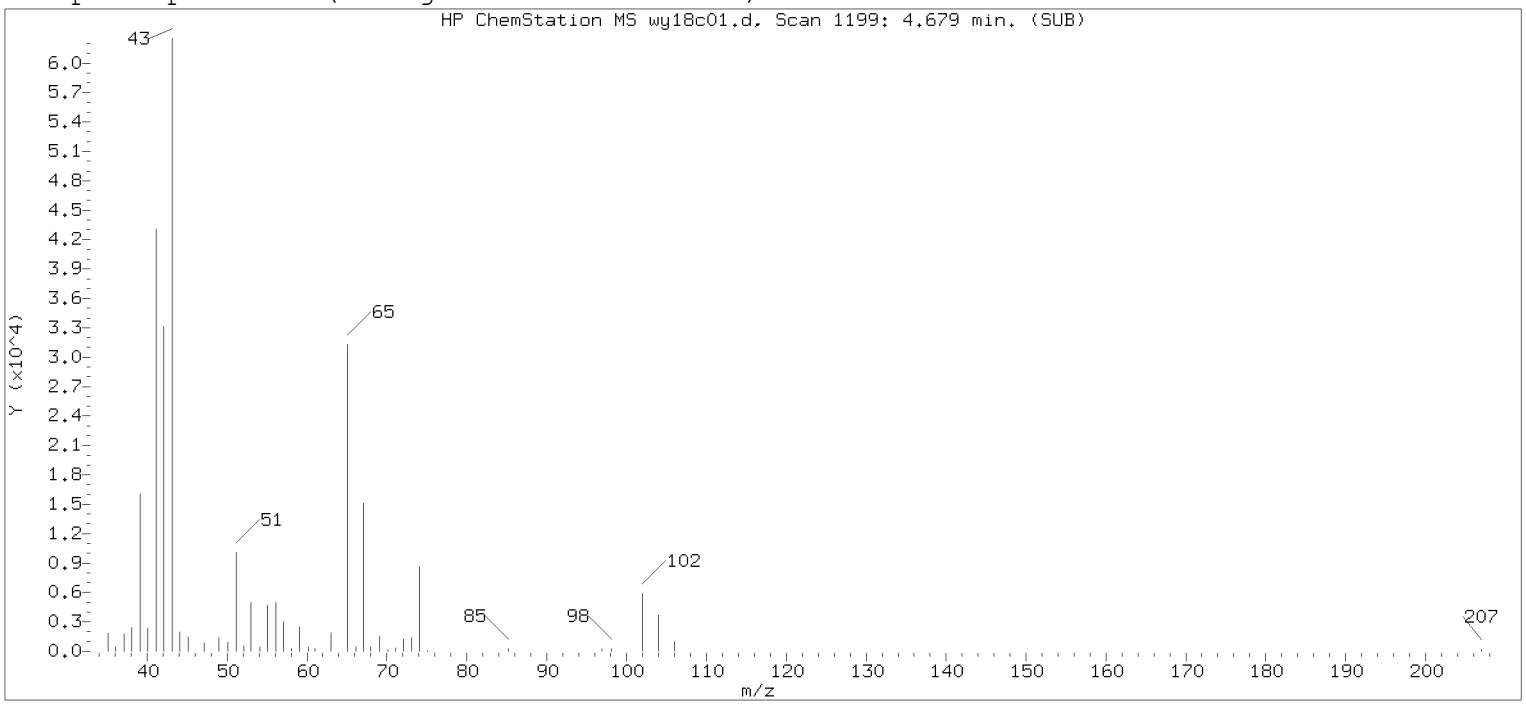
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 1199
Retention Time (minutes): 4.679
Quant Ion : 41.00
Area (flag) : 221106M
On-Column Amount (ng) : 688.9512
Integration start scan : 1185 Integration stop scan: 1238
Y at integration start : 974 Y at integration end: 974

Reason for manual integration: improper integration

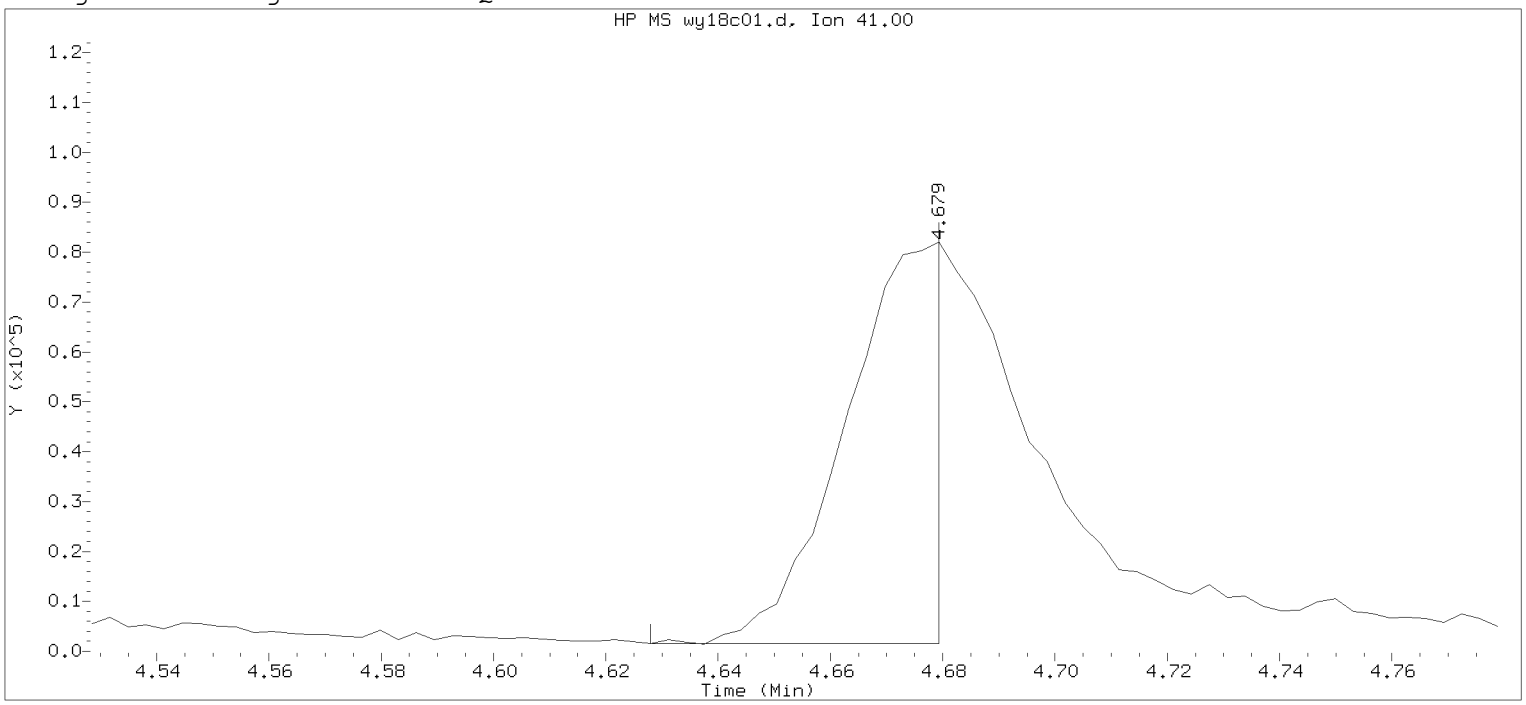
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

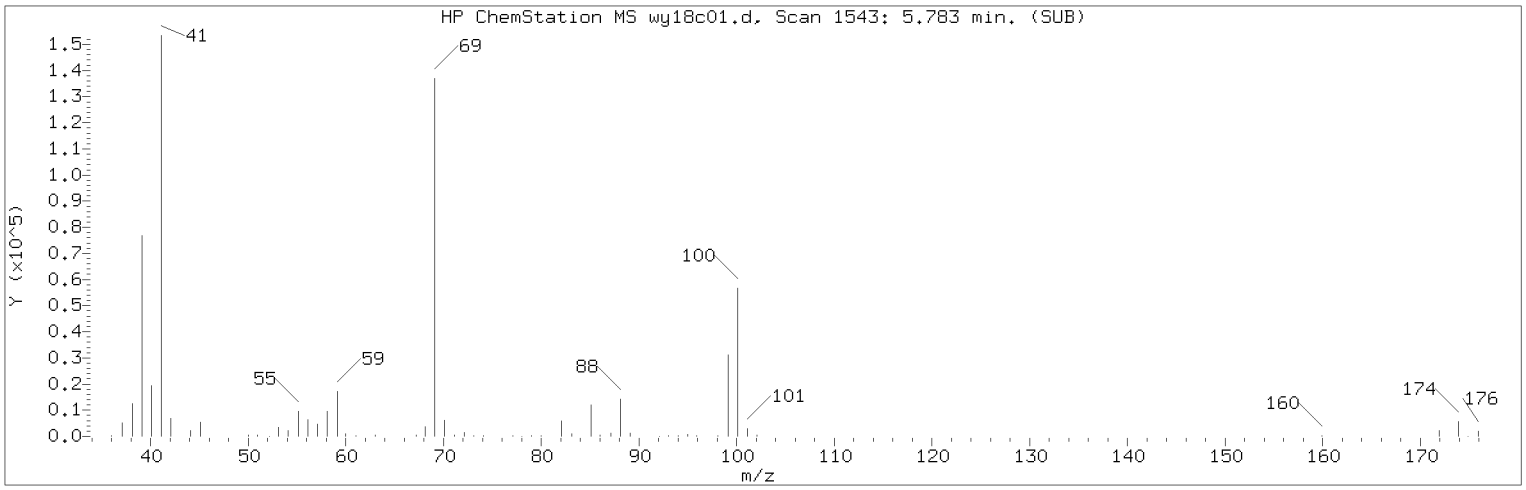
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

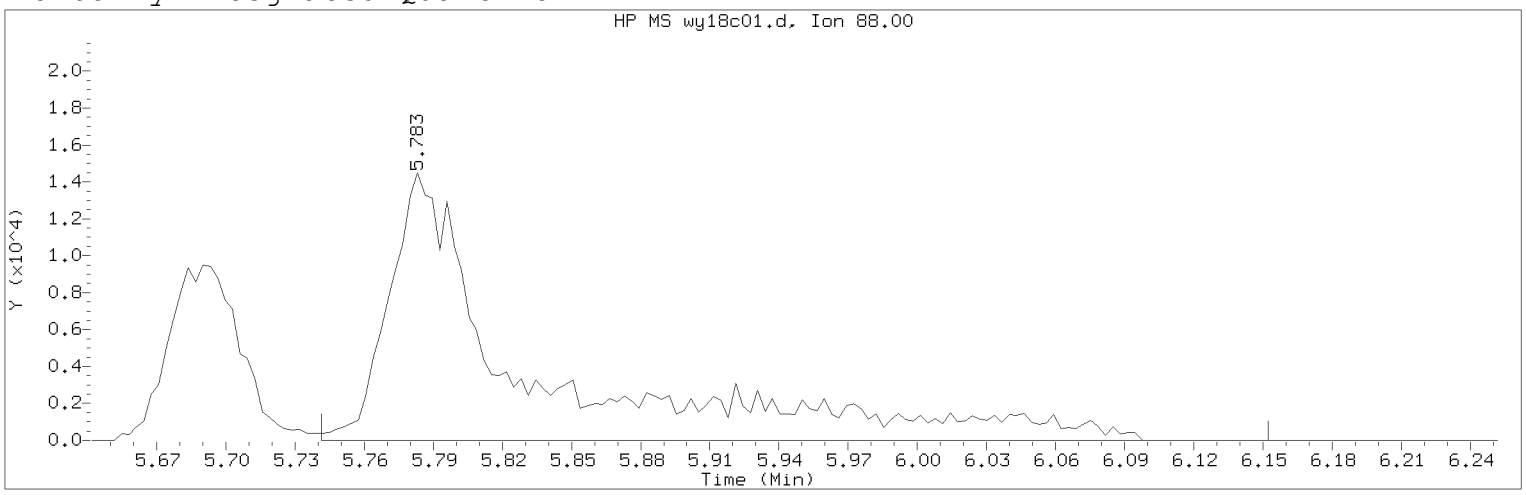
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 1199
Retention Time (minutes): 4.679
Quant Ion : 41.00
Area : 89313
On-column Amount (ng) : 278.2945
Integration start scan : 1182 Integration stop scan: 1198
Y at integration start : 1601 Y at integration end: 1601

Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

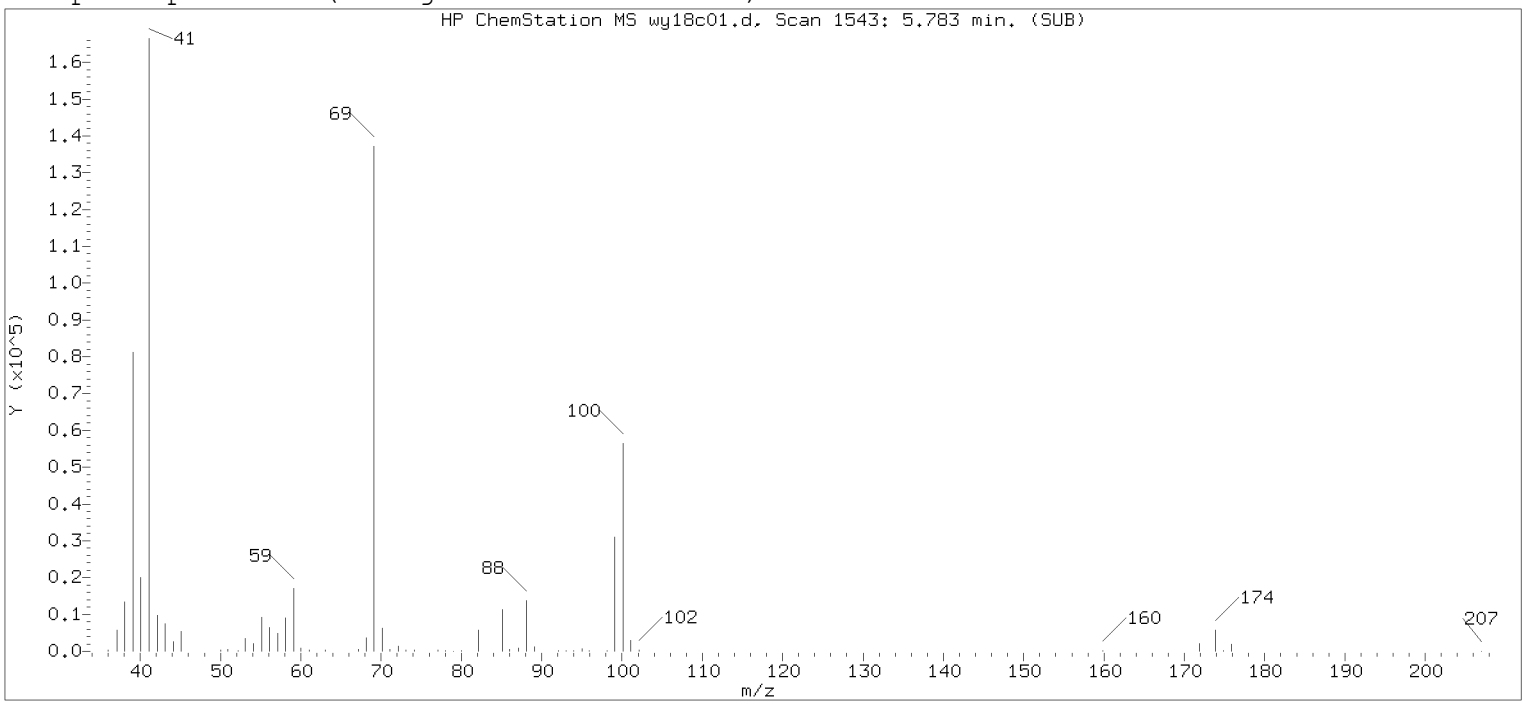
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1543
Retention Time (minutes): 5.783
Quant Ion : 88.00
Area (flag) : 59193M
On-Column Amount (ng) : 694.8747
Integration start scan : 1529 Integration stop scan: 1657
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

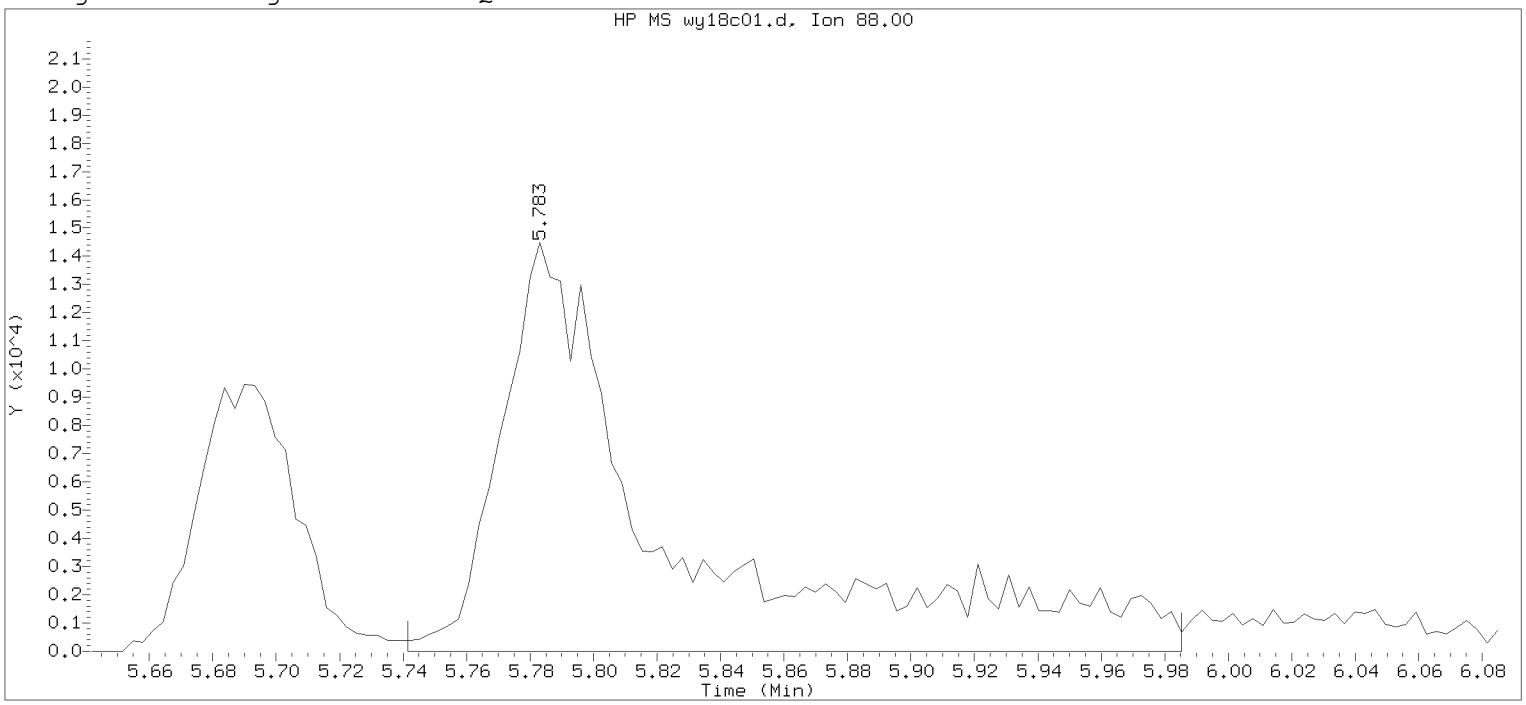
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1543
Retention Time (minutes): 5.783
Quant Ion : 88.00
Area : 52617
On-column Amount (ng) : 617.6776
Integration start scan : 1529 Integration stop scan: 1605
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Data File: /chem2/HP09137.i/19may19a.b/wy19t01.d

Date : 19-MAY-2019 11:04

Client ID: BFB FEB05-19

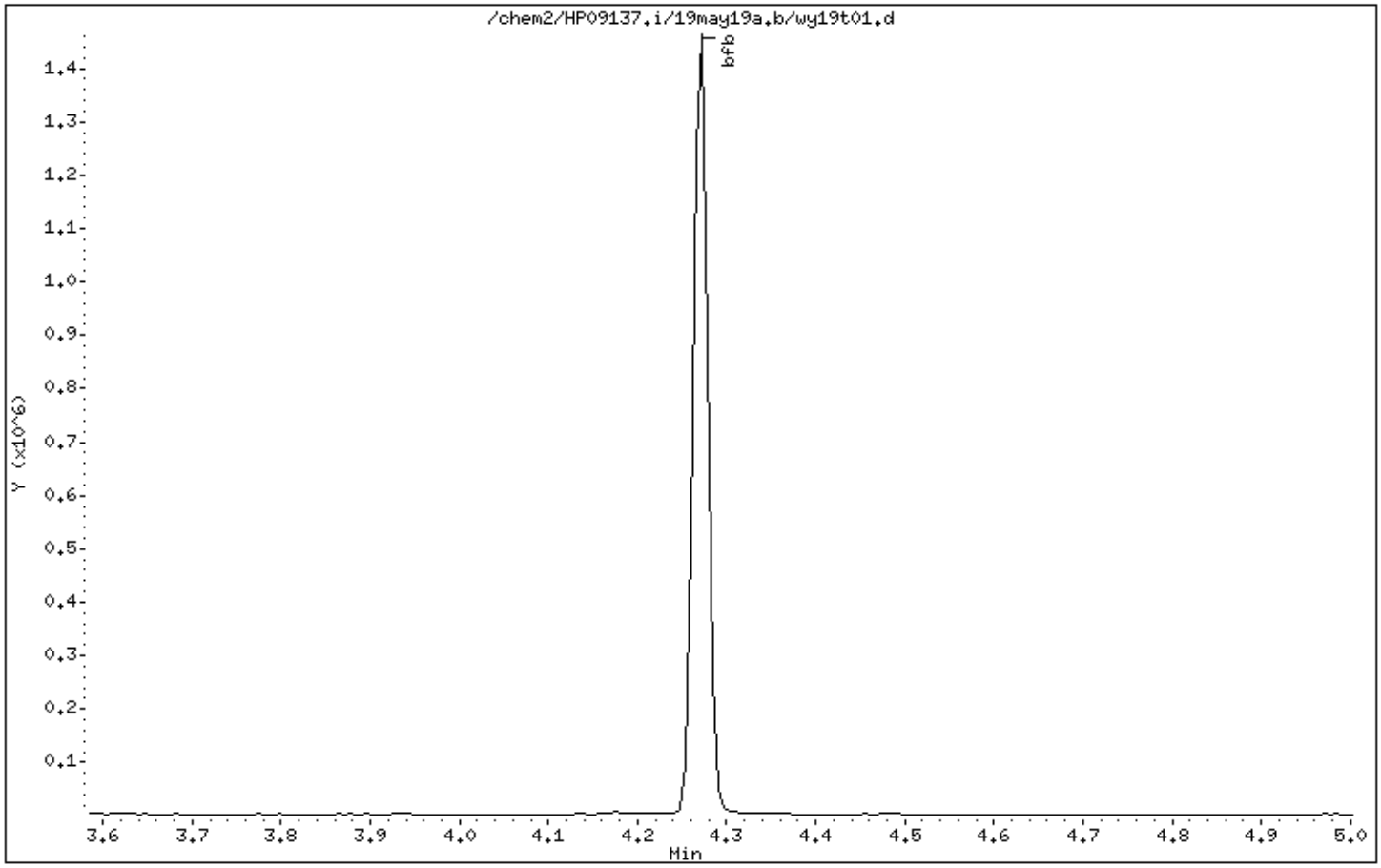
Instrument: HP09137.i

Sample Info: BFB FEB05-19;BFB 50NG;1;3;;;;;;

Operator: CBR01947

Column phase: DB-624

Column diameter: 0.18



Digitally signed by on 05/19/2019 at 11:09.
Target 3.5 esignature user ID: cbr01947

Data File: /chem2/HP09137.i/19may19a.b/wy19t01.d

Date : 19-MAY-2019 11:04

Client ID: BFB FEB05-19

Instrument: HP09137.i

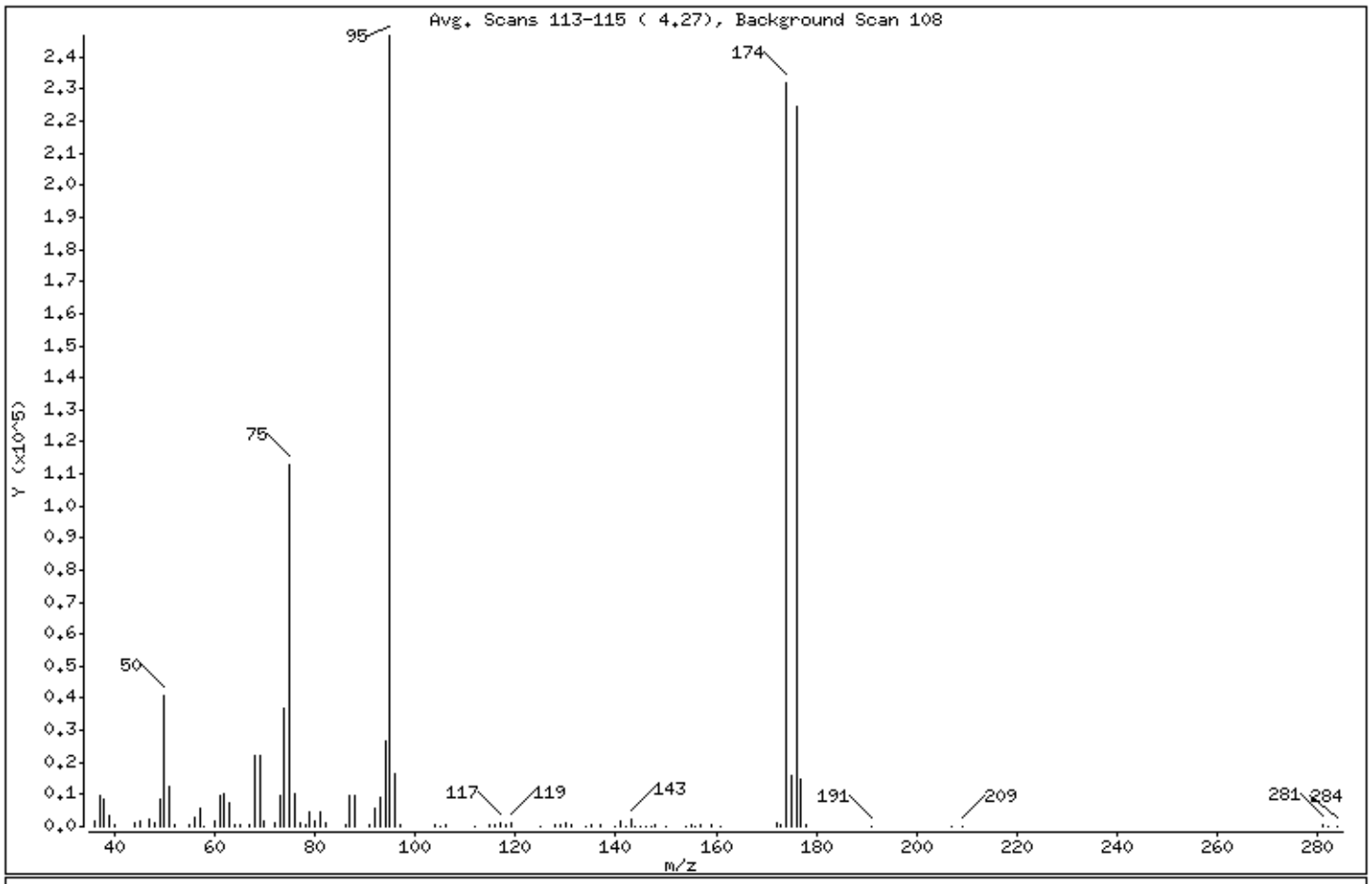
Sample Info: BFB FEB05-19;BFB 50NG;1;3;;;;;;

Operator: CBR01947

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.56
75	30.00 - 60.00% of mass 95	45.66
96	5.00 - 9.00% of mass 95	6.73
173	Less than 2.00% of mass 174	0.17 (0.18)
174	50.00 - 100.00% of mass 95	94.07
175	5.00 - 9.00% of mass 174	6.39 (6.80)
176	95.00 - 101.00% of mass 174	90.96 (96.69)
177	5.00 - 9.00% of mass 176	6.02 (6.62)

Digitally signed by on 05/19/2019 at 11:09.
Target 3.5 esignature user ID: cbr01947

Data File: /chem2/HP09137.i/19may19a.b/wy19t01.d

Date : 19-MAY-2019 11:04

Client ID: BFB FEB05-19 Instrument: HP09137.i

Sample Info: BFB FEB05-19;BFB 50NG;1;3;;;;;;

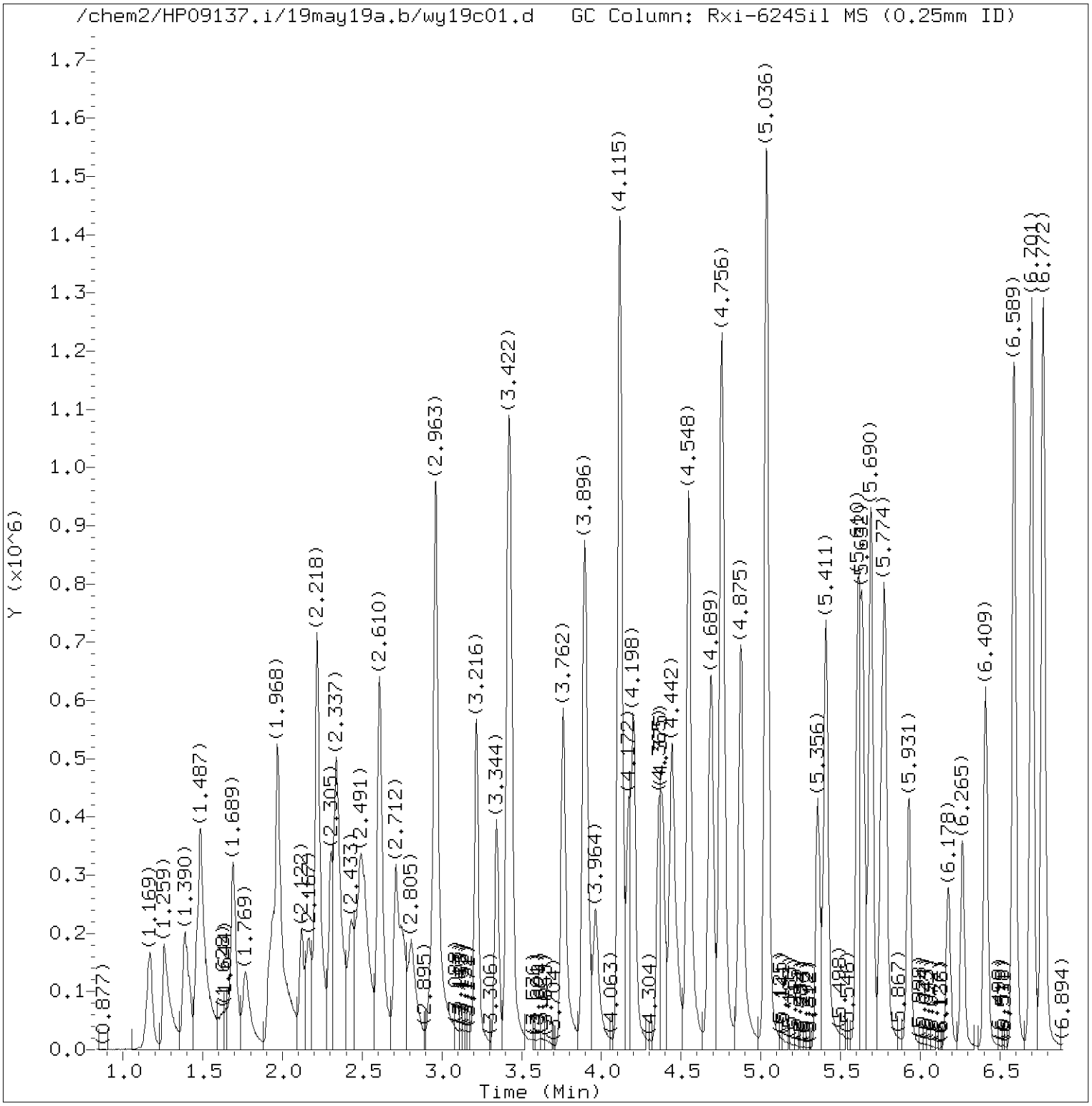
Operator: CBR01947

Column phase: DB-624 Column diameter: 0.18

Data File: wy19t01.d
Spectrum: Avg. Scans 113-115 (4.27), Background Scan 108
Location of Maximum: 95.00
Number of points: 94

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1858	68.00	21936	104.00	809	147.00	154
37.00	9821	69.00	22160	105.00	134	148.00	598
38.00	8516	70.00	1632	106.00	689	150.00	189
39.00	3503	72.00	1262	112.00	112	154.00	84
40.00	307	73.00	9738	115.00	327	155.00	785
44.00	931	74.00	36824	116.00	695	156.00	87
45.00	1717	75.00	112680	117.00	1403	157.00	461
47.00	2402	76.00	10291	118.00	783	159.00	390
48.00	1098	77.00	1373	119.00	1097	161.00	200
49.00	8785	78.00	794	125.00	86	172.00	888
50.00	40864	79.00	4421	128.00	814	173.00	417
51.00	12463	80.00	1472	129.00	394	174.00	232128
52.00	486	81.00	4364	130.00	996	175.00	15778
55.00	490	82.00	909	131.00	316	176.00	224448
56.00	2568	86.00	351	134.00	84	177.00	14866
57.00	5406	87.00	9756	135.00	298	178.00	381
58.00	137	88.00	9469	137.00	389	191.00	86
60.00	1697	91.00	691	140.00	92	207.00	52
61.00	9430	92.00	5836	141.00	1905	209.00	106
62.00	10000	93.00	9249	142.00	186	281.00	651
63.00	7221	94.00	26384	143.00	2336	282.00	87
64.00	823	95.00	246720	144.00	98	284.00	85
65.00	648	96.00	16608	145.00	86		
67.00	557	97.00	551	146.00	237		

Digitally signed by on 05/19/2019 at 11:09.
Target 3.5 esignature user ID: cbr01947



Total Ion Chromatogram (TIC)

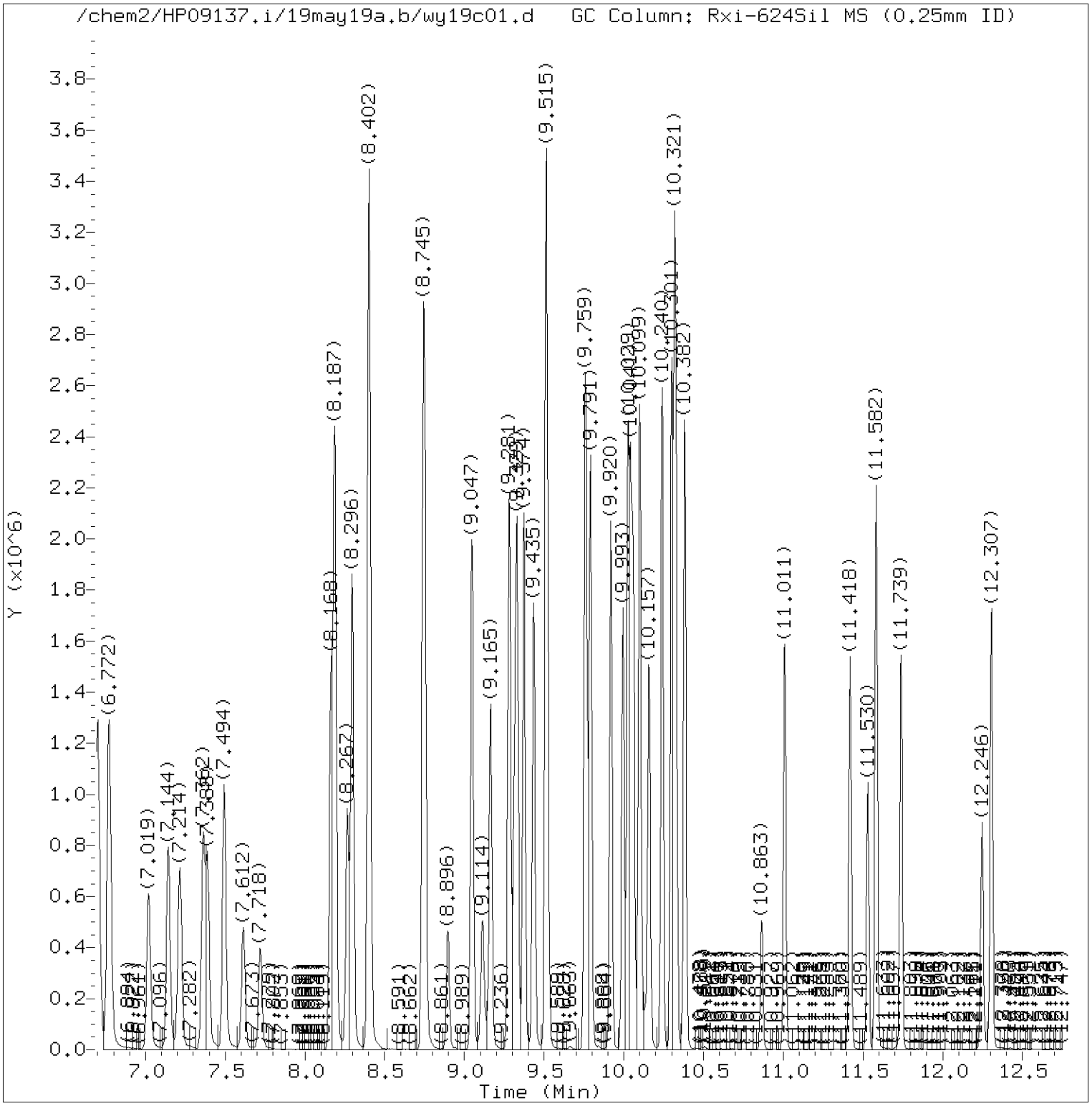
Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.259	85	352640	56.551
4) Chloromethane	(2)	1.390	50	283940	36.568
6) Vinyl Chloride	(2)	1.464	62	282008	39.618
5) 1,3-Butadiene	(2)	1.483	39	178597M	37.742
8) Bromomethane	(2)	1.689	94	244194M	43.498
9) Chloroethane	(2)	1.775	64	176670	37.717
12) Trichlorofluoromethane	(2)	1.936	101	380635	50.350
11) n-Pentane	(2)	1.968	43	289216	40.226
13) Ethanol	(1)	2.032	45	62951	734.166
15) Freon 123a	(2)	2.119	67	260018M	46.027
16) Acrolein	(1)	2.218	56	640475	473.191
17) 1,1-Dichloroethene	(2)	2.308	96	211031	49.632
17) 1,1-Dichloroethene	(2)	2.305	63	87772	40.916
19) Freon 113	(2)	2.340	101	186282	49.892
18) Acetone	(1)	2.343	58	68390	103.952
21) 2-Propanol	(1)	2.452	45	117545	240.475
22) Methyl Iodide	(2)	2.478	142	417167M	51.198
23) Carbon Disulfide	(2)	2.513	76	625100	41.730
25) Allyl Chloride	(2)	2.606	41	348321	47.023
27) Methyl Acetate	(2)	2.622	43	277295	43.249
28) Methylene Chloride	(2)	2.712	84	247023M	47.529
29)*t-Butyl alcohol-d10	(1)	2.735	65	188008	250.000
30) t-Butyl alcohol	(1)	2.809	59	224779	257.788
31) Acrylonitrile	(2)	2.927	53	138578	41.085
32) trans-1,2-Dichloroethene	(2)	2.959	96	224566	48.678
33) Methyl Tertiary Butyl Ether	(2)	2.966	73	654020	58.224
34) n-Hexane	(2)	3.219	57	276401	44.777
36) 1,1-Dichloroethane	(2)	3.344	63	388866	46.518
38) di-Isopropyl ether	(2)	3.415	45	721801	44.945
39) 2-Chloro-1,3-butadiene	(2)	3.431	53	362173	50.023
40) Ethyl t-butyl ether	(2)	3.762	59	610607	52.160
42) cis-1,2-Dichloroethene	(2)	3.893	96	247374	47.758
45) 2,2-Dichloropropane	(2)	3.893	77	151453	40.341
44) 2-Butanone	(2)	3.909	43	386737	79.806
47) Propionitrile	(1)	3.964	54	310763	286.761
48) Methacrylonitrile	(2)	4.115	67	399389	110.127
49) Bromochloromethane	(2)	4.121	128	143715	53.375
50) Tetrahydrofuran	(1)	4.172	71	109736	109.408

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	4.205	83	395256	50.393
52)$Dibromofluoromethane	(2)	4.359	113	218524	48.911
52)$Dibromofluoromethane	(2)	4.359	111	225901	49.255
53) 1,1,1-Trichloroethane	(2)	4.384	97	299166	50.692
54) Cyclohexane	(2)	4.442	56	334661	42.849
54) Cyclohexane	(2)	4.445	84	273818	42.354
54) Cyclohexane	(2)	4.445	69	103238	43.983
55) 1,1-Dichloropropene	(2)	4.548	75	297029	47.235
56) Carbon Tetrachloride	(2)	4.548	117	253960	50.144
58) Isobutyl Alcohol	(1)	4.679	41	209718	659.732
57)$1,2-Dichloroethane-d4	(2)	4.692	102	59029	49.678
57)$1,2-Dichloroethane-d4	(2)	4.692	65	268706	51.949
57)$1,2-Dichloroethane-d4	(2)	4.699	104	38086	50.330
60) Benzene	(2)	4.753	78	956474	47.320
61) 1,2-Dichloroethane	(2)	4.766	62	323596	51.825
61) 1,2-Dichloroethane	(2)	4.769	98	30974	52.140
65) t-Amyl methyl ether	(2)	4.875	73	595645	49.667
66)*Fluorobenzene	(2)	5.036	96	964374	50.000
67) n-Heptane	(2)	5.042	43	256307	43.446
69) n-Butanol	(1)	5.356	56	332536	1178.185
71) Trichloroethene	(2)	5.408	95	240785	49.191
73) Methylcyclohexane	(2)	5.610	83	374982	52.767
73) Methylcyclohexane	(2)	5.610	98	177591	53.746
74) 1,2-Dichloropropane	(2)	5.639	63	238789	46.015
75) Dibromomethane	(2)	5.758	93	160891	50.236
77) Methyl Methacrylate	(2)	5.780	69	258851	45.390
76) 1,4-Dioxane	(1)	5.790	88	62396M	739.493
79) Bromodichloromethane	(2)	5.931	83	295143	50.156
43) 1,2-Dichloroethene (Total)	(2)		96	471940	96.436
80) 2-Nitropropane	(2)	6.175	41	186445	93.643
81) 2-Chloroethyl Vinyl Ether	(2)	6.265	63	159799	40.390
82) cis-1,3-Dichloropropene	(2)	6.409	75	373890	46.211
83) 4-Methyl-2-pentanone	(2)	6.589	43	822463	86.100
84)$Toluene-d8	(3)	6.701	98	955436	51.302
84)$Toluene-d8	(3)	6.698	100	628540	50.892
89) Toluene	(3)	6.772	92	617042	51.433
90) trans-1,3-Dichloropropene	(3)	7.019	75	356889	49.970
92) Ethyl Methacrylate	(3)	7.144	69	428005	48.769

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) 1,1,2-Trichloroethane	(3)	7.214	97	246583	53.402
94) Tetrachloroethene	(3)	7.362	166	259537	53.314
95) 1,3-Dichloropropane	(3)	7.388	76	414876	51.729
97) 2-Hexanone	(3)	7.494	43	636485	91.099
98) Dibromochloromethane	(3)	7.612	129	249068	55.226
100) 1,2-Dibromoethane	(3)	7.721	107	272757	53.766
101)*Chlorobenzene-d5	(3)	8.161	117	743223	50.000
103) Chlorobenzene	(3)	8.190	112	705379	53.000
104) 1,1,1,2-Tetrachloroethane	(3)	8.267	131	232934	54.462
105) Ethylbenzene	(3)	8.296	91	1149585	50.417
107) m+p-Xylene	(3)	8.405	106	934781	103.111
108) o-Xylene	(3)	8.742	106	458704	51.431
110) Styrene	(3)	8.752	104	791610	52.909
111) Bromoform	(3)	8.896	173	187730	53.485
112) Isopropylbenzene	(3)	9.047	105	1085971	49.551
113) Cyclohexanone	(1)	9.114	55	197148	517.974
115)$4-Bromofluorobenzene	(3)	9.165	95	356326	47.825
115)$4-Bromofluorobenzene	(3)	9.165	174	325361	51.751
116) Bromobenzene	(4)	9.281	156	323557	52.490
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	411616	49.517
118) 1,2,3-Trichloropropane	(4)	9.316	110	131304	52.441
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	307098	115.205
120) n-Propylbenzene	(4)	9.374	91	1259814	46.361
121) 2-Chlorotoluene	(4)	9.435	126	280278	50.006
123) 1,3,5-Trimethylbenzene	(4)	9.512	105	939146	47.921
122) 4-Chlorotoluene	(4)	9.518	126	305442	50.906
125) tert-Butylbenzene	(4)	9.756	134	209936	47.150
126) Pentachloroethane	(4)	9.769	167	189428	53.818
127) 1,2,4-Trimethylbenzene	(4)	9.791	105	1003727	48.604
128) sec-Butylbenzene	(4)	9.920	105	1072764	44.595
130) 1,3-Dichlorobenzene	(4)	9.997	146	590614	50.246
131) p-Isopropyltoluene	(4)	10.025	119	970536	45.576
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	427964	50.000
134) 1,4-Dichlorobenzene	(4)	10.061	146	617413	50.667
91) 1,3-Dichloropropene (total)	(3)		100	730779	96.181
135) 1,2,3-Trimethylbenzene	(4)	10.099	105	1114497	50.158
136) Benzyl Chloride	(4)	10.160	91	826017	48.429
137) 1,3-Diethylbenzene	(4)	10.240	119	655395	48.982

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
138) 1,4-Diethylbenzene	(4)	10.298	119	681827	47.562
140) n-Butylbenzene	(4)	10.317	92	467531	43.499
139) 1,2-Dichlorobenzene	(4)	10.327	146	592526	50.809
141) 1,2-Diethylbenzene	(4)	10.382	119	550184	48.703
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	89927	47.602
145) 1,3,5-Trichlorobenzene	(4)	11.011	180	403236	45.092
147) 1,2,4-Trichlorobenzene	(4)	11.421	180	381282	44.410
148) Hexachlorobutadiene	(4)	11.530	225	150776	49.308
149) Naphthalene	(4)	11.582	128	1363562	46.939
150) 1,2,3-Trichlorobenzene	(4)	11.739	180	379630	45.303
109) Xylene (Total)	(3)		106	1393485	154.542
151) 2-Methylnaphthalene	(4)	12.307	142	646953	39.035
142) Diethylbenzene (total)	(4)		100	1887406	145.247

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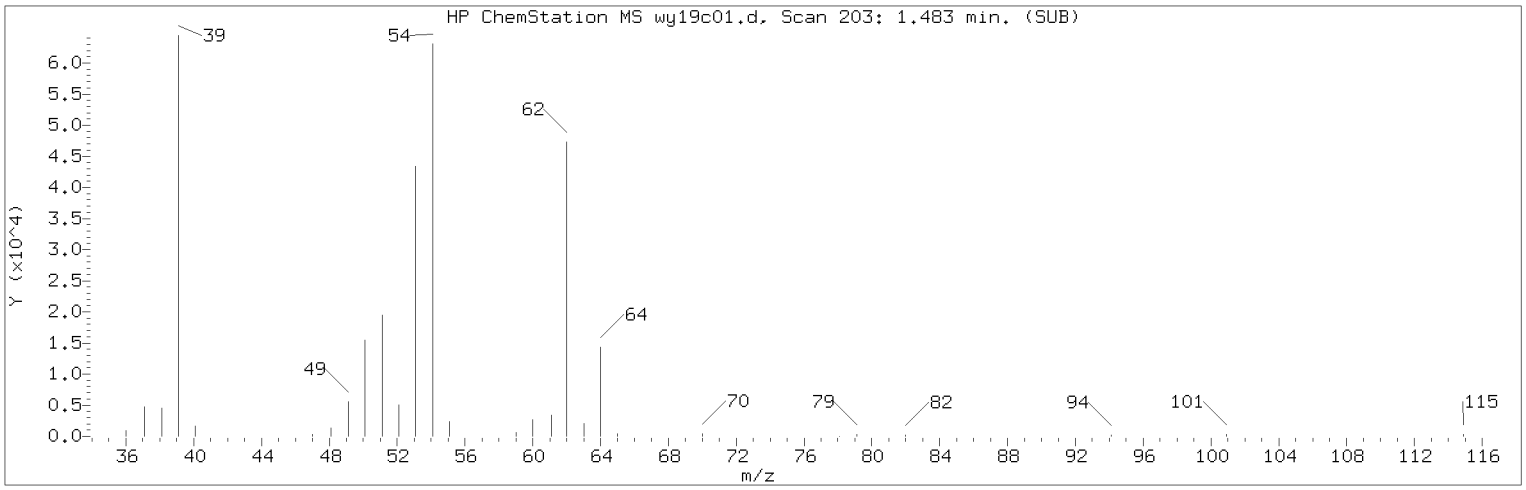
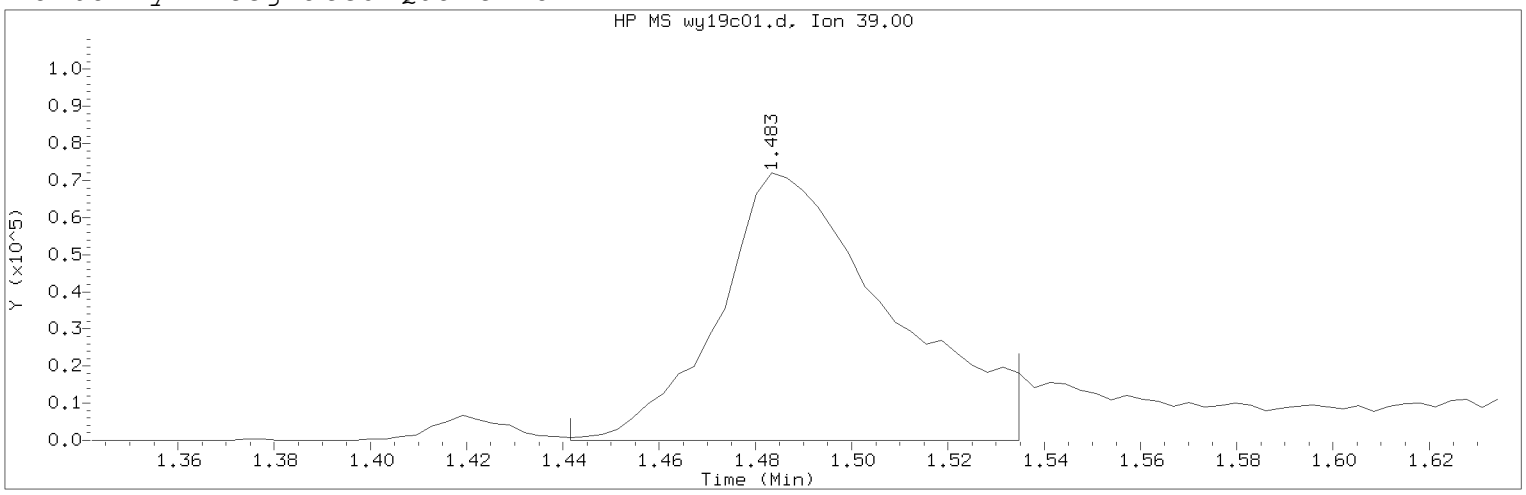
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

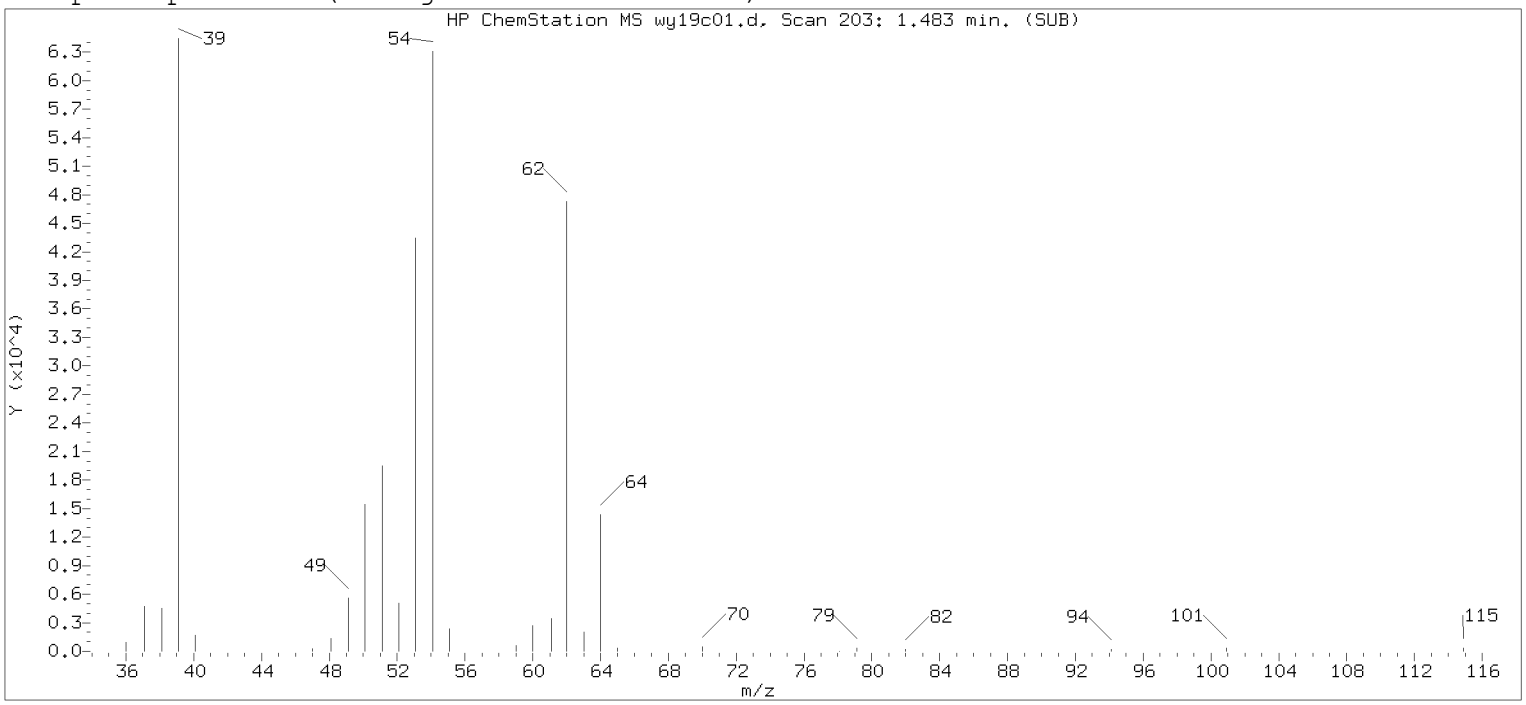
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 203
Retention Time (minutes): 1.483
Quant Ion : 39.00
Area (flag) : 178597M
On-Column Amount (ng) : 37.7421
Integration start scan : 189 Integration stop scan: 218
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

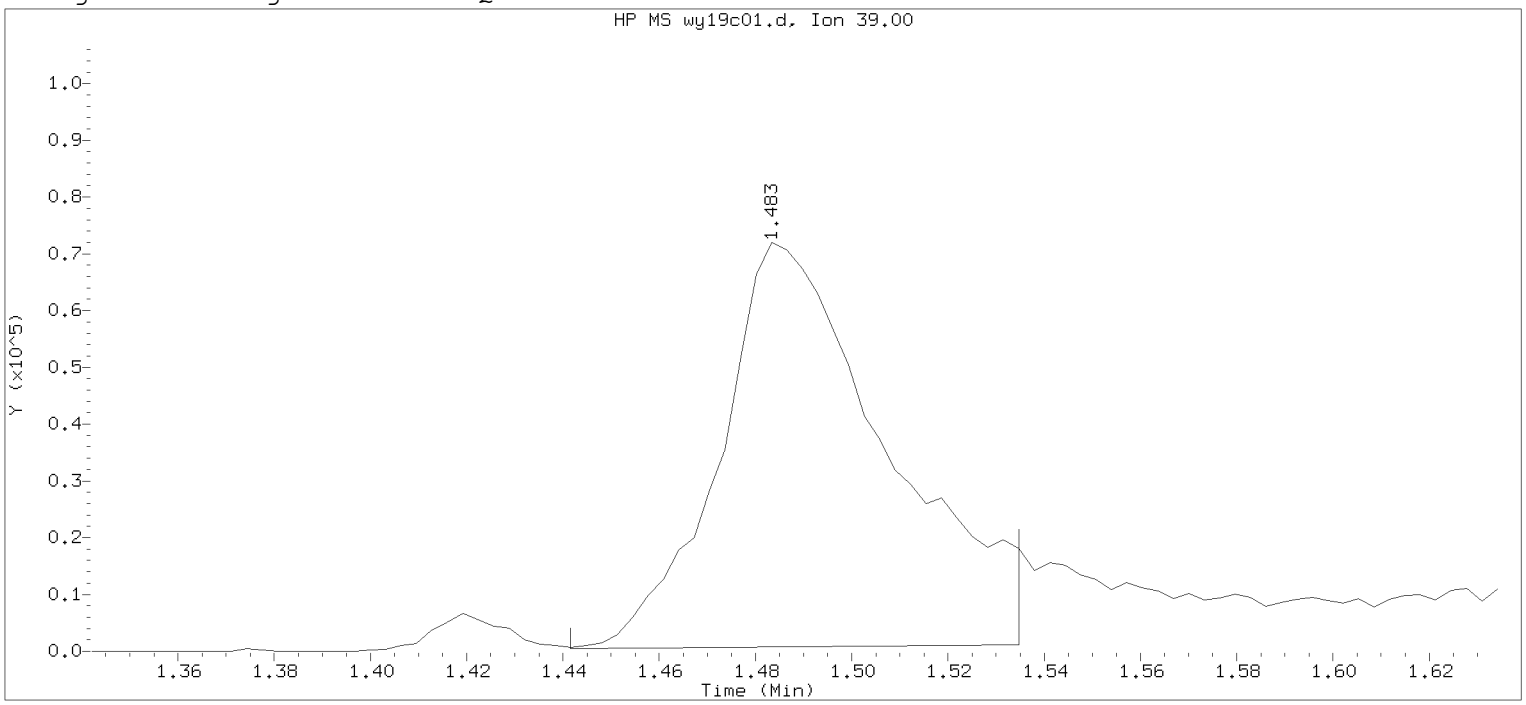
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 21:37.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

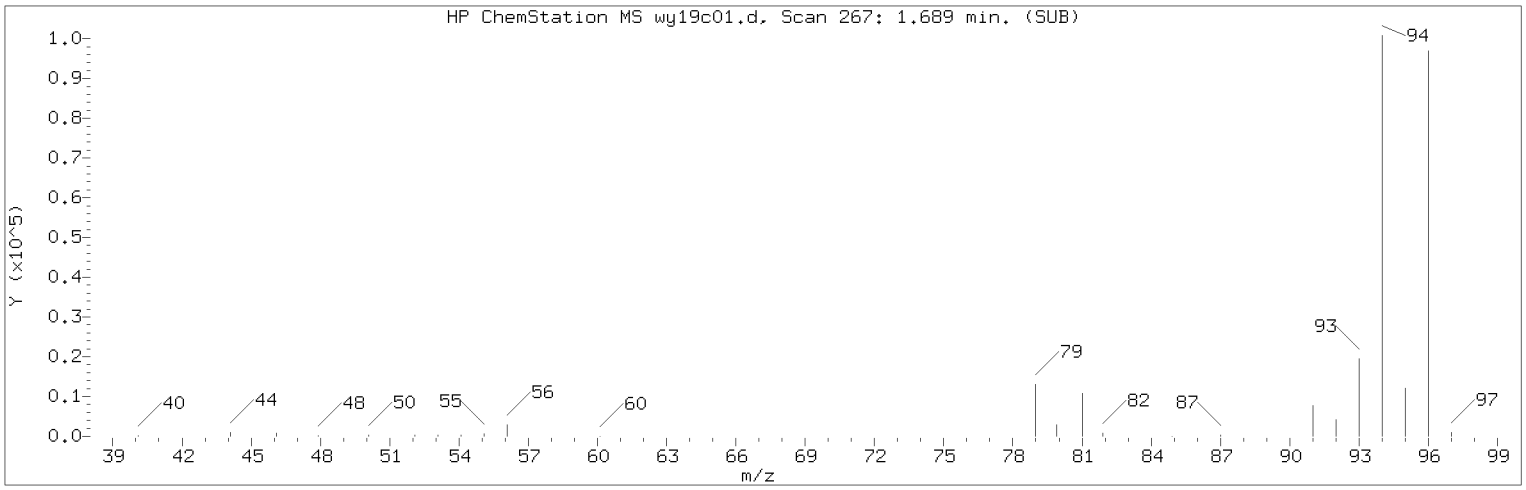
Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 11:47 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

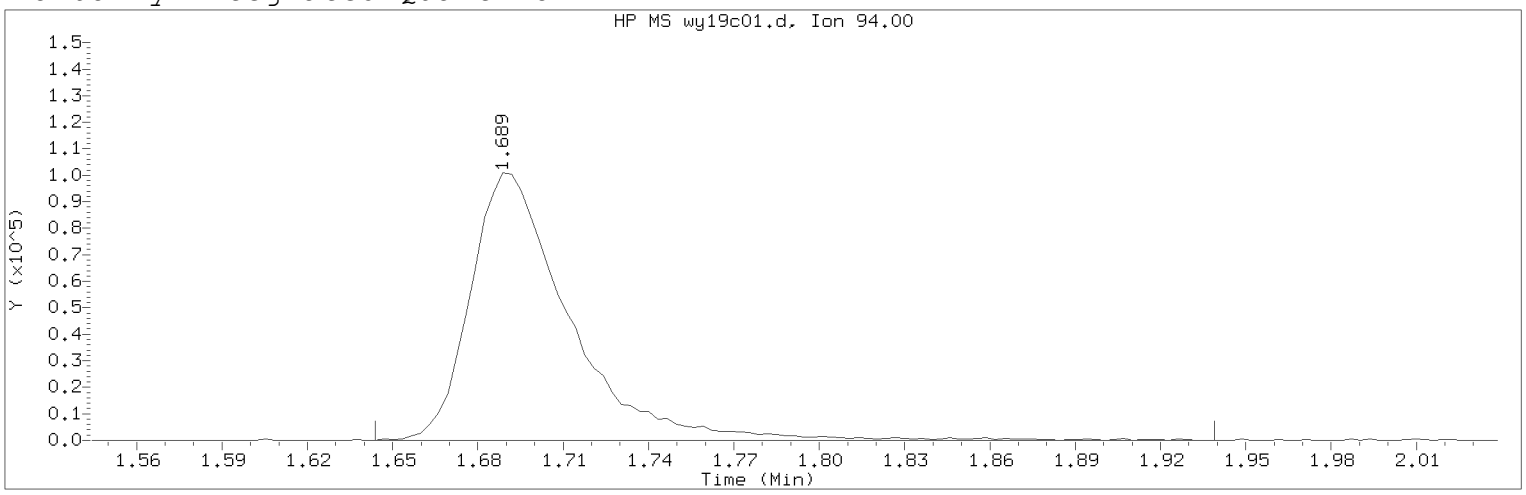
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 203
Retention Time (minutes): 1.483
Quant Ion : 39.00
Area : 172513
On-column Amount (ng) : 36.4565
Integration start scan : 189 Integration stop scan: 218
Y at integration start : 396 Y at integration end: 1136

Digitally signed by Chelsea B. Stong on 05/19/2019 at 12:05.
Target 3.5 esignature user check passed

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

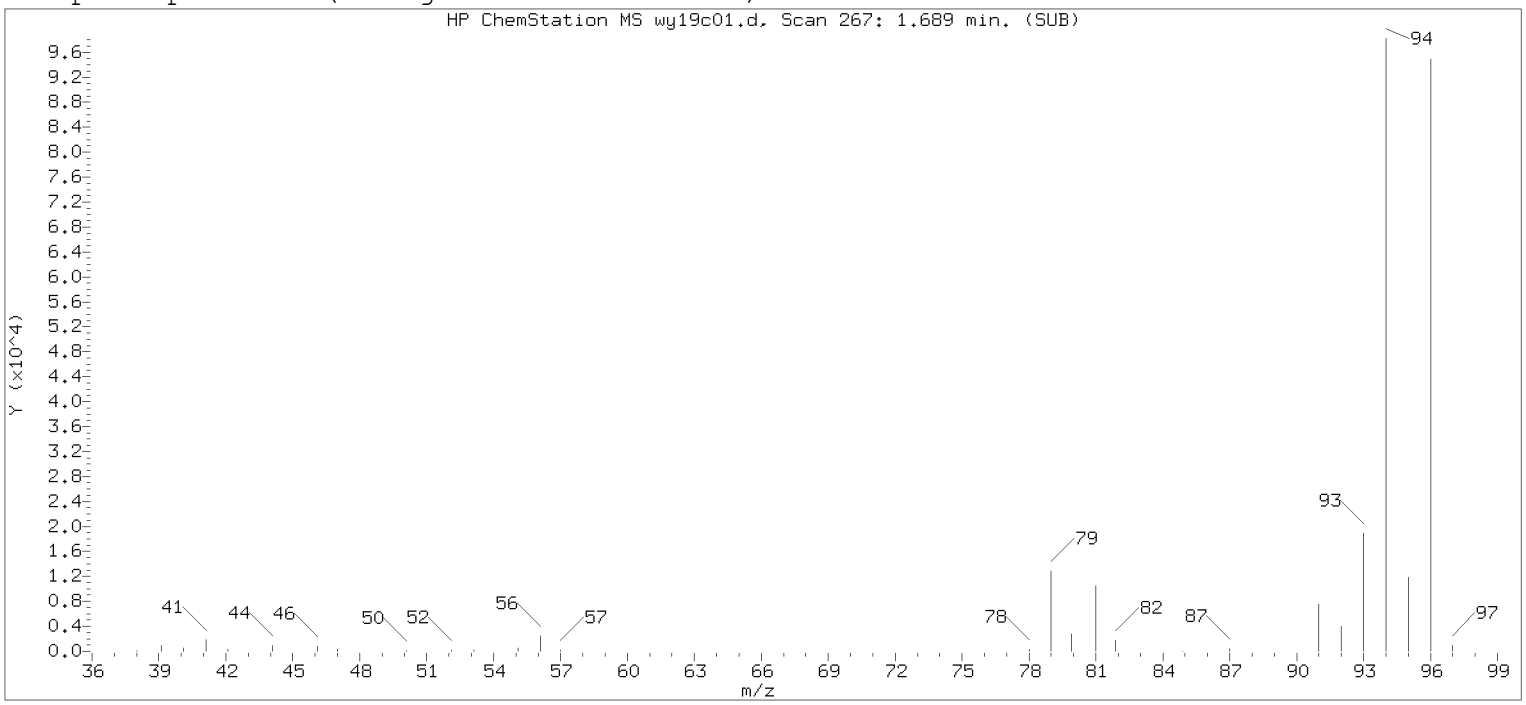
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 267
Retention Time (minutes): 1.689
Quant Ion : 94.00
Area (flag) : 244194M
On-Column Amount (ng) : 43.4984
Integration start scan : 252 Integration stop scan: 344
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

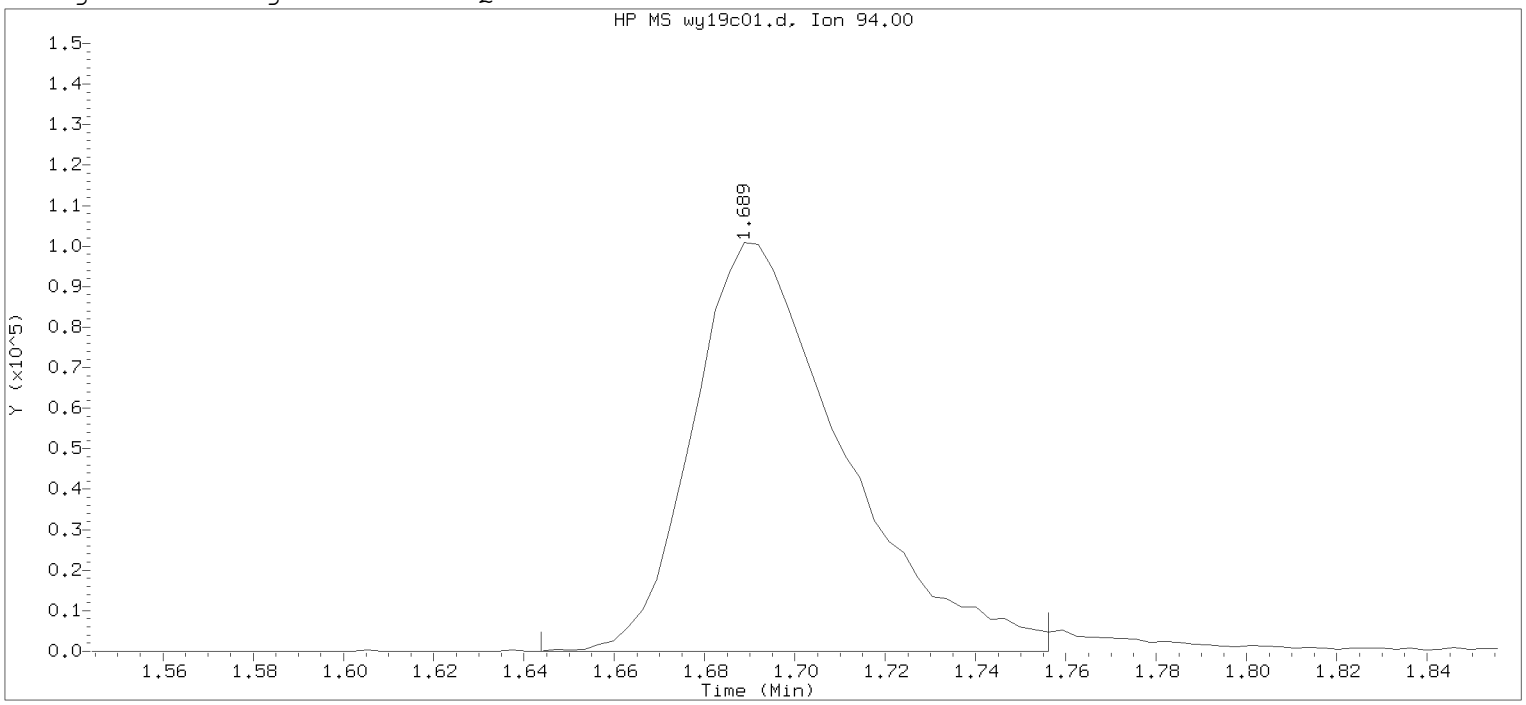
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 21:37.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

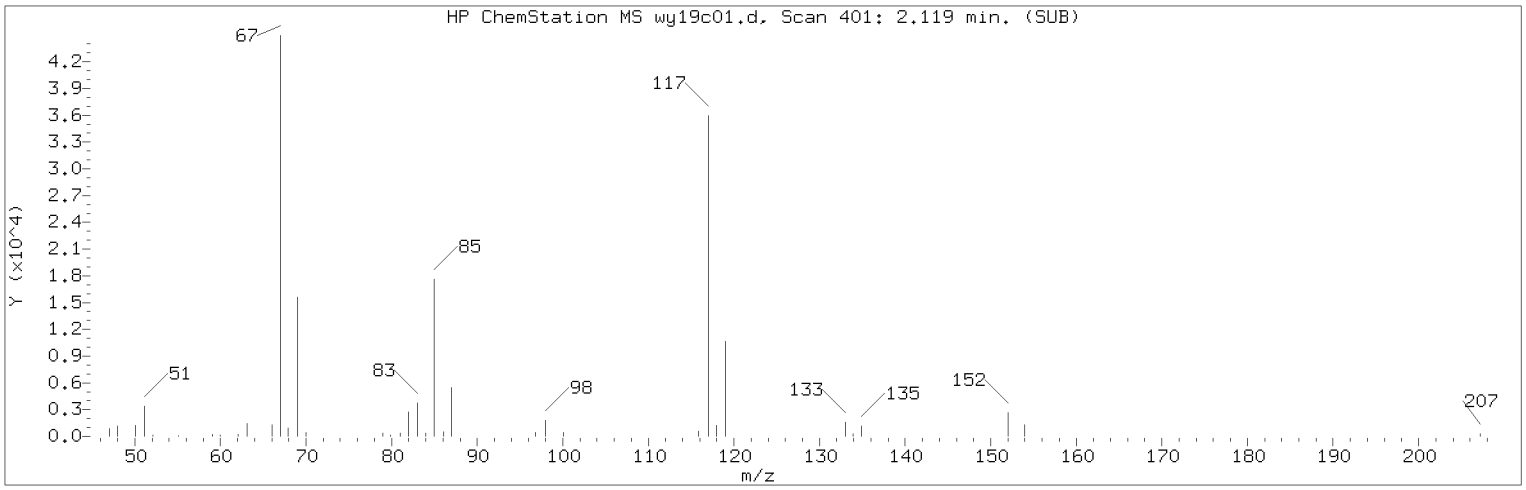
Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 11:47 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

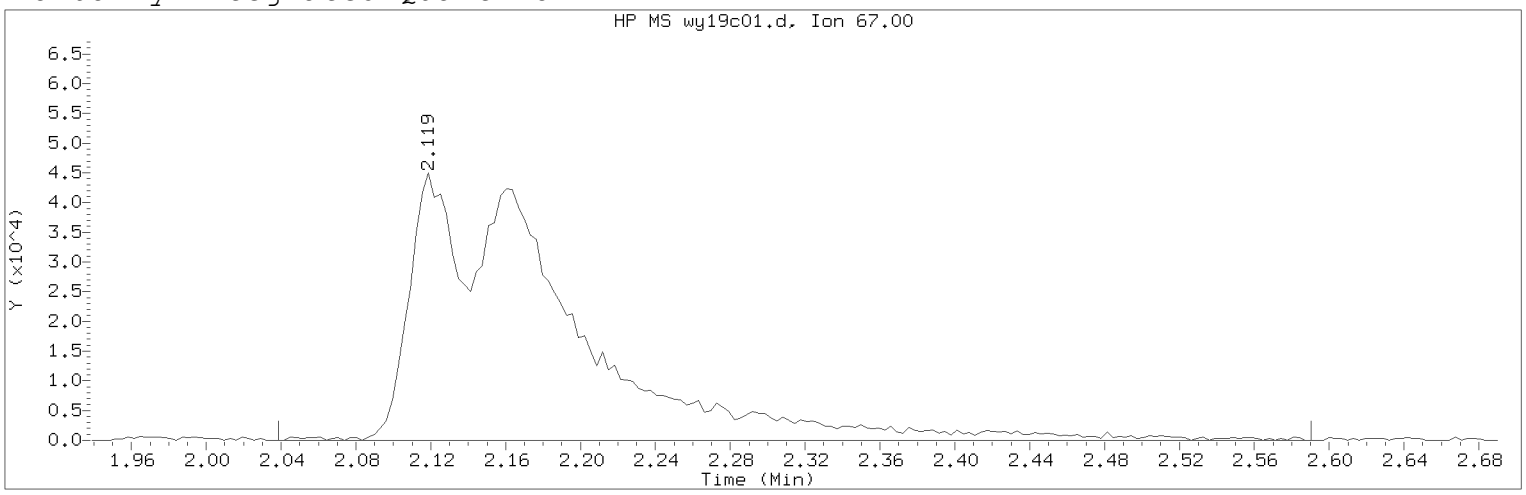
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 267
Retention Time (minutes): 1.689
Quant Ion : 94.00
Area : 232869
On-column Amount (ng) : 41.4809
Integration start scan : 252 Integration stop scan: 287
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbr01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

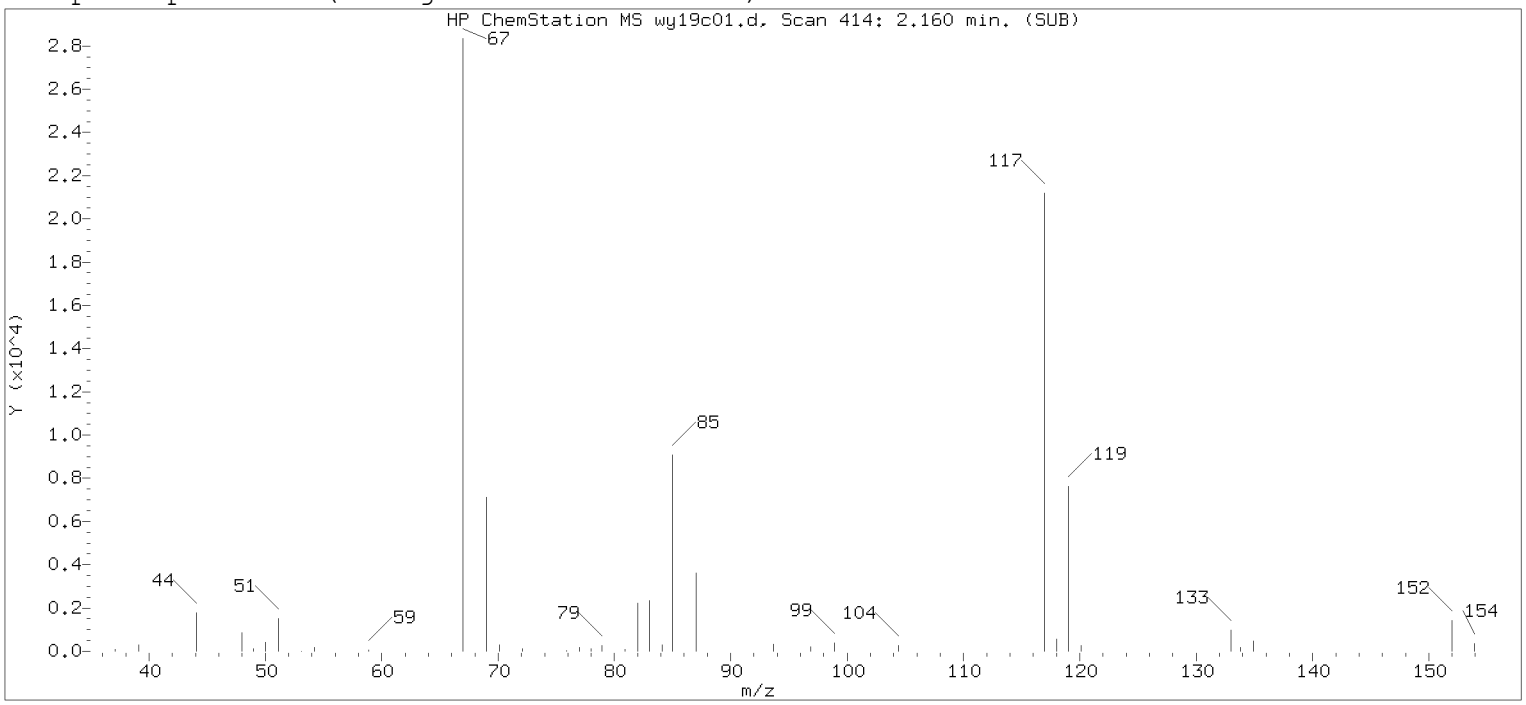
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 401
Retention Time (minutes): 2.119
Quant Ion : 67.00
Area (flag) : 260018M
On-Column Amount (ng) : 46.0271
Integration start scan : 375 Integration stop scan: 547
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

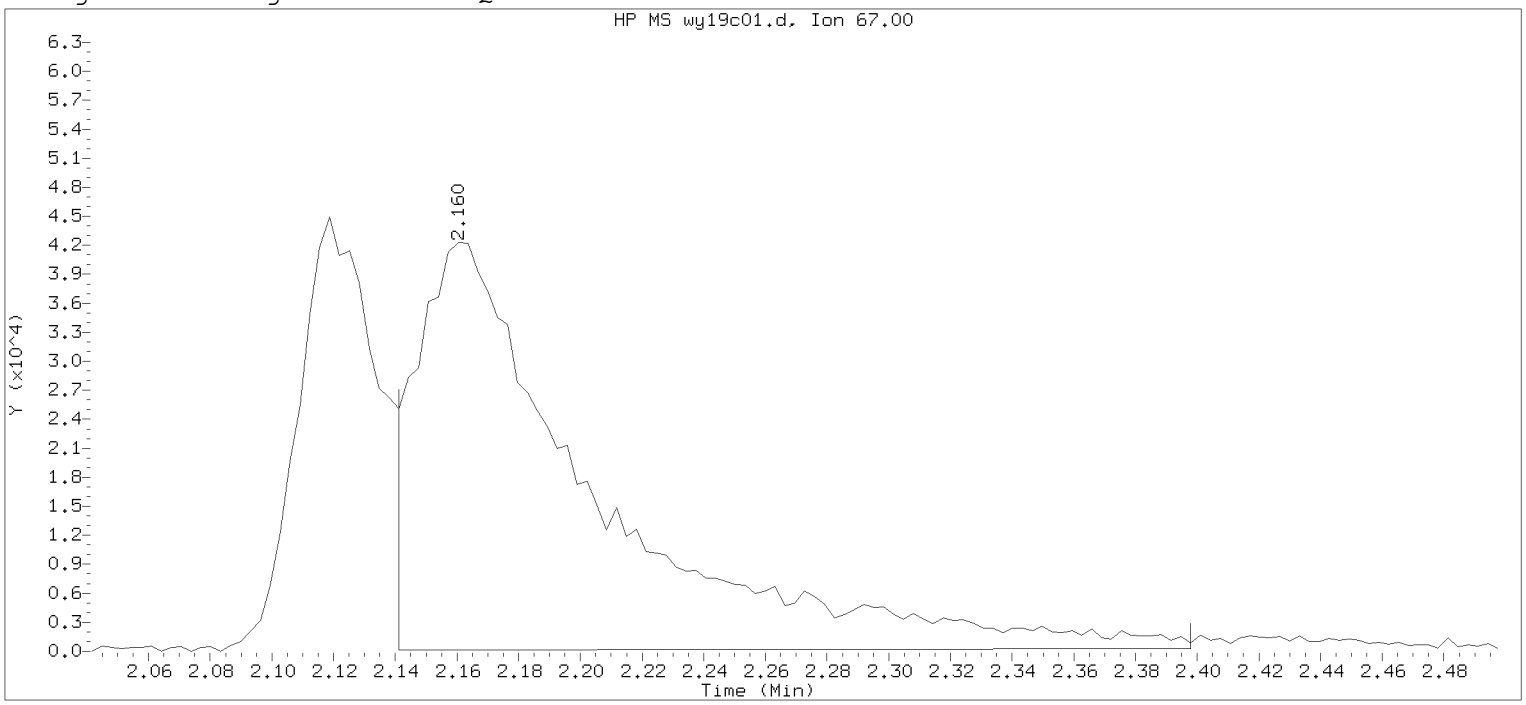
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 21:37.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

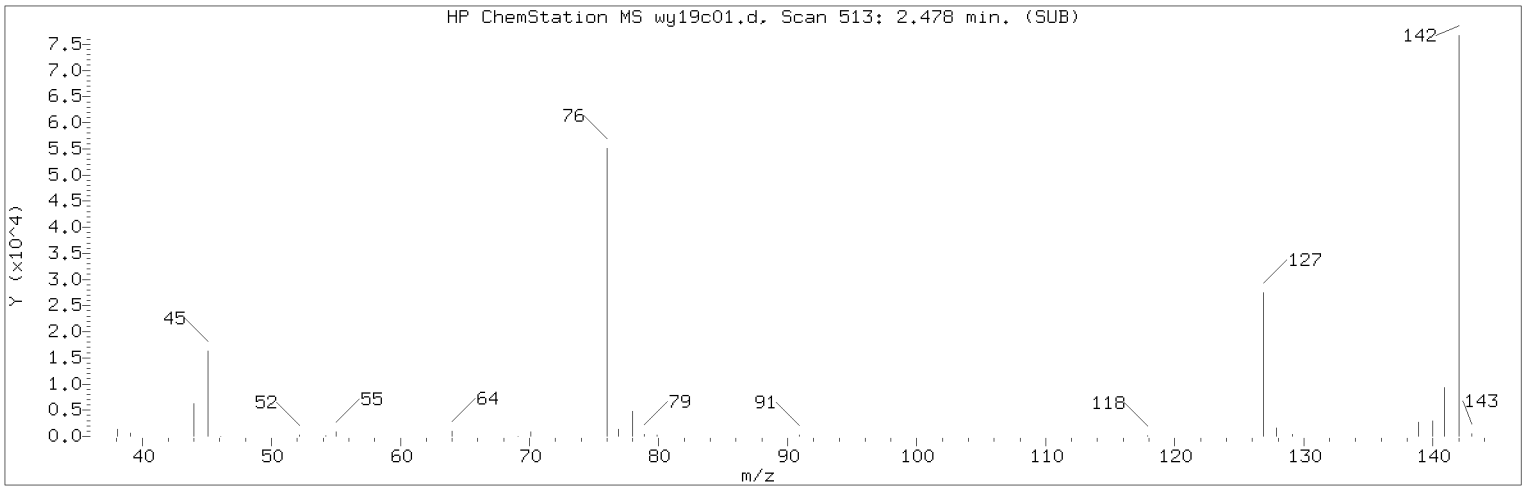
Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 11:47 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

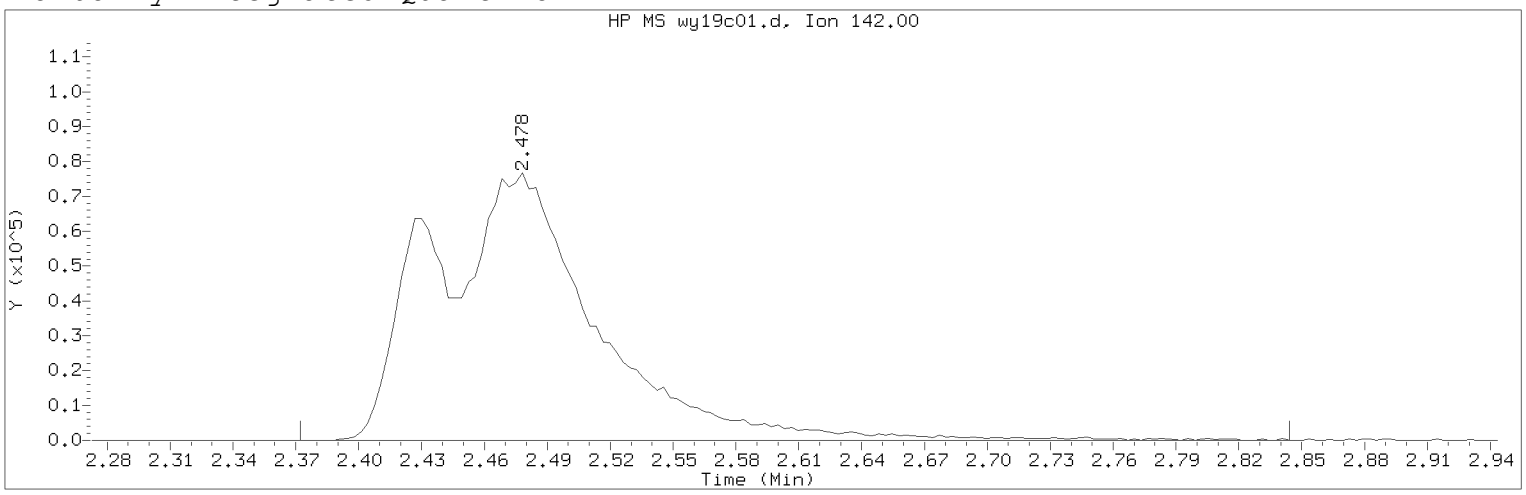
Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 414		
Retention Time (minutes)	: 2.160		
Quant Ion	: 67.00		
Area	: 168794		
On-column Amount (ng)	: 29.8791		
Integration start scan	: 407	Integration stop scan:	487
Y at integration start	: 157	Y at integration end:	269

Digitally signed by Chelsea B. Stong on 05/19/2019 at 12:05.
Target 3.5 esignature user check passed

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

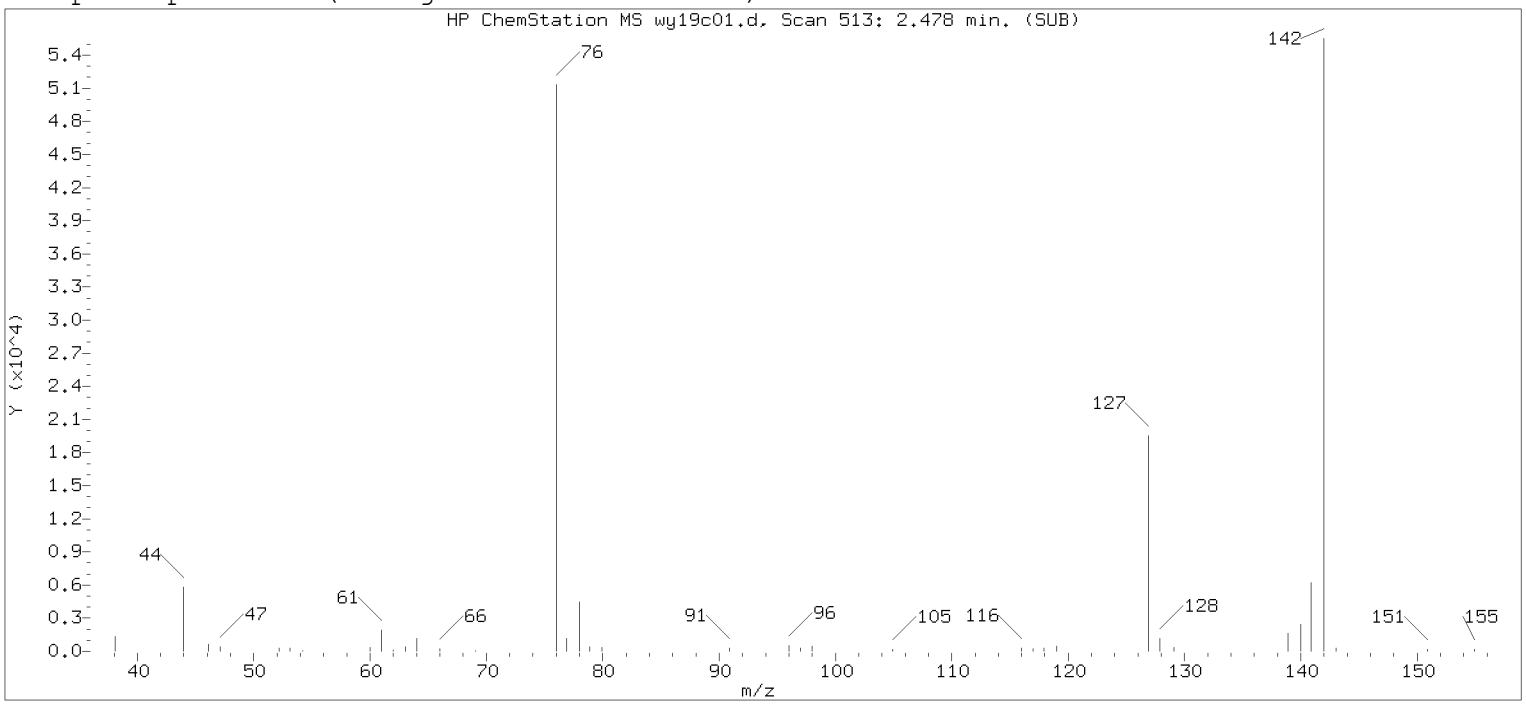
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 513
Retention Time (minutes): 2.478
Quant Ion : 142.00
Area (flag) : 417167M
On-Column Amount (ng) : 51.1983
Integration start scan : 479 Integration stop scan: 626
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

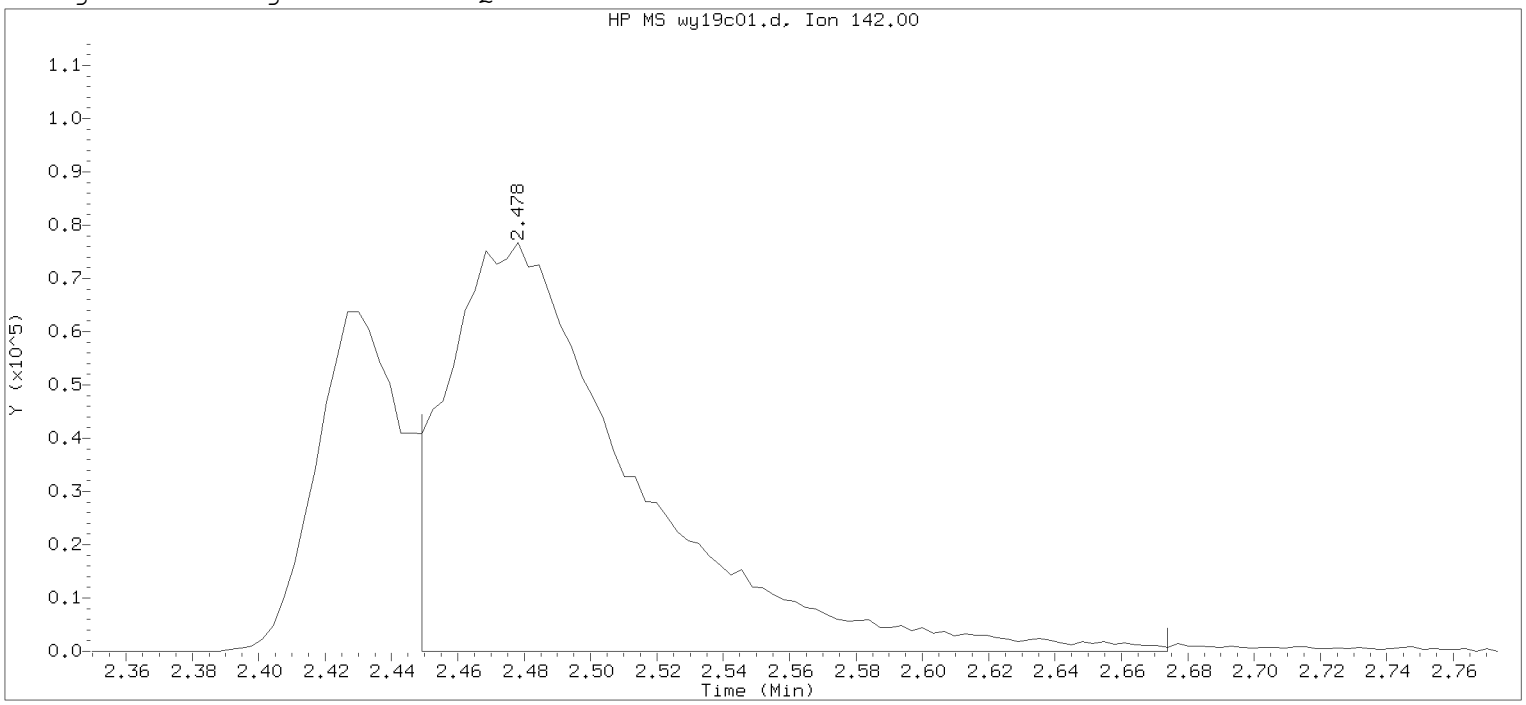
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 21:37.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

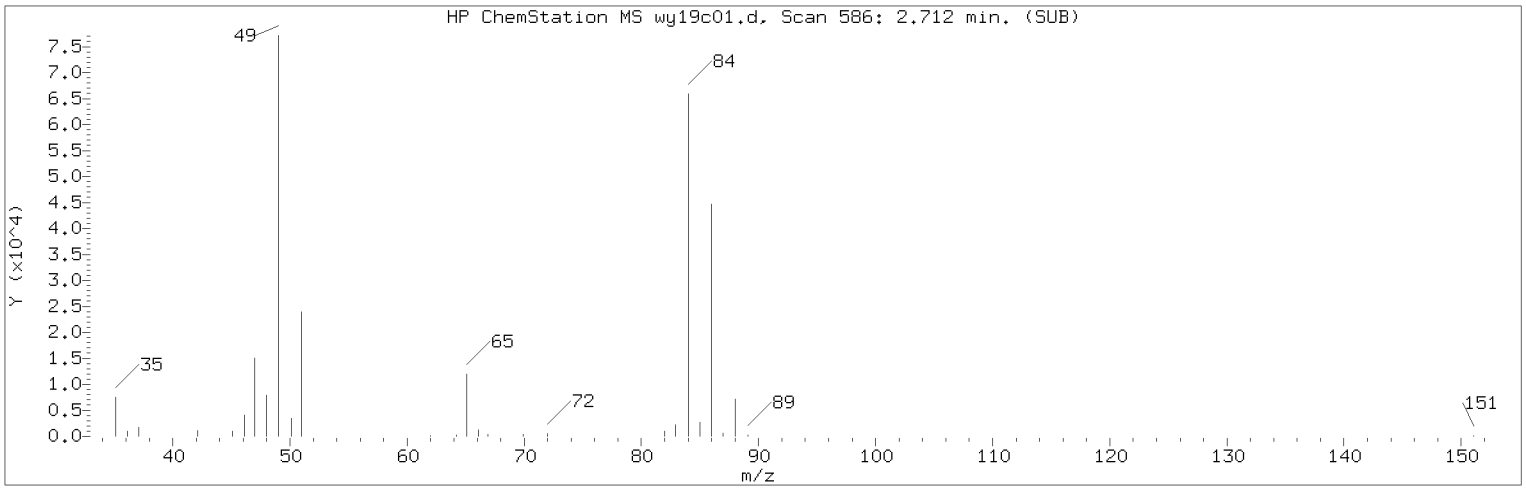
Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 11:47 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

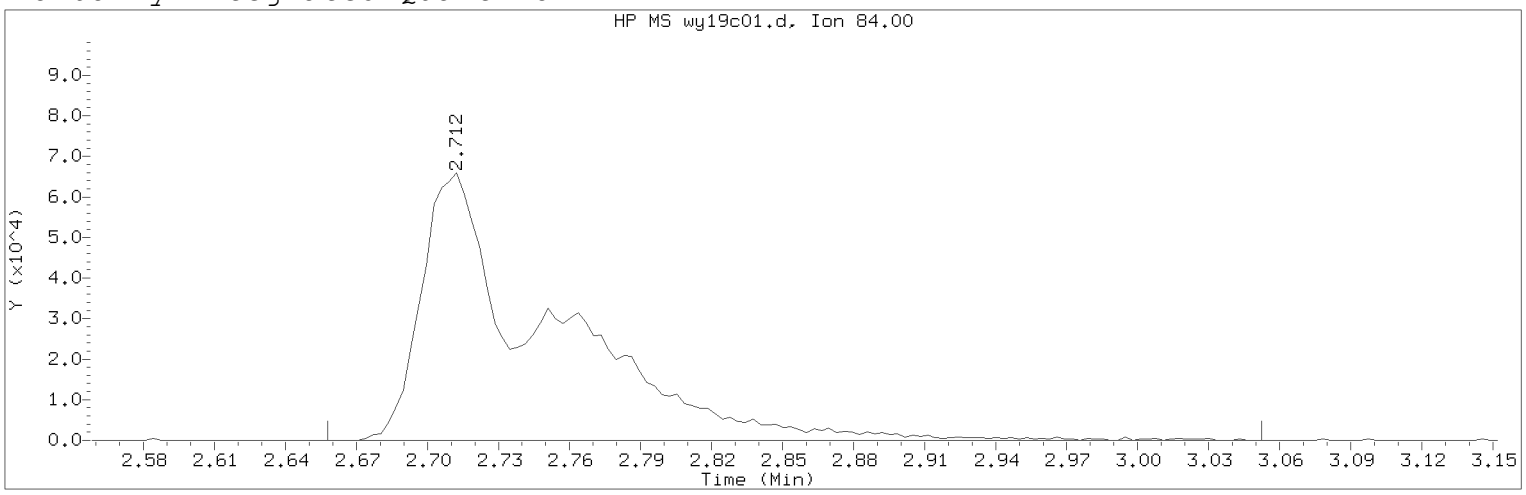
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 513
Retention Time (minutes): 2.478
Quant Ion : 142.00
Area : 298488
On-column Amount (ng) : 36.6330
Integration start scan : 503 Integration stop scan: 573
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: CBR01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

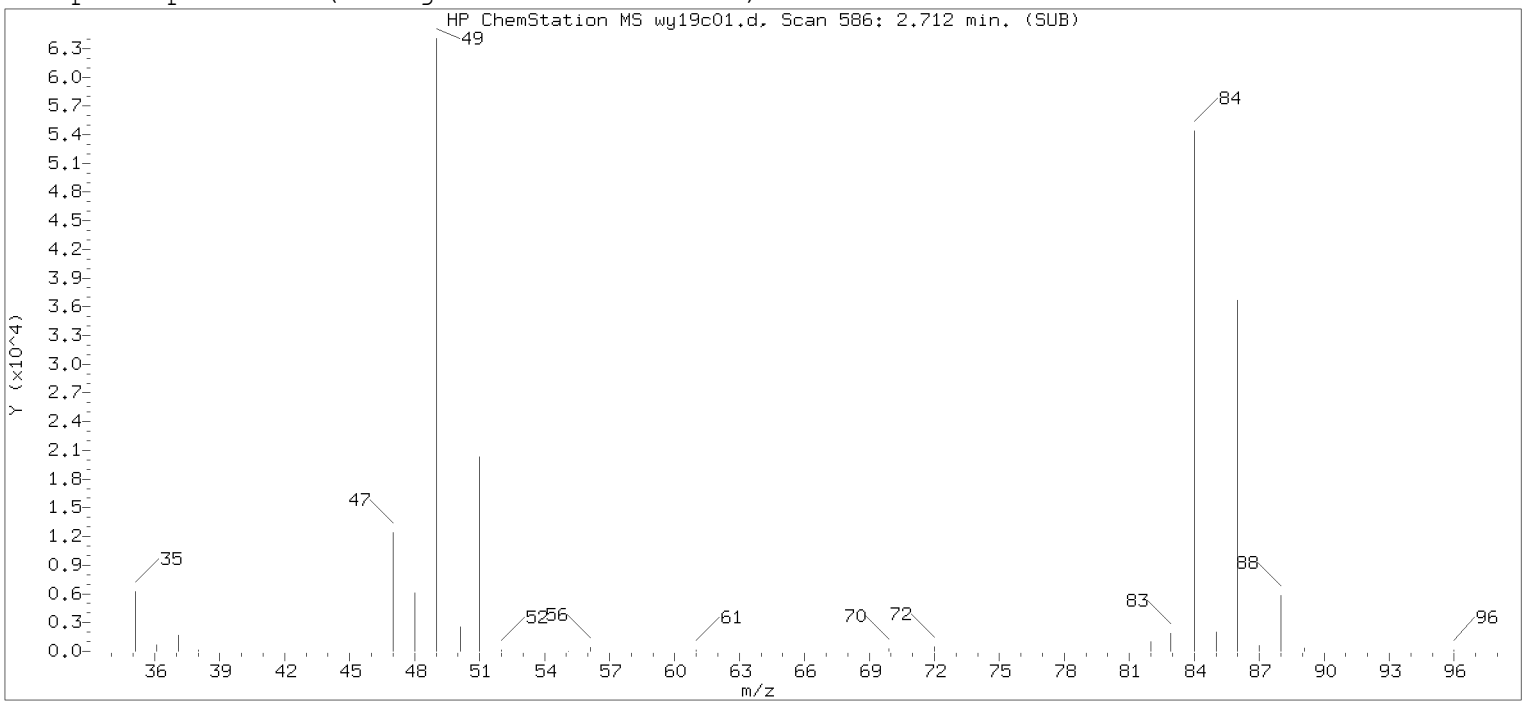
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 586
Retention Time (minutes): 2.712
Quant Ion : 84.00
Area (flag) : 247023M
On-Column Amount (ng) : 47.5295
Integration start scan : 568 Integration stop scan: 691
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

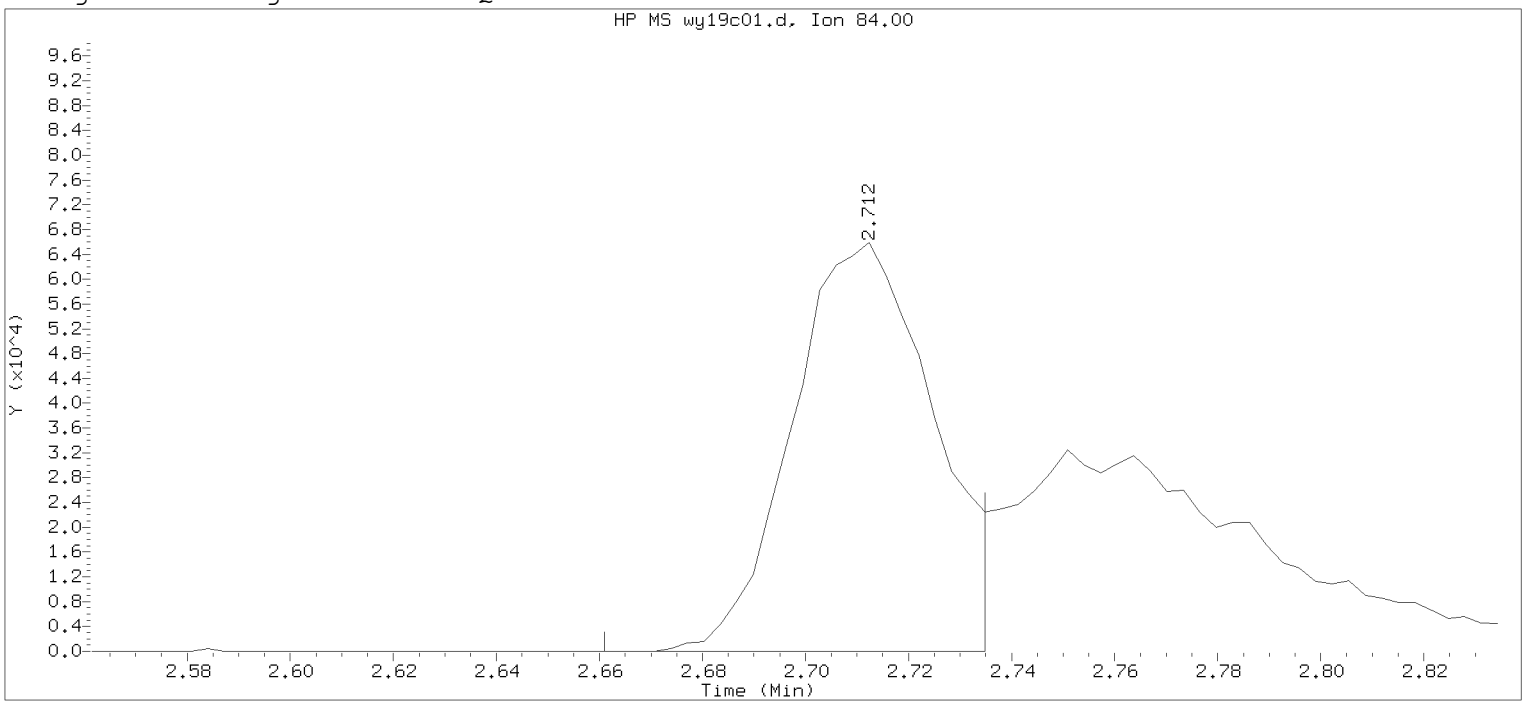
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 21:37.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

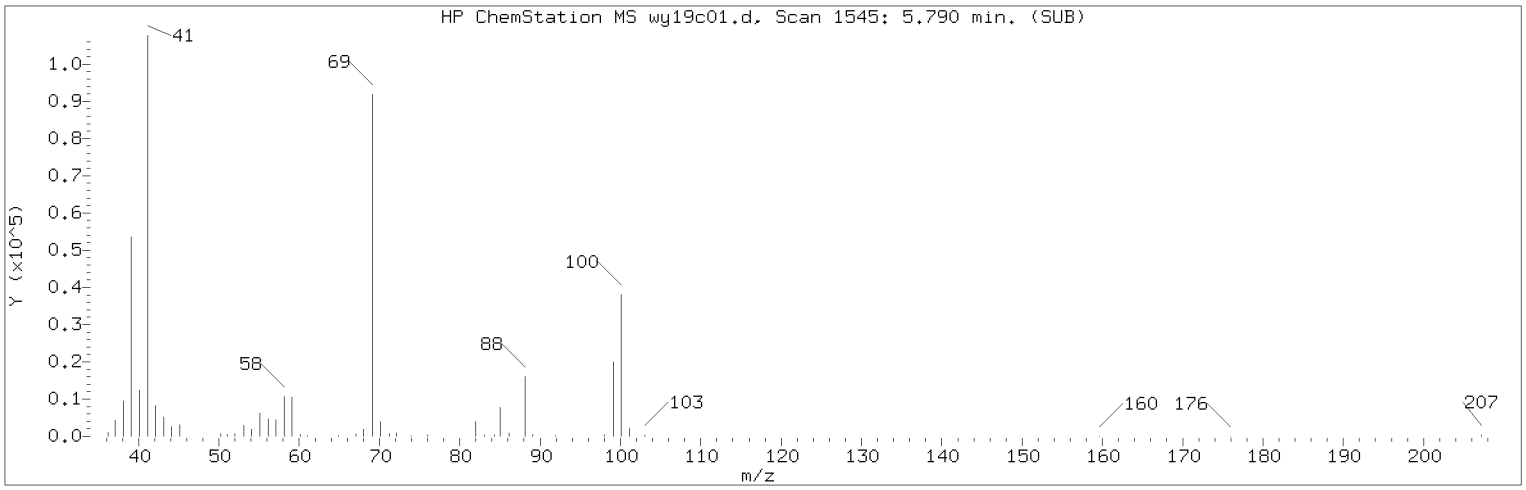
Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 11:47 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

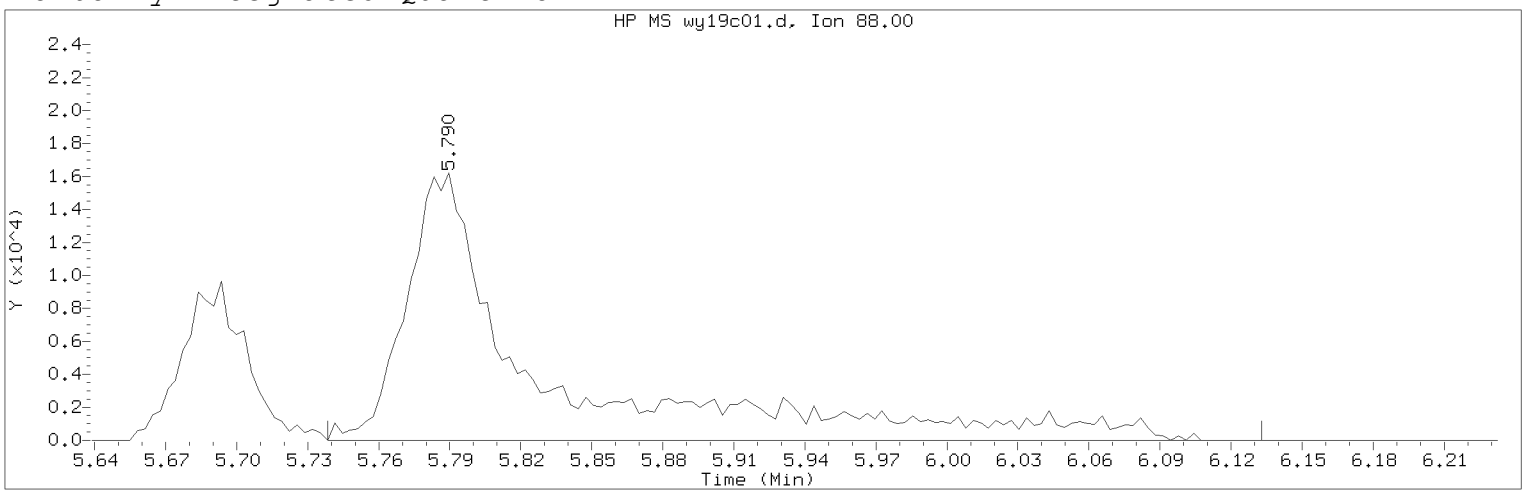
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 586
Retention Time (minutes): 2.712
Quant Ion : 84.00
Area : 123849
On-column Amount (ng) : 23.8297
Integration start scan : 569 Integration stop scan: 592
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbr01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

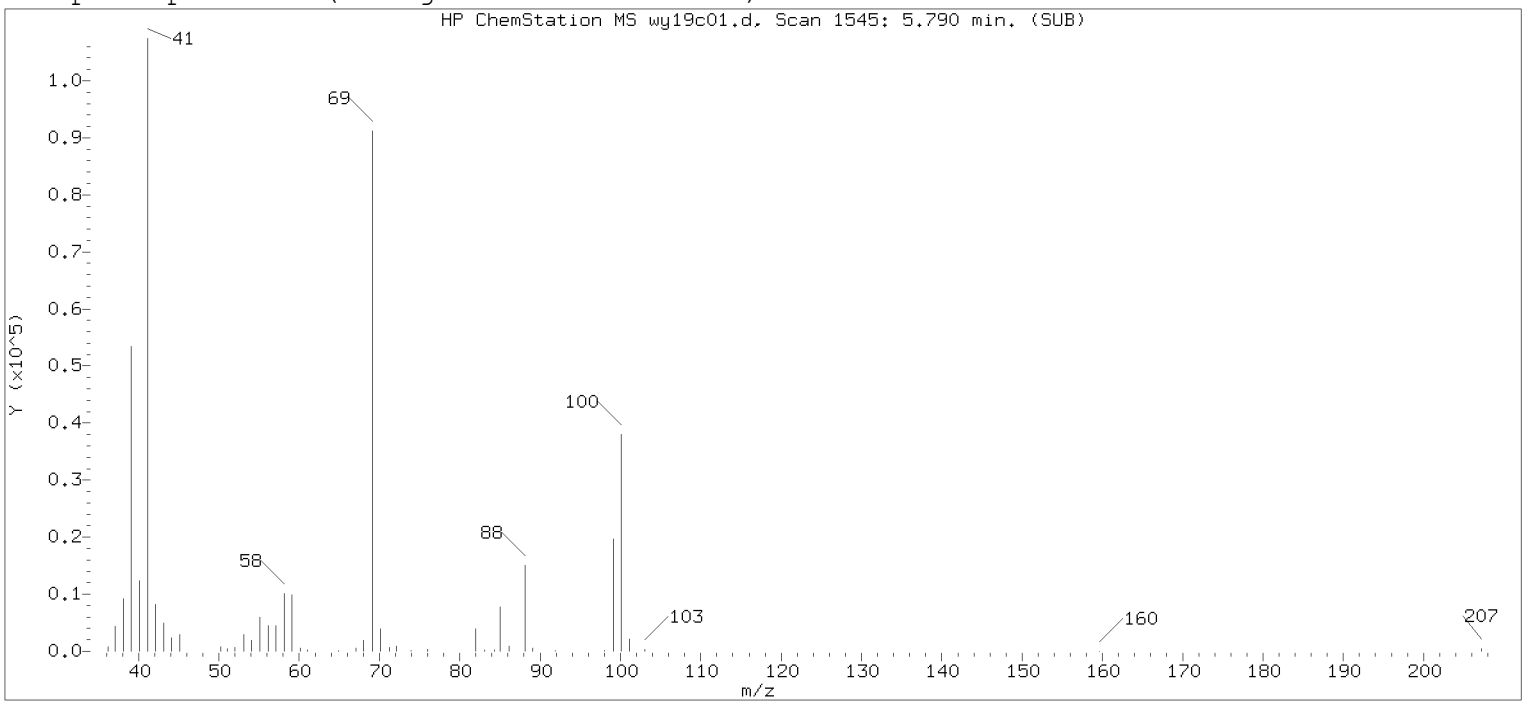
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1545
Retention Time (minutes): 5.790
Quant Ion : 88.00
Area (flag) : 62396M
On-Column Amount (ng) : 739.4932
Integration start scan : 1528 Integration stop scan: 1651
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

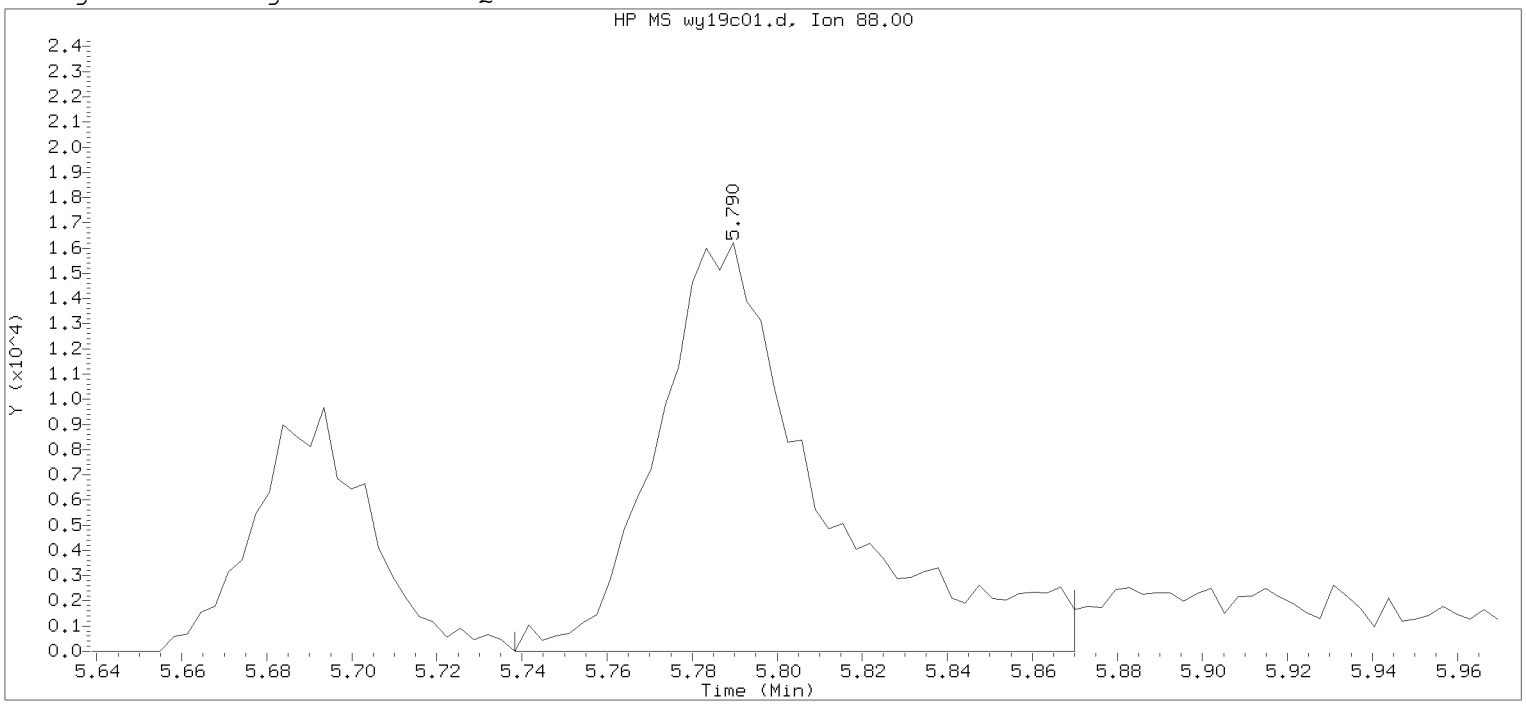
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 21:37.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 11:47 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1545
Retention Time (minutes): 5.790
Quant Ion : 88.00
Area : 43240
On-column Amount (ng) : 512.4648
Integration start scan : 1528 Integration stop scan: 1569
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 05/19/2019 at 12:05.
Target 3.5 esignature user: CV: cbr01947

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

MDL0.5

Data file: /chem2/HP09137.i/19may19a.b/wy19m01.d Injection date and time: **19-MAY-2019 13:07**
Data file Sample Info. Line: MDL0.5;MDL0.5;1;3;MDL/LOQ;;;;wy19b02; Instrument ID: **HP09137.i** Batch: **W191381AB**
Date, time and analyst ID of latest file update: 19-May-2019 13:27 cbs01947

Blank Data file reference: **/chem2/HP09137.i/19may19a.b/wy19b02.d**

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: **MDL**
Calibration date and time (Last Method Edit): 19-MAY-2019 12:48
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may19a.b/wy19c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.738	(-0.003)	594	65	169887	(-10)	250.00	
66) Fluorobenzene	5.032	(0.003)	1309	96	917398	(-5)	50.00	
101) Chlorobenzene-d5	8.164	(-0.003)	2285	117	708870	(-5)	50.00	
132) 1,4-Dichlorobenzene-d4	10.042	(0.000)	2870	152	361566	(-16)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.359	(-0.001)	113	207184	48.748	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692	(-0.001)	102	55174	48.811	98%		80 - 120
84) Toluene-d8	(3)	6.698	(0.001)	98	892077	50.221	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.001)	95	307084	43.213	86%		80 - 120

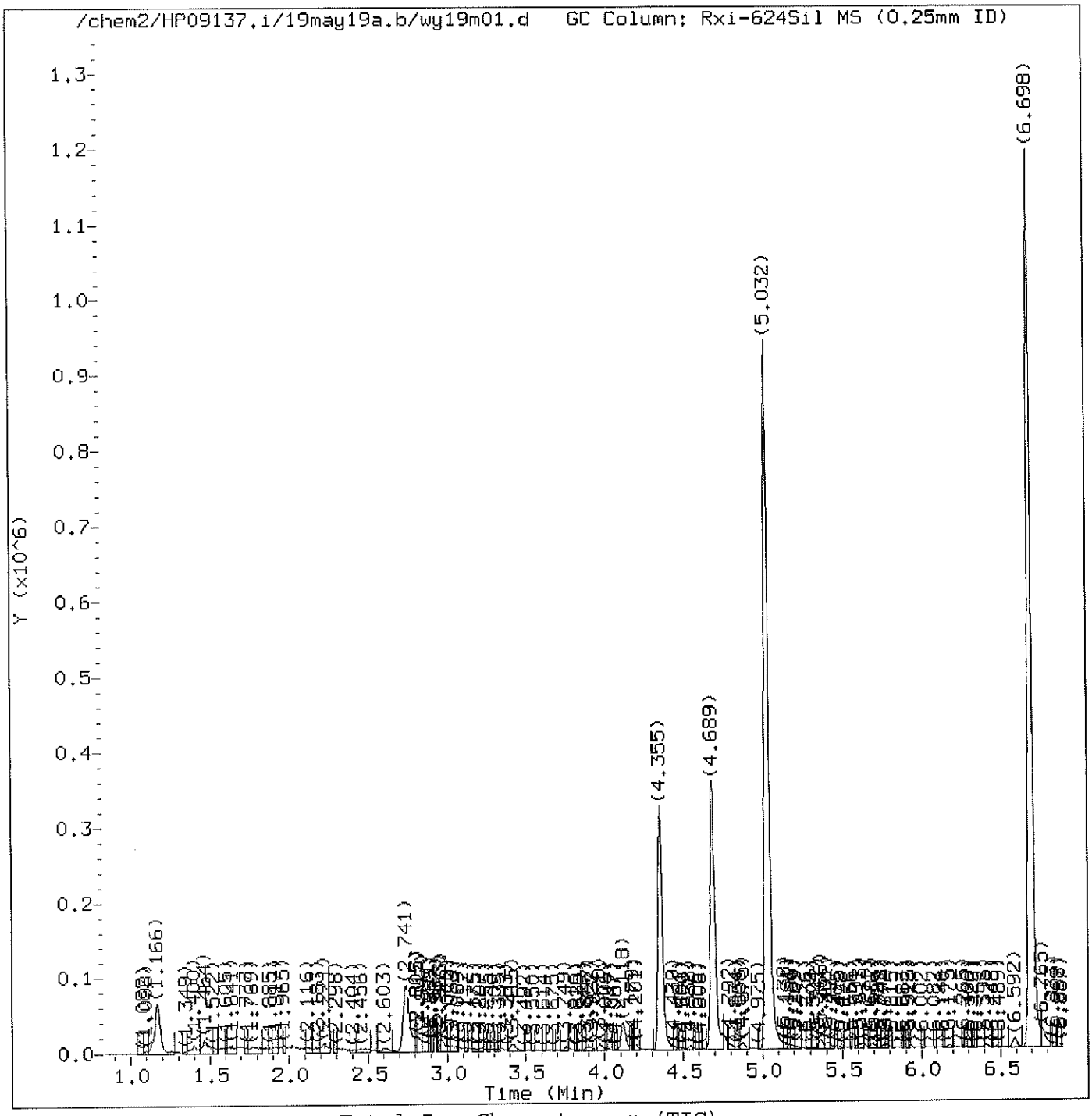
Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (sample)	Blank Conc.	Qual.	Reporting Limit (LOQ) (in sample)	
6) Vinyl Chloride	(2)	1.454	(0.001)	62	2277	0.336	0.34	0.015	B J	0.2	1
9) Chloroethane	(2)	1.766	(0.001)	64	2048M	0.460	0.46	0.047	B J	0.2	1

B = Compound detected in referenced method blank. M = Compound was manually integrated.

Total number of targets = 2

Digitally signed by Chelsea B. Stong on 05/19/2019 at 13:27. Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:25. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

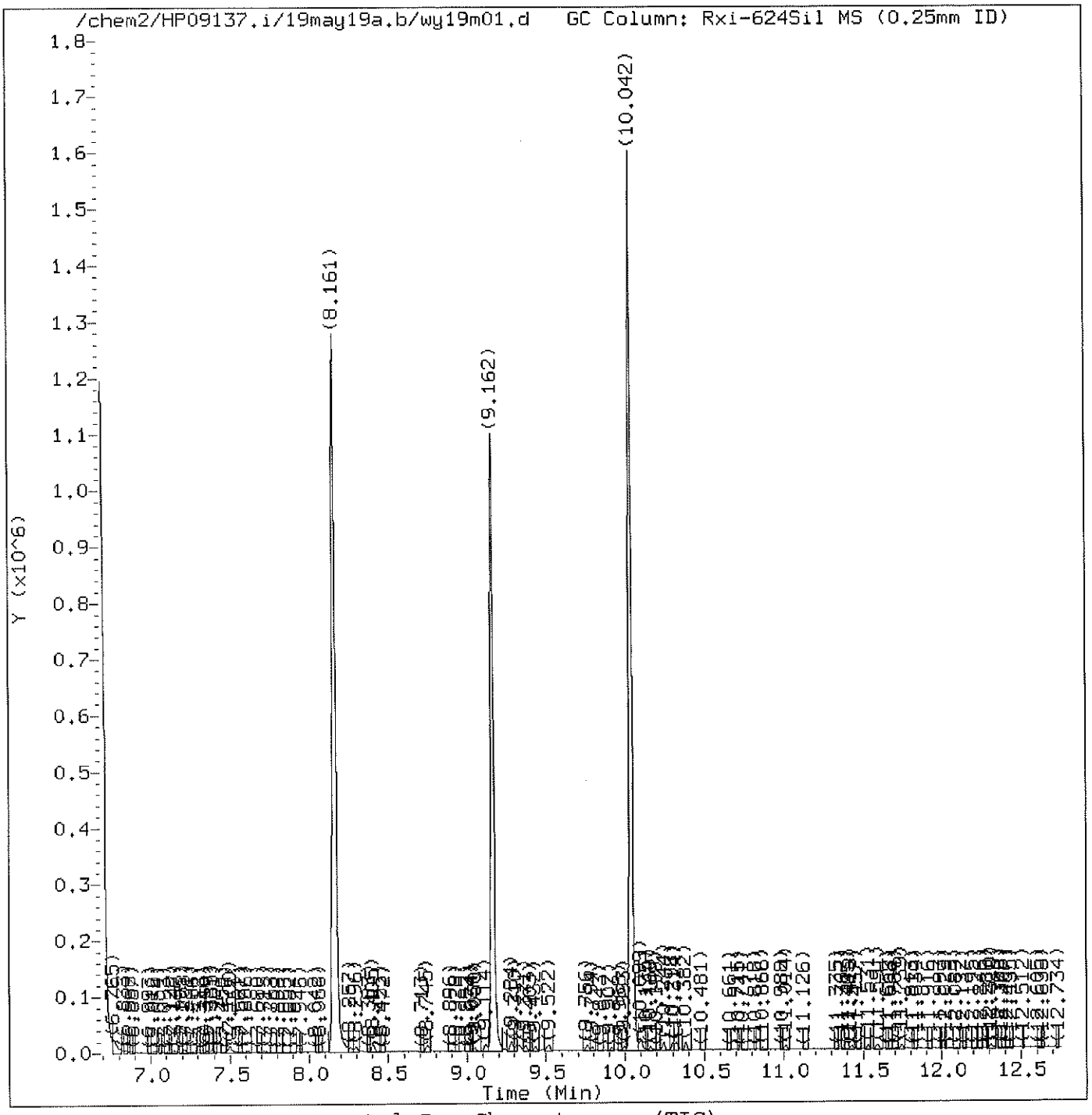
Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19m01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:07 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: MDL
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 13:27 cbs01947

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 13:27.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19m01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:07 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: MDL
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 13:27 cbs01947

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 13:27.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19m01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:07 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: MDL
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 13:27 cbs01947

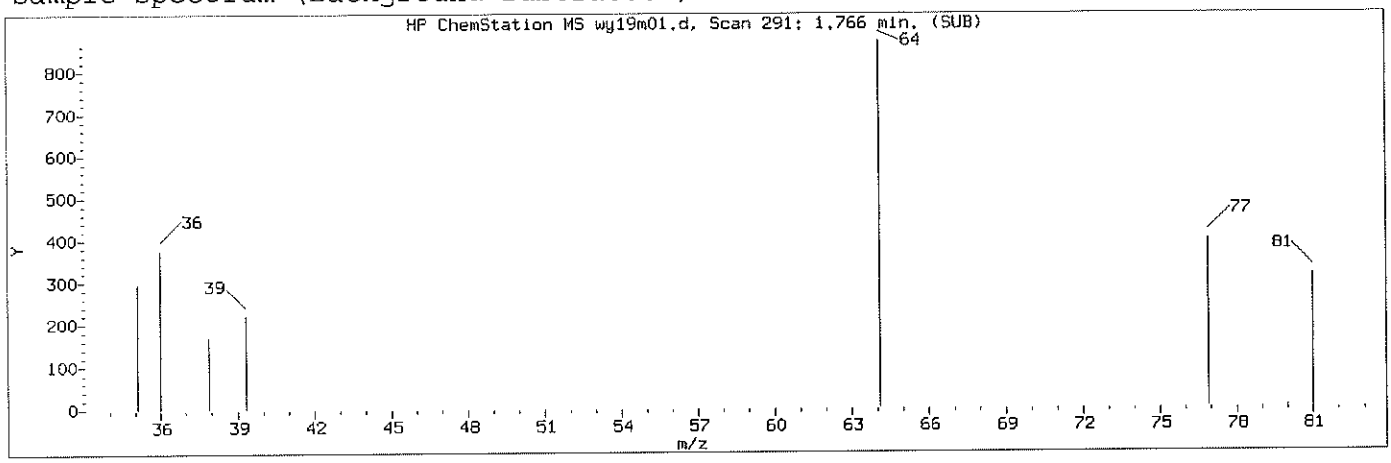
Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	1.455	62	2277	0.336
9) Chloroethane	(2)	1.766	64	2048M	0.460
29)*t-Butyl alcohol-d10	(1)	2.738	65	169887	250.000
52)$Dibromofluoromethane	(2)	4.359	113	207184	48.748
57)$1,2-Dichloroethane-d4	(2)	4.692	102	55174	48.811
66)*Fluorobenzene	(2)	5.032	96	917398	50.000
84)$Toluene-d8	(3)	6.698	98	892077	50.221
101)*Chlorobenzene-d5	(3)	8.164	117	708870	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	307084	43.213
132)*1,4-Dichlorobenzene-d4	(4)	10.042	152	361566	50.000

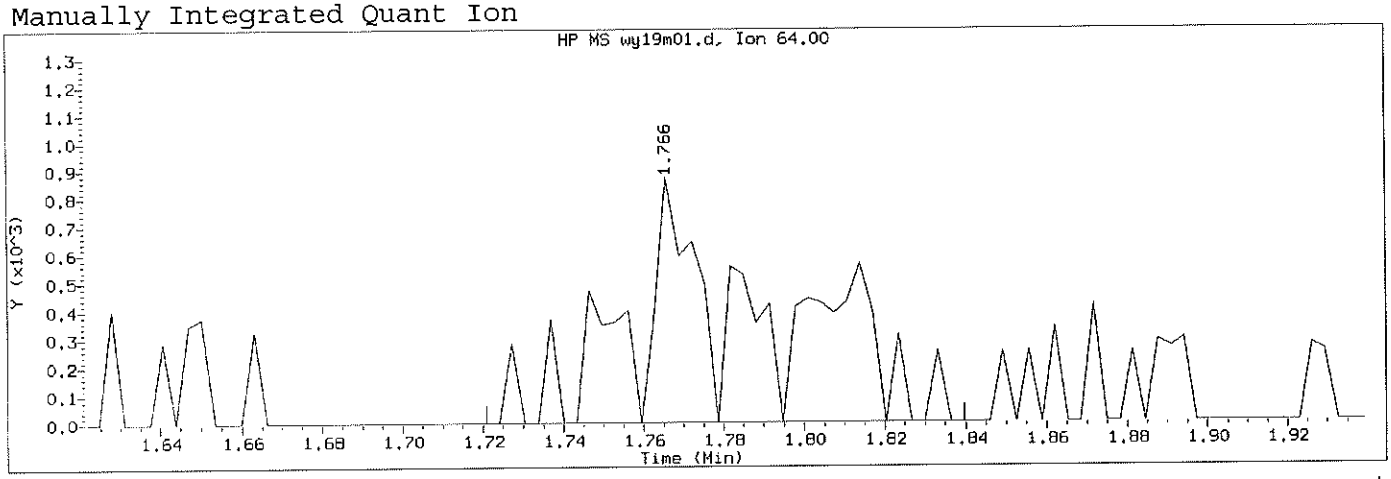
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 13:27.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19m01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:07 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: MDL
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 13:27 cbs01947

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

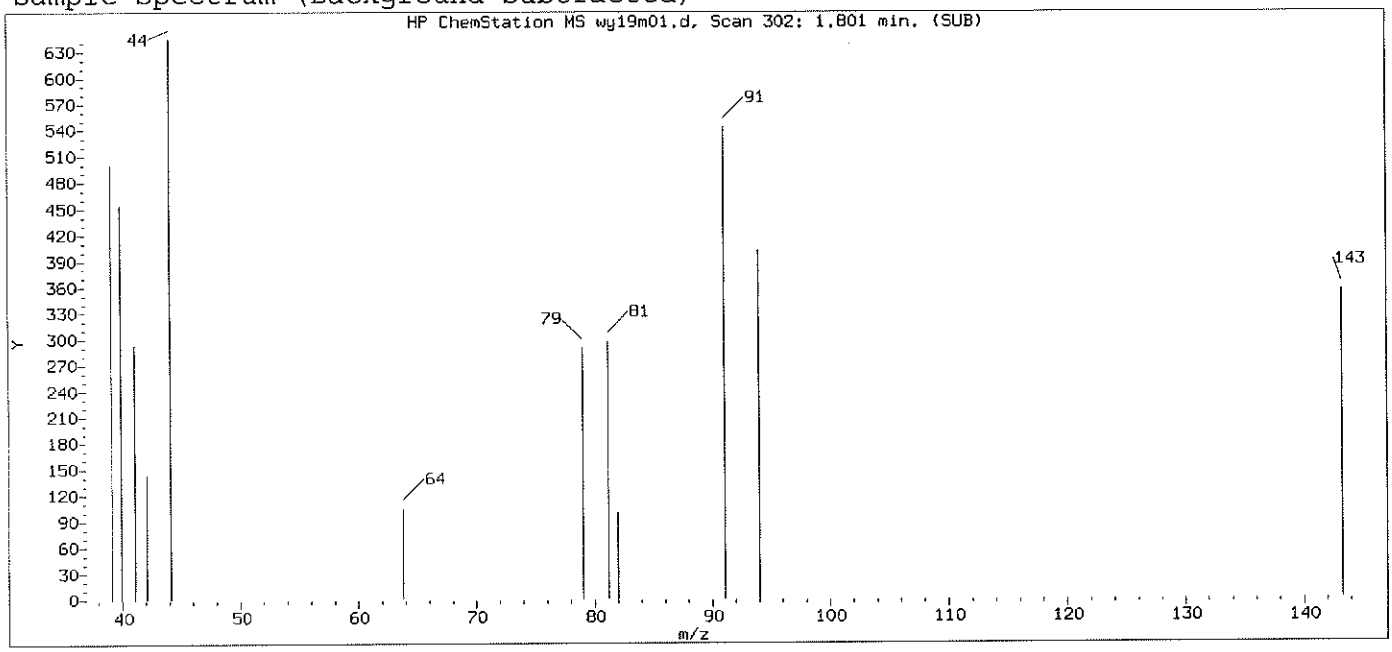
Compound Number	: 9		
Compound Name	: Chloroethane		
Scan Number	: 291		
Retention Time (minutes)	: 1.766		
Quant Ion	: 64.00		
Area (flag)	: 2048M		
On-Column Amount (ng)	: 0.4597		
Integration start scan	: 276	Integration stop scan:	313
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

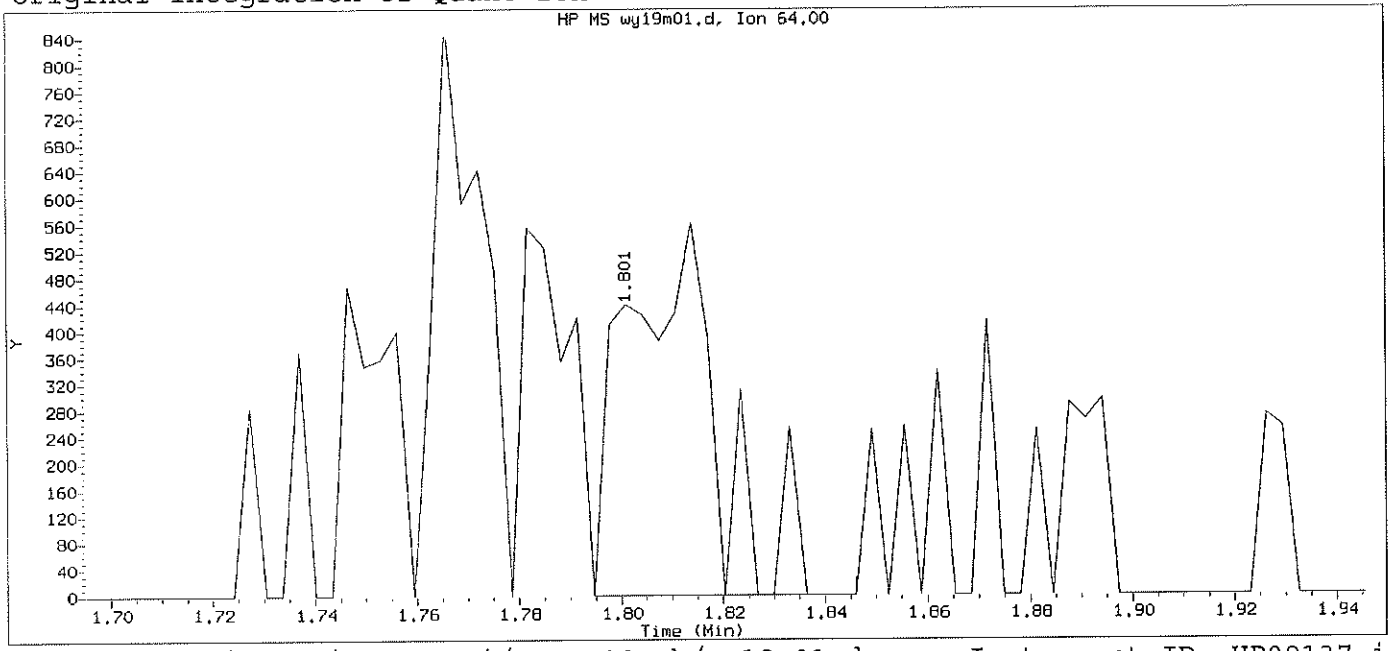
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 05/19/2019 at 13:27. Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:25.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19m01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:07 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: MDL
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 13:23 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Compound Number	: 9		
Compound Name	: Chloroethane		
Scan Number	: 302		
Retention Time (minutes)	: 1.801		
Quant Ion	: 64.00		
Area	: 693		
On-column Amount (ng)	: 0.1556		
Integration start scan	: 299	Integration stop scan:	315
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Chelsea B. Stong on 05/19/2019 at 13:27.
Target 3.5 esignature user ID: cbs01947

Raw QC Data

Volatiles by GC/MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKW23

Data file: /chem2/HP09137.i/19may18a.b/wy18b01.d
Data file Sample Info. Line: VBLKW23;VBLKW23;1;3;;;;;;
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Injection date and time: **18-MAY-2019 23:17**
Instrument ID: **HP09137.i** Batch: **W191381AA**

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.744 (-0.006)	596	65	177555 (-6)	250.00	
66) Fluorobenzene	5.032 (0.000)	1309	96	947707 (-8)	50.00	
101) Chlorobenzene-d5	8.161 (0.000)	2284	117	739589 (-5)	50.00	
132) 1,4-Dichlorobenzene-d4	10.045 (-0.003)	2871	152	377751 (-15)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.358 (0.001)	113	213781	48.691	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692 (0.000)	102	57565	49.298	99%		80 - 120
84) Toluene-d8	(3)	6.698 (0.000)	98	928949	50.125	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.165 (0.000)	95	320336	43.206	86%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)			Not Detected					0.2	1
4) Chloromethane	(2)			Not Detected					0.2	1
5) 1,3-Butadiene	(2)			Not Detected					1	3
6) Vinyl Chloride	(2)			Not Detected					0.2	1
8) Bromomethane	(2)			Not Detected					0.3	1
9) Chloroethane	(2)			Not Detected					0.2	1
11) n-Pentane	(2)			Not Detected					0.4	10
12) Trichlorofluoromethane	(2)			Not Detected					0.2	1
13) Ethanol	(1)			Not Detected					280	750
15) Freon 123a	(2)			Not Detected					0.4	5
16) Acrolein	(1)			Not Detected					2	100
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
21) 2-Propanol	(1)			Not Detected					18	100
22) Methyl Iodide	(2)			Not Detected					0.2	1
23) Carbon Disulfide	(2)			Not Detected					0.2	5
25) Allyl Chloride	(2)			Not Detected					0.3	5
27) Methyl Acetate	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
30) t-Butyl alcohol	(1)			Not Detected					12	50
31) Acrylonitrile	(2)			Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)			Not Detected					0.2	1
34) n-Hexane	(2)			Not Detected					0.2	5
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
38) di-Isopropyl ether	(2)			Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)			Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)			Not Detected					0.2	2

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:42. Target 3.5 esignature user ID: sej02002

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may18a.b/wy18b01.d Injection date and time: **18-MAY-2019 23:17**
Data file Sample Info. Line: VBLKW23;VBLKW23;1;3;;;;;; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)				Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					0.2	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					0.2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
73) Methylcyclohexane	(2)				Not Detected					0.2	5
74) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
75) Dibromomethane	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
77) Methyl Methacrylate	(2)				Not Detected					0.2	5
79) Bromodichloromethane	(2)				Not Detected					0.2	1
80) 2-Nitropropane	(2)				Not Detected					0.8	10
81) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
82) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
83) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
89) Toluene	(3)				Not Detected					0.2	1
90) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
91) 1,3-Dichloropropene (total)	(3)				Not Detected					0.2	5
92) Ethyl Methacrylate	(3)				Not Detected					0.2	5
93) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
95) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
97) 2-Hexanone	(3)				Not Detected					0.3	10
98) Dibromochloromethane	(3)				Not Detected					0.2	1
100) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
103) Chlorobenzene	(3)				Not Detected					0.2	1
104) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
110) Styrene	(3)				Not Detected					0.2	5
111) Bromoform	(3)				Not Detected					0.2	4
112) Isopropylbenzene	(3)				Not Detected					0.2	5
113) Cyclohexanone	(1)				Not Detected					25	100
116) Bromobenzene	(4)				Not Detected					0.2	5
117) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
118) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
119) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50
120) n-Propylbenzene	(4)				Not Detected					0.2	5
121) 2-Chlorotoluene	(4)				Not Detected					0.2	5

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:42. Target 3.5 esignature user ID: sej02002

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may18a.b/wy18b01.d Injection date and time: **18-MAY-2019 23:17**
Data file Sample Info. Line: VBLKW23;VBLKW23;1;3;;;;;; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

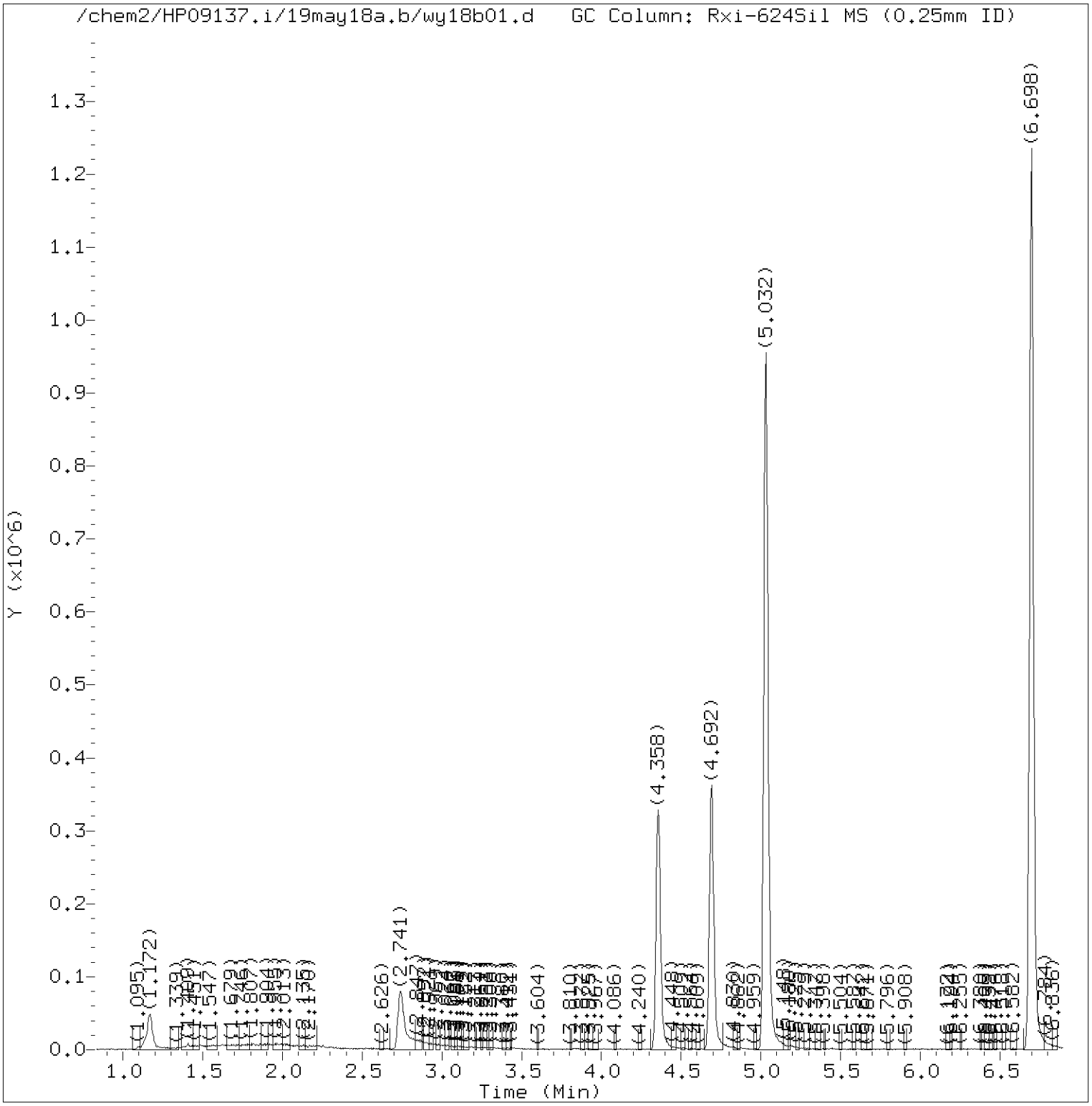
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
122) 4-Chlorotoluene	(4)				Not Detected					0.2	5
123) 1,3,5-Trimethylbenzene	(4)				Not Detected					0.3	5
125) tert-Butylbenzene	(4)				Not Detected					0.3	5
126) Pentachloroethane	(4)				Not Detected					0.2	5
127) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5
128) sec-Butylbenzene	(4)				Not Detected					0.2	5
130) 1,3-Dichlorobenzene	(4)				Not Detected					0.2	5
131) p-Isopropyltoluene	(4)				Not Detected					0.2	5
134) 1,4-Dichlorobenzene	(4)				Not Detected					0.2	5
135) 1,2,3-Trimethylbenzene	(4)				Not Detected					0.3	5
136) Benzyl Chloride	(4)				Not Detected					0.3	5
137) 1,3-Diethylbenzene	(4)				Not Detected					0.2	5
138) 1,4-Diethylbenzene	(4)				Not Detected					0.2	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
140) n-Butylbenzene	(4)				Not Detected					0.2	5
141) 1,2-Diethylbenzene	(4)				Not Detected					0.2	5
142) Diethylbenzene (total)	(4)				Not Detected					0.2	5
143) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.3	5
145) 1,3,5-Trichlorobenzene	(4)				Not Detected					0.2	5
147) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	5
148) Hexachlorobutadiene	(4)				Not Detected					0.7	5
149) Naphthalene	(4)				Not Detected					1	5
150) 1,2,3-Trichlorobenzene	(4)				Not Detected					0.4	5
151) 2-Methylnaphthalene	(4)				Not Detected					0.7	5

Total number of targets = 109

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:42. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

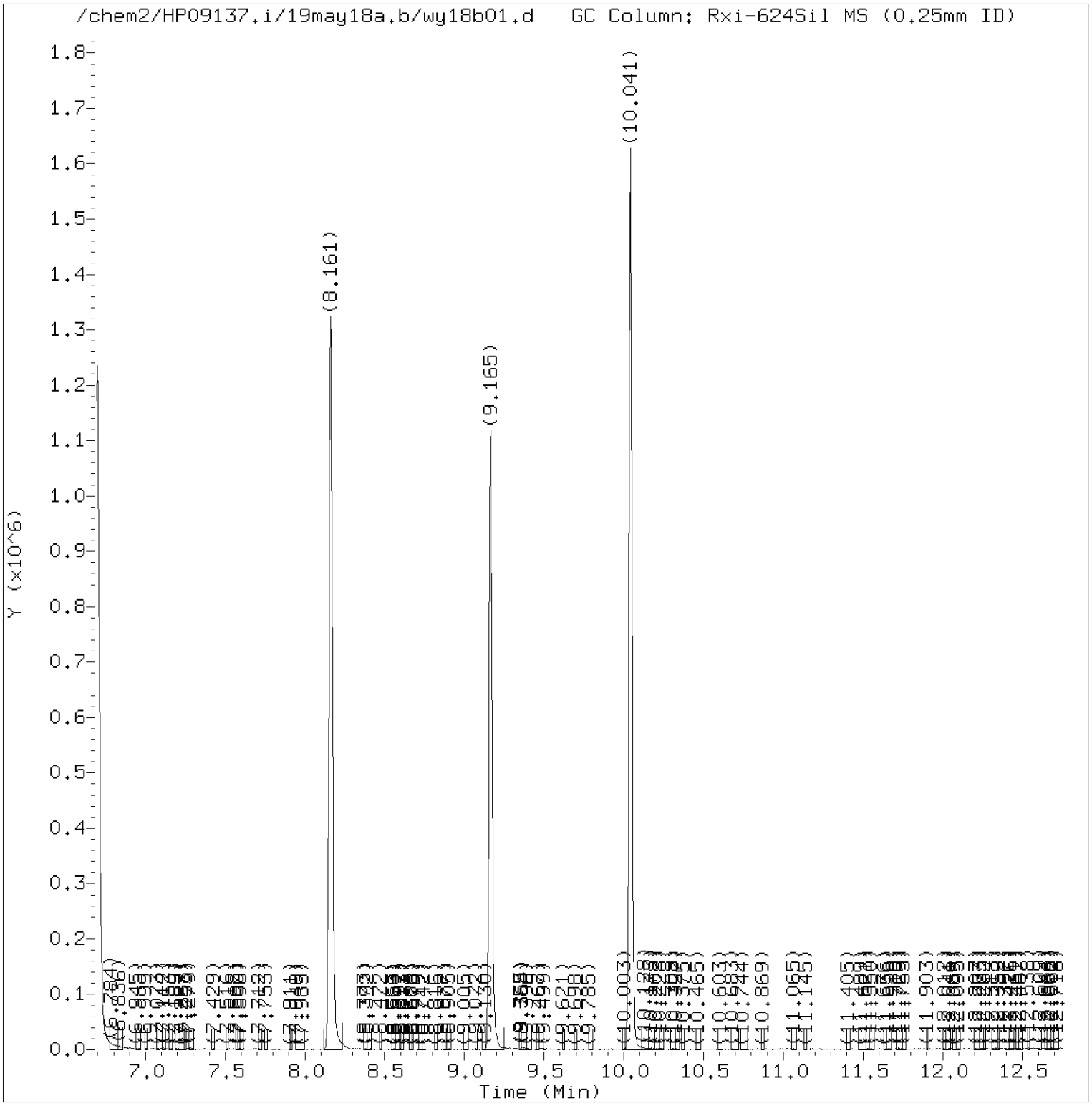
Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18b01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 23:17 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: VBLKW23 Lab Sample ID: VBLKW23

Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:42.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18b01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 23:17 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: VBLKW23 Lab Sample ID: VBLKW23

Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:42.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18b01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 23:17 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: VBLKW23 Lab Sample ID: VBLKW23

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.744	65	177555	250.000
52)$Dibromofluoromethane	(2)	4.358	113	213781	48.691
57)$1,2-Dichloroethane-d4	(2)	4.692	102	57565	49.298
66)*Fluorobenzene	(2)	5.032	96	947707	50.000
84)$Toluene-d8	(3)	6.698	98	928949	50.125
101)*Chlorobenzene-d5	(3)	8.161	117	739589	50.000
115)$4-Bromofluorobenzene	(3)	9.165	95	320336	43.206
132)*1,4-Dichlorobenzene-d4	(4)	10.045	152	377751	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:42.
Target 3.5 esignature user ID: sej02002

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKW24

Data file: /chem2/HP09137.i/19may19a.b/wy19b02.d Injection date and time: **19-MAY-2019 12:20**
Data file Sample Info. Line: VBLKW24;VBLKW24;1;3;;;;;; Instrument ID: **HP09137.i** Batch: **W191381AB**
Date, time and analyst ID of latest file update: 04-Jun-2019 15:08 rrm00219

Blank Data file reference: **Does not exist or can't be found**

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: **18116**
Calibration date and time (Last Method Edit): 04-JUN-2019 15:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may19a.b/wy19c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.741	(-0.006)	595	65	161128	(-14)	250.00	
66) Fluorobenzene	5.032	(0.003)	1309	96	907592	(-6)	50.00	
101) Chlorobenzene-d5	8.164	(-0.003)	2285	117	688339	(-7)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041	(0.000)	2870	152	358292	(-16)	50.00	

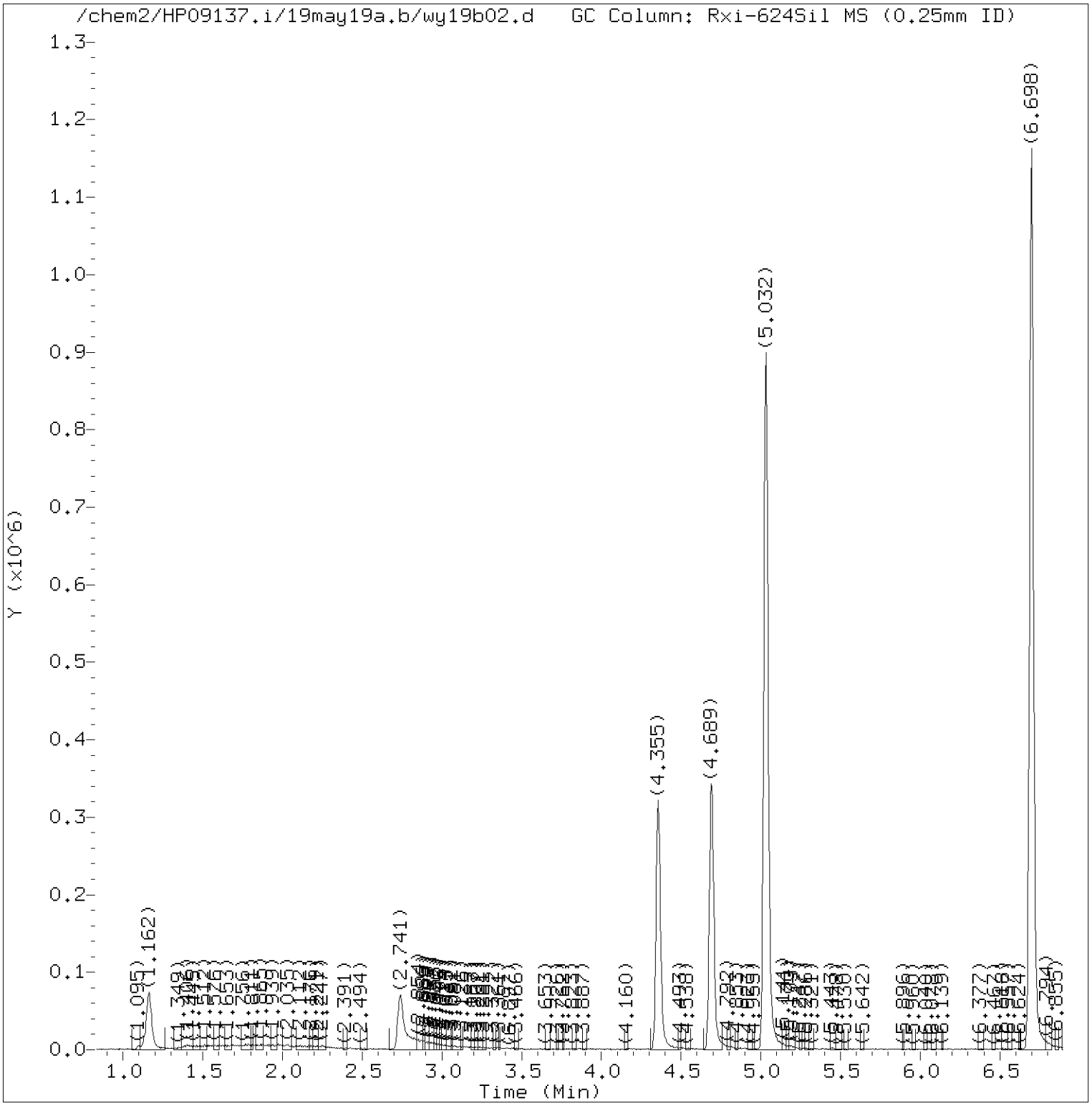
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.355	(0.000)	113	204712	48.686	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692	(-0.001)	102	55555	49.680	99%		80 - 120
84) Toluene-d8	(3)	6.698	(0.001)	98	862842	50.024	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.001)	95	300353	43.527	87%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
9) Chloroethane	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
94) Tetrachloroethene	(3)				Not Detected					0.2	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5

Total number of targets = 12

Digitally signed by Roy R. Mellott on 06/04/2019 at 15:09. Target 3.5 esignature user ID: rrm00219

Secondary review performed and digitally signed by Roy R. Mellott on 06/12/2019 at 17:16. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

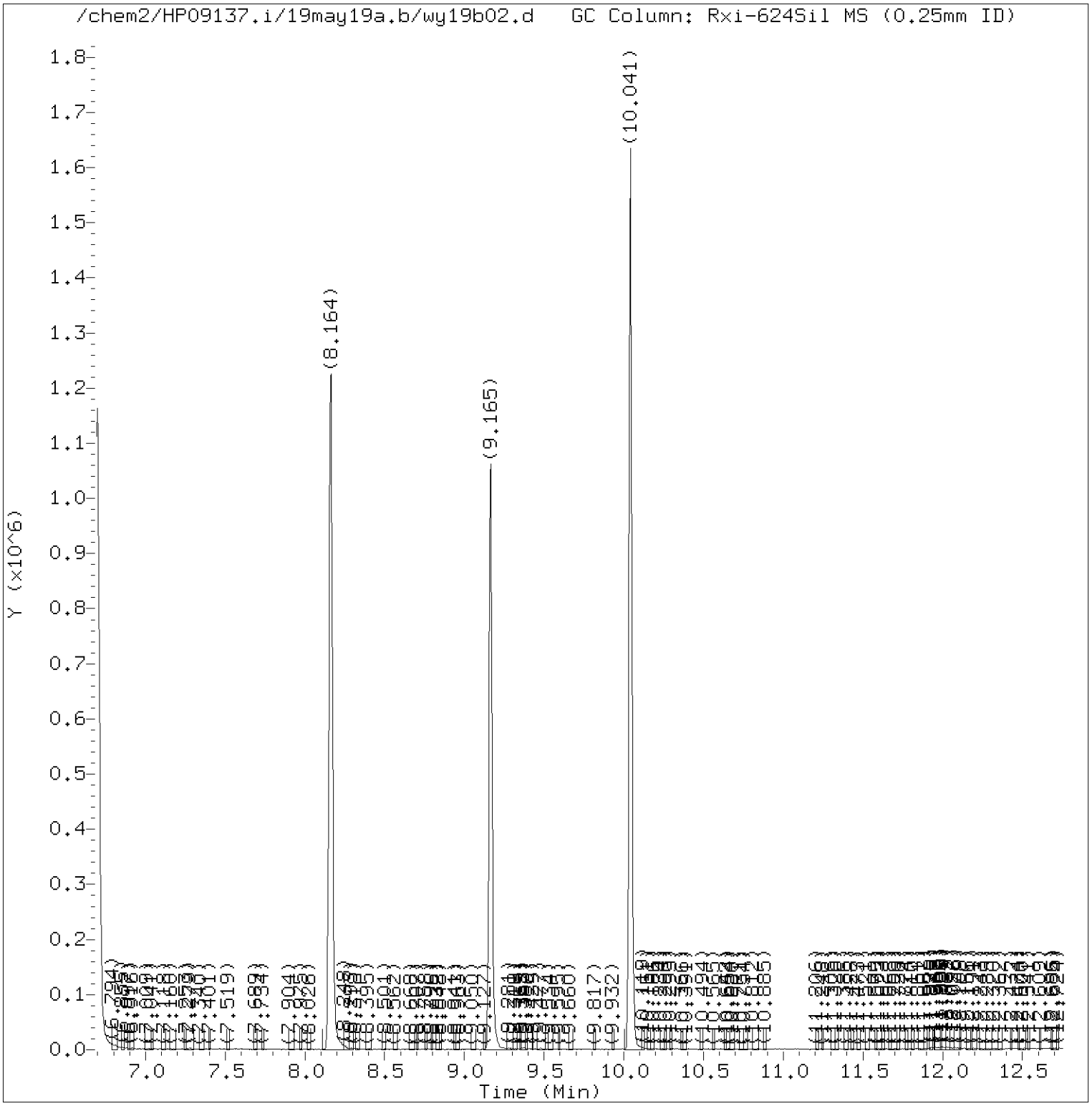
Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19b02.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 12:20 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 04-Jun-2019 15:08 rrm00219

Sample Name: VBLKW24 Lab Sample ID: VBLKW24

Digitally signed by Roy R. Mellott
on 06/04/2019 at 15:09.
Target 3.5 esignature user ID: rrm00219



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19b02.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 12:20 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 04-Jun-2019 15:08 rrm00219

Sample Name: VBLKW24 Lab Sample ID: VBLKW24

Digitally signed by Roy R. Mellott
on 06/04/2019 at 15:09.
Target 3.5 esignature user ID: rrm00219

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19b02.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 12:20 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 04-Jun-2019 15:08 rrm00219

Sample Name: VBLKW24 Lab Sample ID: VBLKW24

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.741	65	161128	250.000
52)$Dibromofluoromethane	(2)	4.355	113	204712	48.686
57)$1,2-Dichloroethane-d4	(2)	4.692	102	55555	49.680
66)*Fluorobenzene	(2)	5.032	96	907592	50.000
84)$Toluene-d8	(3)	6.698	98	862842	50.024
101)*Chlorobenzene-d5	(3)	8.164	117	688339	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	300353	43.527
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	358292	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Roy R. Mellott
on 06/04/2019 at 15:09.
Target 3.5 esignature user ID: rrm00219

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J0102MS

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053360

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s13.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	16	
75-35-4	1,1-Dichloroethene	24	
67-64-1	Acetone	150	
76-13-1	Freon 113	23	
75-15-0	Carbon Disulfide	15	
75-09-2	Methylene Chloride	22	
156-60-5	trans-1,2-Dichloroethene	22	
75-34-3	1,1-Dichloroethane	21	
156-59-2	cis-1,2-Dichloroethene	24	
78-93-3	2-Butanone	120	
67-66-3	Chloroform	23	
71-55-6	1,1,1-Trichloroethane	25	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	23	
79-01-6	Trichloroethene	26	
123-91-1	1,4-Dioxane	560	
108-88-3	Toluene	23	
127-18-4	Tetrachloroethene	35	
100-41-4	Ethylbenzene	23	
1330-20-7	Xylene (Total)	70	
95-50-1	1,2-Dichlorobenzene	23	
91-20-3	Naphthalene	18	

FORM I VOA

^

J0102MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1053360MS

Data file: /chem2/HP09137.i/19may18a.b/wy18s13.d Injection date and time: **19-MAY-2019 04:02**
Data file Sample Info. Line: J0102MS;1053360MS;1;3;MS;JCV88;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 04-Jun-2019 14:50 rrm00219

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.738	(0.000)	594	65	182190	(-4)	250.00	
66) Fluorobenzene	5.032	(0.000)	1309	96	951889	(-7)	50.00	
101) Chlorobenzene-d5	8.161	(0.000)	2284	117	736014	(-5)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041	(0.000)	2870	152	416077	(-6)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.352	(0.002)	113	215248	48.810	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.686	(0.001)	102	57033	48.628	97%		80 - 120
84) Toluene-d8	(3)	6.694	(0.001)	98	942776	51.118	102%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.000)	95	345662	46.848	94%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)	1.470	(-0.001)	62	115614	16.455	16.46			0.2	1
17) 1,1-Dichloroethene	(2)	2.301	(0.001)	96	100884M	24.038	24.04			0.2	1
18) Acetone	(1)	2.337	(0.001)	58	95800	150.264	150.26			0.7	20
19) Freon 113	(2)	2.337	(0.001)	101	84738	22.993	22.99			0.2	10
23) Carbon Disulfide	(2)	2.507	(0.001)	76	227584	15.392	15.39			0.2	5
28) Methylene Chloride	(2)	2.706	(0.001)	84	110644M	21.568	21.57			0.3	1
32) trans-1,2-Dichloroethene	(2)	2.956	(0.001)	96	101017	22.184	22.18			0.2	1
36) 1,1-Dichloroethane	(2)	3.338	(0.001)	63	172334	20.886	20.89			0.2	1
42) cis-1,2-Dichloroethene	(2)	3.890	(0.000)	96	121764	23.816	23.82			0.2	1
44) 2-Butanone	(2)	3.909	(0.000)	43	585853	122.481	122.48			0.3	10
51) Chloroform	(2)	4.201	(0.000)	83	179416	23.175	23.17			0.2	1
53) 1,1,1-Trichloroethane	(2)	4.384	(0.000)	97	146937	25.224	25.22			0.3	1
60) Benzene	(2)	4.750	(0.000)	78	426384	21.371	21.37			0.2	1
61) 1,2-Dichloroethane	(2)	4.763	(0.001)	62	143390	23.266	23.27			0.3	1
71) Trichloroethene	(2)	5.408	(-0.000)	95	124259	25.718	25.72			0.2	1
76) 1,4-Dioxane	(1)	5.783	(-0.000)	88	45925M	561.666	561.67			29	250
89) Toluene	(3)	6.768	(0.000)	92	275524	23.191	23.19			0.2	1
94) Tetrachloroethene	(3)	7.362	(0.000)	166	169427	35.144	35.14			0.2	1
105) Ethylbenzene	(3)	8.292	(0.000)	91	522811	23.153	23.15			0.4	1
107) m+p-Xylene	(3)	8.402	(0.000)	106	422612	47.073	47.07			1	5
108) o-Xylene	(3)	8.738	(0.000)	106	199469	22.584	22.58			0.4	1
109) Xylene (Total)	(3)			106	622081	69.657	69.66			1	5
139) 1,2-Dichlorobenzene	(4)	10.324	(0.000)	146	264895	23.364	23.36			0.2	5
149) Naphthalene	(4)	11.582	(0.000)	128	509635	18.045	18.04			1	5

M = Compound was manually integrated.

Digitally signed by Kevin A. Sposito on 08/08/2019 at 10:43. Target 3.5 esignature user ID: kas02648

Data file: /chem2/HP09137.i/19may18a.b/wy18s13.d Injection date and time: **19-MAY-2019 04:02**
Data file Sample Info. Line: J0102MS;1053360MS;1;3;MS;JCV88;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 04-Jun-2019 14:50 rrm00219

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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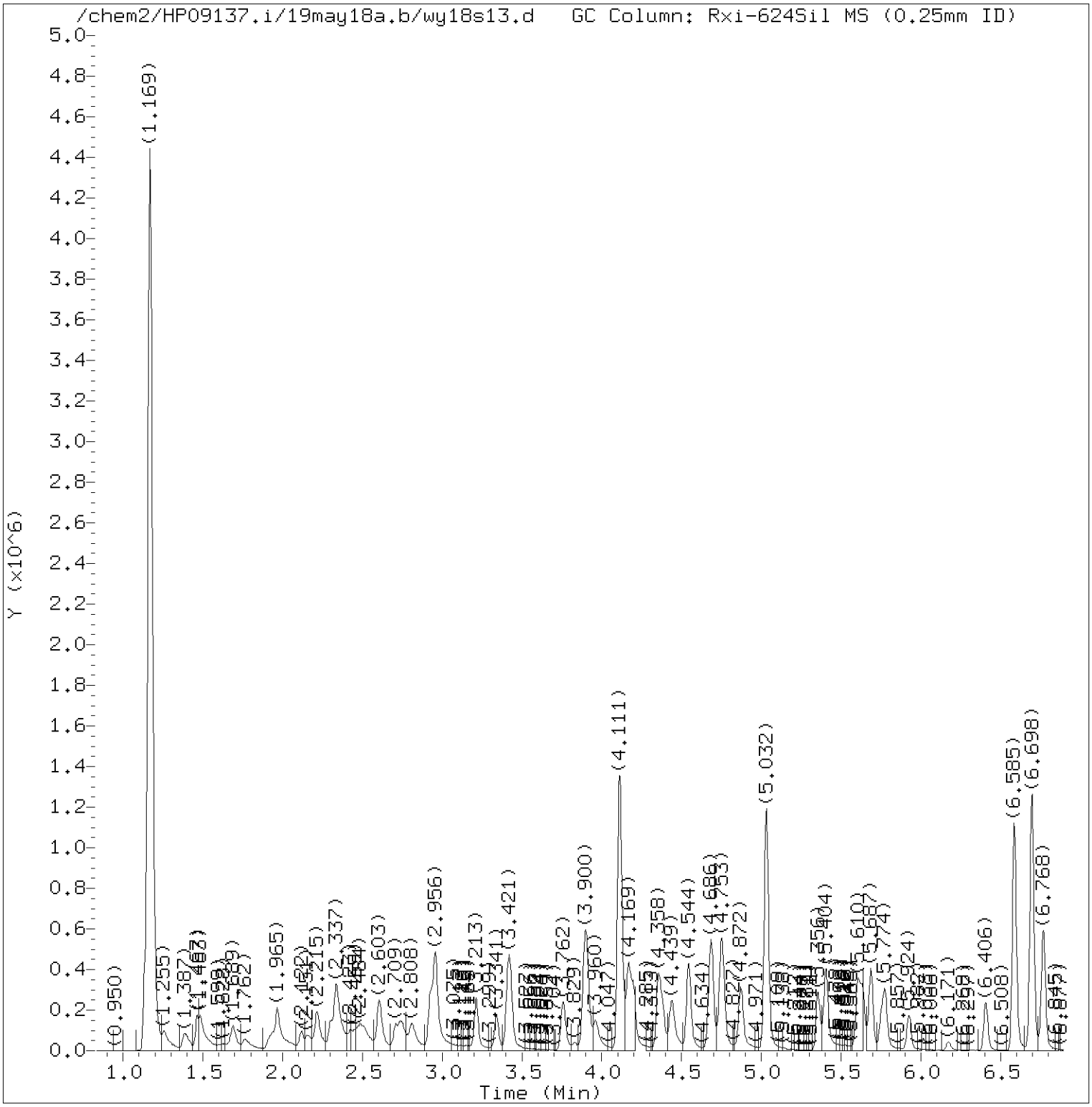
Total number of targets = 24

Digitally signed by Kevin A. Sposito on 08/08/2019 at 10:43. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Roy R. Mellott on 08/08/2019 at 10:44. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

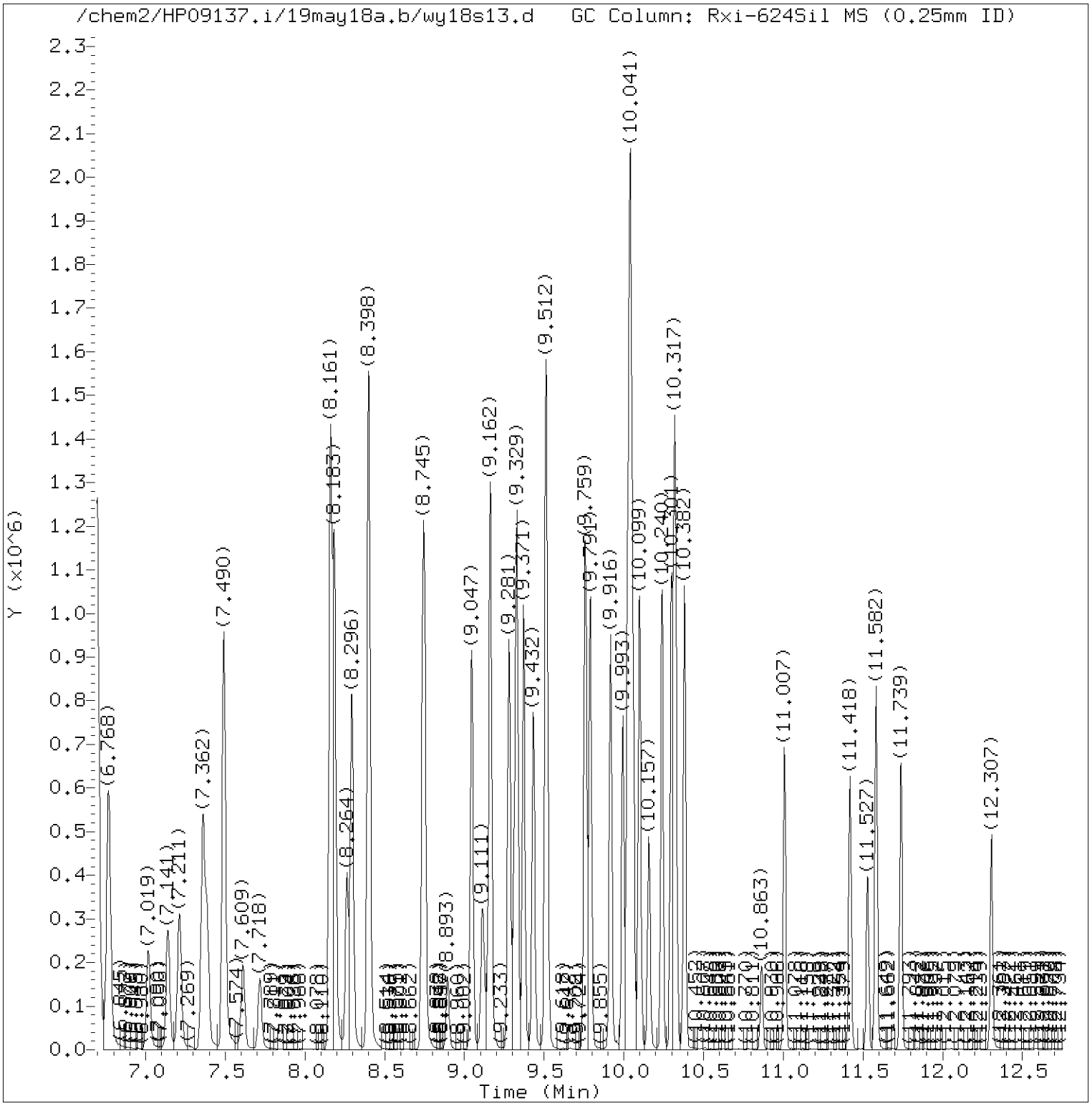
Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s13.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 04:02 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 04-Jun-2019 14:50 rrm00219

Sample Name: J0102MS Lab Sample ID: 1053360MS

Digitally signed by Kevin A. Sposito
on 08/08/2019 at 10:43.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s13.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 04:02 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 04-Jun-2019 14:50 rrm00219

Sample Name: J0102MS Lab Sample ID: 1053360MS

Digitally signed by Kevin A. Sposito
on 08/08/2019 at 10:43.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s13.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 04:02 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 04-Jun-2019 14:50 rrm00219

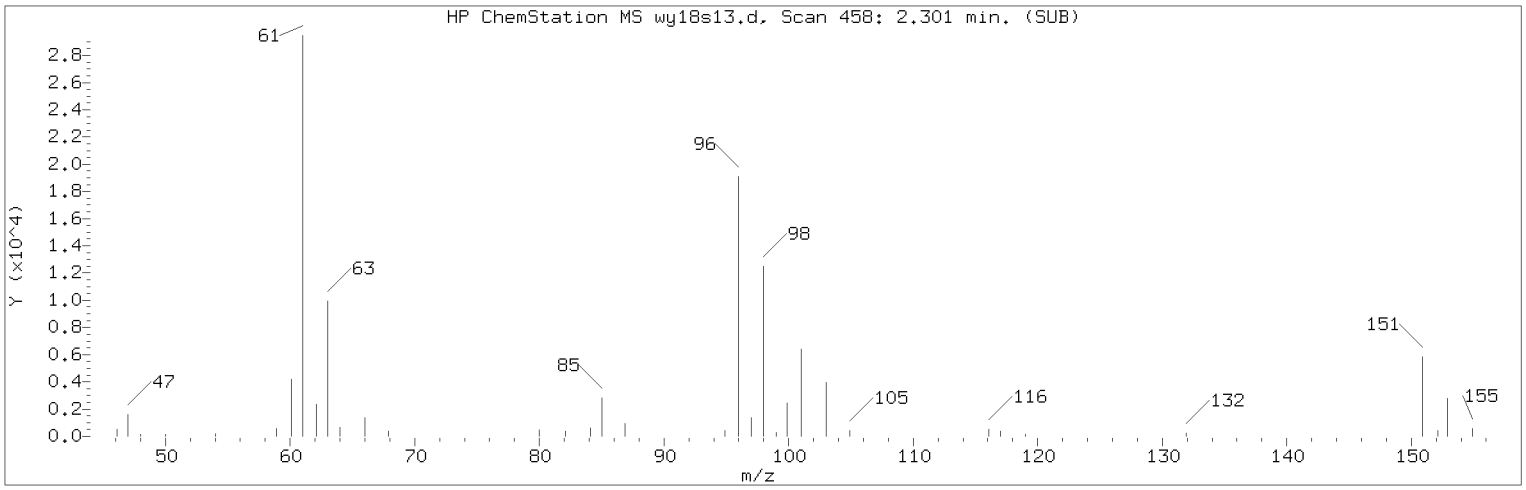
Sample Name: J0102MS Lab Sample ID: 1053360MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	1.470	62	115614	16.455
17) 1,1-Dichloroethene	(2)	2.301	96	100884M	24.038
18) Acetone	(1)	2.337	58	95800	150.264
19) Freon 113	(2)	2.337	101	84738	22.993
23) Carbon Disulfide	(2)	2.507	76	227584	15.392
28) Methylene Chloride	(2)	2.706	84	110644M	21.568
29)*t-Butyl alcohol-d10	(1)	2.738	65	182190	250.000
32) trans-1,2-Dichloroethene	(2)	2.956	96	101017	22.184
36) 1,1-Dichloroethane	(2)	3.338	63	172334	20.886
42) cis-1,2-Dichloroethene	(2)	3.890	96	121764	23.816
44) 2-Butanone	(2)	3.909	43	585853	122.481
51) Chloroform	(2)	4.201	83	179416	23.175
52)$Dibromofluoromethane	(2)	4.352	113	215248	48.810
53) 1,1,1-Trichloroethane	(2)	4.384	97	146937	25.224
57)$1,2-Dichloroethane-d4	(2)	4.686	102	57033	48.628
60) Benzene	(2)	4.750	78	426384	21.371
61) 1,2-Dichloroethane	(2)	4.763	62	143390	23.266
66)*Fluorobenzene	(2)	5.032	96	951889	50.000
71) Trichloroethene	(2)	5.408	95	124259	25.718
76) 1,4-Dioxane	(1)	5.783	88	45925M	561.666
84)$Toluene-d8	(3)	6.694	98	942776	51.118
89) Toluene	(3)	6.768	92	275524	23.191
94) Tetrachloroethene	(3)	7.362	166	169427	35.144
101)*Chlorobenzene-d5	(3)	8.161	117	736014	50.000
105) Ethylbenzene	(3)	8.293	91	522811	23.153
107) m+p-Xylene	(3)	8.402	106	422612	47.073
108) o-Xylene	(3)	8.739	106	199469	22.584
115)$4-Bromofluorobenzene	(3)	9.162	95	345662	46.848
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	416077	50.000
139) 1,2-Dichlorobenzene	(4)	10.324	146	264895	23.364
149) Naphthalene	(4)	11.582	128	509635	18.045
109) Xylene (Total)	(3)		106	622081	69.657

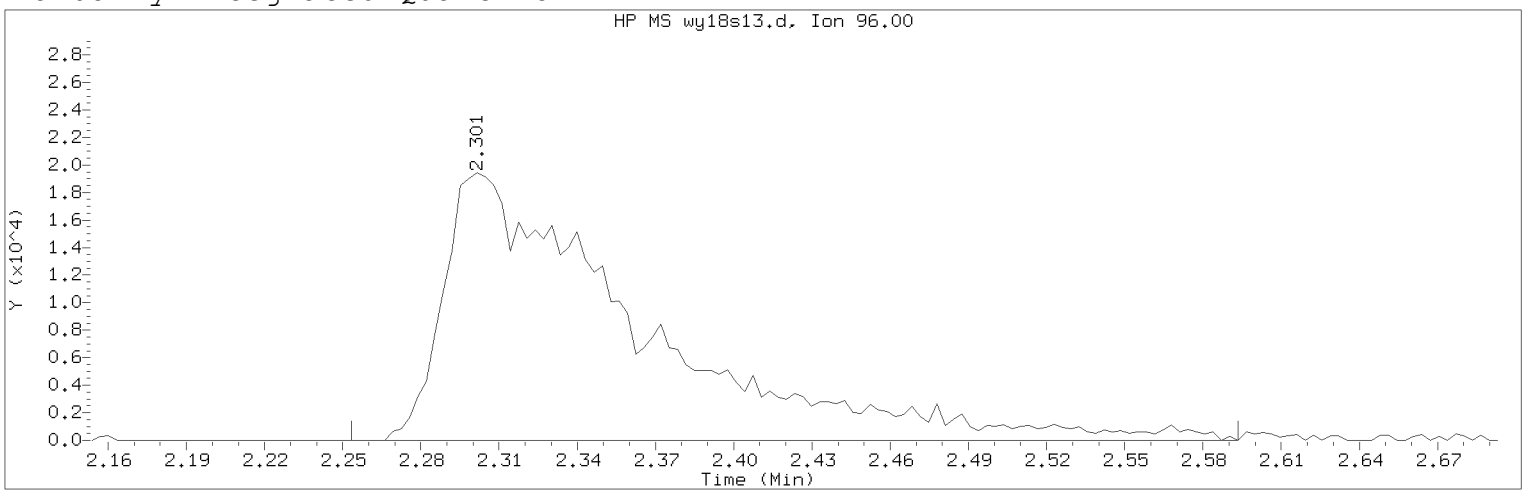
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 08/08/2019 at 10:43.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s13.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 04:02 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 04-Jun-2019 14:50 rrm00219

Sample Name: J0102MS Lab Sample ID: 1053360MS

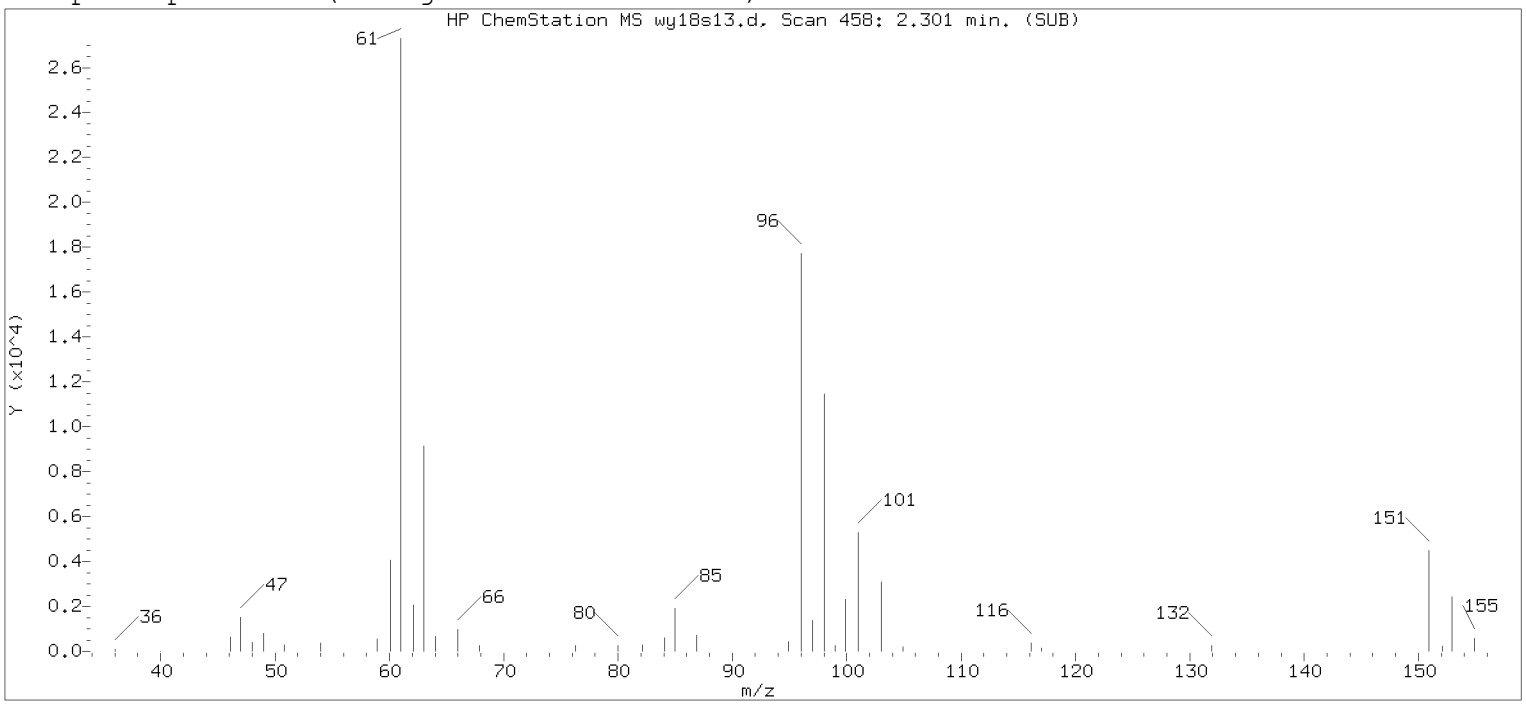
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 458
Retention Time (minutes): 2.301
Quant Ion : 96.00
Area (flag) : 100884M
On-Column Amount (ng) : 24.0377
Integration start scan : 442 Integration stop scan: 548
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

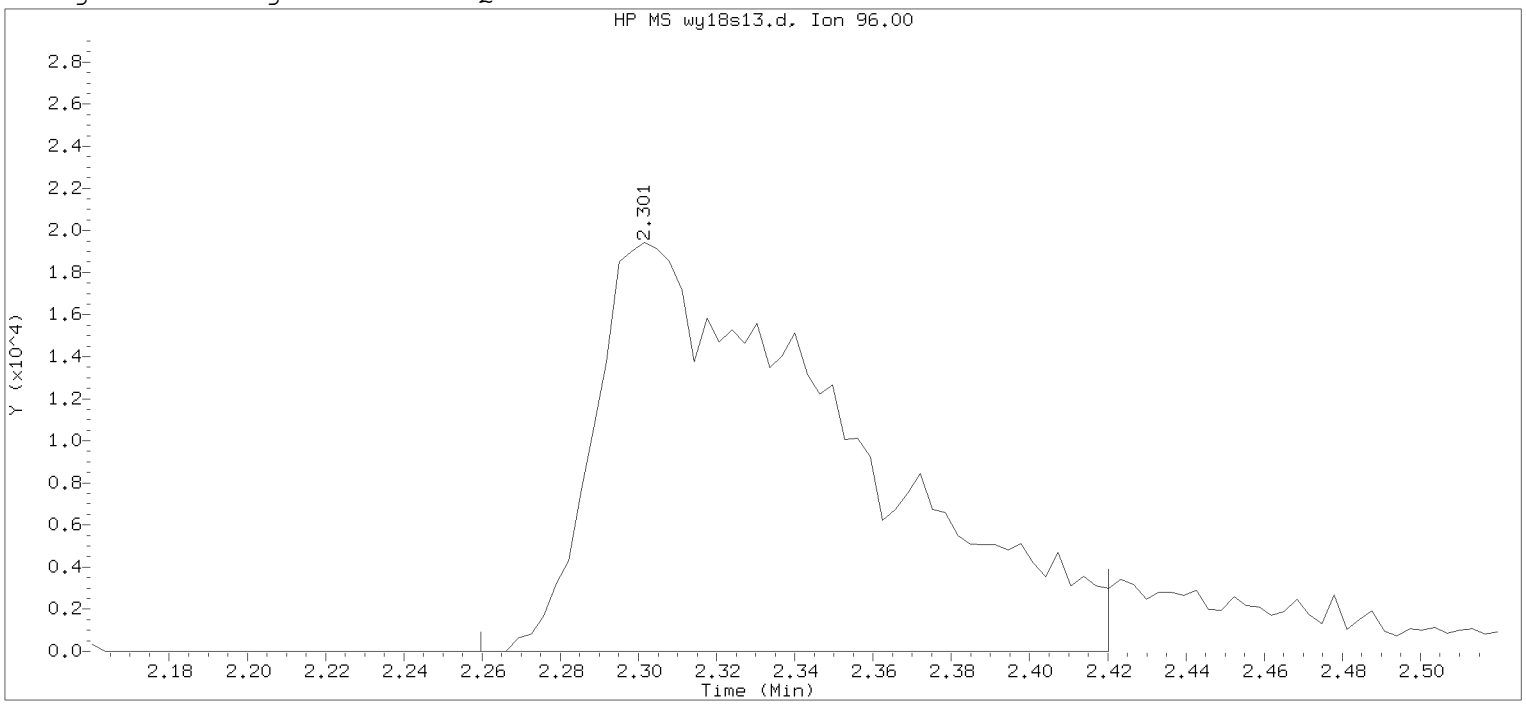
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 08/08/2019 at 10:43.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Roy R. Mellott on 08/08/2019 at 10:44.
PARALLAX ID: rrm00219

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s13.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 04:02 Analyst ID: SEJ02002

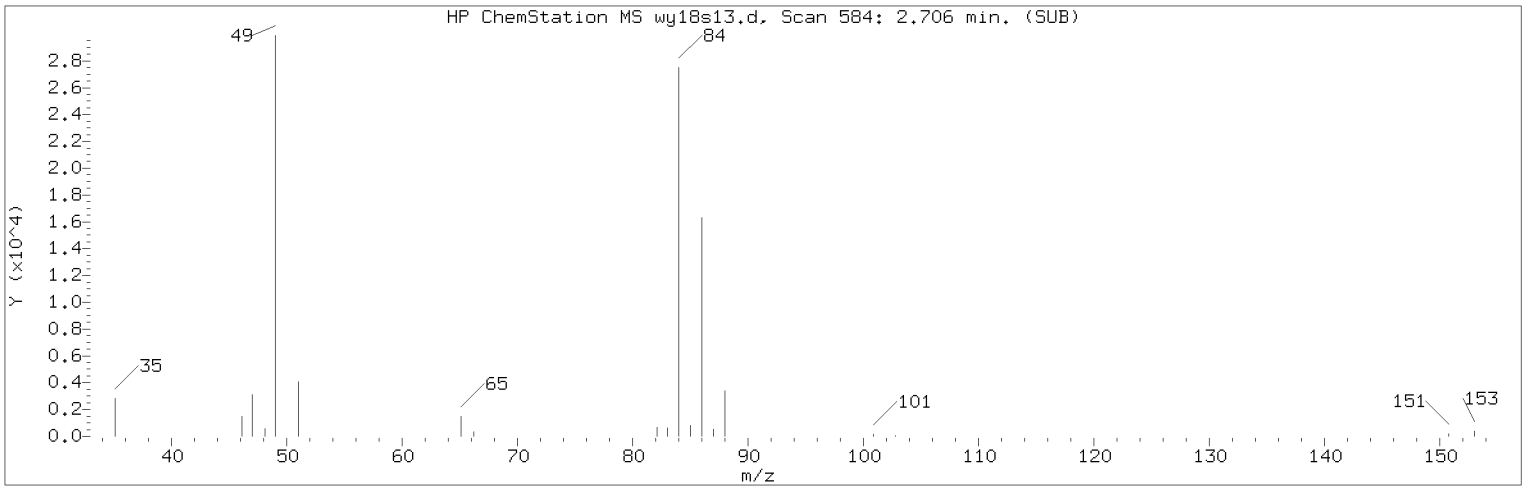
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:49 lcp00895

Sample Name: J0102MS Lab Sample ID: 1053360MS

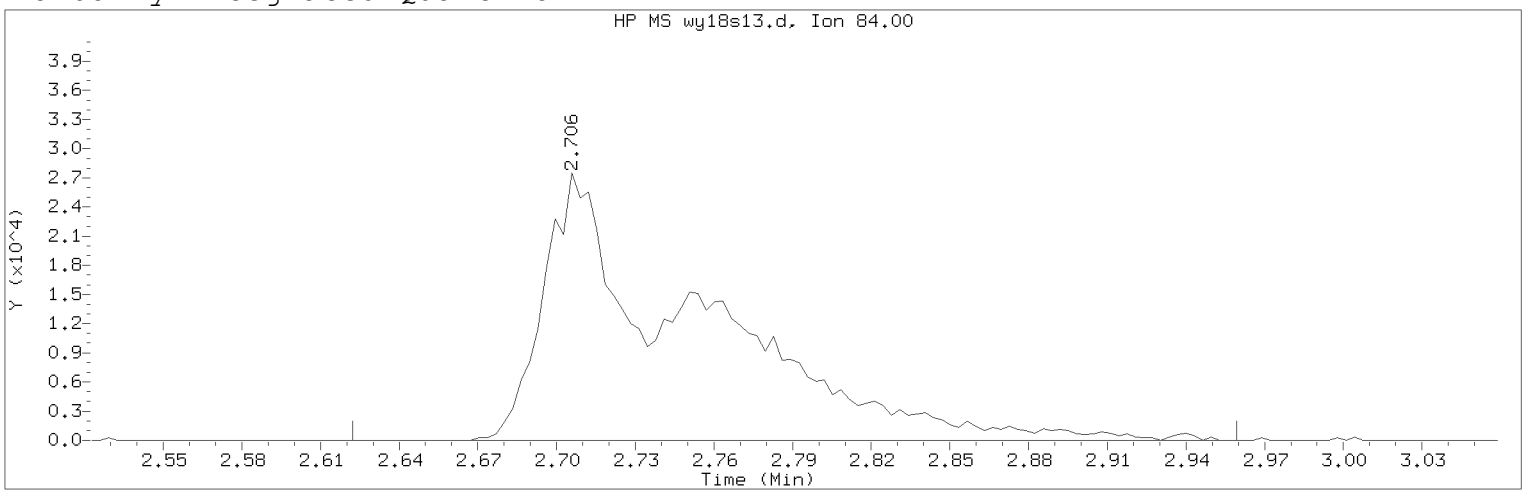
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 458
Retention Time (minutes): 2.301
Quant Ion : 96.00
Area : 86868
On-column Amount (ng) : 20.6982
Integration start scan : 444 Integration stop scan: 494
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 08/08/2019 at 10:43.
Target 3.5 esignature user kas02295

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s13.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 04:02 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 04-Jun-2019 14:50 rrm00219

Sample Name: J0102MS Lab Sample ID: 1053360MS

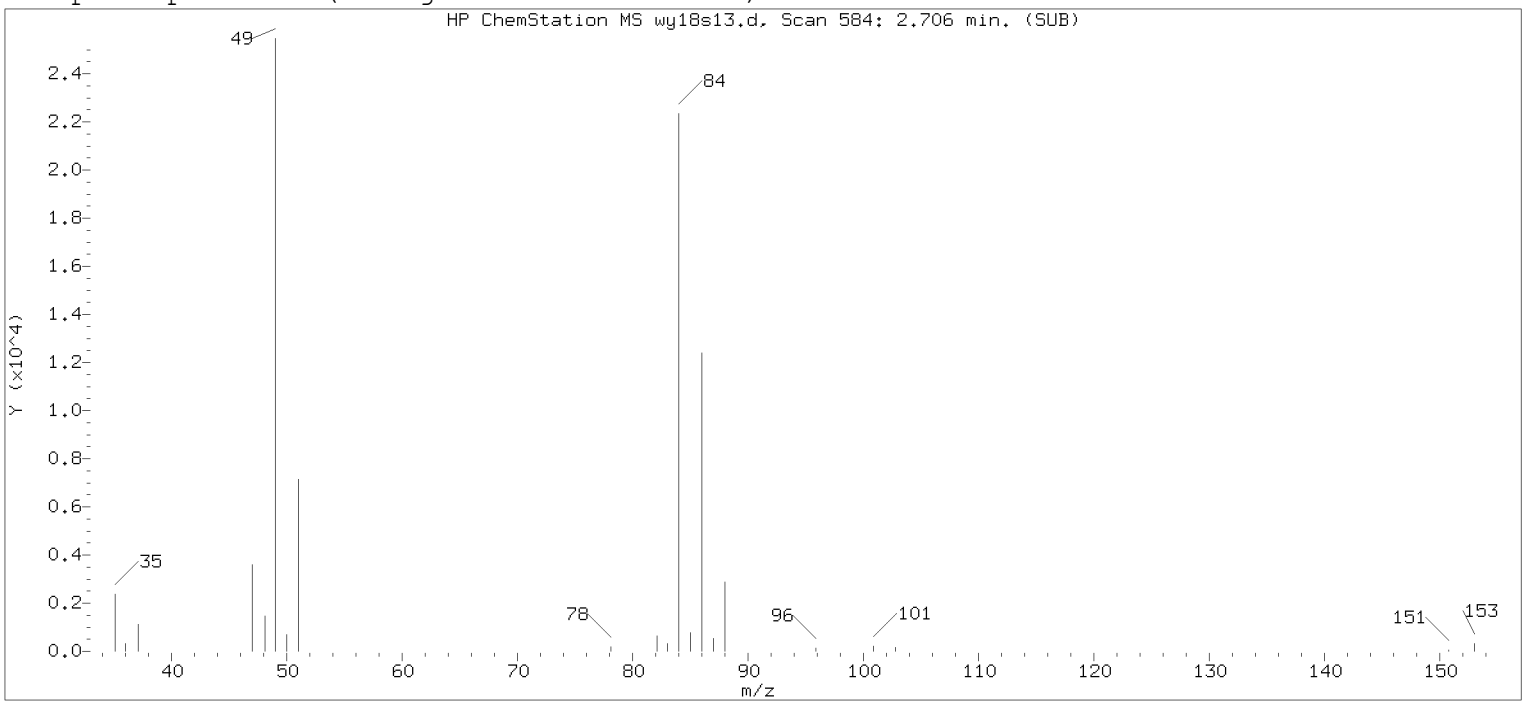
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 584
Retention Time (minutes): 2.706
Quant Ion : 84.00
Area (flag) : 110644M
On-Column Amount (ng) : 21.5681
Integration start scan : 557 Integration stop scan: 662
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

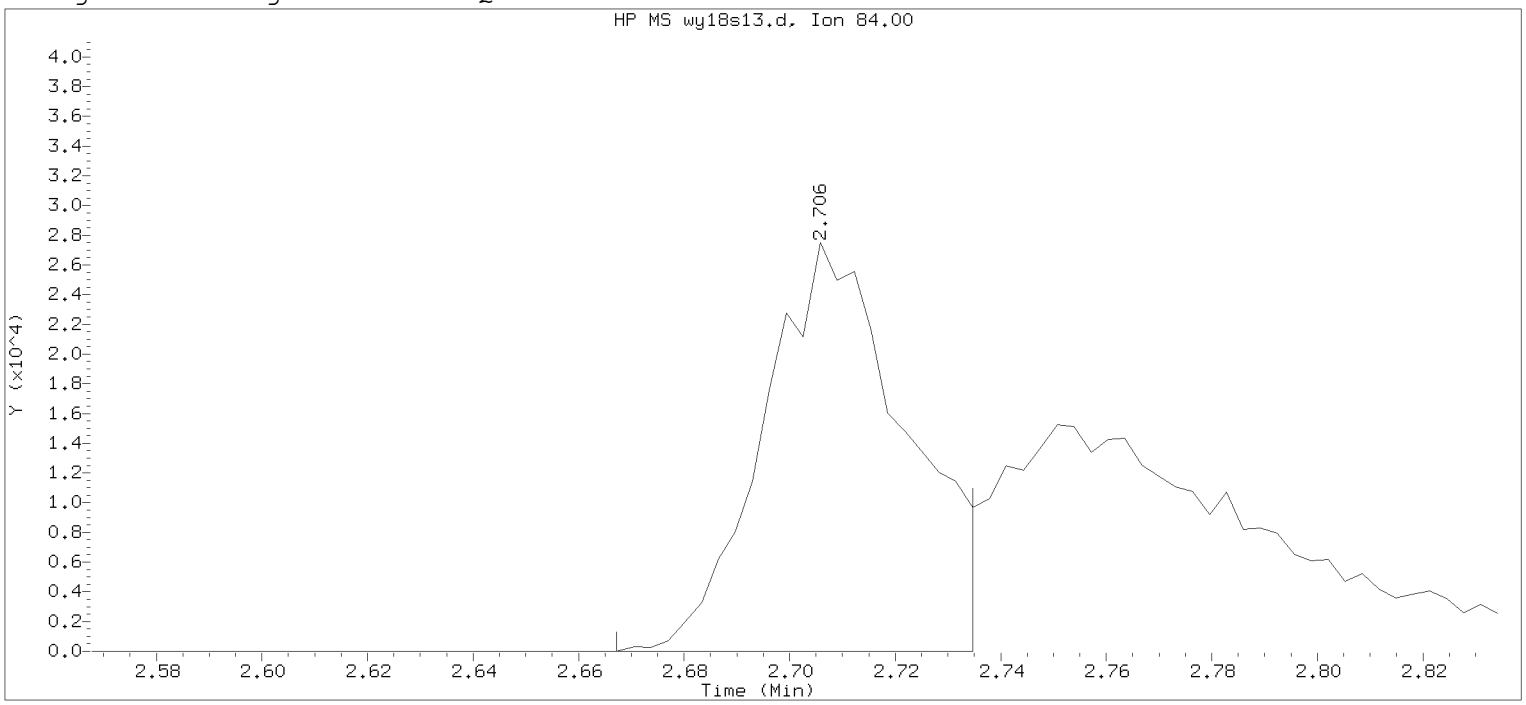
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 08/08/2019 at 10:43.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Roy R. Mellott on 08/08/2019 at 10:44.
PARALLAX ID: rrm00219

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s13.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 04:02 Analyst ID: SEJ02002

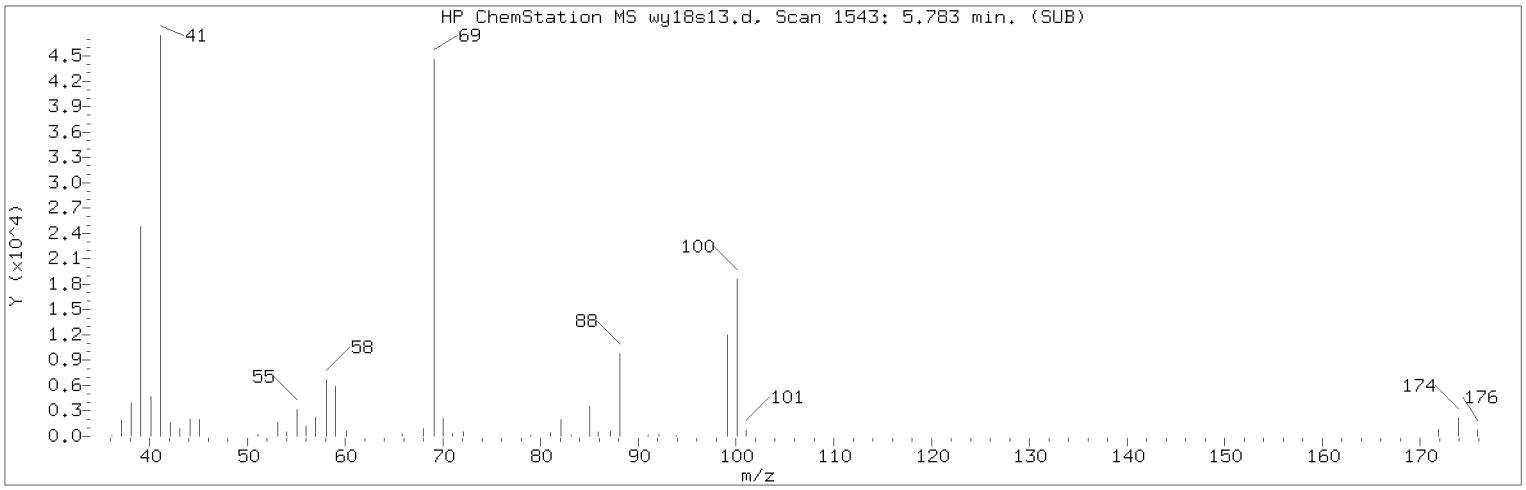
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:49 lcp00895

Sample Name: J0102MS Lab Sample ID: 1053360MS

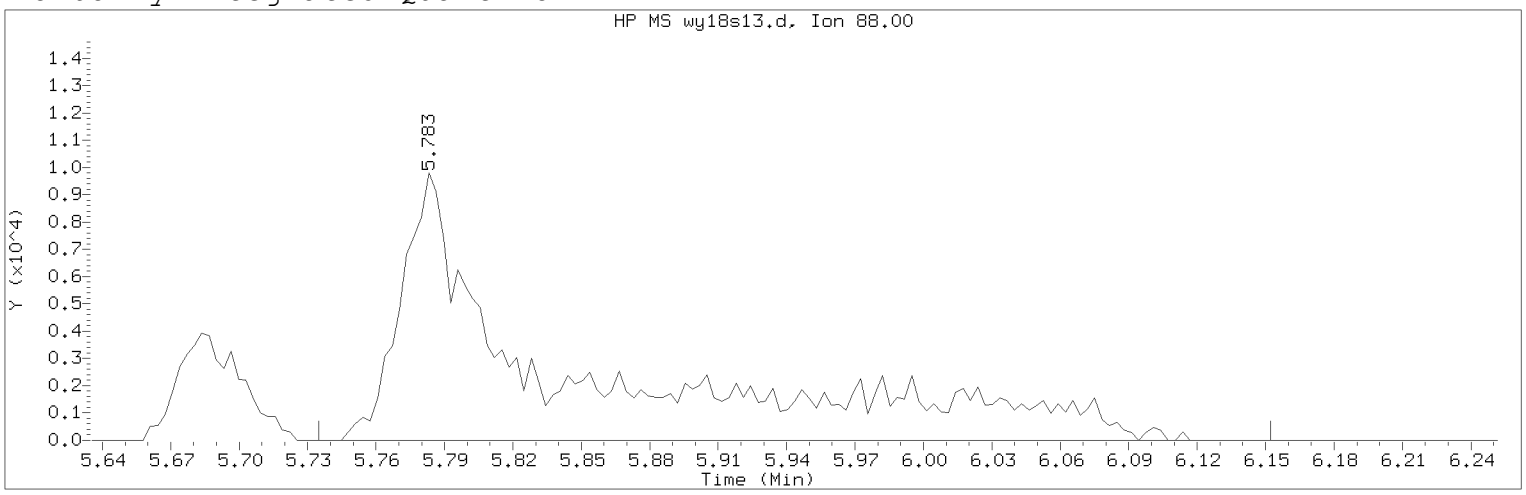
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 584
Retention Time (minutes): 2.706
Quant Ion : 84.00
Area : 51205
On-column Amount (ng) : 9.9817
Integration start scan : 571 Integration stop scan: 592
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 08/08/2019 at 10:43.
Target 3.5 esignature user kas02297

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s13.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 04:02 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 04-Jun-2019 14:50 rrm00219

Sample Name: J0102MS Lab Sample ID: 1053360MS

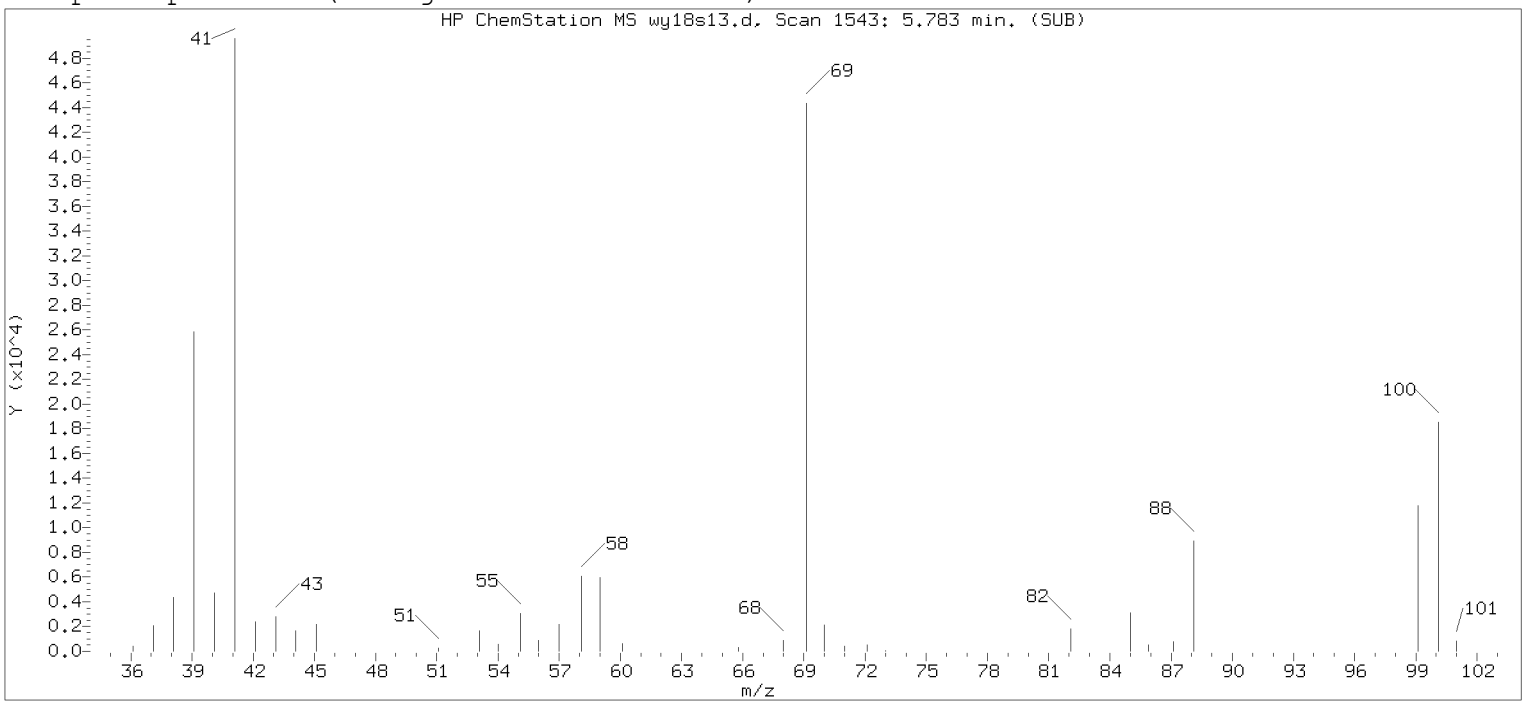
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1543
Retention Time (minutes): 5.783
Quant Ion : 88.00
Area (flag) : 45925M
On-Column Amount (ng) : 561.6660
Integration start scan : 1527 Integration stop scan: 1657
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

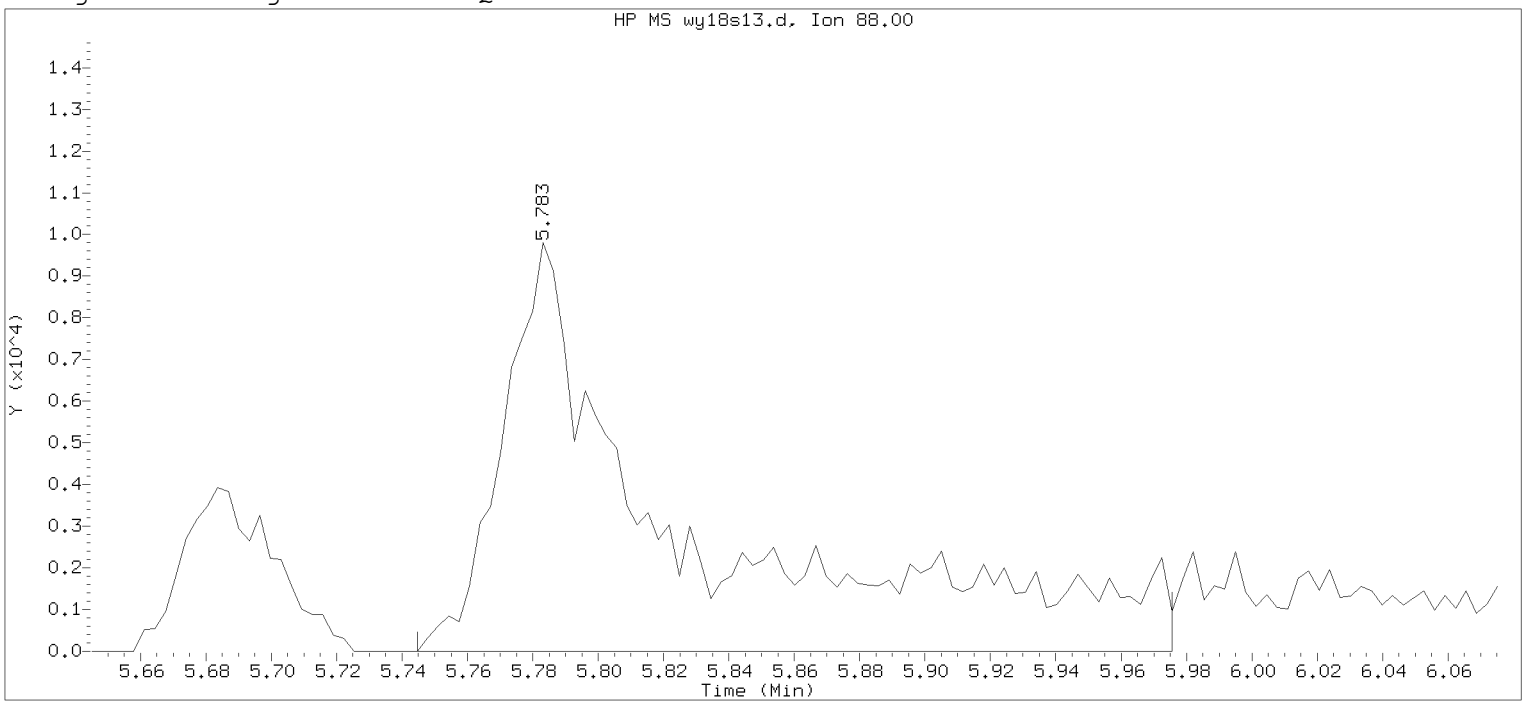
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 08/08/2019 at 10:43.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Roy R. Mellott on 08/08/2019 at 10:44.
PARALLAX ID: rrm00219

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s13.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 04:02 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:49 lcp00895

Sample Name: J0102MS Lab Sample ID: 1053360MS

Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1543		
Retention Time (minutes)	: 5.783		
Quant Ion	: 88.00		
Area	: 36556		
On-column Amount (ng)	: 447.0815		
Integration start scan	: 1530	Integration stop scan:	1602
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 08/08/2019 at 10:43.
Target 3.5 esignature user kas02299

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J0102MSD

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053361

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s14.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	18	
75-35-4	1,1-Dichloroethene	25	
75-34-3	1,1-Dichloroethane	22	
156-59-2	cis-1,2-Dichloroethene	24	
71-55-6	1,1,1-Trichloroethane	26	
79-01-6	Trichloroethene	27	
123-91-1	1,4-Dioxane	600	
127-18-4	Tetrachloroethene	38	
1330-20-7	Xylene (Total)	73	

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may18a.b/wy18s14.d Injection date and time: **19-MAY-2019 04:26**
Data file Sample Info. Line: J0102MSD;1053361MSD;1;3;MSD;JCV88;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:59 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.738	(0.000)	594	65	186782	(-2)	250.00	
66) Fluorobenzene	5.032	(0.000)	1309	96	972725	(-5)	50.00	
101) Chlorobenzene-d5	8.161	(0.000)	2284	117	734147	(-6)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041	(0.000)	2870	152	421474	(-5)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.355	(0.001)	113	214160	47.523	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692	(0.000)	102	60699	50.645	101%		80 - 120
84) Toluene-d8	(3)	6.698	(0.000)	98	953639	51.839	104%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.000)	95	352074	47.839	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)	1.464	(-0.000)	62	131997	18.385	18.38			0.2	1
17) 1,1-Dichloroethene	(2)	2.305	(0.000)	96	105640M	24.632	24.63			0.2	1
18) Acetone	(1)	2.340	(0.000)	58	107270	164.119	164.12			0.7	20
19) Freon 113	(2)	2.340	(0.000)	101	84030	22.312	22.31			0.2	10
23) Carbon Disulfide	(2)	2.500	(0.002)	76	359092M	23.766	23.77			0.2	5
28) Methylene Chloride	(2)	2.706	(0.001)	84	115291M	21.993	21.99			0.3	1
32) trans-1,2-Dichloroethene	(2)	2.956	(0.001)	96	103359	22.212	22.21			0.2	1
36) 1,1-Dichloroethane	(2)	3.341	(0.000)	63	186263	22.091	22.09			0.2	1
42) cis-1,2-Dichloroethene	(2)	3.890	(0.000)	96	126021	24.121	24.12			0.2	1
44) 2-Butanone	(2)	3.906	(0.000)	43	620507	126.947	126.95			0.3	10
51) Chloroform	(2)	4.201	(0.000)	83	184471	23.317	23.32			0.2	1
53) 1,1,1-Trichloroethane	(2)	4.384	(0.000)	97	152678	25.648	25.65			0.3	1
60) Benzene	(2)	4.750	(0.000)	78	442043	21.681	21.68			0.2	1
61) 1,2-Dichloroethane	(2)	4.769	(0.000)	62	146874	23.320	23.32			0.3	1
71) Trichloroethene	(2)	5.404	(0.000)	95	132736	26.884	26.88			0.2	1
76) 1,4-Dioxane	(1)	5.780	(0.001)	88	50100M	597.663	597.66			29	250
89) Toluene	(3)	6.768	(0.000)	92	292377	24.672	24.67			0.2	1
94) Tetrachloroethene	(3)	7.362	(0.000)	166	181552	37.755	37.76			0.2	1
105) Ethylbenzene	(3)	8.292	(0.000)	91	537608	23.869	23.87			0.4	1
107) m+p-Xylene	(3)	8.402	(0.000)	106	439790	49.111	49.11			1	5
108) o-Xylene	(3)	8.738	(0.000)	106	210321	23.873	23.87			0.4	1
109) Xylene (Total)	(3)			106	650111	72.984	72.98			1	5
139) 1,2-Dichlorobenzene	(4)	10.324	(0.000)	146	274334	23.886	23.89			0.2	5
149) Naphthalene	(4)	11.582	(0.000)	128	540247	18.884	18.88			1	5

M = Compound was manually integrated.

Digitally signed by Linda C. Pape on 05/28/2019 at 15:00. Target 3.5 esignature user ID: lcp00895

Data file: /chem2/HP09137.i/19may18a.b/wy18s14.d Injection date and time: **19-MAY-2019 04:26**
Data file Sample Info. Line: J0102MSD;1053361MSD;1;3;MSD;JCV88;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:59 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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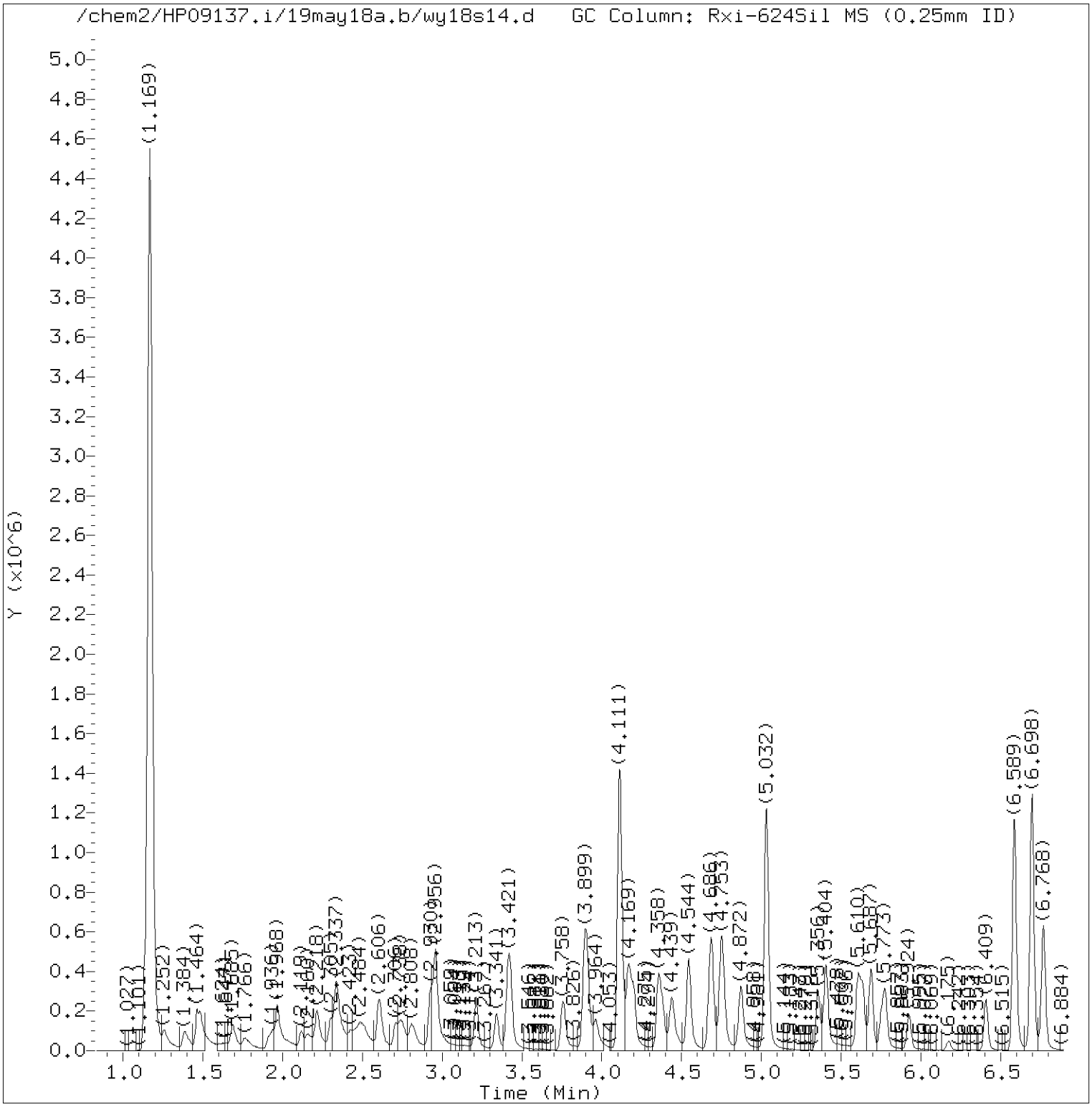
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Linda C. Pape on 05/28/2019 at 15:00. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Roy R. Mellott on 06/12/2019 at 17:17. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

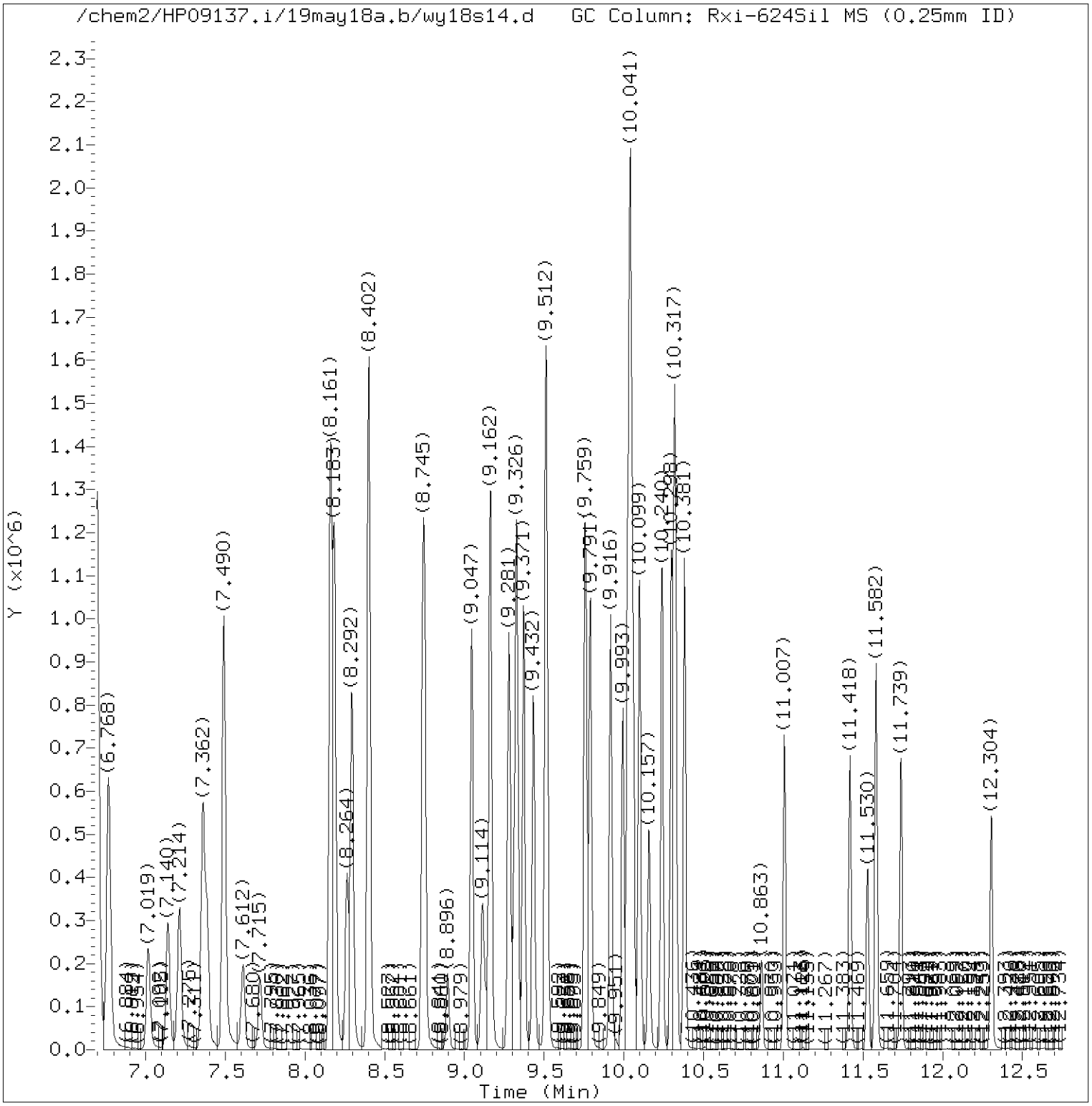
Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s14.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 04:26 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:59 lcp00895

Sample Name: J0102MSD Lab Sample ID: 1053361MSD

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:00.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s14.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 04:26 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:59 lcp00895

Sample Name: J0102MSD Lab Sample ID: 1053361MSD

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:00.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s14.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 04:26 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:59 lcp00895

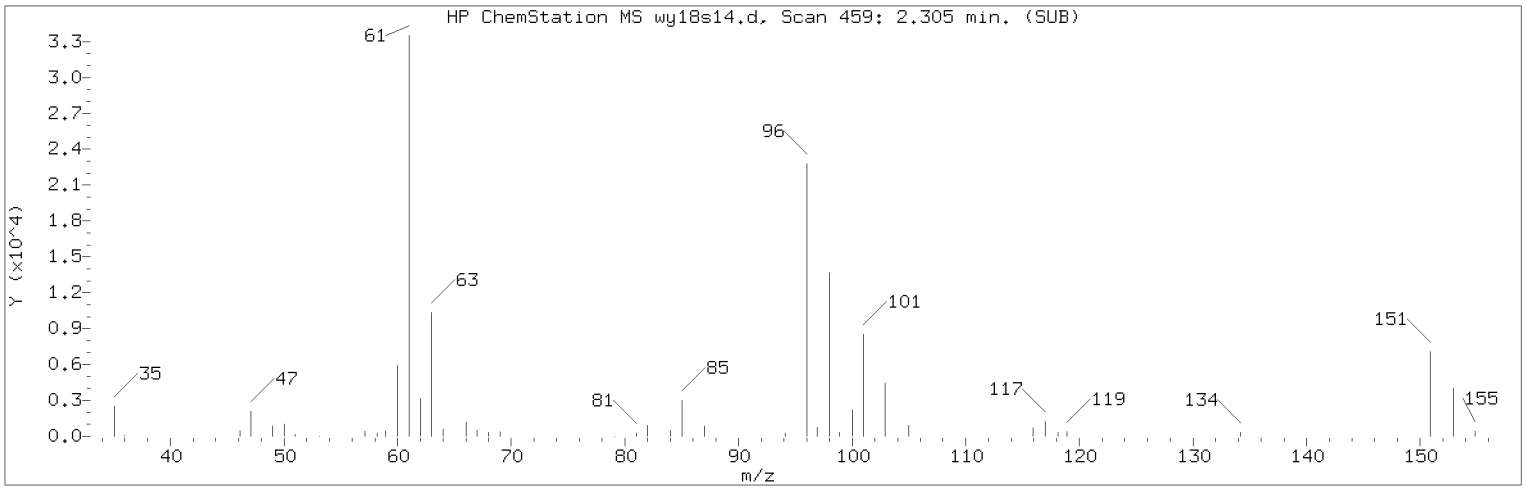
Sample Name: J0102MSD Lab Sample ID: 1053361MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	1.464	62	131997	18.385
17) 1,1-Dichloroethene	(2)	2.305	96	105640M	24.632
18) Acetone	(1)	2.340	58	107270	164.119
19) Freon 113	(2)	2.340	101	84030	22.312
23) Carbon Disulfide	(2)	2.500	76	359092M	23.766
28) Methylene Chloride	(2)	2.706	84	115291M	21.993
29)*t-Butyl alcohol-d10	(1)	2.738	65	186782	250.000
32) trans-1,2-Dichloroethene	(2)	2.956	96	103359	22.212
36) 1,1-Dichloroethane	(2)	3.341	63	186263	22.091
42) cis-1,2-Dichloroethene	(2)	3.890	96	126021	24.121
44) 2-Butanone	(2)	3.906	43	620507	126.947
51) Chloroform	(2)	4.201	83	184471	23.317
52)$Dibromofluoromethane	(2)	4.355	113	214160	47.523
53) 1,1,1-Trichloroethane	(2)	4.384	97	152678	25.648
57)$1,2-Dichloroethane-d4	(2)	4.692	102	60699	50.645
60) Benzene	(2)	4.750	78	442043	21.681
61) 1,2-Dichloroethane	(2)	4.769	62	146874	23.320
66)*Fluorobenzene	(2)	5.032	96	972725	50.000
71) Trichloroethene	(2)	5.404	95	132736	26.884
76) 1,4-Dioxane	(1)	5.780	88	50100M	597.663
84)$Toluene-d8	(3)	6.698	98	953639	51.839
89) Toluene	(3)	6.768	92	292377	24.672
94) Tetrachloroethene	(3)	7.362	166	181552	37.755
101)*Chlorobenzene-d5	(3)	8.161	117	734147	50.000
105) Ethylbenzene	(3)	8.292	91	537608	23.869
107) m+p-Xylene	(3)	8.402	106	439790	49.111
108) o-Xylene	(3)	8.738	106	210321	23.873
115)$4-Bromofluorobenzene	(3)	9.162	95	352074	47.839
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	421474	50.000
139) 1,2-Dichlorobenzene	(4)	10.324	146	274334	23.886
149) Naphthalene	(4)	11.582	128	540247	18.884
109) Xylene (Total)	(3)		106	650111	72.984

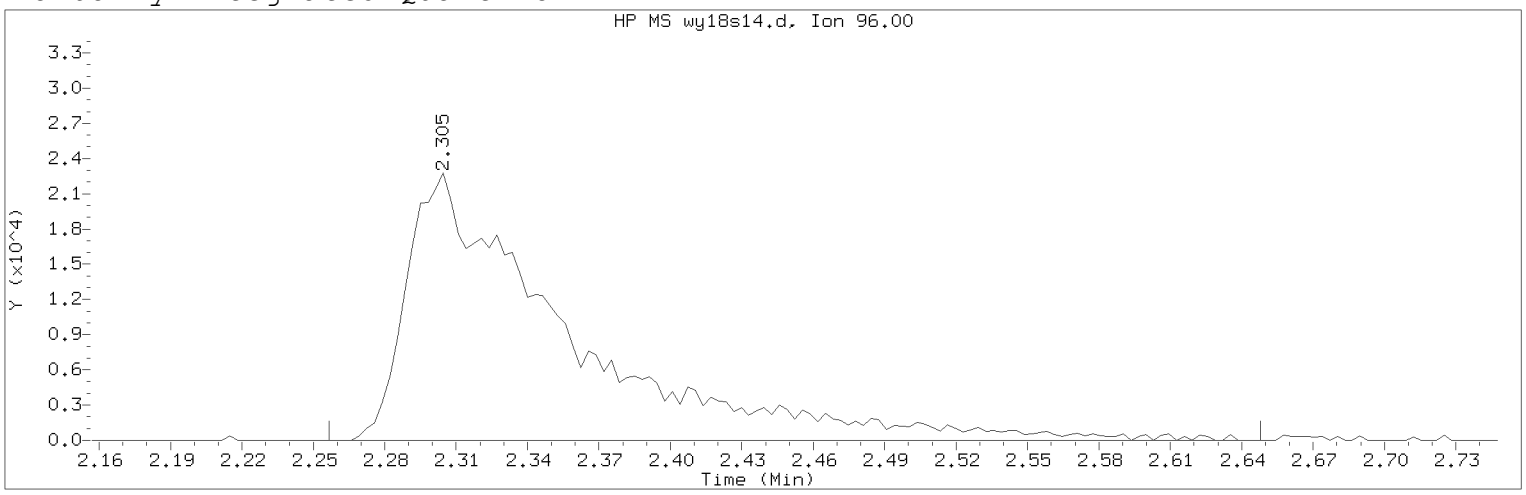
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 05/28/2019 at 15:00.
Target 3.5 esignature user ID: lcp00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s14.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 04:26 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:59 lcp00895

Sample Name: J0102MSD Lab Sample ID: 1053361MSD

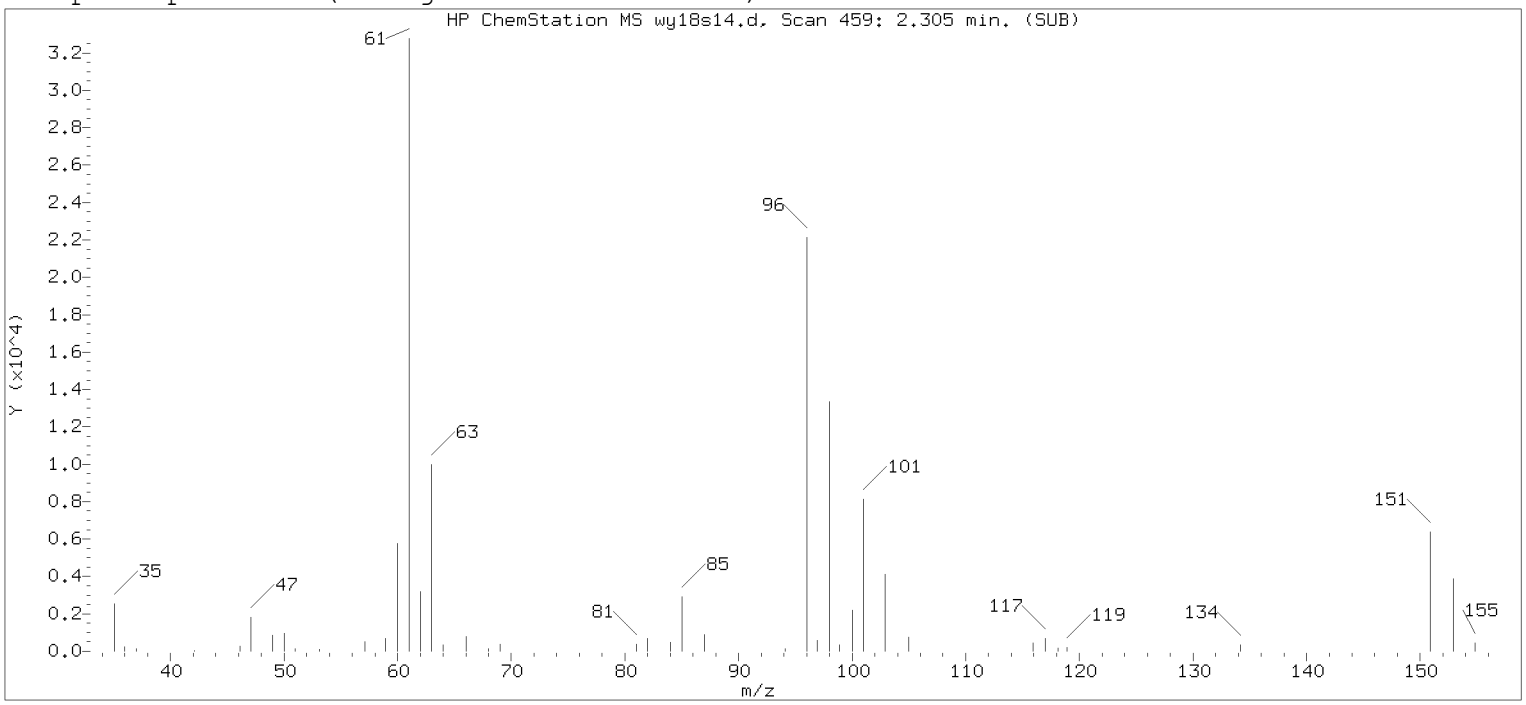
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 459
Retention Time (minutes): 2.305
Quant Ion : 96.00
Area (flag) : 105640M
On-Column Amount (ng) : 24.6319
Integration start scan : 443 Integration stop scan: 565
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

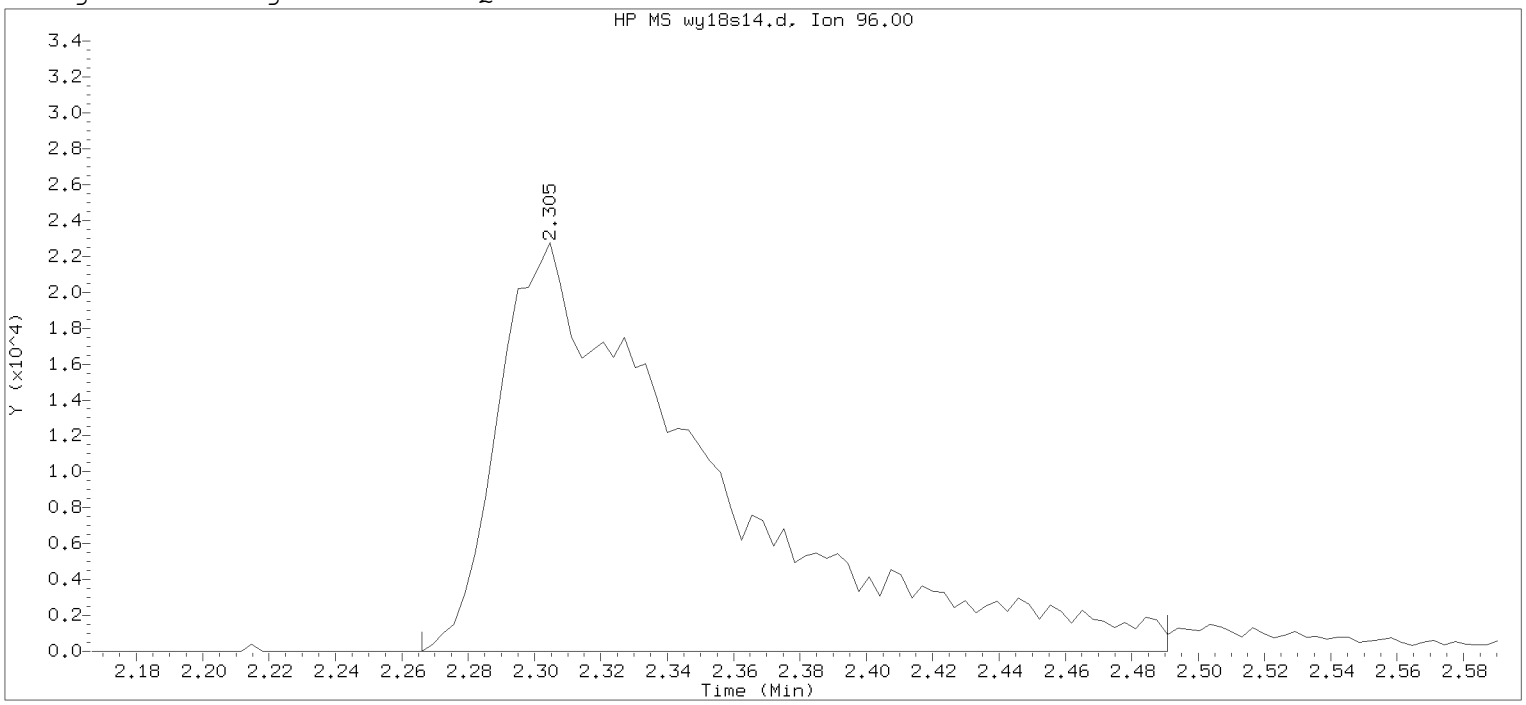
Analyst responsible for change: Digitally signed by Linda C. Pape
on 05/28/2019 at 15:00.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Roy R. Mellott on 06/12/2019 at 17:17.
PARALLAX ID: rrm00219

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s14.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 04:26 Analyst ID: SEJ02002

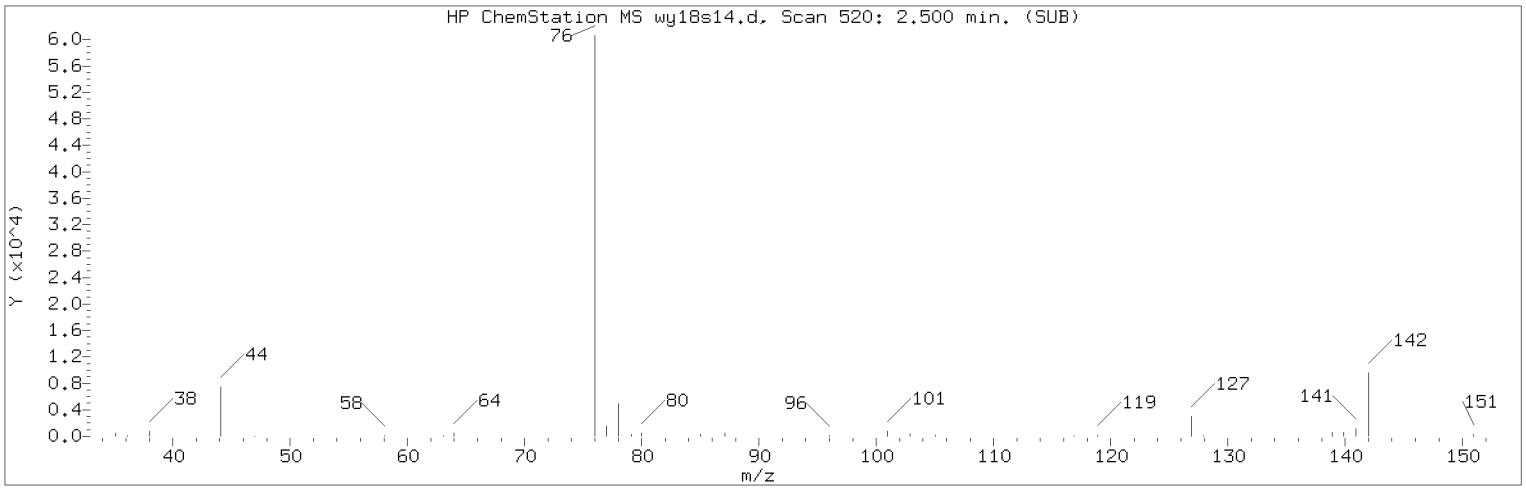
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:49 lcp00895

Sample Name: J0102MSD Lab Sample ID: 1053361MSD

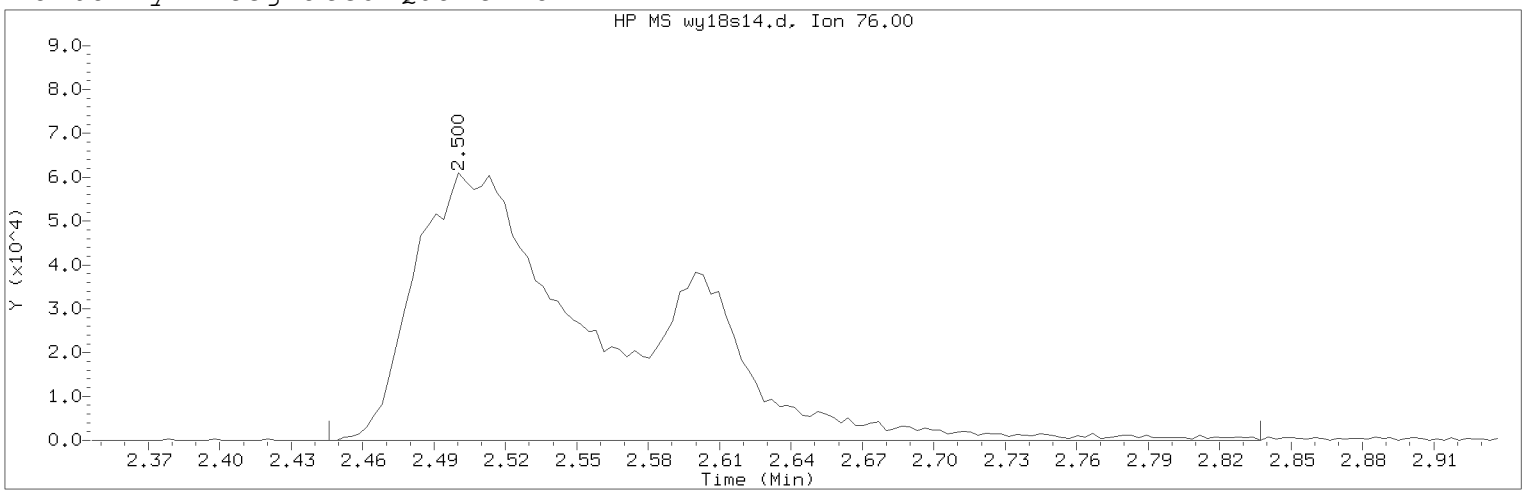
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 459
Retention Time (minutes): 2.305
Quant Ion : 96.00
Area : 100204
On-column Amount (ng) : 23.3644
Integration start scan : 446 Integration stop scan: 516
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 05/28/2019 at 15:00.
Target 3.5 esignature user: lcp00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s14.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 04:26 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:59 lcp00895

Sample Name: J0102MSD Lab Sample ID: 1053361MSD

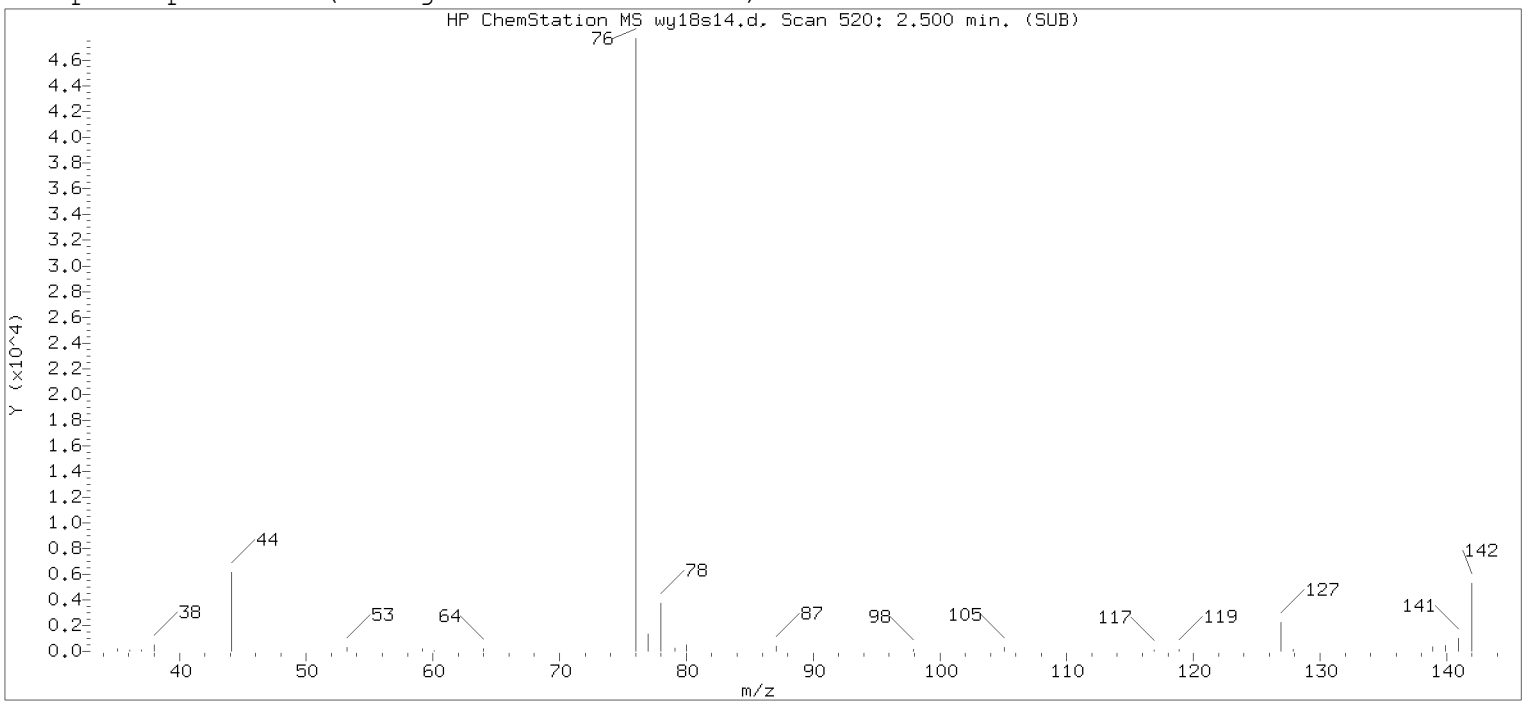
Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 520
Retention Time (minutes): 2.500
Quant Ion : 76.00
Area (flag) : 359092M
On-Column Amount (ng) : 23.7661
Integration start scan : 502 Integration stop scan: 624
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

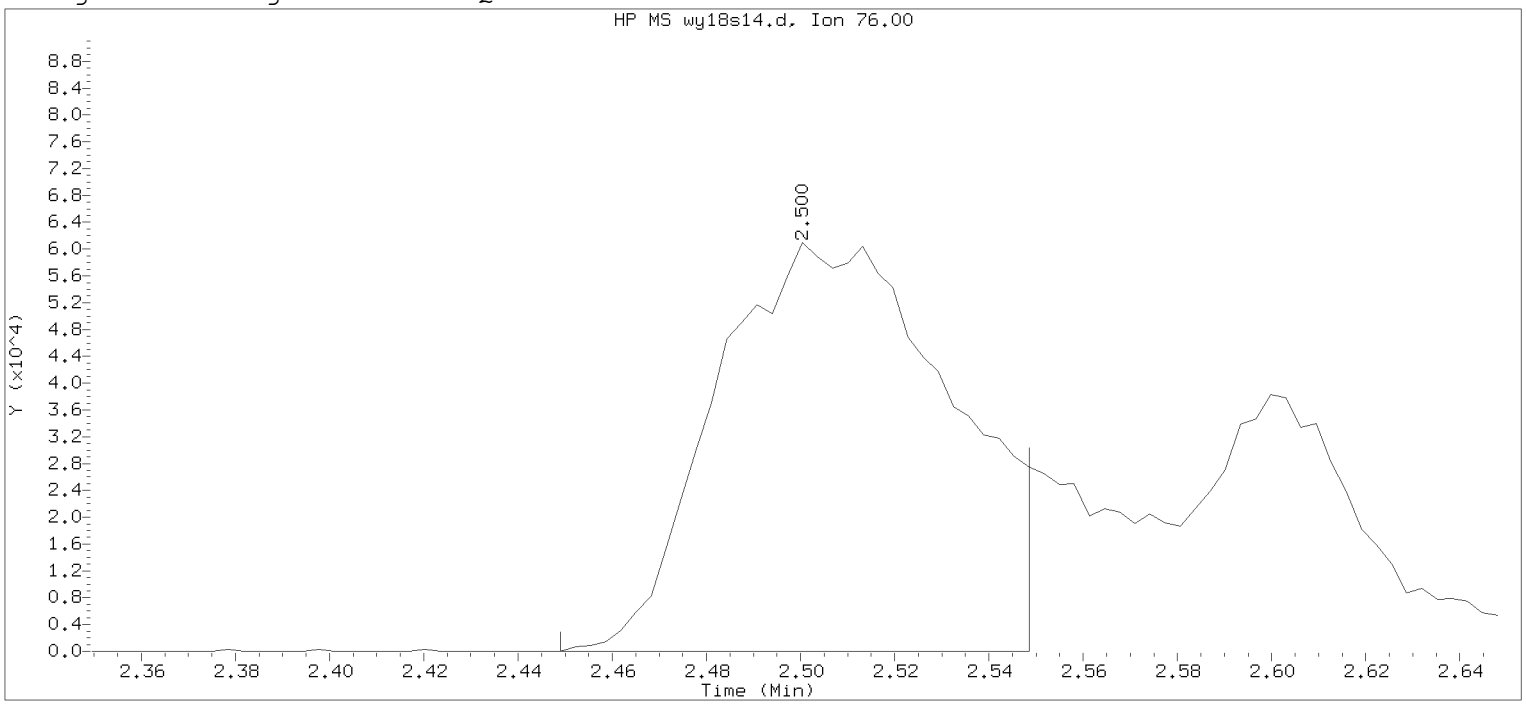
Analyst responsible for change: Digitally signed by Linda C. Pape
on 05/28/2019 at 15:00.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Roy R. Mellott on 06/12/2019 at 17:17.
PARALLAX ID: rrm00219

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s14.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 04:26 Analyst ID: SEJ02002

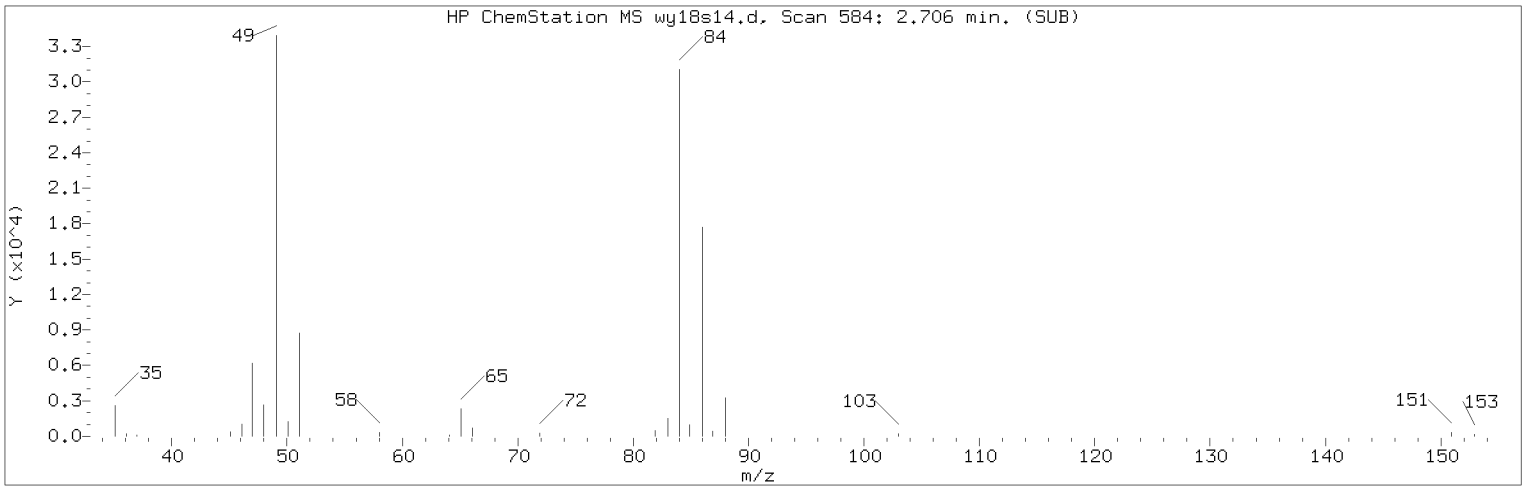
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:49 lcp00895

Sample Name: J0102MSD Lab Sample ID: 1053361MSD

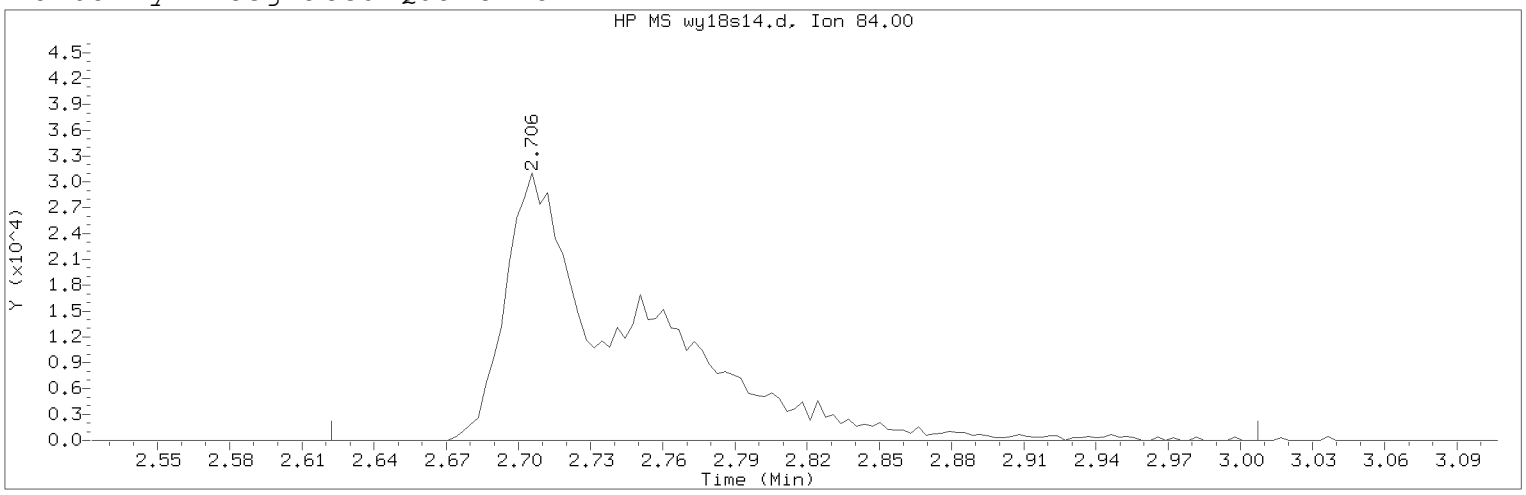
Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 520
Retention Time (minutes): 2.500
Quant Ion : 76.00
Area : 211046
On-column Amount (ng) : 13.9678
Integration start scan : 503 Integration stop scan: 534
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 05/28/2019 at 15:00.
Target 3.5 esignature user id: lcp00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s14.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 04:26 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:59 lcp00895

Sample Name: J0102MSD Lab Sample ID: 1053361MSD

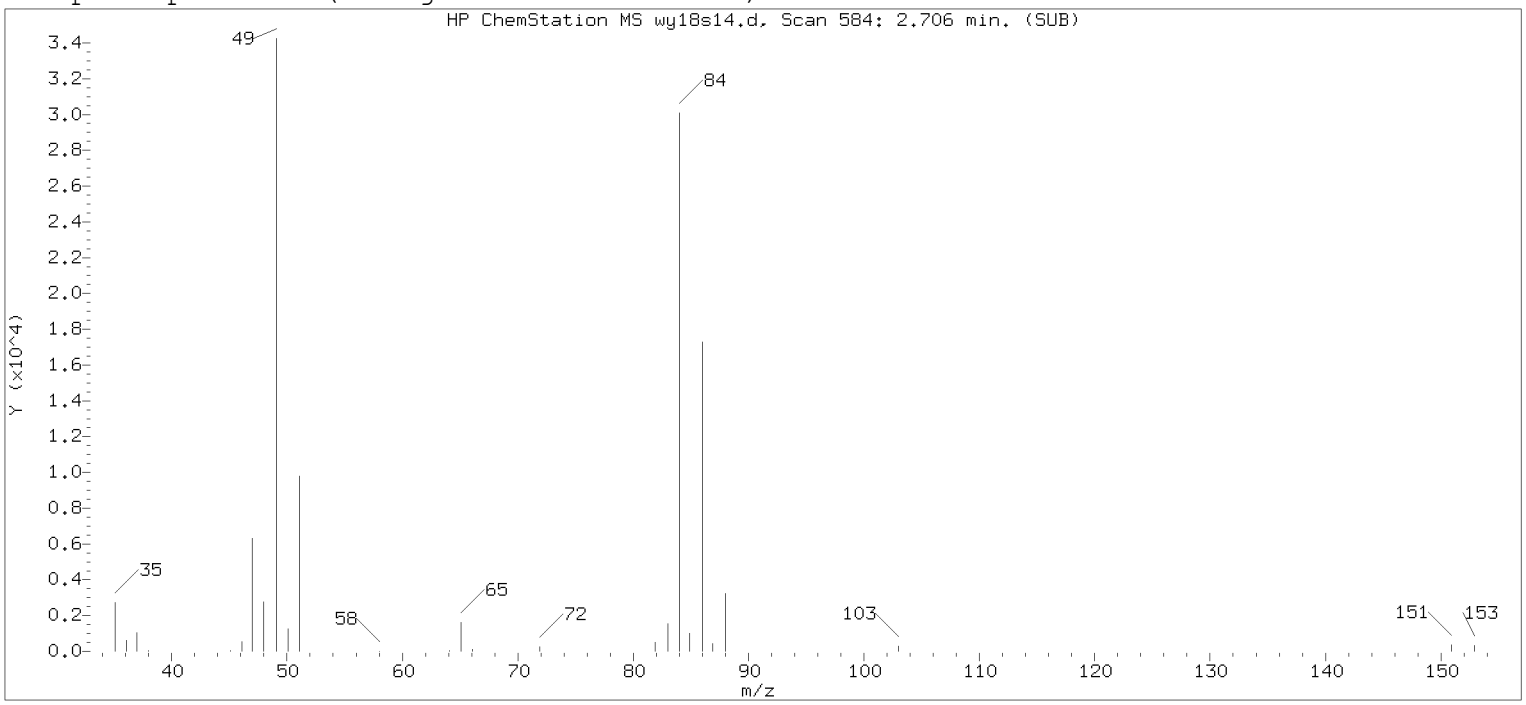
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 584
Retention Time (minutes): 2.706
Quant Ion : 84.00
Area (flag) : 115291M
On-Column Amount (ng) : 21.9927
Integration start scan : 557 Integration stop scan: 677
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

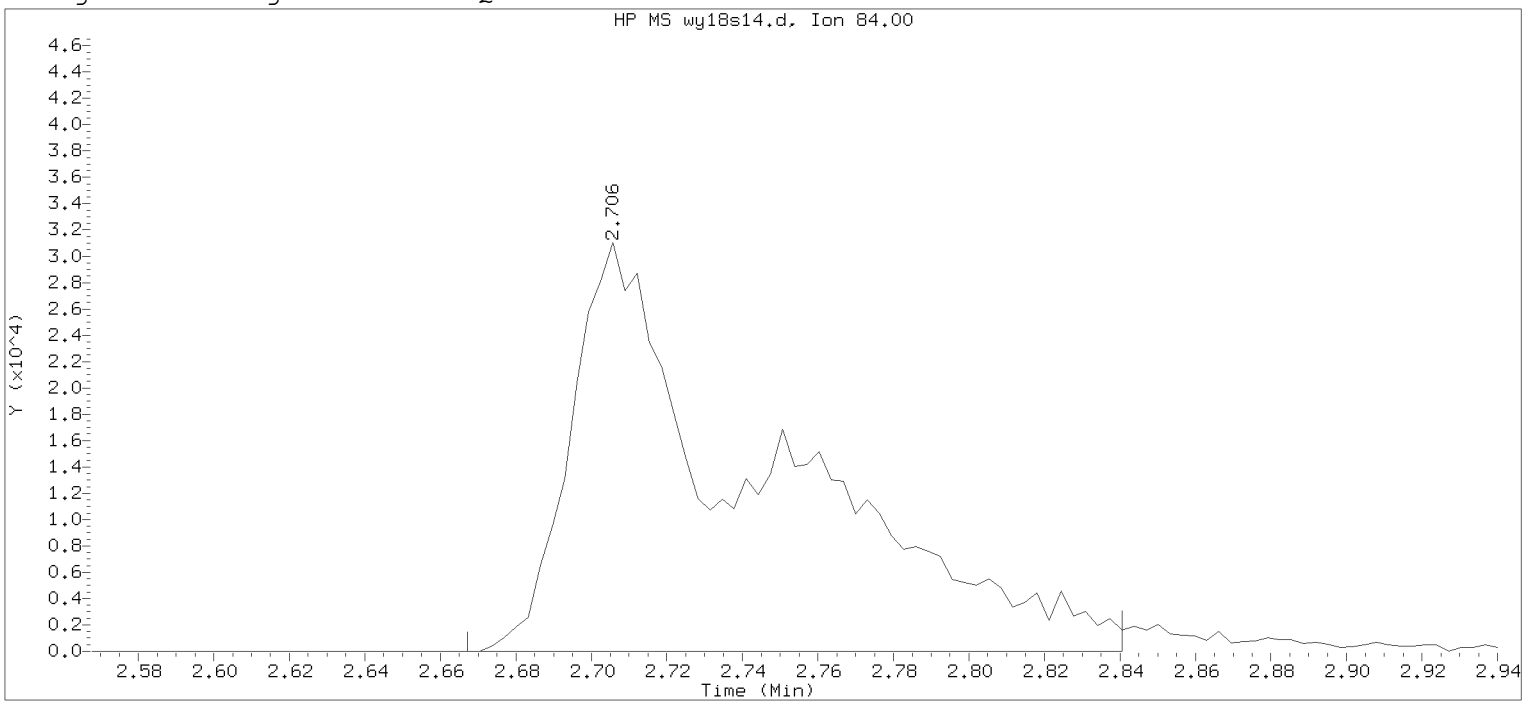
Analyst responsible for change: Digitally signed by Linda C. Pape
on 05/28/2019 at 15:00.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Roy R. Mellott on 06/12/2019 at 17:17.
PARALLAX ID: rrm00219

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s14.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 04:26 Analyst ID: SEJ02002

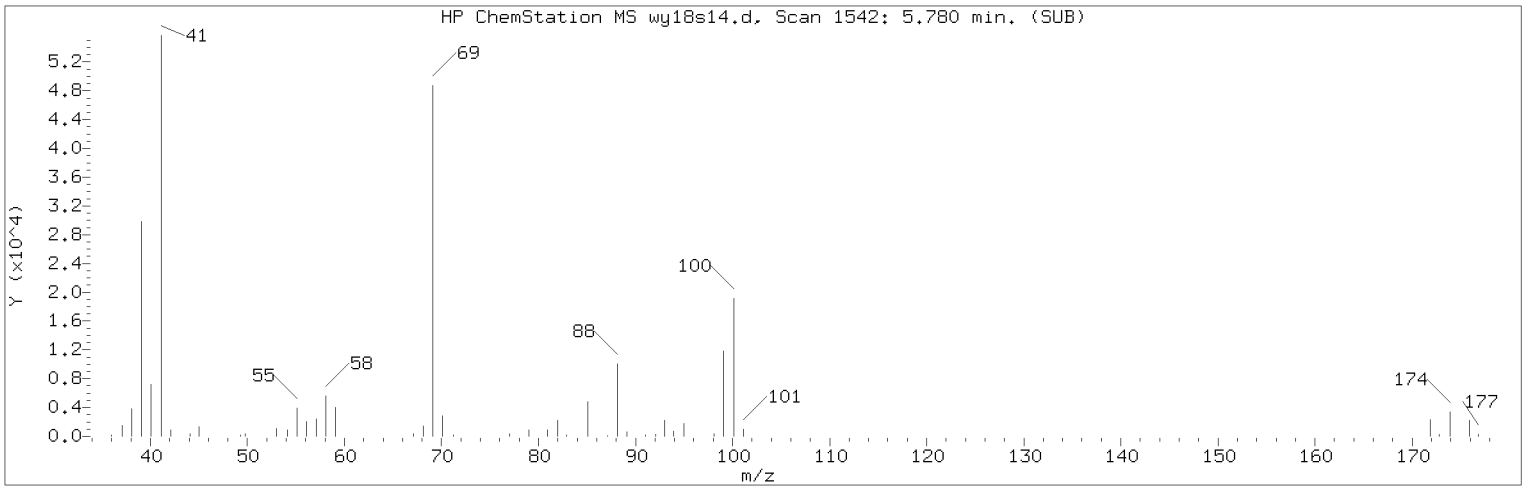
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:49 lcp00895

Sample Name: J0102MSD Lab Sample ID: 1053361MSD

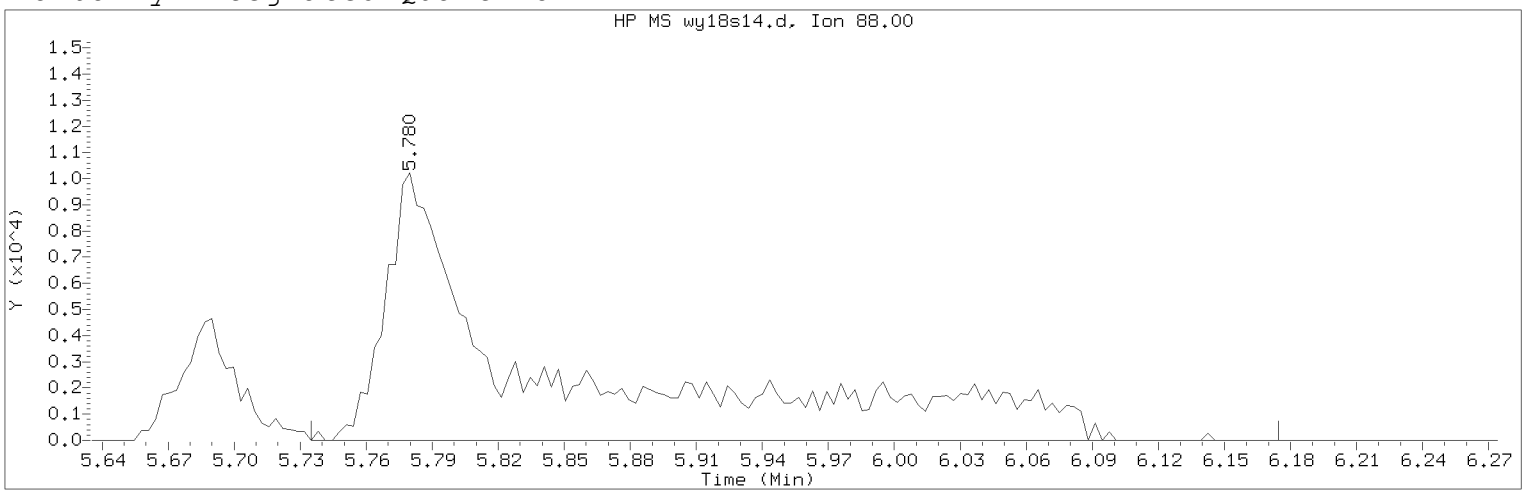
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 584
Retention Time (minutes): 2.706
Quant Ion : 84.00
Area : 109892
On-column Amount (ng) : 20.9627
Integration start scan : 571 Integration stop scan: 625
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 05/28/2019 at 15:00.
Target 3.5 esignature user id: lcp00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s14.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 04:26 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:59 lcp00895

Sample Name: J0102MSD Lab Sample ID: 1053361MSD

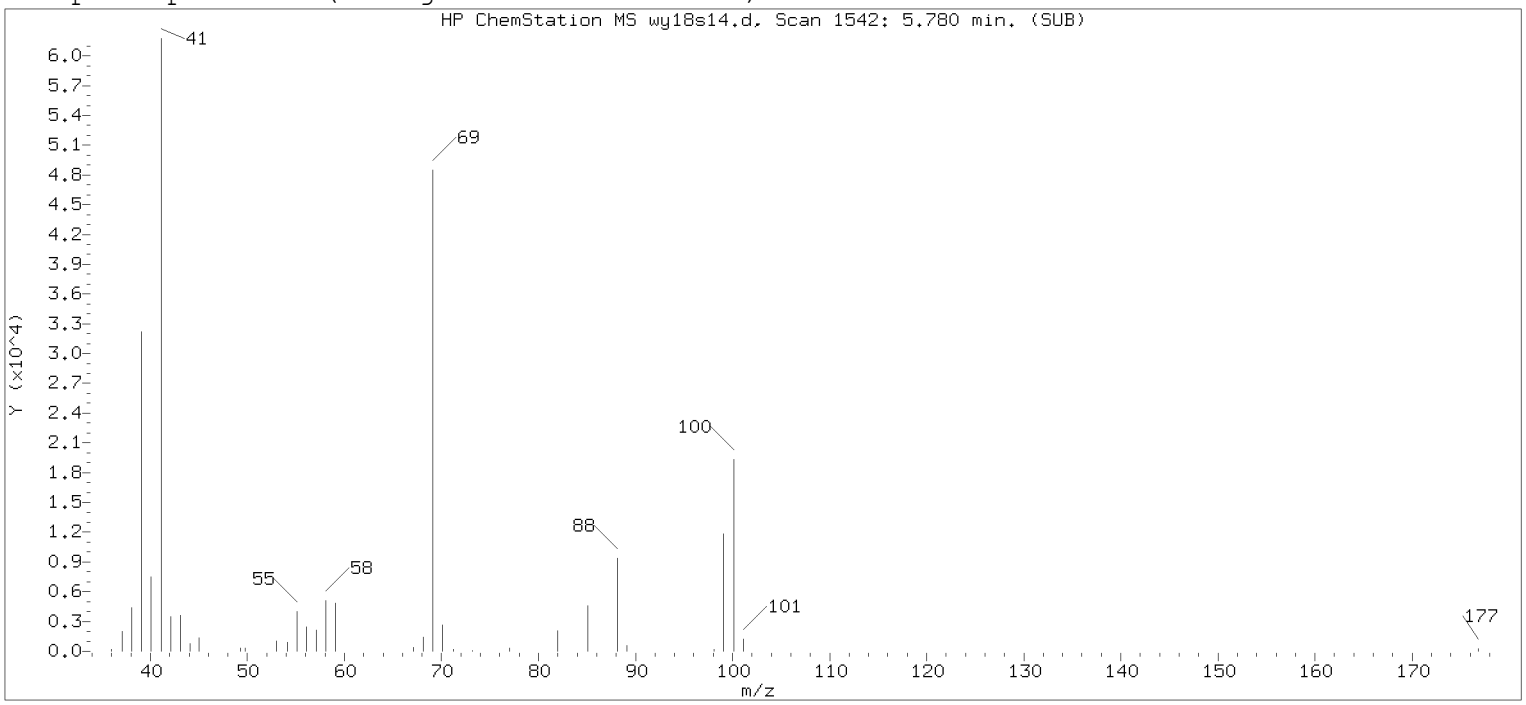
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area (flag) : 50100M
On-Column Amount (ng) : 597.6634
Integration start scan : 1527 Integration stop scan: 1664
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

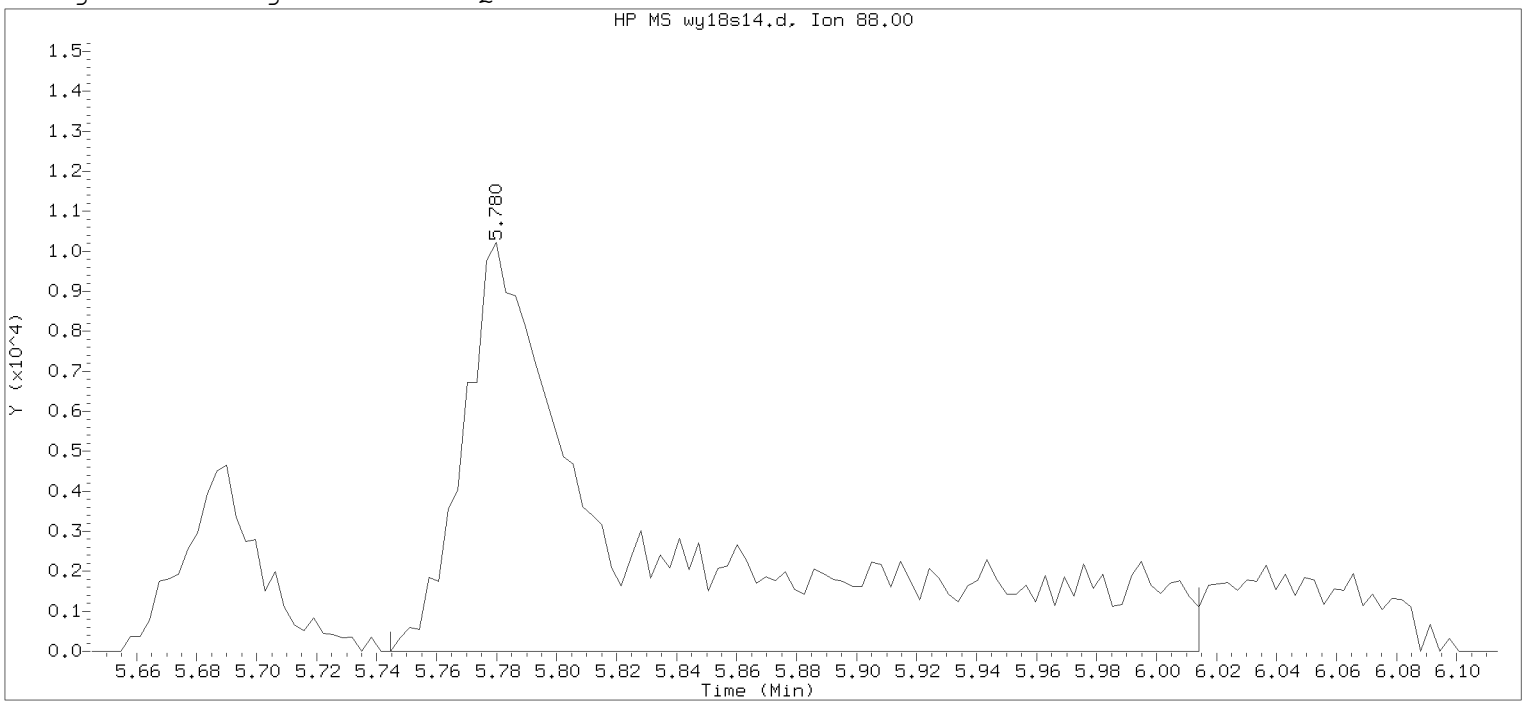
Analyst responsible for change: Digitally signed by Linda C. Pape
on 05/28/2019 at 15:00.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Roy R. Mellott on 06/12/2019 at 17:17.
PARALLAX ID: rrm00219

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s14.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 04:26 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:49 lcp00895

Sample Name: J0102MSD Lab Sample ID: 1053361MSD

Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1542		
Retention Time (minutes)	: 5.780		
Quant Ion	: 88.00		
Area	: 43087		
On-column Amount (ng)	: 514.0092		
Integration start scan	: 1530	Integration stop scan:	1614
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Linda C. Pape on 05/28/2019 at 15:00.
Target 3.5 esignature user id: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSW23

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSW23

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/18/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	18	
74-87-3	Chloromethane	16	
106-99-0	1,3-Butadiene	26	
75-01-4	Vinyl Chloride	17	
74-83-9	Bromomethane	16	
75-00-3	Chloroethane	16	
109-66-0	n-Pentane	14	
75-69-4	Trichlorofluoromethane	18	
64-17-5	Ethanol	380	J
354-23-4	Freon 123a	19	
107-02-8	Acrolein	150	
75-35-4	1,1-Dichloroethene	22	
67-64-1	Acetone	230	
76-13-1	Freon 113	21	
67-63-0	2-Propanol	160	
74-88-4	Methyl Iodide	20	
75-15-0	Carbon Disulfide	15	
107-05-1	Allyl Chloride	19	
79-20-9	Methyl Acetate	18	
75-09-2	Methylene Chloride	20	
75-65-0	t-Butyl alcohol	210	
107-13-1	Acrylonitrile	90	
156-60-5	trans-1,2-Dichloroethene	21	
1634-04-4	Methyl Tertiary Butyl Ether	24	
110-54-3	n-Hexane	19	
75-34-3	1,1-Dichloroethane	21	
108-20-3	di-Isopropyl ether	20	
126-99-8	2-Chloro-1,3-butadiene	21	
637-92-3	Ethyl t-butyl ether	22	
156-59-2	cis-1,2-Dichloroethene	23	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSW23

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSW23

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/18/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	44	
78-93-3	2-Butanone	140	
594-20-7	2,2-Dichloropropane	20	
107-12-0	Propionitrile	200	
126-98-7	Methacrylonitrile	140	
74-97-5	Bromochloromethane	21	
109-99-9	Tetrahydrofuran	130	
67-66-3	Chloroform	22	
71-55-6	1,1,1-Trichloroethane	22	
110-82-7	Cyclohexane	17	
563-58-6	1,1-Dichloropropene	21	
56-23-5	Carbon Tetrachloride	21	
78-83-1	Isobutyl Alcohol	560	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	23	
994-05-8	t-Amyl methyl ether	23	
142-82-5	n-Heptane	19	
71-36-3	n-Butanol	1000	
79-01-6	Trichloroethene	21	
108-87-2	Methylcyclohexane	20	
78-87-5	1,2-Dichloropropane	21	
74-95-3	Dibromomethane	22	
123-91-1	1,4-Dioxane	630	
80-62-6	Methyl Methacrylate	18	
75-27-4	Bromodichloromethane	21	
79-46-9	2-Nitropropane	17	
110-75-8	2-Chloroethyl Vinyl Ether	19	
10061-01-5	cis-1,3-Dichloropropene	20	
108-10-1	4-Methyl-2-pentanone	91	
108-88-3	Toluene	24	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSW23

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSW23

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/18/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	20	
542-75-6	1,3-Dichloropropene (total)	40	
97-63-2	Ethyl Methacrylate	20	
79-00-5	1,1,2-Trichloroethane	24	
127-18-4	Tetrachloroethene	25	
142-28-9	1,3-Dichloropropane	22	
591-78-6	2-Hexanone	99	
124-48-1	Dibromochloromethane	23	
106-93-4	1,2-Dibromoethane	23	
108-90-7	Chlorobenzene	24	
630-20-6	1,1,1,2-Tetrachloroethane	23	
100-41-4	Ethylbenzene	23	
179601-23-1	m+p-Xylene	47	
95-47-6	o-Xylene	23	
1330-20-7	Xylene (Total)	70	
100-42-5	Styrene	23	
75-25-2	Bromoform	21	
98-82-8	Isopropylbenzene	23	
108-94-1	Cyclohexanone	520	
108-86-1	Bromobenzene	24	
79-34-5	1,1,2,2-Tetrachloroethane	23	
96-18-4	1,2,3-Trichloropropane	24	
110-57-6	trans-1,4-Dichloro-2-butene	75	
103-65-1	n-Propylbenzene	23	
95-49-8	2-Chlorotoluene	23	
106-43-4	4-Chlorotoluene	23	
108-67-8	1,3,5-Trimethylbenzene	22	
98-06-6	tert-Butylbenzene	22	
76-01-7	Pentachloroethane	22	
95-63-6	1,2,4-Trimethylbenzene	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSW23

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSW23

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/18/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
135-98-8	sec-Butylbenzene	21	
541-73-1	1,3-Dichlorobenzene	23	
99-87-6	p-Isopropyltoluene	21	
106-46-7	1,4-Dichlorobenzene	23	
526-73-8	1,2,3-Trimethylbenzene	21	
100-44-7	Benzyl Chloride	18	
141-93-5	1,3-Diethylbenzene	20	
105-05-5	1,4-Diethylbenzene	19	
95-50-1	1,2-Dichlorobenzene	23	
104-51-8	n-Butylbenzene	20	
135-01-3	1,2-Diethylbenzene	21	
25340-17-4	Diethylbenzene (total)	60	
96-12-8	1,2-Dibromo-3-chloropropane	20	
108-70-3	1,3,5-Trichlorobenzene	20	
120-82-1	1,2,4-Trichlorobenzene	20	
87-68-3	Hexachlorobutadiene	19	
91-20-3	Naphthalene	20	
87-61-6	1,2,3-Trichlorobenzene	20	
91-57-6	2-Methylnaphthalene	14	

Data file: /chem2/HP09137.i/19may18a.b/wy18s01.d Injection date and time: **18-MAY-2019 22:29**
Data file Sample Info. Line: LCSW23;LCSW23;1;3;LCS;;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.732	(0.006)	592	65	185223	(-2)	250.00	
66) Fluorobenzene	5.032	(0.000)	1309	96	1049302	(2)	50.00	
101) Chlorobenzene-d5	8.161	(0.000)	2284	117	796496	(2)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041	(0.000)	2870	152	447919	(1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.359	(0.001)	113	232125	47.750	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692	(0.000)	102	60342	46.673	93%		80 - 120
84) Toluene-d8	(3)	6.698	(0.000)	98	1024508	51.332	103%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.000)	95	372564	46.660	93%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	1.259	(-0.000)	85	122405	18.041	18.04			0.2	1
4) Chloromethane	(2)	1.390	(-0.001)	50	131544	15.570	15.57			0.2	1
5) 1,3-Butadiene	(2)	1.464	(0.004)	39	134278M	26.080	26.08			1	3
6) Vinyl Chloride	(2)	1.464	(-0.000)	62	129632	16.738	16.74			0.2	1
8) Bromomethane	(2)	1.692	(-0.000)	94	96074M	15.728	15.73			0.3	1
9) Chloroethane	(2)	1.766	(0.000)	64	80293	15.754	15.75			0.2	1
11) n-Pentane	(2)	1.965	(0.001)	43	110412	14.114	14.11			0.4	10
12) Trichlorofluoromethane	(2)	1.932	(-0.000)	101	151761	18.450	18.45			0.2	1
13) Ethanol	(1)	2.032	(-0.000)	45	32125M	380.291	380.29		J	280	750
15) Freon 123a	(2)	2.119	(-0.000)	67	114541M	18.634	18.63			0.4	5
16) Acrolein	(1)	2.215	(-0.000)	56	203467	152.584	152.58			2	100
17) 1,1-Dichloroethene	(2)	2.298	(0.001)	96	99685M	21.547	21.55			0.2	1
18) Acetone	(1)	2.340	(-0.002)	58	150531M	232.245	232.25			0.7	20
19) Freon 113	(2)	2.334	(0.001)	101	84299	20.750	20.75			0.2	10
21) 2-Propanol	(1)	2.456	(-0.004)	45	76314M	158.471	158.47			18	100
22) Methyl Iodide	(2)	2.475	(0.000)	142	178264M	20.107	20.11			0.2	1
23) Carbon Disulfide	(2)	2.507	(0.001)	76	241845	14.838	14.84			0.2	5
25) Allyl Chloride	(2)	2.603	(0.000)	41	149787	18.585	18.58			0.3	5
27) Methyl Acetate	(2)	2.619	(0.000)	43	128160	18.371	18.37			0.2	5
28) Methylene Chloride	(2)	2.709	(0.000)	84	110369	19.517	19.52			0.3	1
30) t-Butyl alcohol	(1)	2.812	(-0.002)	59	183621	213.752	213.75			12	50
31) Acrylonitrile	(2)	2.924	(0.001)	53	329808	89.865	89.87			0.3	20
32) trans-1,2-Dichloroethene	(2)	2.959	(0.000)	96	106977	21.312	21.31			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	2.963	(-0.000)	73	291896M	23.883	23.88			0.2	1
34) n-Hexane	(2)	3.213	(0.001)	57	128915	19.194	19.19			0.2	5
36) 1,1-Dichloroethane	(2)	3.341	(0.000)	63	186937	20.552	20.55			0.2	1
38) di-Isopropyl ether	(2)	3.415	(-0.000)	45	348753	19.958	19.96			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	3.431	(-0.000)	53	166663	21.156	21.16			0.2	5
40) Ethyl t-butyl ether	(2)	3.758	(0.000)	59	277001	21.747	21.75			0.2	1
42) cis-1,2-Dichloroethene	(2)	3.890	(0.000)	96	127328	22.592	22.59			0.2	1
43) 1,2-Dichloroethene (Total)	(2)			96	234305	43.904	43.90			0.2	2

M = Compound was manually integrated.

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43. Target 3.5 esignature user ID: sej02002

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may18a.b/wy18s01.d Injection date and time: **18-MAY-2019 22:29**
Data file Sample Info. Line: LCSW23;LCSW23;1;3;LCS;;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	3.906(0.000)	43	729335	138.323	138.32			0.3	10
45) 2,2-Dichloropropane	(2)	3.893(-0.000)	77	80613	19.734	19.73			0.3	1
47) Propionitrile	(1)	3.961(-0.001)	54	209125	195.875	195.87			14	100
48) Methacrylonitrile	(2)	4.111(0.000)	67	565031	143.190	143.19			6	50
49) Bromochloromethane	(2)	4.121(0.000)	128	61890	21.125	21.13			0.2	5
50) Tetrahydrofuran	(1)	4.169(-0.002)	71	132152	133.738	133.74			0.7	10
51) Chloroform	(2)	4.201(-0.000)	83	187903	22.018	22.02			0.2	1
53) 1,1,1-Trichloroethane	(2)	4.381(0.000)	97	140386	21.862	21.86			0.3	1
54) Cyclohexane	(2)	4.442(0.000)	56	148098	17.427	17.43			0.2	5
55) 1,1-Dichloropropene	(2)	4.548(-0.000)	75	143514	20.975	20.98			0.2	5
56) Carbon Tetrachloride	(2)	4.548(0.000)	117	113827	20.656	20.66			0.2	1
58) Isobutyl Alcohol	(1)	4.679(-0.003)	41	176096	562.293	562.29			36	250
60) Benzene	(2)	4.750(0.000)	78	466958	21.232	21.23			0.2	1
61) 1,2-Dichloroethane	(2)	4.769(-0.000)	62	154308	22.713	22.71			0.3	1
65) t-Amyl methyl ether	(2)	4.875(0.000)	73	300472	23.026	23.03			0.8	5
67) n-Heptane	(2)	5.032(0.001)	43	121659	18.953	18.95			0.2	5
69) n-Butanol	(1)	5.356(-0.004)	56	277598	998.326	998.33			61	250
71) Trichloroethene	(2)	5.405(0.000)	95	113492	21.309	21.31			0.2	1
73) Methylcyclohexane	(2)	5.604(0.001)	83	158337	20.478	20.48			0.2	5
74) 1,2-Dichloropropane	(2)	5.636(0.000)	63	117626	20.832	20.83			0.2	1
75) Dibromomethane	(2)	5.754(0.000)	93	76975	22.089	22.09			0.2	1
76) 1,4-Dioxane	(1)	5.790(-0.007)	88	52768M	634.789	634.79			29	250
77) Methyl Methacrylate	(2)	5.777(0.000)	69	111925	18.038	18.04			0.2	5
79) Bromodichloromethane	(2)	5.928(0.000)	83	133551	20.858	20.86			0.2	1
80) 2-Nitropropane	(2)	6.172(0.000)	41	35846	16.547	16.55			0.8	10
81) 2-Chloroethyl Vinyl Ether	(2)	6.265(0.000)	63	83042	19.291	19.29			0.2	10
82) cis-1,3-Dichloropropene	(2)	6.409(0.000)	75	173429	19.700	19.70			0.2	1
83) 4-Methyl-2-pentanone	(2)	6.586(0.000)	43	948076	91.217	91.22			0.5	10
89) Toluene	(3)	6.768(0.000)	92	305184	23.737	23.74			0.2	1
90) trans-1,3-Dichloropropene	(3)	7.019(-0.000)	75	156038	20.386	20.39			0.2	1
91) 1,3-Dichloropropene (total)	(3)		100	329467	40.087	40.09			0.2	5
92) Ethyl Methacrylate	(3)	7.137(0.000)	69	186320	19.810	19.81			0.2	5
93) 1,1,2-Trichloroethane	(3)	7.214(0.000)	97	120891	24.430	24.43			0.2	1
94) Tetrachloroethene	(3)	7.359(0.000)	166	127987	24.532	24.53			0.2	1
95) 1,3-Dichloropropane	(3)	7.388(0.000)	76	193133	22.470	22.47			0.2	1
97) 2-Hexanone	(3)	7.490(0.000)	43	742042	99.103	99.10			0.3	10
98) Dibromochloromethane	(3)	7.612(0.000)	129	111188	23.005	23.00			0.2	1
100) 1,2-Dibromoethane	(3)	7.718(0.000)	107	126964	23.353	23.35			0.2	1
103) Chlorobenzene	(3)	8.187(0.000)	112	337353	23.653	23.65			0.2	1
104) 1,1,1,2-Tetrachloroethane	(3)	8.267(0.000)	131	105671	23.054	23.05			0.2	1
105) Ethylbenzene	(3)	8.296(0.000)	91	559952	22.915	22.91			0.4	1
107) m+p-Xylene	(3)	8.402(0.000)	106	455044	46.836	46.84			1	5
108) o-Xylene	(3)	8.739(0.000)	106	218577	22.868	22.87			0.4	1
109) Xylene (Total)	(3)		106	673621	69.705	69.70			1	5
110) Styrene	(3)	8.752(0.000)	104	365013	22.765	22.76			0.2	5
111) Bromoform	(3)	8.896(0.000)	173	79455	21.123	21.12			0.2	4
112) Isopropylbenzene	(3)	9.047(0.000)	105	540716	23.022	23.02			0.2	5
113) Cyclohexanone	(1)	9.114(-0.007)	55	193408	515.788	515.79			25	100
116) Bromobenzene	(4)	9.278(0.000)	156	153402	23.777	23.78			0.2	5
117) 1,1,2,2-Tetrachloroethane	(4)	9.284(-0.000)	83	195987	22.527	22.53			0.2	1
118) 1,2,3-Trichloropropane	(4)	9.313(0.000)	110	63106	24.081	24.08			0.2	5
119) trans-1,4-Dichloro-2-butene	(4)	9.329(-0.000)	53	210559	75.471	75.47			6	50
120) n-Propylbenzene	(4)	9.371(0.000)	91	640815	22.532	22.53			0.2	5
121) 2-Chlorotoluene	(4)	9.435(-0.000)	126	136708	23.304	23.30			0.2	5

M = Compound was manually integrated.

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may18a.b/wy18s01.d Injection date and time: **18-MAY-2019 22:29**
Data file Sample Info. Line: LCSW23;LCSW23;1;3;LCS;;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
122) 4-Chlorotoluene	(4)	9.518(-0.000)	126	144449	23.002	23.00			0.2	5
123) 1,3,5-Trimethylbenzene	(4)	9.509(0.000)	105	460582	22.455	22.45			0.3	5
125) tert-Butylbenzene	(4)	9.759(-0.000)	134	102225	21.936	21.94			0.3	5
126) Pentachloroethane	(4)	9.766(0.000)	167	80695	21.905	21.90			0.2	5
127) 1,2,4-Trimethylbenzene	(4)	9.791(-0.000)	105	476442	22.043	22.04			1	5
128) sec-Butylbenzene	(4)	9.920(-0.000)	105	534870	21.244	21.24			0.2	5
130) 1,3-Dichlorobenzene	(4)	9.993(-0.000)	146	282658	22.976	22.98			0.2	5
131) p-Isopropyltoluene	(4)	10.022(0.000)	119	474445	21.287	21.29			0.2	5
134) 1,4-Dichlorobenzene	(4)	10.058(0.000)	146	297886	23.356	23.36			0.2	5
135) 1,2,3-Trimethylbenzene	(4)	10.099(-0.000)	105	495935	21.325	21.33			0.3	5
136) Benzyl Chloride	(4)	10.157(0.000)	91	327217	18.330	18.33			0.3	5
137) 1,3-Diethylbenzene	(4)	10.240(0.000)	119	280737	20.047	20.05			0.2	5
138) 1,4-Diethylbenzene	(4)	10.298(0.000)	119	291396	19.421	19.42			0.2	5
139) 1,2-Dichlorobenzene	(4)	10.324(0.000)	146	284707	23.326	23.33			0.2	5
140) n-Butylbenzene	(4)	10.317(0.000)	92	221191	19.663	19.66			0.2	5
141) 1,2-Diethylbenzene	(4)	10.382(-0.000)	119	248487	21.017	21.02			0.2	5
142) Diethylbenzene (total)	(4)		100	820620	60.484	60.48			0.2	5
143) 1,2-Dibromo-3-chloropropane	(4)	10.866(-0.000)	75	40024	20.242	20.24			0.3	5
145) 1,3,5-Trichlorobenzene	(4)	11.007(0.000)	180	189511	20.248	20.25			0.2	5
147) 1,2,4-Trichlorobenzene	(4)	11.418(0.000)	180	178556	19.871	19.87			0.3	5
148) Hexachlorobutadiene	(4)	11.527(0.000)	225	61764	19.299	19.30			0.7	5
149) Naphthalene	(4)	11.582(0.000)	128	604155	19.871	19.87			1	5
150) 1,2,3-Trichlorobenzene	(4)	11.739(0.000)	180	177733	20.265	20.26			0.4	5
151) 2-Methylnaphthalene	(4)	12.307(-0.000)	142	234395	13.513	13.51			0.7	5

Total number of targets = 109

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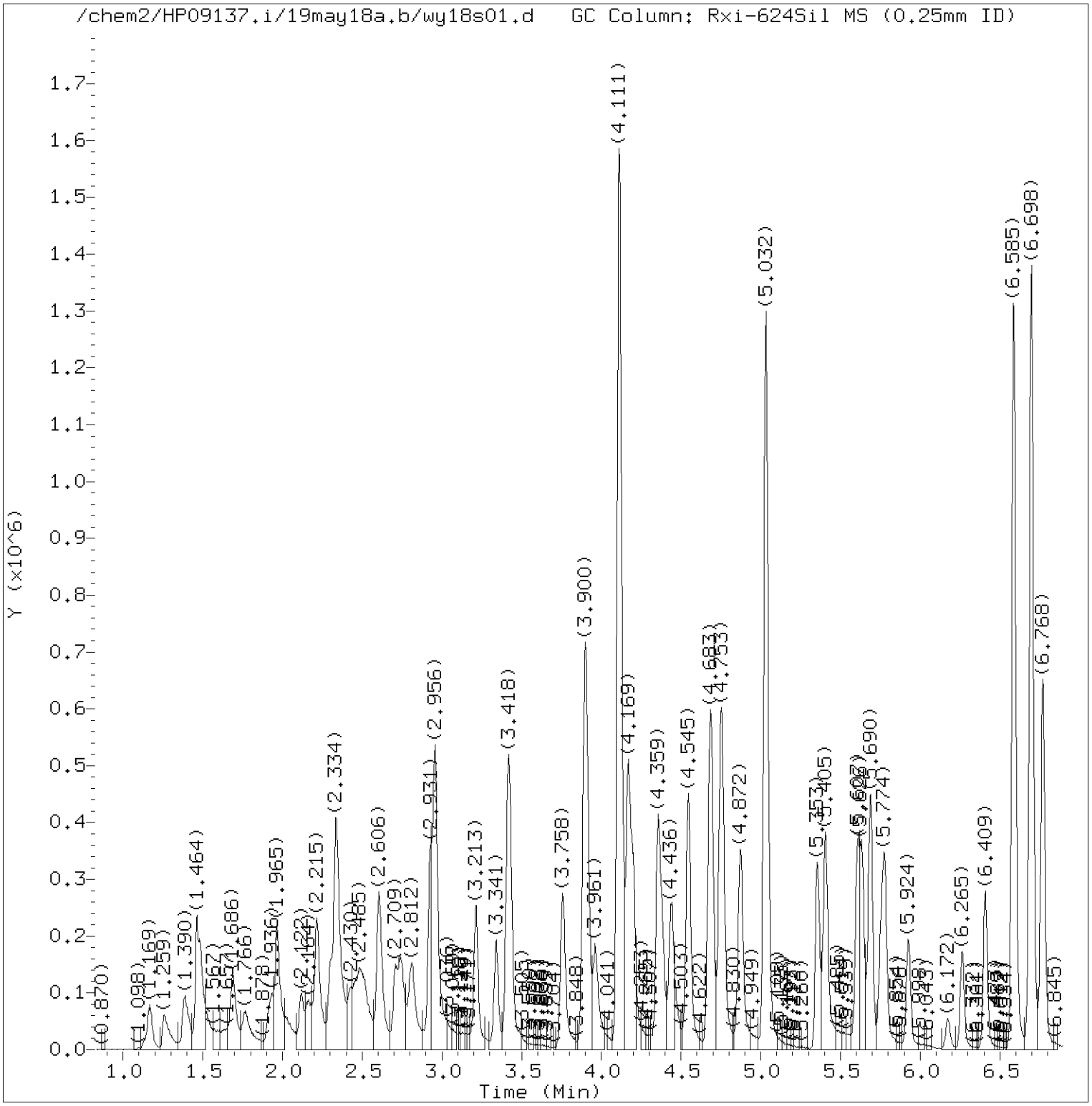
Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

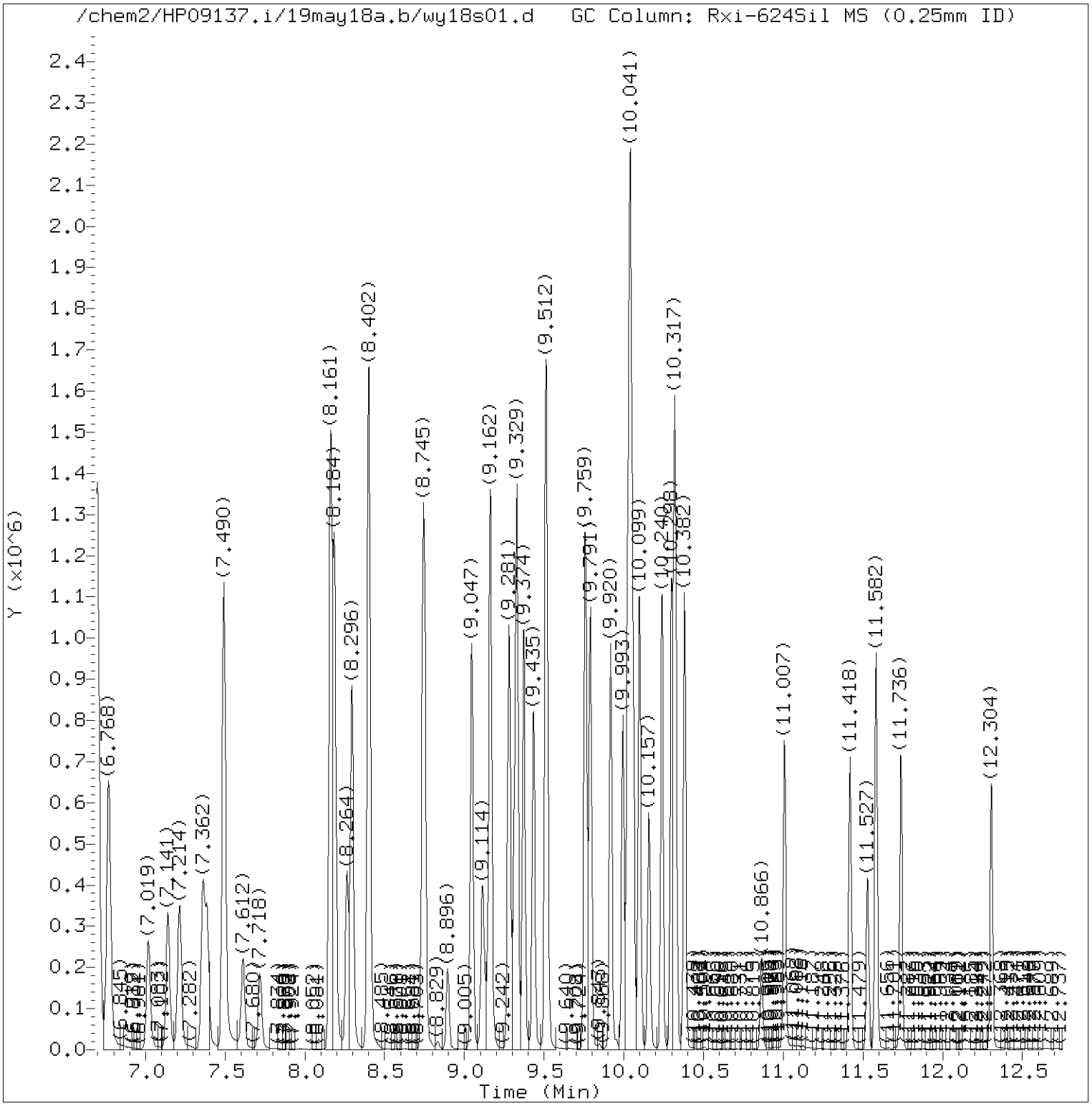
Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.259	85	122405	18.041
4) Chloromethane	(2)	1.390	50	131544	15.570
5) 1,3-Butadiene	(2)	1.464	39	134278M	26.080
6) Vinyl Chloride	(2)	1.464	62	129632	16.738
8) Bromomethane	(2)	1.692	94	96074M	15.728
9) Chloroethane	(2)	1.766	64	80293	15.754
12) Trichlorofluoromethane	(2)	1.933	101	151761	18.450
11) n-Pentane	(2)	1.965	43	110412	14.114
13) Ethanol	(1)	2.032	45	32125M	380.291
15) Freon 123a	(2)	2.119	67	114541M	18.634
16) Acrolein	(1)	2.215	56	203467	152.584
17) 1,1-Dichloroethene	(2)	2.298	96	99685M	21.547
19) Freon 113	(2)	2.334	101	84299	20.750
18) Acetone	(1)	2.340	58	150531M	232.245
21) 2-Propanol	(1)	2.456	45	76314M	158.471
22) Methyl Iodide	(2)	2.475	142	178264M	20.107
23) Carbon Disulfide	(2)	2.507	76	241845	14.838
25) Allyl Chloride	(2)	2.603	41	149787	18.585
27) Methyl Acetate	(2)	2.619	43	128160	18.371
28) Methylene Chloride	(2)	2.709	84	110369	19.517
29)*t-Butyl alcohol-d10	(1)	2.732	65	185223	250.000
30) t-Butyl alcohol	(1)	2.812	59	183621	213.752
31) Acrylonitrile	(2)	2.924	53	329808	89.865
32) trans-1,2-Dichloroethene	(2)	2.959	96	106977	21.312
33) Methyl Tertiary Butyl Ether	(2)	2.963	73	291896M	23.883
34) n-Hexane	(2)	3.213	57	128915	19.194
36) 1,1-Dichloroethane	(2)	3.341	63	186937	20.552
38) di-Isopropyl ether	(2)	3.415	45	348753	19.958
39) 2-Chloro-1,3-butadiene	(2)	3.431	53	166663	21.156
40) Ethyl t-butyl ether	(2)	3.758	59	277001	21.747
42) cis-1,2-Dichloroethene	(2)	3.890	96	127328	22.592
45) 2,2-Dichloropropane	(2)	3.893	77	80613	19.734
44) 2-Butanone	(2)	3.906	43	729335	138.323
47) Propionitrile	(1)	3.961	54	209125	195.875
48) Methacrylonitrile	(2)	4.111	67	565031	143.190
49) Bromochloromethane	(2)	4.121	128	61890	21.125
50) Tetrahydrofuran	(1)	4.169	71	132152	133.738
51) Chloroform	(2)	4.201	83	187903	22.018

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
52)$Dibromofluoromethane	(2)	4.359	113	232125	47.750
53) 1,1,1-Trichloroethane	(2)	4.381	97	140386	21.862
54) Cyclohexane	(2)	4.442	56	148098	17.427
55) 1,1-Dichloropropene	(2)	4.548	75	143514	20.975
56) Carbon Tetrachloride	(2)	4.548	117	113827	20.656
58) Isobutyl Alcohol	(1)	4.679	41	176096	562.293
57)$1,2-Dichloroethane-d4	(2)	4.692	102	60342	46.673
60) Benzene	(2)	4.750	78	466958	21.232
61) 1,2-Dichloroethane	(2)	4.769	62	154308	22.713
65) t-Amyl methyl ether	(2)	4.875	73	300472	23.026
67) n-Heptane	(2)	5.032	43	121659	18.953
66)*Fluorobenzene	(2)	5.032	96	1049302	50.000
69) n-Butanol	(1)	5.356	56	277598	998.326
71) Trichloroethene	(2)	5.405	95	113492	21.309
73) Methylcyclohexane	(2)	5.604	83	158337	20.478
74) 1,2-Dichloropropane	(2)	5.636	63	117626	20.832
75) Dibromomethane	(2)	5.754	93	76975	22.089
77) Methyl Methacrylate	(2)	5.777	69	111925	18.038
76) 1,4-Dioxane	(1)	5.790	88	52768M	634.789
79) Bromodichloromethane	(2)	5.928	83	133551	20.858
43) 1,2-Dichloroethene (Total)	(2)		96	234305	43.904
80) 2-Nitropropane	(2)	6.172	41	35846	16.547
81) 2-Chloroethyl Vinyl Ether	(2)	6.265	63	83042	19.291
82) cis-1,3-Dichloropropene	(2)	6.409	75	173429	19.700
83) 4-Methyl-2-pentanone	(2)	6.585	43	948076	91.217
84)$Toluene-d8	(3)	6.698	98	1024508	51.332
89) Toluene	(3)	6.768	92	305184	23.737
90) trans-1,3-Dichloropropene	(3)	7.019	75	156038	20.386
92) Ethyl Methacrylate	(3)	7.137	69	186320	19.810
93) 1,1,2-Trichloroethane	(3)	7.214	97	120891	24.430
94) Tetrachloroethene	(3)	7.359	166	127987	24.532
95) 1,3-Dichloropropane	(3)	7.388	76	193133	22.470
97) 2-Hexanone	(3)	7.490	43	742042	99.103
98) Dibromochloromethane	(3)	7.612	129	111188	23.005
100) 1,2-Dibromoethane	(3)	7.718	107	126964	23.353
101)*Chlorobenzene-d5	(3)	8.161	117	796496	50.000
103) Chlorobenzene	(3)	8.187	112	337353	23.653
104) 1,1,1,2-Tetrachloroethane	(3)	8.267	131	105671	23.054

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
105) Ethylbenzene	(3)	8.296	91	559952	22.915
107) m+p-Xylene	(3)	8.402	106	455044	46.836
108) o-Xylene	(3)	8.739	106	218577	22.868
110) Styrene	(3)	8.752	104	365013	22.765
111) Bromoform	(3)	8.896	173	79455	21.123
112) Isopropylbenzene	(3)	9.047	105	540716	23.022
113) Cyclohexanone	(1)	9.114	55	193408	515.788
115)$4-Bromofluorobenzene	(3)	9.162	95	372564	46.660
116) Bromobenzene	(4)	9.278	156	153402	23.777
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	195987	22.527
118) 1,2,3-Trichloropropane	(4)	9.313	110	63106	24.081
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	210559	75.471
120) n-Propylbenzene	(4)	9.371	91	640815	22.532
121) 2-Chlorotoluene	(4)	9.435	126	136708	23.304
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	460582	22.455
122) 4-Chlorotoluene	(4)	9.518	126	144449	23.002
125) tert-Butylbenzene	(4)	9.759	134	102225	21.936
126) Pentachloroethane	(4)	9.766	167	80695	21.905
127) 1,2,4-Trimethylbenzene	(4)	9.791	105	476442	22.043
128) sec-Butylbenzene	(4)	9.920	105	534870	21.244
130) 1,3-Dichlorobenzene	(4)	9.993	146	282658	22.976
131) p-Isopropyltoluene	(4)	10.022	119	474445	21.287
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	447919	50.000
134) 1,4-Dichlorobenzene	(4)	10.058	146	297886	23.356
91) 1,3-Dichloropropene (total)	(3)		100	329467	40.087
135) 1,2,3-Trimethylbenzene	(4)	10.099	105	495935	21.325
136) Benzyl Chloride	(4)	10.157	91	327217	18.330
137) 1,3-Diethylbenzene	(4)	10.240	119	280737	20.047
138) 1,4-Diethylbenzene	(4)	10.298	119	291396	19.421
140) n-Butylbenzene	(4)	10.317	92	221191	19.663
139) 1,2-Dichlorobenzene	(4)	10.324	146	284707	23.326
141) 1,2-Diethylbenzene	(4)	10.382	119	248487	21.017
143) 1,2-Dibromo-3-chloropropane	(4)	10.866	75	40024	20.242
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	189511	20.248
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	178556	19.871
148) Hexachlorobutadiene	(4)	11.527	225	61764	19.299
149) Naphthalene	(4)	11.582	128	604155	19.871
150) 1,2,3-Trichlorobenzene	(4)	11.739	180	177733	20.265

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
109) Xylene (Total)	(3)		106	673621	69.705
151) 2-Methylnaphthalene	(4)	12.307	142	234395	13.513
142) Diethylbenzene (total)	(4)		100	820620	60.484

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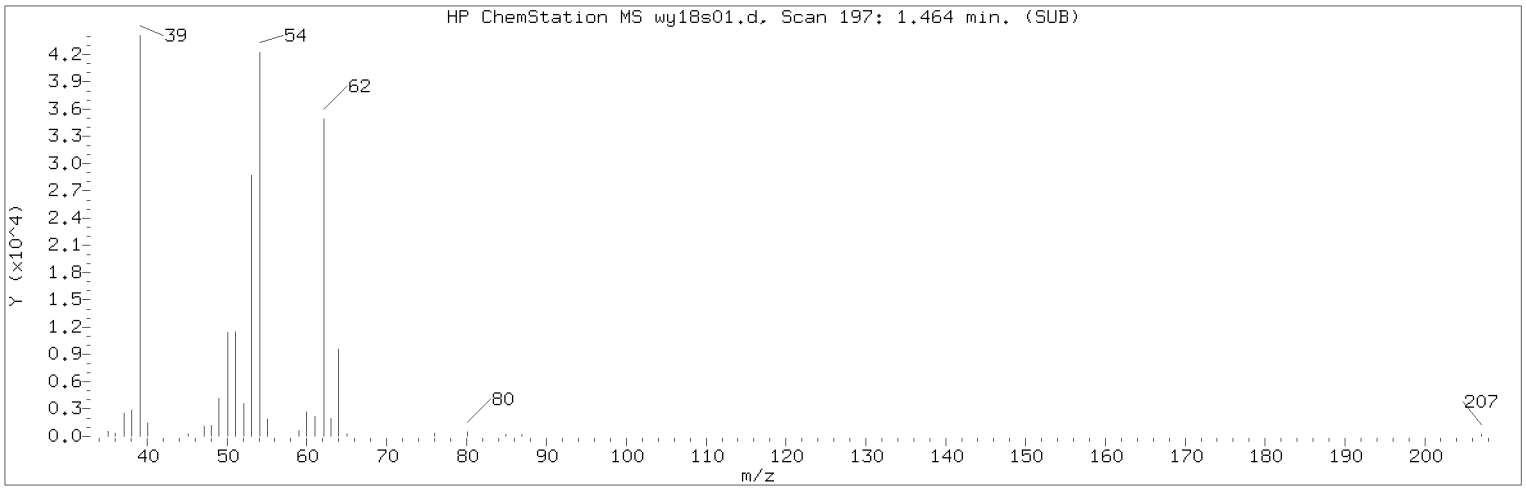
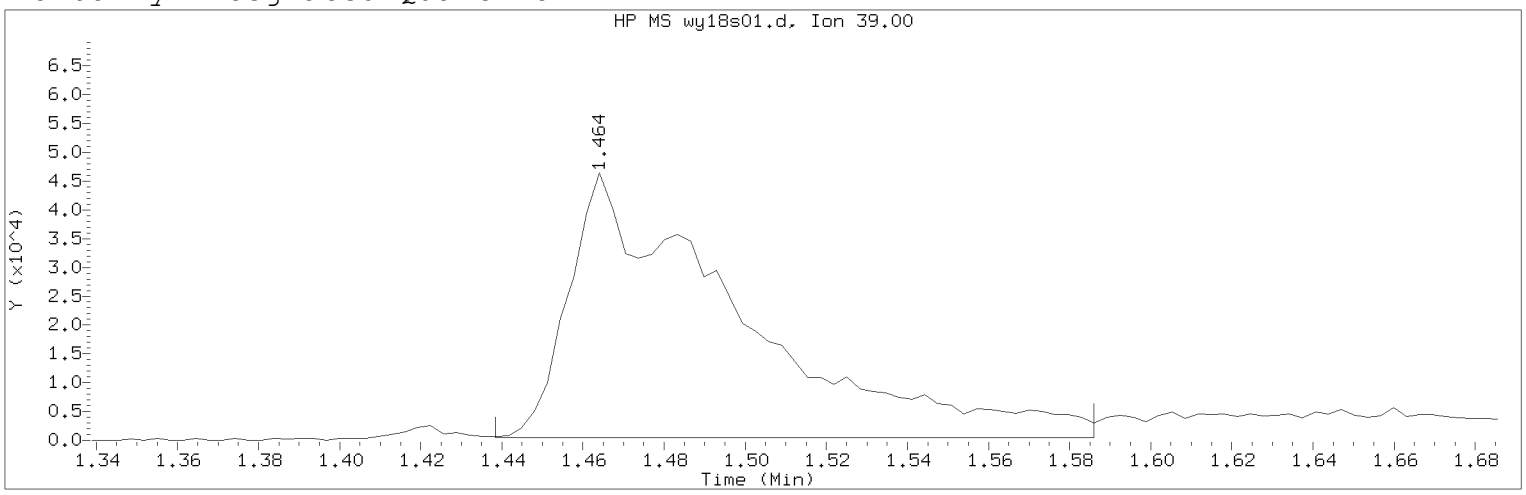
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

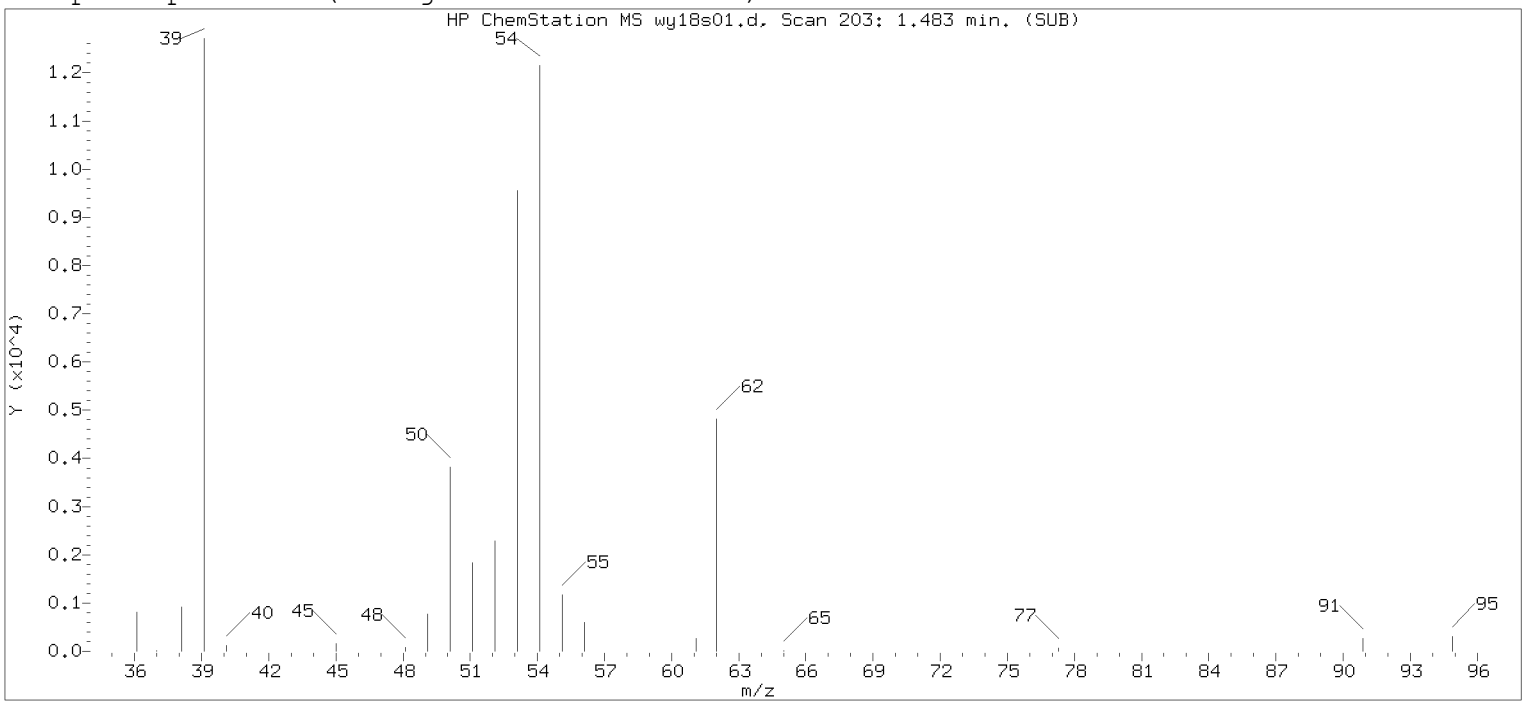
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 197
Retention Time (minutes): 1.464
Quant Ion : 39.00
Area (flag) : 134278M
On-Column Amount (ng) : 26.0797
Integration start scan : 188 Integration stop scan: 234
Y at integration start : 473 Y at integration end: 473

Reason for manual integration: improper integration

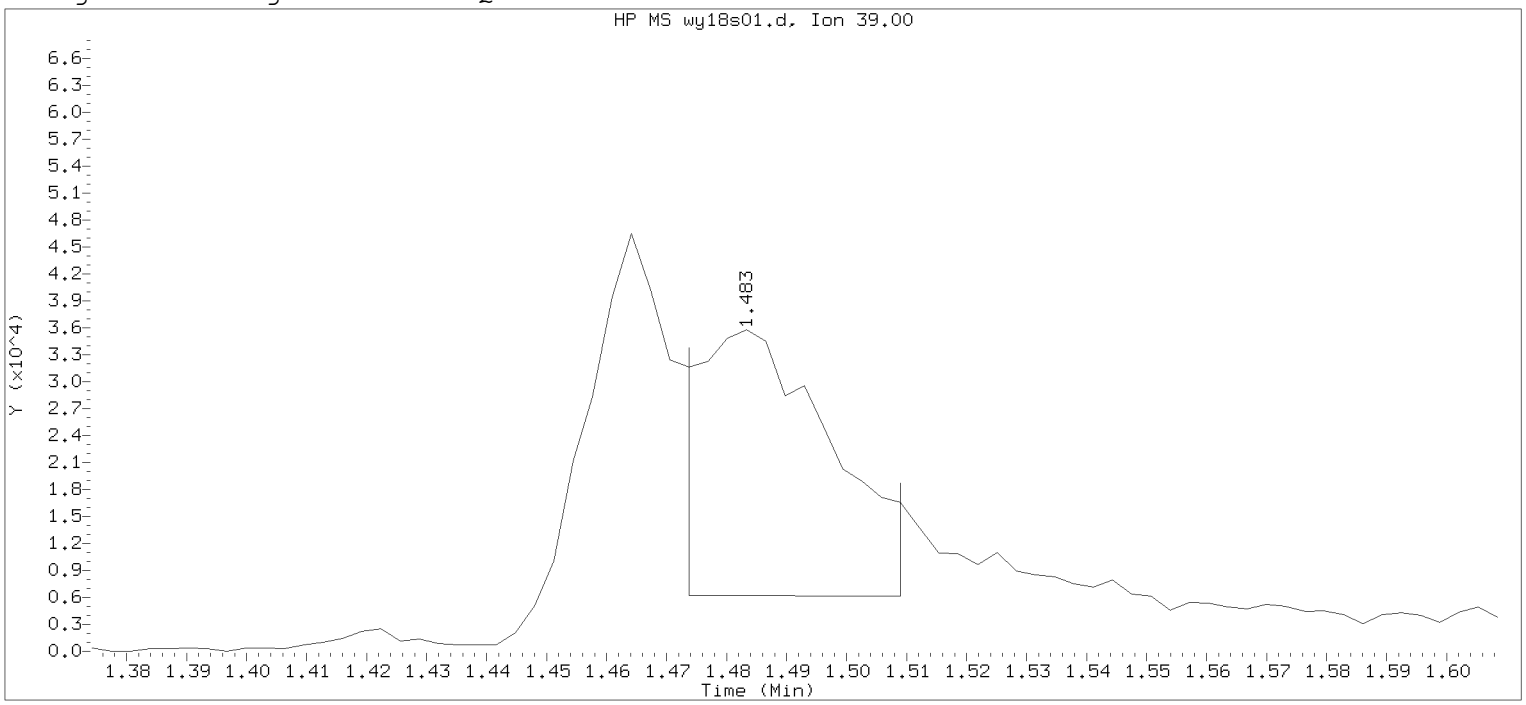
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 203
Retention Time (minutes): 1.483
Quant Ion : 39.00
Area : 44904
On-column Amount (ng) : 8.7215
Integration start scan : 199 Integration stop scan: 210
Y at integration start : 6187 Y at integration end: 6121

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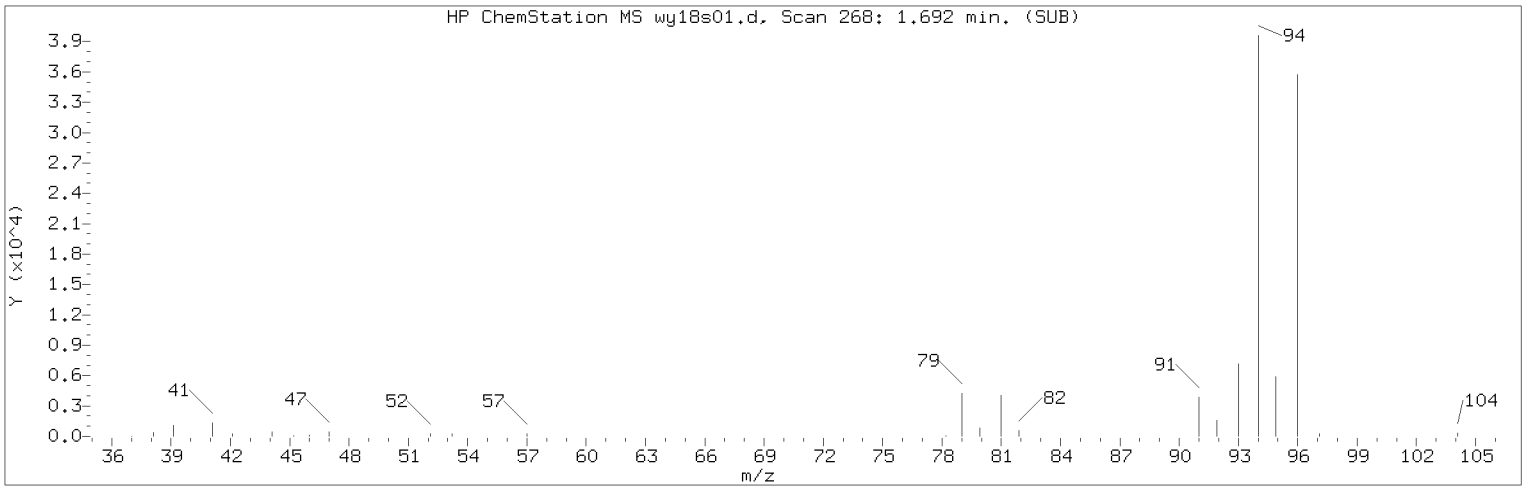
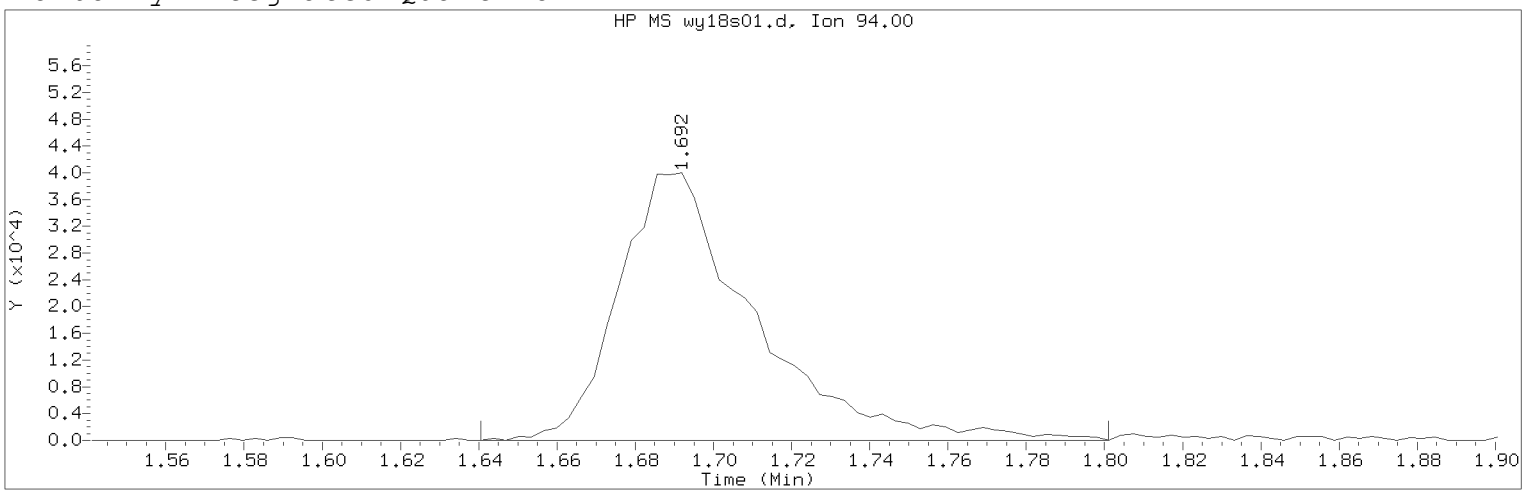
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

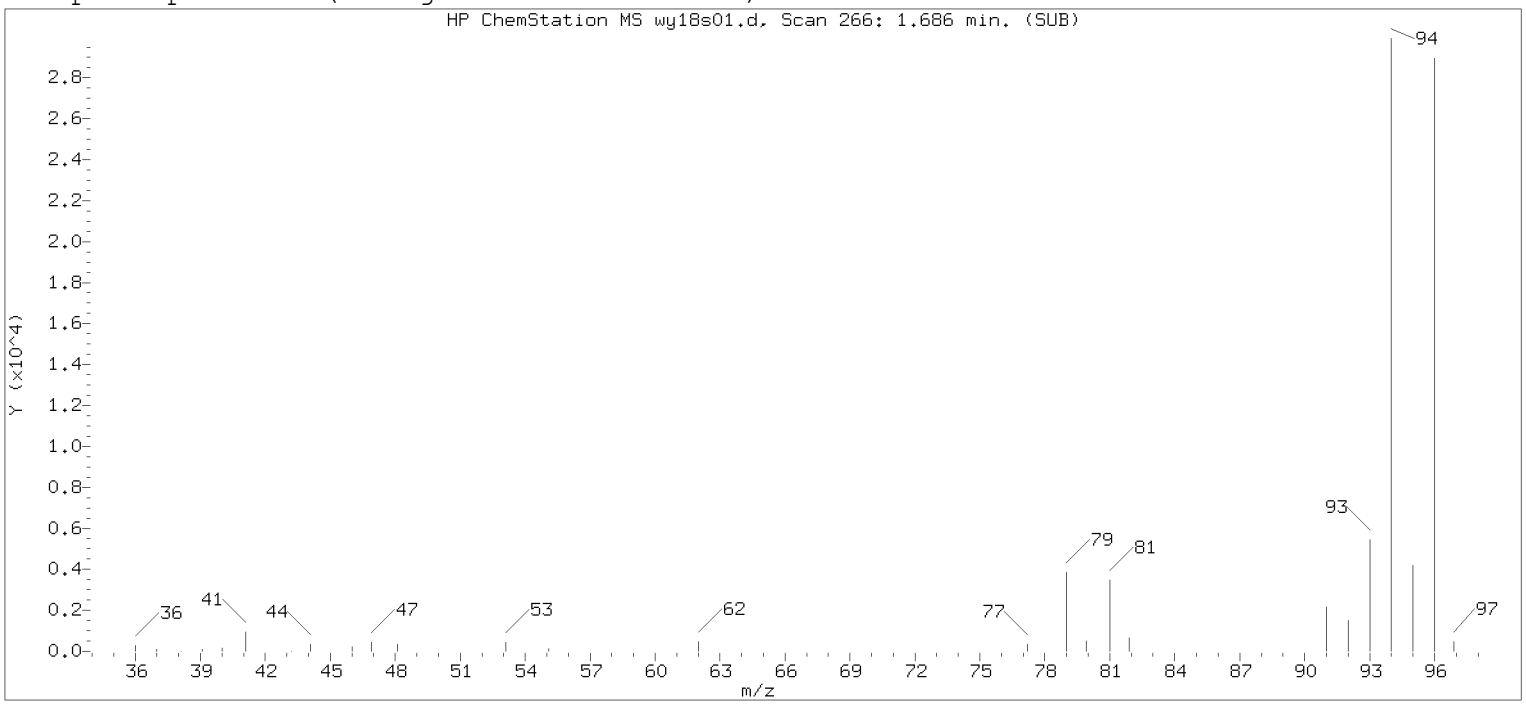
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 268
Retention Time (minutes): 1.692
Quant Ion : 94.00
Area (flag) : 96074M
On-Column Amount (ng) : 15.7285
Integration start scan : 251 Integration stop scan: 301
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

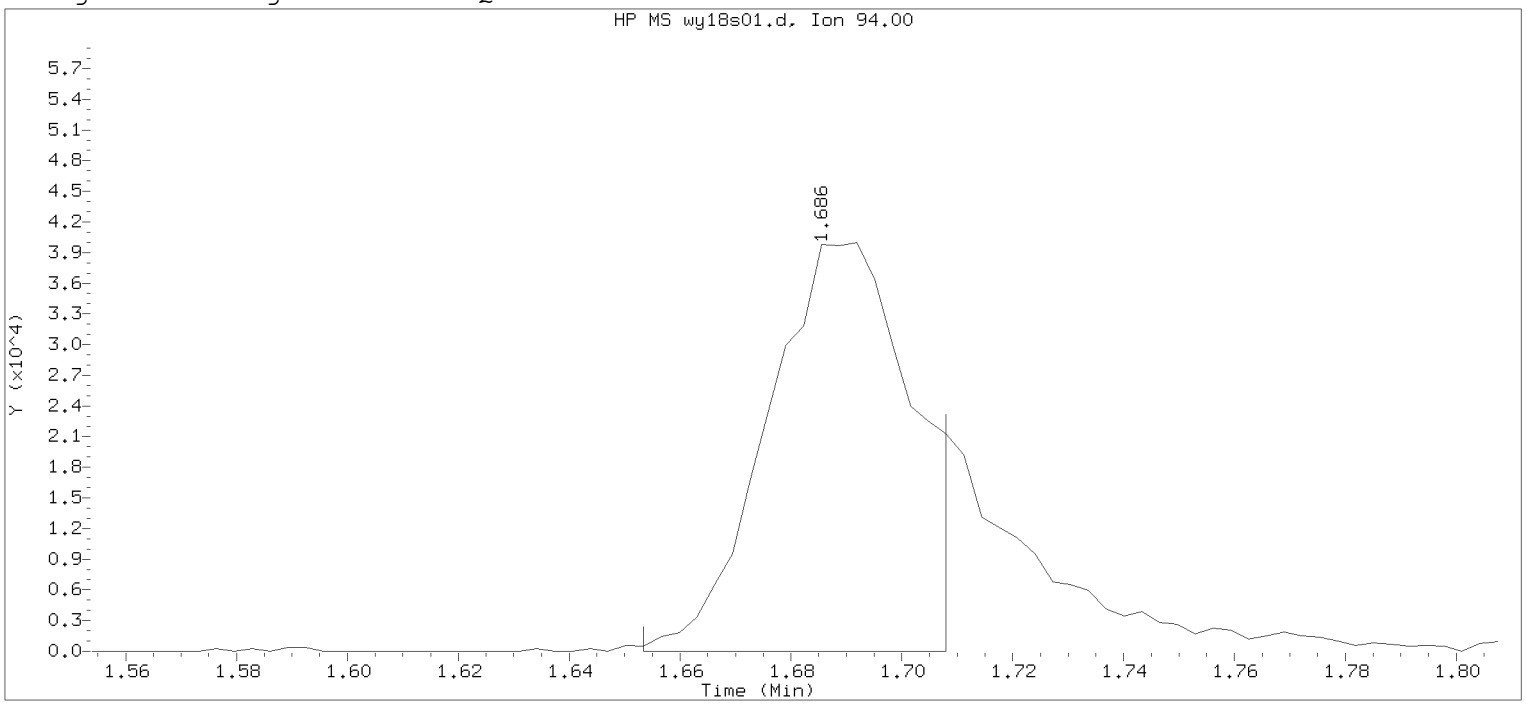
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compound Number : 8
Compound Name : Bromomethane
Scan Number : 266
Retention Time (minutes): 1.686
Quant Ion : 94.00
Area : 70808
On-column Amount (ng) : 11.5922
Integration start scan : 255 Integration stop scan: 272
Y at integration start : 0 Y at integration end: 0

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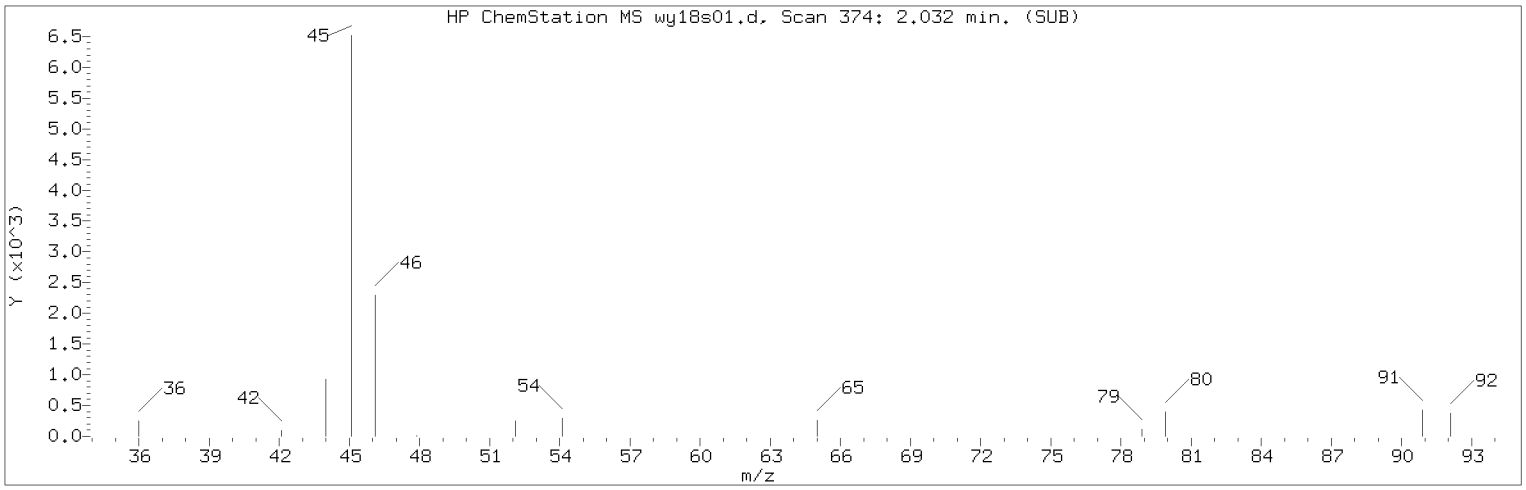
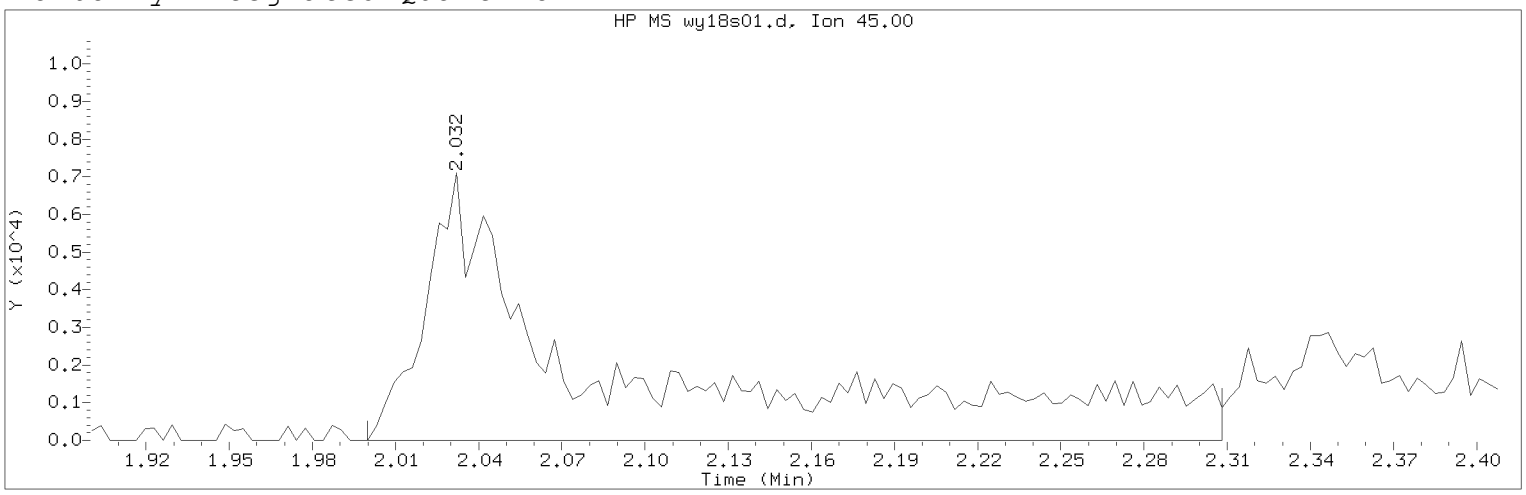
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

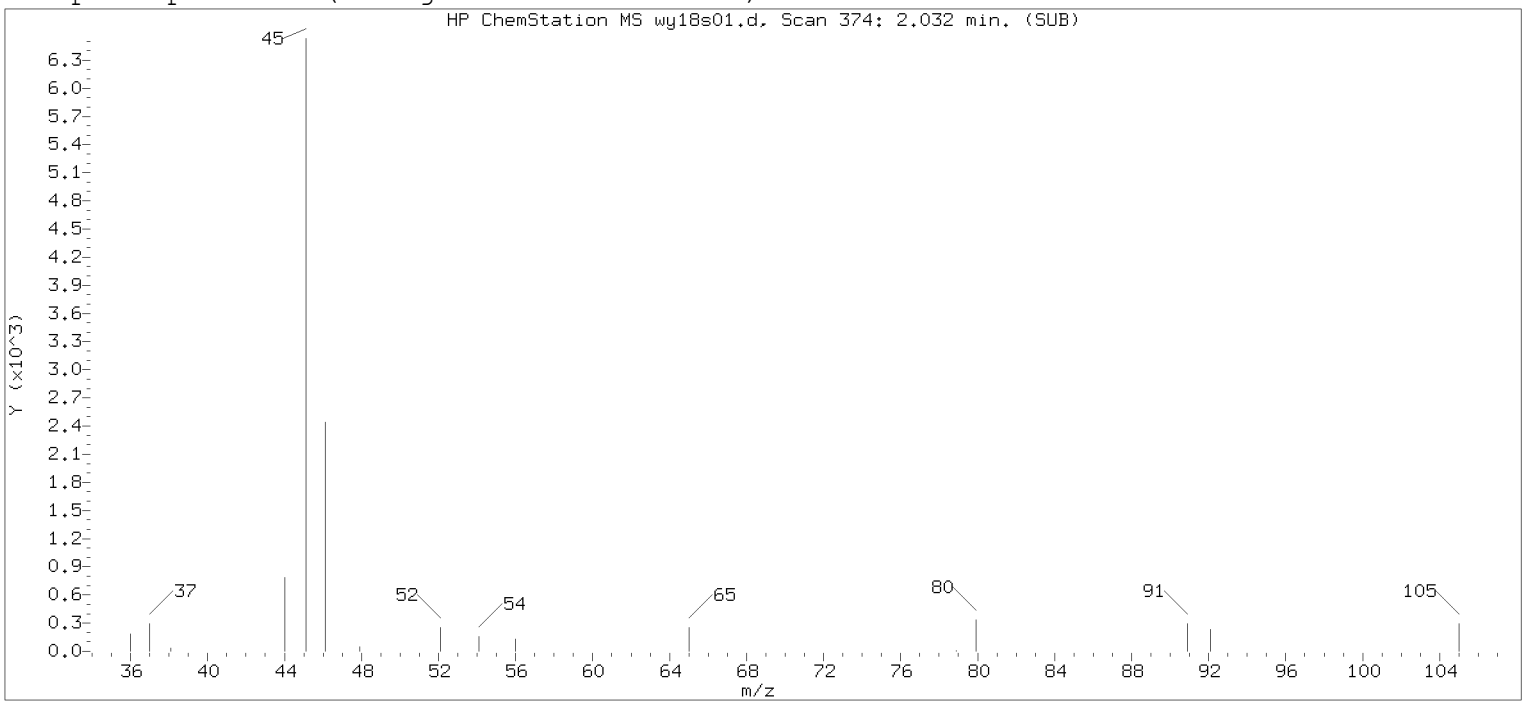
Compound Number : 13
Compound Name : Ethanol
Scan Number : 374
Retention Time (minutes): 2.032
Quant Ion : 45.00
Area (flag) : 32125M
On-Column Amount (ng) : 380.2913
Integration start scan : 363 Integration stop scan: 459
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

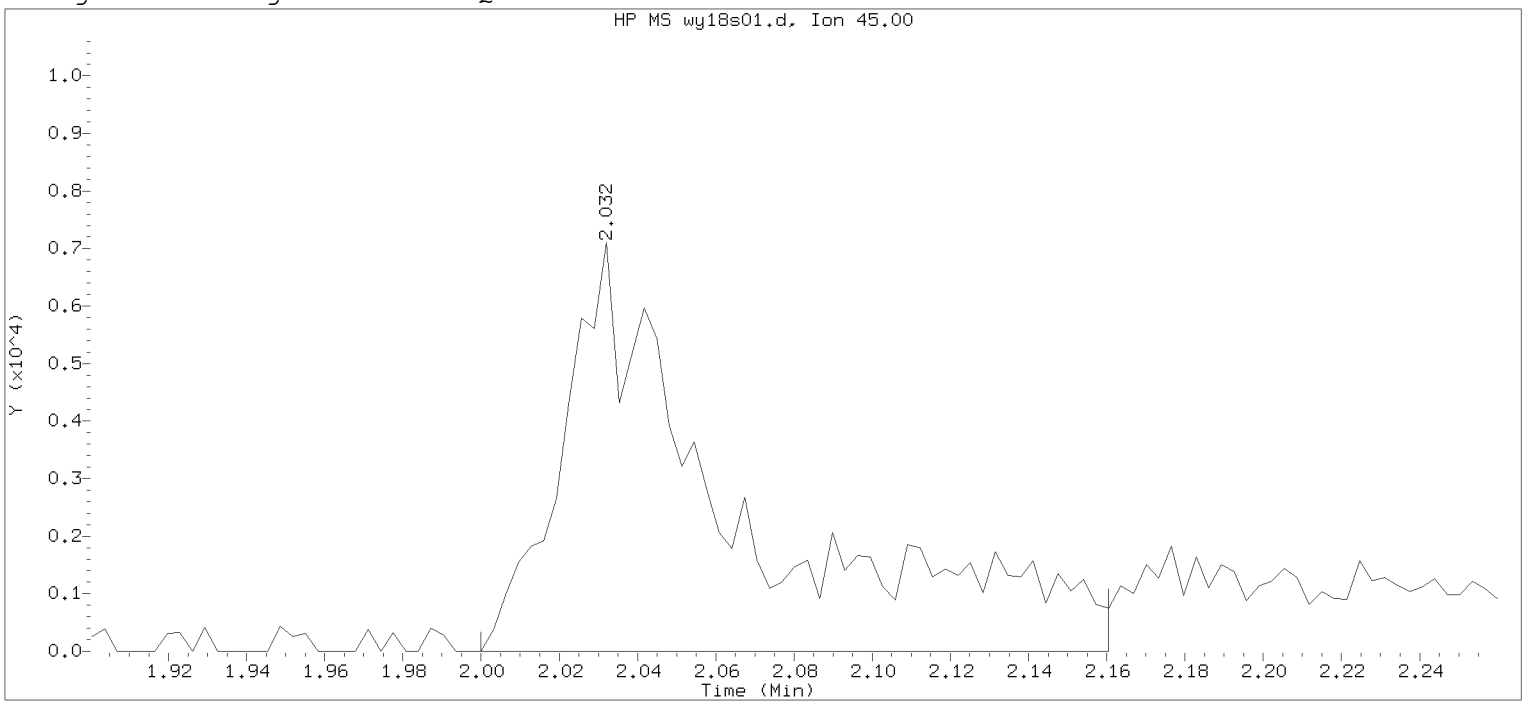
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

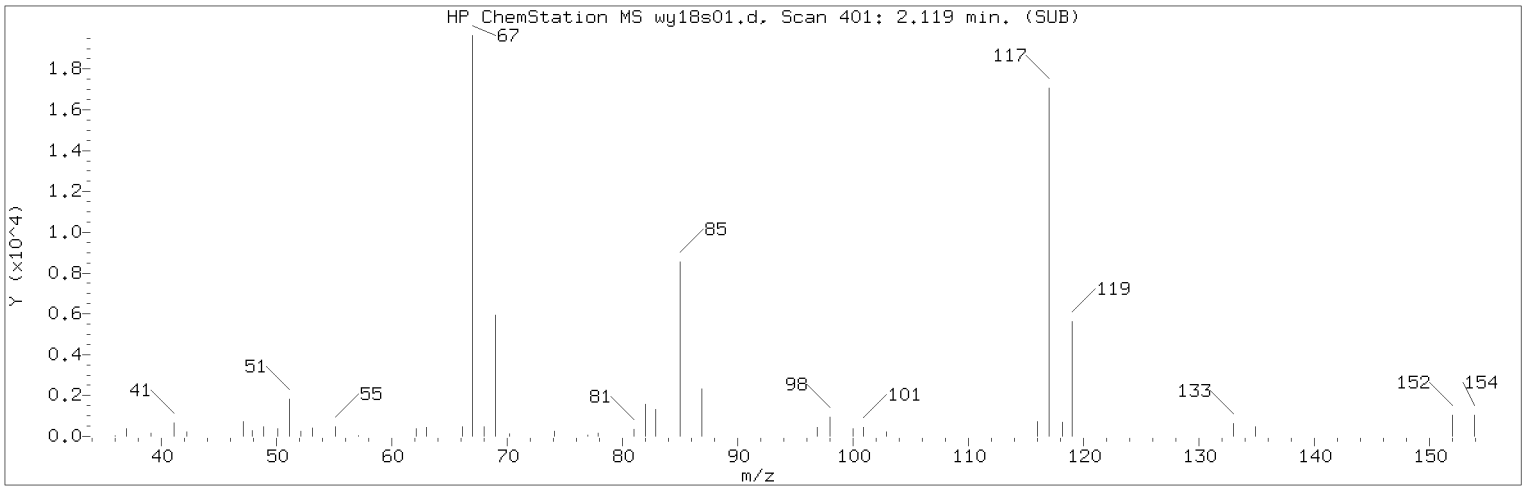
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

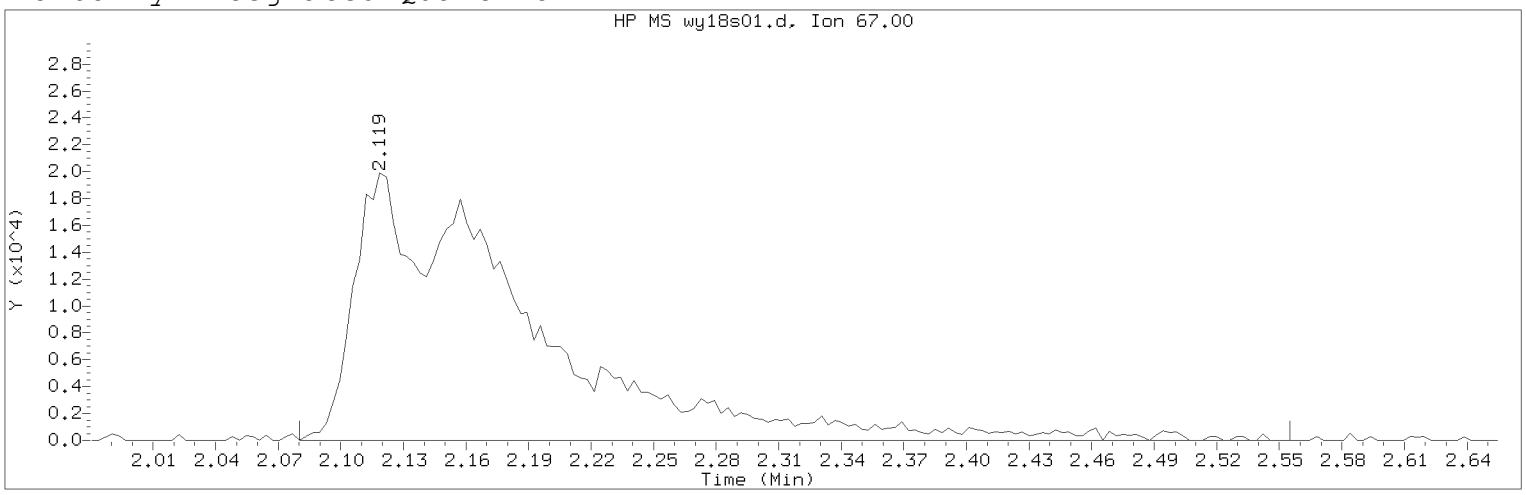
Compound Number : 13
Compound Name : Ethanol
Scan Number : 374
Retention Time (minutes): 2.032
Quant Ion : 45.00
Area : 21467
On-column Amount (ng) : 254.1253
Integration start scan : 363 Integration stop scan: 413
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

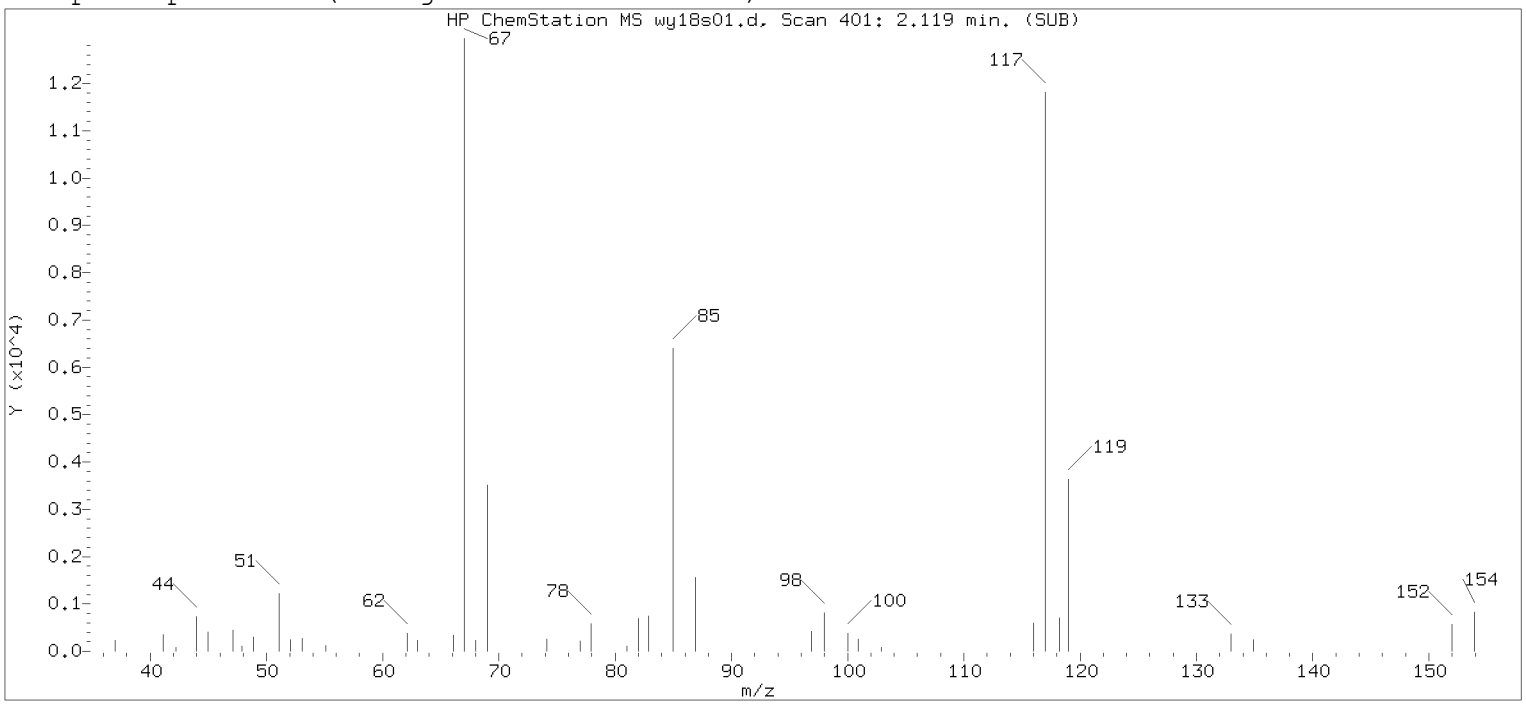
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 401
Retention Time (minutes): 2.119
Quant Ion : 67.00
Area (flag) : 114541M
On-Column Amount (ng) : 18.6344
Integration start scan : 388 Integration stop scan: 536
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

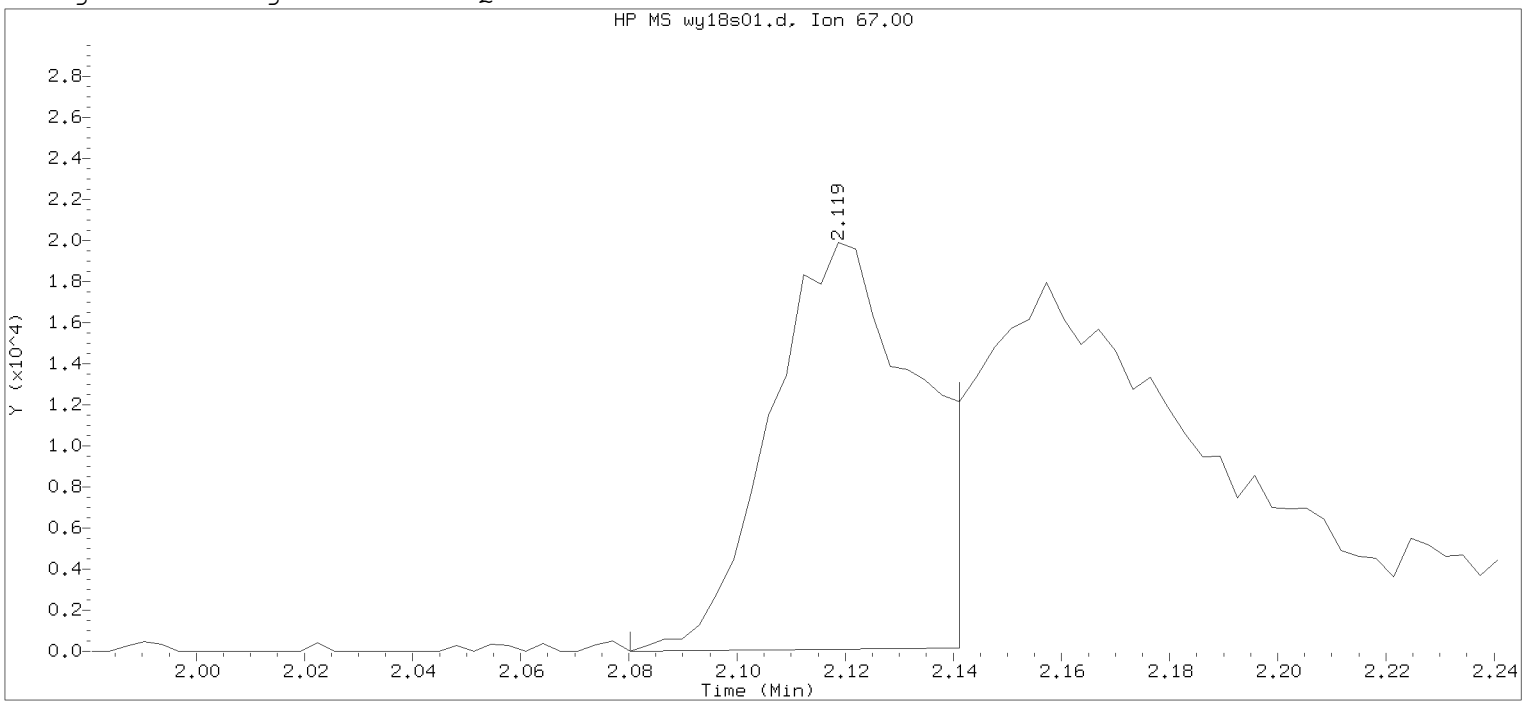
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

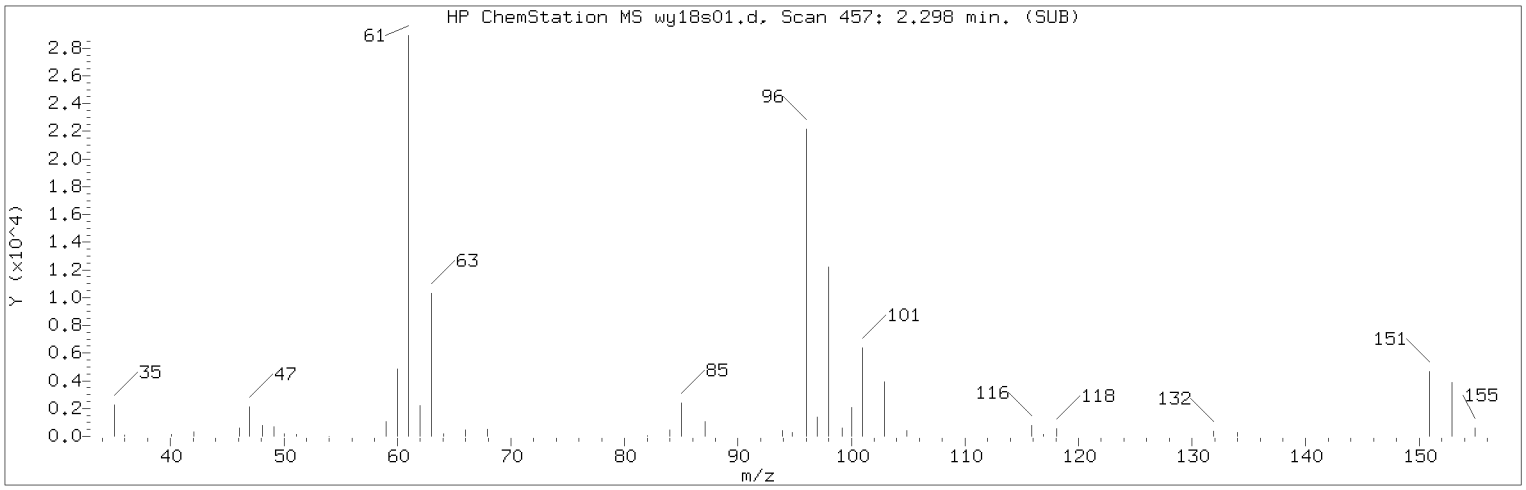
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

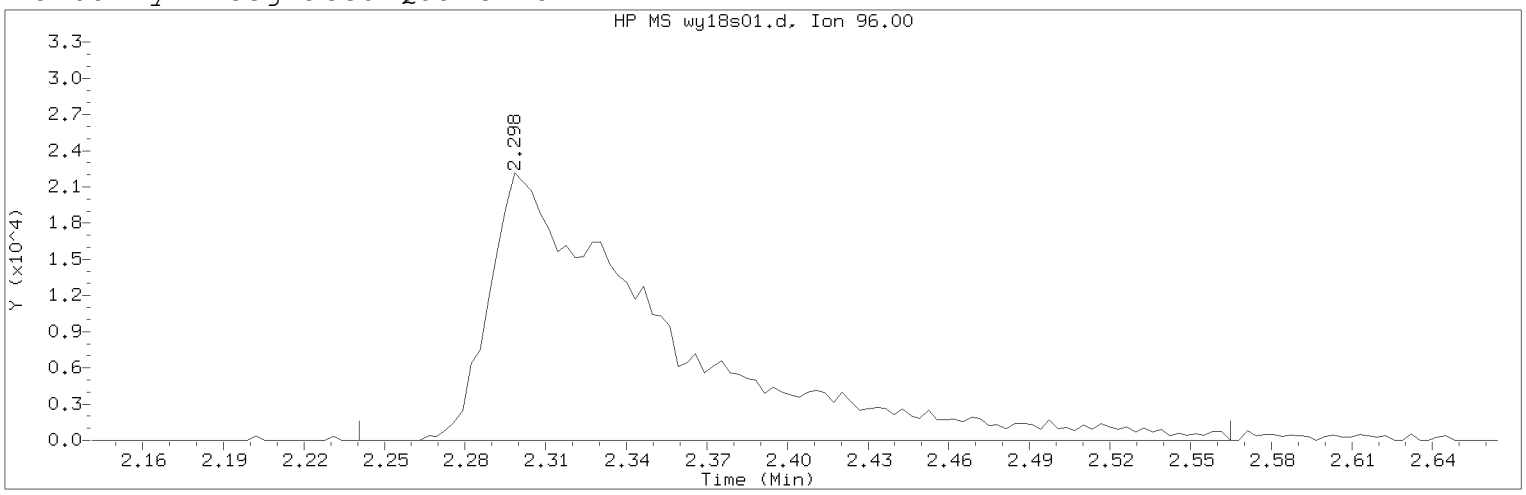
Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 401		
Retention Time (minutes)	: 2.119		
Quant Ion	: 67.00		
Area	: 37059		
On-column Amount (ng)	: 6.0292		
Integration start scan	: 388	Integration stop scan:	407
Y at integration start	: 0	Y at integration end:	164

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user assigned

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

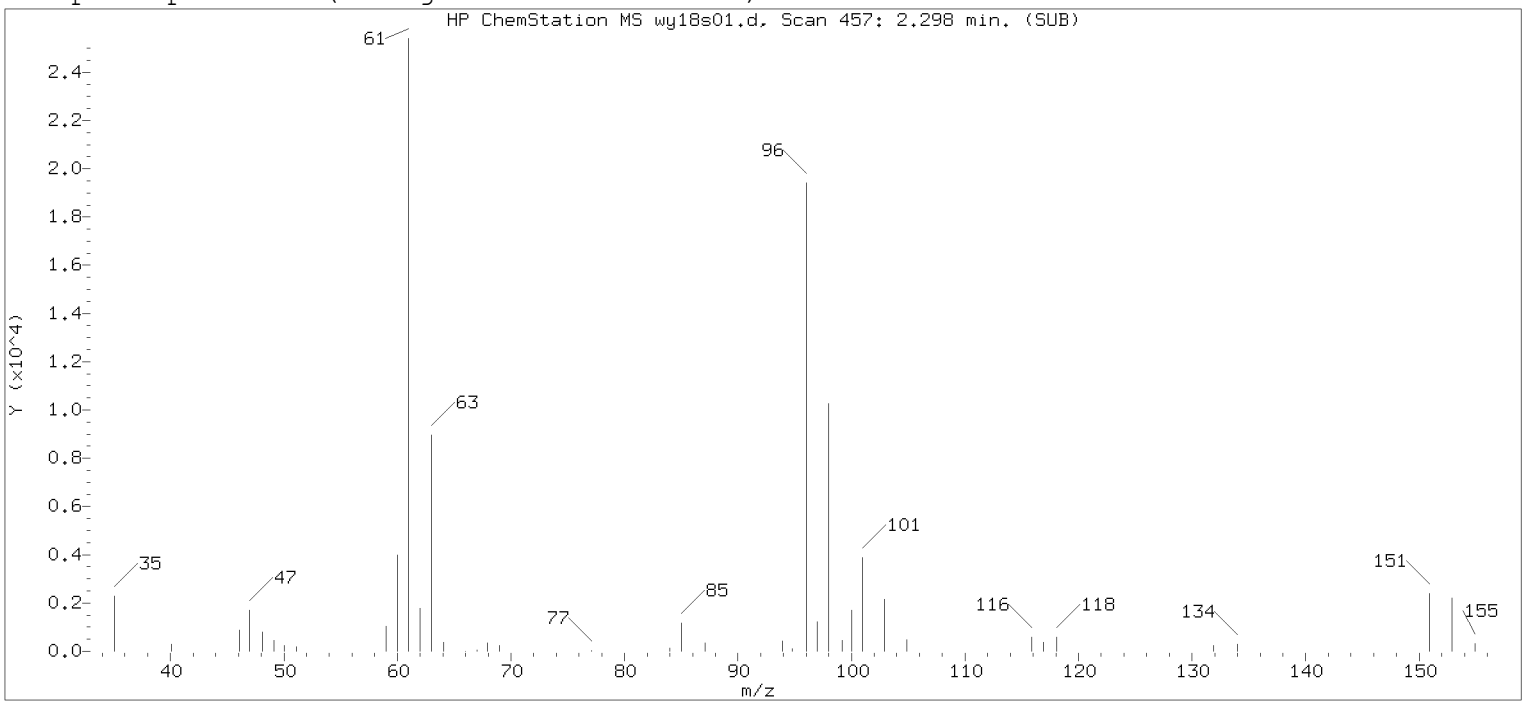
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 457
Retention Time (minutes): 2.298
Quant Ion : 96.00
Area (flag) : 99685M
On-Column Amount (ng) : 21.5470
Integration start scan : 438 Integration stop scan: 539
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

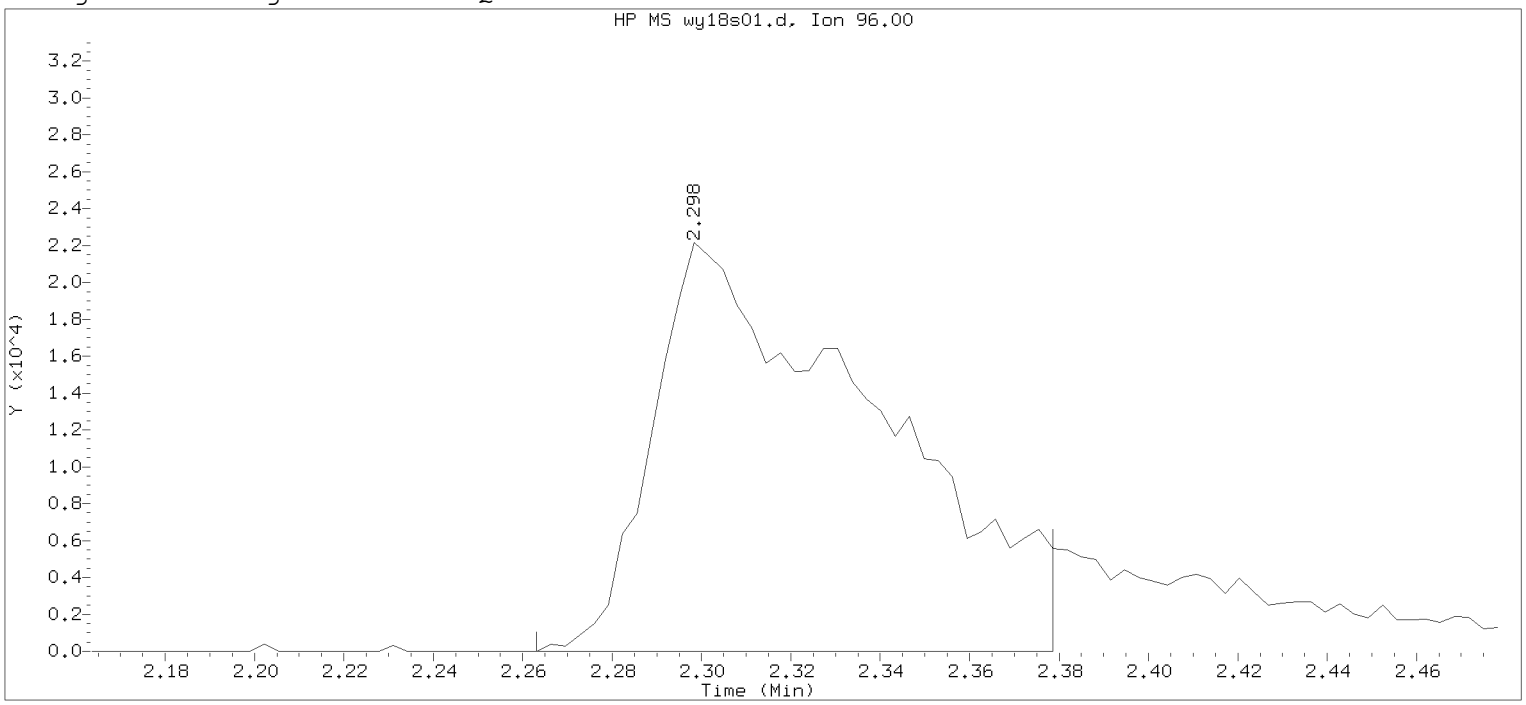
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

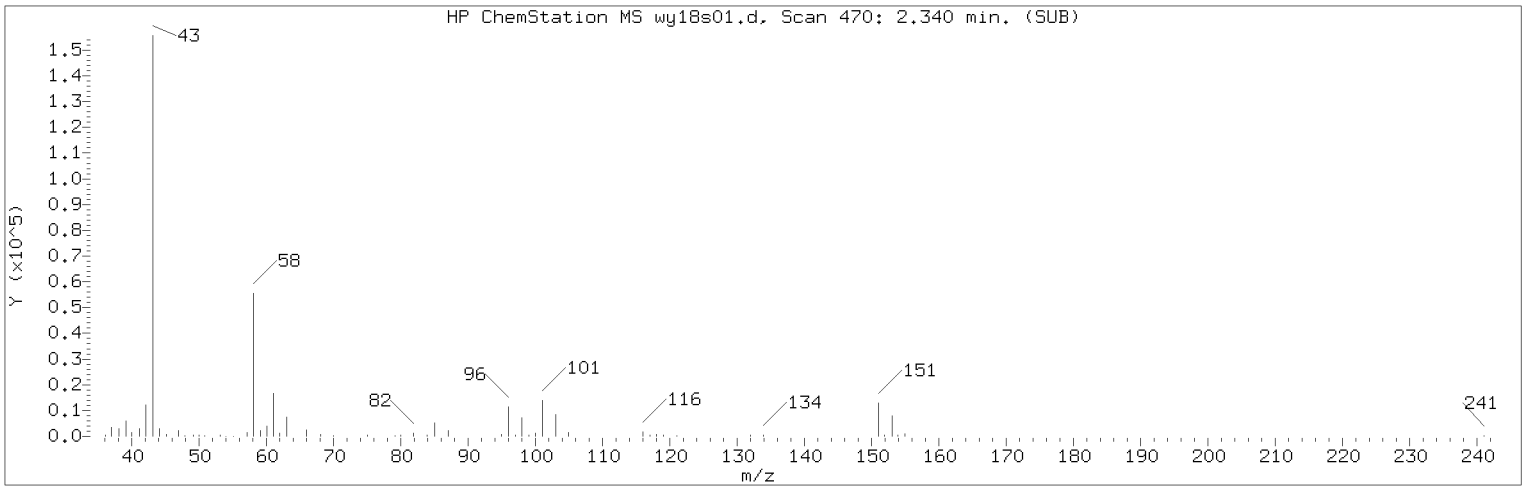
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

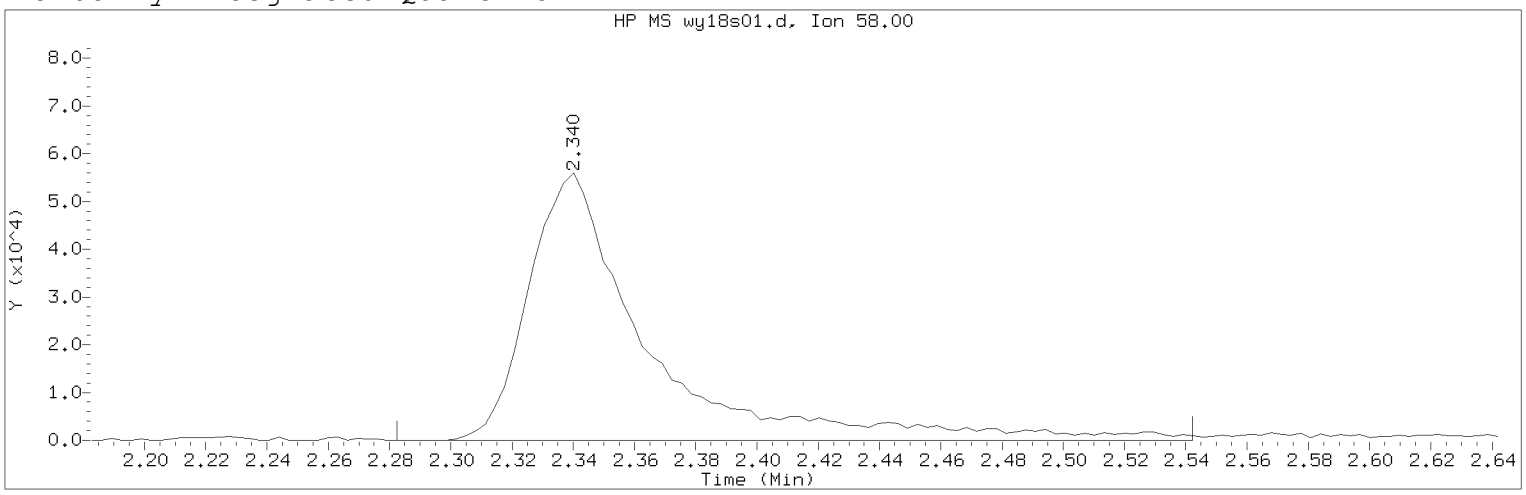
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 457
Retention Time (minutes): 2.298
Quant Ion : 96.00
Area : 76748
On-column Amount (ng) : 16.5892
Integration start scan : 445 Integration stop scan: 481
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

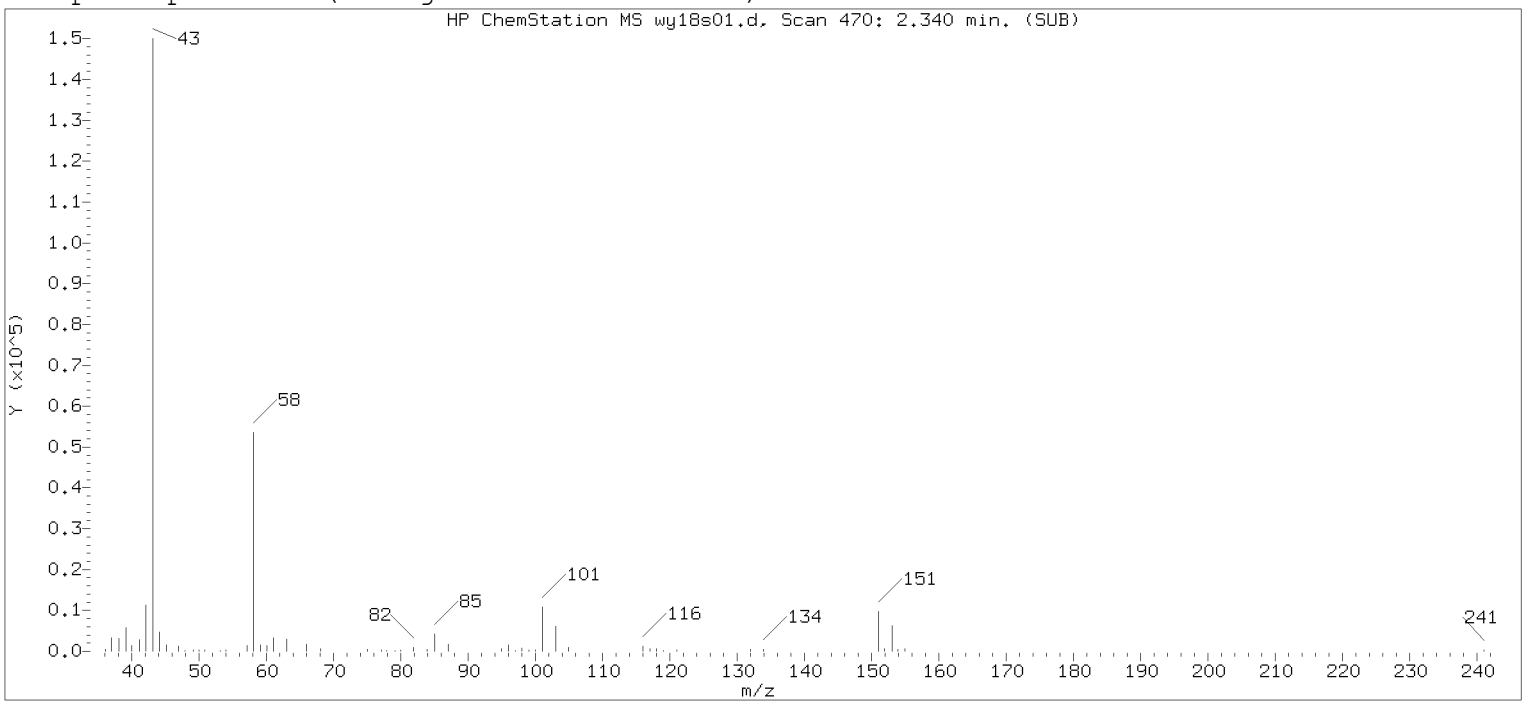
Compound Number : 18
Compound Name : Acetone
Scan Number : 470
Retention Time (minutes): 2.340
Quant Ion : 58.00
Area (flag) : 150531M
On-Column Amount (ng) : 232.2450
Integration start scan : 451 Integration stop scan: 532
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

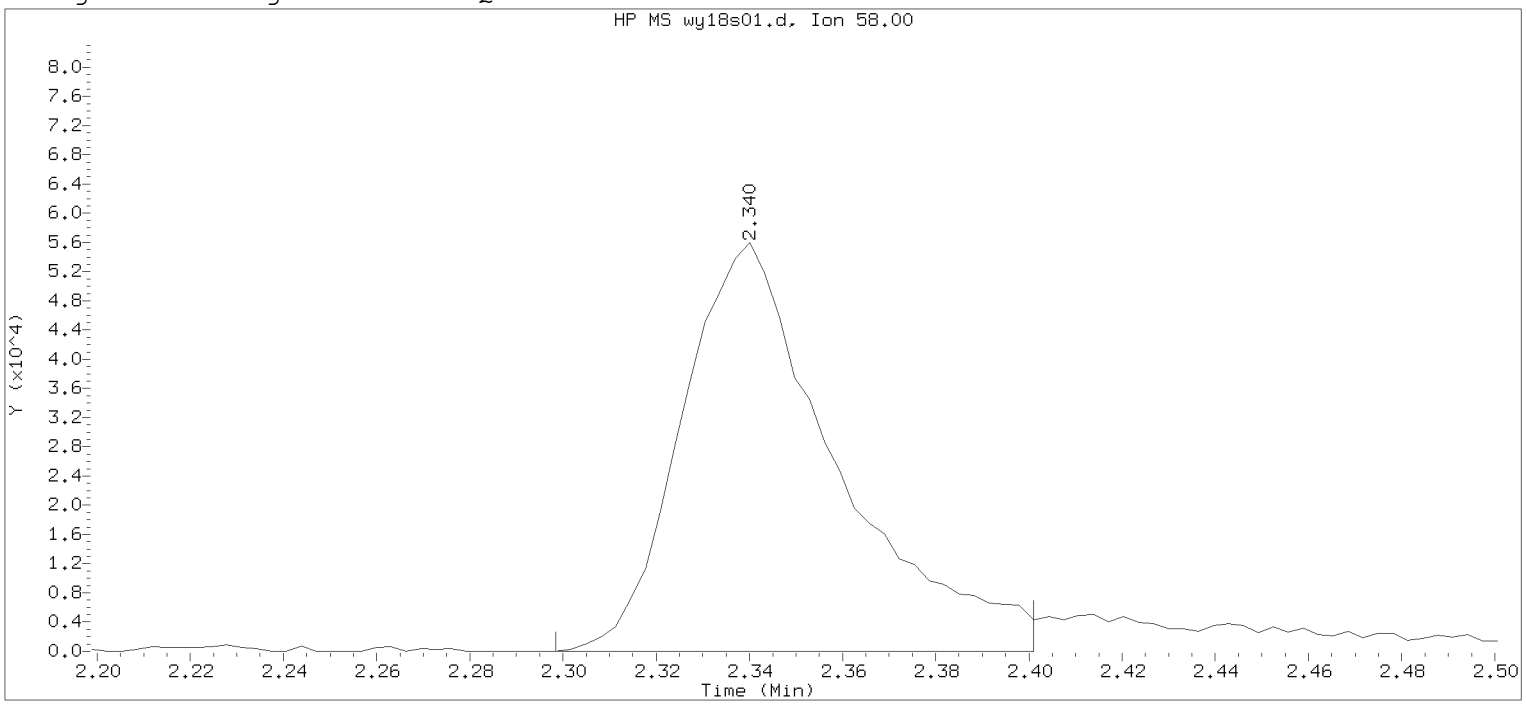
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

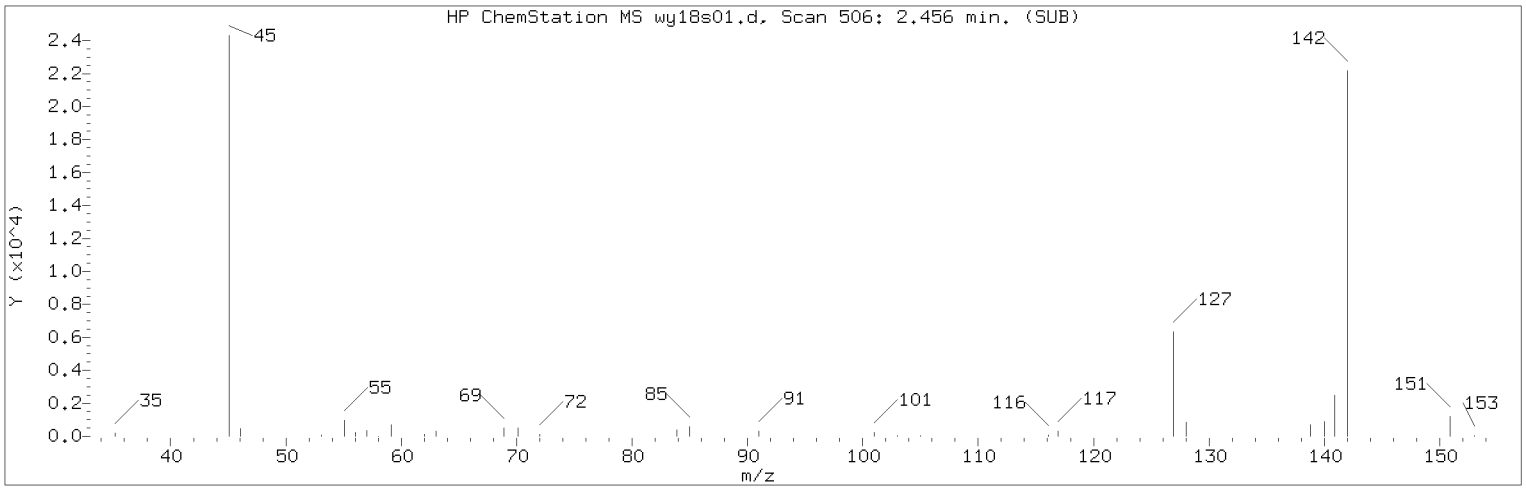
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

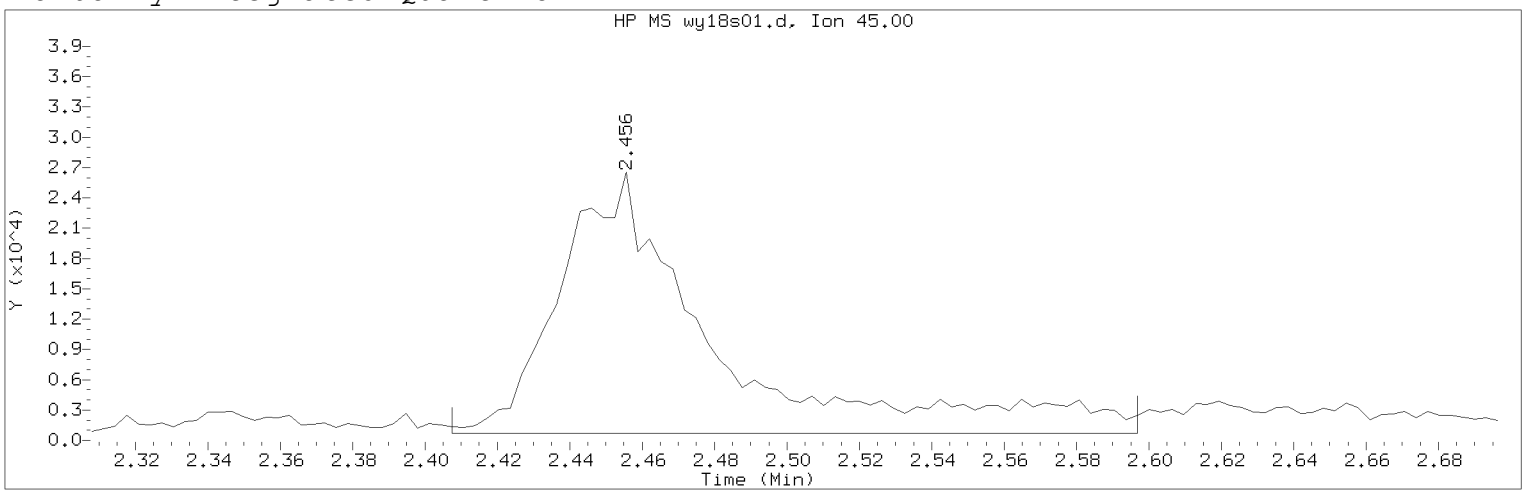
Compound Number : 18
Compound Name : Acetone
Scan Number : 470
Retention Time (minutes): 2.340
Quant Ion : 58.00
Area : 128903
On-column Amount (ng) : 198.8773
Integration start scan : 456 Integration stop scan: 488
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

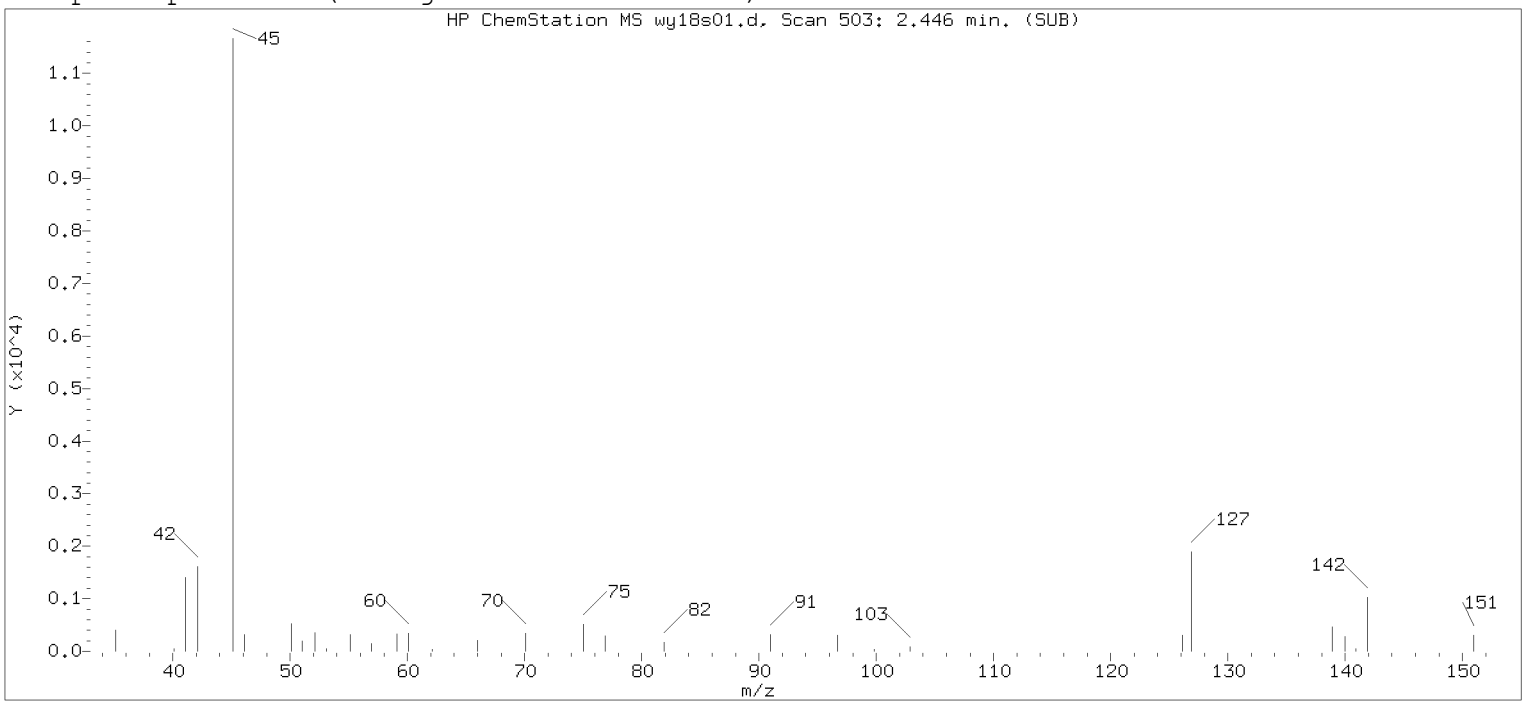
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 506
Retention Time (minutes): 2.456
Quant Ion : 45.00
Area (flag) : 76314M
On-Column Amount (ng) : 158.4713
Integration start scan : 490 Integration stop scan: 549
Y at integration start : 676 Y at integration end: 676

Reason for manual integration: improper integration

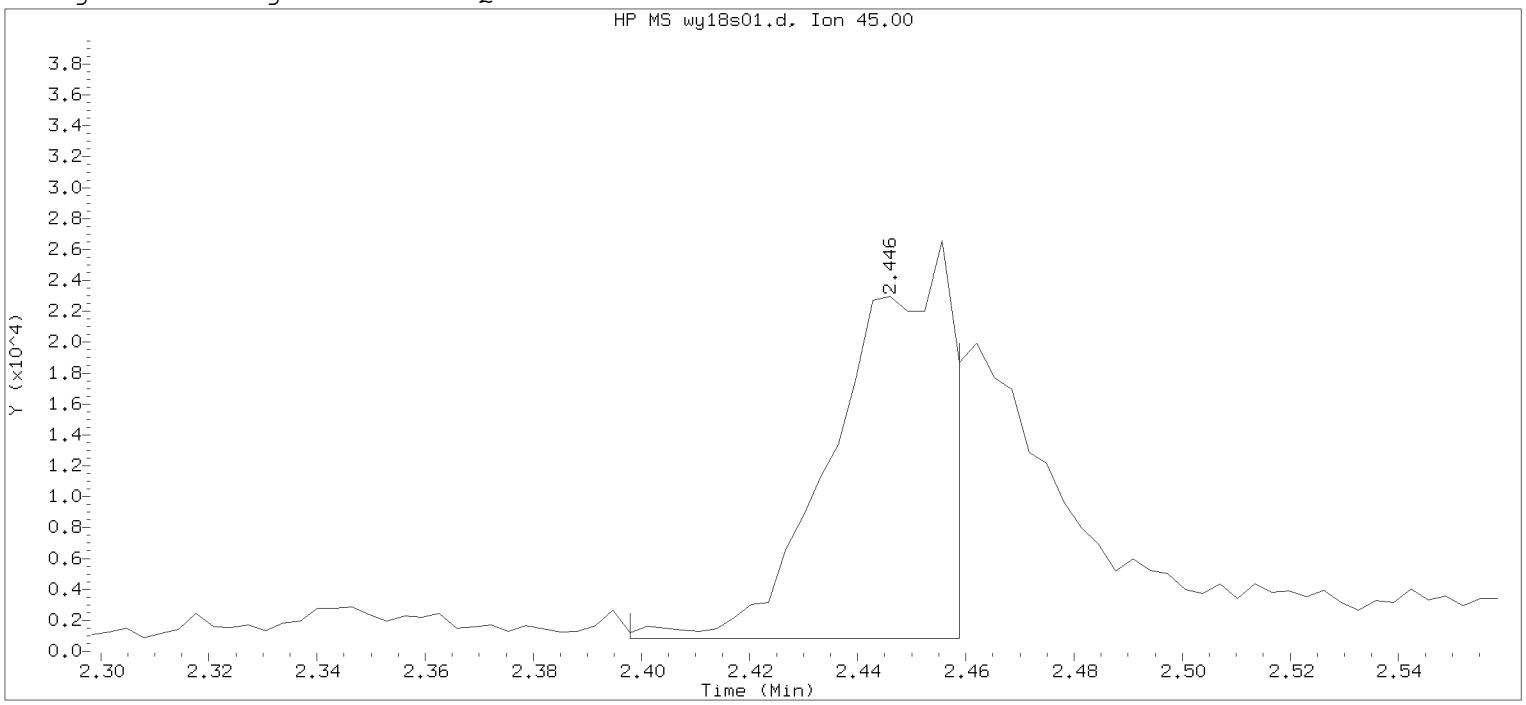
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 503
Retention Time (minutes): 2.446
Quant Ion : 45.00
Area : 35429
On-column Amount (ng) : 73.5706
Integration start scan : 487 Integration stop scan: 506
Y at integration start : 815 Y at integration end: 815

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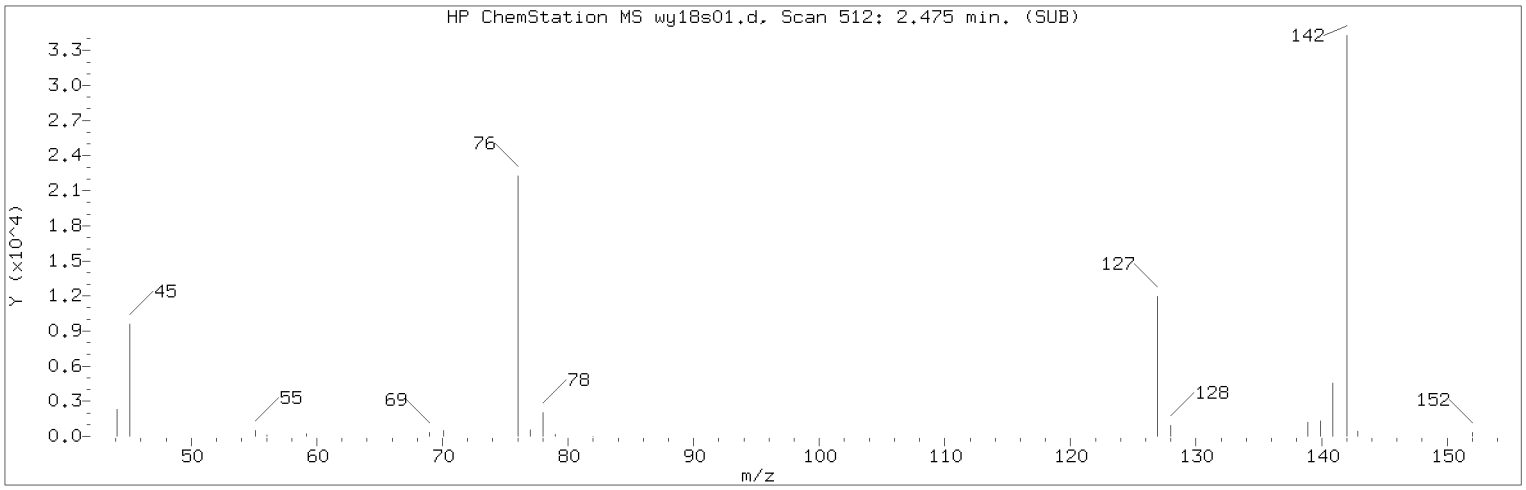
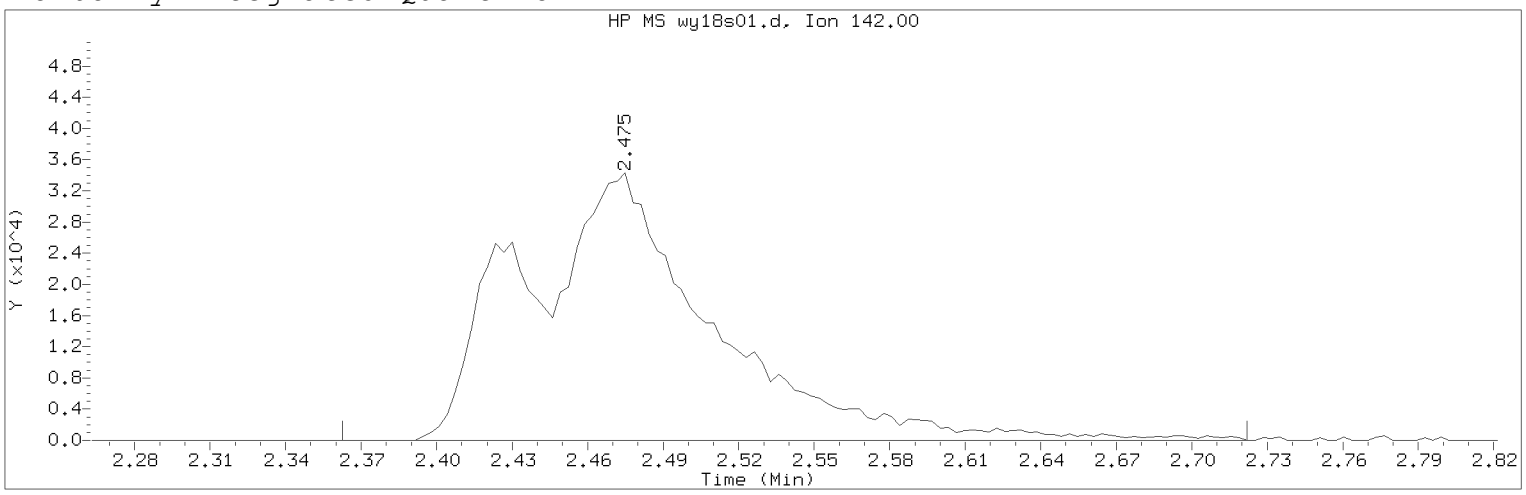
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

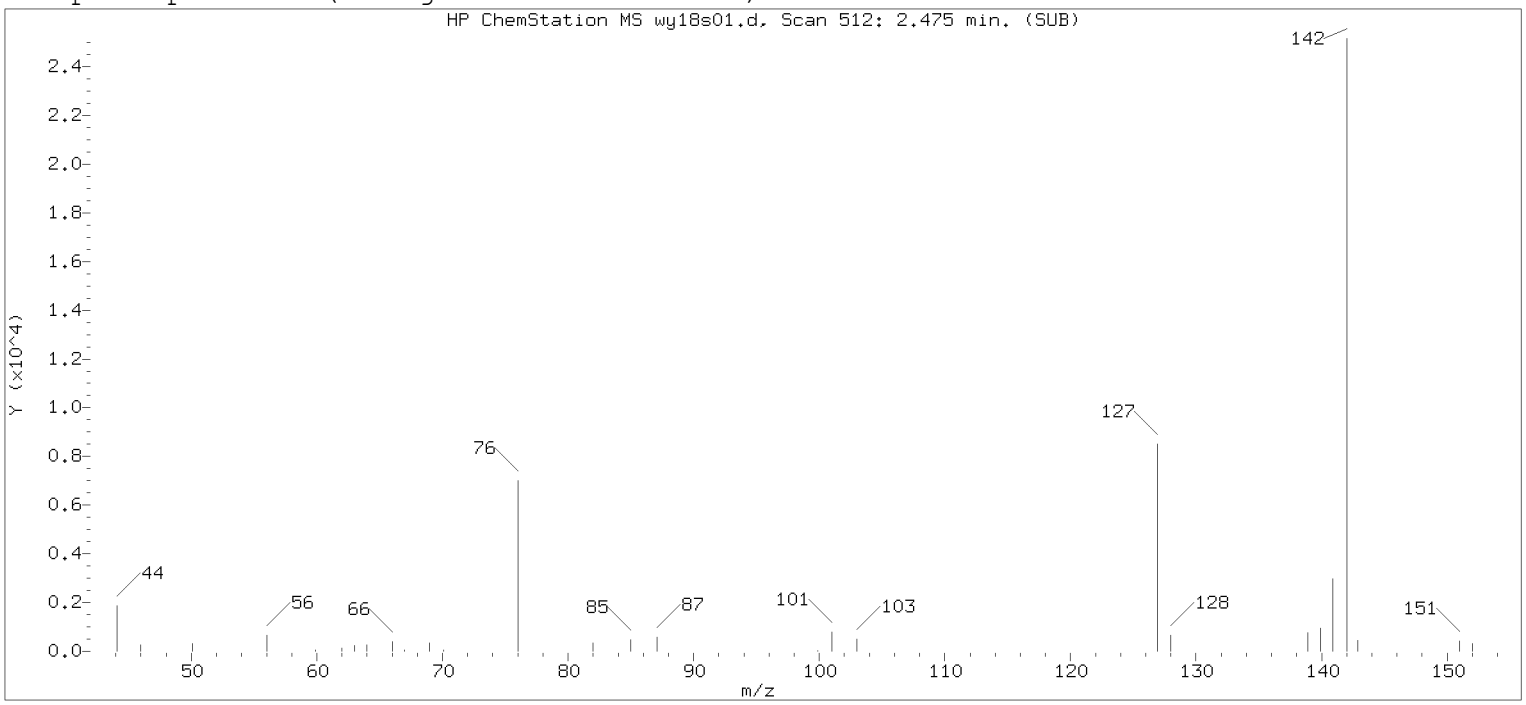
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 512
Retention Time (minutes): 2.475
Quant Ion : 142.00
Area (flag) : 178264M
On-Column Amount (ng) : 20.1073
Integration start scan : 476 Integration stop scan: 588
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

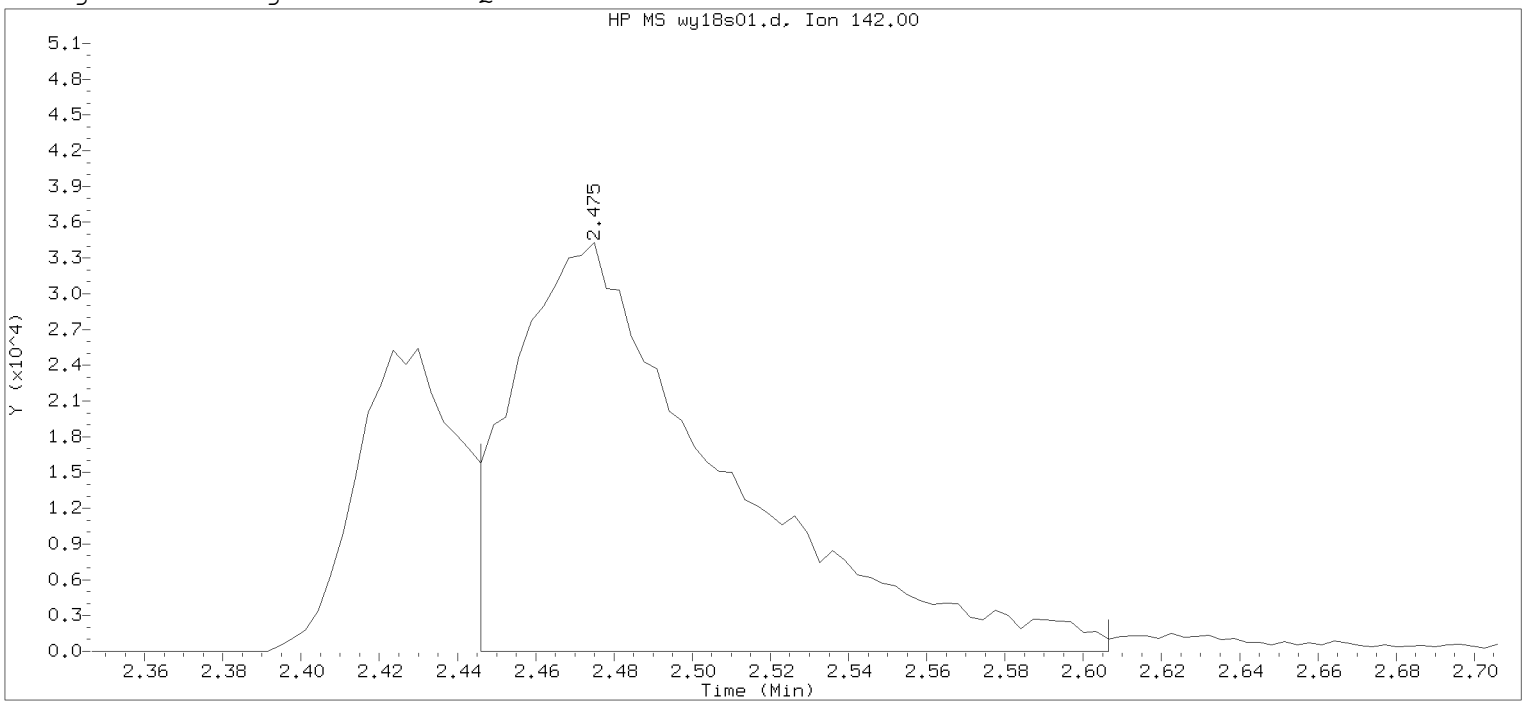
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

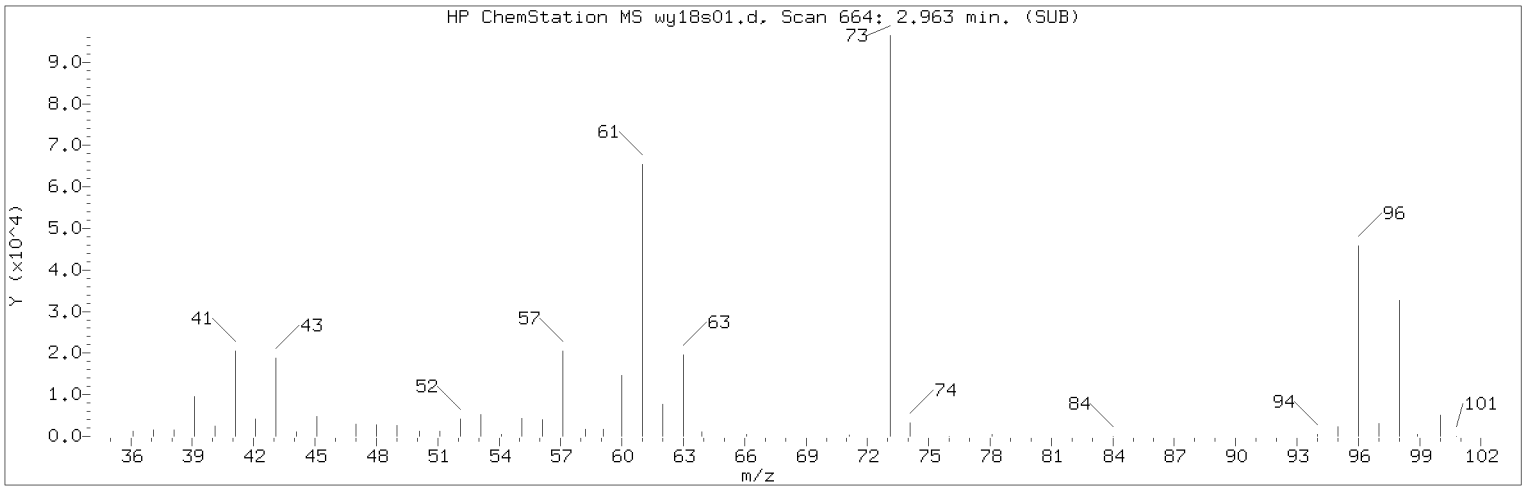
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

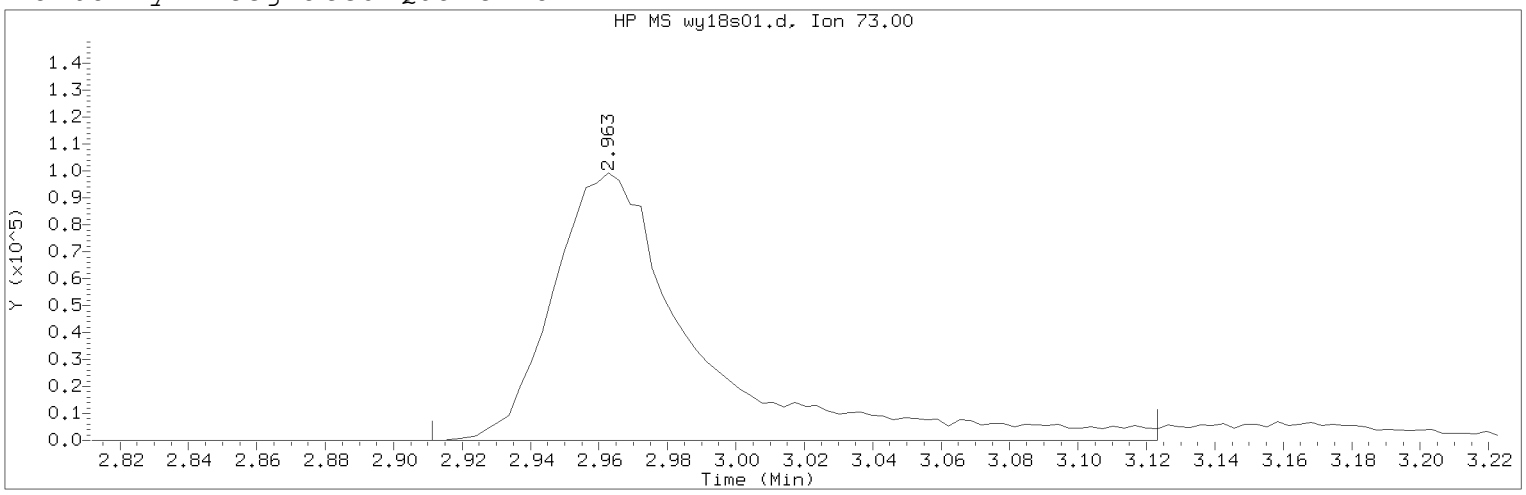
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 512
Retention Time (minutes): 2.475
Quant Ion : 142.00
Area : 127323
On-column Amount (ng) : 14.3615
Integration start scan : 502 Integration stop scan: 552
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

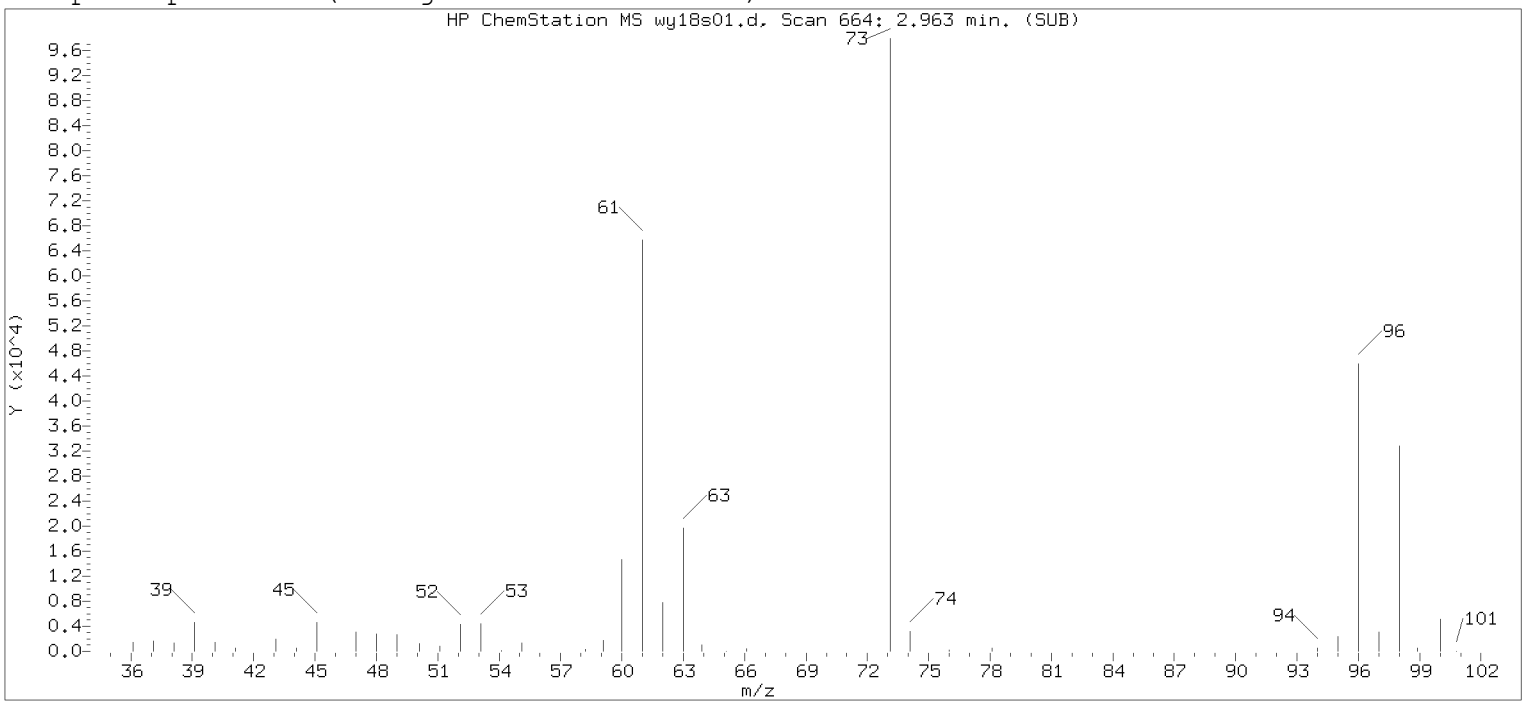
Compound Number : 33
Compound Name : Methyl Tertiary Butyl Ether
Scan Number : 664
Retention Time (minutes): 2.963
Quant Ion : 73.00
Area (flag) : 291896M
On-Column Amount (ng) : 23.8826
Integration start scan : 647 Integration stop scan: 713
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

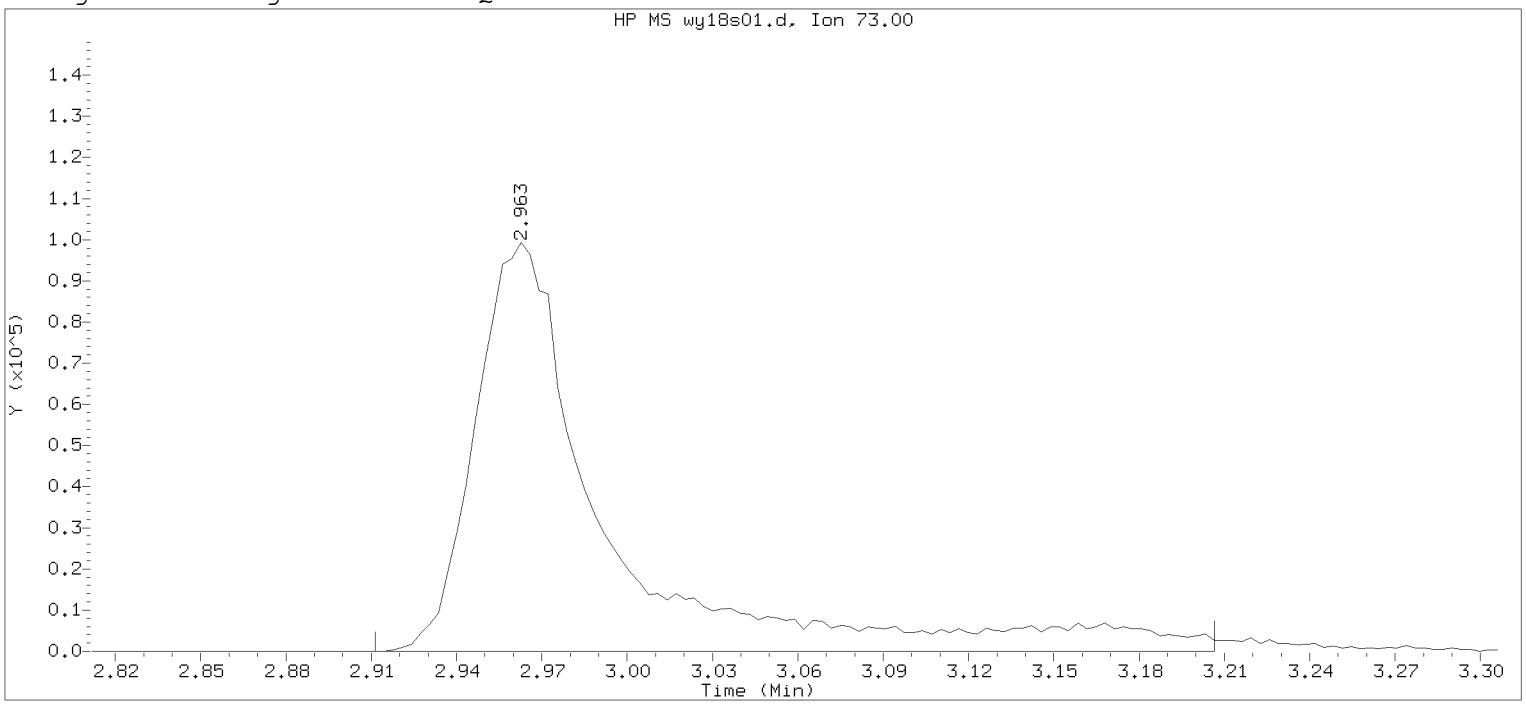
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

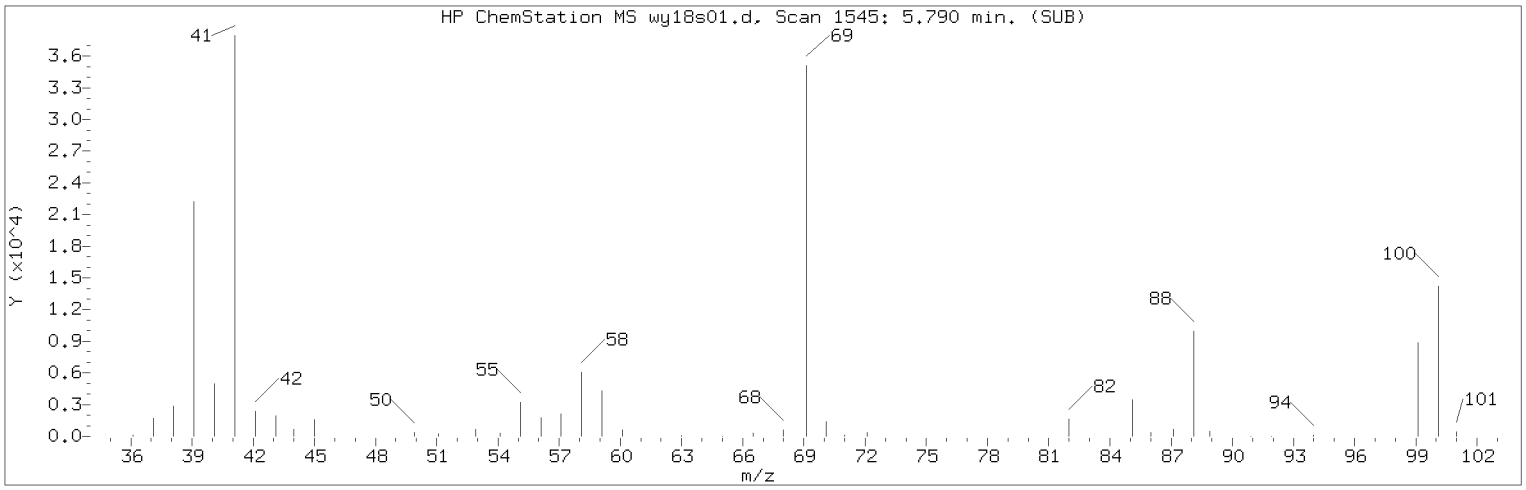
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

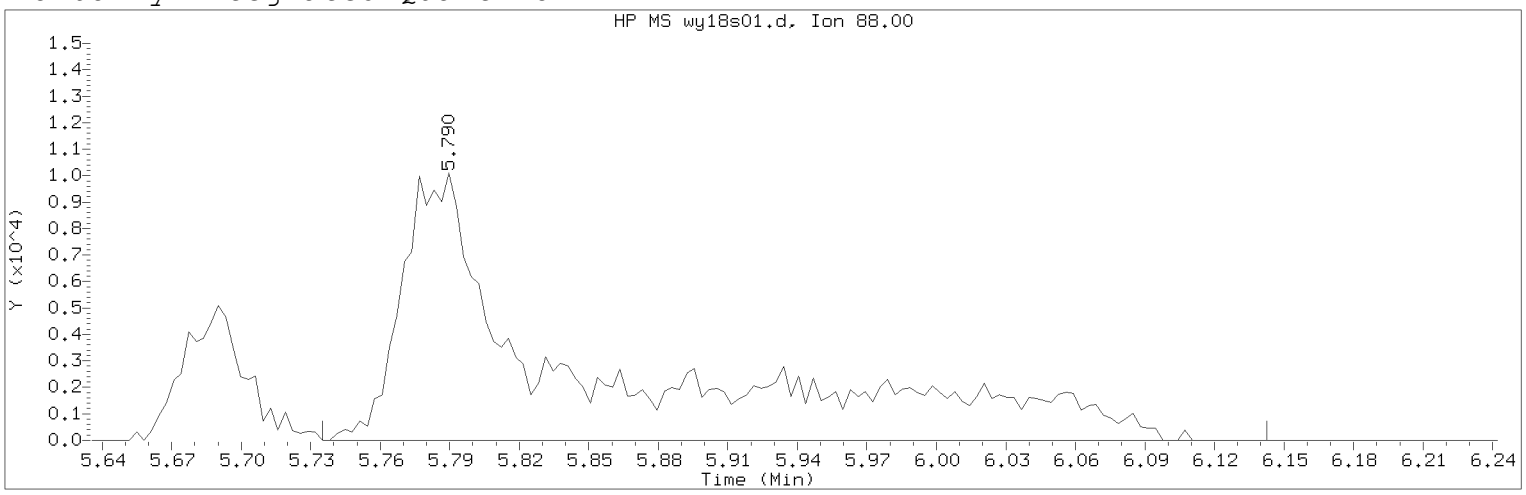
Compound Number : 33
Compound Name : Methyl Tertiary Butyl Ether
Scan Number : 664
Retention Time (minutes): 2.963
Quant Ion : 73.00
Area : 317126
On-column Amount (ng) : 25.9469
Integration start scan : 647 Integration stop scan: 739
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

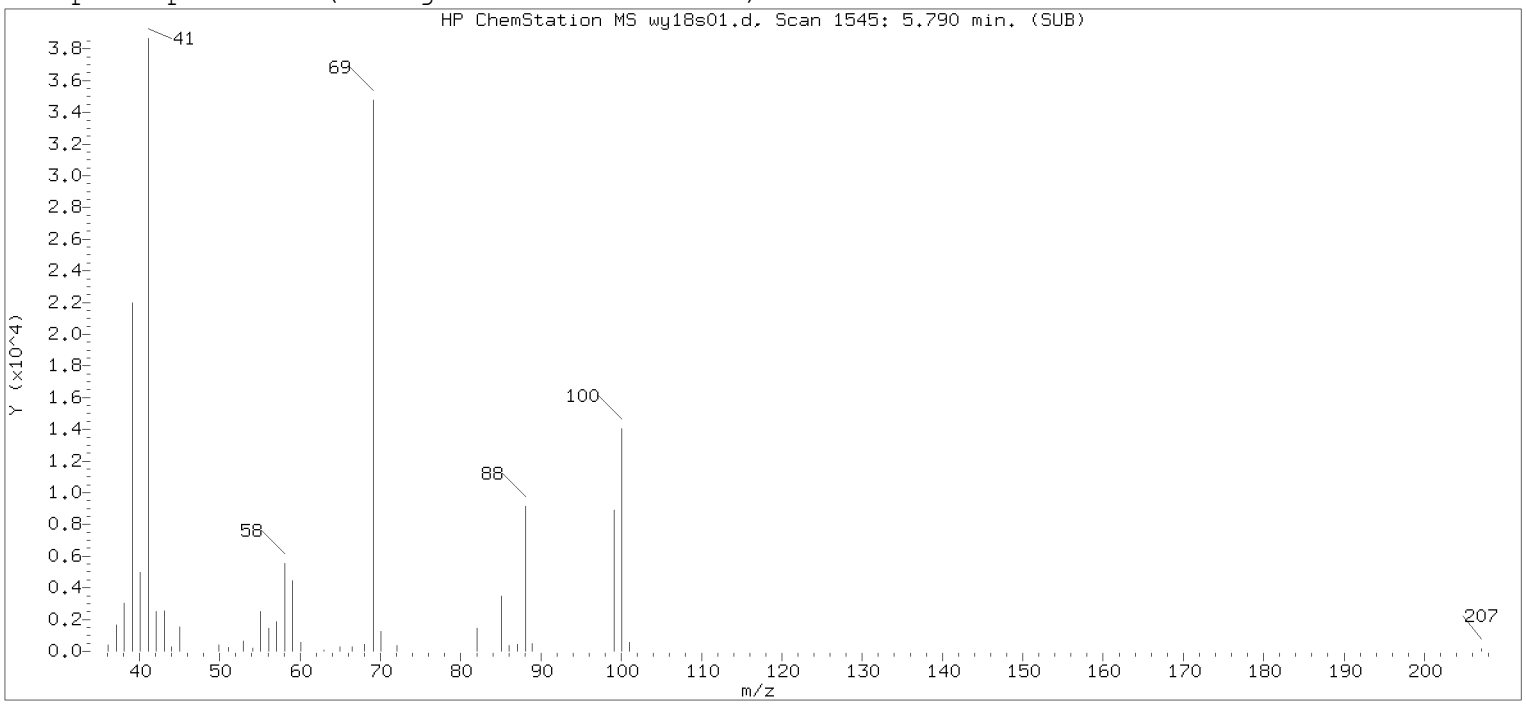
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1545
Retention Time (minutes): 5.790
Quant Ion : 88.00
Area (flag) : 52768M
On-Column Amount (ng) : 634.7888
Integration start scan : 1527 Integration stop scan: 1654
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

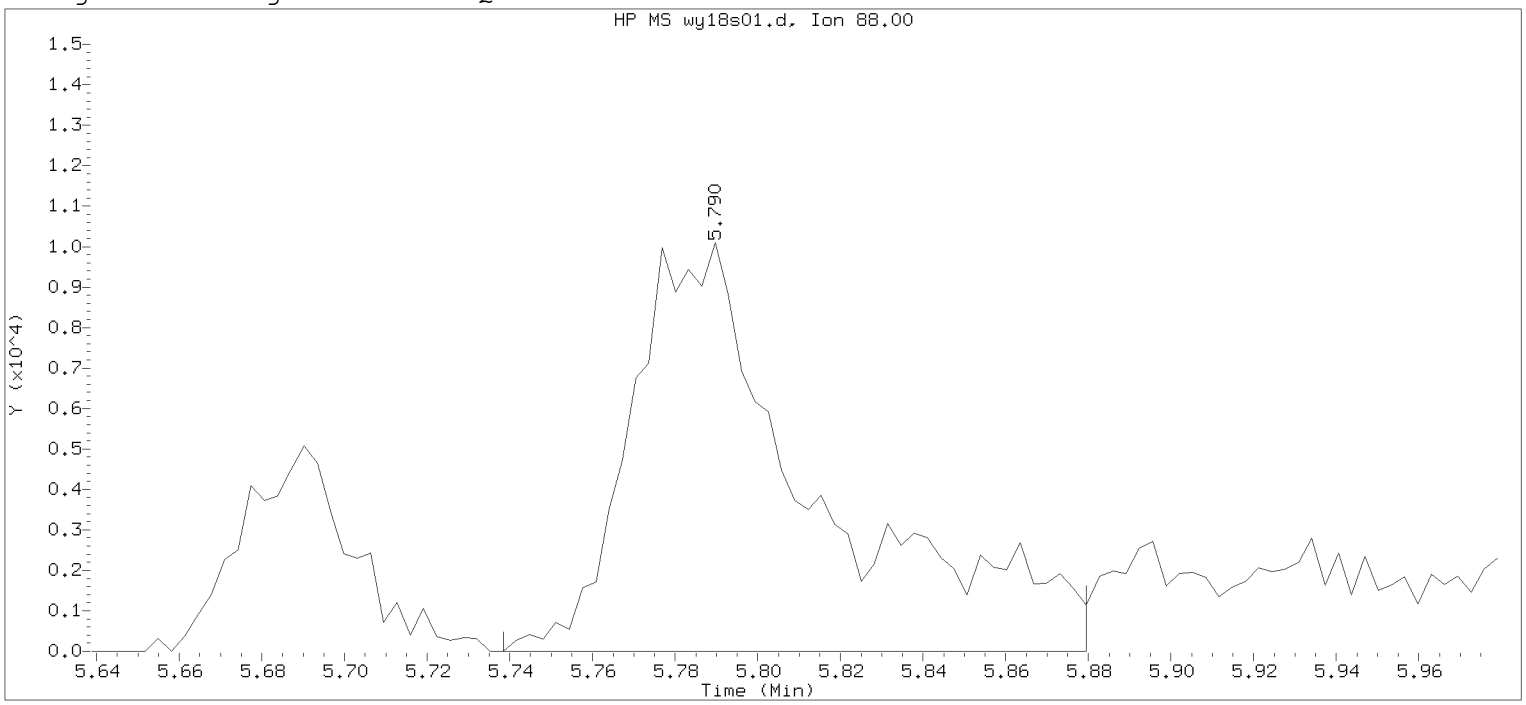
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1545
Retention Time (minutes): 5.790
Quant Ion : 88.00
Area : 31240
On-column Amount (ng) : 375.8212
Integration start scan : 1528 Integration stop scan: 1572
Y at integration start : 0 Y at integration end: 0

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Target 3.5 esignature user's page 346

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSW24

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSW24

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may19a.b/wy19l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	15	
75-00-3	Chloroethane	14	
75-35-4	1,1-Dichloroethene	19	
75-34-3	1,1-Dichloroethane	20	
156-59-2	cis-1,2-Dichloroethene	22	
71-55-6	1,1,1-Trichloroethane	21	
79-01-6	Trichloroethene	20	
123-91-1	1,4-Dioxane	690	
127-18-4	Tetrachloroethene	24	
179601-23-1	m+p-Xylene	45	
95-47-6	o-Xylene	21	
1330-20-7	Xylene (Total)	66	

Data file: /chem2/HP09137.i/19may19a.b/wy19l01.d Injection date and time: **19-MAY-2019 12:44**
Data file Sample Info. Line: LCSW24;LCSW24;1;3;LCS;;;;wy19b02; Instrument ID: **HP09137.i** Batch: **W191381AB**
Date, time and analyst ID of latest file update: 19-May-2019 13:01 cbs01947

Blank Data file reference: **/chem2/HP09137.i/19may19a.b/wy19b02.d**

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: **18116**
Calibration date and time (Last Method Edit): 19-MAY-2019 12:48
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may19a.b/wy19c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.738	(-0.003)	594	65	145218	(-23)	250.00	
66) Fluorobenzene	5.032	(0.003)	1309	96	948146	(-2)	50.00	
101) Chlorobenzene-d5	8.161	(0.000)	2284	117	728644	(-2)	50.00	
132) 1,4-Dichlorobenzene-d4	10.042	(0.000)	2870	152	414799	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.355	(0.000)	113	213555	48.617	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.686	(0.001)	102	58903	50.421	101%		80 - 120
84) Toluene-d8	(3)	6.698	(0.000)	98	940627	51.517	103%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.000)	95	344125	47.112	94%		80 - 120

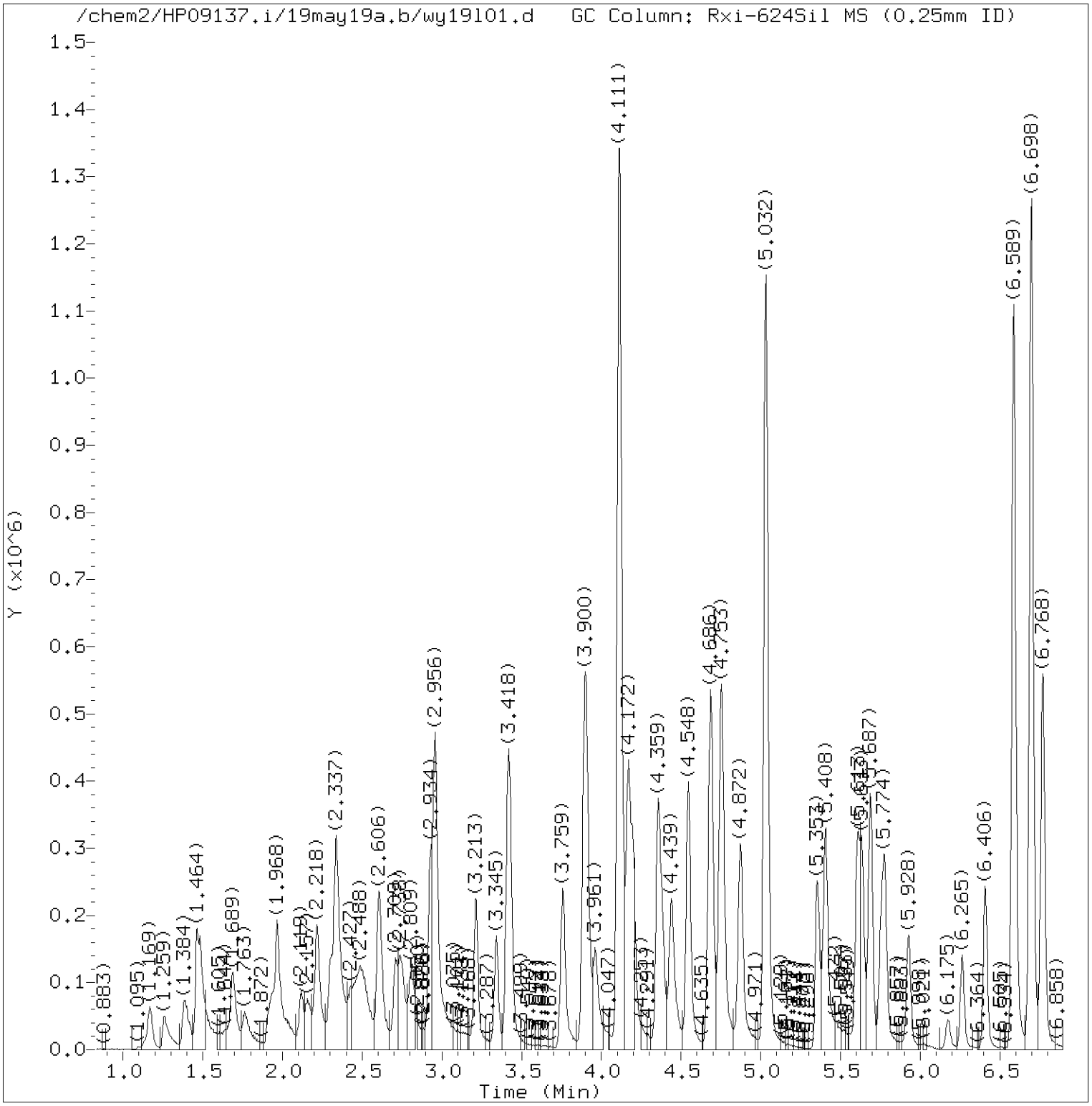
Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)	1.461	(0.000)	62	107567	15.370	15.37			0.2	1
9) Chloroethane	(2)	1.762	(0.002)	64	65713	14.269	14.27			0.2	1
17) 1,1-Dichloroethene	(2)	2.302	(0.000)	96	81171	19.417	19.42			0.2	1
36) 1,1-Dichloroethane	(2)	3.344	(-0.000)	63	165423	20.127	20.13			0.2	1
42) cis-1,2-Dichloroethene	(2)	3.890	(0.000)	96	110799	21.757	21.76			0.2	1
53) 1,1,1-Trichloroethane	(2)	4.381	(0.000)	97	119649	20.621	20.62			0.3	1
71) Trichloroethene	(2)	5.408	(-0.000)	95	97973	20.358	20.36			0.2	1
76) 1,4-Dioxane	(1)	5.790	(0.002)	88	44699M	685.856	685.86			29	250
94) Tetrachloroethene	(3)	7.362	(0.000)	166	112966	23.670	23.67			0.2	1
107) m+p-Xylene	(3)	8.402	(0.000)	106	401071	45.125	45.13			1	5
108) o-Xylene	(3)	8.739	(0.000)	106	186836	21.368	21.37			0.4	1
109) Xylene (Total)	(3)			106	587907	66.493	66.49			1	5

M = Compound was manually integrated.

Total number of targets = 12

Digitally signed by Chelsea B. Stong on 05/19/2019 at 13:02. Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:25. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

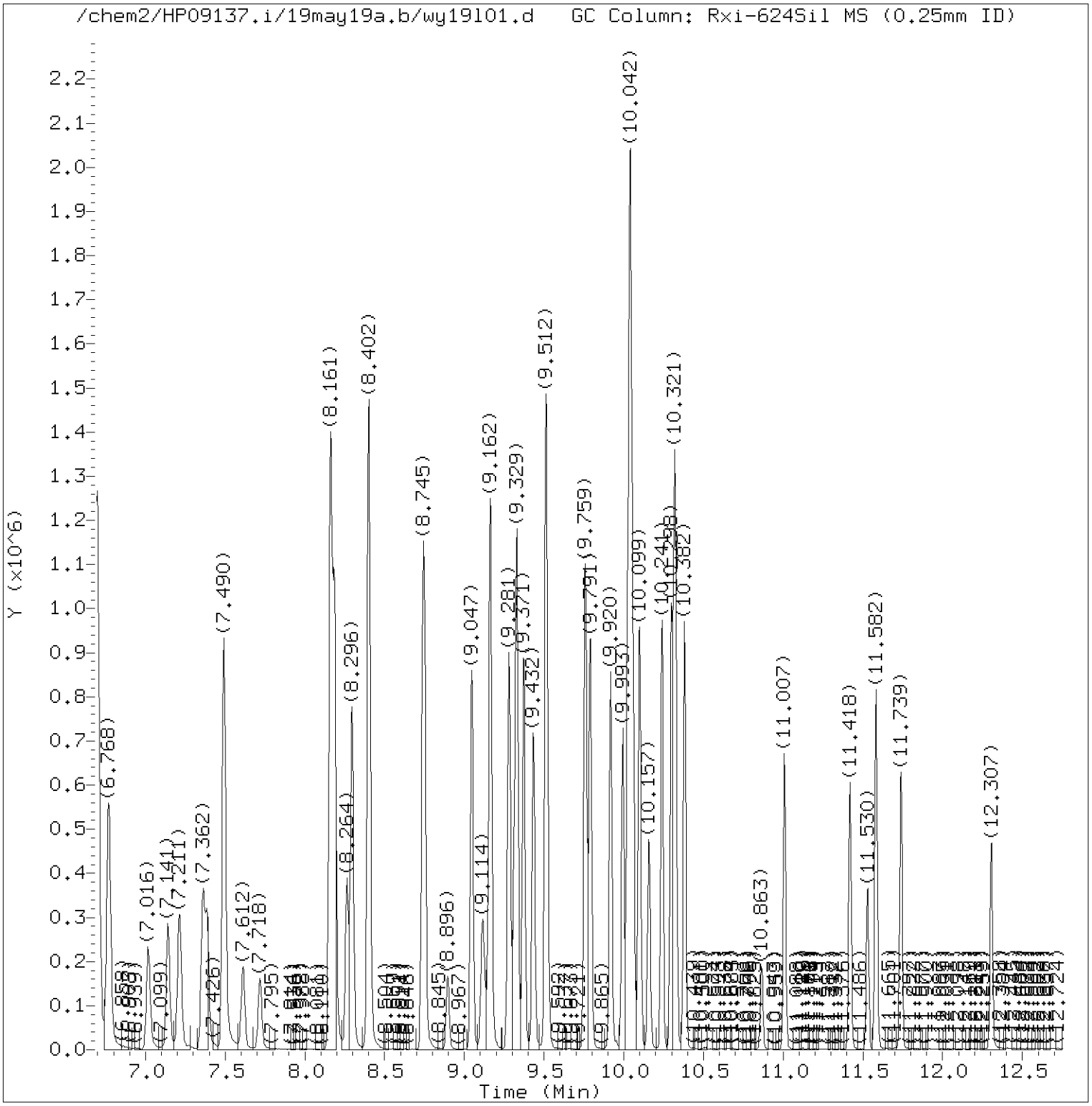
Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19l01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 12:44 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 13:01 cbs01947

Sample Name: LCSW24 Lab Sample ID: LCSW24

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 13:02.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19l01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 12:44 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 13:01 cbs01947

Sample Name: LCSW24 Lab Sample ID: LCSW24

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 13:02.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19l01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 12:44 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 13:01 cbs01947

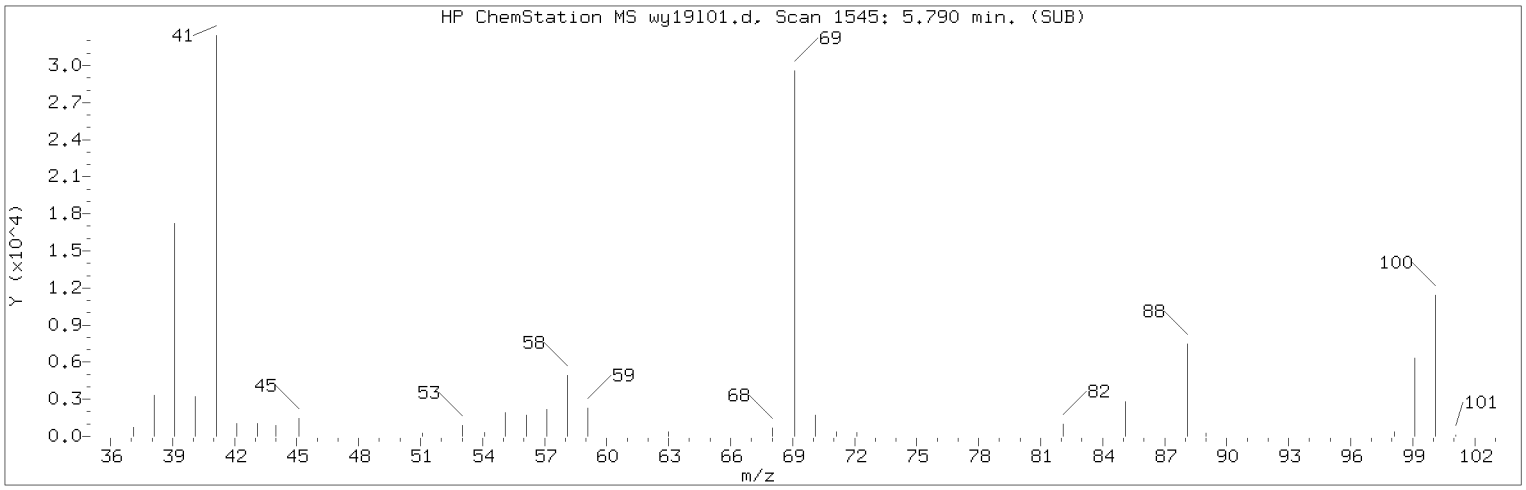
Sample Name: LCSW24 Lab Sample ID: LCSW24

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	1.461	62	107567	15.370
9) Chloroethane	(2)	1.763	64	65713	14.269
17) 1,1-Dichloroethene	(2)	2.302	96	81171	19.417
29)*t-Butyl alcohol-d10	(1)	2.738	65	145218	250.000
36) 1,1-Dichloroethane	(2)	3.345	63	165423	20.127
42) cis-1,2-Dichloroethene	(2)	3.890	96	110799	21.757
52)$Dibromofluoromethane	(2)	4.355	113	213555	48.617
53) 1,1,1-Trichloroethane	(2)	4.381	97	119649	20.621
57)$1,2-Dichloroethane-d4	(2)	4.686	102	58903	50.421
66)*Fluorobenzene	(2)	5.032	96	948146	50.000
71) Trichloroethene	(2)	5.408	95	97973	20.358
76) 1,4-Dioxane	(1)	5.790	88	44699M	685.856
84)$Toluene-d8	(3)	6.698	98	940627	51.517
94) Tetrachloroethene	(3)	7.362	166	112966	23.670
101)*Chlorobenzene-d5	(3)	8.161	117	728644	50.000
107) m+p-Xylene	(3)	8.402	106	401071	45.125
108) o-Xylene	(3)	8.739	106	186836	21.368
115)$4-Bromofluorobenzene	(3)	9.162	95	344125	47.112
132)*1,4-Dichlorobenzene-d4	(4)	10.042	152	414799	50.000
109) Xylene (Total)	(3)		106	587907	66.493

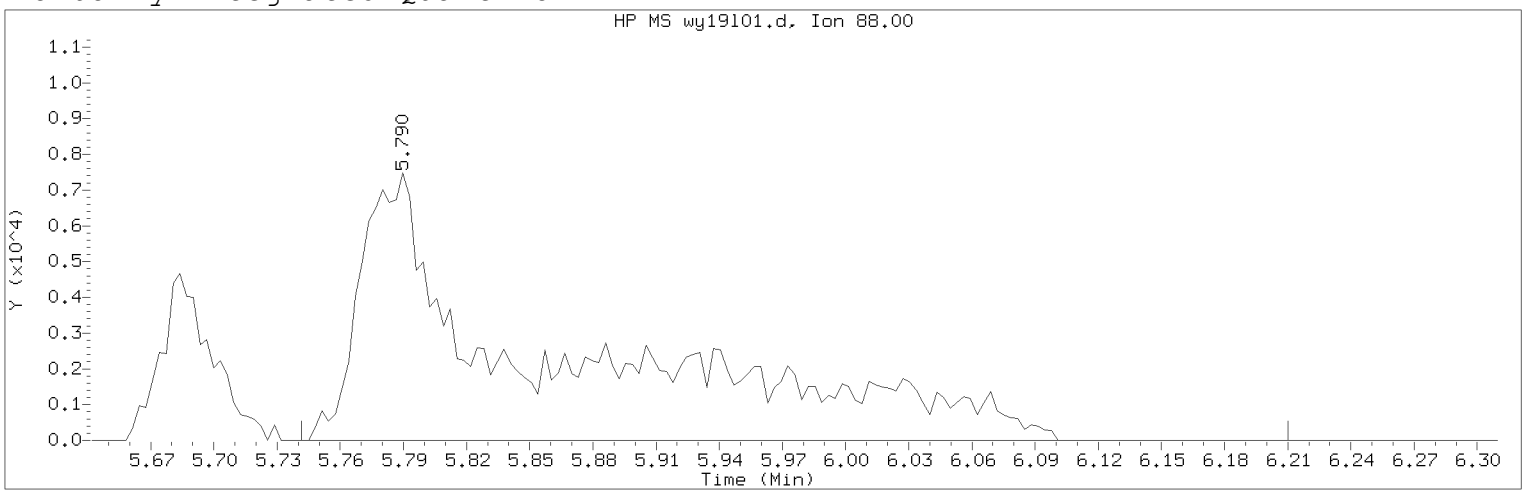
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 13:02.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19l01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 12:44 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 13:01 cbs01947

Sample Name: LCSW24 Lab Sample ID: LCSW24

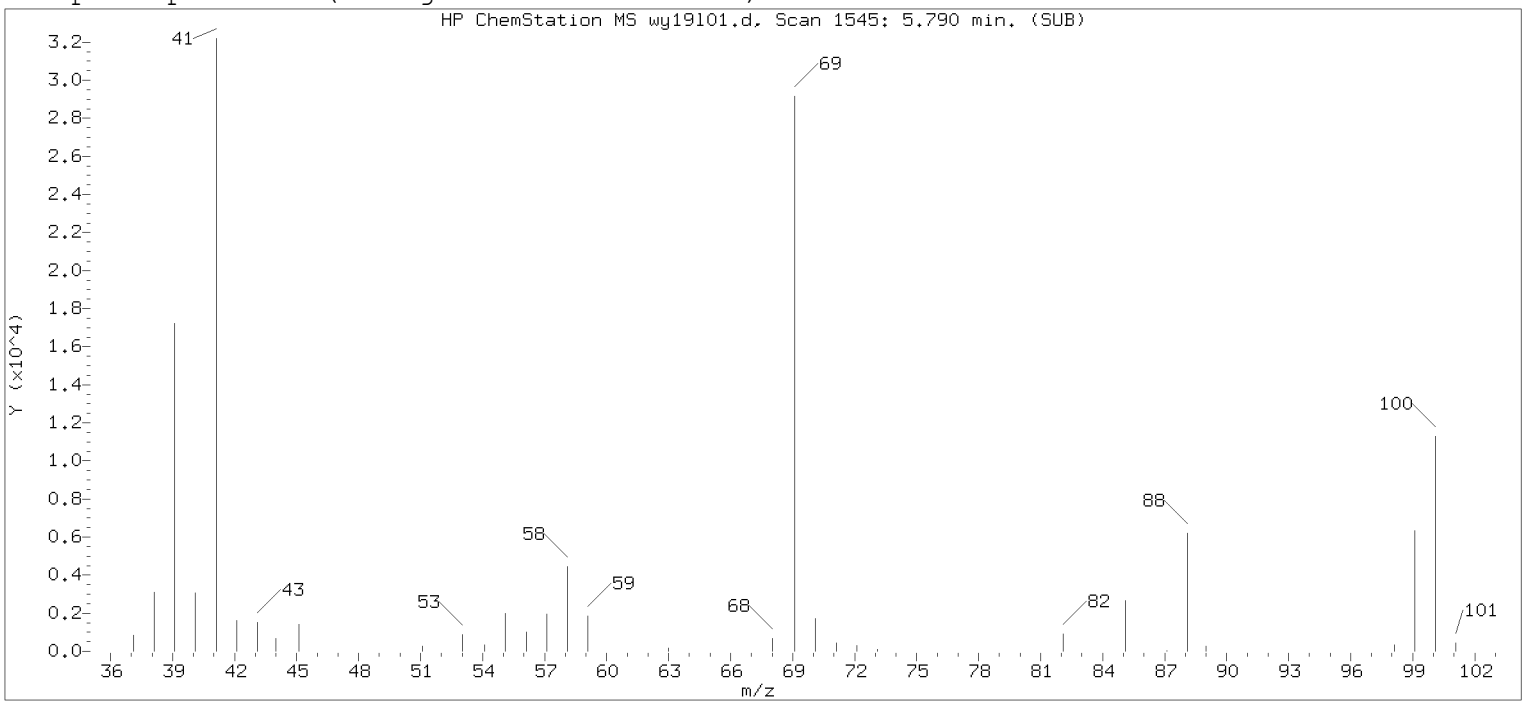
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1545
Retention Time (minutes): 5.790
Quant Ion : 88.00
Area (flag) : 44699M
On-Column Amount (ng) : 685.8561
Integration start scan : 1529 Integration stop scan: 1675
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

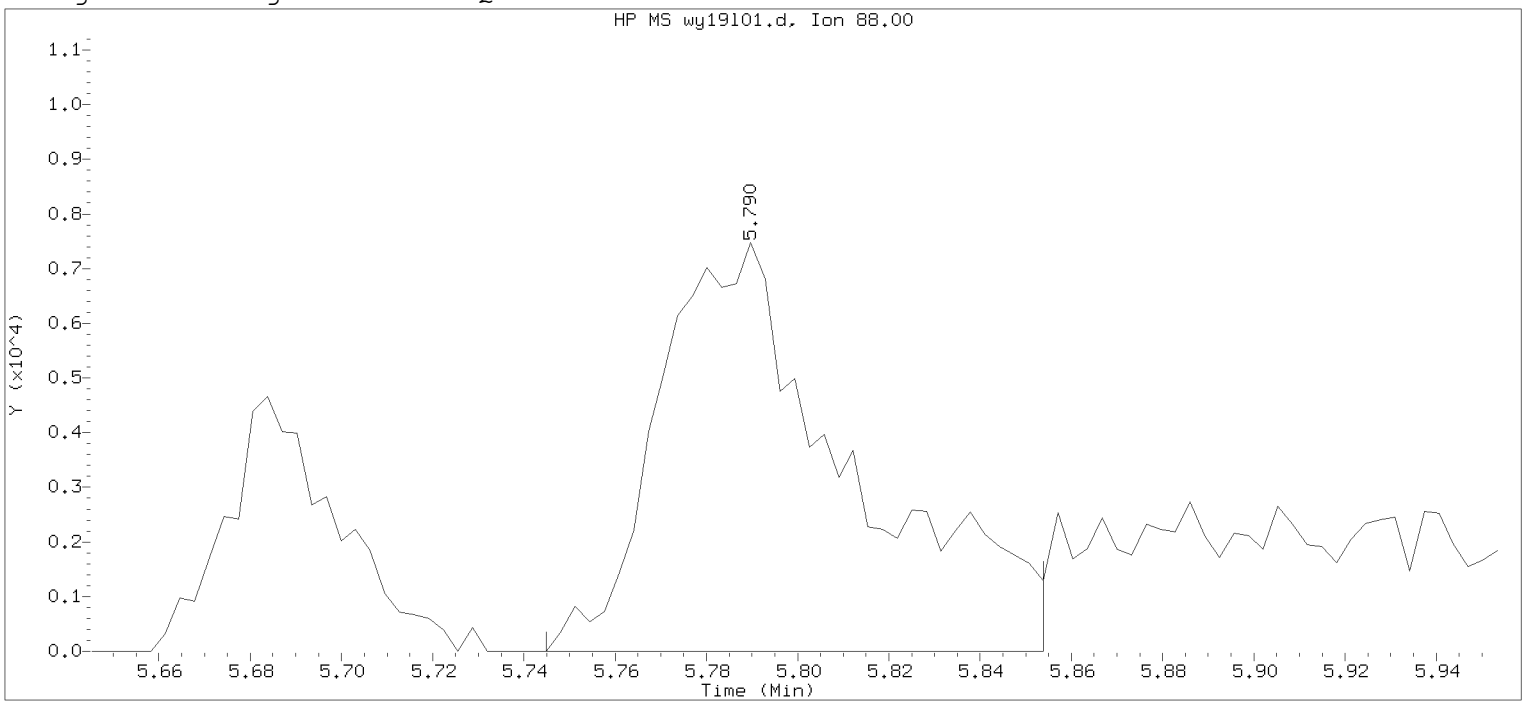
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/19/2019 at 13:02.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:25.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19l01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 12:44 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 12:59 Automation

Sample Name: LCSW24 Lab Sample ID: LCSW24

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1545
Retention Time (minutes): 5.790
Quant Ion : 88.00
Area : 21779
On-column Amount (ng) : 334.1842
Integration start scan : 1530 Integration stop scan: 1564
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 05/19/2019 at 13:02.
Target 3.5 esignature user ID: cbr01947

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NYSDEC ASP Category B Data Package

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Project: AD-New Windsor/1-0145-5
Surface Water and Water Samples
Collected on 05/06/19

SDG# JCV89-V.2

GROUP	SAMPLE NUMBERS
2042995	1053364-1053375

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-18-27
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman **Date:** **08/05/2019**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Katherine Klinefelter at (717) 556-7256.

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Sample Reference List for SDG Number JCV89
with a Data Package Type of NYSDEC B

06556 - The Johnson Company, Inc.

Project: AD-New Windsor/1-0145-5

Lab Sample Number	Client Sample ID	Collection Date	Date Received	Lab Sample Code
1053364	RS-12	05/06/2019 14:53	05/09/2019 10:30	RS001
1053365	RS-01	05/06/2019 15:00	05/09/2019 10:30	RS002
1053366	RS-09	05/06/2019 15:09	05/09/2019 10:30	RS003
1053367	RS-DUP	05/06/2019 14:00	05/09/2019 10:30	RS004
1053368	RS-03	05/06/2019 15:30	05/09/2019 10:30	RS005
1053369	RS-03 MS	05/06/2019 15:30	05/09/2019 10:30	RS005
1053370	RS-03 MSD	05/06/2019 15:30	05/09/2019 10:30	RS005
1053371	RS-13	05/06/2019 15:40	05/09/2019 10:30	RS006
1053372	RS-10	05/06/2019 15:55	05/09/2019 10:30	RS007
1053373	RS-02	05/06/2019 16:05	05/09/2019 10:30	RS008
1053374	RS-11	05/06/2019 16:15	05/09/2019 10:30	RS009
1053375	PDB Blank	05/06/2019 18:00	05/09/2019 10:30	RS010

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Sample pH Log

SDG: JCV89

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
1053364	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/19/2019 11:06:55AM	10203
1053365	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/19/2019 11:06:55AM	10203
1053366	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/19/2019 11:06:55AM	10203
1053367	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/19/2019 11:06:55AM	10203
1053368	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/19/2019 11:06:55AM	10203
1053369	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/19/2019 11:06:55AM	10203
1053370	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/19/2019 11:06:55AM	10203
1053371	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/19/2019 11:06:56AM	10203
1053372	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/19/2019 11:06:56AM	10203
1053373	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/19/2019 11:06:56AM	10203
1053374	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/20/2019 1:22:07PM	895
1053375	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/19/2019 12:16:07PM	1947

*pH Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

**Chlorine Present Code Key
NA = Chlorine Not Checked
Y = Chlorine Present
N = Chlorine Not Present

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11997 VOCs- 5ml Water by 8260C/D

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Report Date: June 25, 2019 15:52

Project: AD-New Windsor/1-0145-5

Account #: 06556
Group Number: 2042995
SDG: JCV89
PO Number: 1-0145-05
State of Sample Origin: NY

Electronic Copy To	The Johnson Company, Inc.	Attn: Tristan Hardy
Electronic Copy To	The Johnson Company, Inc.	Attn: George Lester

Respectfully Submitted,

Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

A previous version of this report was generated on 05/20/2019 23:25.

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
RS-12 Grab Surface Water	05/06/2019 14:53	1053364
RS-01 Grab Surface Water	05/06/2019 15:00	1053365
RS-09 Grab Surface Water	05/06/2019 15:09	1053366
RS-DUP Grab Surface Water	05/06/2019 14:00	1053367
RS-03 Grab Surface Water	05/06/2019 15:30	1053368
RS-03 MS Grab Surface Water	05/06/2019 15:30	1053369
RS-03 MSD Grab Surface Water	05/06/2019 15:30	1053370
RS-13 Grab Surface Water	05/06/2019 15:40	1053371
RS-10 Grab Surface Water	05/06/2019 15:55	1053372
RS-02 Grab Surface Water	05/06/2019 16:05	1053373
RS-11 Grab Surface Water	05/06/2019 16:15	1053374
PDB Blank Grab Water	05/06/2019 18:00	1053375

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

REVISED

Sample Description: **RS-12 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/06/2019 14:53
SDG#: JCV89-01

The Johnson Company, Inc.
ELLE Sample #: WW 1053364
ELLE Group #: 2042995
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	0.4 J	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	5191371AA	05/17/2019 11:56	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5191371AA	05/17/2019 11:55	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **RS-01 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/06/2019 15:00
SDG#: JCV89-02

The Johnson Company, Inc.
ELLE Sample #: WW 1053365
ELLE Group #: 2042995
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	0.9 J	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	5191371AA	05/17/2019 12:17	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5191371AA	05/17/2019 12:16	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **RS-09 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/06/2019 15:09
SDG#: JCV89-03

The Johnson Company, Inc.
ELLE Sample #: WW 1053366
ELLE Group #: 2042995
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	1	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	5191371AA	05/17/2019 12:38	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5191371AA	05/17/2019 12:37	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **RS-DUP Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/06/2019 14:00
SDG#: JCV89-04

The Johnson Company, Inc.
ELLE Sample #: WW 1053367
ELLE Group #: 2042995
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.5 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	0.5 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	0.9 J	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	2	0.3	1	1
11997	Trichloroethene	79-01-6	8	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	5191371AA	05/17/2019 12:59	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5191371AA	05/17/2019 12:58	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **RS-03 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/06/2019 15:30
SDG#: JCV89-05BKG

The Johnson Company, Inc.
ELLE Sample #: WW 1053368
ELLE Group #: 2042995
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	2 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.5 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	0.5 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	0.9 J	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	2	0.3	1	1
11997	Trichloroethene	79-01-6	8	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	5191371AA	05/17/2019 10:53	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5191371AA	05/17/2019 10:52	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **RS-03 MS Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/06/2019 15:30
SDG#: JCV89-05MS

The Johnson Company, Inc.
ELLE Sample #: WW 1053369
ELLE Group #: 2042995
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	170	0.7	20	1
11997	Benzene	71-43-2	23	0.2	1	1
11997	2-Butanone	78-93-3	130	0.3	10	1
11997	Carbon Disulfide	75-15-0	21	0.2	5	1
11997	Chloroform	67-66-3	26	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	22	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	24	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	29	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	24	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	24	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	23	0.2	1	1
11997	1,4-Dioxane	123-91-1	650	29	250	1
11997	Ethylbenzene	100-41-4	24	0.4	1	1
11997	Freon 113	76-13-1	30	0.2	10	1
11997	Methylene Chloride	75-09-2	23	0.3	1	1
11997	Naphthalene	91-20-3	19	1	5	1
11997	Tetrachloroethene	127-18-4	25	0.2	1	1
11997	Toluene	108-88-3	22	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	30	0.3	1	1
11997	Trichloroethene	79-01-6	33	0.2	1	1
11997	Vinyl Chloride	75-01-4	24	0.2	1	1
11997	Xylene (Total)	1330-20-7	69	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	5191371AA	05/17/2019 11:13	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5191371AA	05/17/2019 11:12	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **RS-03 MSD Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/06/2019 15:30
SDG#: JCV89-05MSD

The Johnson Company, Inc.
ELLE Sample #: WW 1053370
ELLE Group #: 2042995
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	150	0.7	20	1
11997	Benzene	71-43-2	22	0.2	1	1
11997	2-Butanone	78-93-3	140	0.3	10	1
11997	Carbon Disulfide	75-15-0	21	0.2	5	1
11997	Chloroform	67-66-3	26	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	22	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	24	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	28	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	24	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	24	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	23	0.2	1	1
11997	1,4-Dioxane	123-91-1	660	29	250	1
11997	Ethylbenzene	100-41-4	23	0.4	1	1
11997	Freon 113	76-13-1	29	0.2	10	1
11997	Methylene Chloride	75-09-2	23	0.3	1	1
11997	Naphthalene	91-20-3	20	1	5	1
11997	Tetrachloroethene	127-18-4	25	0.2	1	1
11997	Toluene	108-88-3	22	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	30	0.3	1	1
11997	Trichloroethene	79-01-6	33	0.2	1	1
11997	Vinyl Chloride	75-01-4	24	0.2	1	1
11997	Xylene (Total)	1330-20-7	69	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	5191371AA	05/17/2019 11:34	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5191371AA	05/17/2019 11:33	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **RS-13 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/06/2019 15:40
SDG#: JCV89-06

The Johnson Company, Inc.
ELLE Sample #: WW 1053371
ELLE Group #: 2042995
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.6 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	0.6 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	1 J	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	2	0.3	1	1
11997	Trichloroethene	79-01-6	8	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	5191371AA	05/17/2019 13:21	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5191371AA	05/17/2019 13:20	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **RS-10 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/06/2019 15:55
SDG#: JCV89-07

The Johnson Company, Inc.
ELLE Sample #: WW 1053372
ELLE Group #: 2042995
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	1	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	5191371AA	05/17/2019 13:41	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5191371AA	05/17/2019 13:40	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **RS-02 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/06/2019 16:05
SDG#: JCV89-08

The Johnson Company, Inc.
ELLE Sample #: WW 1053373
ELLE Group #: 2042995
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	0.2 J	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	2	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	5191371AA	05/17/2019 14:03	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5191371AA	05/17/2019 14:02	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **RS-11 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/06/2019 16:15
SDG#: JCV89-09

The Johnson Company, Inc.
ELLE Sample #: WW 1053374
ELLE Group #: 2042995
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	7 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	0.4 J	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	0.3 J	0.2	1	1
11997	Toluene	108-88-3	0.3 J	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	0.3 J	0.3	1	1
11997	Trichloroethene	79-01-6	1	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191381AB	05/19/2019 13:31	Chelsea B Riehl	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191381AB	05/19/2019 13:30	Chelsea B Riehl	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PDB Blank Grab Water**
New Windsor, NY

Project Name: **AD-New Windsor/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/06/2019 18:00
SDG#: JCV89-10BL

The Johnson Company, Inc.
ELLE Sample #: WW 1053375
ELLE Group #: 2042995
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	2 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	0.7 J	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191381AA	05/18/2019 23:41	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191381AA	05/18/2019 23:40	Sara E Johnson	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2042995
Reported: 06/25/2019 15:52

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 5191371AA	Sample number(s): 1053364-1053373		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: W191381AA	Sample number(s): 1053375		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2042995
Reported: 06/25/2019 15:52

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: W191381AB	Sample number(s): 1053374		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 5191371AA	Sample number(s): 1053364-1053373								
Acetone	150	171.23			114		54-157		
Benzene	20	21.25			106		80-120		
2-Butanone	150	132.06			88		59-135		
Carbon Disulfide	20	19.01			95		65-128		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2042995
Reported: 06/25/2019 15:52

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Chloroform	20	24.06			120		80-120		
1,2-Dichlorobenzene	20	20.84			104		80-120		
1,1-Dichloroethane	20	21.91			110		80-120		
1,2-Dichloroethane	20	26.8			134*		73-124		
1,1-Dichloroethene	20	21.57			108		80-131		
cis-1,2-Dichloroethene	20	22.31			112		80-125		
trans-1,2-Dichloroethene	20	21.31			107		80-126		
1,4-Dioxane	500	655.6			131		63-146		
Ethylbenzene	20	22.05			110		80-120		
Freon 113	20	25.15			126		73-139		
Methylene Chloride	20	21.41			107		80-120		
Naphthalene	20	20.33			102		53-124		
Tetrachloroethene	20	22.3			112		80-120		
Toluene	20	20.73			104		80-120		
1,1,1-Trichloroethane	20	24.96			125		67-126		
Trichloroethene	20	22.68			113		80-120		
Vinyl Chloride	20	22.45			112		56-120		
Xylene (Total)	60	64.35			107		80-120		
Batch number: W191381AA	Sample number(s): 1053375								
Acetone	150	232.25			155		54-157		
Benzene	20	21.23			106		80-120		
2-Butanone	150	138.32			92		59-135		
Carbon Disulfide	20	14.84			74		65-128		
Chloroform	20	22.02			110		80-120		
1,2-Dichlorobenzene	20	23.33			117		80-120		
1,1-Dichloroethane	20	20.55			103		80-120		
1,2-Dichloroethane	20	22.71			114		73-124		
1,1-Dichloroethene	20	21.55			108		80-131		
cis-1,2-Dichloroethene	20	22.59			113		80-125		
trans-1,2-Dichloroethene	20	21.31			107		80-126		
1,4-Dioxane	500	634.79			127		63-146		
Ethylbenzene	20	22.91			115		80-120		
Freon 113	20	20.75			104		73-139		
Methylene Chloride	20	19.52			98		80-120		
Naphthalene	20	19.87			99		53-124		
Tetrachloroethene	20	24.53			123*		80-120		
Toluene	20	23.74			119		80-120		
1,1,1-Trichloroethane	20	21.86			109		67-126		
Trichloroethene	20	21.31			107		80-120		
Vinyl Chloride	20	16.74			84		56-120		
Xylene (Total)	60	69.7			116		80-120		
Batch number: W191381AB	Sample number(s): 1053374								
Acetone	150	191.15			127		54-157		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2042995
Reported: 06/25/2019 15:52

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Benzene	20	19.95			100		80-120		
2-Butanone	150	122.11			81		59-135		
Carbon Disulfide	20	14.45			72		65-128		
Chloroform	20	21.88			109		80-120		
1,2-Dichlorobenzene	20	22.23			111		80-120		
1,1-Dichloroethane	20	20.13			101		80-120		
1,2-Dichloroethane	20	22.6			113		73-124		
1,1-Dichloroethene	20	19.42			97		80-131		
cis-1,2-Dichloroethene	20	21.76			109		80-125		
trans-1,2-Dichloroethene	20	20.47			102		80-126		
1,4-Dioxane	500	685.86			137		63-146		
Ethylbenzene	20	21.55			108		80-120		
Freon 113	20	20.75			104		73-139		
Methylene Chloride	20	19.62			98		80-120		
Naphthalene	20	17.52			88		53-124		
Tetrachloroethene	20	23.67			118		80-120		
Toluene	20	22.06			110		80-120		
1,1,1-Trichloroethane	20	20.62			103		67-126		
Trichloroethene	20	20.36			102		80-120		
Vinyl Chloride	20	15.37			77		56-120		
Xylene (Total)	60	66.49			111		80-120		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 5191371AA	Sample number(s): 1053364-1053373 UNSPK: 1053368									
Acetone	1.55	150	166.82	150	154.94	110	102	54-157	7	30
Benzene	N.D.	20	22.61	20	22.43	113	112	80-120	1	30
2-Butanone	N.D.	150	132.04	150	135.54	88	90	59-135	3	30
Carbon Disulfide	N.D.	20	21.1	20	21.06	106	105	65-128	0	30
Chloroform	N.D.	20	26.01	20	25.84	130*	129*	80-120	1	30
1,2-Dichlorobenzene	N.D.	20	22.09	20	21.89	110	109	80-120	1	30
1,1-Dichloroethane	0.529	20	24.16	20	24.1	118	118	80-120	0	30
1,2-Dichloroethane	N.D.	20	29.32	20	28.39	147*	142*	73-124	3	30
1,1-Dichloroethene	N.D.	20	24.21	20	23.98	121	120	80-131	1	30
cis-1,2-Dichloroethene	0.507	20	24.41	20	24.4	120	119	80-120	0	30
trans-1,2-Dichloroethene	N.D.	20	23.18	20	23.08	116	115	80-120	0	30
1,4-Dioxane	N.D.	500	652.52	500	655.81	131	131	63-146	1	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2042995
Reported: 06/25/2019 15:52

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Ethylbenzene	N.D.	20	23.69	20	23.47	118	117	80-120	1	30
Freon 113	N.D.	20	30.1	20	29.3	151*	146*	73-139	3	30
Methylene Chloride	N.D.	20	22.62	20	22.55	113	113	80-120	0	30
Naphthalene	N.D.	20	19.45	20	20.02	97	100	53-124	3	30
Tetrachloroethene	0.928	20	24.98	20	24.79	120	119	80-120	1	30
Toluene	N.D.	20	21.84	20	22.19	109	111	80-120	2	30
1,1,1-Trichloroethane	N.D.	20	30.32	20	29.85	152*	149*	67-126	2	30
Trichloroethene	7.65	20	32.92	20	32.52	126*	124*	80-120	1	30
Vinyl Chloride	N.D.	20	23.79	20	24.36	119	122*	56-120	2	30
Xylene (Total)	N.D.	60	68.69	60	68.93	114	115	80-120	0	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: 5191371AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1053364	111	105	99	99
1053365	114	107	99	98
1053366	115	107	98	97
1053367	116	108	98	98
1053368	115	106	98	98
1053369	112	102	101	108
1053370	110	102	101	106
1053371	116	107	98	97
1053372	118	108	97	98
1053373	118	108	98	97
Blank	112	106	98	98
LCS	110	105	102	106
MS	112	102	101	108
MSD	110	102	101	106
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: W191381AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1053375	97	101	100	86

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2042995
Reported: 06/25/2019 15:52

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: W191381AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
Blank	97	99	100	86
LCS	96	93	103	93
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: W191381AB

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1053374	98	103	100	85
Blank	97	99	100	87
LCS	97	101	103	94
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 6556 Group # 2042995 Sample # 1053364-75

COC #583003

Client Information

Client: The Johnson Company / VHB	Acct. #: 06556
Project Name/#: AD - New Windsor / 58300 / 1-0145-05	PWSID #:
Project Manager: George Lester	P.O. #:
Sampler: Adam Robtoy	Quote #:
State where samples were collected: NY	For Compliance: Yes ☐ No ☒

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☒ NPDES ☐ Surface ☒ | Other: ____

Analysis Requested — Preservation and Filtration Codes: H

For Lab Use Only
FSC:
SCR#: 242544

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Water	Other	Total # of Containers	8260-VOCs	Remarks
RS-12	5/6/19	1453	X			X		3	X	
RS-01	5/6/19	1500	X			X		3	X	
RS-09	5/6/19	1509	X			X		3	X	
RS-Dup	5/6/19	1400	X			X		3	X	
RS-03	5/6/19	1530	X			X	9	~~3~~	X	MS/MSD
RS-13	5/6/19	1540	X			X		3	X	
RS-10	5/6/19	1555	X			X		3	X	
RS-02	5/6/19	1605	X			X		3	X	
RS-11	5/6/19	1615	X			X		3	X	
PDB Blank	5/6/19	1800	X			DI		3	X	Blank

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: ____

E-mail address: Glester@vhb.com

Relinquished by	Date	Time	Received by	Date	Time
[signature]	4-30-19	1345	[signature]	5/6/19	730
[signature]	5/8/19	1730			
			[signature]	5.9.19	1030

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

EDD Required? Yes No
If yes, format: Excel

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ✓ Other ____

Temperature upon receipt 2.3 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 248557

Group Number(s): 2042995

Client: The Johnson Company

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	05/09/2019 10:30
Number of Packages:	1	Number of Projects:	2
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	No
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Darian Jaynes (29952) at 19:46 on 05/09/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	2.3	DT	Wet	Y	Bagged	N

Sample ID Discrepancy Details

Sample ID on COC	Sample ID on Label	Comments
RS-03 MS	RS-03	

2425 New Holland Pike
Lancaster, PA 17605-2425
T 717-656-2300
F 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCV89

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
1053364	RS-12	X		1	
1053365	RS-01	X		1	
1053366	RS-09	X		1	
1053367	RS-DUP	X		1	
1053368	RS-03	X		1	Unspiked
1053369	RS-03 MS	X		1	Matrix Spike
1053370	RS-03 MSD	X		1	Matrix Spike Duplicate
1053371	RS-13	X		1	
1053372	RS-10	X		1	
1053373	RS-02	X		1	
1053374	RS-11	X		1	
1053375	PDB Blank	X		1	Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

(Sample number(s): 1053374: Analysis: 11997)
A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCV89

GC/MS Volatiles

Fraction: Volatiles by GC/MS

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

LCS/LCSD

(Sample number(s): 1053375: Analysis: 11997)
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

Batch#: W191381AA (Sample number(s): 1053375)
The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: Tetrachloroethene

Batch#: 5191371AA (Sample number(s): 1053364-1053373, UNSPK: 1053368)
The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: 1,2-Dichloroethane

MS/MSD

Batch#: 5191371AA (Sample number(s): 1053364-1053373, UNSPK: 1053368)
The recovery(ies) for the following analyte(s) in the MSD exceeded the acceptance window indicating a positive bias:Vinyl Chloride
The recovery(ies) for the following analyte(s) in the MS and MSD exceeded the acceptance window indicating a positive bias: 1,1,1-Trichloroethane, 1,2-Dichloroethane, Chloroform, Freon 113, Trichloroethene

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCV89

GC/MS Volatiles

Fraction: Volatiles by GC/MS

1. Relative Response Factor (RRF)

$$RRF = \frac{AX}{Ais} \times \frac{Cis}{Cx}$$

Where:

Ax = Area of the characteristic ion for the compound to be measured
Ais = Area of the characteristic ion for the specific internal standard to be measured
Cis = Concentration of the internal standard
Cx = Concentration of the compound to be measured

2. % Relative Standard Deviation (%RSD)

$$\%RSD = \frac{standard\ deviation}{Mean} \times 100$$

3. % Difference

$$\%D = \frac{RRFc - RRFi}{RRFi} \times 100$$

Where:

RRFc = Relative response factor from the continuing calibration standard
RRFi = Mean relative response factor from the initial calibration

4. Concentration

$$Concentration\ (\mu g/L) = \frac{(Ax)(Is)(Df)}{(Ais)(RRF)}$$

Where:

Ax, Ais, and RRF are as given in 1. above
Is = Amount of internal standard added in parts per billion (µg/L)
Df = Dilution factor

5. % Recovery (% Rec)

$$\%Rec = \frac{SSR - SR}{SA} \times 100$$

Where:

SSR = Spiked sample result
SR = Sample result
SA = Spike added

6. Relative Percent Difference (RPD)

$$RPD = \frac{(MSR - MSRD)}{(1/2)(MSR + MSRD)} \times 100$$

Where:

MSR = Matrix spike recovery
MSRD = Matrix spike recovery duplicate

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: The Johnson Company, Inc.
SDG: JCV89

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
VOCs- 5ml Water by 8260C/D	5191371AA	VBLK587	05/17/2019 08:59
		LCS587	05/17/2019 08:38
		1053364	05/17/2019 11:56
		1053365	05/17/2019 12:17
		1053366	05/17/2019 12:38
		1053367	05/17/2019 12:59
		1053368 UNSPK	05/17/2019 10:53
		1053369 MS	05/17/2019 11:13
		1053370 MSD	05/17/2019 11:34
		1053371	05/17/2019 13:21
		1053372	05/17/2019 13:41
		1053373	05/17/2019 14:03
VOCs- 5ml Water by 8260C/D	W191381AA	VBLKW23	05/18/2019 23:17
		LCSW23	05/18/2019 22:29
		1053375 BL	05/18/2019 23:41
VOCs- 5ml Water by 8260C/D	W191381AB	VBLKW24	05/19/2019 12:20
		LCSW24	05/19/2019 12:44
		1053374	05/19/2019 13:31

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: JCV89
Matrix: LIQUID

Fraction: Volatiles by GC/MS

5191371AA / VBLK587 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	05/17/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	05/17/19	N.D.	ug/l	0.2	1
Acetone	05/17/19	N.D.	ug/l	0.7	20
Freon 113	05/17/19	N.D.	ug/l	0.2	10
Carbon Disulfide	05/17/19	N.D.	ug/l	0.2	5
Methylene Chloride	05/17/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	05/17/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	05/17/19	N.D.	ug/l	0.2	1
2-Butanone	05/17/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	05/17/19	N.D.	ug/l	0.2	1
Chloroform	05/17/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	05/17/19	N.D.	ug/l	0.3	1
Benzene	05/17/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	05/17/19	N.D.	ug/l	0.3	1
Trichloroethene	05/17/19	N.D.	ug/l	0.2	1
1,4-Dioxane	05/17/19	N.D.	ug/l	29	250
Toluene	05/17/19	N.D.	ug/l	0.2	1
Tetrachloroethene	05/17/19	N.D.	ug/l	0.2	1
Ethylbenzene	05/17/19	N.D.	ug/l	0.4	1
Xylene (Total)	05/17/19	N.D.	ug/l	1	5
1,2-Dichlorobenzene	05/17/19	N.D.	ug/l	0.2	5
Naphthalene	05/17/19	N.D.	ug/l	1	5

W191381AA / VBLKW23 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	05/18/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	05/18/19	N.D.	ug/l	0.2	1
Acetone	05/18/19	N.D.	ug/l	0.7	20
Freon 113	05/18/19	N.D.	ug/l	0.2	10
Carbon Disulfide	05/18/19	N.D.	ug/l	0.2	5
Methylene Chloride	05/18/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	05/18/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	05/18/19	N.D.	ug/l	0.2	1
2-Butanone	05/18/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	05/18/19	N.D.	ug/l	0.2	1
Chloroform	05/18/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	05/18/19	N.D.	ug/l	0.3	1
Benzene	05/18/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	05/18/19	N.D.	ug/l	0.3	1
Trichloroethene	05/18/19	N.D.	ug/l	0.2	1
1,4-Dioxane	05/18/19	N.D.	ug/l	29	250
Toluene	05/18/19	N.D.	ug/l	0.2	1
Tetrachloroethene	05/18/19	N.D.	ug/l	0.2	1
Ethylbenzene	05/18/19	N.D.	ug/l	0.4	1
Xylene (Total)	05/18/19	N.D.	ug/l	1	5

Fraction: Volatiles by GC/MS

W191381AA / VBLKW23 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
1,2-Dichlorobenzene	05/18/19	N.D.	ug/l	0.2	5
Naphthalene	05/18/19	N.D.	ug/l	1	5

W191381AB / VBLKW24 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	05/19/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	05/19/19	N.D.	ug/l	0.2	1
Acetone	05/19/19	N.D.	ug/l	0.7	20
Freon 113	05/19/19	N.D.	ug/l	0.2	10
Carbon Disulfide	05/19/19	N.D.	ug/l	0.2	5
Methylene Chloride	05/19/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	05/19/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	05/19/19	N.D.	ug/l	0.2	1
2-Butanone	05/19/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	05/19/19	N.D.	ug/l	0.2	1
Chloroform	05/19/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	05/19/19	N.D.	ug/l	0.3	1
Benzene	05/19/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	05/19/19	N.D.	ug/l	0.3	1
Trichloroethene	05/19/19	N.D.	ug/l	0.2	1
1,4-Dioxane	05/19/19	N.D.	ug/l	29	250
Toluene	05/19/19	N.D.	ug/l	0.2	1
Tetrachloroethene	05/19/19	N.D.	ug/l	0.2	1
Ethylbenzene	05/19/19	N.D.	ug/l	0.4	1
Xylene (Total)	05/19/19	N.D.	ug/l	1	5
1,2-Dichlorobenzene	05/19/19	N.D.	ug/l	0.2	5
Naphthalene	05/19/19	N.D.	ug/l	1	5

Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: JCV89
Matrix: LIQUID

Fraction: Volatiles by GC/MS

5191371AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLK587	106	80 - 120	98	80 - 120	112	80 - 120	98	80 - 120
LCS587	105	80 - 120	106	80 - 120	110	80 - 120	102	80 - 120
1053364	105	80 - 120	99	80 - 120	111	80 - 120	99	80 - 120
1053365	107	80 - 120	98	80 - 120	114	80 - 120	99	80 - 120
1053366	107	80 - 120	97	80 - 120	115	80 - 120	98	80 - 120
1053367	108	80 - 120	98	80 - 120	116	80 - 120	98	80 - 120
1053368 UNSPK	106	80 - 120	98	80 - 120	115	80 - 120	98	80 - 120
1053369 MS	102	80 - 120	108	80 - 120	112	80 - 120	101	80 - 120
1053370 MSD	102	80 - 120	106	80 - 120	110	80 - 120	101	80 - 120
1053371	107	80 - 120	97	80 - 120	116	80 - 120	98	80 - 120
1053372	108	80 - 120	98	80 - 120	118	80 - 120	97	80 - 120
1053373	108	80 - 120	97	80 - 120	118	80 - 120	98	80 - 120

W191381AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKW23	99	80 - 120	86	80 - 120	97	80 - 120	100	80 - 120
LCSW23	93	80 - 120	93	80 - 120	96	80 - 120	103	80 - 120
1053375	101	80 - 120	86	80 - 120	97	80 - 120	100	80 - 120

W191381AB	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKW24	99	80 - 120	87	80 - 120	97	80 - 120	100	80 - 120
LCSW24	101	80 - 120	94	80 - 120	97	80 - 120	103	80 - 120
1053374	103	80 - 120	85	80 - 120	98	80 - 120	100	80 - 120

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 1053368 MS: 1053369 MSD: 1053370 **Analyte**	Batch: **5191371AA** (Sample number(s): 1053364-1053373)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	N.D.	23.79	24.36	119	122 *	56-120	2	30
1,1-Dichloroethene	20	N.D.	24.21	23.98	121	120	80-131	1	30
Acetone	150	1.55 J	166.82	154.94	110	102	54-157	7	30
Freon 113	20	N.D.	30.1	29.3	151 *	146 *	73-139	3	30
Carbon Disulfide	20	N.D.	21.1	21.06	106	105	65-128	0	30
Methylene Chloride	20	N.D.	22.62	22.55	113	113	80-120	0	30
trans-1,2-Dichloroethene	20	N.D.	23.18	23.08	116	115	80-120	0	30
1,1-Dichloroethane	20	0.529 J	24.16	24.1	118	118	80-120	0	30
2-Butanone	150	N.D.	132.04	135.54	88	90	59-135	3	30
cis-1,2-Dichloroethene	20	0.507 J	24.41	24.4	120	119	80-120	0	30
1,1,1-Trichloroethane	20	N.D.	30.32	29.85	152 *	149 *	67-126	2	30
Chloroform	20	N.D.	26.01	25.84	130 *	129 *	80-120	1	30
1,2-Dichloroethane	20	N.D.	29.32	28.39	147 *	142 *	73-124	3	30
Benzene	20	N.D.	22.61	22.43	113	112	80-120	1	30
Trichloroethene	20	7.65	32.92	32.52	126 *	124 *	80-120	1	30
1,4-Dioxane	500	N.D.	652.52	655.81	131	131	63-146	1	30
Toluene	20	N.D.	21.84	22.19	109	111	80-120	2	30
Tetrachloroethene	20	0.928 J	24.98	24.79	120	119	80-120	1	30
Ethylbenzene	20	N.D.	23.69	23.47	118	117	80-120	1	30
Xylene (Total)	60	N.D.	68.69	68.93	114	115	80-120	0	30
1,2-Dichlorobenzene	20	N.D.	22.09	21.89	110	109	80-120	1	30
Naphthalene	20	N.D.	19.45	20.02	97	100	53-124	3	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCS587	Batch: **5191371AA** (Sample number(s): 1053364-1053373)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	22.45	NA	112	NA	56-120	NA	NA
1,1-Dichloroethene	20	21.57	NA	108	NA	80-131	NA	NA
Acetone	150	171.23	NA	114	NA	54-157	NA	NA
Freon 113	20	25.15	NA	126	NA	73-139	NA	NA
Carbon Disulfide	20	19.01	NA	95	NA	65-128	NA	NA
Methylene Chloride	20	21.41	NA	107	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	21.31	NA	107	NA	80-126	NA	NA
1,1-Dichloroethane	20	21.91	NA	110	NA	80-120	NA	NA
2-Butanone	150	132.06	NA	88	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	22.31	NA	112	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	24.96	NA	125	NA	67-126	NA	NA
Chloroform	20	24.06	NA	120	NA	80-120	NA	NA
1,2-Dichloroethane	20	26.8	NA	134 *	NA	73-124	NA	NA
Benzene	20	21.25	NA	106	NA	80-120	NA	NA
Trichloroethene	20	22.68	NA	113	NA	80-120	NA	NA
1,4-Dioxane	500	655.6	NA	131	NA	63-146	NA	NA
Toluene	20	20.73	NA	104	NA	80-120	NA	NA
Tetrachloroethene	20	22.3	NA	112	NA	80-120	NA	NA
Ethylbenzene	20	22.05	NA	110	NA	80-120	NA	NA
Xylene (Total)	60	64.35	NA	107	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	20.84	NA	104	NA	80-120	NA	NA
Naphthalene	20	20.33	NA	102	NA	53-124	NA	NA

LCS: LCSW23	Batch: **W191381AA** (Sample number(s): 1053375)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	16.74	NA	84	NA	56-120	NA	NA
1,1-Dichloroethene	20	21.55	NA	108	NA	80-131	NA	NA
Acetone	150	232.25	NA	155	NA	54-157	NA	NA
Freon 113	20	20.75	NA	104	NA	73-139	NA	NA
Carbon Disulfide	20	14.84	NA	74	NA	65-128	NA	NA
Methylene Chloride	20	19.52	NA	98	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	21.31	NA	107	NA	80-126	NA	NA
1,1-Dichloroethane	20	20.55	NA	103	NA	80-120	NA	NA
2-Butanone	150	138.32	NA	92	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	22.59	NA	113	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	21.86	NA	109	NA	67-126	NA	NA
Chloroform	20	22.02	NA	110	NA	80-120	NA	NA
1,2-Dichloroethane	20	22.71	NA	114	NA	73-124	NA	NA
Benzene	20	21.23	NA	106	NA	80-120	NA	NA
Trichloroethene	20	21.31	NA	107	NA	80-120	NA	NA

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSW23	Batch: **W191381AA** (Sample number(s): 1053375)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
1,4-Dioxane	500	634.79	NA	127	NA	63-146	NA	NA
Toluene	20	23.74	NA	119	NA	80-120	NA	NA
Tetrachloroethene	20	24.53	NA	123 *	NA	80-120	NA	NA
Ethylbenzene	20	22.91	NA	115	NA	80-120	NA	NA
Xylene (Total)	60	69.7	NA	116	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	23.33	NA	117	NA	80-120	NA	NA
Naphthalene	20	19.87	NA	99	NA	53-124	NA	NA

LCS: LCSW24	Batch: **W191381AB** (Sample number(s): 1053374)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	15.37	NA	77	NA	56-120	NA	NA
1,1-Dichloroethene	20	19.42	NA	97	NA	80-131	NA	NA
Acetone	150	191.15	NA	127	NA	54-157	NA	NA
Freon 113	20	20.75	NA	104	NA	73-139	NA	NA
Carbon Disulfide	20	14.45	NA	72	NA	65-128	NA	NA
Methylene Chloride	20	19.62	NA	98	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	20.47	NA	102	NA	80-126	NA	NA
1,1-Dichloroethane	20	20.13	NA	101	NA	80-120	NA	NA
2-Butanone	150	122.11	NA	81	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	21.76	NA	109	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	20.62	NA	103	NA	67-126	NA	NA
Chloroform	20	21.88	NA	109	NA	80-120	NA	NA
1,2-Dichloroethane	20	22.6	NA	113	NA	73-124	NA	NA
Benzene	20	19.95	NA	100	NA	80-120	NA	NA
Trichloroethene	20	20.36	NA	102	NA	80-120	NA	NA
1,4-Dioxane	500	685.86	NA	137	NA	63-146	NA	NA
Toluene	20	22.06	NA	110	NA	80-120	NA	NA
Tetrachloroethene	20	23.67	NA	118	NA	80-120	NA	NA
Ethylbenzene	20	21.55	NA	108	NA	80-120	NA	NA
Xylene (Total)	60	66.49	NA	111	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	22.23	NA	111	NA	80-120	NA	NA
Naphthalene	20	17.52	NA	88	NA	53-124	NA	NA

Fraction: Volatiles by GC/MS

11997: VOCs- 5ml Water by 8260C/D Analyte Name	Default MDL	Default LOQ	Units
Vinyl Chloride	0.2	1	ug/l
1,1-Dichloroethene	0.2	1	ug/l
Acetone	0.7	20	ug/l
Freon 113	0.2	10	ug/l
Carbon Disulfide	0.2	5	ug/l
Methylene Chloride	0.3	1	ug/l
trans-1,2-Dichloroethene	0.2	1	ug/l
1,1-Dichloroethane	0.2	1	ug/l
2-Butanone	0.3	10	ug/l
cis-1,2-Dichloroethene	0.2	1	ug/l
Chloroform	0.2	1	ug/l
1,1,1-Trichloroethane	0.3	1	ug/l
Benzene	0.2	1	ug/l
1,2-Dichloroethane	0.3	1	ug/l
Trichloroethene	0.2	1	ug/l
1,4-Dioxane	29	250	ug/l
Toluene	0.2	1	ug/l
Tetrachloroethene	0.2	1	ug/l
Ethylbenzene	0.4	1	ug/l
Xylene (Total)	1	5	ug/l
1,2-Dichlorobenzene	0.2	5	ug/l
Naphthalene	1	5	ug/l

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: wf19t01.d BFB Injection Date: 02/19/19

Instrument ID: HP09137 BFB Injection Time: 11:32

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.42
75	30.0 - 60.0% of mass 95	45.48
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.75
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	82.25
175	5.0 - 9.0% of mass 174	5.88 (7.14)1
176	Greater than 95.0%, but less than 101.0% of mass 174	79.33 (96.46)1
177	5.0 - 9.0% of mass 176	5.24 (6.60)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	wf19i01.d	02/19/19	12:21
02	VSTD100	wf19i02.d	02/19/19	12:45
03	VSTD50	wf19i03.d	02/19/19	13:09
04	VSTD20	wf19i04.d	02/19/19	13:33
05	VSTD10	wf19i05.d	02/19/19	13:57
06	VSTD4	wf19i06.d	02/19/19	14:21
07	VSTD1	wf19i07.d	02/19/19	14:44

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: wf20t01.d BFB Injection Date: 02/20/19

Instrument ID: HP09137 BFB Injection Time: 08:47

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.92
75	30.0 - 60.0% of mass 95	44.90
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.65
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	88.14
175	5.0 - 9.0% of mass 174	6.26 (7.10)1
176	Greater than 95.0%, but less than 101.0% of mass 174	84.40 (95.75)1
177	5.0 - 9.0% of mass 176	5.69 (6.75)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	wf20c02.d	02/20/19	10:55
02	LCSW62	wf20l01.d	02/20/19	12:07

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: wy18t01.d BFB Injection Date: 05/18/19

Instrument ID: HP09137 BFB Injection Time: 21:44

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.64
75	30.0 - 60.0% of mass 95	46.44
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.84
173	Less than 2.0% of mass 174	0.33 (0.35)1
174	Greater than 50.0% of mass 95	92.20
175	5.0 - 9.0% of mass 174	6.62 (7.18)1
176	Greater than 95.0%, but less than 101.0% of mass 174	90.49 (98.15)1
177	5.0 - 9.0% of mass 176	5.78 (6.39)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	wy18c01.d	05/18/19	22:05
02	LCSW23	wy18s01.d	05/18/19	22:29
03	VBLKW23	wy18b01.d	05/18/19	23:17
04	1053375	wy18s02.d	05/18/19	23:41
05	1053376	wy18s04.d	05/19/19	00:28
06	1053379	wy18s07.d	05/19/19	01:39
07	1053382	wy18s10.d	05/19/19	02:51
08	1053383	wy18s11.d	05/19/19	03:15
09	1053360MS	wy18s13.d	05/19/19	04:02
10	1053361MSD	wy18s14.d	05/19/19	04:26
11	1053352	wy18s15.d	05/19/19	04:50
12	1053353	wy18s16.d	05/19/19	05:14
13	1053354	wy18s17.d	05/19/19	05:38
14	1053355	wy18s18.d	05/19/19	06:01
15	1053356	wy18s19.d	05/19/19	06:25
16	1053357	wy18s20.d	05/19/19	06:49
17	1053358	wy18s21.d	05/19/19	07:13
18	1053362	wy18s22.d	05/19/19	07:36
19	1053363	wy18s23.d	05/19/19	08:00

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: wy19t01.d BFB Injection Date: 05/19/19

Instrument ID: HP09137 BFB Injection Time: 11:04

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.56
75	30.0 - 60.0% of mass 95	45.66
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.73
173	Less than 2.0% of mass 174	0.17 (0.18)1
174	Greater than 50.0% of mass 95	94.07
175	5.0 - 9.0% of mass 174	6.39 (6.80)1
176	Greater than 95.0%, but less than 101.0% of mass 174	90.96 (96.69)1
177	5.0 - 9.0% of mass 176	6.02 (6.62)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	wy19c01.d	05/19/19	11:32
02	VBLKW24	wy19b02.d	05/19/19	12:20
03	VBLKW25	wy19b10.d	05/19/19	12:20
04	LCSW24	wy19l01.d	05/19/19	12:44
05	LCSW25	wy19l10.d	05/19/19	12:44
06	MDL0.5 - MDL0.5	wy19m01.d	05/19/19	13:07
07	MDL0.5 - MDL0.5	wy19m10.d	05/19/19	13:07
08	1053374	wy19s02.d	05/19/19	13:31
09	1053377	wy19s03.d	05/19/19	13:55
10	1053378	wy19s04.d	05/19/19	14:18
11	1053380	wy19s05.d	05/19/19	14:42
12	1053381	wy19s06.d	05/19/19	15:06
13	1053359	wy19s07.d	05/19/19	15:30
14	1052544	wy19s11.d	05/19/19	16:17
15	1052546	wy19s13.d	05/19/19	17:05
16	1052547MS	wy19s14.d	05/19/19	17:29
17	1052548MSD	wy19s15.d	05/19/19	17:52
18	1052549	wy19s16.d	05/19/19	18:16
19	1052550	wy19s17.d	05/19/19	18:40
20	1052551	wy19s18.d	05/19/19	19:04
21	1052552	wy19s19.d	05/19/19	19:28
22	1052553	wy19s20.d	05/19/19	19:52

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: wy19t01.d BFB Injection Date: 05/19/19

Instrument ID: HP09137 BFB Injection Time: 11:04

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.56
75	30.0 - 60.0% of mass 95	45.66
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.73
173	Less than 2.0% of mass 174	0.17 (0.18)1
174	Greater than 50.0% of mass 95	94.07
175	5.0 - 9.0% of mass 174	6.39 (6.80)1
176	Greater than 95.0%, but less than 101.0% of mass 174	90.96 (96.69)1
177	5.0 - 9.0% of mass 176	6.02 (6.62)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1052554	wy19s21.d	05/19/19	20:15
24	1052556	wy19s23.d	05/19/19	21:03
25	1052987	wy19s24.d	05/19/19	21:27
26	SECC050	wy19ec1.d	05/19/19	22:14

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: 5m25t01.d BFB Injection Date: 03/25/19

Instrument ID: HP26285 BFB Injection Time: 11:37

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.60
75	30.0 - 60.0% of mass 95	45.32
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.45
173	Less than 2.0% of mass 174	0.52 (0.59)1
174	Greater than 50.0% of mass 95	88.26
175	5.0 - 9.0% of mass 174	6.13 (6.95)1
176	Greater than 95.0%, but less than 101.0% of mass 174	85.76 (97.17)1
177	5.0 - 9.0% of mass 176	5.62 (6.55)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	5m25i01.d	03/25/19	12:48
02	VSTD100	5m25i02.d	03/25/19	13:10
03	VSTD50	5m25i03.d	03/25/19	13:31
04	VSTD20	5m25i04.d	03/25/19	13:52
05	VSTD10	5m25i05.d	03/25/19	14:13
06	VSTD4	5m25i06.d	03/25/19	14:34
07	VSTD1	5m25i07.d	03/25/19	14:55
08	LG5ICV	5c25v01.d	03/25/19	15:38
09	VSTD300	5m25i11.d	03/25/19	16:21
10	VSTD100	5m25i12.d	03/25/19	16:42
11	VSTD50	5m25i13.d	03/25/19	17:03
12	VSTD20	5m25i14.d	03/25/19	17:24
13	VSTD10	5m25i15.d	03/25/19	17:45
14	VSTD4	5m25i16.d	03/25/19	18:06
15	VSTD1	5m25i17.d	03/25/19	18:27
16	SM5ICV	5m25v11.d	03/25/19	19:09

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: 5y17t01.d BFB Injection Date: 05/17/19

Instrument ID: HP26285 BFB Injection Time: 07:34

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.13
75	30.0 - 60.0% of mass 95	49.49
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.57
173	Less than 2.0% of mass 174	0.54 (0.61)1
174	Greater than 50.0% of mass 95	89.56
175	5.0 - 9.0% of mass 174	6.14 (6.86)1
176	Greater than 95.0%, but less than 101.0% of mass 174	86.50 (96.58)1
177	5.0 - 9.0% of mass 176	5.67 (6.56)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	5y17c01.d	05/17/19	08:17
02	LCS587	5y17s01.d	05/17/19	08:38
03	VBLK587	5y17b01.d	05/17/19	08:59
04	1051582	5y17s02.d	05/17/19	10:31
05	1053368	5y17s03.d	05/17/19	10:53
06	1053369MS	5y17s04.d	05/17/19	11:13
07	1053370MSD	5y17s05.d	05/17/19	11:34
08	1053364	5y17s06.d	05/17/19	11:56
09	1053365	5y17s07.d	05/17/19	12:17
10	1053366	5y17s08.d	05/17/19	12:38
11	1053367	5y17s09.d	05/17/19	12:59
12	1053371	5y17s10.d	05/17/19	13:21
13	1053372	5y17s11.d	05/17/19	13:41
14	1053373	5y17s12.d	05/17/19	14:03
15	1051576	5y17s14.d	05/17/19	14:45
16	1051578	5y17s15.d	05/17/19	15:06
17	1051575	5y17s16.d	05/17/19	15:27
18	1051577	5y17s17.d	05/17/19	15:49
19	1051580	5y17s18.d	05/17/19	16:10
20	1051573	5y17s19.d	05/17/19	16:30
21	1051581	5y17s20.d	05/17/19	16:51
22	1051579	5y17s22.d	05/17/19	17:33

FORM V VOA

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6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date(s): 02/19/19 02/19/19

Heated Purge: (Y/N) Y Calibration Times: 12:21 14:44

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = wf19i07.d RRF 4 = wf19i06.d RRF 10= wf19i05.d
RRF 20= wf19i04.d RRF 50= wf19i03.d RRF100= wf19i02.d RRF300= wf19i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
Dichlorodifluoromethane	#0.2226	0.3389	0.3578	0.3419	0.3457	0.3161	0.3402	0.3233	14	AVG	#
Chloromethane	#0.3772	0.4124	0.4406	0.3916	0.4019	0.3931	0.4012	0.4026	5	AVG	#
1,3-Butadiene	0.2727	0.2671	0.2452	0.2384	0.2307	0.2227	0.2406	0.2453	7	AVG	
Vinyl Chloride	#0.3158	0.3797	0.4161	0.3707	0.3685	0.3608	0.3718	0.3690	8	AVG	#
Bromomethane	#0.2607	0.2971	0.3208	0.2821	0.2891	0.2884	0.2992	0.2911	6	AVG	#
Chloroethane	#0.2701	0.2583	0.2600	0.2307	0.2292	0.2238	0.2277	0.2429	8	AVG	#
Dichlorofluoromethane	0.4886	0.5016	0.4813	0.4622	0.4591	0.4389	0.4590	0.4701	5	AVG	
n-Pentane	0.4044	0.3731	0.3987	0.3753	0.3549	0.3420	0.3610	0.3728	6	AVG	
Trichlorofluoromethane	#0.2951	0.4078	0.4333	0.4060	0.4031	0.3866	0.4118	0.3920	11	AVG	#
Ethanol	0.1591	0.1102	0.1024	0.1020	0.1116	0.1084	0.1044	0.1140	18	AVG	
Freon 123a	0.3053	0.3155	0.3061	0.2927	0.2780	0.2657	0.2870	0.2929	6	AVG	
Acrolein	1.7818	1.7469	1.6939	1.8036	1.8632	1.8293	1.8801	1.7998	4	AVG	
1,1-Dichloroethene	#0.1644	0.2297	0.2356	0.2240	0.2253	0.2188	0.2454	0.2204	12	AVG	#
1,1-Dichloroethene(2)	#0.0944	0.1178	0.1203	0.1102	0.1113	0.1062	0.1183	0.1112	8	AVG	#
Acetone	#0.8713	0.8881	0.8570	0.9075	0.8853	0.8327	0.8818	0.8748	3	AVG	#
Freon 113	#0.1356	0.1900	0.2095	0.2086	0.2085	0.1927	0.2102	0.1936	14	AVG	#
2-Propanol	0.7040	0.6397	0.6307	0.6112	0.6739	0.6989	0.5915	0.6500	7	AVG	
Methyl Iodide	0.3680	0.4205	0.4432	0.4290	0.4261	0.4180	0.4524	0.4225	6	AVG	
Carbon Disulfide	#0.6814	0.7916	0.8333	0.7816	0.7719	0.7616	0.8153	0.7767	6	AVG	#
Allyl Chloride	0.3347	0.3590	0.3960	0.3881	0.4091	0.3892	0.4123	0.3841	7	AVG	
Methyl Acetate	#0.3825	0.3415	0.3321	0.3193	0.3250	0.3177	0.3090	0.3324	7	AVG	#
Methylene Chloride	#0.2739	0.2658	0.2838	0.2674	0.2651	0.2543	0.2761	0.2695	4	AVG	#
t-Butyl alcohol	1.1942	1.1621	1.1416	1.1288	1.2188	1.1948	1.0760	1.1595	4	AVG	
Acrylonitrile	0.1426	0.1746	0.1772	0.1870	0.1886	0.1805	0.1736	0.1749	9	AVG	
trans-1,2-Dichloroethene	#0.2033	0.2451	0.2573	0.2362	0.2397	0.2387	0.2541	0.2392	7	AVG	#
Methyl Tertiary Butyl Ether	#0.5358	0.5943	0.6552	0.6031	0.5822	0.5615	0.5446	0.5824	7	AVG	#
n-Hexane	0.2562	0.3096	0.3453	0.3150	0.3433	0.3197	0.3512	0.3200	10	AVG	
1,1-Dichloroethane	#0.3763	0.4330	0.4590	0.4370	0.4397	0.4346	0.4543	0.4334	6	AVG	#
di-Isopropyl ether	0.7905	0.8289	0.8791	0.8509	0.8427	0.8291	0.8074	0.8327	3	AVG	
2-Chloro-1,3-butadiene	0.3177	0.3681	0.3999	0.3841	0.3837	0.3754	0.3986	0.3754	7	AVG	
Ethyl t-butyl ether	0.5811	0.5848	0.6785	0.6482	0.6049	0.5702	0.5810	0.6069	7	AVG	
cis-1,2-Dichloroethene	#0.2366	0.2640	0.2849	0.2696	0.2719	0.2682	0.2847	0.2686	6	AVG	#
2-Butanone	#0.2598	0.2409	0.2472	0.2574	0.2591	0.2553	0.2390	0.2512	3	AVG	#
2,2-Dichloropropane	0.1716	0.2099	0.2086	0.2054	0.1988	0.1927	0.1756	0.1946	8	AVG	
Propionitrile	1.4394	1.4853	1.4411	1.3773	1.4094	1.3838	1.5509	1.4410	4	AVG	
Methacrylonitrile	0.1810	0.1879	0.1975	0.1843	0.1904	0.1848	0.1904	0.1880	3	AVG	
Bromochloromethane	0.1236	0.1333	0.1440	0.1403	0.1442	0.1406	0.1514	0.1396	6	AVG	
Tetrahydrofuran	1.2918	1.3520	1.1750	1.3657	1.3933	1.3069	1.4514	1.3337	7	AVG	
Chloroform	#0.3716	0.3946	0.4295	0.4104	0.4082	0.4049	0.4274	0.4067	5	AVG	#
1,1,1-Trichloroethane	#0.2496	0.3108	0.3281	0.3146	0.3147	0.3057	0.3184	0.3060	8	AVG	#
Cyclohexane	#0.3194	0.4199	0.4353	0.4172	0.4175	0.3935	0.4317	0.4049	10	AVG	#
Cyclohexane(2)	#0.2653	0.3458	0.3537	0.3442	0.3514	0.3279	0.3581	0.3352	10	AVG	#
Cyclohexane(3)	#0.0938	0.1266	0.1303	0.1244	0.1260	0.1188	0.1320	0.1217	11	AVG	#
1,1-Dichloropropene	0.2874	0.3392	0.3424	0.3250	0.3270	0.3193	0.3419	0.3260	6	AVG	
Carbon Tetrachloride	#0.2066	0.2621	0.2761	0.2668	0.2666	0.2671	0.2928	0.2626	10	AVG	#
Isobutyl Alcohol	0.4146	0.4172	0.4158	0.3919	0.4443	0.4523	0.4228	0.4227	5	AVG	
Benzene	#0.9632	1.0571	1.1117	1.0433	1.0439	1.0366	1.0801	1.0480	4	AVG	#
1,2-Dichloroethane	#0.3396	0.3176	0.3369	0.3145	0.3171	0.3133	0.3272	0.3237	3	AVG	#
1,2-Dichloroethane(2)	#0.0185	0.0303	0.0336	0.0330	0.0327	0.0326	0.0348	0.0308	18	AVG	#<-
t-Amyl methyl ether	0.6040	0.6173	0.7089	0.6493	0.6388	0.5916	0.5427	0.6218	8	AVG	
n-Heptane	0.2708	0.2864	0.3261	0.3135	0.3165	0.2938	0.3340	0.3059	7	AVG	
n-Butanol	0.3330	0.3444	0.3646	0.3552	0.4049	0.4250	0.4001	0.3753	9	AVG	

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date(s): 02/19/19 02/19/19

Heated Purge: (Y/N) Y Calibration Times: 12:21 14:44

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = wf19i07.d RRF 4 = wf19i06.d RRF 10= wf19i05.d
RRF 20= wf19i04.d RRF 50= wf19i03.d RRF100= wf19i02.d RRF300= wf19i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Trichloroethene	#0.2217	0.2561	0.2709	0.2546	0.2538	0.2533	0.2660	0.2538	6	AVG #
Methylcyclohexane	#0.2734	0.3769	0.3629	0.3936	0.4025	0.3619	0.4078	0.3684	12	AVG #
Methylcyclohexane(2)	#0.1290	0.1756	0.1682	0.1800	0.1871	0.1689	0.1904	0.1713	12	AVG #
1,2-Dichloropropane	#0.2298	0.2619	0.2854	0.2709	0.2752	0.2733	0.2870	0.2691	7	AVG #
Dibromomethane	0.1380	0.1607	0.1745	0.1685	0.1713	0.1705	0.1789	0.1661	8	AVG
1,4-Dioxane	0.1038	0.0985	0.1109	0.1097	0.1200	0.1211	0.1215	0.1122	8	AVG
Methyl Methacrylate	0.2548	0.2784	0.3021	0.2936	0.3109	0.3104	0.3196	0.2957	8	AVG
Bromodichloromethane	#0.2631	0.2827	0.3141	0.3042	0.3169	0.3198	0.3347	0.3051	8	AVG #
2-Nitropropane	0.0916	0.0888	0.0937	0.1060	0.1128	0.1166	0.1131	0.1032	11	AVG
2-Chloroethyl Vinyl Ether	0.1654	0.1740	0.2247	0.1981	0.2236	0.2230	0.2271	0.2051	13	AVG
cis-1,3-Dichloropropene	#0.3499	0.3892	0.4347	0.4211	0.4364	0.4412	0.4640	0.4195	9	AVG #
4-Methyl-2-pentanone	#0.4637	0.4627	0.4651	0.5077	0.5203	0.5569	0.4904	0.4953	7	AVG #
Toluene	#0.7057	0.7979	0.8800	0.8143	0.8160	0.7998	0.8359	0.8071	7	AVG #
trans-1,3-Dichloropropene	#0.4104	0.4287	0.5014	0.4799	0.5079	0.5047	0.5303	0.4805	9	AVG #
Ethyl Methacrylate	0.4511	0.5199	0.6156	0.6074	0.6469	0.6374	0.6547	0.5904	13	AVG
1,1,2-Trichloroethane	#0.2754	0.2925	0.3295	0.3107	0.3229	0.3186	0.3248	0.3106	6	AVG #
Tetrachloroethene	#0.2816	0.3316	0.3587	0.3284	0.3286	0.3219	0.3417	0.3275	7	AVG #
1,3-Dichloropropane	0.4849	0.4956	0.5806	0.5425	0.5594	0.5482	0.5658	0.5396	7	AVG
2-Hexanone	#0.4121	0.4279	0.4482	0.4830	0.5015	0.5532	0.4643	0.4700	10	AVG #
Dibromochloromethane	#0.2298	0.2541	0.3136	0.3074	0.3296	0.3340	0.3552	0.3034	15	AVG #
1,2-Dibromoethane	#0.2827	0.3112	0.3677	0.3476	0.3597	0.3529	0.3672	0.3413	9	AVG #
Chlorobenzene	#0.8240	0.8700	0.9551	0.8867	0.9011	0.8865	0.9441	0.8953	5	AVG #
1,1,1,2-Tetrachloroethane	0.2351	0.2578	0.3031	0.2863	0.3021	0.3027	0.3270	0.2877	11	AVG
Ethylbenzene	#1.3787	1.5070	1.6572	1.5278	1.5471	1.5272	1.5927	1.5340	6	AVG #
m+p-Xylene	#0.5272	0.5947	0.6616	0.6035	0.6158	0.6113	0.6551	0.6099	7	AVG #
o-Xylene	#0.5222	0.5852	0.6352	0.5944	0.6073	0.6020	0.6538	0.6000	7	AVG #
Styrene	#0.8130	0.9226	1.0653	1.0097	1.0480	1.0521	1.1351	1.0065	11	AVG #
Bromoform	#0.1670	0.1865	0.2373	0.2340	0.2615	0.2709	0.2958	0.2361	19	AVG #
Isopropylbenzene	#1.2646	1.4512	1.6012	1.4685	1.5055	1.4811	1.5487	1.4744	7	AVG #
Cyclohexanone	0.4871	0.4705	0.4632	0.4991	0.5298	0.5229	0.5703	0.5061	7	AVG
Bromobenzene	0.6884	0.7016	0.7569	0.7144	0.7206	0.7135	0.7459	0.7202	3	AVG
1,1,2,2-Tetrachloroethane	#0.8529	0.9108	1.0222	0.9763	1.0290	1.0105	0.9966	0.9712	7	AVG #
1,2,3-Trichloropropane	0.2565	0.2870	0.3041	0.2966	0.3075	0.3006	0.2955	0.2925	6	AVG
trans-1,4-Dichloro-2-butene	0.2803	0.2931	0.3278	0.3106	0.3327	0.3236	0.3120	0.3114	6	AVG
n-Propylbenzene	3.0849	3.2193	3.4353	3.1761	3.1834	3.0968	3.0275	3.1748	4	AVG
2-Chlorotoluene	0.5675	0.6619	0.7096	0.6632	0.6587	0.6474	0.6756	0.6548	7	AVG
4-Chlorotoluene	0.6413	0.6892	0.7427	0.6924	0.7052	0.6961	0.7401	0.7010	5	AVG
1,3,5-Trimethylbenzene	2.0444	2.2573	2.4632	2.2970	2.3331	2.2914	2.3411	2.2896	6	AVG
tert-Butylbenzene	0.4703	0.5351	0.5407	0.5160	0.5213	0.5108	0.5473	0.5202	5	AVG
Pentachloroethane	0.3257	0.3550	0.4283	0.4067	0.4432	0.4300	0.4897	0.4112	13	AVG
1,2,4-Trimethylbenzene	2.2643	2.3364	2.5982	2.4027	2.4540	2.4060	2.4275	2.4127	4	AVG
sec-Butylbenzene	2.5679	2.8763	3.0392	2.8375	2.8520	2.7620	2.7387	2.8105	5	AVG
1,3-Dichlorobenzene	#1.3306	1.3313	1.4637	1.3552	1.3825	1.3548	1.3951	1.3733	3	AVG #
p-Isopropyltoluene	2.2653	2.4890	2.6827	2.4932	2.5293	2.4796	2.4764	2.4879	5	AVG
1,4-Dichlorobenzene	#1.4127	1.3985	1.4925	1.4162	1.4209	1.4000	1.4251	1.4237	2	AVG #
1,2,3-Trimethylbenzene	2.4036	2.5068	2.7437	2.6464	2.7318	2.5569	2.5827	2.5960	5	AVG
Benzyl Chloride	1.4522	1.6615	2.0559	2.0662	2.2489	2.2481	2.2162	1.9927	16	AVG
1,3-Diethylbenzene	1.4093	1.4939	1.6403	1.5871	1.6504	1.5517	1.6100	1.5632	6	AVG
1,4-Diethylbenzene	1.5014	1.6231	1.7666	1.7078	1.7631	1.6440	1.7181	1.6748	6	AVG
1,2-Dichlorobenzene	#1.2870	1.3049	1.4555	1.3483	1.3827	1.3600	1.3989	1.3625	4	AVG #
n-Butylbenzene	1.1573	1.2337	1.3627	1.2429	1.2674	1.2393	1.2867	1.2557	5	AVG
1,2-Diethylbenzene	1.1418	1.3161	1.4034	1.3496	1.3840	1.2953	1.3485	1.3198	7	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date(s): 02/19/19 02/19/19

Heated Purge: (Y/N) Y Calibration Times: 12:21 14:44

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = wf19i07.d RRF 4 = wf19i06.d RRF 10= wf19i05.d
RRF 20= wf19i04.d RRF 50= wf19i03.d RRF100= wf19i02.d RRF300= wf19i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
1,2-Dibromo-3-chloropropane#	0.1739	0.2010	0.2236	0.2274	0.2466	0.2404	0.2321	0.2207	11	AVG #
1,3,5-Trichlorobenzene	1.0015	1.0168	1.1029	1.0404	1.0698	1.0395	1.0425	1.0448	3	AVG
1,2,4-Trichlorobenzene #	0.9276	0.9375	1.0673	1.0091	1.0550	1.0242	1.0006	1.0030	5	AVG #
Hexachlorobutadiene	0.3772	0.3543	0.3867	0.3591	0.3537	0.3359	0.3340	0.3573	5	AVG
Naphthalene	3.0094	3.0778	3.6431	3.5139	3.7449	3.5758	3.1927	3.3939	9	AVG
1,2,3-Trichlorobenzene	0.9349	0.9398	1.0277	0.9764	1.0247	0.9888	0.9609	0.9790	4	AVG
2-Methylnaphthalene	1.6516	1.5794	2.0834	1.9918	2.1930	2.1016	1.9535	1.9363	12	AVG
Dibromofluoromethane	0.2302	0.2343	0.2297	0.2314	0.2334	0.2302	0.2322	0.2316	1	AVG
Dibromofluoromethane(2)	0.2350	0.2399	0.2348	0.2383	0.2371	0.2401	0.2394	0.2378	1	AVG
1,2-Dichloroethane-d4	0.0612	0.0633	0.0610	0.0634	0.0611	0.0615	0.0597	0.0616	2	AVG
1,2-Dichloroethane-d4(2)	0.2724	0.2724	0.2690	0.2741	0.2626	0.2666	0.2602	0.2682	2	AVG
1,2-Dichloroethane-d4(3)	0.0393	0.0399	0.0398	0.0385	0.0385	0.0391	0.0395	0.0392	1	AVG
Toluene-d8	1.2422	1.2652	1.2667	1.2556	1.2661	1.2478	1.2267	1.2529	1	AVG
Toluene-d8(2)	0.8164	0.8263	0.8295	0.8323	0.8287	0.8363	0.8467	0.8309	1	AVG
4-Bromofluorobenzene	0.4965	0.4997	0.5047	0.4992	0.4989	0.5008	0.5088	0.5012	1	AVG
4-Bromofluorobenzene(2)	0.4175	0.4231	0.4261	0.4206	0.4231	0.4215	0.4287	0.4229	1	AVG

Average %RSD 7

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP09137.i/19feb19i.b/wf19i01.d	VSTD300
/chem2/HP09137.i/19feb19i.b/wf19i02.d	VSTD100
/chem2/HP09137.i/19feb19i.b/wf19i03.d	VSTD050
/chem2/HP09137.i/19feb19i.b/wf19i04.d	VSTD020
/chem2/HP09137.i/19feb19i.b/wf19i05.d	VSTD010
/chem2/HP09137.i/19feb19i.b/wf19i06.d	VSTD004
/chem2/HP09137.i/19feb19i.b/wf19i07.d	VSTD001

Area Summary

File ID:

Internal Standard Name	wf19i01.d	wf19i02.d	wf19i03.d	wf19i04.d	wf19i05.d	wf19i06.d	wf19i07.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	208793	220310	221988	226145	235698	216574	213467	220425	4	Yes
Fluorobenzene	896646	842063	858650	878585	872867	867920	823064	862828	3	Yes
Chlorobenzene-d5	750584	700579	703812	722592	709147	717501	683121	712477	3	Yes
1,4-Dichlorobenzene-d4	447340	397731	393177	398717	394276	394254	368100	399085	6	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	wf19i01.d	wf19i02.d	wf19i03.d	wf19i04.d	wf19i05.d	wf19i06.d	wf19i07.d	Avg. RT
t-Butyl alcohol-d10	2.735	2.732	2.728	2.732	2.725	2.728	2.732	2.730
Fluorobenzene	5.029	5.029	5.029	5.029	5.029	5.029	5.029	5.029
Chlorobenzene-d5	8.161	8.161	8.161	8.161	8.161	8.161	8.161	8.161
1,4-Dichlorobenzene-d4	10.041	10.041	10.038	10.038	10.041	10.038	10.038	10.040

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 02/20/2019 at 10:32.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 ICV Date: 02/20/19 Time: 12:07

Lab File ID: wf20l01.d Init. Calib. Date(s): 02/20/19 02/20/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3233	0.2795	17.29	20	-14	#
# Chloromethane	0.4026	0.3901	19.38	20	-3	#
1,3-Butadiene	0.2453	0.2559	20.86	20	4	
# Vinyl Chloride	0.3690	0.3679	19.94	20	0	#
# Bromomethane	0.2911	0.2538	17.44	20	-13	#
# Chloroethane	0.2429	0.2141	17.63	20	-12	#
Dichlorofluoromethane	0.4701	0.4241	18.04	20	-10	
n-Pentane	0.3728	0.3323	17.83	20	-11	
# Trichlorofluoromethane	0.3920	0.3507	17.89	20	-11	#
Ethanol	0.1140	0.1305	572.10	500	14	
Freon 123a	0.2929	0.2989	20.41	20	2	
Acrolein	1.7998	1.6198	135.00	150	-10	
# 1,1-Dichloroethene	0.2204	0.2572	23.34	20	17	#
# Acetone	0.8748	0.8401	144.04	150	-4	#
# Freon 113	0.1936	0.2153	22.24	20	11	#
2-Propanol	0.6500	0.6597	152.24	150	1	
Methyl Iodide	0.4225	0.4552	21.55	20	8	
# Carbon Disulfide	0.7767	0.8165	21.03	20	5	#
Allyl Chloride	0.3841	0.3808	19.83	20	-1	
# Methyl Acetate	0.3324	0.3222	19.38	20	-3	#
# Methylene Chloride	0.2695	0.2912	21.61	20	8	#
t-Butyl alcohol	1.1595	1.1387	196.42	200	-2	
Acrylonitrile	0.1749	0.1762	100.78	100	1	
# trans-1,2-Dichloroethene	0.2392	0.2692	22.51	20	13	#
# Methyl Tertiary Butyl Ether	0.5824	0.6000	20.61	20	3	#
n-Hexane	0.3200	0.3383	21.14	20	6	
# 1,1-Dichloroethane	0.4334	0.4754	21.94	20	10	#
di-Isopropyl ether	0.8327	0.9095	21.85	20	9	
2-Chloro-1,3-butadiene	0.3754	0.4010	21.36	20	7	
Ethyl t-butyl ether	0.6069	0.6397	21.08	20	5	
# cis-1,2-Dichloroethene	0.2686	0.3060	22.79	20	14	#
# 2-Butanone	0.2512	0.2467	147.26	150	-2	#
2,2-Dichloropropane	0.1946	0.2191	22.51	20	13	
Propionitrile	1.4410	1.4646	152.45	150	2	
Methacrylonitrile	0.1880	0.1915	152.73	150	2	
Bromochloromethane	0.1396	0.1402	20.08	20	0	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 ICV Date: 02/20/19 Time: 12:07

Lab File ID: wf20l01.d Init. Calib. Date(s): 02/20/19 02/20/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Tetrahydrofuran	1.3337	1.2743	95.54	100	-4	
#	Chloroform	0.4067	0.4516	22.21	20	11	#
#	1,1,1-Trichloroethane	0.3060	0.3471	22.69	20	13	#
#	Cyclohexane	0.4049	0.4112	20.31	20	2	#
	1,1-Dichloropropene	0.3260	0.3579	21.96	20	10	
#	Carbon Tetrachloride	0.2626	0.2742	20.89	20	4	#
	Isobutyl Alcohol	0.4227	0.4079	482.47	500	-4	
#	Benzene	1.0480	1.1347	21.66	20	8	#
#	1,2-Dichloroethane	0.3237	0.3597	22.22	20	11	#
	t-Amyl methyl ether	0.6218	0.6386	20.54	20	3	
	n-Heptane	0.3059	0.3099	20.26	20	1	
	n-Butanol	0.3753	0.3610	961.94	1000	-4	
#	Trichloroethene	0.2538	0.2812	22.16	20	11	#
#	Methylcyclohexane	0.3684	0.3776	20.50	20	2	#
#	1,2-Dichloropropane	0.2691	0.3032	22.54	20	13	#
	Dibromomethane	0.1661	0.1822	21.94	20	10	
	1,4-Dioxane	0.1122	0.1124	501.07	500	0	
	Methyl Methacrylate	0.2957	0.2953	19.97	20	0	
#	Bromodichloromethane	0.3051	0.3279	21.49	20	7	#
	2-Nitropropane	0.1032	0.0871	16.88	20	-16	
	2-Chloroethyl Vinyl Ether	0.2051	0.1921	18.73	20	-6	
#	cis-1,3-Dichloropropene	0.4195	0.4588	21.87	20	9	#
#	4-Methyl-2-pentanone	0.4953	0.4880	98.53	100	-1	#
#	Toluene	0.8071	0.8843	21.91	20	10	#
#	trans-1,3-Dichloropropene	0.4805	0.4960	20.65	20	3	#
	Ethyl Methacrylate	0.5904	0.6116	20.72	20	4	
#	1,1,2-Trichloroethane	0.3106	0.3563	22.94	20	15	#
#	Tetrachloroethene	0.3275	0.3603	22.00	20	10	#
	1,3-Dichloropropane	0.5396	0.5927	21.97	20	10	
#	2-Hexanone	0.4700	0.4573	97.29	100	-3	#
#	Dibromochloromethane	0.3034	0.3279	21.62	20	8	#
#	1,2-Dibromoethane	0.3413	0.3744	21.94	20	10	#
#	Chlorobenzene	0.8953	0.9820	21.94	20	10	#
	1,1,1,2-Tetrachloroethane	0.2877	0.3058	21.25	20	6	
#	Ethylbenzene	1.5340	1.6678	21.74	20	9	#
#	m+p-Xylene	0.6099	0.6667	43.72	40	9	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 ICV Date: 02/20/19 Time: 12:07

Lab File ID: wf20l01.d Init. Calib. Date(s): 02/20/19 02/20/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	o-Xylene	0.6000	0.6435	21.45	20	7	#
#	Styrene	1.0065	1.1147	22.15	20	11	#
#	Bromoform	0.2361	0.2357	19.96	20	0	#
#	Isopropylbenzene	1.4744	1.6362	22.19	20	11	#
	Cyclohexanone	0.5061	0.3977	392.85	500	-21	
	Bromobenzene	0.7202	0.7749	21.52	20	8	
#	1,1,2,2-Tetrachloroethane	0.9712	1.0477	21.58	20	8	#
	1,2,3-Trichloropropane	0.2925	0.3208	21.93	20	10	
	trans-1,4-Dichloro-2-butene	0.3114	0.3263	104.76	100	5	
	n-Propylbenzene	3.1748	3.5193	22.17	20	11	
	2-Chlorotoluene	0.6548	0.7224	22.06	20	10	
	4-Chlorotoluene	0.7010	0.7635	21.78	20	9	
	1,3,5-Trimethylbenzene	2.2896	2.4970	21.81	20	9	
	tert-Butylbenzene	0.5202	0.5611	21.57	20	8	
	Pentachloroethane	0.4112	0.4164	20.25	20	1	
	1,2,4-Trimethylbenzene	2.4127	2.5891	21.46	20	7	
	sec-Butylbenzene	2.8105	3.0779	21.90	20	10	
#	1,3-Dichlorobenzene	1.3733	1.4796	21.55	20	8	#
	p-Isopropyltoluene	2.4879	2.7111	21.79	20	9	
#	1,4-Dichlorobenzene	1.4237	1.5451	21.71	20	9	#
	1,2,3-Trimethylbenzene	2.5960	2.7701	21.34	20	7	
	Benzyl Chloride	1.9927	1.9670	19.74	20	-1	
	1,3-Diethylbenzene	1.5632	1.6430	21.02	20	5	
	1,4-Diethylbenzene	1.6748	1.7017	20.32	20	2	
#	1,2-Dichlorobenzene	1.3625	1.4843	21.79	20	9	#
	n-Butylbenzene	1.2557	1.3468	21.45	20	7	
	1,2-Diethylbenzene	1.3198	1.4051	21.29	20	6	
#	1,2-Dibromo-3-chloropropane	0.2207	0.2278	20.64	20	3	#
	1,3,5-Trichlorobenzene	1.0448	1.0980	21.02	20	5	
#	1,2,4-Trichlorobenzene	1.0030	1.0774	21.48	20	7	#
	Hexachlorobutadiene	0.3573	0.3703	20.73	20	4	
	Naphthalene	3.3939	3.6416	21.46	20	7	
	1,2,3-Trichlorobenzene	0.9790	1.0505	21.46	20	7	
	2-Methylnaphthalene	1.9363	1.9106	19.73	20	-1	

Average %Drift 7

Compounds with required minimum RRF.
Maximum % Drift = 30 %

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6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 Calibration Date(s): 03/25/19 03/25/19

Heated Purge: (Y/N) Y Calibration Times: 12:48 14:55

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = 5m25i07.d RRF 4 = 5m25i06.d RRF 10= 5m25i05.d
RRF 20= 5m25i04.d RRF 50= 5m25i03.d RRF100= 5m25i02.d RRF300= 5m25i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
Dichlorodifluoromethane	#0.2690	0.4319	0.4370	0.3955	0.4468	0.4347	0.3997	0.4021	15	AVG	#
Chloromethane	#0.2629	0.3113	0.3102	0.2852	0.2994	0.2878	0.2889	0.2922	6	AVG	#
1,3-Butadiene	0.2055	0.2359	0.2142	0.1901	0.1927	0.1979	0.1850	0.2030	9	AVG	
Vinyl Chloride	#0.2507	0.3137	0.3058	0.2818	0.2948	0.2793	0.2752	0.2859	7	AVG	#
Bromomethane	#0.2291	0.2454	0.2508	0.2278	0.2378	0.2200	0.2016	0.2304	7	AVG	#
Chloroethane	#0.1355	0.1508	0.1489	0.1358	0.1396	0.1300	0.1186	0.1370	8	AVG	#
Dichlorofluoromethane	0.3851	0.4043	0.4032	0.3519	0.3680	0.3508	0.3459	0.3728	7	AVG	
n-Pentane	0.2611	0.2595	0.2652	0.2295	0.2529	0.2656	0.2209	0.2506	7	AVG	
Trichlorofluoromethane	#0.3063	0.4436	0.4317	0.3954	0.4227	0.4065	0.3758	0.3974	12	AVG	#
Ethyl ether	0.1799	0.1973	0.2328	0.2127	0.2101	0.2027	0.2052	0.2058	8	AVG	
Freon 123a	0.2863	0.3427	0.3317	0.3067	0.3045	0.2992	0.2912	0.3089	7	AVG	
Acrolein	1.9075	1.8350	1.8961	1.7015	1.9112	1.6592	1.4431	1.7648	10	AVG	
1,1-Dichloroethene	#0.2021	0.2455	0.2440	0.2268	0.2326	0.2303	0.2345	0.2308	6	AVG	#
1,1-Dichloroethene(2)	#0.0986	0.1246	0.1206	0.1132	0.1136	0.1119	0.1123	0.1136	7	AVG	#
Acetone	#0.6982	0.7970	0.8830	0.8307	0.8575	0.7977	0.7845	0.8069	7	AVG	#
Freon 113	#0.1592	0.2485	0.2511	0.2298	0.2517	0.2618	0.2418	0.2348	15	AVG	#
2-Propanol	0.5755	0.6109	0.6080	0.5771	0.5710	0.5764	0.5862	0.5864	3	AVG	
Methyl Iodide	0.4319	0.4920	0.5037	0.4729	0.4842	0.4892	0.5004	0.4821	5	AVG	
Carbon Disulfide	#0.6171	0.7564	0.7917	0.7528	0.7973	0.8084	0.8410	0.7664	9	AVG	#
Allyl Chloride	0.4114	0.4350	0.4177	0.4024	0.4099	0.4091	0.4174	0.4147	3	AVG	
Methyl Acetate	#0.4488	0.3524	0.3537	0.3436	0.3307	0.3343	0.3391	0.3575	12	AVG	#
Methylene Chloride	#0.2604	0.2684	0.2698	0.2570	0.2573	0.2590	0.2633	0.2622	2	AVG	#
t-Butyl alcohol	1.1300	1.2203	1.1923	1.1556	1.1396	1.1352	1.1228	1.1566	3	AVG	
Acrylonitrile	0.1700	0.1909	0.2093	0.1913	0.1955	0.1849	0.1810	0.1890	6	AVG	
trans-1,2-Dichloroethene	#0.2252	0.2668	0.2731	0.2558	0.2617	0.2610	0.2651	0.2584	6	AVG	#
Methyl Tertiary Butyl Ether	#0.7009	0.7725	0.7842	0.7448	0.7314	0.7219	0.7059	0.7373	4	AVG	#
n-Hexane	0.2400	0.3626	0.3893	0.3520	0.3855	0.4079	0.3647	0.3574	15	AVG	
1,1-Dichloroethane	#0.4046	0.4625	0.4838	0.4536	0.4633	0.4579	0.4629	0.4555	5	AVG	#
di-Isopropyl ether	0.7906	0.8643	0.8849	0.8330	0.8286	0.8170	0.7940	0.8303	4	AVG	
2-Chloro-1,3-butadiene	0.3460	0.4237	0.4256	0.3993	0.4123	0.4081	0.4066	0.4031	7	AVG	
Ethyl t-butyl ether	0.7370	0.8057	0.8136	0.7751	0.7668	0.7506	0.7325	0.7687	4	AVG	
cis-1,2-Dichloroethene	#0.2795	0.3001	0.3044	0.2861	0.2898	0.2917	0.2947	0.2923	3	AVG	#
2-Butanone	#0.2991	0.2925	0.3015	0.2780	0.3021	0.2714	0.2529	0.2854	7	AVG	#
2,2-Dichloropropane	0.3085	0.3759	0.3840	0.3616	0.3717	0.3728	0.3757	0.3643	7	AVG	
Propionitrile	1.2353	1.2830	1.2976	1.2388	1.2559	1.2262	1.2688	1.2579	2	AVG	
Methacrylonitrile	0.1803	0.1916	0.1911	0.1865	0.1860	0.1845	0.1816	0.1859	2	AVG	
Bromochloromethane	0.1314	0.1476	0.1519	0.1455	0.1465	0.1481	0.1529	0.1463	5	AVG	
Tetrahydrofuran	1.2374	1.2091	1.3698	1.2744	1.3771	1.2496	1.2276	1.2779	5	AVG	
Chloroform	#0.4226	0.4603	0.4685	0.4445	0.4532	0.4528	0.4599	0.4517	3	AVG	#
1,1,1-Trichloroethane	#0.3254	0.4169	0.4194	0.3929	0.4062	0.4047	0.4171	0.3975	8	AVG	#
Cyclohexane	#0.3699	0.4976	0.4869	0.4418	0.4745	0.4889	0.4576	0.4596	10	AVG	#
Cyclohexane(2)	#0.2982	0.4298	0.4135	0.3792	0.4069	0.4184	0.3955	0.3916	11	AVG	#
Cyclohexane(3)	#0.1024	0.1582	0.1520	0.1380	0.1482	0.1535	0.1445	0.1424	13	AVG	#
1,1-Dichloropropene	0.3111	0.3864	0.3911	0.3610	0.3713	0.3663	0.3706	0.3654	7	AVG	
Carbon Tetrachloride	#0.2673	0.3431	0.3570	0.3396	0.3598	0.3649	0.3763	0.3440	10	AVG	#
Isobutyl Alcohol	0.3870	0.3907	0.3822	0.3727	0.3713	0.3740	0.3733	0.3788	2	AVG	
Benzene	#1.0334	1.1395	1.1703	1.0944	1.1160	1.1101	1.1063	1.1100	4	AVG	#
1,2-Dichloroethane	#0.3591	0.3368	0.3364	0.3168	0.3169	0.3140	0.3163	0.3280	5	AVG	#
1,2-Dichloroethane(2)	#0.0151	0.0325	0.0316	0.0308	0.0300	0.0301	0.0309	0.0287	21	AVG	#<-
t-Amyl methyl ether	0.7637	0.7977	0.8235	0.7914	0.7754	0.7519	0.7195	0.7747	4	AVG	
n-Heptane	0.3058	0.4240	0.4289	0.3836	0.4268	0.4561	0.3962	0.4030	12	AVG	
n-Butanol	0.3008	0.3193	0.3221	0.3157	0.3166	0.3188	0.3173	0.3158	2	AVG	

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 Calibration Date(s): 03/25/19 03/25/19

Heated Purge: (Y/N) Y Calibration Times: 12:48 14:55

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = 5m25i07.d RRF 4 = 5m25i06.d RRF 10= 5m25i05.d
RRF 20= 5m25i04.d RRF 50= 5m25i03.d RRF100= 5m25i02.d RRF300= 5m25i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
Trichloroethene	#0.2619	0.2946	0.3014	0.2836	0.2901	0.2888	0.2945	0.2879	4	AVG	#
Methylcyclohexane	#0.3466	0.5058	0.4959	0.4653	0.5017	0.5289	0.4925	0.4766	13	AVG	#
Methylcyclohexane(2)	#0.1481	0.2152	0.2106	0.2020	0.2159	0.2284	0.2152	0.2050	13	AVG	#
1,2-Dichloropropane	#0.2589	0.2809	0.2889	0.2720	0.2770	0.2759	0.2723	0.2751	3	AVG	#
Dibromomethane	0.1598	0.1785	0.1808	0.1738	0.1740	0.1742	0.1771	0.1740	4	AVG	
1,4-Dioxane	0.0497	0.0763	0.0793	0.0751	0.0756	0.0759	0.0810	0.0733	14	AVG	
Methyl Methacrylate	0.2636	0.2910	0.2961	0.2916	0.2886	0.2896	0.2903	0.2872	4	AVG	
Bromodichloromethane	#0.2768	0.3080	0.3313	0.3185	0.3344	0.3403	0.3546	0.3234	8	AVG	#
2-Nitropropane	0.1214	0.1257	0.1301	0.1253	0.1582	0.1376	0.1310	0.1328	9	AVG	
2-Chloroethyl Vinyl Ether	0.2027	0.2236	0.2400	0.2280	0.2368	0.2367	0.2395	0.2296	6	AVG	
cis-1,3-Dichloropropene	#0.3551	0.4154	0.4385	0.4280	0.4398	0.4463	0.4556	0.4255	8	AVG	#
4-Methyl-2-pentanone	#0.6015	0.6357	0.5689	0.5322	0.7074	0.5648	0.4810	0.5845	13	AVG	#
Toluene	#0.8635	0.9779	0.9973	0.9286	0.9421	0.9362	0.9302	0.9394	5	AVG	#
trans-1,3-Dichloropropene	#0.4537	0.4812	0.5102	0.5068	0.5254	0.5346	0.5416	0.5076	6	AVG	#
Ethyl Methacrylate	0.5412	0.5937	0.6317	0.6292	0.6219	0.6222	0.6207	0.6086	5	AVG	
1,1,2-Trichloroethane	#0.3269	0.3376	0.3474	0.3324	0.3378	0.3339	0.3366	0.3361	2	AVG	#
Tetrachloroethene	#0.3715	0.4464	0.4441	0.4281	0.4254	0.4253	0.4495	0.4272	6	AVG	#
1,3-Dichloropropane	0.5233	0.5682	0.5735	0.5500	0.5478	0.5435	0.5474	0.5505	3	AVG	
2-Hexanone	#0.7100	0.7685	0.6165	0.5795	0.8293	0.6386	0.5082	0.6644	17	AVG	#
Dibromochloromethane	#0.2620	0.3094	0.3471	0.3453	0.3667	0.3786	0.3994	0.3441	13	AVG	#
1,2-Dibromoethane	#0.3566	0.3755	0.3850	0.3742	0.3761	0.3753	0.3842	0.3753	2	AVG	#
1-Chlorohexane	0.5472	0.5824	0.5652	0.5288	0.5433	0.5393	0.5249	0.5473	4	AVG	
Chlorobenzene	#0.9762	1.0704	1.0988	1.0319	1.0605	1.0606	1.0595	1.0511	4	AVG	#
1,1,1,2-Tetrachloroethane	0.2903	0.3337	0.3648	0.3521	0.3714	0.3822	0.3891	0.3548	10	AVG	
Ethylbenzene	#1.6638	1.8801	1.9354	1.8329	1.8797	1.8716	1.7811	1.8349	5	AVG	#
m+p-Xylene	#0.6576	0.7406	0.7674	0.7174	0.7409	0.7410	0.7007	0.7237	5	AVG	#
o-Xylene	#0.6291	0.7247	0.7449	0.7011	0.7211	0.7208	0.7080	0.7071	5	AVG	#
Styrene	#1.0198	1.1588	1.2148	1.1741	1.2101	1.2140	1.1817	1.1676	6	AVG	#
Bromoform	#0.2027	0.2287	0.2598	0.2712	0.2947	0.3080	0.3361	0.2716	17	AVG	#
Isopropylbenzene	#1.5663	1.9109	1.9536	1.8507	1.8941	1.8797	1.7992	1.8363	7	AVG	#
Cyclohexanone	0.3216	0.3101	0.2987	0.2980	0.3061	0.3010	0.3100	0.3065	3	AVG	
Bromobenzene	0.7812	0.8639	0.8893	0.8546	0.8778	0.8798	0.8910	0.8625	4	AVG	
1,1,2,2-Tetrachloroethane	#1.0031	1.1164	1.1452	1.1172	1.1061	1.1004	1.0565	1.0921	4	AVG	#
1,2,3-Trichloropropane	0.3126	0.3470	0.3392	0.3333	0.3281	0.3272	0.3159	0.3290	4	AVG	
trans-1,4-Dichloro-2-butene	0.3156	0.3535	0.3628	0.3560	0.3548	0.3514	0.3135	0.3439	6	AVG	
n-Propylbenzene	3.6297	4.2848	4.4032	4.0943	4.1959	4.1079	3.6986	4.0592	7	AVG	
2-Chlorotoluene	0.7504	0.8376	0.8740	0.8269	0.8465	0.8540	0.8685	0.8368	5	AVG	
4-Chlorotoluene	0.7722	0.8625	0.8946	0.8474	0.8686	0.8781	0.8906	0.8591	5	AVG	
1,3,5-Trimethylbenzene	2.5979	3.0095	3.1110	2.9293	3.0283	3.0078	2.8216	2.9293	6	AVG	
tert-Butylbenzene	0.5364	0.6357	0.6435	0.6062	0.6387	0.6349	0.6376	0.6190	6	AVG	
Pentachloroethane	0.3785	0.4566	0.5017	0.4916	0.5452	0.5703	0.5946	0.5055	15	AVG	
1,2,4-Trimethylbenzene	2.7457	3.0651	3.1562	2.9890	3.0890	3.0834	2.8996	3.0040	5	AVG	
sec-Butylbenzene	3.2512	4.0143	4.0533	3.8459	3.9800	3.9265	3.4948	3.7951	8	AVG	
1,3-Dichlorobenzene	#1.5056	1.6419	1.7188	1.6323	1.6819	1.6909	1.6917	1.6518	4	AVG	#
p-Isopropyltoluene	2.7611	3.3847	3.4766	3.3190	3.4681	3.4407	3.1824	3.2904	8	AVG	
1,4-Dichlorobenzene	#1.5655	1.6995	1.7142	1.6508	1.6952	1.7074	1.6863	1.6741	3	AVG	#
1,2,3-Trimethylbenzene	2.8082	3.1740	3.1989	3.1334	3.1975	3.2230	2.9870	3.1031	5	AVG	
Benzyl Chloride	1.6188	1.9239	2.1663	2.2404	2.3271	2.4149	2.3694	2.1515	13	AVG	
1,3-Diethylbenzene	1.6815	2.0021	2.0735	2.0210	2.1002	2.1119	2.0478	2.0054	7	AVG	
1,4-Diethylbenzene	1.7367	2.1236	2.2053	2.1460	2.2612	2.2675	2.1577	2.1283	9	AVG	
1,2-Dichlorobenzene	#1.4248	1.5692	1.6216	1.5471	1.5863	1.5914	1.5911	1.5617	4	AVG	#
n-Butylbenzene	1.3454	1.7085	1.7580	1.6878	1.7525	1.7479	1.6181	1.6597	9	AVG	

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 Calibration Date(s): 03/25/19 03/25/19

Heated Purge: (Y/N) Y Calibration Times: 12:48 14:55

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = 5m25i07.d RRF 4 = 5m25i06.d RRF 10= 5m25i05.d
RRF 20= 5m25i04.d RRF 50= 5m25i03.d RRF100= 5m25i02.d RRF300= 5m25i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
1,2-Diethylbenzene	1.4154	1.6870	1.7096	1.6815	1.7367	1.7457	1.6948	1.6672	7	AVG
1,2-Dibromo-3-chloropropane#	0.2349	0.2599	0.2802	0.2792	0.2825	0.2895	0.2836	0.2728	7	AVG #
1,3,5-Trichlorobenzene	1.0797	1.2241	1.2755	1.2327	1.2909	1.3294	1.3552	1.2553	7	AVG
1,2,4-Trichlorobenzene #	1.0157	1.0920	1.1440	1.1131	1.1603	1.1982	1.2312	1.1363	6	AVG #
Hexachlorobutadiene	0.4910	0.5155	0.5264	0.5036	0.5433	0.5703	0.6040	0.5363	7	AVG
Naphthalene	3.6503	3.8489	4.0539	3.9463	3.9618	3.9848	3.5452	3.8559	5	AVG
1,2,3-Trichlorobenzene	1.0091	1.0481	1.0921	1.0683	1.1027	1.1311	1.1701	1.0888	5	AVG
2-Methylnaphthalene	1.9468	2.0714	2.2375	2.2936	2.3900	2.4659	2.4766	2.2688	9	AVG
Dibromofluoromethane	0.2369	0.2377	0.2377	0.2394	0.2381	0.2422	0.2430	0.2393	1	AVG
Dibromofluoromethane(2)	0.2430	0.2438	0.2436	0.2452	0.2459	0.2471	0.2504	0.2456	1	AVG
1,2-Dichloroethane-d4	0.0561	0.0561	0.0562	0.0557	0.0560	0.0559	0.0559	0.0560	0	AVG
1,2-Dichloroethane-d4(2)	0.2611	0.2634	0.2587	0.2597	0.2574	0.2581	0.2557	0.2592	1	AVG
1,2-Dichloroethane-d4(3)	0.0355	0.0357	0.0358	0.0355	0.0359	0.0357	0.0356	0.0357	0	AVG
Toluene-d8	1.2727	1.2738	1.2738	1.2689	1.2600	1.2504	1.2349	1.2621	1	AVG
Toluene-d8(2)	0.8340	0.8332	0.8344	0.8309	0.8295	0.8246	0.8200	0.8295	1	AVG
4-Bromofluorobenzene	0.4904	0.4884	0.4916	0.4929	0.4913	0.4905	0.4924	0.4911	0	AVG
4-Bromofluorobenzene(2)	0.4272	0.4263	0.4292	0.4287	0.4305	0.4258	0.4271	0.4278	0	AVG

Average %RSD 7

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP26285.i/19mar25i.b/5m25i01.d	VSTD300
/chem2/HP26285.i/19mar25i.b/5m25i02.d	VSTD100
/chem2/HP26285.i/19mar25i.b/5m25i03.d	VSTD050
/chem2/HP26285.i/19mar25i.b/5m25i04.d	VSTD020
/chem2/HP26285.i/19mar25i.b/5m25i05.d	VSTD010
/chem2/HP26285.i/19mar25i.b/5m25i06.d	VSTD004
/chem2/HP26285.i/19mar25i.b/5m25i07.d	VSTD001

Area Summary

File ID:

Internal Standard Name	5m25i01.d	5m25i02.d	5m25i03.d	5m25i04.d	5m25i05.d	5m25i06.d	5m25i07.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	326405	333791	324947	335255	327405	330891	317402	328014	2	Yes
Fluorobenzene	1087768	1089311	1083032	1089387	1076914	1063233	1068211	1079694	1	Yes
Chlorobenzene-d5	848957	843152	831607	830336	817143	805759	807725	826383	2	Yes
1,4-Dichlorobenzene-d4	472197	456264	445741	445129	435506	427216	425367	443917	4	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	5m25i01.d	5m25i02.d	5m25i03.d	5m25i04.d	5m25i05.d	5m25i06.d	5m25i07.d	Avg. RT
t-Butyl alcohol-d10	3.527	3.527	3.533	3.545	3.533	3.527	3.533	3.532
Fluorobenzene	6.996	6.995	7.002	7.001	6.996	6.996	7.002	6.998
Chlorobenzene-d5	10.745	10.745	10.745	10.745	10.745	10.745	10.745	10.745
1,4-Dichlorobenzene-d4	12.738	12.738	12.738	12.738	12.738	12.738	12.738	12.738

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 03/25/2019 at 21:55.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 ICV Date: 03/25/19 Time: 15:38

Lab File ID: 5c25v01.d Init. Calib. Date(s): 03/25/19 03/25/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.4021	0.3292	16.37	20	-18	#
# Chloromethane	0.2922	0.2748	18.80	20	-6	#
1,3-Butadiene	0.2030	0.1982	19.53	20	-2	
# Vinyl Chloride	0.2859	0.2807	19.64	20	-2	#
# Bromomethane	0.2304	0.1644	14.27	20	-29	#
# Chloroethane	0.1370	0.1052	15.35	20	-23	#
Dichlorofluoromethane	0.3728	0.3417	18.33	20	-8	
n-Pentane	0.2506	0.2068	16.50	20	-17	
# Trichlorofluoromethane	0.3974	0.3389	17.06	20	-15	#
Ethyl ether	0.2058	0.2087	20.28	20	1	
Freon 123a	0.3089	0.2975	19.27	20	-4	
Acrolein	1.7648	1.6208	137.76	150	-8	
# 1,1-Dichloroethene	0.2308	0.2517	21.81	20	9	#
# Acetone	0.8069	0.7999	148.69	150	-1	#
# Freon 113	0.2348	0.2455	20.91	20	5	#
2-Propanol	0.5864	0.5673	145.11	150	-3	
Methyl Iodide	0.4821	0.4866	20.19	20	1	
# Carbon Disulfide	0.7664	0.7297	19.04	20	-5	#
Allyl Chloride	0.4147	0.3933	18.97	20	-5	
# Methyl Acetate	0.3575	0.3470	19.41	20	-3	#
# Methylene Chloride	0.2622	0.2801	21.37	20	7	#
t-Butyl alcohol	1.1566	1.1343	196.14	200	-2	
Acrylonitrile	0.1890	0.1768	93.55	100	-6	
# trans-1,2-Dichloroethene	0.2584	0.2820	21.83	20	9	#
# Methyl Tertiary Butyl Ether	0.7373	0.7262	19.70	20	-2	#
n-Hexane	0.3574	0.3542	19.82	20	-1	
# 1,1-Dichloroethane	0.4555	0.4786	21.02	20	5	#
di-Isopropyl ether	0.8303	0.8512	20.50	20	3	
2-Chloro-1,3-butadiene	0.4031	0.4066	20.17	20	1	
Ethyl t-butyl ether	0.7687	0.7566	19.68	20	-2	
# cis-1,2-Dichloroethene	0.2923	0.3126	21.39	20	7	#
# 2-Butanone	0.2854	0.2587	135.99	150	-9	#
2,2-Dichloropropane	0.3643	0.3801	20.87	20	4	
Propionitrile	1.2579	1.3076	155.92	150	4	
Methacrylonitrile	0.1859	0.1852	149.39	150	0	
Bromochloromethane	0.1463	0.1442	19.71	20	-1	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 ICV Date: 03/25/19 Time: 15:38

Lab File ID: 5c25v01.d Init. Calib. Date(s): 03/25/19 03/25/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Tetrahydrofuran	1.2779	1.2765	99.89	100	0	
#	Chloroform	0.4517	0.4749	21.03	20	5	#
#	1,1,1-Trichloroethane	0.3975	0.4196	21.11	20	6	#
#	Cyclohexane	0.4596	0.4459	19.40	20	-3	#
	1,1-Dichloropropene	0.3654	0.3801	20.80	20	4	
#	Carbon Tetrachloride	0.3440	0.3566	20.73	20	4	#
	Isobutyl Alcohol	0.3788	0.3785	499.68	500	0	
#	Benzene	1.1100	1.1628	20.95	20	5	#
#	1,2-Dichloroethane	0.3280	0.3441	20.98	20	5	#
	t-Amyl methyl ether	0.7747	0.7802	20.14	20	1	
	n-Heptane	0.4030	0.3853	19.12	20	-4	
	n-Butanol	0.3158	0.3147	996.55	1000	0	
#	Trichloroethene	0.2879	0.2982	20.72	20	4	#
#	Methylcyclohexane	0.4766	0.4725	19.82	20	-1	#
#	1,2-Dichloropropane	0.2751	0.2943	21.39	20	7	#
	Dibromomethane	0.1740	0.1811	20.81	20	4	
	1,4-Dioxane	0.0733	0.0791	539.72	500	8	
	Methyl Methacrylate	0.2872	0.2743	19.10	20	-5	
#	Bromodichloromethane	0.3234	0.3390	20.96	20	5	#
	2-Nitropropane	0.1328	0.1096	16.52	20	-17	
	2-Chloroethyl Vinyl Ether	0.2296	0.2373	20.67	20	3	
#	cis-1,3-Dichloropropene	0.4255	0.4494	21.12	20	6	#
#	4-Methyl-2-pentanone	0.5845	0.4951	84.70	100	-15	#
#	Toluene	0.9394	0.9974	21.23	20	6	#
#	trans-1,3-Dichloropropene	0.5076	0.5083	20.02	20	0	#
	Ethyl Methacrylate	0.6086	0.5947	19.54	20	-2	
#	1,1,2-Trichloroethane	0.3361	0.3571	21.25	20	6	#
#	Tetrachloroethene	0.4272	0.4421	20.70	20	3	#
	1,3-Dichloropropane	0.5505	0.5665	20.58	20	3	
#	2-Hexanone	0.6644	0.5276	79.41	100	-21	#
#	Dibromochloromethane	0.3441	0.3601	20.93	20	5	#
#	1,2-Dibromoethane	0.3753	0.3807	20.29	20	1	#
	1-Chlorohexane	0.5473	0.5537	20.23	20	1	
#	Chlorobenzene	1.0511	1.0973	20.88	20	4	#
	1,1,1,2-Tetrachloroethane	0.3548	0.3713	20.93	20	5	
#	Ethylbenzene	1.8349	1.9294	21.03	20	5	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 ICV Date: 03/25/19 Time: 15:38

Lab File ID: 5c25v01.d Init. Calib. Date(s): 03/25/19 03/25/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# m+p-Xylene	0.7237	0.7651	42.29	40	6	#
# o-Xylene	0.7071	0.7425	21.00	20	5	#
# Styrene	1.1676	1.2412	21.26	20	6	#
# Bromoform	0.2716	0.2671	19.67	20	-2	#
# Isopropylbenzene	1.8363	1.9669	21.42	20	7	#
Cyclohexanone	0.3065	0.3238	528.16	500	6	
Bromobenzene	0.8625	0.9100	21.10	20	6	
# 1,1,2,2-Tetrachloroethane	1.0921	1.1571	21.19	20	6	#
1,2,3-Trichloropropane	0.3290	0.3423	20.81	20	4	
trans-1,4-Dichloro-2-butene	0.3439	0.3663	106.50	100	6	
n-Propylbenzene	4.0592	4.3876	21.62	20	8	
2-Chlorotoluene	0.8368	0.8757	20.93	20	5	
4-Chlorotoluene	0.8591	0.9002	20.96	20	5	
1,3,5-Trimethylbenzene	2.9293	3.1080	21.22	20	6	
tert-Butylbenzene	0.6190	0.6450	20.84	20	4	
Pentachloroethane	0.5055	0.5276	20.87	20	4	
1,2,4-Trimethylbenzene	3.0040	3.1429	20.92	20	5	
sec-Butylbenzene	3.7951	4.0625	21.41	20	7	
# 1,3-Dichlorobenzene	1.6518	1.7183	20.80	20	4	#
p-Isopropyltoluene	3.2904	3.5292	21.45	20	7	
# 1,4-Dichlorobenzene	1.6741	1.7776	21.24	20	6	#
1,2,3-Trimethylbenzene	3.1031	3.2693	21.07	20	5	
Benzyl Chloride	2.1515	2.0491	19.05	20	-5	
1,3-Diethylbenzene	2.0054	2.0759	20.70	20	4	
1,4-Diethylbenzene	2.1283	2.1509	20.21	20	1	
# 1,2-Dichlorobenzene	1.5617	1.6591	21.25	20	6	#
n-Butylbenzene	1.6597	1.7472	21.05	20	5	
1,2-Diethylbenzene	1.6672	1.7496	20.99	20	5	
# 1,2-Dibromo-3-chloropropane	0.2728	0.2869	21.03	20	5	#
1,3,5-Trichlorobenzene	1.2553	1.2992	20.70	20	3	
# 1,2,4-Trichlorobenzene	1.1363	1.1826	20.81	20	4	#
Hexachlorobutadiene	0.5363	0.5345	19.93	20	0	
Naphthalene	3.8559	4.0301	20.90	20	5	
1,2,3-Trichlorobenzene	1.0888	1.1250	20.67	20	3	
2-Methylnaphthalene	2.2688	2.3251	20.50	20	2	
			Average %Drift		5	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

^

Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP09137.i/19feb19i.b/wf19i07.d
/chem2/HP09137.i/19feb19i.b/wf19i06.d
/chem2/HP09137.i/19feb19i.b/wf19i05.d
/chem2/HP09137.i/19feb19i.b/wf19i04.d
/chem2/HP09137.i/19feb19i.b/wf19i03.d
/chem2/HP09137.i/19feb19i.b/wf19i02.d
/chem2/HP09137.i/19feb19i.b/wf19i01.d

File /chem2/HP09137.i/19feb19i.b/wf19i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP09137.i/19may18a.b/wy18c01.d

RT Summary

Internal Standard Name	File ID: wy18c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	2.738	2.728	Yes
Fluorobenzene	5.032	5.029	Yes
Chlorobenzene-d5	8.161	8.161	Yes
1,4-Dichlorobenzene-d4	10.041	10.038	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: wy18c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	189811	221988	110994	443976	Yes
Fluorobenzene	1026490	858650	429325	1717300	Yes
Chlorobenzene-d5	778376	703812	351906	1407624	Yes
1,4-Dichlorobenzene-d4	444015	393177	196588	786354	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 05/18/2019 at 22:28

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/18/19 Time: 22:05

Lab File ID: wy18c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
# Dichlorodifluoromethane	0.3233	0.3794	58.68	50	17	#
# Chloromethane	0.4026	0.3395	42.16	50	-16	#
1,3-Butadiene	0.2453	0.1978	40.30	50	-19	
# Vinyl Chloride	0.3690	0.3286	44.52	50	-11	#
# Bromomethane	0.2911	0.2702	46.41	50	-7	#
# Chloroethane	0.2429	0.2027	41.73	50	-17	#
n-Pentane	0.3728	0.3018	40.48	50	-19	
# Trichlorofluoromethane	0.3920	0.4147	52.90	50	6	#
Ethanol	0.1140	0.0601	659.20	1250	-47	<-
Freon 123a	0.2929	0.2637	45.01	50	-10	
Acrolein	1.7998	2.2411	622.59	500	25	<-
# 1,1-Dichloroethene	0.2204	0.2283	51.78	50	4	#
# 1,1-Dichloroethene(2)	0.1112	0.0866	38.95	50	-22	#<-
# Acetone	0.8748	1.0760	123.00	100	23	#<-
# Freon 113	0.1936	0.1979	51.11	50	2	#
2-Propanol	0.6500	0.6260	240.80	250	-4	
Methyl Iodide	0.4225	0.4272	50.56	50	1	
# Carbon Disulfide	0.7767	0.6706	43.17	50	-14	#
Allyl Chloride	0.3841	0.3558	46.33	50	-7	
# Methyl Acetate	0.3324	0.2877	43.28	50	-13	#
# Methylene Chloride	0.2695	0.2493	46.25	50	-7	#
t-Butyl alcohol	1.1595	1.2247	264.07	250	6	
Acrylonitrile	0.1749	0.1626	46.48	50	-7	
# trans-1,2-Dichloroethene	0.2392	0.2366	49.47	50	-1	#
# Methyl Tertiary Butyl Ether	0.5824	0.6339	54.42	50	9	#
n-Hexane	0.3200	0.3091	48.29	50	-3	
# 1,1-Dichloroethane	0.4334	0.4045	46.67	50	-7	#
di-Isopropyl ether	0.8327	0.7418	44.54	50	-11	
2-Chloro-1,3-butadiene	0.3754	0.3717	49.51	50	-1	
Ethyl t-butyl ether	0.6069	0.6070	50.01	50	0	
# cis-1,2-Dichloroethene	0.2686	0.2575	47.94	50	-4	#
# 2-Butanone	0.2512	0.2200	87.58	100	-12	#
2,2-Dichloropropane	0.1946	0.1613	41.43	50	-17	
Propionitrile	1.4410	1.7102	296.70	250	19	
Methacrylonitrile	0.1880	0.1662	110.47	125	-12	
Bromochloromethane	0.1396	0.1454	52.07	50	4	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

page 1 of 4

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/18/19 Time: 22:05

Lab File ID: wy18c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
Tetrahydrofuran	1.3337	1.7007	127.51	100	28	<-
# Chloroform	0.4067	0.4047	49.76	50	0	#
# 1,1,1-Trichloroethane	0.3060	0.3026	49.45	50	-1	#
# Cyclohexane	0.4049	0.3793	46.84	50	-6	#
# Cyclohexane(2)	0.3352	0.3080	45.95	50	-8	#
# Cyclohexane(3)	0.1217	0.1158	47.58	50	-5	#
1,1-Dichloropropene	0.3260	0.3138	48.13	50	-4	
# Carbon Tetrachloride	0.2626	0.2577	49.07	50	-2	#
Isobutyl Alcohol	0.4227	0.4660	688.95	625	10	
# Benzene	1.0480	0.9891	47.19	50	-6	#
# 1,2-Dichloroethane	0.3237	0.3186	49.21	50	-2	#
# 1,2-Dichloroethane(2)	0.0308	0.0317	51.46	50	3	#<-
t-Amyl methyl ether	0.6218	0.6140	49.37	50	-1	
n-Heptane	0.3059	0.2836	46.37	50	-7	
n-Butanol	0.3753	0.3815	1270.61	1250	2	
# Trichloroethene	0.2538	0.2501	49.27	50	-1	#
# Methylcyclohexane	0.3684	0.3769	51.15	50	2	#
# Methylcyclohexane(2)	0.1713	0.1752	51.13	50	2	#
# 1,2-Dichloropropane	0.2691	0.2454	45.61	50	-9	#
Dibromomethane	0.1661	0.1662	50.05	50	0	
1,4-Dioxane	0.1122	0.1247	694.87	625	11	
Methyl Methacrylate	0.2957	0.2695	45.57	50	-9	
# Bromodichloromethane	0.3051	0.2973	48.73	50	-3	#
2-Nitropropane	0.1032	0.1059	102.60	100	3	
2-Chloroethyl Vinyl Ether	0.2051	0.1920	46.81	50	-6	
# cis-1,3-Dichloropropene	0.4195	0.3941	46.98	50	-6	#
# 4-Methyl-2-pentanone	0.4953	0.4705	95.00	100	-5	#
# Toluene	0.8071	0.8480	52.53	50	5	#
# trans-1,3-Dichloropropene	0.4805	0.4836	50.32	50	1	#
Ethyl Methacrylate	0.5904	0.6088	51.56	50	3	
# 1,1,2-Trichloroethane	0.3106	0.3331	53.62	50	7	#
# Tetrachloroethene	0.3275	0.3665	55.96	50	12	#
1,3-Dichloropropane	0.5396	0.5572	51.63	50	3	
# 2-Hexanone	0.4700	0.4953	105.37	100	5	#
# Dibromochloromethane	0.3034	0.3366	55.47	50	11	#
# 1,2-Dibromoethane	0.3413	0.3667	53.72	50	7	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/18/19 Time: 22:05

Lab File ID: wy18c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Chlorobenzene	0.8953	0.9513	53.13	50	6	#
	1,1,1,2-Tetrachloroethane	0.2877	0.3128	54.36	50	9	
#	Ethylbenzene	1.5340	1.6077	52.40	50	5	#
#	m+p-Xylene	0.6099	0.6537	107.18	100	7	#
#	o-Xylene	0.6000	0.6309	52.57	50	5	#
#	Styrene	1.0065	1.0897	54.13	50	8	#
#	Bromoform	0.2361	0.2586	54.77	50	10	#
#	Isopropylbenzene	1.4744	1.5602	52.91	50	6	#
	Cyclohexanone	0.5061	0.4968	613.49	625	-2	
	Bromobenzene	0.7202	0.7701	53.47	50	7	
#	1,1,2,2-Tetrachloroethane	0.9712	0.9943	51.19	50	2	#
	1,2,3-Trichloropropane	0.2925	0.3123	53.38	50	7	
	trans-1,4-Dichloro-2-butene	0.3114	0.2807	112.68	125	-10	
	n-Propylbenzene	3.1748	3.1983	50.37	50	1	
	2-Chlorotoluene	0.6548	0.6917	52.82	50	6	
	4-Chlorotoluene	0.7010	0.7464	53.24	50	6	
	1,3,5-Trimethylbenzene	2.2896	2.3484	51.28	50	3	
	tert-Butylbenzene	0.5202	0.5327	51.20	50	2	
	Pentachloroethane	0.4112	0.4592	55.83	50	12	
	1,2,4-Trimethylbenzene	2.4127	2.4677	51.14	50	2	
	sec-Butylbenzene	2.8105	2.8006	49.82	50	0	
#	1,3-Dichlorobenzene	1.3733	1.4454	52.62	50	5	#
	p-Isopropyltoluene	2.4879	2.5375	51.00	50	2	
#	1,4-Dichlorobenzene	1.4237	1.4982	52.62	50	5	#
	1,2,3-Trimethylbenzene	2.5960	2.7197	52.38	50	5	
	Benzyl Chloride	1.9927	1.9922	49.99	50	0	
	1,3-Diethylbenzene	1.5632	1.5957	51.04	50	2	
	1,4-Diethylbenzene	1.6748	1.6814	50.20	50	0	
#	1,2-Dichlorobenzene	1.3625	1.4448	53.02	50	6	#
	n-Butylbenzene	1.2557	1.2037	47.93	50	-4	
	1,2-Diethylbenzene	1.3198	1.3620	51.60	50	3	
#	1,2-Dibromo-3-chloropropane	0.2207	0.2180	49.39	50	-1	#
	1,3,5-Trichlorobenzene	1.0448	1.0111	48.39	50	-3	
#	1,2,4-Trichlorobenzene	1.0030	0.9514	47.43	50	-5	#
	Hexachlorobutadiene	0.3573	0.3469	48.55	50	-3	
	Naphthalene	3.3939	3.3341	49.12	50	-2	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/18/19 Time: 22:05

Lab File ID: wy18c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

COMPOUND	$\overline{RRF}$	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
1,2,3-Trichlorobenzene	0.9790	0.9324	47.62	50	-5	
2-Methylnaphthalene	1.9363	1.5318	39.55	50	-21	<-
Dibromofluoromethane	0.2316	0.2234	48.22	50	-4	
Dibromofluoromethane(2)	0.2378	0.2276	47.87	50	-4	
1,2-Dichloroethane-d4	0.0616	0.0601	48.77	50	-2	
1,2-Dichloroethane-d4(2)	0.2682	0.2683	50.01	50	0	
1,2-Dichloroethane-d4(3)	0.0392	0.0393	50.03	50	0	
Toluene-d8	1.2529	1.2877	51.39	50	3	
Toluene-d8(2)	0.8309	0.8503	51.17	50	2	
4-Bromofluorobenzene	0.5012	0.4733	47.22	50	-6	
4-Bromofluorobenzene(2)	0.4229	0.4293	50.75	50	1	

Average %Drift 7

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

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Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP09137.i/19feb19i.b/wf19i07.d
/chem2/HP09137.i/19feb19i.b/wf19i06.d
/chem2/HP09137.i/19feb19i.b/wf19i05.d
/chem2/HP09137.i/19feb19i.b/wf19i04.d
/chem2/HP09137.i/19feb19i.b/wf19i03.d
/chem2/HP09137.i/19feb19i.b/wf19i02.d
/chem2/HP09137.i/19feb19i.b/wf19i01.d

File /chem2/HP09137.i/19feb19i.b/wf19i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP09137.i/19may19a.b/wy19c01.d

RT Summary

Internal Standard Name	File ID: wy19c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	2.735	2.728	Yes
Fluorobenzene	5.036	5.029	Yes
Chlorobenzene-d5	8.161	8.161	Yes
1,4-Dichlorobenzene-d4	10.041	10.038	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: wy19c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	188008	221988	110994	443976	Yes
Fluorobenzene	964374	858650	429325	1717300	Yes
Chlorobenzene-d5	743223	703812	351906	1407624	Yes
1,4-Dichlorobenzene-d4	427964	393177	196588	786354	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 05/19/2019 at 12:06

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/19/19 Time: 11:32

Lab File ID: wy19c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	$\overline{RRF}$	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Dichlorodifluoromethane	0.3233	0.3657	56.55	50	13	#
#	Chloromethane	0.4026	0.2944	36.57	50	-27	#<-
|	1,3-Butadiene	0.2453	0.1852	37.74	50	-25	|<-
#	Vinyl Chloride	0.3690	0.2924	39.62	50	-21	#<-
#	Bromomethane	0.2911	0.2532	43.50	50	-13	#
#	Chloroethane	0.2429	0.1832	37.72	50	-25	#<-
|	n-Pentane	0.3728	0.2999	40.23	50	-20	|
#	Trichlorofluoromethane	0.3920	0.3947	50.35	50	1	#
|	Ethanol	0.1140	0.0670	734.17	1250	-41	|<-
|	Freon 123a	0.2929	0.2696	46.03	50	-8	|
|	Acrolein	1.7998	1.7033	473.19	500	-5	|
#	1,1-Dichloroethene	0.2204	0.2188	49.63	50	-1	#
#	1,1-Dichloroethene(2)	0.1112	0.0910	40.92	50	-18	#<-
#	Acetone	0.8748	0.9094	103.95	100	4	#
#	Freon 113	0.1936	0.1932	49.89	50	0	#
|	2-Propanol	0.6500	0.6252	240.47	250	-4	|
|	Methyl Iodide	0.4225	0.4326	51.20	50	2	|
#	Carbon Disulfide	0.7767	0.6482	41.73	50	-17	#
|	Allyl Chloride	0.3841	0.3612	47.02	50	-6	|
#	Methyl Acetate	0.3324	0.2875	43.25	50	-14	#
#	Methylene Chloride	0.2695	0.2561	47.53	50	-5	#
|	t-Butyl alcohol	1.1595	1.1956	257.79	250	3	|
|	Acrylonitrile	0.1749	0.1437	41.08	50	-18	|
#	trans-1,2-Dichloroethene	0.2392	0.2329	48.68	50	-3	#
#	Methyl Tertiary Butyl Ether	0.5824	0.6782	58.22	50	16	#
|	n-Hexane	0.3200	0.2866	44.78	50	-10	|
#	1,1-Dichloroethane	0.4334	0.4032	46.52	50	-7	#
|	di-Isopropyl ether	0.8327	0.7485	44.94	50	-10	|
|	2-Chloro-1,3-butadiene	0.3754	0.3756	50.02	50	0	|
|	Ethyl t-butyl ether	0.6069	0.6332	52.16	50	4	|
#	cis-1,2-Dichloroethene	0.2686	0.2565	47.76	50	-4	#
#	2-Butanone	0.2512	0.2005	79.81	100	-20	#
|	2,2-Dichloropropane	0.1946	0.1570	40.34	50	-19	|
|	Propionitrile	1.4410	1.6529	286.76	250	15	|
|	Methacrylonitrile	0.1880	0.1657	110.13	125	-12	|
|	Bromochloromethane	0.1396	0.1490	53.38	50	7	|

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/19/19 Time: 11:32

Lab File ID: wy19c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	$\overline{RRF}$	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Tetrahydrofuran	1.3337	1.4592	109.41	100	9	
#	Chloroform	0.4067	0.4099	50.39	50	1	#
#	1,1,1-Trichloroethane	0.3060	0.3102	50.69	50	1	#
#	Cyclohexane	0.4049	0.3470	42.85	50	-14	#
#	Cyclohexane(2)	0.3352	0.2839	42.35	50	-15	#
#	Cyclohexane(3)	0.1217	0.1071	43.98	50	-12	#
	1,1-Dichloropropene	0.3260	0.3080	47.23	50	-6	
#	Carbon Tetrachloride	0.2626	0.2633	50.14	50	0	#
	Isobutyl Alcohol	0.4227	0.4462	659.73	625	6	
#	Benzene	1.0480	0.9918	47.32	50	-5	#
#	1,2-Dichloroethane	0.3237	0.3356	51.82	50	4	#
#	1,2-Dichloroethane(2)	0.0308	0.0321	52.14	50	4	#<-
	t-Amyl methyl ether	0.6218	0.6176	49.67	50	-1	
	n-Heptane	0.3059	0.2658	43.45	50	-13	
	n-Butanol	0.3753	0.3537	1178.19	1250	-6	
#	Trichloroethene	0.2538	0.2497	49.19	50	-2	#
#	Methylcyclohexane	0.3684	0.3888	52.77	50	6	#
#	Methylcyclohexane(2)	0.1713	0.1842	53.75	50	7	#
#	1,2-Dichloropropane	0.2691	0.2476	46.01	50	-8	#
	Dibromomethane	0.1661	0.1668	50.24	50	0	
	1,4-Dioxane	0.1122	0.1328	739.49	625	18	
	Methyl Methacrylate	0.2957	0.2684	45.39	50	-9	
#	Bromodichloromethane	0.3051	0.3060	50.16	50	0	#
	2-Nitropropane	0.1032	0.0967	93.64	100	-6	
	2-Chloroethyl Vinyl Ether	0.2051	0.1657	40.39	50	-19	
#	cis-1,3-Dichloropropene	0.4195	0.3877	46.21	50	-8	#
#	4-Methyl-2-pentanone	0.4953	0.4264	86.10	100	-14	#
#	Toluene	0.8071	0.8302	51.43	50	3	#
#	trans-1,3-Dichloropropene	0.4805	0.4802	49.97	50	0	#
	Ethyl Methacrylate	0.5904	0.5759	48.77	50	-2	
#	1,1,2-Trichloroethane	0.3106	0.3318	53.40	50	7	#
#	Tetrachloroethene	0.3275	0.3492	53.31	50	7	#
	1,3-Dichloropropane	0.5396	0.5582	51.73	50	3	
#	2-Hexanone	0.4700	0.4282	91.10	100	-9	#
#	Dibromochloromethane	0.3034	0.3351	55.23	50	10	#
#	1,2-Dibromoethane	0.3413	0.3670	53.77	50	8	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/19/19 Time: 11:32

Lab File ID: wy19c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	$\overline{RRF}$	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Chlorobenzene	0.8953	0.9491	53.00	50	6	#
	1,1,1,2-Tetrachloroethane	0.2877	0.3134	54.46	50	9	
#	Ethylbenzene	1.5340	1.5468	50.42	50	1	#
#	m+p-Xylene	0.6099	0.6289	103.11	100	3	#
#	o-Xylene	0.6000	0.6172	51.43	50	3	#
#	Styrene	1.0065	1.0651	52.91	50	6	#
#	Bromoform	0.2361	0.2526	53.49	50	7	#
#	Isopropylbenzene	1.4744	1.4612	49.55	50	-1	#
	Cyclohexanone	0.5061	0.4194	517.97	625	-17	
	Bromobenzene	0.7202	0.7560	52.49	50	5	
#	1,1,2,2-Tetrachloroethane	0.9712	0.9618	49.52	50	-1	#
	1,2,3-Trichloropropane	0.2925	0.3068	52.44	50	5	
	trans-1,4-Dichloro-2-butene	0.3114	0.2870	115.21	125	-8	
	n-Propylbenzene	3.1748	2.9437	46.36	50	-7	
	2-Chlorotoluene	0.6548	0.6549	50.01	50	0	
	4-Chlorotoluene	0.7010	0.7137	50.91	50	2	
	1,3,5-Trimethylbenzene	2.2896	2.1945	47.92	50	-4	
	tert-Butylbenzene	0.5202	0.4905	47.15	50	-6	
	Pentachloroethane	0.4112	0.4426	53.82	50	8	
	1,2,4-Trimethylbenzene	2.4127	2.3454	48.60	50	-3	
	sec-Butylbenzene	2.8105	2.5067	44.59	50	-11	
#	1,3-Dichlorobenzene	1.3733	1.3801	50.25	50	0	#
	p-Isopropyltoluene	2.4879	2.2678	45.58	50	-9	
#	1,4-Dichlorobenzene	1.4237	1.4427	50.67	50	1	#
	1,2,3-Trimethylbenzene	2.5960	2.6042	50.16	50	0	
	Benzyl Chloride	1.9927	1.9301	48.43	50	-3	
	1,3-Diethylbenzene	1.5632	1.5314	48.98	50	-2	
	1,4-Diethylbenzene	1.6748	1.5932	47.56	50	-5	
#	1,2-Dichlorobenzene	1.3625	1.3845	50.81	50	2	#
	n-Butylbenzene	1.2557	1.0925	43.50	50	-13	
	1,2-Diethylbenzene	1.3198	1.2856	48.70	50	-3	
#	1,2-Dibromo-3-chloropropane	0.2207	0.2101	47.60	50	-5	#
	1,3,5-Trichlorobenzene	1.0448	0.9422	45.09	50	-10	
#	1,2,4-Trichlorobenzene	1.0030	0.8909	44.41	50	-11	#
	Hexachlorobutadiene	0.3573	0.3523	49.31	50	-1	
	Naphthalene	3.3939	3.1862	46.94	50	-6	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/19/19 Time: 11:32

Lab File ID: wy19c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

COMPOUND	$\overline{RRF}$	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
1,2,3-Trichlorobenzene	0.9790	0.8871	45.30	50	-9	
2-Methylnaphthalene	1.9363	1.5117	39.04	50	-22	<-
Dibromofluoromethane	0.2316	0.2266	48.91	50	-2	
Dibromofluoromethane(2)	0.2378	0.2342	49.25	50	-1	
1,2-Dichloroethane-d4	0.0616	0.0612	49.68	50	-1	
1,2-Dichloroethane-d4(2)	0.2682	0.2786	51.95	50	4	
1,2-Dichloroethane-d4(3)	0.0392	0.0395	50.33	50	1	
Toluene-d8	1.2529	1.2855	51.30	50	3	
Toluene-d8(2)	0.8309	0.8457	50.89	50	2	
4-Bromofluorobenzene	0.5012	0.4794	47.83	50	-4	
4-Bromofluorobenzene(2)	0.4229	0.4378	51.75	50	4	

Average %Drift 8

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

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Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP26285.i/19mar25i.b/5m25i07.d
/chem2/HP26285.i/19mar25i.b/5m25i06.d
/chem2/HP26285.i/19mar25i.b/5m25i05.d
/chem2/HP26285.i/19mar25i.b/5m25i04.d
/chem2/HP26285.i/19mar25i.b/5m25i03.d
/chem2/HP26285.i/19mar25i.b/5m25i02.d
/chem2/HP26285.i/19mar25i.b/5m25i01.d

File /chem2/HP26285.i/19mar25i.b/5m25i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP26285.i/19may17a.b/5y17c01.d

RT Summary

Internal Standard Name	File ID: 5y17c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	3.539	3.533	Yes
Fluorobenzene	7.002	7.002	Yes
Chlorobenzene-d5	10.727	10.745	Yes
1,4-Dichlorobenzene-d4	12.708	12.738	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: 5y17c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	238075	324947	162474	649894	Yes
Fluorobenzene	822007	1083032	541516	2166064	Yes
Chlorobenzene-d5	671856	831607	415804	1663214	Yes
1,4-Dichlorobenzene-d4	409595	445741	222870	891482	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 05/17/2019 at 08:52

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 Calibration Date: 05/17/19 Time: 08:17

Lab File ID: 5y17c01.d Init. Calib. Date(s): 03/25/19 03/25/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
# Dichlorodifluoromethane	0.4021	0.6751	83.94	50	68	#<-
# Chloromethane	0.2922	0.3550	60.74	50	21	#<-
| 1,3-Butadiene	0.2030	0.2362	58.16	50	16	|
# Vinyl Chloride	0.2859	0.3618	63.28	50	27	#<-
# Bromomethane	0.2304	0.3282	71.23	50	42	#<-
# Chloroethane	0.1370	0.1845	67.31	50	35	#<-
| Dichlorofluoromethane	0.3728	0.5272	70.71	50	41	|<-
| n-Pentane	0.2506	0.2901	57.88	50	16	|
# Trichlorofluoromethane	0.3974	0.7413	93.26	50	87	#<-
| Ethyl ether	0.2058	0.1853	45.01	50	-10	|
| Freon 123a	0.3089	0.3147	50.94	50	2	|
| Acrolein	1.7648	1.6522	468.08	500	-6	|
# 1,1-Dichloroethene	0.2308	0.2172	47.04	50	-6	#
# 1,1-Dichloroethene(2)	0.1136	0.1207	53.15	50	6	#
# Acetone	0.8069	0.8460	104.83	100	5	#
# Freon 113	0.2348	0.2626	55.91	50	12	#
| 2-Propanol	0.5864	0.6216	264.99	250	6	|
| Methyl Iodide	0.4821	0.4701	48.75	50	-2	|
# Carbon Disulfide	0.7664	0.7423	48.43	50	-3	#
| Allyl Chloride	0.4147	0.3774	45.50	50	-9	|
# Methyl Acetate	0.3575	0.3407	47.65	50	-5	#
# Methylene Chloride	0.2622	0.2598	49.55	50	-1	#
| t-Butyl alcohol	1.1566	1.2327	266.46	250	7	|
| Acrylonitrile	0.1890	0.1736	45.94	50	-8	|
# trans-1,2-Dichloroethene	0.2584	0.2503	48.43	50	-3	#
# Methyl Tertiary Butyl Ether	0.7373	0.6988	47.39	50	-5	#
| n-Hexane	0.3574	0.3220	45.04	50	-10	|
# 1,1-Dichloroethane	0.4555	0.4645	50.98	50	2	#
| di-Isopropyl ether	0.8303	0.7373	44.40	50	-11	|
| 2-Chloro-1,3-butadiene	0.4031	0.4178	51.83	50	4	|
| Ethyl t-butyl ether	0.7687	0.6584	42.82	50	-14	|
# cis-1,2-Dichloroethene	0.2923	0.2847	48.69	50	-3	#
# 2-Butanone	0.2854	0.2560	89.72	100	-10	#
| 2,2-Dichloropropane	0.3643	0.4072	55.89	50	12	|
| Propionitrile	1.2579	1.3475	267.80	250	7	|
| Methacrylonitrile	0.1859	0.1810	121.71	125	-3	|

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 Calibration Date: 05/17/19 Time: 08:17

Lab File ID: 5y17c01.d Init. Calib. Date(s): 03/25/19 03/25/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
Bromochloromethane	0.1463	0.1622	55.44	50	11	
Tetrahydrofuran	1.2779	1.2363	96.75	100	-3	
# Chloroform	0.4517	0.5190	57.45	50	15	#
# 1,1,1-Trichloroethane	0.3975	0.4635	58.29	50	17	#
# Cyclohexane	0.4596	0.4074	44.32	50	-11	#
# Cyclohexane(2)	0.3916	0.3666	46.80	50	-6	#
# Cyclohexane(3)	0.1424	0.1289	45.26	50	-9	#
1,1-Dichloropropene	0.3654	0.3702	50.65	50	1	
# Carbon Tetrachloride	0.3440	0.4195	60.97	50	22	#<-
Isobutyl Alcohol	0.3788	0.4658	768.58	625	23	<-
# Benzene	1.1100	1.0671	48.07	50	-4	#
# 1,2-Dichloroethane	0.3280	0.4313	65.75	50	31	#<-
# 1,2-Dichloroethane(2)	0.0287	0.0308	53.63	50	7	#<-
t-Amyl methyl ether	0.7747	0.6924	44.69	50	-11	
n-Heptane	0.4030	0.3510	43.54	50	-13	
n-Butanol	0.3158	0.3545	1403.19	1250	12	
# Trichloroethene	0.2879	0.2992	51.97	50	4	#
# Methylcyclohexane	0.4766	0.4976	52.20	50	4	#
# Methylcyclohexane(2)	0.2050	0.2198	53.59	50	7	#
# 1,2-Dichloropropane	0.2751	0.2764	50.23	50	0	#
Dibromomethane	0.1740	0.2030	58.32	50	17	
1,4-Dioxane	0.0733	0.1013	864.05	625	38	<-
Methyl Methacrylate	0.2872	0.2848	49.57	50	-1	
# Bromodichloromethane	0.3234	0.3901	60.31	50	21	#<-
2-Nitropropane	0.1328	0.1570	118.26	100	18	
2-Chloroethyl Vinyl Ether	0.2296	0.2364	51.47	50	3	
# cis-1,3-Dichloropropene	0.4255	0.4576	53.77	50	8	#
# 4-Methyl-2-pentanone	0.5845	0.5193	88.86	100	-11	#
# Toluene	0.9394	0.8741	46.52	50	-7	#
# trans-1,3-Dichloropropene	0.5076	0.5468	53.85	50	8	#
Ethyl Methacrylate	0.6086	0.5809	47.72	50	-5	
# 1,1,2-Trichloroethane	0.3361	0.3458	51.44	50	3	#
# Tetrachloroethene	0.4272	0.4140	48.45	50	-3	#
1,3-Dichloropropane	0.5505	0.5842	53.06	50	6	
# 2-Hexanone	0.6644	0.5418	81.55	100	-18	#
# Dibromochloromethane	0.3441	0.4062	59.02	50	18	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 Calibration Date: 05/17/19 Time: 08:17

Lab File ID: 5yl7c01.d Init. Calib. Date(s): 03/25/19 03/25/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	1,2-Dibromoethane	0.3753	0.3983	53.06	50	6	#
	1-Chlorohexane	0.5473	0.4921	44.96	50	-10	
#	Chlorobenzene	1.0511	1.0833	51.53	50	3	#
	1,1,1,2-Tetrachloroethane	0.3548	0.4004	56.42	50	13	
#	Ethylbenzene	1.8349	1.8814	51.26	50	3	#
#	m+p-Xylene	0.7237	0.7281	100.61	100	1	#
#	o-Xylene	0.7071	0.7030	49.71	50	-1	#
#	Styrene	1.1676	1.1970	51.26	50	3	#
#	Bromoform	0.2716	0.3211	59.12	50	18	#
#	Isopropylbenzene	1.8363	1.8923	51.52	50	3	#
	Cyclohexanone	0.3065	0.4428	902.92	625	44	<-
	Bromobenzene	0.8625	0.8133	47.15	50	-6	
#	1,1,2,2-Tetrachloroethane	1.0921	1.1042	50.55	50	1	#
	1,2,3-Trichloropropane	0.3290	0.3554	54.00	50	8	
	trans-1,4-Dichloro-2-butene	0.3439	0.3834	139.33	125	11	
	n-Propylbenzene	4.0592	3.8127	46.96	50	-6	
	2-Chlorotoluene	0.8368	0.7595	45.38	50	-9	
	4-Chlorotoluene	0.8591	0.7878	45.85	50	-8	
	1,3,5-Trimethylbenzene	2.9293	2.7577	47.07	50	-6	
	tert-Butylbenzene	0.6190	0.5208	42.07	50	-16	
	Pentachloroethane	0.5055	0.5564	55.03	50	10	
	1,2,4-Trimethylbenzene	3.0040	2.8860	48.04	50	-4	
	sec-Butylbenzene	3.7951	3.3485	44.12	50	-12	
#	1,3-Dichlorobenzene	1.6518	1.5547	47.06	50	-6	#
	p-Isopropyltoluene	3.2904	2.9731	45.18	50	-10	
#	1,4-Dichlorobenzene	1.6741	1.6014	47.83	50	-4	#
	1,2,3-Trimethylbenzene	3.1031	3.2438	52.27	50	5	
	Benzyl Chloride	2.1515	2.4536	57.02	50	14	
	1,3-Diethylbenzene	2.0054	1.9344	48.23	50	-4	
	1,4-Diethylbenzene	2.1283	2.0143	47.32	50	-5	
#	1,2-Dichlorobenzene	1.5617	1.5265	48.87	50	-2	#
	n-Butylbenzene	1.6597	1.4994	45.17	50	-10	
	1,2-Diethylbenzene	1.6672	1.6026	48.06	50	-4	
#	1,2-Dibromo-3-chloropropane	0.2728	0.3382	61.97	50	24	#<-
	1,3,5-Trichlorobenzene	1.2553	1.0693	42.59	50	-15	
#	1,2,4-Trichlorobenzene	1.1363	0.9863	43.40	50	-13	#

Compounds with required minimum RRF.

All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 Calibration Date: 05/17/19 Time: 08:17

Lab File ID: 5y17c01.d Init. Calib. Date(s): 03/25/19 03/25/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Hexachlorobutadiene	0.5363	0.4308	40.16	50	-20
Naphthalene	3.8559	3.9815	51.63	50	3
1,2,3-Trichlorobenzene	1.0888	1.0017	46.00	50	-8
2-Methylnaphthalene	2.2688	2.1686	47.79	50	-4
Dibromofluoromethane	0.2393	0.2703	56.49	50	13
Dibromofluoromethane(2)	0.2456	0.2750	55.99	50	12
1,2-Dichloroethane-d4	0.0560	0.0576	51.45	50	3
1,2-Dichloroethane-d4(2)	0.2592	0.3558	68.65	50	37
1,2-Dichloroethane-d4(3)	0.0357	0.0369	51.66	50	3
Toluene-d8	1.2621	1.2444	49.30	50	-1
Toluene-d8(2)	0.8295	0.7980	48.10	50	-4
4-Bromofluorobenzene	0.4911	0.5345	54.42	50	9
4-Bromofluorobenzene(2)	0.4278	0.4650	54.35	50	9

Average %Drift 11

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): wy18c01.d Date Analyzed: 05/18/19

Instrument ID: HP09137 Time Analyzed: 22:05

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	189811	2.738	1026490	5.032	778376	8.161	444015	10.041
UPPER LIMIT	379622	3.238	2052980	5.532	1556752	8.661	888030	10.541
LOWER LIMIT	94906	2.238	513245	4.532	389188	7.661	222008	9.541
LAB SAMPLE ID								
01 LCSW23	185223	2.732	1049302	5.032	796496	8.161	447919	10.042
02 VBLKW23	177555	2.744	947707	5.032	739589	8.161	377751	10.045
03 1053375	164279	2.744	947536	5.032	733814	8.161	371974	10.041
04 1053376	162632	2.741	947368	5.032	724356	8.161	373316	10.041
05 1053379	159659	2.744	911949	5.029	705020	8.161	363154	10.042
06 1053382	129701	2.738	887744	5.032	694656	8.161	348961	10.041
07 1053383	152533	2.741	879049	5.032	672115	8.161	348025	10.042
08 1053360MS	182190	2.738	951889	5.032	736014	8.161	416077	10.041
09 1053361MSD	186782	2.738	972725	5.032	734147	8.161	421474	10.041
10 1053352	178385	2.741	928725	5.032	717617	8.161	371056	10.041
11 1053353	157253	2.741	917983	5.032	710608	8.161	363159	10.041
12 1053354	147925	2.744	925895	5.032	721769	8.161	368493	10.042
13 1053355	166431	2.744	910763	5.032	705796	8.161	359701	10.041
14 1053356	169028	2.744	883199	5.032	686111	8.161	345609	10.041
15 1053357	162426	2.741	874167	5.032	681629	8.161	347282	10.042
16 1053358	138607	2.738	877279	5.032	676081	8.161	353388	10.041
17 1053362	151916	2.744	856060	5.032	666355	8.164	337861	10.041
18 1053363	127654	2.744	871075	5.032	670686	8.161	342923	10.041

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

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8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): wy19c01.d Date Analyzed: 05/19/19

Instrument ID: HP09137 Time Analyzed: 11:32

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	188008	2.735	964374	5.036	743223	8.161	427964	10.042
UPPER LIMIT	376016	3.235	1928748	5.536	1486446	8.661	855928	10.542
LOWER LIMIT	94004	2.235	482187	4.536	371612	7.661	213982	9.542
LAB SAMPLE ID								
01 VBLKW24	161128	2.741	907592	5.032	688339	8.164	358292	10.042
02 VBLKW25	161128	2.741	907592	5.032	688339	8.164	358292	10.042
03 LCSW25	145218	2.738	948146	5.032	728644	8.161	414799	10.042
04 LCSW24	145218	2.738	948146	5.032	728644	8.161	414799	10.042
05 MDL0.5 - MD	169887	2.738	917398	5.032	708870	8.164	361566	10.042
06 MDL0.5 - MD	169887	2.738	917398	5.032	708870	8.164	361566	10.042
07 1053374	140048	2.741	882636	5.032	680257	8.164	351344	10.041
08 1053377	128737	2.744	857690	5.032	666191	8.161	342215	10.041
09 1053378	135799	2.741	848569	5.032	666891	8.164	338640	10.041
10 1053380	124134	2.738	852058	5.032	658002	8.161	341161	10.042
11 1053381	124381	2.741	861333	5.029	665001	8.161	340579	10.041
12 1053359	148557	2.744	856880	5.036	661965	8.161	342278	10.041
13 1052544	169696	2.748	831394	5.032	650814	8.161	334236	10.042
14 1052546	128981	2.734	830171	5.032	643794	8.161	336801	10.041
15 1052547MS	145234	2.741	909156	5.032	696482	8.161	404082	10.041
16 1052548MSD	160669	2.738	922034	5.032	701245	8.161	408875	10.041
17 1052549	159340	2.738	879768	5.032	679937	8.161	346825	10.042
18 1052550	134349	2.741	863162	5.032	664463	8.161	341845	10.041
19 1052551	116338	2.741	854134	5.032	657360	8.161	339157	10.041
20 1052552	162777	2.741	854183	5.032	660366	8.161	339742	10.041
21 1052553	150089	2.748	851946	5.032	670129	8.161	345630	10.042
22 1052554	155827	2.744	843676	5.032	653069	8.161	338201	10.041

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): wy19c01.d Date Analyzed: 05/19/19

Instrument ID: HP09137 Time Analyzed: 11:32

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA) AREA #	RT #	IS2(FBZ) AREA #	RT #	IS3(CBZ) AREA #	RT #	IS4(DCB) AREA #	RT #
12 HOUR STD	188008	2.735	964374	5.036	743223	8.161	427964	10.042
UPPER LIMIT	376016	3.235	1928748	5.536	1486446	8.661	855928	10.542
LOWER LIMIT	94004	2.235	482187	4.536	371612	7.661	213982	9.542
LAB SAMPLE ID								
23 1052556	154081	2.741	835482	5.032	653803	8.161	331767	10.041
24 1052987	156447	2.744	828795	5.032	642931	8.161	332591	10.042
25 SECC050	175459	2.738	898393	5.032	699815	8.161	405307	10.041

IS1 (TBA)=t-Butyl alcohol-d10 UPPER LIMIT = + 100%
IS2 (FBZ)=Fluorobenzene of internal standard area.
IS3 (CBZ)=Chlorobenzene-d5 LOWER LIMIT = - 50%
IS4 (DCB)=1,4-Dichlorobenzene-d4 of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

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8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): 5y17c01.d Date Analyzed: 05/17/19

Instrument ID: HP26285 Time Analyzed: 08:17

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	238075	3.539	822007	7.002	671856	10.726	409595	12.708
UPPER LIMIT	476150	4.039	1644014	7.502	1343712	11.226	819190	13.208
LOWER LIMIT	119038	3.039	411004	6.502	335928	10.226	204798	12.208
LAB SAMPLE ID								
01 LCS587	263946	3.557	935764	7.014	739494	10.732	429105	12.708
02 VBLK587	273255	3.551	897609	7.014	703406	10.732	385082	12.708
03 1051582	267163	3.539	859162	6.996	680289	10.720	368049	12.708
04 1053368	233416	3.551	798721	7.008	629634	10.726	346230	12.708
05 1053369MS	231469	3.557	859016	7.014	689368	10.726	410182	12.708
06 1053370MSD	267992	3.557	915064	7.014	728088	10.732	426065	12.714
07 1053364	259967	3.569	885065	7.014	686911	10.733	376366	12.714
08 1053365	239624	3.563	829706	7.014	651321	10.732	354364	12.714
09 1053366	232796	3.557	793137	7.014	627202	10.733	343418	12.714
10 1053367	224788	3.563	776590	7.014	616002	10.732	336477	12.714
11 1053371	223532	3.563	762446	7.020	598428	10.732	327676	12.714
12 1053372	176042	3.557	747225	7.020	615147	10.732	334358	12.714
13 1053373	214211	3.563	743223	7.020	590252	10.732	325402	12.714
14 1051576	221207	3.557	744801	7.020	588877	10.732	323123	12.714
15 1051578	223462	3.563	748770	7.020	596205	10.733	325681	12.714
16 1051575	217930	3.563	737469	7.014	612268	10.732	329673	12.714
17 1051577	212580	3.563	742264	7.020	601123	10.732	332104	12.714
18 1051580	194968	3.569	764077	7.020	651060	10.732	371616	12.714
19 1051573	152201	3.563	804972	7.020	658535	10.733	368142	12.714
20 1051581	230391	3.557	870314	7.020	726246	10.732	401446	12.714
21 1051579	235008	3.563	974799	7.020	803256	10.732	444202	12.714

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

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Sample Data

Volatiles by GC/MS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RS001

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053364

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP26285.i/19may17a.b/5y17s06.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/17/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	0.4	J
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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RS001 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1053364

Data file: /chem2/HP26285.i/19may17a.b/5y17s06.d Injection date and time: **17-MAY-2019 11:56**
Data file Sample Info. Line: RS001;1053364;1;0;;JCV89;;;5y17b01; Instrument ID: **HP26285.i** Batch: **5191371AA**
Date, time and analyst ID of latest file update: 25-May-2019 11:06 clm27445

Blank Data file reference: **/chem2/HP26285.i/19may17a.b/5y17b01.d**

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 17-MAY-2019 13:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may17a.b/5y17c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.569	(-0.031)	358	65	259967	(9)	250.00	
66) Fluorobenzene	7.014	(-0.012)	923	96	885065	(8)	50.00	
101) Chlorobenzene-d5	10.733	(-0.006)	1533	117	686911	(2)	50.00	
132) 1,4-Dichlorobenzene-d4	12.714	(-0.006)	1858	152	376366	(-8)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.106	(-0.001)	113	234871	55.456	111%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.575	(-0.001)	102	52236	52.711	105%		80 - 120
84) Toluene-d8	(3)	9.142	(-0.001)	98	858599	49.519	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.793	(0.000)	95	332584	49.297	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	7.514	(-0.000)	95	1962	0.385	0.39		J	0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Corie L. Mellinger on 05/25/2019 at 11:12. Target 3.5 esignature user ID: clm27445

RS001 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1053364

Data file: /chem2/HP26285.i/19may17a.b/5y17s06.d Injection date and time: **17-MAY-2019 11:56**
Data file Sample Info. Line: RS001;1053364;1;0;;JCV89;;;5y17b01; Instrument ID: **HP26285.i** Batch: **5191371AA**
Date, time and analyst ID of latest file update: 25-May-2019 11:06 clm27445

Blank Data file reference: **/chem2/HP26285.i/19may17a.b/5y17b01.d**

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 17-MAY-2019 13:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may17a.b/5y17c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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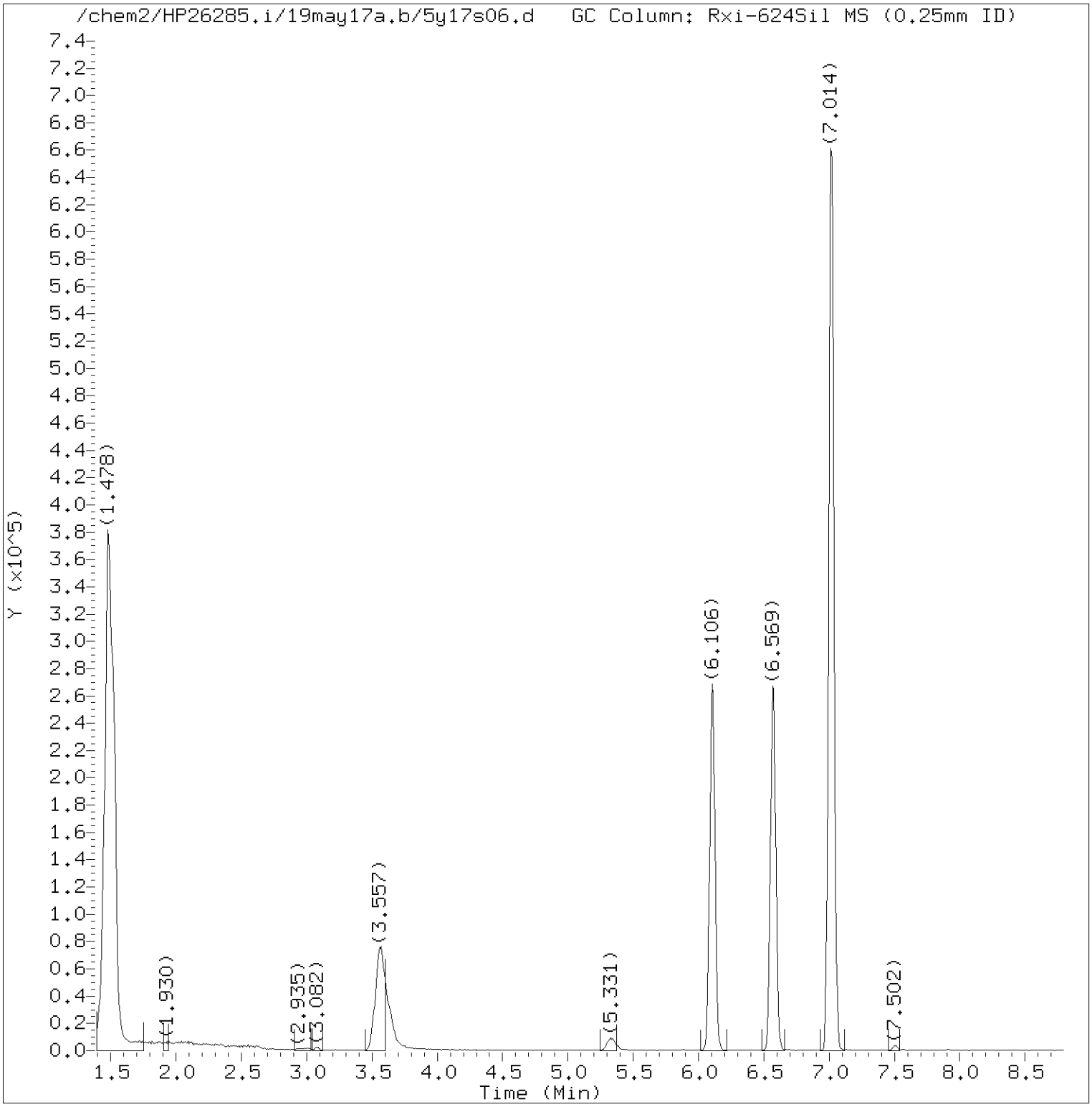
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Corie L. Mellinger on 05/25/2019 at 11:12. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 14:27. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

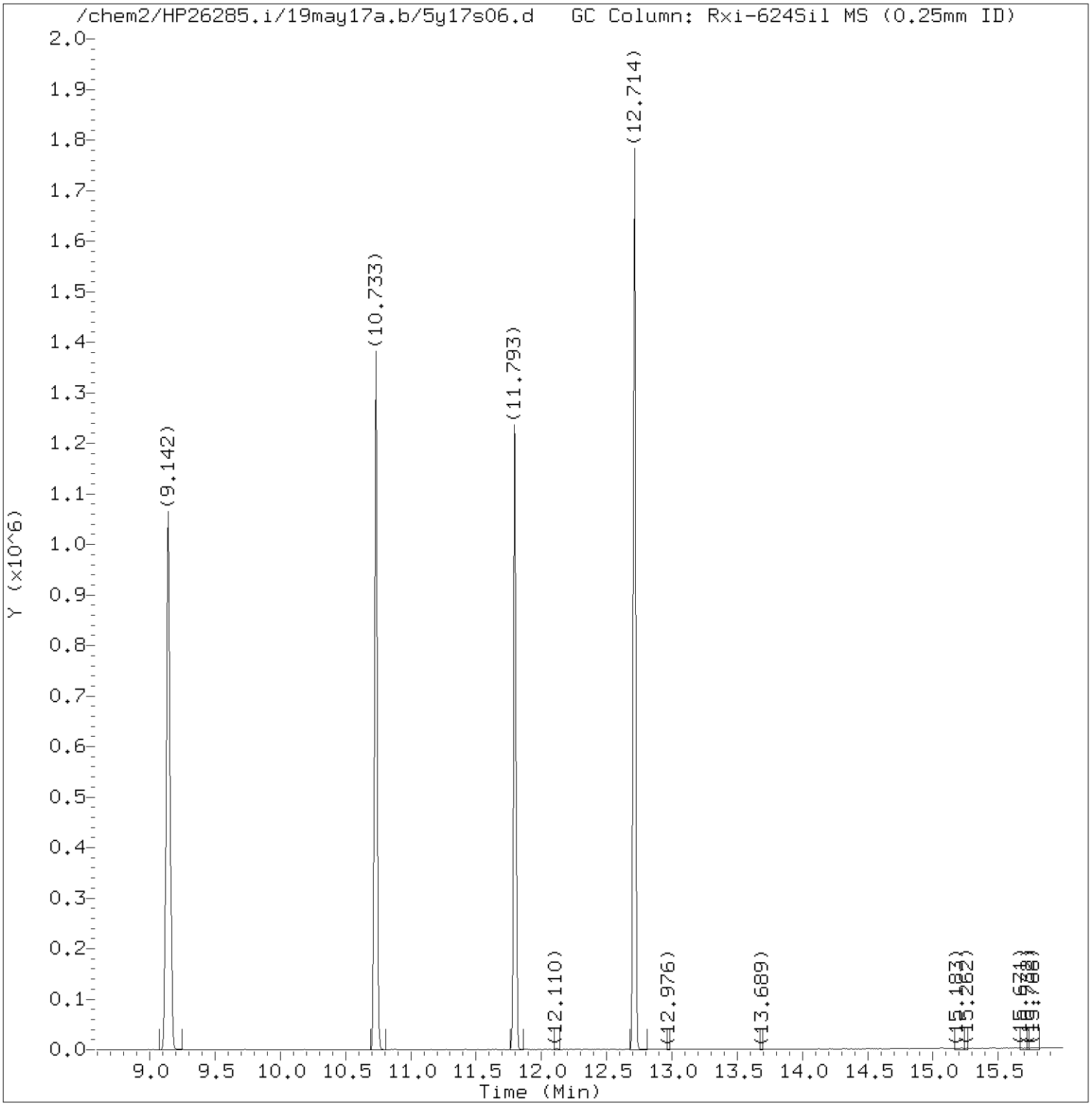
Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s06.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 11:56 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:06 clm27445

Sample Name: RS001 Lab Sample ID: 1053364

Digitally signed by Corie L. Mellinger
on 05/25/2019 at 11:12.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s06.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 11:56 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:06 clm27445

Sample Name: RS001 Lab Sample ID: 1053364

Digitally signed by Corie L. Mellinger
on 05/25/2019 at 11:12.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s06.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 11:56 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:06 clm27445

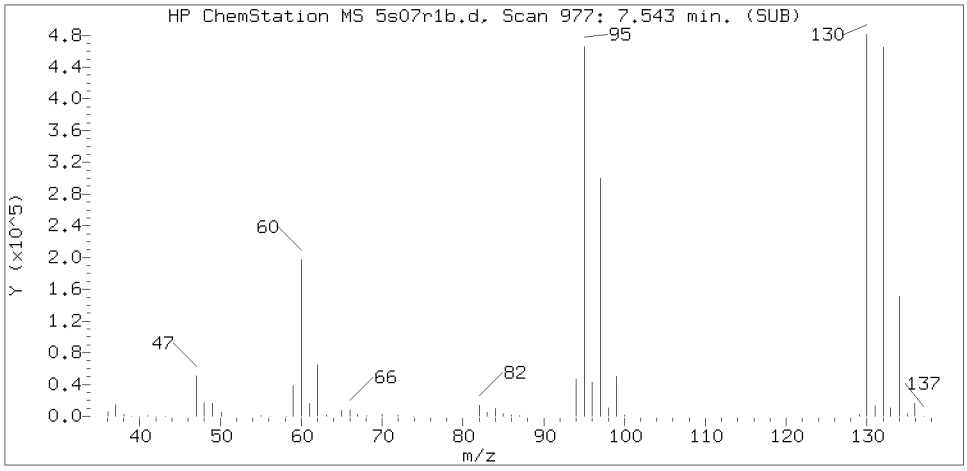
Sample Name: RS001 Lab Sample ID: 1053364

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.569	65	259967	250.000
52)$Dibromofluoromethane	(2)	6.106	113	234871	55.456
57)$1,2-Dichloroethane-d4	(2)	6.575	102	52236	52.711
66)*Fluorobenzene	(2)	7.014	96	885065	50.000
71) Trichloroethene	(2)	7.514	95	1962	0.385
84)$Toluene-d8	(3)	9.142	98	858599	49.519
101)*Chlorobenzene-d5	(3)	10.733	117	686911	50.000
115)$4-Bromofluorobenzene	(3)	11.793	95	332584	49.297
132)*1,4-Dichlorobenzene-d4	(4)	12.714	152	376366	50.000

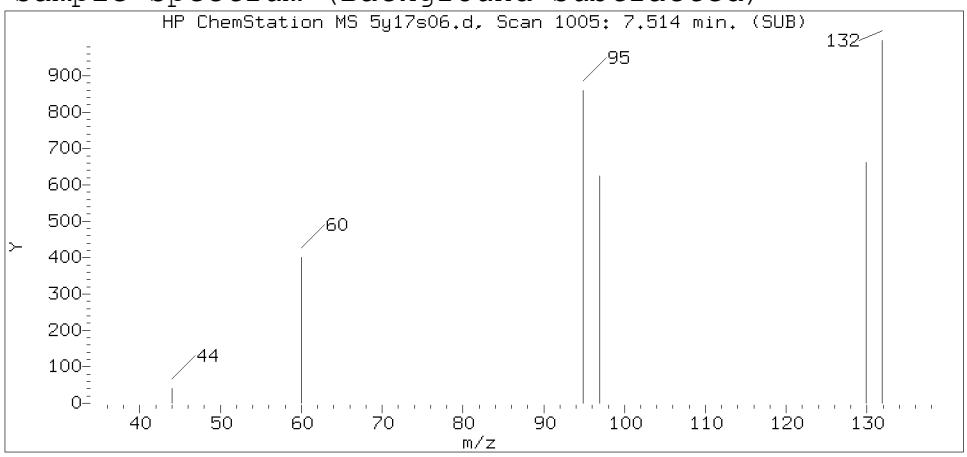
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 05/25/2019 at 11:12.
Target 3.5 esignature user ID: clm27445

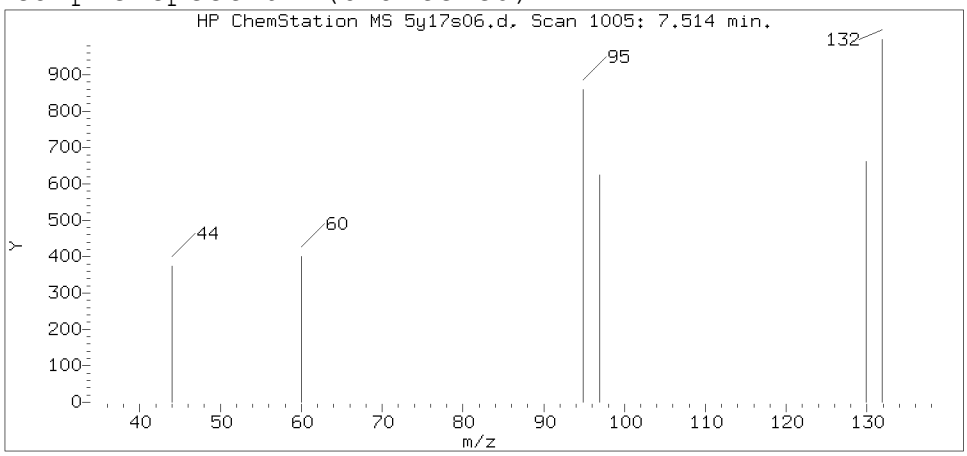
Reference Standard Spectrum for Trichloroethene

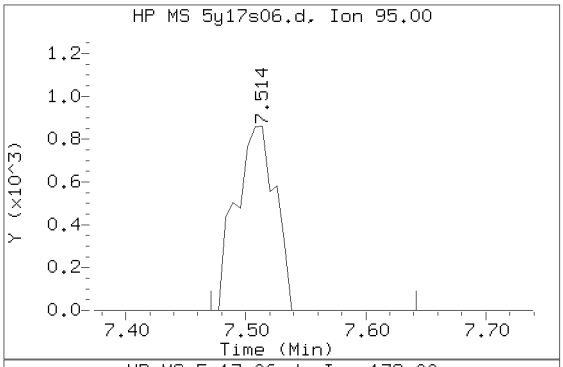


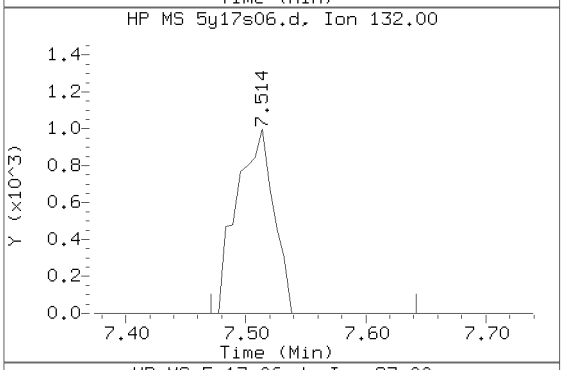
Sample Spectrum (Background Subtracted)

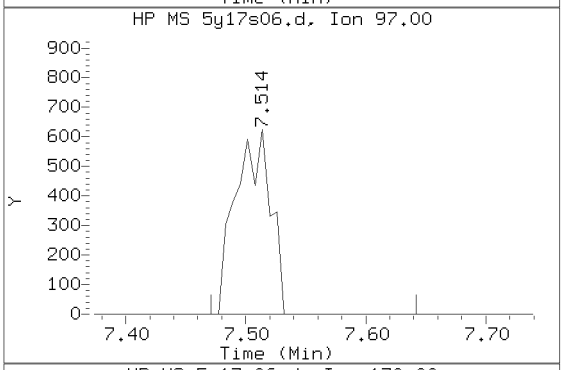


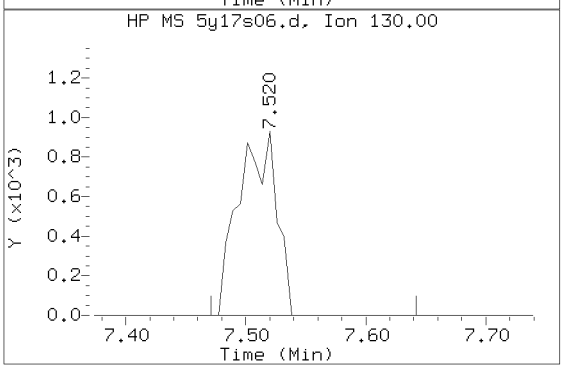
Sample Spectrum (Unaltered)











Data File: /chem2/HP26285.i/19may17a.b/5y17s06.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 11:56 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:06 clm27445

Sample Name: RS001 Lab Sample ID: 1053364

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 1005
Retention Time (minutes)	: 7.514
Relative Retention Time	:-0.00075
Quant Ion	: 95.00
Area (flag)	: 1962
On-Column Amount (ng)	: 0.3850

Digitally signed by Corie L. Mellinger on 05/25/2019 at 11:12.
Target 3.5 esignature user ID: clm27445

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
RS002

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053365

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP26285.i/19may17a.b/5y17s07.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/17/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	0.9	J
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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RS002 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1053365

Data file: /chem2/HP26285.i/19may17a.b/5y17s07.d Injection date and time: **17-MAY-2019 12:17**
Data file Sample Info. Line: RS002;1053365;1;0;;JCV89;;;5y17b01; Instrument ID: **HP26285.i** Batch: **5191371AA**
Date, time and analyst ID of latest file update: 25-May-2019 11:06 clm27445

Blank Data file reference: **/chem2/HP26285.i/19may17a.b/5y17b01.d**

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 17-MAY-2019 13:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may17a.b/5y17c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.563 (-0.024)	357	65	239624 (1)	250.00	
66) Fluorobenzene	7.014 (-0.012)	923	96	829706 (1)	50.00	
101) Chlorobenzene-d5	10.733 (-0.006)	1533	117	651321 (-3)	50.00	
132) 1,4-Dichlorobenzene-d4	12.714 (-0.006)	1858	152	354364 (-13)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.105 (-0.001)	113	227072	57.192	114%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.575 (-0.001)	102	49911	53.726	107%		80 - 120
84) Toluene-d8	(3)	9.141 (-0.001)	98	809959	49.267	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.793 (0.000)	95	313985	49.083	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	7.508 (0.000)	95	4393	0.920	0.92		J	0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Corie L. Mellinger on 05/25/2019 at 11:12. Target 3.5 esignature user ID: clm27445

RS002 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1053365

Data file: /chem2/HP26285.i/19may17a.b/5y17s07.d Injection date and time: **17-MAY-2019 12:17**
Data file Sample Info. Line: RS002;1053365;1;0;;JCV89;;;5y17b01; Instrument ID: **HP26285.i** Batch: **5191371AA**
Date, time and analyst ID of latest file update: 25-May-2019 11:06 clm27445

Blank Data file reference: **/chem2/HP26285.i/19may17a.b/5y17b01.d**

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 17-MAY-2019 13:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may17a.b/5y17c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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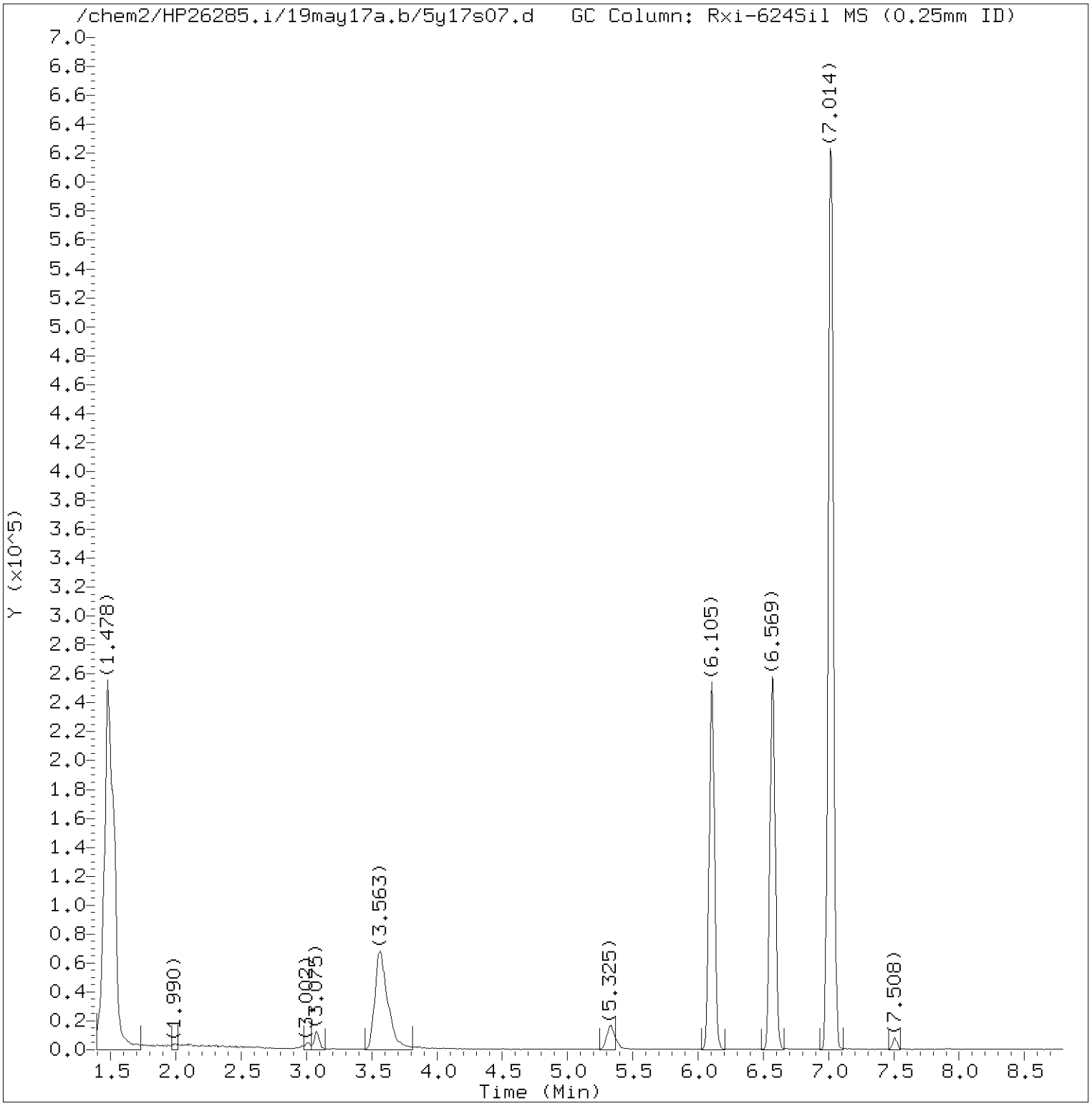
Total number of targets = 24

Digitally signed by Corie L. Mellinger on 05/25/2019 at 11:12. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 14:27. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s07.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 12:17 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:06 clm27445

Sample Name: RS002 Lab Sample ID: 1053365

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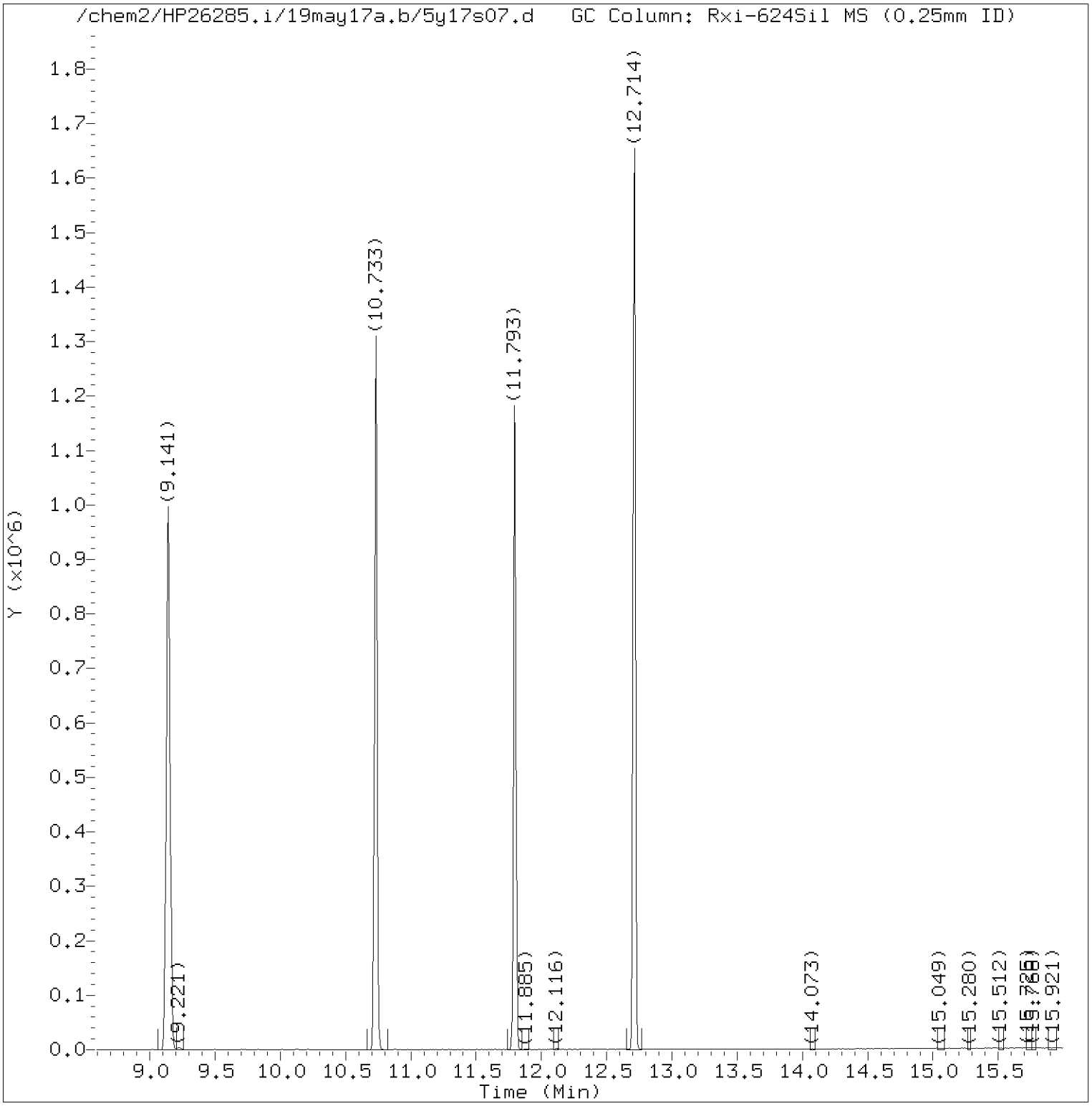
on 05/25/2019 at 11:12.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s07.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 12:17 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:06 clm27445

Sample Name: RS002 Lab Sample ID: 1053365

Digitally signed by Corie L. Mellinger
on 05/25/2019 at 11:12.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s07.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 12:17 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:06 clm27445

Sample Name: RS002 Lab Sample ID: 1053365

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.563	65	239624	250.000
52)$Dibromofluoromethane	(2)	6.105	113	227072	57.192
57)$1,2-Dichloroethane-d4	(2)	6.575	102	49911	53.726
66)*Fluorobenzene	(2)	7.014	96	829706	50.000
71) Trichloroethene	(2)	7.508	95	4393	0.920
84)$Toluene-d8	(3)	9.141	98	809959	49.267
101)*Chlorobenzene-d5	(3)	10.733	117	651321	50.000
115)$4-Bromofluorobenzene	(3)	11.793	95	313985	49.083
132)*1,4-Dichlorobenzene-d4	(4)	12.714	152	354364	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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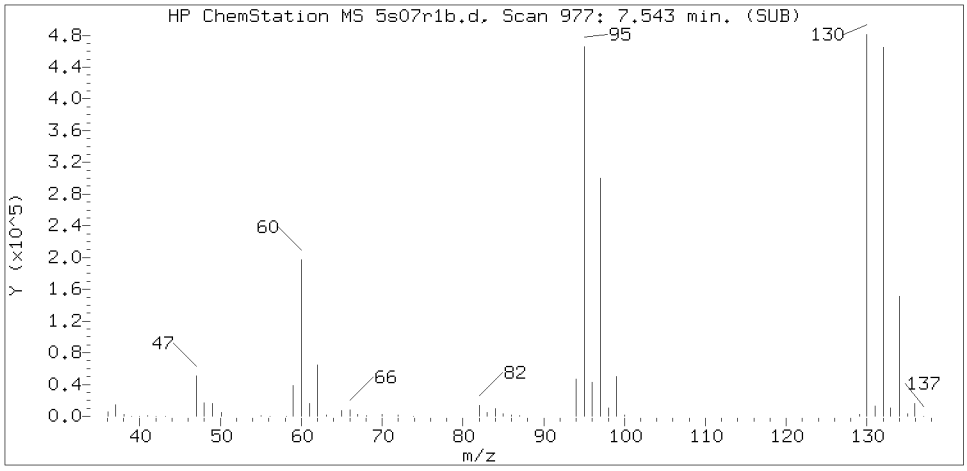
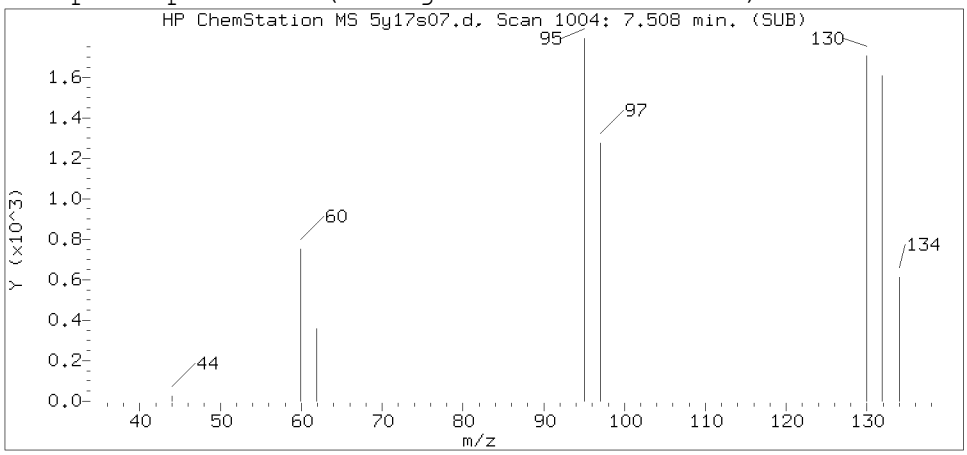
Target 3.5 esignature user ID: clm27445

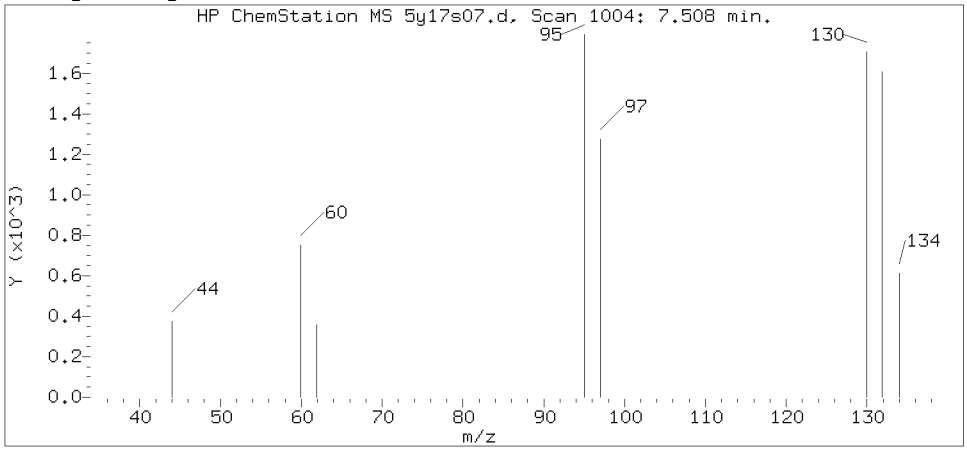
Reference Standard Spectrum for Trichloroethene

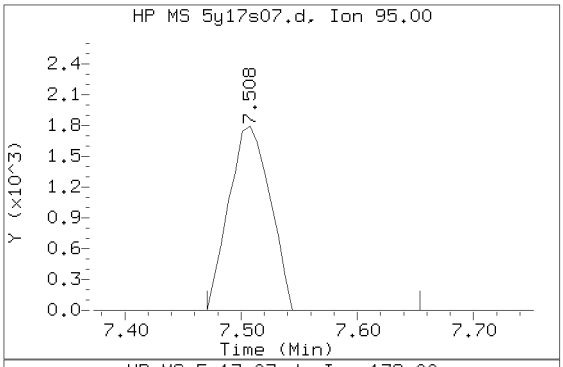


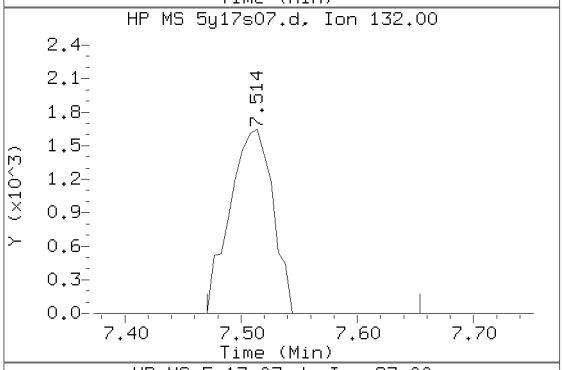
Sample Spectrum (Background Subtracted)

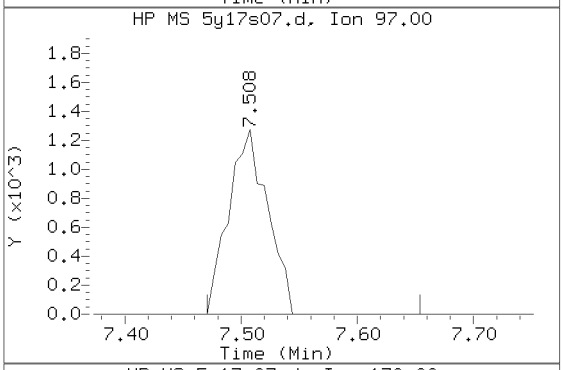


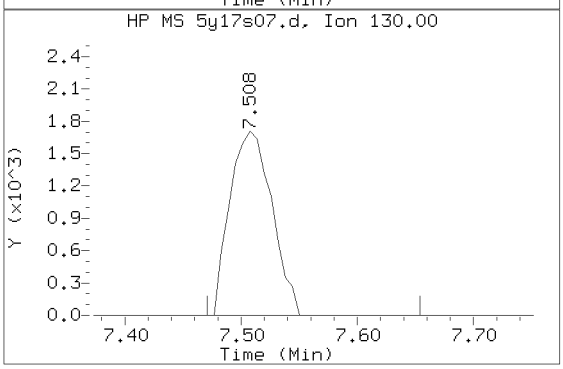
Sample Spectrum (Unaltered)











Data File: /chem2/HP26285.i/19may17a.b/5y17s07.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 12:17 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:06 clm27445

Sample Name: RS002 Lab Sample ID: 1053365

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 1004
Retention Time (minutes)	: 7.508
Relative Retention Time	: 0.00012
Quant Ion	: 95.00
Area (flag)	: 4393
On-Column Amount (ng)	: 0.9196

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Target 3.5 esignature user ID: clm27445

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RS003

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053366

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP26285.i/19may17a.b/5y17s08.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/17/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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RS003 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1053366

Data file: /chem2/HP26285.i/19may17a.b/5y17s08.d Injection date and time: **17-MAY-2019 12:38**
Data file Sample Info. Line: RS003;1053366;1;0;;JCV89;;;5y17b01; Instrument ID: **HP26285.i** Batch: **5191371AA**
Date, time and analyst ID of latest file update: 25-May-2019 11:07 clm27445

Blank Data file reference: **/chem2/HP26285.i/19may17a.b/5y17b01.d**

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 17-MAY-2019 13:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may17a.b/5y17c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.557	(-0.018)	356	65	232796	(-2)	250.00	
66) Fluorobenzene	7.014	(-0.012)	923	96	793137	(-4)	50.00	
101) Chlorobenzene-d5	10.733	(-0.006)	1533	117	627202	(-7)	50.00	
132) 1,4-Dichlorobenzene-d4	12.714	(-0.006)	1858	152	343418	(-16)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.106	(-0.001)	113	218048	57.451	115%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.575	(-0.001)	102	47346	53.314	107%		80 - 120
84) Toluene-d8	(3)	9.142	(-0.001)	98	772768	48.812	98%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.793	(0.000)	95	299034	48.544	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	7.514	(-0.000)	95	5964	1.306	1.31			0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Corie L. Mellinger on 05/25/2019 at 11:13. Target 3.5 esignature user ID: clm27445

RS003 Lancaster Laboratories 1053366
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP26285.i/19may17a.b/5y17s08.d Injection date and time: **17-MAY-2019 12:38**
Data file Sample Info. Line: RS003;1053366;1;0;;JCV89;;;5y17b01; Instrument ID: **HP26285.i** Batch: **5191371AA**
Date, time and analyst ID of latest file update: 25-May-2019 11:07 clm27445

Blank Data file reference: **/chem2/HP26285.i/19may17a.b/5y17b01.d**

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 17-MAY-2019 13:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may17a.b/5y17c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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Total number of targets = 24

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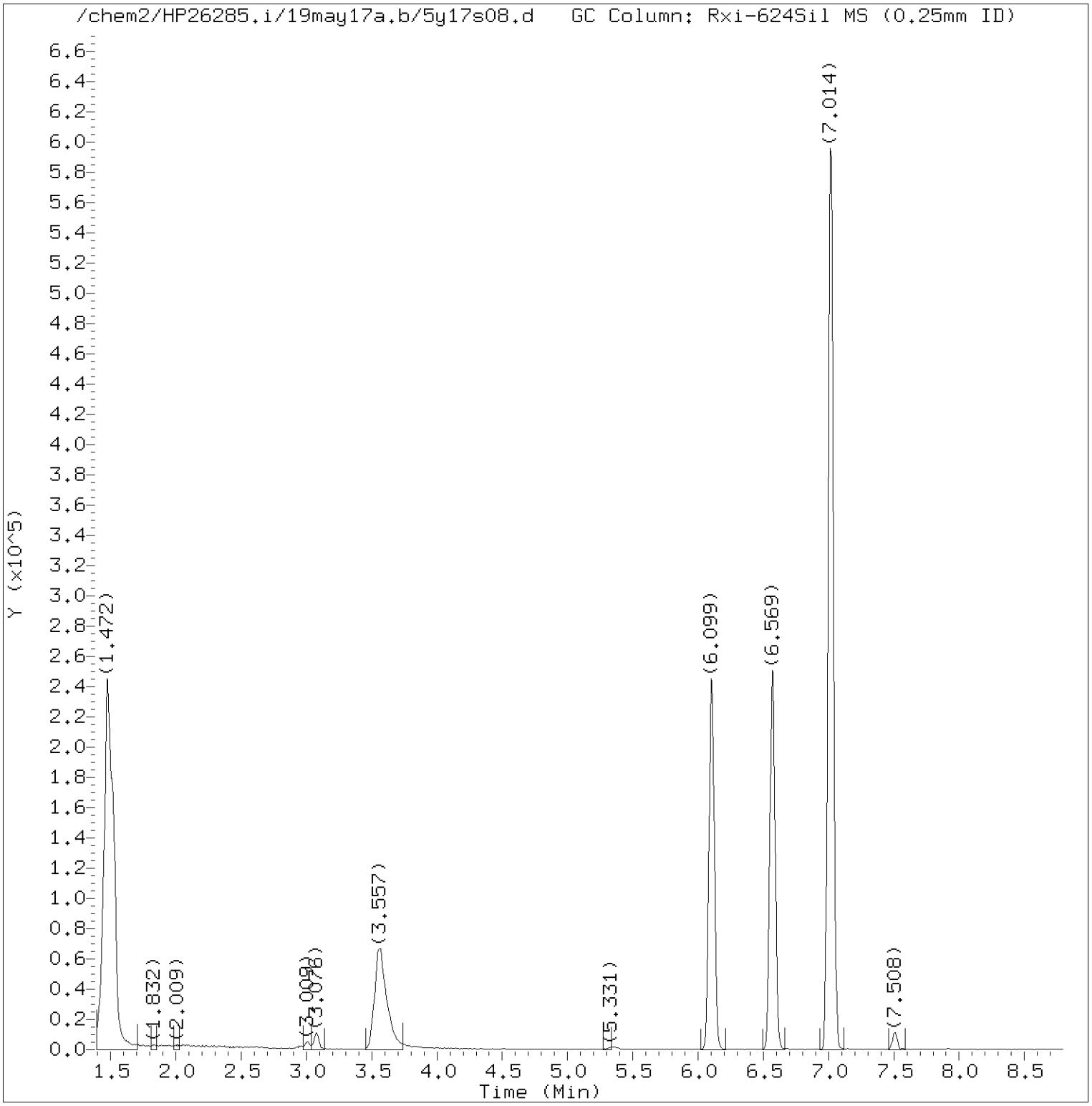

Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s08.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 12:38 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:07 clm27445

Sample Name: RS003 Lab Sample ID: 1053366

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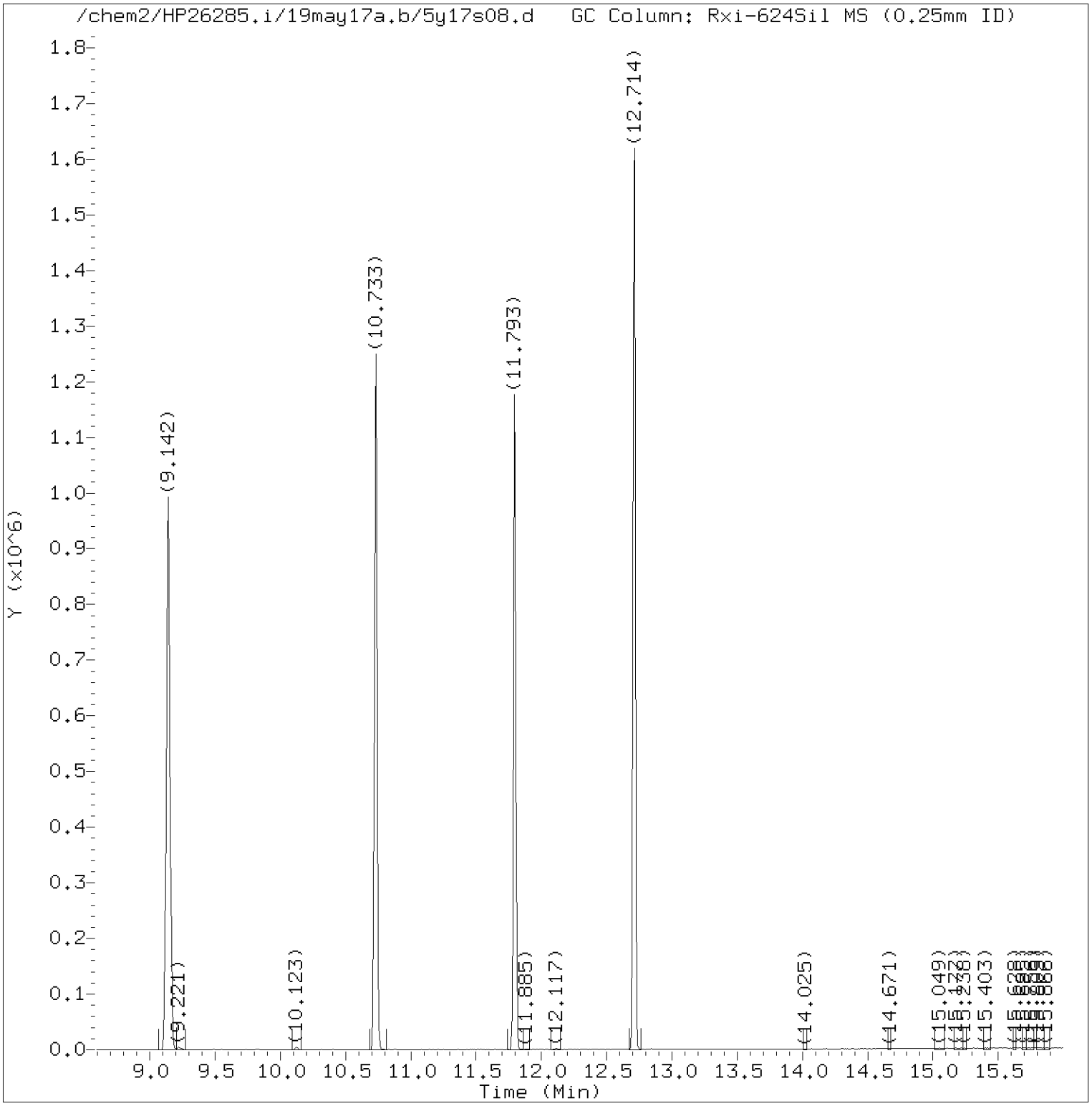
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s08.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 12:38 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
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Date, time and analyst ID of latest file update: 25-May-2019 11:07 clm27445

Sample Name: RS003 Lab Sample ID: 1053366

Digitally signed by Corie L. Mellinger
on 05/25/2019 at 11:13.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s08.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 12:38 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:07 clm27445

Sample Name: RS003 Lab Sample ID: 1053366

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.557	65	232796	250.000
52)$Dibromofluoromethane	(2)	6.106	113	218048	57.451
57)$1,2-Dichloroethane-d4	(2)	6.575	102	47346	53.314
66)*Fluorobenzene	(2)	7.014	96	793137	50.000
71) Trichloroethene	(2)	7.514	95	5964	1.306
84)$Toluene-d8	(3)	9.142	98	772768	48.812
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132)*1,4-Dichlorobenzene-d4	(4)	12.714	152	343418	50.000

* = Compound is an internal standard.
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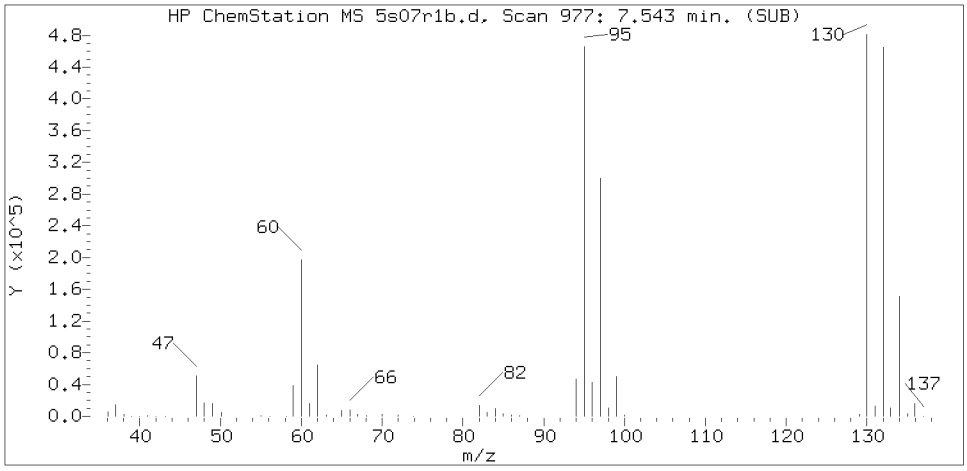
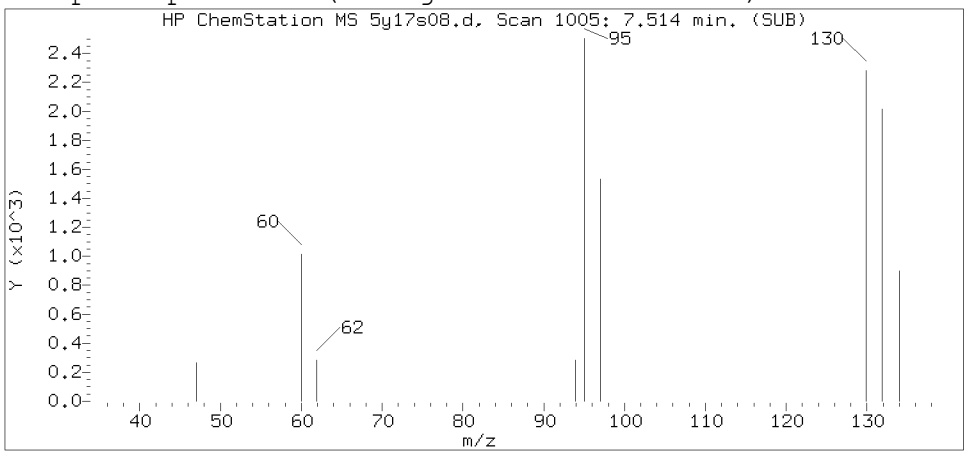
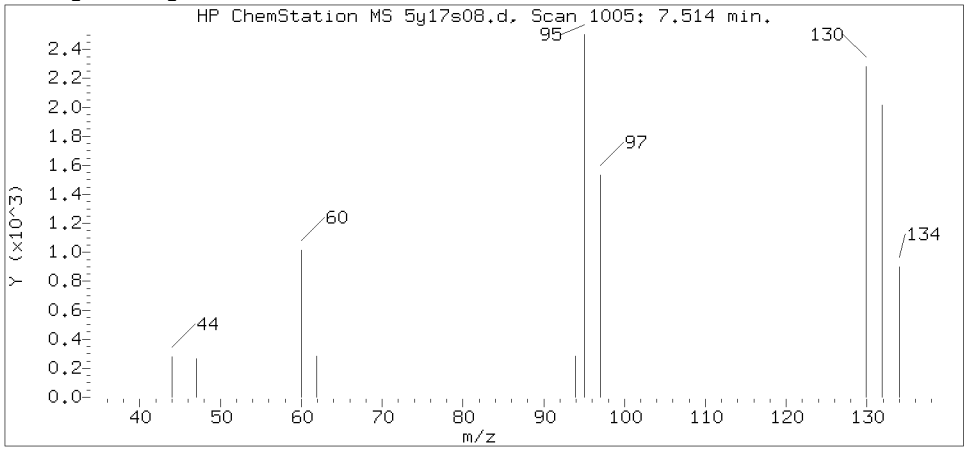
Reference Standard Spectrum for Trichloroethene

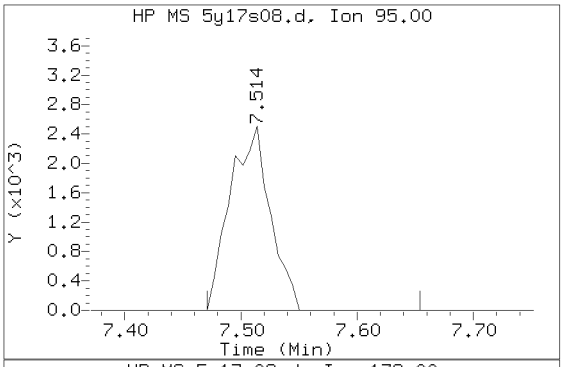


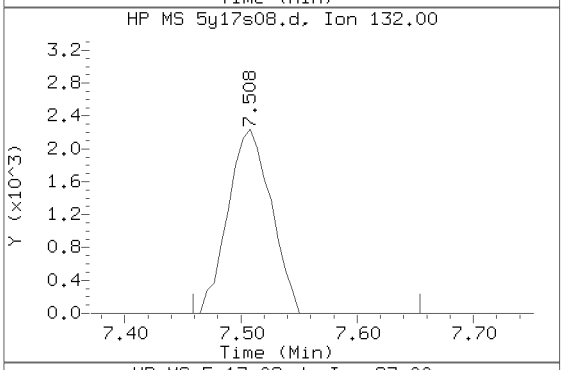
Sample Spectrum (Background Subtracted)

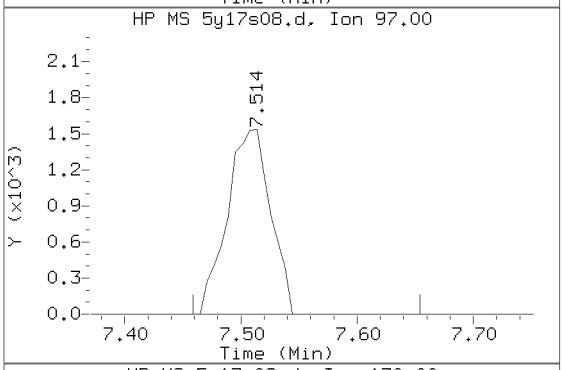


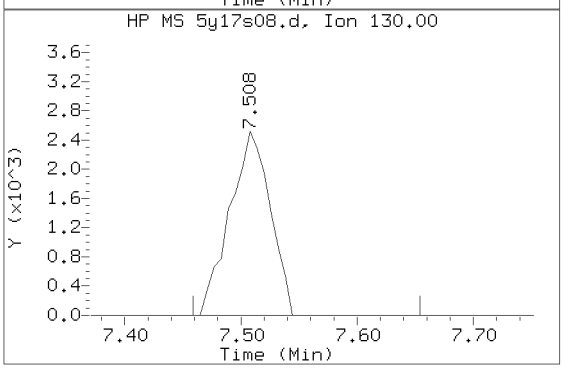
Sample Spectrum (Unaltered)











Data File: /chem2/HP26285.i/19may17a.b/5y17s08.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 12:38 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:07 clm27445

Sample Name: RS003 Lab Sample ID: 1053366

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 1005
Retention Time (minutes)	: 7.514
Relative Retention Time	:-0.00075
Quant Ion	: 95.00
Area (flag)	: 5964
On-Column Amount (ng)	: 1.3061

Digitally signed by Corie L. Mellinger on 05/25/2019 at 11:13.
Target 3.5 esignature user ID: clm27445

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RS004

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053367

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP26285.i/19may17a.b/5y17s09.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/17/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.5	J
156-59-2	cis-1,2-Dichloroethene	0.5	J
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	2	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	8	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	0.9	J
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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RS004 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1053367

Data file: /chem2/HP26285.i/19may17a.b/5y17s09.d Injection date and time: **17-MAY-2019 12:59**
Data file Sample Info. Line: RS004;1053367;1;0;;JCV89;;;5y17b01; Instrument ID: **HP26285.i** Batch: **5191371AA**
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Blank Data file reference: **/chem2/HP26285.i/19may17a.b/5y17b01.d**

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 17-MAY-2019 13:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may17a.b/5y17c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.563(-0.024)	357	65	224788 (-6)	250.00	
66) Fluorobenzene	7.014(-0.012)	923	96	776590 (-6)	50.00	
101) Chlorobenzene-d5	10.732(-0.006)	1533	117	616002 (-8)	50.00	
132) 1,4-Dichlorobenzene-d4	12.714(-0.006)	1858	152	336477 (-18)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.099(0.000)	113	215961	58.114	116%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.575(-0.001)	102	46919	53.959	108%		80 - 120
84) Toluene-d8	(3)	9.141(-0.001)	98	764093	49.142	98%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.793(0.000)	95	296036	48.931	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	4.502(-0.000)	63	3656	0.517	0.52		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	5.362(0.000)	96	2370	0.522	0.52		J	0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	6.099(-0.001)	97	12649A	2.049	2.05			0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	7.507(0.000)	95	34581	7.734	7.73			0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)	9.824(-0.000)	166	4695	0.892	0.89		J	0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

A = User selected an alternate peak.

Digitally signed by Kevin A. Sposito on 06/04/2019 at 14:36. Target 3.5 esignature user ID: kas02648

RS004 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1053367

Data file: /chem2/HP26285.i/19may17a.b/5y17s09.d Injection date and time: **17-MAY-2019 12:59**
Data file Sample Info. Line: RS004;1053367;1;0;;JCV89;;;5y17b01; Instrument ID: **HP26285.i** Batch: **5191371AA**
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Blank Data file reference: **/chem2/HP26285.i/19may17a.b/5y17b01.d**

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 17-MAY-2019 13:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may17a.b/5y17c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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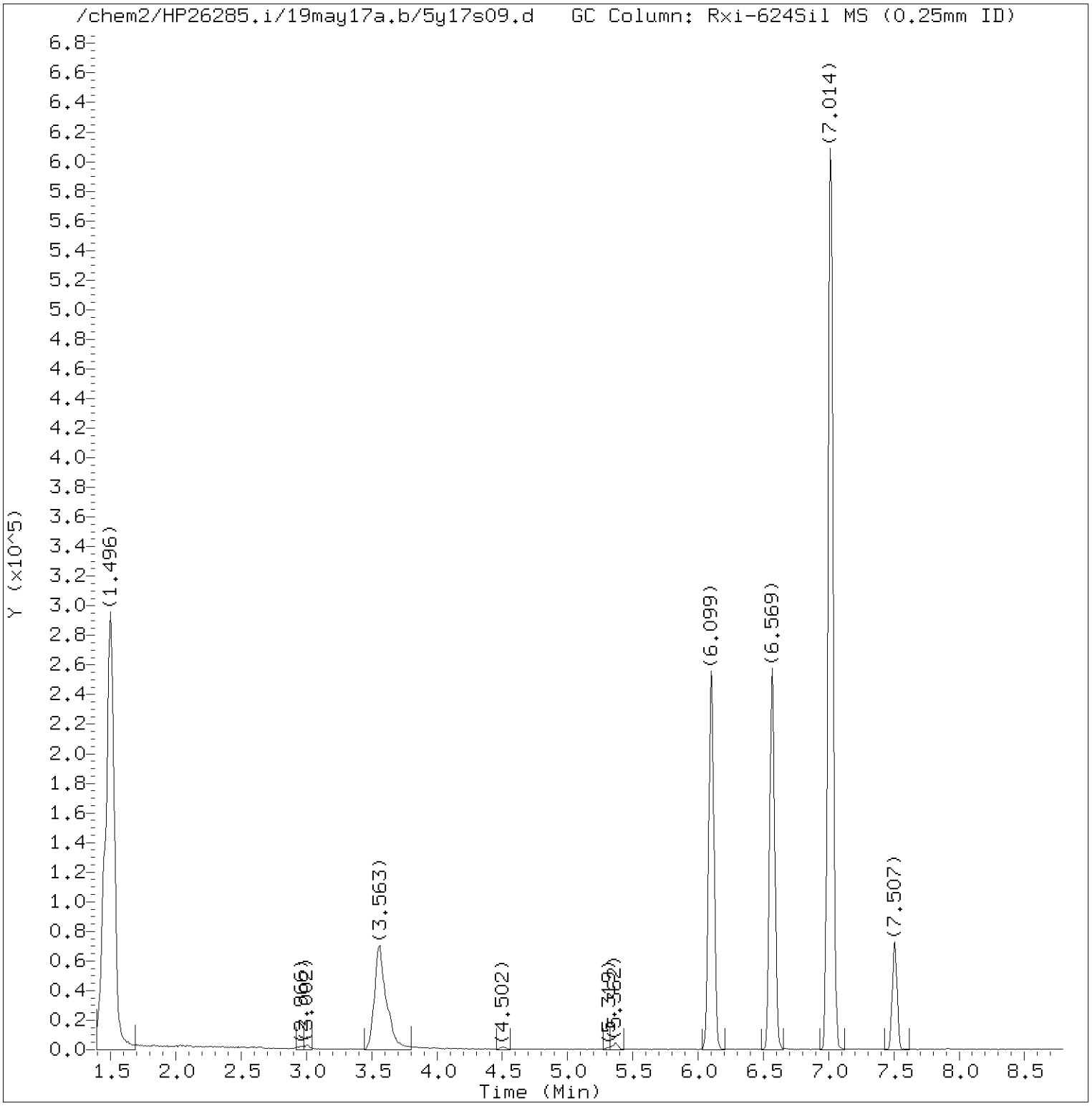
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Kevin A. Sposito on 06/04/2019 at 14:36. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 14:37. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

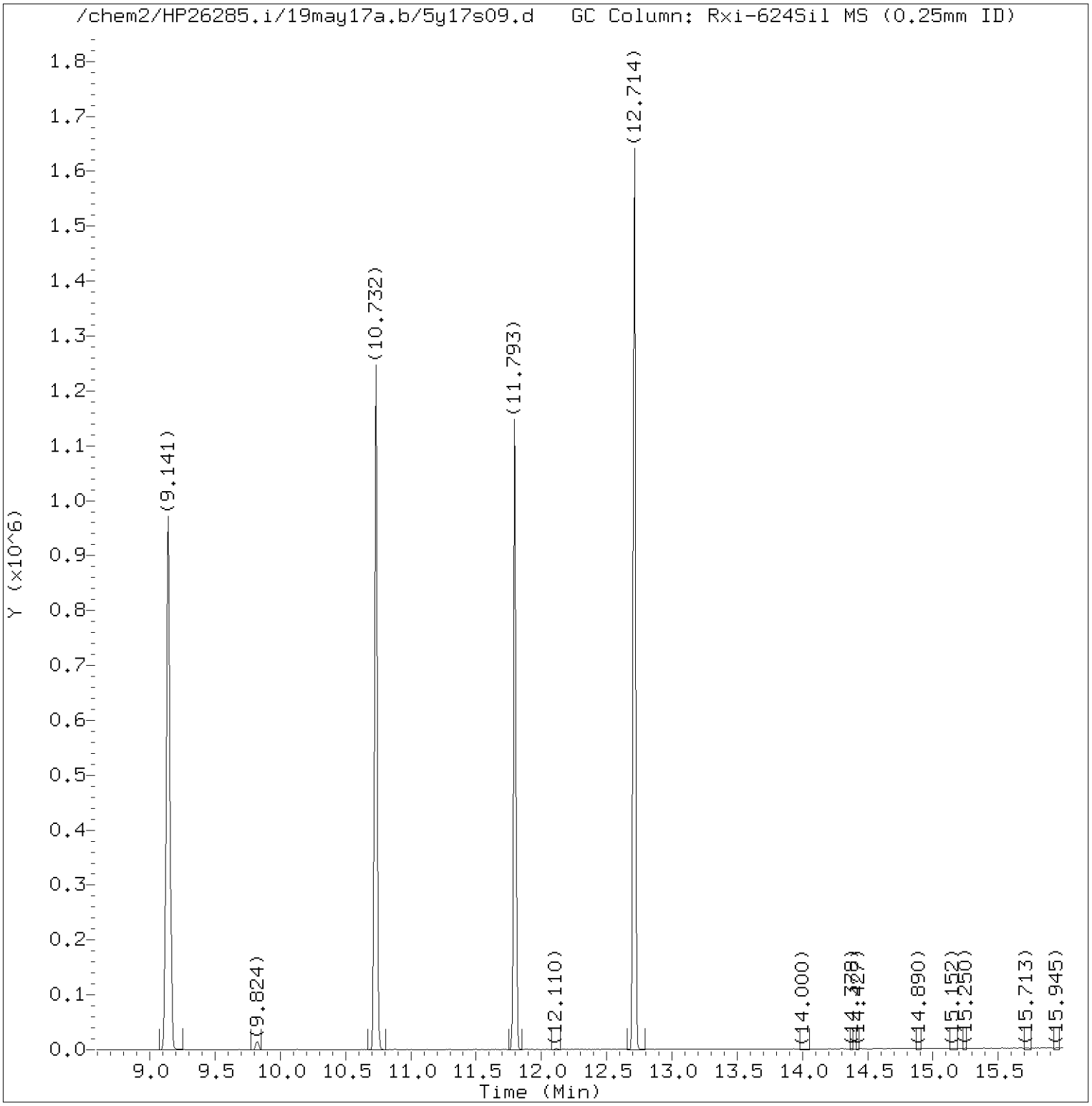
Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s09.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 12:59 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Sample Name: RS004 Lab Sample ID: 1053367

Digitally signed by Kevin A. Sposito
on 06/04/2019 at 14:36.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s09.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 12:59 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Sample Name: RS004 Lab Sample ID: 1053367

Digitally signed by Kevin A. Sposito
on 06/04/2019 at 14:36.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s09.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 12:59 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Sample Name: RS004 Lab Sample ID: 1053367

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.563	65	224788	250.000
36) 1,1-Dichloroethane	(2)	4.502	63	3656	0.517
42) cis-1,2-Dichloroethene	(2)	5.362	96	2370	0.522
53) 1,1,1-Trichloroethane	(2)	6.099	97	12649A	2.049
52)$Dibromofluoromethane	(2)	6.099	113	215961	58.114
57)$1,2-Dichloroethane-d4	(2)	6.575	102	46919	53.959
66)*Fluorobenzene	(2)	7.014	96	776590	50.000
71) Trichloroethene	(2)	7.507	95	34581	7.734
84)$Toluene-d8	(3)	9.141	98	764093	49.142
94) Tetrachloroethene	(3)	9.824	166	4695	0.892
101)*Chlorobenzene-d5	(3)	10.732	117	616002	50.000
115)$4-Bromofluorobenzene	(3)	11.793	95	296036	48.931
132)*1,4-Dichlorobenzene-d4	(4)	12.714	152	336477	50.000

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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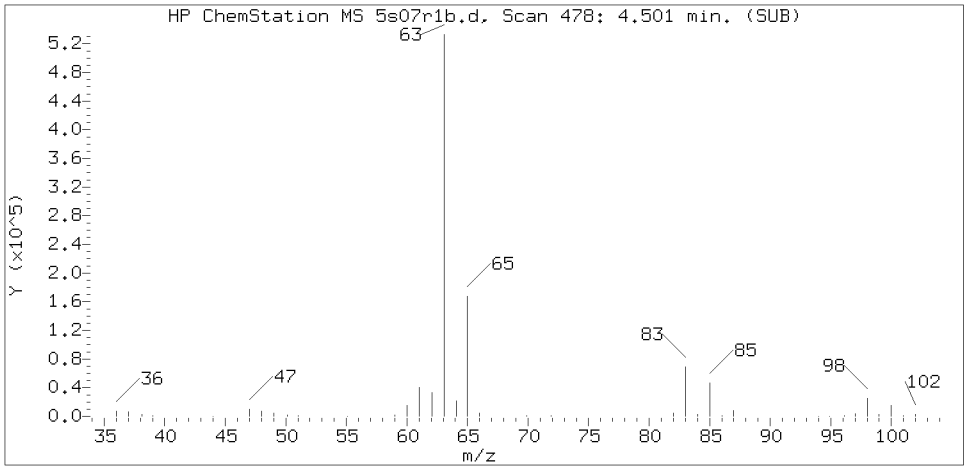
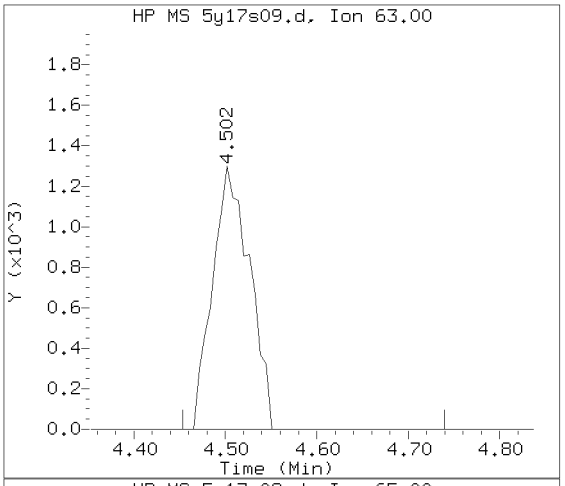
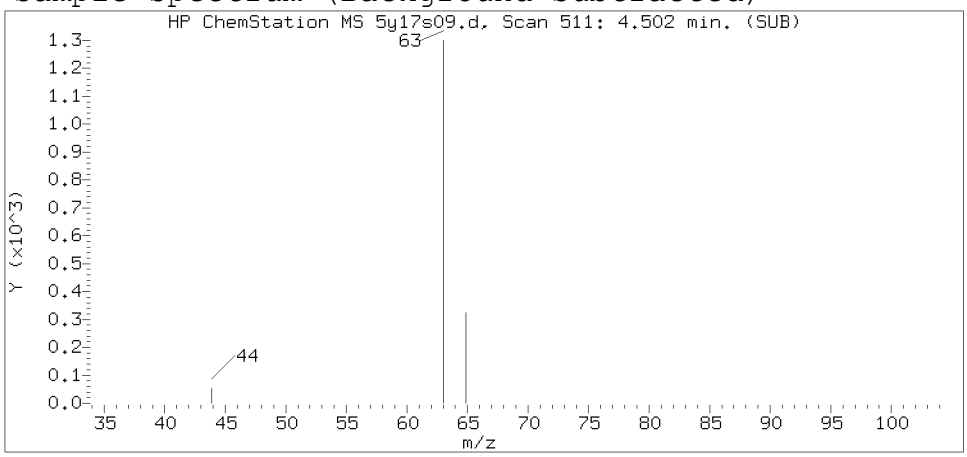
on 06/04/2019 at 14:36.
Target 3.5 esignature user ID: kas02648

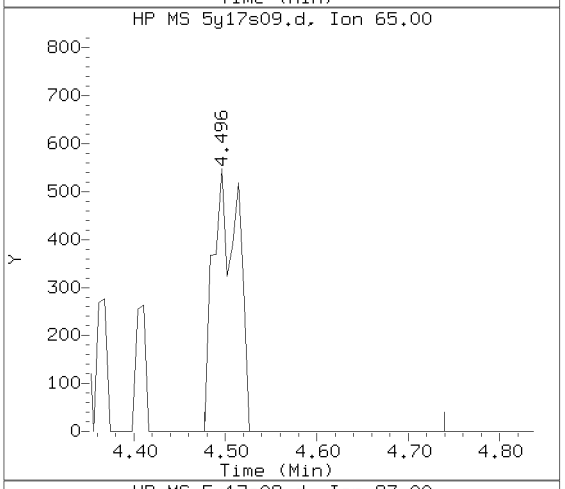
Reference Standard Spectrum for 1,1-Dichloroethane



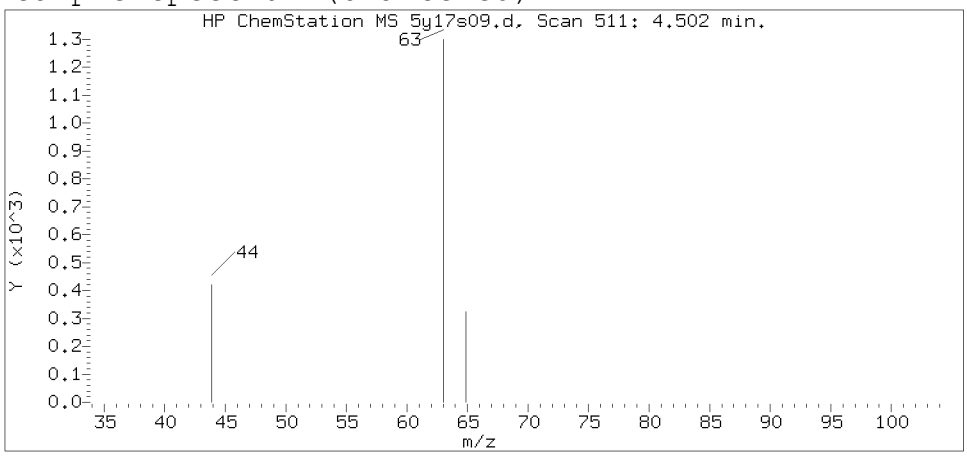


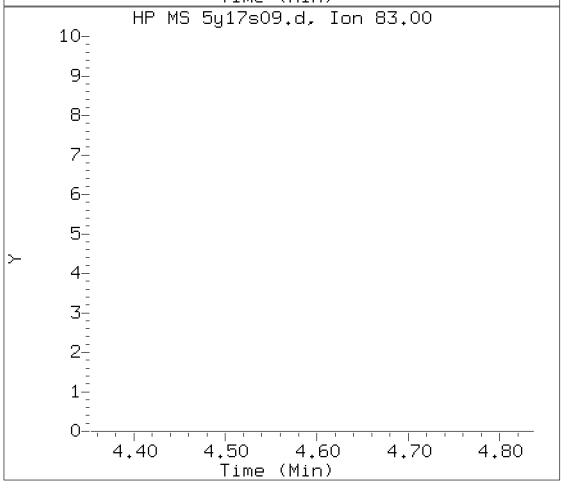
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP26285.i/19may17a.b/5y17s09.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 12:59 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Sample Name: RS004 Lab Sample ID: 1053367

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 511
Retention Time (minutes): 4.502
Relative Retention Time :-0.00062
Quant Ion : 63.00
Area (flag) : 3656
On-Column Amount (ng) : 0.5168

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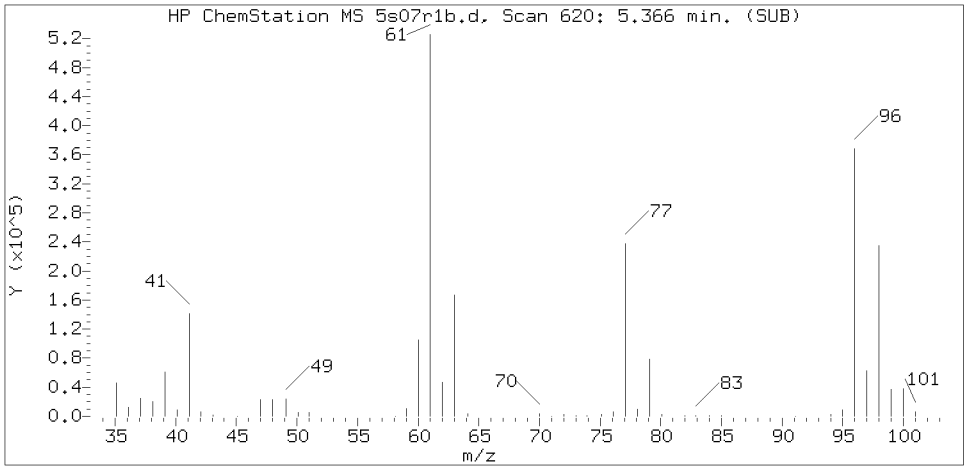
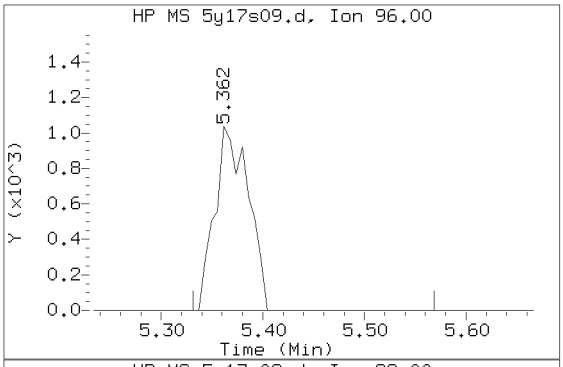
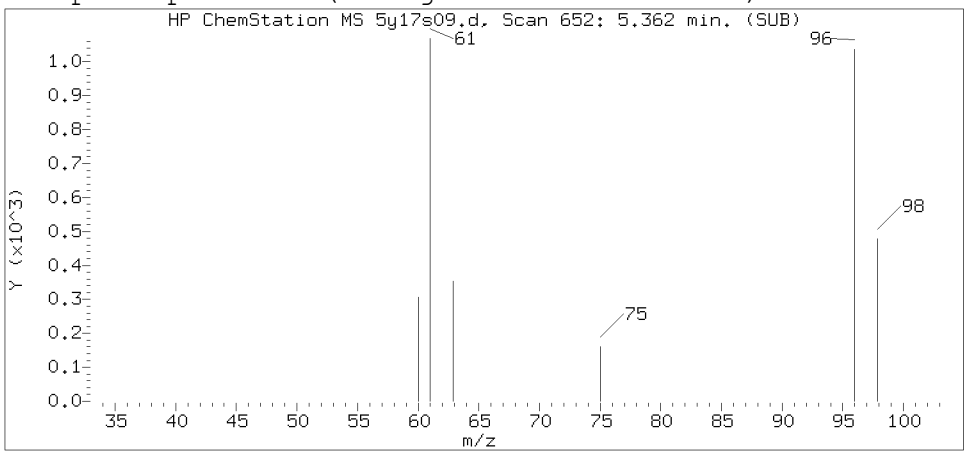
Target 3.5 esignature user ID: kas02648

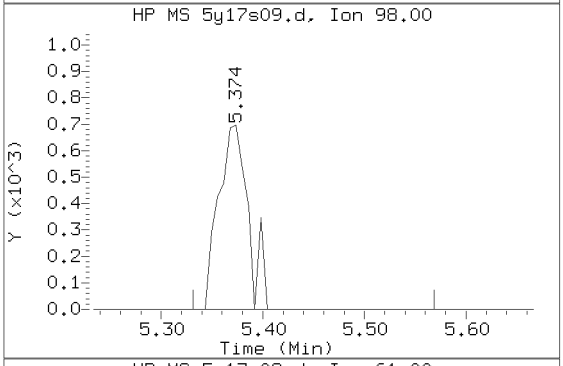
Reference Standard Spectrum for cis-1,2-Dichloroethene

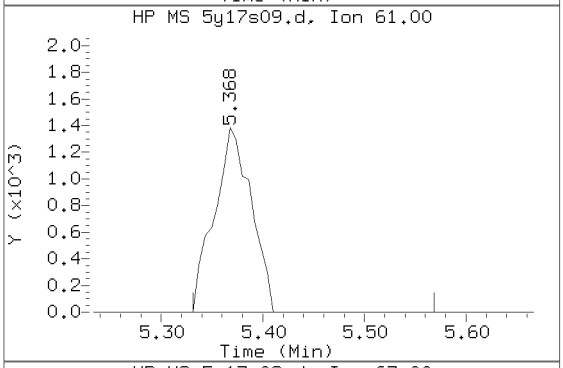




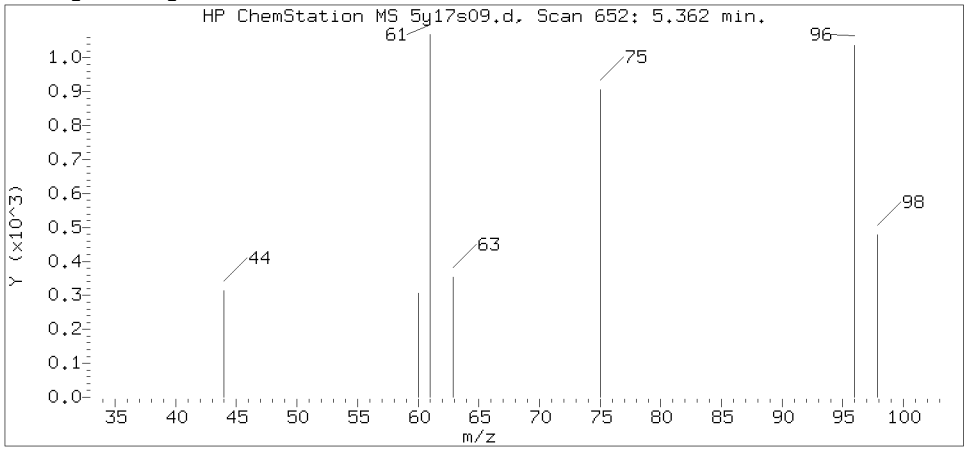
Sample Spectrum (Background Subtracted)

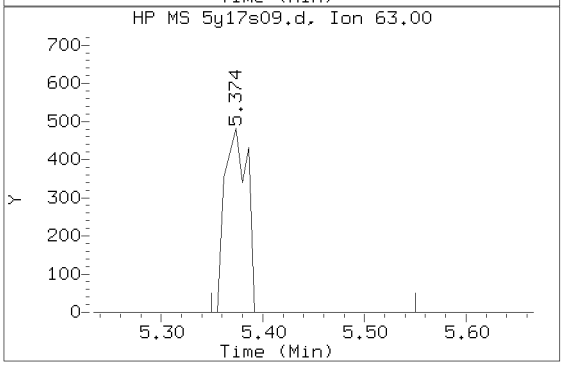






Sample Spectrum (Unaltered)





Data File: /chem2/HP26285.i/19may17a.b/5y17s09.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 12:59 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Sample Name: RS004 Lab Sample ID: 1053367

Compound Number	: 42
Compound Name	: cis-1,2-Dichloroethene
Scan Number	: 652
Retention Time (minutes)	: 5.362
Relative Retention Time	: 0.00047
Quant Ion	: 96.00
Area (flag)	: 2370
On-Column Amount (ng)	: 0.5220

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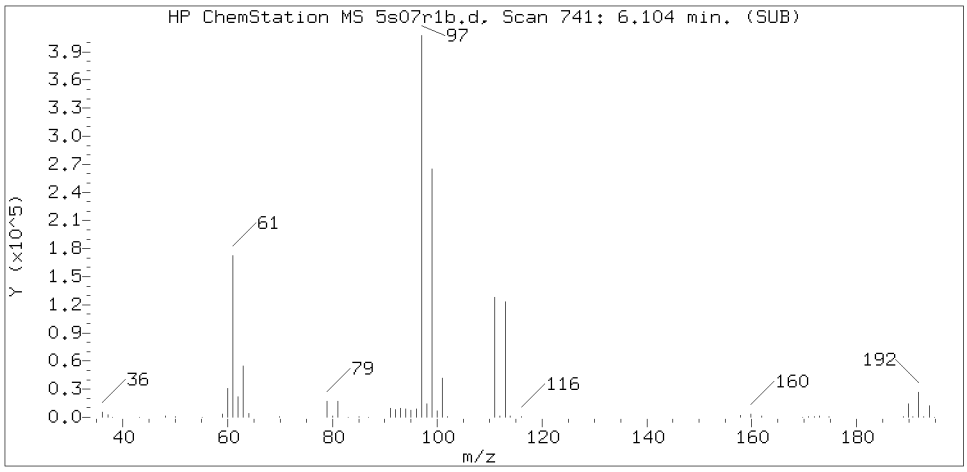
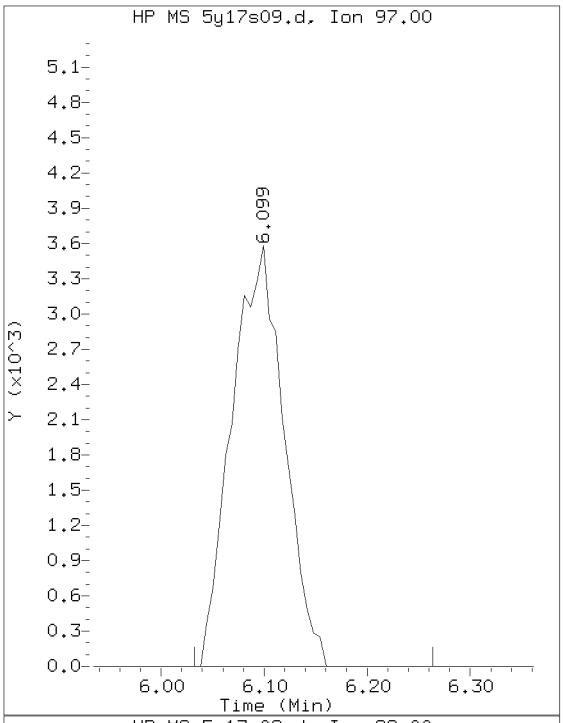
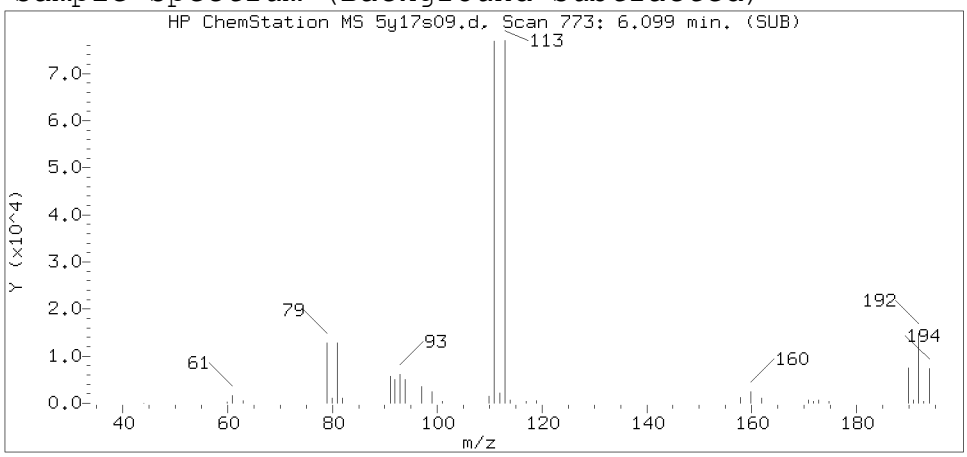
Target 3.5 esignature user ID: kas02648

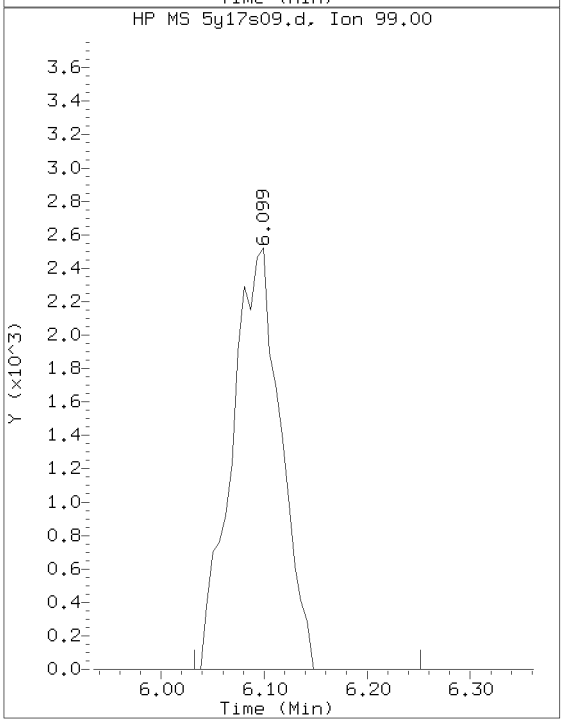
Reference Standard Spectrum for 1,1,1-Trichloroethane



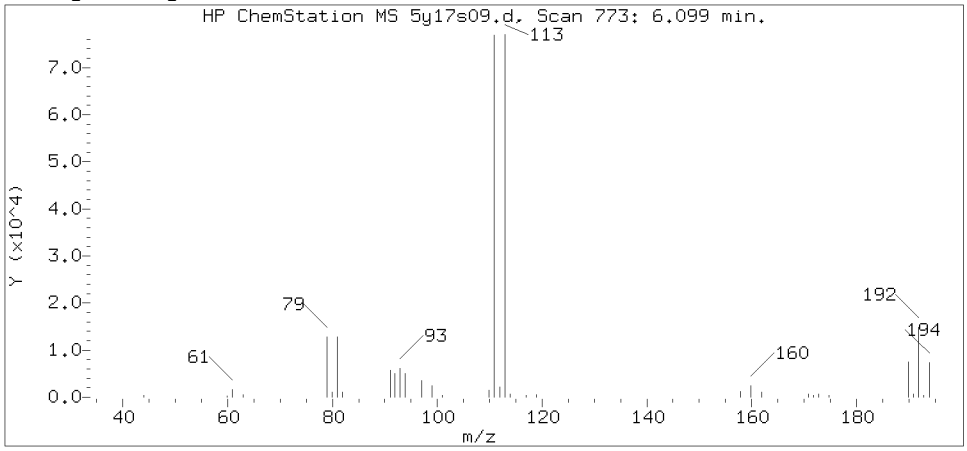


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP26285.i/19may17a.b/5y17s09.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 12:59 Analyst ID: CLM27445

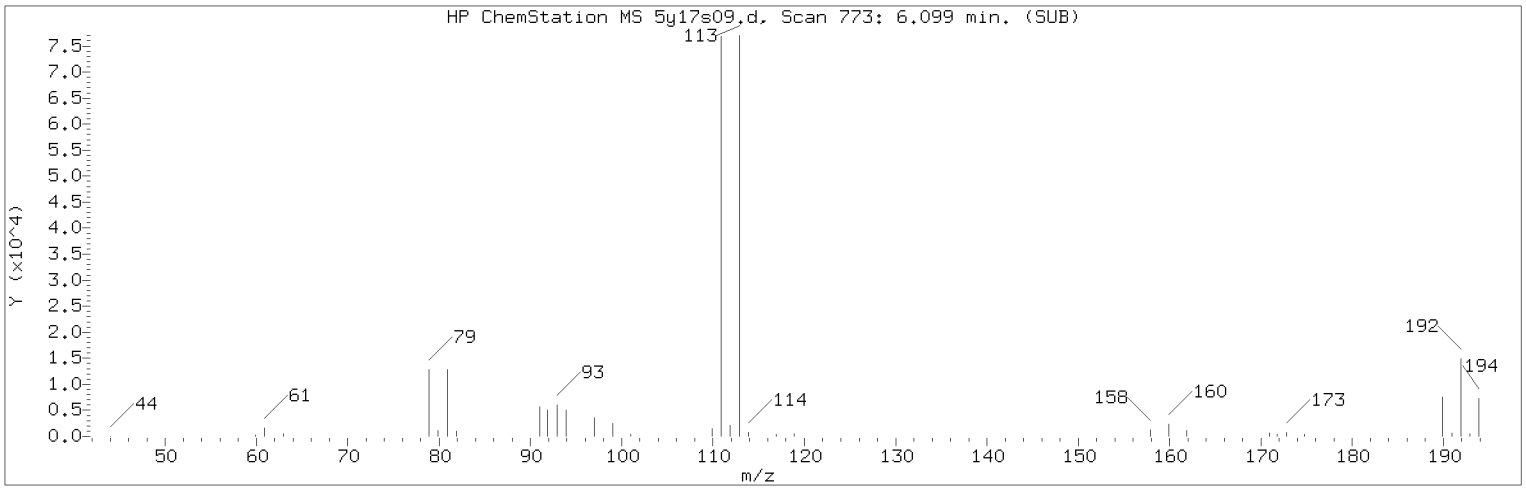
Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Sample Name: RS004 Lab Sample ID: 1053367

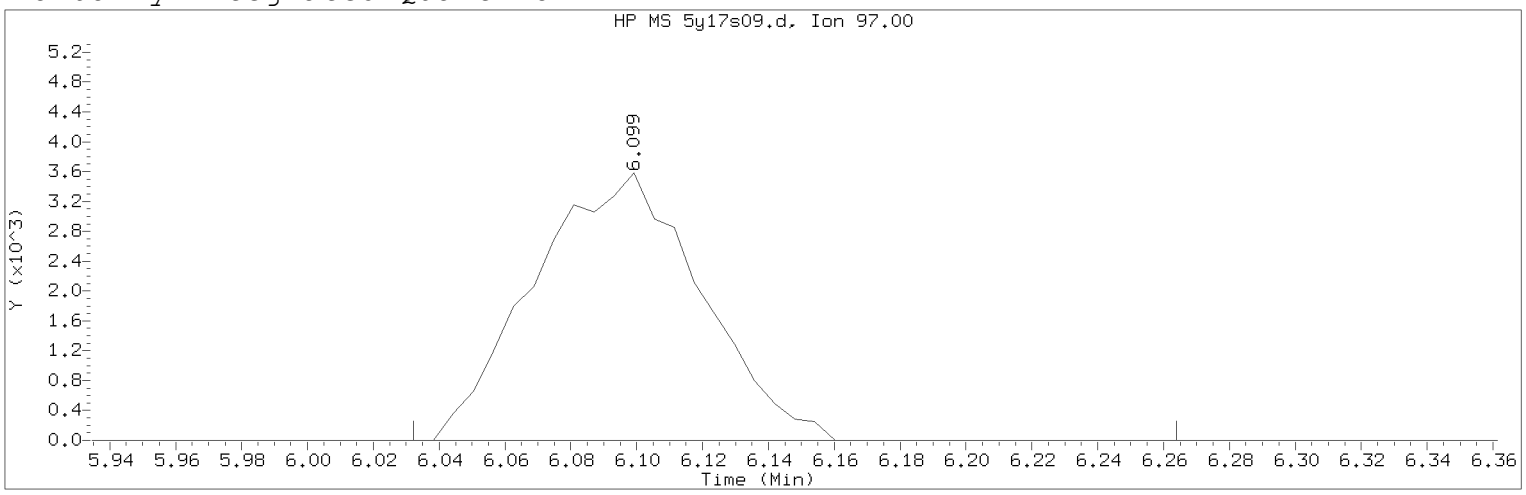
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 773
Retention Time (minutes): 6.099
Relative Retention Time :-0.00109
Quant Ion : 97.00
Area (flag) : 12649A
On-Column Amount (ng) : 2.0487

Digitally signed by Kevin A. Sposito on 06/04/2019 at 14:36.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may17a.b/5y17s09.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 12:59 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Sample Name: RS004 Lab Sample ID: 1053367

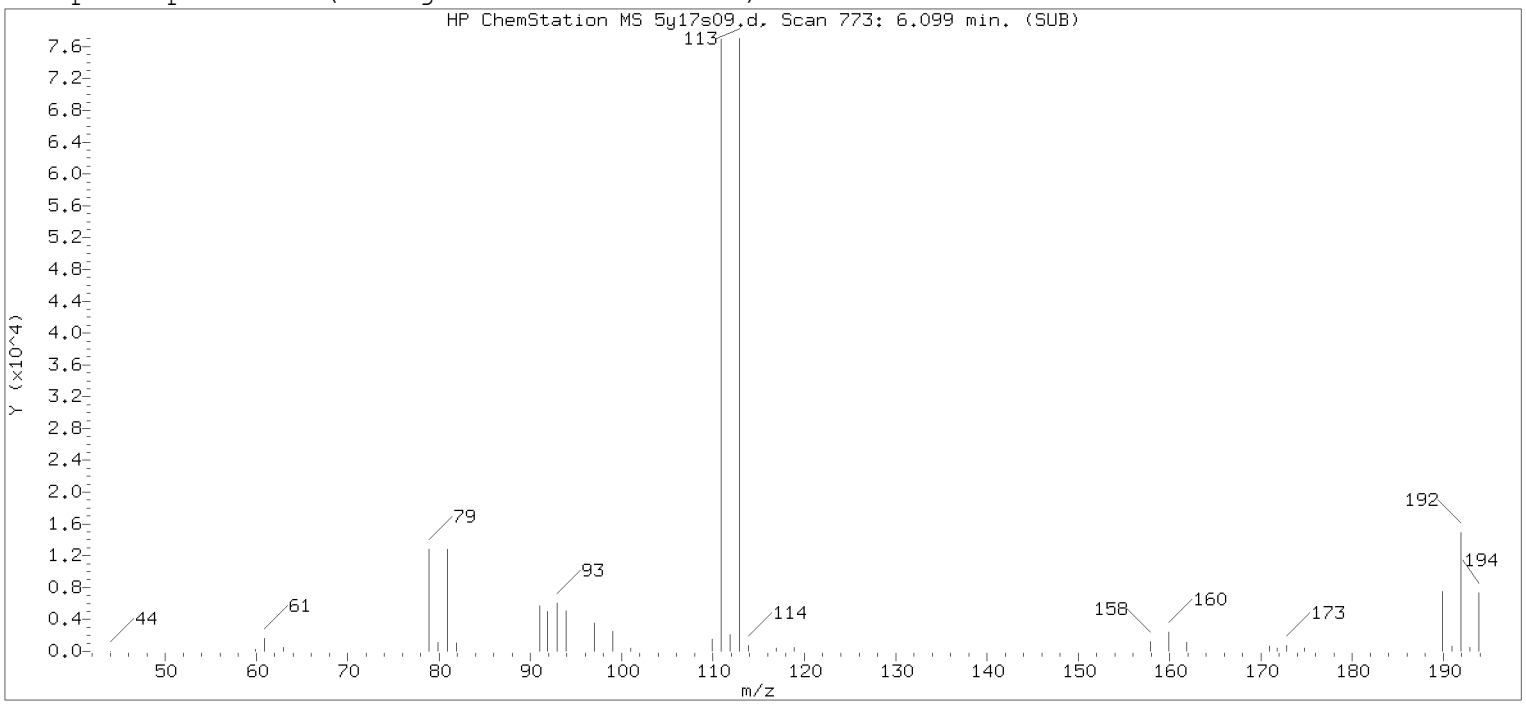
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 773
Retention Time (minutes): 6.099
Quant Ion : 97.00
Area (flag) : 12649A
On-Column Amount (ng) : 2.0487
Integration start scan : 761 Integration stop scan: 799
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

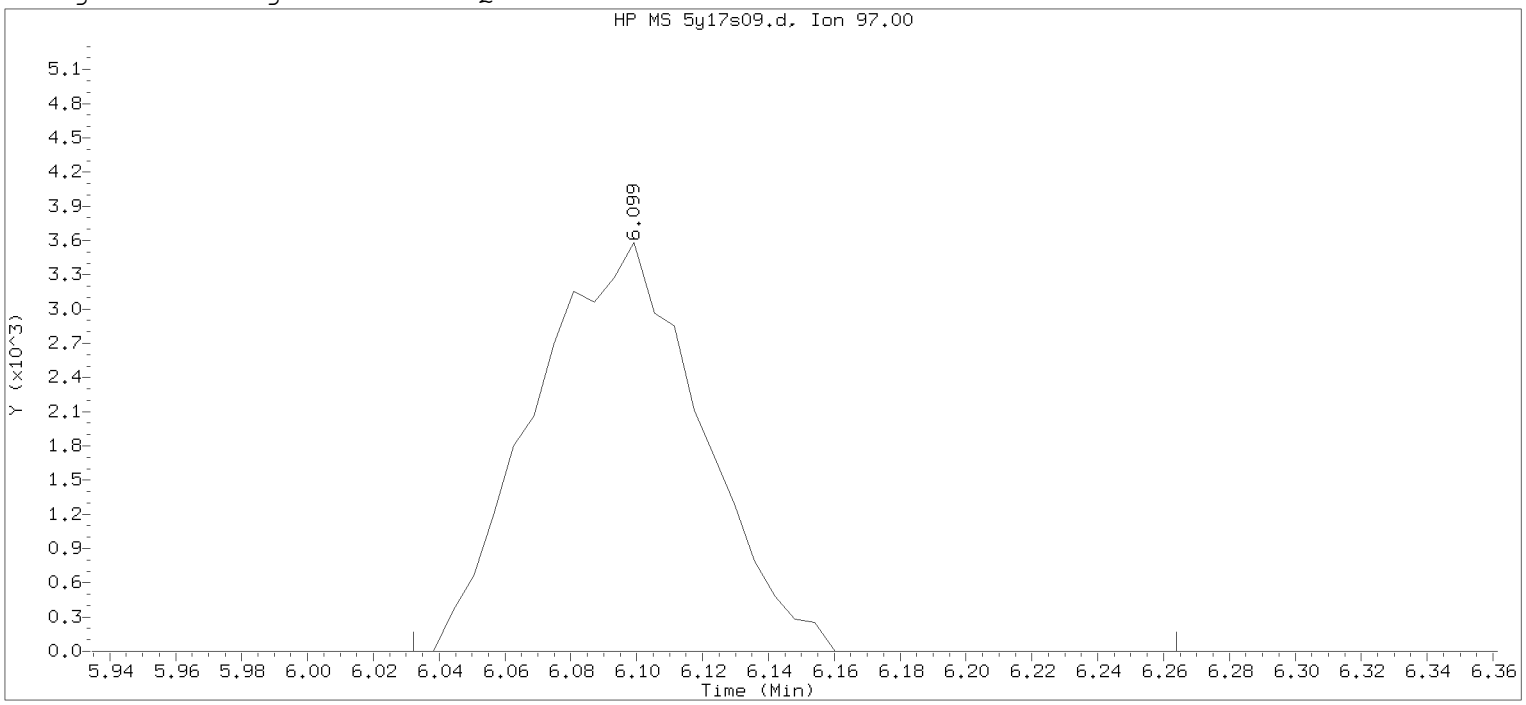
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 06/04/2019 at 14:36.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 14:37.
PARALLAX ID: rrm00219

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may17a.b/5y17s09.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 12:59 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 17-MAY-2019 13:16
Date, time and analyst ID of latest file update: 17-May-2019 13:18 Unknown

Sample Name: RS004 Lab Sample ID: 1053367

Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 773
Retention Time (minutes): 6.099
Quant Ion : 97.00
Area : 12649
On-column Amount (ng) : 2.0488
Integration start scan : 761 Integration stop scan: 799
Y at integration start : 0 Y at integration end: 0

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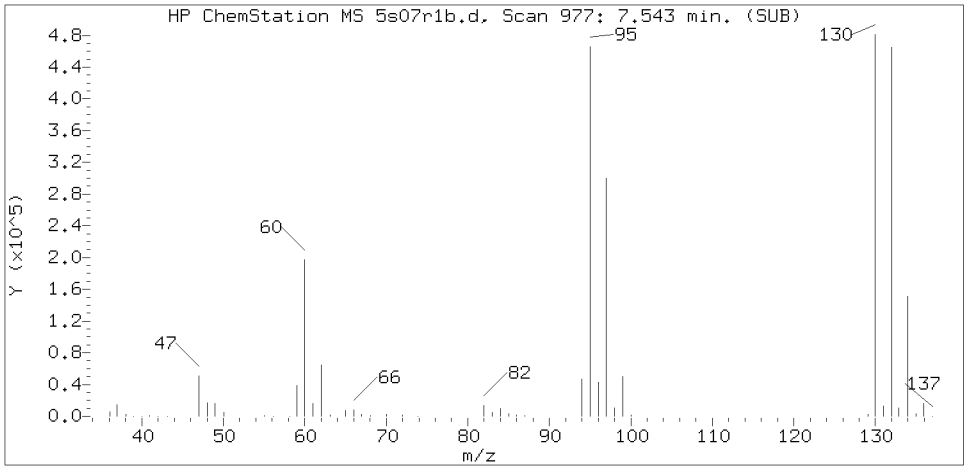
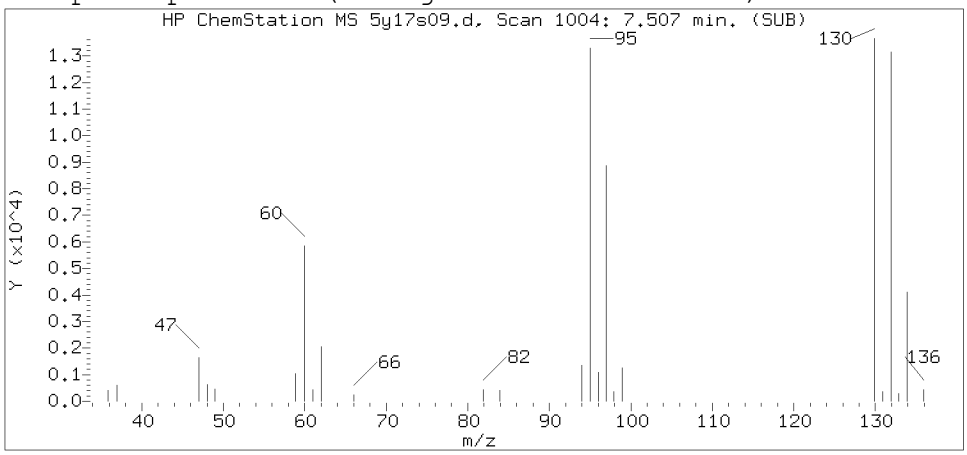
Target 3.5 esignature user kevin.sposito

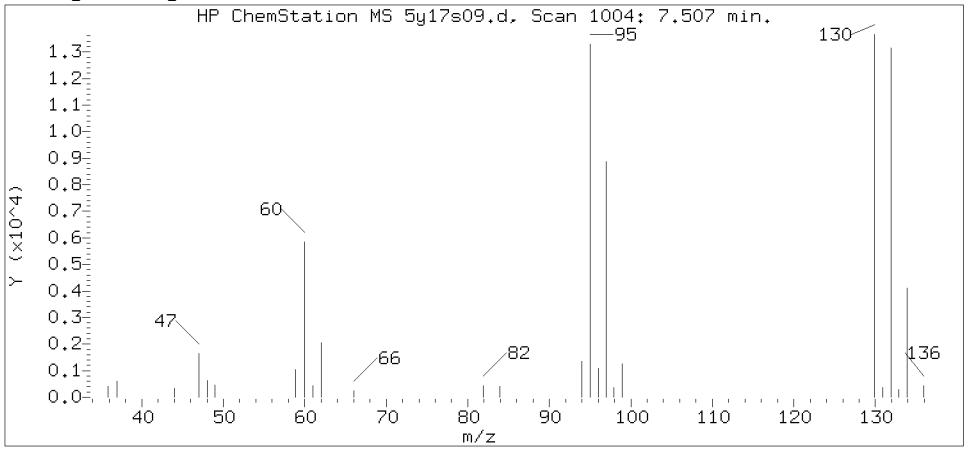
Reference Standard Spectrum for Trichloroethene

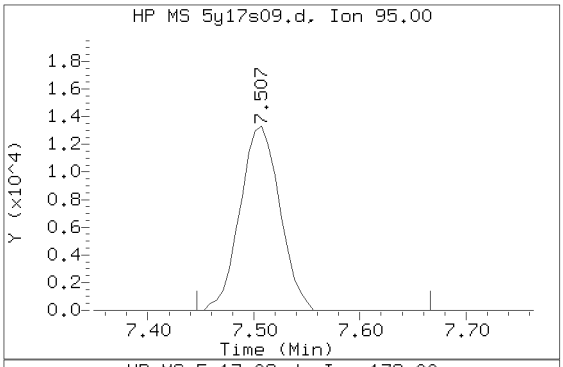


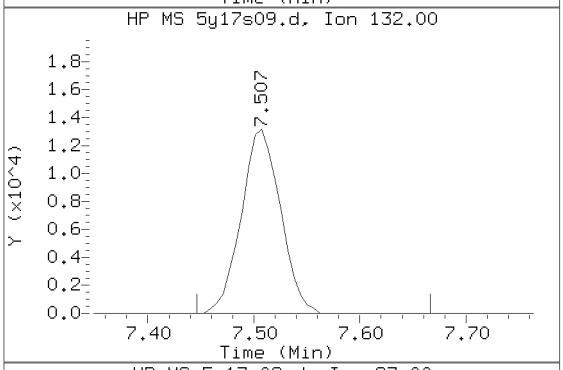
Sample Spectrum (Background Subtracted)

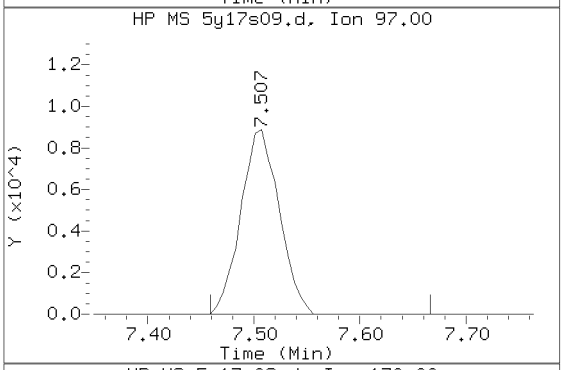


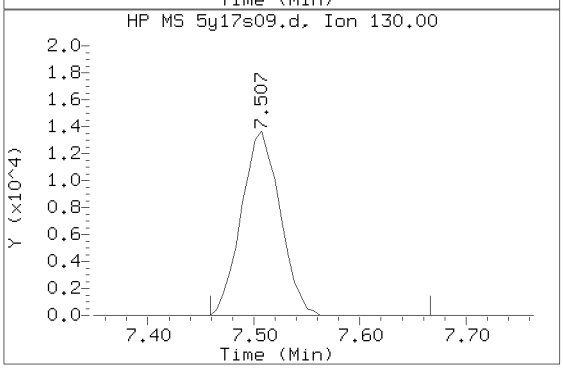
Sample Spectrum (Unaltered)











Data File: /chem2/HP26285.i/19may17a.b/5y17s09.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 12:59 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Sample Name: RS004 Lab Sample ID: 1053367

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 1004
Retention Time (minutes)	: 7.507
Relative Retention Time	: 0.00012
Quant Ion	: 95.00
Area (flag)	: 34581
On-Column Amount (ng)	: 7.7344

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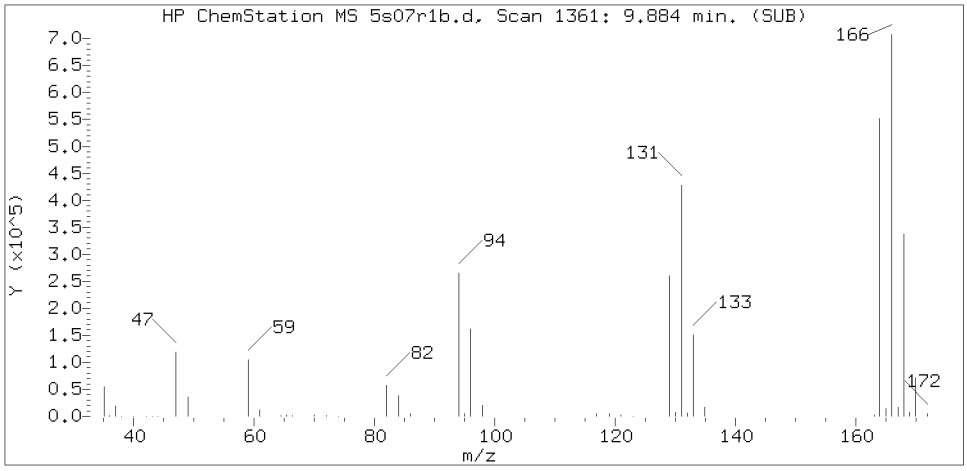
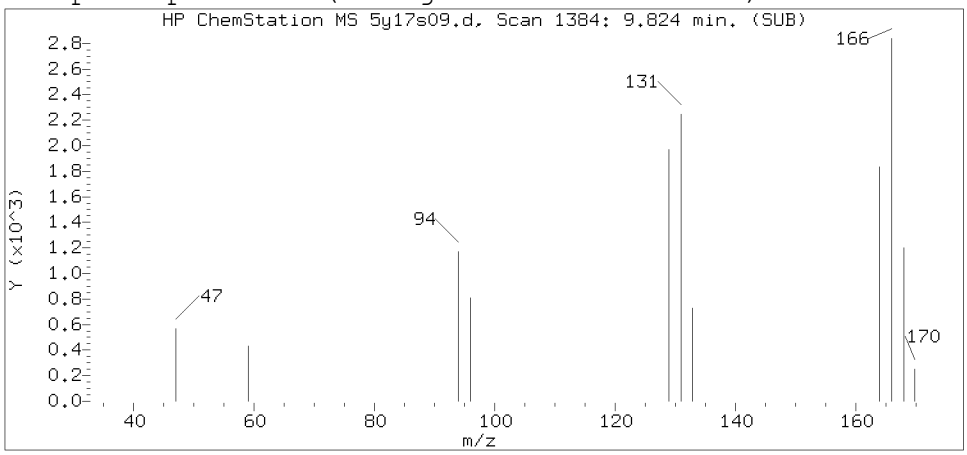
Target 3.5 esignature user ID: kas02648

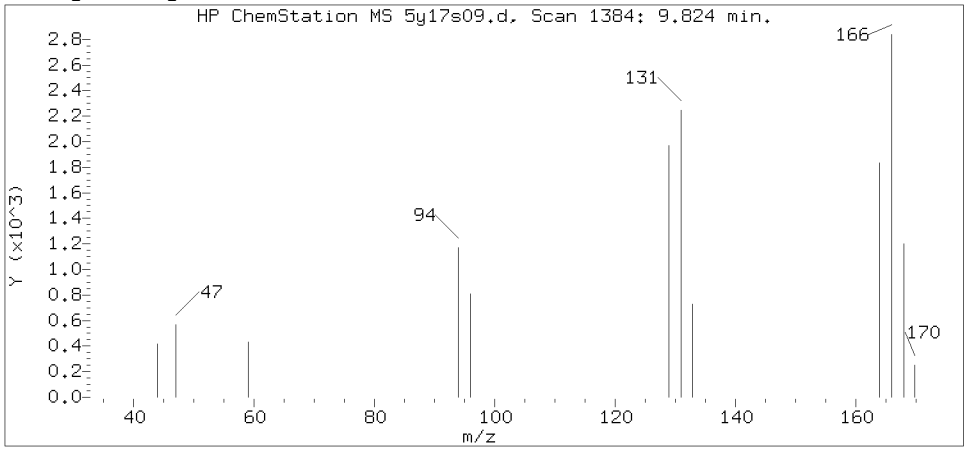
Reference Standard Spectrum for Tetrachloroethene

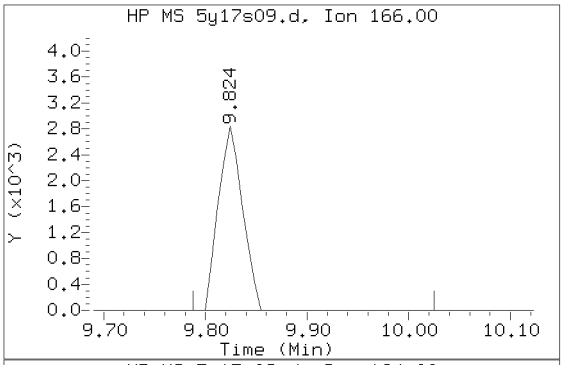


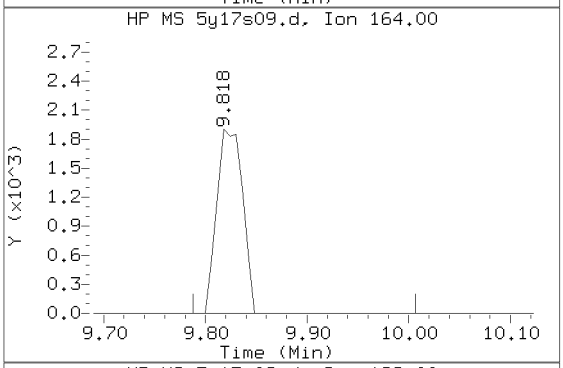
Sample Spectrum (Background Subtracted)

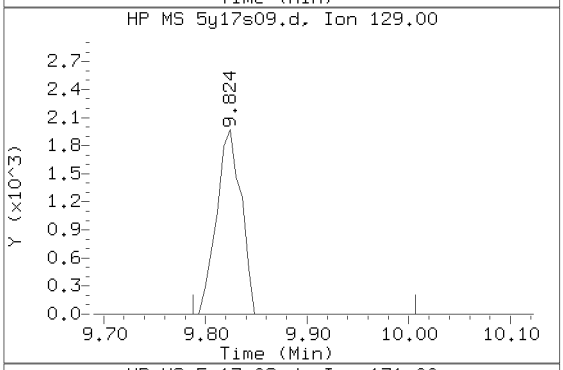


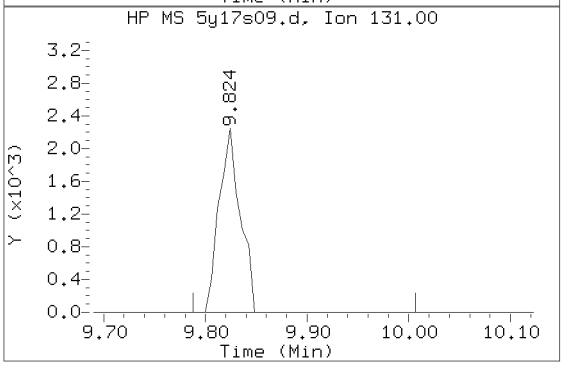
Sample Spectrum (Unaltered)











Data File: /chem2/HP26285.i/19may17a.b/5y17s09.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 12:59 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Sample Name: RS004 Lab Sample ID: 1053367

Compound Number : 94
Compound Name : Tetrachloroethene
Scan Number : 1384
Retention Time (minutes): 9.824
Relative Retention Time :-0.00005
Quant Ion : 166.00
Area (flag) : 4695
On-Column Amount (ng) : 0.8921

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Target 3.5 esignature user ID: kas02648

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RS005

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053368

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP26285.i/19may17a.b/5y17s03.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/17/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L		Q
75-01-4	Vinyl Chloride		1	U
75-35-4	1,1-Dichloroethene		1	U
75-34-3	1,1-Dichloroethane		0.5	J
156-59-2	cis-1,2-Dichloroethene		0.5	J
71-55-6	1,1,1-Trichloroethane		2	
79-01-6	Trichloroethene		8	
123-91-1	1,4-Dioxane		250	U
127-18-4	Tetrachloroethene		0.9	J
1330-20-7	Xylene (Total)		5	U

RS005 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1053368

Data file: /chem2/HP26285.i/19may17a.b/5y17s03.d Injection date and time: **17-MAY-2019 10:53**
Data file Sample Info. Line: RS005;1053368;1;0;;JCV89;;;5y17b01; Instrument ID: **HP26285.i** Batch: **5191371AA**
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Blank Data file reference: **/chem2/HP26285.i/19may17a.b/5y17b01.d**

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 17-MAY-2019 13:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may17a.b/5y17c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.551	(-0.012)	355	65	233416	(-2)	250.00	
66) Fluorobenzene	7.008	(-0.006)	922	96	798721	(-3)	50.00	
101) Chlorobenzene-d5	10.727	(0.000)	1532	117	629634	(-6)	50.00	
132) 1,4-Dichlorobenzene-d4	12.708	(0.000)	1857	152	346230	(-15)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.093	(0.000)	113	220215	57.616	115%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.563	(0.000)	102	47533	53.151	106%		80 - 120
84) Toluene-d8	(3)	9.135	(-0.001)	98	779578	49.052	98%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.793	(-0.001)	95	302983	48.995	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)	2.996	(0.001)	58	1170	1.553	1.55		J	0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	4.496	(-0.000)	63	3847	0.529	0.53		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	5.368	(-0.001)	96	2369	0.507	0.51		J	0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	6.081	(0.000)	97	12736A	2.006	2.01			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	7.496	(0.000)	95	35198	7.654	7.65			0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)	9.818	(-0.000)	166	4991	0.928	0.93		J	0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

A = User selected an alternate peak.

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RS005 Lancaster Laboratories 1053368
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP26285.i/19may17a.b/5y17s03.d Injection date and time: **17-MAY-2019 10:53**
Data file Sample Info. Line: RS005;1053368;1;0;;JCV89;;;5y17b01; Instrument ID: **HP26285.i** Batch: **5191371AA**
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Blank Data file reference: **/chem2/HP26285.i/19may17a.b/5y17b01.d**

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 17-MAY-2019 13:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may17a.b/5y17c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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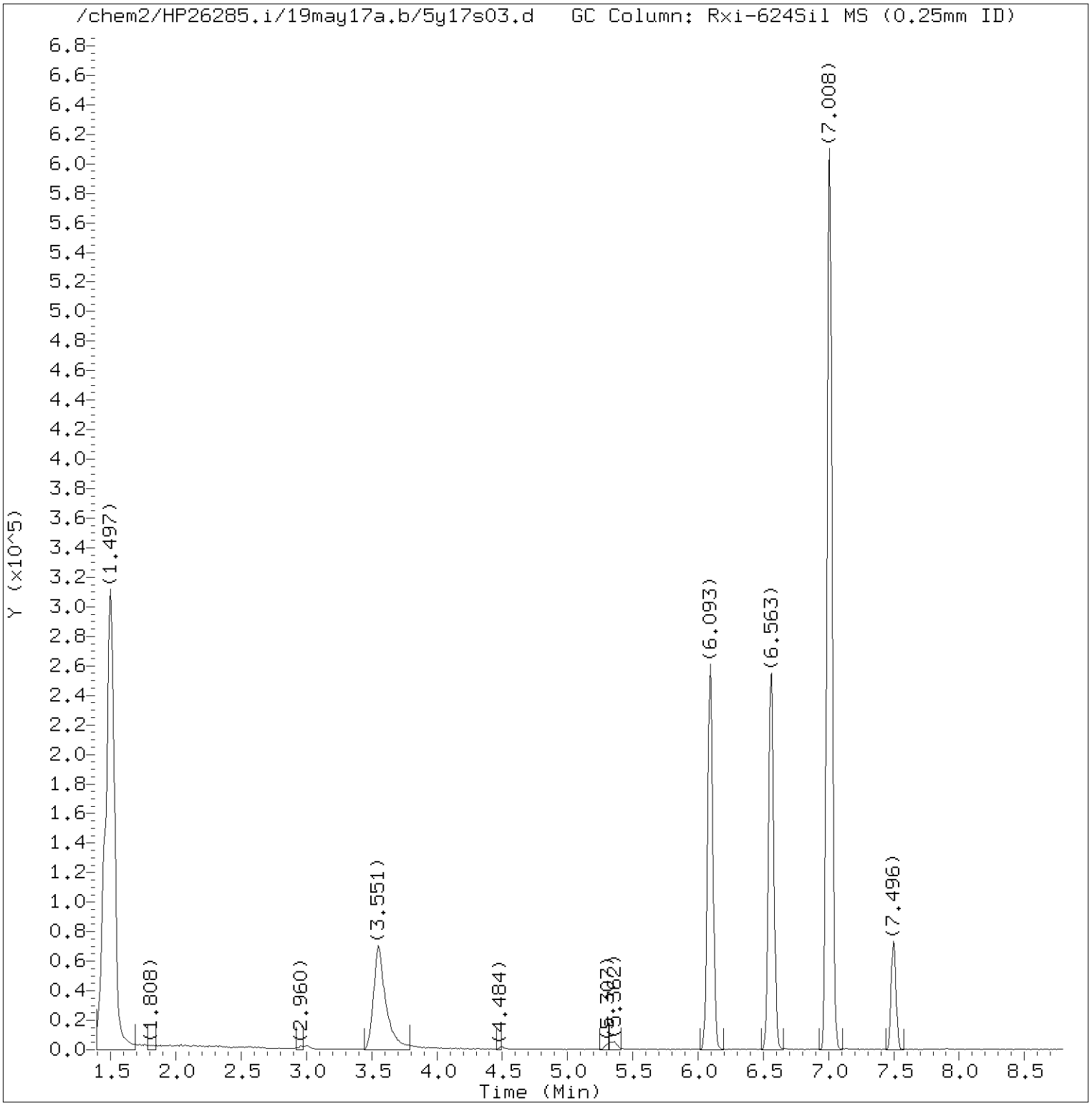
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Kevin A. Sposito on 06/04/2019 at 14:36. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 14:37. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

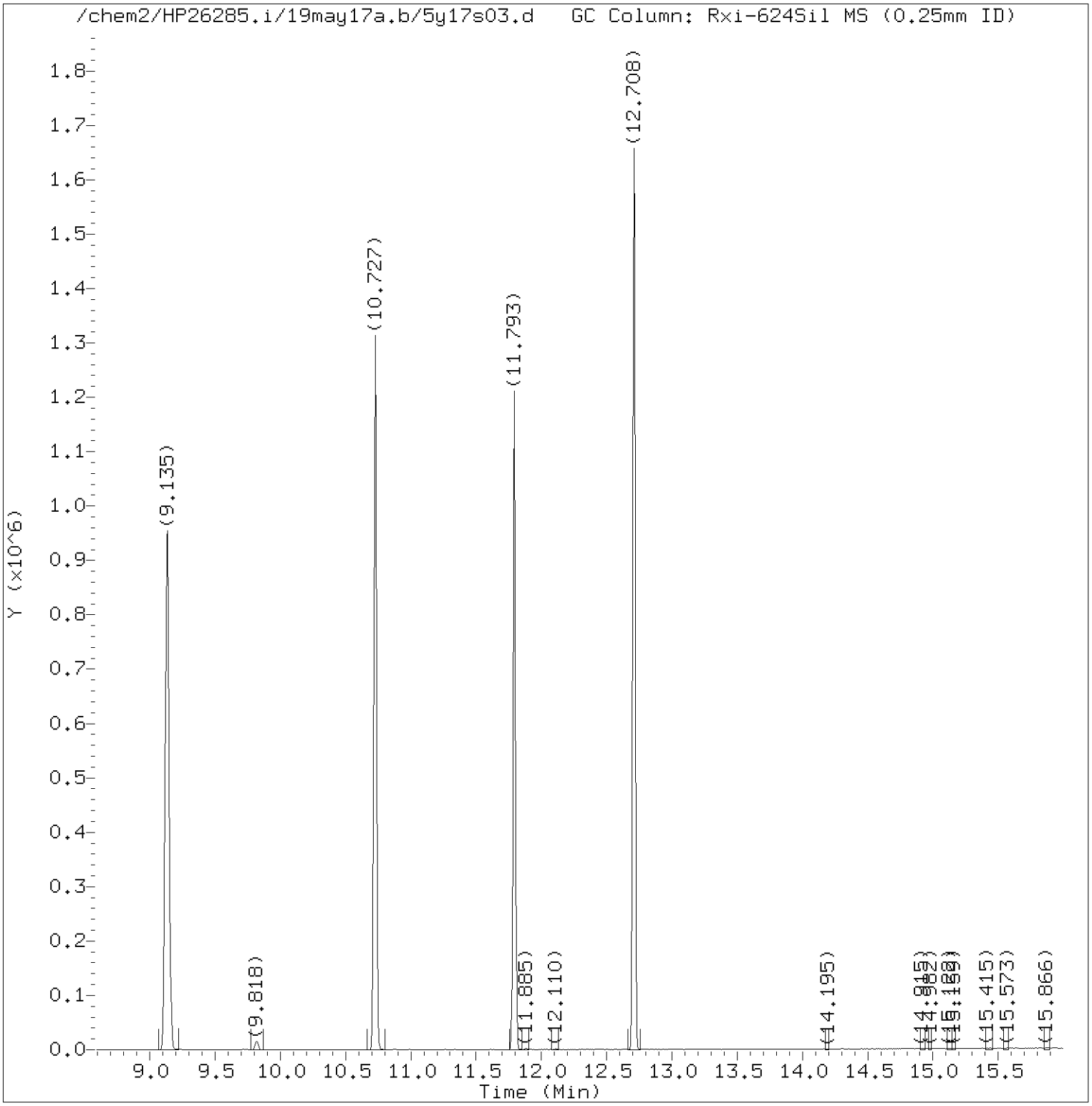
Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s03.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 10:53 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Sample Name: RS005 Lab Sample ID: 1053368

Digitally signed by Kevin A. Sposito
on 06/04/2019 at 14:36.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s03.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 10:53 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Sample Name: RS005 Lab Sample ID: 1053368

Digitally signed by Kevin A. Sposito
on 06/04/2019 at 14:36.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s03.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 10:53 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Sample Name: RS005 Lab Sample ID: 1053368

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
18) Acetone	(1)	2.996	58	1170	1.553
29)*t-Butyl alcohol-d10	(1)	3.551	65	233416	250.000
36) 1,1-Dichloroethane	(2)	4.496	63	3847	0.529
42) cis-1,2-Dichloroethene	(2)	5.368	96	2369	0.507
53) 1,1,1-Trichloroethane	(2)	6.081	97	12736A	2.006
52)$Dibromofluoromethane	(2)	6.093	113	220215	57.616
57)$1,2-Dichloroethane-d4	(2)	6.563	102	47533	53.151
66)*Fluorobenzene	(2)	7.008	96	798721	50.000
71) Trichloroethene	(2)	7.496	95	35198	7.654
84)$Toluene-d8	(3)	9.135	98	779578	49.052
94) Tetrachloroethene	(3)	9.818	166	4991	0.928
101)*Chlorobenzene-d5	(3)	10.727	117	629634	50.000
115)$4-Bromofluorobenzene	(3)	11.793	95	302983	48.995
132)*1,4-Dichlorobenzene-d4	(4)	12.708	152	346230	50.000

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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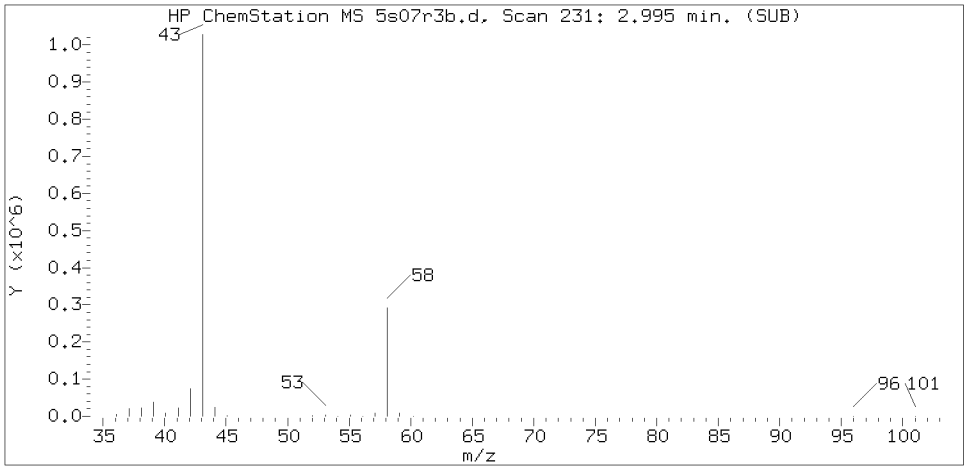
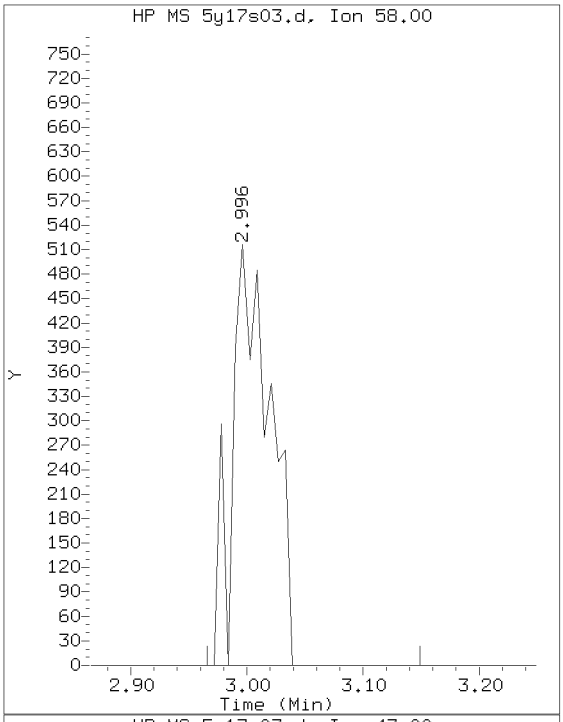
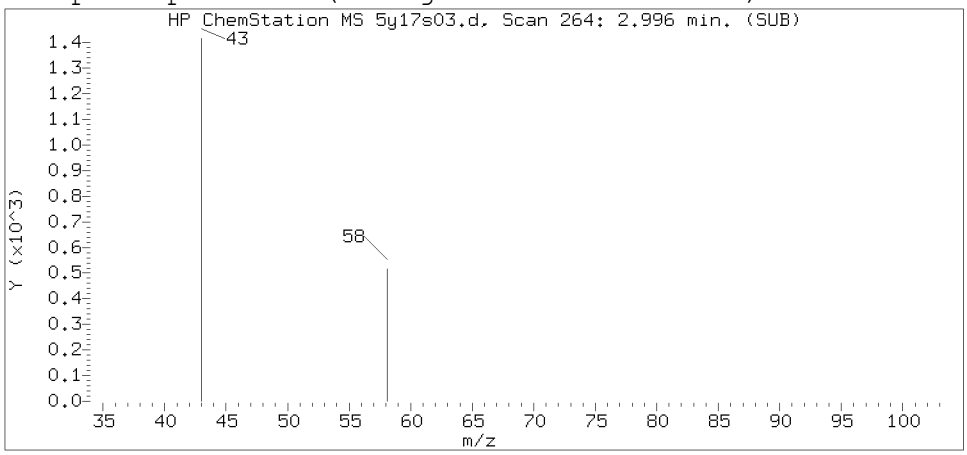
on 06/04/2019 at 14:36.
Target 3.5 esignature user ID: kas02648

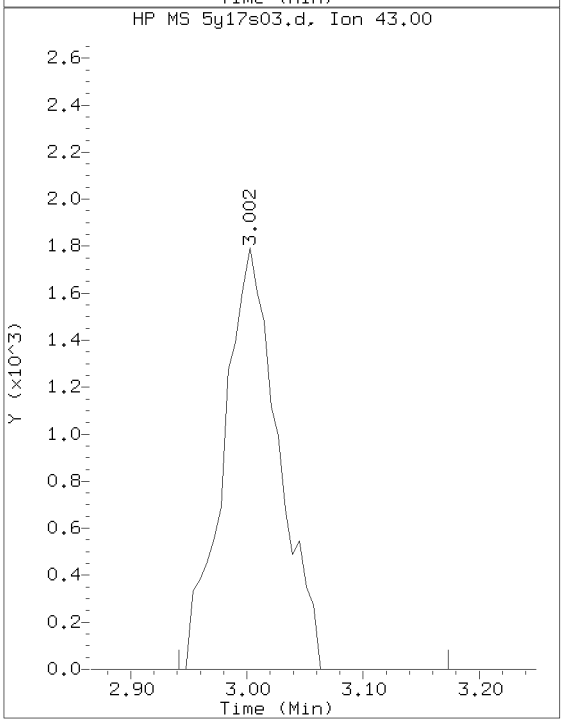
Reference Standard Spectrum for Acetone



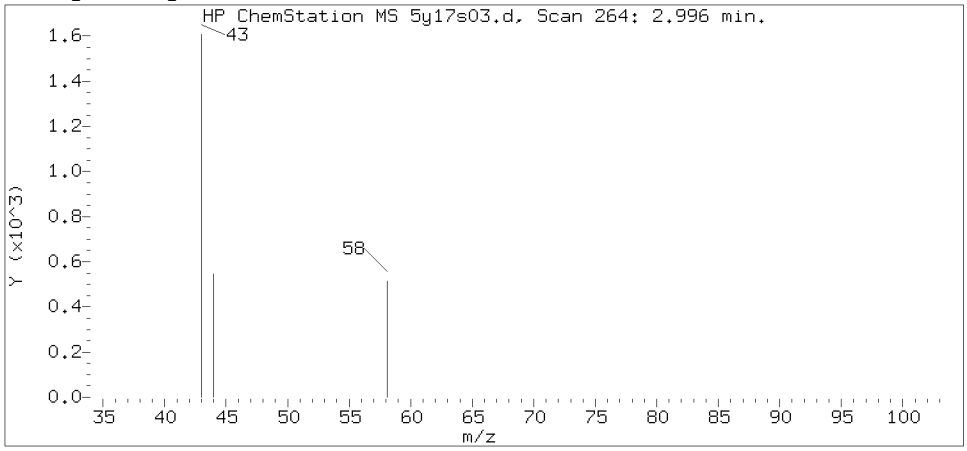


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP26285.i/19may17a.b/5y17s03.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 10:53 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Sample Name: RS005 Lab Sample ID: 1053368

Compound Number	: 18
Compound Name	: Acetone
Scan Number	: 264
Retention Time (minutes)	: 2.996
Relative Retention Time	: 0.00118
Quant Ion	: 58.00
Area (flag)	: 1170
On-Column Amount (ng)	: 1.5529

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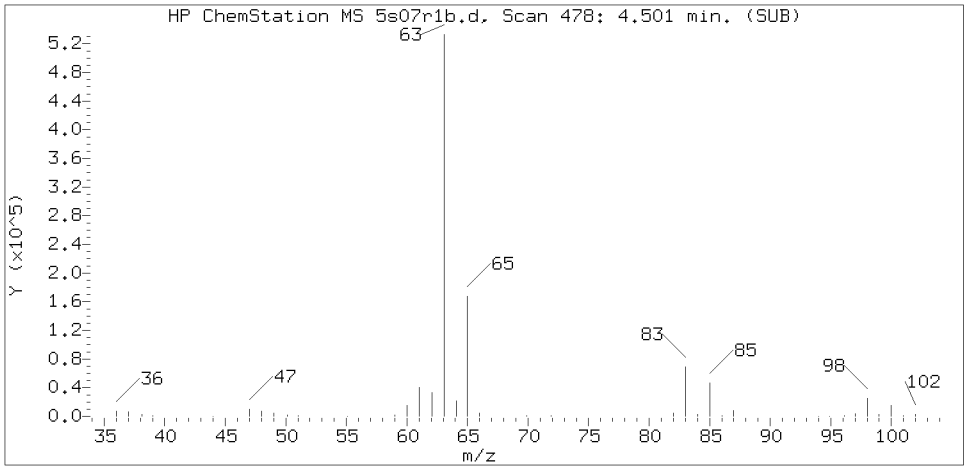
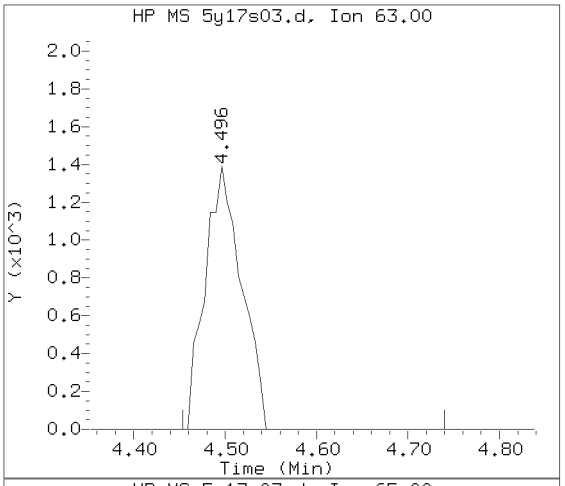
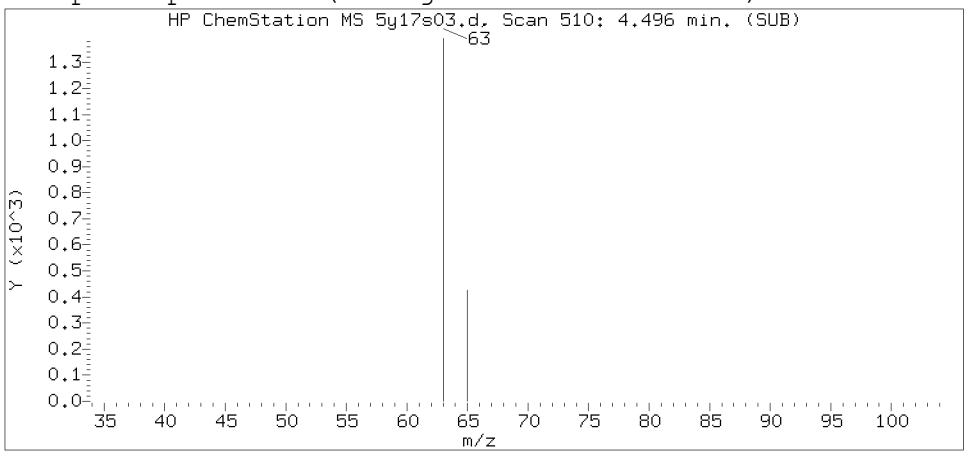
Target 3.5 esignature user ID: kas02648

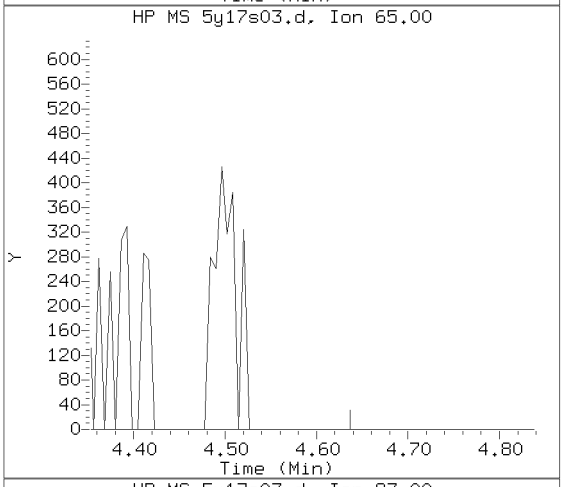
Reference Standard Spectrum for 1,1-Dichloroethane



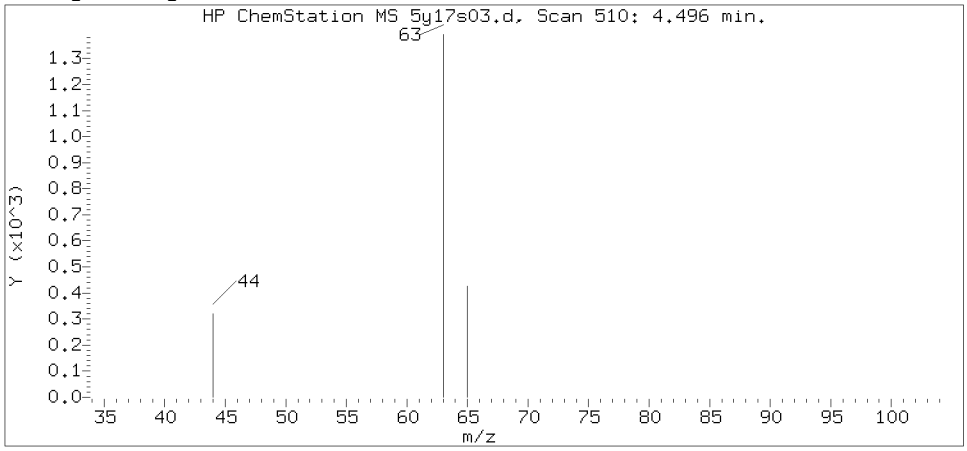


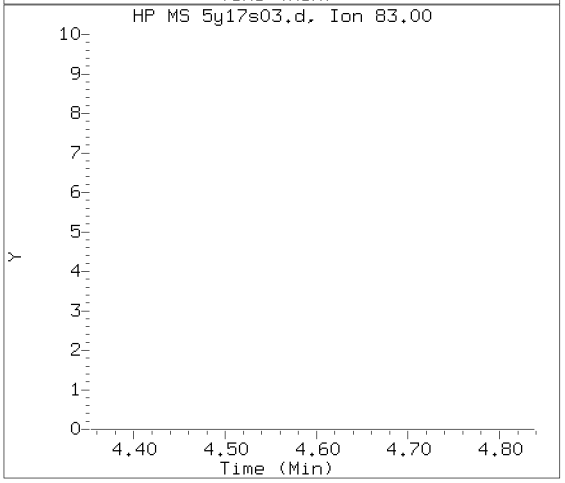
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP26285.i/19may17a.b/5y17s03.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 10:53 Analyst ID: CLM27445

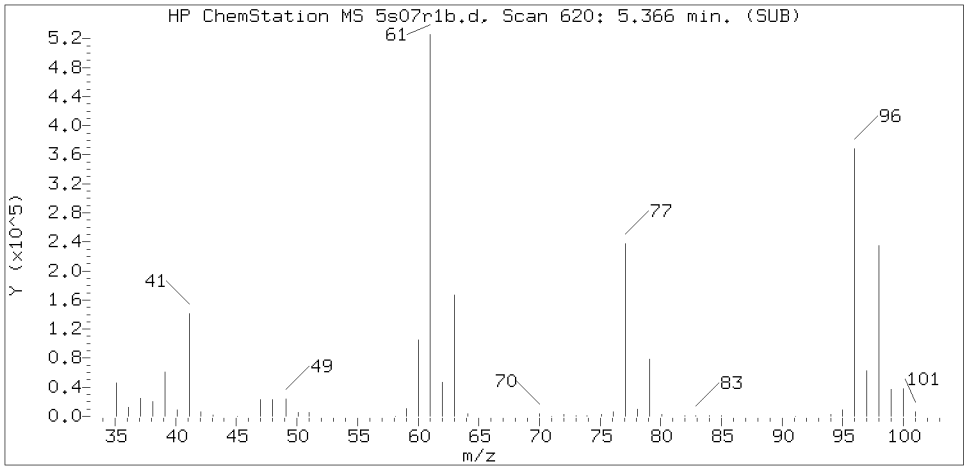
Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Sample Name: RS005 Lab Sample ID: 1053368

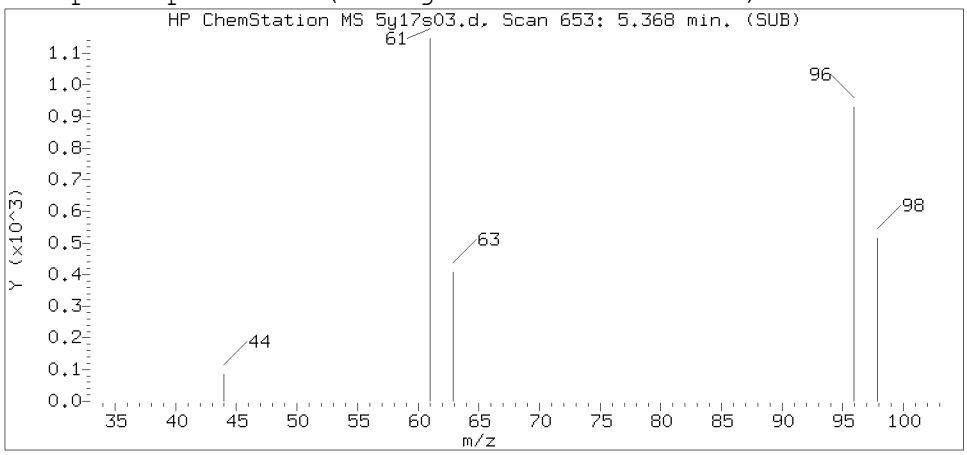
Compound Number	: 36
Compound Name	: 1,1-Dichloroethane
Scan Number	: 510
Retention Time (minutes)	: 4.496
Relative Retention Time	:-0.00032
Quant Ion	: 63.00
Area (flag)	: 3847
On-Column Amount (ng)	: 0.5287

Digitally signed by Kevin A. Sposito on 06/04/2019 at 14:36.
Target 3.5 esignature user ID: kas02648

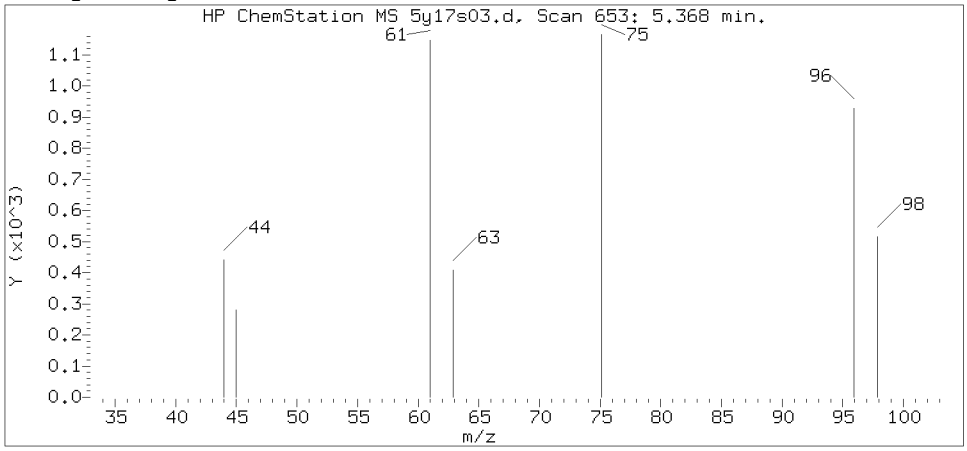
Reference Standard Spectrum for cis-1,2-Dichloroethene

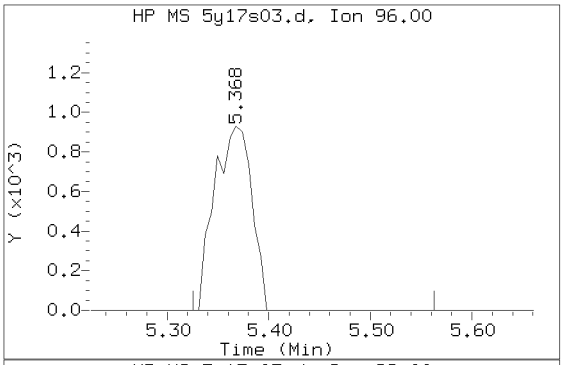


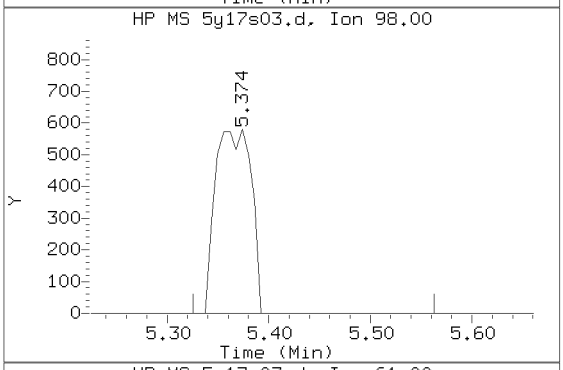
Sample Spectrum (Background Subtracted)

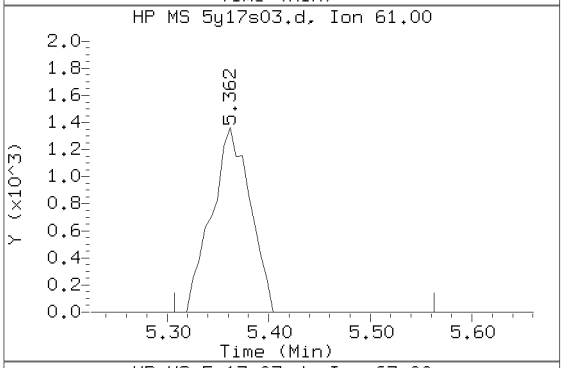


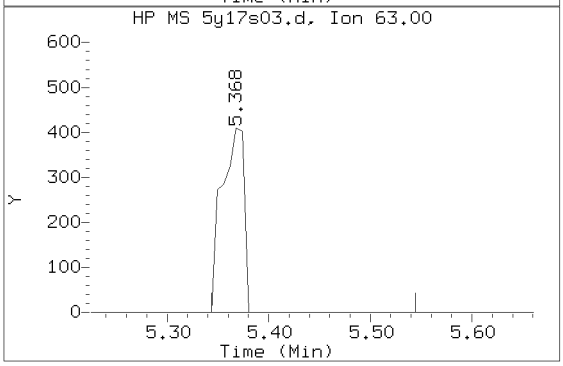
Sample Spectrum (Unaltered)











Data File: /chem2/HP26285.i/19may17a.b/5y17s03.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 10:53 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Sample Name: RS005 Lab Sample ID: 1053368

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 653
Retention Time (minutes): 5.368
Relative Retention Time :-0.00108
Quant Ion : 96.00
Area (flag) : 2369
On-Column Amount (ng) : 0.5073

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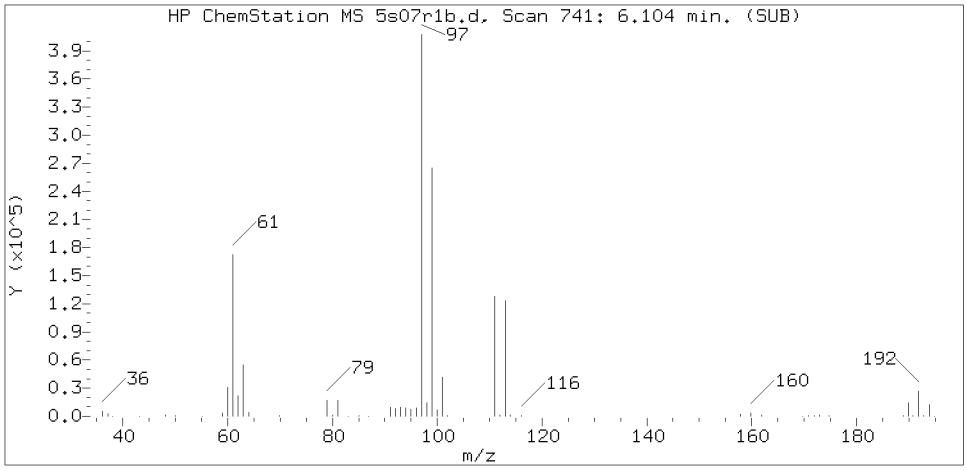
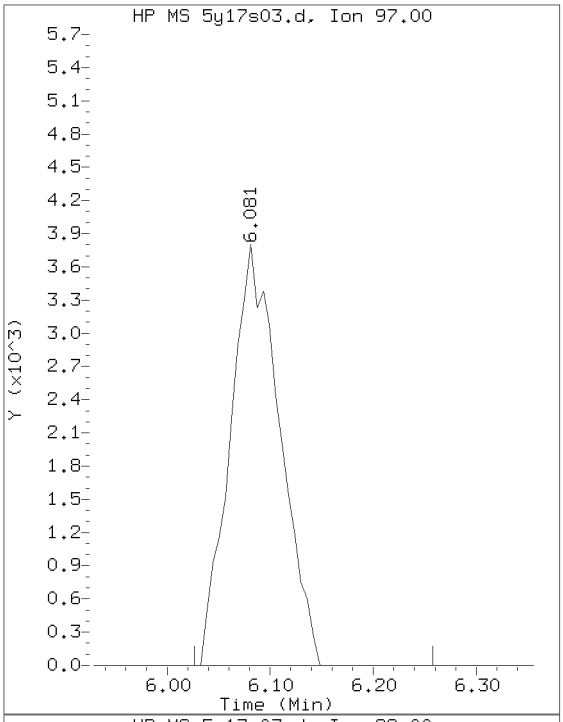
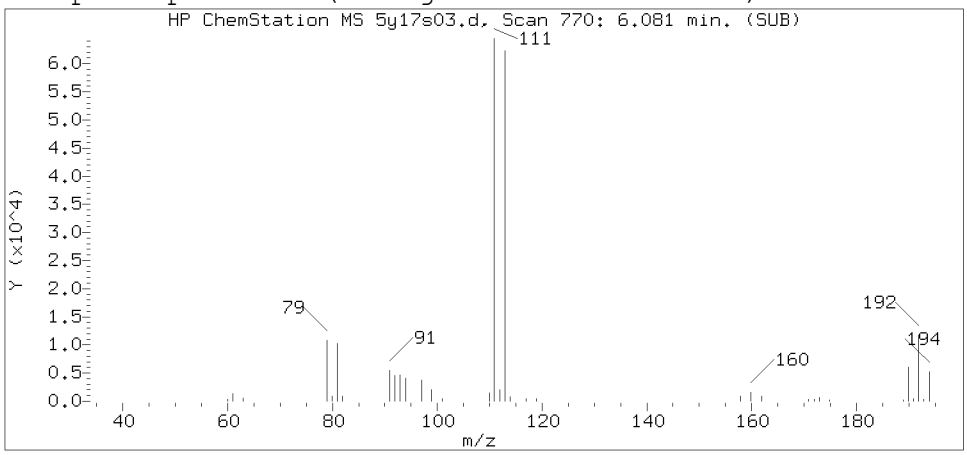
Target 3.5 esignature user ID: kas02648

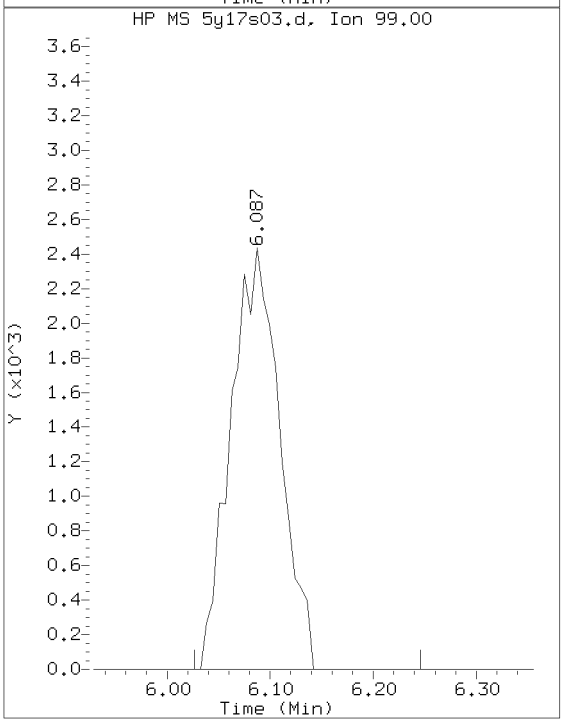
Reference Standard Spectrum for 1,1,1-Trichloroethane



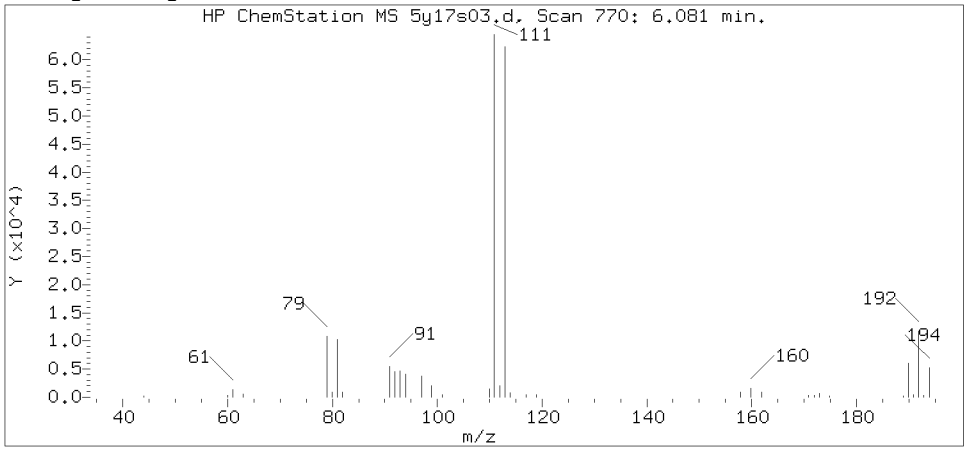


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP26285.i/19may17a.b/5y17s03.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 10:53 Analyst ID: CLM27445

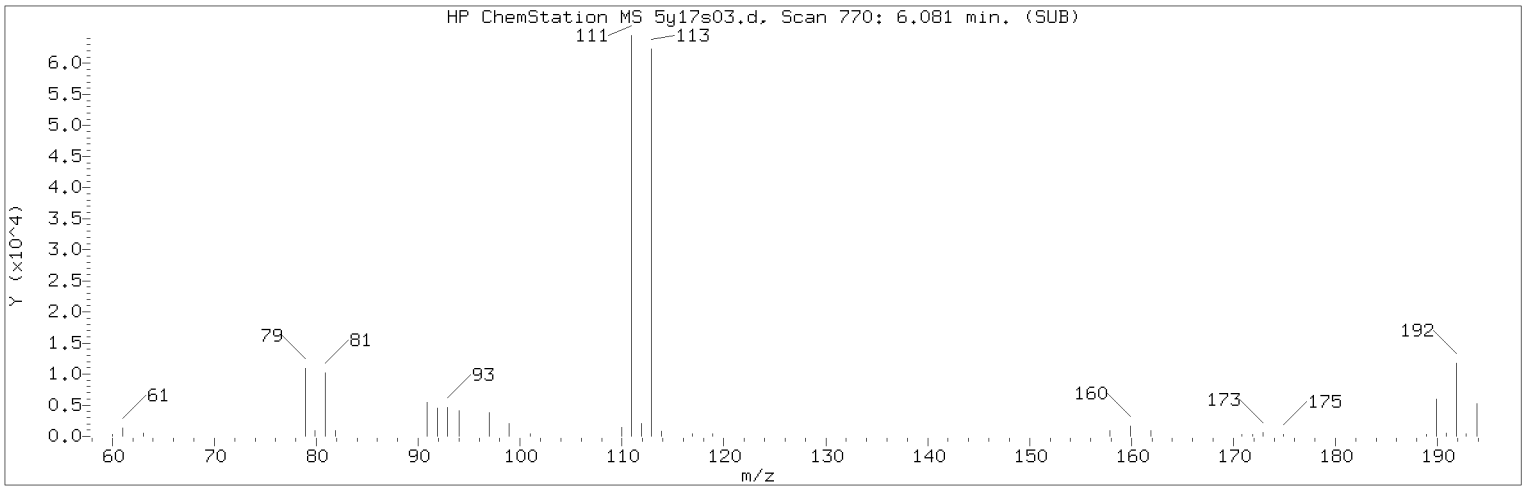
Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Sample Name: RS005 Lab Sample ID: 1053368

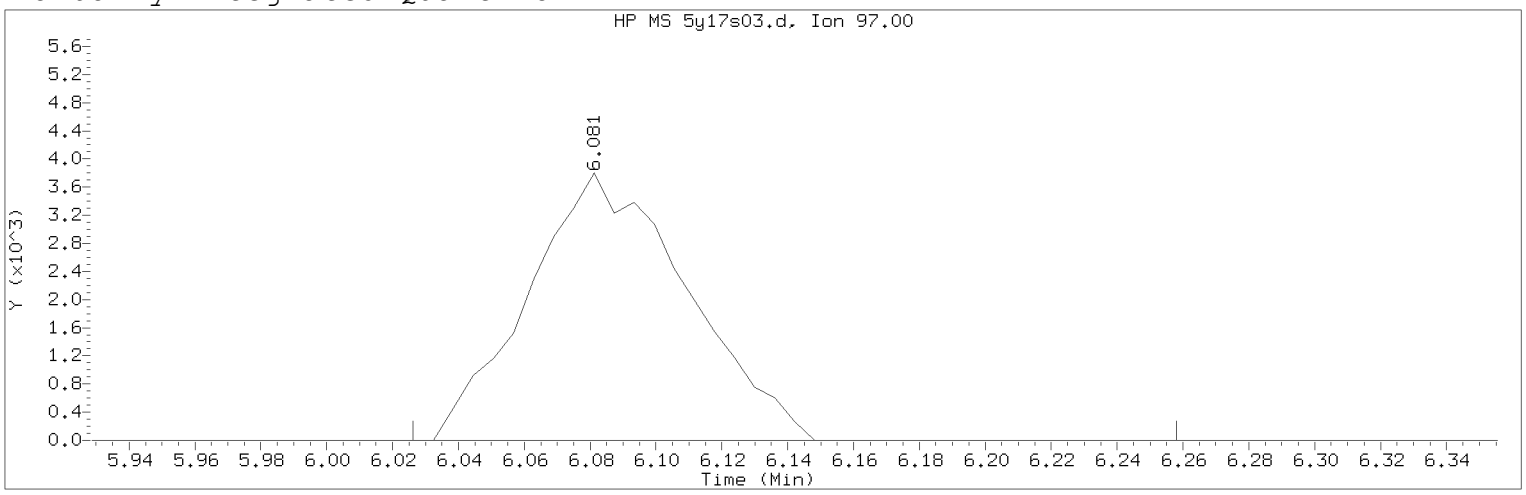
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 770
Retention Time (minutes): 6.081
Relative Retention Time : 0.00075
Quant Ion : 97.00
Area (flag) : 12736A
On-Column Amount (ng) : 2.0056

Digitally signed by Kevin A. Sposito on 06/04/2019 at 14:36.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may17a.b/5y17s03.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 10:53 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Sample Name: RS005 Lab Sample ID: 1053368

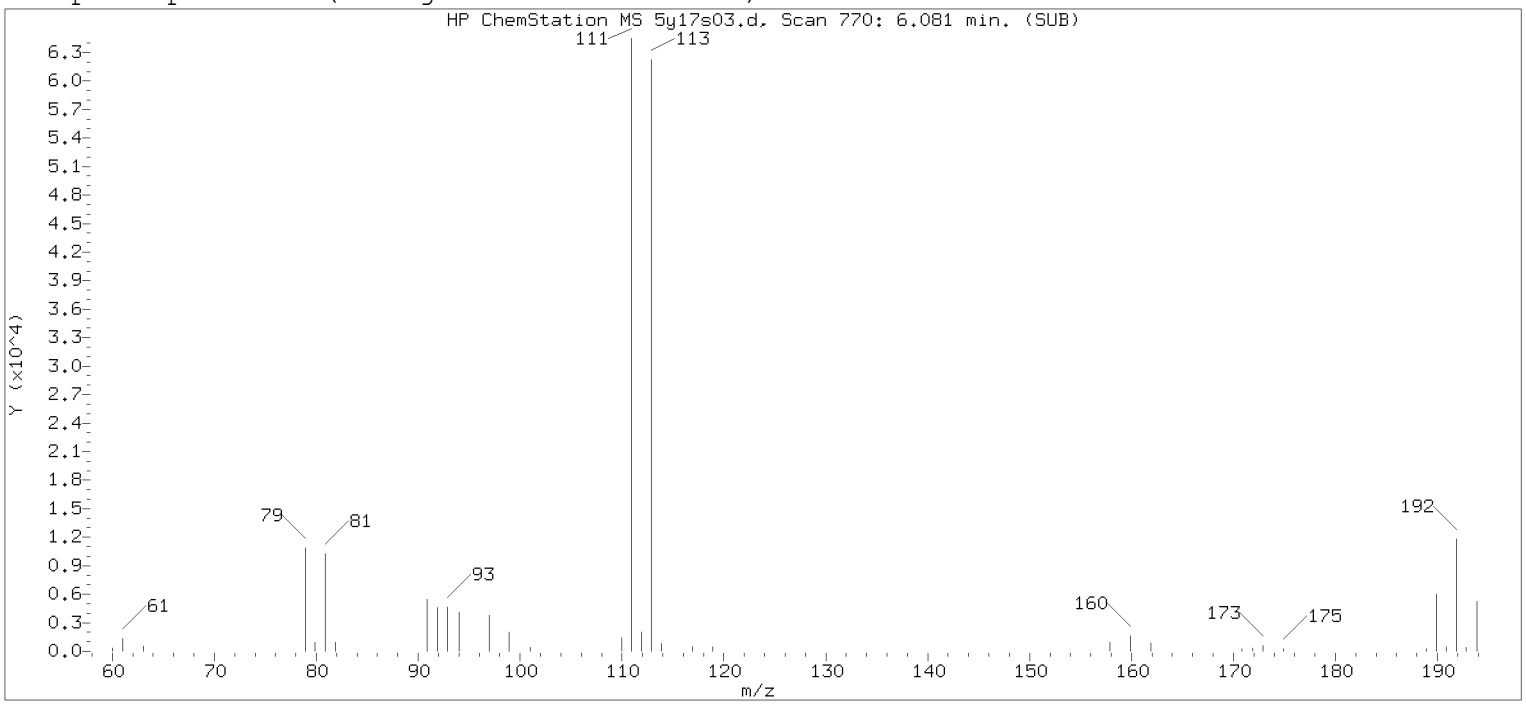
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 770
Retention Time (minutes): 6.081
Quant Ion : 97.00
Area (flag) : 12736A
On-Column Amount (ng) : 2.0056
Integration start scan : 760 Integration stop scan: 798
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

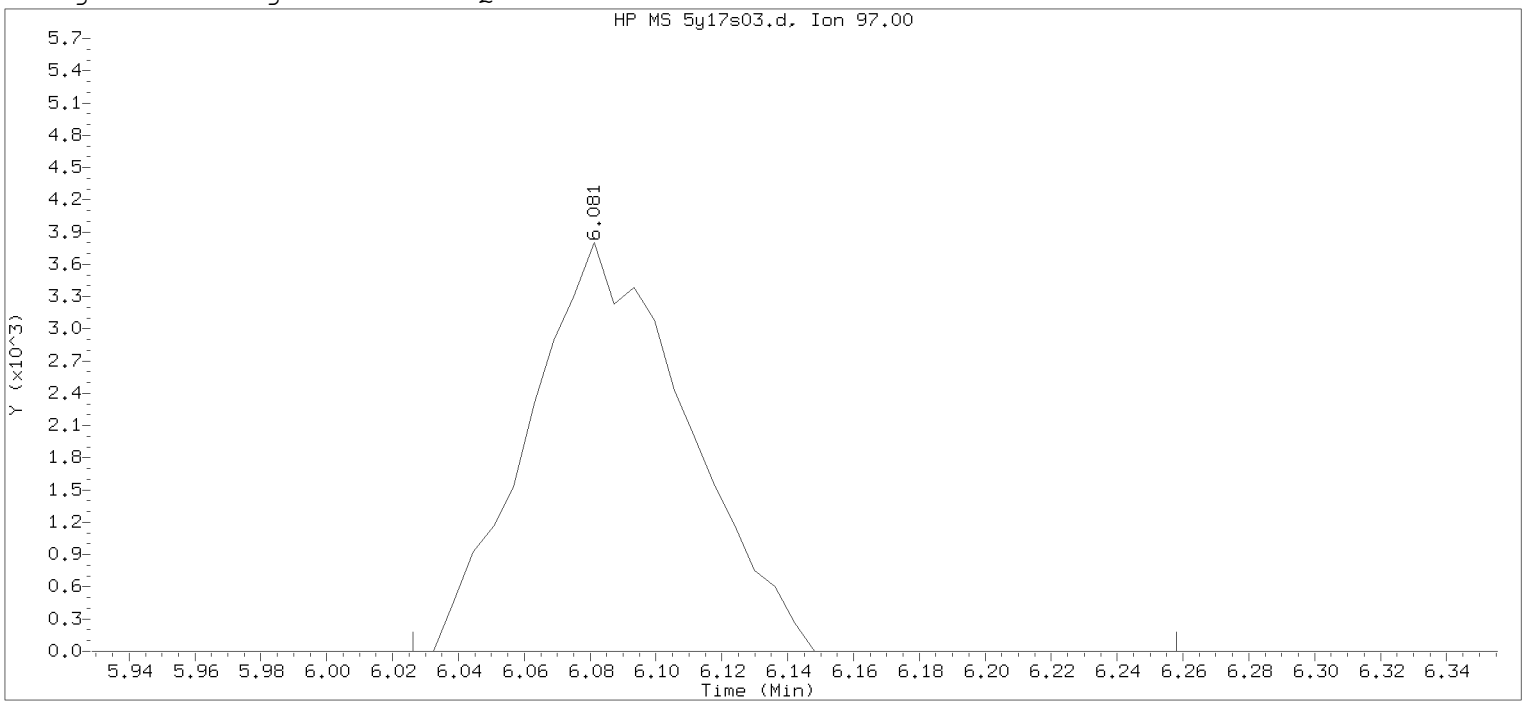
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 06/04/2019 at 14:36.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 14:37.
PARALLAX ID: rrm00219

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may17a.b/5y17s03.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 10:53 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 17-May-2019 13:20 clm27445

Sample Name: RS005 Lab Sample ID: 1053368

Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 770
Retention Time (minutes): 6.081
Quant Ion : 97.00
Area : 12736
On-column Amount (ng) : 2.0058
Integration start scan : 760 Integration stop scan: 798
Y at integration start : 0 Y at integration end: 0

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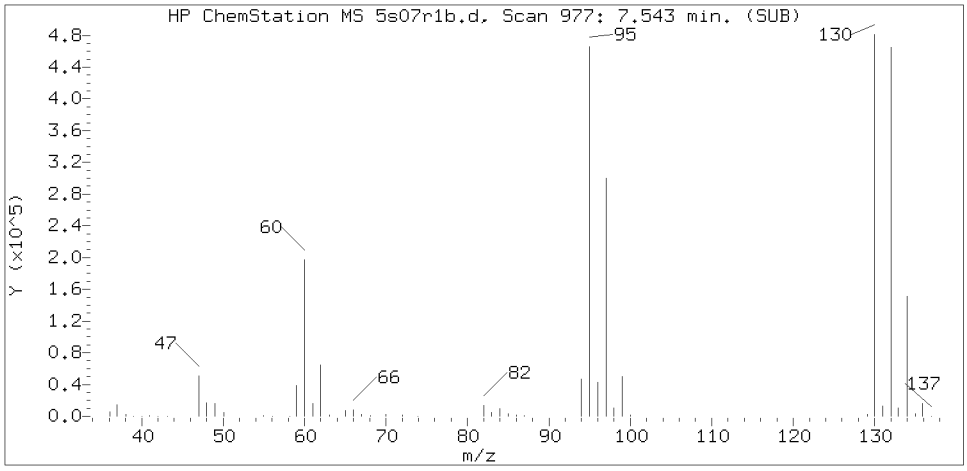
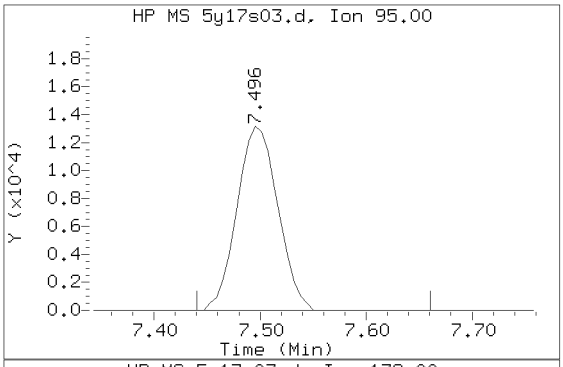
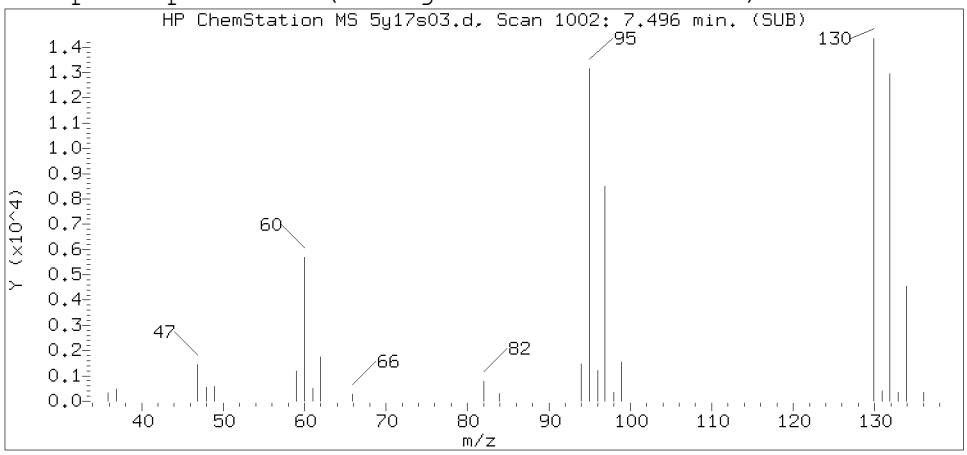
Target 3.5 esignature user kevin.sposito

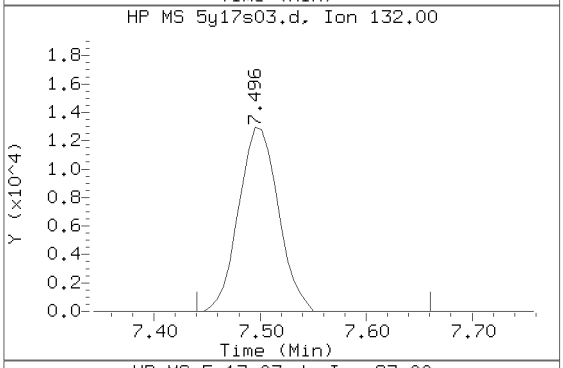
Reference Standard Spectrum for Trichloroethene

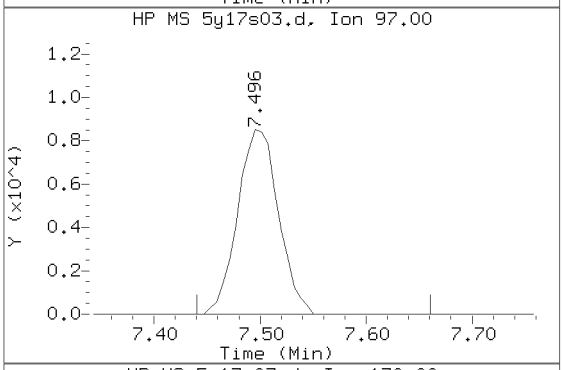




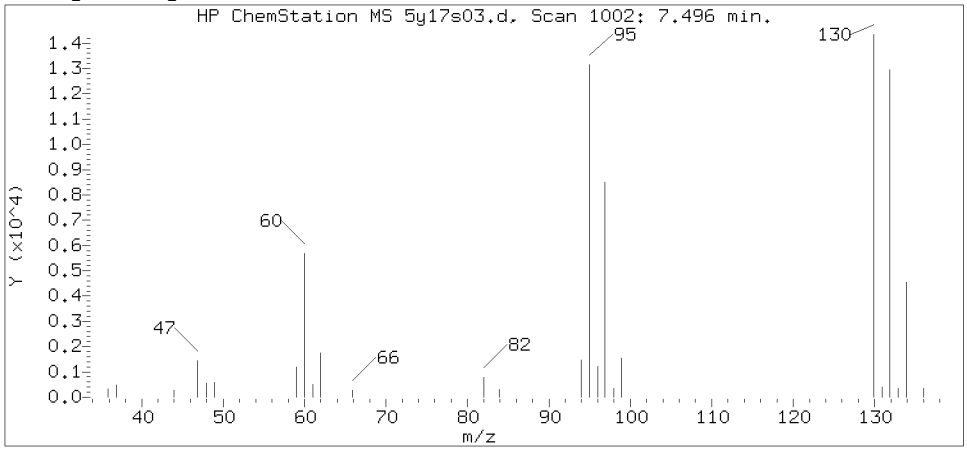
Sample Spectrum (Background Subtracted)

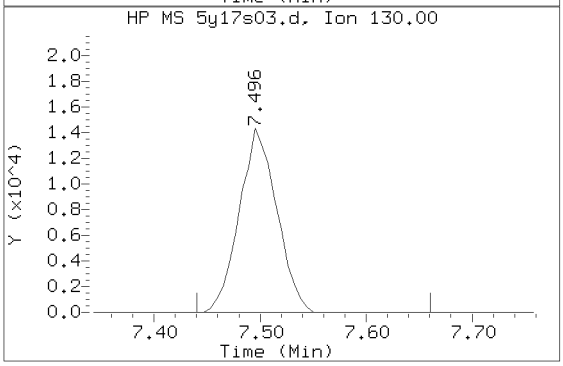






Sample Spectrum (Unaltered)





Data File: /chem2/HP26285.i/19may17a.b/5y17s03.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 10:53 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Sample Name: RS005 Lab Sample ID: 1053368

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 1002
Retention Time (minutes)	: 7.496
Relative Retention Time	: 0.00093
Quant Ion	: 95.00
Area (flag)	: 35198
On-Column Amount (ng)	: 7.6543

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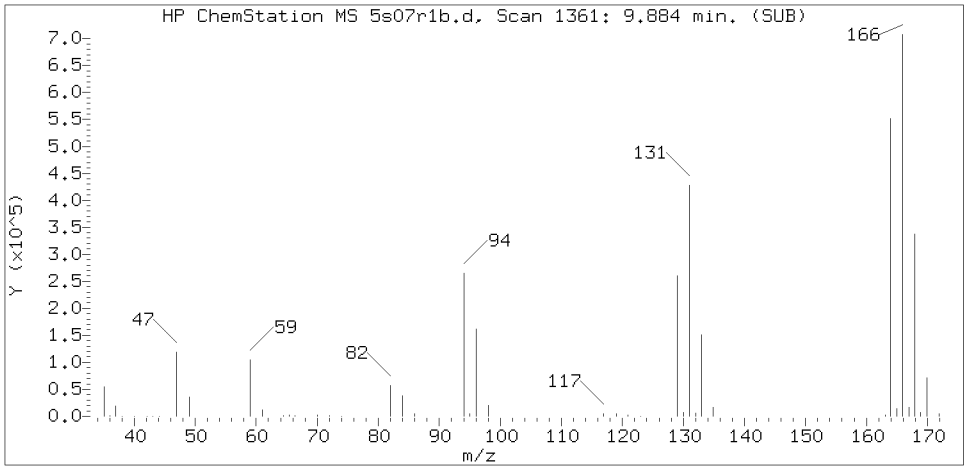
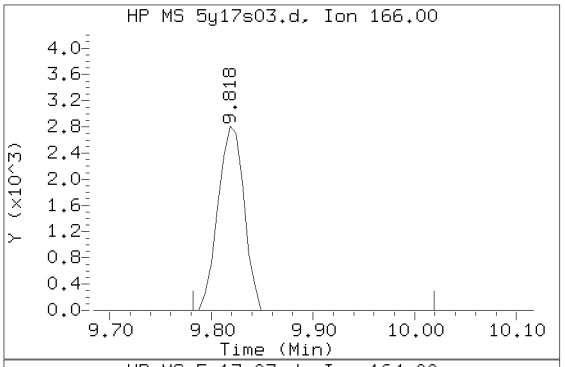
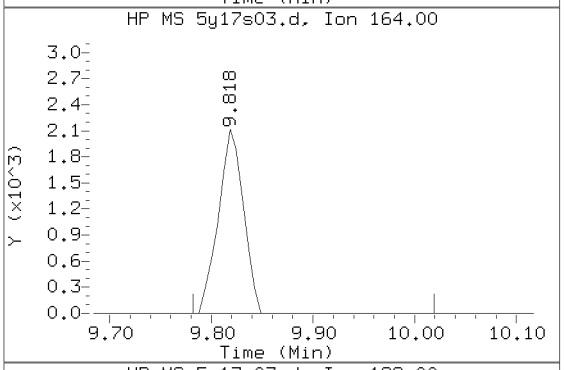
Target 3.5 esignature user ID: kas02648

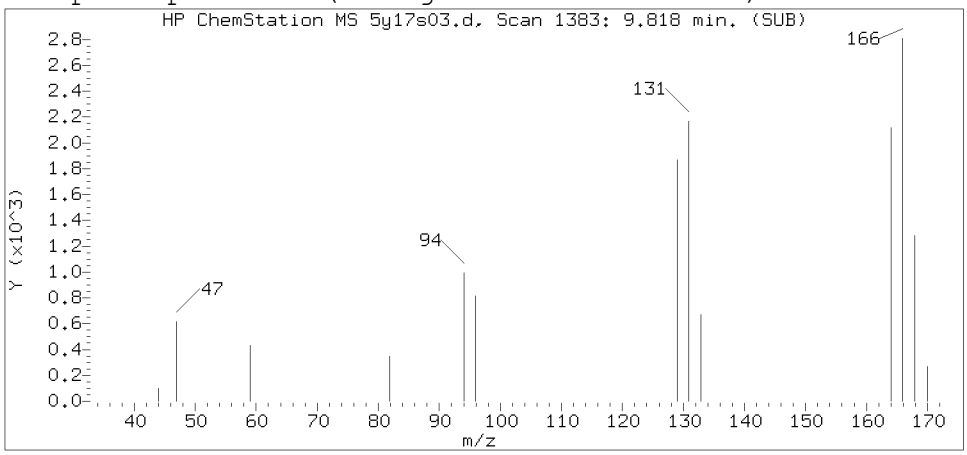
Reference Standard Spectrum for Tetrachloroethene

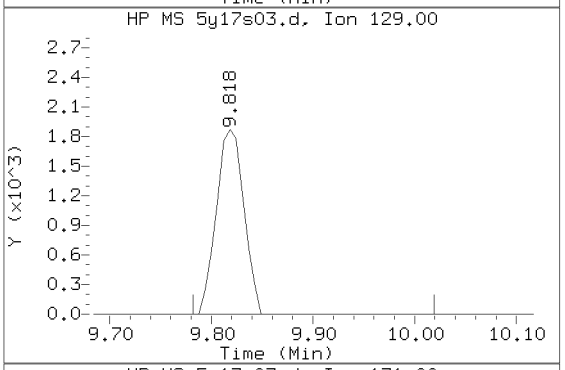




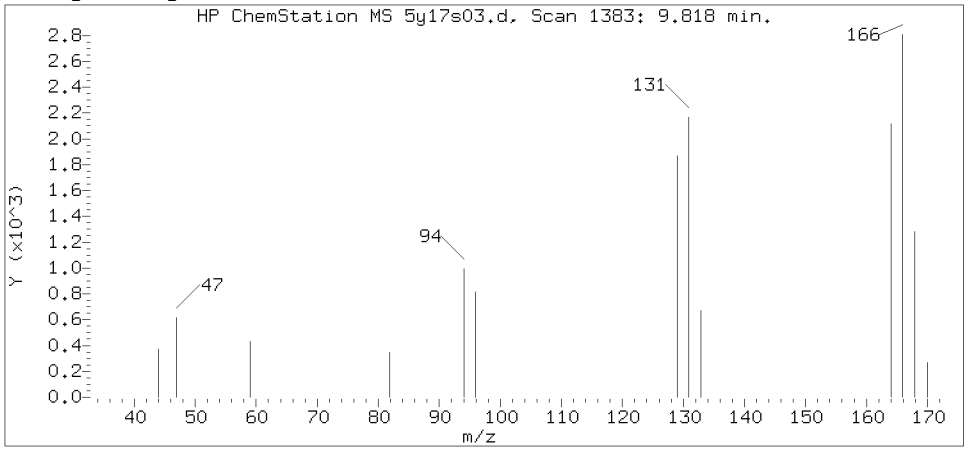


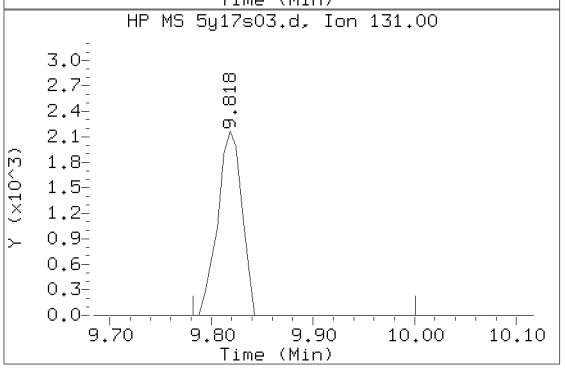
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP26285.i/19may17a.b/5y17s03.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 10:53 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Sample Name: RS005 Lab Sample ID: 1053368

Compound Number : 94
Compound Name : Tetrachloroethene
Scan Number : 1383
Retention Time (minutes): 9.818
Relative Retention Time :-0.00000
Quant Ion : 166.00
Area (flag) : 4991
On-Column Amount (ng) : 0.9278

Digitally signed by Kevin A. Sposito on 06/04/2019 at 14:36.
Target 3.5 esignature user ID: kas02648

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RS006

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053371

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP26285.i/19may17a.b/5y17s10.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/17/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.6	J
156-59-2	cis-1,2-Dichloroethene	0.6	J
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	2	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	8	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	J
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

^

RS006 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1053371

Data file: /chem2/HP26285.i/19may17a.b/5y17s10.d Injection date and time: **17-MAY-2019 13:21**
Data file Sample Info. Line: RS006;1053371;1;0;;JCV89;;;5y17b01; Instrument ID: **HP26285.i** Batch: **5191371AA**
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Blank Data file reference: **/chem2/HP26285.i/19may17a.b/5y17b01.d**

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 17-MAY-2019 13:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may17a.b/5y17c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.563(-0.024)	357	65	223532 (-6)	250.00	
66) Fluorobenzene	7.020(-0.018)	924	96	762446 (-7)	50.00	
101) Chlorobenzene-d5	10.733(-0.006)	1533	117	598428 (-11)	50.00	
132) 1,4-Dichlorobenzene-d4	12.714(-0.006)	1858	152	327676 (-20)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.105(0.000)	113	211761	58.041	116%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.575(0.000)	102	45590	53.403	107%		80 - 120
84) Toluene-d8	(3)	9.141(-0.001)	98	742083	49.128	98%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.793(0.000)	95	285011	48.492	97%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	4.526(-0.003)	63	3866	0.557	0.56		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	5.374(-0.000)	96	2514	0.564	0.56		J	0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	6.105(-0.001)	97	12981A	2.141	2.14			0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	7.508(0.001)	95	34892	7.949	7.95			0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)	9.824(-0.000)	166	5009	0.980	0.98		J	0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

A = User selected an alternate peak.

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Data file: /chem2/HP26285.i/19may17a.b/5y17s10.d Injection date and time: **17-MAY-2019 13:21**
Data file Sample Info. Line: RS006;1053371;1;0;;JCV89;;;5y17b01; Instrument ID: **HP26285.i** Batch: **5191371AA**
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Blank Data file reference: **/chem2/HP26285.i/19may17a.b/5y17b01.d**

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 17-MAY-2019 13:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may17a.b/5y17c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

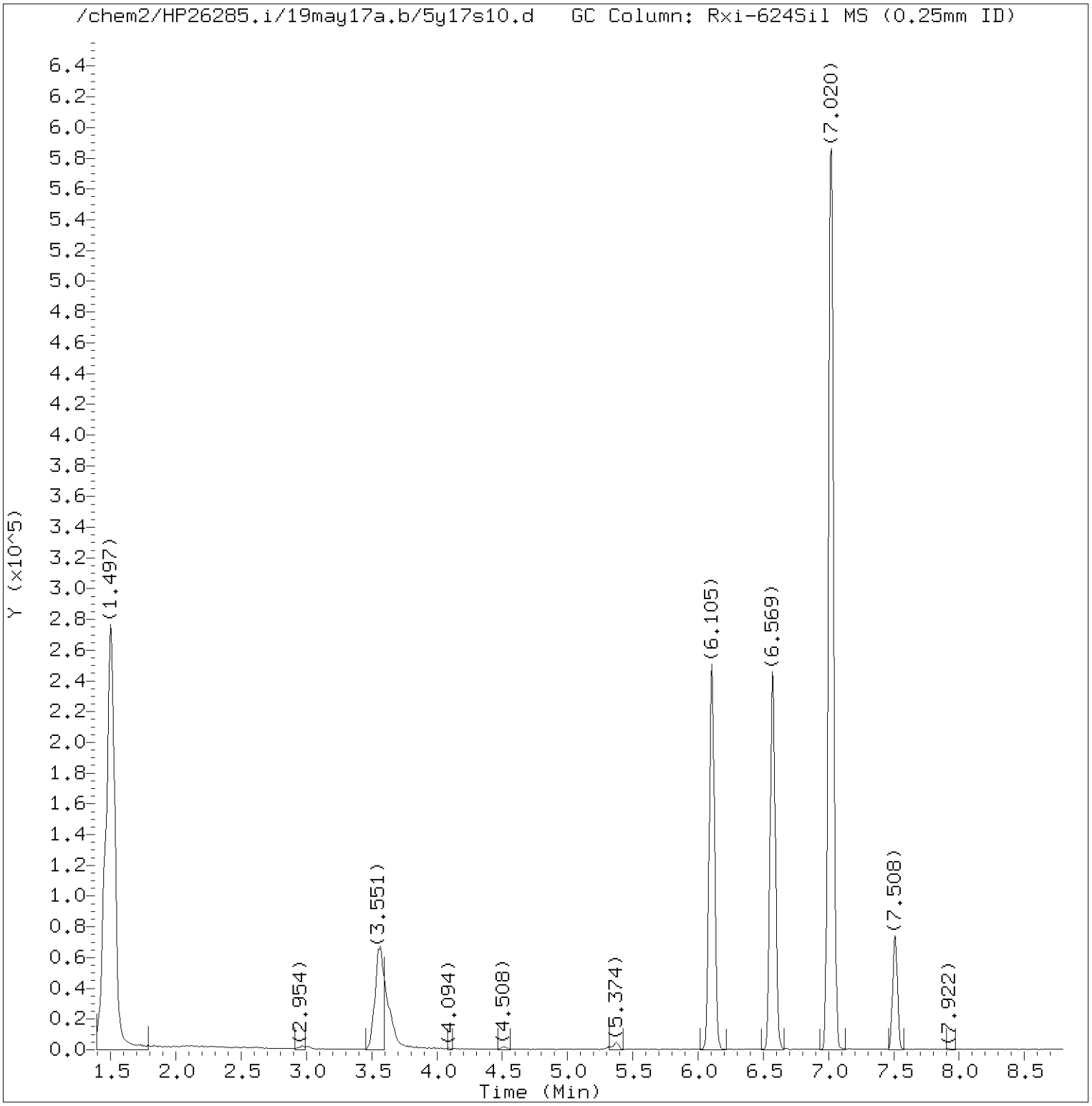
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Kevin A. Sposito on 06/04/2019 at 14:36. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 14:37. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

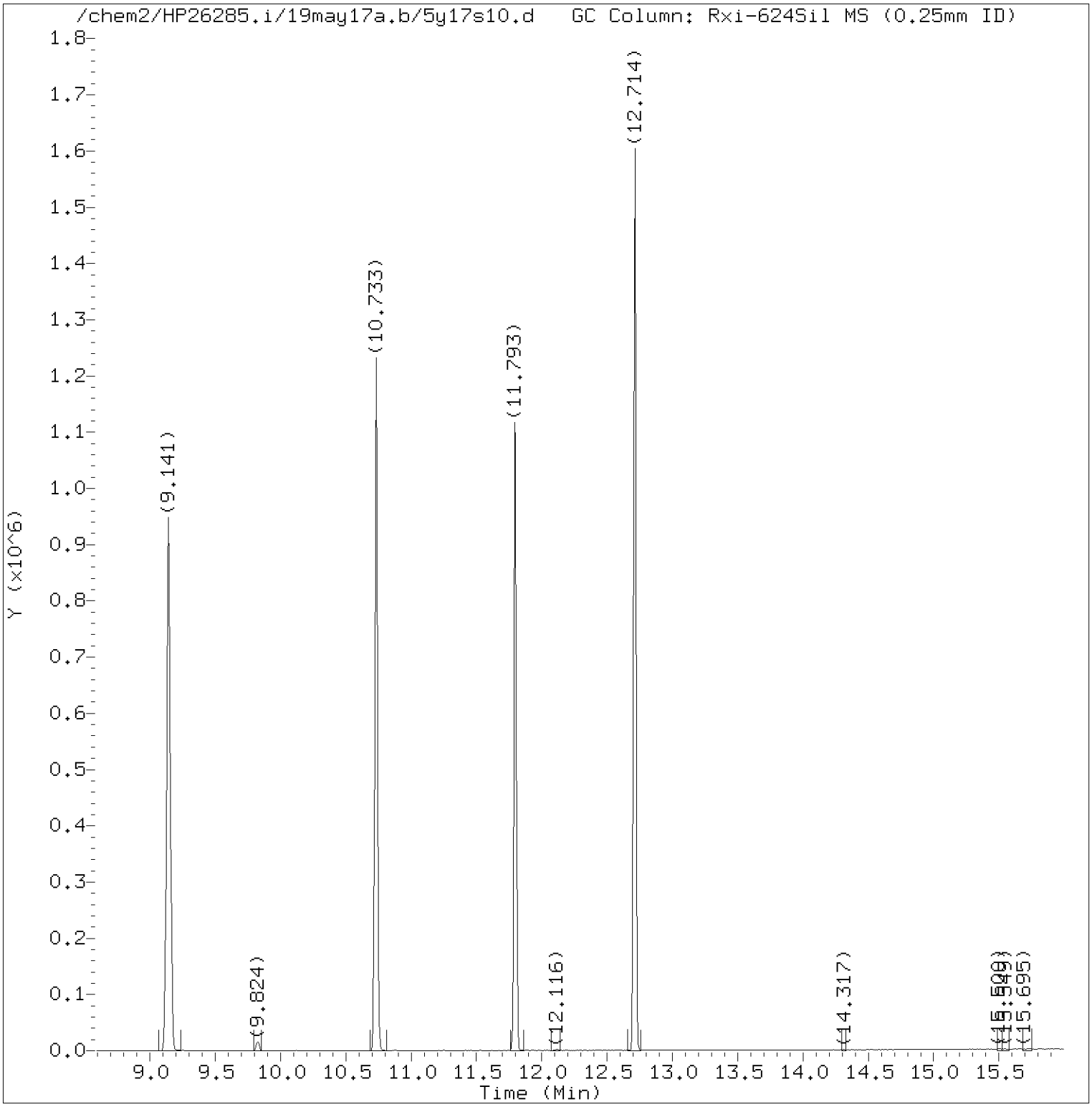
Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s10.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 13:21 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Sample Name: RS006 Lab Sample ID: 1053371

Digitally signed by Kevin A. Sposito
on 06/04/2019 at 14:36.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s10.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 13:21 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Sample Name: RS006 Lab Sample ID: 1053371

Digitally signed by Kevin A. Sposito
on 06/04/2019 at 14:36.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s10.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 13:21 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Sample Name: RS006 Lab Sample ID: 1053371

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.563	65	223532	250.000
36) 1,1-Dichloroethane	(2)	4.526	63	3866	0.557
42) cis-1,2-Dichloroethene	(2)	5.374	96	2514	0.564
53) 1,1,1-Trichloroethane	(2)	6.105	97	12981A	2.141
52)$Dibromofluoromethane	(2)	6.105	113	211761	58.041
57)$1,2-Dichloroethane-d4	(2)	6.575	102	45590	53.403
66)*Fluorobenzene	(2)	7.020	96	762446	50.000
71) Trichloroethene	(2)	7.508	95	34892	7.949
84)$Toluene-d8	(3)	9.141	98	742083	49.128
94) Tetrachloroethene	(3)	9.824	166	5009	0.980
101)*Chlorobenzene-d5	(3)	10.733	117	598428	50.000
115)$4-Bromofluorobenzene	(3)	11.793	95	285011	48.492
132)*1,4-Dichlorobenzene-d4	(4)	12.714	152	327676	50.000

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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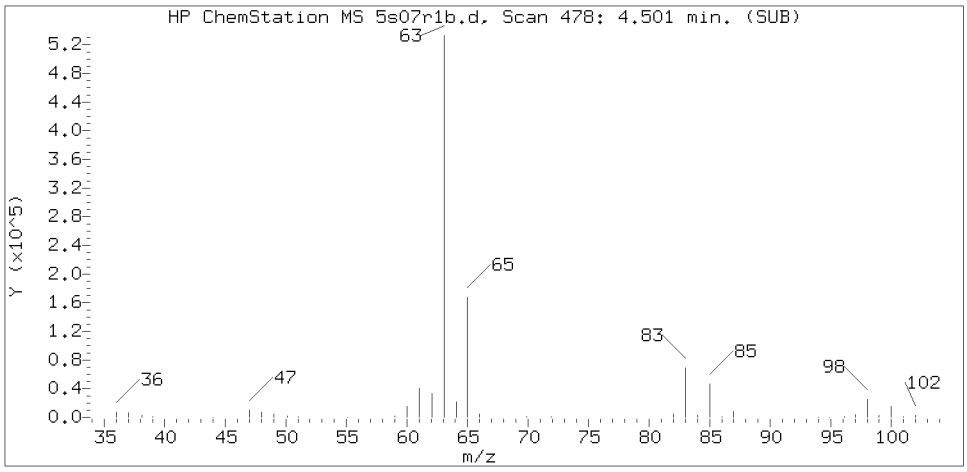
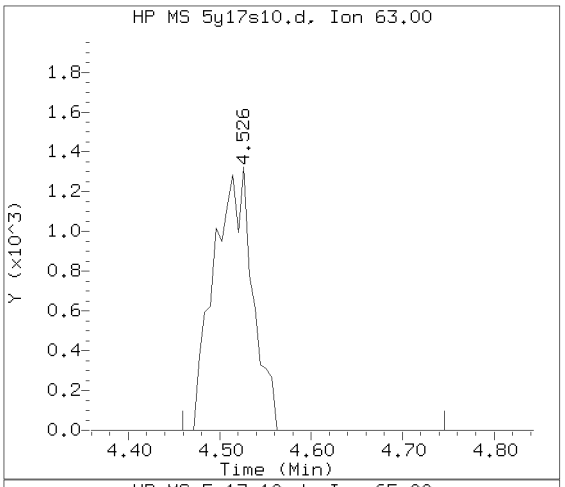
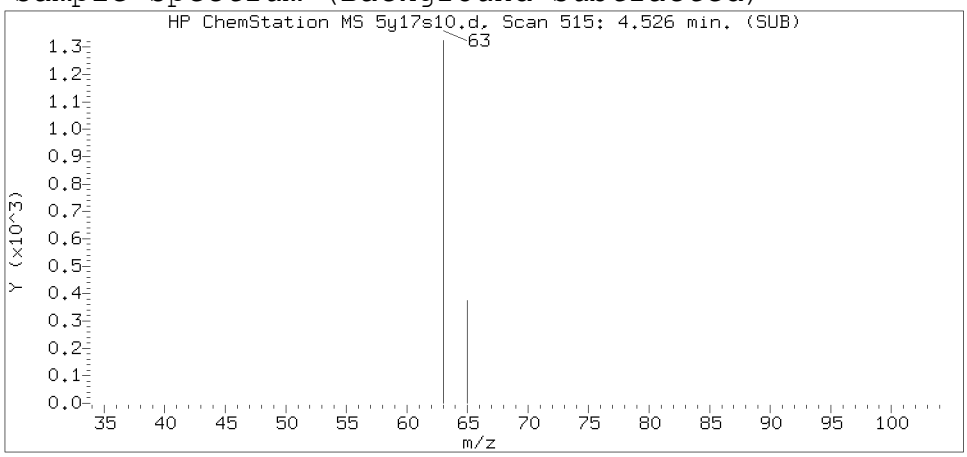
on 06/04/2019 at 14:36.
Target 3.5 esignature user ID: kas02648

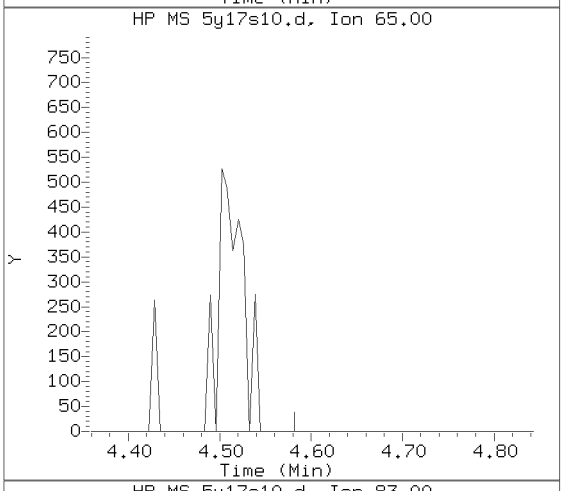
Reference Standard Spectrum for 1,1-Dichloroethane



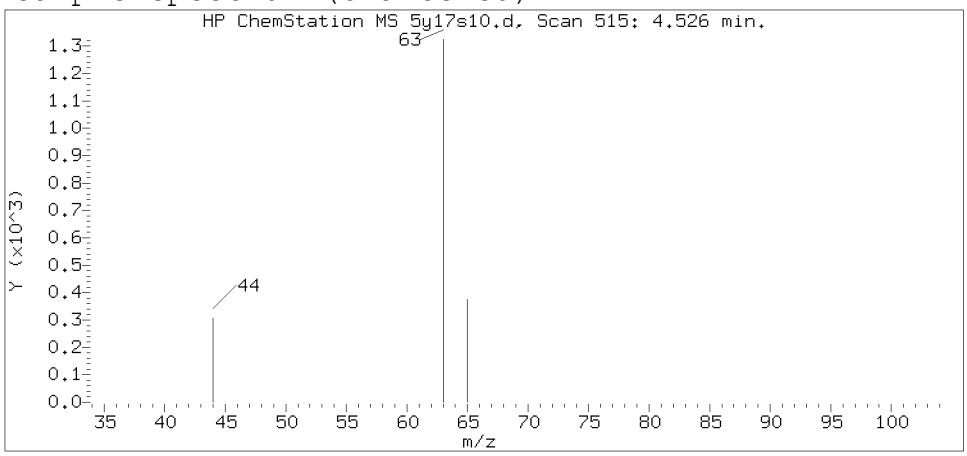


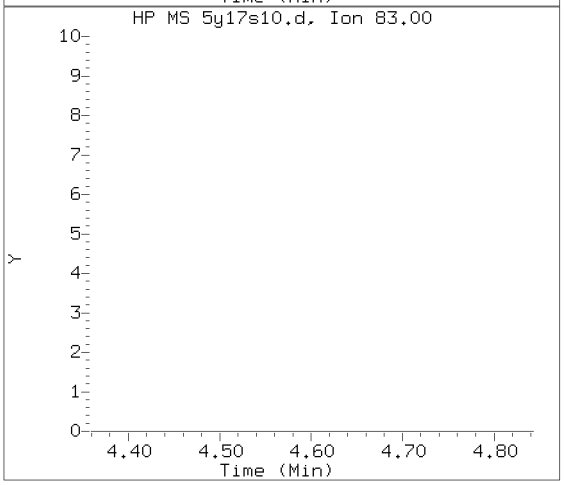
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP26285.i/19may17a.b/5y17s10.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 13:21 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Sample Name: RS006 Lab Sample ID: 1053371

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 515
Retention Time (minutes): 4.526
Relative Retention Time :-0.00354
Quant Ion : 63.00
Area (flag) : 3866
On-Column Amount (ng) : 0.5566

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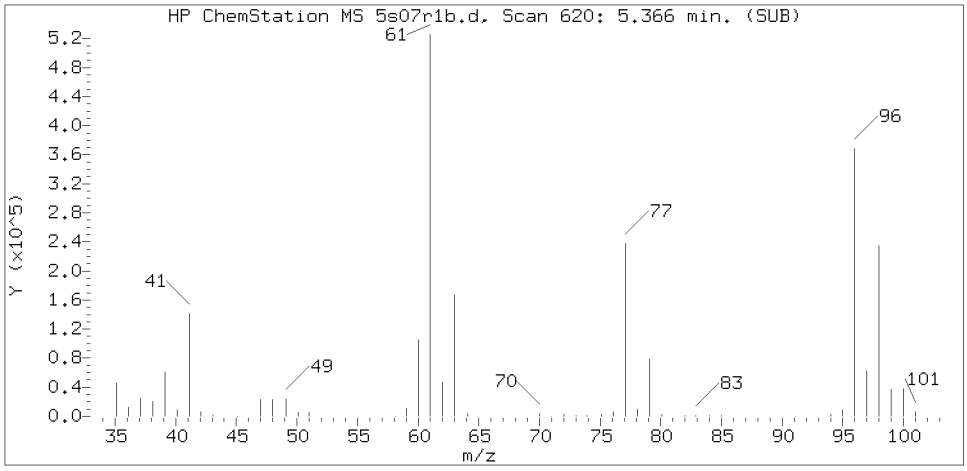
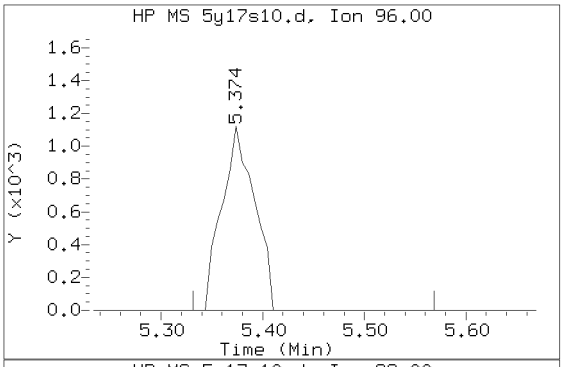
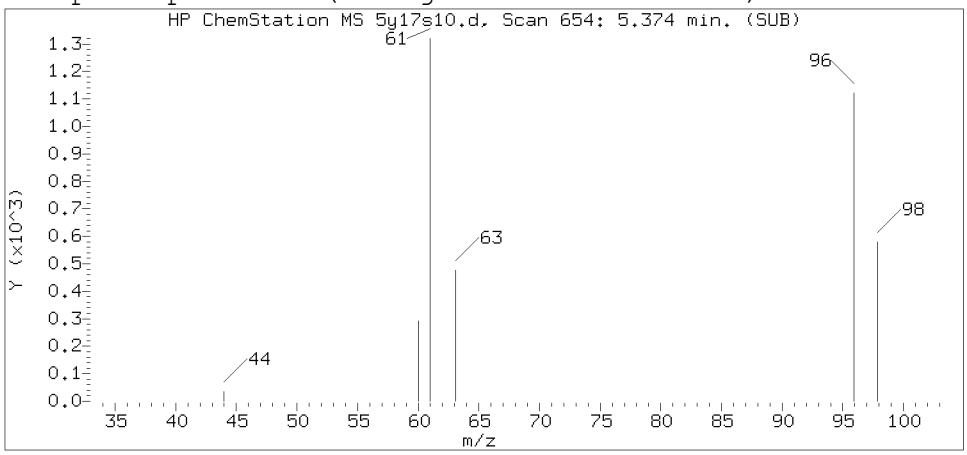
Target 3.5 esignature user ID: kas02648

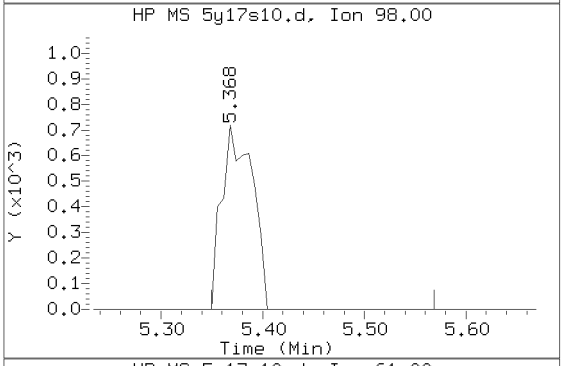
Reference Standard Spectrum for cis-1,2-Dichloroethene

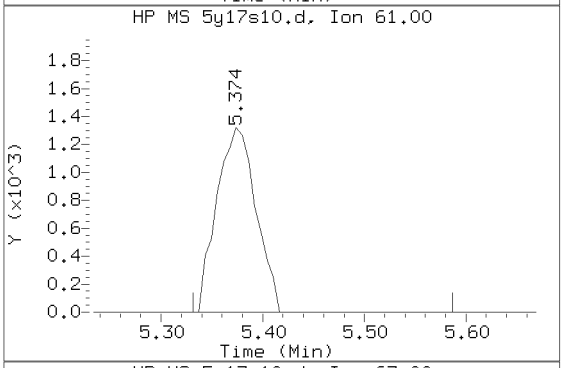




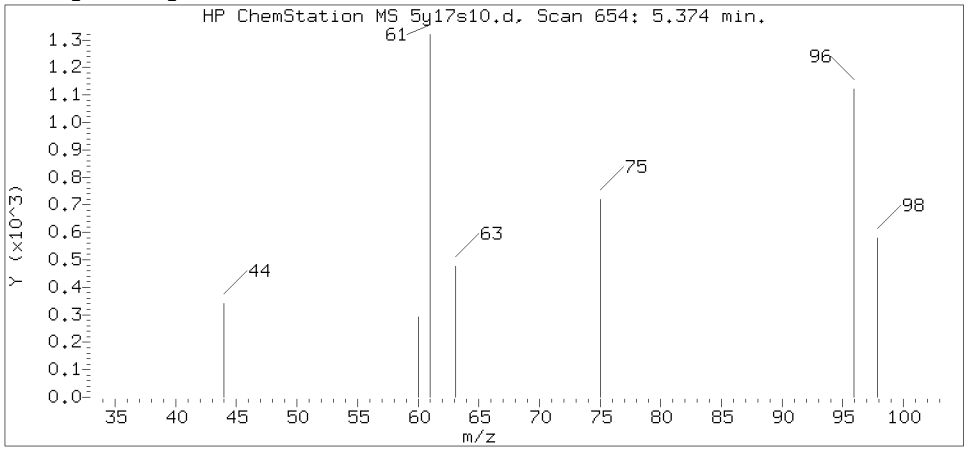
Sample Spectrum (Background Subtracted)

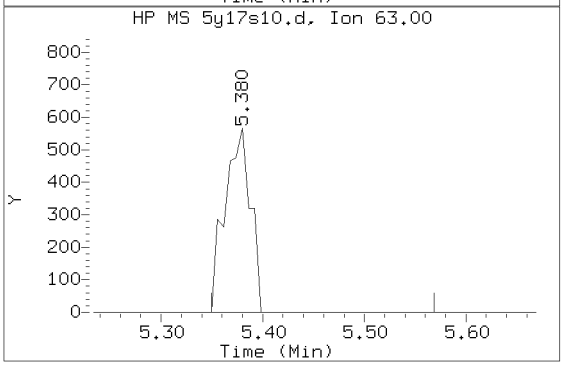






Sample Spectrum (Unaltered)





Data File: /chem2/HP26285.i/19may17a.b/5y17s10.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 13:21 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Sample Name: RS006 Lab Sample ID: 1053371

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 654
Retention Time (minutes): 5.374
Relative Retention Time :-0.00061
Quant Ion : 96.00
Area (flag) : 2514
On-Column Amount (ng) : 0.5640

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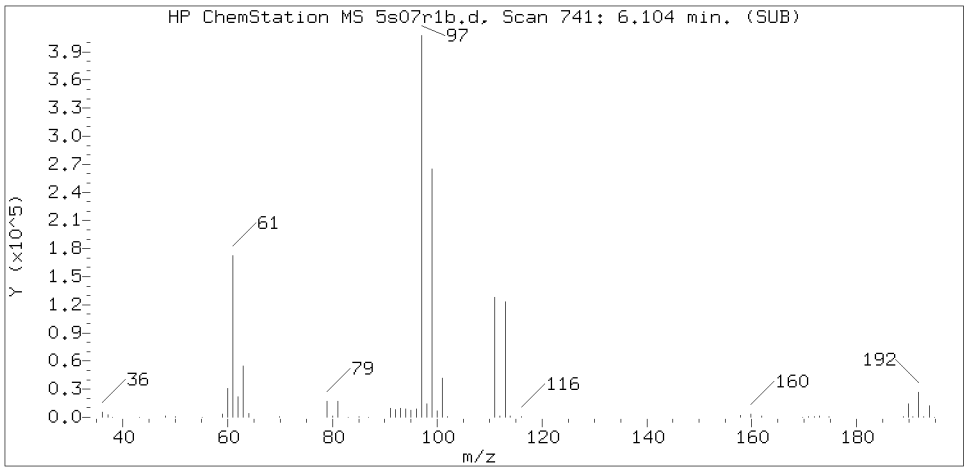
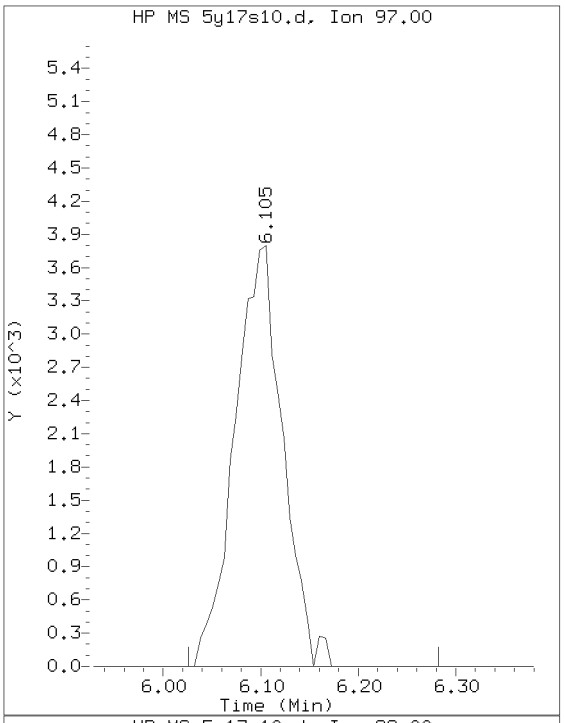
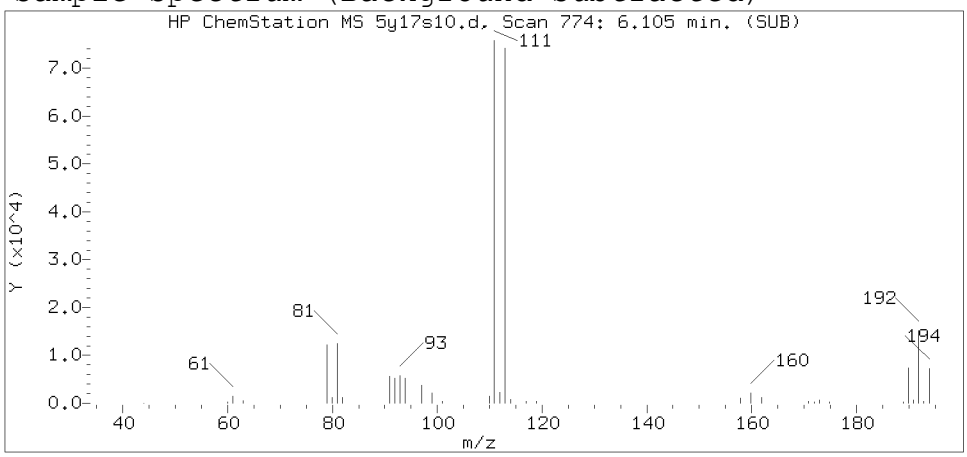
Target 3.5 esignature user ID: kas02648

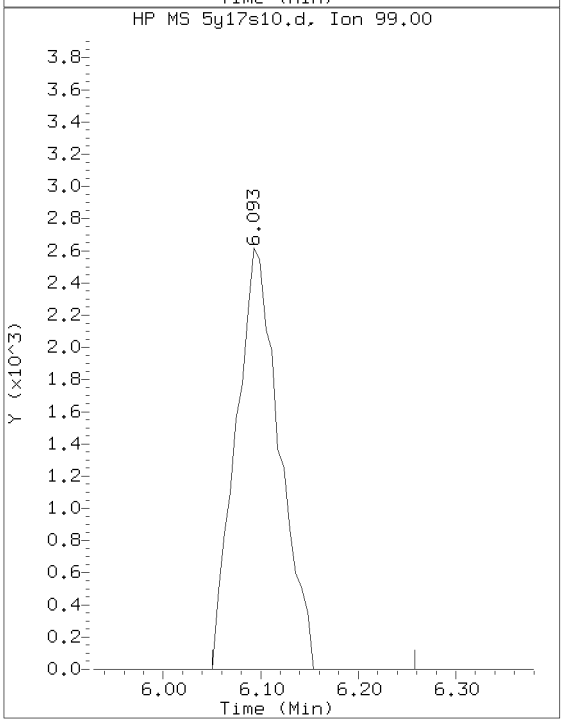
Reference Standard Spectrum for 1,1,1-Trichloroethane



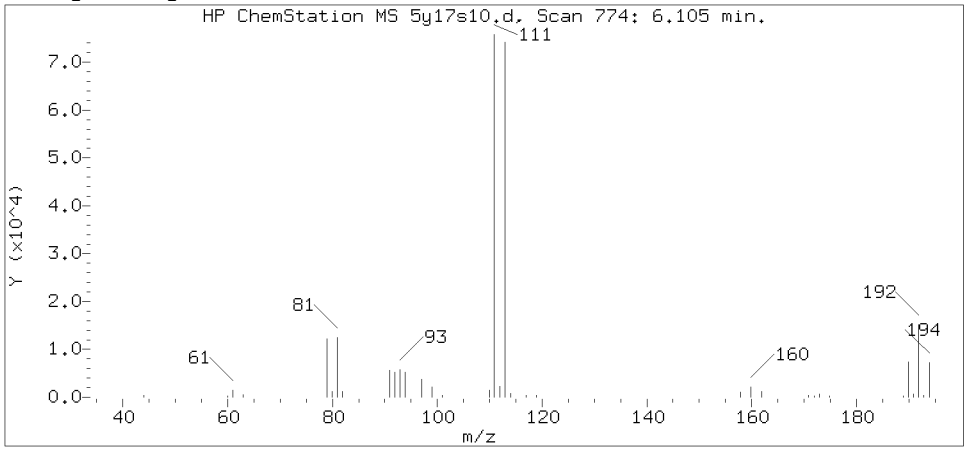


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP26285.i/19may17a.b/5y17s10.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 13:21 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Sample Name: RS006 Lab Sample ID: 1053371

Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 774
Retention Time (minutes): 6.105
Relative Retention Time :-0.00121
Quant Ion : 97.00
Area (flag) : 12981A
On-Column Amount (ng) : 2.1415

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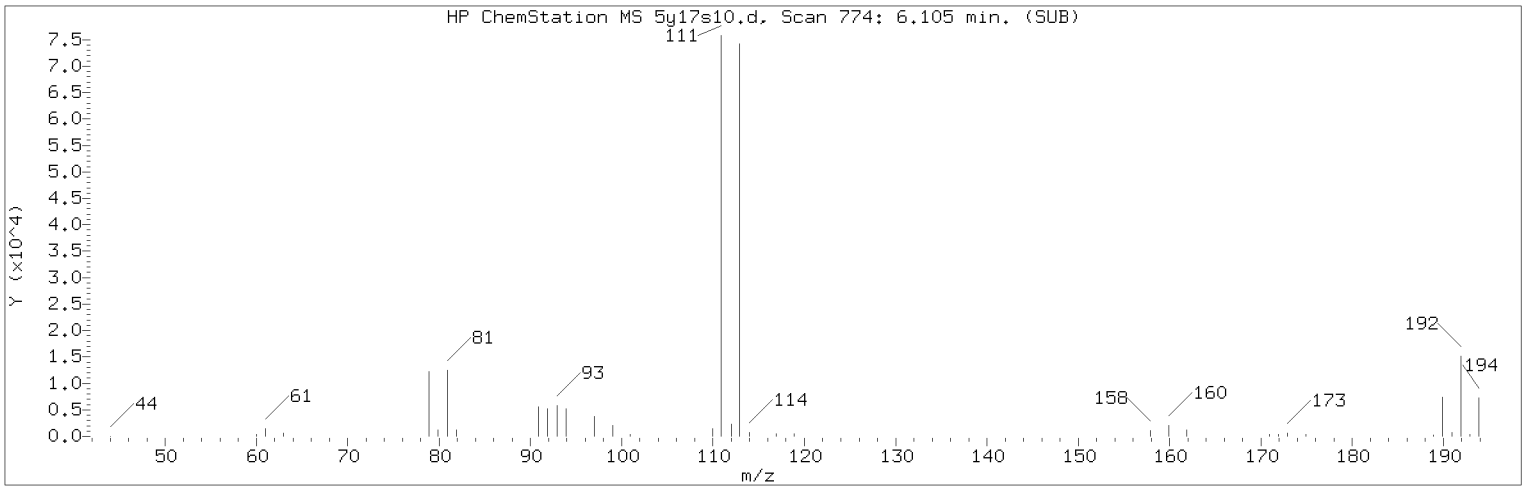
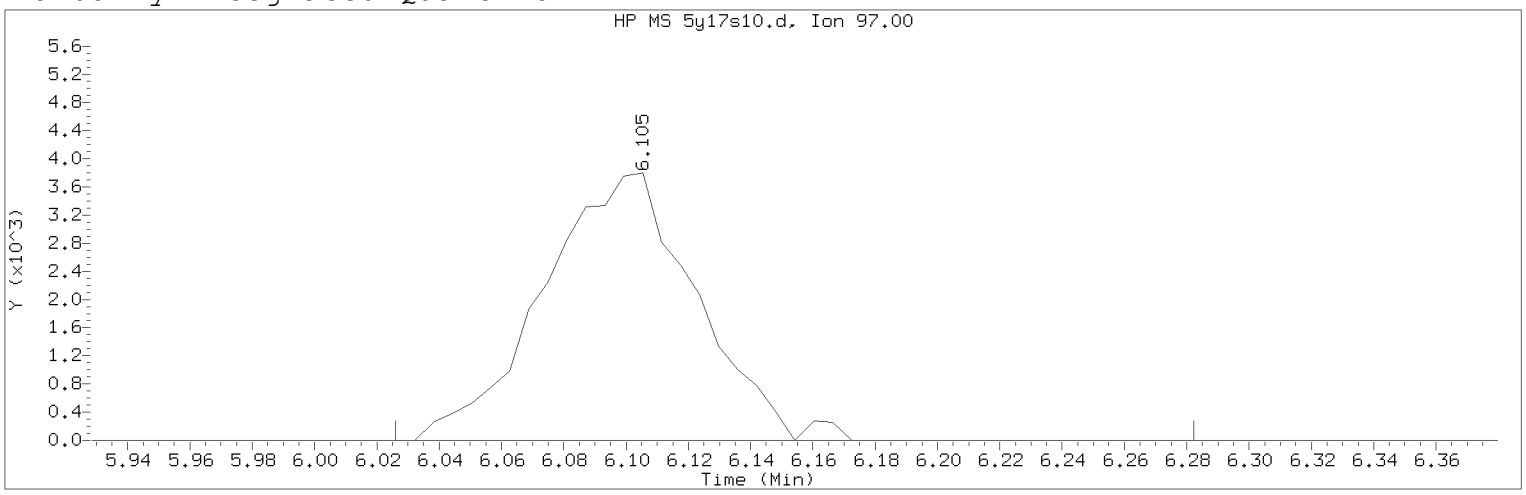
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may17a.b/5y17s10.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 13:21 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Sample Name: RS006 Lab Sample ID: 1053371

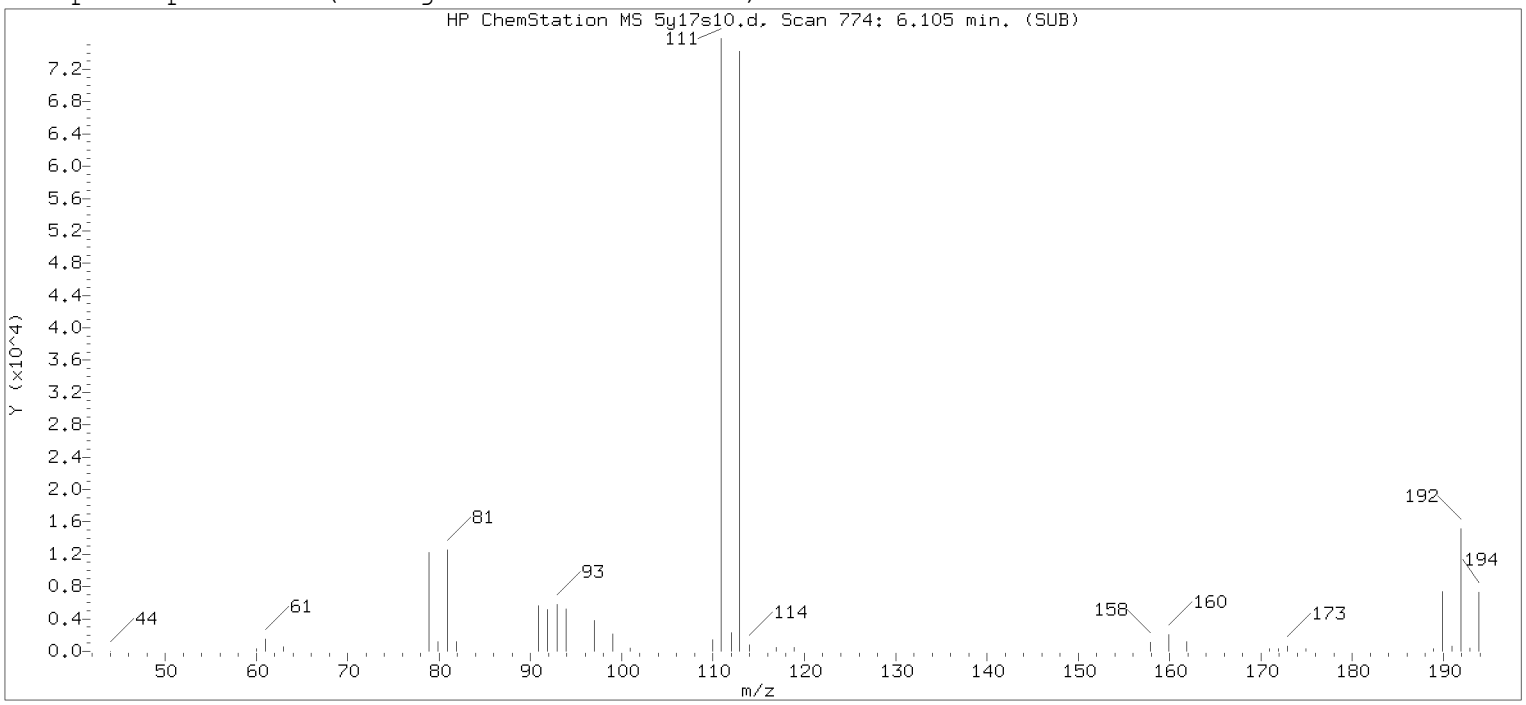
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 774
Retention Time (minutes): 6.105
Quant Ion : 97.00
Area (flag) : 12981A
On-Column Amount (ng) : 2.1415
Integration start scan : 760 Integration stop scan: 802
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

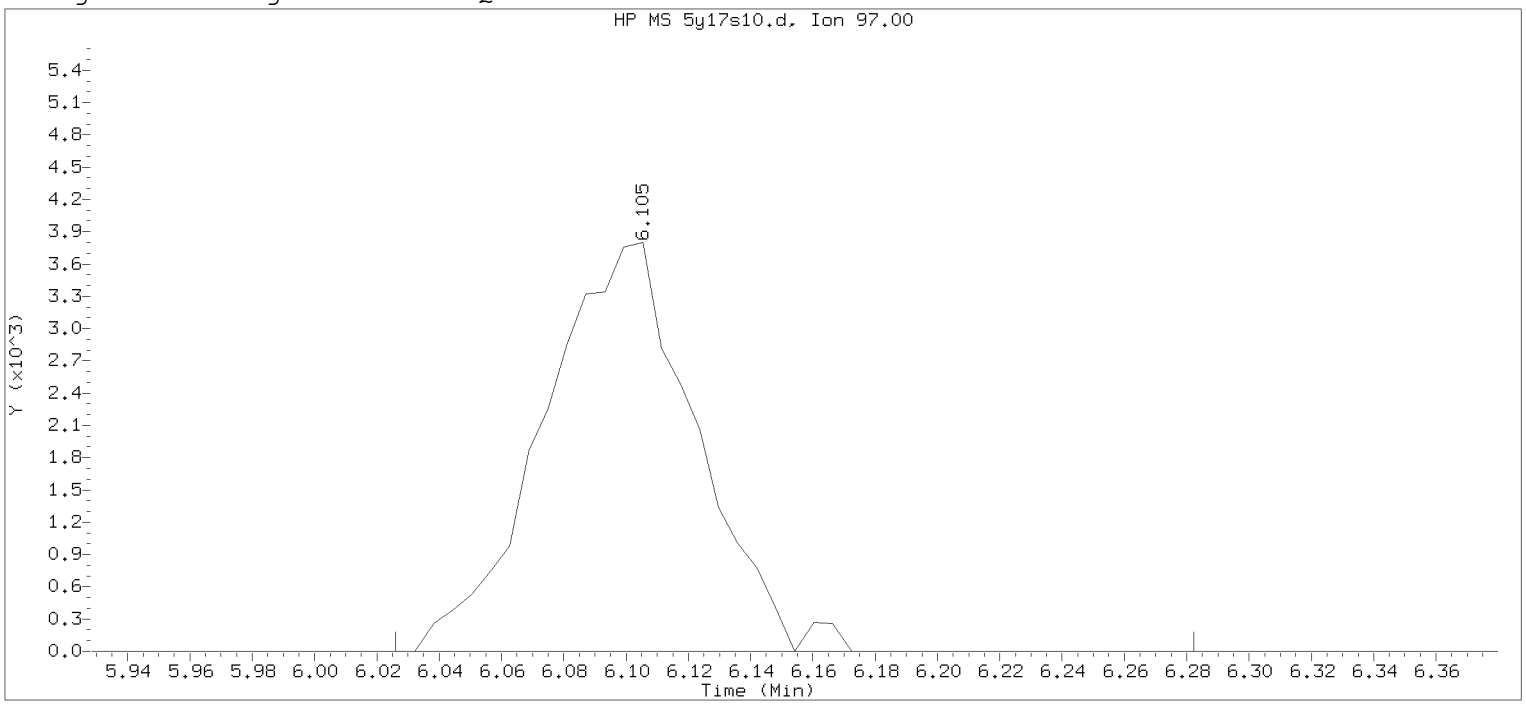
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 06/04/2019 at 14:36.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 14:37.
PARALLAX ID: rrm00219

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may17a.b/5y17s10.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 13:21 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 17-May-2019 13:39 Unknown

Sample Name: RS006 Lab Sample ID: 1053371

Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 774
Retention Time (minutes): 6.105
Quant Ion : 97.00
Area : 12981
On-column Amount (ng) : 2.1416
Integration start scan : 760 Integration stop scan: 802
Y at integration start : 0 Y at integration end: 0

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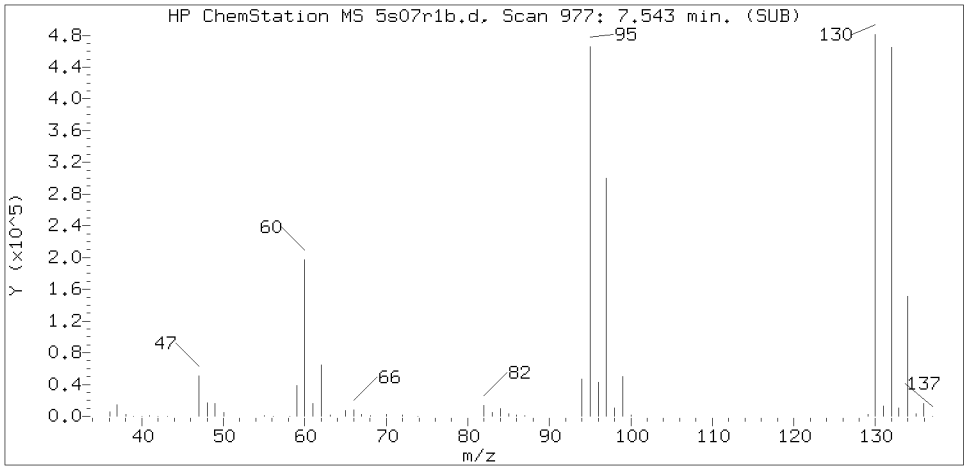
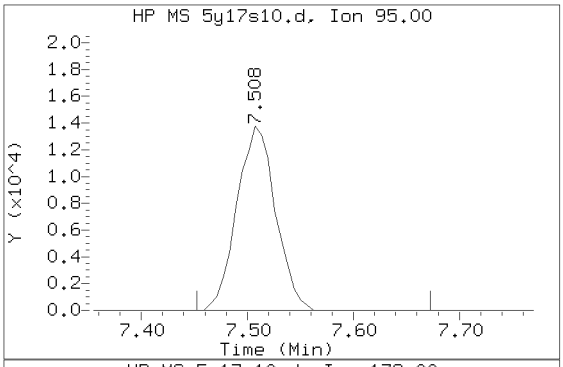
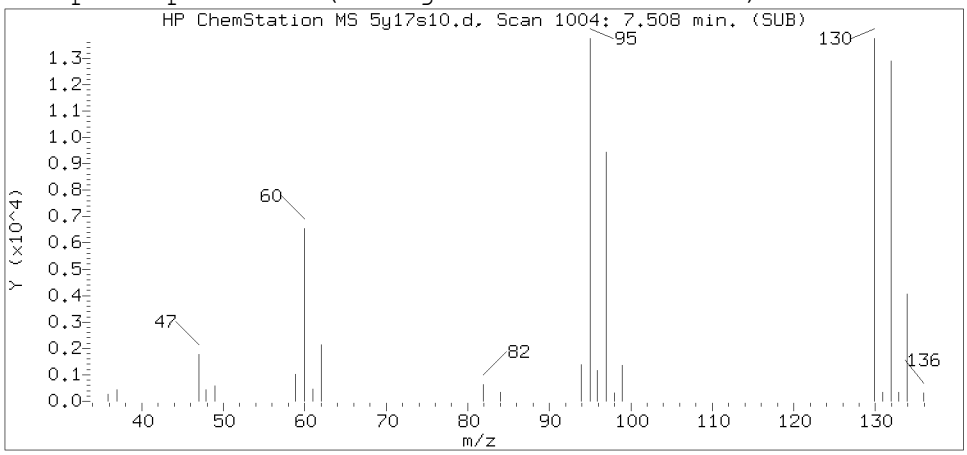
Target 3.5 esignature user kevin.sposito

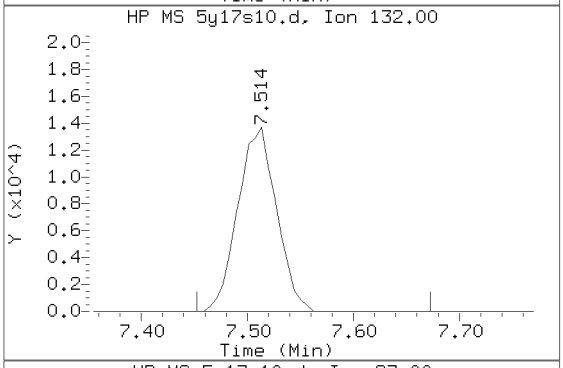
Reference Standard Spectrum for Trichloroethene

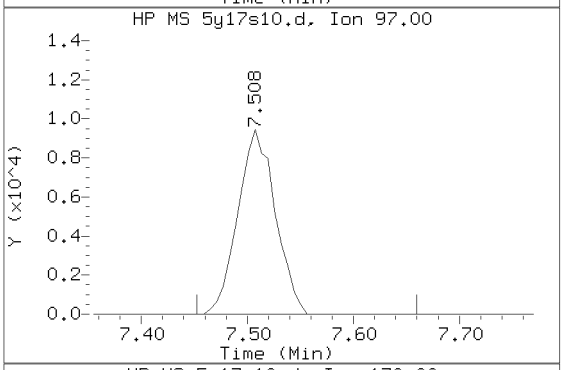




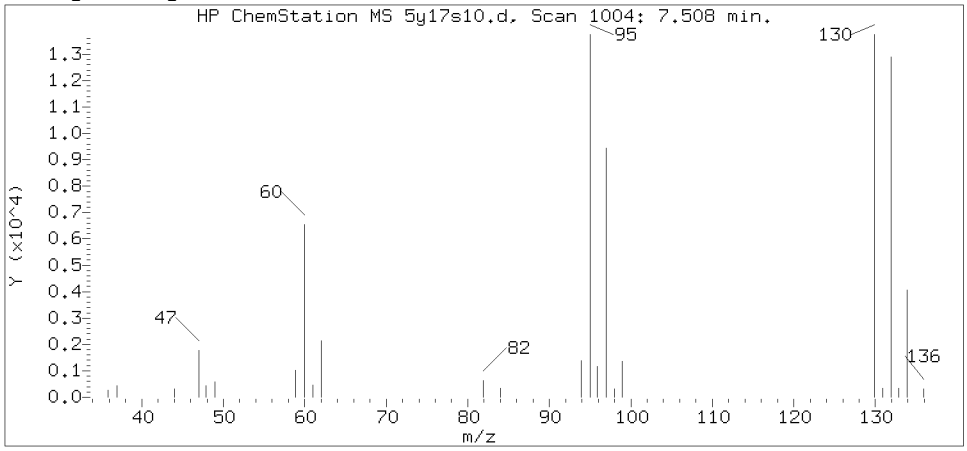
Sample Spectrum (Background Subtracted)

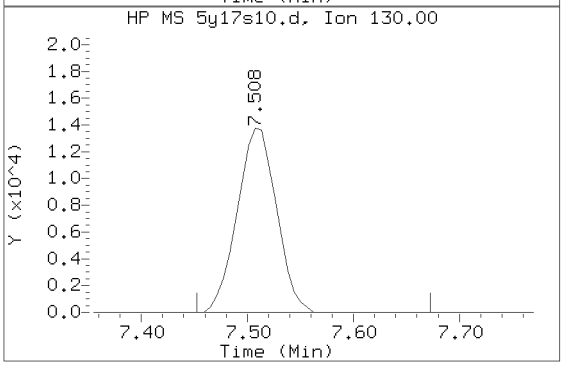






Sample Spectrum (Unaltered)





Data File: /chem2/HP26285.i/19may17a.b/5y17s10.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 13:21 Analyst ID: CLM27445

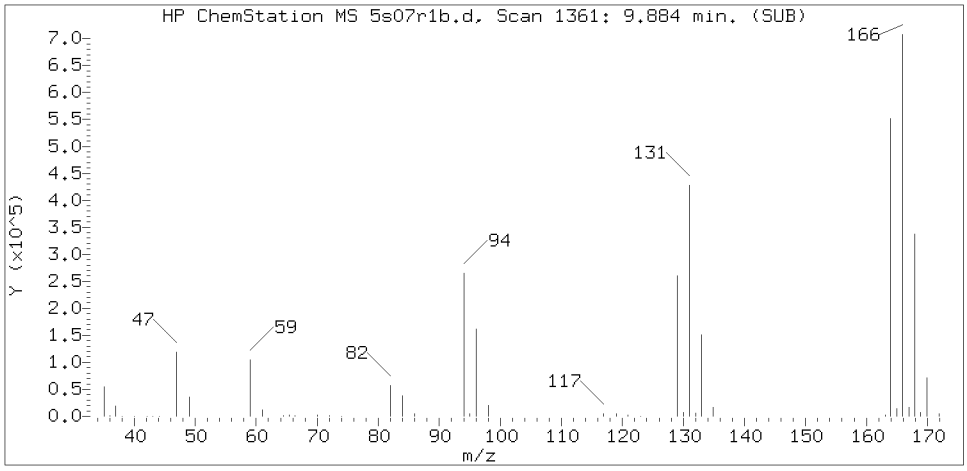
Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

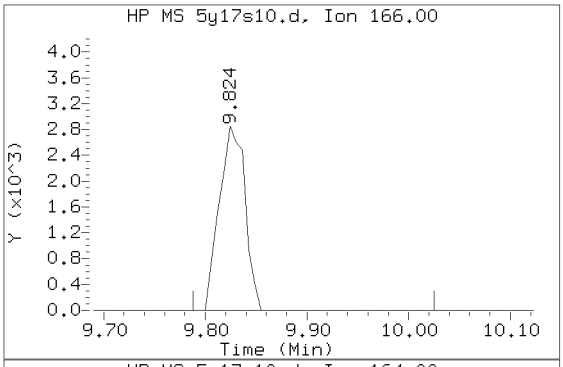
Sample Name: RS006 Lab Sample ID: 1053371

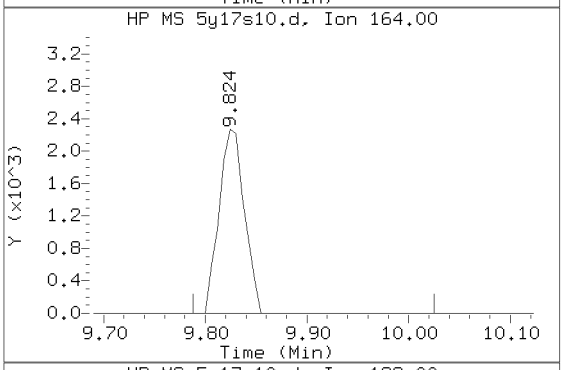
Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 1004
Retention Time (minutes)	: 7.508
Relative Retention Time	: 0.00105
Quant Ion	: 95.00
Area (flag)	: 34892
On-Column Amount (ng)	: 7.9487

Digitally signed by Kevin A. Sposito on 06/04/2019 at 14:36.
Target 3.5 esignature user ID: kas02648

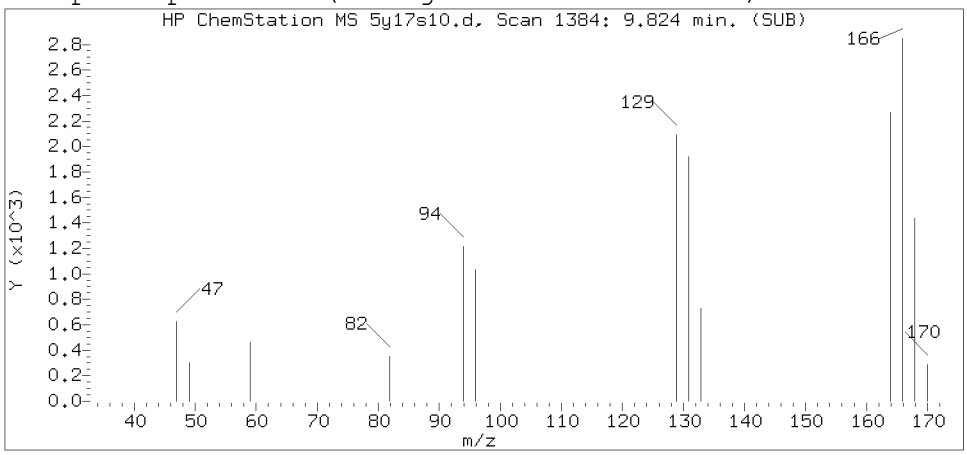
Reference Standard Spectrum for Tetrachloroethene

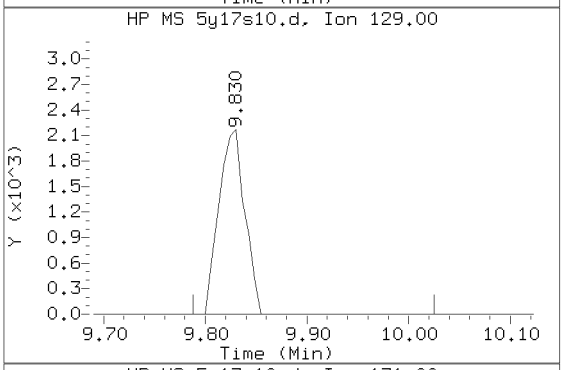




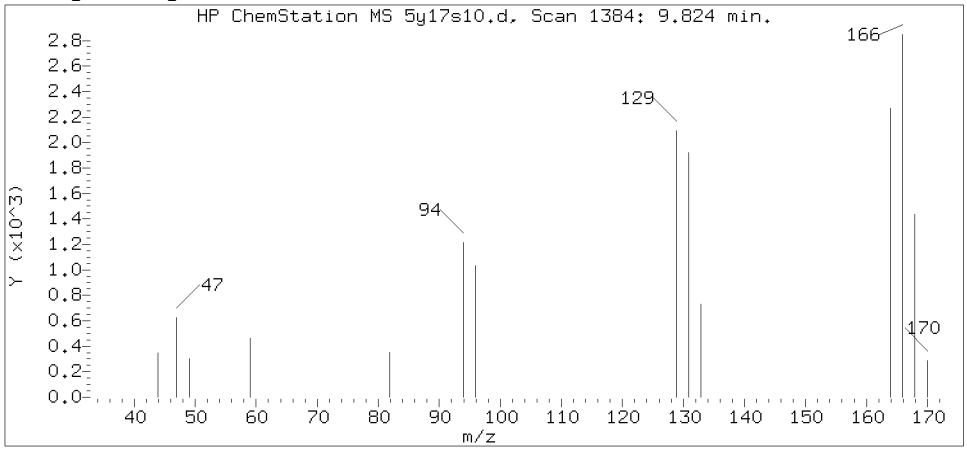


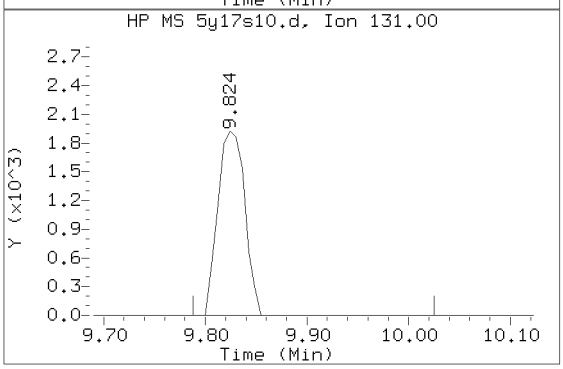
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP26285.i/19may17a.b/5y17s10.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 13:21 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 04-Jun-2019 14:28 rrm00219

Sample Name: RS006 Lab Sample ID: 1053371

Compound Number : 94
Compound Name : Tetrachloroethene
Scan Number : 1384
Retention Time (minutes): 9.824
Relative Retention Time :-0.00005
Quant Ion : 166.00
Area (flag) : 5009
On-Column Amount (ng) : 0.9797

Digitally signed by Kevin A. Sposito on 06/04/2019 at 14:36.
Target 3.5 esignature user ID: kas02648

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RS007

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053372

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP26285.i/19may17a.b/5y17s11.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/17/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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RS007 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1053372

Data file: /chem2/HP26285.i/19may17a.b/5y17s11.d Injection date and time: **17-MAY-2019 13:41**
Data file Sample Info. Line: RS007;1053372;1;0;;JCV89;;;5y17b01; Instrument ID: **HP26285.i** Batch: **5191371AA**
Date, time and analyst ID of latest file update: 25-May-2019 11:07 clm27445

Blank Data file reference: **/chem2/HP26285.i/19may17a.b/5y17b01.d**

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 17-MAY-2019 13:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may17a.b/5y17c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.557(-0.018)	356	65	176042 (-26)	250.00	
66) Fluorobenzene	7.020(-0.018)	924	96	747225 (-9)	50.00	
101) Chlorobenzene-d5	10.733(-0.006)	1533	117	615147 (-8)	50.00	
132) 1,4-Dichlorobenzene-d4	12.714(-0.006)	1858	152	334358 (-18)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.105(0.000)	113	210130	58.767	118%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.575(0.000)	102	45254	54.090	108%		80 - 120
84) Toluene-d8	(3)	9.141(-0.001)	98	755931	48.684	97%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.793(0.000)	95	296066	49.004	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	7.508(0.001)	95	4789	1.113	1.11			0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Corie L. Mellinger on 05/25/2019 at 11:14. Target 3.5 esignature user ID: clm27445

RS007 Lancaster Laboratories 1053372
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP26285.i/19may17a.b/5y17s11.d Injection date and time: **17-MAY-2019 13:41**
Data file Sample Info. Line: RS007;1053372;1;0;;JCV89;;;5y17b01; Instrument ID: **HP26285.i** Batch: **5191371AA**
Date, time and analyst ID of latest file update: 25-May-2019 11:07 clm27445

Blank Data file reference: **/chem2/HP26285.i/19may17a.b/5y17b01.d**

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 17-MAY-2019 13:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may17a.b/5y17c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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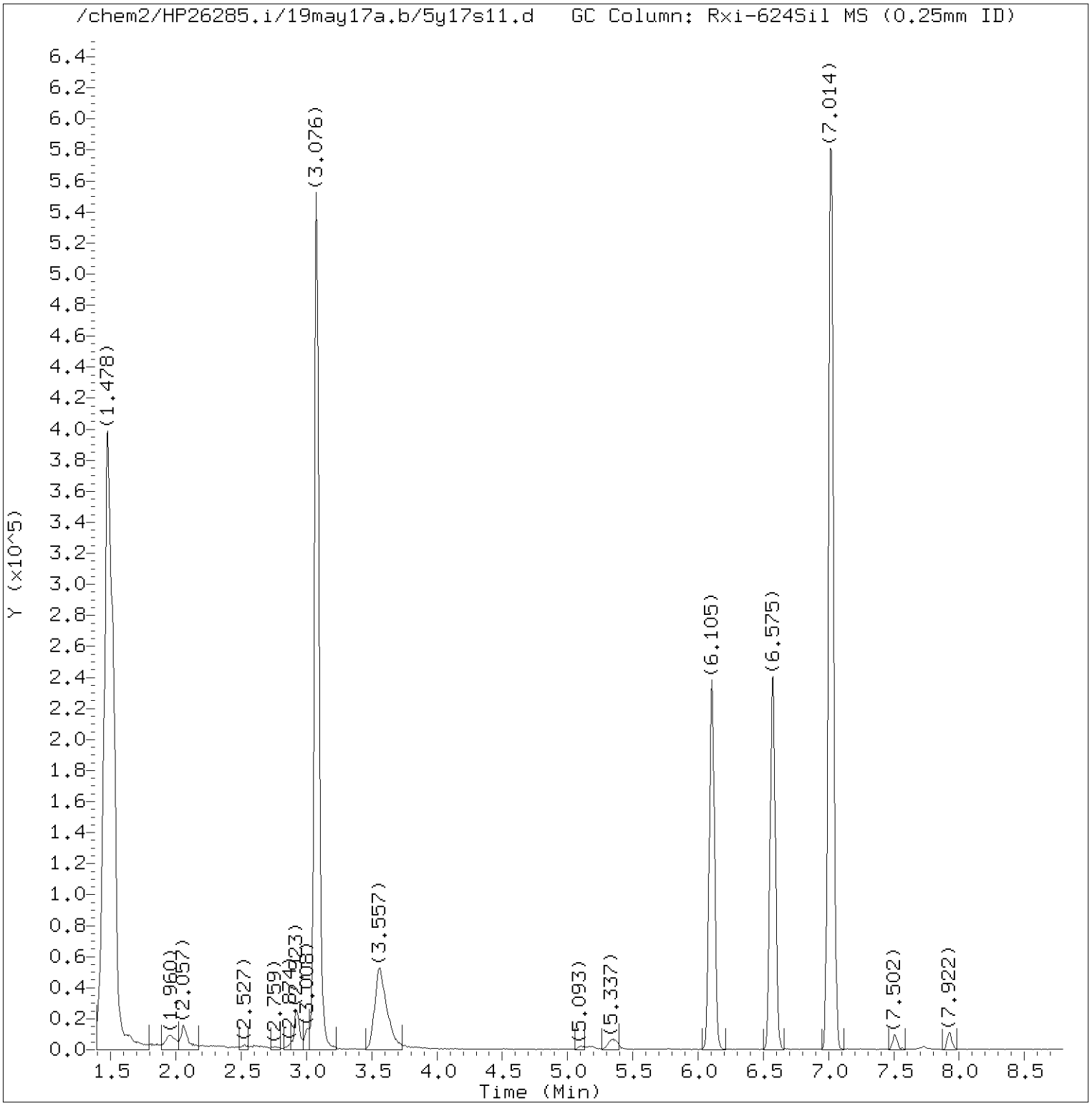
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Corie L. Mellinger on 05/25/2019 at 11:14. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 14:27. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

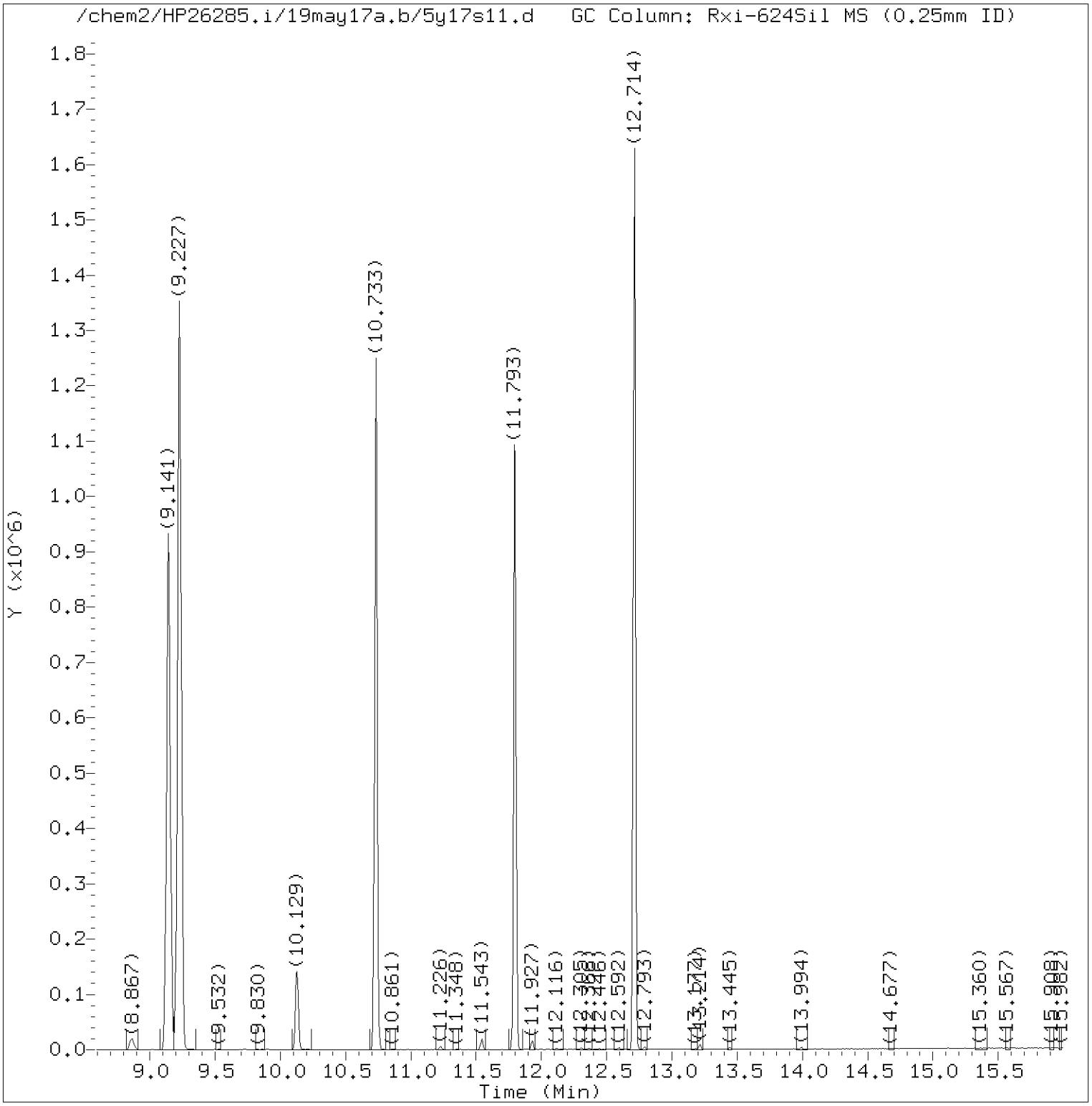
Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s11.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 13:41 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:07 clm27445

Sample Name: RS007 Lab Sample ID: 1053372

Digitally signed by Corie L. Mellinger
on 05/25/2019 at 11:14.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s11.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 13:41 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:07 clm27445

Sample Name: RS007 Lab Sample ID: 1053372

Digitally signed by Corie L. Mellinger
on 05/25/2019 at 11:14.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s11.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 13:41 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:07 clm27445

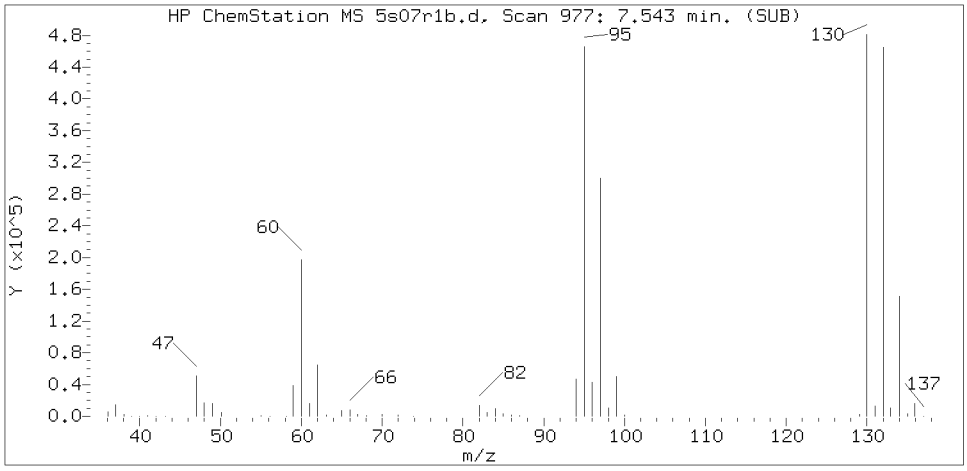
Sample Name: RS007 Lab Sample ID: 1053372

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.557	65	176042	250.000
52)$Dibromofluoromethane	(2)	6.105	113	210130	58.767
57)$1,2-Dichloroethane-d4	(2)	6.575	102	45254	54.090
66)*Fluorobenzene	(2)	7.020	96	747225	50.000
71) Trichloroethene	(2)	7.508	95	4789	1.113
84)$Toluene-d8	(3)	9.141	98	755931	48.684
101)*Chlorobenzene-d5	(3)	10.733	117	615147	50.000
115)$4-Bromofluorobenzene	(3)	11.793	95	296066	49.004
132)*1,4-Dichlorobenzene-d4	(4)	12.714	152	334358	50.000

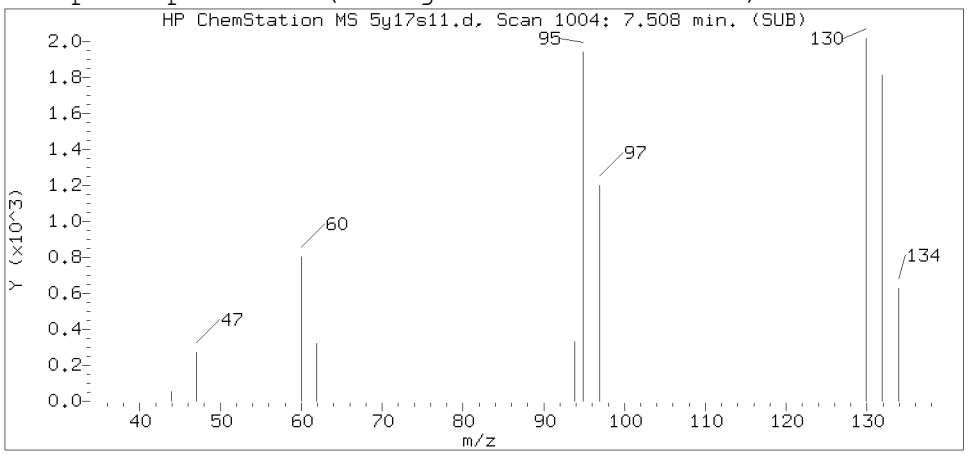
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 05/25/2019 at 11:14.
Target 3.5 esignature user ID: clm27445

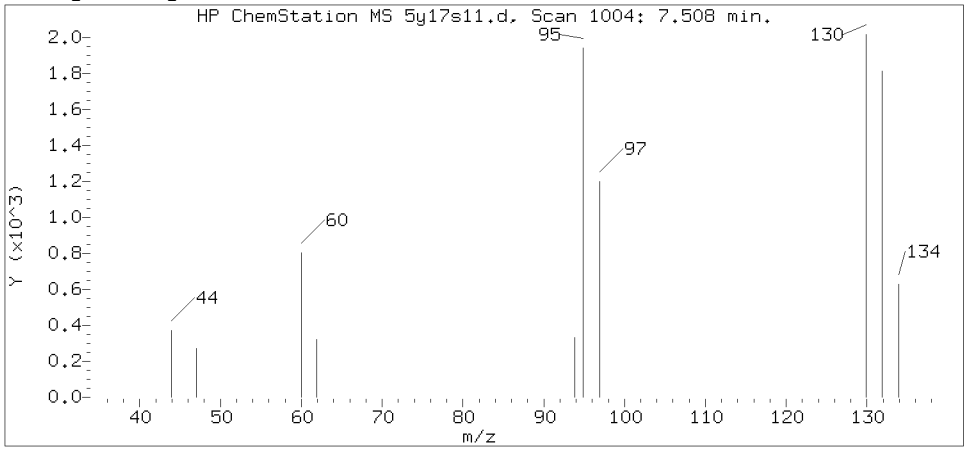
Reference Standard Spectrum for Trichloroethene

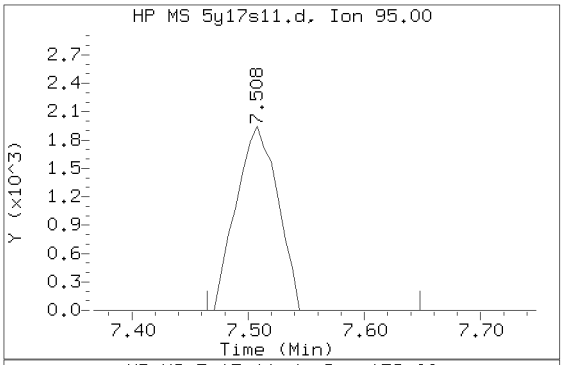


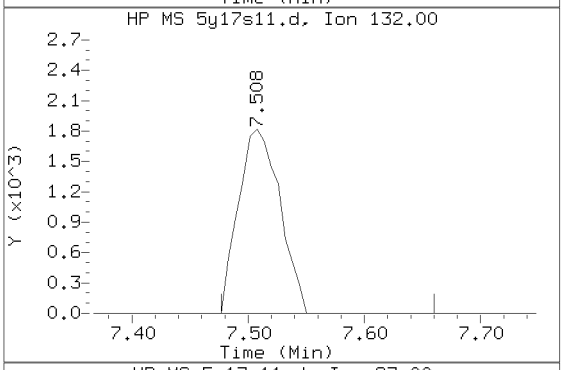
Sample Spectrum (Background Subtracted)

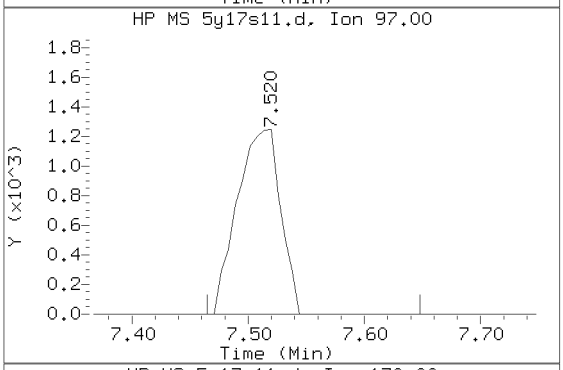


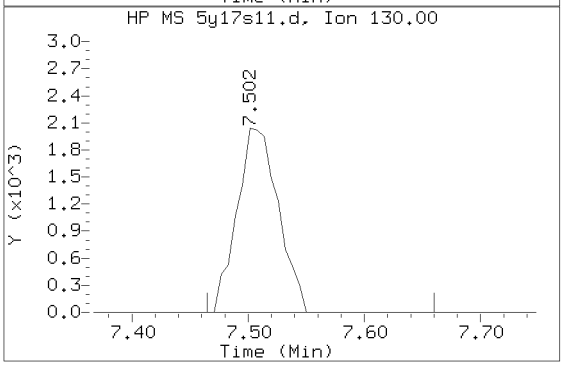
Sample Spectrum (Unaltered)











Data File: /chem2/HP26285.i/19may17a.b/5y17s11.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 13:41 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:07 clm27445

Sample Name: RS007 Lab Sample ID: 1053372

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 1004
Retention Time (minutes)	: 7.508
Relative Retention Time	: 0.00105
Quant Ion	: 95.00
Area (flag)	: 4789
On-Column Amount (ng)	: 1.1132

Digitally signed by Corie L. Mellinger on 05/25/2019 at 11:14.
Target 3.5 esignature user ID: clm27445

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RS008

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053373

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP26285.i/19may17a.b/5y17s12.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/17/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	2	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	0.2	J
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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RS008 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1053373

Data file: /chem2/HP26285.i/19may17a.b/5y17s12.d Injection date and time: **17-MAY-2019 14:03**
Data file Sample Info. Line: RS008;1053373;1;0;;JCV89;;;5y17b01; Instrument ID: **HP26285.i** Batch: **5191371AA**
Date, time and analyst ID of latest file update: 25-May-2019 11:07 clm27445

Blank Data file reference: **/chem2/HP26285.i/19may17a.b/5y17b01.d**

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 17-MAY-2019 13:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may17a.b/5y17c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.563(-0.024)	357	65	214211 (-10)	250.00	
66) Fluorobenzene	7.020(-0.018)	924	96	743223 (-10)	50.00	
101) Chlorobenzene-d5	10.732(-0.006)	1533	117	590252 (-12)	50.00	
132) 1,4-Dichlorobenzene-d4	12.714(-0.006)	1858	152	325402 (-21)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.105(0.000)	113	209246	58.835	118%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.575(0.000)	102	44873	53.923	108%		80 - 120
84) Toluene-d8	(3)	9.141(-0.001)	98	728918	48.925	98%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.799(-0.001)	95	280220	48.337	97%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	7.507(0.001)	95	7991	1.868	1.87			0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)	9.830(-0.000)	166	1054	0.209	0.21		J	0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Corie L. Mellinger on 05/25/2019 at 11:15. Target 3.5 esignature user ID: clm27445

Data file: /chem2/HP26285.i/19may17a.b/5y17s12.d Injection date and time: **17-MAY-2019 14:03**
Data file Sample Info. Line: RS008;1053373;1;0;;JCV89;;;5y17b01; Instrument ID: **HP26285.i** Batch: **5191371AA**
Date, time and analyst ID of latest file update: 25-May-2019 11:07 clm27445

Blank Data file reference: **/chem2/HP26285.i/19may17a.b/5y17b01.d**

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 17-MAY-2019 13:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may17a.b/5y17c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

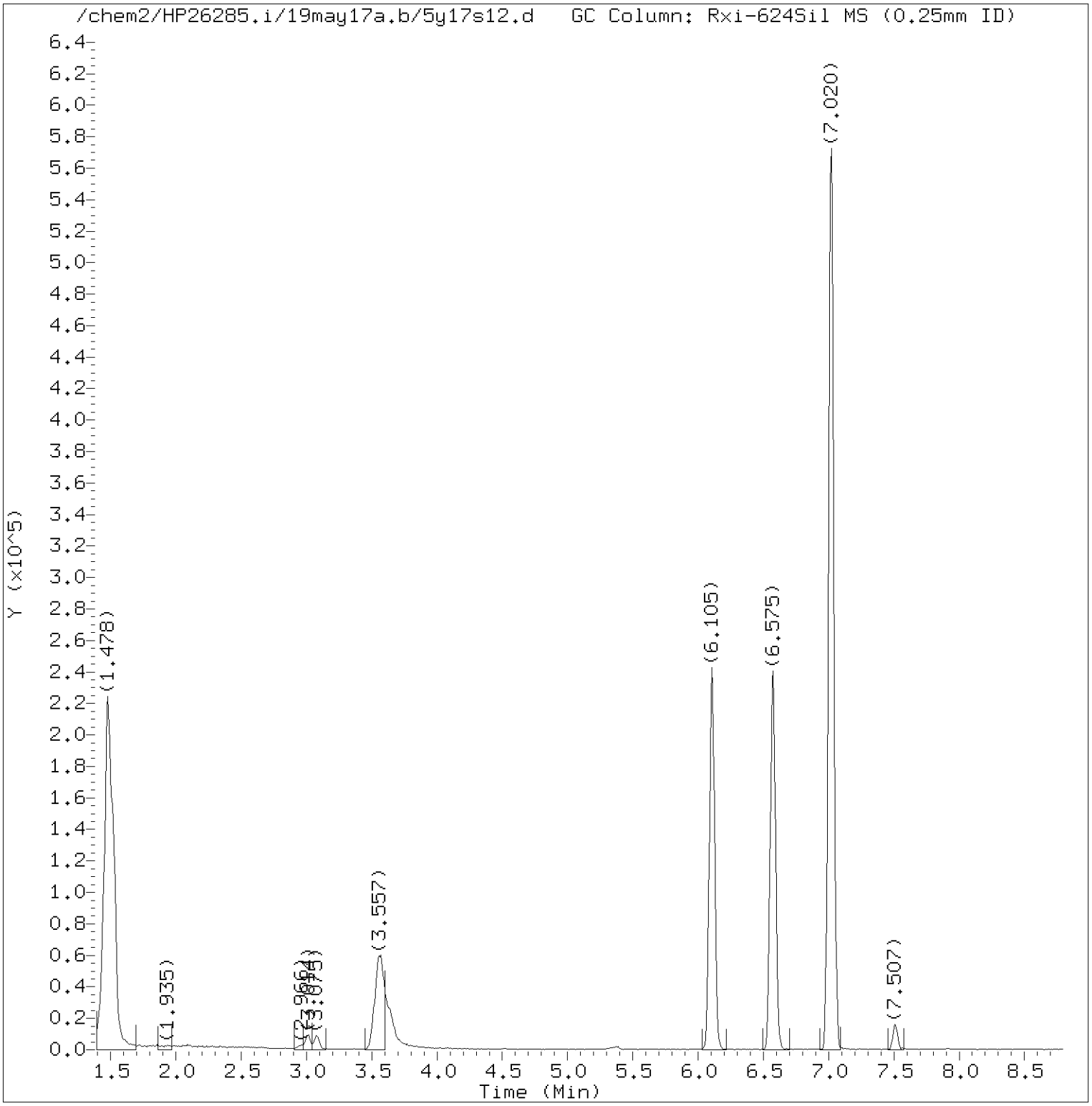
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Corie L. Mellinger on 05/25/2019 at 11:15. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 14:28. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

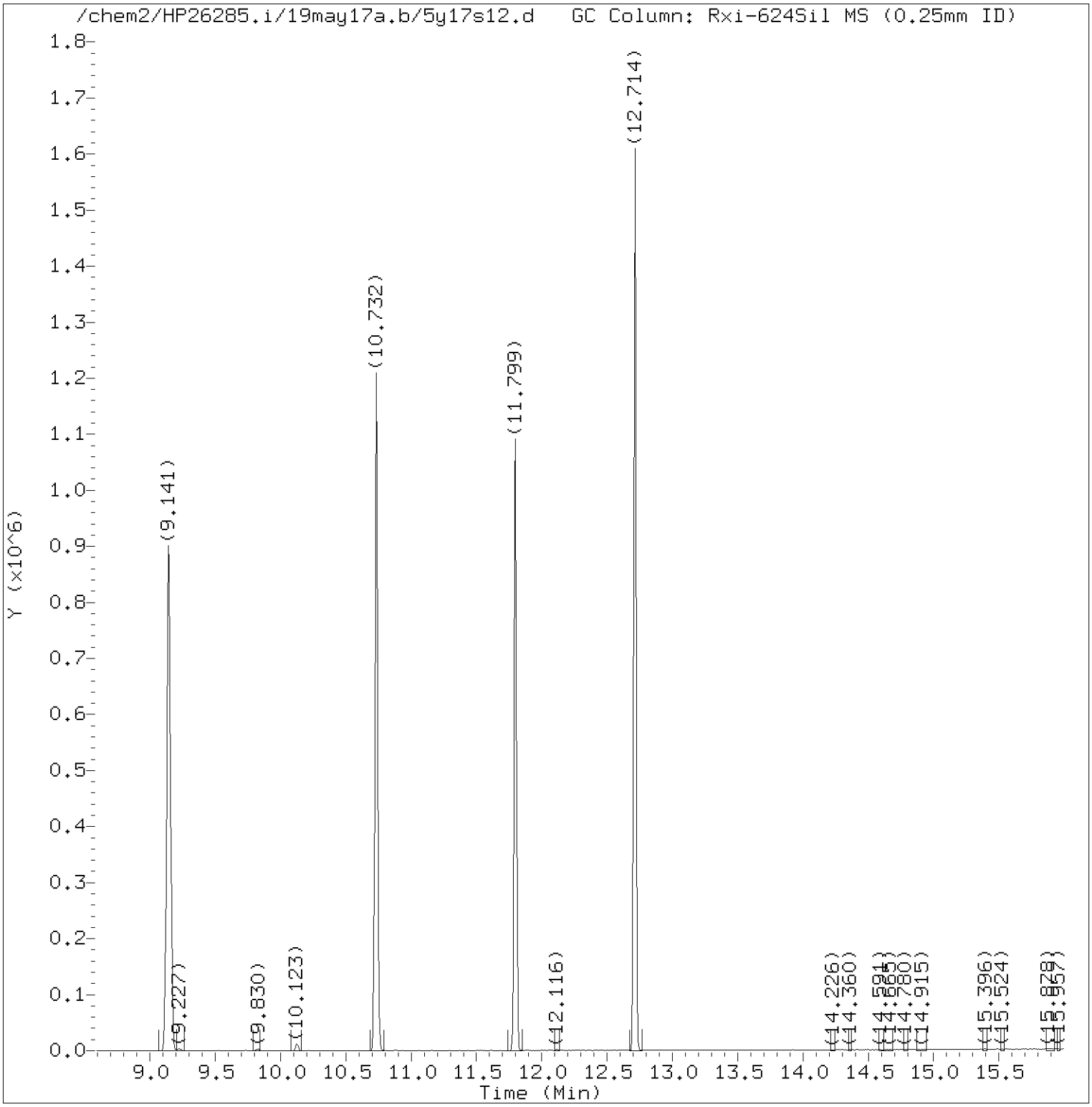
Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s12.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 14:03 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:07 clm27445

Sample Name: RS008 Lab Sample ID: 1053373

Digitally signed by Corie L. Mellinger
on 05/25/2019 at 11:15.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s12.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 14:03 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:07 clm27445

Sample Name: RS008 Lab Sample ID: 1053373

Digitally signed by Corie L. Mellinger
on 05/25/2019 at 11:15.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s12.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 14:03 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:07 clm27445

Sample Name: RS008 Lab Sample ID: 1053373

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.563	65	214211	250.000
52)$Dibromofluoromethane	(2)	6.105	113	209246	58.835
57)$1,2-Dichloroethane-d4	(2)	6.575	102	44873	53.923
66)*Fluorobenzene	(2)	7.020	96	743223	50.000
71) Trichloroethene	(2)	7.507	95	7991	1.868
84)$Toluene-d8	(3)	9.141	98	728918	48.925
94) Tetrachloroethene	(3)	9.830	166	1054	0.209
101)*Chlorobenzene-d5	(3)	10.732	117	590252	50.000
115)$4-Bromofluorobenzene	(3)	11.799	95	280220	48.337
132)*1,4-Dichlorobenzene-d4	(4)	12.714	152	325402	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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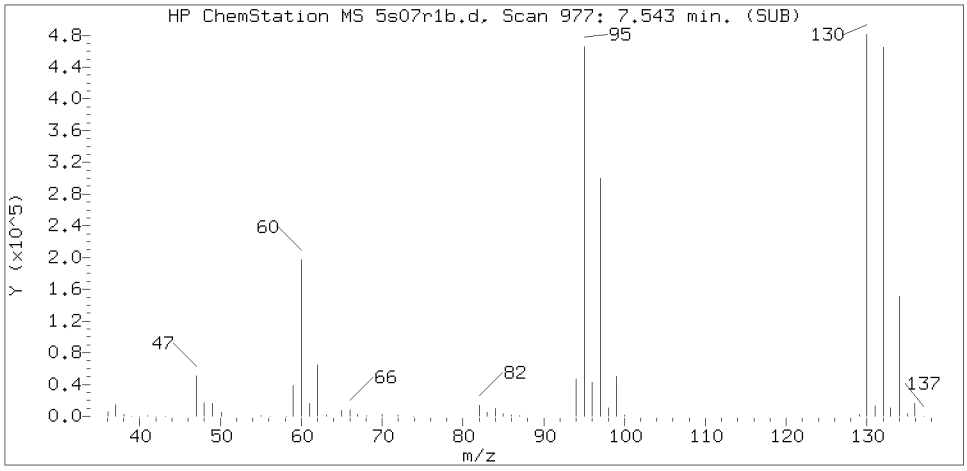
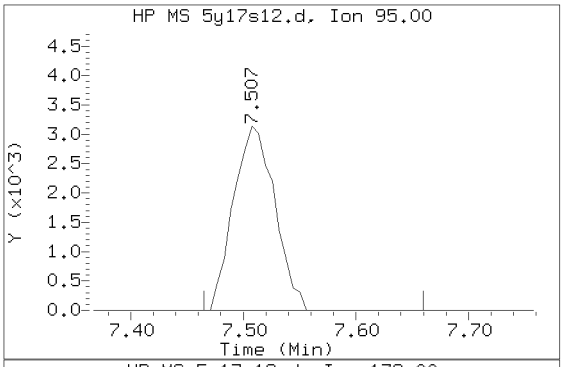
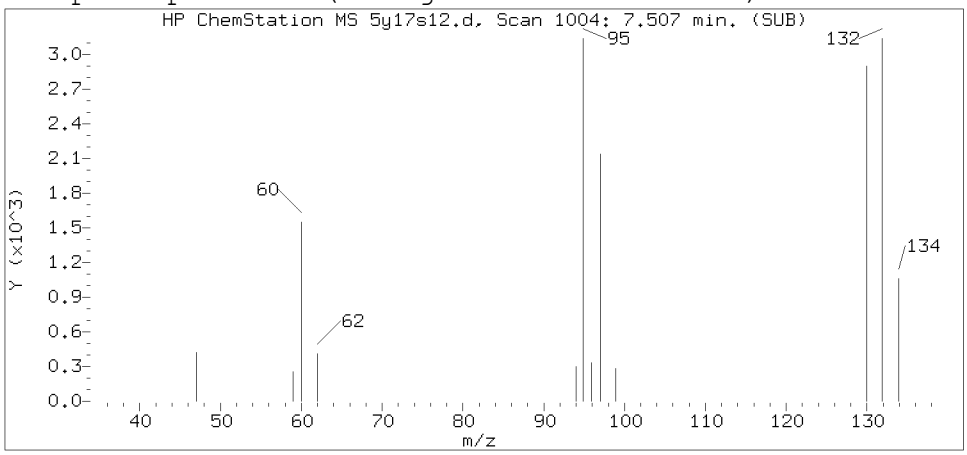
on 05/25/2019 at 11:15.
Target 3.5 esignature user ID: clm27445

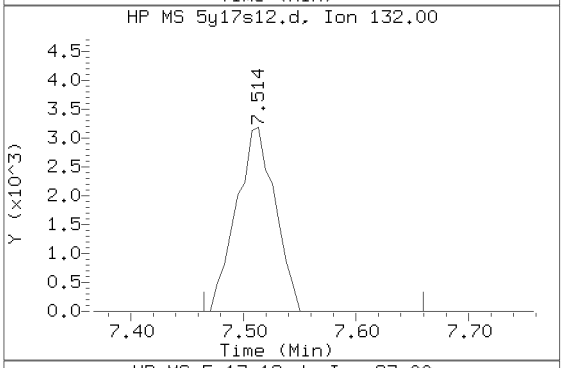
Reference Standard Spectrum for Trichloroethene

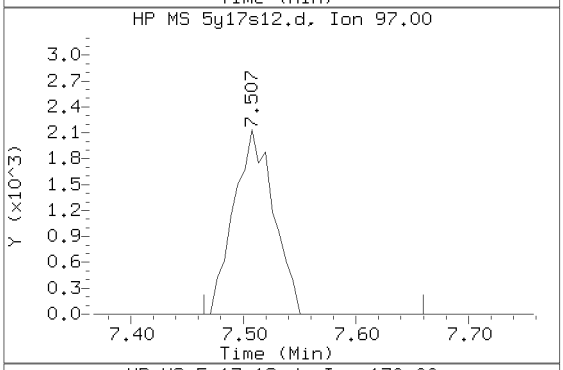




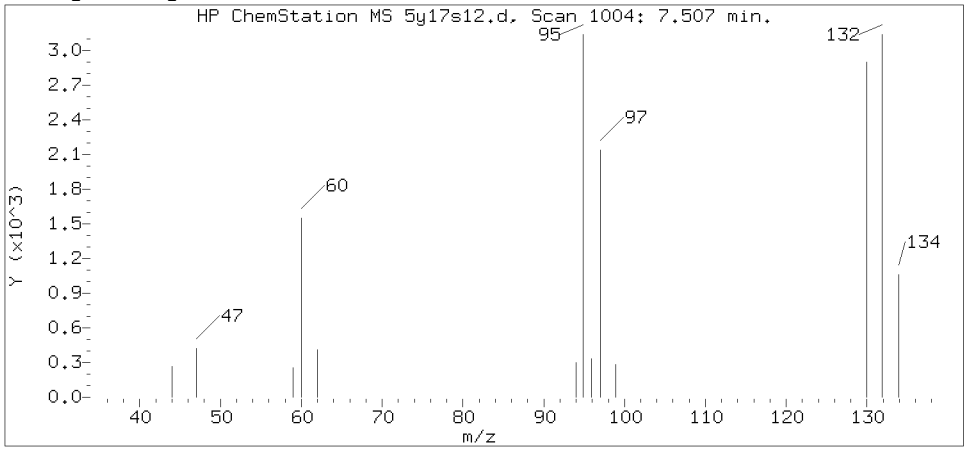
Sample Spectrum (Background Subtracted)

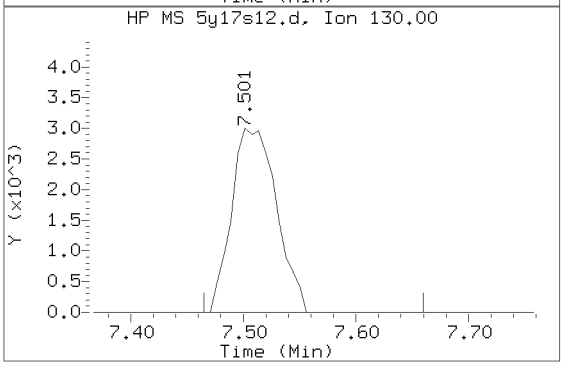






Sample Spectrum (Unaltered)





Data File: /chem2/HP26285.i/19may17a.b/5y17s12.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 14:03 Analyst ID: CLM27445

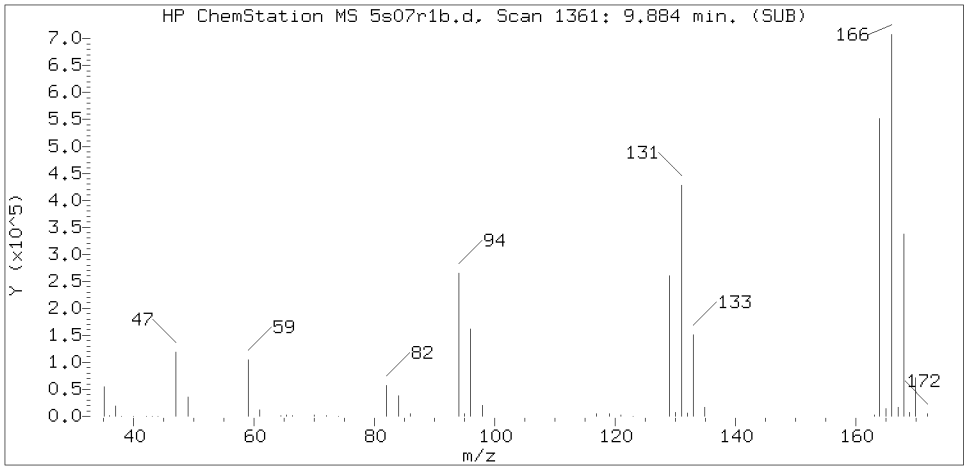
Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:07 clm27445

Sample Name: RS008 Lab Sample ID: 1053373

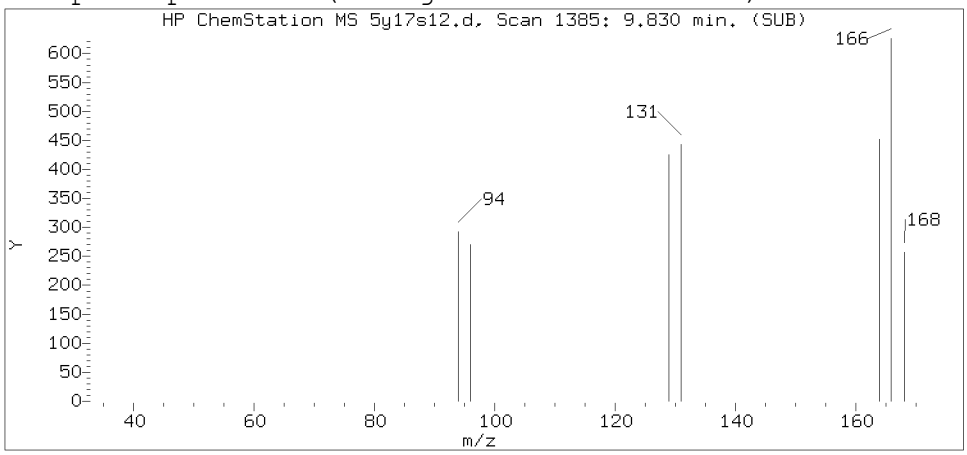
Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 1004
Retention Time (minutes)	: 7.507
Relative Retention Time	: 0.00105
Quant Ion	: 95.00
Area (flag)	: 7991
On-Column Amount (ng)	: 1.8675

Digitally signed by Corie L. Mellinger on 05/25/2019 at 11:15.
Target 3.5 esignature user ID: clm27445

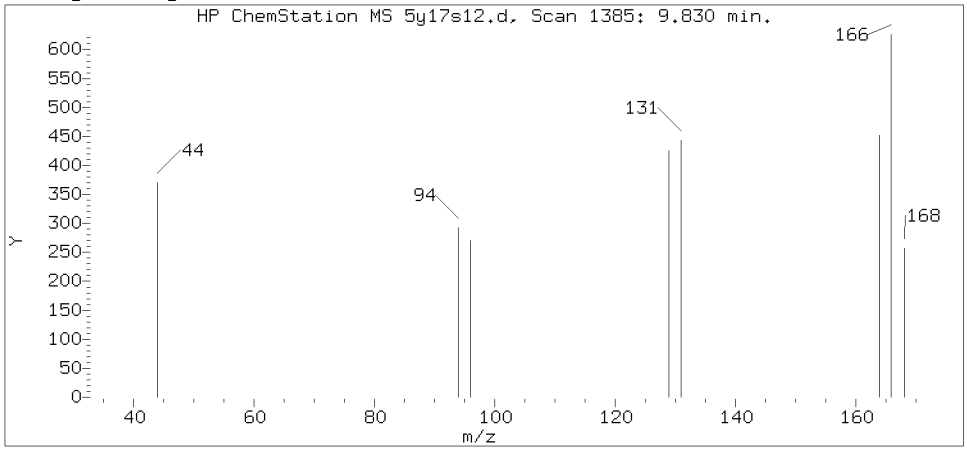
Reference Standard Spectrum for Tetrachloroethene

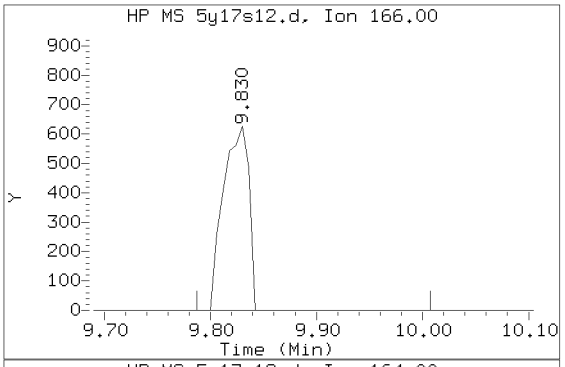


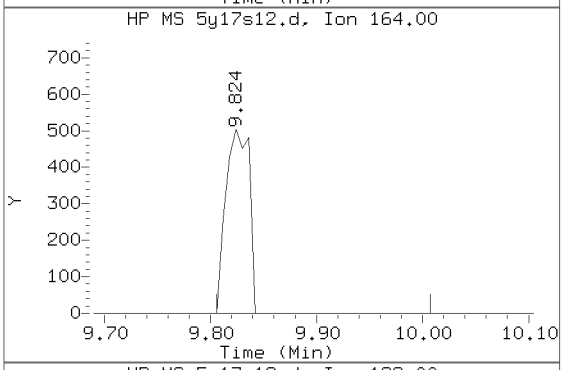
Sample Spectrum (Background Subtracted)

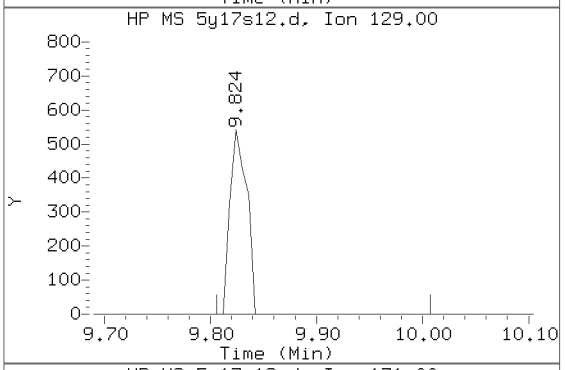


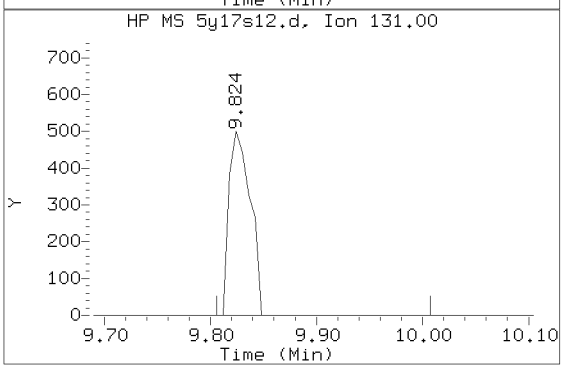
Sample Spectrum (Unaltered)











Data File: /chem2/HP26285.i/19may17a.b/5y17s12.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 14:03 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:07 clm27445

Sample Name: RS008 Lab Sample ID: 1053373

Compound Number : 94
Compound Name : Tetrachloroethene
Scan Number : 1385
Retention Time (minutes): 9.830
Relative Retention Time :-0.00062
Quant Ion : 166.00
Area (flag) : 1054
On-Column Amount (ng) : 0.2090

Digitally signed by Corie L. Mellinger on 05/25/2019 at 11:15.
Target 3.5 esignature user ID: clm27445

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RS009

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053374

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may19a.b/wy19s02.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	7	J
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	0.4	J
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	0.3	J
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	0.3	J
127-18-4	Tetrachloroethene	0.3	J
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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RS009 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1053374

Data file: /chem2/HP09137.i/19may19a.b/wy19s02.d Injection date and time: **19-MAY-2019 13:31**
Data file Sample Info. Line: RS009;1053374;1;0;;JCV89;;;wy19b02; Instrument ID: **HP09137.i** Batch: **W191381AB**
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may19a.b/wy19b02.d**

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 04-JUN-2019 15:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may19a.b/wy19c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:9274

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.741	(-0.006)	595	65	140048	(-26)	250.00	
66) Fluorobenzene	5.032	(0.003)	1309	96	882636	(-8)	50.00	
101) Chlorobenzene-d5	8.164	(-0.003)	2285	117	680257	(-8)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041	(0.000)	2870	152	351344	(-18)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.358	(-0.001)	113	199672	48.831	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692	(-0.001)	102	55865	51.370	103%		80 - 120
84) Toluene-d8	(3)	6.698	(0.001)	98	854912	50.153	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.165	(0.000)	95	290599	42.614	85%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)	2.343	(0.002)	58	3234	6.600	6.60		J	0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)	3.919	(-0.002)	43	1596	0.360	0.36		J	0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	4.384	(-0.000)	97	1643	0.304	0.30		J	0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	5.398	(0.001)	95	5767	1.287	1.29			0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)	6.768	(0.000)	92	3704	0.337	0.34		J	0.2	1
94) Tetrachloroethene	(3)	7.359	(0.000)	166	1157	0.260	0.26		J	0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Kevin A. Sposito on 06/07/2019 at 15:29. Target 3.5 esignature user ID: kas02648

RS009 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1053374

Data file: /chem2/HP09137.i/19may19a.b/wy19s02.d Injection date and time: **19-MAY-2019 13:31**
Data file Sample Info. Line: RS009;1053374;1;0;;JCV89;;;wy19b02; Instrument ID: **HP09137.i** Batch: **W191381AB**
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may19a.b/wy19b02.d**

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 04-JUN-2019 15:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may19a.b/wy19c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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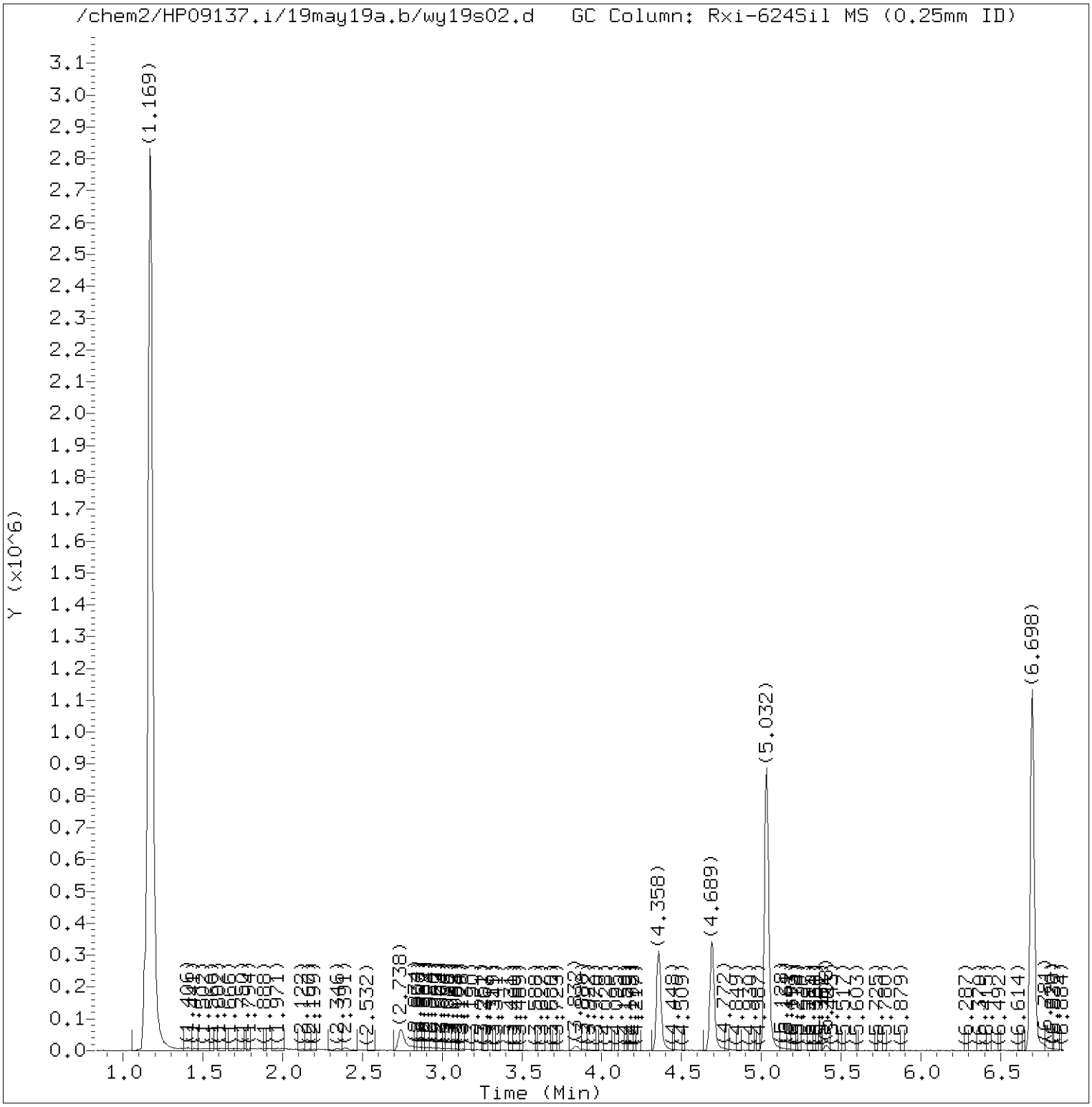
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Kevin A. Sposito on 06/07/2019 at 15:29. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Roy R. Mellott on 06/12/2019 at 17:05. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

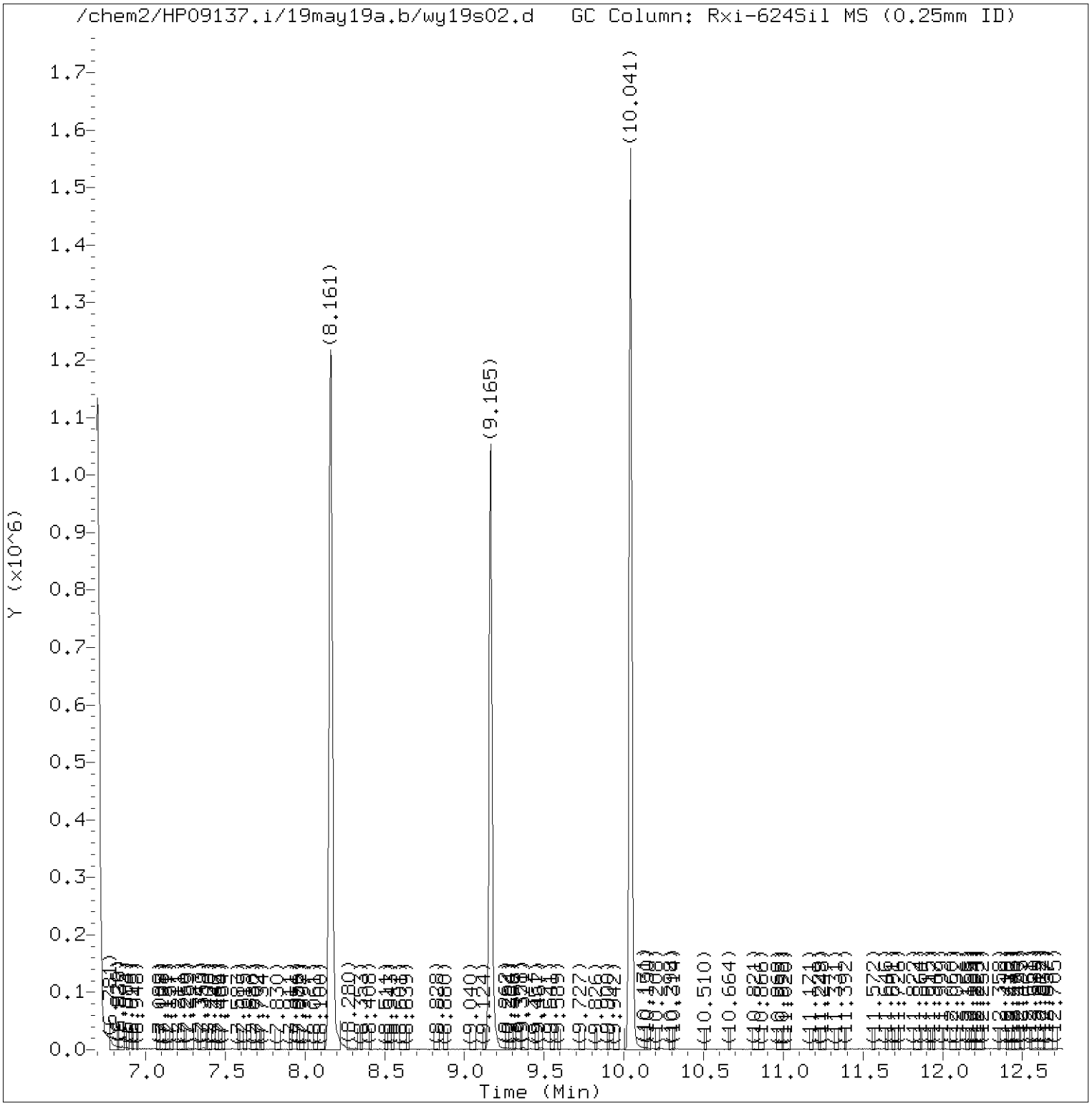
Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19s02.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:31 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Sample Name: RS009 Lab Sample ID: 1053374

Digitally signed by Kevin A. Sposito
on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19s02.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:31 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Sample Name: RS009 Lab Sample ID: 1053374

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on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19s02.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:31 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Sample Name: RS009 Lab Sample ID: 1053374

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
18) Acetone	(1)	2.343	58	3234	6.600
29)*t-Butyl alcohol-d10	(1)	2.741	65	140048	250.000
44) 2-Butanone	(2)	3.919	43	1596	0.360
52)$Dibromofluoromethane	(2)	4.358	113	199672	48.831
53) 1,1,1-Trichloroethane	(2)	4.384	97	1643	0.304
57)$1,2-Dichloroethane-d4	(2)	4.692	102	55865	51.370
66)*Fluorobenzene	(2)	5.032	96	882636	50.000
71) Trichloroethene	(2)	5.398	95	5767	1.287
84)$Toluene-d8	(3)	6.698	98	854912	50.153
89) Toluene	(3)	6.768	92	3704	0.337
94) Tetrachloroethene	(3)	7.359	166	1157	0.260
101)*Chlorobenzene-d5	(3)	8.164	117	680257	50.000
115)$4-Bromofluorobenzene	(3)	9.165	95	290599	42.614
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	351344	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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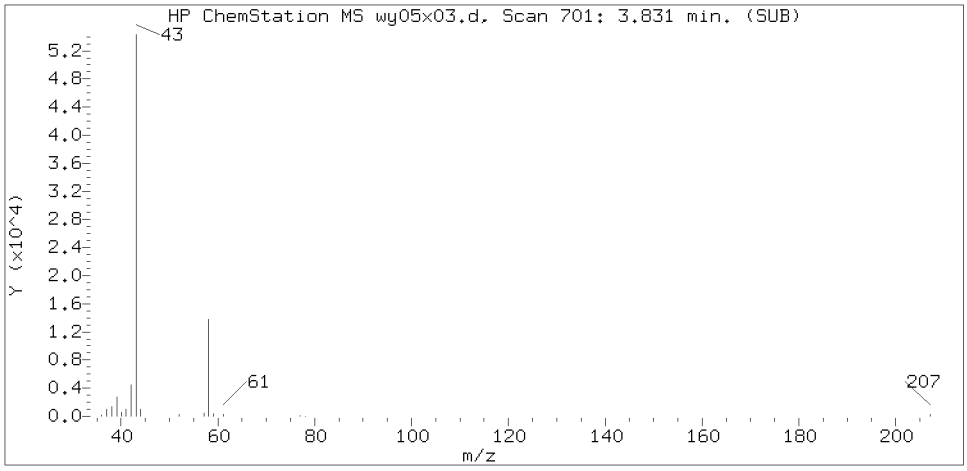
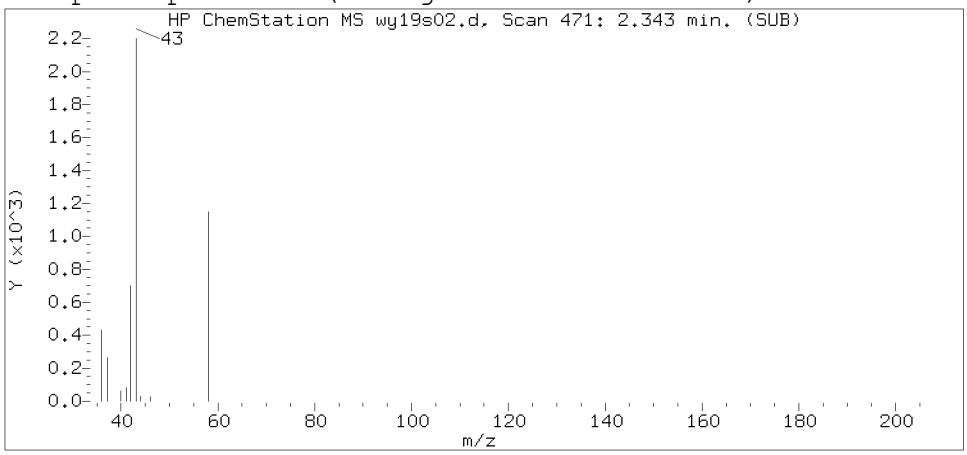
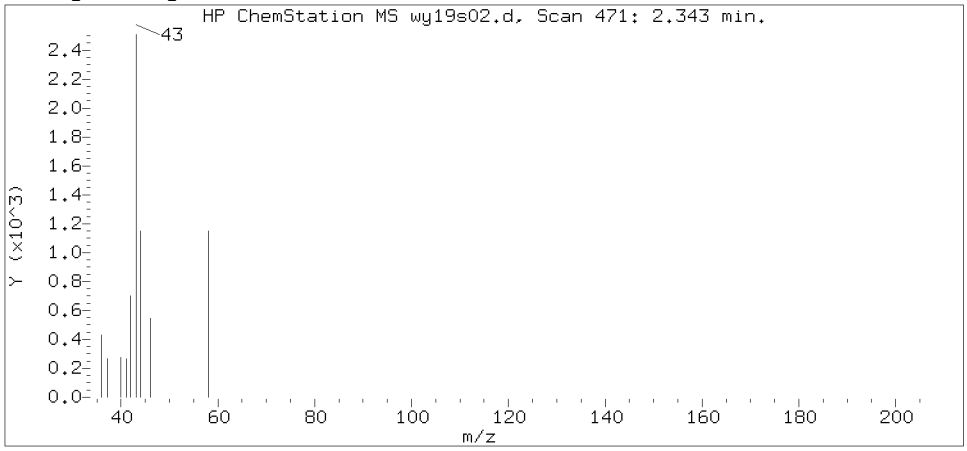
Reference Standard Spectrum for Acetone

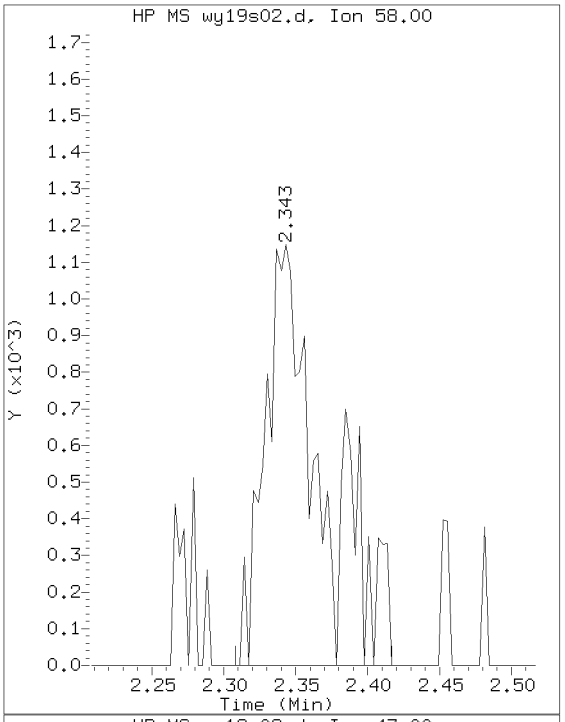


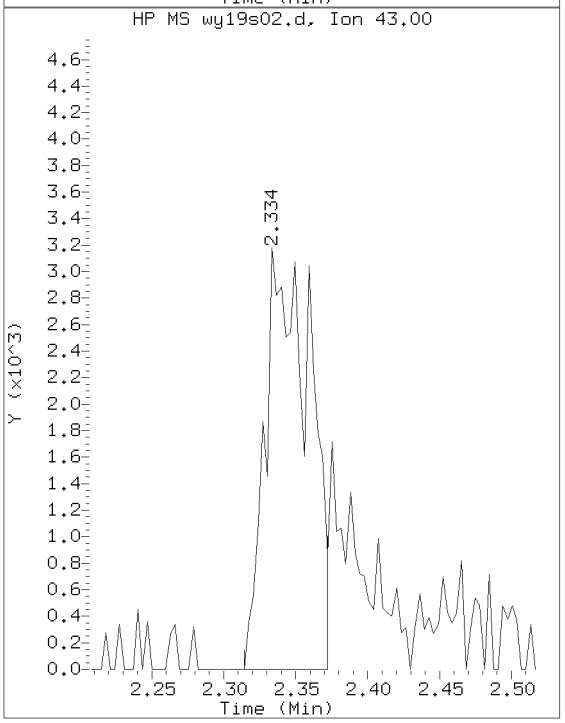
Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)







Data File: /chem2/HP09137.i/19may19a.b/wy19s02.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:31 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Sample Name: RS009 Lab Sample ID: 1053374

Compound Number	: 18
Compound Name	: Acetone
Scan Number	: 471
Retention Time (minutes)	: 2.343
Relative Retention Time	: 0.00202
Quant Ion	: 58.00
Area (flag)	: 3234
On-Column Amount (ng)	: 6.6005

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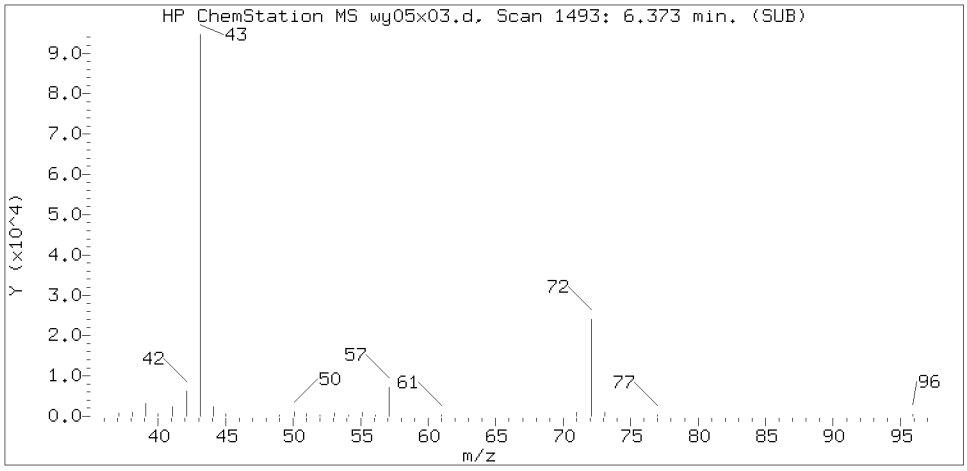
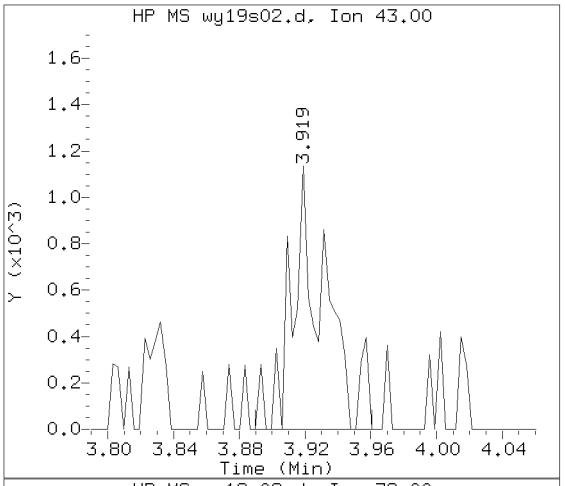
Target 3.5 esignature user ID: kas02648

Reference Standard Spectrum for 2-Butanone





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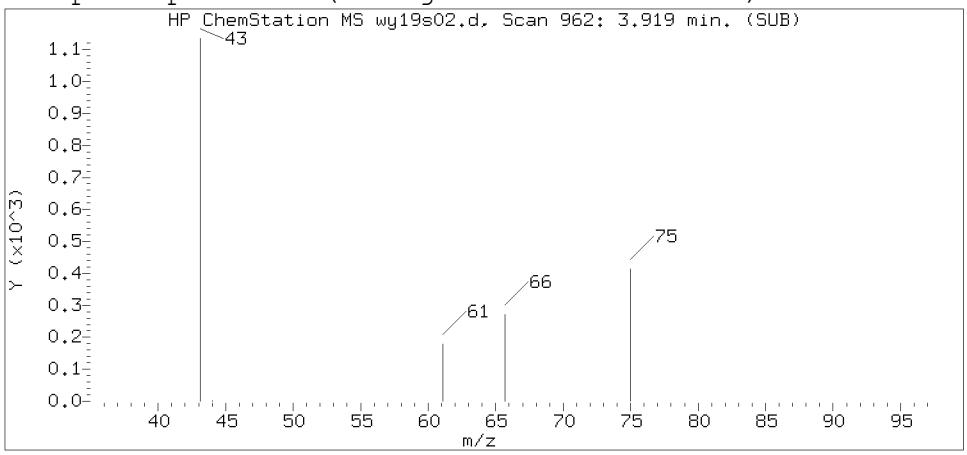
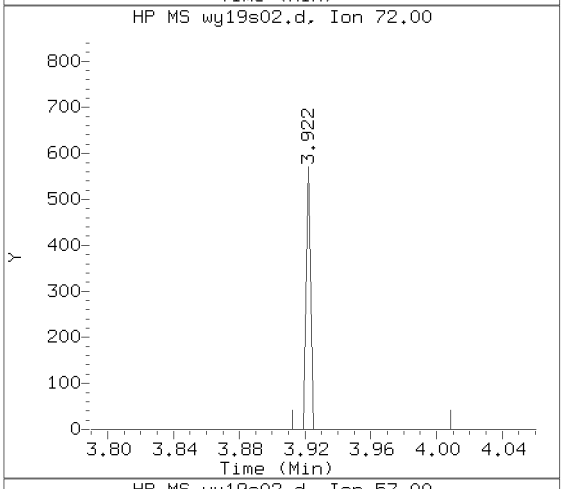
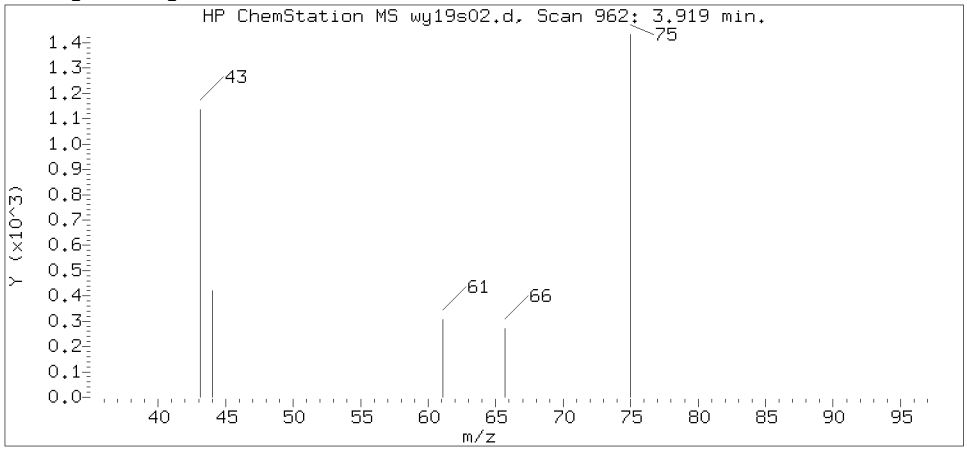
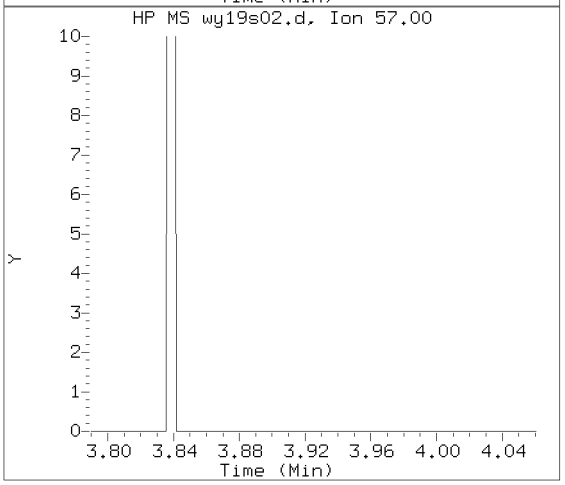




Sample Spectrum (Unaltered)





Data File: /chem2/HP09137.i/19may19a.b/wy19s02.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:31 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Sample Name: RS009 Lab Sample ID: 1053374

Compound Number : 44
Compound Name : 2-Butanone
Scan Number : 962
Retention Time (minutes): 3.919
Relative Retention Time :-0.00240
Quant Ion : 43.00
Area (flag) : 1596
On-Column Amount (ng) : 0.3599

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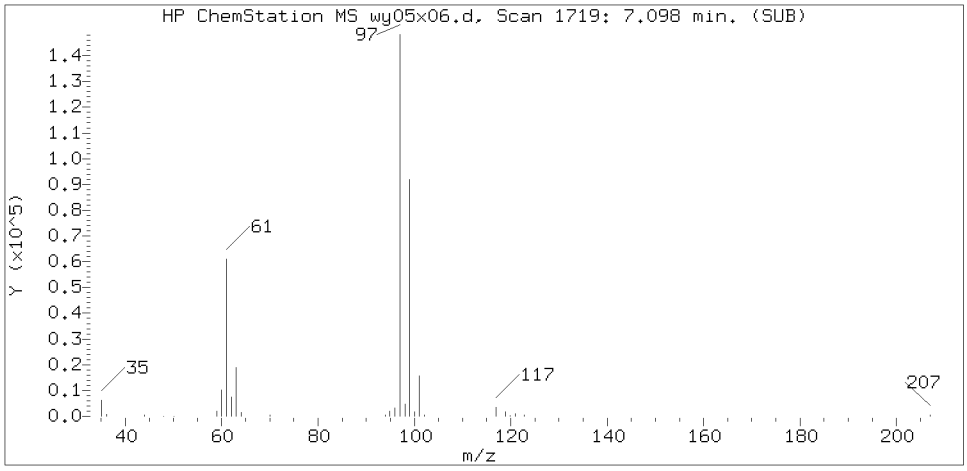
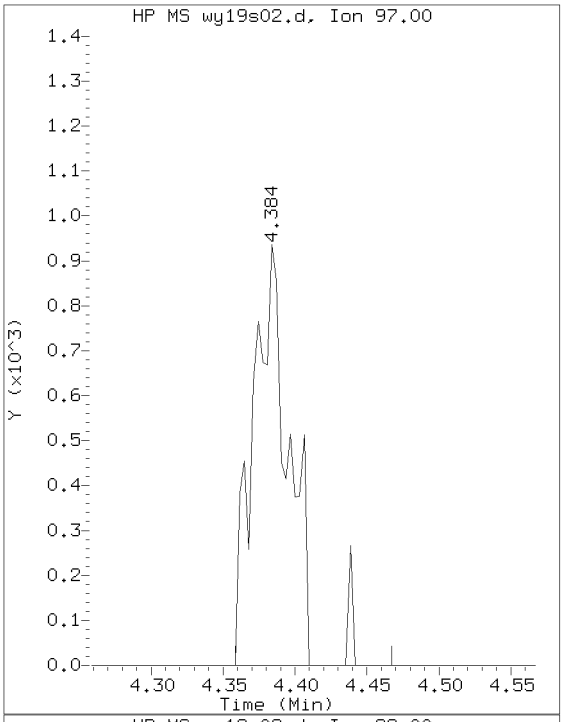
Target 3.5 esignature user ID: kas02648

Reference Standard Spectrum for 1,1,1-Trichloroethane





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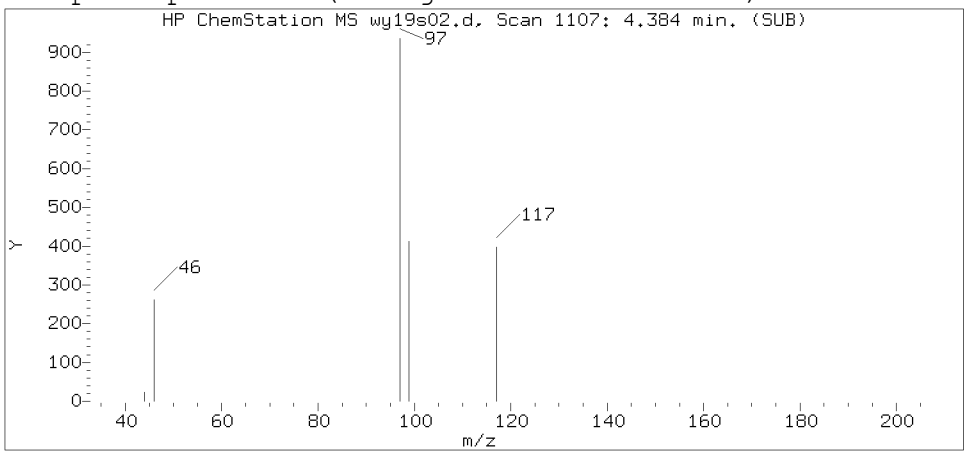
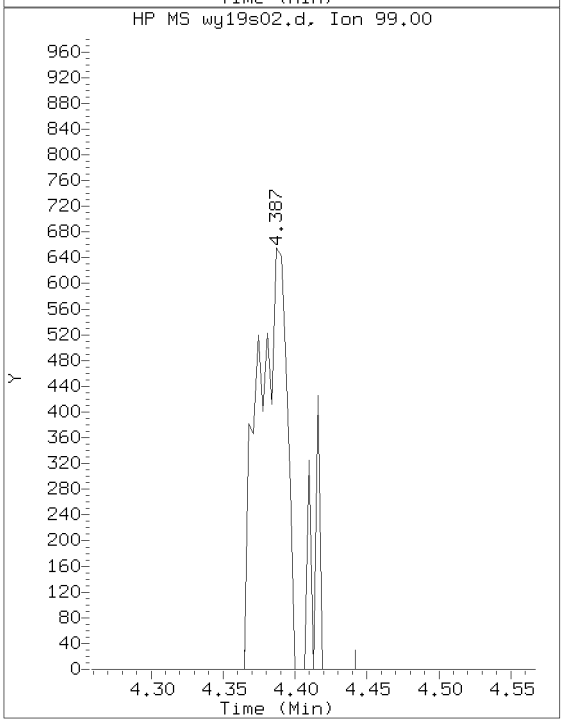
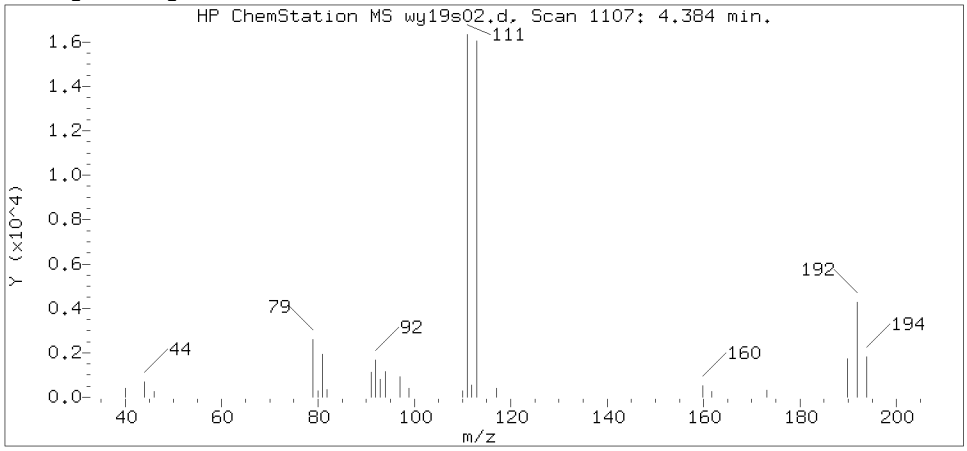




Sample Spectrum (Unaltered)



Data File: /chem2/HP09137.i/19may19a.b/wy19s02.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:31 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Sample Name: RS009 Lab Sample ID: 1053374

Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 1107
Retention Time (minutes): 4.384
Relative Retention Time :-0.00055
Quant Ion : 97.00
Area (flag) : 1643
On-Column Amount (ng) : 0.3042

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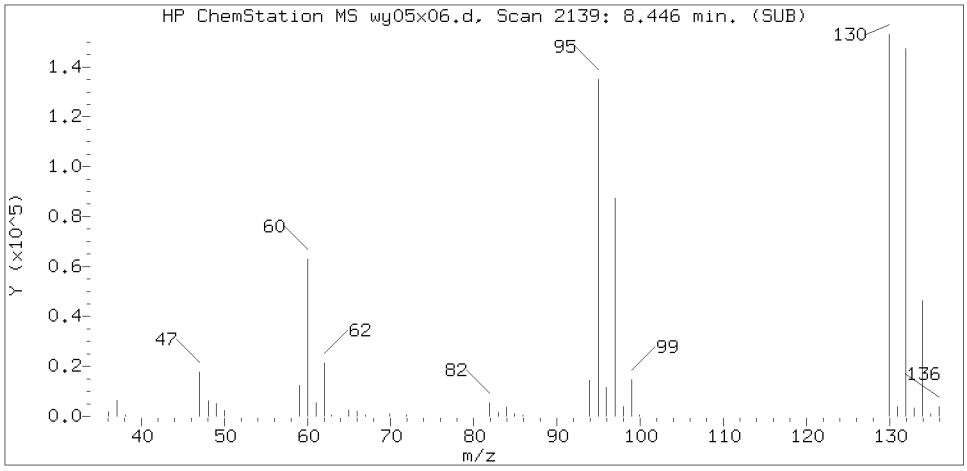
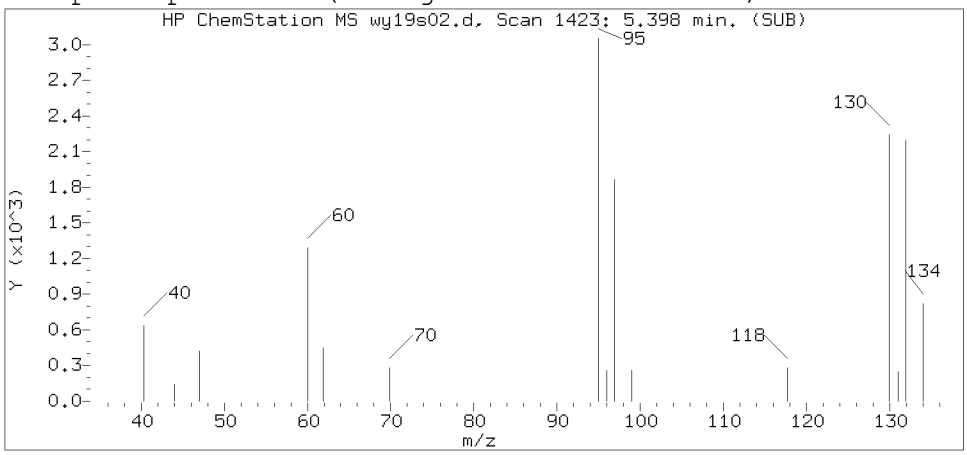
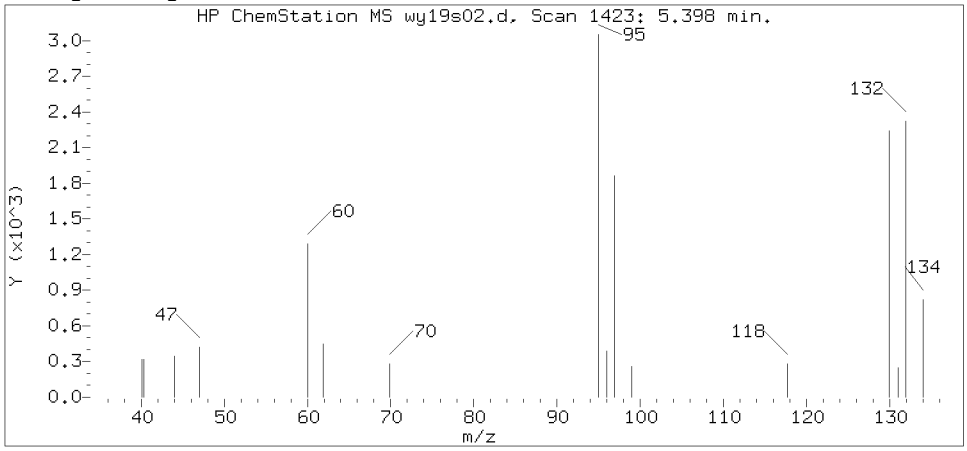
Reference Standard Spectrum for Trichloroethene

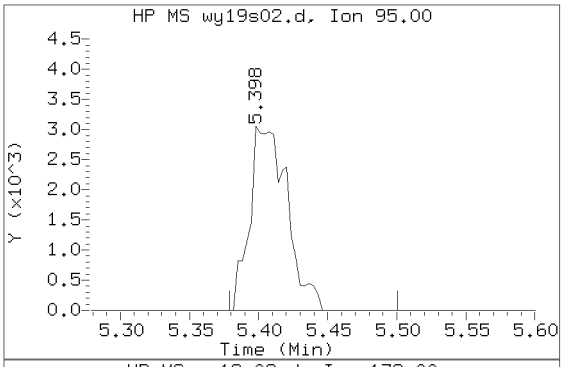


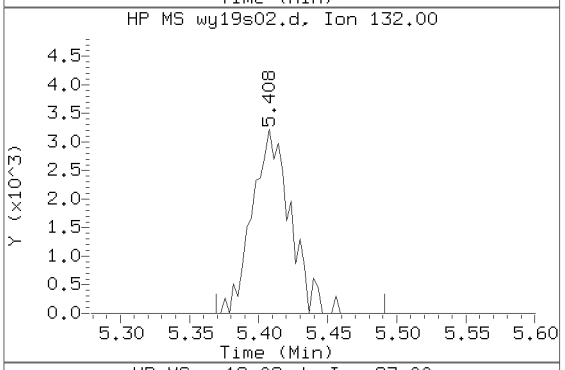
Sample Spectrum (Background Subtracted)

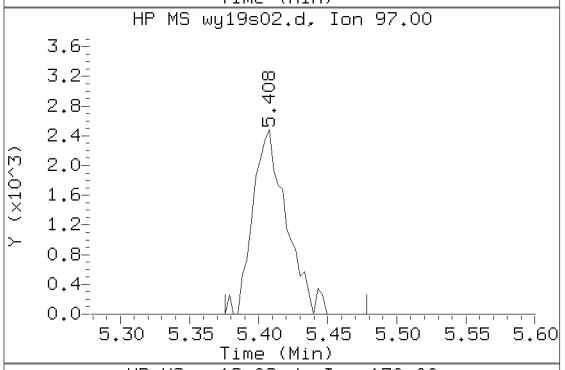


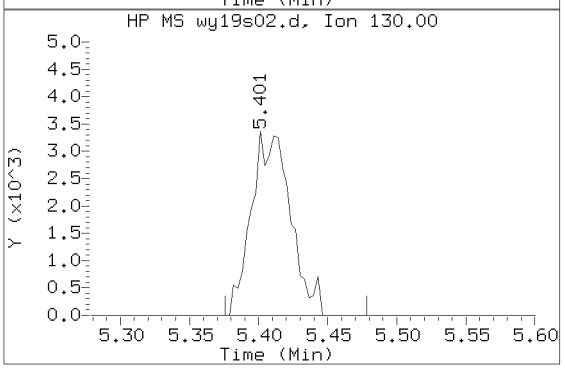
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/19may19a.b/wy19s02.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:31 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Sample Name: RS009 Lab Sample ID: 1053374

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 1423
Retention Time (minutes)	: 5.398
Relative Retention Time	: 0.00123
Quant Ion	: 95.00
Area (flag)	: 5767
On-Column Amount (ng)	: 1.2873

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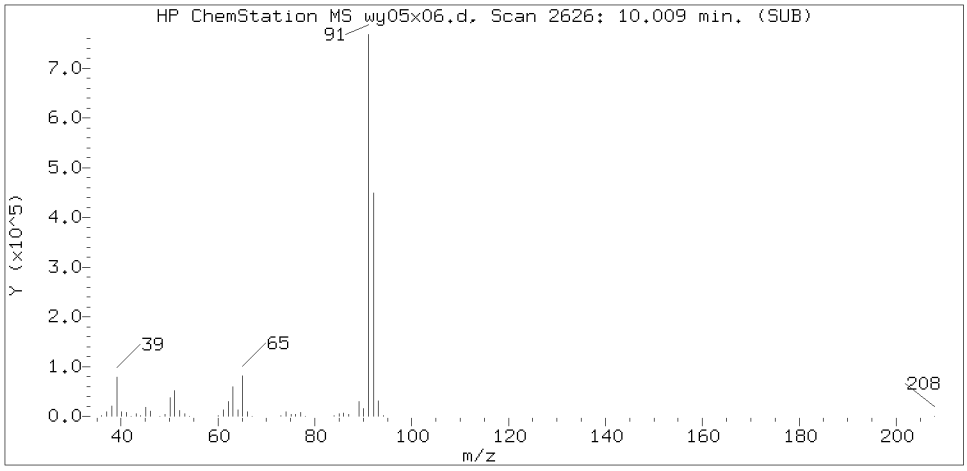
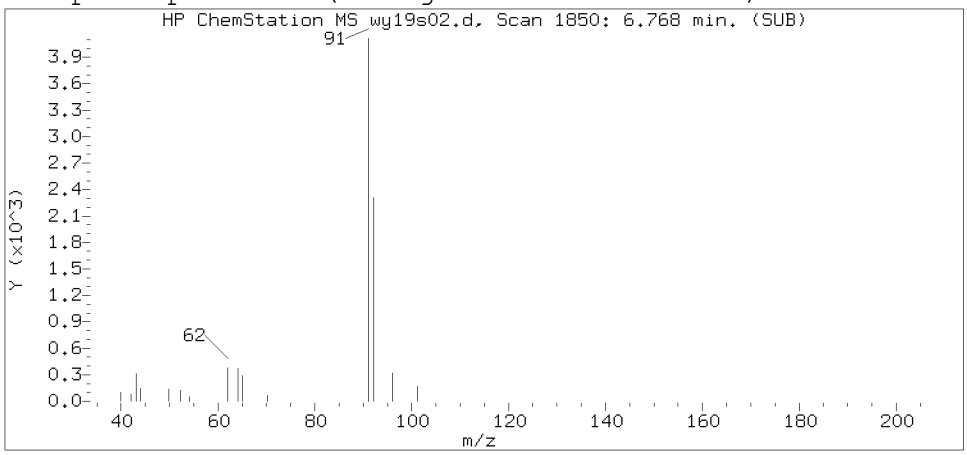
Target 3.5 esignature user ID: kas02648

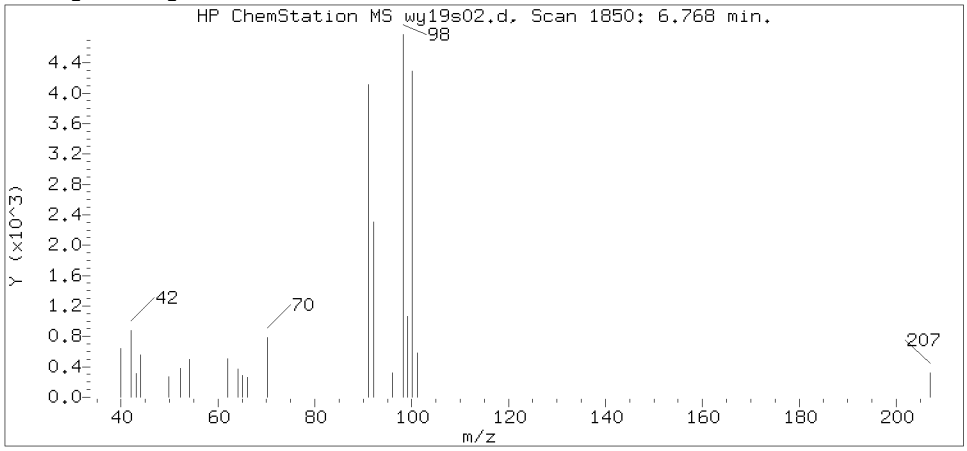
Reference Standard Spectrum for Toluene

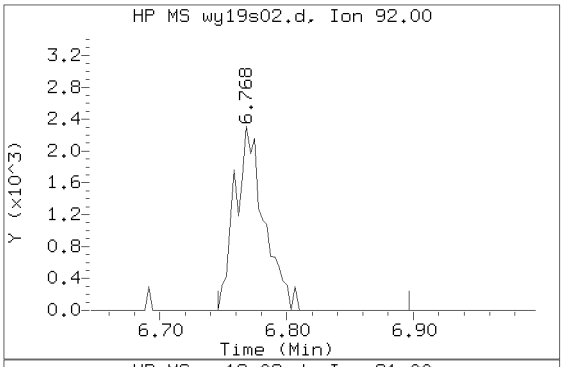


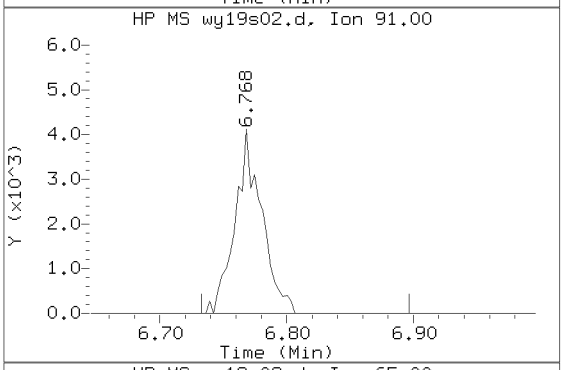
Sample Spectrum (Background Subtracted)

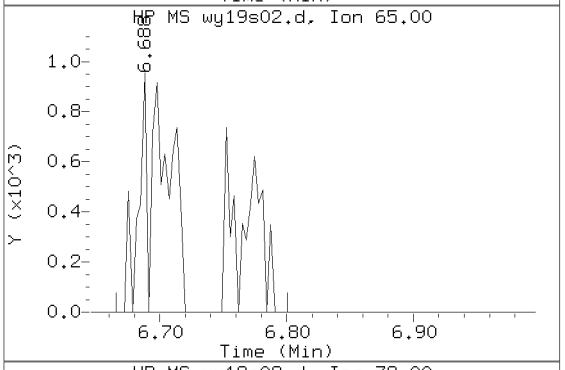


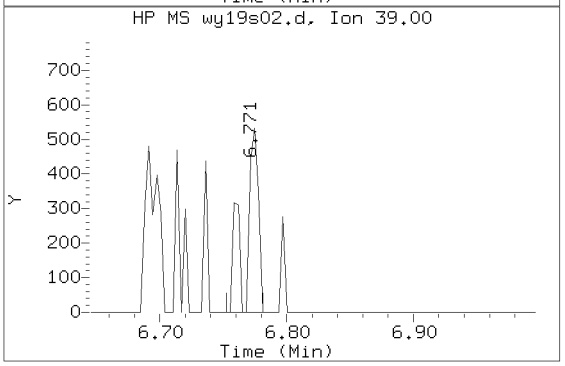
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/19may19a.b/wy19s02.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:31 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Sample Name: RS009 Lab Sample ID: 1053374

Compound Number	: 89
Compound Name	: Toluene
Scan Number	: 1850
Retention Time (minutes)	: 6.768
Relative Retention Time	: 0.00072
Quant Ion	: 92.00
Area (flag)	: 3704
On-Column Amount (ng)	: 0.3374

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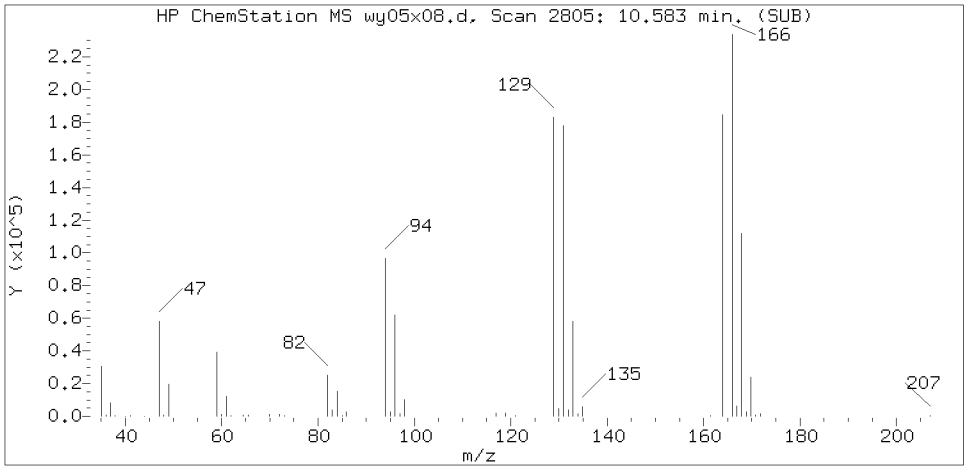
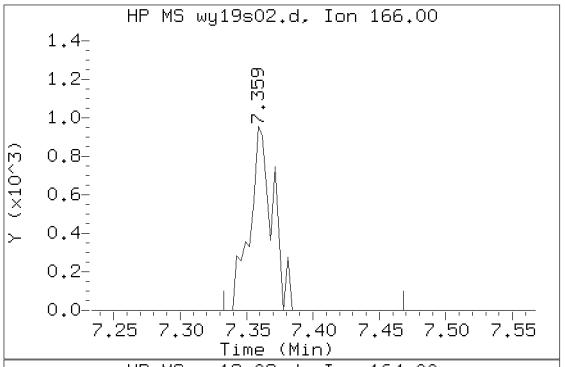
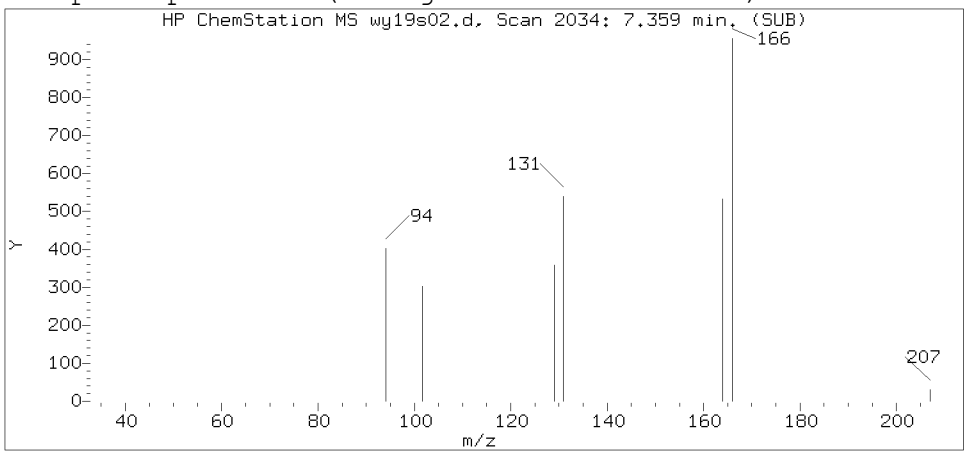
Target 3.5 esignature user ID: kas02648

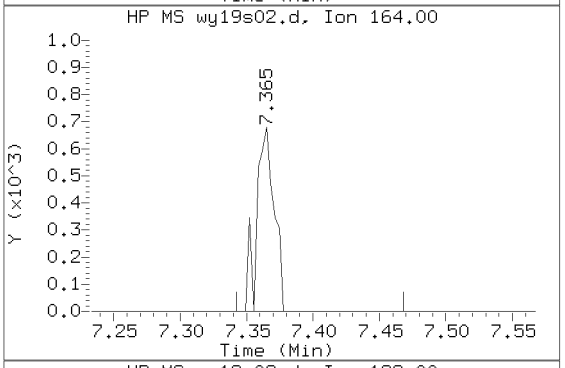
Reference Standard Spectrum for Tetrachloroethene

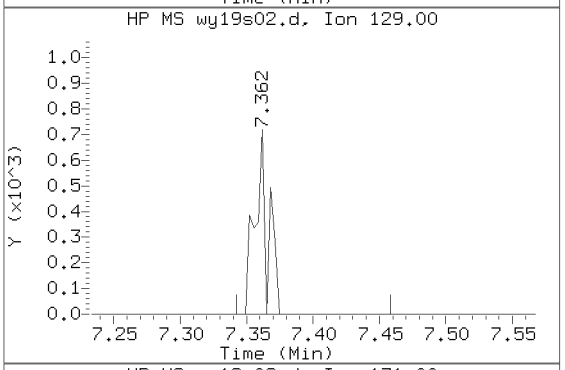




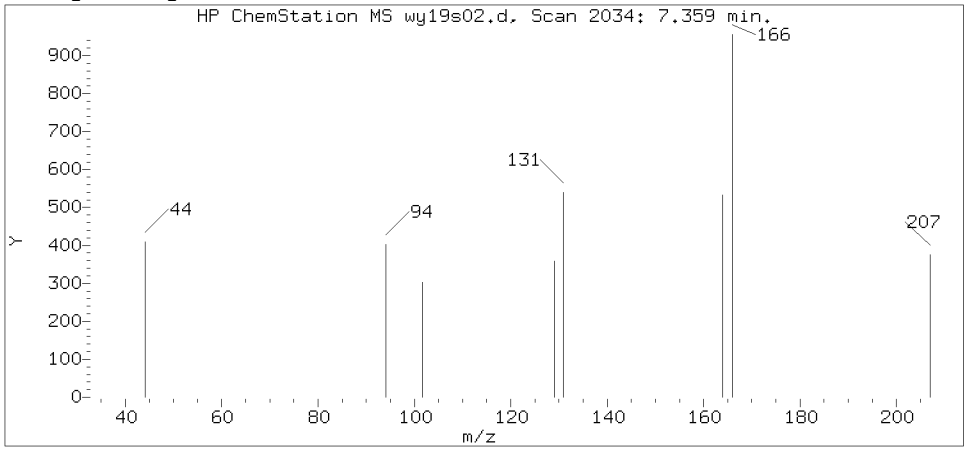
Sample Spectrum (Background Subtracted)

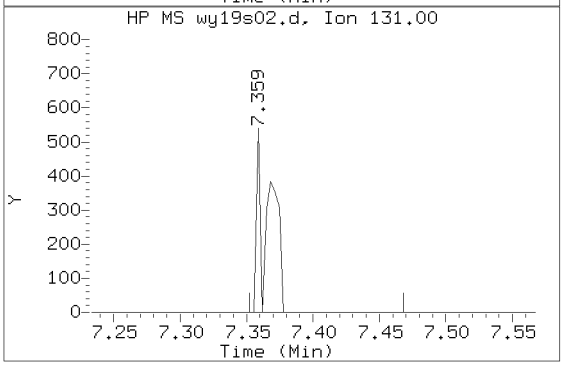






Sample Spectrum (Unaltered)





Data File: /chem2/HP09137.i/19may19a.b/wy19s02.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:31 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Sample Name: RS009 Lab Sample ID: 1053374

Compound Number	: 94
Compound Name	: Tetrachloroethene
Scan Number	: 2034
Retention Time (minutes)	: 7.359
Relative Retention Time	: 0.00075
Quant Ion	: 166.00
Area (flag)	: 1157
On-Column Amount (ng)	: 0.2598

Digitally signed by Kevin A. Sposito on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RS010

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053375

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s02.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/18/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	2	J
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	0.7	J
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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RS010 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1053375

Data file: /chem2/HP09137.i/19may18a.b/wy18s02.d Injection date and time: **18-MAY-2019 23:41**
Data file Sample Info. Line: RS010;1053375;1;0;;JCV89;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:48 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.744	(-0.006)	596	65	164279	(-13)	250.00	
66) Fluorobenzene	5.032	(0.000)	1309	96	947536	(-8)	50.00	
101) Chlorobenzene-d5	8.161	(0.000)	2284	117	733814	(-6)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041	(0.000)	2870	152	371974	(-16)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.358	(0.001)	113	212079	48.312	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.695	(-0.001)	102	58953	50.497	101%		80 - 120
84) Toluene-d8	(3)	6.695	(0.001)	98	921192	50.098	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.000)	95	316427	43.015	86%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)	2.340	(0.001)	58	1146	1.994	1.99		J	0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)	3.922	(-0.002)	43	3116	0.655	0.65		J	0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Linda C. Pape on 05/28/2019 at 14:53. Target 3.5 esignature user ID: lcp00895

RS010 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1053375

Data file: /chem2/HP09137.i/19may18a.b/wy18s02.d Injection date and time: **18-MAY-2019 23:41**
Data file Sample Info. Line: RS010;1053375;1;0;;JCV89;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:48 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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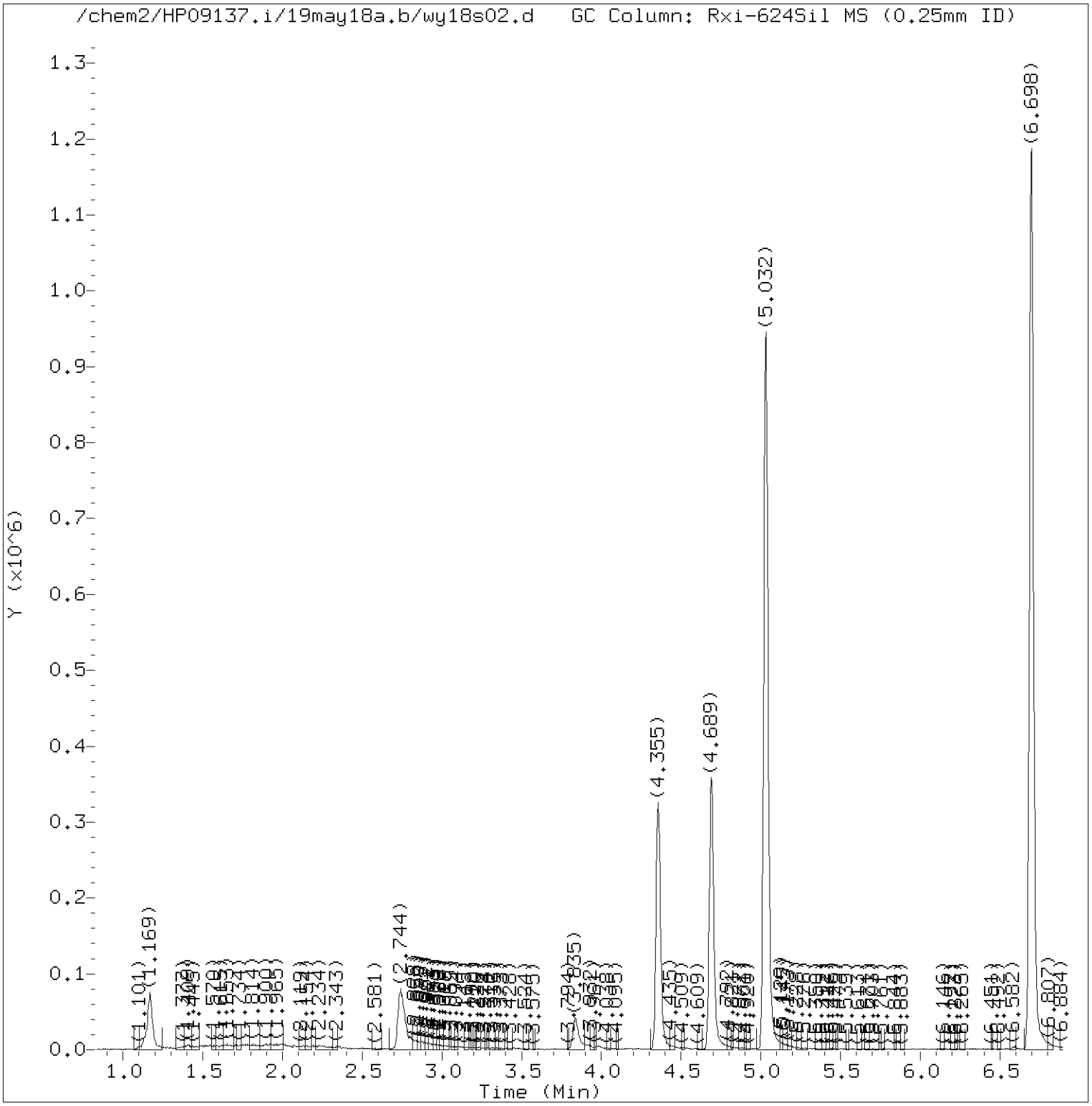
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Linda C. Pape on 05/28/2019 at 14:53. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 15:40. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

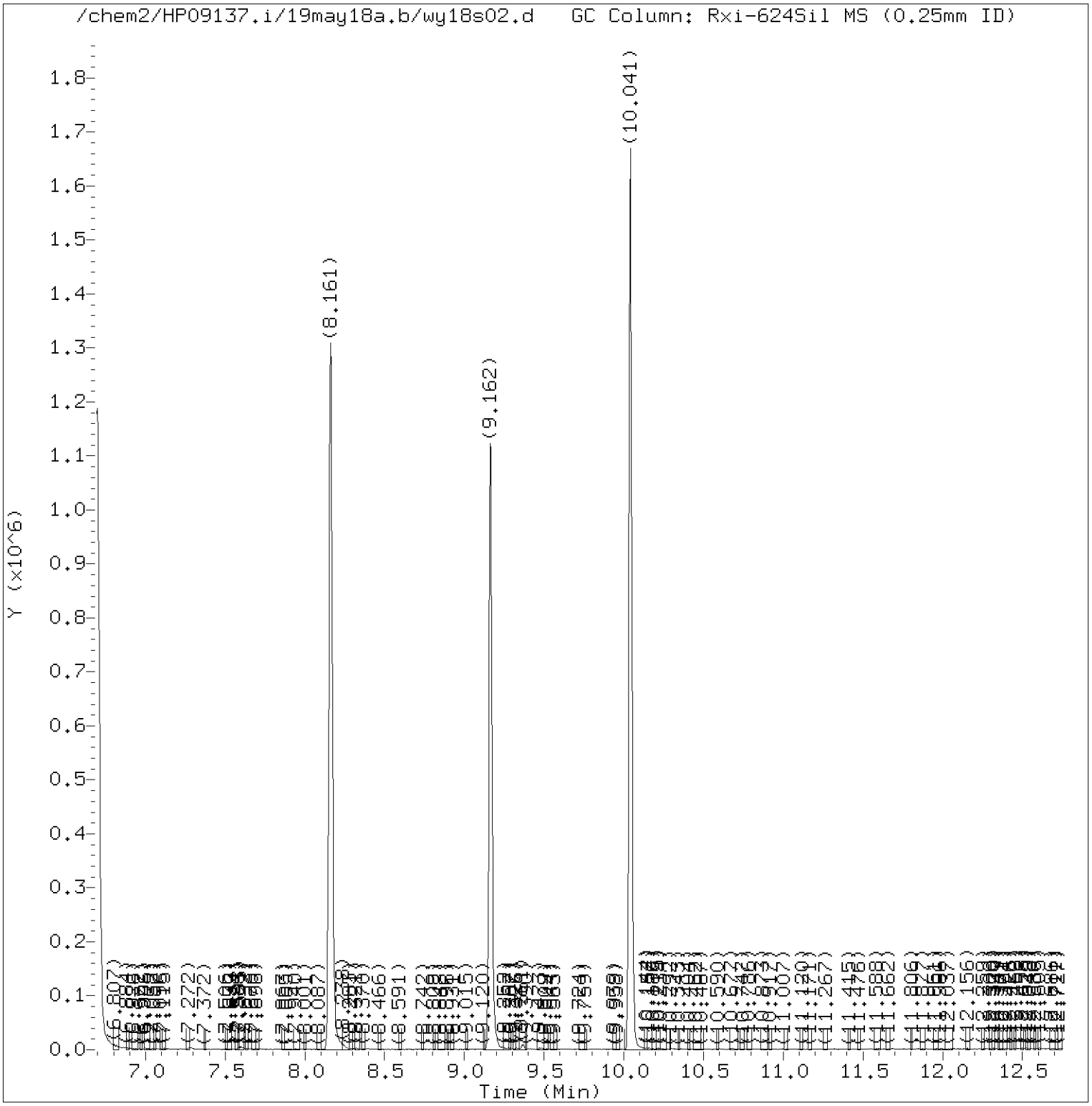
Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s02.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 23:41 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:48 lcp00895

Sample Name: RS010 Lab Sample ID: 1053375

Digitally signed by Linda C. Pape
on 05/28/2019 at 14:53.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s02.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 23:41 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:48 lcp00895

Sample Name: RS010 Lab Sample ID: 1053375

Digitally signed by Linda C. Pape
on 05/28/2019 at 14:53.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s02.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 23:41 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:48 lcp00895

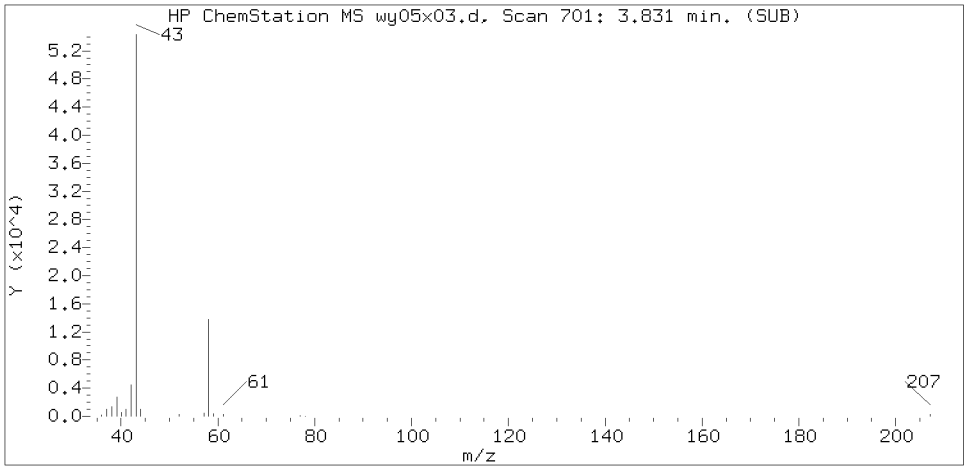
Sample Name: RS010 Lab Sample ID: 1053375

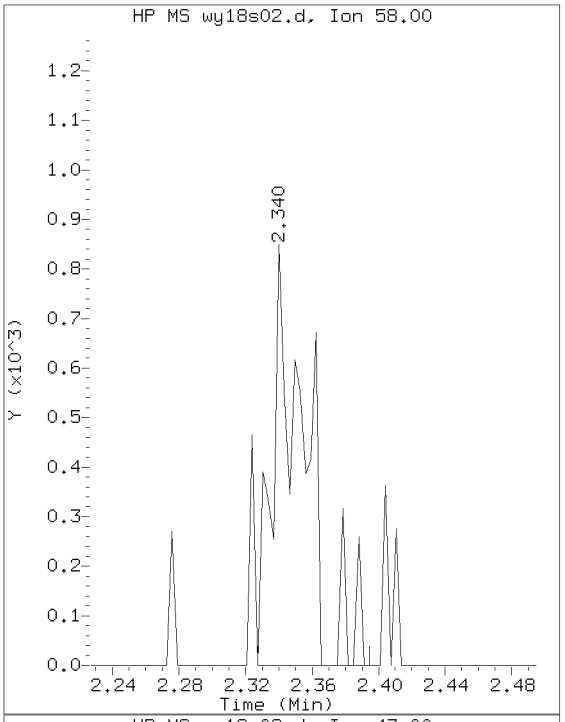
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
18) Acetone	(1)	2.340	58	1146	1.994
29)*t-Butyl alcohol-d10	(1)	2.744	65	164279	250.000
44) 2-Butanone	(2)	3.922	43	3116	0.655
52)$Dibromofluoromethane	(2)	4.358	113	212079	48.312
57)$1,2-Dichloroethane-d4	(2)	4.695	102	58953	50.497
66)*Fluorobenzene	(2)	5.032	96	947536	50.000
84)$Toluene-d8	(3)	6.695	98	921192	50.098
101)*Chlorobenzene-d5	(3)	8.161	117	733814	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	316427	43.015
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	371974	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

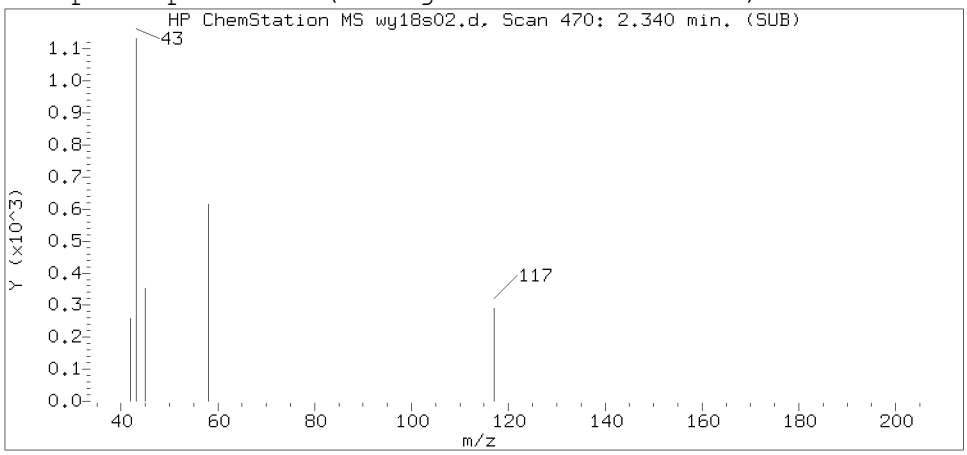
Digitally signed by Linda C. Pape
on 05/28/2019 at 14:53.
Target 3.5 esignature user ID: lcp00895

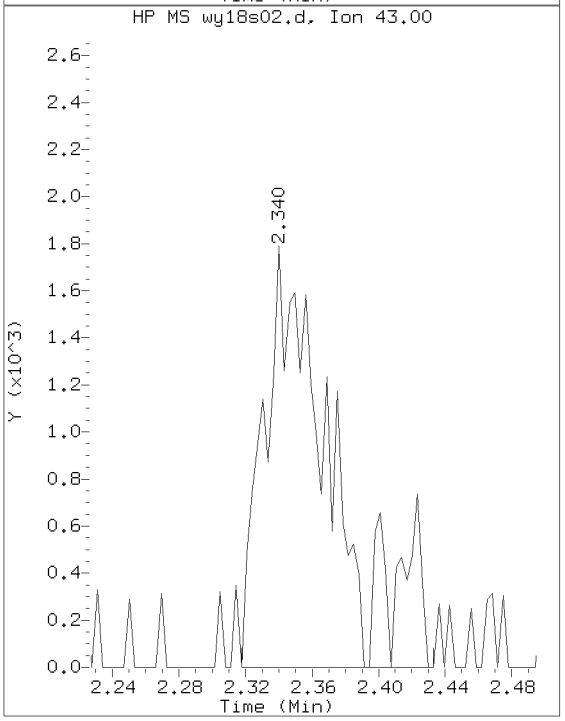
Reference Standard Spectrum for Acetone



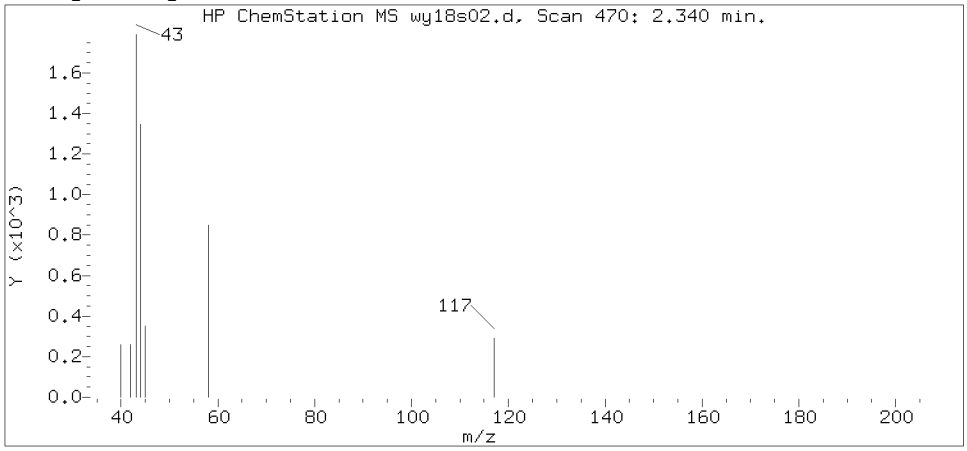


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09137.i/19may18a.b/wy18s02.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 23:41 Analyst ID: SEJ02002

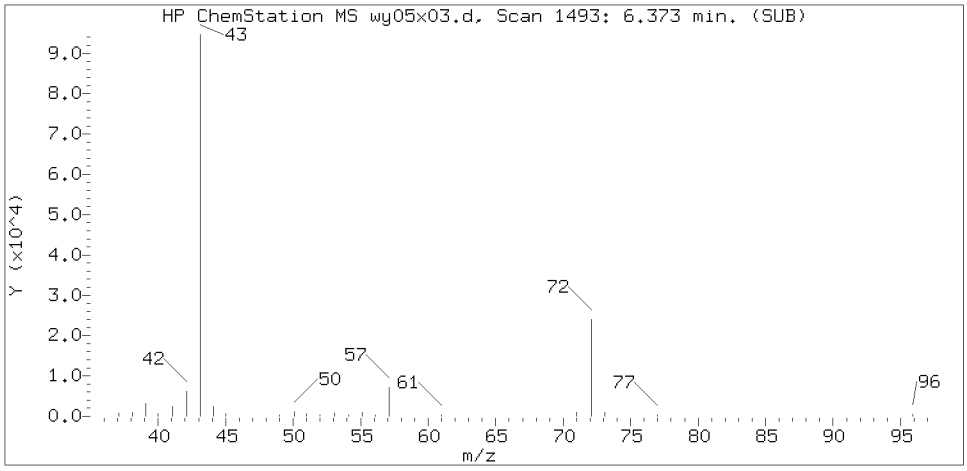
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:48 lcp00895

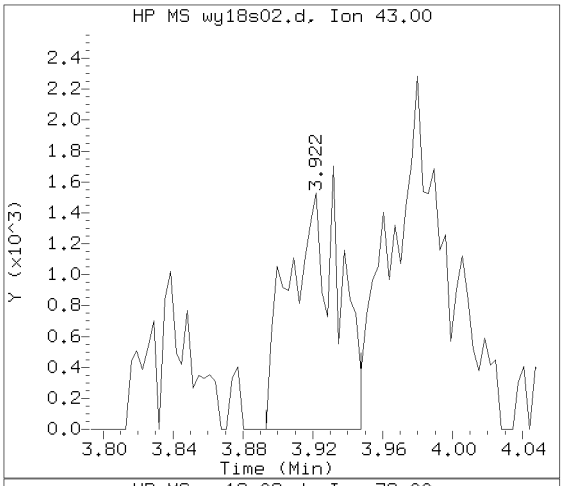
Sample Name: RS010 Lab Sample ID: 1053375

Compound Number	: 18
Compound Name	: Acetone
Scan Number	: 470
Retention Time (minutes)	: 2.340
Relative Retention Time	: 0.00200
Quant Ion	: 58.00
Area (flag)	: 1146
On-Column Amount (ng)	: 1.9938

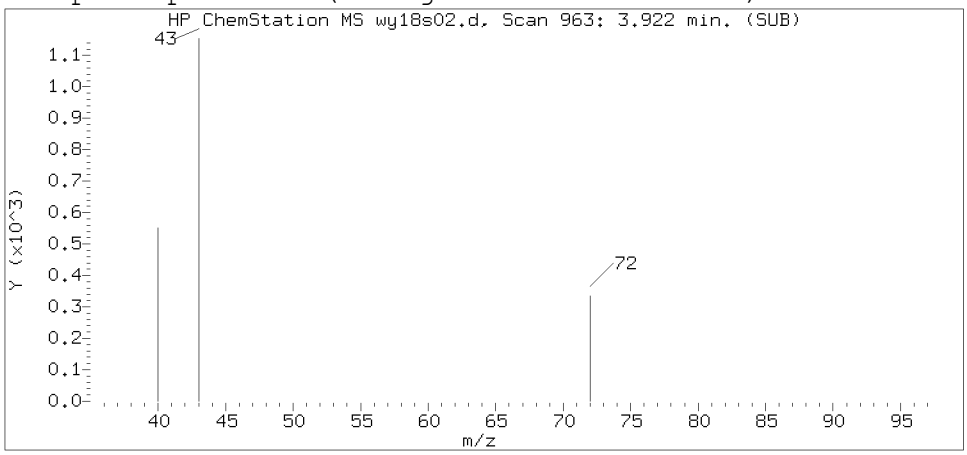
Digitally signed by Linda C. Pape on 05/28/2019 at 14:53.
Target 3.5 esignature user ID: lcp00895

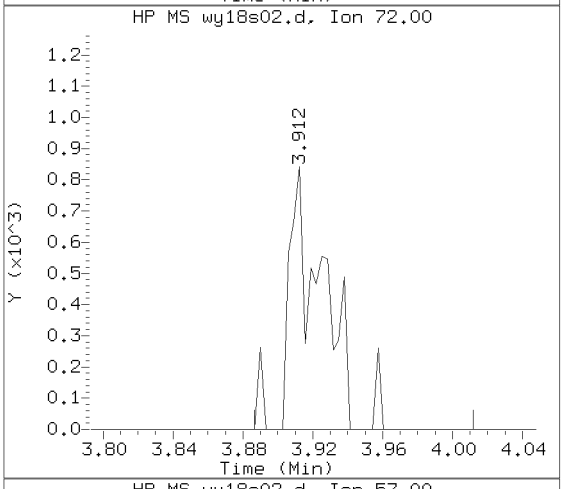
Reference Standard Spectrum for 2-Butanone



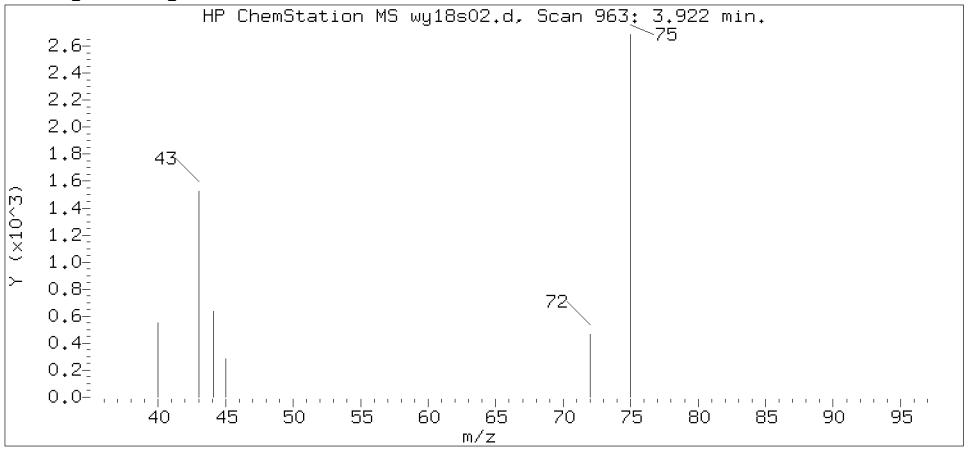


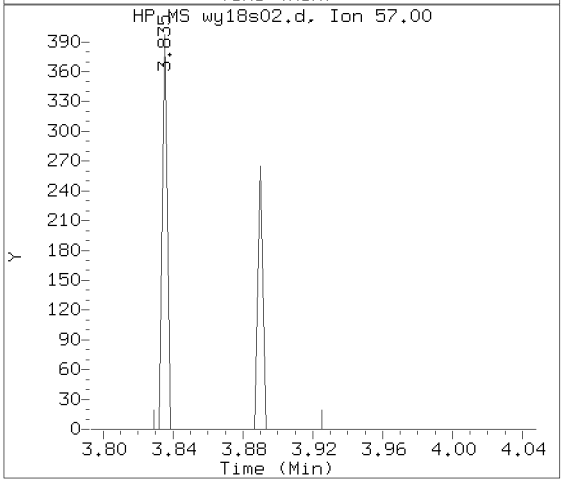
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP09137.i/19may18a.b/wy18s02.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 23:41 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:48 lcp00895

Sample Name: RS010 Lab Sample ID: 1053375

Compound Number : 44
Compound Name : 2-Butanone
Scan Number : 963
Retention Time (minutes): 3.922
Relative Retention Time :-0.00255
Quant Ion : 43.00
Area (flag) : 3116
On-Column Amount (ng) : 0.6546

Digitally signed by Linda C. Pape on 05/28/2019 at 14:53.
Target 3.5 esignature user ID: lcp00895

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09137 **HP #18**

Data Directory Path is - D:\DATA\19FEB19I\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
apr27582	WF19T01.D	50NGBFB	02/19/2019	11:32	W183623AA	
APR27582	WF19I01.D	VSTD300	02/19/2019	12:21		
APR27582	WF19I02.D	VSTD100	02/19/2019	12:45		
APR27582	WF19I03.D	VSTD050	02/19/2019	13:09		
APR27582	WF19I04.D	VSTD020	02/19/2019	13:33		
APR27582	WF19I05.D	VSTD010	02/19/2019	13:57		
APR27582	WF19I06.D	VSTD004	02/19/2019	14:21		
APR27582	WF19I07.D	VSTD001	02/19/2019	14:44		
APR27582	WF19X02.D	CLNBLK	02/19/2019	15:08		
APR27582	WF19V01.D	LCSWICV	02/19/2019	15:32		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09137 **HP #18**

Data Directory Path is - D:\DATA\19FEB20A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
apr27582	WF20T01.D	50NGBFB	02/20/2019	08:47	W183623AA	
APR27582	WF20X01.D	VBLKW62	02/20/2019	09:13	W190511AA	
APR27582	WF20C01.D	VSTD050	02/20/2019	09:37	W190511AA	
APR27582	WF20X02.D	VBLKW62	02/20/2019	10:01	W190511AA	
APR27582	WF20X03.D	VBLKW62	02/20/2019	10:31	W190511AA	
APR27582	WF20C02.D	VSTD050	02/20/2019	10:55	W190511AA	
APR27582	WF20X04.D	VBLKW62	02/20/2019	11:19	W190511AA	
APR27582	WF20B01.D	VBLKW62	02/20/2019	11:43	W190511AA	
APR27582	WF20L01.D	LCSW62	02/20/2019	12:07	W190511AA	
APR27582	WF20B02.D	VBLKW62	02/20/2019	12:30	W190511AA	
APR27582	WF20S02.D	9979095	02/20/2019	12:57	W190511AA	
APR27582	WF20S03.D	9979096	02/20/2019	13:21	W190511AA	
APR27582	WF20S04.D	9979097	02/20/2019	13:45	W190511AA	
APR27582	WF20S05.D	9979099	02/20/2019	14:09	W190511AA	
APR27582	WF20S06.D	9979107	02/20/2019	14:32	W190511AA	
APR27582	WF20S07.D	9979108	02/20/2019	14:56	W190511AA	
APR27582	WF20S08.D	9979109	02/20/2019	15:20	W190511AA	
APR27582	WF20S09.D	9979090	02/20/2019	15:44	W190511AA	
APR27582	WF20S10.D	9979091	02/20/2019	16:08	W190511AA	
APR27582	WF20S17.D	9985342	02/20/2019	16:32	W190511AA	
APR27582	WF20S18.D	9985343MS	02/20/2019	16:56	W190511AA	
APR27582	WF20S19.D	9985344MSD	02/20/2019	17:20	W190511AA	
APR27582	WF20S11.D	9979112	02/20/2019	17:43	W190511AA	
APR27582	WF20S12.D	9987236	02/20/2019	18:07	W190511AA	
APR27582	WF20S13.D	9986162	02/20/2019	18:31	W190511AA	
APR27582	WF20S20.D	9987235	02/20/2019	18:55	W190511AA	
APR27582	WF20S21.D	9985346	02/20/2019	19:19	W190511AA	

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP26285 **HP #05**

Data Directory Path is - C:\DATA\19MAR25I\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
APR27582	5M25T01.D	50 ng BFB	03/25/2019	11:37		
APR27582	5M25X05.D	BLK	03/25/2019	12:27		
APR27582	5M25I01.D	VSTD300	03/25/2019	12:48		
APR27582	5M25I02.D	VSTD100	03/25/2019	13:10		
APR27582	5M25I03.D	VSTD050	03/25/2019	13:31		
APR27582	5M25I04.D	VSTD020	03/25/2019	13:52		
APR27582	5M25I05.D	VSTD010	03/25/2019	14:13		
APR27582	5M25I06.D	VSTD004	03/25/2019	14:34		
APR27582	5M25I07.D	VSTD001	03/25/2019	14:55		
APR27582	5M25X06.D	BLK	03/25/2019	15:17		
APR27582	5C25V01.D	LG5ICV	03/25/2019	15:38		
APR27582	5C25X10.D	BLK	03/25/2019	16:00		
APR27582	5M25I11.D	VSTD300	03/25/2019	16:21		
APR27582	5M25I12.D	VSTD100	03/25/2019	16:42		
APR27582	5M25I13.D	VSTD050	03/25/2019	17:03		
APR27582	5M25I14.D	VSTD020	03/25/2019	17:24		
APR27582	5M25I15.D	VSTD010	03/25/2019	17:45		
APR27582	5M25I16.D	VSTD004	03/25/2019	18:06		
APR27582	5M25I17.D	VSTD001	03/25/2019	18:27		
APR27582	5M25X11.D	BLK	03/25/2019	18:48		
APR27582	5M25V11.D	SM5ICV	03/25/2019	19:09		
APR27582	5M25X12.D	BLK	03/25/2019	22:25		
APR27582	5M25V12.D	SM5ICV	03/25/2019	22:47		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09137 **HP #18**

Data Directory Path is - D:\DATA\19MAY18a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
SEJ02002	WY18T01.D	BFB 50NG	05/18/2019	21:44		
SEJ02002	WY18C01.D	VSTD050	05/18/2019	22:05	W191381AA	
SEJ02002	WY18S01.D	LCSW23	05/18/2019	22:29	W191381AA	
SEJ02002	WY18B00.D	VBLKW23	05/18/2019	22:53	W191381AA	
SEJ02002	WY18B01.D	VBLKW23	05/18/2019	23:17	W191381AA	
SEJ02002	WY18S02.D	1053375	05/18/2019	23:41	W191381AA	
SEJ02002	WY18S03.D	1053374	05/19/2019	00:04	W191381AA	
SEJ02002	WY18S04.D	1053376	05/19/2019	00:28	W191381AA	
SEJ02002	WY18S05.D	1053377	05/19/2019	00:52	W191381AA	
SEJ02002	WY18S06.D	1053378	05/19/2019	01:16	W191381AA	
SEJ02002	WY18S07.D	1053379	05/19/2019	01:39	W191381AA	
SEJ02002	WY18S08.D	1053380	05/19/2019	02:03	W191381AA	
SEJ02002	WY18S09.D	1053381	05/19/2019	02:27	W191381AA	
SEJ02002	WY18S10.D	1053382	05/19/2019	02:51	W191381AA	
SEJ02002	WY18S11.D	1053383	05/19/2019	03:15	W191381AA	
SEJ02002	WY18S12.D	1053359	05/19/2019	03:39	W191381AA	
SEJ02002	WY18S13.D	1053360MS	05/19/2019	04:02	W191381AA	
SEJ02002	WY18S14.D	1053361MSD	05/19/2019	04:26	W191381AA	
SEJ02002	WY18S15.D	1053352	05/19/2019	04:50	W191381AA	
SEJ02002	WY18S16.D	1053353	05/19/2019	05:14	W191381AA	
SEJ02002	WY18S17.D	1053354	05/19/2019	05:38	W191381AA	
SEJ02002	WY18S18.D	1053355	05/19/2019	06:01	W191381AA	
SEJ02002	WY18S19.D	1053356	05/19/2019	06:25	W191381AA	
SEJ02002	WY18S20.D	1053357	05/19/2019	06:49	W191381AA	
SEJ02002	WY18S21.D	1053358	05/19/2019	07:13	W191381AA	
SEJ02002	WY18S22.D	1053362	05/19/2019	07:36	W191381AA	
SEJ02002	WY18S23.D	1053363	05/19/2019	08:00	W191381AA	

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09137 **HP #18**

Data Directory Path is - d:\data\19may19A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
ANYONE	WY19X05.D	BLK	05/19/2019	09:35		
ANYONE	WY19X06.D	BLK	05/19/2019	09:59		
CBR01947	WY19T01.D	BFB 50NG	05/19/2019	11:04		
CBR01947	WY19C01.D	VSTD050	05/19/2019	11:32	W191381AB	
CBR01947	WY19B01.D	VBLKW24	05/19/2019	11:56	W191381AB	
CBR01947	WY19B02.D	VBLKW24	05/19/2019	12:20	W191381AB	
CBR01947	WY19L01.D	LCSW24	05/19/2019	12:44	W191381AB	
CBR01947	WY19M01.D	MDL0.5	05/19/2019	13:07	W191381AB	
CBR01947	WY19S02.D	1053374	05/19/2019	13:31	W191381AB	
CBR01947	WY19S03.D	1053377	05/19/2019	13:55	W191381AB	
CBR01947	WY19S04.D	1053378	05/19/2019	14:18	W191381AB	
CBR01947	WY19S05.D	1053380	05/19/2019	14:42	W191381AB	
CBR01947	WY19S06.D	1053381	05/19/2019	15:06	W191381AB	
CBR01947	WY19S07.D	1053359	05/19/2019	15:30	W191381AB	
CBR01947	WY19S10.D	1052543	05/19/2019	15:53	W191391AA	
CBR01947	WY19S11.D	1052544	05/19/2019	16:17	W191391AA	
CBR01947	WY19S12.D	1052545	05/19/2019	16:41	W191391AA	
CBR01947	WY19S13.D	1052546	05/19/2019	17:05	W191391AA	
CBR01947	WY19S14.D	1052547MS	05/19/2019	17:29	W191391AA	
CBR01947	WY19S15.D	1052548MSD	05/19/2019	17:52	W191391AA	
CBR01947	WY19S16.D	1052549	05/19/2019	18:16	W191391AA	
CBR01947	WY19S17.D	1052550	05/19/2019	18:40	W191391AA	
CBR01947	WY19S18.D	1052551	05/19/2019	19:04	W191391AA	
CBR01947	WY19S19.D	1052552	05/19/2019	19:28	W191391AA	
CBR01947	WY19S20.D	1052553	05/19/2019	19:52	W191391AA	
CBR01947	WY19S21.D	1052554	05/19/2019	20:15	W191391AA	
CBR01947	WY19S22.D	1052555	05/19/2019	20:39	W191391AA	
CBR01947	WY19S23.D	1052556	05/19/2019	21:03	W191391AA	
CBR01947	WY19S24.D	1052987	05/19/2019	21:27	W191391AA	
CBR01947	WY19S25.D	1052988	05/19/2019	21:50	W191391AA	
CBR01947	WY19EC1.D	SECC050	05/19/2019	22:14	W191391AA	

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP26285 **HP #05**

Data Directory Path is - C:\DATA\19MAY17A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
CLM27445	5Y17T01.D	50NGBFB	05/17/2019	07:34	5191371AA	
CLM27445	5Y17X00.D	VBLK587	05/17/2019	07:56	5191371AA	
CLM27445	5Y17C01.D	VSTD050	05/17/2019	08:17	5191371AA	
CLM27445	5Y17S01.D	LCS587	05/17/2019	08:38	5191371AA	
CLM27445	5Y17B01.D	VBLK587	05/17/2019	08:59	5191371AA	
CLM27445	5Y17S02.D	1051582	05/17/2019	10:31	5191371AA	
CLM27445	5Y17S03.D	1053368	05/17/2019	10:53	5191371AA	
CLM27445	5Y17S04.D	1053369MS	05/17/2019	11:13	5191371AA	
CLM27445	5Y17S05.D	1053370MSD	05/17/2019	11:34	5191371AA	
CLM27445	5Y17S06.D	1053364	05/17/2019	11:56	5191371AA	
CLM27445	5Y17S07.D	1053365	05/17/2019	12:17	5191371AA	
CLM27445	5Y17S08.D	1053366	05/17/2019	12:38	5191371AA	
CLM27445	5Y17S09.D	1053367	05/17/2019	12:59	5191371AA	
CLM27445	5Y17S10.D	1053371	05/17/2019	13:21	5191371AA	
CLM27445	5Y17S11.D	1053372	05/17/2019	13:41	5191371AA	
CLM27445	5Y17S12.D	1053373	05/17/2019	14:03	5191371AA	
CLM27445	5Y17S13.D	1051574	05/17/2019	14:24	5191371AA	
CLM27445	5Y17S14.D	1051576	05/17/2019	14:45	5191371AA	
CLM27445	5Y17S15.D	1051578	05/17/2019	15:06	5191371AA	
CLM27445	5Y17S16.D	1051575	05/17/2019	15:27	5191371AA	
CLM27445	5Y17S17.D	1051577	05/17/2019	15:49	5191371AA	
CLM27445	5Y17S18.D	1051580	05/17/2019	16:10	5191371AA	
CLM27445	5Y17S19.D	1051573	05/17/2019	16:30	5191371AA	
CLM27445	5Y17S20.D	1051581	05/17/2019	16:51	5191371AA	
CLM27445	5Y17S21.D	1051581DL	05/17/2019	17:12	5191371AA	10
CLM27445	5Y17S22.D	1051579	05/17/2019	17:33	5191371AA	
CLM27445	5Y17S23.D	1051579DL	05/17/2019	17:54	5191371AA	10

Data File: /chem2/HP09137.i/19feb19i.b/wf19t01.d

Page 1

Date : 19-FEB-2019 11:32

Client ID: FEB05-19

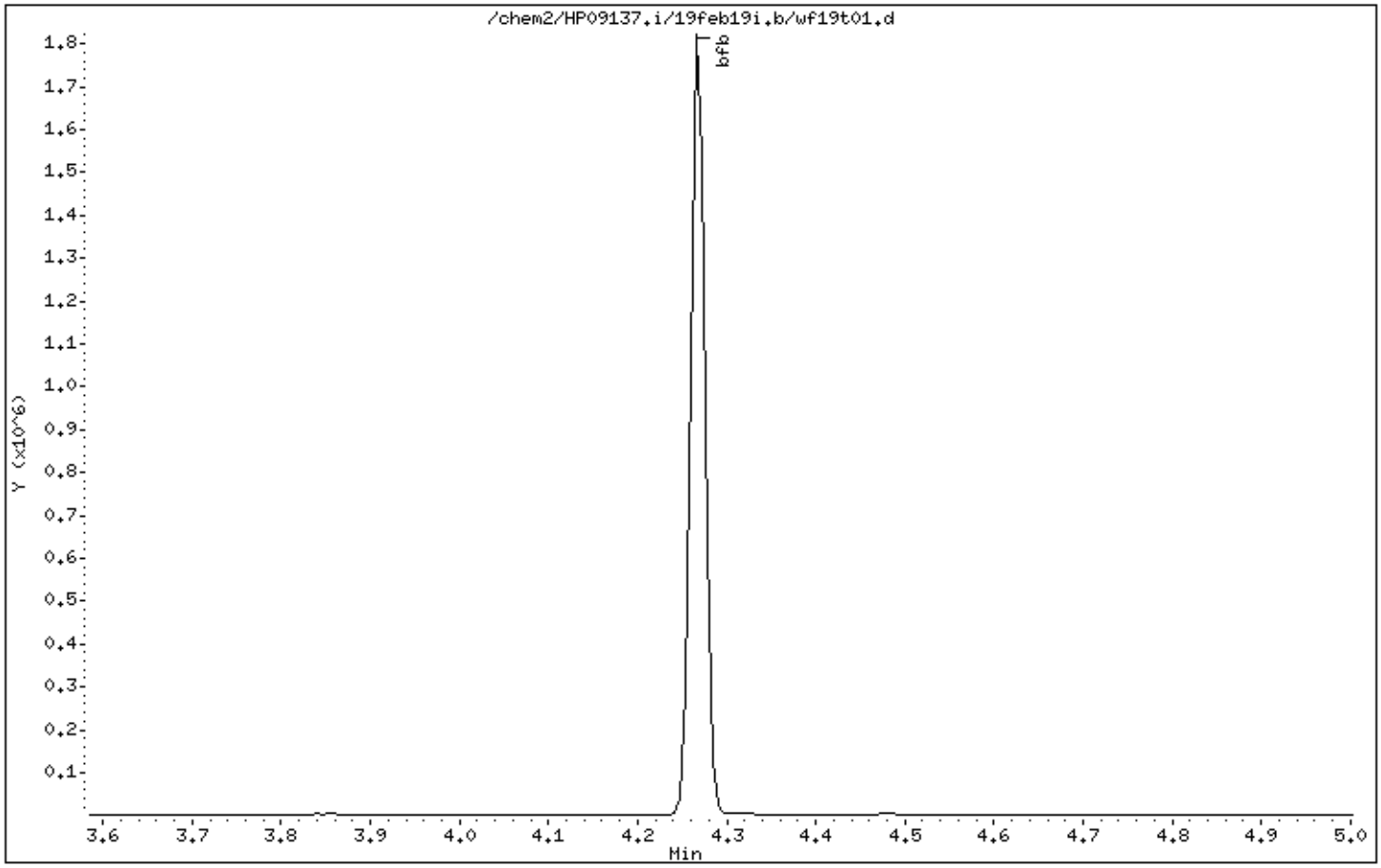
Instrument: HP09137.i

Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: DB-624

Column diameter: 0.18



Digitally signed by Abigail P. Roselli on 02/20/2019 at 07:15.
Target 3.5 esignature user ID: apr27582

Data File: /chem2/HP09137.i/19feb19i.b/wf19t01.d

Date : 19-FEB-2019 11:32

Client ID: FEB05-19

Instrument: HP09137.i

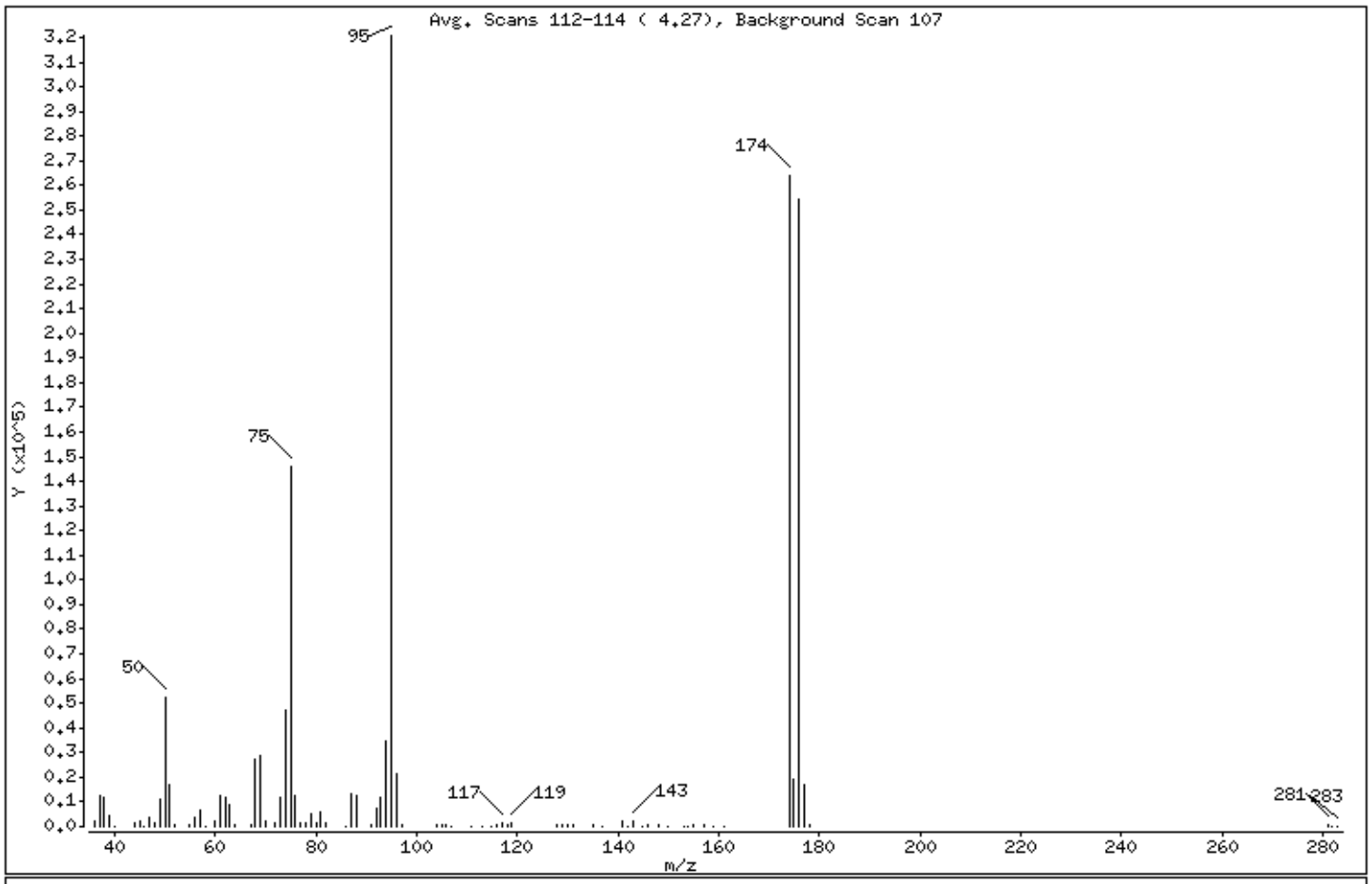
Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.42
75	30.00 - 60.00% of mass 95	45.48
96	5.00 - 9.00% of mass 95	6.75
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	82.25
175	5.00 - 9.00% of mass 174	5.88 (7.14)
176	95.00 - 101.00% of mass 174	79.33 (96.46)
177	5.00 - 9.00% of mass 176	5.24 (6.60)

Digitally signed by Abigail P. Roselli on 02/20/2019 at 07:15.
Target 3.5 esignature user ID: apr27582

Data File: /chem2/HP09137.i/19feb19i.b/wf19t01.d

Date : 19-FEB-2019 11:32

Client ID: FEB05-19 Instrument: HP09137.i

Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: DB-624 Column diameter: 0.18

Data File: wf19t01.d
Spectrum: Avg. Scans 112-114 (4.27), Background Scan 107
Location of Maximum: 95.00
Number of points: 86

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2356	64.00	874	94.00	34376	142.00	237
37.00	12838	67.00	749	95.00	320704	143.00	2536
38.00	11819	68.00	27600	96.00	21656	145.00	91
39.00	4563	69.00	28600	97.00	523	146.00	422
40.00	251	70.00	2130	104.00	986	148.00	700
44.00	1477	72.00	1518	105.00	386	150.00	200
45.00	2478	73.00	11806	106.00	927	153.00	196
46.00	111	74.00	47328	107.00	206	154.00	192
47.00	3965	75.00	145792	111.00	83	155.00	738
48.00	1623	76.00	12750	113.00	91	157.00	589
49.00	11149	77.00	1800	115.00	323	159.00	135
50.00	52656	78.00	1254	116.00	863	161.00	111
51.00	16816	79.00	5441	117.00	1520	174.00	263744
52.00	769	80.00	1674	118.00	967	175.00	18840
55.00	679	81.00	5606	119.00	1205	176.00	254400
56.00	3605	82.00	1114	128.00	1016	177.00	16800
57.00	6852	86.00	238	129.00	498	178.00	482
58.00	344	87.00	13069	130.00	1029	281.00	452
60.00	2409	88.00	12389	131.00	439	282.00	187
61.00	12379	91.00	929	135.00	476	283.00	87
62.00	12164	92.00	7681	137.00	303		
63.00	9186	93.00	11661	141.00	2259		

Digitally signed by Abigail P. Roselli on 02/20/2019 at 07:15.
Target 3.5 esignature user ID: apr27582

Data File: /chem2/HP09137.i/19feb20a.b/wf20t01.d

Date : 20-FEB-2019 08:47

Client ID: FEB05-19

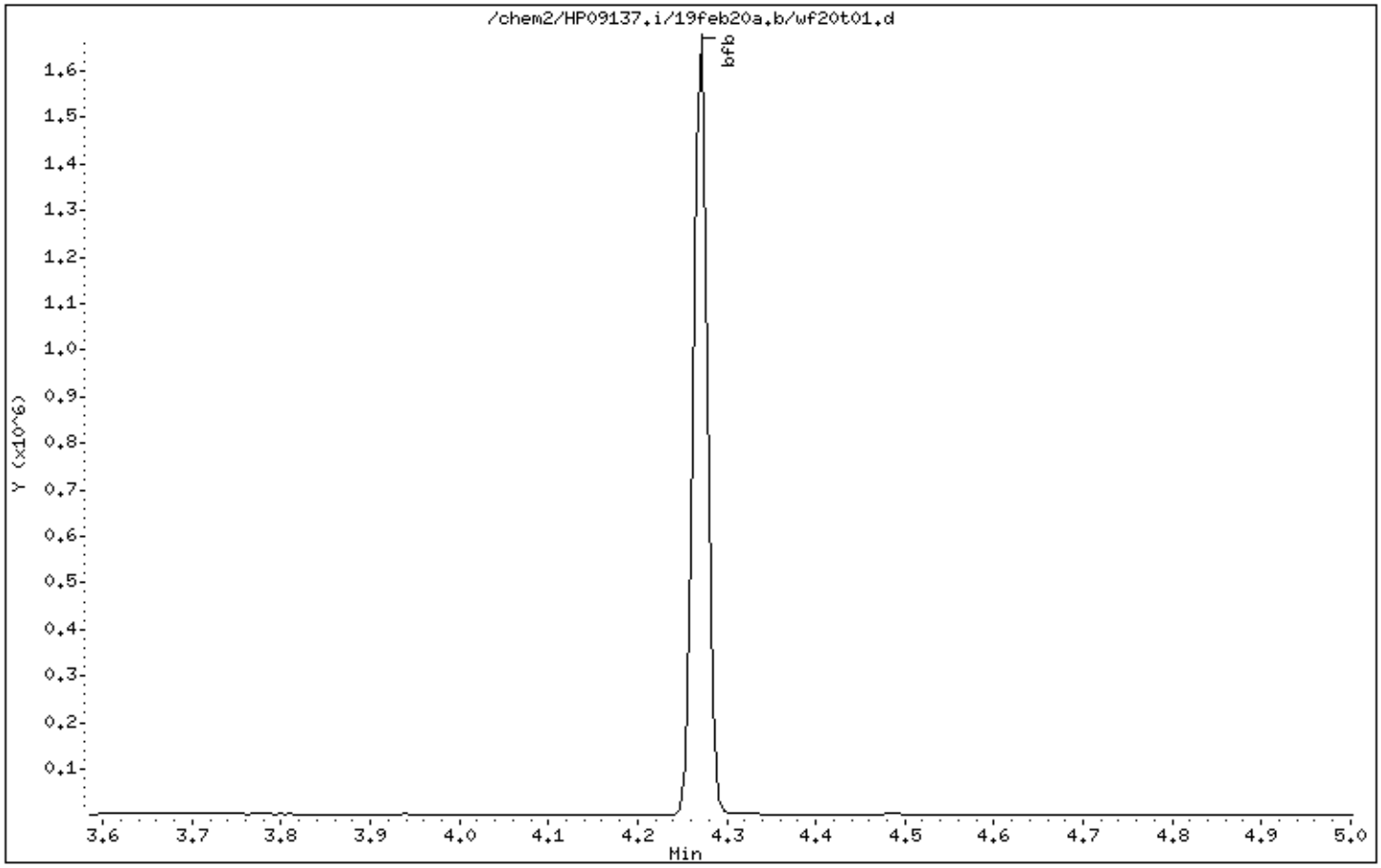
Instrument: HP09137.i

Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: DB-624

Column diameter: 0.18



Digitally signed by Abigail P. Roselli on 02/20/2019 at 08:52.
Target 3.5 esignature user ID: apr27582

Data File: /chem2/HP09137.i/19feb20a.b/wf20t01.d

Date : 20-FEB-2019 08:47

Client ID: FEB05-19

Instrument: HP09137.i

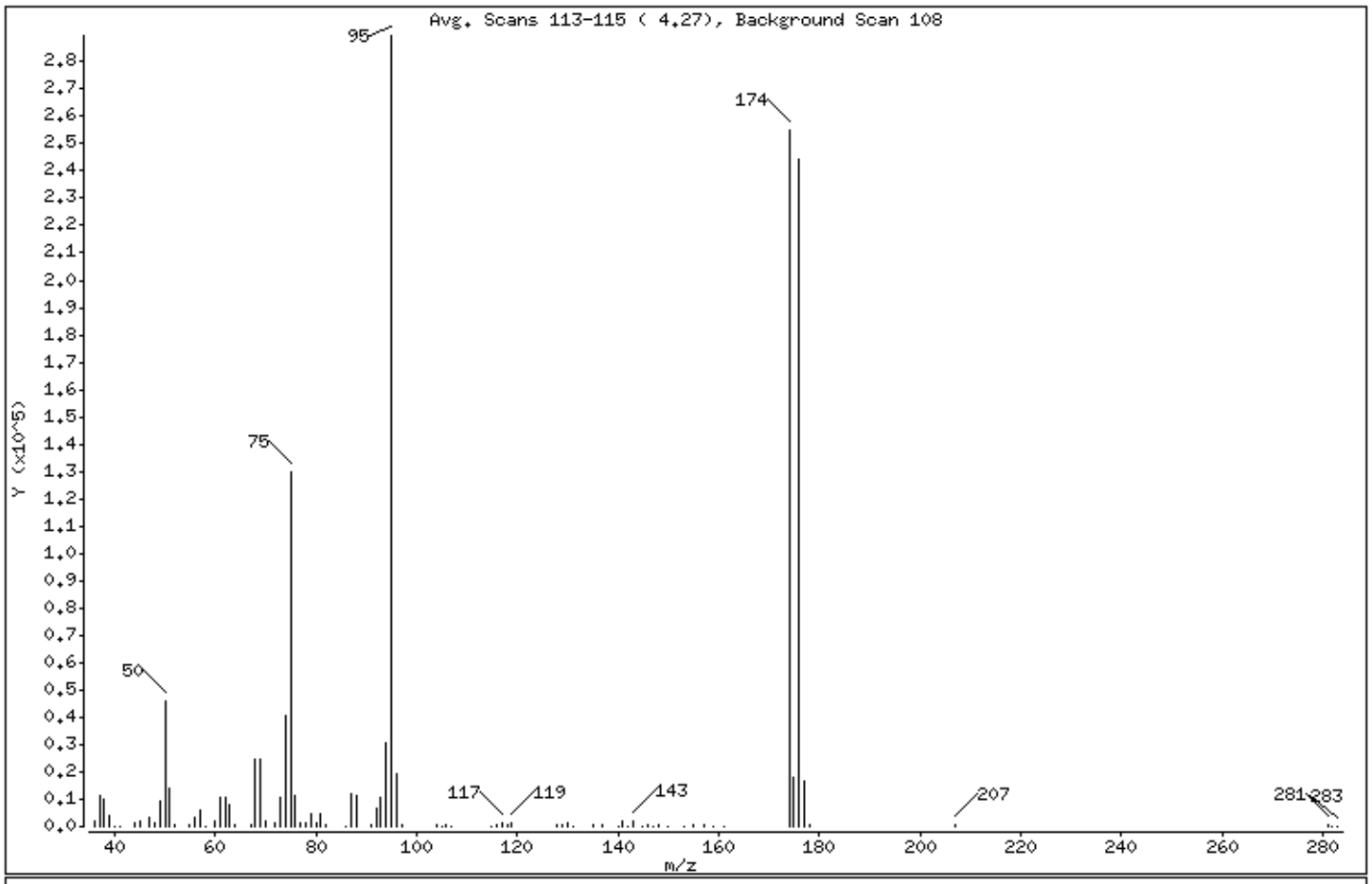
Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.92
75	30.00 - 60.00% of mass 95	44.90
96	5.00 - 9.00% of mass 95	6.65
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	88.14
175	5.00 - 9.00% of mass 174	6.26 (7.10)
176	95.00 - 101.00% of mass 174	84.40 (95.75)
177	5.00 - 9.00% of mass 176	5.69 (6.75)

Digitally signed by Abigail P. Roselli on 02/20/2019 at 08:52.
Target 3.5 esignature user ID: apr27582

Date : 20-FEB-2019 08:47

Client ID: FEB05-19 Instrument: HP09137.i

Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

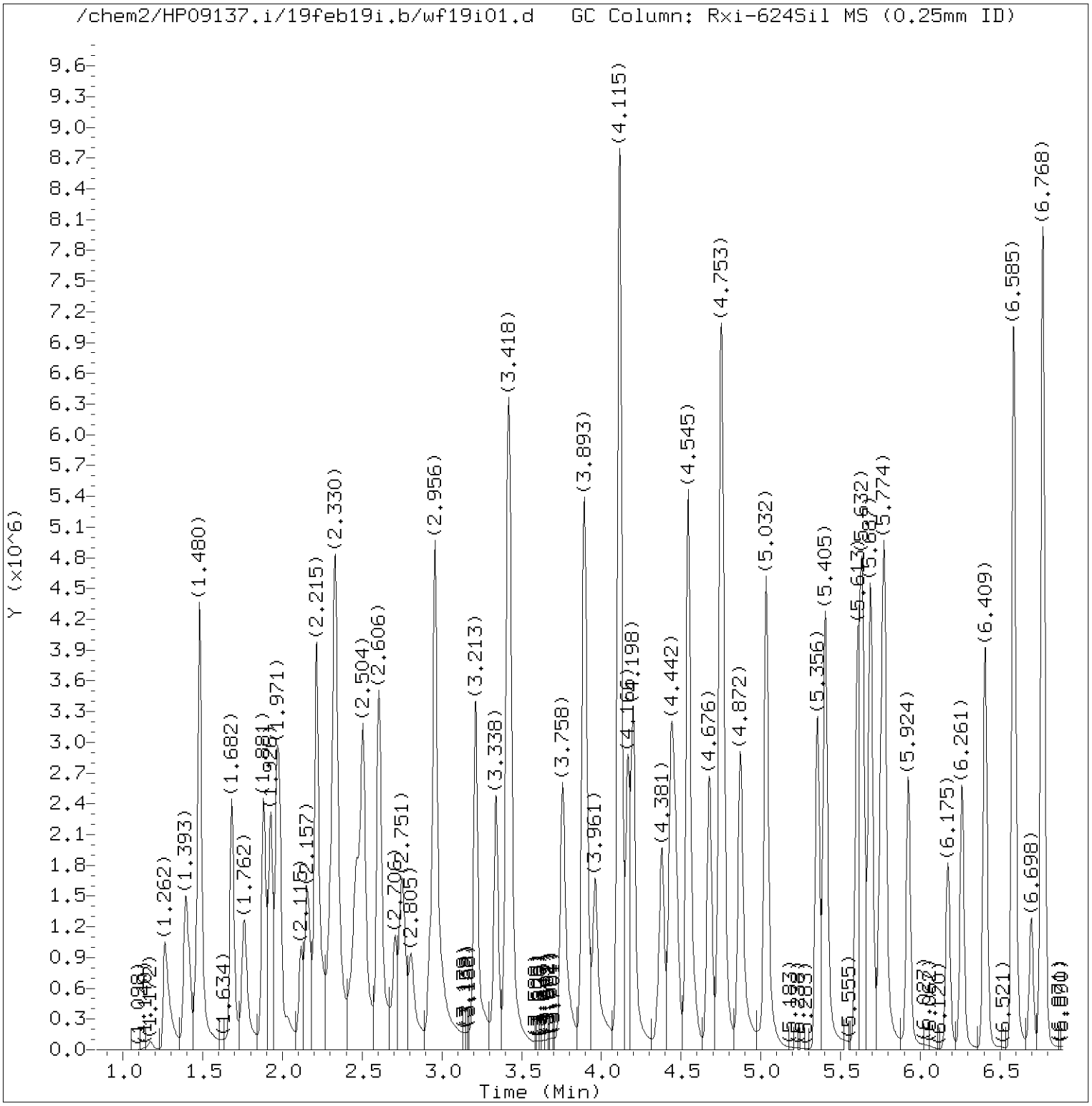
Operator: apr27582

Column phase: DB-624 Column diameter: 0.18

Data File: wf20t01.d
Spectrum: Avg. Scans 113-115 (4.27), Background Scan 108
Location of Maximum: 95.00
Number of points: 86

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2292	64.00	695	94.00	30424	143.00	2131
37.00	11519	67.00	726	95.00	289536	145.00	94
38.00	9778	68.00	24528	96.00	19248	146.00	357
39.00	4147	69.00	24696	97.00	419	147.00	91
40.00	149	70.00	1808	104.00	965	148.00	663
41.00	87	72.00	1344	105.00	326	150.00	173
44.00	1189	73.00	10669	106.00	967	153.00	101
45.00	1920	74.00	40824	107.00	84	155.00	589
47.00	3364	75.00	130008	115.00	92	157.00	513
48.00	1406	76.00	11448	116.00	835	159.00	90
49.00	9232	77.00	1437	117.00	1540	161.00	91
50.00	46088	78.00	1188	118.00	791	174.00	255168
51.00	14176	79.00	4689	119.00	1240	175.00	18112
52.00	576	80.00	1560	128.00	847	176.00	244352
55.00	691	81.00	4855	129.00	488	177.00	16480
56.00	3214	82.00	958	130.00	1039	178.00	430
57.00	5972	86.00	111	131.00	293	207.00	456
58.00	199	87.00	11697	135.00	469	281.00	512
60.00	2132	88.00	11140	137.00	365	282.00	331
61.00	10802	91.00	846	140.00	85	283.00	115
62.00	10922	92.00	6597	141.00	1968		
63.00	8073	93.00	10620	142.00	274		

Digitally signed by Abigail P. Roselli on 02/20/2019 at 08:52.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

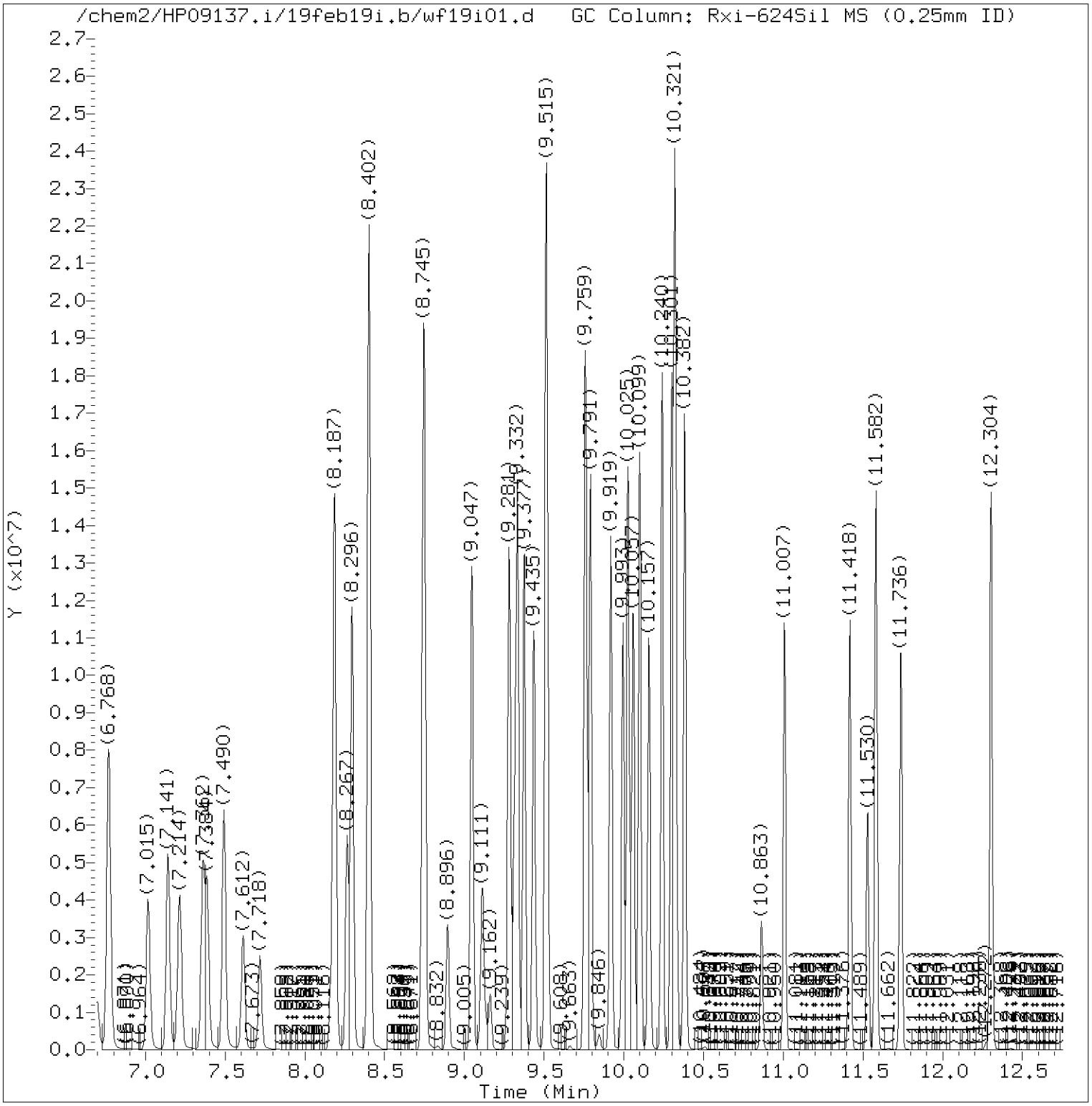
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.262	85	1830028	315.641
4) Chloromethane	(2)	1.397	50	2158390	298.969
6) Vinyl Chloride	(2)	1.467	62	2000231	302.231
5) 1,3-Butadiene	(2)	1.480	39	1294624	294.252
8) Bromomethane	(2)	1.682	94	1609891	308.431
9) Chloroethane	(2)	1.762	64	1225210	281.328
10) Dichlorofluoromethane	(2)	1.881	67	2469513	292.949
12) Trichlorofluoromethane	(2)	1.926	101	2215418	315.186
11) n-Pentane	(2)	1.981	43	1941951	290.504
13) Ethanol	(1)	2.032	45	654026	6868.269
15) Freon 123a	(2)	2.154	67	1544263M	294.005
16) Acrolein	(1)	2.215	56	4710694	3133.863
17) 1,1-Dichloroethene	(2)	2.324	96	1320043	333.906
17) 1,1-Dichloroethene	(2)	2.327	63	636364	319.054
19) Freon 113	(2)	2.330	101	1130965	325.785
18) Acetone	(1)	2.334	58	441895	604.809
21) 2-Propanol	(1)	2.449	45	740976	1364.990
22) Methyl Iodide	(2)	2.465	142	2433926	321.275
23) Carbon Disulfide	(2)	2.504	76	4385958	314.909
25) Allyl Chloride	(2)	2.600	41	2218296M	322.090
27) Methyl Acetate	(2)	2.616	43	1662446	278.873
29)*t-Butyl alcohol-d10	(1)	2.735	65	208793	250.000
28) Methylene Chloride	(2)	2.751	84	1485309M	307.373
30) t-Butyl alcohol	(1)	2.809	59	1347926	1391.981
31) Acrylonitrile	(2)	2.924	53	933874	297.783
32) trans-1,2-Dichloroethene	(2)	2.956	96	1367169	318.737
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	2930120	280.555
34) n-Hexane	(2)	3.213	57	1889144	329.160
36) 1,1-Dichloroethane	(2)	3.338	63	2443808	314.424
38) di-Isopropyl ether	(2)	3.412	45	4343522	290.888
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	2144637	318.591
40) Ethyl t-butyl ether	(2)	3.758	59	3125600	287.165
42) cis-1,2-Dichloroethene	(2)	3.890	96	1531613	318.027
45) 2,2-Dichloropropane	(2)	3.890	77	944483	270.575
44) 2-Butanone	(2)	3.906	43	2571903	570.822
47) Propionitrile	(1)	3.964	54	1942887	1614.356
48) Methacrylonitrile	(2)	4.115	67	2560168	759.258
49) Bromochloromethane	(2)	4.121	128	814405	325.314

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.166	71	727306	652.948
51) Chloroform	(2)	4.201	83	2299180	315.278
52)$Dibromofluoromethane	(2)	4.355	113	208205	50.122
52)$Dibromofluoromethane	(2)	4.355	111	214672	50.342
53) 1,1,1-Trichloroethane	(2)	4.381	97	1712874	312.162
54) Cyclohexane	(2)	4.442	56	2322517	319.833
54) Cyclohexane	(2)	4.445	84	1926454	320.494
54) Cyclohexane	(2)	4.442	69	709917	325.297
55) 1,1-Dichloropropene	(2)	4.545	75	1839194	314.568
56) Carbon Tetrachloride	(2)	4.545	117	1575192	334.514
58) Isobutyl Alcohol	(1)	4.673	41	1324103	3750.712
57)$1,2-Dichloroethane-d4	(2)	4.689	102	53519	48.443
57)$1,2-Dichloroethane-d4	(2)	4.692	65	233334	48.518
57)$1,2-Dichloroethane-d4	(2)	4.689	104	35388	50.297
60) Benzene	(2)	4.750	78	5810714	309.188
61) 1,2-Dichloroethane	(2)	4.766	62	1760449	303.238
61) 1,2-Dichloroethane	(2)	4.766	98	187445	339.366
65) t-Amyl methyl ether	(2)	4.872	73	2919577	261.832
66)*Fluorobenzene	(2)	5.029	96	896646	50.000
67) n-Heptane	(2)	5.036	43	1797080	327.627
69) n-Butanol	(1)	5.356	56	2506205	7995.614
71) Trichloroethene	(2)	5.405	95	1430931	314.409
73) Methylcyclohexane	(2)	5.607	83	2193871	332.036
73) Methylcyclohexane	(2)	5.607	98	1024331	333.422
74) 1,2-Dichloropropane	(2)	5.636	63	1543836	319.971
75) Dibromomethane	(2)	5.754	93	962248	323.143
77) Methyl Methacrylate	(2)	5.774	69	1719359	324.268
76) 1,4-Dioxane	(1)	5.783	88	380560M	4061.259
79) Bromodichloromethane	(2)	5.924	83	1800616	329.105
43) 1,2-Dichloroethene (Total)	(2)		96	2898782	636.764
80) 2-Nitropropane	(2)	6.175	41	1216565	657.181
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	1221742	332.128
82) cis-1,3-Dichloropropene	(2)	6.406	75	2496178	331.820
83) 4-Methyl-2-pentanone	(2)	6.585	43	5276419	594.089
84)$Toluene-d8	(3)	6.698	98	920754	48.955
84)$Toluene-d8	(3)	6.698	100	635513	50.952
89) Toluene	(3)	6.768	92	3764381	310.699
90) trans-1,3-Dichloropropene	(3)	7.015	75	2388350	331.125

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.141	69	2948418	332.666
93) 1,1,2-Trichloroethane	(3)	7.214	97	1462902	313.709
94) Tetrachloroethene	(3)	7.359	166	1538643	312.966
95) 1,3-Dichloropropane	(3)	7.384	76	2548018	314.585
97) 2-Hexanone	(3)	7.490	43	4182184	592.716
98) Dibromochloromethane	(3)	7.612	129	1599809	351.250
100) 1,2-Dibromoethane	(3)	7.718	107	1653551	322.750
101)*Chlorobenzene-d5	(3)	8.161	117	750584	50.000
103) Chlorobenzene	(3)	8.187	112	4251585	316.321
104) 1,1,1,2-Tetrachloroethane	(3)	8.267	131	1472432	340.894
105) Ethylbenzene	(3)	8.296	91	7172946	311.494
107) m+p-Xylene	(3)	8.402	106	5900396	644.458
108) o-Xylene	(3)	8.742	106	2944288	326.885
110) Styrene	(3)	8.751	104	5111867	338.315
111) Bromoform	(3)	8.896	173	1332048	375.784
112) Isopropylbenzene	(3)	9.047	105	6974372	315.109
113) Cyclohexanone	(1)	9.114	55	1785966	4225.220
115)$4-Bromofluorobenzene	(3)	9.162	95	381876	50.752
115)$4-Bromofluorobenzene	(3)	9.165	174	321796	50.682
116) Bromobenzene	(4)	9.278	156	2001950	310.704
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	2675009	307.862
118) 1,2,3-Trichloropropane	(4)	9.313	110	793023	303.003
119) trans-1,4-Dichloro-2-butene	(4)	9.332	53	2093586	751.374
120) n-Propylbenzene	(4)	9.377	91	8126022	286.087
121) 2-Chlorotoluene	(4)	9.435	126	1813407	309.524
123) 1,3,5-Trimethylbenzene	(4)	9.512	105	6283549	306.739
122) 4-Chlorotoluene	(4)	9.518	126	1986374	316.718
125) tert-Butylbenzene	(4)	9.756	134	1469098	315.656
126) Pentachloroethane	(4)	9.765	167	1314293	357.228
127) 1,2,4-Trimethylbenzene	(4)	9.791	105	6515518	301.836
128) sec-Butylbenzene	(4)	9.919	105	7350716	292.333
130) 1,3-Dichlorobenzene	(4)	9.993	146	3744438	304.756
131) p-Isopropyltoluene	(4)	10.025	119	6646629	298.604
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	447340	50.000
134) 1,4-Dichlorobenzene	(4)	10.061	146	3824950	300.290
91) 1,3-Dichloropropene (total)	(3)		100	4884528	662.945
135) 1,2,3-Trimethylbenzene	(4)	10.099	105	6932082	298.464
136) Benzyl Chloride	(4)	10.157	91	5948413	333.650

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$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.240	119	4321366	308.975
138) 1,4-Diethylbenzene	(4)	10.301	119	4611431	307.745
140) n-Butylbenzene	(4)	10.317	92	3453634	307.409
139) 1,2-Dichlorobenzene	(4)	10.324	146	3754829	308.029
141) 1,2-Diethylbenzene	(4)	10.382	119	3619472	306.525
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	622910	315.447
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	2798024	299.339
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	2685608	299.261
148) Hexachlorobutadiene	(4)	11.530	225	896485	280.479
149) Naphthalene	(4)	11.582	128	8569412	282.213
150) 1,2,3-Trichlorobenzene	(4)	11.739	180	2579036	294.437
109) Xylene (Total)	(3)		106	8844684	971.343
151) 2-Methylnaphthalene	(4)	12.304	142	5243189	302.657
142) Diethylbenzene (total)	(4)		100	12552269	923.245

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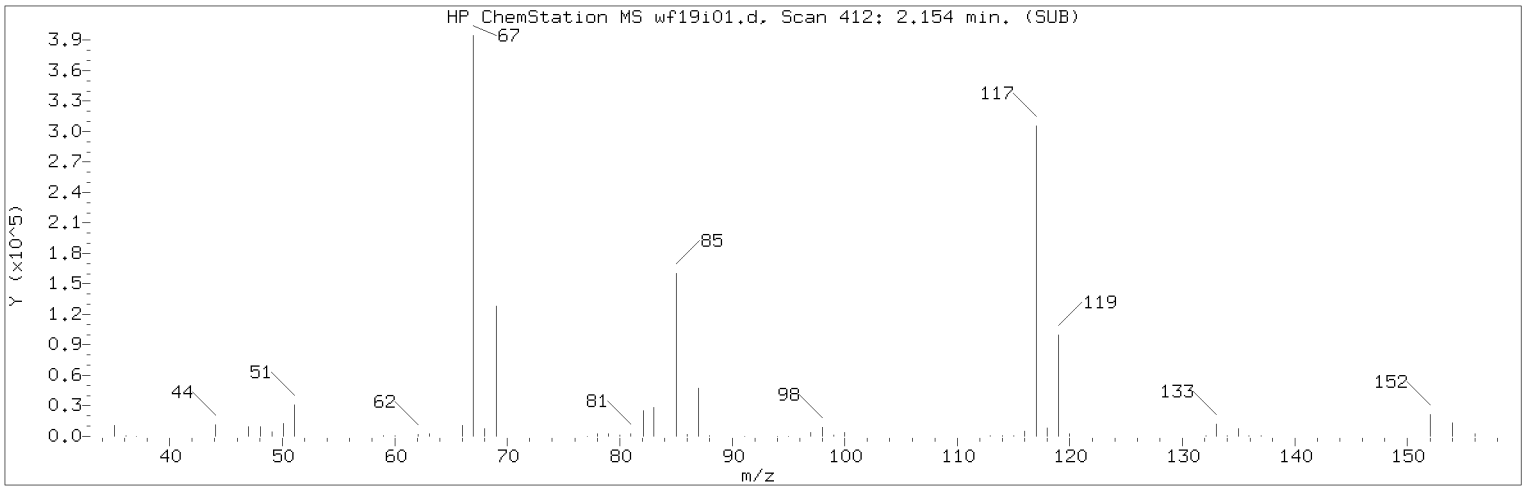
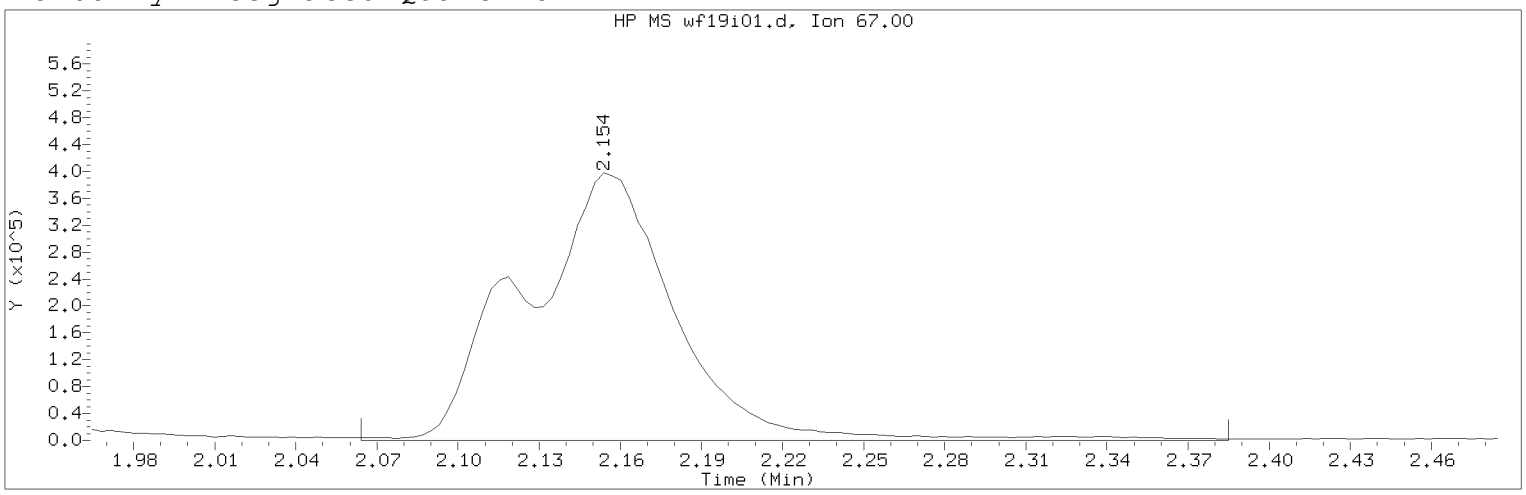
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

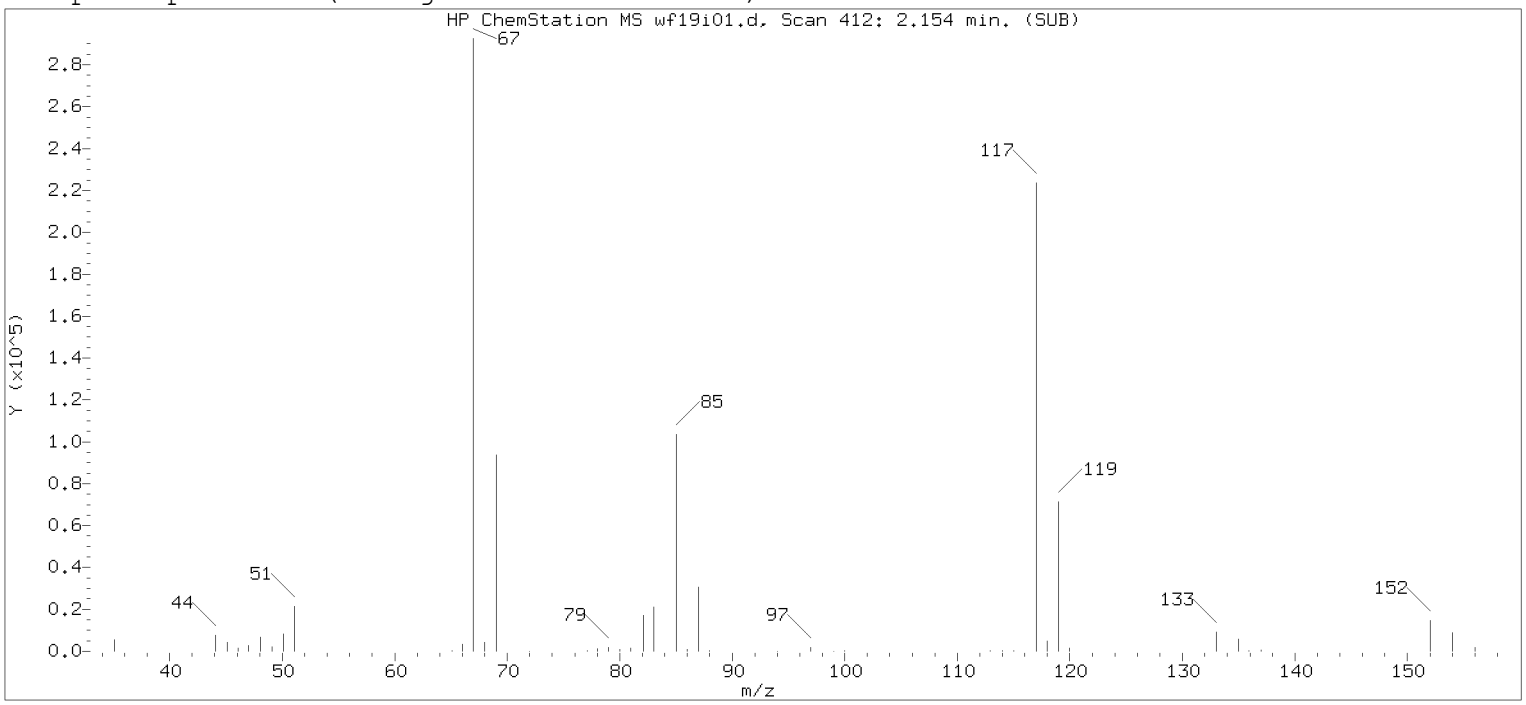
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 412
Retention Time (minutes): 2.154
Quant Ion : 67.00
Area (flag) : 1544263M
On-Column Amount (ng) : 294.0053
Integration start scan : 383 Integration stop scan: 483
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

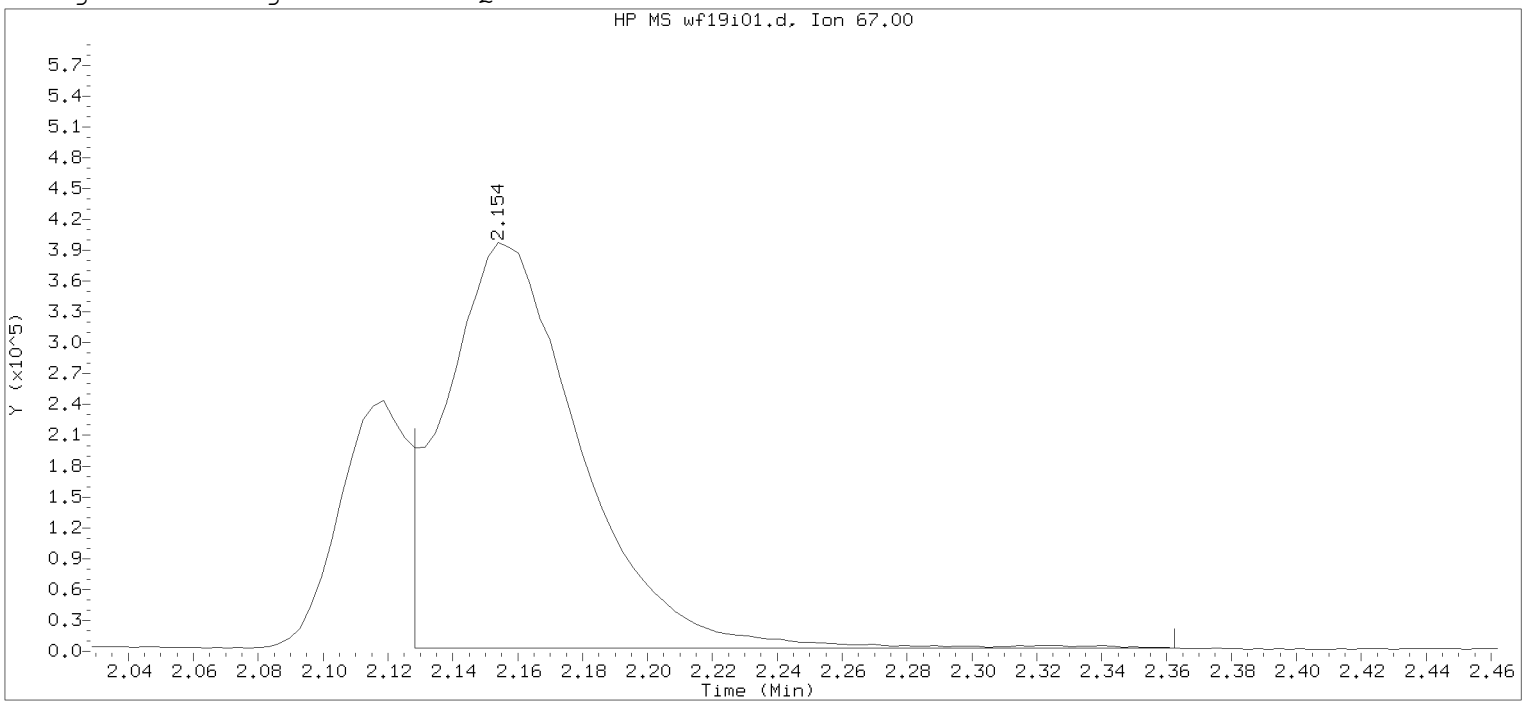
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

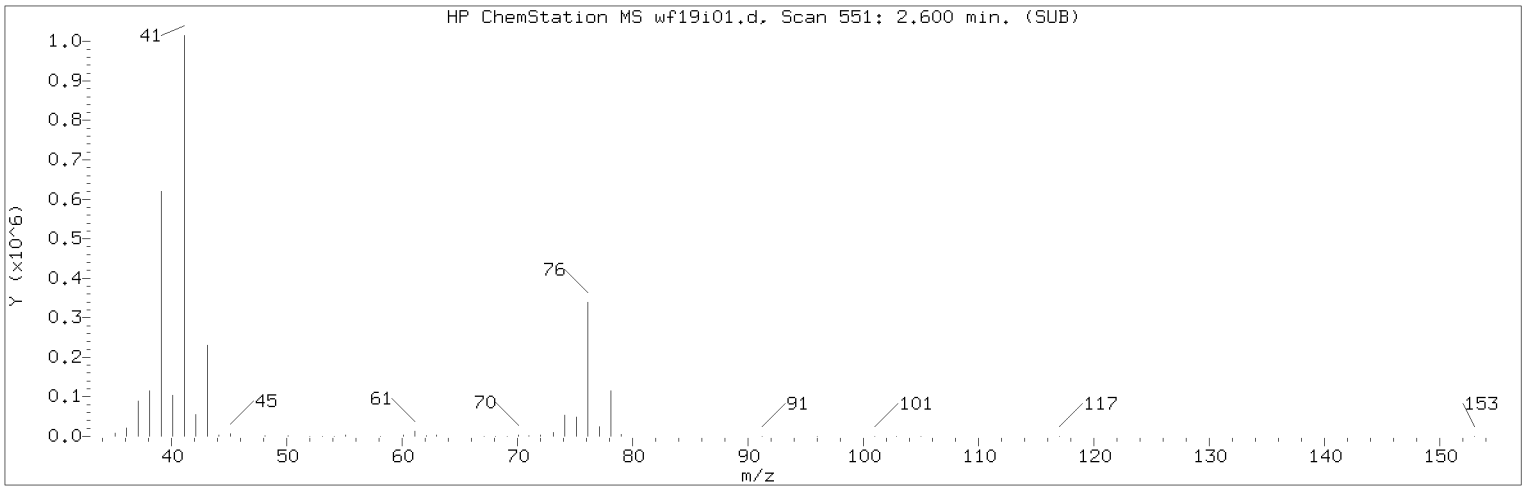
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

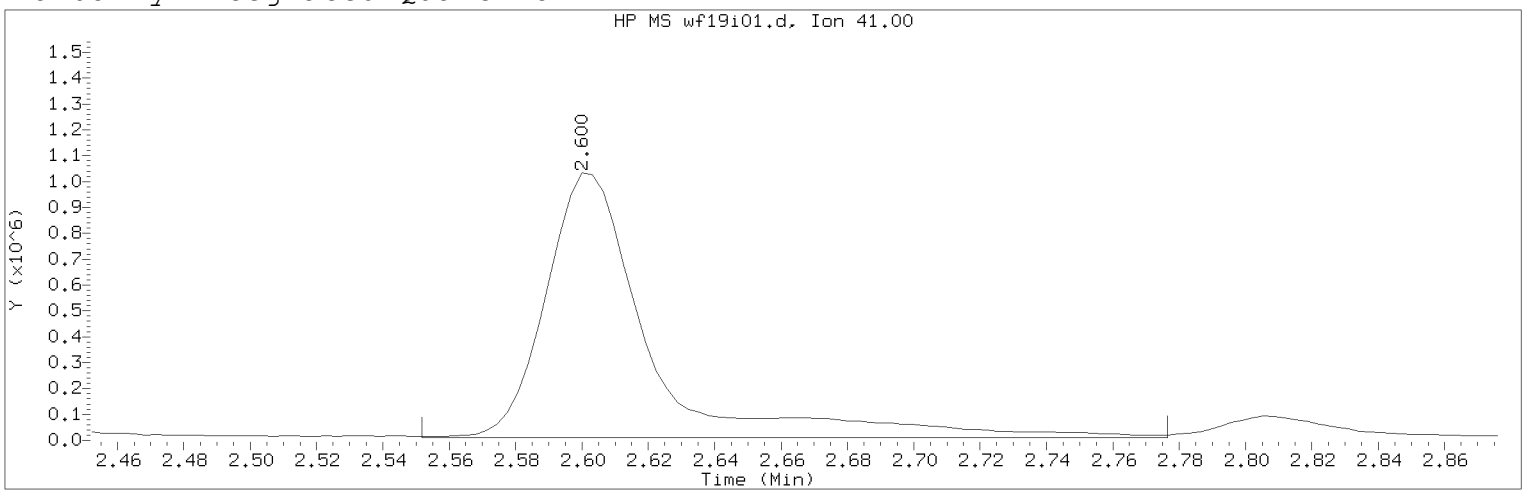
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 412
Retention Time (minutes): 2.154
Quant Ion : 67.00
Area : 1136730
On-column Amount (ng) : 300.0000
Integration start scan : 403 Integration stop scan: 476
Y at integration start : 3233 Y at integration end: 2941

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

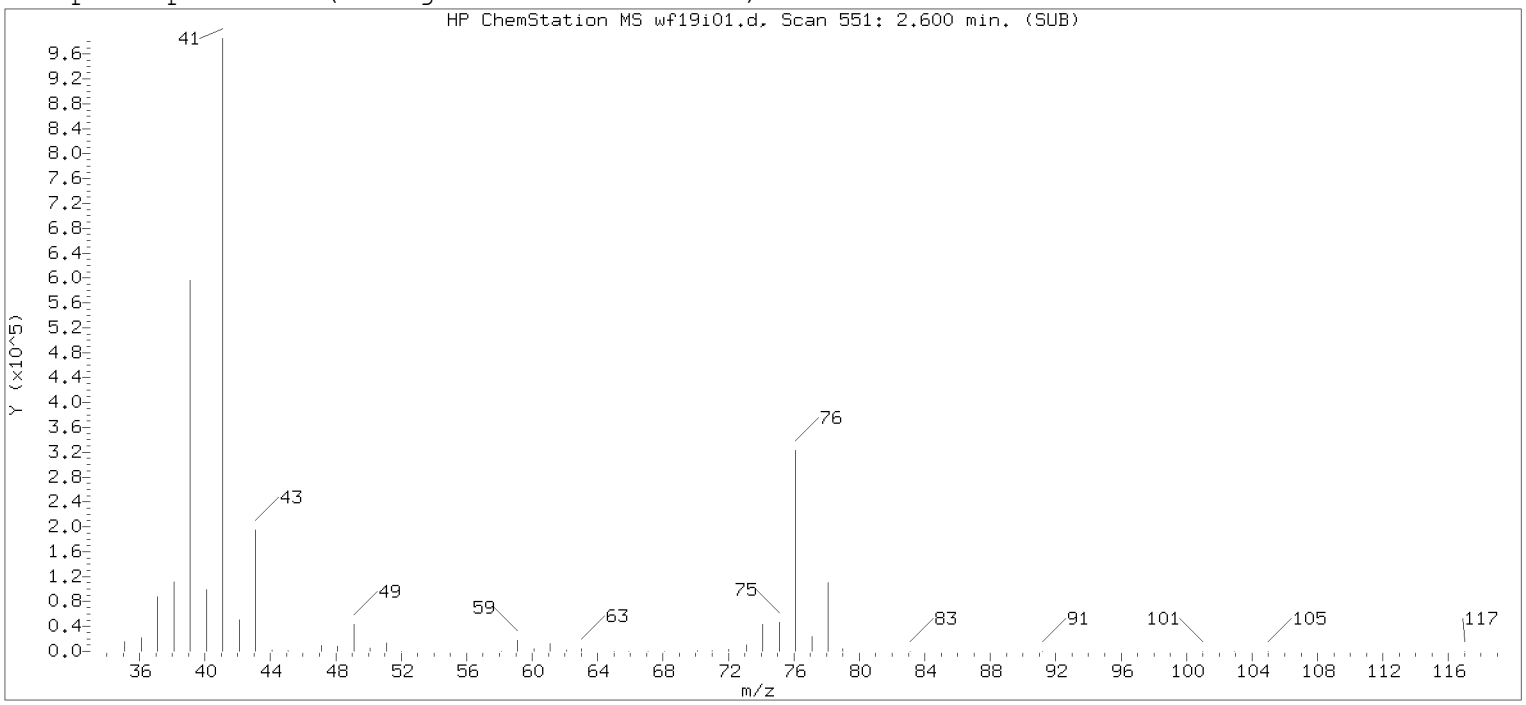
Compound Number : 25
Compound Name : Allyl Chloride
Scan Number : 551
Retention Time (minutes): 2.600
Quant Ion : 41.00
Area (flag) : 2218296M
On-Column Amount (ng) : 322.0900
Integration start scan : 535 Integration stop scan: 605
Y at integration start : 10829 Y at integration end: 10829

Reason for manual integration: improper integration

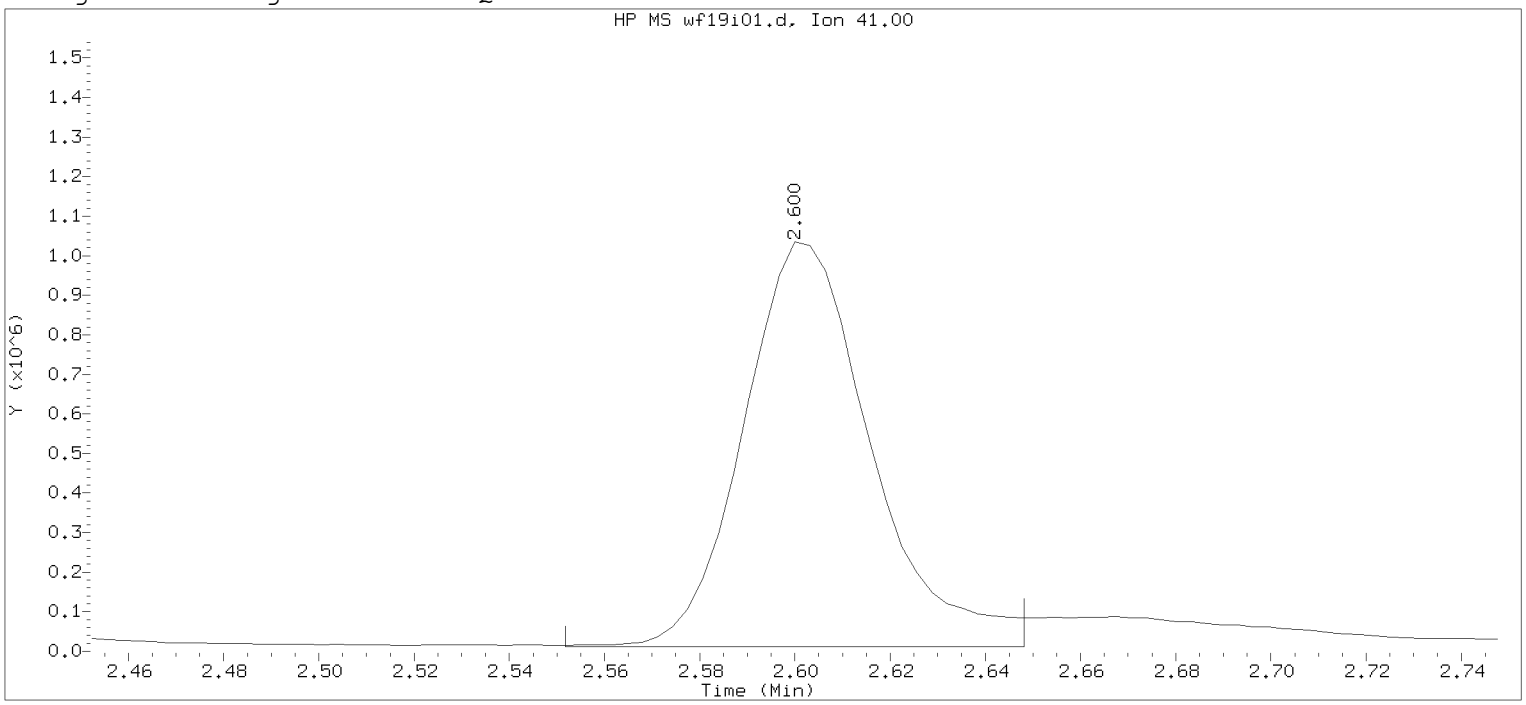
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



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Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 25
Compound Name : Allyl Chloride
Scan Number : 551
Retention Time (minutes): 2.600
Quant Ion : 41.00
Area : 1896643
On-column Amount (ng) : 300.0000
Integration start scan : 535 Integration stop scan: 565
Y at integration start : 11574 Y at integration end: 11574

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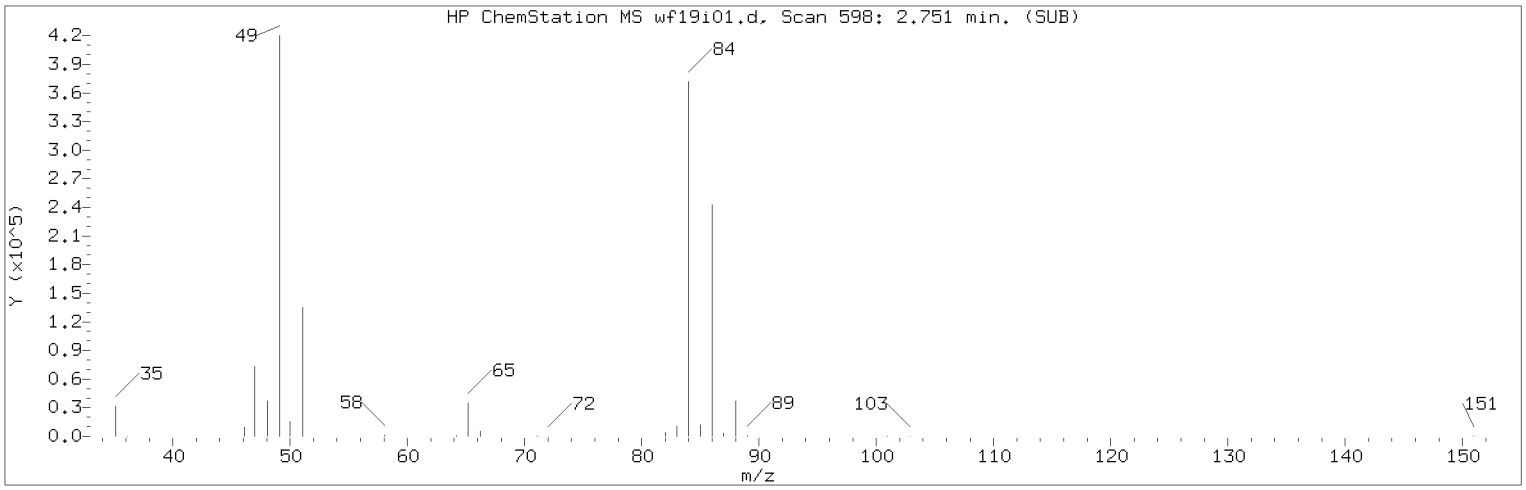
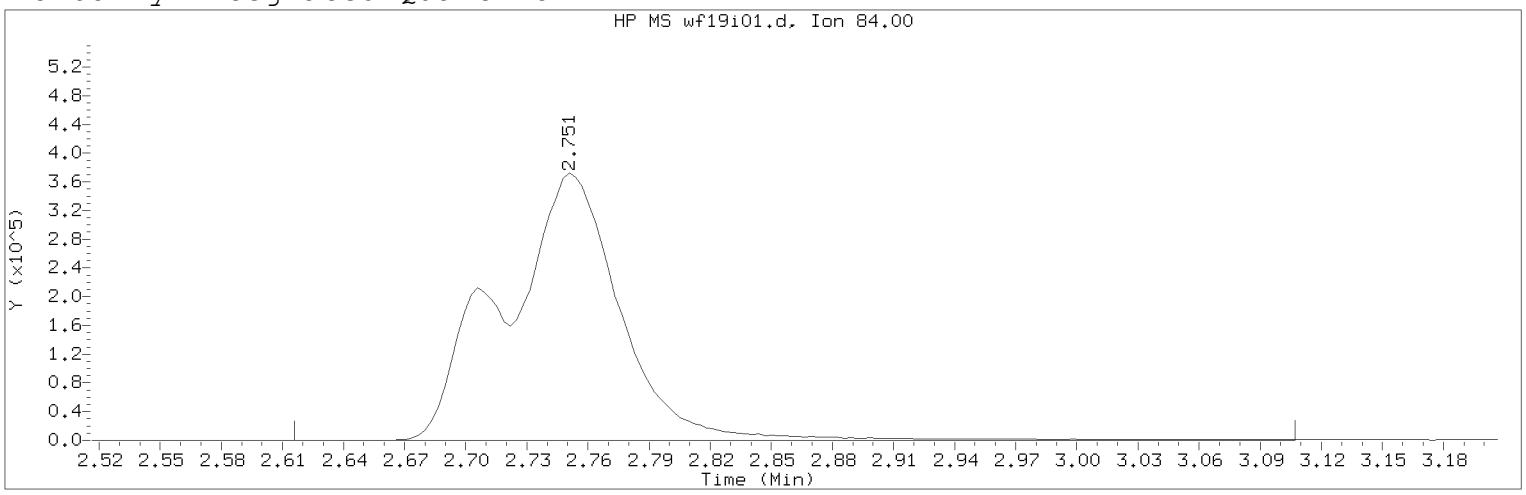
Target 3.5 esignature user apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

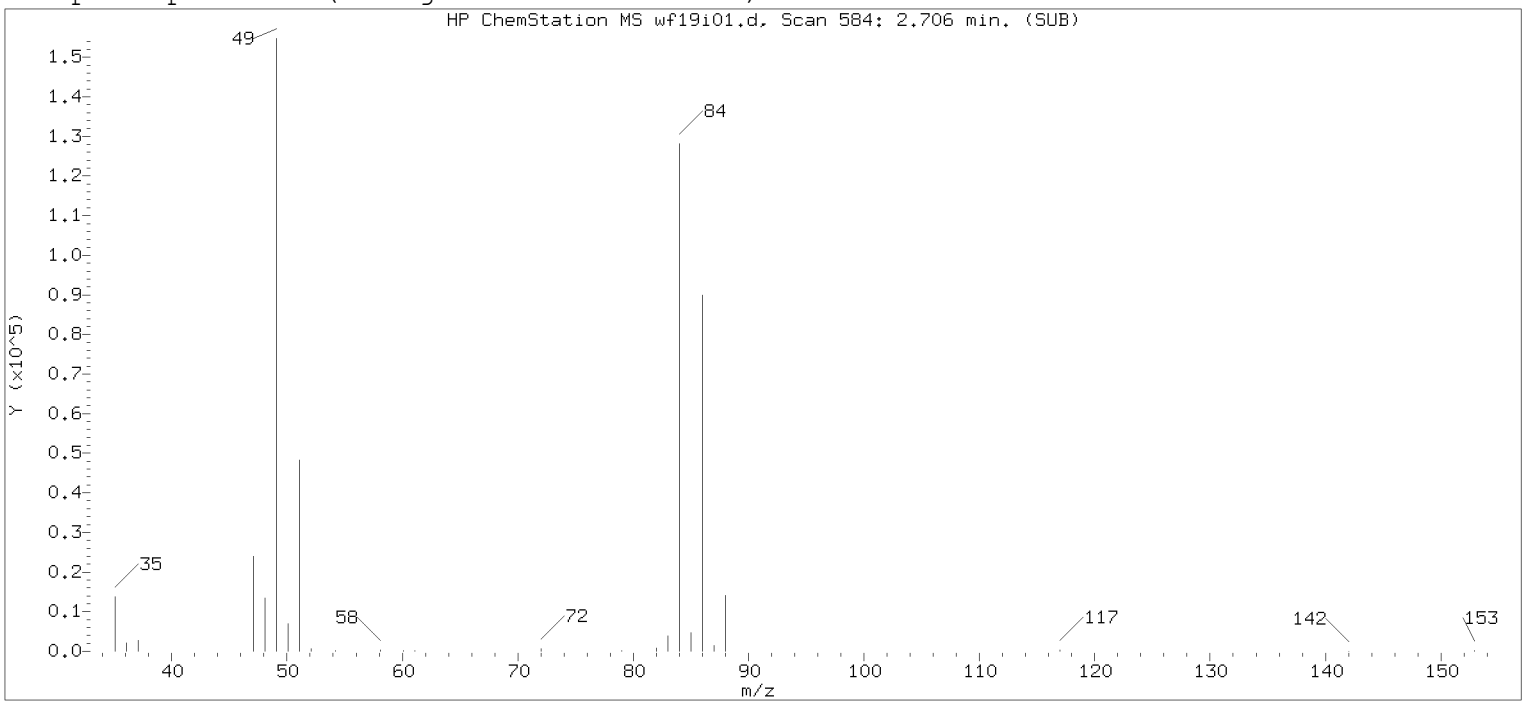
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 598
Retention Time (minutes): 2.751
Quant Ion : 84.00
Area (flag) : 1485309M
On-Column Amount (ng) : 307.3734
Integration start scan : 555 Integration stop scan: 708
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

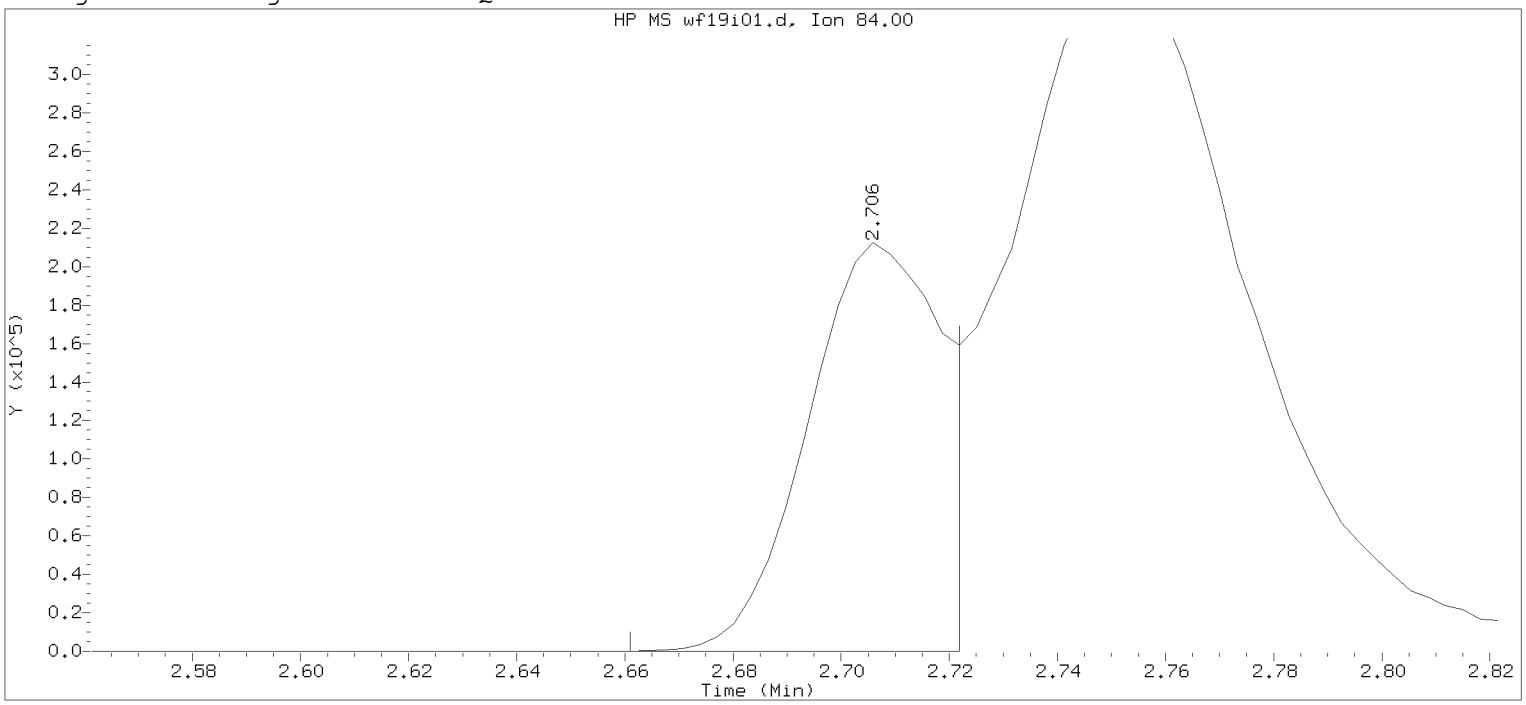
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

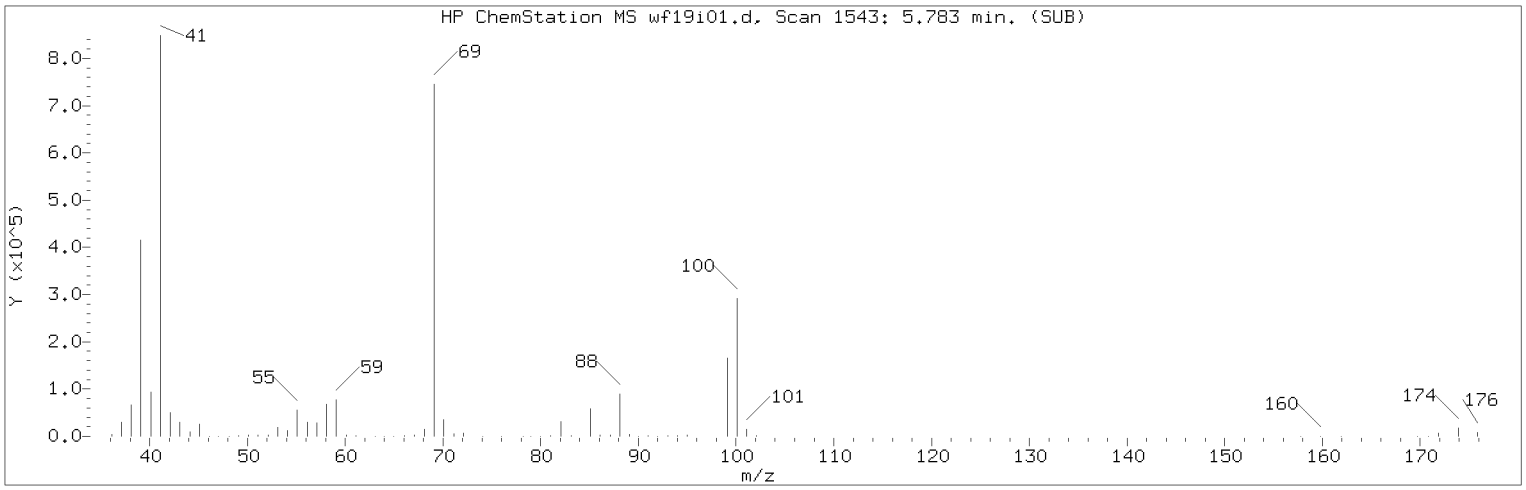
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

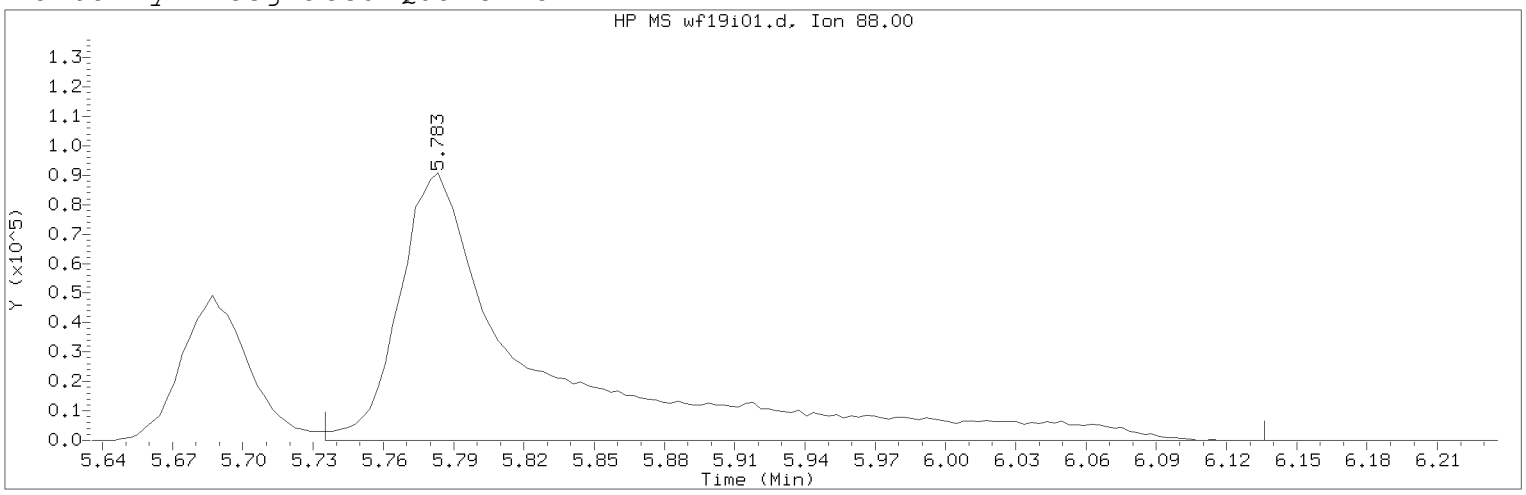
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 584
Retention Time (minutes): 2.706
Quant Ion : 84.00
Area : 358731
On-column Amount (ng) : 300.0000
Integration start scan : 569 Integration stop scan: 588
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

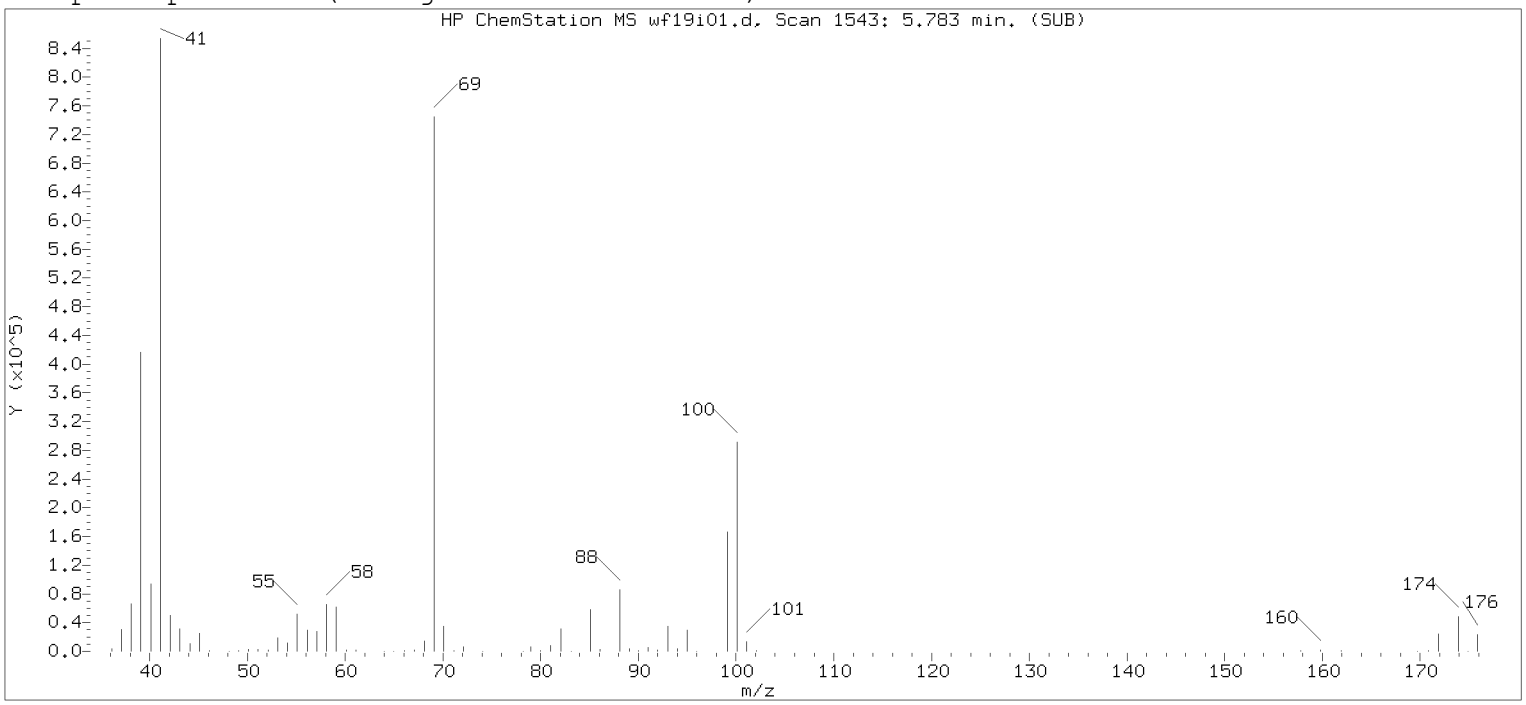
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1543
Retention Time (minutes): 5.783
Quant Ion : 88.00
Area (flag) : 380560M
On-Column Amount (ng) : 4061.2594
Integration start scan : 1527 Integration stop scan: 1652
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

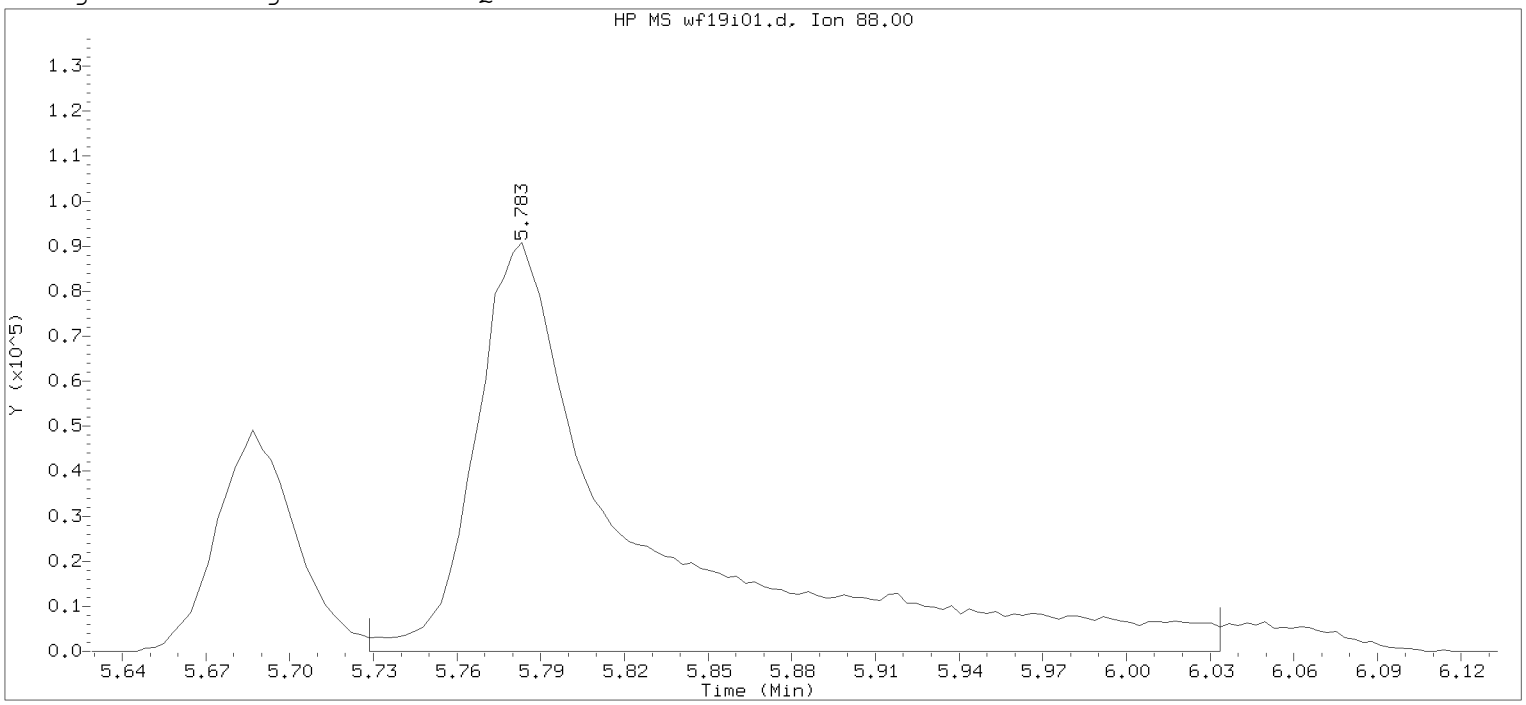
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



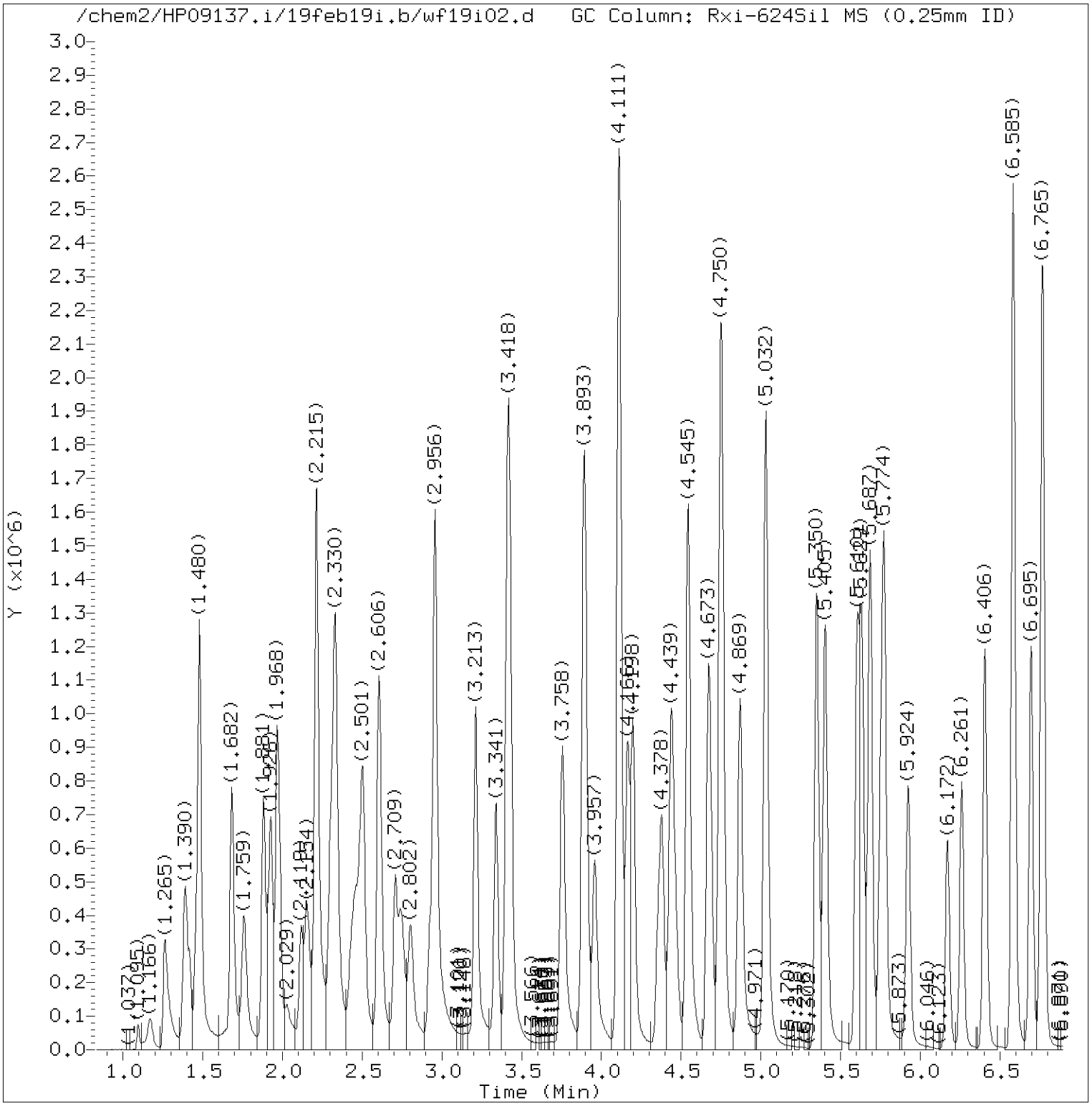
Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1543
Retention Time (minutes): 5.783
Quant Ion : 88.00
Area : 364823
On-column Amount (ng) : 3750.0000
Integration start scan : 1525 Integration stop scan: 1620
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user Abigail P. Roselli



Total Ion Chromatogram (TIC)

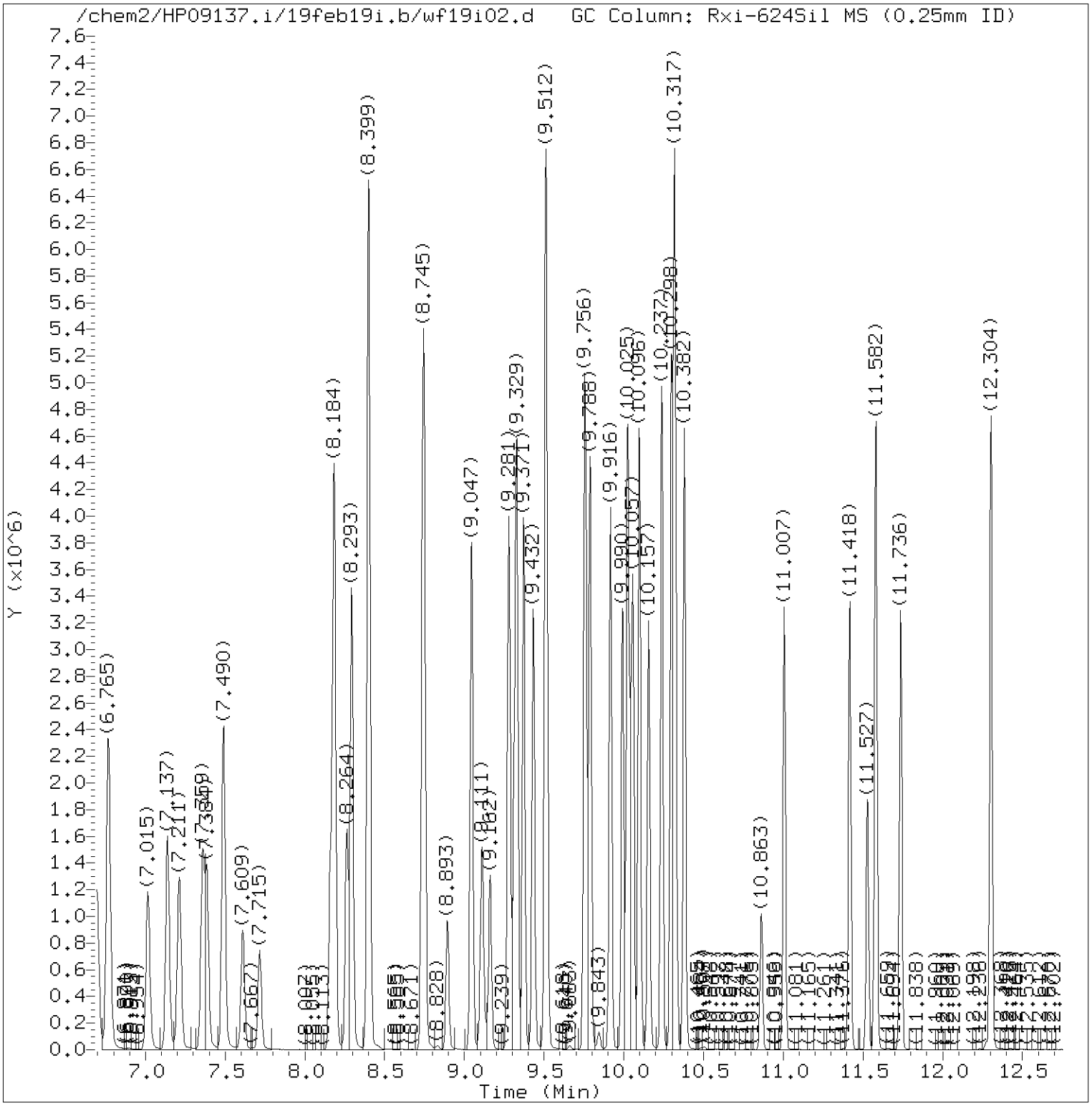
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.265	85	532286	97.759
4) Chloromethane	(2)	1.390	50	662027	97.645
6) Vinyl Chloride	(2)	1.461	62	607652	97.766
5) 1,3-Butadiene	(2)	1.480	39	375111	90.785
8) Bromomethane	(2)	1.682	94	485723	99.089
9) Chloroethane	(2)	1.756	64	376986	92.173
10) Dichlorofluoromethane	(2)	1.881	67	739116	93.362
12) Trichlorofluoromethane	(2)	1.926	101	651101	98.636
11) n-Pentane	(2)	1.968	43	576023	91.755
13) Ethanol	(1)	2.032	45	238813	2376.796
15) Freon 123a	(2)	2.154	67	447423M	90.704
16) Acrolein	(1)	2.215	56	1612064	1016.387
17) 1,1-Dichloroethene	(2)	2.321	96	368528	99.262
17) 1,1-Dichloroethene	(2)	2.324	63	178834	95.474
19) Freon 113	(2)	2.327	101	324542	99.547
18) Acetone	(1)	2.334	58	146760	190.366
21) 2-Propanol	(1)	2.446	45	307931	537.602
22) Methyl Iodide	(2)	2.462	142	704010M	98.952
23) Carbon Disulfide	(2)	2.504	76	1282599	98.059
25) Allyl Chloride	(2)	2.603	41	655452	101.339
27) Methyl Acetate	(2)	2.619	43	535082	95.578
28) Methylene Chloride	(2)	2.709	84	428209	94.359
29)*t-Butyl alcohol-d10	(1)	2.732	65	220310	250.000
30) t-Butyl alcohol	(1)	2.805	59	526469	515.255
31) Acrylonitrile	(2)	2.924	53	304031	103.230
32) trans-1,2-Dichloroethene	(2)	2.956	96	402067	99.813
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	945603	96.409
34) n-Hexane	(2)	3.213	57	538355	99.882
36) 1,1-Dichloroethane	(2)	3.341	63	732003	100.285
38) di-Isopropyl ether	(2)	3.412	45	1396389	99.579
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	632191	100.001
40) Ethyl t-butyl ether	(2)	3.758	59	960285	93.945
42) cis-1,2-Dichloroethene	(2)	3.890	96	451707	99.873
45) 2,2-Dichloropropane	(2)	3.890	77	324555	99.005
44) 2-Butanone	(2)	3.903	43	860004	203.247
47) Propionitrile	(1)	3.961	54	609727	480.141
48) Methacrylonitrile	(2)	4.108	67	777971	245.675
49) Bromochloromethane	(2)	4.118	128	236720	100.687

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.166	71	230330	195.972
51) Chloroform	(2)	4.198	83	681837	99.558
52)$Dibromofluoromethane	(2)	4.352	113	193818	49.683
52)$Dibromofluoromethane	(2)	4.355	111	202190	50.488
53) 1,1,1-Trichloroethane	(2)	4.378	97	514779	99.897
54) Cyclohexane	(2)	4.442	56	662674	97.172
54) Cyclohexane	(2)	4.439	84	552208	97.823
54) Cyclohexane	(2)	4.442	69	200038	97.603
55) 1,1-Dichloropropene	(2)	4.545	75	537698	97.927
56) Carbon Tetrachloride	(2)	4.545	117	449800	101.713
58) Isobutyl Alcohol	(1)	4.670	41	498266	1337.627
57)$1,2-Dichloroethane-d4	(2)	4.689	102	51772	49.899
57)$1,2-Dichloroethane-d4	(2)	4.689	65	224469	49.700
57)$1,2-Dichloroethane-d4	(2)	4.689	104	32929	49.836
60) Benzene	(2)	4.747	78	1745793	98.915
61) 1,2-Dichloroethane	(2)	4.766	62	527693	96.787
61) 1,2-Dichloroethane	(2)	4.763	98	54900	105.839
65) t-Amyl methyl ether	(2)	4.869	73	996307	95.142
66)*Fluorobenzene	(2)	5.029	96	842063	50.000
67) n-Heptane	(2)	5.036	43	494804	96.055
69) n-Butanol	(1)	5.353	56	936370	2831.160
71) Trichloroethene	(2)	5.405	95	426587	99.807
73) Methylcyclohexane	(2)	5.607	83	609561	98.235
73) Methylcyclohexane	(2)	5.604	98	284401	98.574
74) 1,2-Dichloropropane	(2)	5.632	63	460305	101.585
75) Dibromomethane	(2)	5.754	93	287206	102.702
77) Methyl Methacrylate	(2)	5.774	69	522673	104.965
76) 1,4-Dioxane	(1)	5.780	88	133422M	1349.419
79) Bromodichloromethane	(2)	5.924	83	538662	104.835
43) 1,2-Dichloroethene (Total)	(2)		96	853774	199.686
80) 2-Nitropropane	(2)	6.172	41	392793	225.938
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	375619	108.730
82) cis-1,3-Dichloropropene	(2)	6.406	75	742975	105.167
83) 4-Methyl-2-pentanone	(2)	6.582	43	1875717	224.883
84)$Toluene-d8	(3)	6.695	98	874156	49.795
84)$Toluene-d8	(3)	6.695	100	585880	50.326
89) Toluene	(3)	6.765	92	1120657	99.097
90) trans-1,3-Dichloropropene	(3)	7.015	75	707175	105.042

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.137	69	893065	107.955
93) 1,1,2-Trichloroethane	(3)	7.211	97	446415	102.563
94) Tetrachloroethene	(3)	7.359	166	451061	98.296
95) 1,3-Dichloropropane	(3)	7.388	76	768151	101.607
97) 2-Hexanone	(3)	7.490	43	1550240	235.388
98) Dibromochloromethane	(3)	7.609	129	468005	110.088
100) 1,2-Dibromoethane	(3)	7.715	107	494533	103.416
101)*Chlorobenzene-d5	(3)	8.161	117	700579	50.000
103) Chlorobenzene	(3)	8.187	112	1242086	99.008
104) 1,1,1,2-Tetrachloroethane	(3)	8.264	131	424147	105.206
105) Ethylbenzene	(3)	8.293	91	2139903	99.561
107) m+p-Xylene	(3)	8.399	106	1713085	200.463
108) o-Xylene	(3)	8.739	106	843483	100.330
110) Styrene	(3)	8.748	104	1474099	104.523
111) Bromoform	(3)	8.893	173	379562	114.721
112) Isopropylbenzene	(3)	9.047	105	2075316	100.458
113) Cyclohexanone	(1)	9.111	55	575999	1291.456
115)$4-Bromofluorobenzene	(3)	9.162	95	350858	49.958
115)$4-Bromofluorobenzene	(3)	9.162	174	295274	49.824
116) Bromobenzene	(4)	9.278	156	567523	99.066
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	803775	104.043
118) 1,2,3-Trichloropropane	(4)	9.313	110	239124	102.762
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	643492	259.751
120) n-Propylbenzene	(4)	9.371	91	2463393	97.544
121) 2-Chlorotoluene	(4)	9.432	126	515018	98.871
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	1822759	100.079
122) 4-Chlorotoluene	(4)	9.515	126	553747	99.305
125) tert-Butylbenzene	(4)	9.756	134	406285	98.184
126) Pentachloroethane	(4)	9.765	167	342023	104.558
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	1913889	99.721
128) sec-Butylbenzene	(4)	9.916	105	2197034	98.273
130) 1,3-Dichlorobenzene	(4)	9.993	146	1077708	98.654
131) p-Isopropyltoluene	(4)	10.022	119	1972426	99.665
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	397731	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	1113649	98.336
91) 1,3-Dichloropropene (total)	(3)		100	1450150	210.209
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	2033938	98.495
136) Benzyl Chloride	(4)	10.157	91	1788288	112.817

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

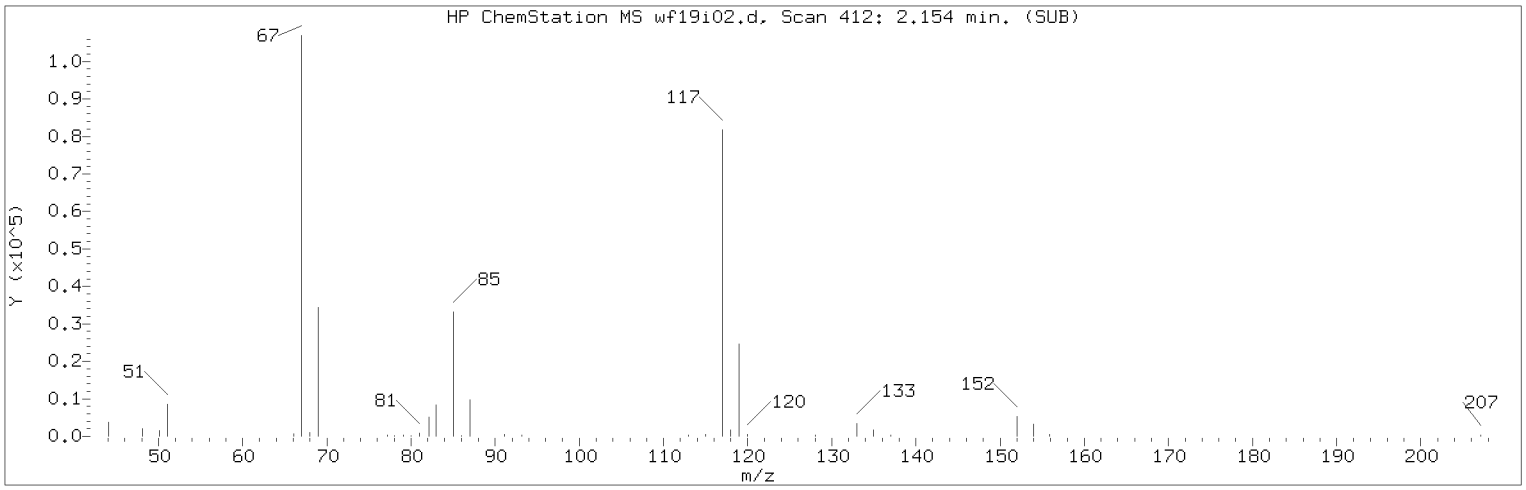
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

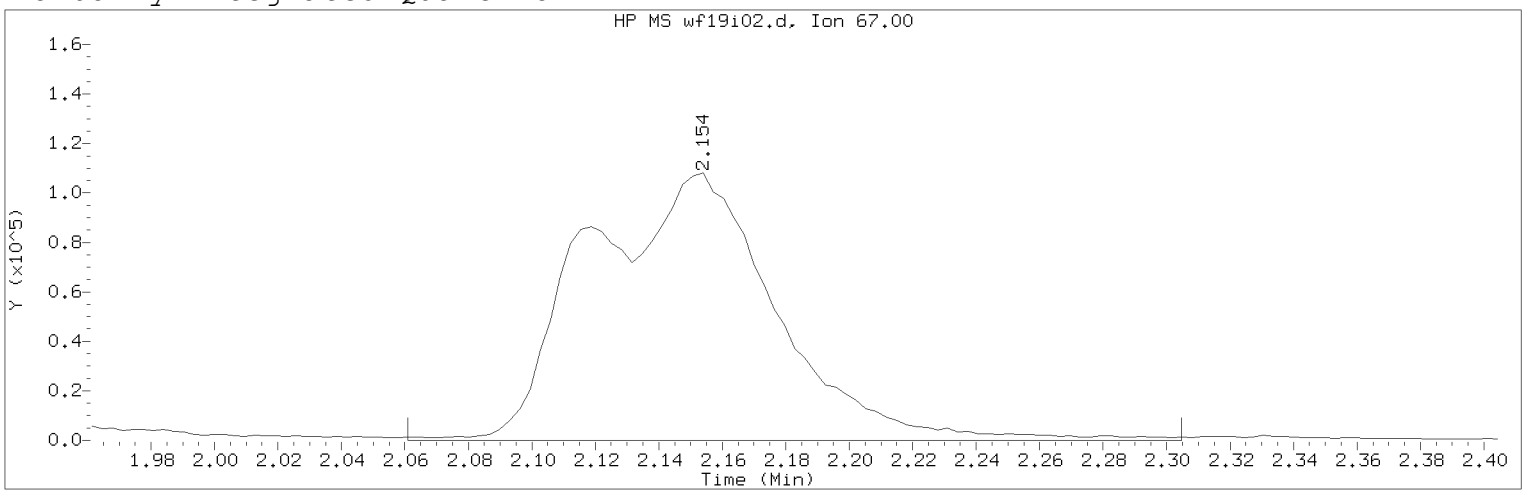
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.237	119	1234343	99.263
138) 1,4-Diethylbenzene	(4)	10.298	119	1307716	98.156
140) n-Butylbenzene	(4)	10.314	92	985822	98.693
139) 1,2-Dichlorobenzene	(4)	10.324	146	1081811	99.816
141) 1,2-Diethylbenzene	(4)	10.382	119	1030347	98.141
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	191235	108.922
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	826857	99.492
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	814746	102.112
148) Hexachlorobutadiene	(4)	11.530	225	267172	94.015
149) Naphthalene	(4)	11.582	128	2844431	105.359
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	786584	101.001
109) Xylene (Total)	(3)		106	2556568	300.794
151) 2-Methylnaphthalene	(4)	12.304	142	1671753	108.536
142) Diethylbenzene (total)	(4)		100	3572406	295.560

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

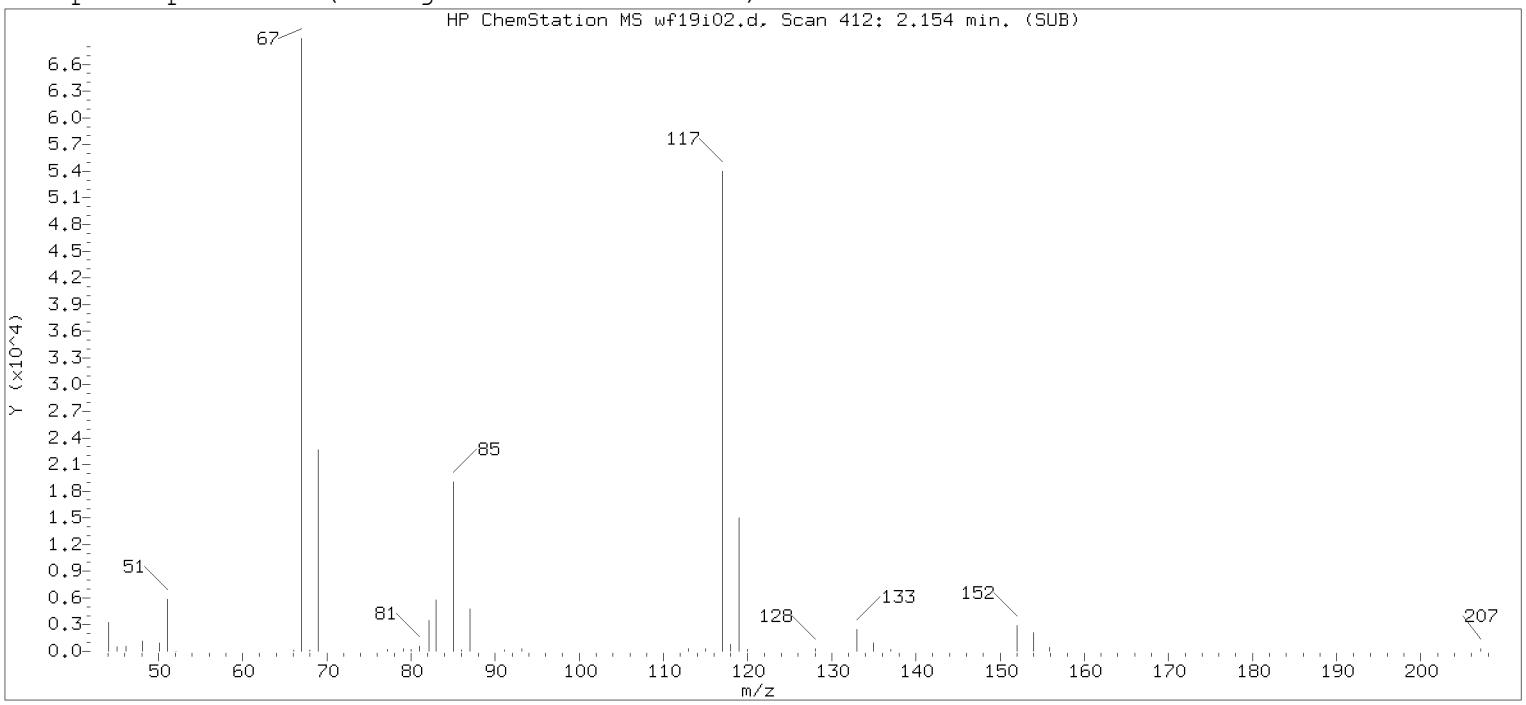
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 412
Retention Time (minutes): 2.154
Quant Ion : 67.00
Area (flag) : 447423M
On-Column Amount (ng) : 90.7045
Integration start scan : 382 Integration stop scan: 458
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

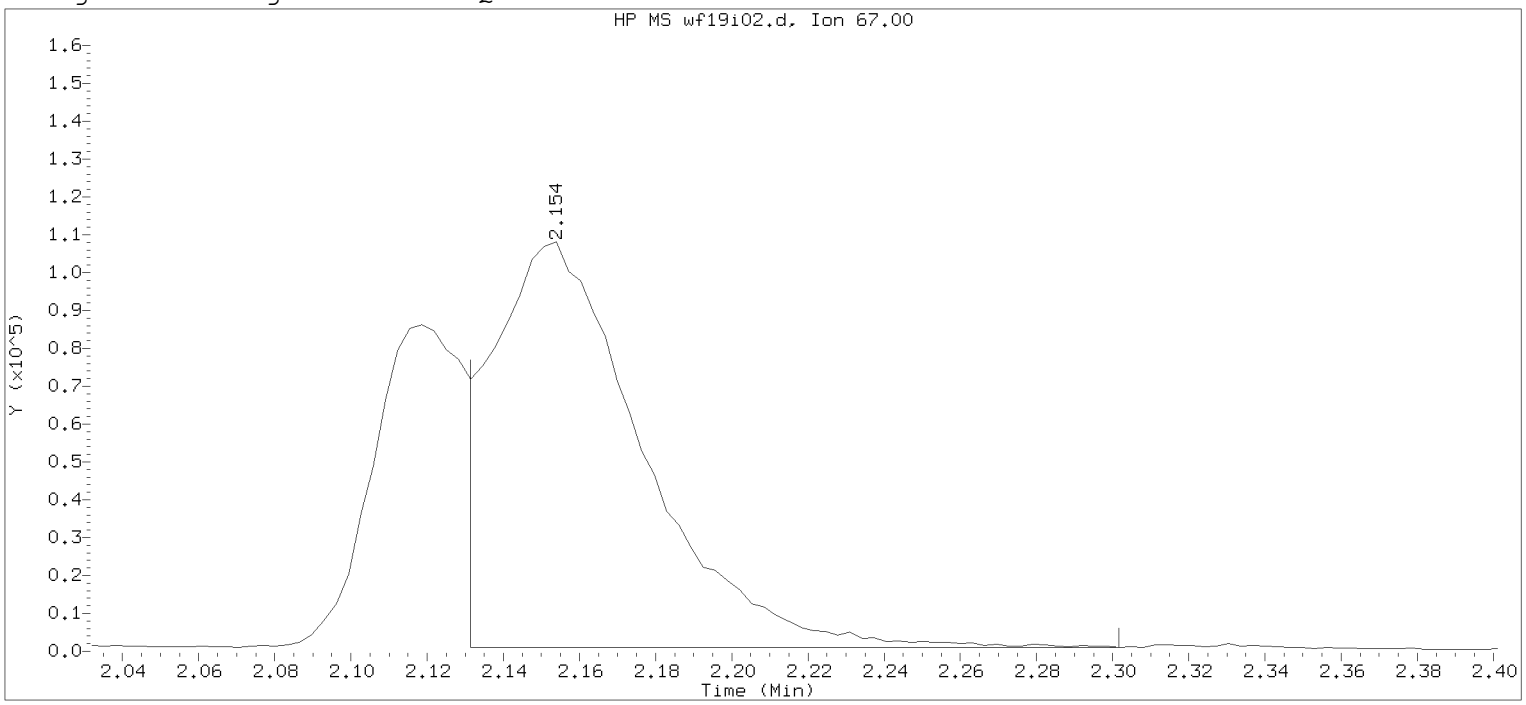
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

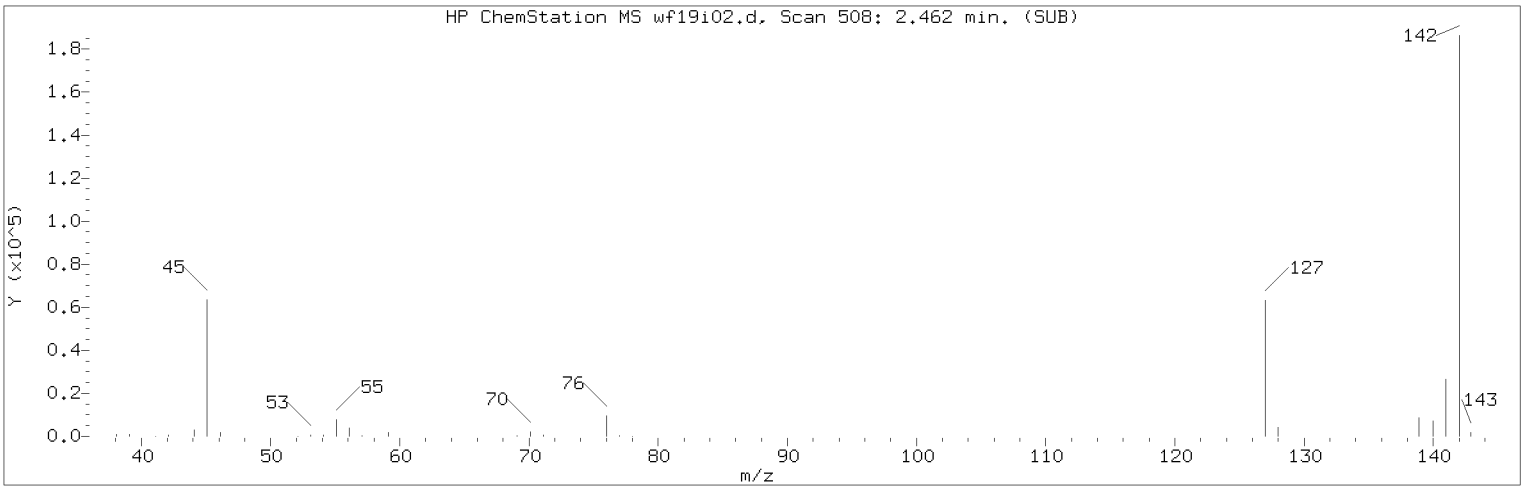
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD100 Lab Sample ID: VSTD100

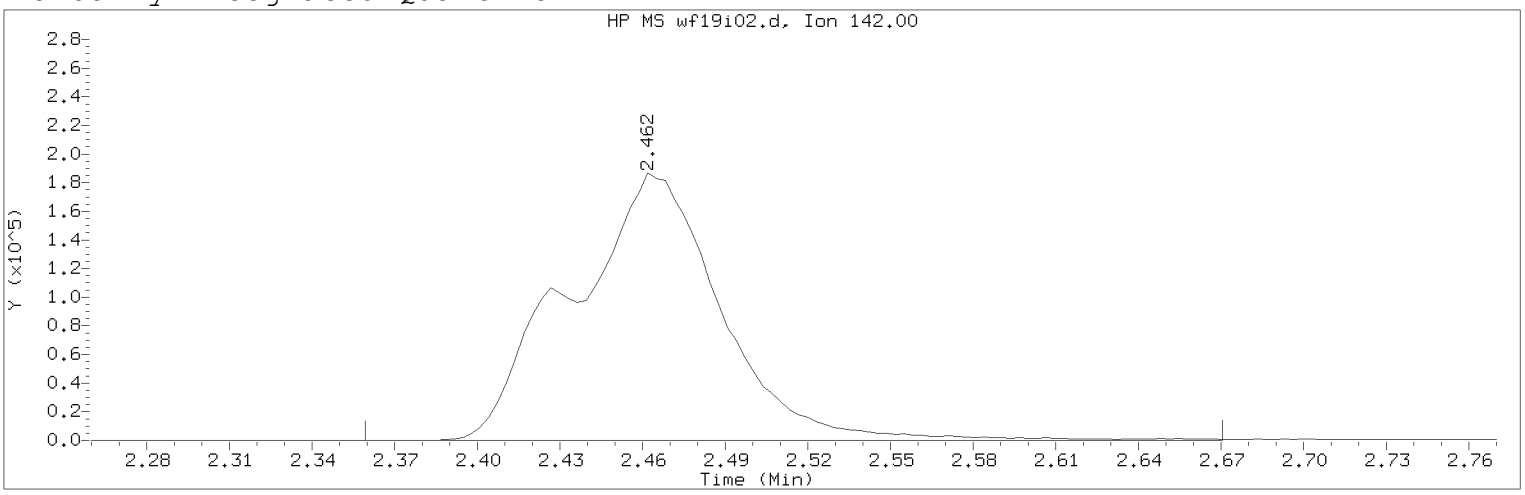
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 412
Retention Time (minutes): 2.154
Quant Ion : 67.00
Area : 294632
On-column Amount (ng) : 90.5897
Integration start scan : 404 Integration stop scan: 457
Y at integration start : 1032 Y at integration end: 981

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

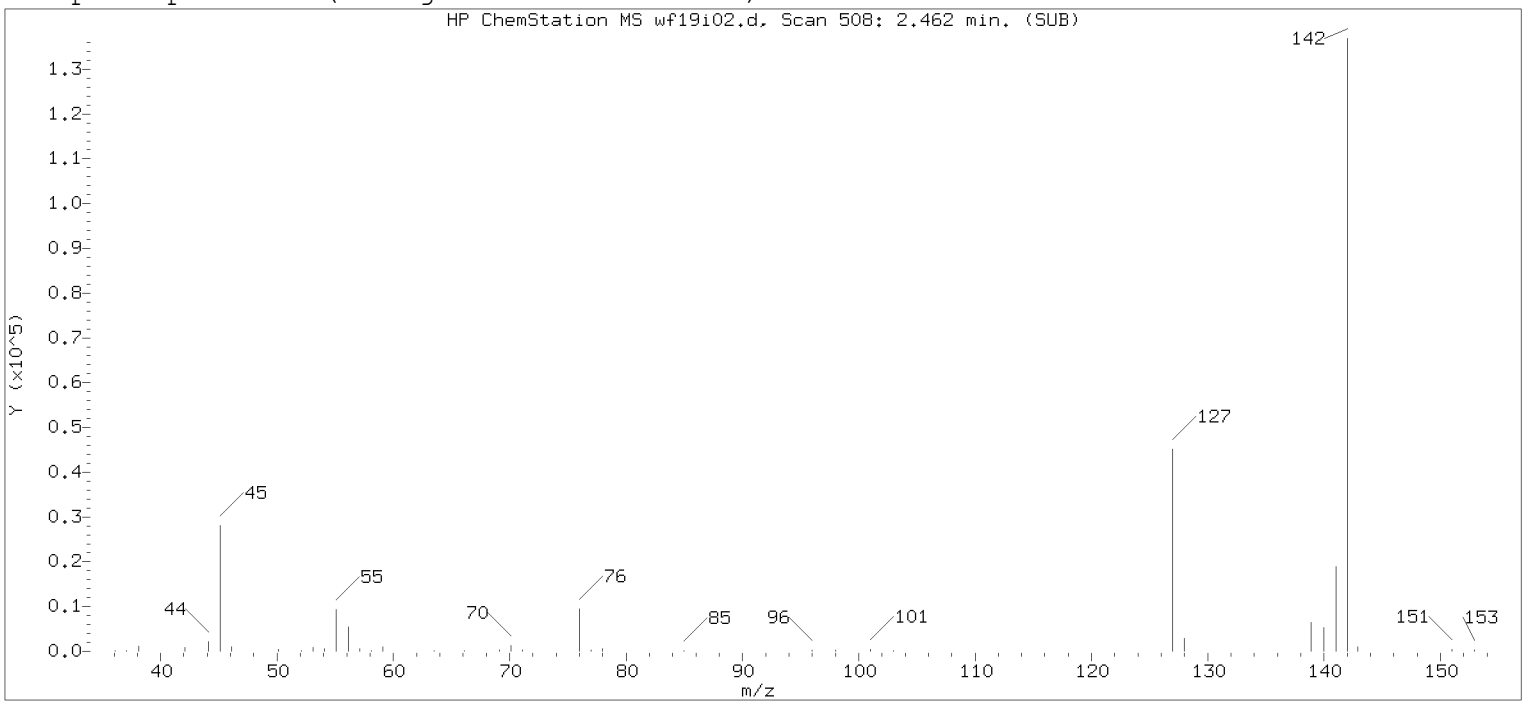
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 508
Retention Time (minutes): 2.462
Quant Ion : 142.00
Area (flag) : 704010M
On-Column Amount (ng) : 98.9520
Integration start scan : 475 Integration stop scan: 572
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

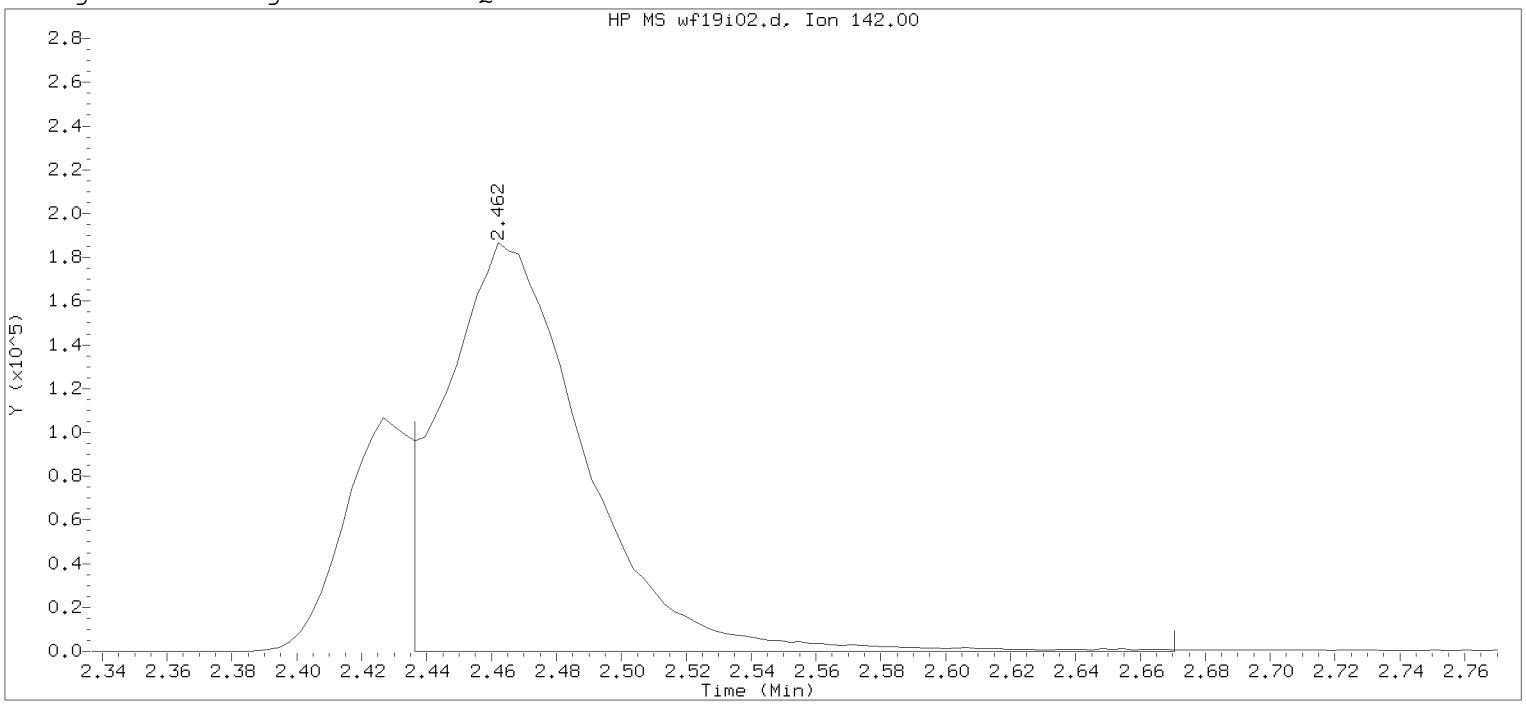
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

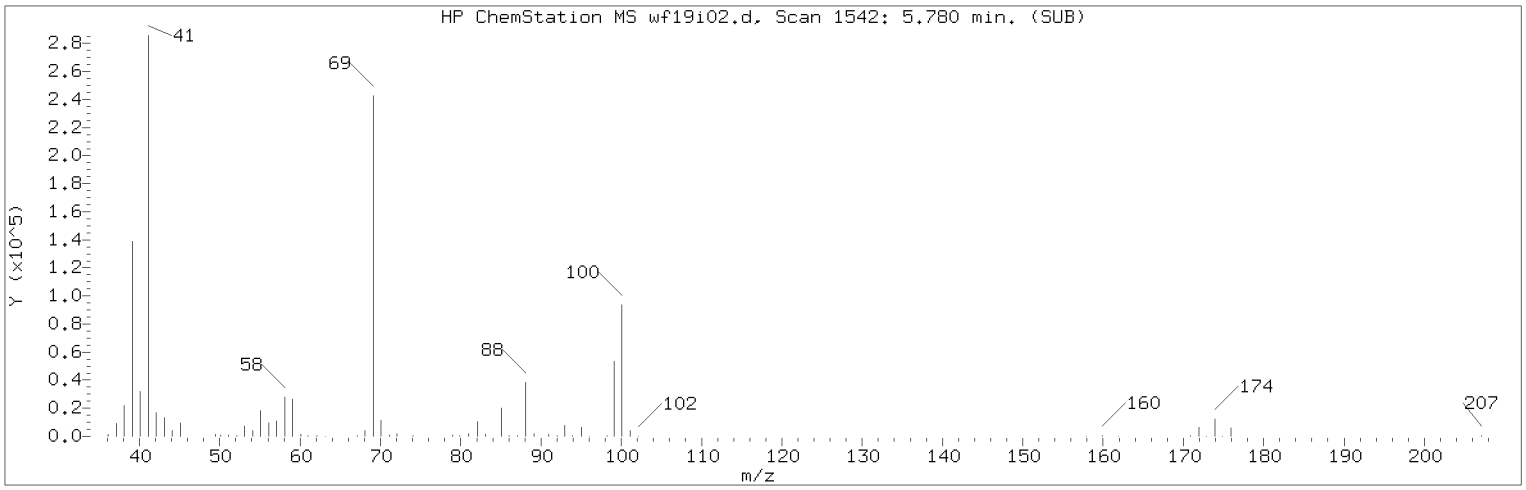
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD100 Lab Sample ID: VSTD100

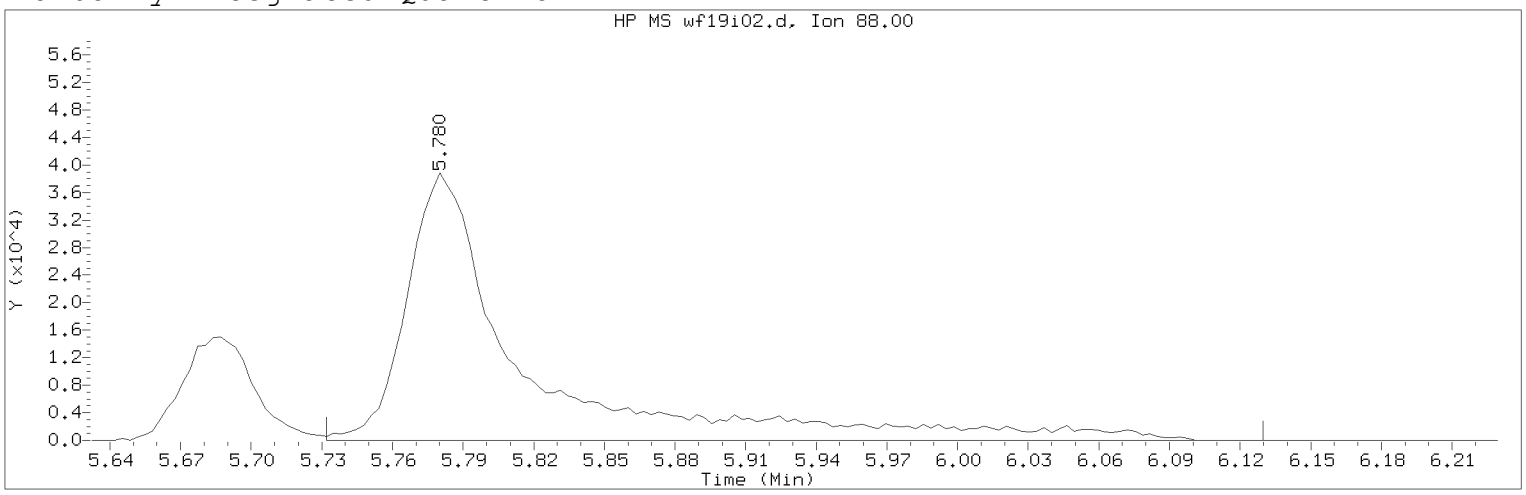
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 508
Retention Time (minutes): 2.462
Quant Ion : 142.00
Area : 554735
On-column Amount (ng) : 84.2643
Integration start scan : 499 Integration stop scan: 572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

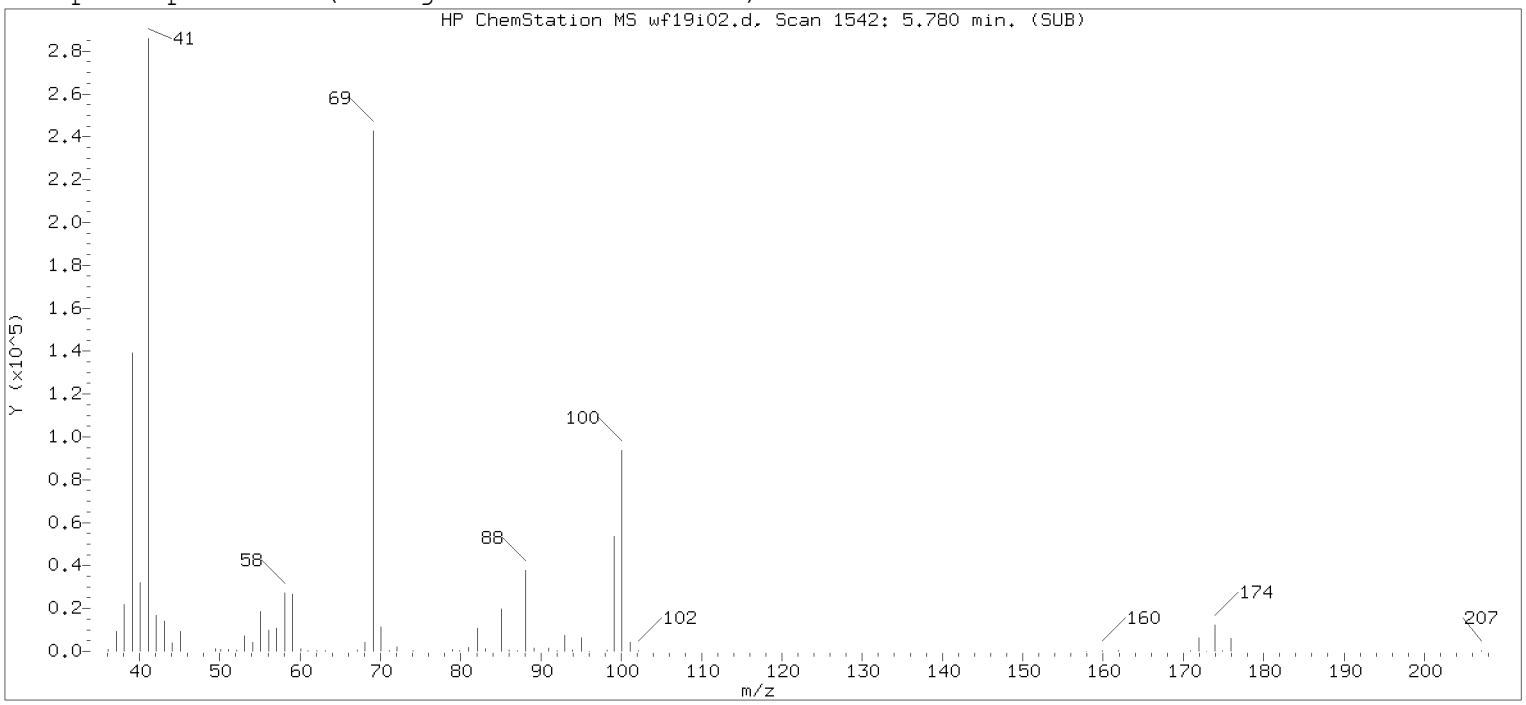
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area (flag) : 133422M
On-Column Amount (ng) : 1349.4188
Integration start scan : 1526 Integration stop scan: 1650
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

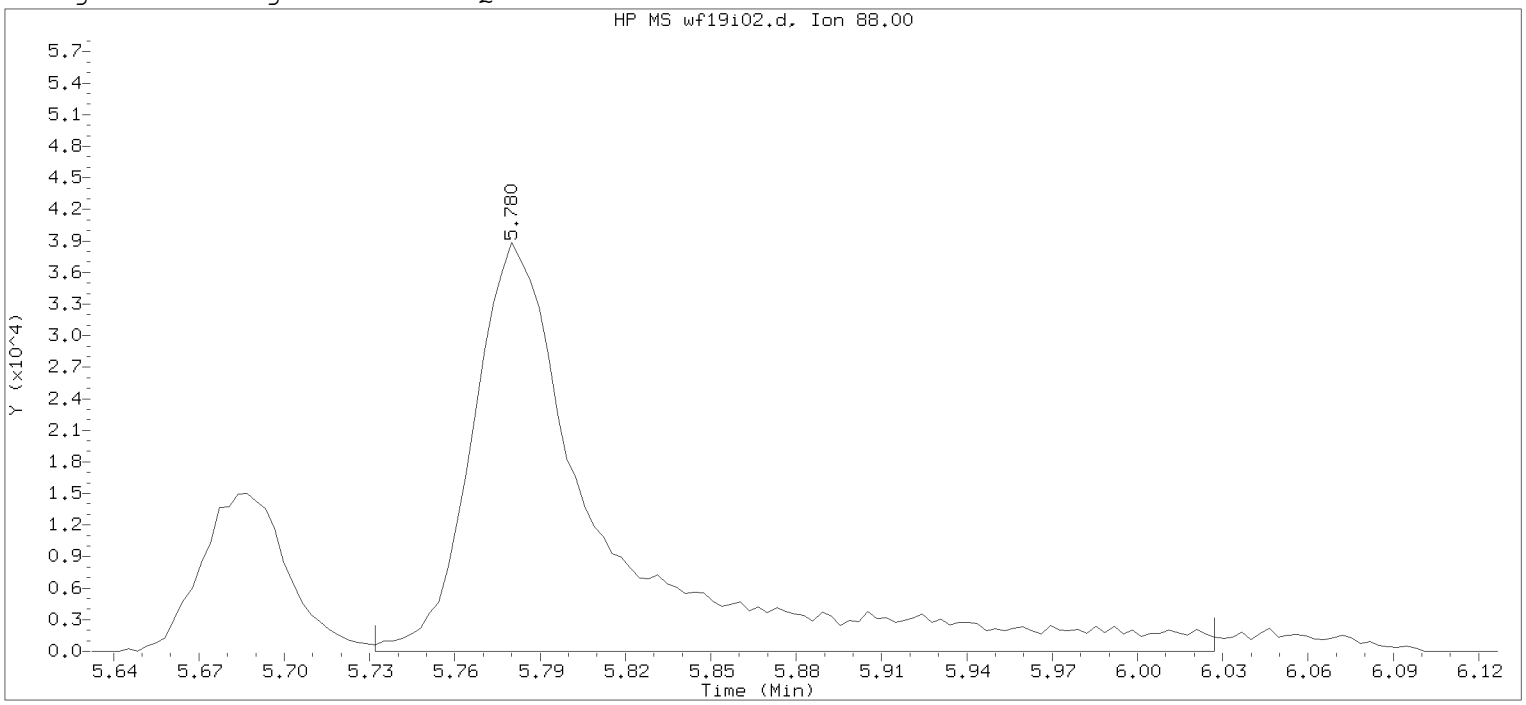
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



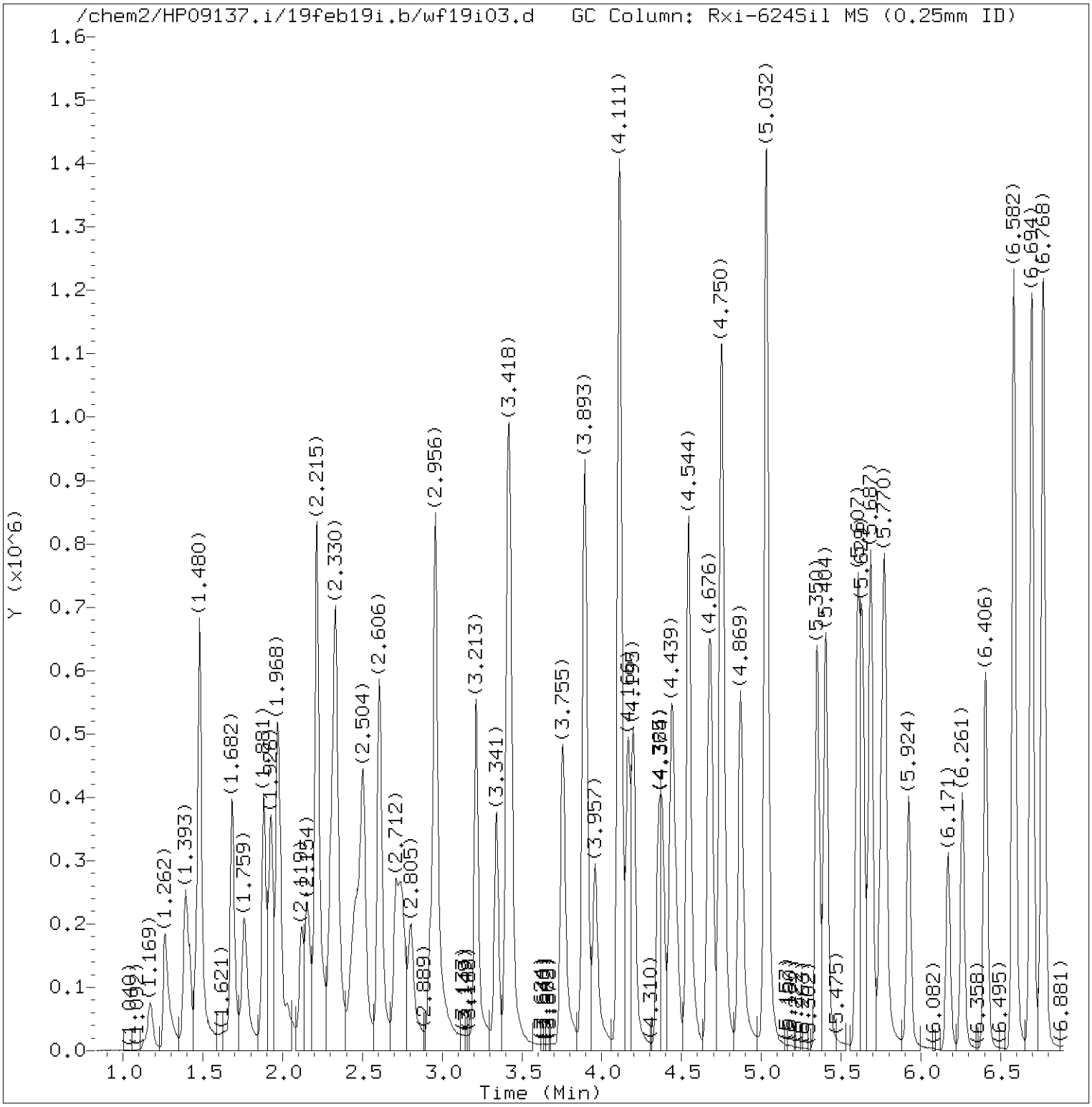
Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1542		
Retention Time (minutes)	: 5.780		
Quant Ion	: 88.00		
Area	: 128356		
On-column Amount (ng)	: 1250.1973		
Integration start scan	: 1526	Integration stop scan:	1618
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user Abigail P. Roselli



Total Ion Chromatogram (TIC)

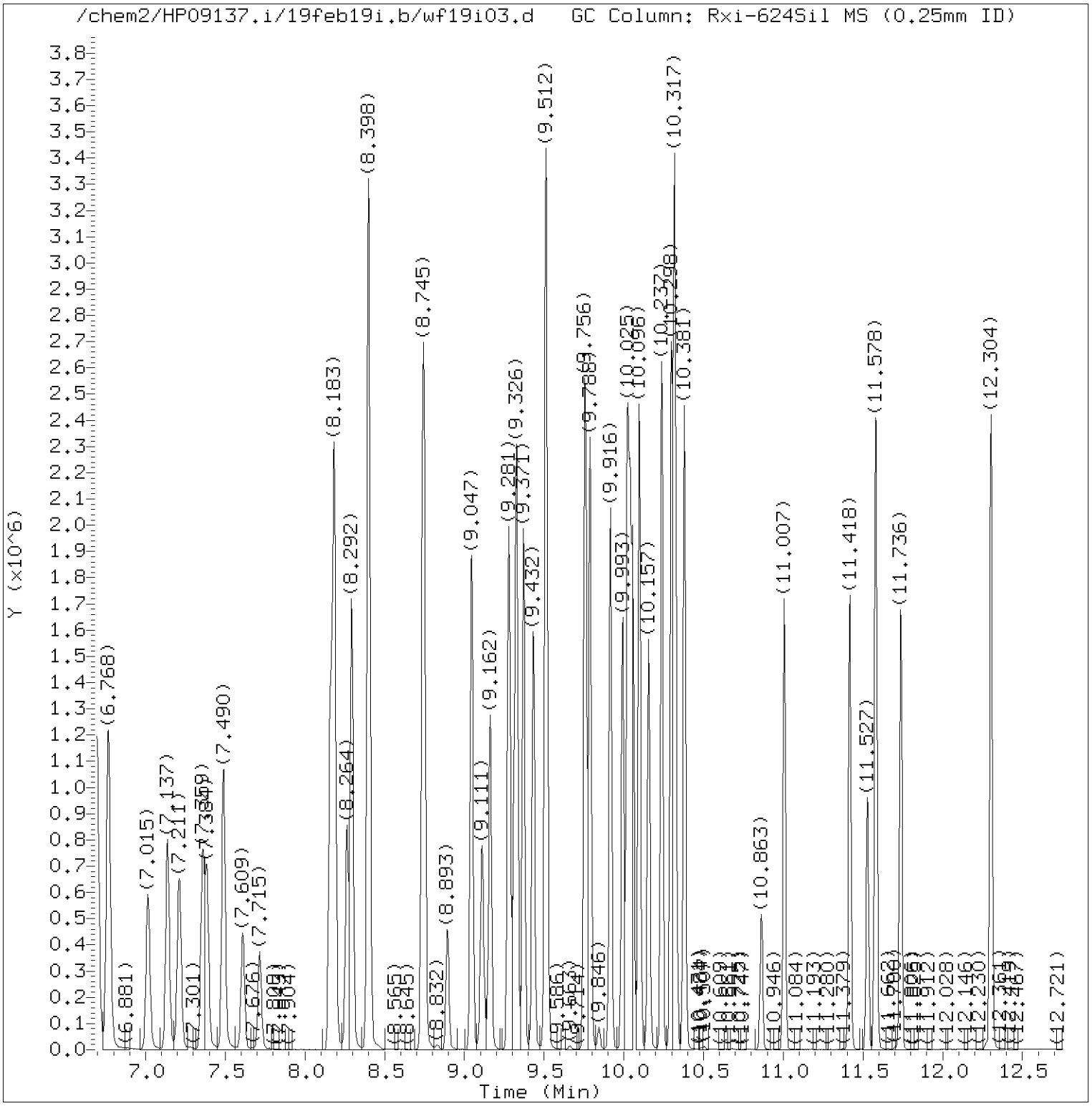
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.262	85	296826	53.462
4) Chloromethane	(2)	1.393	50	345066	49.912
6) Vinyl Chloride	(2)	1.467	62	316392	49.922
5) 1,3-Butadiene	(2)	1.480	39	198055	47.007
8) Bromomethane	(2)	1.682	94	248203	49.656
9) Chloroethane	(2)	1.759	64	196842	47.198
10) Dichlorofluoromethane	(2)	1.881	67	394164	48.827
12) Trichlorofluoromethane	(2)	1.926	101	346119	51.421
11) n-Pentane	(2)	1.971	43	304724	47.602
13) Ethanol	(1)	2.029	45	123880	1223.601
15) Freon 123a	(2)	2.154	67	238678M	47.452
16) Acrolein	(1)	2.215	56	827202	517.599
17) 1,1-Dichloroethene	(2)	2.324	96	193424	51.092
17) 1,1-Dichloroethene	(2)	2.321	63	95600	50.052
19) Freon 113	(2)	2.330	101	179017	53.849
18) Acetone	(1)	2.334	58	78612	101.199
21) 2-Propanol	(1)	2.443	45	149590	259.188
22) Methyl Iodide	(2)	2.465	142	365873	50.432
23) Carbon Disulfide	(2)	2.507	76	662769	49.692
25) Allyl Chloride	(2)	2.600	41	351245	53.257
27) Methyl Acetate	(2)	2.619	43	279026	48.878
28) Methylene Chloride	(2)	2.706	84	227605M	49.185
29)*t-Butyl alcohol-d10	(1)	2.728	65	221988	250.000
30) t-Butyl alcohol	(1)	2.805	59	270559	262.794
31) Acrylonitrile	(2)	2.924	53	161927	53.918
32) trans-1,2-Dichloroethene	(2)	2.956	96	205818	50.107
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	499906	49.983
34) n-Hexane	(2)	3.213	57	294788	53.636
36) 1,1-Dichloroethane	(2)	3.341	63	377579	50.730
38) di-Isopropyl ether	(2)	3.412	45	723571	50.602
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	329496	51.113
40) Ethyl t-butyl ether	(2)	3.755	59	519380	49.830
42) cis-1,2-Dichloroethene	(2)	3.890	96	233468	50.623
45) 2,2-Dichloropropane	(2)	3.893	77	170659	51.054
44) 2-Butanone	(2)	3.906	43	444981	103.132
47) Propionitrile	(1)	3.960	54	312875	244.517
48) Methacrylonitrile	(2)	4.111	67	408760	126.588
49) Bromochloromethane	(2)	4.118	128	123779	51.631

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.166	71	123715	104.465
51) Chloroform	(2)	4.198	83	350541	50.195
52)$Dibromofluoromethane	(2)	4.352	113	200440	50.388
52)$Dibromofluoromethane	(2)	4.352	111	203587	49.855
53) 1,1,1-Trichloroethane	(2)	4.378	97	270255	51.432
54) Cyclohexane	(2)	4.442	56	358513	51.555
54) Cyclohexane	(2)	4.439	84	301750	52.422
54) Cyclohexane	(2)	4.442	69	108191	51.769
55) 1,1-Dichloropropene	(2)	4.544	75	280799	50.152
56) Carbon Tetrachloride	(2)	4.544	117	228944	50.771
58) Isobutyl Alcohol	(1)	4.670	41	246561	656.905
57)$1,2-Dichloroethane-d4	(2)	4.689	102	52492	49.616
57)$1,2-Dichloroethane-d4	(2)	4.686	65	225475	48.958
57)$1,2-Dichloroethane-d4	(2)	4.689	104	33040	49.038
60) Benzene	(2)	4.750	78	896329	49.804
61) 1,2-Dichloroethane	(2)	4.763	62	272237	48.968
61) 1,2-Dichloroethane	(2)	4.766	98	28104	53.133
65) t-Amyl methyl ether	(2)	4.869	73	548486	51.366
66)*Fluorobenzene	(2)	5.029	96	858650	50.000
67) n-Heptane	(2)	5.035	43	271771	51.739
69) n-Butanol	(1)	5.350	56	449377	1348.443
71) Trichloroethene	(2)	5.404	95	217955	50.009
73) Methylcyclohexane	(2)	5.603	83	345616	54.623
73) Methylcyclohexane	(2)	5.607	98	160647	54.605
74) 1,2-Dichloropropane	(2)	5.636	63	236274	51.136
75) Dibromomethane	(2)	5.751	93	147111	51.589
77) Methyl Methacrylate	(2)	5.773	69	266970	52.578
76) 1,4-Dioxane	(1)	5.780	88	66583M	668.325
79) Bromodichloromethane	(2)	5.924	83	272148	51.943
43) 1,2-Dichloroethene (Total)	(2)		96	439286	100.730
80) 2-Nitropropane	(2)	6.171	41	193740	109.288
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	192007	54.506
82) cis-1,3-Dichloropropene	(2)	6.406	75	374689	52.012
83) 4-Methyl-2-pentanone	(2)	6.582	43	893533	105.058
84)$Toluene-d8	(3)	6.694	98	891117	50.528
84)$Toluene-d8	(3)	6.694	100	583239	49.869
89) Toluene	(3)	6.765	92	574331	50.554
90) trans-1,3-Dichloropropene	(3)	7.015	75	357488	52.857

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.137	69	455291	54.784
93) 1,1,2-Trichloroethane	(3)	7.211	97	227274	51.976
94) Tetrachloroethene	(3)	7.359	166	231262	50.166
95) 1,3-Dichloropropane	(3)	7.384	76	393691	51.836
97) 2-Hexanone	(3)	7.490	43	705936	106.697
98) Dibromochloromethane	(3)	7.609	129	231994	54.321
100) 1,2-Dibromoethane	(3)	7.715	107	253132	52.691
101)*Chlorobenzene-d5	(3)	8.161	117	703812	50.000
103) Chlorobenzene	(3)	8.187	112	634213	50.322
104) 1,1,1,2-Tetrachloroethane	(3)	8.264	131	212636	52.500
105) Ethylbenzene	(3)	8.292	91	1088867	50.428
107) m+p-Xylene	(3)	8.398	106	866772	100.963
108) o-Xylene	(3)	8.739	106	427426	50.608
110) Styrene	(3)	8.751	104	737561	52.057
111) Bromoform	(3)	8.893	173	184052	55.373
112) Isopropylbenzene	(3)	9.047	105	1059585	51.055
113) Cyclohexanone	(1)	9.111	55	294000	654.199
115)$4-Bromofluorobenzene	(3)	9.162	95	351157	49.771
115)$4-Bromofluorobenzene	(3)	9.162	174	297817	50.023
116) Bromobenzene	(4)	9.278	156	283326	50.030
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	404581	52.977
118) 1,2,3-Trichloropropane	(4)	9.313	110	120905	52.560
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	326983	133.518
120) n-Propylbenzene	(4)	9.371	91	1251632	50.136
121) 2-Chlorotoluene	(4)	9.435	126	258976	50.293
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	917303	50.948
122) 4-Chlorotoluene	(4)	9.518	126	277283	50.302
125) tert-Butylbenzene	(4)	9.756	134	204946	50.102
126) Pentachloroethane	(4)	9.765	167	174259	53.889
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	964859	50.855
128) sec-Butylbenzene	(4)	9.916	105	1121349	50.739
130) 1,3-Dichlorobenzene	(4)	9.993	146	543558	50.334
131) p-Isopropyltoluene	(4)	10.022	119	994480	50.832
132)*1,4-Dichlorobenzene-d4	(4)	10.038	152	393177	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	558679	49.903
91) 1,3-Dichloropropene (total)	(3)		100	732177	104.868
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	1074098	52.617
136) Benzyl Chloride	(4)	10.157	91	884205	56.428

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

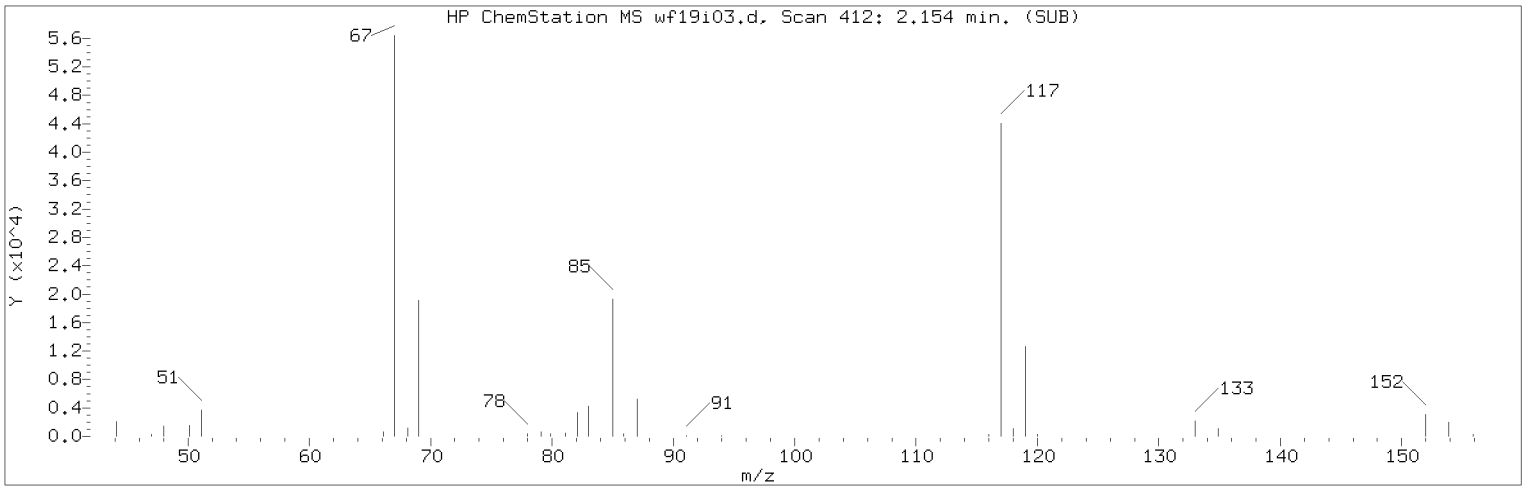
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

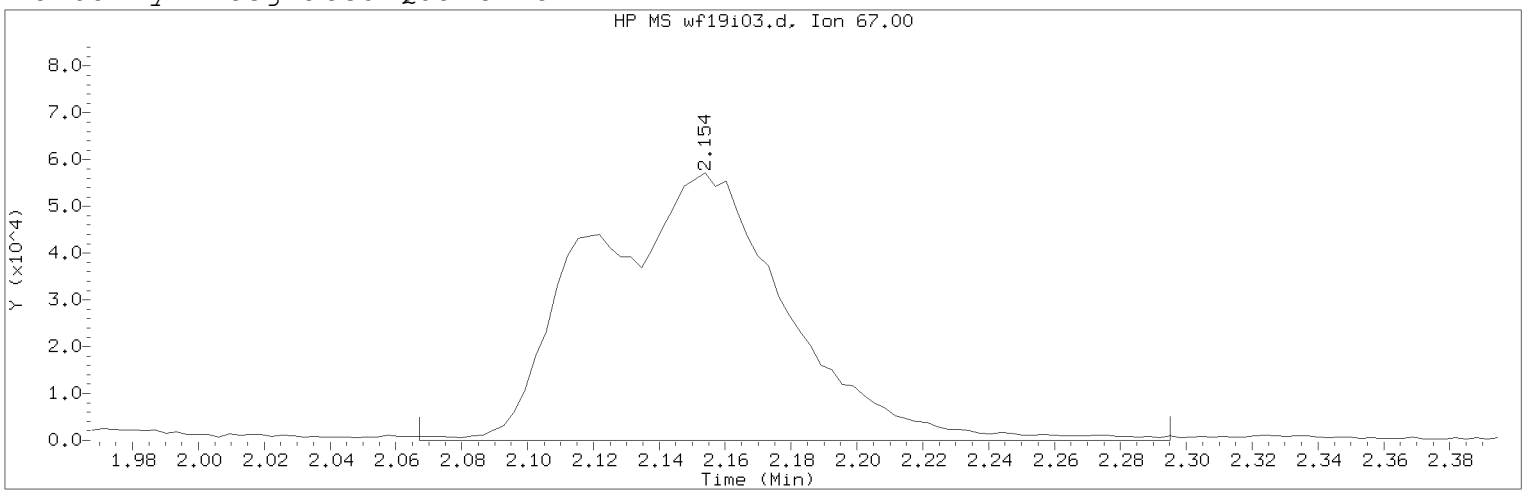
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.237	119	648916	52.789
138) 1,4-Diethylbenzene	(4)	10.298	119	693198	52.634
140) n-Butylbenzene	(4)	10.314	92	498295	50.463
139) 1,2-Dichlorobenzene	(4)	10.324	146	543650	50.742
141) 1,2-Diethylbenzene	(4)	10.381	119	544138	52.430
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	96961	55.866
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	420610	51.197
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	414796	52.589
148) Hexachlorobutadiene	(4)	11.527	225	139053	49.498
149) Naphthalene	(4)	11.582	128	1472414	55.170
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	402903	52.334
109) Xylene (Total)	(3)		106	1294198	151.571
151) 2-Methylnaphthalene	(4)	12.304	142	862234	56.628
142) Diethylbenzene (total)	(4)		100	1886252	157.852

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

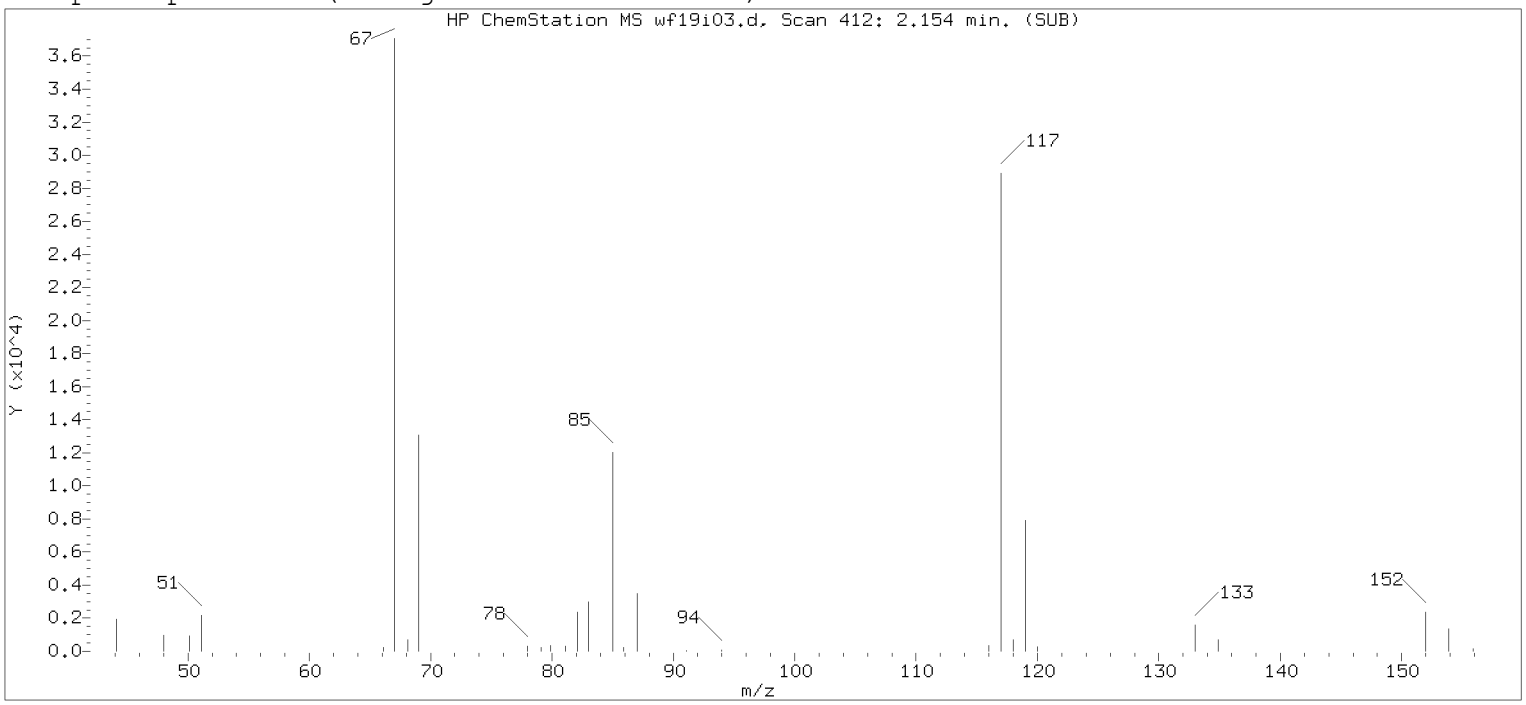
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 412
Retention Time (minutes): 2.154
Quant Ion : 67.00
Area (flag) : 238678M
On-Column Amount (ng) : 47.4516
Integration start scan : 384 Integration stop scan: 455
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

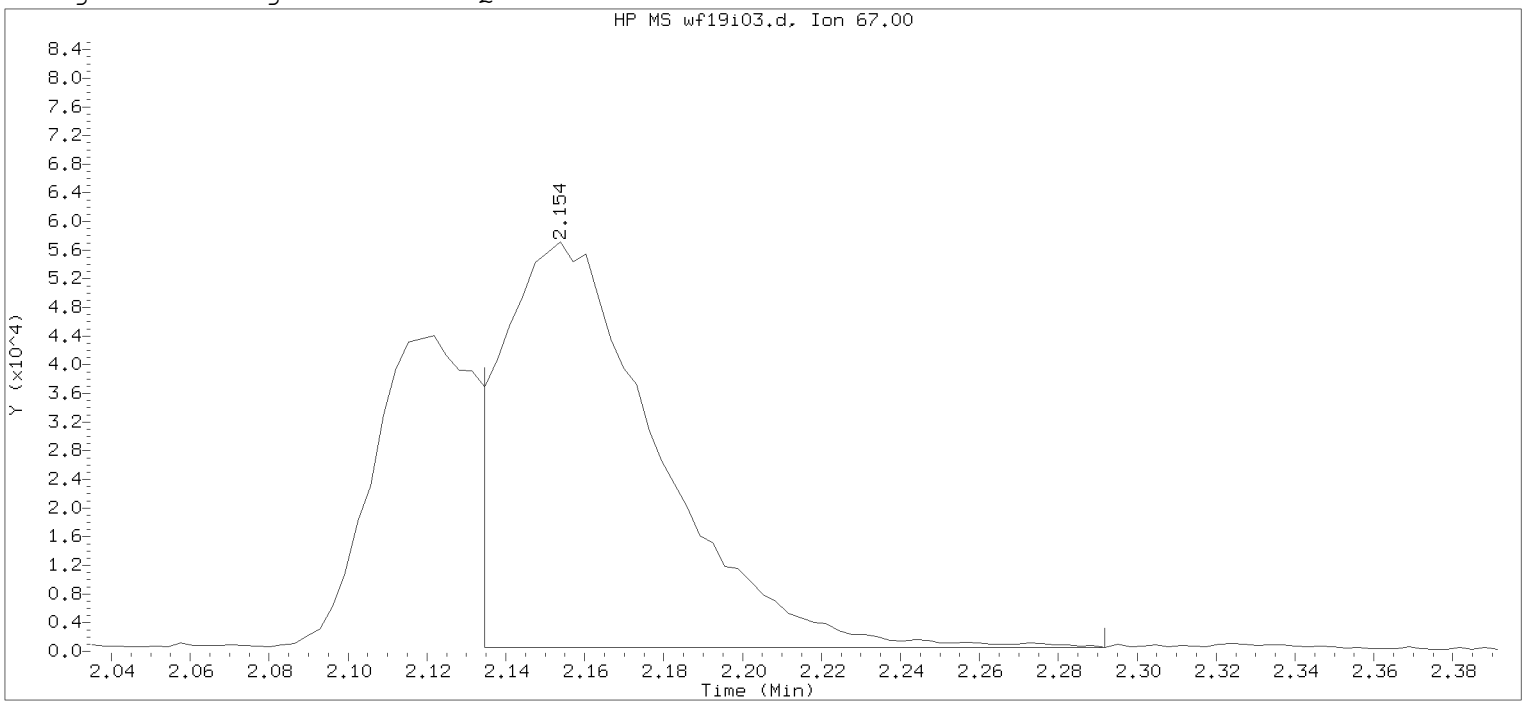
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

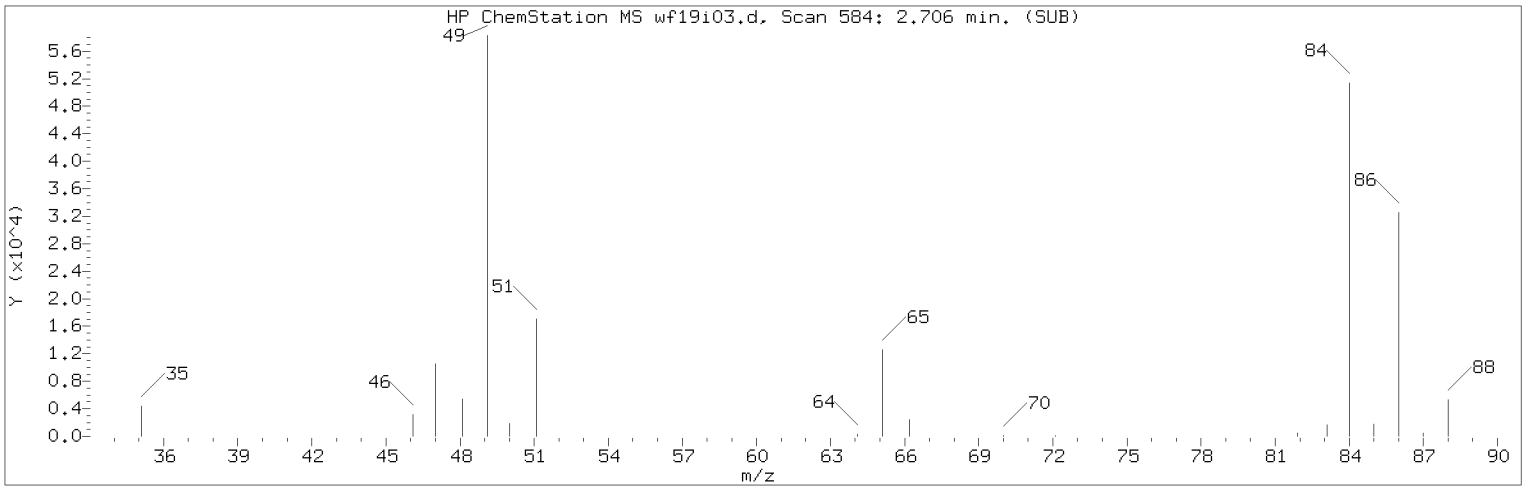
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

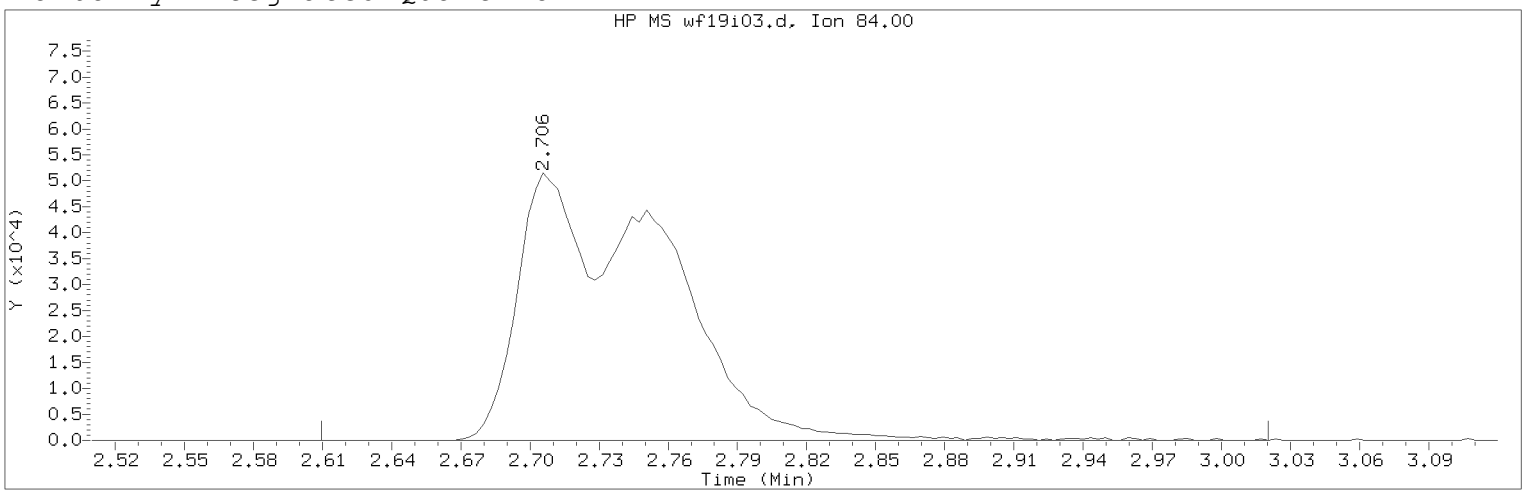
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 412
Retention Time (minutes): 2.154
Quant Ion : 67.00
Area : 154008
On-column Amount (ng) : 47.5673
Integration start scan : 405 Integration stop scan: 454
Y at integration start : 574 Y at integration end: 555

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user Abigail P. Roselli

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

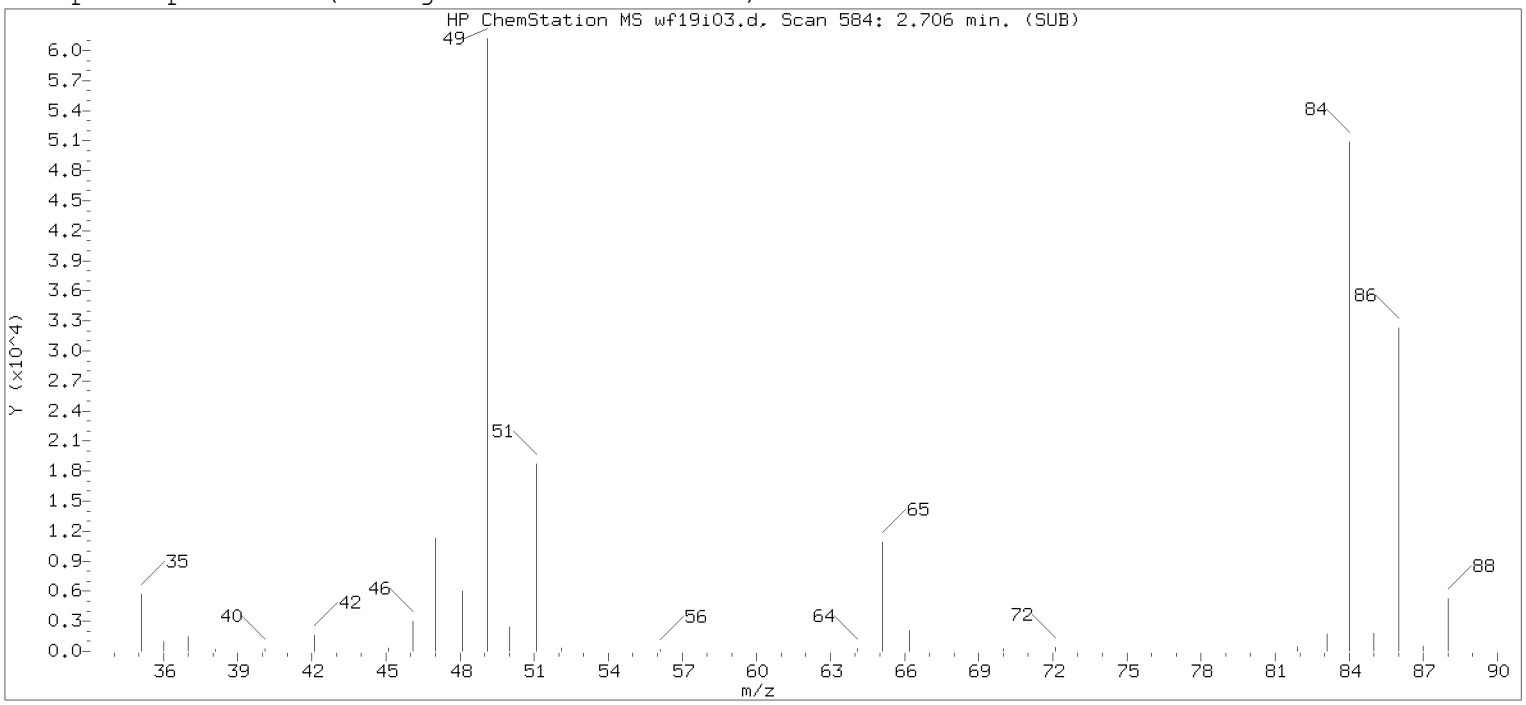
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 584
Retention Time (minutes): 2.706
Quant Ion : 84.00
Area (flag) : 227605M
On-Column Amount (ng) : 49.1854
Integration start scan : 553 Integration stop scan: 681
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

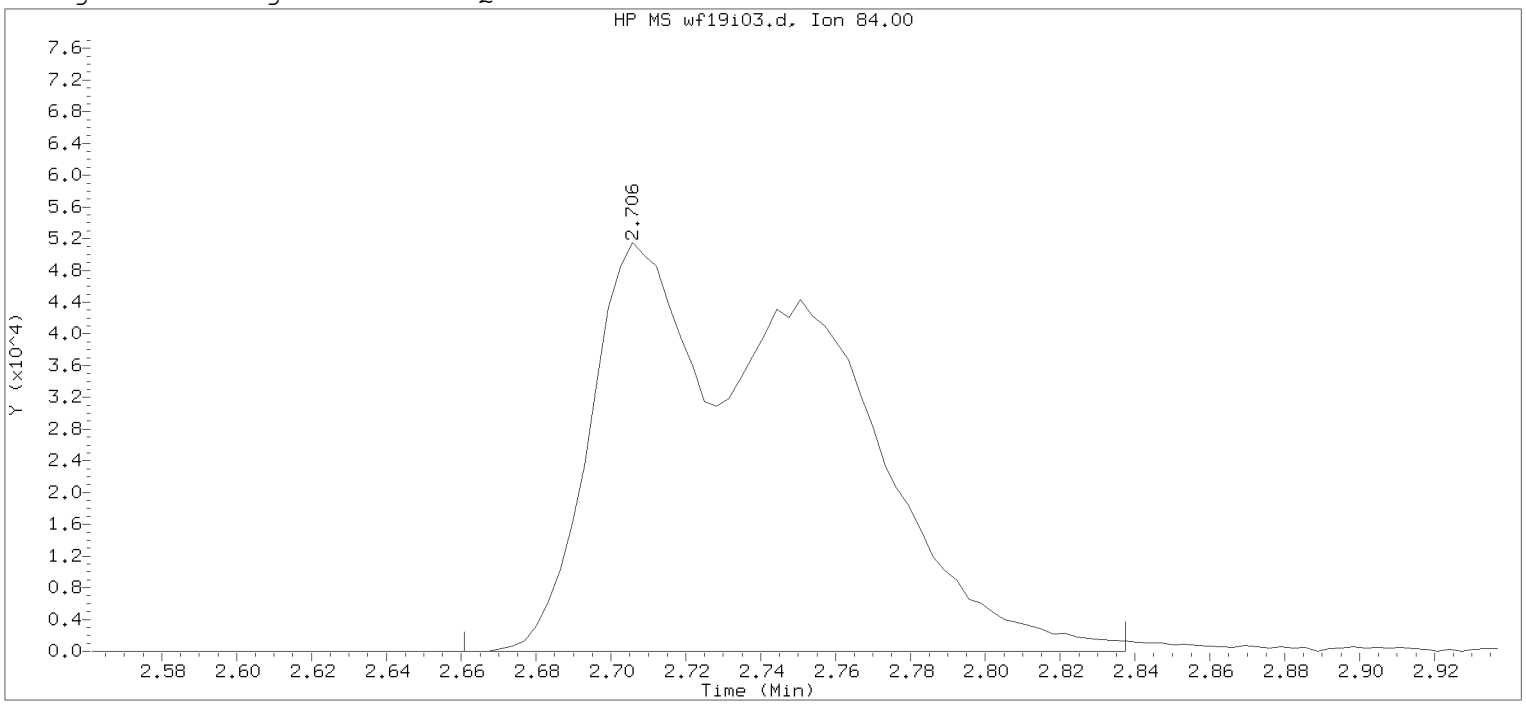
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 584
Retention Time (minutes): 2.706
Quant Ion : 84.00
Area : 223774
On-column Amount (ng) : 67.2195
Integration start scan : 569 Integration stop scan: 624
Y at integration start : 0 Y at integration end: 0

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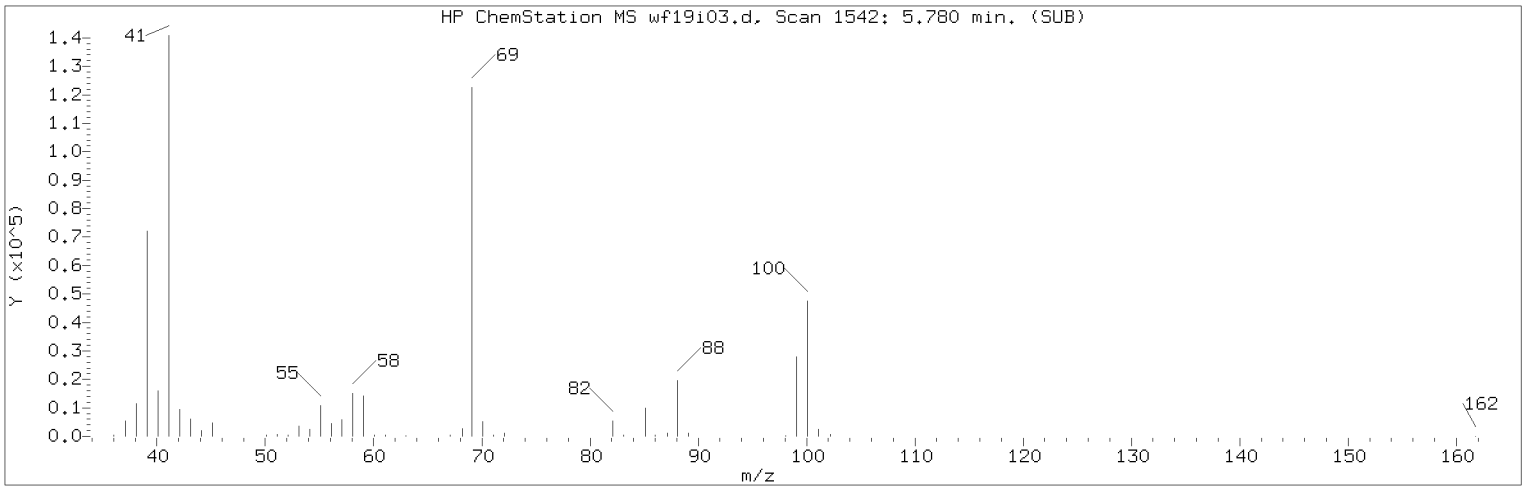
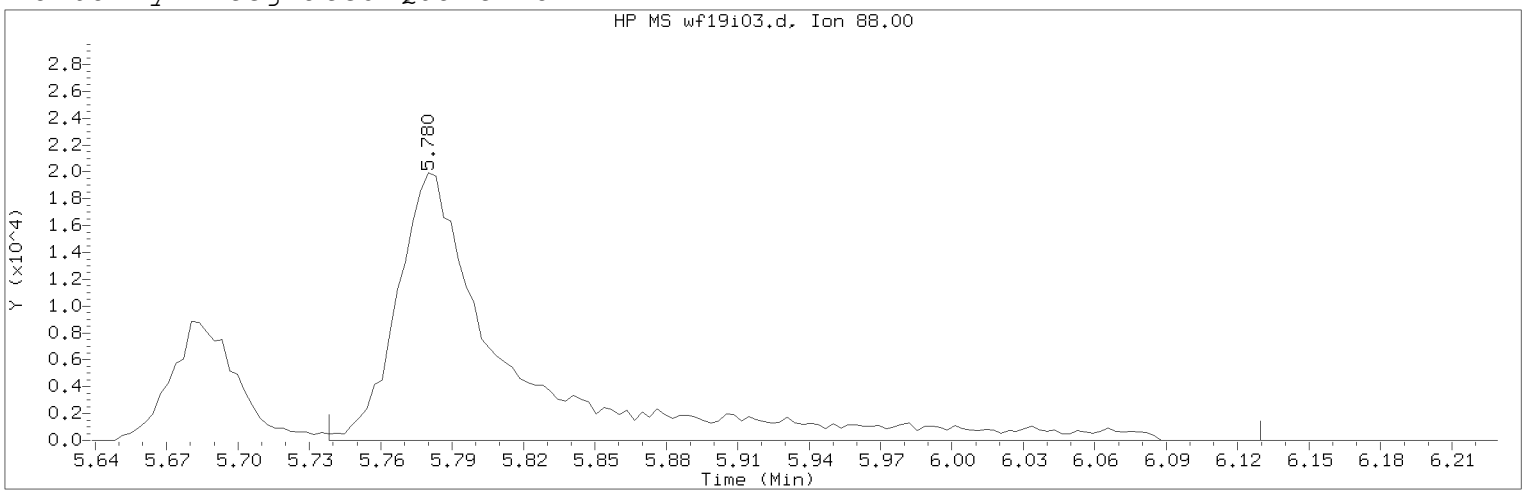
Target 3.5 esignature user apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

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Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

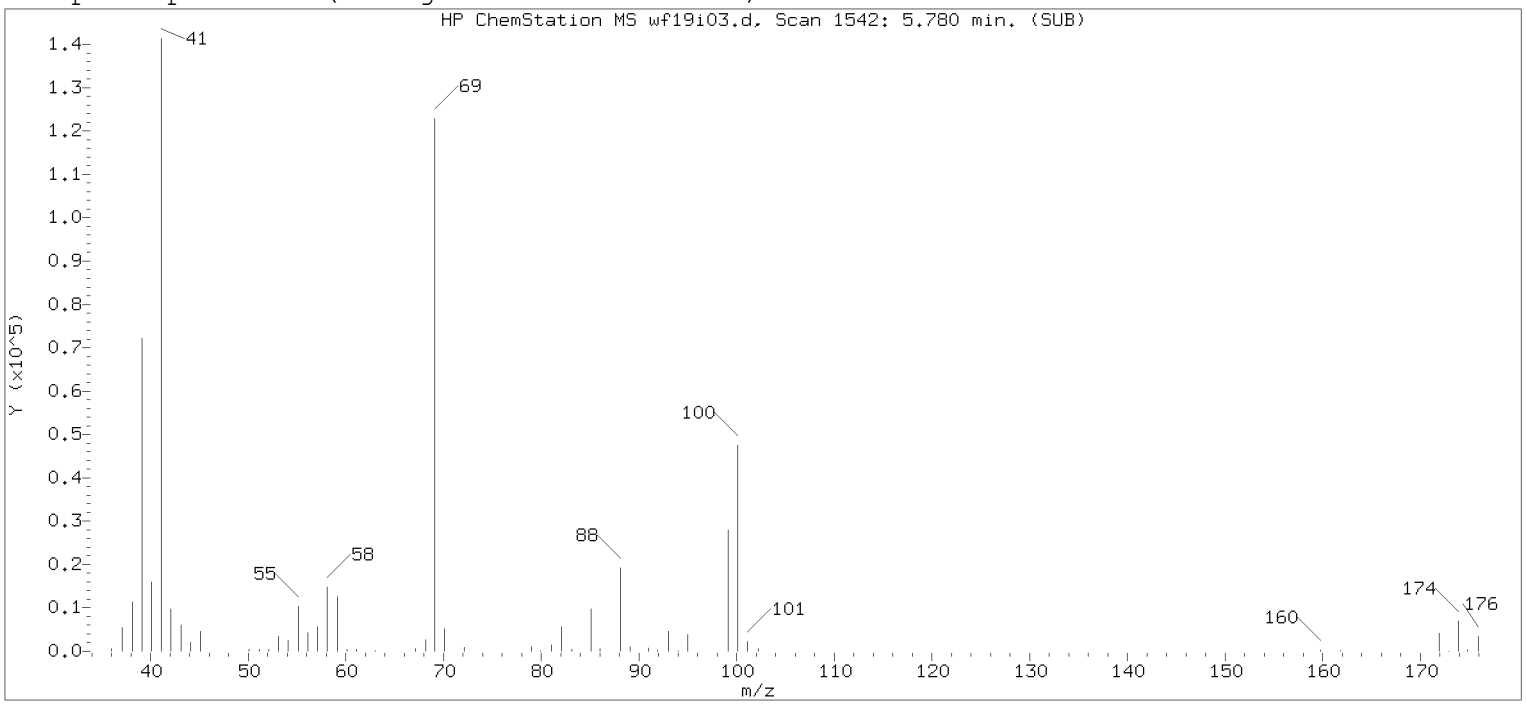
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area (flag) : 66583M
On-Column Amount (ng) : 668.3245
Integration start scan : 1528 Integration stop scan: 1650
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

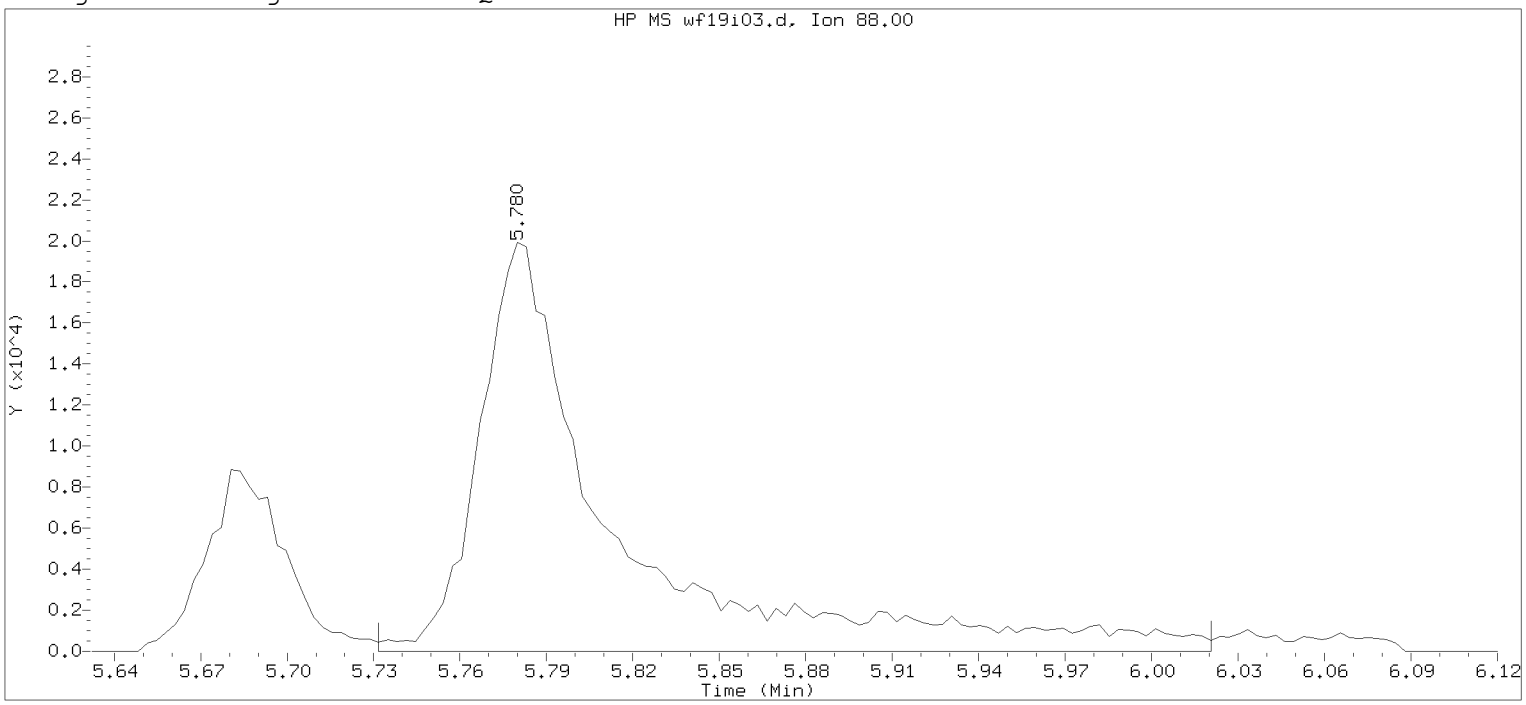
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

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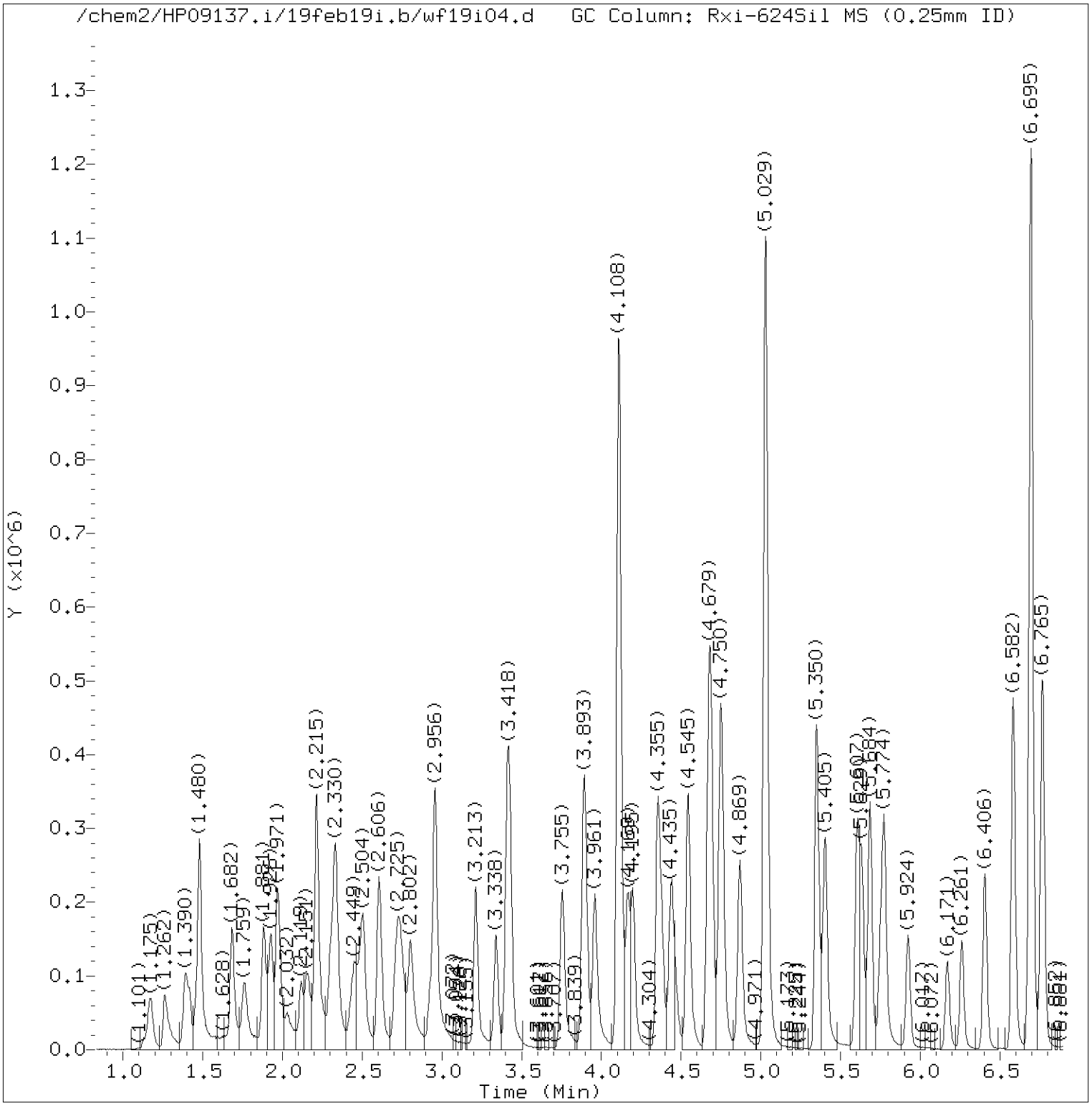
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area : 64091
On-column Amount (ng) : 621.3434
Integration start scan : 1526 Integration stop scan: 1616
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user: apr27582



Total Ion Chromatogram (TIC)

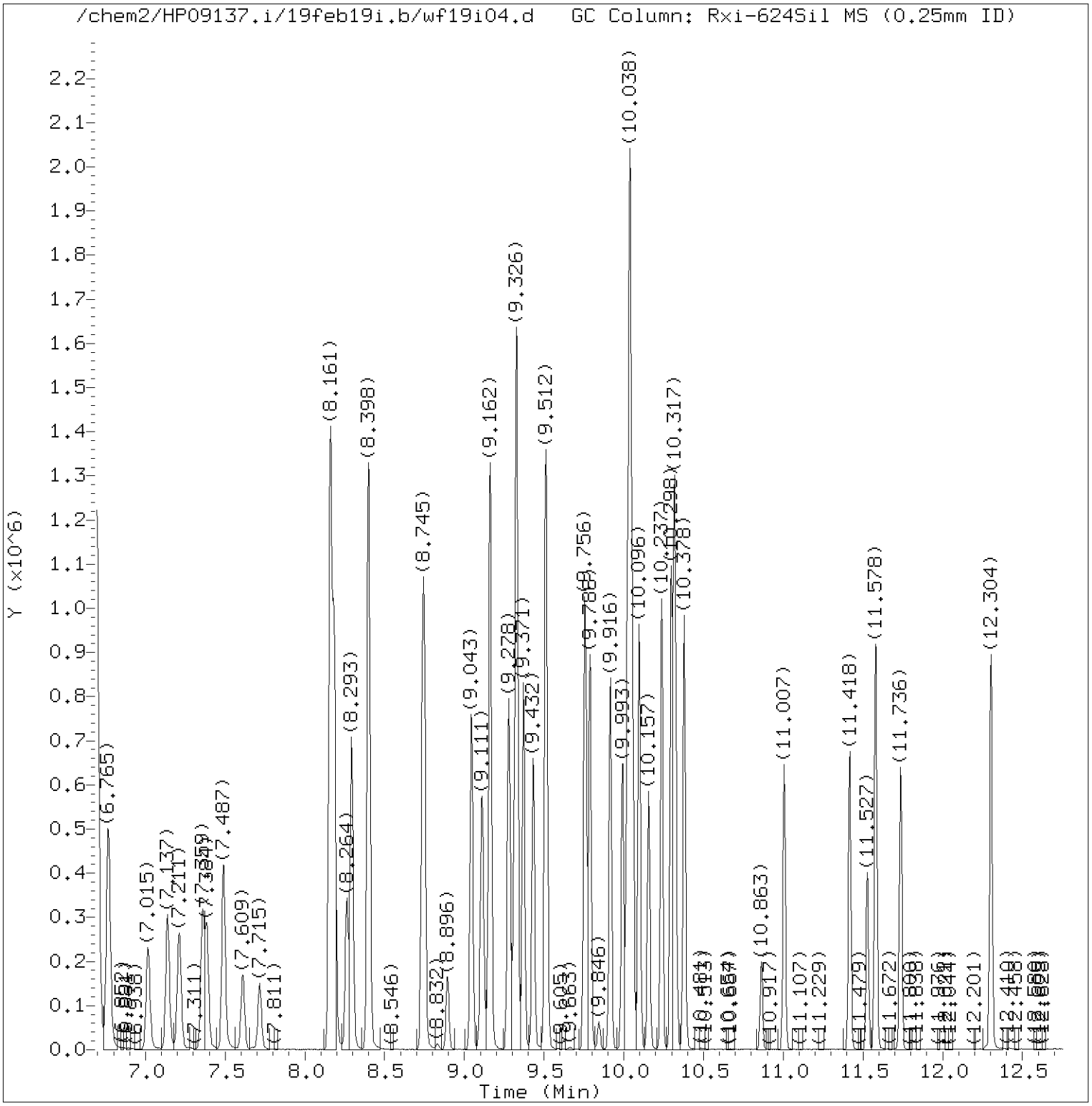
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
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Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.262	85	120158	21.151
4) Chloromethane	(2)	1.393	50	137638	19.457
6) Vinyl Chloride	(2)	1.467	62	130261	20.087
5) 1,3-Butadiene	(2)	1.480	39	83783	19.434
8) Bromomethane	(2)	1.682	94	99153	19.387
9) Chloroethane	(2)	1.762	64	81090	19.002
10) Dichlorofluoromethane	(2)	1.881	67	162421	19.663
12) Trichlorofluoromethane	(2)	1.926	101	142691	20.718
11) n-Pentane	(2)	1.971	43	131885	20.135
13) Ethanol	(1)	2.032	45	92307	894.985
15) Freon 123a	(2)	2.160	67	102866M	19.987
16) Acrolein	(1)	2.215	56	326307	200.424
17) 1,1-Dichloroethene	(2)	2.324	96	78708	20.319
17) 1,1-Dichloroethene	(2)	2.324	63	38728	19.816
18) Acetone	(1)	2.334	58	32836	41.493
19) Freon 113	(2)	2.334	101	73317	21.554
21) 2-Propanol	(1)	2.446	45	110569	188.056
22) Methyl Iodide	(2)	2.465	142	150767M	20.310
23) Carbon Disulfide	(2)	2.507	76	274687	20.128
25) Allyl Chloride	(2)	2.603	41	136398	20.212
27) Methyl Acetate	(2)	2.616	43	112197	19.208
28) Methylene Chloride	(2)	2.709	84	93973M	19.847
29)*t-Butyl alcohol-d10	(1)	2.732	65	226145	250.000
30) t-Butyl alcohol	(1)	2.802	59	204216	194.709
31) Acrylonitrile	(2)	2.927	53	65725	21.388
32) trans-1,2-Dichloroethene	(2)	2.956	96	83001	19.748
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	211952	20.711
34) n-Hexane	(2)	3.213	57	110706	19.686
36) 1,1-Dichloroethane	(2)	3.341	63	153564	20.164
38) di-Isopropyl ether	(2)	3.409	45	299035	20.438
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	134999	20.467
40) Ethyl t-butyl ether	(2)	3.755	59	227792	21.359
42) cis-1,2-Dichloroethene	(2)	3.890	96	94743	20.077
45) 2,2-Dichloropropane	(2)	3.890	77	72171	21.101
44) 2-Butanone	(2)	3.903	43	180906	40.977
47) Propionitrile	(1)	3.961	54	249181	191.159
48) Methacrylonitrile	(2)	4.108	67	323877	98.025
49) Bromochloromethane	(2)	4.118	128	49307	20.101

M = Compound was manually integrated.
* = Compound is an internal standard.

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Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.169	71	49416	40.960
51) Chloroform	(2)	4.198	83	144225	20.184
52)$Dibromofluoromethane	(2)	4.355	113	203311	49.950
52)$Dibromofluoromethane	(2)	4.355	111	209328	50.098
53) 1,1,1-Trichloroethane	(2)	4.381	97	110547	20.561
54) Cyclohexane	(2)	4.442	56	146608	20.604
54) Cyclohexane	(2)	4.442	84	120950	20.535
54) Cyclohexane	(2)	4.442	69	43702	20.437
55) 1,1-Dichloropropene	(2)	4.545	75	114224	19.938
56) Carbon Tetrachloride	(2)	4.545	117	93746	20.318
58) Isobutyl Alcohol	(1)	4.670	41	177235	463.522
57)$1,2-Dichloroethane-d4	(2)	4.689	102	55712	51.465
57)$1,2-Dichloroethane-d4	(2)	4.689	65	240858	51.112
57)$1,2-Dichloroethane-d4	(2)	4.689	104	33860	49.115
60) Benzene	(2)	4.747	78	366659	19.911
61) 1,2-Dichloroethane	(2)	4.763	62	110518	19.428
61) 1,2-Dichloroethane	(2)	4.760	98	11609	21.450
65) t-Amyl methyl ether	(2)	4.869	73	228200	20.886
66)*Fluorobenzene	(2)	5.029	96	878585	50.000
67) n-Heptane	(2)	5.036	43	110175	20.499
69) n-Butanol	(1)	5.350	56	321265	946.297
71) Trichloroethene	(2)	5.405	95	89487	20.067
73) Methylcyclohexane	(2)	5.604	83	138339	21.368
73) Methylcyclohexane	(2)	5.607	98	63264	21.016
74) 1,2-Dichloropropane	(2)	5.636	63	95210	20.139
75) Dibromomethane	(2)	5.748	93	59218	20.295
77) Methyl Methacrylate	(2)	5.774	69	103170	19.858
76) 1,4-Dioxane	(1)	5.780	88	49606M	488.766
79) Bromodichloromethane	(2)	5.924	83	106910	19.942
43) 1,2-Dichloroethene (Total)	(2)		96	177744	39.825
80) 2-Nitropropane	(2)	6.171	41	74529	41.088
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	69606	19.311
82) cis-1,3-Dichloropropene	(2)	6.406	75	147991	20.077
83) 4-Methyl-2-pentanone	(2)	6.582	43	356841	41.004
84)$Toluene-d8	(3)	6.695	98	907310	50.109
84)$Toluene-d8	(3)	6.695	100	601432	50.088
89) Toluene	(3)	6.765	92	235354	20.178
90) trans-1,3-Dichloropropene	(3)	7.015	75	138713	19.976

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.137	69	175549	20.574
93) 1,1,2-Trichloroethane	(3)	7.208	97	89810	20.005
94) Tetrachloroethene	(3)	7.359	166	94924	20.056
95) 1,3-Dichloropropane	(3)	7.384	76	156793	20.108
97) 2-Hexanone	(3)	7.490	43	279190	41.101
98) Dibromochloromethane	(3)	7.612	129	88860	20.266
100) 1,2-Dibromoethane	(3)	7.715	107	100482	20.372
101)*Chlorobenzene-d5	(3)	8.161	117	722592	50.000
103) Chlorobenzene	(3)	8.183	112	256275	19.806
104) 1,1,1,2-Tetrachloroethane	(3)	8.264	131	82744	19.899
105) Ethylbenzene	(3)	8.293	91	441592	19.920
107) m+p-Xylene	(3)	8.398	106	348881	39.582
108) o-Xylene	(3)	8.735	106	171798	19.812
110) Styrene	(3)	8.748	104	291848	20.063
111) Bromoform	(3)	8.896	173	67627	19.817
112) Isopropylbenzene	(3)	9.043	105	424442	19.920
113) Cyclohexanone	(1)	9.111	55	225728	493.049
115)$4-Bromofluorobenzene	(3)	9.162	95	360726	49.798
115)$4-Bromofluorobenzene	(3)	9.162	174	303950	49.726
116) Bromobenzene	(4)	9.278	156	113938	19.840
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	155706	20.105
118) 1,2,3-Trichloropropane	(4)	9.313	110	47306	20.279
119) trans-1,4-Dichloro-2-butene	(4)	9.326	53	247692	99.736
120) n-Propylbenzene	(4)	9.371	91	506549	20.009
121) 2-Chlorotoluene	(4)	9.432	126	105764	20.254
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	366349	20.065
122) 4-Chlorotoluene	(4)	9.515	126	110429	19.755
125) tert-Butylbenzene	(4)	9.756	134	82290	19.837
126) Pentachloroethane	(4)	9.765	167	64856	19.778
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	383195	19.917
128) sec-Butylbenzene	(4)	9.916	105	452546	20.192
130) 1,3-Dichlorobenzene	(4)	9.993	146	216134	19.736
131) p-Isopropyltoluene	(4)	10.022	119	397632	20.042
132)*1,4-Dichlorobenzene-d4	(4)	10.038	152	398717	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	225862	19.894
91) 1,3-Dichloropropene (total)	(3)		100	286704	40.053
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	422072	20.389
136) Benzyl Chloride	(4)	10.157	91	329533	20.738

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

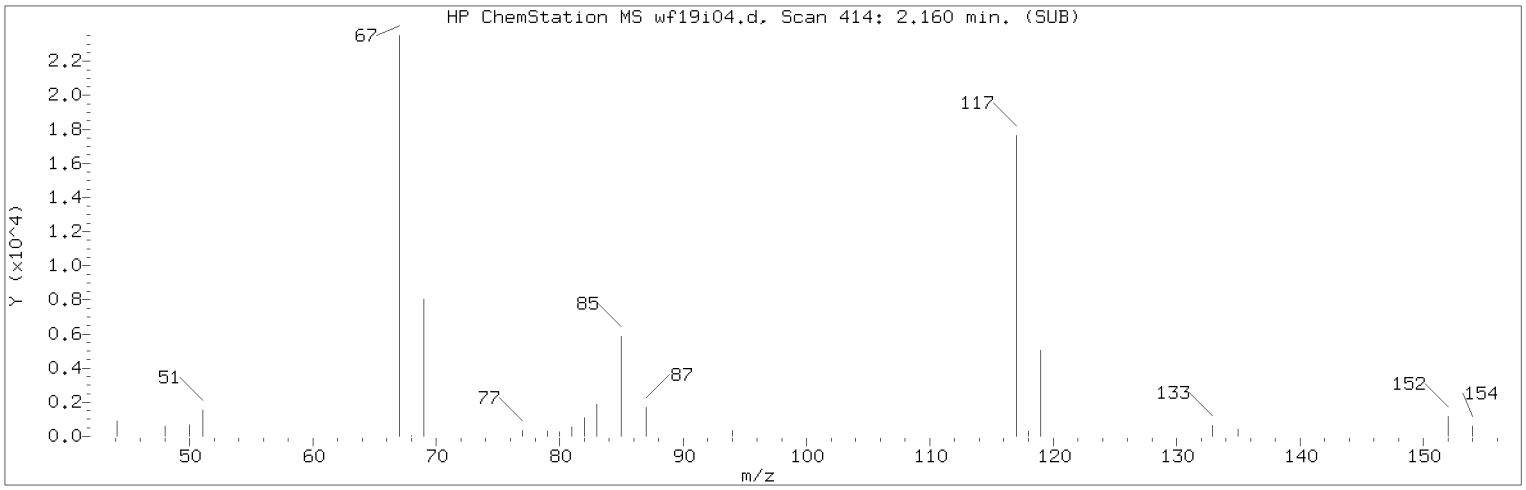
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

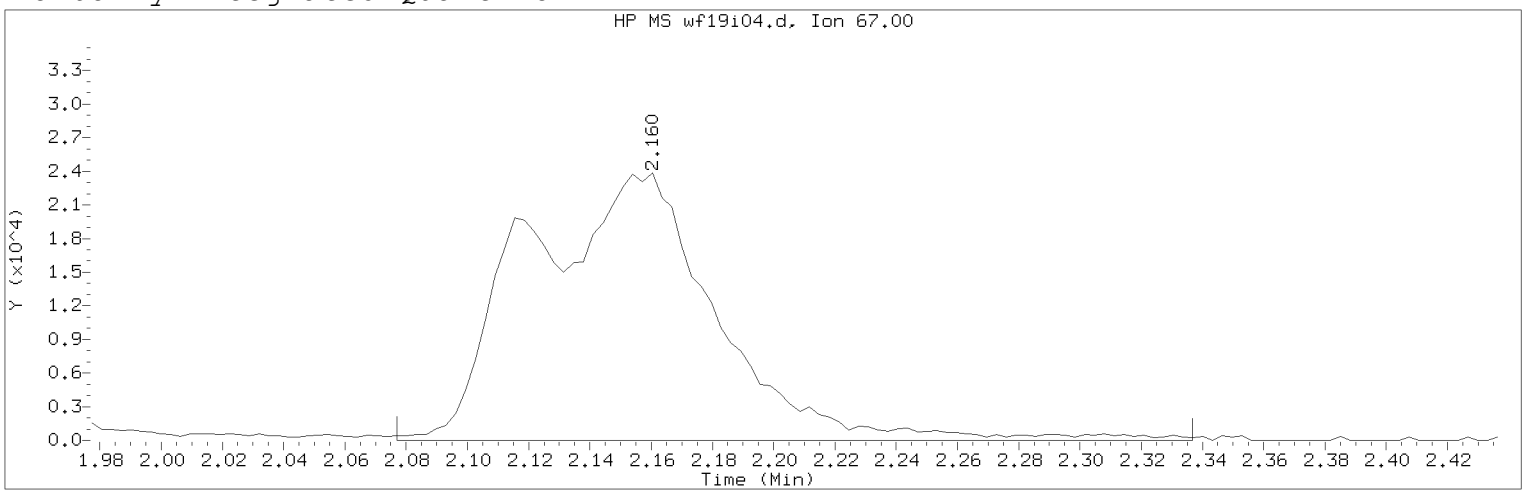
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.237	119	253126	20.305
138) 1,4-Diethylbenzene	(4)	10.298	119	272367	20.393
140) n-Butylbenzene	(4)	10.314	92	198233	19.797
139) 1,2-Dichlorobenzene	(4)	10.324	146	215032	19.791
141) 1,2-Diethylbenzene	(4)	10.378	119	215245	20.452
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	36271	20.608
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	165935	19.917
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	160946	20.121
148) Hexachlorobutadiene	(4)	11.527	225	57264	20.101
149) Naphthalene	(4)	11.582	128	560423	20.707
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	155725	19.946
109) Xylene (Total)	(3)		106	520679	59.394
151) 2-Methylnaphthalene	(4)	12.304	142	317668	20.573
142) Diethylbenzene (total)	(4)		100	740738	61.150

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

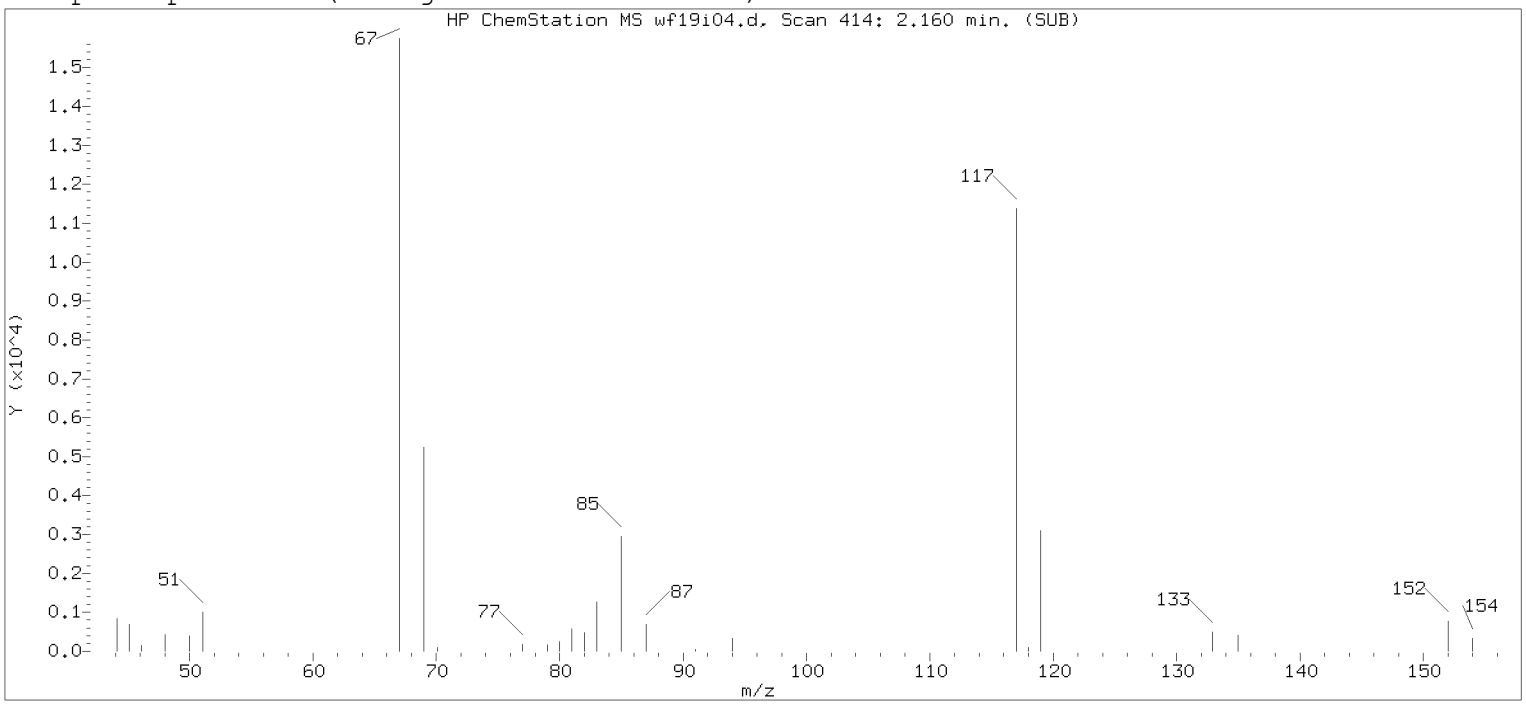
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 414
Retention Time (minutes): 2.160
Quant Ion : 67.00
Area (flag) : 102866M
On-Column Amount (ng) : 19.9868
Integration start scan : 387 Integration stop scan: 468
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

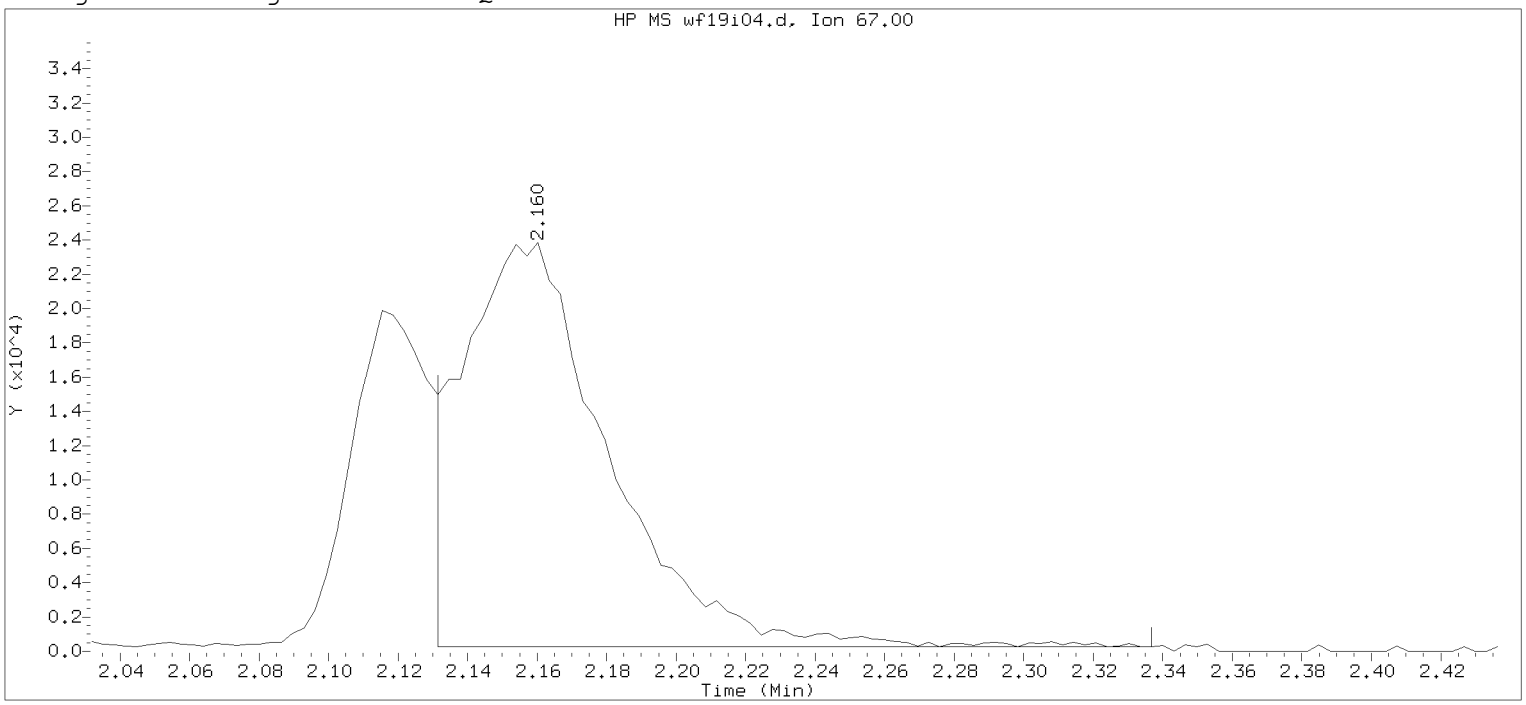
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

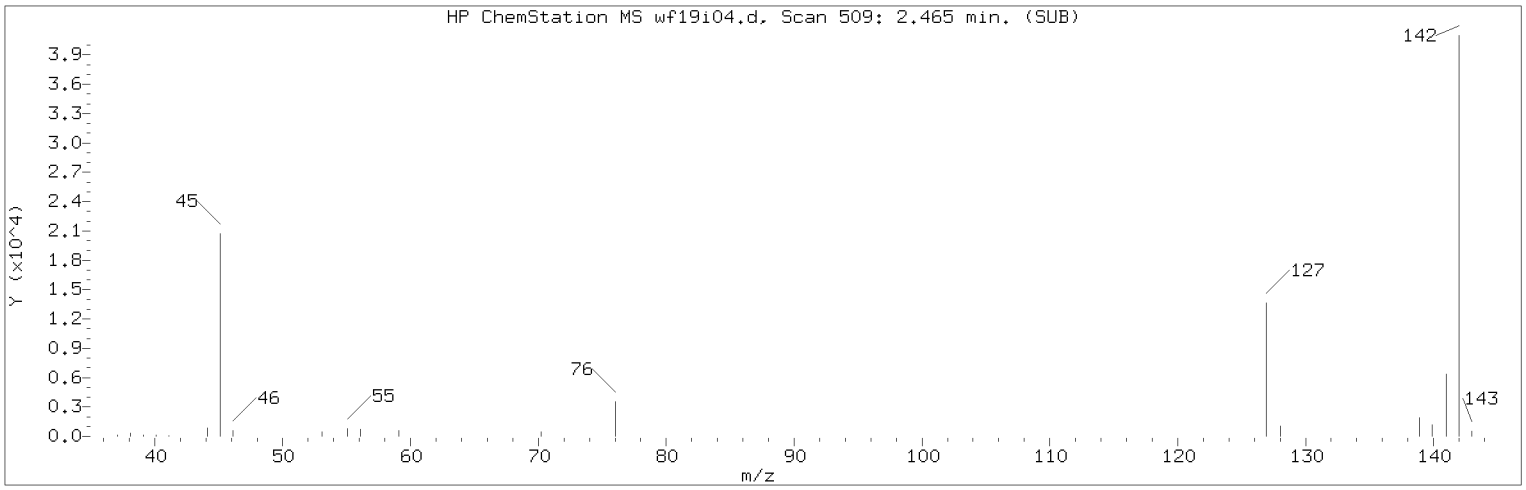
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:48
Date, time and analyst ID of latest file update: 19-Feb-2019 13:48 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

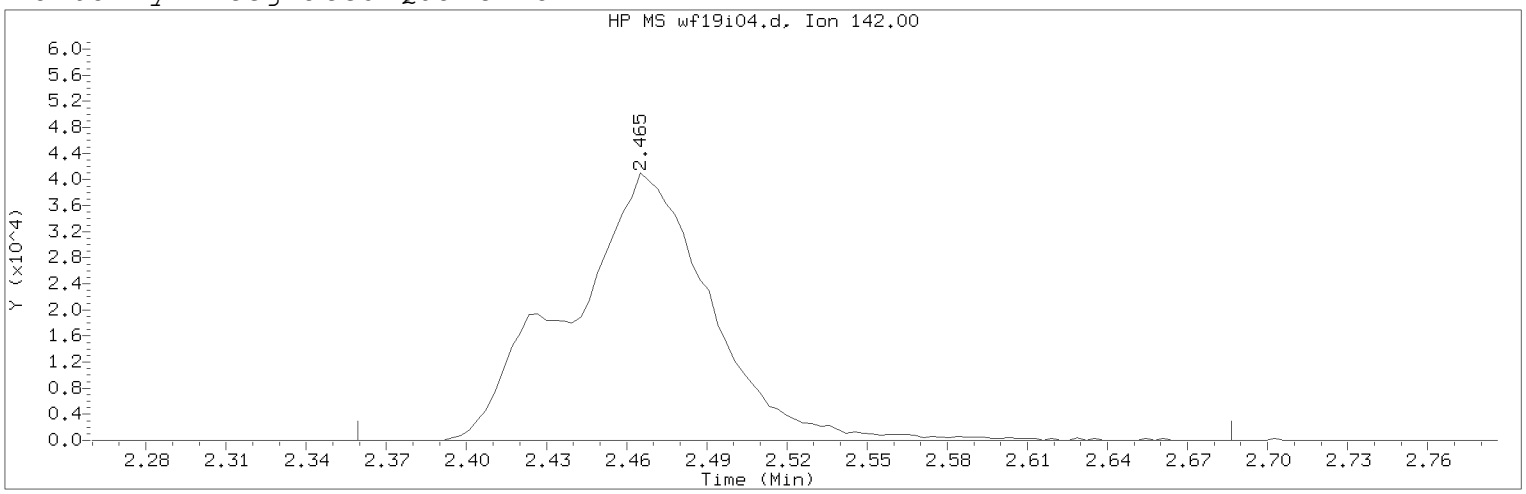
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 414
Retention Time (minutes): 2.160
Quant Ion : 67.00
Area : 68962
On-column Amount (ng) : 20.6064
Integration start scan : 404 Integration stop scan: 468
Y at integration start : 260 Y at integration end: 253

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

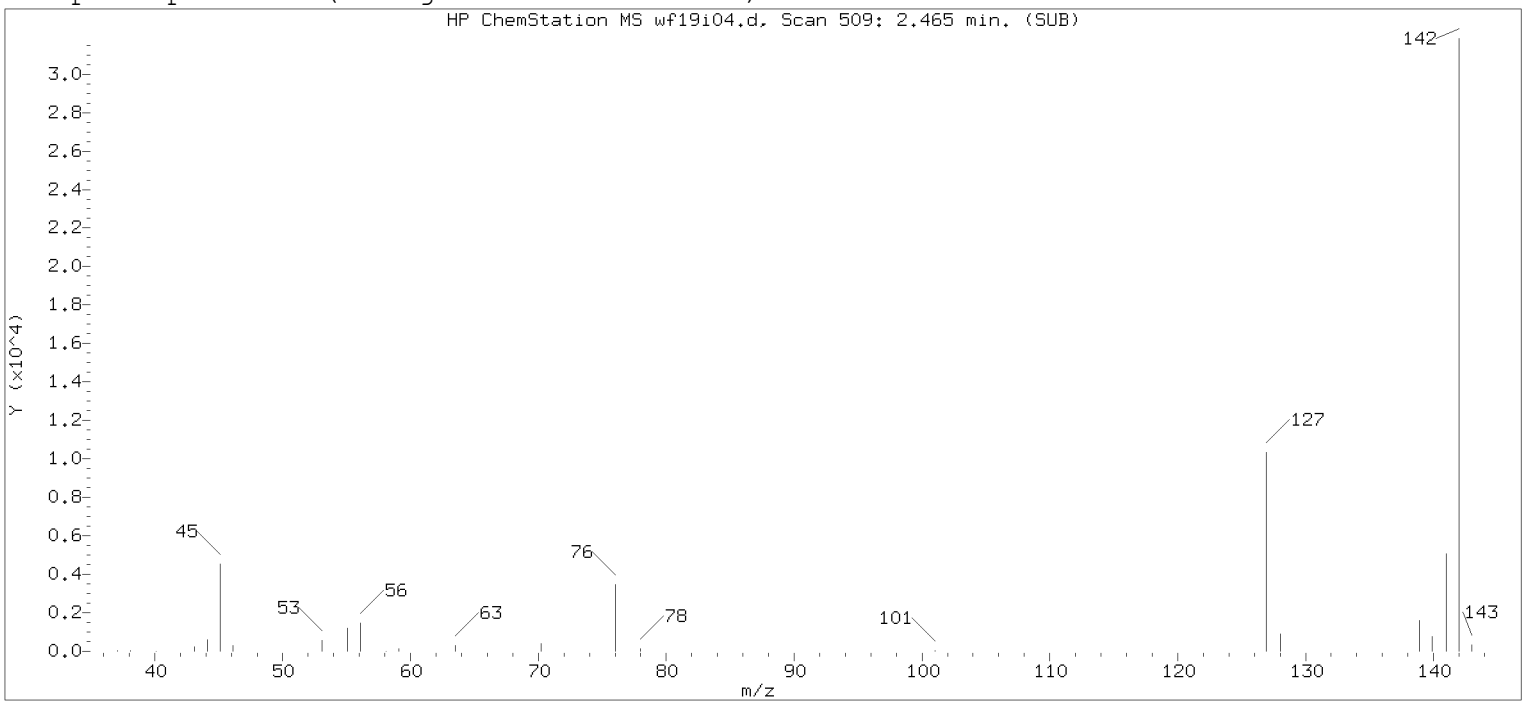
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area (flag) : 150767M
On-Column Amount (ng) : 20.3101
Integration start scan : 475 Integration stop scan: 577
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

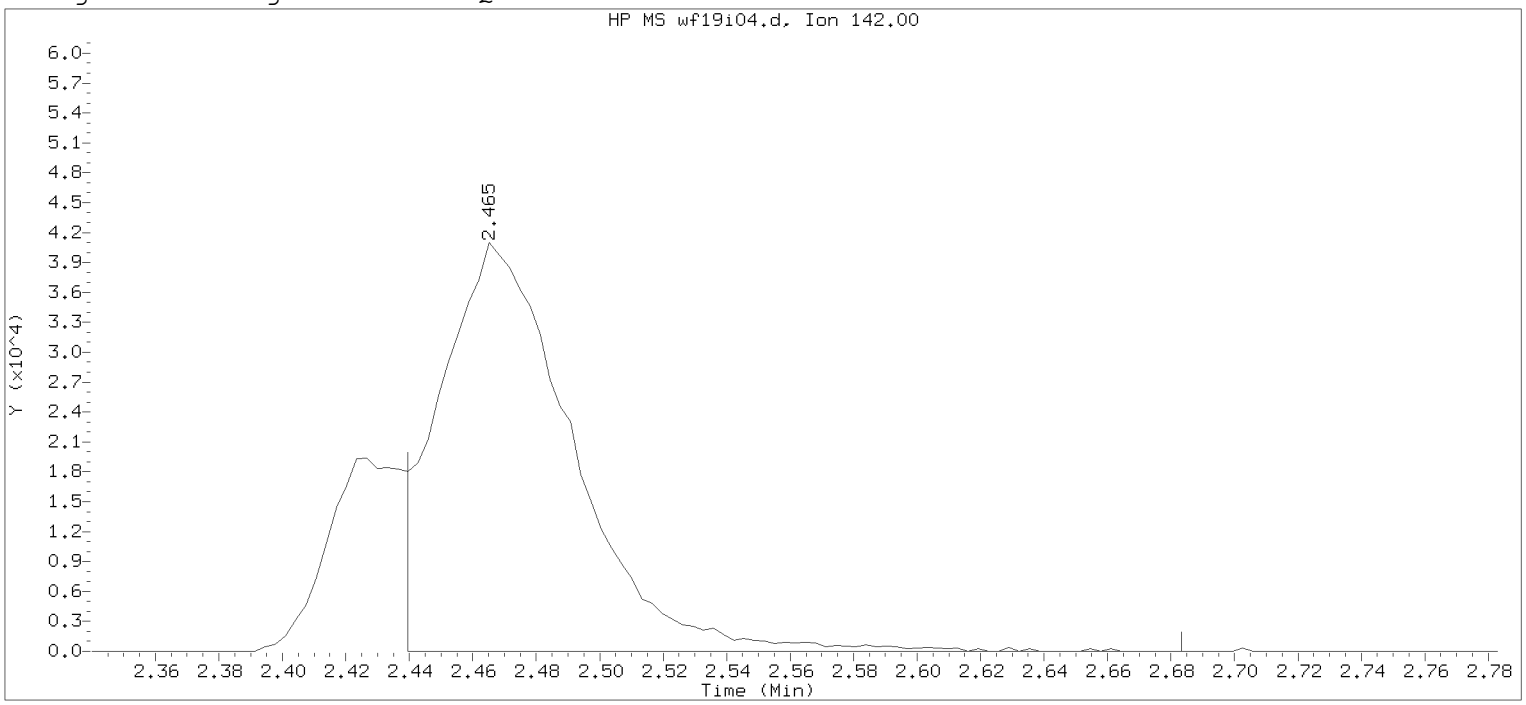
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

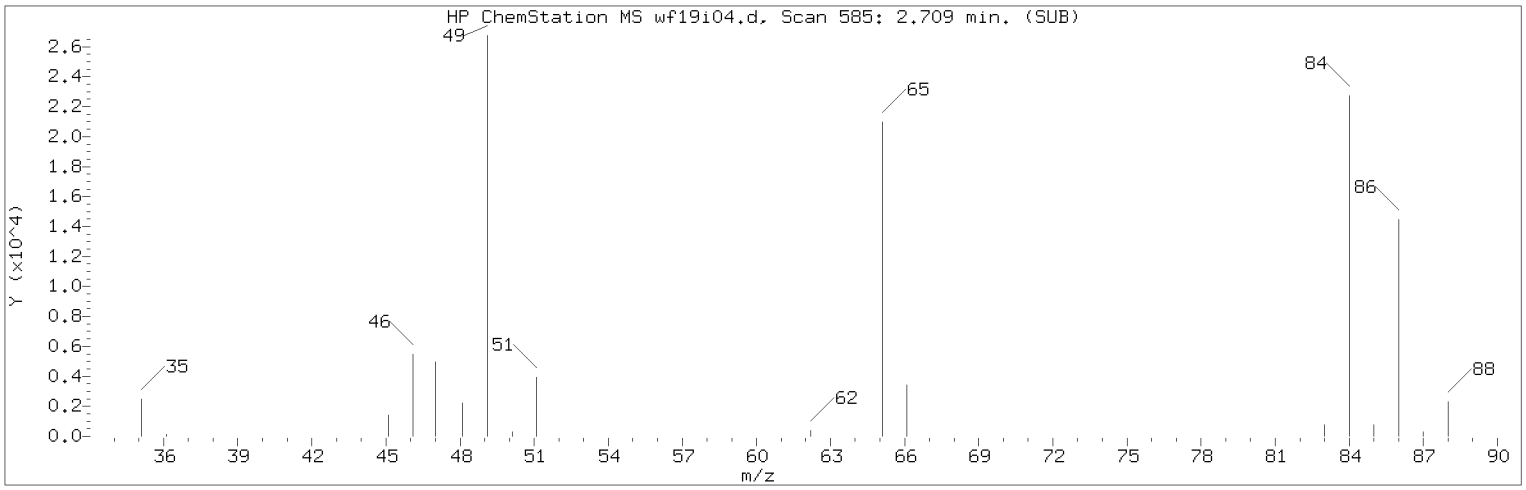
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:48
Date, time and analyst ID of latest file update: 19-Feb-2019 13:48 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

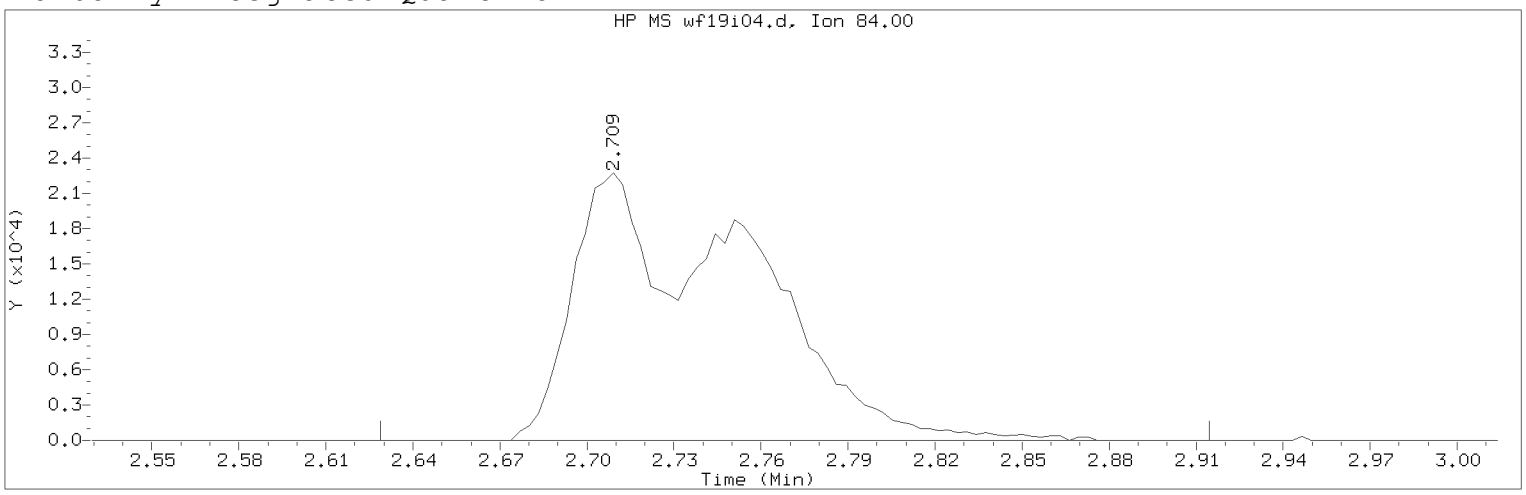
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area : 119508
On-column Amount (ng) : 17.5745
Integration start scan : 500 Integration stop scan: 576
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user approved.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

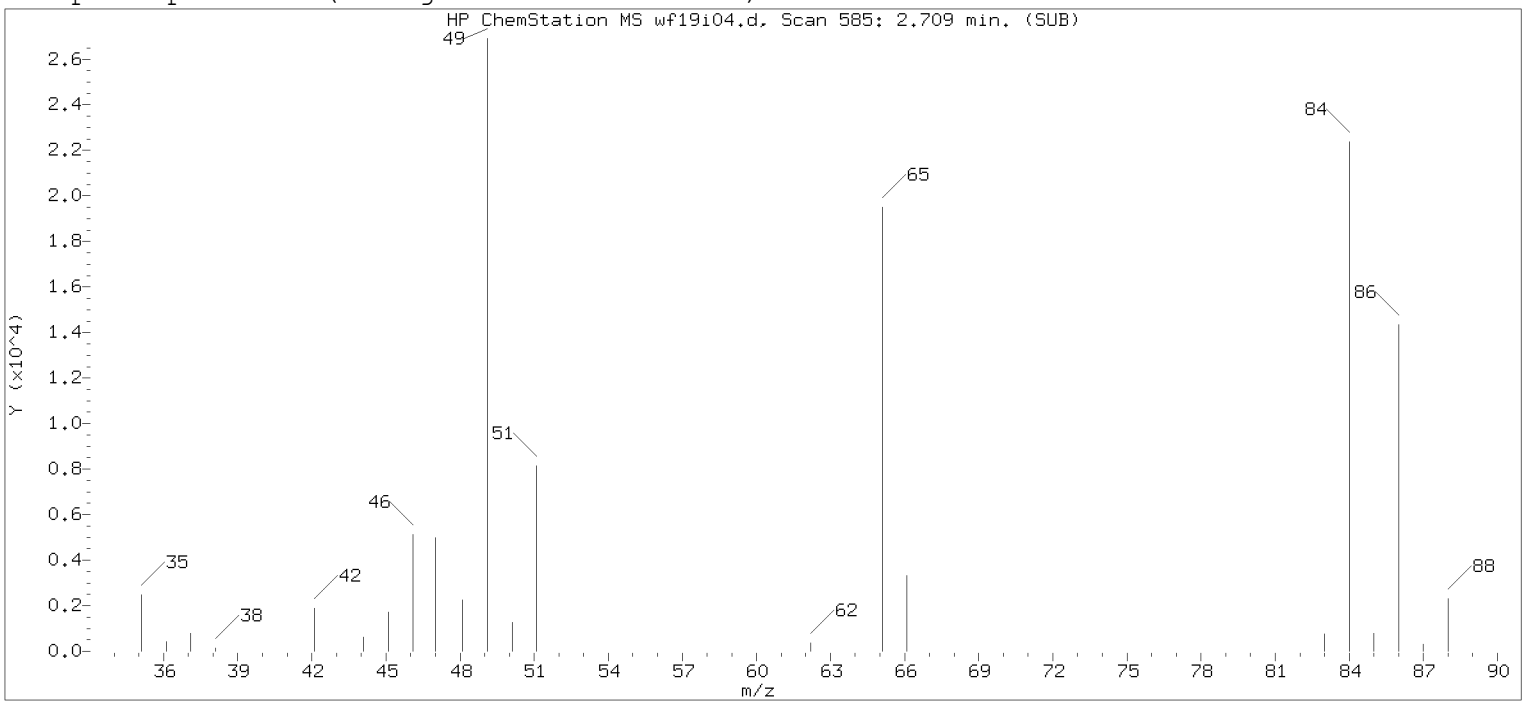
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area (flag) : 93973M
On-Column Amount (ng) : 19.8468
Integration start scan : 559 Integration stop scan: 648
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

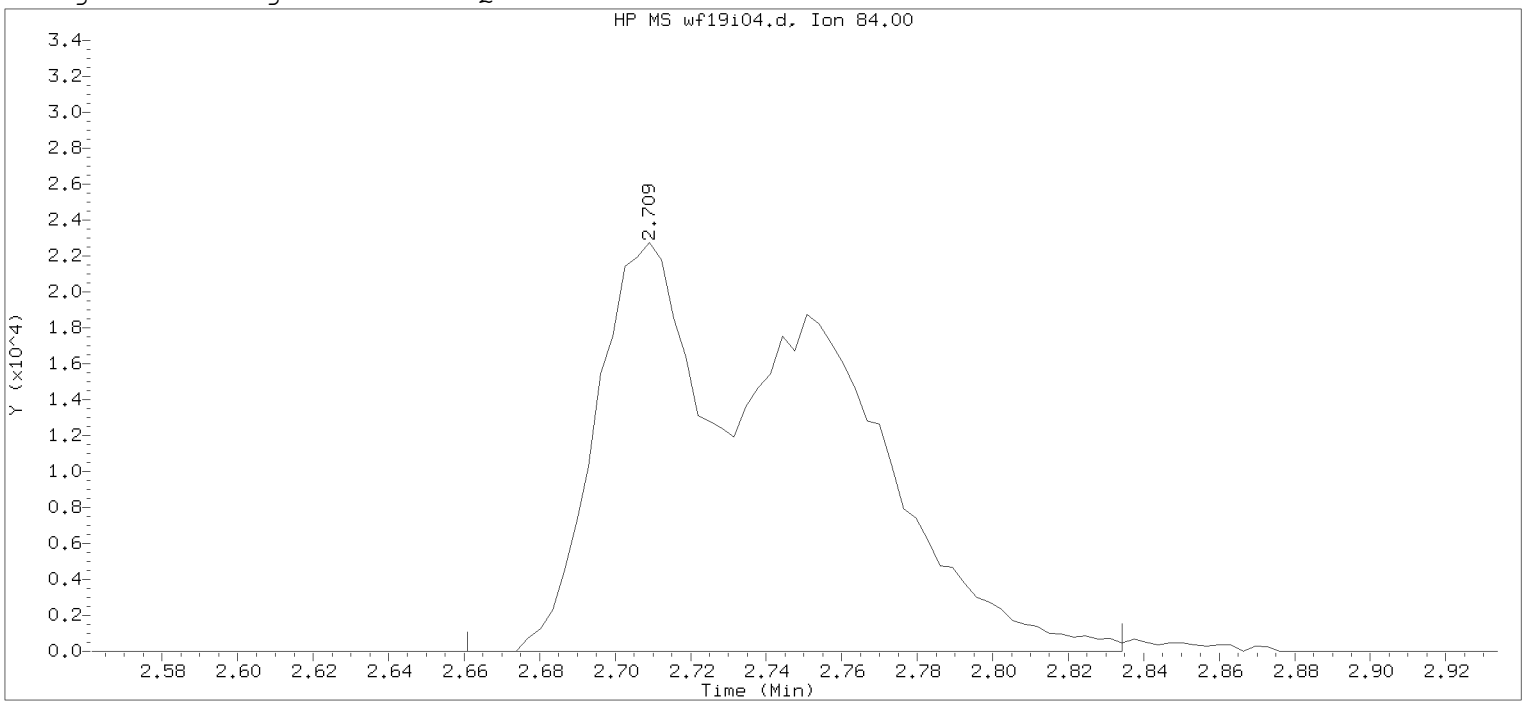
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:48
Date, time and analyst ID of latest file update: 19-Feb-2019 13:48 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area : 93088
On-column Amount (ng) : 25.0351
Integration start scan : 569 Integration stop scan: 623
Y at integration start : 0 Y at integration end: 0

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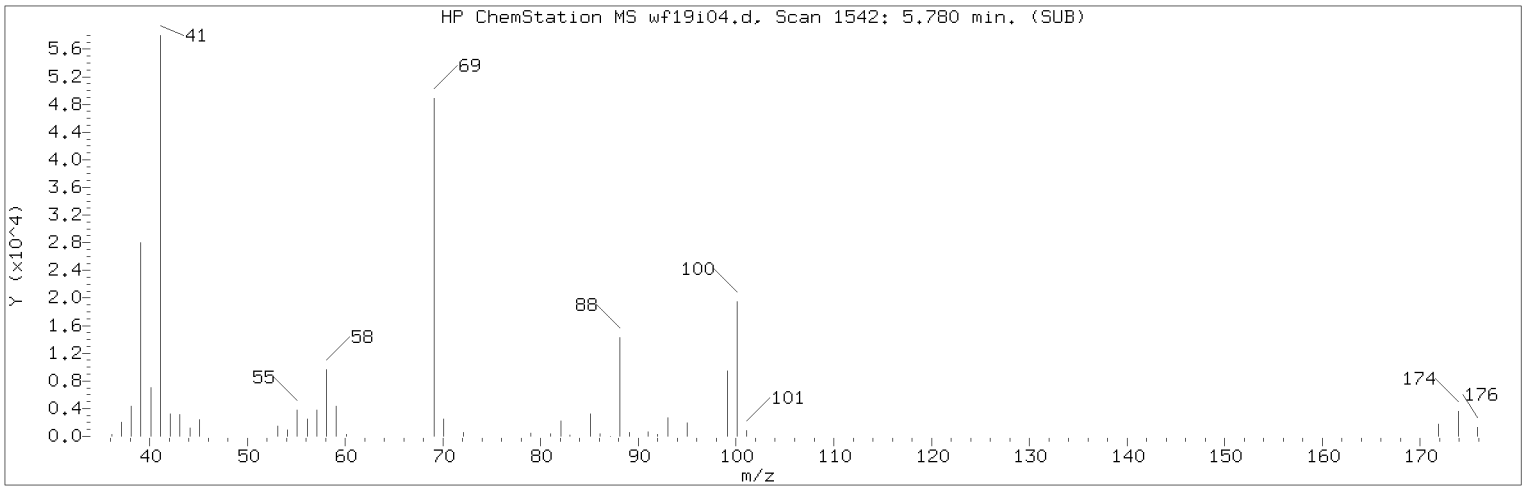
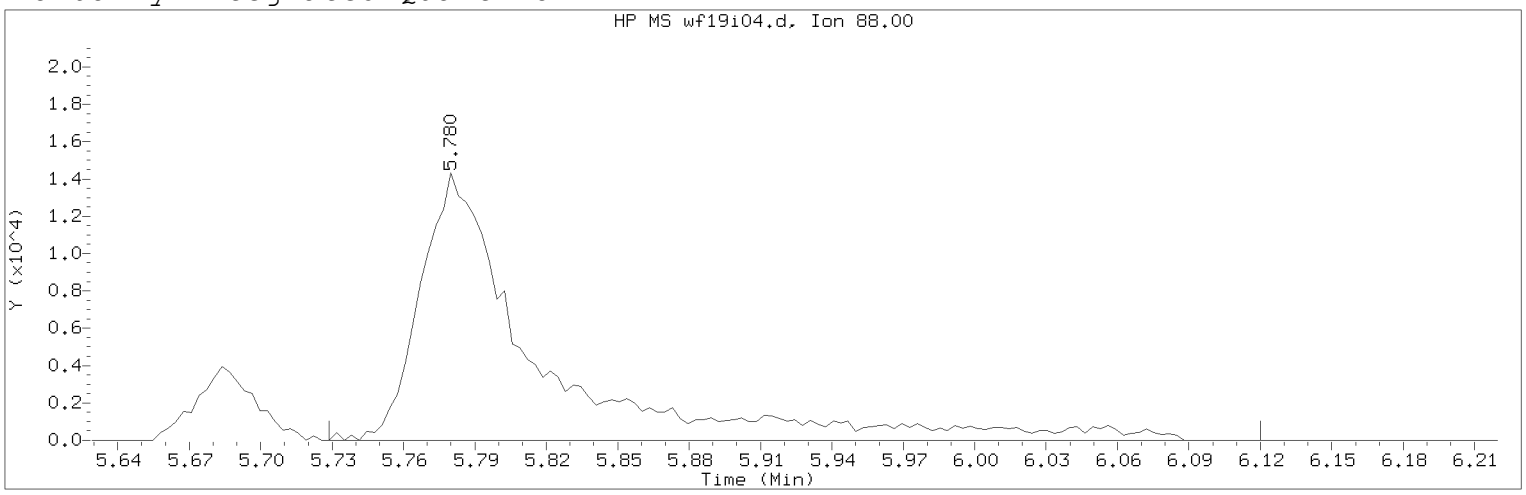
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

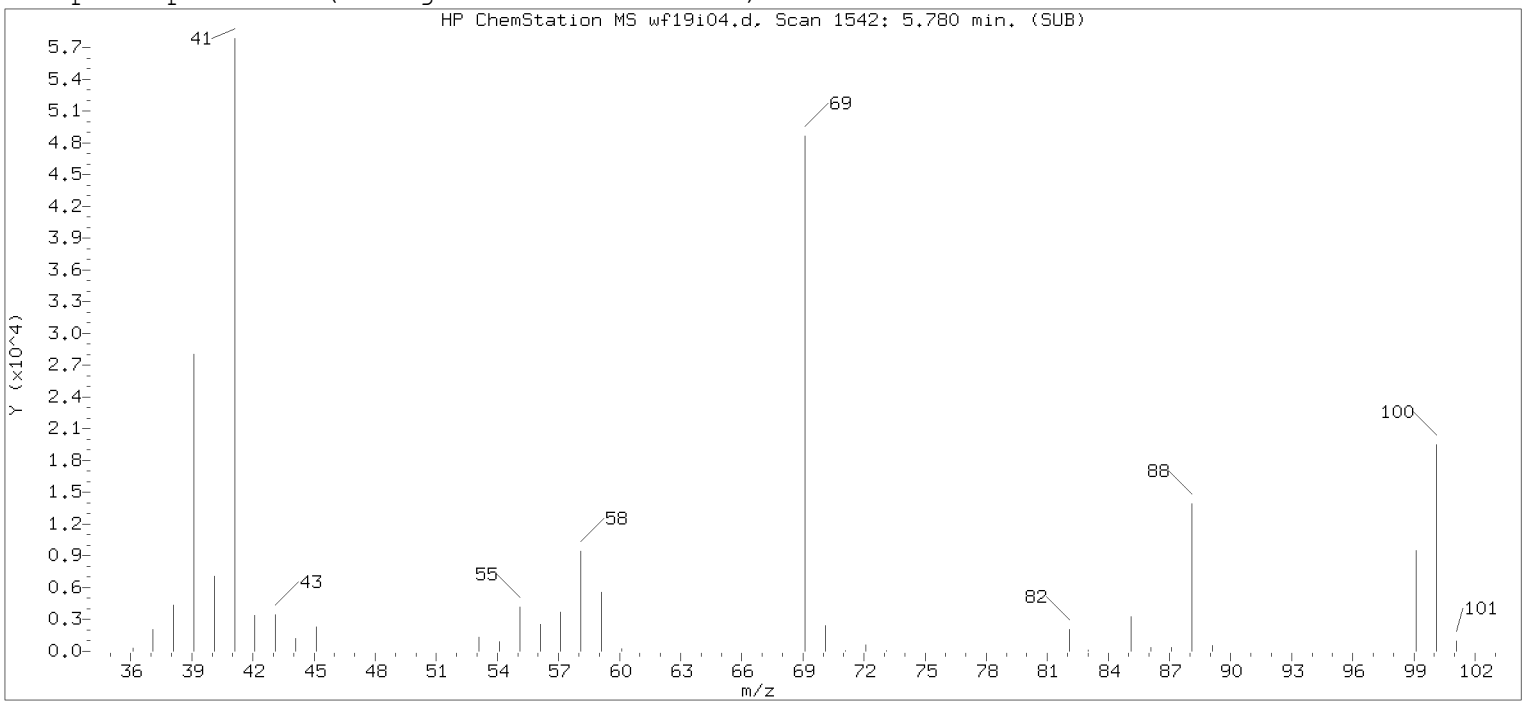
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area (flag) : 49606M
On-Column Amount (ng) : 488.7657
Integration start scan : 1525 Integration stop scan: 1647
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

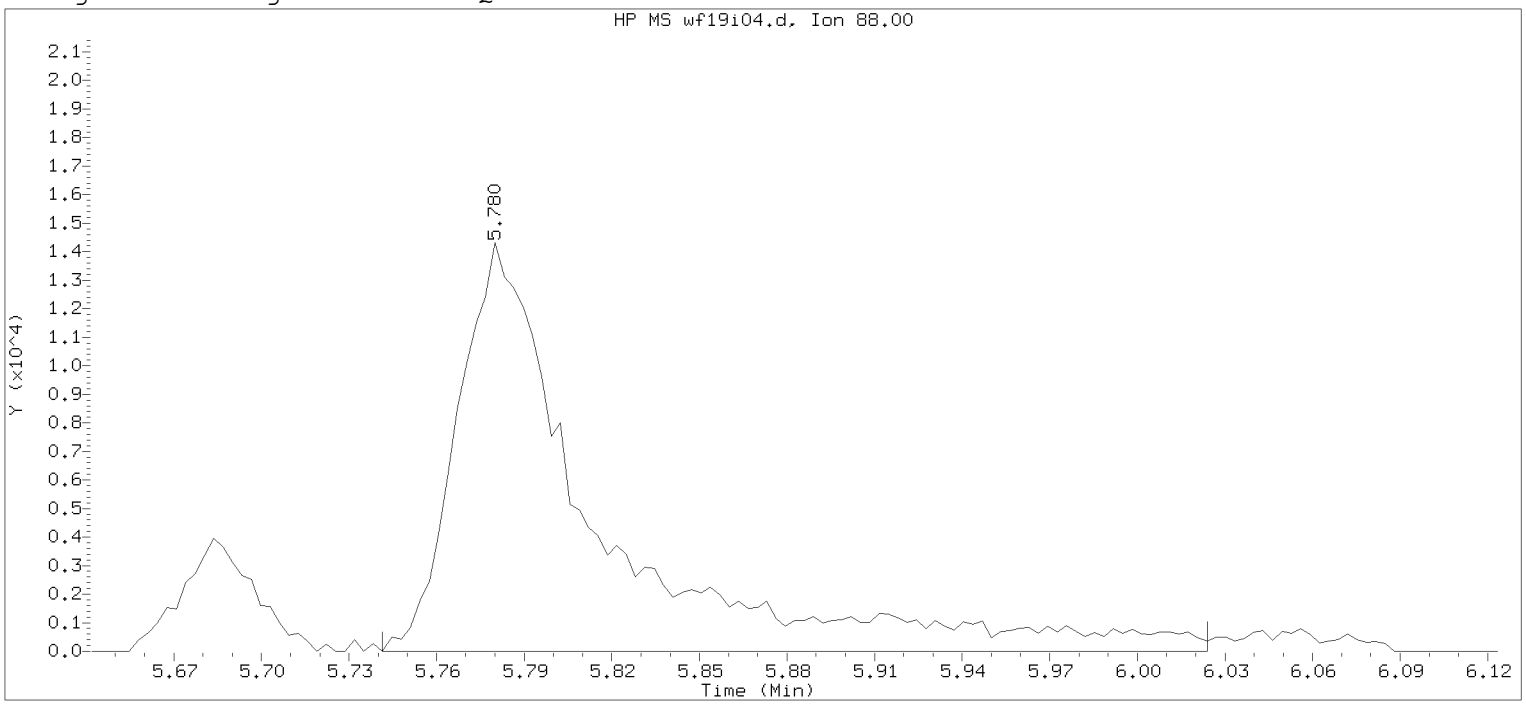
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



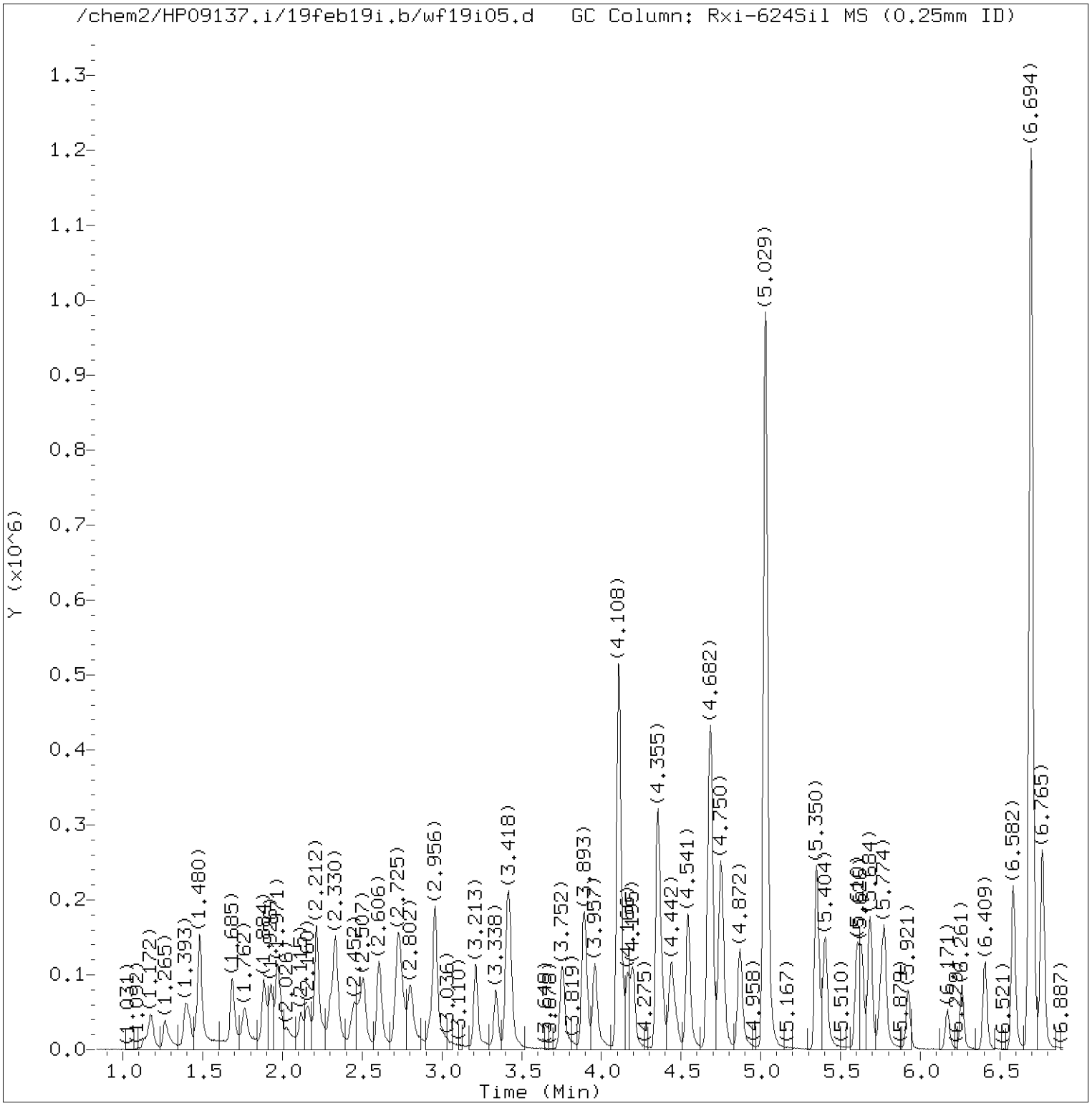
Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:48
Date, time and analyst ID of latest file update: 19-Feb-2019 13:48 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area : 47644
On-column Amount (ng) : 464.2245
Integration start scan : 1529 Integration stop scan: 1617
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

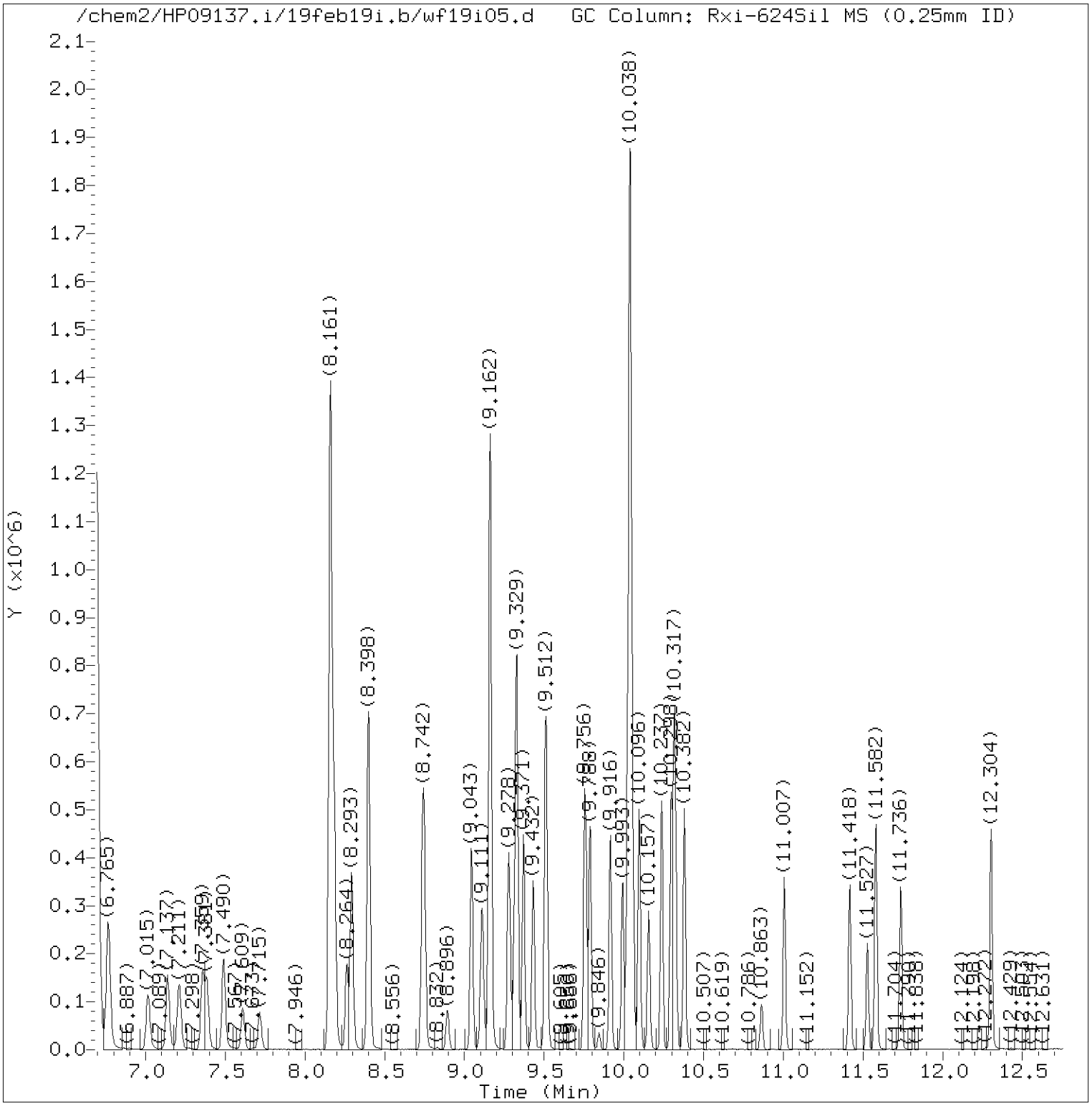
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.262	85	62458	11.066
4) Chloromethane	(2)	1.393	50	76916	10.944
6) Vinyl Chloride	(2)	1.470	62	72647	11.276
5) 1,3-Butadiene	(2)	1.480	39	42800	9.993
8) Bromomethane	(2)	1.682	94	56000	11.021
9) Chloroethane	(2)	1.762	64	45389	10.706
10) Dichlorofluoromethane	(2)	1.884	67	84015	10.238
12) Trichlorofluoromethane	(2)	1.929	101	75649	11.056
11) n-Pentane	(2)	1.971	43	69602	10.696
13) Ethanol	(1)	2.029	45	48262	448.970
15) Freon 123a	(2)	2.160	67	53443M	10.452
16) Acrolein	(1)	2.212	56	159695	94.112
17) 1,1-Dichloroethene	(2)	2.330	96	41128	10.687
17) 1,1-Dichloroethene	(2)	2.330	63	21001	10.816
18) Acetone	(1)	2.334	58	16160M	19.593
19) Freon 113	(2)	2.334	101	36566	10.820
21) 2-Propanol	(1)	2.443	45	59465	97.039
22) Methyl Iodide	(2)	2.468	142	77364	10.490
23) Carbon Disulfide	(2)	2.507	76	145480	10.730
25) Allyl Chloride	(2)	2.600	41	69127	10.310
27) Methyl Acetate	(2)	2.616	43	57968	9.989
29)*t-Butyl alcohol-d10	(1)	2.725	65	235698	250.000
28) Methylene Chloride	(2)	2.744	84	49542M	10.532
30) t-Butyl alcohol	(1)	2.802	59	107632	98.462
31) Acrylonitrile	(2)	2.930	53	30932	10.132
32) trans-1,2-Dichloroethene	(2)	2.956	96	44909	10.755
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	114387	11.251
34) n-Hexane	(2)	3.210	57	60284	10.790
36) 1,1-Dichloroethane	(2)	3.338	63	80127	10.590
38) di-Isopropyl ether	(2)	3.412	45	153463	10.557
39) 2-Chloro-1,3-butadiene	(2)	3.431	53	69810	10.653
40) Ethyl t-butyl ether	(2)	3.758	59	118447	11.179
42) cis-1,2-Dichloroethene	(2)	3.887	96	49735	10.608
45) 2,2-Dichloropropane	(2)	3.887	77	36418	10.717
44) 2-Butanone	(2)	3.903	43	86295	19.675
47) Propionitrile	(1)	3.957	54	135864	100.004
48) Methacrylonitrile	(2)	4.111	67	172352	52.506
49) Bromochloromethane	(2)	4.114	128	25130	10.312

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.166	71	22155	17.619
51) Chloroform	(2)	4.198	83	74987	10.563
52)$Dibromofluoromethane	(2)	4.355	113	200531	49.589
52)$Dibromofluoromethane	(2)	4.355	111	204921	49.364
53) 1,1,1-Trichloroethane	(2)	4.381	97	57282	10.724
54) Cyclohexane	(2)	4.442	56	75994	10.750
54) Cyclohexane	(2)	4.442	84	61745	10.552
54) Cyclohexane	(2)	4.442	69	22755	10.711
55) 1,1-Dichloropropene	(2)	4.541	75	59776	10.502
56) Carbon Tetrachloride	(2)	4.545	117	48197	10.514
58) Isobutyl Alcohol	(1)	4.670	41	97996	245.901
57)$1,2-Dichloroethane-d4	(2)	4.686	102	53213	49.478
57)$1,2-Dichloroethane-d4	(2)	4.686	65	234803	50.153
57)$1,2-Dichloroethane-d4	(2)	4.689	104	34768	50.762
60) Benzene	(2)	4.747	78	194070	10.608
61) 1,2-Dichloroethane	(2)	4.766	62	58810	10.406
61) 1,2-Dichloroethane	(2)	4.760	98	5873	10.923
65) t-Amyl methyl ether	(2)	4.872	73	123749	11.400
66)*Fluorobenzene	(2)	5.029	96	872867	50.000
67) n-Heptane	(2)	5.035	43	56932	10.662
69) n-Butanol	(1)	5.350	56	171859	485.699
71) Trichloroethene	(2)	5.404	95	47297	10.675
73) Methylcyclohexane	(2)	5.610	83	63355	9.850
73) Methylcyclohexane	(2)	5.603	98	29361	9.817
74) 1,2-Dichloropropane	(2)	5.632	63	49822	10.607
75) Dibromomethane	(2)	5.754	93	30462	10.508
77) Methyl Methacrylate	(2)	5.774	69	52747	10.219
76) 1,4-Dioxane	(1)	5.780	88	26130M	247.023
79) Bromodichloromethane	(2)	5.921	83	54837	10.296
43) 1,2-Dichloroethene (Total)	(2)		96	94644	21.364
80) 2-Nitropropane	(2)	6.171	41	32706	18.149
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	39229	10.955
82) cis-1,3-Dichloropropene	(2)	6.409	75	75893	10.363
83) 4-Methyl-2-pentanone	(2)	6.585	43	162394	18.783
84)$Toluene-d8	(3)	6.694	98	898296	50.552
84)$Toluene-d8	(3)	6.694	100	588219	49.916
89) Toluene	(3)	6.765	92	124809	10.903
90) trans-1,3-Dichloropropene	(3)	7.015	75	71110	10.435

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.137	69	87307	10.426
93) 1,1,2-Trichloroethane	(3)	7.211	97	46734	10.607
94) Tetrachloroethene	(3)	7.359	166	50876	10.953
95) 1,3-Dichloropropane	(3)	7.384	76	82341	10.760
97) 2-Hexanone	(3)	7.490	43	127140	19.072
98) Dibromochloromethane	(3)	7.609	129	44473	10.335
100) 1,2-Dibromoethane	(3)	7.715	107	52152	10.774
101)*Chlorobenzene-d5	(3)	8.161	117	709147	50.000
103) Chlorobenzene	(3)	8.187	112	135467	10.668
104) 1,1,1,2-Tetrachloroethane	(3)	8.260	131	42994	10.535
105) Ethylbenzene	(3)	8.293	91	235037	10.803
107) m+p-Xylene	(3)	8.398	106	187670	21.696
108) o-Xylene	(3)	8.735	106	90084	10.586
110) Styrene	(3)	8.751	104	151094	10.584
111) Bromoform	(3)	8.893	173	33660	10.051
112) Isopropylbenzene	(3)	9.043	105	227103	10.860
113) Cyclohexanone	(1)	9.111	55	109179	228.810
115)$4-Bromofluorobenzene	(3)	9.162	95	357932	50.349
115)$4-Bromofluorobenzene	(3)	9.162	174	302192	50.376
116) Bromobenzene	(4)	9.278	156	59684	10.510
117) 1,1,2,2-Tetrachloroethane	(4)	9.281	83	80608	10.526
118) 1,2,3-Trichloropropane	(4)	9.310	110	23980	10.396
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	129246	52.628
120) n-Propylbenzene	(4)	9.371	91	270892	10.821
121) 2-Chlorotoluene	(4)	9.432	126	55953	10.836
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	194234	10.758
122) 4-Chlorotoluene	(4)	9.515	126	58566	10.595
125) tert-Butylbenzene	(4)	9.756	134	42636	10.394
126) Pentachloroethane	(4)	9.765	167	33777	10.416
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	204882	10.769
128) sec-Butylbenzene	(4)	9.916	105	239653	10.814
130) 1,3-Dichlorobenzene	(4)	9.993	146	115418	10.658
131) p-Isopropyltoluene	(4)	10.022	119	211548	10.783
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	394276	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	117695	10.484
91) 1,3-Dichloropropene (total)	(3)		100	147003	20.798
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	216354	10.569
136) Benzyl Chloride	(4)	10.157	91	162115	10.317

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.237	119	129345	10.493
138) 1,4-Diethylbenzene	(4)	10.295	119	139309	10.548
140) n-Butylbenzene	(4)	10.314	92	107453	10.852
139) 1,2-Dichlorobenzene	(4)	10.324	146	114774	10.683
141) 1,2-Diethylbenzene	(4)	10.382	119	110669	10.634
143) 1,2-Dibromo-3-chloropropane	(4)	10.866	75	17630	10.130
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	86972	10.557
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	84162	10.640
148) Hexachlorobutadiene	(4)	11.527	225	30490	10.823
149) Naphthalene	(4)	11.582	128	287278	10.734
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	81036	10.497
109) Xylene (Total)	(3)		106	277754	32.281
151) 2-Methylnaphthalene	(4)	12.304	142	164287	10.760
142) Diethylbenzene (total)	(4)		100	379323	31.674

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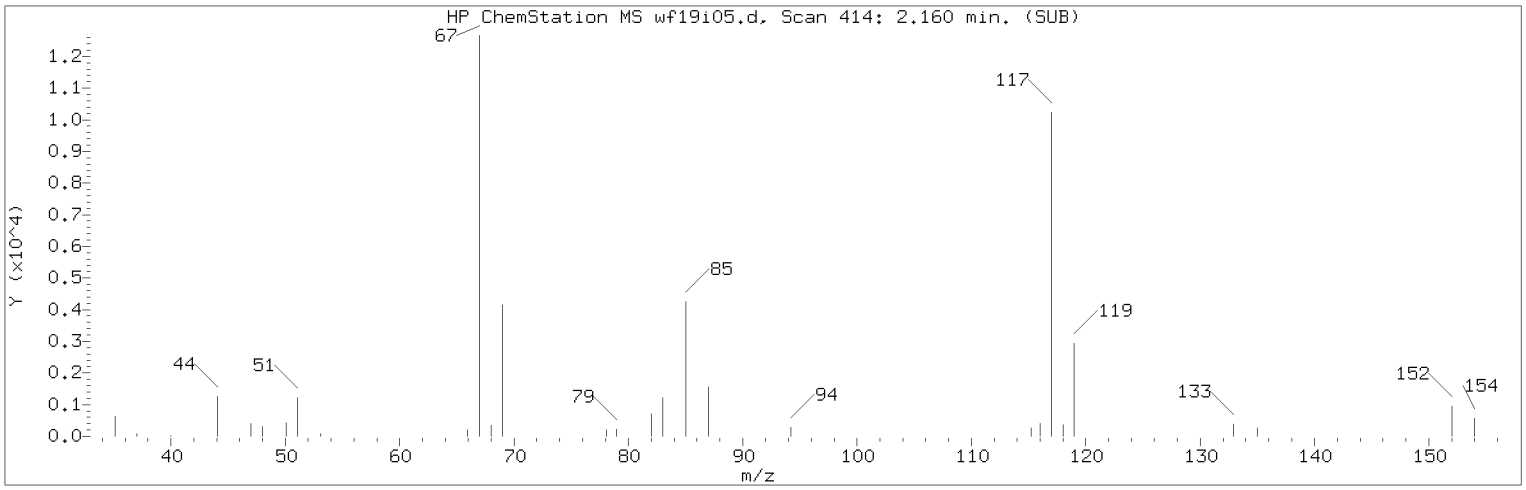
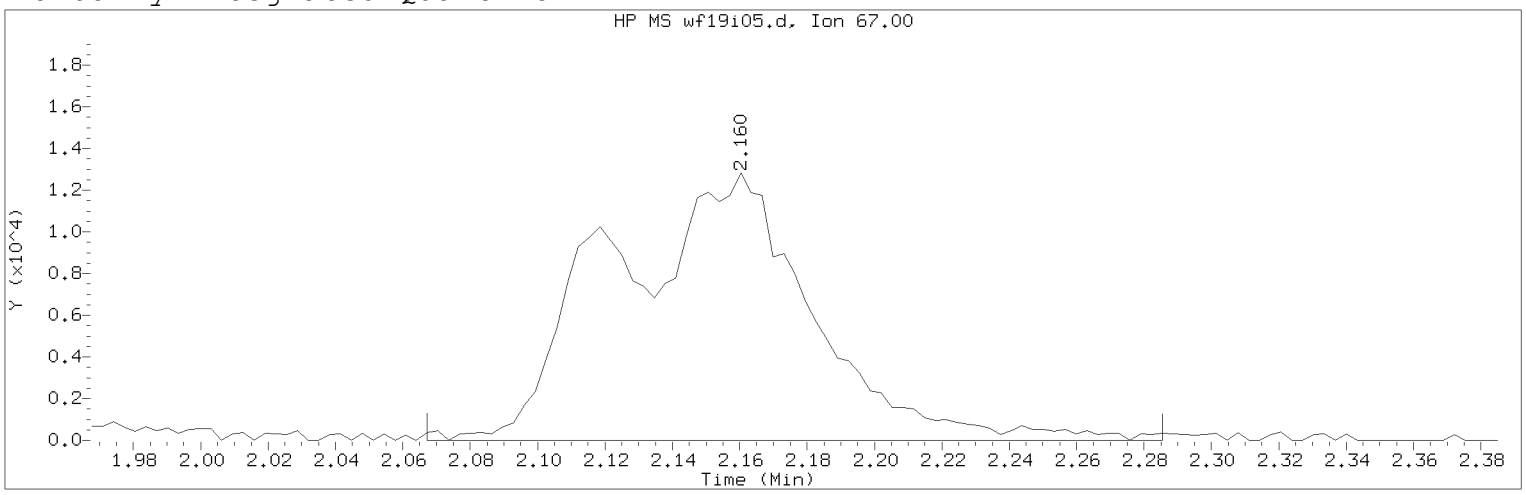
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

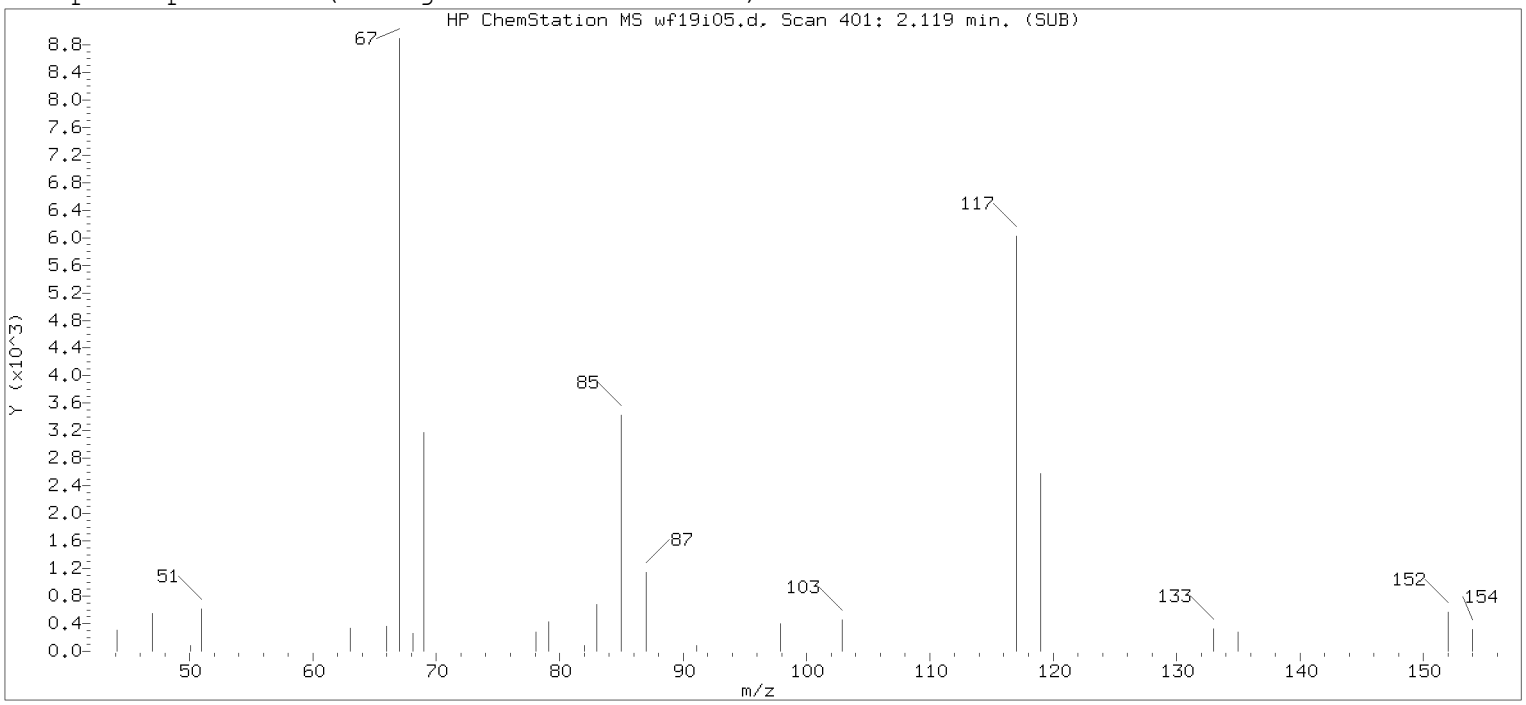
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 414
Retention Time (minutes): 2.160
Quant Ion : 67.00
Area (flag) : 53443M
On-Column Amount (ng) : 10.4520
Integration start scan : 384 Integration stop scan: 452
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

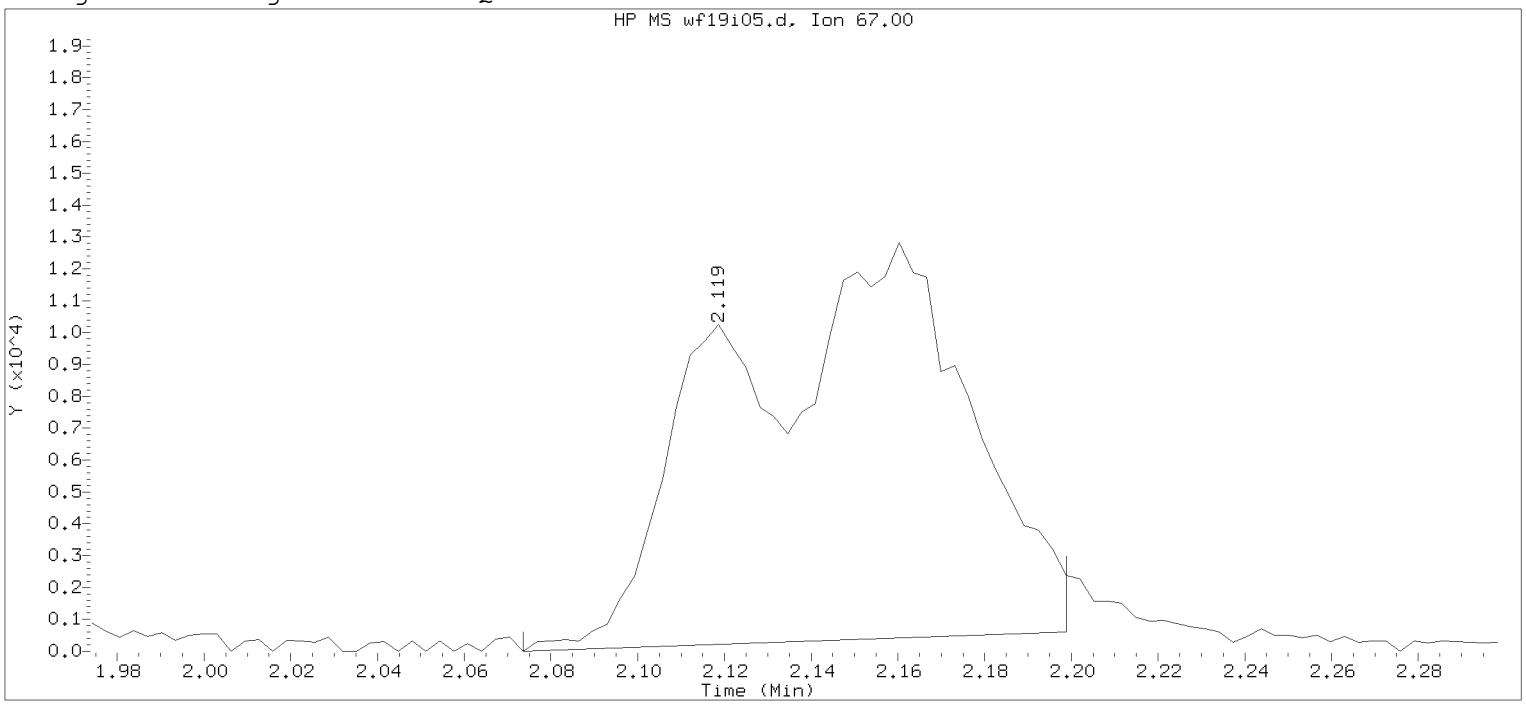
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:12
Date, time and analyst ID of latest file update: 19-Feb-2019 14:12 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 401		
Retention Time (minutes)	: 2.119		
Quant Ion	: 67.00		
Area	: 47122		
On-column Amount (ng)	: 13.0811		
Integration start scan	: 386	Integration stop scan:	425
Y at integration start	: 0	Y at integration end:	613

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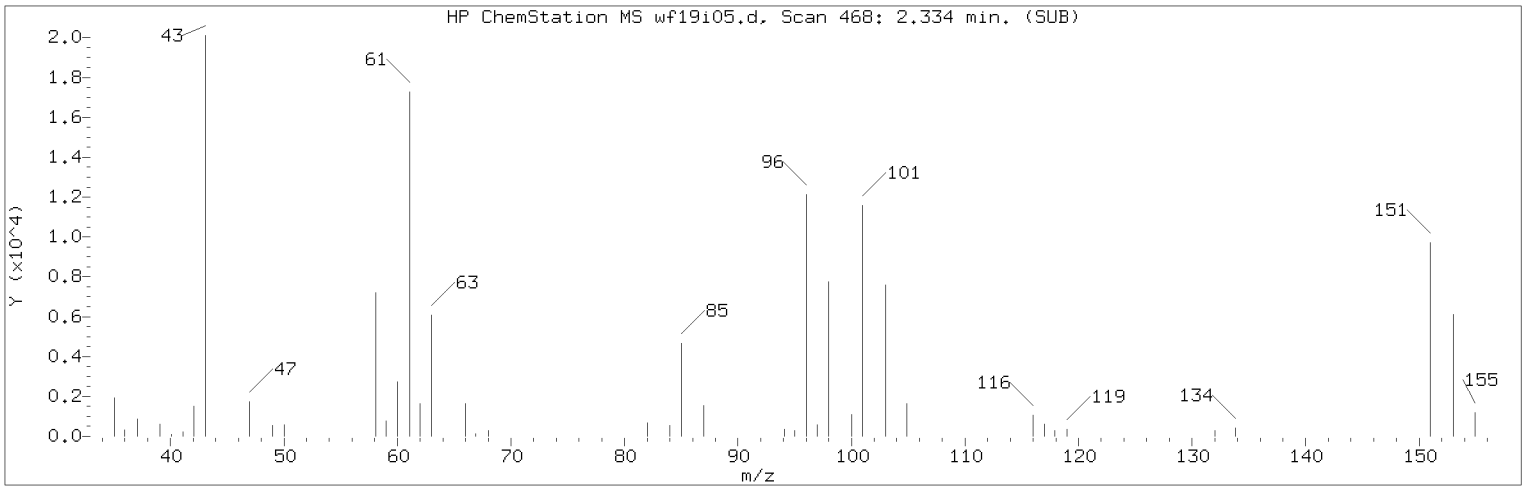
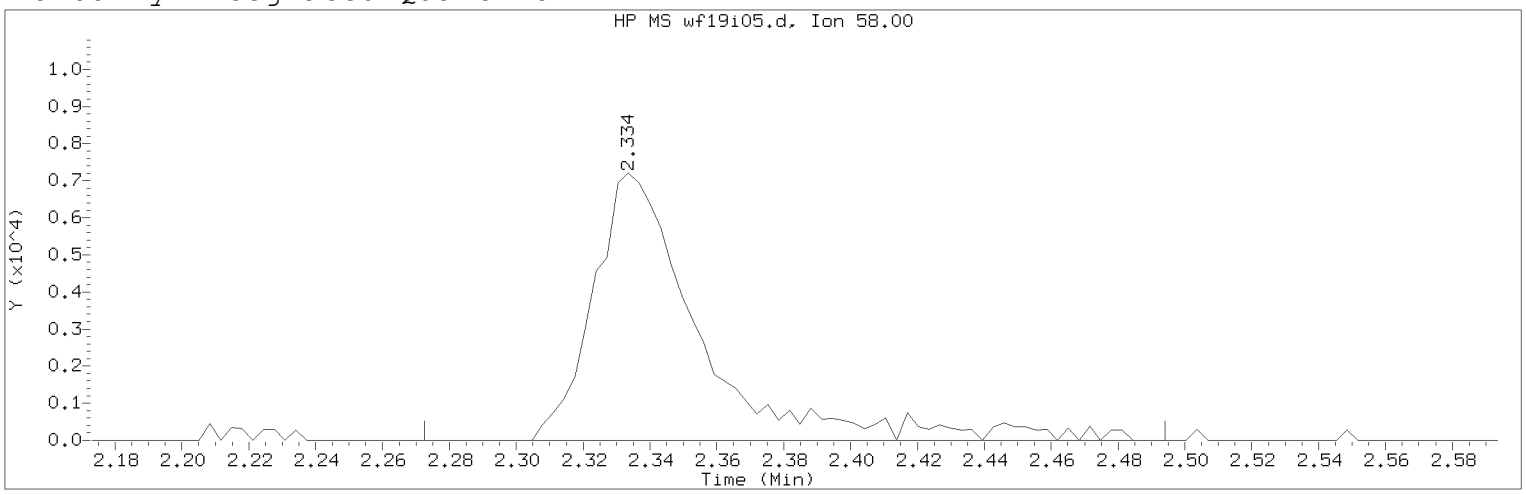
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

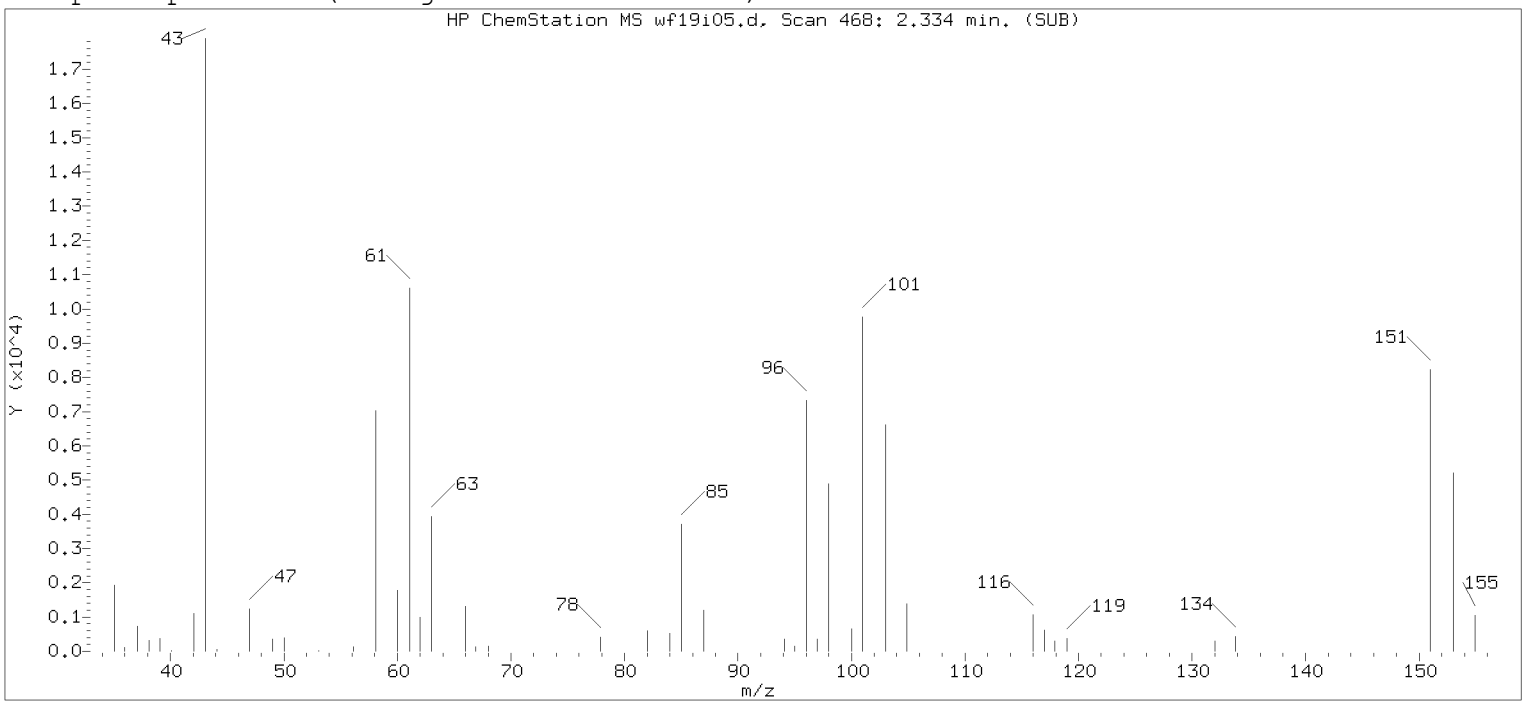
Compound Number : 18
Compound Name : Acetone
Scan Number : 468
Retention Time (minutes): 2.334
Quant Ion : 58.00
Area (flag) : 16160M
On-Column Amount (ng) : 19.5930
Integration start scan : 448 Integration stop scan: 517
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

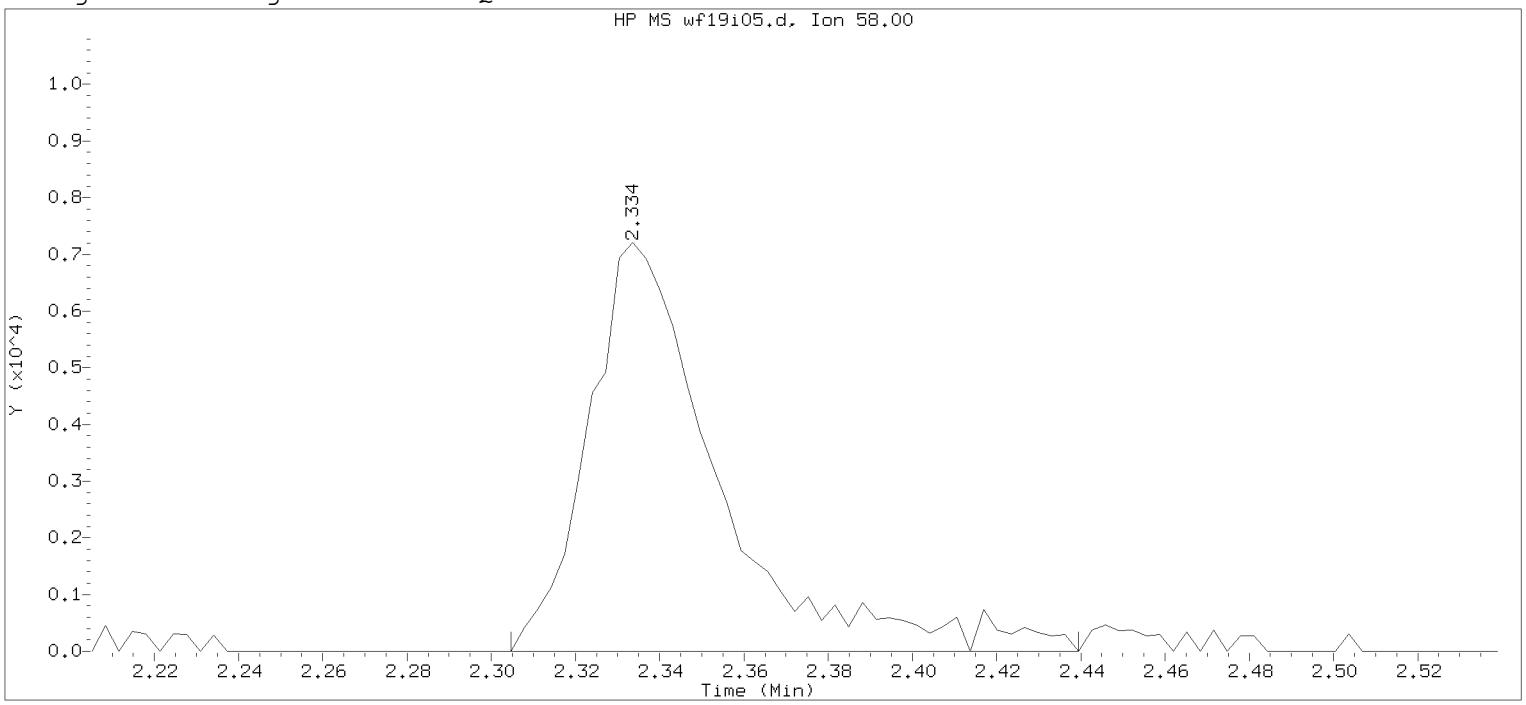
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:12
Date, time and analyst ID of latest file update: 19-Feb-2019 14:12 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 18
Compound Name : Acetone
Scan Number : 468
Retention Time (minutes): 2.334
Quant Ion : 58.00
Area : 15508
On-column Amount (ng) : 18.9951
Integration start scan : 458 Integration stop scan: 500
Y at integration start : 0 Y at integration end: 0

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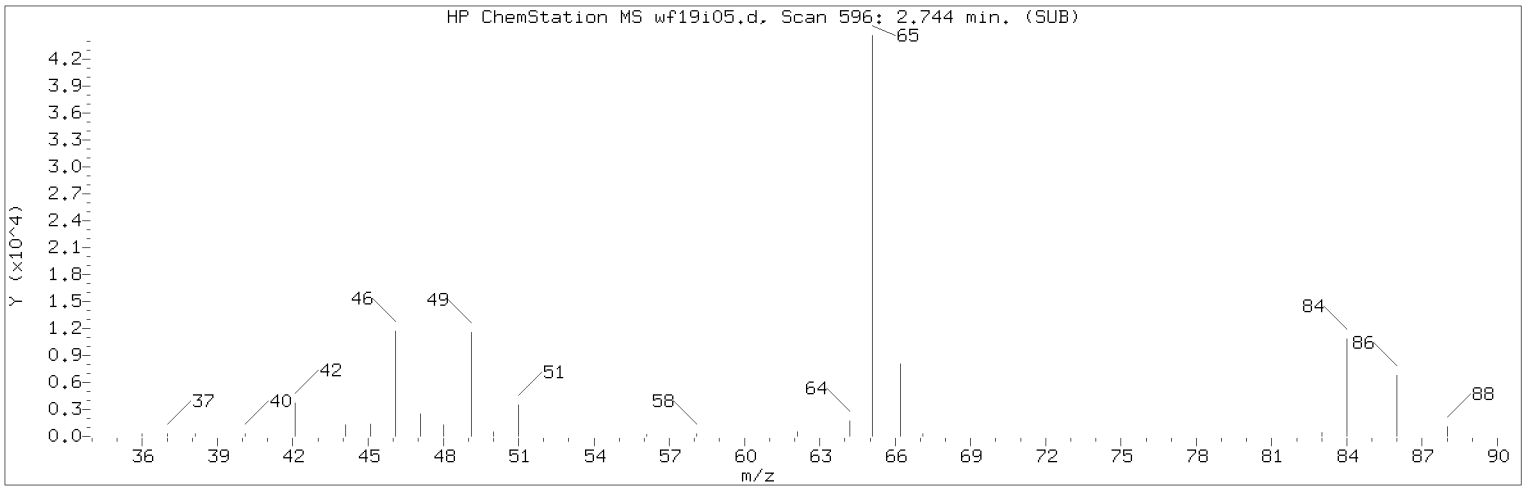
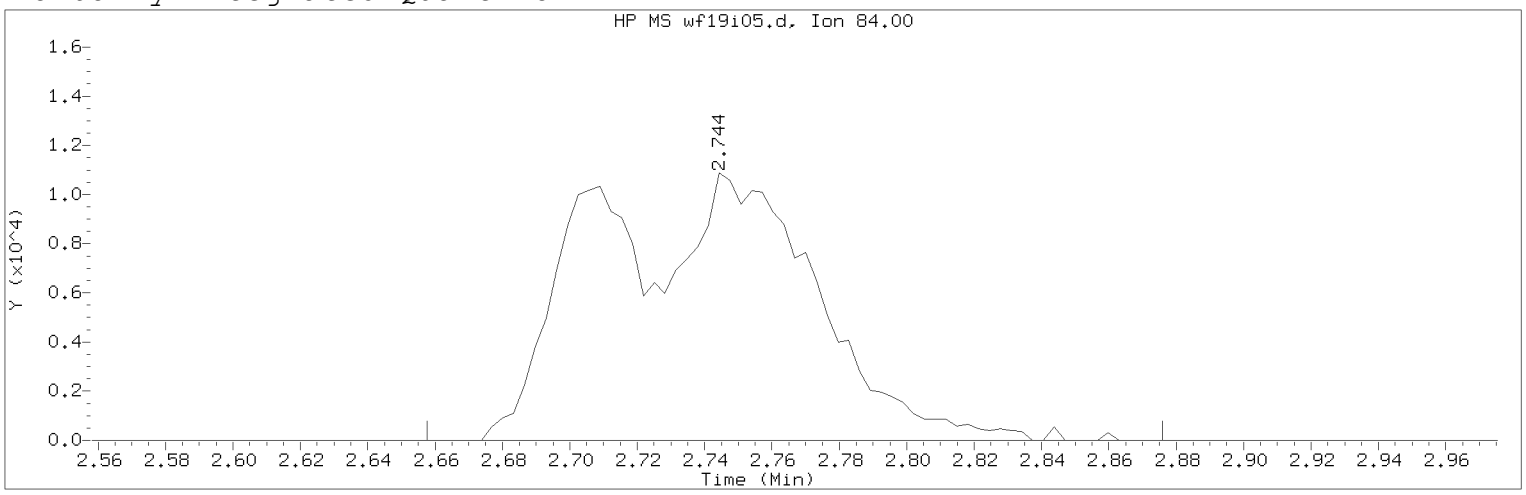
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

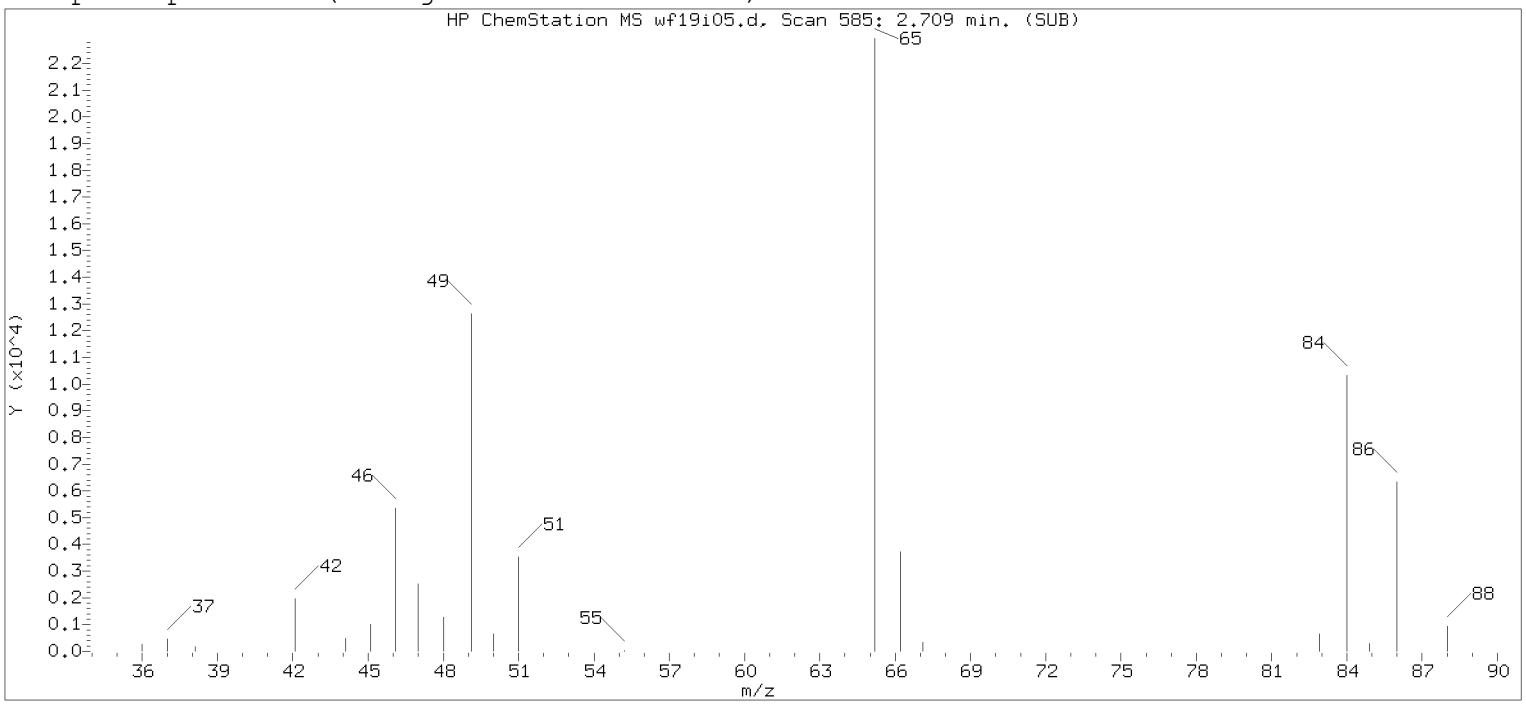
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 596
Retention Time (minutes): 2.744
Quant Ion : 84.00
Area (flag) : 49542M
On-Column Amount (ng) : 10.5316
Integration start scan : 568 Integration stop scan: 636
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

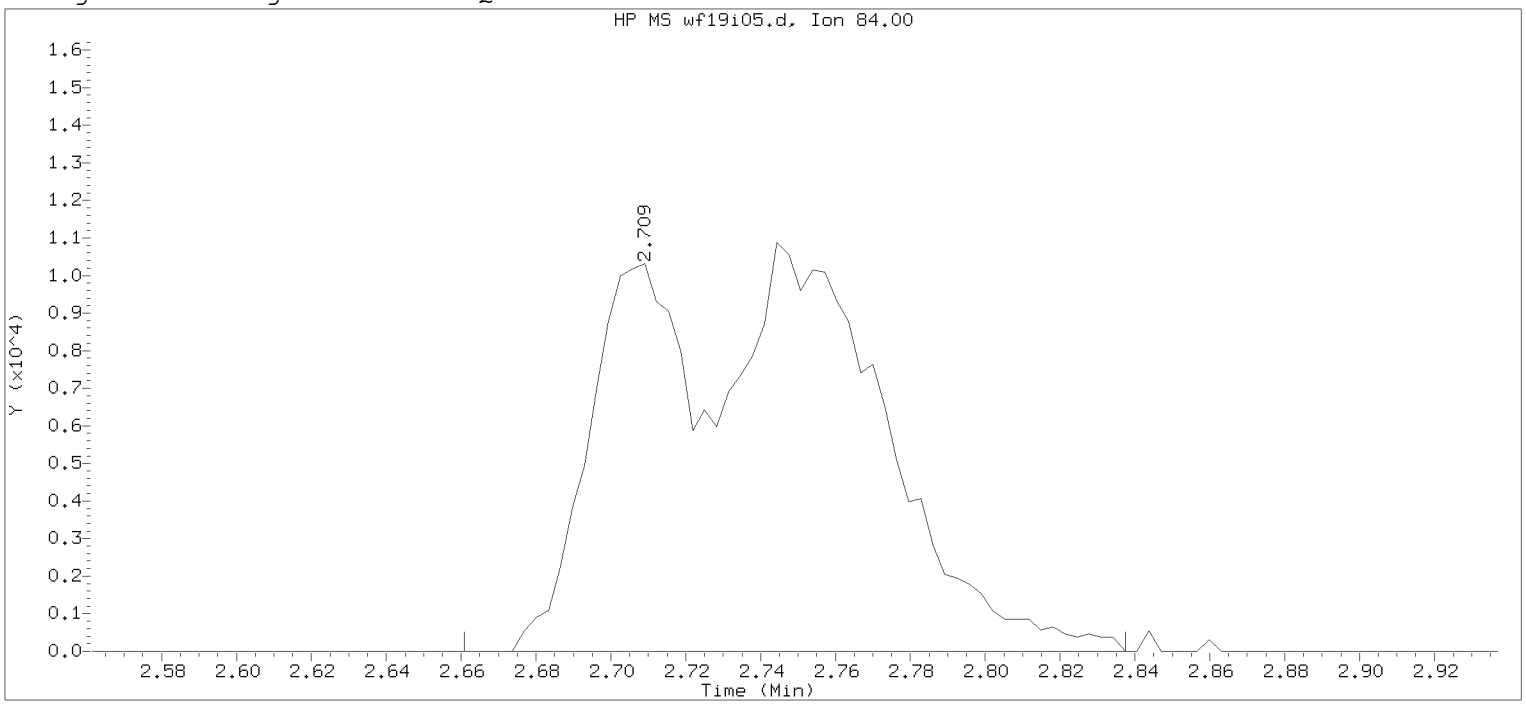
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

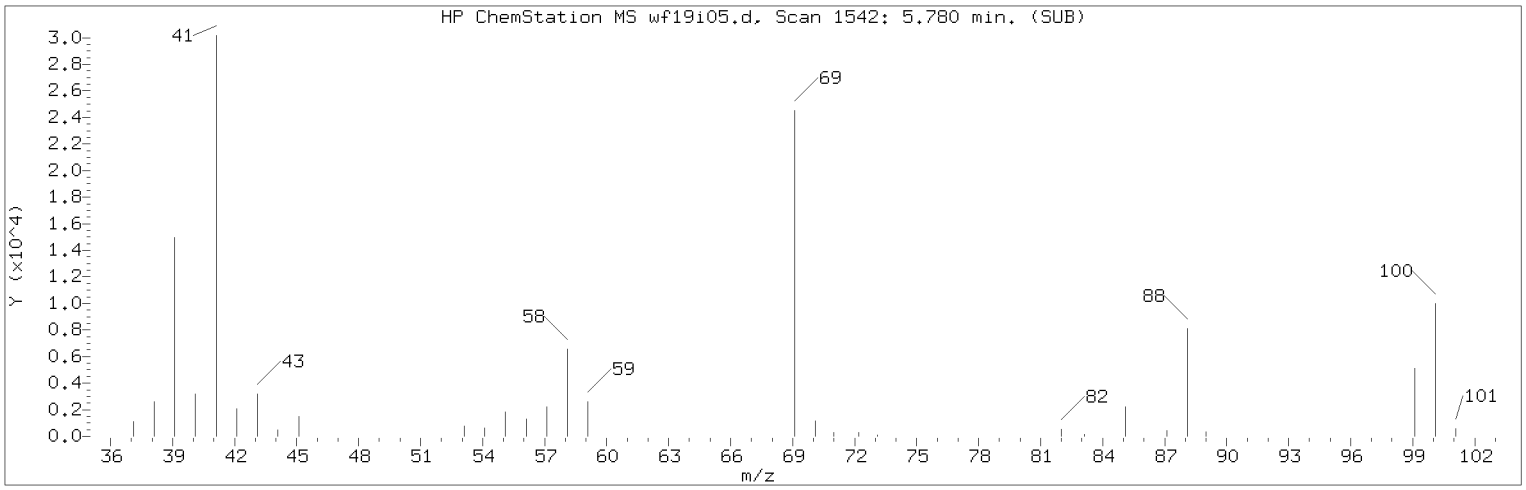
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:12
Date, time and analyst ID of latest file update: 19-Feb-2019 14:12 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

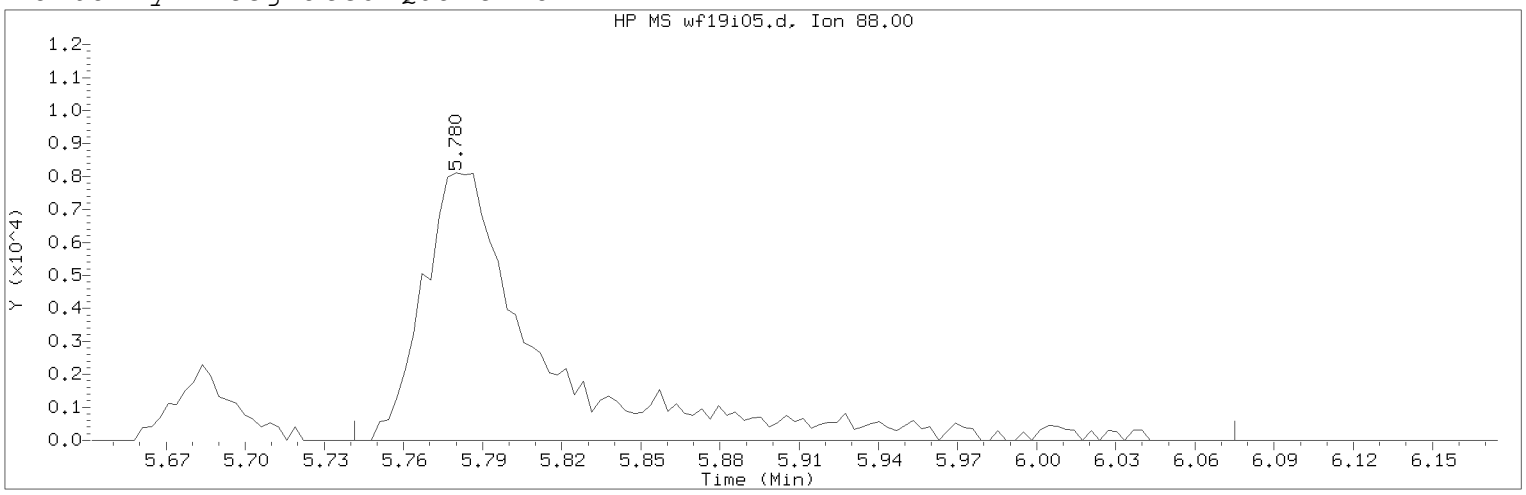
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area : 49378
On-column Amount (ng) : 12.5234
Integration start scan : 569 Integration stop scan: 624
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

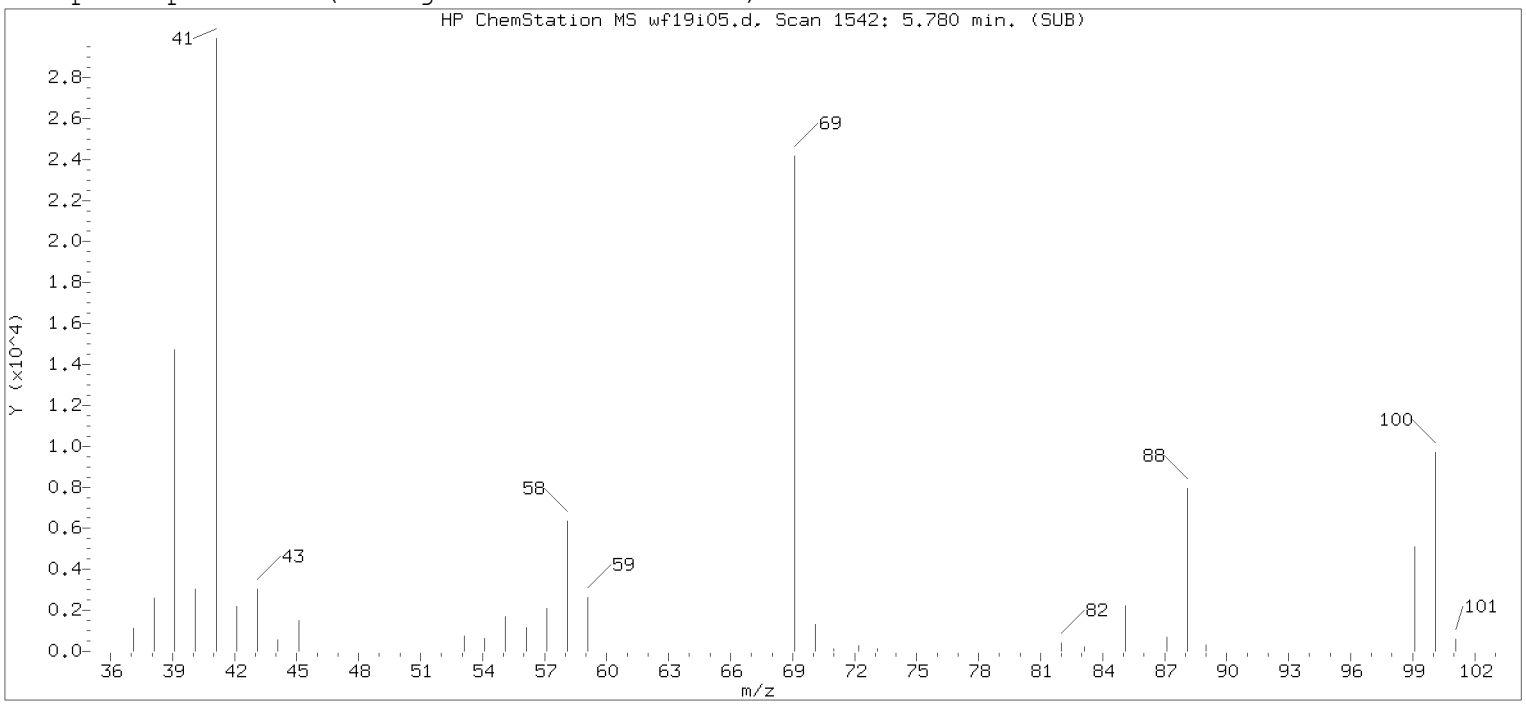
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area (flag) : 26130M
On-Column Amount (ng) : 247.0228
Integration start scan : 1529 Integration stop scan: 1633
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

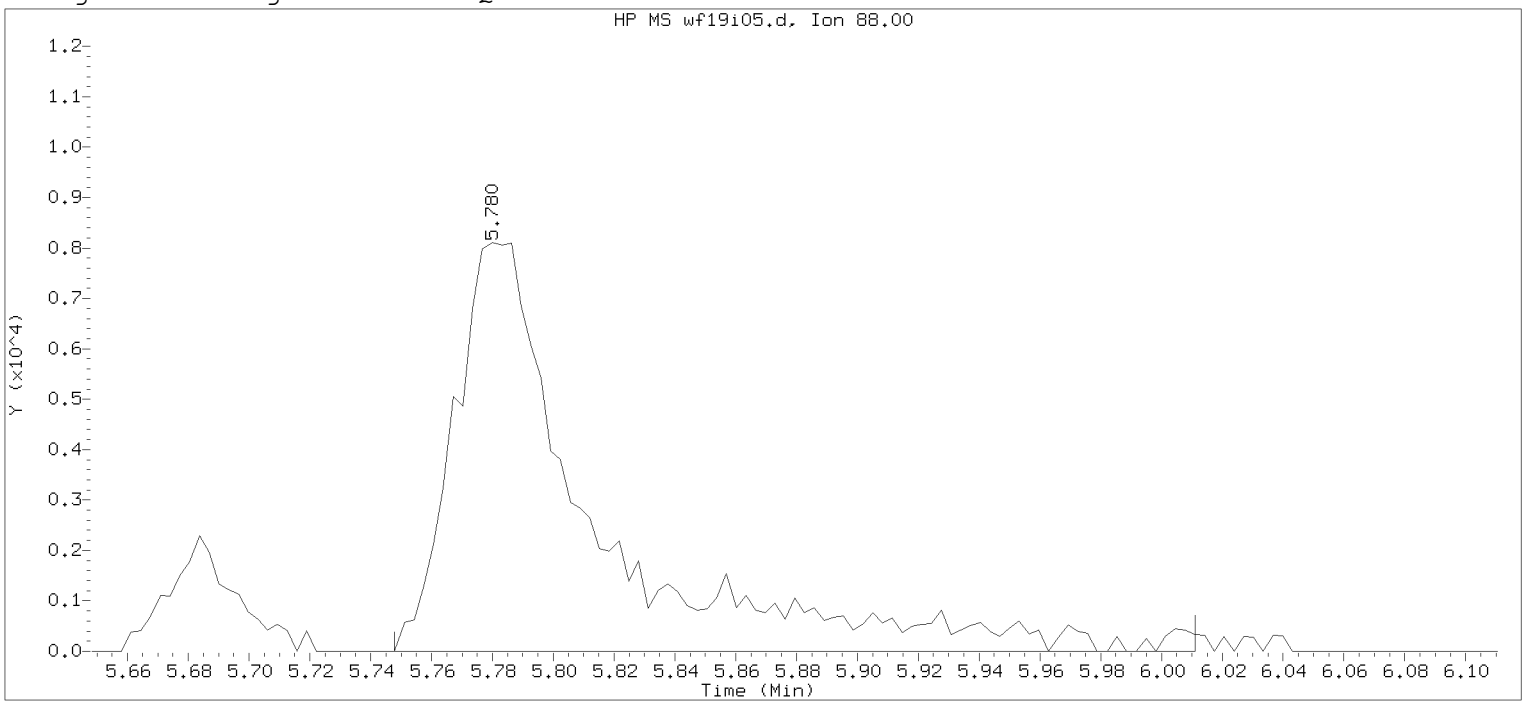
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



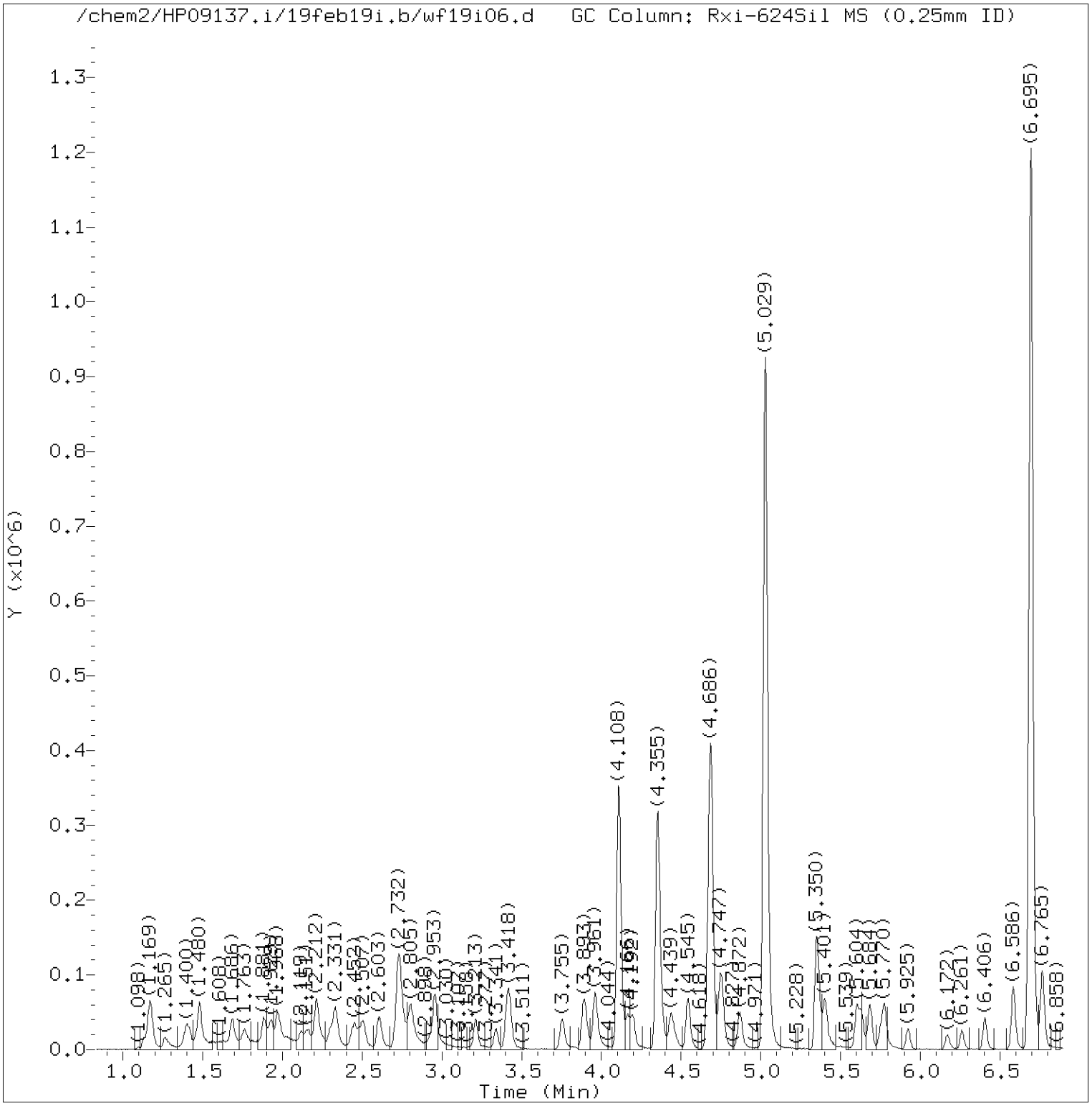
Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:12
Date, time and analyst ID of latest file update: 19-Feb-2019 14:12 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area : 25752
On-column Amount (ng) : 242.5421
Integration start scan : 1531 Integration stop scan: 1613
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

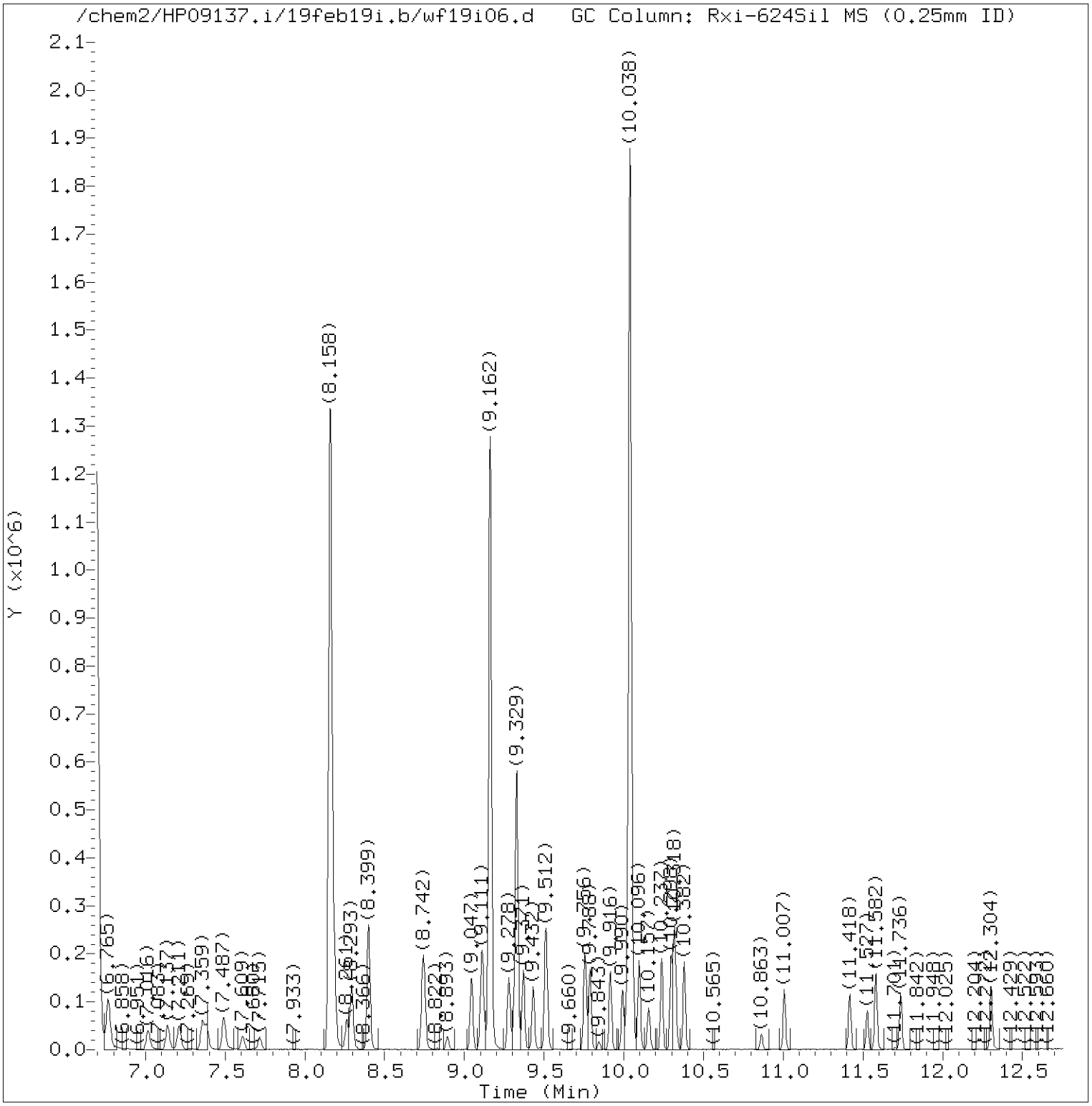
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.259	85	23531	4.193
4) Chloromethane	(2)	1.394	50	28635	4.098
6) Vinyl Chloride	(2)	1.471	62	26366	4.116
5) 1,3-Butadiene	(2)	1.483	39	18545	4.355
8) Bromomethane	(2)	1.686	94	20627	4.083
9) Chloroethane	(2)	1.763	64	17932	4.254
10) Dichlorofluoromethane	(2)	1.881	67	34825	4.268
12) Trichlorofluoromethane	(2)	1.929	101	28313	4.161
11) n-Pentane	(2)	1.968	43	25905	4.003
13) Ethanol	(1)	2.032	45	23872	241.686
15) Freon 123a	(2)	2.160	67	21906M	4.309
16) Acrolein	(1)	2.215	56	60532	38.823
17) 1,1-Dichloroethene	(2)	2.321	96	15949	4.168
17) 1,1-Dichloroethene	(2)	2.331	63	8182	4.238
19) Freon 113	(2)	2.331	101	13192	3.926
18) Acetone	(1)	2.343	58	6155	8.122
21) 2-Propanol	(1)	2.452	45	44335	78.738
22) Methyl Iodide	(2)	2.465	142	29198M	3.982
23) Carbon Disulfide	(2)	2.510	76	54961	4.077
25) Allyl Chloride	(2)	2.600	41	24928	3.739
27) Methyl Acetate	(2)	2.623	43	23710	4.109
28) Methylene Chloride	(2)	2.709	84	18454	3.945
29)*t-Butyl alcohol-d10	(1)	2.728	65	216574	250.000
30) t-Butyl alcohol	(1)	2.802	59	80535	80.179
31) Acrylonitrile	(2)	2.924	53	12124	3.994
32) trans-1,2-Dichloroethene	(2)	2.956	96	17015	4.098
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	41263	4.082
34) n-Hexane	(2)	3.213	57	21496	3.869
36) 1,1-Dichloroethane	(2)	3.341	63	30062	3.996
38) di-Isopropyl ether	(2)	3.412	45	57557	3.982
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	25562	3.923
40) Ethyl t-butyl ether	(2)	3.758	59	40603	3.854
42) cis-1,2-Dichloroethene	(2)	3.890	96	18329	3.932
45) 2,2-Dichloropropane	(2)	3.893	77	14577	4.314
44) 2-Butanone	(2)	3.906	43	33453	7.670
47) Propionitrile	(1)	3.961	54	102936	82.457
48) Methacrylonitrile	(2)	4.111	67	130439	39.964
49) Bromochloromethane	(2)	4.118	128	9255	3.819

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.166	71	9370	8.110
51) Chloroform	(2)	4.195	83	27398	3.881
52)$Dibromofluoromethane	(2)	4.355	113	203360	50.576
52)$Dibromofluoromethane	(2)	4.352	111	208230	50.447
53) 1,1,1-Trichloroethane	(2)	4.378	97	21578	4.063
54) Cyclohexane	(2)	4.436	56	29157	4.148
54) Cyclohexane	(2)	4.439	84	24008	4.126
54) Cyclohexane	(2)	4.439	69	8793	4.162
55) 1,1-Dichloropropene	(2)	4.541	75	23554	4.162
56) Carbon Tetrachloride	(2)	4.545	117	18201	3.993
58) Isobutyl Alcohol	(1)	4.670	41	72292	197.420
57)$1,2-Dichloroethane-d4	(2)	4.686	102	54956	51.390
57)$1,2-Dichloroethane-d4	(2)	4.689	65	236381	50.778
57)$1,2-Dichloroethane-d4	(2)	4.689	104	34670	50.908
60) Benzene	(2)	4.747	78	73397	4.035
61) 1,2-Dichloroethane	(2)	4.766	62	22051	3.924
61) 1,2-Dichloroethane	(2)	4.756	98	2103	3.933
65) t-Amyl methyl ether	(2)	4.872	73	42864	3.971
66)*Fluorobenzene	(2)	5.029	96	867920	50.000
67) n-Heptane	(2)	5.032	43	19883	3.745
69) n-Butanol	(1)	5.353	56	119356	367.104
71) Trichloroethene	(2)	5.408	95	17783	4.037
73) Methylcyclohexane	(2)	5.604	83	26169	4.092
73) Methylcyclohexane	(2)	5.607	98	12193	4.100
74) 1,2-Dichloropropane	(2)	5.632	63	18182	3.893
75) Dibromomethane	(2)	5.751	93	11156	3.870
77) Methyl Methacrylate	(2)	5.777	69	19327M	3.766
76) 1,4-Dioxane	(1)	5.777	88	17062M	175.540
79) Bromodichloromethane	(2)	5.928	83	19632	3.707
43) 1,2-Dichloroethene (Total)	(2)		96	35344	8.030
80) 2-Nitropropane	(2)	6.172	41	12333M	6.883
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	12078	3.392
82) cis-1,3-Dichloropropene	(2)	6.409	75	27021	3.711
83) 4-Methyl-2-pentanone	(2)	6.586	43	64259	7.475
84)$Toluene-d8	(3)	6.695	98	907781	50.491
84)$Toluene-d8	(3)	6.695	100	592851	49.723
89) Toluene	(3)	6.768	92	45802	3.955
90) trans-1,3-Dichloropropene	(3)	7.012	75	24608	3.569

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$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.141	69	29840	3.522
93) 1,1,2-Trichloroethane	(3)	7.211	97	16788	3.766
94) Tetrachloroethene	(3)	7.359	166	19036	4.051
95) 1,3-Dichloropropane	(3)	7.388	76	28445	3.674
97) 2-Hexanone	(3)	7.490	43	49126	7.283
98) Dibromochloromethane	(3)	7.612	129	14587	3.350
100) 1,2-Dibromoethane	(3)	7.718	107	17864	3.648
101)*Chlorobenzene-d5	(3)	8.161	117	717501	50.000
103) Chlorobenzene	(3)	8.187	112	49939	3.887
104) 1,1,1,2-Tetrachloroethane	(3)	8.264	131	14799	3.584
105) Ethylbenzene	(3)	8.296	91	86503	3.930
107) m+p-Xylene	(3)	8.399	106	68276	7.801
108) o-Xylene	(3)	8.736	106	33591	3.901
110) Styrene	(3)	8.752	104	52960	3.667
111) Bromoform	(3)	8.893	173	10704	3.159
112) Isopropylbenzene	(3)	9.047	105	83300	3.937
113) Cyclohexanone	(1)	9.111	55	81513	185.914
115)$4-Bromofluorobenzene	(3)	9.162	95	358508	49.843
115)$4-Bromofluorobenzene	(3)	9.162	174	303553	50.013
116) Bromobenzene	(4)	9.278	156	22129	3.897
117) 1,1,2,2-Tetrachloroethane	(4)	9.281	83	28726	3.751
118) 1,2,3-Trichloropropane	(4)	9.316	110	9051	3.924
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	92446	37.646
120) n-Propylbenzene	(4)	9.371	91	101539	4.056
121) 2-Chlorotoluene	(4)	9.432	126	20876	4.043
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	71196	3.943
122) 4-Chlorotoluene	(4)	9.518	126	21738	3.933
125) tert-Butylbenzene	(4)	9.756	134	16878	4.115
126) Pentachloroethane	(4)	9.766	167	11197	3.453
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	73692	3.874
128) sec-Butylbenzene	(4)	9.916	105	90719	4.094
130) 1,3-Dichlorobenzene	(4)	9.993	146	41989	3.878
131) p-Isopropyltoluene	(4)	10.022	119	78503	4.002
132)*1,4-Dichlorobenzene-d4	(4)	10.038	152	394254	50.000
134) 1,4-Dichlorobenzene	(4)	10.058	146	44108	3.929
91) 1,3-Dichloropropene (total)	(3)		100	51629	7.280
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	79065	3.863
136) Benzyl Chloride	(4)	10.157	91	52403	3.335

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.237	119	47119	3.823
138) 1,4-Diethylbenzene	(4)	10.295	119	51192	3.876
140) n-Butylbenzene	(4)	10.314	92	38912	3.930
139) 1,2-Dichlorobenzene	(4)	10.321	146	41158	3.831
141) 1,2-Diethylbenzene	(4)	10.382	119	41509	3.989
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	6341	3.644
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	32071	3.893
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	29570	3.739
148) Hexachlorobutadiene	(4)	11.527	225	11175	3.967
149) Naphthalene	(4)	11.582	128	97075	3.627
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	29641	3.840
109) Xylene (Total)	(3)		106	101867	11.702
151) 2-Methylnaphthalene	(4)	12.304	142	49814	3.263
142) Diethylbenzene (total)	(4)		100	139820	11.688

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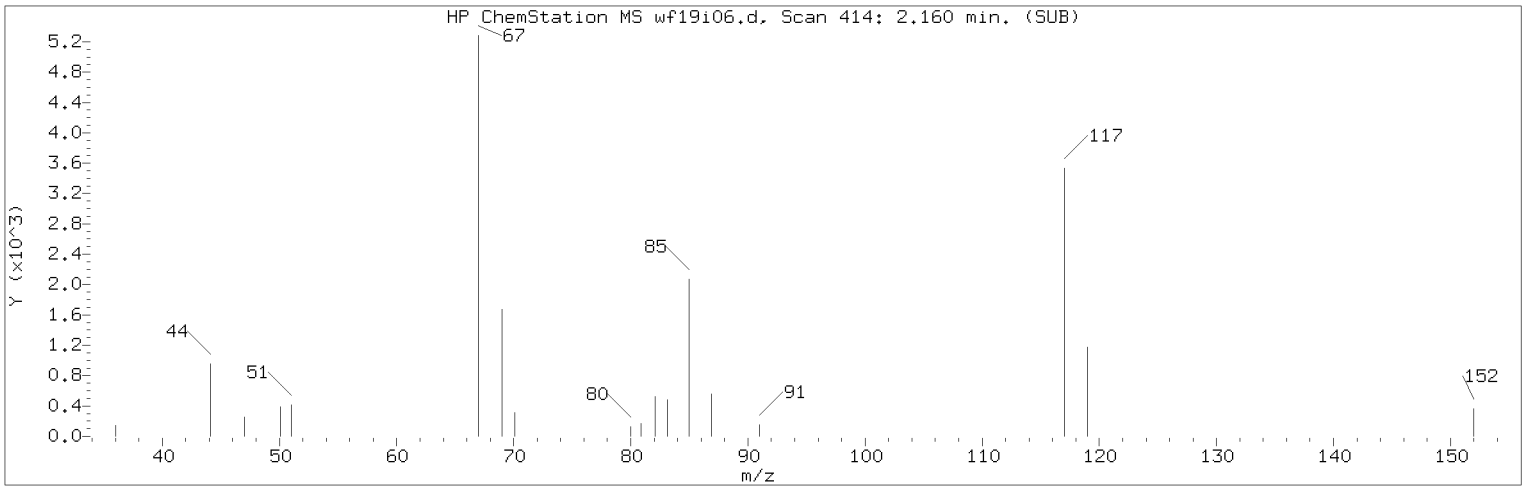
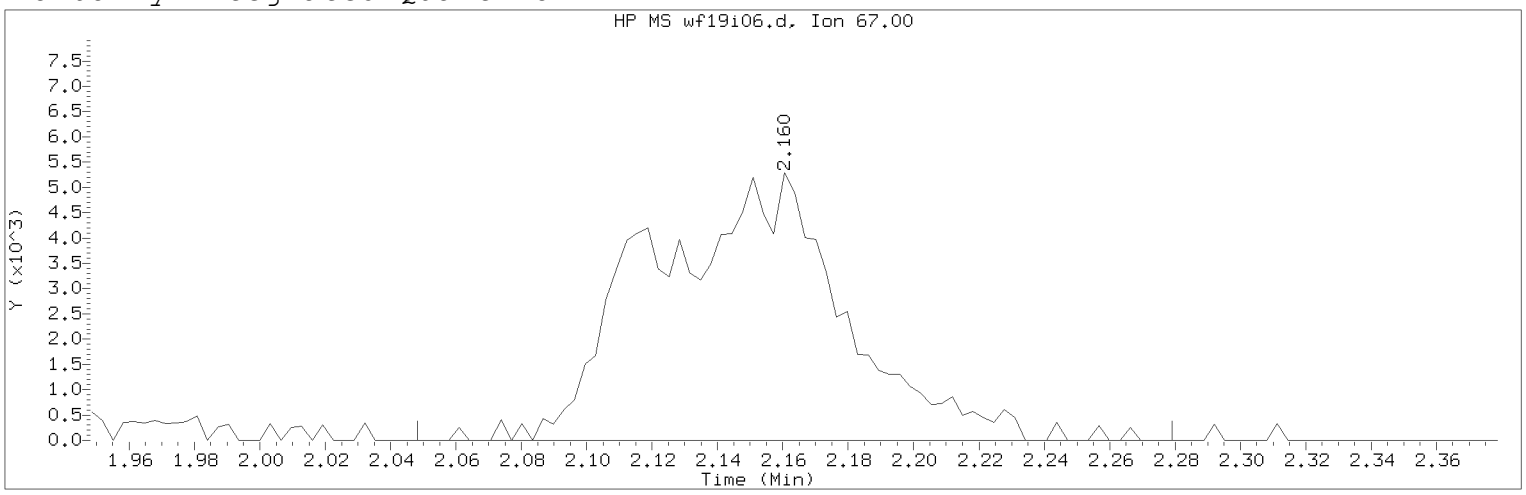
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

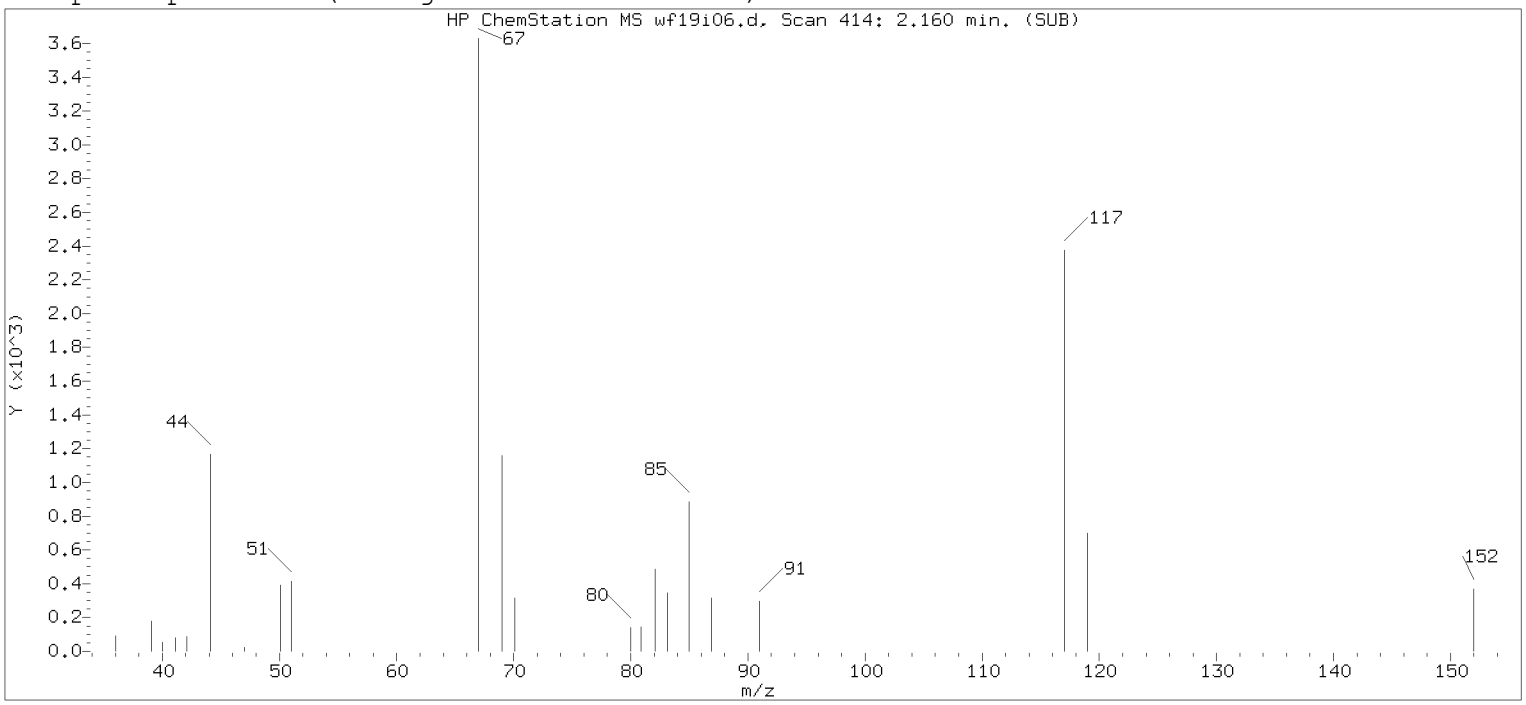
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 414
Retention Time (minutes): 2.160
Quant Ion : 67.00
Area (flag) : 21906M
On-Column Amount (ng) : 4.3086
Integration start scan : 378 Integration stop scan: 450
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

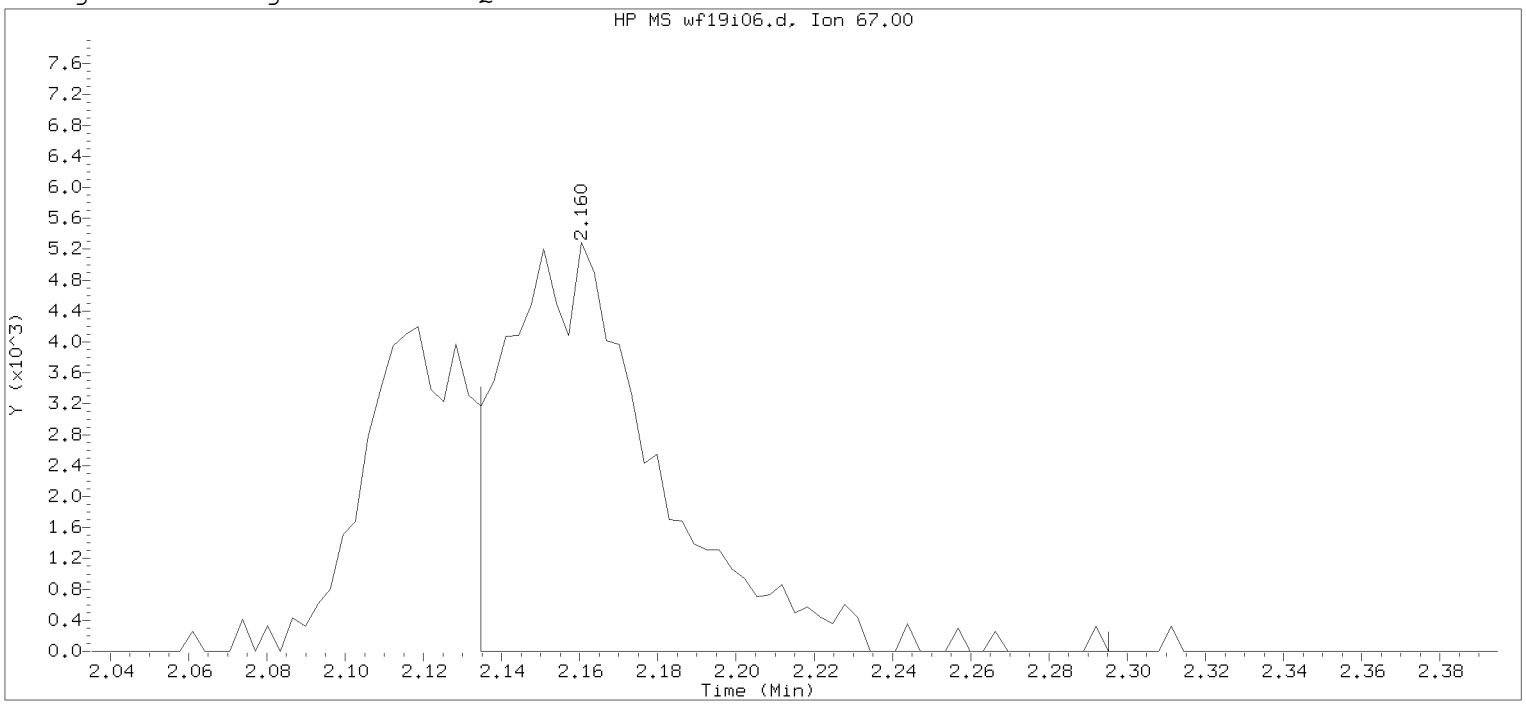
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:36
Date, time and analyst ID of latest file update: 19-Feb-2019 14:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 414		
Retention Time (minutes)	: 2.160		
Quant Ion	: 67.00		
Area	: 14214		
On-column Amount (ng)	: 3.9735		
Integration start scan	: 405	Integration stop scan:	455
Y at integration start	: 0	Y at integration end:	0

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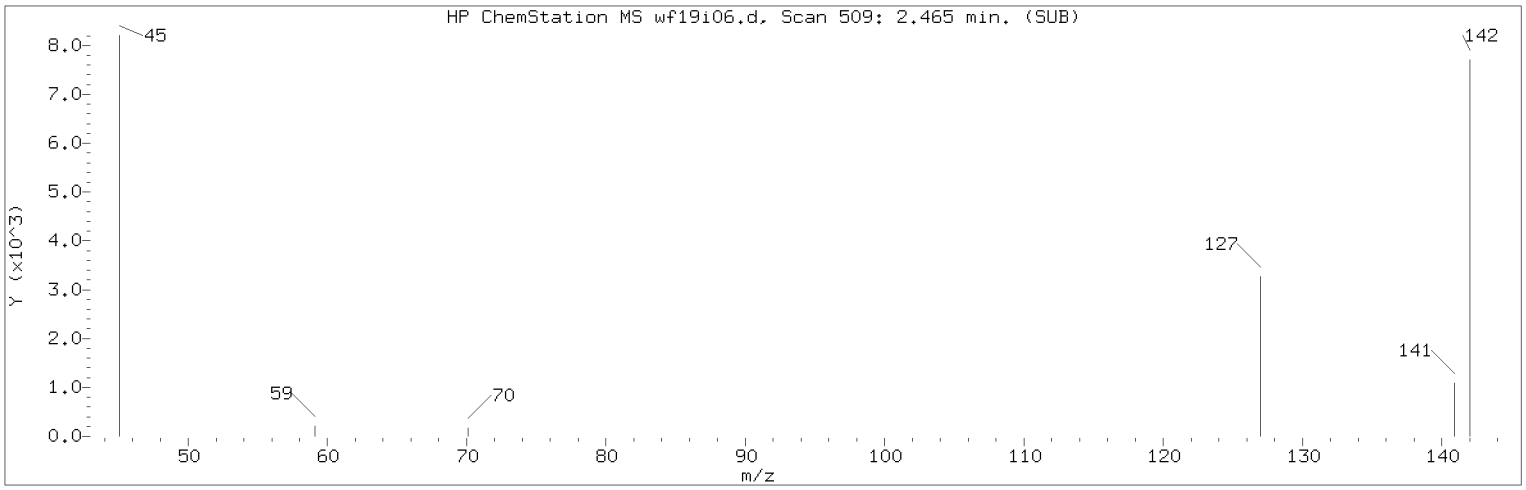
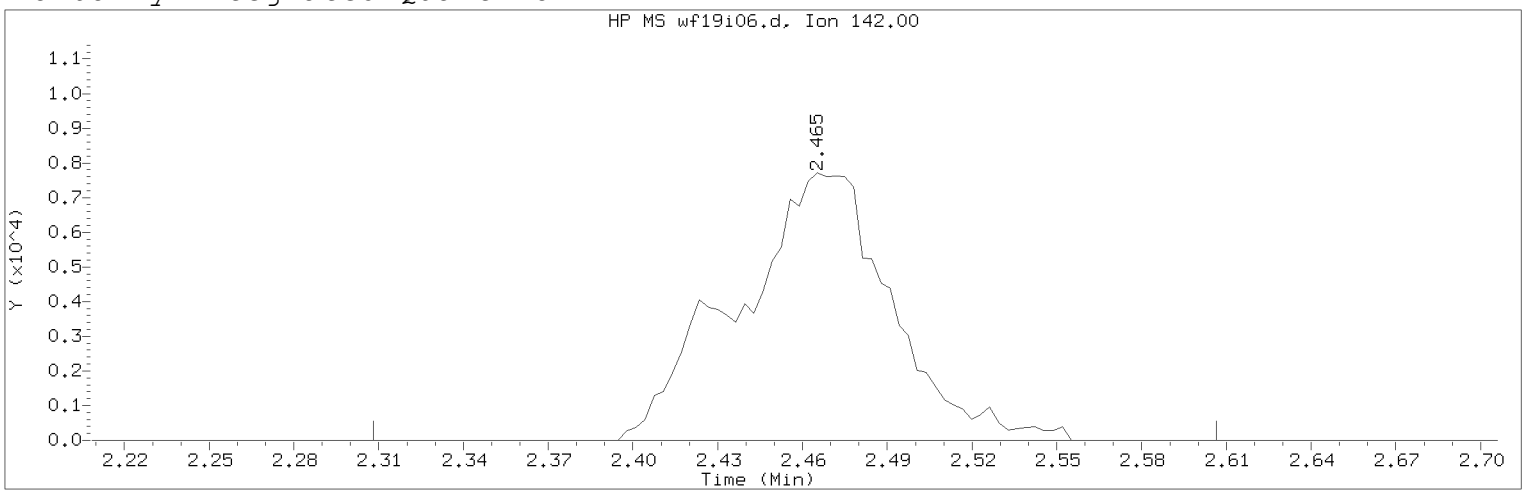
Target 3.5 esignature user Abigail P. Roselli

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

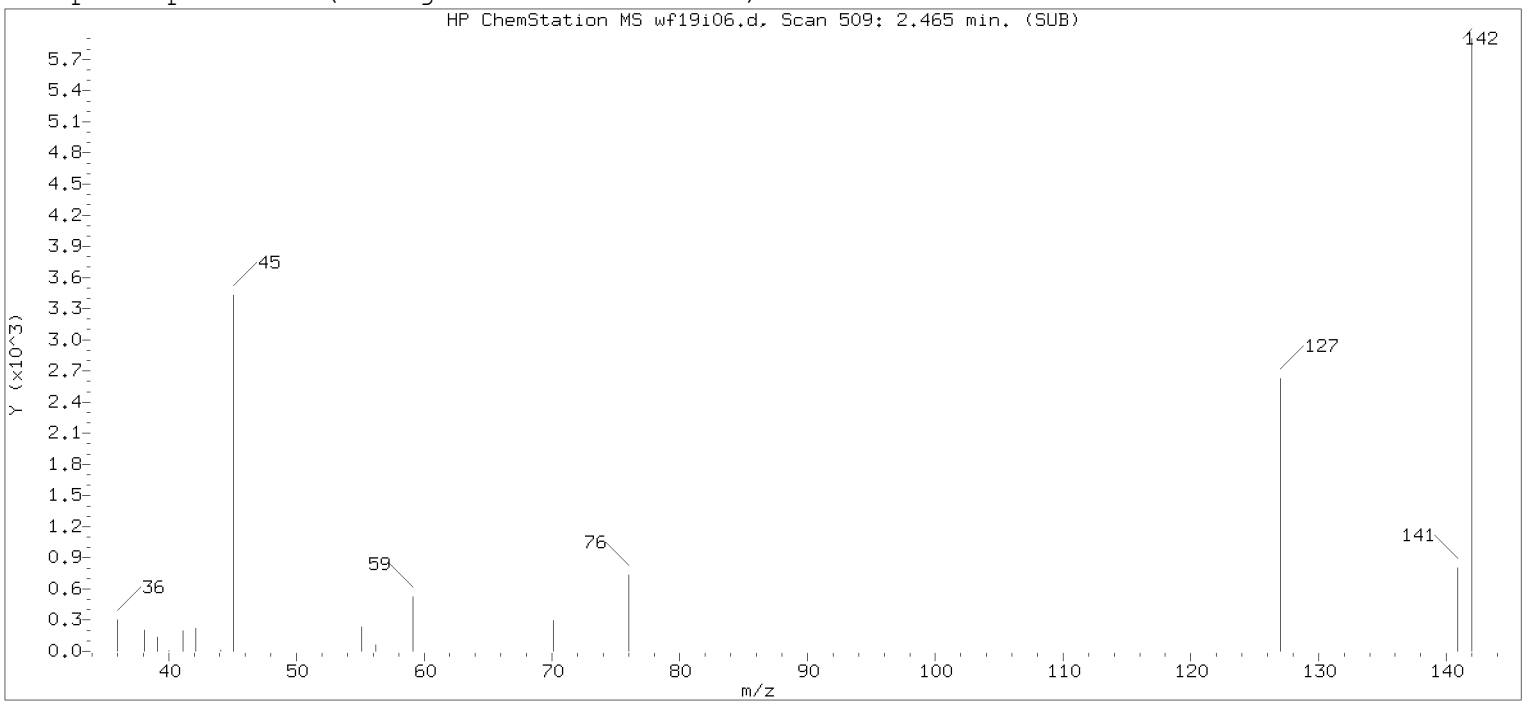
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area (flag) : 29198M
On-Column Amount (ng) : 3.9817
Integration start scan : 459 Integration stop scan: 552
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

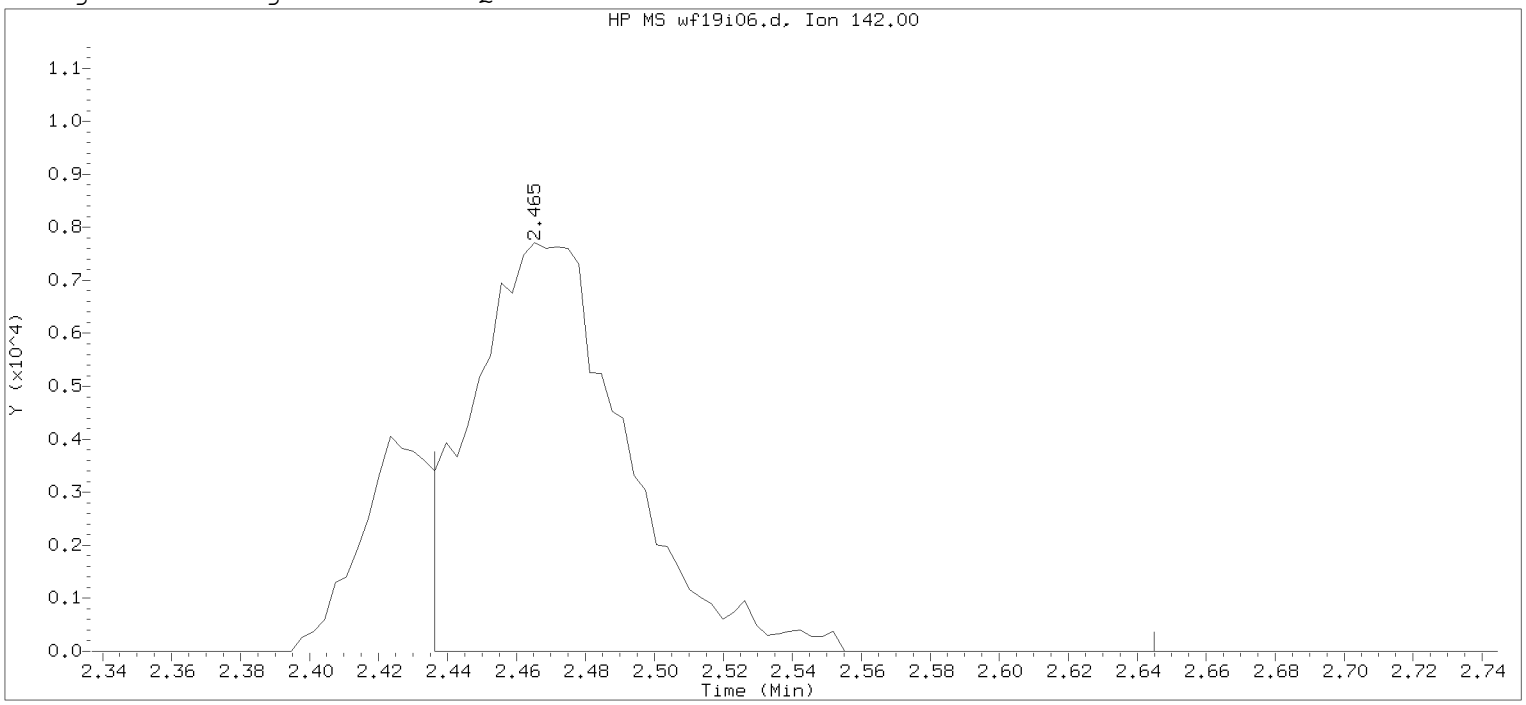
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

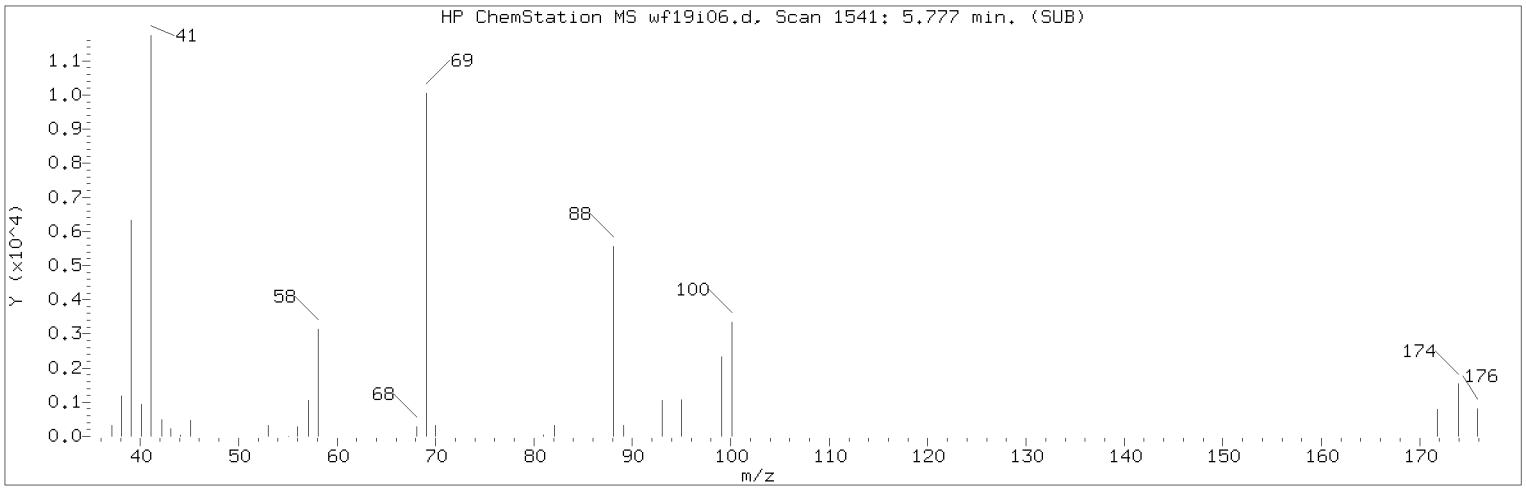
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:36
Date, time and analyst ID of latest file update: 19-Feb-2019 14:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

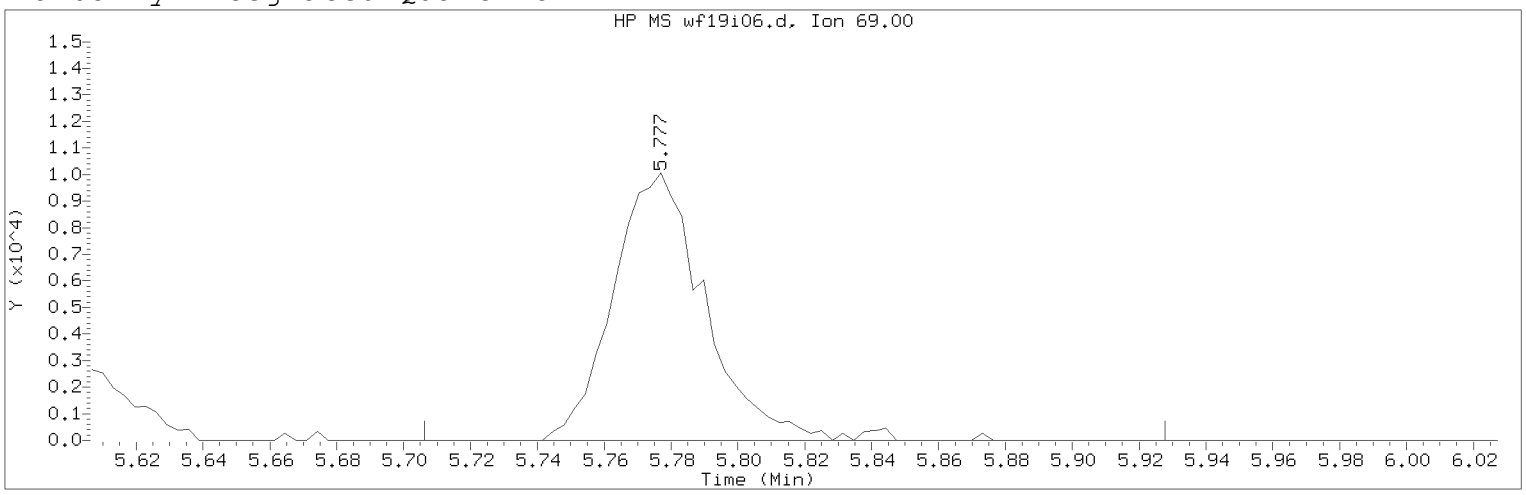
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area : 23663
On-column Amount (ng) : 3.5076
Integration start scan : 499 Integration stop scan: 564
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

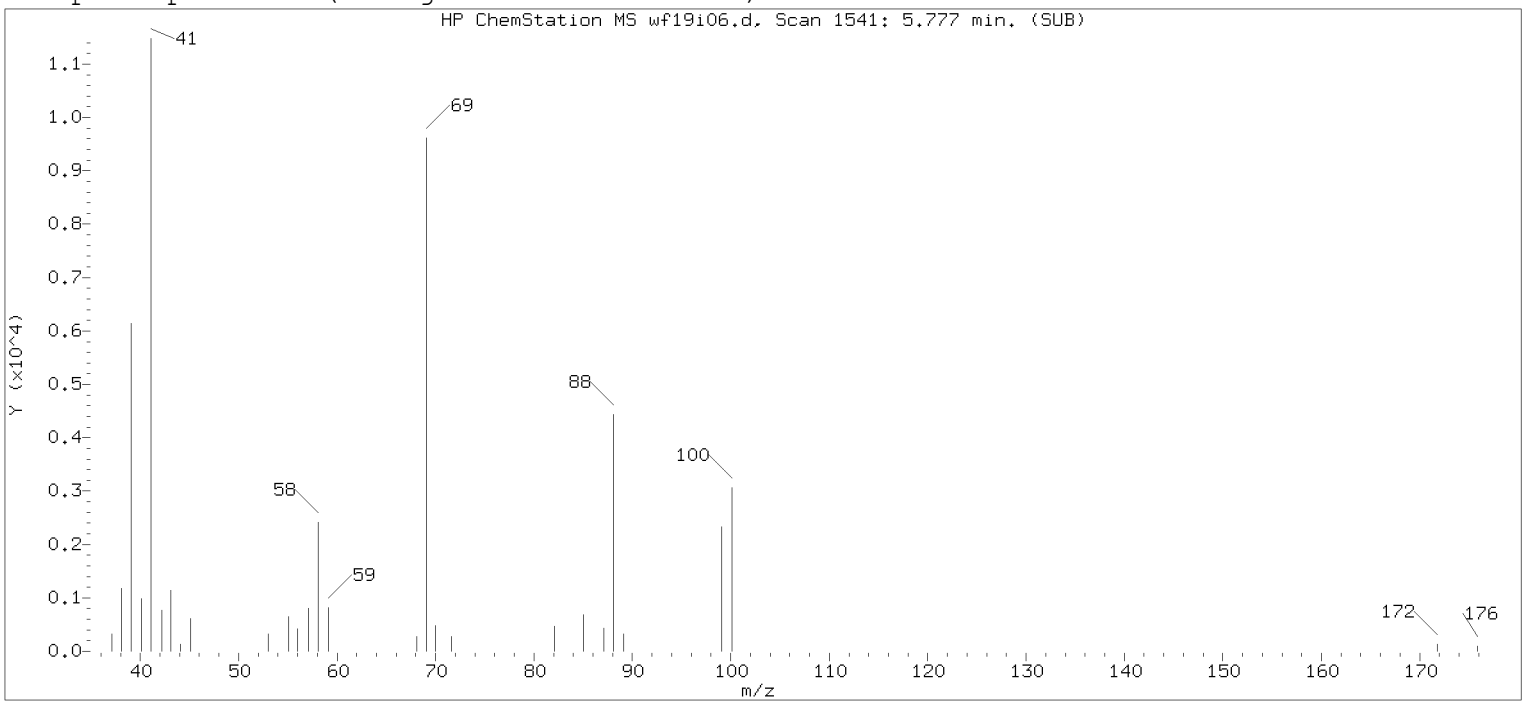
Compound Number : 77
Compound Name : Methyl Methacrylate
Scan Number : 1541
Retention Time (minutes): 5.777
Quant Ion : 69.00
Area (flag) : 19327M
On-Column Amount (ng) : 3.7657
Integration start scan : 1518 Integration stop scan: 1587
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

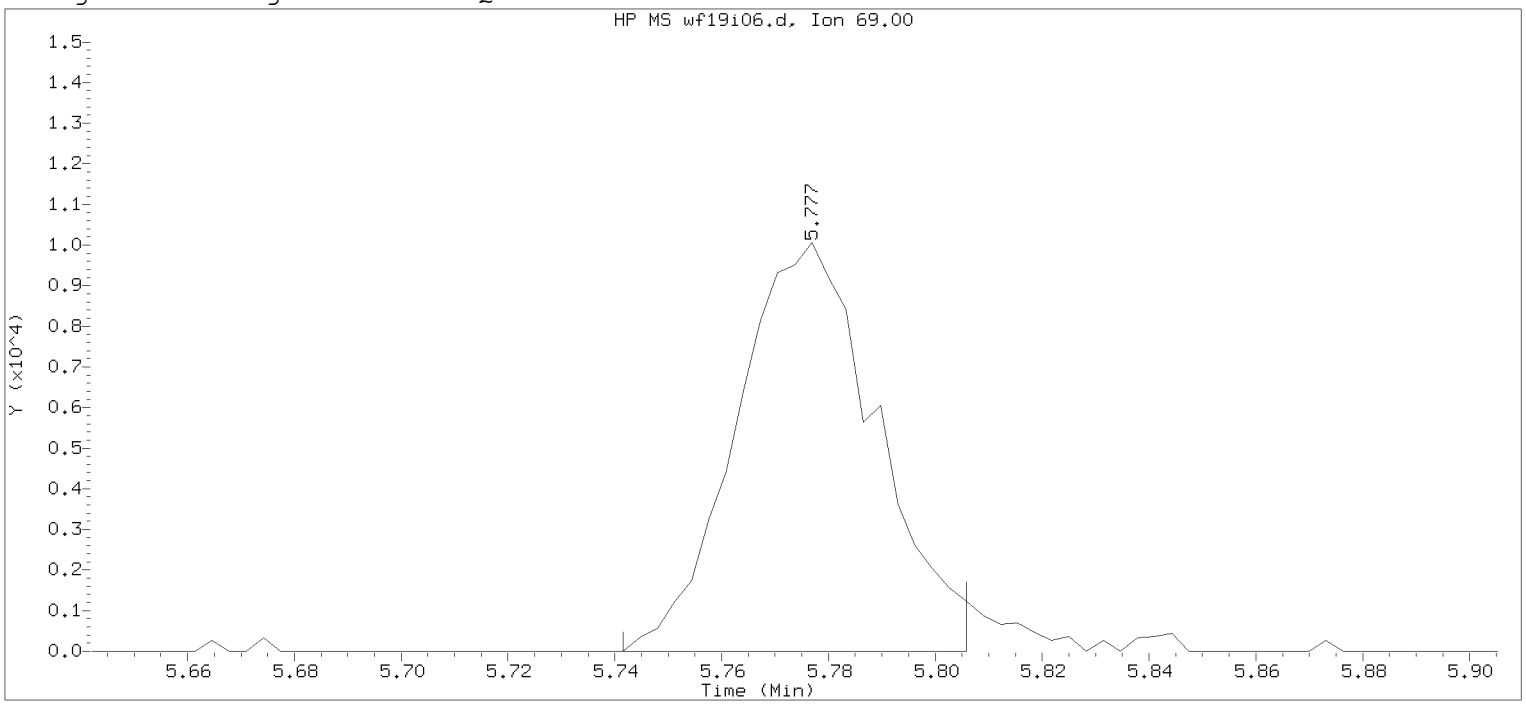
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

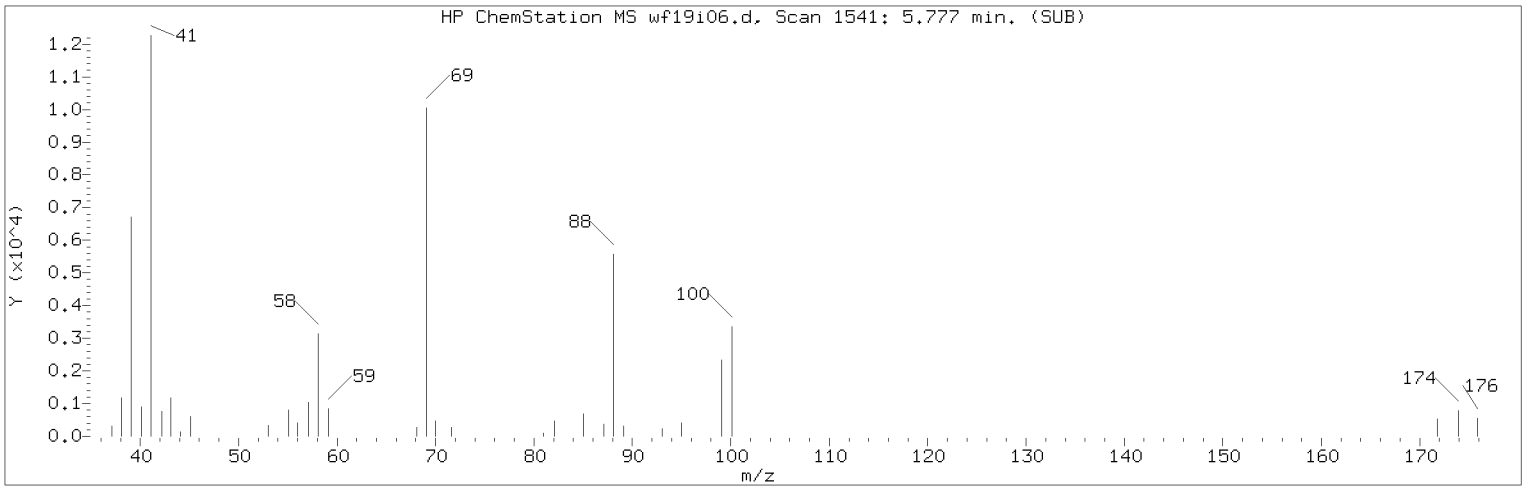
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:36
Date, time and analyst ID of latest file update: 19-Feb-2019 14:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

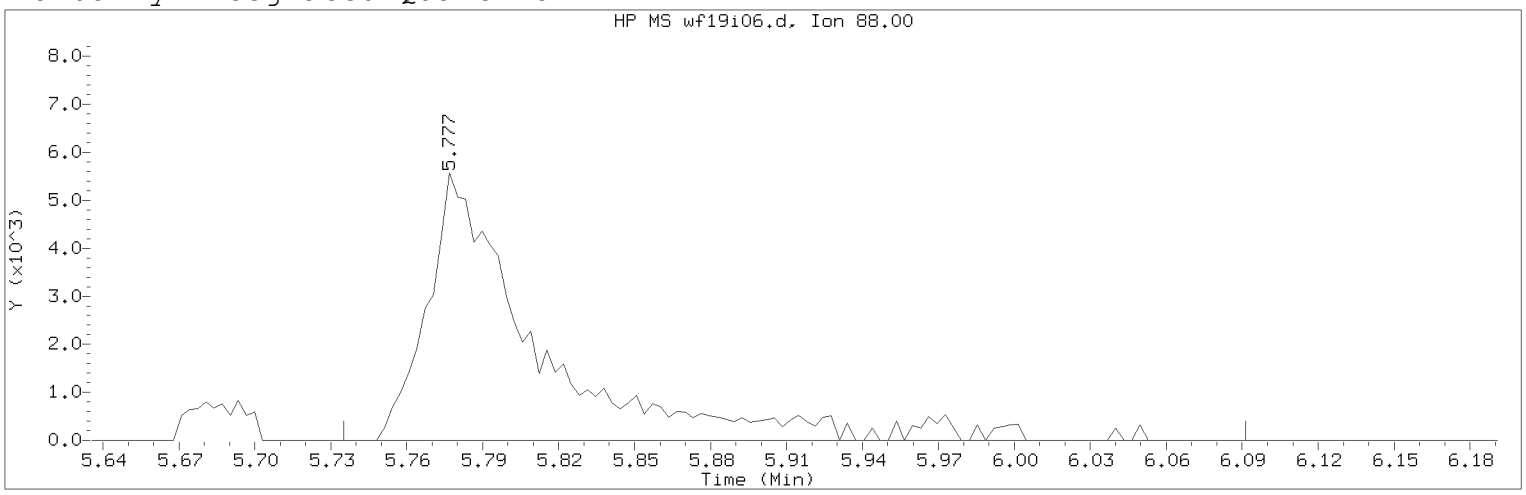
Compound Number	: 77		
Compound Name	: Methyl Methacrylate		
Scan Number	: 1541		
Retention Time (minutes)	: 5.777		
Quant Ion	: 69.00		
Area	: 18238		
On-column Amount (ng)	: 3.5038		
Integration start scan	: 1529	Integration stop scan:	1549
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user Abigail P. Roselli

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

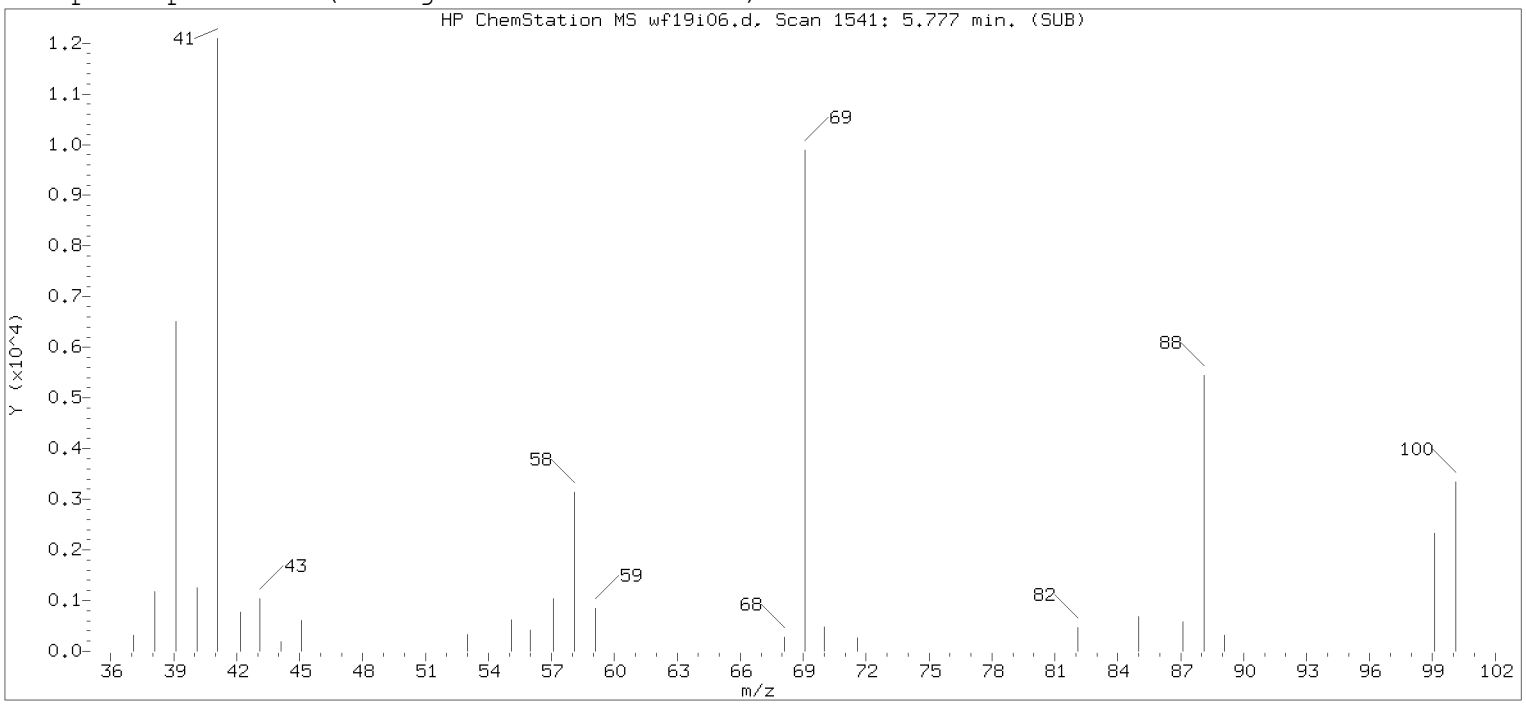
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1541
Retention Time (minutes): 5.777
Quant Ion : 88.00
Area (flag) : 17062M
On-Column Amount (ng) : 175.5404
Integration start scan : 1527 Integration stop scan: 1638
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

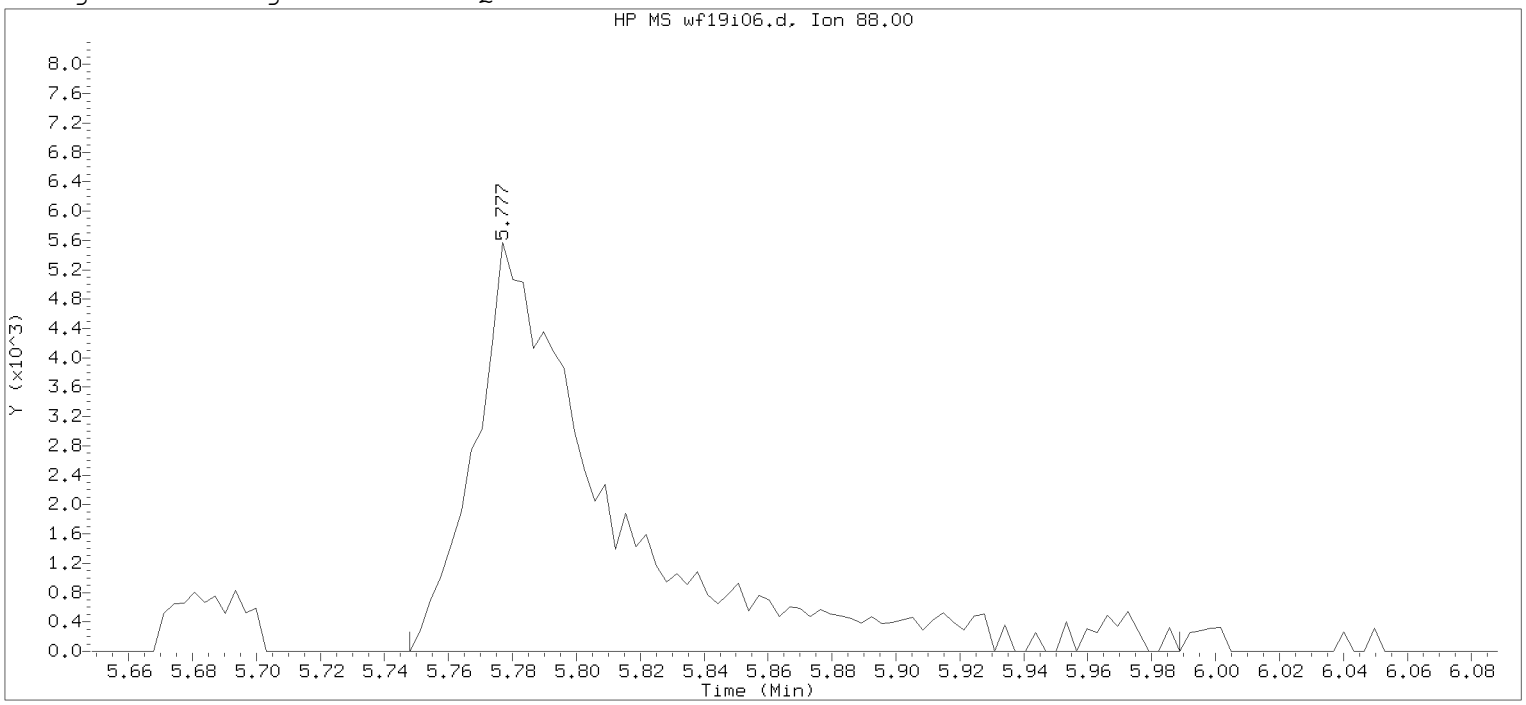
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

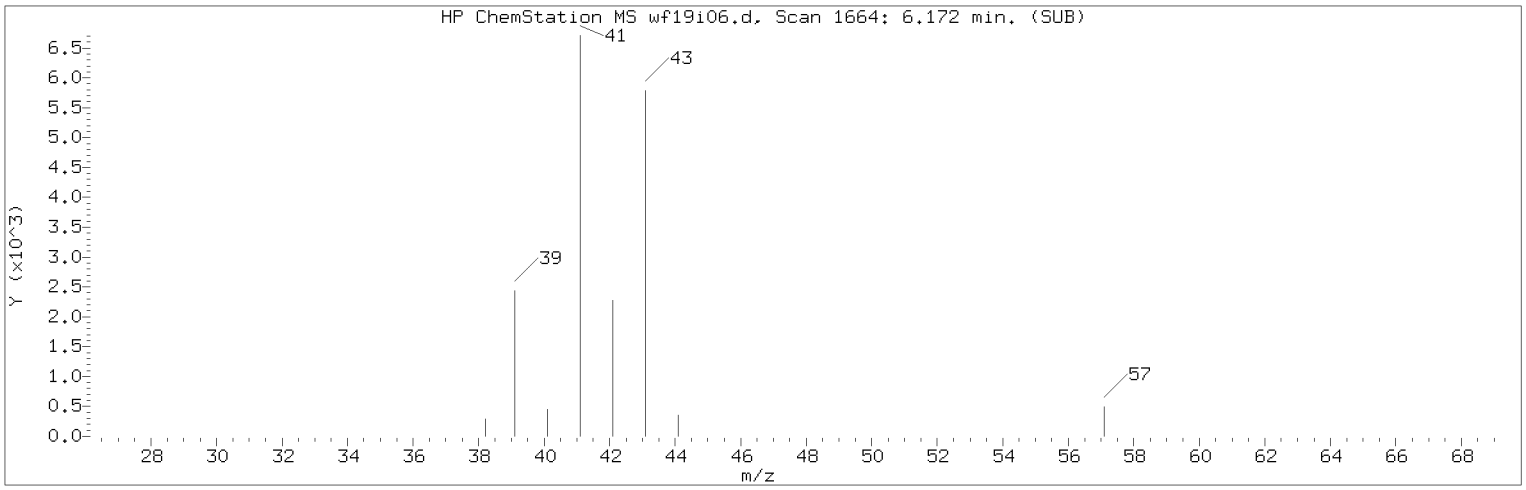
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:36
Date, time and analyst ID of latest file update: 19-Feb-2019 14:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

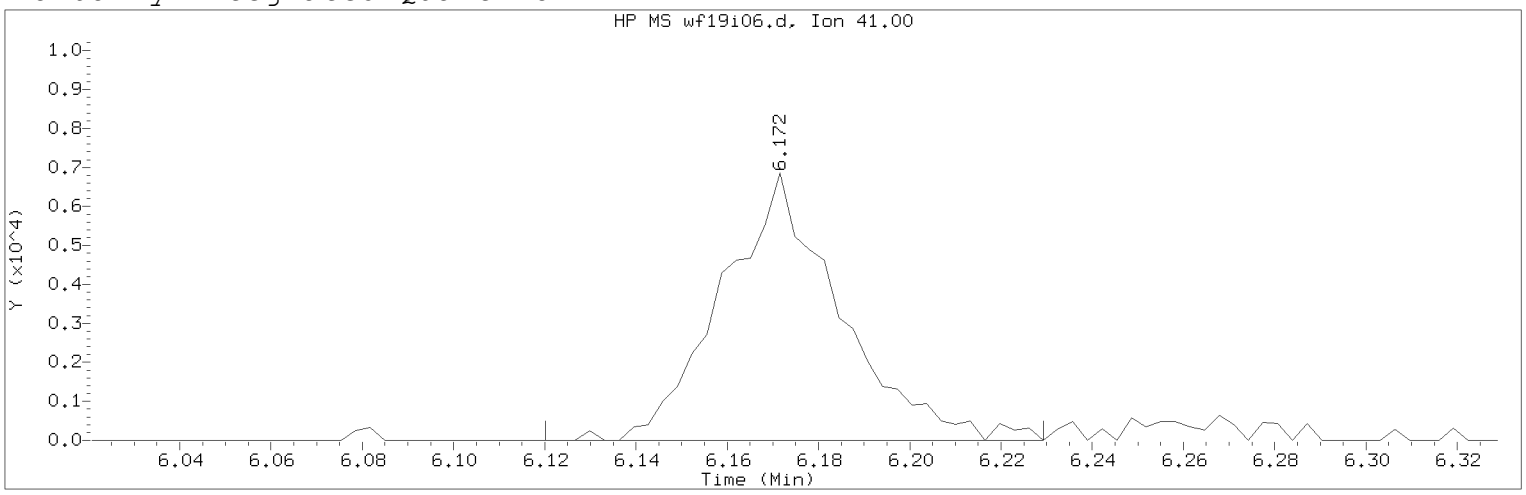
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1541
Retention Time (minutes): 5.777
Quant Ion : 88.00
Area : 16725
On-column Amount (ng) : 175.6192
Integration start scan : 1531 Integration stop scan: 1606
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

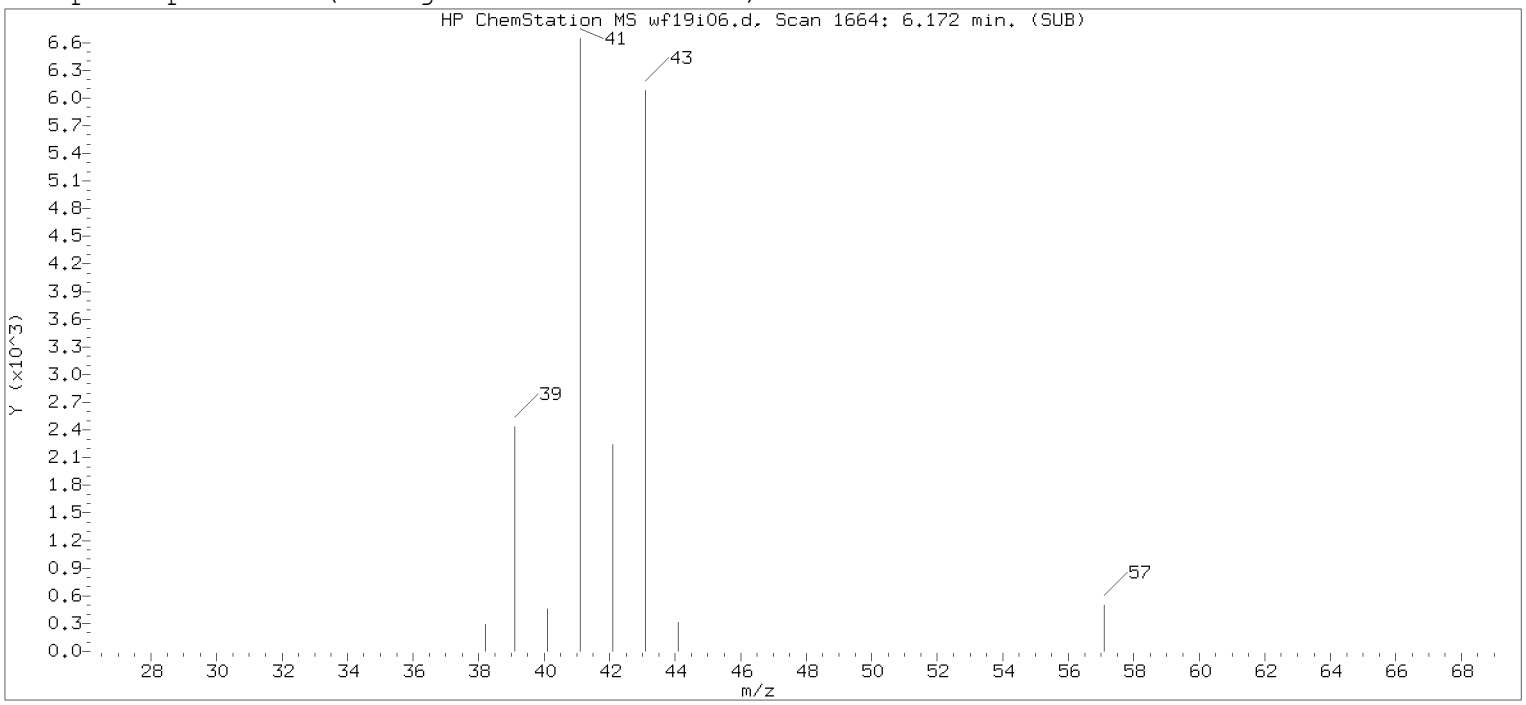
Compound Number : 80
Compound Name : 2-Nitropropane
Scan Number : 1664
Retention Time (minutes): 6.172
Quant Ion : 41.00
Area (flag) : 12333M
On-Column Amount (ng) : 6.8827
Integration start scan : 1647 Integration stop scan: 1681
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

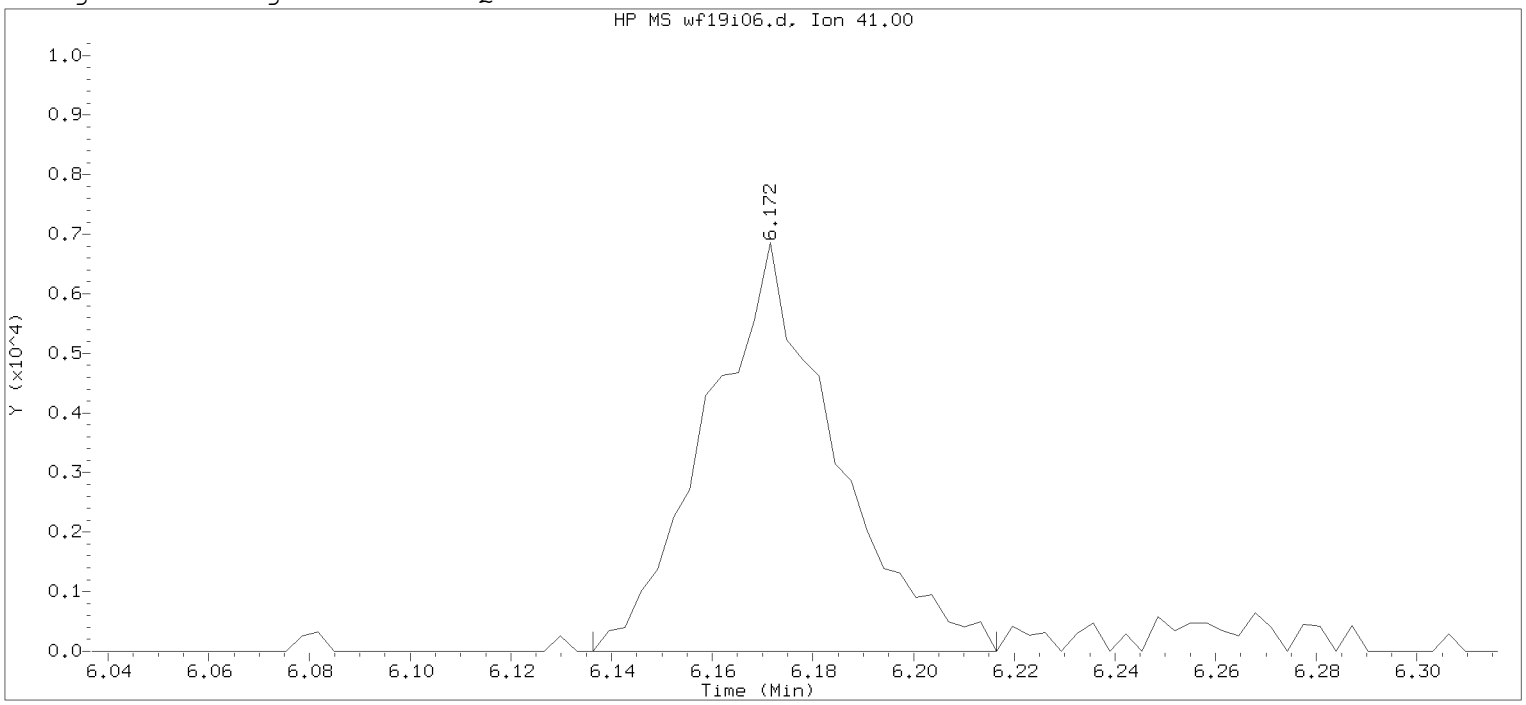
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



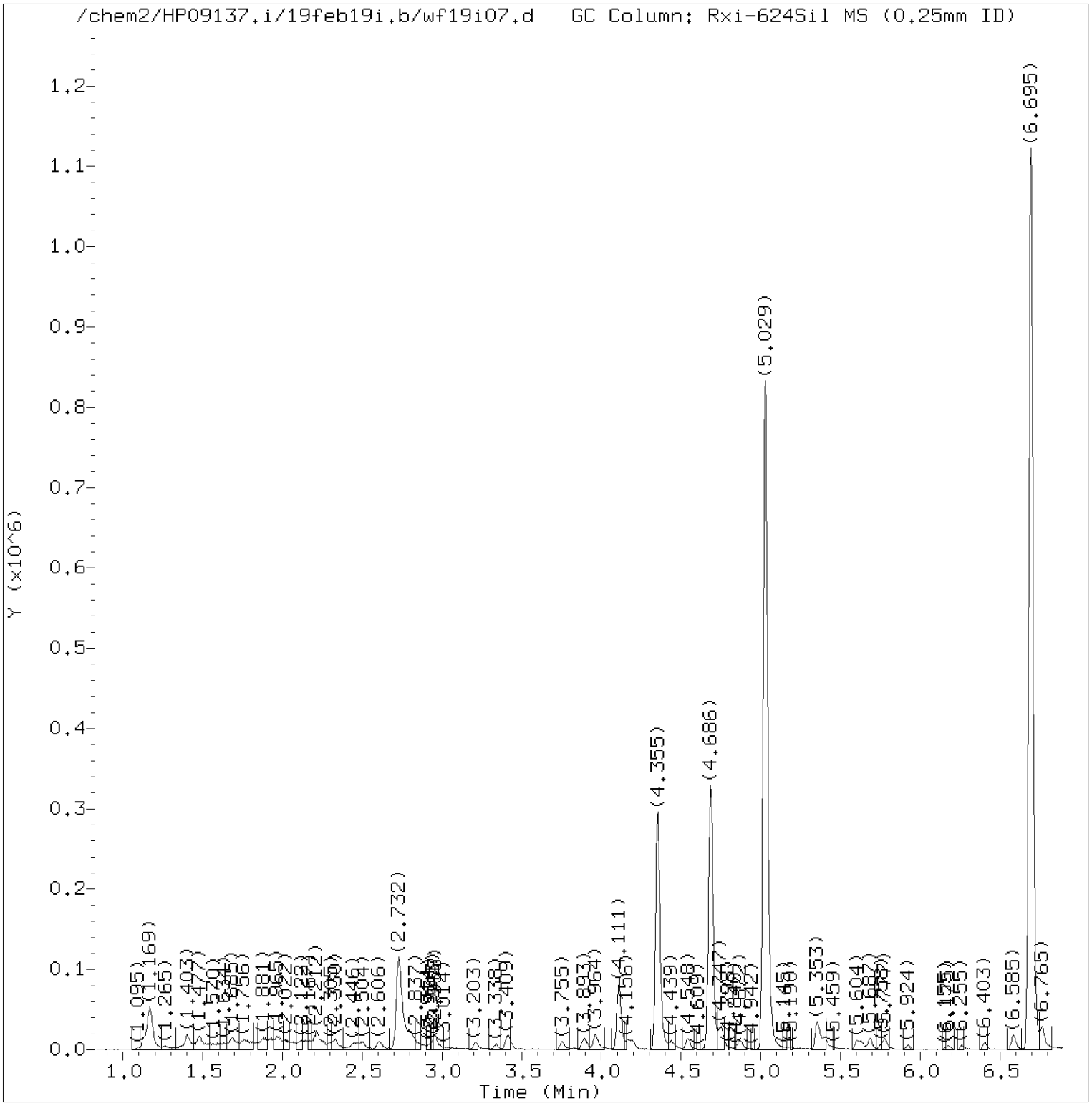
Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:36
Date, time and analyst ID of latest file update: 19-Feb-2019 14:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 80
Compound Name : 2-Nitropropane
Scan Number : 1664
Retention Time (minutes): 6.172
Quant Ion : 41.00
Area : 12090
On-column Amount (ng) : 6.6411
Integration start scan : 1652 Integration stop scan: 1677
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: APR27582



Total Ion Chromatogram (TIC)

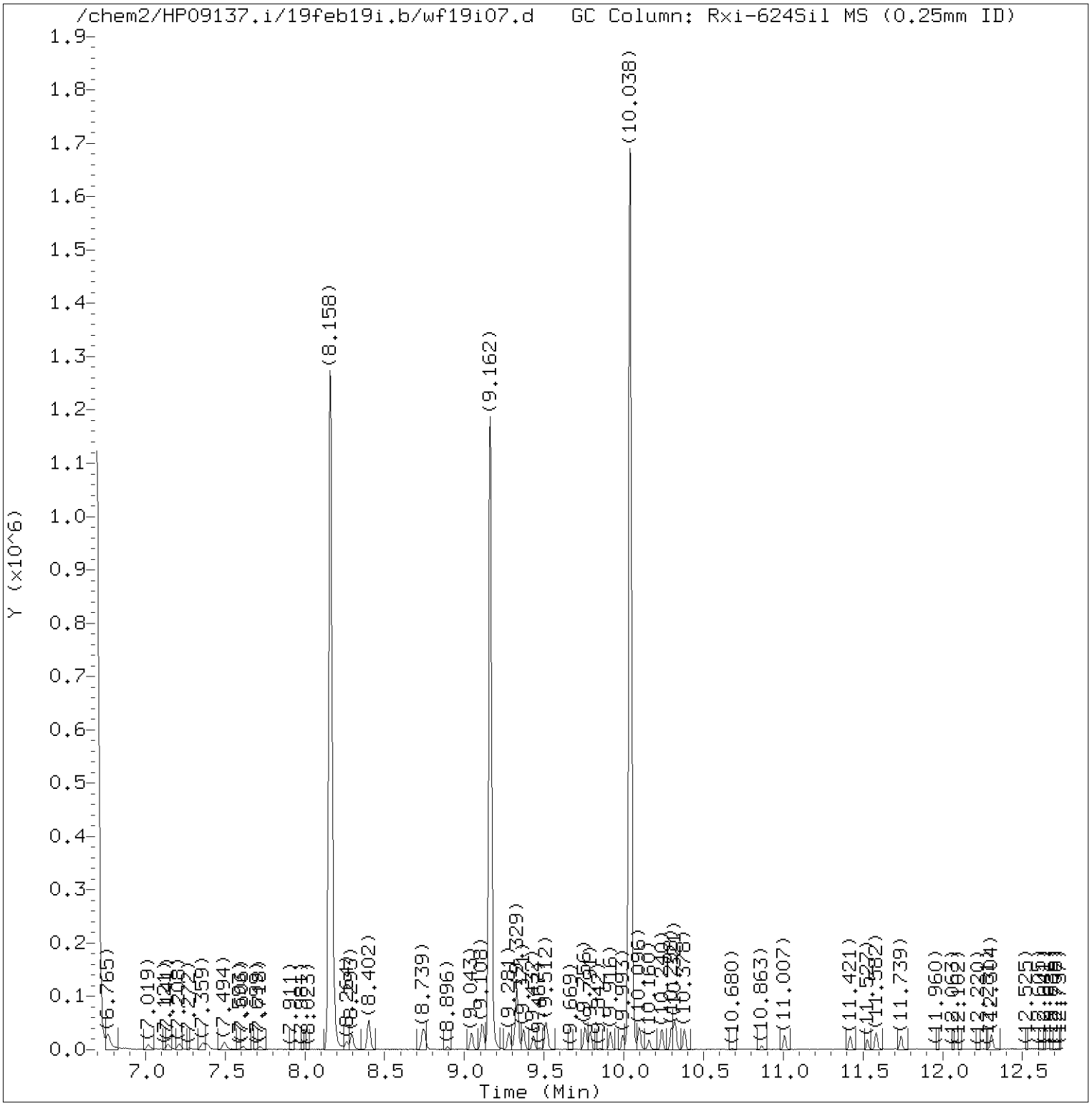
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

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Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.262	85	3665	0.689
4) Chloromethane	(2)	1.400	50	6210	0.937
6) Vinyl Chloride	(2)	1.470	62	5198	0.856
5) 1,3-Butadiene	(2)	1.477	39	4489M	1.112
8) Bromomethane	(2)	1.682	94	4292	0.896
9) Chloroethane	(2)	1.762	64	4447	1.112
10) Dichlorofluoromethane	(2)	1.888	67	8043	1.039
12) Trichlorofluoromethane	(2)	1.923	101	4857	0.753
11) n-Pentane	(2)	1.968	43	6657	1.085
13) Ethanol	(1)	2.051	45	8488	87.185
15) Freon 123a	(2)	2.141	67	5025M	1.042
16) Acrolein	(1)	2.218	56	15214	9.900
17) 1,1-Dichloroethene	(2)	2.321	96	2707	0.746
17) 1,1-Dichloroethene	(2)	2.314	63	1554	0.849
18) Acetone	(1)	2.334	58	1488	1.992
19) Freon 113	(2)	2.334	101	2232	0.700
21) 2-Propanol	(1)	2.446	45	12023	21.663
22) Methyl Iodide	(2)	2.472	142	6057M	0.871
23) Carbon Disulfide	(2)	2.504	76	11216	0.877
25) Allyl Chloride	(2)	2.603	41	5509	0.871
27) Methyl Acetate	(2)	2.619	43	6296	1.151
28) Methylene Chloride	(2)	2.709	84	4508M	1.016
29)*t-Butyl alcohol-d10	(1)	2.732	65	213467	250.000
30) t-Butyl alcohol	(1)	2.805	59	20393M	20.598
31) Acrylonitrile	(2)	2.918	53	2348	0.816
33) Methyl Tertiary Butyl Ether	(2)	2.956	73	8820	0.920
32) trans-1,2-Dichloroethene	(2)	2.959	96	3346	0.850
34) n-Hexane	(2)	3.213	57	4218	0.801
36) 1,1-Dichloroethane	(2)	3.338	63	6195	0.868
38) di-Isopropyl ether	(2)	3.409	45	13012	0.949
39) 2-Chloro-1,3-butadiene	(2)	3.425	53	5230	0.846
40) Ethyl t-butyl ether	(2)	3.752	59	9566	0.957
42) cis-1,2-Dichloroethene	(2)	3.890	96	3895	0.881
45) 2,2-Dichloropropane	(2)	3.890	77	2825	0.882
44) 2-Butanone	(2)	3.909	43	8554	2.068
47) Propionitrile	(1)	3.964	54	24581	19.977
48) Methacrylonitrile	(2)	4.108	67	29800	9.628
49) Bromochloromethane	(2)	4.111	128	2034	0.885

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.172	71	2206	1.937
51) Chloroform	(2)	4.195	83	6117	0.914
52)$Dibromofluoromethane	(2)	4.355	113	189485	49.693
52)$Dibromofluoromethane	(2)	4.355	111	193391	49.406
53) 1,1,1-Trichloroethane	(2)	4.378	97	4109	0.816
54) Cyclohexane	(2)	4.439	56	5258	0.789
54) Cyclohexane	(2)	4.439	84	4367	0.791
54) Cyclohexane	(2)	4.429	69	1544	0.771
55) 1,1-Dichloropropene	(2)	4.541	75	4731	0.882
56) Carbon Tetrachloride	(2)	4.545	117	3401	0.787
58) Isobutyl Alcohol	(1)	4.676	41	17702	49.046
57)$1,2-Dichloroethane-d4	(2)	4.686	102	50410	49.708
57)$1,2-Dichloroethane-d4	(2)	4.689	65	224184	50.782
57)$1,2-Dichloroethane-d4	(2)	4.689	104	32320	50.043
60) Benzene	(2)	4.750	78	15856	0.919
61) 1,2-Dichloroethane	(2)	4.769	62	5590	1.049
61) 1,2-Dichloroethane	(2)	4.763	98	304	0.600
65) t-Amyl methyl ether	(2)	4.869	73	9942	0.971
66)*Fluorobenzene	(2)	5.029	96	823064	50.000
67) n-Heptane	(2)	5.032	43	4457	0.885
69) n-Butanol	(1)	5.353	56	28433	88.724
71) Trichloroethene	(2)	5.405	95	3650	0.874
73) Methylcyclohexane	(2)	5.604	83	4501	0.742
73) Methylcyclohexane	(2)	5.600	98	2124	0.753
74) 1,2-Dichloropropane	(2)	5.632	63	3782	0.854
75) Dibromomethane	(2)	5.748	93	2271	0.831
77) Methyl Methacrylate	(2)	5.780	69	4194M	0.862
76) 1,4-Dioxane	(1)	5.783	88	4430	46.241
79) Bromodichloromethane	(2)	5.924	83	4331	0.862
43) 1,2-Dichloroethene (Total)	(2)		96	7241	1.731
80) 2-Nitropropane	(2)	6.162	41	3015	1.774
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	2723	0.806
82) cis-1,3-Dichloropropene	(2)	6.409	75	5760	0.834
83) 4-Methyl-2-pentanone	(2)	6.585	43	15267	1.873
84)$Toluene-d8	(3)	6.695	98	848544	49.571
84)$Toluene-d8	(3)	6.695	100	557676	49.127
89) Toluene	(3)	6.762	92	9642	0.874
90) trans-1,3-Dichloropropene	(3)	7.019	75	5607	0.854

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$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.137	69	6163	0.764
93) 1,1,2-Trichloroethane	(3)	7.214	97	3763	0.887
94) Tetrachloroethene	(3)	7.359	166	3847	0.860
95) 1,3-Dichloropropane	(3)	7.384	76	6625	0.899
97) 2-Hexanone	(3)	7.494	43	11260M	1.753
98) Dibromochloromethane	(3)	7.612	129	3140	0.757
100) 1,2-Dibromoethane	(3)	7.715	107	3862	0.828
101)*Chlorobenzene-d5	(3)	8.161	117	683121	50.000
103) Chlorobenzene	(3)	8.183	112	11258	0.920
104) 1,1,1,2-Tetrachloroethane	(3)	8.267	131	3212	0.817
105) Ethylbenzene	(3)	8.293	91	18837	0.899
107) m+p-Xylene	(3)	8.405	106	14407	1.729
108) o-Xylene	(3)	8.739	106	7135	0.870
110) Styrene	(3)	8.751	104	11107	0.808
111) Bromoform	(3)	8.896	173	2281	0.707
112) Isopropylbenzene	(3)	9.047	105	17277	0.858
113) Cyclohexanone	(1)	9.111	55	20797	48.124
115)$4-Bromofluorobenzene	(3)	9.162	95	339181	49.529
115)$4-Bromofluorobenzene	(3)	9.162	174	285212	49.356
116) Bromobenzene	(4)	9.278	156	5068	0.956
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	6279	0.878
118) 1,2,3-Trichloropropane	(4)	9.313	110	1888	0.877
119) trans-1,4-Dichloro-2-butene	(4)	9.332	53	20634	9.000
120) n-Propylbenzene	(4)	9.371	91	22711	0.972
121) 2-Chlorotoluene	(4)	9.432	126	4178	0.867
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	15051	0.893
122) 4-Chlorotoluene	(4)	9.515	126	4721	0.915
125) tert-Butylbenzene	(4)	9.753	134	3462	0.904
126) Pentachloroethane	(4)	9.765	167	2398	0.792
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	16670	0.938
128) sec-Butylbenzene	(4)	9.916	105	18905	0.914
130) 1,3-Dichlorobenzene	(4)	9.993	146	9796	0.969
131) p-Isopropyltoluene	(4)	10.022	119	16677	0.911
132)*1,4-Dichlorobenzene-d4	(4)	10.038	152	368100	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	10400	0.992
91) 1,3-Dichloropropene (total)	(3)		100	11367	1.688
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	17695	0.926
136) Benzyl Chloride	(4)	10.160	91	10691	0.729

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Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.240	119	10375	0.901
138) 1,4-Diethylbenzene	(4)	10.298	119	11053	0.896
140) n-Butylbenzene	(4)	10.314	92	8520	0.922
139) 1,2-Dichlorobenzene	(4)	10.324	146	9475	0.945
141) 1,2-Diethylbenzene	(4)	10.378	119	8406	0.865
143) 1,2-Dibromo-3-chloropropane	(4)	10.866	75	1280	0.788
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	7373	0.959
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	6829	0.925
148) Hexachlorobutadiene	(4)	11.527	225	2777	1.056
149) Naphthalene	(4)	11.582	128	22155	0.887
150) 1,2,3-Trichlorobenzene	(4)	11.739	180	6883	0.955
109) Xylene (Total)	(3)		106	21542	2.599
151) 2-Methylnaphthalene	(4)	12.304	142	12159	0.853
142) Diethylbenzene (total)	(4)		100	29834	2.663

Digitally signed by Abigail P. Roselli
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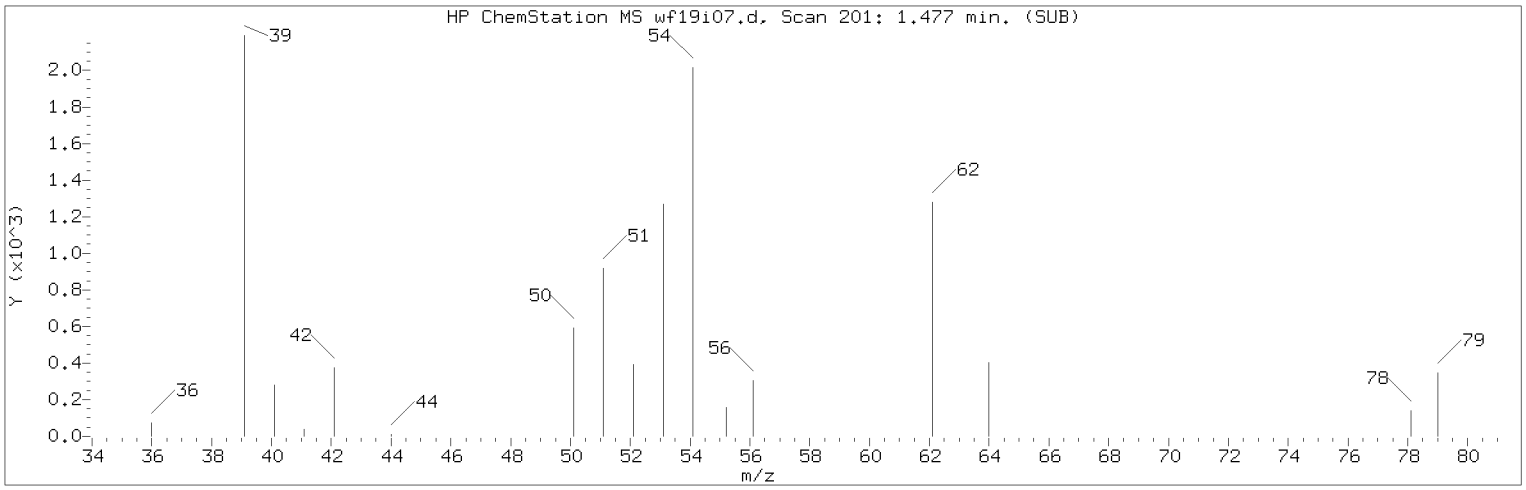
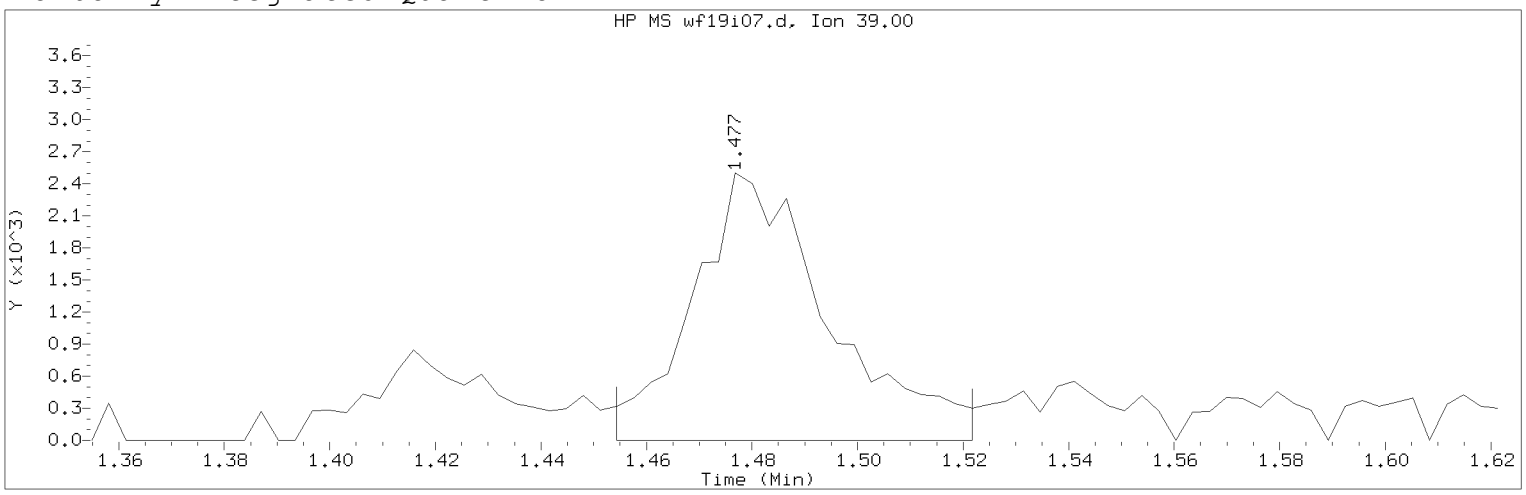
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

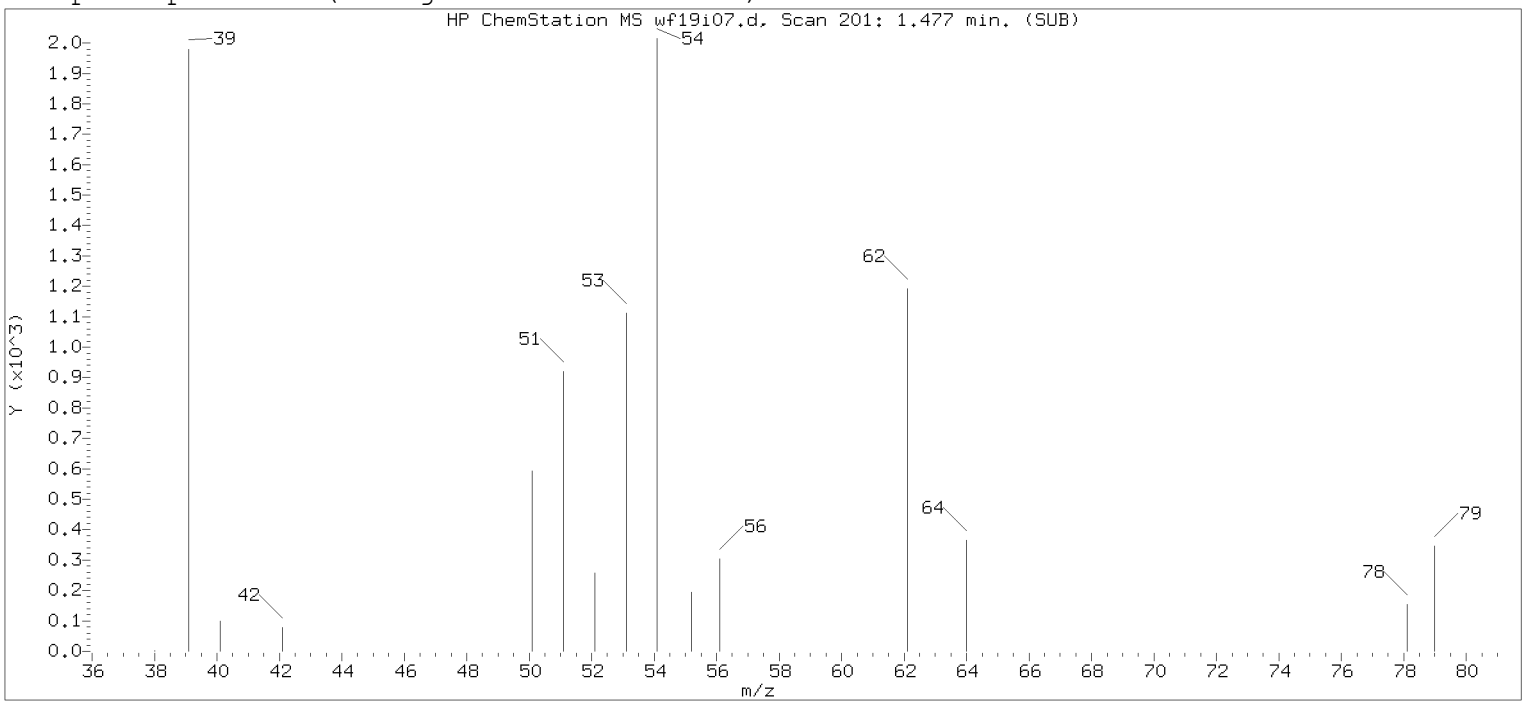
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 201
Retention Time (minutes): 1.477
Quant Ion : 39.00
Area (flag) : 4489M
On-Column Amount (ng) : 1.1115
Integration start scan : 193 Integration stop scan: 214
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

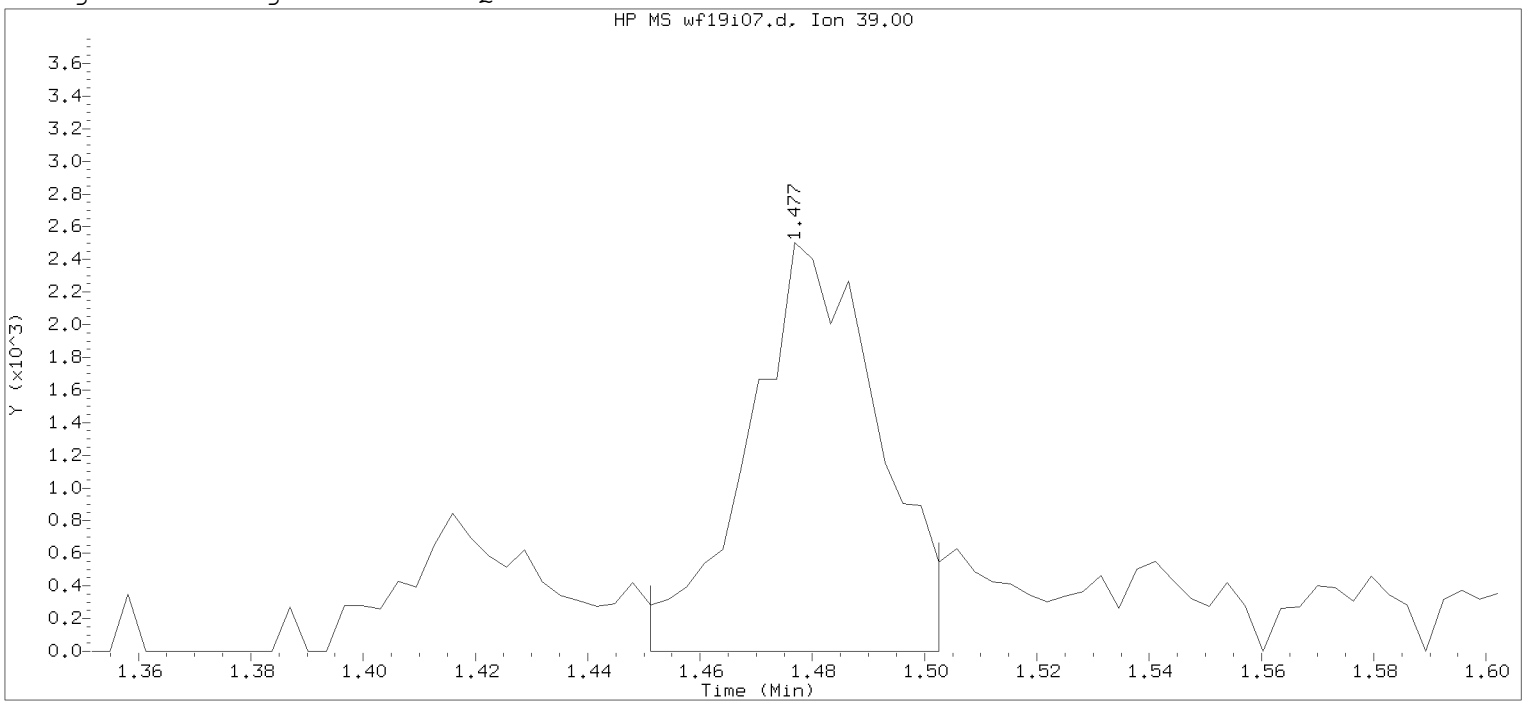
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

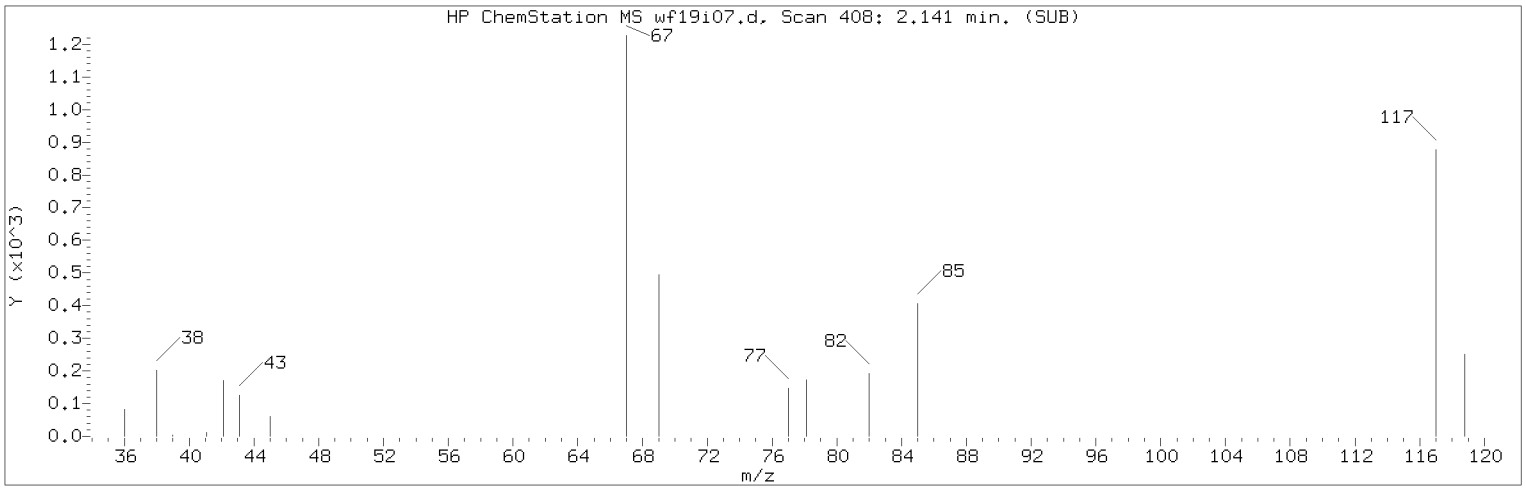
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

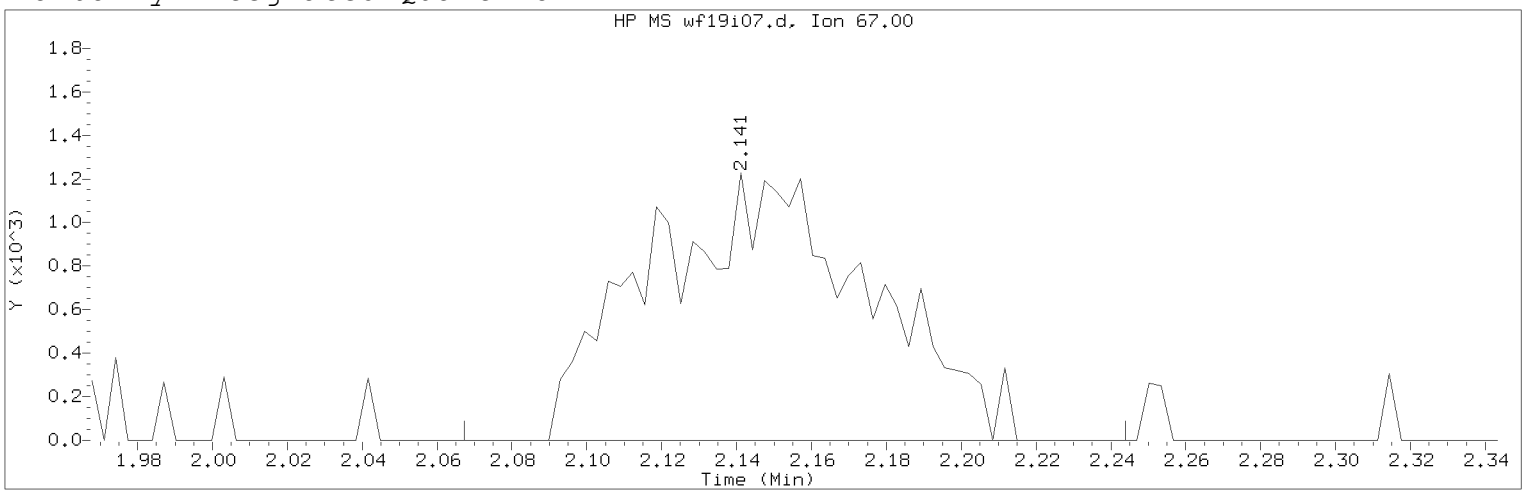
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 201
Retention Time (minutes): 1.477
Quant Ion : 39.00
Area : 3964
On-column Amount (ng) : 1.0001
Integration start scan : 192 Integration stop scan: 208
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user Abigail P. Roselli

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

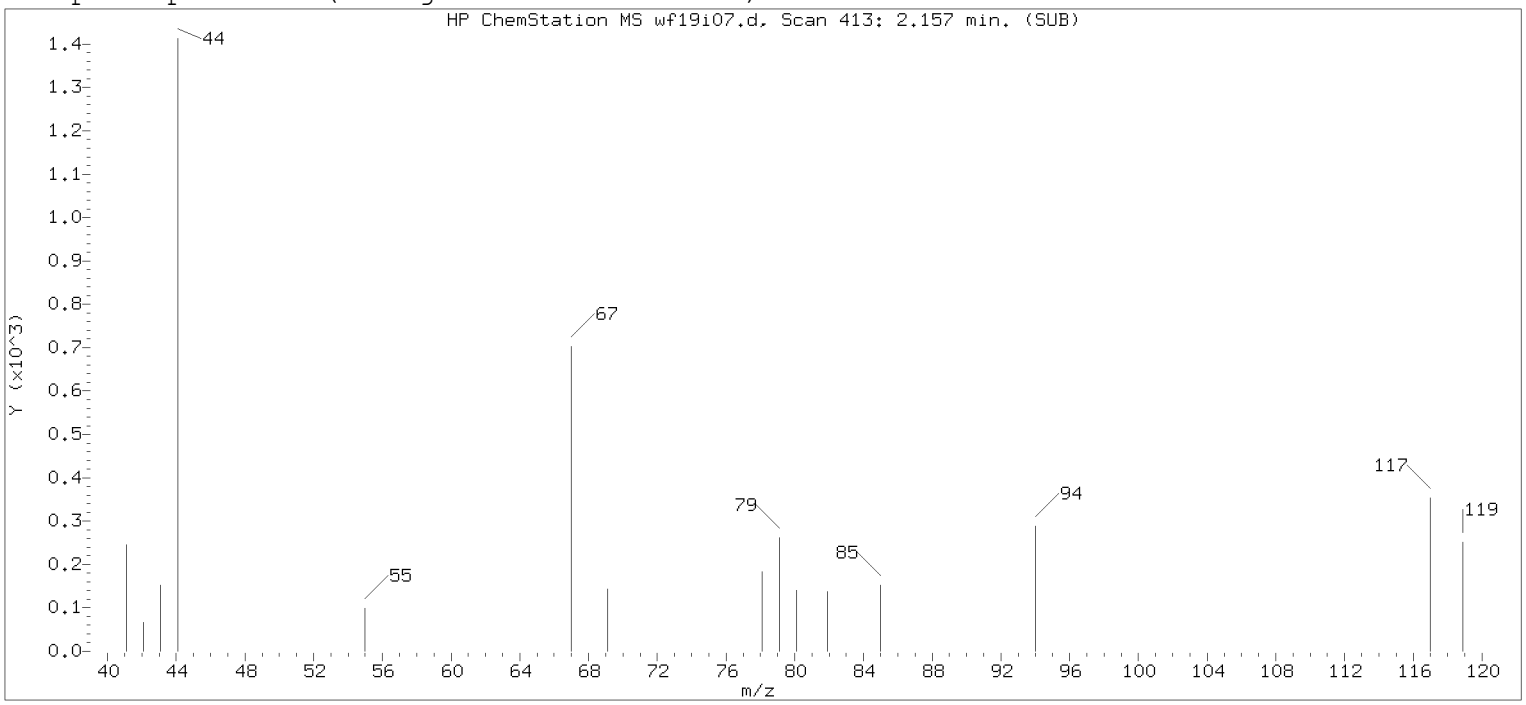
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 408
Retention Time (minutes): 2.141
Quant Ion : 67.00
Area (flag) : 5025M
On-Column Amount (ng) : 1.0422
Integration start scan : 384 Integration stop scan: 439
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

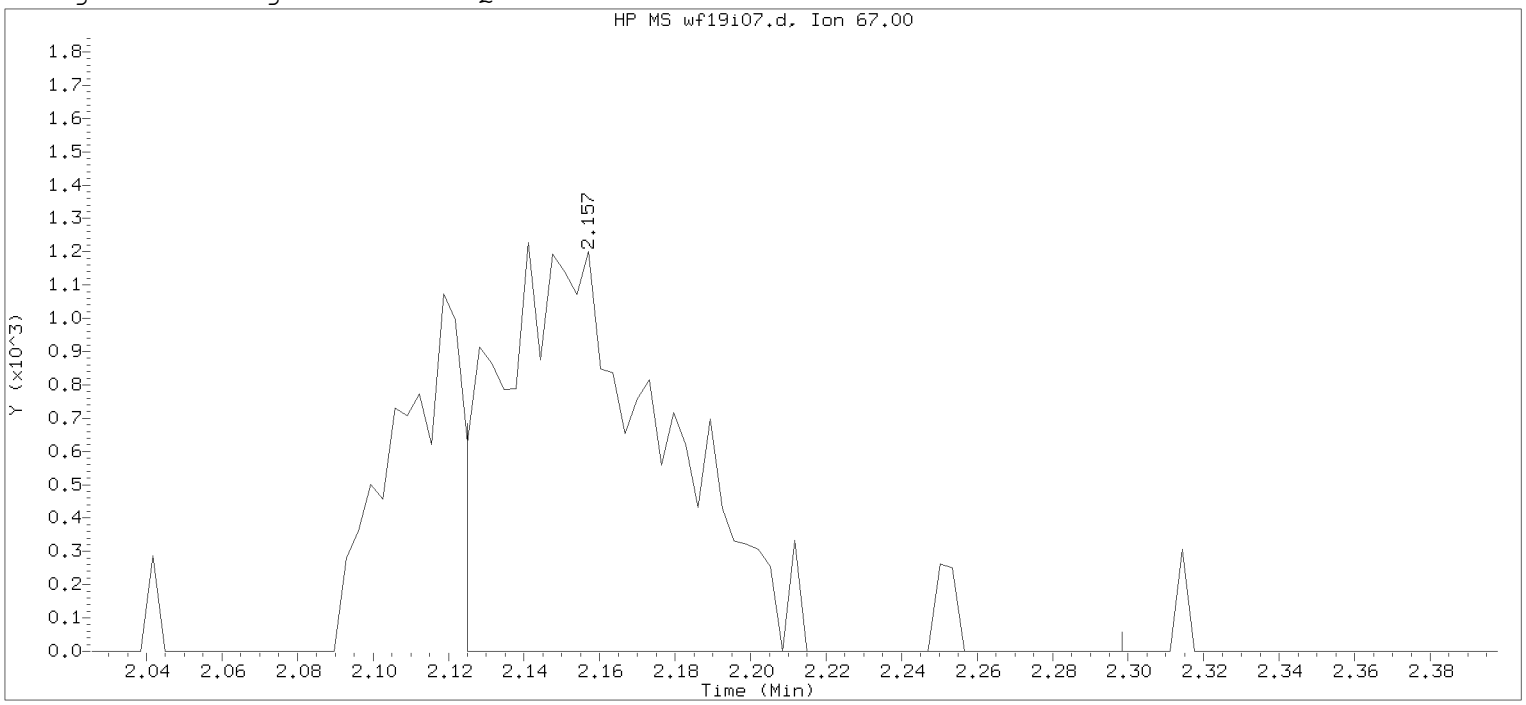
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

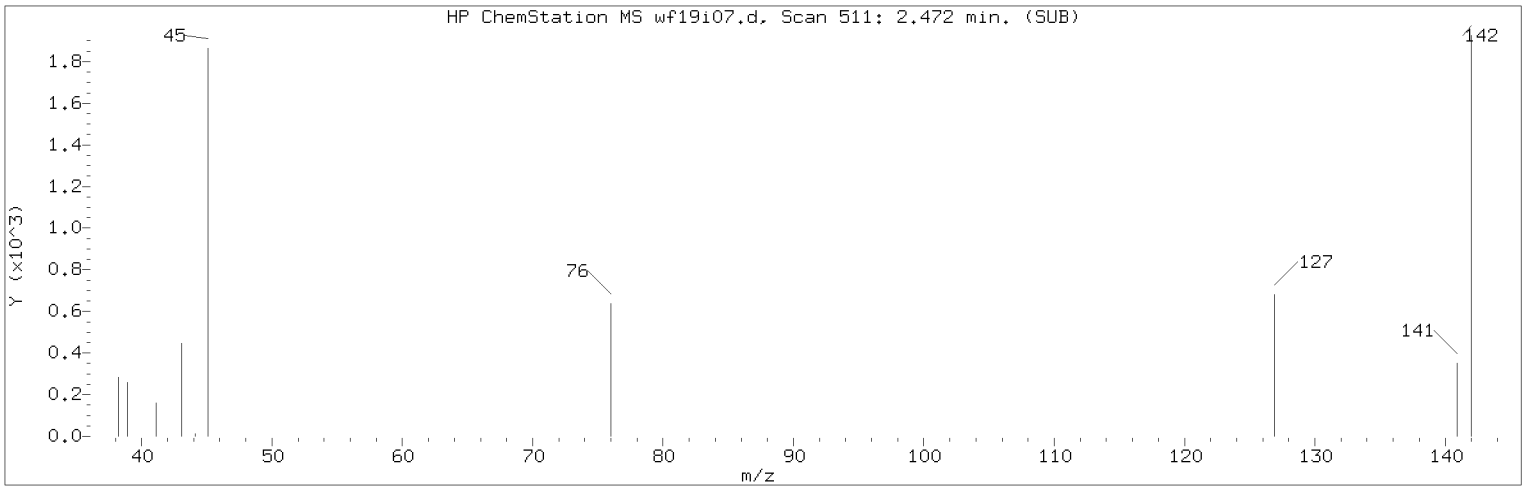
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

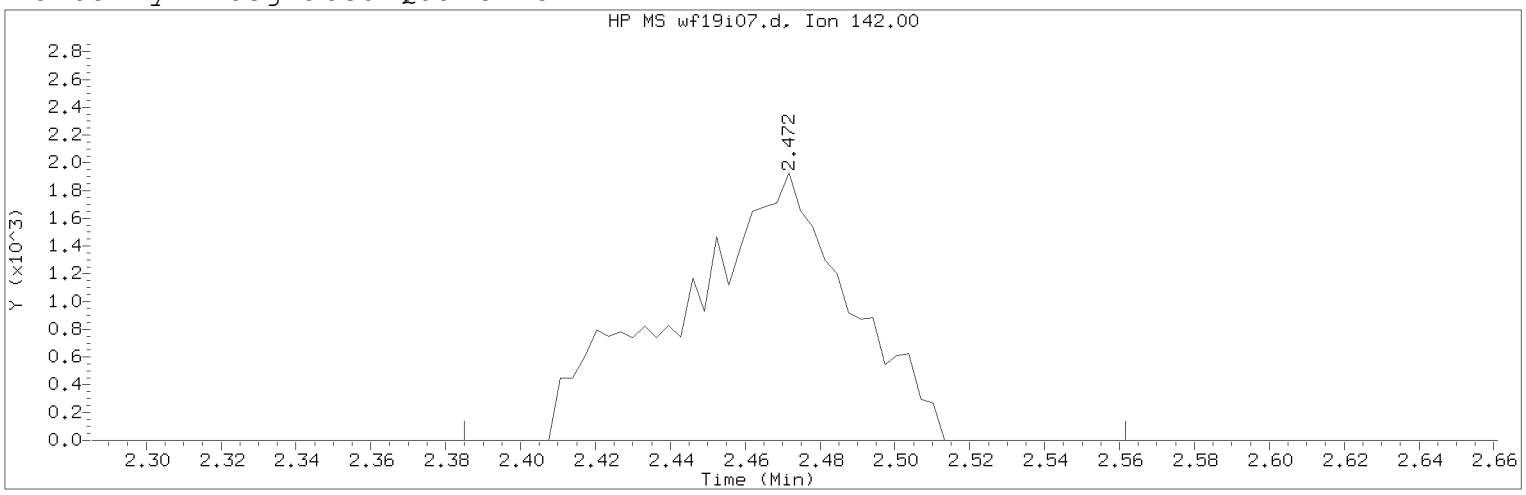
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 413
Retention Time (minutes): 2.157
Quant Ion : 67.00
Area : 3812
On-column Amount (ng) : 1.1043
Integration start scan : 402 Integration stop scan: 456
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

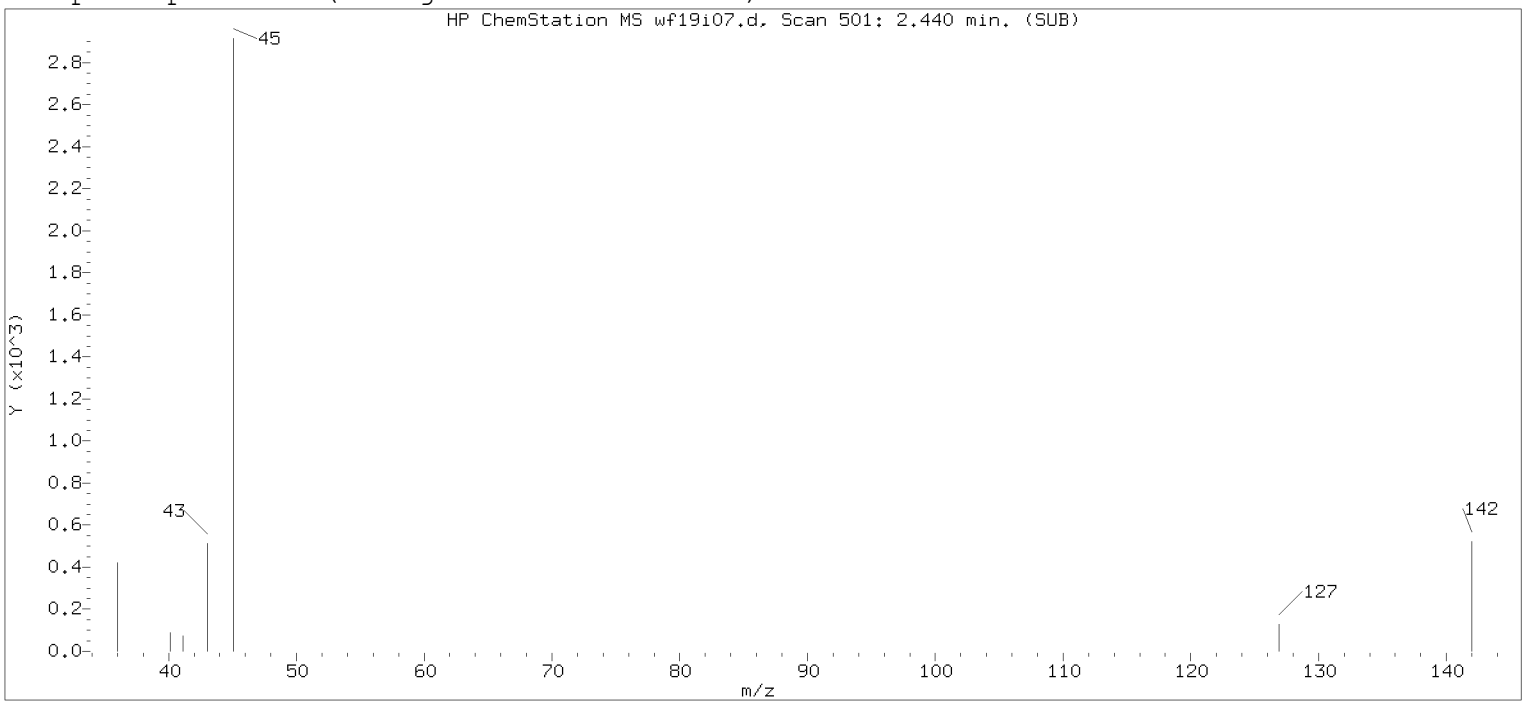
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 511
Retention Time (minutes): 2.472
Quant Ion : 142.00
Area (flag) : 6057M
On-Column Amount (ng) : 0.8710
Integration start scan : 483 Integration stop scan: 538
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

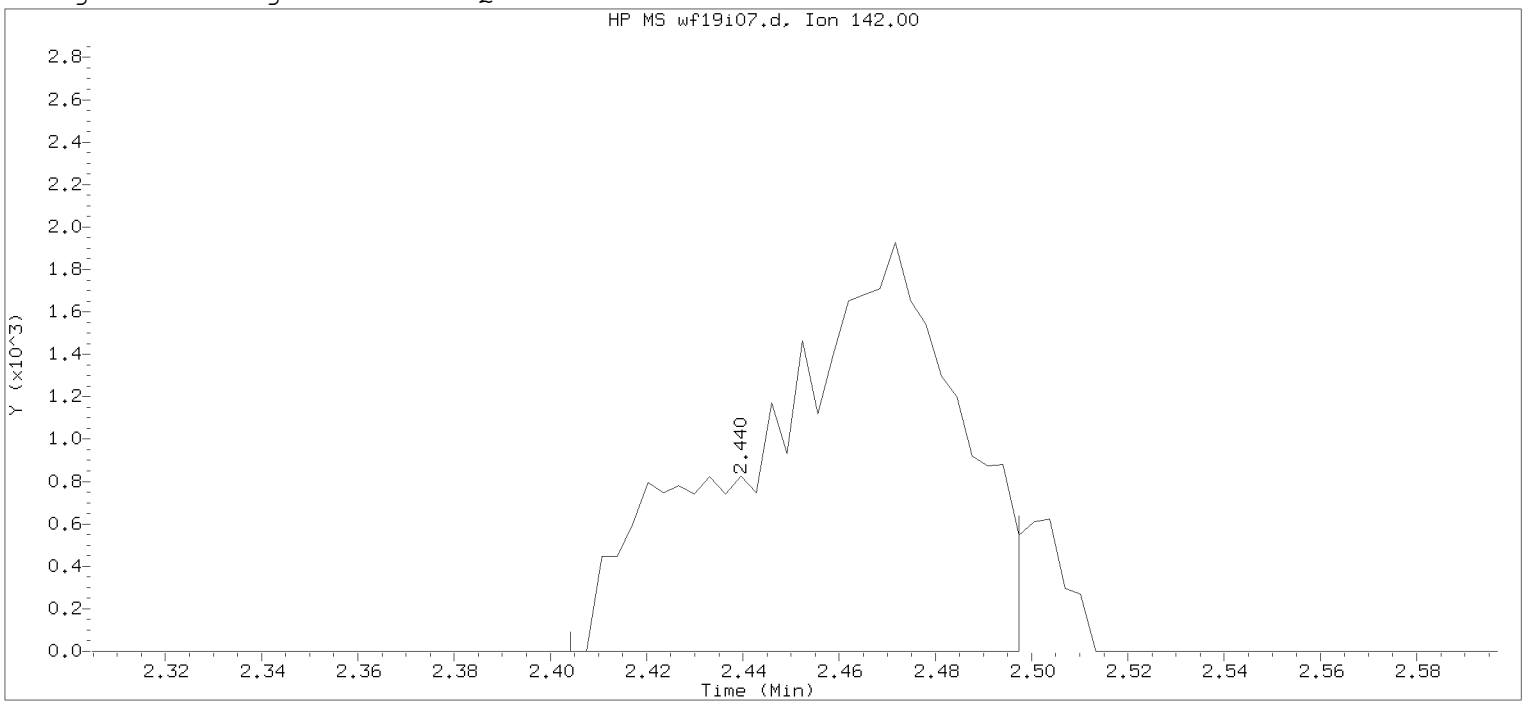
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

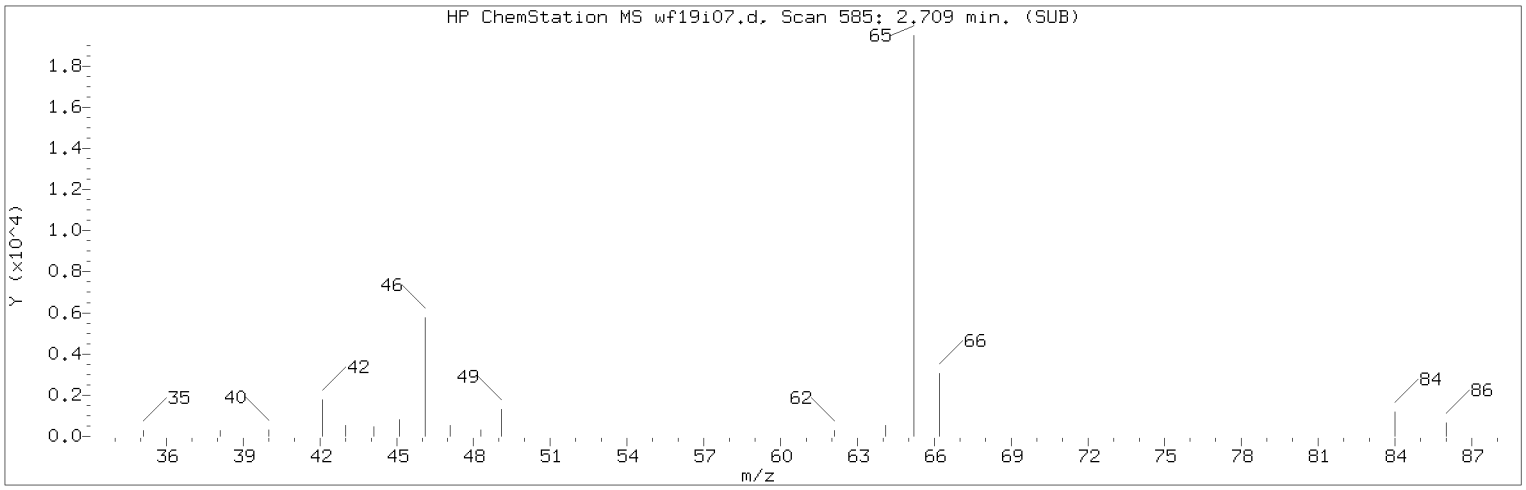
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

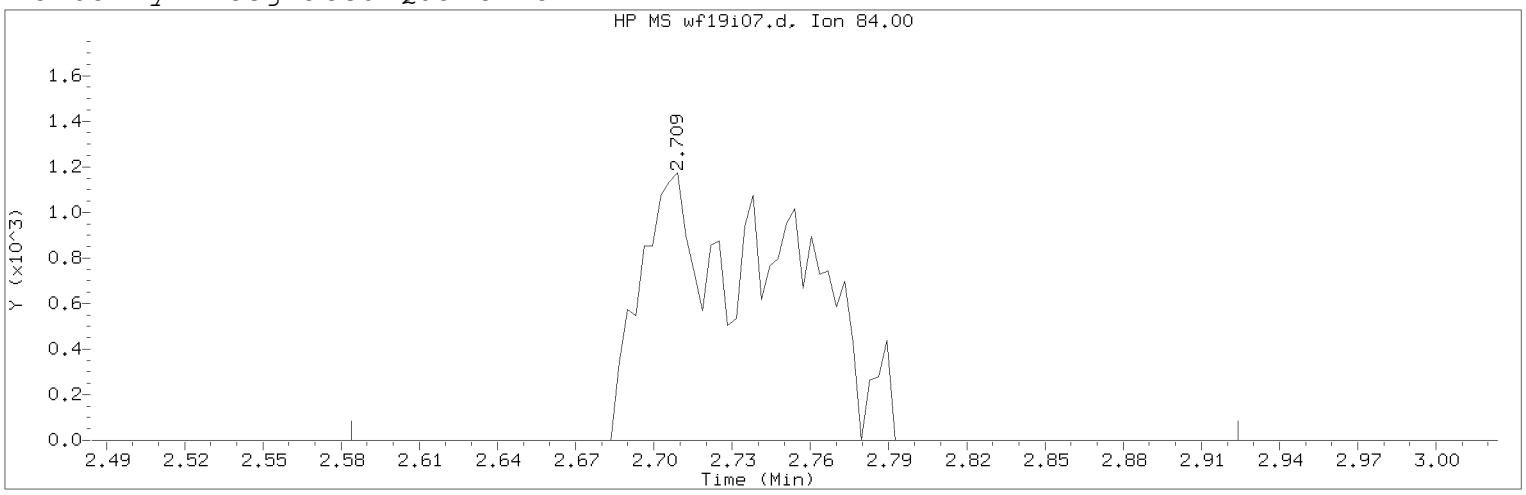
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 501
Retention Time (minutes): 2.440
Quant Ion : 142.00
Area : 5658
On-column Amount (ng) : 0.8993
Integration start scan : 489 Integration stop scan: 518
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

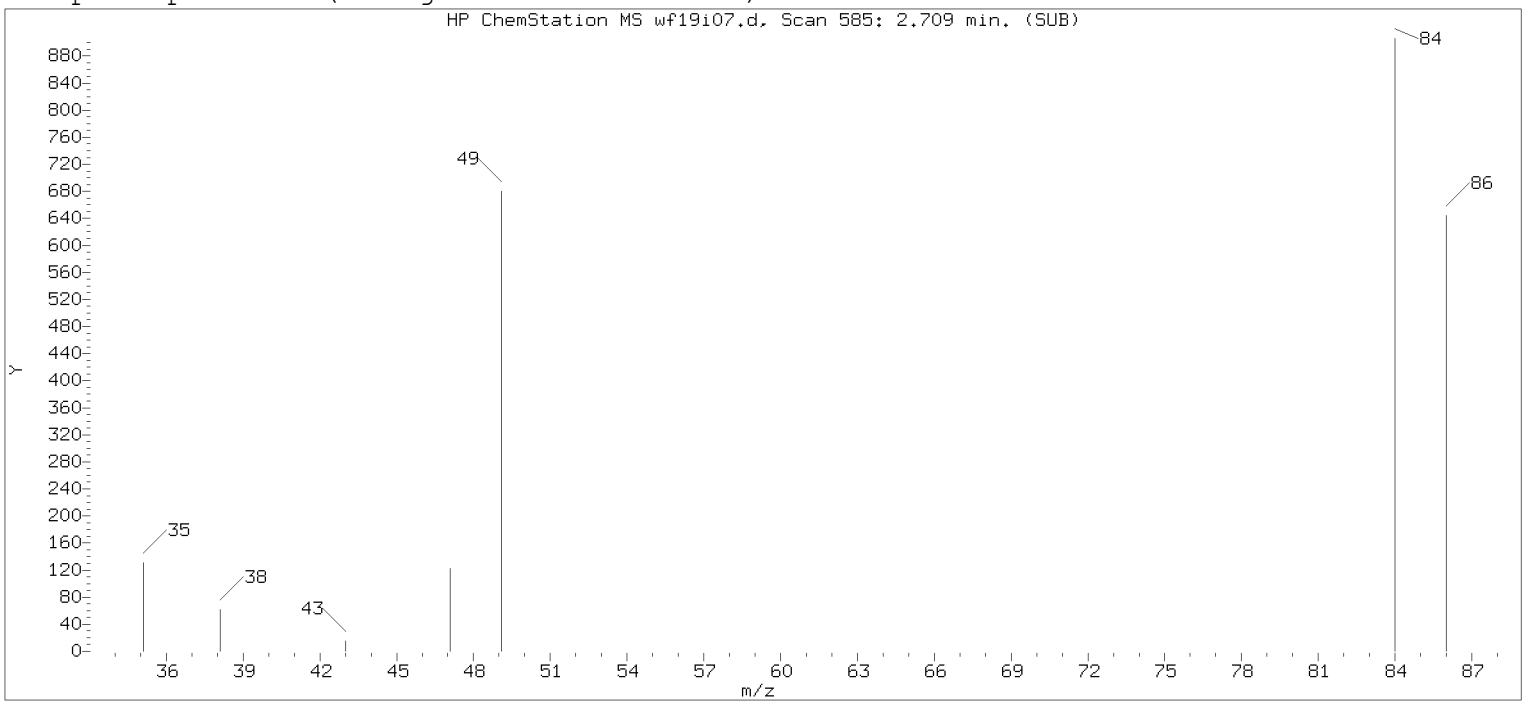
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area (flag) : 4508M
On-Column Amount (ng) : 1.0163
Integration start scan : 545 Integration stop scan: 651
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

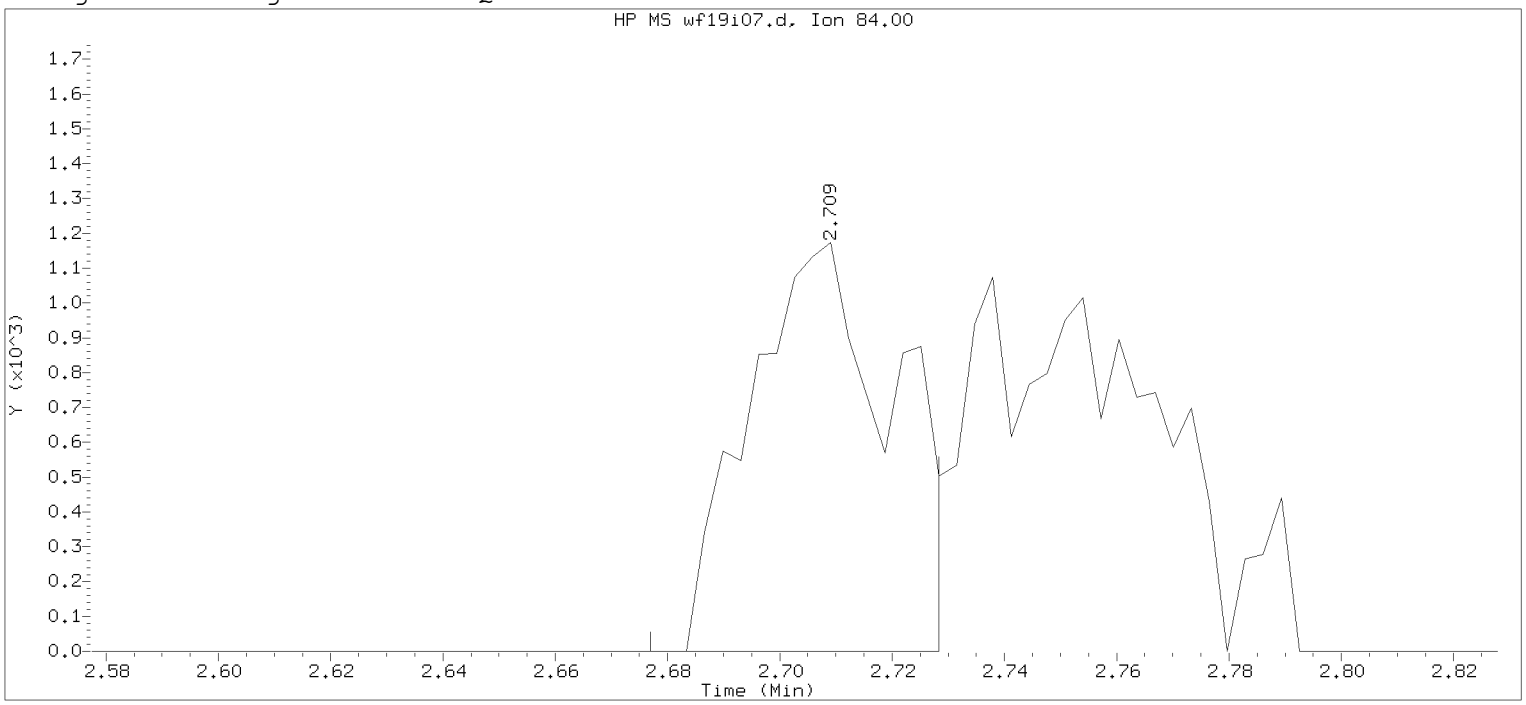
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

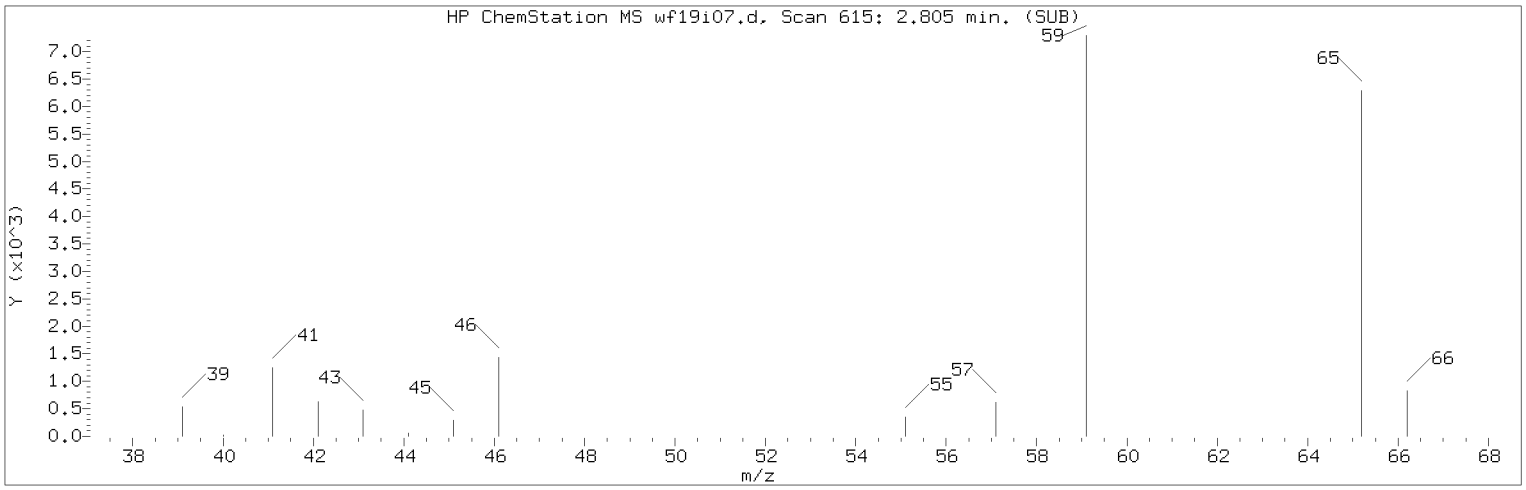
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

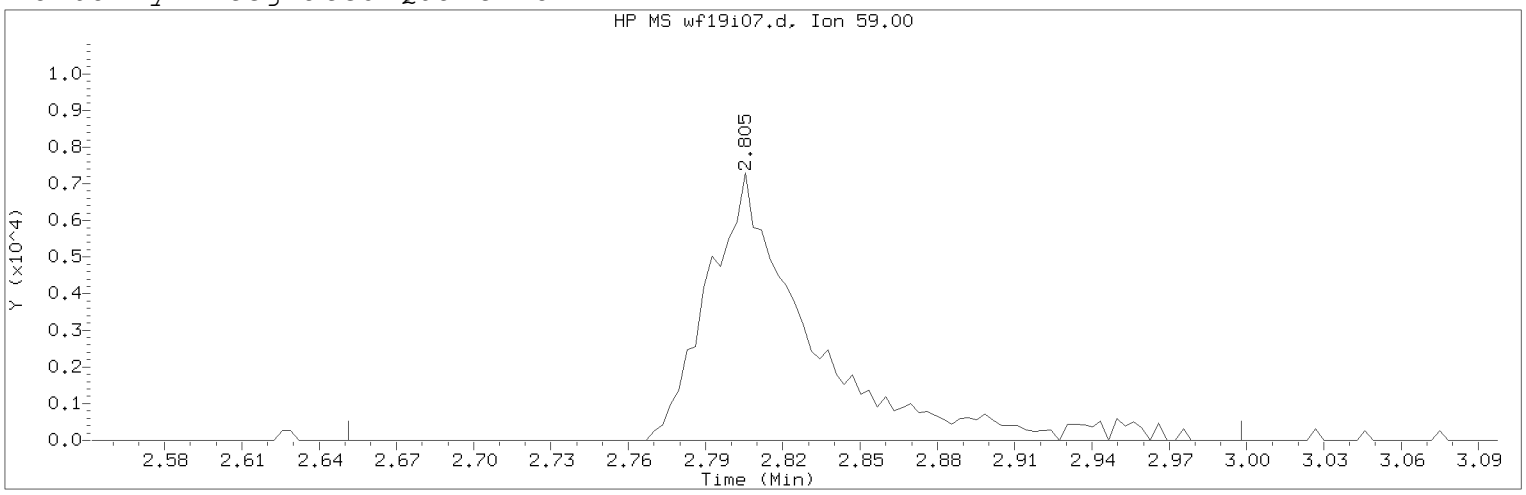
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area : 2067
On-column Amount (ng) : 0.5781
Integration start scan : 574 Integration stop scan: 590
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

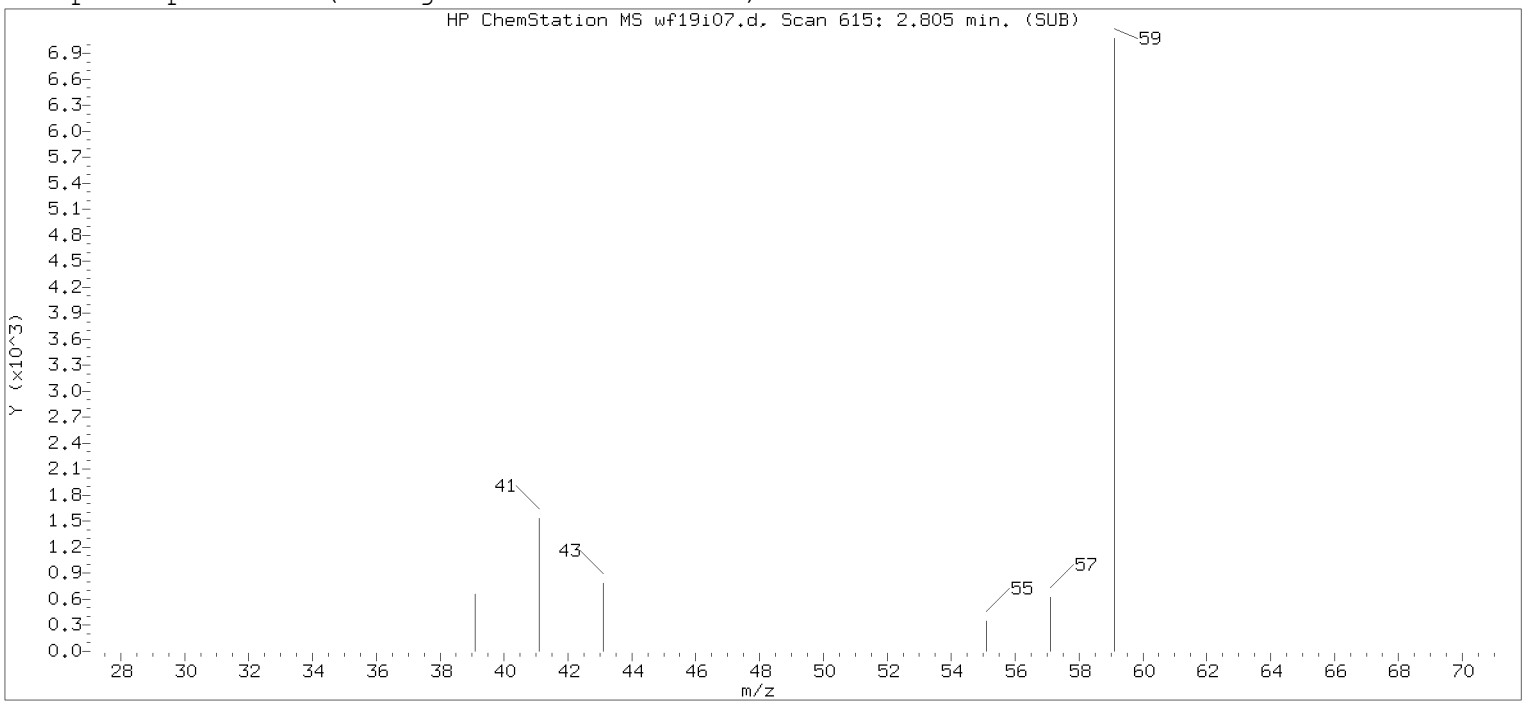
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 615
Retention Time (minutes): 2.805
Quant Ion : 59.00
Area (flag) : 20393M
On-Column Amount (ng) : 20.5984
Integration start scan : 566 Integration stop scan: 674
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

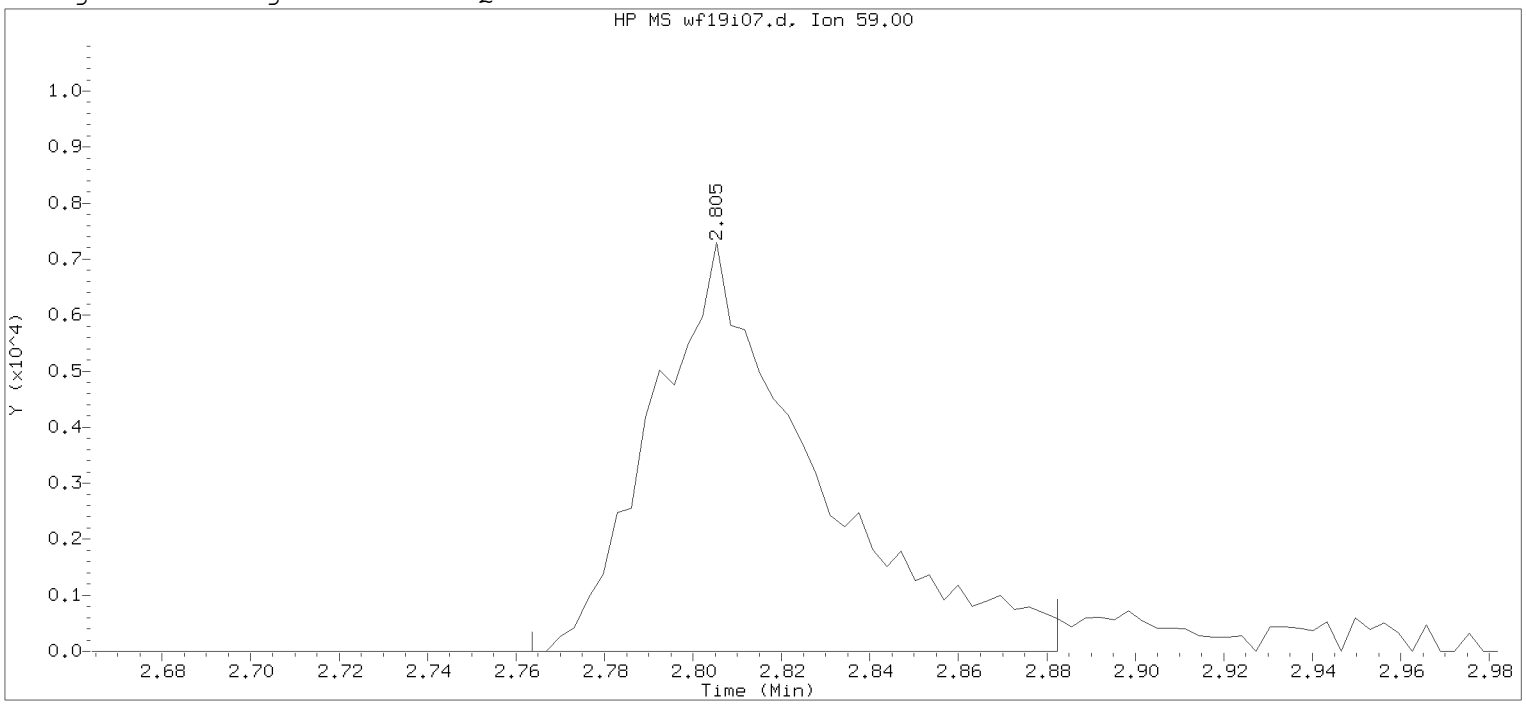
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

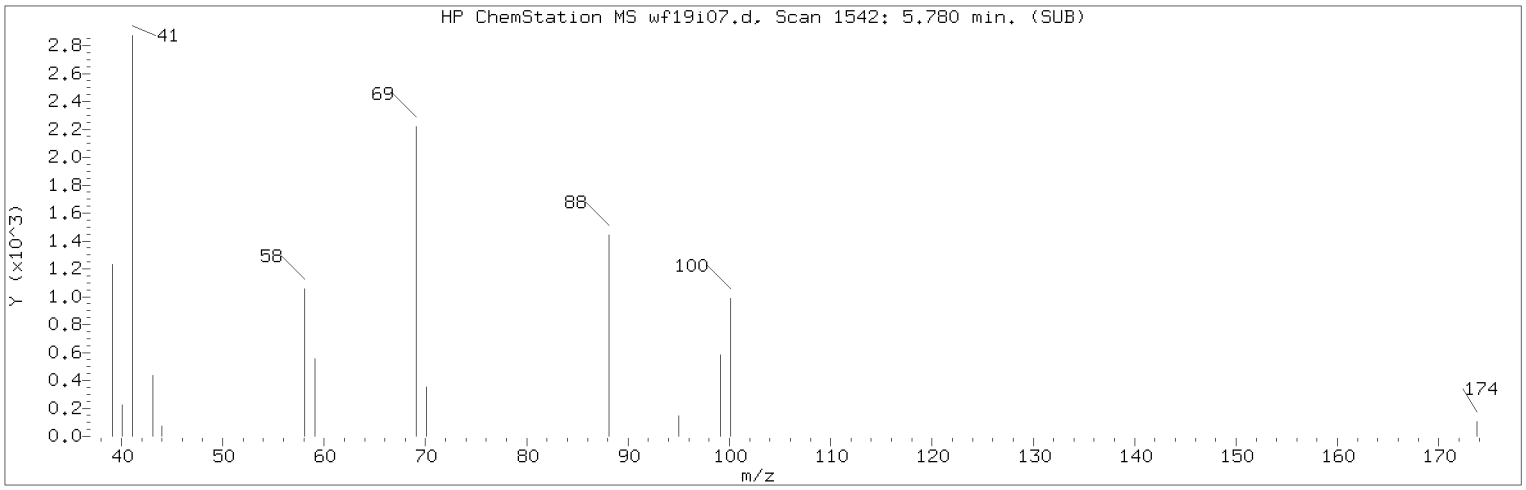
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

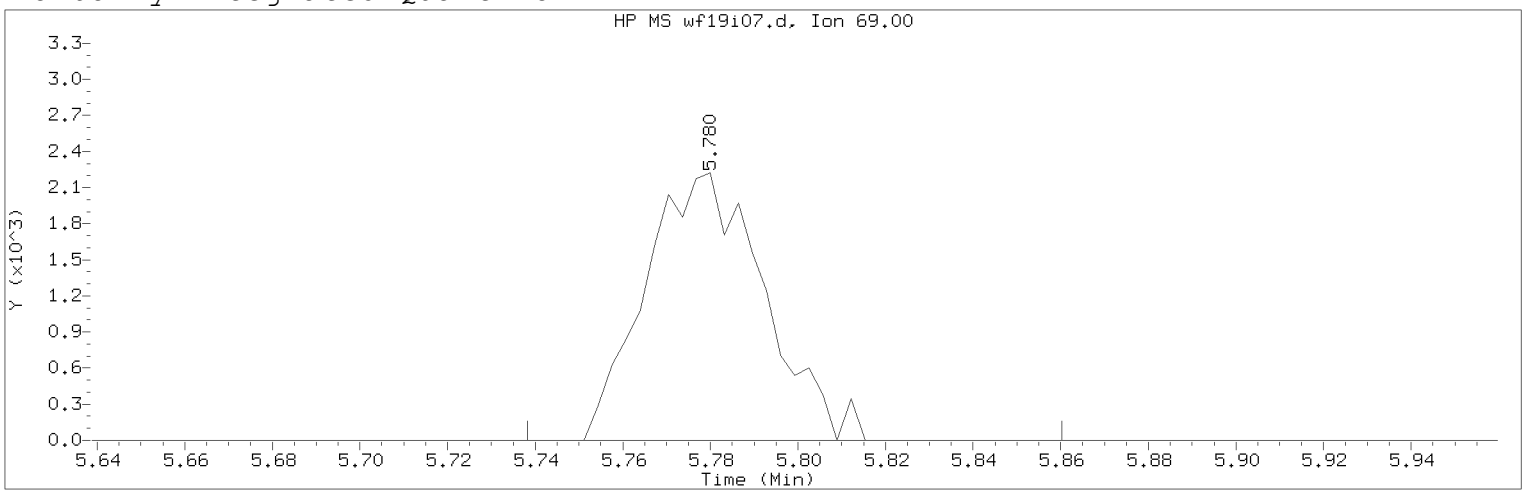
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 615
Retention Time (minutes): 2.805
Quant Ion : 59.00
Area : 18308
On-column Amount (ng) : 18.7752
Integration start scan : 601 Integration stop scan: 638
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

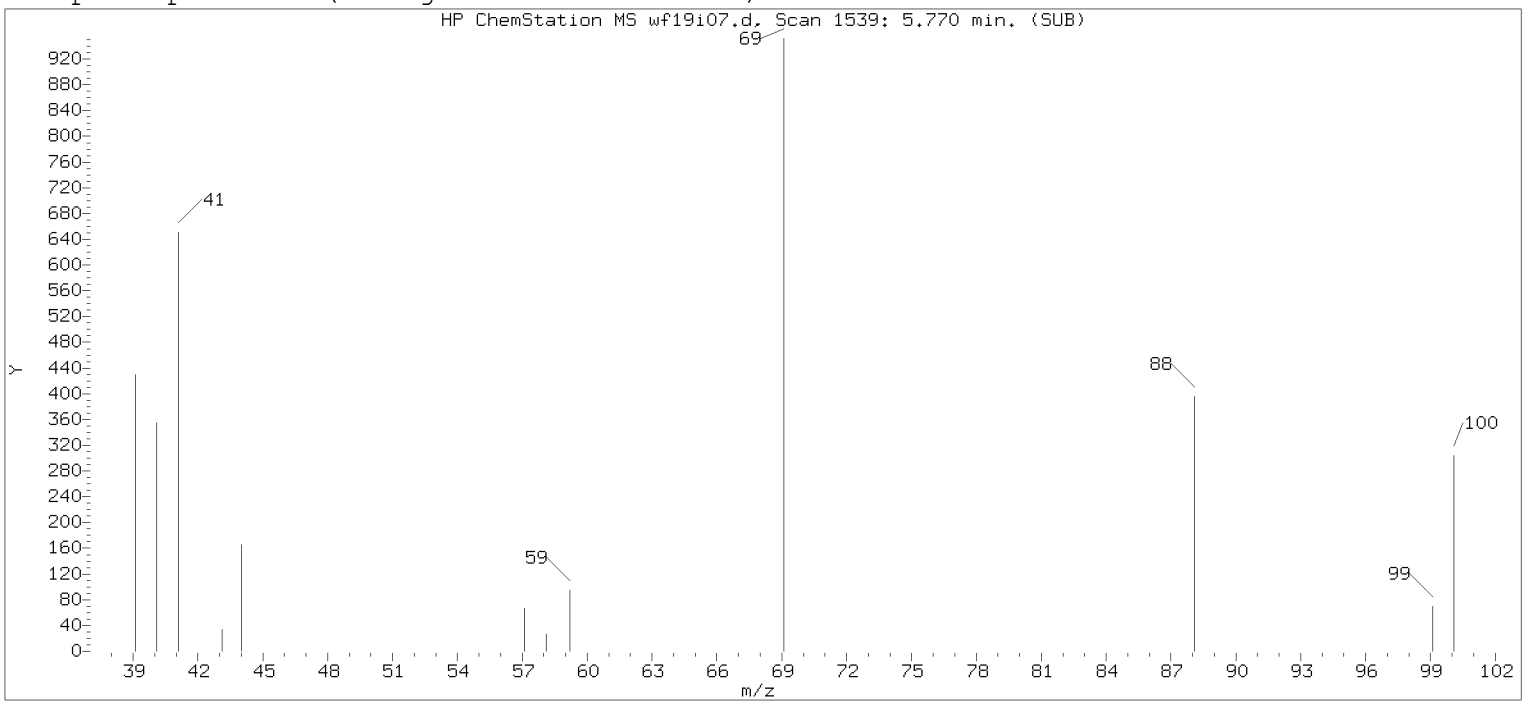
Compound Number : 77
Compound Name : Methyl Methacrylate
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 69.00
Area (flag) : 4194M
On-Column Amount (ng) : 0.8617
Integration start scan : 1528 Integration stop scan: 1566
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

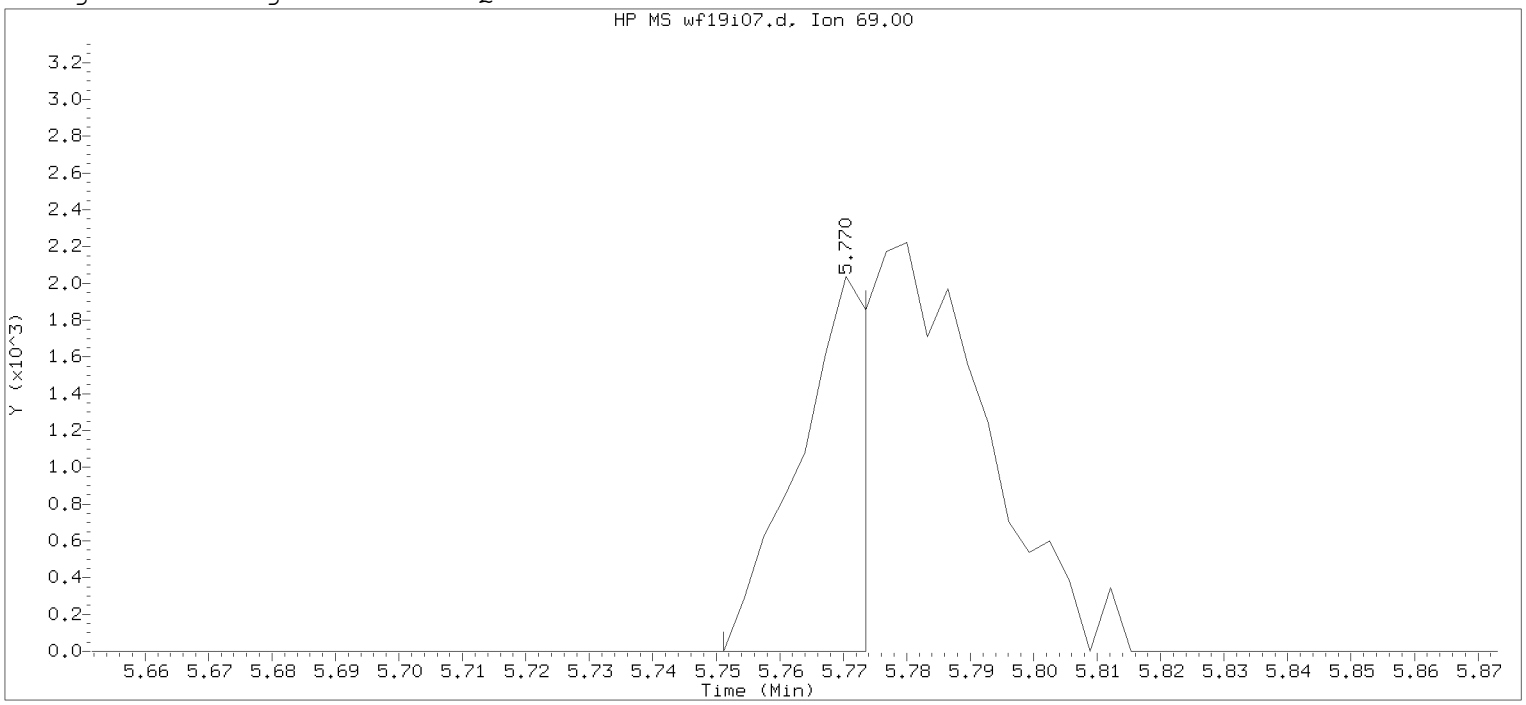
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

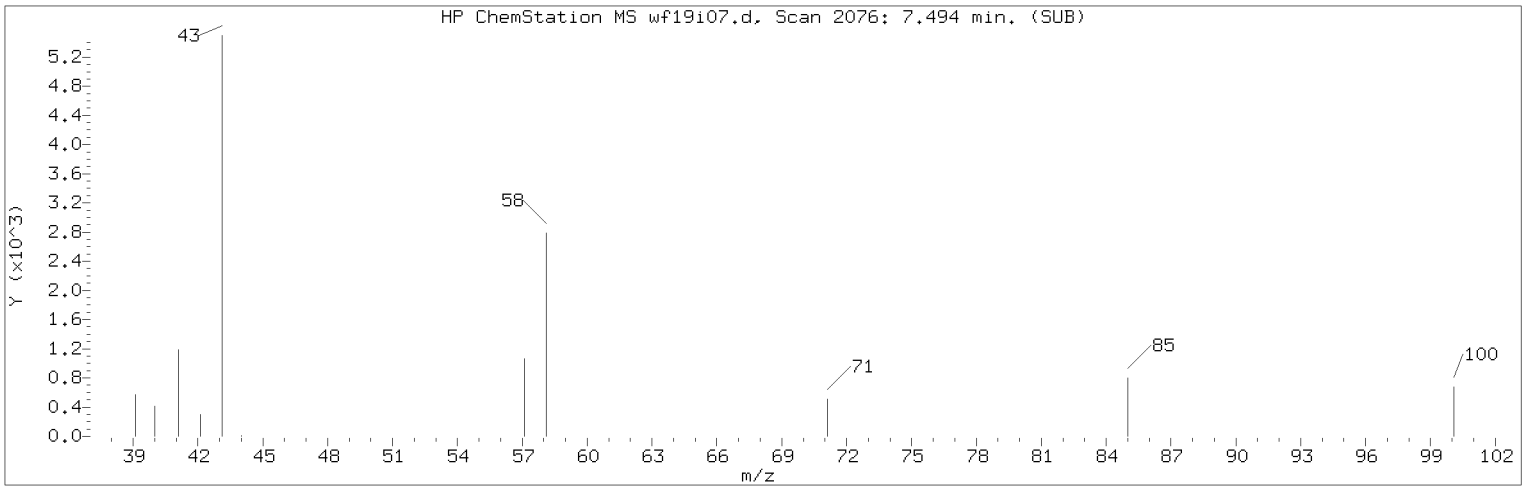
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

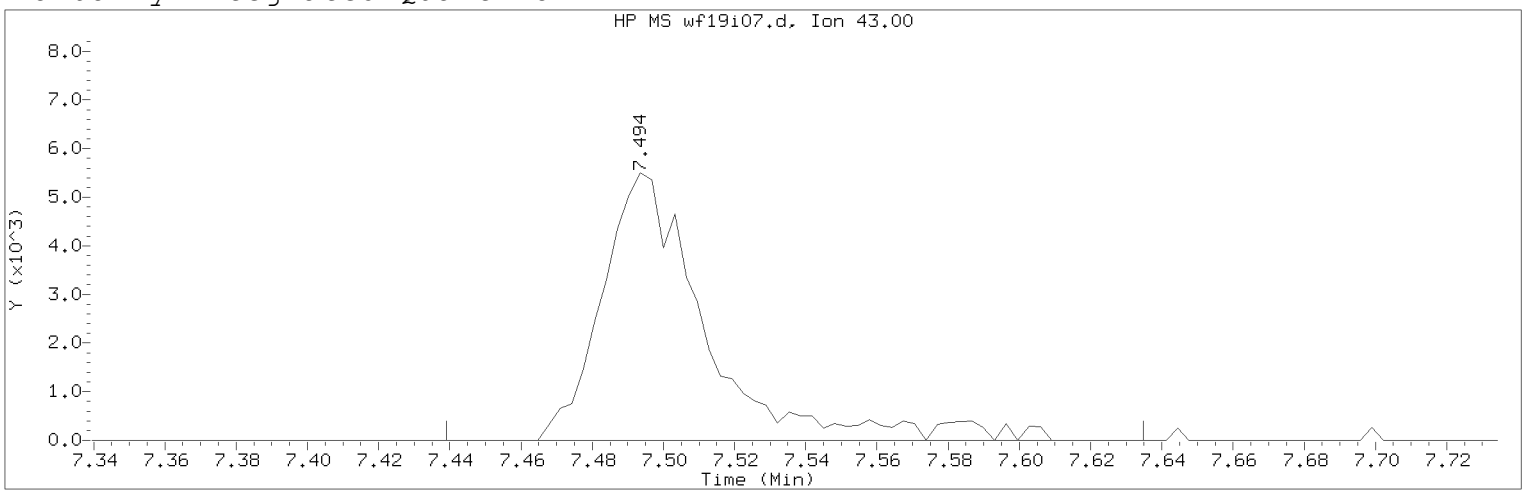
Compound Number : 77
Compound Name : Methyl Methacrylate
Scan Number : 1539
Retention Time (minutes): 5.770
Quant Ion : 69.00
Area : 1428
On-column Amount (ng) : 0.3220
Integration start scan : 1532 Integration stop scan: 1539
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

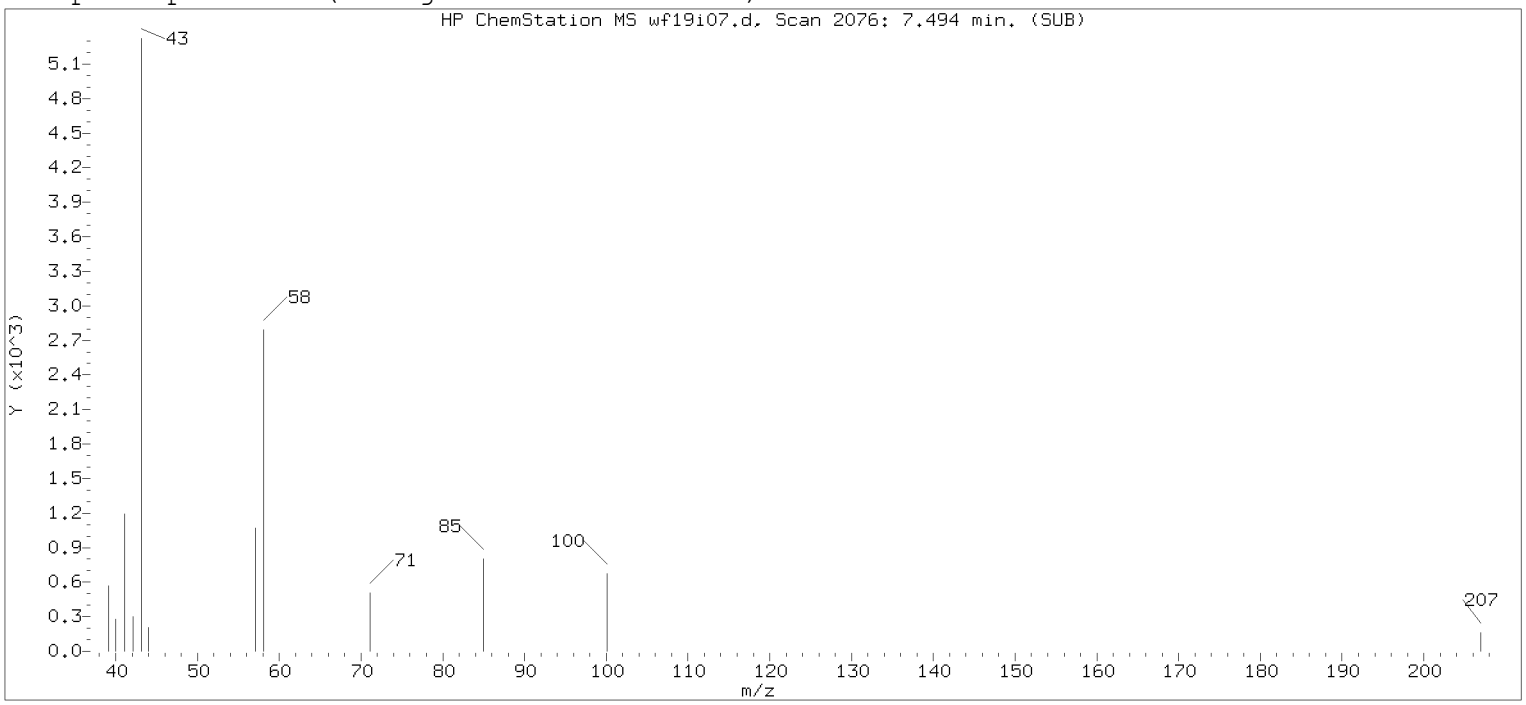
Compound Number : 97
Compound Name : 2-Hexanone
Scan Number : 2076
Retention Time (minutes): 7.494
Quant Ion : 43.00
Area (flag) : 11260M
On-Column Amount (ng) : 1.7534
Integration start scan : 2058 Integration stop scan: 2119
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

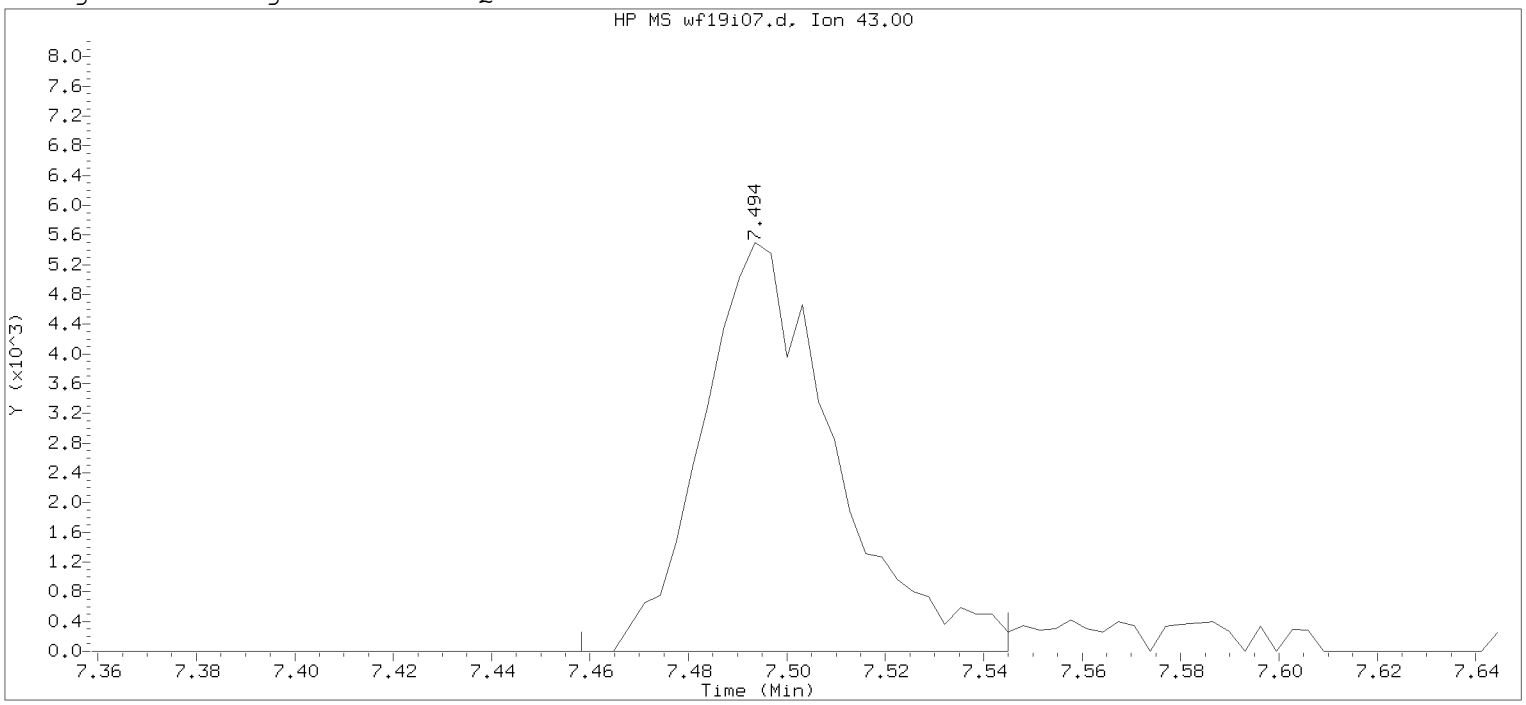
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



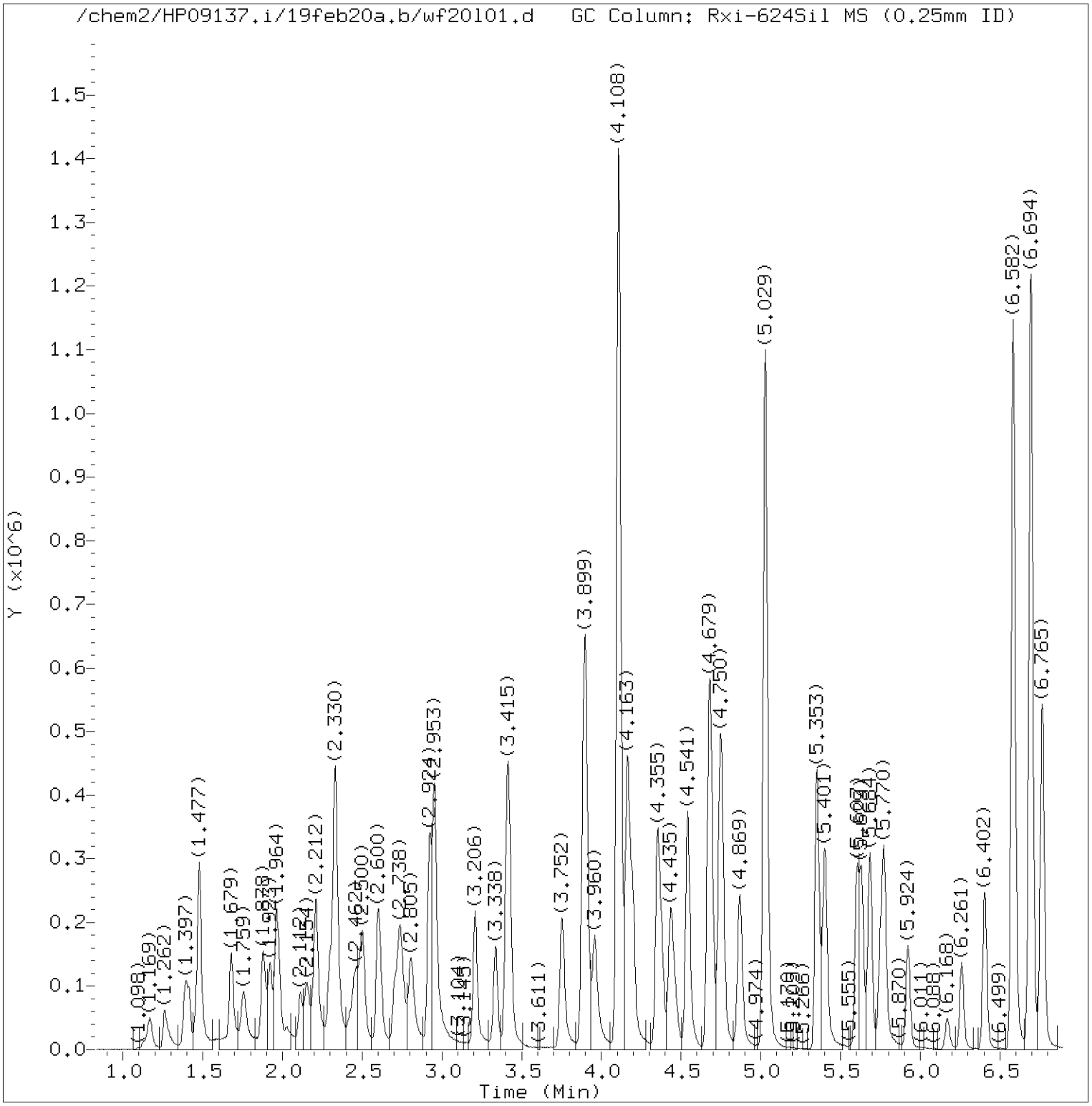
Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 97
Compound Name : 2-Hexanone
Scan Number : 2076
Retention Time (minutes): 7.494
Quant Ion : 43.00
Area : 10210
On-column Amount (ng) : 1.6088
Integration start scan : 2064 Integration stop scan: 2091
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user Abigail P. Roselli



Total Ion Chromatogram (TIC)

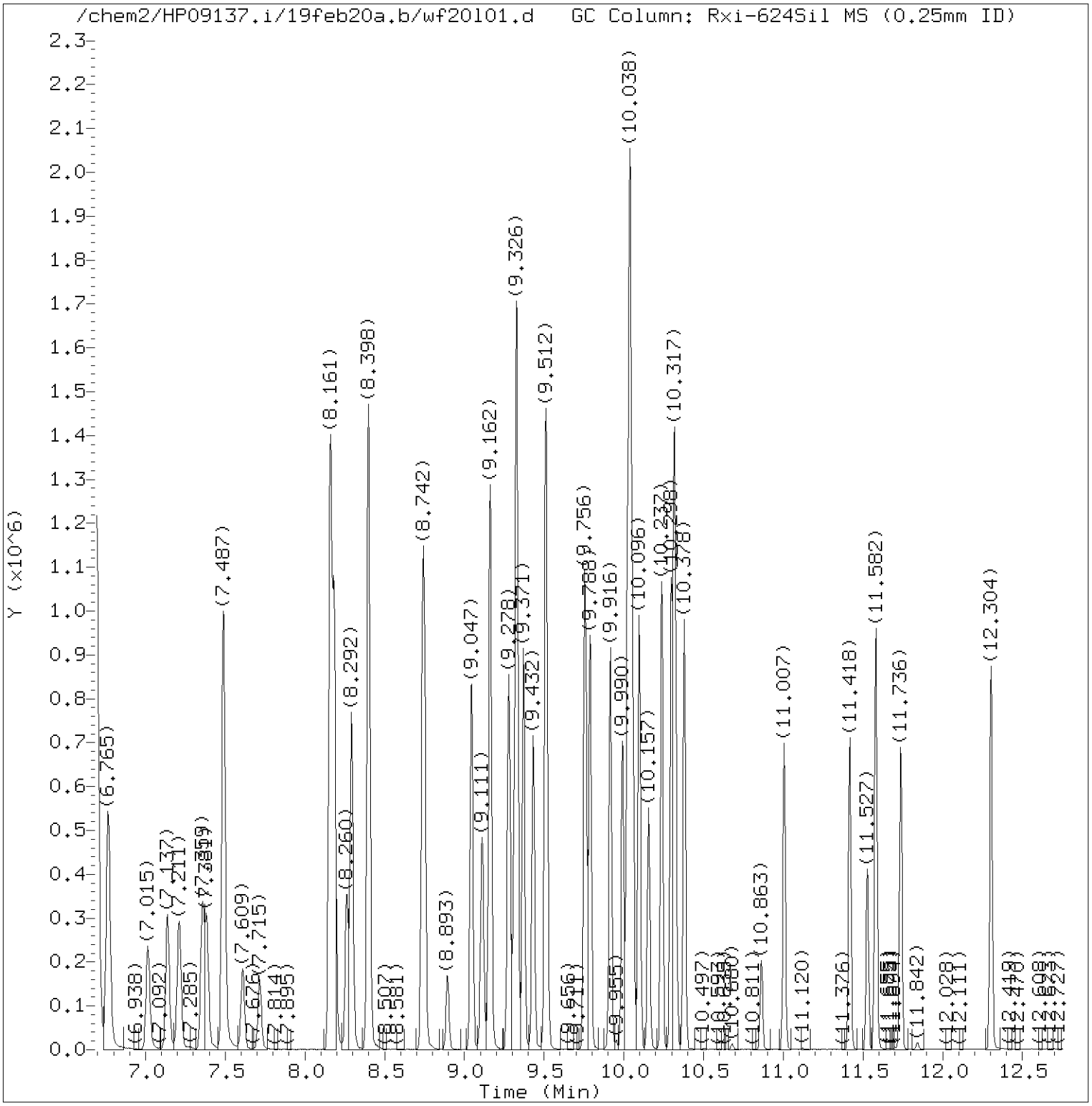
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
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Sample Name: LCSW62 Lab Sample ID: LCSW62

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Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.259	85	96568	17.290
4) Chloromethane	(2)	1.390	50	134773	19.379
6) Vinyl Chloride	(2)	1.467	62	127103	19.936
5) 1,3-Butadiene	(2)	1.480	39	88405	20.858
8) Bromomethane	(2)	1.679	94	87704	17.442
9) Chloroethane	(2)	1.756	64	73983	17.634
10) Dichlorofluoromethane	(2)	1.878	67	146532	18.044
12) Trichlorofluoromethane	(2)	1.923	101	121162	17.894
11) n-Pentane	(2)	1.961	43	114802	17.828
13) Ethanol	(1)	2.035	45	59325	572.099
15) Freon 123a	(2)	2.147	67	103271M	20.410
16) Acrolein	(1)	2.212	56	220979	134.998
17) 1,1-Dichloroethene	(2)	2.324	96	88878	23.338
19) Freon 113	(2)	2.327	101	74386	22.243
18) Acetone	(1)	2.337	58	114607	144.043
21) 2-Propanol	(1)	2.446	45	89998	152.244
22) Methyl Iodide	(2)	2.465	142	157275M	21.550
23) Carbon Disulfide	(2)	2.504	76	282096	21.025
25) Allyl Chloride	(2)	2.600	41	131552	19.828
27) Methyl Acetate	(2)	2.616	43	111319	19.385
28) Methylene Chloride	(2)	2.703	84	100603M	21.612
29)*t-Butyl alcohol-d10	(1)	2.731	65	227371	250.000
30) t-Butyl alcohol	(1)	2.805	59	207128	196.421
31) Acrylonitrile	(2)	2.921	53	304471	100.782
32) trans-1,2-Dichloroethene	(2)	2.953	96	92997	22.506
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	207314	20.606
34) n-Hexane	(2)	3.206	57	116893	21.143
36) 1,1-Dichloroethane	(2)	3.338	63	164243	21.936
38) di-Isopropyl ether	(2)	3.409	45	314239	21.846
39) 2-Chloro-1,3-butadiene	(2)	3.425	53	138541	21.364
40) Ethyl t-butyl ether	(2)	3.752	59	221032	21.080
45) 2,2-Dichloropropane	(2)	3.883	77	75689	22.509
42) cis-1,2-Dichloroethene	(2)	3.887	96	105718	22.787
44) 2-Butanone	(2)	3.899	43	639144	147.256
47) Propionitrile	(1)	3.960	54	199803	152.452
48) Methacrylonitrile	(2)	4.108	67	496119	152.733
49) Bromochloromethane	(2)	4.114	128	48427	20.081
50) Tetrahydrofuran	(1)	4.169	71	115894	95.544

M = Compound was manually integrated.
* = Compound is an internal standard.

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Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

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Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	4.195	83	156016	22.208
52)$Dibromofluoromethane	(2)	4.352	113	198099	49.504
53) 1,1,1-Trichloroethane	(2)	4.378	97	119941	22.691
54) Cyclohexane	(2)	4.439	56	142075	20.310
55) 1,1-Dichloropropene	(2)	4.541	75	123671	21.957
56) Carbon Tetrachloride	(2)	4.541	117	94740	20.885
58) Isobutyl Alcohol	(1)	4.673	41	185481	482.472
57)$1,2-Dichloroethane-d4	(2)	4.686	102	52871	49.678
60) Benzene	(2)	4.747	78	392054	21.655
61) 1,2-Dichloroethane	(2)	4.763	62	124290	22.224
65) t-Amyl methyl ether	(2)	4.869	73	220654	20.542
66)*Fluorobenzene	(2)	5.029	96	863762	50.000
67) n-Heptane	(2)	5.032	43	107071	20.263
69) n-Butanol	(1)	5.353	56	328345	961.937
71) Trichloroethene	(2)	5.404	95	97160	22.161
73) Methylcyclohexane	(2)	5.607	83	130478	20.499
74) 1,2-Dichloropropane	(2)	5.632	63	104752	22.537
75) Dibromomethane	(2)	5.751	93	62949	21.944
77) Methyl Methacrylate	(2)	5.773	69	102016	19.973
76) 1,4-Dioxane	(1)	5.783	88	51130M	501.065
79) Bromodichloromethane	(2)	5.924	83	113283	21.493
43) 1,2-Dichloroethene (Total)	(2)		96	198715	45.294
80) 2-Nitropropane	(2)	6.171	41	30099	16.878
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	66371	18.730
82) cis-1,3-Dichloropropene	(2)	6.406	75	158517	21.874
83) 4-Methyl-2-pentanone	(2)	6.582	43	843026	98.533
84)$Toluene-d8	(3)	6.694	98	904644	50.573
89) Toluene	(3)	6.765	92	252495	21.912
90) trans-1,3-Dichloropropene	(3)	7.012	75	141627	20.646
92) Ethyl Methacrylate	(3)	7.137	69	174648	20.719
93) 1,1,2-Trichloroethane	(3)	7.208	97	101734	22.938
94) Tetrachloroethene	(3)	7.359	166	102889	22.005
95) 1,3-Dichloropropane	(3)	7.388	76	169229	21.968
97) 2-Hexanone	(3)	7.487	43	652921	97.295
98) Dibromochloromethane	(3)	7.609	129	93639	21.617
100) 1,2-Dibromoethane	(3)	7.715	107	106921	21.943
101)*Chlorobenzene-d5	(3)	8.161	117	713862	50.000
103) Chlorobenzene	(3)	8.183	112	280419	21.937

M = Compound was manually integrated.
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Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
104) 1,1,1,2-Tetrachloroethane	(3)	8.260	131	87309	21.253
105) Ethylbenzene	(3)	8.292	91	476224	21.744
107) m+p-Xylene	(3)	8.398	106	380724	43.723
108) o-Xylene	(3)	8.735	106	183750	21.450
110) Styrene	(3)	8.748	104	318309	22.150
111) Bromoform	(3)	8.896	173	67300	19.963
112) Isopropylbenzene	(3)	9.047	105	467195	22.194
113) Cyclohexanone	(1)	9.111	55	180831	392.853
115)$4-Bromofluorobenzene	(3)	9.162	95	356184	49.772
116) Bromobenzene	(4)	9.278	156	123084	21.520
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	166416	21.576
118) 1,2,3-Trichloropropane	(4)	9.310	110	50955	21.933
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	259117	104.764
120) n-Propylbenzene	(4)	9.371	91	558993	22.171
121) 2-Chlorotoluene	(4)	9.432	126	114743	22.064
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	396619	21.812
122) 4-Chlorotoluene	(4)	9.518	126	121267	21.782
125) tert-Butylbenzene	(4)	9.753	134	89119	21.572
126) Pentachloroethane	(4)	9.765	167	66140	20.252
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	411236	21.462
128) sec-Butylbenzene	(4)	9.916	105	488887	21.903
130) 1,3-Dichlorobenzene	(4)	9.990	146	235017	21.548
131) p-Isopropyltoluene	(4)	10.022	119	430620	21.794
132)*1,4-Dichlorobenzene-d4	(4)	10.038	152	397089	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	245420	21.706
91) 1,3-Dichloropropene (total)	(3)		100	300144	42.520
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	439986	21.341
136) Benzyl Chloride	(4)	10.157	91	312431	19.742
137) 1,3-Diethylbenzene	(4)	10.237	119	260974	21.021
138) 1,4-Diethylbenzene	(4)	10.298	119	270284	20.320
140) n-Butylbenzene	(4)	10.314	92	213919	21.451
139) 1,2-Dichlorobenzene	(4)	10.324	146	235762	21.788
141) 1,2-Diethylbenzene	(4)	10.381	119	223186	21.293
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	36179	20.640
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	174405	21.019
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	171135	21.483
148) Hexachlorobutadiene	(4)	11.530	225	58819	20.731
149) Naphthalene	(4)	11.582	128	578423	21.460

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Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
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Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	166855	21.460
109) Xylene (Total)	(3)		106	564474	65.173
151) 2-Methylnaphthalene	(4)	12.304	142	303477	19.735
142) Diethylbenzene (total)	(4)		100	754444	62.634

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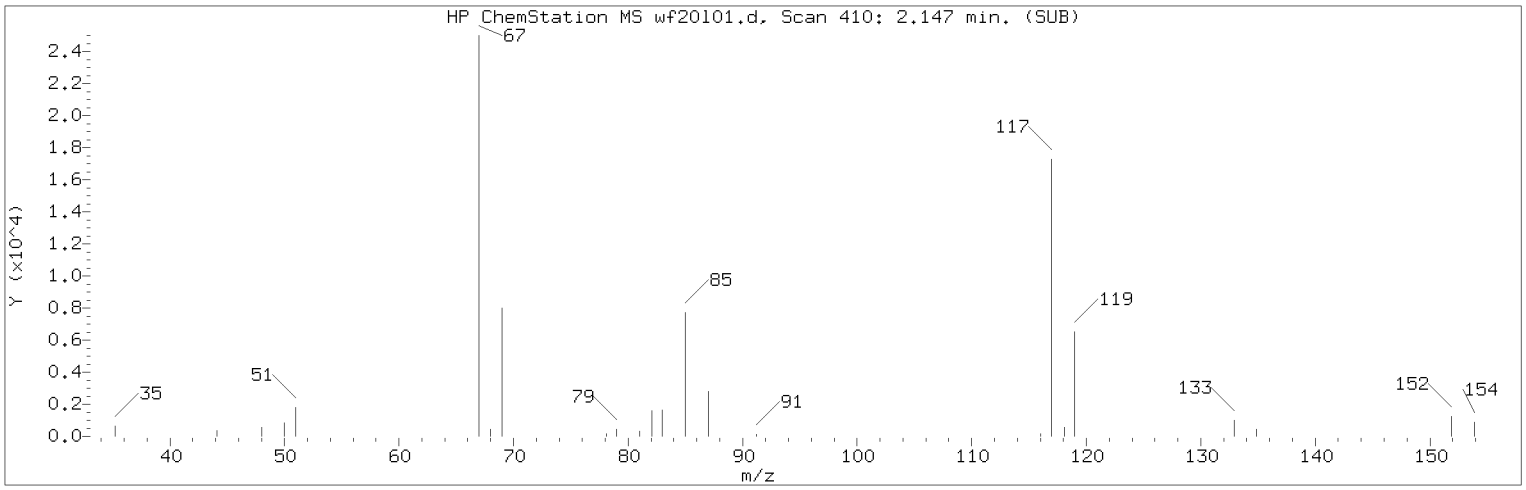
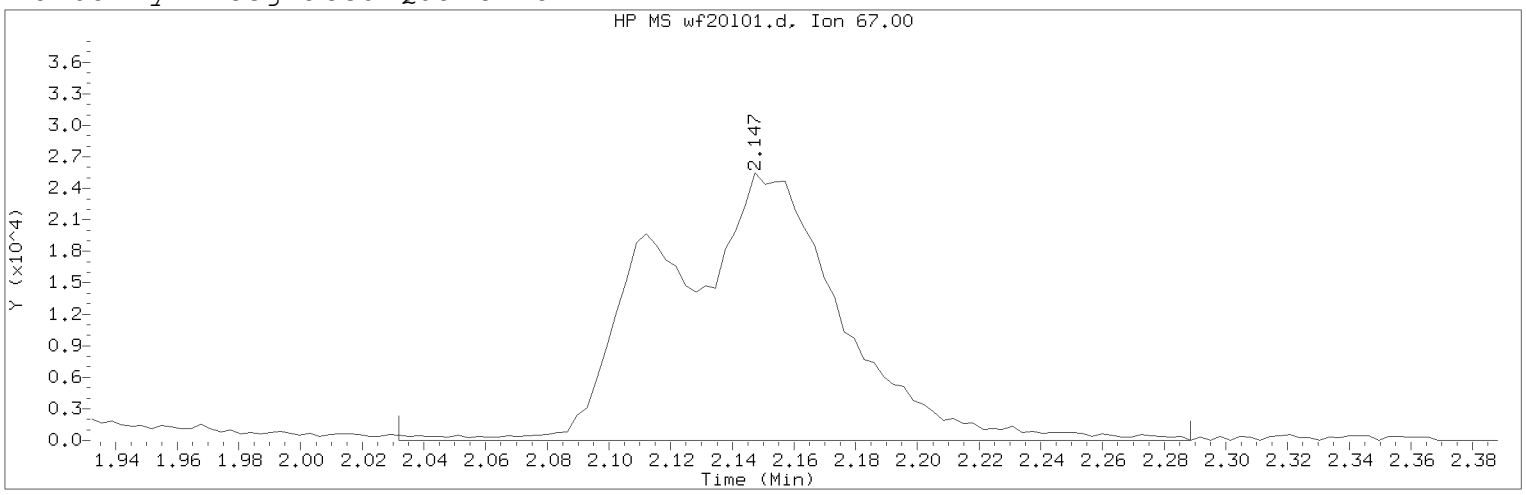
Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

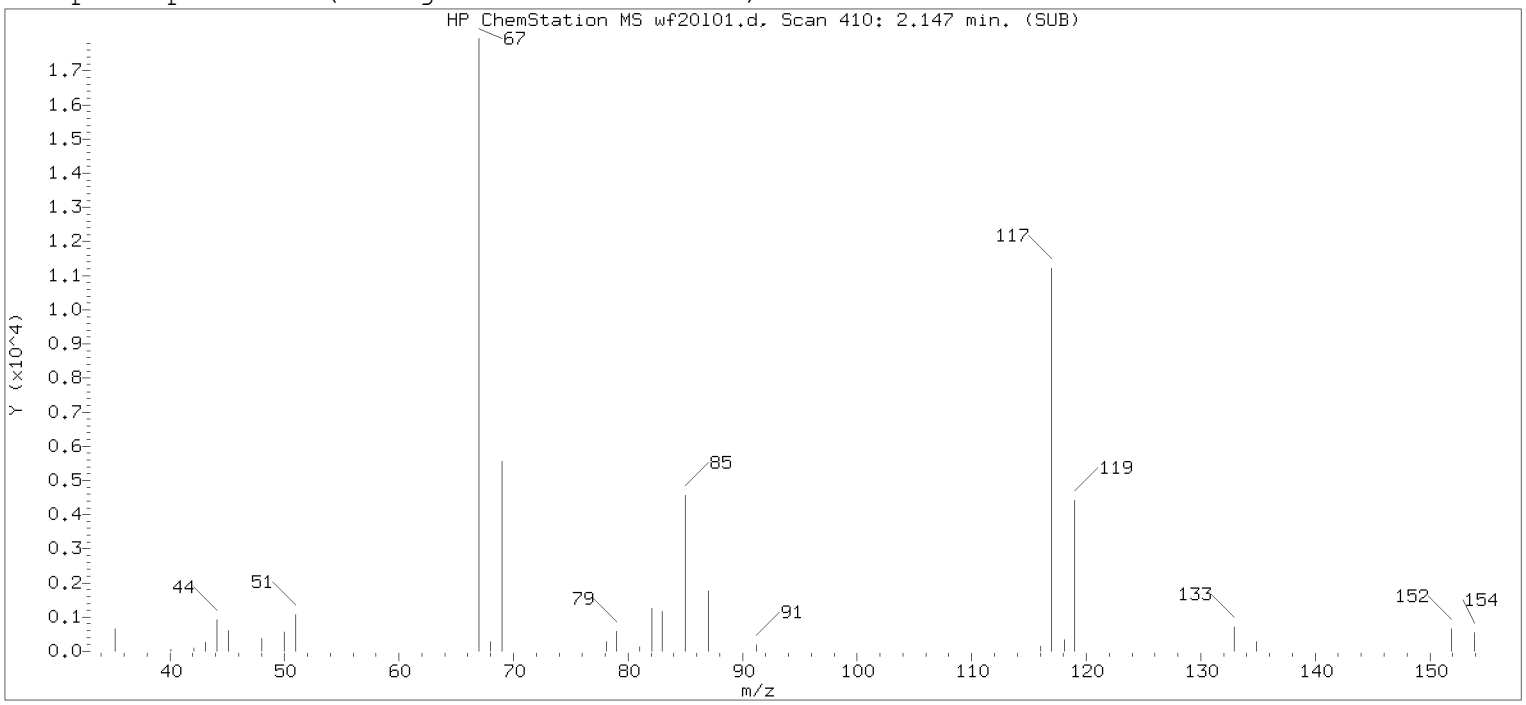
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 410
Retention Time (minutes): 2.147
Quant Ion : 67.00
Area (flag) : 103271M
On-Column Amount (ng) : 20.4098
Integration start scan : 373 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

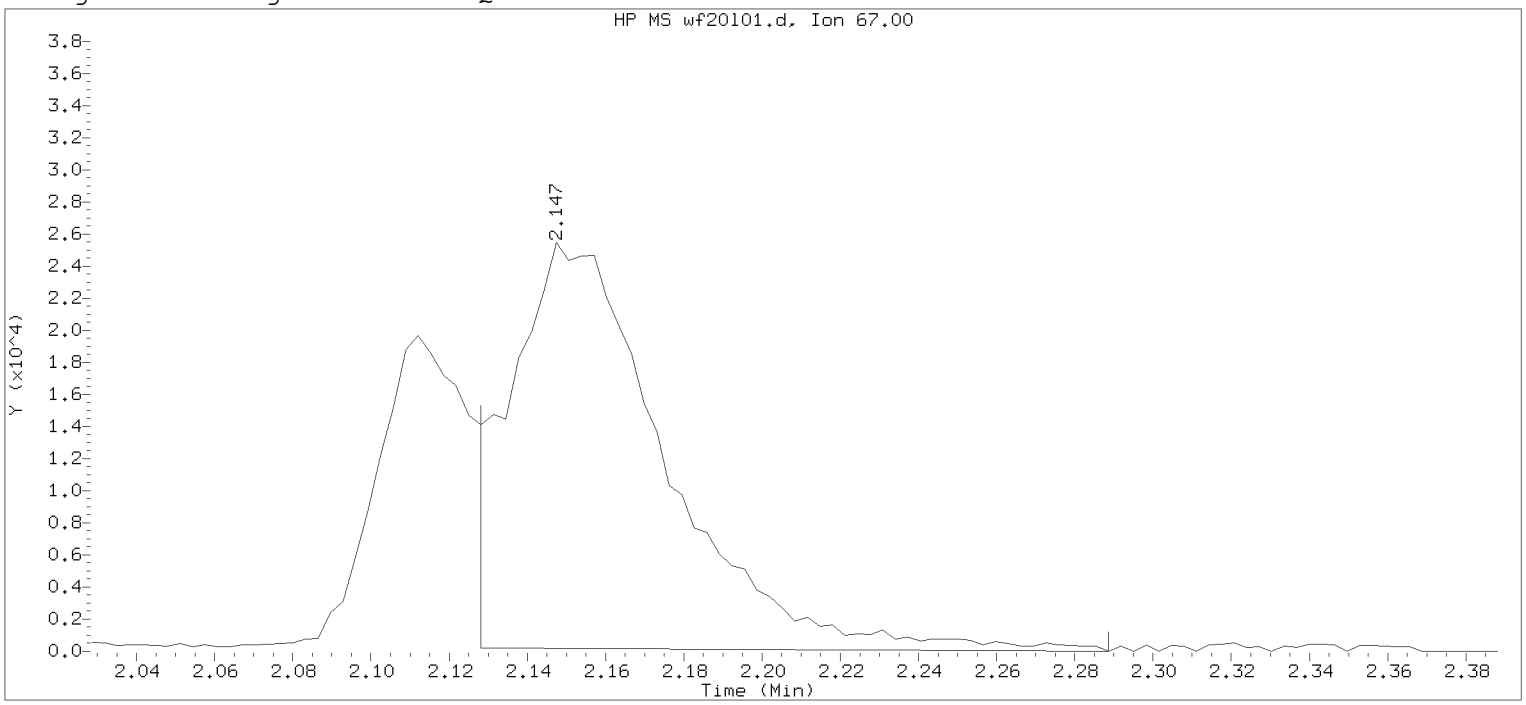
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:55.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20101.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-FEB-2019 11:23
Date, time and analyst ID of latest file update: 20-Feb-2019 12:22 Automation

Sample Name: LCSW62 Lab Sample ID: LCSW62

Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 410		
Retention Time (minutes)	: 2.147		
Quant Ion	: 67.00		
Area	: 69986		
On-column Amount (ng)	: 13.8316		
Integration start scan	: 403	Integration stop scan:	453
Y at integration start	: 195	Y at integration end:	0

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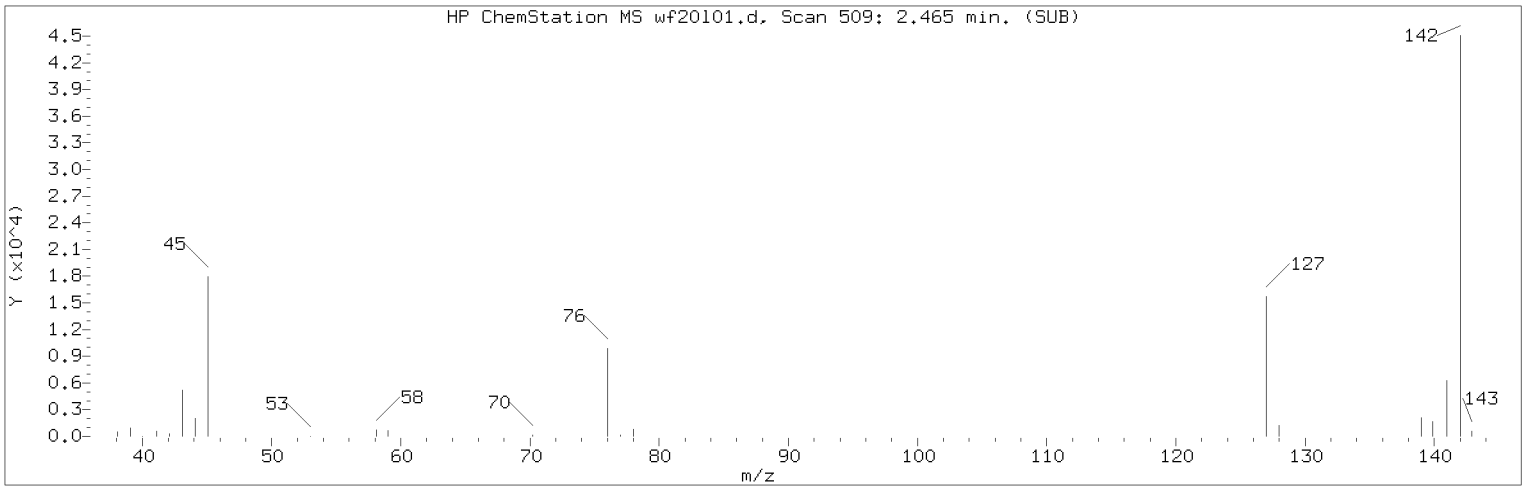
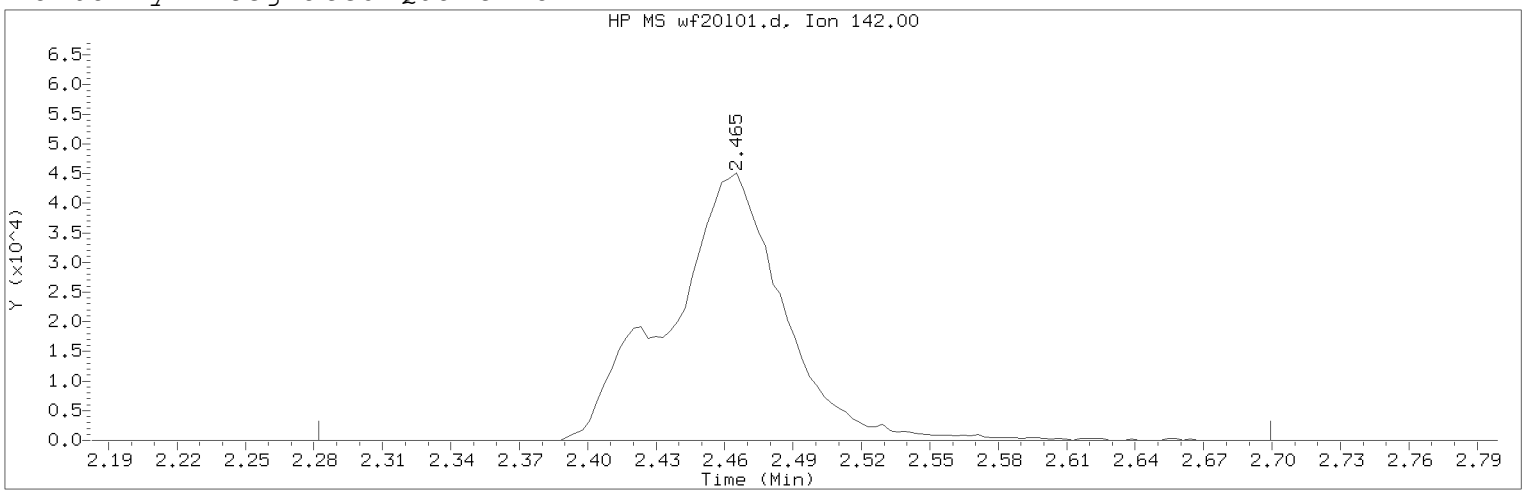
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Sample Name: LCSW62 Lab Sample ID: LCSW62

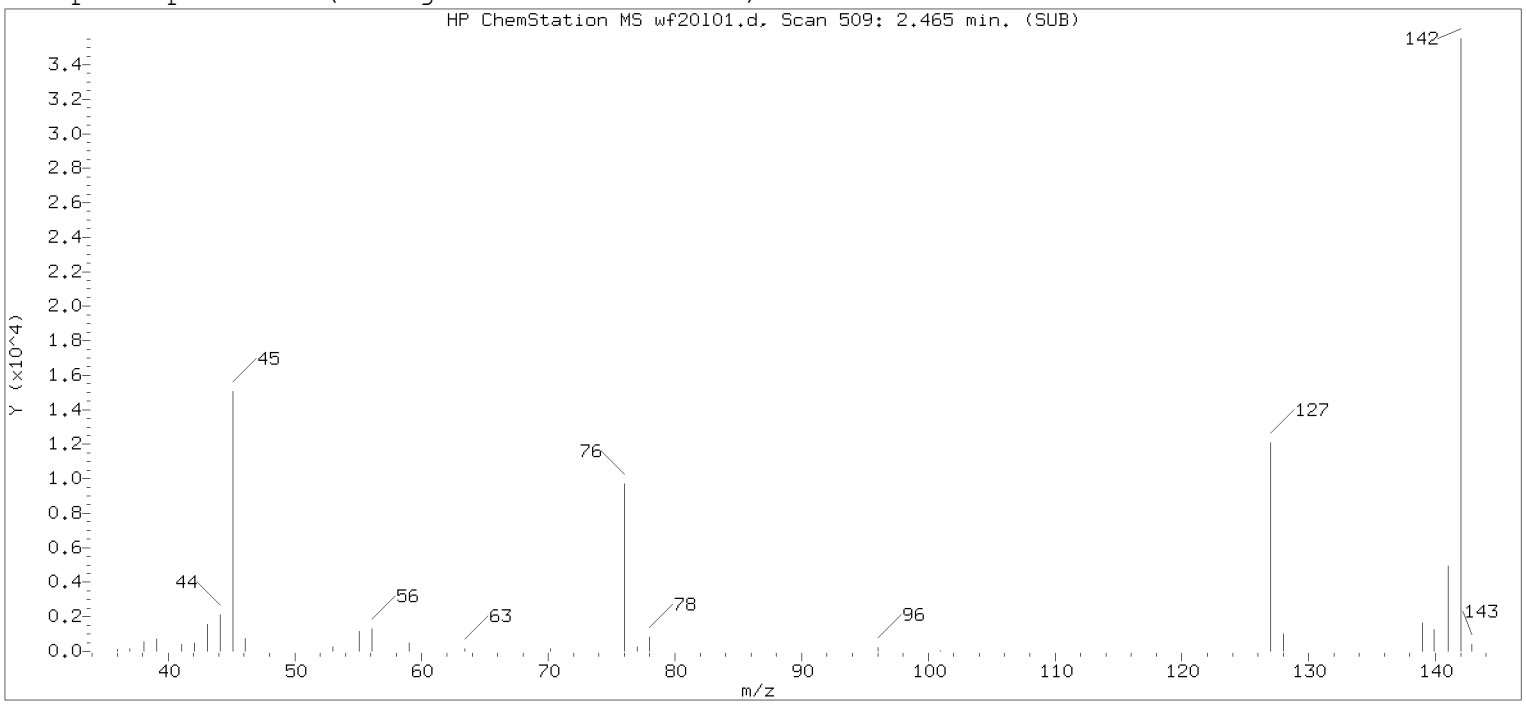
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area (flag) : 157275M
On-Column Amount (ng) : 21.5504
Integration start scan : 451 Integration stop scan: 581
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

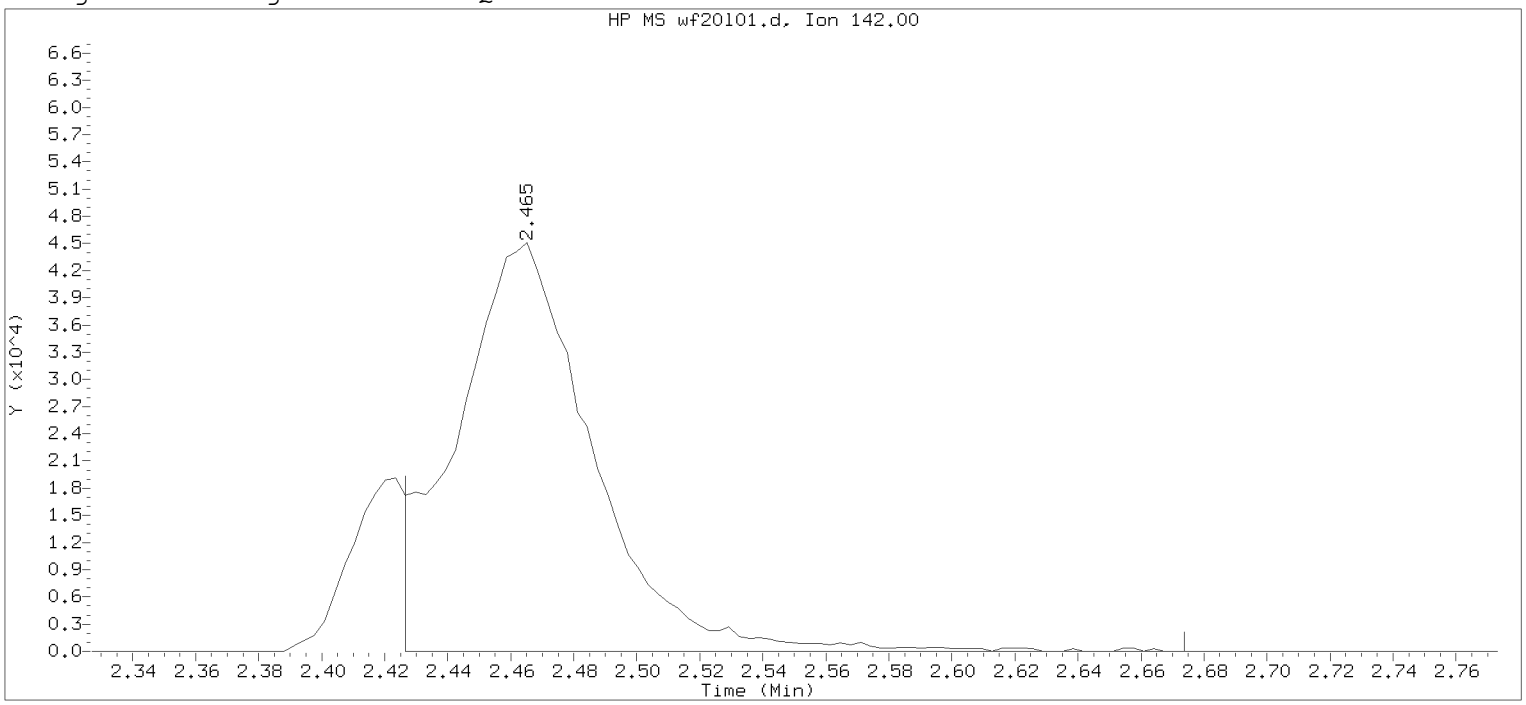
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:55.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



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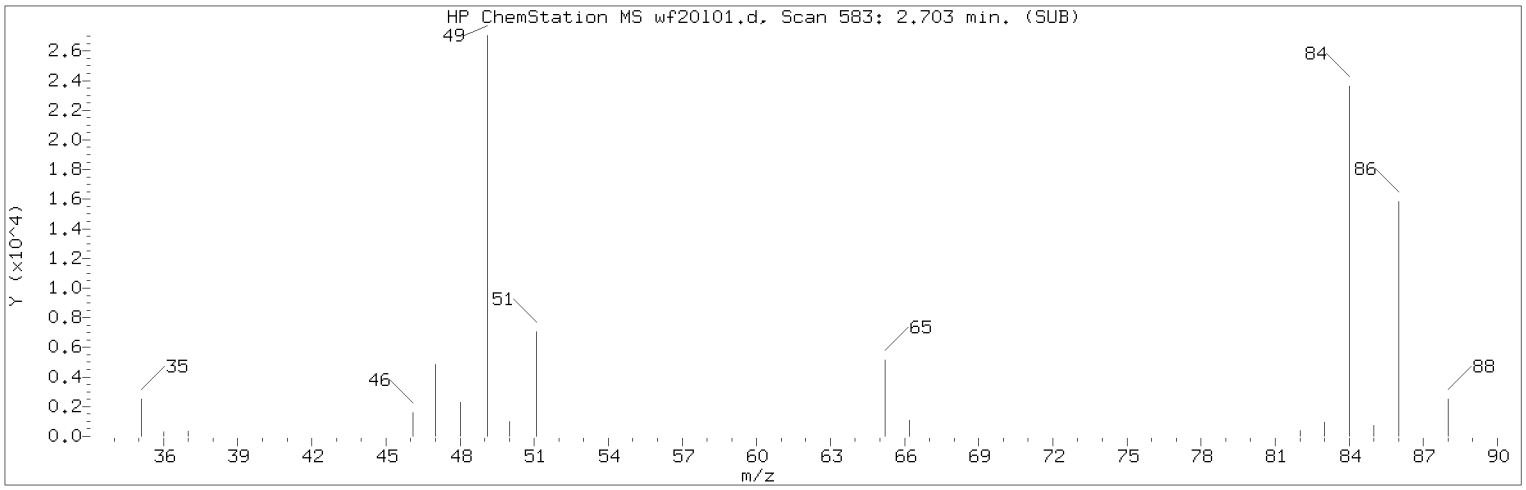
Calibration date and time: 20-FEB-2019 11:23
Date, time and analyst ID of latest file update: 20-Feb-2019 12:22 Automation

Sample Name: LCSW62 Lab Sample ID: LCSW62

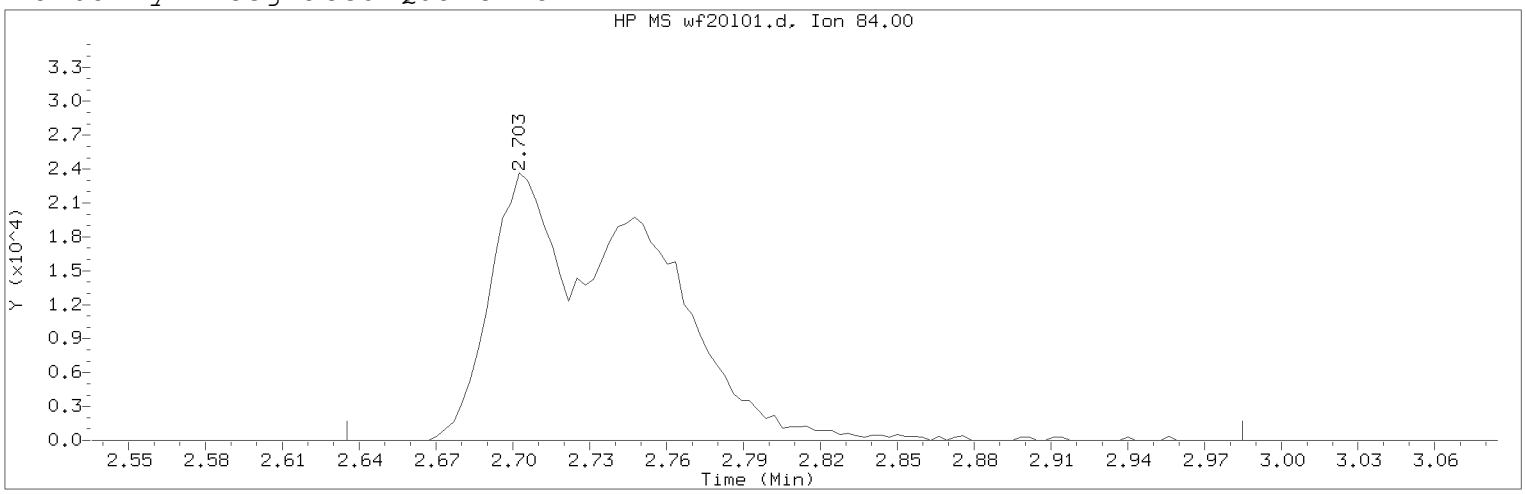
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area : 135289
On-column Amount (ng) : 18.5378
Integration start scan : 496 Integration stop scan: 573
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:38.
Target 3.5 esignature user Abigail P. Roselli

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

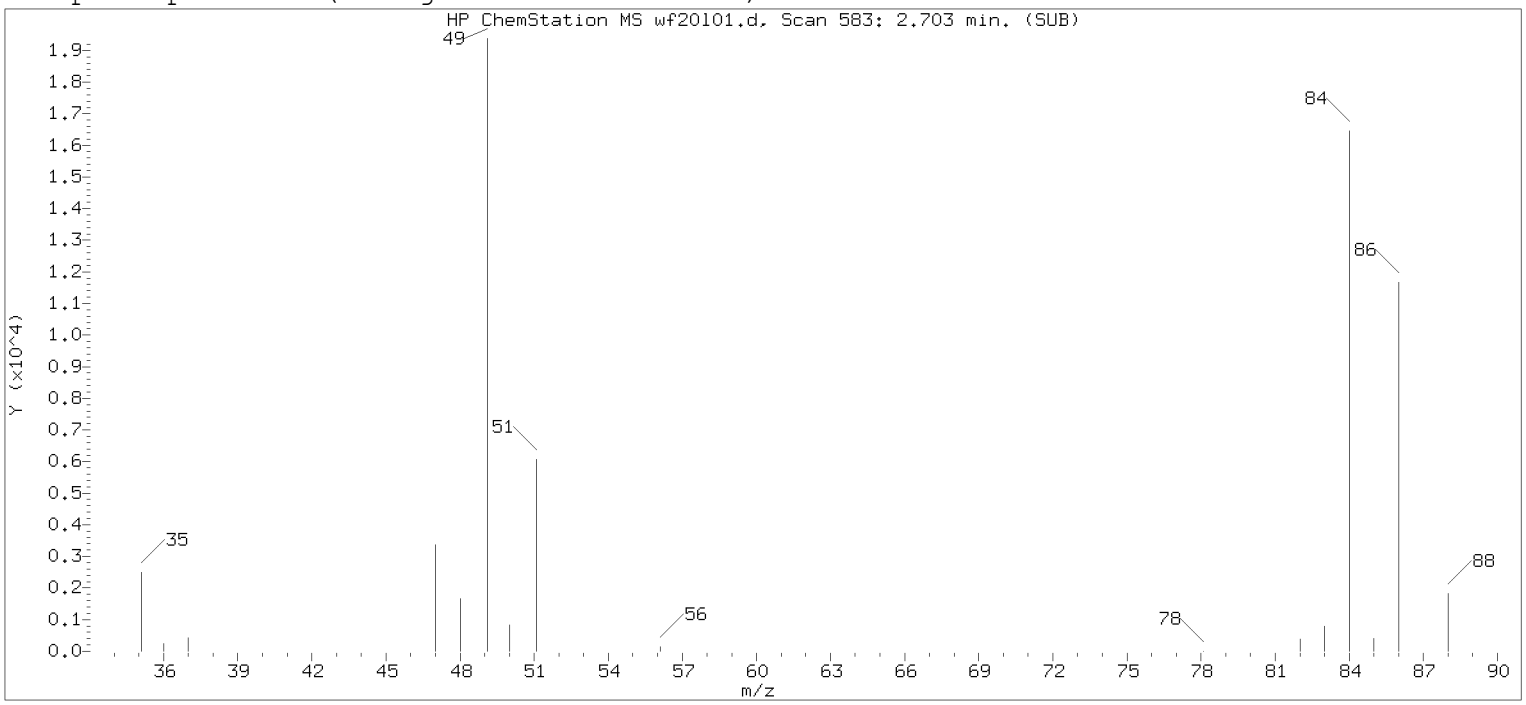
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 583
Retention Time (minutes): 2.703
Quant Ion : 84.00
Area (flag) : 100603M
On-Column Amount (ng) : 21.6116
Integration start scan : 561 Integration stop scan: 670
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

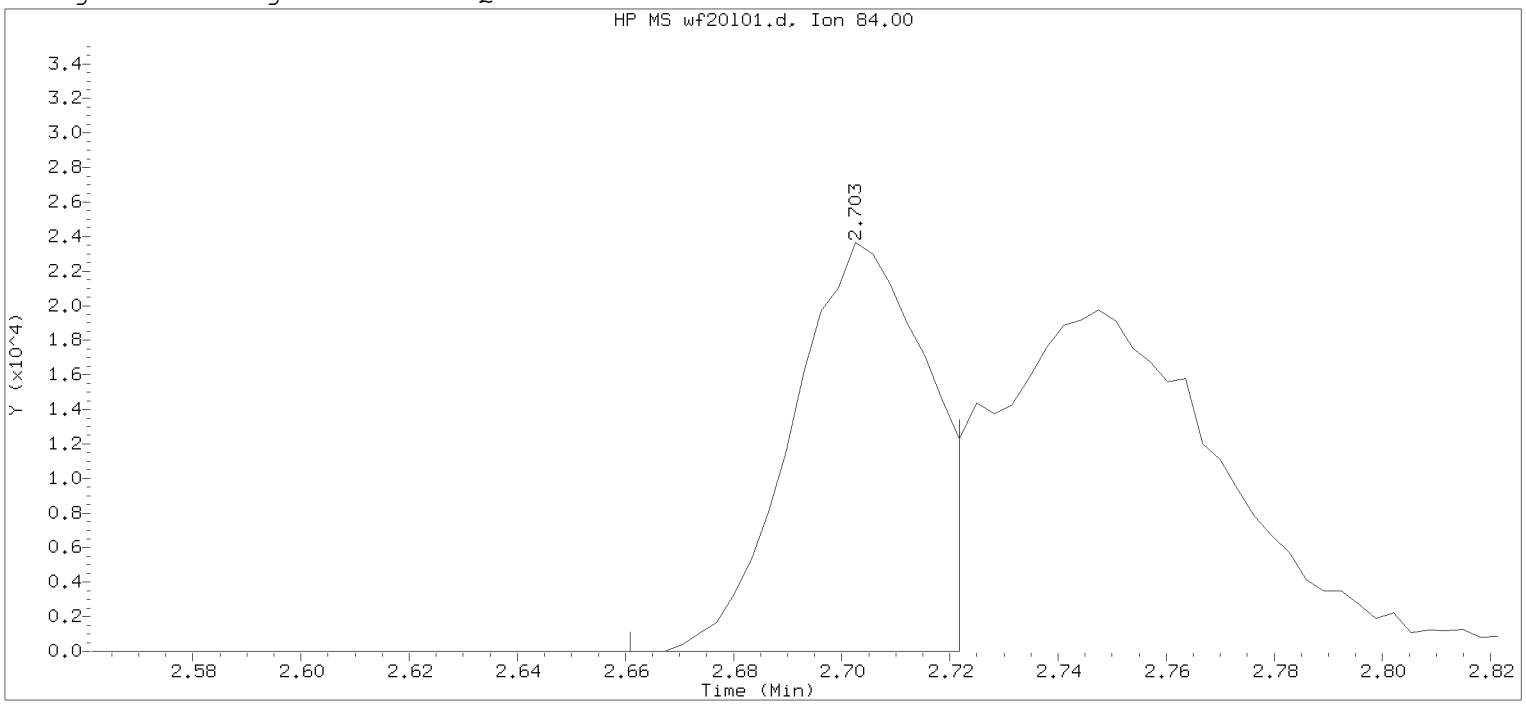
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:55.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20101.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

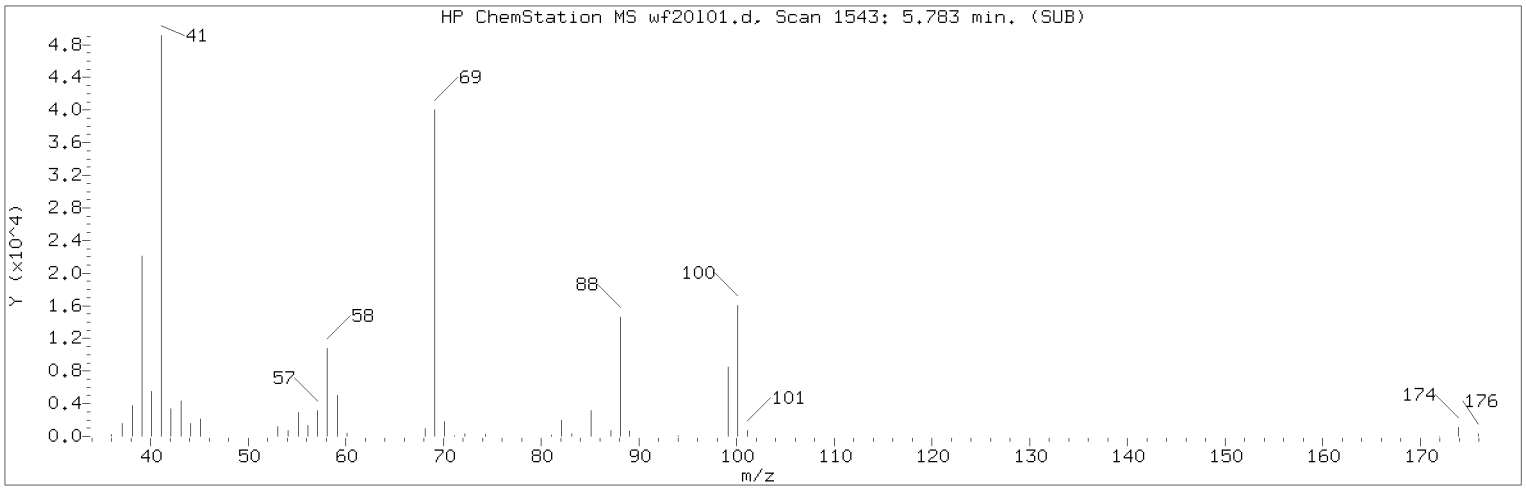
Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-FEB-2019 11:23
Date, time and analyst ID of latest file update: 20-Feb-2019 12:22 Automation

Sample Name: LCSW62 Lab Sample ID: LCSW62

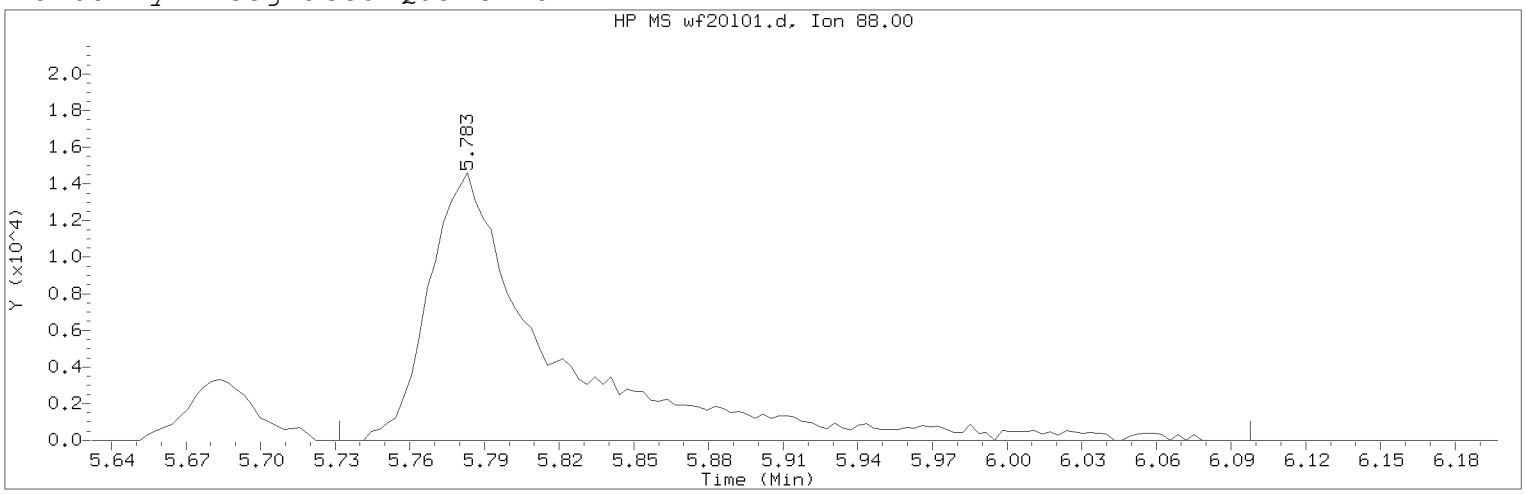
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 583
Retention Time (minutes): 2.703
Quant Ion : 84.00
Area : 40948
On-column Amount (ng) : 8.7967
Integration start scan : 569 Integration stop scan: 588
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:38.
Target 3.5 esignature user Abigail P. Roselli

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20101.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

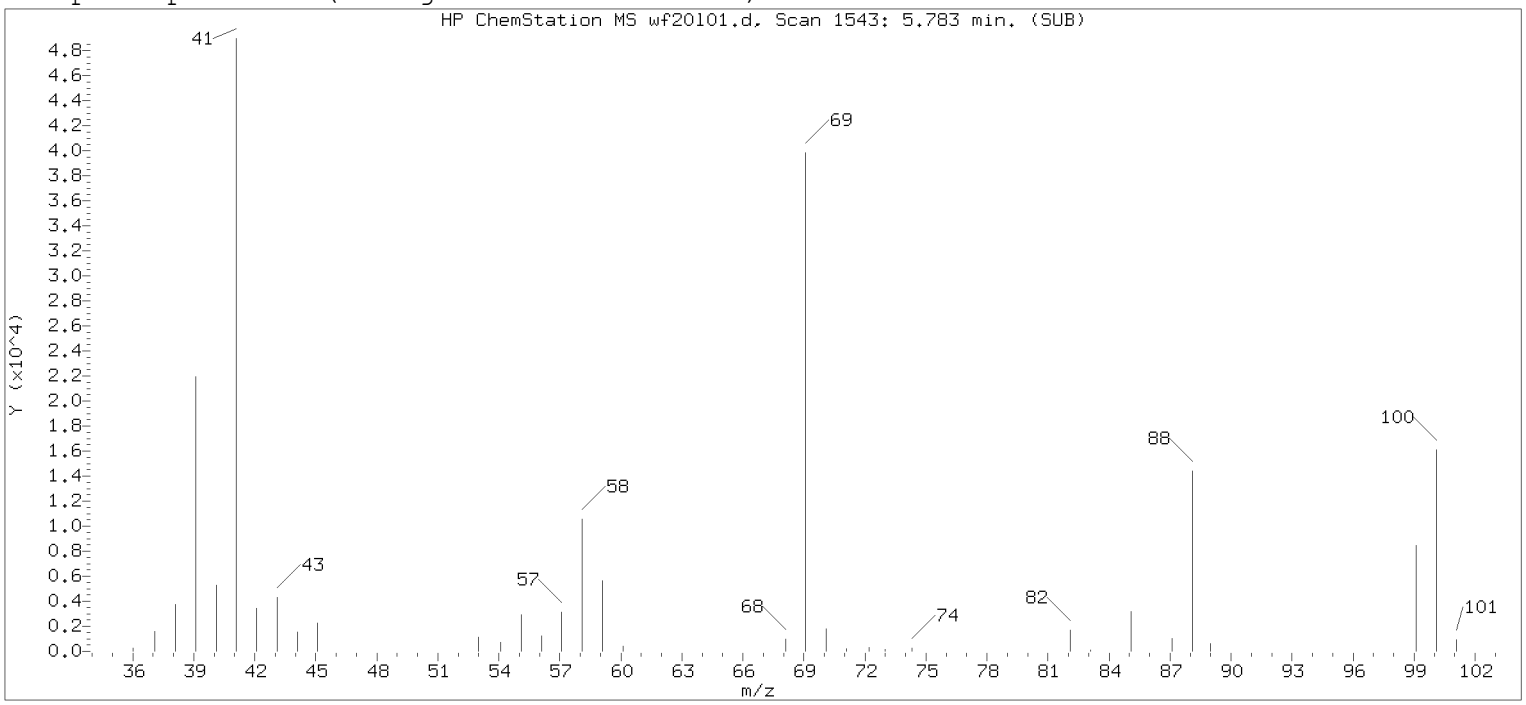
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1543
Retention Time (minutes): 5.783
Quant Ion : 88.00
Area (flag) : 51130M
On-Column Amount (ng) : 501.0652
Integration start scan : 1526 Integration stop scan: 1640
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

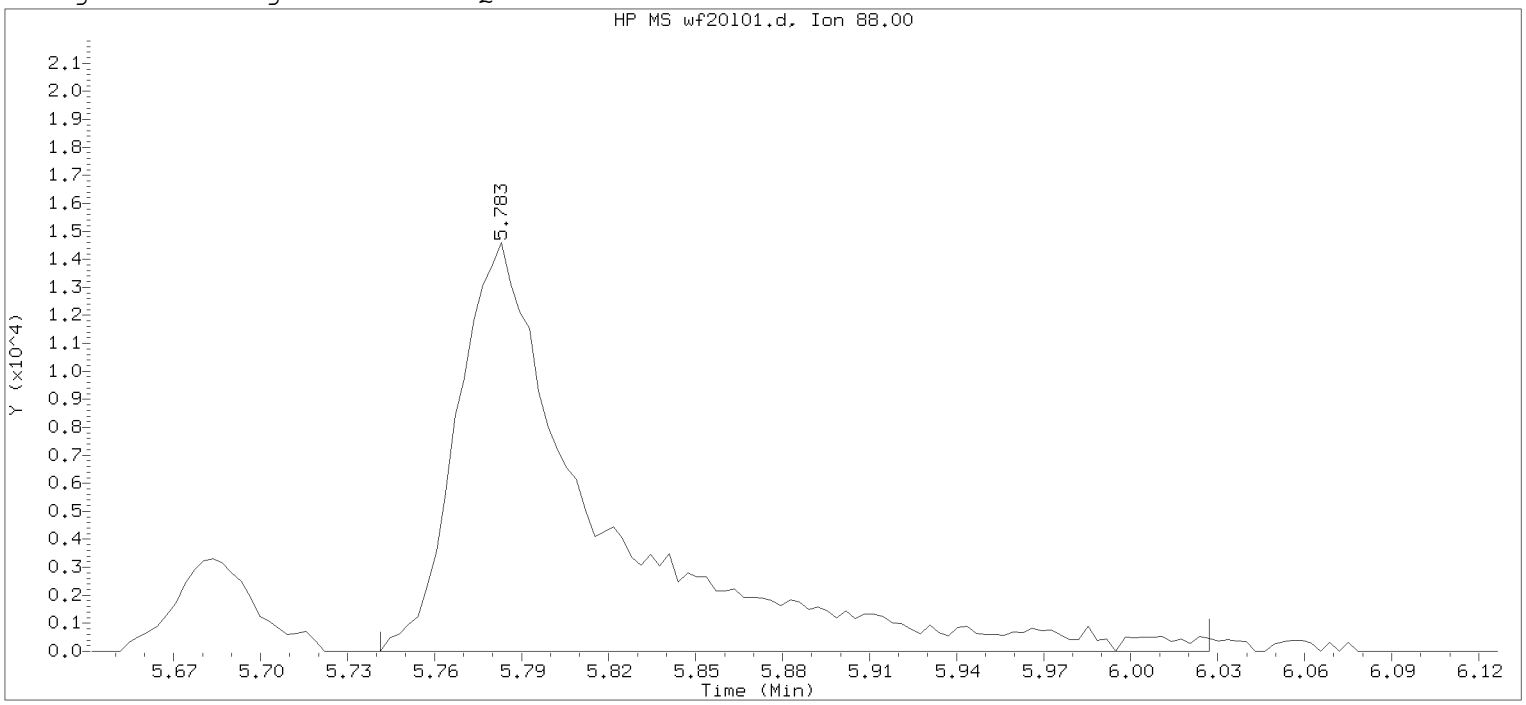
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:55.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20101.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-FEB-2019 11:23
Date, time and analyst ID of latest file update: 20-Feb-2019 12:22 Automation

Sample Name: LCSW62 Lab Sample ID: LCSW62

Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1543		
Retention Time (minutes)	: 5.783		
Quant Ion	: 88.00		
Area	: 50345		
On-column Amount (ng)	: 493.3796		
Integration start scan	: 1529	Integration stop scan:	1618
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: APR27582

Data File: /chem2/HP09137.i/19may18a.b/wy18t01.d

Date : 18-MAY-2019 21:44

Client ID: BFB FEB05-19

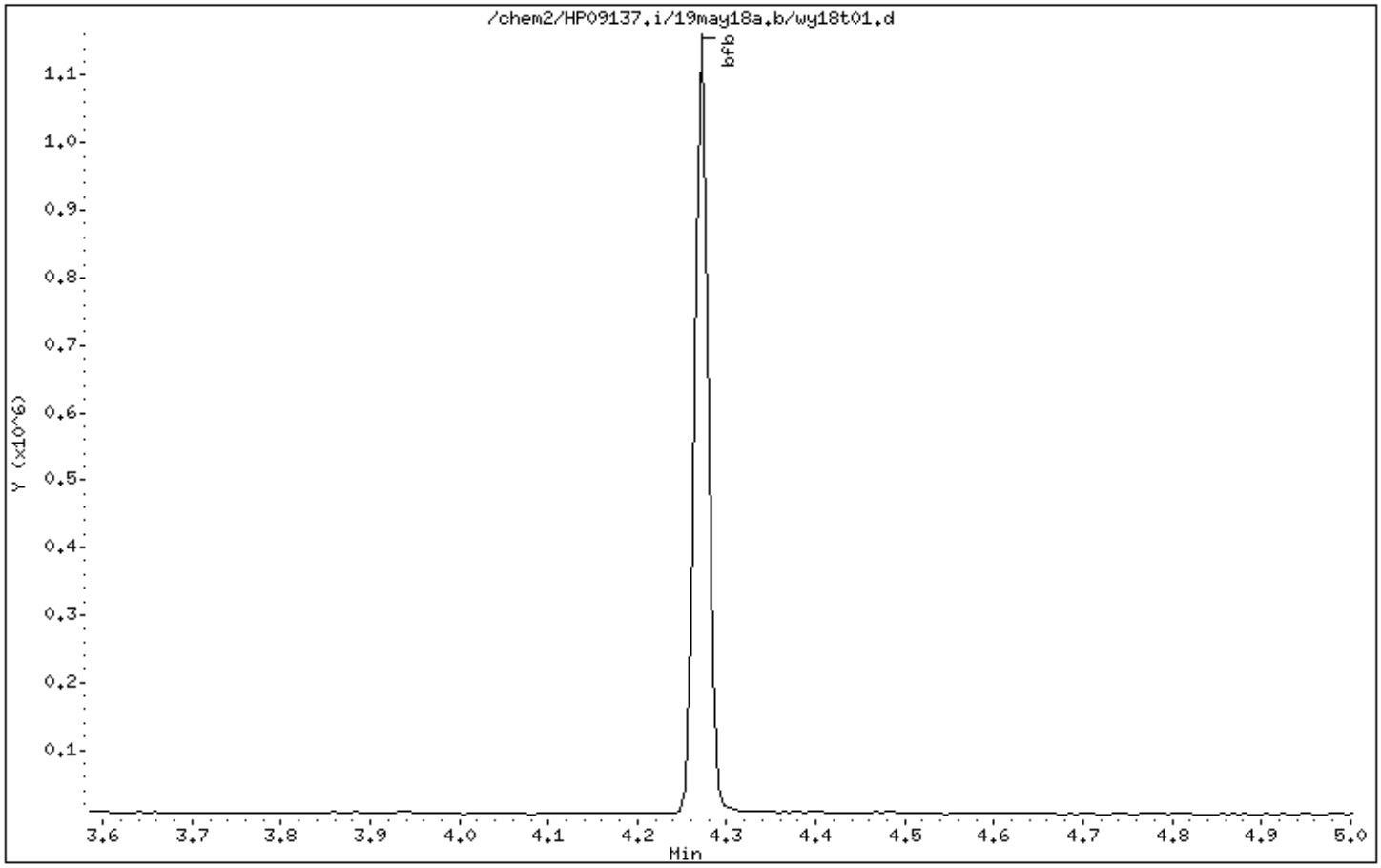
Instrument: HP09137.i

Sample Info: BFB FEB05-19;BFB 50NG;1;3;;;;;;

Operator: SEJ02002

Column phase: DB-624

Column diameter: 0.18



Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Data File: /chem2/HP09137.i/19may18a.b/wy18t01.d

Date : 18-MAY-2019 21:44

Client ID: BFB FEB05-19

Instrument: HP09137.i

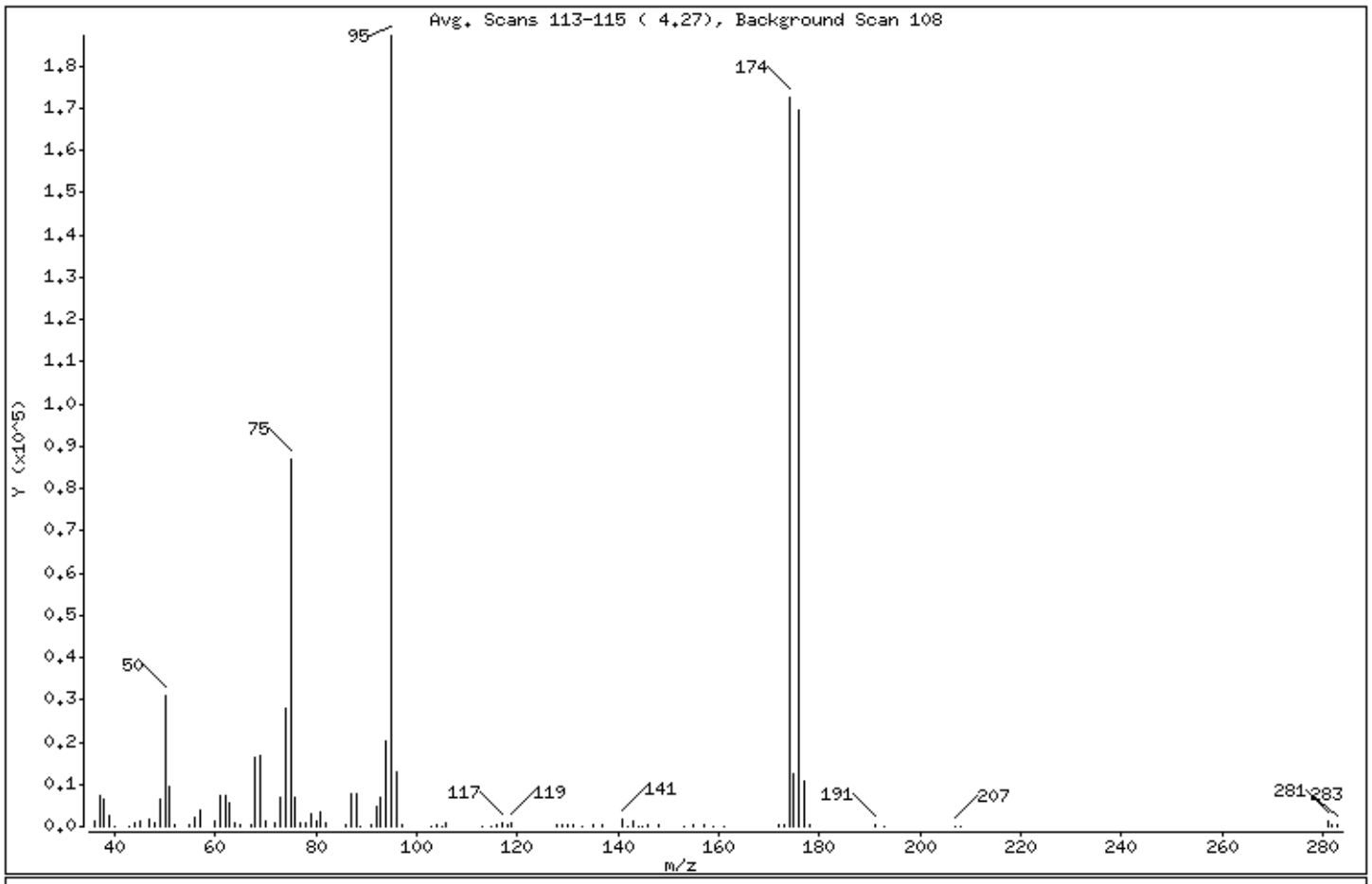
Sample Info: BFB FEB05-19;BFB 50NG;1;3;;;;;;

Operator: SEJ02002

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.64
75	30.00 - 60.00% of mass 95	46.44
96	5.00 - 9.00% of mass 95	6.84
173	Less than 2.00% of mass 174	0.33 (0.35)
174	50.00 - 100.00% of mass 95	92.20
175	5.00 - 9.00% of mass 174	6.62 (7.18)
176	95.00 - 101.00% of mass 174	90.49 (98.15)
177	5.00 - 9.00% of mass 176	5.78 (6.39)

Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Data File: /chem2/HP09137.i/19may18a.b/wy18t01.d

Date : 18-MAY-2019 21:44

Client ID: BFB FEB05-19 Instrument: HP09137.i

Sample Info: BFB FEB05-19;BFB 50NG;1;3;;;;;;

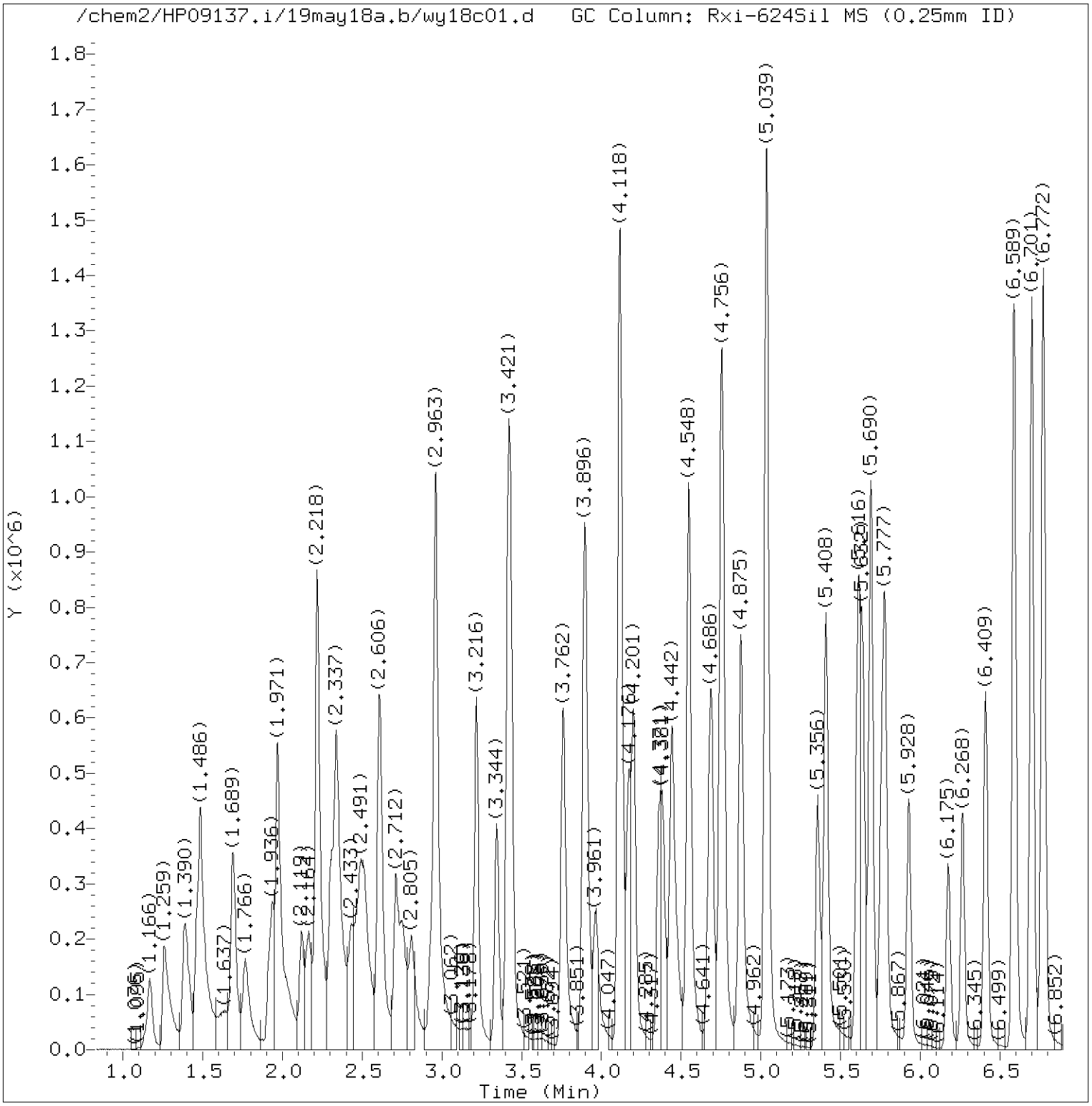
Operator: SEJ02002

Column phase: DB-624 Column diameter: 0.18

Data File: wy18t01.d
Spectrum: Avg. Scans 113-115 (4.27), Background Scan 108
Location of Maximum: 95.00
Number of points: 92

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1414	68.00	16311	97.00	533	148.00	466
37.00	7288	69.00	16776	103.00	96	153.00	192
38.00	6360	70.00	1438	104.00	608	155.00	524
39.00	2795	72.00	980	105.00	87	157.00	343
40.00	170	73.00	6743	106.00	720	159.00	126
43.00	84	74.00	27880	113.00	116	161.00	88
44.00	721	75.00	86912	115.00	83	172.00	581
45.00	1255	76.00	7035	116.00	245	173.00	612
47.00	1797	77.00	979	117.00	826	174.00	172544
48.00	1056	78.00	855	118.00	540	175.00	12390
49.00	6270	79.00	3149	119.00	742	176.00	169344
50.00	31136	80.00	1130	128.00	458	177.00	10814
51.00	9678	81.00	3355	129.00	226	178.00	239
52.00	540	82.00	664	130.00	571	191.00	391
55.00	418	86.00	282	131.00	309	193.00	114
56.00	2342	87.00	7726	133.00	152	207.00	198
57.00	4063	88.00	7828	135.00	308	208.00	108
60.00	1375	89.00	106	137.00	244	281.00	1125
61.00	7524	91.00	526	141.00	1515	282.00	357
62.00	7305	92.00	4844	142.00	90	283.00	276
63.00	5378	93.00	7062	143.00	1365		
64.00	712	94.00	20424	144.00	85		
65.00	289	95.00	187136	145.00	84		
67.00	539	96.00	12793	146.00	273		

Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

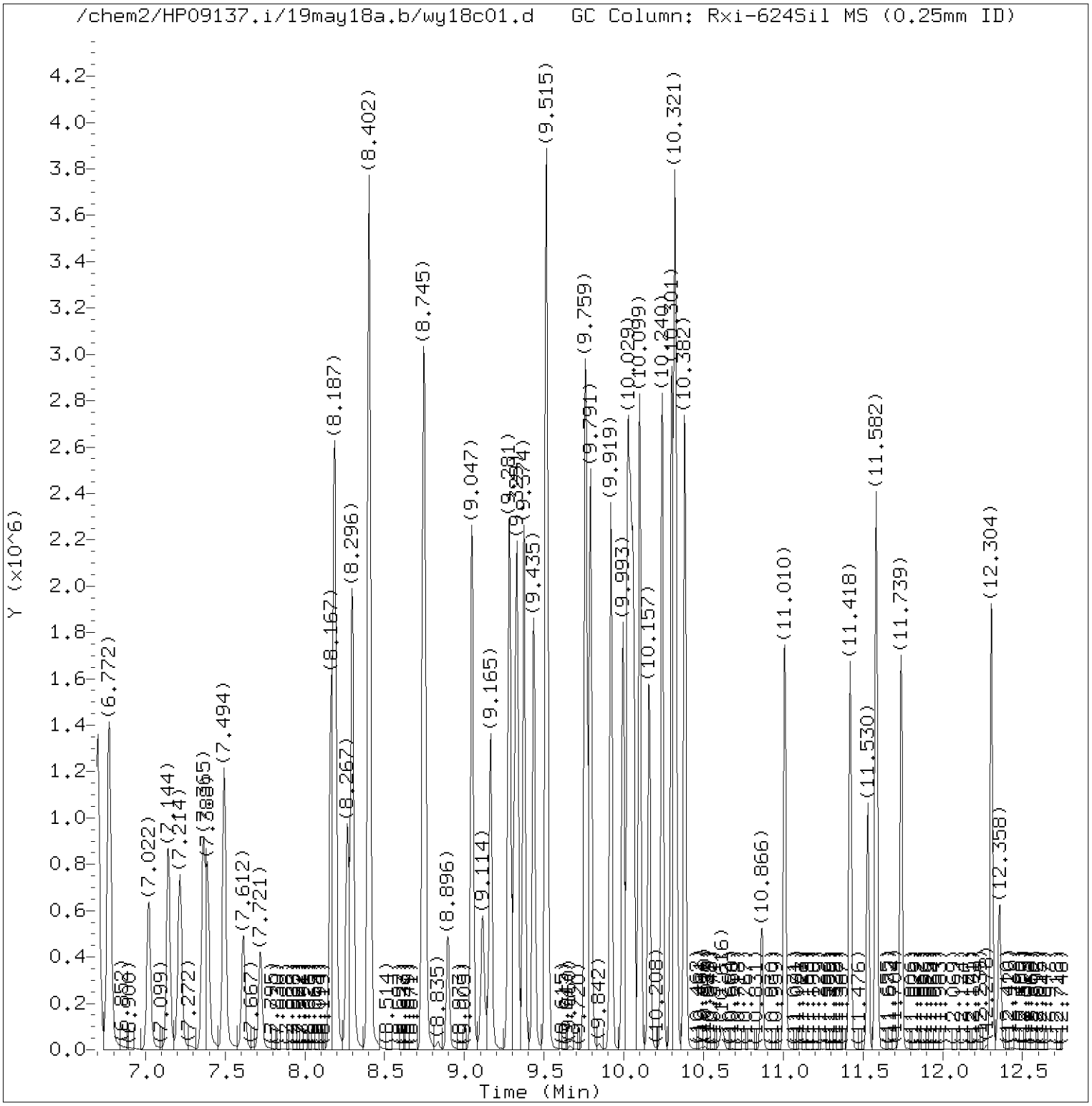
Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.259	85	389477	58.679
4) Chloromethane	(2)	1.384	50	348458	42.161
6) Vinyl Chloride	(2)	1.461	62	337342	44.524
5) 1,3-Butadiene	(2)	1.486	39	202998	40.303
8) Bromomethane	(2)	1.692	94	277344	46.414
9) Chloroethane	(2)	1.769	64	208032	41.725
12) Trichlorofluoromethane	(2)	1.932	101	425684	52.901
11) n-Pentane	(2)	1.971	43	309759	40.477
13) Ethanol	(1)	2.035	45	57065	659.199
15) Freon 123a	(2)	2.119	67	270649M	45.010
16) Acrolein	(1)	2.218	56	850771	622.590
17) 1,1-Dichloroethene	(2)	2.308	96	234343M	51.779
17) 1,1-Dichloroethene	(2)	2.301	63	88931	38.947
18) Acetone	(1)	2.340	58	81695	122.996
19) Freon 113	(2)	2.343	101	203135	51.113
21) 2-Propanol	(1)	2.449	45	118831	240.796
22) Methyl Iodide	(2)	2.478	142	438530M	50.563
23) Carbon Disulfide	(2)	2.513	76	688325M	43.170
25) Allyl Chloride	(2)	2.606	41	365252	46.325
27) Methyl Acetate	(2)	2.622	43	295355	43.278
28) Methylene Chloride	(2)	2.712	84	255875M	46.253
29)*t-Butyl alcohol-d10	(1)	2.738	65	189811	250.000
30) t-Butyl alcohol	(1)	2.812	59	232462	264.067
31) Acrylonitrile	(2)	2.930	53	166868	46.478
32) trans-1,2-Dichloroethene	(2)	2.963	96	242897	49.465
33) Methyl Tertiary Butyl Ether	(2)	2.963	73	650683	54.421
34) n-Hexane	(2)	3.219	57	317302	48.293
36) 1,1-Dichloroethane	(2)	3.344	63	415239	46.667
38) di-Isopropyl ether	(2)	3.415	45	761418	44.542
39) 2-Chloro-1,3-butadiene	(2)	3.431	53	381575	49.514
40) Ethyl t-butyl ether	(2)	3.762	59	623126	50.008
42) cis-1,2-Dichloroethene	(2)	3.893	96	264290	47.936
45) 2,2-Dichloropropane	(2)	3.893	77	165548	41.427
44) 2-Butanone	(2)	3.909	43	451723	87.576
47) Propionitrile	(1)	3.967	54	324612	296.695
48) Methacrylonitrile	(2)	4.115	67	426452	110.473
49) Bromochloromethane	(2)	4.124	128	149245	52.075
50) Tetrahydrofuran	(1)	4.172	71	129121	127.513

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	4.201	83	415434	49.761
52)$Dibromofluoromethane	(2)	4.362	113	229325	48.223
52)$Dibromofluoromethane	(2)	4.358	111	233674	47.866
53) 1,1,1-Trichloroethane	(2)	4.384	97	310606	49.446
54) Cyclohexane	(2)	4.442	56	389364	46.837
54) Cyclohexane	(2)	4.442	84	316164	45.945
54) Cyclohexane	(2)	4.442	69	118873	47.580
55) 1,1-Dichloropropene	(2)	4.548	75	322157	48.131
56) Carbon Tetrachloride	(2)	4.551	117	264516	49.068
58) Isobutyl Alcohol	(1)	4.679	41	221106M	688.951
57)$1,2-Dichloroethane-d4	(2)	4.692	102	61687	48.774
57)$1,2-Dichloroethane-d4	(2)	4.692	65	275360	50.014
57)$1,2-Dichloroethane-d4	(2)	4.695	104	40301	50.035
60) Benzene	(2)	4.753	78	1015277	47.189
61) 1,2-Dichloroethane	(2)	4.769	62	327047	49.208
61) 1,2-Dichloroethane	(2)	4.769	98	32539	51.460
65) t-Amyl methyl ether	(2)	4.875	73	630268	49.374
66)*Fluorobenzene	(2)	5.032	96	1026490	50.000
67) n-Heptane	(2)	5.039	43	291159	46.367
69) n-Butanol	(1)	5.356	56	362062	1270.611
71) Trichloroethene	(2)	5.408	95	256734	49.275
73) Methylcyclohexane	(2)	5.610	83	386933	51.154
73) Methylcyclohexane	(2)	5.613	98	179823	51.129
74) 1,2-Dichloropropane	(2)	5.639	63	251947	45.613
75) Dibromomethane	(2)	5.758	93	170629	50.053
77) Methyl Methacrylate	(2)	5.777	69	276637	45.574
76) 1,4-Dioxane	(1)	5.783	88	59193M	694.875
79) Bromodichloromethane	(2)	5.928	83	305197	48.726
43) 1,2-Dichloroethene (Total)	(2)		96	507187	97.401
80) 2-Nitropropane	(2)	6.175	41	217430	102.597
81) 2-Chloroethyl Vinyl Ether	(2)	6.264	63	197123	46.809
82) cis-1,3-Dichloropropene	(2)	6.409	75	404573	46.978
83) 4-Methyl-2-pentanone	(2)	6.589	43	965889	94.996
84)$Toluene-d8	(3)	6.701	98	1002334	51.390
84)$Toluene-d8	(3)	6.701	100	661862	51.170
89) Toluene	(3)	6.772	92	660052	52.533
90) trans-1,3-Dichloropropene	(3)	7.019	75	376388	50.320
92) Ethyl Methacrylate	(3)	7.144	69	473852	51.555

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) 1,1,2-Trichloroethane	(3)	7.218	97	259285	53.617
94) Tetrachloroethene	(3)	7.362	166	285295	55.958
95) 1,3-Dichloropropane	(3)	7.388	76	433682	51.632
97) 2-Hexanone	(3)	7.494	43	771018	105.370
98) Dibromochloromethane	(3)	7.615	129	262007	55.472
100) 1,2-Dibromoethane	(3)	7.718	107	285438	53.724
101)*Chlorobenzene-d5	(3)	8.161	117	778376	50.000
103) Chlorobenzene	(3)	8.190	112	740508	53.127
104) 1,1,1,2-Tetrachloroethane	(3)	8.267	131	243504	54.363
105) Ethylbenzene	(3)	8.296	91	1251399	52.403
107) m+p-Xylene	(3)	8.402	106	1017623	107.179
108) o-Xylene	(3)	8.739	106	491071	52.574
110) Styrene	(3)	8.751	104	848188	54.131
111) Bromoform	(3)	8.896	173	201322	54.767
112) Isopropylbenzene	(3)	9.047	105	1214414	52.909
113) Cyclohexanone	(1)	9.114	55	235742	613.490
115)$4-Bromofluorobenzene	(3)	9.165	95	368437	47.217
115)$4-Bromofluorobenzene	(3)	9.165	174	334133	50.746
116) Bromobenzene	(4)	9.281	156	341954	53.469
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	441469	51.188
118) 1,2,3-Trichloropropane	(4)	9.316	110	138660	53.377
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	311625	112.678
120) n-Propylbenzene	(4)	9.374	91	1420091	50.371
121) 2-Chlorotoluene	(4)	9.435	126	307146	52.818
123) 1,3,5-Trimethylbenzene	(4)	9.512	105	1042743	51.284
122) 4-Chlorotoluene	(4)	9.518	126	331412	53.238
125) tert-Butylbenzene	(4)	9.759	134	236534	51.203
126) Pentachloroethane	(4)	9.769	167	203886	55.832
127) 1,2,4-Trimethylbenzene	(4)	9.791	105	1095700	51.139
128) sec-Butylbenzene	(4)	9.919	105	1243502	49.824
130) 1,3-Dichlorobenzene	(4)	9.993	146	641768	52.624
131) p-Isopropyltoluene	(4)	10.025	119	1126699	50.997
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	444015	50.000
134) 1,4-Dichlorobenzene	(4)	10.061	146	665243	52.618
91) 1,3-Dichloropropene (total)	(3)		100	780961	97.297
135) 1,2,3-Trimethylbenzene	(4)	10.099	105	1207600	52.383
136) Benzyl Chloride	(4)	10.157	91	884562	49.987
137) 1,3-Diethylbenzene	(4)	10.240	119	708507	51.037

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
138) 1,4-Diethylbenzene	(4)	10.301	119	746561	50.195
140) n-Butylbenzene	(4)	10.317	92	534448	47.928
139) 1,2-Dichlorobenzene	(4)	10.327	146	641494	53.019
141) 1,2-Diethylbenzene	(4)	10.382	119	604765	51.600
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	96797	49.386
145) 1,3,5-Trichlorobenzene	(4)	11.010	180	448931	48.387
147) 1,2,4-Trichlorobenzene	(4)	11.421	180	422444	47.426
148) Hexachlorobutadiene	(4)	11.530	225	154012	48.546
149) Naphthalene	(4)	11.585	128	1480377	49.118
150) 1,2,3-Trichlorobenzene	(4)	11.739	180	414019	47.621
109) Xylene (Total)	(3)		106	1508694	159.753
151) 2-Methylnaphthalene	(4)	12.304	142	680143	39.554
142) Diethylbenzene (total)	(4)		100	2059833	152.832

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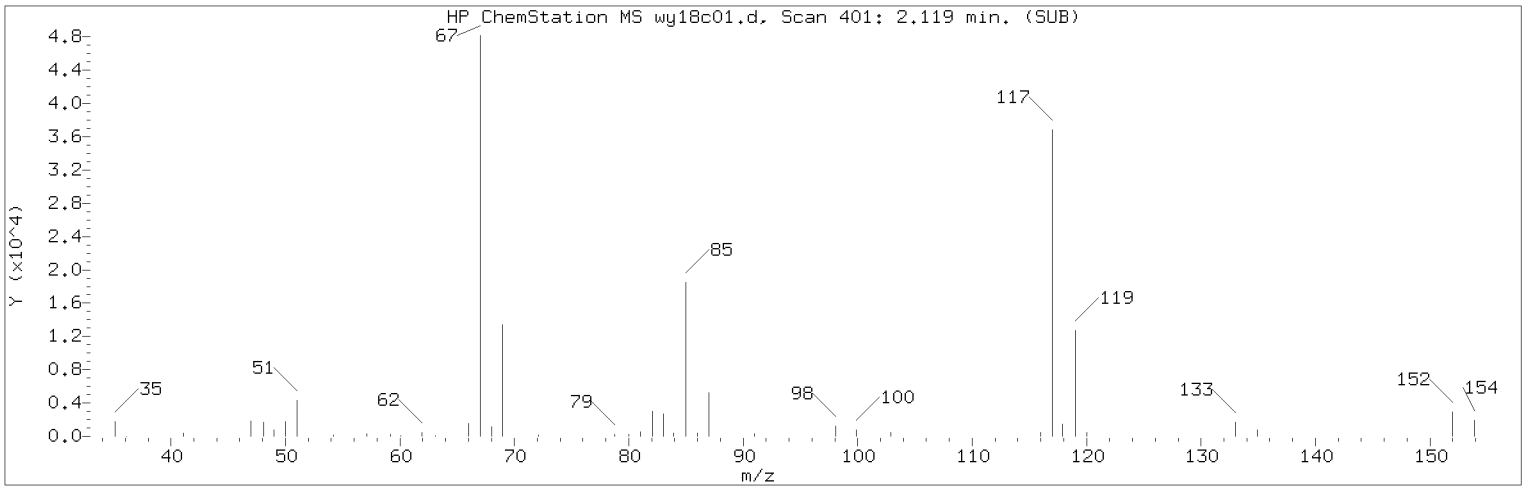
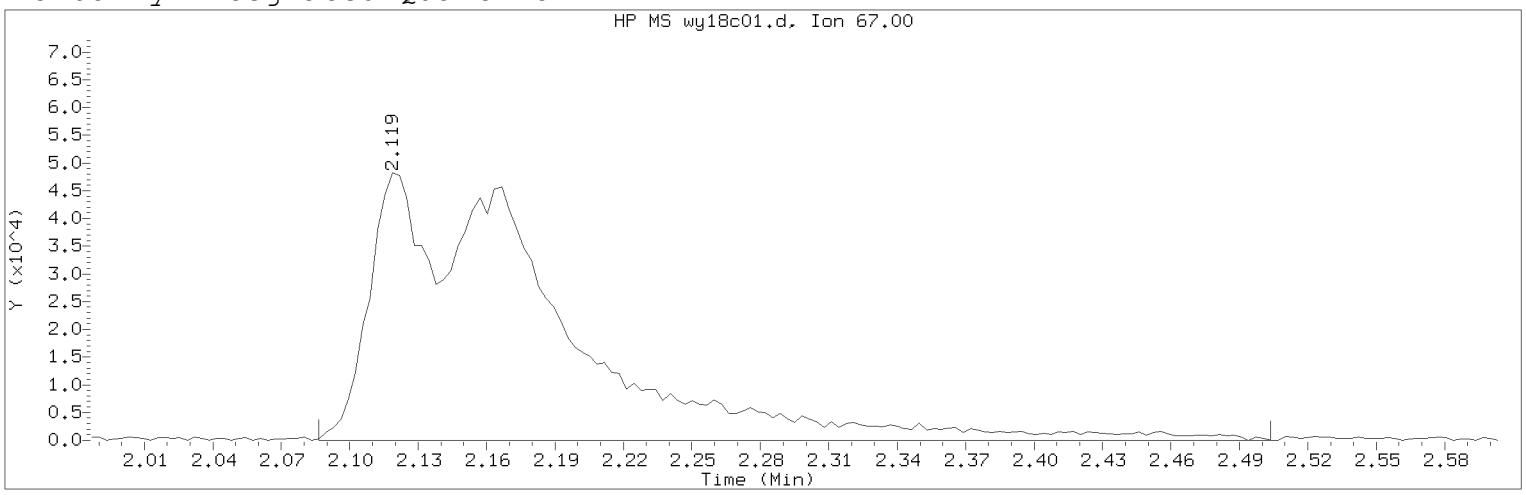
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

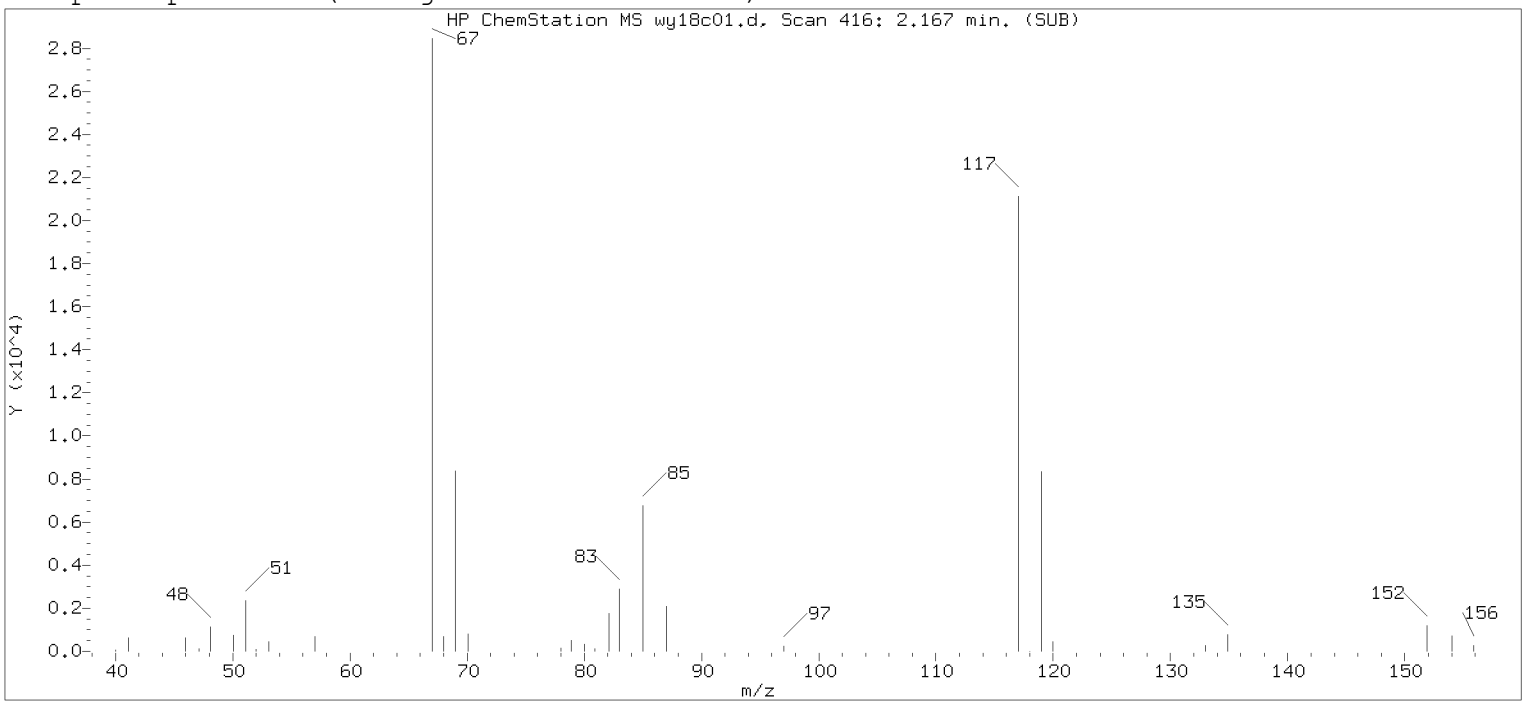
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 401
Retention Time (minutes): 2.119
Quant Ion : 67.00
Area (flag) : 270649M
On-Column Amount (ng) : 45.0099
Integration start scan : 390 Integration stop scan: 520
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

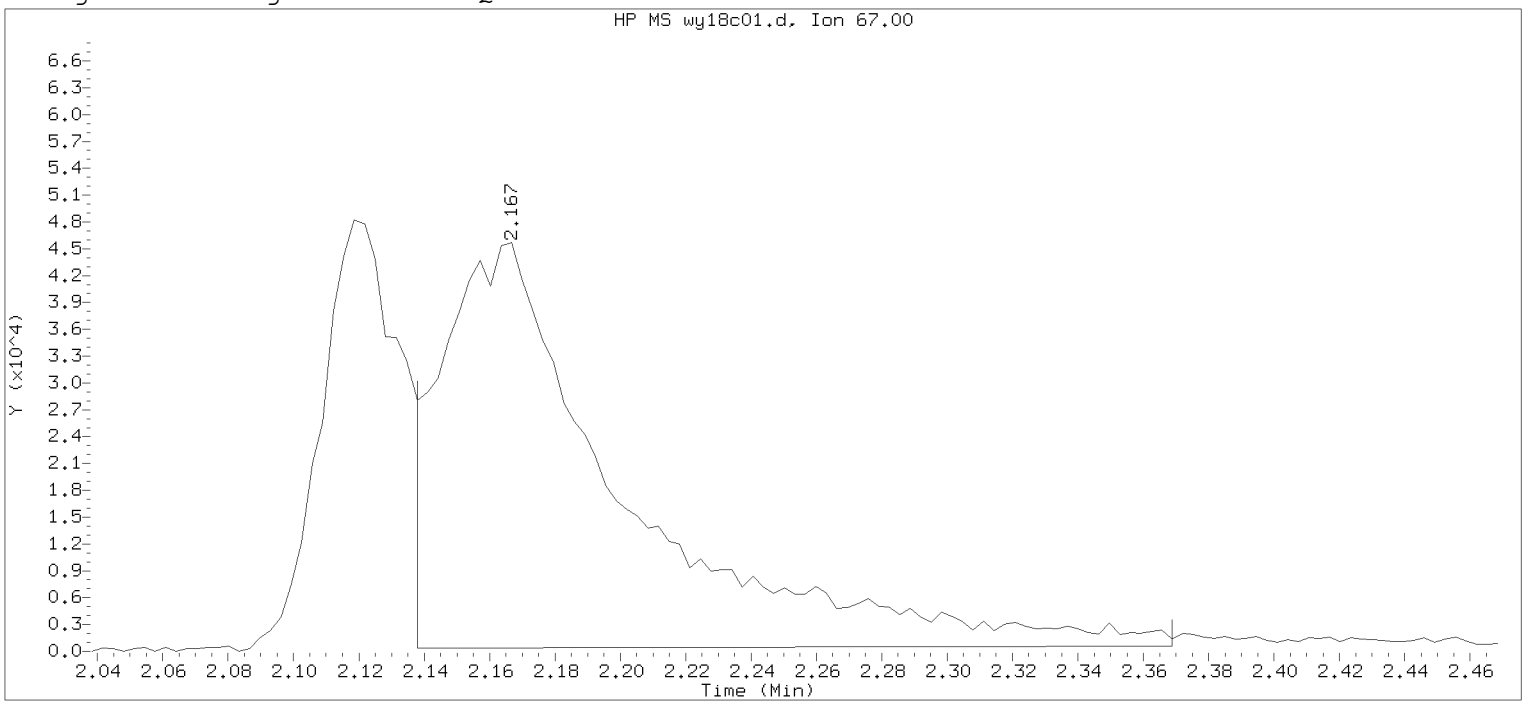
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 416		
Retention Time (minutes)	: 2.167		
Quant Ion	: 67.00		
Area	: 175550		
On-column Amount (ng)	: 29.1946		
Integration start scan	: 406	Integration stop scan:	478
Y at integration start	: 337	Y at integration end:	564

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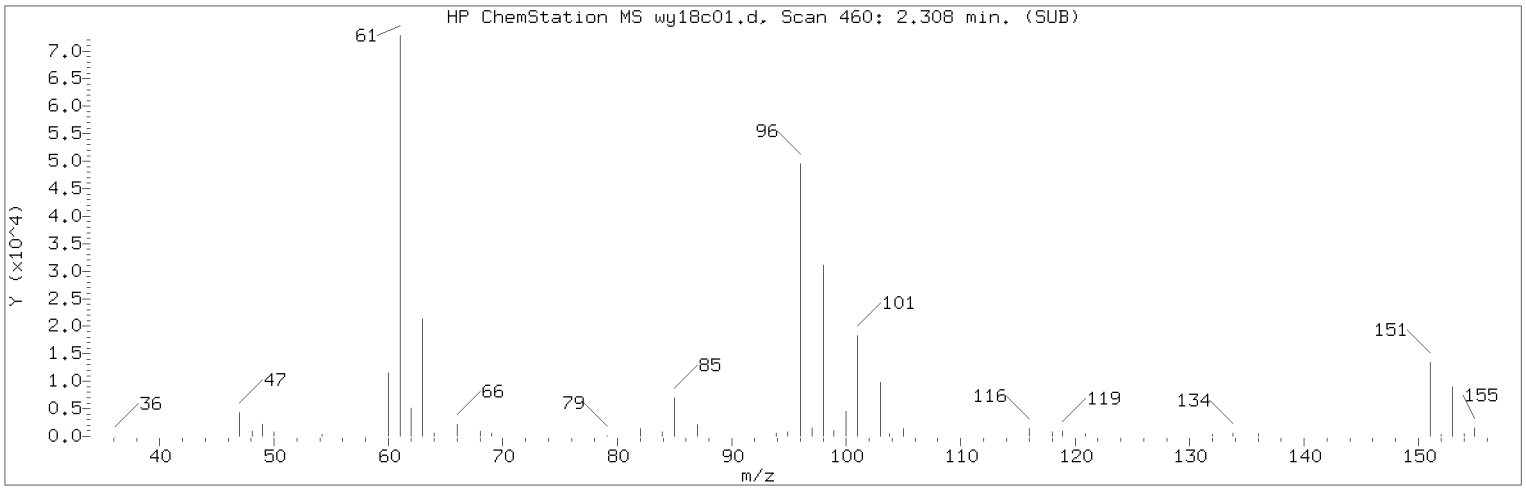
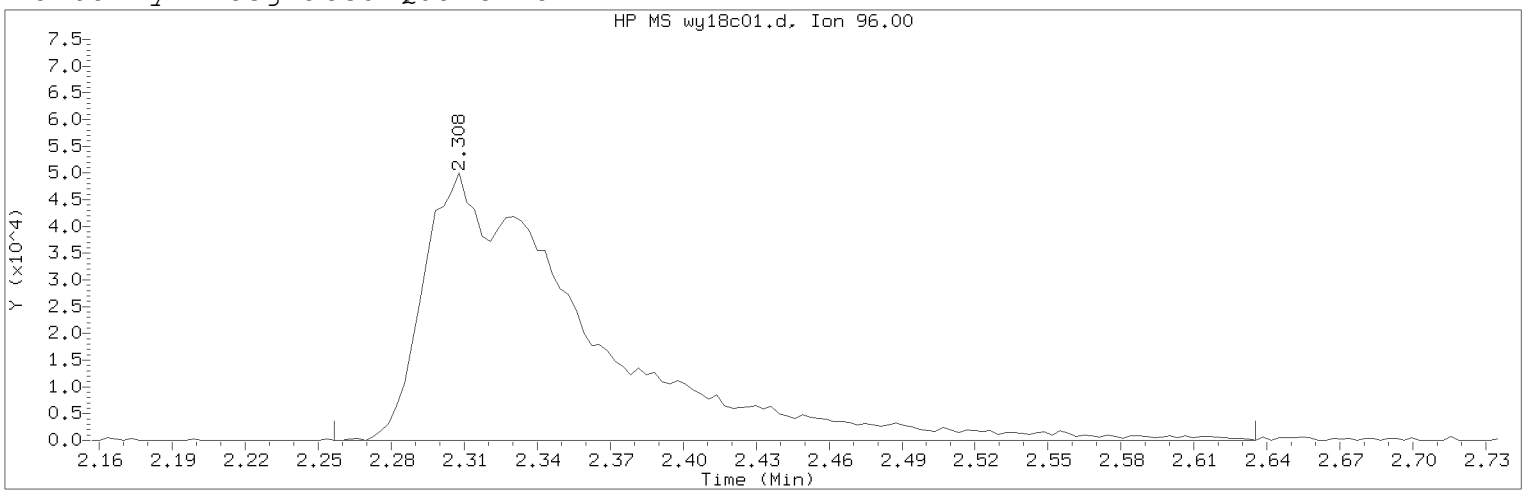
Target 3.5 esignature user signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
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Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

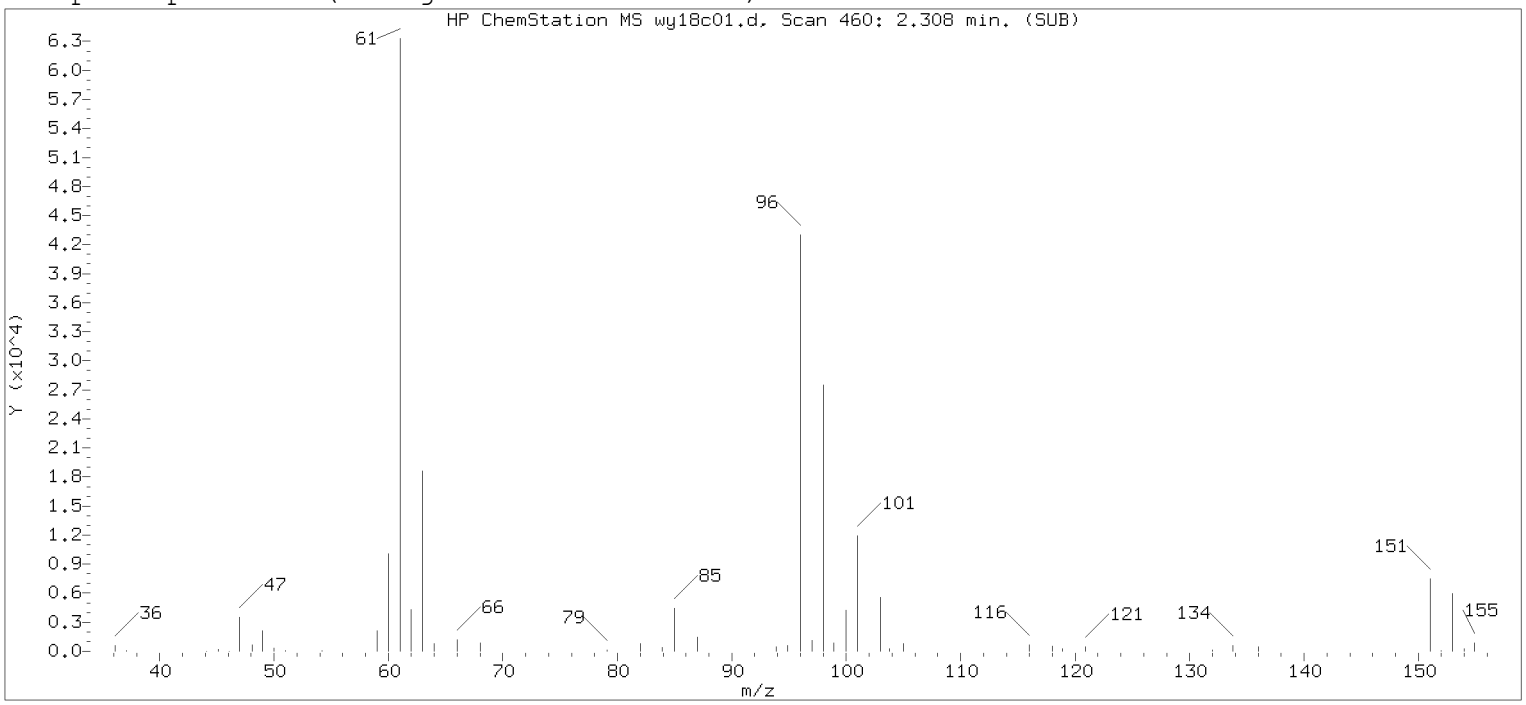
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 460
Retention Time (minutes): 2.308
Quant Ion : 96.00
Area (flag) : 234343M
On-Column Amount (ng) : 51.7791
Integration start scan : 443 Integration stop scan: 561
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

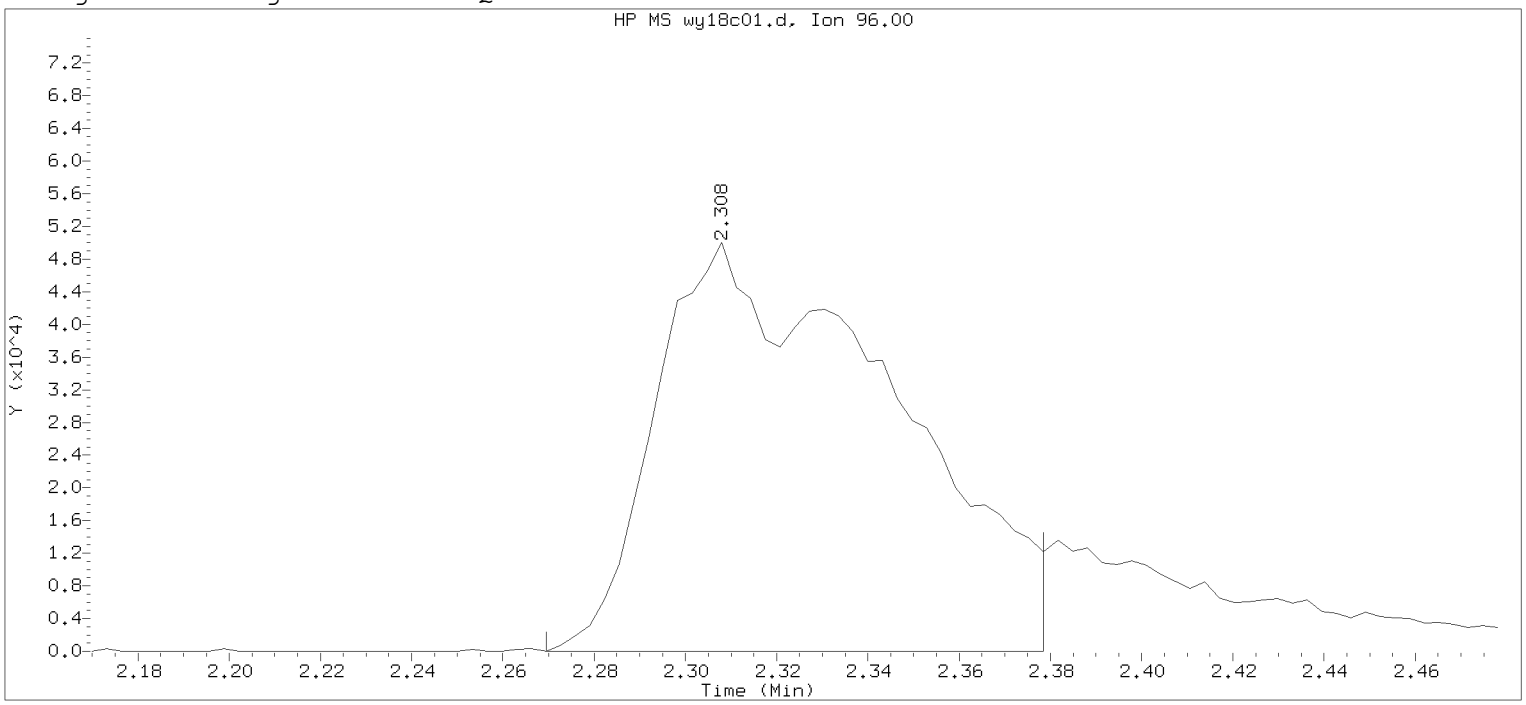
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 460
Retention Time (minutes): 2.308
Quant Ion : 96.00
Area : 181112
On-column Amount (ng) : 40.0175
Integration start scan : 447 Integration stop scan: 481
Y at integration start : 0 Y at integration end: 0

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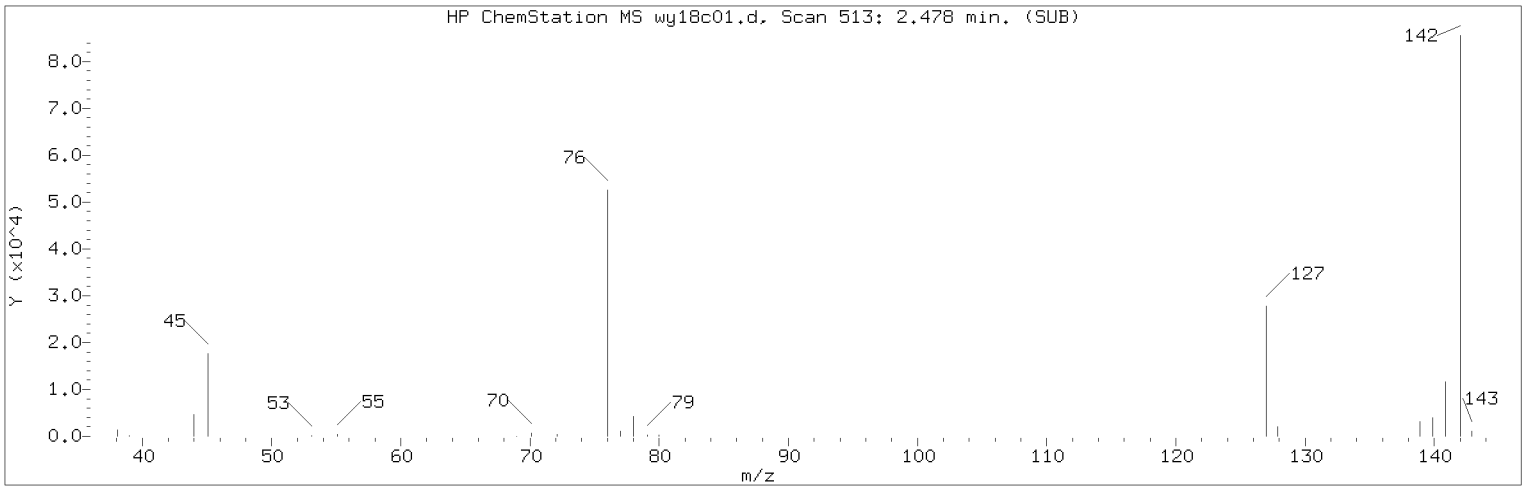
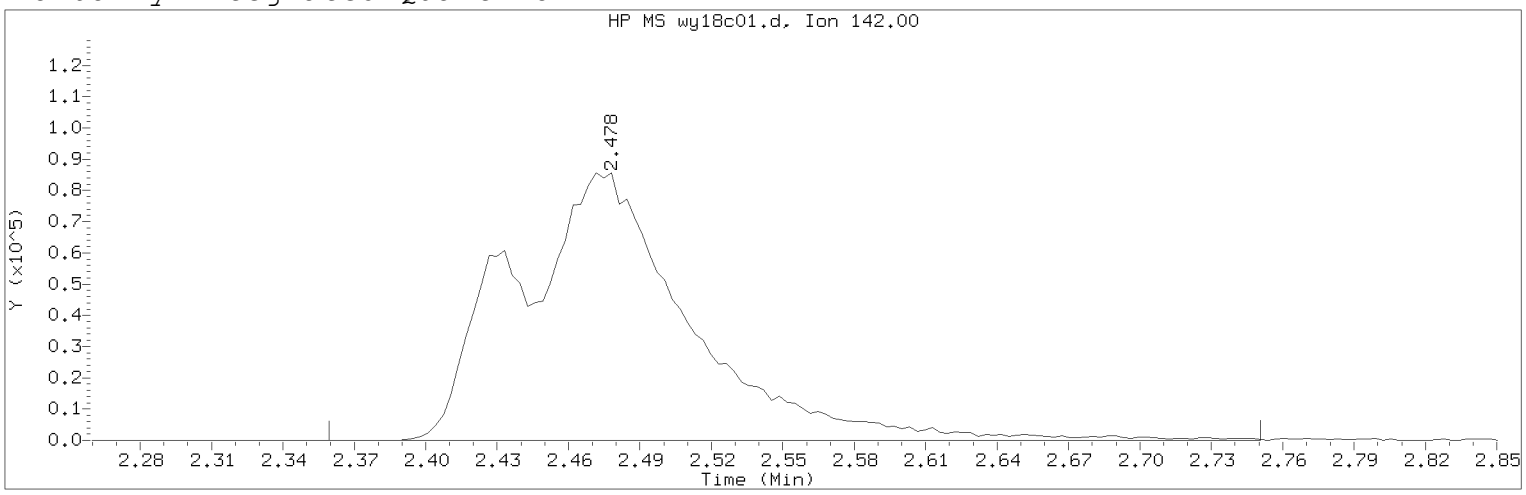
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

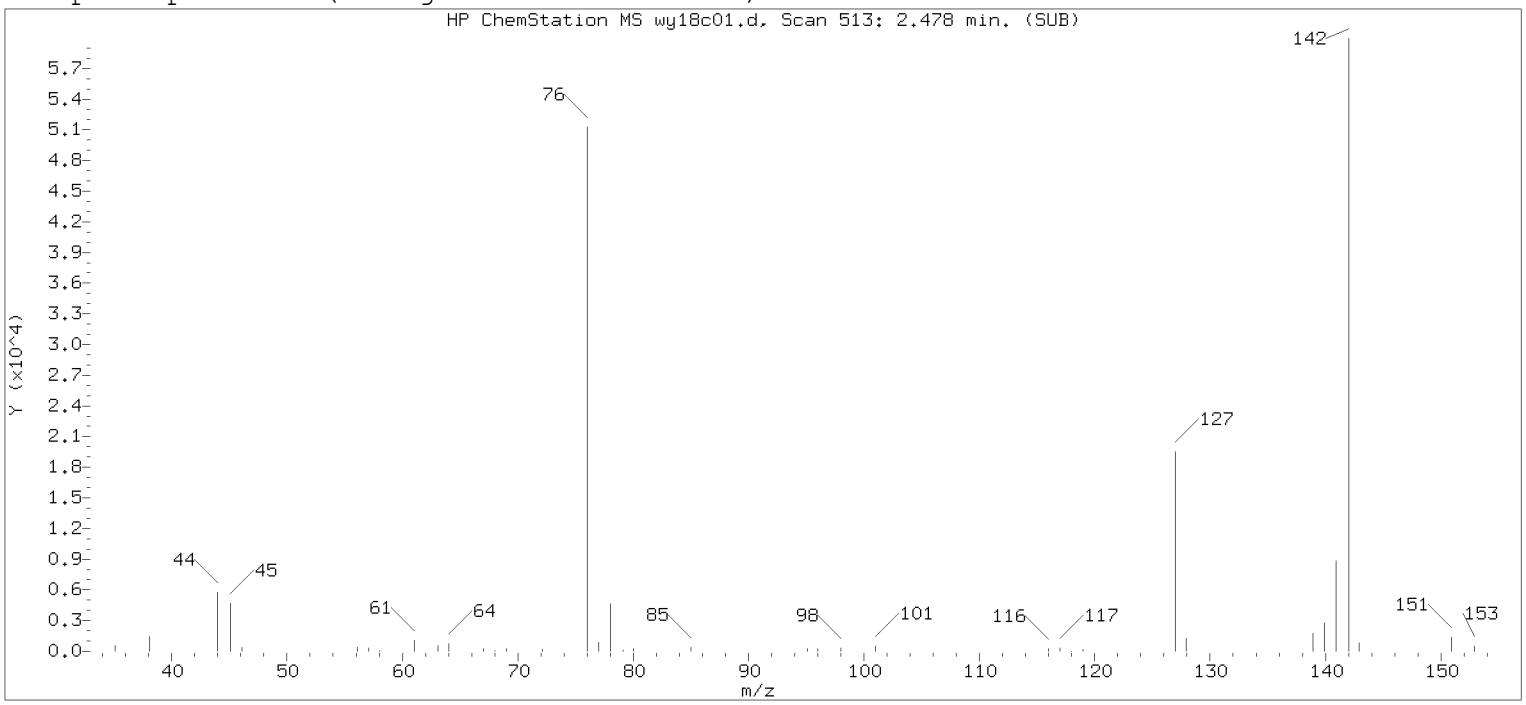
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 513
Retention Time (minutes): 2.478
Quant Ion : 142.00
Area (flag) : 438530M
On-Column Amount (ng) : 50.5633
Integration start scan : 475 Integration stop scan: 597
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

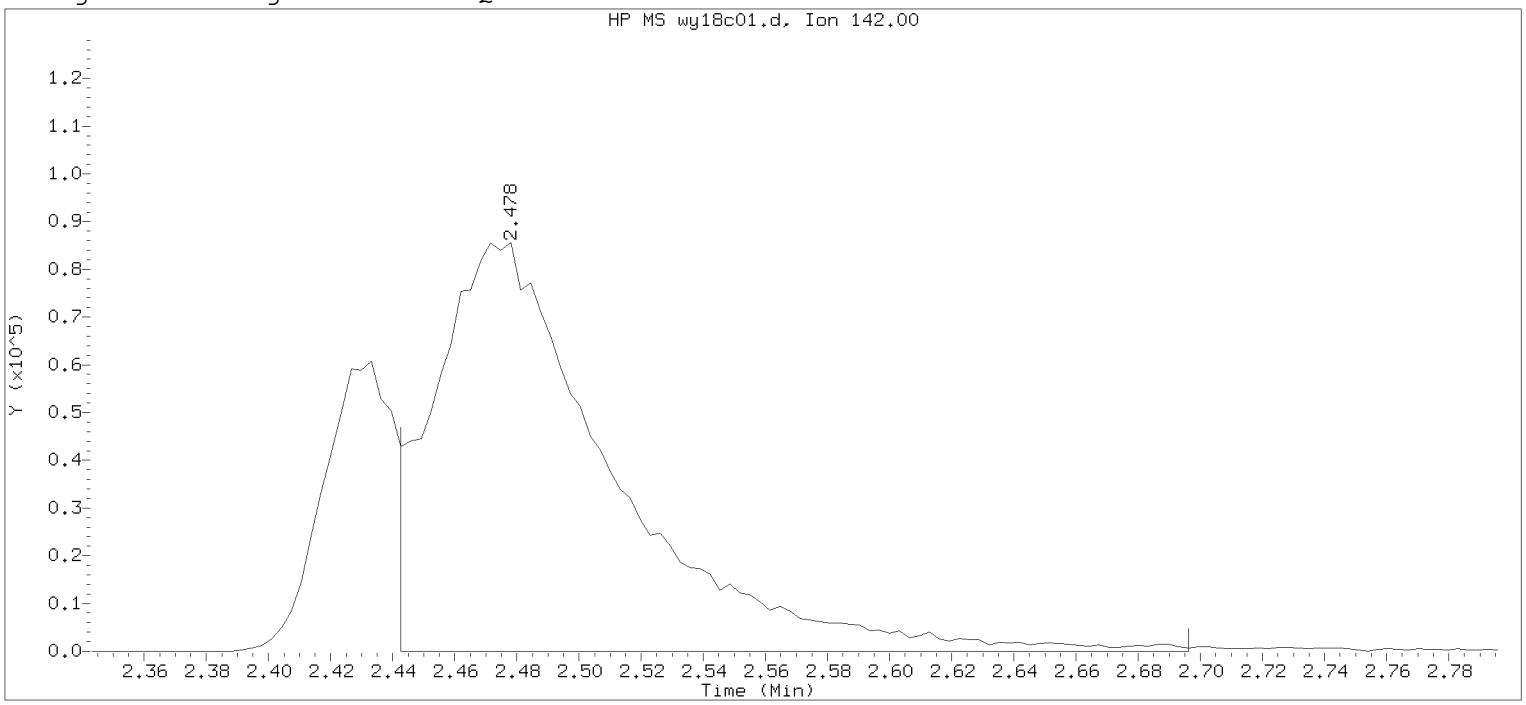
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 513
Retention Time (minutes): 2.478
Quant Ion : 142.00
Area : 343036
On-column Amount (ng) : 39.5527
Integration start scan : 501 Integration stop scan: 580
Y at integration start : 0 Y at integration end: 0

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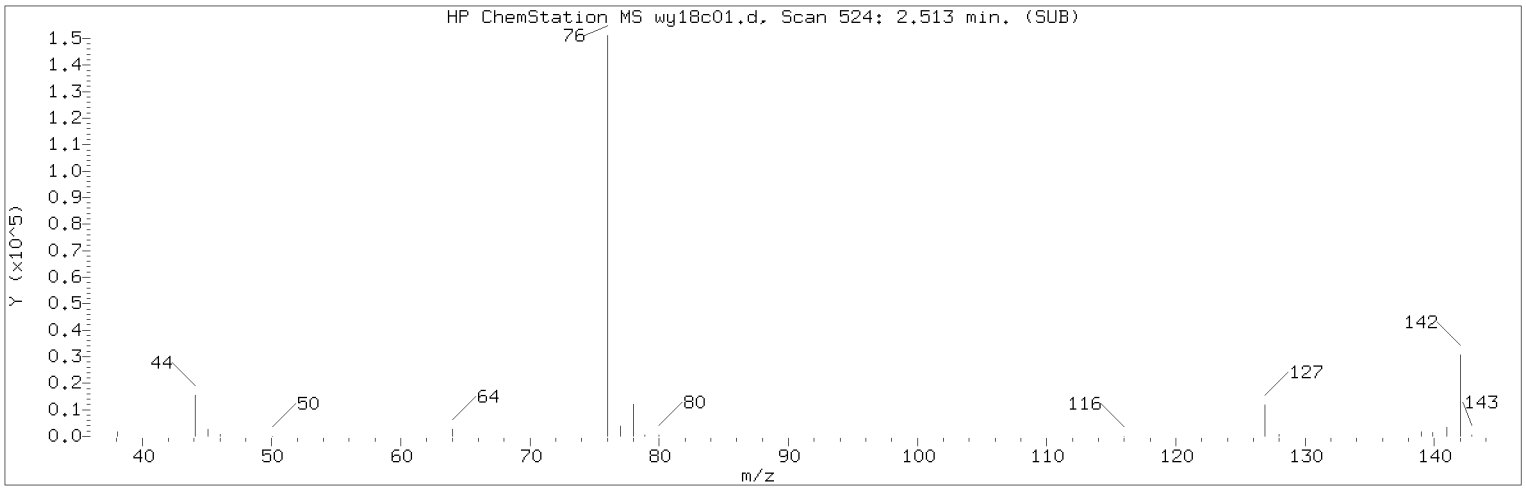
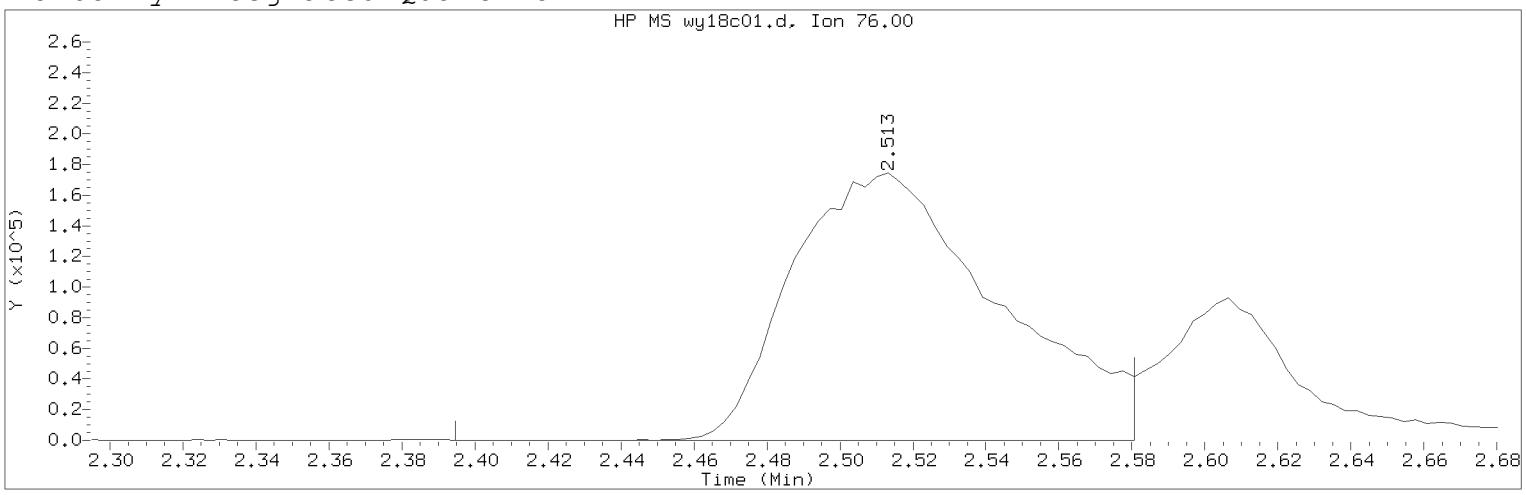
Target 3.5 esignature user signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
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Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

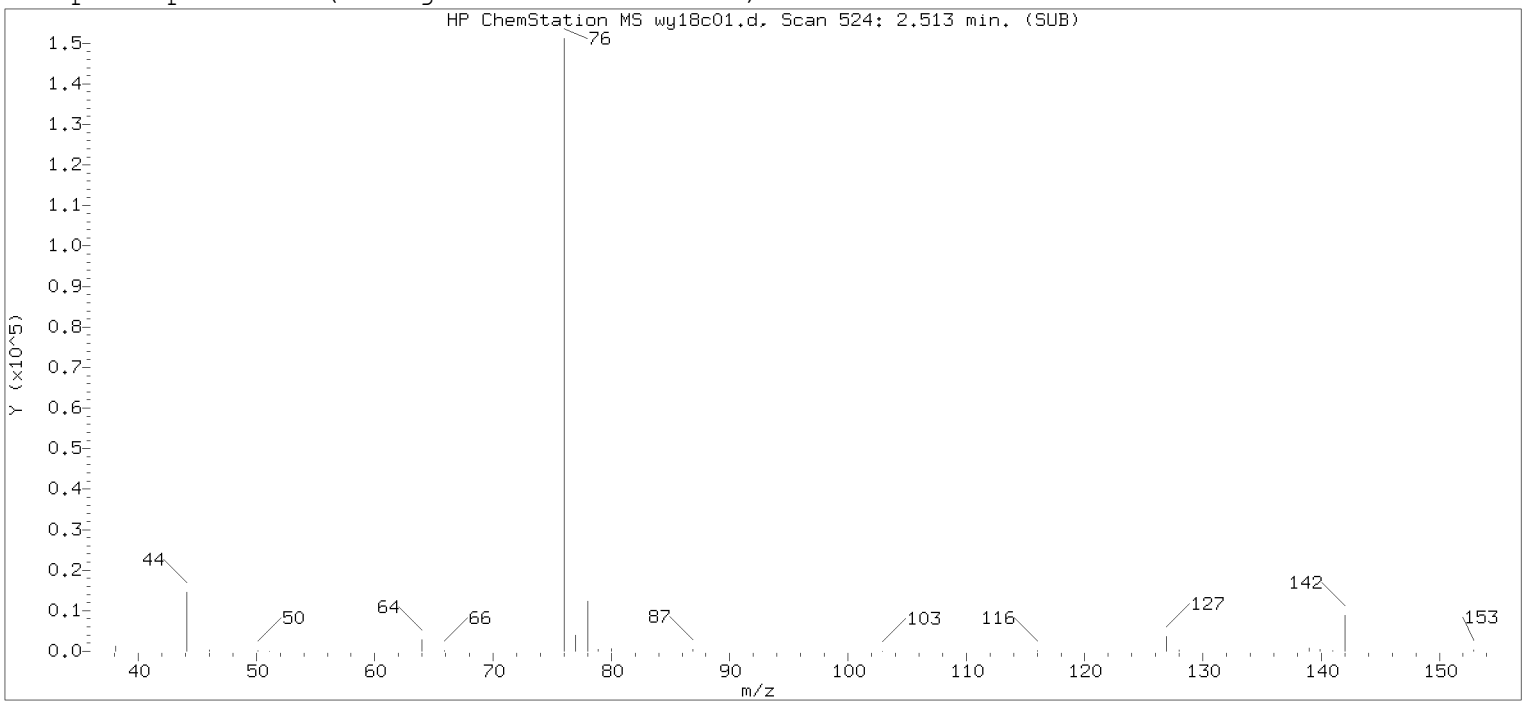
Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 524
Retention Time (minutes): 2.513
Quant Ion : 76.00
Area (flag) : 688325M
On-Column Amount (ng) : 43.1699
Integration start scan : 486 Integration stop scan: 544
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

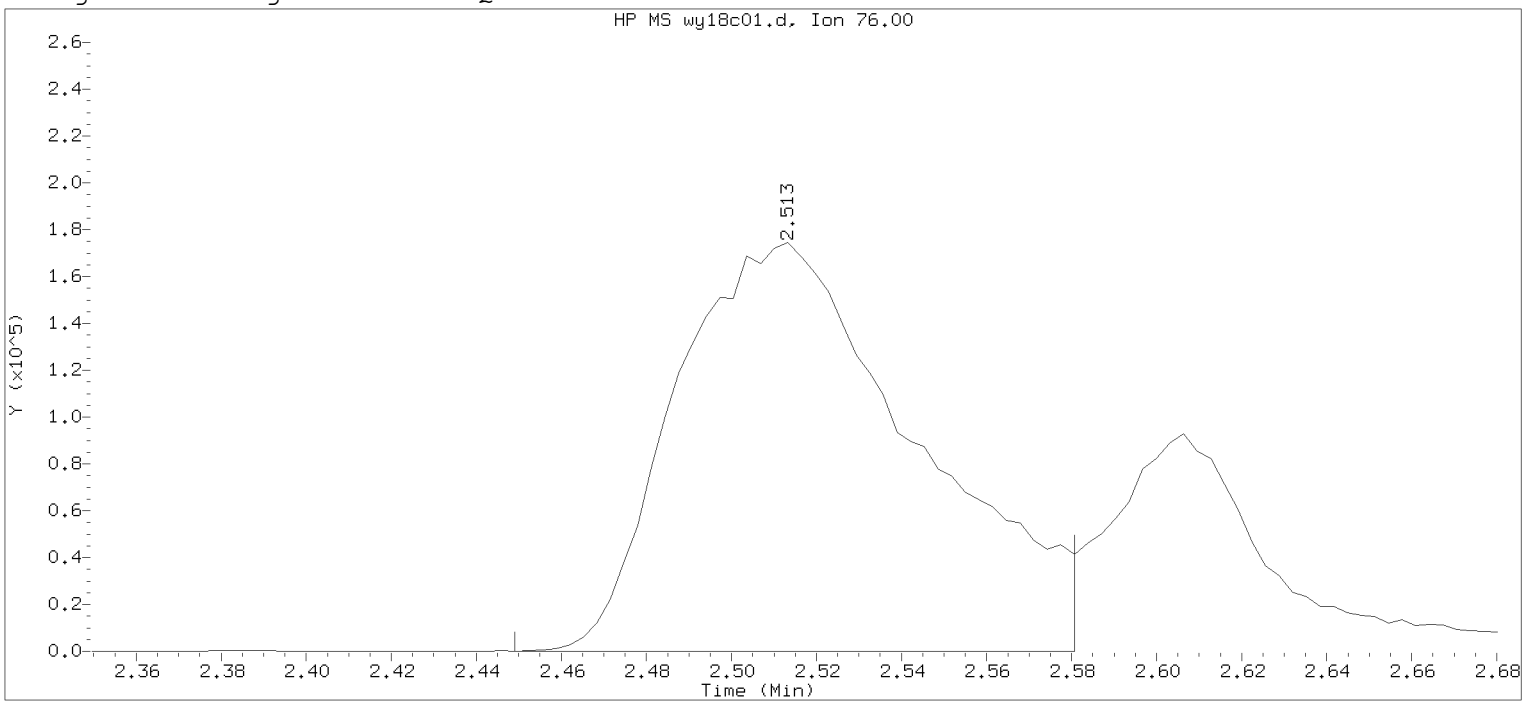
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



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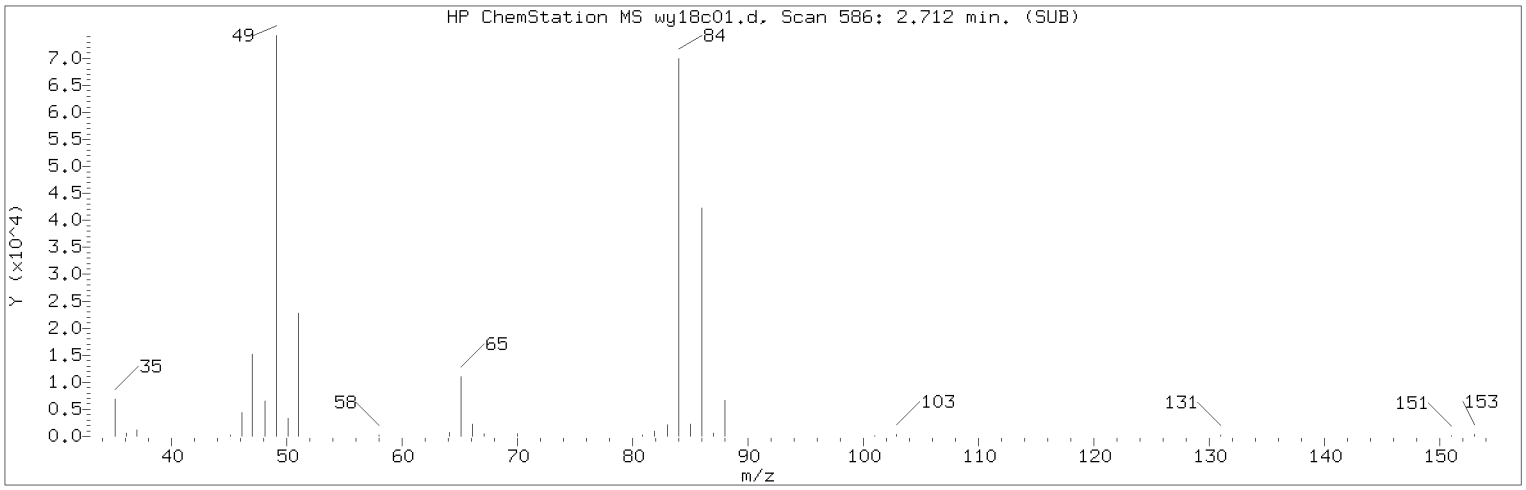
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

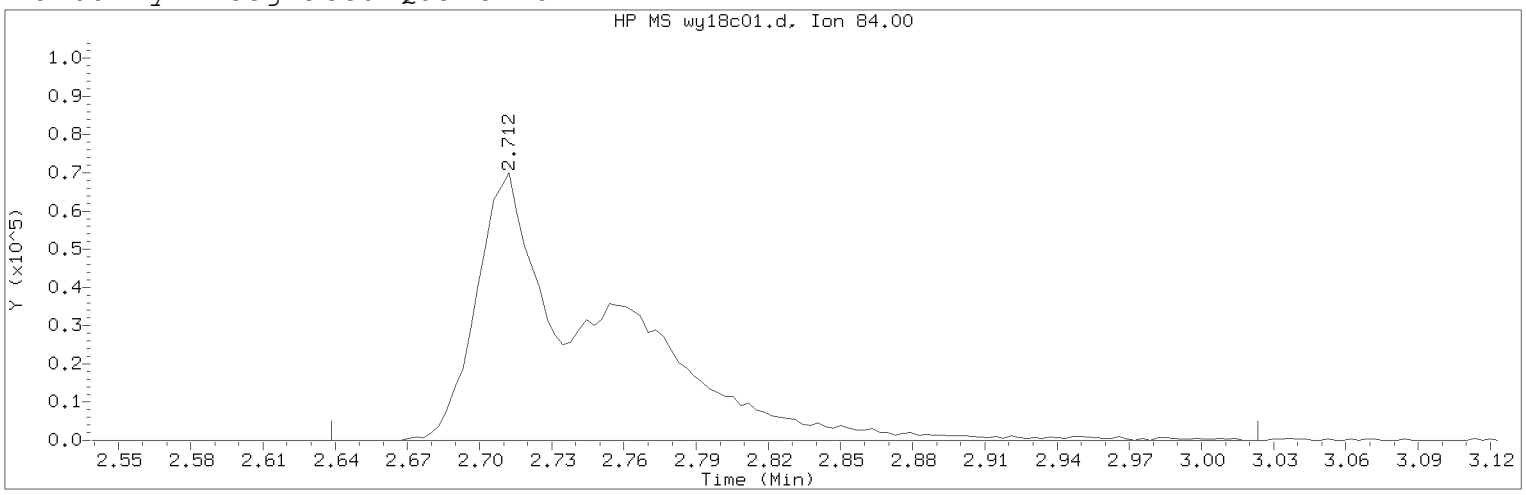
Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 524
Retention Time (minutes): 2.513
Quant Ion : 76.00
Area : 684283
On-column Amount (ng) : 42.9163
Integration start scan : 503 Integration stop scan: 544
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

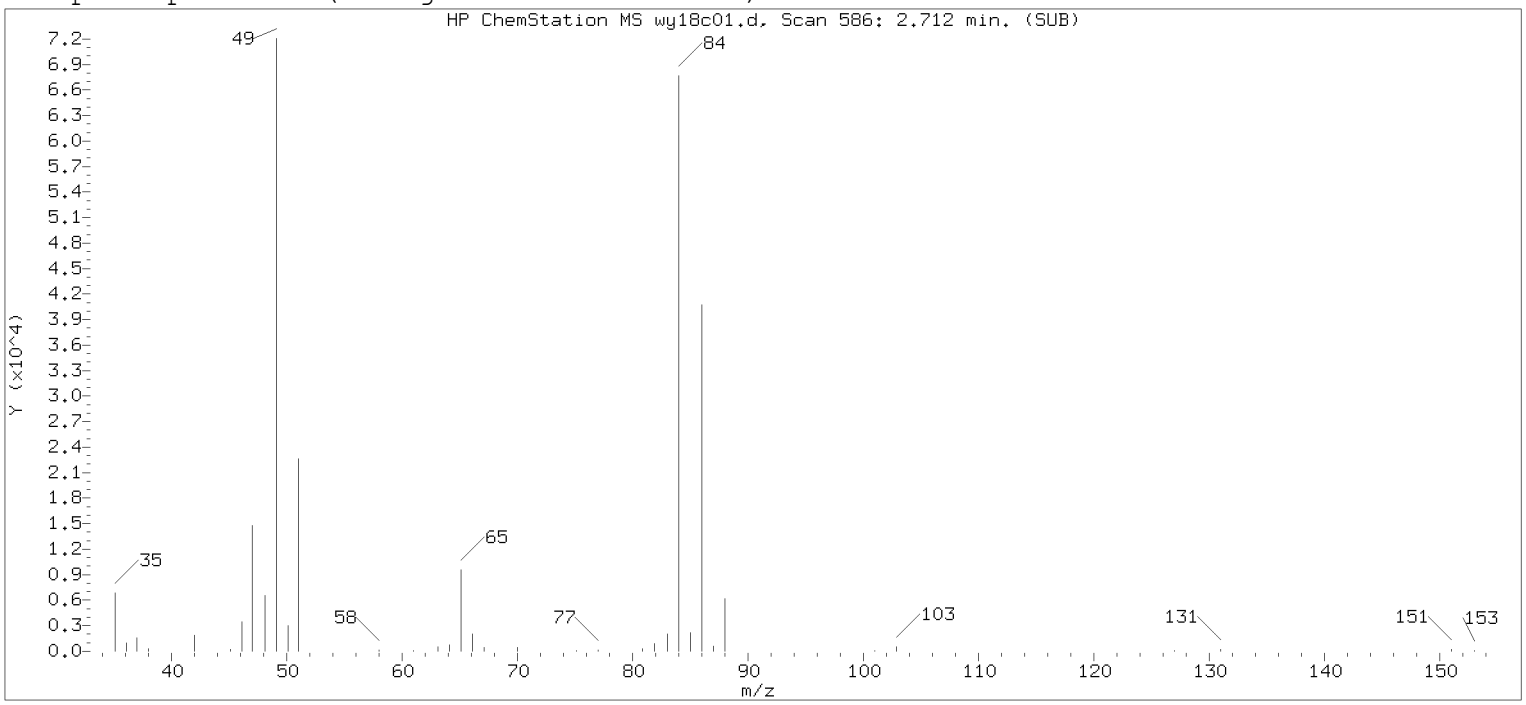
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 586
Retention Time (minutes): 2.712
Quant Ion : 84.00
Area (flag) : 255875M
On-Column Amount (ng) : 46.2534
Integration start scan : 562 Integration stop scan: 682
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

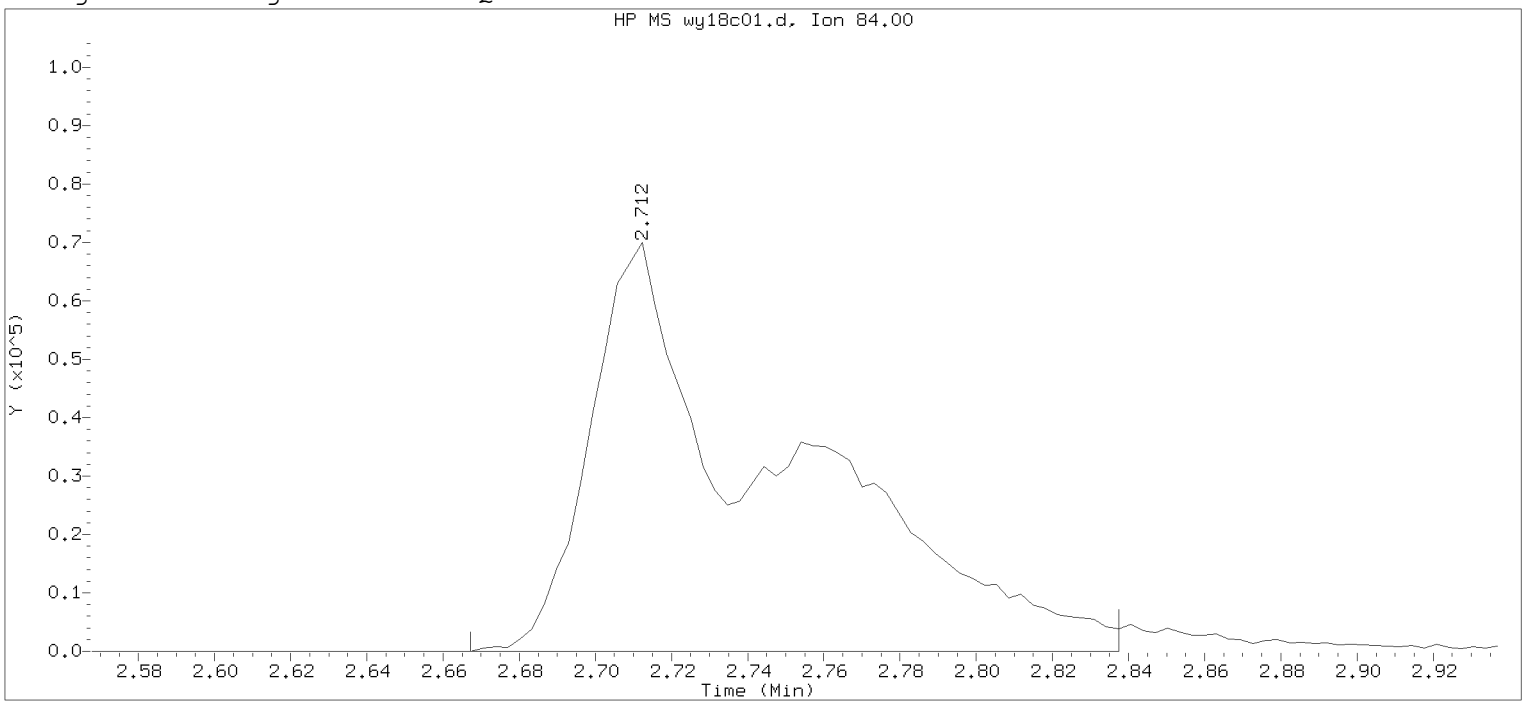
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

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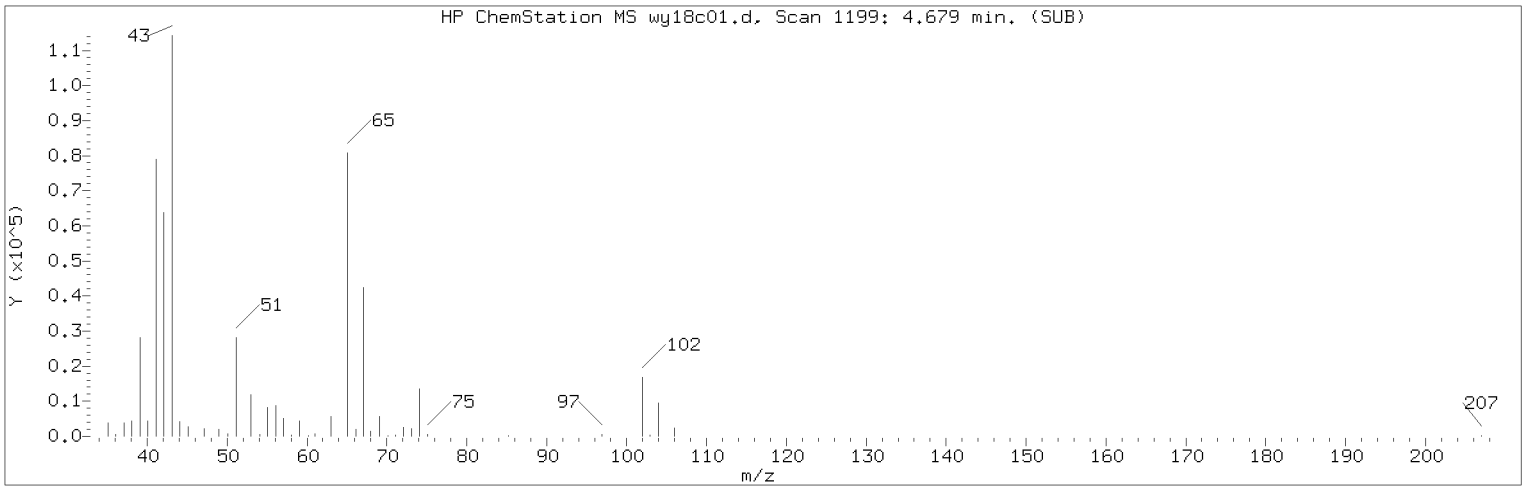
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

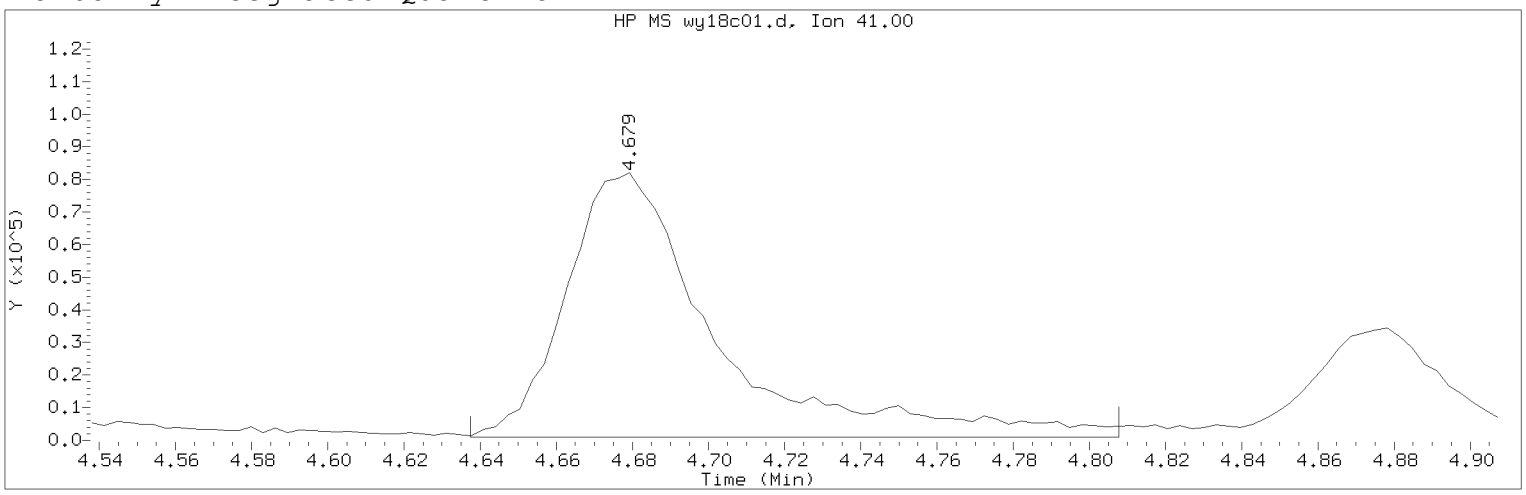
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 586
Retention Time (minutes): 2.712
Quant Ion : 84.00
Area : 242758
On-column Amount (ng) : 43.8824
Integration start scan : 571 Integration stop scan: 624
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

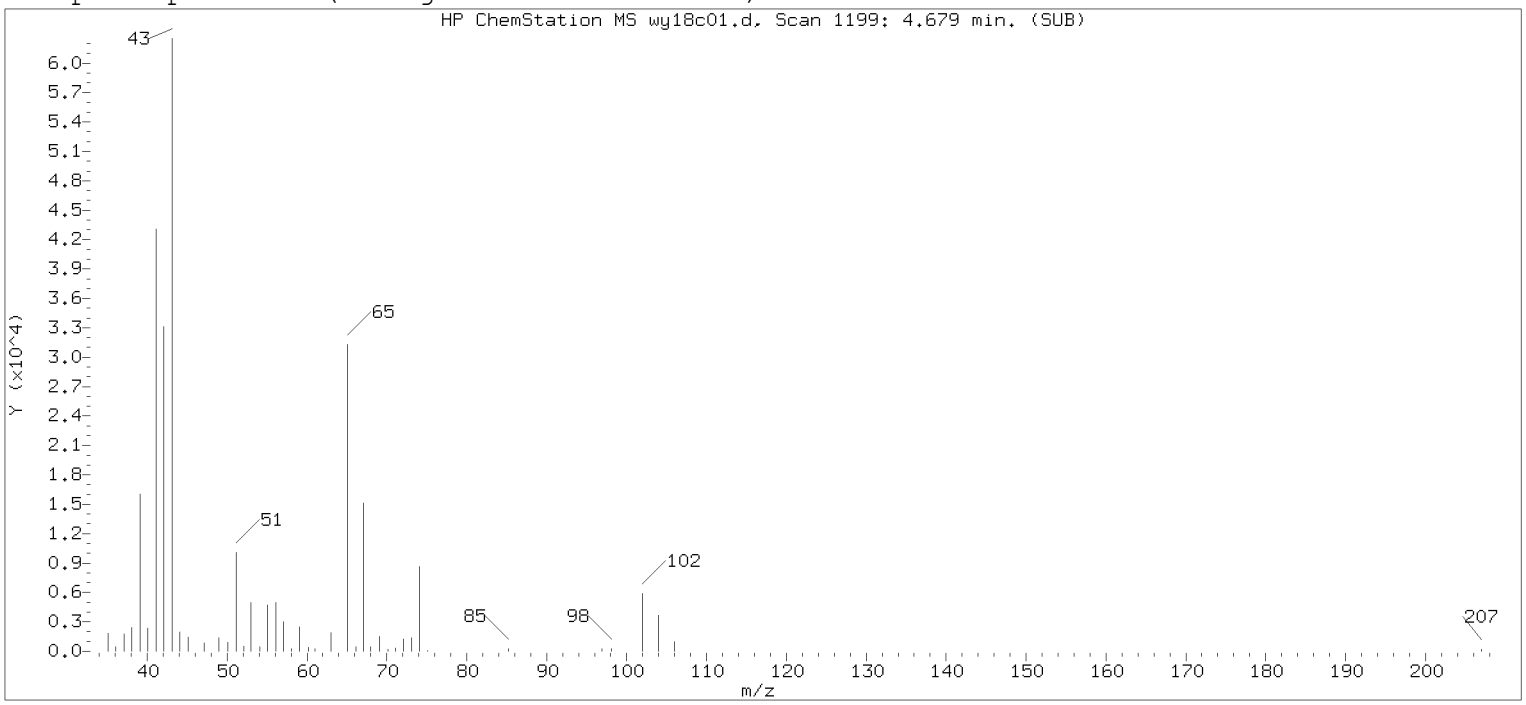
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 1199
Retention Time (minutes): 4.679
Quant Ion : 41.00
Area (flag) : 221106M
On-Column Amount (ng) : 688.9512
Integration start scan : 1185 Integration stop scan: 1238
Y at integration start : 974 Y at integration end: 974

Reason for manual integration: improper integration

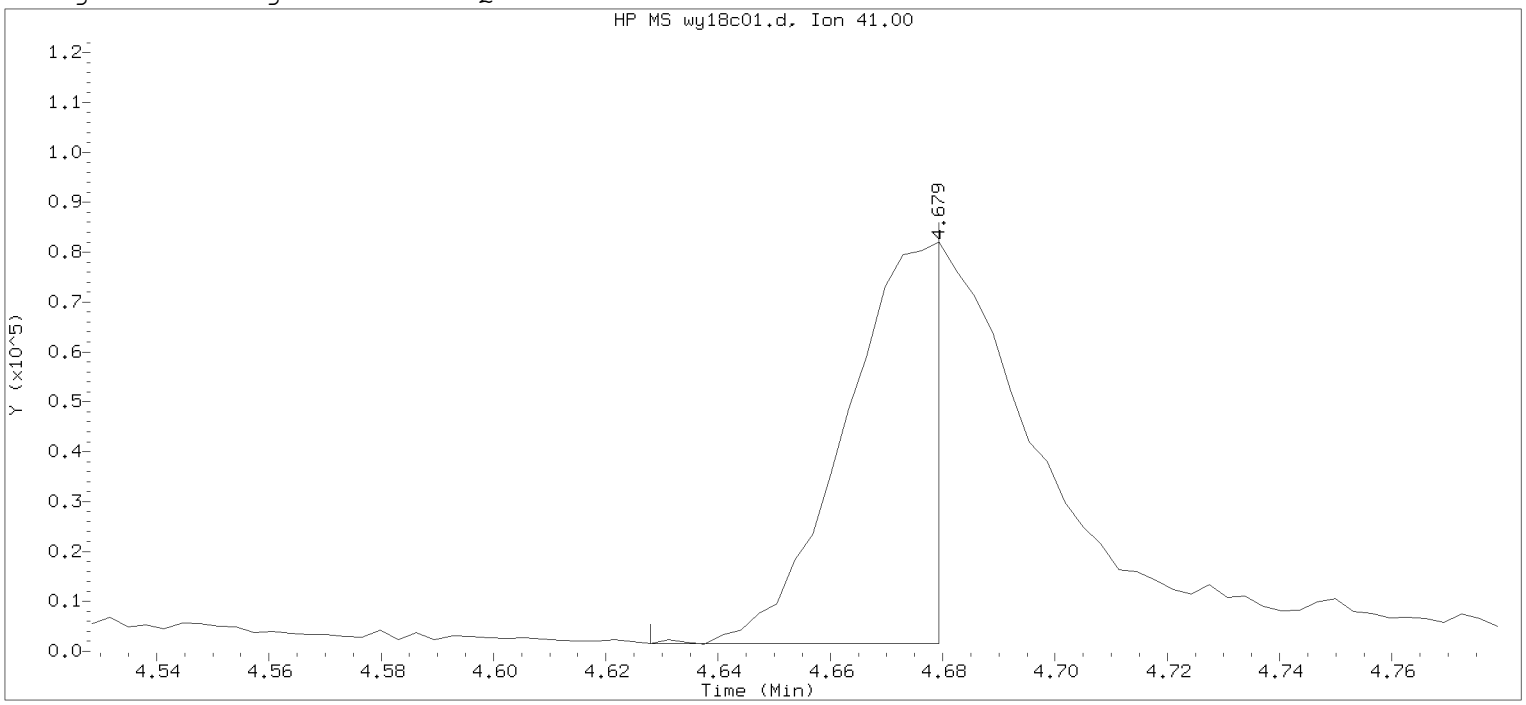
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



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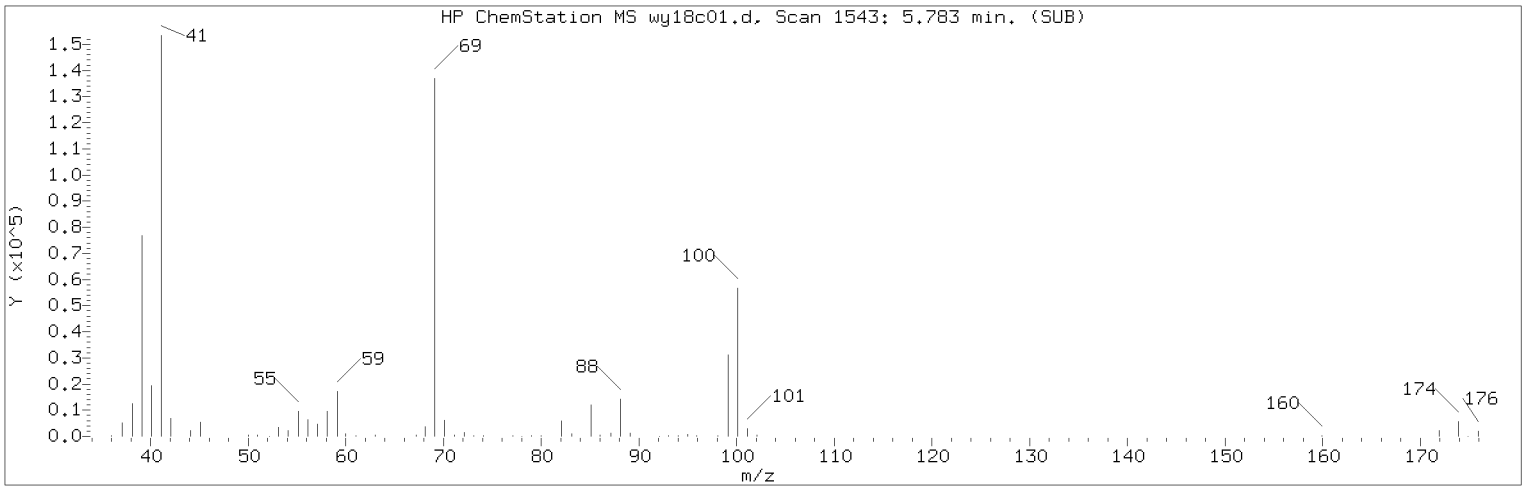
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

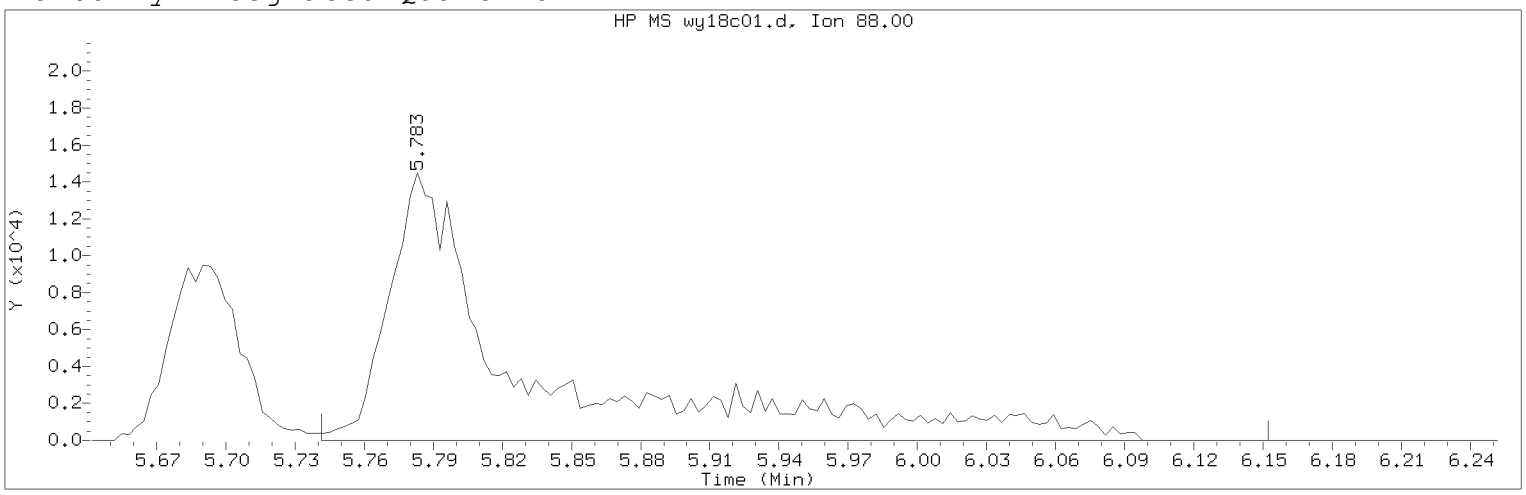
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 1199
Retention Time (minutes): 4.679
Quant Ion : 41.00
Area : 89313
On-column Amount (ng) : 278.2945
Integration start scan : 1182 Integration stop scan: 1198
Y at integration start : 1601 Y at integration end: 1601

Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

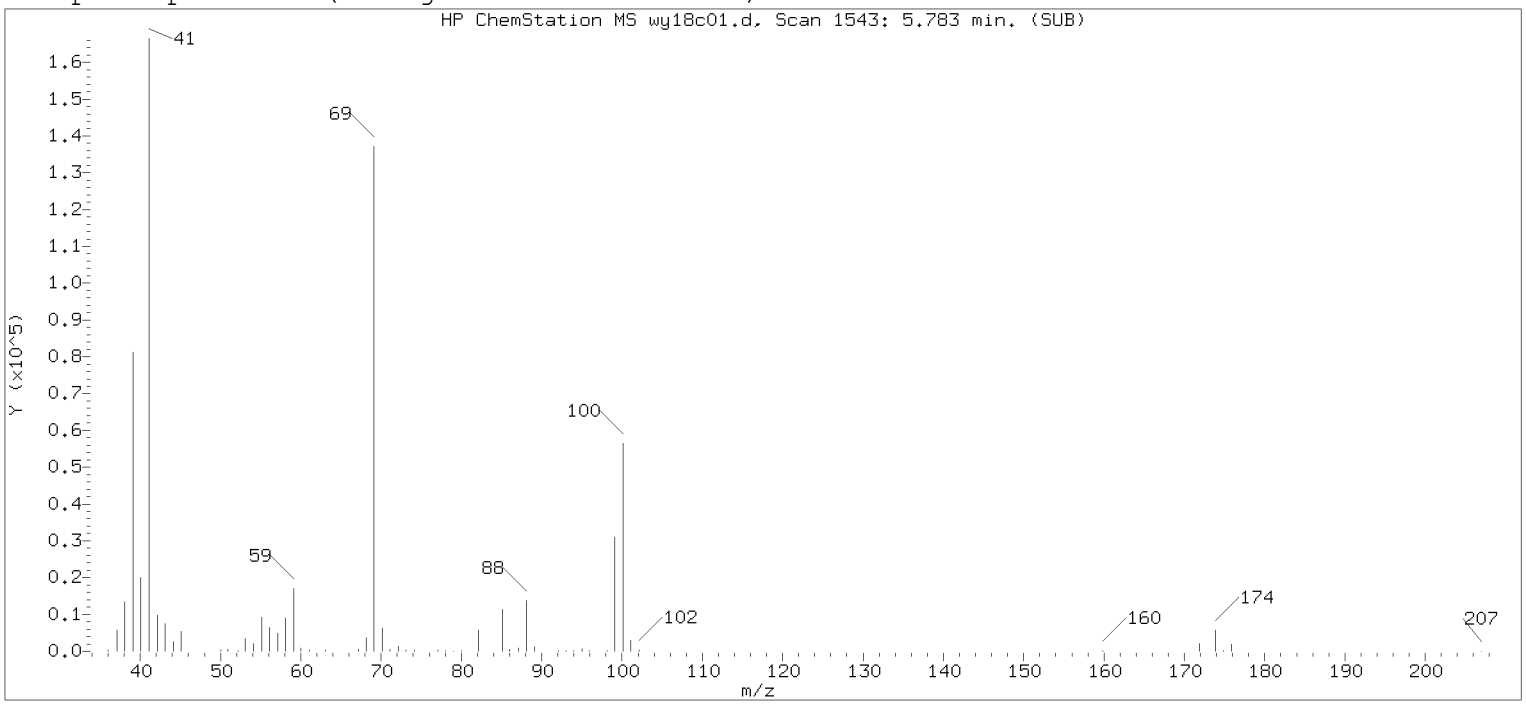
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1543
Retention Time (minutes): 5.783
Quant Ion : 88.00
Area (flag) : 59193M
On-Column Amount (ng) : 694.8747
Integration start scan : 1529 Integration stop scan: 1657
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

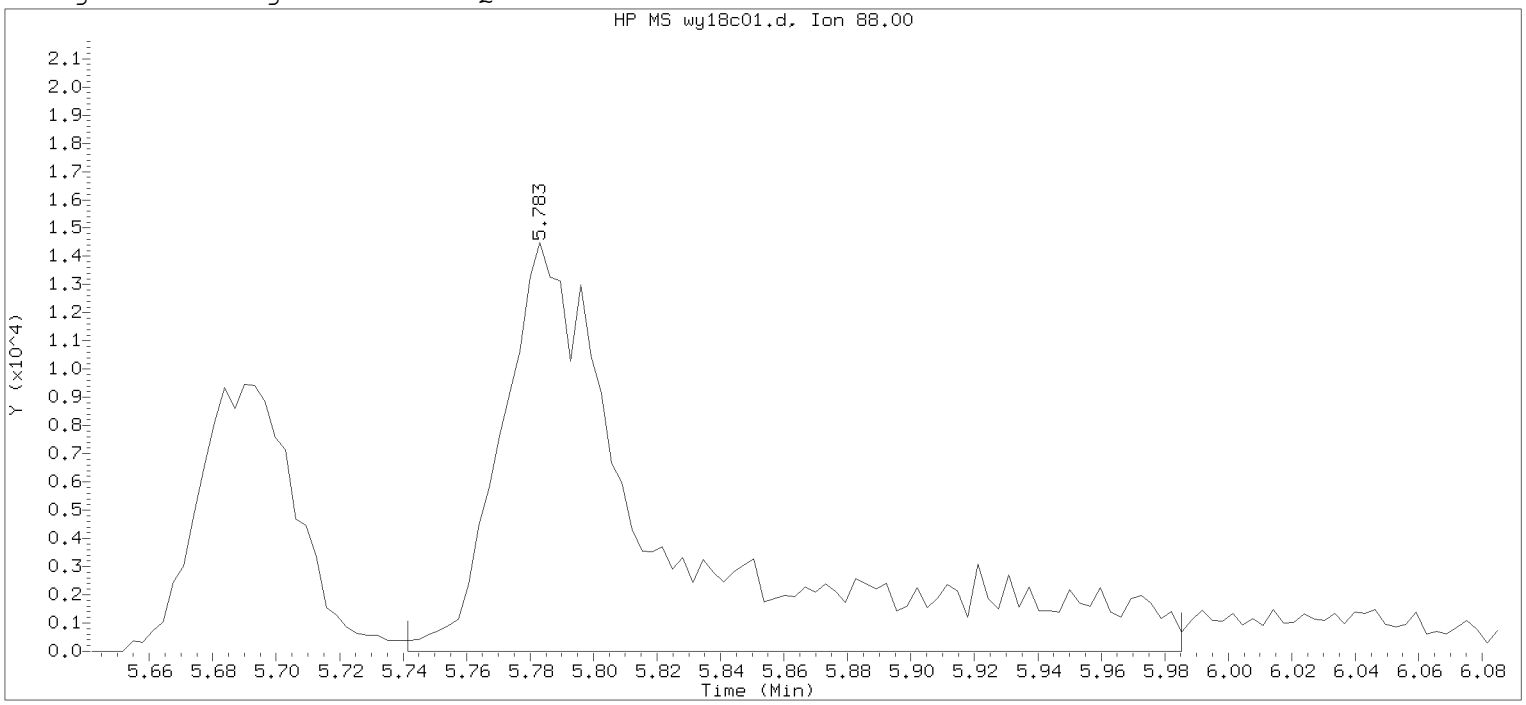
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1543		
Retention Time (minutes)	: 5.783		
Quant Ion	: 88.00		
Area	: 52617		
On-column Amount (ng)	: 617.6776		
Integration start scan	: 1529	Integration stop scan:	1605
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user sej02002

Data File: /chem2/HP09137.i/19may19a.b/wy19t01.d

Date : 19-MAY-2019 11:04

Client ID: BFB FEB05-19

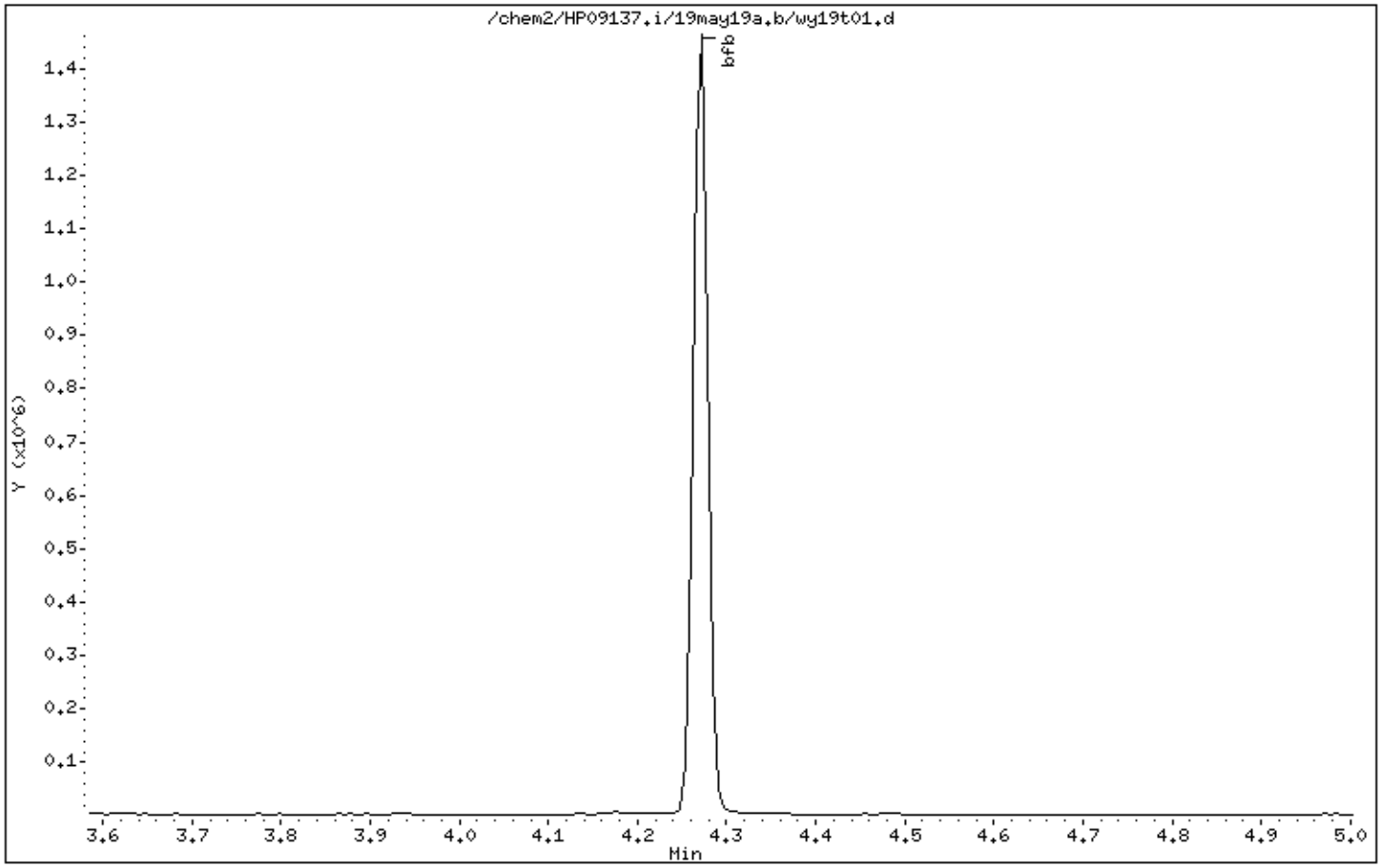
Instrument: HP09137.i

Sample Info: BFB FEB05-19;BFB 50NG;1;3;;;;;;

Operator: CBR01947

Column phase: DB-624

Column diameter: 0.18



Digitally signed by on 05/19/2019 at 11:09.
Target 3.5 esignature user ID: cbr01947

Data File: /chem2/HP09137.i/19may19a.b/wy19t01.d

Date : 19-MAY-2019 11:04

Client ID: BFB FEB05-19

Instrument: HP09137.i

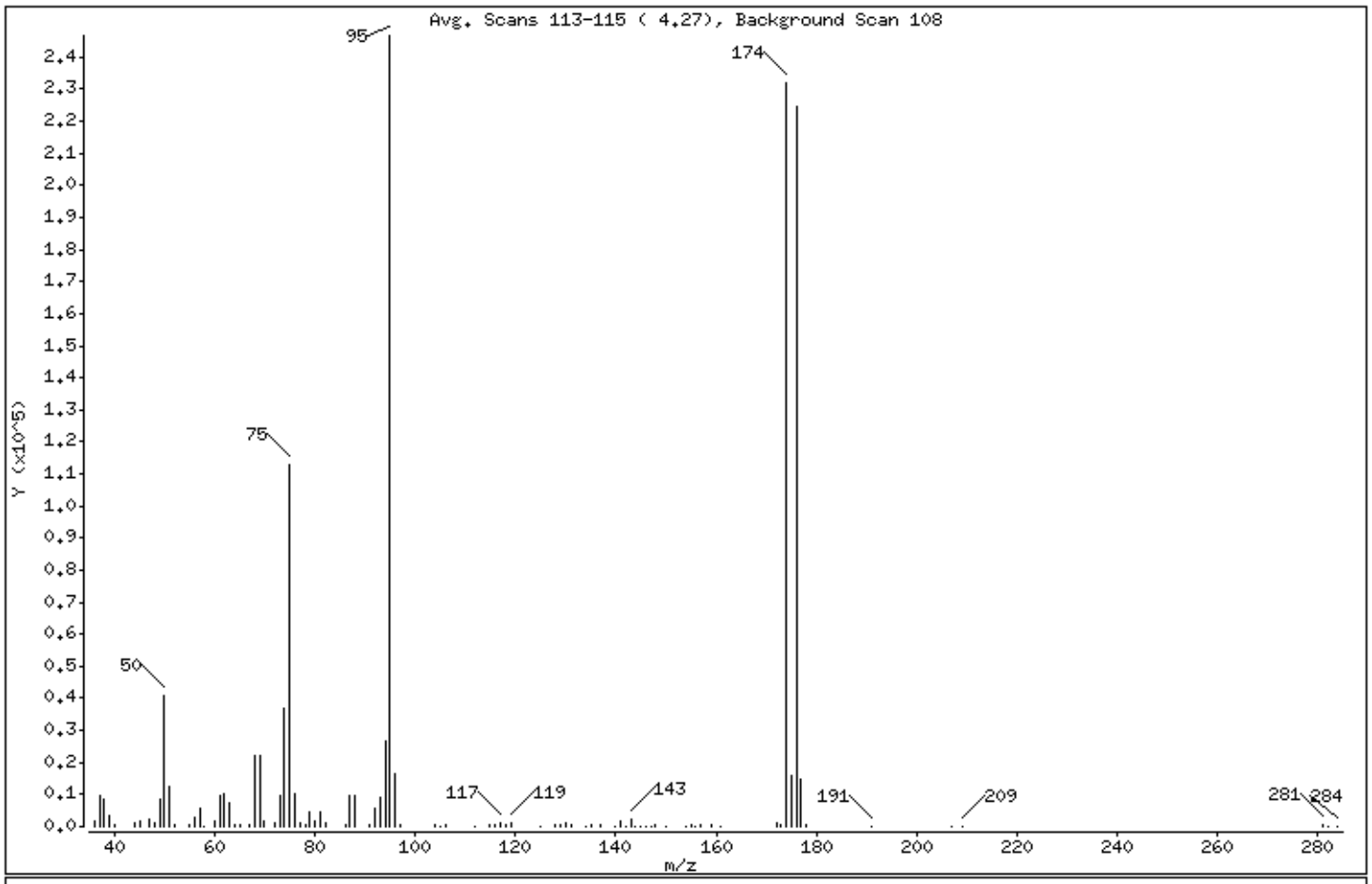
Sample Info: BFB FEB05-19;BFB 50NG;1;3;;;;;;

Operator: CBR01947

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.56
75	30.00 - 60.00% of mass 95	45.66
96	5.00 - 9.00% of mass 95	6.73
173	Less than 2.00% of mass 174	0.17 (0.18)
174	50.00 - 100.00% of mass 95	94.07
175	5.00 - 9.00% of mass 174	6.39 (6.80)
176	95.00 - 101.00% of mass 174	90.96 (96.69)
177	5.00 - 9.00% of mass 176	6.02 (6.62)

Digitally signed by on 05/19/2019 at 11:09.
Target 3.5 esignature user ID: cbr01947

Data File: /chem2/HP09137.i/19may19a.b/wy19t01.d

Date : 19-MAY-2019 11:04

Client ID: BFB FEB05-19

Instrument: HP09137.i

Sample Info: BFB FEB05-19;BFB 50NG;1;3;;;;;;

Operator: CBR01947

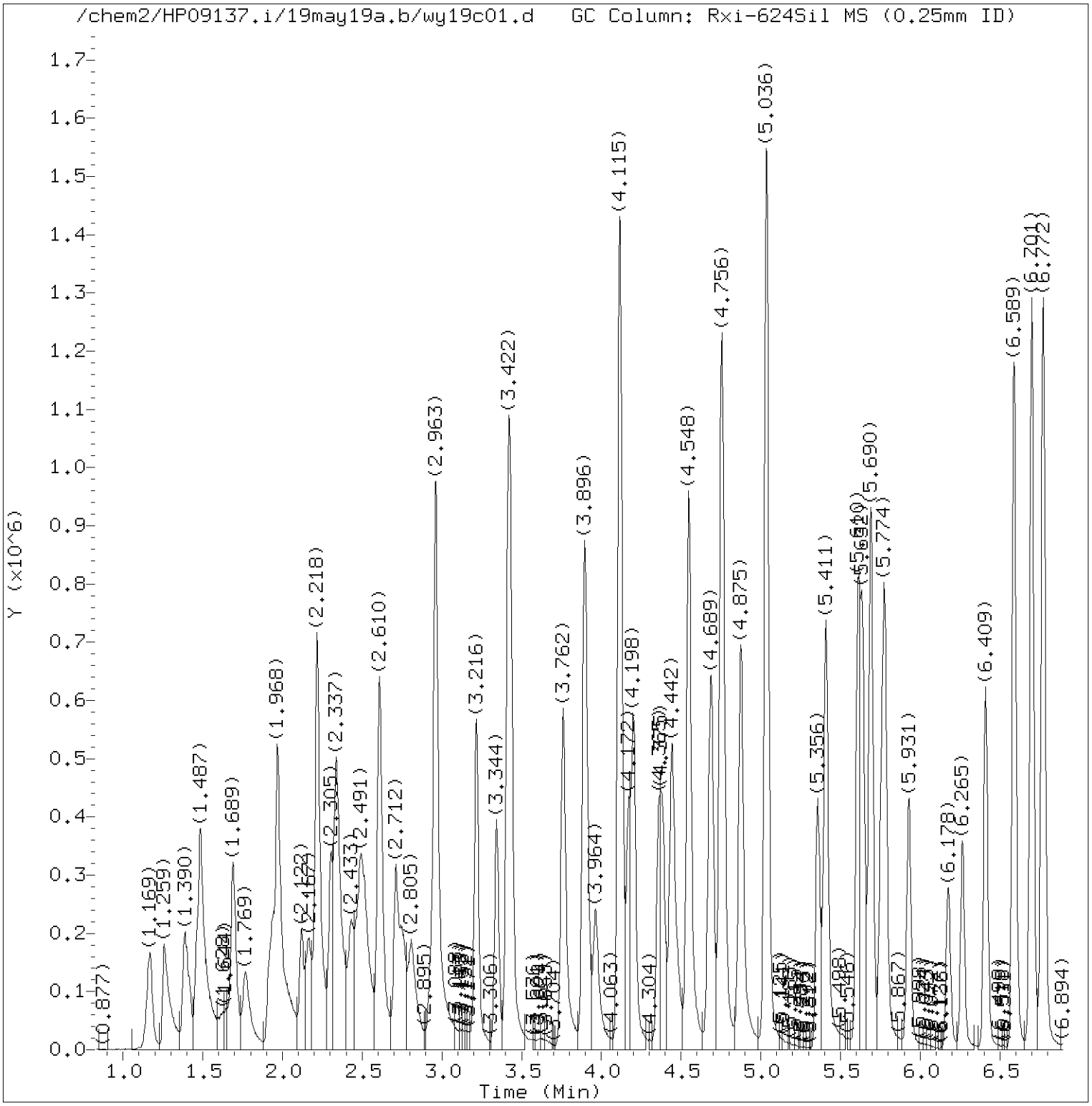
Column phase: DB-624

Column diameter: 0.18

Data File: wy19t01.d
Spectrum: Avg. Scans 113-115 (4.27), Background Scan 108
Location of Maximum: 95.00
Number of points: 94

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1858	68.00	21936	104.00	809	147.00	154
37.00	9821	69.00	22160	105.00	134	148.00	598
38.00	8516	70.00	1632	106.00	689	150.00	189
39.00	3503	72.00	1262	112.00	112	154.00	84
40.00	307	73.00	9738	115.00	327	155.00	785
44.00	931	74.00	36824	116.00	695	156.00	87
45.00	1717	75.00	112680	117.00	1403	157.00	461
47.00	2402	76.00	10291	118.00	783	159.00	390
48.00	1098	77.00	1373	119.00	1097	161.00	200
49.00	8785	78.00	794	125.00	86	172.00	888
50.00	40864	79.00	4421	128.00	814	173.00	417
51.00	12463	80.00	1472	129.00	394	174.00	232128
52.00	486	81.00	4364	130.00	996	175.00	15778
55.00	490	82.00	909	131.00	316	176.00	224448
56.00	2568	86.00	351	134.00	84	177.00	14866
57.00	5406	87.00	9756	135.00	298	178.00	381
58.00	137	88.00	9469	137.00	389	191.00	86
60.00	1697	91.00	691	140.00	92	207.00	52
61.00	9430	92.00	5836	141.00	1905	209.00	106
62.00	10000	93.00	9249	142.00	186	281.00	651
63.00	7221	94.00	26384	143.00	2336	282.00	87
64.00	823	95.00	246720	144.00	98	284.00	85
65.00	648	96.00	16608	145.00	86		
67.00	557	97.00	551	146.00	237		

Digitally signed by on 05/19/2019 at 11:09.
Target 3.5 esignature user ID: cbr01947



Total Ion Chromatogram (TIC)

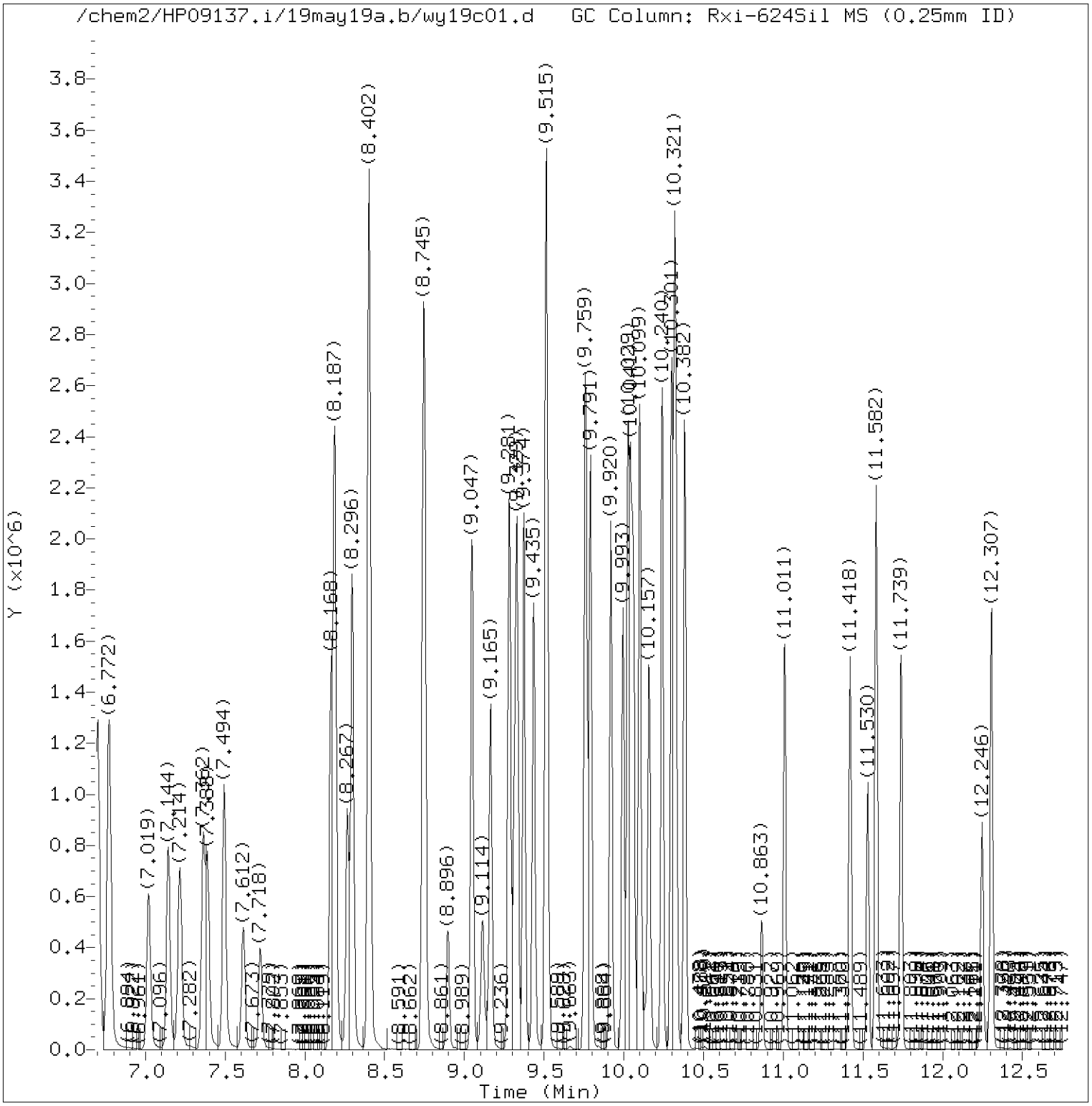
Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.259	85	352640	56.551
4) Chloromethane	(2)	1.390	50	283940	36.568
6) Vinyl Chloride	(2)	1.464	62	282008	39.618
5) 1,3-Butadiene	(2)	1.483	39	178597M	37.742
8) Bromomethane	(2)	1.689	94	244194M	43.498
9) Chloroethane	(2)	1.775	64	176670	37.717
12) Trichlorofluoromethane	(2)	1.936	101	380635	50.350
11) n-Pentane	(2)	1.968	43	289216	40.226
13) Ethanol	(1)	2.032	45	62951	734.166
15) Freon 123a	(2)	2.119	67	260018M	46.027
16) Acrolein	(1)	2.218	56	640475	473.191
17) 1,1-Dichloroethene	(2)	2.308	96	211031	49.632
17) 1,1-Dichloroethene	(2)	2.305	63	87772	40.916
19) Freon 113	(2)	2.340	101	186282	49.892
18) Acetone	(1)	2.343	58	68390	103.952
21) 2-Propanol	(1)	2.452	45	117545	240.475
22) Methyl Iodide	(2)	2.478	142	417167M	51.198
23) Carbon Disulfide	(2)	2.513	76	625100	41.730
25) Allyl Chloride	(2)	2.606	41	348321	47.023
27) Methyl Acetate	(2)	2.622	43	277295	43.249
28) Methylene Chloride	(2)	2.712	84	247023M	47.529
29)*t-Butyl alcohol-d10	(1)	2.735	65	188008	250.000
30) t-Butyl alcohol	(1)	2.809	59	224779	257.788
31) Acrylonitrile	(2)	2.927	53	138578	41.085
32) trans-1,2-Dichloroethene	(2)	2.959	96	224566	48.678
33) Methyl Tertiary Butyl Ether	(2)	2.966	73	654020	58.224
34) n-Hexane	(2)	3.219	57	276401	44.777
36) 1,1-Dichloroethane	(2)	3.344	63	388866	46.518
38) di-Isopropyl ether	(2)	3.415	45	721801	44.945
39) 2-Chloro-1,3-butadiene	(2)	3.431	53	362173	50.023
40) Ethyl t-butyl ether	(2)	3.762	59	610607	52.160
42) cis-1,2-Dichloroethene	(2)	3.893	96	247374	47.758
45) 2,2-Dichloropropane	(2)	3.893	77	151453	40.341
44) 2-Butanone	(2)	3.909	43	386737	79.806
47) Propionitrile	(1)	3.964	54	310763	286.761
48) Methacrylonitrile	(2)	4.115	67	399389	110.127
49) Bromochloromethane	(2)	4.121	128	143715	53.375
50) Tetrahydrofuran	(1)	4.172	71	109736	109.408

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	4.205	83	395256	50.393
52)$Dibromofluoromethane	(2)	4.359	113	218524	48.911
52)$Dibromofluoromethane	(2)	4.359	111	225901	49.255
53) 1,1,1-Trichloroethane	(2)	4.384	97	299166	50.692
54) Cyclohexane	(2)	4.442	56	334661	42.849
54) Cyclohexane	(2)	4.445	84	273818	42.354
54) Cyclohexane	(2)	4.445	69	103238	43.983
55) 1,1-Dichloropropene	(2)	4.548	75	297029	47.235
56) Carbon Tetrachloride	(2)	4.548	117	253960	50.144
58) Isobutyl Alcohol	(1)	4.679	41	209718	659.732
57)$1,2-Dichloroethane-d4	(2)	4.692	102	59029	49.678
57)$1,2-Dichloroethane-d4	(2)	4.692	65	268706	51.949
57)$1,2-Dichloroethane-d4	(2)	4.699	104	38086	50.330
60) Benzene	(2)	4.753	78	956474	47.320
61) 1,2-Dichloroethane	(2)	4.766	62	323596	51.825
61) 1,2-Dichloroethane	(2)	4.769	98	30974	52.140
65) t-Amyl methyl ether	(2)	4.875	73	595645	49.667
66)*Fluorobenzene	(2)	5.036	96	964374	50.000
67) n-Heptane	(2)	5.042	43	256307	43.446
69) n-Butanol	(1)	5.356	56	332536	1178.185
71) Trichloroethene	(2)	5.408	95	240785	49.191
73) Methylcyclohexane	(2)	5.610	83	374982	52.767
73) Methylcyclohexane	(2)	5.610	98	177591	53.746
74) 1,2-Dichloropropane	(2)	5.639	63	238789	46.015
75) Dibromomethane	(2)	5.758	93	160891	50.236
77) Methyl Methacrylate	(2)	5.780	69	258851	45.390
76) 1,4-Dioxane	(1)	5.790	88	62396M	739.493
79) Bromodichloromethane	(2)	5.931	83	295143	50.156
43) 1,2-Dichloroethene (Total)	(2)		96	471940	96.436
80) 2-Nitropropane	(2)	6.175	41	186445	93.643
81) 2-Chloroethyl Vinyl Ether	(2)	6.265	63	159799	40.390
82) cis-1,3-Dichloropropene	(2)	6.409	75	373890	46.211
83) 4-Methyl-2-pentanone	(2)	6.589	43	822463	86.100
84)$Toluene-d8	(3)	6.701	98	955436	51.302
84)$Toluene-d8	(3)	6.698	100	628540	50.892
89) Toluene	(3)	6.772	92	617042	51.433
90) trans-1,3-Dichloropropene	(3)	7.019	75	356889	49.970
92) Ethyl Methacrylate	(3)	7.144	69	428005	48.769

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) 1,1,2-Trichloroethane	(3)	7.214	97	246583	53.402
94) Tetrachloroethene	(3)	7.362	166	259537	53.314
95) 1,3-Dichloropropane	(3)	7.388	76	414876	51.729
97) 2-Hexanone	(3)	7.494	43	636485	91.099
98) Dibromochloromethane	(3)	7.612	129	249068	55.226
100) 1,2-Dibromoethane	(3)	7.721	107	272757	53.766
101)*Chlorobenzene-d5	(3)	8.161	117	743223	50.000
103) Chlorobenzene	(3)	8.190	112	705379	53.000
104) 1,1,1,2-Tetrachloroethane	(3)	8.267	131	232934	54.462
105) Ethylbenzene	(3)	8.296	91	1149585	50.417
107) m+p-Xylene	(3)	8.405	106	934781	103.111
108) o-Xylene	(3)	8.742	106	458704	51.431
110) Styrene	(3)	8.752	104	791610	52.909
111) Bromoform	(3)	8.896	173	187730	53.485
112) Isopropylbenzene	(3)	9.047	105	1085971	49.551
113) Cyclohexanone	(1)	9.114	55	197148	517.974
115)$4-Bromofluorobenzene	(3)	9.165	95	356326	47.825
115)$4-Bromofluorobenzene	(3)	9.165	174	325361	51.751
116) Bromobenzene	(4)	9.281	156	323557	52.490
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	411616	49.517
118) 1,2,3-Trichloropropane	(4)	9.316	110	131304	52.441
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	307098	115.205
120) n-Propylbenzene	(4)	9.374	91	1259814	46.361
121) 2-Chlorotoluene	(4)	9.435	126	280278	50.006
123) 1,3,5-Trimethylbenzene	(4)	9.512	105	939146	47.921
122) 4-Chlorotoluene	(4)	9.518	126	305442	50.906
125) tert-Butylbenzene	(4)	9.756	134	209936	47.150
126) Pentachloroethane	(4)	9.769	167	189428	53.818
127) 1,2,4-Trimethylbenzene	(4)	9.791	105	1003727	48.604
128) sec-Butylbenzene	(4)	9.920	105	1072764	44.595
130) 1,3-Dichlorobenzene	(4)	9.997	146	590614	50.246
131) p-Isopropyltoluene	(4)	10.025	119	970536	45.576
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	427964	50.000
134) 1,4-Dichlorobenzene	(4)	10.061	146	617413	50.667
91) 1,3-Dichloropropene (total)	(3)		100	730779	96.181
135) 1,2,3-Trimethylbenzene	(4)	10.099	105	1114497	50.158
136) Benzyl Chloride	(4)	10.160	91	826017	48.429
137) 1,3-Diethylbenzene	(4)	10.240	119	655395	48.982

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

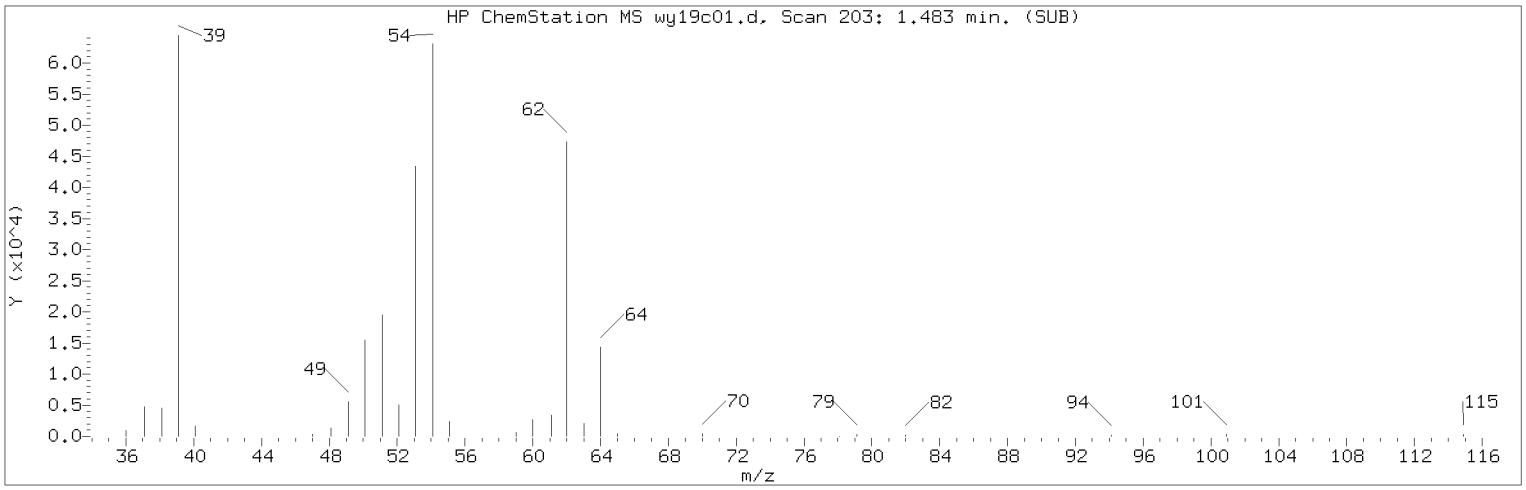
Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

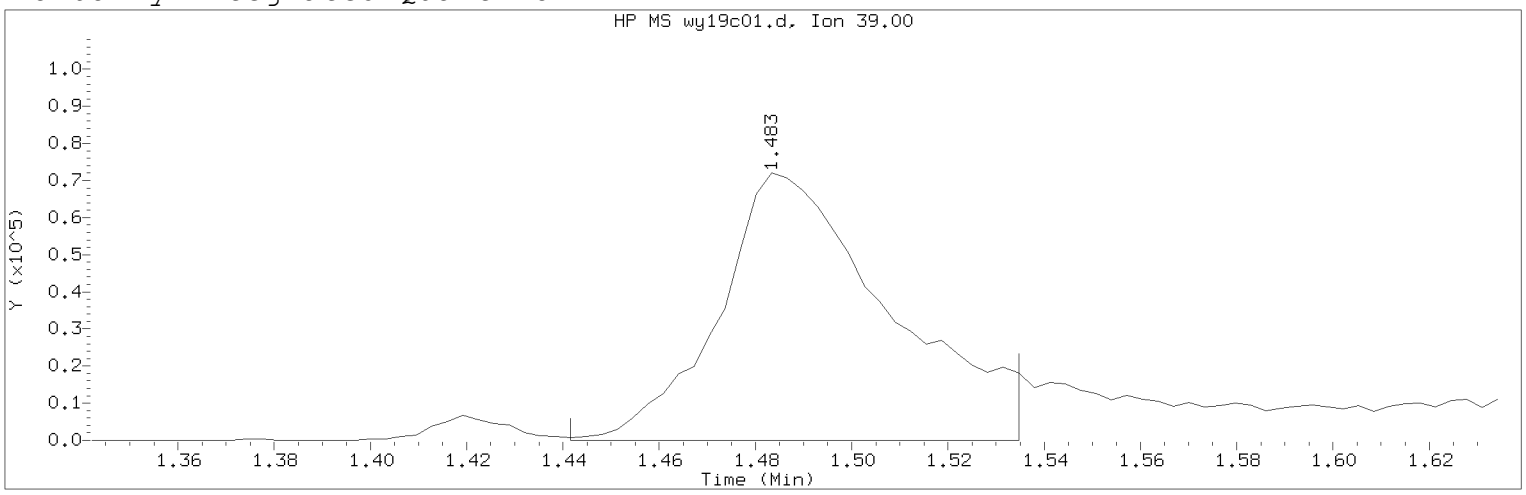
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
138) 1,4-Diethylbenzene	(4)	10.298	119	681827	47.562
140) n-Butylbenzene	(4)	10.317	92	467531	43.499
139) 1,2-Dichlorobenzene	(4)	10.327	146	592526	50.809
141) 1,2-Diethylbenzene	(4)	10.382	119	550184	48.703
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	89927	47.602
145) 1,3,5-Trichlorobenzene	(4)	11.011	180	403236	45.092
147) 1,2,4-Trichlorobenzene	(4)	11.421	180	381282	44.410
148) Hexachlorobutadiene	(4)	11.530	225	150776	49.308
149) Naphthalene	(4)	11.582	128	1363562	46.939
150) 1,2,3-Trichlorobenzene	(4)	11.739	180	379630	45.303
109) Xylene (Total)	(3)		106	1393485	154.542
151) 2-Methylnaphthalene	(4)	12.307	142	646953	39.035
142) Diethylbenzene (total)	(4)		100	1887406	145.247

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

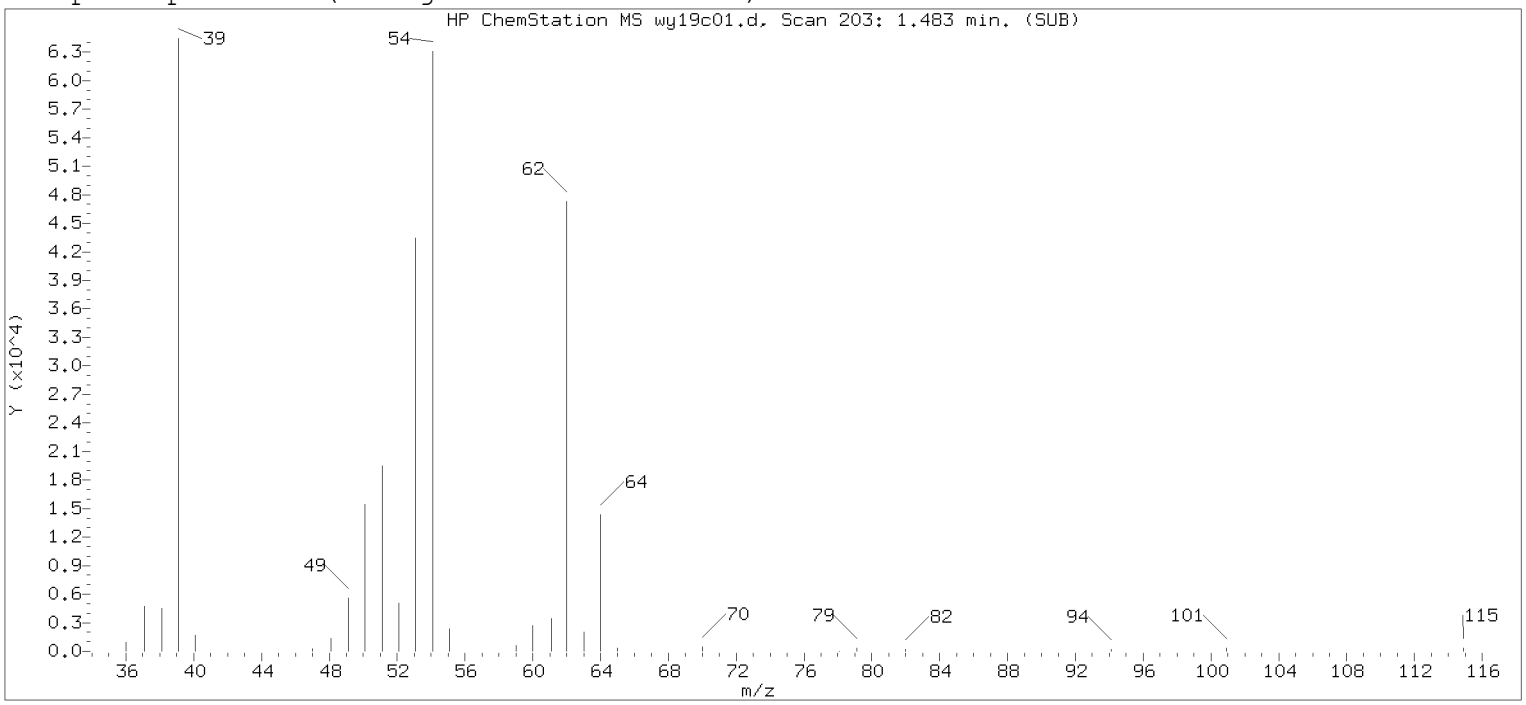
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 203
Retention Time (minutes): 1.483
Quant Ion : 39.00
Area (flag) : 178597M
On-Column Amount (ng) : 37.7421
Integration start scan : 189 Integration stop scan: 218
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

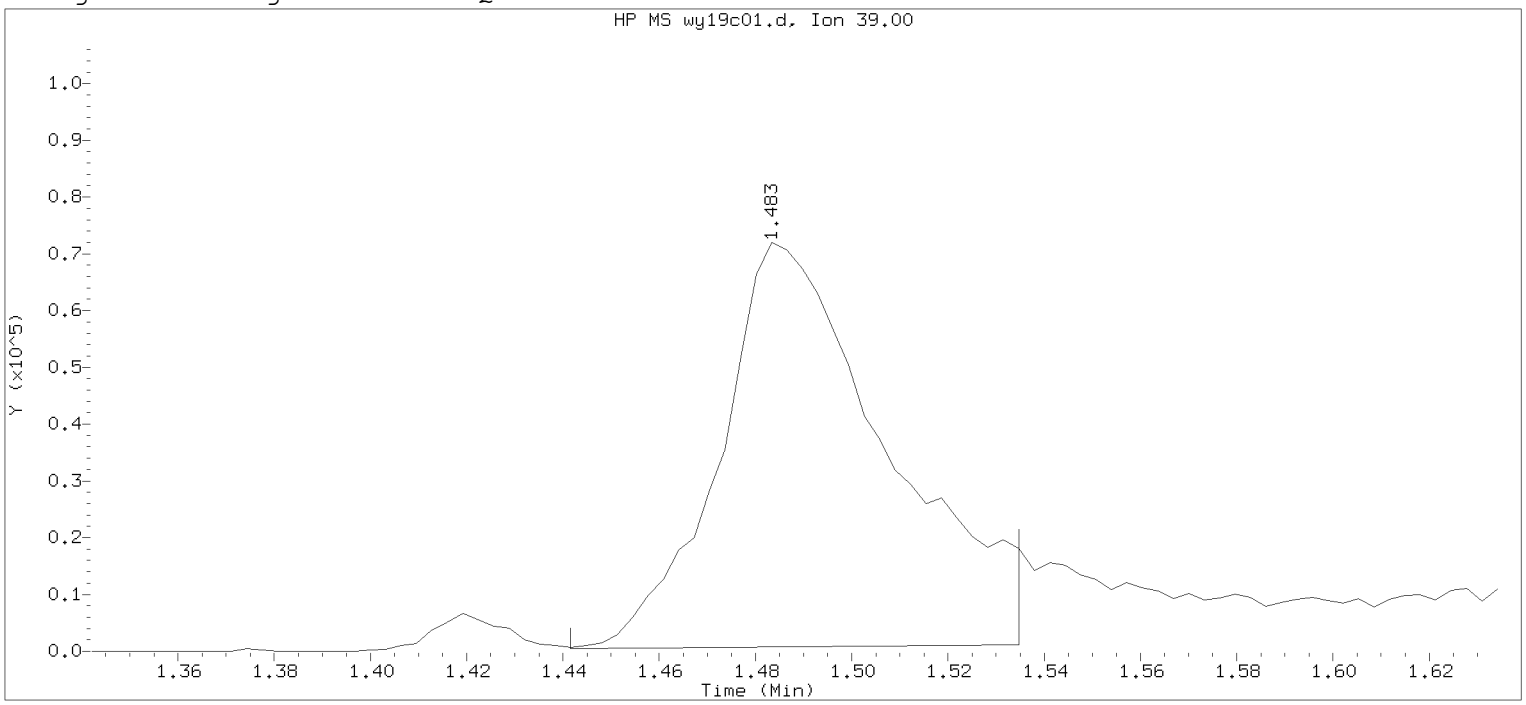
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 21:37.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

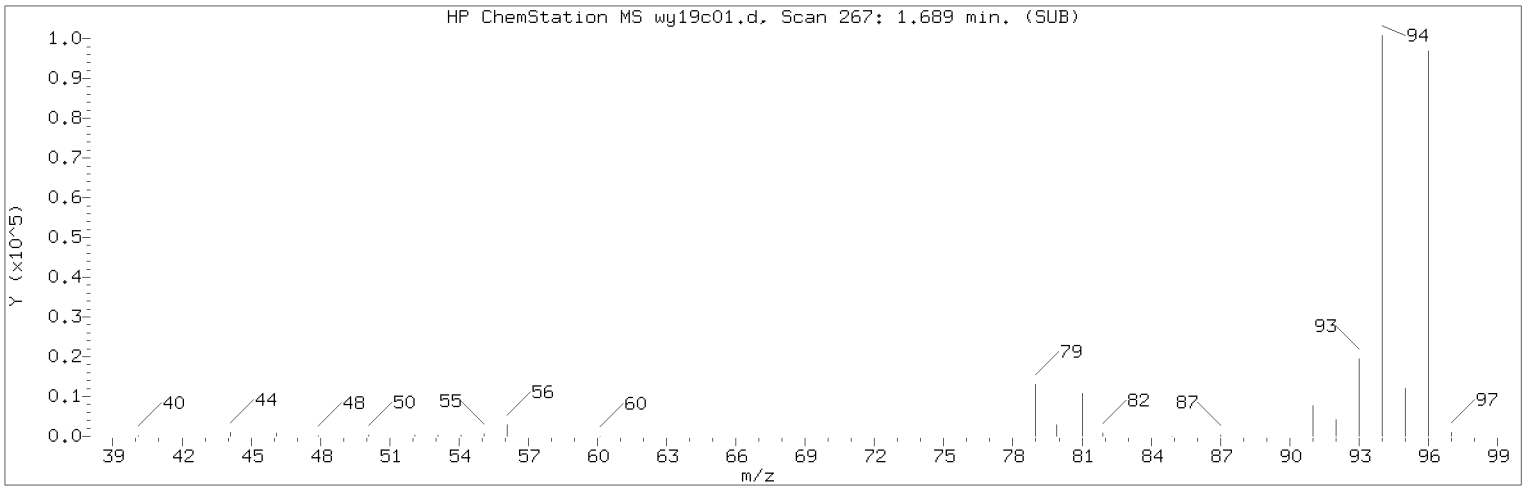
Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 11:47 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

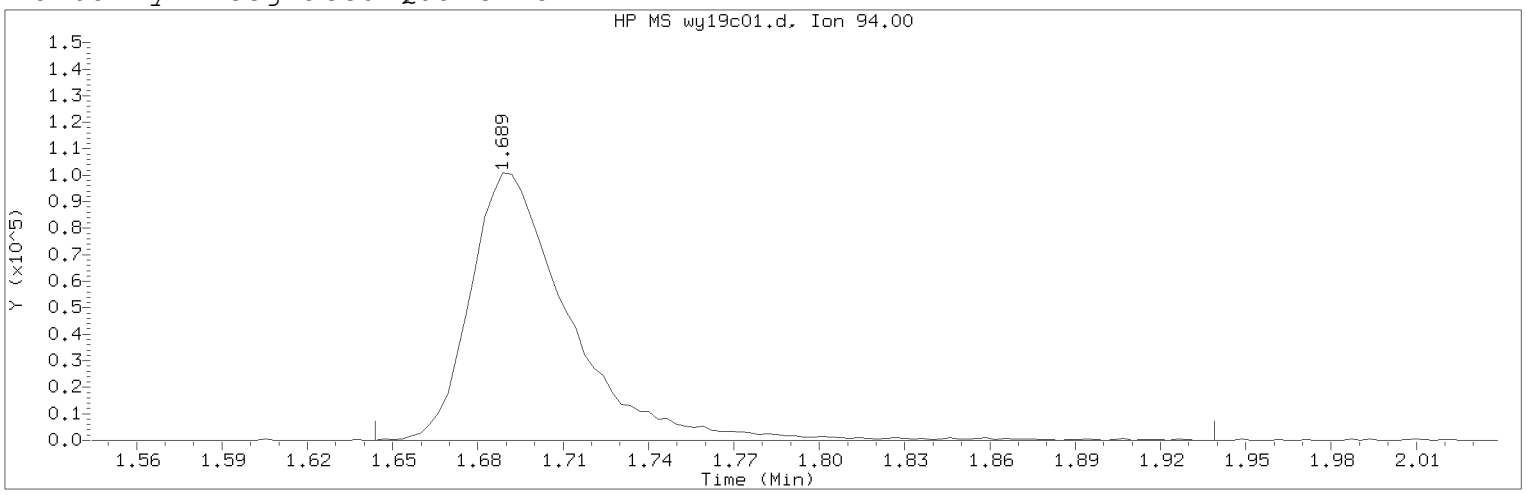
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 203
Retention Time (minutes): 1.483
Quant Ion : 39.00
Area : 172513
On-column Amount (ng) : 36.4565
Integration start scan : 189 Integration stop scan: 218
Y at integration start : 396 Y at integration end: 1136

Digitally signed by Chelsea B. Stong on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbr01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

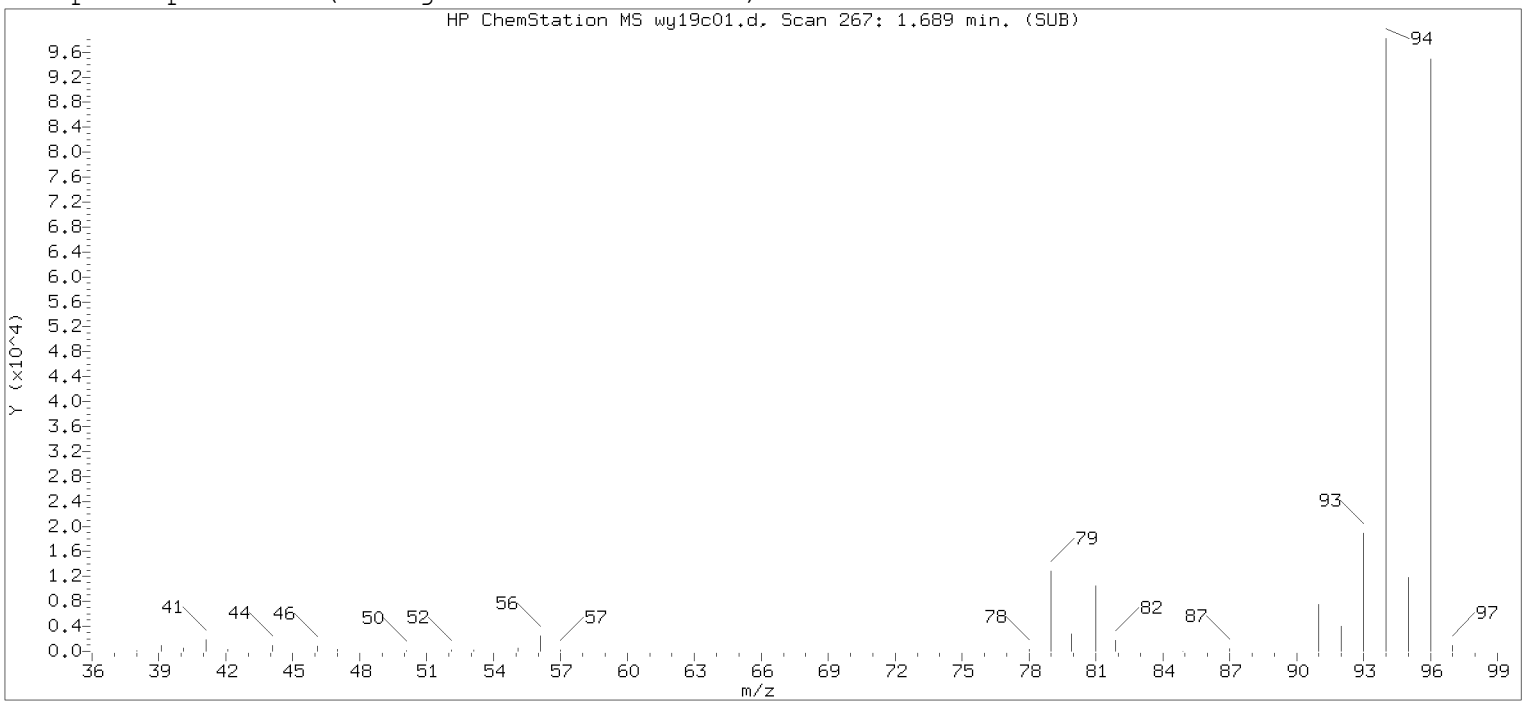
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 267
Retention Time (minutes): 1.689
Quant Ion : 94.00
Area (flag) : 244194M
On-Column Amount (ng) : 43.4984
Integration start scan : 252 Integration stop scan: 344
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

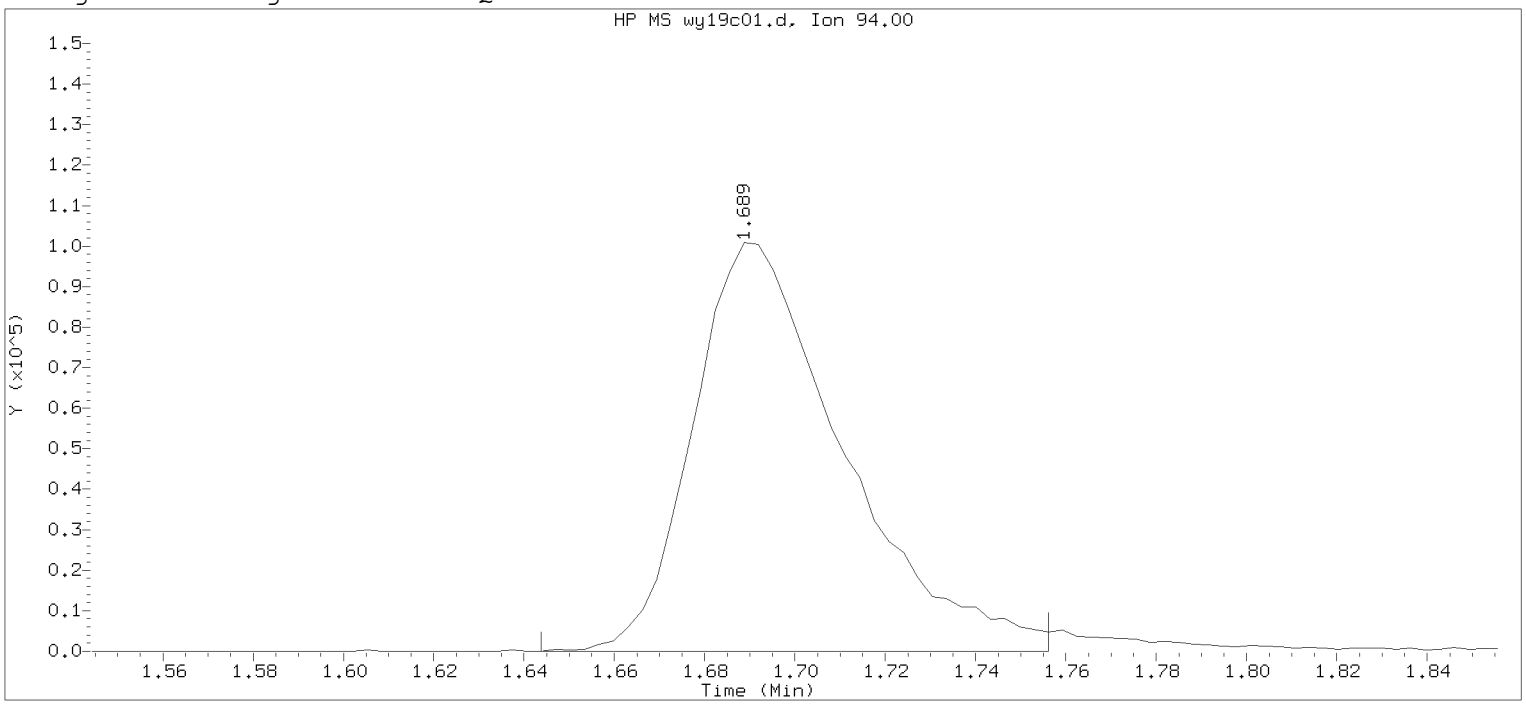
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 21:37.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

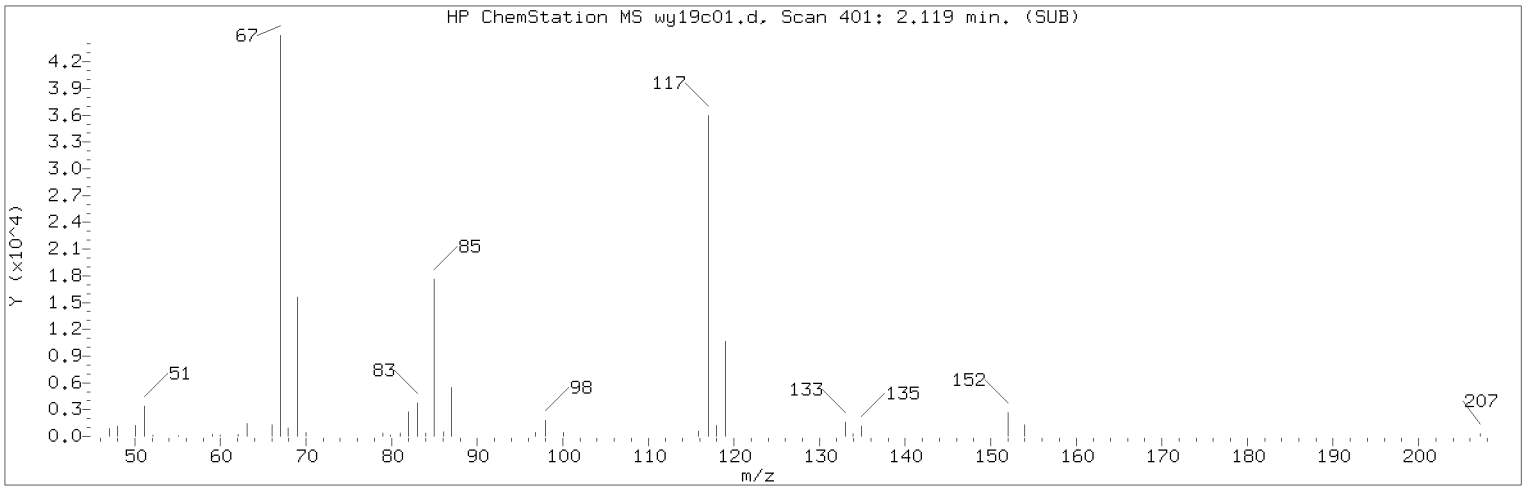
Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 11:47 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

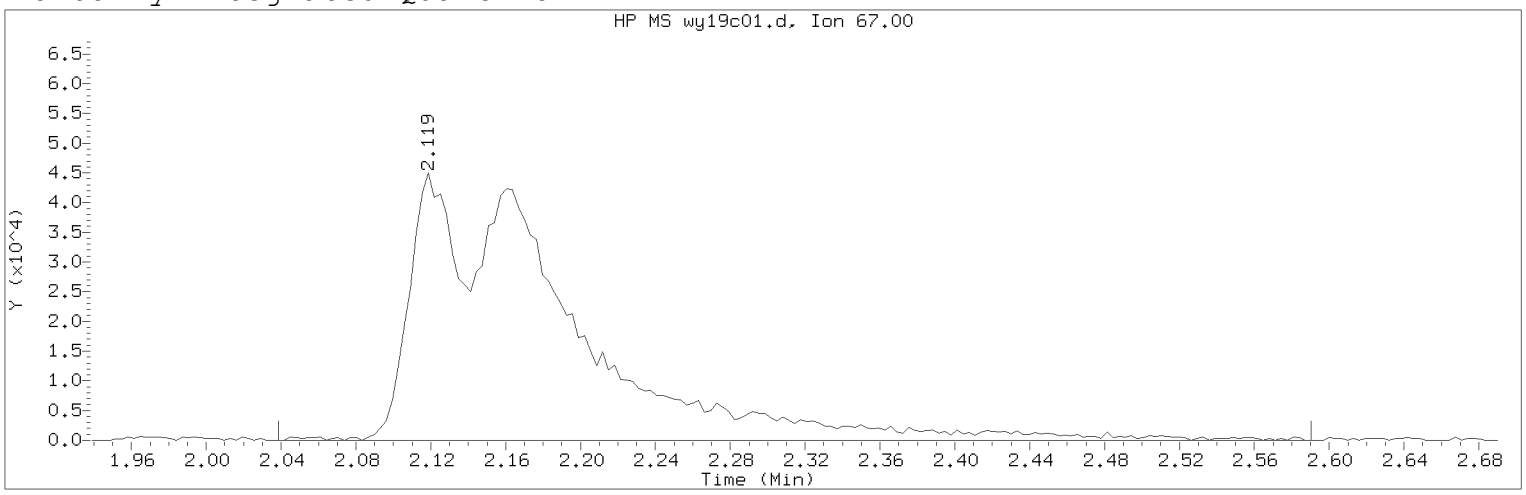
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 267
Retention Time (minutes): 1.689
Quant Ion : 94.00
Area : 232869
On-column Amount (ng) : 41.4809
Integration start scan : 252 Integration stop scan: 287
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbr01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

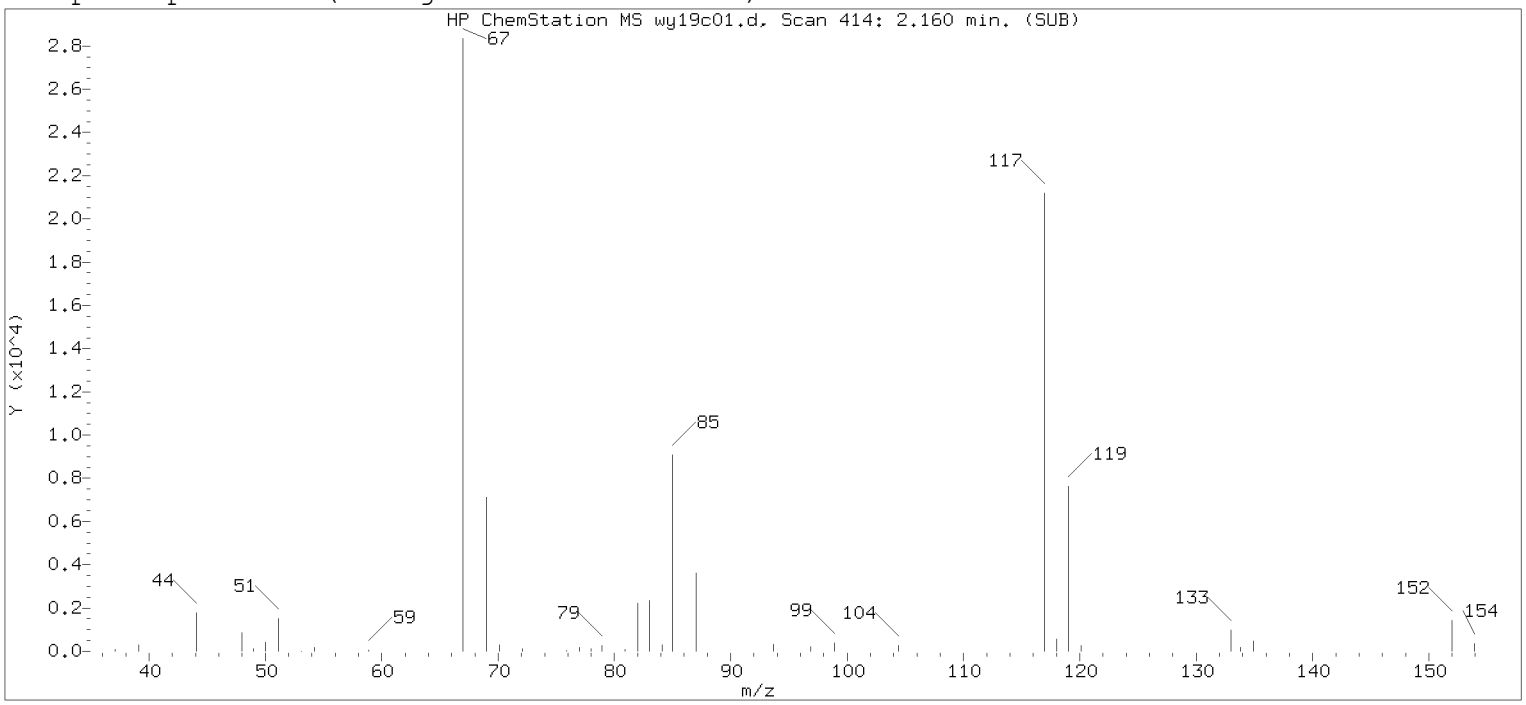
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 401
Retention Time (minutes): 2.119
Quant Ion : 67.00
Area (flag) : 260018M
On-Column Amount (ng) : 46.0271
Integration start scan : 375 Integration stop scan: 547
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

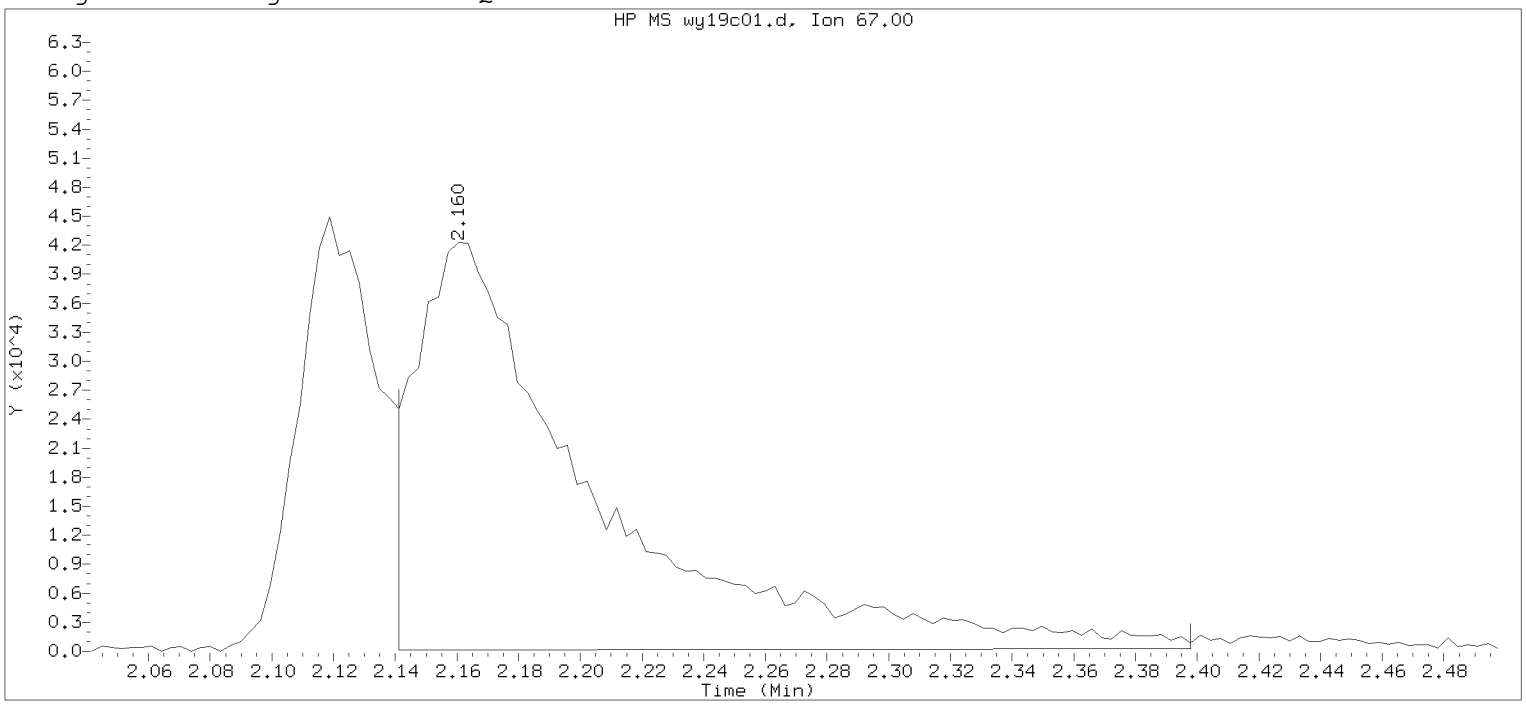
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 21:37.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

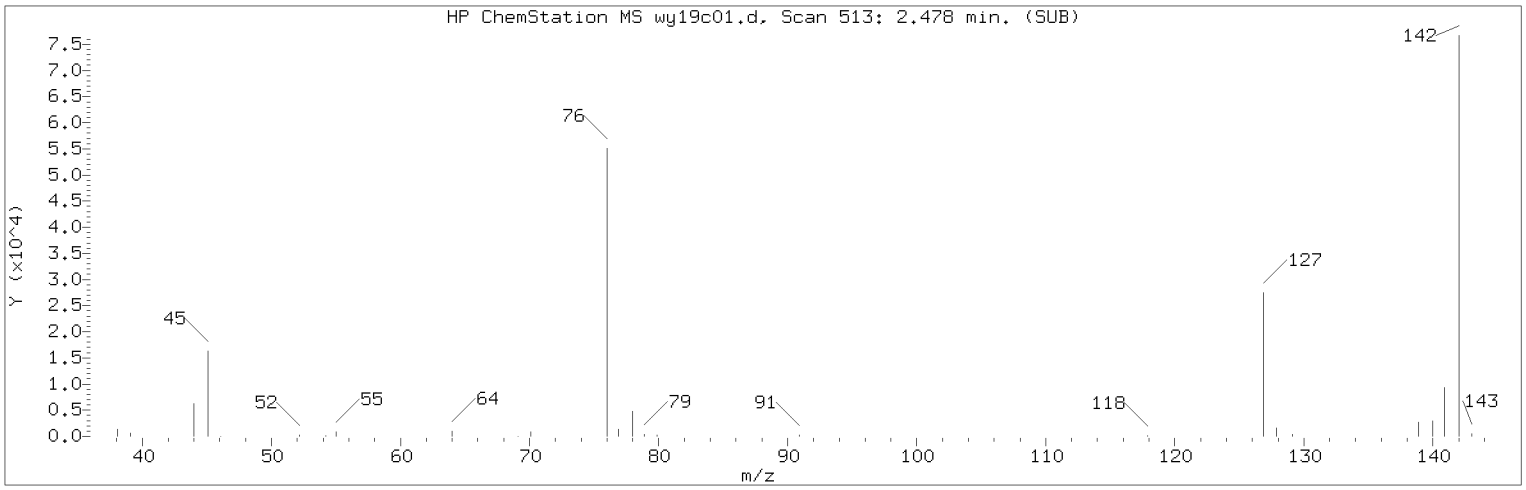
Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 11:47 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

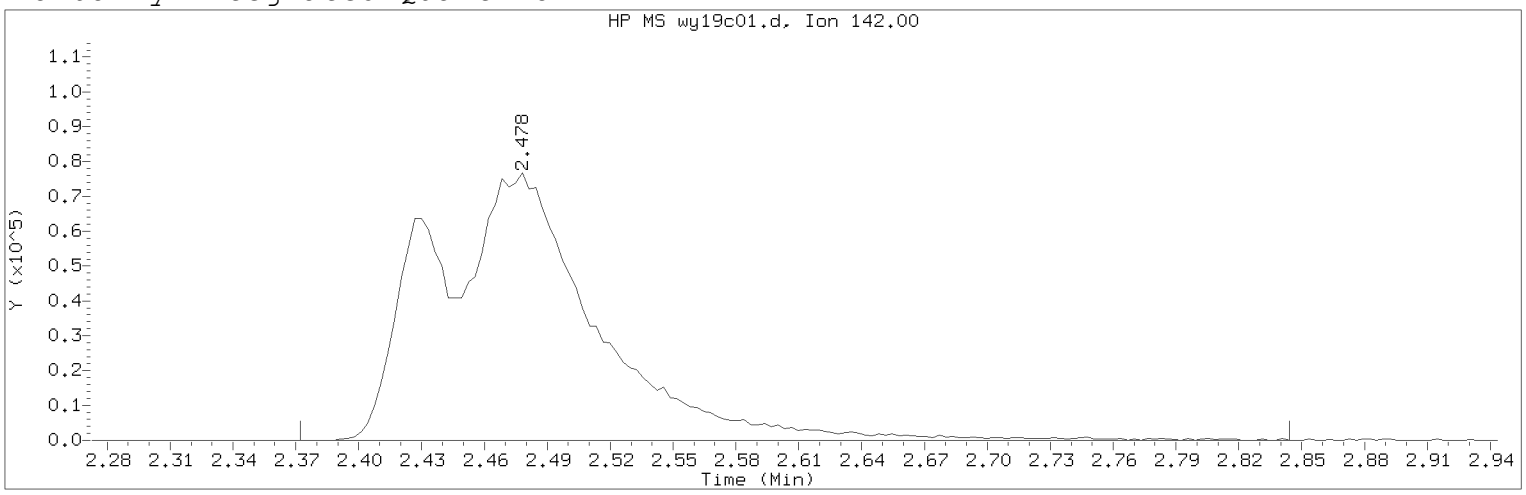
Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 414		
Retention Time (minutes)	: 2.160		
Quant Ion	: 67.00		
Area	: 168794		
On-column Amount (ng)	: 29.8791		
Integration start scan	: 407	Integration stop scan:	487
Y at integration start	: 157	Y at integration end:	269

Digitally signed by Chelsea B. Stong on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: CBR01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

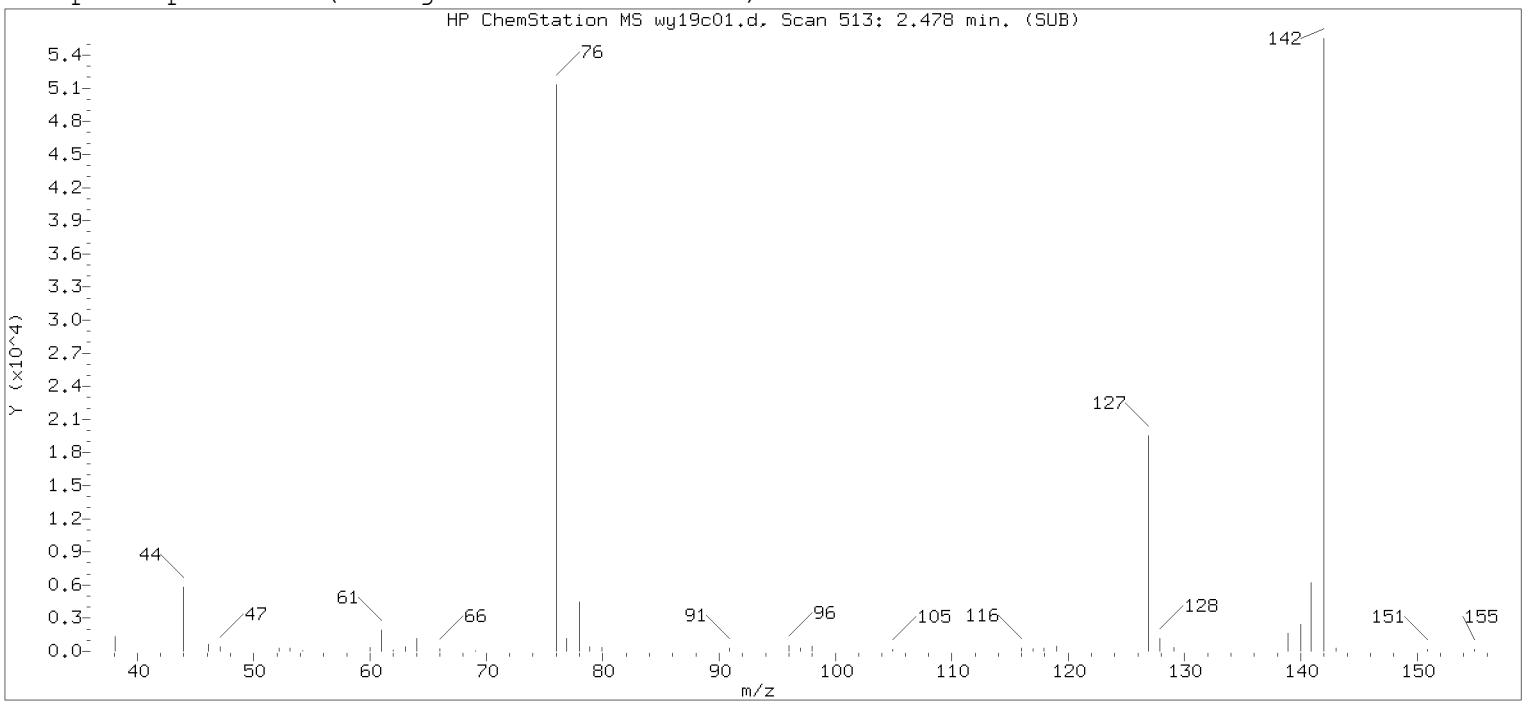
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 513
Retention Time (minutes): 2.478
Quant Ion : 142.00
Area (flag) : 417167M
On-Column Amount (ng) : 51.1983
Integration start scan : 479 Integration stop scan: 626
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

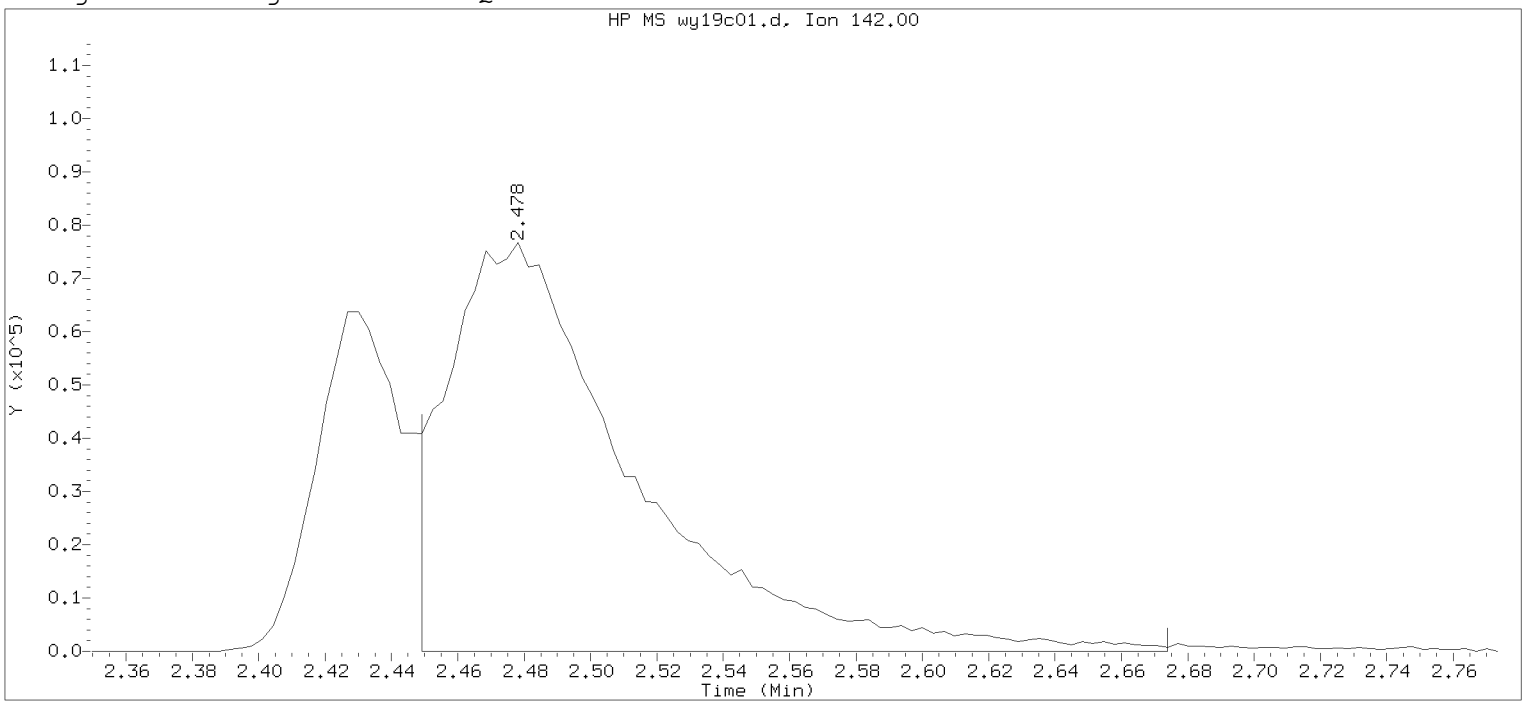
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 21:37.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

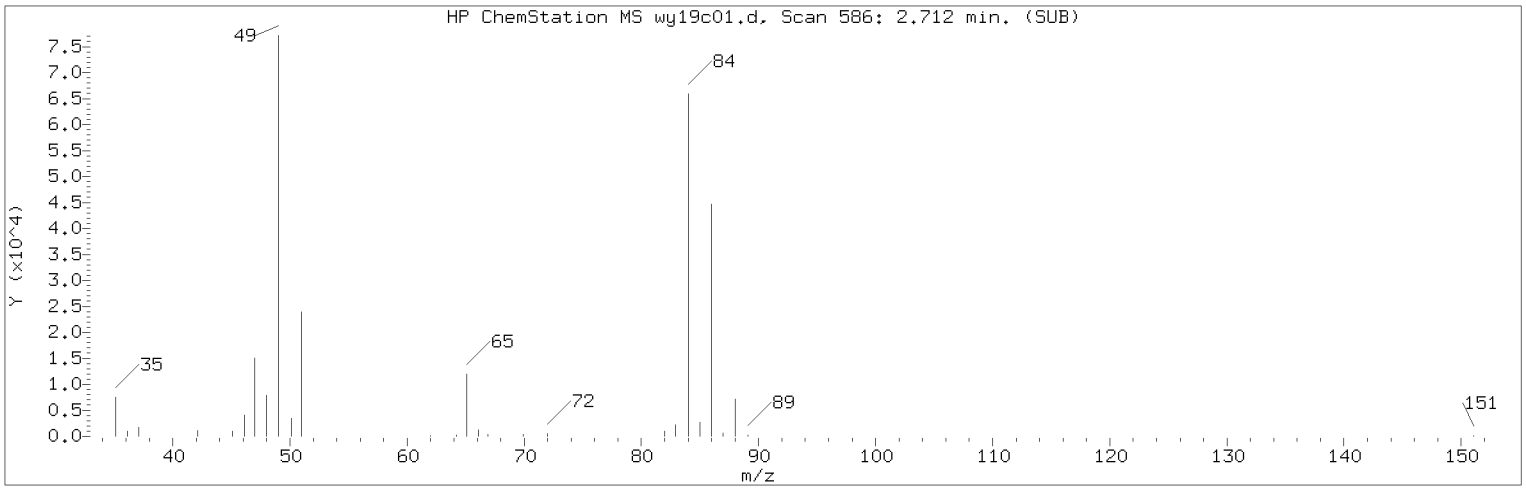
Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 11:47 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

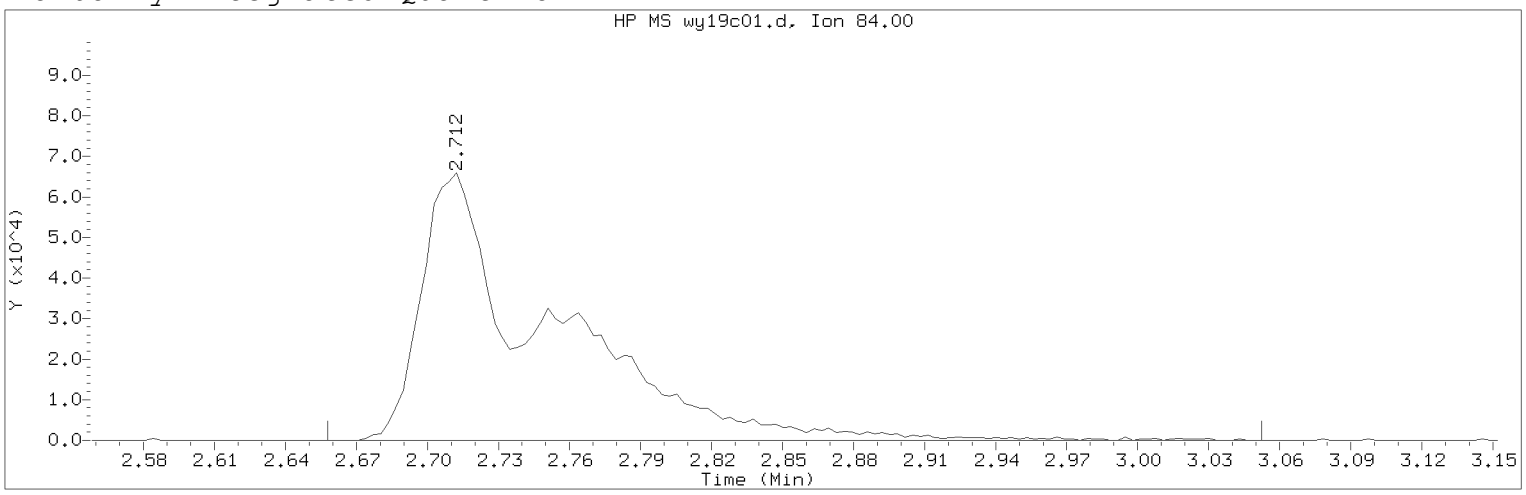
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 513
Retention Time (minutes): 2.478
Quant Ion : 142.00
Area : 298488
On-column Amount (ng) : 36.6330
Integration start scan : 503 Integration stop scan: 573
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbr01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

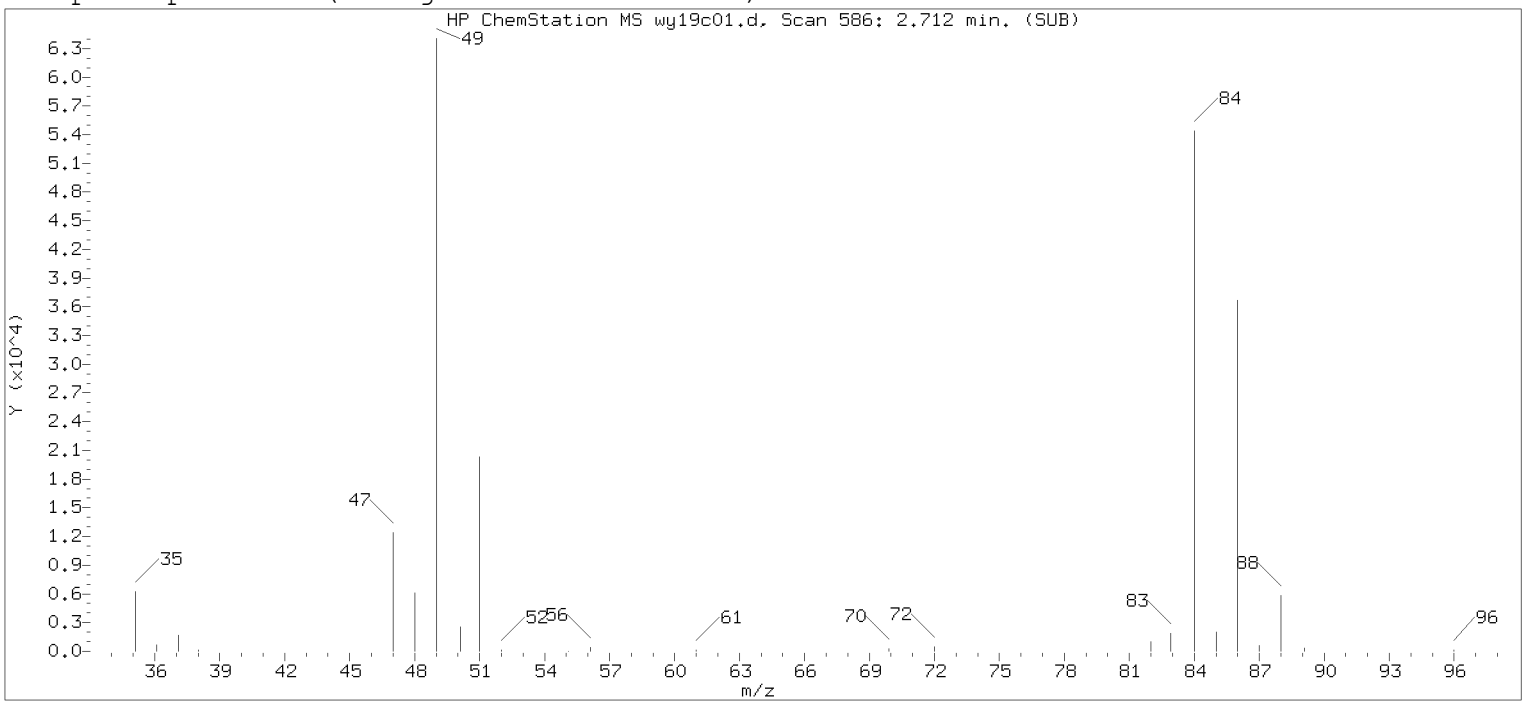
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 586
Retention Time (minutes): 2.712
Quant Ion : 84.00
Area (flag) : 247023M
On-Column Amount (ng) : 47.5295
Integration start scan : 568 Integration stop scan: 691
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

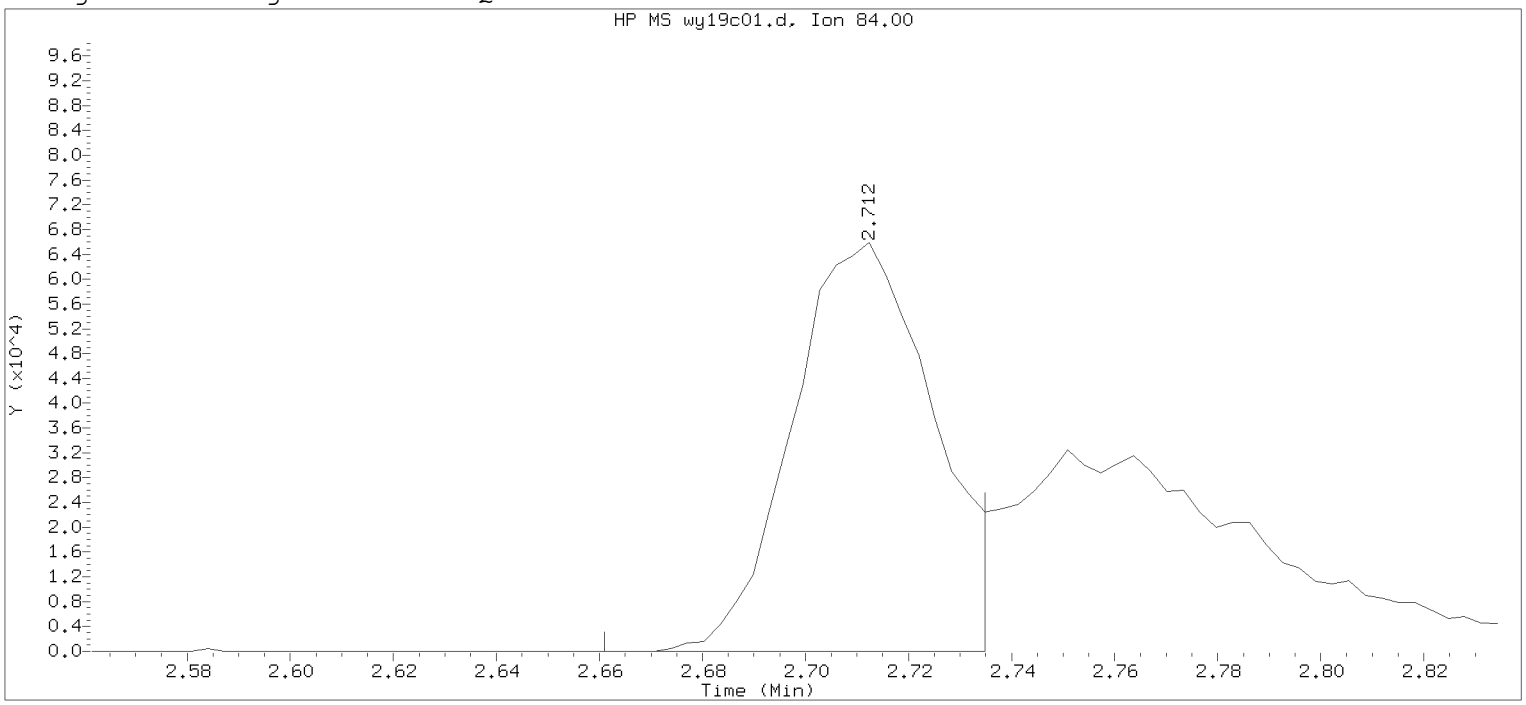
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 21:37.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

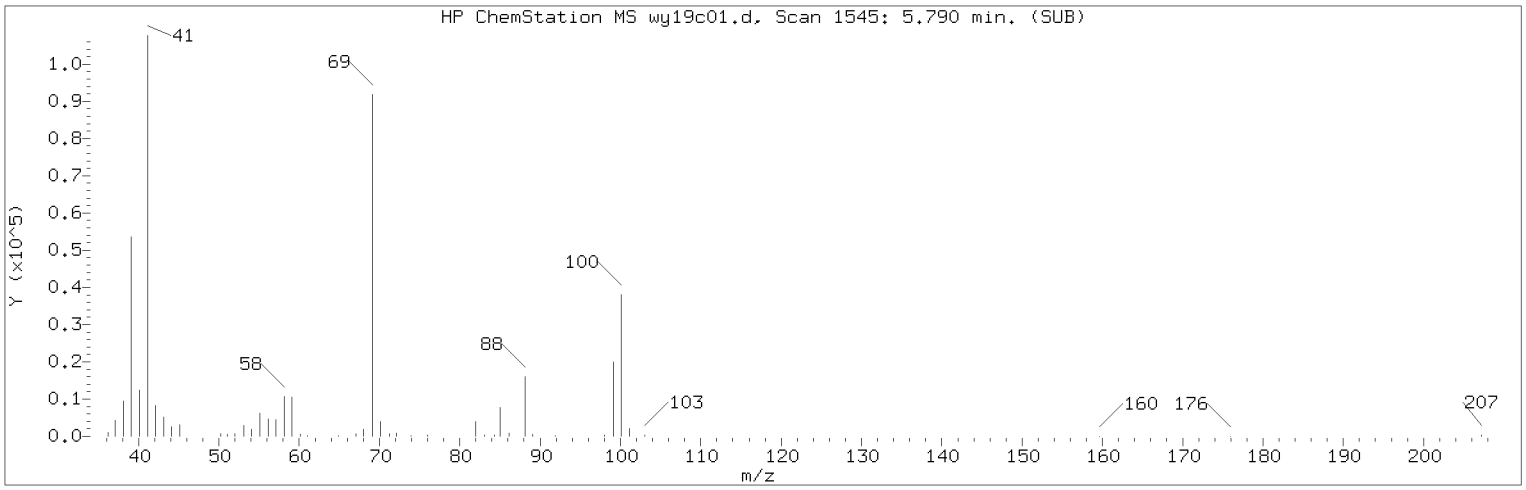
Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 11:47 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

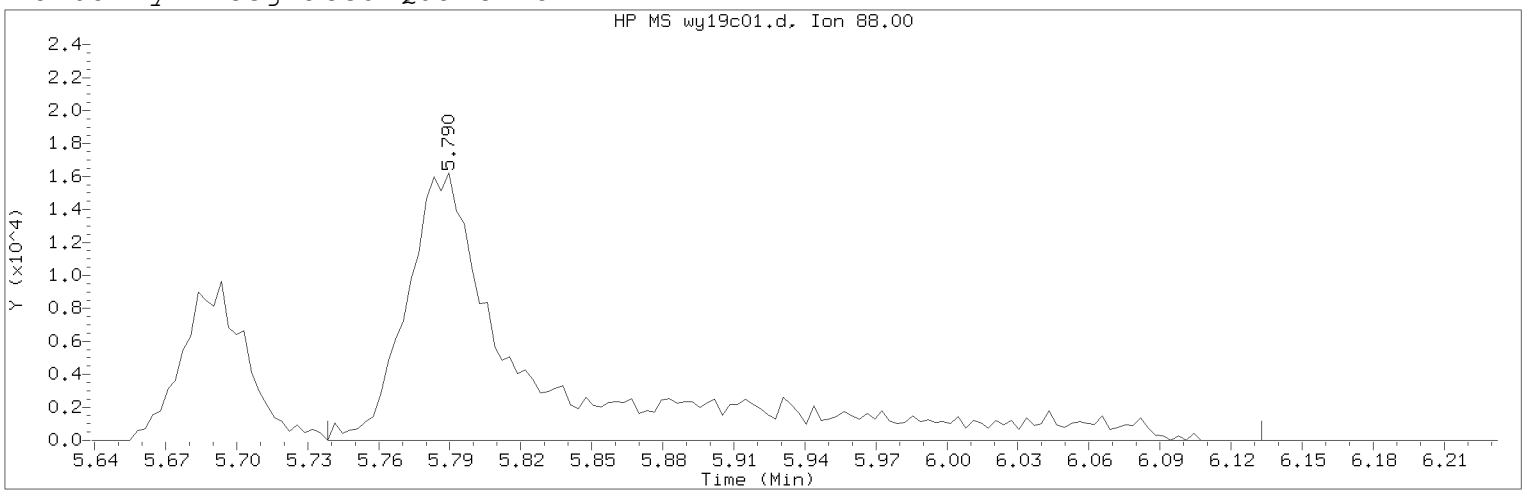
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 586
Retention Time (minutes): 2.712
Quant Ion : 84.00
Area : 123849
On-column Amount (ng) : 23.8297
Integration start scan : 569 Integration stop scan: 592
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: CBR01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

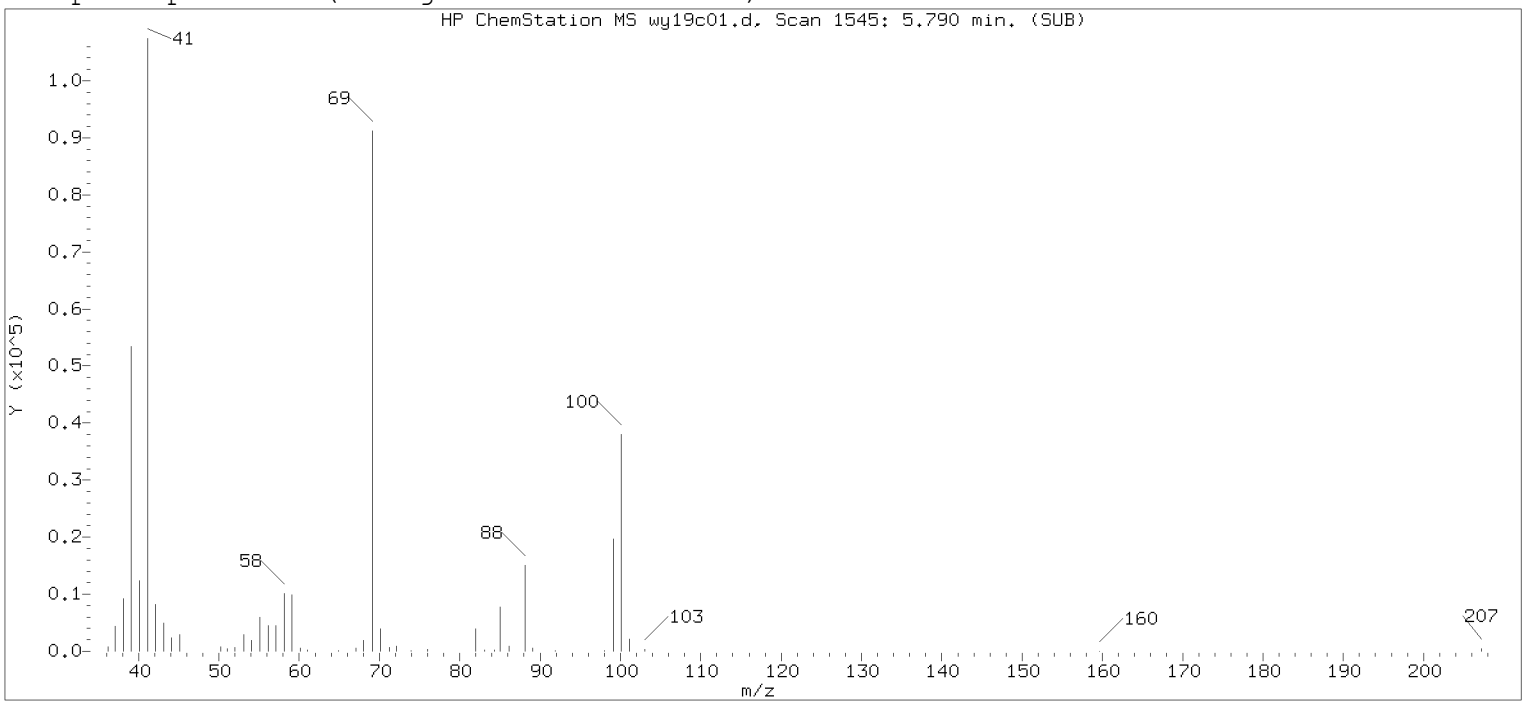
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1545
Retention Time (minutes): 5.790
Quant Ion : 88.00
Area (flag) : 62396M
On-Column Amount (ng) : 739.4932
Integration start scan : 1528 Integration stop scan: 1651
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

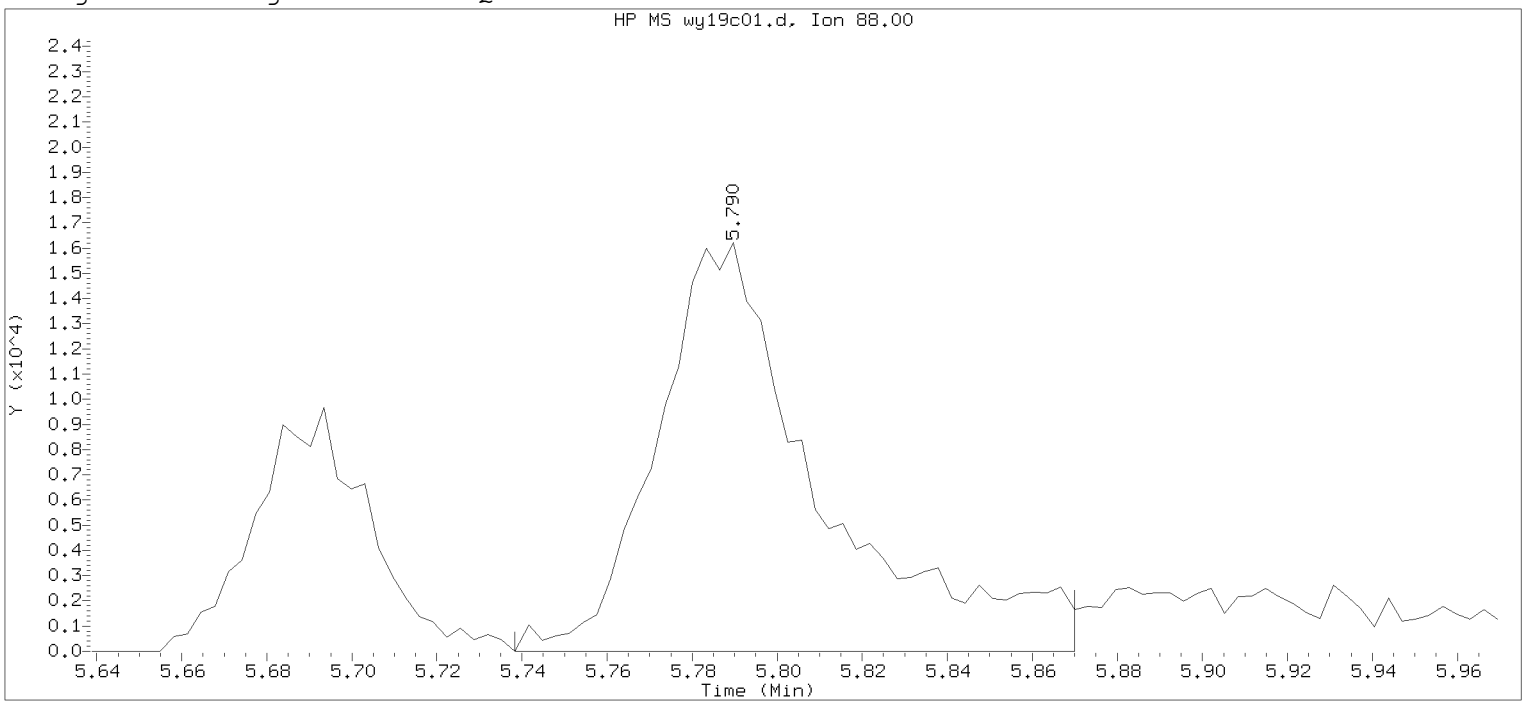
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 21:37.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 11:47 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1545		
Retention Time (minutes)	: 5.790		
Quant Ion	: 88.00		
Area	: 43240		
On-column Amount (ng)	: 512.4648		
Integration start scan	: 1528	Integration stop scan:	1569
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Chelsea B. Stong on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: CBR01947

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may19a.b/wy19m01.d Injection date and time: **19-MAY-2019 13:07**
Data file Sample Info. Line: MDL0.5;MDL0.5;1;3;MDL/LOQ;;;;wy19b02; Instrument ID: **HP09137.i** Batch: **W191381AB**
Date, time and analyst ID of latest file update: 19-May-2019 13:27 cbs01947

Blank Data file reference: **/chem2/HP09137.i/19may19a.b/wy19b02.d**

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: **MDL**
Calibration date and time (Last Method Edit): 19-MAY-2019 12:48
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may19a.b/wy19c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.738	(-0.003)	594	65	169887	(-10)	250.00	
66) Fluorobenzene	5.032	(0.003)	1309	96	917398	(-5)	50.00	
101) Chlorobenzene-d5	8.164	(-0.003)	2285	117	708870	(-5)	50.00	
132) 1,4-Dichlorobenzene-d4	10.042	(0.000)	2870	152	361566	(-16)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.359	(-0.001)	113	207184	48.748	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692	(-0.001)	102	55174	48.811	98%		80 - 120
84) Toluene-d8	(3)	6.698	(0.001)	98	892077	50.221	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.001)	95	307084	43.213	86%		80 - 120

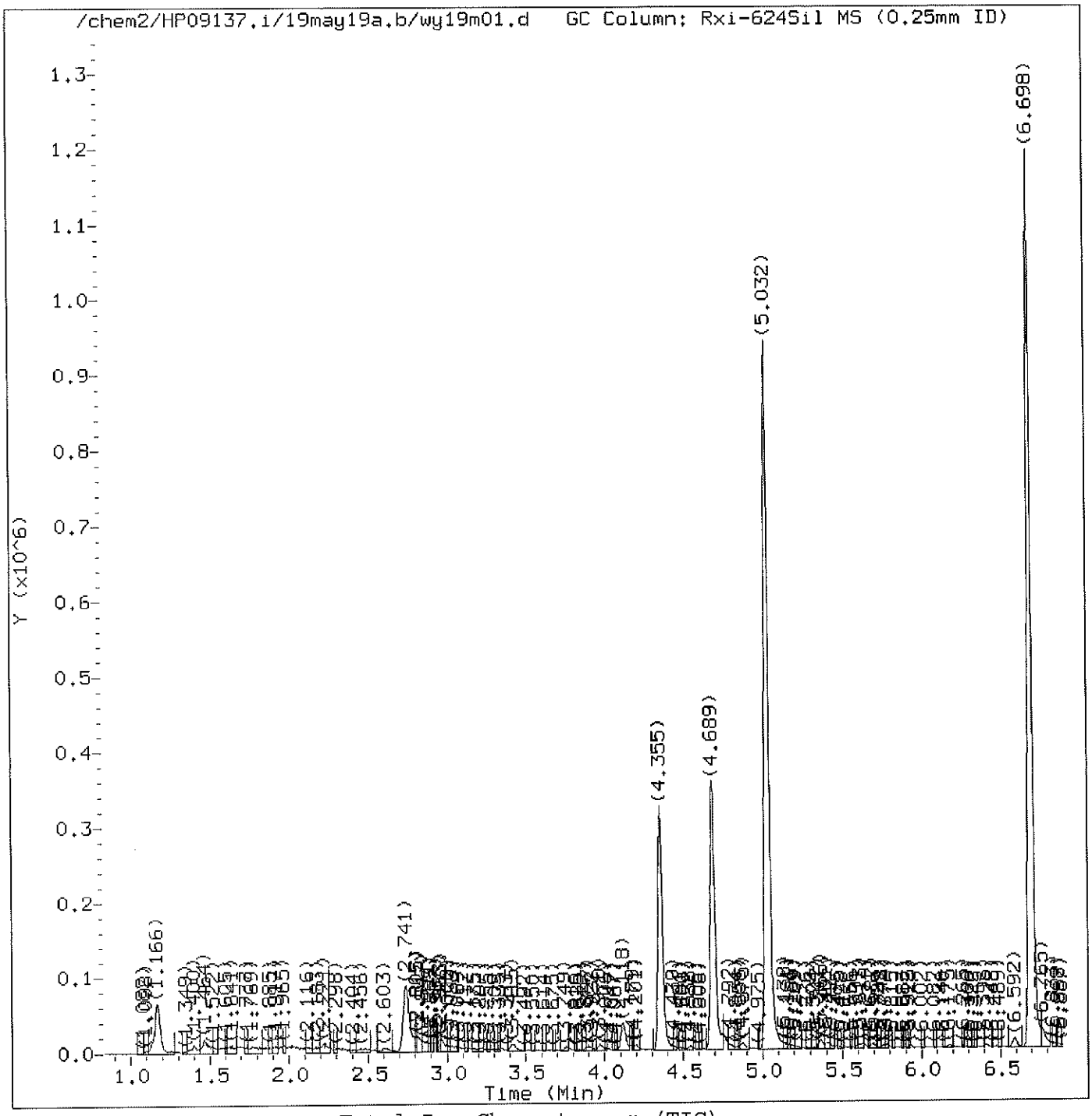
Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (sample)	Blank Conc.	Qual.	Reporting Limit (LOQ) (in sample)	
6) Vinyl Chloride	(2)	1.454	(0.001)	62	2277	0.336	0.34	0.015	B J	0.2	1
9) Chloroethane	(2)	1.766	(0.001)	64	2048M	0.460	0.46	0.047	B J	0.2	1

B = Compound detected in referenced method blank. M = Compound was manually integrated.

Total number of targets = 2

Digitally signed by Chelsea B. Stong on 05/19/2019 at 13:27. Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:25. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

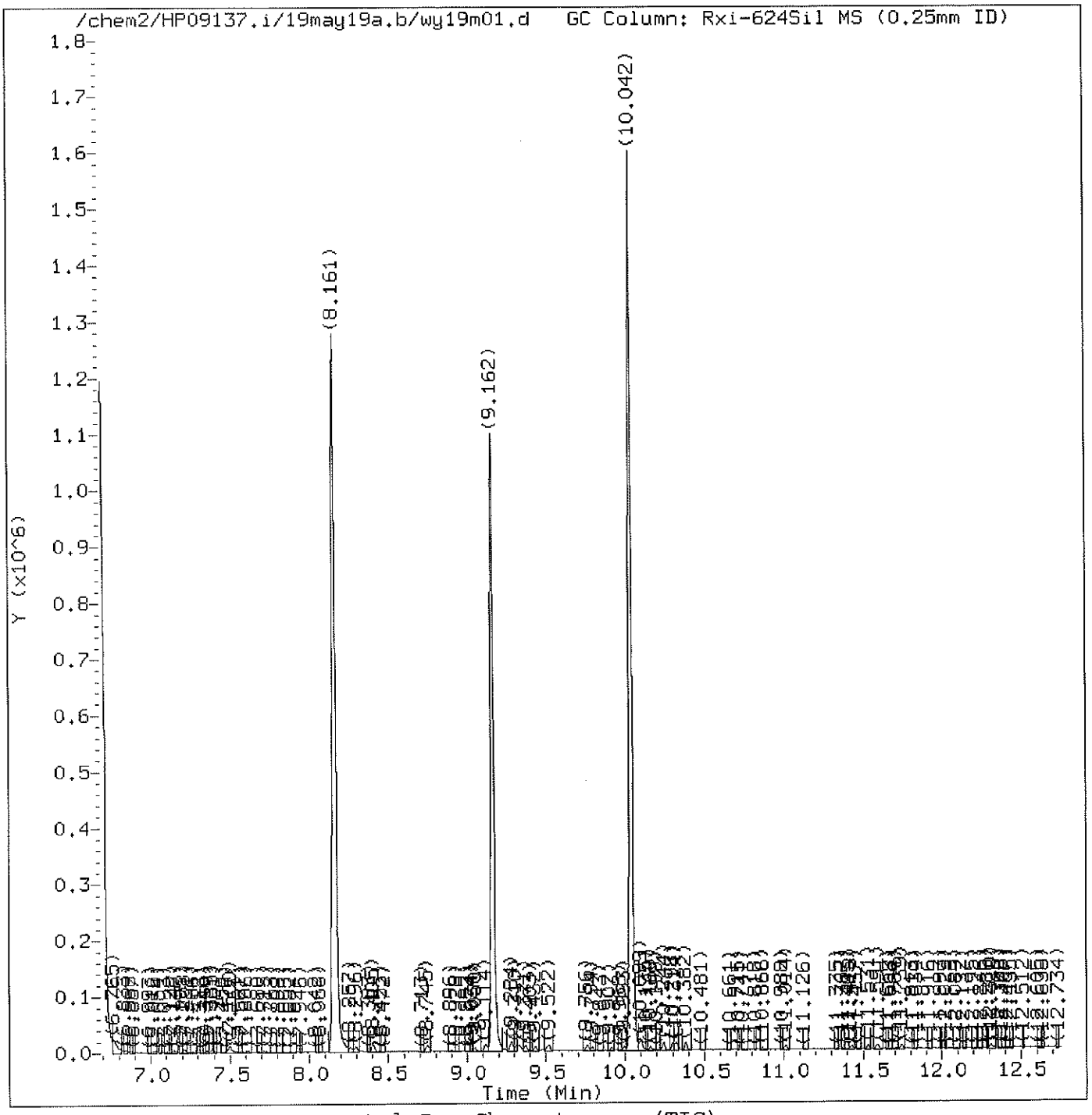
Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19m01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:07 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: MDL
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 13:27 cbs01947

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 13:27.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19m01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:07 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: MDL
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 13:27 cbs01947

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 13:27.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19m01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:07 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: MDL
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 13:27 cbs01947

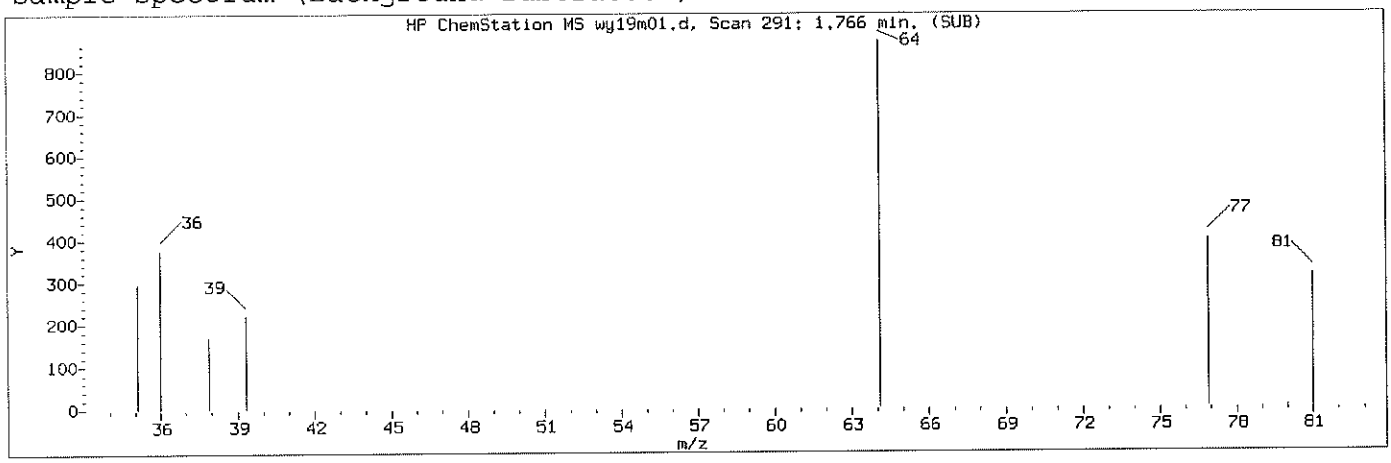
Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	1.455	62	2277	0.336
9) Chloroethane	(2)	1.766	64	2048M	0.460
29)*t-Butyl alcohol-d10	(1)	2.738	65	169887	250.000
52)$Dibromofluoromethane	(2)	4.359	113	207184	48.748
57)$1,2-Dichloroethane-d4	(2)	4.692	102	55174	48.811
66)*Fluorobenzene	(2)	5.032	96	917398	50.000
84)$Toluene-d8	(3)	6.698	98	892077	50.221
101)*Chlorobenzene-d5	(3)	8.164	117	708870	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	307084	43.213
132)*1,4-Dichlorobenzene-d4	(4)	10.042	152	361566	50.000

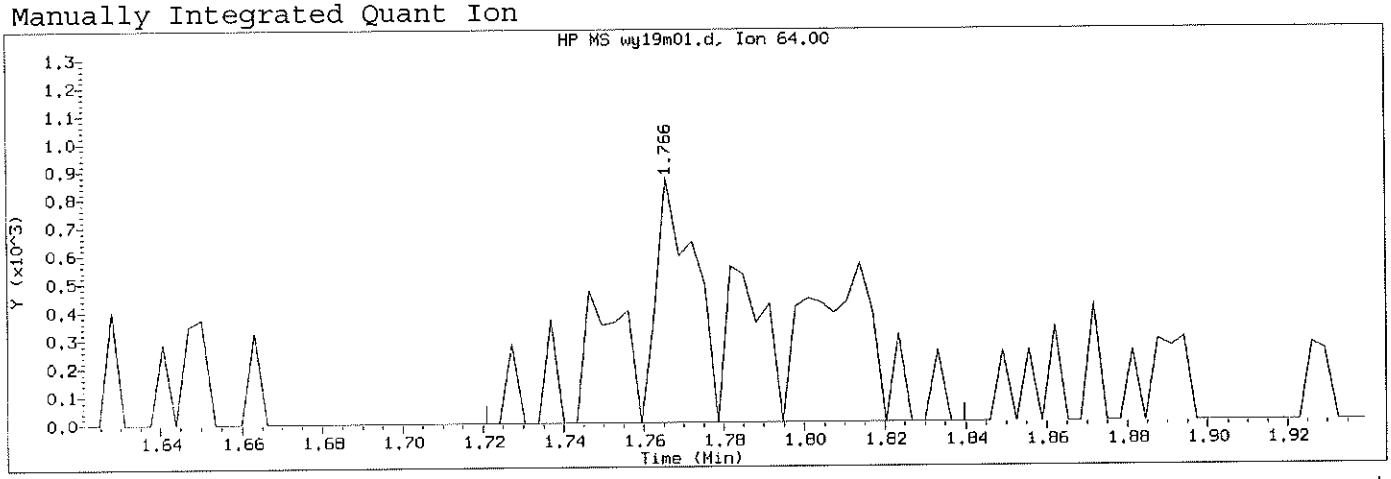
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 13:27.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19m01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:07 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: MDL
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 13:27 cbs01947

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

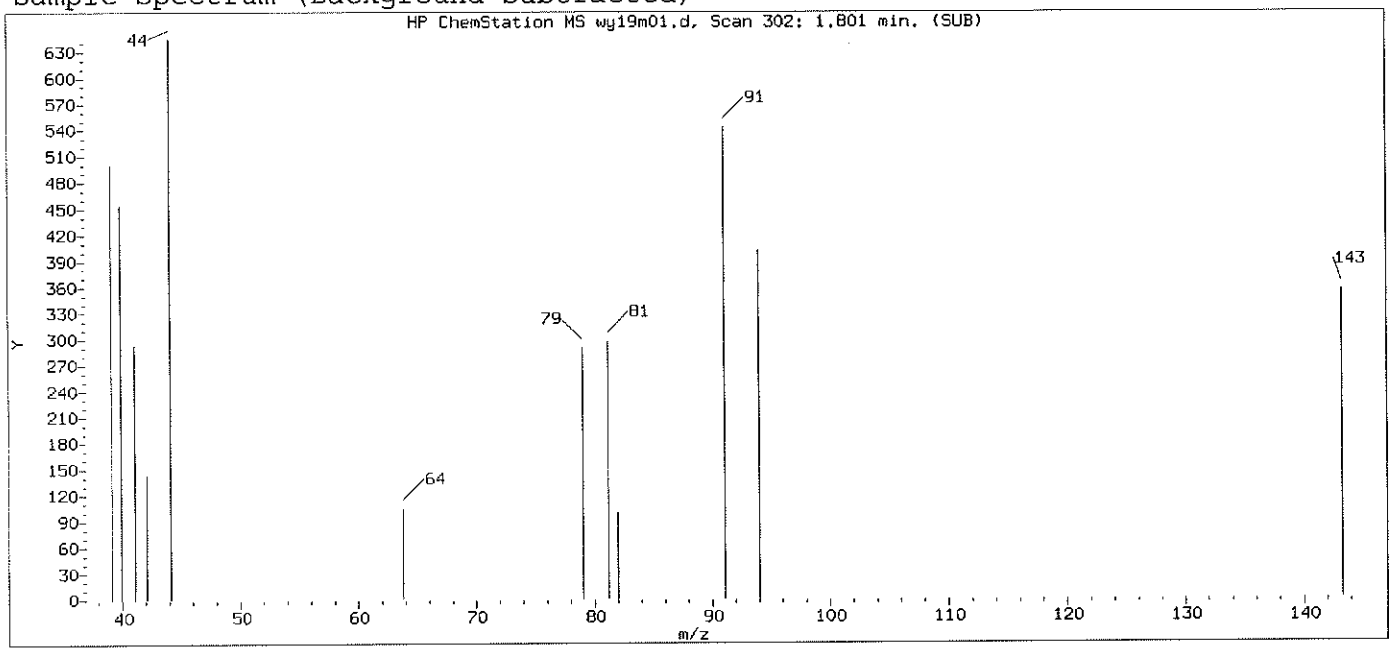
Compound Number	: 9		
Compound Name	: Chloroethane		
Scan Number	: 291		
Retention Time (minutes)	: 1.766		
Quant Ion	: 64.00		
Area (flag)	: 2048M		
On-Column Amount (ng)	: 0.4597		
Integration start scan	: 276	Integration stop scan:	313
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

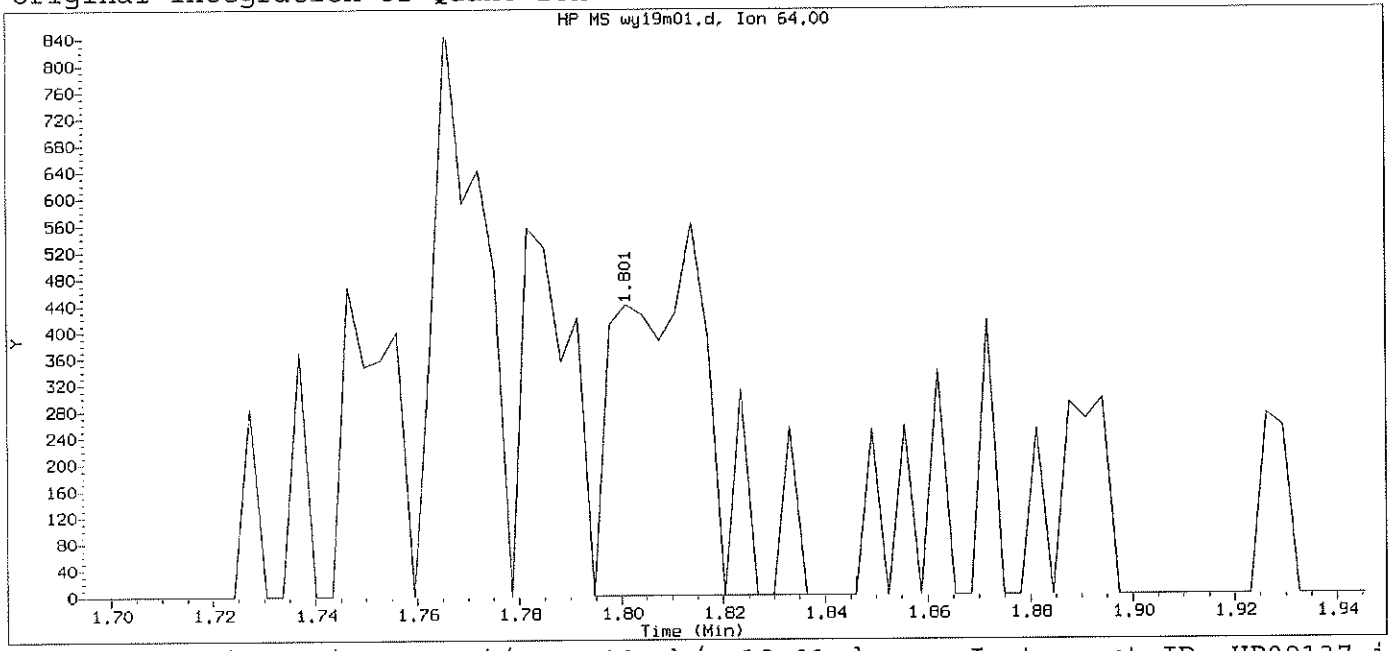
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 05/19/2019 at 13:27. Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:25.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19m01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:07 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: MDL
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 13:23 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Compound Number	: 9		
Compound Name	: Chloroethane		
Scan Number	: 302		
Retention Time (minutes)	: 1.801		
Quant Ion	: 64.00		
Area	: 693		
On-column Amount (ng)	: 0.1556		
Integration start scan	: 299	Integration stop scan:	315
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Chelsea B. Stong on 05/19/2019 at 13:27.
Target 3.5 esignature user ID: cbs01947

Data File: /chem2/HP26285.i/19mar25i.b/5m25t01.d

Date : 25-MAR-2019 11:37

Client ID: BFB Feb05-19

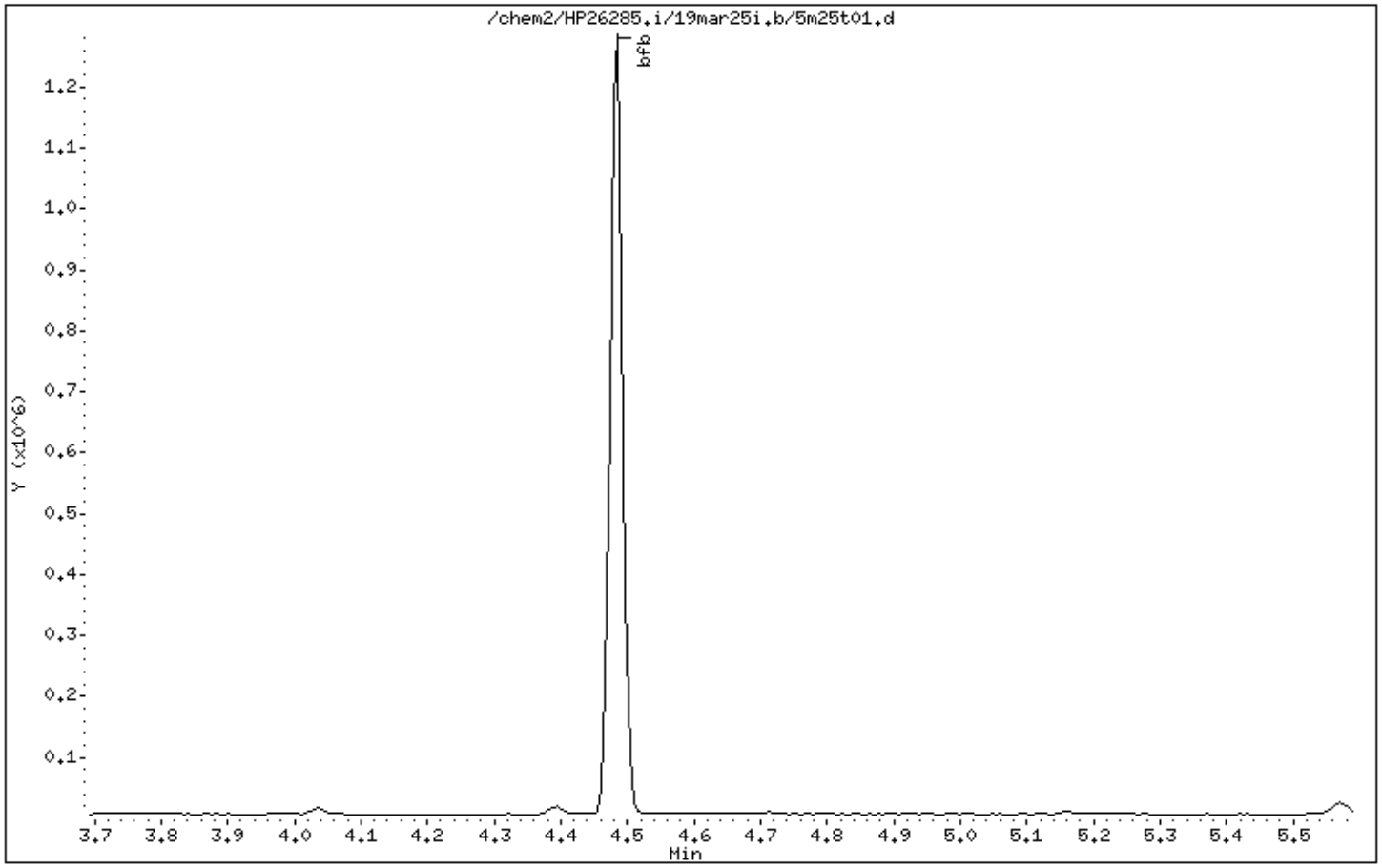
Instrument: HP26285.i

Sample Info: BFB Feb05-19;50 ng BFB;1;3;;;;;;

Operator: APR27582

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Kevin Kelly on 03/25/2019 at 21:53.
Target 3.5 esignature user ID: kk10002

Data File: /chem2/HP26285.i/19mar25i.b/5m25t01.d

Date : 25-MAR-2019 11:37

Client ID: BFB Feb05-19

Instrument: HP26285.i

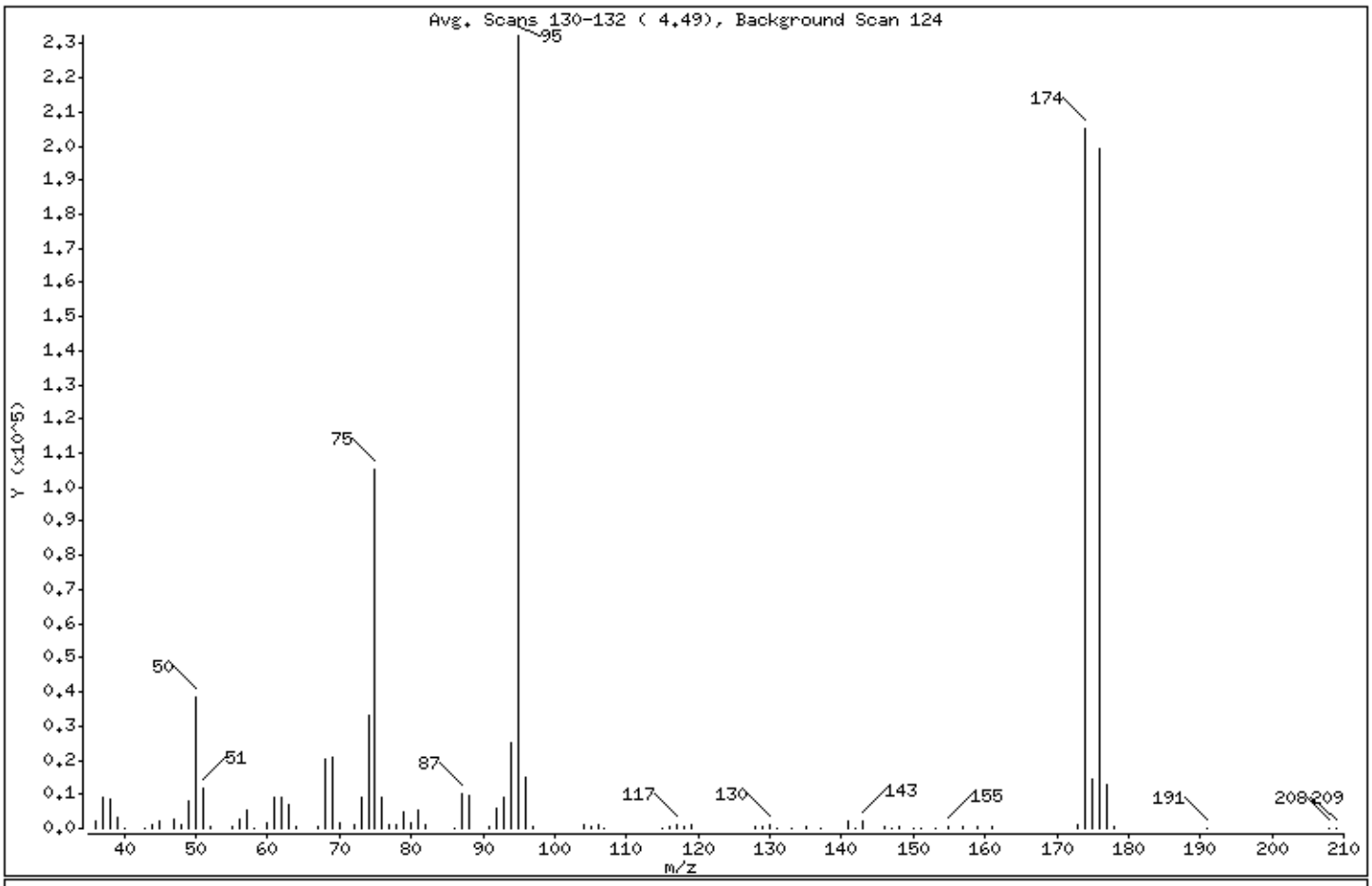
Sample Info: BFB Feb05-19;50 ng BFB;1;3;;;;;;

Operator: APR27582

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.60
75	30.00 - 60.00% of mass 95	45.32
96	5.00 - 9.00% of mass 95	6.45
173	Less than 2.00% of mass 174	0.52 (0.59)
174	50.00 - 100.00% of mass 95	88.26
175	5.00 - 9.00% of mass 174	6.13 (6.95)
176	95.00 - 101.00% of mass 174	85.76 (97.17)
177	5.00 - 9.00% of mass 176	5.62 (6.55)

Digitally signed by Kevin Kelly on 03/25/2019 at 21:53.
Target 3.5 esignature user ID: kk10002

Data File: /chem2/HP26285.i/19mar25i.b/5m25t01.d

Date : 25-MAR-2019 11:37

Client ID: BFB Feb05-19

Instrument: HP26285.i

Sample Info: BFB Feb05-19;50 ng BFB;1;3;;;;;;

Operator: APR27582

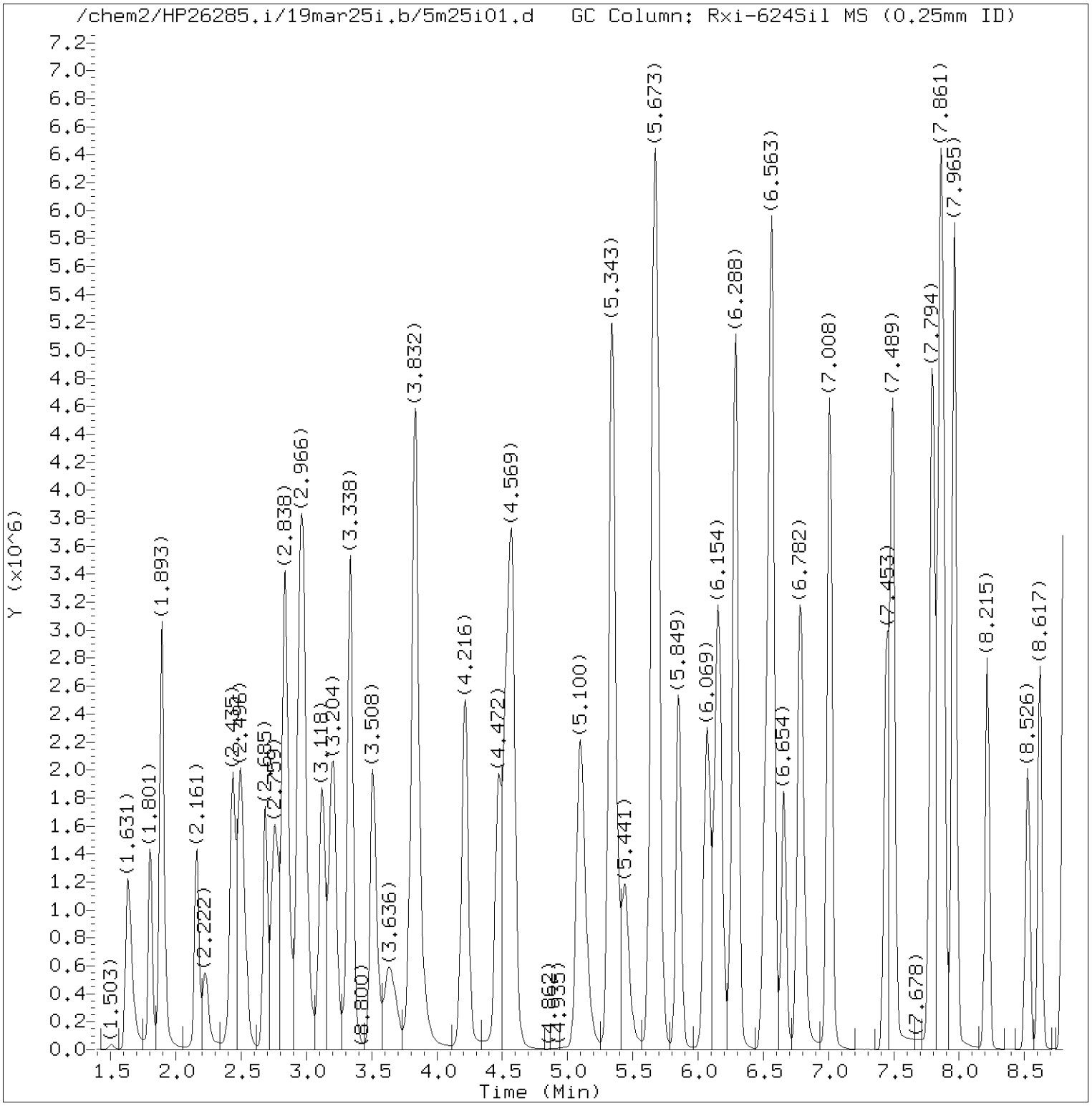
Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: 5m25t01.d
Spectrum: Avg. Scans 130-132 (4.49), Background Scan 124
Location of Maximum: 95.00
Number of points: 86

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1872	64.00	636	94.00	25024	143.00	2121
37.00	9327	67.00	571	95.00	232320	146.00	313
38.00	8303	68.00	20536	96.00	14984	147.00	86
39.00	3466	69.00	21064	97.00	502	148.00	506
40.00	116	70.00	1589	104.00	840	150.00	101
43.00	88	72.00	1029	105.00	366	151.00	92
44.00	928	73.00	8819	106.00	907	153.00	85
45.00	1933	74.00	33296	107.00	97	155.00	499
47.00	2716	75.00	105296	115.00	193	157.00	433
48.00	1099	76.00	8991	116.00	662	159.00	268
49.00	7937	77.00	1230	117.00	1274	161.00	306
50.00	38560	78.00	810	118.00	730	173.00	1202
51.00	11672	79.00	4904	119.00	1189	174.00	205056
52.00	518	80.00	1545	128.00	721	175.00	14247
55.00	630	81.00	5199	129.00	378	176.00	199232
56.00	2897	82.00	1179	130.00	805	177.00	13057
57.00	5157	86.00	221	131.00	247	178.00	366
58.00	108	87.00	9894	133.00	241	191.00	17
60.00	1767	88.00	9700	135.00	453	208.00	22
61.00	8907	91.00	709	137.00	257	209.00	92
62.00	8843	92.00	5770	141.00	2002		
63.00	6818	93.00	8903	142.00	87		

Digitally signed by Kevin Kelly on 03/25/2019 at 21:53.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

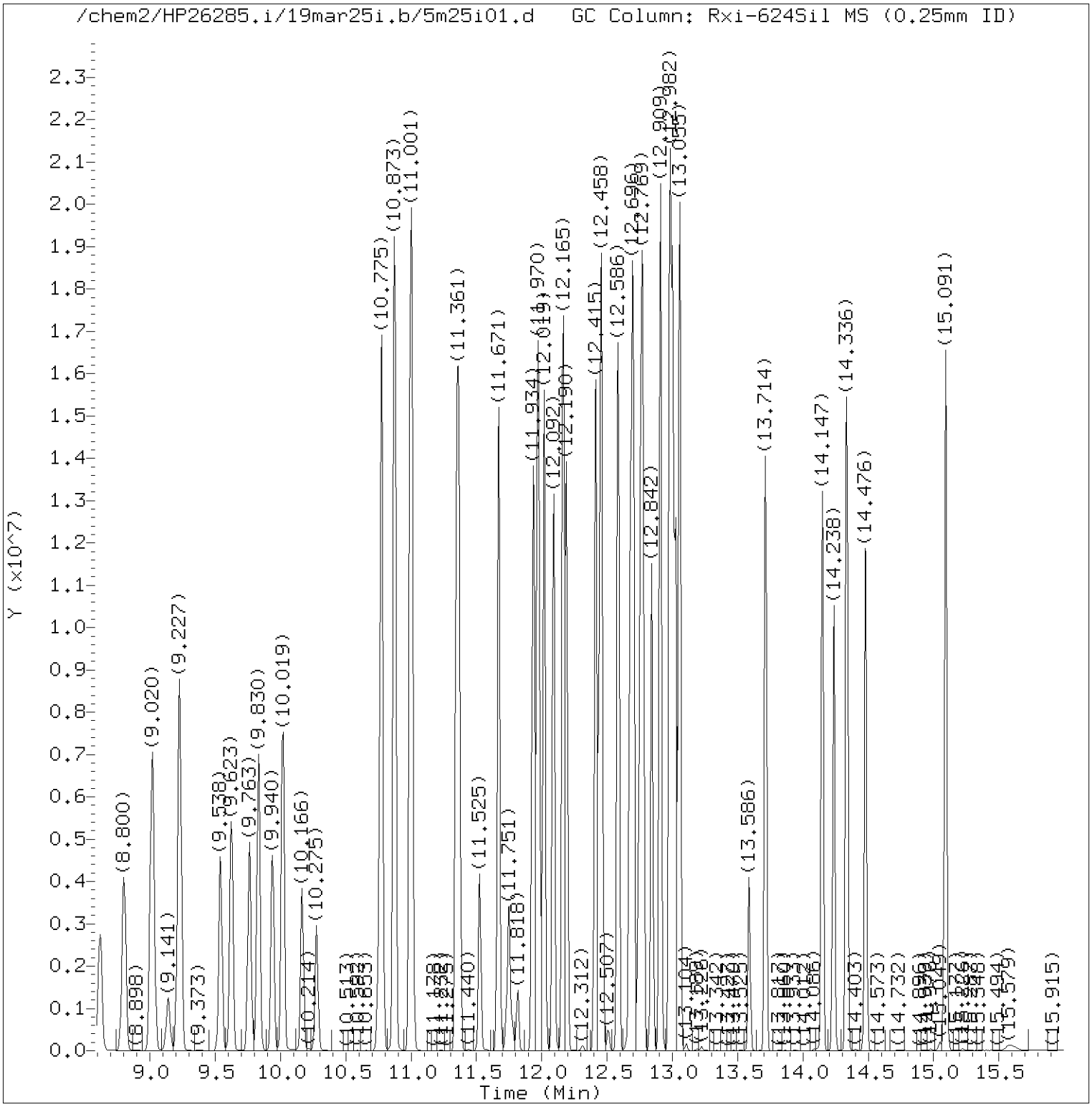
Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.631	85	2608976	298.233
4) Chloromethane	(2)	1.801	50	1885335	296.555
5) 1,3-Butadiene	(2)	1.887	39	1207662	273.412
6) Vinyl Chloride	(2)	1.899	62	1796066	288.783
8) Bromomethane	(2)	2.161	94	1315987	262.582
9) Chloroethane	(2)	2.228	64	774079	259.633
10) Dichlorofluoromethane	(2)	2.435	67	2257730	278.411
12) Trichlorofluoromethane	(2)	2.478	101	2452676	283.683
11) n-Pentane	(2)	2.502	43	1441914	264.422
14) Ethyl ether	(2)	2.685	59	1339417	299.117
15) Freon 123a	(2)	2.759	67	1900361	282.805
16) Acrolein	(1)	2.838	56	5652571	2453.178
17) 1,1-Dichloroethene	(2)	2.948	96	1530237	304.722
17) 1,1-Dichloroethene	(2)	2.948	63	733044	296.717
19) Freon 113	(2)	2.972	101	1577863	308.865
18) Acetone	(1)	2.978	58	614571	583.331
22) Methyl Iodide	(2)	3.118	142	3266197	311.437
21) 2-Propanol	(1)	3.130	45	1148076	1499.402
23) Carbon Disulfide	(2)	3.204	76	5488758	329.204
27) Methyl Acetate	(2)	3.319	43	2213072	284.537
25) Allyl Chloride	(2)	3.338	41	2724004	301.920
28) Methylene Chloride	(2)	3.508	84	1718176	301.236
29)*t-Butyl alcohol-d10	(1)	3.527	65	326405M	250.000
30) t-Butyl alcohol	(1)	3.636	59	2198992	1456.269
31) Acrylonitrile	(2)	3.795	53	1181402	287.366
32) trans-1,2-Dichloroethene	(2)	3.838	96	1730092	307.785
33) Methyl Tertiary Butyl Ether	(2)	3.838	73	4606831	287.188
34) n-Hexane	(2)	4.216	57	2380242M	306.100
36) 1,1-Dichloroethane	(2)	4.466	63	3021317	304.879
38) di-Isopropyl ether	(2)	4.539	45	5182208	286.873
39) 2-Chloro-1,3-butadiene	(2)	4.575	53	2653748	302.623
40) Ethyl t-butyl ether	(2)	5.100	59	4780560	285.844
42) cis-1,2-Dichloroethene	(2)	5.337	96	1923358	302.424
44) 2-Butanone	(2)	5.337	43	3300993	531.702
45) 2,2-Dichloropropane	(2)	5.349	77	2451763	309.356
47) Propionitrile	(1)	5.441	54	2484795	1512.909
48) Methacrylonitrile	(2)	5.660	67	2963539	732.608
49) Bromochloromethane	(2)	5.685	128	998148	313.646

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.697	71	961681	576.408
51) Chloroform	(2)	5.849	83	3001870	305.492
53) 1,1,1-Trichloroethane	(2)	6.069	97	2722547	314.814
52)$Dibromofluoromethane	(2)	6.075	113	264278	50.771
52)$Dibromofluoromethane	(2)	6.075	111	272340	50.972
54) Cyclohexane	(2)	6.154	56	2986431	298.688
54) Cyclohexane	(2)	6.154	84	2581462	302.977
54) Cyclohexane	(2)	6.154	69	943241	304.477
43) 1,2-Dichloroethene (Total)	(2)		96	3653450	610.209
56) Carbon Tetrachloride	(2)	6.276	117	2455823	328.151
55) 1,1-Dichloropropene	(2)	6.288	75	2418643	304.260
58) Isobutyl Alcohol	(1)	6.520	41	1827801	3696.125
57)$1,2-Dichloroethane-d4	(2)	6.550	102	60834	49.948
57)$1,2-Dichloroethane-d4	(2)	6.544	65	278152	49.333
57)$1,2-Dichloroethane-d4	(2)	6.544	104	38778	49.961
60) Benzene	(2)	6.569	78	7220430	298.998
61) 1,2-Dichloroethane	(2)	6.654	62	2064048	289.218
61) 1,2-Dichloroethane	(2)	6.654	98	201723	323.085
65) t-Amyl methyl ether	(2)	6.782	73	4696079	278.618
66)*Fluorobenzene	(2)	6.996	96	1087768	50.000
67) n-Heptane	(2)	7.008	43	2585604	294.881
69) n-Butanol	(1)	7.447	56	3106764	7534.738
71) Trichloroethene	(2)	7.489	95	1922262	306.943
73) Methylcyclohexane	(2)	7.794	83	3214324	309.972
73) Methylcyclohexane	(2)	7.794	98	1404428	314.831
74) 1,2-Dichloropropane	(2)	7.849	63	1777461	296.943
76) 1,4-Dioxane	(1)	7.947	88	396729M	4147.928
75) Dibromomethane	(2)	7.959	93	1155706	305.258
77) Methyl Methacrylate	(2)	7.965	69	1894820	303.212
79) Bromodichloromethane	(2)	8.215	83	2314317	328.927
80) 2-Nitropropane	(2)	8.526	41	1709944	592.076
81) 2-Chloroethyl Vinyl Ether	(2)	8.617	63	1563074	312.890
82) cis-1,3-Dichloropropene	(2)	8.800	75	2973312	321.180
83) 4-Methyl-2-pentanone	(2)	9.020	43	6278506	493.771
84)$Toluene-d8	(3)	9.141	98	1048402	48.925
84)$Toluene-d8	(3)	9.141	100	696153	49.428
89) Toluene	(3)	9.227	92	4738284	297.064
90) trans-1,3-Dichloropropene	(3)	9.538	75	2758950	320.093

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	9.623	69	3161608	305.933
93) 1,1,2-Trichloroethane	(3)	9.763	97	1714381	300.442
94) Tetrachloroethene	(3)	9.830	166	2289853	315.688
95) 1,3-Dichloropropane	(3)	9.940	76	2788173	298.281
97) 2-Hexanone	(3)	10.019	43	5177326	458.958
91) 1,3-Dichloropropene (total)	(3)		100	5732262	641.273
98) Dibromochloromethane	(3)	10.166	129	2034347	348.221
100) 1,2-Dibromoethane	(3)	10.275	107	1957239	307.152
101)*Chlorobenzene-d5	(3)	10.745	117	848957	50.000
103) Chlorobenzene	(3)	10.775	112	5396966	302.398
102) 1-Chlorohexane	(3)	10.775	91	2673818	287.729
104) 1,1,1,2-Tetrachloroethane	(3)	10.867	131	1981799	328.955
105) Ethylbenzene	(3)	10.873	91	9072597	291.199
107) m+p-Xylene	(3)	11.001	106	7138359	580.958
108) o-Xylene	(3)	11.348	106	3606230	300.372
110) Styrene	(3)	11.367	104	6019504	303.627
111) Bromoform	(3)	11.525	173	1712237	371.284
112) Isopropylbenzene	(3)	11.671	105	9164479	293.927
113) Cyclohexanone	(1)	11.751	55	1517972	3793.222
109) Xylene (Total)	(3)		106	10744589	881.330
115)$4-Bromofluorobenzene	(3)	11.818	95	418035	50.136
115)$4-Bromofluorobenzene	(3)	11.818	174	362609	49.920
116) Bromobenzene	(4)	11.934	156	2524267	309.892
117) 1,1,2,2-Tetrachloroethane	(4)	11.940	83	2993179	290.204
119) trans-1,4-Dichloro-2-butene	(4)	11.970	53	2220765	683.700
118) 1,2,3-Trichloropropane	(4)	11.982	110	895099	288.057
120) n-Propylbenzene	(4)	12.019	91	10478728	273.347
121) 2-Chlorotoluene	(4)	12.092	126	2460607	311.345
123) 1,3,5-Trimethylbenzene	(4)	12.165	105	7994133	288.968
122) 4-Chlorotoluene	(4)	12.190	126	2523342	310.997
125) tert-Butylbenzene	(4)	12.415	134	1806450M	309.014
126) Pentachloroethane	(4)	12.440	167	1684552	352.870
127) 1,2,4-Trimethylbenzene	(4)	12.458	105	8215076	289.574
128) sec-Butylbenzene	(4)	12.586	105	9901365	276.257
130) 1,3-Dichlorobenzene	(4)	12.677	146	4792778	307.228
131) p-Isopropyltoluene	(4)	12.702	119	9016411	290.158
132)*1,4-Dichlorobenzene-d4	(4)	12.738	152	472197	50.000
134) 1,4-Dichlorobenzene	(4)	12.757	146	4777736	302.190

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

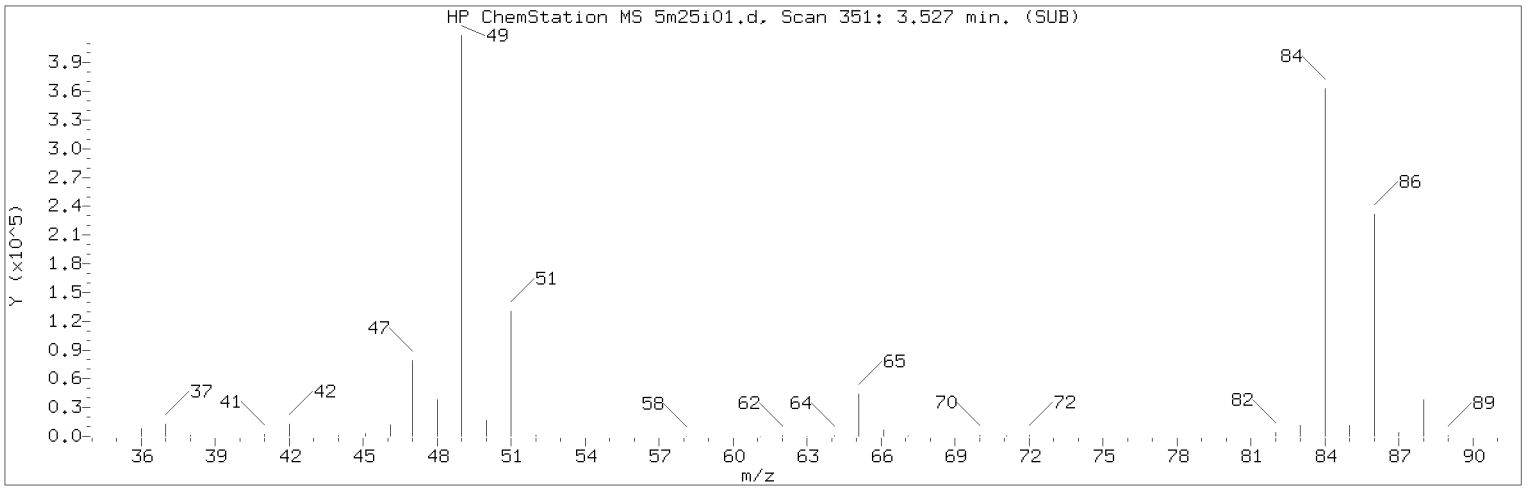
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

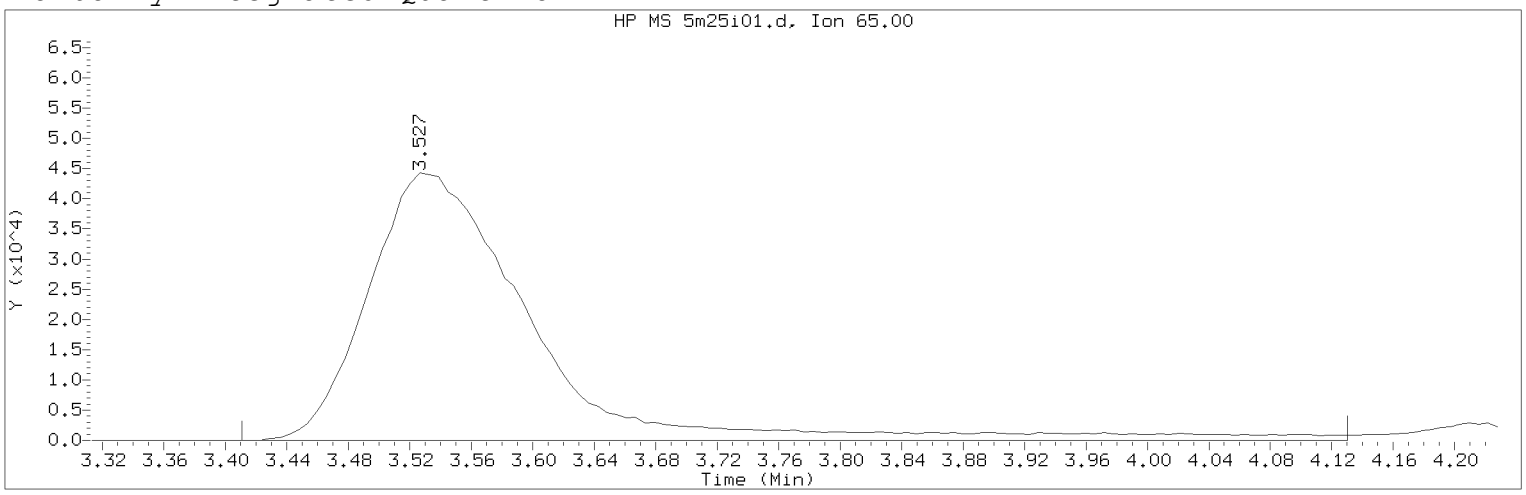
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	12.775	105	8462817	288.777
136) Benzyl Chloride	(4)	12.842	91	6712885	330.375
137) 1,3-Diethylbenzene	(4)	12.909	119	5801927	306.345
138) 1,4-Diethylbenzene	(4)	12.982	119	6113132	304.143
140) n-Butylbenzene	(4)	13.000	92	4584278	292.468
139) 1,2-Dichlorobenzene	(4)	13.025	146	4507989	305.665
141) 1,2-Diethylbenzene	(4)	13.055	119	4801598	304.957
142) Diethylbenzene (total)	(4)		100	16716657	915.446
143) 1,2-Dibromo-3-chloropropane	(4)	13.586	75	803623	311.890
145) 1,3,5-Trichlorobenzene	(4)	13.714	180	3839402	323.855
147) 1,2,4-Trichlorobenzene	(4)	14.147	180	3488143	325.036
148) Hexachlorobutadiene	(4)	14.238	225	1711354	337.896
149) Naphthalene	(4)	14.336	128	10044106	275.826
150) 1,2,3-Trichlorobenzene	(4)	14.482	180	3315138	322.404
151) 2-Methylnaphthalene	(4)	15.091	142	7016729	327.477

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

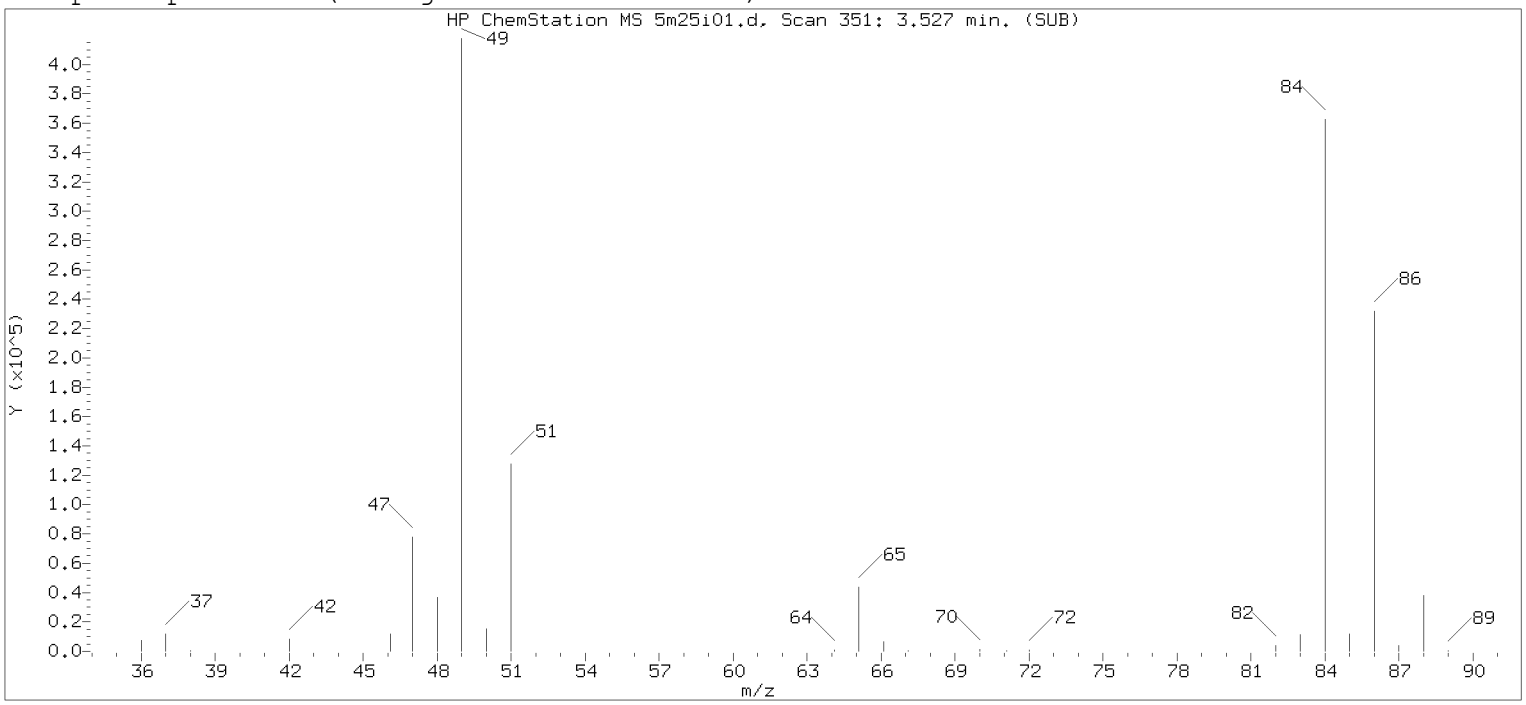
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 351
Retention Time (minutes): 3.527
Quant Ion : 65.00
Area (flag) : 326405M
On-Column Amount (ng) : 250.0000
Integration start scan : 331 Integration stop scan: 449
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

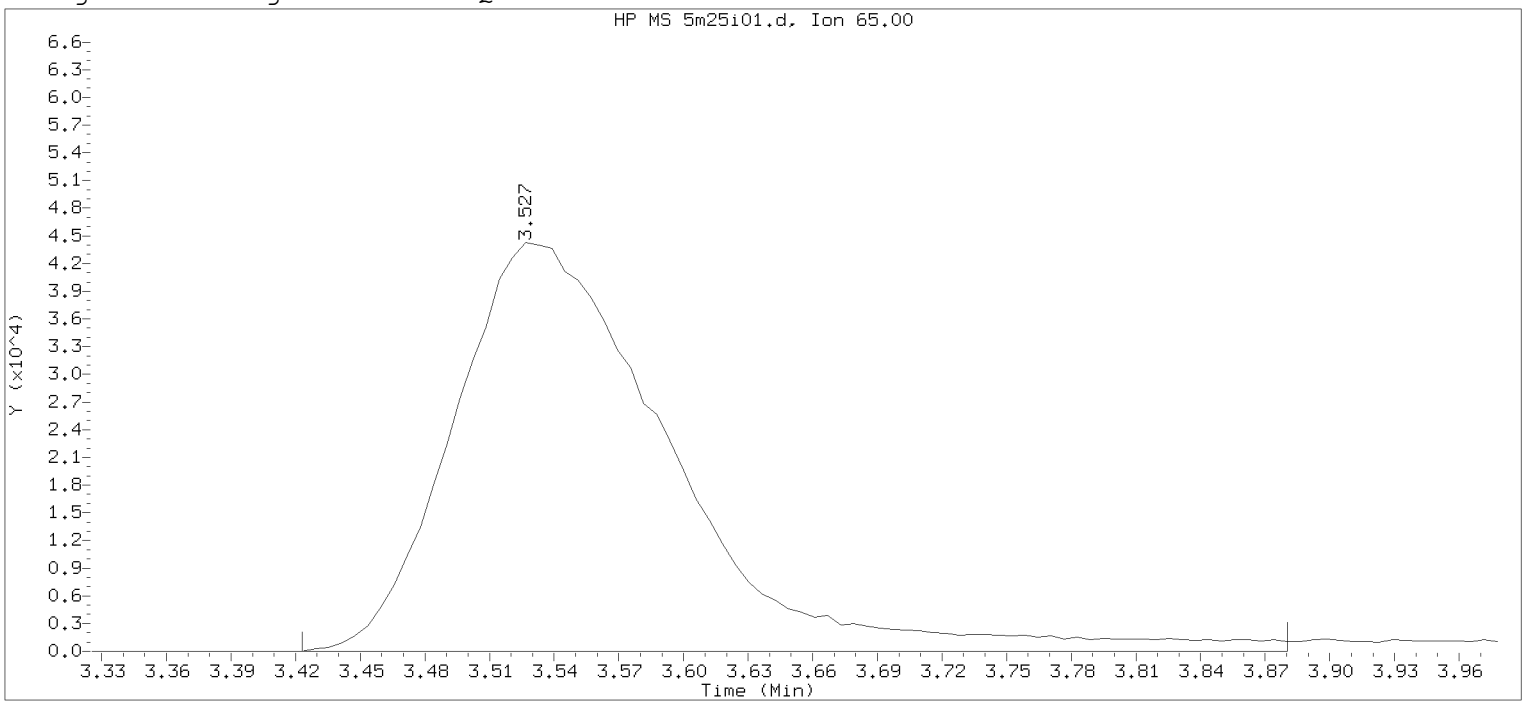
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

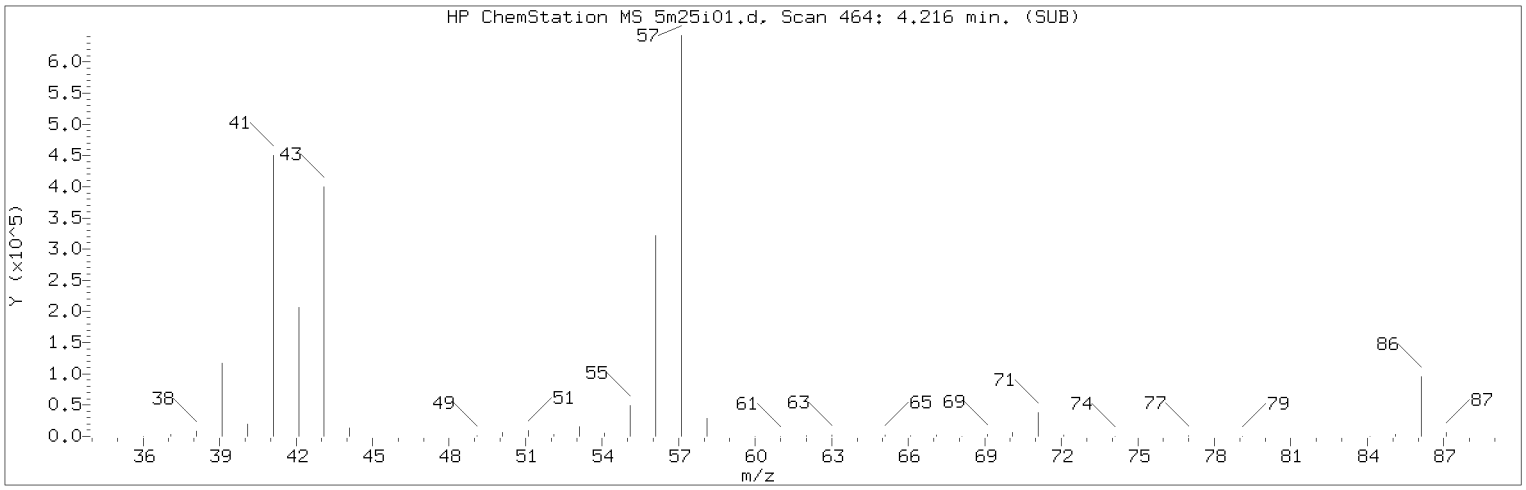
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:26
Date, time and analyst ID of latest file update: 25-Mar-2019 14:26 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

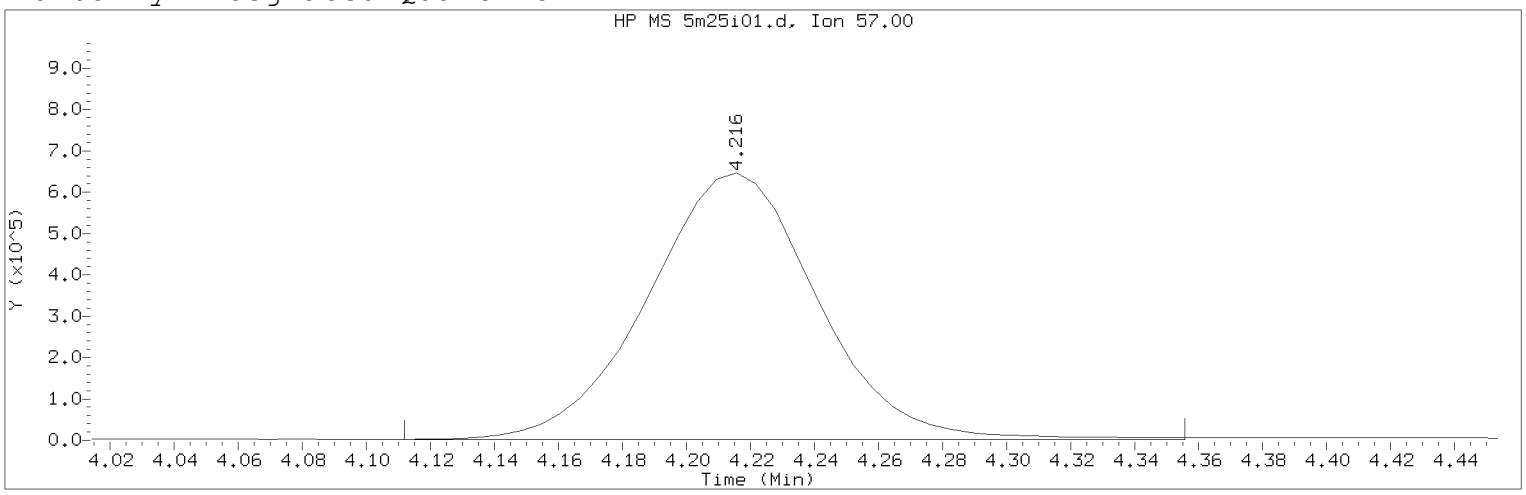
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 351
Retention Time (minutes): 3.527
Quant Ion : 65.00
Area : 310989
On-column Amount (ng) : 250.0000
Integration start scan : 333 Integration stop scan: 408
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user: KEVIN KELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

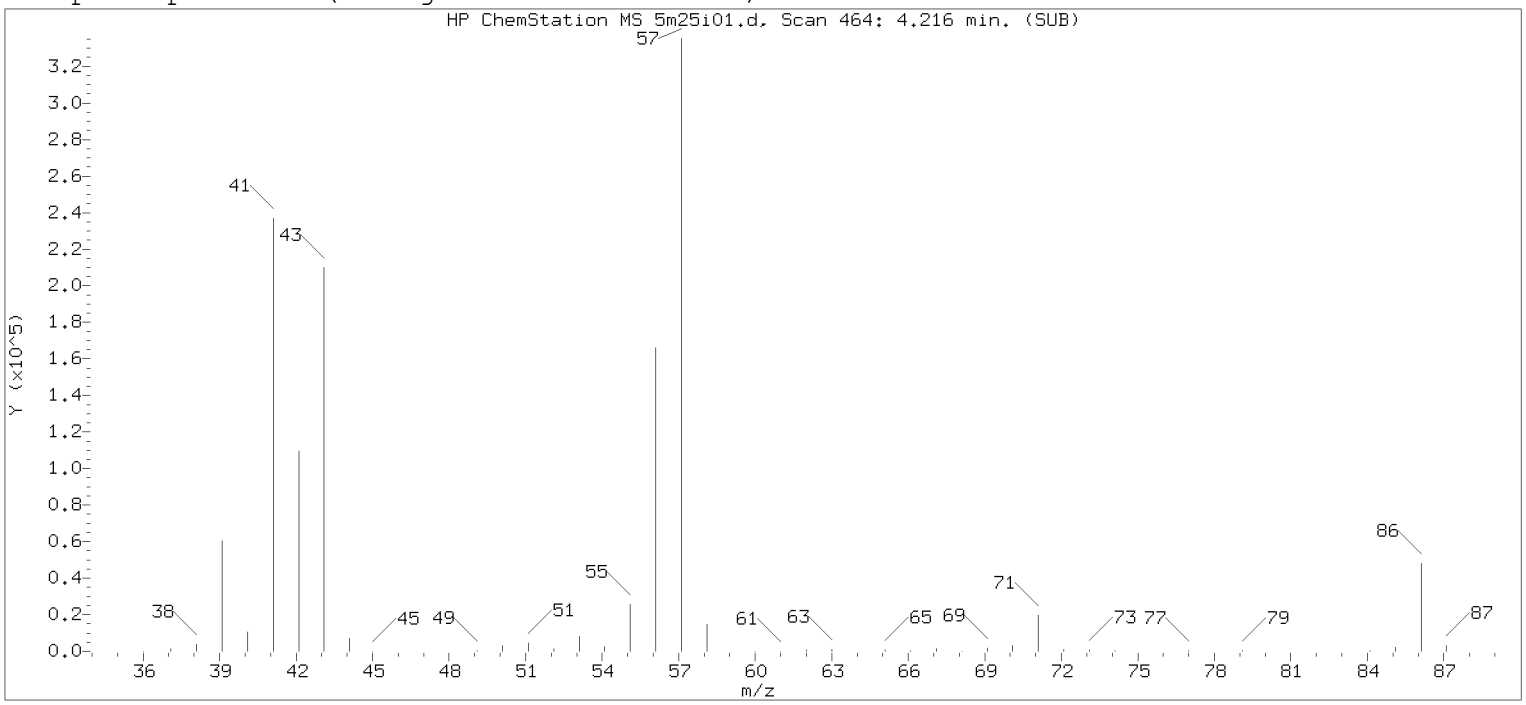
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 464
Retention Time (minutes): 4.216
Quant Ion : 57.00
Area (flag) : 2380242M
On-Column Amount (ng) : 306.0997
Integration start scan : 446 Integration stop scan: 486
Y at integration start : 1421 Y at integration end: 1421

Reason for manual integration: improper integration

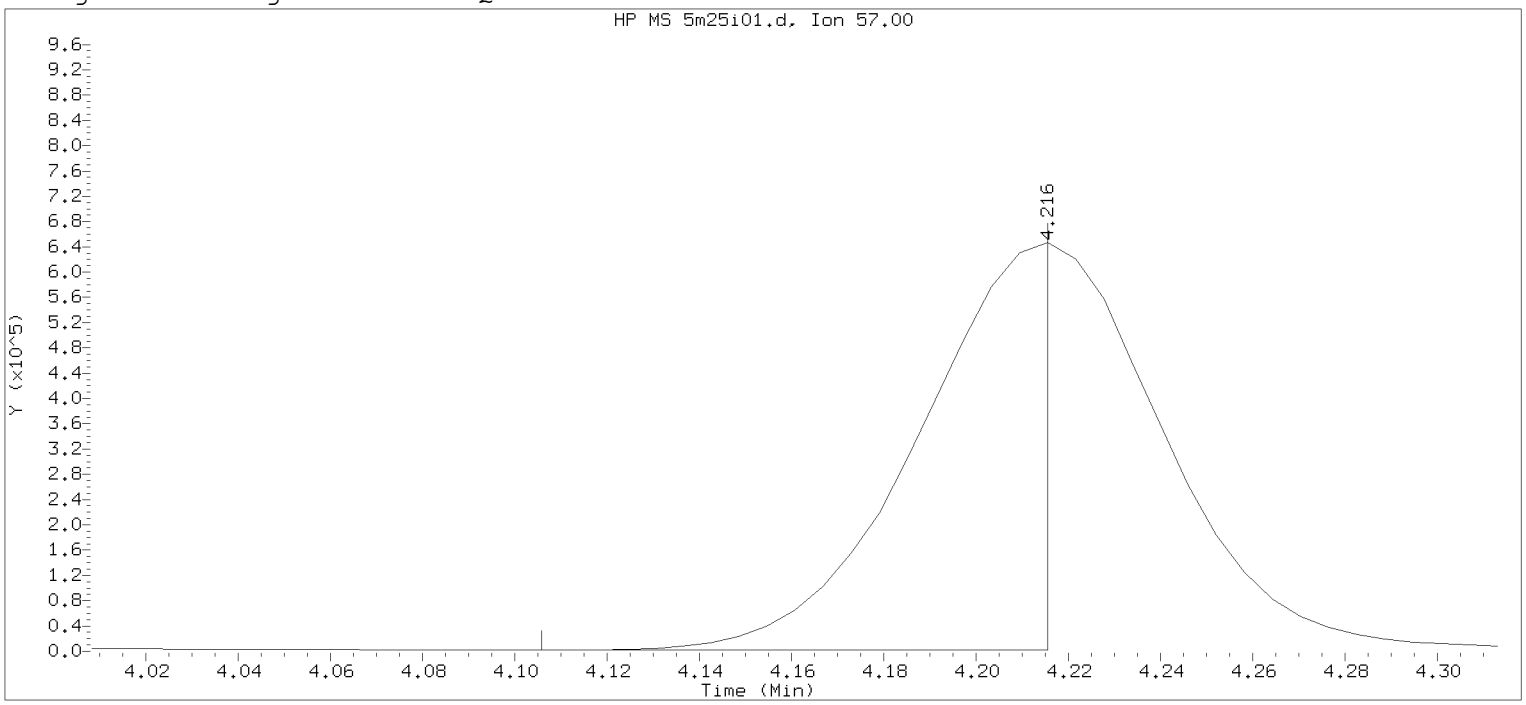
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

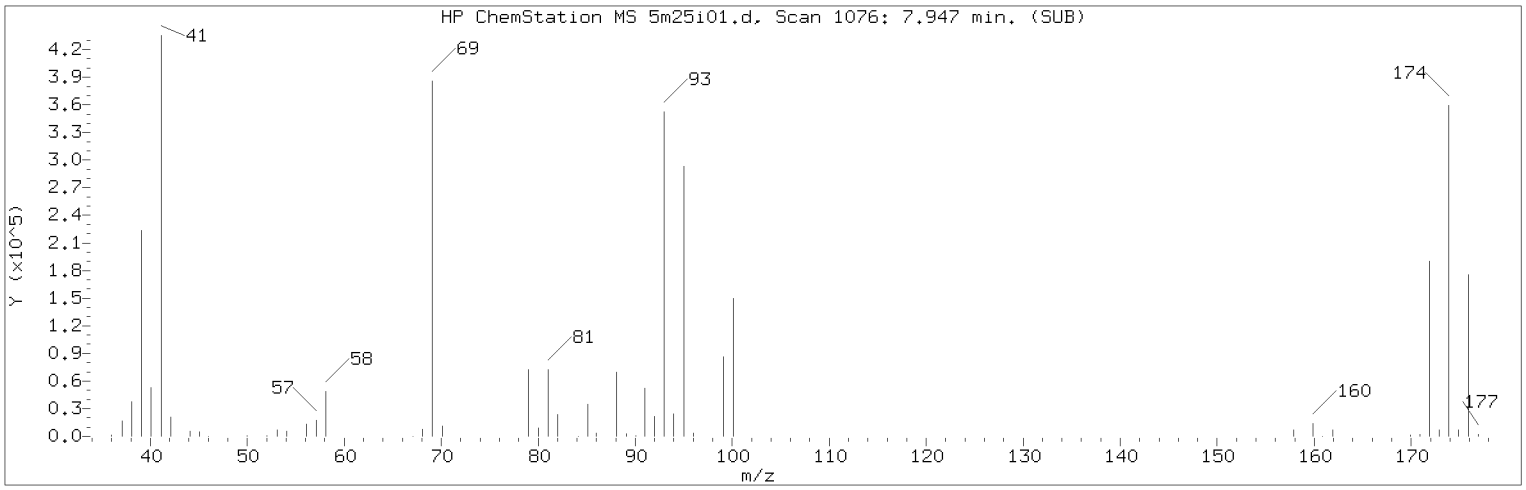
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:26
Date, time and analyst ID of latest file update: 25-Mar-2019 14:26 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

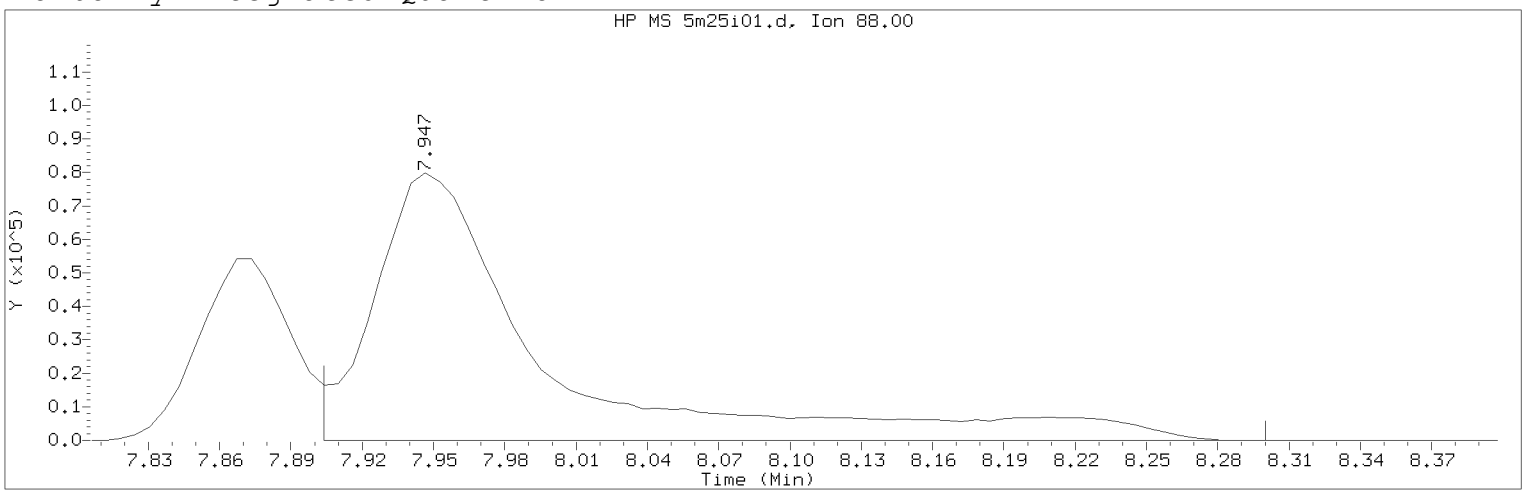
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 464
Retention Time (minutes): 4.216
Quant Ion : 57.00
Area : 1215284
On-column Amount (ng) : 167.2526
Integration start scan : 445 Integration stop scan: 463
Y at integration start : 2141 Y at integration end: 2141

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: KKELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

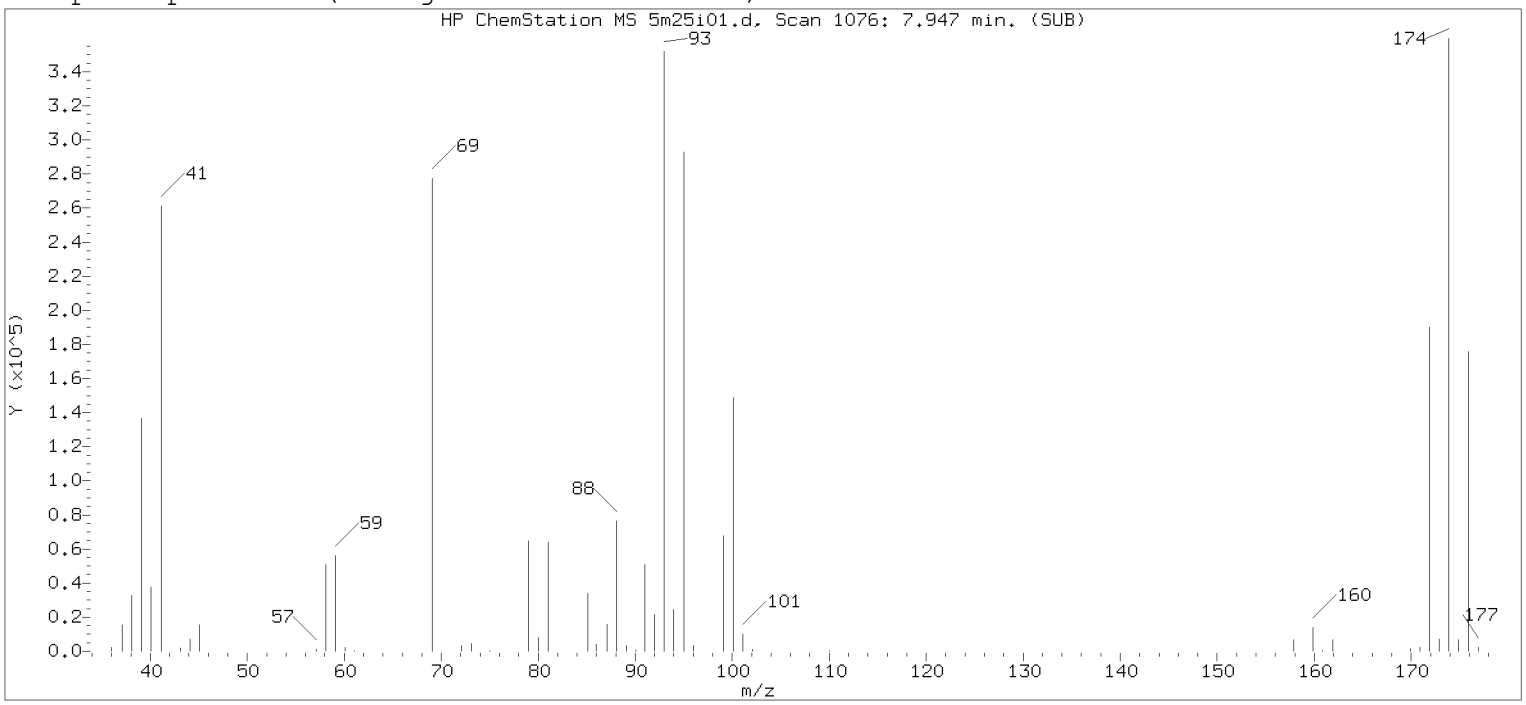
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1076
Retention Time (minutes): 7.947
Quant Ion : 88.00
Area (flag) : 396729M
On-Column Amount (ng) : 4147.9280
Integration start scan : 1068 Integration stop scan: 1133
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

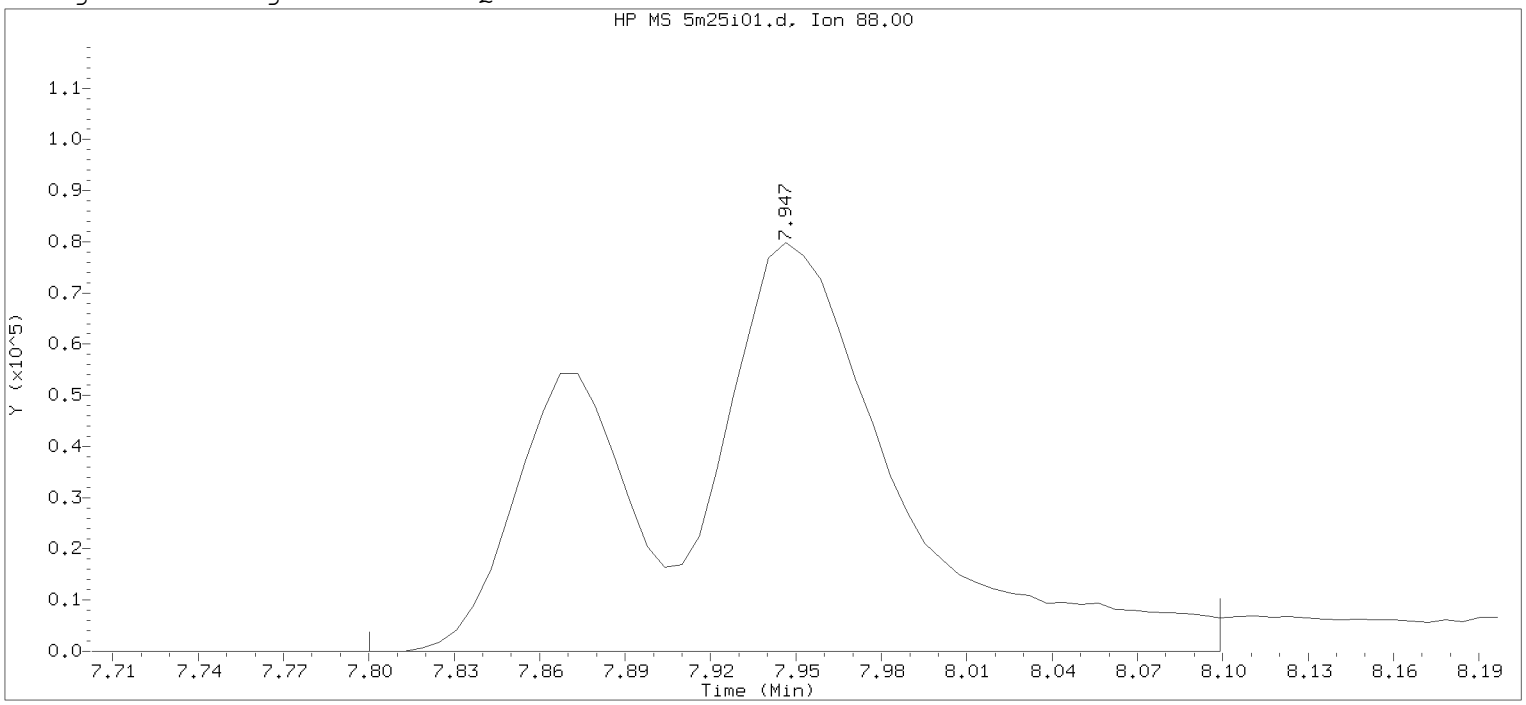
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

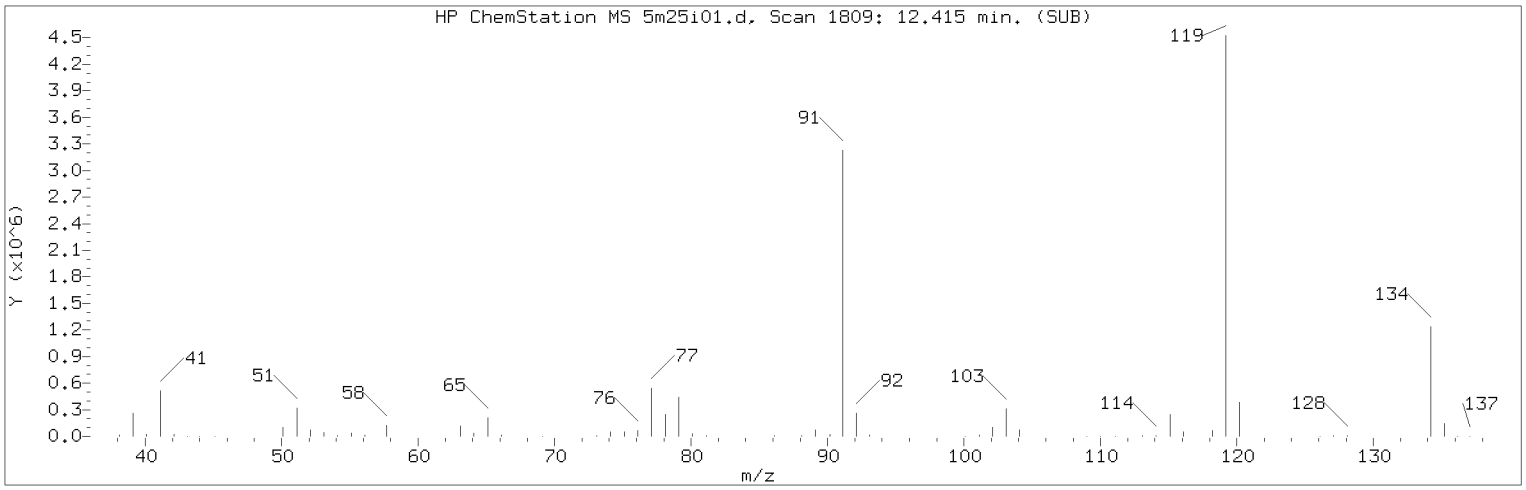
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:26
Date, time and analyst ID of latest file update: 25-Mar-2019 14:26 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

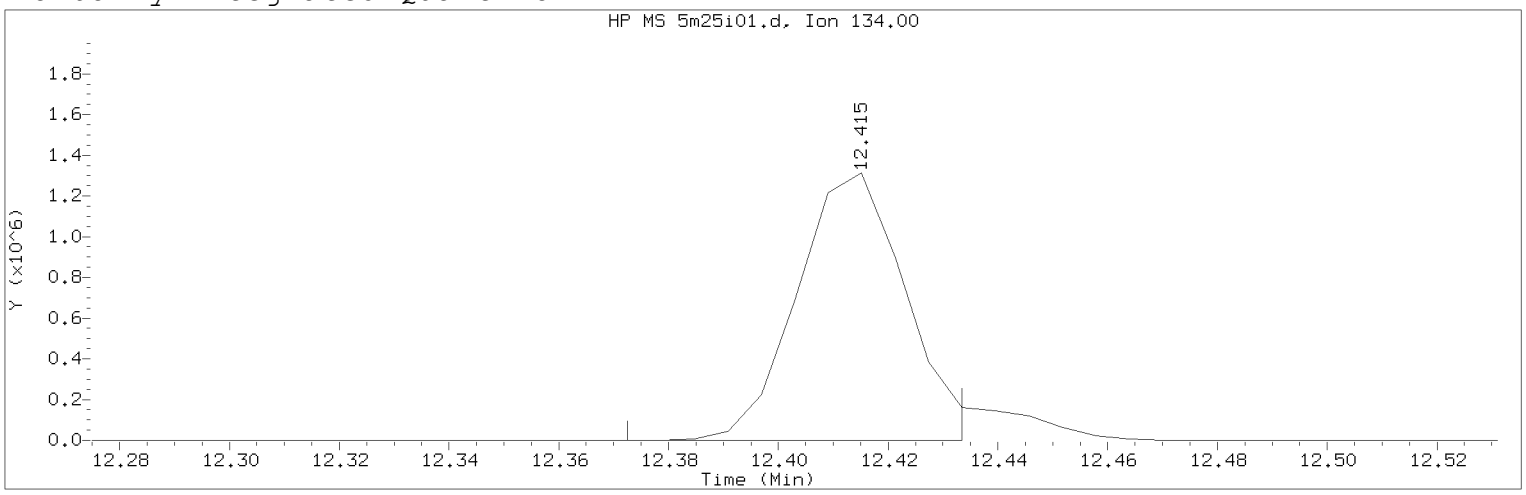
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1076
Retention Time (minutes): 7.947
Quant Ion : 88.00
Area : 478982
On-column Amount (ng) : 3936.7372
Integration start scan : 1051 Integration stop scan: 1100
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10038

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

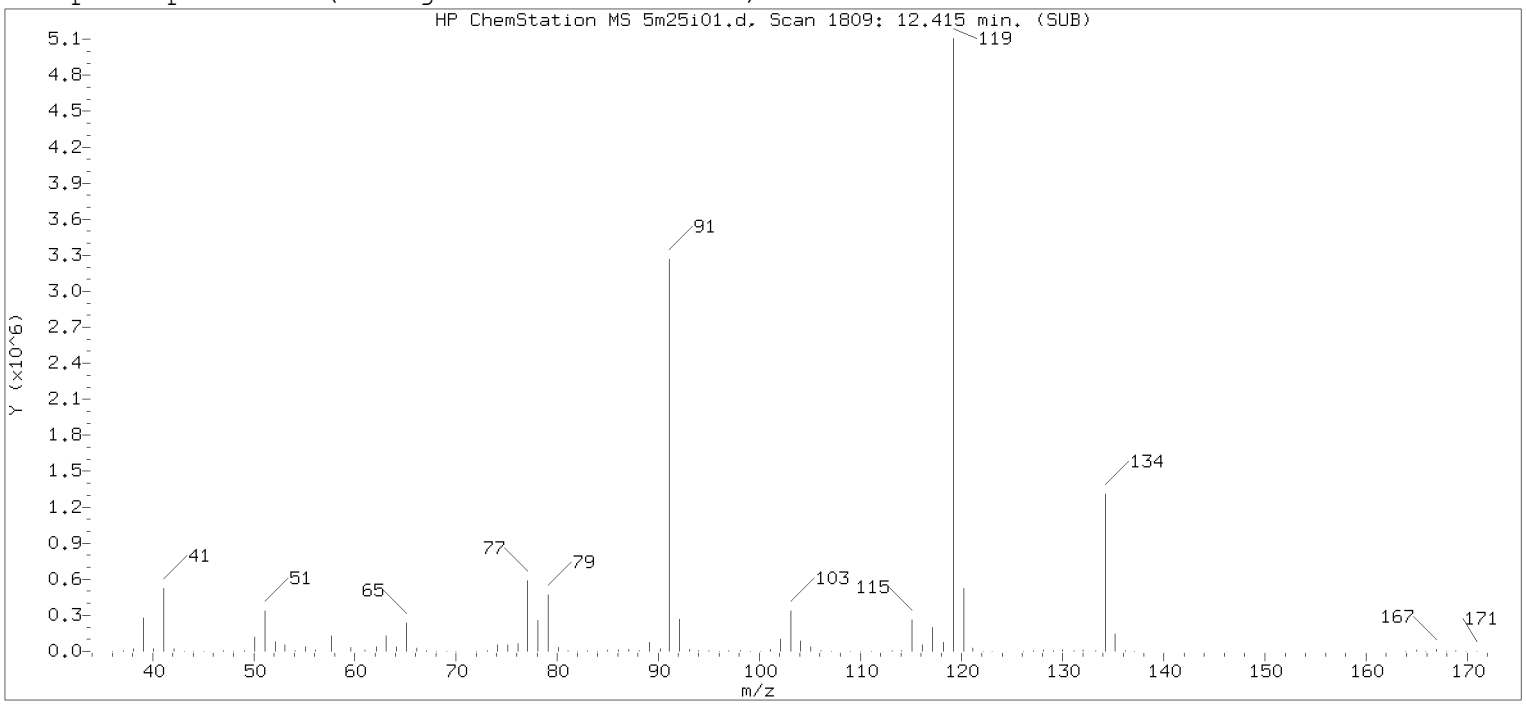
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1809
Retention Time (minutes): 12.415
Quant Ion : 134.00
Area (flag) : 1806450M
On-Column Amount (ng) : 309.0136
Integration start scan : 1801 Integration stop scan: 1811
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

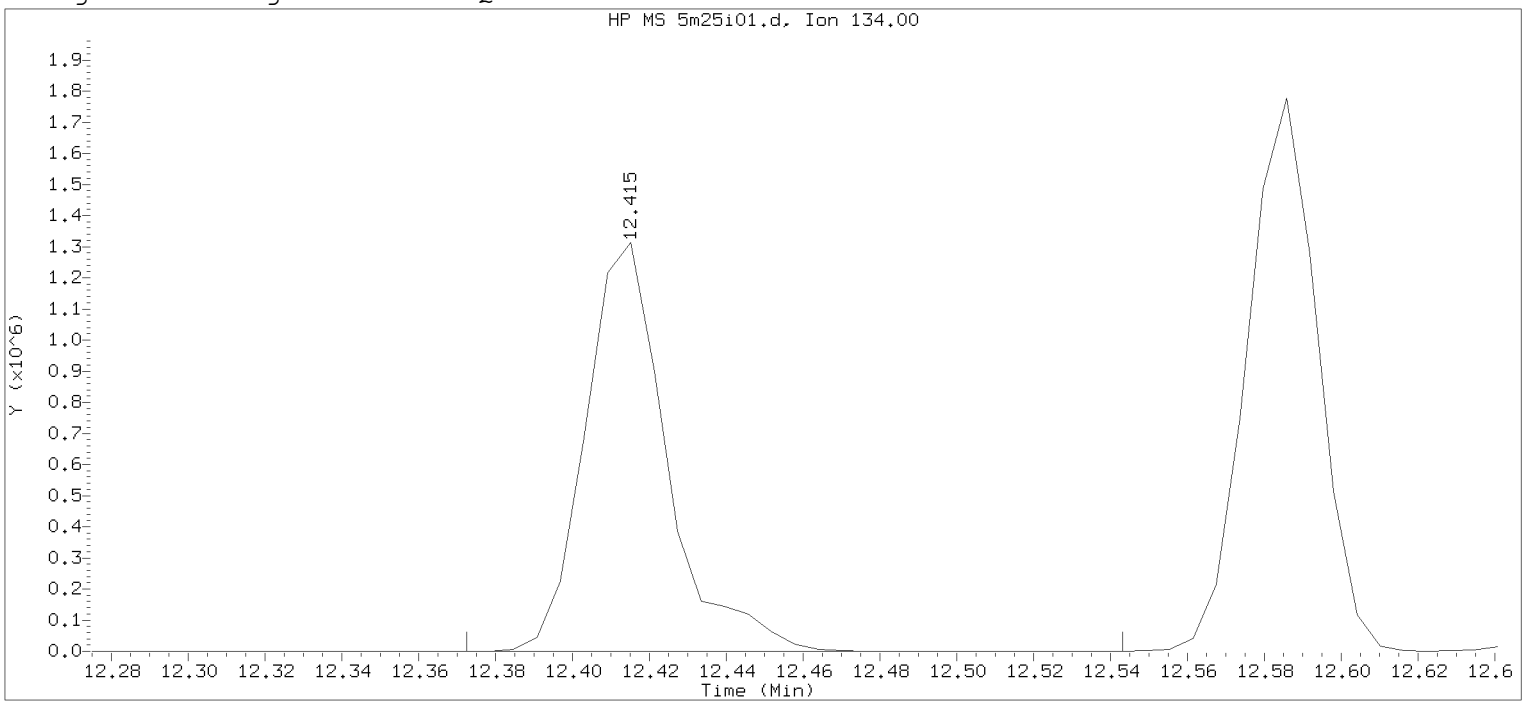
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



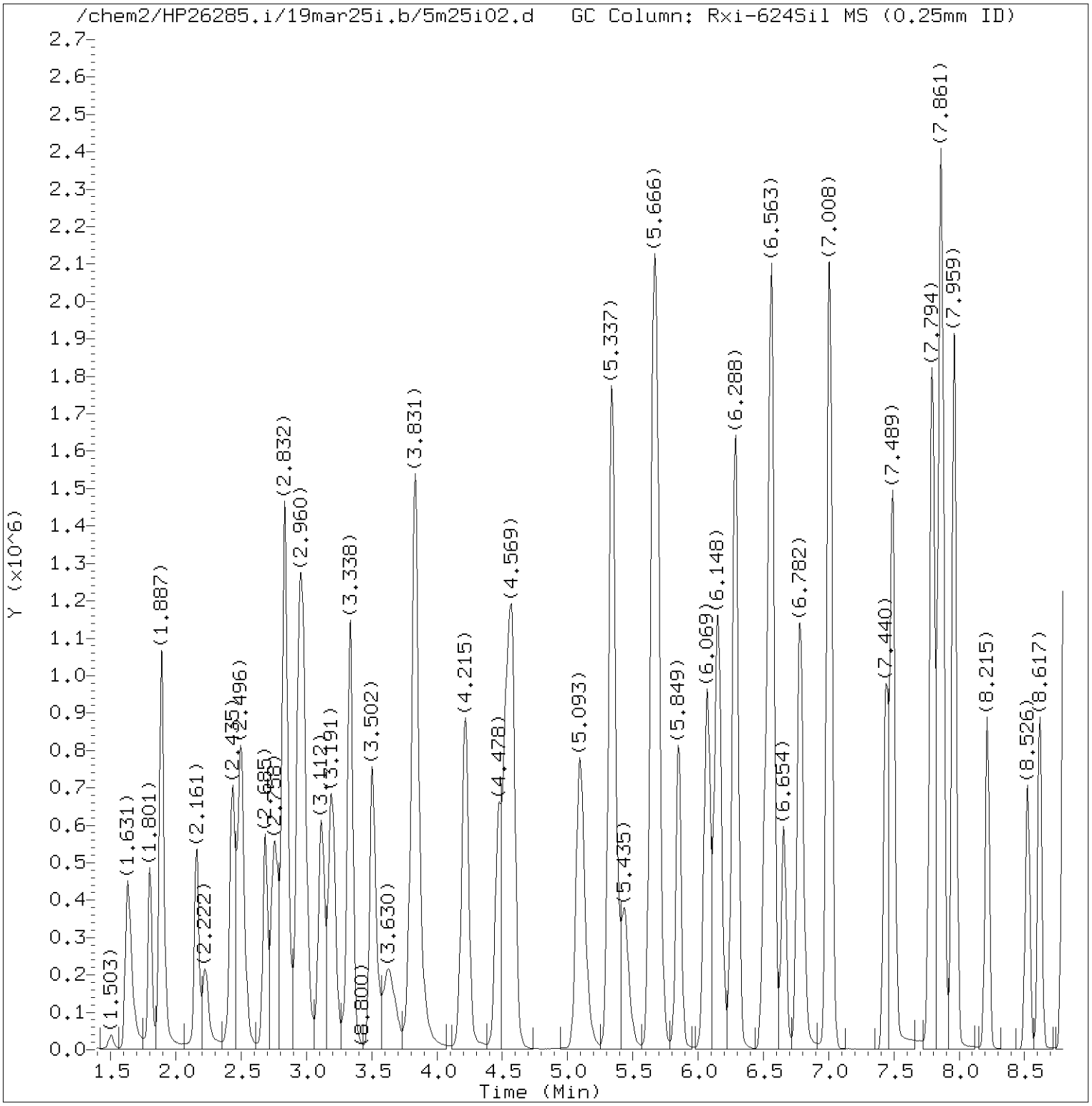
Data File: /chem2/HP26285.i/19mar25i.b/5m25i01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 12:48 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:26
Date, time and analyst ID of latest file update: 25-Mar-2019 14:26 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1809
Retention Time (minutes): 12.415
Quant Ion : 134.00
Area : 1936751
On-column Amount (ng) : 304.5814
Integration start scan : 1801 Integration stop scan: 1829
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kkelly100



Total Ion Chromatogram (TIC)

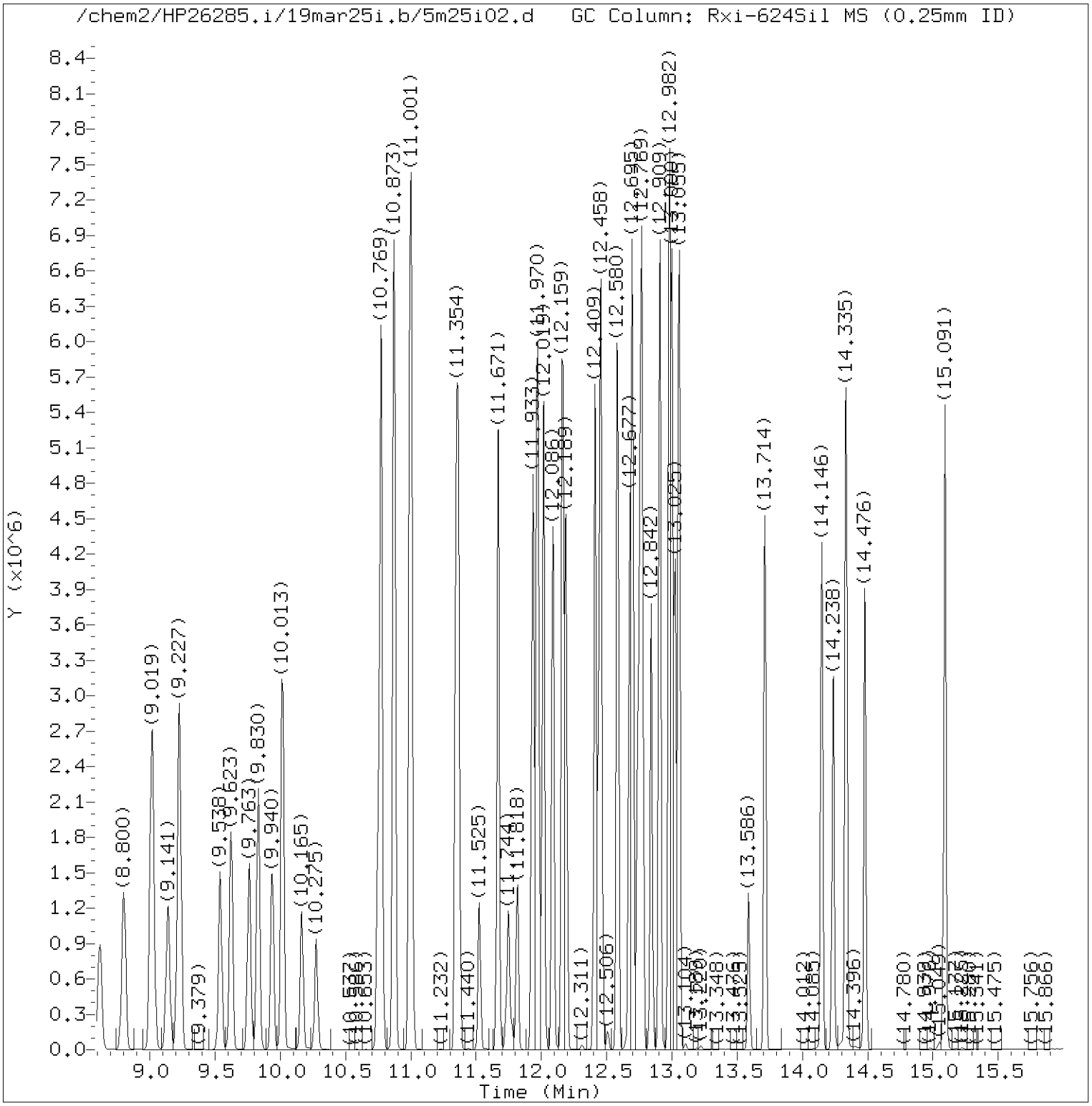
Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i02.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:10 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i02.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:10 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i02.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:10 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.631	85	947106	108.111
4) Chloromethane	(2)	1.801	50	627048	98.492
5) 1,3-Butadiene	(2)	1.887	39	431065	97.454
6) Vinyl Chloride	(2)	1.893	62	608412	97.686
8) Bromomethane	(2)	2.161	94	479369	95.514
9) Chloroethane	(2)	2.222	64	283263	94.874
10) Dichlorofluoromethane	(2)	2.435	67	764311	94.117
12) Trichlorofluoromethane	(2)	2.478	101	885624	102.288
11) n-Pentane	(2)	2.502	43	578540	105.944
14) Ethyl ether	(2)	2.685	59	441637	98.486
15) Freon 123a	(2)	2.752	67	651851	96.869
16) Acrolein	(1)	2.832	56	2215338	940.167
17) 1,1-Dichloroethene	(2)	2.941	96	501724	99.769
17) 1,1-Dichloroethene	(2)	2.941	63	243817	98.551
19) Freon 113	(2)	2.966	101	570277	111.473
18) Acetone	(1)	2.978	58	213000	197.699
22) Methyl Iodide	(2)	3.112	142	1065819	101.483
21) 2-Propanol	(1)	3.130	45	384805	491.440
23) Carbon Disulfide	(2)	3.191	76	1761154	105.481
27) Methyl Acetate	(2)	3.319	43	728327	93.509
25) Allyl Chloride	(2)	3.338	41	891320	98.651
28) Methylene Chloride	(2)	3.502	84	564344	98.803
29)*t-Butyl alcohol-d10	(1)	3.527	65	333791M	250.000
30) t-Butyl alcohol	(1)	3.630	59	757859	490.782
31) Acrylonitrile	(2)	3.795	53	402849	97.851
33) Methyl Tertiary Butyl Ether	(2)	3.831	73	1572643	97.899
32) trans-1,2-Dichloroethene	(2)	3.837	96	568718	101.032
34) n-Hexane	(2)	4.215	57	888708	114.126
36) 1,1-Dichloroethane	(2)	4.465	63	997684	100.533
38) di-Isopropyl ether	(2)	4.532	45	1779894	98.390
39) 2-Chloro-1,3-butadiene	(2)	4.575	53	889035	101.238
40) Ethyl t-butyl ether	(2)	5.093	59	1635297	97.641
42) cis-1,2-Dichloroethene	(2)	5.337	96	635497	99.782
44) 2-Butanone	(2)	5.337	43	1182768	190.243
45) 2,2-Dichloropropane	(2)	5.349	77	812128	102.327
47) Propionitrile	(1)	5.441	54	818601	487.390
48) Methacrylonitrile	(2)	5.654	67	1004915	248.070
49) Bromochloromethane	(2)	5.685	128	322677	101.250

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i02.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:10 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.697	71	333685	195.577
51) Chloroform	(2)	5.849	83	986469	100.248
53) 1,1,1-Trichloroethane	(2)	6.069	97	881670	101.805
52)$Dibromofluoromethane	(2)	6.075	113	263803	50.608
52)$Dibromofluoromethane	(2)	6.075	111	269211	50.315
54) Cyclohexane	(2)	6.154	56	1065235	106.389
54) Cyclohexane	(2)	6.154	84	911601	106.840
54) Cyclohexane	(2)	6.154	69	334510	107.827
43) 1,2-Dichloroethene (Total)	(2)		96	1204215	200.815
56) Carbon Tetrachloride	(2)	6.276	117	794895	106.065
55) 1,1-Dichloropropene	(2)	6.294	75	798059	100.252
58) Isobutyl Alcohol	(1)	6.520	41	624171	1234.251
57)$1,2-Dichloroethane-d4	(2)	6.550	102	60921	49.949
57)$1,2-Dichloroethane-d4	(2)	6.550	65	281201	49.803
57)$1,2-Dichloroethane-d4	(2)	6.550	104	38896	50.043
60) Benzene	(2)	6.563	78	2418592	100.012
61) 1,2-Dichloroethane	(2)	6.654	62	684116	95.724
61) 1,2-Dichloroethane	(2)	6.654	98	65543	104.827
65) t-Amyl methyl ether	(2)	6.776	73	1638155	97.054
66)*Fluorobenzene	(2)	6.995	96	1089311	50.000
67) n-Heptane	(2)	7.014	43	993585	113.155
69) n-Butanol	(1)	7.440	56	1064242	2523.960
71) Trichloroethene	(2)	7.489	95	629240	100.334
73) Methylcyclohexane	(2)	7.794	83	1152245	110.959
73) Methylcyclohexane	(2)	7.794	98	497566	111.382
74) 1,2-Dichloropropane	(2)	7.849	63	600986	100.259
76) 1,4-Dioxane	(1)	7.946	88	126609M	1294.446
75) Dibromomethane	(2)	7.959	93	379623	100.128
77) Methyl Methacrylate	(2)	7.965	69	630978	100.827
79) Bromodichloromethane	(2)	8.215	83	741449	105.231
80) 2-Nitropropane	(2)	8.526	41	599567	207.309
81) 2-Chloroethyl Vinyl Ether	(2)	8.617	63	515724	103.089
82) cis-1,3-Dichloropropene	(2)	8.800	75	972230	104.873
83) 4-Methyl-2-pentanone	(2)	9.019	43	2460855	193.259
84)$Toluene-d8	(3)	9.141	98	1054296	49.538
84)$Toluene-d8	(3)	9.141	100	695227	49.702
89) Toluene	(3)	9.227	92	1578747	99.660
90) trans-1,3-Dichloropropene	(3)	9.538	75	901452	105.306

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i02.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:10 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	9.623	69	1049219	102.227
93) 1,1,2-Trichloroethane	(3)	9.763	97	563055	99.354
94) Tetrachloroethene	(3)	9.830	166	717193	99.556
95) 1,3-Dichloropropane	(3)	9.940	76	916525	98.726
97) 2-Hexanone	(3)	10.013	43	2153880	192.251
91) 1,3-Dichloropropene (total)	(3)		100	1873682	210.179
98) Dibromochloromethane	(3)	10.165	129	638423	110.032
100) 1,2-Dibromoethane	(3)	10.275	107	632949	100.013
101)*Chlorobenzene-d5	(3)	10.745	117	843152	50.000
102) 1-Chlorohexane	(3)	10.769	91	909373	98.531
103) Chlorobenzene	(3)	10.775	112	1788455	100.899
104) 1,1,1,2-Tetrachloroethane	(3)	10.867	131	644573	107.728
105) Ethylbenzene	(3)	10.873	91	3156171	102.000
107) m+p-Xylene	(3)	11.001	106	2499205	204.799
108) o-Xylene	(3)	11.348	106	1215550	101.943
110) Styrene	(3)	11.366	104	2047254	103.975
111) Bromoform	(3)	11.525	173	519370	113.396
112) Isopropylbenzene	(3)	11.671	105	3169698	102.360
113) Cyclohexanone	(1)	11.744	55	502388	1227.626
109) Xylene (Total)	(3)		106	3714755	306.742
115)$4-Bromofluorobenzene	(3)	11.811	95	413588	49.944
115)$4-Bromofluorobenzene	(3)	11.818	174	358984	49.761
116) Bromobenzene	(4)	11.933	156	802876	102.007
117) 1,1,2,2-Tetrachloroethane	(4)	11.940	83	1004145	100.757
119) trans-1,4-Dichloro-2-butene	(4)	11.964	53	801613	255.408
118) 1,2,3-Trichloropropane	(4)	11.982	110	298540	99.430
120) n-Propylbenzene	(4)	12.019	91	3748557	101.199
121) 2-Chlorotoluene	(4)	12.086	126	779328	102.053
123) 1,3,5-Trimethylbenzene	(4)	12.159	105	2744711	102.679
122) 4-Chlorotoluene	(4)	12.189	126	801291	102.206
125) tert-Butylbenzene	(4)	12.409	134	579376M	102.570
126) Pentachloroethane	(4)	12.439	167	520425	112.823
127) 1,2,4-Trimethylbenzene	(4)	12.458	105	2813650	102.642
128) sec-Butylbenzene	(4)	12.580	105	3583040	103.461
130) 1,3-Dichlorobenzene	(4)	12.677	146	1542952	102.361
131) p-Isopropyltoluene	(4)	12.695	119	3139715	104.568
132)*1,4-Dichlorobenzene-d4	(4)	12.738	152	456264	50.000
134) 1,4-Dichlorobenzene	(4)	12.756	146	1558057	101.988

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i02.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:10 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	12.769	105	2941038	103.862
136) Benzyl Chloride	(4)	12.842	91	2203704	112.243
137) 1,3-Diethylbenzene	(4)	12.909	119	1927150	105.308
138) 1,4-Diethylbenzene	(4)	12.982	119	2069181	106.542
140) n-Butylbenzene	(4)	13.000	92	1595051	105.315
139) 1,2-Dichlorobenzene	(4)	13.025	146	1452235	101.908
141) 1,2-Diethylbenzene	(4)	13.055	119	1592965	104.705
142) Diethylbenzene (total)	(4)		100	5589296	316.555
143) 1,2-Dibromo-3-chloropropane	(4)	13.586	75	264178	106.109
145) 1,3,5-Trichlorobenzene	(4)	13.714	180	1213074	105.897
147) 1,2,4-Trichlorobenzene	(4)	14.146	180	1093350	105.439
148) Hexachlorobutadiene	(4)	14.238	225	520452	106.348
149) Naphthalene	(4)	14.335	128	3636278	103.345
150) 1,2,3-Trichlorobenzene	(4)	14.482	180	1032205	103.889
151) 2-Methylnaphthalene	(4)	15.091	142	2250219	108.687

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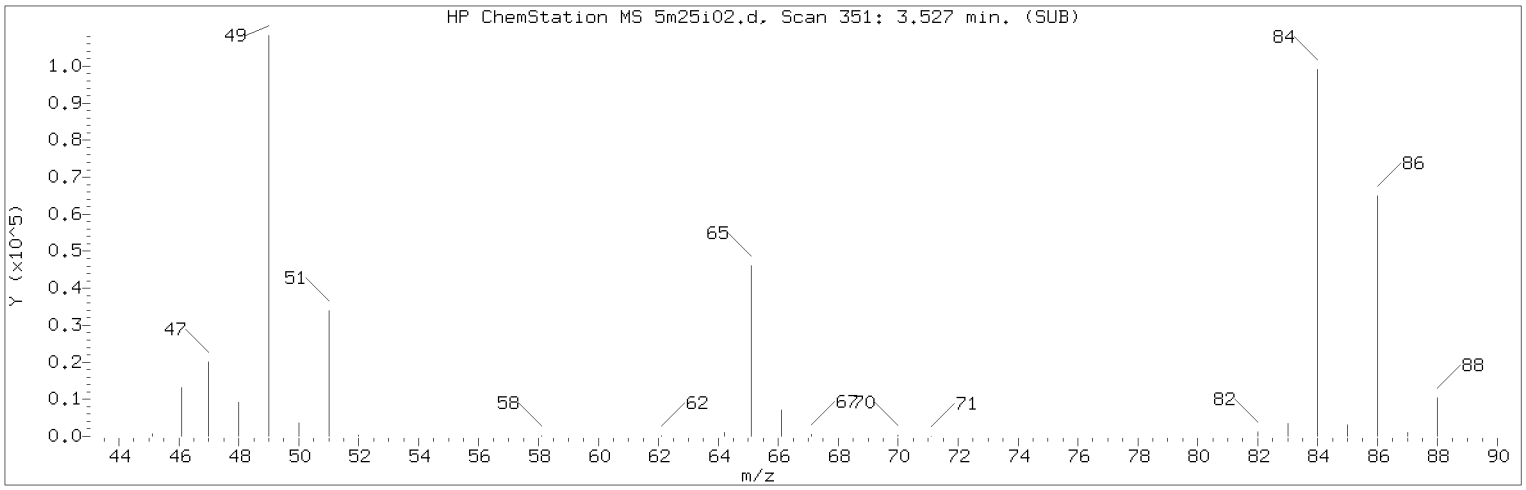
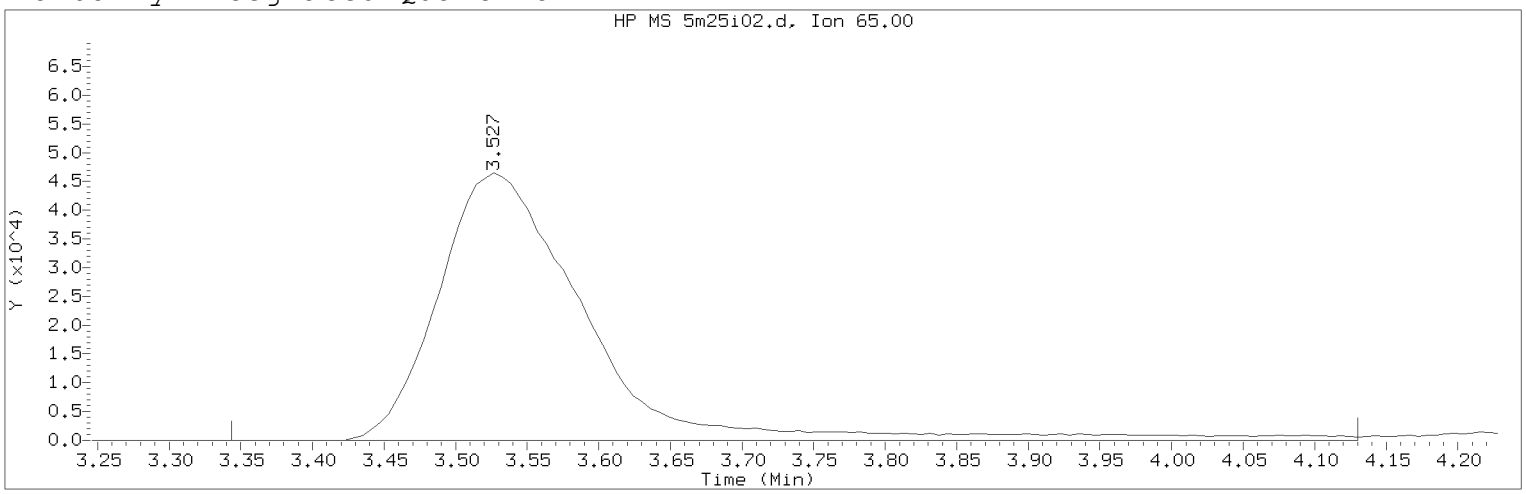
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i02.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:10 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

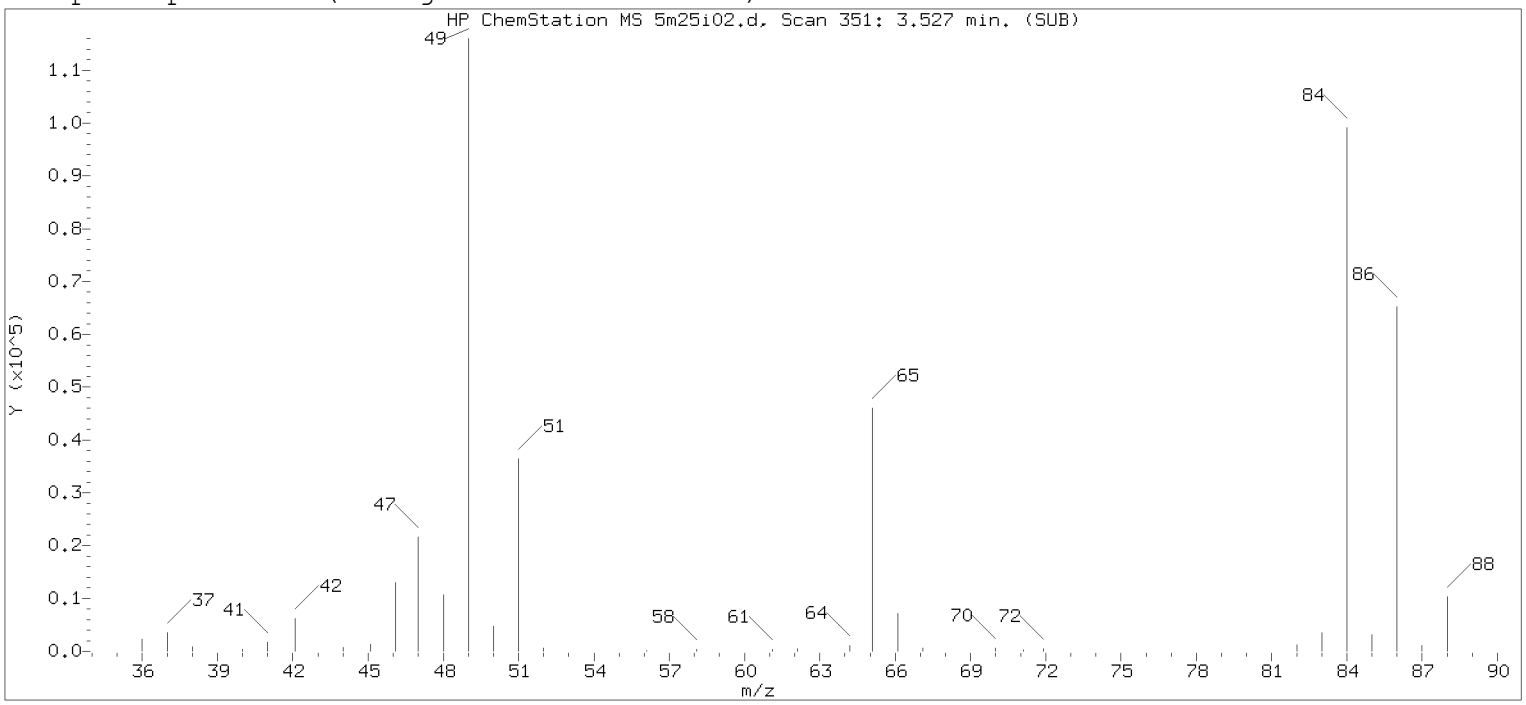
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 351
Retention Time (minutes): 3.527
Quant Ion : 65.00
Area (flag) : 333791M
On-Column Amount (ng) : 250.0000
Integration start scan : 320 Integration stop scan: 449
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

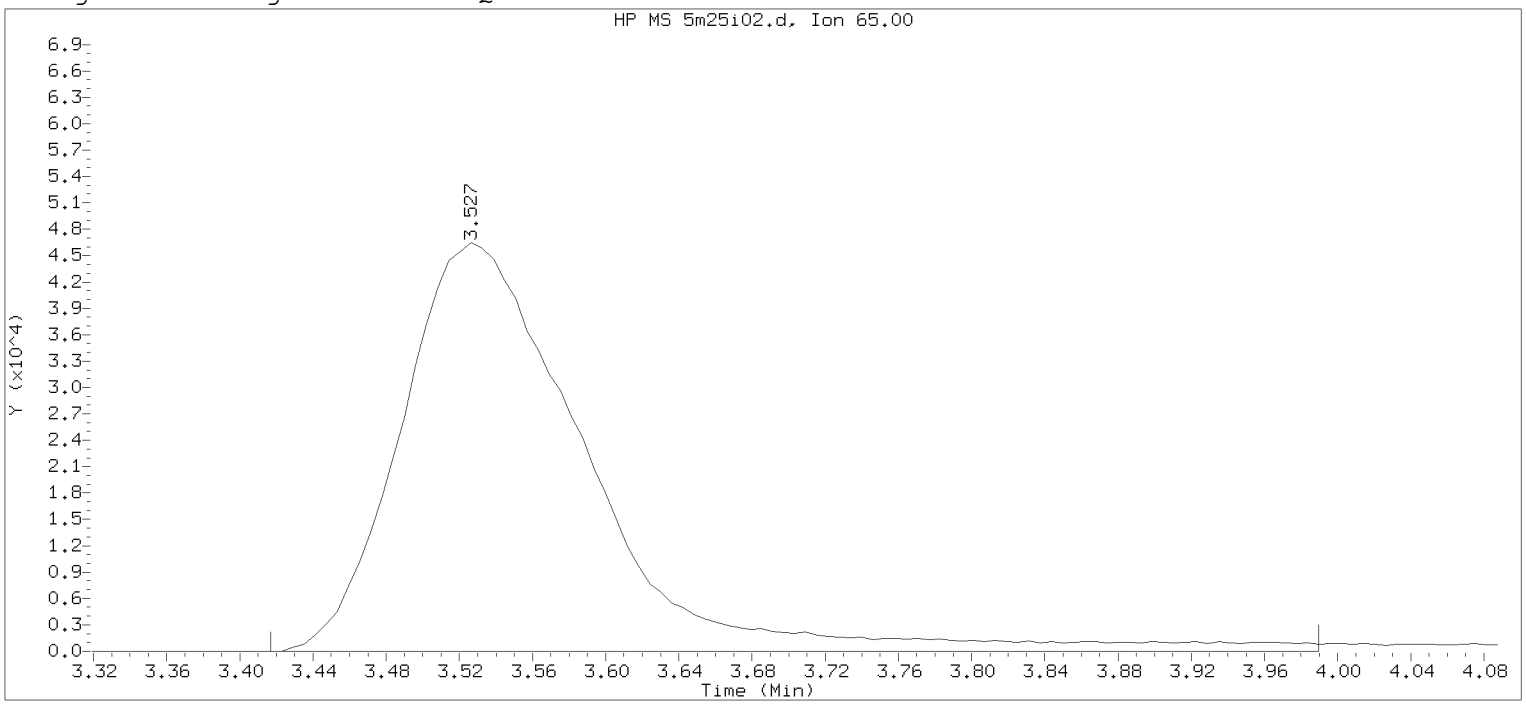
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



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Injection date and time: 25-MAR-2019 13:10 Analyst ID: APR27582

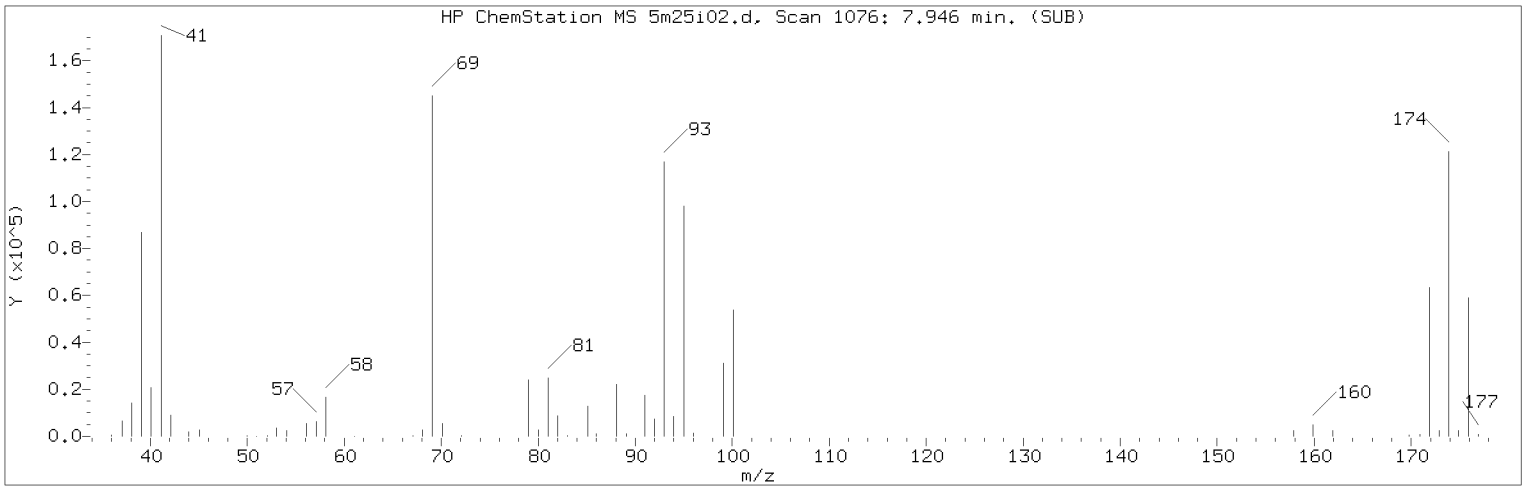
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:26
Date, time and analyst ID of latest file update: 25-Mar-2019 14:26 apr27582

Sample Name: VSTD100 Lab Sample ID: VSTD100

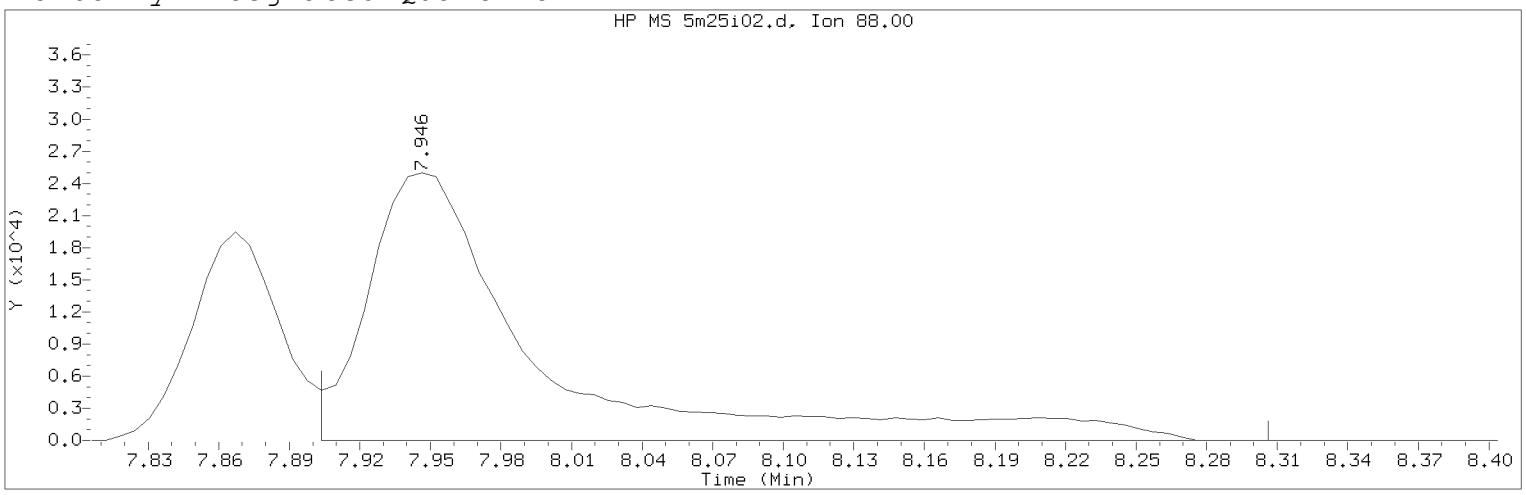
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 351
Retention Time (minutes): 3.527
Quant Ion : 65.00
Area : 327159
On-column Amount (ng) : 250.0000
Integration start scan : 332 Integration stop scan: 426
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10039

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 25-MAR-2019 13:10 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

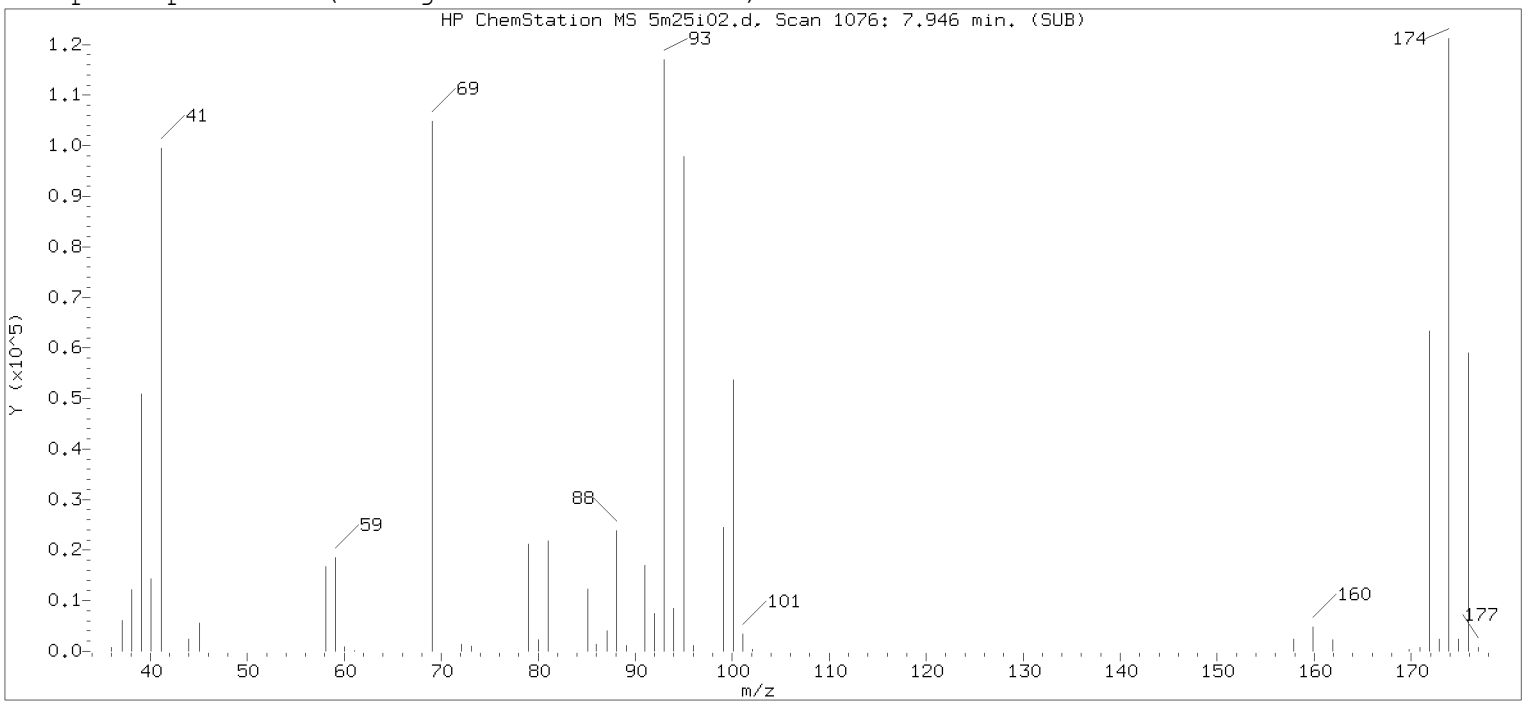
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1076
Retention Time (minutes): 7.946
Quant Ion : 88.00
Area (flag) : 126609M
On-Column Amount (ng) : 1294.4462
Integration start scan : 1068 Integration stop scan: 1134
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

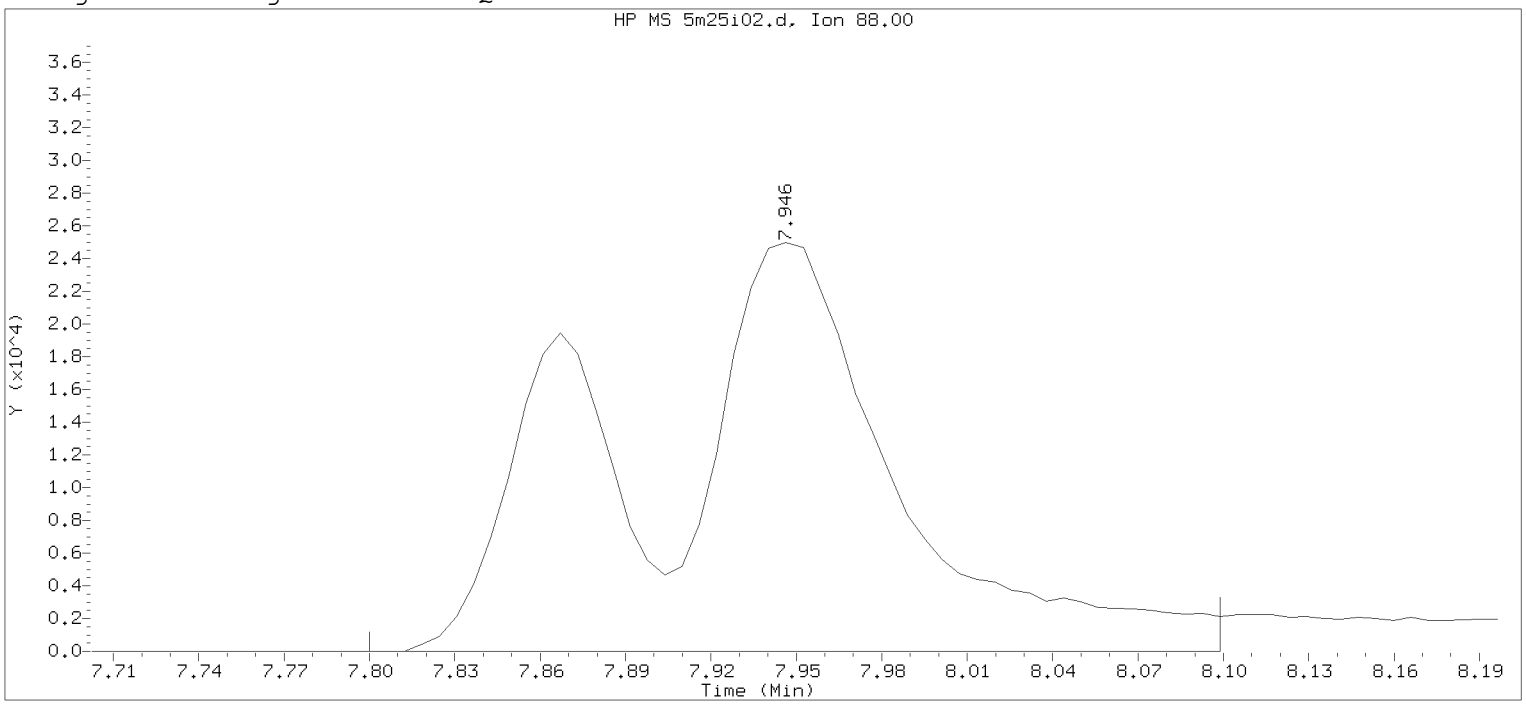
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i02.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:10 Analyst ID: APR27582

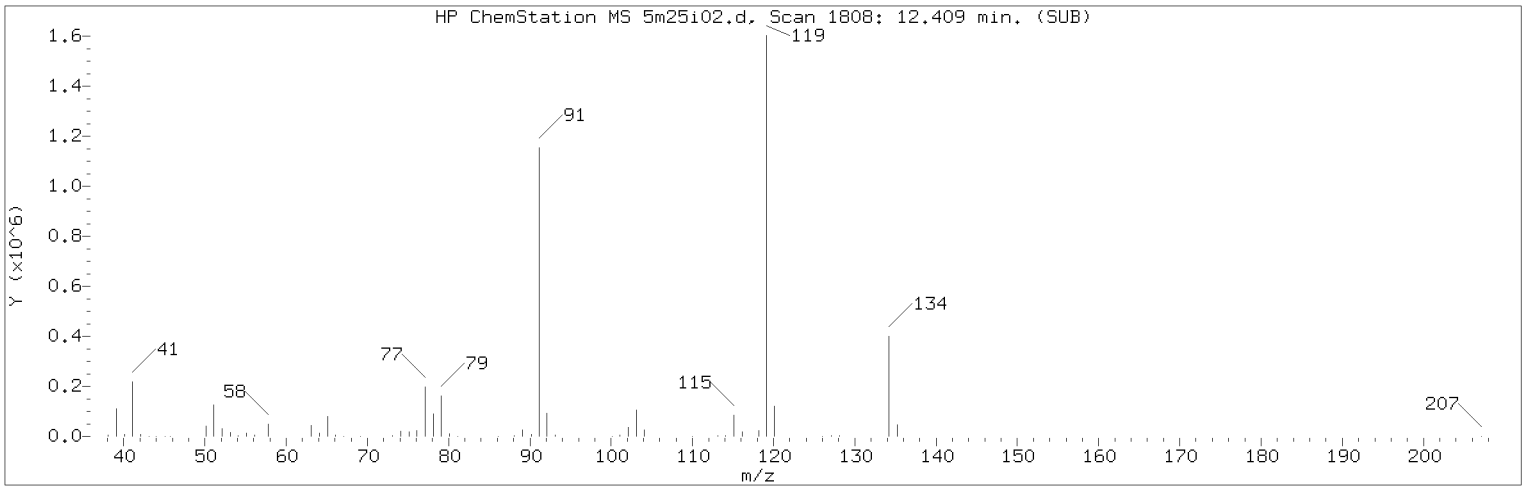
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:26
Date, time and analyst ID of latest file update: 25-Mar-2019 14:26 apr27582

Sample Name: VSTD100 Lab Sample ID: VSTD100

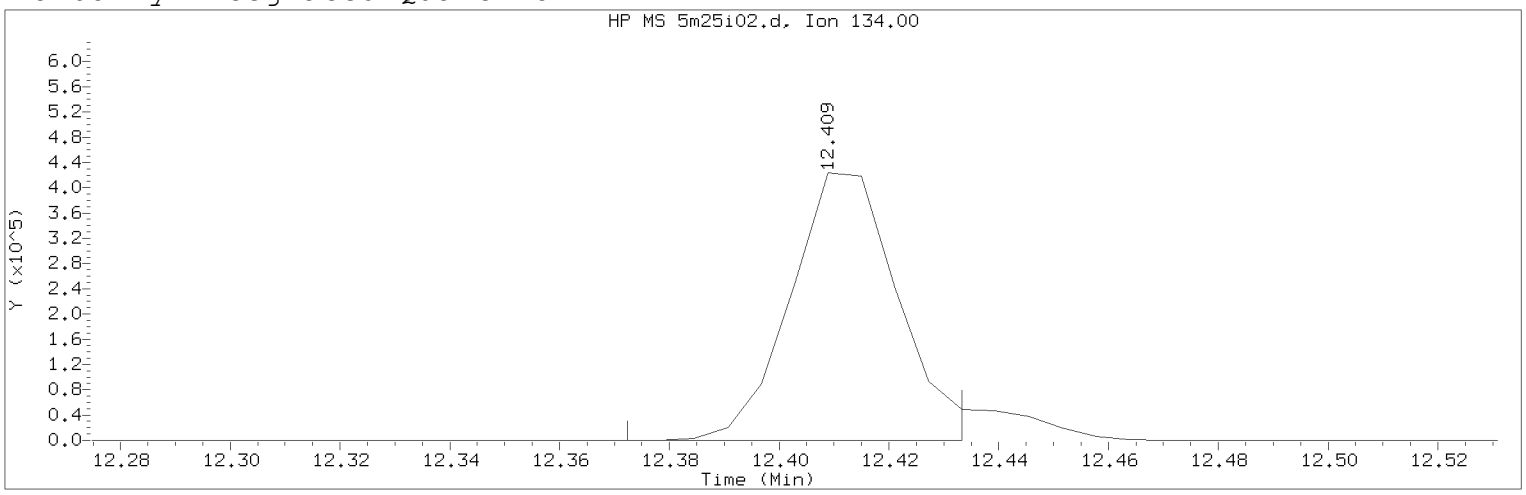
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1076
Retention Time (minutes): 7.946
Quant Ion : 88.00
Area : 157415
On-column Amount (ng) : 1247.6112
Integration start scan : 1051 Integration stop scan: 1100
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10039

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 25-MAR-2019 13:10 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

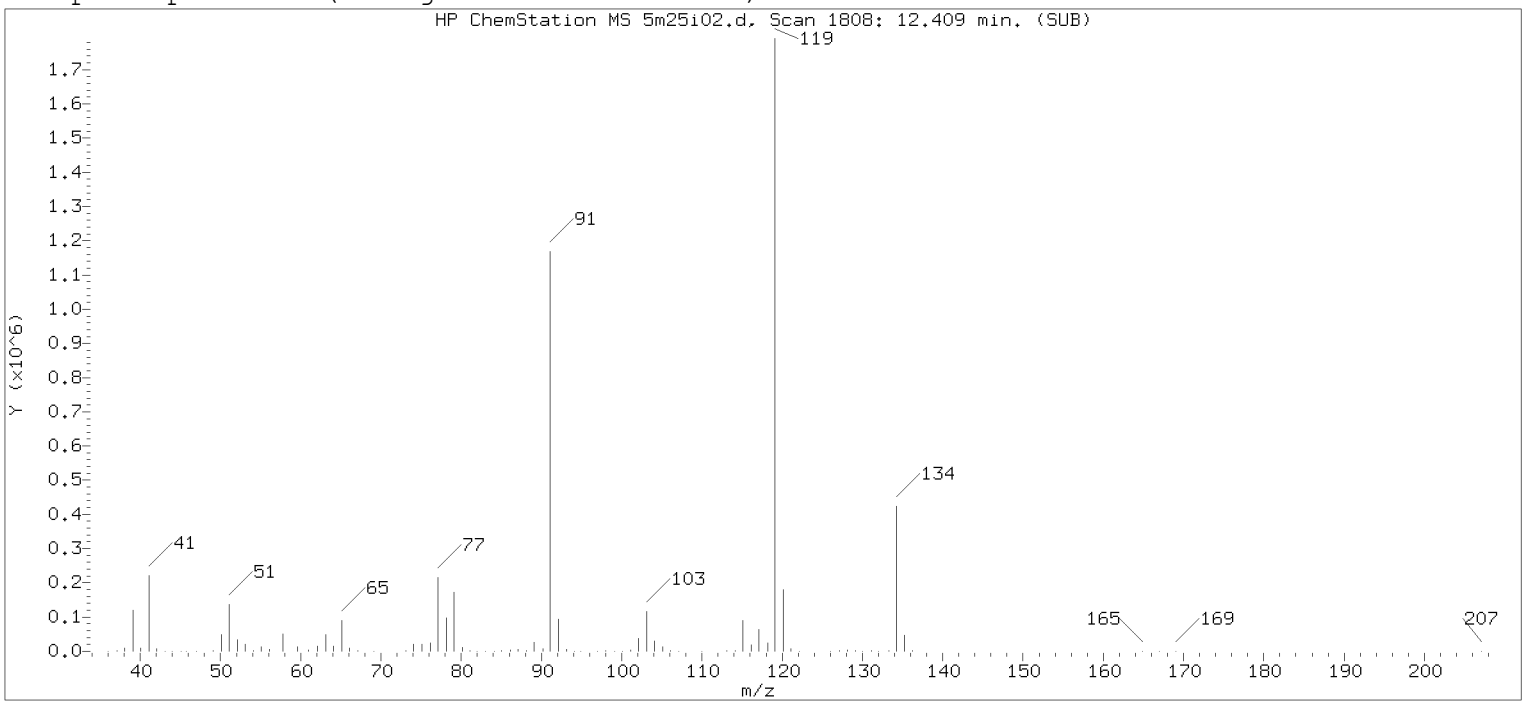
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1808
Retention Time (minutes): 12.409
Quant Ion : 134.00
Area (flag) : 579376M
On-Column Amount (ng) : 102.5697
Integration start scan : 1801 Integration stop scan: 1811
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

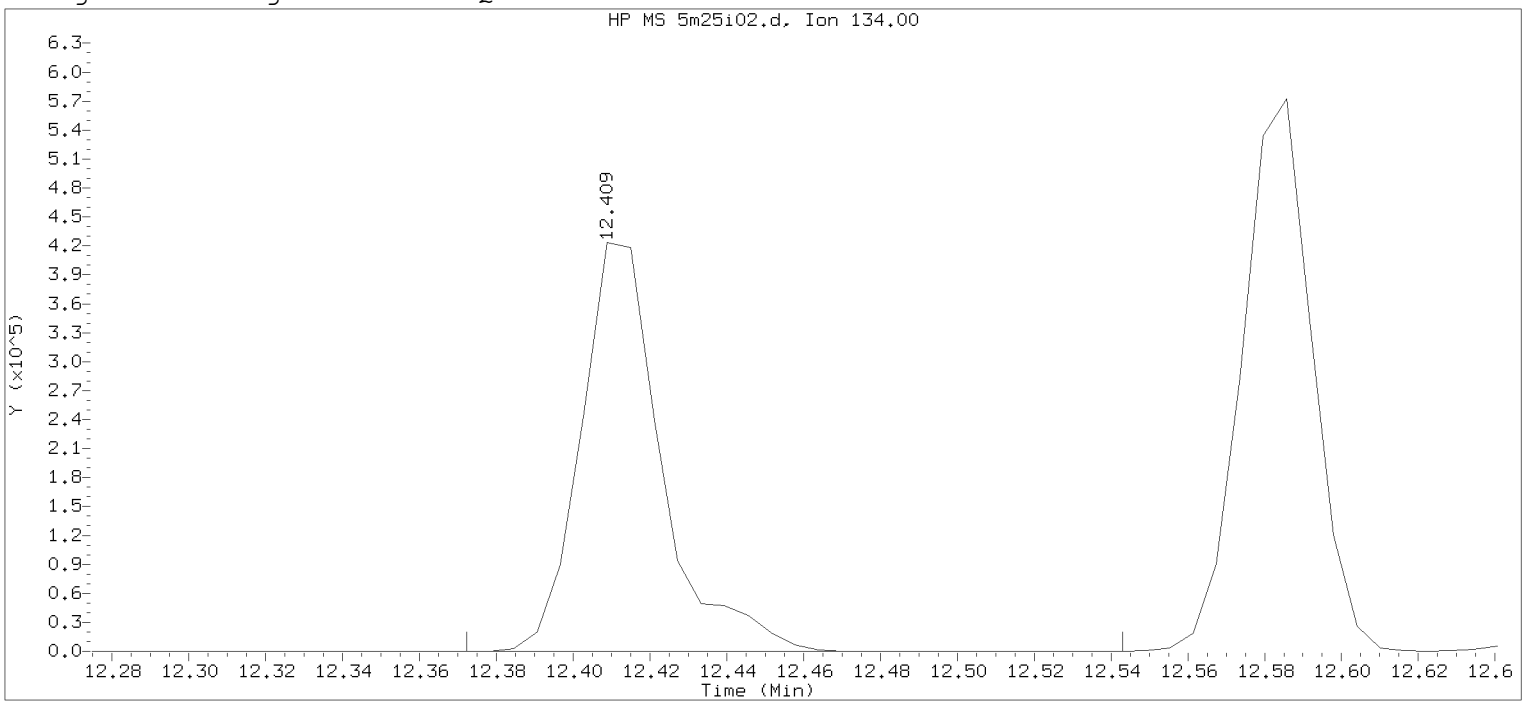
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



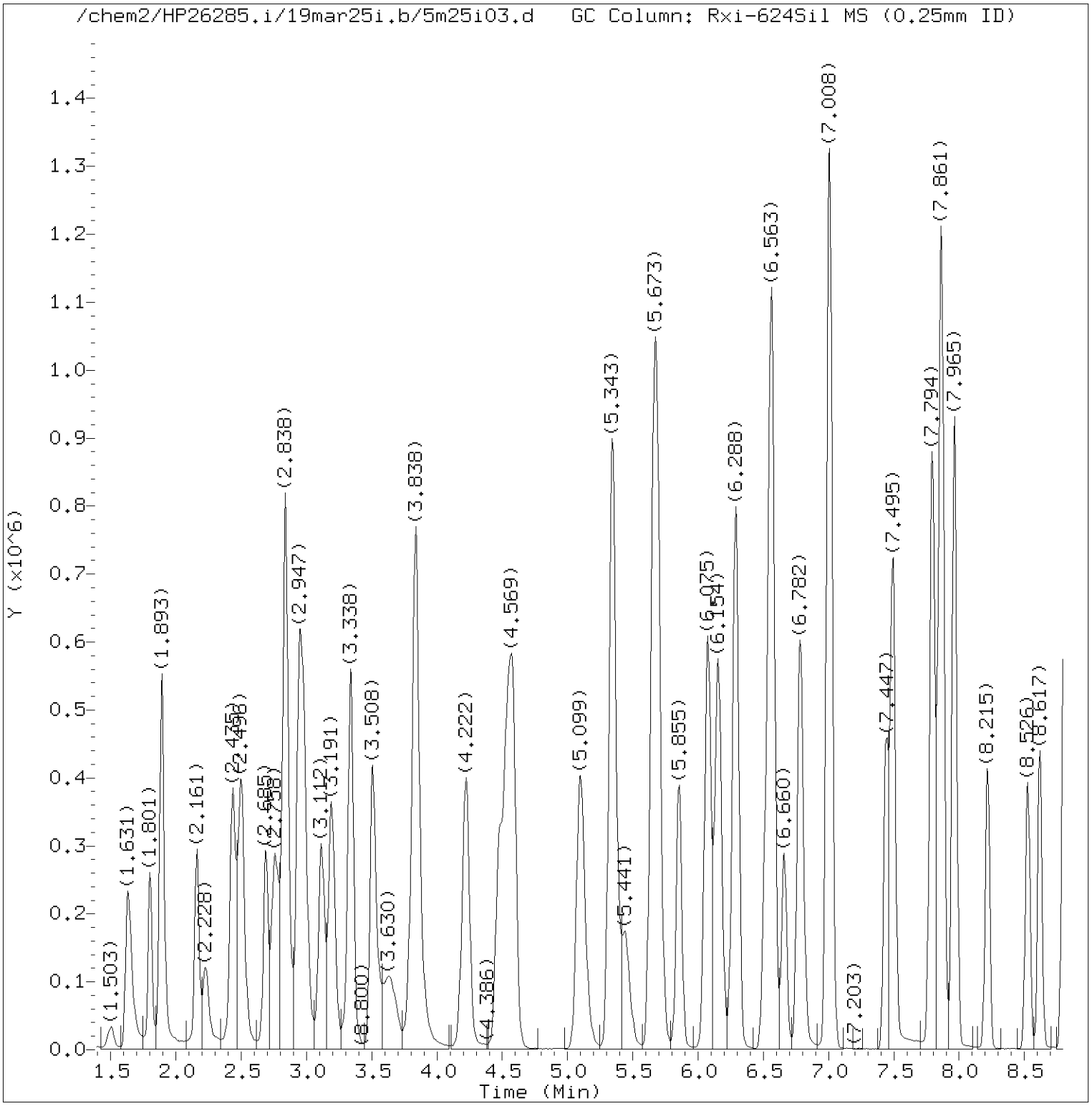
Data File: /chem2/HP26285.i/19mar25i.b/5m25i02.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:10 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:26
Date, time and analyst ID of latest file update: 25-Mar-2019 14:26 apr27582

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1808
Retention Time (minutes): 12.409
Quant Ion : 134.00
Area : 619931
On-column Amount (ng) : 100.8973
Integration start scan : 1801 Integration stop scan: 1829
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kkelly100139



Total Ion Chromatogram (TIC)

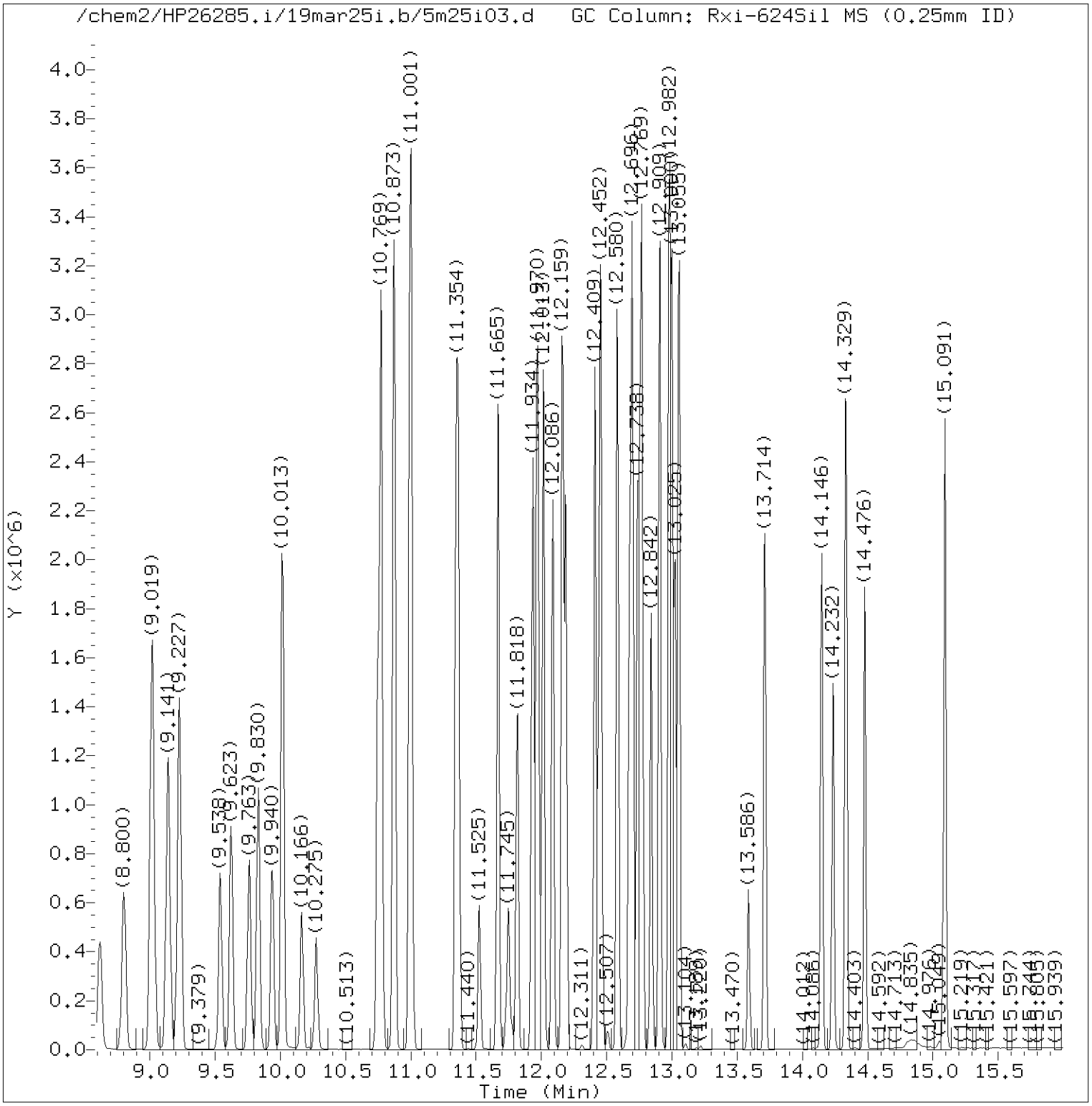
Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.631	85	483939	55.561
4) Chloromethane	(2)	1.801	50	324228	51.223
5) 1,3-Butadiene	(2)	1.887	39	208651	47.445
6) Vinyl Chloride	(2)	1.899	62	319263	51.558
8) Bromomethane	(2)	2.161	94	257539	51.612
9) Chloroethane	(2)	2.228	64	151210	50.939
10) Dichlorofluoromethane	(2)	2.435	67	398534	49.360
12) Trichlorofluoromethane	(2)	2.478	101	457802	53.182
11) n-Pentane	(2)	2.509	43	273848	50.439
14) Ethyl ether	(2)	2.685	59	227566	51.042
15) Freon 123a	(2)	2.758	67	329755	49.288
16) Acrolein	(1)	2.838	56	1242070	541.469
17) 1,1-Dichloroethene	(2)	2.947	96	251920	50.385
17) 1,1-Dichloroethene	(2)	2.947	63	123077	50.036
19) Freon 113	(2)	2.972	101	272548	53.584
18) Acetone	(1)	2.984	58	111456	106.265
22) Methyl Iodide	(2)	3.112	142	524378	50.219
21) 2-Propanol	(1)	3.130	45	185557	243.427
23) Carbon Disulfide	(2)	3.191	76	863530	52.019
27) Methyl Acetate	(2)	3.325	43	358107	46.244
25) Allyl Chloride	(2)	3.344	41	443936	49.420
28) Methylene Chloride	(2)	3.502	84	278637	49.065
29)*t-Butyl alcohol-d10	(1)	3.533	65	324947M	250.000
30) t-Butyl alcohol	(1)	3.642	59	370315	246.339
31) Acrylonitrile	(2)	3.801	53	211683	51.715
32) trans-1,2-Dichloroethene	(2)	3.838	96	283390	50.636
33) Methyl Tertiary Butyl Ether	(2)	3.838	73	792156	49.599
34) n-Hexane	(2)	4.222	57	417489	53.924
36) 1,1-Dichloroethane	(2)	4.472	63	501781	50.856
38) di-Isopropyl ether	(2)	4.539	45	897377	49.894
39) 2-Chloro-1,3-butadiene	(2)	4.581	53	446500	51.140
40) Ethyl t-butyl ether	(2)	5.093	59	830508	49.876
42) cis-1,2-Dichloroethene	(2)	5.343	96	313812	49.559
44) 2-Butanone	(2)	5.343	43	654454	105.876
45) 2,2-Dichloropropane	(2)	5.349	77	402605	51.022
47) Propionitrile	(1)	5.441	54	408108	249.598
48) Methacrylonitrile	(2)	5.660	67	503688	125.060
49) Bromochloromethane	(2)	5.691	128	158668	50.076

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.697	71	178992	107.765
51) Chloroform	(2)	5.855	83	490791	50.165
53) 1,1,1-Trichloroethane	(2)	6.069	97	439972	51.097
52)$Dibromofluoromethane	(2)	6.081	113	257854	49.754
52)$Dibromofluoromethane	(2)	6.075	111	266367	50.072
54) Cyclohexane	(2)	6.154	56	513901	51.623
54) Cyclohexane	(2)	6.154	84	440664	51.945
54) Cyclohexane	(2)	6.154	69	160500	52.036
43) 1,2-Dichloroethene (Total)	(2)		96	597202	100.195
56) Carbon Tetrachloride	(2)	6.276	117	389667	52.296
55) 1,1-Dichloropropene	(2)	6.294	75	402118	50.807
58) Isobutyl Alcohol	(1)	6.520	41	301673	612.771
57)$1,2-Dichloroethane-d4	(2)	6.550	102	60641	50.007
57)$1,2-Dichloroethane-d4	(2)	6.550	65	278798	49.664
57)$1,2-Dichloroethane-d4	(2)	6.550	104	38905	50.344
60) Benzene	(2)	6.569	78	1208690	50.271
61) 1,2-Dichloroethane	(2)	6.660	62	343258	48.308
61) 1,2-Dichloroethane	(2)	6.654	98	32442	52.187
65) t-Amyl methyl ether	(2)	6.782	73	839811	50.044
66)*Fluorobenzene	(2)	7.002	96	1083032	50.000
67) n-Heptane	(2)	7.014	43	462229	52.946
69) n-Butanol	(1)	7.440	56	514329	1252.983
71) Trichloroethene	(2)	7.495	95	314205	50.391
73) Methylcyclohexane	(2)	7.794	83	543348	52.627
73) Methylcyclohexane	(2)	7.794	98	233844	52.650
74) 1,2-Dichloropropane	(2)	7.849	63	300047	50.345
76) 1,4-Dioxane	(1)	7.946	88	61393M	644.763
75) Dibromomethane	(2)	7.959	93	188443	49.991
77) Methyl Methacrylate	(2)	7.965	69	312567	50.236
79) Bromodichloromethane	(2)	8.215	83	362178	51.700
80) 2-Nitropropane	(2)	8.526	41	342647	119.162
81) 2-Chloroethyl Vinyl Ether	(2)	8.617	63	256509M	51.571
82) cis-1,3-Dichloropropene	(2)	8.800	75	476342	51.680
83) 4-Methyl-2-pentanone	(2)	9.019	43	1532192	121.026
84)$Toluene-d8	(3)	9.141	98	1047807	49.917
84)$Toluene-d8	(3)	9.141	100	689804	49.999
89) Toluene	(3)	9.227	92	783467	50.144
90) trans-1,3-Dichloropropene	(3)	9.538	75	436918	51.749

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on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	9.623	69	517168	51.088
93) 1,1,2-Trichloroethane	(3)	9.763	97	280901	50.254
94) Tetrachloroethene	(3)	9.830	166	353801	49.794
95) 1,3-Dichloropropane	(3)	9.940	76	455595	49.757
97) 2-Hexanone	(3)	10.013	43	1379228	124.816
91) 1,3-Dichloropropene (total)	(3)		100	913260	103.429
98) Dibromochloromethane	(3)	10.166	129	304984	53.294
100) 1,2-Dibromoethane	(3)	10.275	107	312796	50.112
101)*Chlorobenzene-d5	(3)	10.745	117	831607	50.000
102) 1-Chlorohexane	(3)	10.769	91	451844	49.637
103) Chlorobenzene	(3)	10.775	112	881919	50.446
104) 1,1,1,2-Tetrachloroethane	(3)	10.867	131	308865	52.337
105) Ethylbenzene	(3)	10.873	91	1563175	51.219
107) m+p-Xylene	(3)	11.001	106	1232325	102.386
108) o-Xylene	(3)	11.348	106	599659	50.989
110) Styrene	(3)	11.367	104	1006299	51.817
111) Bromoform	(3)	11.525	173	245060	54.248
112) Isopropylbenzene	(3)	11.665	105	1575153	51.573
113) Cyclohexanone	(1)	11.745	55	248635	624.095
109) Xylene (Total)	(3)		106	1831984	153.375
115)$4-Bromofluorobenzene	(3)	11.812	95	408552	50.021
115)$4-Bromofluorobenzene	(3)	11.818	174	357976	50.310
116) Bromobenzene	(4)	11.934	156	391268	50.885
117) 1,1,2,2-Tetrachloroethane	(4)	11.940	83	493030	50.639
119) trans-1,4-Dichloro-2-butene	(4)	11.964	53	395416	128.961
118) 1,2,3-Trichloropropane	(4)	11.982	110	146234	49.854
120) n-Propylbenzene	(4)	12.013	91	1870288	51.684
121) 2-Chlorotoluene	(4)	12.086	126	377302	50.574
123) 1,3,5-Trimethylbenzene	(4)	12.159	105	1349847	51.690
122) 4-Chlorotoluene	(4)	12.190	126	387178	50.551
125) tert-Butylbenzene	(4)	12.409	134	284706M	51.593
126) Pentachloroethane	(4)	12.440	167	243019	53.928
127) 1,2,4-Trimethylbenzene	(4)	12.458	105	1376882	51.415
128) sec-Butylbenzene	(4)	12.580	105	1774045	52.435
130) 1,3-Dichlorobenzene	(4)	12.677	146	749694	50.909
131) p-Isopropyltoluene	(4)	12.696	119	1545878	52.701
132)*1,4-Dichlorobenzene-d4	(4)	12.738	152	445741	50.000
134) 1,4-Dichlorobenzene	(4)	12.757	146	755607	50.628

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$ = Compound is a surrogate standard.

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on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

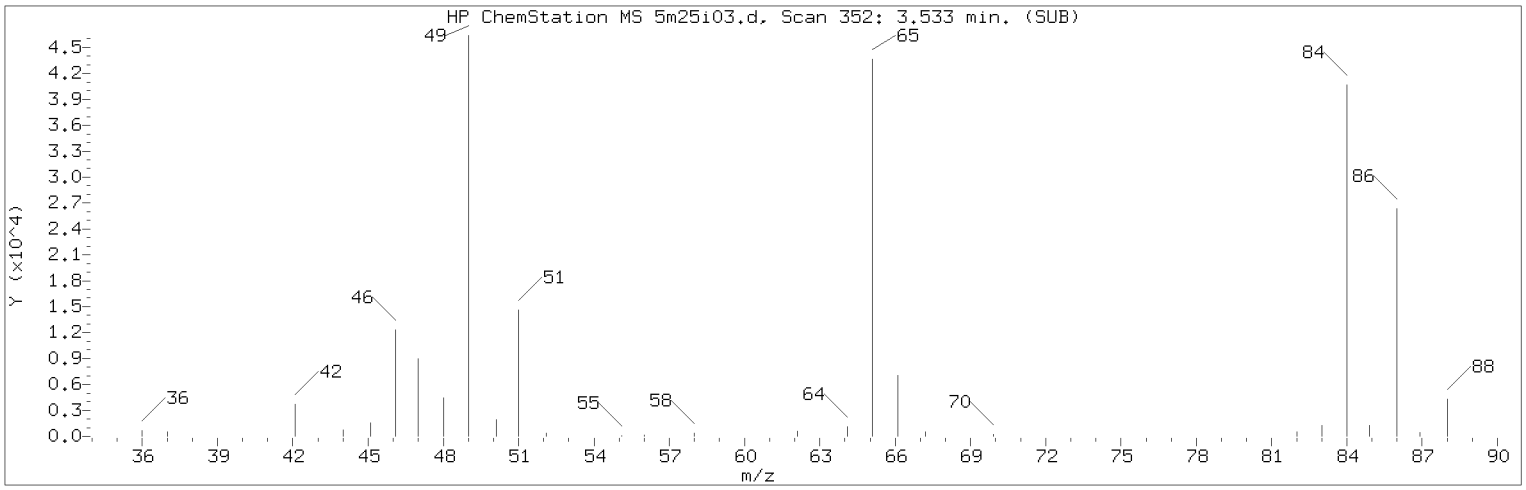
Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	12.769	105	1425258	51.521
136) Benzyl Chloride	(4)	12.842	91	1037262	54.079
137) 1,3-Diethylbenzene	(4)	12.909	119	936156	52.363
138) 1,4-Diethylbenzene	(4)	12.982	119	1007901	53.122
140) n-Butylbenzene	(4)	13.000	92	781143M	52.793
139) 1,2-Dichlorobenzene	(4)	13.025	146	707099	50.791
141) 1,2-Diethylbenzene	(4)	13.055	119	774136	52.085
142) Diethylbenzene (total)	(4)		100	2718193	157.570
143) 1,2-Dibromo-3-chloropropane	(4)	13.586	75	125918	51.770
145) 1,3,5-Trichlorobenzene	(4)	13.714	180	575391	51.415
147) 1,2,4-Trichlorobenzene	(4)	14.146	180	517183	51.053
148) Hexachlorobutadiene	(4)	14.238	225	242154	50.650
149) Naphthalene	(4)	14.335	128	1765929	51.373
150) 1,2,3-Trichlorobenzene	(4)	14.476	180	491532	50.640
151) 2-Methylnaphthalene	(4)	15.091	142	1065299	52.669

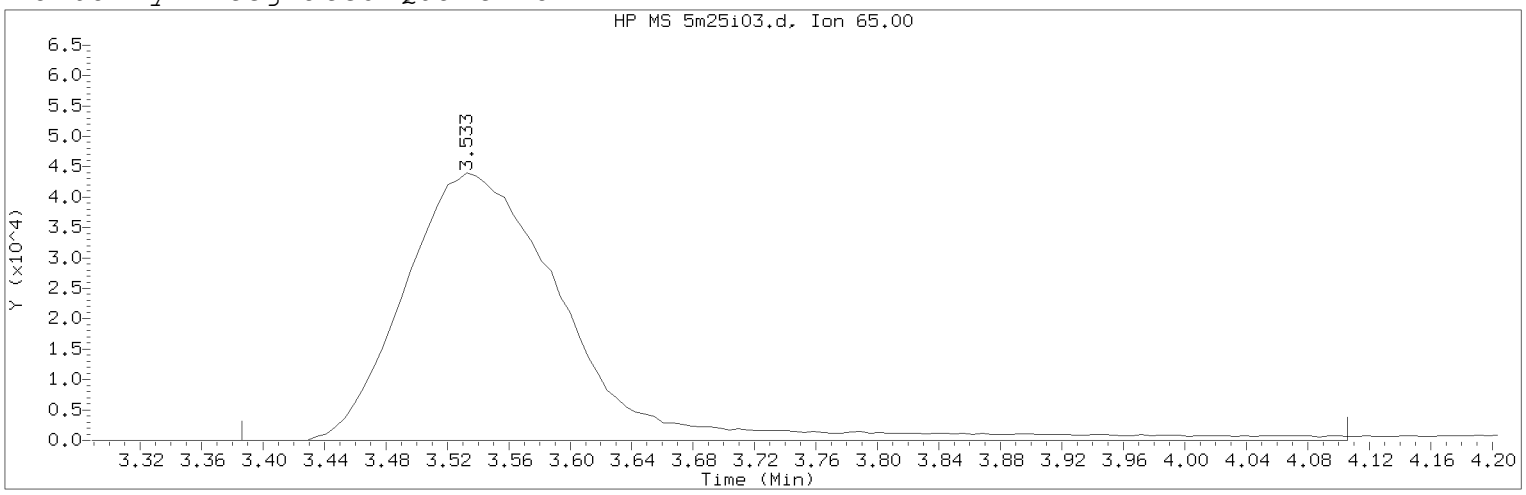
M = Compound was manually integrated.

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

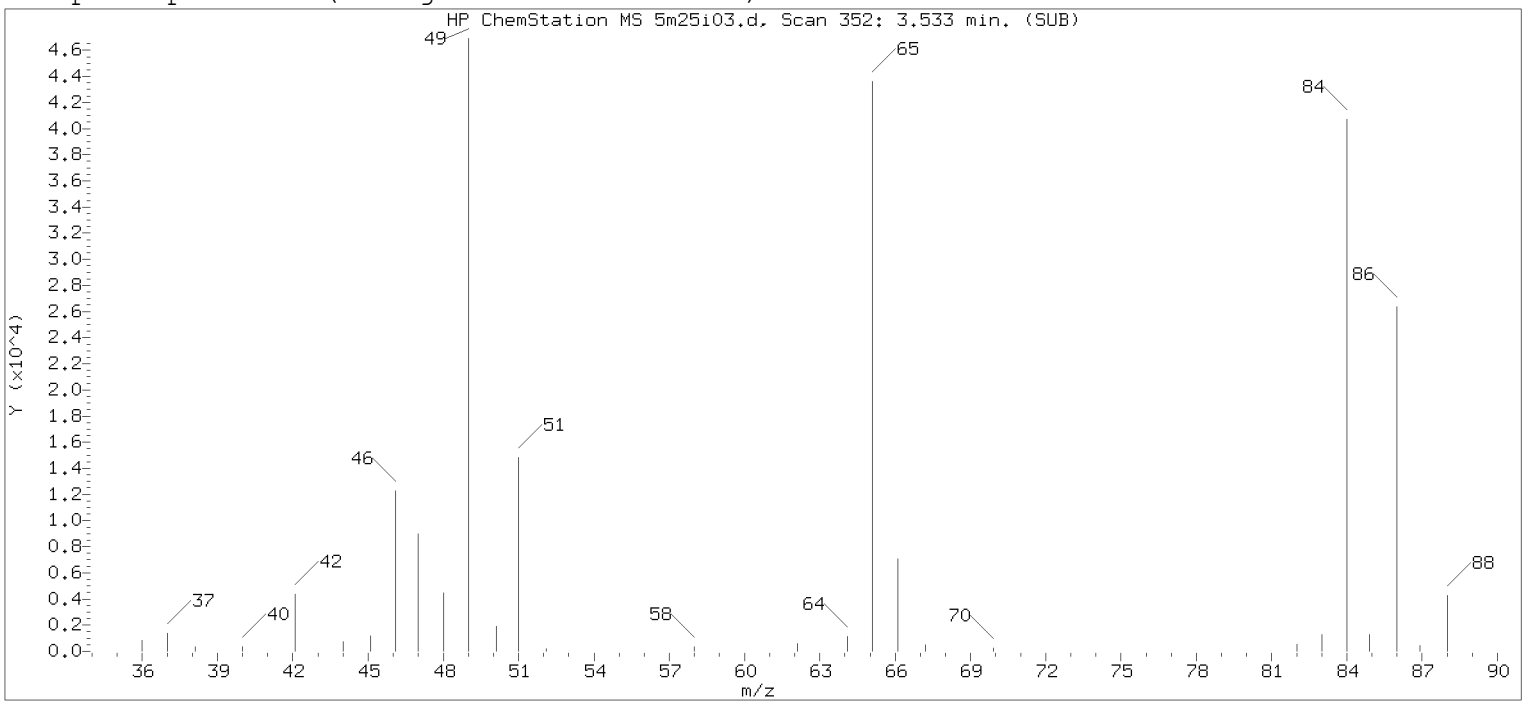
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 352
Retention Time (minutes): 3.533
Quant Ion : 65.00
Area (flag) : 324947M
On-Column Amount (ng) : 250.0000
Integration start scan : 327 Integration stop scan: 445
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

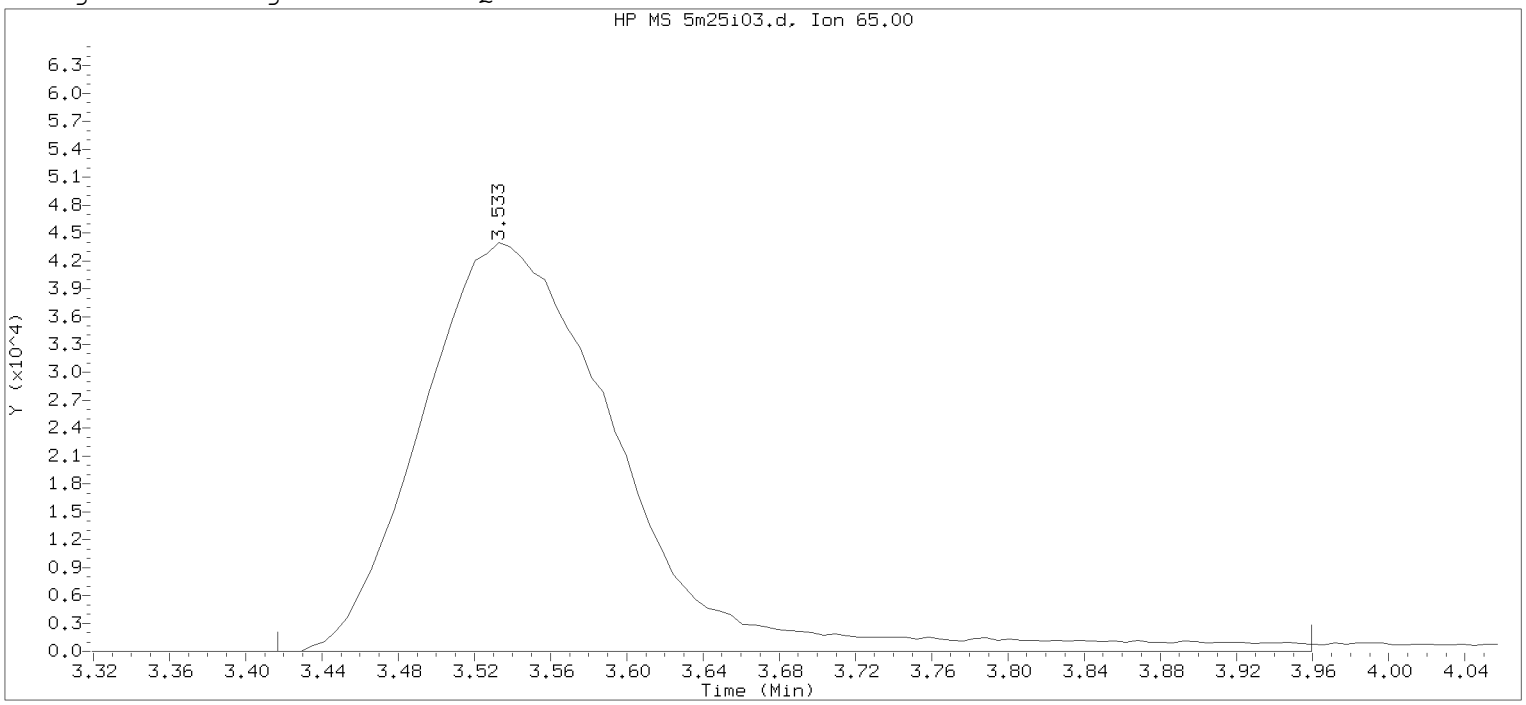
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

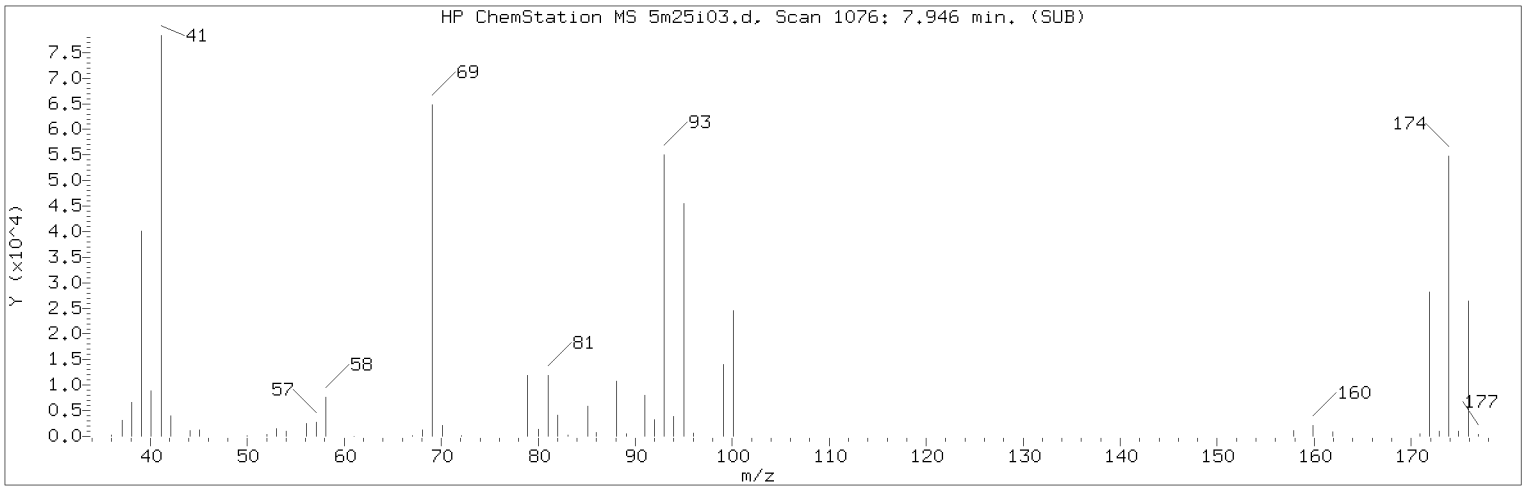
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:26
Date, time and analyst ID of latest file update: 25-Mar-2019 14:27 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

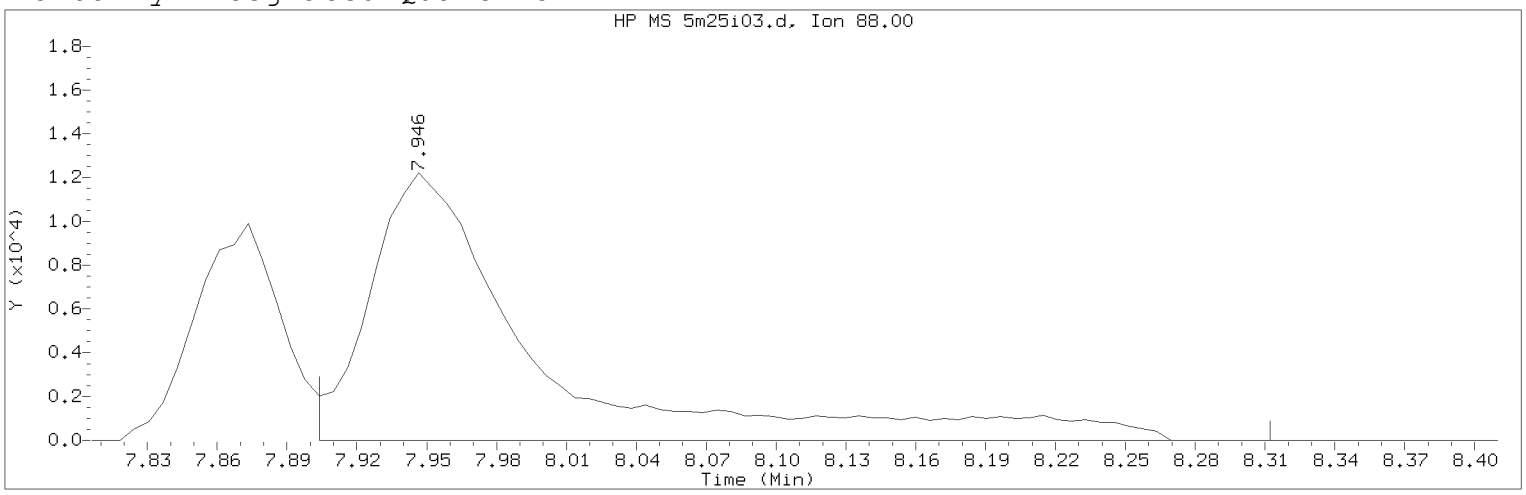
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 352
Retention Time (minutes): 3.533
Quant Ion : 65.00
Area : 318391
On-column Amount (ng) : 250.0000
Integration start scan : 332 Integration stop scan: 421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user: KEVIN KELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

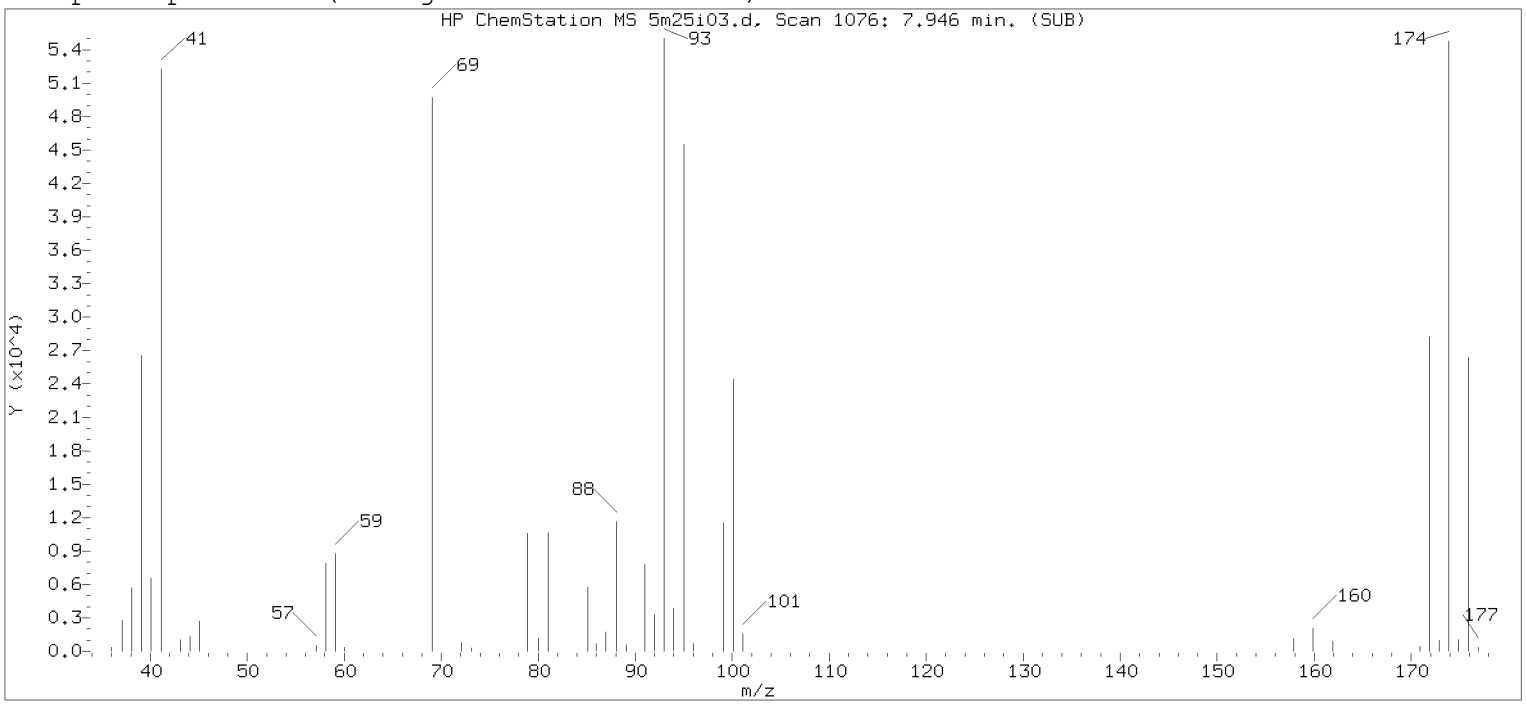
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1076
Retention Time (minutes): 7.946
Quant Ion : 88.00
Area (flag) : 61393M
On-Column Amount (ng) : 644.7634
Integration start scan : 1068 Integration stop scan: 1135
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

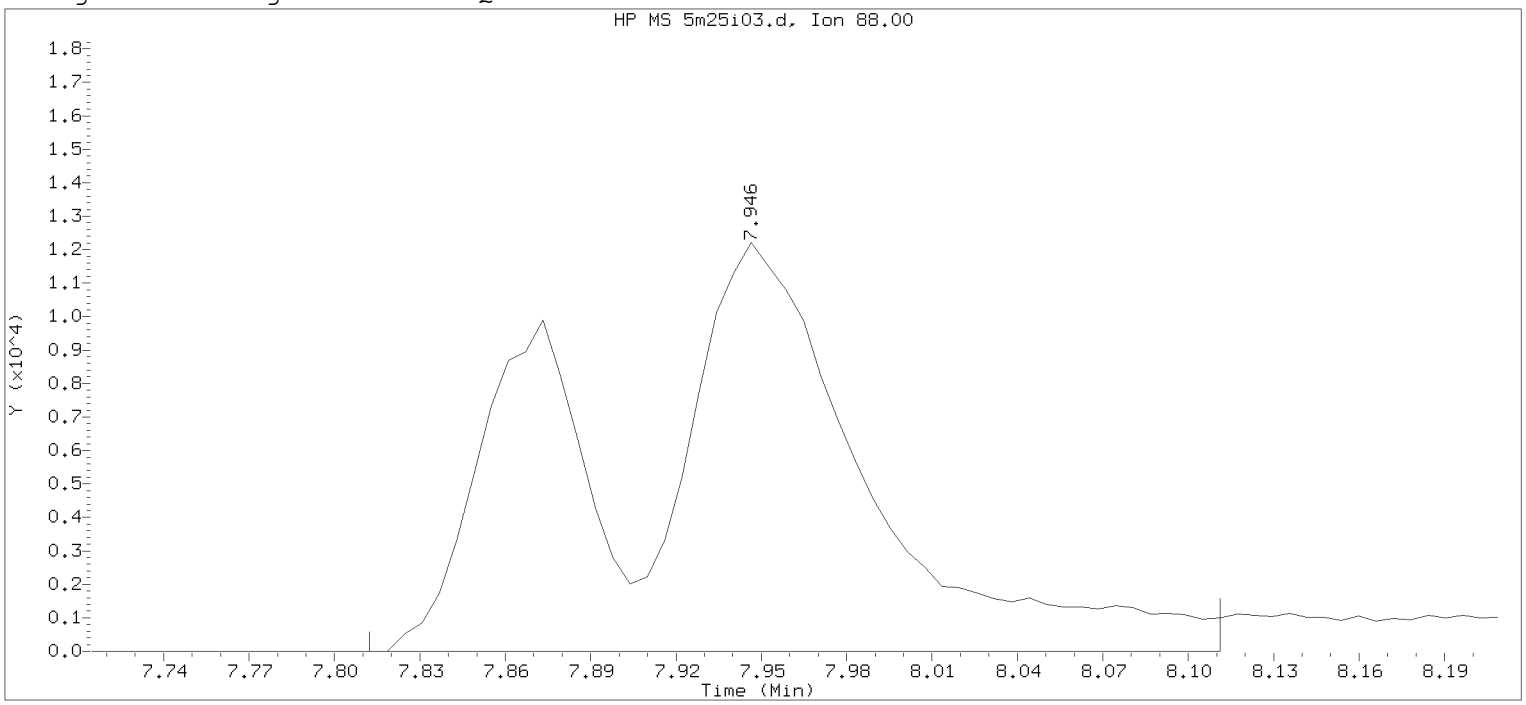
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

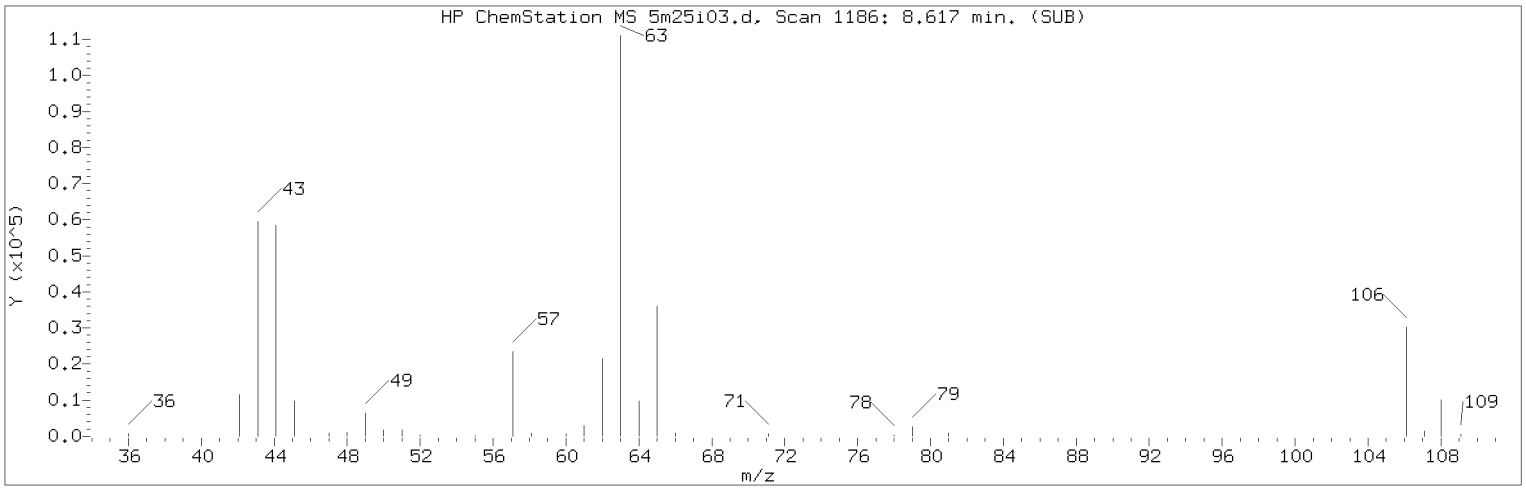
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:26
Date, time and analyst ID of latest file update: 25-Mar-2019 14:27 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

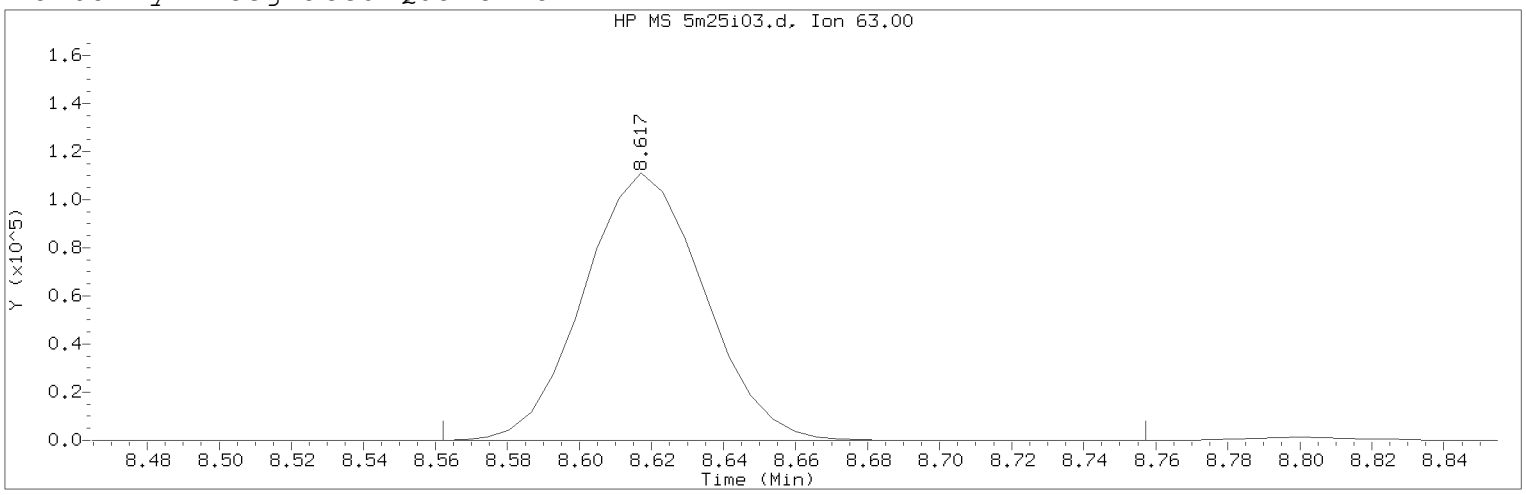
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1076
Retention Time (minutes): 7.946
Quant Ion : 88.00
Area : 77570
On-column Amount (ng) : 638.7899
Integration start scan : 1053 Integration stop scan: 1102
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kkelly1000

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

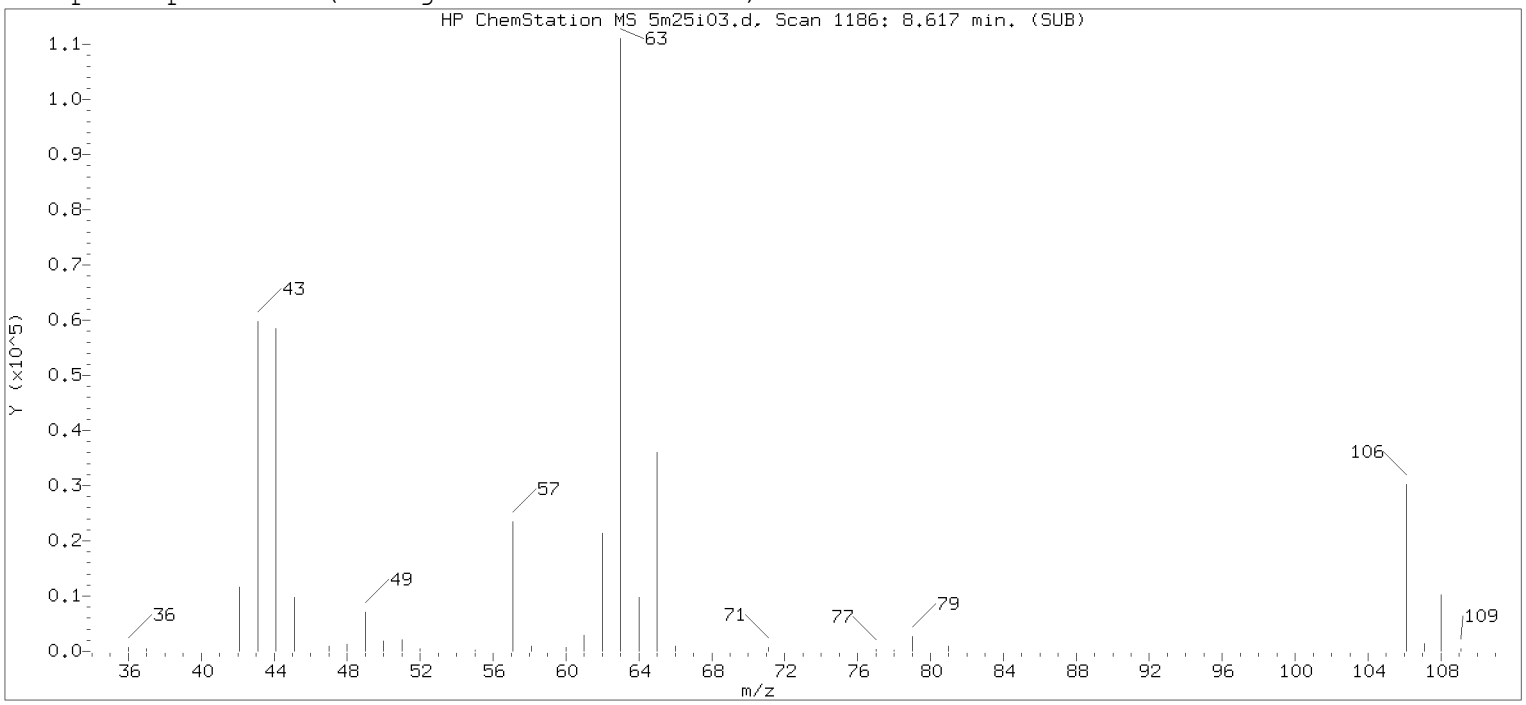
Compound Number : 81
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1186
Retention Time (minutes): 8.617
Quant Ion : 63.00
Area (flag) : 256509M
On-Column Amount (ng) : 51.5714
Integration start scan : 1176 Integration stop scan: 1208
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

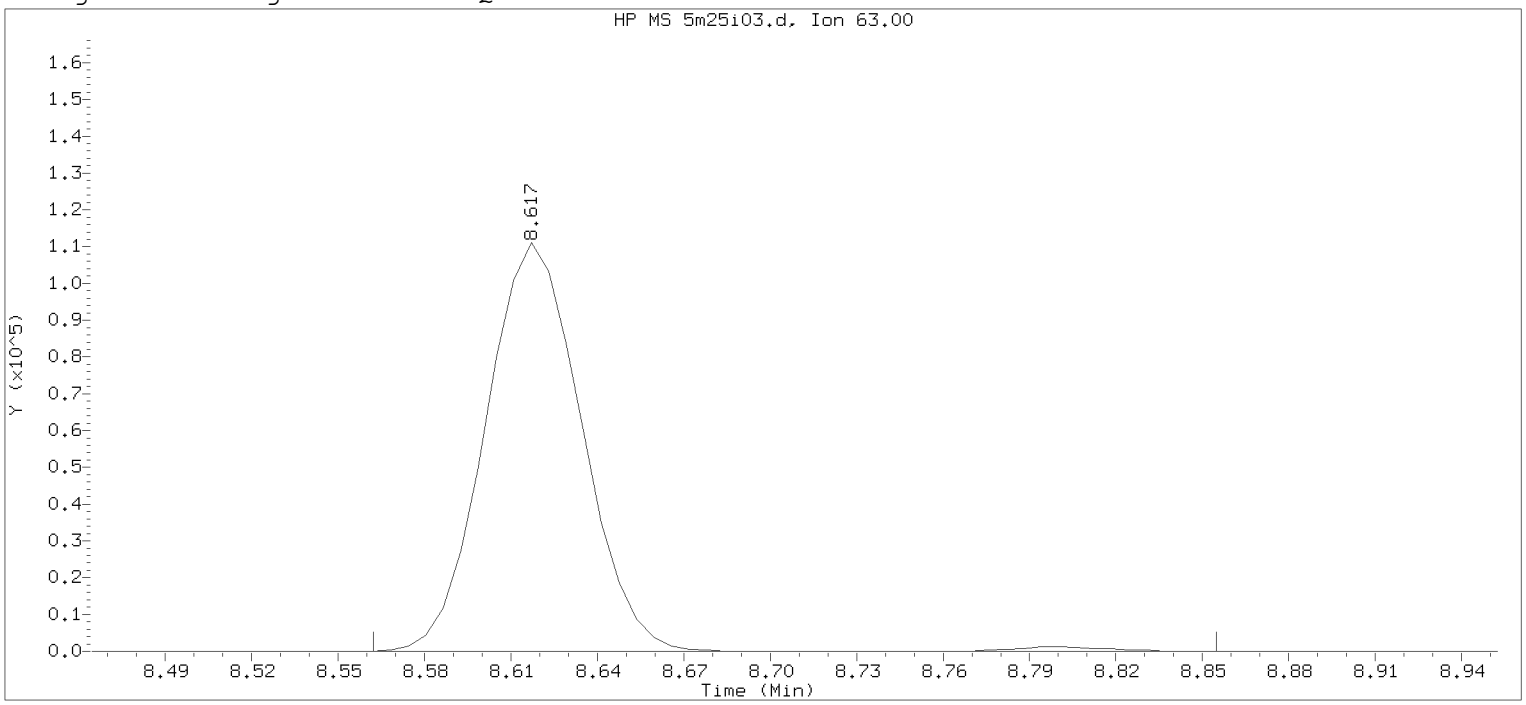
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

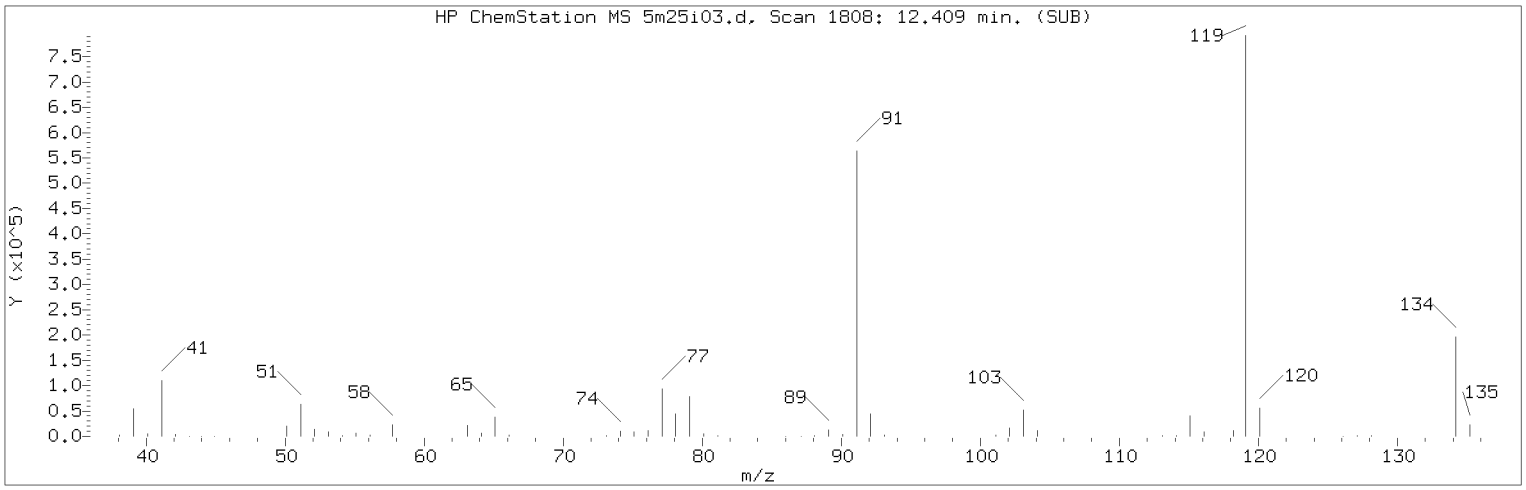
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:26
Date, time and analyst ID of latest file update: 25-Mar-2019 14:27 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

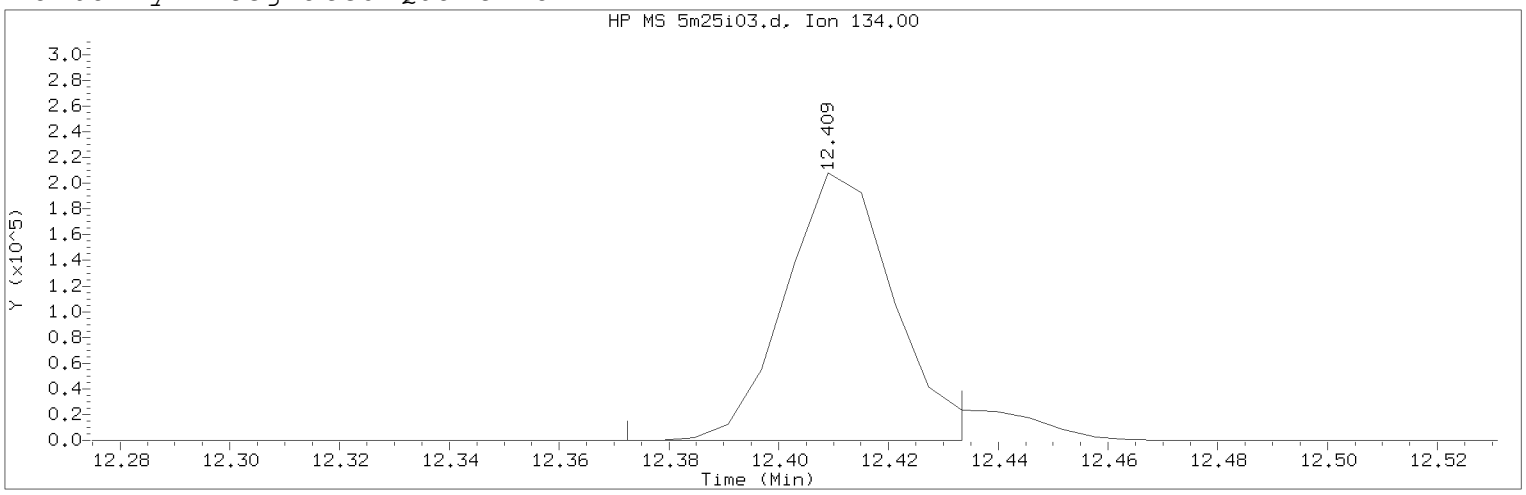
Compound Number : 81
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1186
Retention Time (minutes): 8.617
Quant Ion : 63.00
Area : 259176
On-column Amount (ng) : 50.6106
Integration start scan : 1176 Integration stop scan: 1224
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: KKELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

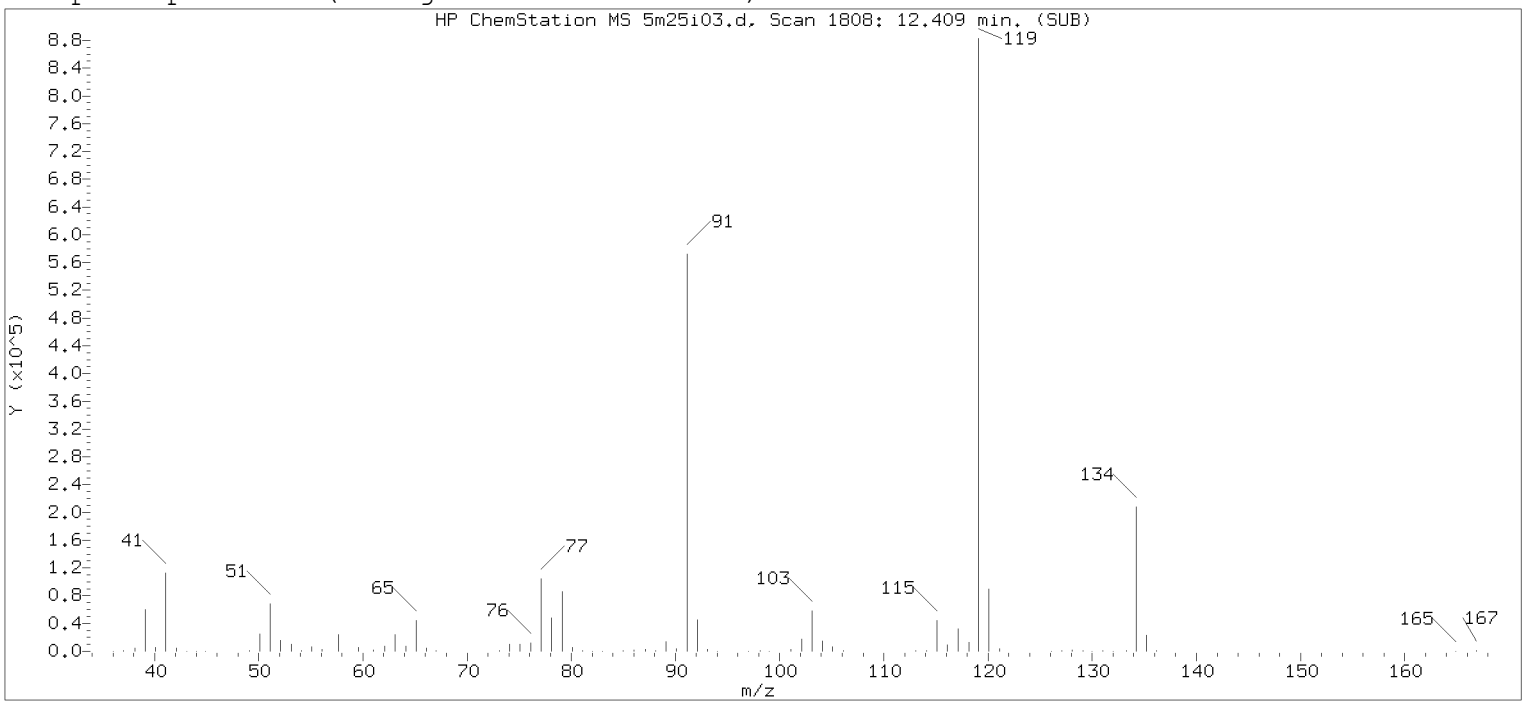
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1808
Retention Time (minutes): 12.409
Quant Ion : 134.00
Area (flag) : 284706M
On-Column Amount (ng) : 51.5928
Integration start scan : 1801 Integration stop scan: 1811
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

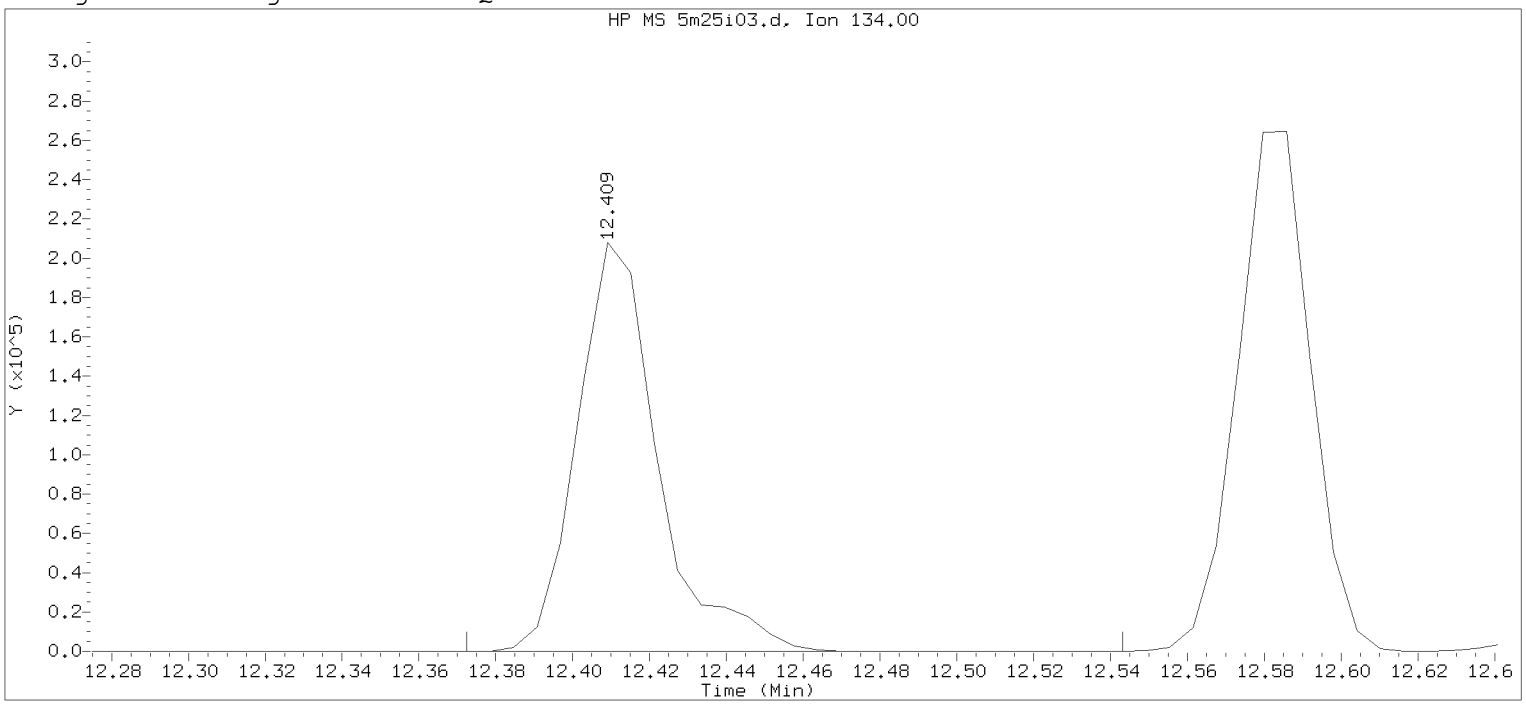
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

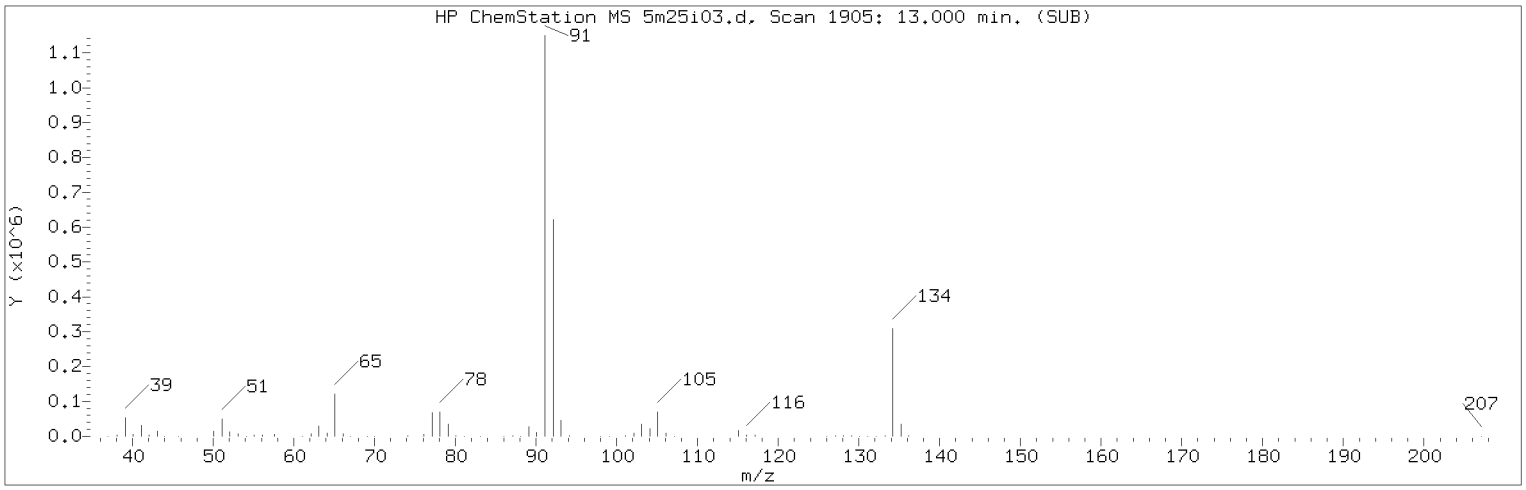
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:26
Date, time and analyst ID of latest file update: 25-Mar-2019 14:27 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

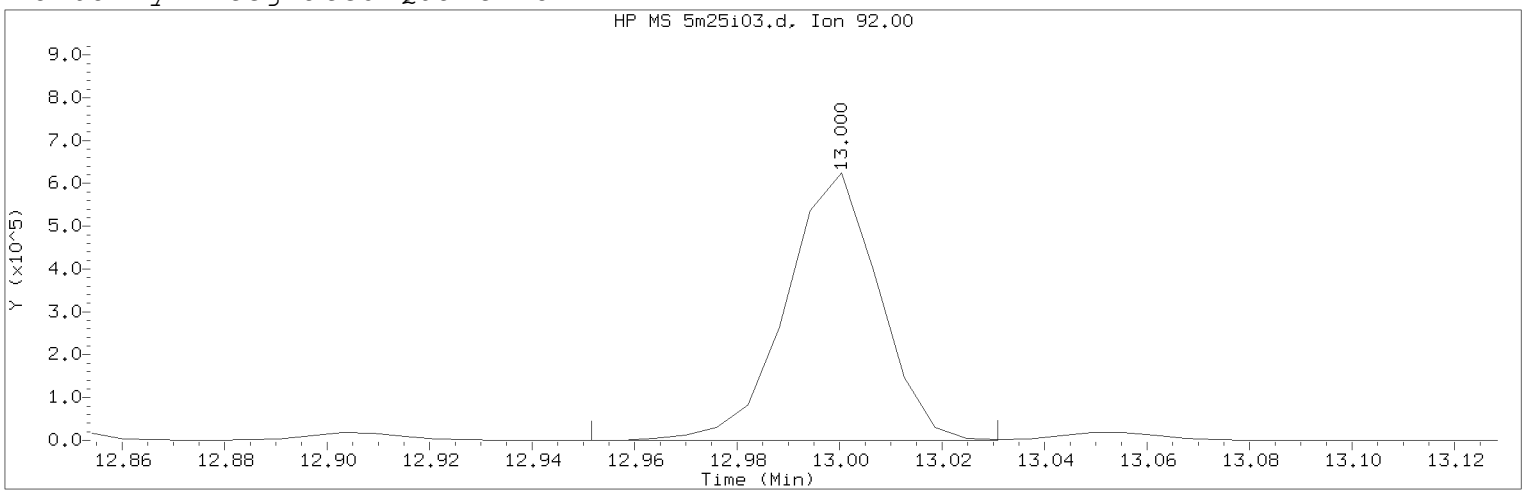
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1808
Retention Time (minutes): 12.409
Quant Ion : 134.00
Area : 303736
On-column Amount (ng) : 50.6019
Integration start scan : 1801 Integration stop scan: 1829
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kkelly1000

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

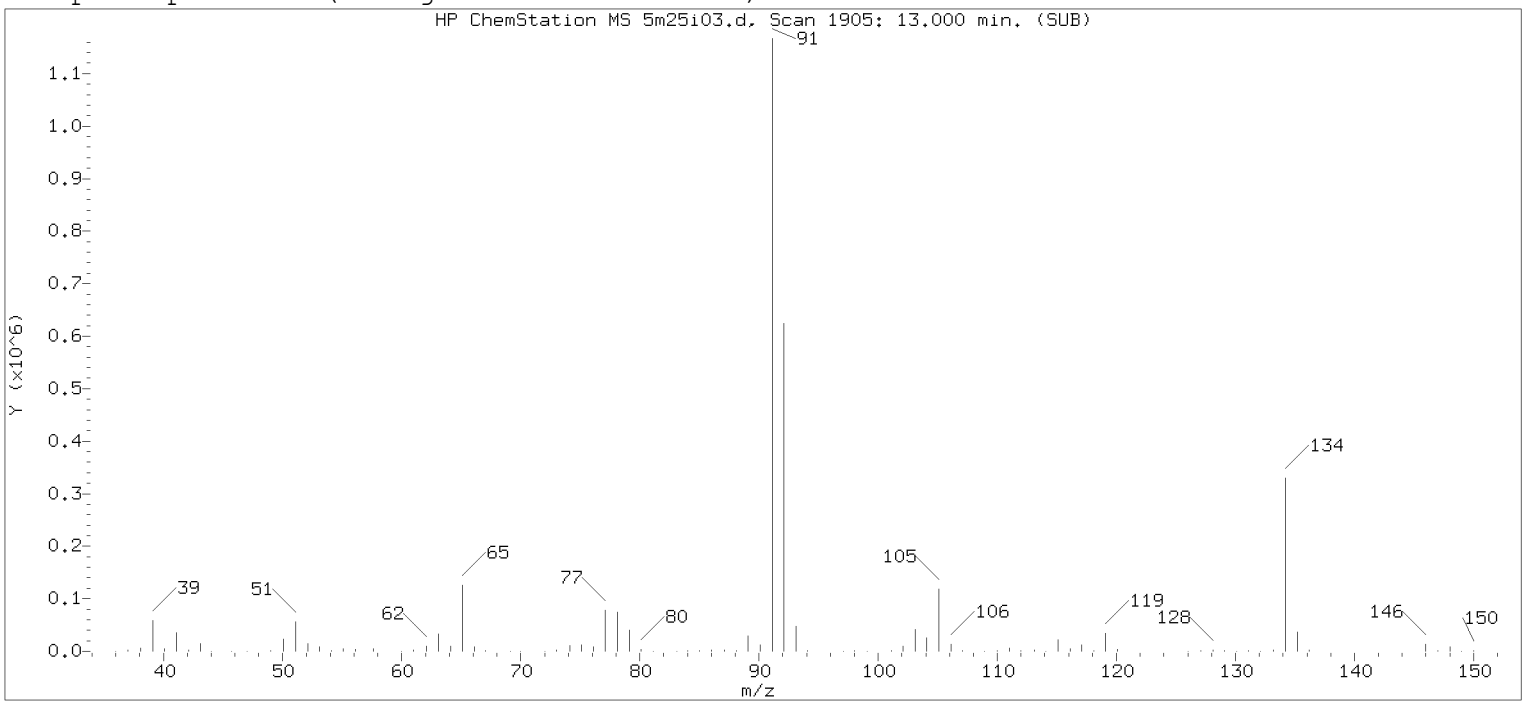
Compound Number : 140
Compound Name : n-Butylbenzene
Scan Number : 1905
Retention Time (minutes): 13.000
Quant Ion : 92.00
Area (flag) : 781143M
On-Column Amount (ng) : 52.7932
Integration start scan : 1896 Integration stop scan: 1909
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

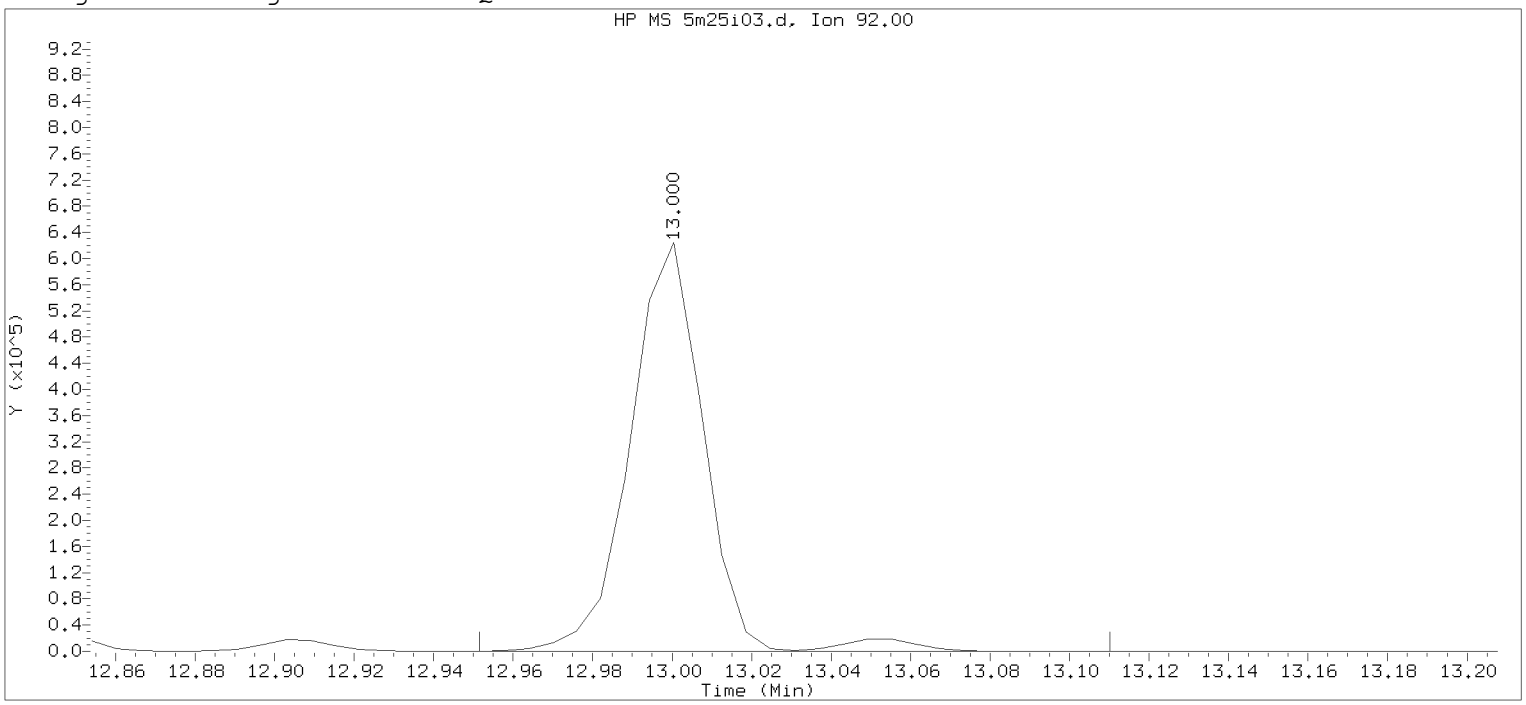
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



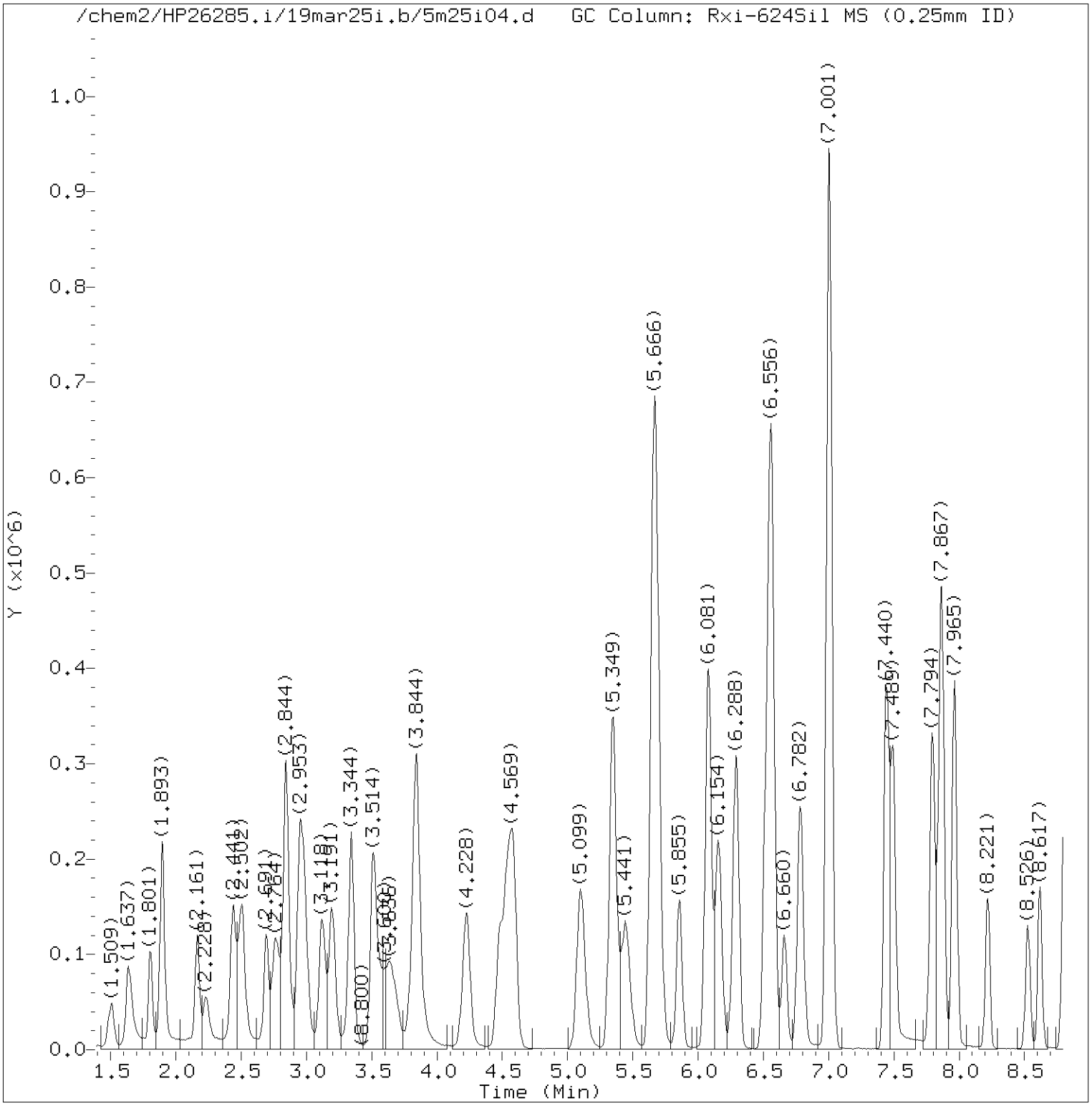
Data File: /chem2/HP26285.i/19mar25i.b/5m25i03.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:31 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:26
Date, time and analyst ID of latest file update: 25-Mar-2019 14:27 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 140
Compound Name : n-Butylbenzene
Scan Number : 1905
Retention Time (minutes): 13.000
Quant Ion : 92.00
Area : 805625
On-column Amount (ng) : 52.6838
Integration start scan : 1896 Integration stop scan: 1922
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kkelly1000



Total Ion Chromatogram (TIC)

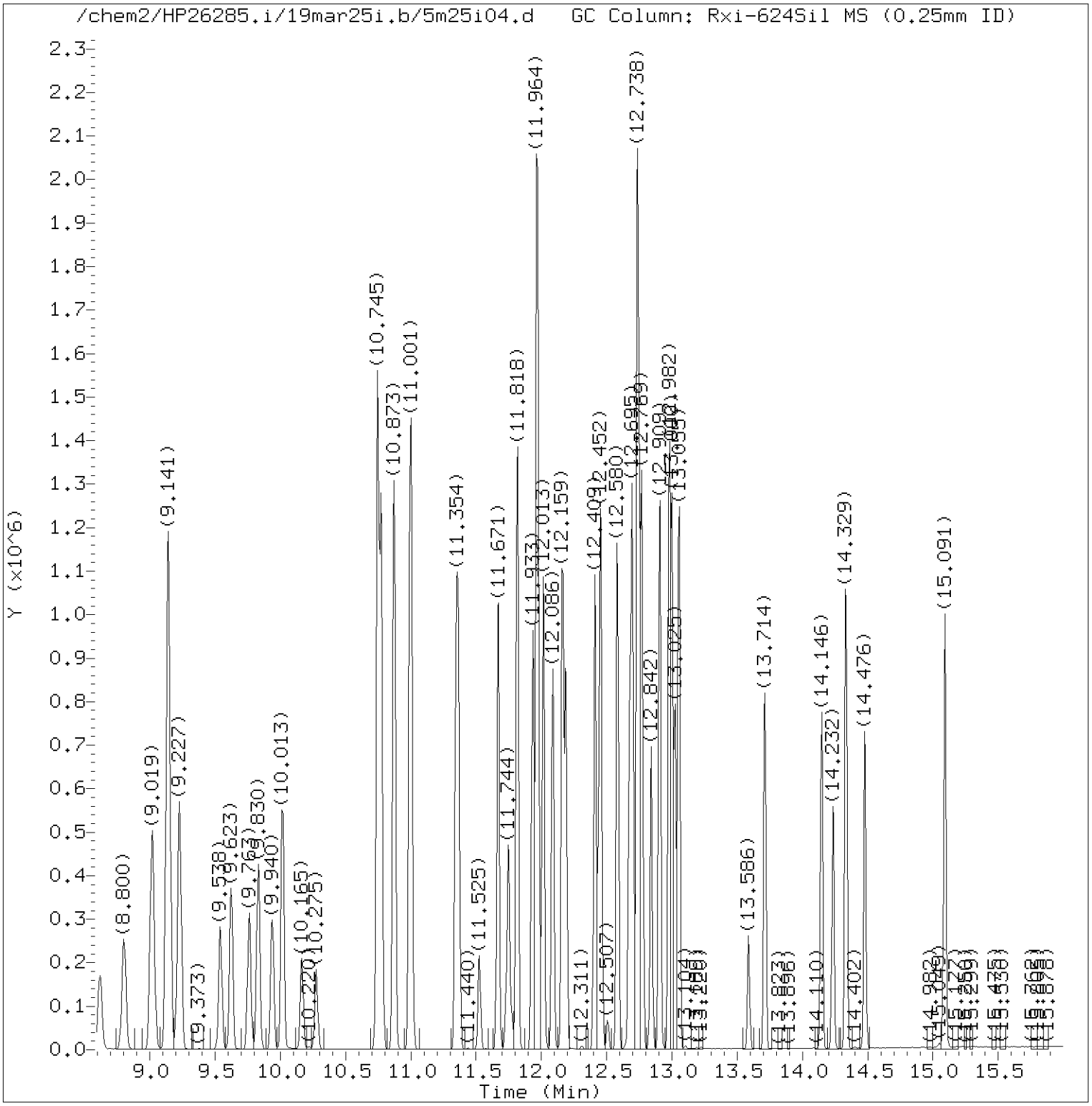
Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.637	85	172350	19.672
4) Chloromethane	(2)	1.801	50	124257	19.516
5) 1,3-Butadiene	(2)	1.893	39	82818	18.722
6) Vinyl Chloride	(2)	1.899	62	122775	19.711
8) Bromomethane	(2)	2.161	94	99284	19.781
9) Chloroethane	(2)	2.228	64	59194	19.825
10) Dichlorofluoromethane	(2)	2.441	67	153345	18.882
12) Trichlorofluoromethane	(2)	2.478	101	172291	19.898
11) n-Pentane	(2)	2.508	43	100005	18.312
14) Ethyl ether	(2)	2.691	59	92693	20.669
15) Freon 123a	(2)	2.764	67	133641	19.858
16) Acrolein	(1)	2.844	56	456356	192.827
17) 1,1-Dichloroethene	(2)	2.947	96	98846	19.654
17) 1,1-Dichloroethene	(2)	2.947	63	49339	19.941
19) Freon 113	(2)	2.972	101	100158	19.577
18) Acetone	(1)	2.990	58	44559	41.177
22) Methyl Iodide	(2)	3.118	142	206073	19.620
21) 2-Propanol	(1)	3.136	45	154771M	196.797
23) Carbon Disulfide	(2)	3.191	76	328031	19.645
27) Methyl Acetate	(2)	3.331	43	149732	19.223
25) Allyl Chloride	(2)	3.344	41	175341	19.405
28) Methylene Chloride	(2)	3.508	84	112010	19.609
29)*t-Butyl alcohol-d10	(1)	3.545	65	335255M	250.000
30) t-Butyl alcohol	(1)	3.642	59	309939	199.837
31) Acrylonitrile	(2)	3.807	53	83355	20.245
32) trans-1,2-Dichloroethene	(2)	3.844	96	111445	19.797
33) Methyl Tertiary Butyl Ether	(2)	3.844	73	324532	20.201
34) n-Hexane	(2)	4.228	57	153368	19.694
36) 1,1-Dichloroethane	(2)	4.478	63	197644	19.914
38) di-Isopropyl ether	(2)	4.545	45	363000	20.065
39) 2-Chloro-1,3-butadiene	(2)	4.587	53	173985	19.811
40) Ethyl t-butyl ether	(2)	5.099	59	337736	20.164
44) 2-Butanone	(2)	5.343	43	242274	38.966
42) cis-1,2-Dichloroethene	(2)	5.349	96	124688	19.576
45) 2,2-Dichloropropane	(2)	5.355	77	157570	19.852
47) Propionitrile	(1)	5.441	54	332262	196.963
48) Methacrylonitrile	(2)	5.660	67	406258	100.281
49) Bromochloromethane	(2)	5.691	128	63414	19.897

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.703	71	68361	39.892
51) Chloroform	(2)	5.855	83	193684	19.681
53) 1,1,1-Trichloroethane	(2)	6.069	97	171194	19.766
52)$Dibromofluoromethane	(2)	6.081	113	260793	50.027
52)$Dibromofluoromethane	(2)	6.081	111	267093	49.916
54) Cyclohexane	(2)	6.154	56	192496	19.224
54) Cyclohexane	(2)	6.160	84	165247	19.366
54) Cyclohexane	(2)	6.154	69	60128	19.380
43) 1,2-Dichloroethene (Total)	(2)		96	236133	39.373
56) Carbon Tetrachloride	(2)	6.282	117	148002	19.747
55) 1,1-Dichloropropene	(2)	6.300	75	157290	19.757
58) Isobutyl Alcohol	(1)	6.520	41	249927	492.054
57)$1,2-Dichloroethane-d4	(2)	6.550	102	60643	49.717
57)$1,2-Dichloroethane-d4	(2)	6.550	65	282883	50.097
57)$1,2-Dichloroethane-d4	(2)	6.556	104	38696	49.782
60) Benzene	(2)	6.569	78	476885	19.718
61) 1,2-Dichloroethane	(2)	6.660	62	138060	19.316
61) 1,2-Dichloroethane	(2)	6.666	98	13401	21.431
65) t-Amyl methyl ether	(2)	6.782	73	344866	20.430
66)*Fluorobenzene	(2)	7.001	96	1089387	50.000
67) n-Heptane	(2)	7.014	43	167146	19.034
69) n-Butanol	(1)	7.440	56	423388	999.724
71) Trichloroethene	(2)	7.495	95	123567	19.702
73) Methylcyclohexane	(2)	7.794	83	202738	19.522
73) Methylcyclohexane	(2)	7.794	98	88037	19.706
74) 1,2-Dichloropropane	(2)	7.849	63	118545	19.775
76) 1,4-Dioxane	(1)	7.952	88	50360M	512.631
75) Dibromomethane	(2)	7.959	93	75717	19.970
77) Methyl Methacrylate	(2)	7.965	69	127050	20.301
79) Bromodichloromethane	(2)	8.215	83	138779	19.695
80) 2-Nitropropane	(2)	8.526	41	109183	37.749
81) 2-Chloroethyl Vinyl Ether	(2)	8.617	63	99372M	19.862
82) cis-1,3-Dichloropropene	(2)	8.800	75	186521	20.118
83) 4-Methyl-2-pentanone	(2)	9.019	43	463778	36.419
84)$Toluene-d8	(3)	9.141	98	1053591	50.269
84)$Toluene-d8	(3)	9.141	100	689904	50.082
89) Toluene	(3)	9.227	92	308430	19.770
90) trans-1,3-Dichloropropene	(3)	9.538	75	168331	19.968

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	9.623	69	208968	20.674
93) 1,1,2-Trichloroethane	(3)	9.763	97	110389	19.779
94) Tetrachloroethene	(3)	9.830	166	142190	20.042
95) 1,3-Dichloropropane	(3)	9.940	76	182687	19.982
97) 2-Hexanone	(3)	10.013	43	384955	34.891
91) 1,3-Dichloropropene (total)	(3)		100	354852	40.086
98) Dibromochloromethane	(3)	10.165	129	114693	20.072
100) 1,2-Dibromoethane	(3)	10.275	107	124284	19.941
101)*Chlorobenzene-d5	(3)	10.745	117	830336	50.000
102) 1-Chlorohexane	(3)	10.769	91	175644	19.325
103) Chlorobenzene	(3)	10.775	112	342720	19.634
104) 1,1,1,2-Tetrachloroethane	(3)	10.867	131	116961	19.849
105) Ethylbenzene	(3)	10.873	91	608758	19.977
107) m+p-Xylene	(3)	11.001	106	476538	39.653
108) o-Xylene	(3)	11.348	106	232867	19.831
110) Styrene	(3)	11.366	104	389965	20.111
111) Bromoform	(3)	11.525	173	90078	19.971
112) Isopropylbenzene	(3)	11.671	105	614683	20.156
113) Cyclohexanone	(1)	11.744	55	199819M	486.142
109) Xylene (Total)	(3)		106	709405	59.484
115)$4-Bromofluorobenzene	(3)	11.812	95	409296	50.189
115)$4-Bromofluorobenzene	(3)	11.818	174	355930	50.099
116) Bromobenzene	(4)	11.933	156	152170	19.817
117) 1,1,2,2-Tetrachloroethane	(4)	11.940	83	198926	20.460
119) trans-1,4-Dichloro-2-butene	(4)	11.964	53	316965	103.517
118) 1,2,3-Trichloropropane	(4)	11.982	110	59339	20.257
120) n-Propylbenzene	(4)	12.013	91	728999	20.173
121) 2-Chlorotoluene	(4)	12.086	126	147229	19.762
123) 1,3,5-Trimethylbenzene	(4)	12.159	105	521567	20.000
122) 4-Chlorotoluene	(4)	12.189	126	150883	19.727
125) tert-Butylbenzene	(4)	12.409	134	107942M	19.588
126) Pentachloroethane	(4)	12.439	167	87523	19.449
127) 1,2,4-Trimethylbenzene	(4)	12.458	105	532189	19.900
128) sec-Butylbenzene	(4)	12.580	105	684768	20.267
130) 1,3-Dichlorobenzene	(4)	12.677	146	290633	19.763
131) p-Isopropyltoluene	(4)	12.695	119	590948	20.174
132)*1,4-Dichlorobenzene-d4	(4)	12.738	152	445129	50.000
134) 1,4-Dichlorobenzene	(4)	12.756	146	293930	19.721

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Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

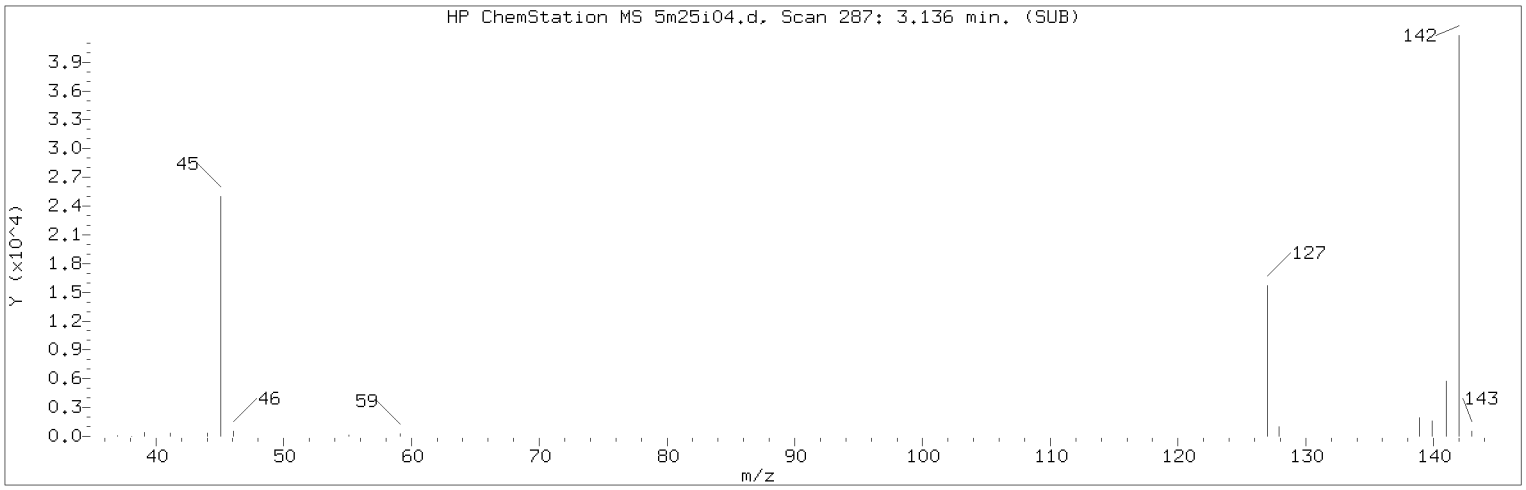
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

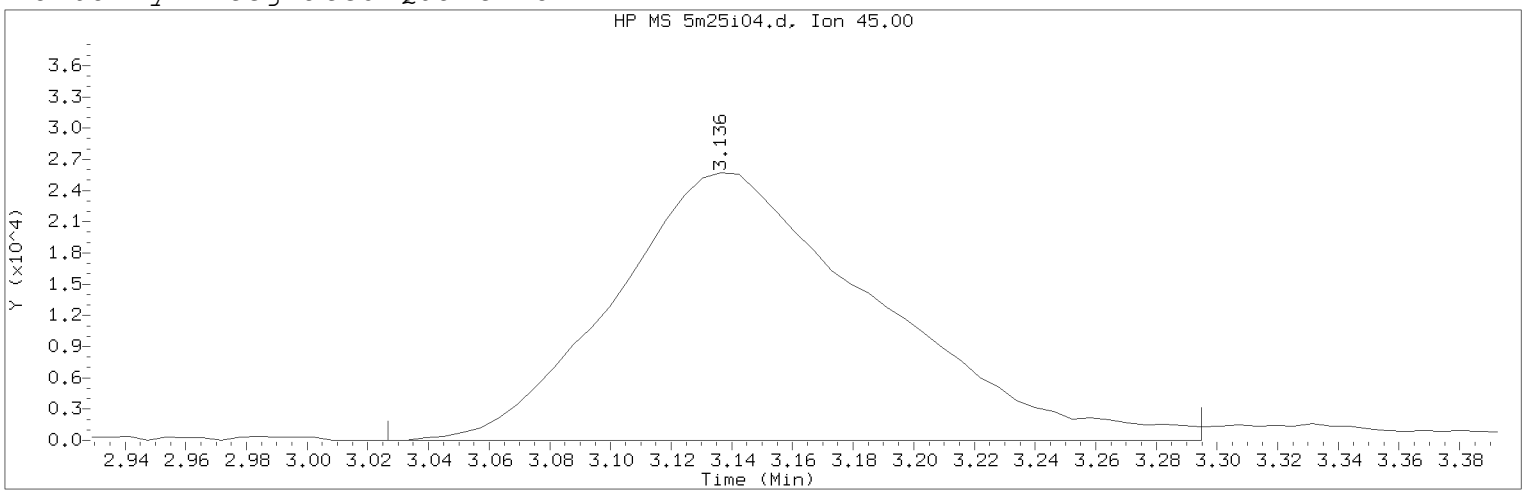
	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135)	1,2,3-Trimethylbenzene	(4)	12.769	105	557905	20.195
136)	Benzyl Chloride	(4)	12.842	91	398908	20.826
137)	1,3-Diethylbenzene	(4)	12.909	119	359837	20.155
138)	1,4-Diethylbenzene	(4)	12.982	119	382107	20.167
140)	n-Butylbenzene	(4)	13.000	92	300522	20.339
139)	1,2-Dichlorobenzene	(4)	13.025	146	275468	19.814
141)	1,2-Diethylbenzene	(4)	13.055	119	299389	20.171
142)	Diethylbenzene (total)	(4)		100	1041333	60.493
143)	1,2-Dibromo-3-chloropropane	(4)	13.586	75	49716	20.468
145)	1,3,5-Trichlorobenzene	(4)	13.714	180	219476	19.639
147)	1,2,4-Trichlorobenzene	(4)	14.146	180	198195	19.591
148)	Hexachlorobutadiene	(4)	14.238	225	89661	18.780
149)	Naphthalene	(4)	14.335	128	702642	20.469
150)	1,2,3-Trichlorobenzene	(4)	14.476	180	190219	19.624
151)	2-Methylnaphthalene	(4)	15.091	142	408373	20.218

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

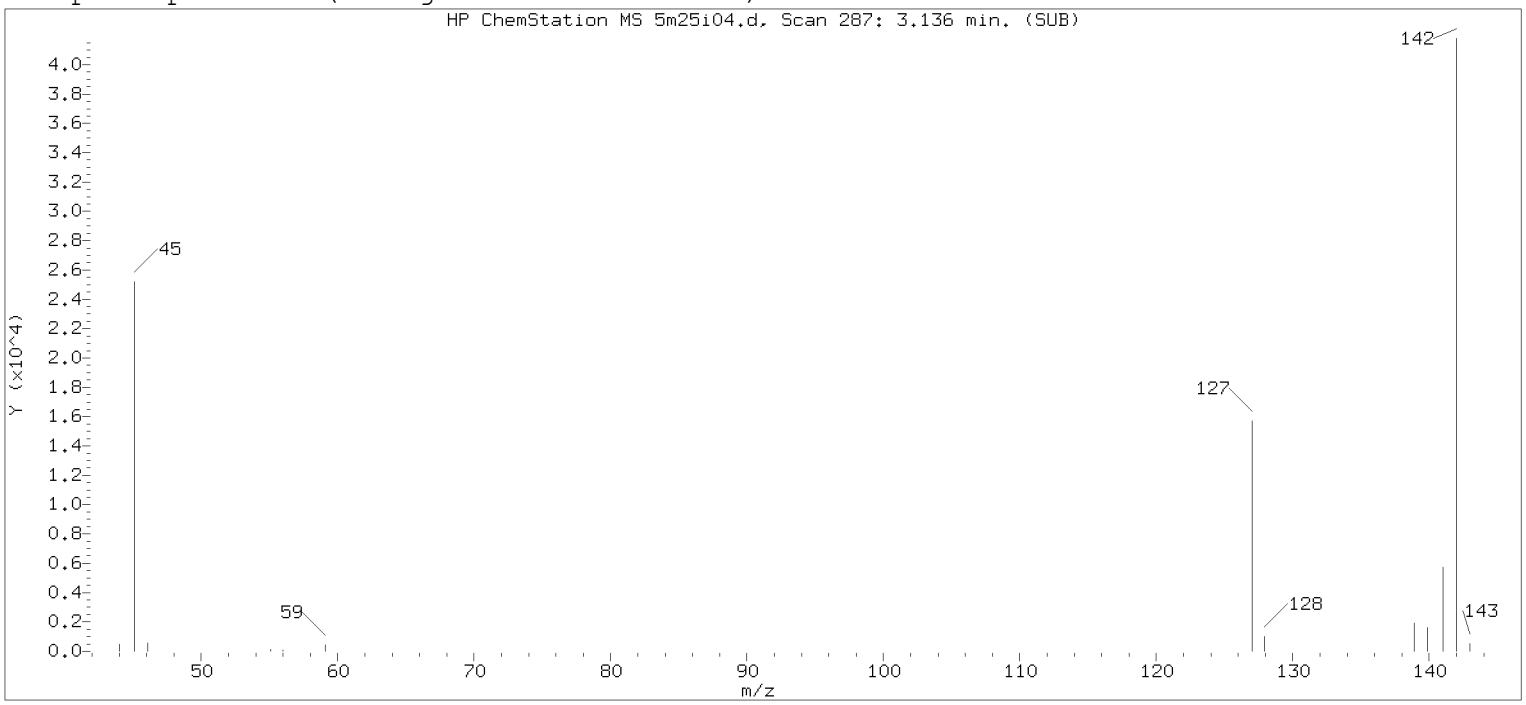
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 287
Retention Time (minutes): 3.136
Quant Ion : 45.00
Area (flag) : 154771M
On-Column Amount (ng) : 196.7971
Integration start scan : 268 Integration stop scan: 312
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

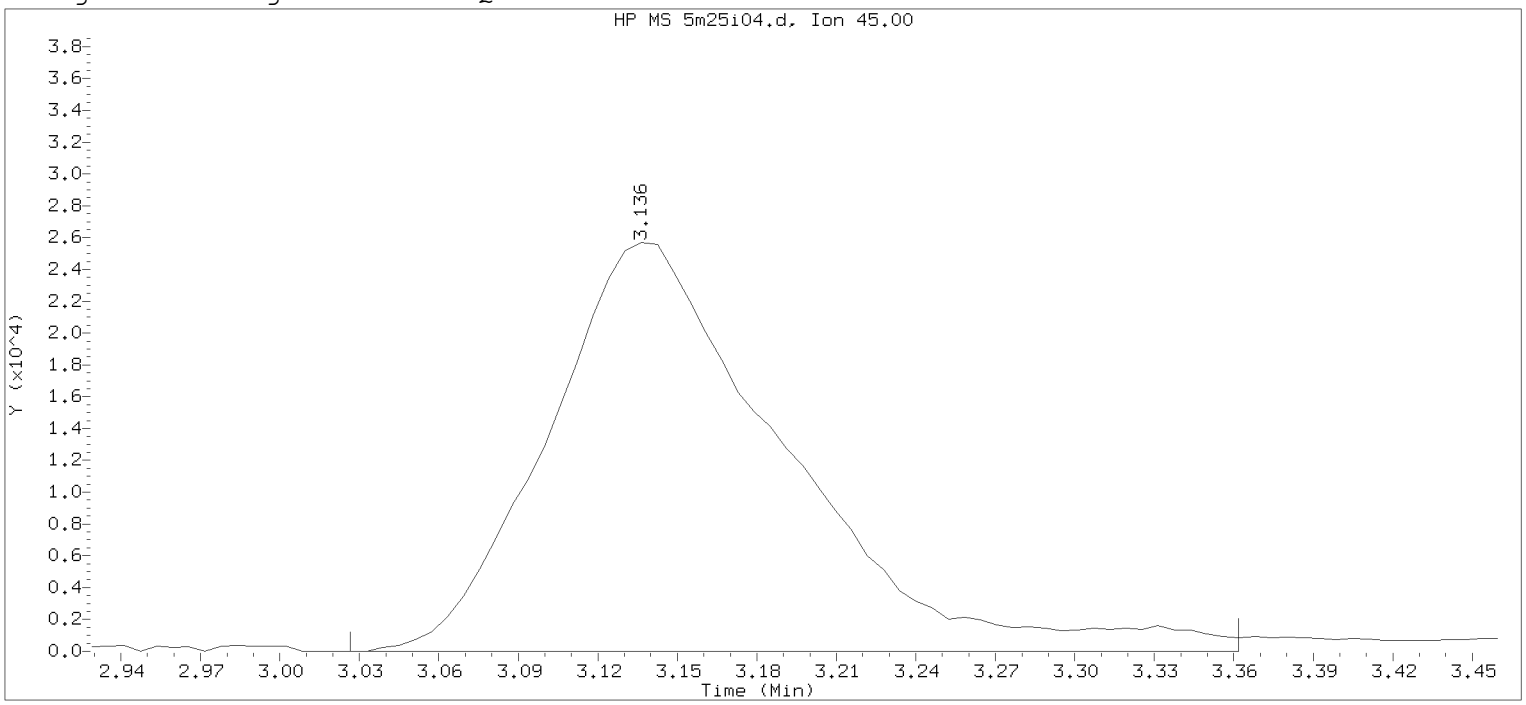
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

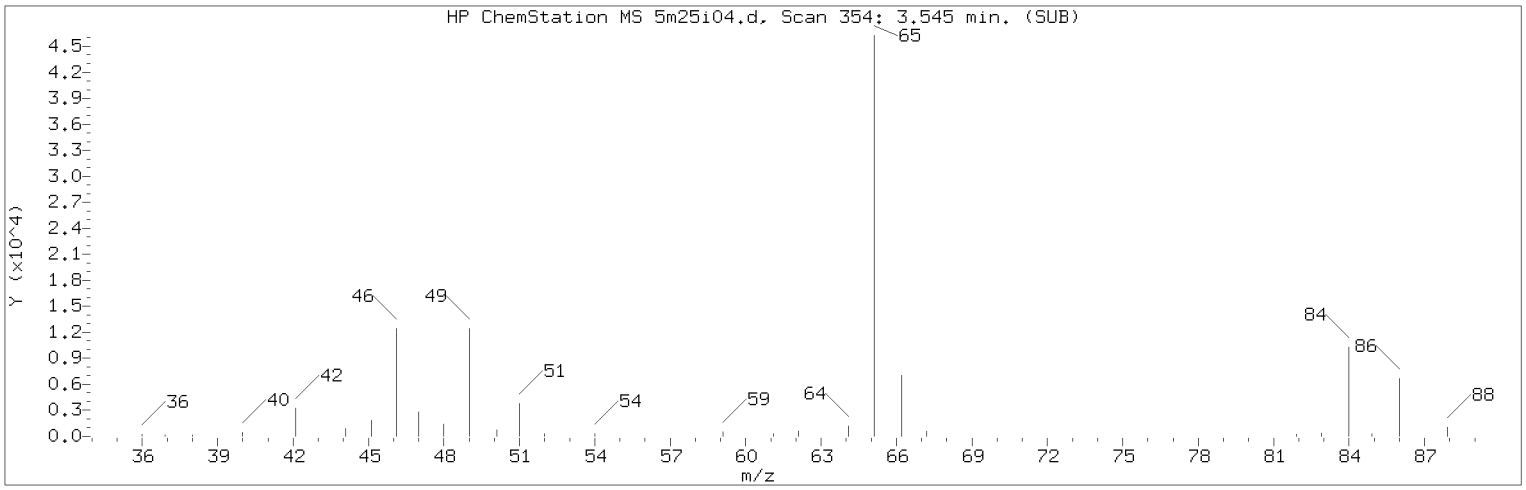
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:27
Date, time and analyst ID of latest file update: 25-Mar-2019 14:27 apr27582

Sample Name: VSTD020 Lab Sample ID: VSTD020

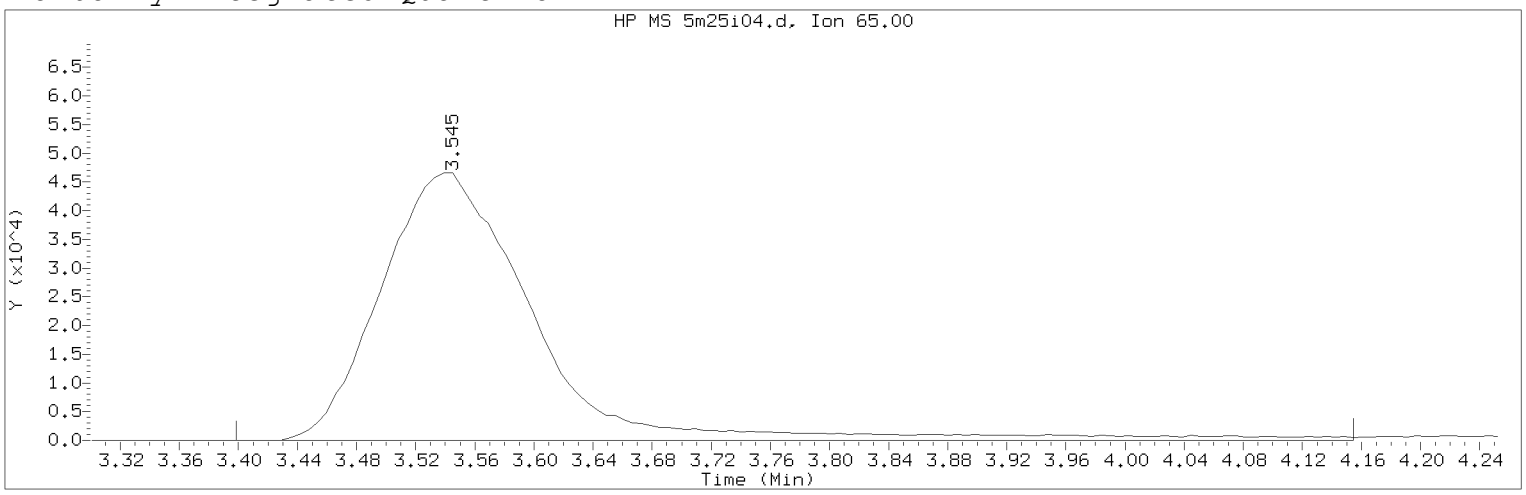
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 287
Retention Time (minutes): 3.136
Quant Ion : 45.00
Area : 159786
On-column Amount (ng) : 206.6331
Integration start scan : 268 Integration stop scan: 323
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kkelly1007

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

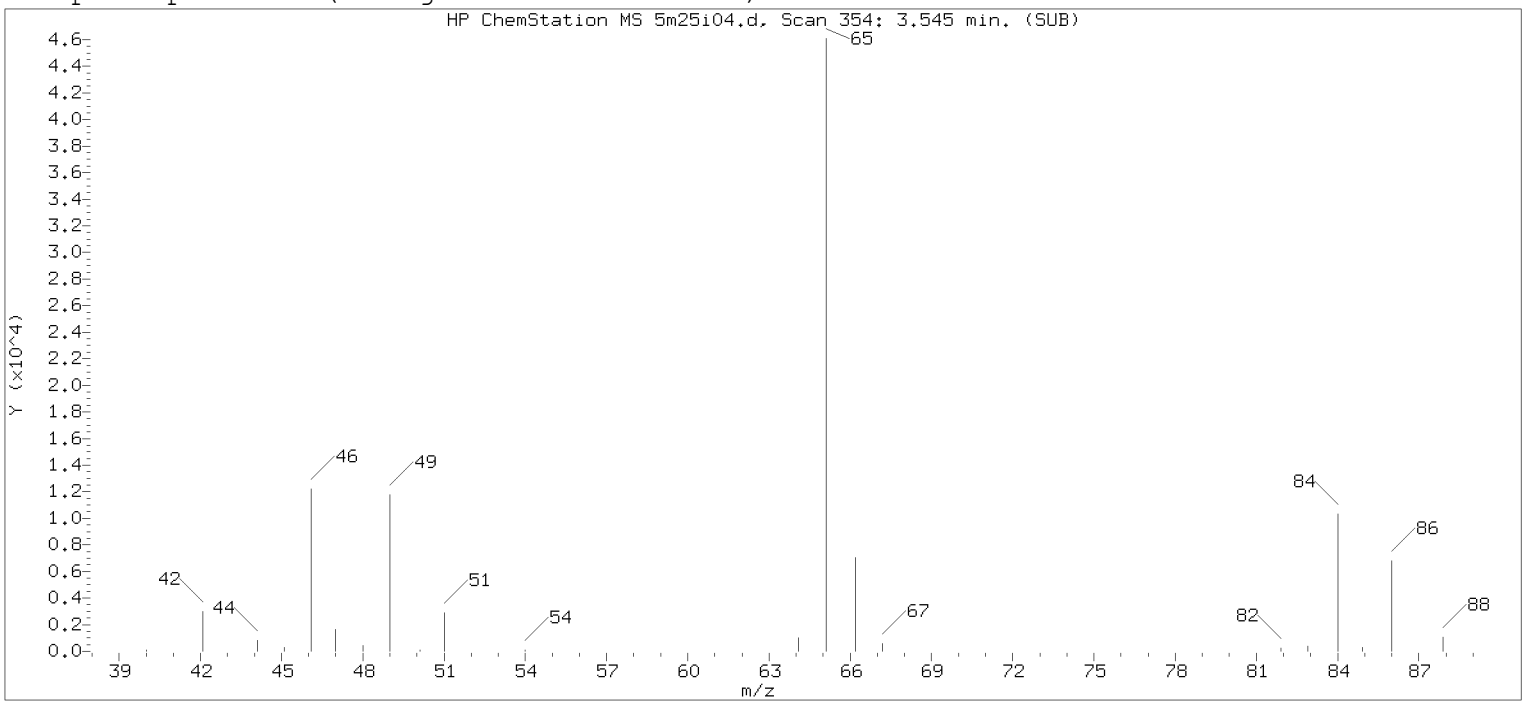
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 354
Retention Time (minutes): 3.545
Quant Ion : 65.00
Area (flag) : 335255M
On-Column Amount (ng) : 250.0000
Integration start scan : 329 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

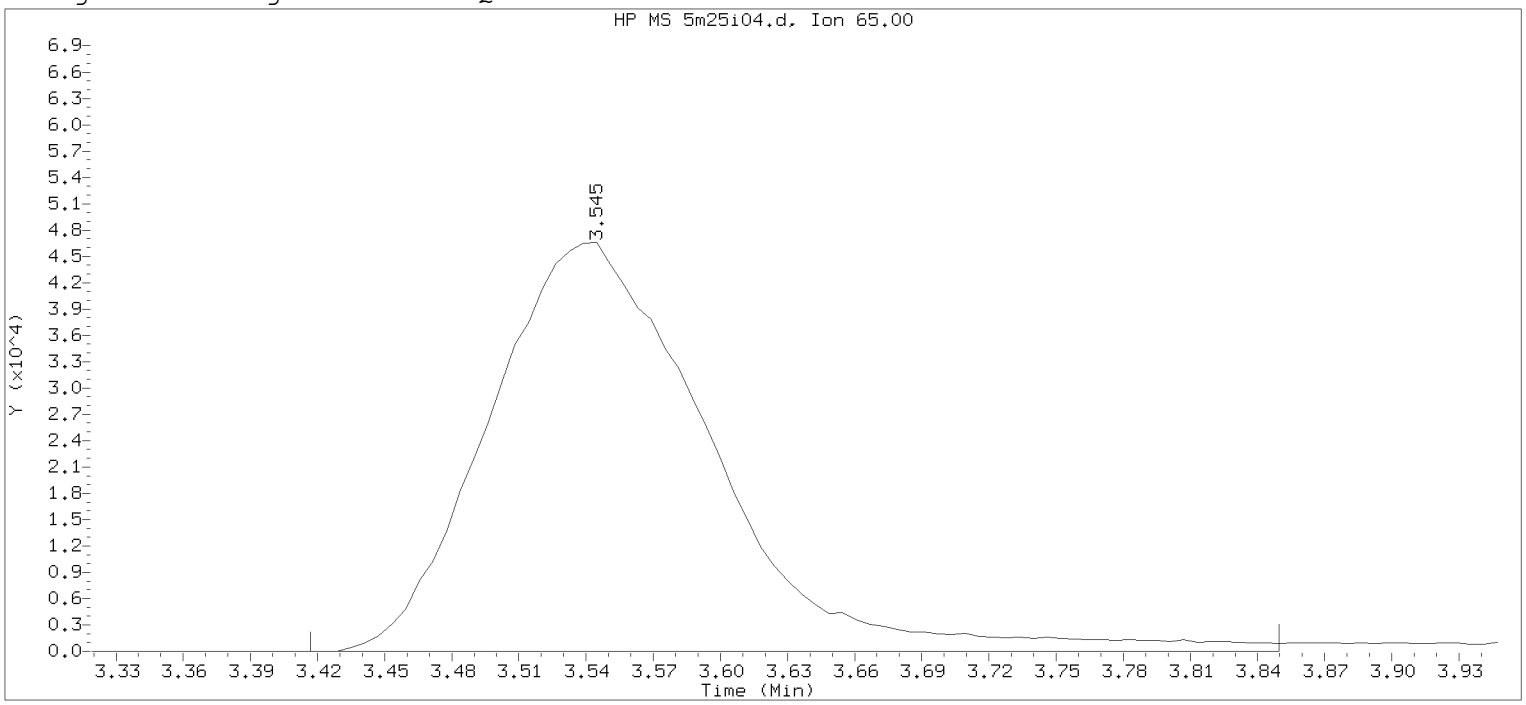
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

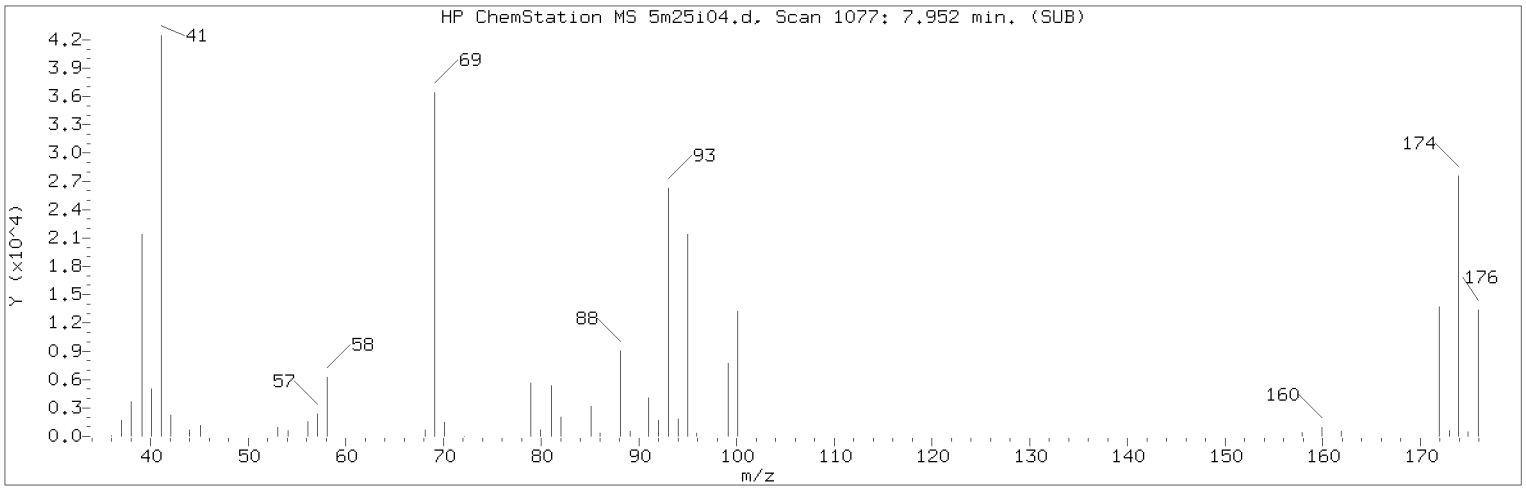
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:27
Date, time and analyst ID of latest file update: 25-Mar-2019 14:27 apr27582

Sample Name: VSTD020 Lab Sample ID: VSTD020

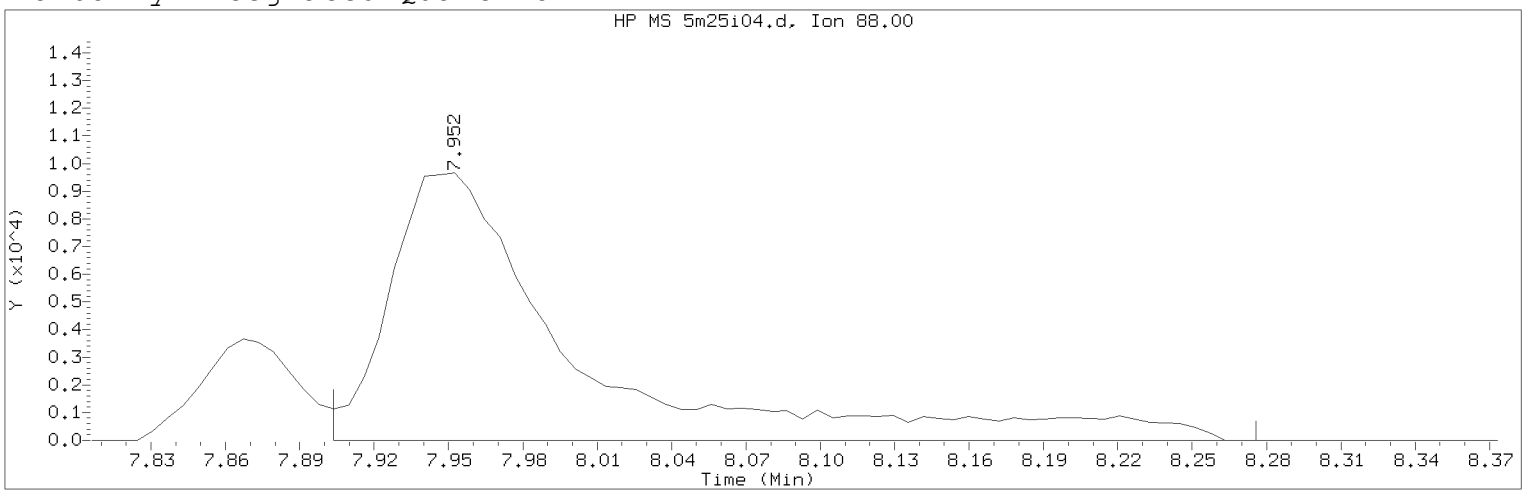
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 354
Retention Time (minutes): 3.545
Quant Ion : 65.00
Area : 321106
On-column Amount (ng) : 250.0000
Integration start scan : 332 Integration stop scan: 403
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user: KKELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

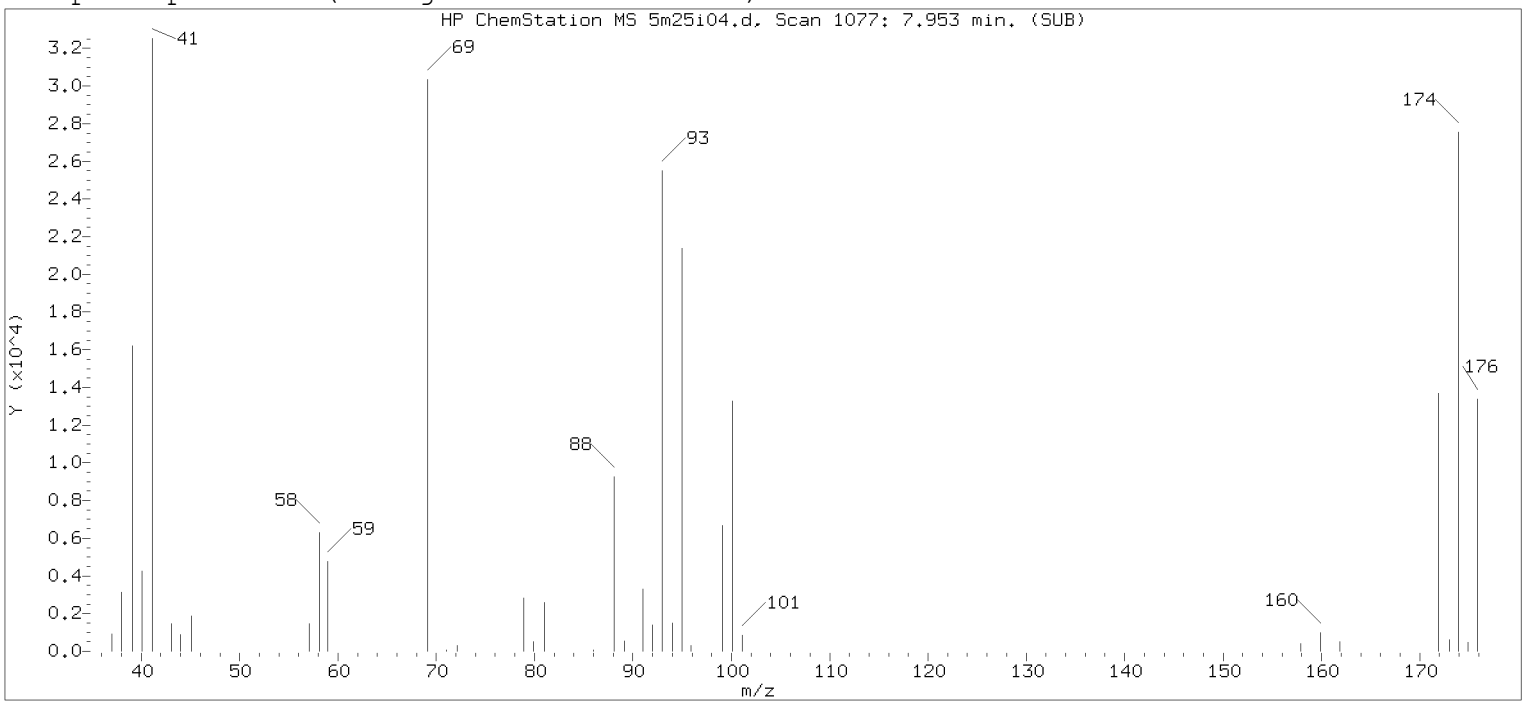
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1077
Retention Time (minutes): 7.952
Quant Ion : 88.00
Area (flag) : 50360M
On-Column Amount (ng) : 512.6306
Integration start scan : 1068 Integration stop scan: 1129
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

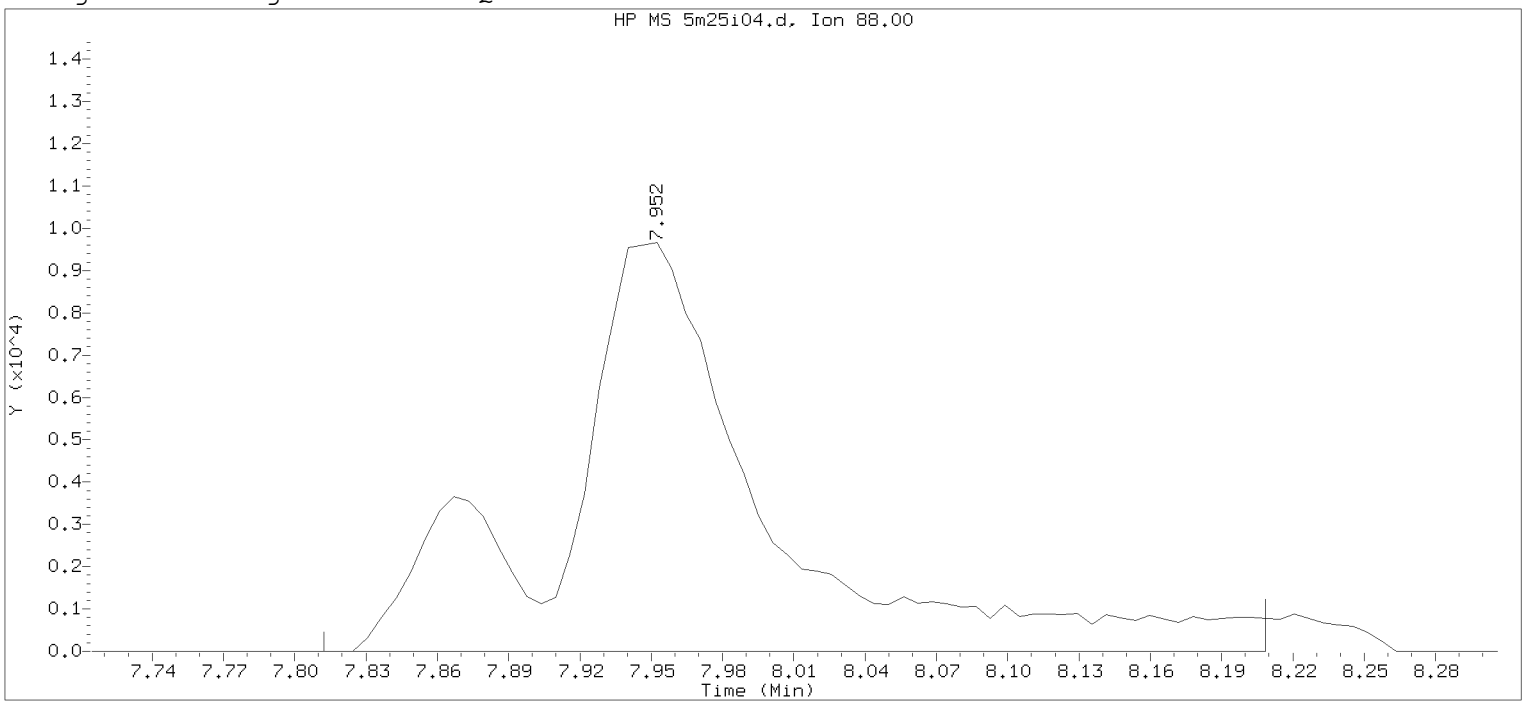
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

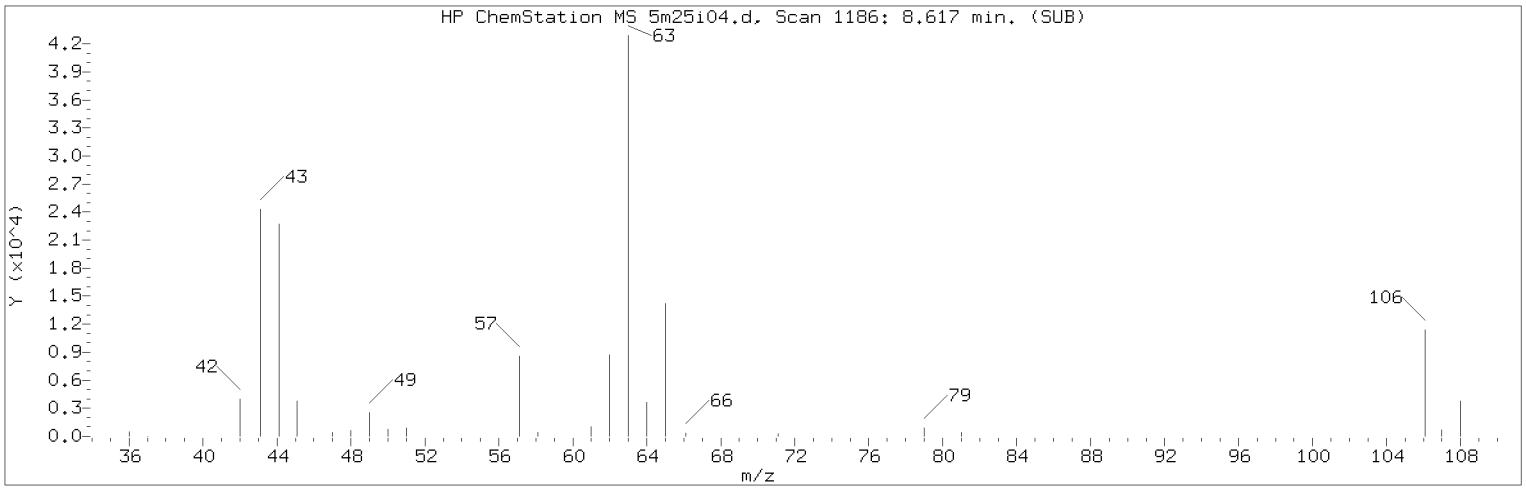
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:27
Date, time and analyst ID of latest file update: 25-Mar-2019 14:27 apr27582

Sample Name: VSTD020 Lab Sample ID: VSTD020

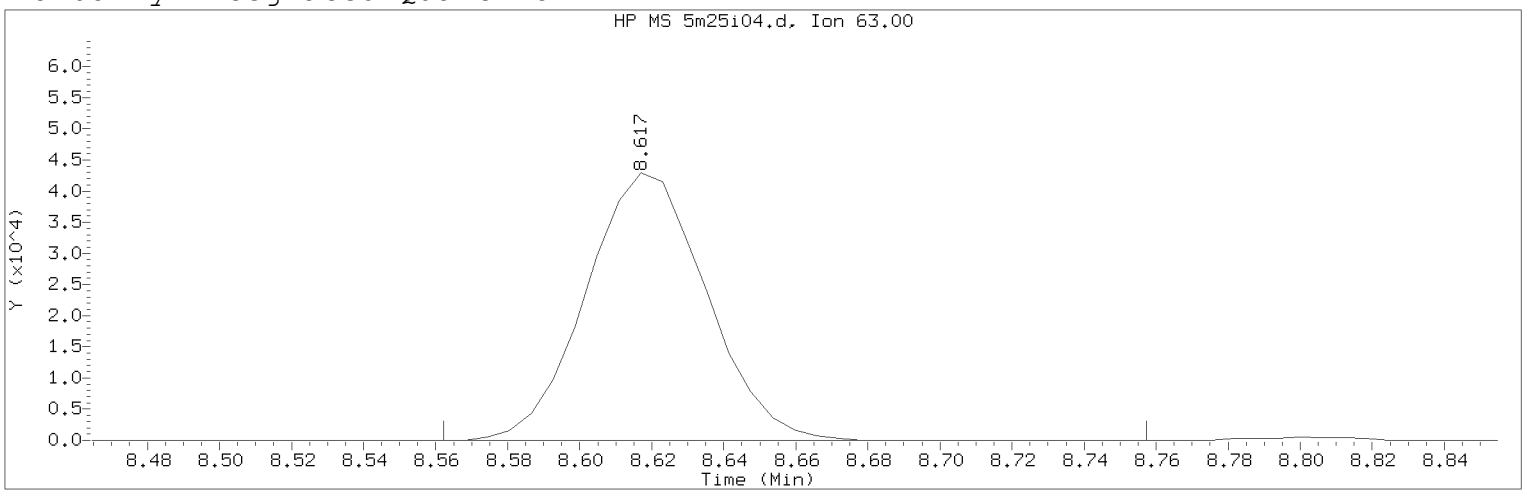
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1077
Retention Time (minutes): 7.952
Quant Ion : 88.00
Area : 58019
On-column Amount (ng) : 467.2427
Integration start scan : 1053 Integration stop scan: 1118
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kkelly100

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

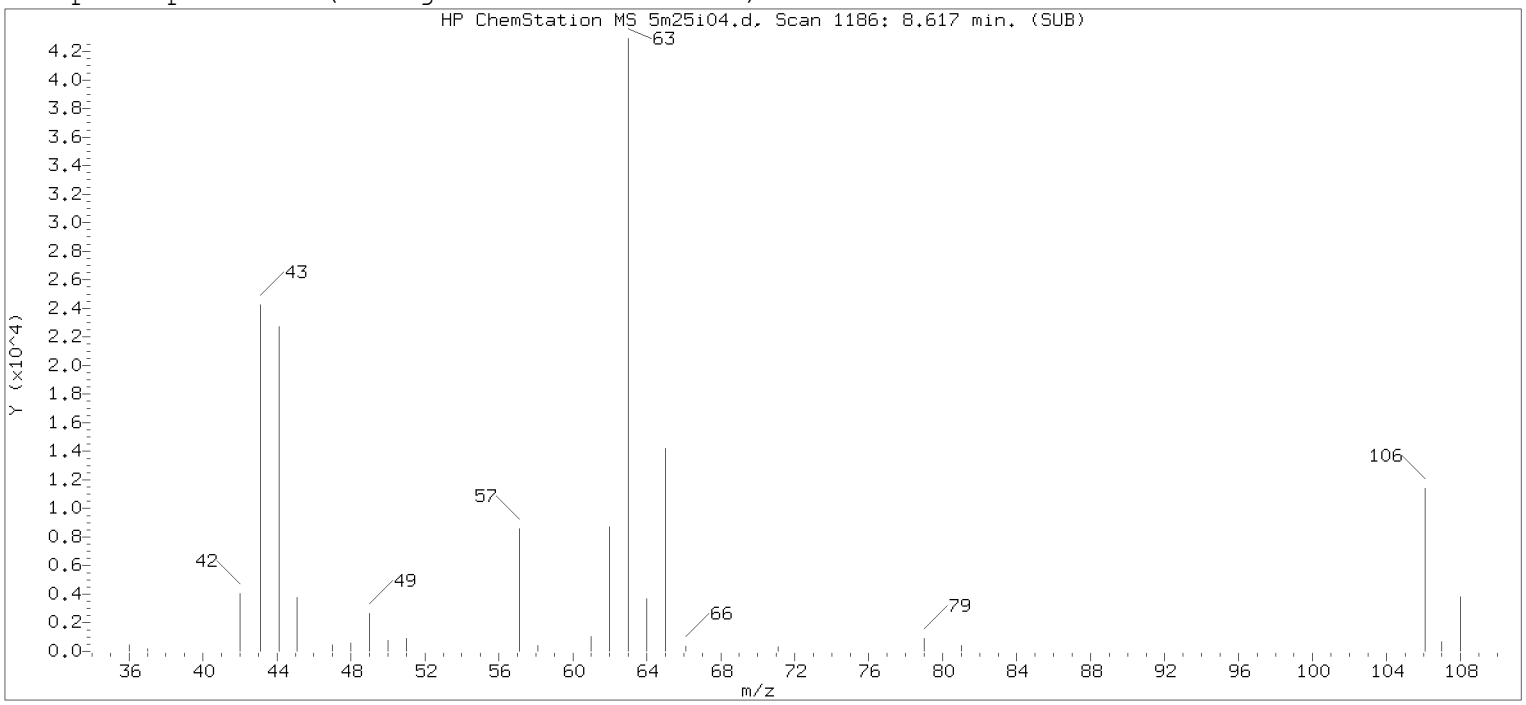
Compound Number : 81
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1186
Retention Time (minutes): 8.617
Quant Ion : 63.00
Area (flag) : 99372M
On-Column Amount (ng) : 19.8623
Integration start scan : 1176 Integration stop scan: 1208
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

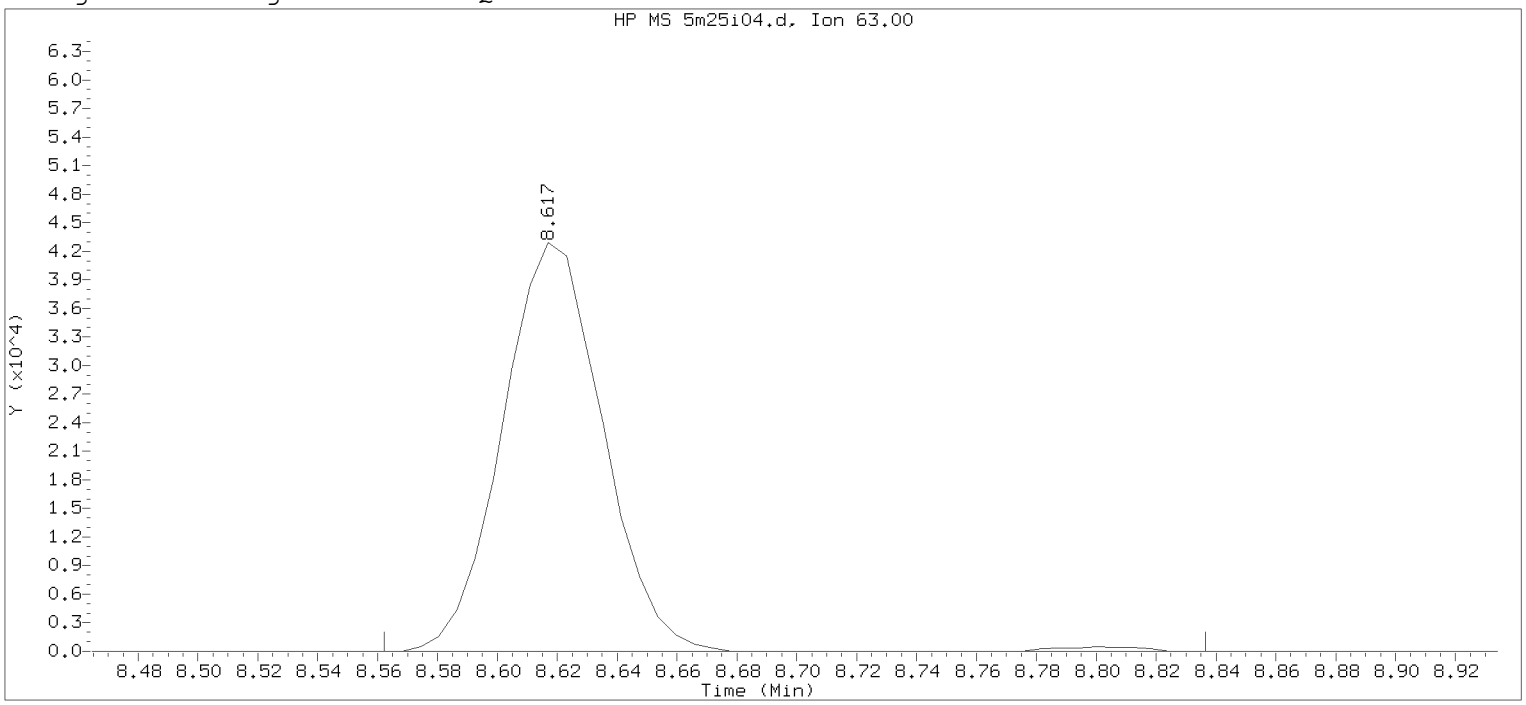
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

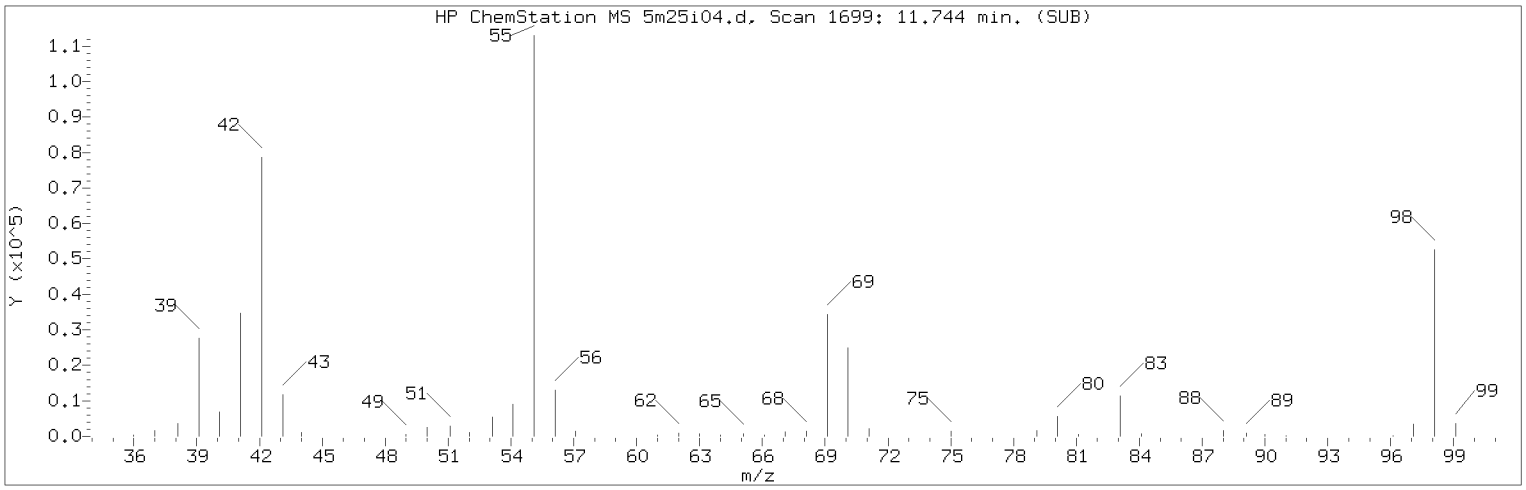
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:27
Date, time and analyst ID of latest file update: 25-Mar-2019 14:27 apr27582

Sample Name: VSTD020 Lab Sample ID: VSTD020

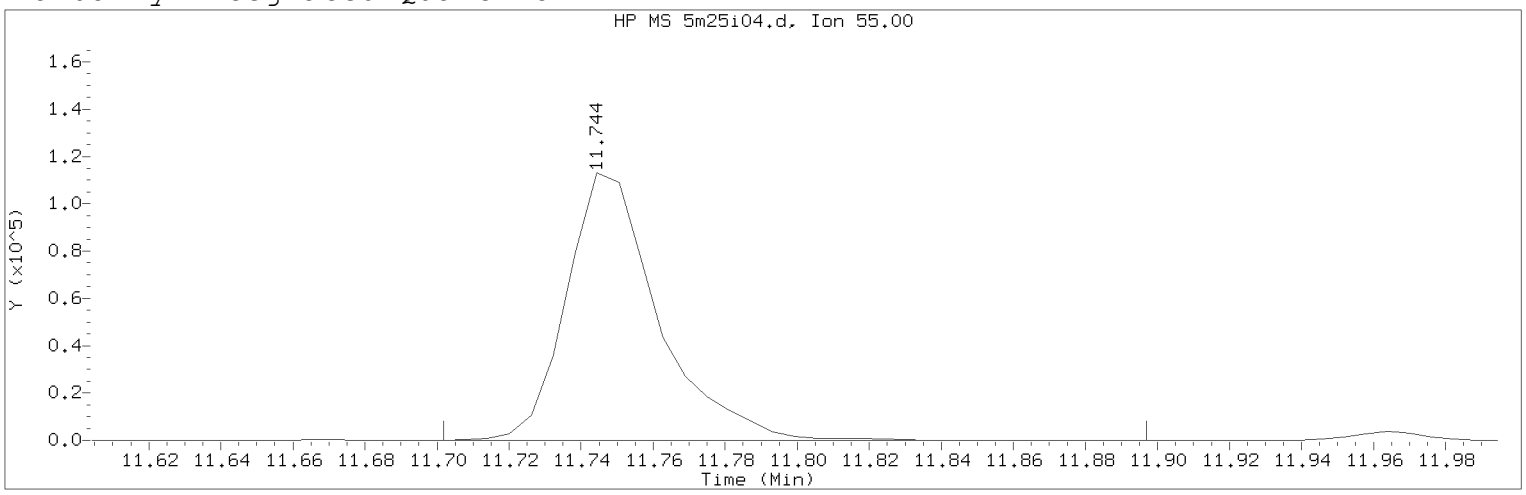
Compound Number : 81
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1186
Retention Time (minutes): 8.617
Quant Ion : 63.00
Area : 100292
On-column Amount (ng) : 19.4703
Integration start scan : 1176 Integration stop scan: 1221
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user id: kkelly100

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

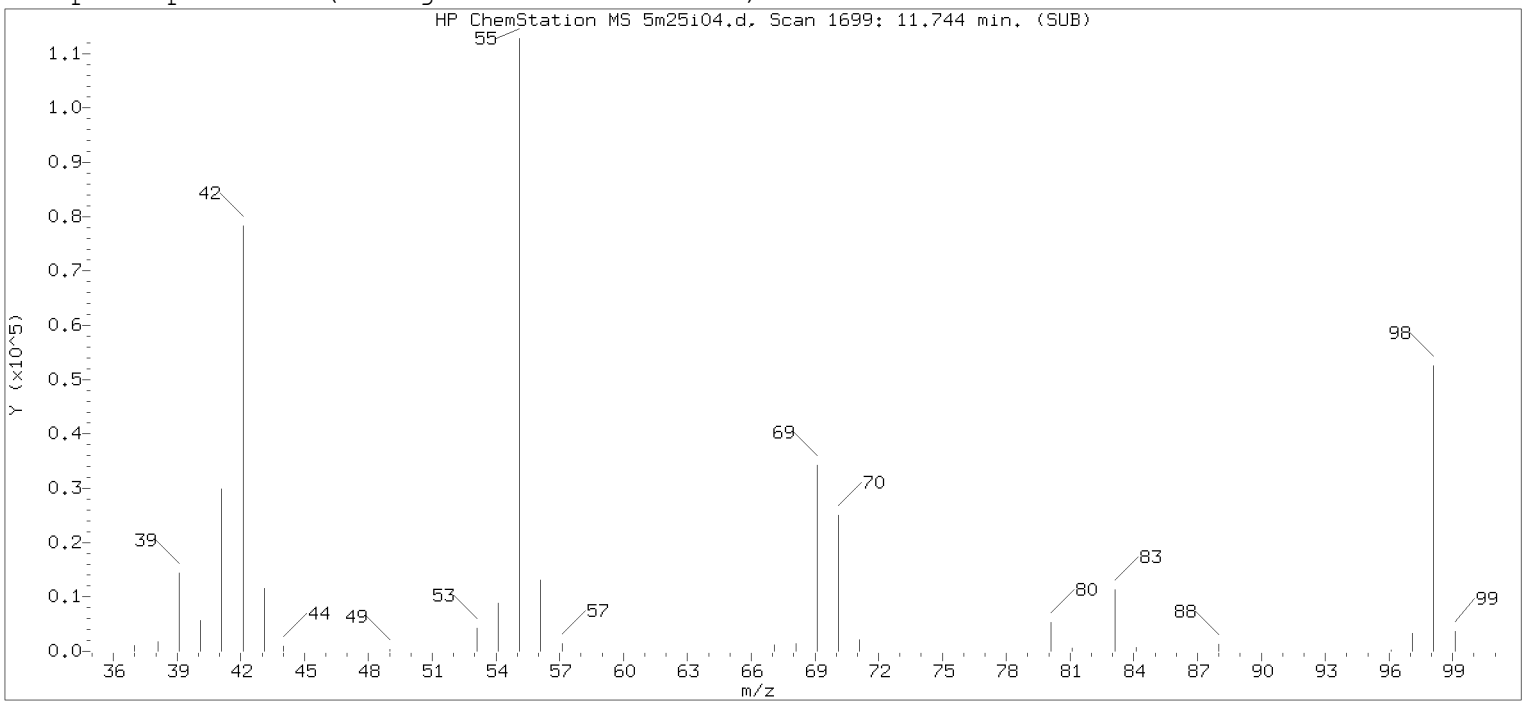
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1699
Retention Time (minutes): 11.744
Quant Ion : 55.00
Area (flag) : 199819M
On-Column Amount (ng) : 486.1416
Integration start scan : 1691 Integration stop scan: 1723
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

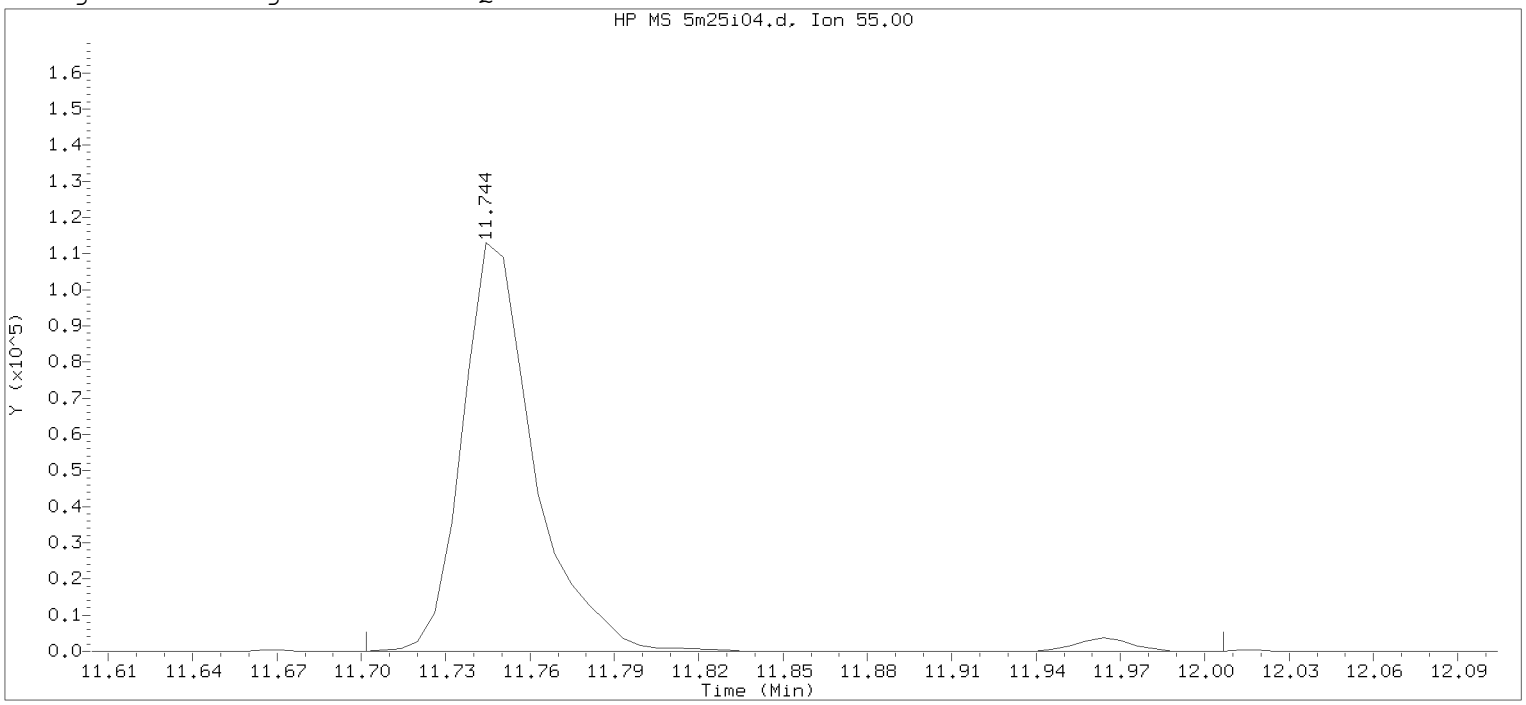
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

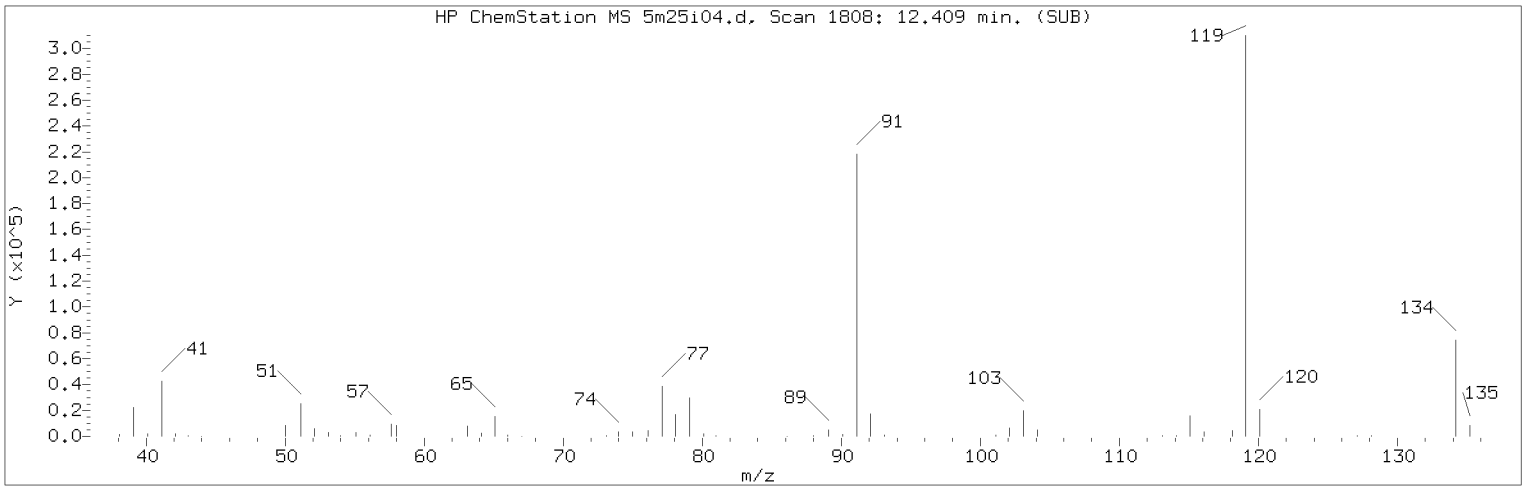
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:27
Date, time and analyst ID of latest file update: 25-Mar-2019 14:27 apr27582

Sample Name: VSTD020 Lab Sample ID: VSTD020

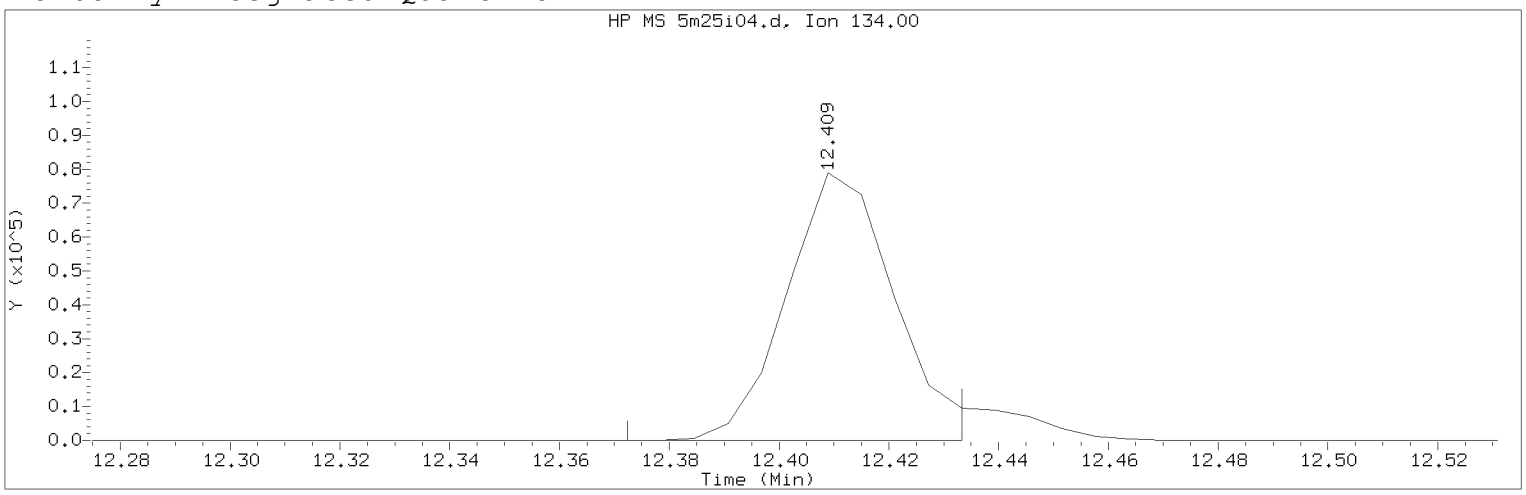
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1699
Retention Time (minutes): 11.744
Quant Ion : 55.00
Area : 204771
On-column Amount (ng) : 504.6157
Integration start scan : 1691 Integration stop scan: 1741
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kkelly1000

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

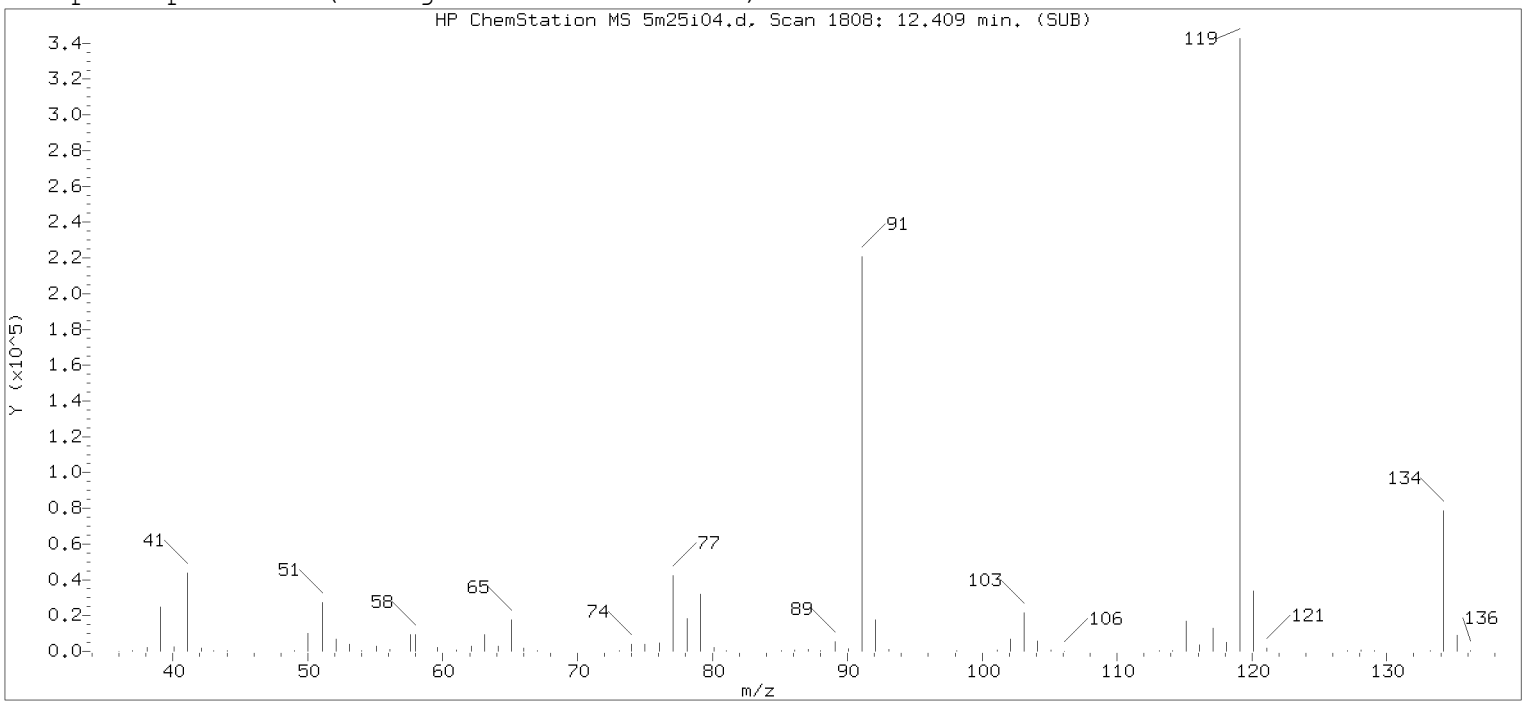
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1808
Retention Time (minutes): 12.409
Quant Ion : 134.00
Area (flag) : 107942M
On-Column Amount (ng) : 19.5875
Integration start scan : 1801 Integration stop scan: 1811
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

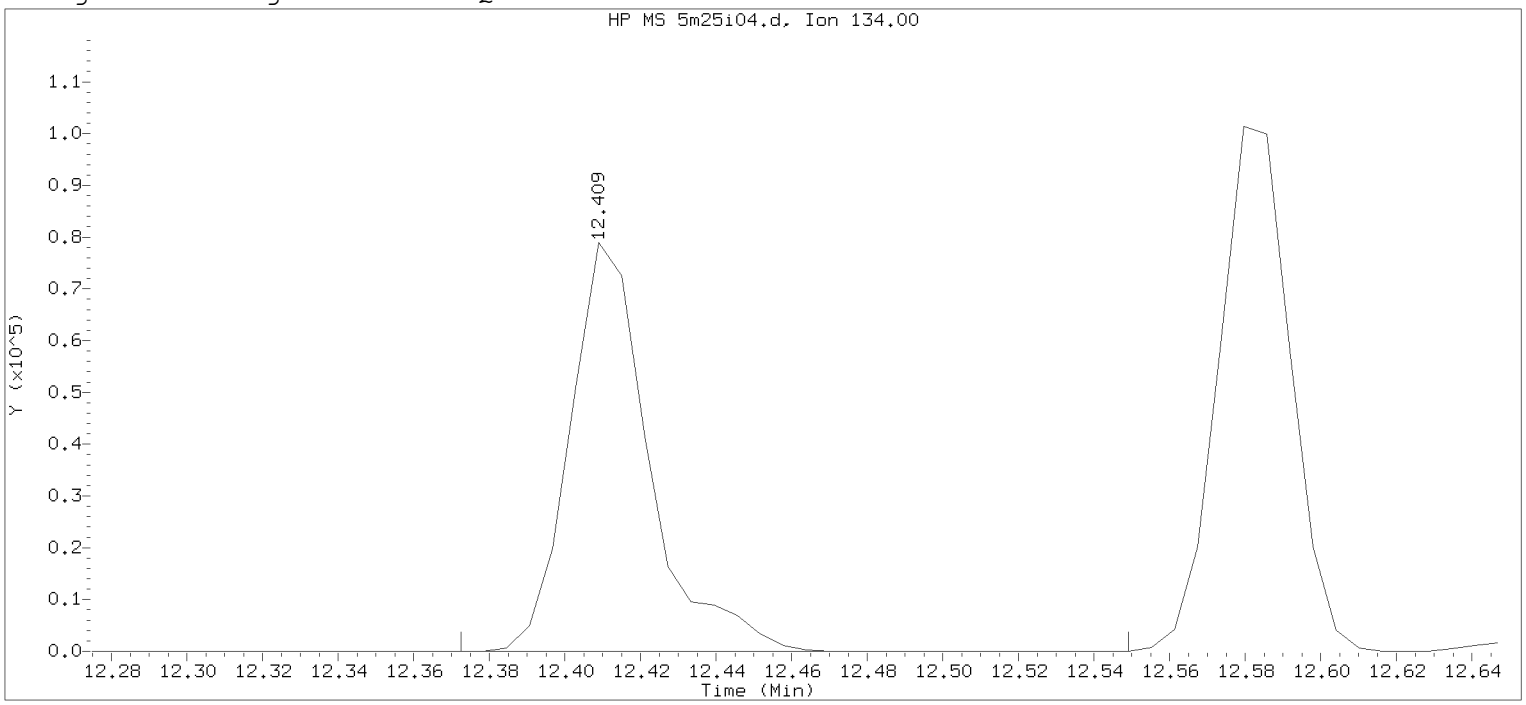
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



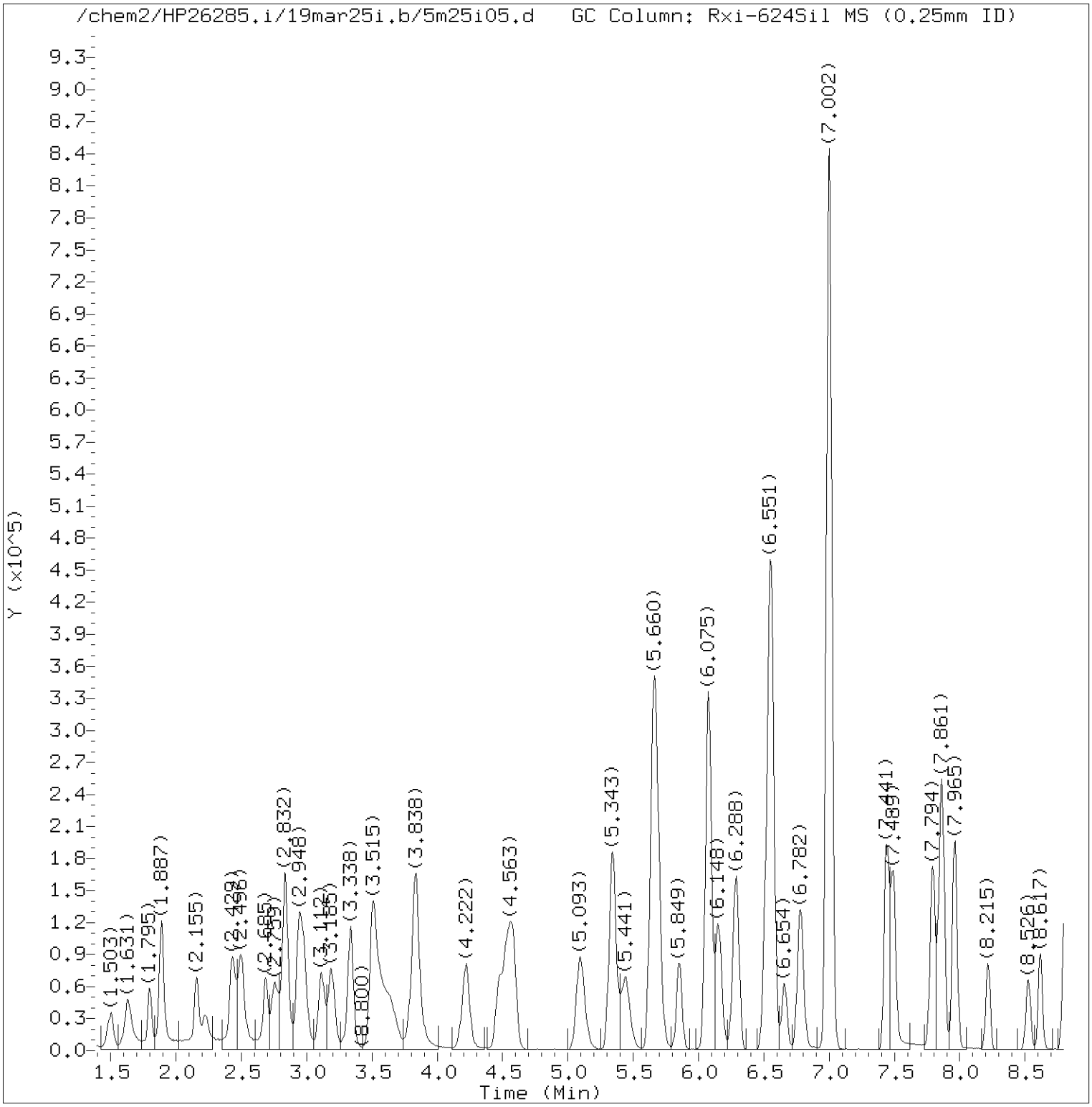
Data File: /chem2/HP26285.i/19mar25i.b/5m25i04.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 13:52 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:27
Date, time and analyst ID of latest file update: 25-Mar-2019 14:27 apr27582

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1808
Retention Time (minutes): 12.409
Quant Ion : 134.00
Area : 115535
On-column Amount (ng) : 19.2744
Integration start scan : 1801 Integration stop scan: 1830
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kkelly100



Total Ion Chromatogram (TIC)

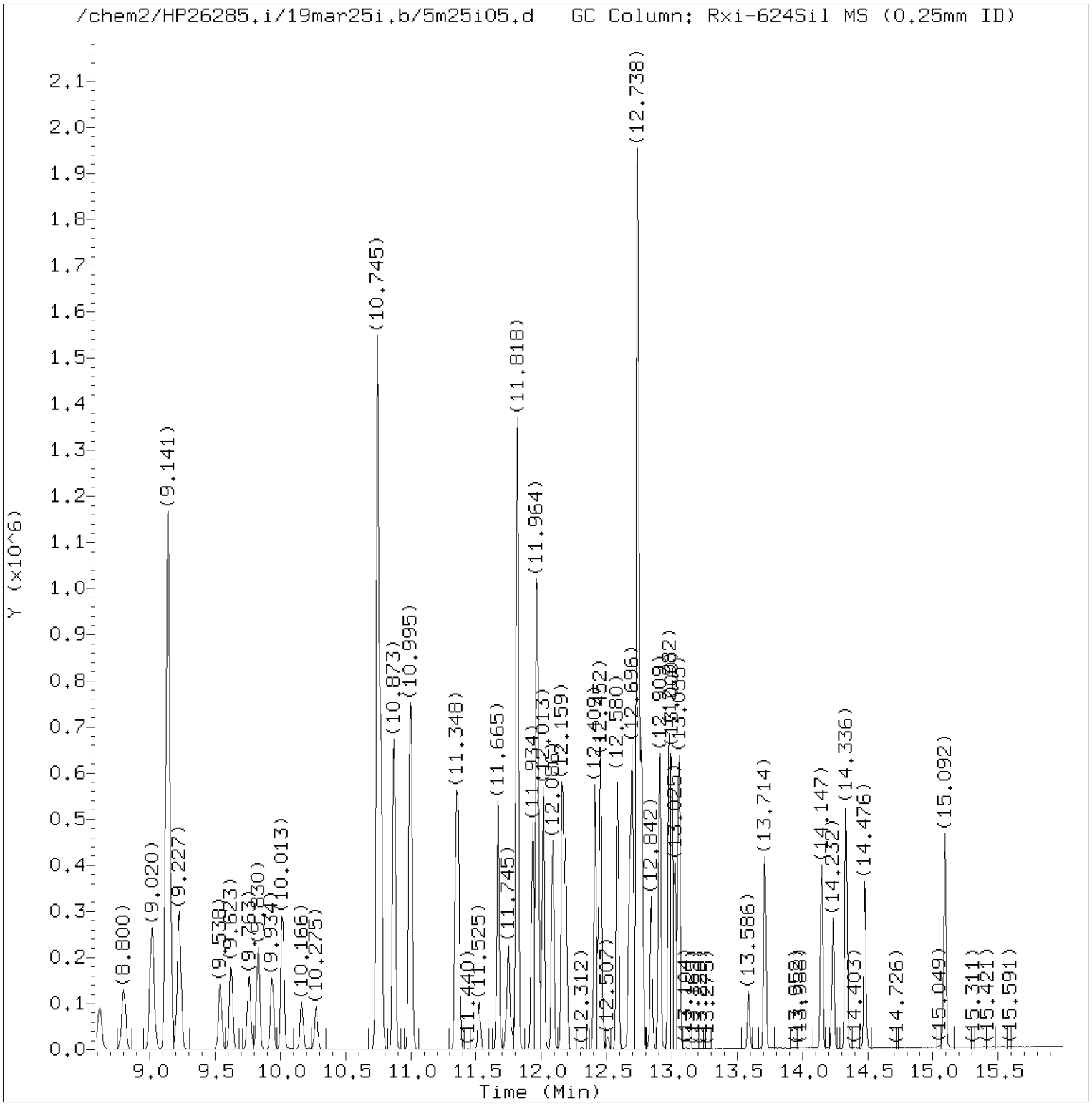
Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.631	85	94119	10.867
4) Chloromethane	(2)	1.795	50	66804	10.614
5) 1,3-Butadiene	(2)	1.887	39	46141M	10.551
6) Vinyl Chloride	(2)	1.893	62	65864	10.697
8) Bromomethane	(2)	2.155	94	54012	10.886
9) Chloroethane	(2)	2.222	64	32076	10.867
10) Dichlorofluoromethane	(2)	2.429	67	86847	10.817
12) Trichlorofluoromethane	(2)	2.478	101	92976	10.862
11) n-Pentane	(2)	2.503	43	57109	10.578
14) Ethyl ether	(2)	2.685	59	50150	11.312
15) Freon 123a	(2)	2.759	67	71433	10.738
16) Acrolein	(1)	2.832	56	248316	107.438
17) 1,1-Dichloroethene	(2)	2.941	96	52544	10.569
17) 1,1-Dichloroethene	(2)	2.941	63	25969	10.618
19) Freon 113	(2)	2.966	101	54074	10.692
18) Acetone	(1)	2.978	58	23127	21.884
22) Methyl Iodide	(2)	3.106	142	108497	10.450
21) 2-Propanol	(1)	3.124	45	79627M	103.676
23) Carbon Disulfide	(2)	3.191	76	170510	10.330
27) Methyl Acetate	(2)	3.326	43	76180	9.893
25) Allyl Chloride	(2)	3.338	41	89976	10.073
28) Methylene Chloride	(2)	3.502	84	58106	10.290
29)*t-Butyl alcohol-d10	(1)	3.533	65	327405M	250.000
30) t-Butyl alcohol	(1)	3.636	59	156152	103.095
31) Acrylonitrile	(2)	3.807	53	45074	11.074
32) trans-1,2-Dichloroethene	(2)	3.838	96	58818	10.569
33) Methyl Tertiary Butyl Ether	(2)	3.838	73	168895	10.635
34) n-Hexane	(2)	4.222	57	83855	10.892
36) 1,1-Dichloroethane	(2)	4.472	63	104202	10.621
38) di-Isopropyl ether	(2)	4.533	45	190591	10.657
39) 2-Chloro-1,3-butadiene	(2)	4.581	53	91675	10.560
40) Ethyl t-butyl ether	(2)	5.093	59	175231	10.583
42) cis-1,2-Dichloroethene	(2)	5.337	96	65570	10.414
44) 2-Butanone	(2)	5.337	43	129887	21.132
45) 2,2-Dichloropropane	(2)	5.350	77	82703	10.540
47) Propionitrile	(1)	5.447	54	169933	103.151
48) Methacrylonitrile	(2)	5.654	67	205805	51.389
49) Bromochloromethane	(2)	5.685	128	32707	10.381

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.703	71	35878	21.439
51) Chloroform	(2)	5.849	83	100898	10.372
53) 1,1,1-Trichloroethane	(2)	6.069	97	90322	10.549
52)$Dibromofluoromethane	(2)	6.075	113	255943	49.666
52)$Dibromofluoromethane	(2)	6.075	111	262388	49.604
54) Cyclohexane	(2)	6.154	56	104862	10.593
54) Cyclohexane	(2)	6.154	84	89057	10.558
54) Cyclohexane	(2)	6.148	69	32737	10.674
43) 1,2-Dichloroethene (Total)	(2)		96	124388	20.983
56) Carbon Tetrachloride	(2)	6.276	117	76883	10.377
55) 1,1-Dichloropropene	(2)	6.294	75	84233	10.703
58) Isobutyl Alcohol	(1)	6.520	41	125141	252.284
57)$1,2-Dichloroethane-d4	(2)	6.551	102	60548	50.214
57)$1,2-Dichloroethane-d4	(2)	6.551	65	278650	49.919
57)$1,2-Dichloroethane-d4	(2)	6.551	104	38514	50.121
60) Benzene	(2)	6.569	78	252073	10.544
61) 1,2-Dichloroethane	(2)	6.654	62	72447	10.254
61) 1,2-Dichloroethane	(2)	6.660	98	6802	11.004
65) t-Amyl methyl ether	(2)	6.782	73	177362	10.629
66)*Fluorobenzene	(2)	6.996	96	1076914	50.000
67) n-Heptane	(2)	7.014	43	92368	10.640
69) n-Butanol	(1)	7.441	56	210925	509.987
71) Trichloroethene	(2)	7.489	95	64927	10.472
73) Methylcyclohexane	(2)	7.794	83	106801	10.403
73) Methylcyclohexane	(2)	7.788	98	45351	10.269
74) 1,2-Dichloropropane	(2)	7.843	63	62224	10.500
76) 1,4-Dioxane	(1)	7.947	88	25954M	270.529
75) Dibromomethane	(2)	7.959	93	38941	10.389
77) Methyl Methacrylate	(2)	7.965	69	63773	10.308
79) Bromodichloromethane	(2)	8.215	83	71347	10.243
80) 2-Nitropropane	(2)	8.526	41	56052	19.604
81) 2-Chloroethyl Vinyl Ether	(2)	8.617	63	51694	10.452
82) cis-1,3-Dichloropropene	(2)	8.800	75	94445	10.305
83) 4-Methyl-2-pentanone	(2)	9.020	43	245048	19.466
84)$Toluene-d8	(3)	9.141	98	1040894	50.465
84)$Toluene-d8	(3)	9.141	100	681849	50.297
89) Toluene	(3)	9.227	92	162986	10.616
90) trans-1,3-Dichloropropene	(3)	9.538	75	83380	10.050

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	9.623	69	103239	10.379
93) 1,1,2-Trichloroethane	(3)	9.763	97	56777	10.337
94) Tetrachloroethene	(3)	9.830	166	72586	10.397
95) 1,3-Dichloropropane	(3)	9.934	76	93721	10.417
97) 2-Hexanone	(3)	10.013	43	201517	18.560
91) 1,3-Dichloropropene (total)	(3)		100	177825	20.355
98) Dibromochloromethane	(3)	10.166	129	56725	10.088
100) 1,2-Dibromoethane	(3)	10.275	107	62928	10.260
101)*Chlorobenzene-d5	(3)	10.745	117	817143	50.000
102) 1-Chlorohexane	(3)	10.769	91	92374	10.327
103) Chlorobenzene	(3)	10.775	112	179579	10.454
104) 1,1,1,2-Tetrachloroethane	(3)	10.867	131	59624	10.282
105) Ethylbenzene	(3)	10.873	91	316305	10.548
107) m+p-Xylene	(3)	10.995	106	250815	21.207
108) o-Xylene	(3)	11.348	106	121737	10.535
110) Styrene	(3)	11.367	104	198532	10.404
111) Bromoform	(3)	11.525	173	42466	9.567
112) Isopropylbenzene	(3)	11.665	105	319274	10.639
113) Cyclohexanone	(1)	11.745	55	97782M	243.599
109) Xylene (Total)	(3)		106	372552	31.742
115)$4-Bromofluorobenzene	(3)	11.812	95	401683	50.050
115)$4-Bromofluorobenzene	(3)	11.818	174	350688	50.158
116) Bromobenzene	(4)	11.934	156	77462	10.311
117) 1,1,2,2-Tetrachloroethane	(4)	11.940	83	99747	10.486
119) trans-1,4-Dichloro-2-butene	(4)	11.964	53	157982	52.735
118) 1,2,3-Trichloropropane	(4)	11.982	110	29545	10.309
120) n-Propylbenzene	(4)	12.013	91	383528	10.848
121) 2-Chlorotoluene	(4)	12.086	126	76128	10.444
123) 1,3,5-Trimethylbenzene	(4)	12.159	105	270969	10.620
122) 4-Chlorotoluene	(4)	12.190	126	77920	10.413
125) tert-Butylbenzene	(4)	12.409	134	56051M	10.396
126) Pentachloroethane	(4)	12.440	167	43703	9.926
127) 1,2,4-Trimethylbenzene	(4)	12.458	105	274908	10.507
128) sec-Butylbenzene	(4)	12.580	105	353049	10.680
130) 1,3-Dichlorobenzene	(4)	12.677	146	149707	10.405
131) p-Isopropyltoluene	(4)	12.696	119	302818	10.566
132)*1,4-Dichlorobenzene-d4	(4)	12.738	152	435506	50.000
134) 1,4-Dichlorobenzene	(4)	12.757	146	149307	10.239

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	12.769	105	278625	10.309
136) Benzyl Chloride	(4)	12.842	91	188685	10.068
137) 1,3-Diethylbenzene	(4)	12.909	119	180608	10.340
138) 1,4-Diethylbenzene	(4)	12.982	119	192086	10.362
140) n-Butylbenzene	(4)	13.000	92	153121	10.592
139) 1,2-Dichlorobenzene	(4)	13.025	146	141240	10.384
141) 1,2-Diethylbenzene	(4)	13.055	119	148906	10.254
142) Diethylbenzene (total)	(4)		100	521600	30.956
143) 1,2-Dibromo-3-chloropropane	(4)	13.586	75	24404	10.269
145) 1,3,5-Trichlorobenzene	(4)	13.714	180	111098	10.161
147) 1,2,4-Trichlorobenzene	(4)	14.147	180	99642	10.067
148) Hexachlorobutadiene	(4)	14.238	225	45848	9.815
149) Naphthalene	(4)	14.336	128	353097	10.514
150) 1,2,3-Trichlorobenzene	(4)	14.482	180	95122	10.030
151) 2-Methylnaphthalene	(4)	15.092	142	194887	9.862

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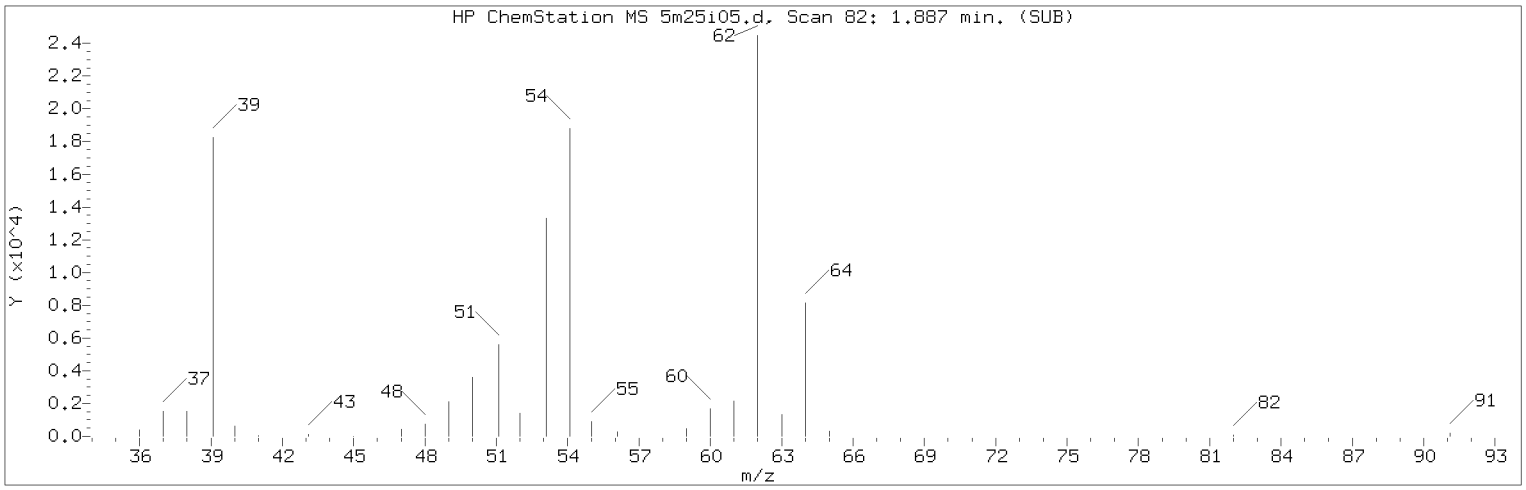
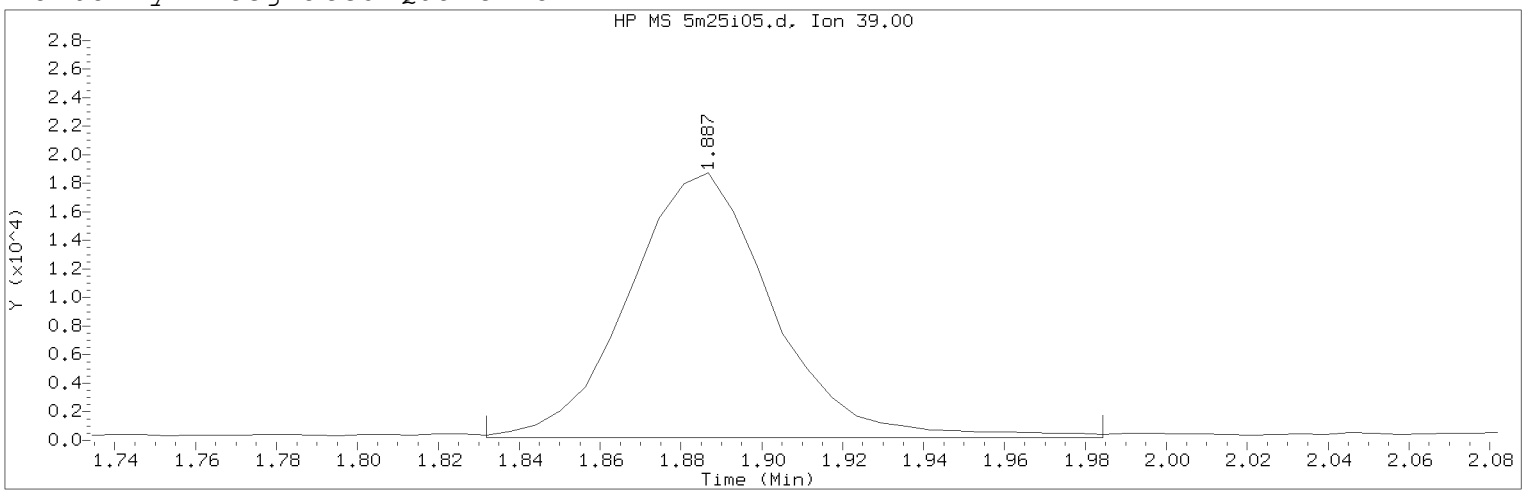
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

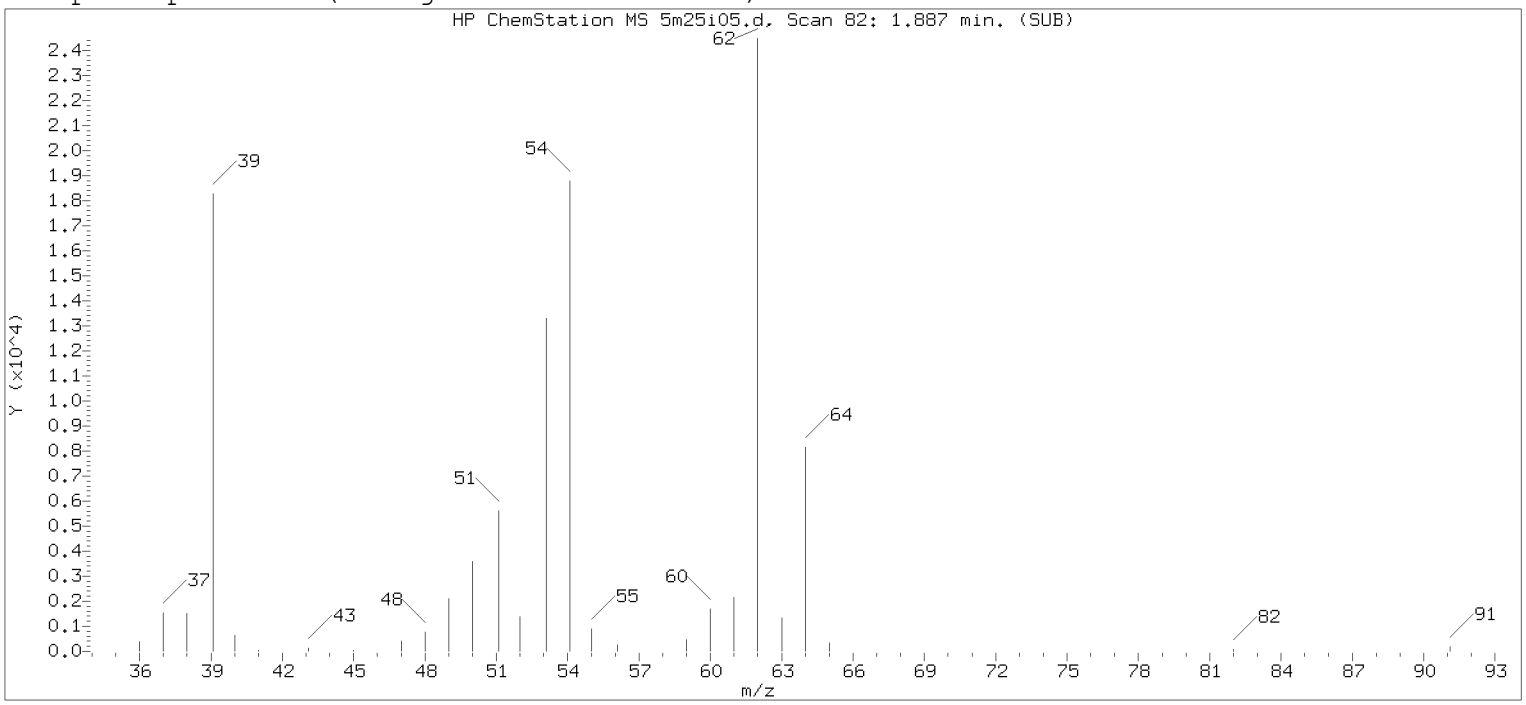
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 82
Retention Time (minutes): 1.887
Quant Ion : 39.00
Area (flag) : 46141M
On-Column Amount (ng) : 10.5515
Integration start scan : 72 Integration stop scan: 97
Y at integration start : 168 Y at integration end: 168

Reason for manual integration: improper integration

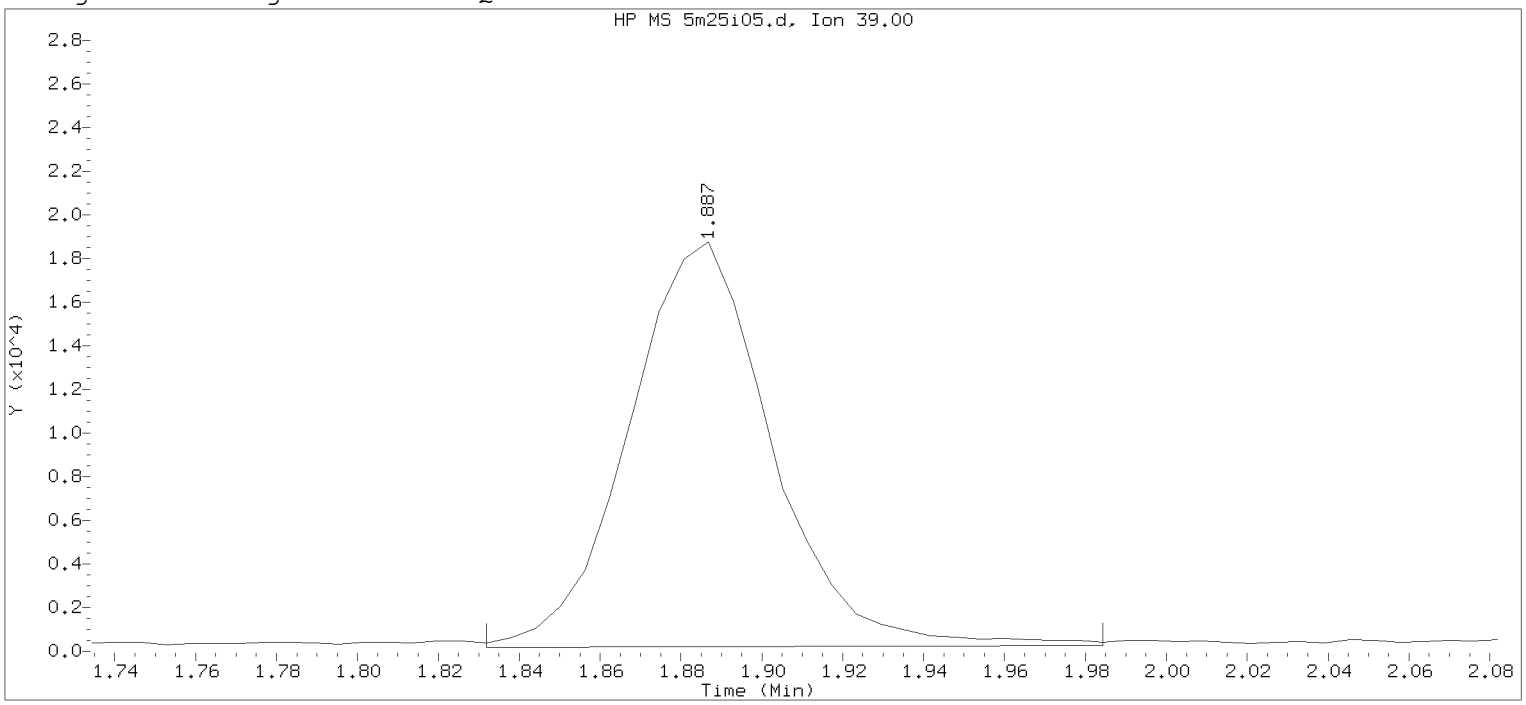
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

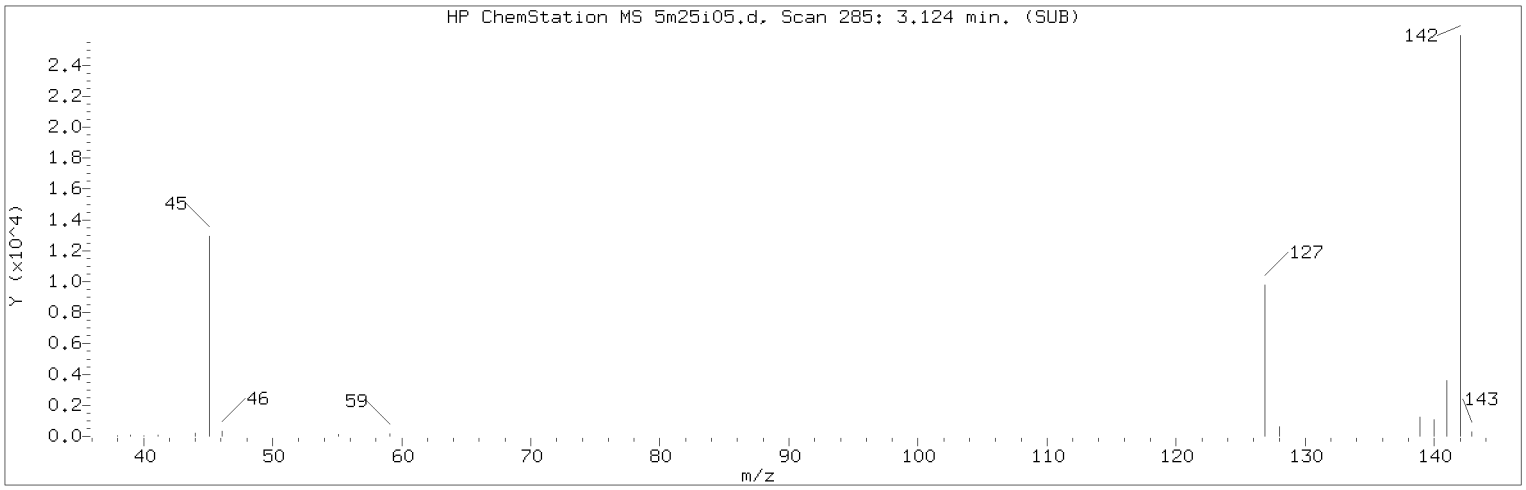
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:32
Date, time and analyst ID of latest file update: 25-Mar-2019 14:32 Unknown

Sample Name: VSTD010 Lab Sample ID: VSTD010

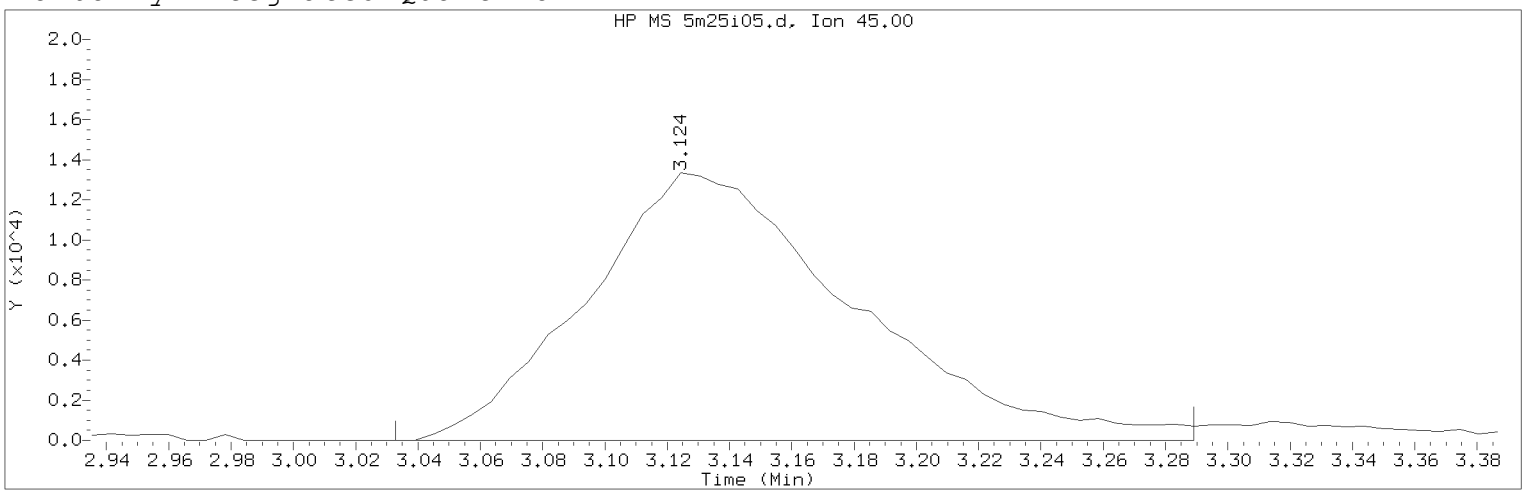
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 82
Retention Time (minutes): 1.887
Quant Ion : 39.00
Area : 45668
On-column Amount (ng) : 10.8442
Integration start scan : 72 Integration stop scan: 97
Y at integration start : 166 Y at integration end: 255

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kkelly1000

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

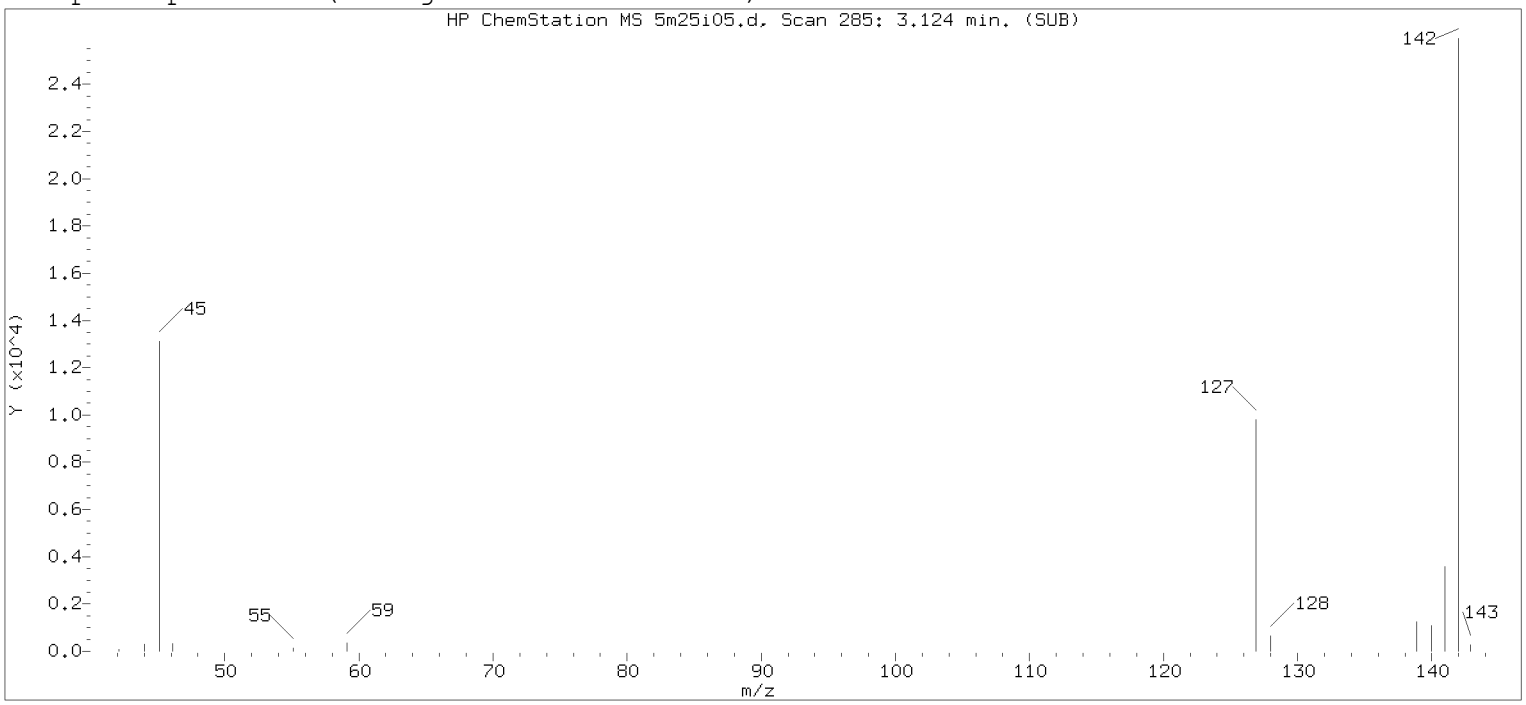
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 285
Retention Time (minutes): 3.124
Quant Ion : 45.00
Area (flag) : 79627M
On-Column Amount (ng) : 103.6763
Integration start scan : 269 Integration stop scan: 311
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

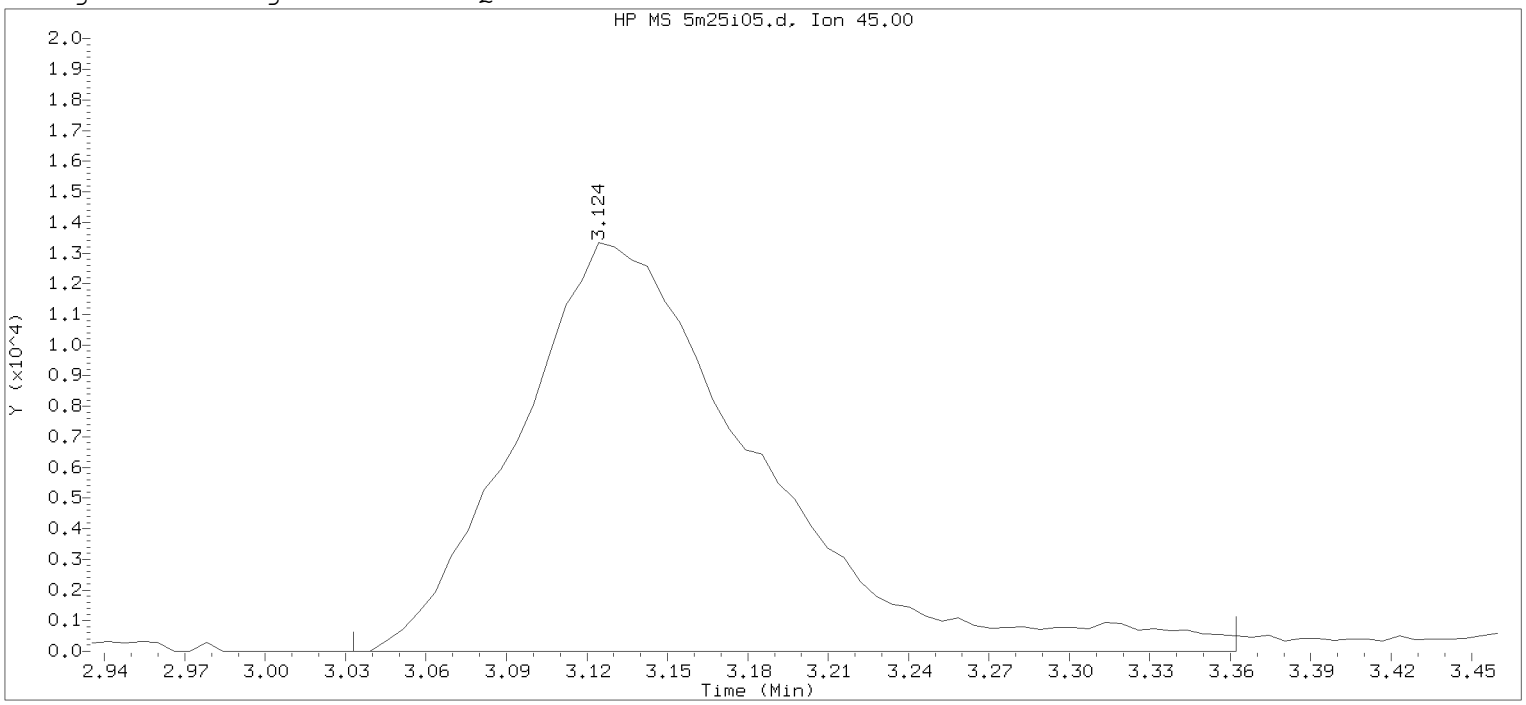
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

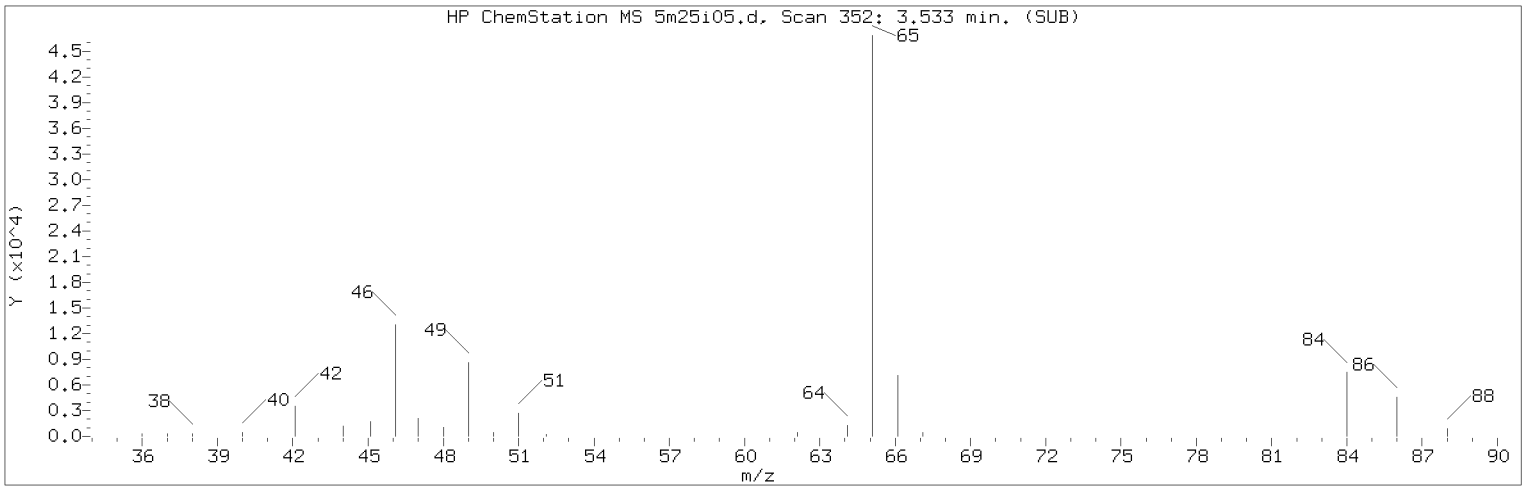
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:32
Date, time and analyst ID of latest file update: 25-Mar-2019 14:32 Unknown

Sample Name: VSTD010 Lab Sample ID: VSTD010

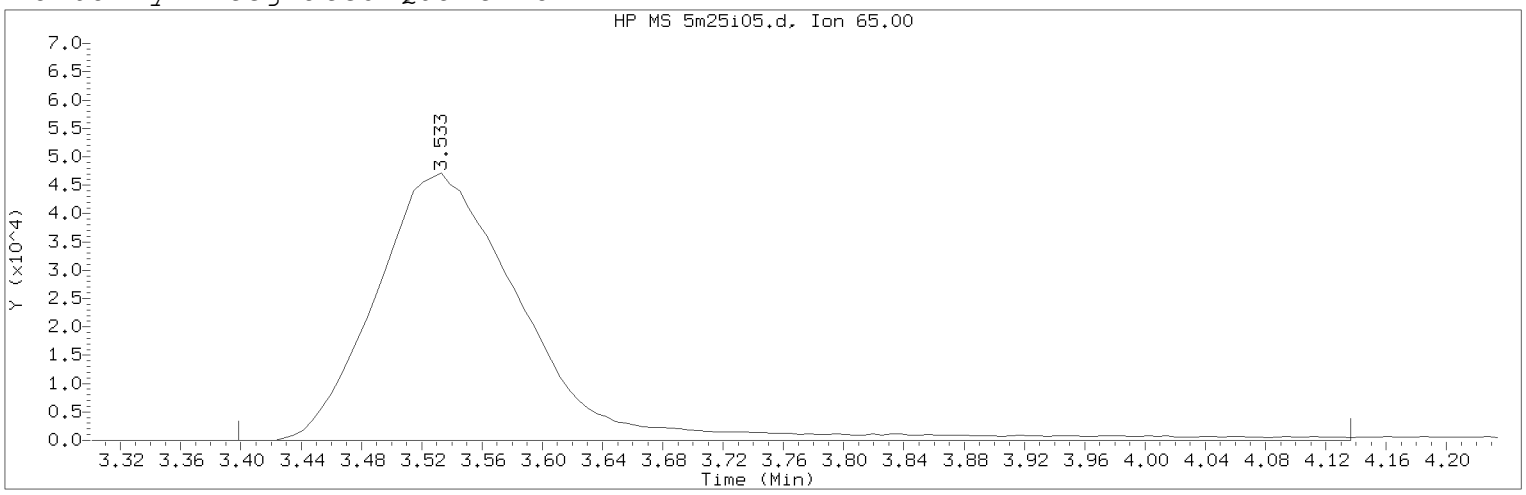
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 285
Retention Time (minutes): 3.124
Quant Ion : 45.00
Area : 82655
On-column Amount (ng) : 104.8368
Integration start scan : 269 Integration stop scan: 323
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kkelly100

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

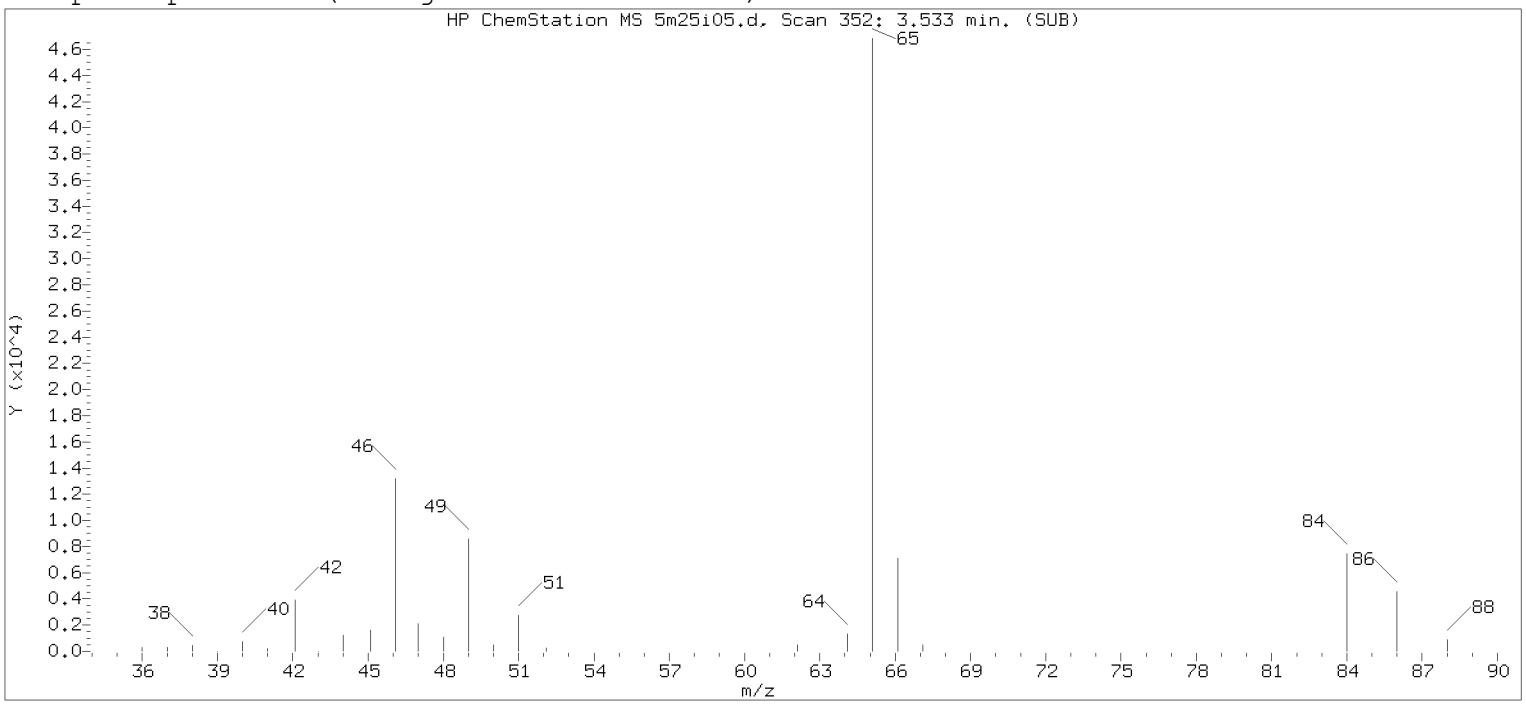
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 352
Retention Time (minutes): 3.533
Quant Ion : 65.00
Area (flag) : 327405M
On-Column Amount (ng) : 250.0000
Integration start scan : 329 Integration stop scan: 450
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

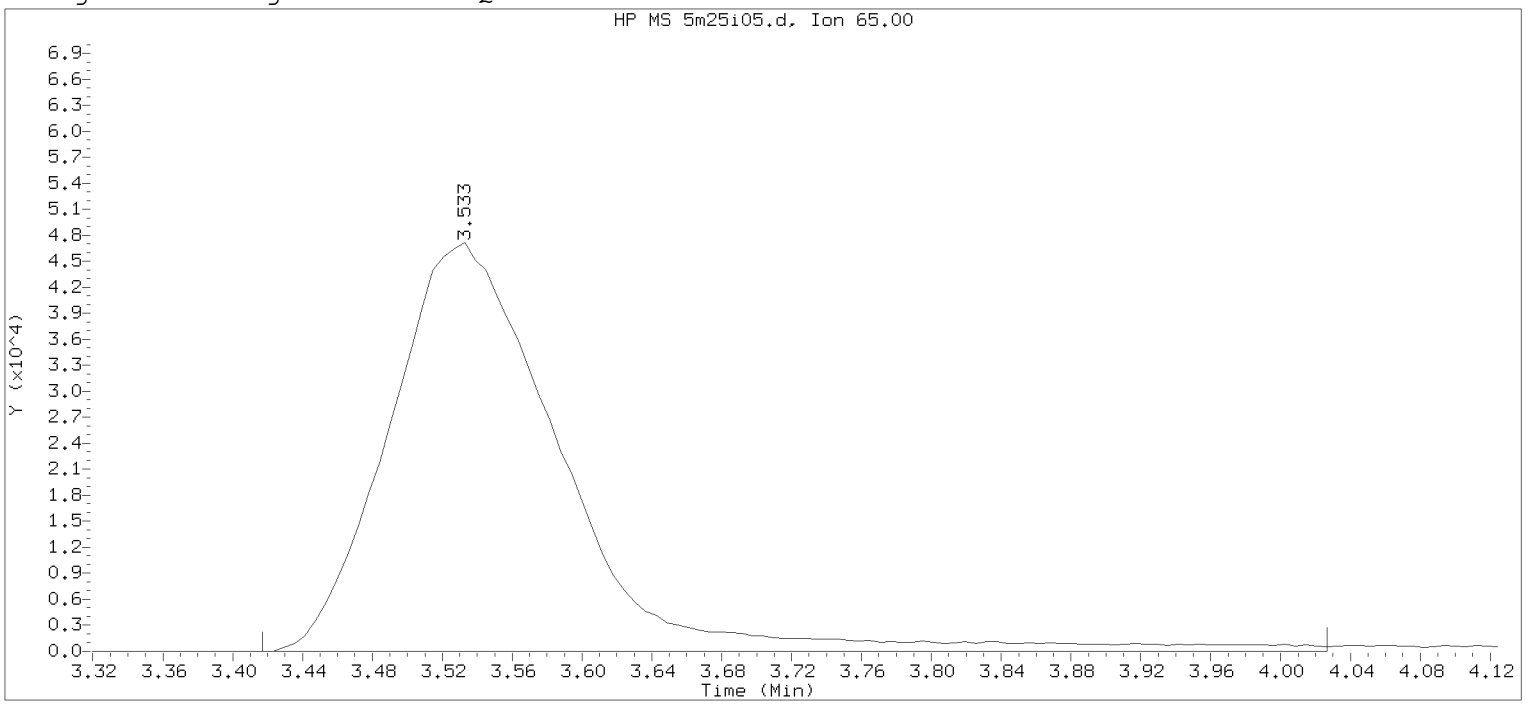
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

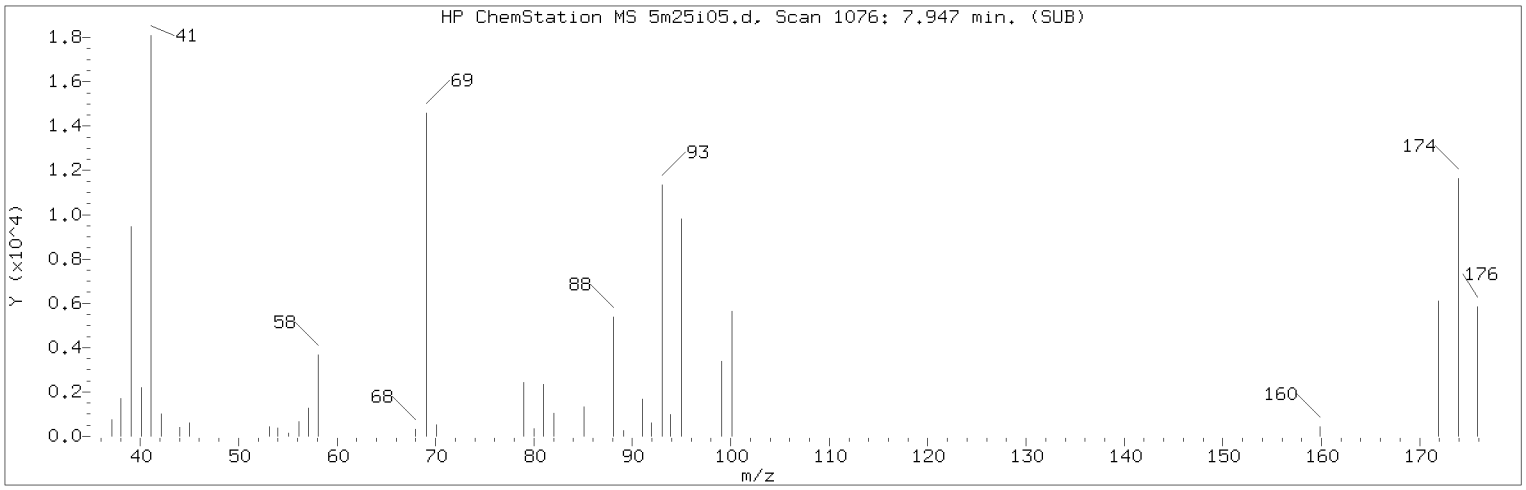
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:32
Date, time and analyst ID of latest file update: 25-Mar-2019 14:32 Unknown

Sample Name: VSTD010 Lab Sample ID: VSTD010

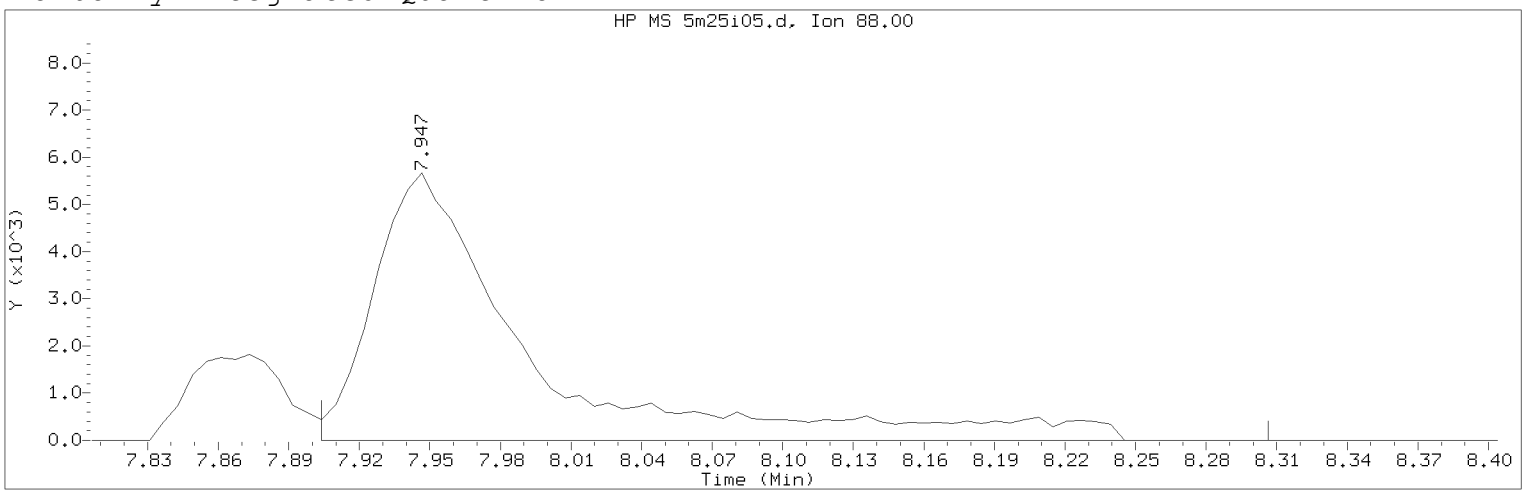
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 352
Retention Time (minutes): 3.533
Quant Ion : 65.00
Area : 323431
On-column Amount (ng) : 250.0000
Integration start scan : 332 Integration stop scan: 432
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user: Kevin Kelly

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

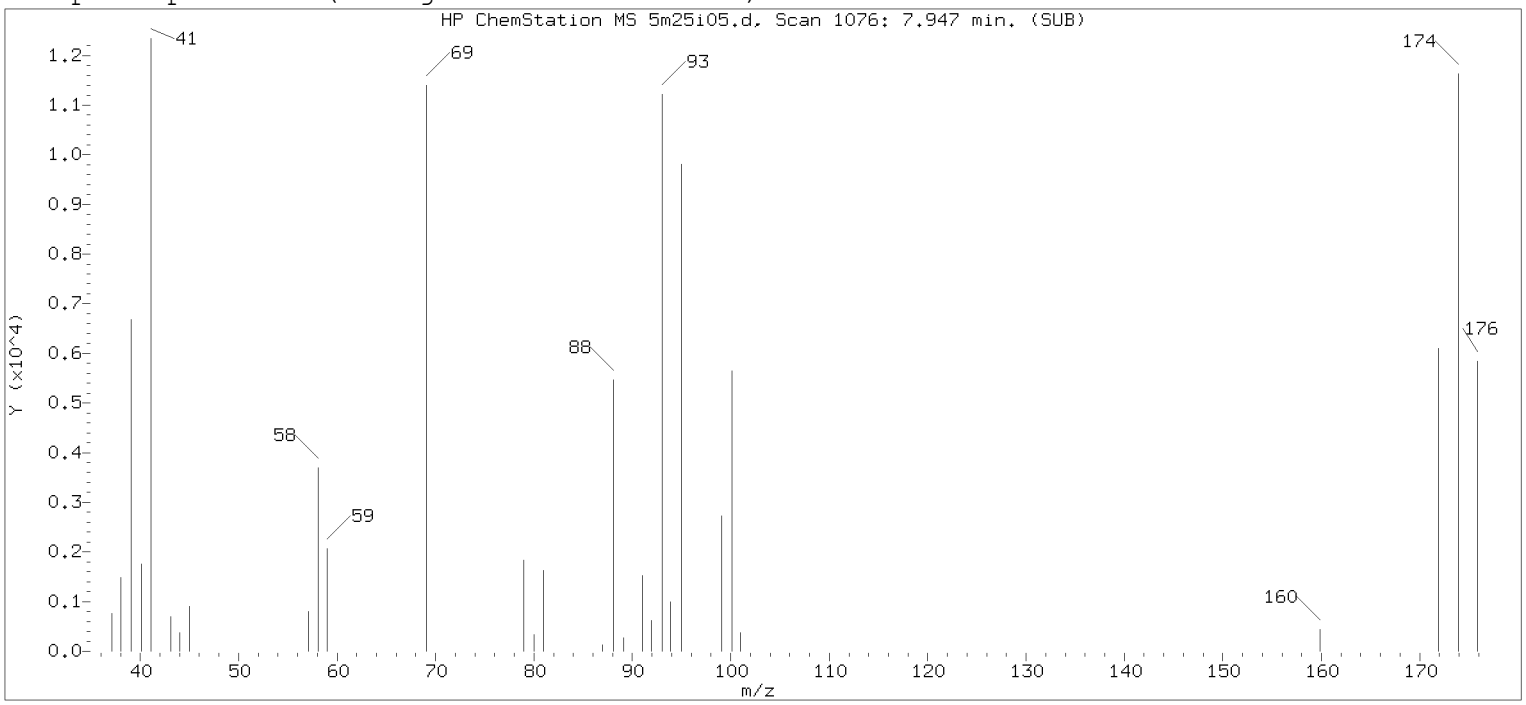
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1076
Retention Time (minutes): 7.947
Quant Ion : 88.00
Area (flag) : 25954M
On-Column Amount (ng) : 270.5285
Integration start scan : 1068 Integration stop scan: 1134
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

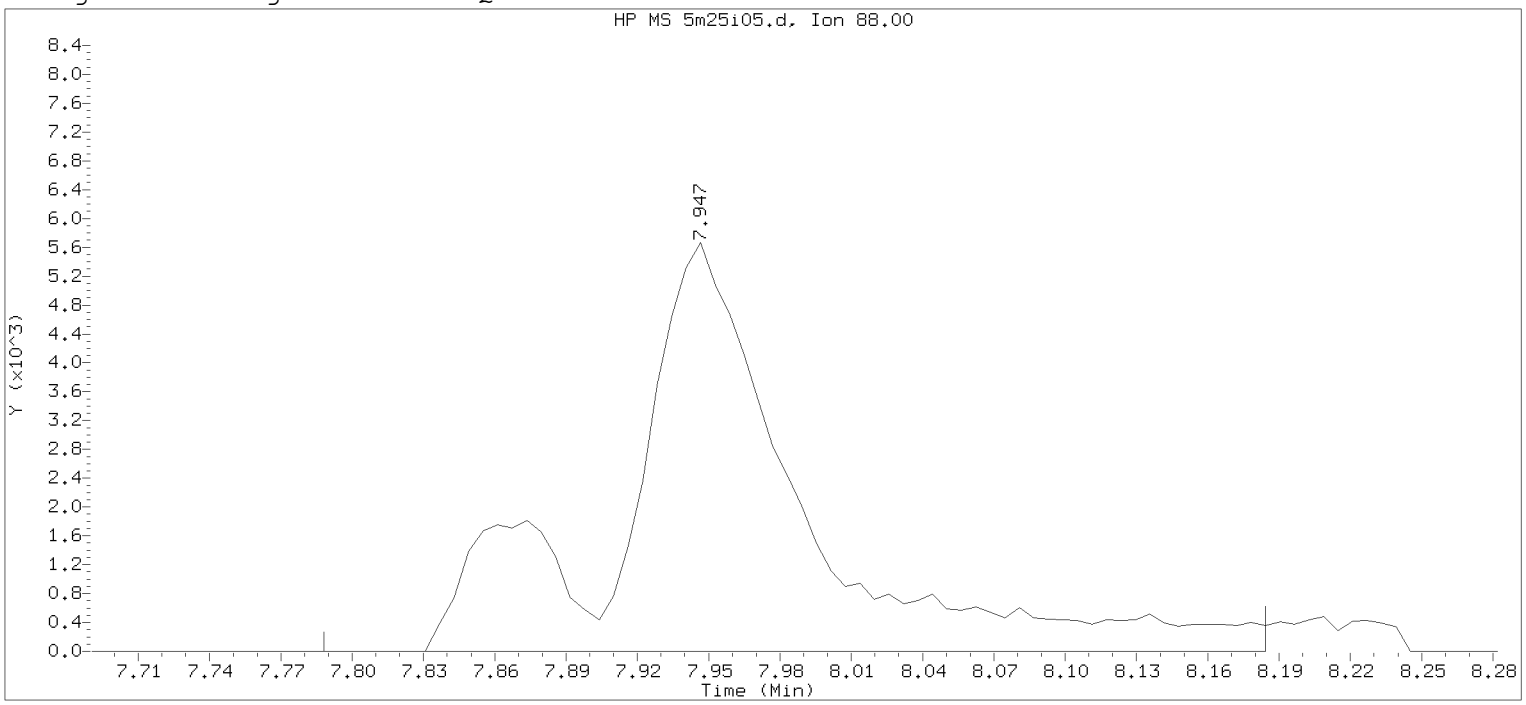
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

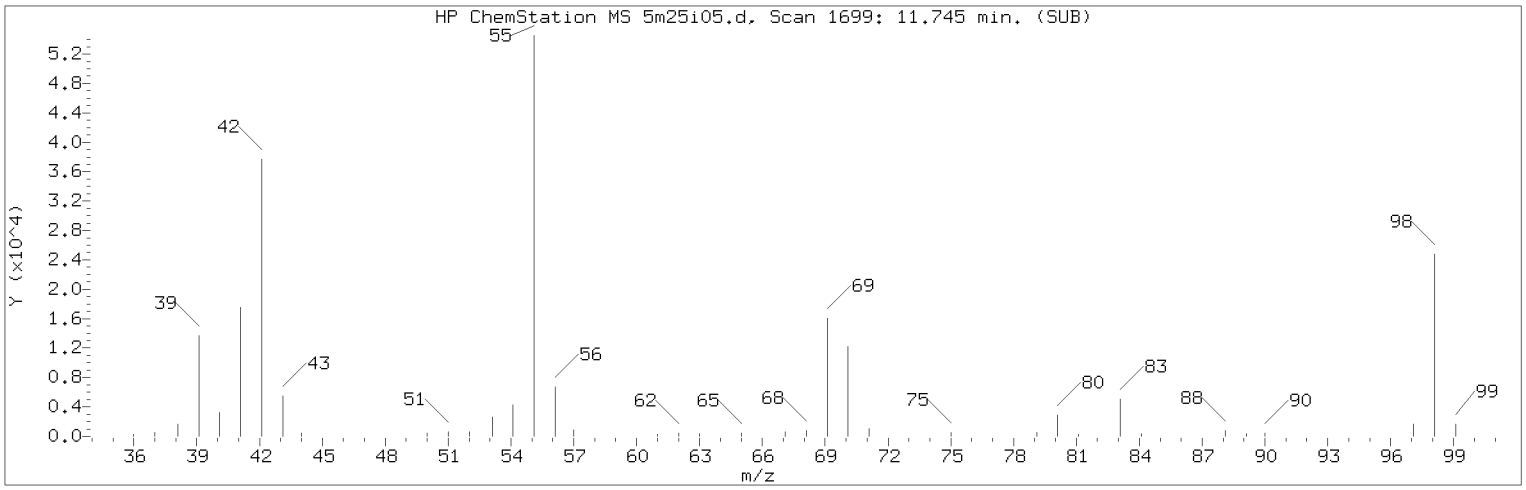
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:32
Date, time and analyst ID of latest file update: 25-Mar-2019 14:32 Unknown

Sample Name: VSTD010 Lab Sample ID: VSTD010

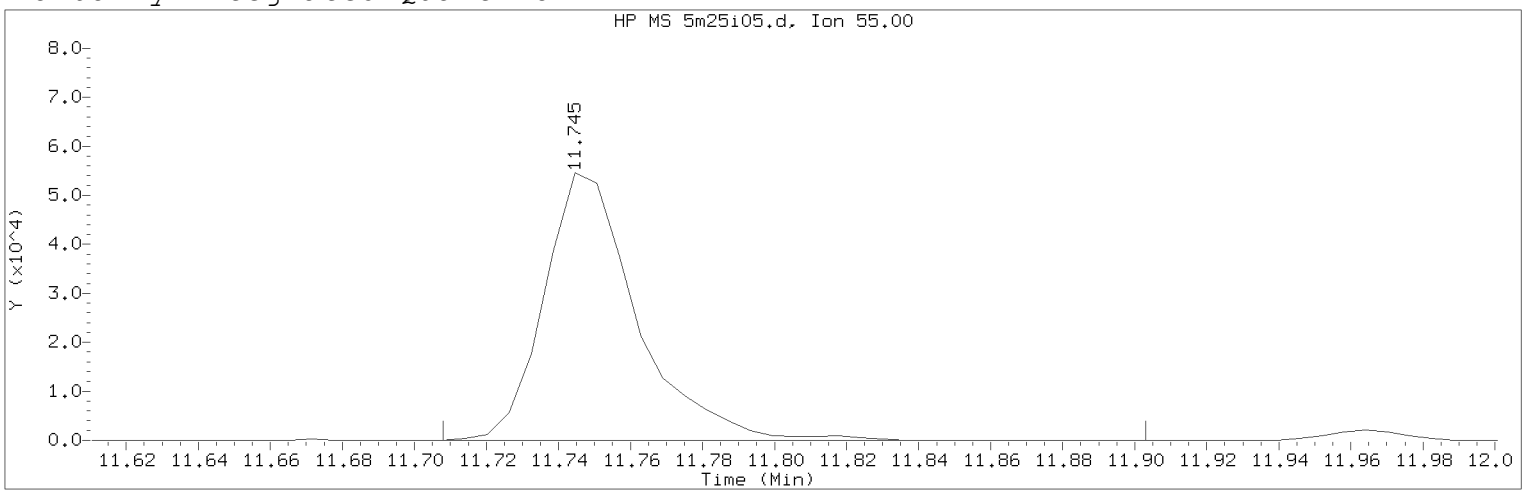
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1076
Retention Time (minutes): 7.947
Quant Ion : 88.00
Area : 29623
On-column Amount (ng) : 239.3666
Integration start scan : 1049 Integration stop scan: 1114
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kkelly1004

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

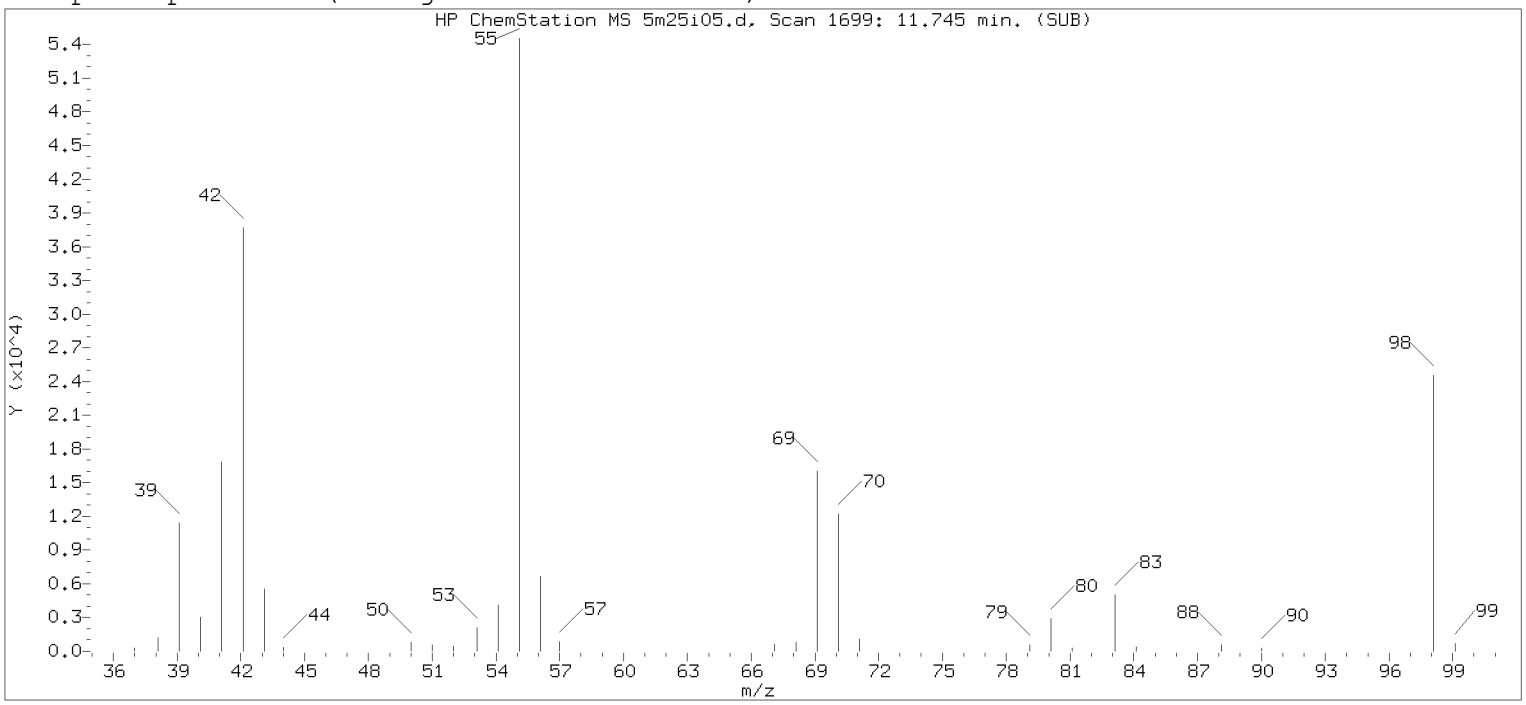
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1699
Retention Time (minutes): 11.745
Quant Ion : 55.00
Area (flag) : 97782M
On-Column Amount (ng) : 243.5987
Integration start scan : 1692 Integration stop scan: 1724
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

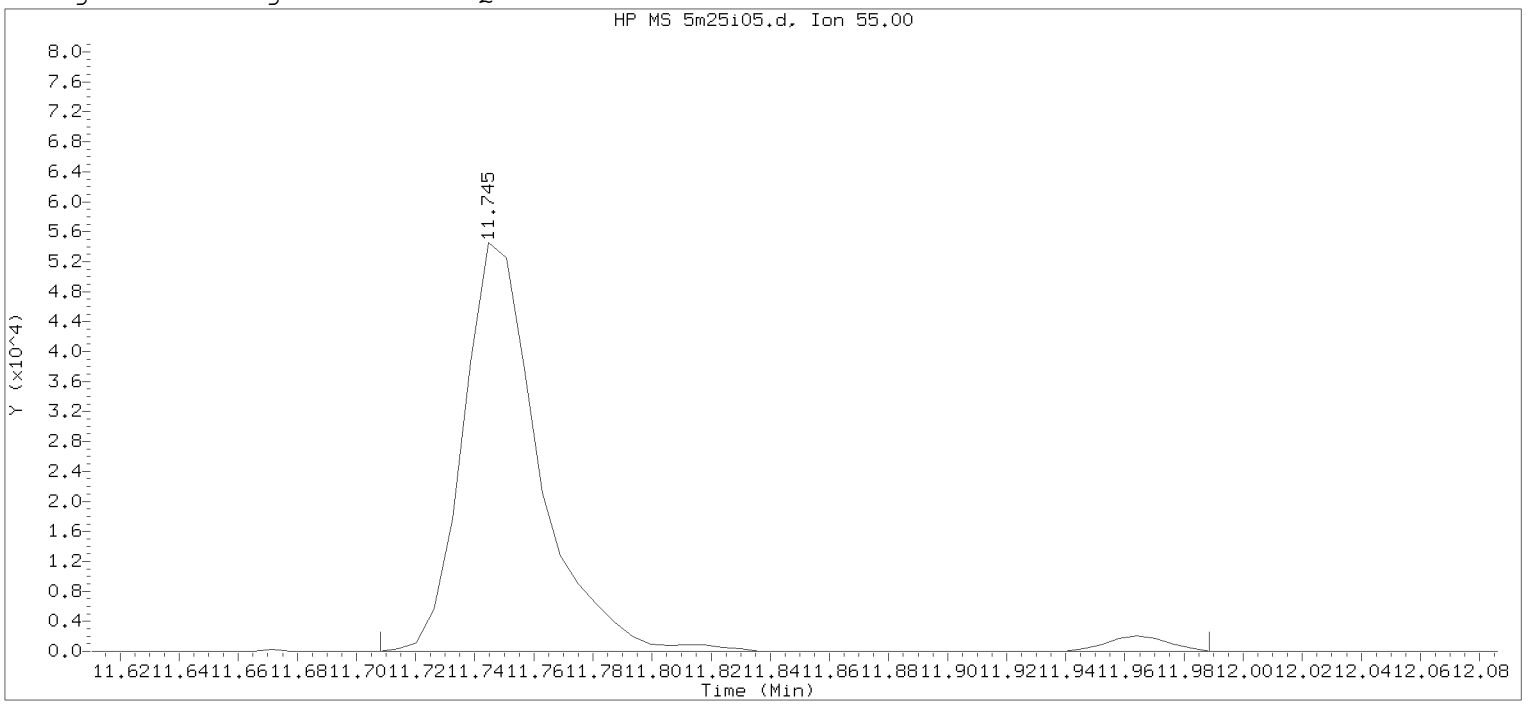
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

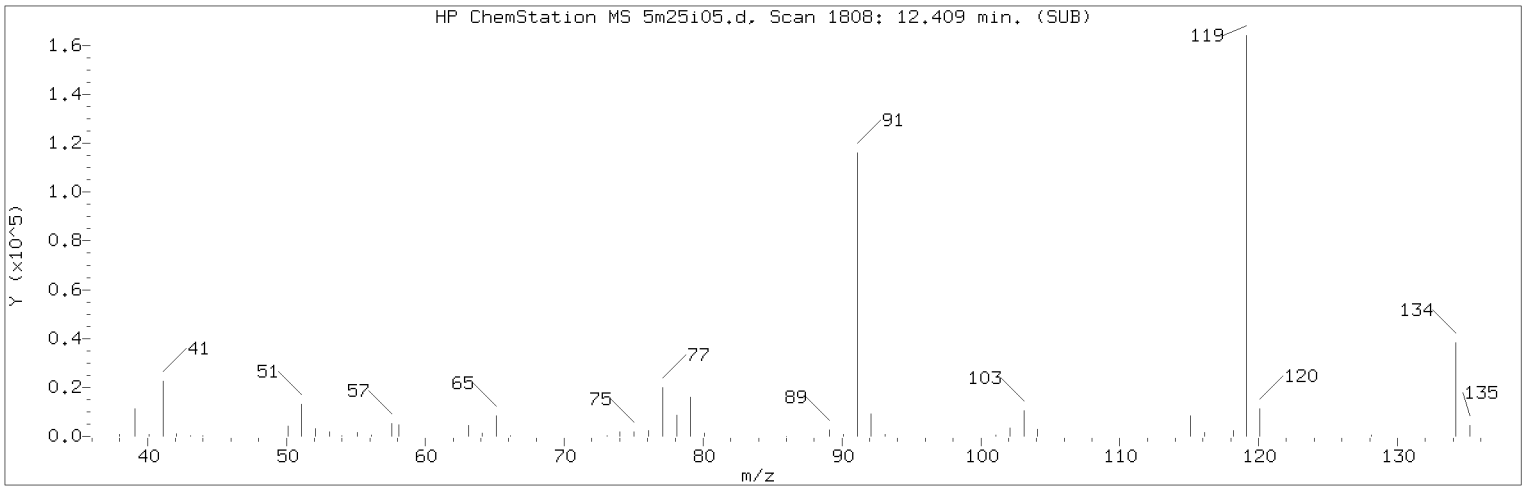
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:32
Date, time and analyst ID of latest file update: 25-Mar-2019 14:32 Unknown

Sample Name: VSTD010 Lab Sample ID: VSTD010

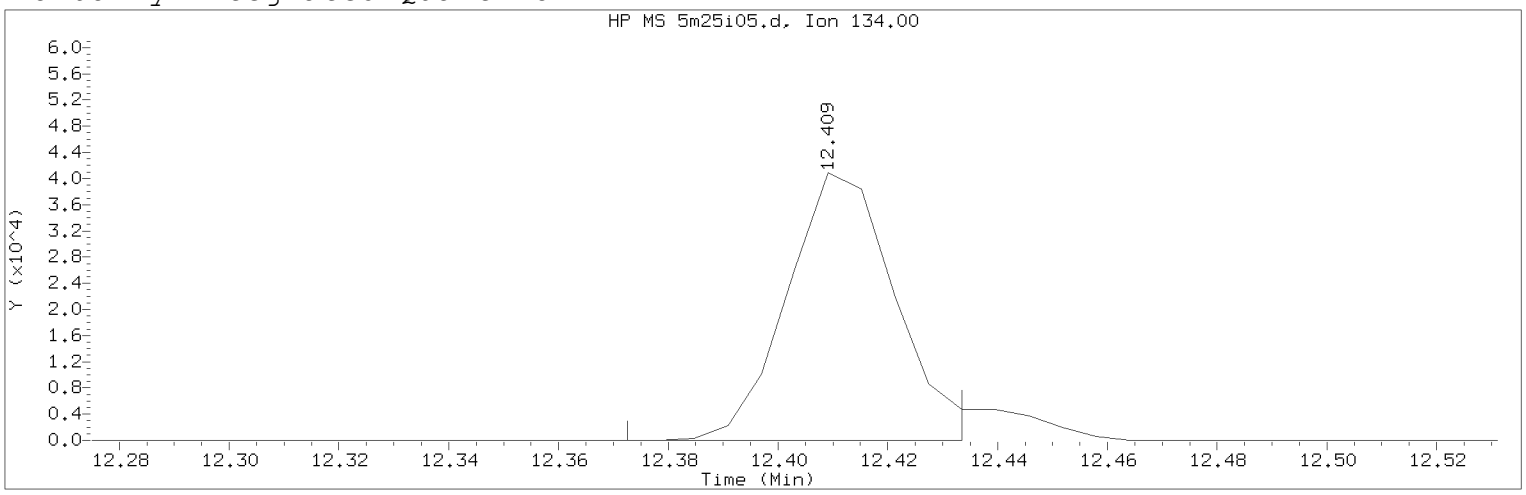
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1699
Retention Time (minutes): 11.745
Quant Ion : 55.00
Area : 100707
On-column Amount (ng) : 247.1018
Integration start scan : 1692 Integration stop scan: 1738
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kkelly1007

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

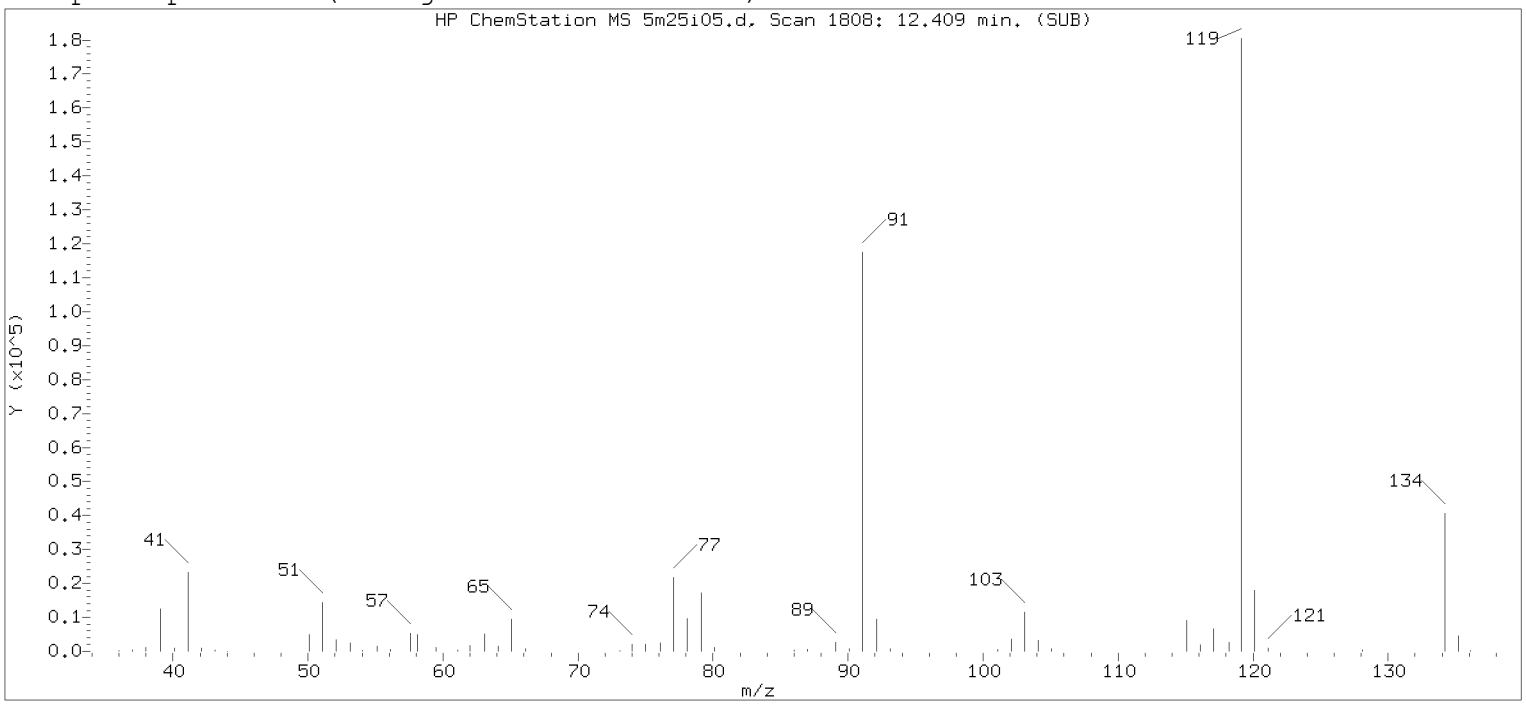
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1808
Retention Time (minutes): 12.409
Quant Ion : 134.00
Area (flag) : 56051M
On-Column Amount (ng) : 10.3959
Integration start scan : 1801 Integration stop scan: 1811
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

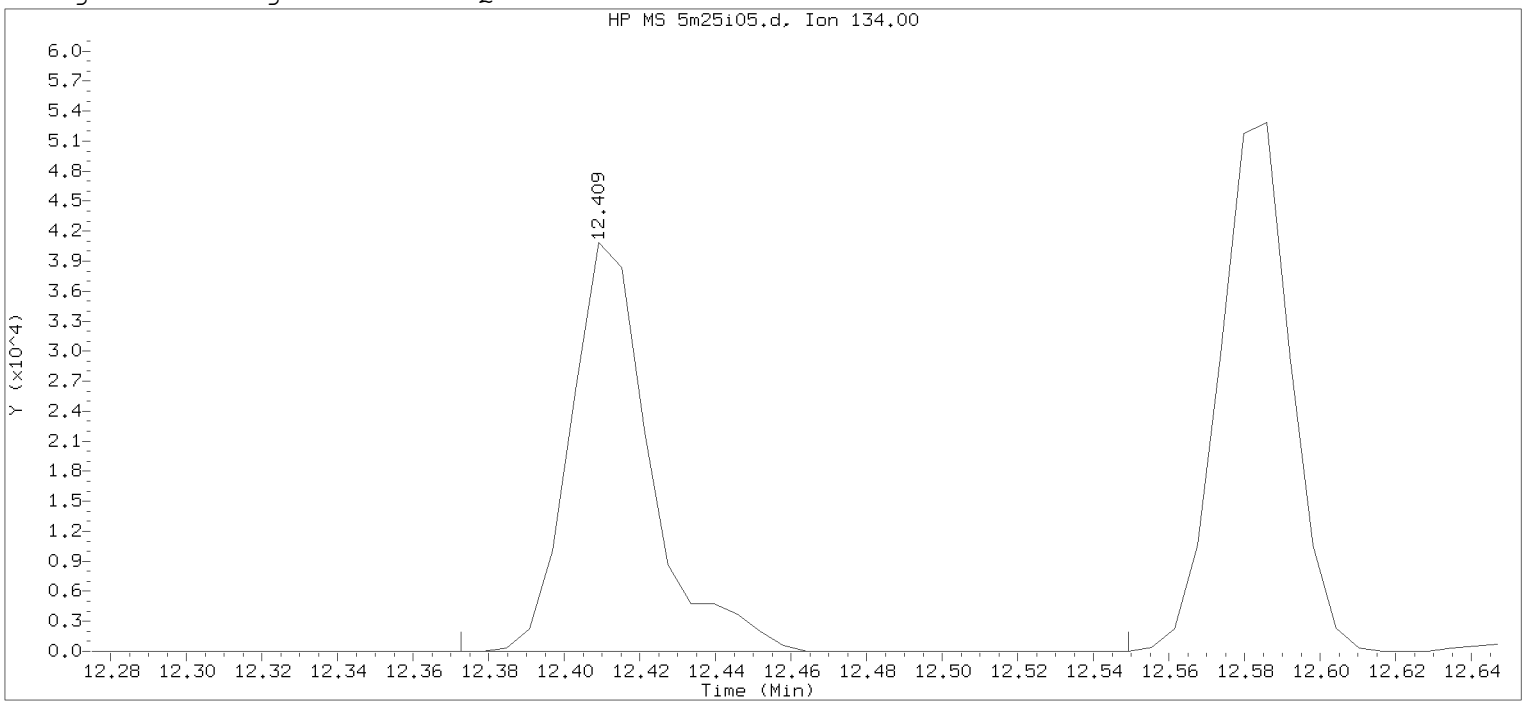
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



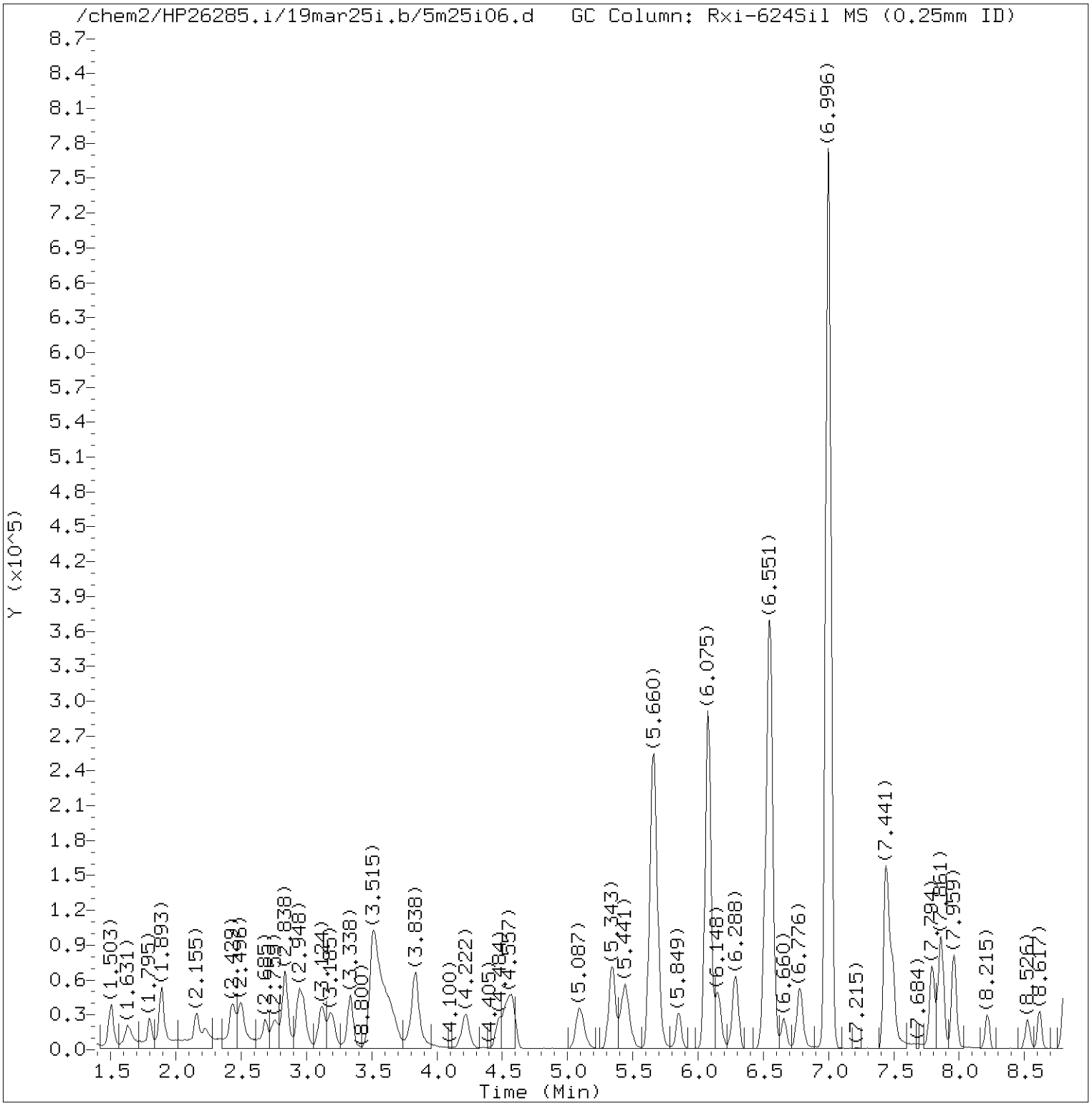
Data File: /chem2/HP26285.i/19mar25i.b/5m25i05.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:13 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:32
Date, time and analyst ID of latest file update: 25-Mar-2019 14:32 Unknown

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1808
Retention Time (minutes): 12.409
Quant Ion : 134.00
Area : 60082
On-column Amount (ng) : 10.1949
Integration start scan : 1801 Integration stop scan: 1830
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10004



Total Ion Chromatogram (TIC)

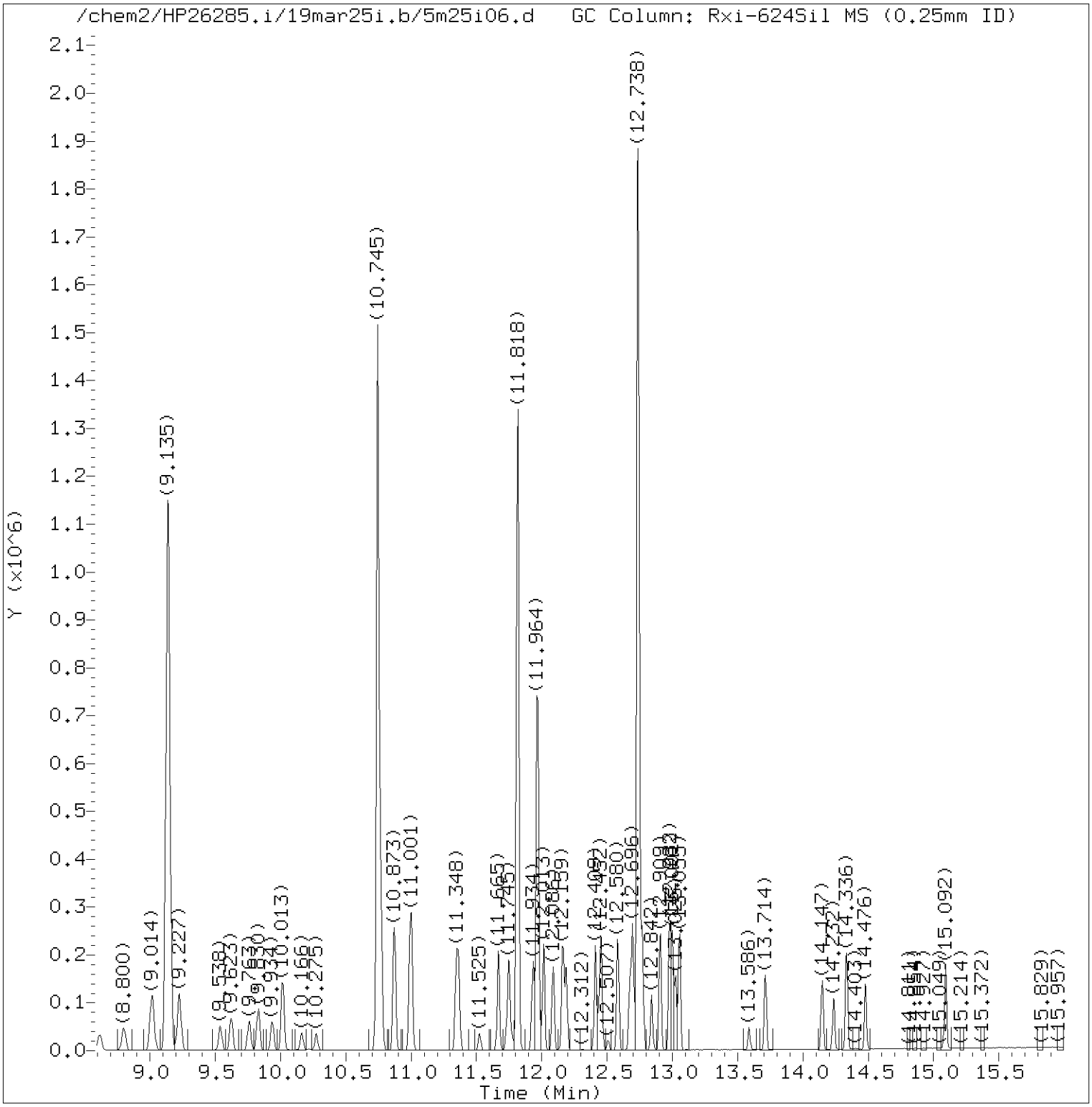
Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.625	85	36739	4.297
4) Chloromethane	(2)	1.802	50	26477	4.261
5) 1,3-Butadiene	(2)	1.887	39	20065M	4.647
6) Vinyl Chloride	(2)	1.893	62	26684	4.389
8) Bromomethane	(2)	2.155	94	20875	4.261
9) Chloroethane	(2)	2.222	64	12826	4.401
10) Dichlorofluoromethane	(2)	2.436	67	34391	4.339
12) Trichlorofluoromethane	(2)	2.472	101	37728	4.464
11) n-Pentane	(2)	2.503	43	22069	4.140
14) Ethyl ether	(2)	2.685	59	16779	3.834
15) Freon 123a	(2)	2.759	67	29146	4.437
16) Acrolein	(1)	2.838	56	97152	41.592
17) 1,1-Dichloroethene	(2)	2.942	96	20884	4.255
17) 1,1-Dichloroethene	(2)	2.942	63	10600	4.390
18) Acetone	(1)	2.978	58	8439	7.901
19) Freon 113	(2)	2.978	101	21134	4.232
22) Methyl Iodide	(2)	3.112	142	41852	4.083
21) 2-Propanol	(1)	3.124	45	64690M	83.341
23) Carbon Disulfide	(2)	3.191	76	64338	3.948
27) Methyl Acetate	(2)	3.326	43	29978	3.943
25) Allyl Chloride	(2)	3.338	41	37004	4.196
28) Methylene Chloride	(2)	3.502	84	22834	4.096
29)*t-Butyl alcohol-d10	(1)	3.527	65	330891M	250.000
30) t-Butyl alcohol	(1)	3.630	59	129209	84.408
31) Acrylonitrile	(2)	3.801	53	16238	4.041
33) Methyl Tertiary Butyl Ether	(2)	3.832	73	65704	4.190
32) trans-1,2-Dichloroethene	(2)	3.838	96	22696	4.131
34) n-Hexane	(2)	4.222	57	30842	4.058
36) 1,1-Dichloroethane	(2)	4.466	63	39340	4.061
38) di-Isopropyl ether	(2)	4.533	45	73520	4.164
39) 2-Chloro-1,3-butadiene	(2)	4.575	53	36040	4.205
40) Ethyl t-butyl ether	(2)	5.087	59	68531	4.192
42) cis-1,2-Dichloroethene	(2)	5.337	96	25524	4.106
44) 2-Butanone	(2)	5.337	43	49756	8.199
45) 2,2-Dichloropropane	(2)	5.350	77	31970	4.127
47) Propionitrile	(1)	5.441	54	135848	81.592
48) Methacrylonitrile	(2)	5.654	67	162944	41.210
49) Bromochloromethane	(2)	5.685	128	12555	4.036

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.709	71	12803	7.570
51) Chloroform	(2)	5.849	83	39149	4.076
53) 1,1,1-Trichloroethane	(2)	6.069	97	35462	4.195
52)$Dibromofluoromethane	(2)	6.075	113	252710	49.669
52)$Dibromofluoromethane	(2)	6.075	111	259244	49.641
54) Cyclohexane	(2)	6.148	56	42321	4.330
54) Cyclohexane	(2)	6.154	84	36558	4.390
54) Cyclohexane	(2)	6.160	69	13454	4.443
43) 1,2-Dichloroethene (Total)	(2)		96	48220	8.237
56) Carbon Tetrachloride	(2)	6.270	117	29187	3.990
55) 1,1-Dichloropropene	(2)	6.295	75	32870	4.230
58) Isobutyl Alcohol	(1)	6.520	41	103433	206.324
57)$1,2-Dichloroethane-d4	(2)	6.544	102	59639	50.097
57)$1,2-Dichloroethane-d4	(2)	6.551	65	280003	50.807
57)$1,2-Dichloroethane-d4	(2)	6.551	104	37936	50.005
60) Benzene	(2)	6.569	78	96926	4.106
61) 1,2-Dichloroethane	(2)	6.660	62	28650	4.107
61) 1,2-Dichloroethane	(2)	6.660	98	2768	4.536
65) t-Amyl methyl ether	(2)	6.782	73	67855	4.119
66)*Fluorobenzene	(2)	6.996	96	1063233	50.000
67) n-Heptane	(2)	7.008	43	36065	4.208
69) n-Butanol	(1)	7.441	56	169060	404.457
71) Trichloroethene	(2)	7.489	95	25061	4.094
73) Methylcyclohexane	(2)	7.788	83	43023	4.245
73) Methylcyclohexane	(2)	7.794	98	18301	4.197
74) 1,2-Dichloropropane	(2)	7.849	63	23892	4.084
76) 1,4-Dioxane	(1)	7.941	88	20189M	208.221
75) Dibromomethane	(2)	7.959	93	15187	4.104
77) Methyl Methacrylate	(2)	7.965	69	24748	4.052
79) Bromodichloromethane	(2)	8.215	83	26198	3.809
80) 2-Nitropropane	(2)	8.520	41	21379	7.573
81) 2-Chloroethyl Vinyl Ether	(2)	8.617	63	19019	3.895
82) cis-1,3-Dichloropropene	(2)	8.800	75	35330	3.904
83) 4-Methyl-2-pentanone	(2)	9.014	43	108145	8.701
84)$Toluene-d8	(3)	9.135	98	1026397	50.466
84)$Toluene-d8	(3)	9.135	100	671370	50.223
89) Toluene	(3)	9.227	92	63034	4.164
90) trans-1,3-Dichloropropene	(3)	9.544	75	31016	3.791

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	9.623	69	38269	3.902
93) 1,1,2-Trichloroethane	(3)	9.763	97	21760	4.018
94) Tetrachloroethene	(3)	9.830	166	28775	4.180
95) 1,3-Dichloropropane	(3)	9.940	76	36626	4.128
97) 2-Hexanone	(3)	10.013	43	99080	9.254
91) 1,3-Dichloropropene (total)	(3)		100	66346	7.696
98) Dibromochloromethane	(3)	10.166	129	19946	3.597
100) 1,2-Dibromoethane	(3)	10.275	107	24204	4.002
101)*Chlorobenzene-d5	(3)	10.745	117	805759	50.000
102) 1-Chlorohexane	(3)	10.769	91	37539	4.256
103) Chlorobenzene	(3)	10.775	112	68998	4.073
104) 1,1,1,2-Tetrachloroethane	(3)	10.867	131	21512	3.762
105) Ethylbenzene	(3)	10.873	91	121194	4.098
107) m+p-Xylene	(3)	11.001	106	95481	8.187
108) o-Xylene	(3)	11.348	106	46715	4.100
110) Styrene	(3)	11.367	104	74697	3.970
111) Bromoform	(3)	11.525	173	14739	3.367
112) Isopropylbenzene	(3)	11.665	105	123176	4.162
113) Cyclohexanone	(1)	11.751	55	82090	202.352
109) Xylene (Total)	(3)		106	142196	12.287
115)$4-Bromofluorobenzene	(3)	11.818	95	393555	49.730
115)$4-Bromofluorobenzene	(3)	11.818	174	343461	49.819
116) Bromobenzene	(4)	11.934	156	29526	4.006
117) 1,1,2,2-Tetrachloroethane	(4)	11.940	83	38156	4.089
119) trans-1,4-Dichloro-2-butene	(4)	11.964	53	120804	41.107
118) 1,2,3-Trichloropropane	(4)	11.982	110	11861	4.219
120) n-Propylbenzene	(4)	12.013	91	146443	4.222
121) 2-Chlorotoluene	(4)	12.086	126	28628	4.004
123) 1,3,5-Trimethylbenzene	(4)	12.159	105	102855	4.109
122) 4-Chlorotoluene	(4)	12.190	126	29478	4.016
125) tert-Butylbenzene	(4)	12.409	134	21726M	4.108
126) Pentachloroethane	(4)	12.440	167	15604	3.613
127) 1,2,4-Trimethylbenzene	(4)	12.458	105	104757	4.081
128) sec-Butylbenzene	(4)	12.580	105	137198	4.231
130) 1,3-Dichlorobenzene	(4)	12.677	146	56115	3.976
131) p-Isopropyltoluene	(4)	12.696	119	115679	4.115
132)*1,4-Dichlorobenzene-d4	(4)	12.738	152	427216	50.000
134) 1,4-Dichlorobenzene	(4)	12.757	146	58085	4.061

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	12.769	105	108478	4.091
136) Benzyl Chloride	(4)	12.842	91	65753	3.577
137) 1,3-Diethylbenzene	(4)	12.909	119	68425	3.993
138) 1,4-Diethylbenzene	(4)	12.982	119	72578	3.991
140) n-Butylbenzene	(4)	13.001	92	58391	4.117
139) 1,2-Dichlorobenzene	(4)	13.025	146	53630	4.019
141) 1,2-Diethylbenzene	(4)	13.055	119	57656	4.047
142) Diethylbenzene (total)	(4)		100	198659	12.032
143) 1,2-Dibromo-3-chloropropane	(4)	13.586	75	8884	3.811
145) 1,3,5-Trichlorobenzene	(4)	13.714	180	41838	3.901
147) 1,2,4-Trichlorobenzene	(4)	14.147	180	37321	3.844
148) Hexachlorobutadiene	(4)	14.238	225	17618	3.845
149) Naphthalene	(4)	14.336	128	131544	3.993
150) 1,2,3-Trichlorobenzene	(4)	14.482	180	35820	3.850
151) 2-Methylnaphthalene	(4)	15.092	142	70796	3.652

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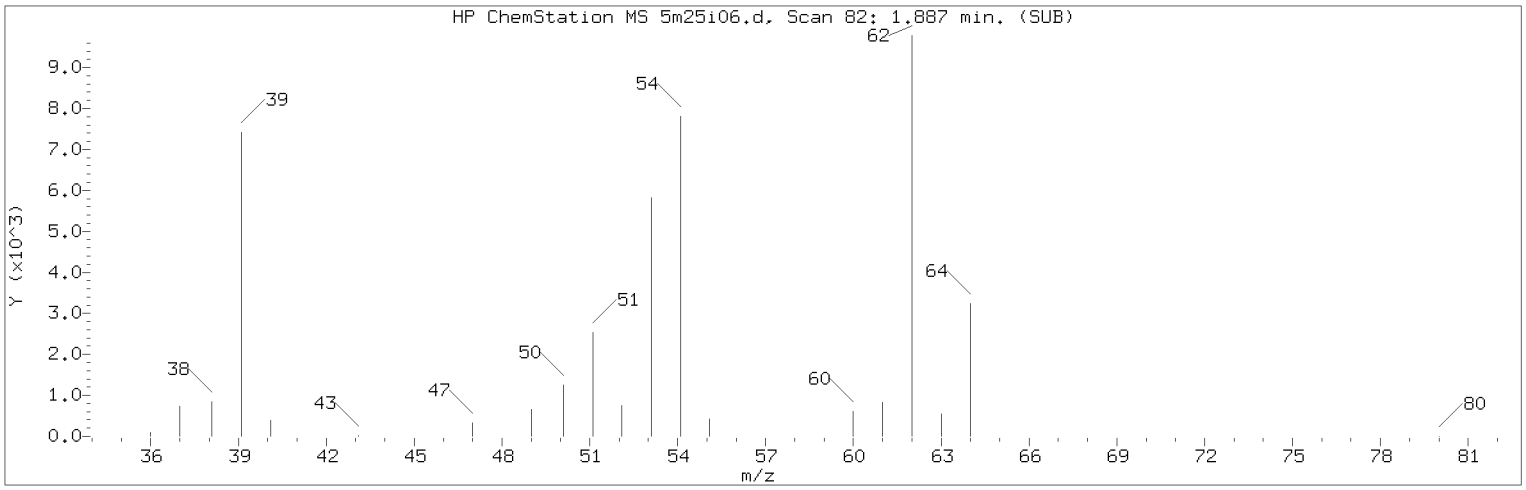
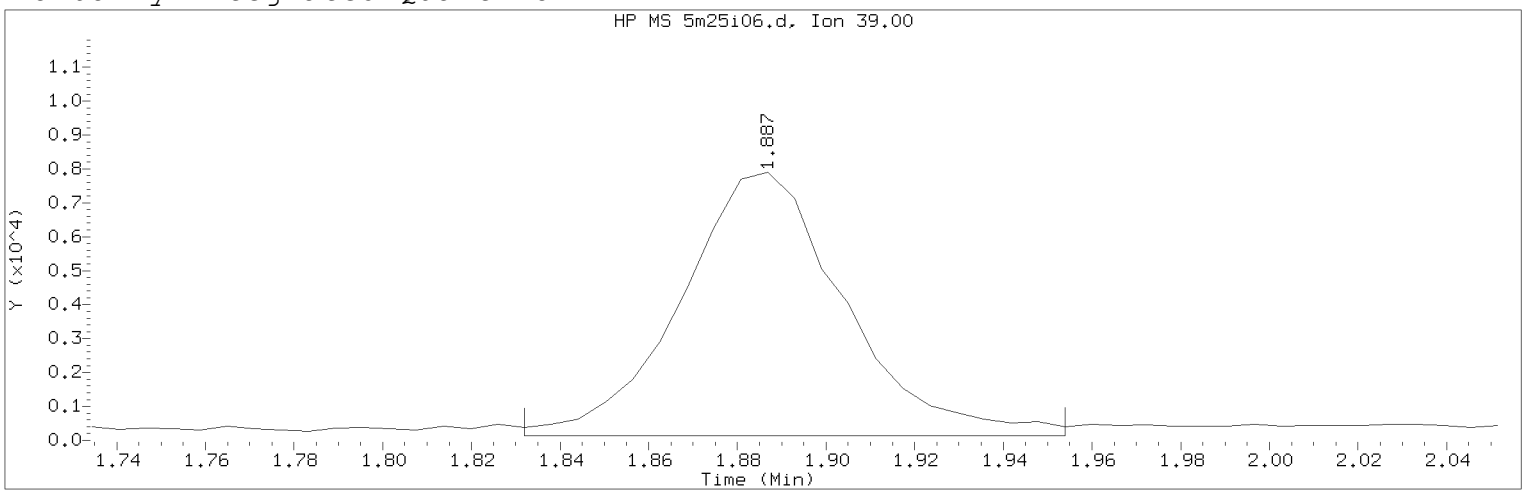
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

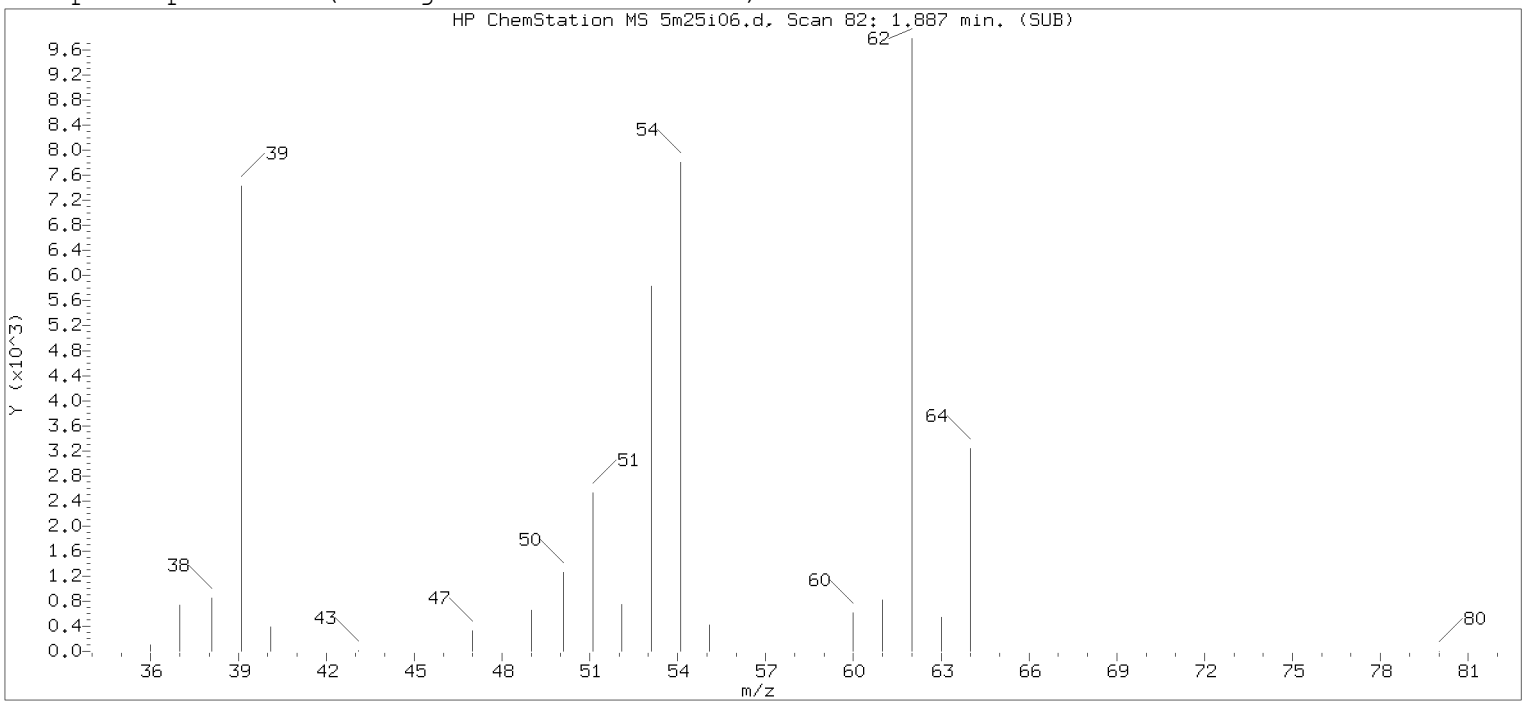
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 82
Retention Time (minutes): 1.887
Quant Ion : 39.00
Area (flag) : 20065M
On-Column Amount (ng) : 4.6475
Integration start scan : 72 Integration stop scan: 92
Y at integration start : 128 Y at integration end: 128

Reason for manual integration: improper integration

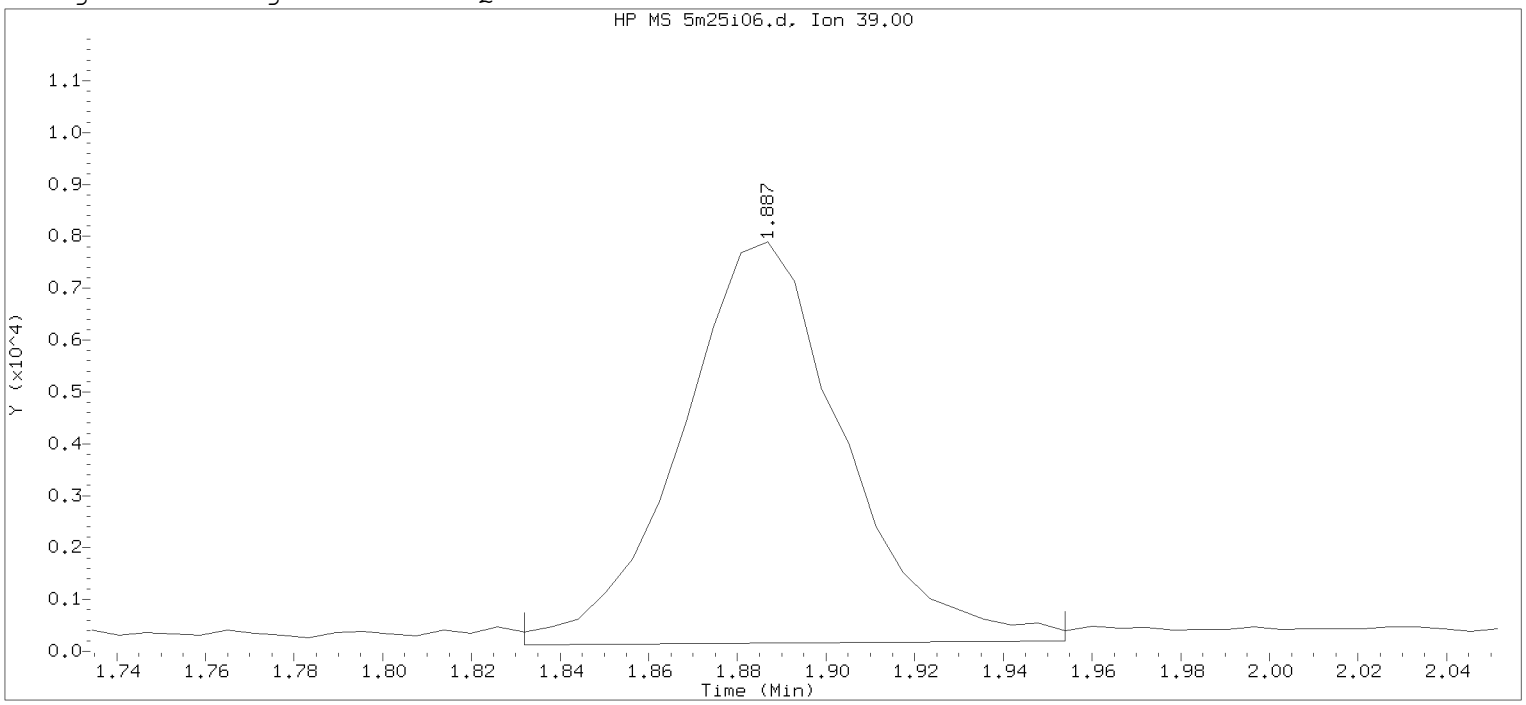
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

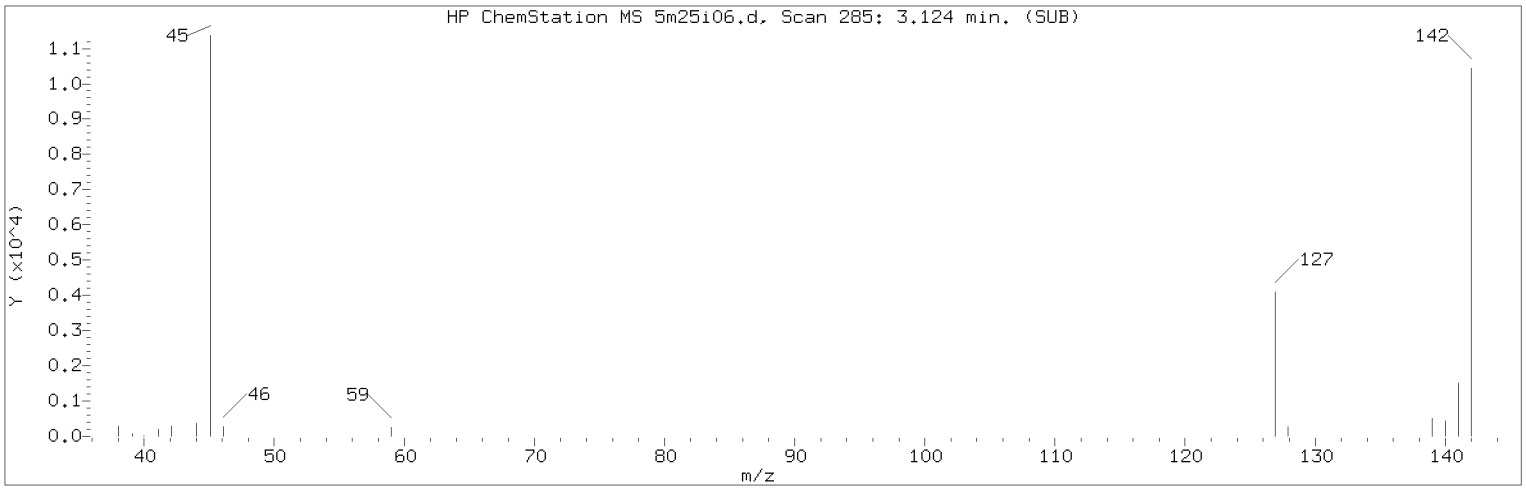
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:53
Date, time and analyst ID of latest file update: 25-Mar-2019 14:53 Unknown

Sample Name: VSTD004 Lab Sample ID: VSTD004

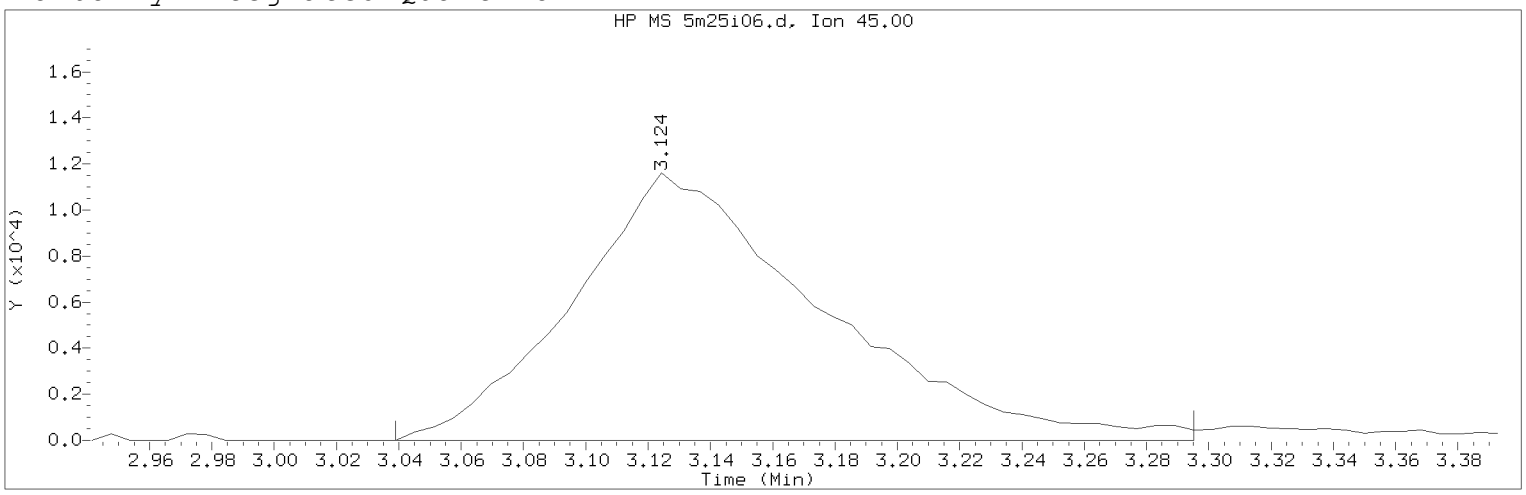
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 82
Retention Time (minutes): 1.887
Quant Ion : 39.00
Area : 19730
On-column Amount (ng) : 4.6025
Integration start scan : 72 Integration stop scan: 92
Y at integration start : 129 Y at integration end: 193

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10045

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

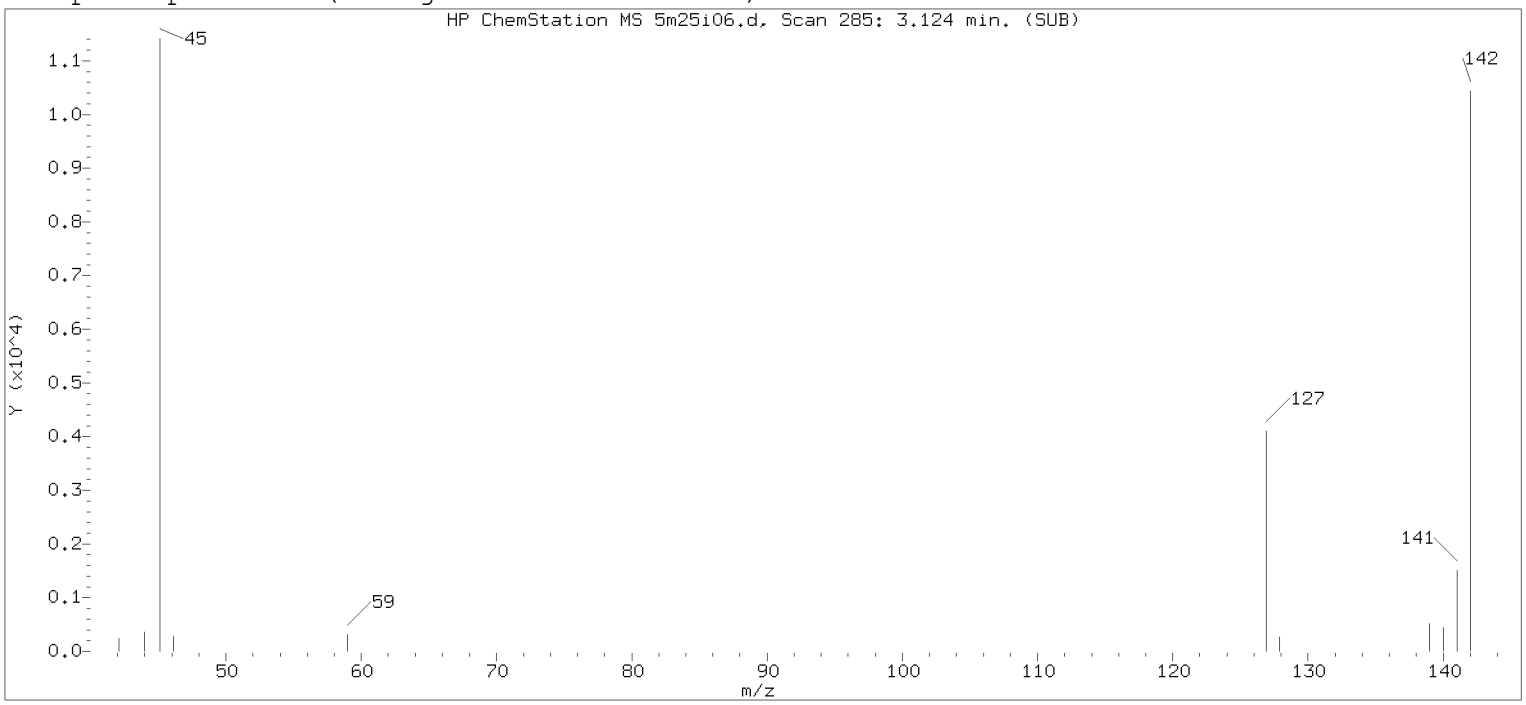
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 285
Retention Time (minutes): 3.124
Quant Ion : 45.00
Area (flag) : 64690M
On-Column Amount (ng) : 83.3406
Integration start scan : 270 Integration stop scan: 312
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

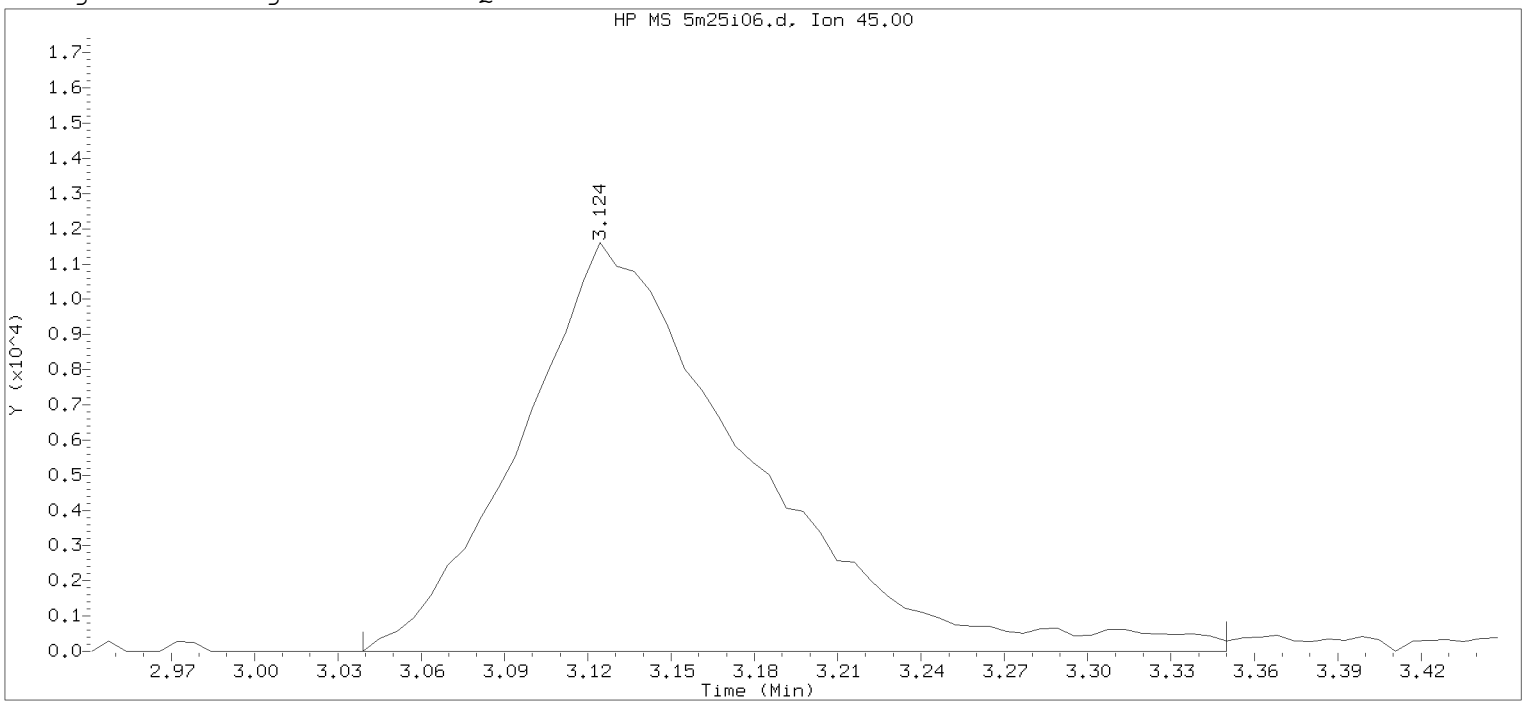
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

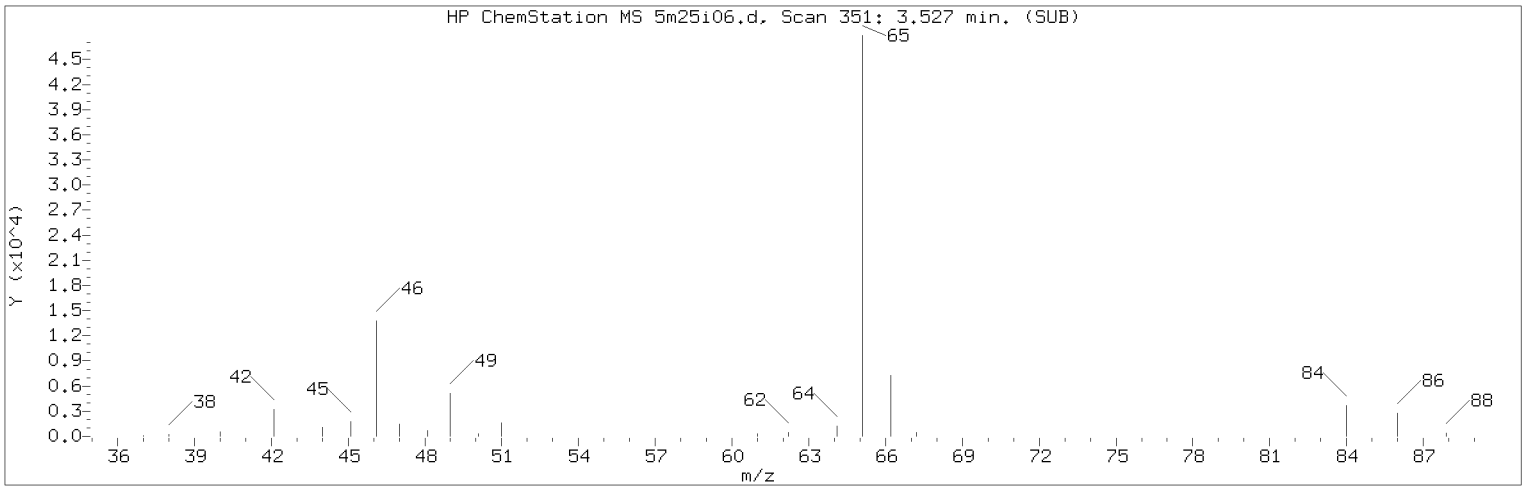
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:53
Date, time and analyst ID of latest file update: 25-Mar-2019 14:53 Unknown

Sample Name: VSTD004 Lab Sample ID: VSTD004

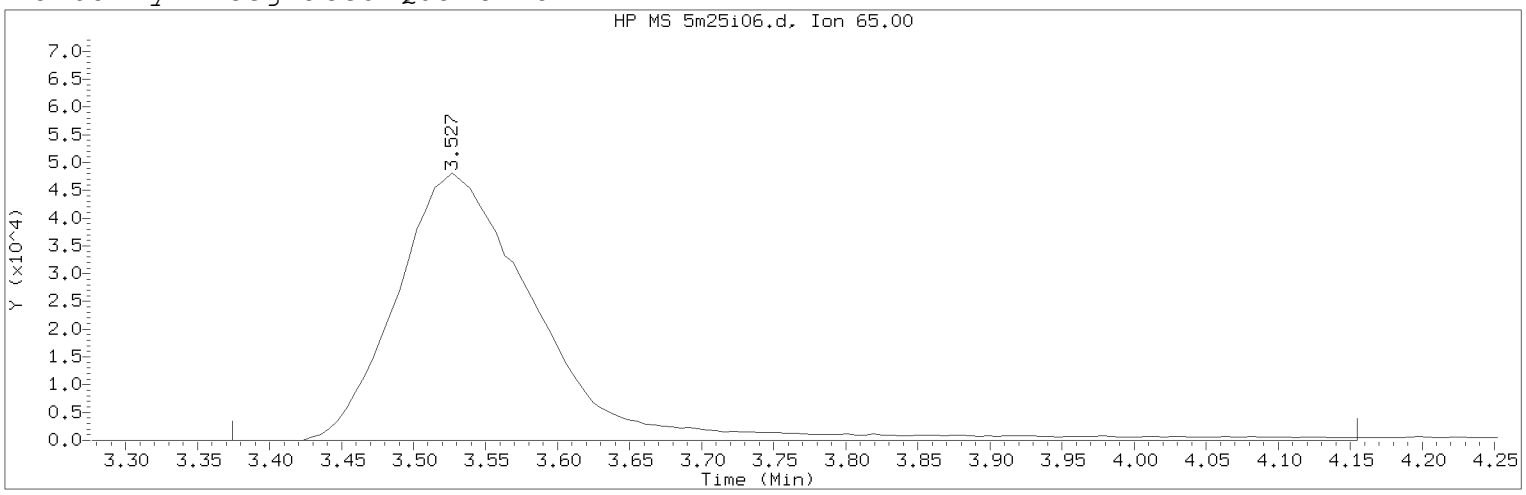
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 285
Retention Time (minutes): 3.124
Quant Ion : 45.00
Area : 66248
On-column Amount (ng) : 82.9265
Integration start scan : 270 Integration stop scan: 321
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10045

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

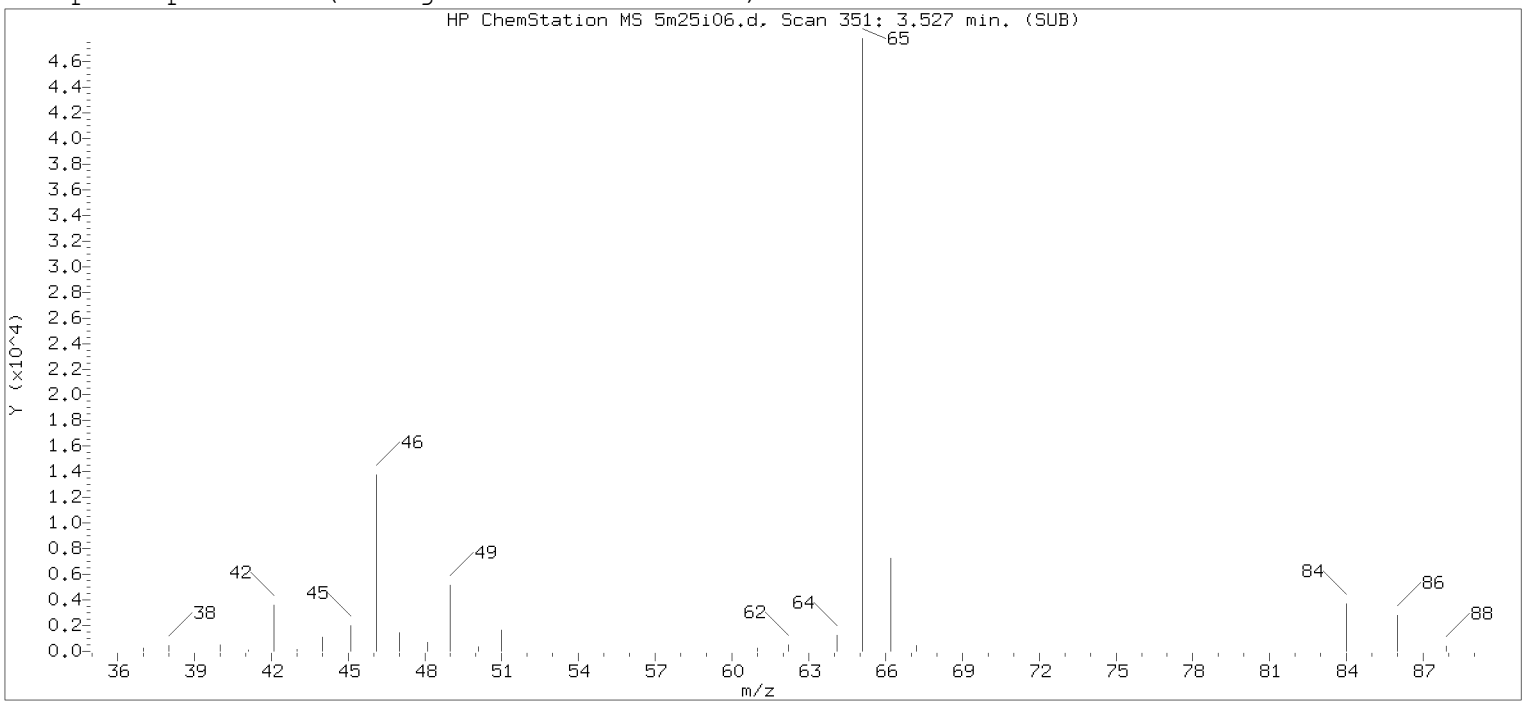
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 351
Retention Time (minutes): 3.527
Quant Ion : 65.00
Area (flag) : 330891M
On-Column Amount (ng) : 250.0000
Integration start scan : 325 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

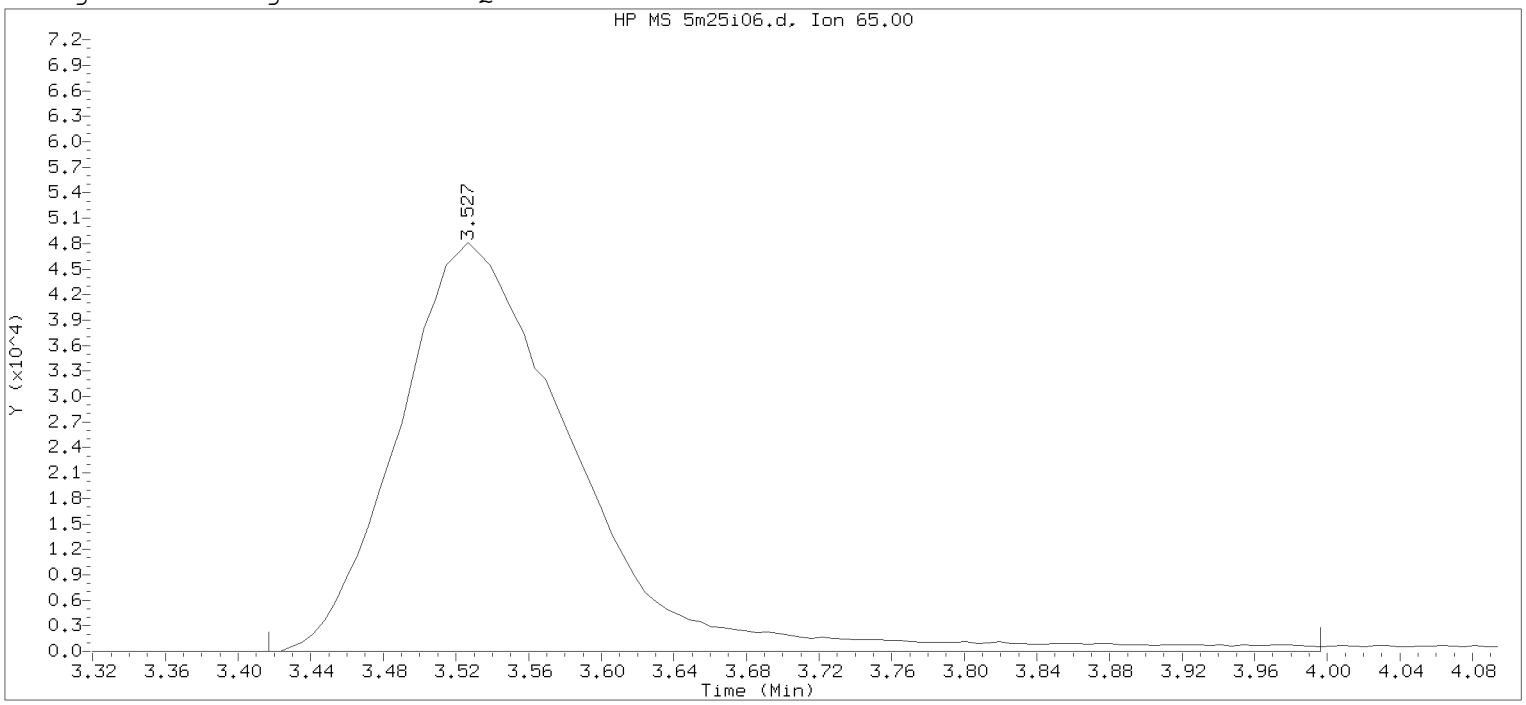
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

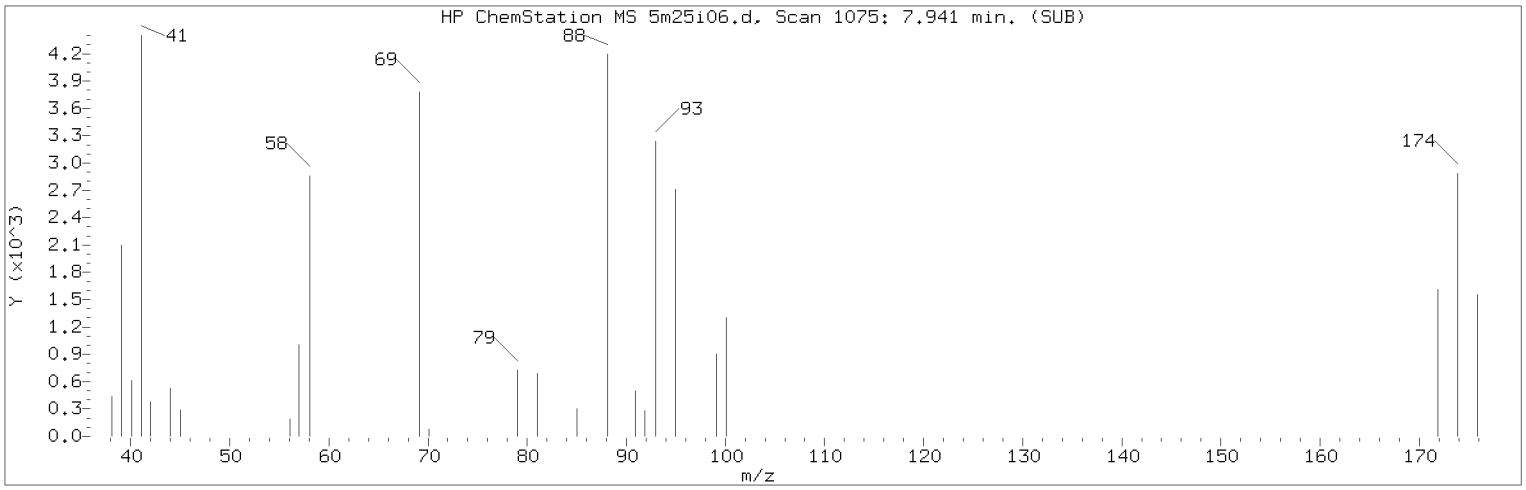
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:53
Date, time and analyst ID of latest file update: 25-Mar-2019 14:53 Unknown

Sample Name: VSTD004 Lab Sample ID: VSTD004

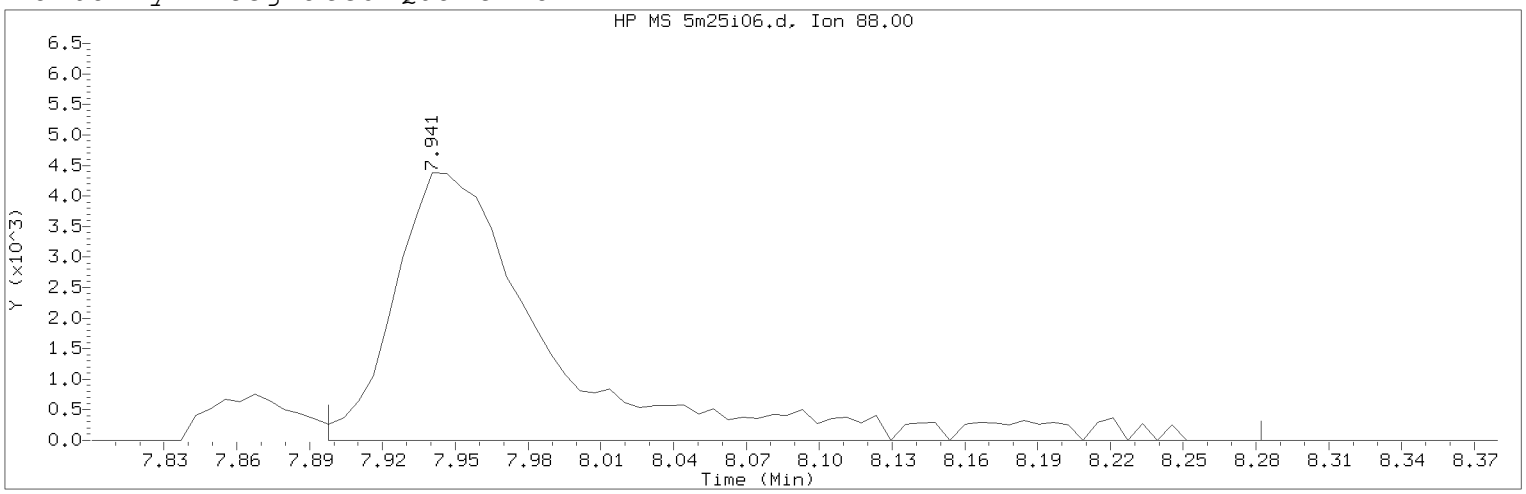
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 351
Retention Time (minutes): 3.527
Quant Ion : 65.00
Area : 325324
On-column Amount (ng) : 250.0000
Integration start scan : 332 Integration stop scan: 427
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: KKELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

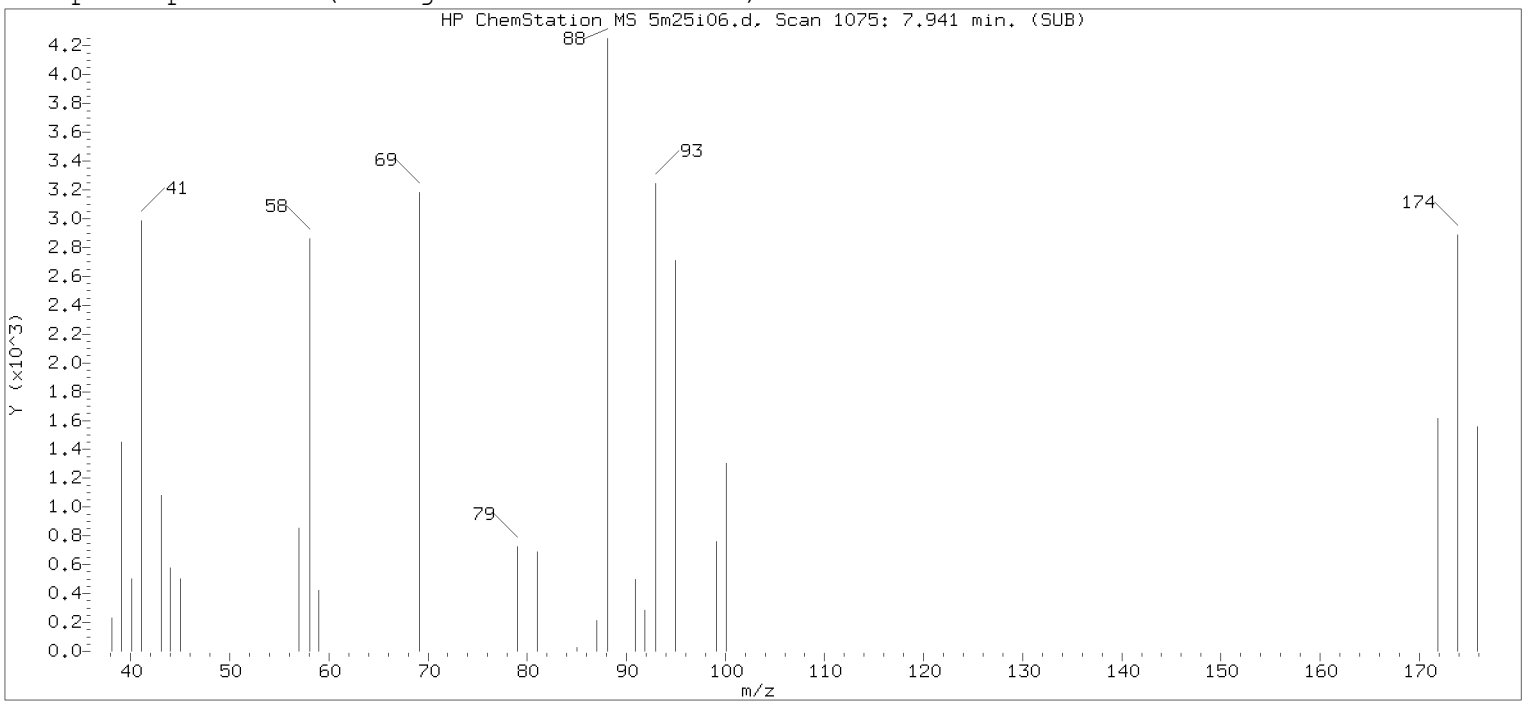
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1075
Retention Time (minutes): 7.941
Quant Ion : 88.00
Area (flag) : 20189M
On-Column Amount (ng) : 208.2207
Integration start scan : 1067 Integration stop scan: 1130
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

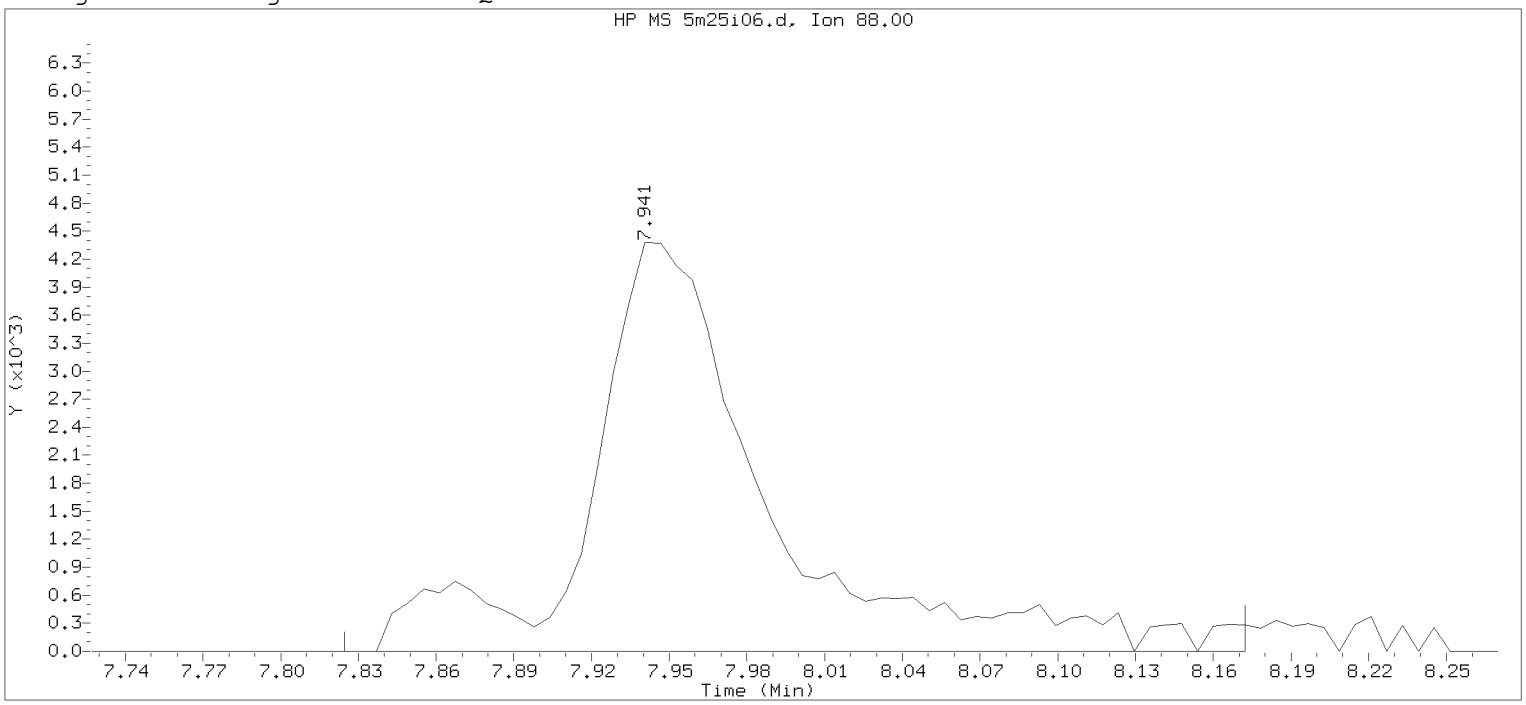
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

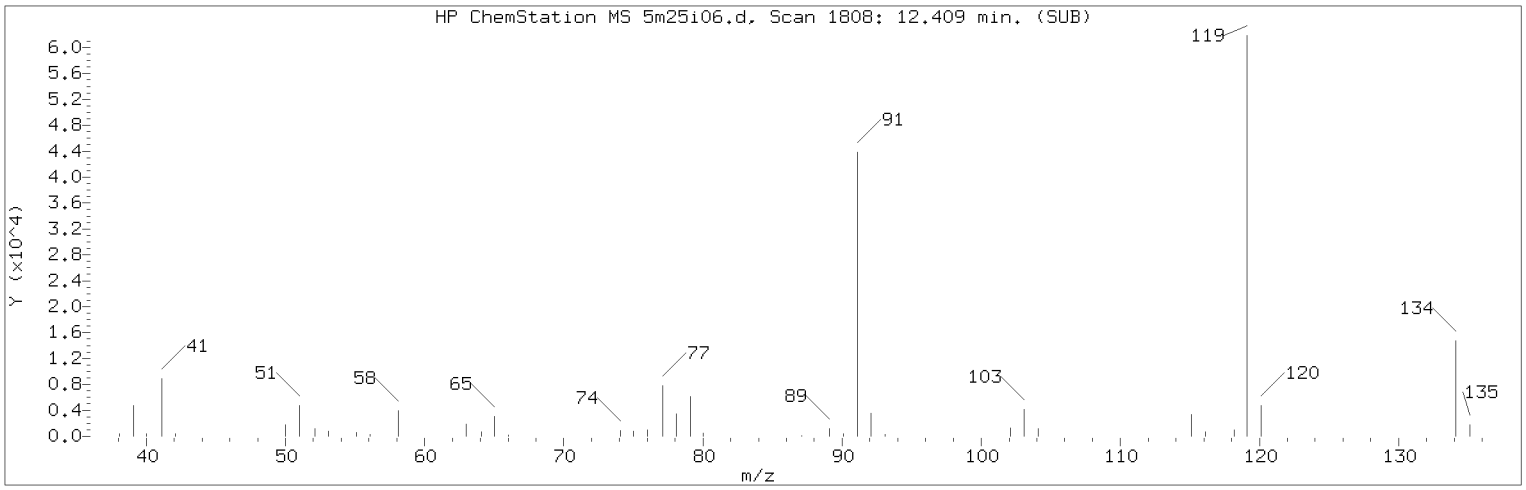
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:53
Date, time and analyst ID of latest file update: 25-Mar-2019 14:53 Unknown

Sample Name: VSTD004 Lab Sample ID: VSTD004

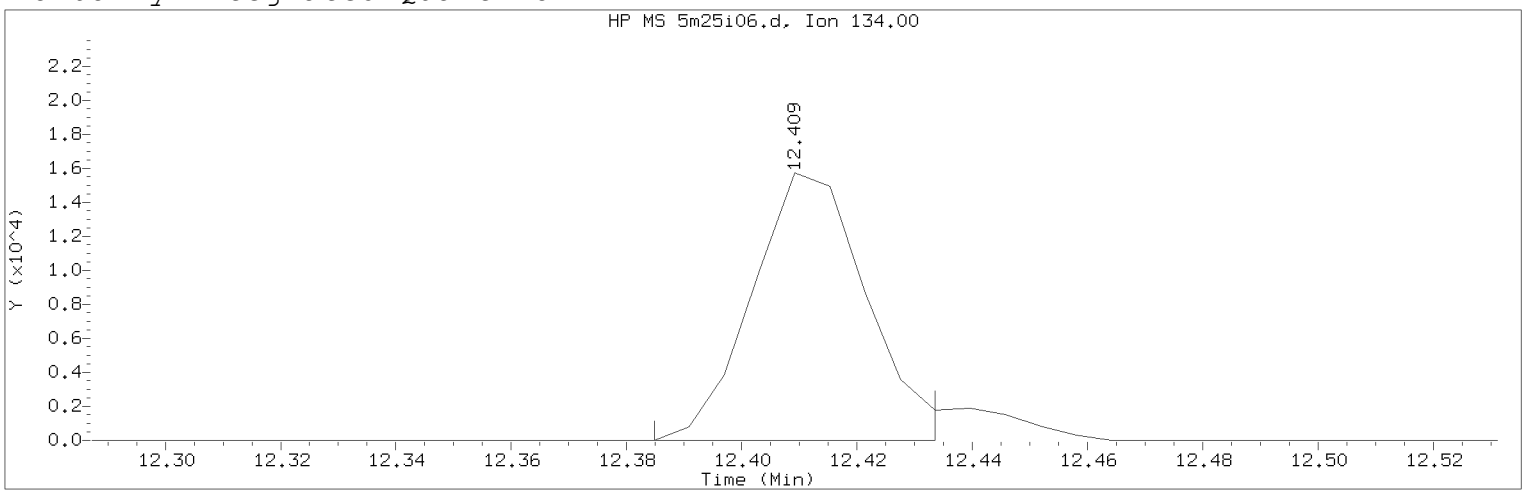
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1075
Retention Time (minutes): 7.941
Quant Ion : 88.00
Area : 20996
On-column Amount (ng) : 173.1914
Integration start scan : 1055 Integration stop scan: 1112
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10046

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

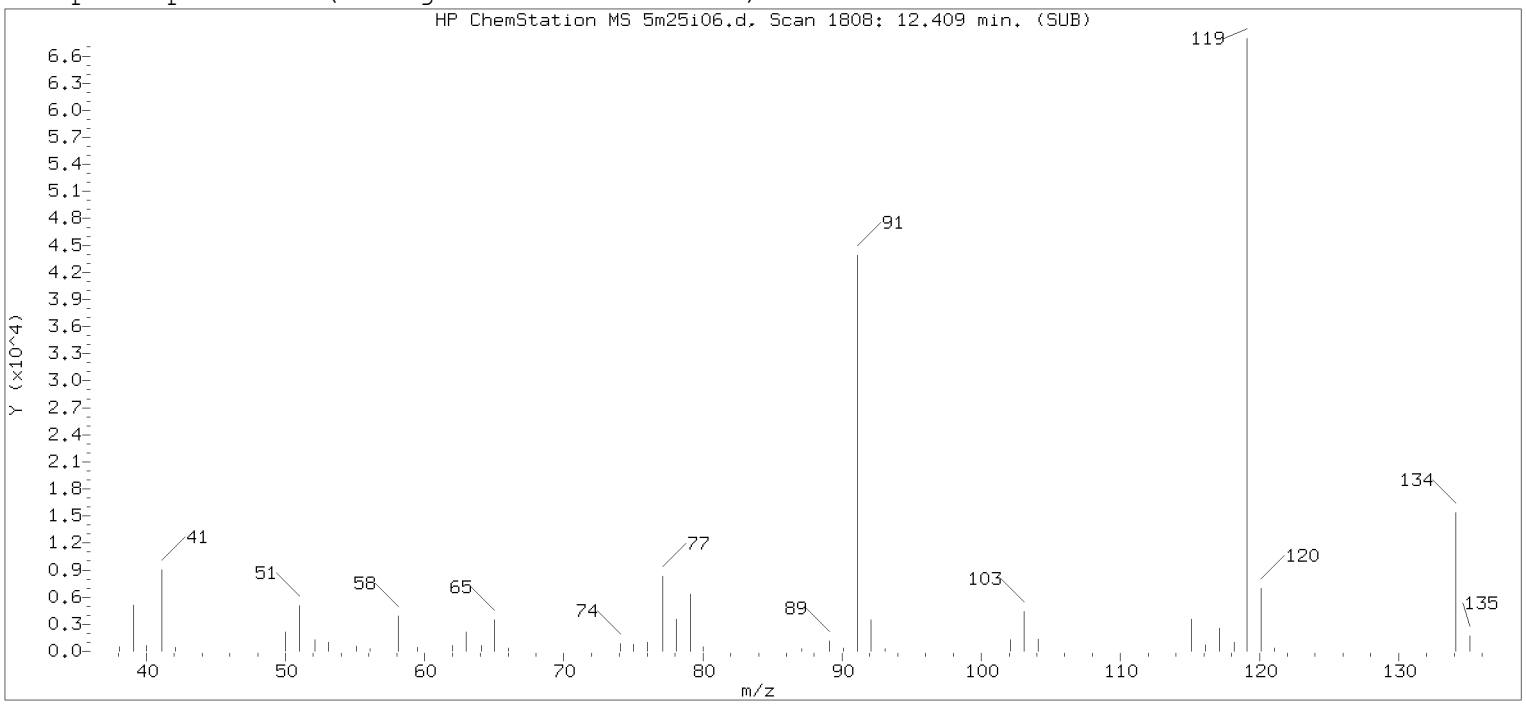
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1808
Retention Time (minutes): 12.409
Quant Ion : 134.00
Area (flag) : 21726M
On-Column Amount (ng) : 4.1078
Integration start scan : 1803 Integration stop scan: 1811
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

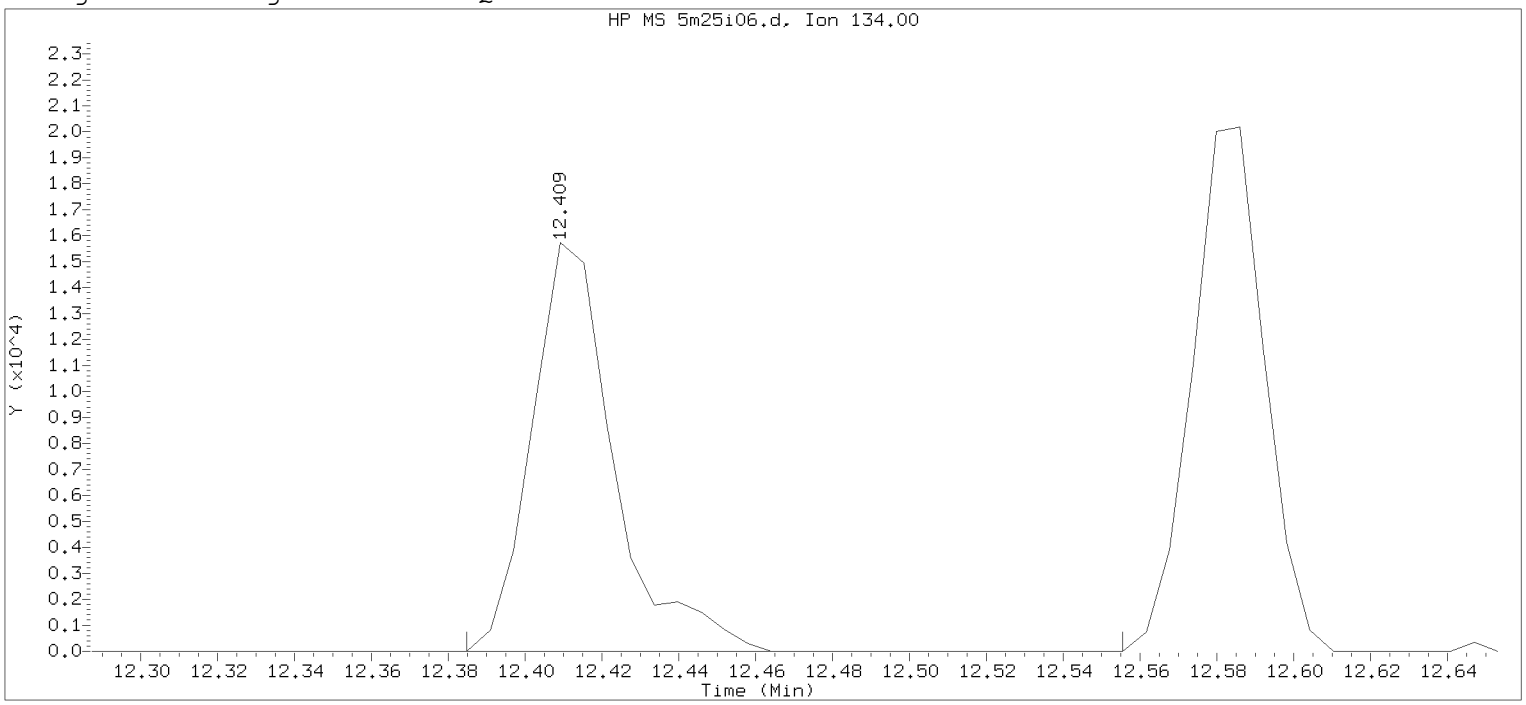
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



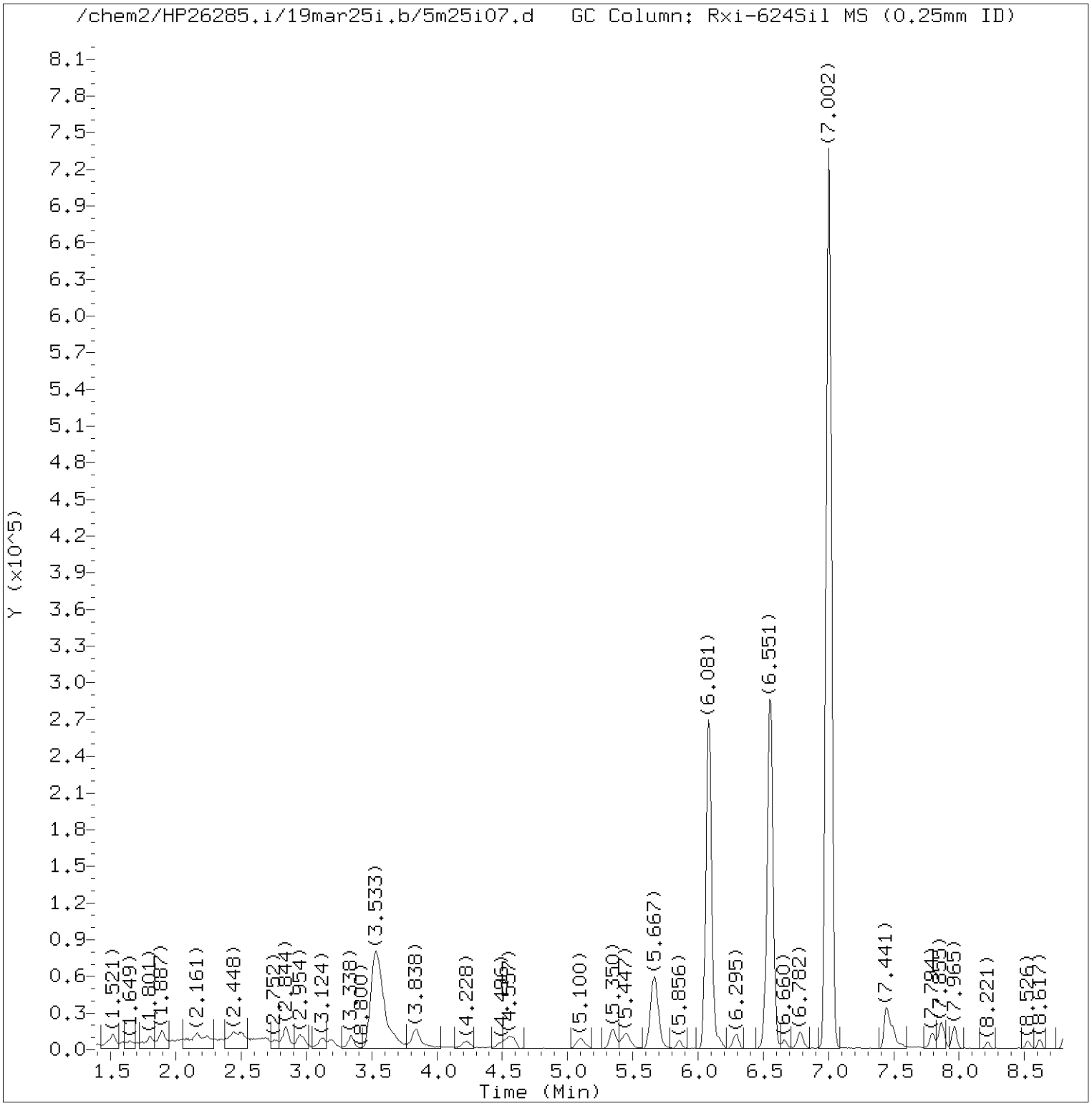
Data File: /chem2/HP26285.i/19mar25i.b/5m25i06.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:34 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 14:53
Date, time and analyst ID of latest file update: 25-Mar-2019 14:53 Unknown

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1808
Retention Time (minutes): 12.409
Quant Ion : 134.00
Area : 23399
On-column Amount (ng) : 4.0395
Integration start scan : 1803 Integration stop scan: 1831
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10046



Total Ion Chromatogram (TIC)

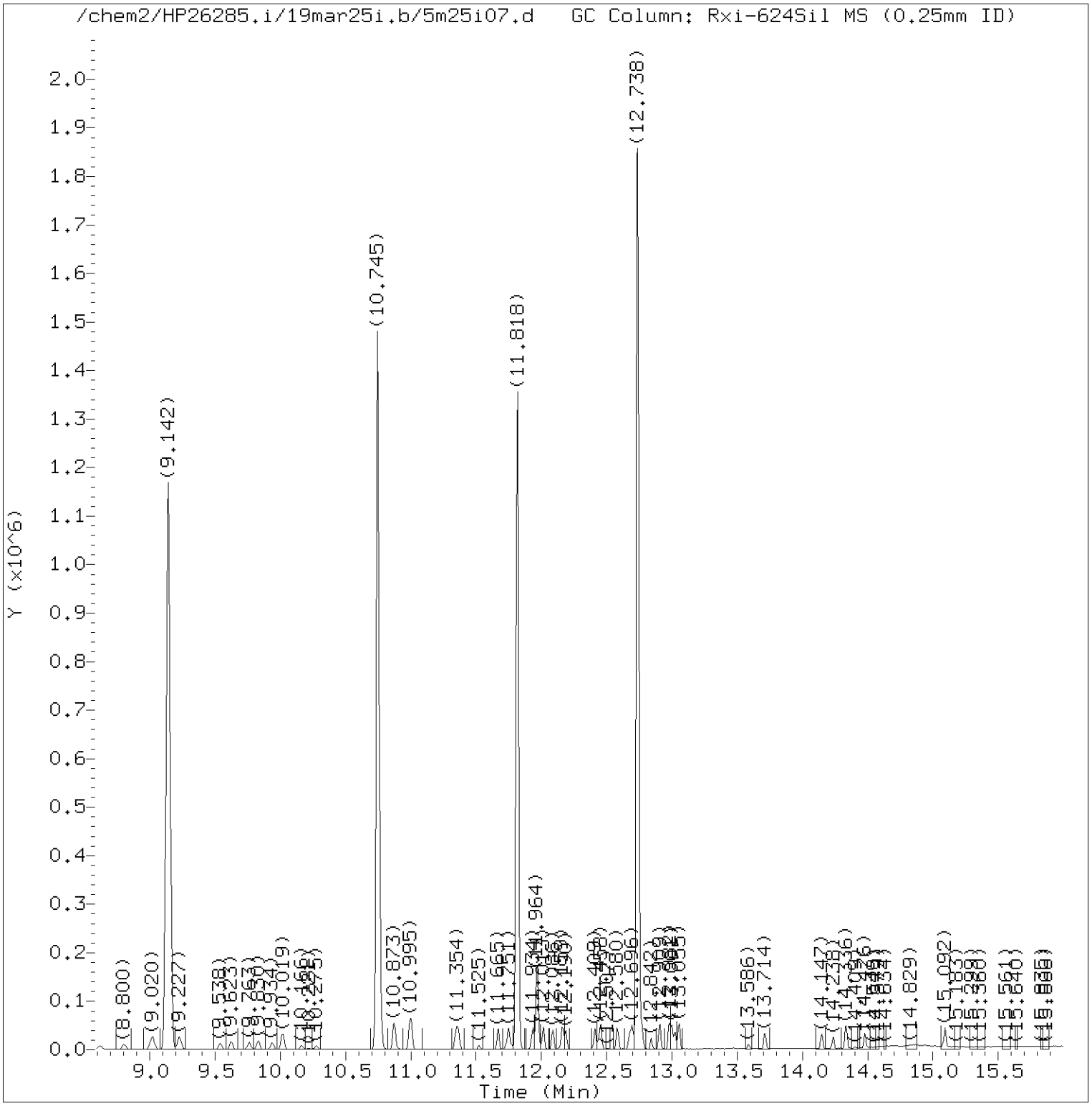
Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:53.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.631	85	5748	0.669
4) Chloromethane	(2)	1.801	50	5617	0.900
5) 1,3-Butadiene	(2)	1.893	39	4390M	1.012
6) Vinyl Chloride	(2)	1.899	62	5355	0.877
8) Bromomethane	(2)	2.161	94	4894	0.994
9) Chloroethane	(2)	2.222	64	2895	0.989
10) Dichlorofluoromethane	(2)	2.442	67	8227	1.033
12) Trichlorofluoromethane	(2)	2.484	101	6543	0.771
11) n-Pentane	(2)	2.509	43	5579	1.042
14) Ethyl ether	(2)	2.692	59	3844	0.874
15) Freon 123a	(2)	2.752	67	6116	0.927
16) Acrolein	(1)	2.844	56	24218	10.809
17) 1,1-Dichloroethene	(2)	2.954	96	4318	0.876
17) 1,1-Dichloroethene	(2)	2.942	63	2107	0.868
19) Freon 113	(2)	2.972	101	3401	0.678
18) Acetone	(1)	2.990	58	1773	1.731
22) Methyl Iodide	(2)	3.118	142	9228	0.896
21) 2-Propanol	(1)	3.137	45	14613	19.626
23) Carbon Disulfide	(2)	3.191	76	13184	0.805
27) Methyl Acetate	(2)	3.332	43	9588	1.255
25) Allyl Chloride	(2)	3.344	41	8790	0.992
28) Methylene Chloride	(2)	3.508	84	5563	0.993
29)*t-Butyl alcohol-d10	(1)	3.533	65	317402M	250.000
30) t-Butyl alcohol	(1)	3.636	59	28692	19.540
31) Acrylonitrile	(2)	3.813	53	3631	0.899
33) Methyl Tertiary Butyl Ether	(2)	3.838	73	14974	0.951
32) trans-1,2-Dichloroethene	(2)	3.850	96	4811	0.872
34) n-Hexane	(2)	4.222	57	5128	0.672
36) 1,1-Dichloroethane	(2)	4.484	63	8643	0.888
38) di-Isopropyl ether	(2)	4.545	45	16890	0.952
39) 2-Chloro-1,3-butadiene	(2)	4.594	53	7392	0.858
40) Ethyl t-butyl ether	(2)	5.100	59	15745	0.959
44) 2-Butanone	(2)	5.343	43	12781	2.096
45) 2,2-Dichloropropane	(2)	5.350	77	6590	0.847
42) cis-1,2-Dichloroethene	(2)	5.350	96	5972	0.956
47) Propionitrile	(1)	5.441	54	31367	19.640
48) Methacrylonitrile	(2)	5.654	67	38516	9.696
49) Bromochloromethane	(2)	5.691	128	2808	0.899

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.709	71	3142	1.937
51) Chloroform	(2)	5.856	83	9029	0.936
53) 1,1,1-Trichloroethane	(2)	6.075	97	6952	0.819
52)$Dibromofluoromethane	(2)	6.081	113	253048	49.504
52)$Dibromofluoromethane	(2)	6.081	111	259616	49.480
43) 1,2-Dichloroethene (Total)	(2)		96	10783	1.828
54) Cyclohexane	(2)	6.160	56	7903	0.805
54) Cyclohexane	(2)	6.148	84	6370	0.761
54) Cyclohexane	(2)	6.154	69	2187	0.719
56) Carbon Tetrachloride	(2)	6.270	117	5711	0.777
55) 1,1-Dichloropropene	(2)	6.301	75	6646	0.851
58) Isobutyl Alcohol	(1)	6.526	41	24565	51.084
57)$1,2-Dichloroethane-d4	(2)	6.557	102	59883	50.067
57)$1,2-Dichloroethane-d4	(2)	6.551	65	278937	50.378
57)$1,2-Dichloroethane-d4	(2)	6.551	104	37915	49.744
60) Benzene	(2)	6.575	78	22077	0.931
61) 1,2-Dichloroethane	(2)	6.660	62	7671	1.095
61) 1,2-Dichloroethane	(2)	6.666	98	322	0.525
65) t-Amyl methyl ether	(2)	6.782	73	16316	0.986
66)*Fluorobenzene	(2)	7.002	96	1068211	50.000
67) n-Heptane	(2)	7.014	43	6534	0.759
69) n-Butanol	(1)	7.441	56	38193	95.256
71) Trichloroethene	(2)	7.495	95	5596	0.910
73) Methylcyclohexane	(2)	7.800	83	7404	0.727
73) Methylcyclohexane	(2)	7.794	98	3164	0.722
74) 1,2-Dichloropropane	(2)	7.843	63	5532	0.941
76) 1,4-Dioxane	(1)	7.947	88	3154	33.911
77) Methyl Methacrylate	(2)	7.965	69	5631	0.918
75) Dibromomethane	(2)	7.965	93	3413	0.918
79) Bromodichloromethane	(2)	8.221	83	5914	0.856
80) 2-Nitropropane	(2)	8.526	41	5187	1.829
81) 2-Chloroethyl Vinyl Ether	(2)	8.617	63	4330	0.883
82) cis-1,3-Dichloropropene	(2)	8.800	75	7587	0.835
83) 4-Methyl-2-pentanone	(2)	9.020	43	25699	2.058
84)$Toluene-d8	(3)	9.142	98	1027959	50.419
84)$Toluene-d8	(3)	9.142	100	673629	50.270
89) Toluene	(3)	9.227	92	13950	0.919
90) trans-1,3-Dichloropropene	(3)	9.538	75	7329	0.894

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	9.623	69	8743	0.889
93) 1,1,2-Trichloroethane	(3)	9.763	97	5281	0.973
94) Tetrachloroethene	(3)	9.830	166	6001	0.870
95) 1,3-Dichloropropane	(3)	9.940	76	8453	0.950
97) 2-Hexanone	(3)	10.013	43	22939	2.137
91) 1,3-Dichloropropene (total)	(3)		100	14916	1.728
98) Dibromochloromethane	(3)	10.166	129	4232	0.761
100) 1,2-Dibromoethane	(3)	10.275	107	5761	0.950
101)*Chlorobenzene-d5	(3)	10.745	117	807725	50.000
102) 1-Chlorohexane	(3)	10.769	91	8840	1.000
103) Chlorobenzene	(3)	10.775	112	15770	0.929
104) 1,1,1,2-Tetrachloroethane	(3)	10.873	131	4690	0.818
105) Ethylbenzene	(3)	10.873	91	26878	0.907
107) m+p-Xylene	(3)	10.995	106	21248	1.818
108) o-Xylene	(3)	11.348	106	10162	0.890
110) Styrene	(3)	11.367	104	16475	0.873
111) Bromoform	(3)	11.525	173	3275	0.746
112) Isopropylbenzene	(3)	11.665	105	25302	0.853
113) Cyclohexanone	(1)	11.745	55	20418M	52.469
109) Xylene (Total)	(3)		106	31410	2.707
115)$4-Bromofluorobenzene	(3)	11.818	95	396103	49.930
115)$4-Bromofluorobenzene	(3)	11.818	174	345086	49.933
116) Bromobenzene	(4)	11.934	156	6646	0.906
117) 1,1,2,2-Tetrachloroethane	(4)	11.940	83	8534	0.919
119) trans-1,4-Dichloro-2-butene	(4)	11.964	53	26847	9.175
118) 1,2,3-Trichloropropane	(4)	11.982	110	2659	0.950
120) n-Propylbenzene	(4)	12.013	91	30879	0.894
121) 2-Chlorotoluene	(4)	12.092	126	6384	0.897
123) 1,3,5-Trimethylbenzene	(4)	12.159	105	22101	0.887
122) 4-Chlorotoluene	(4)	12.190	126	6569	0.899
125) tert-Butylbenzene	(4)	12.409	134	4563M	0.866
126) Pentachloroethane	(4)	12.440	167	3220	0.749
127) 1,2,4-Trimethylbenzene	(4)	12.458	105	23359	0.914
128) sec-Butylbenzene	(4)	12.580	105	27659	0.857
130) 1,3-Dichlorobenzene	(4)	12.677	146	12809	0.911
131) p-Isopropyltoluene	(4)	12.696	119	23490	0.839
132)*1,4-Dichlorobenzene-d4	(4)	12.738	152	425367	50.000
134) 1,4-Dichlorobenzene	(4)	12.757	146	13318	0.935

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	12.769	105	23890	0.905
136) Benzyl Chloride	(4)	12.842	91	13772	0.752
137) 1,3-Diethylbenzene	(4)	12.909	119	14305	0.838
138) 1,4-Diethylbenzene	(4)	12.982	119	14775	0.816
140) n-Butylbenzene	(4)	13.001	92	11446	0.811
139) 1,2-Dichlorobenzene	(4)	13.025	146	12121	0.912
141) 1,2-Diethylbenzene	(4)	13.055	119	12041	0.849
142) Diethylbenzene (total)	(4)		100	41121	2.503
143) 1,2-Dibromo-3-chloropropane	(4)	13.586	75	1998	0.861
145) 1,3,5-Trichlorobenzene	(4)	13.714	180	9185	0.860
147) 1,2,4-Trichlorobenzene	(4)	14.147	180	8641	0.894
148) Hexachlorobutadiene	(4)	14.238	225	4177	0.916
149) Naphthalene	(4)	14.336	128	31054	0.947
150) 1,2,3-Trichlorobenzene	(4)	14.476	180	8585	0.927
151) 2-Methylnaphthalene	(4)	15.092	142	16562	0.858

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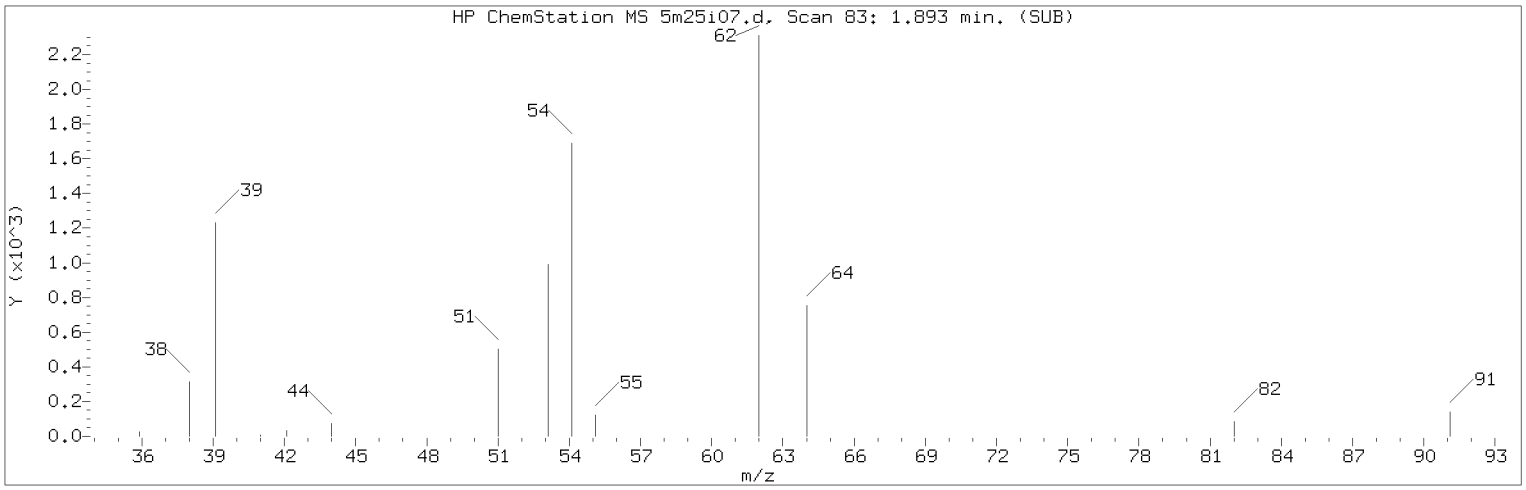
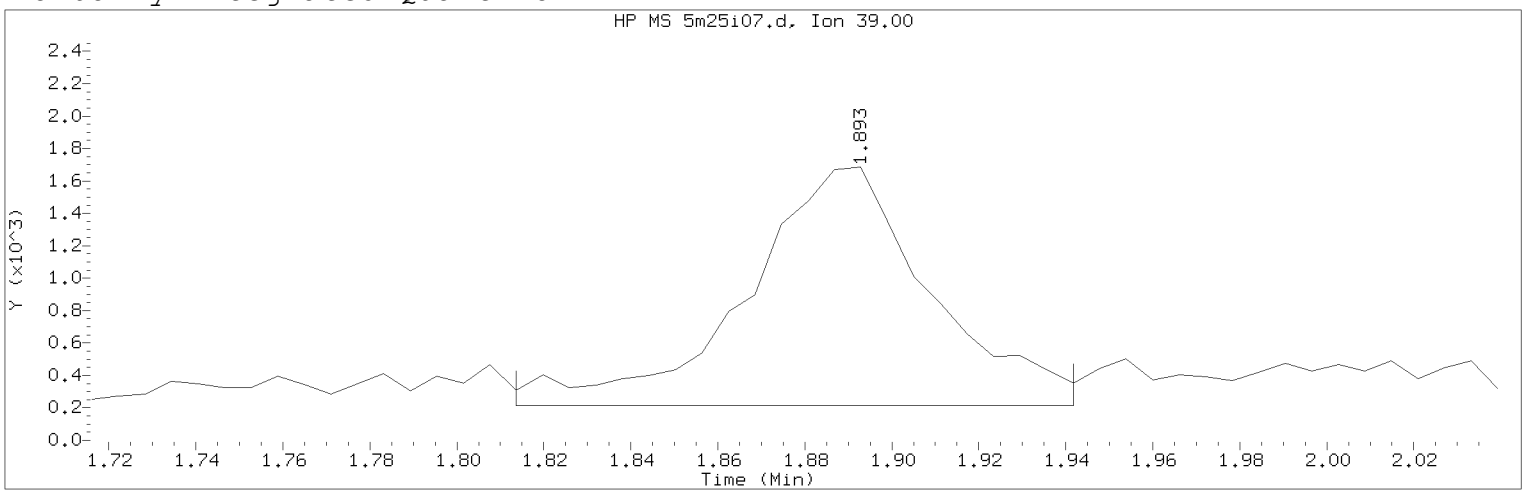
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

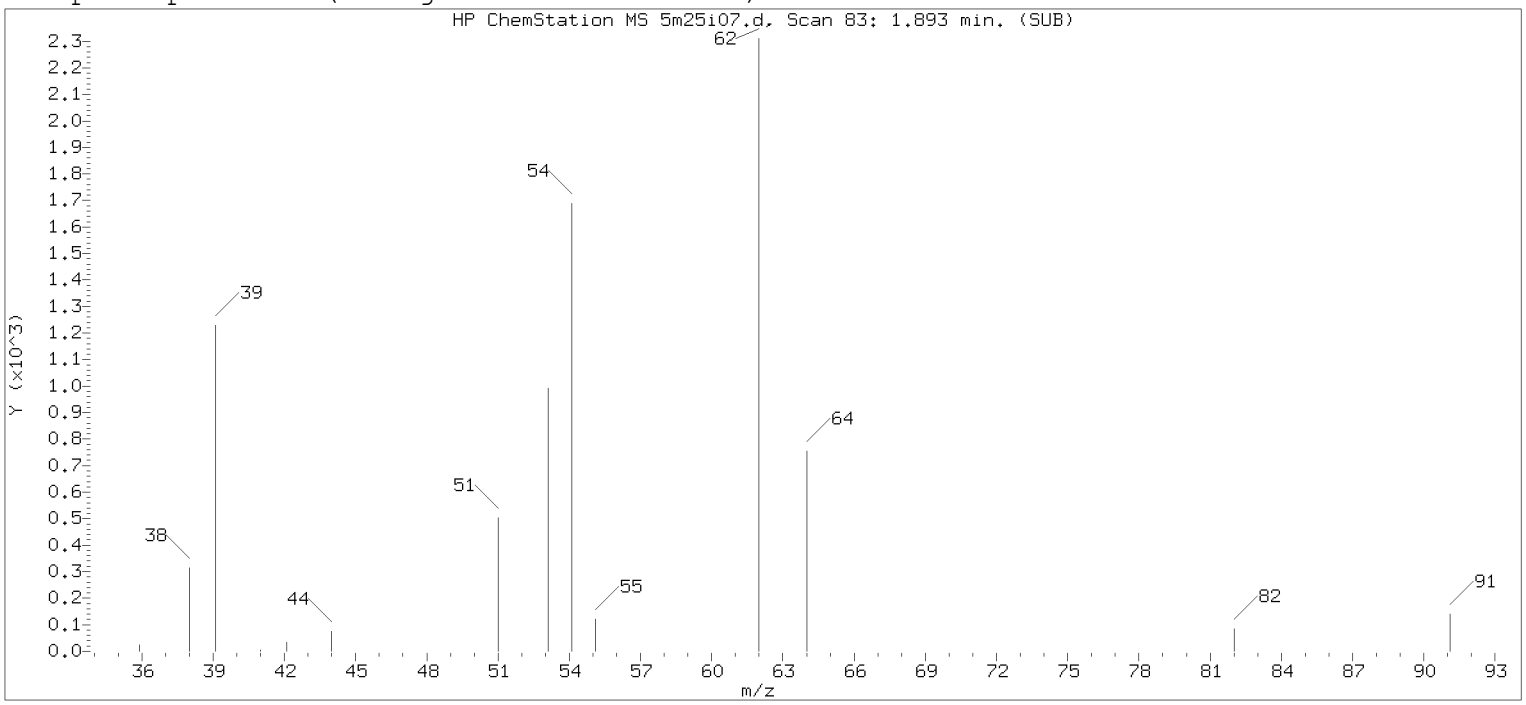
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 83
Retention Time (minutes): 1.893
Quant Ion : 39.00
Area (flag) : 4390M
On-Column Amount (ng) : 1.0121
Integration start scan : 69 Integration stop scan: 90
Y at integration start : 212 Y at integration end: 212

Reason for manual integration: improper integration

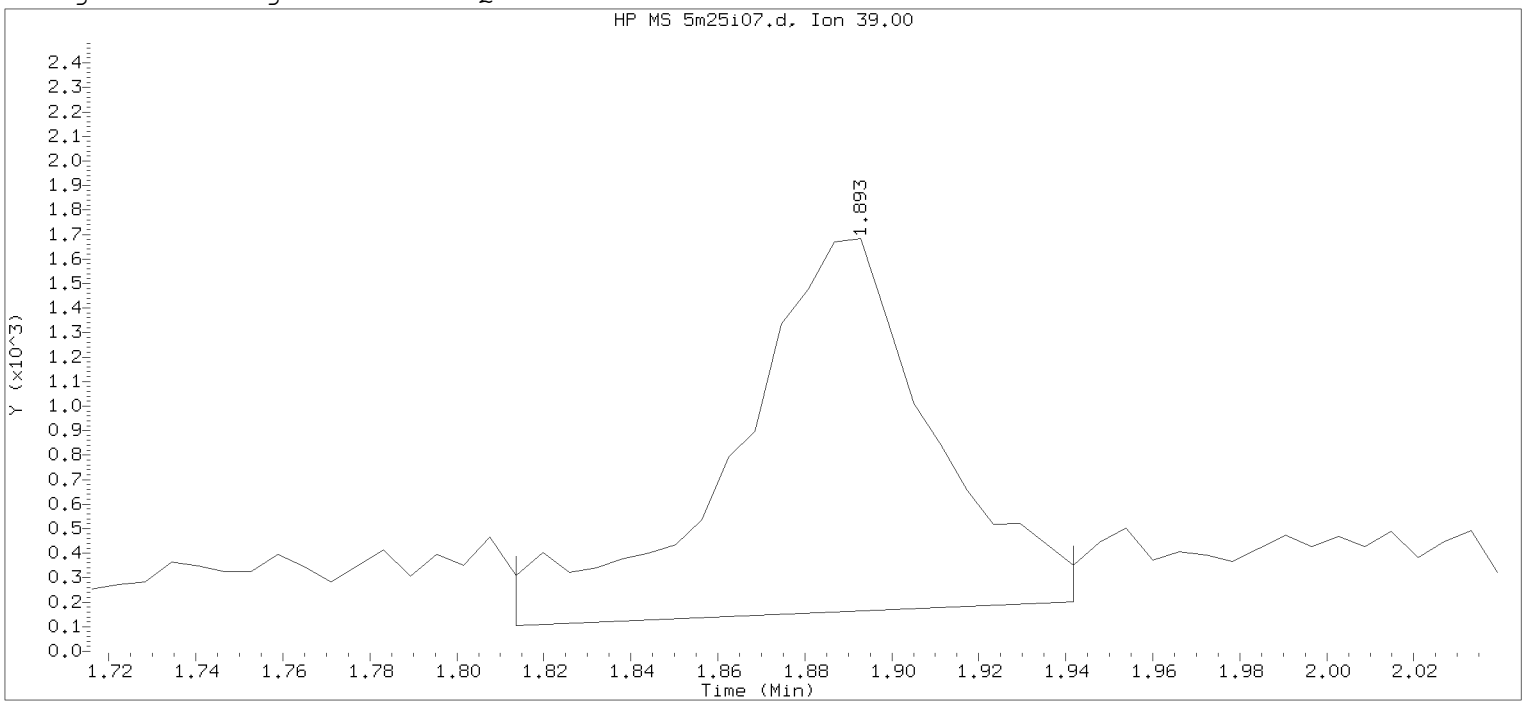
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

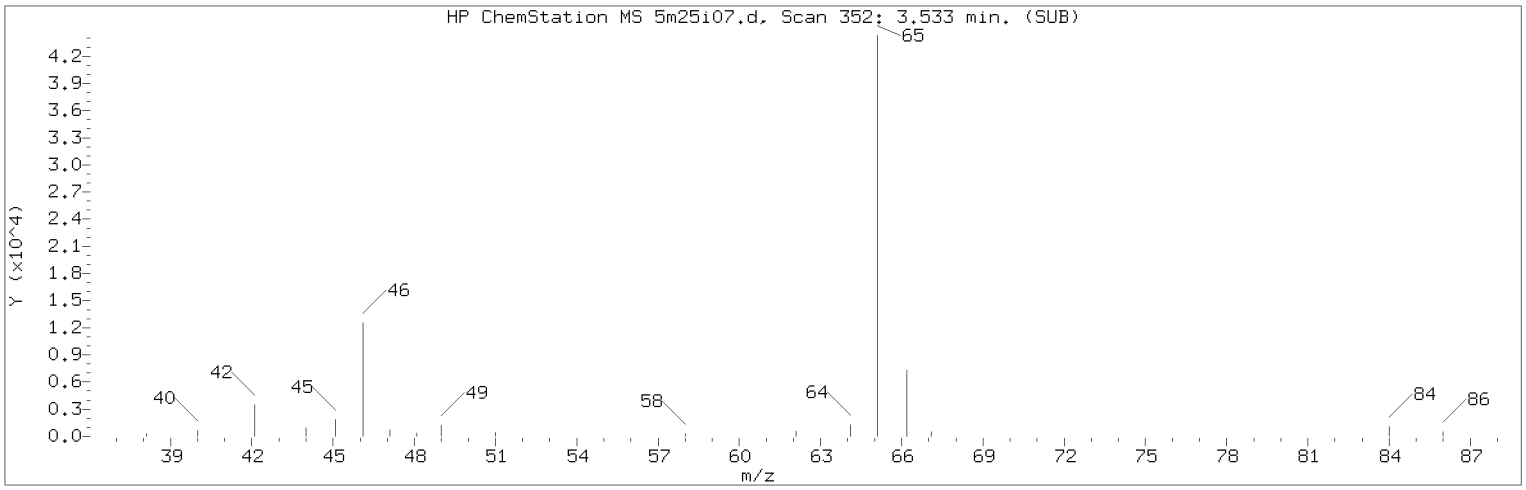
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 15:14
Date, time and analyst ID of latest file update: 25-Mar-2019 15:14 Unknown

Sample Name: VSTD001 Lab Sample ID: VSTD001

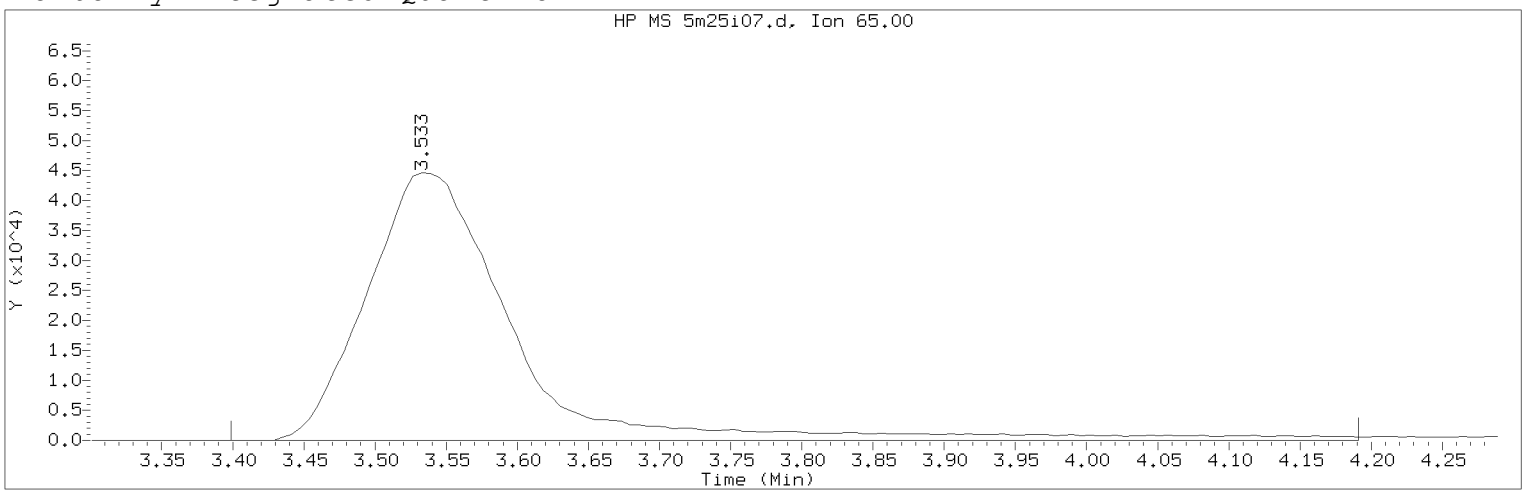
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 83
Retention Time (minutes): 1.893
Quant Ion : 39.00
Area : 4796
On-column Amount (ng) : 1.0958
Integration start scan : 69 Integration stop scan: 90
Y at integration start : 105 Y at integration end: 202

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: KKELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

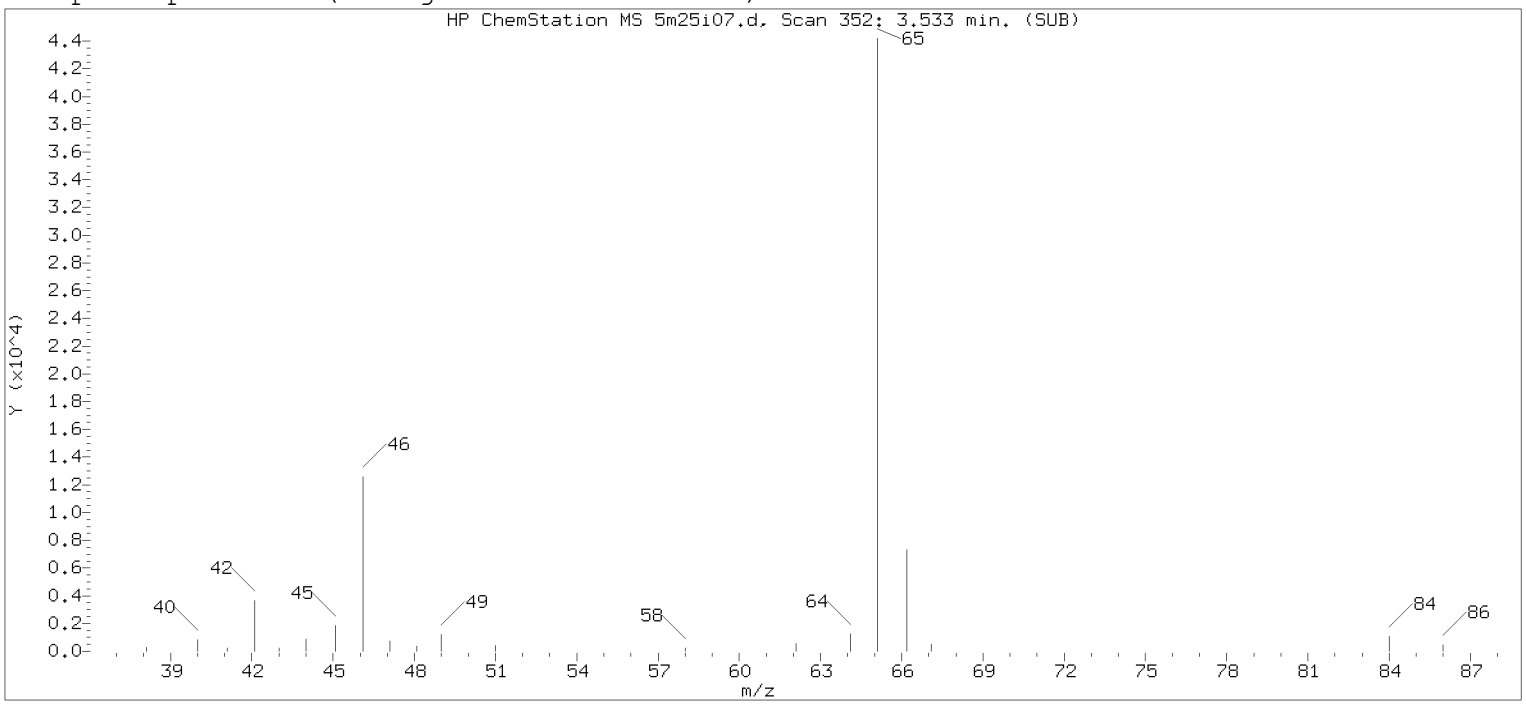
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 352
Retention Time (minutes): 3.533
Quant Ion : 65.00
Area (flag) : 317402M
On-Column Amount (ng) : 250.0000
Integration start scan : 329 Integration stop scan: 459
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

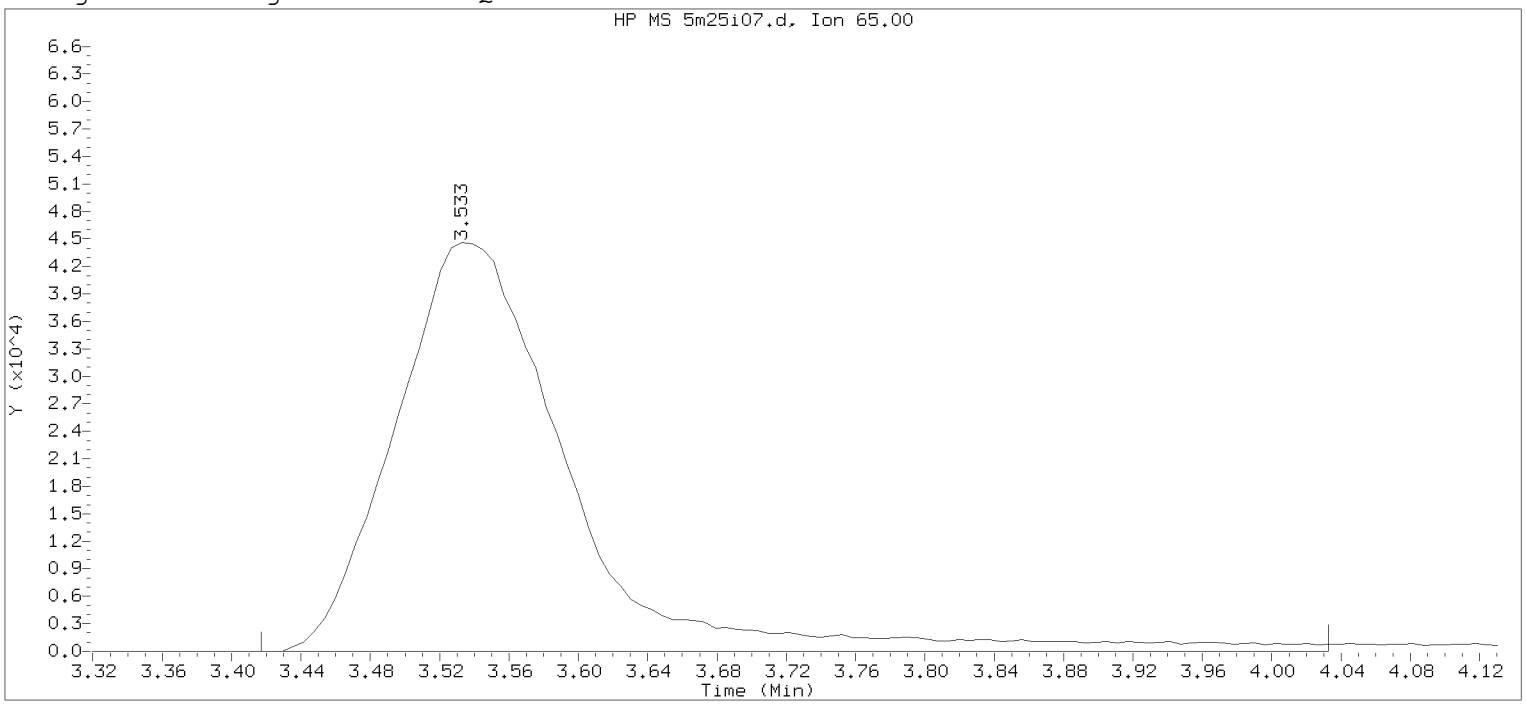
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

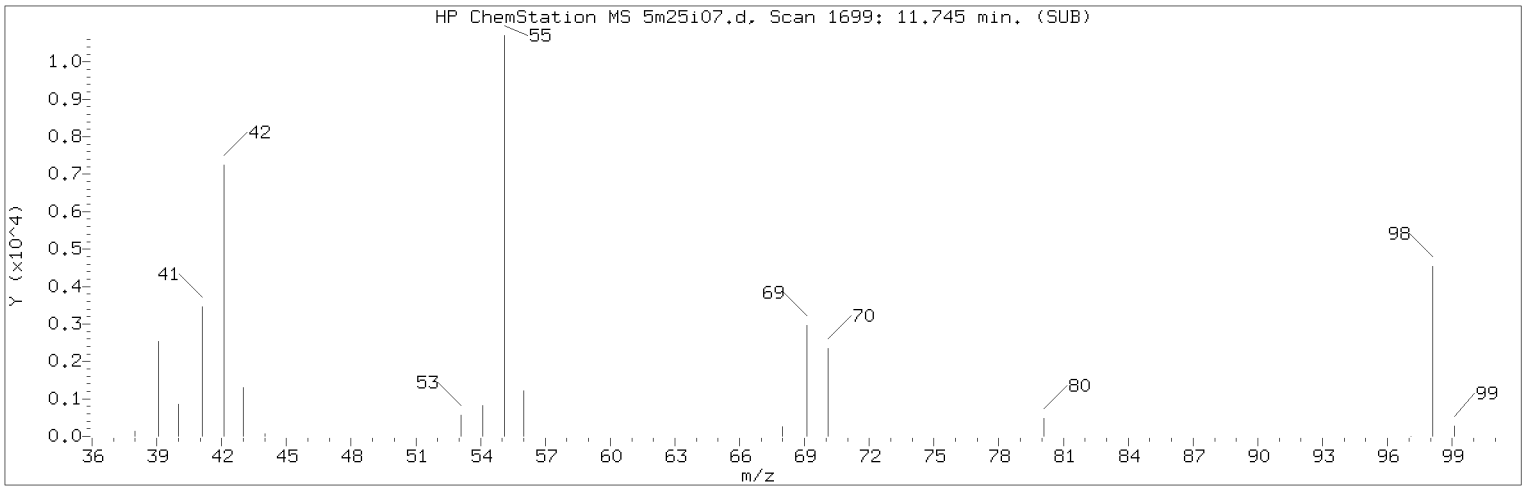
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 15:14
Date, time and analyst ID of latest file update: 25-Mar-2019 15:14 Unknown

Sample Name: VSTD001 Lab Sample ID: VSTD001

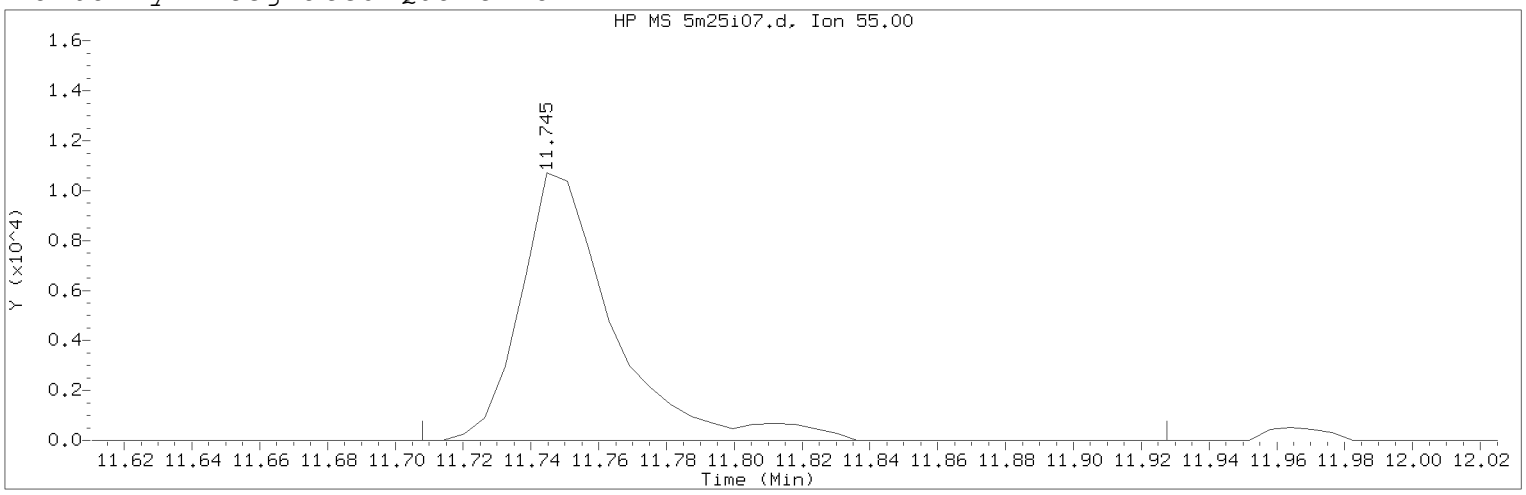
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 352
Retention Time (minutes): 3.533
Quant Ion : 65.00
Area : 310510
On-column Amount (ng) : 250.0000
Integration start scan : 332 Integration stop scan: 433
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10047

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

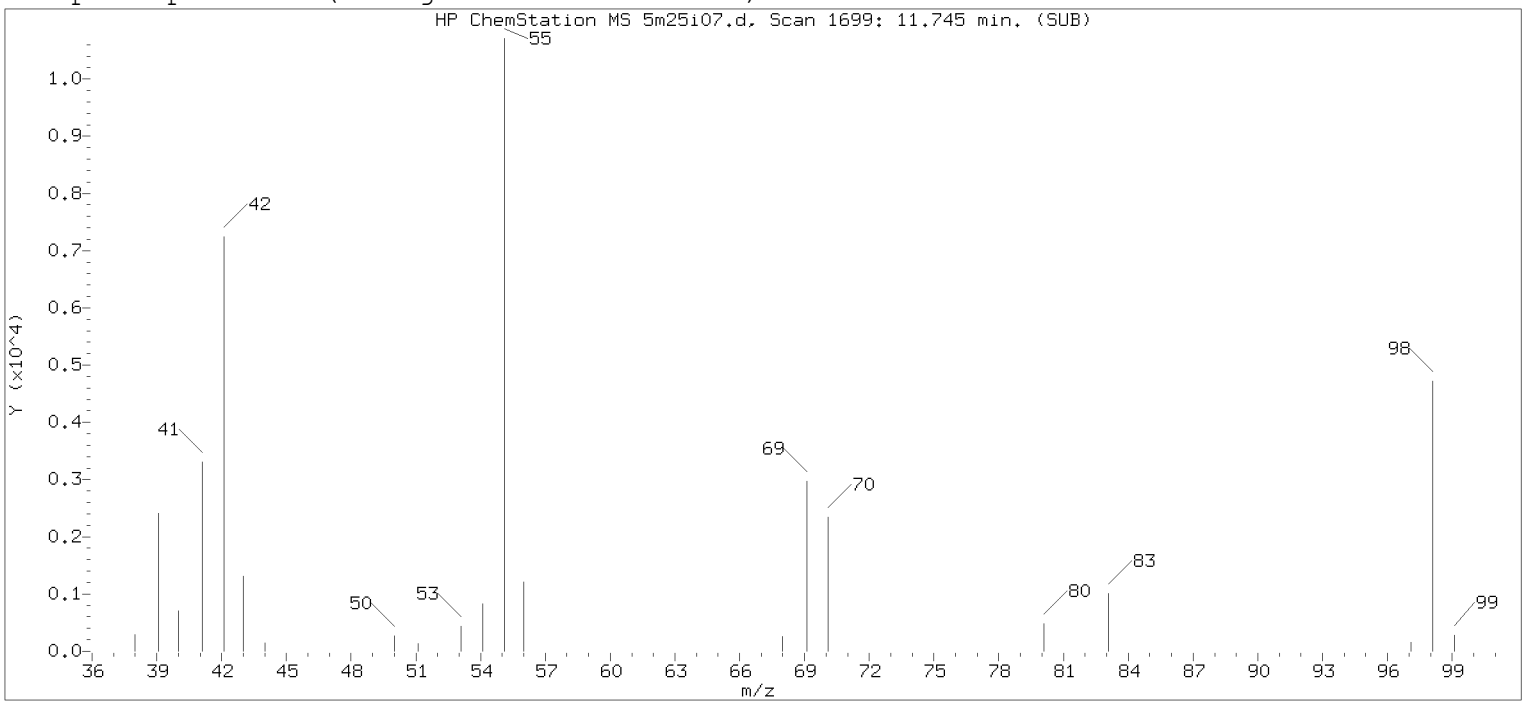
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1699
Retention Time (minutes): 11.745
Quant Ion : 55.00
Area (flag) : 20418M
On-Column Amount (ng) : 52.4692
Integration start scan : 1692 Integration stop scan: 1728
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

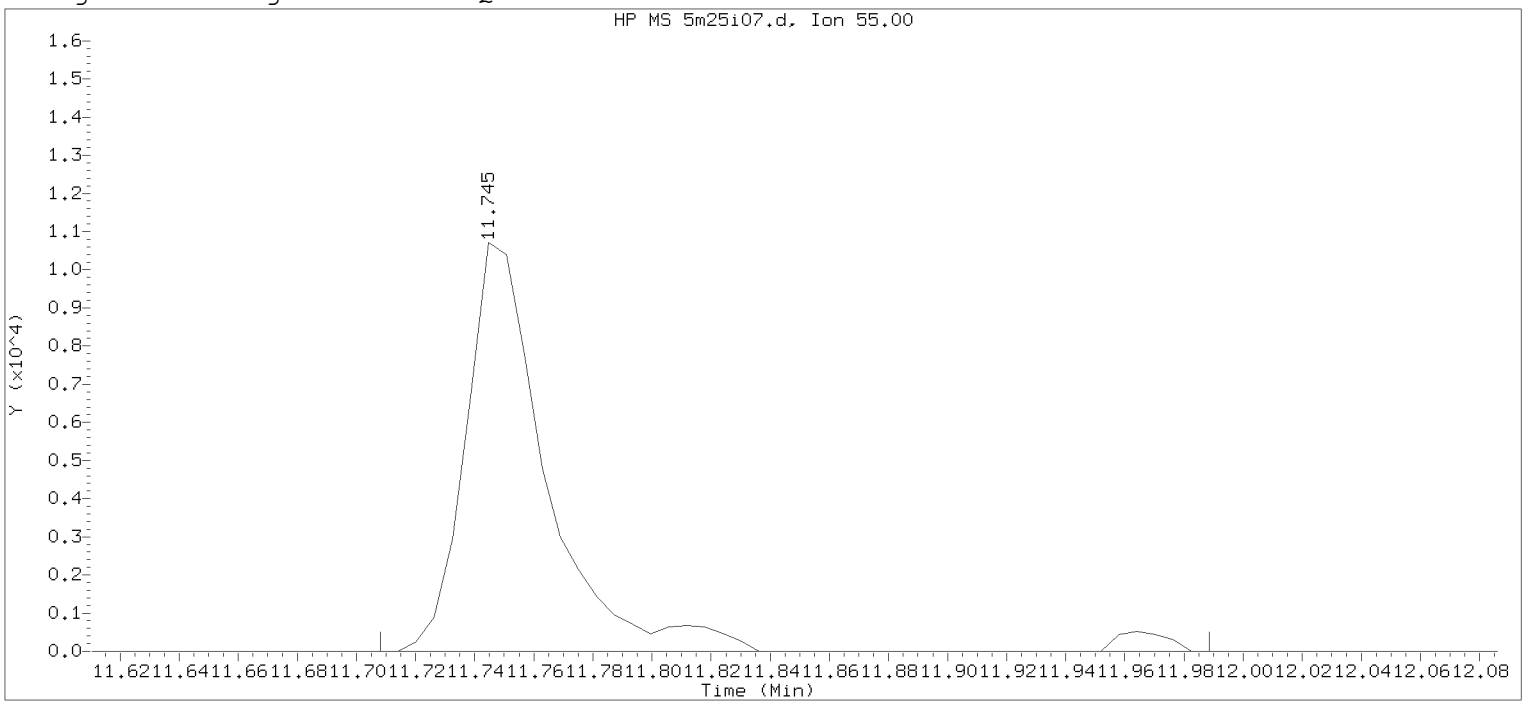
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

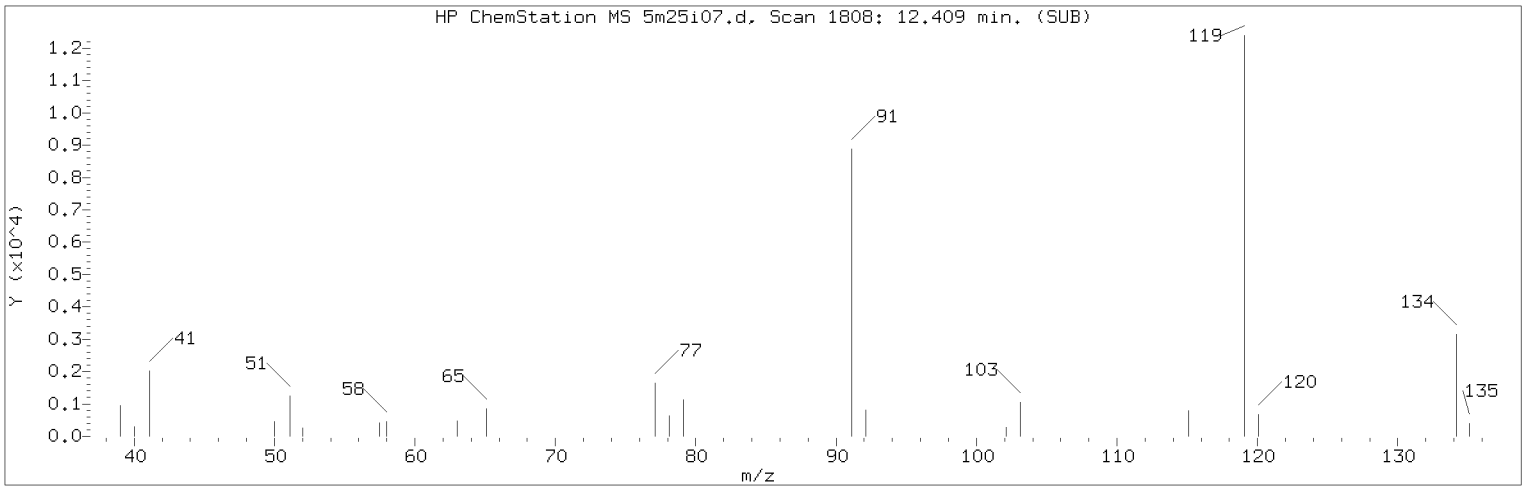
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 15:14
Date, time and analyst ID of latest file update: 25-Mar-2019 15:14 Unknown

Sample Name: VSTD001 Lab Sample ID: VSTD001

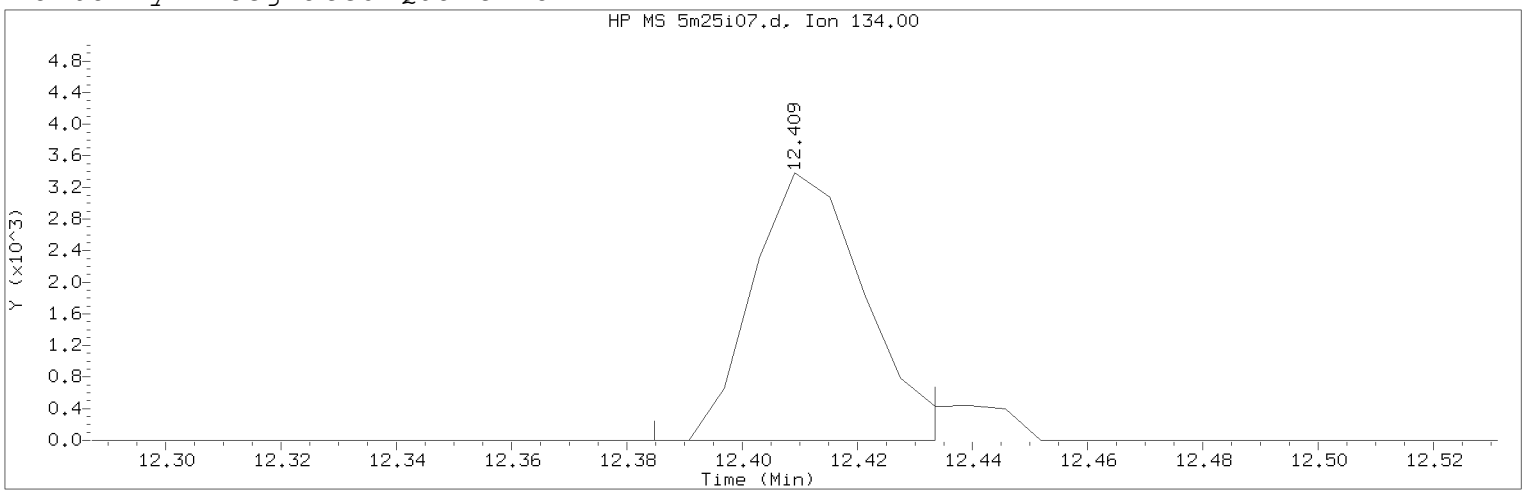
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1699
Retention Time (minutes): 11.745
Quant Ion : 55.00
Area : 21041
On-column Amount (ng) : 53.1937
Integration start scan : 1692 Integration stop scan: 1738
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kkelly1007

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:45
Date, time and analyst ID of latest file update: 25-Mar-2019 21:45 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

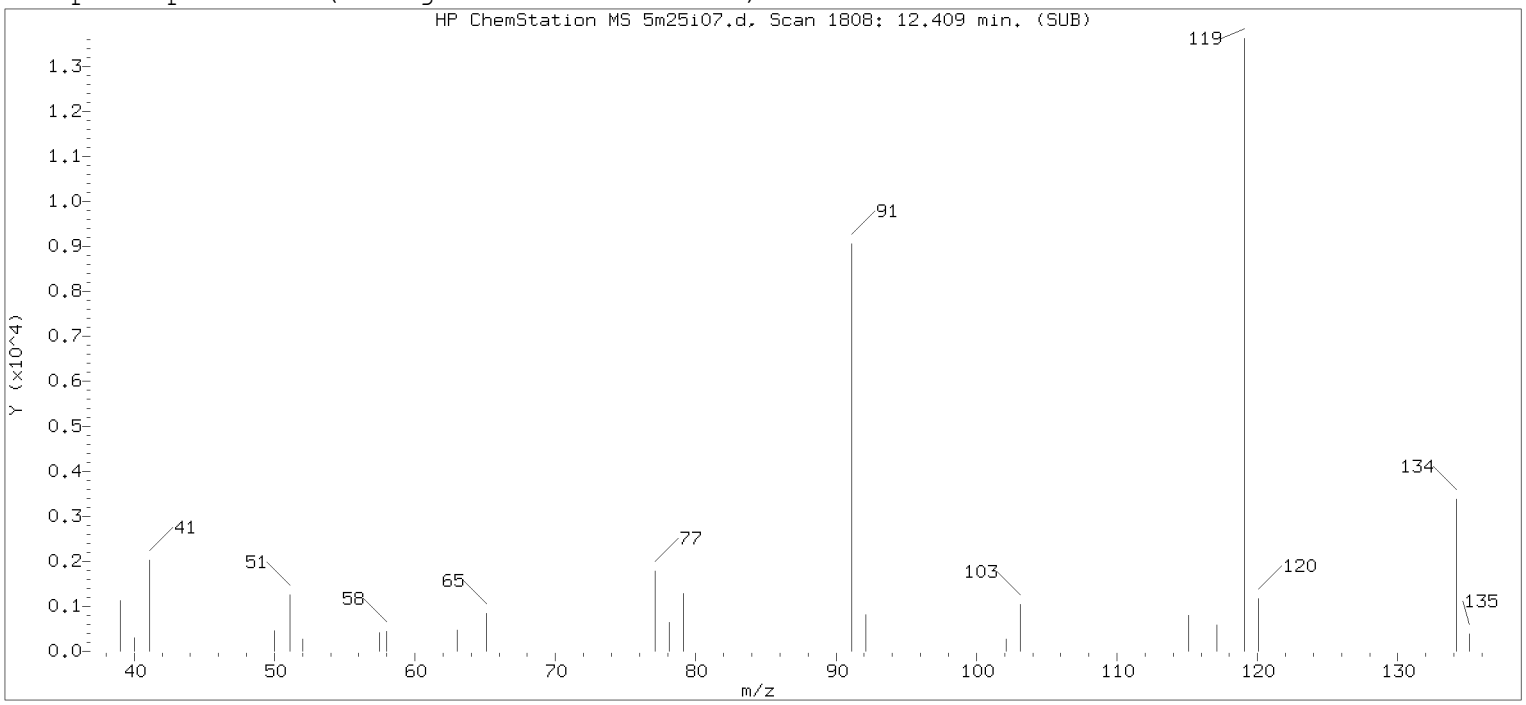
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1808
Retention Time (minutes): 12.409
Quant Ion : 134.00
Area (flag) : 4563M
On-Column Amount (ng) : 0.8665
Integration start scan : 1803 Integration stop scan: 1811
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

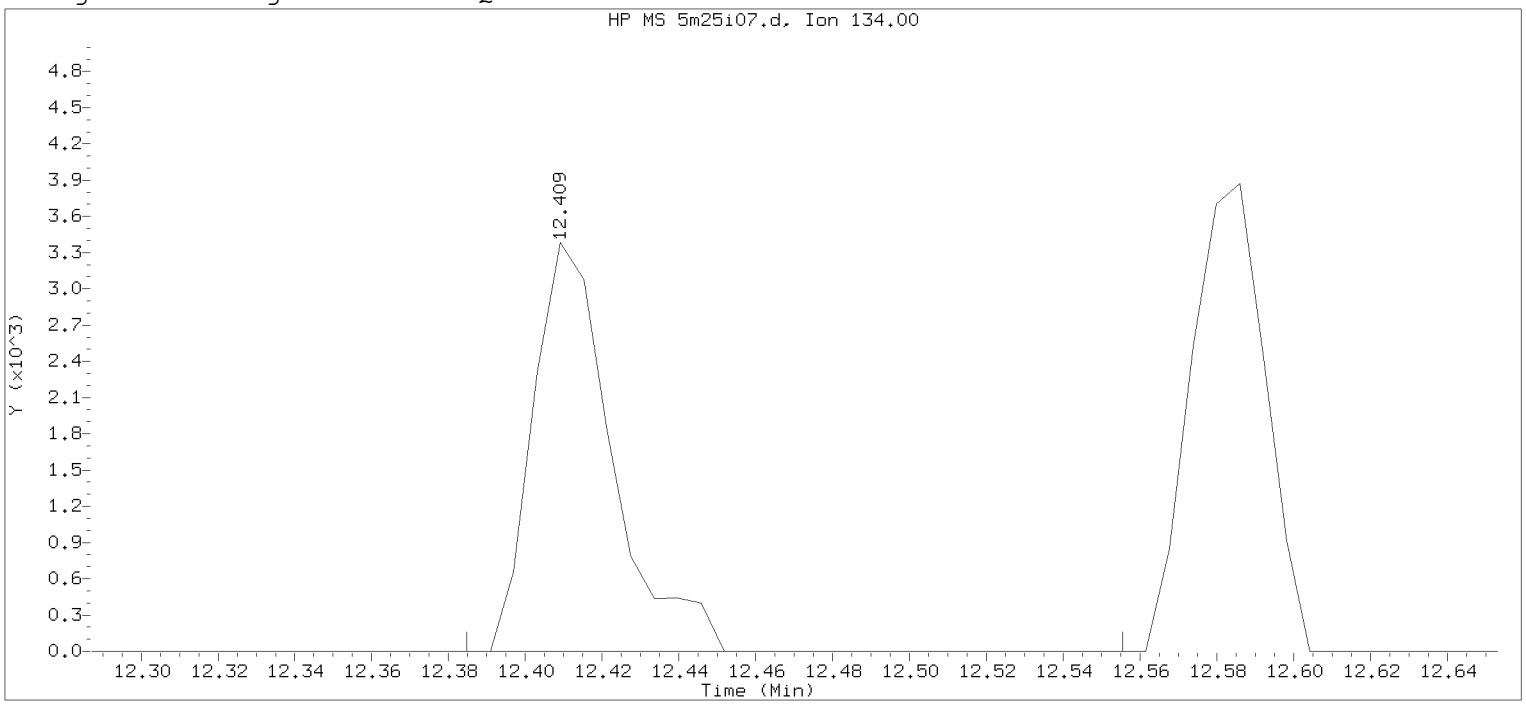
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



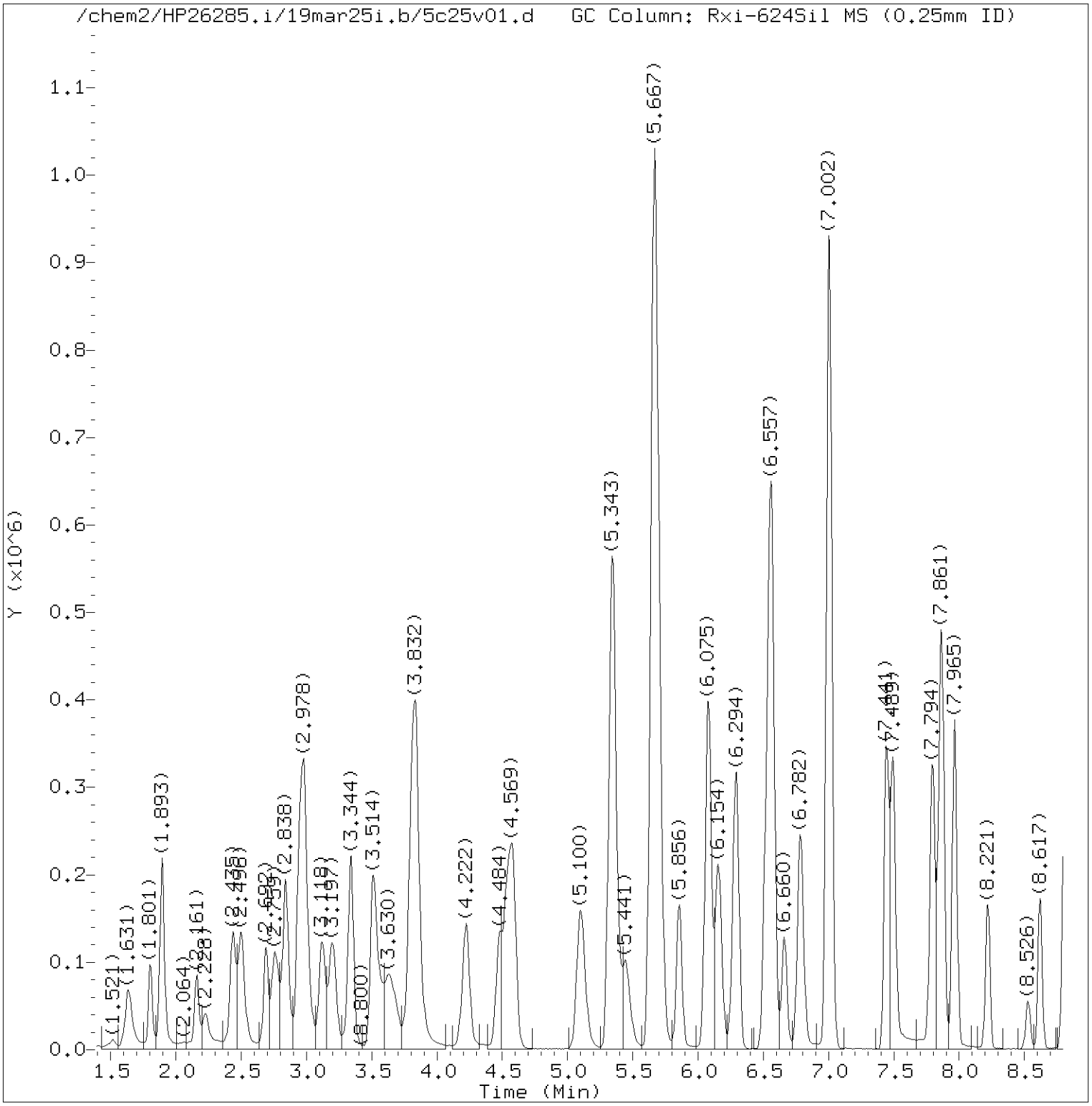
Data File: /chem2/HP26285.i/19mar25i.b/5m25i07.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 14:55 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 15:14
Date, time and analyst ID of latest file update: 25-Mar-2019 15:14 Unknown

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1808
Retention Time (minutes): 12.409
Quant Ion : 134.00
Area : 4871
On-column Amount (ng) : 0.8638
Integration start scan : 1803 Integration stop scan: 1831
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/25/2019 at 21:54.
Target 3.5 esignature user ID: kkelly



Total Ion Chromatogram (TIC)

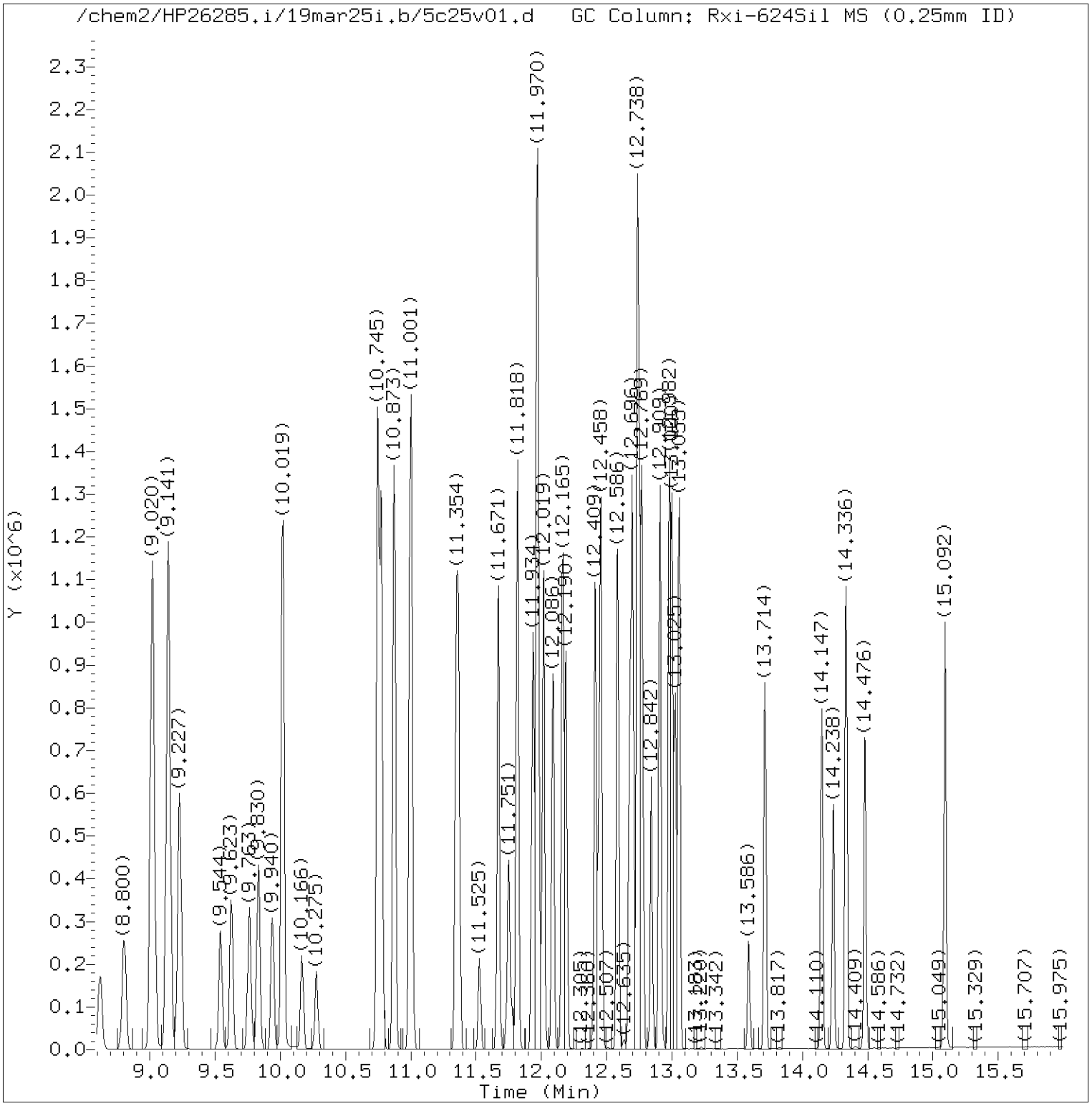
Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 26-Mar-2019 11:37 kek01027

Sample Name: LG5ICV Lab Sample ID: LG5ICV

Digitally signed by Jennifer K. Howe
on 03/26/2019 at 11:39.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 26-Mar-2019 11:37 kek01027

Sample Name: LG5ICV Lab Sample ID: LG5ICV

Digitally signed by Jennifer K. Howe
on 03/26/2019 at 11:39.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 26-Mar-2019 11:37 kek01027

Sample Name: LG5ICV Lab Sample ID: LG5ICV

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.637	85	139216	16.373
4) Chloromethane	(2)	1.801	50	116200	18.805
5) 1,3-Butadiene	(2)	1.893	39	83831	19.526
6) Vinyl Chloride	(2)	1.899	62	118724	19.639
8) Bromomethane	(2)	2.161	94	69534	14.274
9) Chloroethane	(2)	2.222	64	44481	15.349
10) Dichlorofluoromethane	(2)	2.435	67	144496	18.332
12) Trichlorofluoromethane	(2)	2.484	101	143342	17.057
11) n-Pentane	(2)	2.502	43	87480	16.505
14) Ethyl ether	(2)	2.685	59	88280	20.283
15) Freon 123a	(2)	2.759	67	125838	19.267
16) Acrolein	(1)	2.838	56	294986	137.757
17) 1,1-Dichloroethene	(2)	2.948	96	106465	21.812
19) Freon 113	(2)	2.966	101	103809	20.906
18) Acetone	(1)	2.984	58	145584	148.691
22) Methyl Iodide	(2)	3.118	142	205804	20.189
21) 2-Propanol	(1)	3.130	45	103259	145.112
23) Carbon Disulfide	(2)	3.197	76	308592	19.042
27) Methyl Acetate	(2)	3.332	43	146764	19.413
25) Allyl Chloride	(2)	3.344	41	166322	18.966
28) Methylene Chloride	(2)	3.508	84	118456	21.367
29)*t-Butyl alcohol-d10	(1)	3.533	65	303339	250.000
30) t-Butyl alcohol	(1)	3.636	59	275250	196.143
31) Acrylonitrile	(2)	3.801	53	373810	93.547
32) trans-1,2-Dichloroethene	(2)	3.838	96	119263	21.829
33) Methyl Tertiary Butyl Ether	(2)	3.838	73	307118	19.697
34) n-Hexane	(2)	4.222	57	149777	19.817
36) 1,1-Dichloroethane	(2)	4.472	63	202427	21.016
38) di-Isopropyl ether	(2)	4.539	45	359972	20.501
39) 2-Chloro-1,3-butadiene	(2)	4.581	53	171956	20.174
40) Ethyl t-butyl ether	(2)	5.100	59	319972	19.684
42) cis-1,2-Dichloroethene	(2)	5.343	96	132220	21.389
44) 2-Butanone	(2)	5.343	43	820618	135.989
45) 2,2-Dichloropropane	(2)	5.350	77	160731	20.865
47) Propionitrile	(1)	5.447	54	237981	155.917
48) Methacrylonitrile	(2)	5.667	67	587383	149.391
49) Bromochloromethane	(2)	5.685	128	60975	19.712
50) Tetrahydrofuran	(1)	5.703	71	154887	99.895

* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 03/26/2019 at 11:39.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 26-Mar-2019 11:37 kek01027

Sample Name: LG5ICV Lab Sample ID: LG5ICV

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	5.856	83	200837	21.028
53) 1,1,1-Trichloroethane	(2)	6.069	97	177471	21.113
52)$Dibromofluoromethane	(2)	6.081	113	251990	49.806
54) Cyclohexane	(2)	6.154	56	188561	19.403
43) 1,2-Dichloroethene (Total)	(2)		96	251483	43.218
56) Carbon Tetrachloride	(2)	6.282	117	150826	20.734
55) 1,1-Dichloropropene	(2)	6.294	75	160744	20.804
58) Isobutyl Alcohol	(1)	6.520	41	229638	499.678
57)$1,2-Dichloroethane-d4	(2)	6.551	102	58948	49.795
60) Benzene	(2)	6.569	78	491780	20.952
61) 1,2-Dichloroethane	(2)	6.660	62	145518	20.978
65) t-Amyl methyl ether	(2)	6.782	73	329968	20.141
66)*Fluorobenzene	(2)	7.002	96	1057294	50.000
67) n-Heptane	(2)	7.014	43	162946	19.119
69) n-Butanol	(1)	7.441	56	381865	996.548
71) Trichloroethene	(2)	7.495	95	126099	20.716
73) Methylcyclohexane	(2)	7.794	83	199819	19.825
74) 1,2-Dichloropropane	(2)	7.849	63	124457	21.391
76) 1,4-Dioxane	(1)	7.947	88	47974M	539.724
77) Methyl Methacrylate	(2)	7.965	69	116009	19.099
75) Dibromomethane	(2)	7.965	93	76595	20.814
79) Bromodichloromethane	(2)	8.221	83	143365	20.963
80) 2-Nitropropane	(2)	8.526	41	46372	16.519
81) 2-Chloroethyl Vinyl Ether	(2)	8.617	63	100356M	20.668
82) cis-1,3-Dichloropropene	(2)	8.800	75	190041	21.120
83) 4-Methyl-2-pentanone	(2)	9.020	43	1046828	84.700
84)$Toluene-d8	(3)	9.141	98	1022700	50.034
89) Toluene	(3)	9.227	92	323057	21.234
90) trans-1,3-Dichloropropene	(3)	9.544	75	164633	20.025
92) Ethyl Methacrylate	(3)	9.623	69	192638	19.542
93) 1,1,2-Trichloroethane	(3)	9.763	97	115685	21.254
94) Tetrachloroethene	(3)	9.830	166	143203	20.698
95) 1,3-Dichloropropane	(3)	9.940	76	183487	20.579
97) 2-Hexanone	(3)	10.019	43	854408	79.406
91) 1,3-Dichloropropene (total)	(3)		100	354674	41.145
98) Dibromochloromethane	(3)	10.166	129	116649	20.933
100) 1,2-Dibromoethane	(3)	10.275	107	123329	20.291
101)*Chlorobenzene-d5	(3)	10.745	117	809780	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 03/26/2019 at 11:39.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 26-Mar-2019 11:37 kek01027

Sample Name: LG5ICV Lab Sample ID: LG5ICV

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
103) Chlorobenzene	(3)	10.775	112	355435	20.879
102) 1-Chlorohexane	(3)	10.775	91	179350	20.234
104) 1,1,1,2-Tetrachloroethane	(3)	10.867	131	120284	20.932
105) Ethylbenzene	(3)	10.873	91	624941	21.029
107) m+p-Xylene	(3)	11.001	106	495654	42.291
108) o-Xylene	(3)	11.348	106	240502	21.001
110) Styrene	(3)	11.367	104	402044	21.260
111) Bromoform	(3)	11.525	173	86518	19.668
112) Isopropylbenzene	(3)	11.671	105	637091	21.422
113) Cyclohexanone	(1)	11.751	55	196422M	528.157
109) Xylene (Total)	(3)		106	736156	63.292
115)$4-Bromofluorobenzene	(3)	11.818	95	394758	49.635
116) Bromobenzene	(4)	11.934	156	157768	21.101
117) 1,1,2,2-Tetrachloroethane	(4)	11.940	83	200610	21.190
119) trans-1,4-Dichloro-2-butene	(4)	11.964	53	317521	106.499
118) 1,2,3-Trichloropropane	(4)	11.982	110	59342	20.806
120) n-Propylbenzene	(4)	12.019	91	760673	21.618
121) 2-Chlorotoluene	(4)	12.092	126	151815	20.928
123) 1,3,5-Trimethylbenzene	(4)	12.165	105	538830	21.220
122) 4-Chlorotoluene	(4)	12.190	126	156067	20.956
125) tert-Butylbenzene	(4)	12.415	134	111818M	20.839
126) Pentachloroethane	(4)	12.440	167	91465	20.873
127) 1,2,4-Trimethylbenzene	(4)	12.458	105	544880	20.925
128) sec-Butylbenzene	(4)	12.586	105	704316	21.409
130) 1,3-Dichlorobenzene	(4)	12.677	146	297904	20.805
131) p-Isopropyltoluene	(4)	12.696	119	611860	21.452
132)*1,4-Dichlorobenzene-d4	(4)	12.738	152	433425	50.000
134) 1,4-Dichlorobenzene	(4)	12.757	146	308182	21.236
135) 1,2,3-Trimethylbenzene	(4)	12.769	105	566794	21.071
136) Benzyl Chloride	(4)	12.842	91	355261	19.048
137) 1,3-Diethylbenzene	(4)	12.909	119	359893	20.702
138) 1,4-Diethylbenzene	(4)	12.982	119	372905	20.213
140) n-Butylbenzene	(4)	13.000	92	302908	21.054
139) 1,2-Dichlorobenzene	(4)	13.025	146	287642	21.248
141) 1,2-Diethylbenzene	(4)	13.055	119	303333	20.989
142) Diethylbenzene (total)	(4)		100	1036131	61.904
143) 1,2-Dibromo-3-chloropropane	(4)	13.586	75	49737	21.030
145) 1,3,5-Trichlorobenzene	(4)	13.714	180	225250	20.700

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 03/26/2019 at 11:39.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

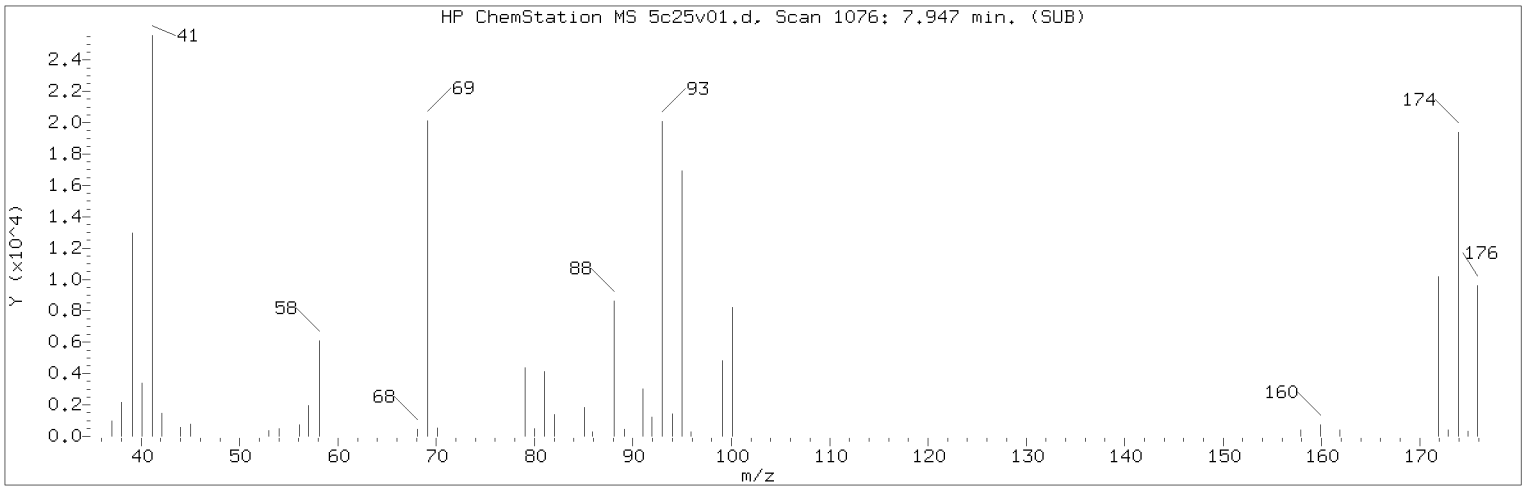
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 26-Mar-2019 11:37 kek01027

Sample Name: LG5ICV Lab Sample ID: LG5ICV

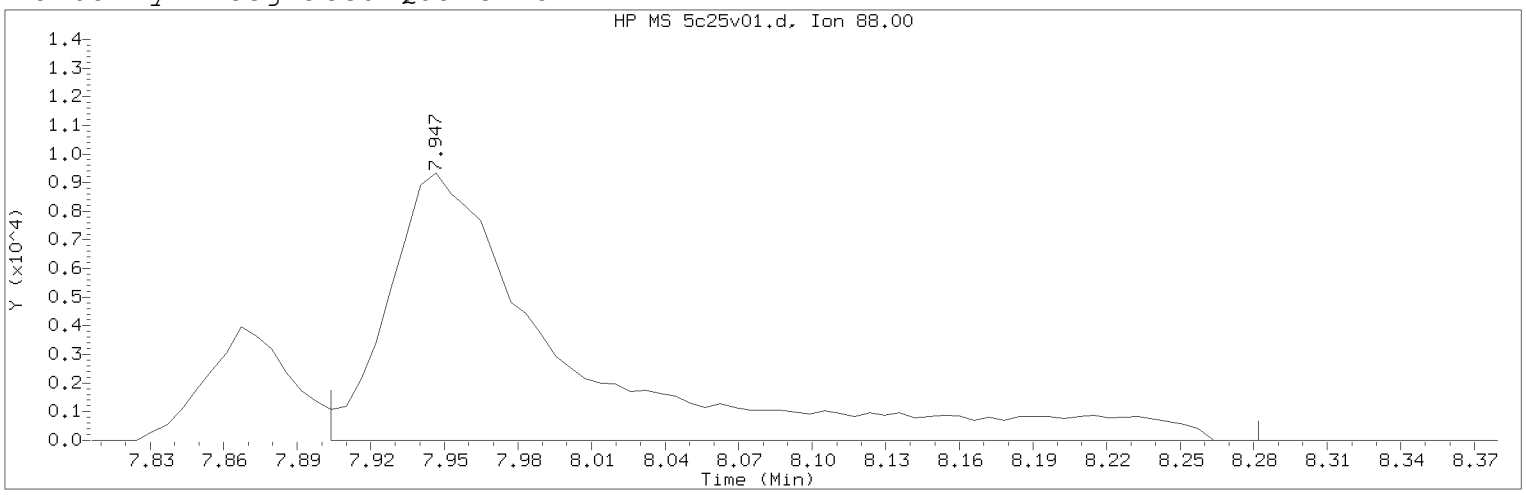
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) 1,2,4-Trichlorobenzene	(4)	14.147	180	205023	20.814
148) Hexachlorobutadiene	(4)	14.238	225	92670	19.934
149) Naphthalene	(4)	14.336	128	698702	20.904
150) 1,2,3-Trichlorobenzene	(4)	14.482	180	195042	20.665
151) 2-Methylnaphthalene	(4)	15.092	142	403100	20.496

Digitally signed by Jennifer K. Howe
on 03/26/2019 at 11:39.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 26-Mar-2019 11:37 kek01027

Sample Name: LG5ICV Lab Sample ID: LG5ICV

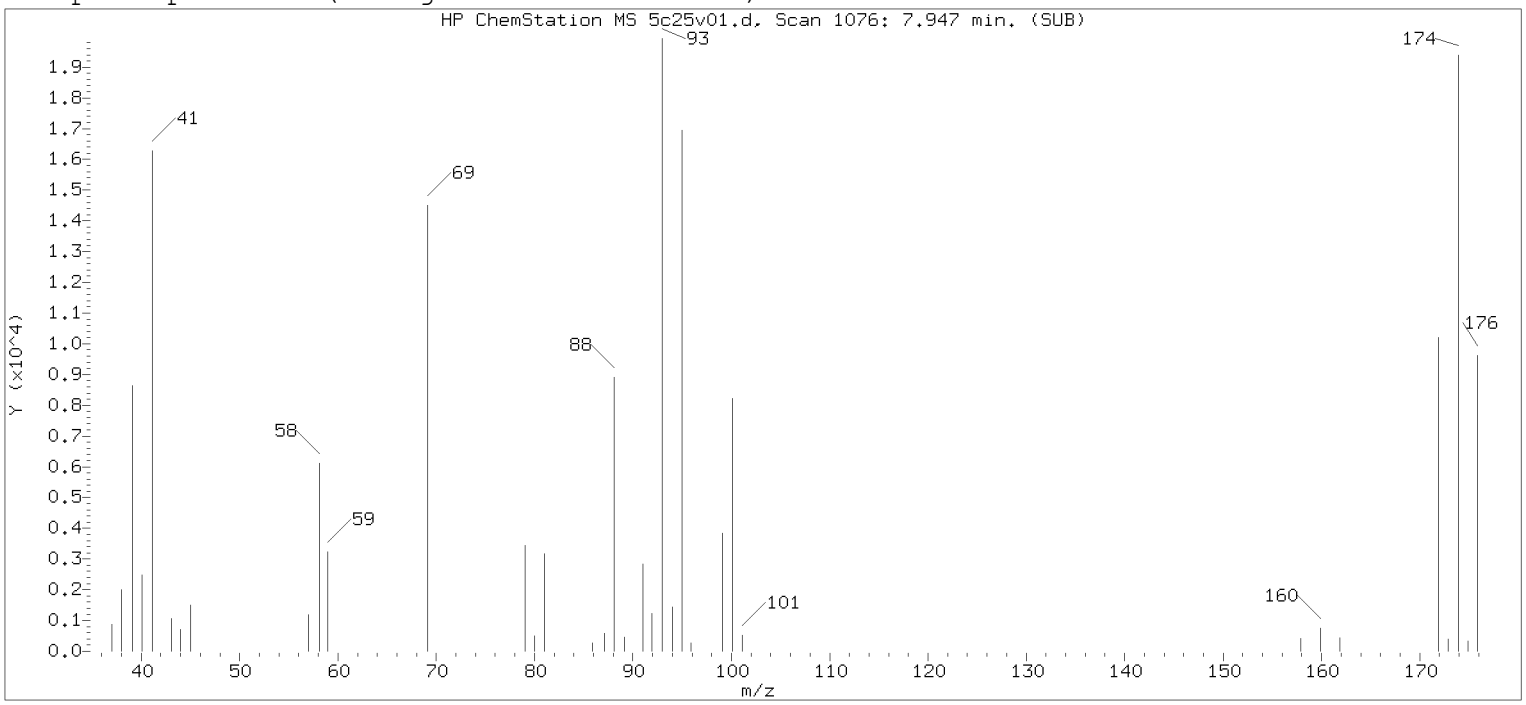
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1076
Retention Time (minutes): 7.947
Quant Ion : 88.00
Area (flag) : 47974M
On-Column Amount (ng) : 539.7240
Integration start scan : 1068 Integration stop scan: 1130
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

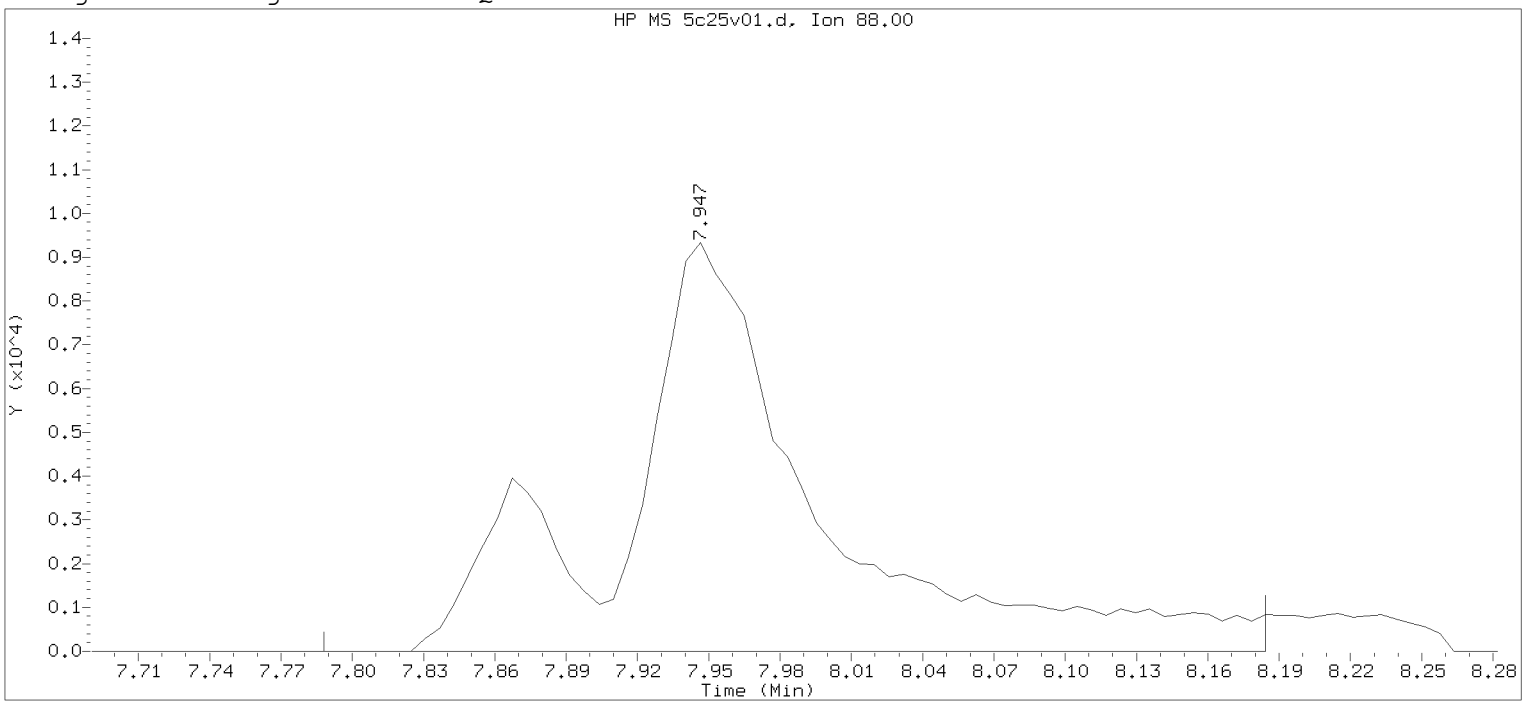
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 03/26/2019 at 11:39.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:54.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

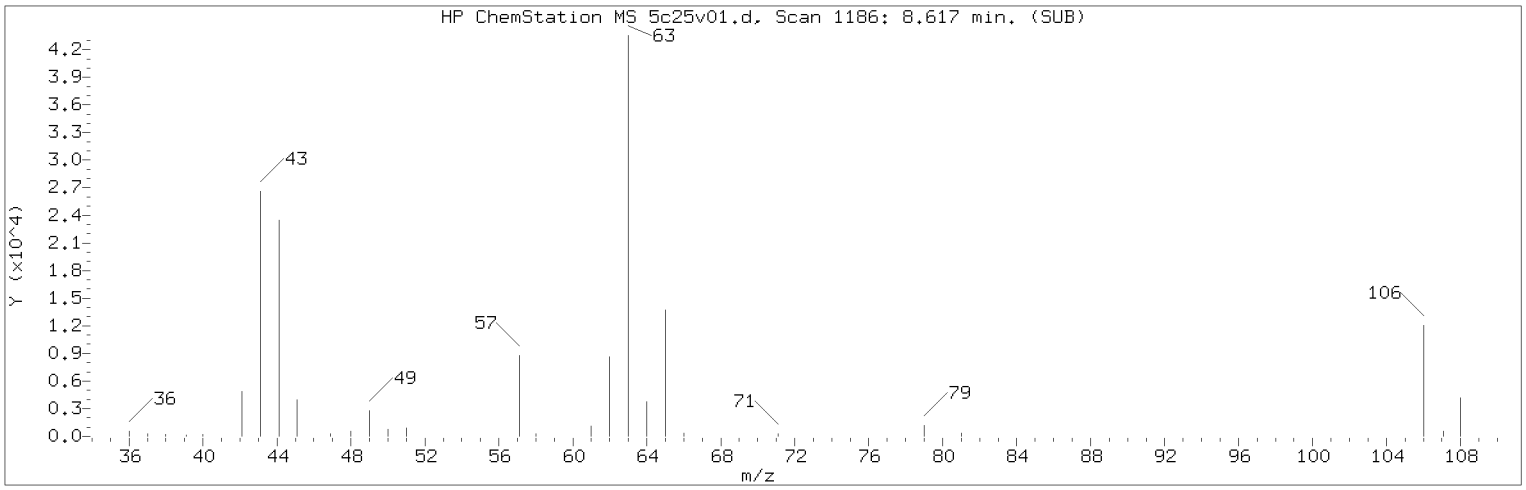
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 25-Mar-2019 21:52 kk10002

Sample Name: LG5ICV Lab Sample ID: LG5ICV

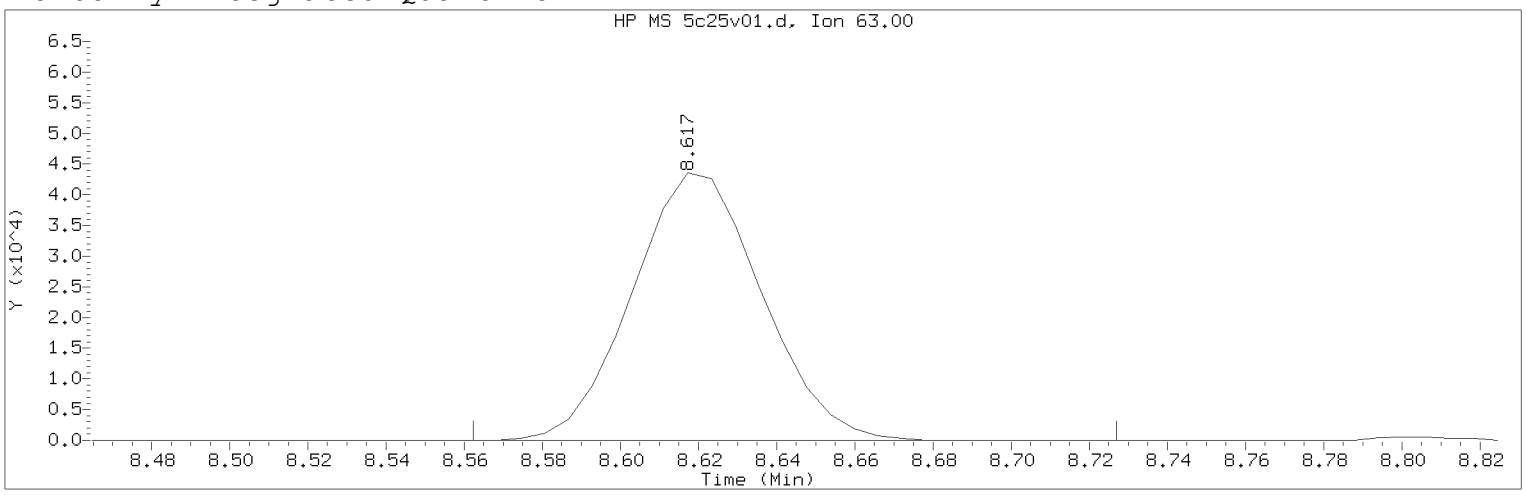
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1076
Retention Time (minutes): 7.947
Quant Ion : 88.00
Area : 53880
On-column Amount (ng) : 606.1681
Integration start scan : 1049 Integration stop scan: 1114
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 03/26/2019 at 11:39.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 26-Mar-2019 11:37 kek01027

Sample Name: LG5ICV Lab Sample ID: LG5ICV

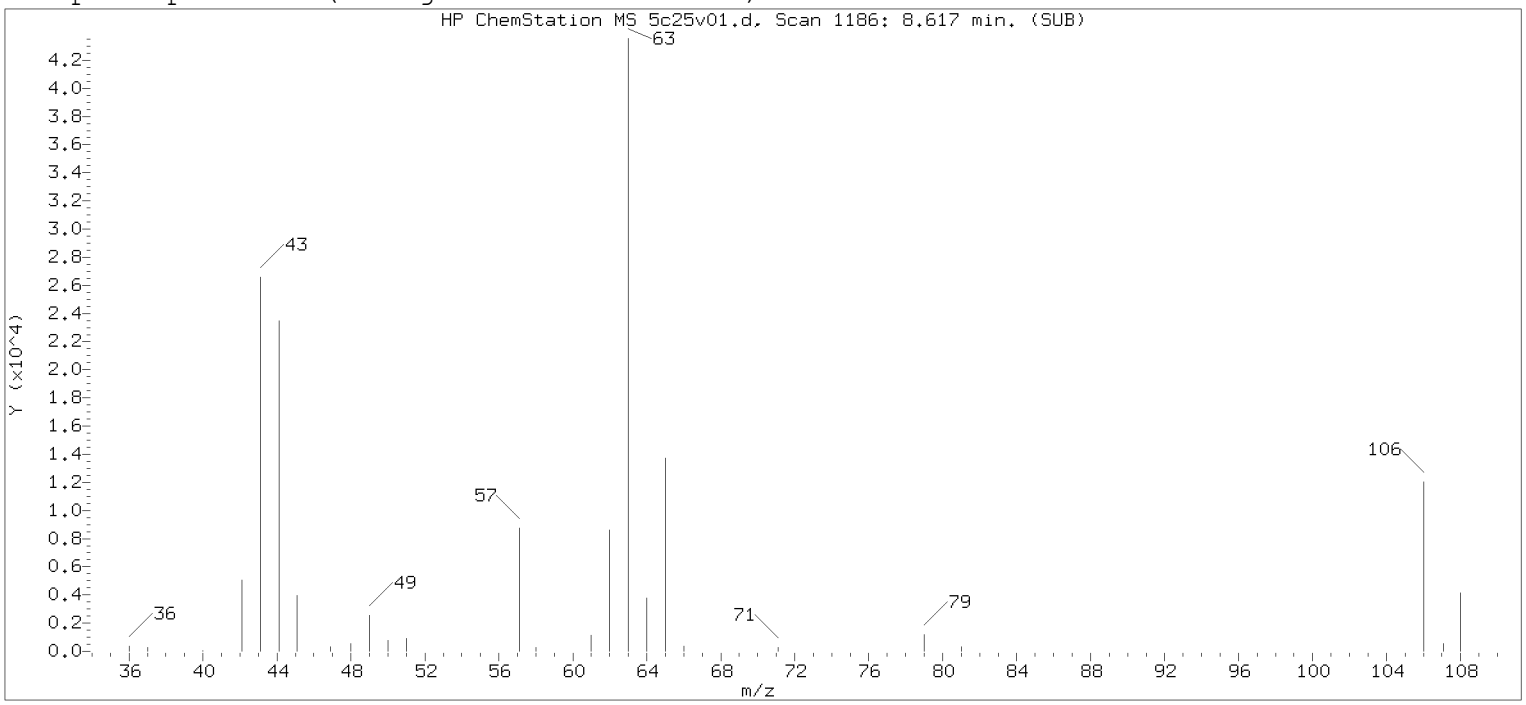
Compound Number : 81
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1186
Retention Time (minutes): 8.617
Quant Ion : 63.00
Area (flag) : 100356M
On-Column Amount (ng) : 20.6679
Integration start scan : 1176 Integration stop scan: 1203
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

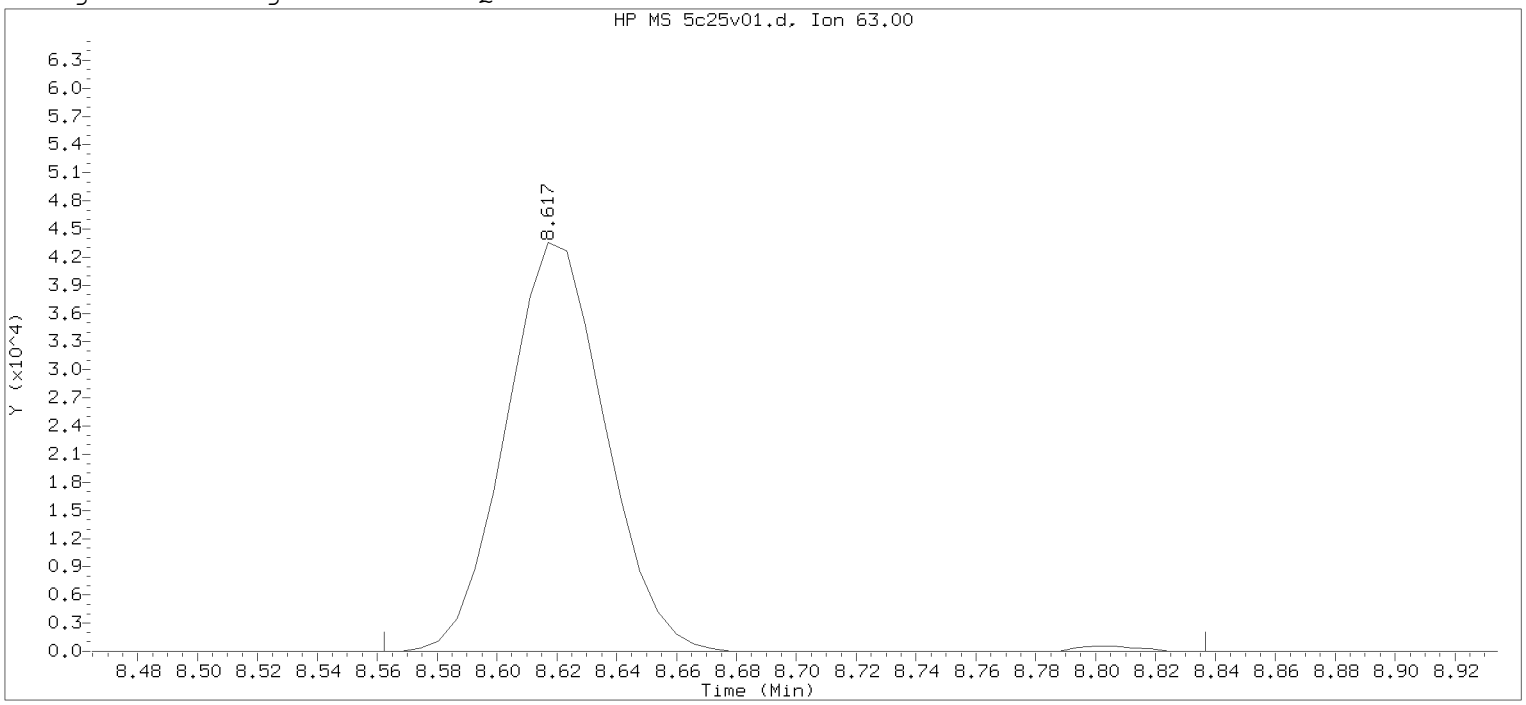
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 03/26/2019 at 11:39.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:54.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

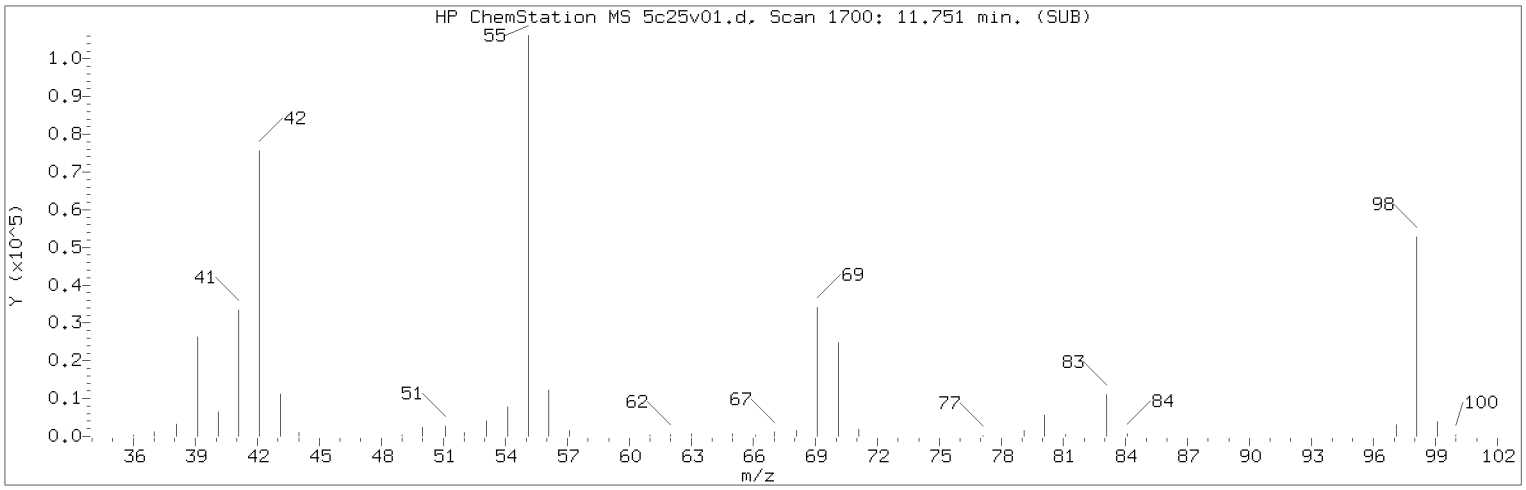
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 25-Mar-2019 21:52 kk10002

Sample Name: LG5ICV Lab Sample ID: LG5ICV

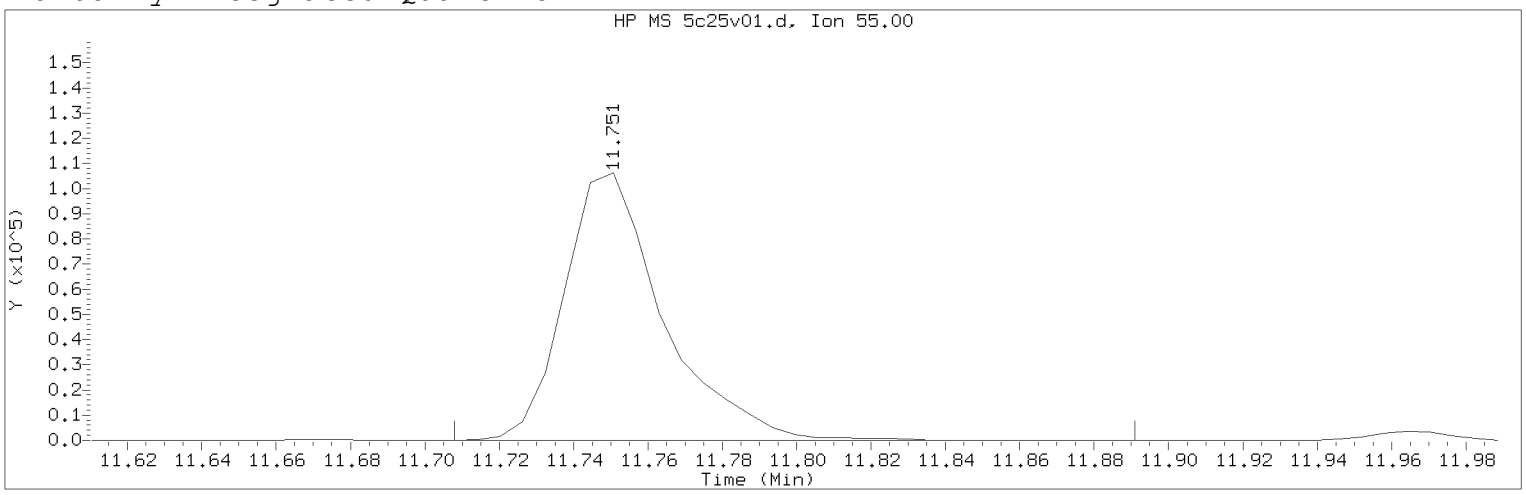
Compound Number : 81
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1186
Retention Time (minutes): 8.617
Quant Ion : 63.00
Area : 101128
On-column Amount (ng) : 20.8269
Integration start scan : 1176 Integration stop scan: 1221
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 03/26/2019 at 11:39.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 26-Mar-2019 11:37 kek01027

Sample Name: LG5ICV Lab Sample ID: LG5ICV

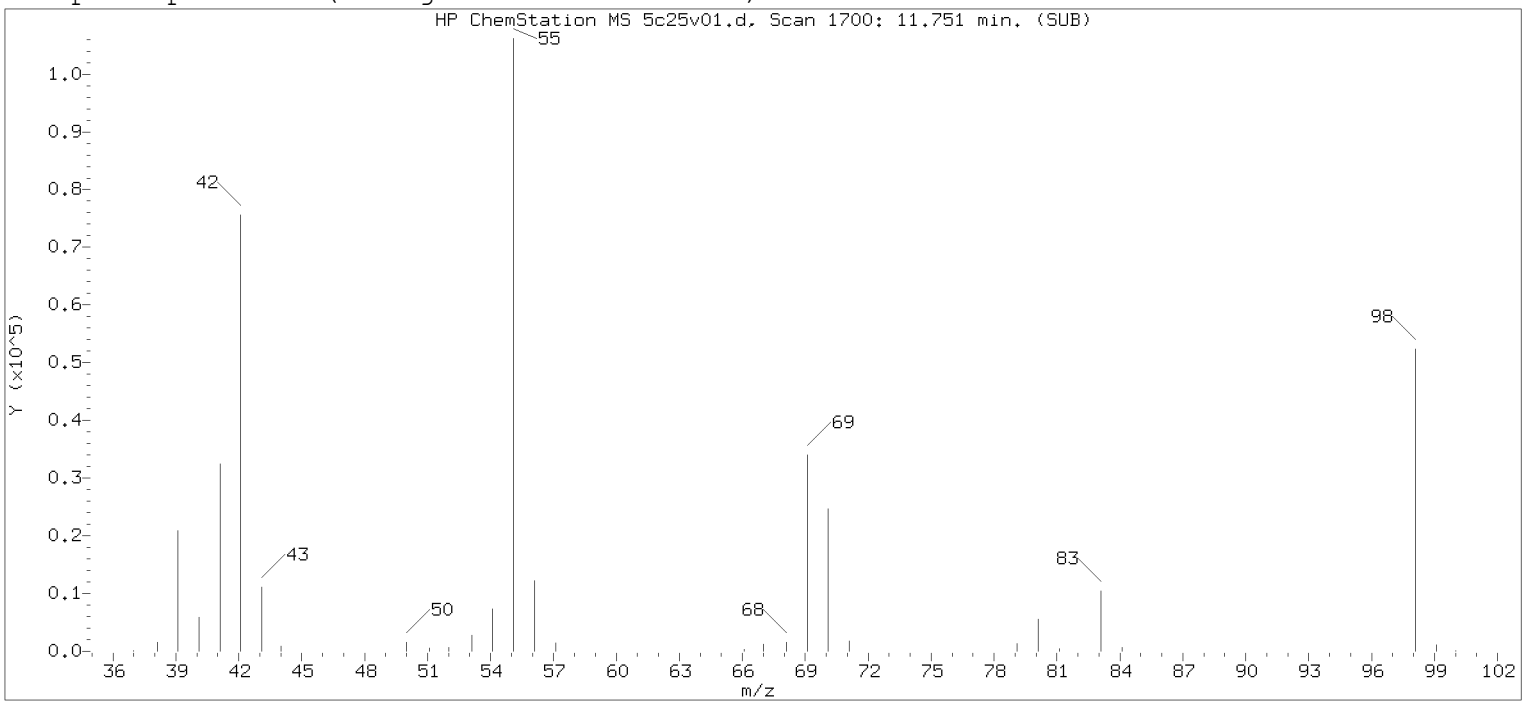
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1700
Retention Time (minutes): 11.751
Quant Ion : 55.00
Area (flag) : 196422M
On-Column Amount (ng) : 528.1572
Integration start scan : 1692 Integration stop scan: 1722
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

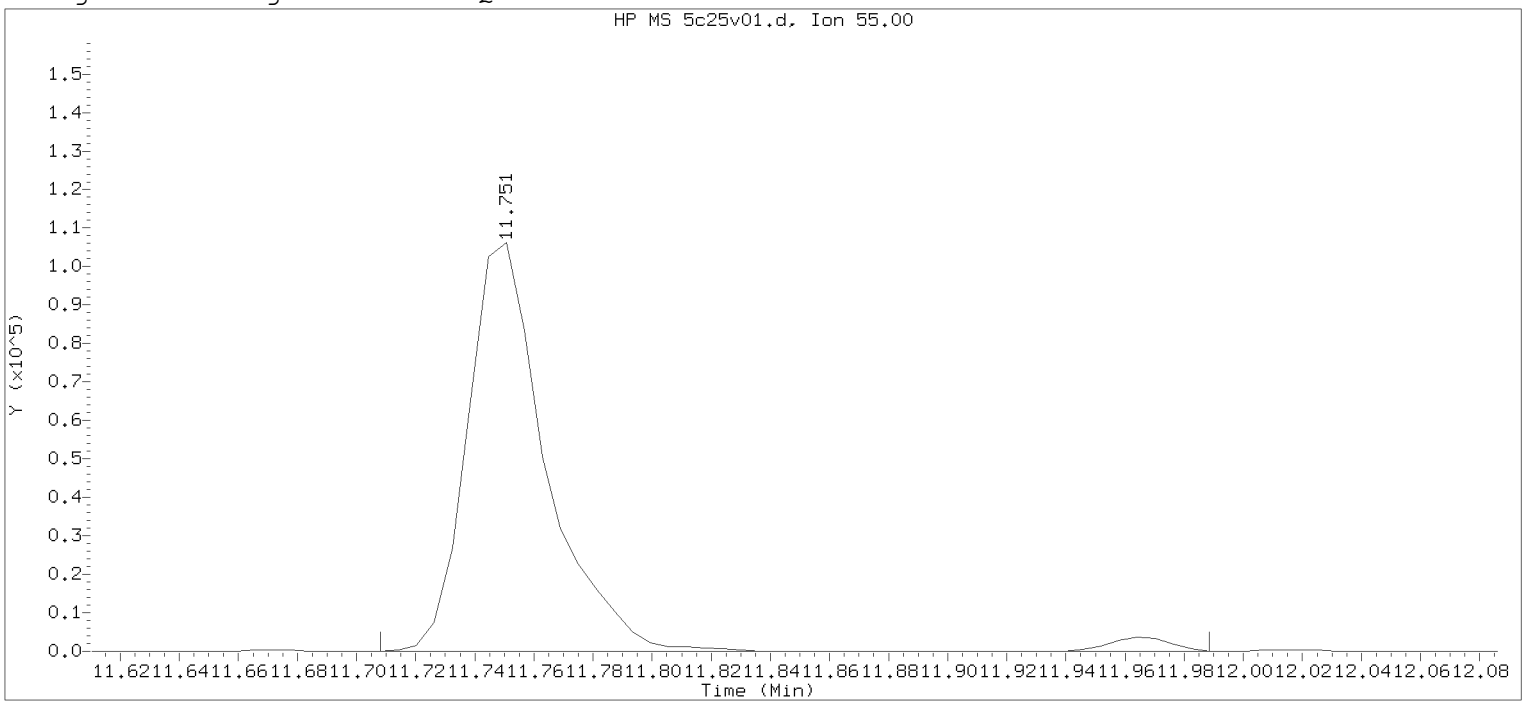
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 03/26/2019 at 11:39.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:54.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

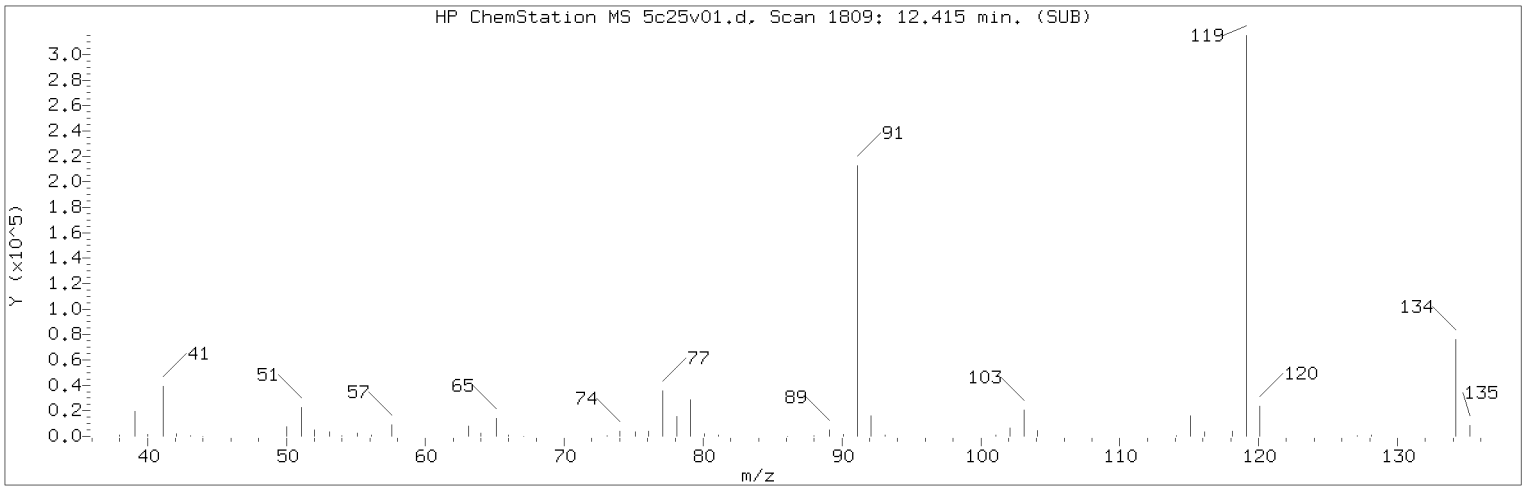
Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 25-Mar-2019 21:52 kk10002

Sample Name: LG5ICV Lab Sample ID: LG5ICV

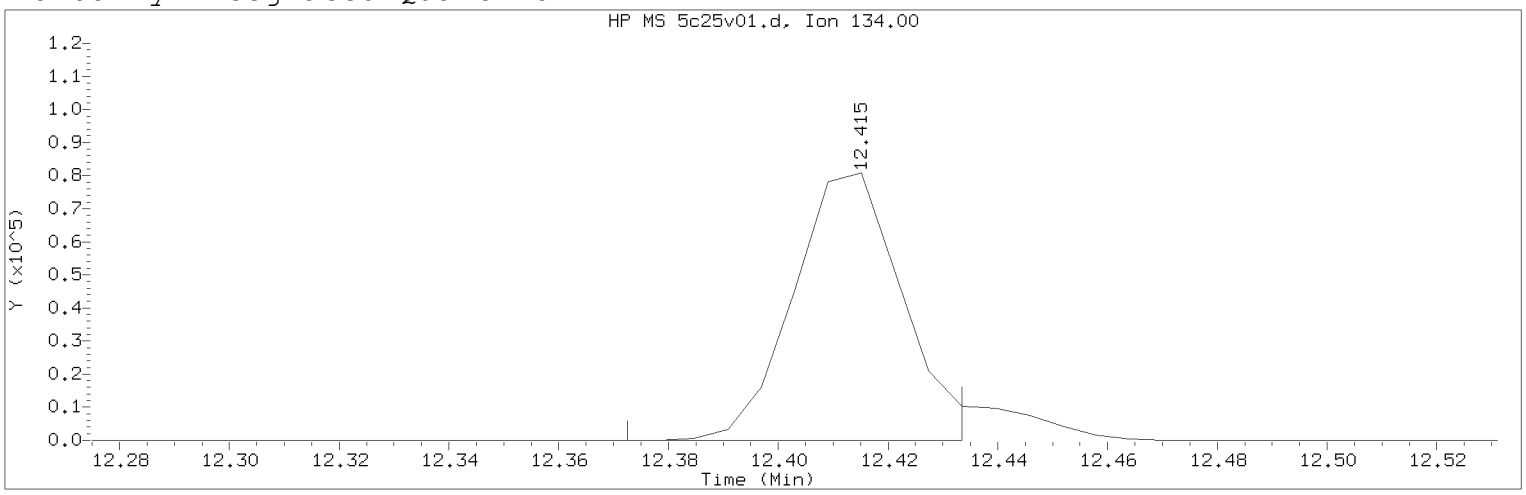
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1700
Retention Time (minutes): 11.751
Quant Ion : 55.00
Area : 201506
On-column Amount (ng) : 541.8277
Integration start scan : 1692 Integration stop scan: 1738
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 03/26/2019 at 11:39.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 26-Mar-2019 11:37 kek01027

Sample Name: LG5ICV Lab Sample ID: LG5ICV

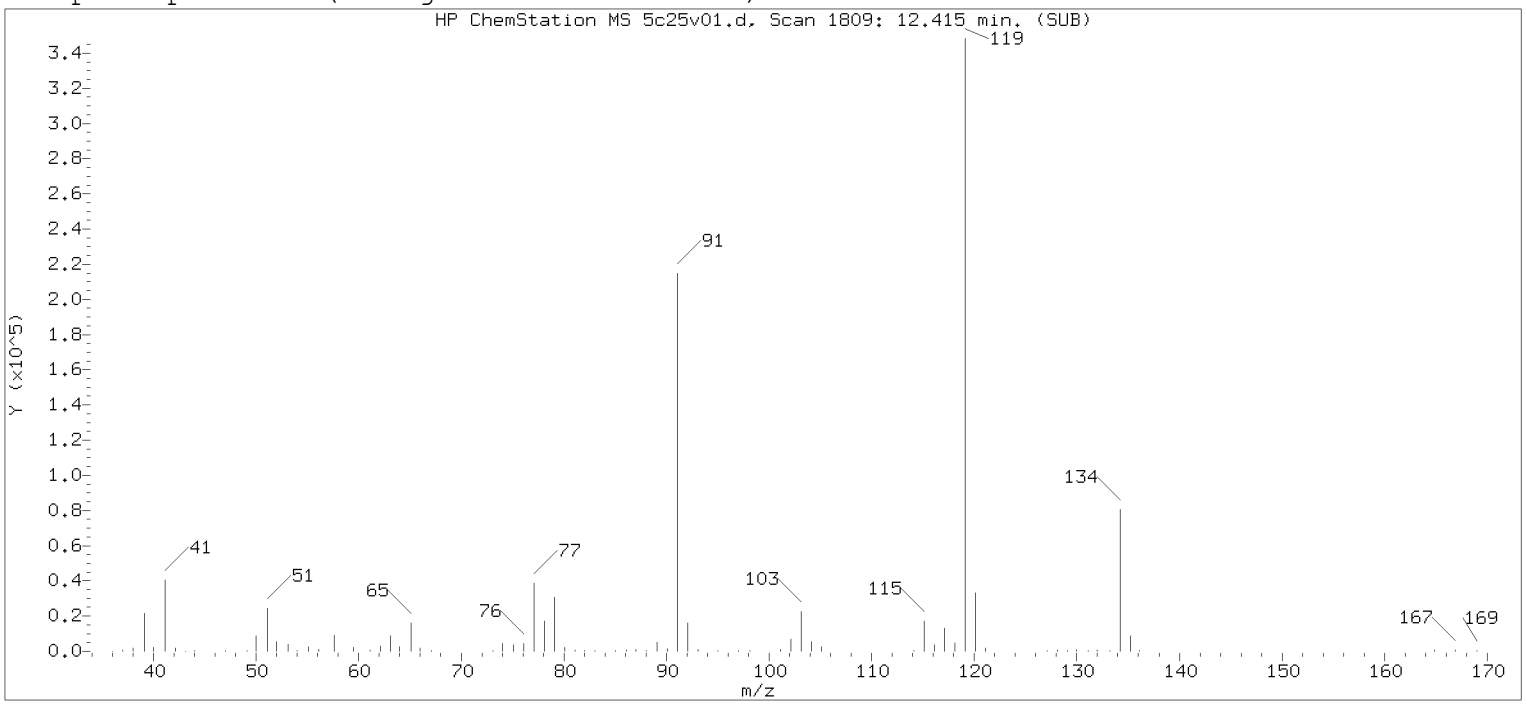
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1809
Retention Time (minutes): 12.415
Quant Ion : 134.00
Area (flag) : 111818M
On-Column Amount (ng) : 20.8389
Integration start scan : 1801 Integration stop scan: 1811
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

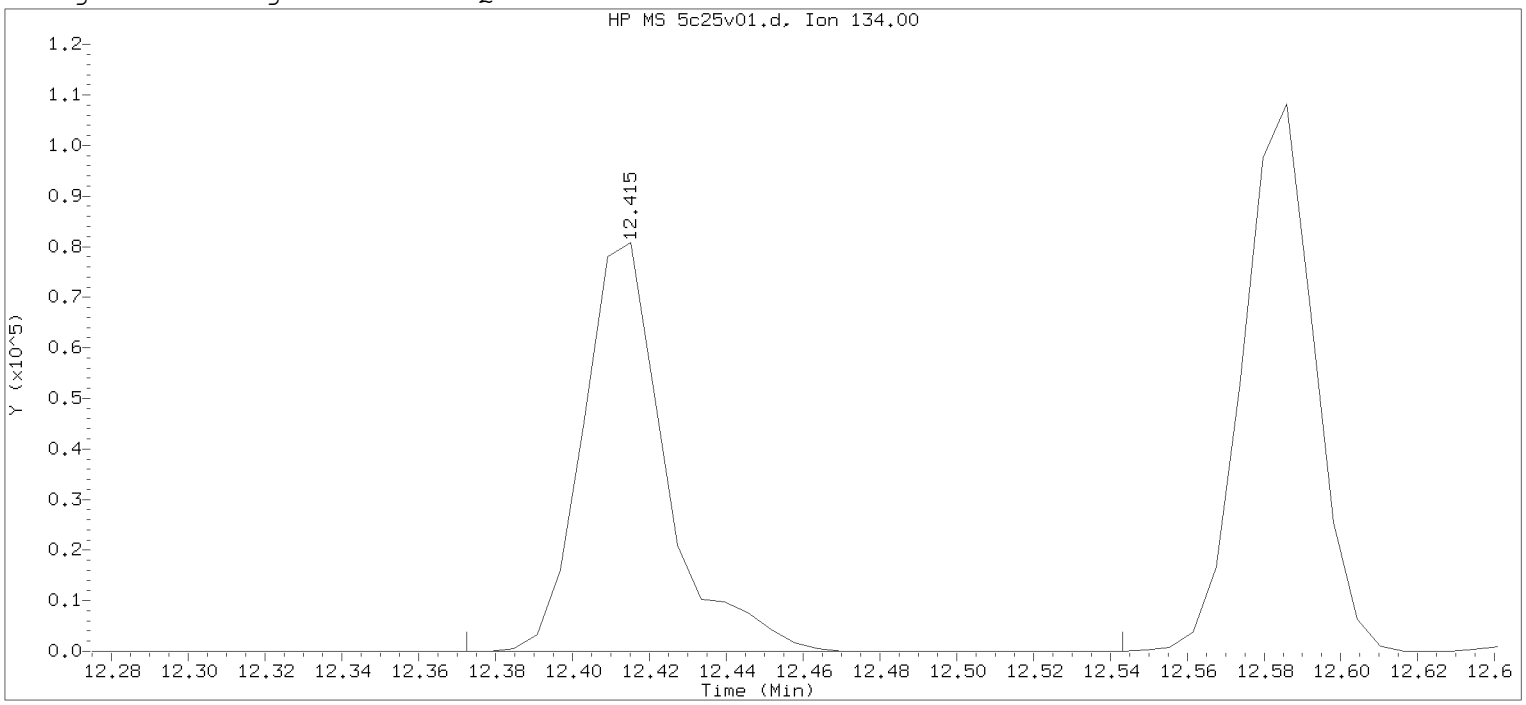
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 03/26/2019 at 11:39.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 03/26/2019 at 11:54.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19mar25i.b/5c25v01.d Instrument ID: HP26285.i
Injection date and time: 25-MAR-2019 15:38 Analyst ID: APR27582

Method used: /chem2/HP26285.i/19mar25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-MAR-2019 21:51
Date, time and analyst ID of latest file update: 25-Mar-2019 21:52 kk10002

Sample Name: LG5ICV Lab Sample ID: LG5ICV

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1809
Retention Time (minutes): 12.415
Quant Ion : 134.00
Area : 120508
On-column Amount (ng) : 22.4583
Integration start scan : 1801 Integration stop scan: 1829
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 03/26/2019 at 11:39.
Target 3.5 esignature user id: jkhowe

Data File: /chem2/HP26285.i/19may17a.b/5y17t01.d

Date : 17-MAY-2019 07:34

Client ID: feb-05-19

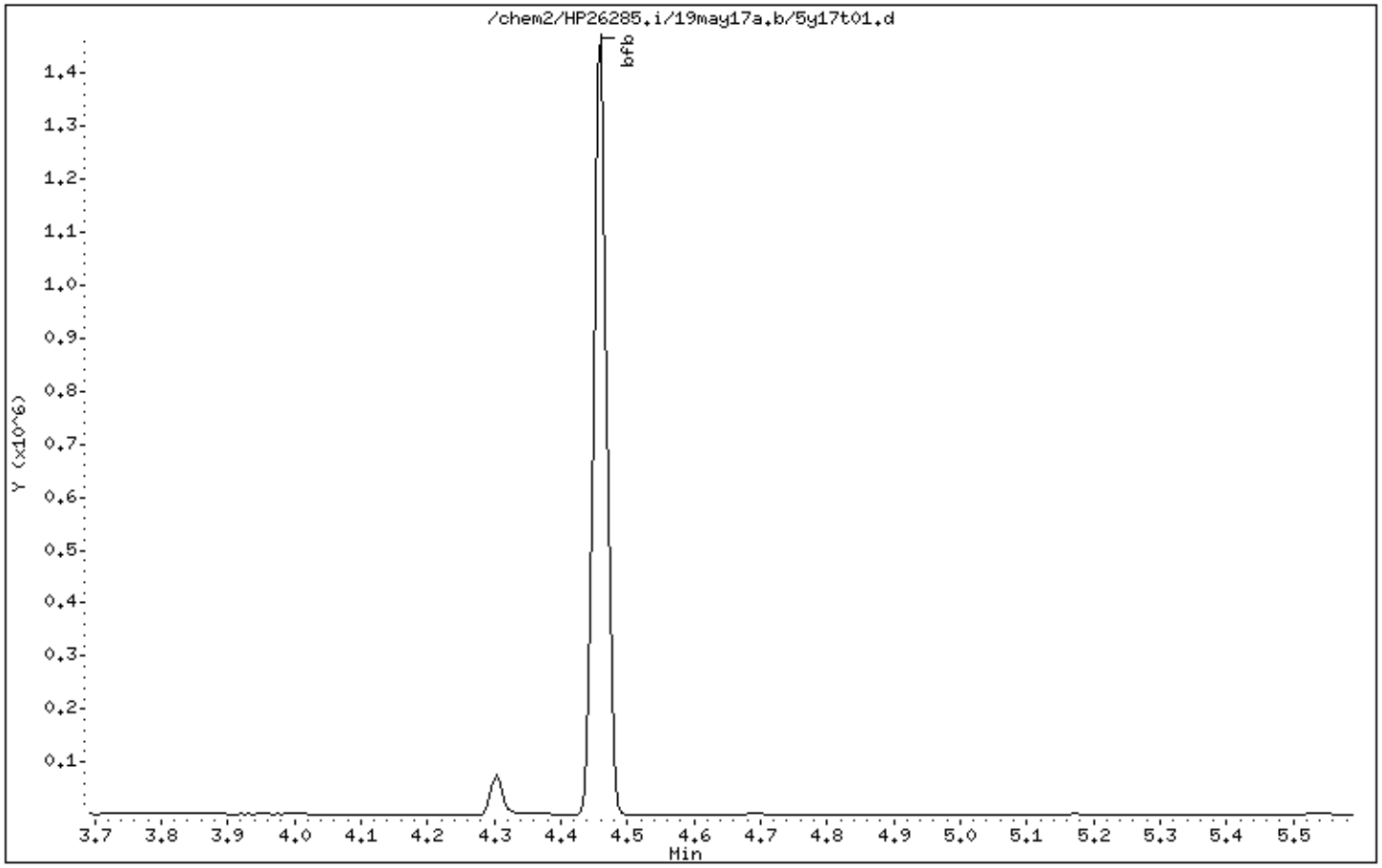
Instrument: HP26285.i

Sample Info: feb-05-19;50NGBFB;1;3;;;;;;

Operator: CLM27445

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Corie L. Mellinger on 05/17/2019 at 09:18.
Target 3.5 esignature user ID: clm27445

Data File: /chem2/HP26285.i/19may17a.b/5y17t01.d

Date : 17-MAY-2019 07:34

Client ID: feb-05-19

Instrument: HP26285.i

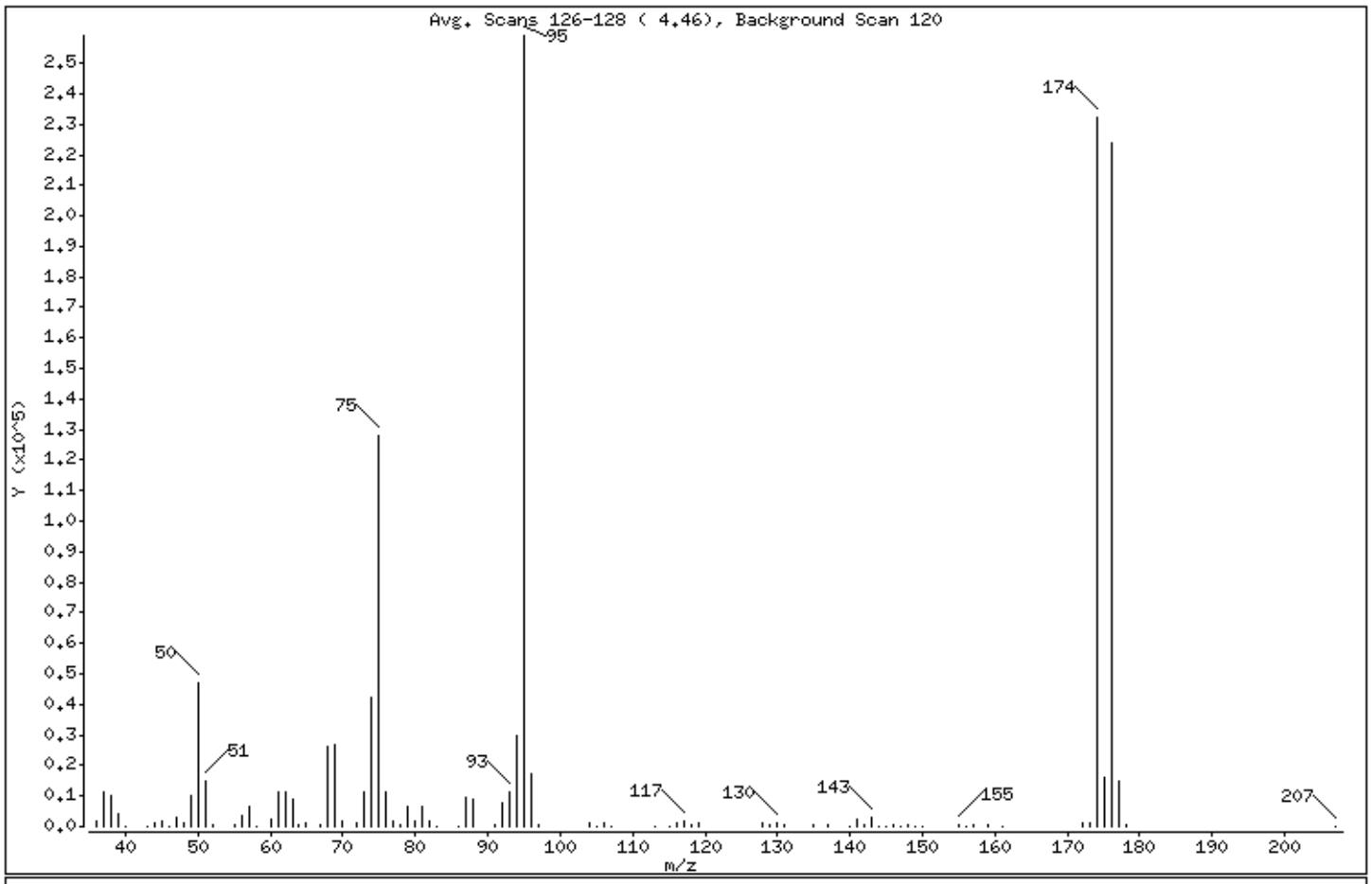
Sample Info: feb-05-19;50NGBFB;1;3;;;;;;

Operator: CLM27445

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	18.13
75	30.00 - 60.00% of mass 95	49.49
96	5.00 - 9.00% of mass 95	6.57
173	Less than 2.00% of mass 174	0.54 (0.61)
174	50.00 - 100.00% of mass 95	89.56
175	5.00 - 9.00% of mass 174	6.14 (6.86)
176	95.00 - 101.00% of mass 174	86.50 (96.58)
177	5.00 - 9.00% of mass 176	5.67 (6.56)

Digitally signed by Corie L. Mellinger on 05/17/2019 at 09:18.
Target 3.5 esignature user ID: clm27445

Data File: /chem2/HP26285.i/19may17a.b/5y17t01.d

Date : 17-MAY-2019 07:34

Client ID: feb-05-19 Instrument: HP26285.i

Sample Info: feb-05-19;50NGBFB;1;3;;;;;;

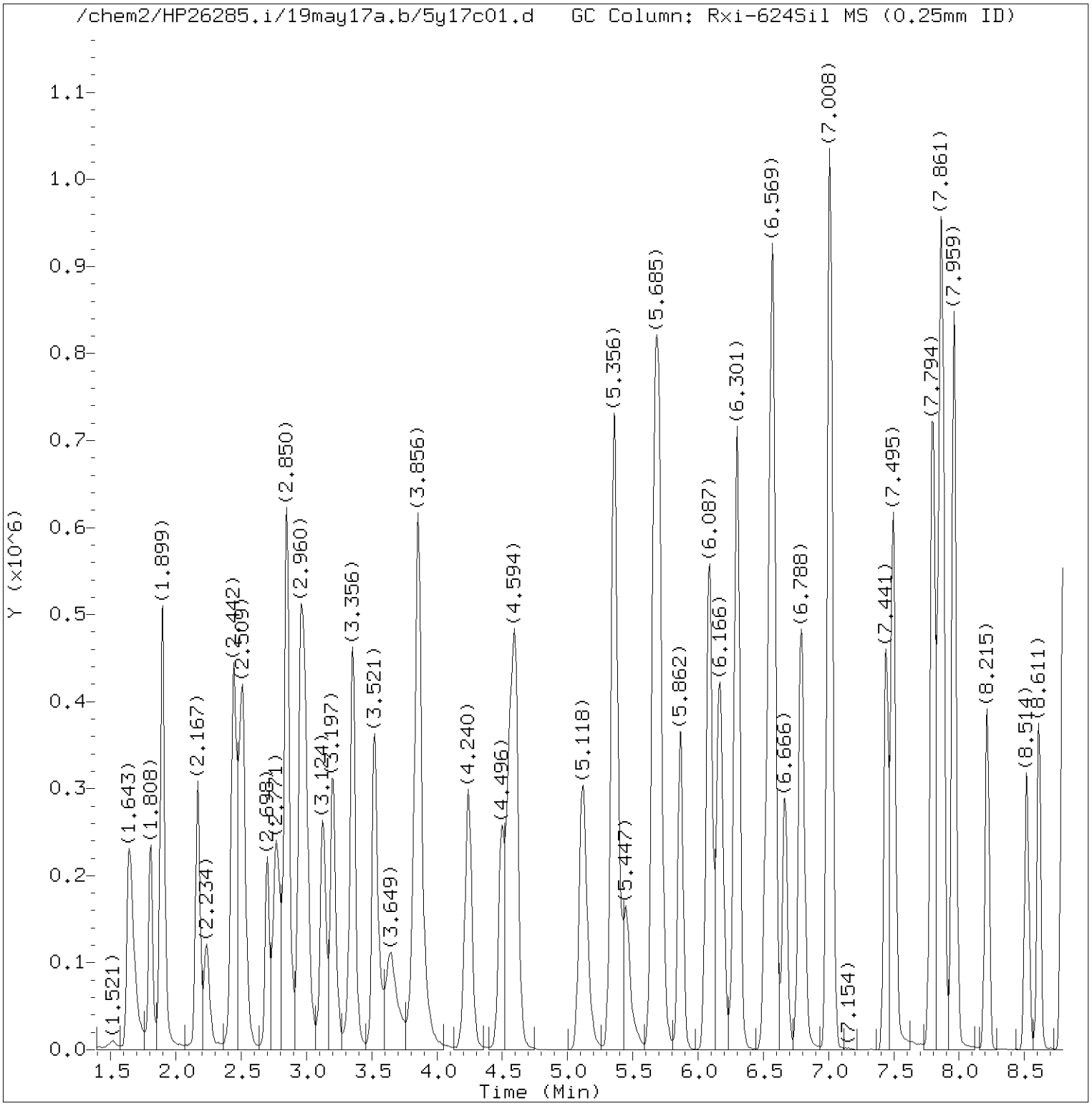
Operator: CLM27445

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: 5y17t01.d
Spectrum: Avg. Scans 126-128 (4.46), Background Scan 120
Location of Maximum: 95.00
Number of points: 91

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2066	64.00	802	93.00	11181	142.00	320
37.00	11445	65.00	1021	94.00	29576	143.00	2865
38.00	10091	67.00	632	95.00	259008	144.00	84
39.00	4333	68.00	25928	96.00	17000	145.00	296
40.00	114	69.00	26760	97.00	516	146.00	419
43.00	88	70.00	1867	104.00	1102	147.00	90
44.00	1453	72.00	1342	105.00	256	148.00	602
45.00	2069	73.00	11170	106.00	1096	149.00	83
46.00	112	74.00	42480	107.00	175	150.00	148
47.00	2719	75.00	128184	113.00	99	155.00	669
48.00	1402	76.00	11112	115.00	248	156.00	87
49.00	9841	77.00	1494	116.00	920	157.00	526
50.00	46960	78.00	820	117.00	1656	159.00	339
51.00	14756	79.00	6415	118.00	886	161.00	259
52.00	561	80.00	2017	119.00	1345	172.00	1337
55.00	739	81.00	6803	128.00	928	173.00	1410
56.00	3742	82.00	1566	129.00	345	174.00	231936
57.00	6361	83.00	107	130.00	1047	175.00	15908
58.00	220	86.00	212	131.00	373	176.00	224000
60.00	2390	87.00	9717	135.00	470	177.00	14686
61.00	11494	88.00	9134	137.00	328	178.00	368
62.00	11578	91.00	888	140.00	100	207.00	108
63.00	8674	92.00	7639	141.00	2657		

Digitally signed by Corie L. Mellinger on 05/17/2019 at 09:18.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

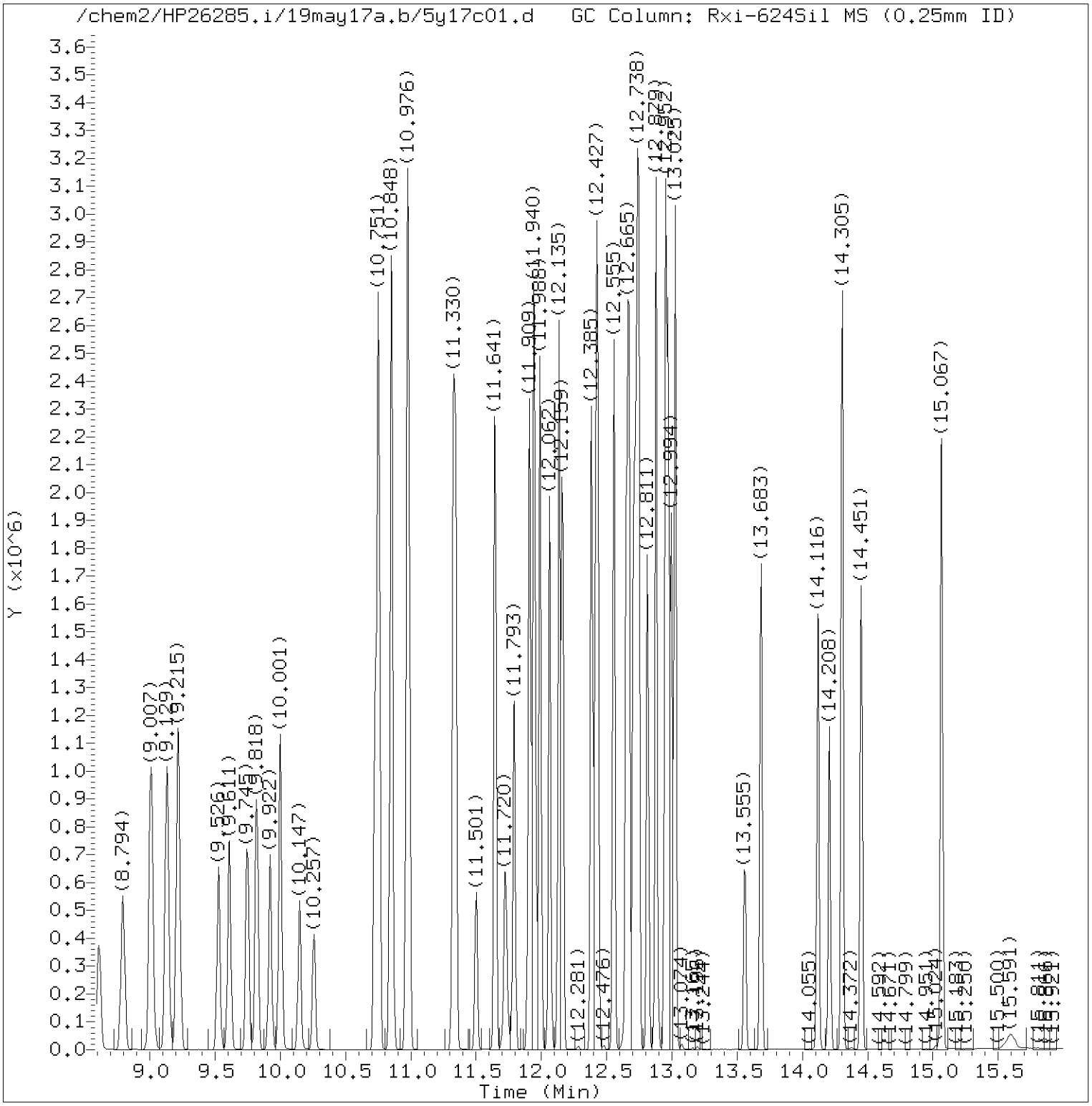
Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17c01.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 08:17 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 17-MAY-2019 08:49
Date, time and analyst ID of latest file update: 17-May-2019 08:49 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Corie L. Mellinger
on 05/17/2019 at 08:52.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17c01.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 08:17 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 17-MAY-2019 08:49
Date, time and analyst ID of latest file update: 17-May-2019 08:49 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Corie L. Mellinger
on 05/17/2019 at 08:52.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17c01.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 08:17 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 17-MAY-2019 08:49
Date, time and analyst ID of latest file update: 17-May-2019 08:49 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.643	85	554942	83.945
4) Chloromethane	(2)	1.808	50	291807	60.740
5) 1,3-Butadiene	(2)	1.893	39	194132	58.161
6) Vinyl Chloride	(2)	1.899	62	297406	63.279
8) Bromomethane	(2)	2.167	94	269770	71.231
9) Chloroethane	(2)	2.234	64	151651	67.310
10) Dichlorofluoromethane	(2)	2.442	67	433335	70.713
12) Trichlorofluoromethane	(2)	2.484	101	609318	93.260
11) n-Pentane	(2)	2.515	43	238493	57.876
14) Ethyl ether	(2)	2.698	59	152320	45.014
15) Freon 123a	(2)	2.771	67	258679	50.942
16) Acrolein	(1)	2.850	56	786679	468.084
17) 1,1-Dichloroethene	(2)	2.954	96	178518	47.042
17) 1,1-Dichloroethene	(2)	2.954	63	99230	53.152
19) Freon 113	(2)	2.978	101	215823	55.906
18) Acetone	(1)	2.990	58	80560	104.835
22) Methyl Iodide	(2)	3.124	142	386391	48.755
21) 2-Propanol	(1)	3.143	45	147993	264.991
23) Carbon Disulfide	(2)	3.204	76	610145	48.427
27) Methyl Acetate	(2)	3.338	43	280078	47.652
25) Allyl Chloride	(2)	3.356	41	310221	45.501
28) Methylene Chloride	(2)	3.521	84	213573	49.550
29)*t-Butyl alcohol-d10	(1)	3.539	65	238075	250.000
30) t-Butyl alcohol	(1)	3.649	59	293473	266.458
31) Acrylonitrile	(2)	3.819	53	142716	45.938
32) trans-1,2-Dichloroethene	(2)	3.856	96	205715	48.429
33) Methyl Tertiary Butyl Ether	(2)	3.856	73	574402	47.385
34) n-Hexane	(2)	4.240	57	264659	45.039
36) 1,1-Dichloroethane	(2)	4.490	63	381806	50.984
38) di-Isopropyl ether	(2)	4.557	45	606104	44.400
39) 2-Chloro-1,3-butadiene	(2)	4.600	53	343475	51.832
40) Ethyl t-butyl ether	(2)	5.118	59	541230	42.825
44) 2-Butanone	(2)	5.343	43	420938	89.723
42) cis-1,2-Dichloroethene	(2)	5.356	96	234027	48.695
45) 2,2-Dichloropropane	(2)	5.368	77	334745	55.893
47) Propionitrile	(1)	5.447	54	320803	267.796
48) Methacrylonitrile	(2)	5.667	67	372041	121.706
49) Bromochloromethane	(2)	5.697	128	133333	55.443

* = Compound is an internal standard.

Digitally signed by Corie L. Mellinger
on 05/17/2019 at 08:52.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17c01.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 08:17 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 17-MAY-2019 08:49
Date, time and analyst ID of latest file update: 17-May-2019 08:49 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.709	71	117733	96.748
51) Chloroform	(2)	5.862	83	426594	57.449
53) 1,1,1-Trichloroethane	(2)	6.081	97	380969	58.295
52)$Dibromofluoromethane	(2)	6.087	113	222207	56.491
52)$Dibromofluoromethane	(2)	6.087	111	226075	55.993
43) 1,2-Dichloroethene (Total)	(2)		96	439742	97.124
54) Cyclohexane	(2)	6.160	56	334905	44.325
54) Cyclohexane	(2)	6.166	84	301354	46.804
54) Cyclohexane	(2)	6.166	69	105947	45.257
56) Carbon Tetrachloride	(2)	6.288	117	344836	60.975
55) 1,1-Dichloropropene	(2)	6.307	75	304275	50.652
58) Isobutyl Alcohol	(1)	6.526	41	277222	768.579
57)$1,2-Dichloroethane-d4	(2)	6.557	102	47356	51.453
57)$1,2-Dichloroethane-d4	(2)	6.557	65	292484	68.646
57)$1,2-Dichloroethane-d4	(2)	6.557	104	30299	51.658
60) Benzene	(2)	6.575	78	877172	48.067
61) 1,2-Dichloroethane	(2)	6.666	62	354565	65.745
61) 1,2-Dichloroethane	(2)	6.666	98	25304	53.630
65) t-Amyl methyl ether	(2)	6.788	73	569175	44.687
66)*Fluorobenzene	(2)	7.002	96	822007	50.000
67) n-Heptane	(2)	7.020	43	288527	43.544
69) n-Butanol	(1)	7.441	56	422000	1403.186
71) Trichloroethene	(2)	7.495	95	245943	51.969
73) Methylcyclohexane	(2)	7.800	83	409049	52.200
73) Methylcyclohexane	(2)	7.794	98	180660	53.592
74) 1,2-Dichloropropane	(2)	7.843	63	227224	50.233
76) 1,4-Dioxane	(1)	7.947	88	60278M	864.050
77) Methyl Methacrylate	(2)	7.959	69	234072	49.567
75) Dibromomethane	(2)	7.959	93	166845	58.317
79) Bromodichloromethane	(2)	8.215	83	320666	60.310
80) 2-Nitropropane	(2)	8.514	41	258089	118.257
81) 2-Chloroethyl Vinyl Ether	(2)	8.611	63	194311	51.472
82) cis-1,3-Dichloropropene	(2)	8.794	75	376190	53.775
83) 4-Methyl-2-pentanone	(2)	9.007	43	853799	88.856
84)$Toluene-d8	(3)	9.129	98	836084	49.301
84)$Toluene-d8	(3)	9.129	100	536169	48.103
89) Toluene	(3)	9.215	92	587271	46.524
90) trans-1,3-Dichloropropene	(3)	9.526	75	367337	53.853

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 05/17/2019 at 08:52.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17c01.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 08:17 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 17-MAY-2019 08:49
Date, time and analyst ID of latest file update: 17-May-2019 08:49 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	9.611	69	390259	47.718
93) 1,1,2-Trichloroethane	(3)	9.745	97	232299	51.441
94) Tetrachloroethene	(3)	9.818	166	278128	48.451
95) 1,3-Dichloropropane	(3)	9.922	76	392489	53.057
97) 2-Hexanone	(3)	10.001	43	728052	81.553
91) 1,3-Dichloropropene (total)	(3)		100	743527	107.627
98) Dibromochloromethane	(3)	10.147	129	272876	59.021
100) 1,2-Dibromoethane	(3)	10.257	107	267598	53.064
101)*Chlorobenzene-d5	(3)	10.727	117	671856	50.000
103) Chlorobenzene	(3)	10.751	112	727852	51.533
102) 1-Chlorohexane	(3)	10.751	91	330632	44.958
104) 1,1,1,2-Tetrachloroethane	(3)	10.848	131	268986	56.418
105) Ethylbenzene	(3)	10.855	91	1264002	51.264
107) m+p-Xylene	(3)	10.976	106	978323	100.609
108) o-Xylene	(3)	11.324	106	472313	49.710
110) Styrene	(3)	11.342	104	804218	51.258
111) Bromoform	(3)	11.501	173	215766	59.120
112) Isopropylbenzene	(3)	11.641	105	1271336	51.523
113) Cyclohexanone	(1)	11.726	55	263549	902.919
109) Xylene (Total)	(3)		106	1450636	150.319
115)$4-Bromofluorobenzene	(3)	11.787	95	359119	54.423
115)$4-Bromofluorobenzene	(3)	11.793	174	312407	54.346
117) 1,1,2,2-Tetrachloroethane	(4)	11.909	83	452289	50.554
116) Bromobenzene	(4)	11.909	156	333129	47.147
119) trans-1,4-Dichloro-2-butene	(4)	11.940	53	392573	139.332
118) 1,2,3-Trichloropropane	(4)	11.952	110	145563	54.004
120) n-Propylbenzene	(4)	11.988	91	1561650	46.963
121) 2-Chlorotoluene	(4)	12.062	126	311099	45.380
123) 1,3,5-Trimethylbenzene	(4)	12.135	105	1129537	47.070
122) 4-Chlorotoluene	(4)	12.159	126	322672	45.847
125) tert-Butylbenzene	(4)	12.385	134	213328M	42.070
126) Pentachloroethane	(4)	12.415	167	227881	55.031
127) 1,2,4-Trimethylbenzene	(4)	12.427	105	1182093	48.036
128) sec-Butylbenzene	(4)	12.555	105	1371544	44.116
130) 1,3-Dichlorobenzene	(4)	12.647	146	636778	47.058
131) p-Isopropyltoluene	(4)	12.671	119	1217770	45.179
132)*1,4-Dichlorobenzene-d4	(4)	12.708	152	409595	50.000
134) 1,4-Dichlorobenzene	(4)	12.726	146	655918	47.827

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 05/17/2019 at 08:52.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17c01.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 08:17 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 17-MAY-2019 08:49
Date, time and analyst ID of latest file update: 17-May-2019 08:49 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	12.744	105	1328661	52.267
136) Benzyl Chloride	(4)	12.811	91	1004985	57.020
137) 1,3-Diethylbenzene	(4)	12.879	119	792334	48.230
138) 1,4-Diethylbenzene	(4)	12.952	119	825065	47.323
140) n-Butylbenzene	(4)	12.970	92	614139	45.169
139) 1,2-Dichlorobenzene	(4)	12.994	146	625236	48.874
141) 1,2-Diethylbenzene	(4)	13.025	119	656404	48.061
142) Diethylbenzene (total)	(4)		100	2273803	143.614
143) 1,2-Dibromo-3-chloropropane	(4)	13.555	75	138511	61.973
145) 1,3,5-Trichlorobenzene	(4)	13.683	180	437998	42.592
147) 1,2,4-Trichlorobenzene	(4)	14.122	180	403974	43.397
148) Hexachlorobutadiene	(4)	14.208	225	176439	40.161
149) Naphthalene	(4)	14.305	128	1630799	51.629
150) 1,2,3-Trichlorobenzene	(4)	14.451	180	410288	46.000
151) 2-Methylnaphthalene	(4)	15.067	142	888234	47.791

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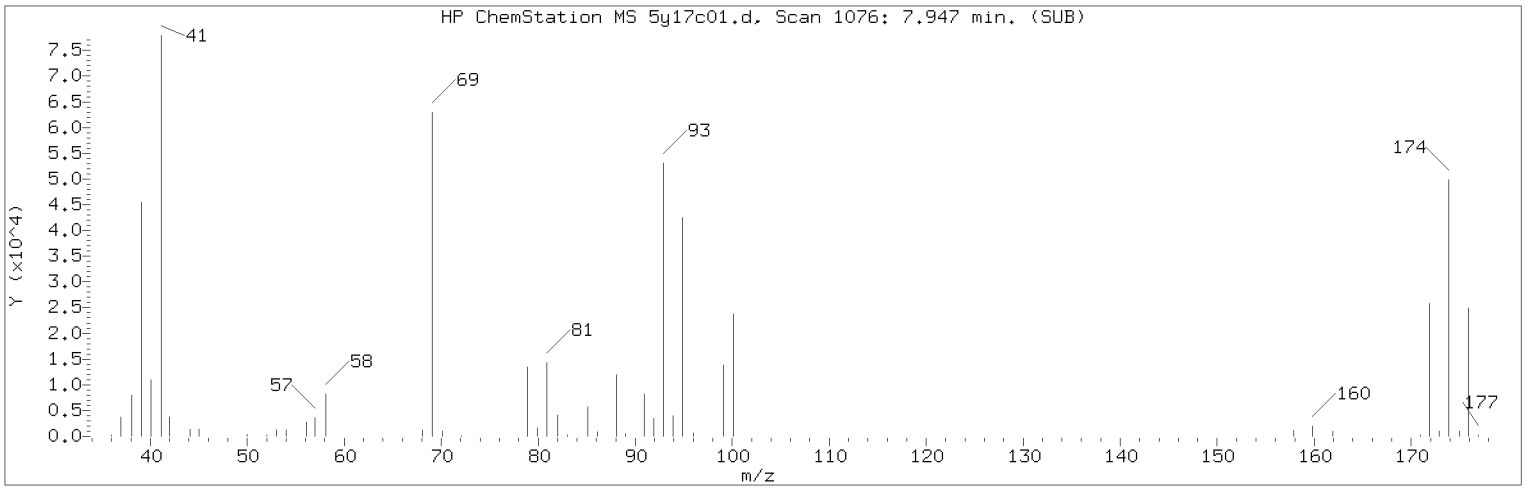
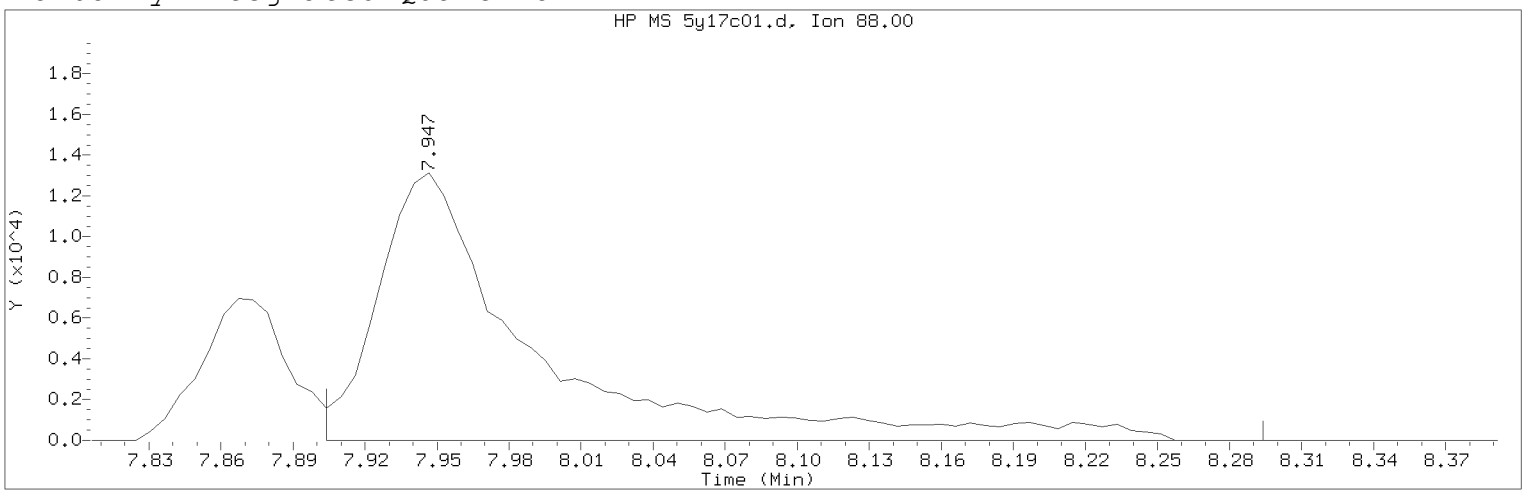
on 05/17/2019 at 08:52.
Target 3.5 esignature user ID: clm27445

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may17a.b/5y17c01.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 08:17 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 17-MAY-2019 08:49
Date, time and analyst ID of latest file update: 17-May-2019 08:49 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

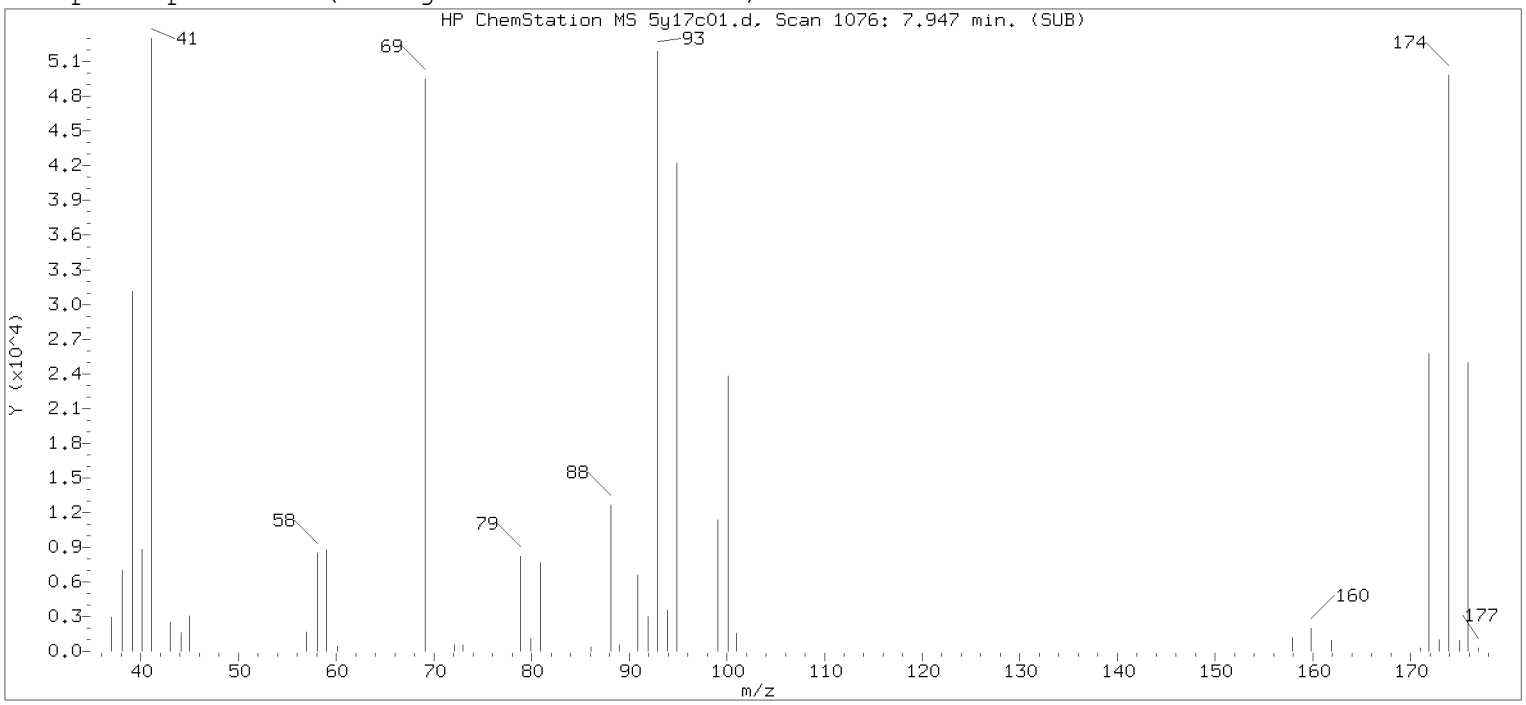
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1076
Retention Time (minutes): 7.947
Quant Ion : 88.00
Area (flag) : 60278M
On-Column Amount (ng) : 864.0505
Integration start scan : 1068 Integration stop scan: 1132
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

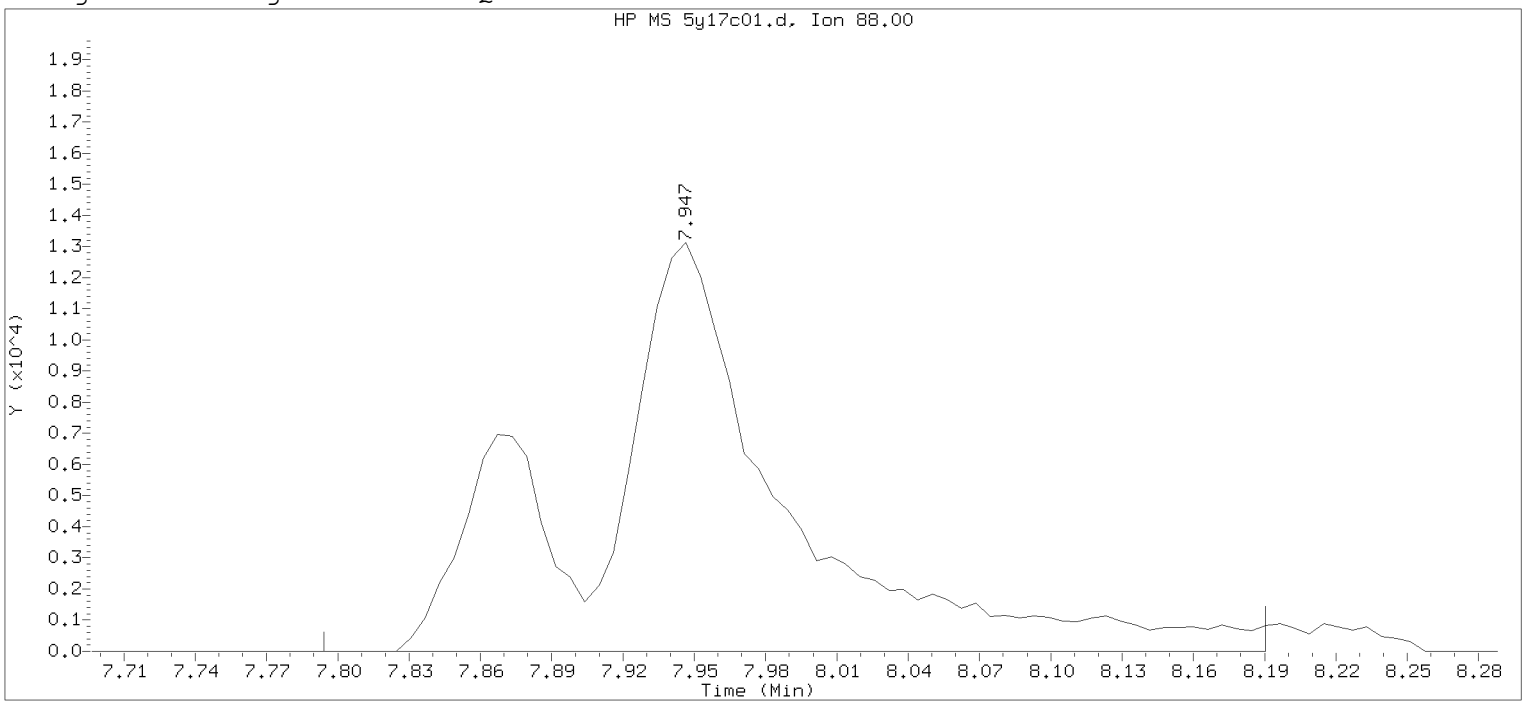
Analyst responsible for change: Digitally signed by Corie L. Mellinger
on 05/17/2019 at 08:52.
Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 15:28.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may17a.b/5y17c01.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 08:17 Analyst ID: CLM27445

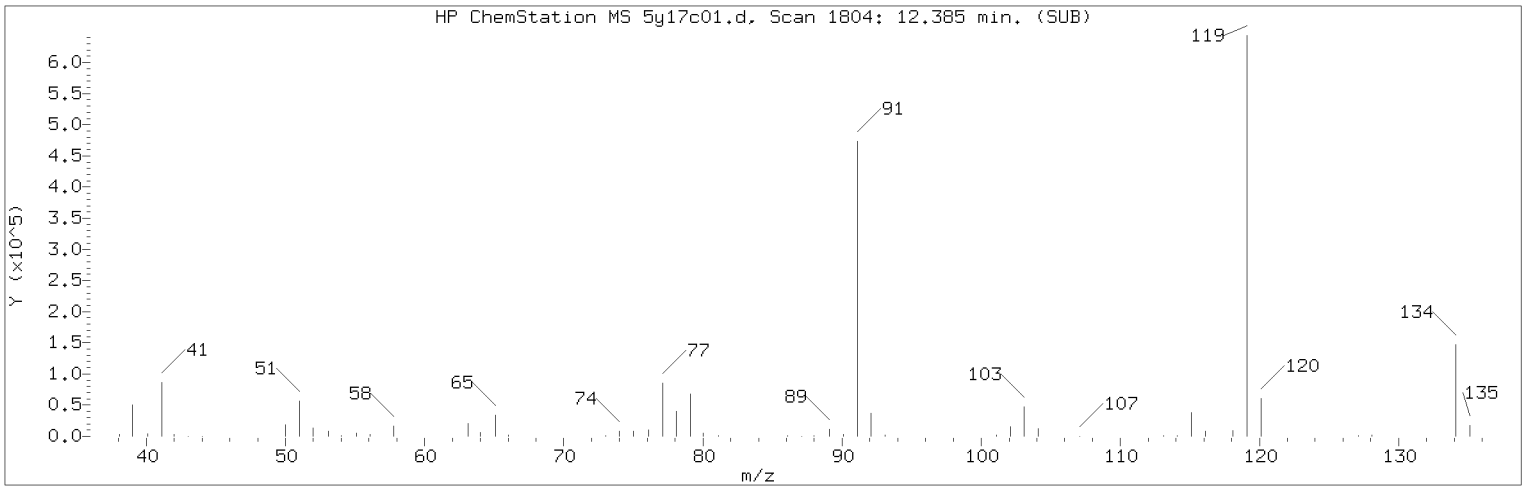
Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 17-MAY-2019 08:36
Date, time and analyst ID of latest file update: 17-May-2019 08:36 Unknown

Sample Name: VSTD050 Lab Sample ID: VSTD050

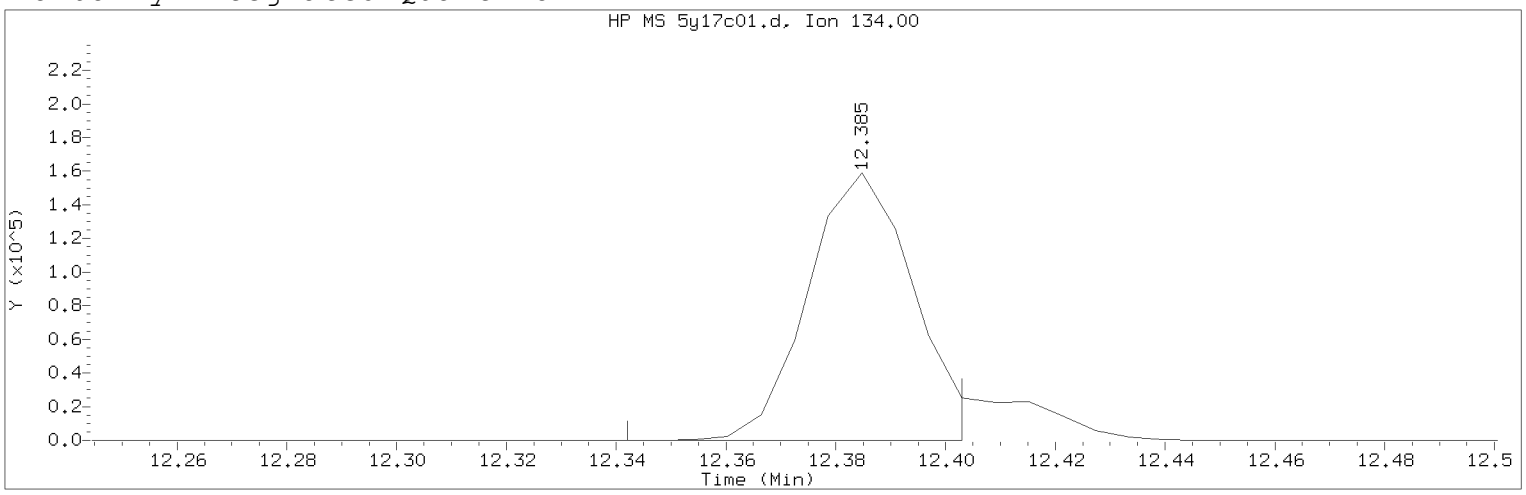
Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1076		
Retention Time (minutes)	: 7.947		
Quant Ion	: 88.00		
Area	: 74839		
On-column Amount (ng)	: 1072.7785		
Integration start scan	: 1050	Integration stop scan:	1115
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Corie L. Mellinger on 05/17/2019 at 08:52.
Target 3.5 esignature user: CLM27445

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may17a.b/5y17c01.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 08:17 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 17-MAY-2019 08:49
Date, time and analyst ID of latest file update: 17-May-2019 08:49 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

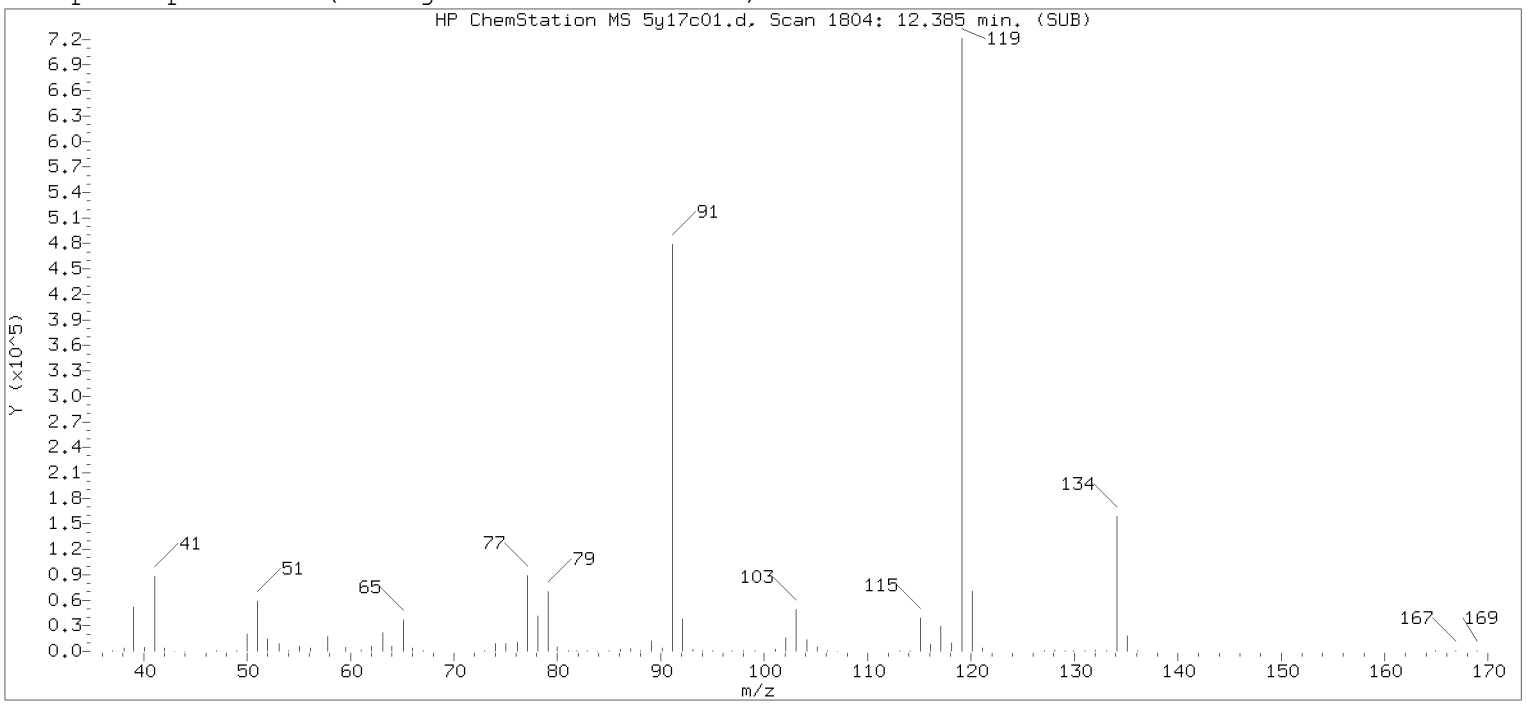
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1804
Retention Time (minutes): 12.385
Quant Ion : 134.00
Area (flag) : 213328M
On-Column Amount (ng) : 42.0696
Integration start scan : 1796 Integration stop scan: 1806
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

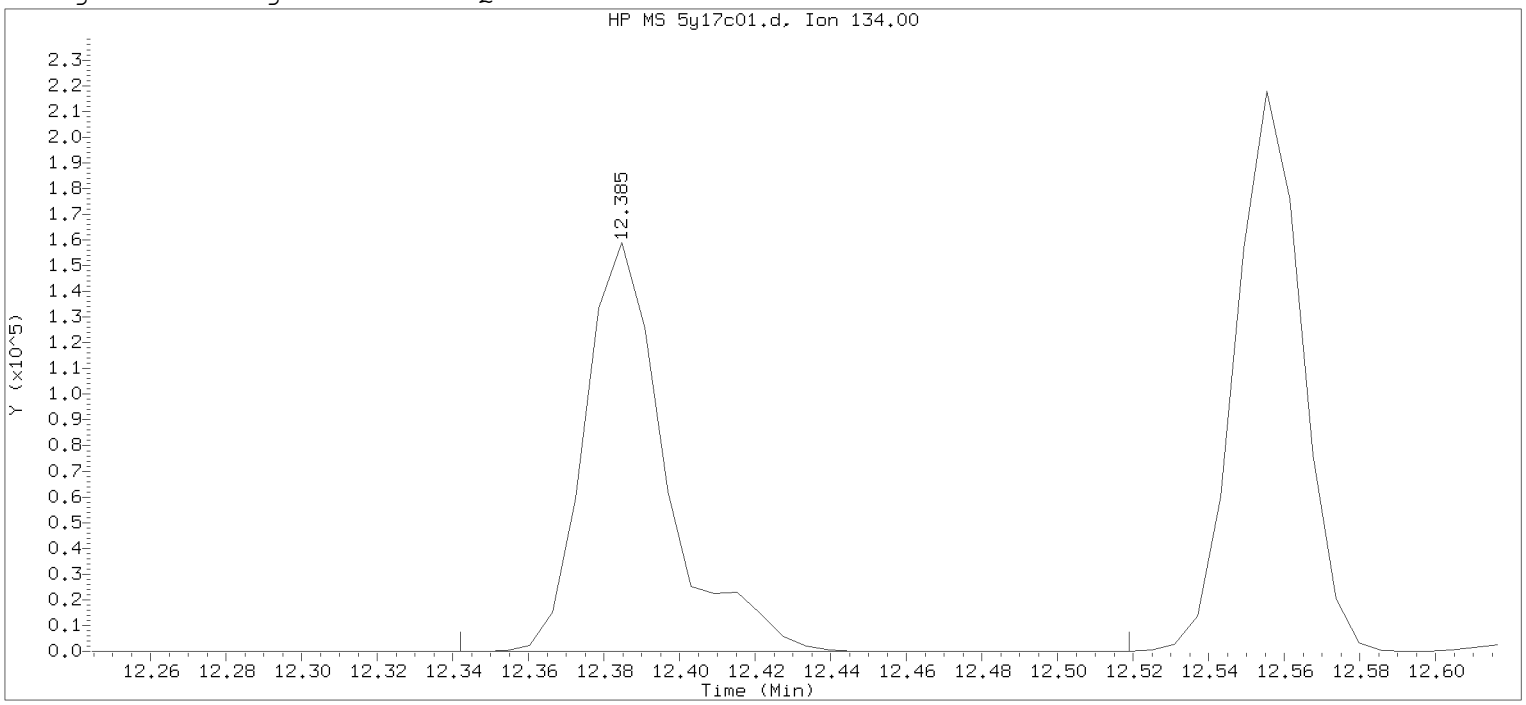
Analyst responsible for change: Digitally signed by Corie L. Mellinger
on 05/17/2019 at 08:52.
Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 15:28.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may17a.b/5y17c01.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 08:17 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 17-MAY-2019 08:36
Date, time and analyst ID of latest file update: 17-May-2019 08:36 Unknown

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1804
Retention Time (minutes): 12.385
Quant Ion : 134.00
Area : 238281
On-column Amount (ng) : 46.9905
Integration start scan : 1796 Integration stop scan: 1825
Y at integration start : 0 Y at integration end: 0

Digitally signed by Corie L. Mellinger on 05/17/2019 at 08:52.
Target 3.5 esignature user: CLM27445

Raw QC Data

Volatiles by GC/MS

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP26285.i/19may17a.b/5y17b01.d
Data file Sample Info. Line: VBLK587;VBLK587;1;3;;;;;;
Date, time and analyst ID of latest file update: 17-May-2019 13:19 clm27445

Injection date and time: **17-MAY-2019 08:59**
Instrument ID: **HP26285.i** Batch: **5191371AA**

Blank Data file reference: **/chem2/HP26285.i/19may17a.b/5y17b01.d**

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 17-MAY-2019 08:49
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may17a.b/5y17c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.551	(-0.012)	355	65	273255	(15)	250.00	
66) Fluorobenzene	7.014	(-0.012)	923	96	897609	(9)	50.00	
101) Chlorobenzene-d5	10.733	(-0.006)	1533	117	703406	(5)	50.00	
132) 1,4-Dichlorobenzene-d4	12.708	(0.000)	1857	152	385082	(-6)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.105	(-0.001)	113	239895	55.851	112%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.569	(0.000)	102	53266	52.999	106%		80 - 120
84) Toluene-d8	(3)	9.135	(0.000)	98	870509	49.029	98%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.793	(0.000)	95	339788	49.184	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)				Not Detected					0.2	1
4) Chloromethane	(2)				Not Detected					0.2	1
5) 1,3-Butadiene	(2)				Not Detected					1	3
6) Vinyl Chloride	(2)				Not Detected					0.2	1
8) Bromomethane	(2)				Not Detected					0.3	1
9) Chloroethane	(2)				Not Detected					0.2	1
11) n-Pentane	(2)				Not Detected					0.4	10
12) Trichlorofluoromethane	(2)				Not Detected					0.2	1
14) Ethyl ether	(2)				Not Detected					0.2	5
15) Freon 123a	(2)				Not Detected					0.4	5
16) Acrolein	(1)				Not Detected					2	100
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
21) 2-Propanol	(1)				Not Detected					18	100
22) Methyl Iodide	(2)				Not Detected					0.2	1
23) Carbon Disulfide	(2)				Not Detected					0.2	5
25) Allyl Chloride	(2)				Not Detected					0.3	5
27) Methyl Acetate	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
30) t-Butyl alcohol	(1)				Not Detected					12	50
31) Acrylonitrile	(2)				Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.2	1
34) n-Hexane	(2)				Not Detected					0.2	5
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
38) di-Isopropyl ether	(2)				Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)				Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)				Not Detected					0.2	2

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP26285.i/19may17a.b/5y17b01.d Injection date and time: **17-MAY-2019 08:59**
Data file Sample Info. Line: VBLK587;VBLK587;1;3;;;;;; Instrument ID: **HP26285.i** Batch: **5191371AA**
Date, time and analyst ID of latest file update: 17-May-2019 13:19 clm27445

Blank Data file reference: **/chem2/HP26285.i/19may17a.b/5y17b01.d**

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 17-MAY-2019 08:49
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may17a.b/5y17c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)				Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					0.2	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					0.2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
73) Methylcyclohexane	(2)				Not Detected					0.2	5
74) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
75) Dibromomethane	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
77) Methyl Methacrylate	(2)				Not Detected					0.2	5
79) Bromodichloromethane	(2)				Not Detected					0.2	1
80) 2-Nitropropane	(2)				Not Detected					0.8	10
81) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
82) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
83) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
89) Toluene	(3)				Not Detected					0.2	1
90) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
91) 1,3-Dichloropropene (total)	(3)				Not Detected					0.2	5
92) Ethyl Methacrylate	(3)				Not Detected					0.2	5
93) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
95) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
97) 2-Hexanone	(3)				Not Detected					0.3	10
98) Dibromochloromethane	(3)				Not Detected					0.2	1
100) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
102) 1-Chlorohexane	(3)				Not Detected					0.3	5
103) Chlorobenzene	(3)				Not Detected					0.2	1
104) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
110) Styrene	(3)				Not Detected					0.2	5
111) Bromoform	(3)				Not Detected					0.2	4
112) Isopropylbenzene	(3)				Not Detected					0.2	5
113) Cyclohexanone	(1)				Not Detected					25	100
116) Bromobenzene	(4)				Not Detected					0.2	5
117) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
118) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
119) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50
120) n-Propylbenzene	(4)				Not Detected					0.2	5

Digitally signed by Corie L. Mellinger on 05/17/2019 at 13:19. Target 3.5 esignature user ID: clm27445

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP26285.i/19may17a.b/5y17b01.d Injection date and time: **17-MAY-2019 08:59**
Data file Sample Info. Line: VBLK587;VBLK587;1;3;;;;;; Instrument ID: **HP26285.i** Batch: **5191371AA**
Date, time and analyst ID of latest file update: 17-May-2019 13:19 clm27445

Blank Data file reference: **/chem2/HP26285.i/19may17a.b/5y17b01.d**

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 17-MAY-2019 08:49
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may17a.b/5y17c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

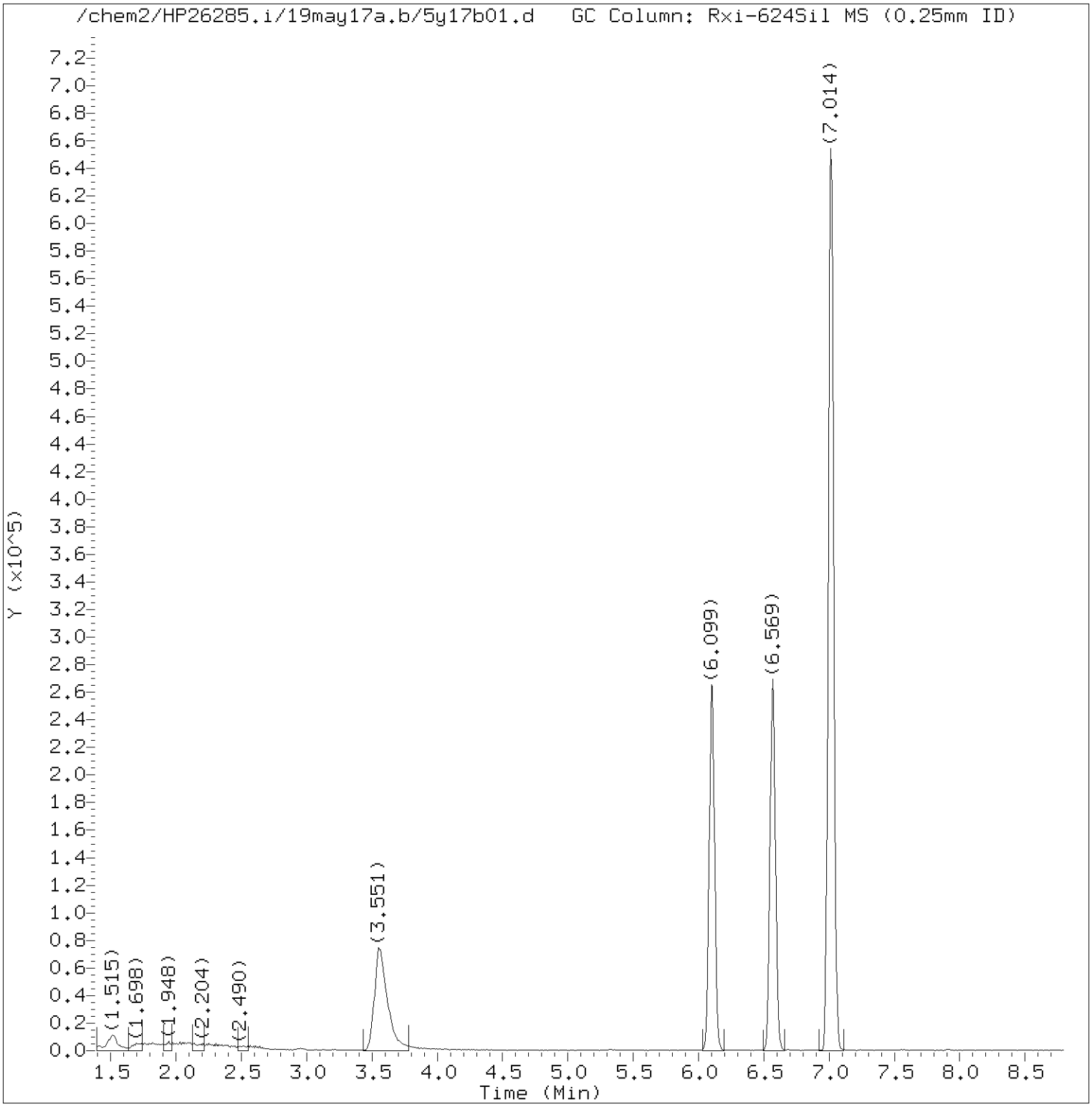
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
121) 2-Chlorotoluene	(4)				Not Detected					0.2	5
122) 4-Chlorotoluene	(4)				Not Detected					0.2	5
123) 1,3,5-Trimethylbenzene	(4)				Not Detected					0.3	5
125) tert-Butylbenzene	(4)				Not Detected					0.3	5
126) Pentachloroethane	(4)				Not Detected					0.2	5
127) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5
128) sec-Butylbenzene	(4)				Not Detected					0.2	5
130) 1,3-Dichlorobenzene	(4)				Not Detected					0.2	5
131) p-Isopropyltoluene	(4)				Not Detected					0.2	5
134) 1,4-Dichlorobenzene	(4)				Not Detected					0.2	5
135) 1,2,3-Trimethylbenzene	(4)				Not Detected					0.3	5
136) Benzyl Chloride	(4)				Not Detected					0.3	5
137) 1,3-Diethylbenzene	(4)				Not Detected					0.2	5
138) 1,4-Diethylbenzene	(4)				Not Detected					0.2	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
140) n-Butylbenzene	(4)				Not Detected					0.2	5
141) 1,2-Diethylbenzene	(4)				Not Detected					0.2	5
142) Diethylbenzene (total)	(4)				Not Detected					0.2	5
143) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.3	5
145) 1,3,5-Trichlorobenzene	(4)				Not Detected					0.2	5
147) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	5
148) Hexachlorobutadiene	(4)				Not Detected					0.7	5
149) Naphthalene	(4)				Not Detected					1	5
150) 1,2,3-Trichlorobenzene	(4)				Not Detected					0.4	5
151) 2-Methylnaphthalene	(4)				Not Detected					0.7	5

Total number of targets = 110

Digitally signed by Corie L. Mellinger on 05/17/2019 at 13:19. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 15:28. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

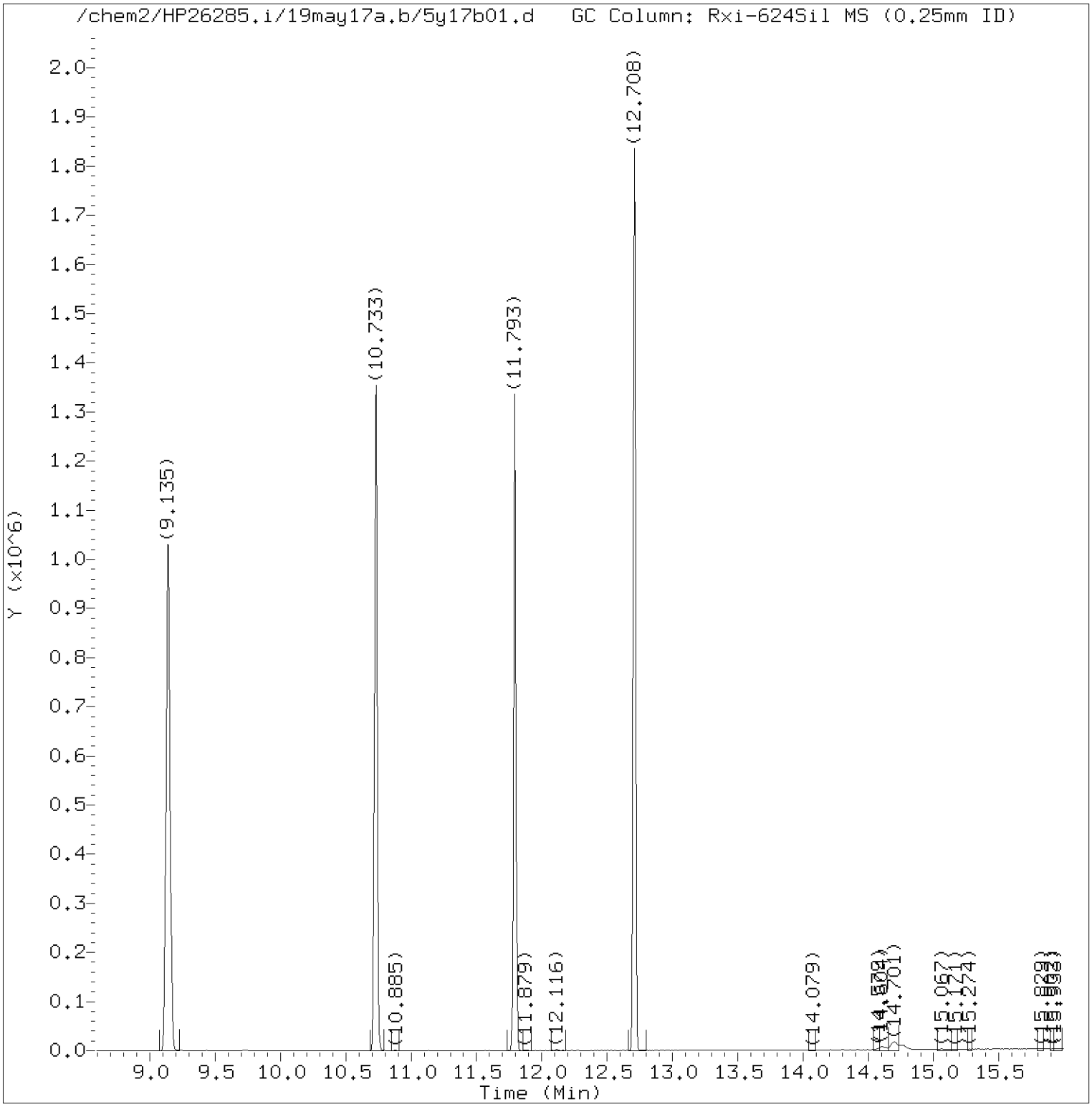
Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17b01.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 08:59 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 17-MAY-2019 08:49
Date, time and analyst ID of latest file update: 17-May-2019 13:19 clm27445

Sample Name: VBLK587 Lab Sample ID: VBLK587

Digitally signed by Corie L. Mellinger
on 05/17/2019 at 13:19.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17b01.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 08:59 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 17-MAY-2019 08:49
Date, time and analyst ID of latest file update: 17-May-2019 13:19 clm27445

Sample Name: VBLK587 Lab Sample ID: VBLK587

Digitally signed by Corie L. Mellinger
on 05/17/2019 at 13:19.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17b01.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 08:59 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 17-MAY-2019 08:49
Date, time and analyst ID of latest file update: 17-May-2019 13:19 clm27445

Sample Name: VBLK587 Lab Sample ID: VBLK587

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.551	65	273255	250.000
52)$Dibromofluoromethane	(2)	6.105	113	239895	55.851
57)$1,2-Dichloroethane-d4	(2)	6.569	102	53266	52.999
66)*Fluorobenzene	(2)	7.014	96	897609	50.000
84)$Toluene-d8	(3)	9.135	98	870509	49.029
101)*Chlorobenzene-d5	(3)	10.733	117	703406	50.000
115)$4-Bromofluorobenzene	(3)	11.793	95	339788	49.184
132)*1,4-Dichlorobenzene-d4	(4)	12.708	152	385082	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/17/2019 at 13:19.
Target 3.5 esignature user ID: clm27445

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKW23

Data file: /chem2/HP09137.i/19may18a.b/wy18b01.d
Data file Sample Info. Line: VBLKW23;VBLKW23;1;3;;;;;;
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Injection date and time: **18-MAY-2019 23:17**
Instrument ID: **HP09137.i** Batch: **W191381AA**

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.744 (-0.006)	596	65	177555 (-6)	250.00	
66) Fluorobenzene	5.032 (0.000)	1309	96	947707 (-8)	50.00	
101) Chlorobenzene-d5	8.161 (0.000)	2284	117	739589 (-5)	50.00	
132) 1,4-Dichlorobenzene-d4	10.045 (-0.003)	2871	152	377751 (-15)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.358 (0.001)	113	213781	48.691	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692 (0.000)	102	57565	49.298	99%		80 - 120
84) Toluene-d8	(3)	6.698 (0.000)	98	928949	50.125	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.165 (0.000)	95	320336	43.206	86%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)			Not Detected					0.2	1
4) Chloromethane	(2)			Not Detected					0.2	1
5) 1,3-Butadiene	(2)			Not Detected					1	3
6) Vinyl Chloride	(2)			Not Detected					0.2	1
8) Bromomethane	(2)			Not Detected					0.3	1
9) Chloroethane	(2)			Not Detected					0.2	1
11) n-Pentane	(2)			Not Detected					0.4	10
12) Trichlorofluoromethane	(2)			Not Detected					0.2	1
13) Ethanol	(1)			Not Detected					280	750
15) Freon 123a	(2)			Not Detected					0.4	5
16) Acrolein	(1)			Not Detected					2	100
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
21) 2-Propanol	(1)			Not Detected					18	100
22) Methyl Iodide	(2)			Not Detected					0.2	1
23) Carbon Disulfide	(2)			Not Detected					0.2	5
25) Allyl Chloride	(2)			Not Detected					0.3	5
27) Methyl Acetate	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
30) t-Butyl alcohol	(1)			Not Detected					12	50
31) Acrylonitrile	(2)			Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)			Not Detected					0.2	1
34) n-Hexane	(2)			Not Detected					0.2	5
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
38) di-Isopropyl ether	(2)			Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)			Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)			Not Detected					0.2	2

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may18a.b/wy18b01.d Injection date and time: **18-MAY-2019 23:17**
Data file Sample Info. Line: VBLKW23;VBLKW23;1;3;;;;;; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)				Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					0.2	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					0.2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
73) Methylcyclohexane	(2)				Not Detected					0.2	5
74) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
75) Dibromomethane	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
77) Methyl Methacrylate	(2)				Not Detected					0.2	5
79) Bromodichloromethane	(2)				Not Detected					0.2	1
80) 2-Nitropropane	(2)				Not Detected					0.8	10
81) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
82) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
83) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
89) Toluene	(3)				Not Detected					0.2	1
90) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
91) 1,3-Dichloropropene (total)	(3)				Not Detected					0.2	5
92) Ethyl Methacrylate	(3)				Not Detected					0.2	5
93) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
95) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
97) 2-Hexanone	(3)				Not Detected					0.3	10
98) Dibromochloromethane	(3)				Not Detected					0.2	1
100) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
103) Chlorobenzene	(3)				Not Detected					0.2	1
104) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
110) Styrene	(3)				Not Detected					0.2	5
111) Bromoform	(3)				Not Detected					0.2	4
112) Isopropylbenzene	(3)				Not Detected					0.2	5
113) Cyclohexanone	(1)				Not Detected					25	100
116) Bromobenzene	(4)				Not Detected					0.2	5
117) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
118) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
119) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50
120) n-Propylbenzene	(4)				Not Detected					0.2	5
121) 2-Chlorotoluene	(4)				Not Detected					0.2	5

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:42. Target 3.5 esignature user ID: sej02002

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may18a.b/wy18b01.d Injection date and time: **18-MAY-2019 23:17**
Data file Sample Info. Line: VBLKW23;VBLKW23;1;3;;;;;; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

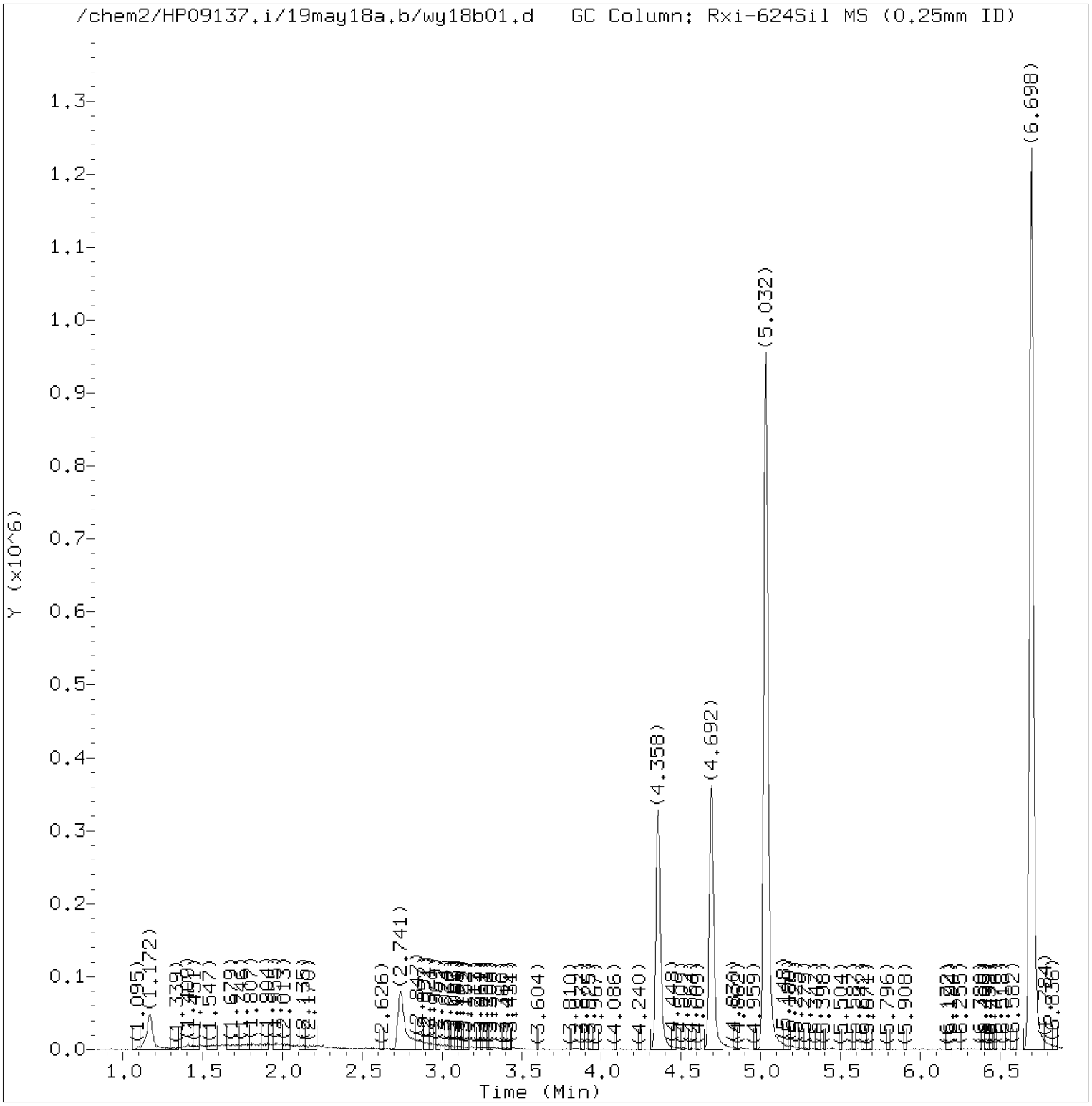
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
122) 4-Chlorotoluene	(4)				Not Detected					0.2	5
123) 1,3,5-Trimethylbenzene	(4)				Not Detected					0.3	5
125) tert-Butylbenzene	(4)				Not Detected					0.3	5
126) Pentachloroethane	(4)				Not Detected					0.2	5
127) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5
128) sec-Butylbenzene	(4)				Not Detected					0.2	5
130) 1,3-Dichlorobenzene	(4)				Not Detected					0.2	5
131) p-Isopropyltoluene	(4)				Not Detected					0.2	5
134) 1,4-Dichlorobenzene	(4)				Not Detected					0.2	5
135) 1,2,3-Trimethylbenzene	(4)				Not Detected					0.3	5
136) Benzyl Chloride	(4)				Not Detected					0.3	5
137) 1,3-Diethylbenzene	(4)				Not Detected					0.2	5
138) 1,4-Diethylbenzene	(4)				Not Detected					0.2	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
140) n-Butylbenzene	(4)				Not Detected					0.2	5
141) 1,2-Diethylbenzene	(4)				Not Detected					0.2	5
142) Diethylbenzene (total)	(4)				Not Detected					0.2	5
143) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.3	5
145) 1,3,5-Trichlorobenzene	(4)				Not Detected					0.2	5
147) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	5
148) Hexachlorobutadiene	(4)				Not Detected					0.7	5
149) Naphthalene	(4)				Not Detected					1	5
150) 1,2,3-Trichlorobenzene	(4)				Not Detected					0.4	5
151) 2-Methylnaphthalene	(4)				Not Detected					0.7	5

Total number of targets = 109

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:42. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

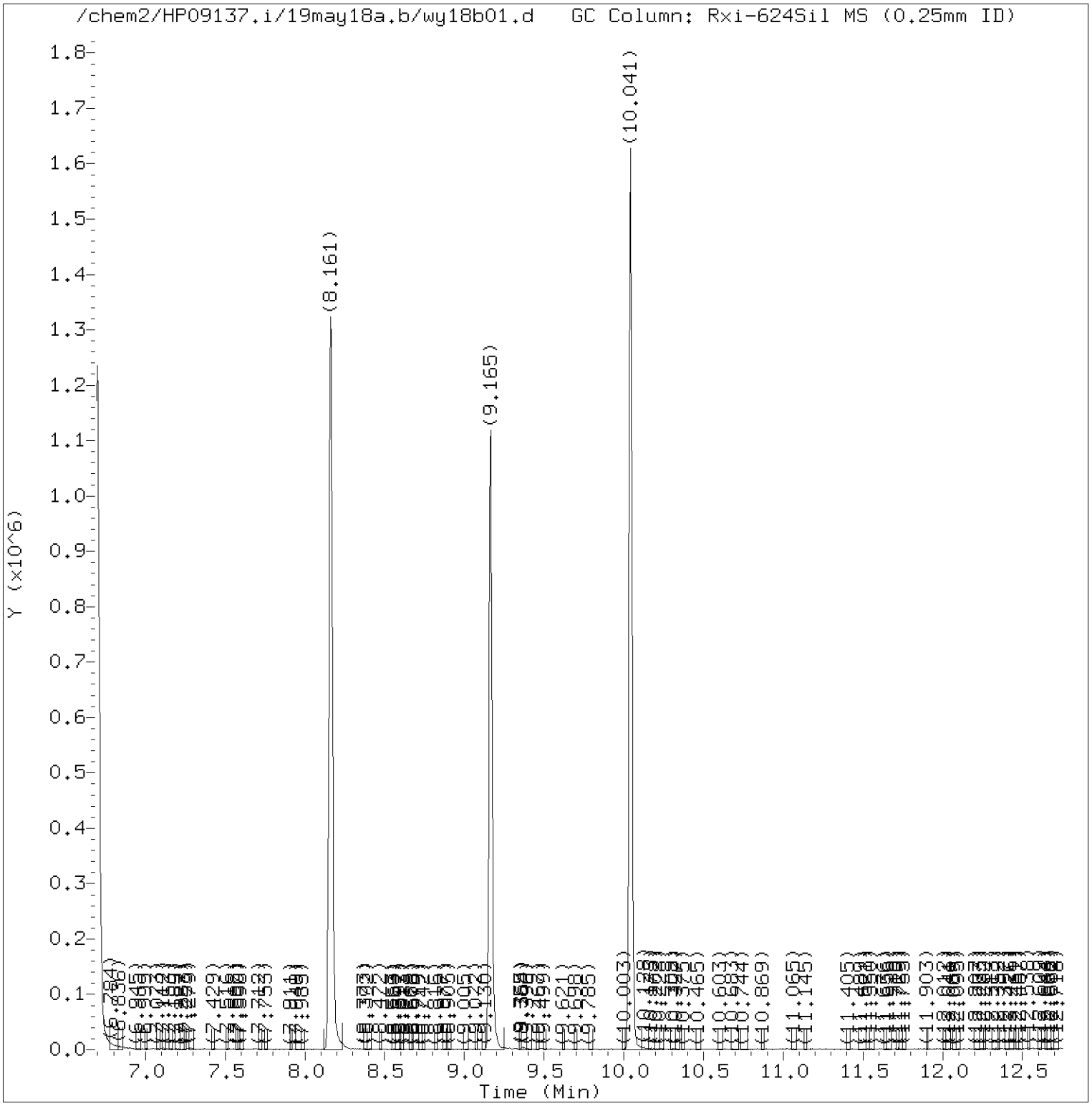
Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18b01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 23:17 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: VBLKW23 Lab Sample ID: VBLKW23

Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:42.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18b01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 23:17 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: VBLKW23 Lab Sample ID: VBLKW23

Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:42.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18b01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 23:17 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: VBLKW23 Lab Sample ID: VBLKW23

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.744	65	177555	250.000
52)$Dibromofluoromethane	(2)	4.358	113	213781	48.691
57)$1,2-Dichloroethane-d4	(2)	4.692	102	57565	49.298
66)*Fluorobenzene	(2)	5.032	96	947707	50.000
84)$Toluene-d8	(3)	6.698	98	928949	50.125
101)*Chlorobenzene-d5	(3)	8.161	117	739589	50.000
115)$4-Bromofluorobenzene	(3)	9.165	95	320336	43.206
132)*1,4-Dichlorobenzene-d4	(4)	10.045	152	377751	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:42.
Target 3.5 esignature user ID: sej02002

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKW24

Data file: /chem2/HP09137.i/19may19a.b/wy19b02.d Injection date and time: **19-MAY-2019 12:20**
Data file Sample Info. Line: VBLKW24;VBLKW24;1;3;;;;;; Instrument ID: **HP09137.i** Batch: **W191381AB**
Date, time and analyst ID of latest file update: 04-Jun-2019 15:08 rrm00219

Blank Data file reference: **Does not exist or can't be found**

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: **18116**
Calibration date and time (Last Method Edit): 04-JUN-2019 15:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may19a.b/wy19c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.741	(-0.006)	595	65	161128	(-14)	250.00	
66) Fluorobenzene	5.032	(0.003)	1309	96	907592	(-6)	50.00	
101) Chlorobenzene-d5	8.164	(-0.003)	2285	117	688339	(-7)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041	(0.000)	2870	152	358292	(-16)	50.00	

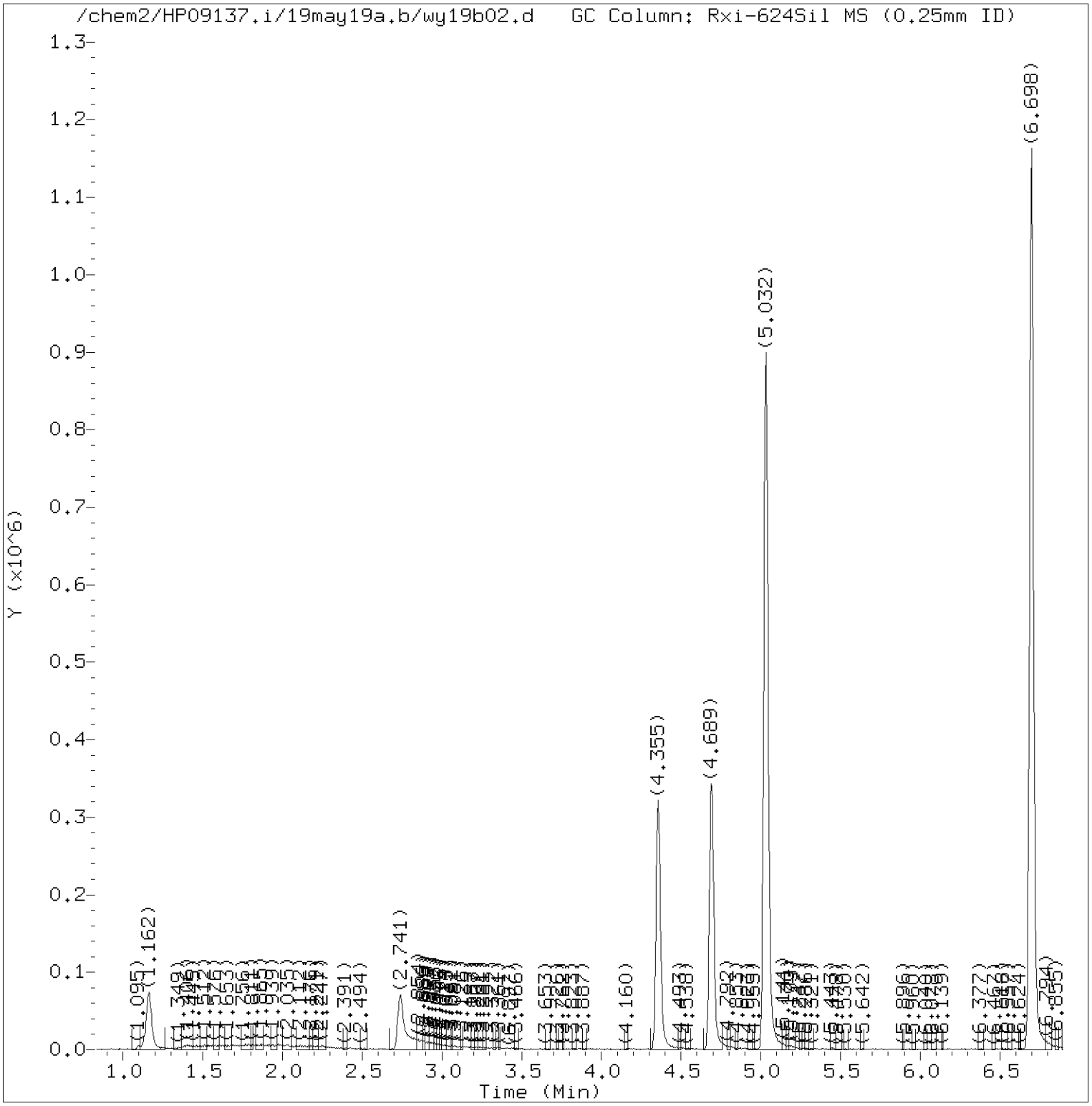
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.355	(0.000)	113	204712	48.686	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692	(-0.001)	102	55555	49.680	99%		80 - 120
84) Toluene-d8	(3)	6.698	(0.001)	98	862842	50.024	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.001)	95	300353	43.527	87%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
9) Chloroethane	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
94) Tetrachloroethene	(3)				Not Detected					0.2	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5

Total number of targets = 12

Digitally signed by Roy R. Mellott on 06/04/2019 at 15:09. Target 3.5 esignature user ID: rrm00219

Secondary review performed and digitally signed by Roy R. Mellott on 06/12/2019 at 17:16. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

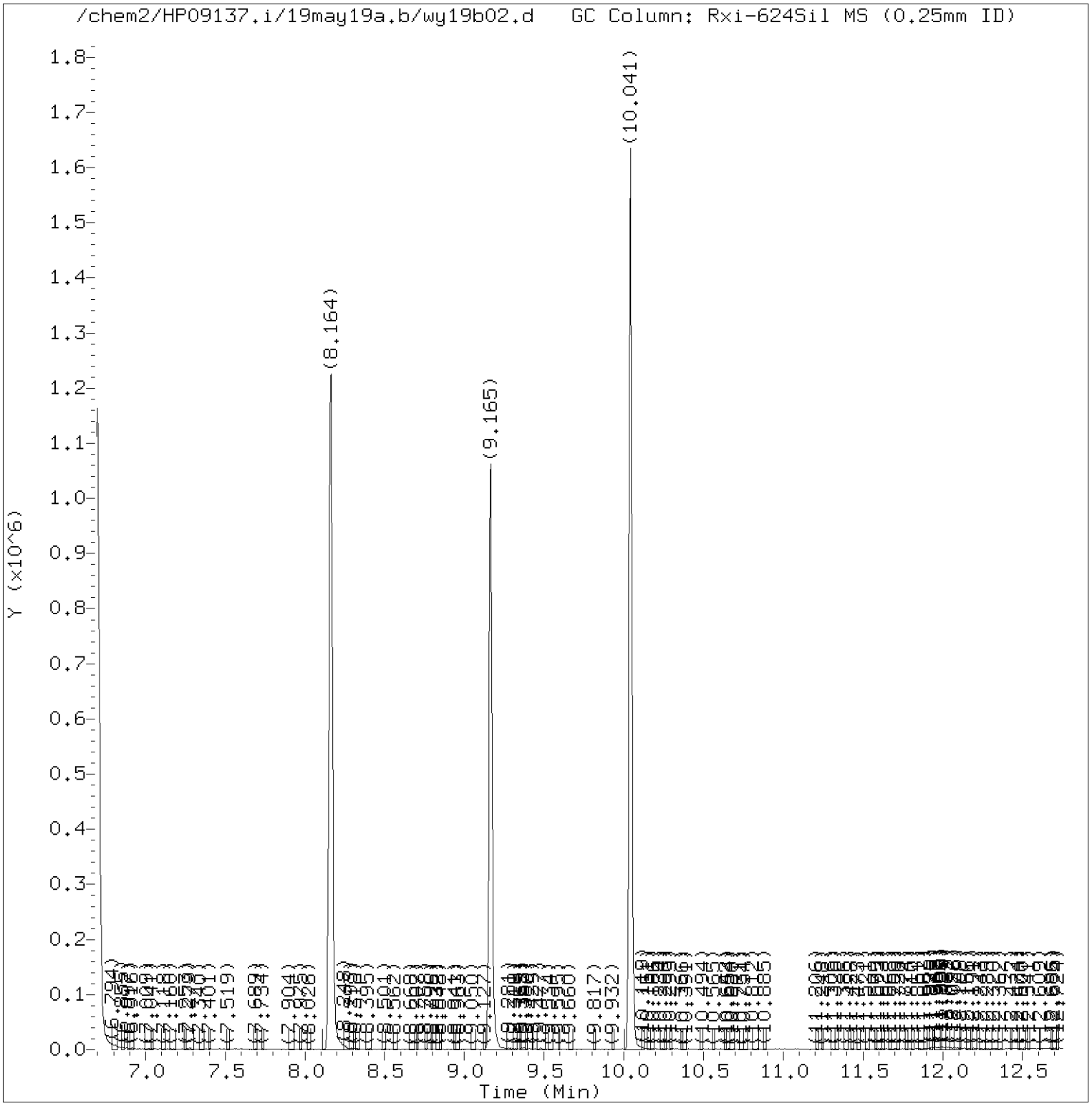
Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19b02.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 12:20 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 04-Jun-2019 15:08 rrm00219

Sample Name: VBLKW24 Lab Sample ID: VBLKW24

Digitally signed by Roy R. Mellott
on 06/04/2019 at 15:09.
Target 3.5 esignature user ID: rrm00219



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19b02.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 12:20 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 04-Jun-2019 15:08 rrm00219

Sample Name: VBLKW24 Lab Sample ID: VBLKW24

Digitally signed by Roy R. Mellott
on 06/04/2019 at 15:09.
Target 3.5 esignature user ID: rrm00219

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19b02.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 12:20 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 04-Jun-2019 15:08 rrm00219

Sample Name: VBLKW24 Lab Sample ID: VBLKW24

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.741	65	161128	250.000
52)$Dibromofluoromethane	(2)	4.355	113	204712	48.686
57)$1,2-Dichloroethane-d4	(2)	4.692	102	55555	49.680
66)*Fluorobenzene	(2)	5.032	96	907592	50.000
84)$Toluene-d8	(3)	6.698	98	862842	50.024
101)*Chlorobenzene-d5	(3)	8.164	117	688339	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	300353	43.527
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	358292	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Roy R. Mellott
on 06/04/2019 at 15:09.
Target 3.5 esignature user ID: rrm00219

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RS005MS

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053369

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP26285.i/19may17a.b/5y17s04.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/17/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	24	
75-35-4	1,1-Dichloroethene	24	
75-34-3	1,1-Dichloroethane	24	
156-59-2	cis-1,2-Dichloroethene	24	
71-55-6	1,1,1-Trichloroethane	30	
79-01-6	Trichloroethene	33	
123-91-1	1,4-Dioxane	650	
127-18-4	Tetrachloroethene	25	
1330-20-7	Xylene (Total)	69	

FORM I VOA

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RS005MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1053369MS

Data file: /chem2/HP26285.i/19may17a.b/5y17s04.d Injection date and time: **17-MAY-2019 11:13**
Data file Sample Info. Line: RS005MS;1053369MS;1;3;MS;JCV89;;;5y17b01; Instrument ID: **HP26285.i** Batch: **5191371AA**
Date, time and analyst ID of latest file update: 25-May-2019 11:05 clm27445

Blank Data file reference: **/chem2/HP26285.i/19may17a.b/5y17b01.d**

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 17-MAY-2019 13:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may17a.b/5y17c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.557	(-0.018)	356	65	231469	(-3)	250.00	
66) Fluorobenzene	7.014	(-0.012)	923	96	859016	(5)	50.00	
101) Chlorobenzene-d5	10.726	(0.000)	1532	117	689368	(3)	50.00	
132) 1,4-Dichlorobenzene-d4	12.708	(0.000)	1857	152	410182	(0)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.099	(0.000)	113	230408	56.052	112%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.569	(0.000)	102	49059	51.007	102%		80 - 120
84) Toluene-d8	(3)	9.141	(-0.001)	98	877900	50.452	101%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.793	(-0.001)	95	364456	53.829	108%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)	1.905	(-0.000)	62	116841	23.789	23.79			0.2	1
17) 1,1-Dichloroethene	(2)	2.960	(-0.000)	96	95999	24.207	24.21			0.2	1
18) Acetone	(1)	3.002	(0.000)	58	124638	166.823	166.82			0.7	20
19) Freon 113	(2)	2.990	(-0.000)	101	121442	30.103	30.10			0.2	10
23) Carbon Disulfide	(2)	3.210	(-0.000)	76	277826	21.101	21.10			0.2	5
28) Methylene Chloride	(2)	3.527	(0.000)	84	101882	22.619	22.62			0.3	1
32) trans-1,2-Dichloroethene	(2)	3.868	(-0.000)	96	102879	23.176	23.18			0.2	1
36) 1,1-Dichloroethane	(2)	4.508	(-0.001)	63	189073	24.160	24.16			0.2	1
42) cis-1,2-Dichloroethene	(2)	5.374	(-0.001)	96	122591	24.409	24.41			0.2	1
44) 2-Butanone	(2)	5.362	(-0.001)	43	647367	132.041	132.04			0.3	10
51) Chloroform	(2)	5.880	(-0.001)	83	201838	26.010	26.01			0.2	1
53) 1,1,1-Trichloroethane	(2)	6.087	(0.000)	97	207096	30.324	30.32			0.3	1
60) Benzene	(2)	6.587	(-0.000)	78	431182	22.610	22.61			0.2	1
61) 1,2-Dichloroethane	(2)	6.678	(-0.000)	62	165248	29.321	29.32			0.3	1
71) Trichloroethene	(2)	7.508	(0.000)	95	162799	32.918	32.92			0.2	1
76) 1,4-Dioxane	(1)	7.953	(0.009)	88	44258M	652.519	652.52			29	250
89) Toluene	(3)	9.221	(-0.000)	92	282876	21.840	21.84			0.2	1
94) Tetrachloroethene	(3)	9.824	(-0.000)	166	147137	24.981	24.98			0.2	1
105) Ethylbenzene	(3)	10.854	(-0.000)	91	599272	23.687	23.69			0.4	1
107) m+p-Xylene	(3)	10.982	(-0.000)	106	467169	46.823	46.82			1	5
108) o-Xylene	(3)	11.330	(-0.000)	106	213182	21.867	21.87			0.4	1
109) Xylene (Total)	(3)			106	680351	68.690	68.69			1	5
139) 1,2-Dichlorobenzene	(4)	12.994	(-0.000)	146	282989	22.089	22.09			0.2	5
149) Naphthalene	(4)	14.305	(-0.000)	128	615396	19.455	19.45			1	5

M = Compound was manually integrated.

Digitally signed by Corie L. Mellinger on 05/25/2019 at 11:10. Target 3.5 esignature user ID: clm27445

RS005MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1053369MS

Data file: /chem2/HP26285.i/19may17a.b/5y17s04.d Injection date and time: **17-MAY-2019 11:13**
Data file Sample Info. Line: RS005MS;1053369MS;1;3;MS;JCV89;;;5y17b01; Instrument ID: **HP26285.i** Batch: **5191371AA**
Date, time and analyst ID of latest file update: 25-May-2019 11:05 clm27445

Blank Data file reference: **/chem2/HP26285.i/19may17a.b/5y17b01.d**

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 17-MAY-2019 13:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may17a.b/5y17c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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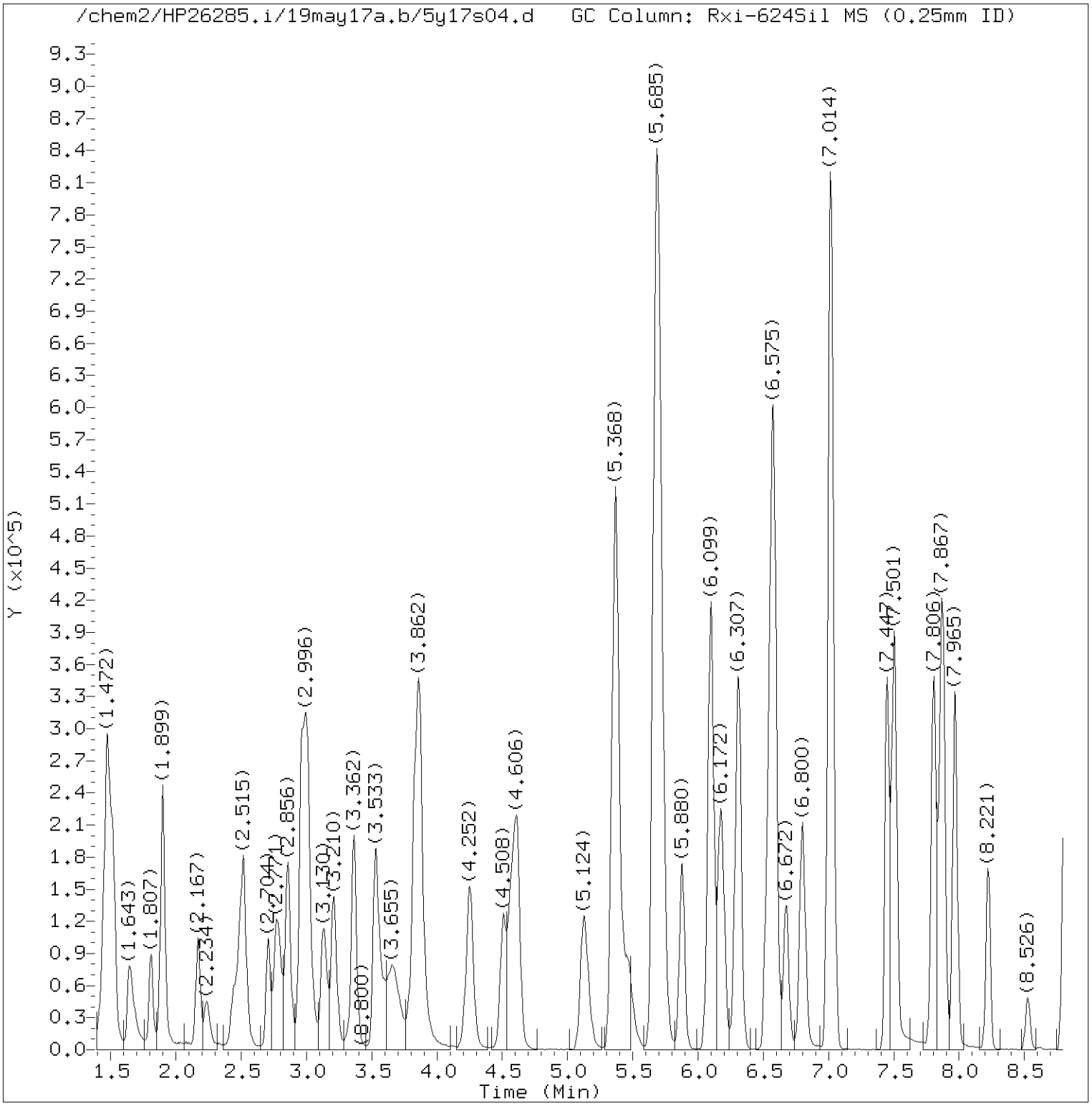
Total number of targets = 24

Digitally signed by Corie L. Mellinger on 05/25/2019 at 11:10. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 14:27. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

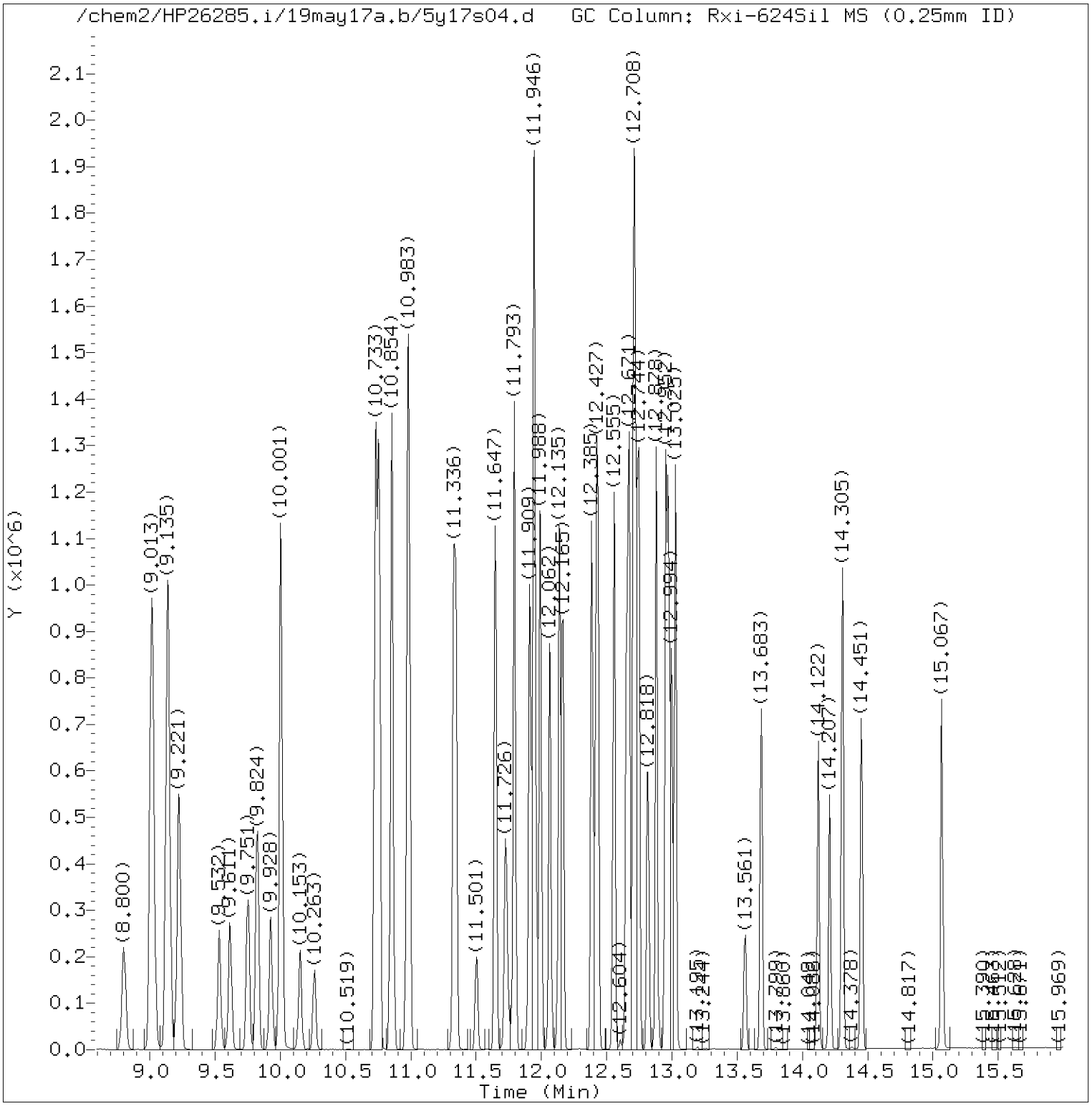
Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s04.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 11:13 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:05 clm27445

Sample Name: RS005MS Lab Sample ID: 1053369MS

Digitally signed by Corie L. Mellinger
on 05/25/2019 at 11:10.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s04.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 11:13 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:05 clm27445

Sample Name: RS005MS Lab Sample ID: 1053369MS

Digitally signed by Corie L. Mellinger
on 05/25/2019 at 11:10.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s04.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 11:13 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:05 clm27445

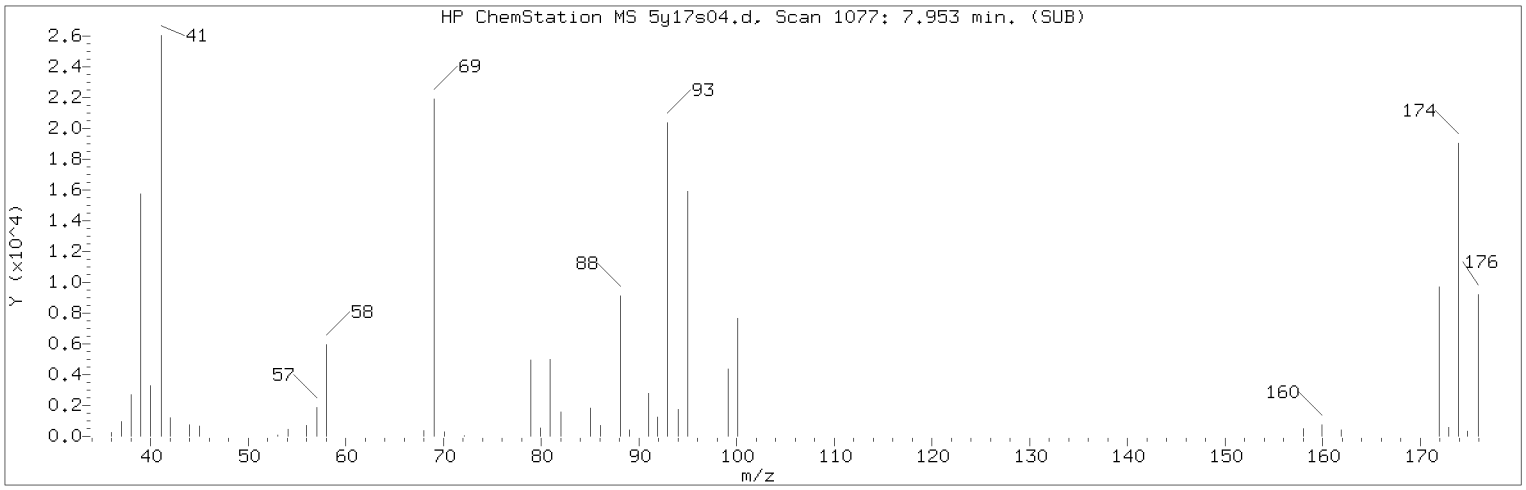
Sample Name: RS005MS Lab Sample ID: 1053369MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	1.905	62	116841	23.789
17) 1,1-Dichloroethene	(2)	2.960	96	95999	24.207
19) Freon 113	(2)	2.990	101	121442	30.103
18) Acetone	(1)	3.002	58	124638	166.823
23) Carbon Disulfide	(2)	3.210	76	277826	21.101
28) Methylene Chloride	(2)	3.527	84	101882	22.619
29)*t-Butyl alcohol-d10	(1)	3.557	65	231469	250.000
32) trans-1,2-Dichloroethene	(2)	3.868	96	102879	23.176
36) 1,1-Dichloroethane	(2)	4.508	63	189073	24.160
44) 2-Butanone	(2)	5.362	43	647367	132.041
42) cis-1,2-Dichloroethene	(2)	5.374	96	122591	24.409
51) Chloroform	(2)	5.880	83	201838	26.010
53) 1,1,1-Trichloroethane	(2)	6.087	97	207096	30.324
52)$Dibromofluoromethane	(2)	6.099	113	230408	56.052
57)$1,2-Dichloroethane-d4	(2)	6.569	102	49059	51.007
60) Benzene	(2)	6.587	78	431182	22.610
61) 1,2-Dichloroethane	(2)	6.678	62	165248	29.321
66)*Fluorobenzene	(2)	7.014	96	859016	50.000
71) Trichloroethene	(2)	7.508	95	162799	32.918
76) 1,4-Dioxane	(1)	7.953	88	44258M	652.519
84)$Toluene-d8	(3)	9.141	98	877900	50.452
89) Toluene	(3)	9.221	92	282876	21.840
94) Tetrachloroethene	(3)	9.824	166	147137	24.981
101)*Chlorobenzene-d5	(3)	10.726	117	689368	50.000
105) Ethylbenzene	(3)	10.854	91	599272	23.687
107) m+p-Xylene	(3)	10.983	106	467169	46.823
108) o-Xylene	(3)	11.330	106	213182	21.867
109) Xylene (Total)	(3)		106	680351	68.690
115)$4-Bromofluorobenzene	(3)	11.793	95	364456	53.829
132)*1,4-Dichlorobenzene-d4	(4)	12.708	152	410182	50.000
139) 1,2-Dichlorobenzene	(4)	12.994	146	282989	22.089
149) Naphthalene	(4)	14.305	128	615396	19.455

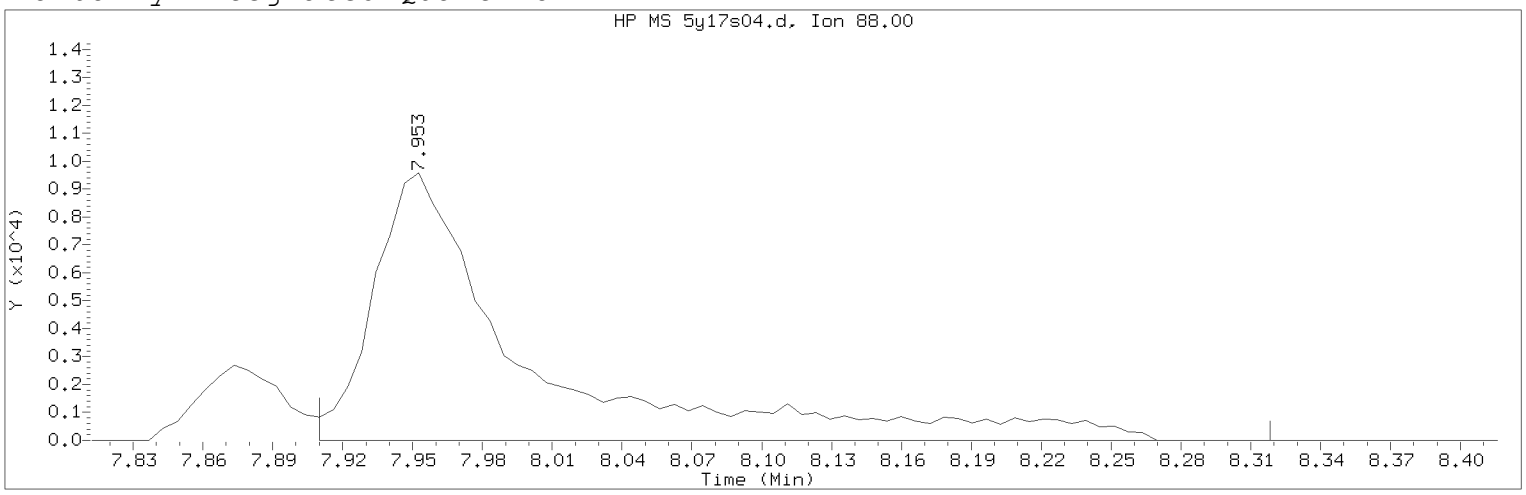
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 05/25/2019 at 11:10.
Target 3.5 esignature user ID: clm27445

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may17a.b/5y17s04.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 11:13 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:05 clm27445

Sample Name: RS005MS Lab Sample ID: 1053369MS

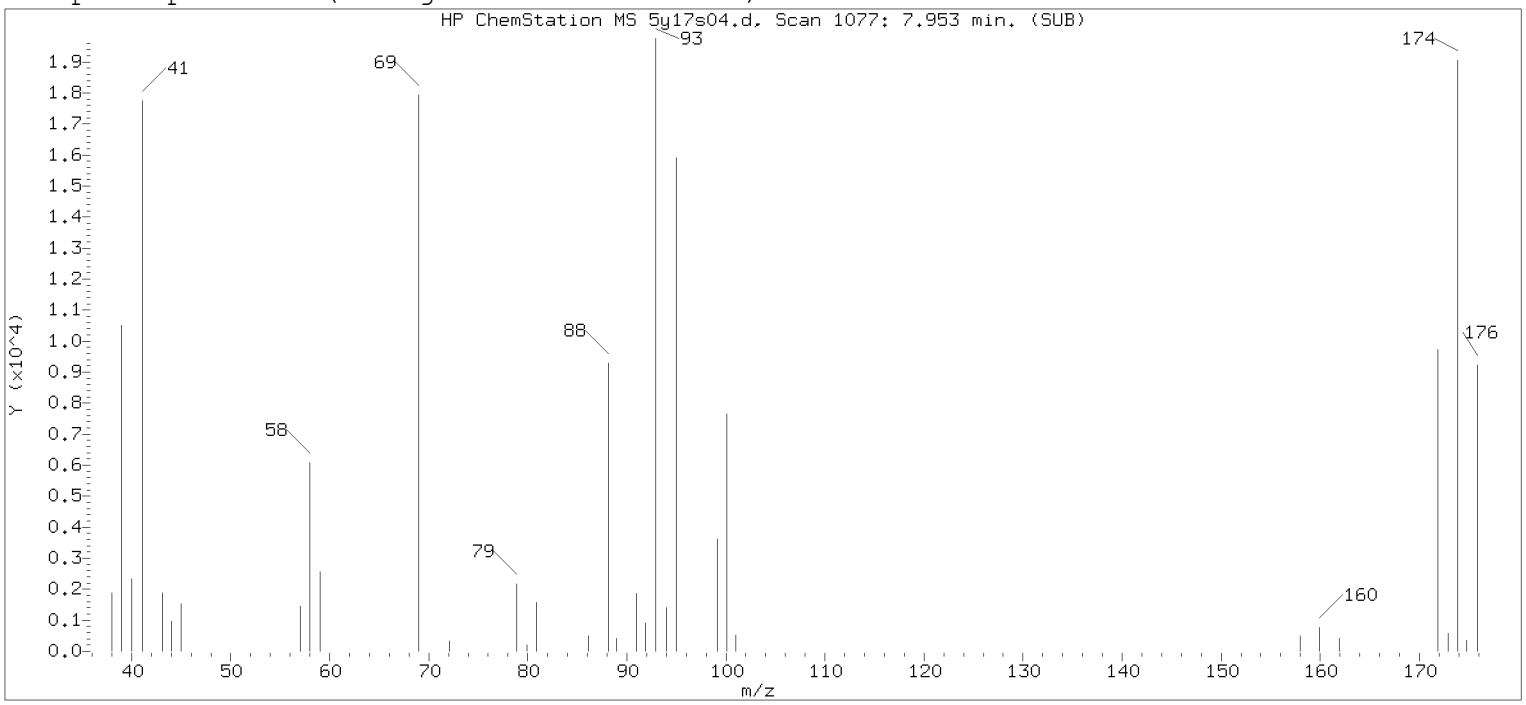
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1077
Retention Time (minutes): 7.953
Quant Ion : 88.00
Area (flag) : 44258M
On-Column Amount (ng) : 652.5188
Integration start scan : 1069 Integration stop scan: 1136
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

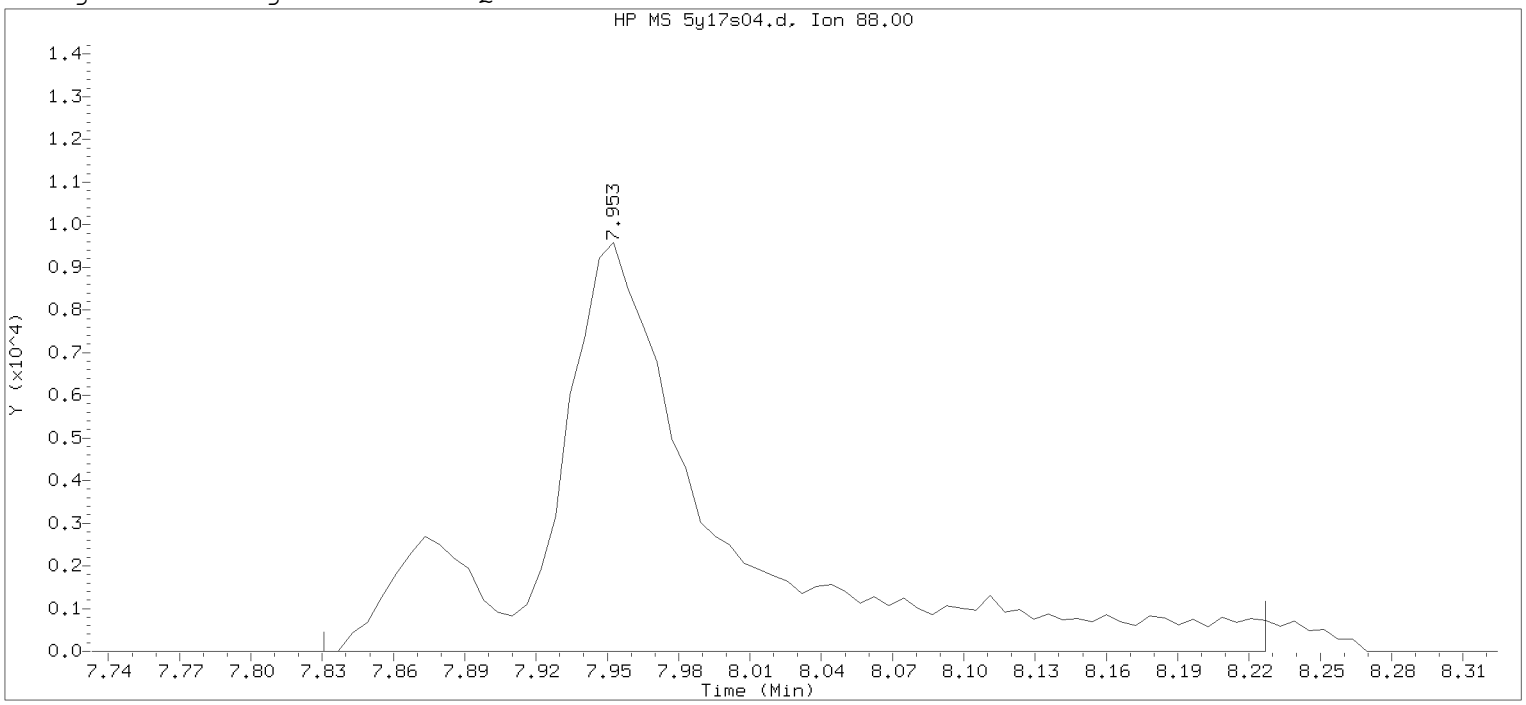
Analyst responsible for change: Digitally signed by Corie L. Mellinger
on 05/25/2019 at 11:10.
Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 14:27.
PARALLAX ID: rrm00219

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may17a.b/5y17s04.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 11:13 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 17-May-2019 13:21 clm27445

Sample Name: RS005MS Lab Sample ID: 1053369MS

Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1077		
Retention Time (minutes)	: 7.953		
Quant Ion	: 88.00		
Area	: 49629		
On-column Amount (ng)	: 731.7184		
Integration start scan	: 1056	Integration stop scan:	1121
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Corie L. Mellinger on 05/25/2019 at 11:10.
Target 3.5 esignature user ID: CLM27445

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RS005MSD

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053370

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP26285.i/19may17a.b/5y17s05.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/17/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L		Q
75-01-4	Vinyl Chloride		24	
75-35-4	1,1-Dichloroethene		24	
75-34-3	1,1-Dichloroethane		24	
156-59-2	cis-1,2-Dichloroethene		24	
71-55-6	1,1,1-Trichloroethane		30	
79-01-6	Trichloroethene		33	
123-91-1	1,4-Dioxane		660	
127-18-4	Tetrachloroethene		25	
1330-20-7	Xylene (Total)		69	

RS005MSD

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1053370MSD

Data file: /chem2/HP26285.i/19may17a.b/5y17s05.d Injection date and time: **17-MAY-2019 11:34**
Data file Sample Info. Line: RS005MSD;1053370MSD;1;3;MSD;JCV89;;;5y17b01; Instrument ID: **HP26285.i** Batch: **5191371AA**
Date, time and analyst ID of latest file update: 25-May-2019 11:06 clm27445

Blank Data file reference: **/chem2/HP26285.i/19may17a.b/5y17b01.d**

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 17-MAY-2019 13:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may17a.b/5y17c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.557	(-0.018)	356	65	267992	(13)	250.00	
66) Fluorobenzene	7.014	(-0.012)	923	96	915064	(11)	50.00	
101) Chlorobenzene-d5	10.733	(-0.006)	1533	117	728088	(8)	50.00	
132) 1,4-Dichlorobenzene-d4	12.714	(-0.006)	1858	152	426065	(4)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.099	(0.000)	113	241251	55.095	110%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.569	(0.000)	102	52133	50.883	102%		80 - 120
84) Toluene-d8	(3)	9.141	(-0.001)	98	927366	50.461	101%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.793	(0.000)	95	380201	53.168	106%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)	1.905	(-0.000)	62	127446	24.359	24.36			0.2	1
17) 1,1-Dichloroethene	(2)	2.960	(-0.000)	96	101307	23.981	23.98			0.2	1
18) Acetone	(1)	3.008	(-0.000)	58	134023	154.938	154.94			0.7	20
19) Freon 113	(2)	2.990	(-0.000)	101	125909	29.298	29.30			0.2	10
23) Carbon Disulfide	(2)	3.210	(-0.000)	76	295432	21.064	21.06			0.2	5
28) Methylene Chloride	(2)	3.533	(-0.000)	84	108209	22.552	22.55			0.3	1
32) trans-1,2-Dichloroethene	(2)	3.868	(-0.000)	96	109156	23.084	23.08			0.2	1
36) 1,1-Dichloroethane	(2)	4.508	(-0.001)	63	200895	24.098	24.10			0.2	1
42) cis-1,2-Dichloroethene	(2)	5.374	(-0.001)	96	130558	24.403	24.40			0.2	1
44) 2-Butanone	(2)	5.362	(-0.001)	43	707861	135.537	135.54			0.3	10
51) Chloroform	(2)	5.880	(-0.001)	83	213579	25.838	25.84			0.2	1
53) 1,1,1-Trichloroethane	(2)	6.093	(-0.000)	97	217137	29.847	29.85			0.3	1
60) Benzene	(2)	6.587	(-0.000)	78	455703	22.432	22.43			0.2	1
61) 1,2-Dichloroethane	(2)	6.678	(-0.000)	62	170417	28.386	28.39			0.3	1
71) Trichloroethene	(2)	7.508	(0.000)	95	171319	32.519	32.52			0.2	1
76) 1,4-Dioxane	(1)	7.953	(0.009)	88	51500M	655.812	655.81			29	250
89) Toluene	(3)	9.227	(-0.000)	92	303586	22.193	22.19			0.2	1
94) Tetrachloroethene	(3)	9.824	(-0.000)	166	154190	24.786	24.79			0.2	1
105) Ethylbenzene	(3)	10.854	(0.000)	91	627124	23.470	23.47			0.4	1
107) m+p-Xylene	(3)	10.982	(0.000)	106	490797	46.575	46.57			1	5
108) o-Xylene	(3)	11.330	(0.000)	106	230175	22.355	22.35			0.4	1
109) Xylene (Total)	(3)			106	720972	68.929	68.93			1	5
139) 1,2-Dichlorobenzene	(4)	13.000	(0.000)	146	291356	21.894	21.89			0.2	5
149) Naphthalene	(4)	14.305	(0.000)	128	657923	20.024	20.02			1	5

M = Compound was manually integrated.

Digitally signed by Corie L. Mellinger on 05/25/2019 at 11:11. Target 3.5 esignature user ID: clm27445

Data file: /chem2/HP26285.i/19may17a.b/5y17s05.d Injection date and time: **17-MAY-2019 11:34**
Data file Sample Info. Line: RS005MSD;1053370MSD;1;3;MSD;JCV89;;;5y17b01; Instrument ID: **HP26285.i** Batch: **5191371AA**
Date, time and analyst ID of latest file update: 25-May-2019 11:06 clm27445

Blank Data file reference: **/chem2/HP26285.i/19may17a.b/5y17b01.d**

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 17-MAY-2019 13:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may17a.b/5y17c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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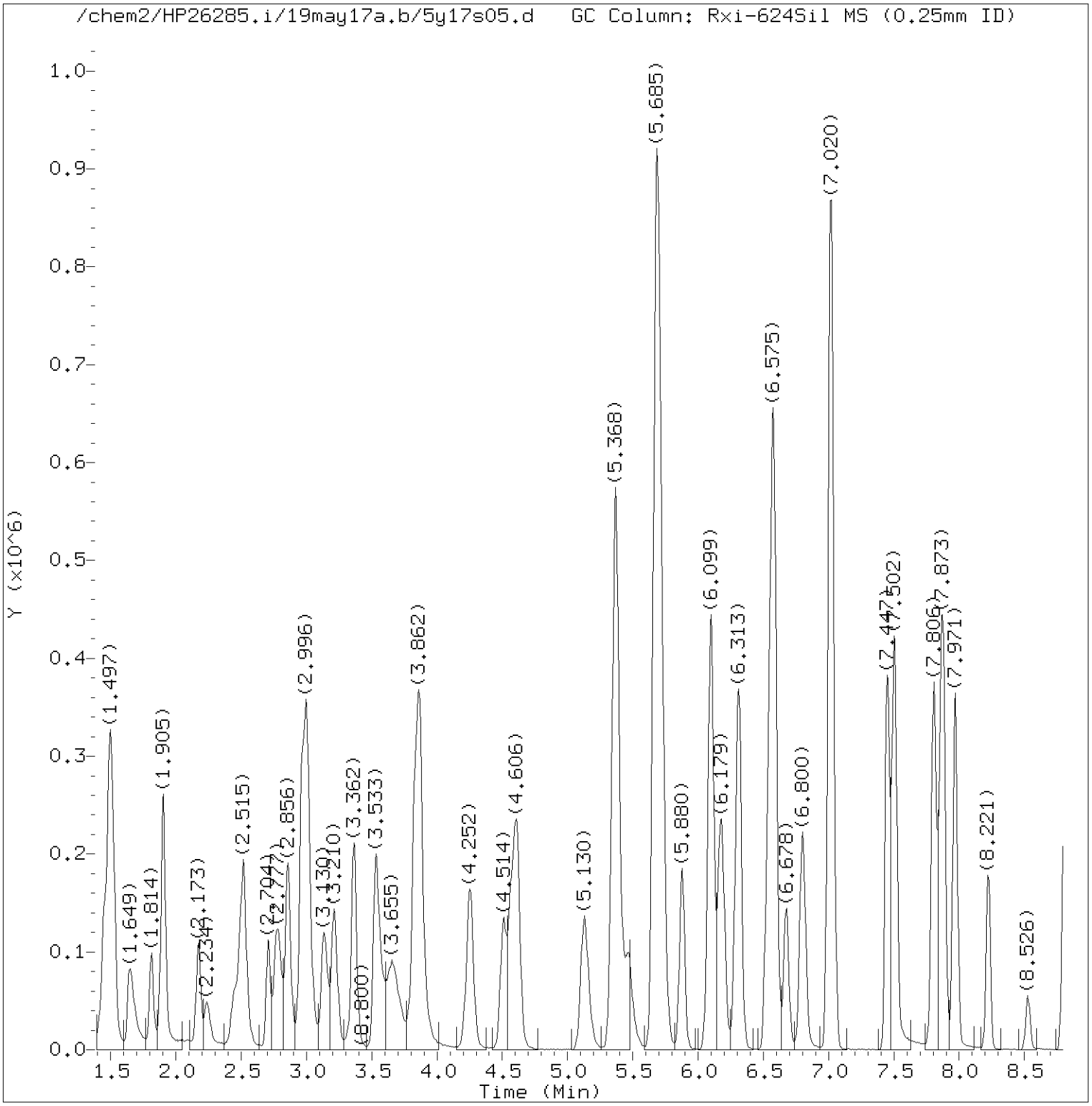
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Corie L. Mellinger on 05/25/2019 at 11:11. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 14:27. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

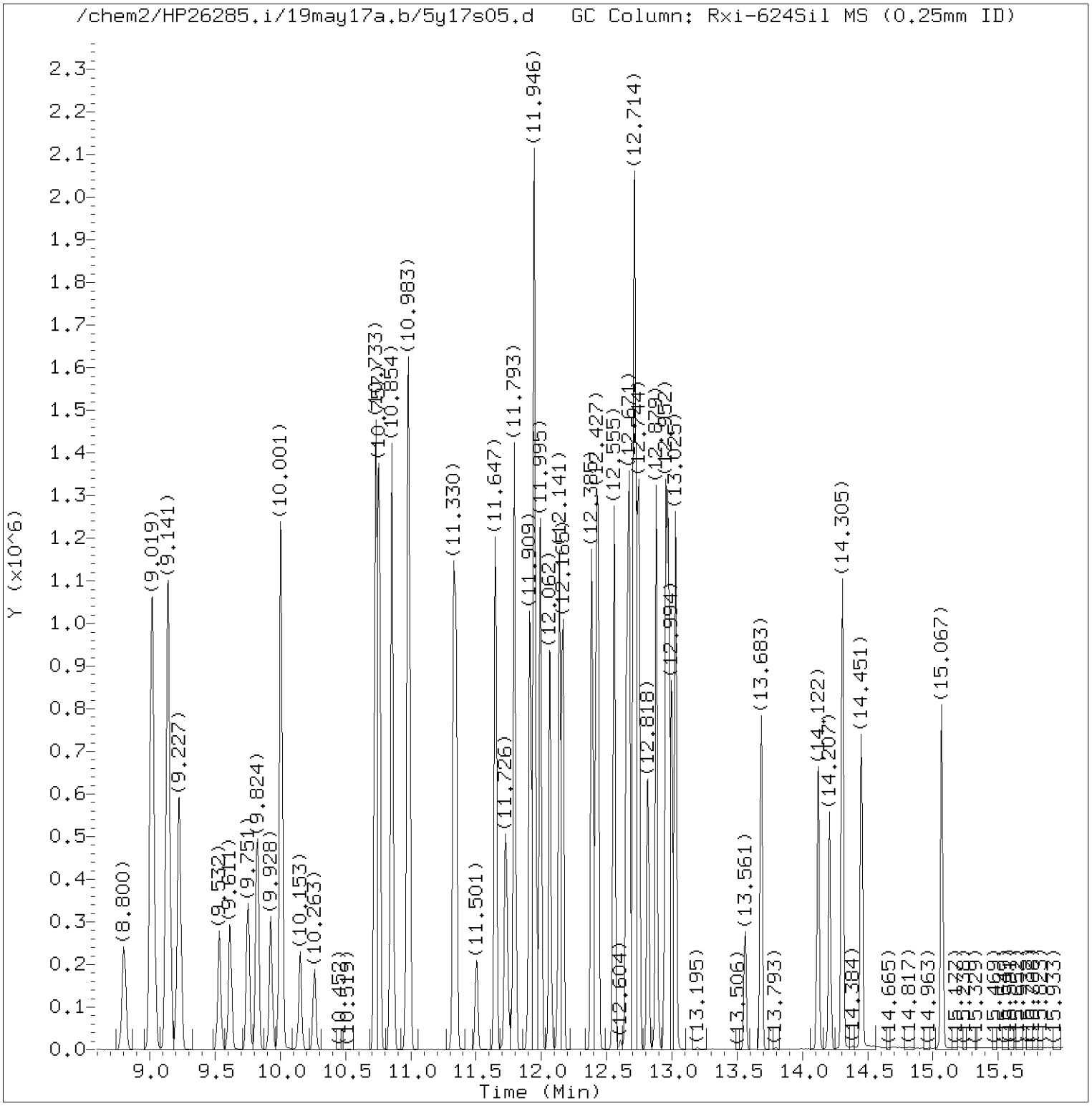
Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s05.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 11:34 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:06 clm27445

Sample Name: RS005MSD Lab Sample ID: 1053370MSD

Digitally signed by Corie L. Mellinger
on 05/25/2019 at 11:11.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s05.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 11:34 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:06 clm27445

Sample Name: RS005MSD Lab Sample ID: 1053370MSD

Digitally signed by Corie L. Mellinger
on 05/25/2019 at 11:11.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s05.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 11:34 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:06 clm27445

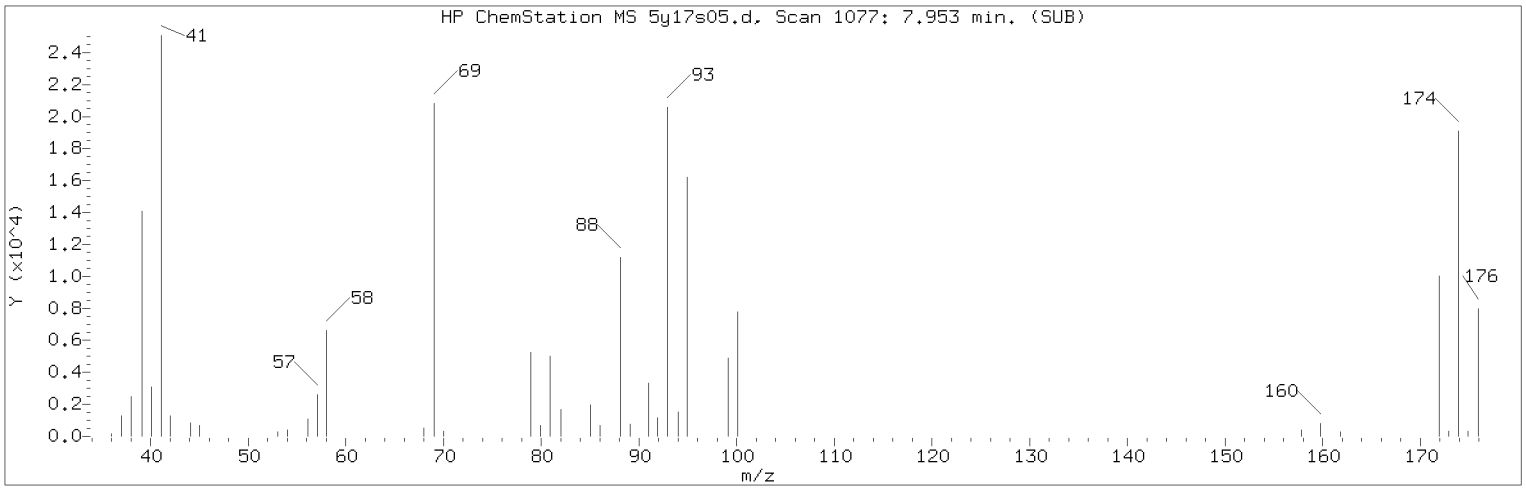
Sample Name: RS005MSD Lab Sample ID: 1053370MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	1.905	62	127446	24.359
17) 1,1-Dichloroethene	(2)	2.960	96	101307	23.981
19) Freon 113	(2)	2.990	101	125909	29.298
18) Acetone	(1)	3.008	58	134023	154.938
23) Carbon Disulfide	(2)	3.210	76	295432	21.064
28) Methylene Chloride	(2)	3.533	84	108209	22.552
29)*t-Butyl alcohol-d10	(1)	3.557	65	267992	250.000
32) trans-1,2-Dichloroethene	(2)	3.868	96	109156	23.084
36) 1,1-Dichloroethane	(2)	4.508	63	200895	24.098
44) 2-Butanone	(2)	5.362	43	707861	135.537
42) cis-1,2-Dichloroethene	(2)	5.374	96	130558	24.403
51) Chloroform	(2)	5.880	83	213579	25.838
53) 1,1,1-Trichloroethane	(2)	6.093	97	217137	29.847
52)$Dibromofluoromethane	(2)	6.099	113	241251	55.095
57)$1,2-Dichloroethane-d4	(2)	6.569	102	52133	50.883
60) Benzene	(2)	6.587	78	455703	22.432
61) 1,2-Dichloroethane	(2)	6.678	62	170417	28.386
66)*Fluorobenzene	(2)	7.014	96	915064	50.000
71) Trichloroethene	(2)	7.508	95	171319	32.519
76) 1,4-Dioxane	(1)	7.953	88	51500M	655.812
84)$Toluene-d8	(3)	9.141	98	927366	50.461
89) Toluene	(3)	9.227	92	303586	22.193
94) Tetrachloroethene	(3)	9.824	166	154190	24.786
101)*Chlorobenzene-d5	(3)	10.733	117	728088	50.000
105) Ethylbenzene	(3)	10.854	91	627124	23.470
107) m+p-Xylene	(3)	10.983	106	490797	46.575
108) o-Xylene	(3)	11.330	106	230175	22.355
109) Xylene (Total)	(3)		106	720972	68.929
115)$4-Bromofluorobenzene	(3)	11.793	95	380201	53.168
132)*1,4-Dichlorobenzene-d4	(4)	12.714	152	426065	50.000
139) 1,2-Dichlorobenzene	(4)	13.000	146	291356	21.894
149) Naphthalene	(4)	14.305	128	657923	20.024

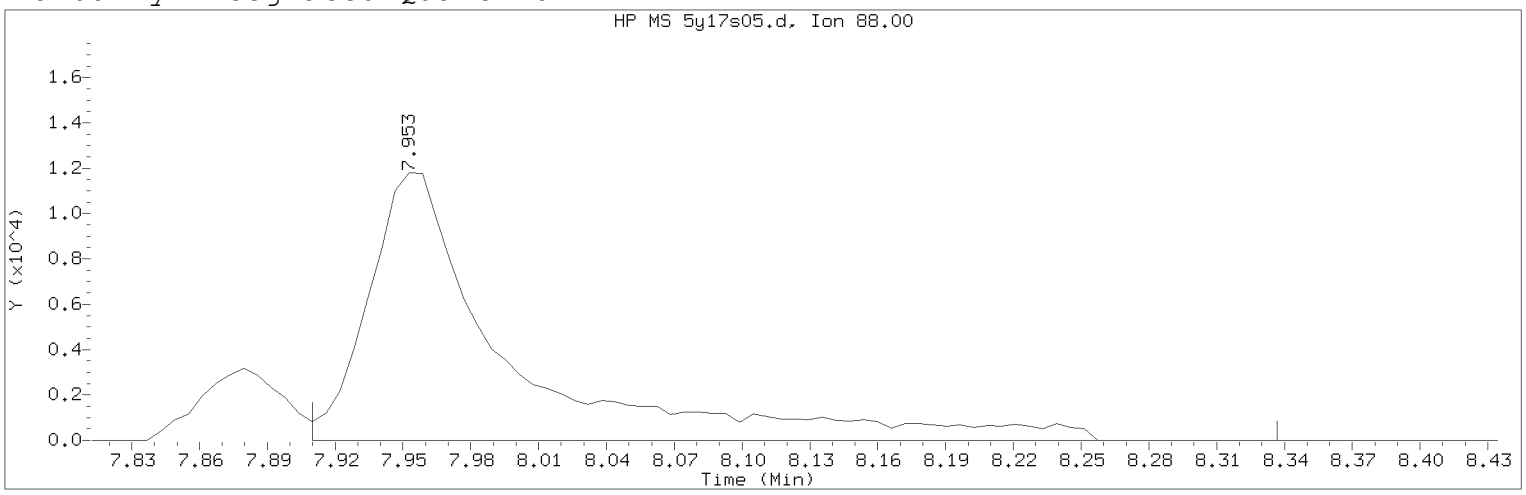
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 05/25/2019 at 11:11.
Target 3.5 esignature user ID: clm27445

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/19may17a.b/5y17s05.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 11:34 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 25-May-2019 11:06 clm27445

Sample Name: RS005MSD Lab Sample ID: 1053370MSD

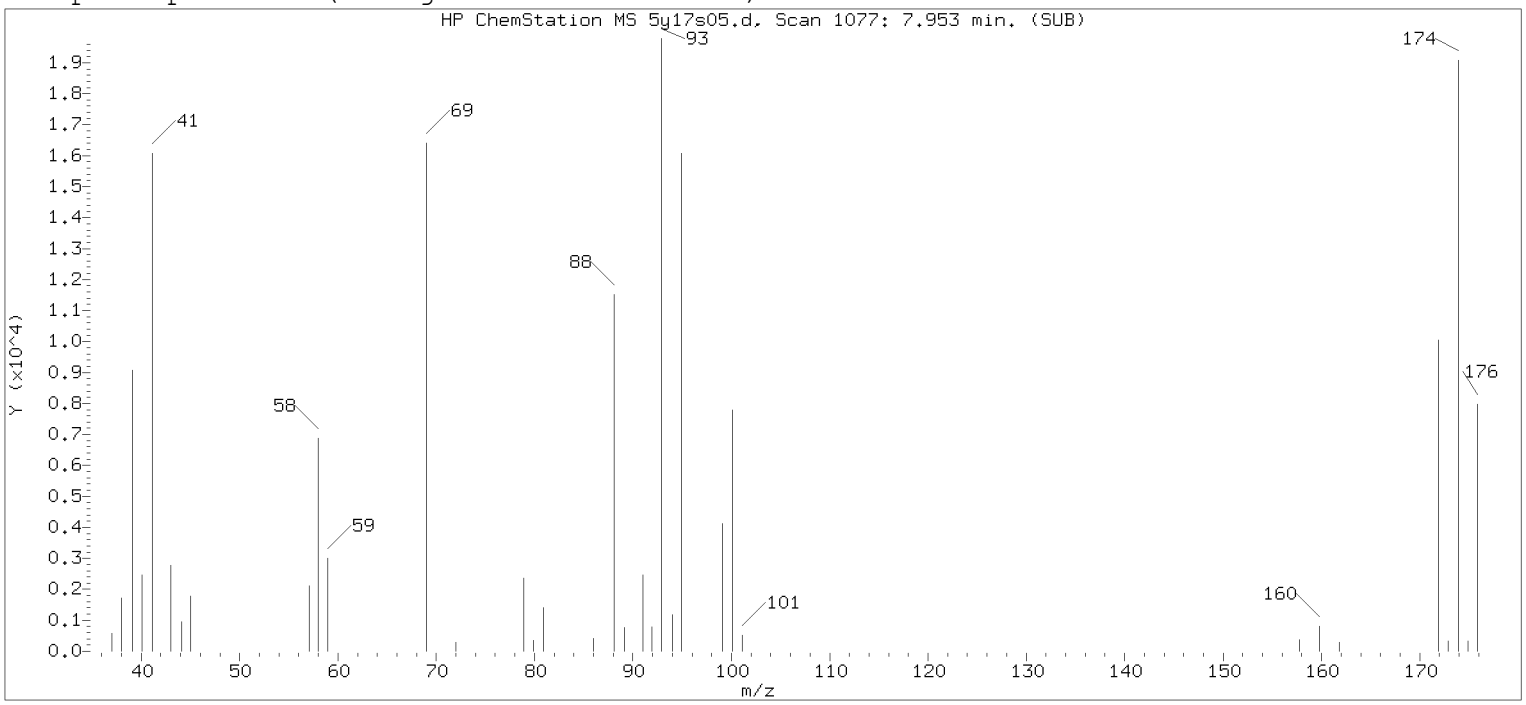
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1077
Retention Time (minutes): 7.953
Quant Ion : 88.00
Area (flag) : 51500M
On-Column Amount (ng) : 655.8122
Integration start scan : 1069 Integration stop scan: 1139
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

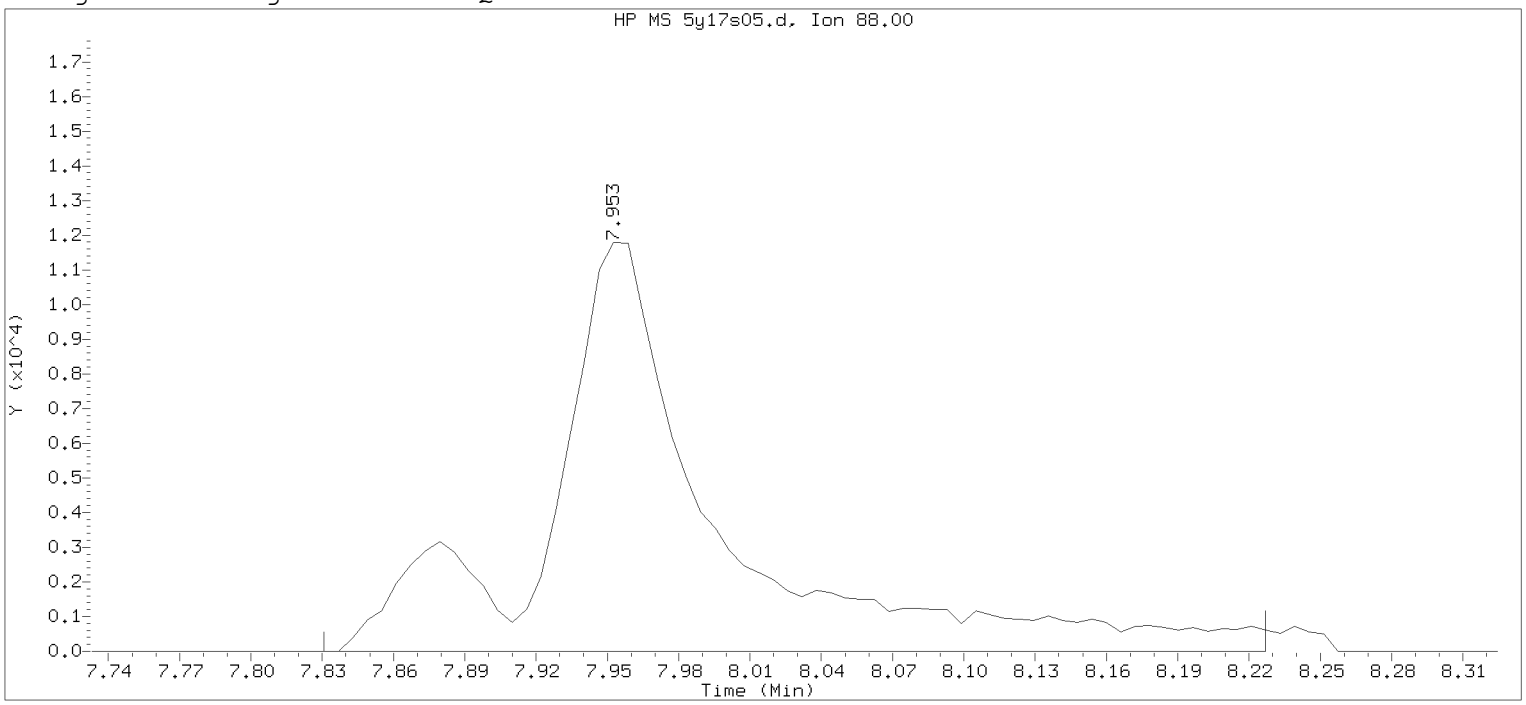
Analyst responsible for change: Digitally signed by Corie L. Mellinger
on 05/25/2019 at 11:11.
Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 14:27.
PARALLAX ID: rrm00219

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may17a.b/5y17s05.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 11:34 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 17-MAY-2019 13:19
Date, time and analyst ID of latest file update: 17-May-2019 13:22 clm27445

Sample Name: RS005MSD Lab Sample ID: 1053370MSD

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1077
Retention Time (minutes): 7.953
Quant Ion : 88.00
Area : 58309
On-column Amount (ng) : 742.5221
Integration start scan : 1056 Integration stop scan: 1121
Y at integration start : 0 Y at integration end: 0

Digitally signed by Corie L. Mellinger on 05/25/2019 at 11:11.
Target 3.5 esignature user ID: CLM27445

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS587

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCS587

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP26285.i/19may17a.b/5y17s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/17/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	24	
74-87-3	Chloromethane	21	
106-99-0	1,3-Butadiene	25	
75-01-4	Vinyl Chloride	22	
74-83-9	Bromomethane	22	
75-00-3	Chloroethane	21	
109-66-0	n-Pentane	23	
75-69-4	Trichlorofluoromethane	28	
60-29-7	Ethyl ether	20	
354-23-4	Freon 123a	22	
107-02-8	Acrolein	130	
75-35-4	1,1-Dichloroethene	22	
67-64-1	Acetone	170	
76-13-1	Freon 113	25	
67-63-0	2-Propanol	150	
74-88-4	Methyl Iodide	20	
75-15-0	Carbon Disulfide	19	
107-05-1	Allyl Chloride	18	
79-20-9	Methyl Acetate	19	
75-09-2	Methylene Chloride	21	
75-65-0	t-Butyl alcohol	210	
107-13-1	Acrylonitrile	89	
156-60-5	trans-1,2-Dichloroethene	21	
1634-04-4	Methyl Tertiary Butyl Ether	19	
110-54-3	n-Hexane	19	
75-34-3	1,1-Dichloroethane	22	
108-20-3	di-Isopropyl ether	18	
126-99-8	2-Chloro-1,3-butadiene	21	
637-92-3	Ethyl t-butyl ether	16	
156-59-2	cis-1,2-Dichloroethene	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS587

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCS587

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP26285.i/19may17a.b/5y17s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/17/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	44	
78-93-3	2-Butanone	130	
594-20-7	2,2-Dichloropropane	25	
107-12-0	Propionitrile	160	
126-98-7	Methacrylonitrile	140	
74-97-5	Bromochloromethane	21	
109-99-9	Tetrahydrofuran	98	
67-66-3	Chloroform	24	
71-55-6	1,1,1-Trichloroethane	25	
110-82-7	Cyclohexane	20	
563-58-6	1,1-Dichloropropene	22	
56-23-5	Carbon Tetrachloride	26	
78-83-1	Isobutyl Alcohol	570	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	27	
994-05-8	t-Amyl methyl ether	18	
142-82-5	n-Heptane	18	
71-36-3	n-Butanol	1100	
79-01-6	Trichloroethene	23	
108-87-2	Methylcyclohexane	20	
78-87-5	1,2-Dichloropropane	22	
74-95-3	Dibromomethane	23	
123-91-1	1,4-Dioxane	660	
80-62-6	Methyl Methacrylate	18	
75-27-4	Bromodichloromethane	24	
79-46-9	2-Nitropropane	18	
110-75-8	2-Chloroethyl Vinyl Ether	17	
10061-01-5	cis-1,3-Dichloropropene	21	
108-10-1	4-Methyl-2-pentanone	86	
108-88-3	Toluene	21	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS587

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCS587

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP26285.i/19may17a.b/5y17s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/17/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	20	
542-75-6	1,3-Dichloropropene (total)	42	
97-63-2	Ethyl Methacrylate	17	
79-00-5	1,1,2-Trichloroethane	22	
127-18-4	Tetrachloroethene	22	
142-28-9	1,3-Dichloropropane	22	
591-78-6	2-Hexanone	78	
124-48-1	Dibromochloromethane	23	
106-93-4	1,2-Dibromoethane	22	
544-10-5	1-Chlorohexane	20	
108-90-7	Chlorobenzene	22	
630-20-6	1,1,1,2-Tetrachloroethane	23	
100-41-4	Ethylbenzene	22	
179601-23-1	m+p-Xylene	44	
95-47-6	o-Xylene	20	
1330-20-7	Xylene (Total)	64	
100-42-5	Styrene	21	
75-25-2	Bromoform	21	
98-82-8	Isopropylbenzene	22	
108-94-1	Cyclohexanone	740	
108-86-1	Bromobenzene	20	
79-34-5	1,1,2,2-Tetrachloroethane	21	
96-18-4	1,2,3-Trichloropropane	22	
110-57-6	trans-1,4-Dichloro-2-butene	110	
103-65-1	n-Propylbenzene	21	
95-49-8	2-Chlorotoluene	20	
106-43-4	4-Chlorotoluene	20	
108-67-8	1,3,5-Trimethylbenzene	20	
98-06-6	tert-Butylbenzene	19	
76-01-7	Pentachloroethane	20	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS587

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCS587

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP26285.i/19may17a.b/5y17s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/17/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
95-63-6	1,2,4-Trimethylbenzene	20	
135-98-8	sec-Butylbenzene	20	
541-73-1	1,3-Dichlorobenzene	20	
99-87-6	p-Isopropyltoluene	19	
106-46-7	1,4-Dichlorobenzene	21	
526-73-8	1,2,3-Trimethylbenzene	20	
100-44-7	Benzyl Chloride	20	
141-93-5	1,3-Diethylbenzene	18	
105-05-5	1,4-Diethylbenzene	18	
95-50-1	1,2-Dichlorobenzene	21	
104-51-8	n-Butylbenzene	19	
135-01-3	1,2-Diethylbenzene	19	
25340-17-4	Diethylbenzene (total)	55	
96-12-8	1,2-Dibromo-3-chloropropane	23	
108-70-3	1,3,5-Trichlorobenzene	17	
120-82-1	1,2,4-Trichlorobenzene	17	
87-68-3	Hexachlorobutadiene	17	
91-20-3	Naphthalene	20	
87-61-6	1,2,3-Trichlorobenzene	19	
91-57-6	2-Methylnaphthalene	15	

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCS587

Data file: /chem2/HP26285.i/19may17a.b/5y17s01.d
Injection date and time: **17-MAY-2019 08:38**
Data file Sample Info. Line: LCS587;LCS587;1;3;LCS;;;;5y17b01;
Instrument ID: **HP26285.i** Batch: **5191371AA**
Date, time and analyst ID of latest file update: 17-May-2019 10:05 clm27445

Blank Data file reference: **/chem2/HP26285.i/19may17a.b/5y17b01.d**

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 17-MAY-2019 08:49
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may17a.b/5y17c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.557(-0.018)	356	65	263946 (11)	250.00	
66) Fluorobenzene	7.014(-0.012)	923	96	935764 (14)	50.00	
101) Chlorobenzene-d5	10.732(-0.006)	1533	117	739494 (10)	50.00	
132) 1,4-Dichlorobenzene-d4	12.708(0.000)	1857	152	429105 (5)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.099(0.000)	113	247088	55.180	110%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.569(0.000)	102	54868	52.367	105%		80 - 120
84) Toluene-d8	(3)	9.135(0.000)	98	948456	50.812	102%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.793(0.000)	95	384882	52.992	106%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	1.649(-0.000)	85	176864	23.501	23.50			0.2	1
4) Chloromethane	(2)	1.807(0.000)	50	116343	21.273	21.27			0.2	1
5) 1,3-Butadiene	(2)	1.899(-0.000)	39	96693	25.447	25.45			1	3
6) Vinyl Chloride	(2)	1.905(-0.000)	62	120092	22.446	22.45			0.2	1
8) Bromomethane	(2)	2.167(0.000)	94	92840	21.534	21.53			0.3	1
9) Chloroethane	(2)	2.240(-0.000)	64	54104	21.095	21.09			0.2	1
11) n-Pentane	(2)	2.521(-0.000)	43	108434	23.115	23.12			0.4	10
12) Trichlorofluoromethane	(2)	2.490(-0.000)	101	206492	27.763	27.76			0.2	1
14) Ethyl ether	(2)	2.710(-0.001)	59	75832	19.686	19.69			0.2	5
15) Freon 123a	(2)	2.783(-0.001)	67	126695	21.917	21.92			0.4	5
16) Acrolein	(1)	2.862(0.000)	56	248532	133.385	133.39			2	100
17) 1,1-Dichloroethene	(2)	2.966(-0.000)	96	93190	21.572	21.57			0.2	1
18) Acetone	(1)	3.008(-0.000)	58	145878	171.228	171.23			0.7	20
19) Freon 113	(2)	2.990(-0.000)	101	110541	25.153	25.15			0.2	10
21) 2-Propanol	(1)	3.161(-0.000)	45	92686	149.694	149.69			18	100
22) Methyl Iodide	(2)	3.130(-0.000)	142	176447	19.557	19.56			0.2	1
23) Carbon Disulfide	(2)	3.210(-0.000)	76	272698	19.013	19.01			0.2	5
25) Allyl Chloride	(2)	3.368(-0.000)	41	140341	18.082	18.08			0.3	5
27) Methyl Acetate	(2)	3.356(-0.001)	43	127714	19.088	19.09			0.2	5
28) Methylene Chloride	(2)	3.526(0.000)	84	105044	21.408	21.41			0.3	1
30) t-Butyl alcohol	(1)	3.661(0.001)	59	255980	209.636	209.64			12	50
31) Acrylonitrile	(2)	3.831(-0.000)	53	313913	88.760	88.76			0.3	20
32) trans-1,2-Dichloroethene	(2)	3.868(-0.000)	96	103024	21.305	21.31			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	3.862(0.000)	73	255455	18.512	18.51			0.2	1
34) n-Hexane	(2)	4.252(-0.000)	57	127930	19.124	19.12			0.2	5
36) 1,1-Dichloroethane	(2)	4.508(-0.001)	63	186748	21.906	21.91			0.2	1
38) di-Isopropyl ether	(2)	4.575(-0.001)	45	274995	17.696	17.70			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	4.618(-0.001)	53	156761	20.780	20.78			0.2	5
40) Ethyl t-butyl ether	(2)	5.130(-0.000)	59	233026	16.197	16.20			0.2	1
42) cis-1,2-Dichloroethene	(2)	5.368(-0.000)	96	122061	22.310	22.31			0.2	1
43) 1,2-Dichloroethene (Total)	(2)		96	225085	43.615	43.62			0.2	2

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP26285.i/19may17a.b/5y17s01.d Injection date and time: **17-MAY-2019 08:38**
Data file Sample Info. Line: LCS587;LCS587;1;3;LCS;;;;5y17b01; Instrument ID: **HP26285.i** Batch: **5191371AA**
Date, time and analyst ID of latest file update: 17-May-2019 10:05 clm27445

Blank Data file reference: **/chem2/HP26285.i/19may17a.b/5y17b01.d**

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 17-MAY-2019 08:49
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may17a.b/5y17c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	5.362(-0.001)	43	705315	132.062	132.06			0.3	10
45) 2,2-Dichloropropane	(2)	5.374(0.000)	77	167674	24.593	24.59			0.3	1
47) Propionitrile	(1)	5.471(0.001)	54	214468	161.483	161.48			14	100
48) Methacrylonitrile	(2)	5.678(-0.000)	67	499334	143.490	143.49			6	50
49) Bromochloromethane	(2)	5.715(-0.001)	128	56408	20.604	20.60			0.2	5
50) Tetrahydrofuran	(1)	5.721(0.004)	71	132264	98.035	98.04			0.7	10
51) Chloroform	(2)	5.880(-0.001)	83	203409	24.063	24.06			0.2	1
53) 1,1,1-Trichloroethane	(2)	6.093(-0.000)	97	185674	24.957	24.96			0.3	1
54) Cyclohexane	(2)	6.172(-0.000)	56	171760	19.969	19.97			0.2	5
55) 1,1-Dichloropropene	(2)	6.312(0.000)	75	153181	22.400	22.40			0.2	5
56) Carbon Tetrachloride	(2)	6.300(-0.000)	117	167073	25.951	25.95			0.2	1
58) Isobutyl Alcohol	(1)	6.538(0.006)	41	226494	566.391	566.39			36	250
60) Benzene	(2)	6.587(-0.000)	78	441462	21.250	21.25			0.2	1
61) 1,2-Dichloroethane	(2)	6.672(0.000)	62	164531	26.799	26.80			0.3	1
65) t-Amyl methyl ether	(2)	6.800(-0.000)	73	257146	17.735	17.73			0.8	5
67) n-Heptane	(2)	7.026(0.000)	43	136635	18.114	18.11			0.2	5
69) n-Butanol	(1)	7.446(0.009)	56	355045	1064.842	1064.84			61	250
71) Trichloroethene	(2)	7.507(0.000)	95	122195	22.681	22.68			0.2	1
73) Methylcyclohexane	(2)	7.806(0.001)	83	178619	20.023	20.02			0.2	5
74) 1,2-Dichloropropane	(2)	7.855(0.000)	63	112068	21.763	21.76			0.2	1
75) Dibromomethane	(2)	7.971(0.000)	93	75132	23.068	23.07			0.2	1
76) 1,4-Dioxane	(1)	7.952(0.009)	88	50706M	655.599	655.60			29	250
77) Methyl Methacrylate	(2)	7.971(0.000)	69	96831	18.012	18.01			0.2	5
79) Bromodichloromethane	(2)	8.221(0.001)	83	144562	23.884	23.88			0.2	1
80) 2-Nitropropane	(2)	8.526(0.000)	41	44419	17.879	17.88			0.8	10
81) 2-Chloroethyl Vinyl Ether	(2)	8.617(0.001)	63	75193	17.497	17.50			0.2	10
82) cis-1,3-Dichloropropene	(2)	8.800(0.001)	75	169526	21.287	21.29			0.2	1
83) 4-Methyl-2-pentanone	(2)	9.013(0.001)	43	946171	86.499	86.50			0.5	10
89) Toluene	(3)	9.220(-0.000)	92	287958	20.726	20.73			0.2	1
90) trans-1,3-Dichloropropene	(3)	9.531(-0.000)	75	153431	20.436	20.44			0.2	1
91) 1,3-Dichloropropene (total)	(3)		100	322957	41.723	41.72			0.2	5
92) Ethyl Methacrylate	(3)	9.617(-0.000)	69	153230	17.022	17.02			0.2	5
93) 1,1,2-Trichloroethane	(3)	9.751(-0.000)	97	111699	22.473	22.47			0.2	1
94) Tetrachloroethene	(3)	9.824(-0.000)	166	140914	22.303	22.30			0.2	1
95) 1,3-Dichloropropane	(3)	9.928(-0.000)	76	175635	21.571	21.57			0.2	1
97) 2-Hexanone	(3)	10.001(0.000)	43	770400	78.403	78.40			0.3	10
98) Dibromochloromethane	(3)	10.153(-0.000)	129	116343	22.862	22.86			0.2	1
100) 1,2-Dibromoethane	(3)	10.263(-0.000)	107	119651	21.556	21.56			0.2	1
102) 1-Chlorohexane	(3)	10.757(0.000)	91	163459	20.194	20.19			0.3	5
103) Chlorobenzene	(3)	10.757(0.000)	112	348992	22.449	22.45			0.2	1
104) 1,1,1,2-Tetrachloroethane	(3)	10.848(0.000)	131	119909	22.850	22.85			0.2	1
105) Ethylbenzene	(3)	10.854(0.000)	91	598529	22.054	22.05			0.4	1
107) m+p-Xylene	(3)	10.982(0.000)	106	469548	43.871	43.87			1	5
108) o-Xylene	(3)	11.330(0.000)	106	214122	20.475	20.47			0.4	1
109) Xylene (Total)	(3)		106	683670	64.346	64.35			1	5
110) Styrene	(3)	11.342(0.000)	104	358643	20.768	20.77			0.2	5
111) Bromoform	(3)	11.507(0.000)	173	83959	20.901	20.90			0.2	4
112) Isopropylbenzene	(3)	11.647(0.000)	105	597233	21.990	21.99			0.2	5
113) Cyclohexanone	(1)	11.726(0.016)	55	239947	741.484	741.48			25	100
116) Bromobenzene	(4)	11.909(0.000)	156	149443	20.189	20.19			0.2	5
117) 1,1,2,2-Tetrachloroethane	(4)	11.915(-0.000)	83	200307	21.371	21.37			0.2	1
118) 1,2,3-Trichloropropane	(4)	11.958(-0.000)	110	62697	22.203	22.20			0.2	5
119) trans-1,4-Dichloro-2-butene	(4)	11.940(-0.000)	53	329142	111.508	111.51			6	50
120) n-Propylbenzene	(4)	11.994(-0.000)	91	747434	21.455	21.46			0.2	5

M = Compound was manually integrated.

Digitally signed by Corie L. Mellinger on 05/17/2019 at 10:07. Target 3.5 esignature user ID: clm27445

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP26285.i/19may17a.b/5y17s01.d Injection date and time: **17-MAY-2019 08:38**
Data file Sample Info. Line: LCS587;LCS587;1;3;LCS;;;;5y17b01; Instrument ID: **HP26285.i** Batch: **5191371AA**
Date, time and analyst ID of latest file update: 17-May-2019 10:05 clm27445

Blank Data file reference: **/chem2/HP26285.i/19may17a.b/5y17b01.d**

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 17-MAY-2019 08:49
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/19may17a.b/5y17c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

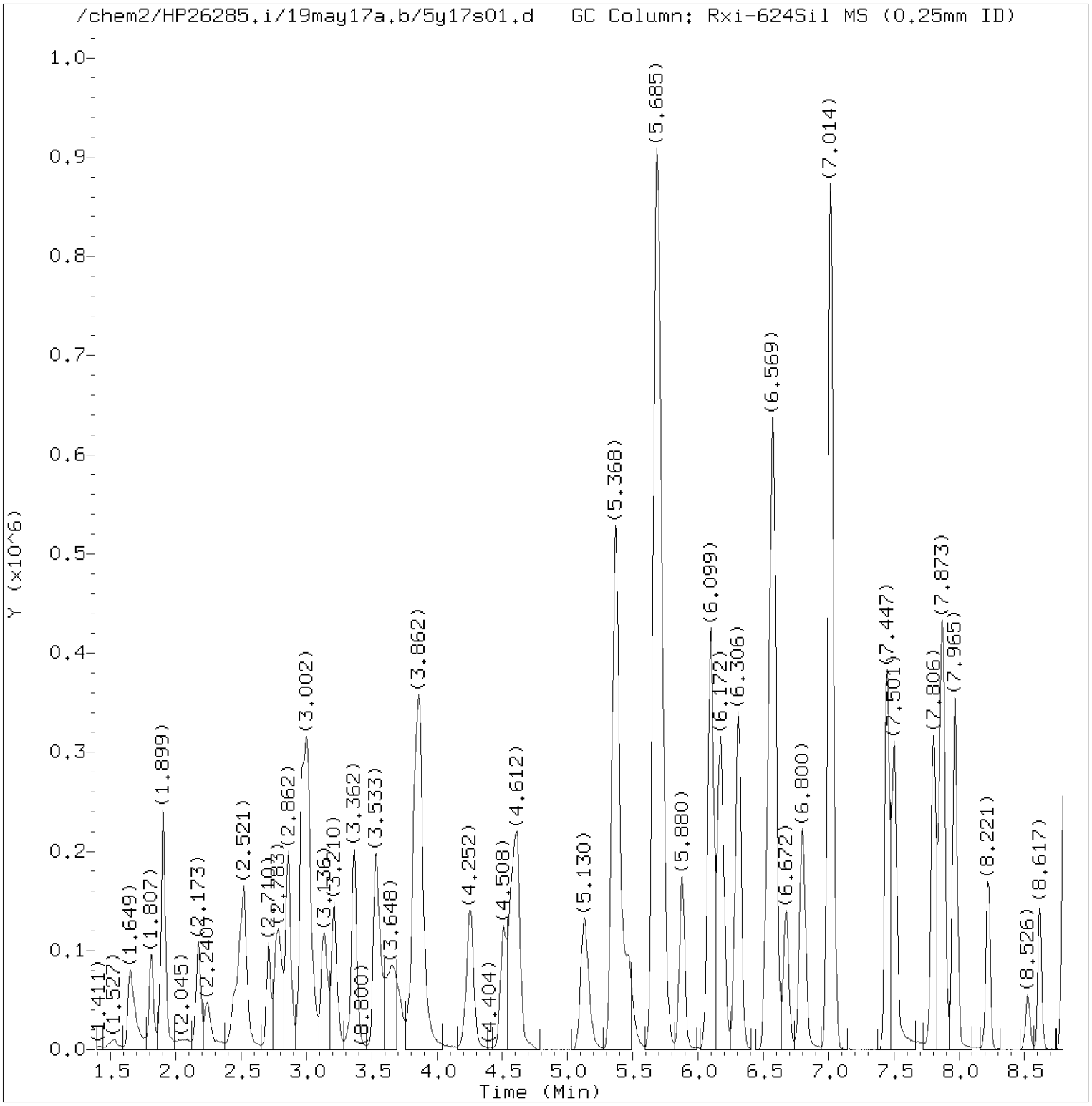
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
121) 2-Chlorotoluene	(4)	12.061(0.000)	126	143352	19.960	19.96			0.2	5
122) 4-Chlorotoluene	(4)	12.165(-0.000)	126	149021	20.211	20.21			0.2	5
123) 1,3,5-Trimethylbenzene	(4)	12.141(-0.000)	105	511027	20.327	20.33			0.3	5
125) tert-Butylbenzene	(4)	12.384(0.000)	134	99255M	18.684	18.68			0.3	5
126) Pentachloroethane	(4)	12.415(-0.000)	167	88383	20.373	20.37			0.2	5
127) 1,2,4-Trimethylbenzene	(4)	12.433(-0.000)	105	527348	20.455	20.46			1	5
128) sec-Butylbenzene	(4)	12.555(-0.000)	105	640473	19.664	19.66			0.2	5
130) 1,3-Dichlorobenzene	(4)	12.653(-0.000)	146	285719	20.155	20.15			0.2	5
131) p-Isopropyltoluene	(4)	12.671(0.000)	119	544885	19.296	19.30			0.2	5
134) 1,4-Dichlorobenzene	(4)	12.726(-0.000)	146	297377	20.698	20.70			0.2	5
135) 1,2,3-Trimethylbenzene	(4)	12.744(-0.000)	105	536168	20.133	20.13			0.3	5
136) Benzyl Chloride	(4)	12.817(-0.000)	91	369862	20.031	20.03			0.3	5
137) 1,3-Diethylbenzene	(4)	12.878(-0.000)	119	315431	18.327	18.33			0.2	5
138) 1,4-Diethylbenzene	(4)	12.952(-0.000)	119	329483	18.039	18.04			0.2	5
139) 1,2-Dichlorobenzene	(4)	12.994(-0.000)	146	279290	20.839	20.84			0.2	5
140) n-Butylbenzene	(4)	12.976(-0.000)	92	271741	19.078	19.08			0.2	5
141) 1,2-Diethylbenzene	(4)	13.025(-0.000)	119	265731M	18.572	18.57			0.2	5
142) Diethylbenzene (total)	(4)		100	910645	54.938	54.94			0.2	5
143) 1,2-Dibromo-3-chloropropane	(4)	13.561(-0.000)	75	54572	23.307	23.31			0.3	5
145) 1,3,5-Trichlorobenzene	(4)	13.683(-0.000)	180	187774	17.429	17.43			0.2	5
147) 1,2,4-Trichlorobenzene	(4)	14.122(-0.000)	180	166773	17.101	17.10			0.3	5
148) Hexachlorobutadiene	(4)	14.207(-0.000)	225	79382	17.247	17.25			0.7	5
149) Naphthalene	(4)	14.305(-0.000)	128	672619	20.326	20.33			1	5
150) 1,2,3-Trichlorobenzene	(4)	14.451(-0.000)	180	173326	18.549	18.55			0.4	5
151) 2-Methylnaphthalene	(4)	15.067(-0.000)	142	299158	15.364	15.36			0.7	5

M = Compound was manually integrated.

Total number of targets = 110

Digitally signed by Corie L. Mellinger on 05/17/2019 at 10:07. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 15:28. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

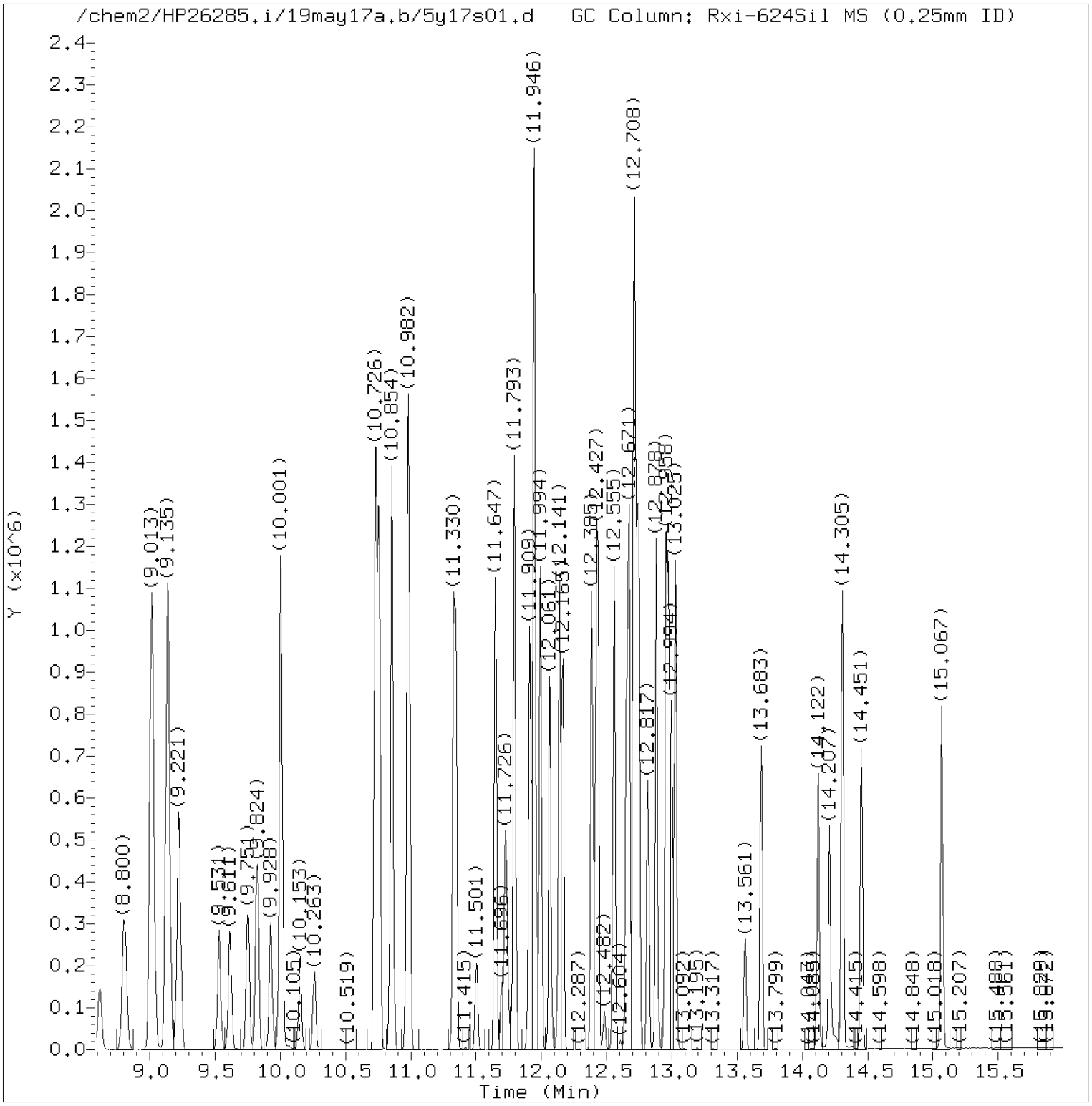
Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s01.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 08:38 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 17-MAY-2019 08:49
Date, time and analyst ID of latest file update: 17-May-2019 10:05 clm27445

Sample Name: LCS587 Lab Sample ID: LCS587

Digitally signed by Corie L. Mellinger
on 05/17/2019 at 10:07.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s01.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 08:38 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 17-MAY-2019 08:49
Date, time and analyst ID of latest file update: 17-May-2019 10:05 clm27445

Sample Name: LCS587 Lab Sample ID: LCS587

Digitally signed by Corie L. Mellinger
on 05/17/2019 at 10:07.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s01.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 08:38 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 17-MAY-2019 08:49
Date, time and analyst ID of latest file update: 17-May-2019 10:05 clm27445

Sample Name: LCS587 Lab Sample ID: LCS587

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.649	85	176864	23.501
4) Chloromethane	(2)	1.807	50	116343	21.273
5) 1,3-Butadiene	(2)	1.899	39	96693	25.447
6) Vinyl Chloride	(2)	1.905	62	120092	22.446
8) Bromomethane	(2)	2.167	94	92840	21.534
9) Chloroethane	(2)	2.240	64	54104	21.095
12) Trichlorofluoromethane	(2)	2.490	101	206492	27.763
11) n-Pentane	(2)	2.521	43	108434	23.115
14) Ethyl ether	(2)	2.710	59	75832	19.686
15) Freon 123a	(2)	2.783	67	126695	21.917
16) Acrolein	(1)	2.862	56	248532	133.385
17) 1,1-Dichloroethene	(2)	2.966	96	93190	21.572
19) Freon 113	(2)	2.990	101	110541	25.153
18) Acetone	(1)	3.008	58	145878	171.228
22) Methyl Iodide	(2)	3.130	142	176447	19.557
21) 2-Propanol	(1)	3.161	45	92686	149.694
23) Carbon Disulfide	(2)	3.210	76	272698	19.013
27) Methyl Acetate	(2)	3.356	43	127714	19.088
25) Allyl Chloride	(2)	3.368	41	140341	18.082
28) Methylene Chloride	(2)	3.527	84	105044	21.408
29)*t-Butyl alcohol-d10	(1)	3.557	65	263946	250.000
30) t-Butyl alcohol	(1)	3.661	59	255980	209.636
31) Acrylonitrile	(2)	3.831	53	313913	88.760
33) Methyl Tertiary Butyl Ether	(2)	3.862	73	255455	18.512
32) trans-1,2-Dichloroethene	(2)	3.868	96	103024	21.305
34) n-Hexane	(2)	4.252	57	127930	19.124
36) 1,1-Dichloroethane	(2)	4.508	63	186748	21.906
38) di-Isopropyl ether	(2)	4.575	45	274995	17.696
39) 2-Chloro-1,3-butadiene	(2)	4.618	53	156761	20.780
40) Ethyl t-butyl ether	(2)	5.130	59	233026	16.197
44) 2-Butanone	(2)	5.362	43	705315	132.062
42) cis-1,2-Dichloroethene	(2)	5.368	96	122061	22.310
45) 2,2-Dichloropropane	(2)	5.374	77	167674	24.593
47) Propionitrile	(1)	5.471	54	214468	161.483
48) Methacrylonitrile	(2)	5.679	67	499334	143.490
49) Bromochloromethane	(2)	5.715	128	56408	20.604
50) Tetrahydrofuran	(1)	5.721	71	132264	98.035
51) Chloroform	(2)	5.880	83	203409	24.063

* = Compound is an internal standard.

Digitally signed by Corie L. Mellinger
on 05/17/2019 at 10:07.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s01.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 08:38 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 17-MAY-2019 08:49
Date, time and analyst ID of latest file update: 17-May-2019 10:05 clm27445

Sample Name: LCS587 Lab Sample ID: LCS587

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
53) 1,1,1-Trichloroethane	(2)	6.093	97	185674	24.957
52)$Dibromofluoromethane	(2)	6.099	113	247088	55.180
43) 1,2-Dichloroethene (Total)	(2)		96	225085	43.615
54) Cyclohexane	(2)	6.172	56	171760	19.969
56) Carbon Tetrachloride	(2)	6.300	117	167073	25.951
55) 1,1-Dichloropropene	(2)	6.313	75	153181	22.400
58) Isobutyl Alcohol	(1)	6.538	41	226494	566.391
57)$1,2-Dichloroethane-d4	(2)	6.569	102	54868	52.367
60) Benzene	(2)	6.587	78	441462	21.250
61) 1,2-Dichloroethane	(2)	6.672	62	164531	26.799
65) t-Amyl methyl ether	(2)	6.800	73	257146	17.735
66)*Fluorobenzene	(2)	7.014	96	935764	50.000
67) n-Heptane	(2)	7.026	43	136635	18.114
69) n-Butanol	(1)	7.447	56	355045	1064.842
71) Trichloroethene	(2)	7.507	95	122195	22.681
73) Methylcyclohexane	(2)	7.806	83	178619	20.023
74) 1,2-Dichloropropane	(2)	7.855	63	112068	21.763
76) 1,4-Dioxane	(1)	7.953	88	50706M	655.599
75) Dibromomethane	(2)	7.971	93	75132	23.068
77) Methyl Methacrylate	(2)	7.971	69	96831	18.012
79) Bromodichloromethane	(2)	8.221	83	144562	23.884
80) 2-Nitropropane	(2)	8.526	41	44419	17.879
81) 2-Chloroethyl Vinyl Ether	(2)	8.617	63	75193	17.497
82) cis-1,3-Dichloropropene	(2)	8.800	75	169526	21.287
83) 4-Methyl-2-pentanone	(2)	9.013	43	946171	86.499
84)$Toluene-d8	(3)	9.135	98	948456	50.812
89) Toluene	(3)	9.221	92	287958	20.726
90) trans-1,3-Dichloropropene	(3)	9.531	75	153431	20.436
92) Ethyl Methacrylate	(3)	9.617	69	153230	17.022
93) 1,1,2-Trichloroethane	(3)	9.751	97	111699	22.473
94) Tetrachloroethene	(3)	9.824	166	140914	22.303
95) 1,3-Dichloropropane	(3)	9.928	76	175635	21.571
97) 2-Hexanone	(3)	10.001	43	770400	78.403
91) 1,3-Dichloropropene (total)	(3)		100	322957	41.723
98) Dibromochloromethane	(3)	10.153	129	116343	22.862
100) 1,2-Dibromoethane	(3)	10.263	107	119651	21.556
101)*Chlorobenzene-d5	(3)	10.732	117	739494	50.000
102) 1-Chlorohexane	(3)	10.757	91	163459	20.194

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 05/17/2019 at 10:07.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s01.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 08:38 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 17-MAY-2019 08:49
Date, time and analyst ID of latest file update: 17-May-2019 10:05 clm27445

Sample Name: LCS587 Lab Sample ID: LCS587

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
103) Chlorobenzene	(3)	10.757	112	348992	22.449
104) 1,1,1,2-Tetrachloroethane	(3)	10.848	131	119909	22.850
105) Ethylbenzene	(3)	10.854	91	598529	22.054
107) m+p-Xylene	(3)	10.982	106	469548	43.871
108) o-Xylene	(3)	11.330	106	214122	20.475
110) Styrene	(3)	11.342	104	358643	20.768
111) Bromoform	(3)	11.507	173	83959	20.901
112) Isopropylbenzene	(3)	11.647	105	597233	21.990
113) Cyclohexanone	(1)	11.726	55	239947	741.484
109) Xylene (Total)	(3)		106	683670	64.346
115)$4-Bromofluorobenzene	(3)	11.793	95	384882	52.992
116) Bromobenzene	(4)	11.909	156	149443	20.189
117) 1,1,2,2-Tetrachloroethane	(4)	11.915	83	200307	21.371
119) trans-1,4-Dichloro-2-butene	(4)	11.940	53	329142	111.508
118) 1,2,3-Trichloropropane	(4)	11.958	110	62697	22.203
120) n-Propylbenzene	(4)	11.994	91	747434	21.455
121) 2-Chlorotoluene	(4)	12.061	126	143352	19.960
123) 1,3,5-Trimethylbenzene	(4)	12.141	105	511027	20.327
122) 4-Chlorotoluene	(4)	12.165	126	149021	20.211
125) tert-Butylbenzene	(4)	12.385	134	99255M	18.684
126) Pentachloroethane	(4)	12.415	167	88383	20.373
127) 1,2,4-Trimethylbenzene	(4)	12.433	105	527348	20.455
128) sec-Butylbenzene	(4)	12.555	105	640473	19.664
130) 1,3-Dichlorobenzene	(4)	12.653	146	285719	20.155
131) p-Isopropyltoluene	(4)	12.671	119	544885	19.296
132)*1,4-Dichlorobenzene-d4	(4)	12.708	152	429105	50.000
134) 1,4-Dichlorobenzene	(4)	12.726	146	297377	20.698
135) 1,2,3-Trimethylbenzene	(4)	12.744	105	536168	20.133
136) Benzyl Chloride	(4)	12.817	91	369862	20.031
137) 1,3-Diethylbenzene	(4)	12.878	119	315431	18.327
138) 1,4-Diethylbenzene	(4)	12.952	119	329483	18.039
140) n-Butylbenzene	(4)	12.976	92	271741	19.078
139) 1,2-Dichlorobenzene	(4)	12.994	146	279290	20.839
141) 1,2-Diethylbenzene	(4)	13.025	119	265731M	18.572
142) Diethylbenzene (total)	(4)		100	910645	54.938
143) 1,2-Dibromo-3-chloropropane	(4)	13.561	75	54572	23.307
145) 1,3,5-Trichlorobenzene	(4)	13.683	180	187774	17.429
147) 1,2,4-Trichlorobenzene	(4)	14.122	180	166773	17.101

M = Compound was manually integrated.
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Digitally signed by Corie L. Mellinger
on 05/17/2019 at 10:07.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/19may17a.b/5y17s01.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 08:38 Analyst ID: CLM27445

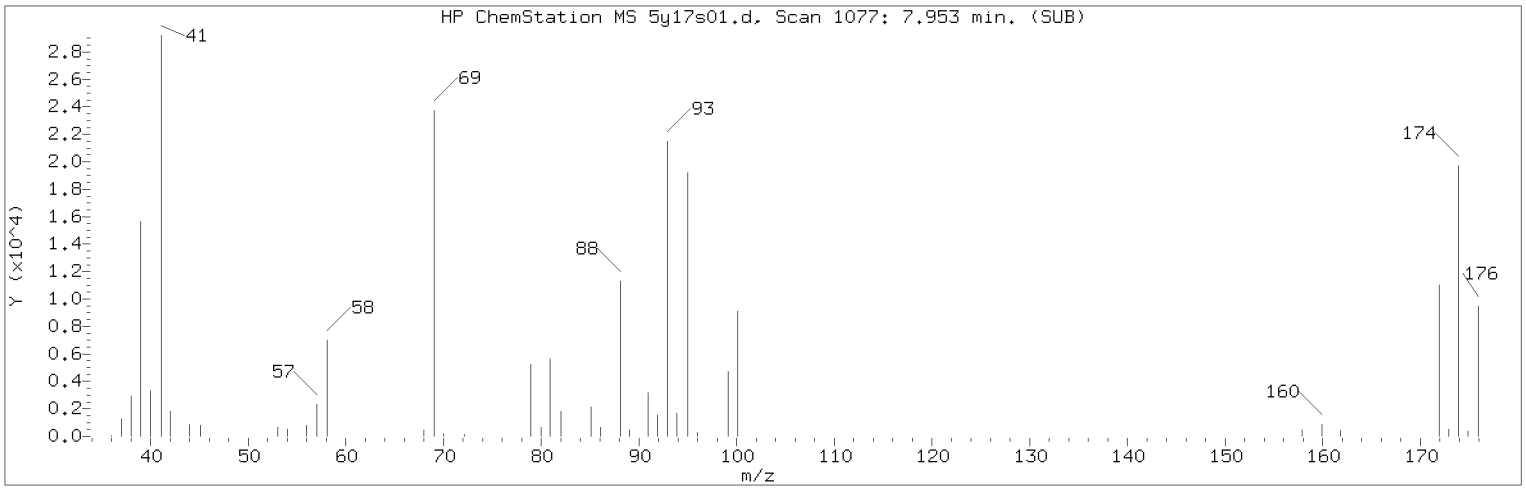
Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 17-MAY-2019 08:49
Date, time and analyst ID of latest file update: 17-May-2019 10:05 clm27445

Sample Name: LCS587 Lab Sample ID: LCS587

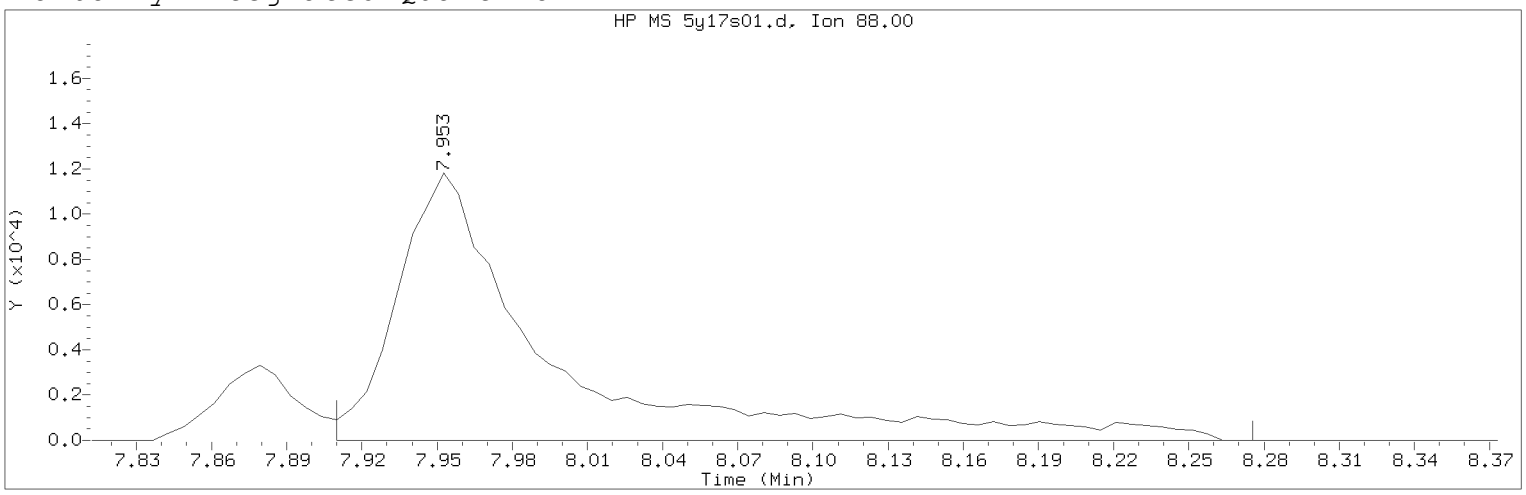
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) Hexachlorobutadiene	(4)	14.207	225	79382	17.247
149) Naphthalene	(4)	14.305	128	672619	20.326
150) 1,2,3-Trichlorobenzene	(4)	14.451	180	173326	18.549
151) 2-Methylnaphthalene	(4)	15.067	142	299158	15.364

Digitally signed by Corie L. Mellinger
on 05/17/2019 at 10:07.
Target 3.5 esignature user ID: clm27445

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 17-MAY-2019 08:38 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 17-MAY-2019 08:49
Date, time and analyst ID of latest file update: 17-May-2019 10:05 clm27445

Sample Name: LCS587 Lab Sample ID: LCS587

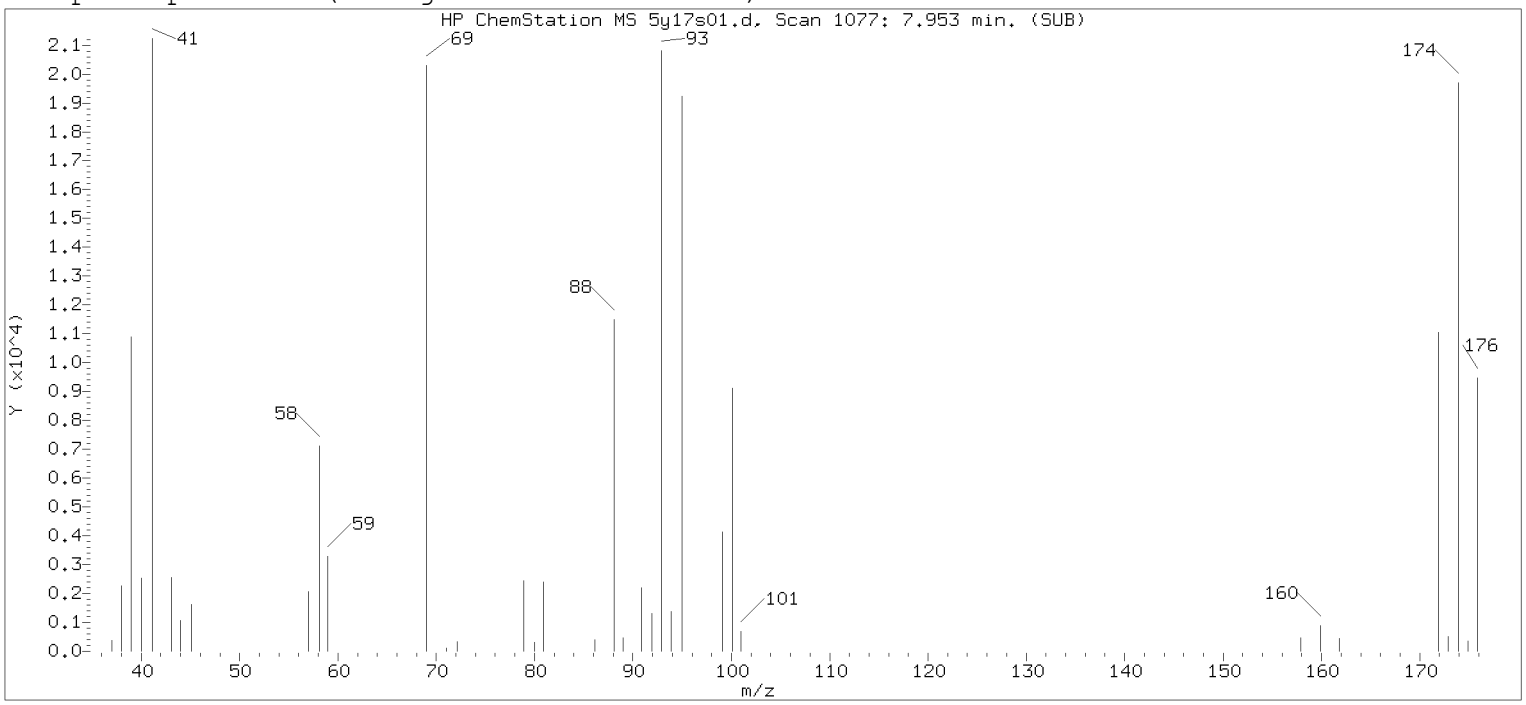
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1077
Retention Time (minutes): 7.953
Quant Ion : 88.00
Area (flag) : 50706M
On-Column Amount (ng) : 655.5991
Integration start scan : 1069 Integration stop scan: 1129
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

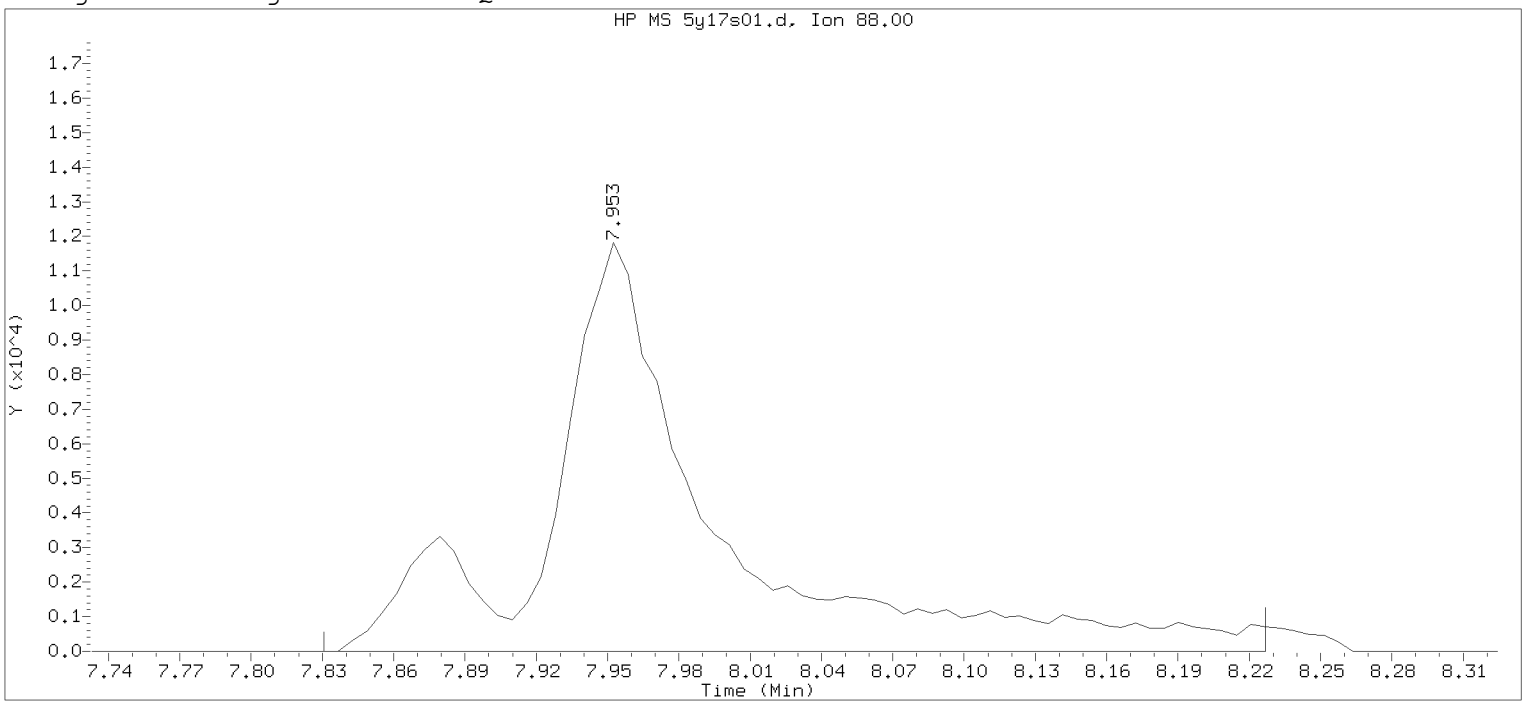
Analyst responsible for change: Digitally signed by Corie L. Mellinger
on 05/17/2019 at 10:07.
Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 15:28.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may17a.b/5y17s01.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 08:38 Analyst ID: CLM27445

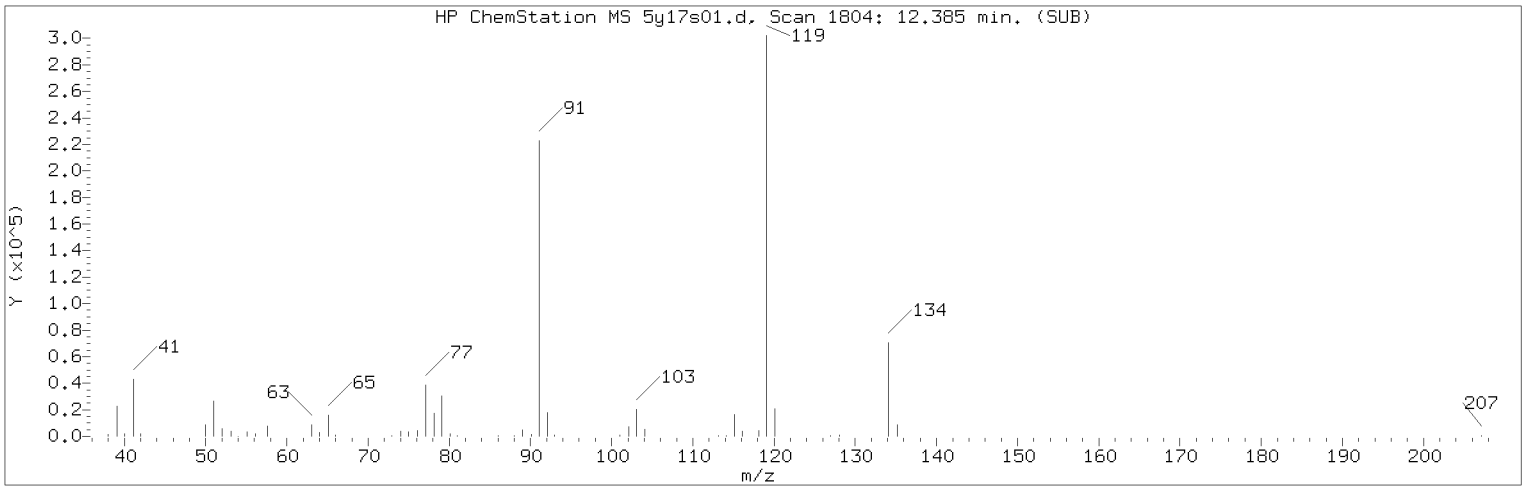
Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 17-MAY-2019 08:49
Date, time and analyst ID of latest file update: 17-May-2019 08:57 Unknown

Sample Name: LCS587 Lab Sample ID: LCS587

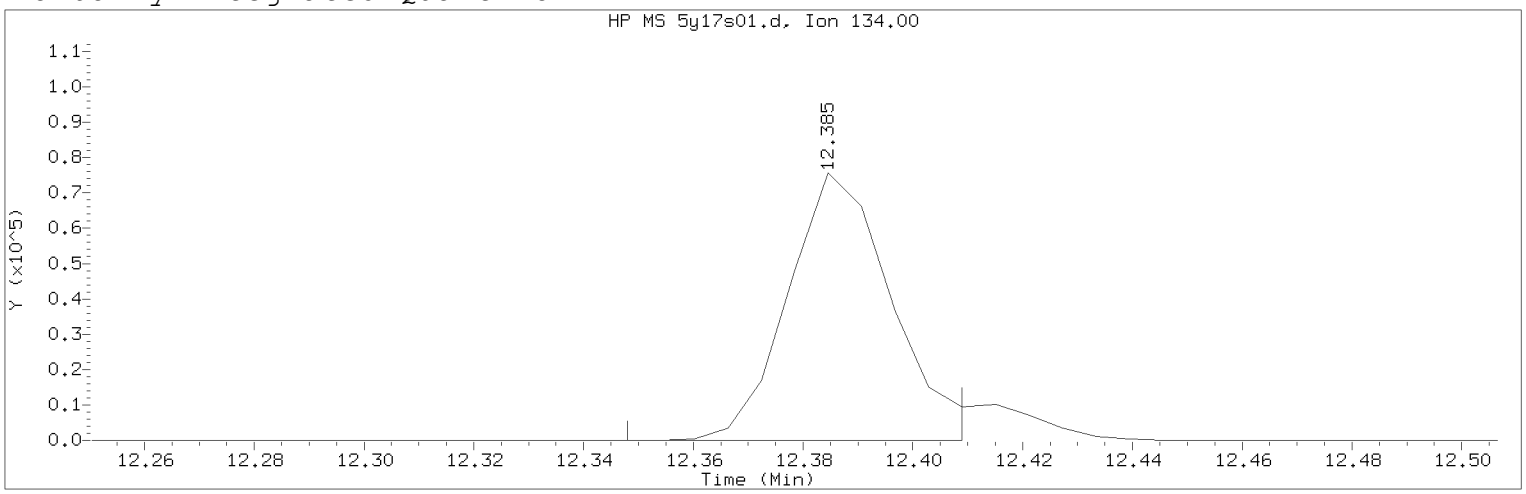
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1077
Retention Time (minutes): 7.953
Quant Ion : 88.00
Area : 56905
On-column Amount (ng) : 735.7522
Integration start scan : 1056 Integration stop scan: 1121
Y at integration start : 0 Y at integration end: 0

Digitally signed by Corie L. Mellinger on 05/17/2019 at 10:07.
Target 3.5 esignature user: CLM27445

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 17-MAY-2019 08:38 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 17-MAY-2019 08:49
Date, time and analyst ID of latest file update: 17-May-2019 10:05 clm27445

Sample Name: LCS587 Lab Sample ID: LCS587

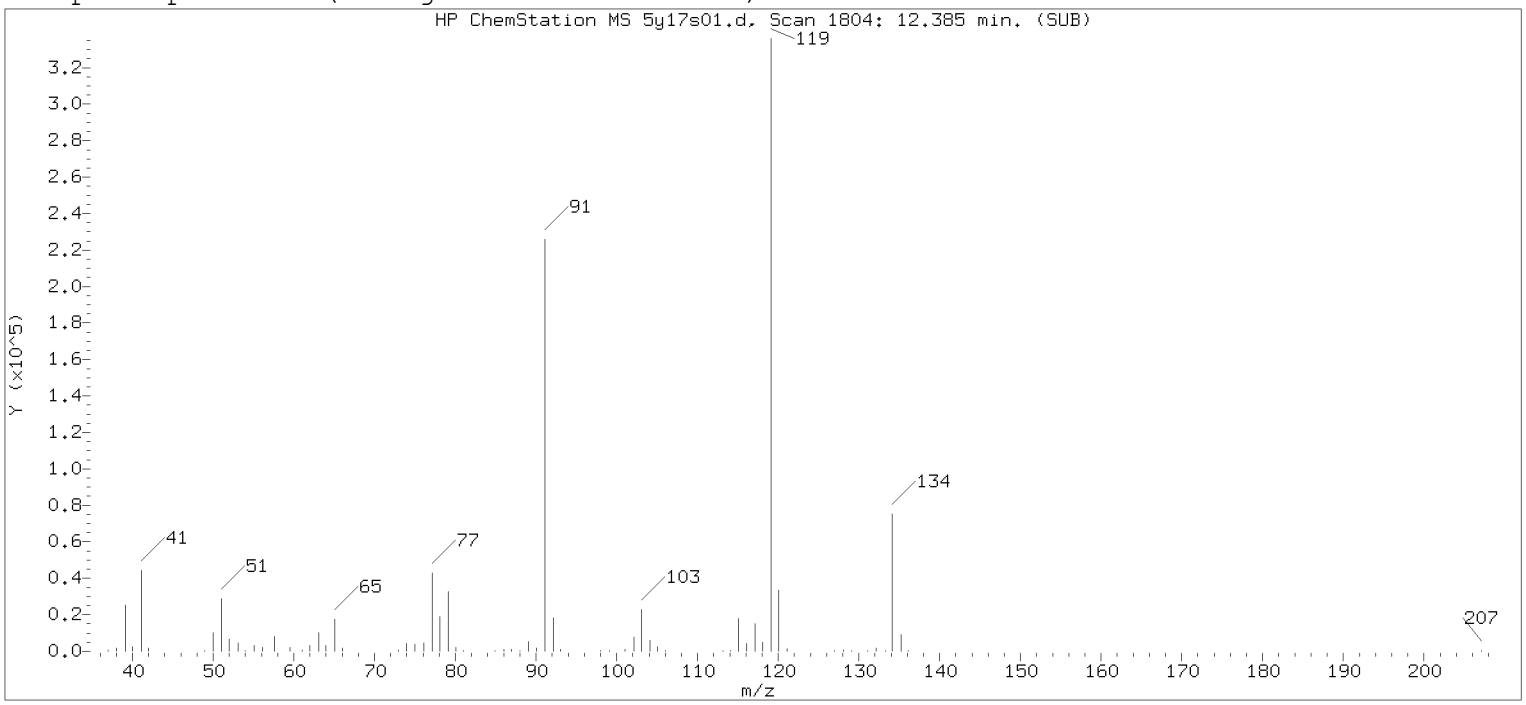
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1804
Retention Time (minutes): 12.385
Quant Ion : 134.00
Area (flag) : 99255M
On-Column Amount (ng) : 18.6837
Integration start scan : 1797 Integration stop scan: 1807
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

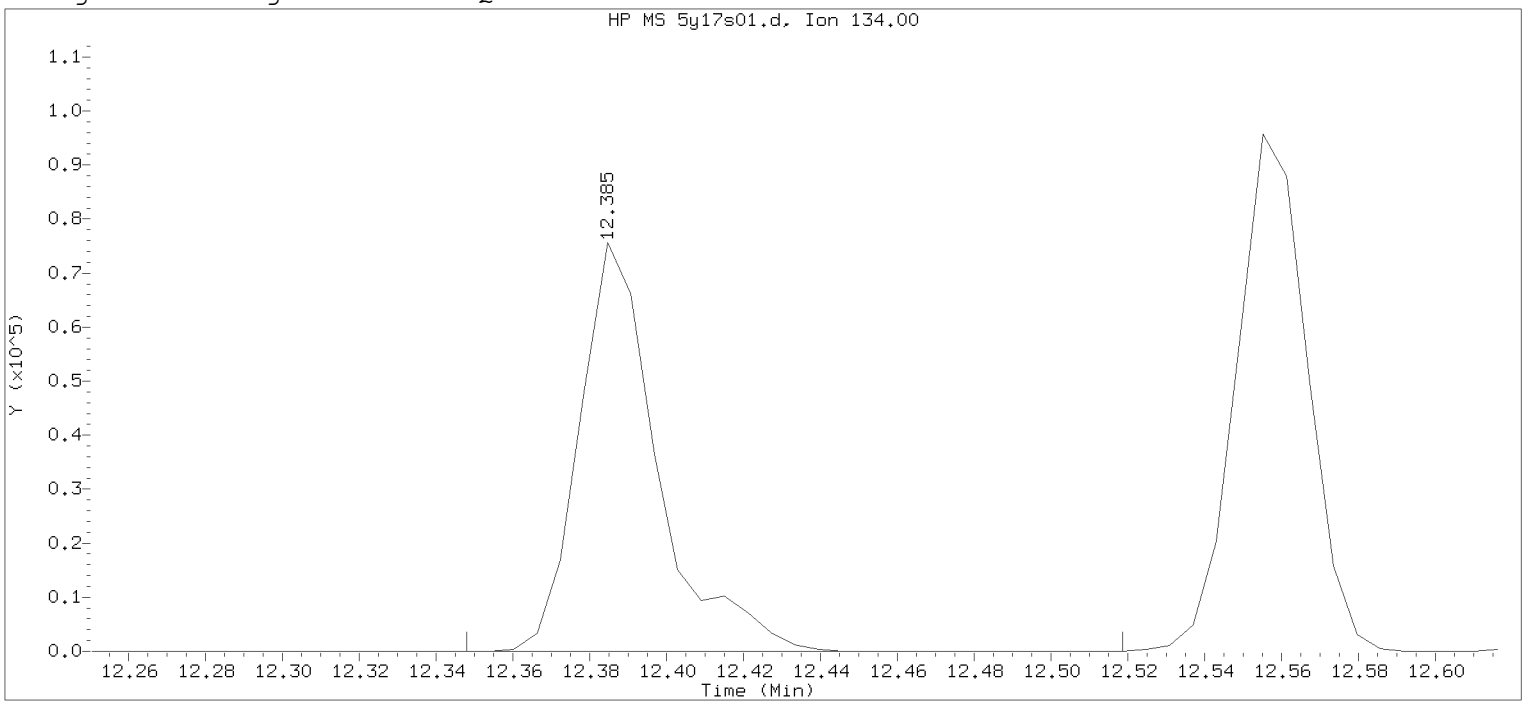
Analyst responsible for change: Digitally signed by Corie L. Mellinger
on 05/17/2019 at 10:07.
Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 15:28.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may17a.b/5y17s01.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 08:38 Analyst ID: CLM27445

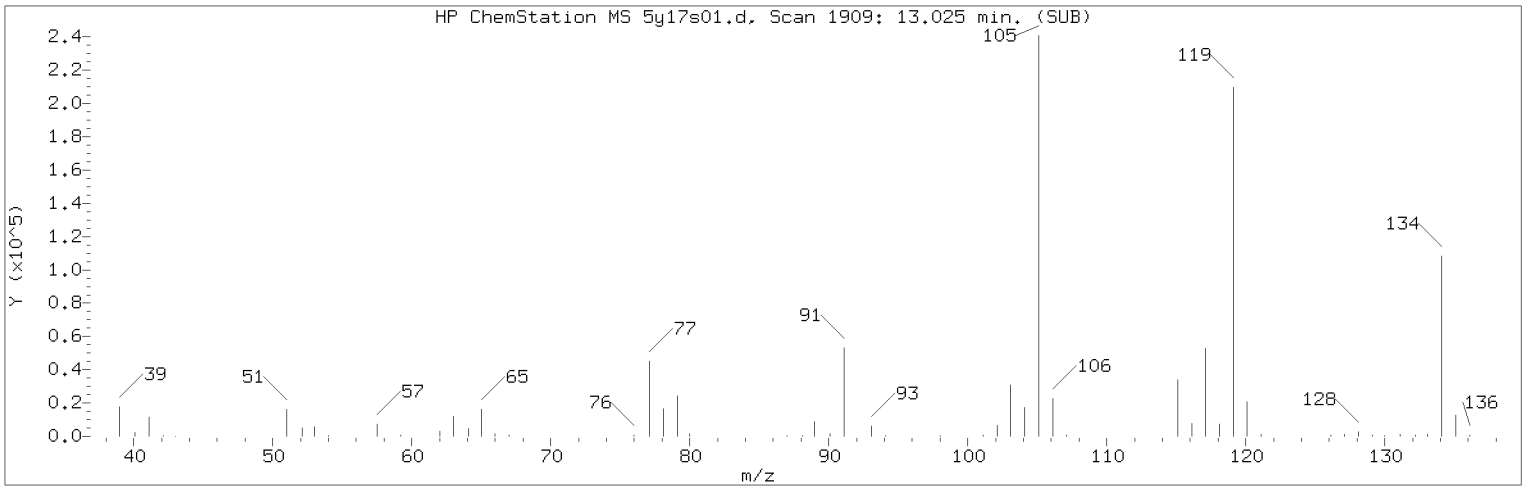
Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 17-MAY-2019 08:49
Date, time and analyst ID of latest file update: 17-May-2019 08:57 Unknown

Sample Name: LCS587 Lab Sample ID: LCS587

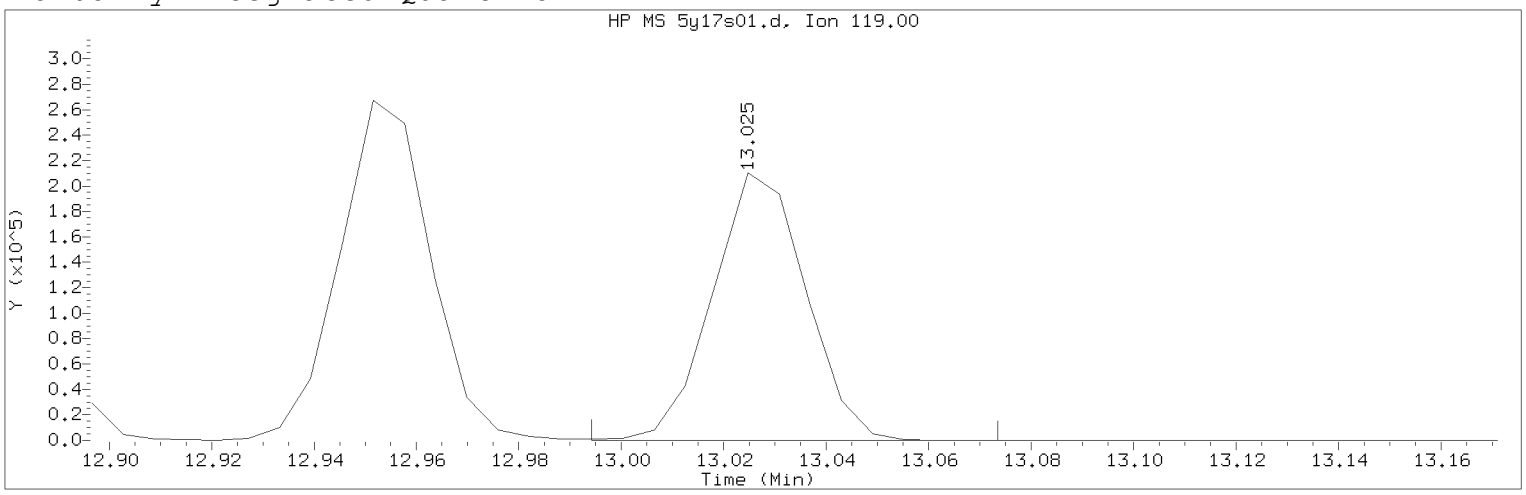
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1804
Retention Time (minutes): 12.385
Quant Ion : 134.00
Area : 107397
On-column Amount (ng) : 20.2165
Integration start scan : 1797 Integration stop scan: 1825
Y at integration start : 0 Y at integration end: 0

Digitally signed by Corie L. Mellinger on 05/17/2019 at 10:07.
Target 3.5 esignature user: CLM27445

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 17-MAY-2019 08:38 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 17-MAY-2019 08:49
Date, time and analyst ID of latest file update: 17-May-2019 10:05 clm27445

Sample Name: LCS587 Lab Sample ID: LCS587

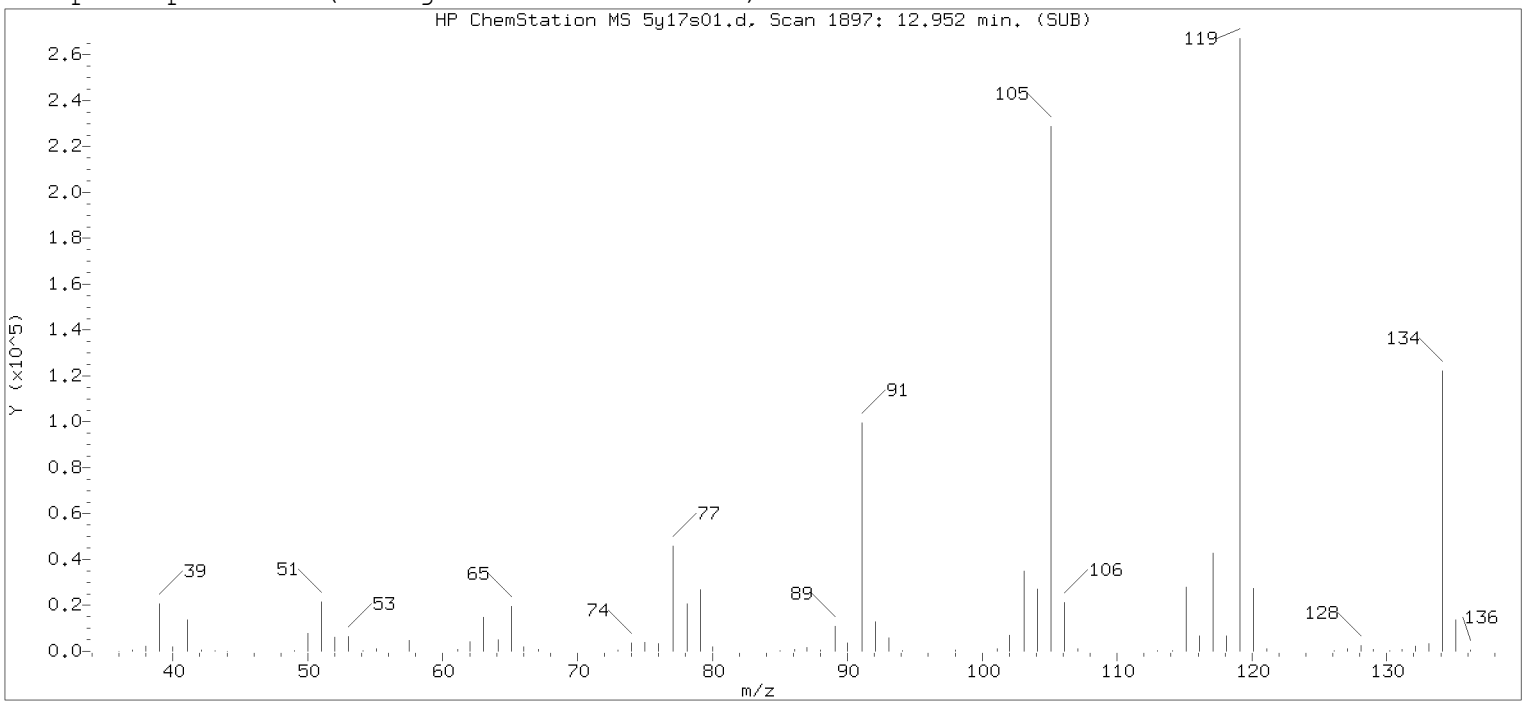
Compound Number : 141
Compound Name : 1,2-Diethylbenzene
Scan Number : 1909
Retention Time (minutes): 13.025
Quant Ion : 119.00
Area (flag) : 265731M
On-Column Amount (ng) : 18.5718
Integration start scan : 1903 Integration stop scan: 1916
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

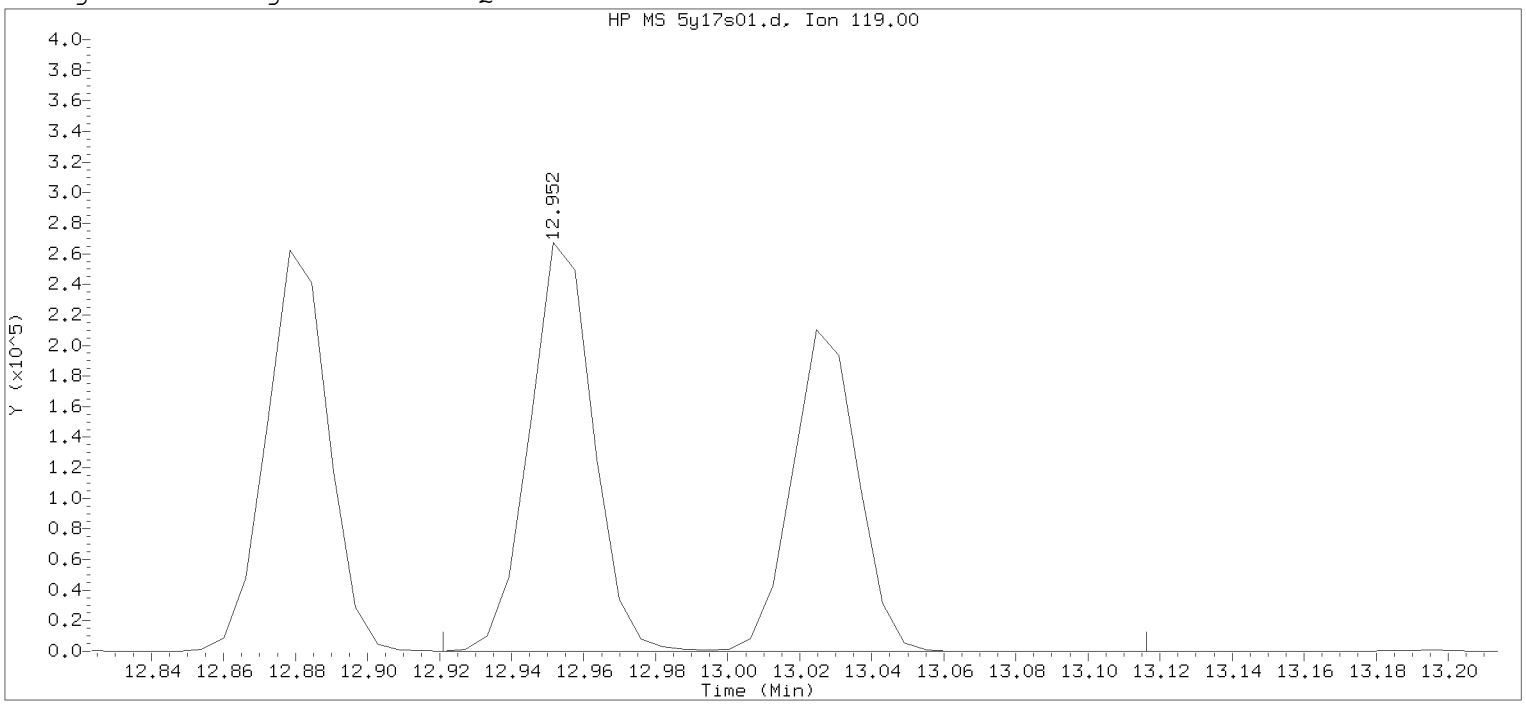
Analyst responsible for change: Digitally signed by Corie L. Mellinger
on 05/17/2019 at 10:07.
Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 15:28.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/19may17a.b/5y17s01.d Instrument ID: HP26285.i
Injection date and time: 17-MAY-2019 08:38 Analyst ID: CLM27445

Method used: /chem2/HP26285.i/19may17a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 17-MAY-2019 08:49
Date, time and analyst ID of latest file update: 17-May-2019 08:57 Unknown

Sample Name: LCS587 Lab Sample ID: LCS587

Compound Number : 141
Compound Name : 1,2-Diethylbenzene
Scan Number : 1897
Retention Time (minutes): 12.952
Quant Ion : 119.00
Area : 595077
On-column Amount (ng) : 41.5897
Integration start scan : 1891 Integration stop scan: 1923
Y at integration start : 0 Y at integration end: 0

Digitally signed by Corie L. Mellinger on 05/17/2019 at 10:07.
Target 3.5 esignature user ID: CLM27445

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSW23

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSW23

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/18/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	18	
74-87-3	Chloromethane	16	
106-99-0	1,3-Butadiene	26	
75-01-4	Vinyl Chloride	17	
74-83-9	Bromomethane	16	
75-00-3	Chloroethane	16	
109-66-0	n-Pentane	14	
75-69-4	Trichlorofluoromethane	18	
64-17-5	Ethanol	380	J
354-23-4	Freon 123a	19	
107-02-8	Acrolein	150	
75-35-4	1,1-Dichloroethene	22	
67-64-1	Acetone	230	
76-13-1	Freon 113	21	
67-63-0	2-Propanol	160	
74-88-4	Methyl Iodide	20	
75-15-0	Carbon Disulfide	15	
107-05-1	Allyl Chloride	19	
79-20-9	Methyl Acetate	18	
75-09-2	Methylene Chloride	20	
75-65-0	t-Butyl alcohol	210	
107-13-1	Acrylonitrile	90	
156-60-5	trans-1,2-Dichloroethene	21	
1634-04-4	Methyl Tertiary Butyl Ether	24	
110-54-3	n-Hexane	19	
75-34-3	1,1-Dichloroethane	21	
108-20-3	di-Isopropyl ether	20	
126-99-8	2-Chloro-1,3-butadiene	21	
637-92-3	Ethyl t-butyl ether	22	
156-59-2	cis-1,2-Dichloroethene	23	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSW23

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSW23

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/18/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	44	
78-93-3	2-Butanone	140	
594-20-7	2,2-Dichloropropane	20	
107-12-0	Propionitrile	200	
126-98-7	Methacrylonitrile	140	
74-97-5	Bromochloromethane	21	
109-99-9	Tetrahydrofuran	130	
67-66-3	Chloroform	22	
71-55-6	1,1,1-Trichloroethane	22	
110-82-7	Cyclohexane	17	
563-58-6	1,1-Dichloropropene	21	
56-23-5	Carbon Tetrachloride	21	
78-83-1	Isobutyl Alcohol	560	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	23	
994-05-8	t-Amyl methyl ether	23	
142-82-5	n-Heptane	19	
71-36-3	n-Butanol	1000	
79-01-6	Trichloroethene	21	
108-87-2	Methylcyclohexane	20	
78-87-5	1,2-Dichloropropane	21	
74-95-3	Dibromomethane	22	
123-91-1	1,4-Dioxane	630	
80-62-6	Methyl Methacrylate	18	
75-27-4	Bromodichloromethane	21	
79-46-9	2-Nitropropane	17	
110-75-8	2-Chloroethyl Vinyl Ether	19	
10061-01-5	cis-1,3-Dichloropropene	20	
108-10-1	4-Methyl-2-pentanone	91	
108-88-3	Toluene	24	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSW23

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSW23

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/18/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	20	
542-75-6	1,3-Dichloropropene (total)	40	
97-63-2	Ethyl Methacrylate	20	
79-00-5	1,1,2-Trichloroethane	24	
127-18-4	Tetrachloroethene	25	
142-28-9	1,3-Dichloropropane	22	
591-78-6	2-Hexanone	99	
124-48-1	Dibromochloromethane	23	
106-93-4	1,2-Dibromoethane	23	
108-90-7	Chlorobenzene	24	
630-20-6	1,1,1,2-Tetrachloroethane	23	
100-41-4	Ethylbenzene	23	
179601-23-1	m+p-Xylene	47	
95-47-6	o-Xylene	23	
1330-20-7	Xylene (Total)	70	
100-42-5	Styrene	23	
75-25-2	Bromoform	21	
98-82-8	Isopropylbenzene	23	
108-94-1	Cyclohexanone	520	
108-86-1	Bromobenzene	24	
79-34-5	1,1,2,2-Tetrachloroethane	23	
96-18-4	1,2,3-Trichloropropane	24	
110-57-6	trans-1,4-Dichloro-2-butene	75	
103-65-1	n-Propylbenzene	23	
95-49-8	2-Chlorotoluene	23	
106-43-4	4-Chlorotoluene	23	
108-67-8	1,3,5-Trimethylbenzene	22	
98-06-6	tert-Butylbenzene	22	
76-01-7	Pentachloroethane	22	
95-63-6	1,2,4-Trimethylbenzene	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSW23

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSW23

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/18/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
135-98-8	sec-Butylbenzene	21	
541-73-1	1,3-Dichlorobenzene	23	
99-87-6	p-Isopropyltoluene	21	
106-46-7	1,4-Dichlorobenzene	23	
526-73-8	1,2,3-Trimethylbenzene	21	
100-44-7	Benzyl Chloride	18	
141-93-5	1,3-Diethylbenzene	20	
105-05-5	1,4-Diethylbenzene	19	
95-50-1	1,2-Dichlorobenzene	23	
104-51-8	n-Butylbenzene	20	
135-01-3	1,2-Diethylbenzene	21	
25340-17-4	Diethylbenzene (total)	60	
96-12-8	1,2-Dibromo-3-chloropropane	20	
108-70-3	1,3,5-Trichlorobenzene	20	
120-82-1	1,2,4-Trichlorobenzene	20	
87-68-3	Hexachlorobutadiene	19	
91-20-3	Naphthalene	20	
87-61-6	1,2,3-Trichlorobenzene	20	
91-57-6	2-Methylnaphthalene	14	

Data file: /chem2/HP09137.i/19may18a.b/wy18s01.d Injection date and time: **18-MAY-2019 22:29**
Data file Sample Info. Line: LCSW23;LCSW23;1;3;LCS;;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.732	(0.006)	592	65	185223	(-2)	250.00	
66) Fluorobenzene	5.032	(0.000)	1309	96	1049302	(2)	50.00	
101) Chlorobenzene-d5	8.161	(0.000)	2284	117	796496	(2)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041	(0.000)	2870	152	447919	(1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.359	(0.001)	113	232125	47.750	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692	(0.000)	102	60342	46.673	93%		80 - 120
84) Toluene-d8	(3)	6.698	(0.000)	98	1024508	51.332	103%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.000)	95	372564	46.660	93%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	1.259	(-0.000)	85	122405	18.041	18.04			0.2	1
4) Chloromethane	(2)	1.390	(-0.001)	50	131544	15.570	15.57			0.2	1
5) 1,3-Butadiene	(2)	1.464	(0.004)	39	134278M	26.080	26.08			1	3
6) Vinyl Chloride	(2)	1.464	(-0.000)	62	129632	16.738	16.74			0.2	1
8) Bromomethane	(2)	1.692	(-0.000)	94	96074M	15.728	15.73			0.3	1
9) Chloroethane	(2)	1.766	(0.000)	64	80293	15.754	15.75			0.2	1
11) n-Pentane	(2)	1.965	(0.001)	43	110412	14.114	14.11			0.4	10
12) Trichlorofluoromethane	(2)	1.932	(-0.000)	101	151761	18.450	18.45			0.2	1
13) Ethanol	(1)	2.032	(-0.000)	45	32125M	380.291	380.29		J	280	750
15) Freon 123a	(2)	2.119	(-0.000)	67	114541M	18.634	18.63			0.4	5
16) Acrolein	(1)	2.215	(-0.000)	56	203467	152.584	152.58			2	100
17) 1,1-Dichloroethene	(2)	2.298	(0.001)	96	99685M	21.547	21.55			0.2	1
18) Acetone	(1)	2.340	(-0.002)	58	150531M	232.245	232.25			0.7	20
19) Freon 113	(2)	2.334	(0.001)	101	84299	20.750	20.75			0.2	10
21) 2-Propanol	(1)	2.456	(-0.004)	45	76314M	158.471	158.47			18	100
22) Methyl Iodide	(2)	2.475	(0.000)	142	178264M	20.107	20.11			0.2	1
23) Carbon Disulfide	(2)	2.507	(0.001)	76	241845	14.838	14.84			0.2	5
25) Allyl Chloride	(2)	2.603	(0.000)	41	149787	18.585	18.58			0.3	5
27) Methyl Acetate	(2)	2.619	(0.000)	43	128160	18.371	18.37			0.2	5
28) Methylene Chloride	(2)	2.709	(0.000)	84	110369	19.517	19.52			0.3	1
30) t-Butyl alcohol	(1)	2.812	(-0.002)	59	183621	213.752	213.75			12	50
31) Acrylonitrile	(2)	2.924	(0.001)	53	329808	89.865	89.87			0.3	20
32) trans-1,2-Dichloroethene	(2)	2.959	(0.000)	96	106977	21.312	21.31			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	2.963	(-0.000)	73	291896M	23.883	23.88			0.2	1
34) n-Hexane	(2)	3.213	(0.001)	57	128915	19.194	19.19			0.2	5
36) 1,1-Dichloroethane	(2)	3.341	(0.000)	63	186937	20.552	20.55			0.2	1
38) di-Isopropyl ether	(2)	3.415	(-0.000)	45	348753	19.958	19.96			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	3.431	(-0.000)	53	166663	21.156	21.16			0.2	5
40) Ethyl t-butyl ether	(2)	3.758	(0.000)	59	277001	21.747	21.75			0.2	1
42) cis-1,2-Dichloroethene	(2)	3.890	(0.000)	96	127328	22.592	22.59			0.2	1
43) 1,2-Dichloroethene (Total)	(2)			96	234305	43.904	43.90			0.2	2

M = Compound was manually integrated.

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43. Target 3.5 esignature user ID: sej02002

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may18a.b/wy18s01.d Injection date and time: **18-MAY-2019 22:29**
Data file Sample Info. Line: LCSW23;LCSW23;1;3;LCS;;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	3.906(0.000)	43	729335	138.323	138.32			0.3	10
45) 2,2-Dichloropropane	(2)	3.893(-0.000)	77	80613	19.734	19.73			0.3	1
47) Propionitrile	(1)	3.961(-0.001)	54	209125	195.875	195.87			14	100
48) Methacrylonitrile	(2)	4.111(0.000)	67	565031	143.190	143.19			6	50
49) Bromochloromethane	(2)	4.121(0.000)	128	61890	21.125	21.13			0.2	5
50) Tetrahydrofuran	(1)	4.169(-0.002)	71	132152	133.738	133.74			0.7	10
51) Chloroform	(2)	4.201(-0.000)	83	187903	22.018	22.02			0.2	1
53) 1,1,1-Trichloroethane	(2)	4.381(0.000)	97	140386	21.862	21.86			0.3	1
54) Cyclohexane	(2)	4.442(0.000)	56	148098	17.427	17.43			0.2	5
55) 1,1-Dichloropropene	(2)	4.548(-0.000)	75	143514	20.975	20.98			0.2	5
56) Carbon Tetrachloride	(2)	4.548(0.000)	117	113827	20.656	20.66			0.2	1
58) Isobutyl Alcohol	(1)	4.679(-0.003)	41	176096	562.293	562.29			36	250
60) Benzene	(2)	4.750(0.000)	78	466958	21.232	21.23			0.2	1
61) 1,2-Dichloroethane	(2)	4.769(-0.000)	62	154308	22.713	22.71			0.3	1
65) t-Amyl methyl ether	(2)	4.875(0.000)	73	300472	23.026	23.03			0.8	5
67) n-Heptane	(2)	5.032(0.001)	43	121659	18.953	18.95			0.2	5
69) n-Butanol	(1)	5.356(-0.004)	56	277598	998.326	998.33			61	250
71) Trichloroethene	(2)	5.405(0.000)	95	113492	21.309	21.31			0.2	1
73) Methylcyclohexane	(2)	5.604(0.001)	83	158337	20.478	20.48			0.2	5
74) 1,2-Dichloropropane	(2)	5.636(0.000)	63	117626	20.832	20.83			0.2	1
75) Dibromomethane	(2)	5.754(0.000)	93	76975	22.089	22.09			0.2	1
76) 1,4-Dioxane	(1)	5.790(-0.007)	88	52768M	634.789	634.79			29	250
77) Methyl Methacrylate	(2)	5.777(0.000)	69	111925	18.038	18.04			0.2	5
79) Bromodichloromethane	(2)	5.928(0.000)	83	133551	20.858	20.86			0.2	1
80) 2-Nitropropane	(2)	6.172(0.000)	41	35846	16.547	16.55			0.8	10
81) 2-Chloroethyl Vinyl Ether	(2)	6.265(0.000)	63	83042	19.291	19.29			0.2	10
82) cis-1,3-Dichloropropene	(2)	6.409(0.000)	75	173429	19.700	19.70			0.2	1
83) 4-Methyl-2-pentanone	(2)	6.586(0.000)	43	948076	91.217	91.22			0.5	10
89) Toluene	(3)	6.768(0.000)	92	305184	23.737	23.74			0.2	1
90) trans-1,3-Dichloropropene	(3)	7.019(-0.000)	75	156038	20.386	20.39			0.2	1
91) 1,3-Dichloropropene (total)	(3)		100	329467	40.087	40.09			0.2	5
92) Ethyl Methacrylate	(3)	7.137(0.000)	69	186320	19.810	19.81			0.2	5
93) 1,1,2-Trichloroethane	(3)	7.214(0.000)	97	120891	24.430	24.43			0.2	1
94) Tetrachloroethene	(3)	7.359(0.000)	166	127987	24.532	24.53			0.2	1
95) 1,3-Dichloropropane	(3)	7.388(0.000)	76	193133	22.470	22.47			0.2	1
97) 2-Hexanone	(3)	7.490(0.000)	43	742042	99.103	99.10			0.3	10
98) Dibromochloromethane	(3)	7.612(0.000)	129	111188	23.005	23.00			0.2	1
100) 1,2-Dibromoethane	(3)	7.718(0.000)	107	126964	23.353	23.35			0.2	1
103) Chlorobenzene	(3)	8.187(0.000)	112	337353	23.653	23.65			0.2	1
104) 1,1,1,2-Tetrachloroethane	(3)	8.267(0.000)	131	105671	23.054	23.05			0.2	1
105) Ethylbenzene	(3)	8.296(0.000)	91	559952	22.915	22.91			0.4	1
107) m+p-Xylene	(3)	8.402(0.000)	106	455044	46.836	46.84			1	5
108) o-Xylene	(3)	8.739(0.000)	106	218577	22.868	22.87			0.4	1
109) Xylene (Total)	(3)		106	673621	69.705	69.70			1	5
110) Styrene	(3)	8.752(0.000)	104	365013	22.765	22.76			0.2	5
111) Bromoform	(3)	8.896(0.000)	173	79455	21.123	21.12			0.2	4
112) Isopropylbenzene	(3)	9.047(0.000)	105	540716	23.022	23.02			0.2	5
113) Cyclohexanone	(1)	9.114(-0.007)	55	193408	515.788	515.79			25	100
116) Bromobenzene	(4)	9.278(0.000)	156	153402	23.777	23.78			0.2	5
117) 1,1,2,2-Tetrachloroethane	(4)	9.284(-0.000)	83	195987	22.527	22.53			0.2	1
118) 1,2,3-Trichloropropane	(4)	9.313(0.000)	110	63106	24.081	24.08			0.2	5
119) trans-1,4-Dichloro-2-butene	(4)	9.329(-0.000)	53	210559	75.471	75.47			6	50
120) n-Propylbenzene	(4)	9.371(0.000)	91	640815	22.532	22.53			0.2	5
121) 2-Chlorotoluene	(4)	9.435(-0.000)	126	136708	23.304	23.30			0.2	5

M = Compound was manually integrated.

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43. Target 3.5 esignature user ID: sej02002

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may18a.b/wy18s01.d Injection date and time: **18-MAY-2019 22:29**
Data file Sample Info. Line: LCSW23;LCSW23;1;3;LCS;;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
122) 4-Chlorotoluene	(4)	9.518(-0.000)	126	144449	23.002	23.00			0.2	5
123) 1,3,5-Trimethylbenzene	(4)	9.509(0.000)	105	460582	22.455	22.45			0.3	5
125) tert-Butylbenzene	(4)	9.759(-0.000)	134	102225	21.936	21.94			0.3	5
126) Pentachloroethane	(4)	9.766(0.000)	167	80695	21.905	21.90			0.2	5
127) 1,2,4-Trimethylbenzene	(4)	9.791(-0.000)	105	476442	22.043	22.04			1	5
128) sec-Butylbenzene	(4)	9.920(-0.000)	105	534870	21.244	21.24			0.2	5
130) 1,3-Dichlorobenzene	(4)	9.993(-0.000)	146	282658	22.976	22.98			0.2	5
131) p-Isopropyltoluene	(4)	10.022(0.000)	119	474445	21.287	21.29			0.2	5
134) 1,4-Dichlorobenzene	(4)	10.058(0.000)	146	297886	23.356	23.36			0.2	5
135) 1,2,3-Trimethylbenzene	(4)	10.099(-0.000)	105	495935	21.325	21.33			0.3	5
136) Benzyl Chloride	(4)	10.157(0.000)	91	327217	18.330	18.33			0.3	5
137) 1,3-Diethylbenzene	(4)	10.240(0.000)	119	280737	20.047	20.05			0.2	5
138) 1,4-Diethylbenzene	(4)	10.298(0.000)	119	291396	19.421	19.42			0.2	5
139) 1,2-Dichlorobenzene	(4)	10.324(0.000)	146	284707	23.326	23.33			0.2	5
140) n-Butylbenzene	(4)	10.317(0.000)	92	221191	19.663	19.66			0.2	5
141) 1,2-Diethylbenzene	(4)	10.382(-0.000)	119	248487	21.017	21.02			0.2	5
142) Diethylbenzene (total)	(4)		100	820620	60.484	60.48			0.2	5
143) 1,2-Dibromo-3-chloropropane	(4)	10.866(-0.000)	75	40024	20.242	20.24			0.3	5
145) 1,3,5-Trichlorobenzene	(4)	11.007(0.000)	180	189511	20.248	20.25			0.2	5
147) 1,2,4-Trichlorobenzene	(4)	11.418(0.000)	180	178556	19.871	19.87			0.3	5
148) Hexachlorobutadiene	(4)	11.527(0.000)	225	61764	19.299	19.30			0.7	5
149) Naphthalene	(4)	11.582(0.000)	128	604155	19.871	19.87			1	5
150) 1,2,3-Trichlorobenzene	(4)	11.739(0.000)	180	177733	20.265	20.26			0.4	5
151) 2-Methylnaphthalene	(4)	12.307(-0.000)	142	234395	13.513	13.51			0.7	5

Total number of targets = 109

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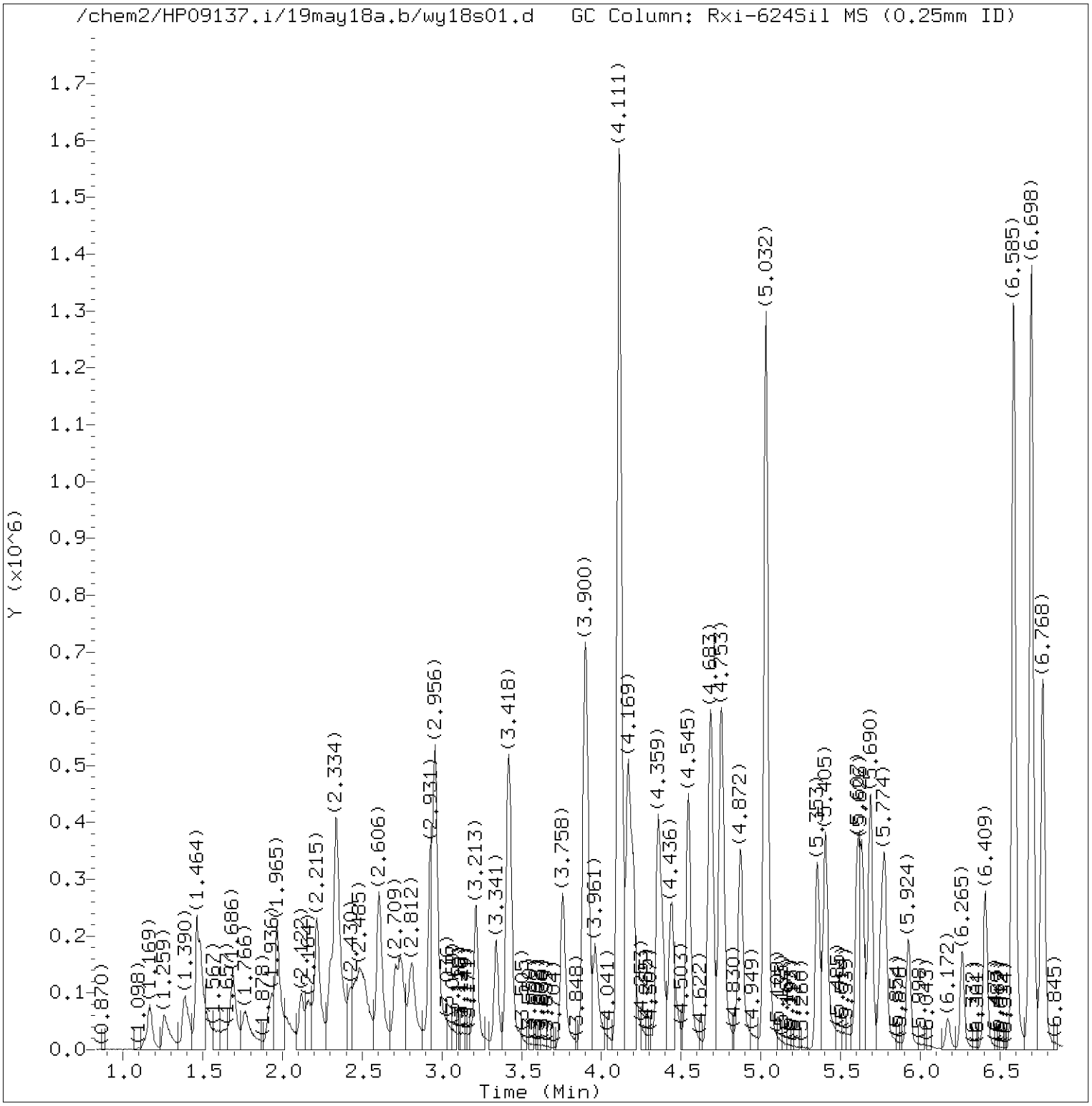
Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

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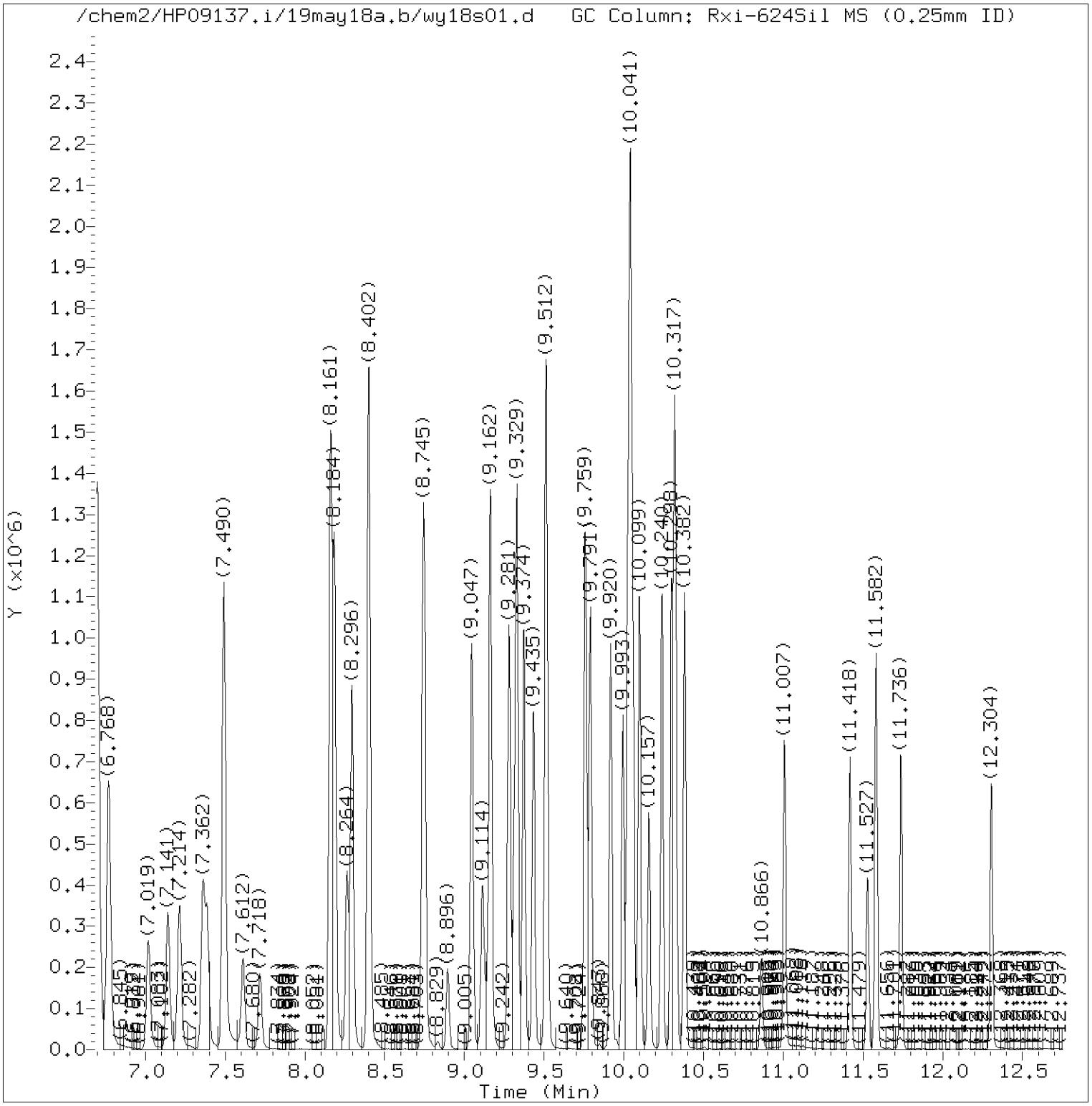
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.259	85	122405	18.041
4) Chloromethane	(2)	1.390	50	131544	15.570
5) 1,3-Butadiene	(2)	1.464	39	134278M	26.080
6) Vinyl Chloride	(2)	1.464	62	129632	16.738
8) Bromomethane	(2)	1.692	94	96074M	15.728
9) Chloroethane	(2)	1.766	64	80293	15.754
12) Trichlorofluoromethane	(2)	1.933	101	151761	18.450
11) n-Pentane	(2)	1.965	43	110412	14.114
13) Ethanol	(1)	2.032	45	32125M	380.291
15) Freon 123a	(2)	2.119	67	114541M	18.634
16) Acrolein	(1)	2.215	56	203467	152.584
17) 1,1-Dichloroethene	(2)	2.298	96	99685M	21.547
19) Freon 113	(2)	2.334	101	84299	20.750
18) Acetone	(1)	2.340	58	150531M	232.245
21) 2-Propanol	(1)	2.456	45	76314M	158.471
22) Methyl Iodide	(2)	2.475	142	178264M	20.107
23) Carbon Disulfide	(2)	2.507	76	241845	14.838
25) Allyl Chloride	(2)	2.603	41	149787	18.585
27) Methyl Acetate	(2)	2.619	43	128160	18.371
28) Methylene Chloride	(2)	2.709	84	110369	19.517
29)*t-Butyl alcohol-d10	(1)	2.732	65	185223	250.000
30) t-Butyl alcohol	(1)	2.812	59	183621	213.752
31) Acrylonitrile	(2)	2.924	53	329808	89.865
32) trans-1,2-Dichloroethene	(2)	2.959	96	106977	21.312
33) Methyl Tertiary Butyl Ether	(2)	2.963	73	291896M	23.883
34) n-Hexane	(2)	3.213	57	128915	19.194
36) 1,1-Dichloroethane	(2)	3.341	63	186937	20.552
38) di-Isopropyl ether	(2)	3.415	45	348753	19.958
39) 2-Chloro-1,3-butadiene	(2)	3.431	53	166663	21.156
40) Ethyl t-butyl ether	(2)	3.758	59	277001	21.747
42) cis-1,2-Dichloroethene	(2)	3.890	96	127328	22.592
45) 2,2-Dichloropropane	(2)	3.893	77	80613	19.734
44) 2-Butanone	(2)	3.906	43	729335	138.323
47) Propionitrile	(1)	3.961	54	209125	195.875
48) Methacrylonitrile	(2)	4.111	67	565031	143.190
49) Bromochloromethane	(2)	4.121	128	61890	21.125
50) Tetrahydrofuran	(1)	4.169	71	132152	133.738
51) Chloroform	(2)	4.201	83	187903	22.018

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
52)$Dibromofluoromethane	(2)	4.359	113	232125	47.750
53) 1,1,1-Trichloroethane	(2)	4.381	97	140386	21.862
54) Cyclohexane	(2)	4.442	56	148098	17.427
55) 1,1-Dichloropropene	(2)	4.548	75	143514	20.975
56) Carbon Tetrachloride	(2)	4.548	117	113827	20.656
58) Isobutyl Alcohol	(1)	4.679	41	176096	562.293
57)$1,2-Dichloroethane-d4	(2)	4.692	102	60342	46.673
60) Benzene	(2)	4.750	78	466958	21.232
61) 1,2-Dichloroethane	(2)	4.769	62	154308	22.713
65) t-Amyl methyl ether	(2)	4.875	73	300472	23.026
67) n-Heptane	(2)	5.032	43	121659	18.953
66)*Fluorobenzene	(2)	5.032	96	1049302	50.000
69) n-Butanol	(1)	5.356	56	277598	998.326
71) Trichloroethene	(2)	5.405	95	113492	21.309
73) Methylcyclohexane	(2)	5.604	83	158337	20.478
74) 1,2-Dichloropropane	(2)	5.636	63	117626	20.832
75) Dibromomethane	(2)	5.754	93	76975	22.089
77) Methyl Methacrylate	(2)	5.777	69	111925	18.038
76) 1,4-Dioxane	(1)	5.790	88	52768M	634.789
79) Bromodichloromethane	(2)	5.928	83	133551	20.858
43) 1,2-Dichloroethene (Total)	(2)		96	234305	43.904
80) 2-Nitropropane	(2)	6.172	41	35846	16.547
81) 2-Chloroethyl Vinyl Ether	(2)	6.265	63	83042	19.291
82) cis-1,3-Dichloropropene	(2)	6.409	75	173429	19.700
83) 4-Methyl-2-pentanone	(2)	6.585	43	948076	91.217
84)$Toluene-d8	(3)	6.698	98	1024508	51.332
89) Toluene	(3)	6.768	92	305184	23.737
90) trans-1,3-Dichloropropene	(3)	7.019	75	156038	20.386
92) Ethyl Methacrylate	(3)	7.137	69	186320	19.810
93) 1,1,2-Trichloroethane	(3)	7.214	97	120891	24.430
94) Tetrachloroethene	(3)	7.359	166	127987	24.532
95) 1,3-Dichloropropane	(3)	7.388	76	193133	22.470
97) 2-Hexanone	(3)	7.490	43	742042	99.103
98) Dibromochloromethane	(3)	7.612	129	111188	23.005
100) 1,2-Dibromoethane	(3)	7.718	107	126964	23.353
101)*Chlorobenzene-d5	(3)	8.161	117	796496	50.000
103) Chlorobenzene	(3)	8.187	112	337353	23.653
104) 1,1,1,2-Tetrachloroethane	(3)	8.267	131	105671	23.054

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
105) Ethylbenzene	(3)	8.296	91	559952	22.915
107) m+p-Xylene	(3)	8.402	106	455044	46.836
108) o-Xylene	(3)	8.739	106	218577	22.868
110) Styrene	(3)	8.752	104	365013	22.765
111) Bromoform	(3)	8.896	173	79455	21.123
112) Isopropylbenzene	(3)	9.047	105	540716	23.022
113) Cyclohexanone	(1)	9.114	55	193408	515.788
115)$4-Bromofluorobenzene	(3)	9.162	95	372564	46.660
116) Bromobenzene	(4)	9.278	156	153402	23.777
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	195987	22.527
118) 1,2,3-Trichloropropane	(4)	9.313	110	63106	24.081
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	210559	75.471
120) n-Propylbenzene	(4)	9.371	91	640815	22.532
121) 2-Chlorotoluene	(4)	9.435	126	136708	23.304
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	460582	22.455
122) 4-Chlorotoluene	(4)	9.518	126	144449	23.002
125) tert-Butylbenzene	(4)	9.759	134	102225	21.936
126) Pentachloroethane	(4)	9.766	167	80695	21.905
127) 1,2,4-Trimethylbenzene	(4)	9.791	105	476442	22.043
128) sec-Butylbenzene	(4)	9.920	105	534870	21.244
130) 1,3-Dichlorobenzene	(4)	9.993	146	282658	22.976
131) p-Isopropyltoluene	(4)	10.022	119	474445	21.287
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	447919	50.000
134) 1,4-Dichlorobenzene	(4)	10.058	146	297886	23.356
91) 1,3-Dichloropropene (total)	(3)		100	329467	40.087
135) 1,2,3-Trimethylbenzene	(4)	10.099	105	495935	21.325
136) Benzyl Chloride	(4)	10.157	91	327217	18.330
137) 1,3-Diethylbenzene	(4)	10.240	119	280737	20.047
138) 1,4-Diethylbenzene	(4)	10.298	119	291396	19.421
140) n-Butylbenzene	(4)	10.317	92	221191	19.663
139) 1,2-Dichlorobenzene	(4)	10.324	146	284707	23.326
141) 1,2-Diethylbenzene	(4)	10.382	119	248487	21.017
143) 1,2-Dibromo-3-chloropropane	(4)	10.866	75	40024	20.242
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	189511	20.248
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	178556	19.871
148) Hexachlorobutadiene	(4)	11.527	225	61764	19.299
149) Naphthalene	(4)	11.582	128	604155	19.871
150) 1,2,3-Trichlorobenzene	(4)	11.739	180	177733	20.265

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
109) Xylene (Total)	(3)		106	673621	69.705
151) 2-Methylnaphthalene	(4)	12.307	142	234395	13.513
142) Diethylbenzene (total)	(4)		100	820620	60.484

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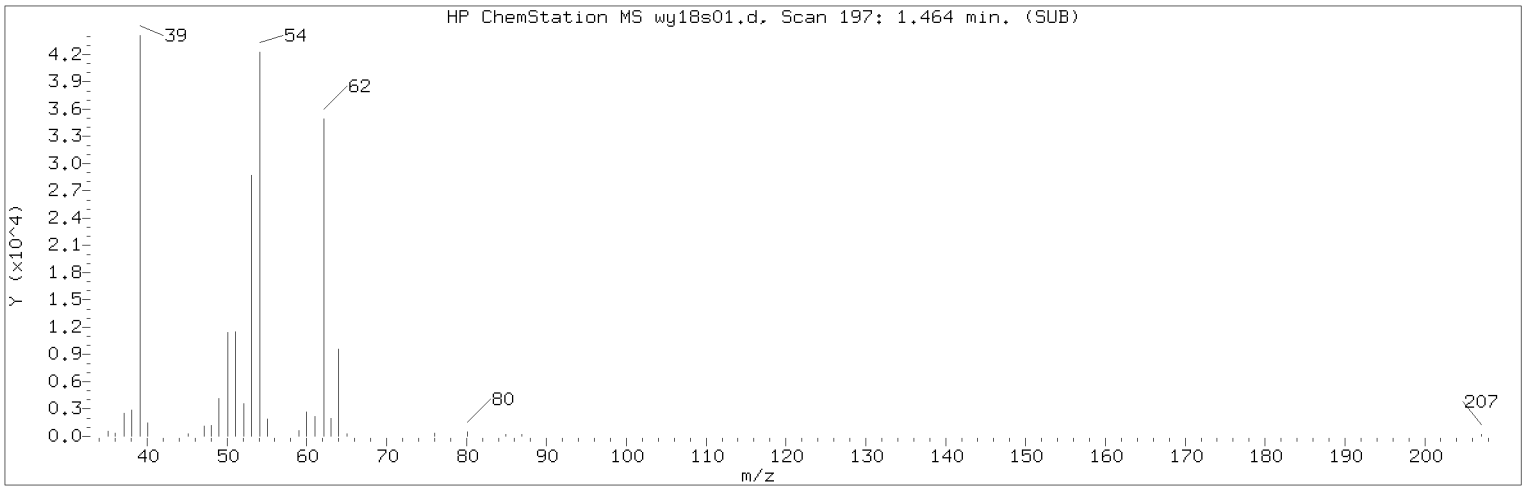
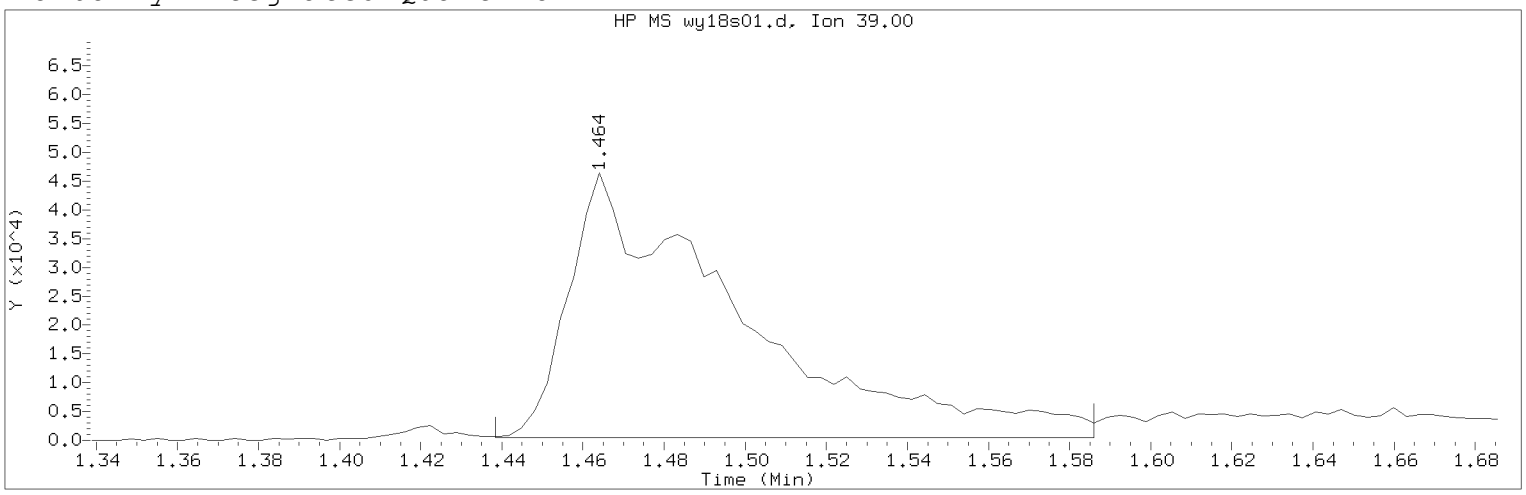
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

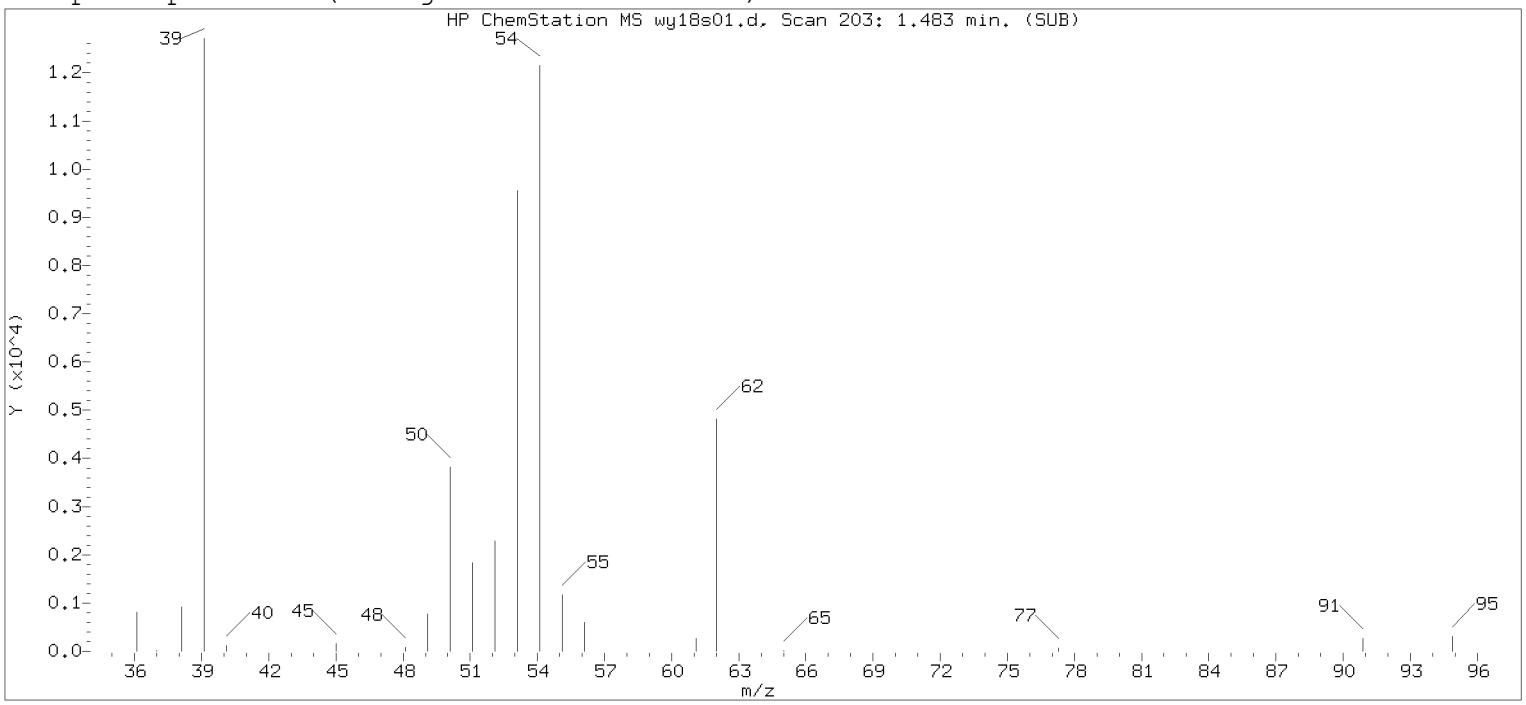
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 197
Retention Time (minutes): 1.464
Quant Ion : 39.00
Area (flag) : 134278M
On-Column Amount (ng) : 26.0797
Integration start scan : 188 Integration stop scan: 234
Y at integration start : 473 Y at integration end: 473

Reason for manual integration: improper integration

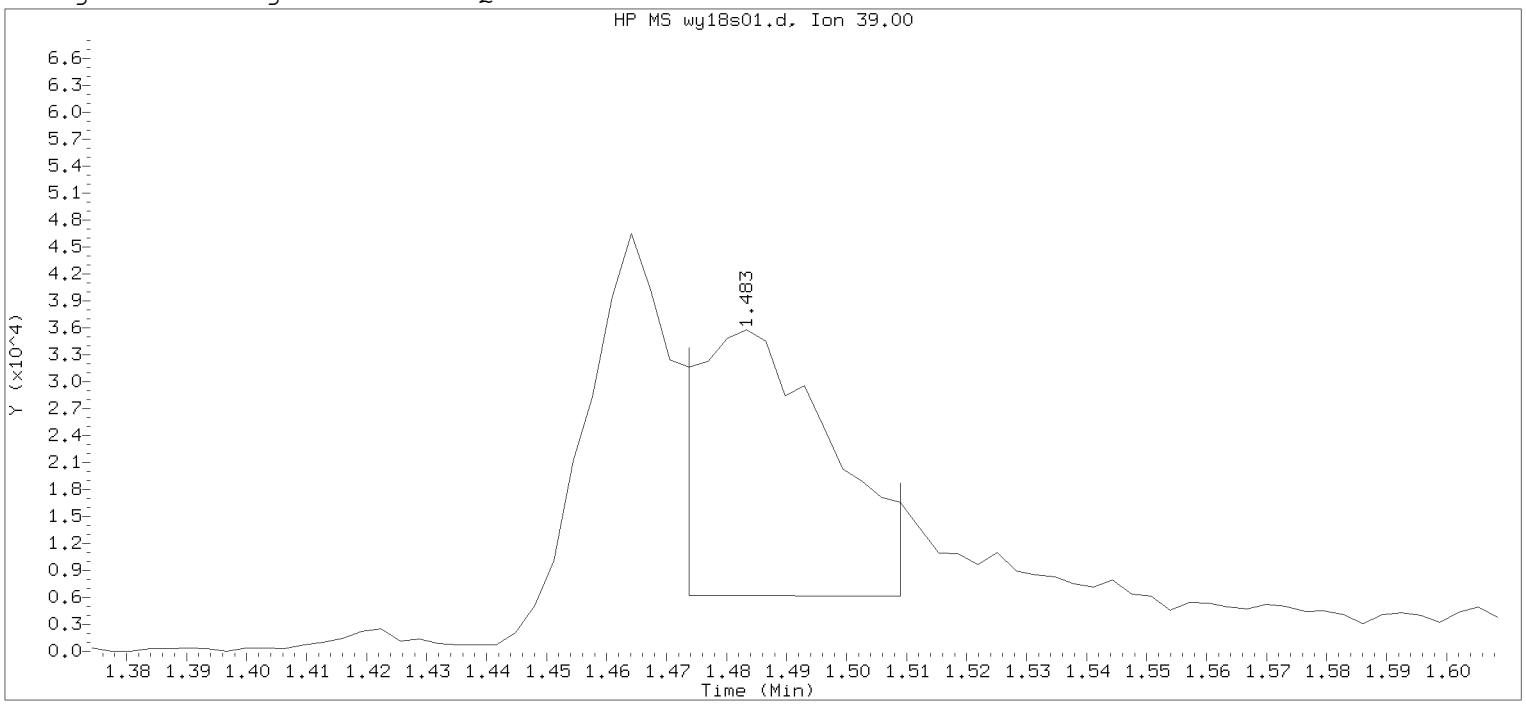
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 203
Retention Time (minutes): 1.483
Quant Ion : 39.00
Area : 44904
On-column Amount (ng) : 8.7215
Integration start scan : 199 Integration stop scan: 210
Y at integration start : 6187 Y at integration end: 6121

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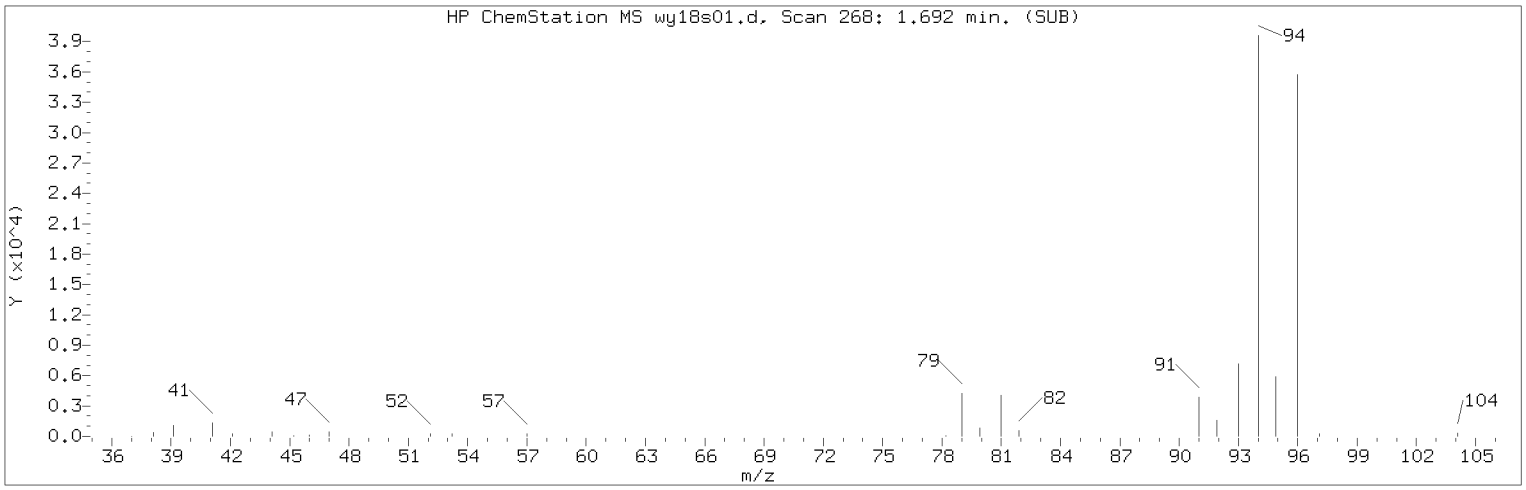
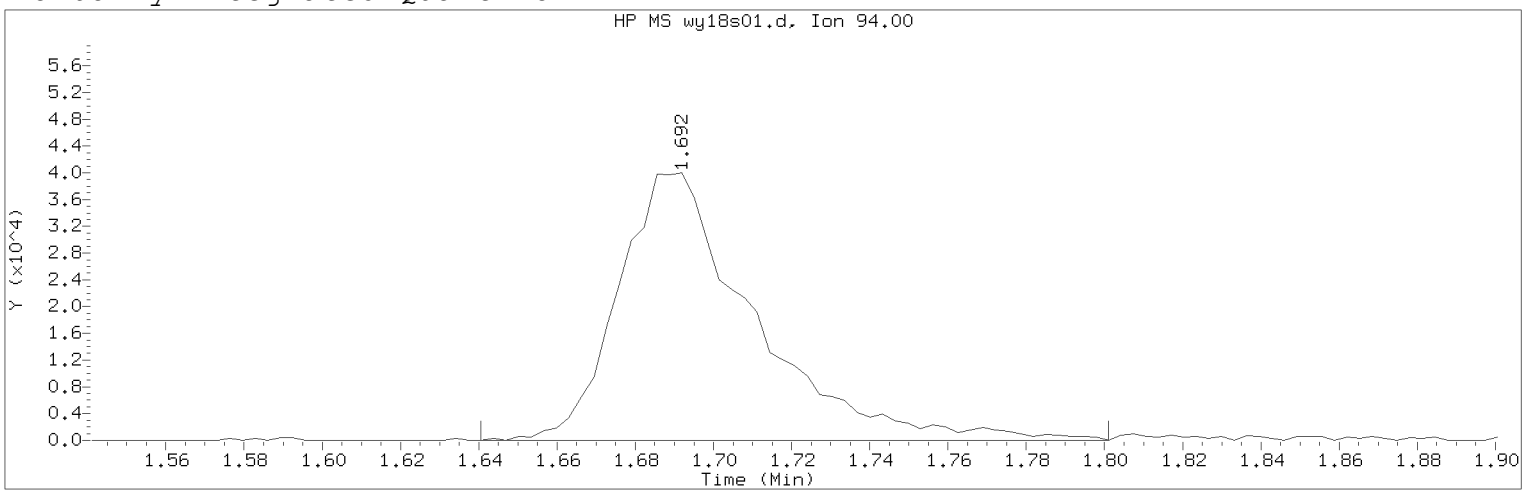
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

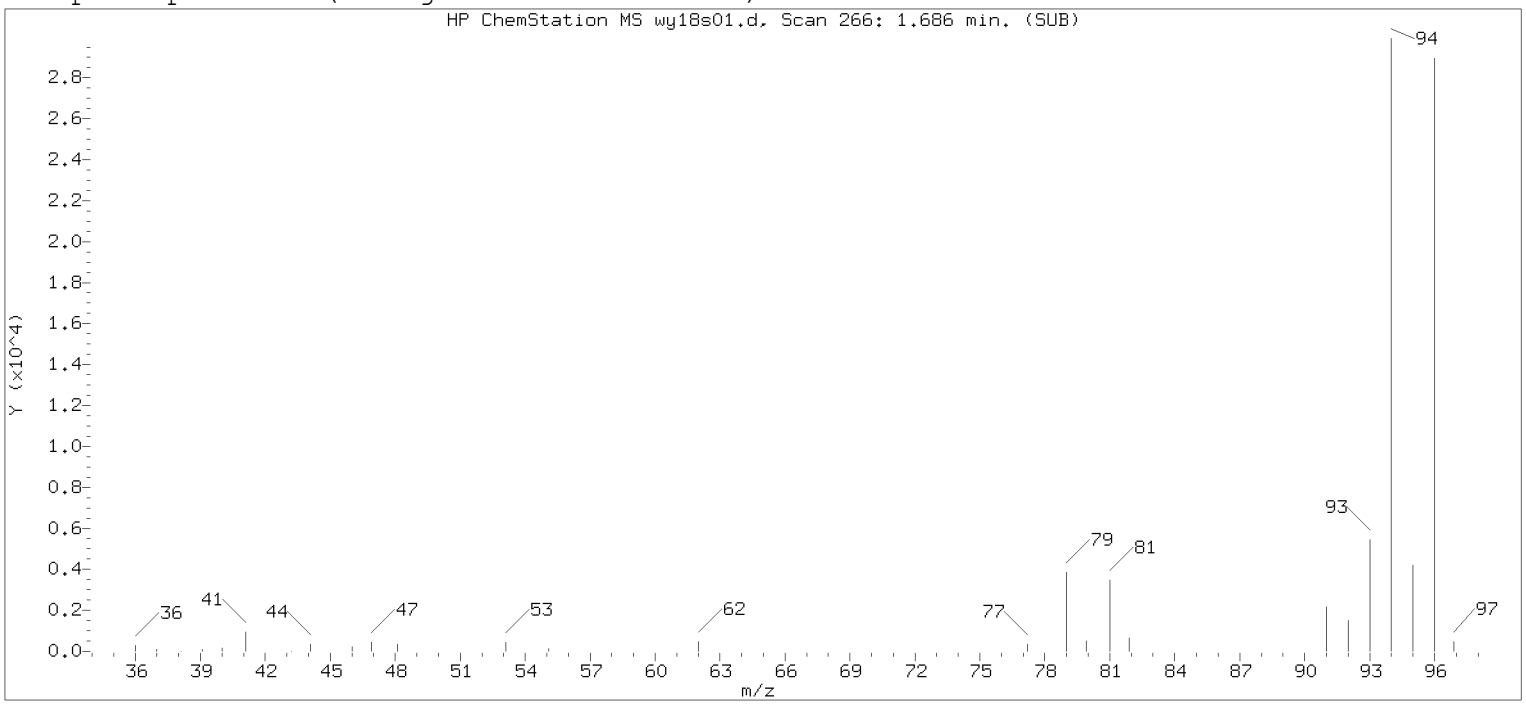
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 268
Retention Time (minutes): 1.692
Quant Ion : 94.00
Area (flag) : 96074M
On-Column Amount (ng) : 15.7285
Integration start scan : 251 Integration stop scan: 301
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

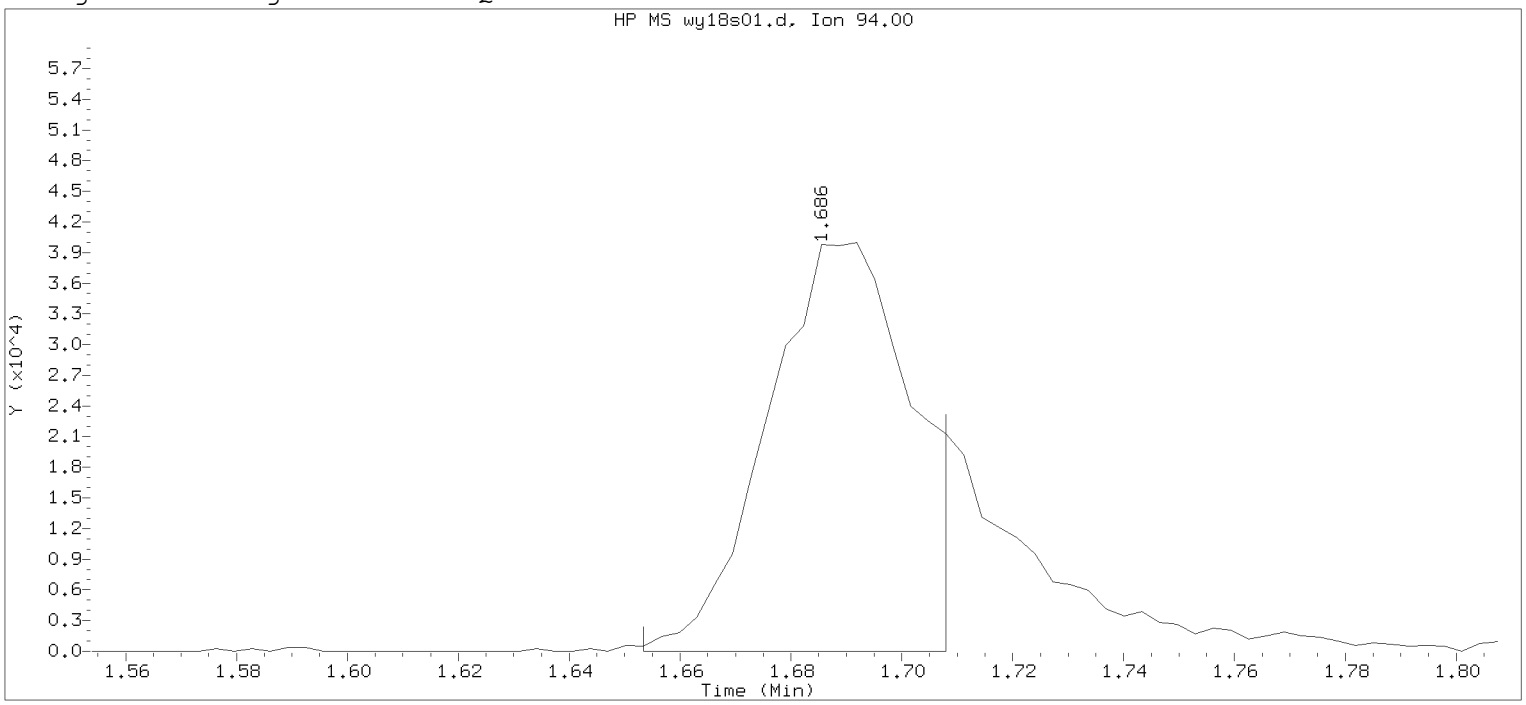
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

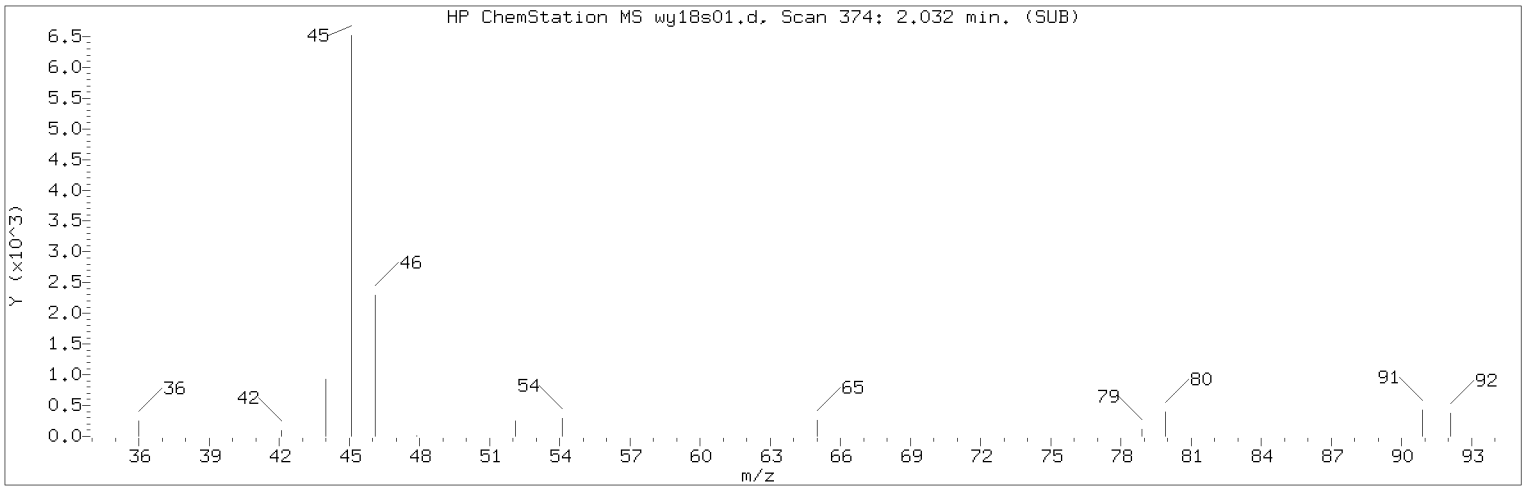
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

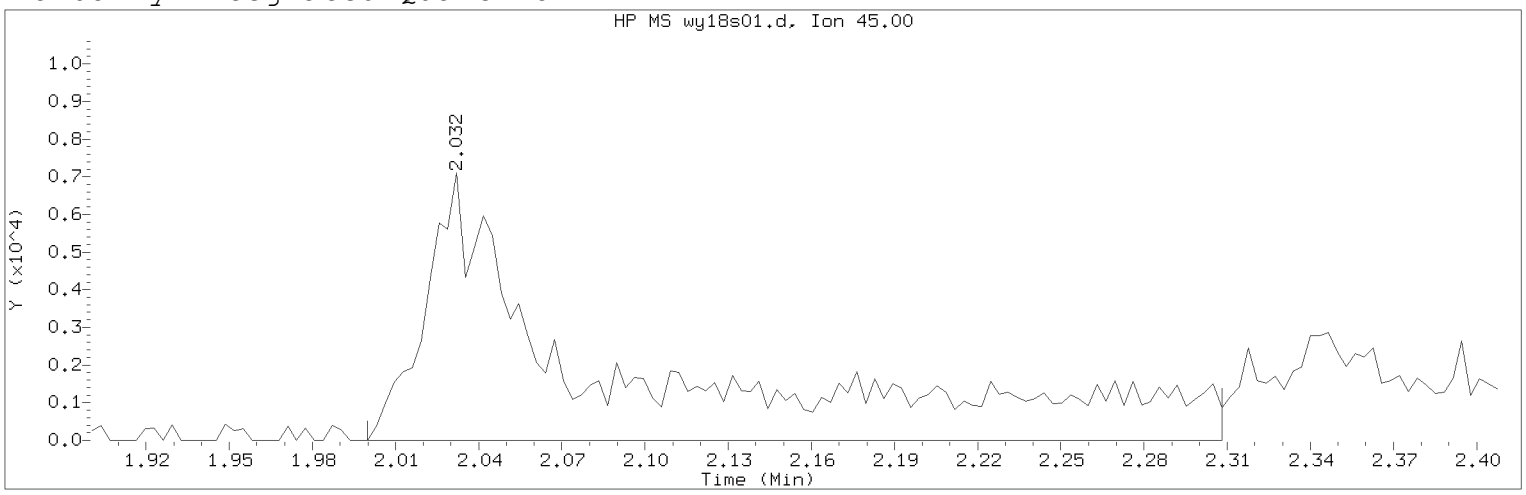
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 266
Retention Time (minutes): 1.686
Quant Ion : 94.00
Area : 70808
On-column Amount (ng) : 11.5922
Integration start scan : 255 Integration stop scan: 272
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user is sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

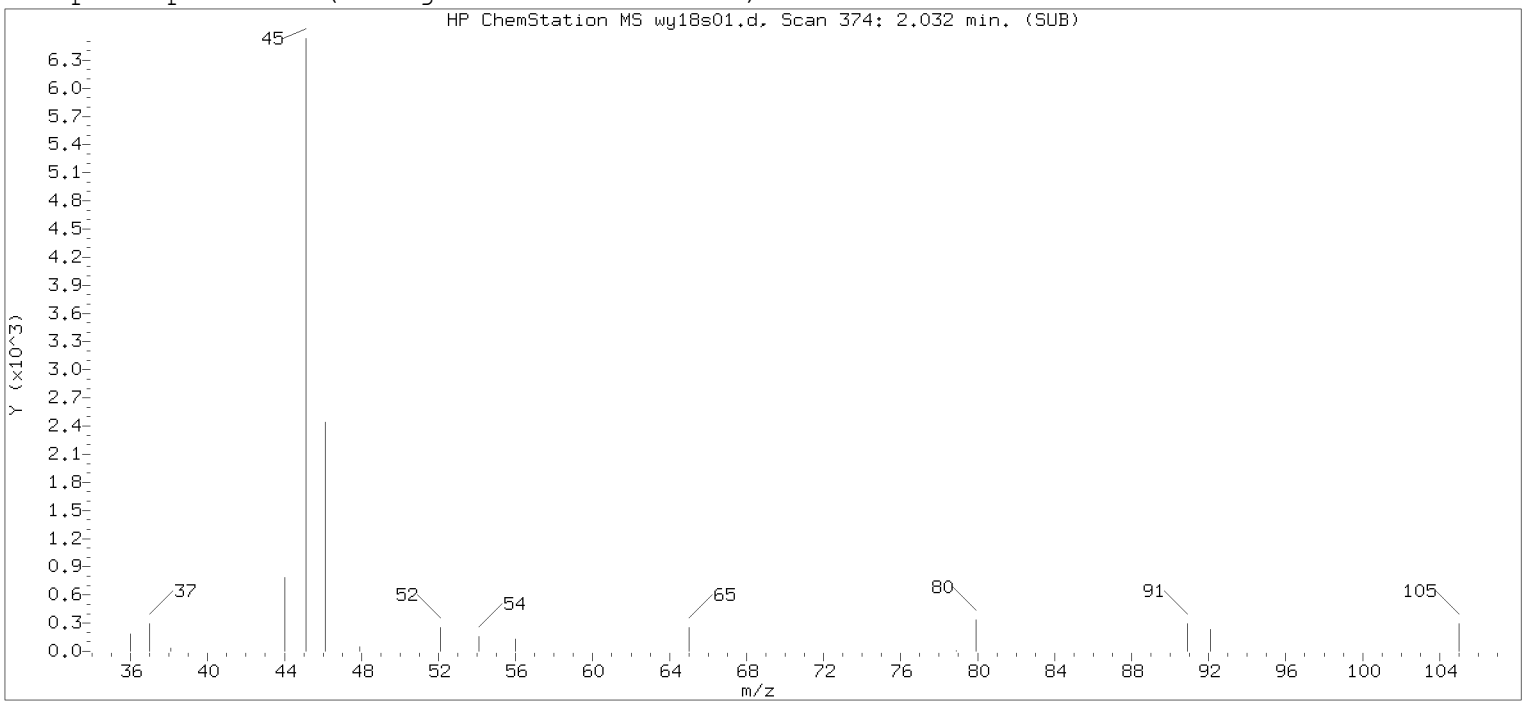
Compound Number : 13
Compound Name : Ethanol
Scan Number : 374
Retention Time (minutes): 2.032
Quant Ion : 45.00
Area (flag) : 32125M
On-Column Amount (ng) : 380.2913
Integration start scan : 363 Integration stop scan: 459
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

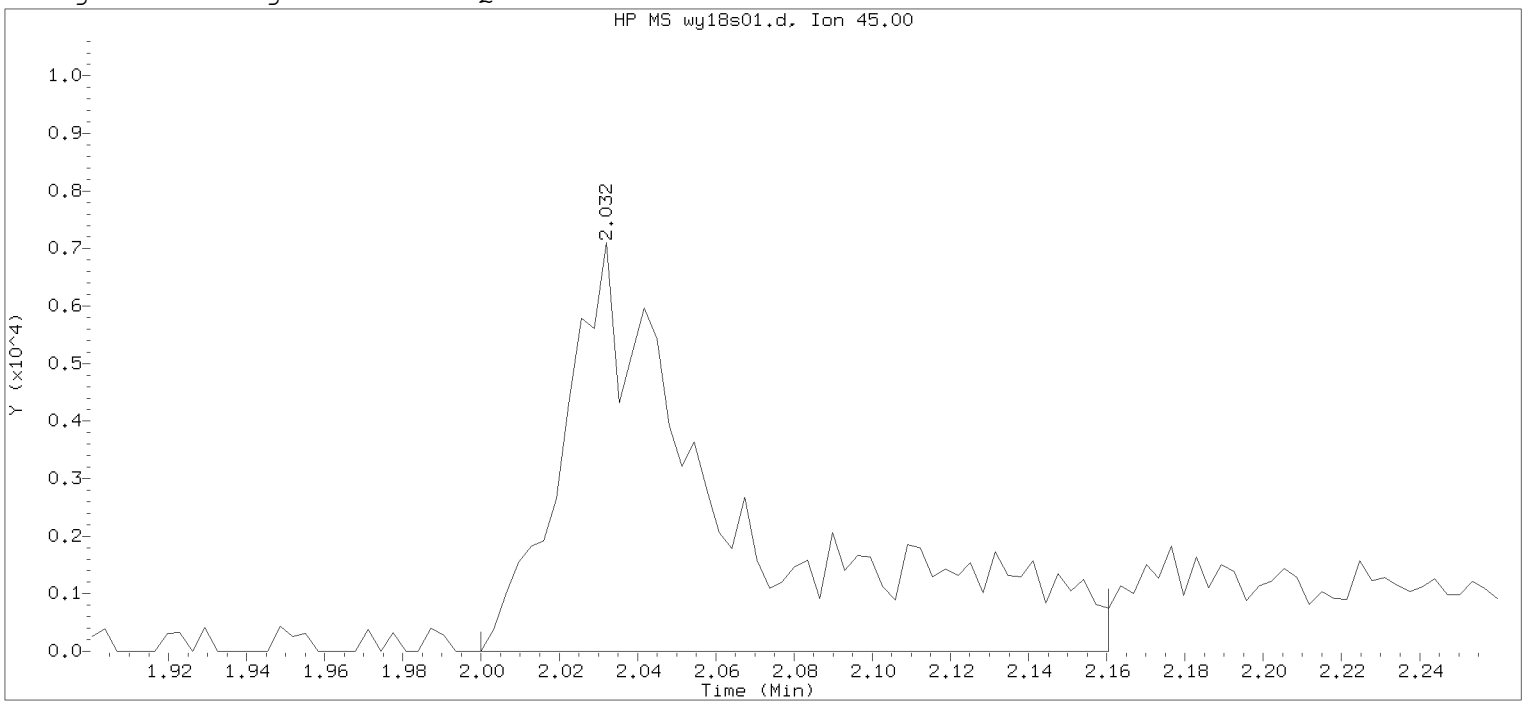
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

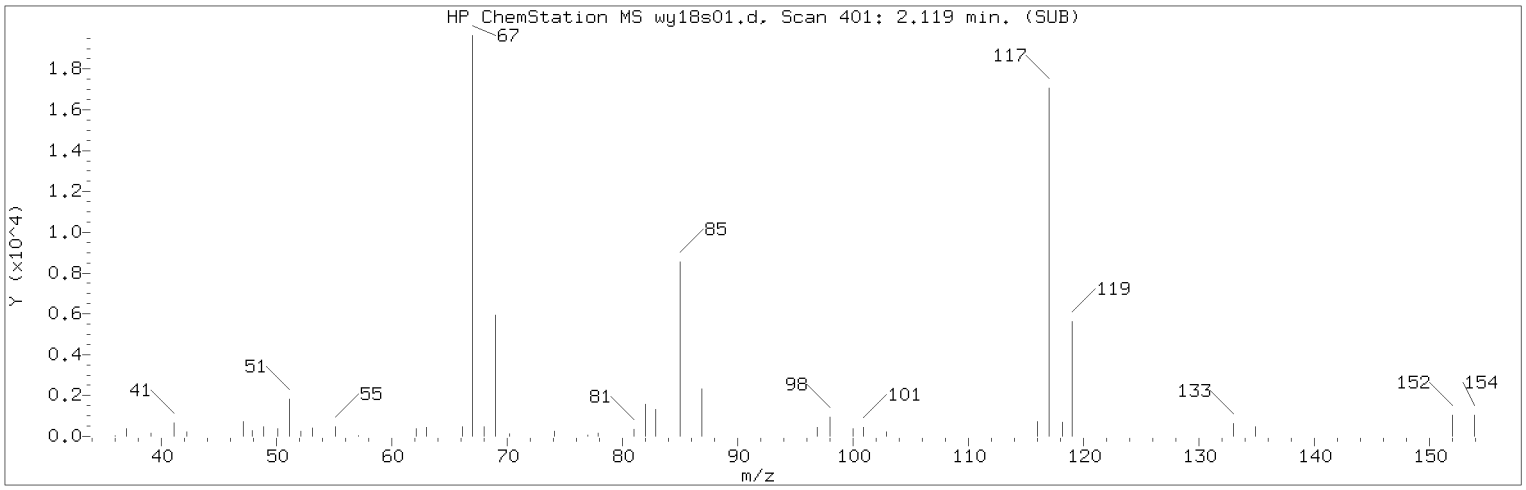
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

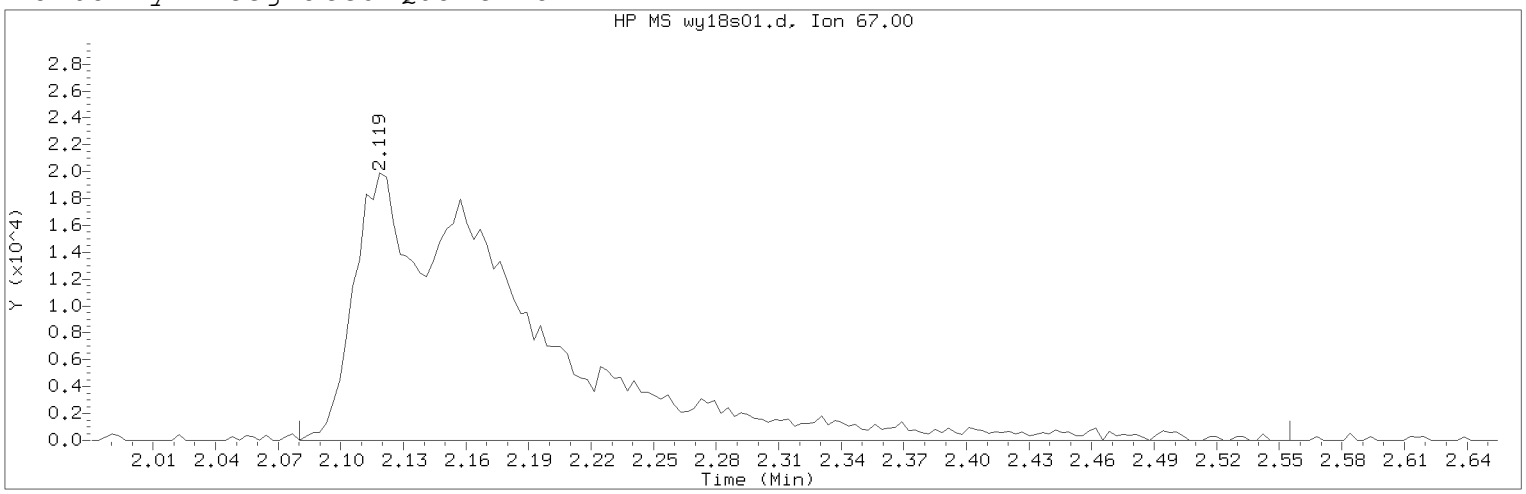
Compound Number : 13
Compound Name : Ethanol
Scan Number : 374
Retention Time (minutes): 2.032
Quant Ion : 45.00
Area : 21467
On-column Amount (ng) : 254.1253
Integration start scan : 363 Integration stop scan: 413
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

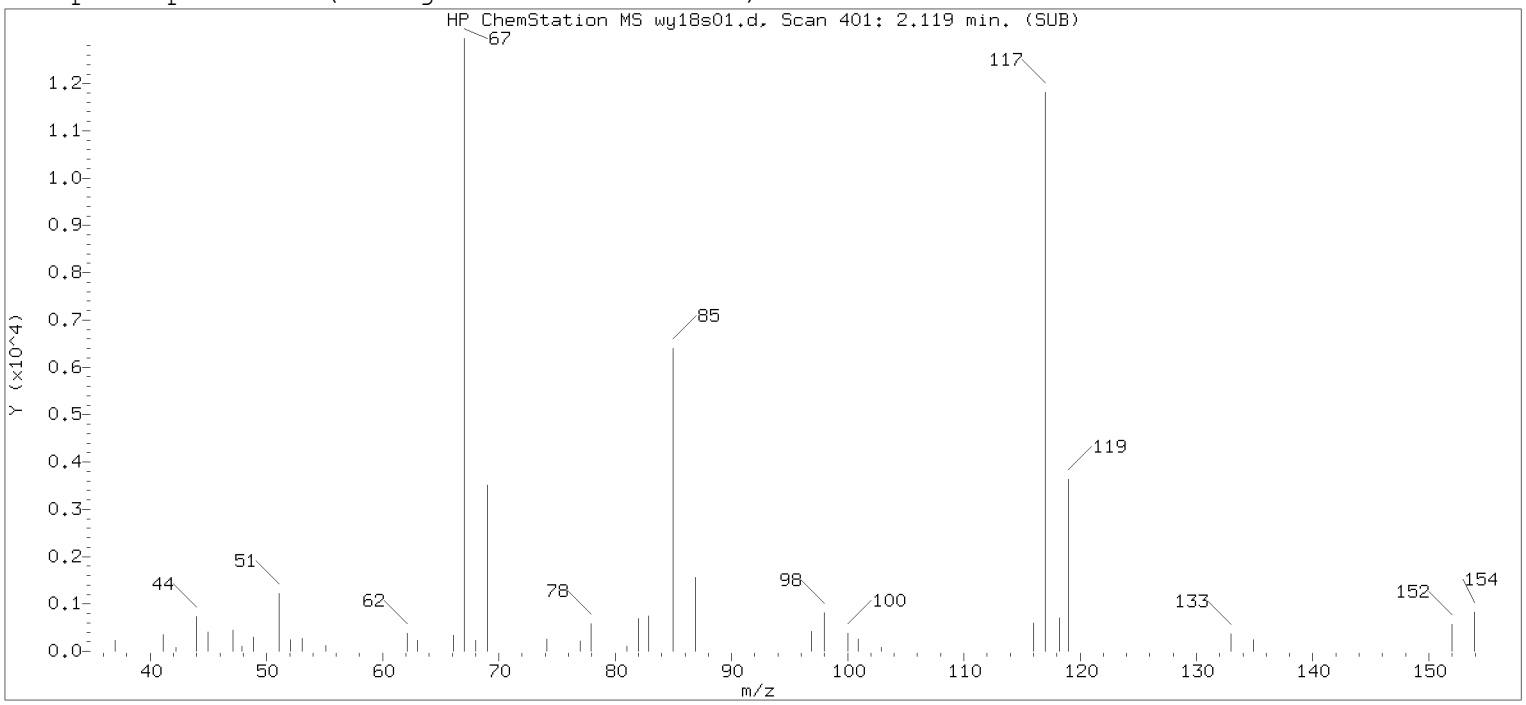
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 401
Retention Time (minutes): 2.119
Quant Ion : 67.00
Area (flag) : 114541M
On-Column Amount (ng) : 18.6344
Integration start scan : 388 Integration stop scan: 536
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

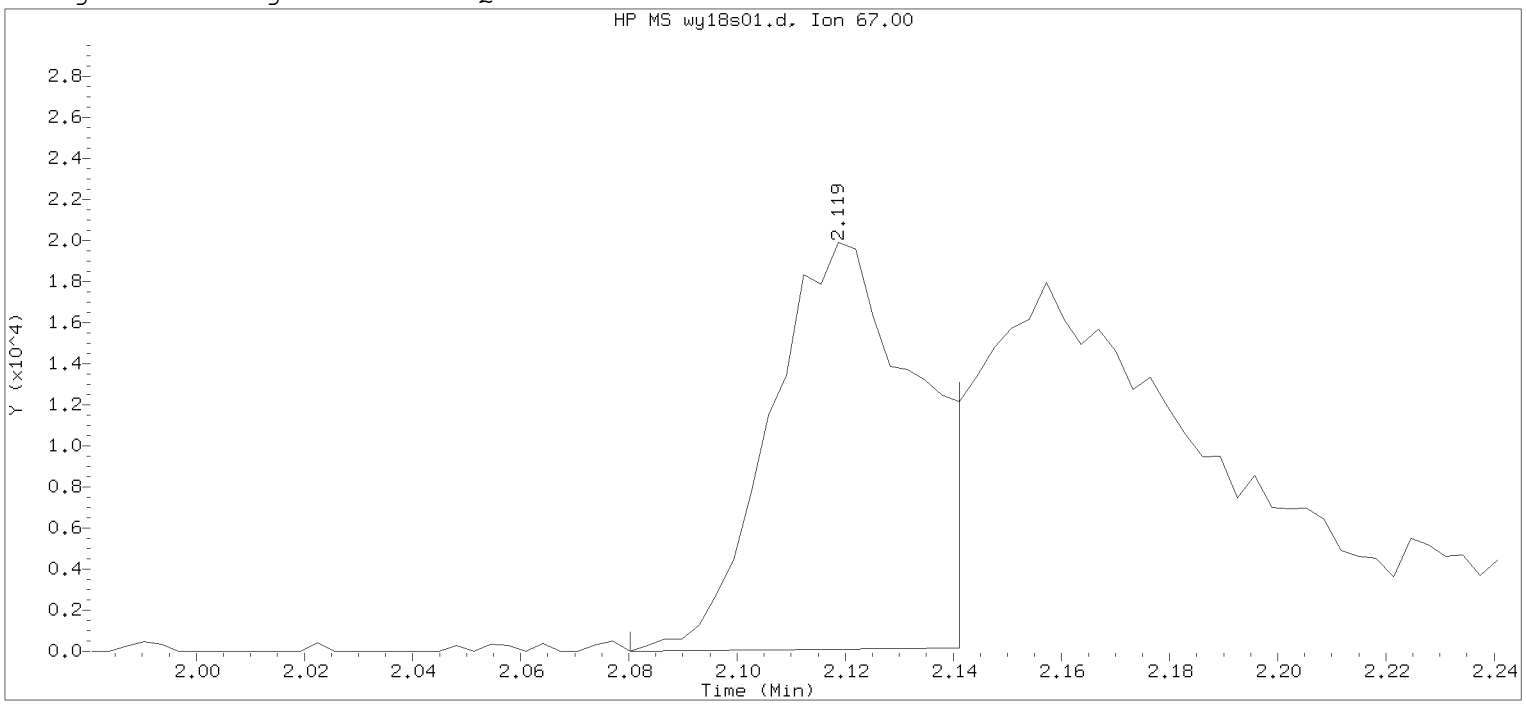
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

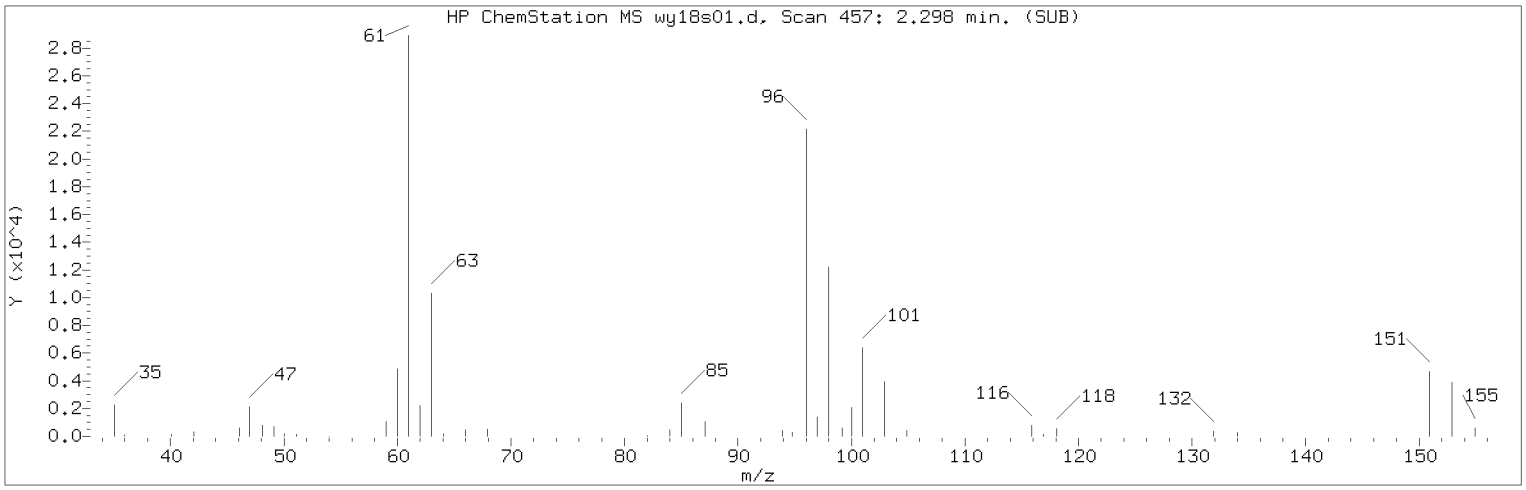
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

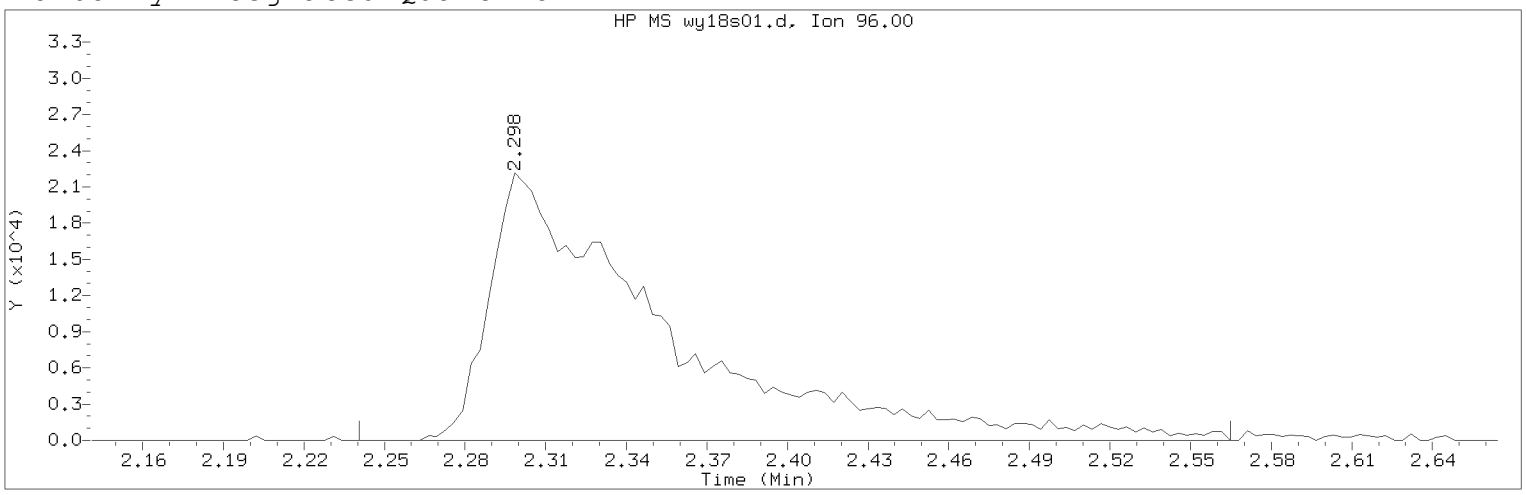
Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 401		
Retention Time (minutes)	: 2.119		
Quant Ion	: 67.00		
Area	: 37059		
On-column Amount (ng)	: 6.0292		
Integration start scan	: 388	Integration stop scan:	407
Y at integration start	: 0	Y at integration end:	164

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

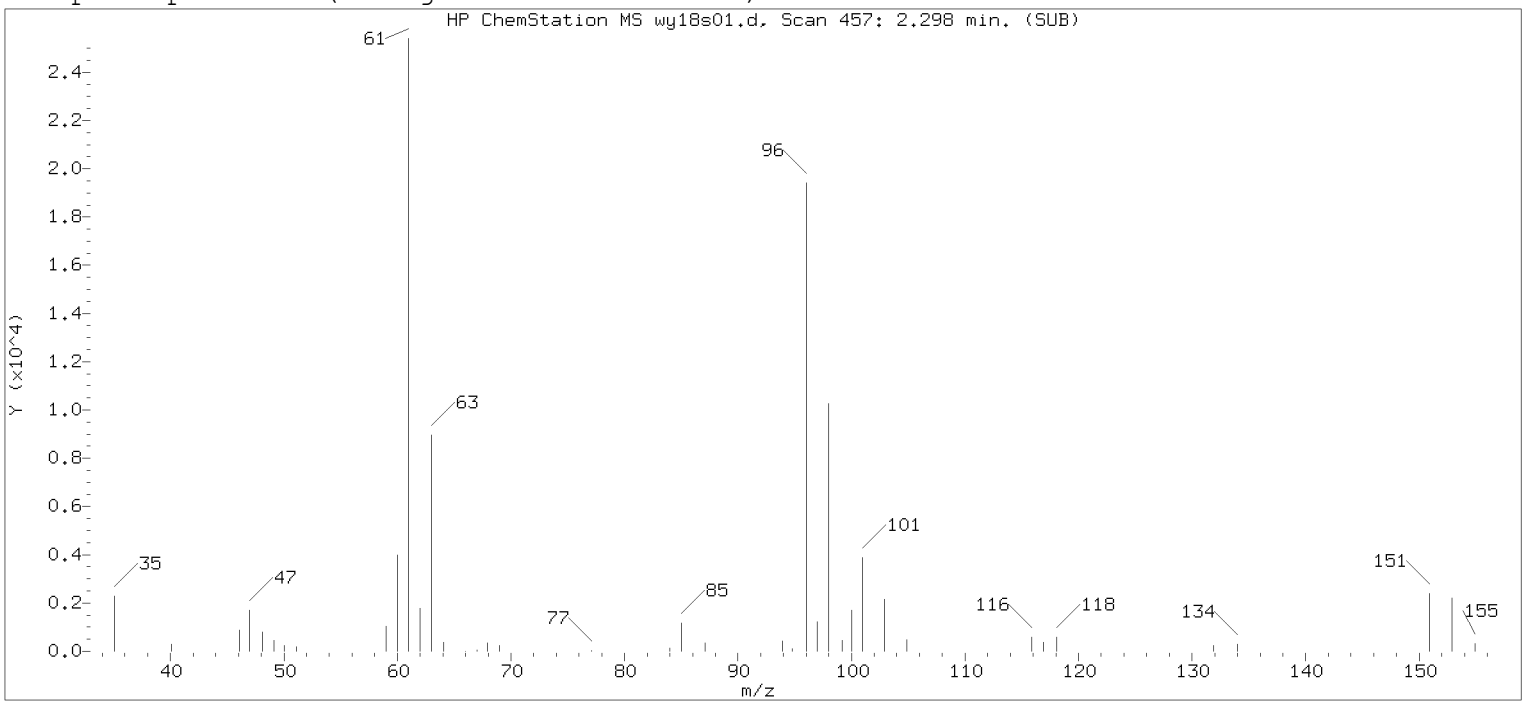
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 457
Retention Time (minutes): 2.298
Quant Ion : 96.00
Area (flag) : 99685M
On-Column Amount (ng) : 21.5470
Integration start scan : 438 Integration stop scan: 539
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

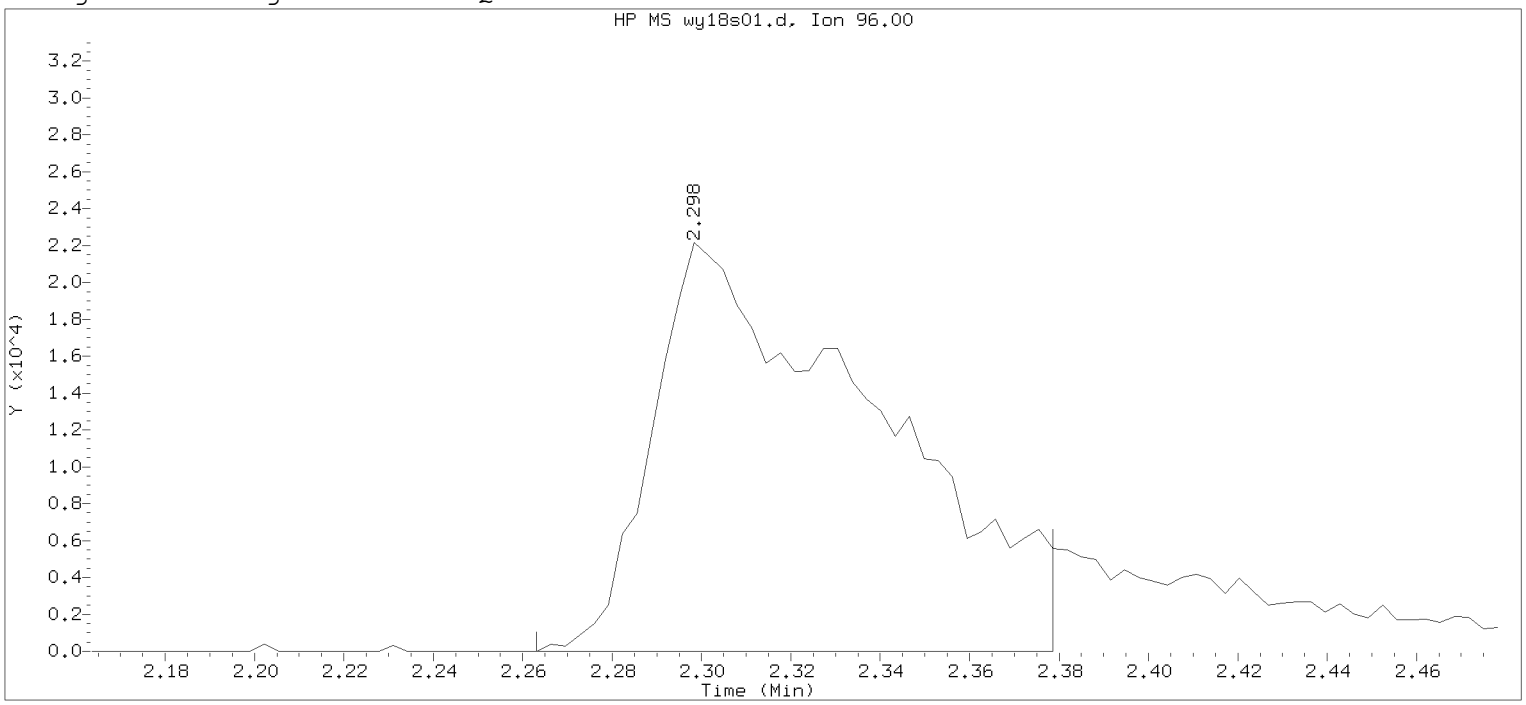
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

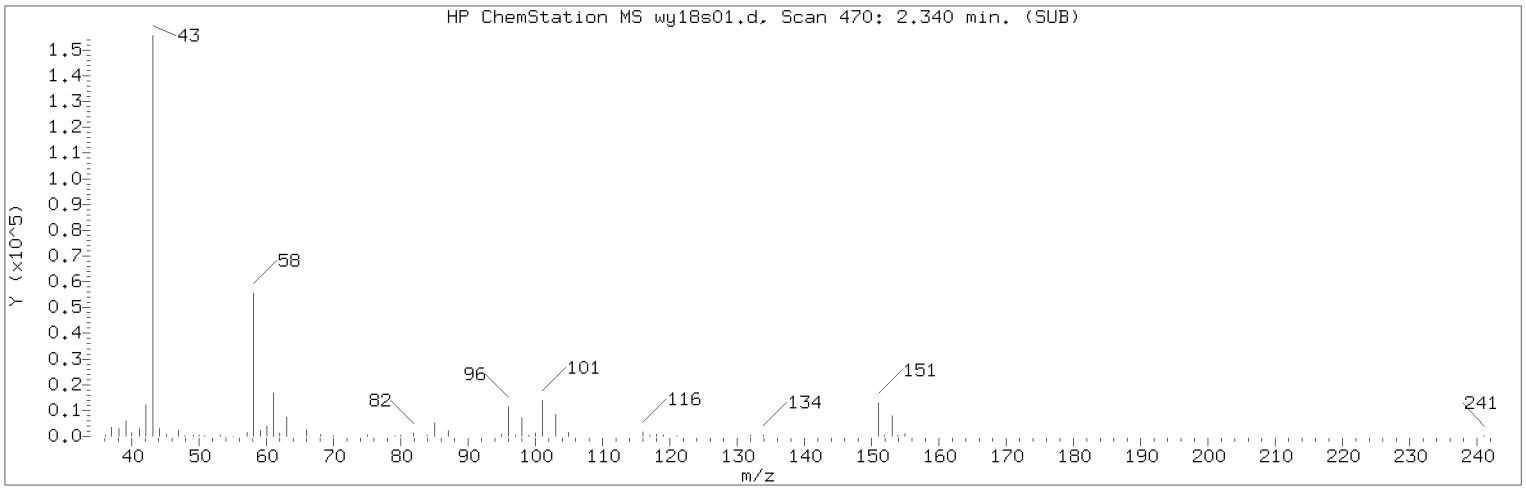
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

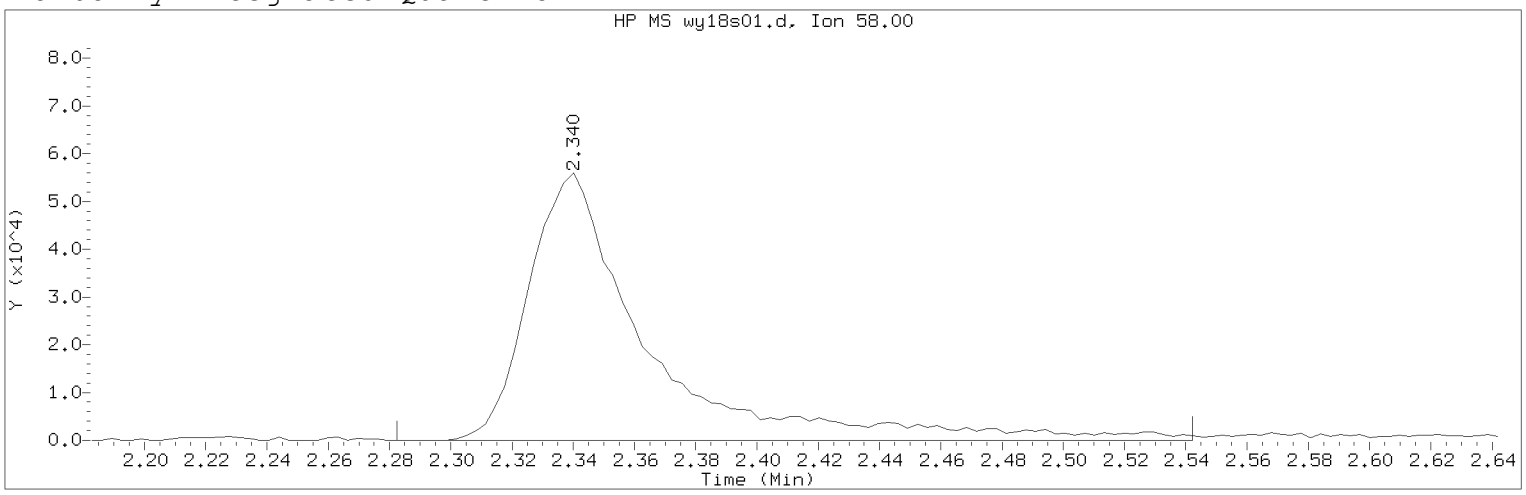
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 457
Retention Time (minutes): 2.298
Quant Ion : 96.00
Area : 76748
On-column Amount (ng) : 16.5892
Integration start scan : 445 Integration stop scan: 481
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

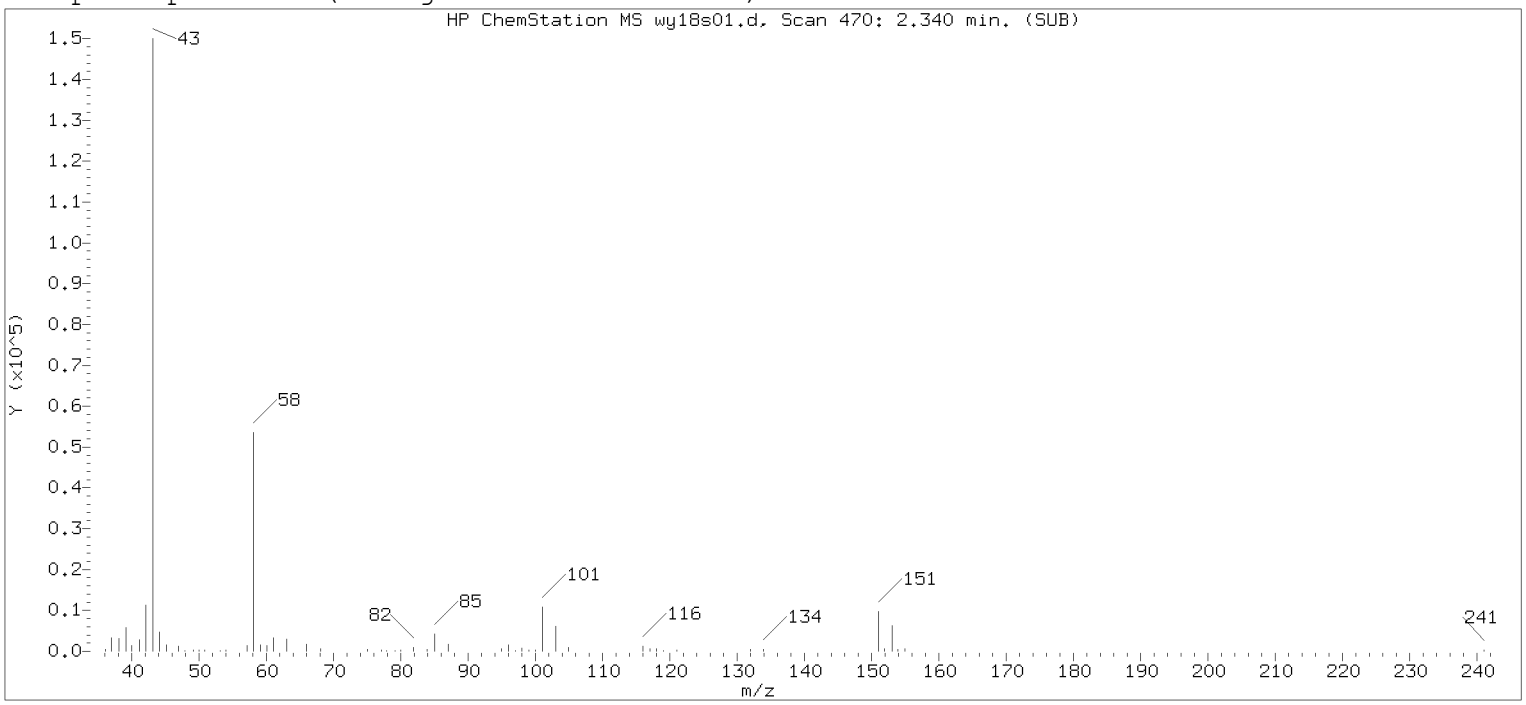
Compound Number : 18
Compound Name : Acetone
Scan Number : 470
Retention Time (minutes): 2.340
Quant Ion : 58.00
Area (flag) : 150531M
On-Column Amount (ng) : 232.2450
Integration start scan : 451 Integration stop scan: 532
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

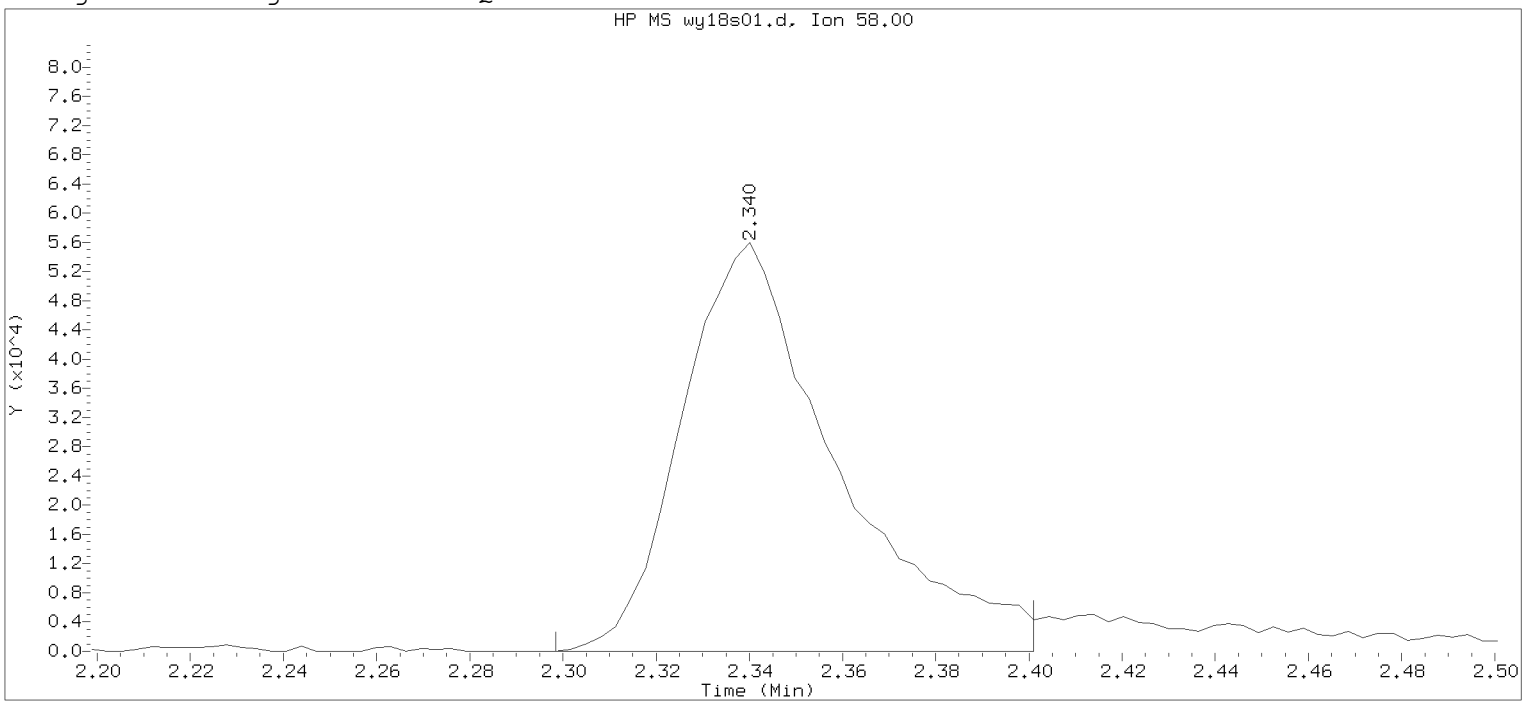
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

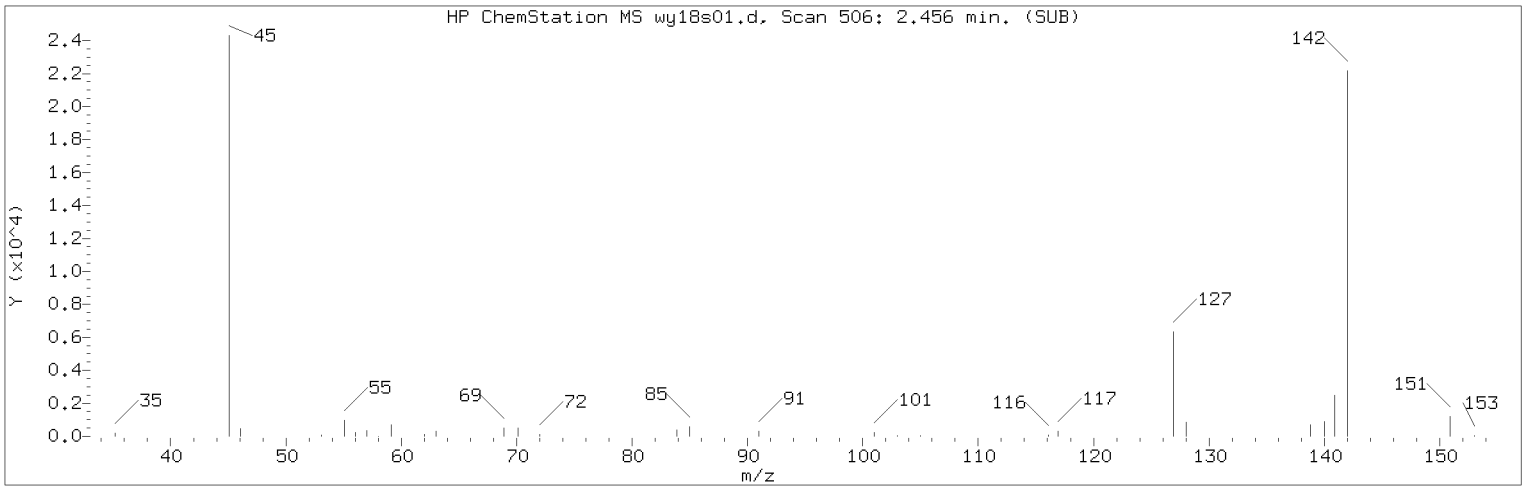
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

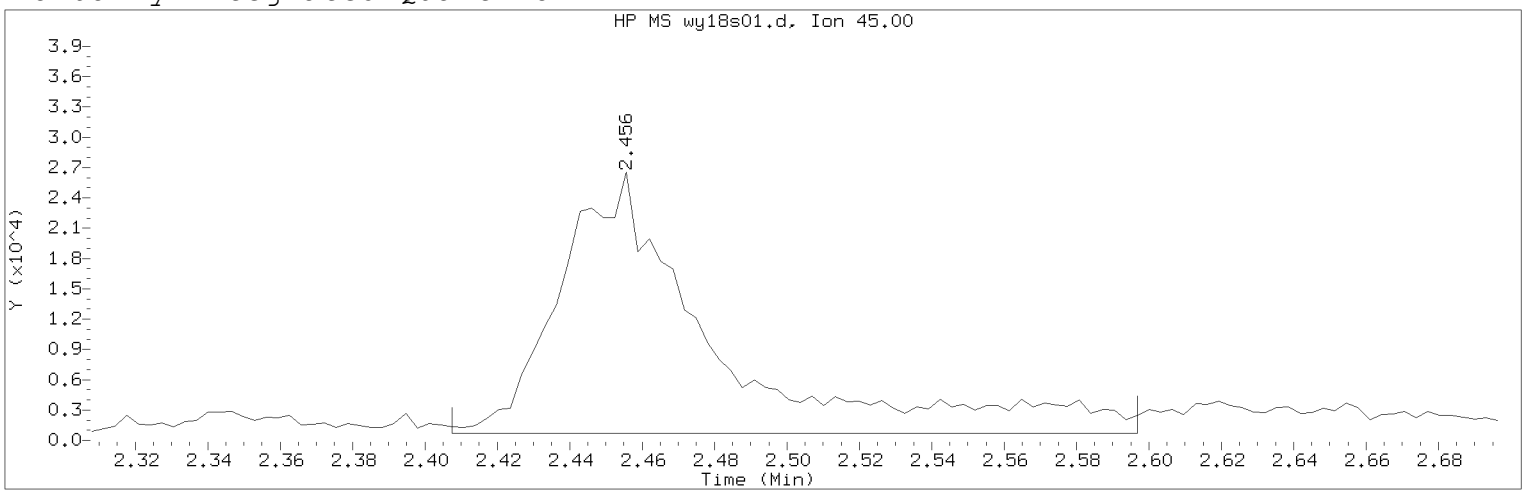
Compound Number : 18
Compound Name : Acetone
Scan Number : 470
Retention Time (minutes): 2.340
Quant Ion : 58.00
Area : 128903
On-column Amount (ng) : 198.8773
Integration start scan : 456 Integration stop scan: 488
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

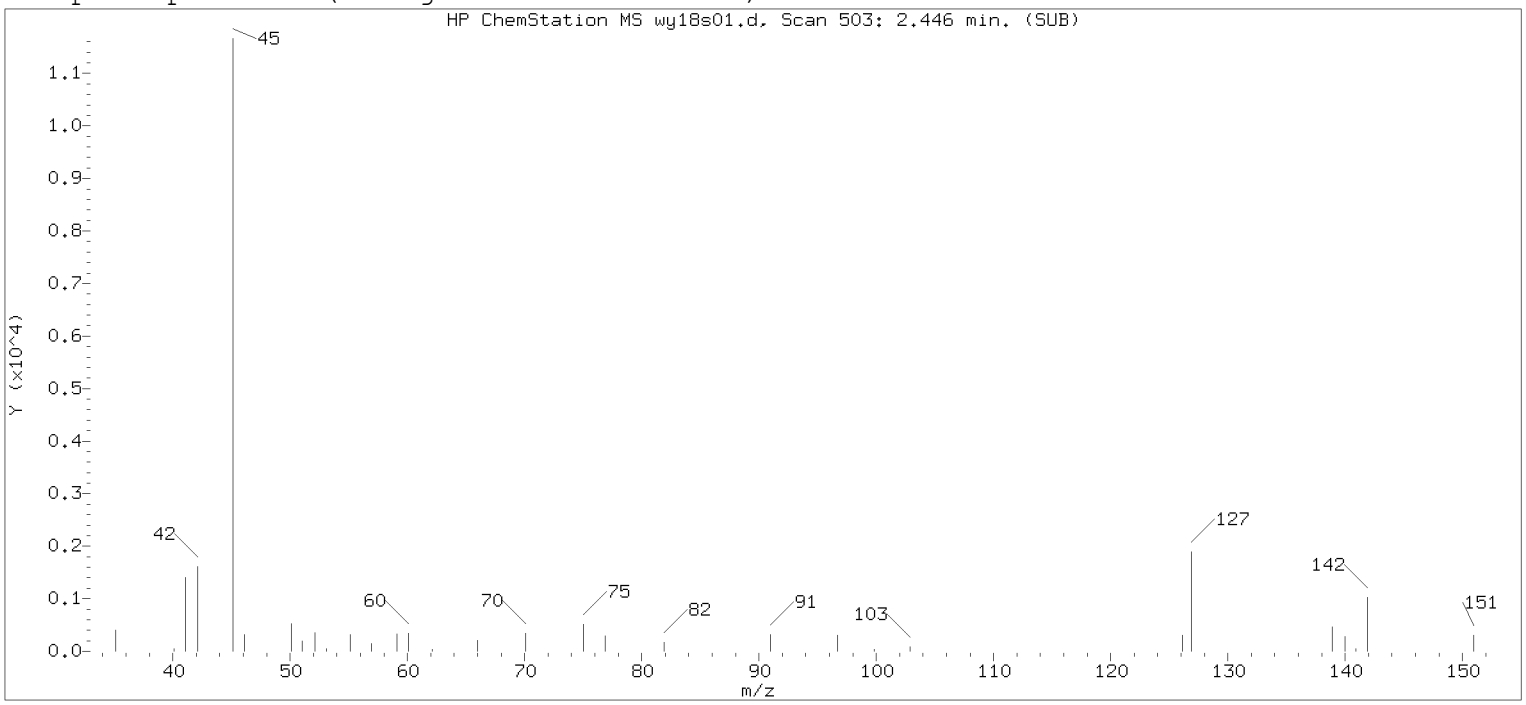
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 506
Retention Time (minutes): 2.456
Quant Ion : 45.00
Area (flag) : 76314M
On-Column Amount (ng) : 158.4713
Integration start scan : 490 Integration stop scan: 549
Y at integration start : 676 Y at integration end: 676

Reason for manual integration: improper integration

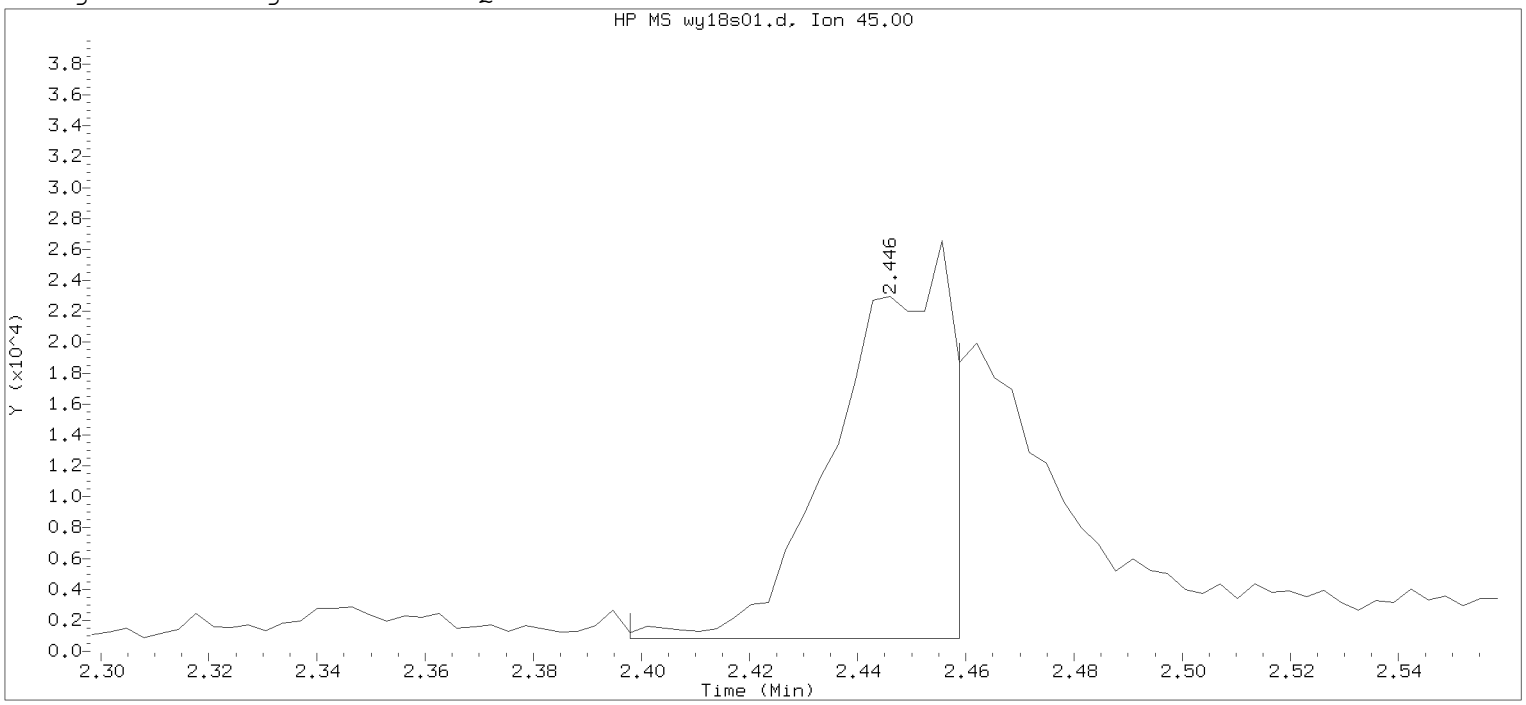
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

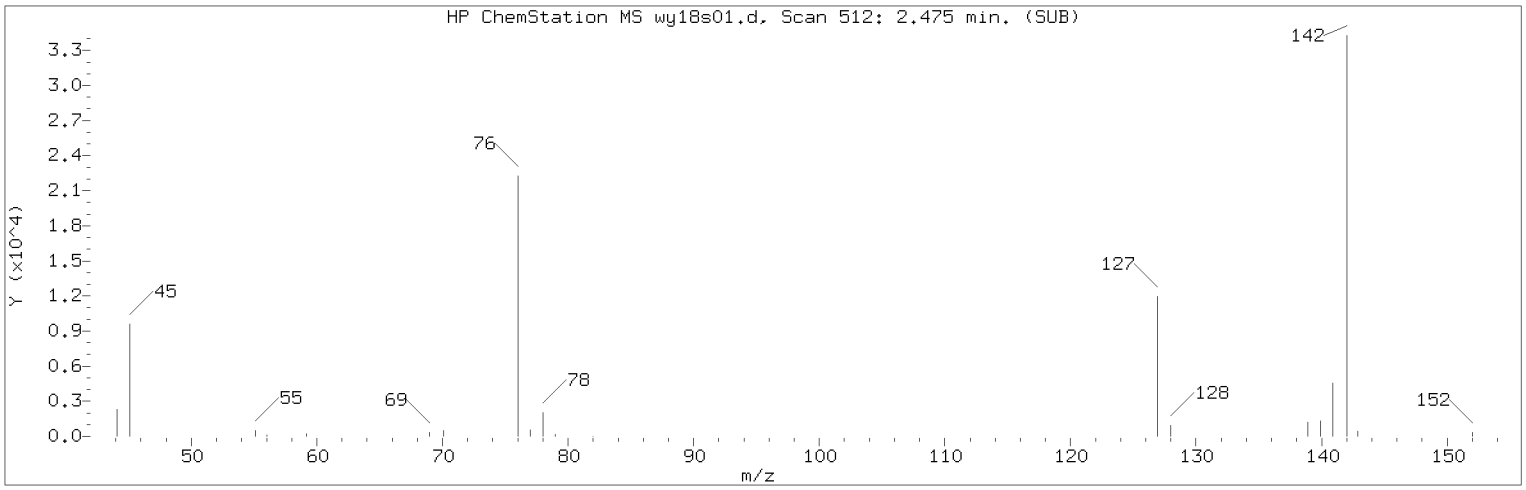
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

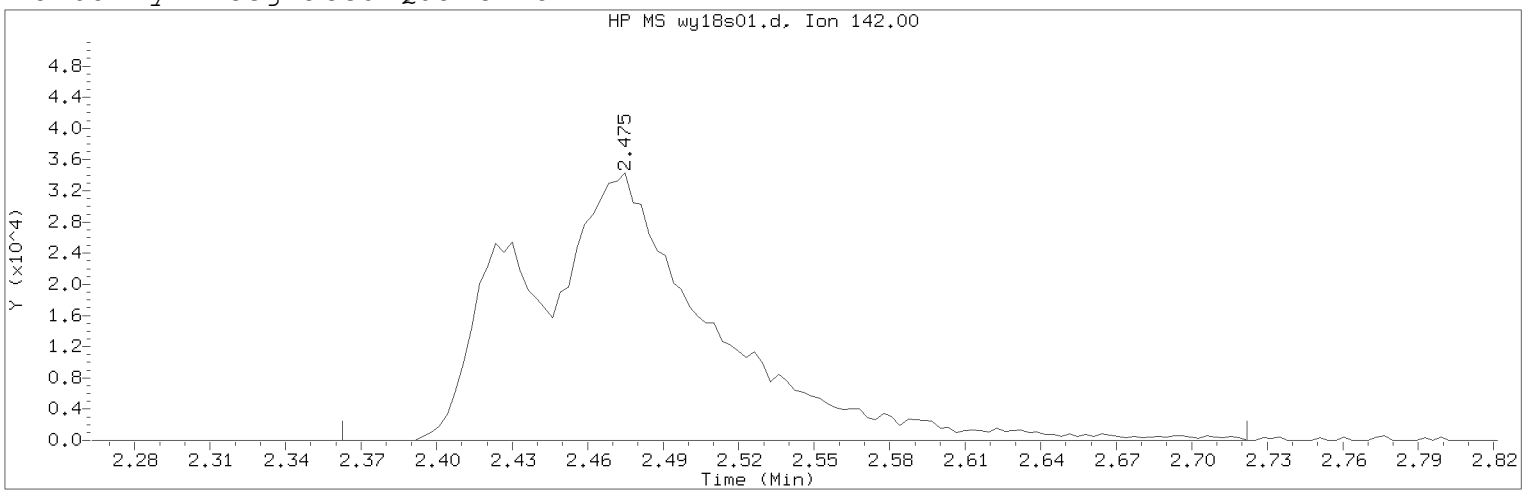
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 503
Retention Time (minutes): 2.446
Quant Ion : 45.00
Area : 35429
On-column Amount (ng) : 73.5706
Integration start scan : 487 Integration stop scan: 506
Y at integration start : 815 Y at integration end: 815

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

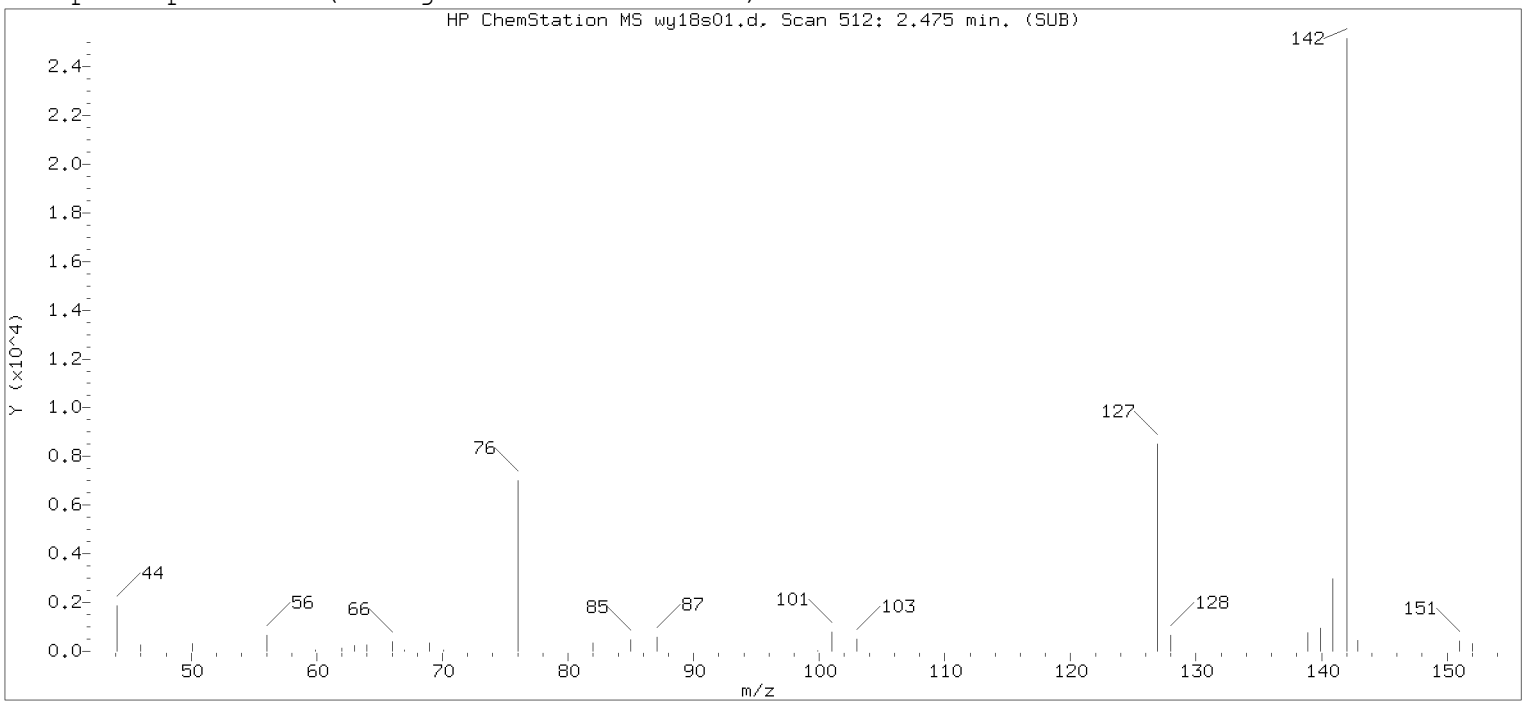
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 512
Retention Time (minutes): 2.475
Quant Ion : 142.00
Area (flag) : 178264M
On-Column Amount (ng) : 20.1073
Integration start scan : 476 Integration stop scan: 588
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

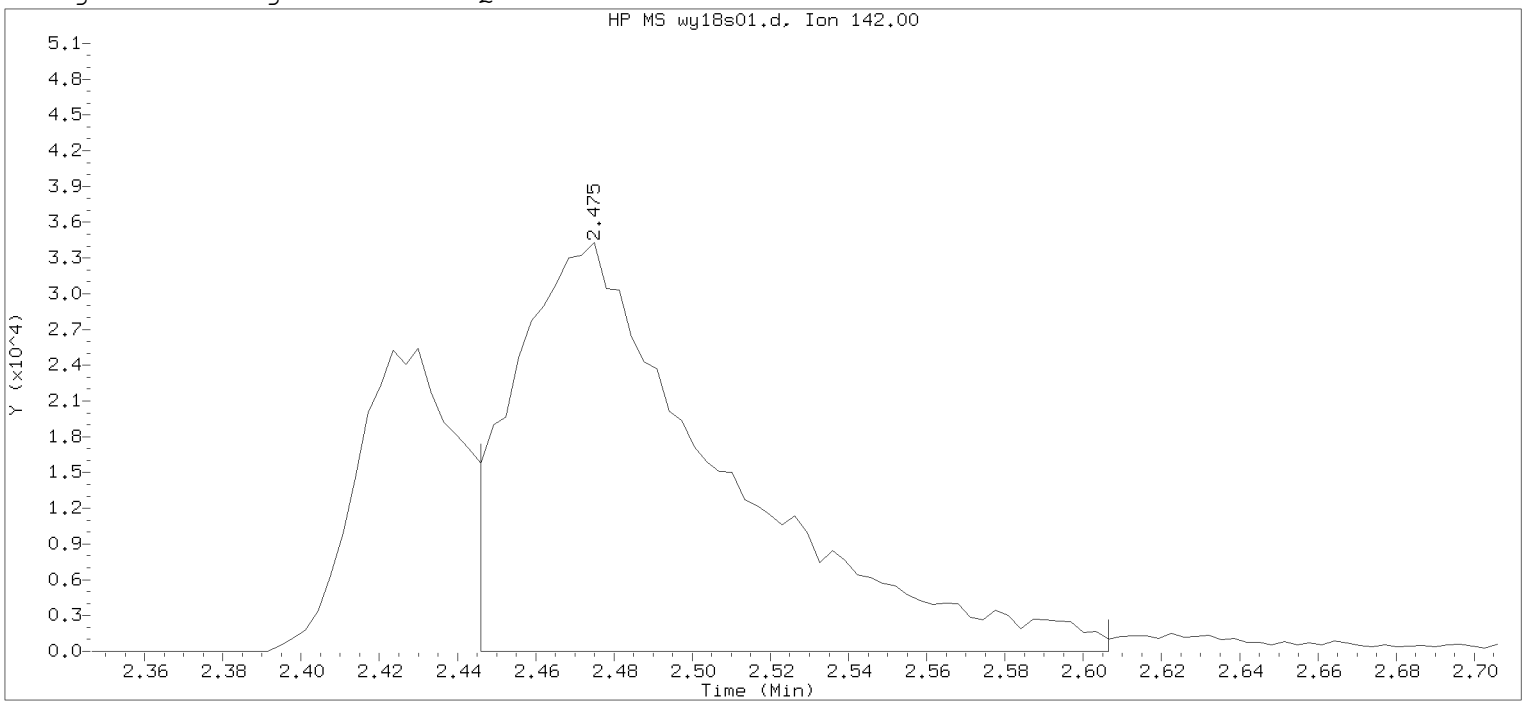
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

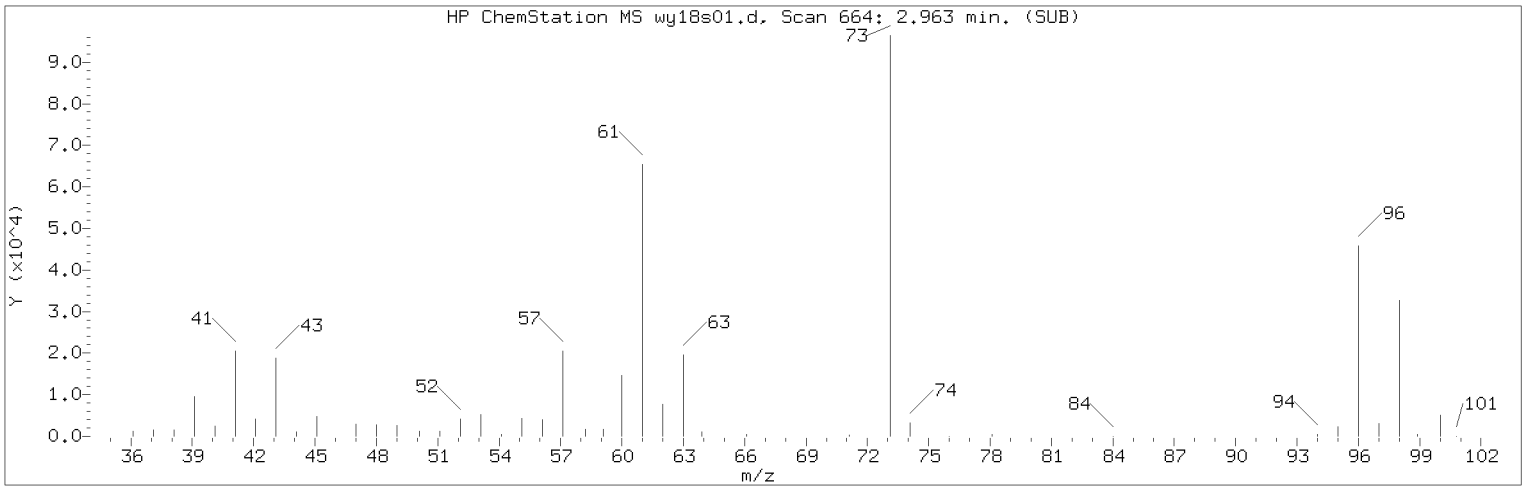
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

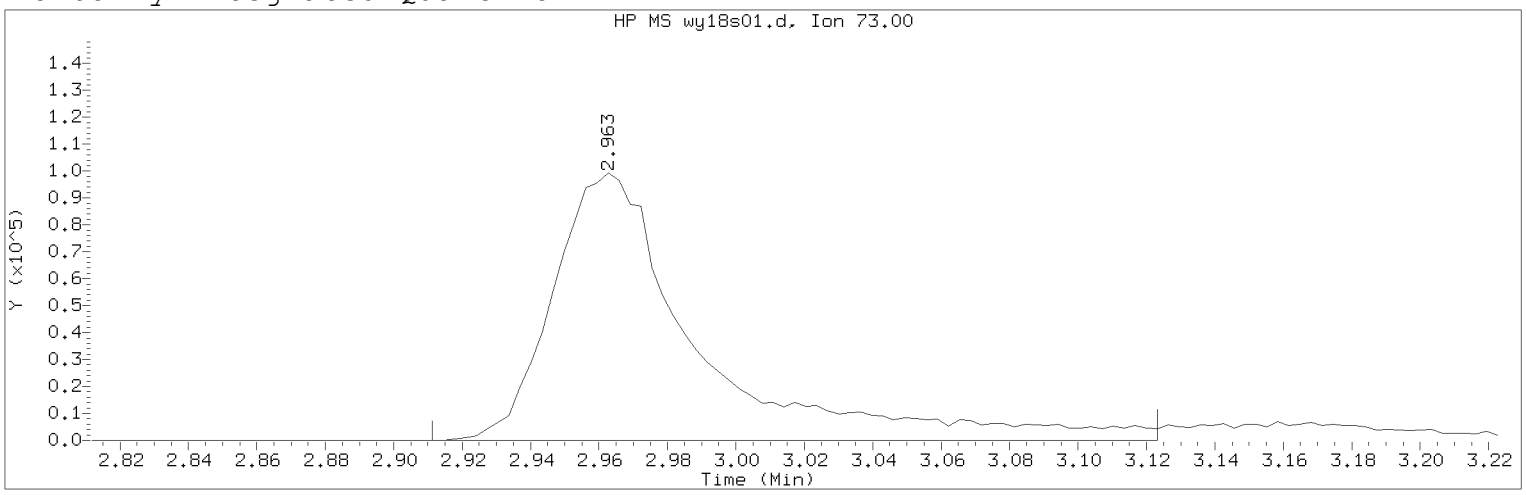
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 512
Retention Time (minutes): 2.475
Quant Ion : 142.00
Area : 127323
On-column Amount (ng) : 14.3615
Integration start scan : 502 Integration stop scan: 552
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

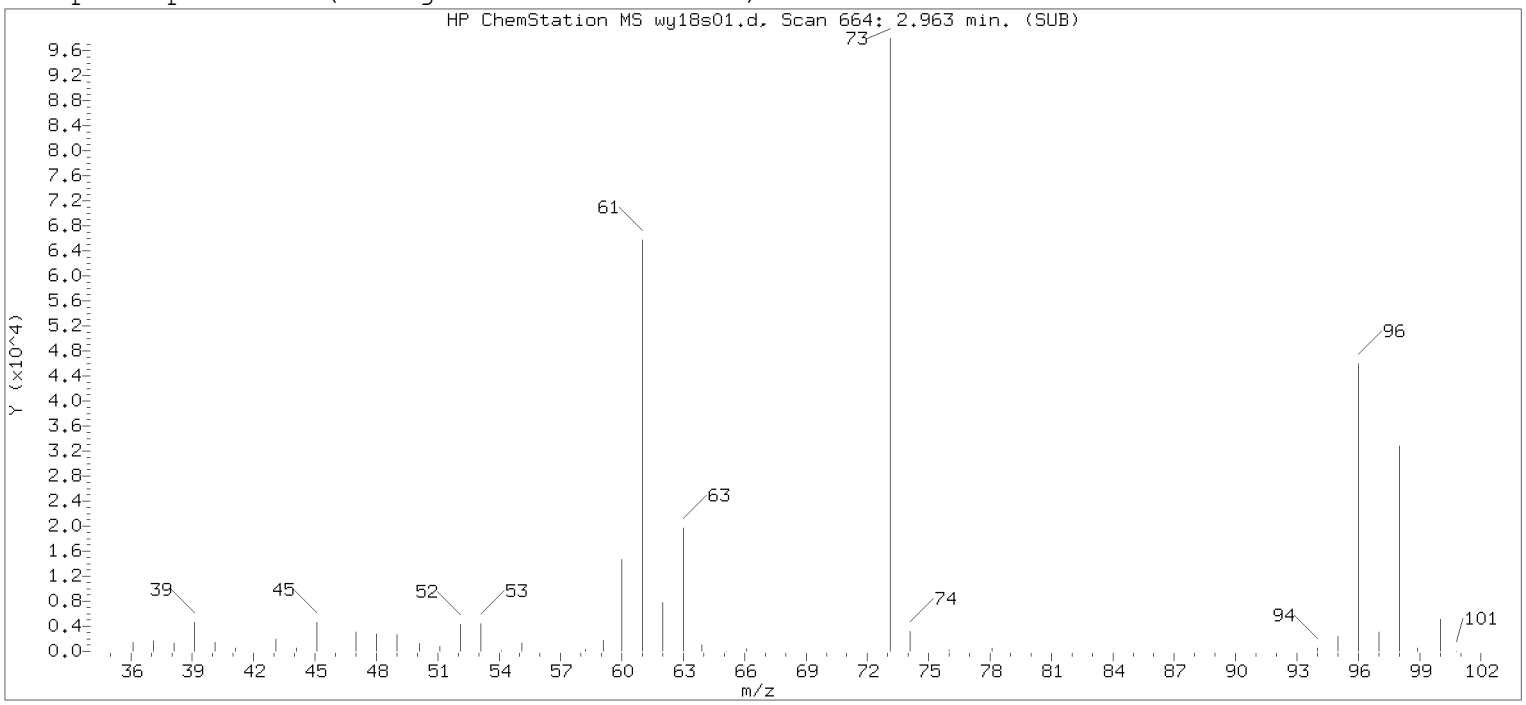
Compound Number : 33
Compound Name : Methyl Tertiary Butyl Ether
Scan Number : 664
Retention Time (minutes): 2.963
Quant Ion : 73.00
Area (flag) : 291896M
On-Column Amount (ng) : 23.8826
Integration start scan : 647 Integration stop scan: 713
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

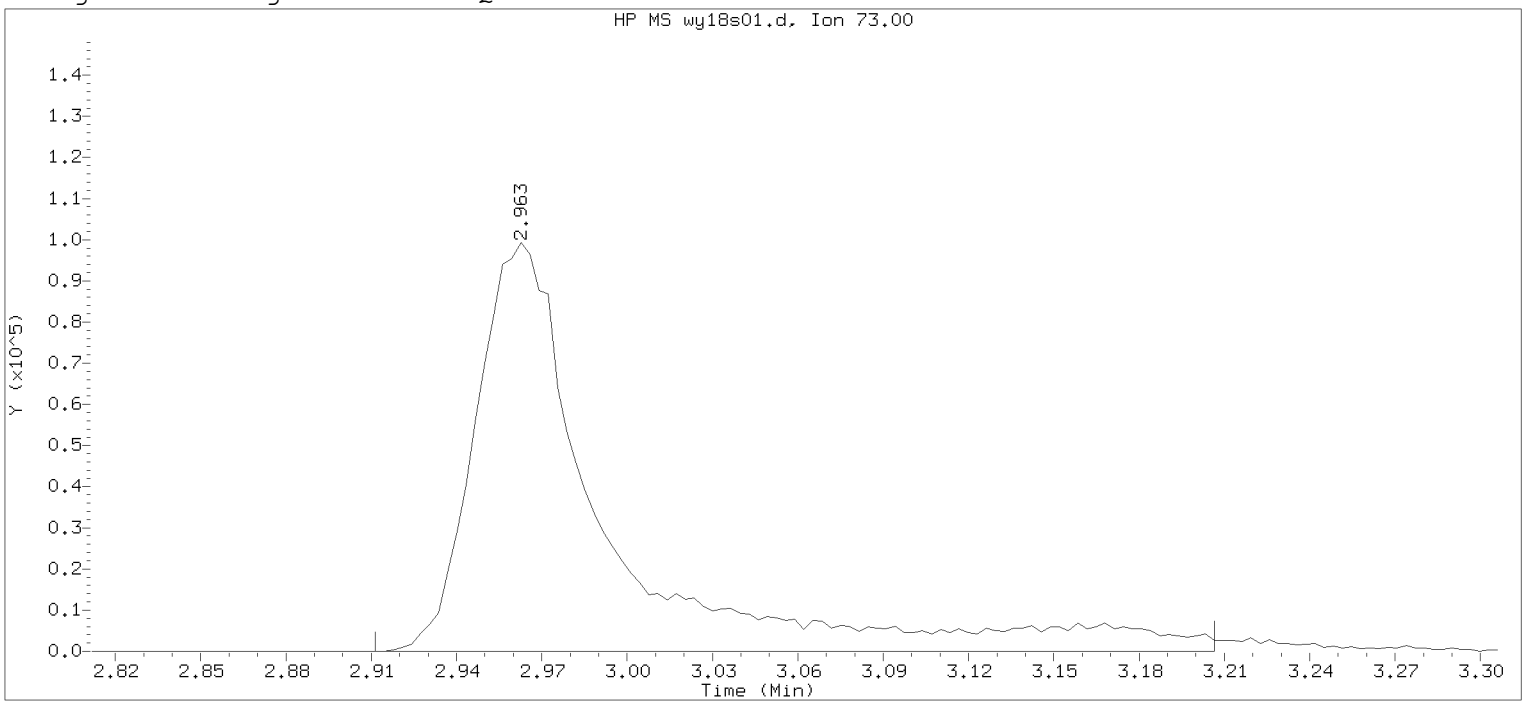
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

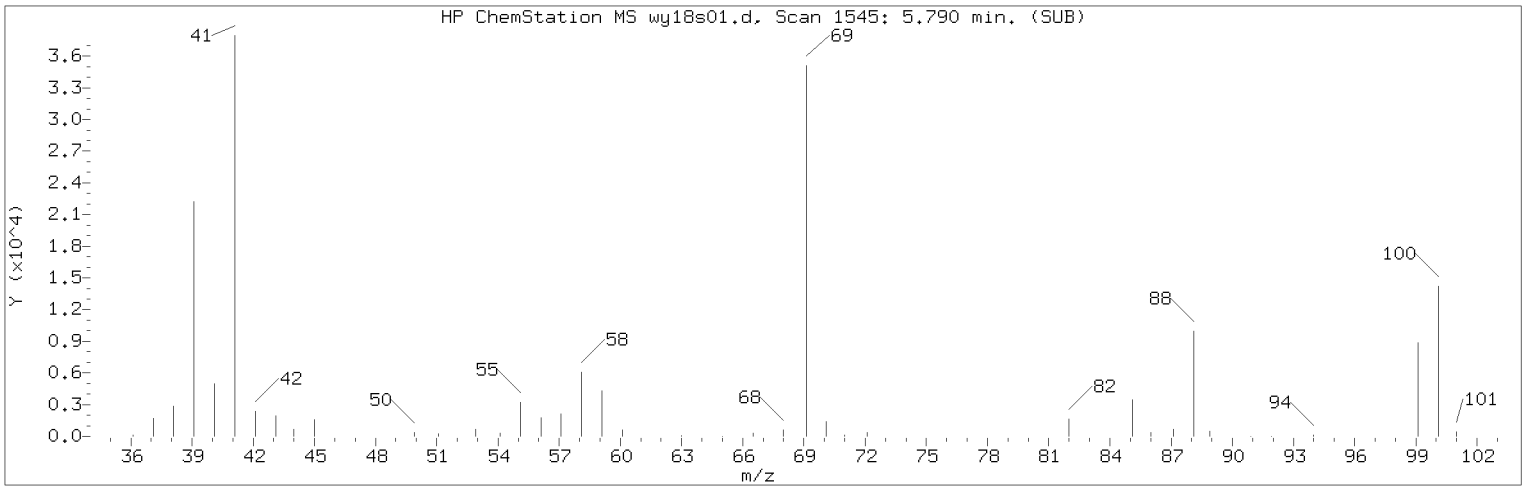
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

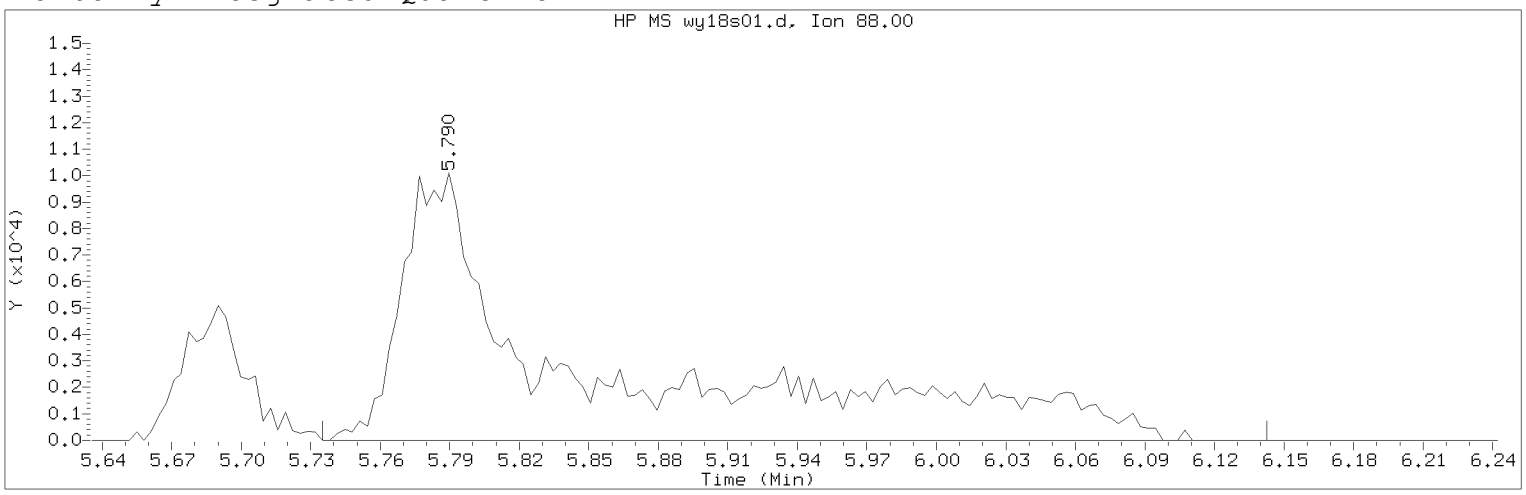
Compound Number : 33
Compound Name : Methyl Tertiary Butyl Ether
Scan Number : 664
Retention Time (minutes): 2.963
Quant Ion : 73.00
Area : 317126
On-column Amount (ng) : 25.9469
Integration start scan : 647 Integration stop scan: 739
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

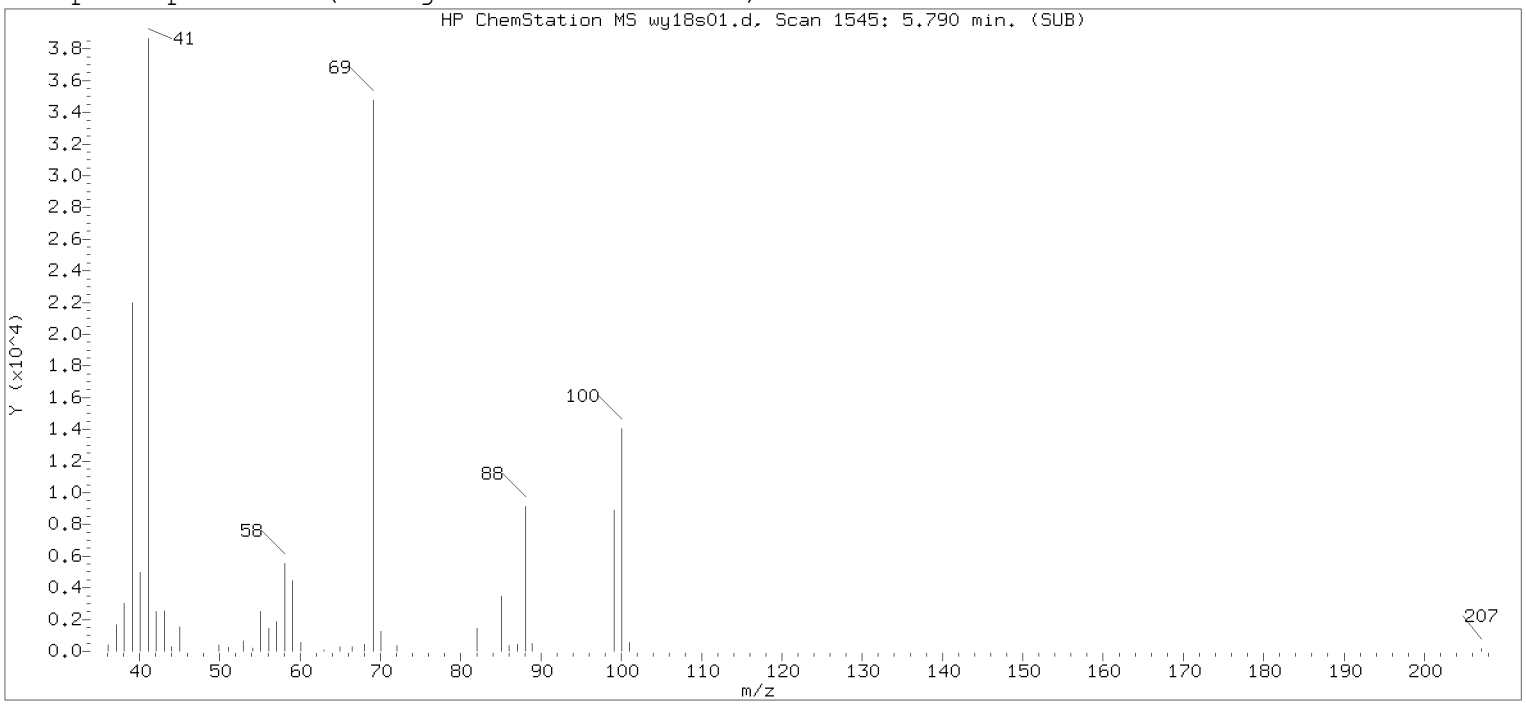
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1545
Retention Time (minutes): 5.790
Quant Ion : 88.00
Area (flag) : 52768M
On-Column Amount (ng) : 634.7888
Integration start scan : 1527 Integration stop scan: 1654
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

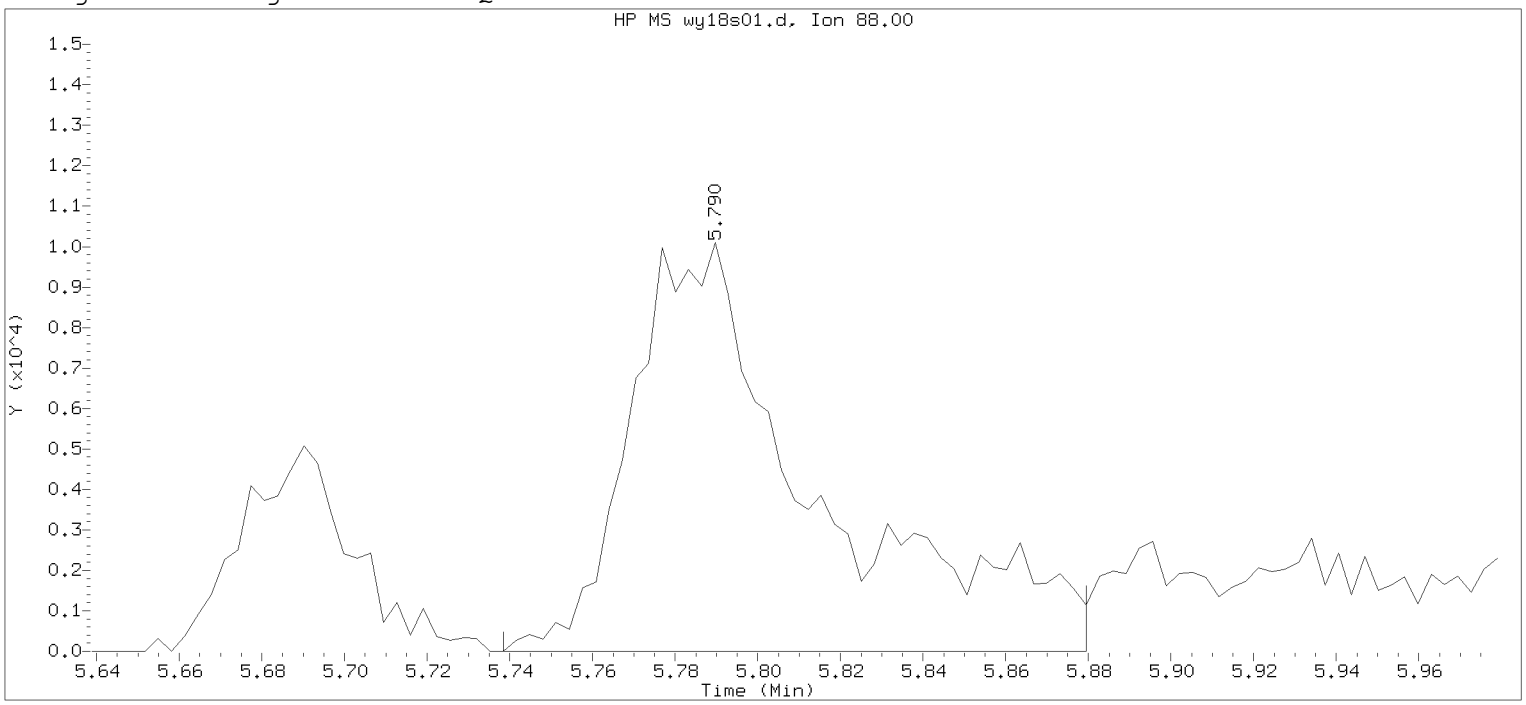
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1545
Retention Time (minutes): 5.790
Quant Ion : 88.00
Area : 31240
On-column Amount (ng) : 375.8212
Integration start scan : 1528 Integration stop scan: 1572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user's signature

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSW24

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSW24

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may19a.b/wy19l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	15	
75-00-3	Chloroethane	14	
75-35-4	1,1-Dichloroethene	19	
75-34-3	1,1-Dichloroethane	20	
156-59-2	cis-1,2-Dichloroethene	22	
71-55-6	1,1,1-Trichloroethane	21	
79-01-6	Trichloroethene	20	
123-91-1	1,4-Dioxane	690	
127-18-4	Tetrachloroethene	24	
179601-23-1	m+p-Xylene	45	
95-47-6	o-Xylene	21	
1330-20-7	Xylene (Total)	66	

Data file: /chem2/HP09137.i/19may19a.b/wy19l01.d Injection date and time: **19-MAY-2019 12:44**
Data file Sample Info. Line: LCSW24;LCSW24;1;3;LCS;;;;wy19b02; Instrument ID: **HP09137.i** Batch: **W191381AB**
Date, time and analyst ID of latest file update: 19-May-2019 13:01 cbs01947

Blank Data file reference: **/chem2/HP09137.i/19may19a.b/wy19b02.d**

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: **18116**
Calibration date and time (Last Method Edit): 19-MAY-2019 12:48
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may19a.b/wy19c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.738	(-0.003)	594	65	145218	(-23)	250.00	
66) Fluorobenzene	5.032	(0.003)	1309	96	948146	(-2)	50.00	
101) Chlorobenzene-d5	8.161	(0.000)	2284	117	728644	(-2)	50.00	
132) 1,4-Dichlorobenzene-d4	10.042	(0.000)	2870	152	414799	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.355	(0.000)	113	213555	48.617	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.686	(0.001)	102	58903	50.421	101%		80 - 120
84) Toluene-d8	(3)	6.698	(0.000)	98	940627	51.517	103%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.000)	95	344125	47.112	94%		80 - 120

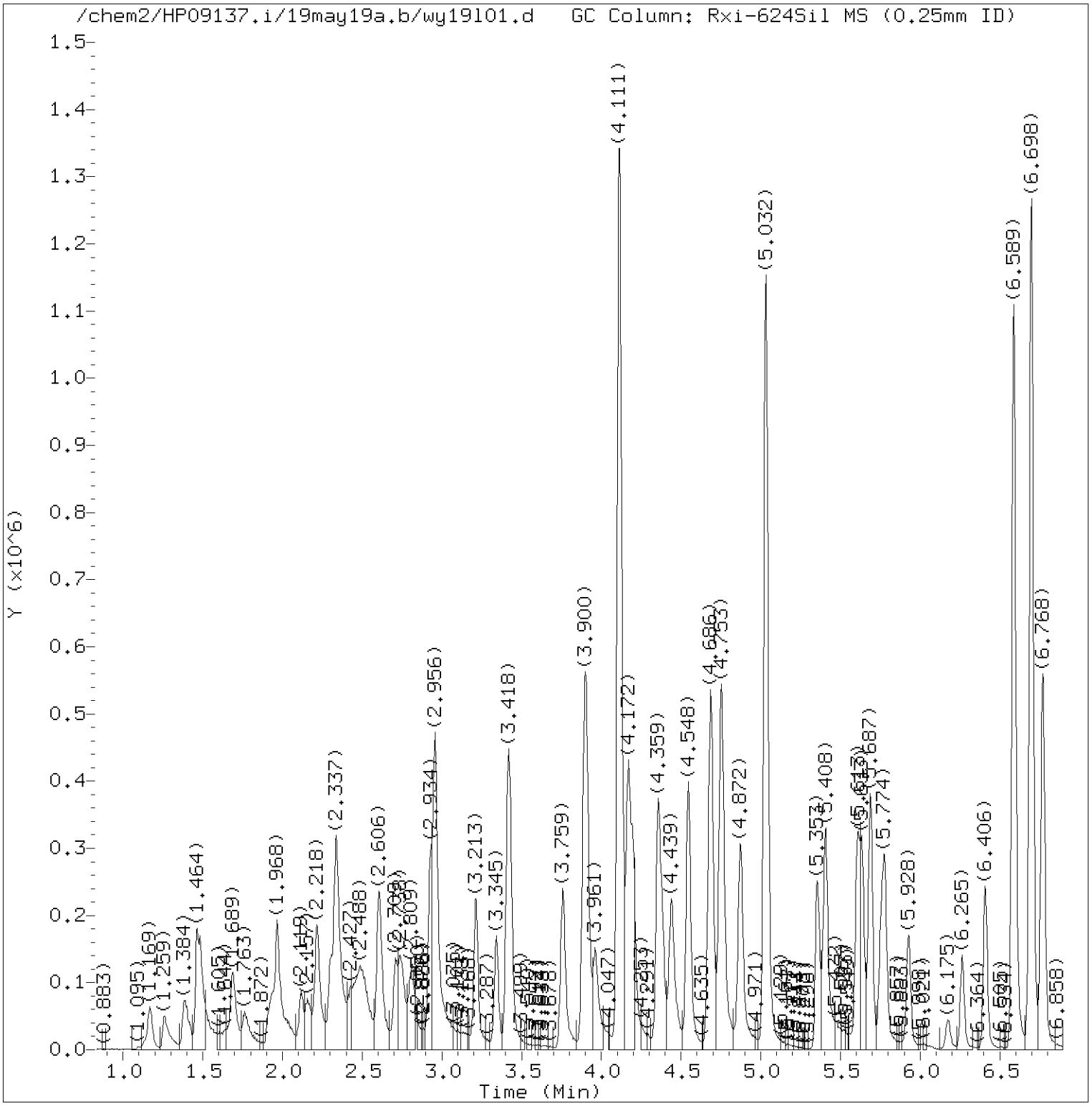
Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)	1.461	(0.000)	62	107567	15.370	15.37			0.2	1
9) Chloroethane	(2)	1.762	(0.002)	64	65713	14.269	14.27			0.2	1
17) 1,1-Dichloroethene	(2)	2.302	(0.000)	96	81171	19.417	19.42			0.2	1
36) 1,1-Dichloroethane	(2)	3.344	(-0.000)	63	165423	20.127	20.13			0.2	1
42) cis-1,2-Dichloroethene	(2)	3.890	(0.000)	96	110799	21.757	21.76			0.2	1
53) 1,1,1-Trichloroethane	(2)	4.381	(0.000)	97	119649	20.621	20.62			0.3	1
71) Trichloroethene	(2)	5.408	(-0.000)	95	97973	20.358	20.36			0.2	1
76) 1,4-Dioxane	(1)	5.790	(0.002)	88	44699M	685.856	685.86			29	250
94) Tetrachloroethene	(3)	7.362	(0.000)	166	112966	23.670	23.67			0.2	1
107) m+p-Xylene	(3)	8.402	(0.000)	106	401071	45.125	45.13			1	5
108) o-Xylene	(3)	8.739	(0.000)	106	186836	21.368	21.37			0.4	1
109) Xylene (Total)	(3)			106	587907	66.493	66.49			1	5

M = Compound was manually integrated.

Total number of targets = 12

Digitally signed by Chelsea B. Stong on 05/19/2019 at 13:02. Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:25. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

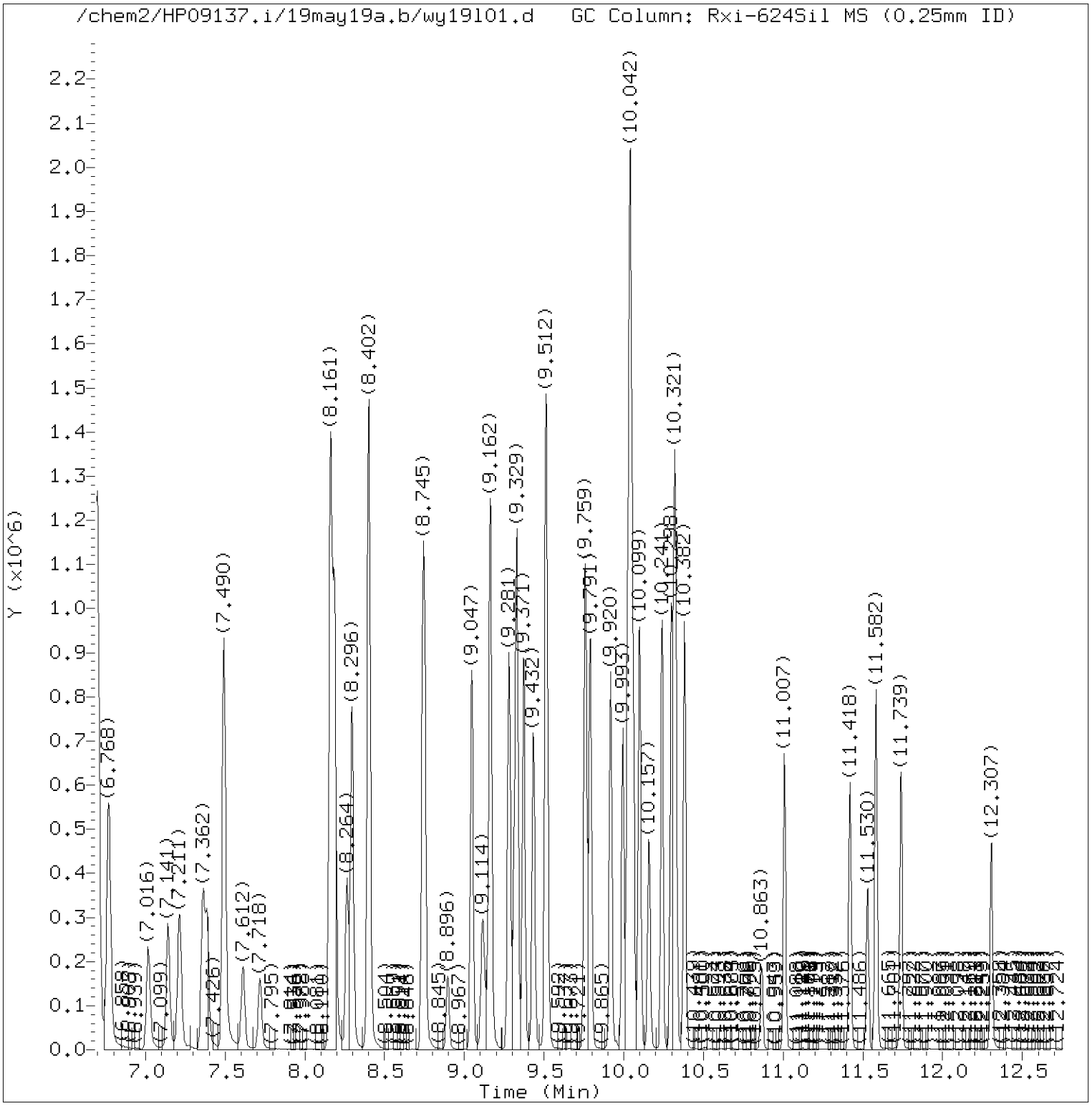
Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19l01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 12:44 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 13:01 cbs01947

Sample Name: LCSW24 Lab Sample ID: LCSW24

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 13:02.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19l01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 12:44 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 13:01 cbs01947

Sample Name: LCSW24 Lab Sample ID: LCSW24

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 13:02.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19l01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 12:44 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 13:01 cbs01947

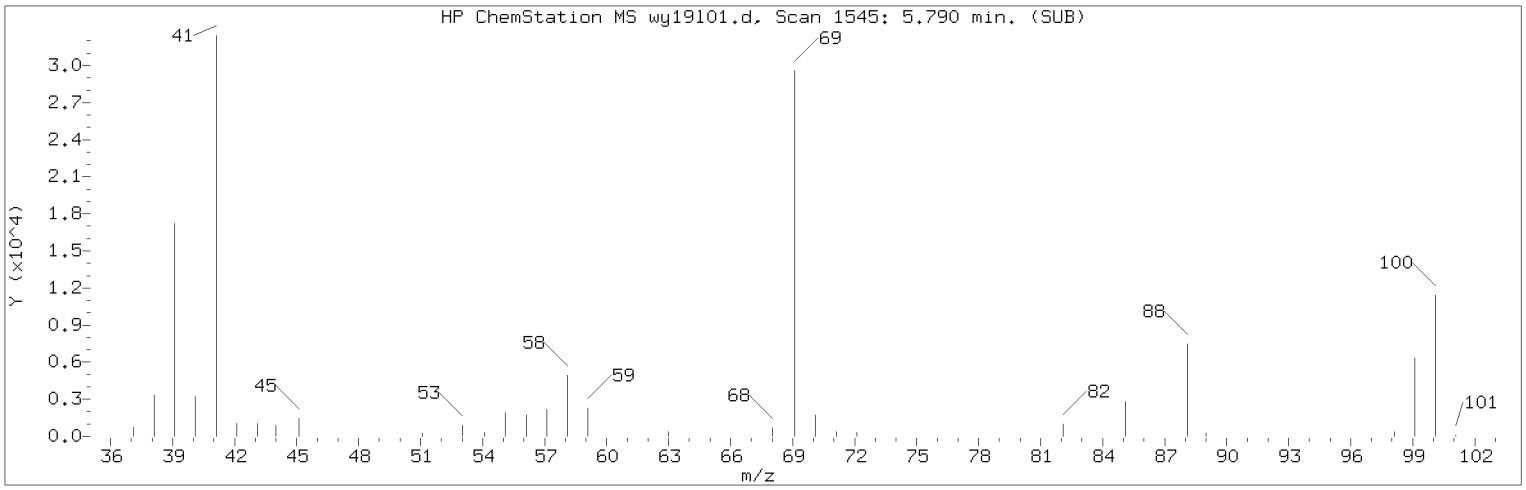
Sample Name: LCSW24 Lab Sample ID: LCSW24

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	1.461	62	107567	15.370
9) Chloroethane	(2)	1.763	64	65713	14.269
17) 1,1-Dichloroethene	(2)	2.302	96	81171	19.417
29)*t-Butyl alcohol-d10	(1)	2.738	65	145218	250.000
36) 1,1-Dichloroethane	(2)	3.345	63	165423	20.127
42) cis-1,2-Dichloroethene	(2)	3.890	96	110799	21.757
52)$Dibromofluoromethane	(2)	4.355	113	213555	48.617
53) 1,1,1-Trichloroethane	(2)	4.381	97	119649	20.621
57)$1,2-Dichloroethane-d4	(2)	4.686	102	58903	50.421
66)*Fluorobenzene	(2)	5.032	96	948146	50.000
71) Trichloroethene	(2)	5.408	95	97973	20.358
76) 1,4-Dioxane	(1)	5.790	88	44699M	685.856
84)$Toluene-d8	(3)	6.698	98	940627	51.517
94) Tetrachloroethene	(3)	7.362	166	112966	23.670
101)*Chlorobenzene-d5	(3)	8.161	117	728644	50.000
107) m+p-Xylene	(3)	8.402	106	401071	45.125
108) o-Xylene	(3)	8.739	106	186836	21.368
115)$4-Bromofluorobenzene	(3)	9.162	95	344125	47.112
132)*1,4-Dichlorobenzene-d4	(4)	10.042	152	414799	50.000
109) Xylene (Total)	(3)		106	587907	66.493

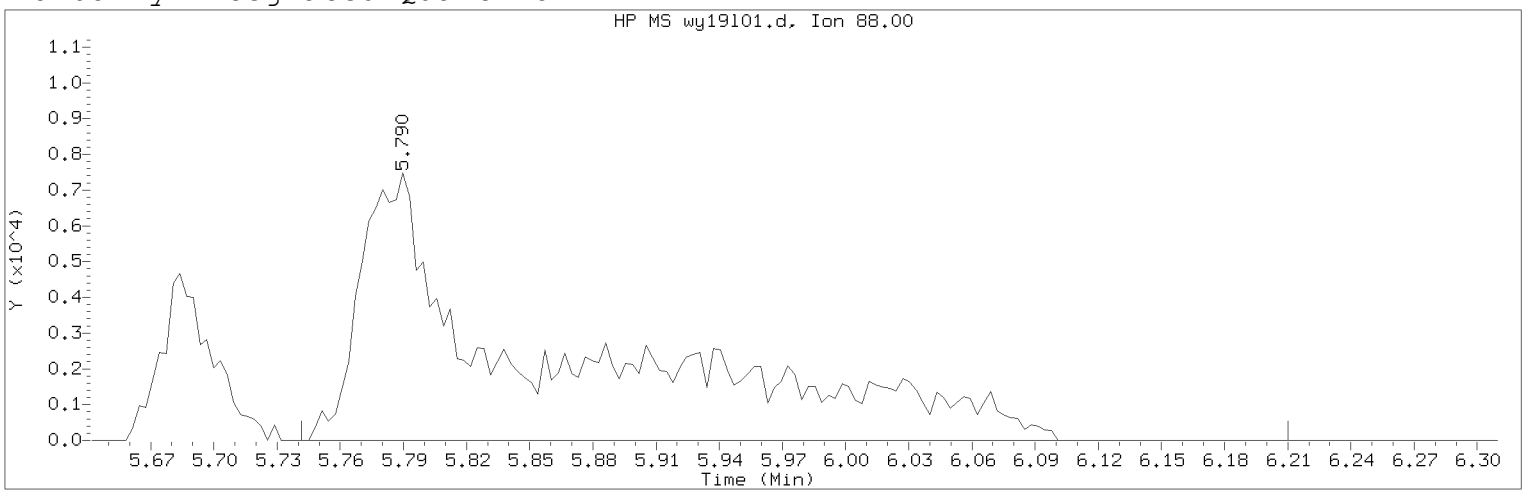
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 13:02.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19l01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 12:44 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 13:01 cbs01947

Sample Name: LCSW24 Lab Sample ID: LCSW24

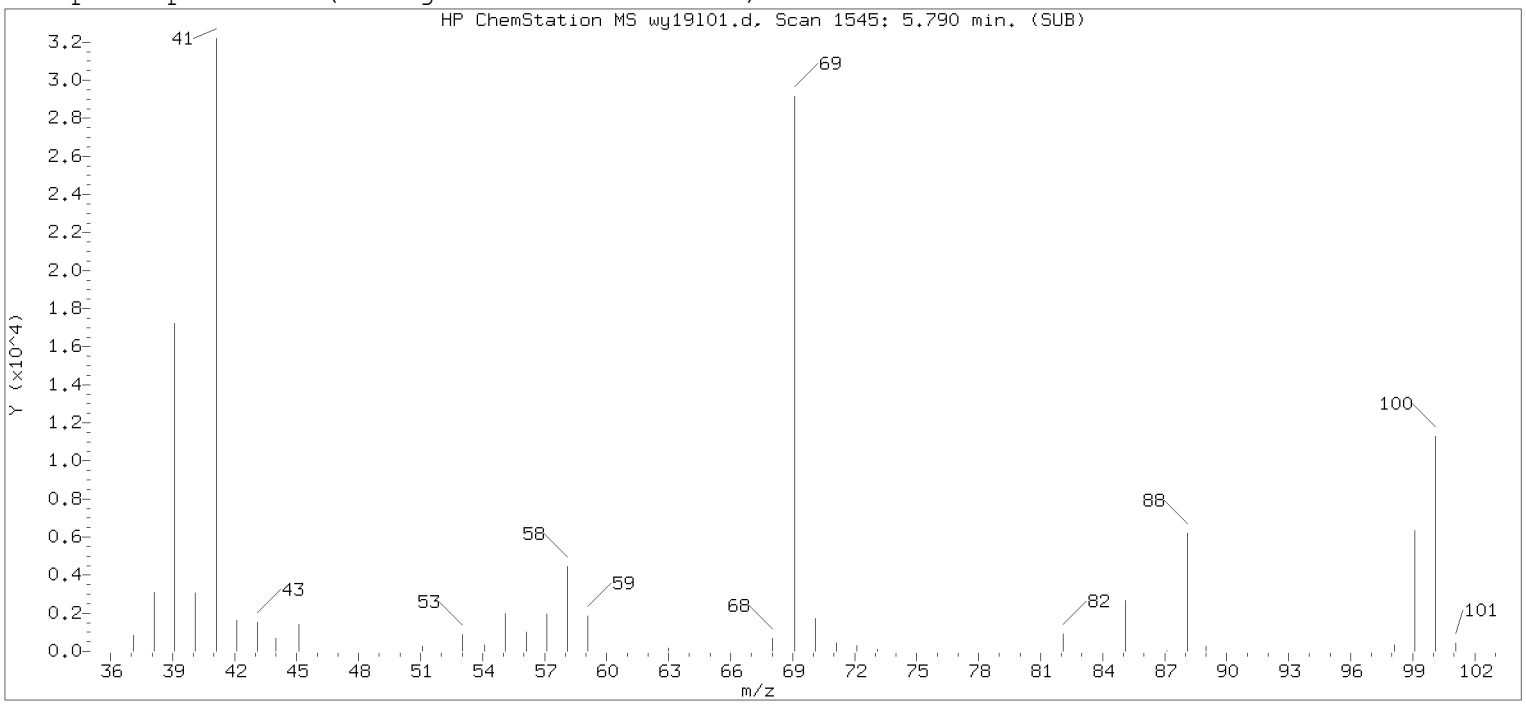
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1545
Retention Time (minutes): 5.790
Quant Ion : 88.00
Area (flag) : 44699M
On-Column Amount (ng) : 685.8561
Integration start scan : 1529 Integration stop scan: 1675
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

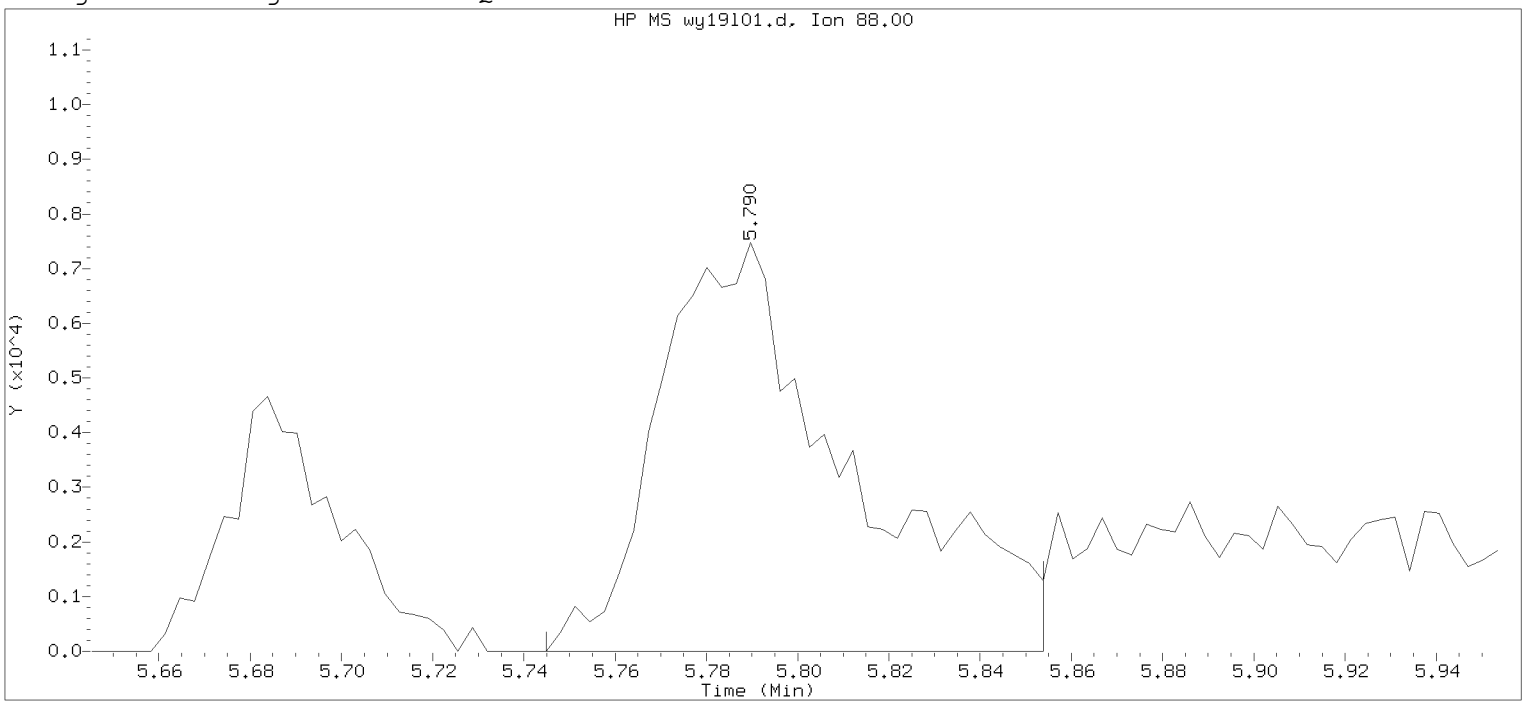
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/19/2019 at 13:02.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:25.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19l01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 12:44 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 12:59 Automation

Sample Name: LCSW24 Lab Sample ID: LCSW24

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1545
Retention Time (minutes): 5.790
Quant Ion : 88.00
Area : 21779
On-column Amount (ng) : 334.1842
Integration start scan : 1530 Integration stop scan: 1564
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 05/19/2019 at 13:02.
Target 3.5 esignature user ID: cbr01947

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NYSDEC ASP Category B Data Package

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Project: AD-New Windsor/1-0145-5
Surface Water Samples
Collected on 05/06/19

SDG# JCV90-V.2

GROUP	SAMPLE NUMBERS
2042996	1053376-1053383

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-18-27
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman **Date:** **08/05/2019**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Katherine Klinefelter at (717) 556-7256.

2425 New Holland Pike, Lancaster, PA 17601 | 717-656-2300 | Fax: 717-656-2681 | www.LancasterLabs.com

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Sample Reference List for SDG Number JCV90
with a Data Package Type of NYSDEC B

06556 - The Johnson Company, Inc.

Project: AD-New Windsor/1-0145-5

Lab Sample Number	Client Sample ID	Collection Date	Date Received	Lab Sample Code
1053376	RS-06	05/06/2019 16:40	05/09/2019 10:30	001RS
1053377	RS-05	05/06/2019 16:45	05/09/2019 10:30	002RS
1053378	RS-04	05/06/2019 16:50	05/09/2019 10:30	003RS
1053379	RS-15	05/06/2019 17:00	05/09/2019 10:30	004RS
1053380	RS-07	05/06/2019 17:10	05/09/2019 10:30	005RS
1053381	RS-14	05/06/2019 17:16	05/09/2019 10:30	006RS
1053382	RS-16	05/06/2019 17:30	05/09/2019 10:30	007RS
1053383	RS-08	05/06/2019 17:40	05/09/2019 10:30	008RS

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Sample pH Log

SDG: JCV90

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
1053376	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/19/2019 12:16:07PM	1947
1053377	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/20/2019 1:22:07PM	895
1053378	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/20/2019 1:22:08PM	895
1053379	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/19/2019 12:16:07PM	1947
1053380	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/20/2019 1:22:08PM	895
1053381	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/20/2019 1:22:08PM	895
1053382	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/19/2019 12:16:07PM	1947
1053383	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/19/2019 12:16:07PM	1947

*pH Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

**Chlorine Present Code Key
NA = Chlorine Not Checked
Y = Chlorine Present
N = Chlorine Not Present

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11997 VOCs- 5ml Water by 8260C/D

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Report Date: June 25, 2019 15:53

Project: AD-New Windsor/1-0145-5

Account #: 06556
Group Number: 2042996
SDG: JCV90
PO Number: 1-0145-05
State of Sample Origin: NY

Electronic Copy To	The Johnson Company, Inc.	Attn: Tristan Hardy
Electronic Copy To	The Johnson Company, Inc.	Attn: George Lester

Respectfully Submitted,

Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

A previous version of this report was generated on 05/20/2019 23:25.

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
RS-06 Grab Surface Water	05/06/2019 16:40	1053376
RS-05 Grab Surface Water	05/06/2019 16:45	1053377
RS-04 Grab Surface Water	05/06/2019 16:50	1053378
RS-15 Grab Surface Water	05/06/2019 17:00	1053379
RS-07 Grab Surface Water	05/06/2019 17:10	1053380
RS-14 Grab Surface Water	05/06/2019 17:16	1053381
RS-16 Grab Surface Water	05/06/2019 17:30	1053382
RS-08 Grab Surface Water	05/06/2019 17:40	1053383

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

REVISED

Sample Description: **RS-06 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/06/2019 16:40
SDG#: JCV90-01

The Johnson Company, Inc.
ELLE Sample #: WW 1053376
ELLE Group #: 2042996
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	2 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191381AA	05/19/2019 00:28	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191381AA	05/19/2019 00:27	Sara E Johnson	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **RS-05 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/06/2019 16:45
SDG#: JCV90-02

The Johnson Company, Inc.
ELLE Sample #: WW 1053377
ELLE Group #: 2042996
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.6 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	1 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	1	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	2	0.3	1	1
11997	Trichloroethene	79-01-6	8	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191381AB	05/19/2019 13:55	Chelsea B Riehl	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191381AB	05/19/2019 13:54	Chelsea B Riehl	1

*=This limit was used in the evaluation of the final result

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Sample Description: **RS-04 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/06/2019 16:50
SDG#: JCV90-03

The Johnson Company, Inc.
ELLE Sample #: WW 1053378
ELLE Group #: 2042996
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.7 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	0.2 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	0.3 J	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	3	0.3	1	1
11997	Trichloroethene	79-01-6	6	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191381AB	05/19/2019 14:18	Chelsea B Riehl	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191381AB	05/19/2019 14:17	Chelsea B Riehl	1

*=This limit was used in the evaluation of the final result

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Sample Description: **RS-15 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/06/2019 17:00
SDG#: JCV90-04

The Johnson Company, Inc.
ELLE Sample #: WW 1053379
ELLE Group #: 2042996
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.4 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	1	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191381AA	05/19/2019 01:39	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191381AA	05/19/2019 01:38	Sara E Johnson	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **RS-07 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/06/2019 17:10
SDG#: JCV90-05

The Johnson Company, Inc.
ELLE Sample #: WW 1053380
ELLE Group #: 2042996
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	1 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.3 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	1	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	0.9 J	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	0.4 J	0.3	1	1
11997	Trichloroethene	79-01-6	0.5 J	0.2	1	1
11997	Vinyl Chloride	75-01-4	0.2 J	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191381AB	05/19/2019 14:42	Chelsea B Riehl	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191381AB	05/19/2019 14:41	Chelsea B Riehl	1

*=This limit was used in the evaluation of the final result

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Sample Description: **RS-14 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/06/2019 17:16
SDG#: JCV90-06

The Johnson Company, Inc.
ELLE Sample #: WW 1053381
ELLE Group #: 2042996
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	2 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	1	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	0.6 J	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191381AB	05/19/2019 15:06	Chelsea B Riehl	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191381AB	05/19/2019 15:05	Chelsea B Riehl	1

*=This limit was used in the evaluation of the final result

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Sample Description: **RS-16 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/06/2019 17:30
SDG#: JCV90-07

The Johnson Company, Inc.
ELLE Sample #: WW 1053382
ELLE Group #: 2042996
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191381AA	05/19/2019 02:51	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191381AA	05/19/2019 02:50	Sara E Johnson	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **RS-08 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor/1-0145-5**

Submittal Date/Time: 05/09/2019 10:30
Collection Date/Time: 05/06/2019 17:40
SDG#: JCV90-08

The Johnson Company, Inc.
ELLE Sample #: WW 1053383
ELLE Group #: 2042996
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	4 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191381AA	05/19/2019 03:15	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191381AA	05/19/2019 03:14	Sara E Johnson	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2042996
Reported: 06/25/2019 15:53

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: W191381AA	Sample number(s): 1053376,1053379,1053382-1053383		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: W191381AB	Sample number(s): 1053377-1053378,1053380-1053381		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2042996
Reported: 06/25/2019 15:53

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: W191381AA	Sample number(s): 1053376,1053379,1053382-1053383								
Acetone	150	232.25			155		54-157		
Benzene	20	21.23			106		80-120		
2-Butanone	150	138.32			92		59-135		
Carbon Disulfide	20	14.84			74		65-128		
Chloroform	20	22.02			110		80-120		
1,2-Dichlorobenzene	20	23.33			117		80-120		
1,1-Dichloroethane	20	20.55			103		80-120		
1,2-Dichloroethane	20	22.71			114		73-124		
1,1-Dichloroethene	20	21.55			108		80-131		
cis-1,2-Dichloroethene	20	22.59			113		80-125		
trans-1,2-Dichloroethene	20	21.31			107		80-126		
1,4-Dioxane	500	634.79			127		63-146		
Ethylbenzene	20	22.91			115		80-120		
Freon 113	20	20.75			104		73-139		
Methylene Chloride	20	19.52			98		80-120		
Naphthalene	20	19.87			99		53-124		
Tetrachloroethene	20	24.53			123*		80-120		
Toluene	20	23.74			119		80-120		
1,1,1-Trichloroethane	20	21.86			109		67-126		
Trichloroethene	20	21.31			107		80-120		
Vinyl Chloride	20	16.74			84		56-120		
Xylene (Total)	60	69.7			116		80-120		
Batch number: W191381AB	Sample number(s): 1053377-1053378,1053380-1053381								
Acetone	150	191.15			127		54-157		
Benzene	20	19.95			100		80-120		
2-Butanone	150	122.11			81		59-135		
Carbon Disulfide	20	14.45			72		65-128		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2042996
Reported: 06/25/2019 15:53

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Chloroform	20	21.88			109		80-120		
1,2-Dichlorobenzene	20	22.23			111		80-120		
1,1-Dichloroethane	20	20.13			101		80-120		
1,2-Dichloroethane	20	22.6			113		73-124		
1,1-Dichloroethene	20	19.42			97		80-131		
cis-1,2-Dichloroethene	20	21.76			109		80-125		
trans-1,2-Dichloroethene	20	20.47			102		80-126		
1,4-Dioxane	500	685.86			137		63-146		
Ethylbenzene	20	21.55			108		80-120		
Freon 113	20	20.75			104		73-139		
Methylene Chloride	20	19.62			98		80-120		
Naphthalene	20	17.52			88		53-124		
Tetrachloroethene	20	23.67			118		80-120		
Toluene	20	22.06			110		80-120		
1,1,1-Trichloroethane	20	20.62			103		67-126		
Trichloroethene	20	20.36			102		80-120		
Vinyl Chloride	20	15.37			77		56-120		
Xylene (Total)	60	66.49			111		80-120		

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: W191381AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1053376	97	103	101	87
1053379	97	102	99	86
1053382	99	102	100	86
1053383	100	100	102	86
Blank	97	99	100	86
LCS	96	93	103	93
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: W191381AB

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1053377	99	102	100	86
1053378	100	101	100	85

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2042996
Reported: 06/25/2019 15:53

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: W191381AB

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1053380	100	108	101	86
1053381	99	103	99	86
Blank	97	99	100	87
LCS	97	101	103	94
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 6556 Group # 2042996 Sample # 1053376-83

COC # 583004

Client Information

Client: The Johnson Company / VHB	Acct. #: 06556
Project Name/#: AD-New Windsor / 58304 / 1-0145-05	PWSID #:
Project Manager: George Lesters	P.O. #:
Sampler: Adam Robtoy	Quote #:
State where samples were collected: NY	For Compliance: Yes ☐ No ☒

Sample Identification	Collected Date	Collected Time	Grab	Composite	Matrix: Soil	Sediment	Tissue	Water	Potable	Ground	Surface	NPDES	Other:	Total # of Containers	Analysis Requested: 8260 - VOCs	Preservation and Filtration Codes: H
RS-06	5/6/19	1640	X					X						3	X	
RS-05	5/6/19	1645	X					X						3	X	
RS-04	5/6/19	1650	X					X						3	X	
RS-15	5/6/19	1700	X					X						3	X	
RS-07	5/6/19	1710	X					X						3	X	
RS-14	5/6/19	1716	X					X						3	X	
RS-16	5/6/19	1730	X					X						3	X	
RS-08	5/6/19	1740	X					X						3	X	

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days:

E-mail address: Glesters@vhb.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)

Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13

NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	5/8/19	1730			
				5.9.19	1030

EDD Required? Yes No

If yes, format: Excel

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS FedEx Other

Temperature upon receipt 2.3 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 248557

Group Number(s): 2042996

Client: The Johnson Company

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	05/09/2019 10:30
Number of Packages:	1	Number of Projects:	2
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	No
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Darian Jaynes (29952) at 19:46 on 05/09/2019

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	2.3	DT	Wet	Y	Bagged	N

Sample ID Discrepancy Details

Sample ID on COC	Sample ID on Label	Comments
RS-03 MS	RS-03	

2425 New Holland Pike
Lancaster, PA 17601-5994

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCV90

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
1053376	RS-06	X		1	
1053377	RS-05	X		1	
1053378	RS-04	X		1	
1053379	RS-15	X		1	
1053380	RS-07	X		1	
1053381	RS-14	X		1	
1053382	RS-16	X		1	
1053383	RS-08	X		1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

(Sample number(s): 1053377-1053378, 1053380-1053381: Analysis: 11997)
A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

LCS/LCSD

(Sample number(s): 1053376, 1053379, 1053382-1053383: Analysis: 11997)
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCV90

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Batch#: W191381AA (Sample number(s): 1053376, 1053379, 1053382-1053383)
The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: Tetrachloroethene

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

1. Relative Response Factor (RRF)

$$RRF = \frac{AX}{Ais} \times \frac{Cis}{Cx}$$

Where:

Ax = Area of the characteristic ion for the compound to be measured
Ais = Area of the characteristic ion for the specific internal standard to be measured
Cis = Concentration of the internal standard
Cx = Concentration of the compound to be measured

2. % Relative Standard Deviation (%RSD)

$$\%RSD = \frac{standard\ deviation}{Mean} \times 100$$

3. % Difference

$$\%D = \frac{RRFc - RRFi}{RRFi} \times 100$$

Where:

RRFc = Relative response factor from the continuing calibration standard
RRFi = Mean relative response factor from the initial calibration

4. Concentration

$$Concentration\ (\mu g / L) = \frac{(Ax)(Is)(Df)}{(Ais)(RRF)}$$

Where:

Ax, Ais, and RRF are as given in 1. above
Is = Amount of internal standard added in parts per billion (µg/L)
Df = Dilution factor

5. % Recovery (% Rec)

$$\%Rec = \frac{SSR - SR}{SA} \times 100$$

Where:

SSR = Spiked sample result
SR = Sample result
SA = Spike added

6. Relative Percent Difference (RPD)

$$RPD = \frac{(MSR - MSRD)}{(1/2)(MSR + MSRD)} \times 100$$

Where:

MSR = Matrix spike recovery
MSRD = Matrix spike recovery duplicate

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: The Johnson Company, Inc.
SDG: JCV90

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
VOCs- 5ml Water by 8260C/D	W191381AA	VBLKW23	05/18/2019 23:17
		LCSW23	05/18/2019 22:29
		1053376	05/19/2019 00:28
		1053379	05/19/2019 01:39
		1053382	05/19/2019 02:51
		1053383	05/19/2019 03:15
VOCs- 5ml Water by 8260C/D	W191381AB	VBLKW24	05/19/2019 12:20
		LCSW24	05/19/2019 12:44
		1053377	05/19/2019 13:55
		1053378	05/19/2019 14:18
		1053380	05/19/2019 14:42
		1053381	05/19/2019 15:06

Fraction: Volatiles by GC/MS

W191381AA / VBLKW23 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	05/18/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	05/18/19	N.D.	ug/l	0.2	1
Acetone	05/18/19	N.D.	ug/l	0.7	20
Freon 113	05/18/19	N.D.	ug/l	0.2	10
Carbon Disulfide	05/18/19	N.D.	ug/l	0.2	5
Methylene Chloride	05/18/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	05/18/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	05/18/19	N.D.	ug/l	0.2	1
2-Butanone	05/18/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	05/18/19	N.D.	ug/l	0.2	1
Chloroform	05/18/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	05/18/19	N.D.	ug/l	0.3	1
Benzene	05/18/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	05/18/19	N.D.	ug/l	0.3	1
Trichloroethene	05/18/19	N.D.	ug/l	0.2	1
1,4-Dioxane	05/18/19	N.D.	ug/l	29	250
Toluene	05/18/19	N.D.	ug/l	0.2	1
Tetrachloroethene	05/18/19	N.D.	ug/l	0.2	1
Ethylbenzene	05/18/19	N.D.	ug/l	0.4	1
Xylene (Total)	05/18/19	N.D.	ug/l	1	5
1,2-Dichlorobenzene	05/18/19	N.D.	ug/l	0.2	5
Naphthalene	05/18/19	N.D.	ug/l	1	5

W191381AB / VBLKW24 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	05/19/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	05/19/19	N.D.	ug/l	0.2	1
Acetone	05/19/19	N.D.	ug/l	0.7	20
Freon 113	05/19/19	N.D.	ug/l	0.2	10
Carbon Disulfide	05/19/19	N.D.	ug/l	0.2	5
Methylene Chloride	05/19/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	05/19/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	05/19/19	N.D.	ug/l	0.2	1
2-Butanone	05/19/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	05/19/19	N.D.	ug/l	0.2	1
Chloroform	05/19/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	05/19/19	N.D.	ug/l	0.3	1
Benzene	05/19/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	05/19/19	N.D.	ug/l	0.3	1
Trichloroethene	05/19/19	N.D.	ug/l	0.2	1
1,4-Dioxane	05/19/19	N.D.	ug/l	29	250
Toluene	05/19/19	N.D.	ug/l	0.2	1
Tetrachloroethene	05/19/19	N.D.	ug/l	0.2	1
Ethylbenzene	05/19/19	N.D.	ug/l	0.4	1
Xylene (Total)	05/19/19	N.D.	ug/l	1	5

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: JCV90
Matrix: LIQUID

Fraction: Volatiles by GC/MS

W191381AB / VBLKW24 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
1,2-Dichlorobenzene	05/19/19	N.D.	ug/l	0.2	5
Naphthalene	05/19/19	N.D.	ug/l	1	5

Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: JCV90
Matrix: LIQUID

Fraction: Volatiles by GC/MS

W191381AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKW23	99	80 - 120	86	80 - 120	97	80 - 120	100	80 - 120
LCSW23	93	80 - 120	93	80 - 120	96	80 - 120	103	80 - 120
1053376	103	80 - 120	87	80 - 120	97	80 - 120	101	80 - 120
1053379	102	80 - 120	86	80 - 120	97	80 - 120	99	80 - 120
1053382	102	80 - 120	86	80 - 120	99	80 - 120	100	80 - 120
1053383	100	80 - 120	86	80 - 120	100	80 - 120	102	80 - 120

W191381AB	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKW24	99	80 - 120	87	80 - 120	97	80 - 120	100	80 - 120
LCSW24	101	80 - 120	94	80 - 120	97	80 - 120	103	80 - 120
1053377	102	80 - 120	86	80 - 120	99	80 - 120	100	80 - 120
1053378	101	80 - 120	85	80 - 120	100	80 - 120	100	80 - 120
1053380	108	80 - 120	86	80 - 120	100	80 - 120	101	80 - 120
1053381	103	80 - 120	86	80 - 120	99	80 - 120	99	80 - 120

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: JCV90
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSW23	Batch: **W191381AA** (Sample number(s): 1053376, 1053379, 1053382-1053383)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	16.74	NA	84	NA	56-120	NA	NA
1,1-Dichloroethene	20	21.55	NA	108	NA	80-131	NA	NA
Acetone	150	232.25	NA	155	NA	54-157	NA	NA
Freon 113	20	20.75	NA	104	NA	73-139	NA	NA
Carbon Disulfide	20	14.84	NA	74	NA	65-128	NA	NA
Methylene Chloride	20	19.52	NA	98	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	21.31	NA	107	NA	80-126	NA	NA
1,1-Dichloroethane	20	20.55	NA	103	NA	80-120	NA	NA
2-Butanone	150	138.32	NA	92	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	22.59	NA	113	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	21.86	NA	109	NA	67-126	NA	NA
Chloroform	20	22.02	NA	110	NA	80-120	NA	NA
1,2-Dichloroethane	20	22.71	NA	114	NA	73-124	NA	NA
Benzene	20	21.23	NA	106	NA	80-120	NA	NA
Trichloroethene	20	21.31	NA	107	NA	80-120	NA	NA
1,4-Dioxane	500	634.79	NA	127	NA	63-146	NA	NA
Toluene	20	23.74	NA	119	NA	80-120	NA	NA
Tetrachloroethene	20	24.53	NA	123 *	NA	80-120	NA	NA
Ethylbenzene	20	22.91	NA	115	NA	80-120	NA	NA
Xylene (Total)	60	69.7	NA	116	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	23.33	NA	117	NA	80-120	NA	NA
Naphthalene	20	19.87	NA	99	NA	53-124	NA	NA

LCS: LCSW24	Batch: **W191381AB** (Sample number(s): 1053377-1053378, 1053380-1053381)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	15.37	NA	77	NA	56-120	NA	NA
1,1-Dichloroethene	20	19.42	NA	97	NA	80-131	NA	NA
Acetone	150	191.15	NA	127	NA	54-157	NA	NA
Freon 113	20	20.75	NA	104	NA	73-139	NA	NA
Carbon Disulfide	20	14.45	NA	72	NA	65-128	NA	NA
Methylene Chloride	20	19.62	NA	98	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	20.47	NA	102	NA	80-126	NA	NA
1,1-Dichloroethane	20	20.13	NA	101	NA	80-120	NA	NA
2-Butanone	150	122.11	NA	81	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	21.76	NA	109	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	20.62	NA	103	NA	67-126	NA	NA
Chloroform	20	21.88	NA	109	NA	80-120	NA	NA
1,2-Dichloroethane	20	22.6	NA	113	NA	73-124	NA	NA
Benzene	20	19.95	NA	100	NA	80-120	NA	NA
Trichloroethene	20	20.36	NA	102	NA	80-120	NA	NA

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: JCV90
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSW24	Batch: **W191381AB** (Sample number(s): 1053377-1053378, 1053380-1053381)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
1,4-Dioxane	500	685.86	NA	137	NA	63-146	NA	NA
Toluene	20	22.06	NA	110	NA	80-120	NA	NA
Tetrachloroethene	20	23.67	NA	118	NA	80-120	NA	NA
Ethylbenzene	20	21.55	NA	108	NA	80-120	NA	NA
Xylene (Total)	60	66.49	NA	111	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	22.23	NA	111	NA	80-120	NA	NA
Naphthalene	20	17.52	NA	88	NA	53-124	NA	NA

Fraction: Volatiles by GC/MS

11997: VOCs- 5ml Water by 8260C/D Analyte Name	Default MDL	Default LOQ	Units
Vinyl Chloride	0.2	1	ug/l
1,1-Dichloroethene	0.2	1	ug/l
Acetone	0.7	20	ug/l
Freon 113	0.2	10	ug/l
Carbon Disulfide	0.2	5	ug/l
Methylene Chloride	0.3	1	ug/l
trans-1,2-Dichloroethene	0.2	1	ug/l
1,1-Dichloroethane	0.2	1	ug/l
2-Butanone	0.3	10	ug/l
cis-1,2-Dichloroethene	0.2	1	ug/l
Chloroform	0.2	1	ug/l
1,1,1-Trichloroethane	0.3	1	ug/l
Benzene	0.2	1	ug/l
1,2-Dichloroethane	0.3	1	ug/l
Trichloroethene	0.2	1	ug/l
1,4-Dioxane	29	250	ug/l
Toluene	0.2	1	ug/l
Tetrachloroethene	0.2	1	ug/l
Ethylbenzene	0.4	1	ug/l
Xylene (Total)	1	5	ug/l
1,2-Dichlorobenzene	0.2	5	ug/l
Naphthalene	1	5	ug/l

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: wf19t01.d BFB Injection Date: 02/19/19

Instrument ID: HP09137 BFB Injection Time: 11:32

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.42
75	30.0 - 60.0% of mass 95	45.48
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.75
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	82.25
175	5.0 - 9.0% of mass 174	5.88 (7.14)1
176	Greater than 95.0%, but less than 101.0% of mass 174	79.33 (96.46)1
177	5.0 - 9.0% of mass 176	5.24 (6.60)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	wf19i01.d	02/19/19	12:21
02	VSTD100	wf19i02.d	02/19/19	12:45
03	VSTD50	wf19i03.d	02/19/19	13:09
04	VSTD20	wf19i04.d	02/19/19	13:33
05	VSTD10	wf19i05.d	02/19/19	13:57
06	VSTD4	wf19i06.d	02/19/19	14:21
07	VSTD1	wf19i07.d	02/19/19	14:44

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: wf20t01.d BFB Injection Date: 02/20/19

Instrument ID: HP09137 BFB Injection Time: 08:47

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.92
75	30.0 - 60.0% of mass 95	44.90
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.65
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	88.14
175	5.0 - 9.0% of mass 174	6.26 (7.10)1
176	Greater than 95.0%, but less than 101.0% of mass 174	84.40 (95.75)1
177	5.0 - 9.0% of mass 176	5.69 (6.75)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	wf20c02.d	02/20/19	10:55
02	LCSW62	wf20l01.d	02/20/19	12:07

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: wy18t01.d BFB Injection Date: 05/18/19

Instrument ID: HP09137 BFB Injection Time: 21:44

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.64
75	30.0 - 60.0% of mass 95	46.44
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.84
173	Less than 2.0% of mass 174	0.33 (0.35)1
174	Greater than 50.0% of mass 95	92.20
175	5.0 - 9.0% of mass 174	6.62 (7.18)1
176	Greater than 95.0%, but less than 101.0% of mass 174	90.49 (98.15)1
177	5.0 - 9.0% of mass 176	5.78 (6.39)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	wy18c01.d	05/18/19	22:05
02	LCSW23	wy18s01.d	05/18/19	22:29
03	VBLKW23	wy18b01.d	05/18/19	23:17
04	1053375	wy18s02.d	05/18/19	23:41
05	1053376	wy18s04.d	05/19/19	00:28
06	1053379	wy18s07.d	05/19/19	01:39
07	1053382	wy18s10.d	05/19/19	02:51
08	1053383	wy18s11.d	05/19/19	03:15
09	1053360MS	wy18s13.d	05/19/19	04:02
10	1053361MSD	wy18s14.d	05/19/19	04:26
11	1053352	wy18s15.d	05/19/19	04:50
12	1053353	wy18s16.d	05/19/19	05:14
13	1053354	wy18s17.d	05/19/19	05:38
14	1053355	wy18s18.d	05/19/19	06:01
15	1053356	wy18s19.d	05/19/19	06:25
16	1053357	wy18s20.d	05/19/19	06:49
17	1053358	wy18s21.d	05/19/19	07:13
18	1053362	wy18s22.d	05/19/19	07:36
19	1053363	wy18s23.d	05/19/19	08:00

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: wy19t01.d BFB Injection Date: 05/19/19

Instrument ID: HP09137 BFB Injection Time: 11:04

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.56
75	30.0 - 60.0% of mass 95	45.66
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.73
173	Less than 2.0% of mass 174	0.17 (0.18)1
174	Greater than 50.0% of mass 95	94.07
175	5.0 - 9.0% of mass 174	6.39 (6.80)1
176	Greater than 95.0%, but less than 101.0% of mass 174	90.96 (96.69)1
177	5.0 - 9.0% of mass 176	6.02 (6.62)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	wy19c01.d	05/19/19	11:32
02	VBLKW24	wy19b02.d	05/19/19	12:20
03	VBLKW25	wy19b10.d	05/19/19	12:20
04	LCSW24	wy19l01.d	05/19/19	12:44
05	LCSW25	wy19l10.d	05/19/19	12:44
06	MDL0.5 - MDL0.5	wy19m01.d	05/19/19	13:07
07	MDL0.5 - MDL0.5	wy19m10.d	05/19/19	13:07
08	1053374	wy19s02.d	05/19/19	13:31
09	1053377	wy19s03.d	05/19/19	13:55
10	1053378	wy19s04.d	05/19/19	14:18
11	1053380	wy19s05.d	05/19/19	14:42
12	1053381	wy19s06.d	05/19/19	15:06
13	1053359	wy19s07.d	05/19/19	15:30
14	1052544	wy19s11.d	05/19/19	16:17
15	1052546	wy19s13.d	05/19/19	17:05
16	1052547MS	wy19s14.d	05/19/19	17:29
17	1052548MSD	wy19s15.d	05/19/19	17:52
18	1052549	wy19s16.d	05/19/19	18:16
19	1052550	wy19s17.d	05/19/19	18:40
20	1052551	wy19s18.d	05/19/19	19:04
21	1052552	wy19s19.d	05/19/19	19:28
22	1052553	wy19s20.d	05/19/19	19:52

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: wy19t01.d BFB Injection Date: 05/19/19

Instrument ID: HP09137 BFB Injection Time: 11:04

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.56
75	30.0 - 60.0% of mass 95	45.66
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.73
173	Less than 2.0% of mass 174	0.17 (0.18)1
174	Greater than 50.0% of mass 95	94.07
175	5.0 - 9.0% of mass 174	6.39 (6.80)1
176	Greater than 95.0%, but less than 101.0% of mass 174	90.96 (96.69)1
177	5.0 - 9.0% of mass 176	6.02 (6.62)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1052554	wy19s21.d	05/19/19	20:15
24	1052556	wy19s23.d	05/19/19	21:03
25	1052987	wy19s24.d	05/19/19	21:27
26	SECC050	wy19ec1.d	05/19/19	22:14

FORM V VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date(s): 02/19/19 02/19/19

Heated Purge: (Y/N) Y Calibration Times: 12:21 14:44

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = wf19i07.d RRF 4 = wf19i06.d RRF 10= wf19i05.d
RRF 20= wf19i04.d RRF 50= wf19i03.d RRF100= wf19i02.d RRF300= wf19i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Dichlorodifluoromethane	#0.2226	0.3389	0.3578	0.3419	0.3457	0.3161	0.3402	0.3233	14	AVG #
Chloromethane	#0.3772	0.4124	0.4406	0.3916	0.4019	0.3931	0.4012	0.4026	5	AVG #
1,3-Butadiene	0.2727	0.2671	0.2452	0.2384	0.2307	0.2227	0.2406	0.2453	7	AVG
Vinyl Chloride	#0.3158	0.3797	0.4161	0.3707	0.3685	0.3608	0.3718	0.3690	8	AVG #
Bromomethane	#0.2607	0.2971	0.3208	0.2821	0.2891	0.2884	0.2992	0.2911	6	AVG #
Chloroethane	#0.2701	0.2583	0.2600	0.2307	0.2292	0.2238	0.2277	0.2429	8	AVG #
Dichlorofluoromethane	0.4886	0.5016	0.4813	0.4622	0.4591	0.4389	0.4590	0.4701	5	AVG
n-Pentane	0.4044	0.3731	0.3987	0.3753	0.3549	0.3420	0.3610	0.3728	6	AVG
Trichlorofluoromethane	#0.2951	0.4078	0.4333	0.4060	0.4031	0.3866	0.4118	0.3920	11	AVG #
Ethanol	0.1591	0.1102	0.1024	0.1020	0.1116	0.1084	0.1044	0.1140	18	AVG
Freon 123a	0.3053	0.3155	0.3061	0.2927	0.2780	0.2657	0.2870	0.2929	6	AVG
Acrolein	1.7818	1.7469	1.6939	1.8036	1.8632	1.8293	1.8801	1.7998	4	AVG
1,1-Dichloroethene	#0.1644	0.2297	0.2356	0.2240	0.2253	0.2188	0.2454	0.2204	12	AVG #
1,1-Dichloroethene(2)	#0.0944	0.1178	0.1203	0.1102	0.1113	0.1062	0.1183	0.1112	8	AVG #
Acetone	#0.8713	0.8881	0.8570	0.9075	0.8853	0.8327	0.8818	0.8748	3	AVG #
Freon 113	#0.1356	0.1900	0.2095	0.2086	0.2085	0.1927	0.2102	0.1936	14	AVG #
2-Propanol	0.7040	0.6397	0.6307	0.6112	0.6739	0.6989	0.5915	0.6500	7	AVG
Methyl Iodide	0.3680	0.4205	0.4432	0.4290	0.4261	0.4180	0.4524	0.4225	6	AVG
Carbon Disulfide	#0.6814	0.7916	0.8333	0.7816	0.7719	0.7616	0.8153	0.7767	6	AVG #
Allyl Chloride	0.3347	0.3590	0.3960	0.3881	0.4091	0.3892	0.4123	0.3841	7	AVG
Methyl Acetate	#0.3825	0.3415	0.3321	0.3193	0.3250	0.3177	0.3090	0.3324	7	AVG #
Methylene Chloride	#0.2739	0.2658	0.2838	0.2674	0.2651	0.2543	0.2761	0.2695	4	AVG #
t-Butyl alcohol	1.1942	1.1621	1.1416	1.1288	1.2188	1.1948	1.0760	1.1595	4	AVG
Acrylonitrile	0.1426	0.1746	0.1772	0.1870	0.1886	0.1805	0.1736	0.1749	9	AVG
trans-1,2-Dichloroethene	#0.2033	0.2451	0.2573	0.2362	0.2397	0.2387	0.2541	0.2392	7	AVG #
Methyl Tertiary Butyl Ether	#0.5358	0.5943	0.6552	0.6031	0.5822	0.5615	0.5446	0.5824	7	AVG #
n-Hexane	0.2562	0.3096	0.3453	0.3150	0.3433	0.3197	0.3512	0.3200	10	AVG
1,1-Dichloroethane	#0.3763	0.4330	0.4590	0.4370	0.4397	0.4346	0.4543	0.4334	6	AVG #
di-Isopropyl ether	0.7905	0.8289	0.8791	0.8509	0.8427	0.8291	0.8074	0.8327	3	AVG
2-Chloro-1,3-butadiene	0.3177	0.3681	0.3999	0.3841	0.3837	0.3754	0.3986	0.3754	7	AVG
Ethyl t-butyl ether	0.5811	0.5848	0.6785	0.6482	0.6049	0.5702	0.5810	0.6069	7	AVG
cis-1,2-Dichloroethene	#0.2366	0.2640	0.2849	0.2696	0.2719	0.2682	0.2847	0.2686	6	AVG #
2-Butanone	#0.2598	0.2409	0.2472	0.2574	0.2591	0.2553	0.2390	0.2512	3	AVG #
2,2-Dichloropropane	0.1716	0.2099	0.2086	0.2054	0.1988	0.1927	0.1756	0.1946	8	AVG
Propionitrile	1.4394	1.4853	1.4411	1.3773	1.4094	1.3838	1.5509	1.4410	4	AVG
Methacrylonitrile	0.1810	0.1879	0.1975	0.1843	0.1904	0.1848	0.1904	0.1880	3	AVG
Bromochloromethane	0.1236	0.1333	0.1440	0.1403	0.1442	0.1406	0.1514	0.1396	6	AVG
Tetrahydrofuran	1.2918	1.3520	1.1750	1.3657	1.3933	1.3069	1.4514	1.3337	7	AVG
Chloroform	#0.3716	0.3946	0.4295	0.4104	0.4082	0.4049	0.4274	0.4067	5	AVG #
1,1,1-Trichloroethane	#0.2496	0.3108	0.3281	0.3146	0.3147	0.3057	0.3184	0.3060	8	AVG #
Cyclohexane	#0.3194	0.4199	0.4353	0.4172	0.4175	0.3935	0.4317	0.4049	10	AVG #
Cyclohexane(2)	#0.2653	0.3458	0.3537	0.3442	0.3514	0.3279	0.3581	0.3352	10	AVG #
Cyclohexane(3)	#0.0938	0.1266	0.1303	0.1244	0.1260	0.1188	0.1320	0.1217	11	AVG #
1,1-Dichloropropene	0.2874	0.3392	0.3424	0.3250	0.3270	0.3193	0.3419	0.3260	6	AVG
Carbon Tetrachloride	#0.2066	0.2621	0.2761	0.2668	0.2666	0.2671	0.2928	0.2626	10	AVG #
Isobutyl Alcohol	0.4146	0.4172	0.4158	0.3919	0.4443	0.4523	0.4228	0.4227	5	AVG
Benzene	#0.9632	1.0571	1.1117	1.0433	1.0439	1.0366	1.0801	1.0480	4	AVG #
1,2-Dichloroethane	#0.3396	0.3176	0.3369	0.3145	0.3171	0.3133	0.3272	0.3237	3	AVG #
1,2-Dichloroethane(2)	#0.0185	0.0303	0.0336	0.0330	0.0327	0.0326	0.0348	0.0308	18	AVG #<-
t-Amyl methyl ether	0.6040	0.6173	0.7089	0.6493	0.6388	0.5916	0.5427	0.6218	8	AVG
n-Heptane	0.2708	0.2864	0.3261	0.3135	0.3165	0.2938	0.3340	0.3059	7	AVG
n-Butanol	0.3330	0.3444	0.3646	0.3552	0.4049	0.4250	0.4001	0.3753	9	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

FORM VI VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date(s): 02/19/19 02/19/19

Heated Purge: (Y/N) Y Calibration Times: 12:21 14:44

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = wf19i07.d RRF 4 = wf19i06.d RRF 10= wf19i05.d
RRF 20= wf19i04.d RRF 50= wf19i03.d RRF100= wf19i02.d RRF300= wf19i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Trichloroethene	#0.2217	0.2561	0.2709	0.2546	0.2538	0.2533	0.2660	0.2538	6	AVG #
Methylcyclohexane	#0.2734	0.3769	0.3629	0.3936	0.4025	0.3619	0.4078	0.3684	12	AVG #
Methylcyclohexane(2)	#0.1290	0.1756	0.1682	0.1800	0.1871	0.1689	0.1904	0.1713	12	AVG #
1,2-Dichloropropane	#0.2298	0.2619	0.2854	0.2709	0.2752	0.2733	0.2870	0.2691	7	AVG #
Dibromomethane	0.1380	0.1607	0.1745	0.1685	0.1713	0.1705	0.1789	0.1661	8	AVG
1,4-Dioxane	0.1038	0.0985	0.1109	0.1097	0.1200	0.1211	0.1215	0.1122	8	AVG
Methyl Methacrylate	0.2548	0.2784	0.3021	0.2936	0.3109	0.3104	0.3196	0.2957	8	AVG
Bromodichloromethane	#0.2631	0.2827	0.3141	0.3042	0.3169	0.3198	0.3347	0.3051	8	AVG #
2-Nitropropane	0.0916	0.0888	0.0937	0.1060	0.1128	0.1166	0.1131	0.1032	11	AVG
2-Chloroethyl Vinyl Ether	0.1654	0.1740	0.2247	0.1981	0.2236	0.2230	0.2271	0.2051	13	AVG
cis-1,3-Dichloropropene	#0.3499	0.3892	0.4347	0.4211	0.4364	0.4412	0.4640	0.4195	9	AVG #
4-Methyl-2-pentanone	#0.4637	0.4627	0.4651	0.5077	0.5203	0.5569	0.4904	0.4953	7	AVG #
Toluene	#0.7057	0.7979	0.8800	0.8143	0.8160	0.7998	0.8359	0.8071	7	AVG #
trans-1,3-Dichloropropene	#0.4104	0.4287	0.5014	0.4799	0.5079	0.5047	0.5303	0.4805	9	AVG #
Ethyl Methacrylate	0.4511	0.5199	0.6156	0.6074	0.6469	0.6374	0.6547	0.5904	13	AVG
1,1,2-Trichloroethane	#0.2754	0.2925	0.3295	0.3107	0.3229	0.3186	0.3248	0.3106	6	AVG #
Tetrachloroethene	#0.2816	0.3316	0.3587	0.3284	0.3286	0.3219	0.3417	0.3275	7	AVG #
1,3-Dichloropropane	0.4849	0.4956	0.5806	0.5425	0.5594	0.5482	0.5658	0.5396	7	AVG
2-Hexanone	#0.4121	0.4279	0.4482	0.4830	0.5015	0.5532	0.4643	0.4700	10	AVG #
Dibromochloromethane	#0.2298	0.2541	0.3136	0.3074	0.3296	0.3340	0.3552	0.3034	15	AVG #
1,2-Dibromoethane	#0.2827	0.3112	0.3677	0.3476	0.3597	0.3529	0.3672	0.3413	9	AVG #
Chlorobenzene	#0.8240	0.8700	0.9551	0.8867	0.9011	0.8865	0.9441	0.8953	5	AVG #
1,1,1,2-Tetrachloroethane	0.2351	0.2578	0.3031	0.2863	0.3021	0.3027	0.3270	0.2877	11	AVG
Ethylbenzene	#1.3787	1.5070	1.6572	1.5278	1.5471	1.5272	1.5927	1.5340	6	AVG #
m+p-Xylene	#0.5272	0.5947	0.6616	0.6035	0.6158	0.6113	0.6551	0.6099	7	AVG #
o-Xylene	#0.5222	0.5852	0.6352	0.5944	0.6073	0.6020	0.6538	0.6000	7	AVG #
Styrene	#0.8130	0.9226	1.0653	1.0097	1.0480	1.0521	1.1351	1.0065	11	AVG #
Bromoform	#0.1670	0.1865	0.2373	0.2340	0.2615	0.2709	0.2958	0.2361	19	AVG #
Isopropylbenzene	#1.2646	1.4512	1.6012	1.4685	1.5055	1.4811	1.5487	1.4744	7	AVG #
Cyclohexanone	0.4871	0.4705	0.4632	0.4991	0.5298	0.5229	0.5703	0.5061	7	AVG
Bromobenzene	0.6884	0.7016	0.7569	0.7144	0.7206	0.7135	0.7459	0.7202	3	AVG
1,1,2,2-Tetrachloroethane	#0.8529	0.9108	1.0222	0.9763	1.0290	1.0105	0.9966	0.9712	7	AVG #
1,2,3-Trichloropropane	0.2565	0.2870	0.3041	0.2966	0.3075	0.3006	0.2955	0.2925	6	AVG
trans-1,4-Dichloro-2-butene	0.2803	0.2931	0.3278	0.3106	0.3327	0.3236	0.3120	0.3114	6	AVG
n-Propylbenzene	3.0849	3.2193	3.4353	3.1761	3.1834	3.0968	3.0275	3.1748	4	AVG
2-Chlorotoluene	0.5675	0.6619	0.7096	0.6632	0.6587	0.6474	0.6756	0.6548	7	AVG
4-Chlorotoluene	0.6413	0.6892	0.7427	0.6924	0.7052	0.6961	0.7401	0.7010	5	AVG
1,3,5-Trimethylbenzene	2.0444	2.2573	2.4632	2.2970	2.3331	2.2914	2.3411	2.2896	6	AVG
tert-Butylbenzene	0.4703	0.5351	0.5407	0.5160	0.5213	0.5108	0.5473	0.5202	5	AVG
Pentachloroethane	0.3257	0.3550	0.4283	0.4067	0.4432	0.4300	0.4897	0.4112	13	AVG
1,2,4-Trimethylbenzene	2.2643	2.3364	2.5982	2.4027	2.4540	2.4060	2.4275	2.4127	4	AVG
sec-Butylbenzene	2.5679	2.8763	3.0392	2.8375	2.8520	2.7620	2.7387	2.8105	5	AVG
1,3-Dichlorobenzene	#1.3306	1.3313	1.4637	1.3552	1.3825	1.3548	1.3951	1.3733	3	AVG #
p-Isopropyltoluene	2.2653	2.4890	2.6827	2.4932	2.5293	2.4796	2.4764	2.4879	5	AVG
1,4-Dichlorobenzene	#1.4127	1.3985	1.4925	1.4162	1.4209	1.4000	1.4251	1.4237	2	AVG #
1,2,3-Trimethylbenzene	2.4036	2.5068	2.7437	2.6464	2.7318	2.5569	2.5827	2.5960	5	AVG
Benzyl Chloride	1.4522	1.6615	2.0559	2.0662	2.2489	2.2481	2.2162	1.9927	16	AVG
1,3-Diethylbenzene	1.4093	1.4939	1.6403	1.5871	1.6504	1.5517	1.6100	1.5632	6	AVG
1,4-Diethylbenzene	1.5014	1.6231	1.7666	1.7078	1.7631	1.6440	1.7181	1.6748	6	AVG
1,2-Dichlorobenzene	#1.2870	1.3049	1.4555	1.3483	1.3827	1.3600	1.3989	1.3625	4	AVG #
n-Butylbenzene	1.1573	1.2337	1.3627	1.2429	1.2674	1.2393	1.2867	1.2557	5	AVG
1,2-Diethylbenzene	1.1418	1.3161	1.4034	1.3496	1.3840	1.2953	1.3485	1.3198	7	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date(s): 02/19/19 02/19/19

Heated Purge: (Y/N) Y Calibration Times: 12:21 14:44

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = wf19i07.d RRF 4 = wf19i06.d RRF 10= wf19i05.d
RRF 20= wf19i04.d RRF 50= wf19i03.d RRF100= wf19i02.d RRF300= wf19i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
1,2-Dibromo-3-chloropropane#	0.1739	0.2010	0.2236	0.2274	0.2466	0.2404	0.2321	0.2207	11	AVG #
1,3,5-Trichlorobenzene	1.0015	1.0168	1.1029	1.0404	1.0698	1.0395	1.0425	1.0448	3	AVG
1,2,4-Trichlorobenzene #	0.9276	0.9375	1.0673	1.0091	1.0550	1.0242	1.0006	1.0030	5	AVG #
Hexachlorobutadiene	0.3772	0.3543	0.3867	0.3591	0.3537	0.3359	0.3340	0.3573	5	AVG
Naphthalene	3.0094	3.0778	3.6431	3.5139	3.7449	3.5758	3.1927	3.3939	9	AVG
1,2,3-Trichlorobenzene	0.9349	0.9398	1.0277	0.9764	1.0247	0.9888	0.9609	0.9790	4	AVG
2-Methylnaphthalene	1.6516	1.5794	2.0834	1.9918	2.1930	2.1016	1.9535	1.9363	12	AVG
Dibromofluoromethane	0.2302	0.2343	0.2297	0.2314	0.2334	0.2302	0.2322	0.2316	1	AVG
Dibromofluoromethane(2)	0.2350	0.2399	0.2348	0.2383	0.2371	0.2401	0.2394	0.2378	1	AVG
1,2-Dichloroethane-d4	0.0612	0.0633	0.0610	0.0634	0.0611	0.0615	0.0597	0.0616	2	AVG
1,2-Dichloroethane-d4(2)	0.2724	0.2724	0.2690	0.2741	0.2626	0.2666	0.2602	0.2682	2	AVG
1,2-Dichloroethane-d4(3)	0.0393	0.0399	0.0398	0.0385	0.0385	0.0391	0.0395	0.0392	1	AVG
Toluene-d8	1.2422	1.2652	1.2667	1.2556	1.2661	1.2478	1.2267	1.2529	1	AVG
Toluene-d8(2)	0.8164	0.8263	0.8295	0.8323	0.8287	0.8363	0.8467	0.8309	1	AVG
4-Bromofluorobenzene	0.4965	0.4997	0.5047	0.4992	0.4989	0.5008	0.5088	0.5012	1	AVG
4-Bromofluorobenzene(2)	0.4175	0.4231	0.4261	0.4206	0.4231	0.4215	0.4287	0.4229	1	AVG

Average %RSD 7

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP09137.i/19feb19i.b/wf19i01.d	VSTD300
/chem2/HP09137.i/19feb19i.b/wf19i02.d	VSTD100
/chem2/HP09137.i/19feb19i.b/wf19i03.d	VSTD050
/chem2/HP09137.i/19feb19i.b/wf19i04.d	VSTD020
/chem2/HP09137.i/19feb19i.b/wf19i05.d	VSTD010
/chem2/HP09137.i/19feb19i.b/wf19i06.d	VSTD004
/chem2/HP09137.i/19feb19i.b/wf19i07.d	VSTD001

Area Summary

File ID:

Internal Standard Name	wf19i01.d	wf19i02.d	wf19i03.d	wf19i04.d	wf19i05.d	wf19i06.d	wf19i07.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	208793	220310	221988	226145	235698	216574	213467	220425	4	Yes
Fluorobenzene	896646	842063	858650	878585	872867	867920	823064	862828	3	Yes
Chlorobenzene-d5	750584	700579	703812	722592	709147	717501	683121	712477	3	Yes
1,4-Dichlorobenzene-d4	447340	397731	393177	398717	394276	394254	368100	399085	6	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	wf19i01.d	wf19i02.d	wf19i03.d	wf19i04.d	wf19i05.d	wf19i06.d	wf19i07.d	Avg. RT
t-Butyl alcohol-d10	2.735	2.732	2.728	2.732	2.725	2.728	2.732	2.730
Fluorobenzene	5.029	5.029	5.029	5.029	5.029	5.029	5.029	5.029
Chlorobenzene-d5	8.161	8.161	8.161	8.161	8.161	8.161	8.161	8.161
1,4-Dichlorobenzene-d4	10.041	10.041	10.038	10.038	10.041	10.038	10.038	10.040

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 02/20/2019 at 10:32.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 ICV Date: 02/20/19 Time: 12:07

Lab File ID: wf20l01.d Init. Calib. Date(s): 02/20/19 02/20/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3233	0.2795	17.29	20	-14	#
# Chloromethane	0.4026	0.3901	19.38	20	-3	#
1,3-Butadiene	0.2453	0.2559	20.86	20	4	
# Vinyl Chloride	0.3690	0.3679	19.94	20	0	#
# Bromomethane	0.2911	0.2538	17.44	20	-13	#
# Chloroethane	0.2429	0.2141	17.63	20	-12	#
Dichlorofluoromethane	0.4701	0.4241	18.04	20	-10	
n-Pentane	0.3728	0.3323	17.83	20	-11	
# Trichlorofluoromethane	0.3920	0.3507	17.89	20	-11	#
Ethanol	0.1140	0.1305	572.10	500	14	
Freon 123a	0.2929	0.2989	20.41	20	2	
Acrolein	1.7998	1.6198	135.00	150	-10	
# 1,1-Dichloroethene	0.2204	0.2572	23.34	20	17	#
# Acetone	0.8748	0.8401	144.04	150	-4	#
# Freon 113	0.1936	0.2153	22.24	20	11	#
2-Propanol	0.6500	0.6597	152.24	150	1	
Methyl Iodide	0.4225	0.4552	21.55	20	8	
# Carbon Disulfide	0.7767	0.8165	21.03	20	5	#
Allyl Chloride	0.3841	0.3808	19.83	20	-1	
# Methyl Acetate	0.3324	0.3222	19.38	20	-3	#
# Methylene Chloride	0.2695	0.2912	21.61	20	8	#
t-Butyl alcohol	1.1595	1.1387	196.42	200	-2	
Acrylonitrile	0.1749	0.1762	100.78	100	1	
# trans-1,2-Dichloroethene	0.2392	0.2692	22.51	20	13	#
# Methyl Tertiary Butyl Ether	0.5824	0.6000	20.61	20	3	#
n-Hexane	0.3200	0.3383	21.14	20	6	
# 1,1-Dichloroethane	0.4334	0.4754	21.94	20	10	#
di-Isopropyl ether	0.8327	0.9095	21.85	20	9	
2-Chloro-1,3-butadiene	0.3754	0.4010	21.36	20	7	
Ethyl t-butyl ether	0.6069	0.6397	21.08	20	5	
# cis-1,2-Dichloroethene	0.2686	0.3060	22.79	20	14	#
# 2-Butanone	0.2512	0.2467	147.26	150	-2	#
2,2-Dichloropropane	0.1946	0.2191	22.51	20	13	
Propionitrile	1.4410	1.4646	152.45	150	2	
Methacrylonitrile	0.1880	0.1915	152.73	150	2	
Bromochloromethane	0.1396	0.1402	20.08	20	0	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 ICV Date: 02/20/19 Time: 12:07

Lab File ID: wf20l01.d Init. Calib. Date(s): 02/20/19 02/20/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Tetrahydrofuran	1.3337	1.2743	95.54	100	-4	
#	Chloroform	0.4067	0.4516	22.21	20	11	#
#	1,1,1-Trichloroethane	0.3060	0.3471	22.69	20	13	#
#	Cyclohexane	0.4049	0.4112	20.31	20	2	#
	1,1-Dichloropropene	0.3260	0.3579	21.96	20	10	
#	Carbon Tetrachloride	0.2626	0.2742	20.89	20	4	#
	Isobutyl Alcohol	0.4227	0.4079	482.47	500	-4	
#	Benzene	1.0480	1.1347	21.66	20	8	#
#	1,2-Dichloroethane	0.3237	0.3597	22.22	20	11	#
	t-Amyl methyl ether	0.6218	0.6386	20.54	20	3	
	n-Heptane	0.3059	0.3099	20.26	20	1	
	n-Butanol	0.3753	0.3610	961.94	1000	-4	
#	Trichloroethene	0.2538	0.2812	22.16	20	11	#
#	Methylcyclohexane	0.3684	0.3776	20.50	20	2	#
#	1,2-Dichloropropane	0.2691	0.3032	22.54	20	13	#
	Dibromomethane	0.1661	0.1822	21.94	20	10	
	1,4-Dioxane	0.1122	0.1124	501.07	500	0	
	Methyl Methacrylate	0.2957	0.2953	19.97	20	0	
#	Bromodichloromethane	0.3051	0.3279	21.49	20	7	#
	2-Nitropropane	0.1032	0.0871	16.88	20	-16	
	2-Chloroethyl Vinyl Ether	0.2051	0.1921	18.73	20	-6	
#	cis-1,3-Dichloropropene	0.4195	0.4588	21.87	20	9	#
#	4-Methyl-2-pentanone	0.4953	0.4880	98.53	100	-1	#
#	Toluene	0.8071	0.8843	21.91	20	10	#
#	trans-1,3-Dichloropropene	0.4805	0.4960	20.65	20	3	#
	Ethyl Methacrylate	0.5904	0.6116	20.72	20	4	
#	1,1,2-Trichloroethane	0.3106	0.3563	22.94	20	15	#
#	Tetrachloroethene	0.3275	0.3603	22.00	20	10	#
	1,3-Dichloropropane	0.5396	0.5927	21.97	20	10	
#	2-Hexanone	0.4700	0.4573	97.29	100	-3	#
#	Dibromochloromethane	0.3034	0.3279	21.62	20	8	#
#	1,2-Dibromoethane	0.3413	0.3744	21.94	20	10	#
#	Chlorobenzene	0.8953	0.9820	21.94	20	10	#
	1,1,1,2-Tetrachloroethane	0.2877	0.3058	21.25	20	6	
#	Ethylbenzene	1.5340	1.6678	21.74	20	9	#
#	m+p-Xylene	0.6099	0.6667	43.72	40	9	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 ICV Date: 02/20/19 Time: 12:07

Lab File ID: wf20l01.d Init. Calib. Date(s): 02/20/19 02/20/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	o-Xylene	0.6000	0.6435	21.45	20	7	#
#	Styrene	1.0065	1.1147	22.15	20	11	#
#	Bromoform	0.2361	0.2357	19.96	20	0	#
#	Isopropylbenzene	1.4744	1.6362	22.19	20	11	#
	Cyclohexanone	0.5061	0.3977	392.85	500	-21	
	Bromobenzene	0.7202	0.7749	21.52	20	8	
#	1,1,2,2-Tetrachloroethane	0.9712	1.0477	21.58	20	8	#
	1,2,3-Trichloropropane	0.2925	0.3208	21.93	20	10	
	trans-1,4-Dichloro-2-butene	0.3114	0.3263	104.76	100	5	
	n-Propylbenzene	3.1748	3.5193	22.17	20	11	
	2-Chlorotoluene	0.6548	0.7224	22.06	20	10	
	4-Chlorotoluene	0.7010	0.7635	21.78	20	9	
	1,3,5-Trimethylbenzene	2.2896	2.4970	21.81	20	9	
	tert-Butylbenzene	0.5202	0.5611	21.57	20	8	
	Pentachloroethane	0.4112	0.4164	20.25	20	1	
	1,2,4-Trimethylbenzene	2.4127	2.5891	21.46	20	7	
	sec-Butylbenzene	2.8105	3.0779	21.90	20	10	
#	1,3-Dichlorobenzene	1.3733	1.4796	21.55	20	8	#
	p-Isopropyltoluene	2.4879	2.7111	21.79	20	9	
#	1,4-Dichlorobenzene	1.4237	1.5451	21.71	20	9	#
	1,2,3-Trimethylbenzene	2.5960	2.7701	21.34	20	7	
	Benzyl Chloride	1.9927	1.9670	19.74	20	-1	
	1,3-Diethylbenzene	1.5632	1.6430	21.02	20	5	
	1,4-Diethylbenzene	1.6748	1.7017	20.32	20	2	
#	1,2-Dichlorobenzene	1.3625	1.4843	21.79	20	9	#
	n-Butylbenzene	1.2557	1.3468	21.45	20	7	
	1,2-Diethylbenzene	1.3198	1.4051	21.29	20	6	
#	1,2-Dibromo-3-chloropropane	0.2207	0.2278	20.64	20	3	#
	1,3,5-Trichlorobenzene	1.0448	1.0980	21.02	20	5	
#	1,2,4-Trichlorobenzene	1.0030	1.0774	21.48	20	7	#
	Hexachlorobutadiene	0.3573	0.3703	20.73	20	4	
	Naphthalene	3.3939	3.6416	21.46	20	7	
	1,2,3-Trichlorobenzene	0.9790	1.0505	21.46	20	7	
	2-Methylnaphthalene	1.9363	1.9106	19.73	20	-1	

Average %Drift 7

Compounds with required minimum RRF.
Maximum % Drift = 30 %

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Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP09137.i/19feb19i.b/wf19i07.d
/chem2/HP09137.i/19feb19i.b/wf19i06.d
/chem2/HP09137.i/19feb19i.b/wf19i05.d
/chem2/HP09137.i/19feb19i.b/wf19i04.d
/chem2/HP09137.i/19feb19i.b/wf19i03.d
/chem2/HP09137.i/19feb19i.b/wf19i02.d
/chem2/HP09137.i/19feb19i.b/wf19i01.d

File /chem2/HP09137.i/19feb19i.b/wf19i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP09137.i/19may18a.b/wy18c01.d

RT Summary

Internal Standard Name	File ID: wy18c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	2.738	2.728	Yes
Fluorobenzene	5.032	5.029	Yes
Chlorobenzene-d5	8.161	8.161	Yes
1,4-Dichlorobenzene-d4	10.041	10.038	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: wy18c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	189811	221988	110994	443976	Yes
Fluorobenzene	1026490	858650	429325	1717300	Yes
Chlorobenzene-d5	778376	703812	351906	1407624	Yes
1,4-Dichlorobenzene-d4	444015	393177	196588	786354	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 05/18/2019 at 22:28

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/18/19 Time: 22:05

Lab File ID: wy18c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
# Dichlorodifluoromethane	0.3233	0.3794	58.68	50	17	#
# Chloromethane	0.4026	0.3395	42.16	50	-16	#
1,3-Butadiene	0.2453	0.1978	40.30	50	-19	
# Vinyl Chloride	0.3690	0.3286	44.52	50	-11	#
# Bromomethane	0.2911	0.2702	46.41	50	-7	#
# Chloroethane	0.2429	0.2027	41.73	50	-17	#
n-Pentane	0.3728	0.3018	40.48	50	-19	
# Trichlorofluoromethane	0.3920	0.4147	52.90	50	6	#
Ethanol	0.1140	0.0601	659.20	1250	-47	<-
Freon 123a	0.2929	0.2637	45.01	50	-10	
Acrolein	1.7998	2.2411	622.59	500	25	<-
# 1,1-Dichloroethene	0.2204	0.2283	51.78	50	4	#
# 1,1-Dichloroethene(2)	0.1112	0.0866	38.95	50	-22	#<-
# Acetone	0.8748	1.0760	123.00	100	23	#<-
# Freon 113	0.1936	0.1979	51.11	50	2	#
2-Propanol	0.6500	0.6260	240.80	250	-4	
Methyl Iodide	0.4225	0.4272	50.56	50	1	
# Carbon Disulfide	0.7767	0.6706	43.17	50	-14	#
Allyl Chloride	0.3841	0.3558	46.33	50	-7	
# Methyl Acetate	0.3324	0.2877	43.28	50	-13	#
# Methylene Chloride	0.2695	0.2493	46.25	50	-7	#
t-Butyl alcohol	1.1595	1.2247	264.07	250	6	
Acrylonitrile	0.1749	0.1626	46.48	50	-7	
# trans-1,2-Dichloroethene	0.2392	0.2366	49.47	50	-1	#
# Methyl Tertiary Butyl Ether	0.5824	0.6339	54.42	50	9	#
n-Hexane	0.3200	0.3091	48.29	50	-3	
# 1,1-Dichloroethane	0.4334	0.4045	46.67	50	-7	#
di-Isopropyl ether	0.8327	0.7418	44.54	50	-11	
2-Chloro-1,3-butadiene	0.3754	0.3717	49.51	50	-1	
Ethyl t-butyl ether	0.6069	0.6070	50.01	50	0	
# cis-1,2-Dichloroethene	0.2686	0.2575	47.94	50	-4	#
# 2-Butanone	0.2512	0.2200	87.58	100	-12	#
2,2-Dichloropropane	0.1946	0.1613	41.43	50	-17	
Propionitrile	1.4410	1.7102	296.70	250	19	
Methacrylonitrile	0.1880	0.1662	110.47	125	-12	
Bromochloromethane	0.1396	0.1454	52.07	50	4	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

page 1 of 4

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/18/19 Time: 22:05

Lab File ID: wy18c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
Tetrahydrofuran	1.3337	1.7007	127.51	100	28	<-
# Chloroform	0.4067	0.4047	49.76	50	0	#
# 1,1,1-Trichloroethane	0.3060	0.3026	49.45	50	-1	#
# Cyclohexane	0.4049	0.3793	46.84	50	-6	#
# Cyclohexane(2)	0.3352	0.3080	45.95	50	-8	#
# Cyclohexane(3)	0.1217	0.1158	47.58	50	-5	#
1,1-Dichloropropene	0.3260	0.3138	48.13	50	-4	
# Carbon Tetrachloride	0.2626	0.2577	49.07	50	-2	#
Isobutyl Alcohol	0.4227	0.4660	688.95	625	10	
# Benzene	1.0480	0.9891	47.19	50	-6	#
# 1,2-Dichloroethane	0.3237	0.3186	49.21	50	-2	#
# 1,2-Dichloroethane(2)	0.0308	0.0317	51.46	50	3	#<-
t-Amyl methyl ether	0.6218	0.6140	49.37	50	-1	
n-Heptane	0.3059	0.2836	46.37	50	-7	
n-Butanol	0.3753	0.3815	1270.61	1250	2	
# Trichloroethene	0.2538	0.2501	49.27	50	-1	#
# Methylcyclohexane	0.3684	0.3769	51.15	50	2	#
# Methylcyclohexane(2)	0.1713	0.1752	51.13	50	2	#
# 1,2-Dichloropropane	0.2691	0.2454	45.61	50	-9	#
Dibromomethane	0.1661	0.1662	50.05	50	0	
1,4-Dioxane	0.1122	0.1247	694.87	625	11	
Methyl Methacrylate	0.2957	0.2695	45.57	50	-9	
# Bromodichloromethane	0.3051	0.2973	48.73	50	-3	#
2-Nitropropane	0.1032	0.1059	102.60	100	3	
2-Chloroethyl Vinyl Ether	0.2051	0.1920	46.81	50	-6	
# cis-1,3-Dichloropropene	0.4195	0.3941	46.98	50	-6	#
# 4-Methyl-2-pentanone	0.4953	0.4705	95.00	100	-5	#
# Toluene	0.8071	0.8480	52.53	50	5	#
# trans-1,3-Dichloropropene	0.4805	0.4836	50.32	50	1	#
Ethyl Methacrylate	0.5904	0.6088	51.56	50	3	
# 1,1,2-Trichloroethane	0.3106	0.3331	53.62	50	7	#
# Tetrachloroethene	0.3275	0.3665	55.96	50	12	#
1,3-Dichloropropane	0.5396	0.5572	51.63	50	3	
# 2-Hexanone	0.4700	0.4953	105.37	100	5	#
# Dibromochloromethane	0.3034	0.3366	55.47	50	11	#
# 1,2-Dibromoethane	0.3413	0.3667	53.72	50	7	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/18/19 Time: 22:05

Lab File ID: wy18c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Chlorobenzene	0.8953	0.9513	53.13	50	6	#
	1,1,1,2-Tetrachloroethane	0.2877	0.3128	54.36	50	9	
#	Ethylbenzene	1.5340	1.6077	52.40	50	5	#
#	m+p-Xylene	0.6099	0.6537	107.18	100	7	#
#	o-Xylene	0.6000	0.6309	52.57	50	5	#
#	Styrene	1.0065	1.0897	54.13	50	8	#
#	Bromoform	0.2361	0.2586	54.77	50	10	#
#	Isopropylbenzene	1.4744	1.5602	52.91	50	6	#
	Cyclohexanone	0.5061	0.4968	613.49	625	-2	
	Bromobenzene	0.7202	0.7701	53.47	50	7	
#	1,1,2,2-Tetrachloroethane	0.9712	0.9943	51.19	50	2	#
	1,2,3-Trichloropropane	0.2925	0.3123	53.38	50	7	
	trans-1,4-Dichloro-2-butene	0.3114	0.2807	112.68	125	-10	
	n-Propylbenzene	3.1748	3.1983	50.37	50	1	
	2-Chlorotoluene	0.6548	0.6917	52.82	50	6	
	4-Chlorotoluene	0.7010	0.7464	53.24	50	6	
	1,3,5-Trimethylbenzene	2.2896	2.3484	51.28	50	3	
	tert-Butylbenzene	0.5202	0.5327	51.20	50	2	
	Pentachloroethane	0.4112	0.4592	55.83	50	12	
	1,2,4-Trimethylbenzene	2.4127	2.4677	51.14	50	2	
	sec-Butylbenzene	2.8105	2.8006	49.82	50	0	
#	1,3-Dichlorobenzene	1.3733	1.4454	52.62	50	5	#
	p-Isopropyltoluene	2.4879	2.5375	51.00	50	2	
#	1,4-Dichlorobenzene	1.4237	1.4982	52.62	50	5	#
	1,2,3-Trimethylbenzene	2.5960	2.7197	52.38	50	5	
	Benzyl Chloride	1.9927	1.9922	49.99	50	0	
	1,3-Diethylbenzene	1.5632	1.5957	51.04	50	2	
	1,4-Diethylbenzene	1.6748	1.6814	50.20	50	0	
#	1,2-Dichlorobenzene	1.3625	1.4448	53.02	50	6	#
	n-Butylbenzene	1.2557	1.2037	47.93	50	-4	
	1,2-Diethylbenzene	1.3198	1.3620	51.60	50	3	
#	1,2-Dibromo-3-chloropropane	0.2207	0.2180	49.39	50	-1	#
	1,3,5-Trichlorobenzene	1.0448	1.0111	48.39	50	-3	
#	1,2,4-Trichlorobenzene	1.0030	0.9514	47.43	50	-5	#
	Hexachlorobutadiene	0.3573	0.3469	48.55	50	-3	
	Naphthalene	3.3939	3.3341	49.12	50	-2	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/18/19 Time: 22:05

Lab File ID: wy18c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

COMPOUND	$\overline{RRF}$	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
1,2,3-Trichlorobenzene	0.9790	0.9324	47.62	50	-5	
2-Methylnaphthalene	1.9363	1.5318	39.55	50	-21	<-
Dibromofluoromethane	0.2316	0.2234	48.22	50	-4	
Dibromofluoromethane(2)	0.2378	0.2276	47.87	50	-4	
1,2-Dichloroethane-d4	0.0616	0.0601	48.77	50	-2	
1,2-Dichloroethane-d4(2)	0.2682	0.2683	50.01	50	0	
1,2-Dichloroethane-d4(3)	0.0392	0.0393	50.03	50	0	
Toluene-d8	1.2529	1.2877	51.39	50	3	
Toluene-d8(2)	0.8309	0.8503	51.17	50	2	
4-Bromofluorobenzene	0.5012	0.4733	47.22	50	-6	
4-Bromofluorobenzene(2)	0.4229	0.4293	50.75	50	1	

Average %Drift 7

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

page 4 of 4

Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP09137.i/19feb19i.b/wf19i07.d
/chem2/HP09137.i/19feb19i.b/wf19i06.d
/chem2/HP09137.i/19feb19i.b/wf19i05.d
/chem2/HP09137.i/19feb19i.b/wf19i04.d
/chem2/HP09137.i/19feb19i.b/wf19i03.d
/chem2/HP09137.i/19feb19i.b/wf19i02.d
/chem2/HP09137.i/19feb19i.b/wf19i01.d

File /chem2/HP09137.i/19feb19i.b/wf19i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP09137.i/19may19a.b/wy19c01.d

RT Summary

Internal Standard Name	File ID: wy19c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	2.735	2.728	Yes
Fluorobenzene	5.036	5.029	Yes
Chlorobenzene-d5	8.161	8.161	Yes
1,4-Dichlorobenzene-d4	10.041	10.038	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: wy19c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	188008	221988	110994	443976	Yes
Fluorobenzene	964374	858650	429325	1717300	Yes
Chlorobenzene-d5	743223	703812	351906	1407624	Yes
1,4-Dichlorobenzene-d4	427964	393177	196588	786354	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 05/19/2019 at 12:06

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/19/19 Time: 11:32

Lab File ID: wy19c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Dichlorodifluoromethane	0.3233	0.3657	56.55	50	13	#
#	Chloromethane	0.4026	0.2944	36.57	50	-27	#<-
|	1,3-Butadiene	0.2453	0.1852	37.74	50	-25	|<-
#	Vinyl Chloride	0.3690	0.2924	39.62	50	-21	#<-
#	Bromomethane	0.2911	0.2532	43.50	50	-13	#
#	Chloroethane	0.2429	0.1832	37.72	50	-25	#<-
|	n-Pentane	0.3728	0.2999	40.23	50	-20	|
#	Trichlorofluoromethane	0.3920	0.3947	50.35	50	1	#
|	Ethanol	0.1140	0.0670	734.17	1250	-41	|<-
|	Freon 123a	0.2929	0.2696	46.03	50	-8	|
|	Acrolein	1.7998	1.7033	473.19	500	-5	|
#	1,1-Dichloroethene	0.2204	0.2188	49.63	50	-1	#
#	1,1-Dichloroethene(2)	0.1112	0.0910	40.92	50	-18	#<-
#	Acetone	0.8748	0.9094	103.95	100	4	#
#	Freon 113	0.1936	0.1932	49.89	50	0	#
|	2-Propanol	0.6500	0.6252	240.47	250	-4	|
|	Methyl Iodide	0.4225	0.4326	51.20	50	2	|
#	Carbon Disulfide	0.7767	0.6482	41.73	50	-17	#
|	Allyl Chloride	0.3841	0.3612	47.02	50	-6	|
#	Methyl Acetate	0.3324	0.2875	43.25	50	-14	#
#	Methylene Chloride	0.2695	0.2561	47.53	50	-5	#
|	t-Butyl alcohol	1.1595	1.1956	257.79	250	3	|
|	Acrylonitrile	0.1749	0.1437	41.08	50	-18	|
#	trans-1,2-Dichloroethene	0.2392	0.2329	48.68	50	-3	#
#	Methyl Tertiary Butyl Ether	0.5824	0.6782	58.22	50	16	#
|	n-Hexane	0.3200	0.2866	44.78	50	-10	|
#	1,1-Dichloroethane	0.4334	0.4032	46.52	50	-7	#
|	di-Isopropyl ether	0.8327	0.7485	44.94	50	-10	|
|	2-Chloro-1,3-butadiene	0.3754	0.3756	50.02	50	0	|
|	Ethyl t-butyl ether	0.6069	0.6332	52.16	50	4	|
#	cis-1,2-Dichloroethene	0.2686	0.2565	47.76	50	-4	#
#	2-Butanone	0.2512	0.2005	79.81	100	-20	#
|	2,2-Dichloropropane	0.1946	0.1570	40.34	50	-19	|
|	Propionitrile	1.4410	1.6529	286.76	250	15	|
|	Methacrylonitrile	0.1880	0.1657	110.13	125	-12	|
|	Bromochloromethane	0.1396	0.1490	53.38	50	7	|

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/19/19 Time: 11:32

Lab File ID: wy19c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	$\overline{RRF}$	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Tetrahydrofuran	1.3337	1.4592	109.41	100	9	
#	Chloroform	0.4067	0.4099	50.39	50	1	#
#	1,1,1-Trichloroethane	0.3060	0.3102	50.69	50	1	#
#	Cyclohexane	0.4049	0.3470	42.85	50	-14	#
#	Cyclohexane(2)	0.3352	0.2839	42.35	50	-15	#
#	Cyclohexane(3)	0.1217	0.1071	43.98	50	-12	#
	1,1-Dichloropropene	0.3260	0.3080	47.23	50	-6	
#	Carbon Tetrachloride	0.2626	0.2633	50.14	50	0	#
	Isobutyl Alcohol	0.4227	0.4462	659.73	625	6	
#	Benzene	1.0480	0.9918	47.32	50	-5	#
#	1,2-Dichloroethane	0.3237	0.3356	51.82	50	4	#
#	1,2-Dichloroethane(2)	0.0308	0.0321	52.14	50	4	#<-
	t-Amyl methyl ether	0.6218	0.6176	49.67	50	-1	
	n-Heptane	0.3059	0.2658	43.45	50	-13	
	n-Butanol	0.3753	0.3537	1178.19	1250	-6	
#	Trichloroethene	0.2538	0.2497	49.19	50	-2	#
#	Methylcyclohexane	0.3684	0.3888	52.77	50	6	#
#	Methylcyclohexane(2)	0.1713	0.1842	53.75	50	7	#
#	1,2-Dichloropropane	0.2691	0.2476	46.01	50	-8	#
	Dibromomethane	0.1661	0.1668	50.24	50	0	
	1,4-Dioxane	0.1122	0.1328	739.49	625	18	
	Methyl Methacrylate	0.2957	0.2684	45.39	50	-9	
#	Bromodichloromethane	0.3051	0.3060	50.16	50	0	#
	2-Nitropropane	0.1032	0.0967	93.64	100	-6	
	2-Chloroethyl Vinyl Ether	0.2051	0.1657	40.39	50	-19	
#	cis-1,3-Dichloropropene	0.4195	0.3877	46.21	50	-8	#
#	4-Methyl-2-pentanone	0.4953	0.4264	86.10	100	-14	#
#	Toluene	0.8071	0.8302	51.43	50	3	#
#	trans-1,3-Dichloropropene	0.4805	0.4802	49.97	50	0	#
	Ethyl Methacrylate	0.5904	0.5759	48.77	50	-2	
#	1,1,2-Trichloroethane	0.3106	0.3318	53.40	50	7	#
#	Tetrachloroethene	0.3275	0.3492	53.31	50	7	#
	1,3-Dichloropropane	0.5396	0.5582	51.73	50	3	
#	2-Hexanone	0.4700	0.4282	91.10	100	-9	#
#	Dibromochloromethane	0.3034	0.3351	55.23	50	10	#
#	1,2-Dibromoethane	0.3413	0.3670	53.77	50	8	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/19/19 Time: 11:32

Lab File ID: wy19c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	$\overline{RRF}$	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Chlorobenzene	0.8953	0.9491	53.00	50	6	#
	1,1,1,2-Tetrachloroethane	0.2877	0.3134	54.46	50	9	
#	Ethylbenzene	1.5340	1.5468	50.42	50	1	#
#	m+p-Xylene	0.6099	0.6289	103.11	100	3	#
#	o-Xylene	0.6000	0.6172	51.43	50	3	#
#	Styrene	1.0065	1.0651	52.91	50	6	#
#	Bromoform	0.2361	0.2526	53.49	50	7	#
#	Isopropylbenzene	1.4744	1.4612	49.55	50	-1	#
	Cyclohexanone	0.5061	0.4194	517.97	625	-17	
	Bromobenzene	0.7202	0.7560	52.49	50	5	
#	1,1,2,2-Tetrachloroethane	0.9712	0.9618	49.52	50	-1	#
	1,2,3-Trichloropropane	0.2925	0.3068	52.44	50	5	
	trans-1,4-Dichloro-2-butene	0.3114	0.2870	115.21	125	-8	
	n-Propylbenzene	3.1748	2.9437	46.36	50	-7	
	2-Chlorotoluene	0.6548	0.6549	50.01	50	0	
	4-Chlorotoluene	0.7010	0.7137	50.91	50	2	
	1,3,5-Trimethylbenzene	2.2896	2.1945	47.92	50	-4	
	tert-Butylbenzene	0.5202	0.4905	47.15	50	-6	
	Pentachloroethane	0.4112	0.4426	53.82	50	8	
	1,2,4-Trimethylbenzene	2.4127	2.3454	48.60	50	-3	
	sec-Butylbenzene	2.8105	2.5067	44.59	50	-11	
#	1,3-Dichlorobenzene	1.3733	1.3801	50.25	50	0	#
	p-Isopropyltoluene	2.4879	2.2678	45.58	50	-9	
#	1,4-Dichlorobenzene	1.4237	1.4427	50.67	50	1	#
	1,2,3-Trimethylbenzene	2.5960	2.6042	50.16	50	0	
	Benzyl Chloride	1.9927	1.9301	48.43	50	-3	
	1,3-Diethylbenzene	1.5632	1.5314	48.98	50	-2	
	1,4-Diethylbenzene	1.6748	1.5932	47.56	50	-5	
#	1,2-Dichlorobenzene	1.3625	1.3845	50.81	50	2	#
	n-Butylbenzene	1.2557	1.0925	43.50	50	-13	
	1,2-Diethylbenzene	1.3198	1.2856	48.70	50	-3	
#	1,2-Dibromo-3-chloropropane	0.2207	0.2101	47.60	50	-5	#
	1,3,5-Trichlorobenzene	1.0448	0.9422	45.09	50	-10	
#	1,2,4-Trichlorobenzene	1.0030	0.8909	44.41	50	-11	#
	Hexachlorobutadiene	0.3573	0.3523	49.31	50	-1	
	Naphthalene	3.3939	3.1862	46.94	50	-6	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/19/19 Time: 11:32

Lab File ID: wy19c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

COMPOUND	$\overline{RRF}$	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
1,2,3-Trichlorobenzene	0.9790	0.8871	45.30	50	-9	
2-Methylnaphthalene	1.9363	1.5117	39.04	50	-22	<-
Dibromofluoromethane	0.2316	0.2266	48.91	50	-2	
Dibromofluoromethane(2)	0.2378	0.2342	49.25	50	-1	
1,2-Dichloroethane-d4	0.0616	0.0612	49.68	50	-1	
1,2-Dichloroethane-d4(2)	0.2682	0.2786	51.95	50	4	
1,2-Dichloroethane-d4(3)	0.0392	0.0395	50.33	50	1	
Toluene-d8	1.2529	1.2855	51.30	50	3	
Toluene-d8(2)	0.8309	0.8457	50.89	50	2	
4-Bromofluorobenzene	0.5012	0.4794	47.83	50	-4	
4-Bromofluorobenzene(2)	0.4229	0.4378	51.75	50	4	

Average %Drift 8

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): wy18c01.d Date Analyzed: 05/18/19

Instrument ID: HP09137 Time Analyzed: 22:05

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	189811	2.738	1026490	5.032	778376	8.161	444015	10.041
UPPER LIMIT	379622	3.238	2052980	5.532	1556752	8.661	888030	10.541
LOWER LIMIT	94906	2.238	513245	4.532	389188	7.661	222008	9.541
LAB SAMPLE ID								
01 LCSW23	185223	2.732	1049302	5.032	796496	8.161	447919	10.042
02 VBLKW23	177555	2.744	947707	5.032	739589	8.161	377751	10.045
03 1053375	164279	2.744	947536	5.032	733814	8.161	371974	10.041
04 1053376	162632	2.741	947368	5.032	724356	8.161	373316	10.041
05 1053379	159659	2.744	911949	5.029	705020	8.161	363154	10.042
06 1053382	129701	2.738	887744	5.032	694656	8.161	348961	10.041
07 1053383	152533	2.741	879049	5.032	672115	8.161	348025	10.042
08 1053360MS	182190	2.738	951889	5.032	736014	8.161	416077	10.041
09 1053361MSD	186782	2.738	972725	5.032	734147	8.161	421474	10.041
10 1053352	178385	2.741	928725	5.032	717617	8.161	371056	10.041
11 1053353	157253	2.741	917983	5.032	710608	8.161	363159	10.041
12 1053354	147925	2.744	925895	5.032	721769	8.161	368493	10.042
13 1053355	166431	2.744	910763	5.032	705796	8.161	359701	10.041
14 1053356	169028	2.744	883199	5.032	686111	8.161	345609	10.041
15 1053357	162426	2.741	874167	5.032	681629	8.161	347282	10.042
16 1053358	138607	2.738	877279	5.032	676081	8.161	353388	10.041
17 1053362	151916	2.744	856060	5.032	666355	8.164	337861	10.041
18 1053363	127654	2.744	871075	5.032	670686	8.161	342923	10.041

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

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8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): wy19c01.d Date Analyzed: 05/19/19

Instrument ID: HP09137 Time Analyzed: 11:32

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	188008	2.735	964374	5.036	743223	8.161	427964	10.042
UPPER LIMIT	376016	3.235	1928748	5.536	1486446	8.661	855928	10.542
LOWER LIMIT	94004	2.235	482187	4.536	371612	7.661	213982	9.542
LAB SAMPLE ID								
01 VBLKW24	161128	2.741	907592	5.032	688339	8.164	358292	10.042
02 VBLKW25	161128	2.741	907592	5.032	688339	8.164	358292	10.042
03 LCSW25	145218	2.738	948146	5.032	728644	8.161	414799	10.042
04 LCSW24	145218	2.738	948146	5.032	728644	8.161	414799	10.042
05 MDL0.5 - MD	169887	2.738	917398	5.032	708870	8.164	361566	10.042
06 MDL0.5 - MD	169887	2.738	917398	5.032	708870	8.164	361566	10.042
07 1053374	140048	2.741	882636	5.032	680257	8.164	351344	10.041
08 1053377	128737	2.744	857690	5.032	666191	8.161	342215	10.041
09 1053378	135799	2.741	848569	5.032	666891	8.164	338640	10.041
10 1053380	124134	2.738	852058	5.032	658002	8.161	341161	10.042
11 1053381	124381	2.741	861333	5.029	665001	8.161	340579	10.041
12 1053359	148557	2.744	856880	5.036	661965	8.161	342278	10.041
13 1052544	169696	2.748	831394	5.032	650814	8.161	334236	10.042
14 1052546	128981	2.734	830171	5.032	643794	8.161	336801	10.041
15 1052547MS	145234	2.741	909156	5.032	696482	8.161	404082	10.041
16 1052548MSD	160669	2.738	922034	5.032	701245	8.161	408875	10.041
17 1052549	159340	2.738	879768	5.032	679937	8.161	346825	10.042
18 1052550	134349	2.741	863162	5.032	664463	8.161	341845	10.041
19 1052551	116338	2.741	854134	5.032	657360	8.161	339157	10.041
20 1052552	162777	2.741	854183	5.032	660366	8.161	339742	10.041
21 1052553	150089	2.748	851946	5.032	670129	8.161	345630	10.042
22 1052554	155827	2.744	843676	5.032	653069	8.161	338201	10.041

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): wy19c01.d Date Analyzed: 05/19/19

Instrument ID: HP09137 Time Analyzed: 11:32

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA) AREA #	RT #	IS2(FBZ) AREA #	RT #	IS3(CBZ) AREA #	RT #	IS4(DCB) AREA #	RT #
12 HOUR STD	188008	2.735	964374	5.036	743223	8.161	427964	10.042
UPPER LIMIT	376016	3.235	1928748	5.536	1486446	8.661	855928	10.542
LOWER LIMIT	94004	2.235	482187	4.536	371612	7.661	213982	9.542
LAB SAMPLE ID								
23 1052556	154081	2.741	835482	5.032	653803	8.161	331767	10.041
24 1052987	156447	2.744	828795	5.032	642931	8.161	332591	10.042
25 SECC050	175459	2.738	898393	5.032	699815	8.161	405307	10.041

IS1 (TBA)=t-Butyl alcohol-d10 UPPER LIMIT = + 100%
IS2 (FBZ)=Fluorobenzene of internal standard area.
IS3 (CBZ)=Chlorobenzene-d5 LOWER LIMIT = - 50%
IS4 (DCB)=1,4-Dichlorobenzene-d4 of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

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Sample Data

Volatiles by GC/MS

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
001RS

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053376

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s04.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	2	J
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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001RS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1053376

Data file: /chem2/HP09137.i/19may18a.b/wy18s04.d
Data file Sample Info. Line: 001RS;1053376;1;0;;JCV90;;;wy18b01;
Date, time and analyst ID of latest file update: 28-May-2019 14:49 lcp00895

Injection date and time: **19-MAY-2019 00:28**
Instrument ID: **HP09137.i** Batch: **W191381AA**

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.741(-0.003)	595	65	162632 (-14)	250.00	
66) Fluorobenzene	5.032(0.000)	1309	96	947368 (-8)	50.00	
101) Chlorobenzene-d5	8.161(0.000)	2284	117	724356 (-7)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041(0.000)	2870	152	373316 (-16)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.358(0.001)	113	212864	48.500	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.689(0.001)	102	59919	51.332	103%		80 - 120
84) Toluene-d8	(3)	6.698(0.000)	98	915972	50.464	101%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162(0.000)	95	314223	43.273	87%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)	2.324(0.006)	58	1130	1.986	1.99		J	0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)			Not Detected					0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Linda C. Pape on 05/28/2019 at 14:53. Target 3.5 esignature user ID: lcp00895

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may18a.b/wy18s04.d Injection date and time: **19-MAY-2019 00:28**
Data file Sample Info. Line: 001RS;1053376;1;0;;JCV90;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:49 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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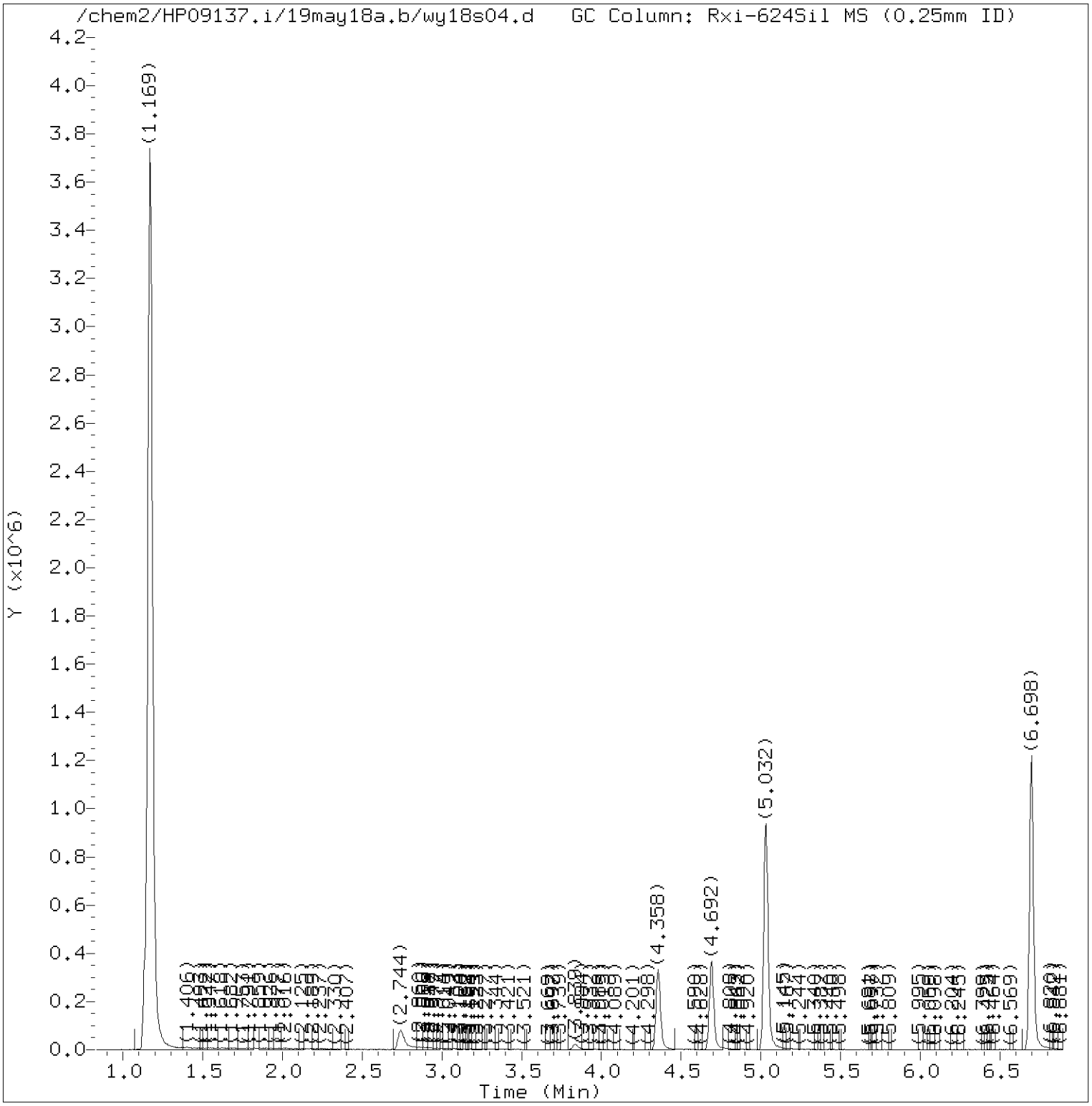
Total number of targets = 24

Digitally signed by Linda C. Pape on 05/28/2019 at 14:53. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 15:40. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

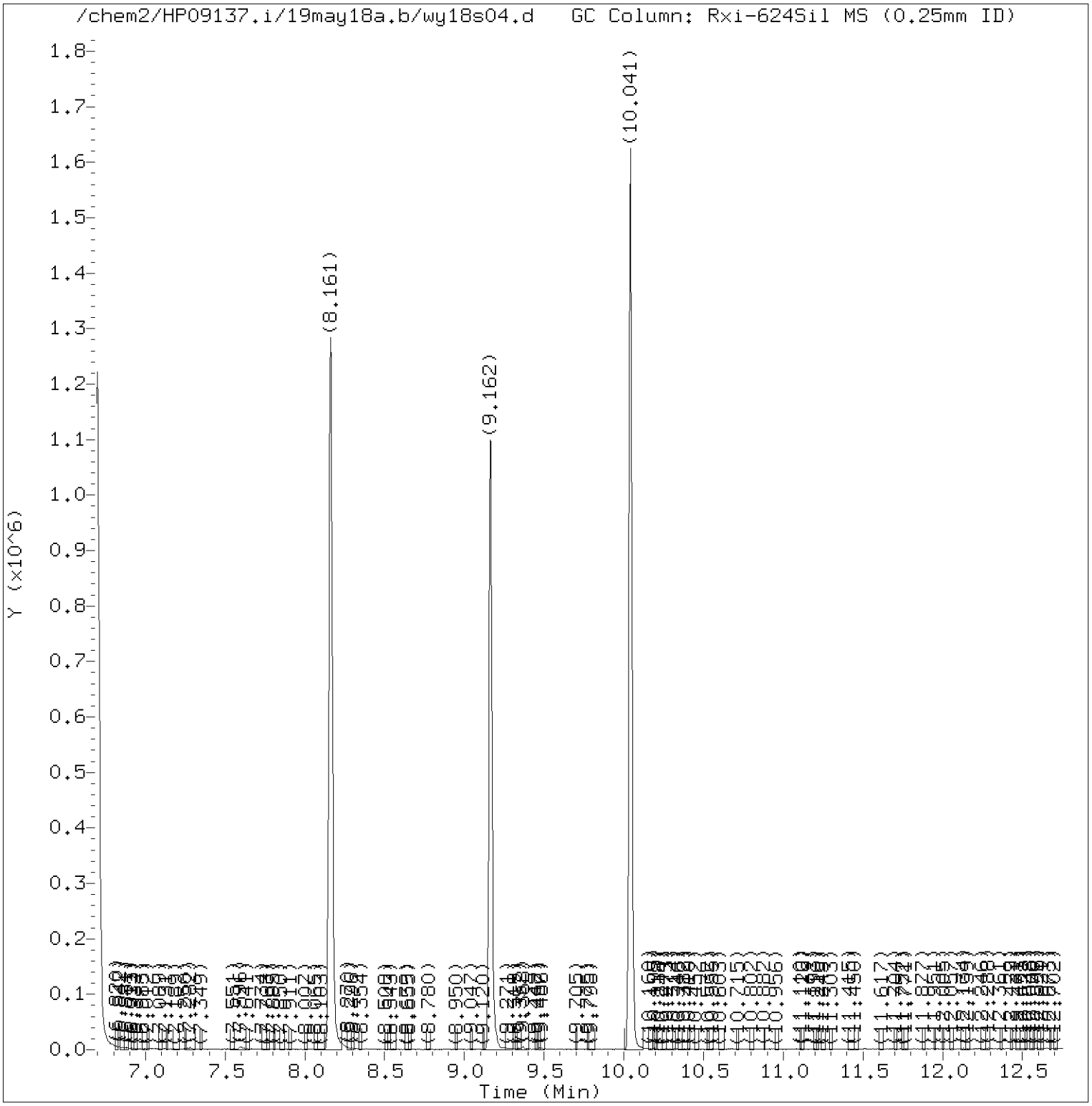
Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s04.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 00:28 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:49 lcp00895

Sample Name: 001RS Lab Sample ID: 1053376

Digitally signed by Linda C. Pape
on 05/28/2019 at 14:53.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s04.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 00:28 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:49 lcp00895

Sample Name: 001RS Lab Sample ID: 1053376

Digitally signed by Linda C. Pape
on 05/28/2019 at 14:53.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s04.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 00:28 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:49 lcp00895

Sample Name: 001RS Lab Sample ID: 1053376

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
18) Acetone	(1)	2.324	58	1130	1.986
29)*t-Butyl alcohol-d10	(1)	2.741	65	162632	250.000
52)$Dibromofluoromethane	(2)	4.358	113	212864	48.500
57)$1,2-Dichloroethane-d4	(2)	4.689	102	59919	51.332
66)*Fluorobenzene	(2)	5.032	96	947368	50.000
84)$Toluene-d8	(3)	6.698	98	915972	50.464
101)*Chlorobenzene-d5	(3)	8.161	117	724356	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	314223	43.273
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	373316	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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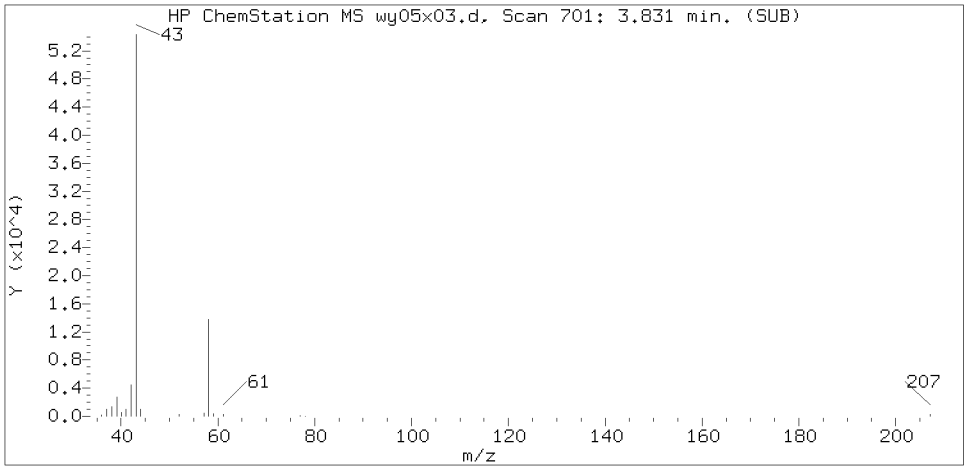
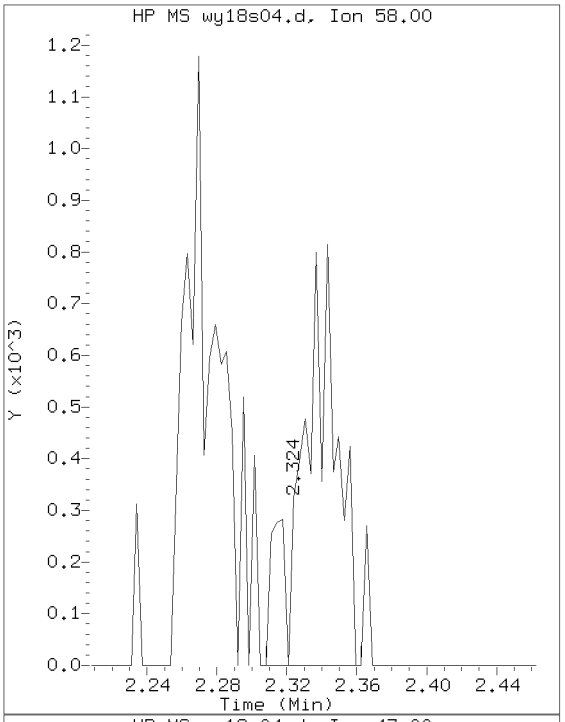
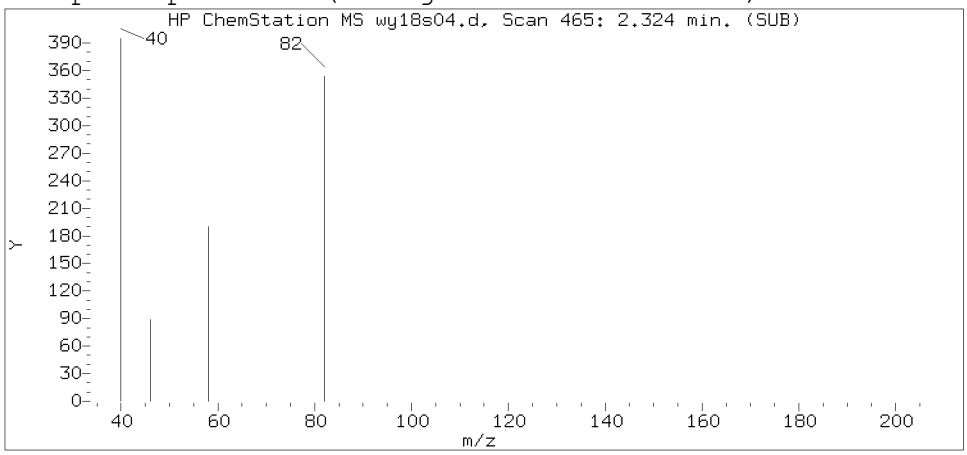
on 05/28/2019 at 14:53.
Target 3.5 esignature user ID: lcp00895

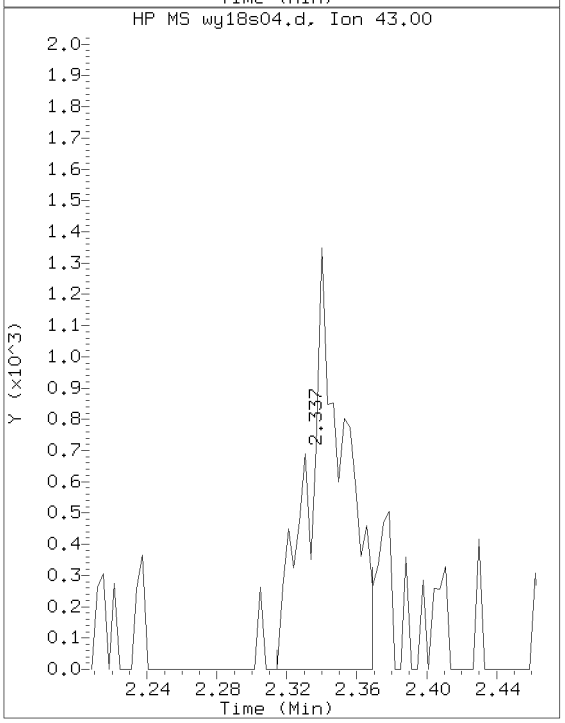
Reference Standard Spectrum for Acetone



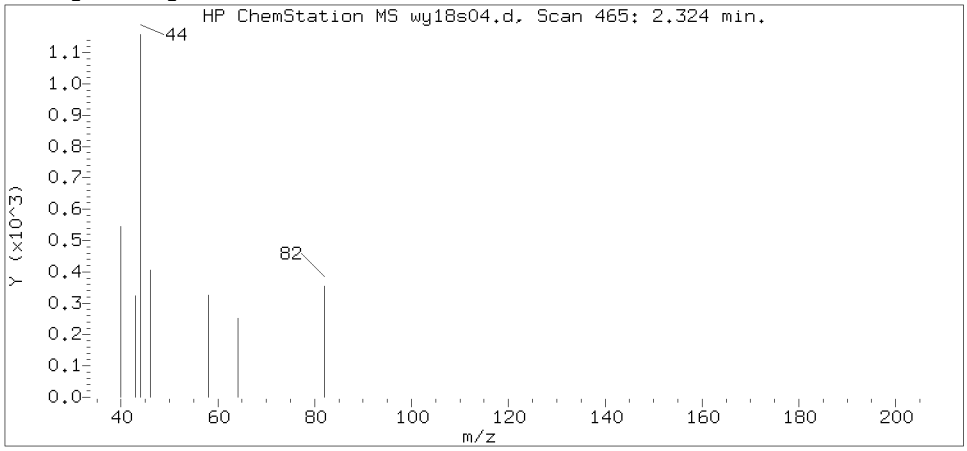


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09137.i/19may18a.b/wy18s04.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 00:28 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:49 lcp00895

Sample Name: 001RS Lab Sample ID: 1053376

Compound Number	: 18
Compound Name	: Acetone
Scan Number	: 465
Retention Time (minutes)	: 2.324
Relative Retention Time	: 0.00685
Quant Ion	: 58.00
Area (flag)	: 1130
On-Column Amount (ng)	: 1.9863

Digitally signed by Linda C. Pape on 05/28/2019 at 14:53.
Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

002RS

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053377

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may19a.b/wy19s03.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.6	J
156-59-2	cis-1,2-Dichloroethene	1	J
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	2	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	8	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Data file: /chem2/HP09137.i/19may19a.b/wy19s03.d Injection date and time: **19-MAY-2019 13:55**
Data file Sample Info. Line: 002RS;1053377;1;0;;JCV90;;;wy19b02; Instrument ID: **HP09137.i** Batch: **W191381AB**
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may19a.b/wy19b02.d**

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 04-JUN-2019 15:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may19a.b/wy19c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:9274

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.744	(-0.010)	596	65	128737	(-32)	250.00	
66) Fluorobenzene	5.032	(0.003)	1309	96	857690	(-11)	50.00	
101) Chlorobenzene-d5	8.161	(0.000)	2284	117	666191	(-10)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041	(0.000)	2870	152	342215	(-20)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.358	(-0.001)	113	197585	49.726	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692	(-0.001)	102	53699	50.815	102%		80 - 120
84) Toluene-d8	(3)	6.698	(0.000)	98	831833	49.830	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.000)	95	285756	42.788	86%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	3.344	(-0.000)	63	4453	0.599	0.60		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	3.887	(0.000)	96	4451	0.966	0.97		J	0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	4.394	(-0.002)	97	9842	1.875	1.88			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	5.408	(-0.000)	95	36409	8.363	8.36			0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)	7.362	(0.000)	166	6537	1.498	1.50			0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Kevin A. Sposito on 06/07/2019 at 15:29. Target 3.5 esignature user ID: kas02648

Data file: /chem2/HP09137.i/19may19a.b/wy19s03.d Injection date and time: **19-MAY-2019 13:55**
Data file Sample Info. Line: 002RS;1053377;1;0;;JCV90;;;wy19b02; Instrument ID: **HP09137.i** Batch: **W191381AB**
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may19a.b/wy19b02.d**

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 04-JUN-2019 15:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may19a.b/wy19c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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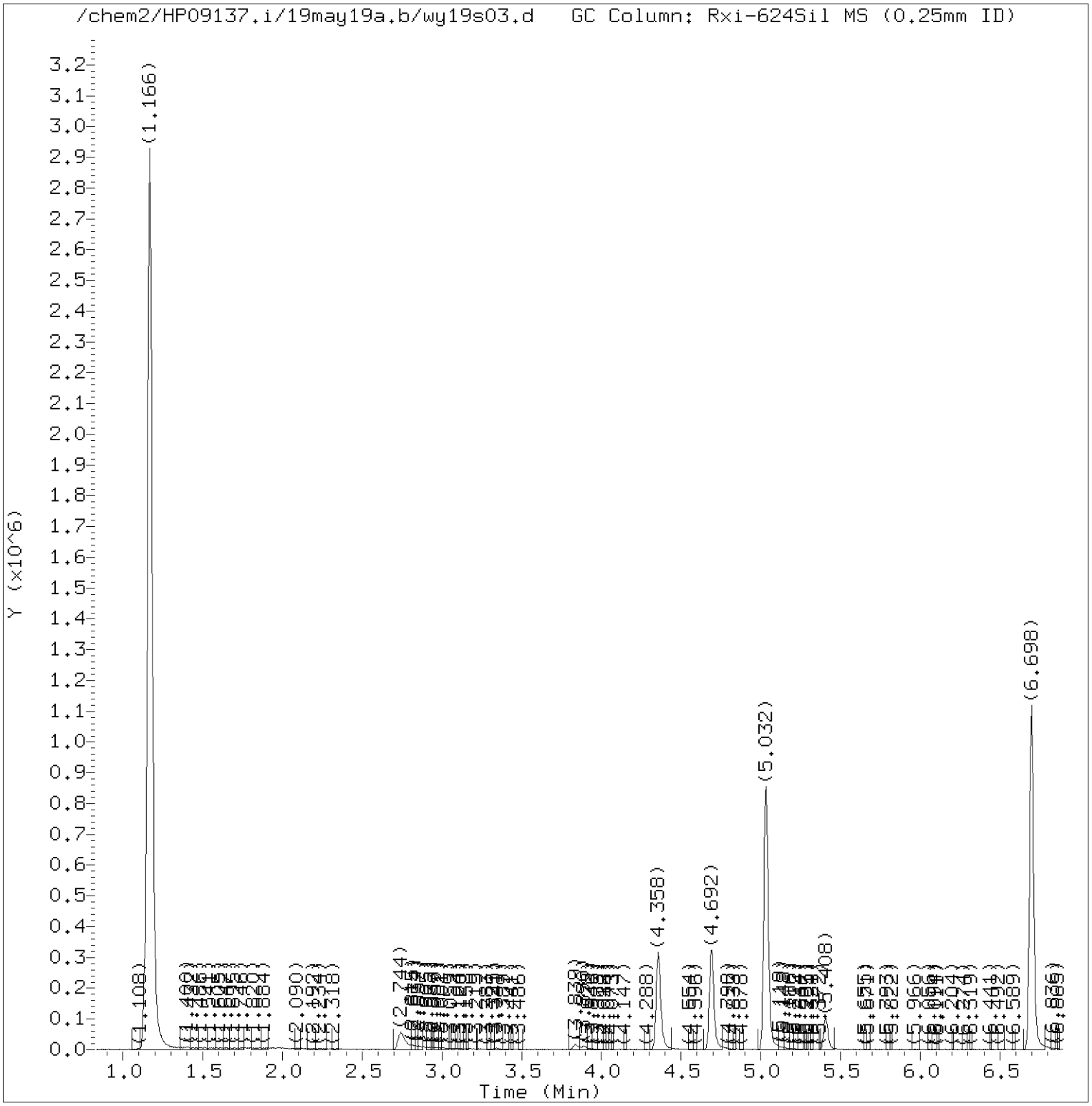
Total number of targets = 24

Digitally signed by Kevin A. Sposito on 06/07/2019 at 15:29. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Roy R. Mellott on 06/12/2019 at 17:05. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

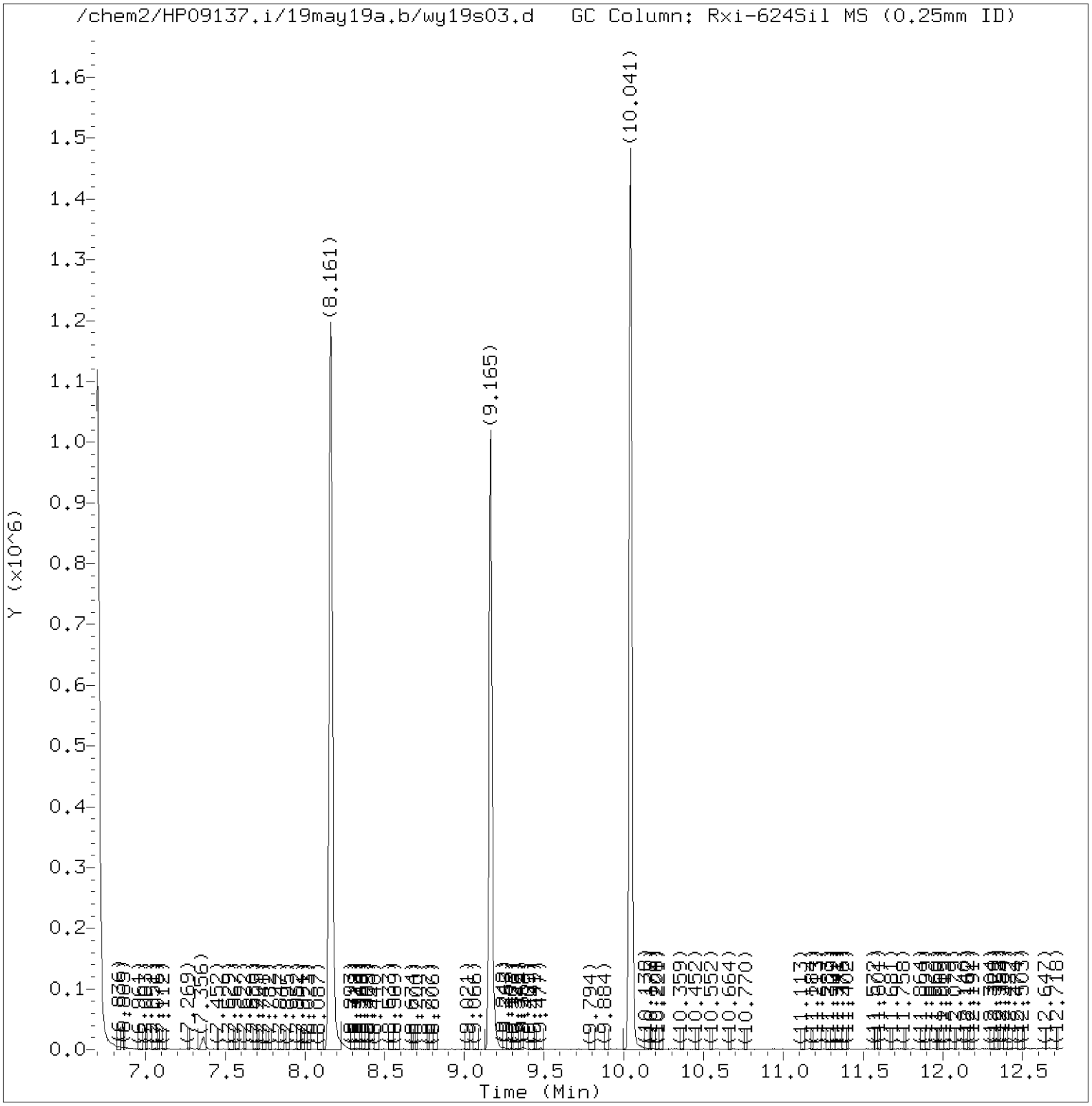
Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19s03.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:55 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Sample Name: 002RS Lab Sample ID: 1053377

Digitally signed by Kevin A. Sposito
on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19s03.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:55 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Sample Name: 002RS Lab Sample ID: 1053377

Digitally signed by Kevin A. Sposito
on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19s03.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:55 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Sample Name: 002RS Lab Sample ID: 1053377

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.744	65	128737	250.000
36) 1,1-Dichloroethane	(2)	3.344	63	4453	0.599
42) cis-1,2-Dichloroethene	(2)	3.887	96	4451	0.966
52)$Dibromofluoromethane	(2)	4.358	113	197585	49.726
53) 1,1,1-Trichloroethane	(2)	4.394	97	9842	1.875
57)$1,2-Dichloroethane-d4	(2)	4.692	102	53699	50.815
66)*Fluorobenzene	(2)	5.032	96	857690	50.000
71) Trichloroethene	(2)	5.408	95	36409	8.363
84)$Toluene-d8	(3)	6.698	98	831833	49.830
94) Tetrachloroethene	(3)	7.362	166	6537	1.498
101)*Chlorobenzene-d5	(3)	8.161	117	666191	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	285756	42.788
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	342215	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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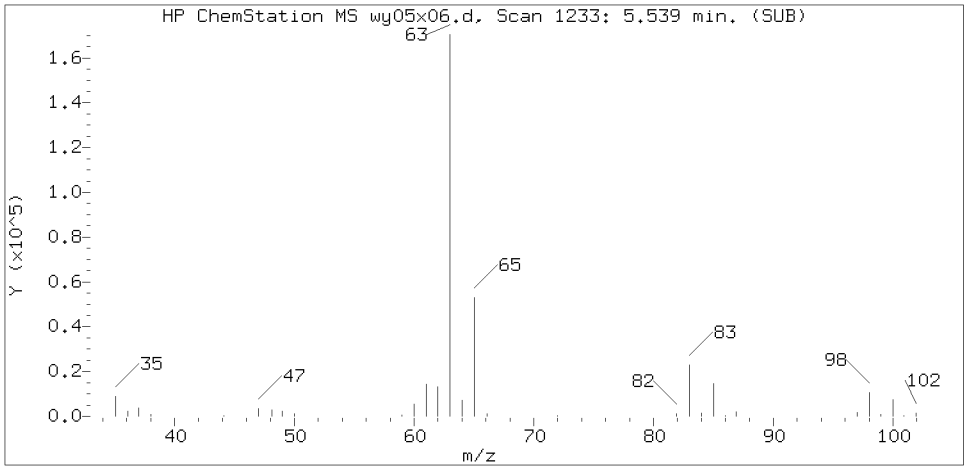
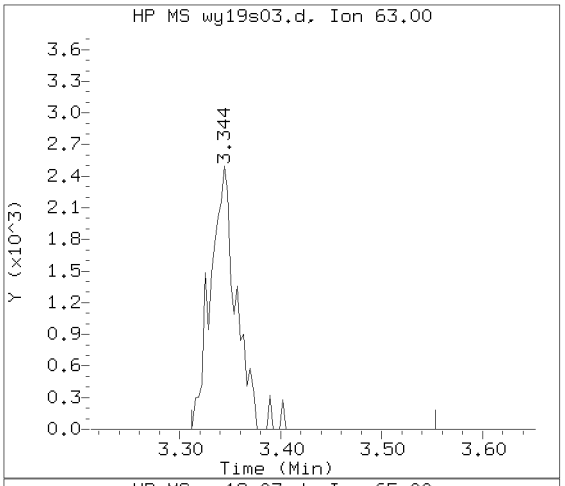
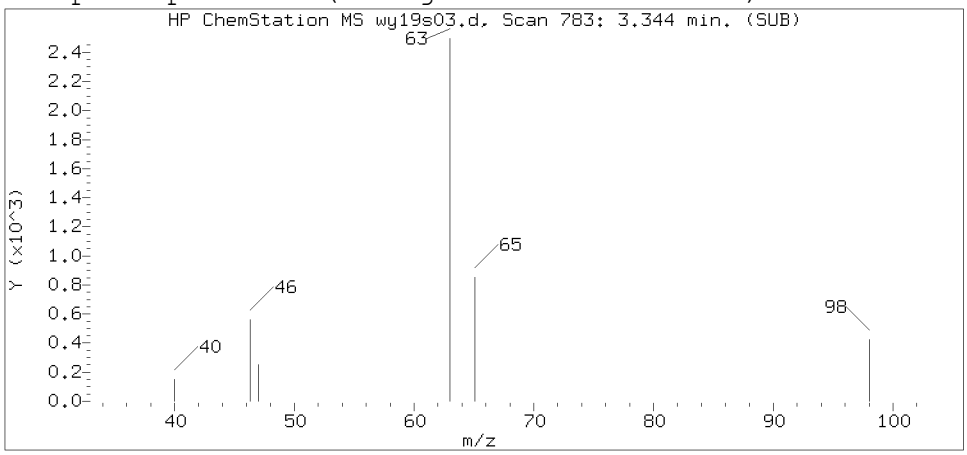
on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648

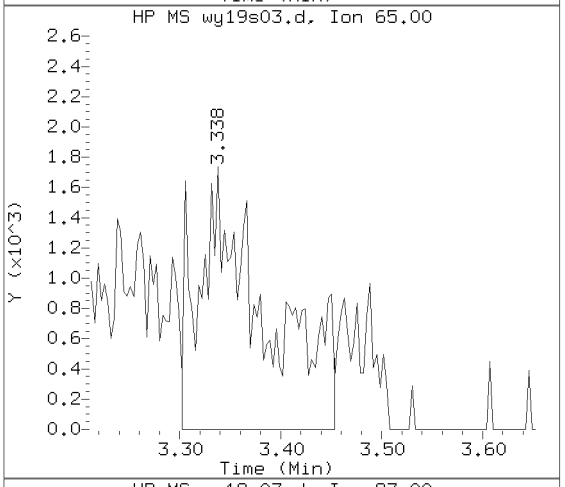
Reference Standard Spectrum for 1,1-Dichloroethane



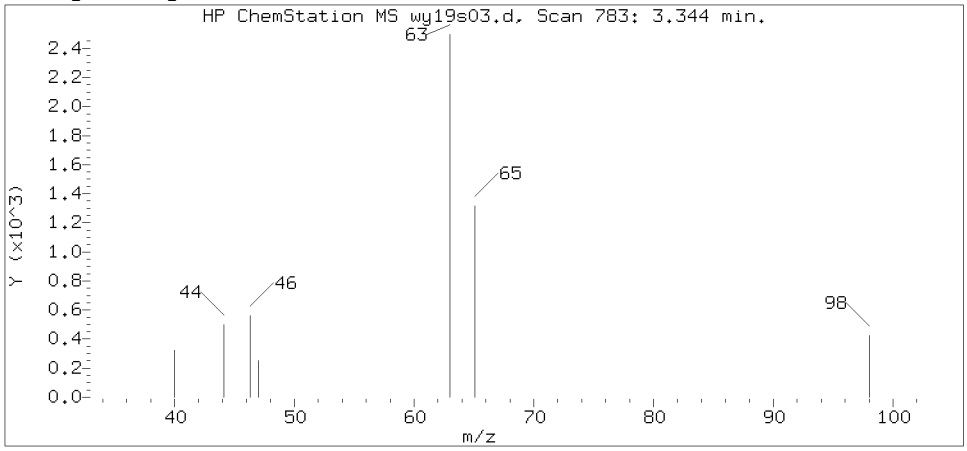


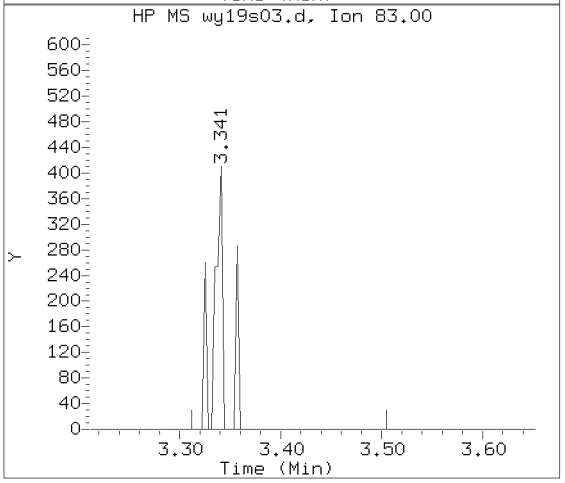
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP09137.i/19may19a.b/wy19s03.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:55 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Sample Name: 002RS Lab Sample ID: 1053377

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 783
Retention Time (minutes): 3.344
Relative Retention Time :-0.00042
Quant Ion : 63.00
Area (flag) : 4453
On-Column Amount (ng) : 0.5990

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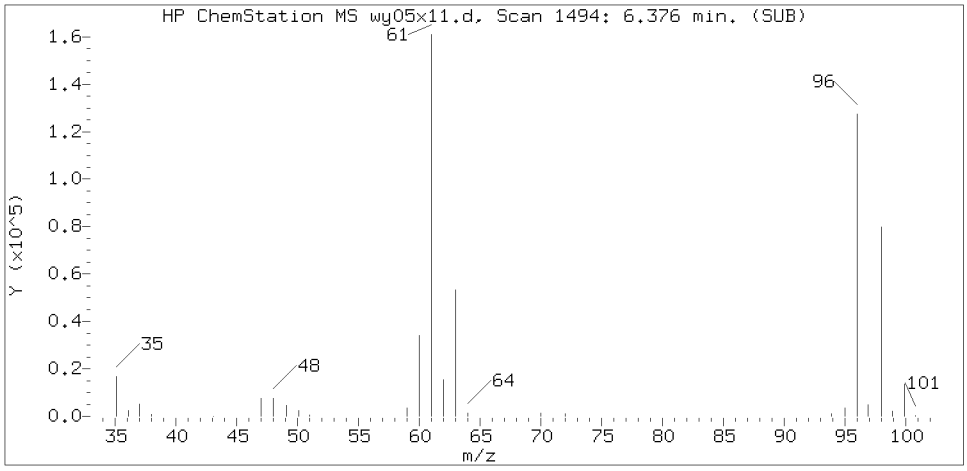
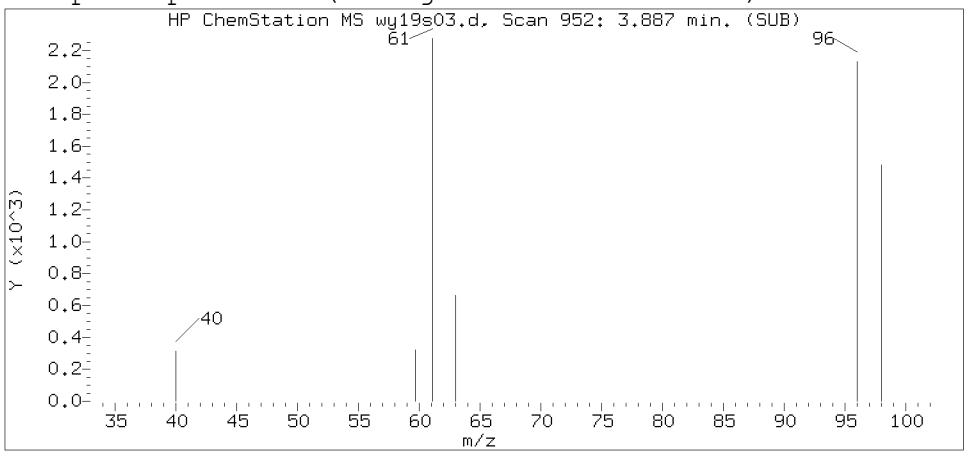
Target 3.5 esignature user ID: kas02648

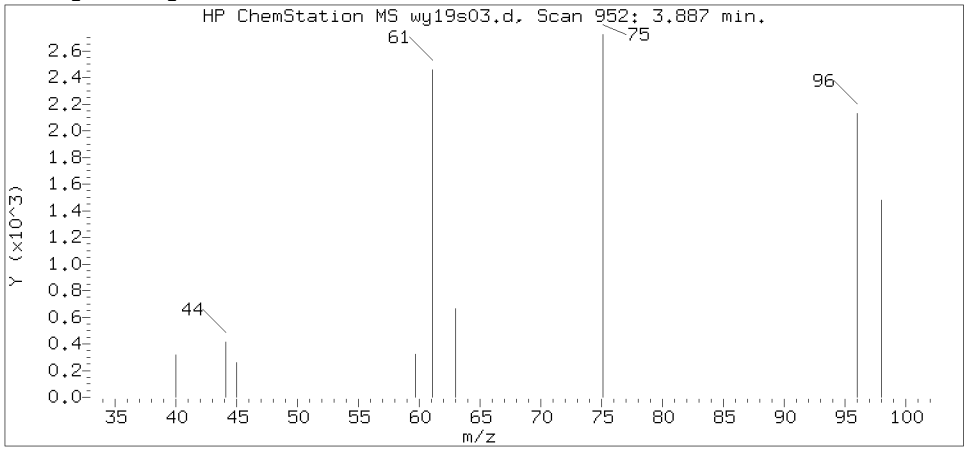
Reference Standard Spectrum for cis-1,2-Dichloroethene

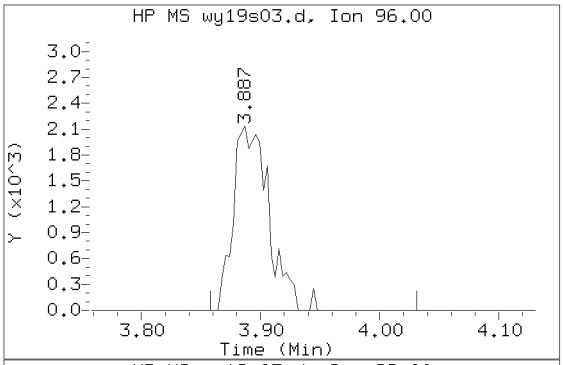


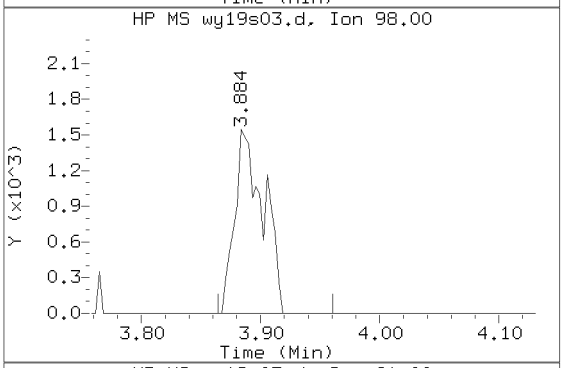
Sample Spectrum (Background Subtracted)

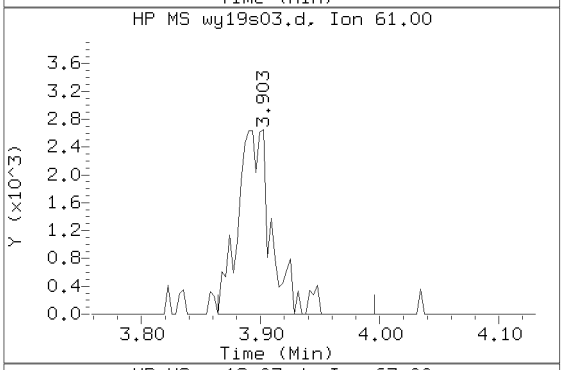


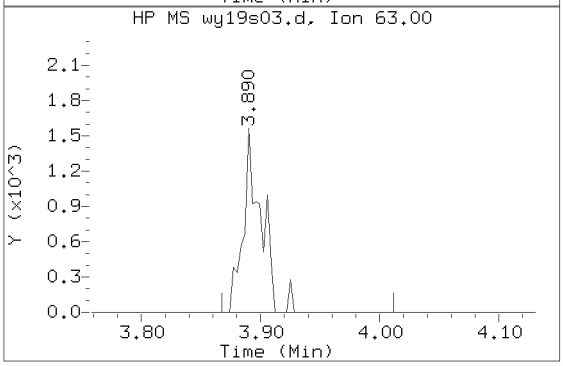
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/19may19a.b/wy19s03.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:55 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Sample Name: 002RS Lab Sample ID: 1053377

Compound Number	: 42
Compound Name	: cis-1,2-Dichloroethene
Scan Number	: 952
Retention Time (minutes)	: 3.887
Relative Retention Time	: 0.00078
Quant Ion	: 96.00
Area (flag)	: 4451
On-Column Amount (ng)	: 0.9664

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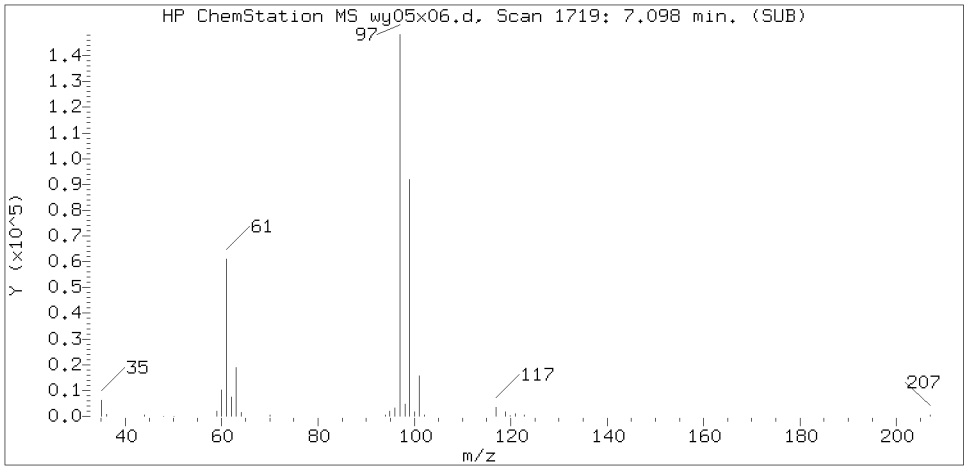
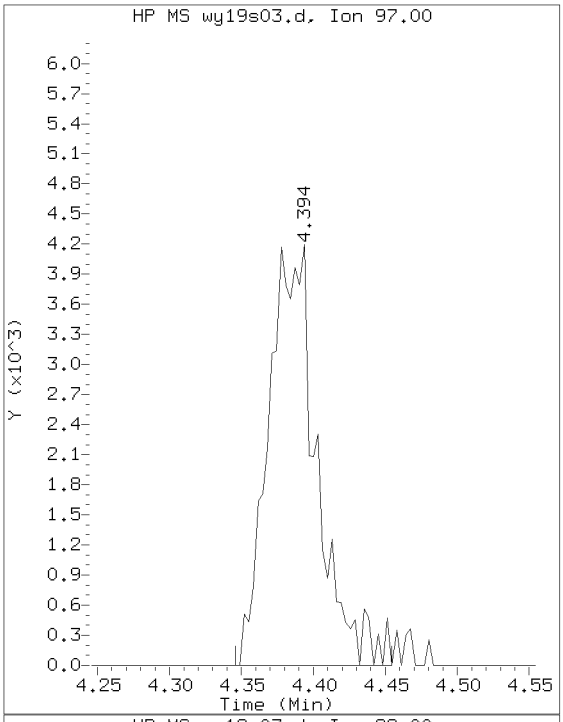
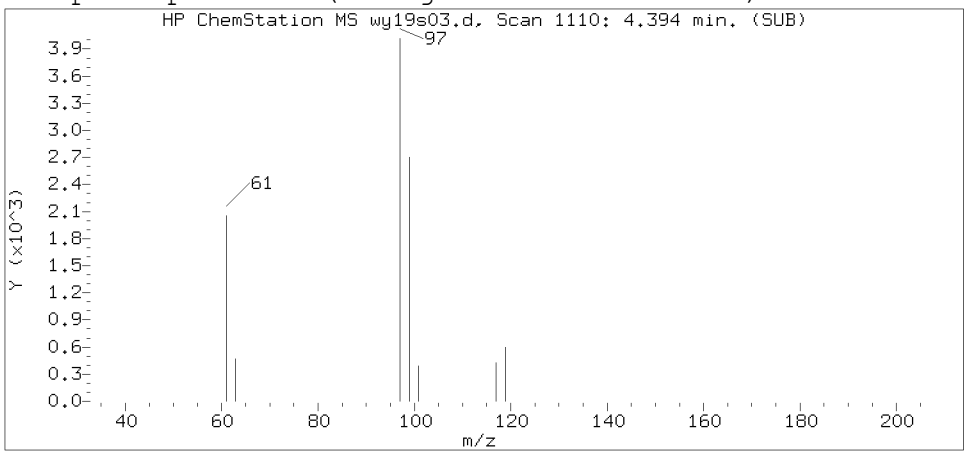
Target 3.5 esignature user ID: kas02648

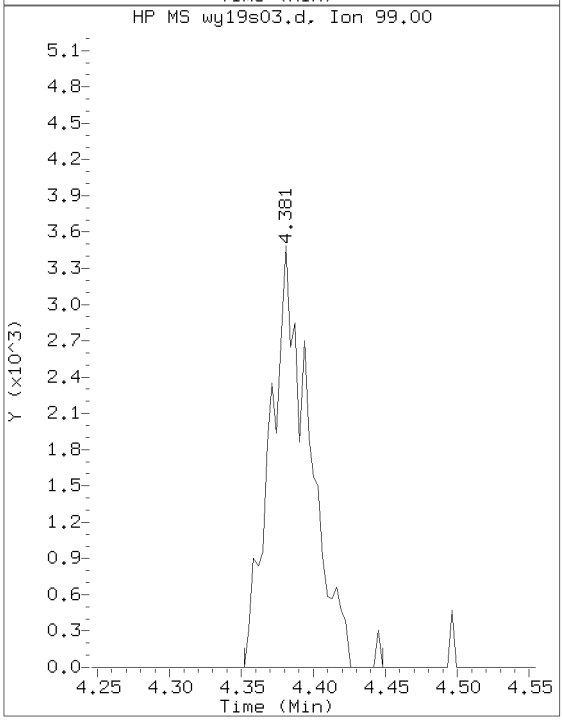
Reference Standard Spectrum for 1,1,1-Trichloroethane



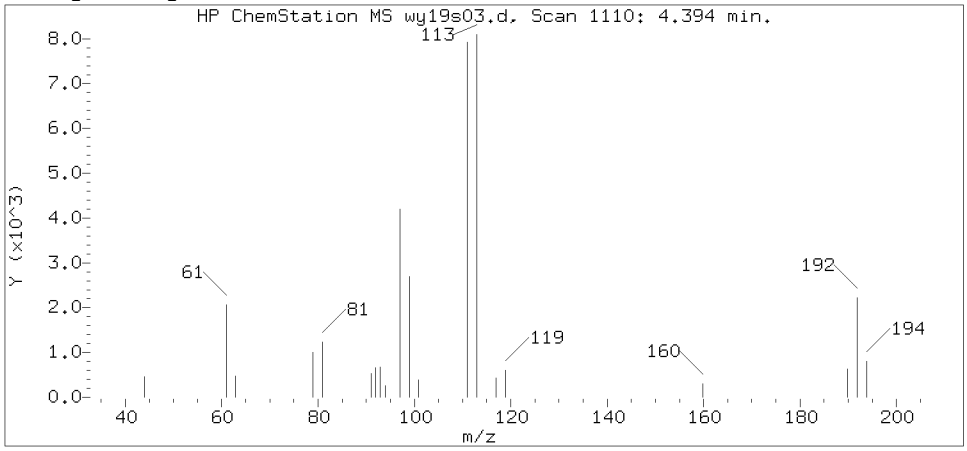


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09137.i/19may19a.b/wy19s03.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:55 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Sample Name: 002RS Lab Sample ID: 1053377

Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 1110
Retention Time (minutes): 4.394
Relative Retention Time :-0.00247
Quant Ion : 97.00
Area (flag) : 9842
On-Column Amount (ng) : 1.8753

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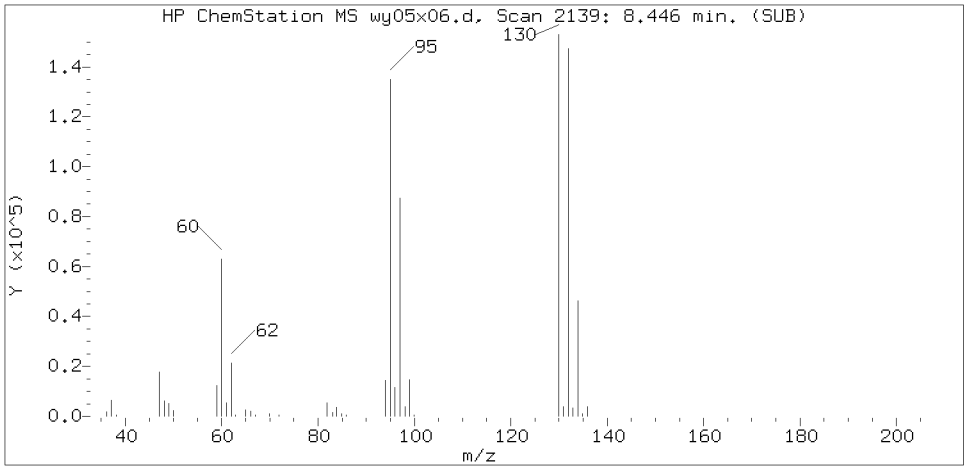
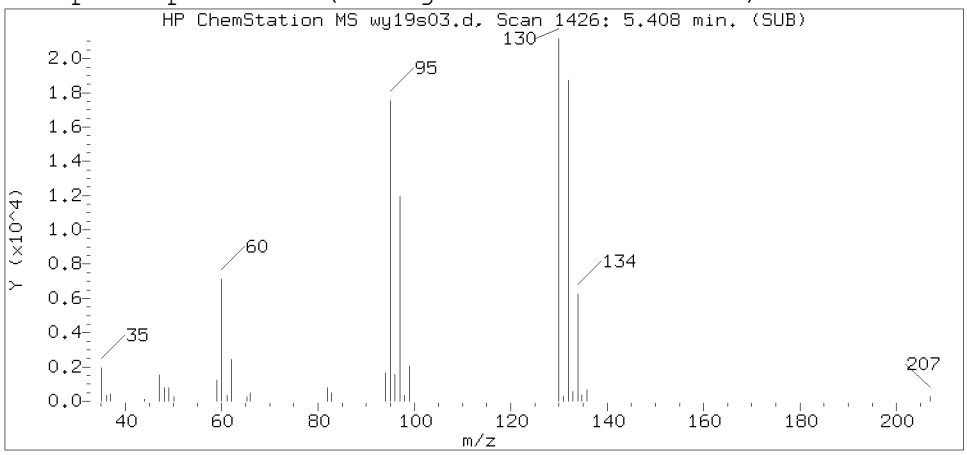
Target 3.5 esignature user ID: kas02648

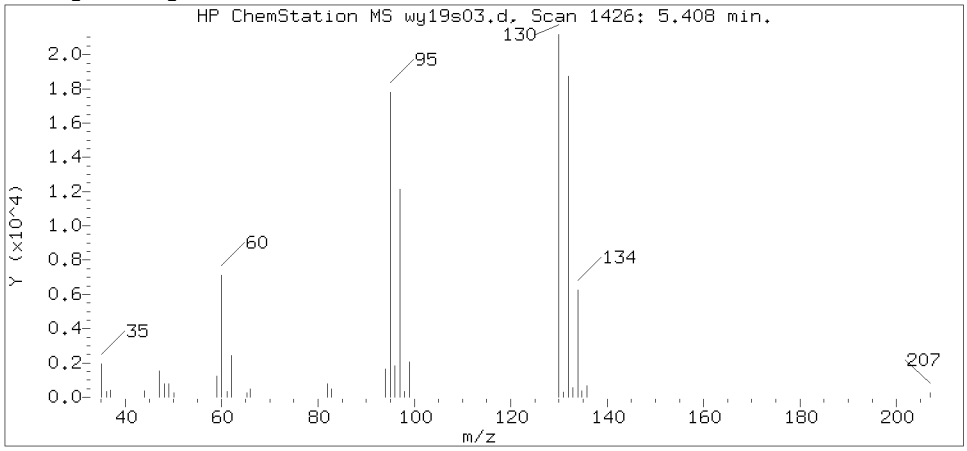
Reference Standard Spectrum for Trichloroethene

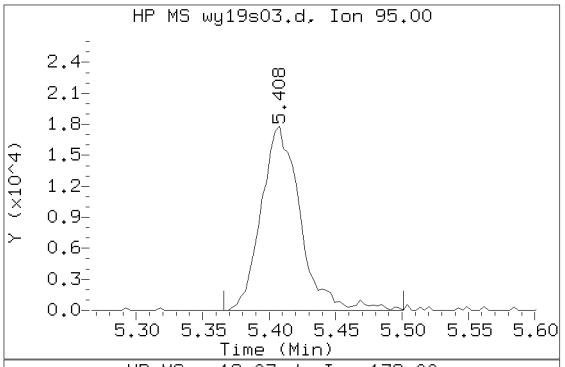


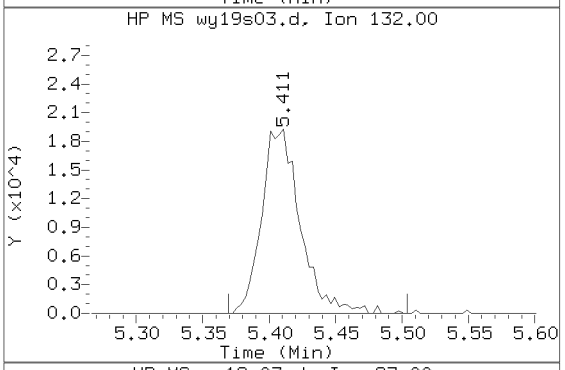
Sample Spectrum (Background Subtracted)

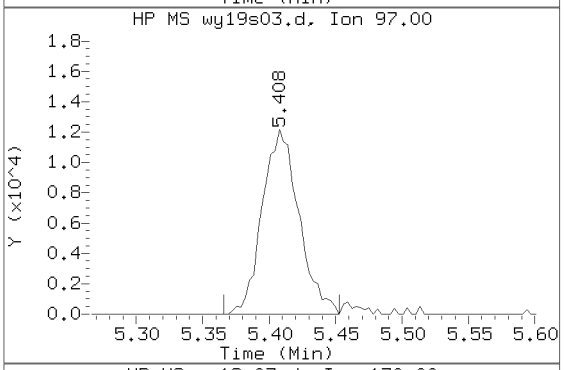


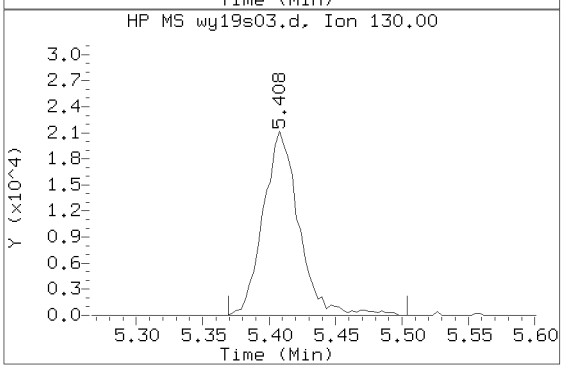
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/19may19a.b/wy19s03.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:55 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Sample Name: 002RS Lab Sample ID: 1053377

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 1426
Retention Time (minutes)	: 5.408
Relative Retention Time	:-0.00069
Quant Ion	: 95.00
Area (flag)	: 36409
On-Column Amount (ng)	: 8.3634

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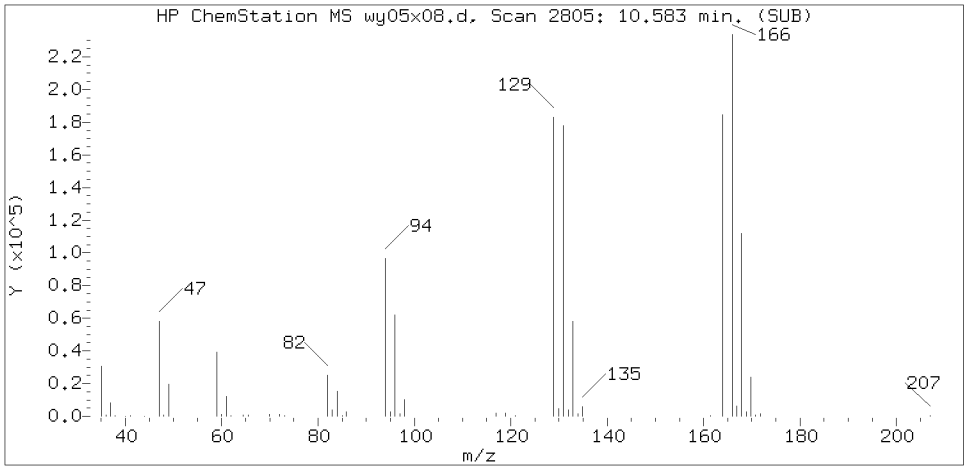
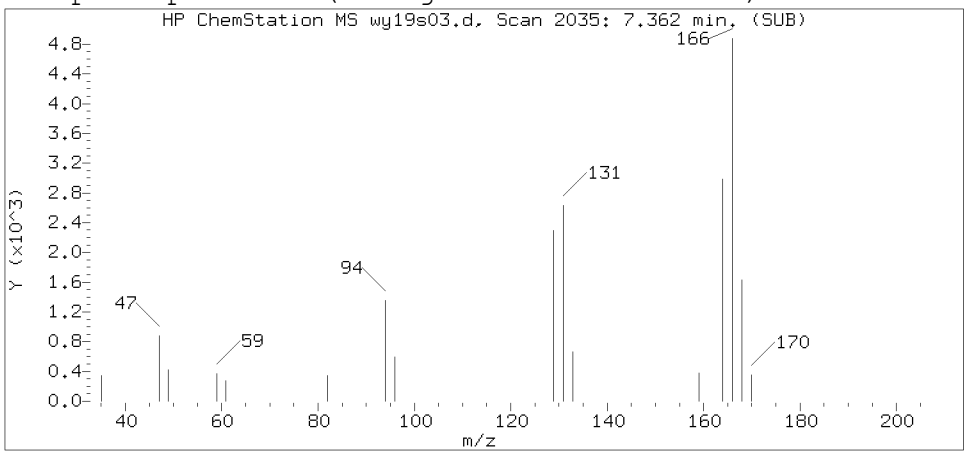
Target 3.5 esignature user ID: kas02648

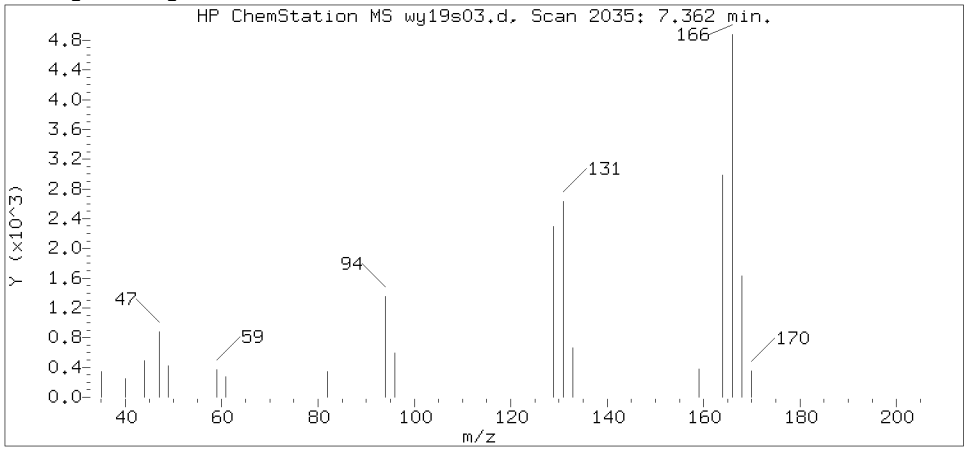
Reference Standard Spectrum for Tetrachloroethene

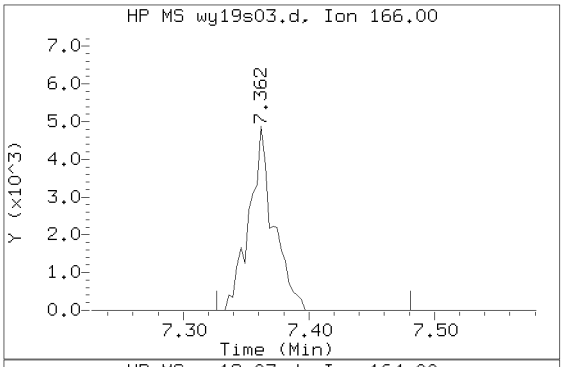


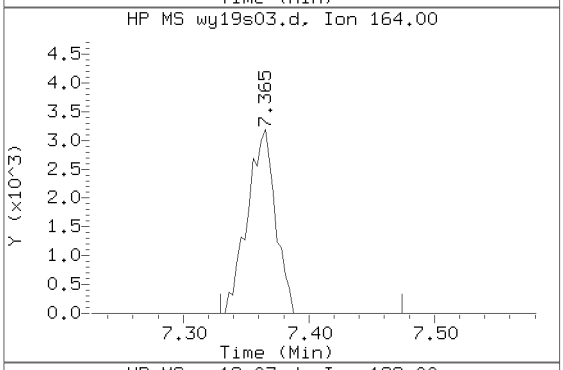
Sample Spectrum (Background Subtracted)

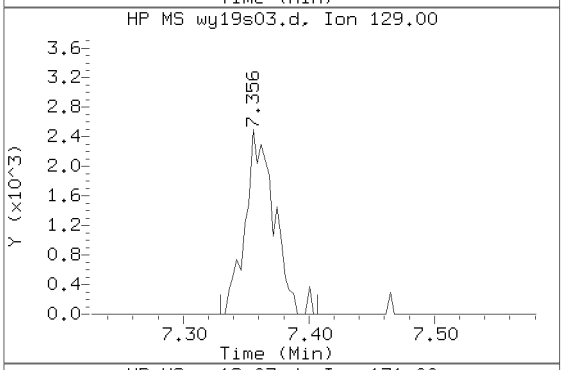


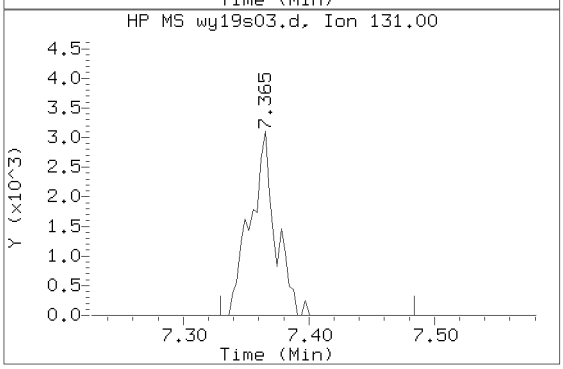
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/19may19a.b/wy19s03.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:55 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Sample Name: 002RS Lab Sample ID: 1053377

Compound Number : 94
Compound Name : Tetrachloroethene
Scan Number : 2035
Retention Time (minutes): 7.362
Relative Retention Time : 0.00000
Quant Ion : 166.00
Area (flag) : 6537
On-Column Amount (ng) : 1.4983

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Target 3.5 esignature user ID: kas02648

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
003RS

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053378

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may19a.b/wy19s04.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.7	J
156-59-2	cis-1,2-Dichloroethene	0.2	J
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	3	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	6	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	0.3	J
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

^

Data file: /chem2/HP09137.i/19may19a.b/wy19s04.d Injection date and time: **19-MAY-2019 14:18**
Data file Sample Info. Line: 003RS;1053378;1;0;;JCV90;;;wy19b02; Instrument ID: **HP09137.i** Batch: **W191381AB**
Date, time and analyst ID of latest file update: 19-May-2019 14:34 Automation

Blank Data file reference: **/chem2/HP09137.i/19may19a.b/wy19b02.d**

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: **18116**
Calibration date and time (Last Method Edit): 19-MAY-2019 12:48
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may19a.b/wy19c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:9274

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.741	(-0.006)	595	65	135799	(-28)	250.00	
66) Fluorobenzene	5.032	(0.003)	1309	96	848569	(-12)	50.00	
101) Chlorobenzene-d5	8.164	(-0.003)	2285	117	666891	(-10)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041	(0.000)	2870	152	338640	(-21)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.358	(-0.001)	113	197162	50.152	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692	(-0.001)	102	52797	50.498	101%		80 - 120
84) Toluene-d8	(3)	6.701	(0.000)	98	833083	49.852	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.165	(0.000)	95	283816	42.453	85%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
9) Chloroethane	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	2.298	(0.001)	96	885	0.237	0.24		J	0.2	1
36) 1,1-Dichloroethane	(2)	3.341	(0.000)	63	4942	0.672	0.67		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	3.893	(-0.000)	96	935	0.205	0.21		J	0.2	1
53) 1,1,1-Trichloroethane	(2)	4.384	(-0.000)	97	15270	2.941	2.94			0.3	1
71) Trichloroethene	(2)	5.408	(-0.000)	95	27172	6.309	6.31			0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
94) Tetrachloroethene	(3)	7.362	(0.000)	166	1399	0.320	0.32		J	0.2	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5

Total number of targets = 12

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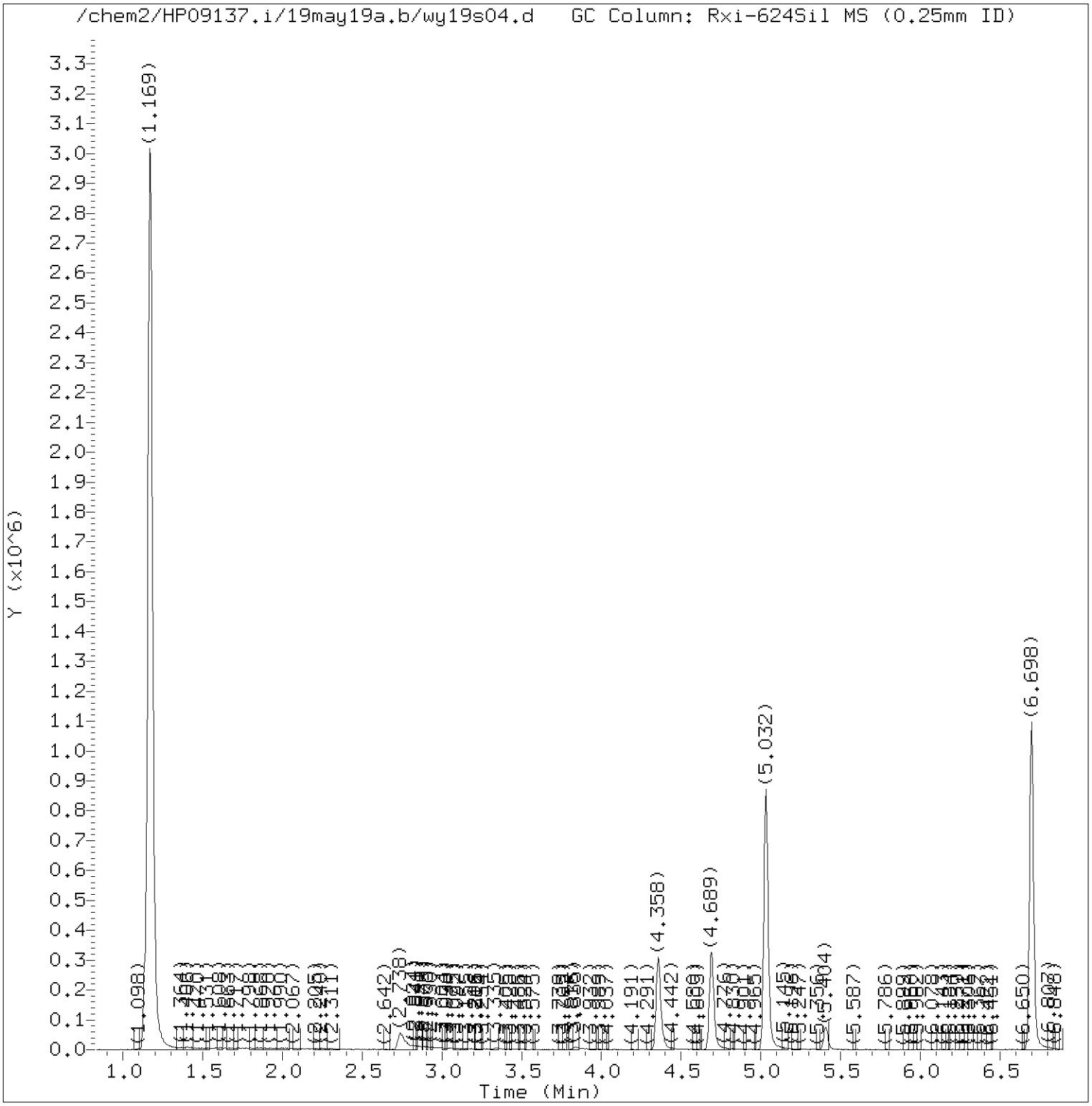
Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:25. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19s04.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 14:18 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 14:34 Automation

Sample Name: 003RS Lab Sample ID: 1053378

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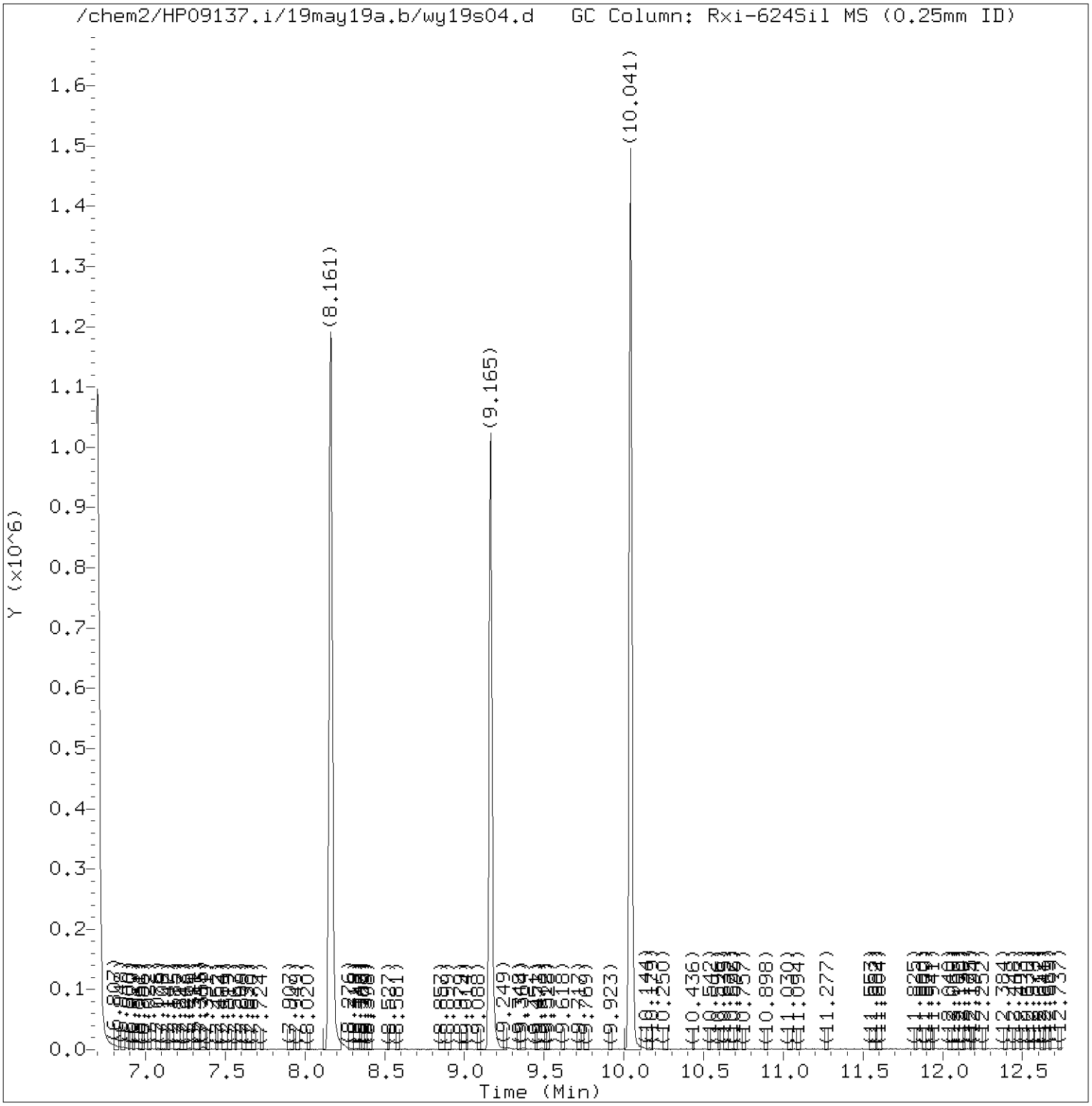
on 05/20/2019 at 12:58.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19s04.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 14:18 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 14:34 Automation

Sample Name: 003RS Lab Sample ID: 1053378

Digitally signed by Linda C. Pape
on 05/20/2019 at 12:58.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19s04.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 14:18 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 14:34 Automation

Sample Name: 003RS Lab Sample ID: 1053378

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	2.298	96	885	0.237
29)*t-Butyl alcohol-d10	(1)	2.741	65	135799	250.000
36) 1,1-Dichloroethane	(2)	3.341	63	4942	0.672
42) cis-1,2-Dichloroethene	(2)	3.893	96	935	0.205
52)$Dibromofluoromethane	(2)	4.358	113	197162	50.152
53) 1,1,1-Trichloroethane	(2)	4.384	97	15270	2.941
57)$1,2-Dichloroethane-d4	(2)	4.692	102	52797	50.498
66)*Fluorobenzene	(2)	5.032	96	848569	50.000
71) Trichloroethene	(2)	5.408	95	27172	6.309
84)$Toluene-d8	(3)	6.701	98	833083	49.852
94) Tetrachloroethene	(3)	7.362	166	1399	0.320
101)*Chlorobenzene-d5	(3)	8.164	117	666891	50.000
115)$4-Bromofluorobenzene	(3)	9.165	95	283816	42.453
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	338640	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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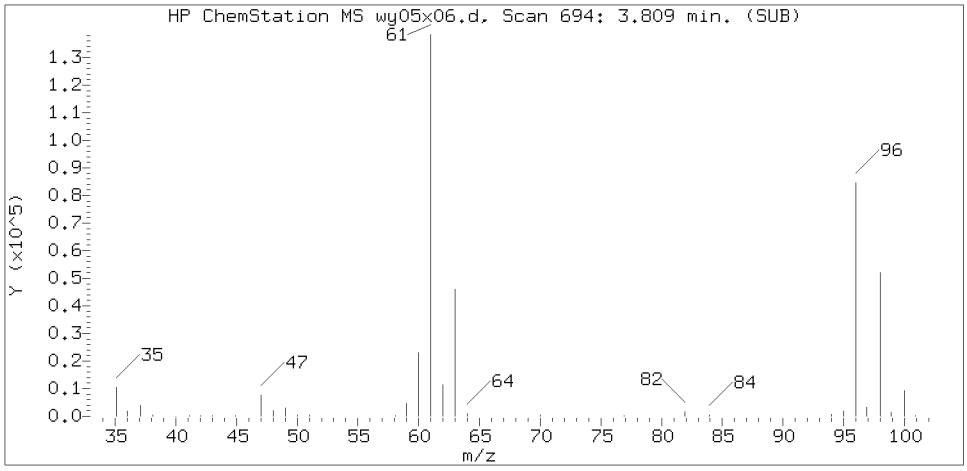
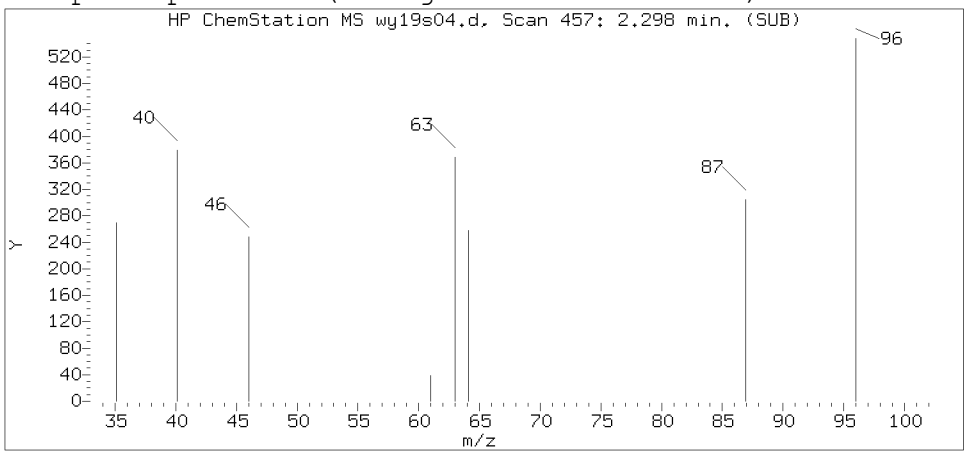
on 05/20/2019 at 12:58.
Target 3.5 esignature user ID: lcp00895

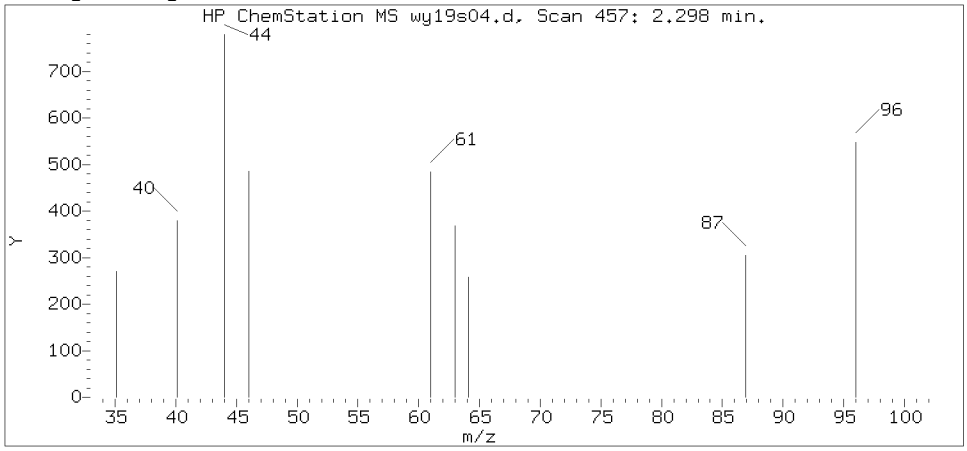
Reference Standard Spectrum for 1,1-Dichloroethene

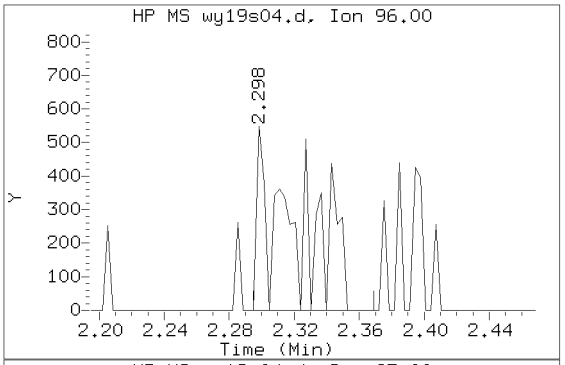


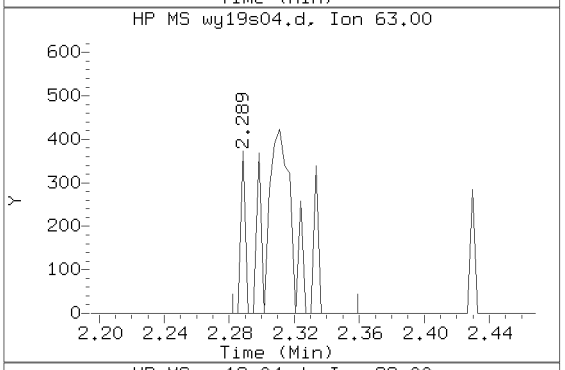
Sample Spectrum (Background Subtracted)

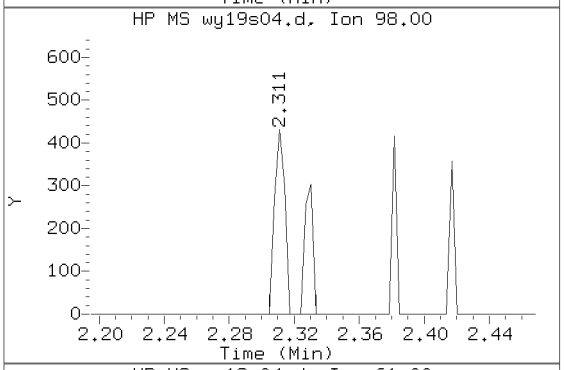


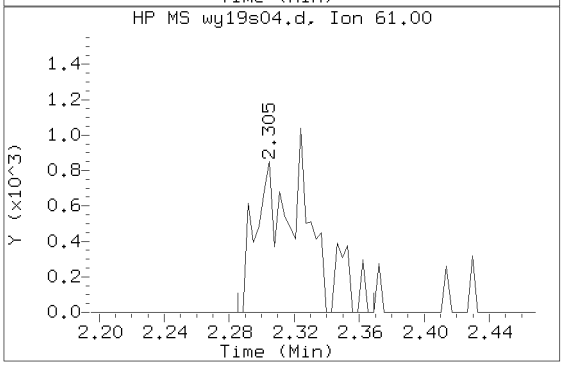
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/19may19a.b/wy19s04.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 14:18 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 14:34 Automation

Sample Name: 003RS Lab Sample ID: 1053378

Compound Number	: 17
Compound Name	: 1,1-Dichloroethene
Scan Number	: 457
Retention Time (minutes)	: 2.298
Relative Retention Time	: 0.00164
Quant Ion	: 96.00
Area (flag)	: 885
On-Column Amount (ng)	: 0.2367

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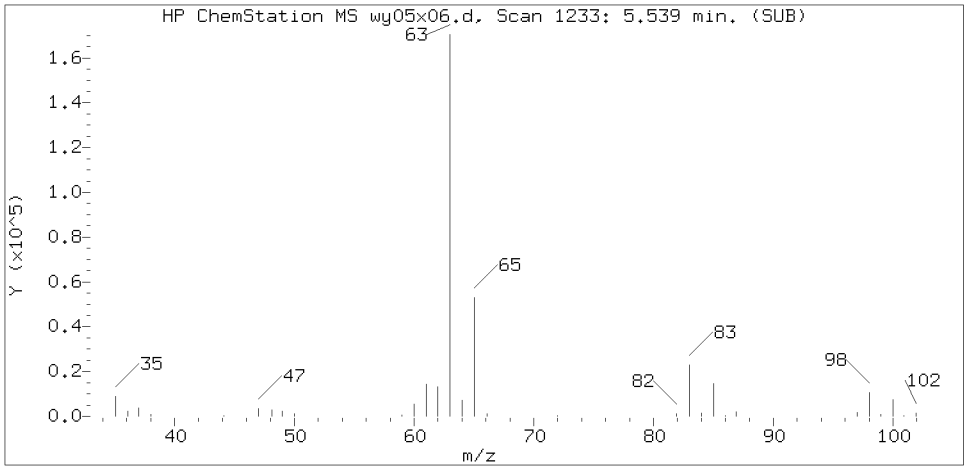
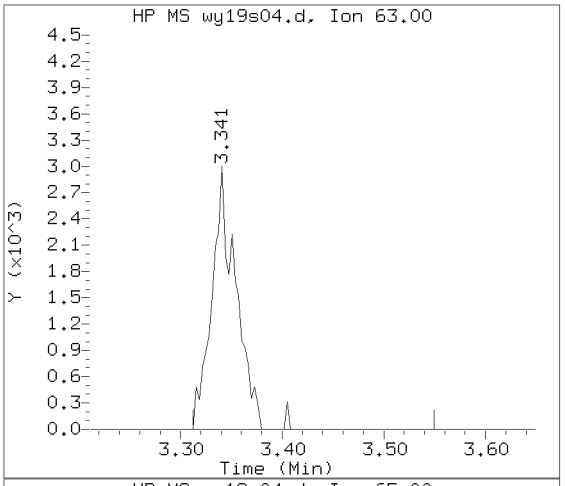
Target 3.5 esignature user ID: lcp00805

Reference Standard Spectrum for 1,1-Dichloroethane





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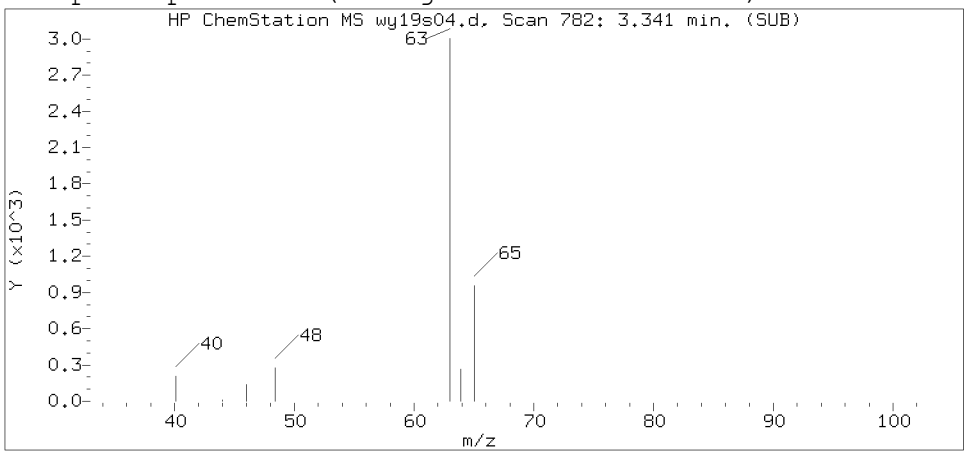
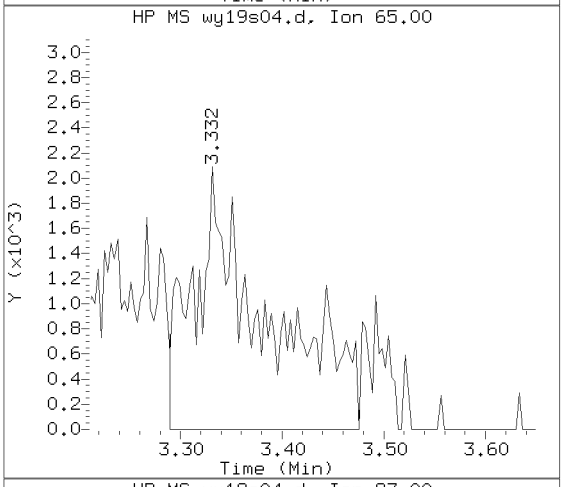
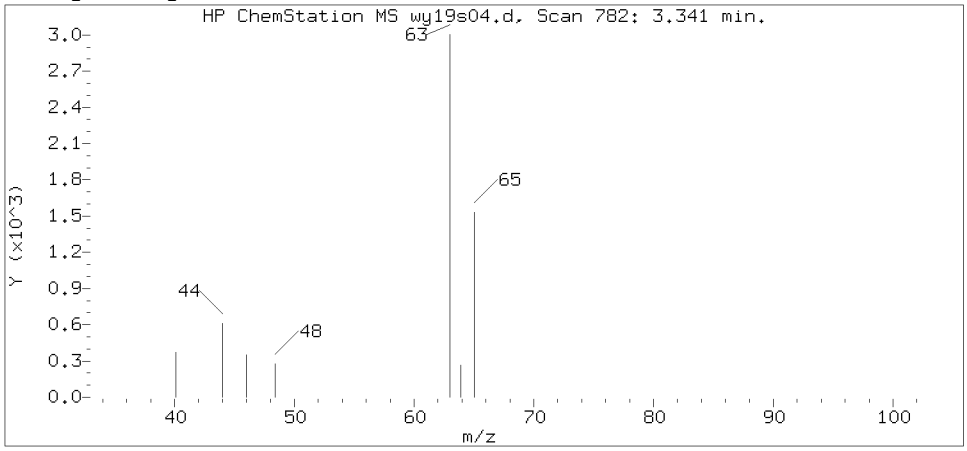
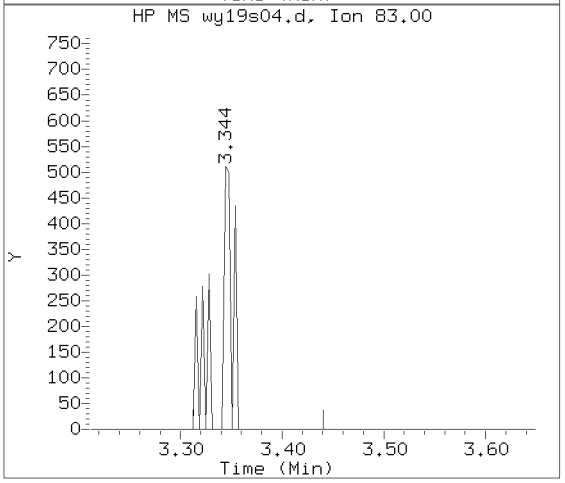




Sample Spectrum (Unaltered)





Data File: /chem2/HP09137.i/19may19a.b/wy19s04.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 14:18 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 14:34 Automation

Sample Name: 003RS Lab Sample ID: 1053378

Compound Number	: 36
Compound Name	: 1,1-Dichloroethane
Scan Number	: 782
Retention Time (minutes)	: 3.341
Relative Retention Time	: 0.00023
Quant Ion	: 63.00
Area (flag)	: 4942
On-Column Amount (ng)	: 0.6719

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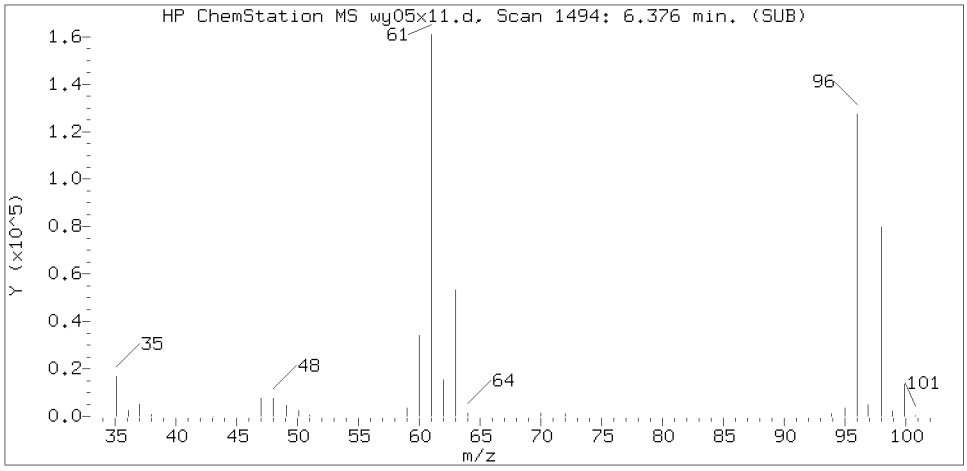
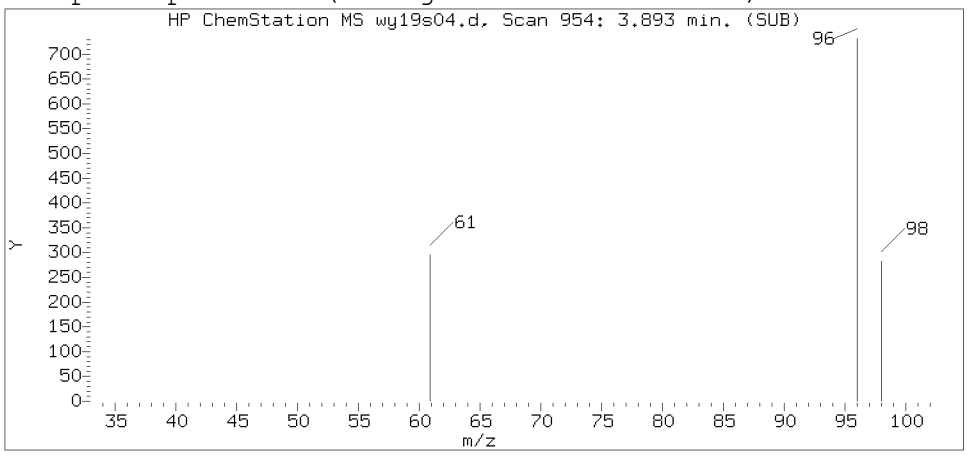
Target 3.5 esignature user ID: lcp00895

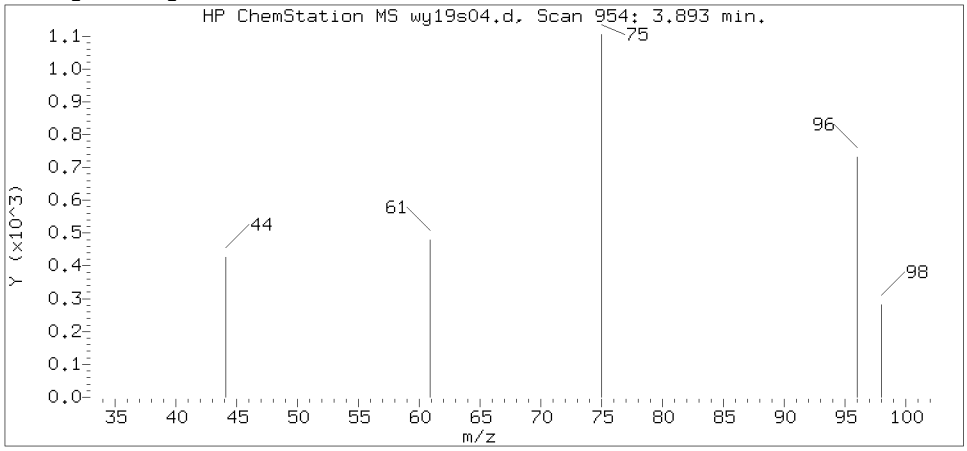
Reference Standard Spectrum for cis-1,2-Dichloroethene

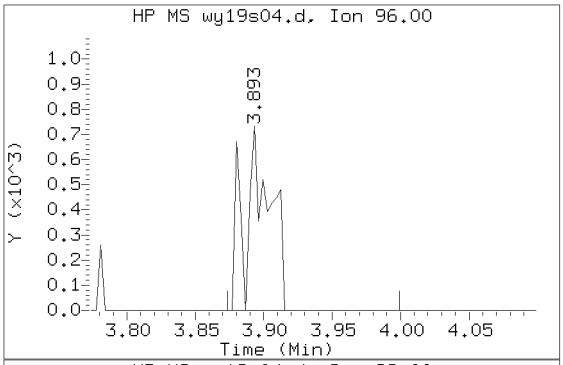


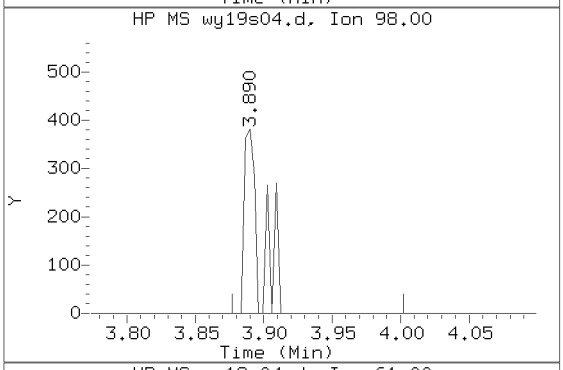
Sample Spectrum (Background Subtracted)

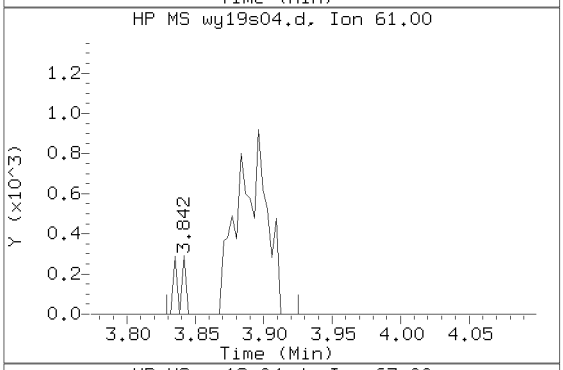


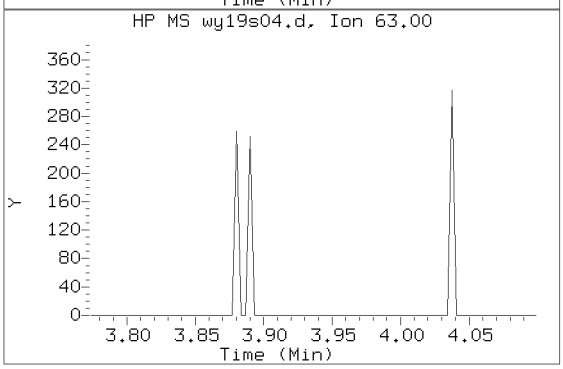
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/19may19a.b/wy19s04.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 14:18 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 14:34 Automation

Sample Name: 003RS Lab Sample ID: 1053378

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 954
Retention Time (minutes): 3.893
Relative Retention Time :-0.00048
Quant Ion : 96.00
Area (flag) : 935
On-Column Amount (ng) : 0.2052

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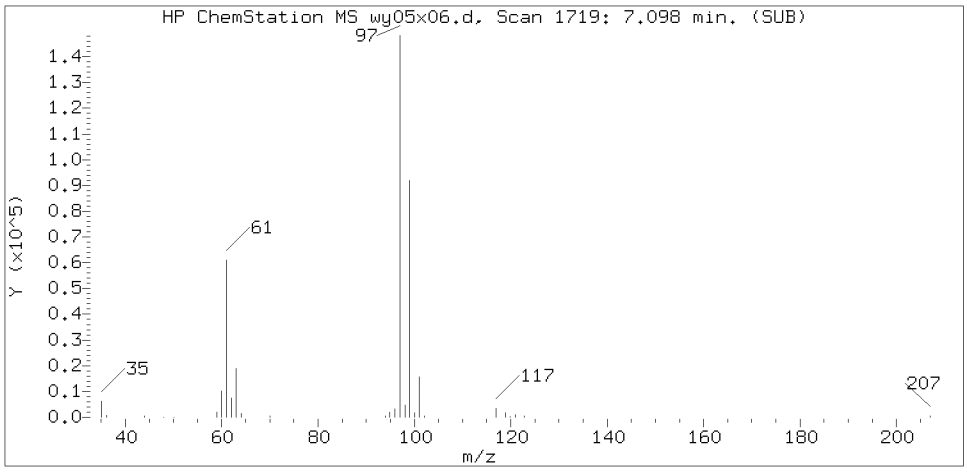
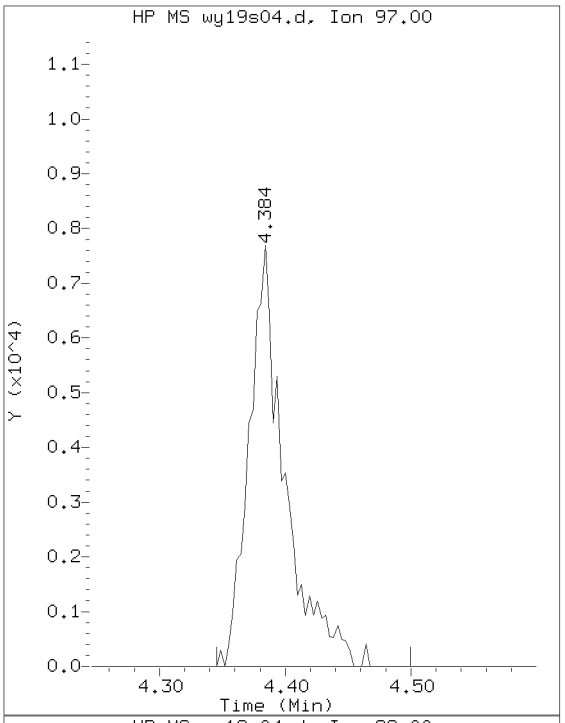
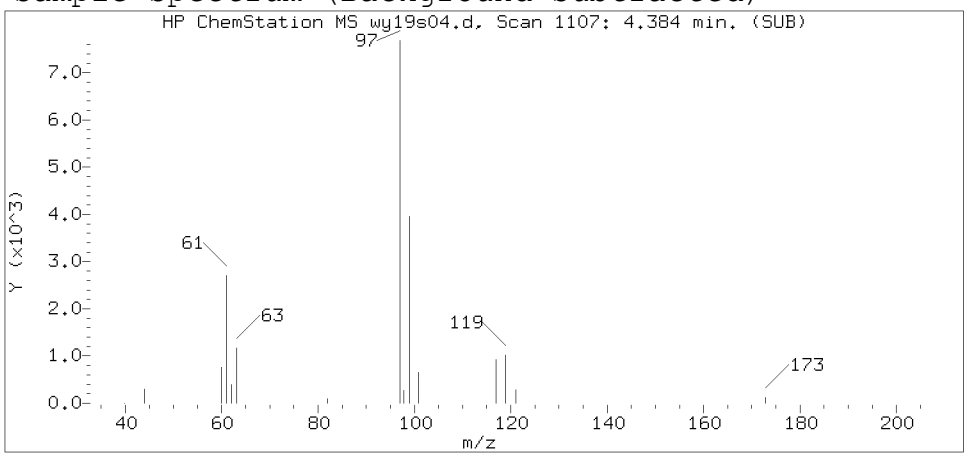
Target 3.5 esignature user ID: lcp00895

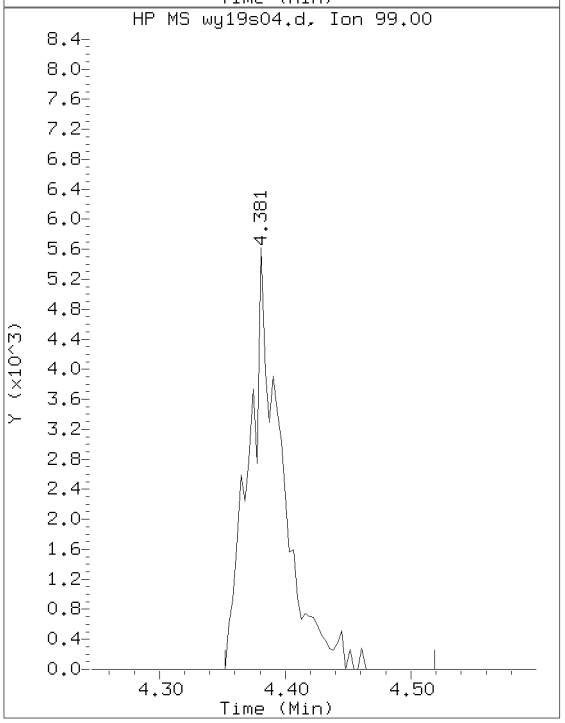
Reference Standard Spectrum for 1,1,1-Trichloroethane



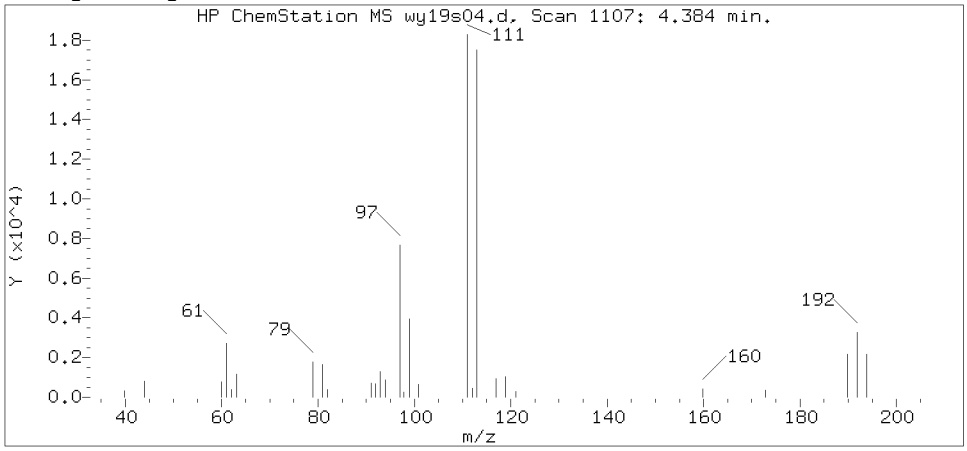


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09137.i/19may19a.b/wy19s04.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 14:18 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 14:34 Automation

Sample Name: 003RS Lab Sample ID: 1053378

Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 1107
Retention Time (minutes): 4.384
Relative Retention Time :-0.00055
Quant Ion : 97.00
Area (flag) : 15270
On-Column Amount (ng) : 2.9407

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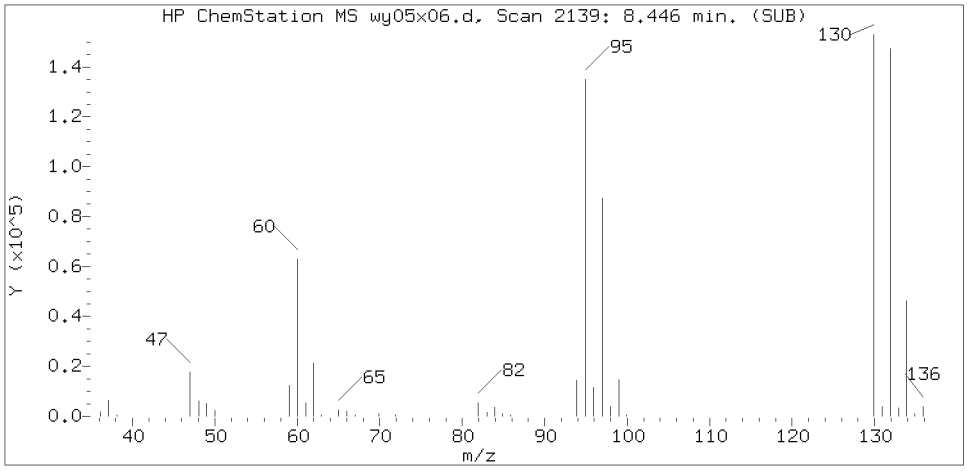
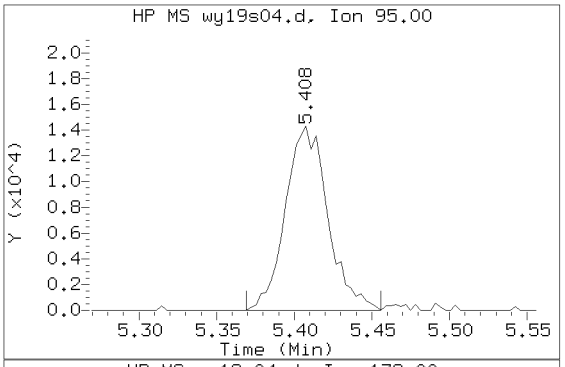
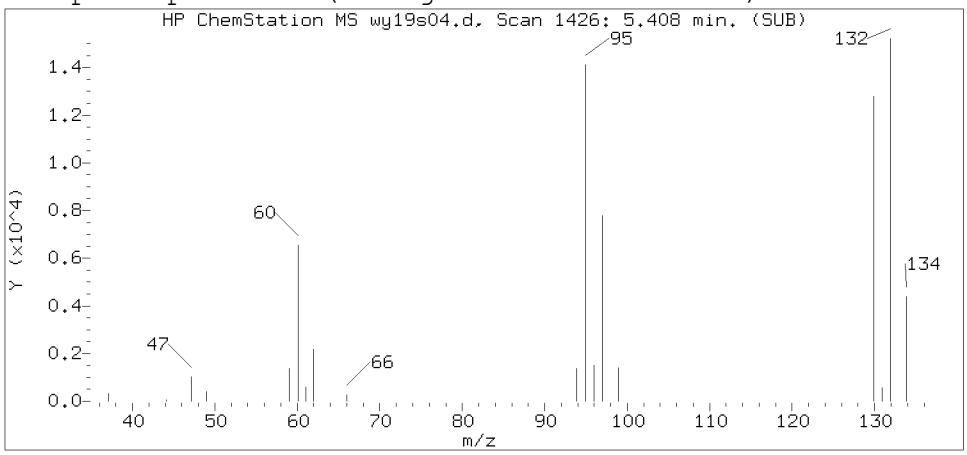
Target 3.5 esignature user ID: lcp00805

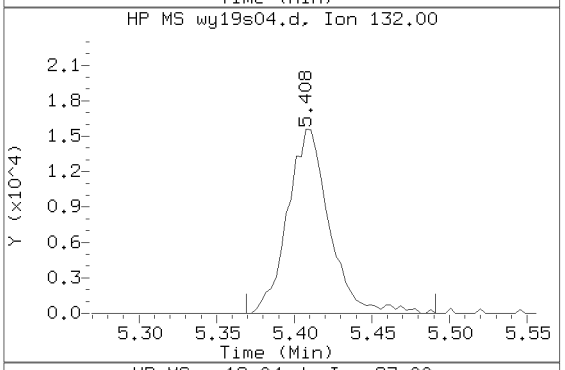
Reference Standard Spectrum for Trichloroethene



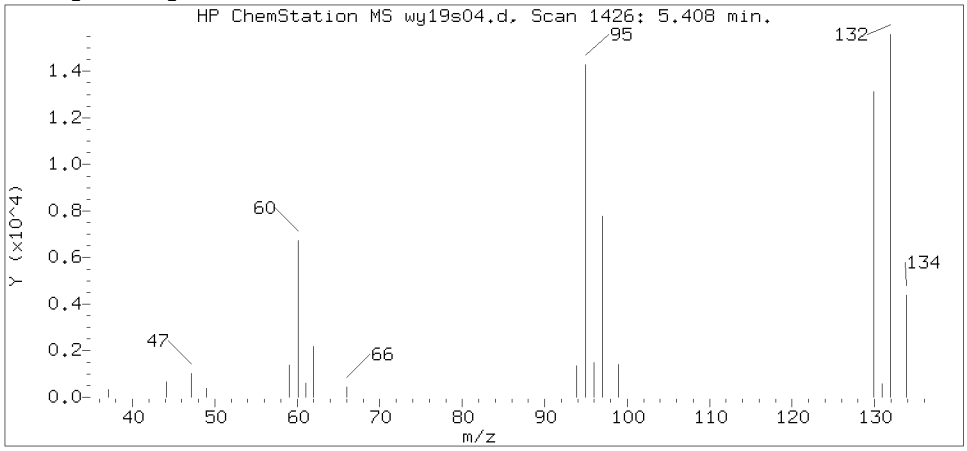


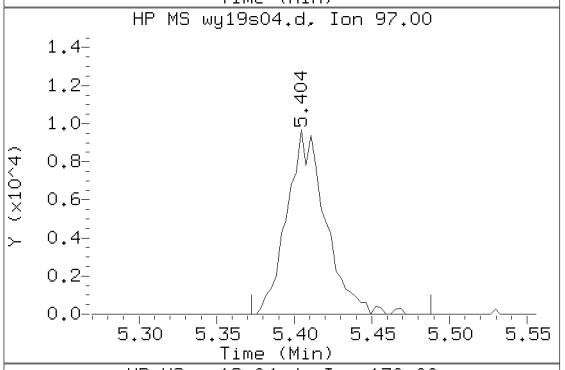
Sample Spectrum (Background Subtracted)

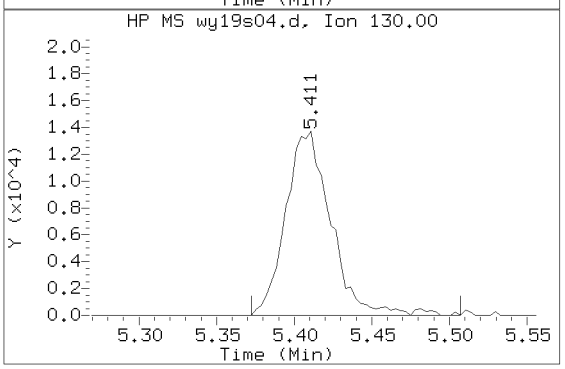




Sample Spectrum (Unaltered)







Data File: /chem2/HP09137.i/19may19a.b/wy19s04.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 14:18 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 14:34 Automation

Sample Name: 003RS Lab Sample ID: 1053378

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 1426
Retention Time (minutes): 5.408
Relative Retention Time :-0.00069
Quant Ion : 95.00
Area (flag) : 27172
On-Column Amount (ng) : 6.3088

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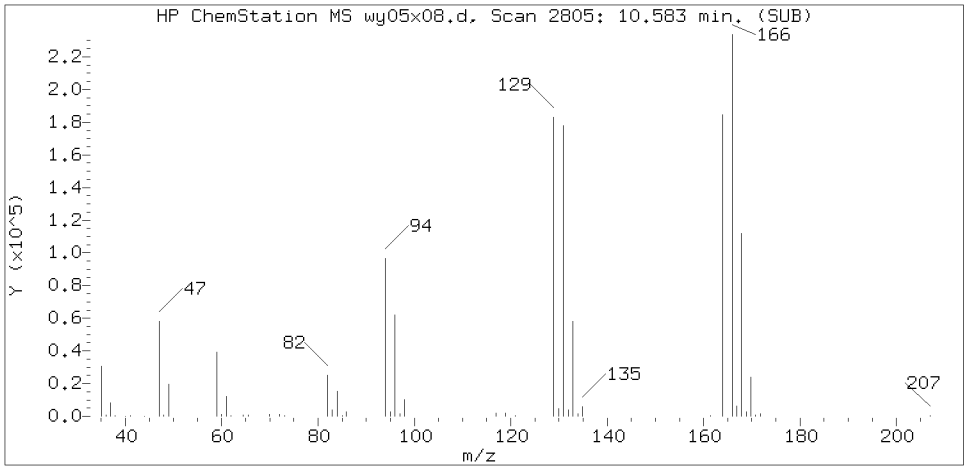
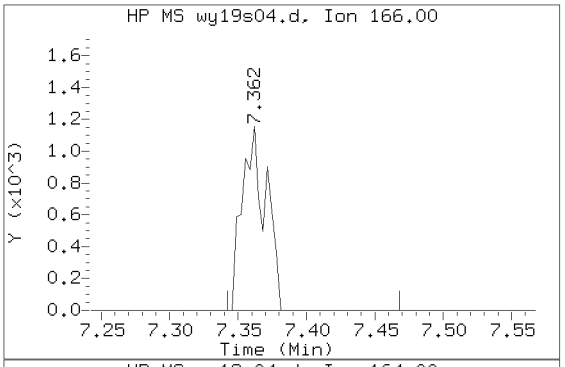
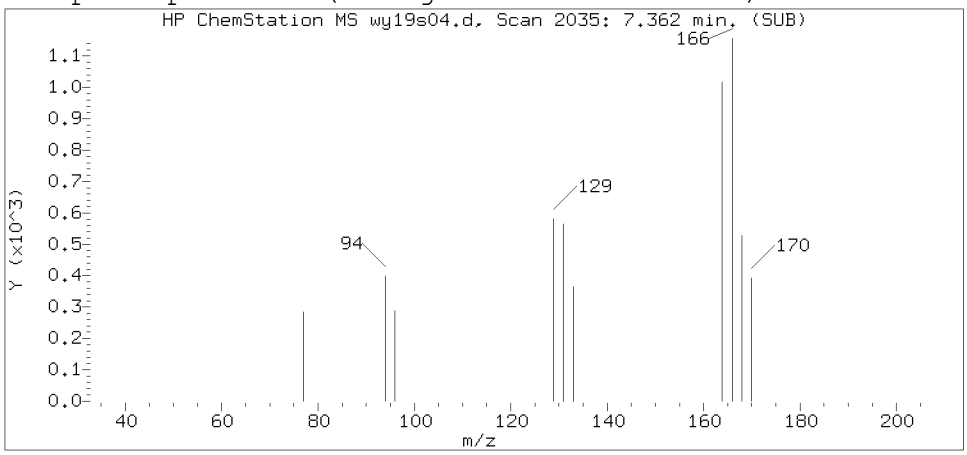
Target 3.5 esignature user ID: lcp00895

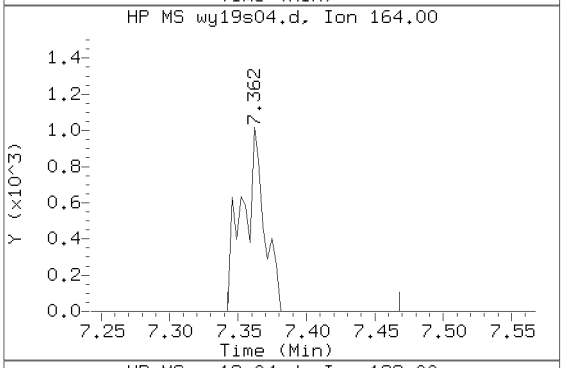
Reference Standard Spectrum for Tetrachloroethene

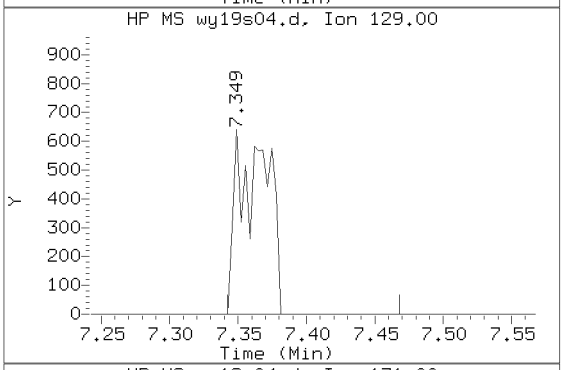




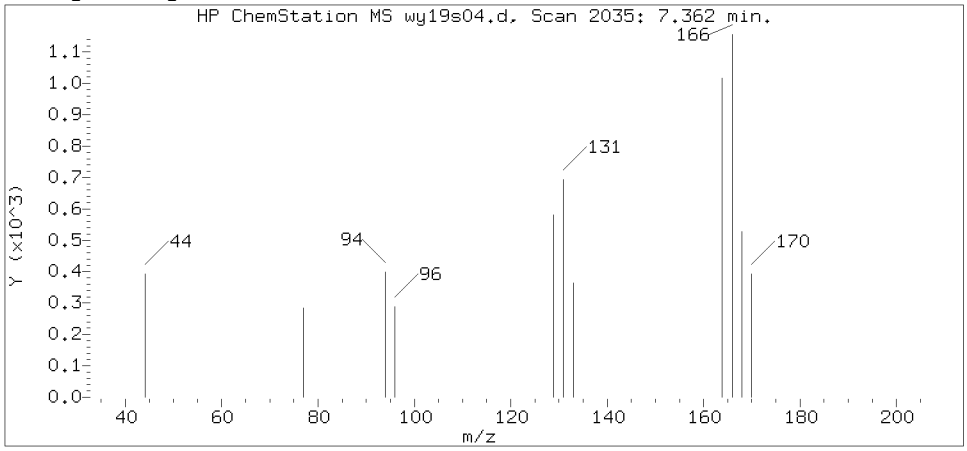
Sample Spectrum (Background Subtracted)

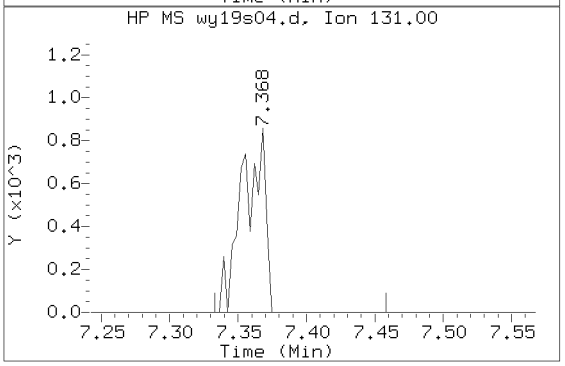






Sample Spectrum (Unaltered)





Data File: /chem2/HP09137.i/19may19a.b/wy19s04.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 14:18 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 14:34 Automation

Sample Name: 003RS Lab Sample ID: 1053378

Compound Number	: 94
Compound Name	: Tetrachloroethene
Scan Number	: 2035
Retention Time (minutes)	: 7.362
Relative Retention Time	: 0.00036
Quant Ion	: 166.00
Area (flag)	: 1399
On-Column Amount (ng)	: 0.3203

Digitally signed by Linda C. Pape on 05/20/2019 at 12:58.
Target 3.5 esignature user ID: lcp00805

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

004RS

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053379

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s07.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.4	J
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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004RS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1053379

Data file: /chem2/HP09137.i/19may18a.b/wy18s07.d
Data file Sample Info. Line: 004RS;1053379;1;0;;JCV90;;;wy18b01;
Date, time and analyst ID of latest file update: 28-May-2019 14:49 lcp00895

Injection date and time: **19-MAY-2019 01:39**
Instrument ID: **HP09137.i** Batch: **W191381AA**

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.744	(-0.007)	596	65	159659	(-16)	250.00	
66) Fluorobenzene	5.029	(0.003)	1308	96	911949	(-11)	50.00	
101) Chlorobenzene-d5	8.161	(0.000)	2284	117	705020	(-9)	50.00	
132) 1,4-Dichlorobenzene-d4	10.042	(0.000)	2870	152	363154	(-18)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.355	(0.001)	113	204748	48.463	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692	(-0.001)	102	57496	51.170	102%		80 - 120
84) Toluene-d8	(3)	6.698	(0.000)	98	878403	49.722	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.165	(0.000)	95	303267	42.909	86%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	3.344	(-0.000)	63	2947	0.373	0.37		J	0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	4.381	(0.000)	97	5956	1.067	1.07			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Linda C. Pape on 05/28/2019 at 14:54. Target 3.5 esignature user ID: lcp00895

Data file: /chem2/HP09137.i/19may18a.b/wy18s07.d Injection date and time: **19-MAY-2019 01:39**
Data file Sample Info. Line: 004RS;1053379;1;0;;JCV90;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:49 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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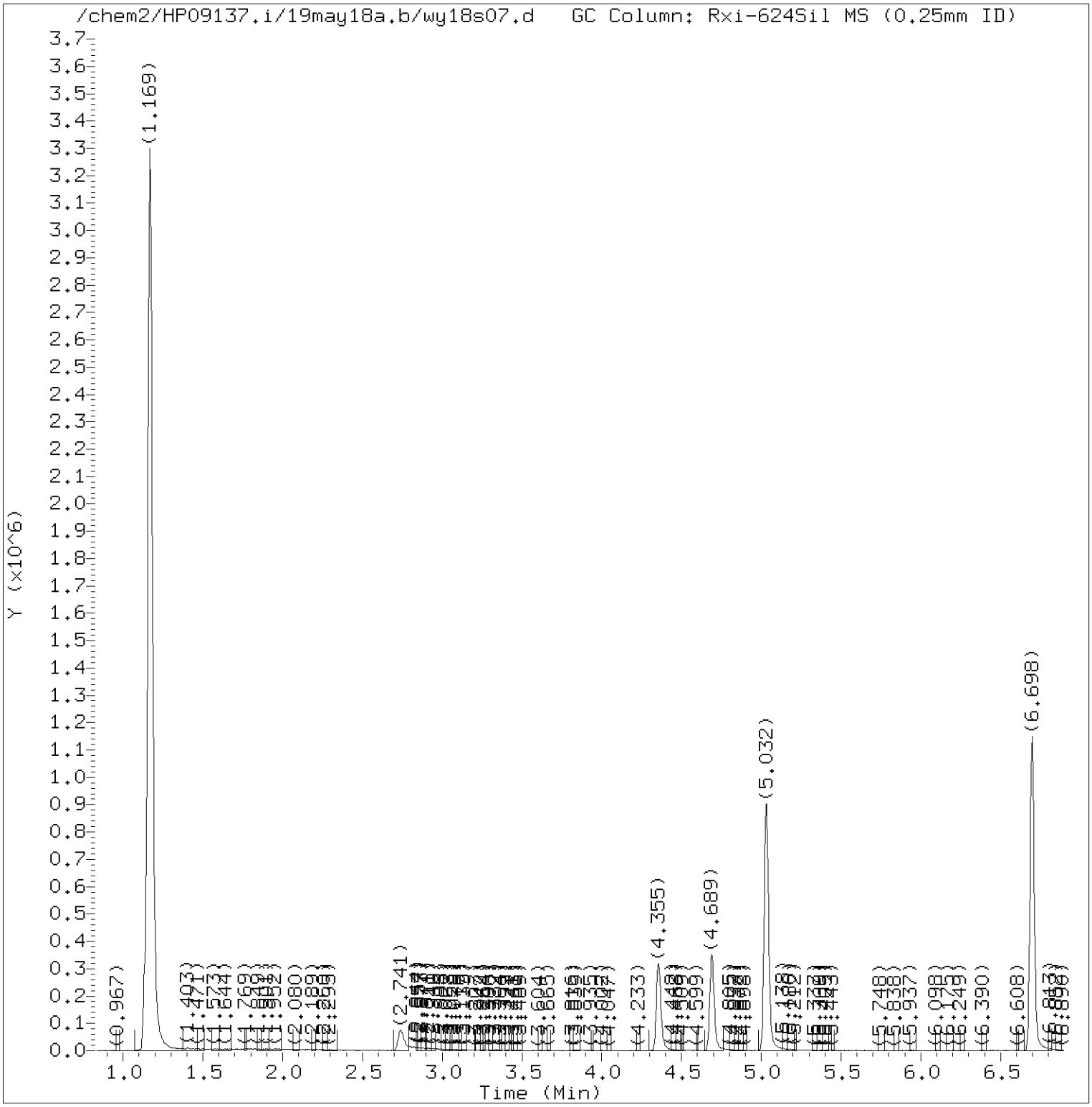
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Linda C. Pape on 05/28/2019 at 14:54. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 15:40. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

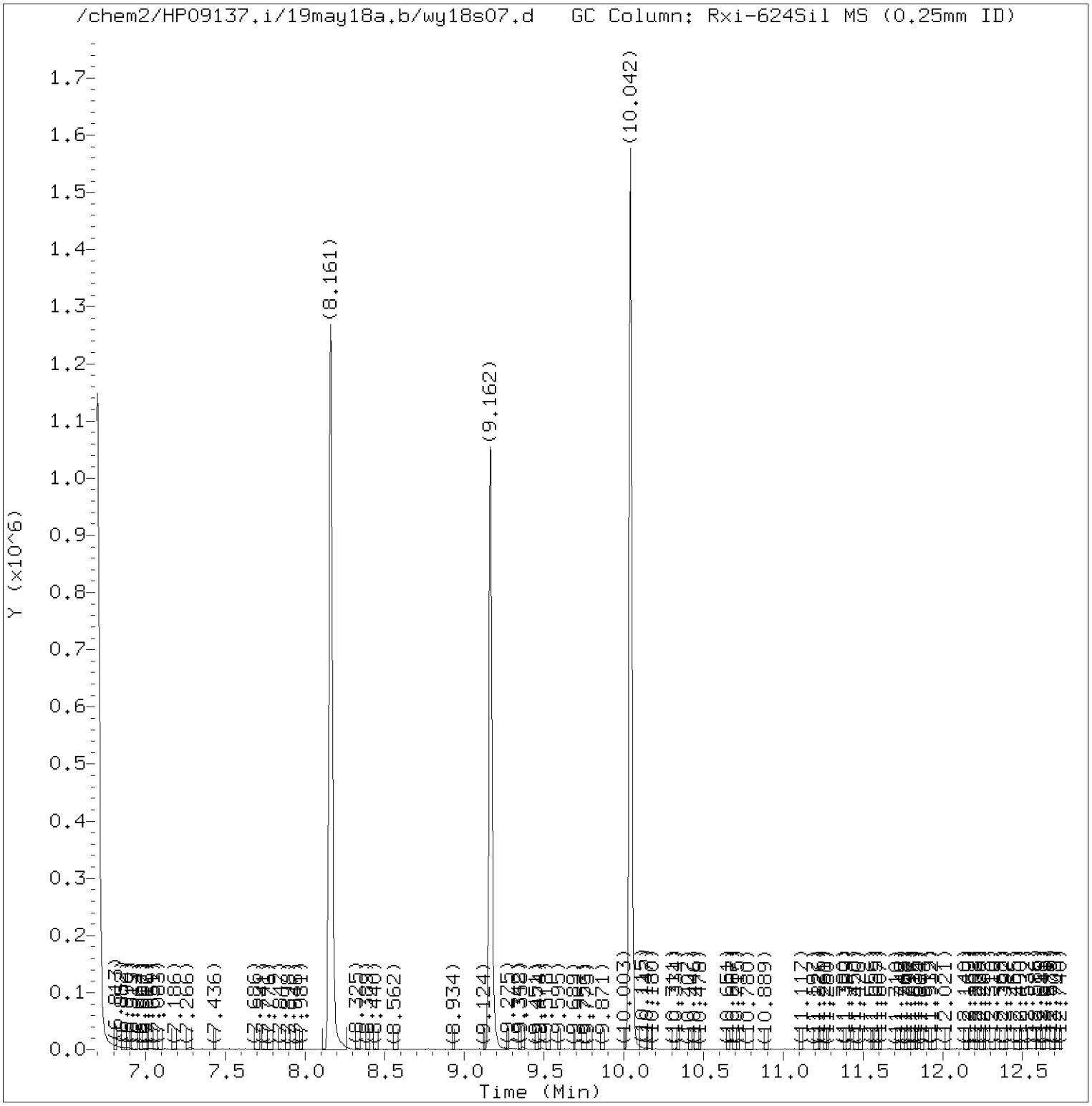
Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s07.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 01:39 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:49 lcp00895

Sample Name: 004RS Lab Sample ID: 1053379

Digitally signed by Linda C. Pape
on 05/28/2019 at 14:54.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s07.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 01:39 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:49 lcp00895

Sample Name: 004RS Lab Sample ID: 1053379

Digitally signed by Linda C. Pape
on 05/28/2019 at 14:54.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s07.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 01:39 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:49 lcp00895

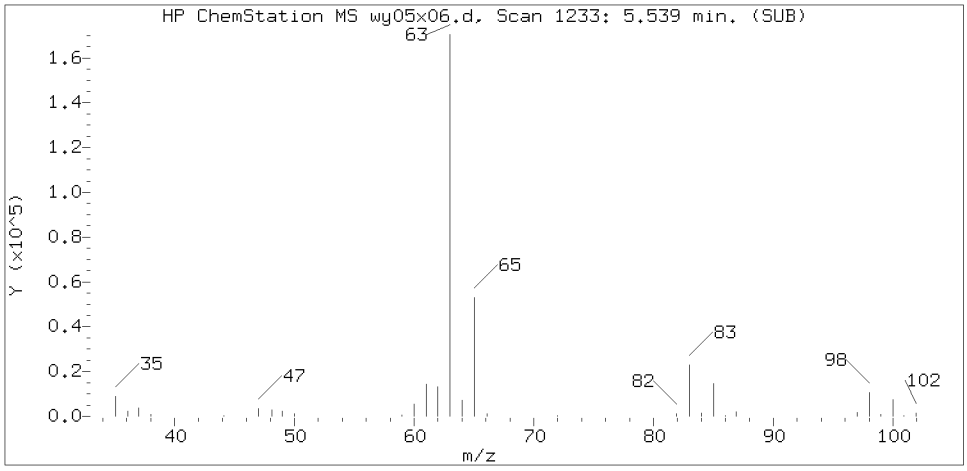
Sample Name: 004RS Lab Sample ID: 1053379

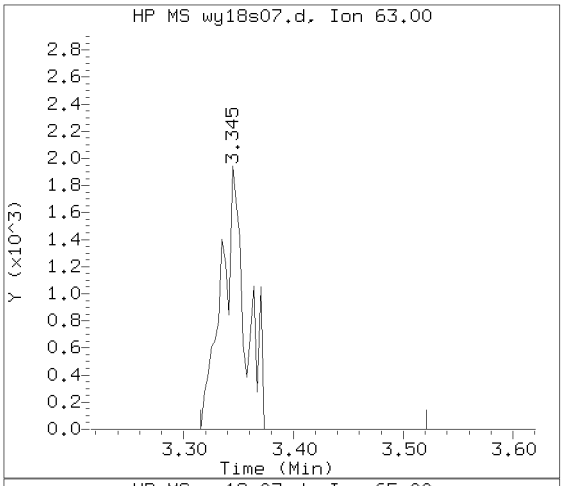
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.744	65	159659	250.000
36) 1,1-Dichloroethane	(2)	3.345	63	2947	0.373
52)$Dibromofluoromethane	(2)	4.355	113	204748	48.463
53) 1,1,1-Trichloroethane	(2)	4.381	97	5956	1.067
57)$1,2-Dichloroethane-d4	(2)	4.692	102	57496	51.170
66)*Fluorobenzene	(2)	5.029	96	911949	50.000
84)$Toluene-d8	(3)	6.698	98	878403	49.722
101)*Chlorobenzene-d5	(3)	8.161	117	705020	50.000
115)$4-Bromofluorobenzene	(3)	9.165	95	303267	42.909
132)*1,4-Dichlorobenzene-d4	(4)	10.042	152	363154	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

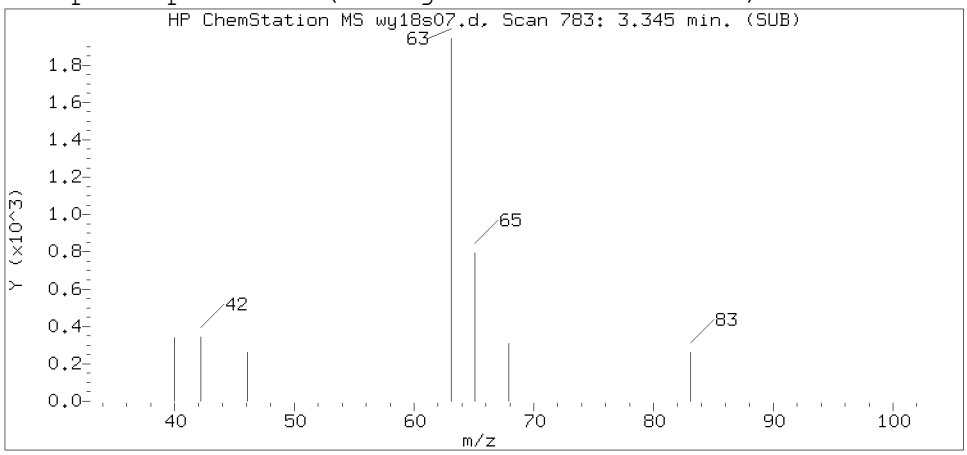
Digitally signed by Linda C. Pape
on 05/28/2019 at 14:54.
Target 3.5 esignature user ID: lcp00895

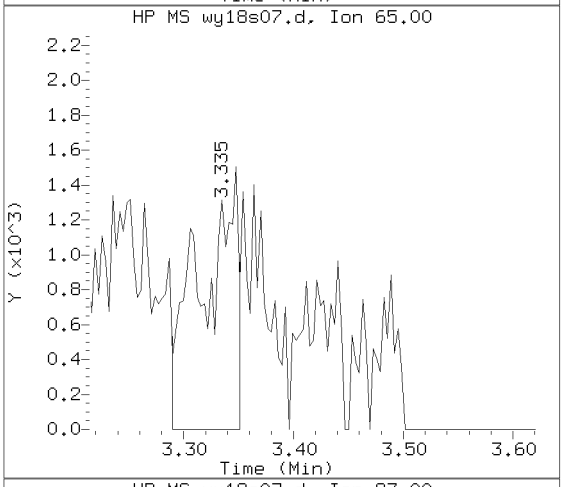
Reference Standard Spectrum for 1,1-Dichloroethane



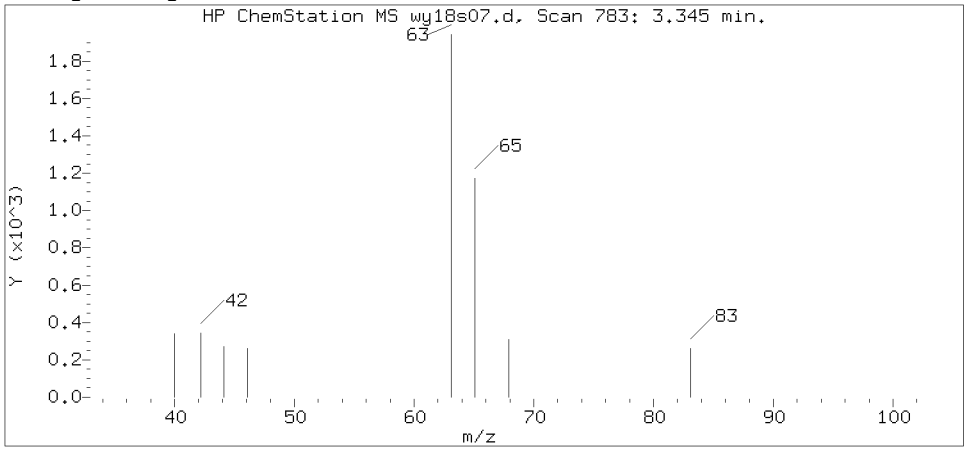


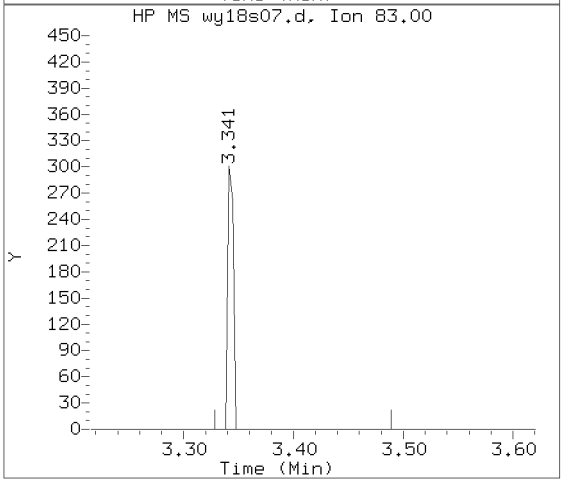
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP09137.i/19may18a.b/wy18s07.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 01:39 Analyst ID: SEJ02002

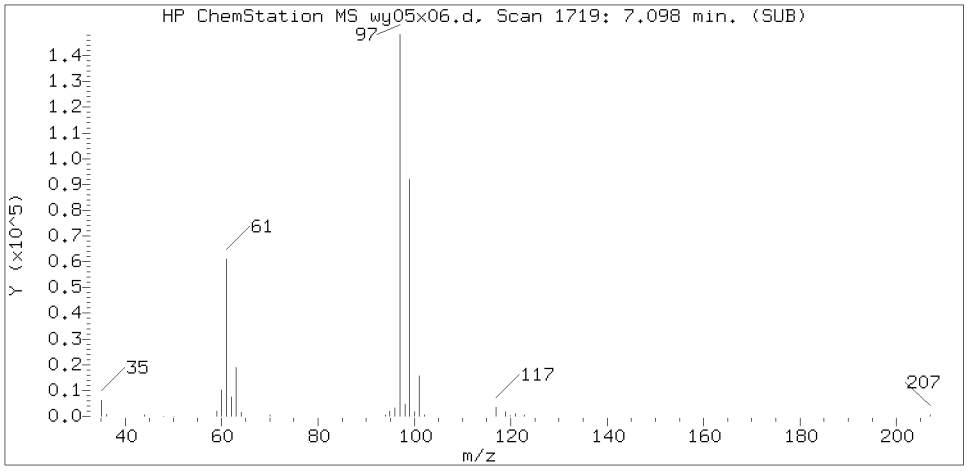
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:49 lcp00895

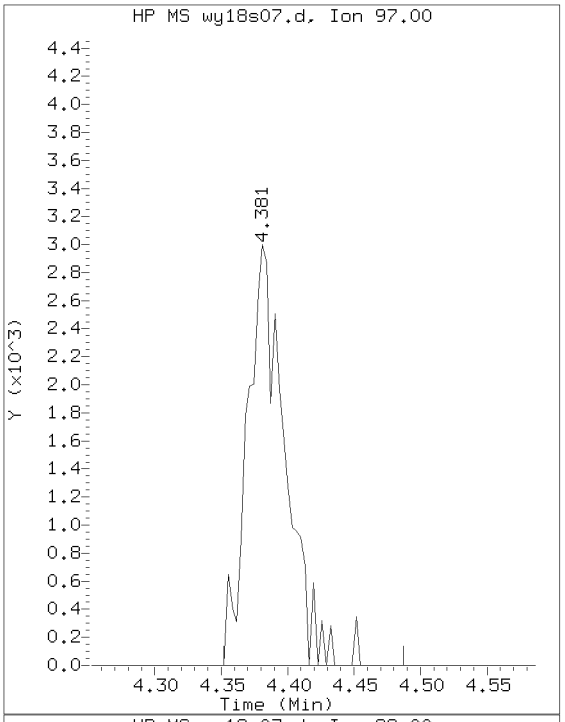
Sample Name: 004RS Lab Sample ID: 1053379

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 783
Retention Time (minutes): 3.345
Relative Retention Time :-0.00043
Quant Ion : 63.00
Area (flag) : 2947
On-Column Amount (ng) : 0.3729

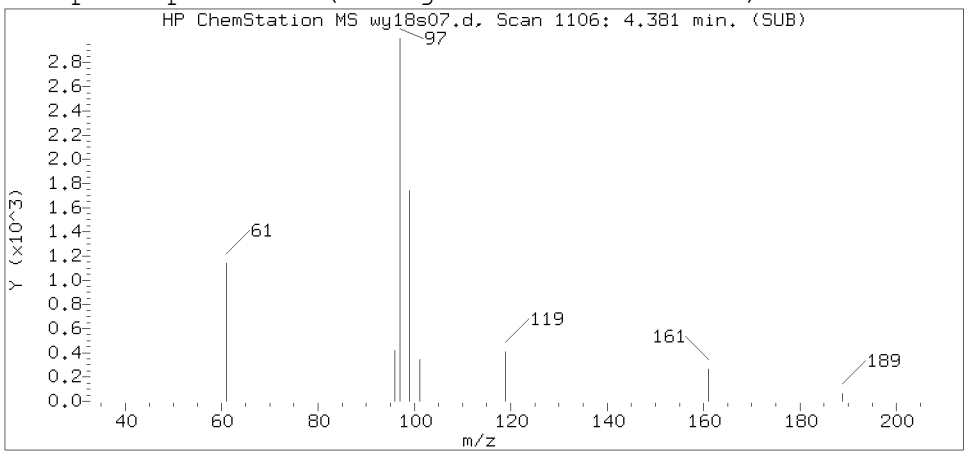
Digitally signed by Linda C. Pape on 05/28/2019 at 14:54.
Target 3.5 esignature user ID: lcp00895

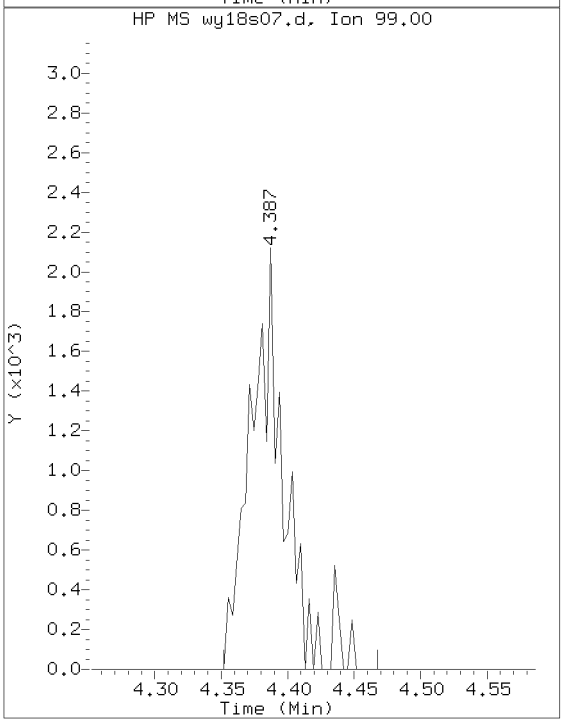
Reference Standard Spectrum for 1,1,1-Trichloroethane



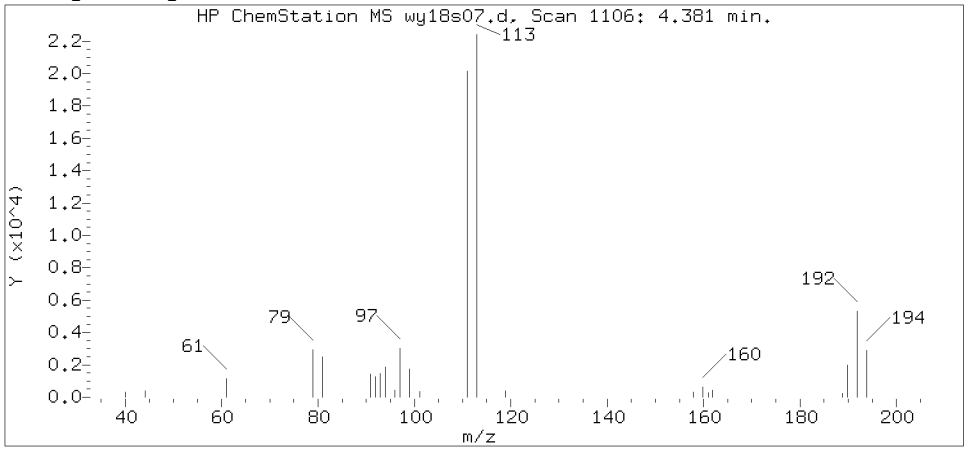


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09137.i/19may18a.b/wy18s07.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 01:39 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:49 lcp00895

Sample Name: 004RS Lab Sample ID: 1053379

Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 1106
Retention Time (minutes): 4.381
Relative Retention Time : 0.00008
Quant Ion : 97.00
Area (flag) : 5956
On-Column Amount (ng) : 1.0673

Digitally signed by Linda C. Pape on 05/28/2019 at 14:54.
Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

005RS

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053380

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may19a.b/wy19s05.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	0.2	J
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	1	J
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.3	J
156-59-2	cis-1,2-Dichloroethene	1	
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	0.4	J
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	0.5	J
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	0.9	J
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Data file: /chem2/HP09137.i/19may19a.b/wy19s05.d Injection date and time: **19-MAY-2019 14:42**
Data file Sample Info. Line: 005RS;1053380;1;0;;JCV90;;;wy19b02; Instrument ID: **HP09137.i** Batch: **W191381AB**
Date, time and analyst ID of latest file update: 07-Jun-2019 00:09 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may19a.b/wy19b02.d**

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 04-JUN-2019 15:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may19a.b/wy19c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:9274

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.738	(-0.003)	594	65	124134	(-34)	250.00	
66) Fluorobenzene	5.032	(0.003)	1309	96	852058	(-12)	50.00	
101) Chlorobenzene-d5	8.161	(0.000)	2284	117	658002	(-11)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041	(0.000)	2870	152	341161	(-20)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.359	(-0.001)	113	196561	49.795	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.689	(0.000)	102	56849	54.150	108%		80 - 120
84) Toluene-d8	(3)	6.698	(0.000)	98	831975	50.459	101%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.000)	95	285224	43.240	86%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)	1.464	(-0.000)	62	1369M	0.218	0.22		J	0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)	2.337	(0.003)	58	501M	1.155	1.16		J	0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	3.344	(-0.000)	63	2571	0.348	0.35		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	3.890	(0.000)	96	5300	1.158	1.16			0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	4.374	(0.001)	97	2233	0.428	0.43		J	0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	5.405	(-0.000)	95	2325	0.538	0.54		J	0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)	7.359	(0.000)	166	3999	0.928	0.93		J	0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

M = Compound was manually integrated.

Digitally signed by Kevin A. Sposito on 06/07/2019 at 15:29. Target 3.5 esignature user ID: kas02648

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may19a.b/wy19s05.d Injection date and time: **19-MAY-2019 14:42**
Data file Sample Info. Line: 005RS;1053380;1;0;;JCV90;;;wy19b02; Instrument ID: **HP09137.i** Batch: **W191381AB**
Date, time and analyst ID of latest file update: 07-Jun-2019 00:09 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may19a.b/wy19b02.d**

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 04-JUN-2019 15:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may19a.b/wy19c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

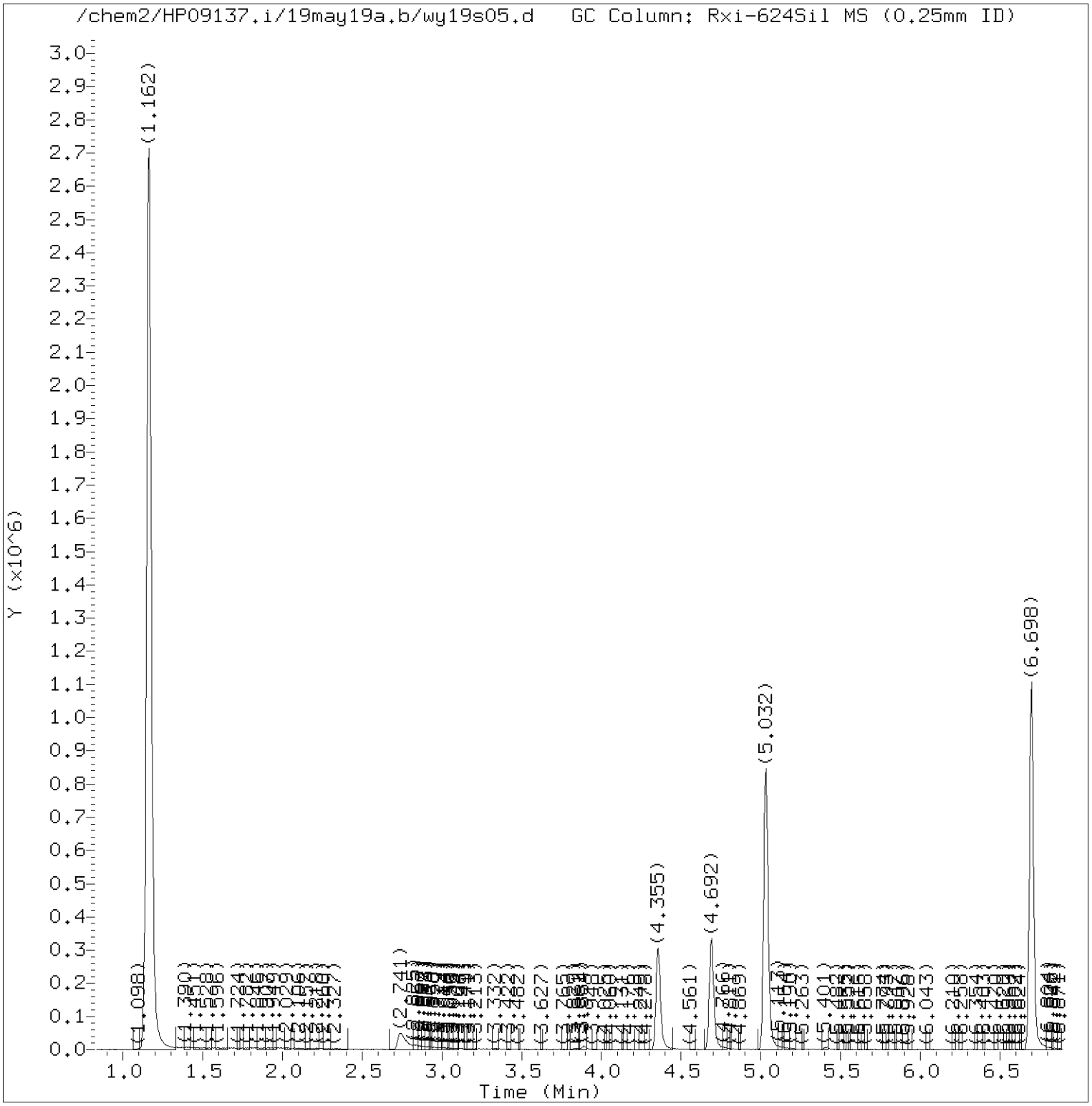
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Kevin A. Sposito on 06/07/2019 at 15:29. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Roy R. Mellott on 06/12/2019 at 17:05. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

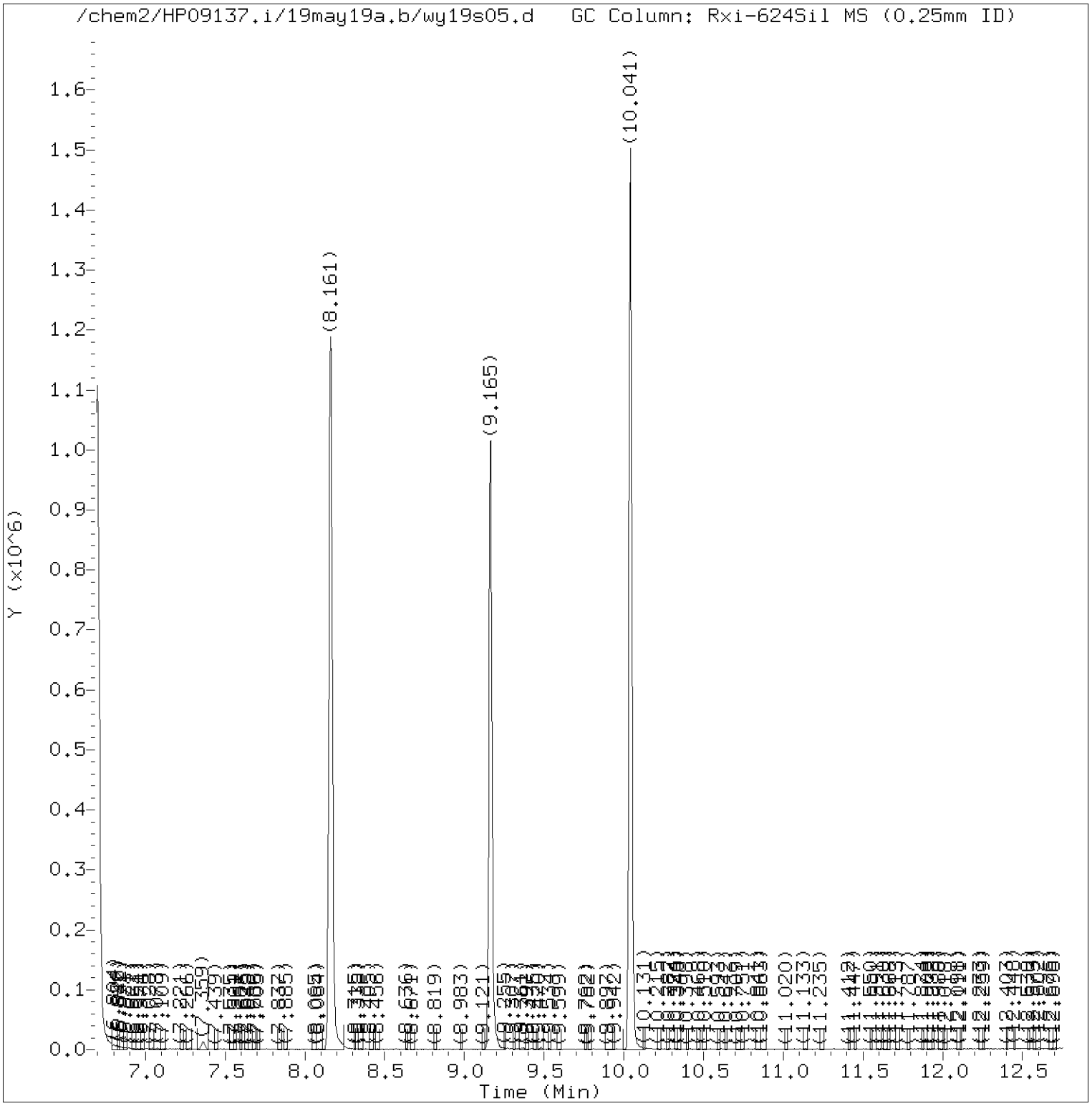
Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19s05.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 14:42 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:09 sej02002

Sample Name: 005RS Lab Sample ID: 1053380

Digitally signed by Kevin A. Sposito
on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19s05.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 14:42 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:09 sej02002

Sample Name: 005RS Lab Sample ID: 1053380

Digitally signed by Kevin A. Sposito
on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19s05.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 14:42 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:09 sej02002

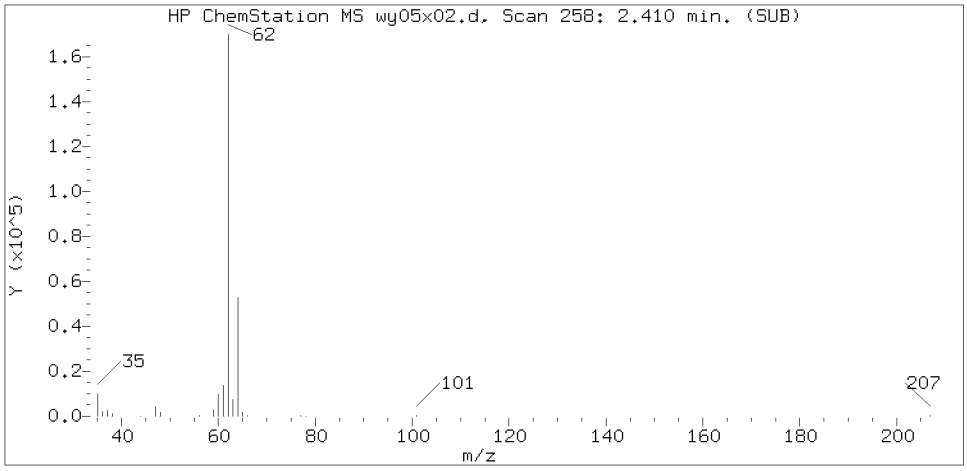
Sample Name: 005RS Lab Sample ID: 1053380

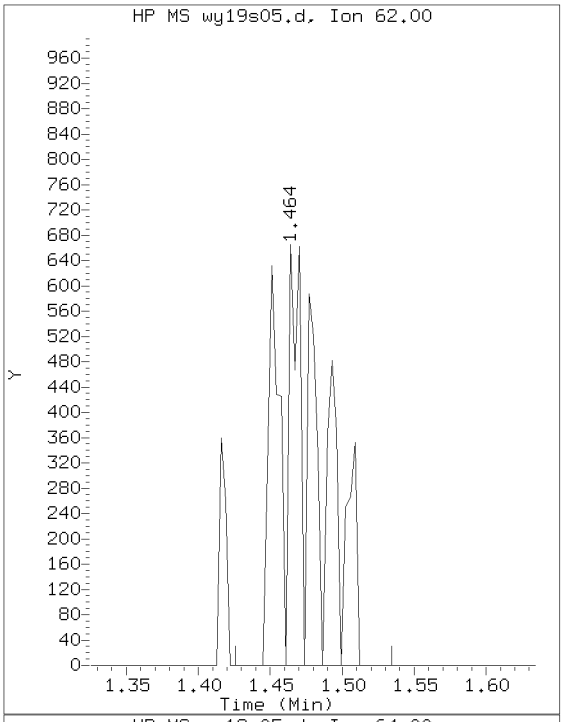
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	1.464	62	1369M	0.218
18) Acetone	(1)	2.337	58	501M	1.155
29)*t-Butyl alcohol-d10	(1)	2.738	65	124134	250.000
36) 1,1-Dichloroethane	(2)	3.344	63	2571	0.348
42) cis-1,2-Dichloroethene	(2)	3.890	96	5300	1.158
52)$Dibromofluoromethane	(2)	4.359	113	196561	49.795
53) 1,1,1-Trichloroethane	(2)	4.375	97	2233	0.428
57)$1,2-Dichloroethane-d4	(2)	4.689	102	56849	54.150
66)*Fluorobenzene	(2)	5.032	96	852058	50.000
71) Trichloroethene	(2)	5.405	95	2325	0.538
84)$Toluene-d8	(3)	6.698	98	831975	50.459
94) Tetrachloroethene	(3)	7.359	166	3999	0.928
101)*Chlorobenzene-d5	(3)	8.161	117	658002	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	285224	43.240
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	341161	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

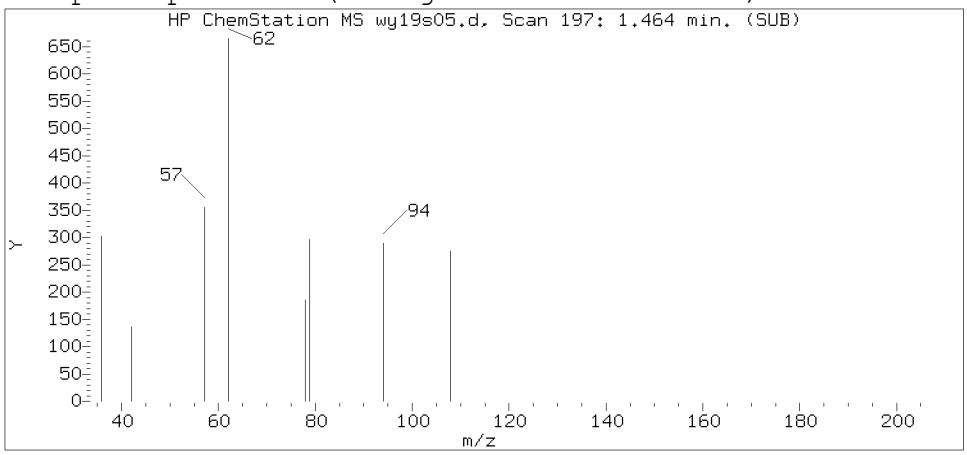
Digitally signed by Kevin A. Sposito
on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648

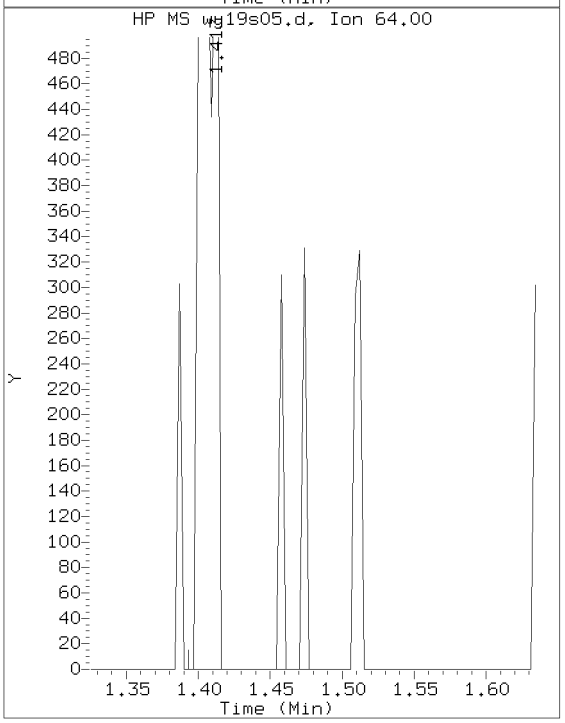
Reference Standard Spectrum for Vinyl Chloride



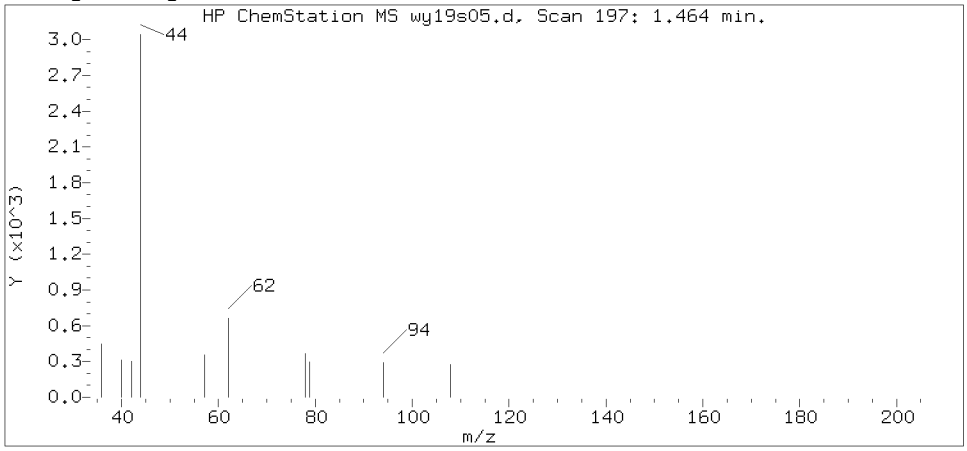


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09137.i/19may19a.b/wy19s05.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 14:42 Analyst ID: CBR01947

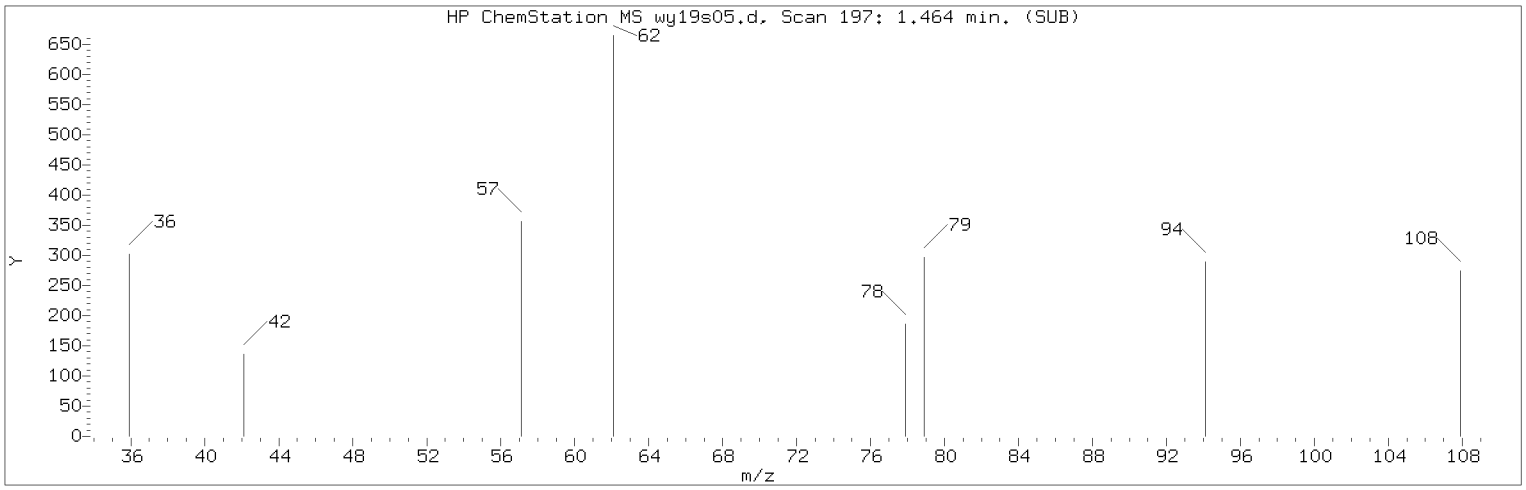
Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:09 sej02002

Sample Name: 005RS Lab Sample ID: 1053380

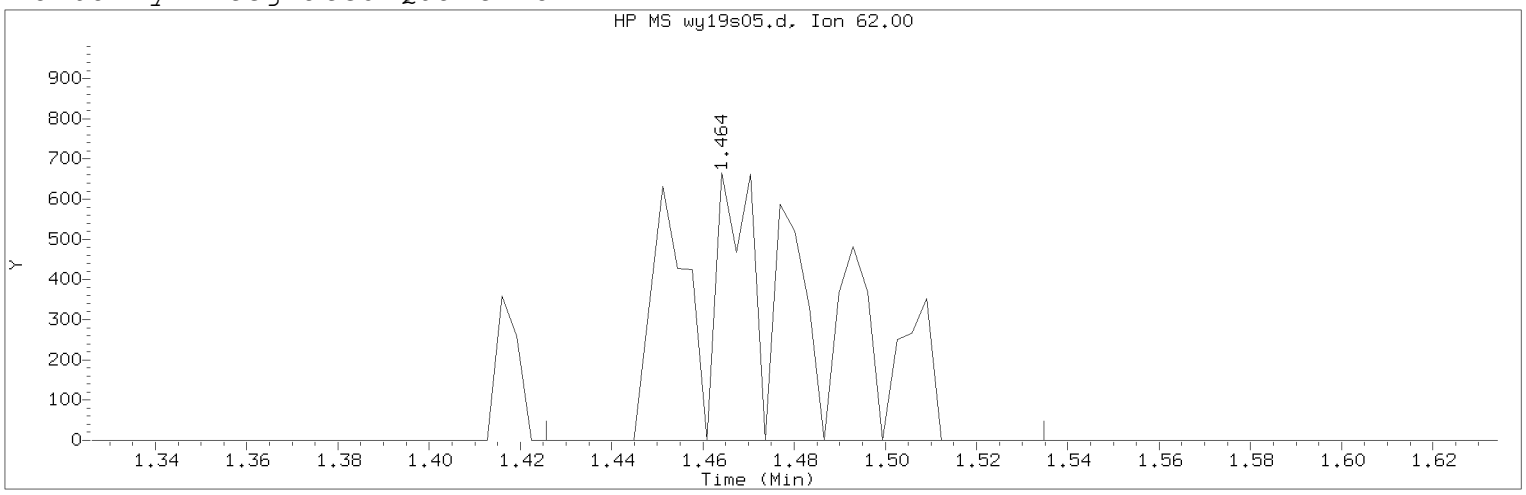
Compound Number	: 6
Compound Name	: Vinyl Chloride
Scan Number	: 197
Retention Time (minutes)	: 1.464
Relative Retention Time	:-0.00018
Quant Ion	: 62.00
Area (flag)	: 1369M
On-Column Amount (ng)	: 0.2178

Digitally signed by Kevin A. Sposito on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19s05.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 14:42 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:09 sej02002

Sample Name: 005RS Lab Sample ID: 1053380

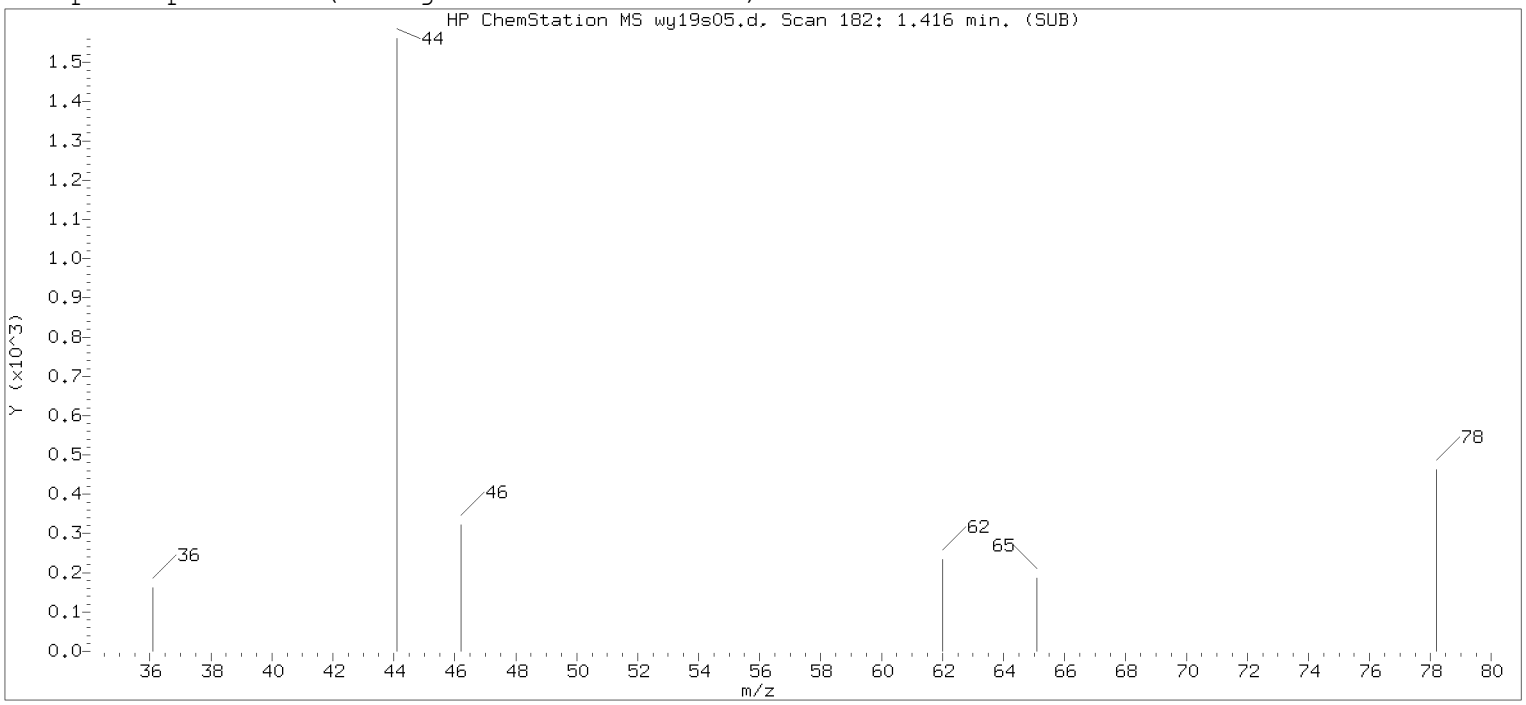
Compound Number : 6
Compound Name : Vinyl Chloride
Scan Number : 197
Retention Time (minutes): 1.464
Quant Ion : 62.00
Area (flag) : 1369M
On-Column Amount (ng) : 0.2178
Integration start scan : 184 Integration stop scan: 218
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

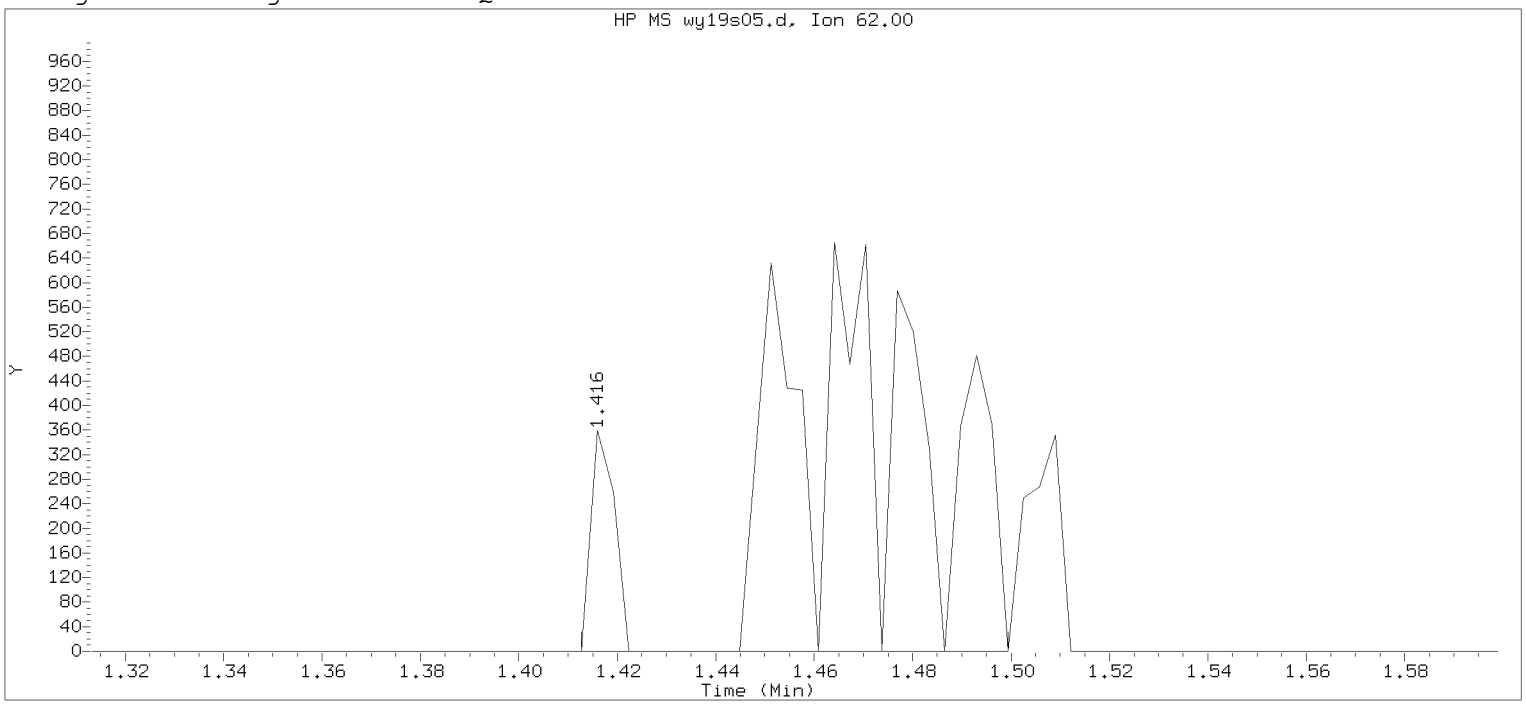
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Roy R. Mellott on 06/12/2019 at 17:05.
PARALLAX ID: rrm00219

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19s05.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 14:42 Analyst ID: CBR01947

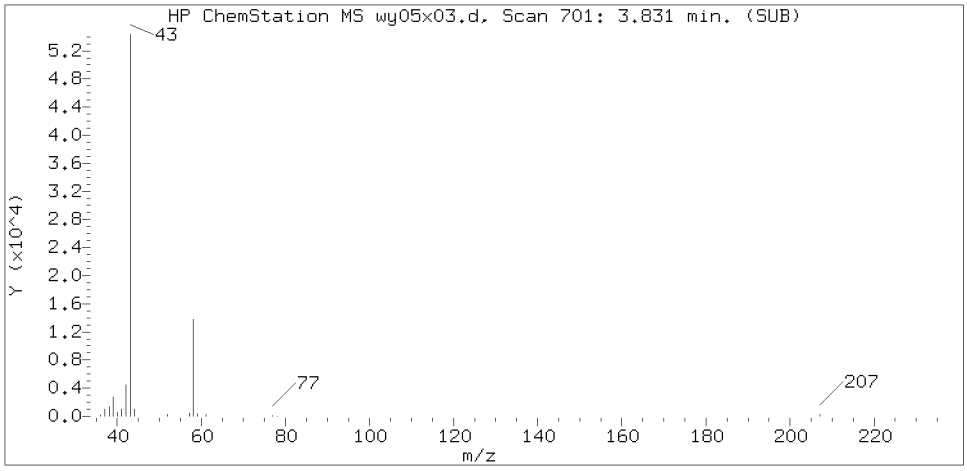
Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Sample Name: 005RS Lab Sample ID: 1053380

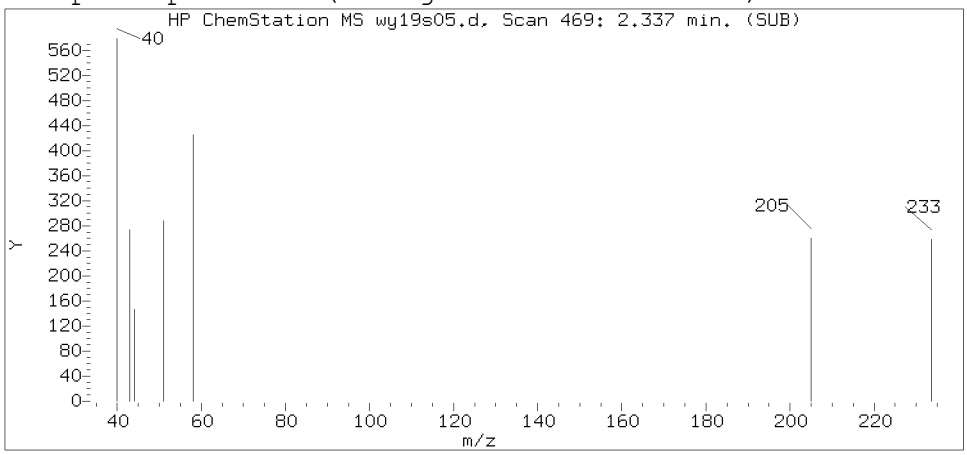
Compound Number : 6
Compound Name : Vinyl Chloride
Scan Number : 182
Retention Time (minutes): 1.416
Quant Ion : 62.00
Area : 1321
On-column Amount (ng) : 0.2101
Integration start scan : 180 Integration stop scan: 207
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 06/07/2019 at 15:29.
Target 3.5 esignature user kas02112

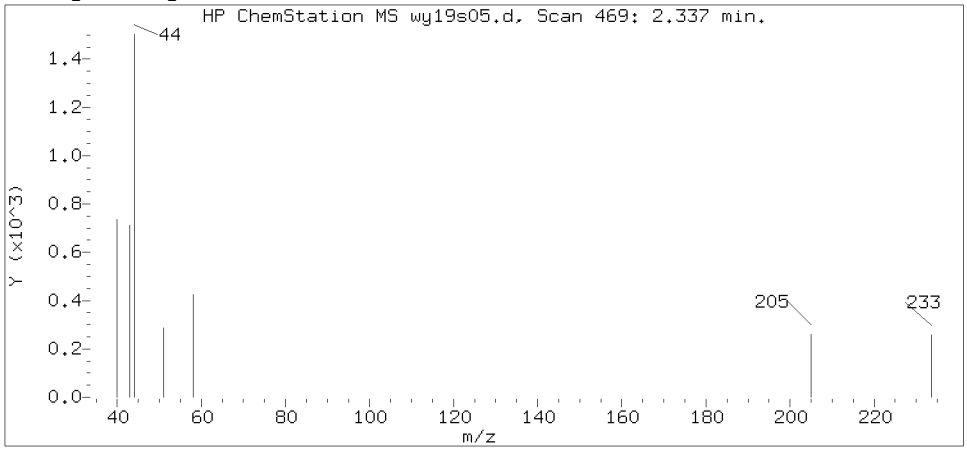
Reference Standard Spectrum for Acetone

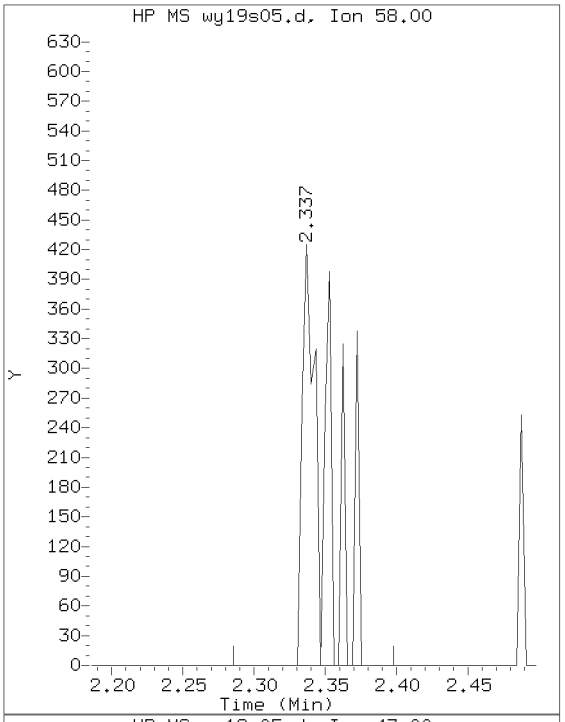


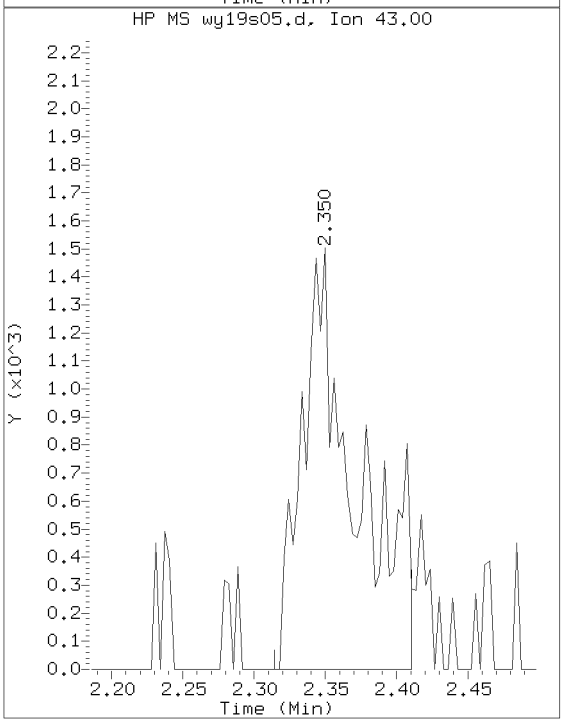
Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)







Data File: /chem2/HP09137.i/19may19a.b/wy19s05.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 14:42 Analyst ID: CBR01947

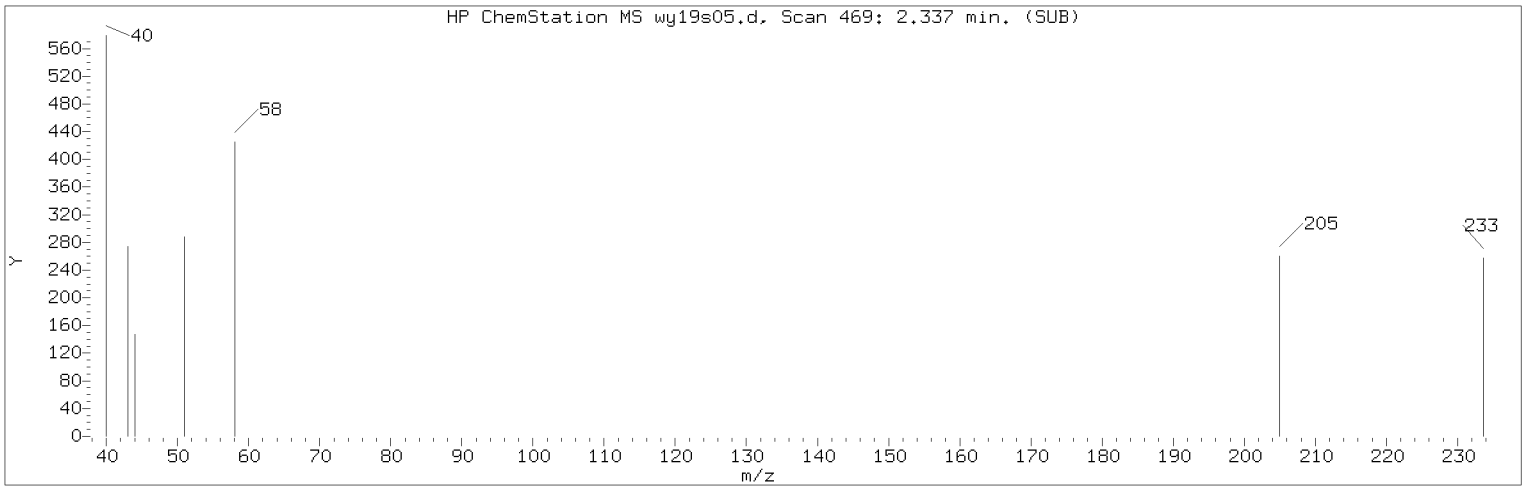
Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:09 sej02002

Sample Name: 005RS Lab Sample ID: 1053380

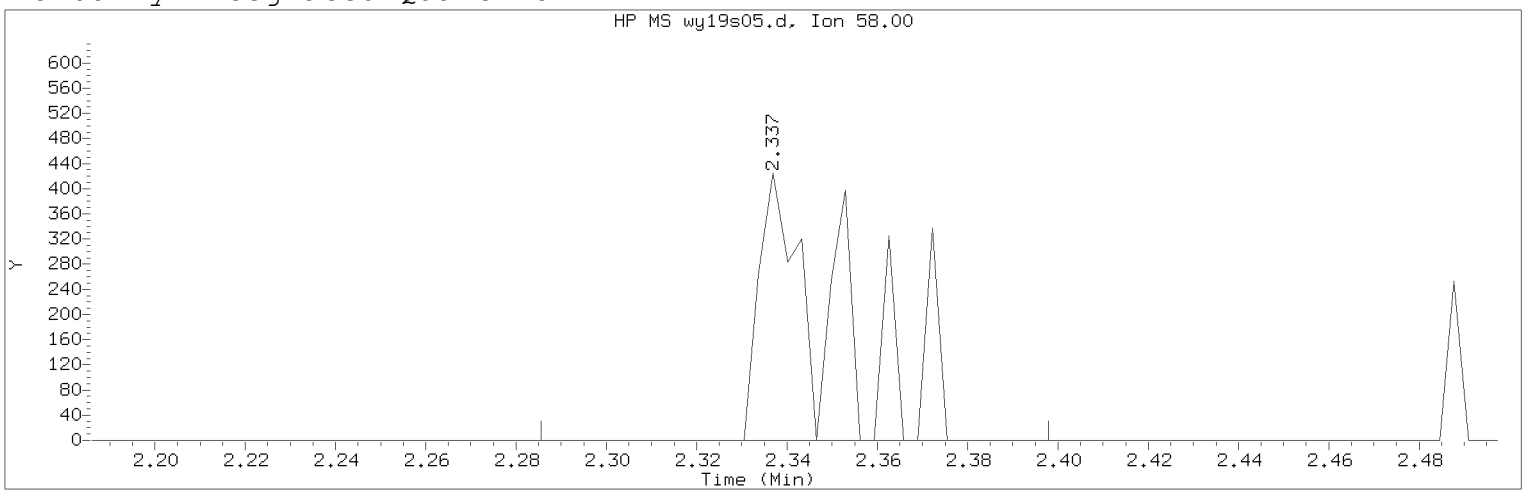
Compound Number : 18
Compound Name : Acetone
Scan Number : 469
Retention Time (minutes): 2.337
Relative Retention Time : 0.00335
Quant Ion : 58.00
Area (flag) : 501M
On-Column Amount (ng) : 1.1551

Digitally signed by Kevin A. Sposito on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19s05.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 14:42 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:09 sej02002

Sample Name: 005RS Lab Sample ID: 1053380

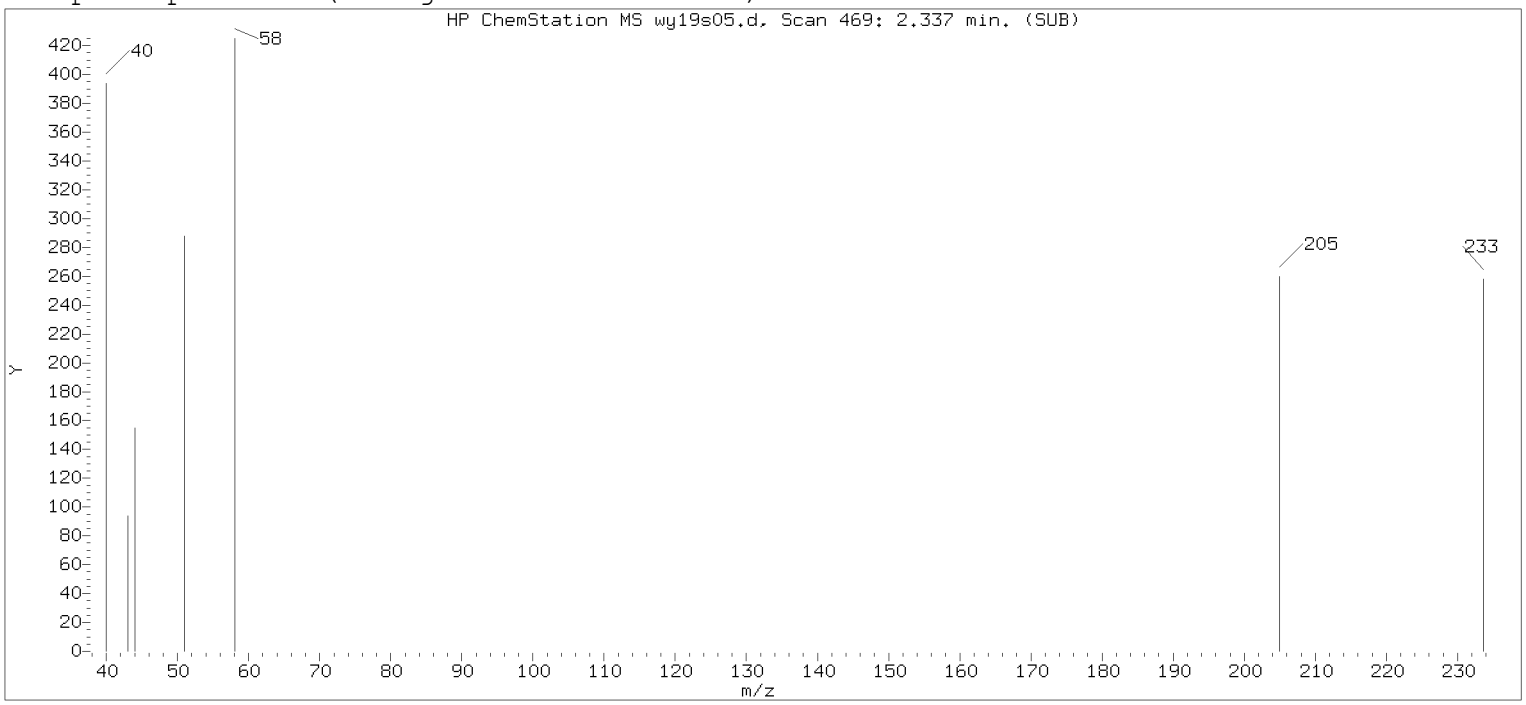
Compound Number : 18
Compound Name : Acetone
Scan Number : 469
Retention Time (minutes): 2.337
Quant Ion : 58.00
Area (flag) : 501M
On-Column Amount (ng) : 1.1551
Integration start scan : 452 Integration stop scan: 487
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

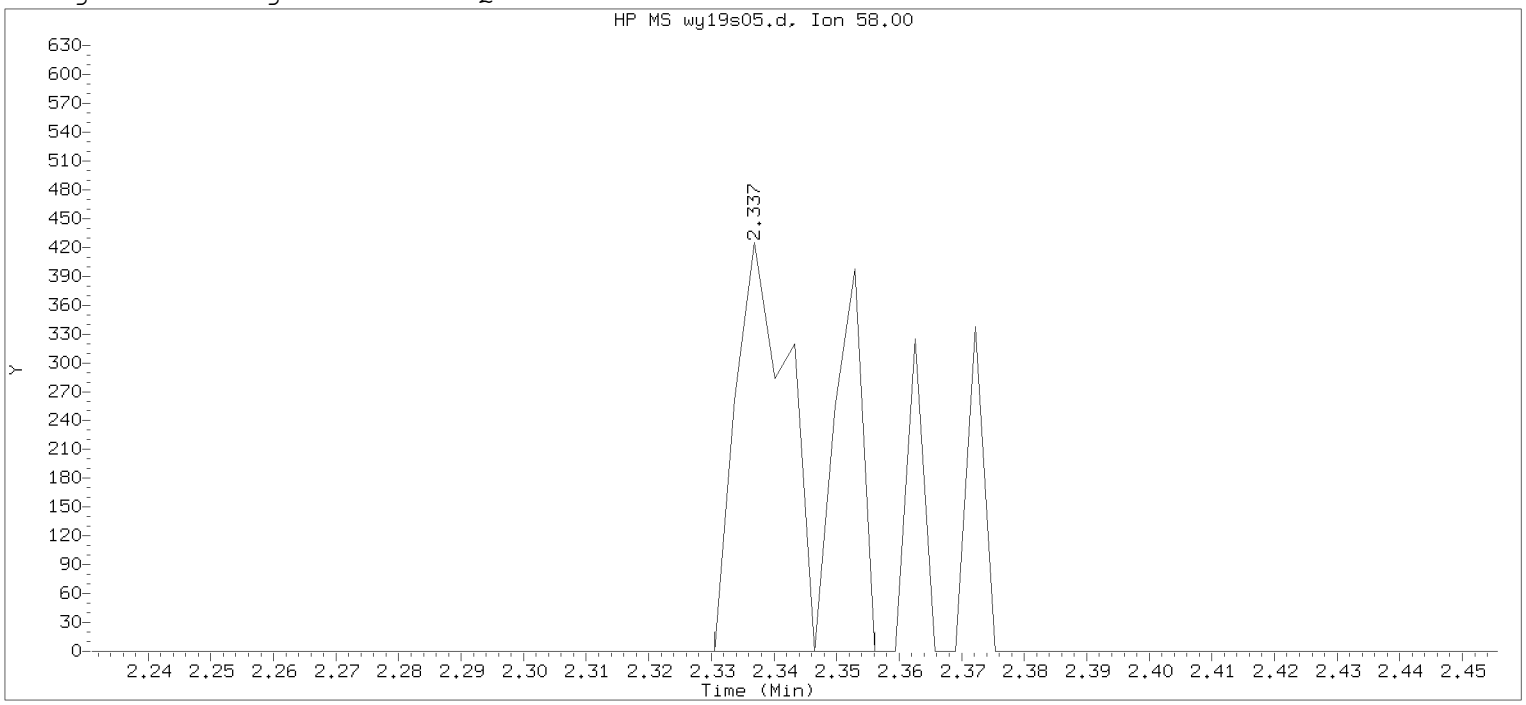
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Roy R. Mellott on 06/12/2019 at 17:05.
PARALLAX ID: rrm00219

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19s05.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 14:42 Analyst ID: CBR01947

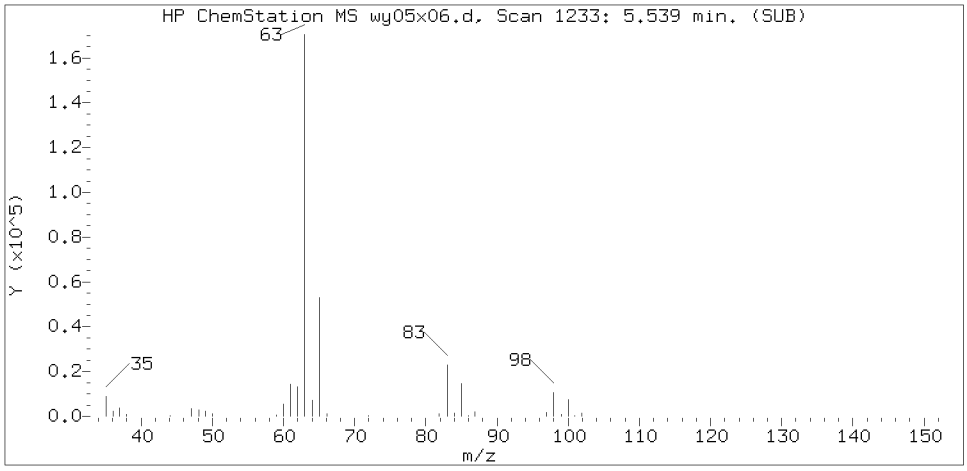
Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

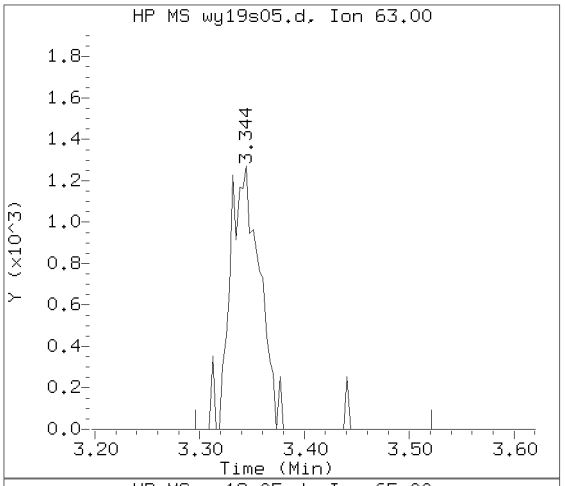
Sample Name: 005RS Lab Sample ID: 1053380

Compound Number : 18
Compound Name : Acetone
Scan Number : 469
Retention Time (minutes): 2.337
Quant Ion : 58.00
Area : 374
On-column Amount (ng) : 0.8612
Integration start scan : 466 Integration stop scan: 474
Y at integration start : 0 Y at integration end: 0

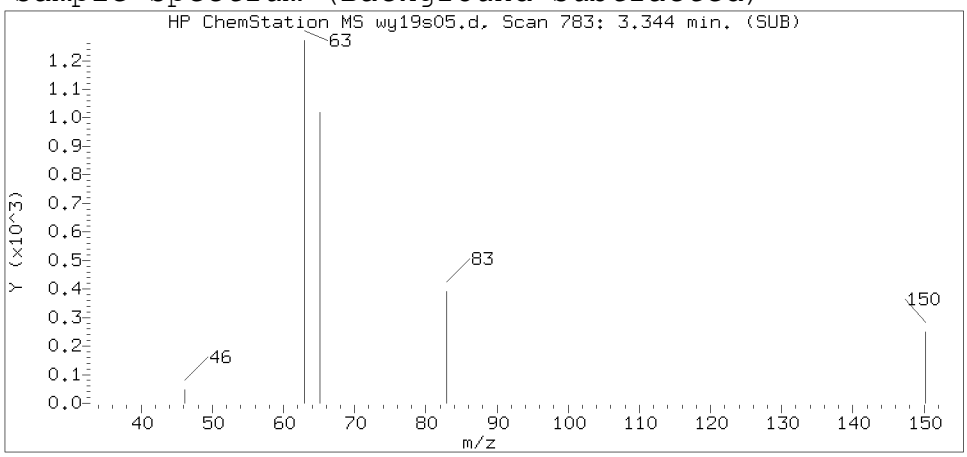
Digitally signed by Kevin A. Sposito on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02615

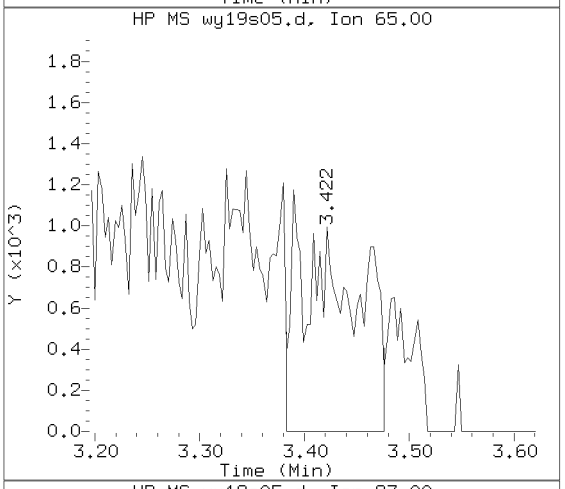
Reference Standard Spectrum for 1,1-Dichloroethane



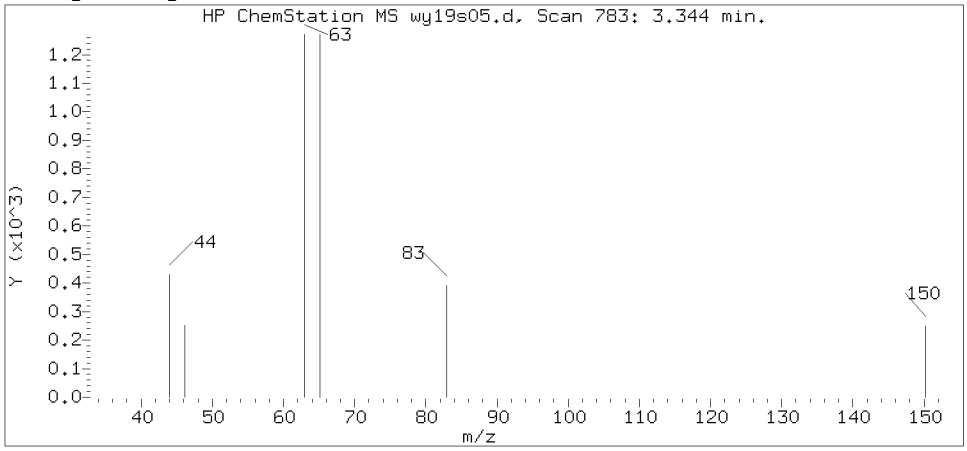


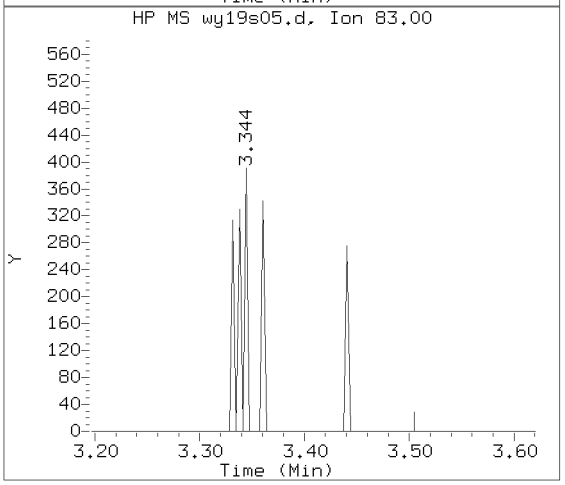
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP09137.i/19may19a.b/wy19s05.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 14:42 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:09 sej02002

Sample Name: 005RS Lab Sample ID: 1053380

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 783
Retention Time (minutes): 3.344
Relative Retention Time :-0.00042
Quant Ion : 63.00
Area (flag) : 2571
On-Column Amount (ng) : 0.3481

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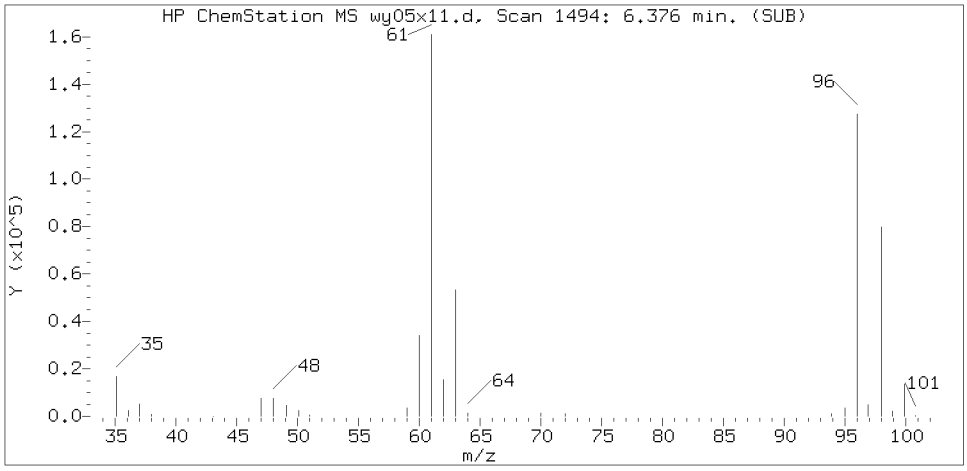
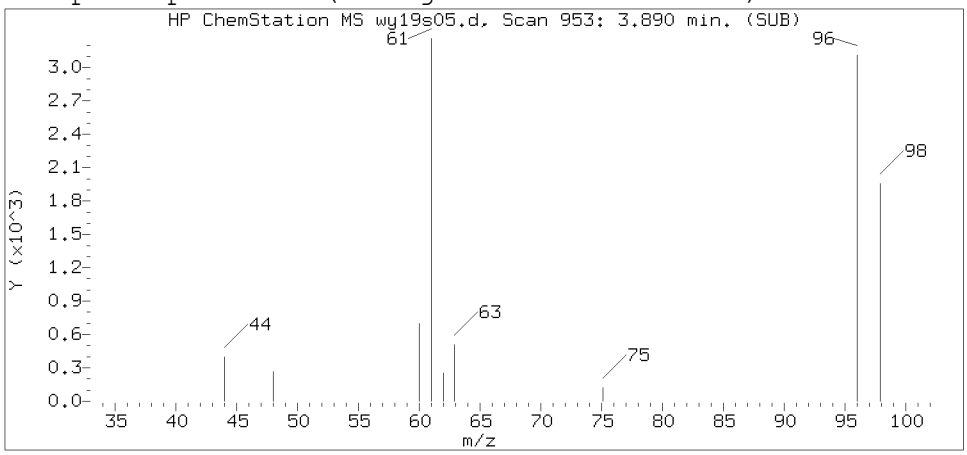
Target 3.5 esignature user ID: kas02648

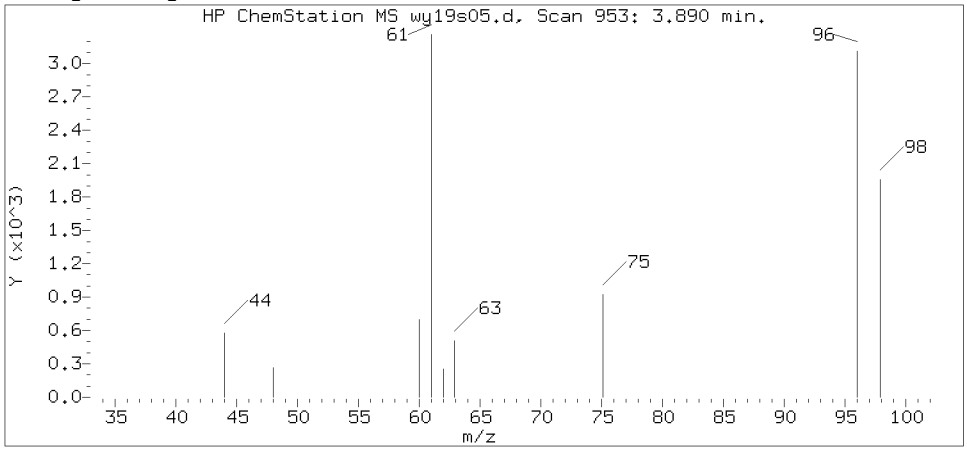
Reference Standard Spectrum for cis-1,2-Dichloroethene

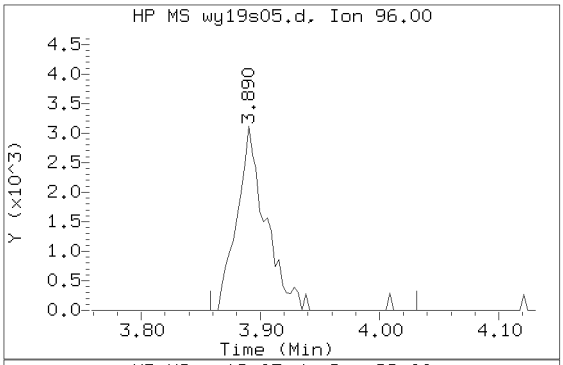


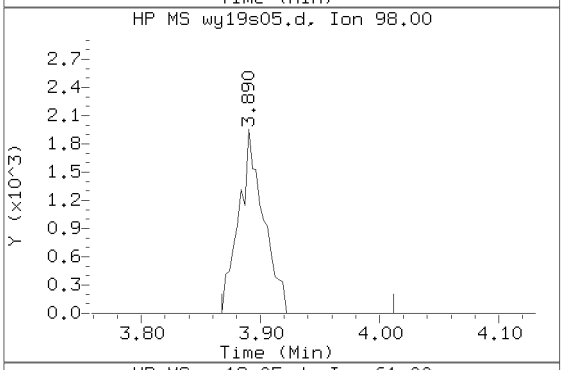
Sample Spectrum (Background Subtracted)

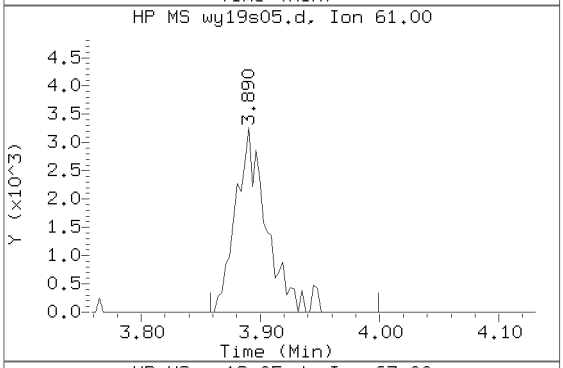


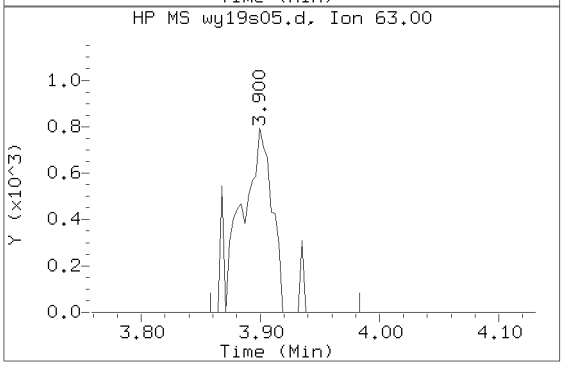
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/19may19a.b/wy19s05.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 14:42 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:09 sej02002

Sample Name: 005RS Lab Sample ID: 1053380

Compound Number	: 42
Compound Name	: cis-1,2-Dichloroethene
Scan Number	: 953
Retention Time (minutes)	: 3.890
Relative Retention Time	: 0.00015
Quant Ion	: 96.00
Area (flag)	: 5300
On-Column Amount (ng)	: 1.1581

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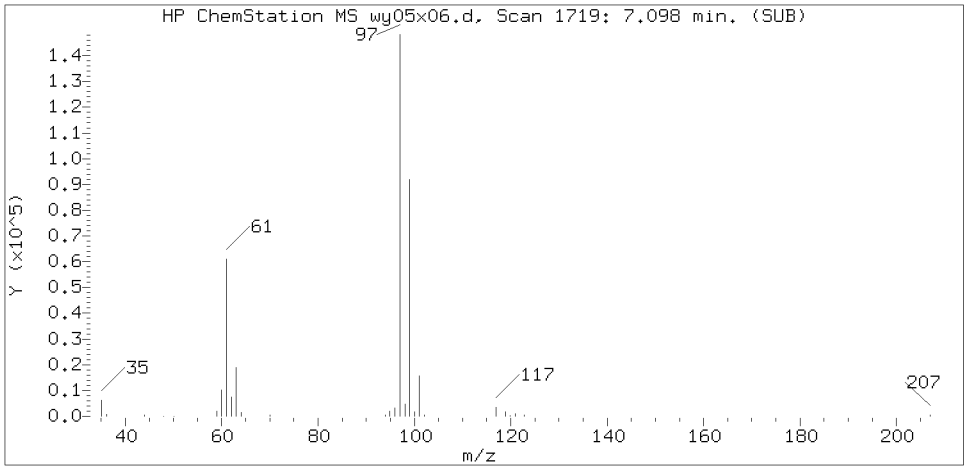
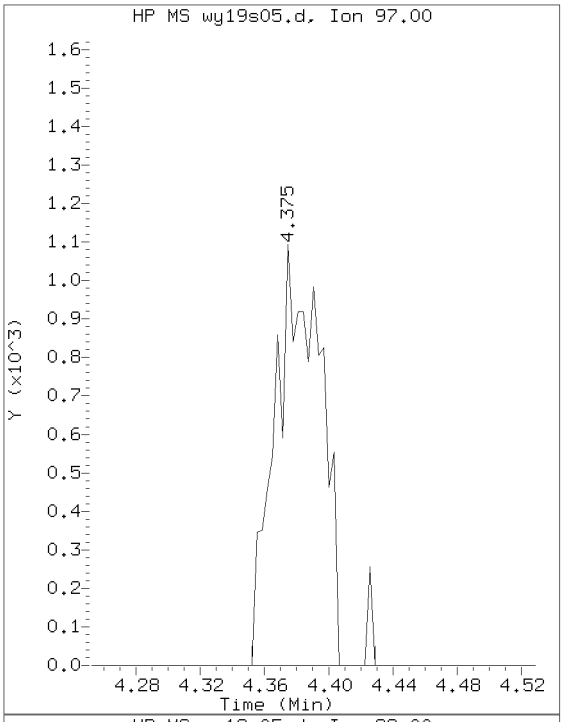
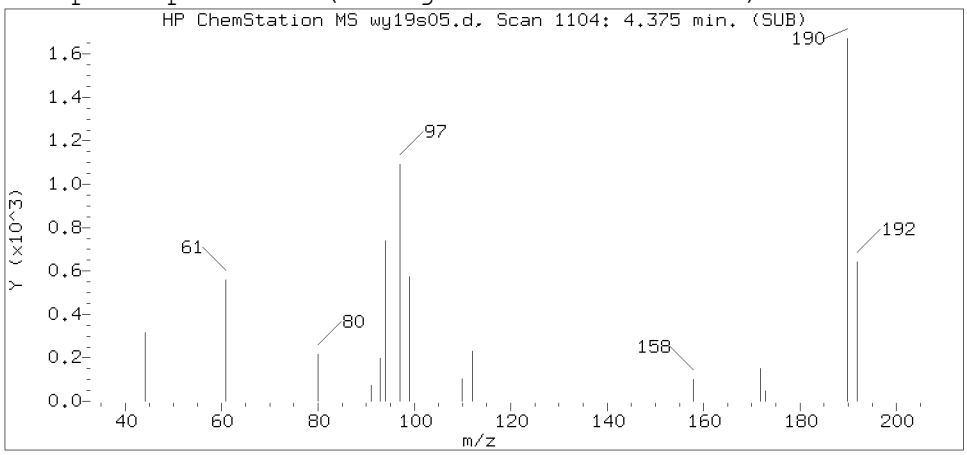
Target 3.5 esignature user ID: kas02648

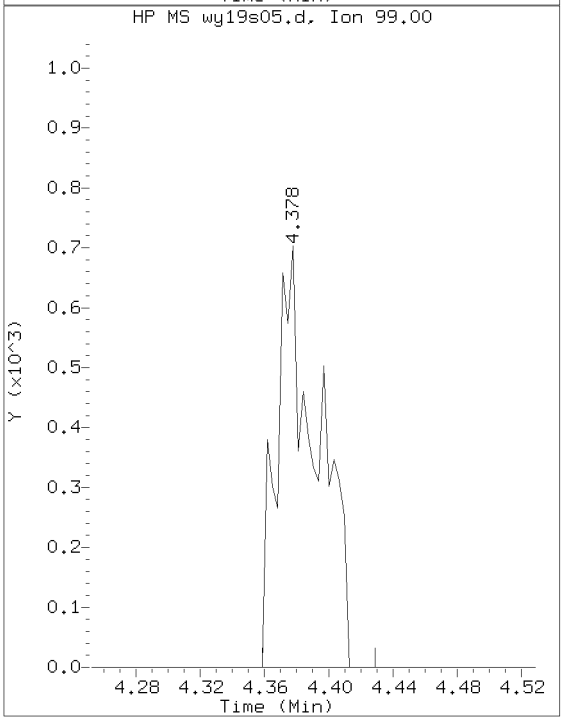
Reference Standard Spectrum for 1,1,1-Trichloroethane



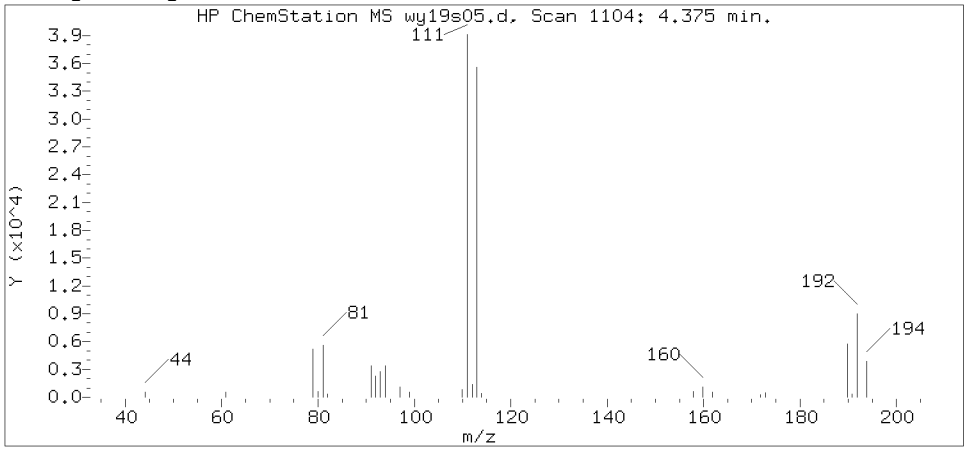


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09137.i/19may19a.b/wy19s05.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 14:42 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:09 sej02002

Sample Name: 005RS Lab Sample ID: 1053380

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1104
Retention Time (minutes)	: 4.375
Relative Retention Time	: 0.00136
Quant Ion	: 97.00
Area (flag)	: 2233
On-Column Amount (ng)	: 0.4282

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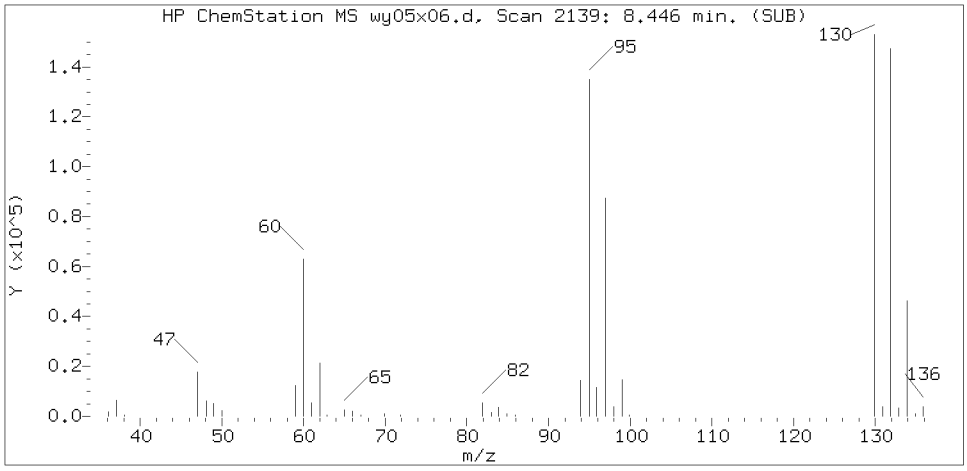
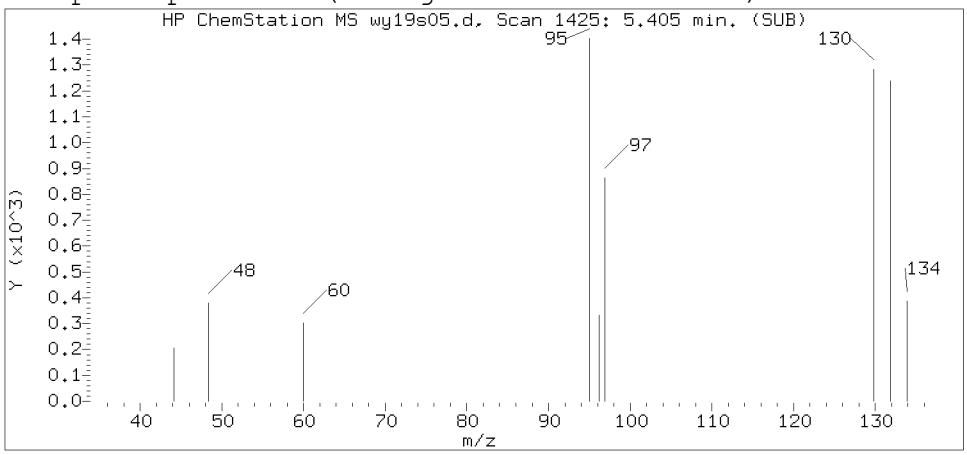
Target 3.5 esignature user ID: kas02648

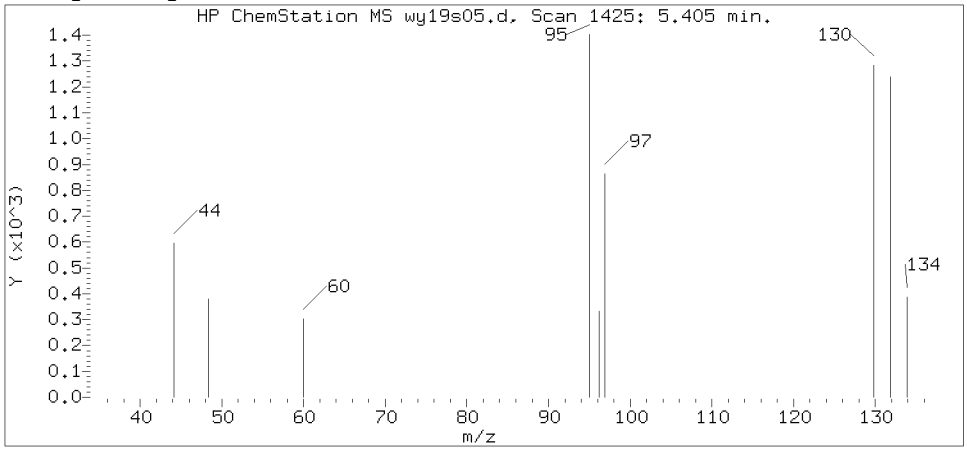
Reference Standard Spectrum for Trichloroethene

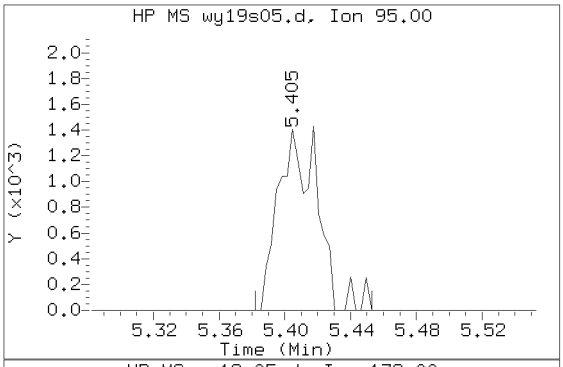


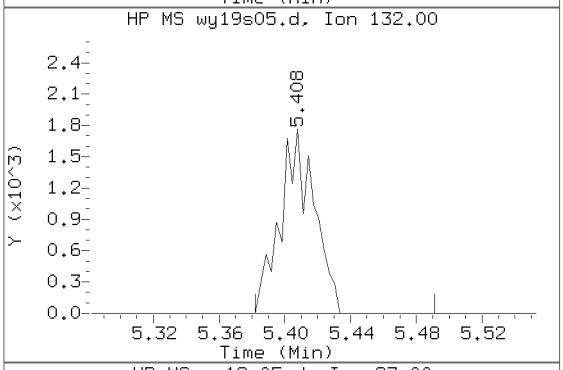
Sample Spectrum (Background Subtracted)

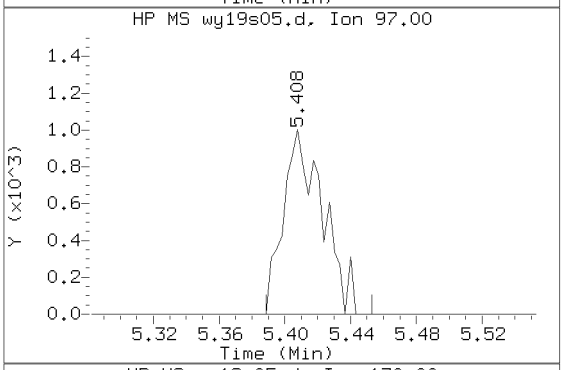


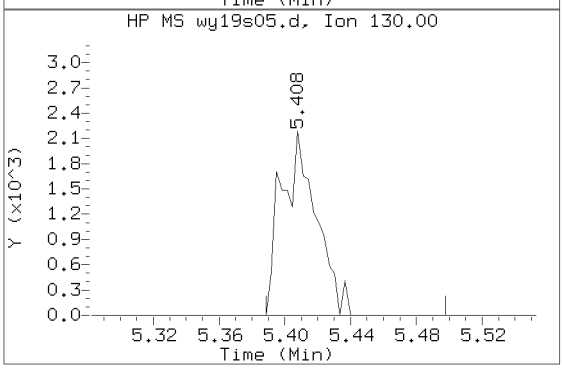
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/19may19a.b/wy19s05.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 14:42 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:09 sej02002

Sample Name: 005RS Lab Sample ID: 1053380

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 1425
Retention Time (minutes): 5.405
Relative Retention Time :-0.00005
Quant Ion : 95.00
Area (flag) : 2325
On-Column Amount (ng) : 0.5376

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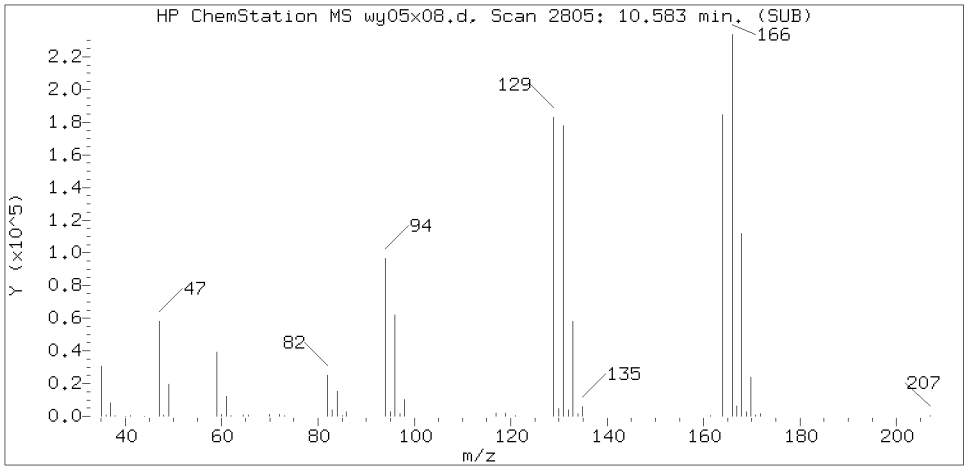
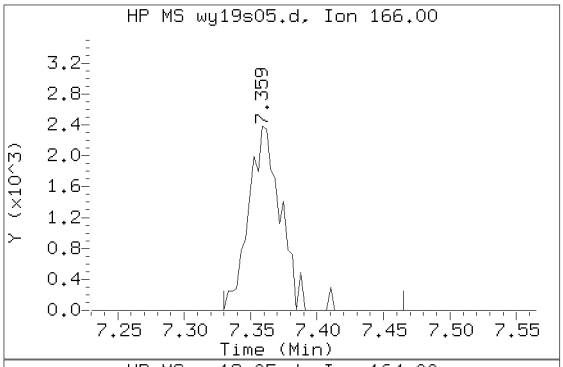
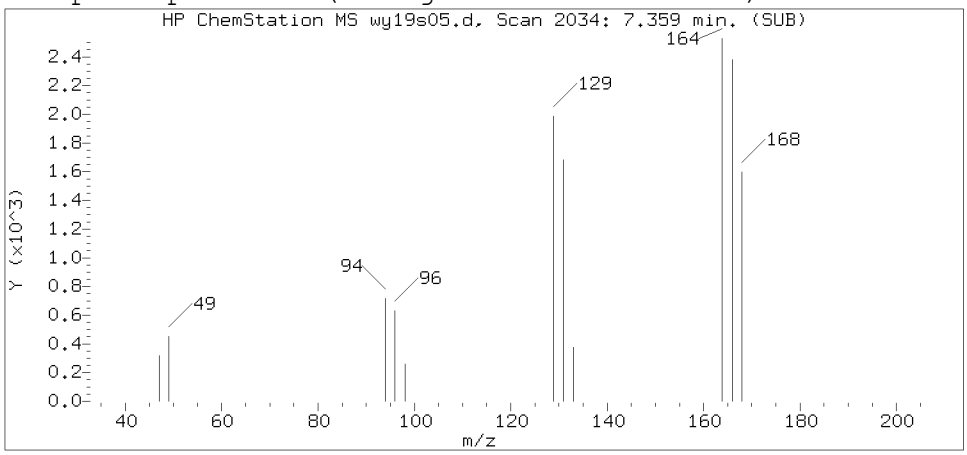
Target 3.5 esignature user ID: kas02648

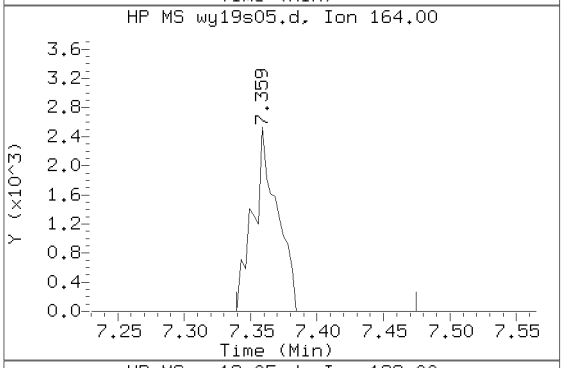
Reference Standard Spectrum for Tetrachloroethene

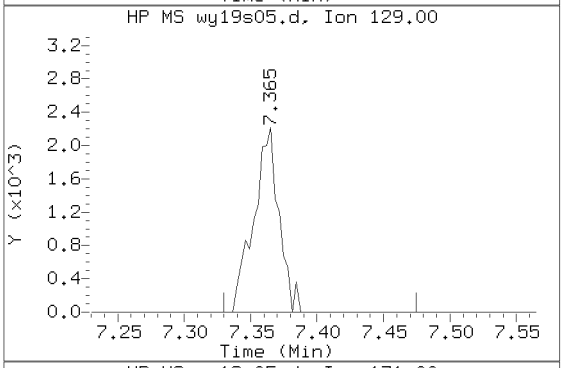




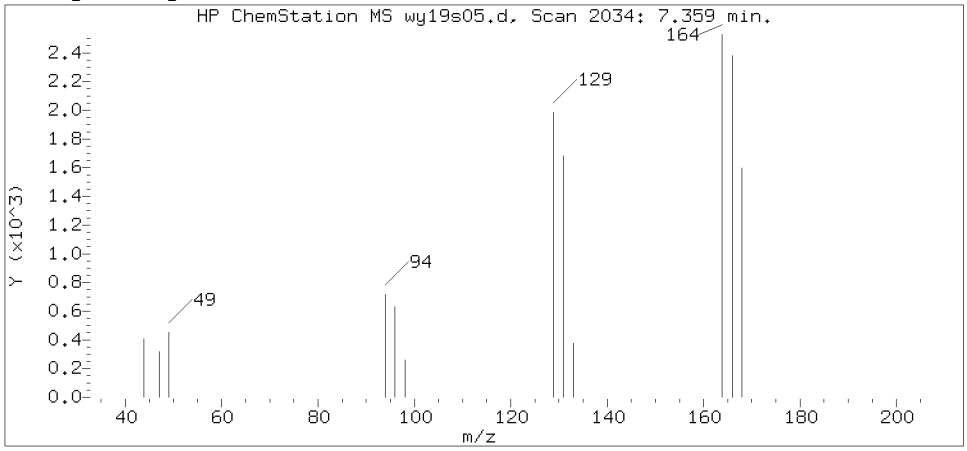
Sample Spectrum (Background Subtracted)

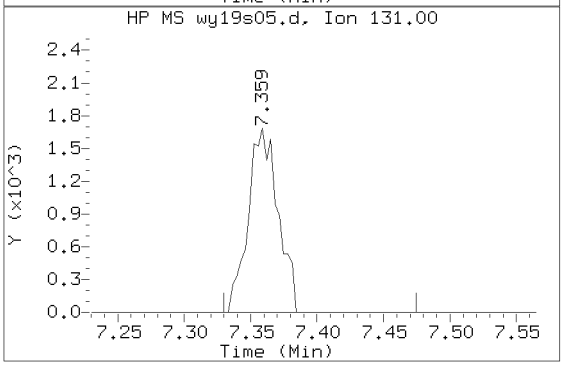






Sample Spectrum (Unaltered)





Data File: /chem2/HP09137.i/19may19a.b/wy19s05.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 14:42 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:09 sej02002

Sample Name: 005RS Lab Sample ID: 1053380

Compound Number	: 94
Compound Name	: Tetrachloroethene
Scan Number	: 2034
Retention Time (minutes)	: 7.359
Relative Retention Time	: 0.00039
Quant Ion	: 166.00
Area (flag)	: 3999
On-Column Amount (ng)	: 0.9279

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Target 3.5 esignature user ID: kas02648

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

006RS

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053381

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may19a.b/wy19s06.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	2	J
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	0.6	J
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may19a.b/wy19s06.d Injection date and time: **19-MAY-2019 15:06**
Data file Sample Info. Line: 006RS;1053381;1;0;;JCV90;;;wy19b02; Instrument ID: **HP09137.i** Batch: **W191381AB**
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may19a.b/wy19b02.d**

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 04-JUN-2019 15:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may19a.b/wy19c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:9274

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.741	(-0.006)	595	65	124381	(-34)	250.00	
66) Fluorobenzene	5.029	(0.006)	1308	96	861333	(-11)	50.00	
101) Chlorobenzene-d5	8.161	(0.000)	2284	117	665001	(-11)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041	(0.000)	2870	152	340579	(-20)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.358	(-0.001)	113	198057	49.634	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692	(-0.001)	102	54734	51.575	103%		80 - 120
84) Toluene-d8	(3)	6.698	(0.000)	98	821775	49.315	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.000)	95	285240	42.787	86%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)	2.346	(0.000)	58	1054	2.422	2.42		J	0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	5.408	(-0.001)	95	2734	0.625	0.63		J	0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)	7.356	(0.000)	166	5014	1.151	1.15			0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may19a.b/wy19s06.d Injection date and time: **19-MAY-2019 15:06**
Data file Sample Info. Line: 006RS;1053381;1;0;;JCV90;;;wy19b02; Instrument ID: **HP09137.i** Batch: **W191381AB**
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may19a.b/wy19b02.d**

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 04-JUN-2019 15:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may19a.b/wy19c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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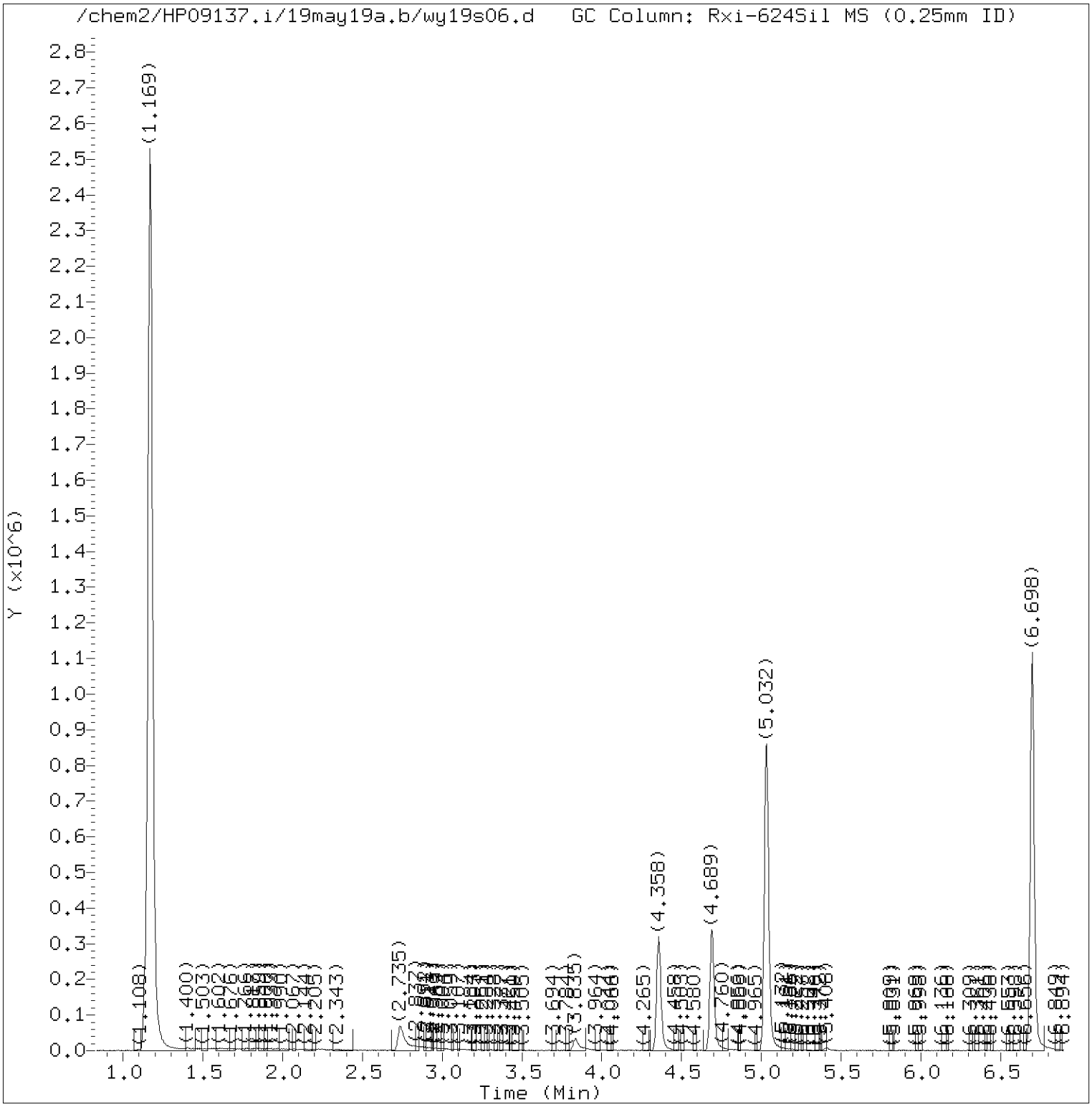
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Kevin A. Sposito on 06/07/2019 at 15:29. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Roy R. Mellott on 06/12/2019 at 17:05. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

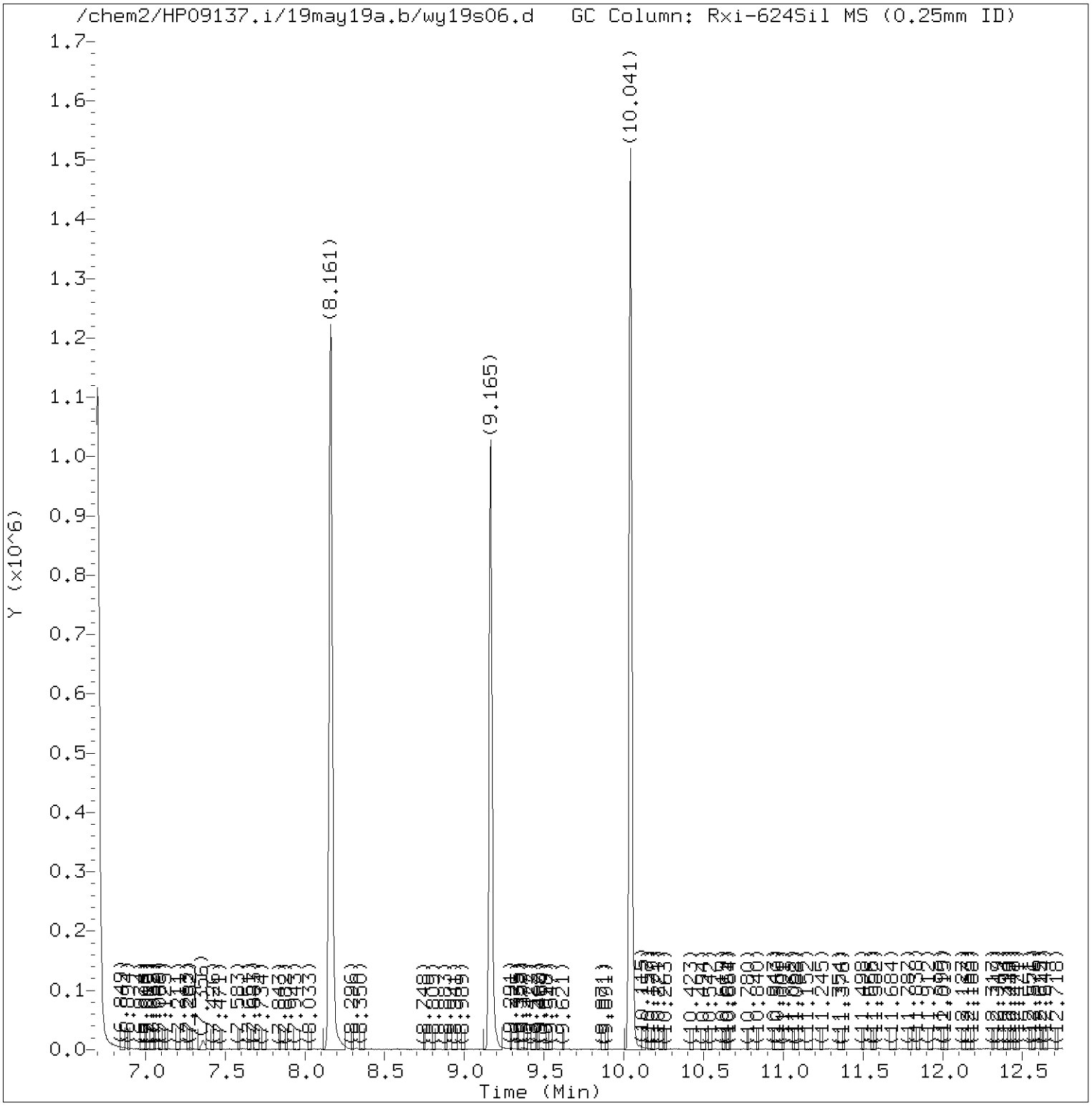
Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19s06.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 15:06 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Sample Name: 006RS Lab Sample ID: 1053381

Digitally signed by Kevin A. Sposito
on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19s06.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 15:06 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Sample Name: 006RS Lab Sample ID: 1053381

Digitally signed by Kevin A. Sposito
on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19s06.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 15:06 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Sample Name: 006RS Lab Sample ID: 1053381

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
18) Acetone	(1)	2.346	58	1054	2.422
29)*t-Butyl alcohol-d10	(1)	2.741	65	124381	250.000
52)$Dibromofluoromethane	(2)	4.358	113	198057	49.634
57)$1,2-Dichloroethane-d4	(2)	4.692	102	54734	51.575
66)*Fluorobenzene	(2)	5.029	96	861333	50.000
71) Trichloroethene	(2)	5.408	95	2734	0.625
84)$Toluene-d8	(3)	6.698	98	821775	49.315
94) Tetrachloroethene	(3)	7.356	166	5014	1.151
101)*Chlorobenzene-d5	(3)	8.161	117	665001	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	285240	42.787
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	340579	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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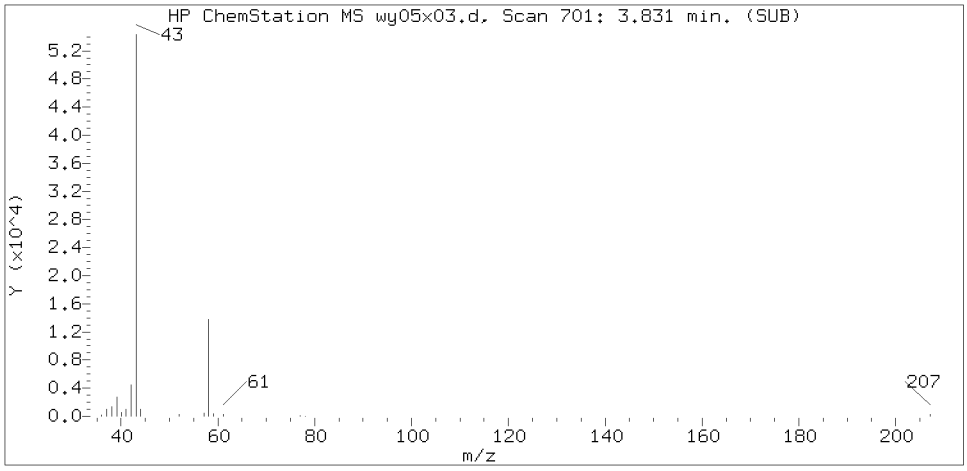
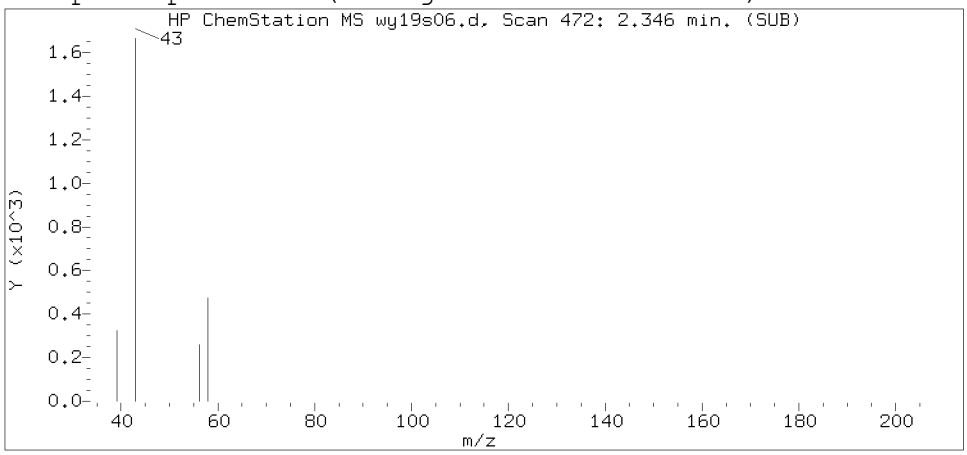
on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648

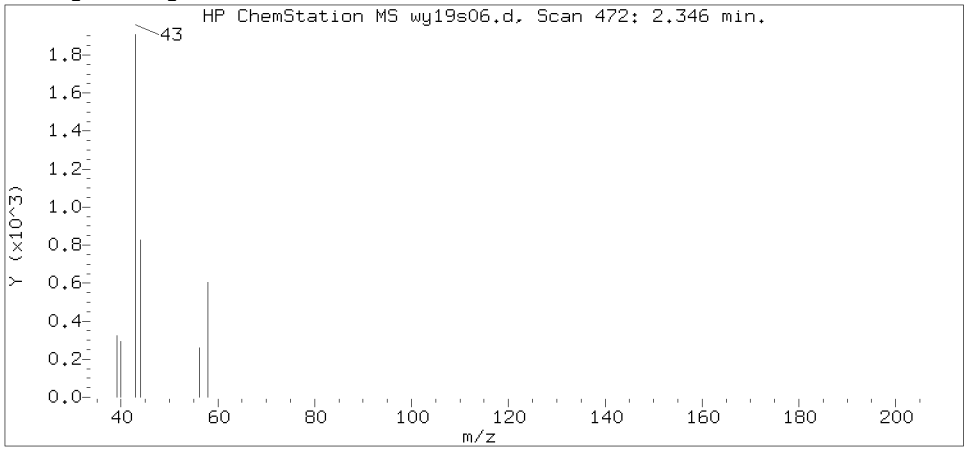
Reference Standard Spectrum for Acetone

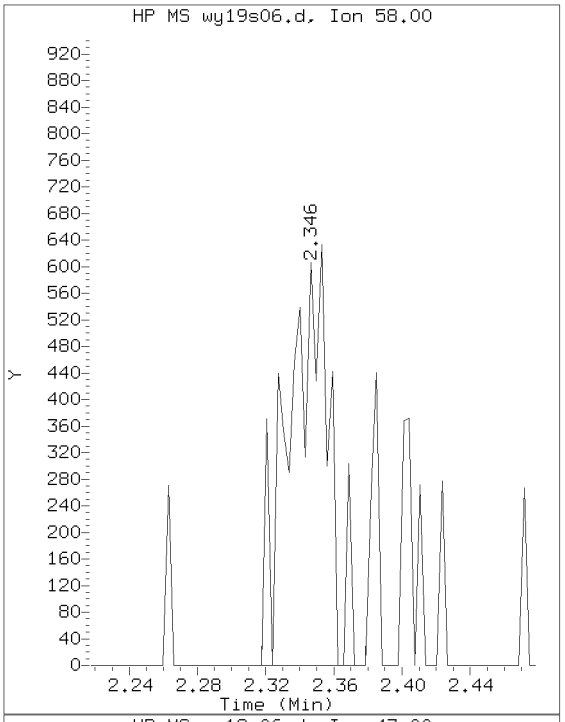


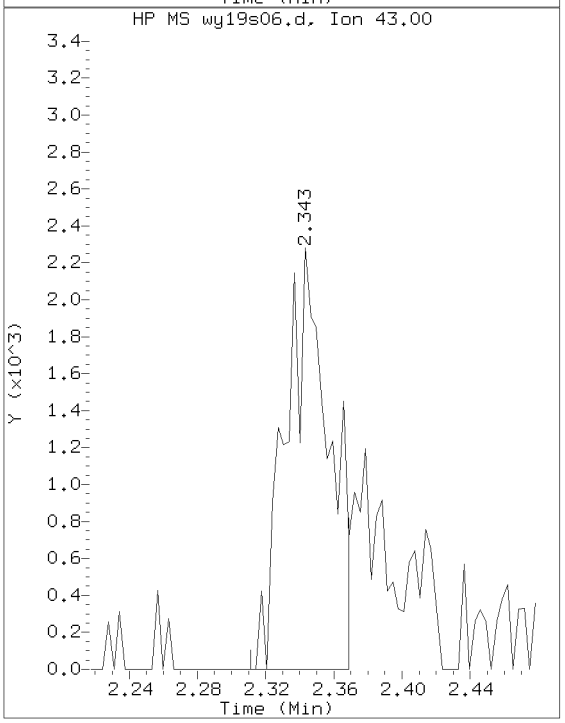
Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)







Data File: /chem2/HP09137.i/19may19a.b/wy19s06.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 15:06 Analyst ID: CBR01947

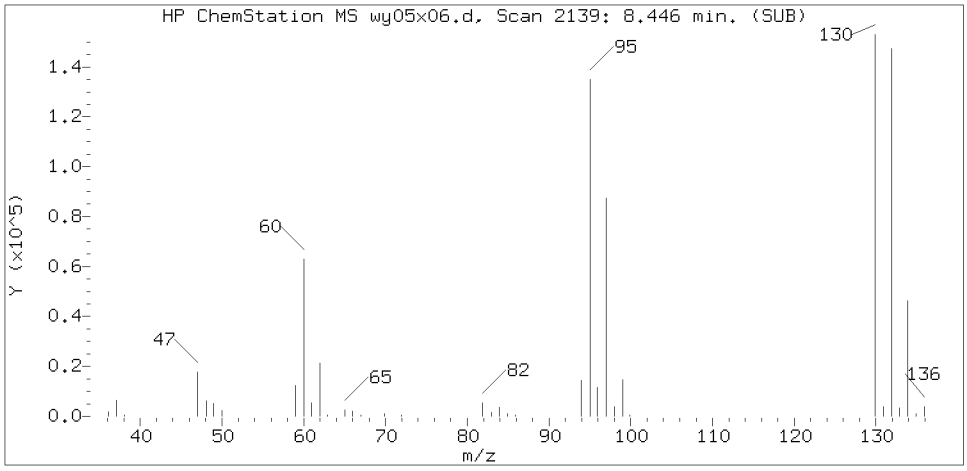
Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Sample Name: 006RS Lab Sample ID: 1053381

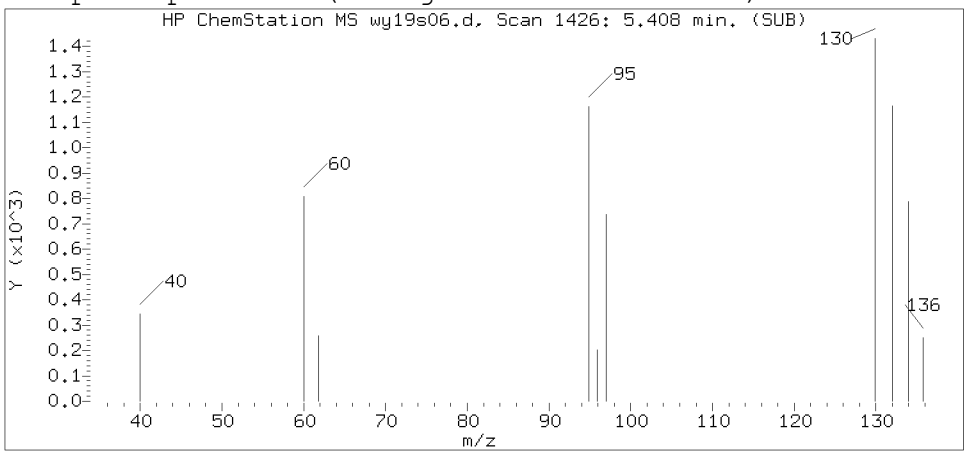
Compound Number	: 18
Compound Name	: Acetone
Scan Number	: 472
Retention Time (minutes)	: 2.346
Relative Retention Time	: 0.00084
Quant Ion	: 58.00
Area (flag)	: 1054
On-Column Amount (ng)	: 2.4219

Digitally signed by Kevin A. Sposito on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648

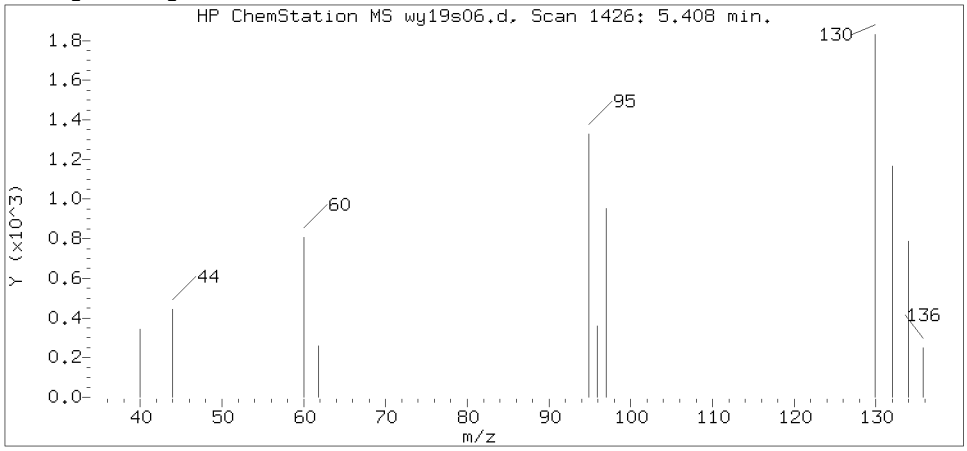
Reference Standard Spectrum for Trichloroethene

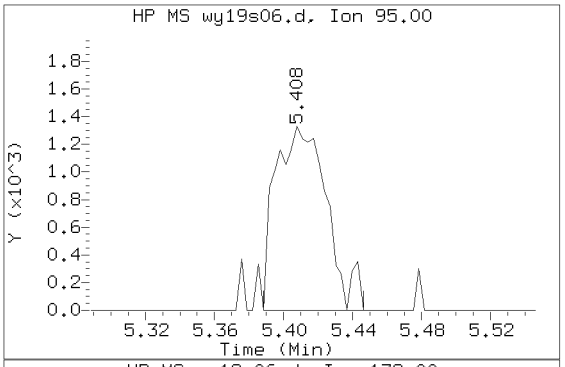


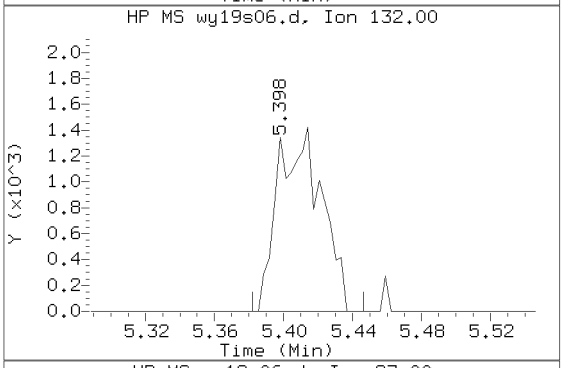
Sample Spectrum (Background Subtracted)

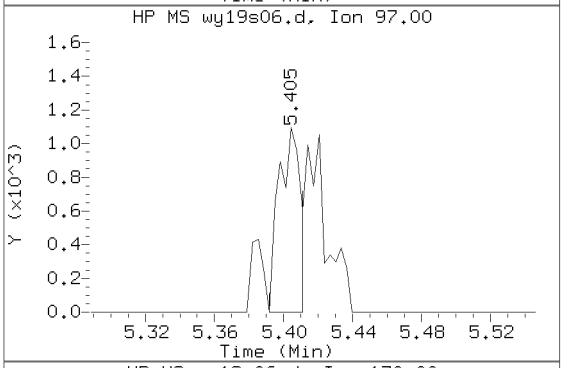


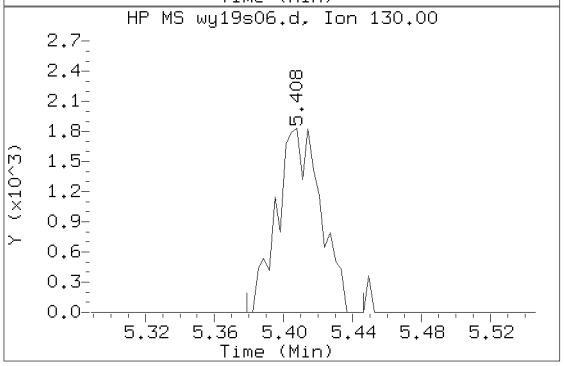
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/19may19a.b/wy19s06.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 15:06 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Sample Name: 006RS Lab Sample ID: 1053381

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 1426
Retention Time (minutes): 5.408
Relative Retention Time :-0.00137
Quant Ion : 95.00
Area (flag) : 2734
On-Column Amount (ng) : 0.6254

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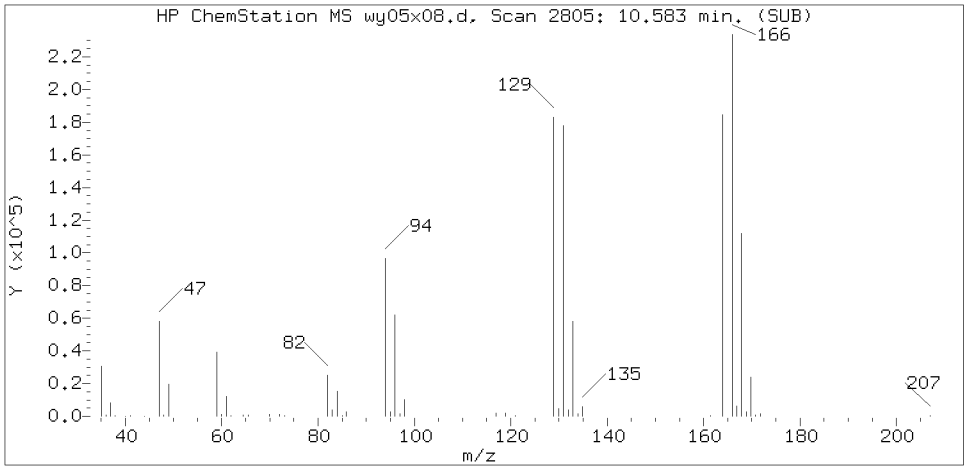
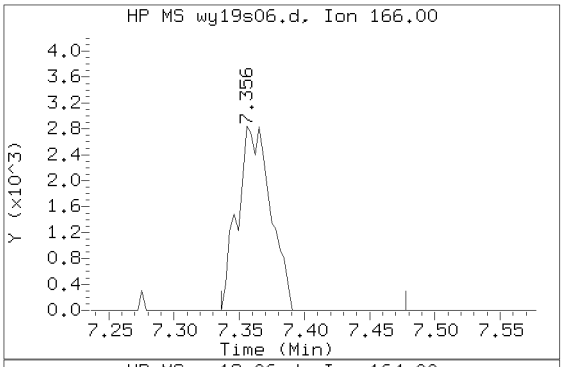
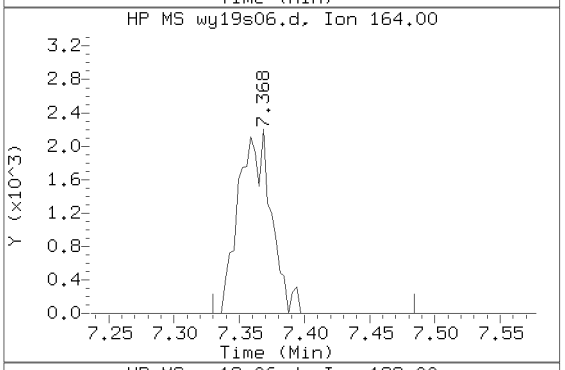
Target 3.5 esignature user ID: kas02648

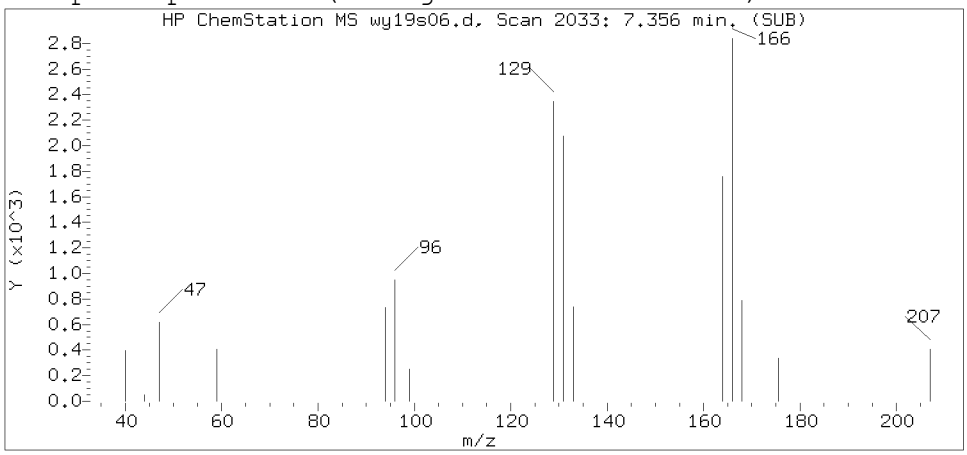
Reference Standard Spectrum for Tetrachloroethene

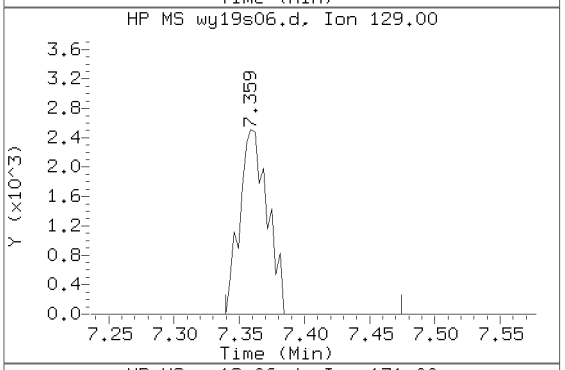




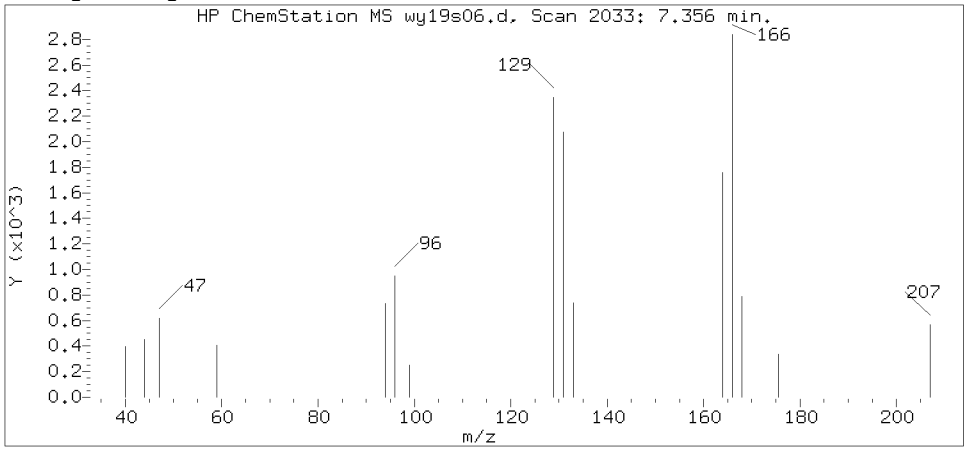


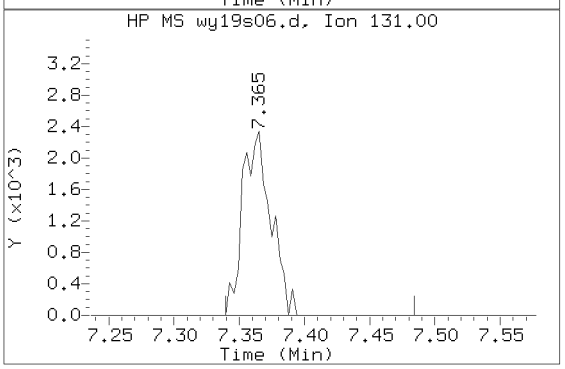
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP09137.i/19may19a.b/wy19s06.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 15:06 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 07-Jun-2019 00:06 sej02002

Sample Name: 006RS Lab Sample ID: 1053381

Compound Number : 94
Compound Name : Tetrachloroethene
Scan Number : 2033
Retention Time (minutes): 7.356
Relative Retention Time : 0.00079
Quant Ion : 166.00
Area (flag) : 5014
On-Column Amount (ng) : 1.1513

Digitally signed by Kevin A. Sposito on 06/07/2019 at 15:29.
Target 3.5 esignature user ID: kas02648

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

007RS

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053382

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s10.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

^

007RS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1053382

Data file: /chem2/HP09137.i/19may18a.b/wy18s10.d
Injection date and time: **19-MAY-2019 02:51**
Data file Sample Info. Line: 007RS;1053382;1;0;;JCV90;;;wy18b01;
Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:49 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.738	(0.000)	594	65	129701	(-32)	250.00	
66) Fluorobenzene	5.032	(0.000)	1309	96	887744	(-14)	50.00	
101) Chlorobenzene-d5	8.161	(0.000)	2284	117	694656	(-11)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041	(0.000)	2870	152	348961	(-21)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.355	(0.001)	113	202963	49.350	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692	(0.000)	102	55880	51.088	102%		80 - 120
84) Toluene-d8	(3)	6.698	(0.000)	98	867830	49.856	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.000)	95	300270	43.119	86%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Linda C. Pape on 05/28/2019 at 14:54. Target 3.5 esignature user ID: lcp00895

Data file: /chem2/HP09137.i/19may18a.b/wy18s10.d Injection date and time: **19-MAY-2019 02:51**
Data file Sample Info. Line: 007RS;1053382;1;0;;JCV90;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:49 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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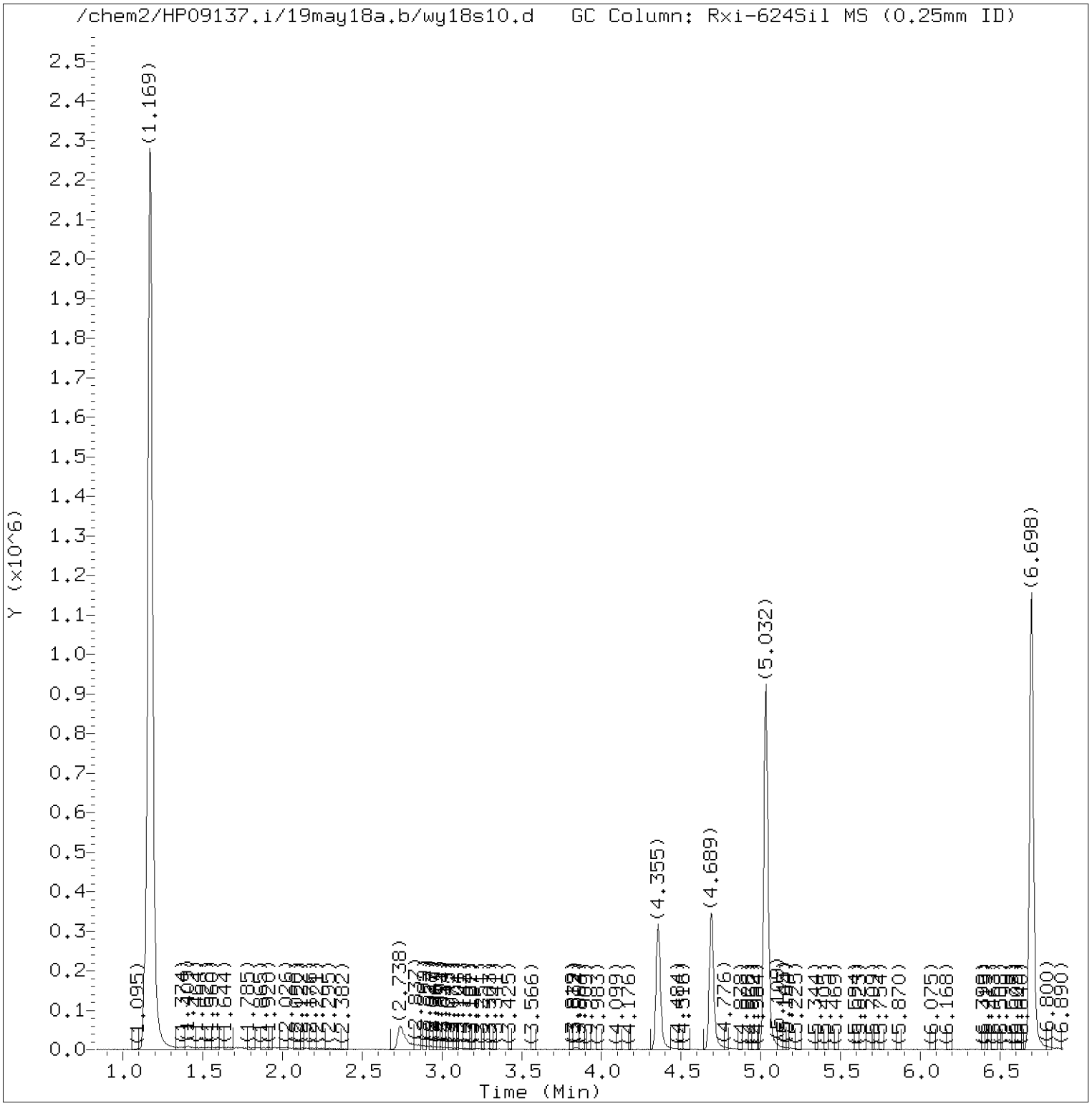
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Linda C. Pape on 05/28/2019 at 14:54. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Roy R. Mellott on 06/04/2019 at 15:40. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

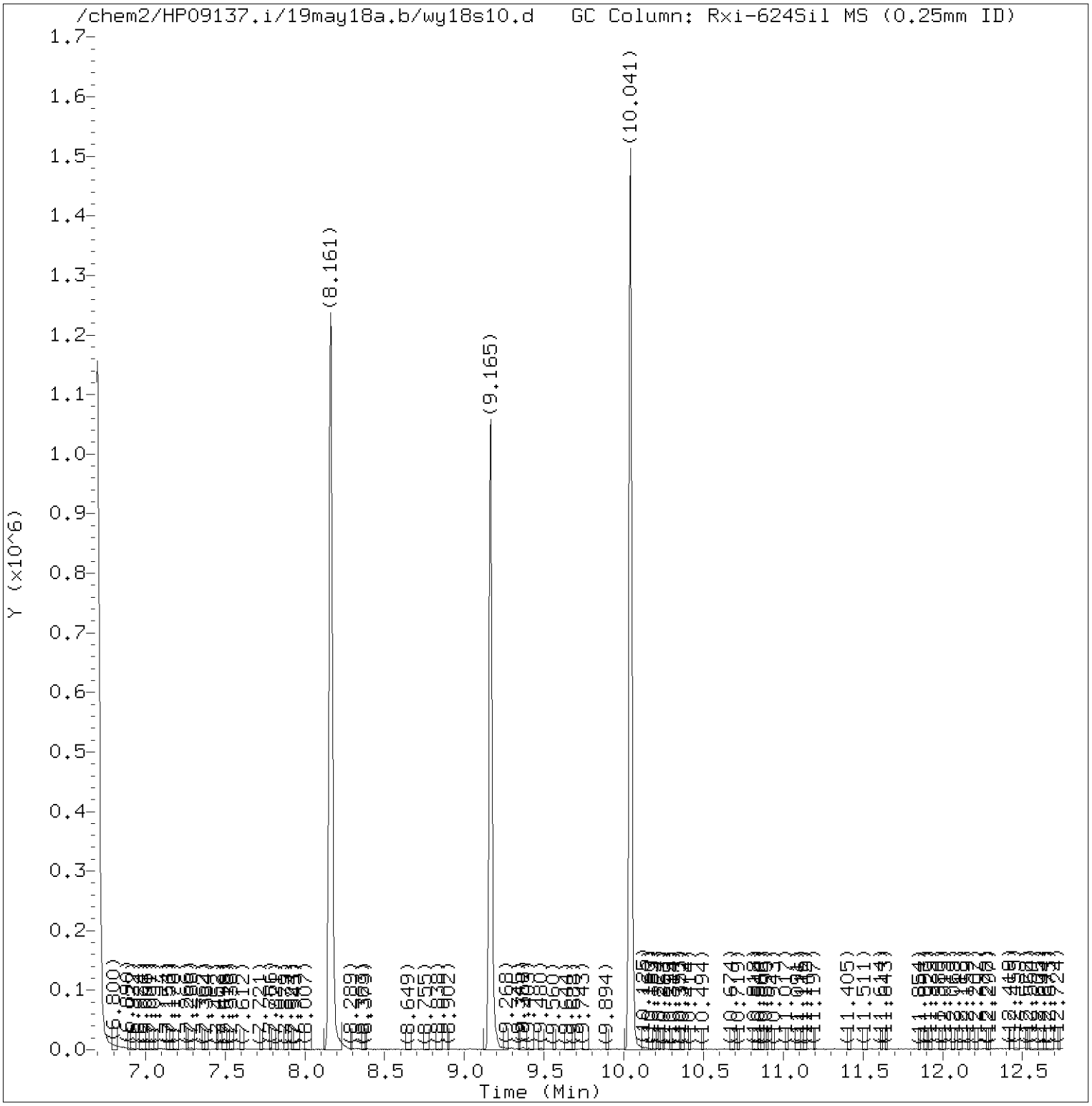
Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s10.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 02:51 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:49 lcp00895

Sample Name: 007RS Lab Sample ID: 1053382

Digitally signed by Linda C. Pape
on 05/28/2019 at 14:54.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s10.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 02:51 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:49 lcp00895

Sample Name: 007RS Lab Sample ID: 1053382

Digitally signed by Linda C. Pape
on 05/28/2019 at 14:54.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s10.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 02:51 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:49 lcp00895

Sample Name: 007RS Lab Sample ID: 1053382

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.738	65	129701	250.000
52)$Dibromofluoromethane	(2)	4.355	113	202963	49.350
57)$1,2-Dichloroethane-d4	(2)	4.692	102	55880	51.088
66)*Fluorobenzene	(2)	5.032	96	887744	50.000
84)$Toluene-d8	(3)	6.698	98	867830	49.856
101)*Chlorobenzene-d5	(3)	8.161	117	694656	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	300270	43.119
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	348961	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/28/2019 at 14:54.
Target 3.5 esignature user ID: lcp00895

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
008RS

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1053383

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s11.d

Level: (low/med) LOW Date Received: 05/09/19

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	4	J
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
179601-23-1	m+p-Xylene	5	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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008RS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1053383

Data file: /chem2/HP09137.i/19may18a.b/wy18s11.d
Data file Sample Info. Line: 008RS;1053383;1;0;;JCV90;;;wy18b01;
Date, time and analyst ID of latest file update: 28-May-2019 14:55 lcp00895

Injection date and time: **19-MAY-2019 03:15**
Instrument ID: **HP09137.i** Batch: **W191381AA**

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.741(-0.003)	595	65	152533 (-20)	250.00	
66) Fluorobenzene	5.032(0.000)	1309	96	879049 (-14)	50.00	
101) Chlorobenzene-d5	8.161(0.000)	2284	117	672115 (-14)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041(0.000)	2870	152	348025 (-22)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.355(0.001)	113	204427	50.197	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.695(-0.001)	102	54227	50.067	100%		80 - 120
84) Toluene-d8	(3)	6.698(0.000)	98	855558	50.799	102%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.165(0.000)	95	288810	42.864	86%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)	2.337(0.002)	58	2057	3.854	3.85		J	0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)			Not Detected					0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

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Data file: /chem2/HP09137.i/19may18a.b/wy18s11.d Injection date and time: **19-MAY-2019 03:15**
Data file Sample Info. Line: 008RS;1053383;1;0;;JCV90;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 28-May-2019 14:55 lcp00895

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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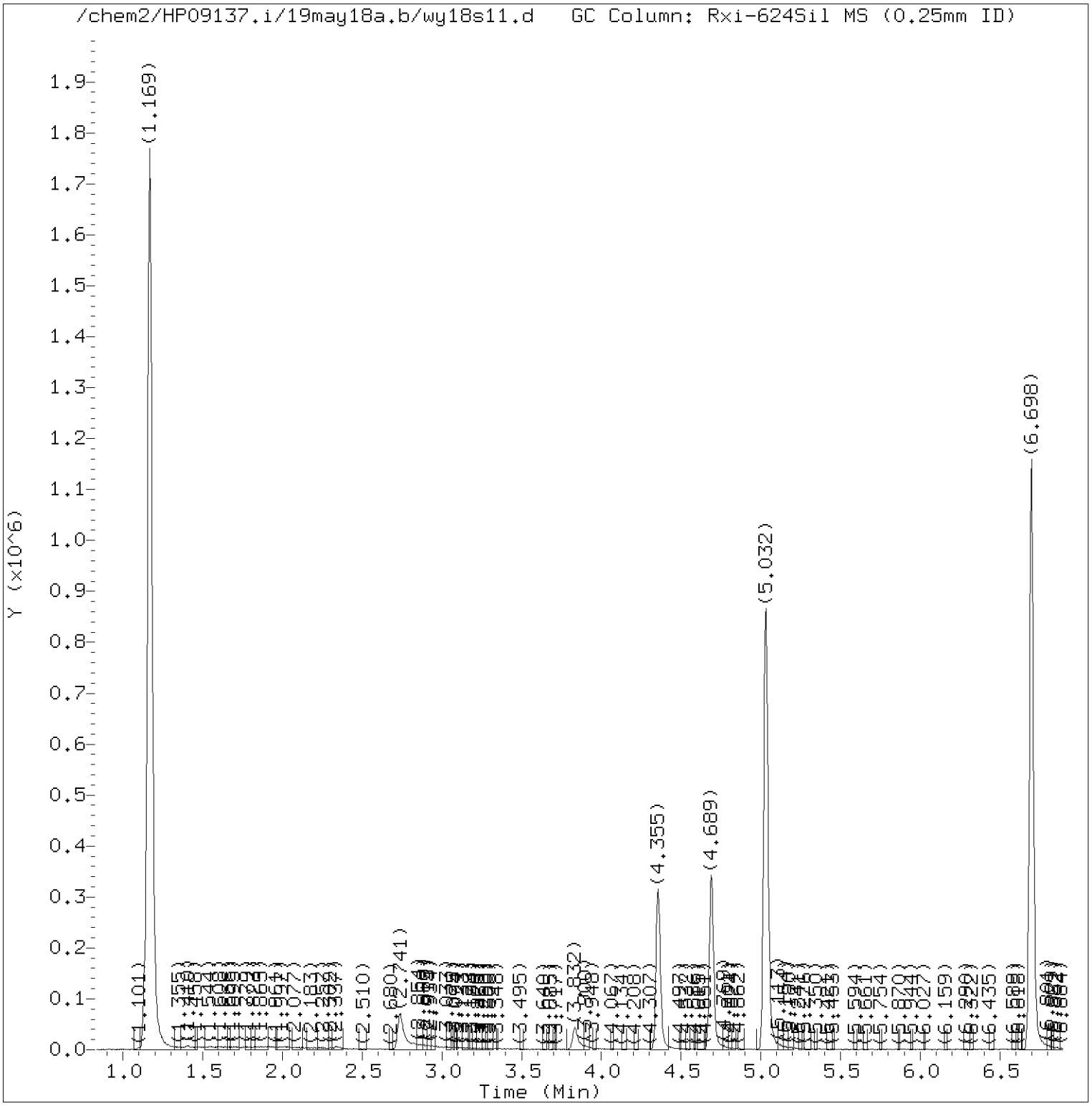
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Linda C. Pape on 05/28/2019 at 14:55. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Roy R. Mellott on 06/27/2019 at 11:25. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

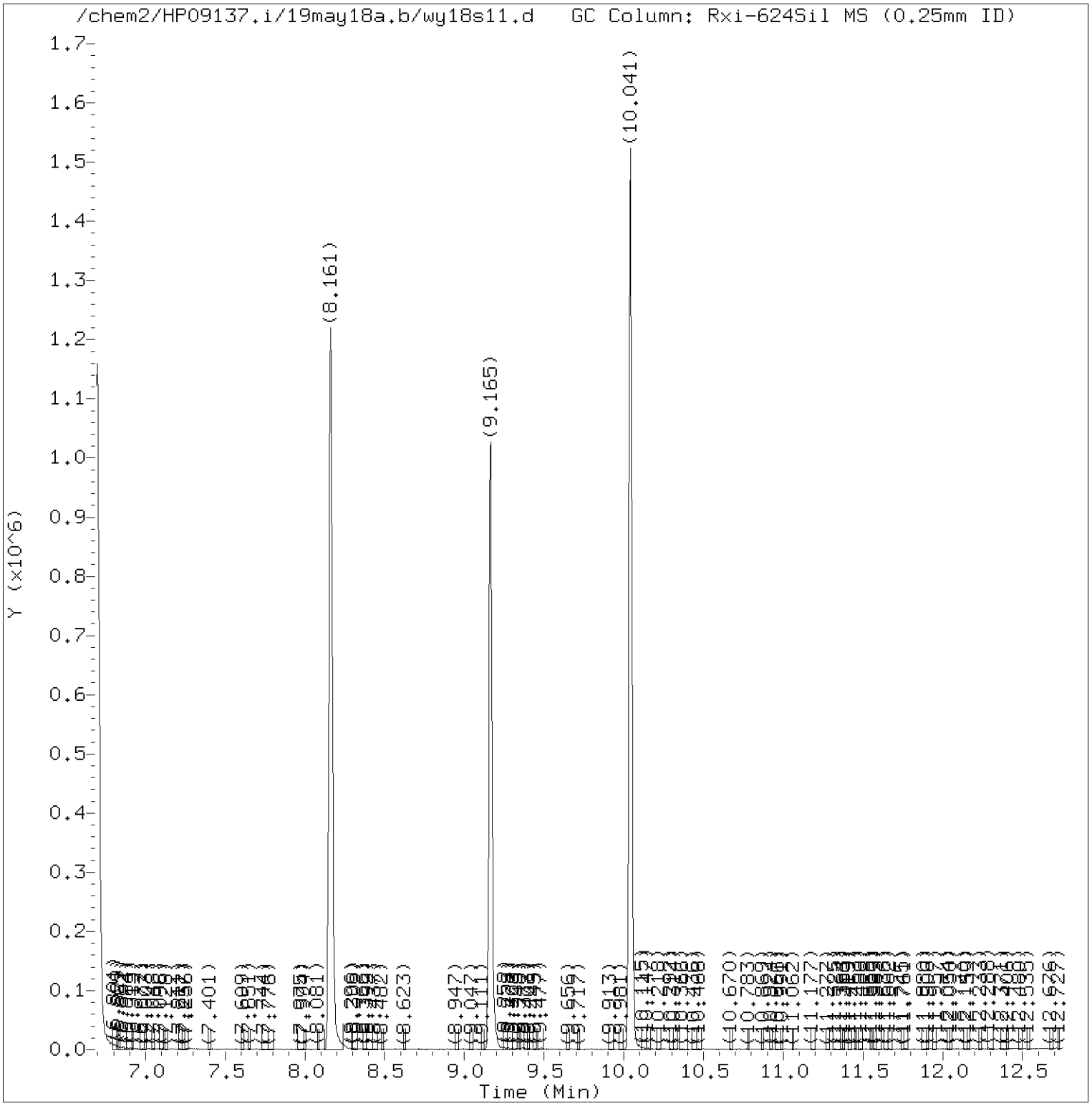
Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s11.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 03:15 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:55 lcp00895

Sample Name: 008RS Lab Sample ID: 1053383

Digitally signed by Linda C. Pape
on 05/28/2019 at 14:55.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s11.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 03:15 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:55 lcp00895

Sample Name: 008RS Lab Sample ID: 1053383

Digitally signed by Linda C. Pape
on 05/28/2019 at 14:55.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s11.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 03:15 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:55 lcp00895

Sample Name: 008RS Lab Sample ID: 1053383

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
18) Acetone	(1)	2.337	58	2057	3.854
29)*t-Butyl alcohol-d10	(1)	2.741	65	152533	250.000
52)$Dibromofluoromethane	(2)	4.355	113	204427	50.197
57)$1,2-Dichloroethane-d4	(2)	4.695	102	54227	50.067
66)*Fluorobenzene	(2)	5.032	96	879049	50.000
84)$Toluene-d8	(3)	6.698	98	855558	50.799
101)*Chlorobenzene-d5	(3)	8.161	117	672115	50.000
115)$4-Bromofluorobenzene	(3)	9.165	95	288810	42.864
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	348025	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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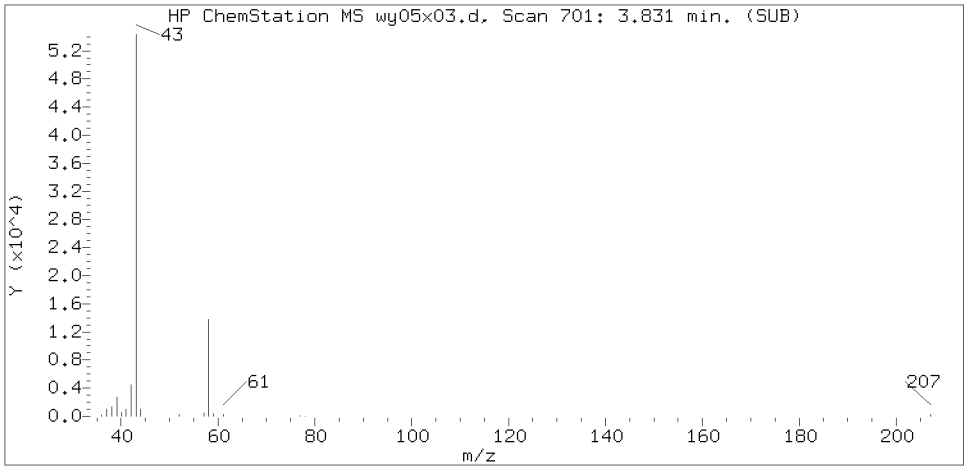
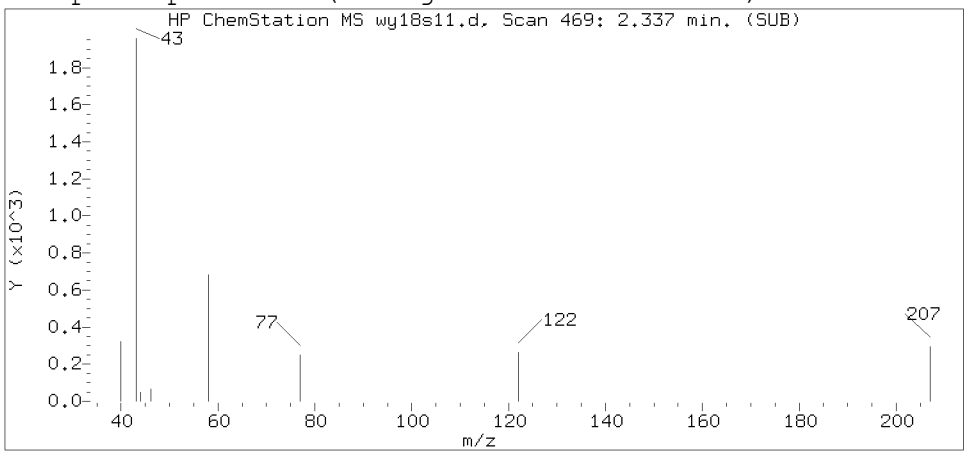
on 05/28/2019 at 14:55.
Target 3.5 esignature user ID: lcp00895

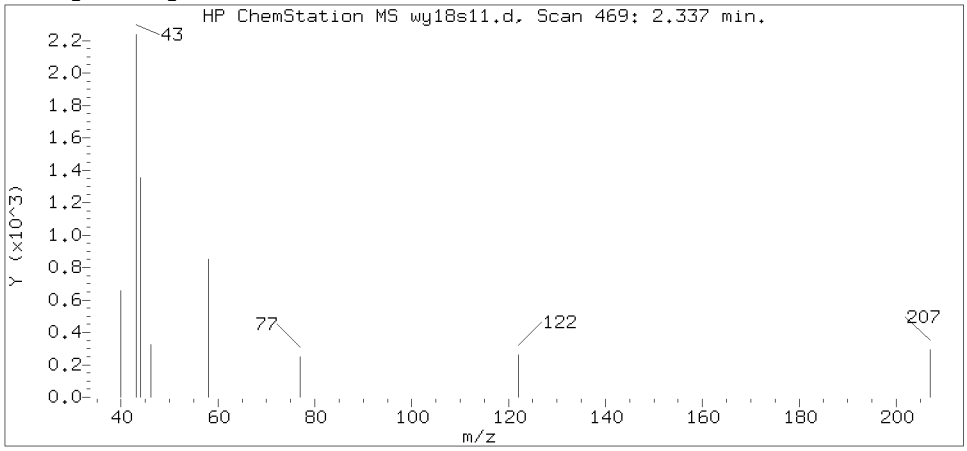
Reference Standard Spectrum for Acetone

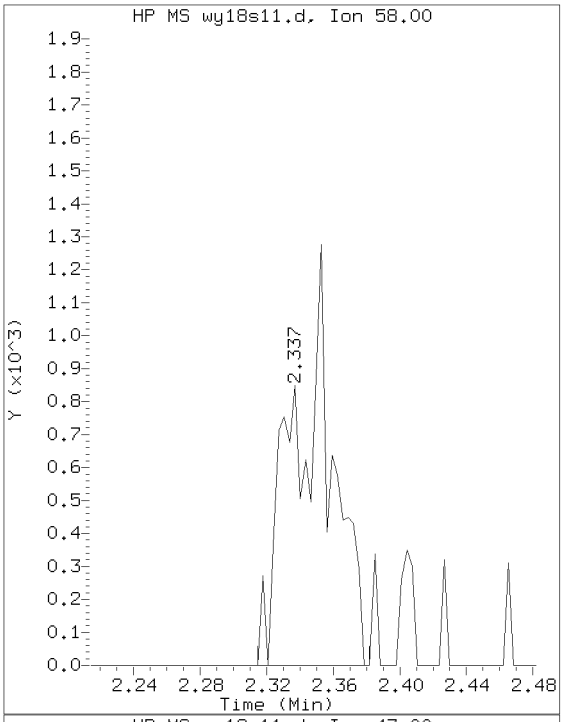


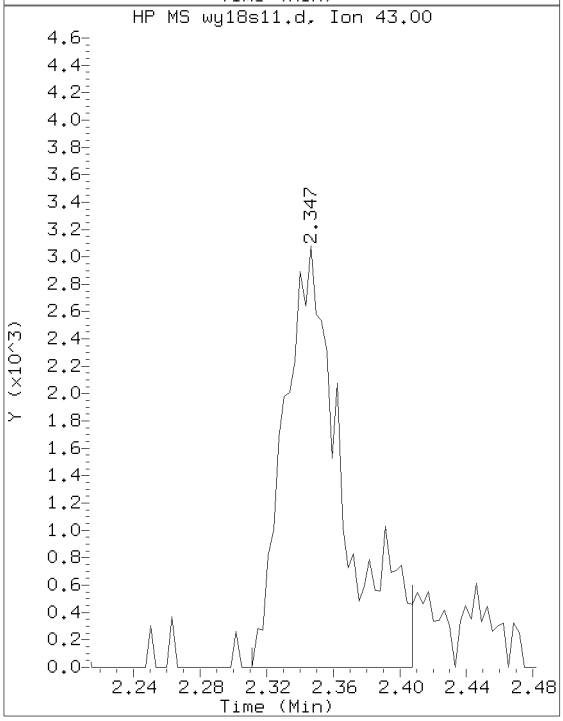
Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)







Data File: /chem2/HP09137.i/19may18a.b/wy18s11.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 03:15 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 28-May-2019 14:55 lcp00895

Sample Name: 008RS Lab Sample ID: 1053383

Compound Number	: 18
Compound Name	: Acetone
Scan Number	: 469
Retention Time (minutes)	: 2.337
Relative Retention Time	: 0.00217
Quant Ion	: 58.00
Area (flag)	: 2057
On-Column Amount (ng)	: 3.8538

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Target 3.5 esignature user ID: lcp00895

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09137 **HP #18**

Data Directory Path is - D:\DATA\19FEB19I\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
apr27582	WF19T01.D	50NGBFB	02/19/2019	11:32	W183623AA	
APR27582	WF19I01.D	VSTD300	02/19/2019	12:21		
APR27582	WF19I02.D	VSTD100	02/19/2019	12:45		
APR27582	WF19I03.D	VSTD050	02/19/2019	13:09		
APR27582	WF19I04.D	VSTD020	02/19/2019	13:33		
APR27582	WF19I05.D	VSTD010	02/19/2019	13:57		
APR27582	WF19I06.D	VSTD004	02/19/2019	14:21		
APR27582	WF19I07.D	VSTD001	02/19/2019	14:44		
APR27582	WF19X02.D	CLNBLK	02/19/2019	15:08		
APR27582	WF19V01.D	LCSWICV	02/19/2019	15:32		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09137 **HP #18**

Data Directory Path is - D:\DATA\19FEB20A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
apr27582	WF20T01.D	50NGBFB	02/20/2019	08:47	W183623AA	
APR27582	WF20X01.D	VBLKW62	02/20/2019	09:13	W190511AA	
APR27582	WF20C01.D	VSTD050	02/20/2019	09:37	W190511AA	
APR27582	WF20X02.D	VBLKW62	02/20/2019	10:01	W190511AA	
APR27582	WF20X03.D	VBLKW62	02/20/2019	10:31	W190511AA	
APR27582	WF20C02.D	VSTD050	02/20/2019	10:55	W190511AA	
APR27582	WF20X04.D	VBLKW62	02/20/2019	11:19	W190511AA	
APR27582	WF20B01.D	VBLKW62	02/20/2019	11:43	W190511AA	
APR27582	WF20L01.D	LCSW62	02/20/2019	12:07	W190511AA	
APR27582	WF20B02.D	VBLKW62	02/20/2019	12:30	W190511AA	
APR27582	WF20S02.D	9979095	02/20/2019	12:57	W190511AA	
APR27582	WF20S03.D	9979096	02/20/2019	13:21	W190511AA	
APR27582	WF20S04.D	9979097	02/20/2019	13:45	W190511AA	
APR27582	WF20S05.D	9979099	02/20/2019	14:09	W190511AA	
APR27582	WF20S06.D	9979107	02/20/2019	14:32	W190511AA	
APR27582	WF20S07.D	9979108	02/20/2019	14:56	W190511AA	
APR27582	WF20S08.D	9979109	02/20/2019	15:20	W190511AA	
APR27582	WF20S09.D	9979090	02/20/2019	15:44	W190511AA	
APR27582	WF20S10.D	9979091	02/20/2019	16:08	W190511AA	
APR27582	WF20S17.D	9985342	02/20/2019	16:32	W190511AA	
APR27582	WF20S18.D	9985343MS	02/20/2019	16:56	W190511AA	
APR27582	WF20S19.D	9985344MSD	02/20/2019	17:20	W190511AA	
APR27582	WF20S11.D	9979112	02/20/2019	17:43	W190511AA	
APR27582	WF20S12.D	9987236	02/20/2019	18:07	W190511AA	
APR27582	WF20S13.D	9986162	02/20/2019	18:31	W190511AA	
APR27582	WF20S20.D	9987235	02/20/2019	18:55	W190511AA	
APR27582	WF20S21.D	9985346	02/20/2019	19:19	W190511AA	

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09137 **HP #18**

Data Directory Path is - D:\DATA\19MAY18a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
SEJ02002	WY18T01.D	BFB 50NG	05/18/2019	21:44		
SEJ02002	WY18C01.D	VSTD050	05/18/2019	22:05	W191381AA	
SEJ02002	WY18S01.D	LCSW23	05/18/2019	22:29	W191381AA	
SEJ02002	WY18B00.D	VBLKW23	05/18/2019	22:53	W191381AA	
SEJ02002	WY18B01.D	VBLKW23	05/18/2019	23:17	W191381AA	
SEJ02002	WY18S02.D	1053375	05/18/2019	23:41	W191381AA	
SEJ02002	WY18S03.D	1053374	05/19/2019	00:04	W191381AA	
SEJ02002	WY18S04.D	1053376	05/19/2019	00:28	W191381AA	
SEJ02002	WY18S05.D	1053377	05/19/2019	00:52	W191381AA	
SEJ02002	WY18S06.D	1053378	05/19/2019	01:16	W191381AA	
SEJ02002	WY18S07.D	1053379	05/19/2019	01:39	W191381AA	
SEJ02002	WY18S08.D	1053380	05/19/2019	02:03	W191381AA	
SEJ02002	WY18S09.D	1053381	05/19/2019	02:27	W191381AA	
SEJ02002	WY18S10.D	1053382	05/19/2019	02:51	W191381AA	
SEJ02002	WY18S11.D	1053383	05/19/2019	03:15	W191381AA	
SEJ02002	WY18S12.D	1053359	05/19/2019	03:39	W191381AA	
SEJ02002	WY18S13.D	1053360MS	05/19/2019	04:02	W191381AA	
SEJ02002	WY18S14.D	1053361MSD	05/19/2019	04:26	W191381AA	
SEJ02002	WY18S15.D	1053352	05/19/2019	04:50	W191381AA	
SEJ02002	WY18S16.D	1053353	05/19/2019	05:14	W191381AA	
SEJ02002	WY18S17.D	1053354	05/19/2019	05:38	W191381AA	
SEJ02002	WY18S18.D	1053355	05/19/2019	06:01	W191381AA	
SEJ02002	WY18S19.D	1053356	05/19/2019	06:25	W191381AA	
SEJ02002	WY18S20.D	1053357	05/19/2019	06:49	W191381AA	
SEJ02002	WY18S21.D	1053358	05/19/2019	07:13	W191381AA	
SEJ02002	WY18S22.D	1053362	05/19/2019	07:36	W191381AA	
SEJ02002	WY18S23.D	1053363	05/19/2019	08:00	W191381AA	

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09137 **HP #18**

Data Directory Path is - d:\data\19may19A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
ANYONE	WY19X05.D	BLK	05/19/2019	09:35		
ANYONE	WY19X06.D	BLK	05/19/2019	09:59		
CBR01947	WY19T01.D	BFB 50NG	05/19/2019	11:04		
CBR01947	WY19C01.D	VSTD050	05/19/2019	11:32	W191381AB	
CBR01947	WY19B01.D	VBLKW24	05/19/2019	11:56	W191381AB	
CBR01947	WY19B02.D	VBLKW24	05/19/2019	12:20	W191381AB	
CBR01947	WY19L01.D	LCSW24	05/19/2019	12:44	W191381AB	
CBR01947	WY19M01.D	MDL0.5	05/19/2019	13:07	W191381AB	
CBR01947	WY19S02.D	1053374	05/19/2019	13:31	W191381AB	
CBR01947	WY19S03.D	1053377	05/19/2019	13:55	W191381AB	
CBR01947	WY19S04.D	1053378	05/19/2019	14:18	W191381AB	
CBR01947	WY19S05.D	1053380	05/19/2019	14:42	W191381AB	
CBR01947	WY19S06.D	1053381	05/19/2019	15:06	W191381AB	
CBR01947	WY19S07.D	1053359	05/19/2019	15:30	W191381AB	
CBR01947	WY19S10.D	1052543	05/19/2019	15:53	W191391AA	
CBR01947	WY19S11.D	1052544	05/19/2019	16:17	W191391AA	
CBR01947	WY19S12.D	1052545	05/19/2019	16:41	W191391AA	
CBR01947	WY19S13.D	1052546	05/19/2019	17:05	W191391AA	
CBR01947	WY19S14.D	1052547MS	05/19/2019	17:29	W191391AA	
CBR01947	WY19S15.D	1052548MSD	05/19/2019	17:52	W191391AA	
CBR01947	WY19S16.D	1052549	05/19/2019	18:16	W191391AA	
CBR01947	WY19S17.D	1052550	05/19/2019	18:40	W191391AA	
CBR01947	WY19S18.D	1052551	05/19/2019	19:04	W191391AA	
CBR01947	WY19S19.D	1052552	05/19/2019	19:28	W191391AA	
CBR01947	WY19S20.D	1052553	05/19/2019	19:52	W191391AA	
CBR01947	WY19S21.D	1052554	05/19/2019	20:15	W191391AA	
CBR01947	WY19S22.D	1052555	05/19/2019	20:39	W191391AA	
CBR01947	WY19S23.D	1052556	05/19/2019	21:03	W191391AA	
CBR01947	WY19S24.D	1052987	05/19/2019	21:27	W191391AA	
CBR01947	WY19S25.D	1052988	05/19/2019	21:50	W191391AA	
CBR01947	WY19EC1.D	SECC050	05/19/2019	22:14	W191391AA	

Data File: /chem2/HP09137.i/19feb19i.b/wf19t01.d

Page 1

Date : 19-FEB-2019 11:32

Client ID: FEB05-19

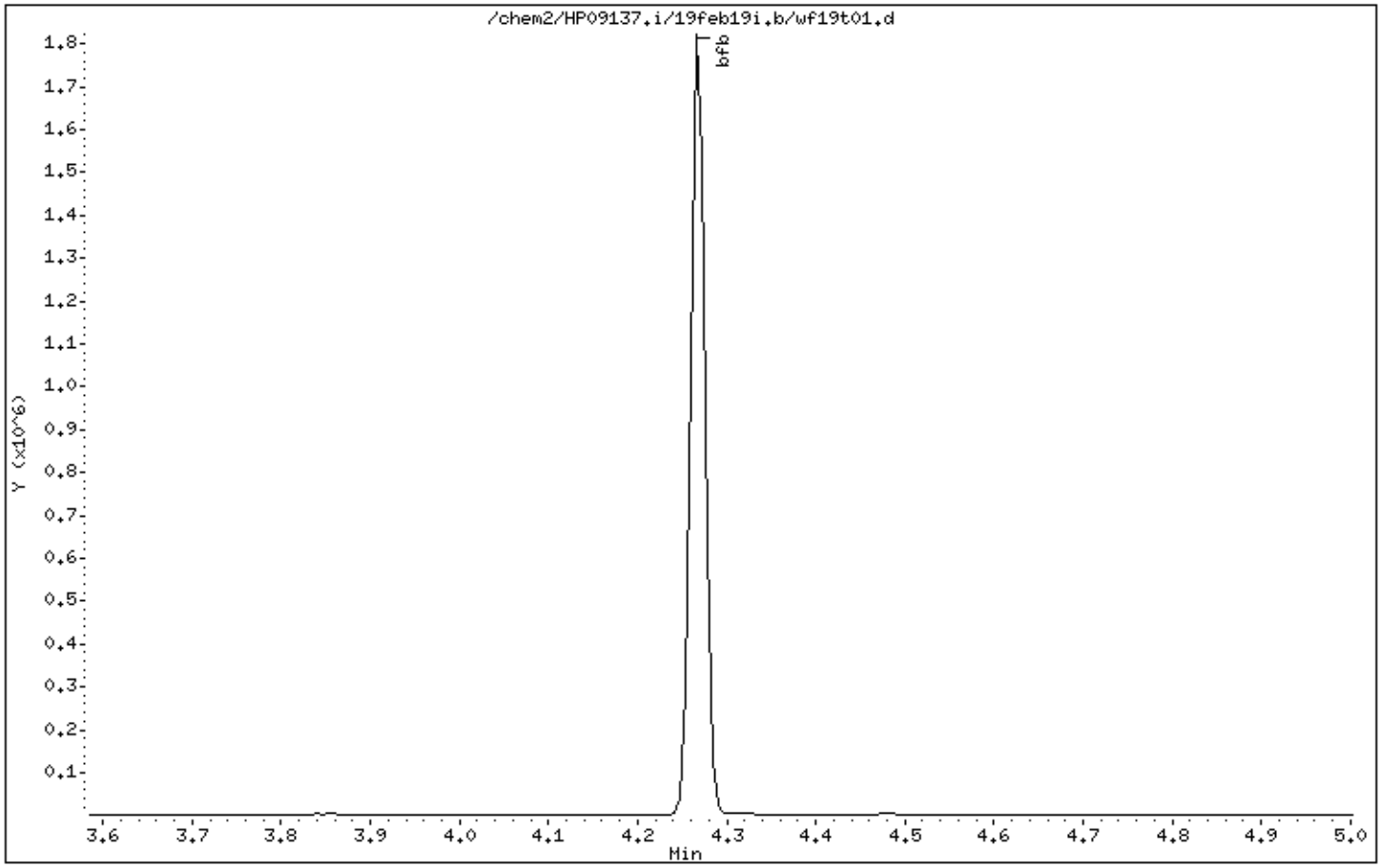
Instrument: HP09137.i

Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: DB-624

Column diameter: 0.18



Digitally signed by Abigail P. Roselli on 02/20/2019 at 07:15.
Target 3.5 esignature user ID: apr27582

Data File: /chem2/HP09137.i/19feb19i.b/wf19t01.d

Date : 19-FEB-2019 11:32

Client ID: FEB05-19

Instrument: HP09137.i

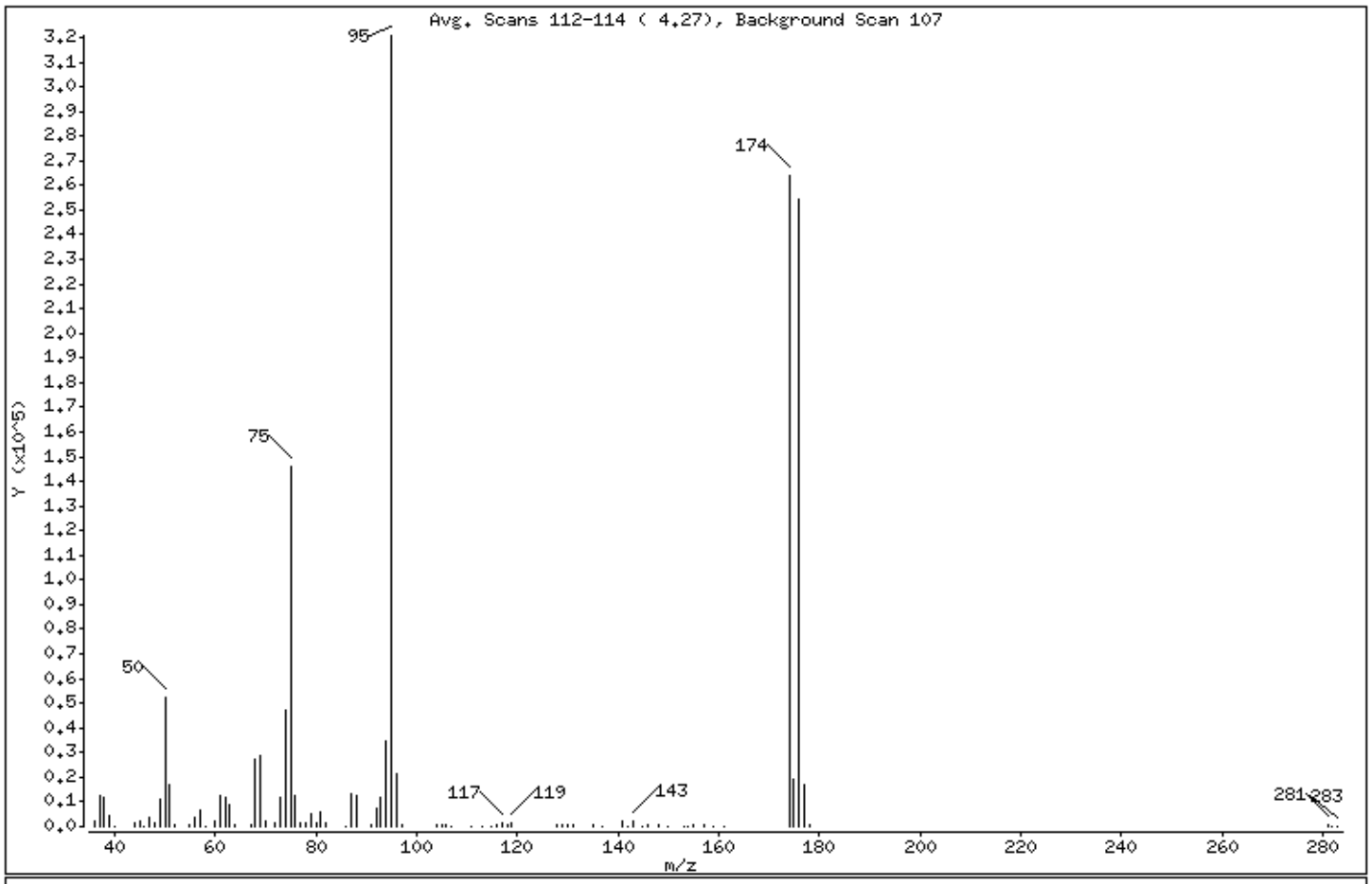
Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.42
75	30.00 - 60.00% of mass 95	45.48
96	5.00 - 9.00% of mass 95	6.75
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	82.25
175	5.00 - 9.00% of mass 174	5.88 (7.14)
176	95.00 - 101.00% of mass 174	79.33 (96.46)
177	5.00 - 9.00% of mass 176	5.24 (6.60)

Digitally signed by Abigail P. Roselli on 02/20/2019 at 07:15.
Target 3.5 esignature user ID: apr27582

Data File: /chem2/HP09137.i/19feb19i.b/wf19t01.d

Date : 19-FEB-2019 11:32

Client ID: FEB05-19 Instrument: HP09137.i

Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: DB-624 Column diameter: 0.18

Data File: wf19t01.d
Spectrum: Avg. Scans 112-114 (4.27), Background Scan 107
Location of Maximum: 95.00
Number of points: 86

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2356	64.00	874	94.00	34376	142.00	237
37.00	12838	67.00	749	95.00	320704	143.00	2536
38.00	11819	68.00	27600	96.00	21656	145.00	91
39.00	4563	69.00	28600	97.00	523	146.00	422
40.00	251	70.00	2130	104.00	986	148.00	700
44.00	1477	72.00	1518	105.00	386	150.00	200
45.00	2478	73.00	11806	106.00	927	153.00	196
46.00	111	74.00	47328	107.00	206	154.00	192
47.00	3965	75.00	145792	111.00	83	155.00	738
48.00	1623	76.00	12750	113.00	91	157.00	589
49.00	11149	77.00	1800	115.00	323	159.00	135
50.00	52656	78.00	1254	116.00	863	161.00	111
51.00	16816	79.00	5441	117.00	1520	174.00	263744
52.00	769	80.00	1674	118.00	967	175.00	18840
55.00	679	81.00	5606	119.00	1205	176.00	254400
56.00	3605	82.00	1114	128.00	1016	177.00	16800
57.00	6852	86.00	238	129.00	498	178.00	482
58.00	344	87.00	13069	130.00	1029	281.00	452
60.00	2409	88.00	12389	131.00	439	282.00	187
61.00	12379	91.00	929	135.00	476	283.00	87
62.00	12164	92.00	7681	137.00	303		
63.00	9186	93.00	11661	141.00	2259		

Digitally signed by Abigail P. Roselli on 02/20/2019 at 07:15.
Target 3.5 esignature user ID: apr27582

Data File: /chem2/HP09137.i/19feb20a.b/wf20t01.d

Date : 20-FEB-2019 08:47

Client ID: FEB05-19

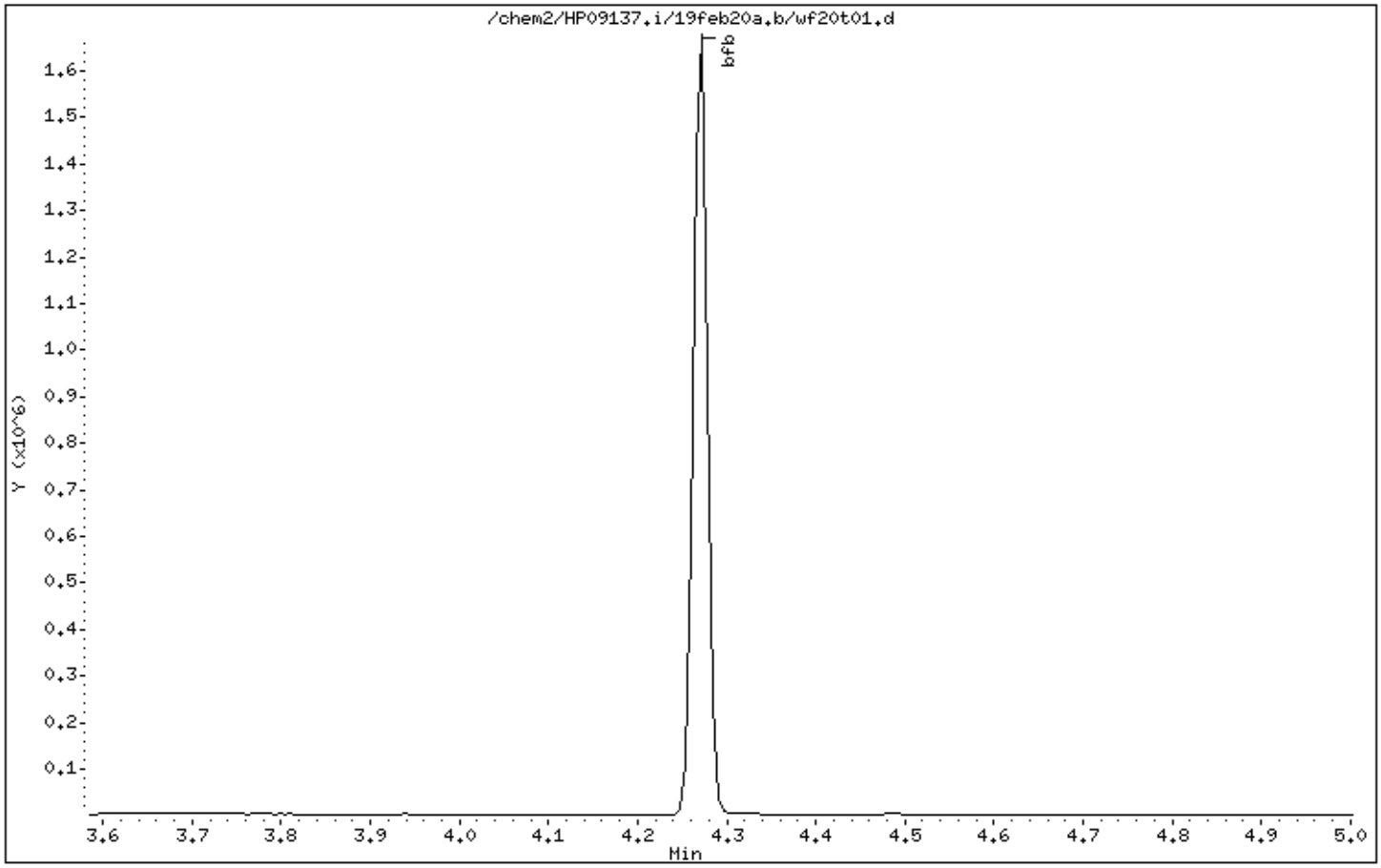
Instrument: HP09137.i

Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: DB-624

Column diameter: 0.18



Digitally signed by Abigail P. Roselli on 02/20/2019 at 08:52.
Target 3.5 esignature user ID: apr27582

Data File: /chem2/HP09137.i/19feb20a.b/wf20t01.d

Date : 20-FEB-2019 08:47

Client ID: FEB05-19

Instrument: HP09137.i

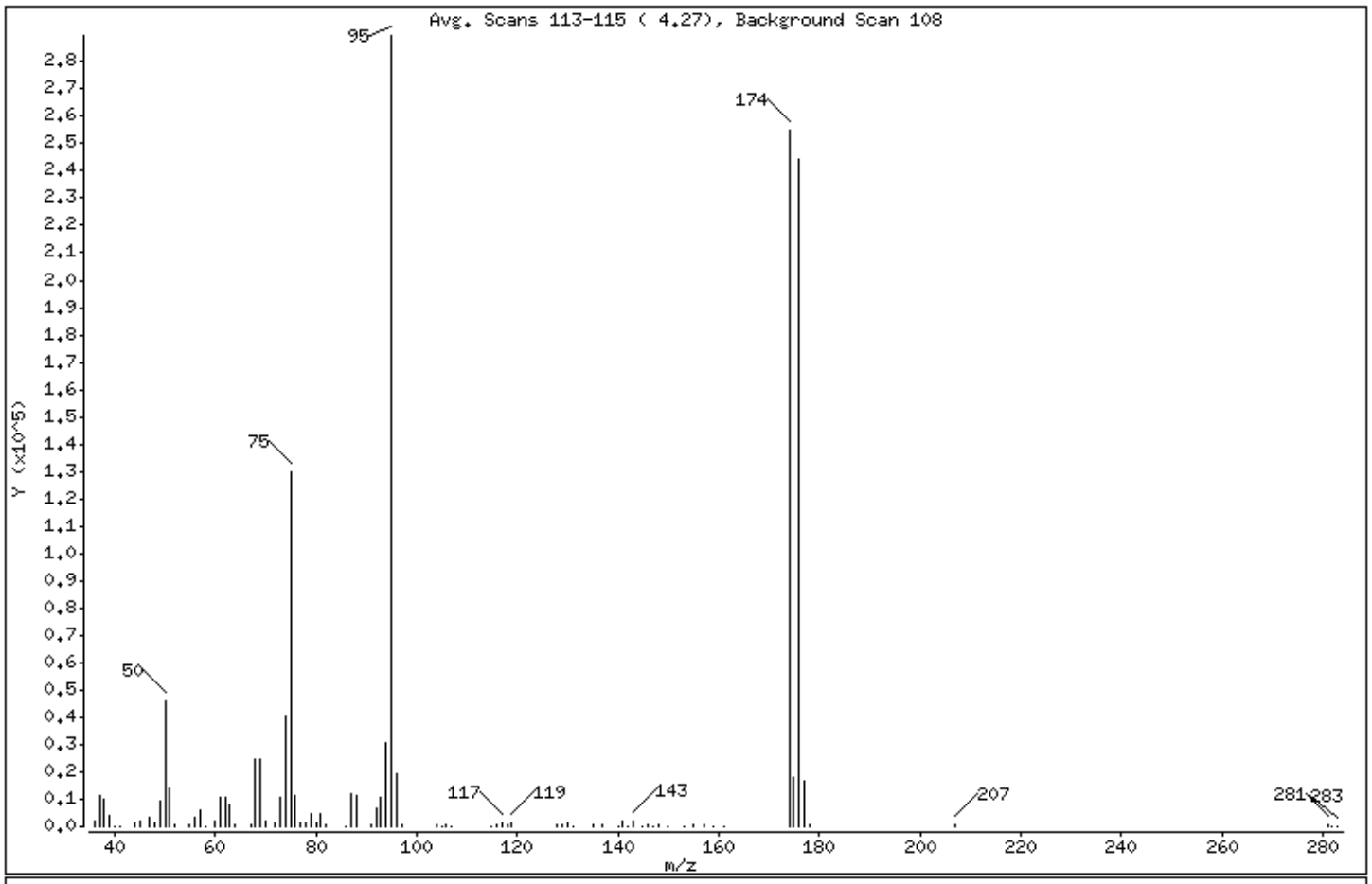
Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.92
75	30.00 - 60.00% of mass 95	44.90
96	5.00 - 9.00% of mass 95	6.65
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	88.14
175	5.00 - 9.00% of mass 174	6.26 (7.10)
176	95.00 - 101.00% of mass 174	84.40 (95.75)
177	5.00 - 9.00% of mass 176	5.69 (6.75)

Digitally signed by Abigail P. Roselli on 02/20/2019 at 08:52.
Target 3.5 esignature user ID: apr27582

Date : 20-FEB-2019 08:47

Client ID: FEB05-19 Instrument: HP09137.i

Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

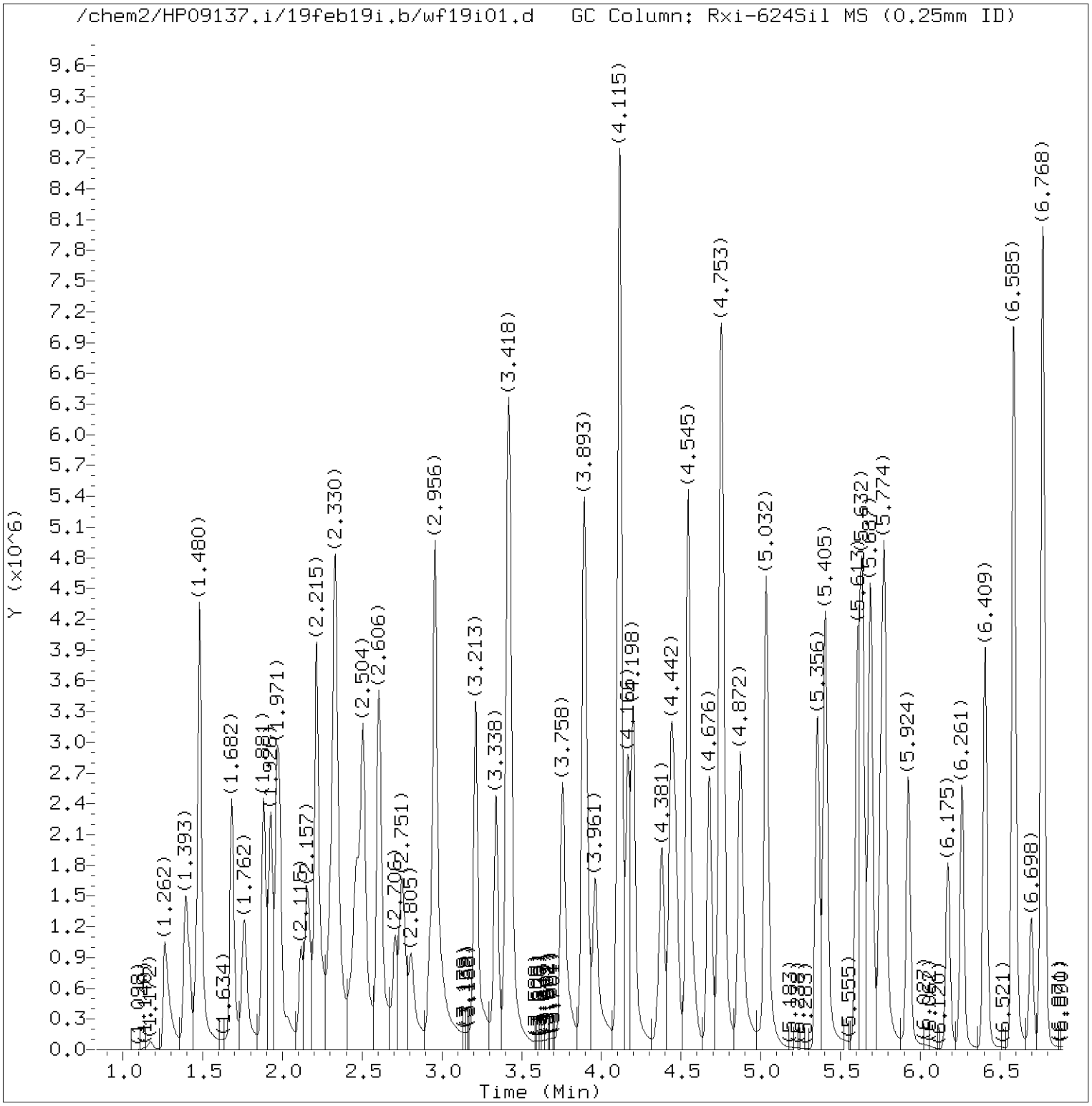
Operator: apr27582

Column phase: DB-624 Column diameter: 0.18

Data File: wf20t01.d
Spectrum: Avg. Scans 113-115 (4.27), Background Scan 108
Location of Maximum: 95.00
Number of points: 86

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2292	64.00	695	94.00	30424	143.00	2131
37.00	11519	67.00	726	95.00	289536	145.00	94
38.00	9778	68.00	24528	96.00	19248	146.00	357
39.00	4147	69.00	24696	97.00	419	147.00	91
40.00	149	70.00	1808	104.00	965	148.00	663
41.00	87	72.00	1344	105.00	326	150.00	173
44.00	1189	73.00	10669	106.00	967	153.00	101
45.00	1920	74.00	40824	107.00	84	155.00	589
47.00	3364	75.00	130008	115.00	92	157.00	513
48.00	1406	76.00	11448	116.00	835	159.00	90
49.00	9232	77.00	1437	117.00	1540	161.00	91
50.00	46088	78.00	1188	118.00	791	174.00	255168
51.00	14176	79.00	4689	119.00	1240	175.00	18112
52.00	576	80.00	1560	128.00	847	176.00	244352
55.00	691	81.00	4855	129.00	488	177.00	16480
56.00	3214	82.00	958	130.00	1039	178.00	430
57.00	5972	86.00	111	131.00	293	207.00	456
58.00	199	87.00	11697	135.00	469	281.00	512
60.00	2132	88.00	11140	137.00	365	282.00	331
61.00	10802	91.00	846	140.00	85	283.00	115
62.00	10922	92.00	6597	141.00	1968		
63.00	8073	93.00	10620	142.00	274		

Digitally signed by Abigail P. Roselli on 02/20/2019 at 08:52.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

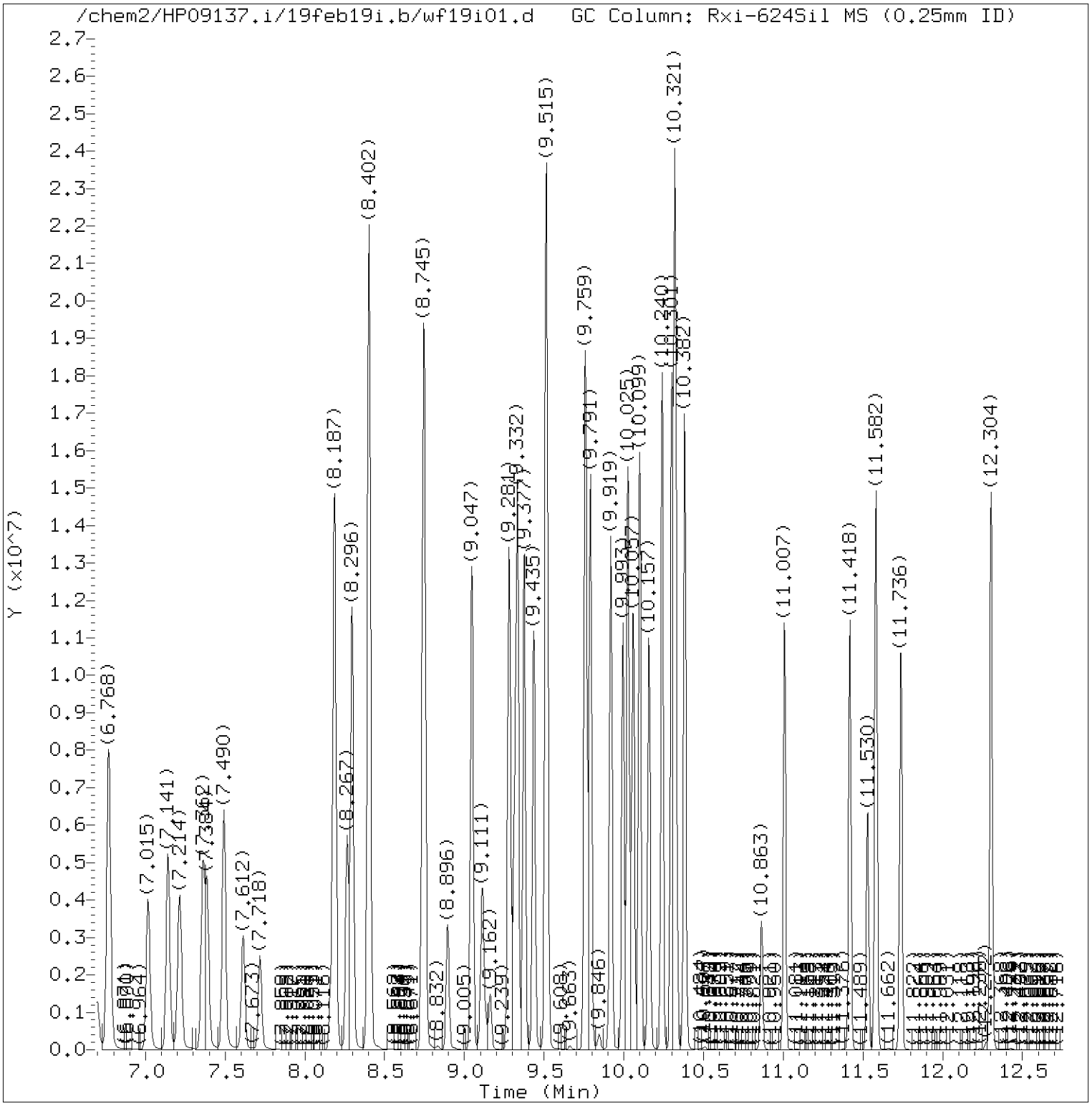
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.262	85	1830028	315.641
4) Chloromethane	(2)	1.397	50	2158390	298.969
6) Vinyl Chloride	(2)	1.467	62	2000231	302.231
5) 1,3-Butadiene	(2)	1.480	39	1294624	294.252
8) Bromomethane	(2)	1.682	94	1609891	308.431
9) Chloroethane	(2)	1.762	64	1225210	281.328
10) Dichlorofluoromethane	(2)	1.881	67	2469513	292.949
12) Trichlorofluoromethane	(2)	1.926	101	2215418	315.186
11) n-Pentane	(2)	1.981	43	1941951	290.504
13) Ethanol	(1)	2.032	45	654026	6868.269
15) Freon 123a	(2)	2.154	67	1544263M	294.005
16) Acrolein	(1)	2.215	56	4710694	3133.863
17) 1,1-Dichloroethene	(2)	2.324	96	1320043	333.906
17) 1,1-Dichloroethene	(2)	2.327	63	636364	319.054
19) Freon 113	(2)	2.330	101	1130965	325.785
18) Acetone	(1)	2.334	58	441895	604.809
21) 2-Propanol	(1)	2.449	45	740976	1364.990
22) Methyl Iodide	(2)	2.465	142	2433926	321.275
23) Carbon Disulfide	(2)	2.504	76	4385958	314.909
25) Allyl Chloride	(2)	2.600	41	2218296M	322.090
27) Methyl Acetate	(2)	2.616	43	1662446	278.873
29)*t-Butyl alcohol-d10	(1)	2.735	65	208793	250.000
28) Methylene Chloride	(2)	2.751	84	1485309M	307.373
30) t-Butyl alcohol	(1)	2.809	59	1347926	1391.981
31) Acrylonitrile	(2)	2.924	53	933874	297.783
32) trans-1,2-Dichloroethene	(2)	2.956	96	1367169	318.737
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	2930120	280.555
34) n-Hexane	(2)	3.213	57	1889144	329.160
36) 1,1-Dichloroethane	(2)	3.338	63	2443808	314.424
38) di-Isopropyl ether	(2)	3.412	45	4343522	290.888
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	2144637	318.591
40) Ethyl t-butyl ether	(2)	3.758	59	3125600	287.165
42) cis-1,2-Dichloroethene	(2)	3.890	96	1531613	318.027
45) 2,2-Dichloropropane	(2)	3.890	77	944483	270.575
44) 2-Butanone	(2)	3.906	43	2571903	570.822
47) Propionitrile	(1)	3.964	54	1942887	1614.356
48) Methacrylonitrile	(2)	4.115	67	2560168	759.258
49) Bromochloromethane	(2)	4.121	128	814405	325.314

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.166	71	727306	652.948
51) Chloroform	(2)	4.201	83	2299180	315.278
52)$Dibromofluoromethane	(2)	4.355	113	208205	50.122
52)$Dibromofluoromethane	(2)	4.355	111	214672	50.342
53) 1,1,1-Trichloroethane	(2)	4.381	97	1712874	312.162
54) Cyclohexane	(2)	4.442	56	2322517	319.833
54) Cyclohexane	(2)	4.445	84	1926454	320.494
54) Cyclohexane	(2)	4.442	69	709917	325.297
55) 1,1-Dichloropropene	(2)	4.545	75	1839194	314.568
56) Carbon Tetrachloride	(2)	4.545	117	1575192	334.514
58) Isobutyl Alcohol	(1)	4.673	41	1324103	3750.712
57)$1,2-Dichloroethane-d4	(2)	4.689	102	53519	48.443
57)$1,2-Dichloroethane-d4	(2)	4.692	65	233334	48.518
57)$1,2-Dichloroethane-d4	(2)	4.689	104	35388	50.297
60) Benzene	(2)	4.750	78	5810714	309.188
61) 1,2-Dichloroethane	(2)	4.766	62	1760449	303.238
61) 1,2-Dichloroethane	(2)	4.766	98	187445	339.366
65) t-Amyl methyl ether	(2)	4.872	73	2919577	261.832
66)*Fluorobenzene	(2)	5.029	96	896646	50.000
67) n-Heptane	(2)	5.036	43	1797080	327.627
69) n-Butanol	(1)	5.356	56	2506205	7995.614
71) Trichloroethene	(2)	5.405	95	1430931	314.409
73) Methylcyclohexane	(2)	5.607	83	2193871	332.036
73) Methylcyclohexane	(2)	5.607	98	1024331	333.422
74) 1,2-Dichloropropane	(2)	5.636	63	1543836	319.971
75) Dibromomethane	(2)	5.754	93	962248	323.143
77) Methyl Methacrylate	(2)	5.774	69	1719359	324.268
76) 1,4-Dioxane	(1)	5.783	88	380560M	4061.259
79) Bromodichloromethane	(2)	5.924	83	1800616	329.105
43) 1,2-Dichloroethene (Total)	(2)		96	2898782	636.764
80) 2-Nitropropane	(2)	6.175	41	1216565	657.181
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	1221742	332.128
82) cis-1,3-Dichloropropene	(2)	6.406	75	2496178	331.820
83) 4-Methyl-2-pentanone	(2)	6.585	43	5276419	594.089
84)$Toluene-d8	(3)	6.698	98	920754	48.955
84)$Toluene-d8	(3)	6.698	100	635513	50.952
89) Toluene	(3)	6.768	92	3764381	310.699
90) trans-1,3-Dichloropropene	(3)	7.015	75	2388350	331.125

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.141	69	2948418	332.666
93) 1,1,2-Trichloroethane	(3)	7.214	97	1462902	313.709
94) Tetrachloroethene	(3)	7.359	166	1538643	312.966
95) 1,3-Dichloropropane	(3)	7.384	76	2548018	314.585
97) 2-Hexanone	(3)	7.490	43	4182184	592.716
98) Dibromochloromethane	(3)	7.612	129	1599809	351.250
100) 1,2-Dibromoethane	(3)	7.718	107	1653551	322.750
101)*Chlorobenzene-d5	(3)	8.161	117	750584	50.000
103) Chlorobenzene	(3)	8.187	112	4251585	316.321
104) 1,1,1,2-Tetrachloroethane	(3)	8.267	131	1472432	340.894
105) Ethylbenzene	(3)	8.296	91	7172946	311.494
107) m+p-Xylene	(3)	8.402	106	5900396	644.458
108) o-Xylene	(3)	8.742	106	2944288	326.885
110) Styrene	(3)	8.751	104	5111867	338.315
111) Bromoform	(3)	8.896	173	1332048	375.784
112) Isopropylbenzene	(3)	9.047	105	6974372	315.109
113) Cyclohexanone	(1)	9.114	55	1785966	4225.220
115)$4-Bromofluorobenzene	(3)	9.162	95	381876	50.752
115)$4-Bromofluorobenzene	(3)	9.165	174	321796	50.682
116) Bromobenzene	(4)	9.278	156	2001950	310.704
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	2675009	307.862
118) 1,2,3-Trichloropropane	(4)	9.313	110	793023	303.003
119) trans-1,4-Dichloro-2-butene	(4)	9.332	53	2093586	751.374
120) n-Propylbenzene	(4)	9.377	91	8126022	286.087
121) 2-Chlorotoluene	(4)	9.435	126	1813407	309.524
123) 1,3,5-Trimethylbenzene	(4)	9.512	105	6283549	306.739
122) 4-Chlorotoluene	(4)	9.518	126	1986374	316.718
125) tert-Butylbenzene	(4)	9.756	134	1469098	315.656
126) Pentachloroethane	(4)	9.765	167	1314293	357.228
127) 1,2,4-Trimethylbenzene	(4)	9.791	105	6515518	301.836
128) sec-Butylbenzene	(4)	9.919	105	7350716	292.333
130) 1,3-Dichlorobenzene	(4)	9.993	146	3744438	304.756
131) p-Isopropyltoluene	(4)	10.025	119	6646629	298.604
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	447340	50.000
134) 1,4-Dichlorobenzene	(4)	10.061	146	3824950	300.290
91) 1,3-Dichloropropene (total)	(3)		100	4884528	662.945
135) 1,2,3-Trimethylbenzene	(4)	10.099	105	6932082	298.464
136) Benzyl Chloride	(4)	10.157	91	5948413	333.650

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.240	119	4321366	308.975
138) 1,4-Diethylbenzene	(4)	10.301	119	4611431	307.745
140) n-Butylbenzene	(4)	10.317	92	3453634	307.409
139) 1,2-Dichlorobenzene	(4)	10.324	146	3754829	308.029
141) 1,2-Diethylbenzene	(4)	10.382	119	3619472	306.525
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	622910	315.447
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	2798024	299.339
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	2685608	299.261
148) Hexachlorobutadiene	(4)	11.530	225	896485	280.479
149) Naphthalene	(4)	11.582	128	8569412	282.213
150) 1,2,3-Trichlorobenzene	(4)	11.739	180	2579036	294.437
109) Xylene (Total)	(3)		106	8844684	971.343
151) 2-Methylnaphthalene	(4)	12.304	142	5243189	302.657
142) Diethylbenzene (total)	(4)		100	12552269	923.245

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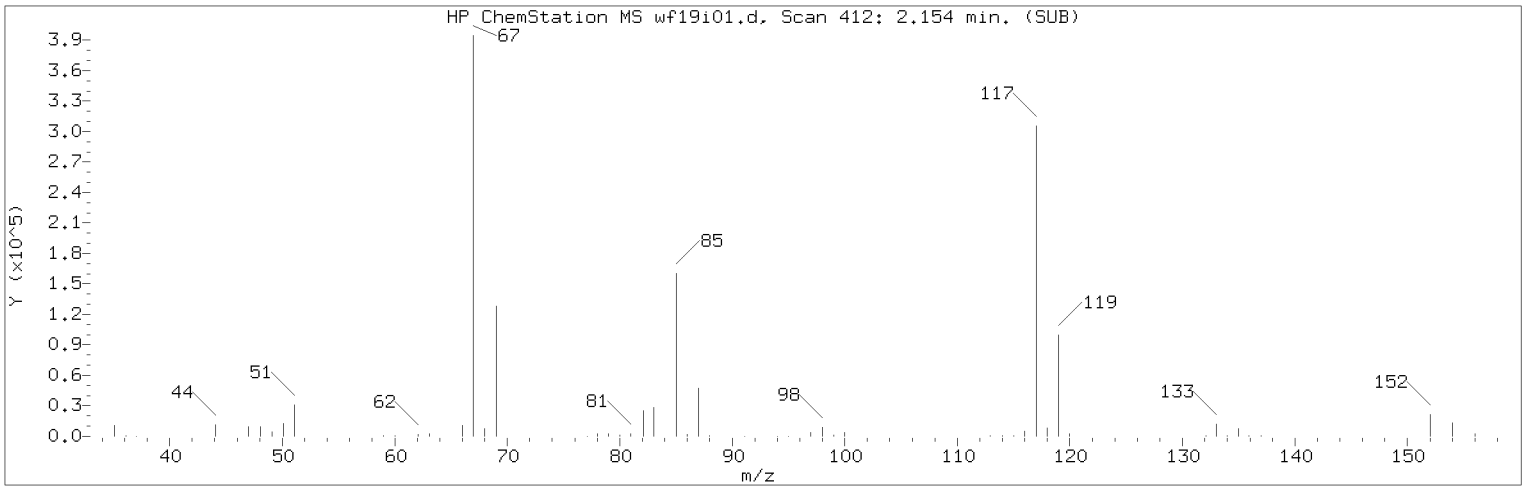
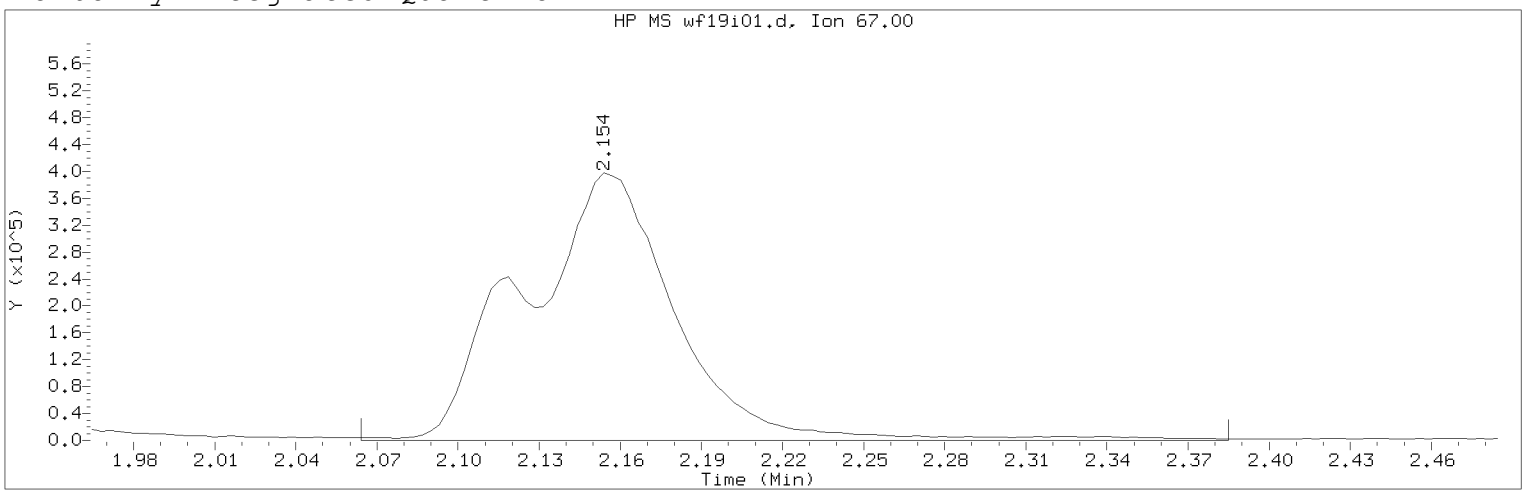
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

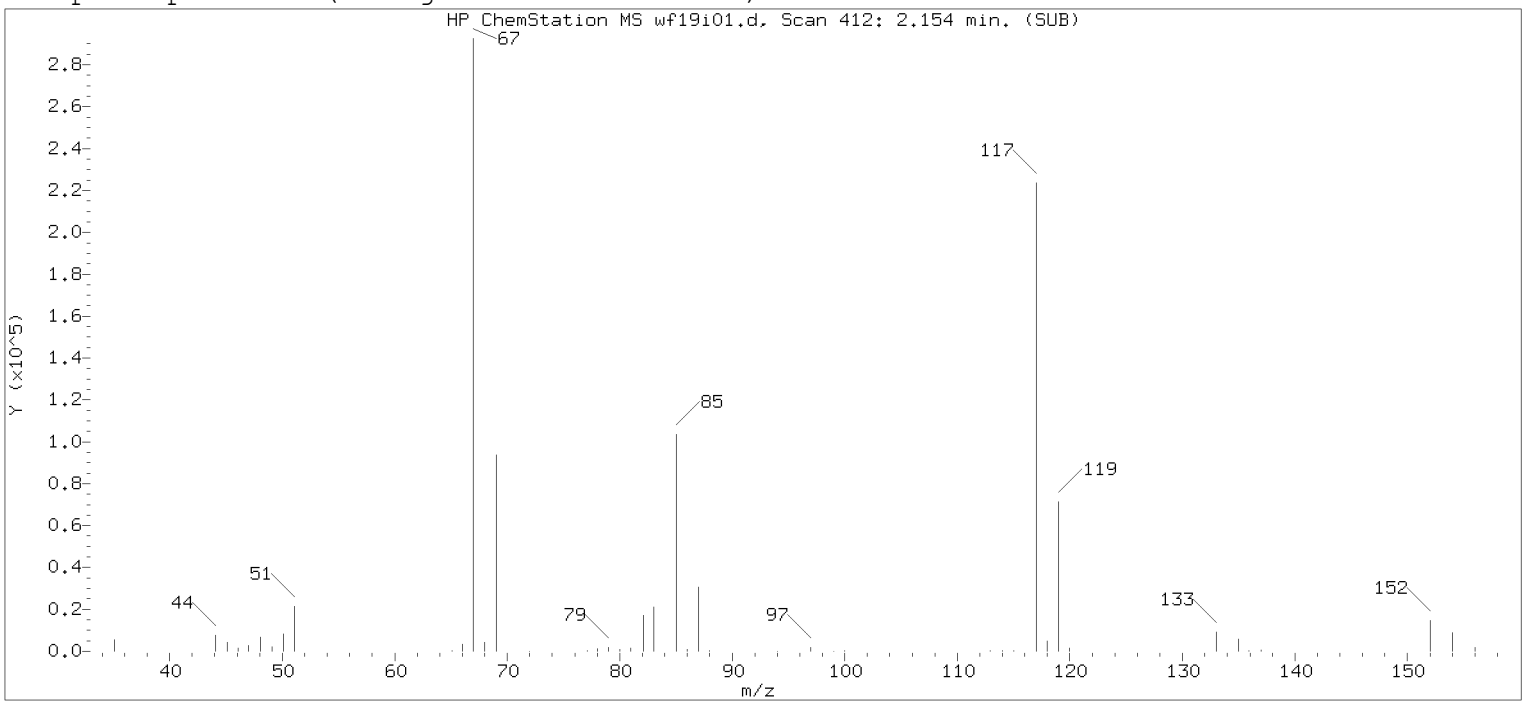
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 412
Retention Time (minutes): 2.154
Quant Ion : 67.00
Area (flag) : 1544263M
On-Column Amount (ng) : 294.0053
Integration start scan : 383 Integration stop scan: 483
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

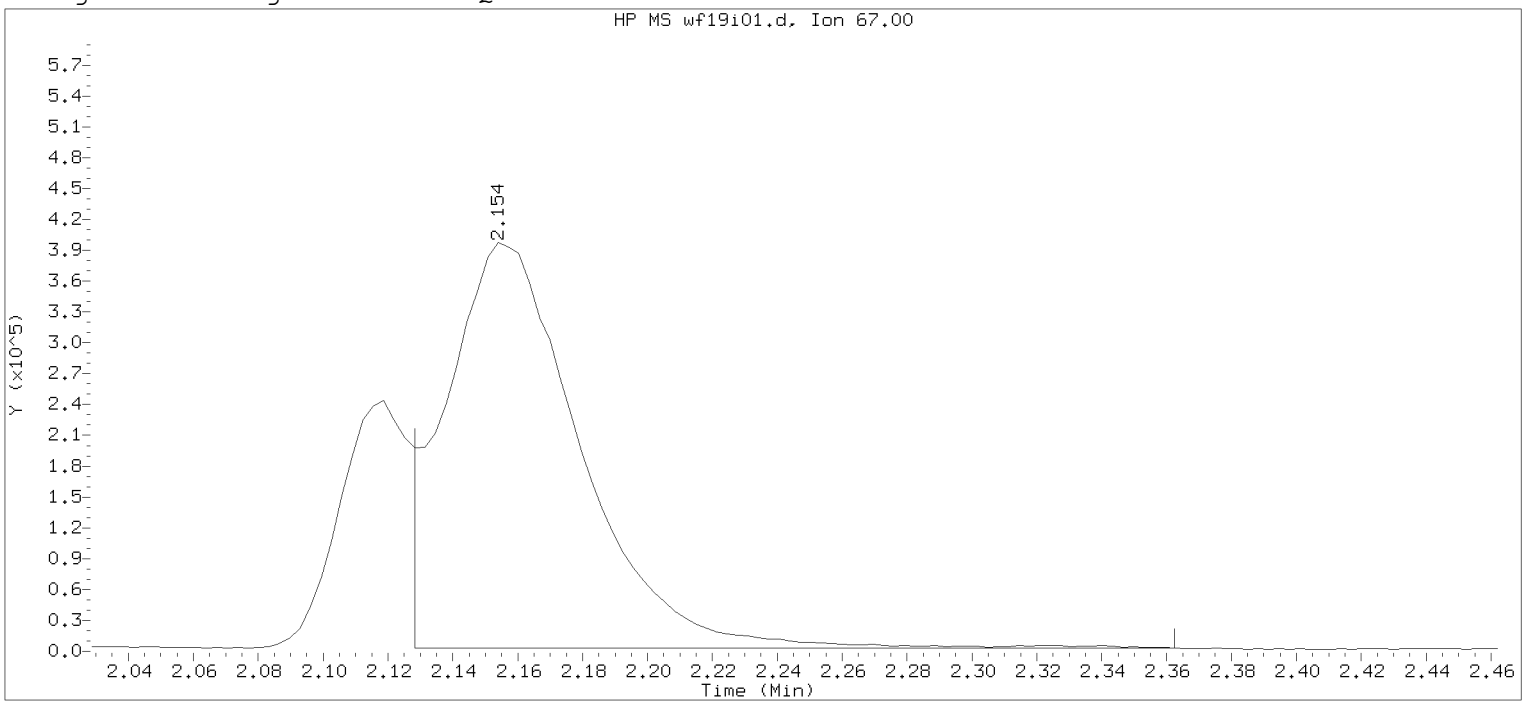
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 15
Compound Name : Freon 123a
Scan Number : 412
Retention Time (minutes): 2.154
Quant Ion : 67.00
Area : 1136730
On-column Amount (ng) : 300.0000
Integration start scan : 403 Integration stop scan: 476
Y at integration start : 3233 Y at integration end: 2941

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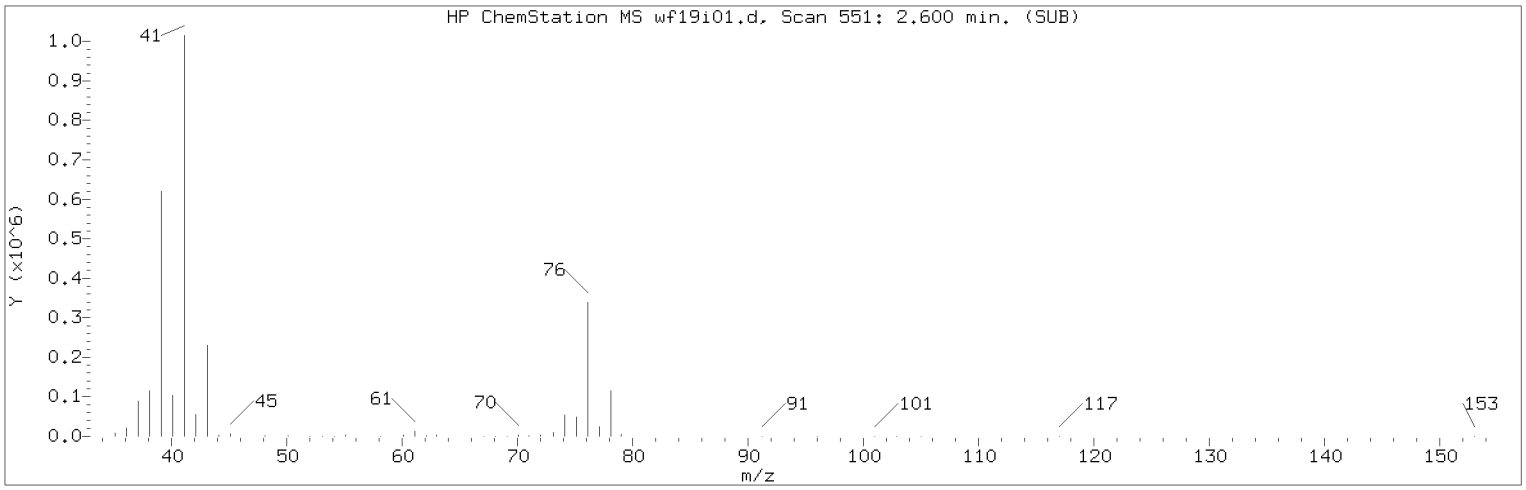
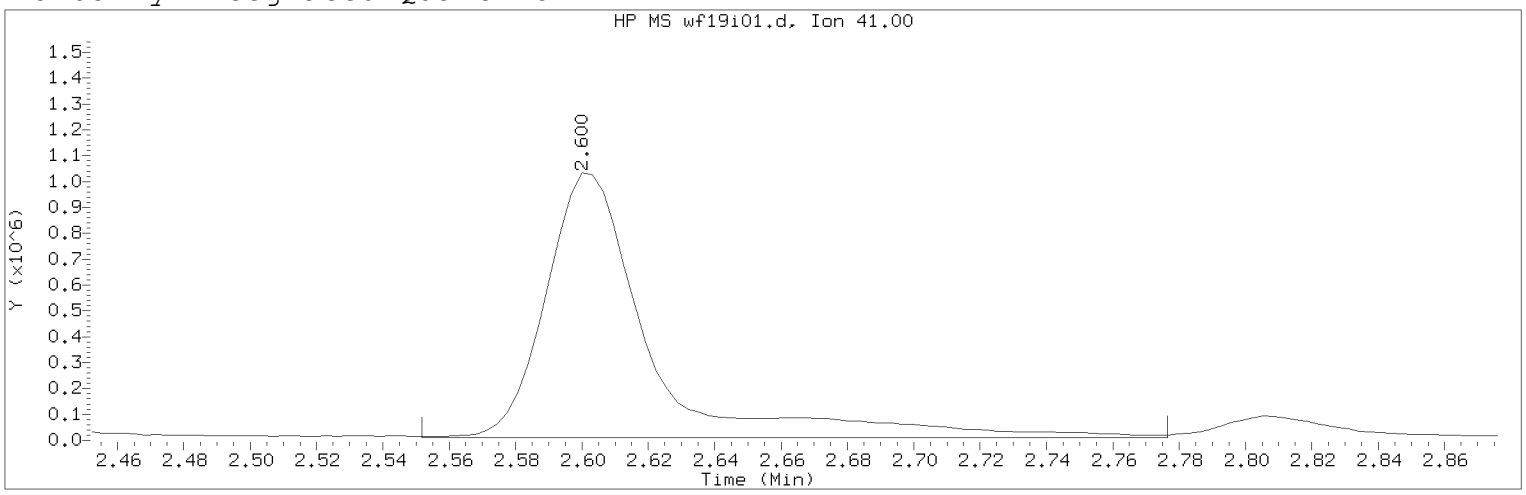
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

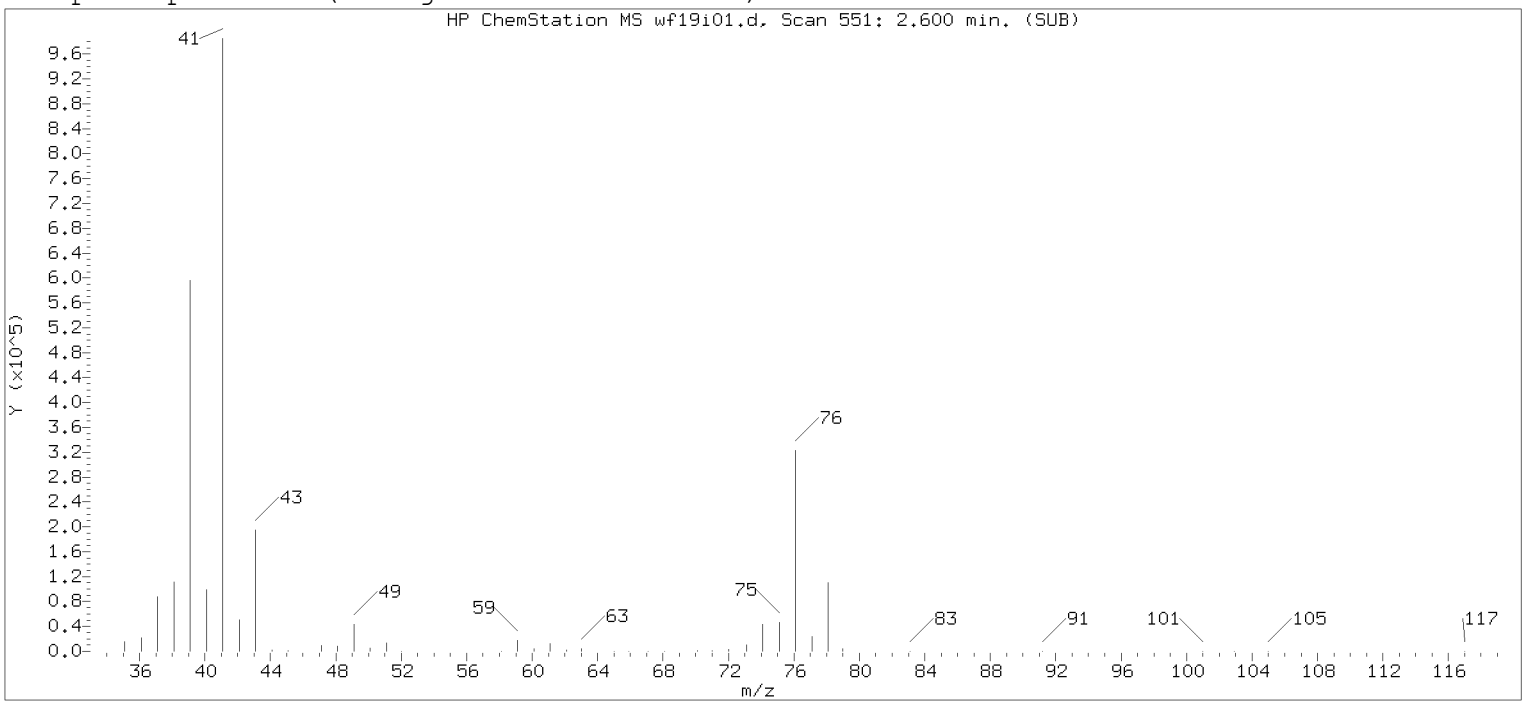
Compound Number : 25
Compound Name : Allyl Chloride
Scan Number : 551
Retention Time (minutes): 2.600
Quant Ion : 41.00
Area (flag) : 2218296M
On-Column Amount (ng) : 322.0900
Integration start scan : 535 Integration stop scan: 605
Y at integration start : 10829 Y at integration end: 10829

Reason for manual integration: improper integration

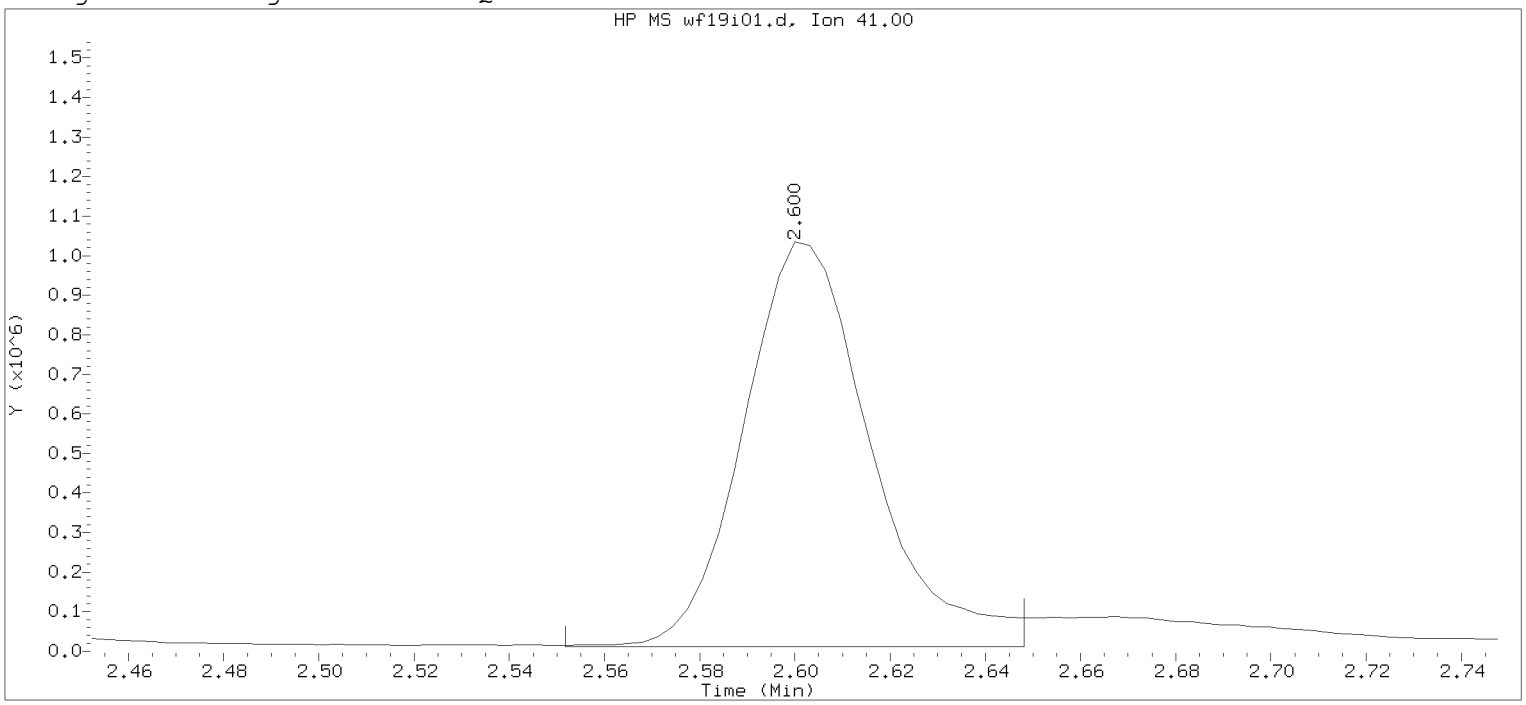
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 25
Compound Name : Allyl Chloride
Scan Number : 551
Retention Time (minutes): 2.600
Quant Ion : 41.00
Area : 1896643
On-column Amount (ng) : 300.0000
Integration start scan : 535 Integration stop scan: 565
Y at integration start : 11574 Y at integration end: 11574

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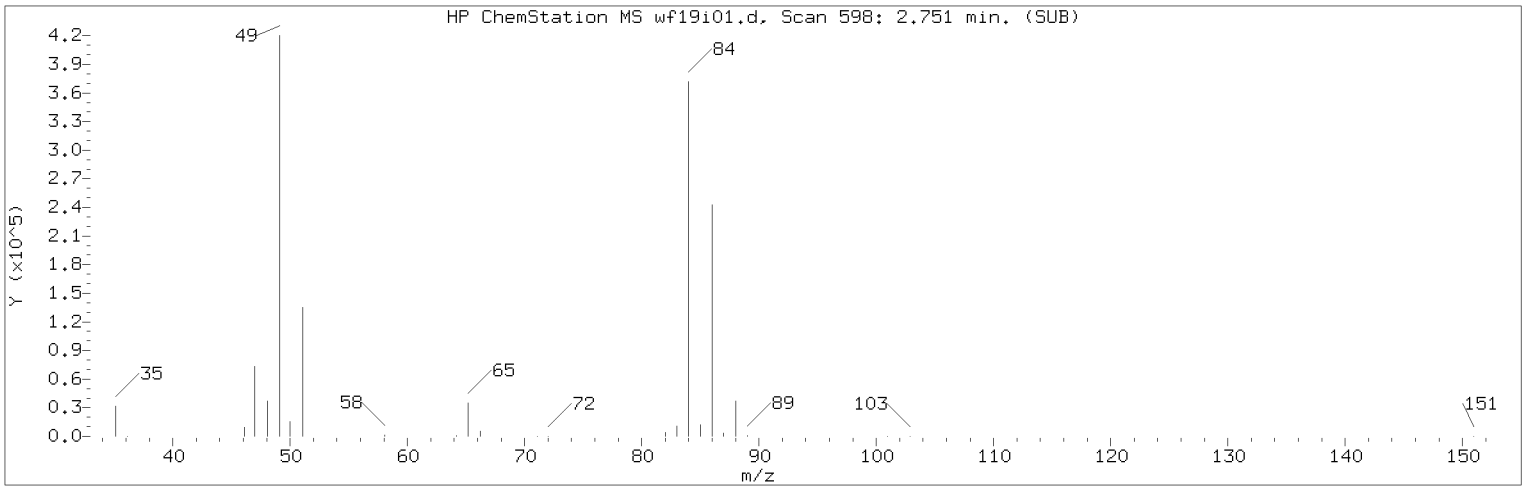
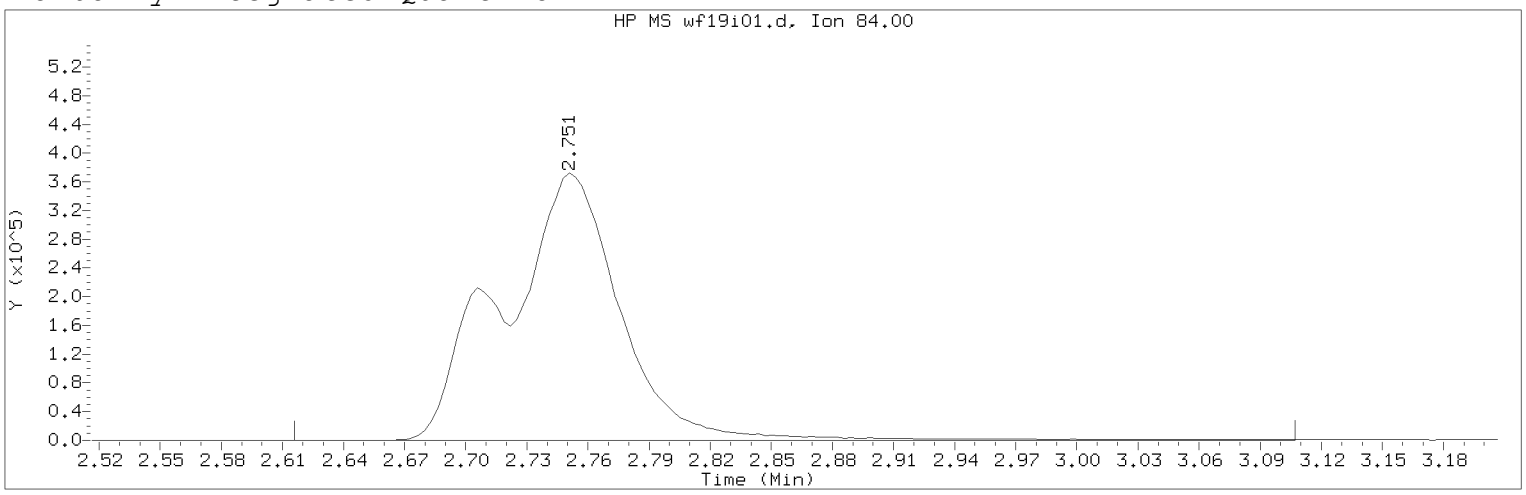
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

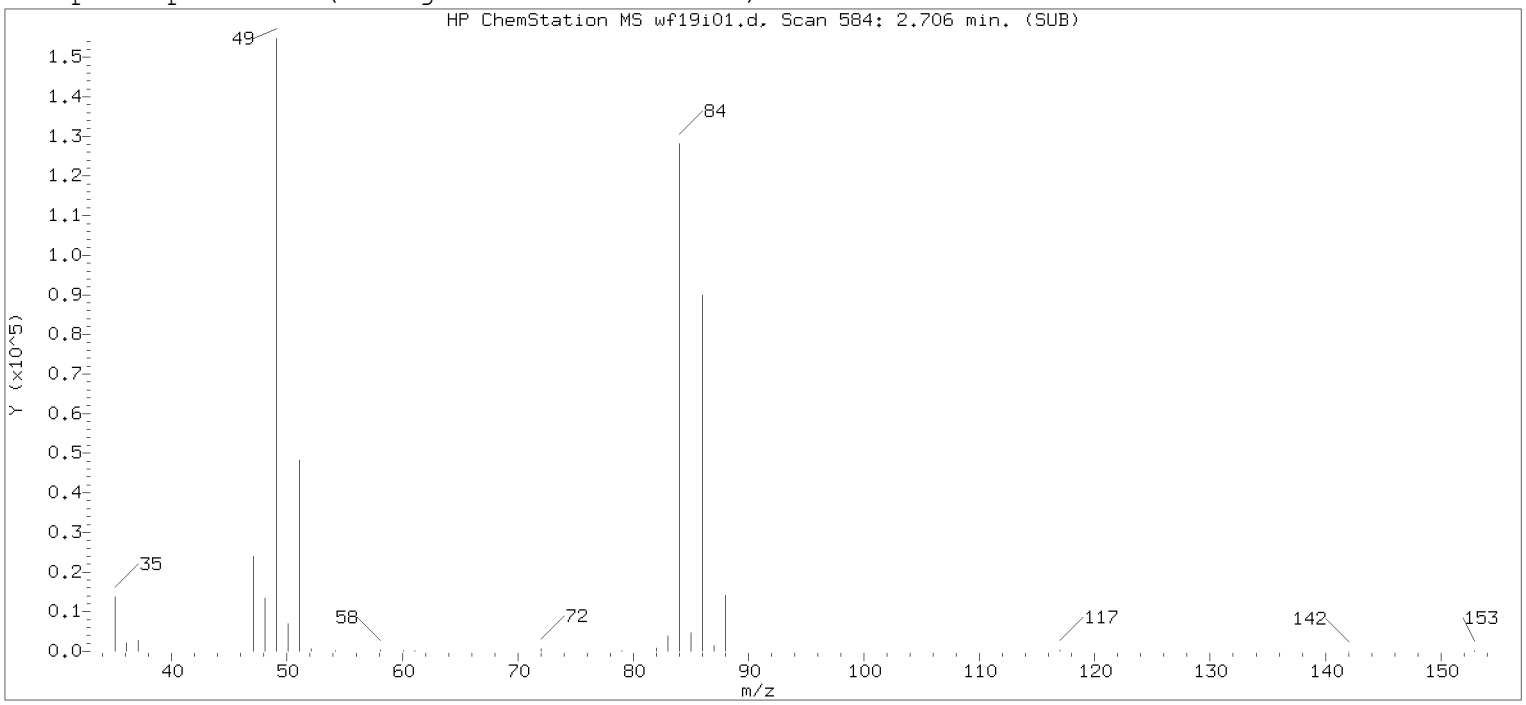
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 598
Retention Time (minutes): 2.751
Quant Ion : 84.00
Area (flag) : 1485309M
On-Column Amount (ng) : 307.3734
Integration start scan : 555 Integration stop scan: 708
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

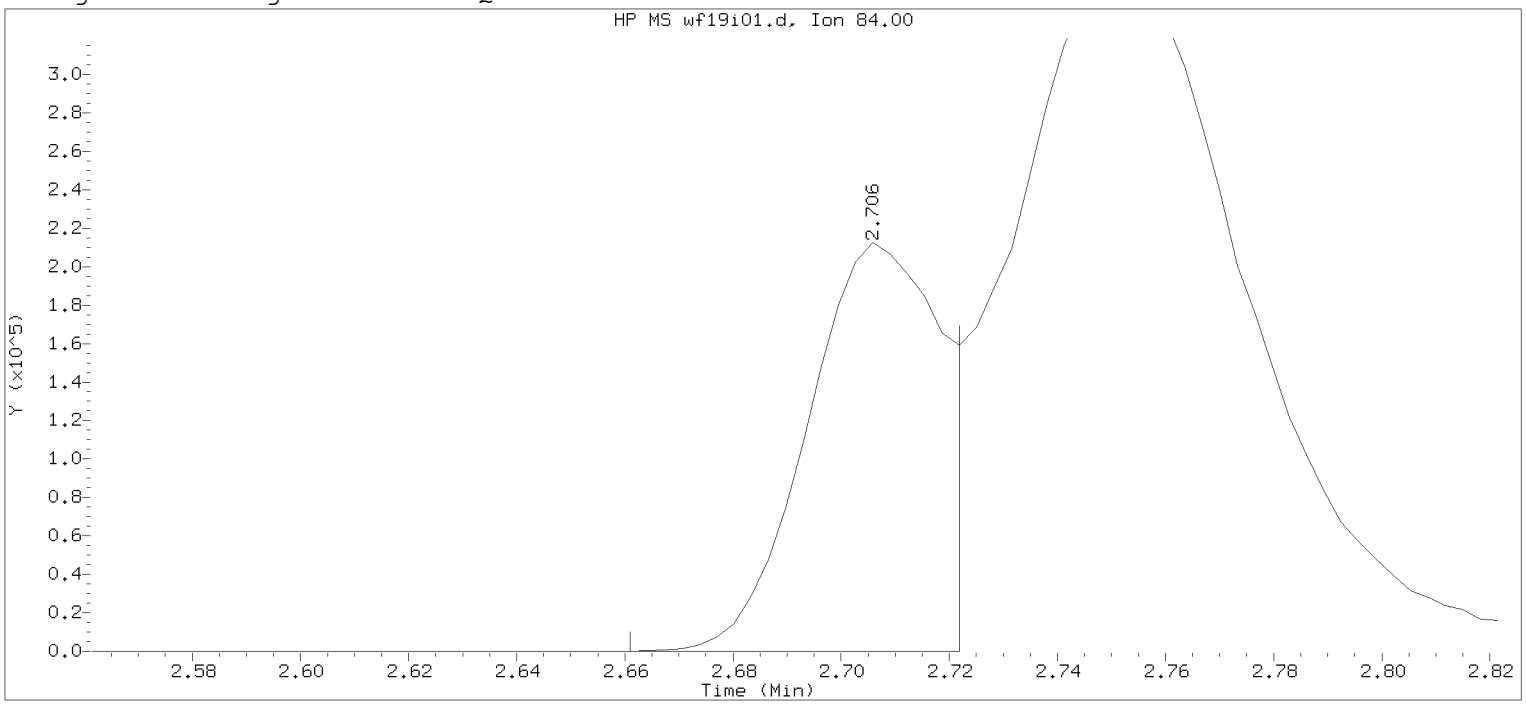
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 584
Retention Time (minutes): 2.706
Quant Ion : 84.00
Area : 358731
On-column Amount (ng) : 300.0000
Integration start scan : 569 Integration stop scan: 588
Y at integration start : 0 Y at integration end: 0

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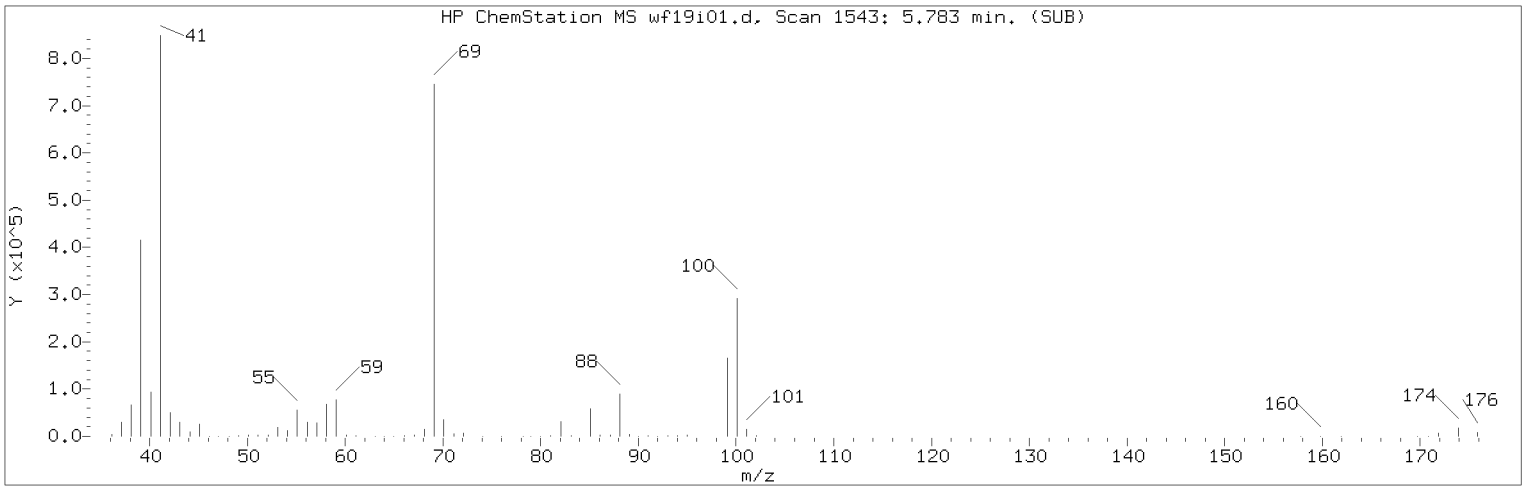
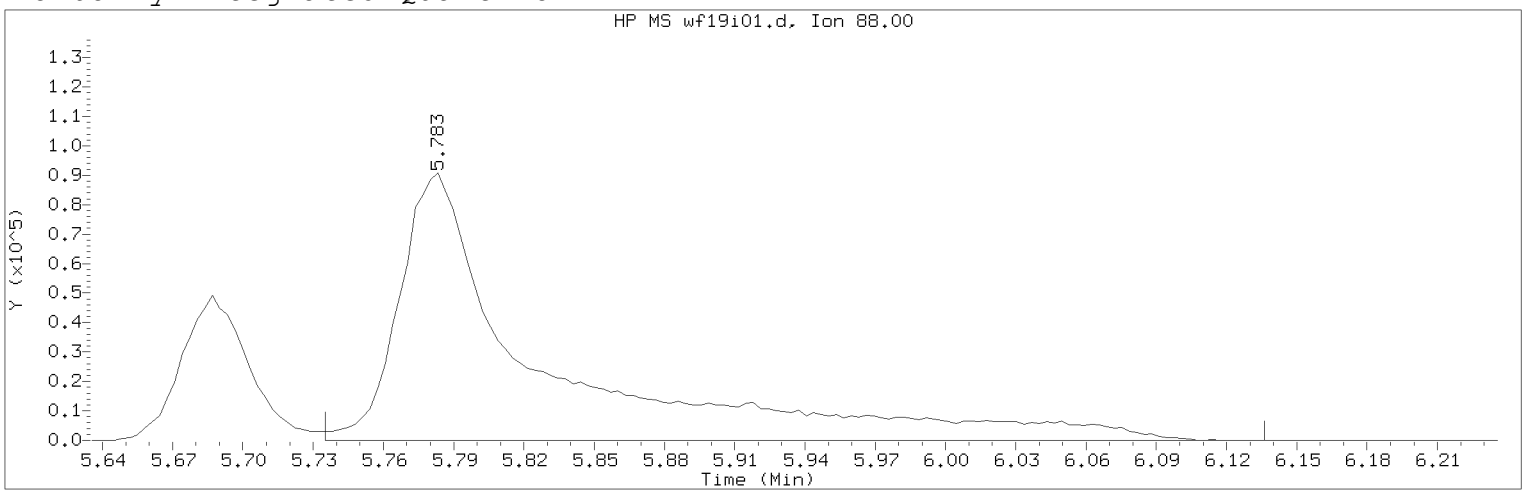
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

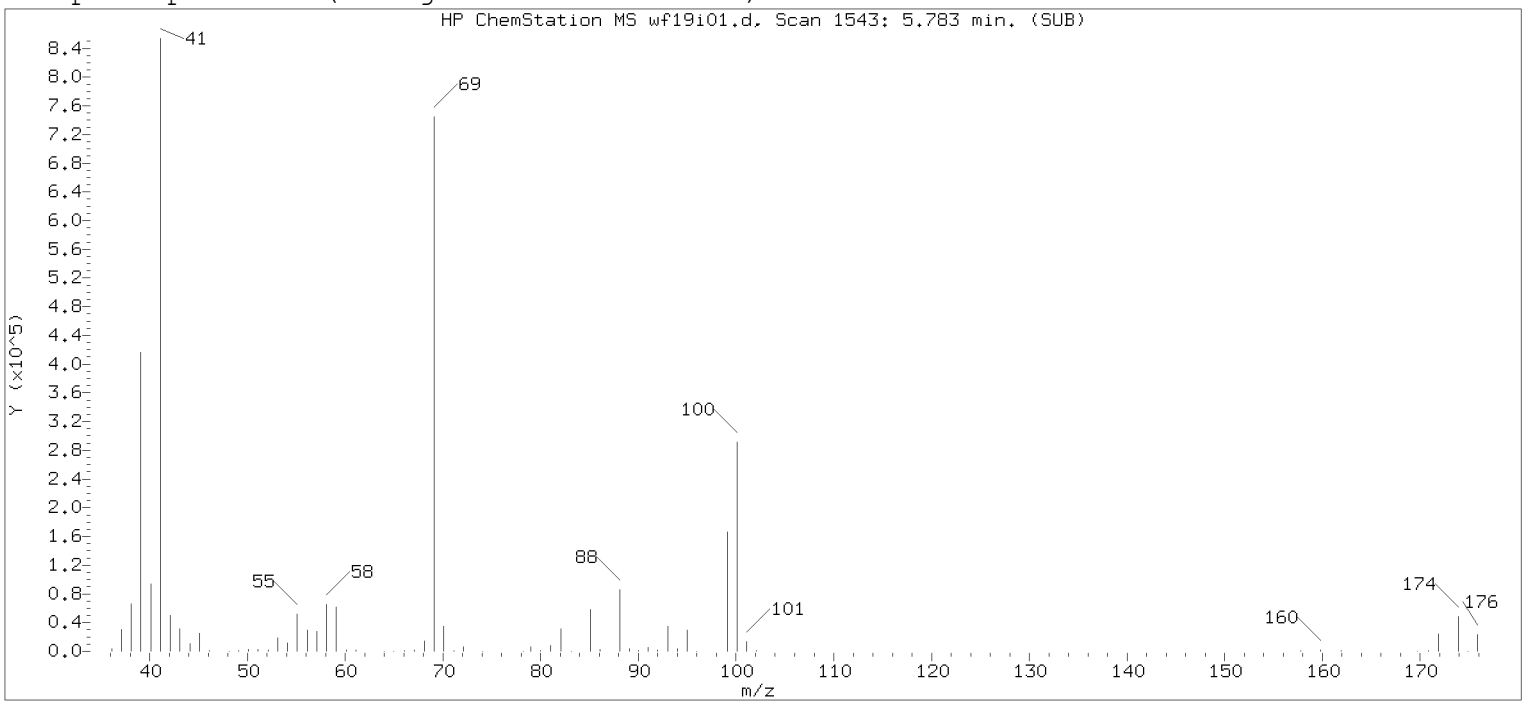
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1543
Retention Time (minutes): 5.783
Quant Ion : 88.00
Area (flag) : 380560M
On-Column Amount (ng) : 4061.2594
Integration start scan : 1527 Integration stop scan: 1652
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

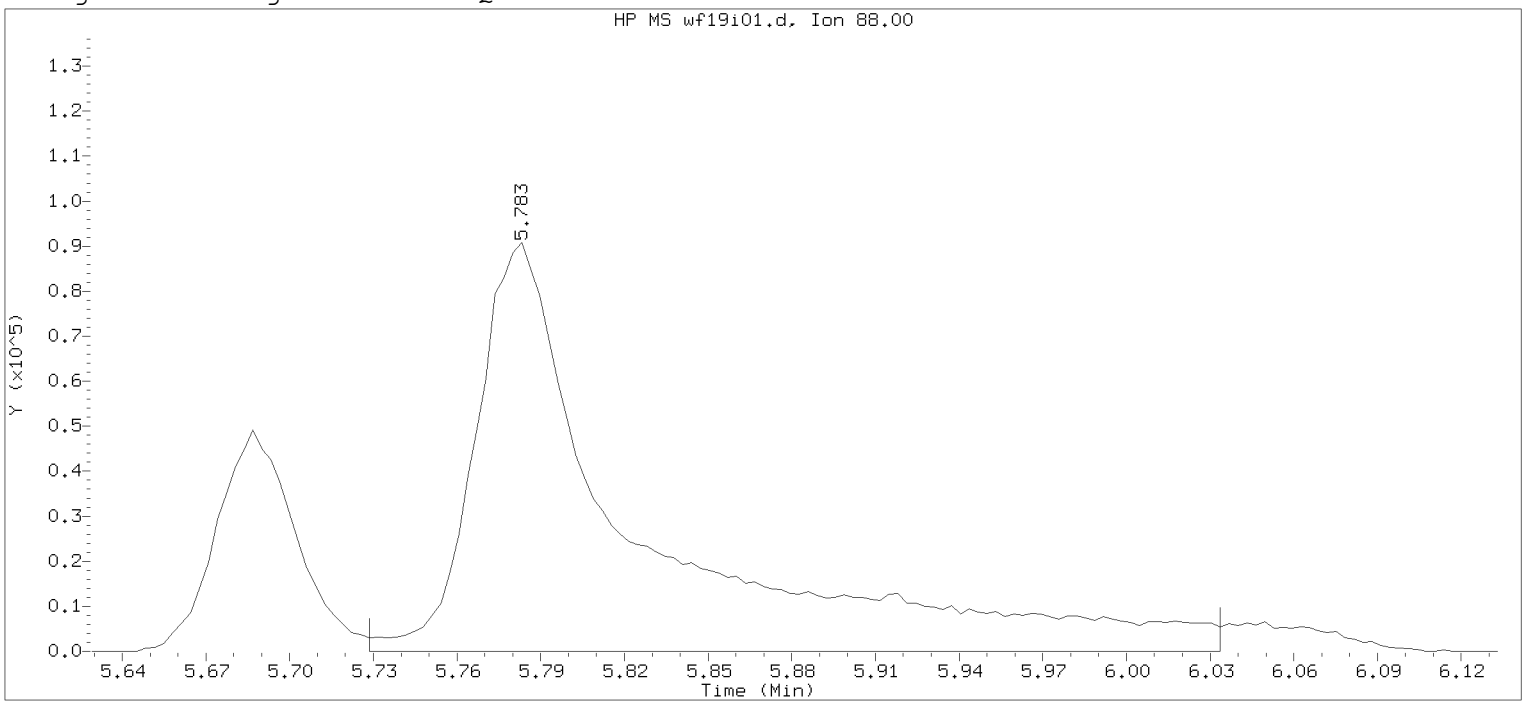
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



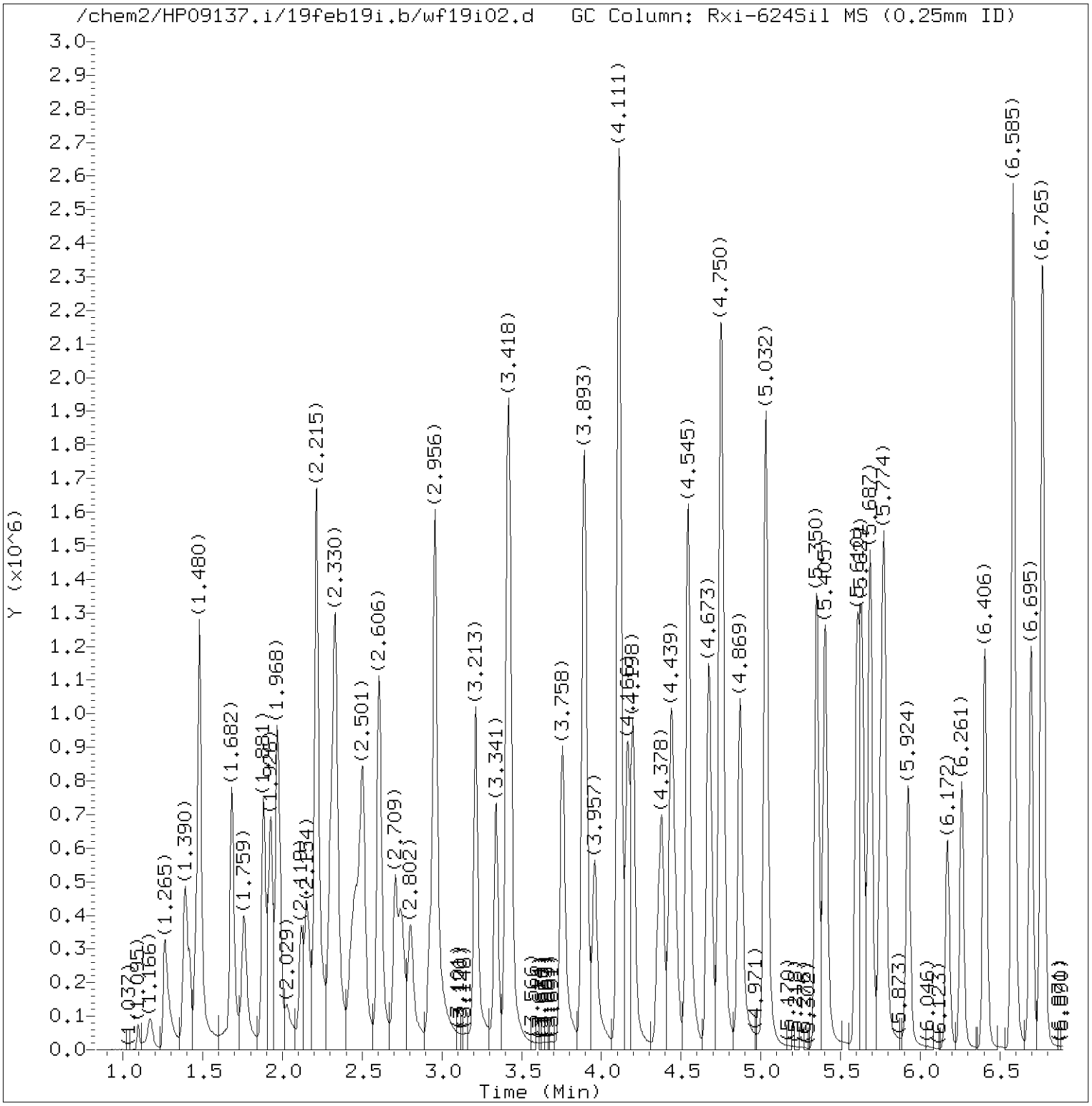
Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1543
Retention Time (minutes): 5.783
Quant Ion : 88.00
Area : 364823
On-column Amount (ng) : 3750.0000
Integration start scan : 1525 Integration stop scan: 1620
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

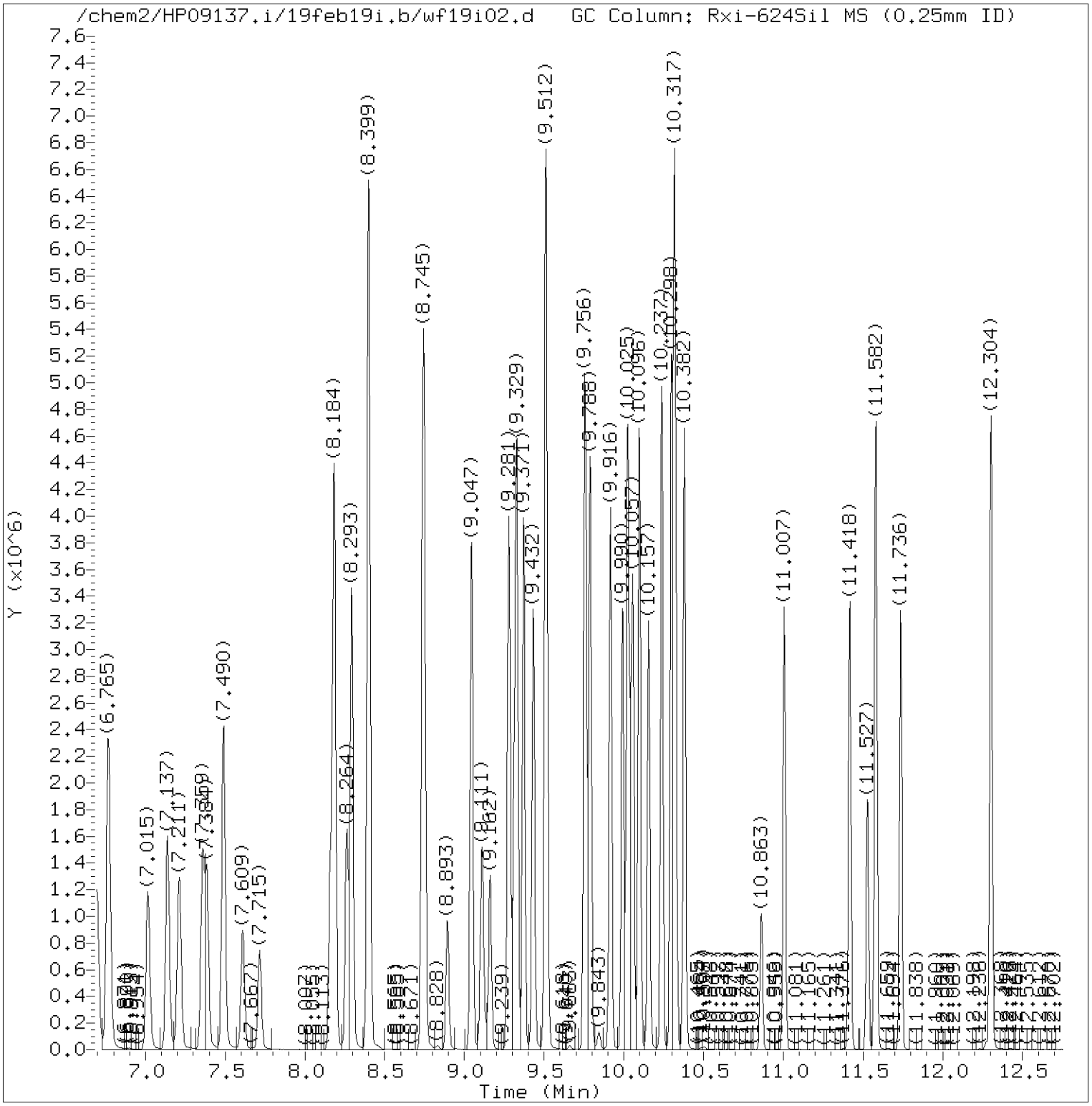
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.265	85	532286	97.759
4) Chloromethane	(2)	1.390	50	662027	97.645
6) Vinyl Chloride	(2)	1.461	62	607652	97.766
5) 1,3-Butadiene	(2)	1.480	39	375111	90.785
8) Bromomethane	(2)	1.682	94	485723	99.089
9) Chloroethane	(2)	1.756	64	376986	92.173
10) Dichlorofluoromethane	(2)	1.881	67	739116	93.362
12) Trichlorofluoromethane	(2)	1.926	101	651101	98.636
11) n-Pentane	(2)	1.968	43	576023	91.755
13) Ethanol	(1)	2.032	45	238813	2376.796
15) Freon 123a	(2)	2.154	67	447423M	90.704
16) Acrolein	(1)	2.215	56	1612064	1016.387
17) 1,1-Dichloroethene	(2)	2.321	96	368528	99.262
17) 1,1-Dichloroethene	(2)	2.324	63	178834	95.474
19) Freon 113	(2)	2.327	101	324542	99.547
18) Acetone	(1)	2.334	58	146760	190.366
21) 2-Propanol	(1)	2.446	45	307931	537.602
22) Methyl Iodide	(2)	2.462	142	704010M	98.952
23) Carbon Disulfide	(2)	2.504	76	1282599	98.059
25) Allyl Chloride	(2)	2.603	41	655452	101.339
27) Methyl Acetate	(2)	2.619	43	535082	95.578
28) Methylene Chloride	(2)	2.709	84	428209	94.359
29)*t-Butyl alcohol-d10	(1)	2.732	65	220310	250.000
30) t-Butyl alcohol	(1)	2.805	59	526469	515.255
31) Acrylonitrile	(2)	2.924	53	304031	103.230
32) trans-1,2-Dichloroethene	(2)	2.956	96	402067	99.813
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	945603	96.409
34) n-Hexane	(2)	3.213	57	538355	99.882
36) 1,1-Dichloroethane	(2)	3.341	63	732003	100.285
38) di-Isopropyl ether	(2)	3.412	45	1396389	99.579
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	632191	100.001
40) Ethyl t-butyl ether	(2)	3.758	59	960285	93.945
42) cis-1,2-Dichloroethene	(2)	3.890	96	451707	99.873
45) 2,2-Dichloropropane	(2)	3.890	77	324555	99.005
44) 2-Butanone	(2)	3.903	43	860004	203.247
47) Propionitrile	(1)	3.961	54	609727	480.141
48) Methacrylonitrile	(2)	4.108	67	777971	245.675
49) Bromochloromethane	(2)	4.118	128	236720	100.687

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.166	71	230330	195.972
51) Chloroform	(2)	4.198	83	681837	99.558
52)$Dibromofluoromethane	(2)	4.352	113	193818	49.683
52)$Dibromofluoromethane	(2)	4.355	111	202190	50.488
53) 1,1,1-Trichloroethane	(2)	4.378	97	514779	99.897
54) Cyclohexane	(2)	4.442	56	662674	97.172
54) Cyclohexane	(2)	4.439	84	552208	97.823
54) Cyclohexane	(2)	4.442	69	200038	97.603
55) 1,1-Dichloropropene	(2)	4.545	75	537698	97.927
56) Carbon Tetrachloride	(2)	4.545	117	449800	101.713
58) Isobutyl Alcohol	(1)	4.670	41	498266	1337.627
57)$1,2-Dichloroethane-d4	(2)	4.689	102	51772	49.899
57)$1,2-Dichloroethane-d4	(2)	4.689	65	224469	49.700
57)$1,2-Dichloroethane-d4	(2)	4.689	104	32929	49.836
60) Benzene	(2)	4.747	78	1745793	98.915
61) 1,2-Dichloroethane	(2)	4.766	62	527693	96.787
61) 1,2-Dichloroethane	(2)	4.763	98	54900	105.839
65) t-Amyl methyl ether	(2)	4.869	73	996307	95.142
66)*Fluorobenzene	(2)	5.029	96	842063	50.000
67) n-Heptane	(2)	5.036	43	494804	96.055
69) n-Butanol	(1)	5.353	56	936370	2831.160
71) Trichloroethene	(2)	5.405	95	426587	99.807
73) Methylcyclohexane	(2)	5.607	83	609561	98.235
73) Methylcyclohexane	(2)	5.604	98	284401	98.574
74) 1,2-Dichloropropane	(2)	5.632	63	460305	101.585
75) Dibromomethane	(2)	5.754	93	287206	102.702
77) Methyl Methacrylate	(2)	5.774	69	522673	104.965
76) 1,4-Dioxane	(1)	5.780	88	133422M	1349.419
79) Bromodichloromethane	(2)	5.924	83	538662	104.835
43) 1,2-Dichloroethene (Total)	(2)		96	853774	199.686
80) 2-Nitropropane	(2)	6.172	41	392793	225.938
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	375619	108.730
82) cis-1,3-Dichloropropene	(2)	6.406	75	742975	105.167
83) 4-Methyl-2-pentanone	(2)	6.582	43	1875717	224.883
84)$Toluene-d8	(3)	6.695	98	874156	49.795
84)$Toluene-d8	(3)	6.695	100	585880	50.326
89) Toluene	(3)	6.765	92	1120657	99.097
90) trans-1,3-Dichloropropene	(3)	7.015	75	707175	105.042

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.137	69	893065	107.955
93) 1,1,2-Trichloroethane	(3)	7.211	97	446415	102.563
94) Tetrachloroethene	(3)	7.359	166	451061	98.296
95) 1,3-Dichloropropane	(3)	7.388	76	768151	101.607
97) 2-Hexanone	(3)	7.490	43	1550240	235.388
98) Dibromochloromethane	(3)	7.609	129	468005	110.088
100) 1,2-Dibromoethane	(3)	7.715	107	494533	103.416
101)*Chlorobenzene-d5	(3)	8.161	117	700579	50.000
103) Chlorobenzene	(3)	8.187	112	1242086	99.008
104) 1,1,1,2-Tetrachloroethane	(3)	8.264	131	424147	105.206
105) Ethylbenzene	(3)	8.293	91	2139903	99.561
107) m+p-Xylene	(3)	8.399	106	1713085	200.463
108) o-Xylene	(3)	8.739	106	843483	100.330
110) Styrene	(3)	8.748	104	1474099	104.523
111) Bromoform	(3)	8.893	173	379562	114.721
112) Isopropylbenzene	(3)	9.047	105	2075316	100.458
113) Cyclohexanone	(1)	9.111	55	575999	1291.456
115)$4-Bromofluorobenzene	(3)	9.162	95	350858	49.958
115)$4-Bromofluorobenzene	(3)	9.162	174	295274	49.824
116) Bromobenzene	(4)	9.278	156	567523	99.066
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	803775	104.043
118) 1,2,3-Trichloropropane	(4)	9.313	110	239124	102.762
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	643492	259.751
120) n-Propylbenzene	(4)	9.371	91	2463393	97.544
121) 2-Chlorotoluene	(4)	9.432	126	515018	98.871
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	1822759	100.079
122) 4-Chlorotoluene	(4)	9.515	126	553747	99.305
125) tert-Butylbenzene	(4)	9.756	134	406285	98.184
126) Pentachloroethane	(4)	9.765	167	342023	104.558
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	1913889	99.721
128) sec-Butylbenzene	(4)	9.916	105	2197034	98.273
130) 1,3-Dichlorobenzene	(4)	9.993	146	1077708	98.654
131) p-Isopropyltoluene	(4)	10.022	119	1972426	99.665
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	397731	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	1113649	98.336
91) 1,3-Dichloropropene (total)	(3)		100	1450150	210.209
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	2033938	98.495
136) Benzyl Chloride	(4)	10.157	91	1788288	112.817

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.237	119	1234343	99.263
138) 1,4-Diethylbenzene	(4)	10.298	119	1307716	98.156
140) n-Butylbenzene	(4)	10.314	92	985822	98.693
139) 1,2-Dichlorobenzene	(4)	10.324	146	1081811	99.816
141) 1,2-Diethylbenzene	(4)	10.382	119	1030347	98.141
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	191235	108.922
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	826857	99.492
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	814746	102.112
148) Hexachlorobutadiene	(4)	11.530	225	267172	94.015
149) Naphthalene	(4)	11.582	128	2844431	105.359
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	786584	101.001
109) Xylene (Total)	(3)		106	2556568	300.794
151) 2-Methylnaphthalene	(4)	12.304	142	1671753	108.536
142) Diethylbenzene (total)	(4)		100	3572406	295.560

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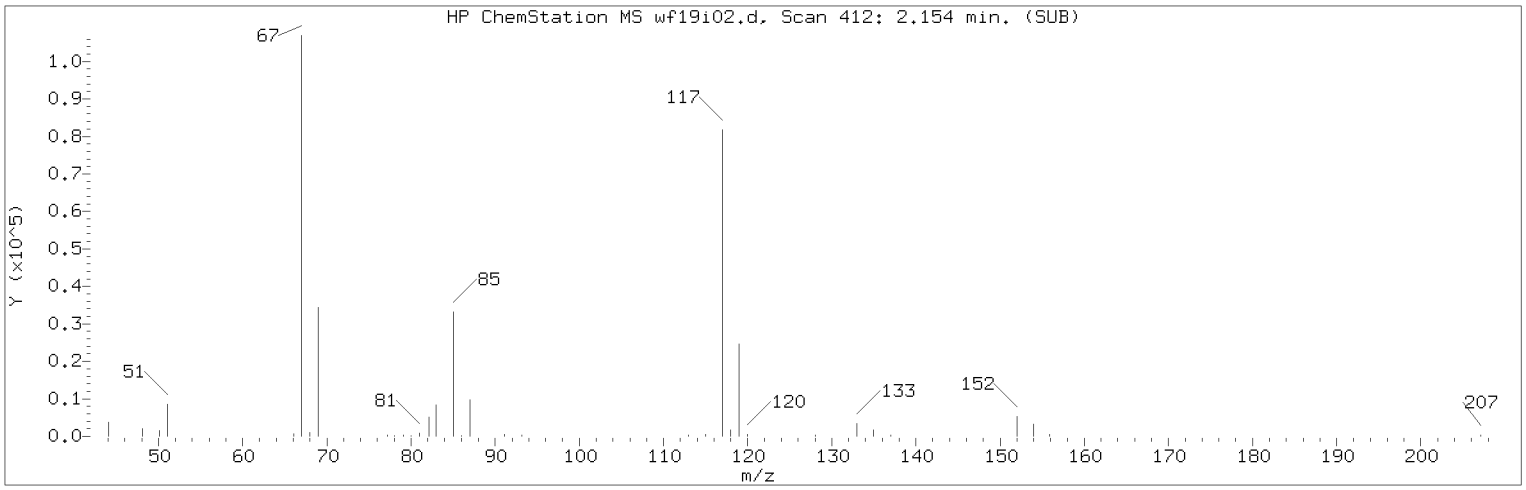
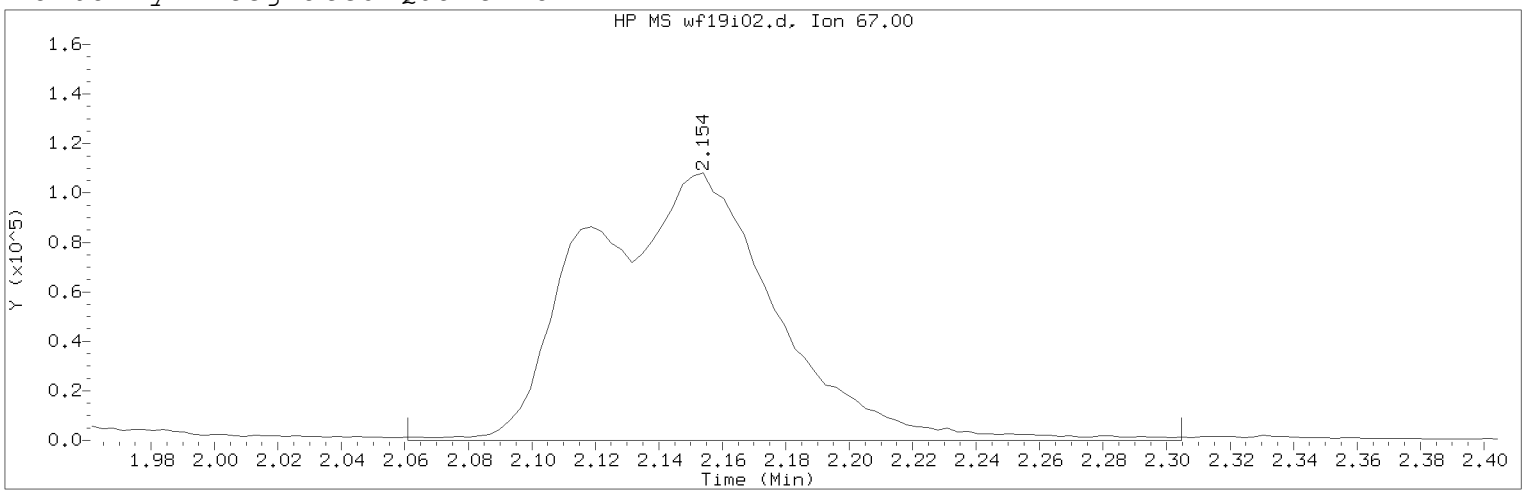
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

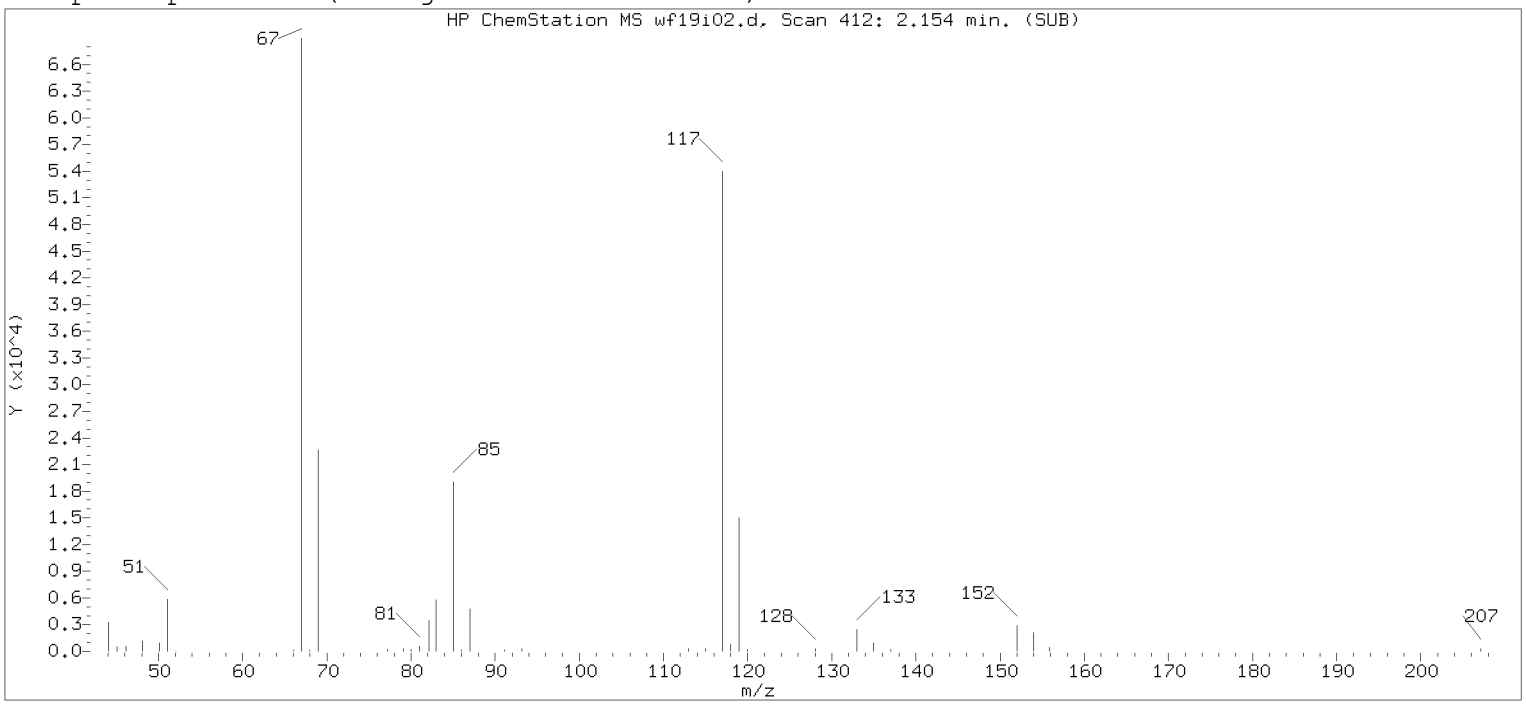
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 412
Retention Time (minutes): 2.154
Quant Ion : 67.00
Area (flag) : 447423M
On-Column Amount (ng) : 90.7045
Integration start scan : 382 Integration stop scan: 458
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

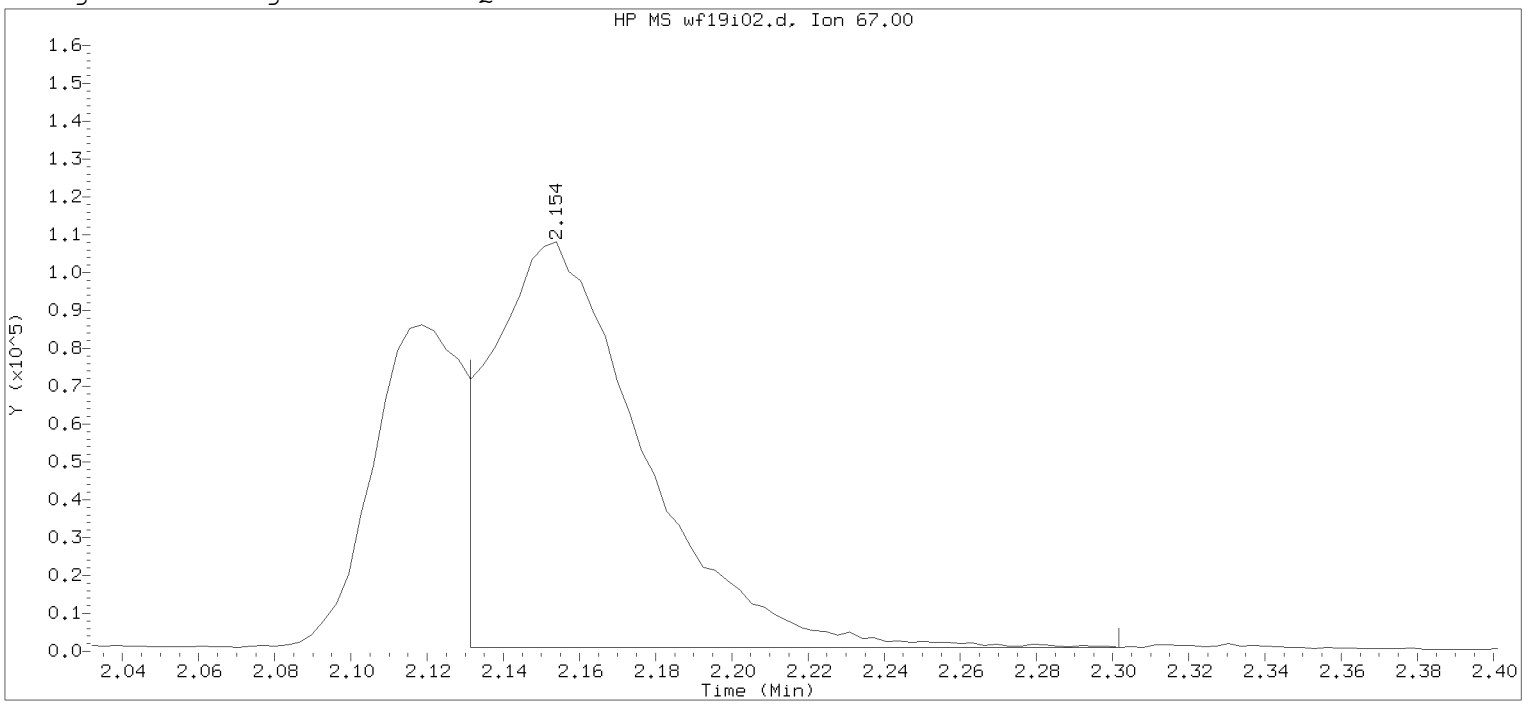
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 412		
Retention Time (minutes)	: 2.154		
Quant Ion	: 67.00		
Area	: 294632		
On-column Amount (ng)	: 90.5897		
Integration start scan	: 404	Integration stop scan:	457
Y at integration start	: 1032	Y at integration end:	981

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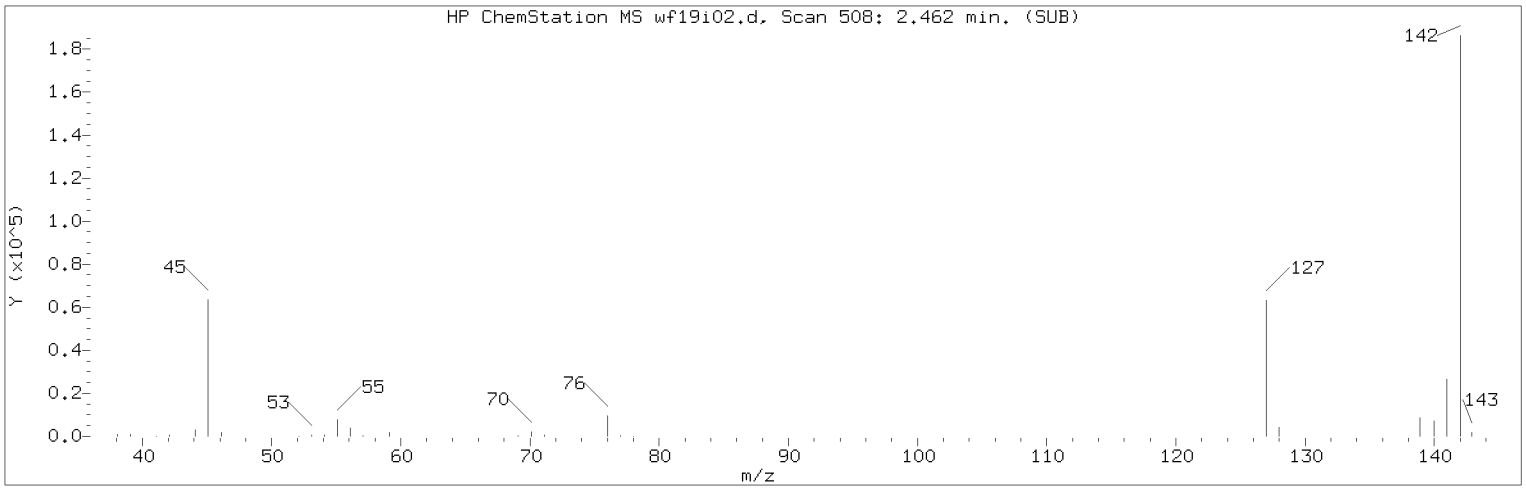
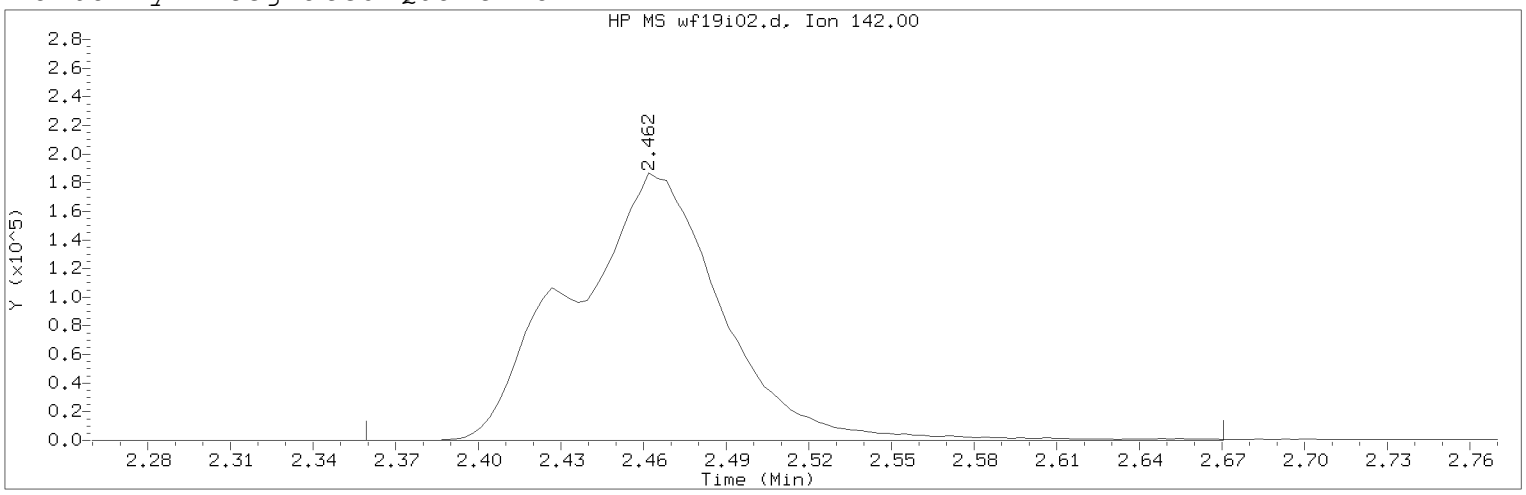
Target 3.5 esignature user apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

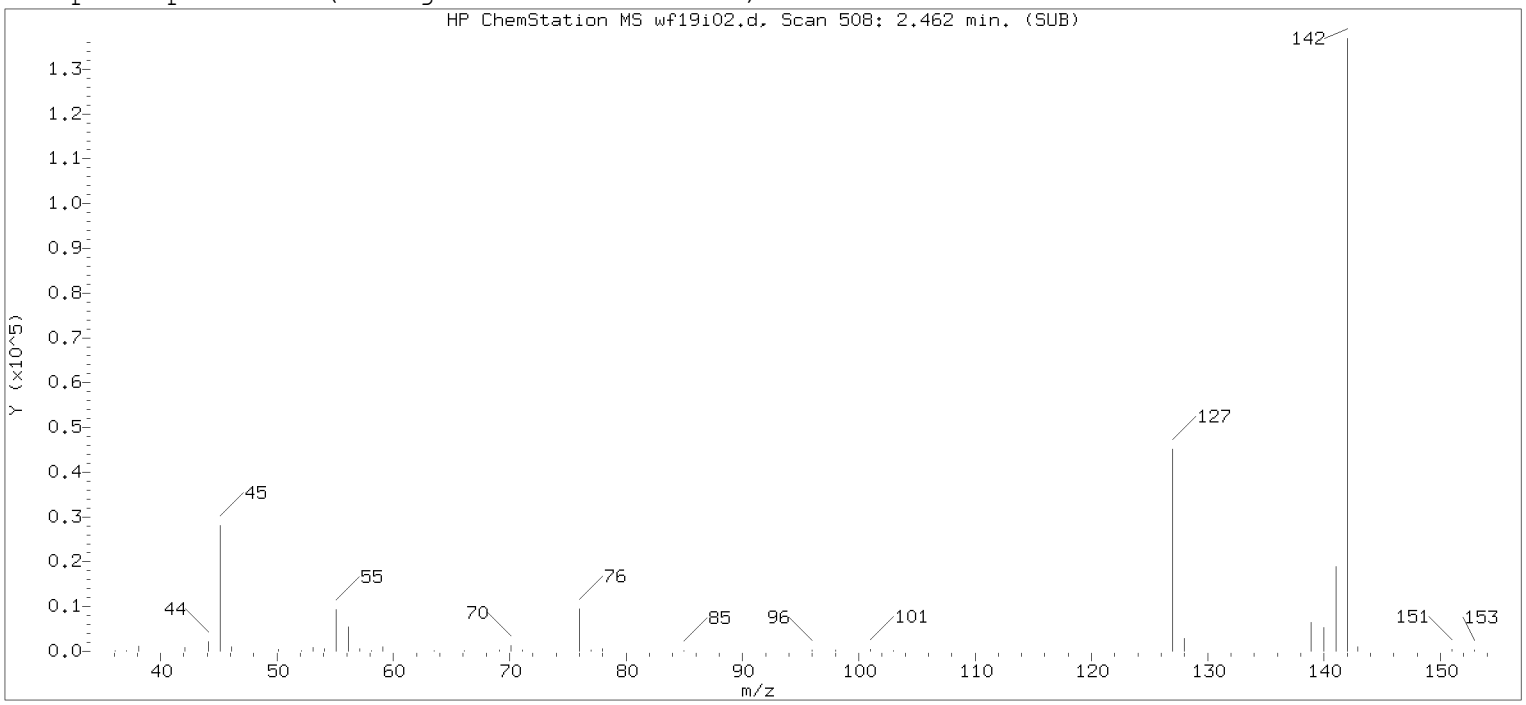
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 508
Retention Time (minutes): 2.462
Quant Ion : 142.00
Area (flag) : 704010M
On-Column Amount (ng) : 98.9520
Integration start scan : 475 Integration stop scan: 572
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

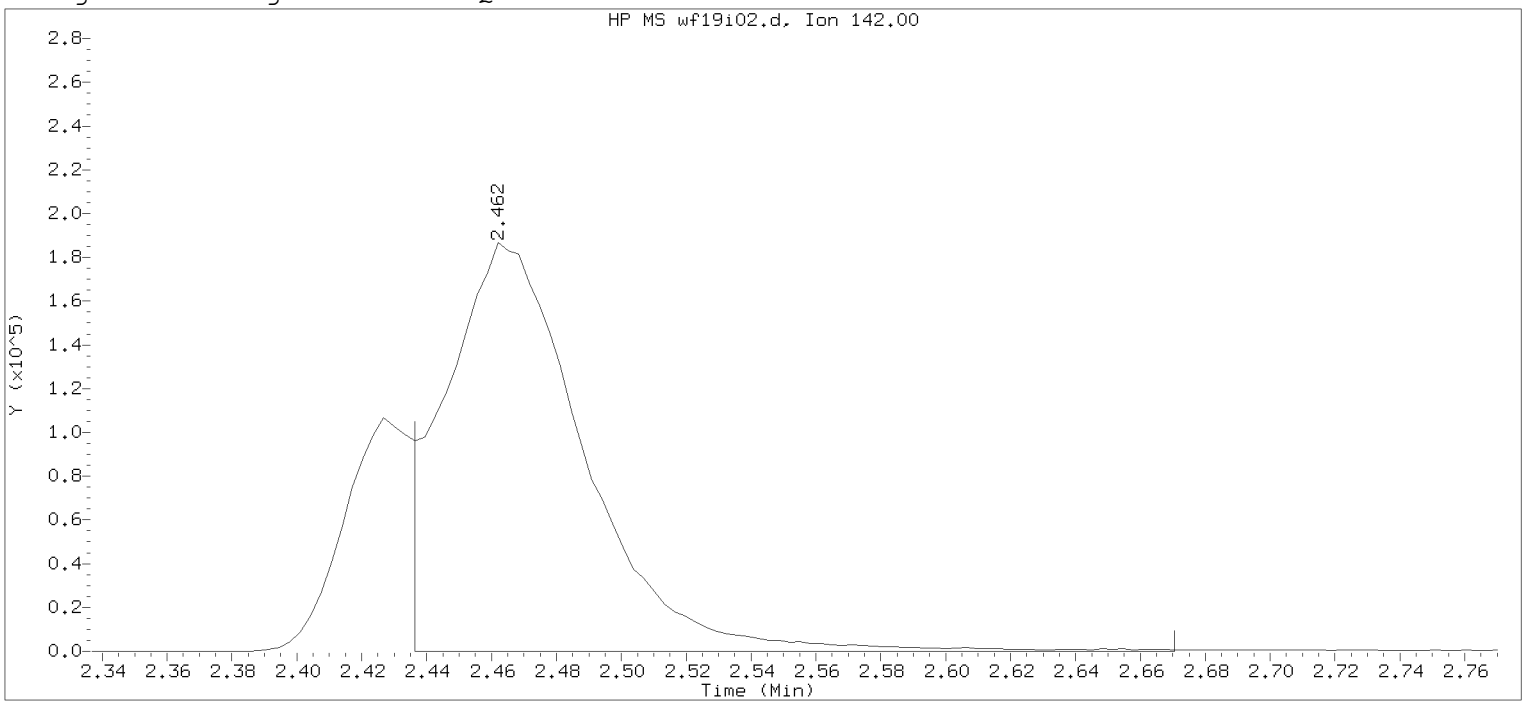
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

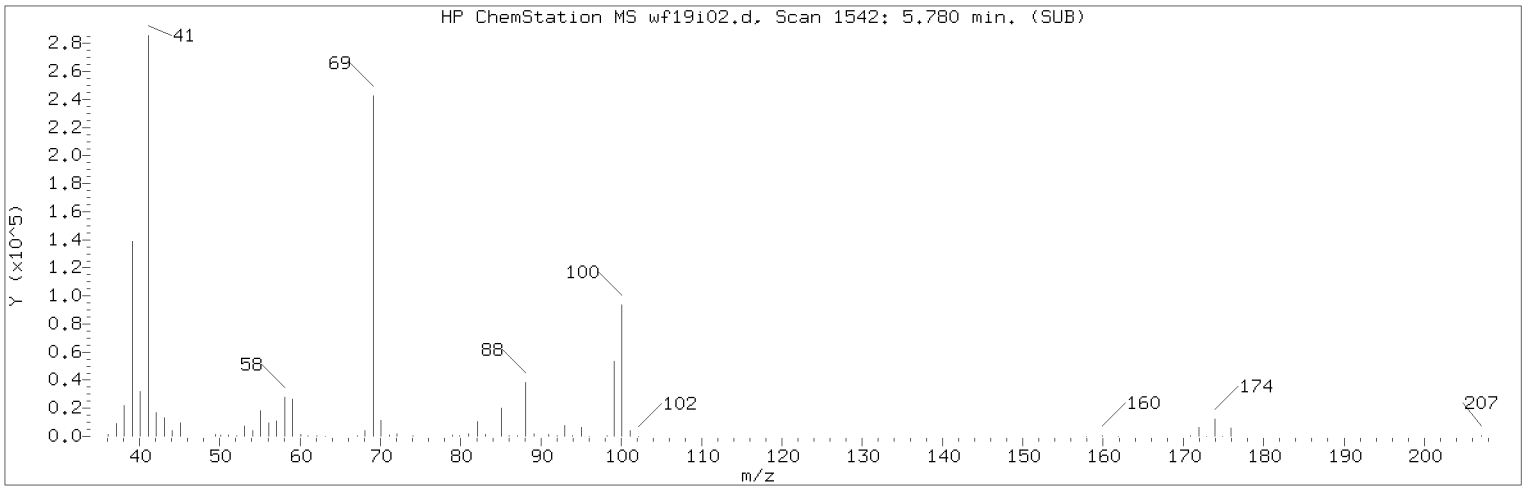
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD100 Lab Sample ID: VSTD100

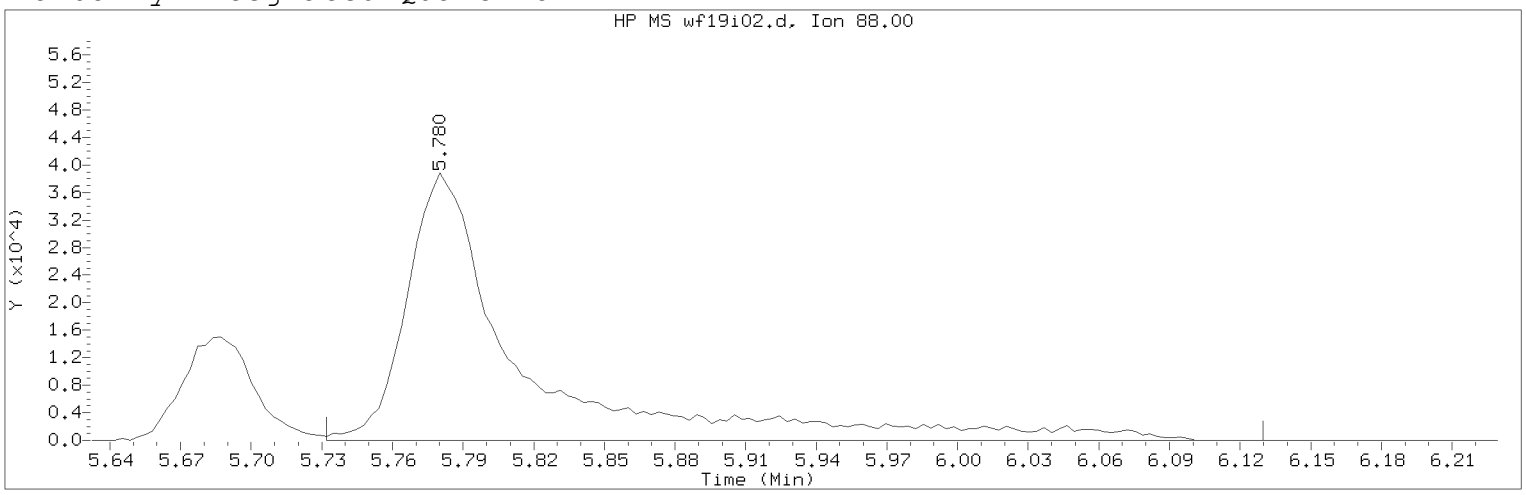
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 508
Retention Time (minutes): 2.462
Quant Ion : 142.00
Area : 554735
On-column Amount (ng) : 84.2643
Integration start scan : 499 Integration stop scan: 572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

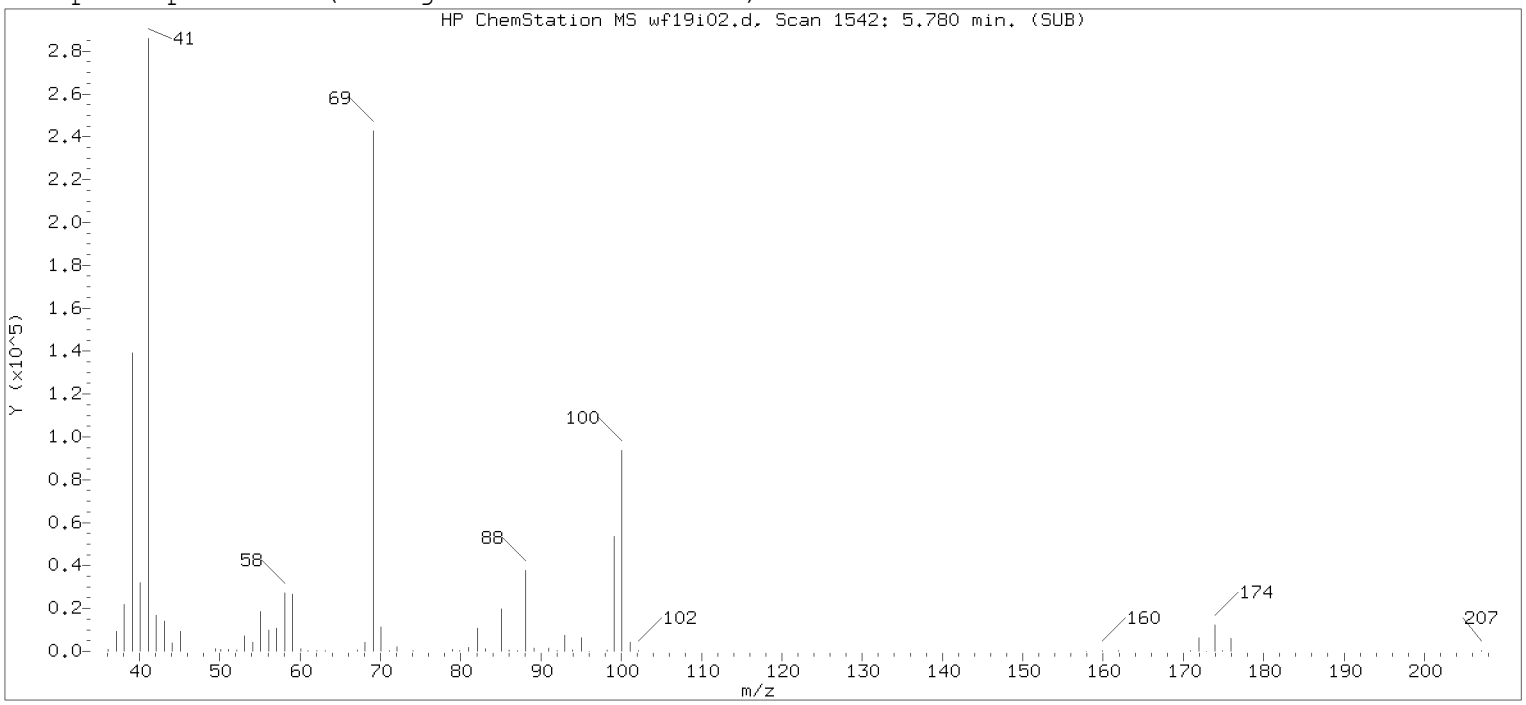
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area (flag) : 133422M
On-Column Amount (ng) : 1349.4188
Integration start scan : 1526 Integration stop scan: 1650
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

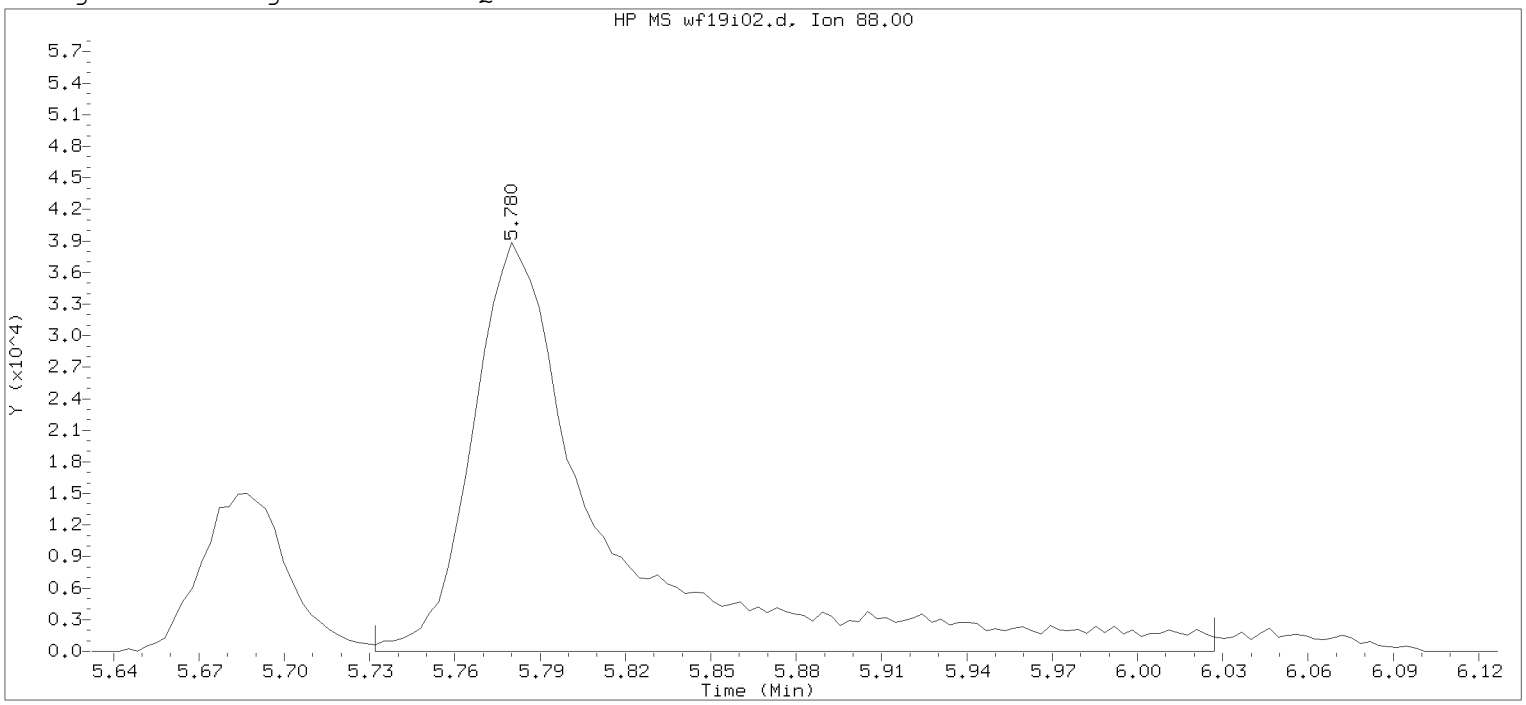
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



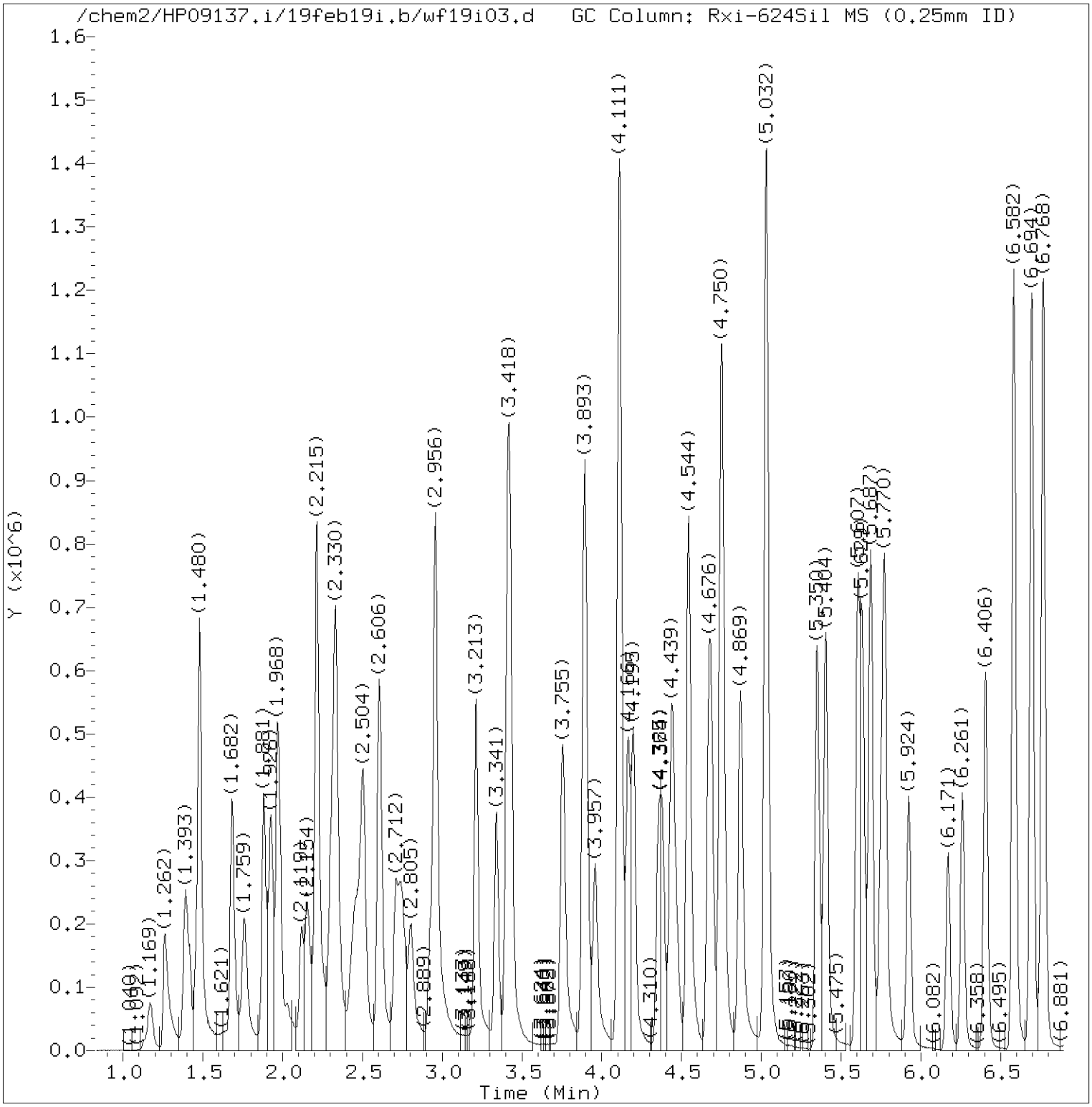
Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area : 128356
On-column Amount (ng) : 1250.1973
Integration start scan : 1526 Integration stop scan: 1618
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

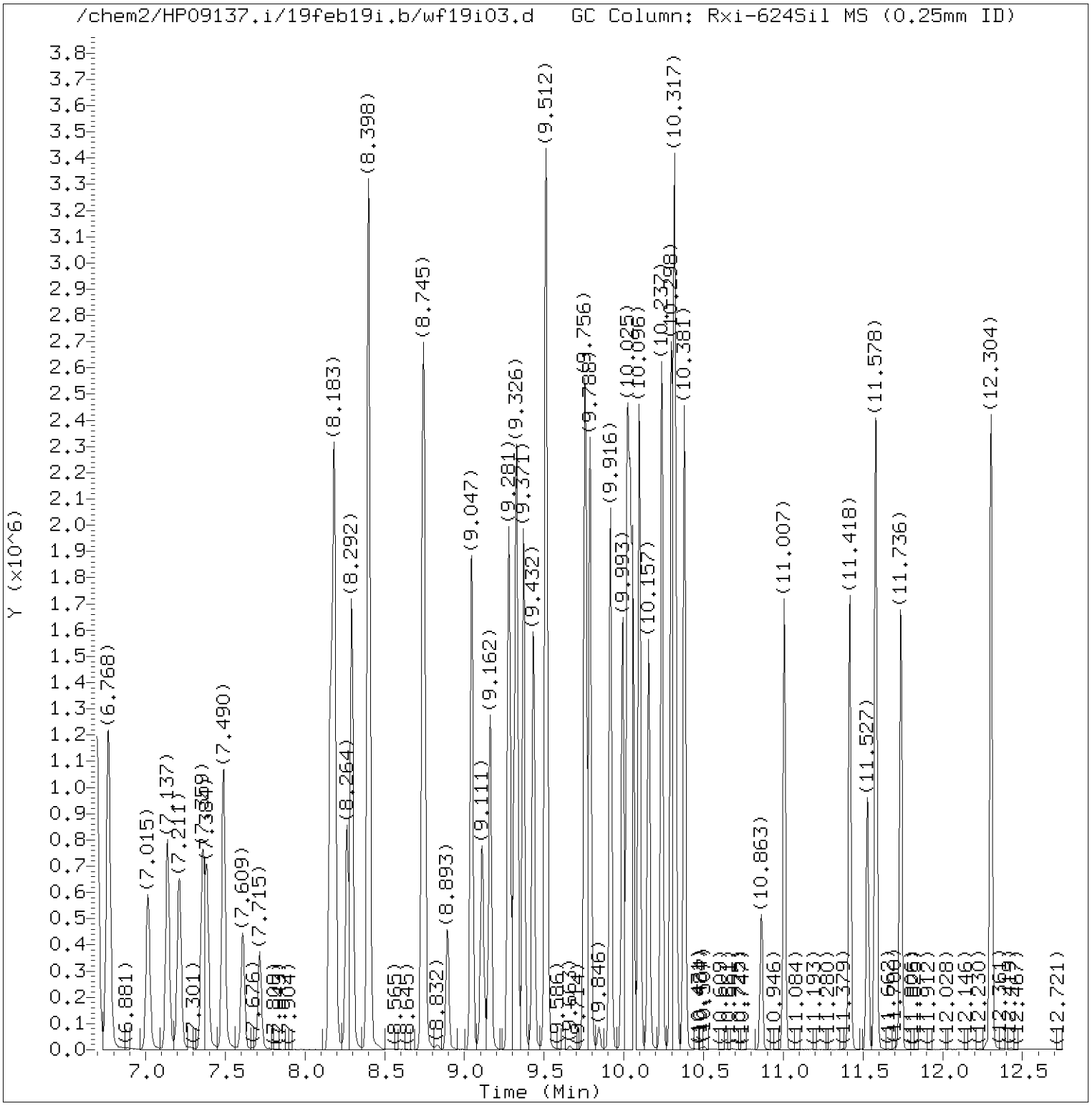
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.262	85	296826	53.462
4) Chloromethane	(2)	1.393	50	345066	49.912
6) Vinyl Chloride	(2)	1.467	62	316392	49.922
5) 1,3-Butadiene	(2)	1.480	39	198055	47.007
8) Bromomethane	(2)	1.682	94	248203	49.656
9) Chloroethane	(2)	1.759	64	196842	47.198
10) Dichlorofluoromethane	(2)	1.881	67	394164	48.827
12) Trichlorofluoromethane	(2)	1.926	101	346119	51.421
11) n-Pentane	(2)	1.971	43	304724	47.602
13) Ethanol	(1)	2.029	45	123880	1223.601
15) Freon 123a	(2)	2.154	67	238678M	47.452
16) Acrolein	(1)	2.215	56	827202	517.599
17) 1,1-Dichloroethene	(2)	2.324	96	193424	51.092
17) 1,1-Dichloroethene	(2)	2.321	63	95600	50.052
19) Freon 113	(2)	2.330	101	179017	53.849
18) Acetone	(1)	2.334	58	78612	101.199
21) 2-Propanol	(1)	2.443	45	149590	259.188
22) Methyl Iodide	(2)	2.465	142	365873	50.432
23) Carbon Disulfide	(2)	2.507	76	662769	49.692
25) Allyl Chloride	(2)	2.600	41	351245	53.257
27) Methyl Acetate	(2)	2.619	43	279026	48.878
28) Methylene Chloride	(2)	2.706	84	227605M	49.185
29)*t-Butyl alcohol-d10	(1)	2.728	65	221988	250.000
30) t-Butyl alcohol	(1)	2.805	59	270559	262.794
31) Acrylonitrile	(2)	2.924	53	161927	53.918
32) trans-1,2-Dichloroethene	(2)	2.956	96	205818	50.107
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	499906	49.983
34) n-Hexane	(2)	3.213	57	294788	53.636
36) 1,1-Dichloroethane	(2)	3.341	63	377579	50.730
38) di-Isopropyl ether	(2)	3.412	45	723571	50.602
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	329496	51.113
40) Ethyl t-butyl ether	(2)	3.755	59	519380	49.830
42) cis-1,2-Dichloroethene	(2)	3.890	96	233468	50.623
45) 2,2-Dichloropropane	(2)	3.893	77	170659	51.054
44) 2-Butanone	(2)	3.906	43	444981	103.132
47) Propionitrile	(1)	3.960	54	312875	244.517
48) Methacrylonitrile	(2)	4.111	67	408760	126.588
49) Bromochloromethane	(2)	4.118	128	123779	51.631

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.166	71	123715	104.465
51) Chloroform	(2)	4.198	83	350541	50.195
52)$Dibromofluoromethane	(2)	4.352	113	200440	50.388
52)$Dibromofluoromethane	(2)	4.352	111	203587	49.855
53) 1,1,1-Trichloroethane	(2)	4.378	97	270255	51.432
54) Cyclohexane	(2)	4.442	56	358513	51.555
54) Cyclohexane	(2)	4.439	84	301750	52.422
54) Cyclohexane	(2)	4.442	69	108191	51.769
55) 1,1-Dichloropropene	(2)	4.544	75	280799	50.152
56) Carbon Tetrachloride	(2)	4.544	117	228944	50.771
58) Isobutyl Alcohol	(1)	4.670	41	246561	656.905
57)$1,2-Dichloroethane-d4	(2)	4.689	102	52492	49.616
57)$1,2-Dichloroethane-d4	(2)	4.686	65	225475	48.958
57)$1,2-Dichloroethane-d4	(2)	4.689	104	33040	49.038
60) Benzene	(2)	4.750	78	896329	49.804
61) 1,2-Dichloroethane	(2)	4.763	62	272237	48.968
61) 1,2-Dichloroethane	(2)	4.766	98	28104	53.133
65) t-Amyl methyl ether	(2)	4.869	73	548486	51.366
66)*Fluorobenzene	(2)	5.029	96	858650	50.000
67) n-Heptane	(2)	5.035	43	271771	51.739
69) n-Butanol	(1)	5.350	56	449377	1348.443
71) Trichloroethene	(2)	5.404	95	217955	50.009
73) Methylcyclohexane	(2)	5.603	83	345616	54.623
73) Methylcyclohexane	(2)	5.607	98	160647	54.605
74) 1,2-Dichloropropane	(2)	5.636	63	236274	51.136
75) Dibromomethane	(2)	5.751	93	147111	51.589
77) Methyl Methacrylate	(2)	5.773	69	266970	52.578
76) 1,4-Dioxane	(1)	5.780	88	66583M	668.325
79) Bromodichloromethane	(2)	5.924	83	272148	51.943
43) 1,2-Dichloroethene (Total)	(2)		96	439286	100.730
80) 2-Nitropropane	(2)	6.171	41	193740	109.288
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	192007	54.506
82) cis-1,3-Dichloropropene	(2)	6.406	75	374689	52.012
83) 4-Methyl-2-pentanone	(2)	6.582	43	893533	105.058
84)$Toluene-d8	(3)	6.694	98	891117	50.528
84)$Toluene-d8	(3)	6.694	100	583239	49.869
89) Toluene	(3)	6.765	92	574331	50.554
90) trans-1,3-Dichloropropene	(3)	7.015	75	357488	52.857

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.137	69	455291	54.784
93) 1,1,2-Trichloroethane	(3)	7.211	97	227274	51.976
94) Tetrachloroethene	(3)	7.359	166	231262	50.166
95) 1,3-Dichloropropane	(3)	7.384	76	393691	51.836
97) 2-Hexanone	(3)	7.490	43	705936	106.697
98) Dibromochloromethane	(3)	7.609	129	231994	54.321
100) 1,2-Dibromoethane	(3)	7.715	107	253132	52.691
101)*Chlorobenzene-d5	(3)	8.161	117	703812	50.000
103) Chlorobenzene	(3)	8.187	112	634213	50.322
104) 1,1,1,2-Tetrachloroethane	(3)	8.264	131	212636	52.500
105) Ethylbenzene	(3)	8.292	91	1088867	50.428
107) m+p-Xylene	(3)	8.398	106	866772	100.963
108) o-Xylene	(3)	8.739	106	427426	50.608
110) Styrene	(3)	8.751	104	737561	52.057
111) Bromoform	(3)	8.893	173	184052	55.373
112) Isopropylbenzene	(3)	9.047	105	1059585	51.055
113) Cyclohexanone	(1)	9.111	55	294000	654.199
115)$4-Bromofluorobenzene	(3)	9.162	95	351157	49.771
115)$4-Bromofluorobenzene	(3)	9.162	174	297817	50.023
116) Bromobenzene	(4)	9.278	156	283326	50.030
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	404581	52.977
118) 1,2,3-Trichloropropane	(4)	9.313	110	120905	52.560
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	326983	133.518
120) n-Propylbenzene	(4)	9.371	91	1251632	50.136
121) 2-Chlorotoluene	(4)	9.435	126	258976	50.293
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	917303	50.948
122) 4-Chlorotoluene	(4)	9.518	126	277283	50.302
125) tert-Butylbenzene	(4)	9.756	134	204946	50.102
126) Pentachloroethane	(4)	9.765	167	174259	53.889
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	964859	50.855
128) sec-Butylbenzene	(4)	9.916	105	1121349	50.739
130) 1,3-Dichlorobenzene	(4)	9.993	146	543558	50.334
131) p-Isopropyltoluene	(4)	10.022	119	994480	50.832
132)*1,4-Dichlorobenzene-d4	(4)	10.038	152	393177	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	558679	49.903
91) 1,3-Dichloropropene (total)	(3)		100	732177	104.868
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	1074098	52.617
136) Benzyl Chloride	(4)	10.157	91	884205	56.428

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.237	119	648916	52.789
138) 1,4-Diethylbenzene	(4)	10.298	119	693198	52.634
140) n-Butylbenzene	(4)	10.314	92	498295	50.463
139) 1,2-Dichlorobenzene	(4)	10.324	146	543650	50.742
141) 1,2-Diethylbenzene	(4)	10.381	119	544138	52.430
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	96961	55.866
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	420610	51.197
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	414796	52.589
148) Hexachlorobutadiene	(4)	11.527	225	139053	49.498
149) Naphthalene	(4)	11.582	128	1472414	55.170
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	402903	52.334
109) Xylene (Total)	(3)		106	1294198	151.571
151) 2-Methylnaphthalene	(4)	12.304	142	862234	56.628
142) Diethylbenzene (total)	(4)		100	1886252	157.852

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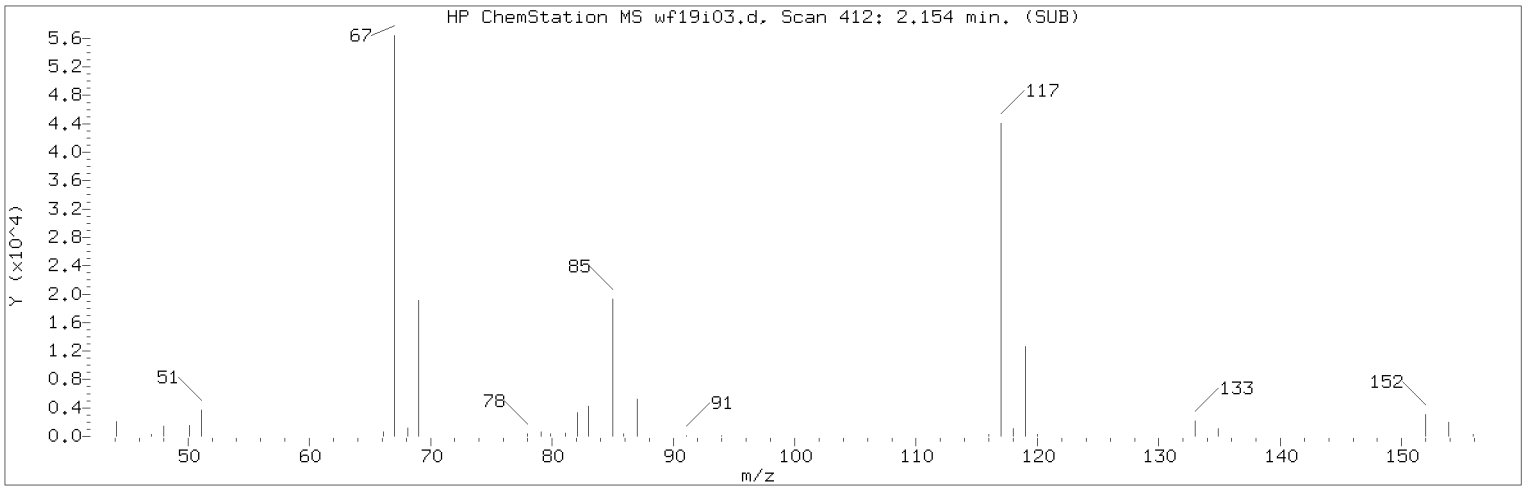
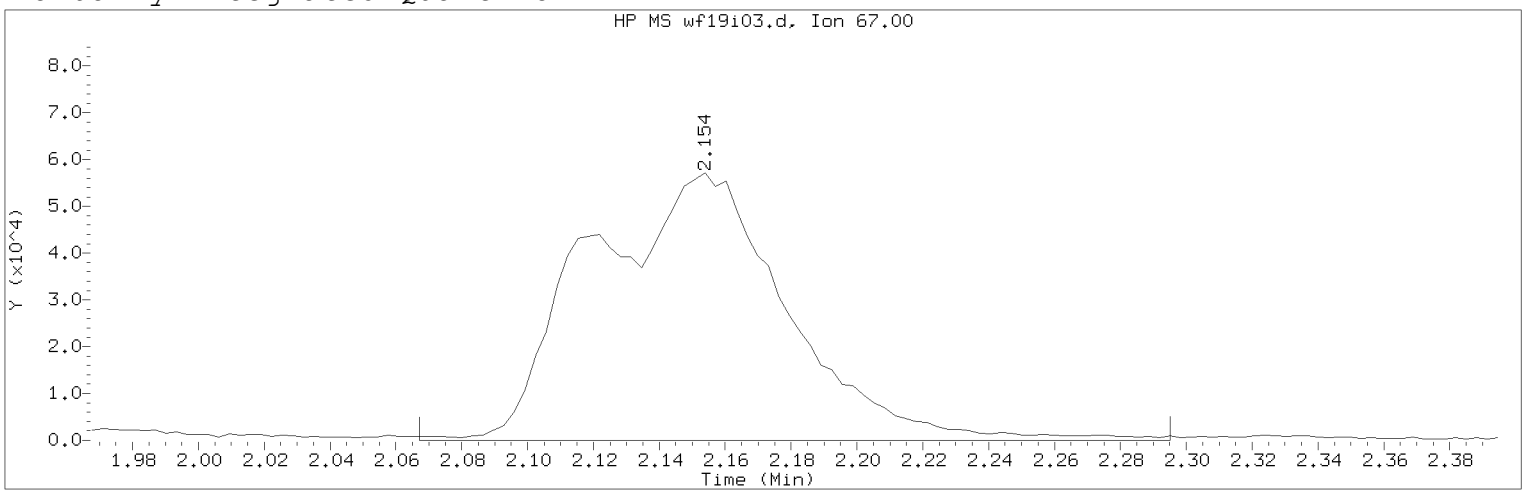
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

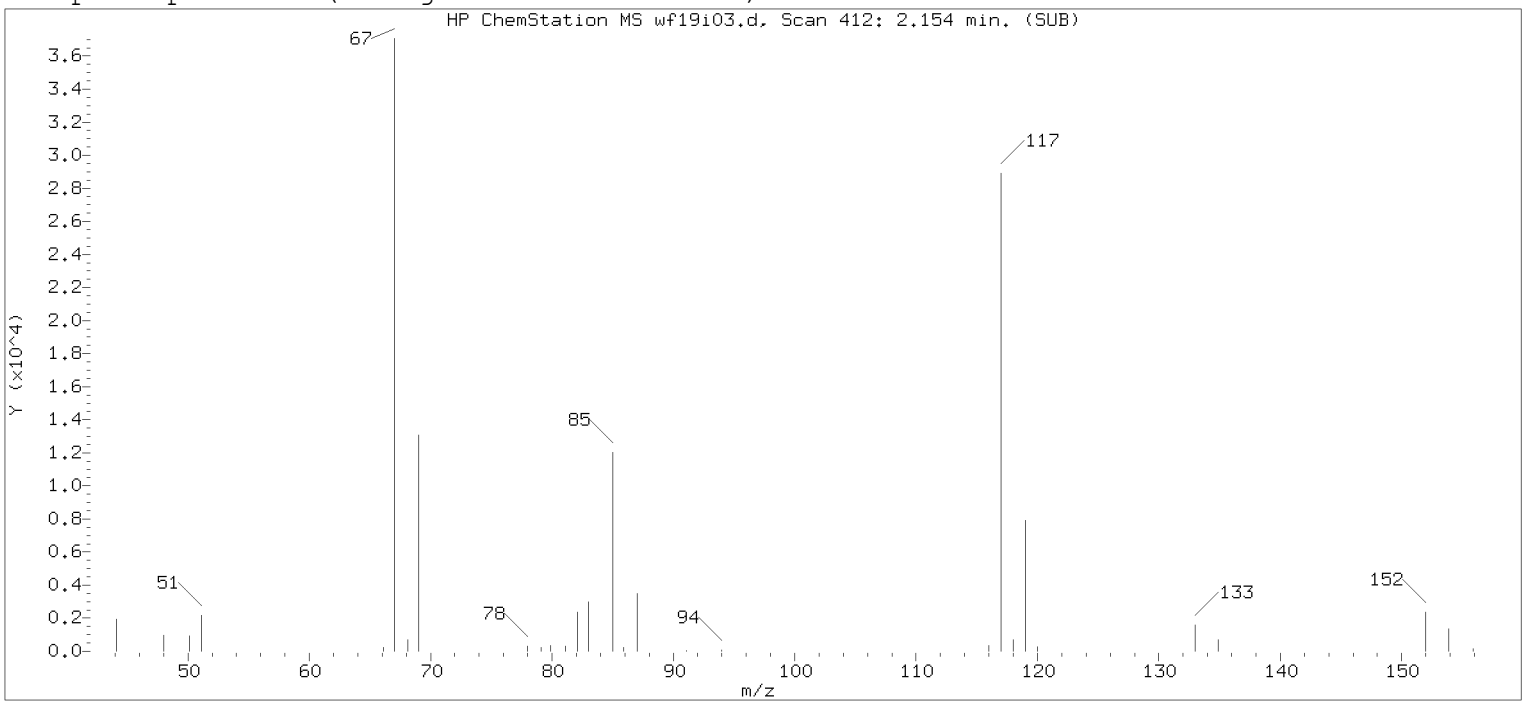
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 412
Retention Time (minutes): 2.154
Quant Ion : 67.00
Area (flag) : 238678M
On-Column Amount (ng) : 47.4516
Integration start scan : 384 Integration stop scan: 455
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

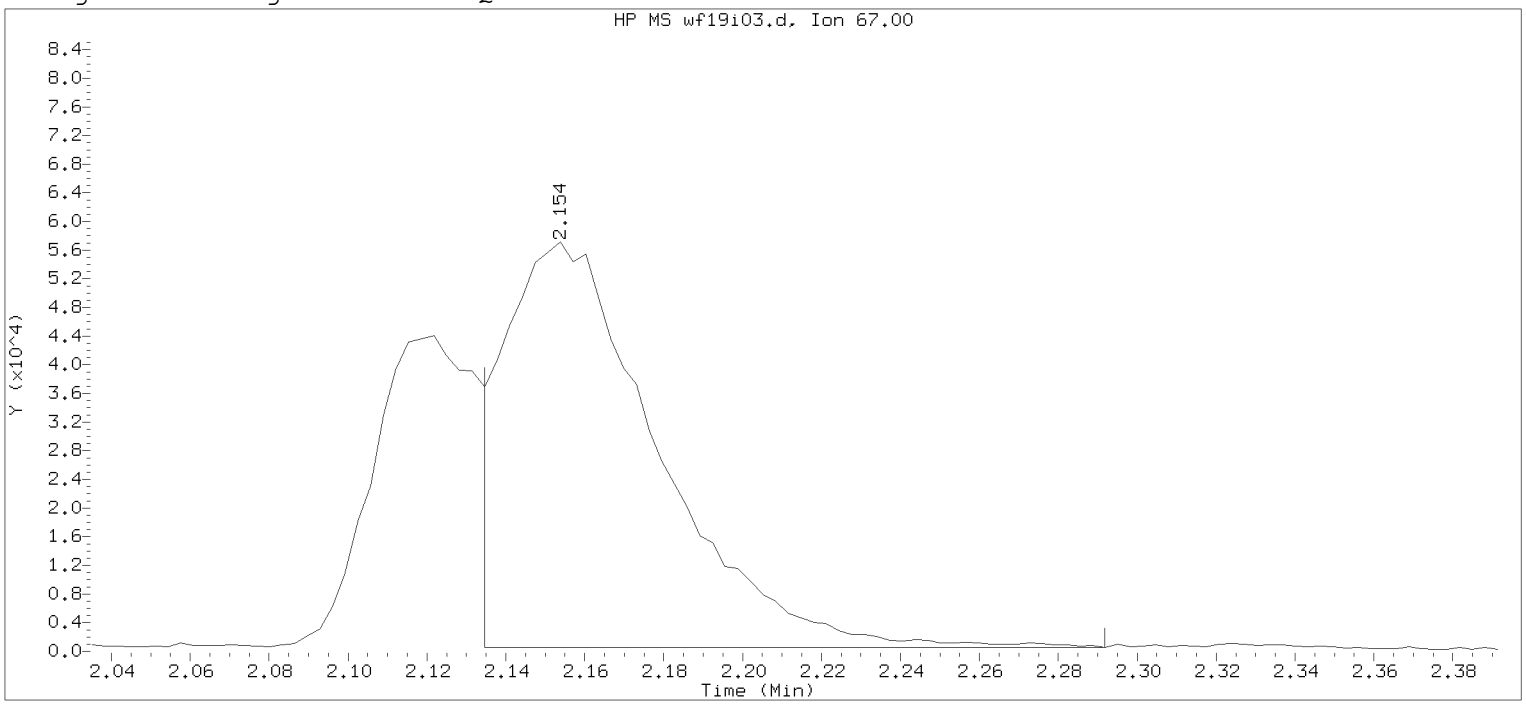
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 412		
Retention Time (minutes)	: 2.154		
Quant Ion	: 67.00		
Area	: 154008		
On-column Amount (ng)	: 47.5673		
Integration start scan	: 405	Integration stop scan:	454
Y at integration start	: 574	Y at integration end:	555

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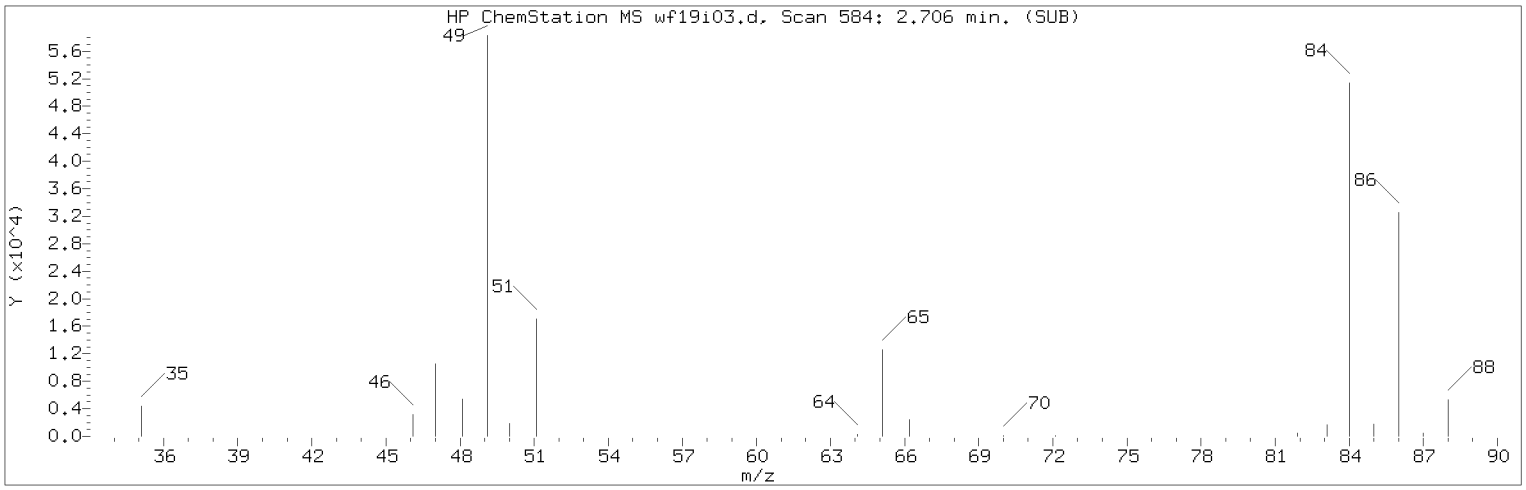
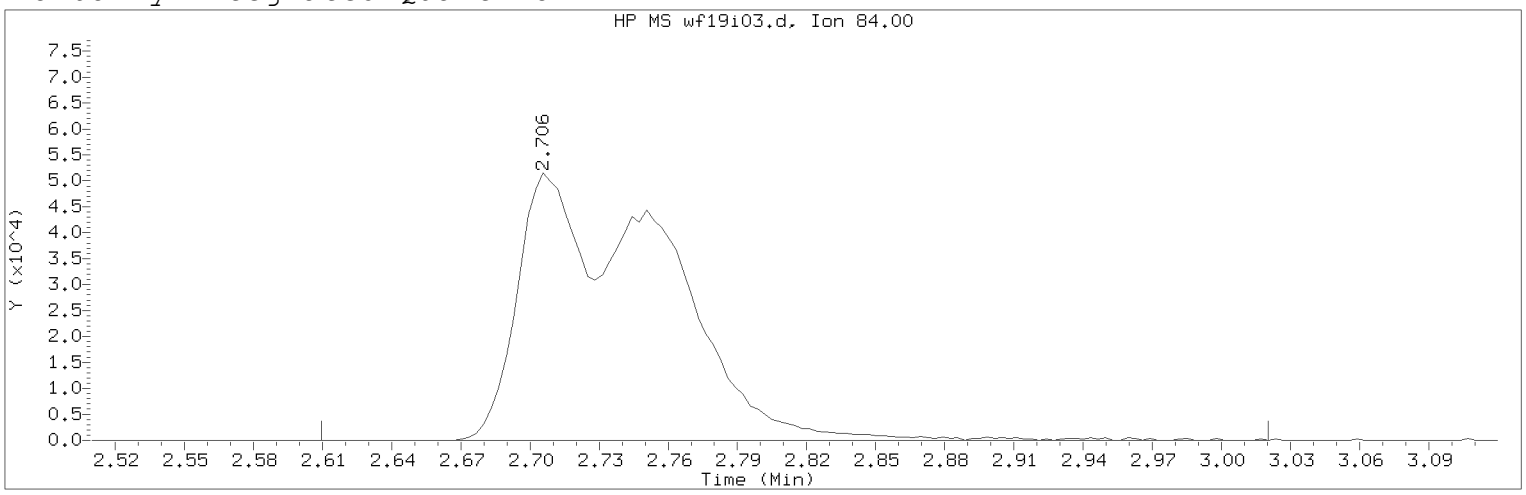
Target 3.5 esignature user apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

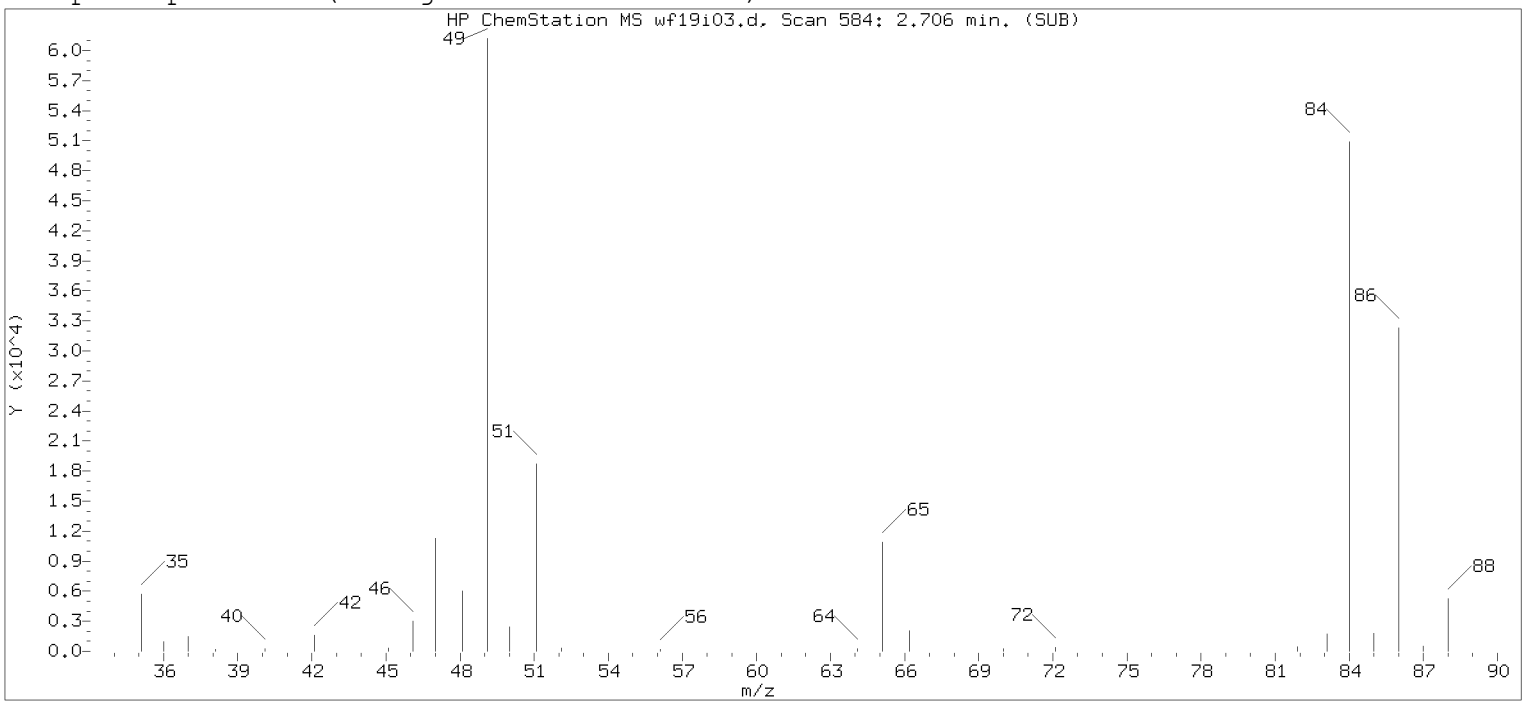
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 584
Retention Time (minutes): 2.706
Quant Ion : 84.00
Area (flag) : 227605M
On-Column Amount (ng) : 49.1854
Integration start scan : 553 Integration stop scan: 681
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

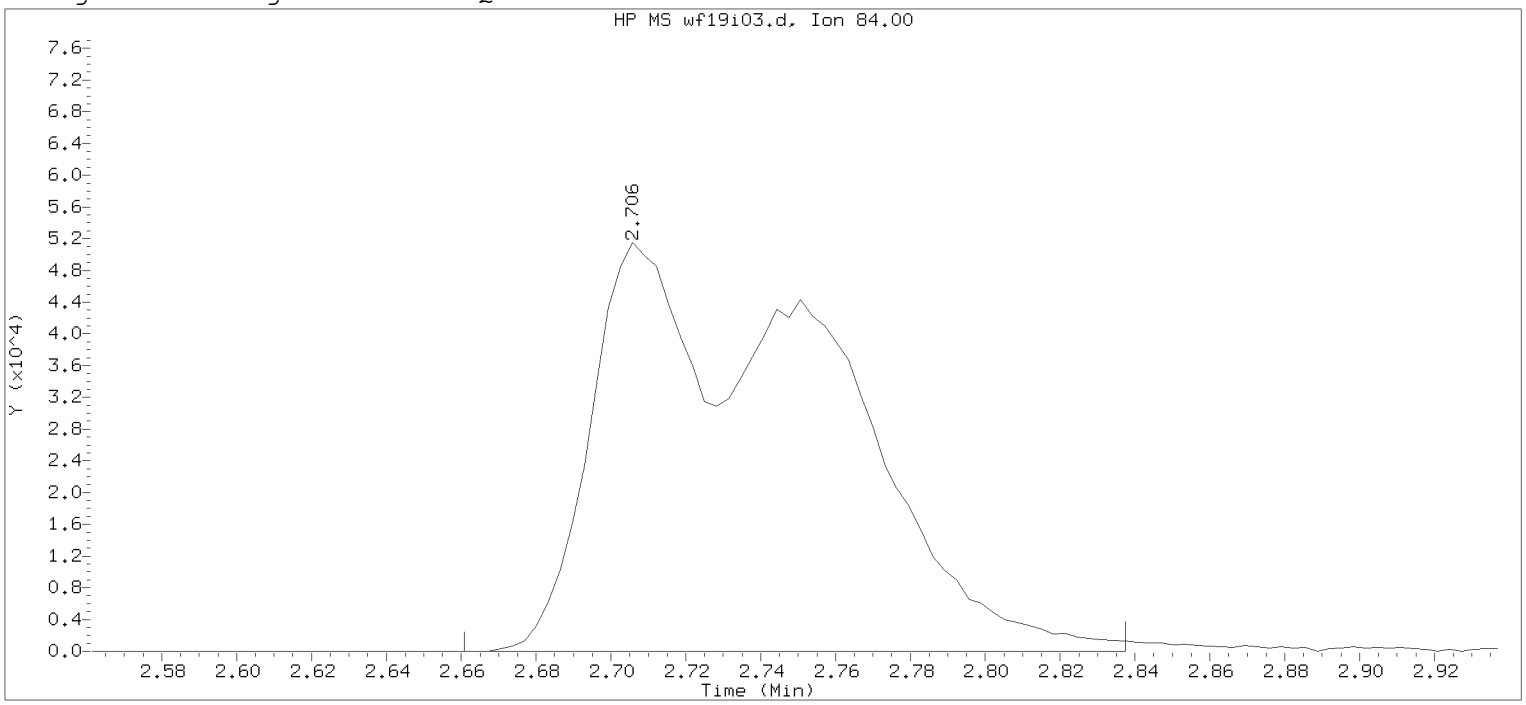
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

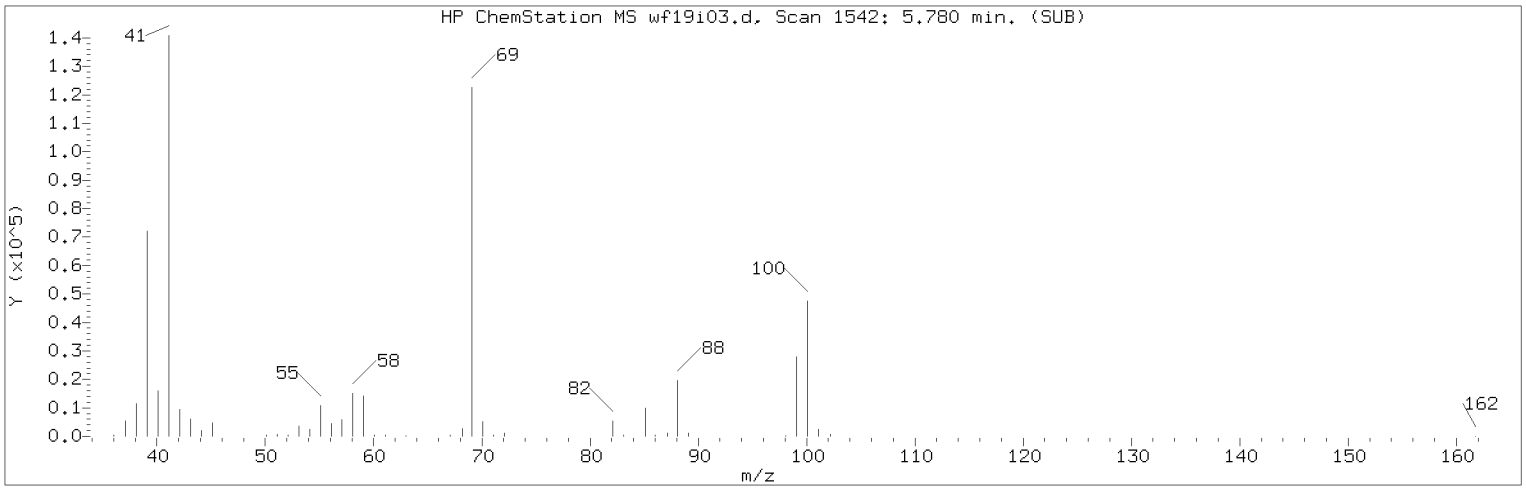
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

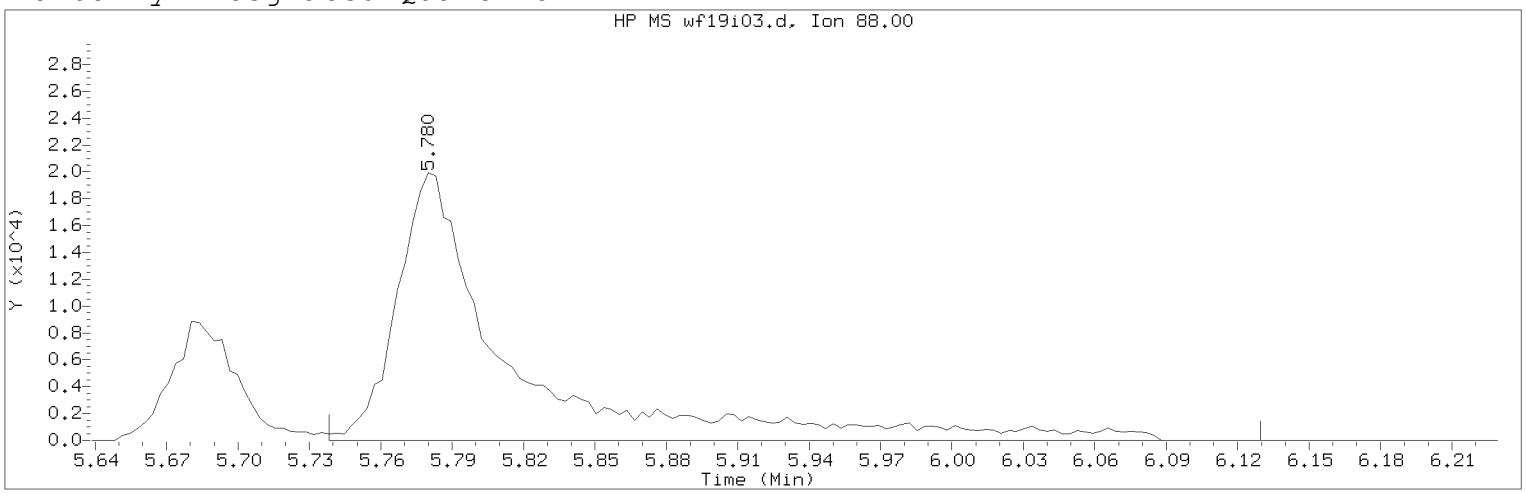
Compound Number	: 28		
Compound Name	: Methylene Chloride		
Scan Number	: 584		
Retention Time (minutes)	: 2.706		
Quant Ion	: 84.00		
Area	: 223774		
On-column Amount (ng)	: 67.2195		
Integration start scan	: 569	Integration stop scan:	624
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

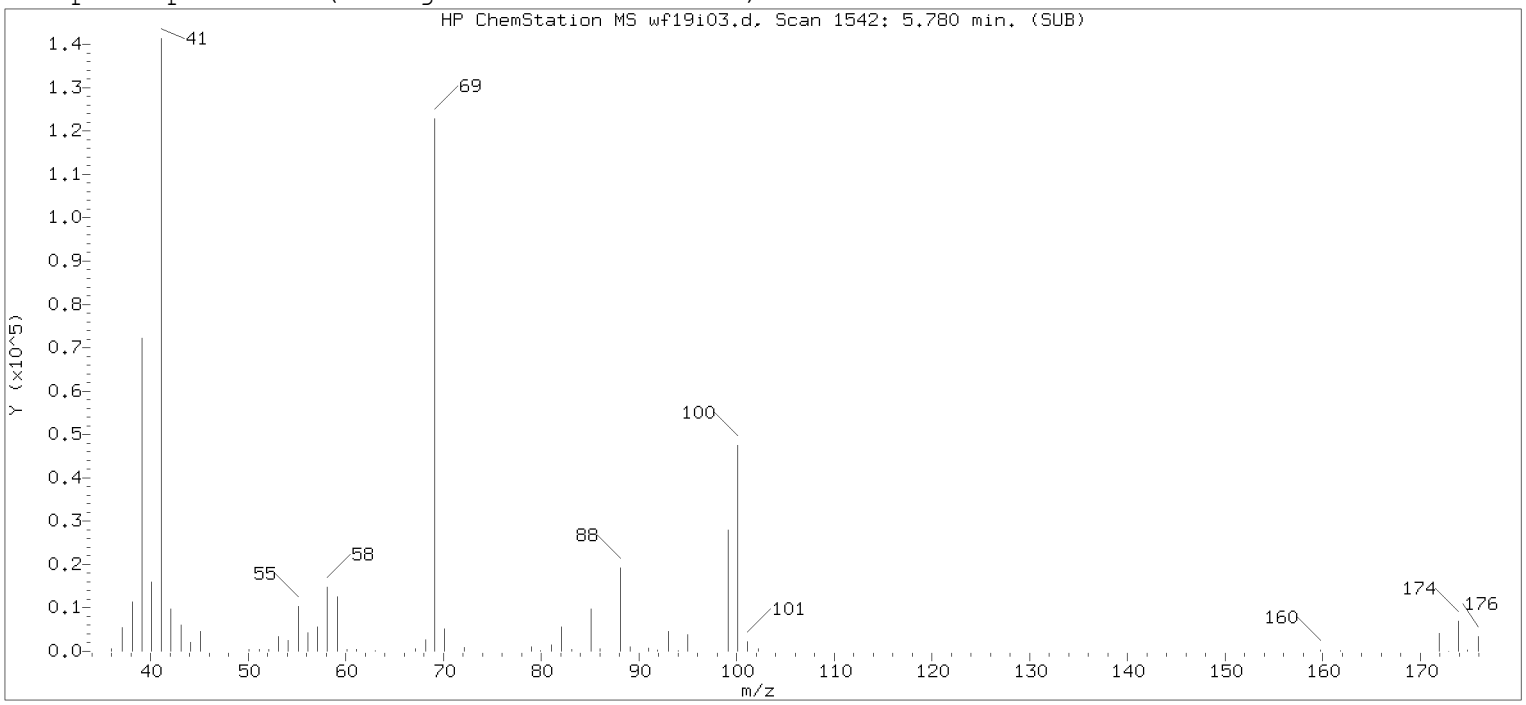
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area (flag) : 66583M
On-Column Amount (ng) : 668.3245
Integration start scan : 1528 Integration stop scan: 1650
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

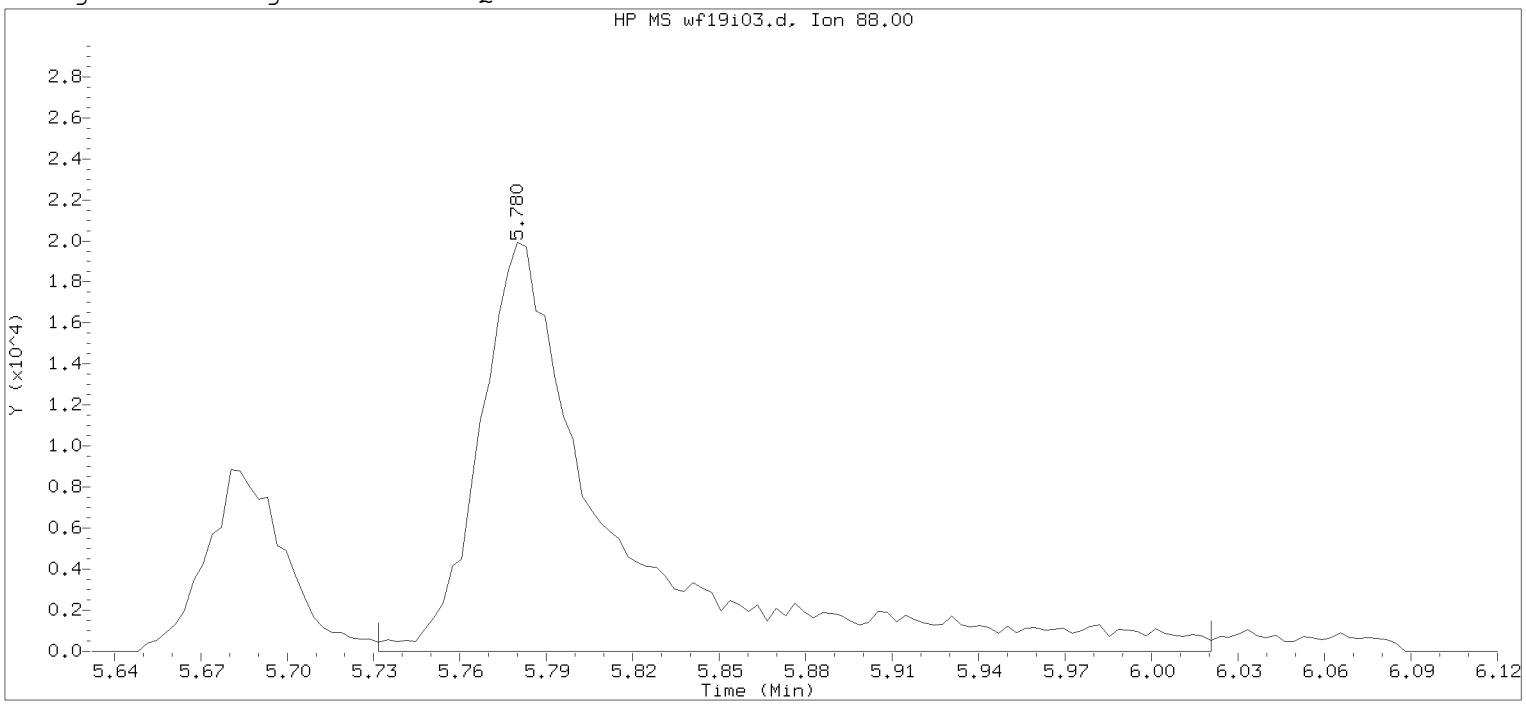
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



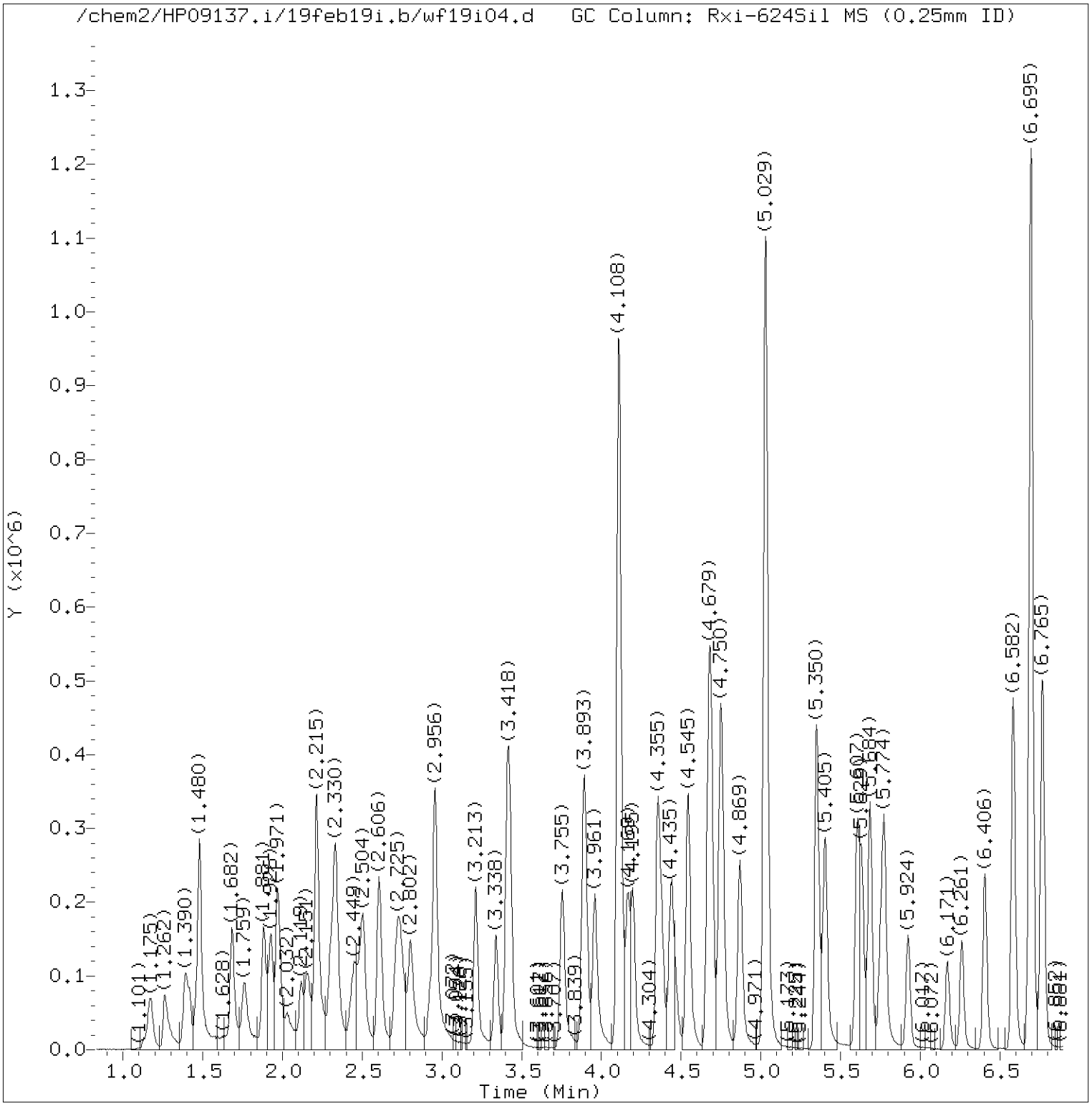
Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area : 64091
On-column Amount (ng) : 621.3434
Integration start scan : 1526 Integration stop scan: 1616
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

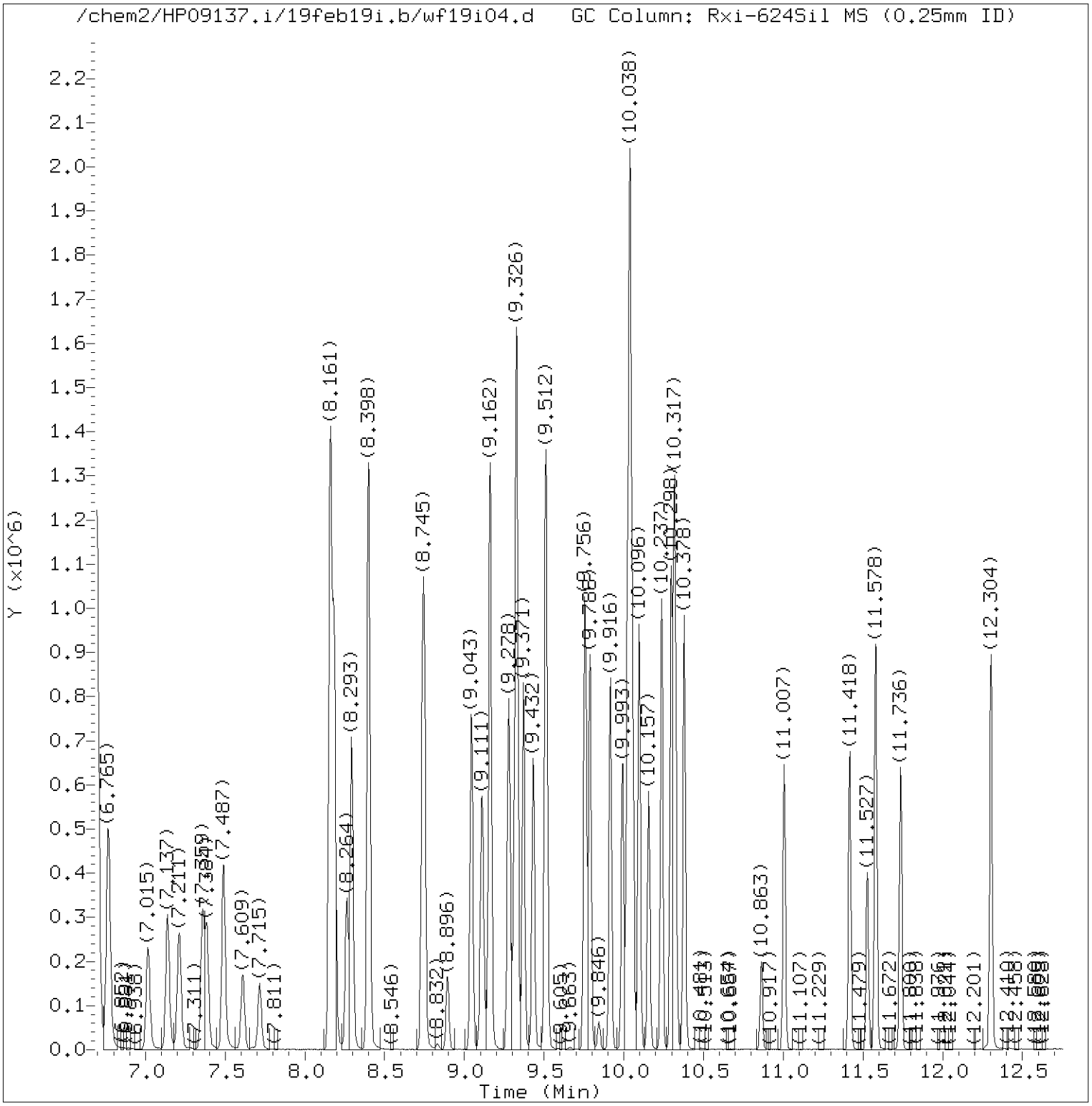
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.262	85	120158	21.151
4) Chloromethane	(2)	1.393	50	137638	19.457
6) Vinyl Chloride	(2)	1.467	62	130261	20.087
5) 1,3-Butadiene	(2)	1.480	39	83783	19.434
8) Bromomethane	(2)	1.682	94	99153	19.387
9) Chloroethane	(2)	1.762	64	81090	19.002
10) Dichlorofluoromethane	(2)	1.881	67	162421	19.663
12) Trichlorofluoromethane	(2)	1.926	101	142691	20.718
11) n-Pentane	(2)	1.971	43	131885	20.135
13) Ethanol	(1)	2.032	45	92307	894.985
15) Freon 123a	(2)	2.160	67	102866M	19.987
16) Acrolein	(1)	2.215	56	326307	200.424
17) 1,1-Dichloroethene	(2)	2.324	96	78708	20.319
17) 1,1-Dichloroethene	(2)	2.324	63	38728	19.816
18) Acetone	(1)	2.334	58	32836	41.493
19) Freon 113	(2)	2.334	101	73317	21.554
21) 2-Propanol	(1)	2.446	45	110569	188.056
22) Methyl Iodide	(2)	2.465	142	150767M	20.310
23) Carbon Disulfide	(2)	2.507	76	274687	20.128
25) Allyl Chloride	(2)	2.603	41	136398	20.212
27) Methyl Acetate	(2)	2.616	43	112197	19.208
28) Methylene Chloride	(2)	2.709	84	93973M	19.847
29)*t-Butyl alcohol-d10	(1)	2.732	65	226145	250.000
30) t-Butyl alcohol	(1)	2.802	59	204216	194.709
31) Acrylonitrile	(2)	2.927	53	65725	21.388
32) trans-1,2-Dichloroethene	(2)	2.956	96	83001	19.748
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	211952	20.711
34) n-Hexane	(2)	3.213	57	110706	19.686
36) 1,1-Dichloroethane	(2)	3.341	63	153564	20.164
38) di-Isopropyl ether	(2)	3.409	45	299035	20.438
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	134999	20.467
40) Ethyl t-butyl ether	(2)	3.755	59	227792	21.359
42) cis-1,2-Dichloroethene	(2)	3.890	96	94743	20.077
45) 2,2-Dichloropropane	(2)	3.890	77	72171	21.101
44) 2-Butanone	(2)	3.903	43	180906	40.977
47) Propionitrile	(1)	3.961	54	249181	191.159
48) Methacrylonitrile	(2)	4.108	67	323877	98.025
49) Bromochloromethane	(2)	4.118	128	49307	20.101

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.169	71	49416	40.960
51) Chloroform	(2)	4.198	83	144225	20.184
52)$Dibromofluoromethane	(2)	4.355	113	203311	49.950
52)$Dibromofluoromethane	(2)	4.355	111	209328	50.098
53) 1,1,1-Trichloroethane	(2)	4.381	97	110547	20.561
54) Cyclohexane	(2)	4.442	56	146608	20.604
54) Cyclohexane	(2)	4.442	84	120950	20.535
54) Cyclohexane	(2)	4.442	69	43702	20.437
55) 1,1-Dichloropropene	(2)	4.545	75	114224	19.938
56) Carbon Tetrachloride	(2)	4.545	117	93746	20.318
58) Isobutyl Alcohol	(1)	4.670	41	177235	463.522
57)$1,2-Dichloroethane-d4	(2)	4.689	102	55712	51.465
57)$1,2-Dichloroethane-d4	(2)	4.689	65	240858	51.112
57)$1,2-Dichloroethane-d4	(2)	4.689	104	33860	49.115
60) Benzene	(2)	4.747	78	366659	19.911
61) 1,2-Dichloroethane	(2)	4.763	62	110518	19.428
61) 1,2-Dichloroethane	(2)	4.760	98	11609	21.450
65) t-Amyl methyl ether	(2)	4.869	73	228200	20.886
66)*Fluorobenzene	(2)	5.029	96	878585	50.000
67) n-Heptane	(2)	5.036	43	110175	20.499
69) n-Butanol	(1)	5.350	56	321265	946.297
71) Trichloroethene	(2)	5.405	95	89487	20.067
73) Methylcyclohexane	(2)	5.604	83	138339	21.368
73) Methylcyclohexane	(2)	5.607	98	63264	21.016
74) 1,2-Dichloropropane	(2)	5.636	63	95210	20.139
75) Dibromomethane	(2)	5.748	93	59218	20.295
77) Methyl Methacrylate	(2)	5.774	69	103170	19.858
76) 1,4-Dioxane	(1)	5.780	88	49606M	488.766
79) Bromodichloromethane	(2)	5.924	83	106910	19.942
43) 1,2-Dichloroethene (Total)	(2)		96	177744	39.825
80) 2-Nitropropane	(2)	6.171	41	74529	41.088
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	69606	19.311
82) cis-1,3-Dichloropropene	(2)	6.406	75	147991	20.077
83) 4-Methyl-2-pentanone	(2)	6.582	43	356841	41.004
84)$Toluene-d8	(3)	6.695	98	907310	50.109
84)$Toluene-d8	(3)	6.695	100	601432	50.088
89) Toluene	(3)	6.765	92	235354	20.178
90) trans-1,3-Dichloropropene	(3)	7.015	75	138713	19.976

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Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.137	69	175549	20.574
93) 1,1,2-Trichloroethane	(3)	7.208	97	89810	20.005
94) Tetrachloroethene	(3)	7.359	166	94924	20.056
95) 1,3-Dichloropropane	(3)	7.384	76	156793	20.108
97) 2-Hexanone	(3)	7.490	43	279190	41.101
98) Dibromochloromethane	(3)	7.612	129	88860	20.266
100) 1,2-Dibromoethane	(3)	7.715	107	100482	20.372
101)*Chlorobenzene-d5	(3)	8.161	117	722592	50.000
103) Chlorobenzene	(3)	8.183	112	256275	19.806
104) 1,1,1,2-Tetrachloroethane	(3)	8.264	131	82744	19.899
105) Ethylbenzene	(3)	8.293	91	441592	19.920
107) m+p-Xylene	(3)	8.398	106	348881	39.582
108) o-Xylene	(3)	8.735	106	171798	19.812
110) Styrene	(3)	8.748	104	291848	20.063
111) Bromoform	(3)	8.896	173	67627	19.817
112) Isopropylbenzene	(3)	9.043	105	424442	19.920
113) Cyclohexanone	(1)	9.111	55	225728	493.049
115)$4-Bromofluorobenzene	(3)	9.162	95	360726	49.798
115)$4-Bromofluorobenzene	(3)	9.162	174	303950	49.726
116) Bromobenzene	(4)	9.278	156	113938	19.840
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	155706	20.105
118) 1,2,3-Trichloropropane	(4)	9.313	110	47306	20.279
119) trans-1,4-Dichloro-2-butene	(4)	9.326	53	247692	99.736
120) n-Propylbenzene	(4)	9.371	91	506549	20.009
121) 2-Chlorotoluene	(4)	9.432	126	105764	20.254
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	366349	20.065
122) 4-Chlorotoluene	(4)	9.515	126	110429	19.755
125) tert-Butylbenzene	(4)	9.756	134	82290	19.837
126) Pentachloroethane	(4)	9.765	167	64856	19.778
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	383195	19.917
128) sec-Butylbenzene	(4)	9.916	105	452546	20.192
130) 1,3-Dichlorobenzene	(4)	9.993	146	216134	19.736
131) p-Isopropyltoluene	(4)	10.022	119	397632	20.042
132)*1,4-Dichlorobenzene-d4	(4)	10.038	152	398717	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	225862	19.894
91) 1,3-Dichloropropene (total)	(3)		100	286704	40.053
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	422072	20.389
136) Benzyl Chloride	(4)	10.157	91	329533	20.738

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Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.237	119	253126	20.305
138) 1,4-Diethylbenzene	(4)	10.298	119	272367	20.393
140) n-Butylbenzene	(4)	10.314	92	198233	19.797
139) 1,2-Dichlorobenzene	(4)	10.324	146	215032	19.791
141) 1,2-Diethylbenzene	(4)	10.378	119	215245	20.452
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	36271	20.608
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	165935	19.917
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	160946	20.121
148) Hexachlorobutadiene	(4)	11.527	225	57264	20.101
149) Naphthalene	(4)	11.582	128	560423	20.707
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	155725	19.946
109) Xylene (Total)	(3)		106	520679	59.394
151) 2-Methylnaphthalene	(4)	12.304	142	317668	20.573
142) Diethylbenzene (total)	(4)		100	740738	61.150

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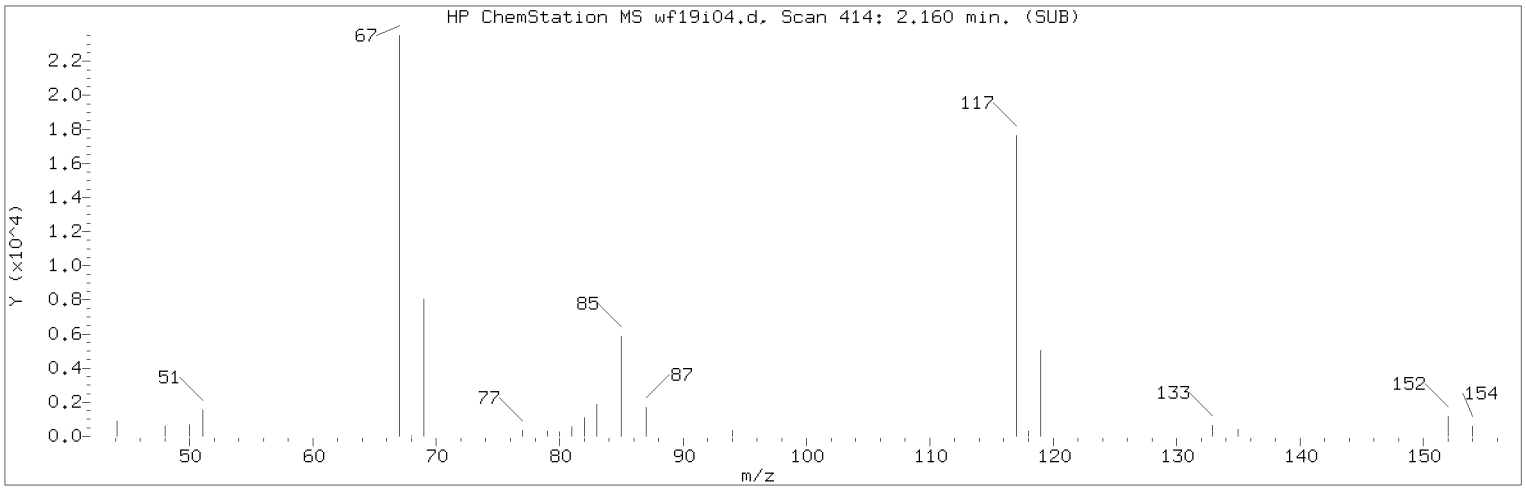
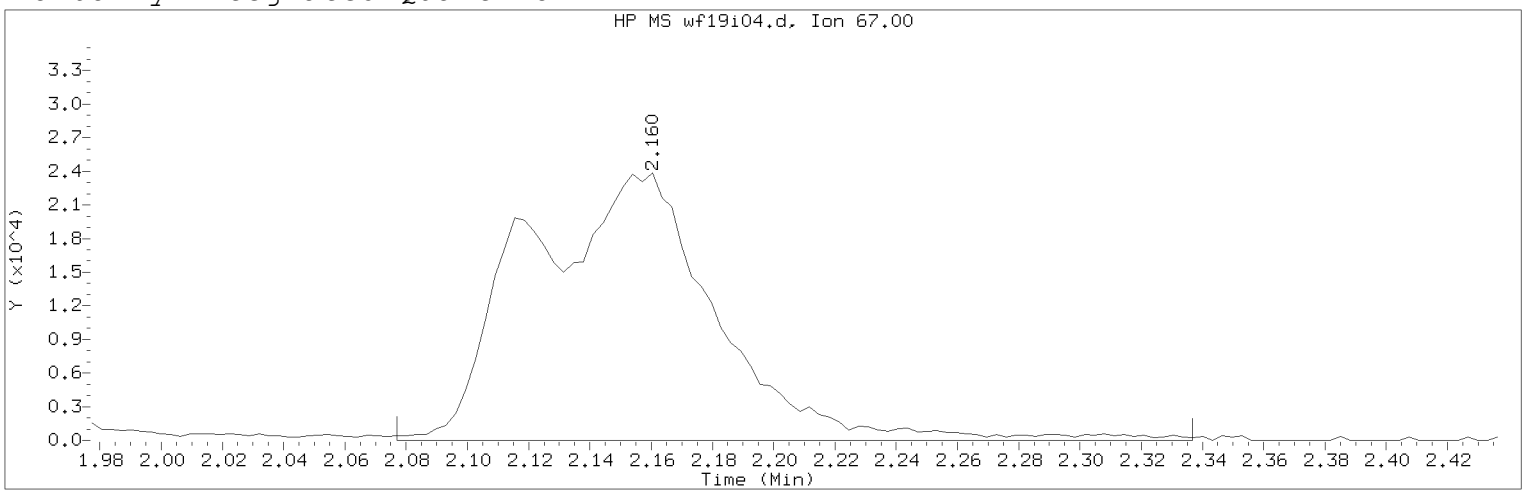
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

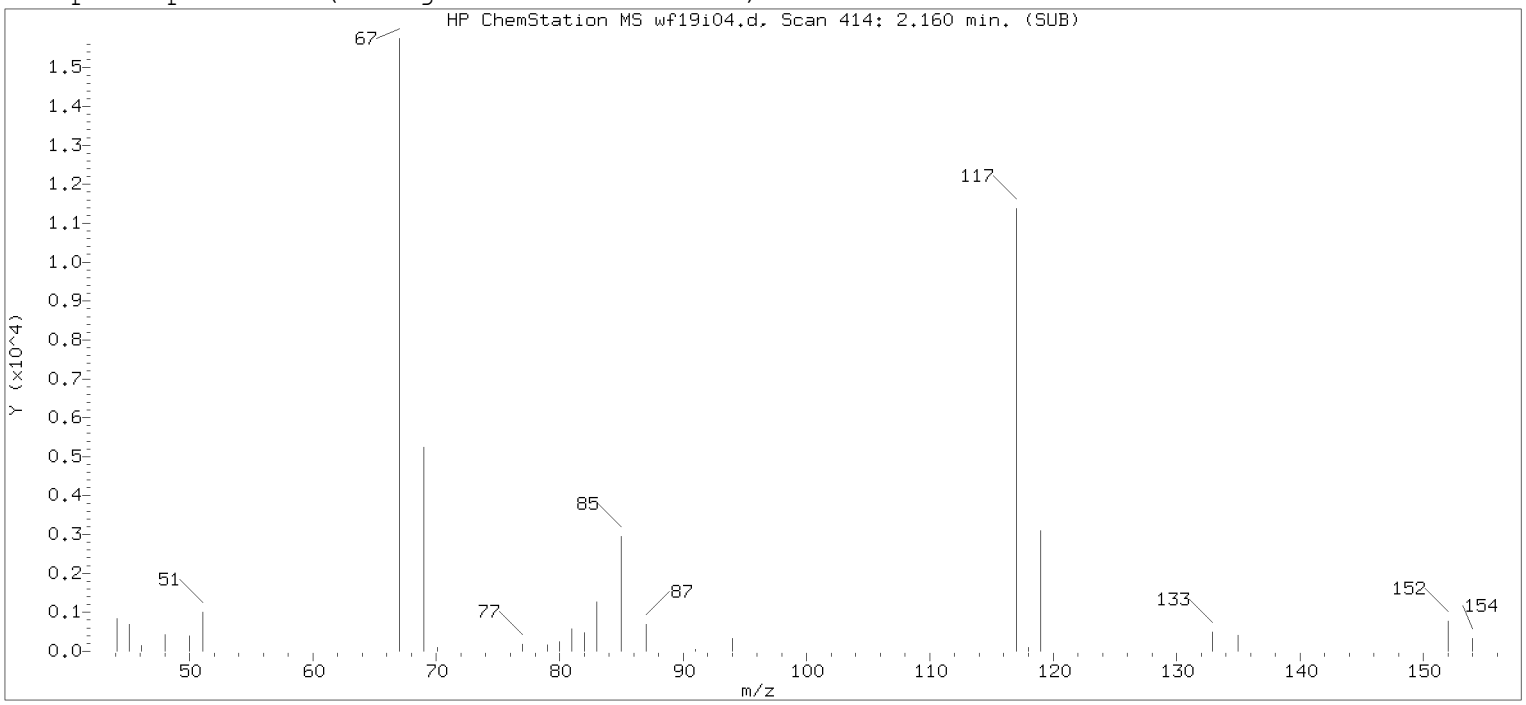
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 414
Retention Time (minutes): 2.160
Quant Ion : 67.00
Area (flag) : 102866M
On-Column Amount (ng) : 19.9868
Integration start scan : 387 Integration stop scan: 468
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

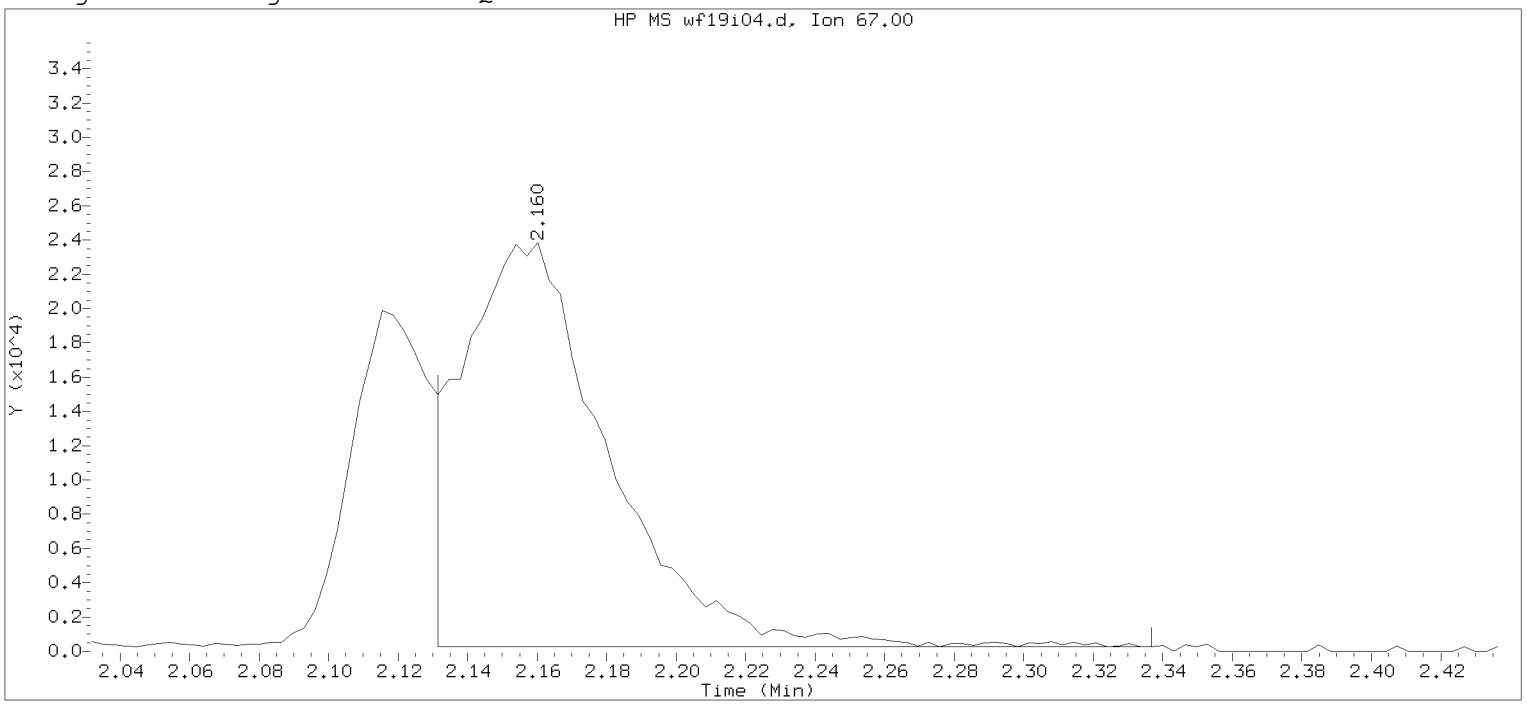
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

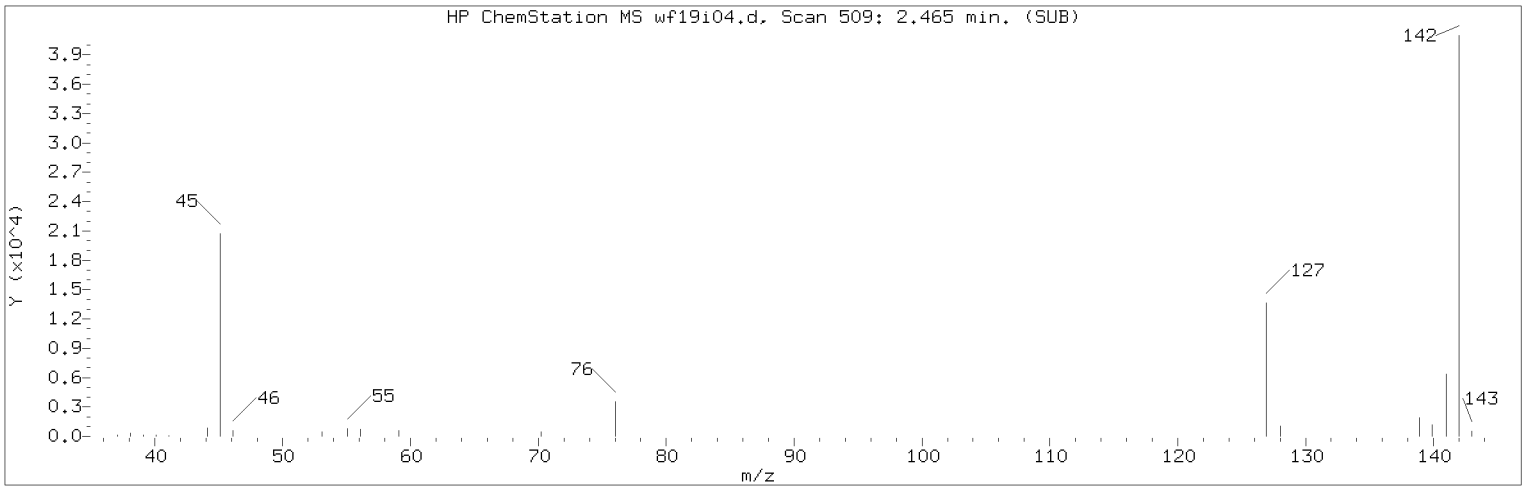
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:48
Date, time and analyst ID of latest file update: 19-Feb-2019 13:48 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

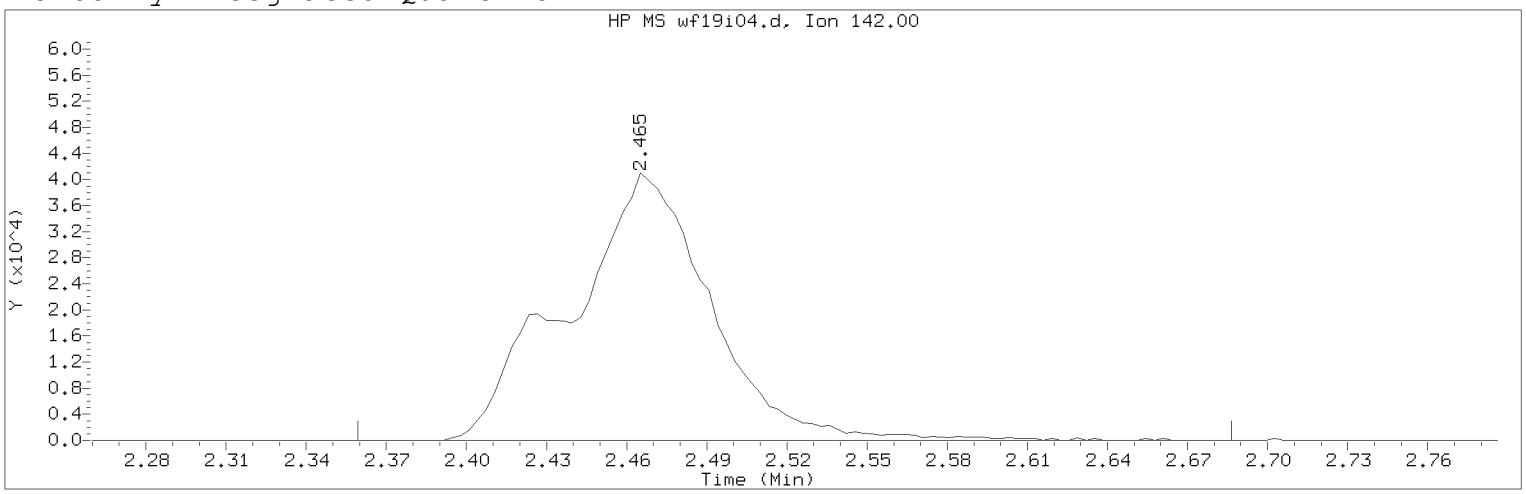
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 414
Retention Time (minutes): 2.160
Quant Ion : 67.00
Area : 68962
On-column Amount (ng) : 20.6064
Integration start scan : 404 Integration stop scan: 468
Y at integration start : 260 Y at integration end: 253

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user Abigail P. Roselli

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

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Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

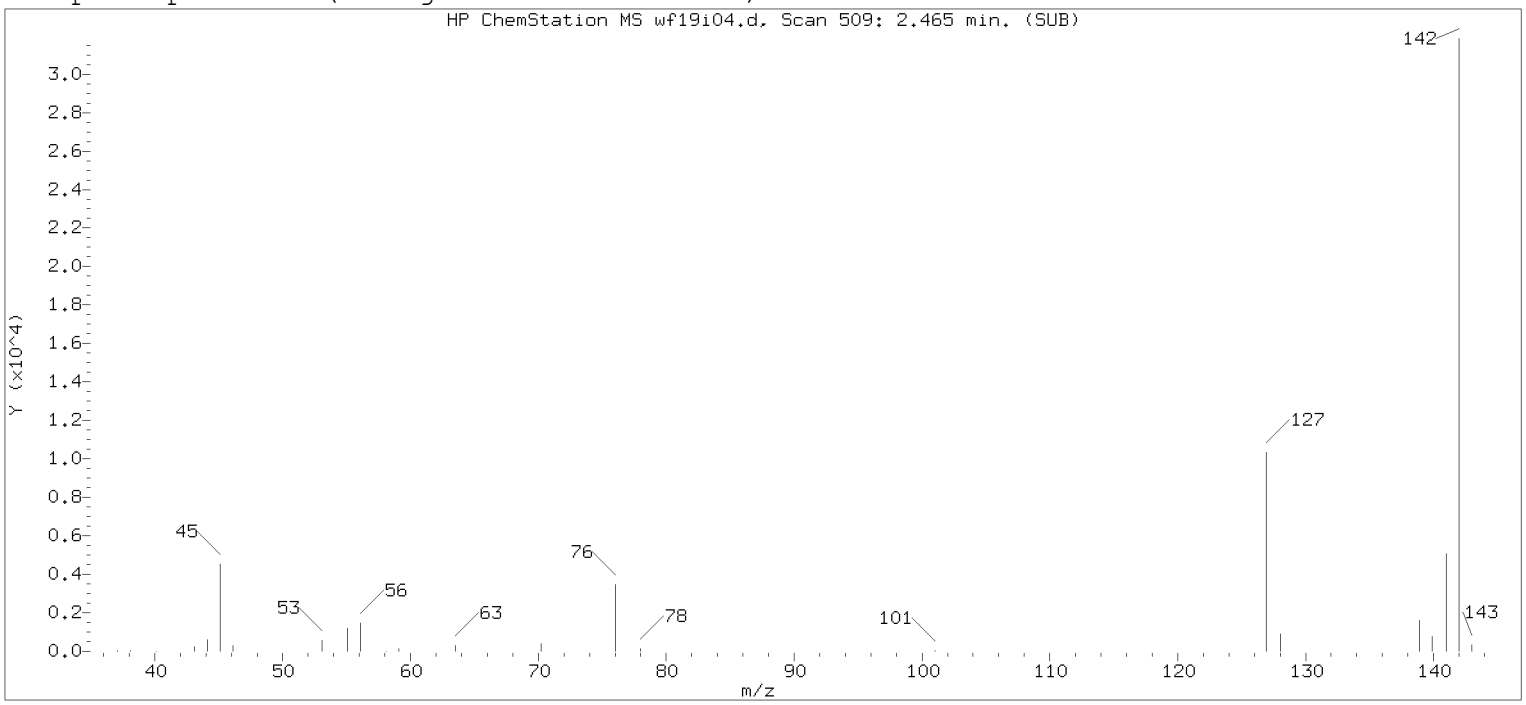
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area (flag) : 150767M
On-Column Amount (ng) : 20.3101
Integration start scan : 475 Integration stop scan: 577
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

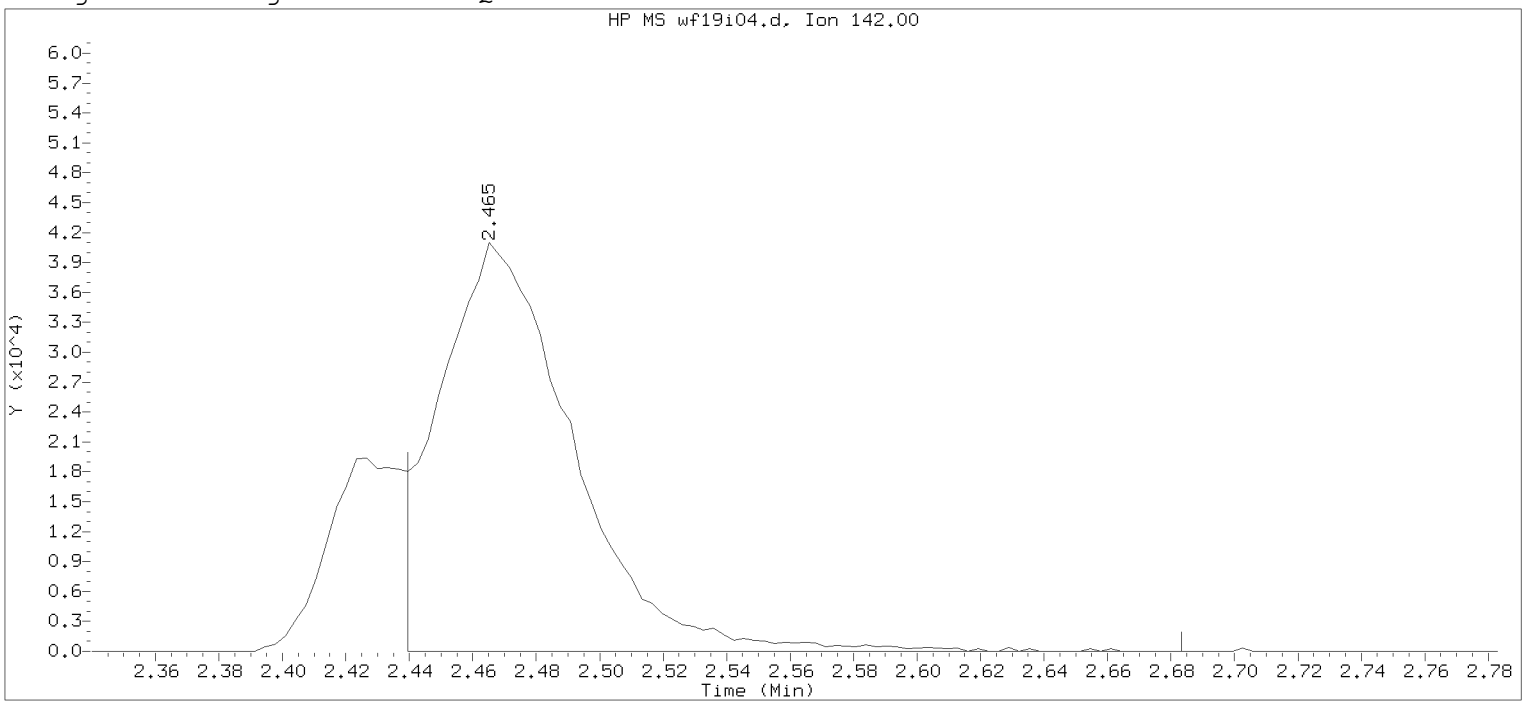
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

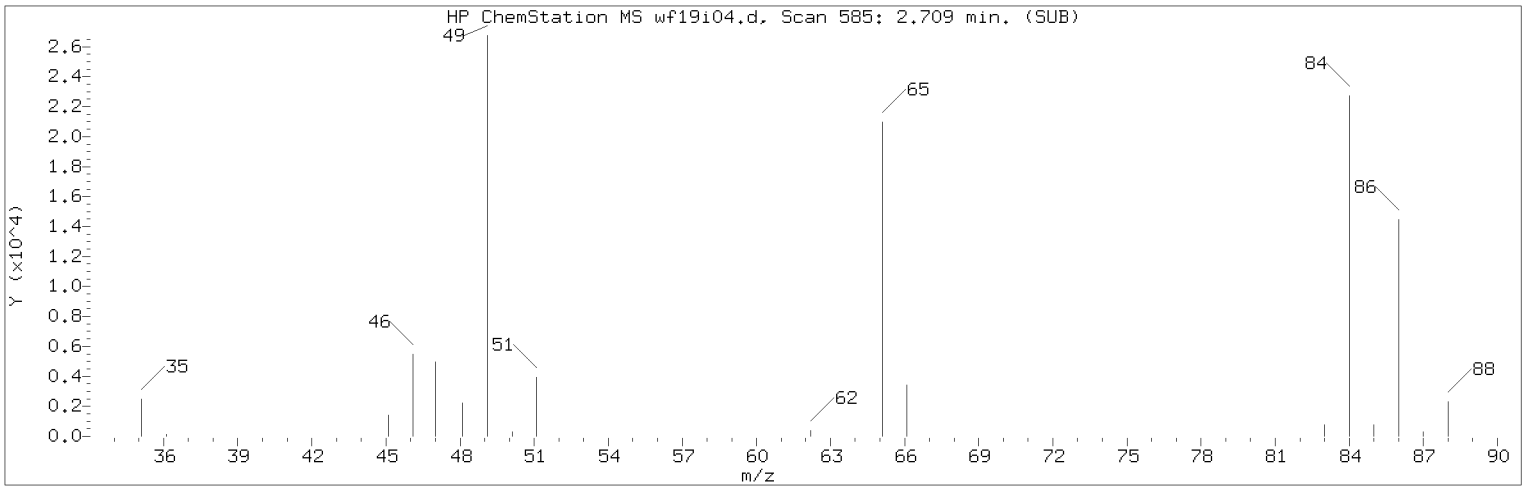
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:48
Date, time and analyst ID of latest file update: 19-Feb-2019 13:48 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

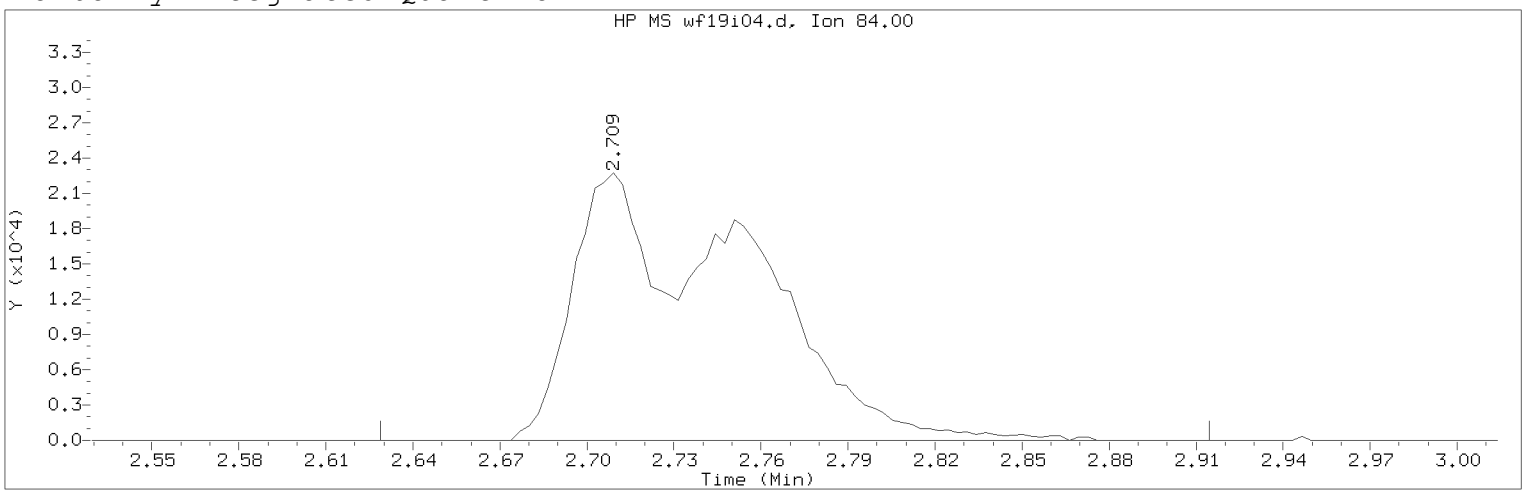
Compound Number	: 22		
Compound Name	: Methyl Iodide		
Scan Number	: 509		
Retention Time (minutes)	: 2.465		
Quant Ion	: 142.00		
Area	: 119508		
On-column Amount (ng)	: 17.5745		
Integration start scan	: 500	Integration stop scan:	576
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

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Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

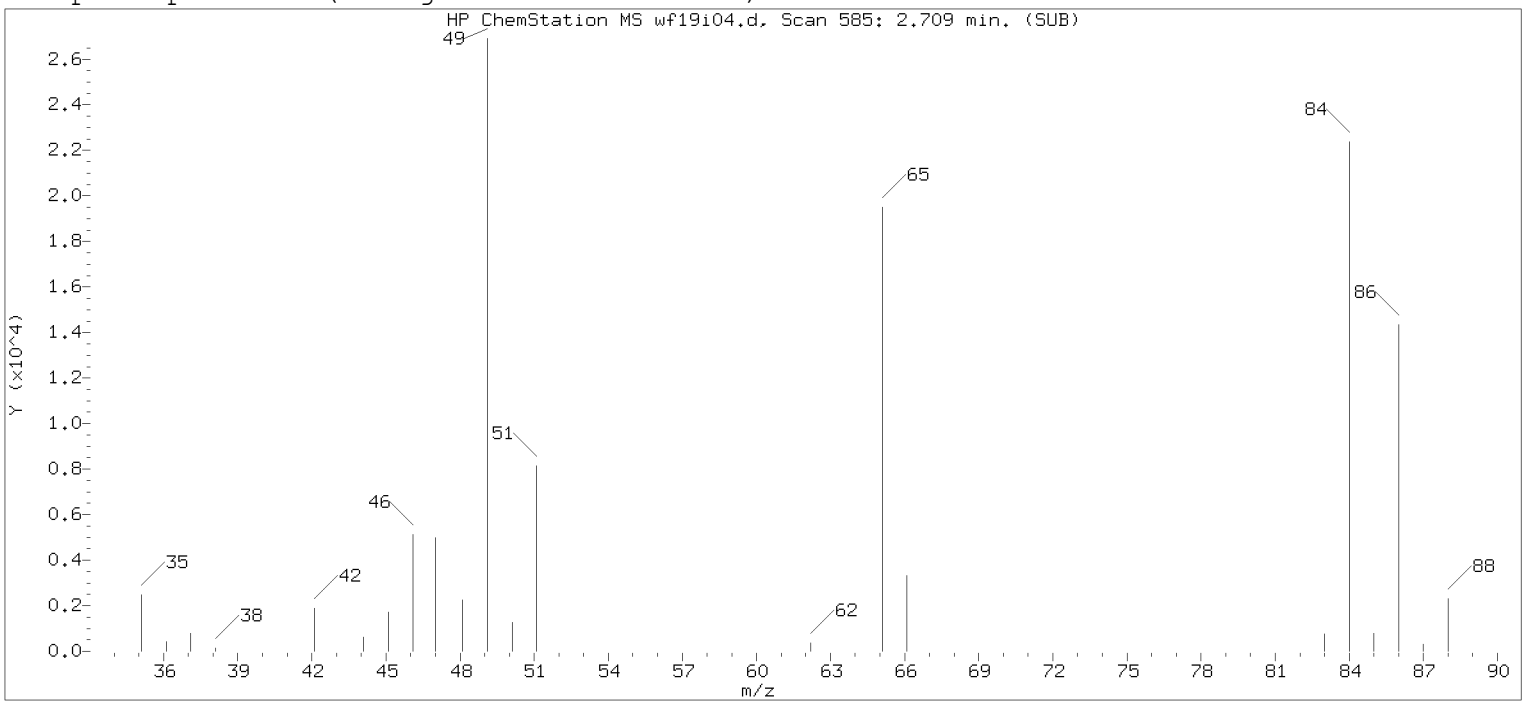
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area (flag) : 93973M
On-Column Amount (ng) : 19.8468
Integration start scan : 559 Integration stop scan: 648
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

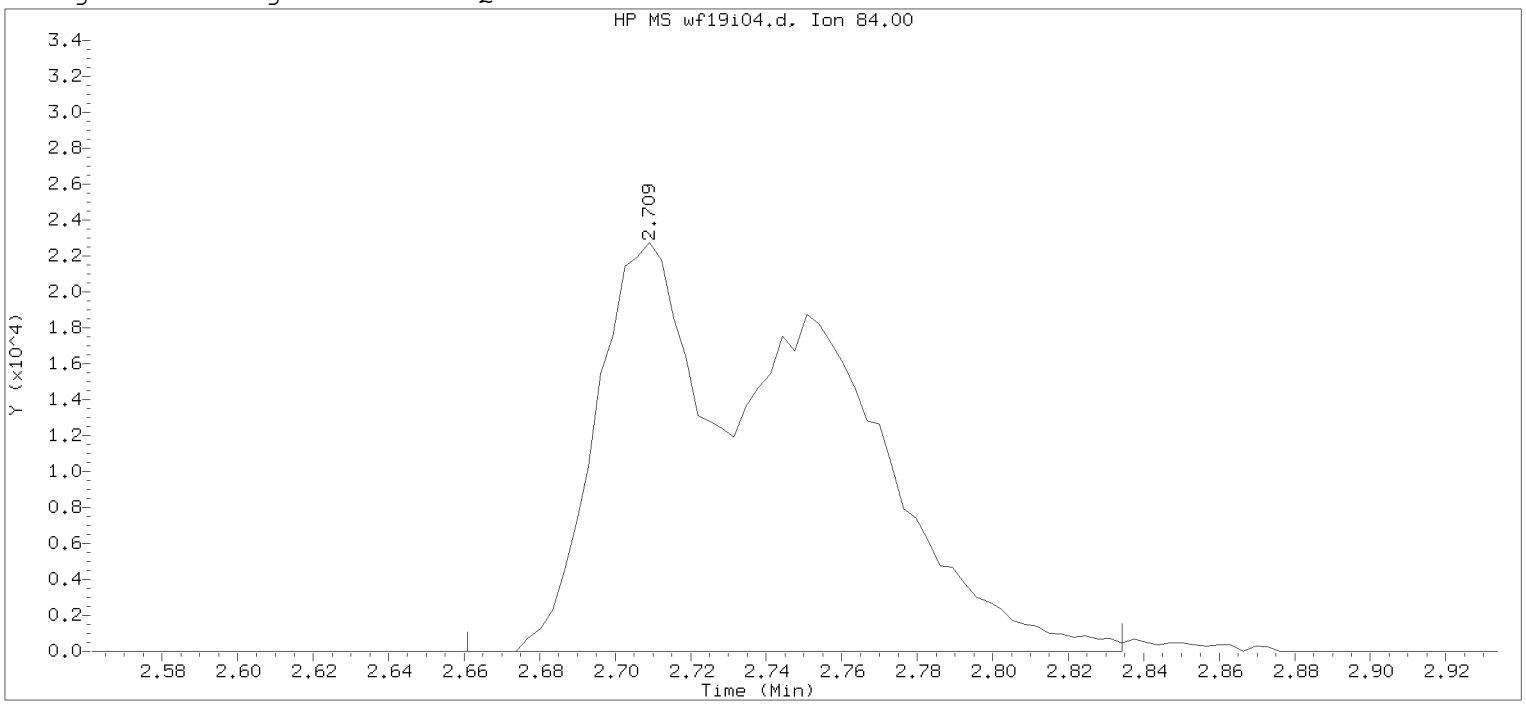
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

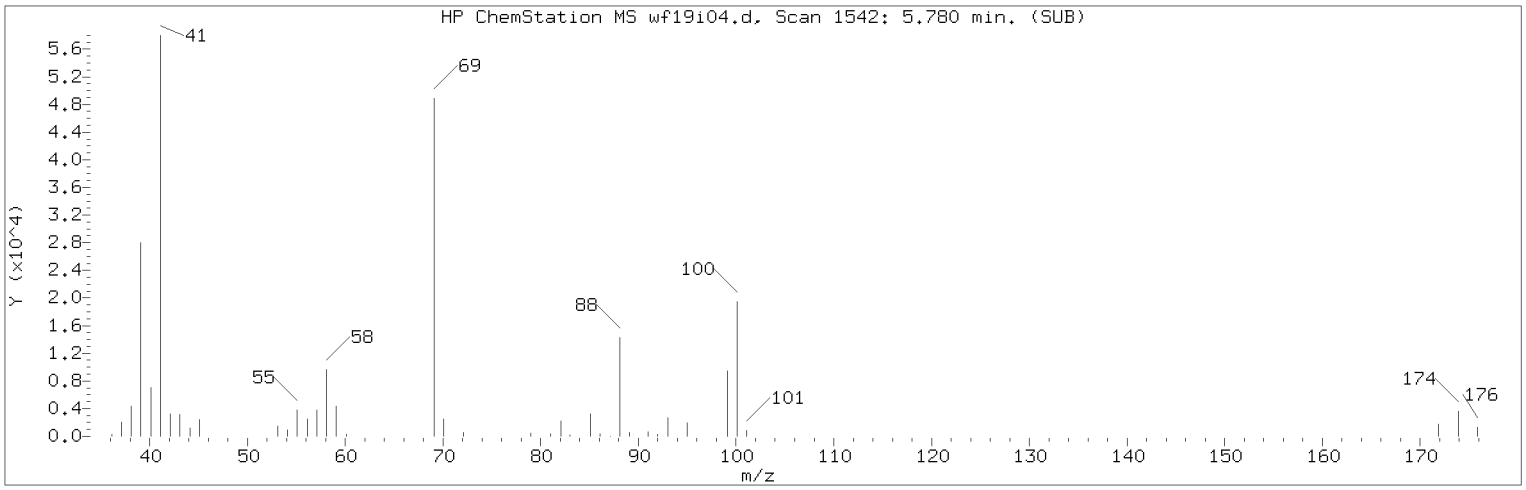
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:48
Date, time and analyst ID of latest file update: 19-Feb-2019 13:48 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

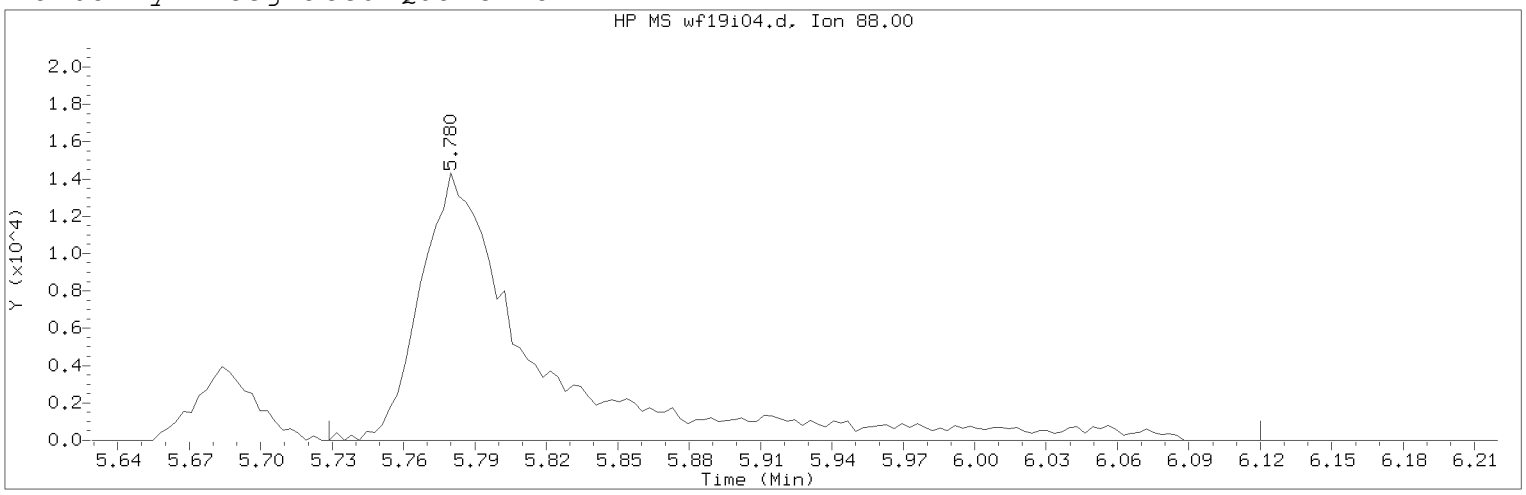
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area : 93088
On-column Amount (ng) : 25.0351
Integration start scan : 569 Integration stop scan: 623
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

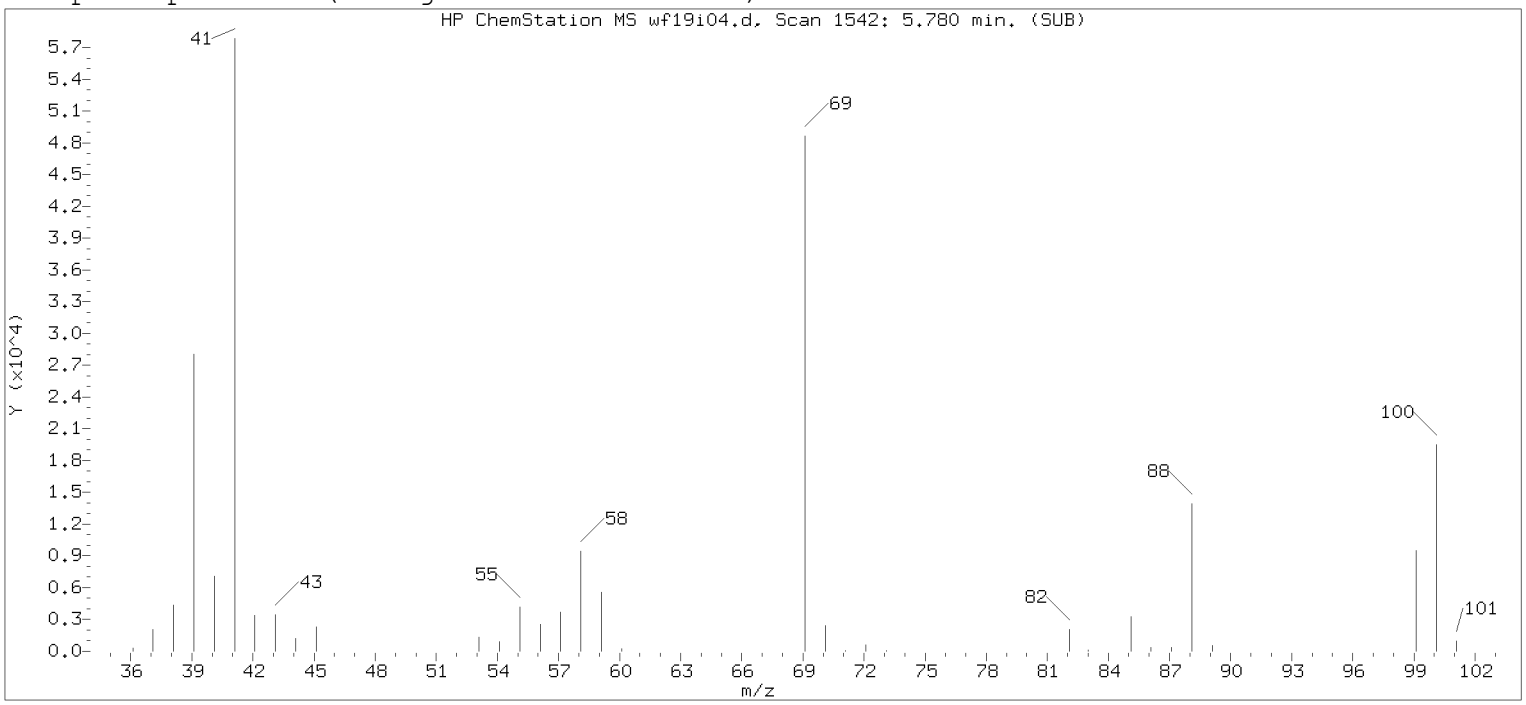
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area (flag) : 49606M
On-Column Amount (ng) : 488.7657
Integration start scan : 1525 Integration stop scan: 1647
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

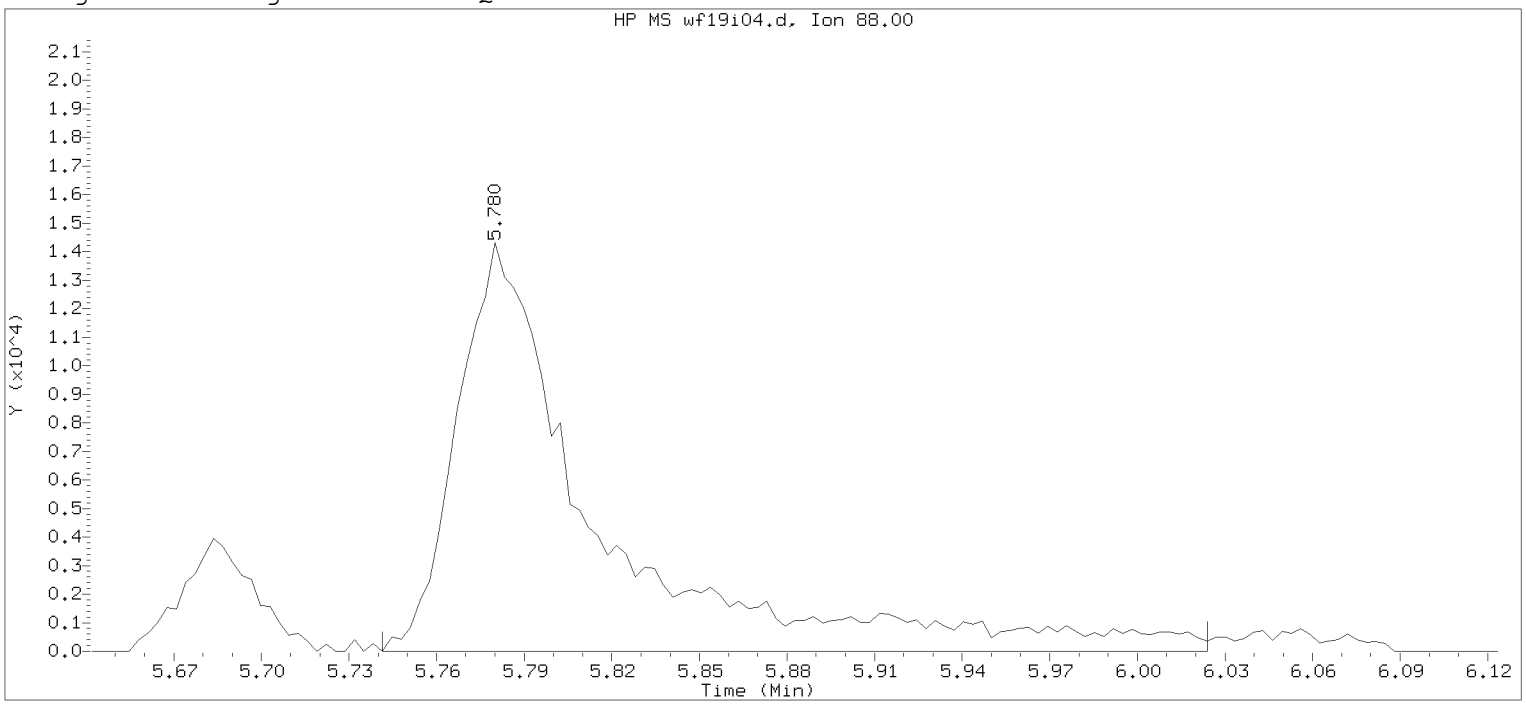
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



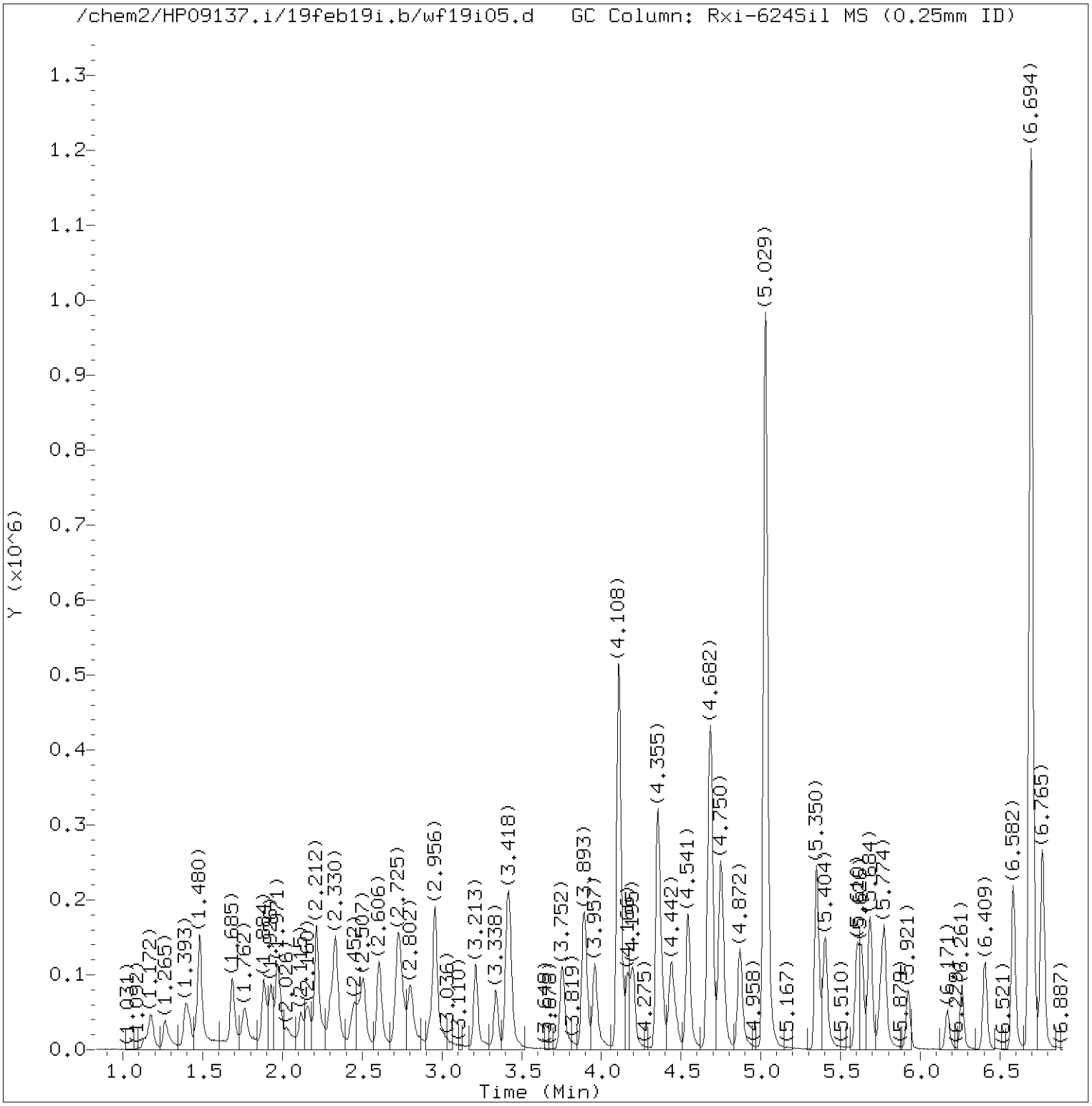
Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:48
Date, time and analyst ID of latest file update: 19-Feb-2019 13:48 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1542		
Retention Time (minutes)	: 5.780		
Quant Ion	: 88.00		
Area	: 47644		
On-column Amount (ng)	: 464.2245		
Integration start scan	: 1529	Integration stop scan:	1617
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user Date: 2019.02.21



Total Ion Chromatogram (TIC)

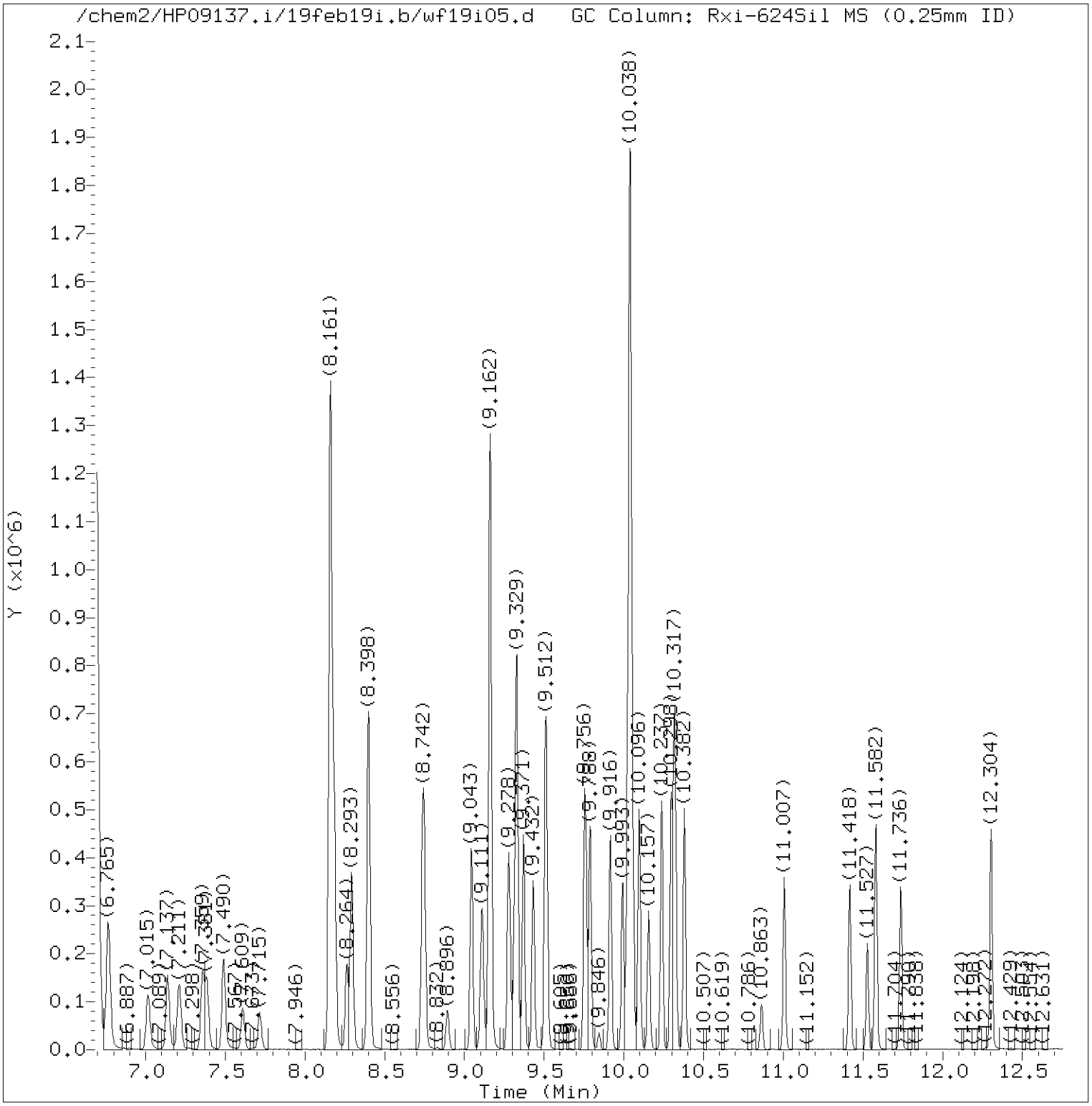
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.262	85	62458	11.066
4) Chloromethane	(2)	1.393	50	76916	10.944
6) Vinyl Chloride	(2)	1.470	62	72647	11.276
5) 1,3-Butadiene	(2)	1.480	39	42800	9.993
8) Bromomethane	(2)	1.682	94	56000	11.021
9) Chloroethane	(2)	1.762	64	45389	10.706
10) Dichlorofluoromethane	(2)	1.884	67	84015	10.238
12) Trichlorofluoromethane	(2)	1.929	101	75649	11.056
11) n-Pentane	(2)	1.971	43	69602	10.696
13) Ethanol	(1)	2.029	45	48262	448.970
15) Freon 123a	(2)	2.160	67	53443M	10.452
16) Acrolein	(1)	2.212	56	159695	94.112
17) 1,1-Dichloroethene	(2)	2.330	96	41128	10.687
17) 1,1-Dichloroethene	(2)	2.330	63	21001	10.816
18) Acetone	(1)	2.334	58	16160M	19.593
19) Freon 113	(2)	2.334	101	36566	10.820
21) 2-Propanol	(1)	2.443	45	59465	97.039
22) Methyl Iodide	(2)	2.468	142	77364	10.490
23) Carbon Disulfide	(2)	2.507	76	145480	10.730
25) Allyl Chloride	(2)	2.600	41	69127	10.310
27) Methyl Acetate	(2)	2.616	43	57968	9.989
29)*t-Butyl alcohol-d10	(1)	2.725	65	235698	250.000
28) Methylene Chloride	(2)	2.744	84	49542M	10.532
30) t-Butyl alcohol	(1)	2.802	59	107632	98.462
31) Acrylonitrile	(2)	2.930	53	30932	10.132
32) trans-1,2-Dichloroethene	(2)	2.956	96	44909	10.755
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	114387	11.251
34) n-Hexane	(2)	3.210	57	60284	10.790
36) 1,1-Dichloroethane	(2)	3.338	63	80127	10.590
38) di-Isopropyl ether	(2)	3.412	45	153463	10.557
39) 2-Chloro-1,3-butadiene	(2)	3.431	53	69810	10.653
40) Ethyl t-butyl ether	(2)	3.758	59	118447	11.179
42) cis-1,2-Dichloroethene	(2)	3.887	96	49735	10.608
45) 2,2-Dichloropropane	(2)	3.887	77	36418	10.717
44) 2-Butanone	(2)	3.903	43	86295	19.675
47) Propionitrile	(1)	3.957	54	135864	100.004
48) Methacrylonitrile	(2)	4.111	67	172352	52.506
49) Bromochloromethane	(2)	4.114	128	25130	10.312

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.166	71	22155	17.619
51) Chloroform	(2)	4.198	83	74987	10.563
52)$Dibromofluoromethane	(2)	4.355	113	200531	49.589
52)$Dibromofluoromethane	(2)	4.355	111	204921	49.364
53) 1,1,1-Trichloroethane	(2)	4.381	97	57282	10.724
54) Cyclohexane	(2)	4.442	56	75994	10.750
54) Cyclohexane	(2)	4.442	84	61745	10.552
54) Cyclohexane	(2)	4.442	69	22755	10.711
55) 1,1-Dichloropropene	(2)	4.541	75	59776	10.502
56) Carbon Tetrachloride	(2)	4.545	117	48197	10.514
58) Isobutyl Alcohol	(1)	4.670	41	97996	245.901
57)$1,2-Dichloroethane-d4	(2)	4.686	102	53213	49.478
57)$1,2-Dichloroethane-d4	(2)	4.686	65	234803	50.153
57)$1,2-Dichloroethane-d4	(2)	4.689	104	34768	50.762
60) Benzene	(2)	4.747	78	194070	10.608
61) 1,2-Dichloroethane	(2)	4.766	62	58810	10.406
61) 1,2-Dichloroethane	(2)	4.760	98	5873	10.923
65) t-Amyl methyl ether	(2)	4.872	73	123749	11.400
66)*Fluorobenzene	(2)	5.029	96	872867	50.000
67) n-Heptane	(2)	5.035	43	56932	10.662
69) n-Butanol	(1)	5.350	56	171859	485.699
71) Trichloroethene	(2)	5.404	95	47297	10.675
73) Methylcyclohexane	(2)	5.610	83	63355	9.850
73) Methylcyclohexane	(2)	5.603	98	29361	9.817
74) 1,2-Dichloropropane	(2)	5.632	63	49822	10.607
75) Dibromomethane	(2)	5.754	93	30462	10.508
77) Methyl Methacrylate	(2)	5.774	69	52747	10.219
76) 1,4-Dioxane	(1)	5.780	88	26130M	247.023
79) Bromodichloromethane	(2)	5.921	83	54837	10.296
43) 1,2-Dichloroethene (Total)	(2)		96	94644	21.364
80) 2-Nitropropane	(2)	6.171	41	32706	18.149
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	39229	10.955
82) cis-1,3-Dichloropropene	(2)	6.409	75	75893	10.363
83) 4-Methyl-2-pentanone	(2)	6.585	43	162394	18.783
84)$Toluene-d8	(3)	6.694	98	898296	50.552
84)$Toluene-d8	(3)	6.694	100	588219	49.916
89) Toluene	(3)	6.765	92	124809	10.903
90) trans-1,3-Dichloropropene	(3)	7.015	75	71110	10.435

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.137	69	87307	10.426
93) 1,1,2-Trichloroethane	(3)	7.211	97	46734	10.607
94) Tetrachloroethene	(3)	7.359	166	50876	10.953
95) 1,3-Dichloropropane	(3)	7.384	76	82341	10.760
97) 2-Hexanone	(3)	7.490	43	127140	19.072
98) Dibromochloromethane	(3)	7.609	129	44473	10.335
100) 1,2-Dibromoethane	(3)	7.715	107	52152	10.774
101)*Chlorobenzene-d5	(3)	8.161	117	709147	50.000
103) Chlorobenzene	(3)	8.187	112	135467	10.668
104) 1,1,1,2-Tetrachloroethane	(3)	8.260	131	42994	10.535
105) Ethylbenzene	(3)	8.293	91	235037	10.803
107) m+p-Xylene	(3)	8.398	106	187670	21.696
108) o-Xylene	(3)	8.735	106	90084	10.586
110) Styrene	(3)	8.751	104	151094	10.584
111) Bromoform	(3)	8.893	173	33660	10.051
112) Isopropylbenzene	(3)	9.043	105	227103	10.860
113) Cyclohexanone	(1)	9.111	55	109179	228.810
115)$4-Bromofluorobenzene	(3)	9.162	95	357932	50.349
115)$4-Bromofluorobenzene	(3)	9.162	174	302192	50.376
116) Bromobenzene	(4)	9.278	156	59684	10.510
117) 1,1,2,2-Tetrachloroethane	(4)	9.281	83	80608	10.526
118) 1,2,3-Trichloropropane	(4)	9.310	110	23980	10.396
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	129246	52.628
120) n-Propylbenzene	(4)	9.371	91	270892	10.821
121) 2-Chlorotoluene	(4)	9.432	126	55953	10.836
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	194234	10.758
122) 4-Chlorotoluene	(4)	9.515	126	58566	10.595
125) tert-Butylbenzene	(4)	9.756	134	42636	10.394
126) Pentachloroethane	(4)	9.765	167	33777	10.416
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	204882	10.769
128) sec-Butylbenzene	(4)	9.916	105	239653	10.814
130) 1,3-Dichlorobenzene	(4)	9.993	146	115418	10.658
131) p-Isopropyltoluene	(4)	10.022	119	211548	10.783
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	394276	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	117695	10.484
91) 1,3-Dichloropropene (total)	(3)		100	147003	20.798
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	216354	10.569
136) Benzyl Chloride	(4)	10.157	91	162115	10.317

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

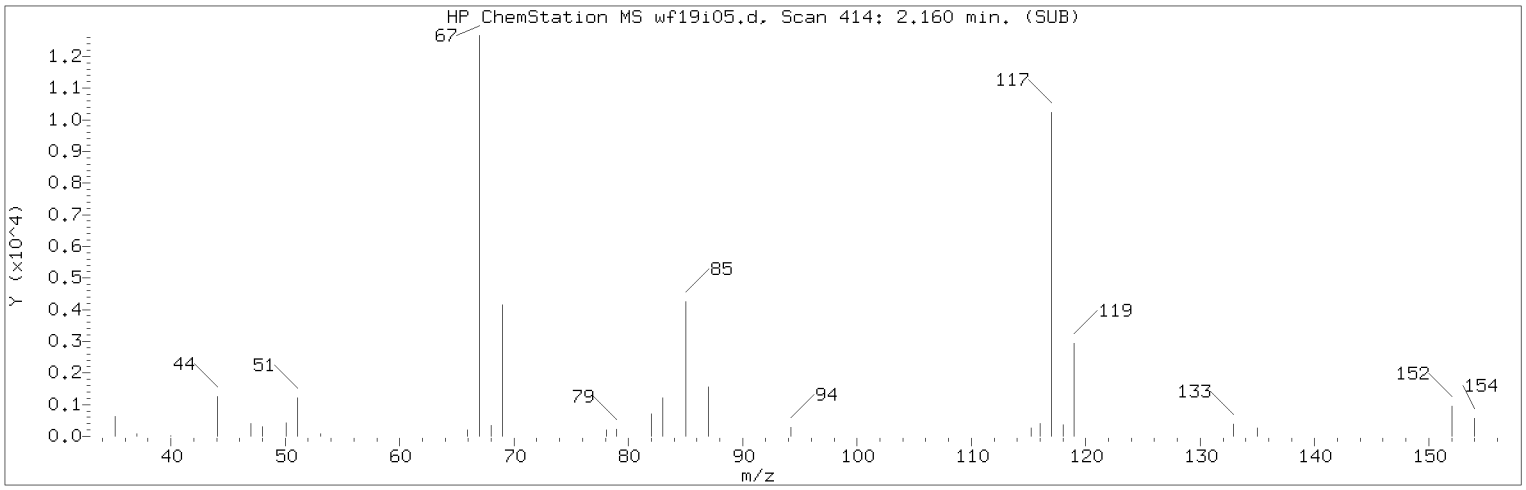
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

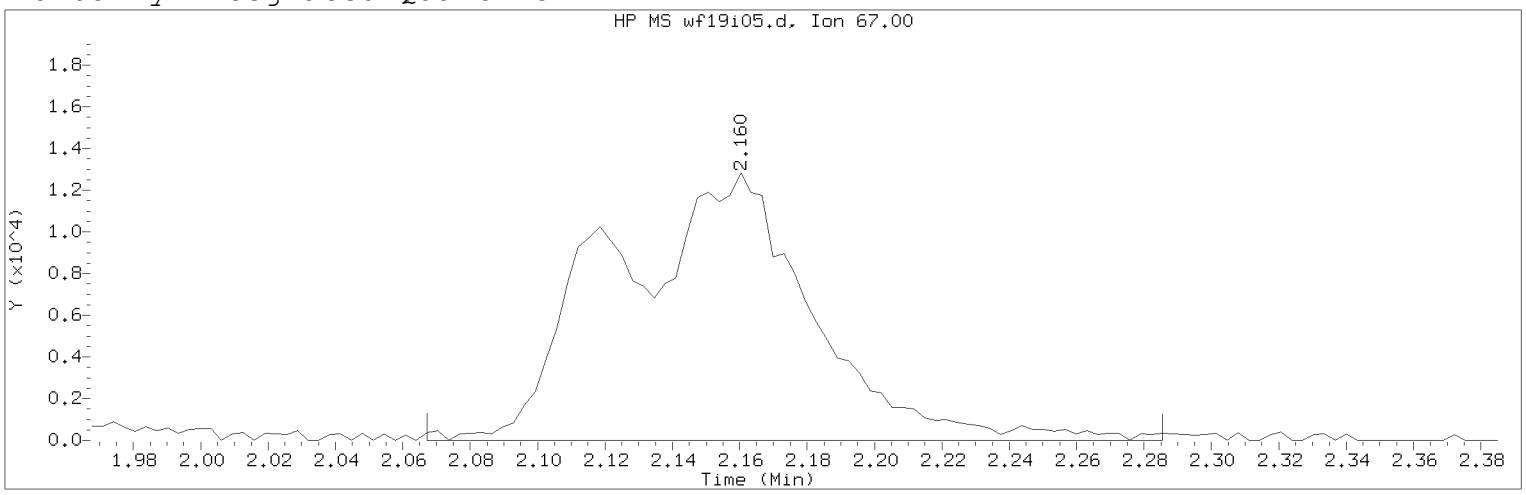
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.237	119	129345	10.493
138) 1,4-Diethylbenzene	(4)	10.295	119	139309	10.548
140) n-Butylbenzene	(4)	10.314	92	107453	10.852
139) 1,2-Dichlorobenzene	(4)	10.324	146	114774	10.683
141) 1,2-Diethylbenzene	(4)	10.382	119	110669	10.634
143) 1,2-Dibromo-3-chloropropane	(4)	10.866	75	17630	10.130
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	86972	10.557
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	84162	10.640
148) Hexachlorobutadiene	(4)	11.527	225	30490	10.823
149) Naphthalene	(4)	11.582	128	287278	10.734
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	81036	10.497
109) Xylene (Total)	(3)		106	277754	32.281
151) 2-Methylnaphthalene	(4)	12.304	142	164287	10.760
142) Diethylbenzene (total)	(4)		100	379323	31.674

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

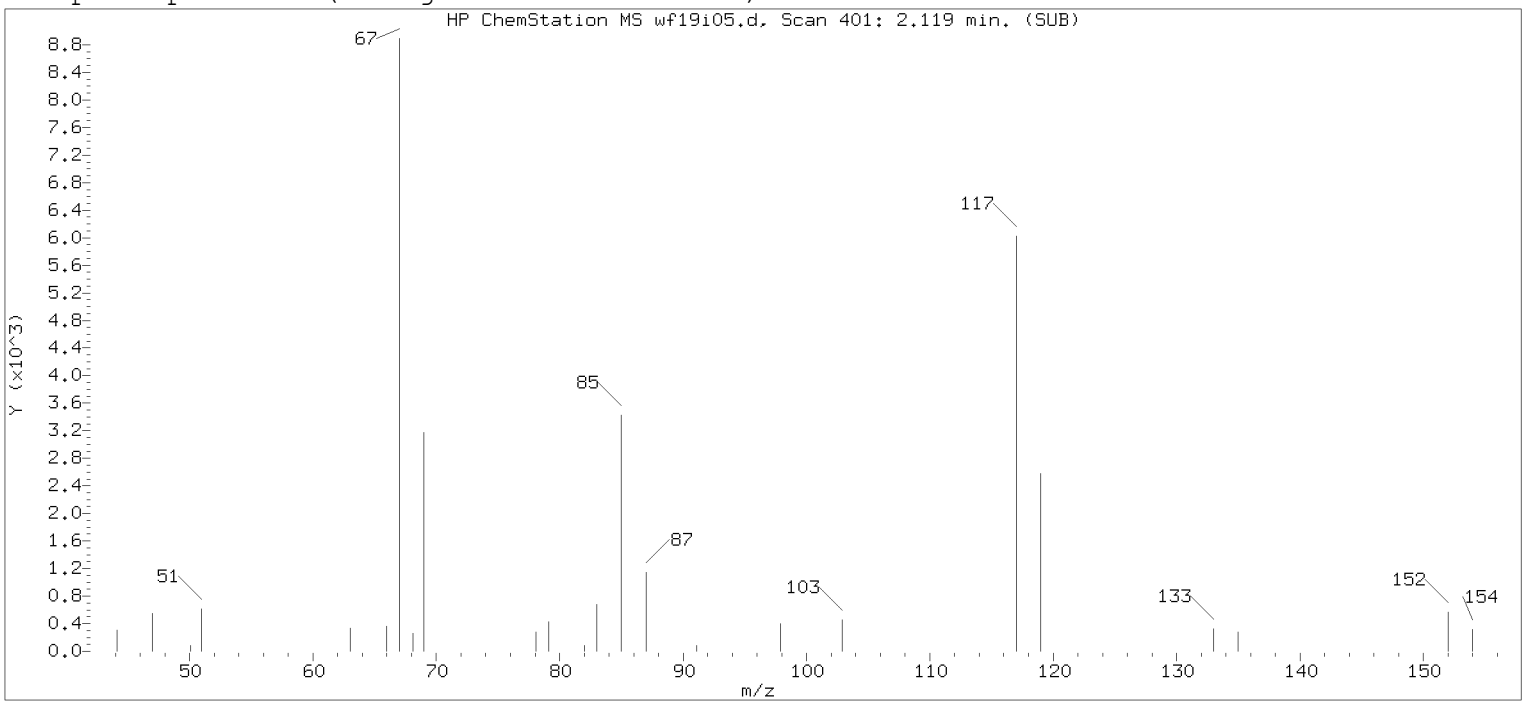
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 414
Retention Time (minutes): 2.160
Quant Ion : 67.00
Area (flag) : 53443M
On-Column Amount (ng) : 10.4520
Integration start scan : 384 Integration stop scan: 452
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

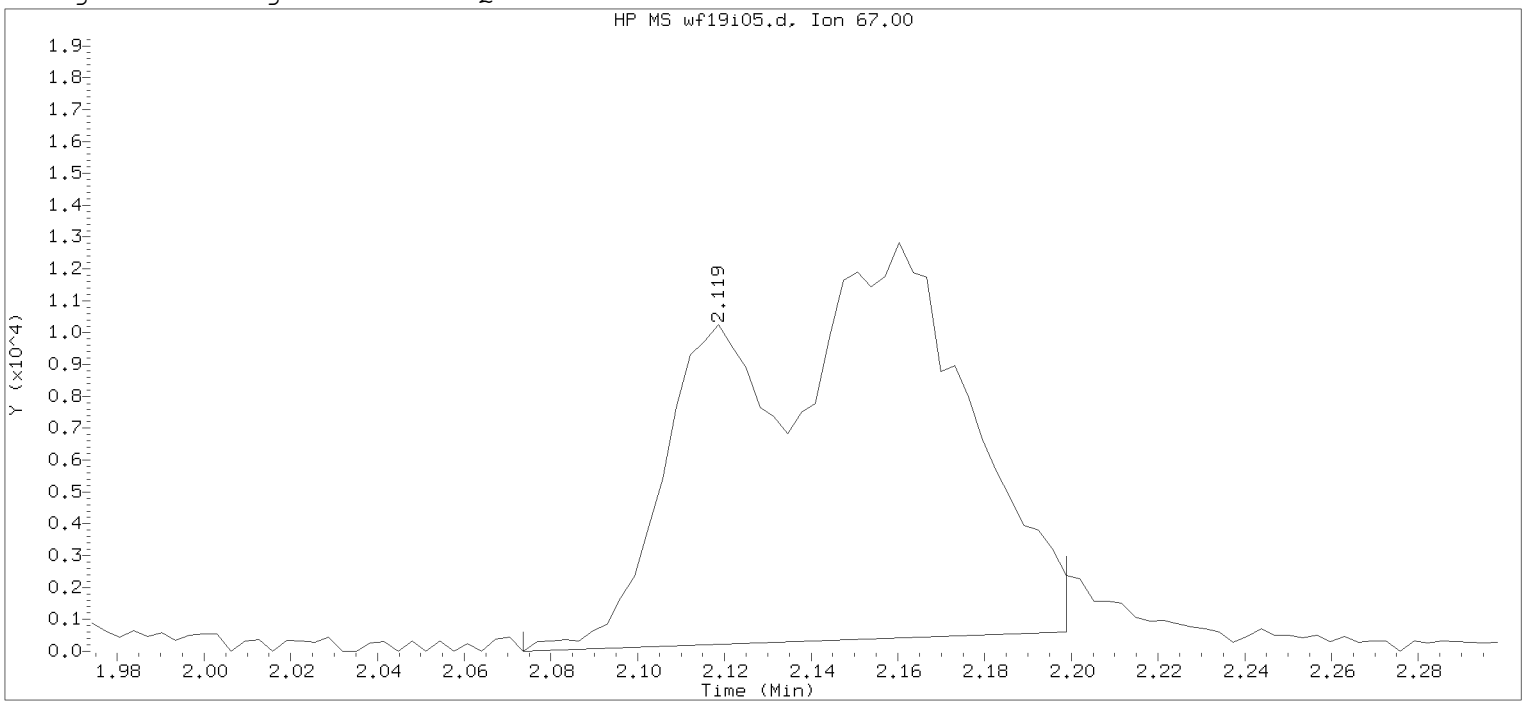
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:12
Date, time and analyst ID of latest file update: 19-Feb-2019 14:12 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 401		
Retention Time (minutes)	: 2.119		
Quant Ion	: 67.00		
Area	: 47122		
On-column Amount (ng)	: 13.0811		
Integration start scan	: 386	Integration stop scan:	425
Y at integration start	: 0	Y at integration end:	613

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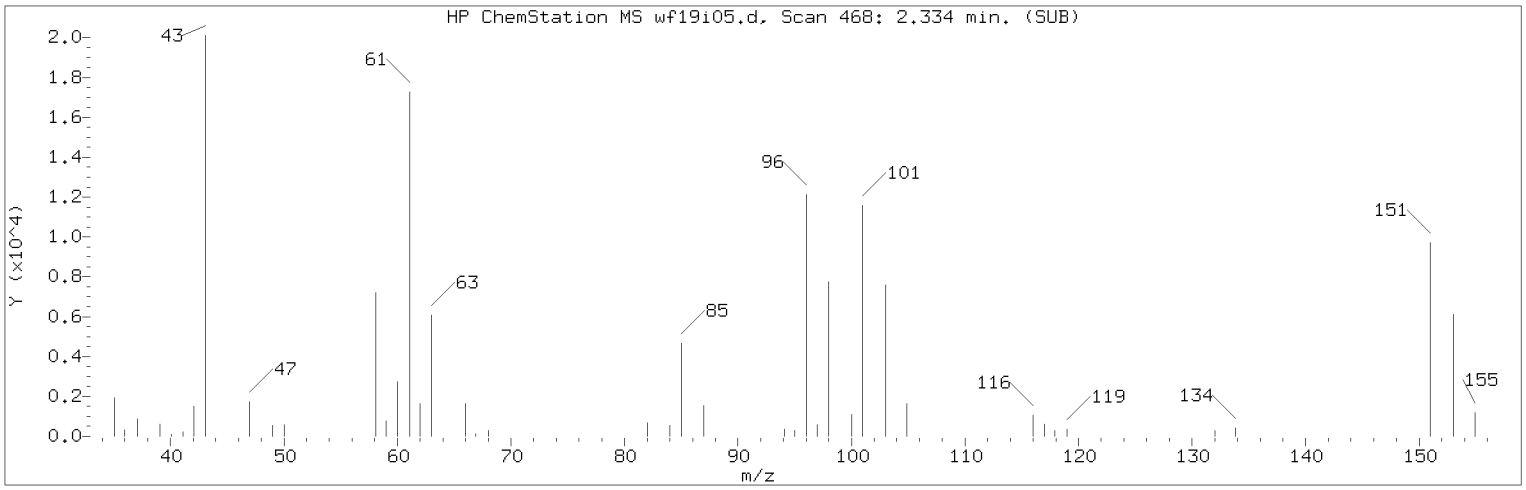
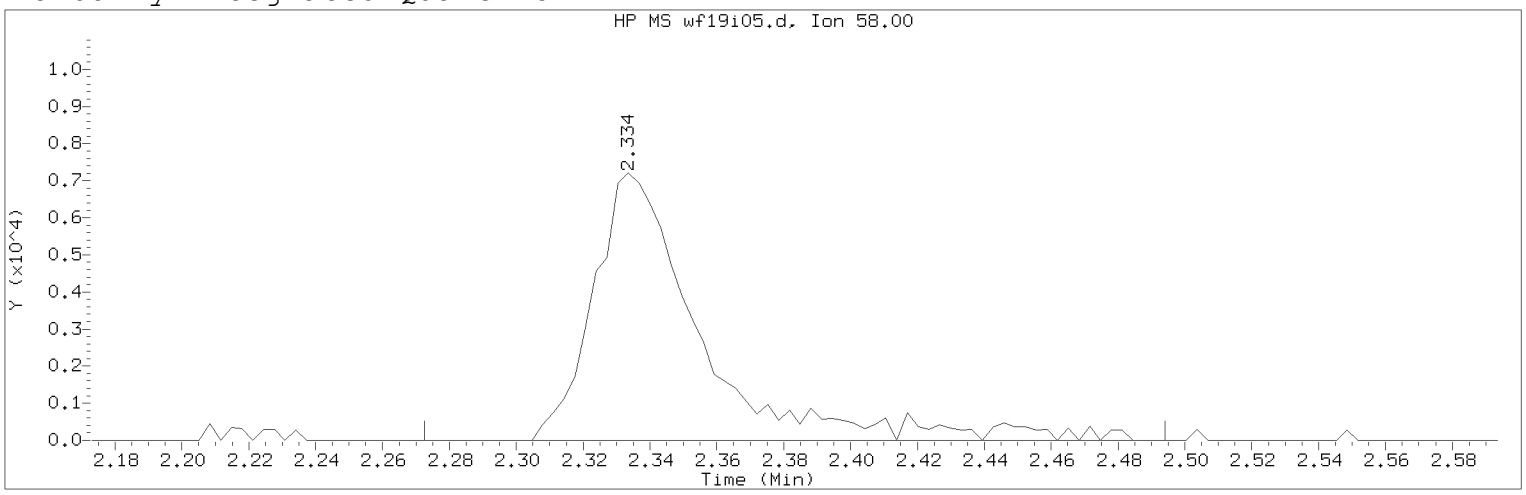
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

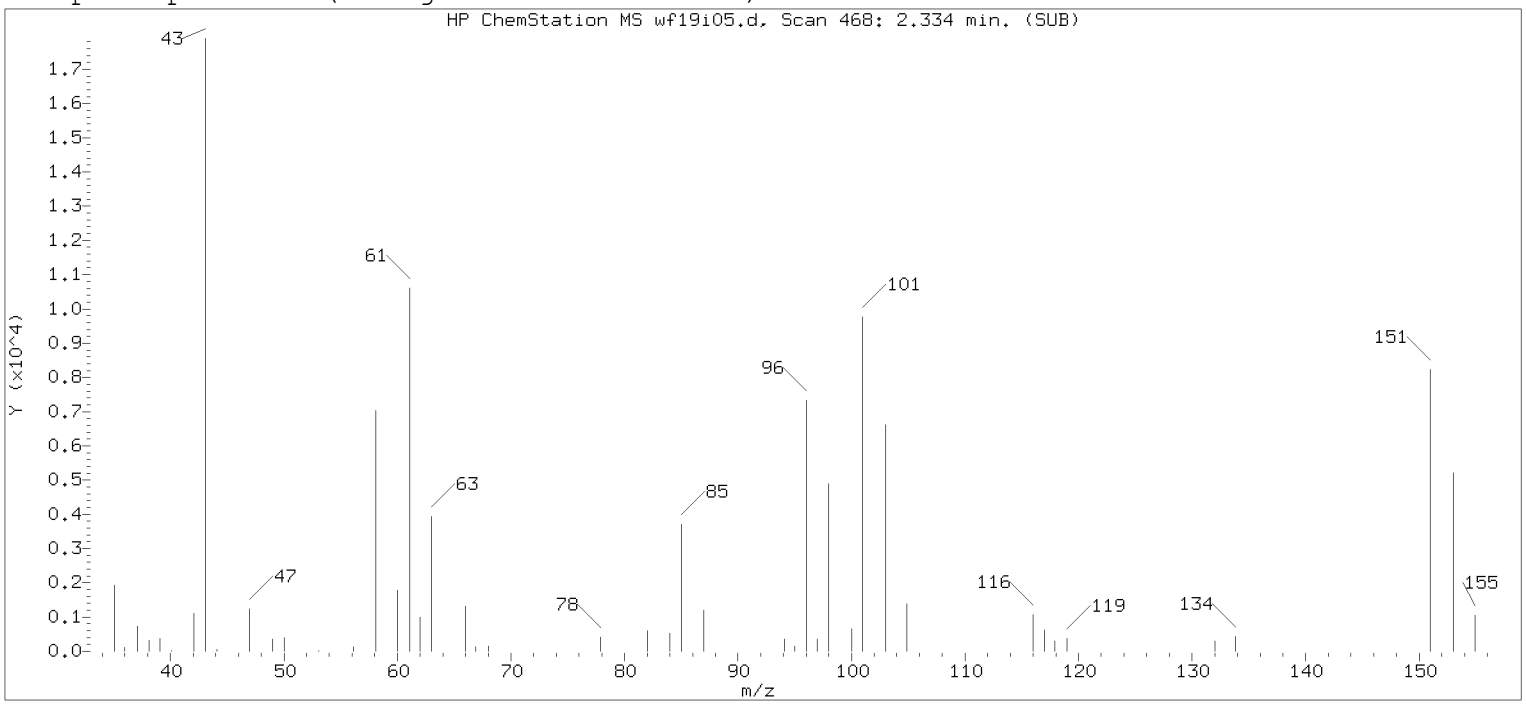
Compound Number : 18
Compound Name : Acetone
Scan Number : 468
Retention Time (minutes): 2.334
Quant Ion : 58.00
Area (flag) : 16160M
On-Column Amount (ng) : 19.5930
Integration start scan : 448 Integration stop scan: 517
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

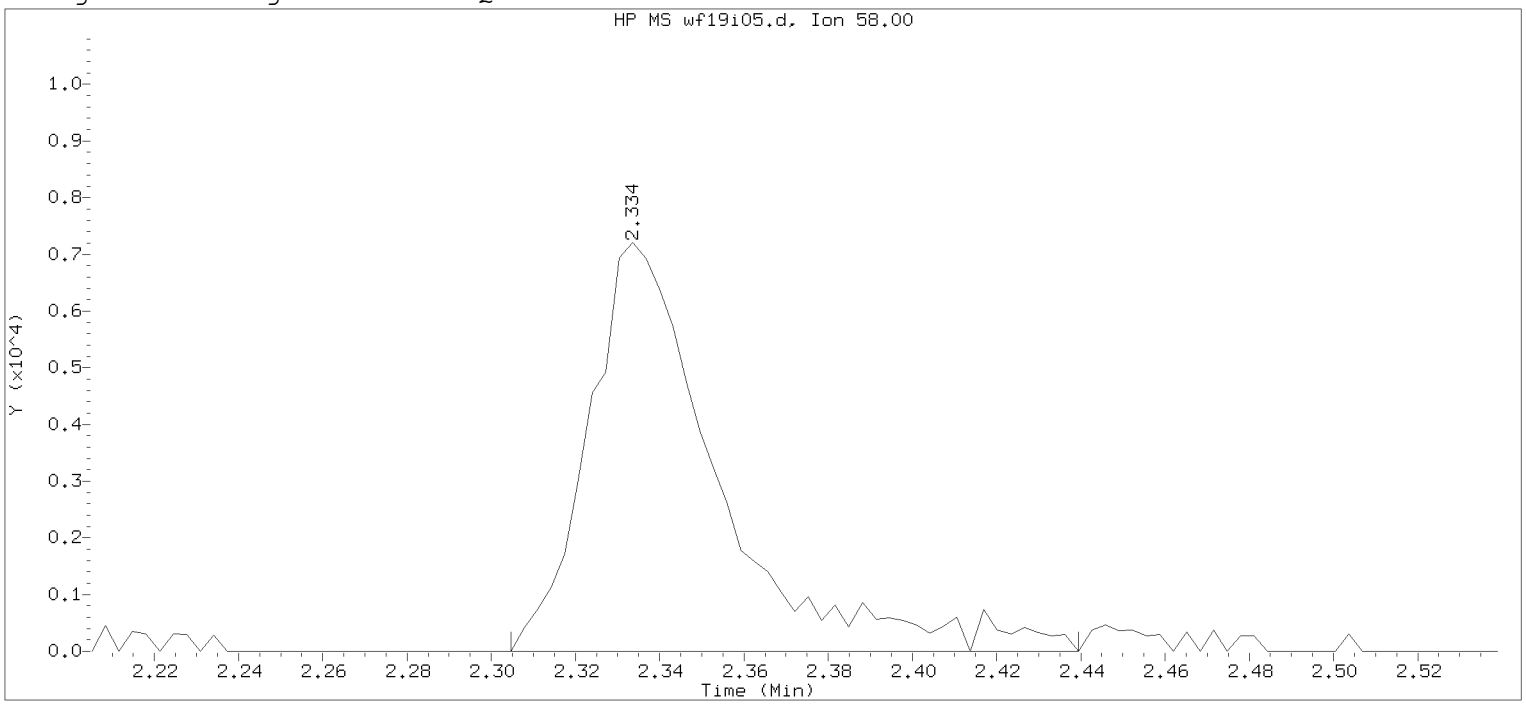
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

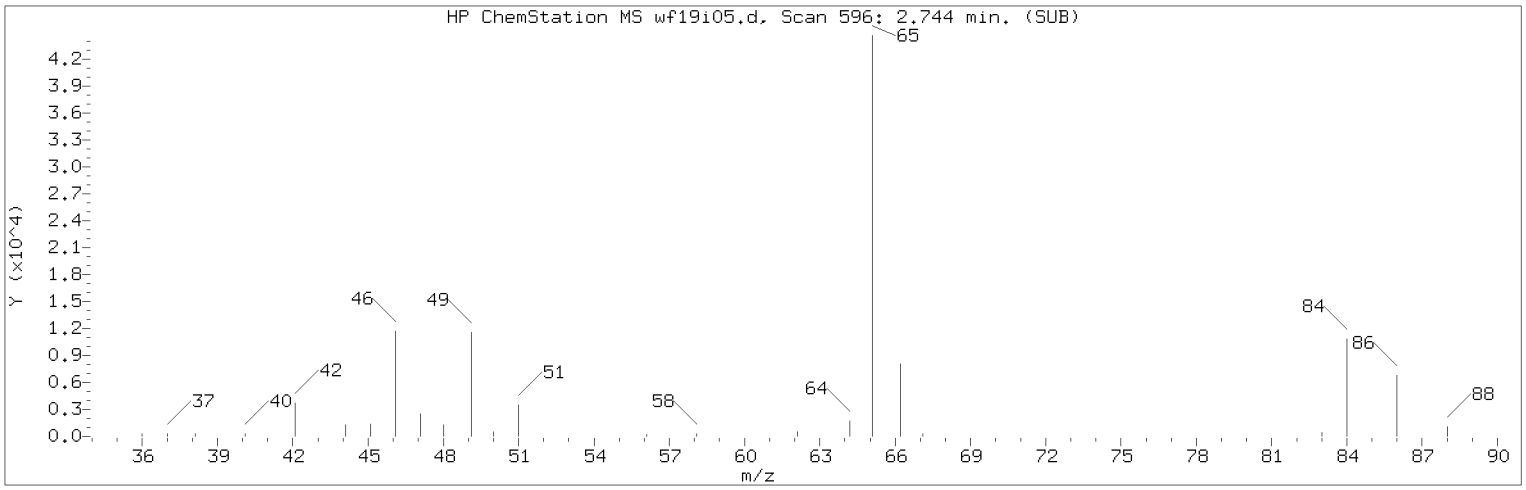
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:12
Date, time and analyst ID of latest file update: 19-Feb-2019 14:12 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

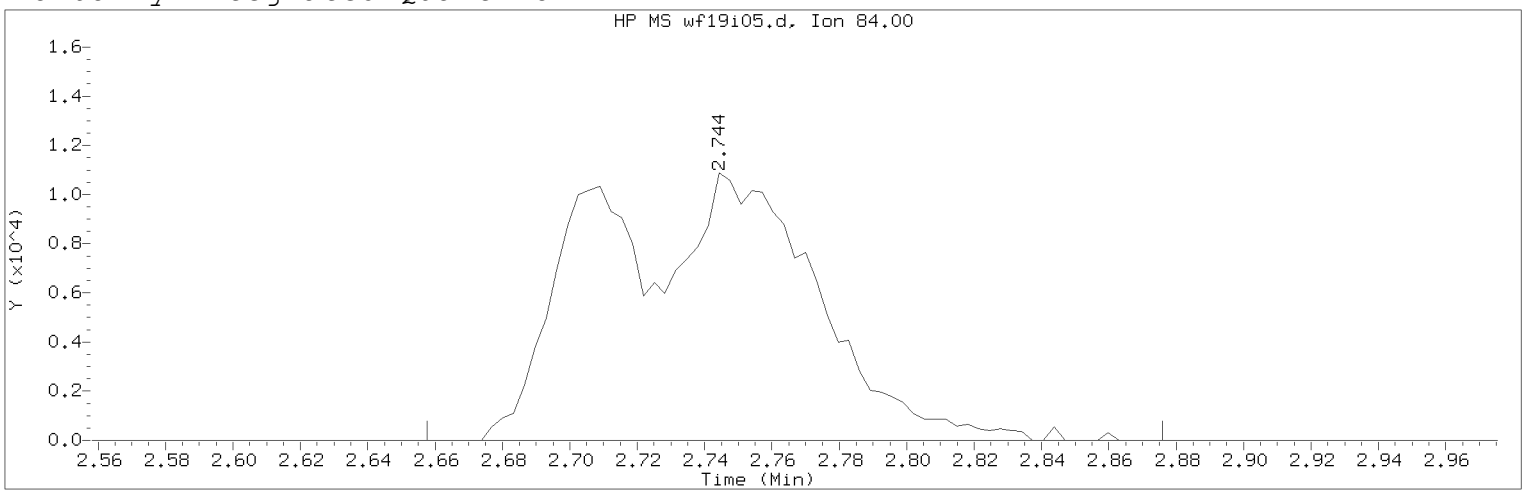
Compound Number : 18
Compound Name : Acetone
Scan Number : 468
Retention Time (minutes): 2.334
Quant Ion : 58.00
Area : 15508
On-column Amount (ng) : 18.9951
Integration start scan : 458 Integration stop scan: 500
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ap 27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

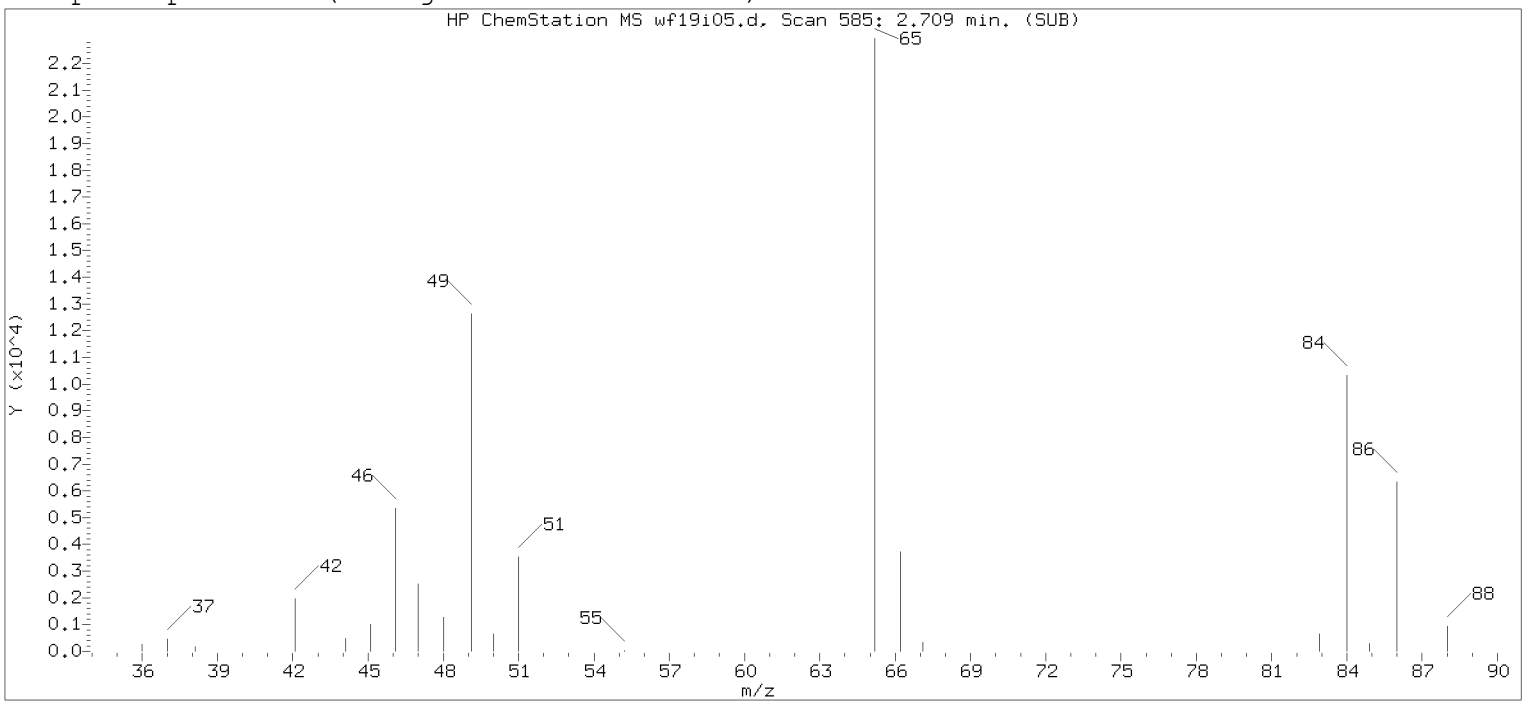
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 596
Retention Time (minutes): 2.744
Quant Ion : 84.00
Area (flag) : 49542M
On-Column Amount (ng) : 10.5316
Integration start scan : 568 Integration stop scan: 636
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

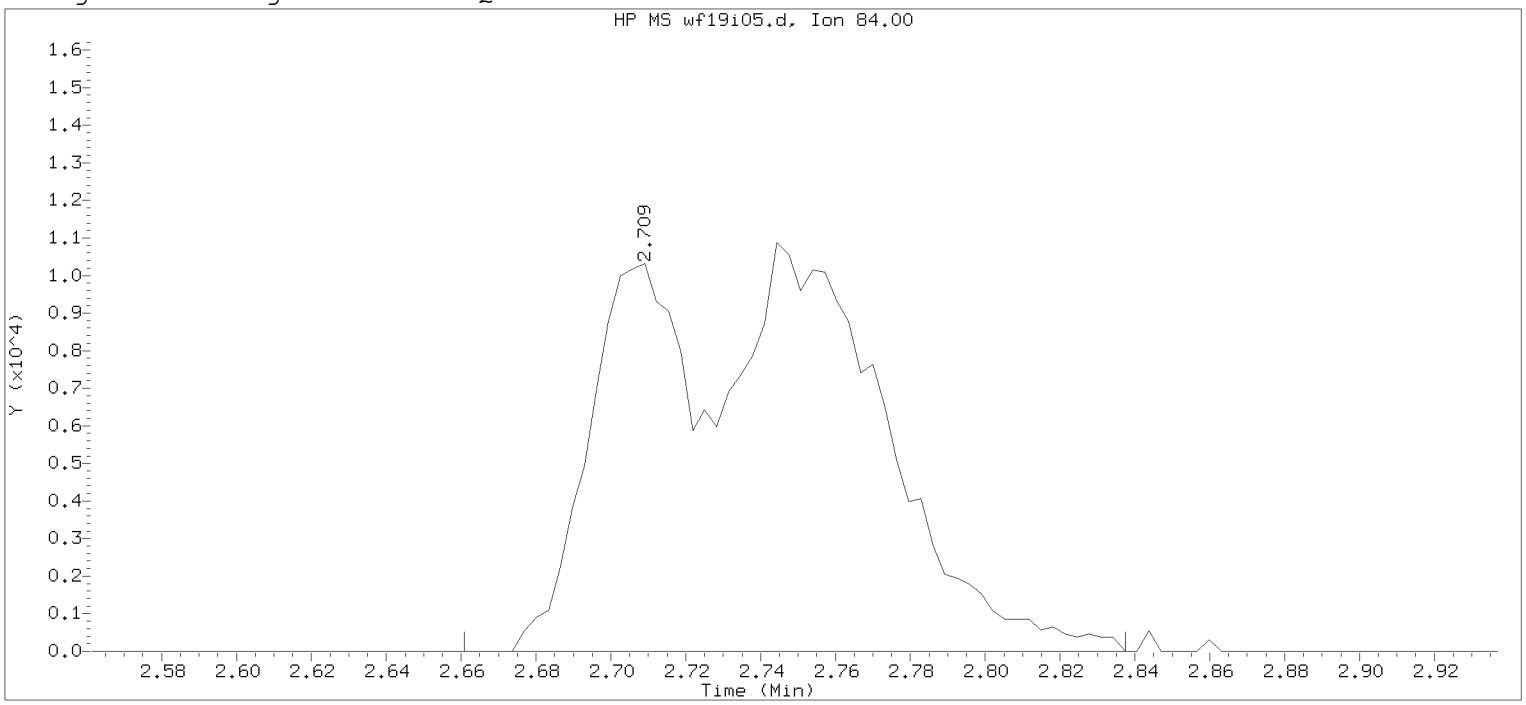
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:12
Date, time and analyst ID of latest file update: 19-Feb-2019 14:12 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area : 49378
On-column Amount (ng) : 12.5234
Integration start scan : 569 Integration stop scan: 624
Y at integration start : 0 Y at integration end: 0

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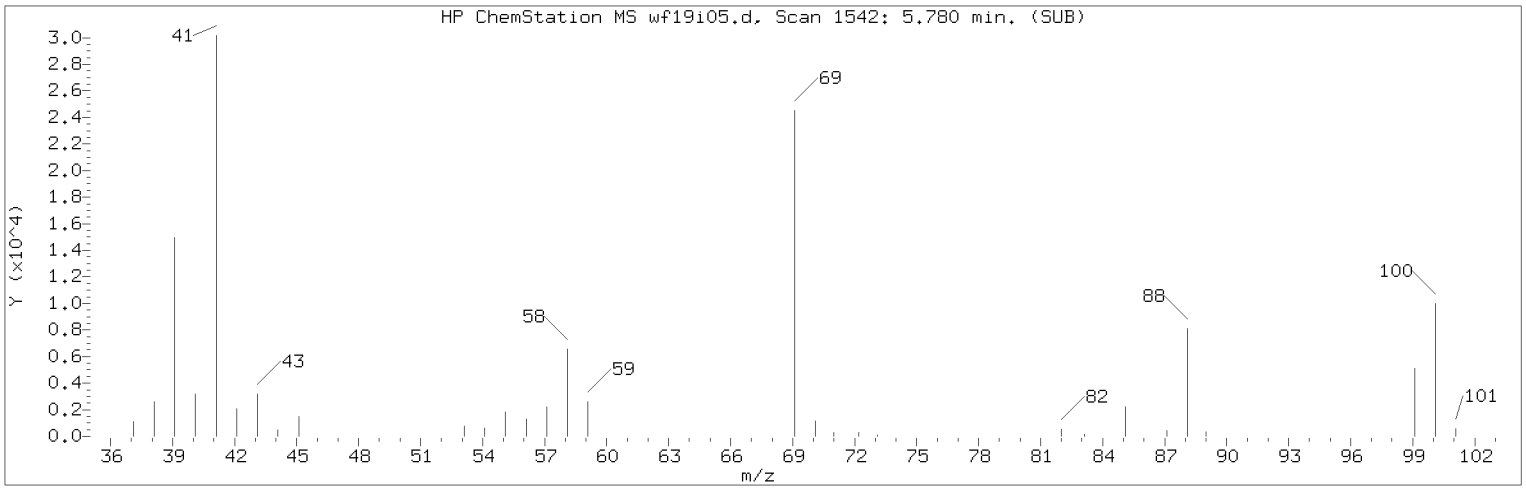
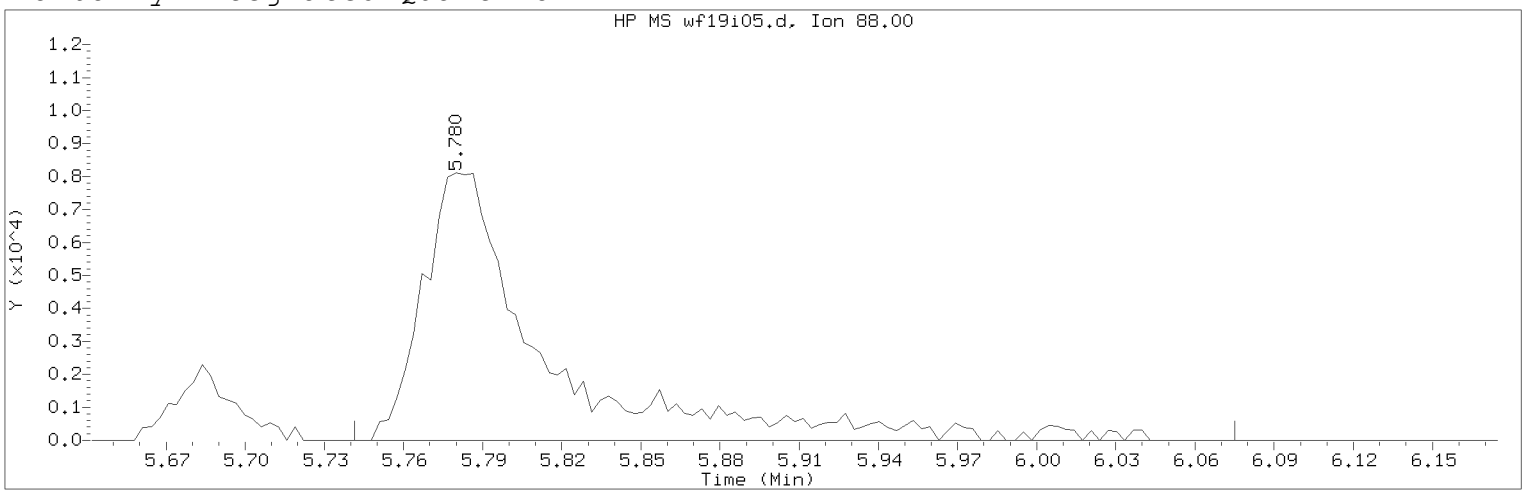
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

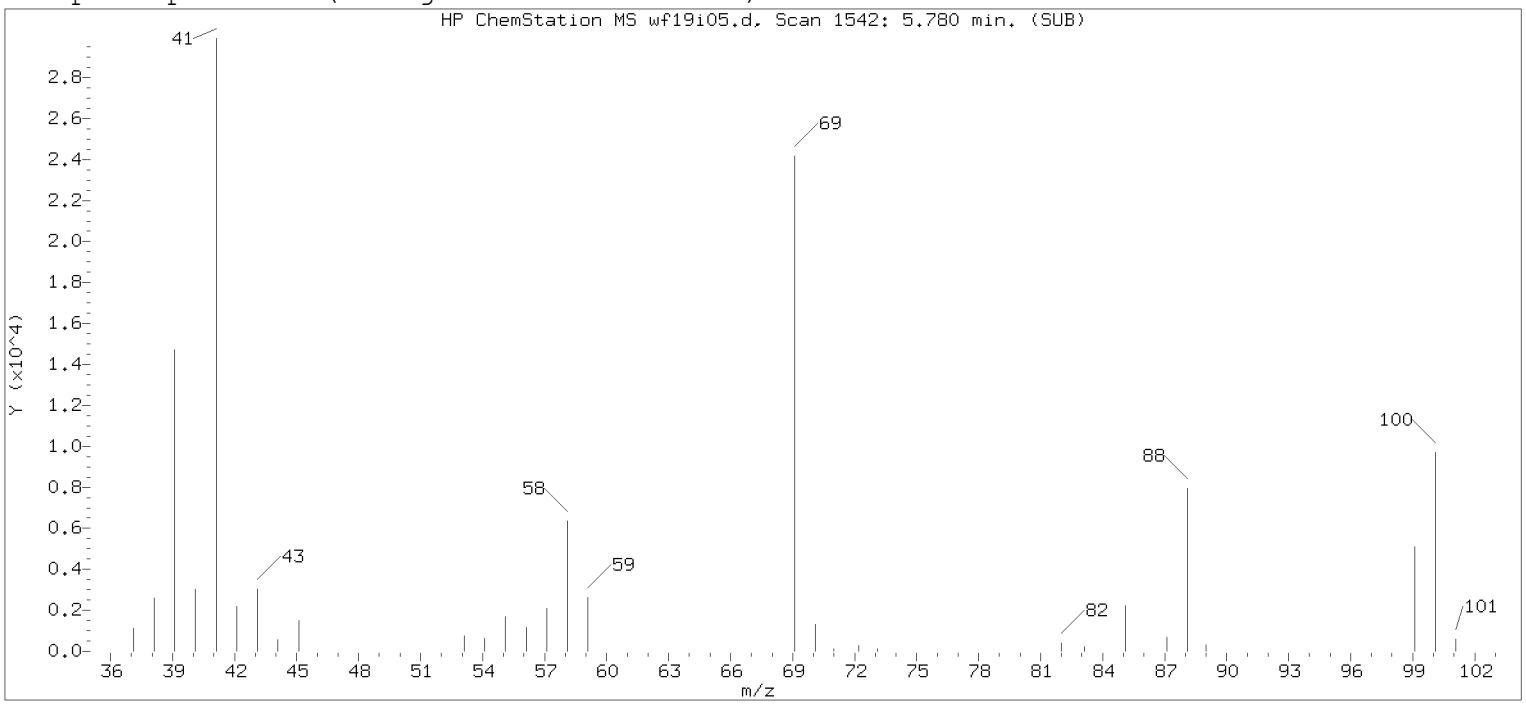
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area (flag) : 26130M
On-Column Amount (ng) : 247.0228
Integration start scan : 1529 Integration stop scan: 1633
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

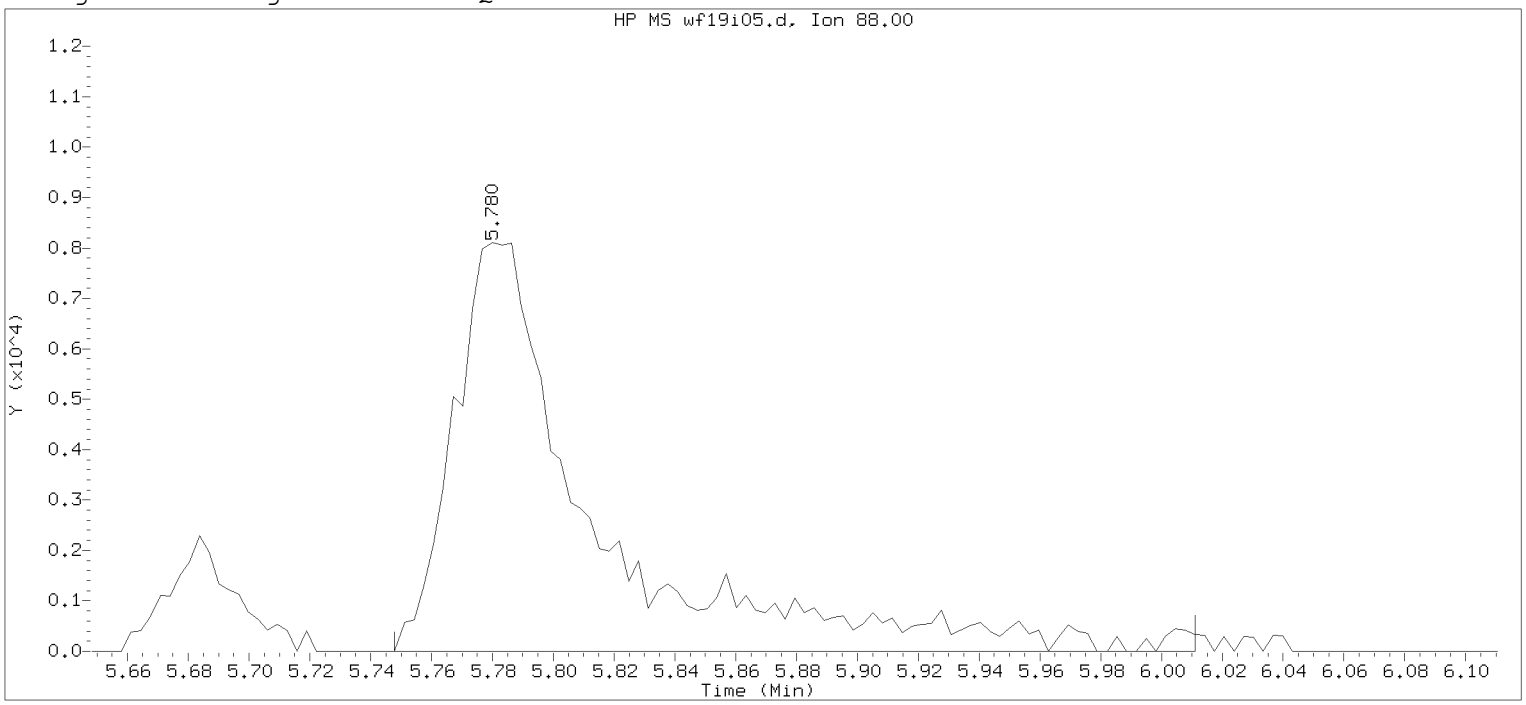
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



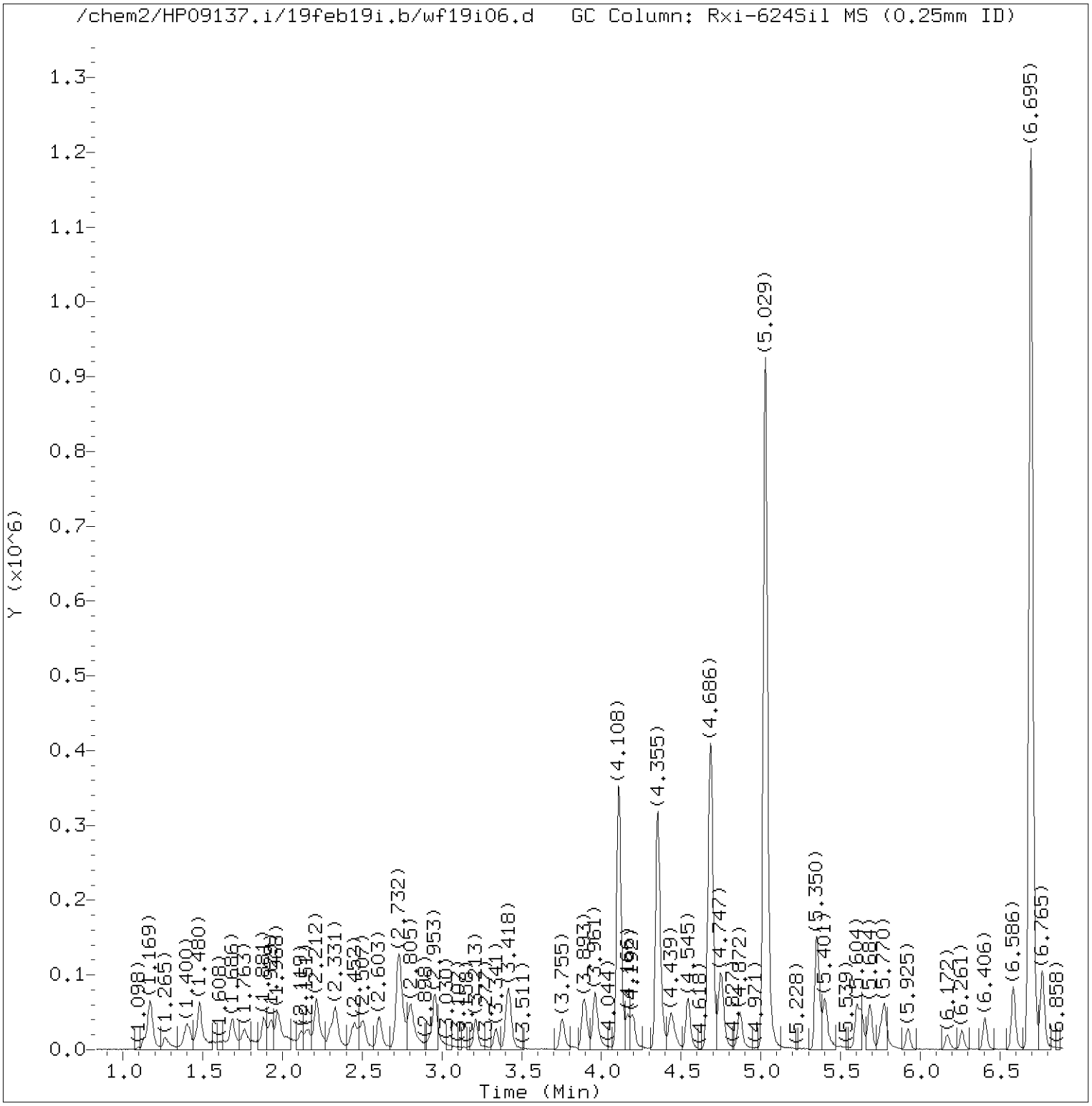
Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:12
Date, time and analyst ID of latest file update: 19-Feb-2019 14:12 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1542		
Retention Time (minutes)	: 5.780		
Quant Ion	: 88.00		
Area	: 25752		
On-column Amount (ng)	: 242.5421		
Integration start scan	: 1531	Integration stop scan:	1613
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: APR27582



Total Ion Chromatogram (TIC)

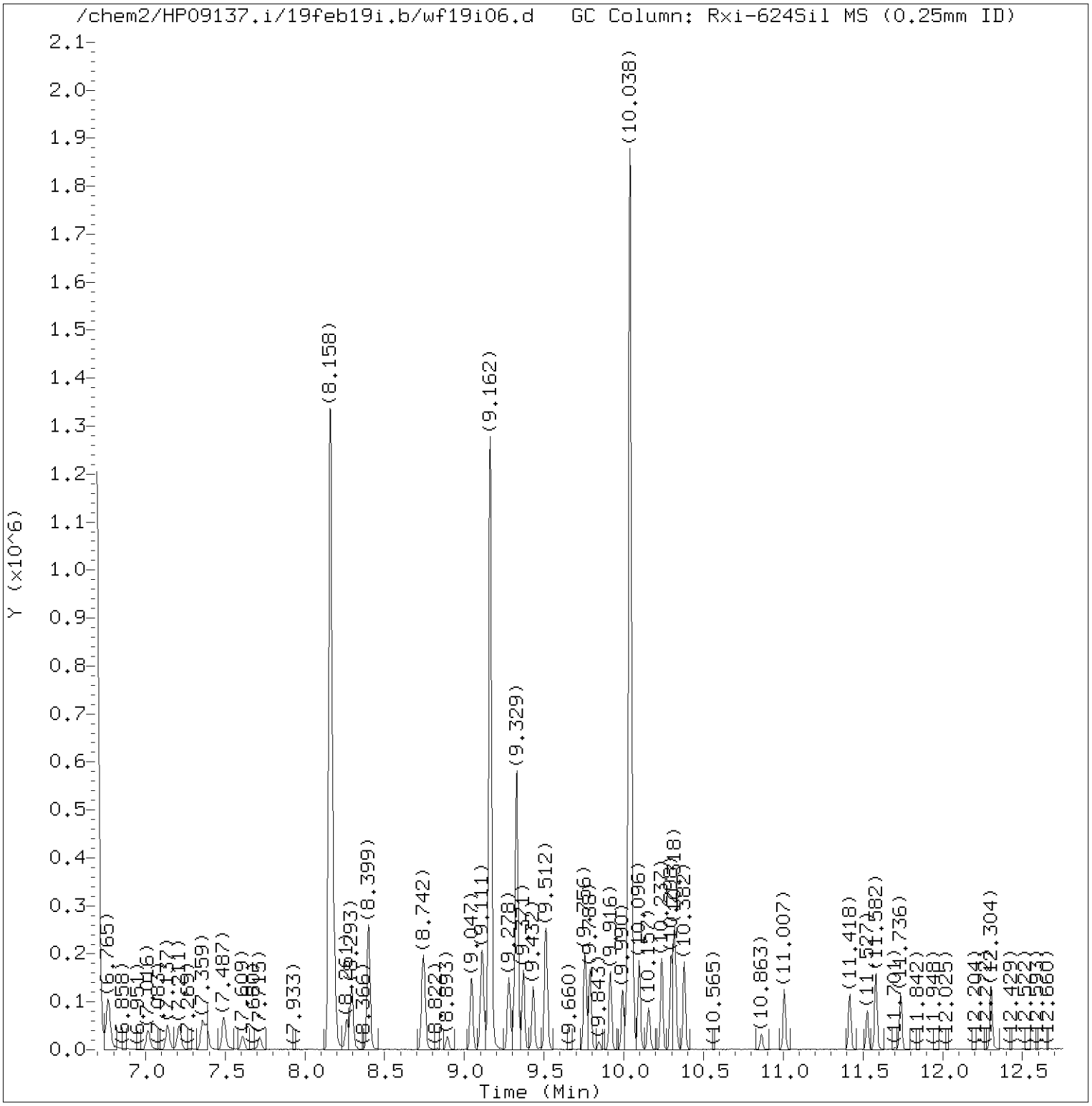
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.259	85	23531	4.193
4) Chloromethane	(2)	1.394	50	28635	4.098
6) Vinyl Chloride	(2)	1.471	62	26366	4.116
5) 1,3-Butadiene	(2)	1.483	39	18545	4.355
8) Bromomethane	(2)	1.686	94	20627	4.083
9) Chloroethane	(2)	1.763	64	17932	4.254
10) Dichlorofluoromethane	(2)	1.881	67	34825	4.268
12) Trichlorofluoromethane	(2)	1.929	101	28313	4.161
11) n-Pentane	(2)	1.968	43	25905	4.003
13) Ethanol	(1)	2.032	45	23872	241.686
15) Freon 123a	(2)	2.160	67	21906M	4.309
16) Acrolein	(1)	2.215	56	60532	38.823
17) 1,1-Dichloroethene	(2)	2.321	96	15949	4.168
17) 1,1-Dichloroethene	(2)	2.331	63	8182	4.238
19) Freon 113	(2)	2.331	101	13192	3.926
18) Acetone	(1)	2.343	58	6155	8.122
21) 2-Propanol	(1)	2.452	45	44335	78.738
22) Methyl Iodide	(2)	2.465	142	29198M	3.982
23) Carbon Disulfide	(2)	2.510	76	54961	4.077
25) Allyl Chloride	(2)	2.600	41	24928	3.739
27) Methyl Acetate	(2)	2.623	43	23710	4.109
28) Methylene Chloride	(2)	2.709	84	18454	3.945
29)*t-Butyl alcohol-d10	(1)	2.728	65	216574	250.000
30) t-Butyl alcohol	(1)	2.802	59	80535	80.179
31) Acrylonitrile	(2)	2.924	53	12124	3.994
32) trans-1,2-Dichloroethene	(2)	2.956	96	17015	4.098
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	41263	4.082
34) n-Hexane	(2)	3.213	57	21496	3.869
36) 1,1-Dichloroethane	(2)	3.341	63	30062	3.996
38) di-Isopropyl ether	(2)	3.412	45	57557	3.982
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	25562	3.923
40) Ethyl t-butyl ether	(2)	3.758	59	40603	3.854
42) cis-1,2-Dichloroethene	(2)	3.890	96	18329	3.932
45) 2,2-Dichloropropane	(2)	3.893	77	14577	4.314
44) 2-Butanone	(2)	3.906	43	33453	7.670
47) Propionitrile	(1)	3.961	54	102936	82.457
48) Methacrylonitrile	(2)	4.111	67	130439	39.964
49) Bromochloromethane	(2)	4.118	128	9255	3.819

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.166	71	9370	8.110
51) Chloroform	(2)	4.195	83	27398	3.881
52)$Dibromofluoromethane	(2)	4.355	113	203360	50.576
52)$Dibromofluoromethane	(2)	4.352	111	208230	50.447
53) 1,1,1-Trichloroethane	(2)	4.378	97	21578	4.063
54) Cyclohexane	(2)	4.436	56	29157	4.148
54) Cyclohexane	(2)	4.439	84	24008	4.126
54) Cyclohexane	(2)	4.439	69	8793	4.162
55) 1,1-Dichloropropene	(2)	4.541	75	23554	4.162
56) Carbon Tetrachloride	(2)	4.545	117	18201	3.993
58) Isobutyl Alcohol	(1)	4.670	41	72292	197.420
57)$1,2-Dichloroethane-d4	(2)	4.686	102	54956	51.390
57)$1,2-Dichloroethane-d4	(2)	4.689	65	236381	50.778
57)$1,2-Dichloroethane-d4	(2)	4.689	104	34670	50.908
60) Benzene	(2)	4.747	78	73397	4.035
61) 1,2-Dichloroethane	(2)	4.766	62	22051	3.924
61) 1,2-Dichloroethane	(2)	4.756	98	2103	3.933
65) t-Amyl methyl ether	(2)	4.872	73	42864	3.971
66)*Fluorobenzene	(2)	5.029	96	867920	50.000
67) n-Heptane	(2)	5.032	43	19883	3.745
69) n-Butanol	(1)	5.353	56	119356	367.104
71) Trichloroethene	(2)	5.408	95	17783	4.037
73) Methylcyclohexane	(2)	5.604	83	26169	4.092
73) Methylcyclohexane	(2)	5.607	98	12193	4.100
74) 1,2-Dichloropropane	(2)	5.632	63	18182	3.893
75) Dibromomethane	(2)	5.751	93	11156	3.870
77) Methyl Methacrylate	(2)	5.777	69	19327M	3.766
76) 1,4-Dioxane	(1)	5.777	88	17062M	175.540
79) Bromodichloromethane	(2)	5.928	83	19632	3.707
43) 1,2-Dichloroethene (Total)	(2)		96	35344	8.030
80) 2-Nitropropane	(2)	6.172	41	12333M	6.883
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	12078	3.392
82) cis-1,3-Dichloropropene	(2)	6.409	75	27021	3.711
83) 4-Methyl-2-pentanone	(2)	6.586	43	64259	7.475
84)$Toluene-d8	(3)	6.695	98	907781	50.491
84)$Toluene-d8	(3)	6.695	100	592851	49.723
89) Toluene	(3)	6.768	92	45802	3.955
90) trans-1,3-Dichloropropene	(3)	7.012	75	24608	3.569

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.141	69	29840	3.522
93) 1,1,2-Trichloroethane	(3)	7.211	97	16788	3.766
94) Tetrachloroethene	(3)	7.359	166	19036	4.051
95) 1,3-Dichloropropane	(3)	7.388	76	28445	3.674
97) 2-Hexanone	(3)	7.490	43	49126	7.283
98) Dibromochloromethane	(3)	7.612	129	14587	3.350
100) 1,2-Dibromoethane	(3)	7.718	107	17864	3.648
101)*Chlorobenzene-d5	(3)	8.161	117	717501	50.000
103) Chlorobenzene	(3)	8.187	112	49939	3.887
104) 1,1,1,2-Tetrachloroethane	(3)	8.264	131	14799	3.584
105) Ethylbenzene	(3)	8.296	91	86503	3.930
107) m+p-Xylene	(3)	8.399	106	68276	7.801
108) o-Xylene	(3)	8.736	106	33591	3.901
110) Styrene	(3)	8.752	104	52960	3.667
111) Bromoform	(3)	8.893	173	10704	3.159
112) Isopropylbenzene	(3)	9.047	105	83300	3.937
113) Cyclohexanone	(1)	9.111	55	81513	185.914
115)$4-Bromofluorobenzene	(3)	9.162	95	358508	49.843
115)$4-Bromofluorobenzene	(3)	9.162	174	303553	50.013
116) Bromobenzene	(4)	9.278	156	22129	3.897
117) 1,1,2,2-Tetrachloroethane	(4)	9.281	83	28726	3.751
118) 1,2,3-Trichloropropane	(4)	9.316	110	9051	3.924
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	92446	37.646
120) n-Propylbenzene	(4)	9.371	91	101539	4.056
121) 2-Chlorotoluene	(4)	9.432	126	20876	4.043
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	71196	3.943
122) 4-Chlorotoluene	(4)	9.518	126	21738	3.933
125) tert-Butylbenzene	(4)	9.756	134	16878	4.115
126) Pentachloroethane	(4)	9.766	167	11197	3.453
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	73692	3.874
128) sec-Butylbenzene	(4)	9.916	105	90719	4.094
130) 1,3-Dichlorobenzene	(4)	9.993	146	41989	3.878
131) p-Isopropyltoluene	(4)	10.022	119	78503	4.002
132)*1,4-Dichlorobenzene-d4	(4)	10.038	152	394254	50.000
134) 1,4-Dichlorobenzene	(4)	10.058	146	44108	3.929
91) 1,3-Dichloropropene (total)	(3)		100	51629	7.280
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	79065	3.863
136) Benzyl Chloride	(4)	10.157	91	52403	3.335

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.237	119	47119	3.823
138) 1,4-Diethylbenzene	(4)	10.295	119	51192	3.876
140) n-Butylbenzene	(4)	10.314	92	38912	3.930
139) 1,2-Dichlorobenzene	(4)	10.321	146	41158	3.831
141) 1,2-Diethylbenzene	(4)	10.382	119	41509	3.989
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	6341	3.644
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	32071	3.893
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	29570	3.739
148) Hexachlorobutadiene	(4)	11.527	225	11175	3.967
149) Naphthalene	(4)	11.582	128	97075	3.627
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	29641	3.840
109) Xylene (Total)	(3)		106	101867	11.702
151) 2-Methylnaphthalene	(4)	12.304	142	49814	3.263
142) Diethylbenzene (total)	(4)		100	139820	11.688

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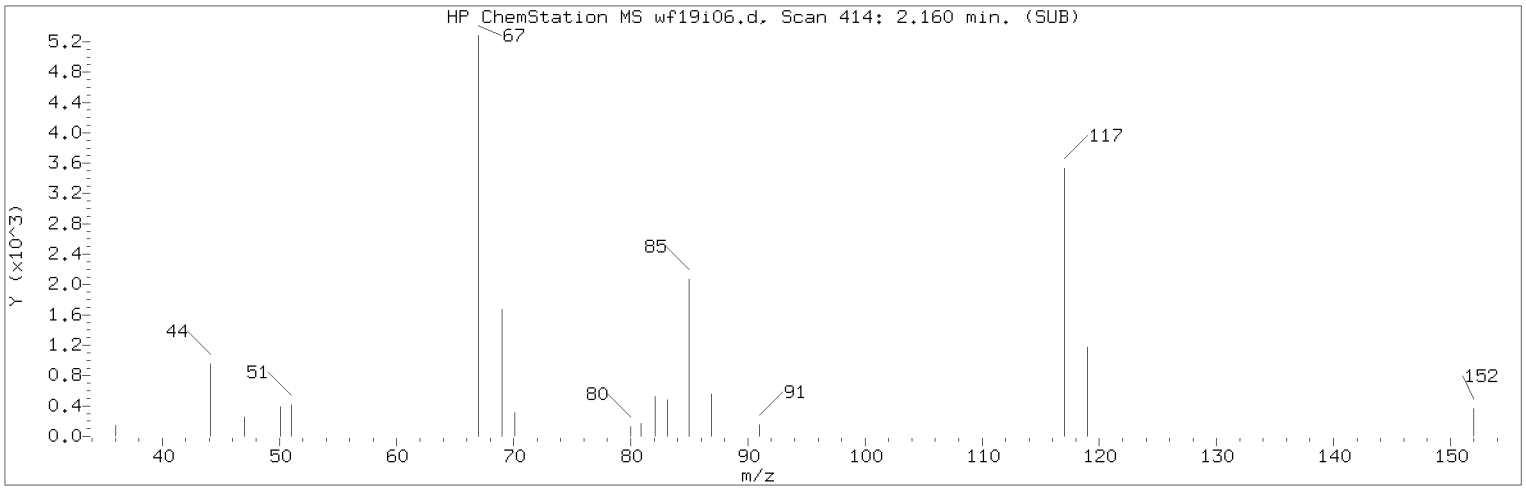
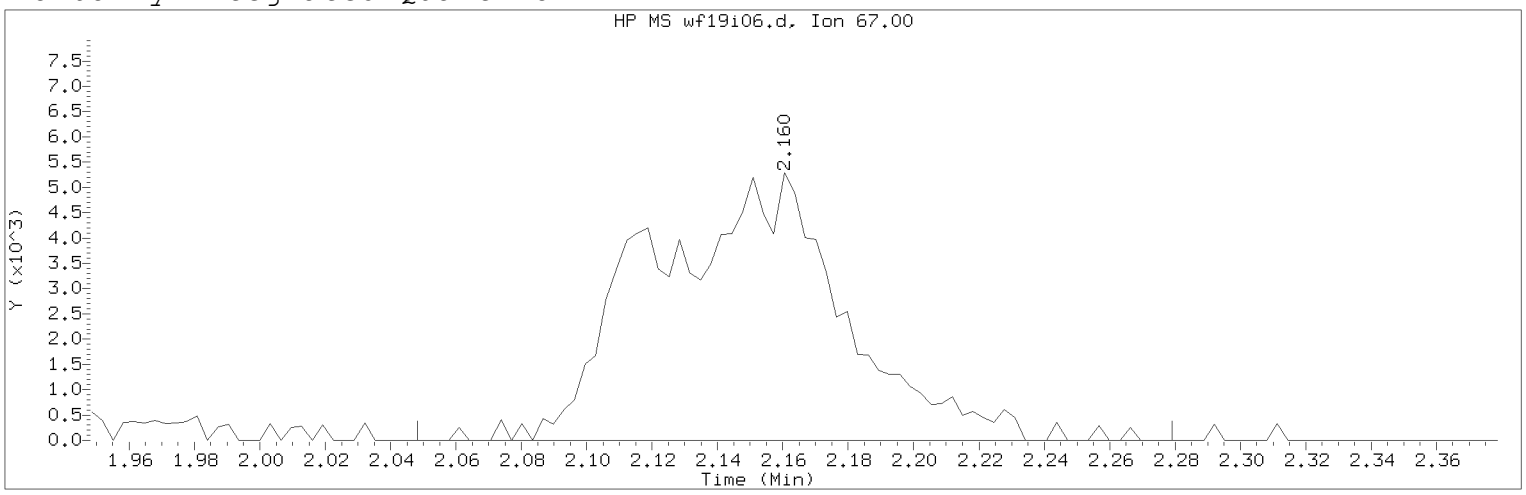
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

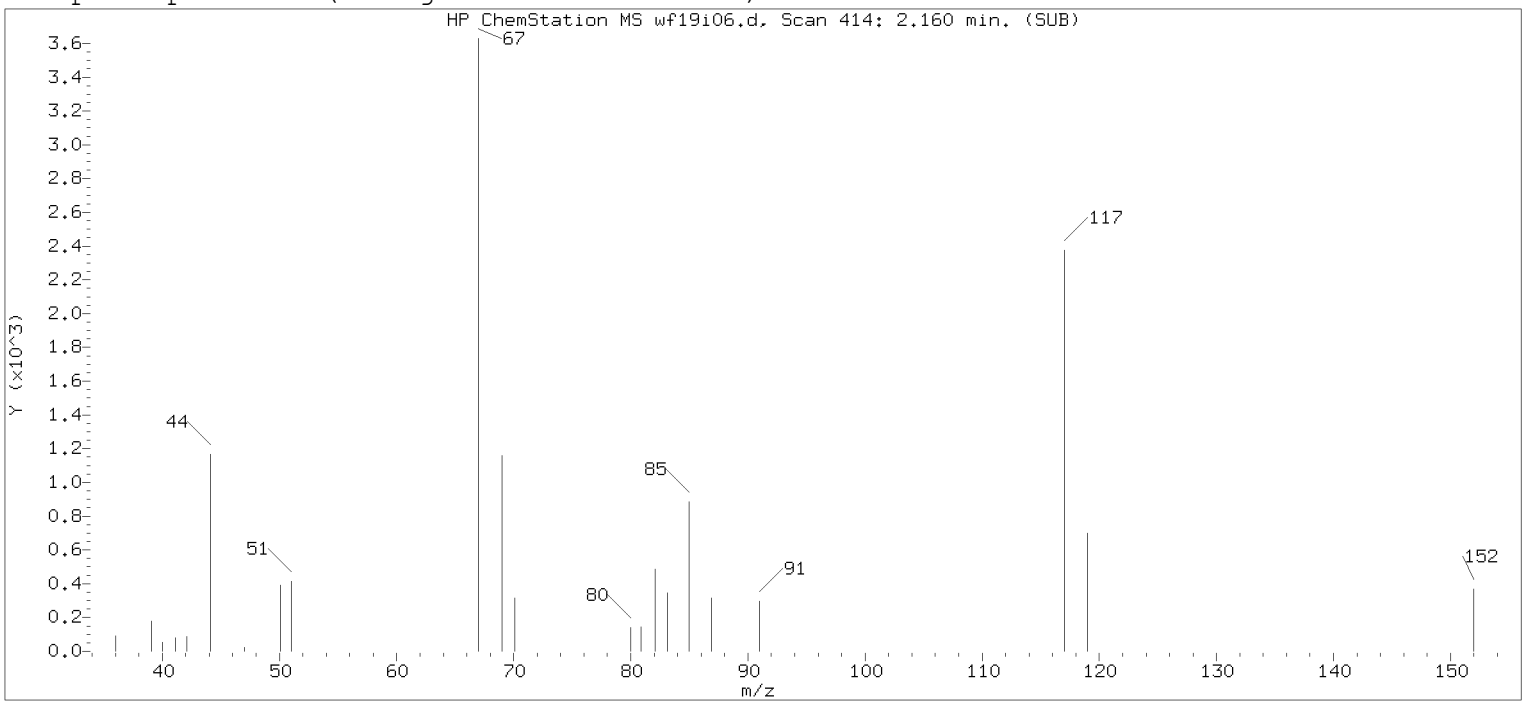
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 414
Retention Time (minutes): 2.160
Quant Ion : 67.00
Area (flag) : 21906M
On-Column Amount (ng) : 4.3086
Integration start scan : 378 Integration stop scan: 450
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

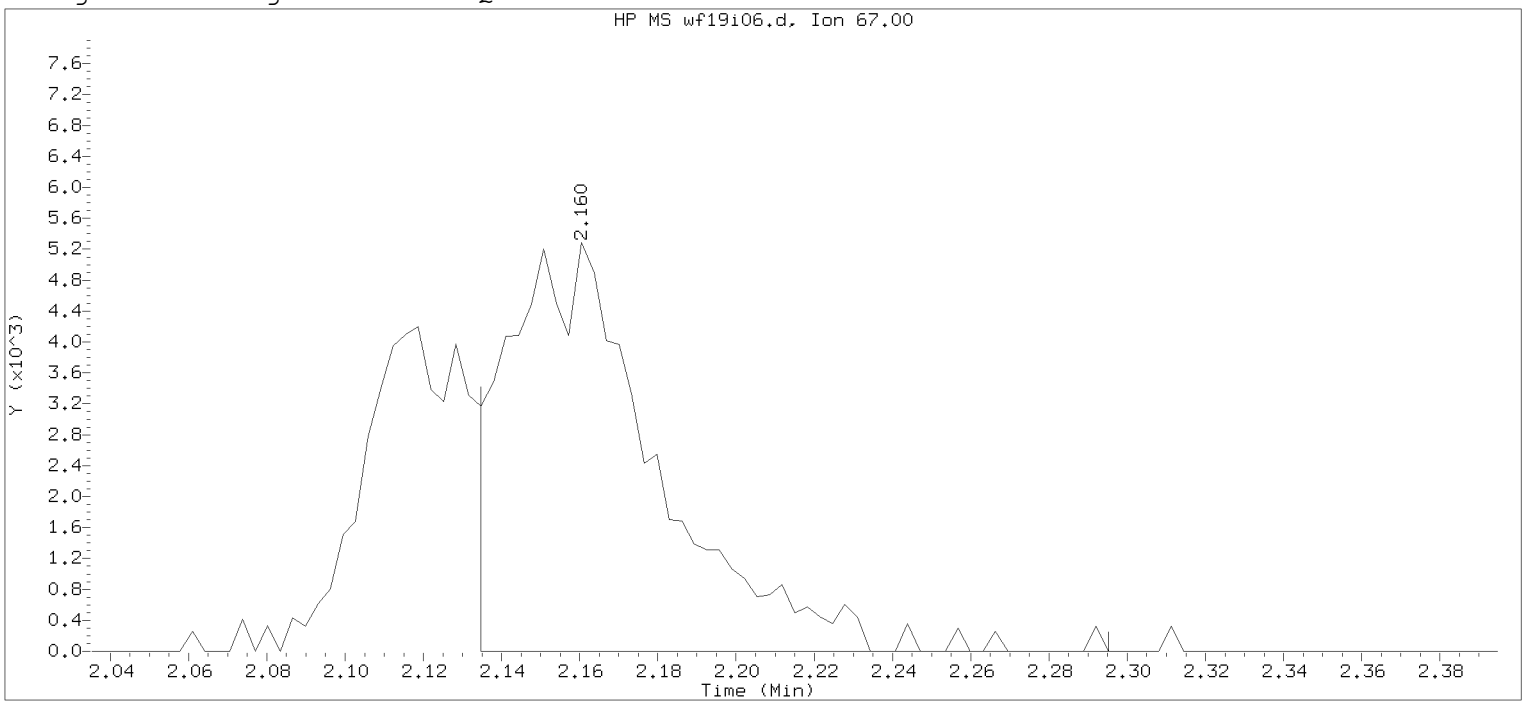
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:36
Date, time and analyst ID of latest file update: 19-Feb-2019 14:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 15
Compound Name : Freon 123a
Scan Number : 414
Retention Time (minutes): 2.160
Quant Ion : 67.00
Area : 14214
On-column Amount (ng) : 3.9735
Integration start scan : 405 Integration stop scan: 455
Y at integration start : 0 Y at integration end: 0

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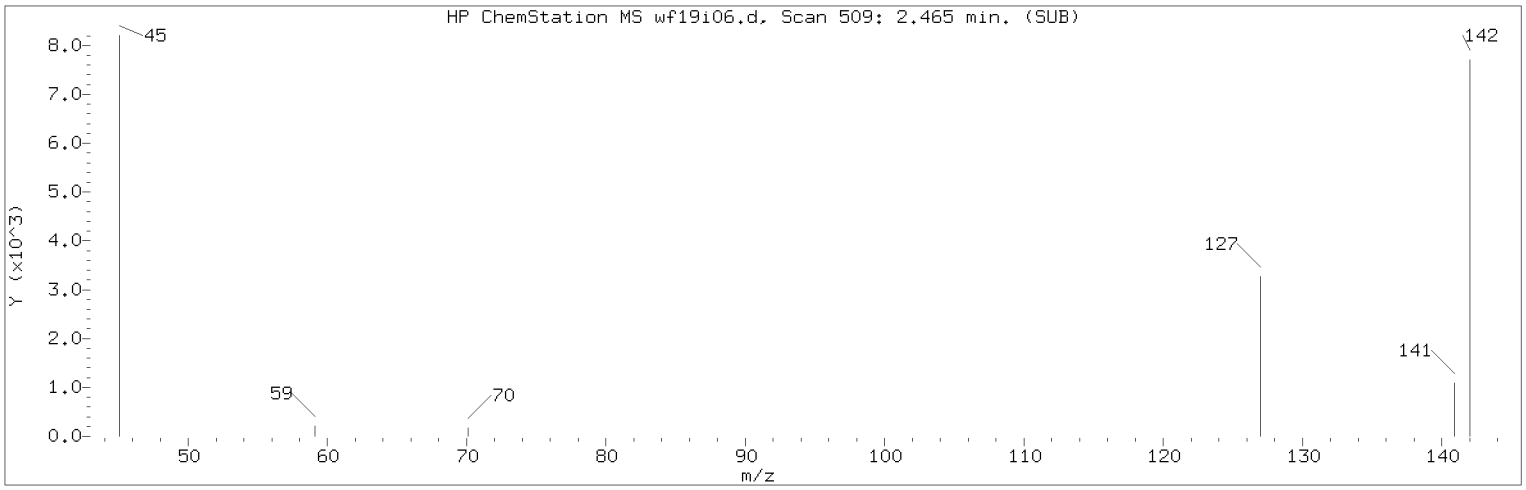
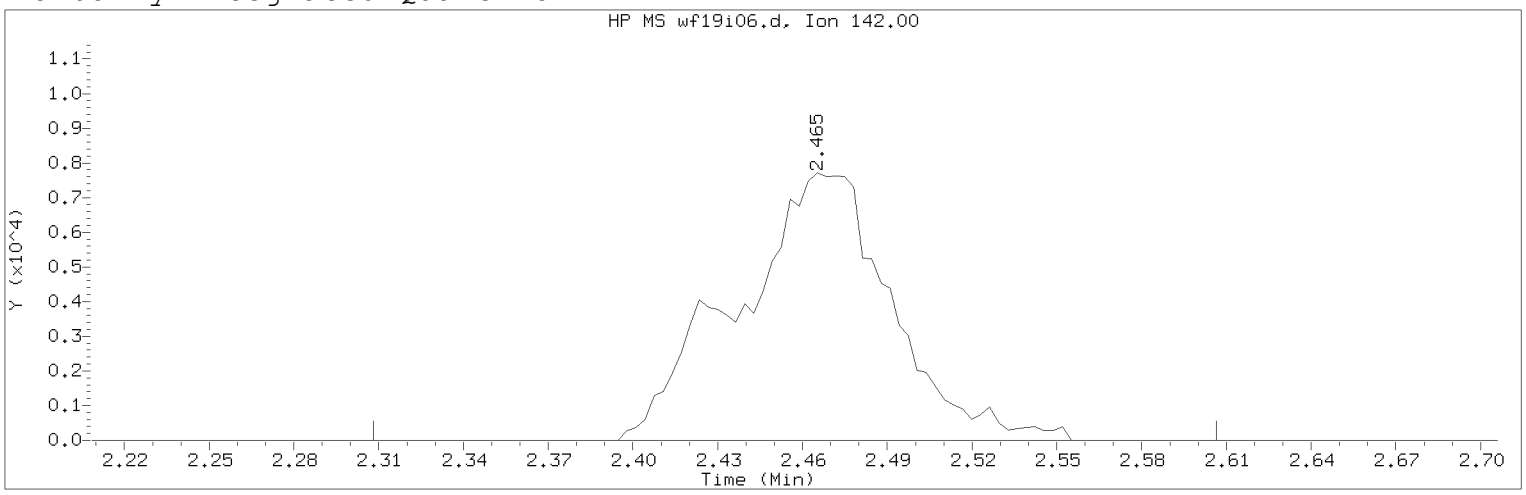
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

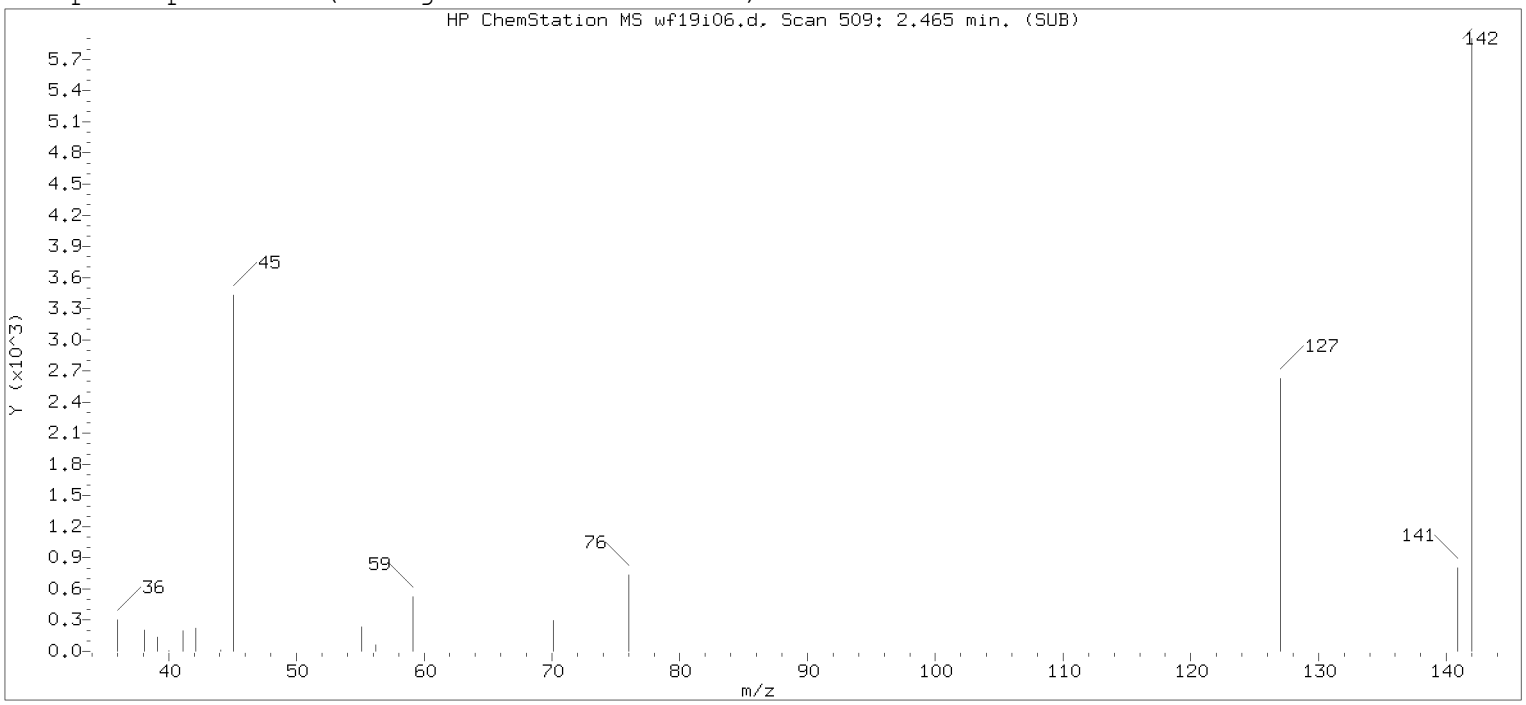
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area (flag) : 29198M
On-Column Amount (ng) : 3.9817
Integration start scan : 459 Integration stop scan: 552
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

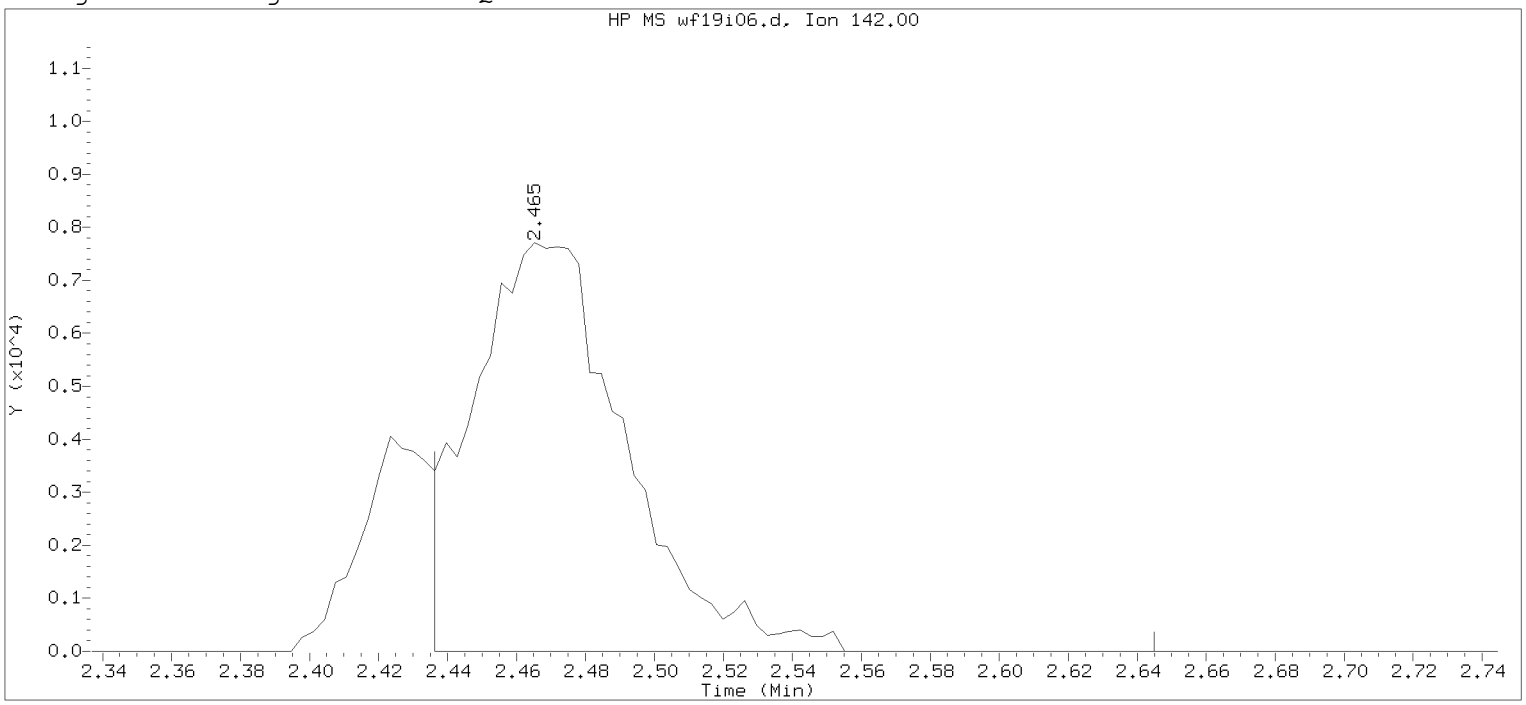
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:36
Date, time and analyst ID of latest file update: 19-Feb-2019 14:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area : 23663
On-column Amount (ng) : 3.5076
Integration start scan : 499 Integration stop scan: 564
Y at integration start : 0 Y at integration end: 0

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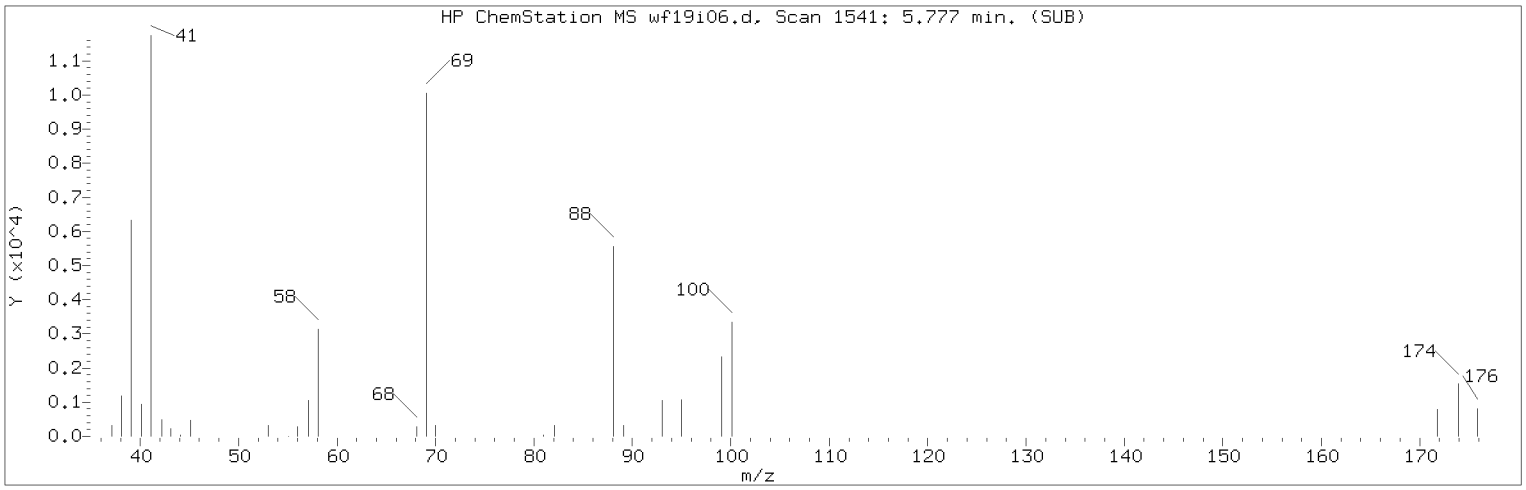
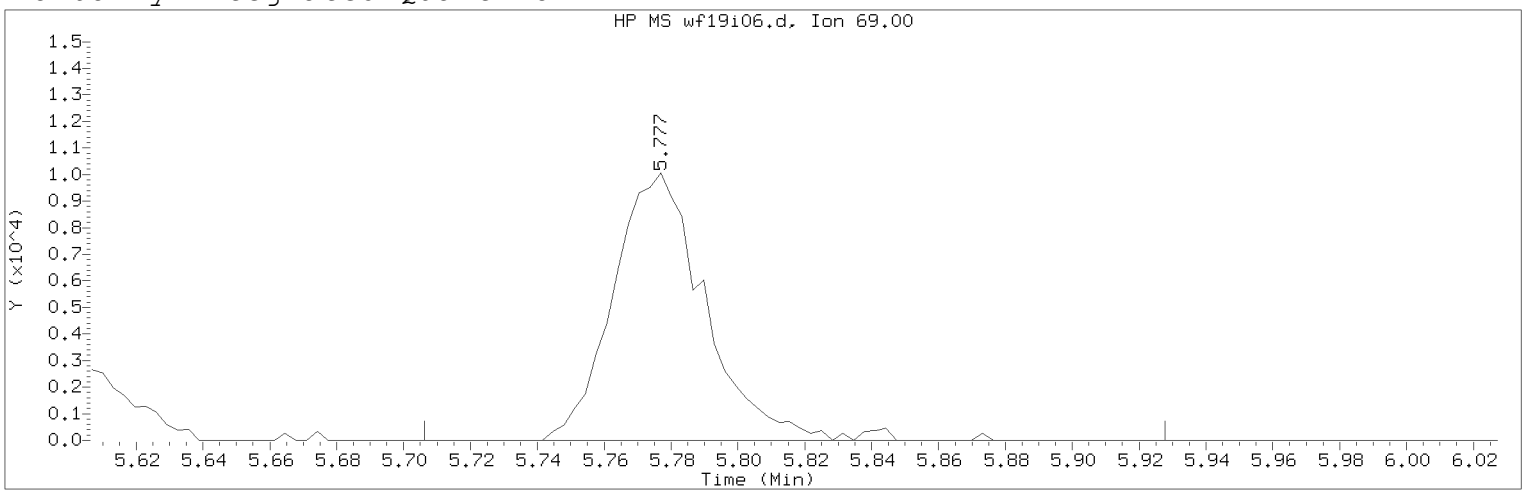
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

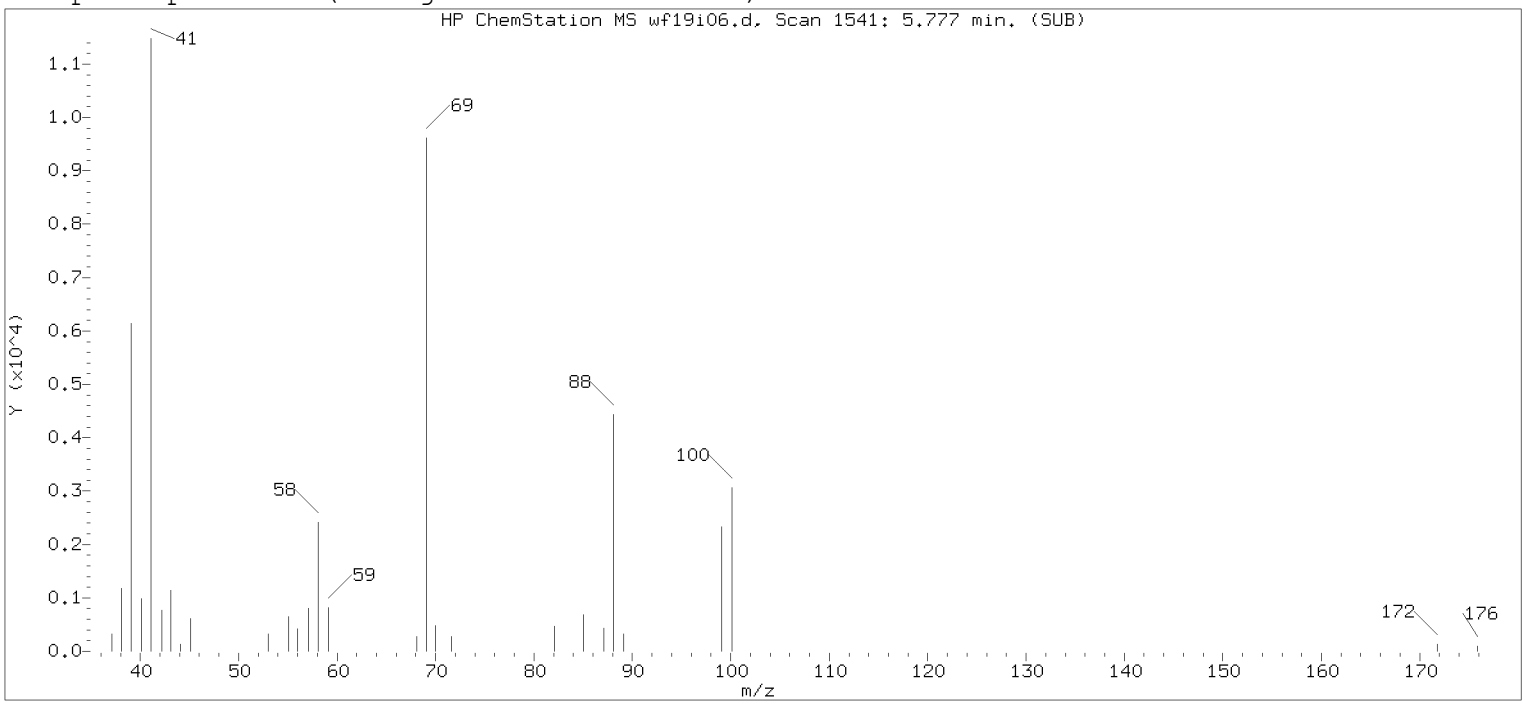
Compound Number : 77
Compound Name : Methyl Methacrylate
Scan Number : 1541
Retention Time (minutes): 5.777
Quant Ion : 69.00
Area (flag) : 19327M
On-Column Amount (ng) : 3.7657
Integration start scan : 1518 Integration stop scan: 1587
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

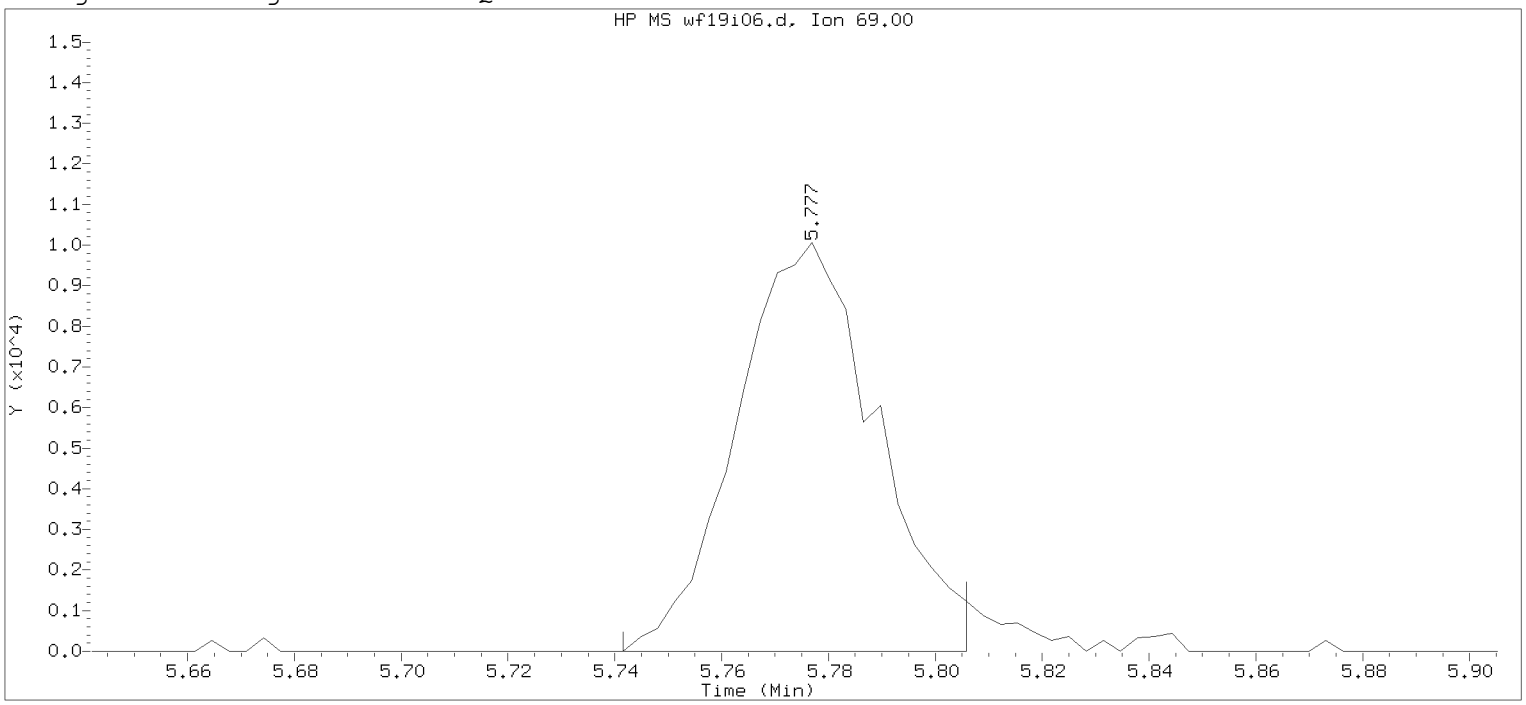
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:36
Date, time and analyst ID of latest file update: 19-Feb-2019 14:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 77
Compound Name : Methyl Methacrylate
Scan Number : 1541
Retention Time (minutes): 5.777
Quant Ion : 69.00
Area : 18238
On-column Amount (ng) : 3.5038
Integration start scan : 1529 Integration stop scan: 1549
Y at integration start : 0 Y at integration end: 0

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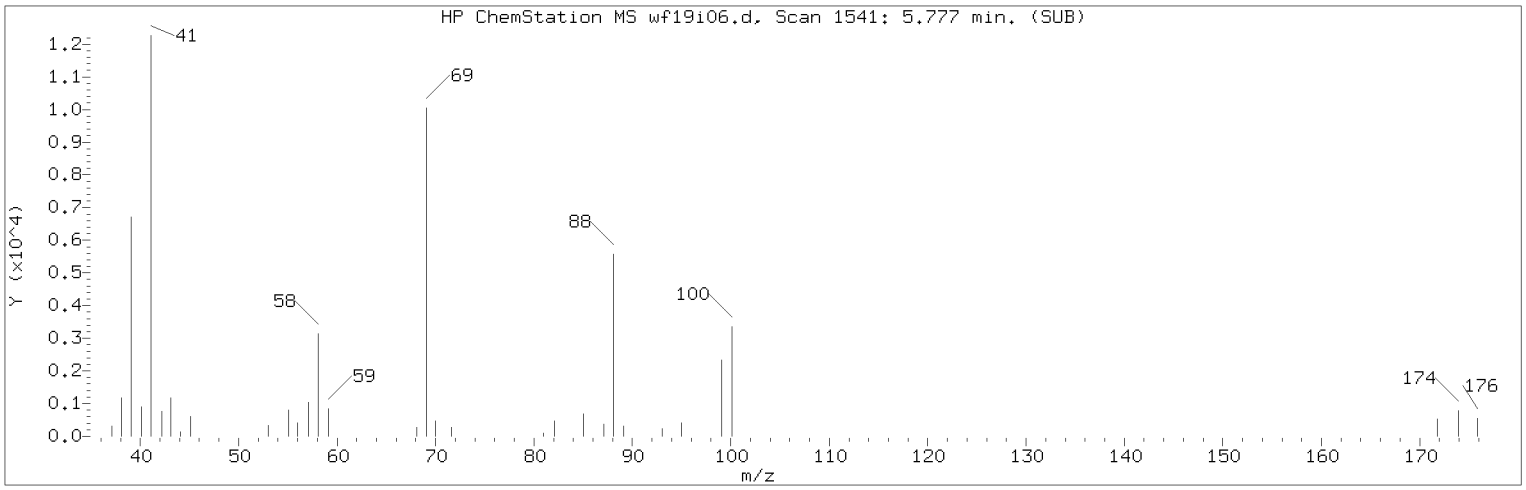
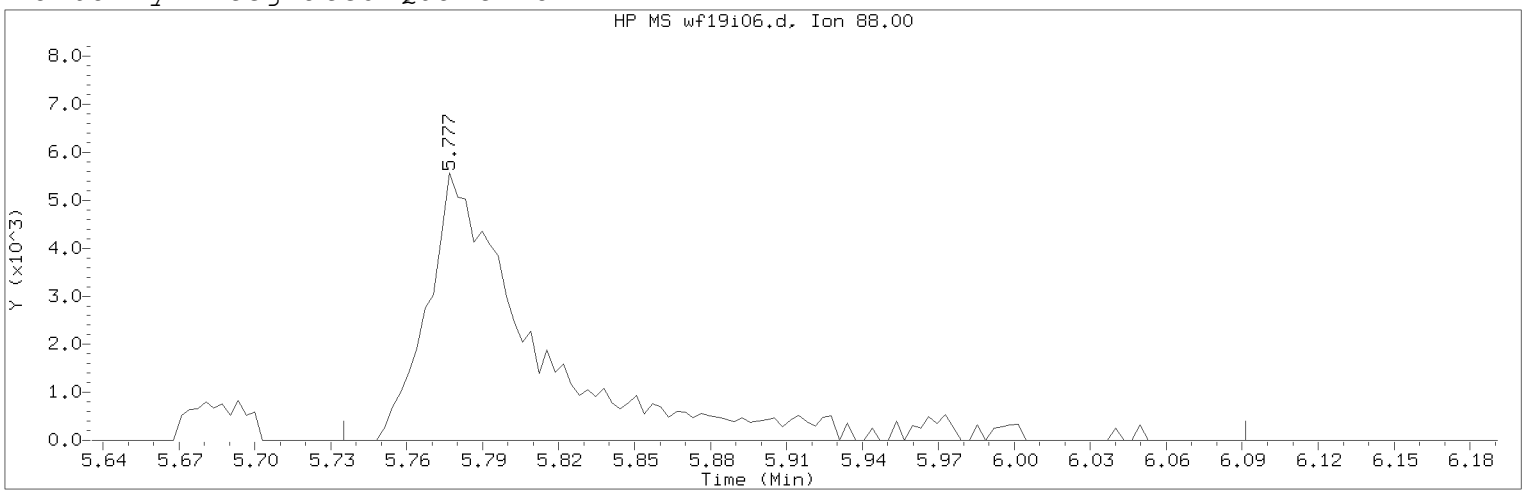
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

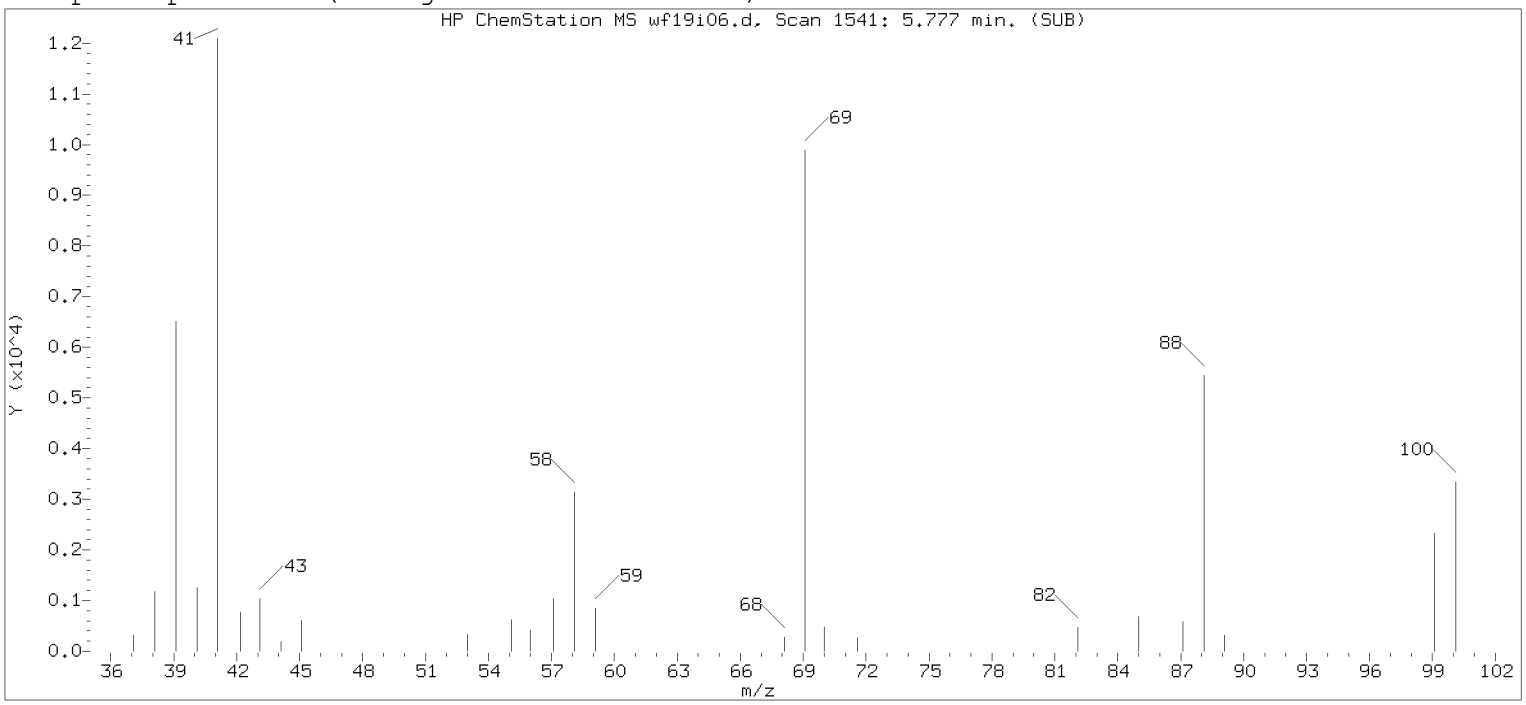
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1541
Retention Time (minutes): 5.777
Quant Ion : 88.00
Area (flag) : 17062M
On-Column Amount (ng) : 175.5404
Integration start scan : 1527 Integration stop scan: 1638
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

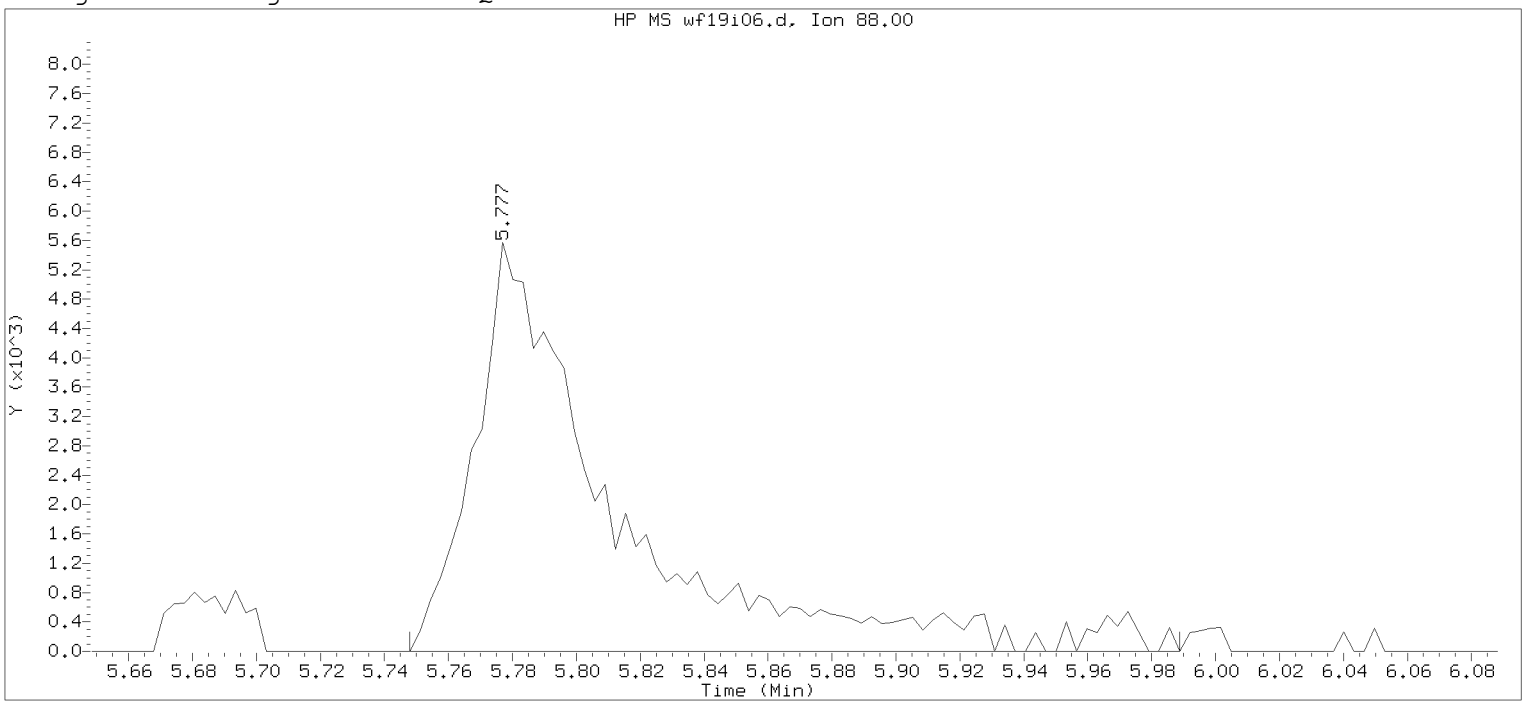
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:36
Date, time and analyst ID of latest file update: 19-Feb-2019 14:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1541
Retention Time (minutes): 5.777
Quant Ion : 88.00
Area : 16725
On-column Amount (ng) : 175.6192
Integration start scan : 1531 Integration stop scan: 1606
Y at integration start : 0 Y at integration end: 0

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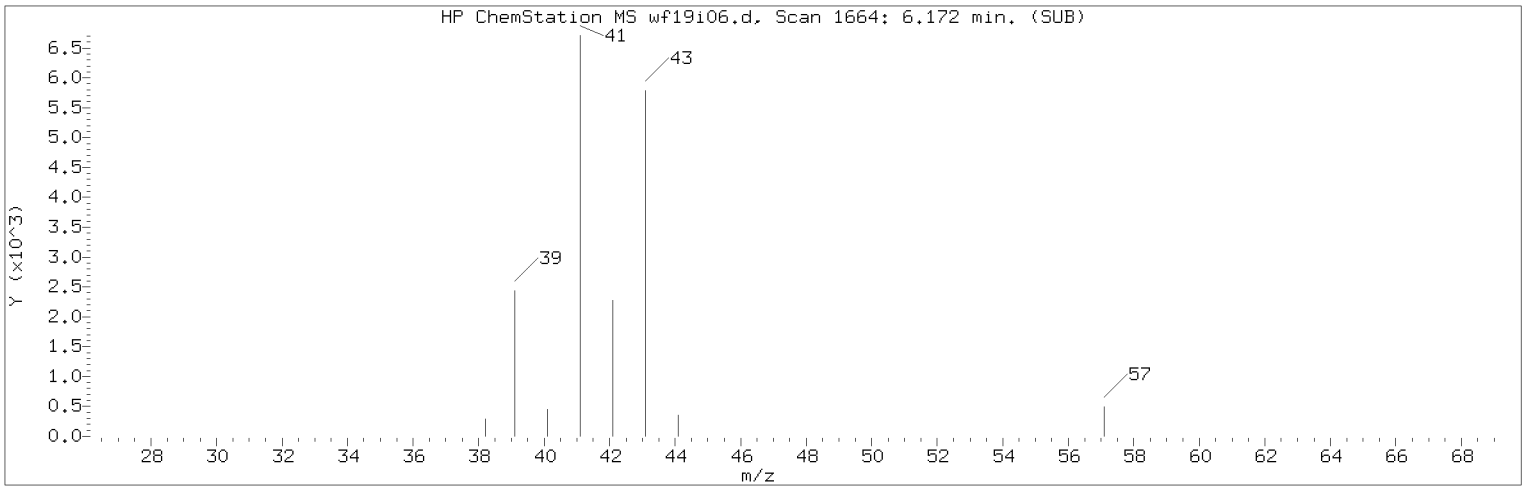
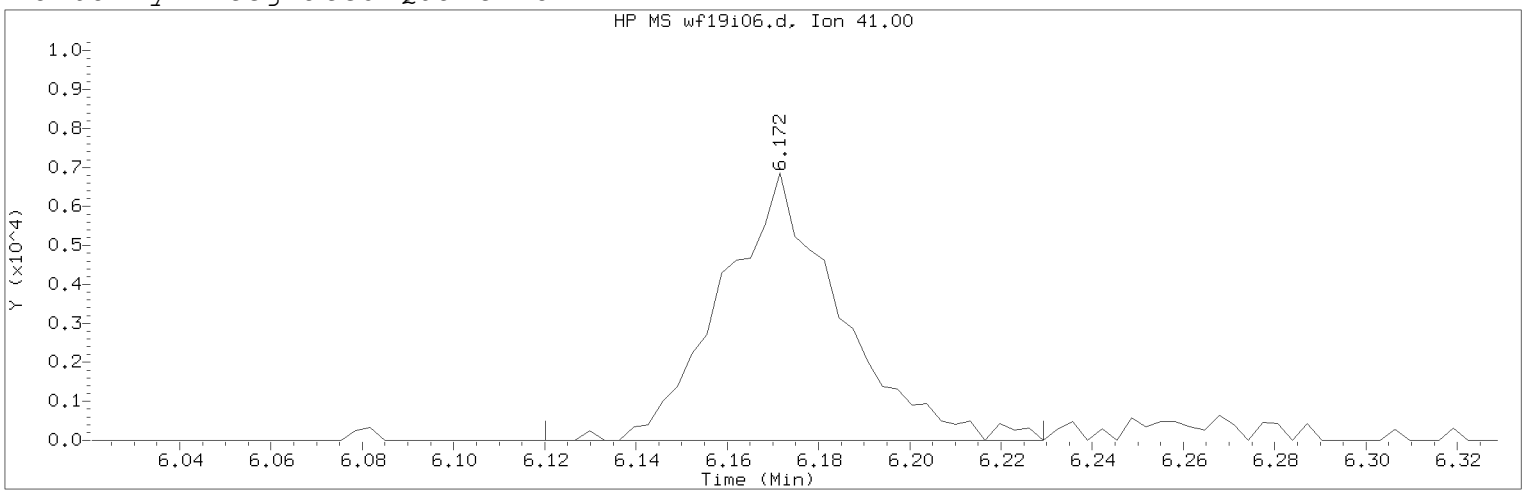
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

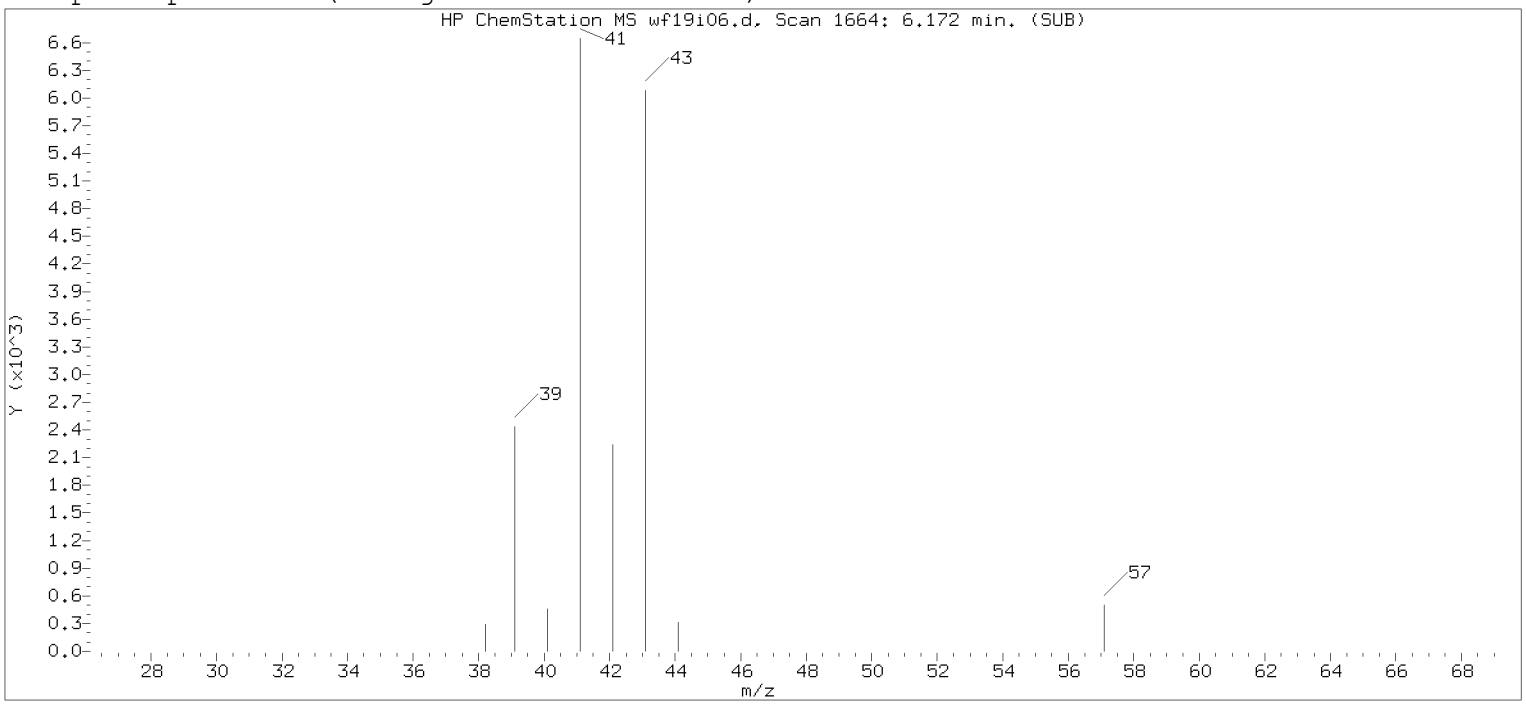
Compound Number : 80
Compound Name : 2-Nitropropane
Scan Number : 1664
Retention Time (minutes): 6.172
Quant Ion : 41.00
Area (flag) : 12333M
On-Column Amount (ng) : 6.8827
Integration start scan : 1647 Integration stop scan: 1681
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

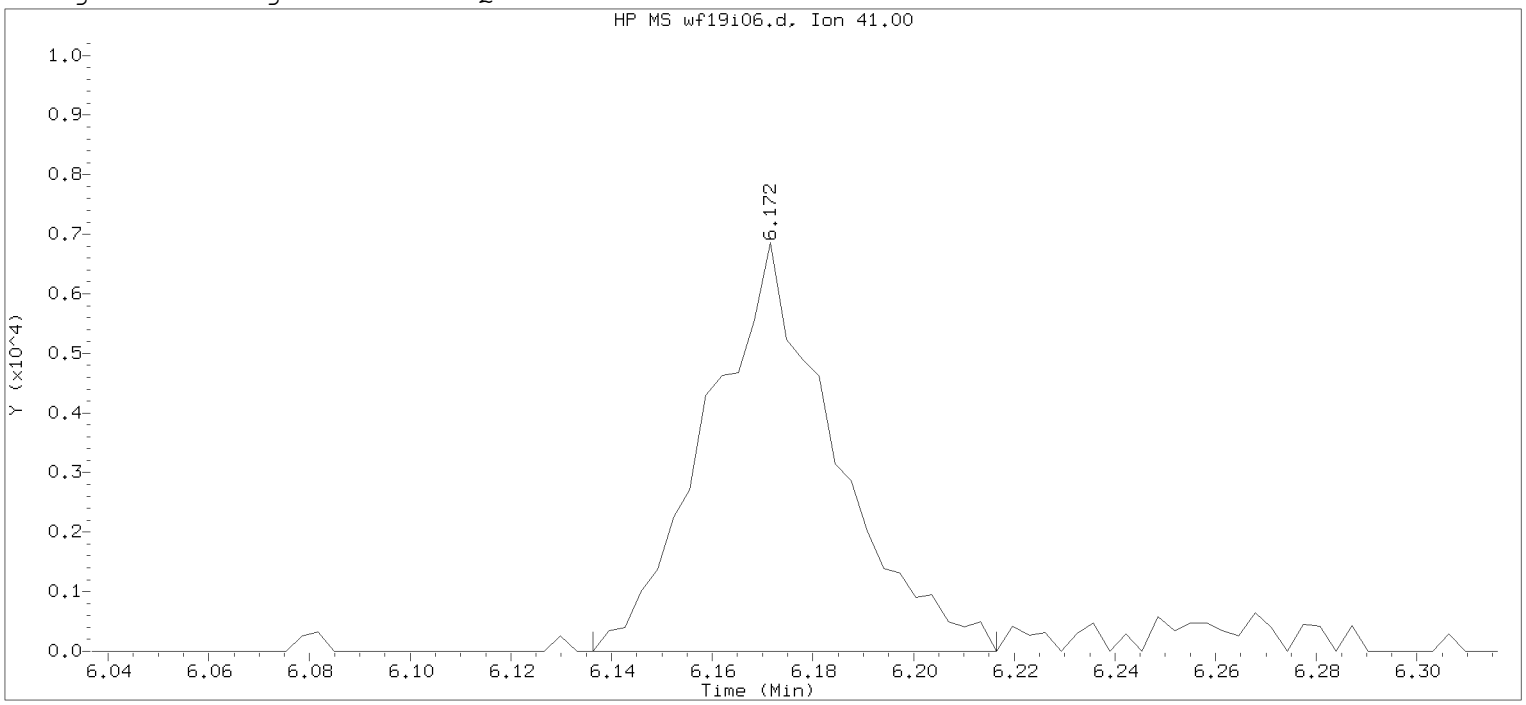
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



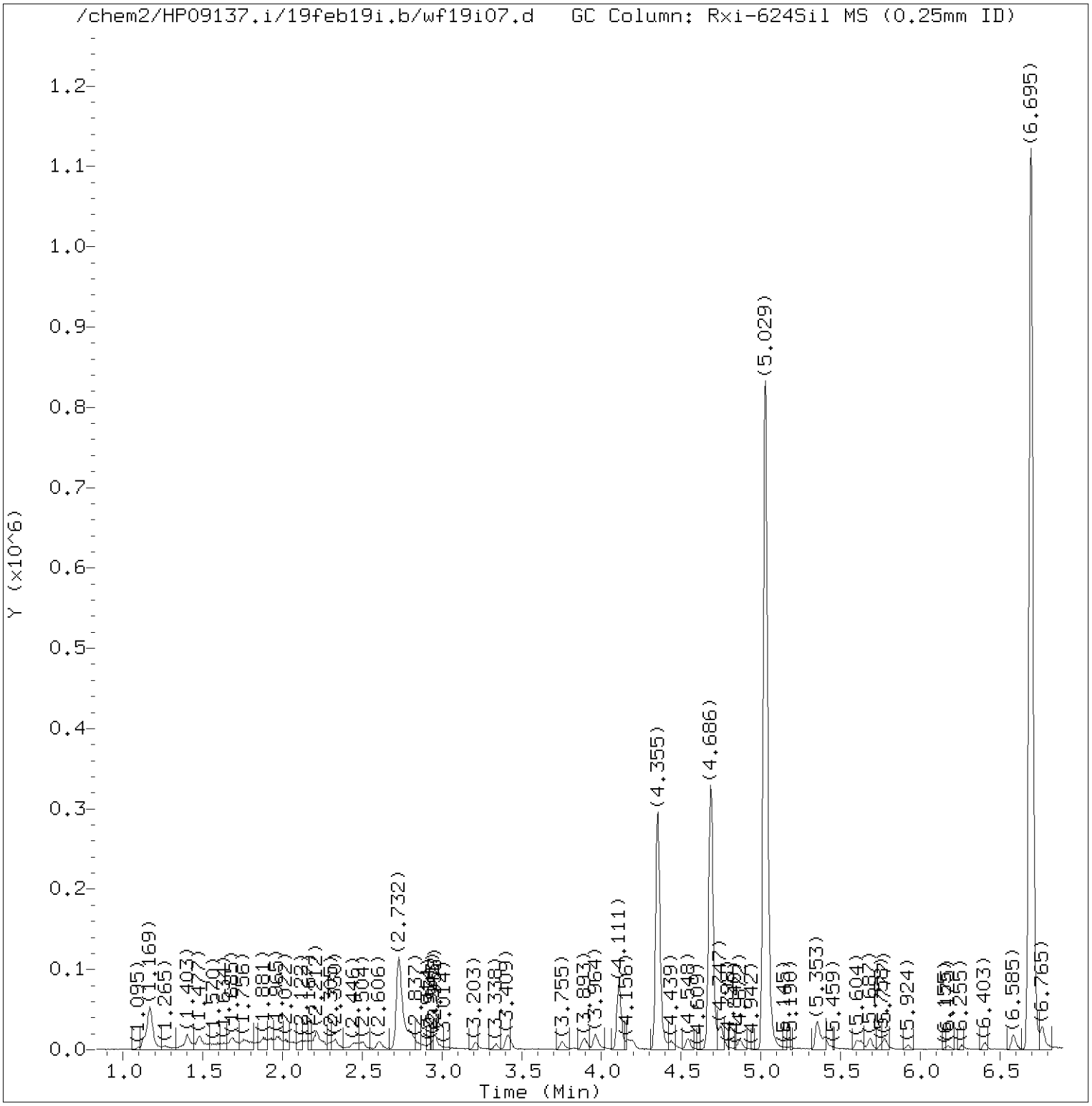
Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:36
Date, time and analyst ID of latest file update: 19-Feb-2019 14:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 80
Compound Name : 2-Nitropropane
Scan Number : 1664
Retention Time (minutes): 6.172
Quant Ion : 41.00
Area : 12090
On-column Amount (ng) : 6.6411
Integration start scan : 1652 Integration stop scan: 1677
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

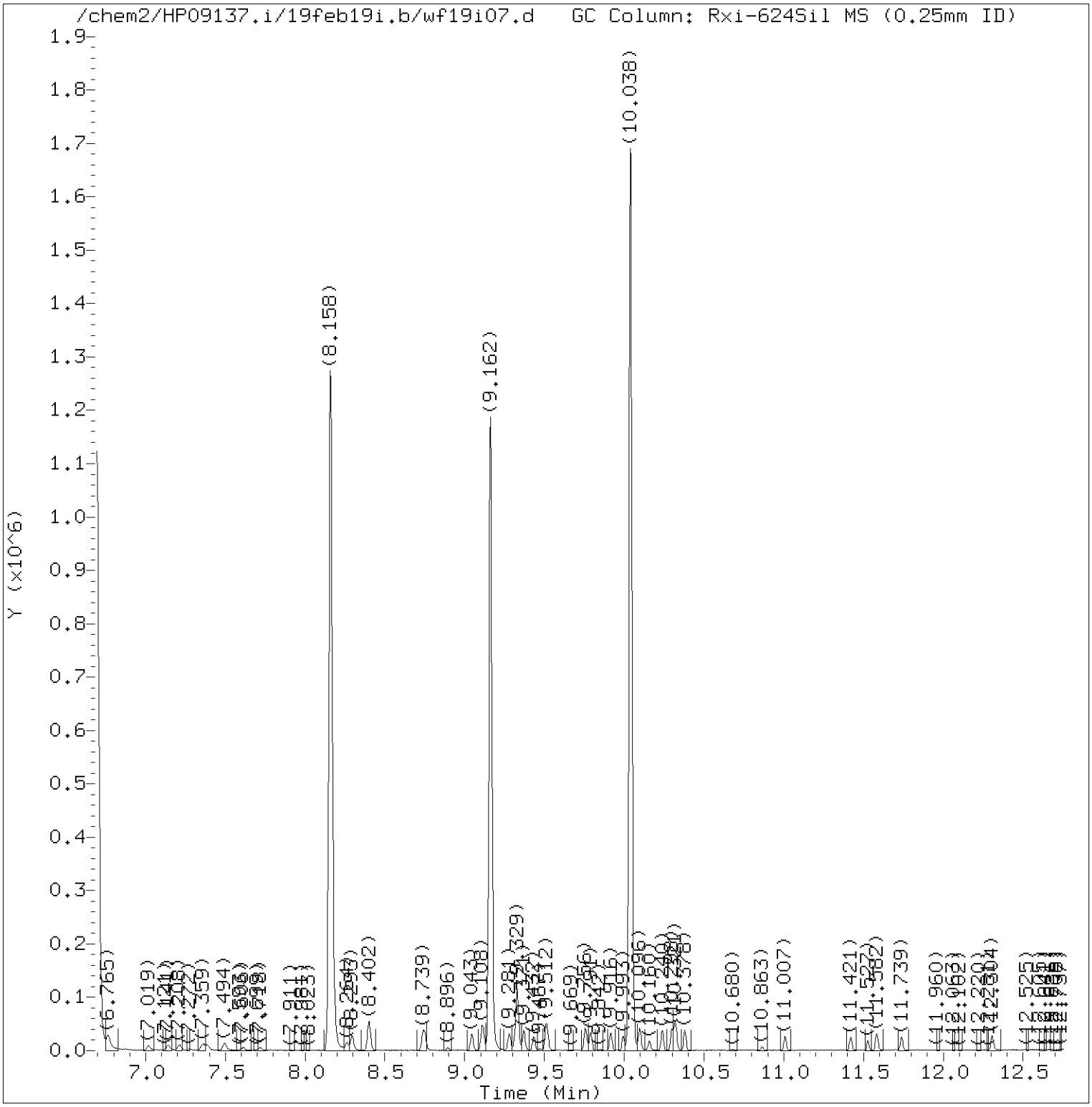
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.262	85	3665	0.689
4) Chloromethane	(2)	1.400	50	6210	0.937
6) Vinyl Chloride	(2)	1.470	62	5198	0.856
5) 1,3-Butadiene	(2)	1.477	39	4489M	1.112
8) Bromomethane	(2)	1.682	94	4292	0.896
9) Chloroethane	(2)	1.762	64	4447	1.112
10) Dichlorofluoromethane	(2)	1.888	67	8043	1.039
12) Trichlorofluoromethane	(2)	1.923	101	4857	0.753
11) n-Pentane	(2)	1.968	43	6657	1.085
13) Ethanol	(1)	2.051	45	8488	87.185
15) Freon 123a	(2)	2.141	67	5025M	1.042
16) Acrolein	(1)	2.218	56	15214	9.900
17) 1,1-Dichloroethene	(2)	2.321	96	2707	0.746
17) 1,1-Dichloroethene	(2)	2.314	63	1554	0.849
18) Acetone	(1)	2.334	58	1488	1.992
19) Freon 113	(2)	2.334	101	2232	0.700
21) 2-Propanol	(1)	2.446	45	12023	21.663
22) Methyl Iodide	(2)	2.472	142	6057M	0.871
23) Carbon Disulfide	(2)	2.504	76	11216	0.877
25) Allyl Chloride	(2)	2.603	41	5509	0.871
27) Methyl Acetate	(2)	2.619	43	6296	1.151
28) Methylene Chloride	(2)	2.709	84	4508M	1.016
29)*t-Butyl alcohol-d10	(1)	2.732	65	213467	250.000
30) t-Butyl alcohol	(1)	2.805	59	20393M	20.598
31) Acrylonitrile	(2)	2.918	53	2348	0.816
33) Methyl Tertiary Butyl Ether	(2)	2.956	73	8820	0.920
32) trans-1,2-Dichloroethene	(2)	2.959	96	3346	0.850
34) n-Hexane	(2)	3.213	57	4218	0.801
36) 1,1-Dichloroethane	(2)	3.338	63	6195	0.868
38) di-Isopropyl ether	(2)	3.409	45	13012	0.949
39) 2-Chloro-1,3-butadiene	(2)	3.425	53	5230	0.846
40) Ethyl t-butyl ether	(2)	3.752	59	9566	0.957
42) cis-1,2-Dichloroethene	(2)	3.890	96	3895	0.881
45) 2,2-Dichloropropane	(2)	3.890	77	2825	0.882
44) 2-Butanone	(2)	3.909	43	8554	2.068
47) Propionitrile	(1)	3.964	54	24581	19.977
48) Methacrylonitrile	(2)	4.108	67	29800	9.628
49) Bromochloromethane	(2)	4.111	128	2034	0.885

M = Compound was manually integrated.
* = Compound is an internal standard.

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Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.172	71	2206	1.937
51) Chloroform	(2)	4.195	83	6117	0.914
52)$Dibromofluoromethane	(2)	4.355	113	189485	49.693
52)$Dibromofluoromethane	(2)	4.355	111	193391	49.406
53) 1,1,1-Trichloroethane	(2)	4.378	97	4109	0.816
54) Cyclohexane	(2)	4.439	56	5258	0.789
54) Cyclohexane	(2)	4.439	84	4367	0.791
54) Cyclohexane	(2)	4.429	69	1544	0.771
55) 1,1-Dichloropropene	(2)	4.541	75	4731	0.882
56) Carbon Tetrachloride	(2)	4.545	117	3401	0.787
58) Isobutyl Alcohol	(1)	4.676	41	17702	49.046
57)$1,2-Dichloroethane-d4	(2)	4.686	102	50410	49.708
57)$1,2-Dichloroethane-d4	(2)	4.689	65	224184	50.782
57)$1,2-Dichloroethane-d4	(2)	4.689	104	32320	50.043
60) Benzene	(2)	4.750	78	15856	0.919
61) 1,2-Dichloroethane	(2)	4.769	62	5590	1.049
61) 1,2-Dichloroethane	(2)	4.763	98	304	0.600
65) t-Amyl methyl ether	(2)	4.869	73	9942	0.971
66)*Fluorobenzene	(2)	5.029	96	823064	50.000
67) n-Heptane	(2)	5.032	43	4457	0.885
69) n-Butanol	(1)	5.353	56	28433	88.724
71) Trichloroethene	(2)	5.405	95	3650	0.874
73) Methylcyclohexane	(2)	5.604	83	4501	0.742
73) Methylcyclohexane	(2)	5.600	98	2124	0.753
74) 1,2-Dichloropropane	(2)	5.632	63	3782	0.854
75) Dibromomethane	(2)	5.748	93	2271	0.831
77) Methyl Methacrylate	(2)	5.780	69	4194M	0.862
76) 1,4-Dioxane	(1)	5.783	88	4430	46.241
79) Bromodichloromethane	(2)	5.924	83	4331	0.862
43) 1,2-Dichloroethene (Total)	(2)		96	7241	1.731
80) 2-Nitropropane	(2)	6.162	41	3015	1.774
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	2723	0.806
82) cis-1,3-Dichloropropene	(2)	6.409	75	5760	0.834
83) 4-Methyl-2-pentanone	(2)	6.585	43	15267	1.873
84)$Toluene-d8	(3)	6.695	98	848544	49.571
84)$Toluene-d8	(3)	6.695	100	557676	49.127
89) Toluene	(3)	6.762	92	9642	0.874
90) trans-1,3-Dichloropropene	(3)	7.019	75	5607	0.854

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Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.137	69	6163	0.764
93) 1,1,2-Trichloroethane	(3)	7.214	97	3763	0.887
94) Tetrachloroethene	(3)	7.359	166	3847	0.860
95) 1,3-Dichloropropane	(3)	7.384	76	6625	0.899
97) 2-Hexanone	(3)	7.494	43	11260M	1.753
98) Dibromochloromethane	(3)	7.612	129	3140	0.757
100) 1,2-Dibromoethane	(3)	7.715	107	3862	0.828
101)*Chlorobenzene-d5	(3)	8.161	117	683121	50.000
103) Chlorobenzene	(3)	8.183	112	11258	0.920
104) 1,1,1,2-Tetrachloroethane	(3)	8.267	131	3212	0.817
105) Ethylbenzene	(3)	8.293	91	18837	0.899
107) m+p-Xylene	(3)	8.405	106	14407	1.729
108) o-Xylene	(3)	8.739	106	7135	0.870
110) Styrene	(3)	8.751	104	11107	0.808
111) Bromoform	(3)	8.896	173	2281	0.707
112) Isopropylbenzene	(3)	9.047	105	17277	0.858
113) Cyclohexanone	(1)	9.111	55	20797	48.124
115)$4-Bromofluorobenzene	(3)	9.162	95	339181	49.529
115)$4-Bromofluorobenzene	(3)	9.162	174	285212	49.356
116) Bromobenzene	(4)	9.278	156	5068	0.956
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	6279	0.878
118) 1,2,3-Trichloropropane	(4)	9.313	110	1888	0.877
119) trans-1,4-Dichloro-2-butene	(4)	9.332	53	20634	9.000
120) n-Propylbenzene	(4)	9.371	91	22711	0.972
121) 2-Chlorotoluene	(4)	9.432	126	4178	0.867
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	15051	0.893
122) 4-Chlorotoluene	(4)	9.515	126	4721	0.915
125) tert-Butylbenzene	(4)	9.753	134	3462	0.904
126) Pentachloroethane	(4)	9.765	167	2398	0.792
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	16670	0.938
128) sec-Butylbenzene	(4)	9.916	105	18905	0.914
130) 1,3-Dichlorobenzene	(4)	9.993	146	9796	0.969
131) p-Isopropyltoluene	(4)	10.022	119	16677	0.911
132)*1,4-Dichlorobenzene-d4	(4)	10.038	152	368100	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	10400	0.992
91) 1,3-Dichloropropene (total)	(3)		100	11367	1.688
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	17695	0.926
136) Benzyl Chloride	(4)	10.160	91	10691	0.729

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on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.240	119	10375	0.901
138) 1,4-Diethylbenzene	(4)	10.298	119	11053	0.896
140) n-Butylbenzene	(4)	10.314	92	8520	0.922
139) 1,2-Dichlorobenzene	(4)	10.324	146	9475	0.945
141) 1,2-Diethylbenzene	(4)	10.378	119	8406	0.865
143) 1,2-Dibromo-3-chloropropane	(4)	10.866	75	1280	0.788
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	7373	0.959
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	6829	0.925
148) Hexachlorobutadiene	(4)	11.527	225	2777	1.056
149) Naphthalene	(4)	11.582	128	22155	0.887
150) 1,2,3-Trichlorobenzene	(4)	11.739	180	6883	0.955
109) Xylene (Total)	(3)		106	21542	2.599
151) 2-Methylnaphthalene	(4)	12.304	142	12159	0.853
142) Diethylbenzene (total)	(4)		100	29834	2.663

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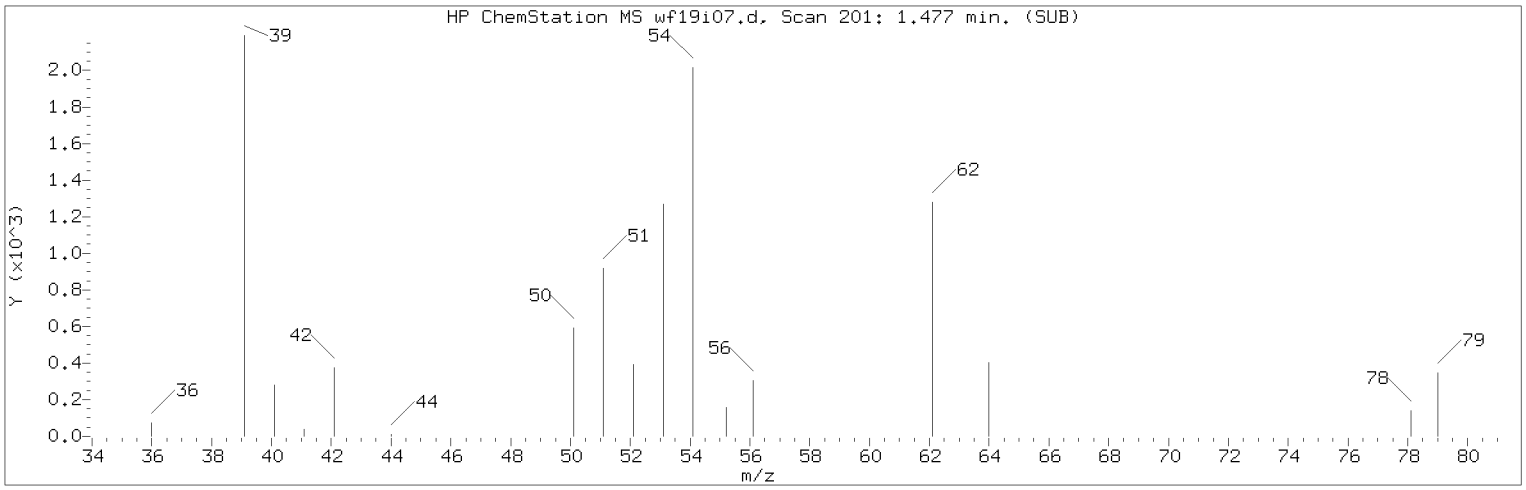
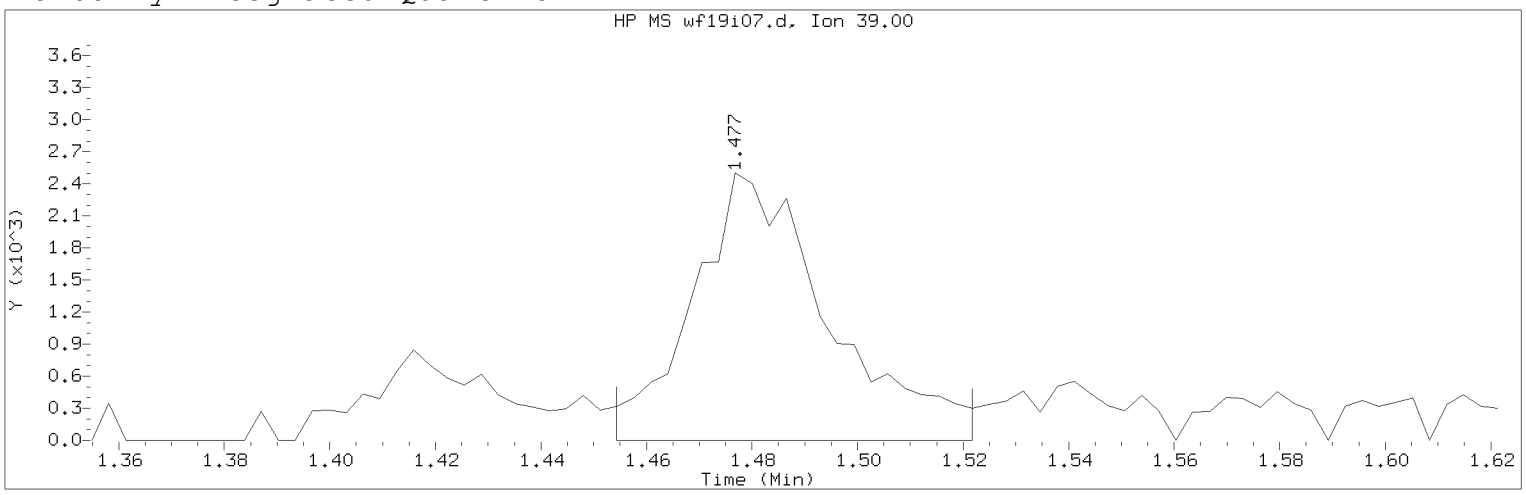
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

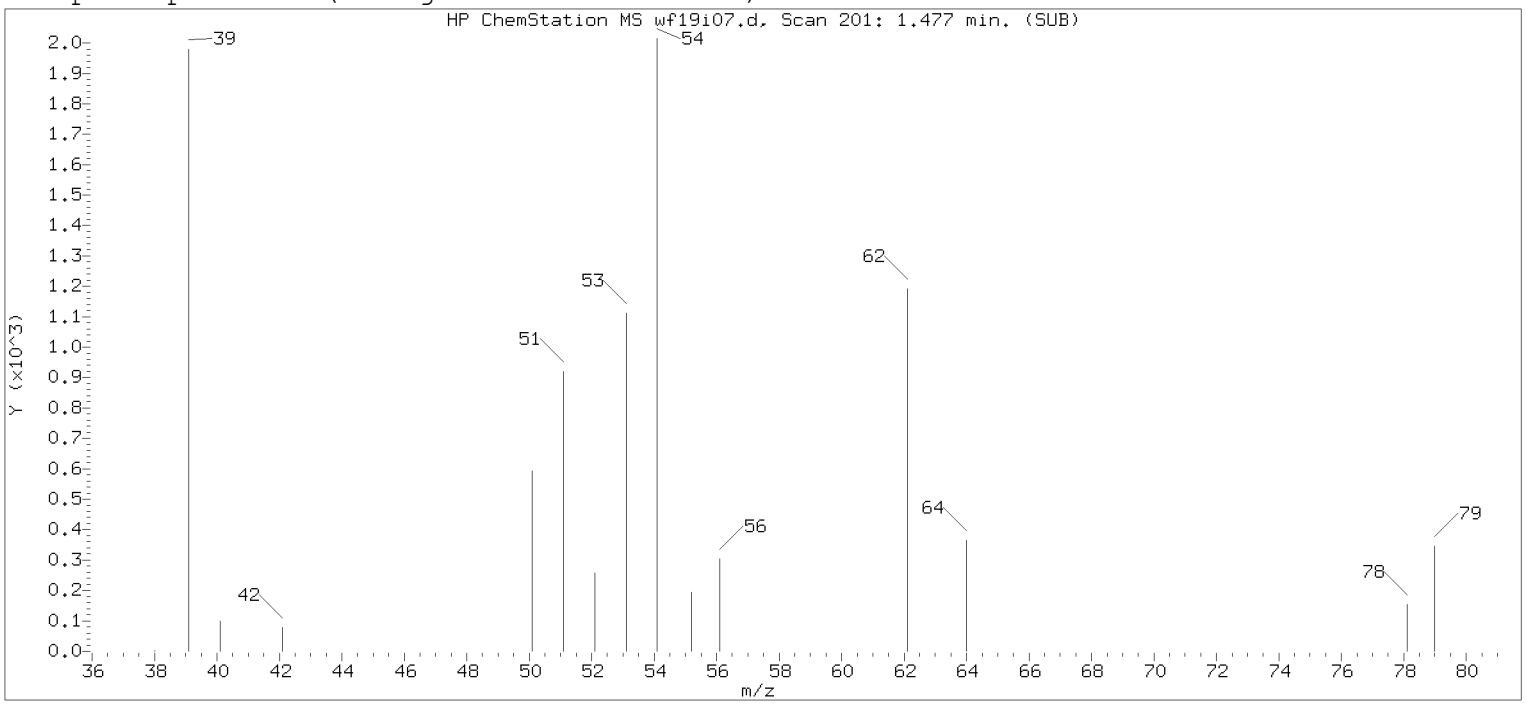
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 201
Retention Time (minutes): 1.477
Quant Ion : 39.00
Area (flag) : 4489M
On-Column Amount (ng) : 1.1115
Integration start scan : 193 Integration stop scan: 214
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

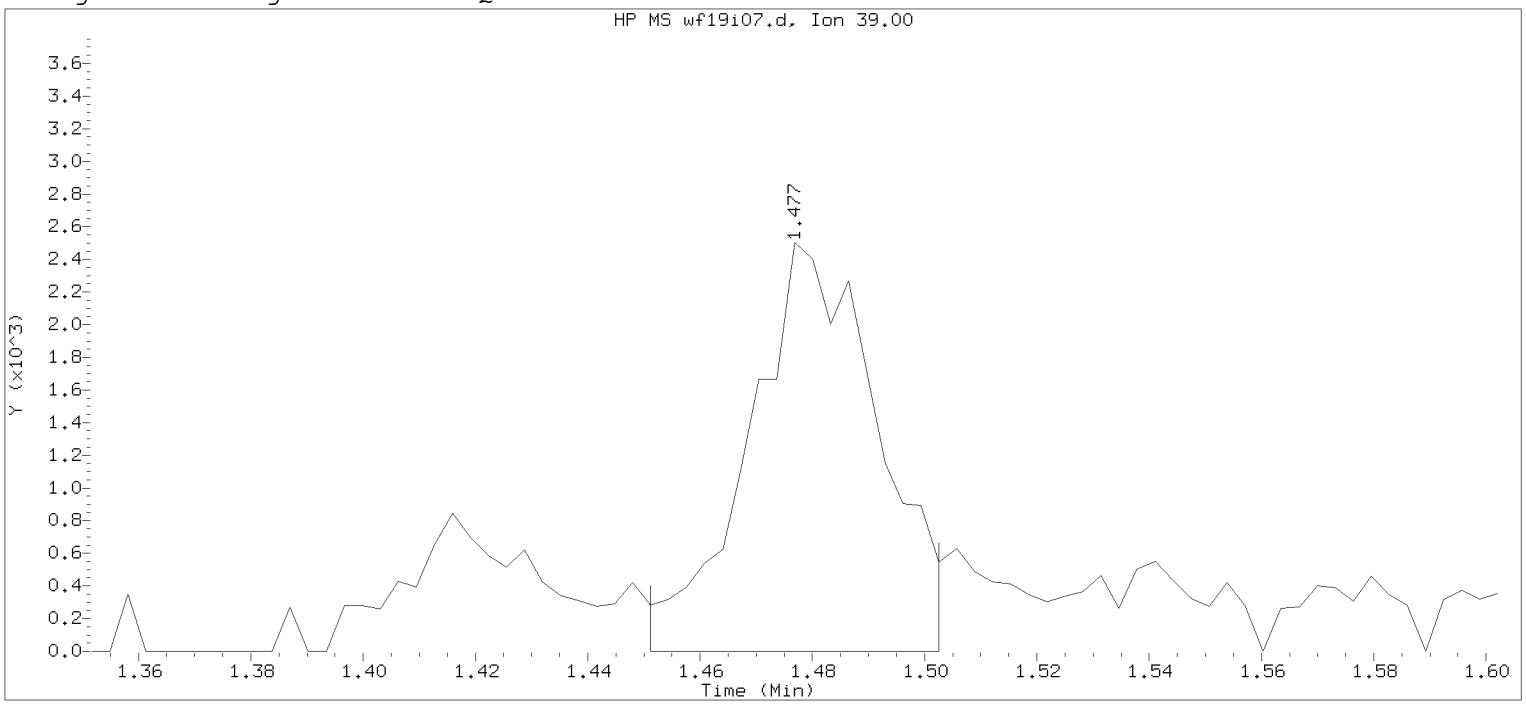
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

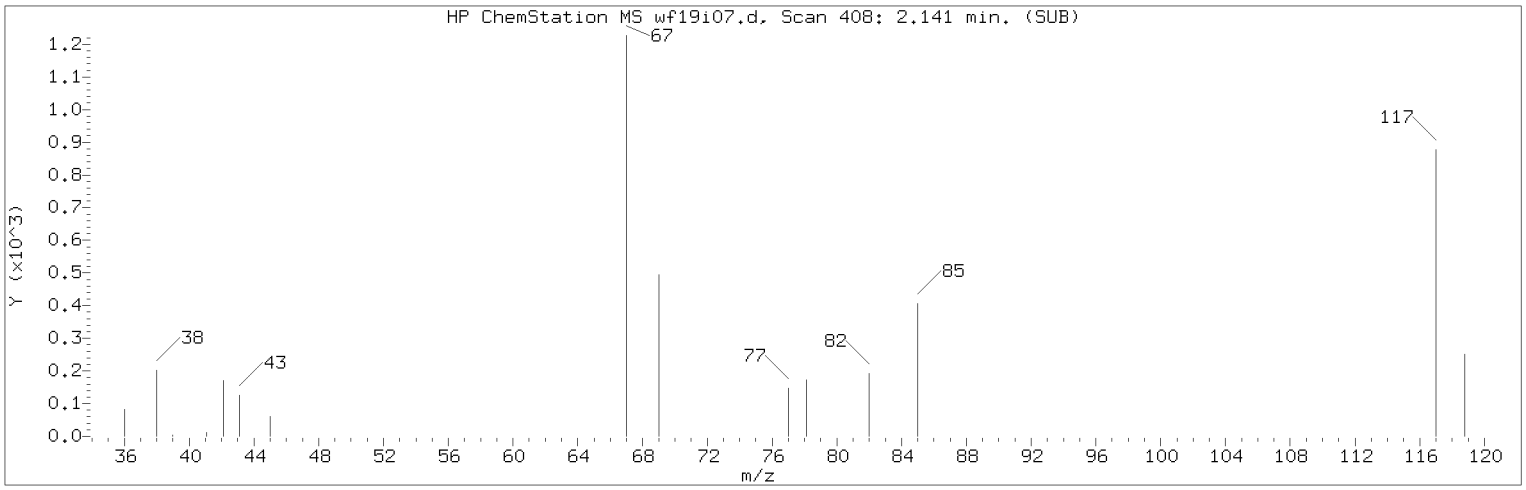
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

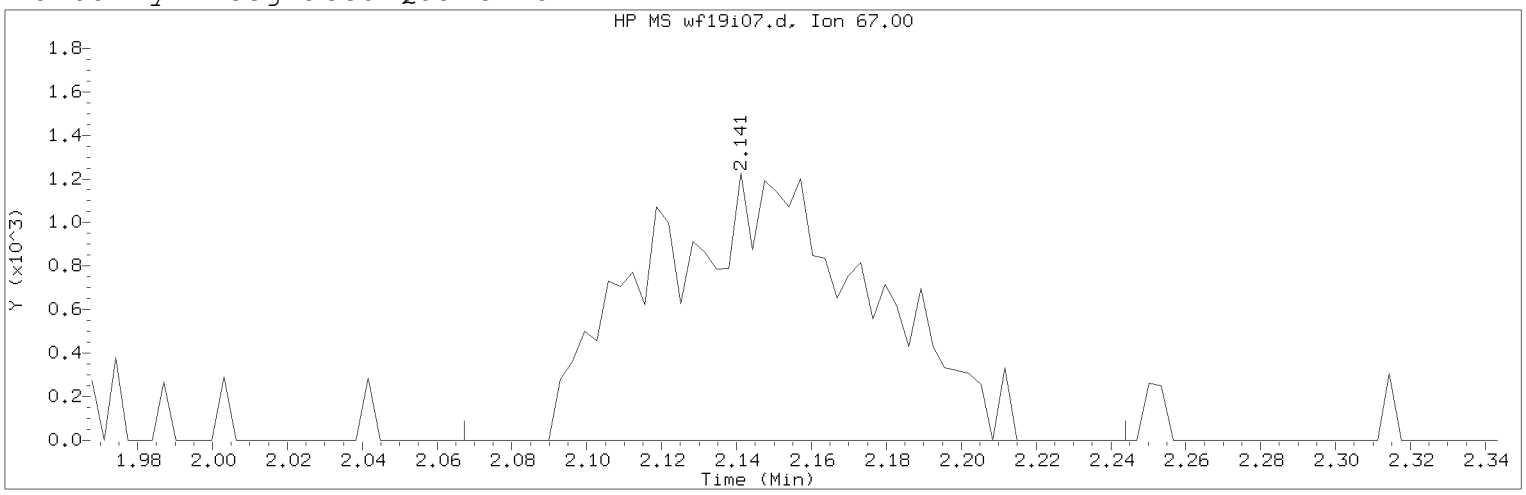
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 201
Retention Time (minutes): 1.477
Quant Ion : 39.00
Area : 3964
On-column Amount (ng) : 1.0001
Integration start scan : 192 Integration stop scan: 208
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ap 27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

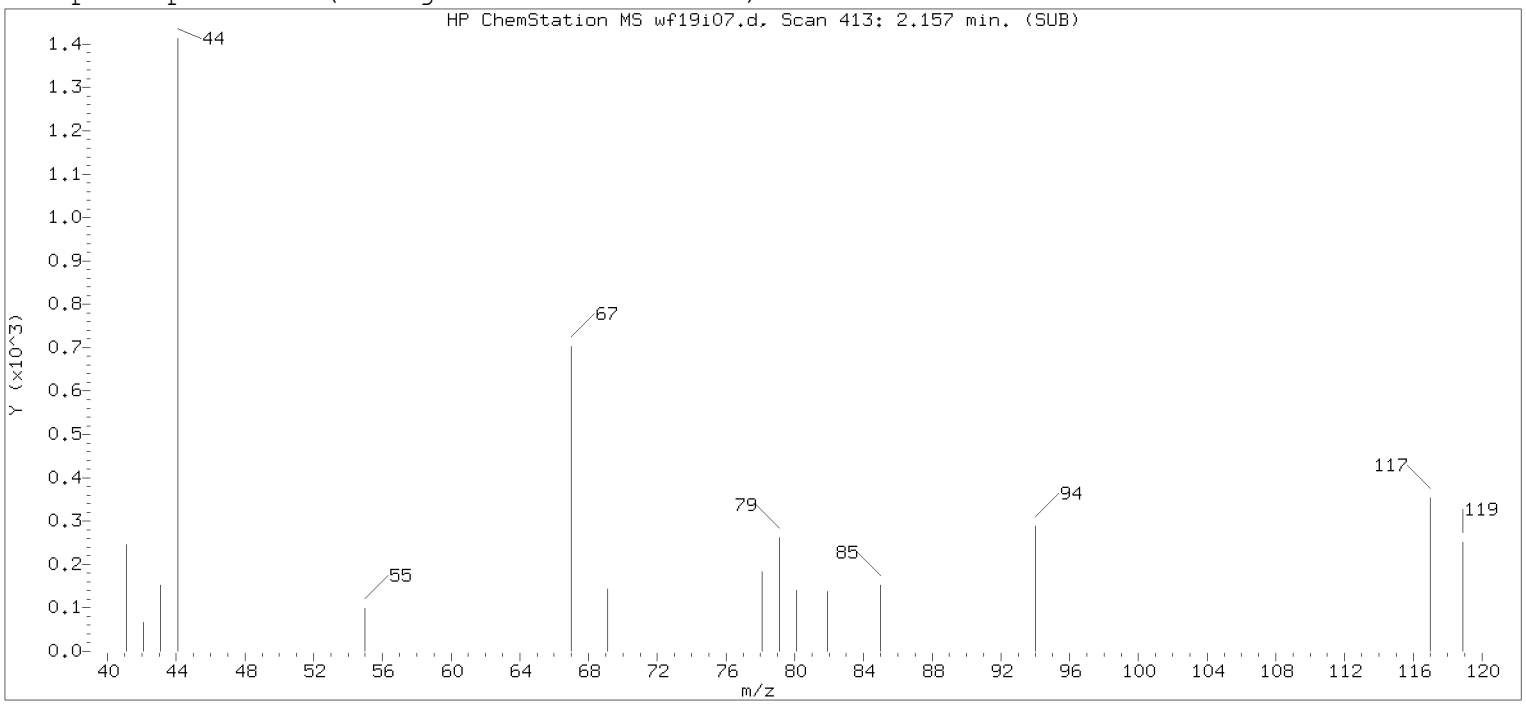
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 408
Retention Time (minutes): 2.141
Quant Ion : 67.00
Area (flag) : 5025M
On-Column Amount (ng) : 1.0422
Integration start scan : 384 Integration stop scan: 439
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

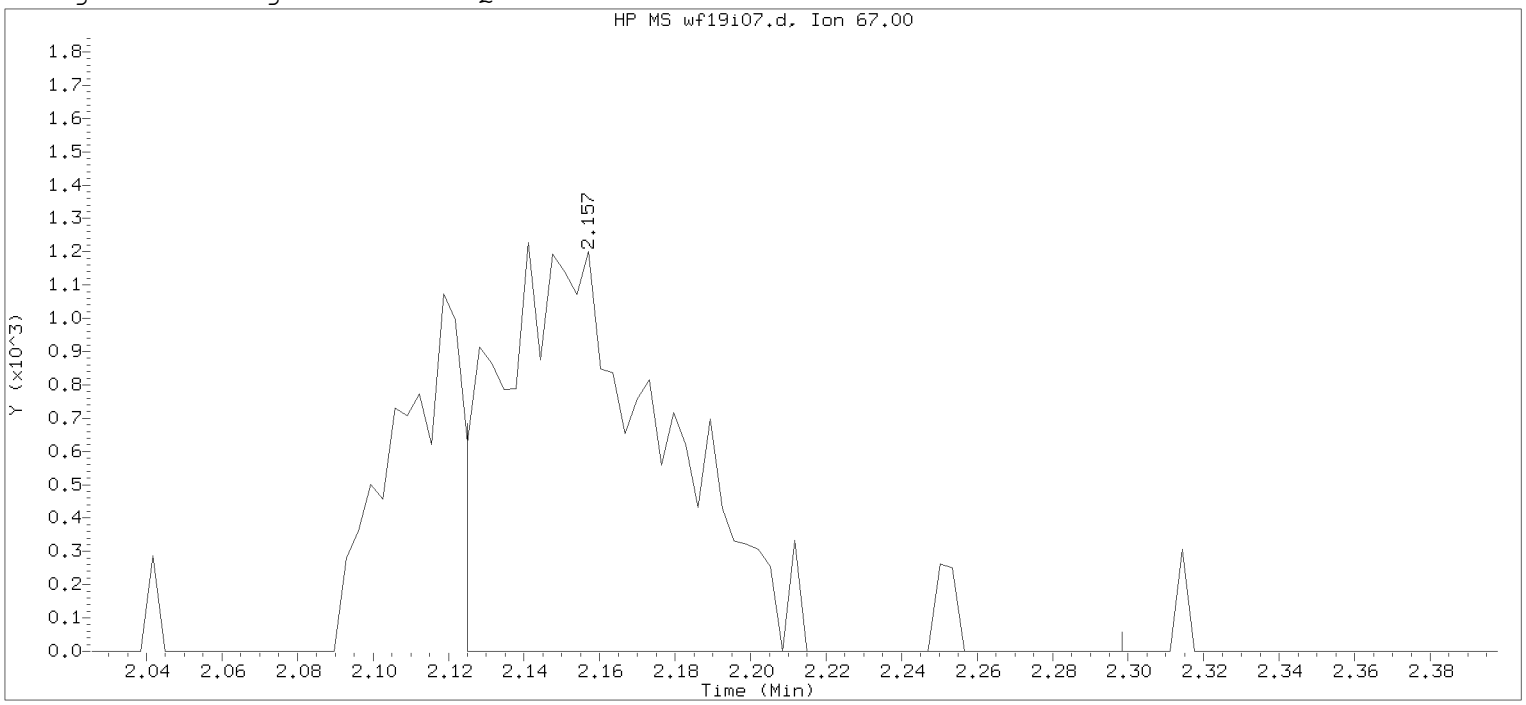
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 413		
Retention Time (minutes)	: 2.157		
Quant Ion	: 67.00		
Area	: 3812		
On-column Amount (ng)	: 1.1043		
Integration start scan	: 402	Integration stop scan:	456
Y at integration start	: 0	Y at integration end:	0

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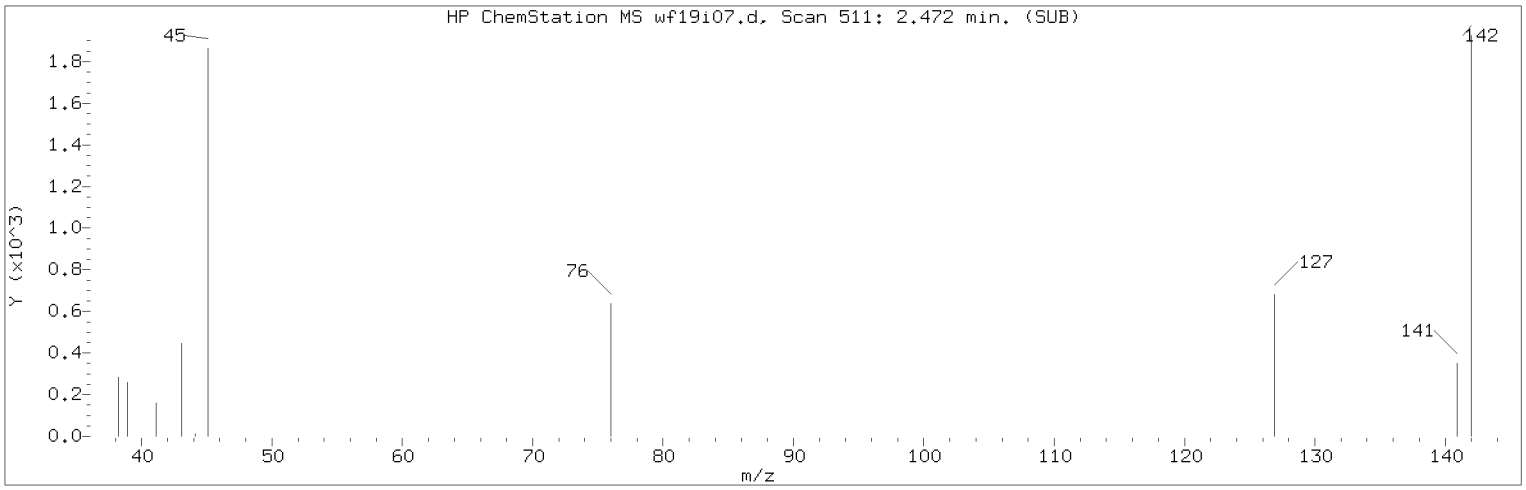
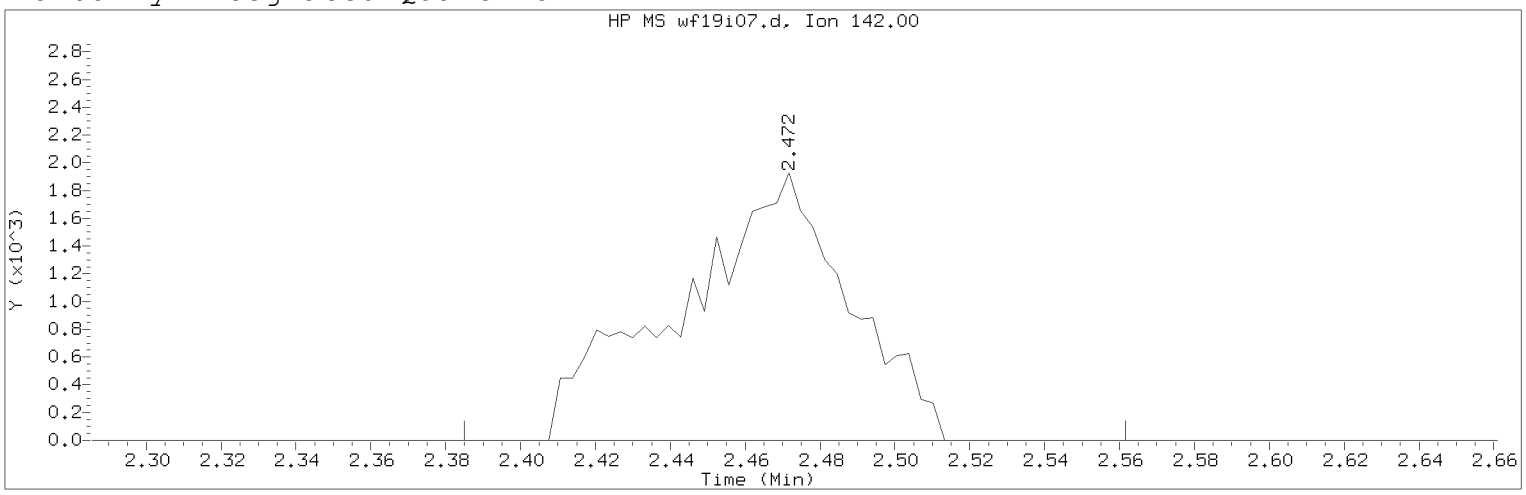
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

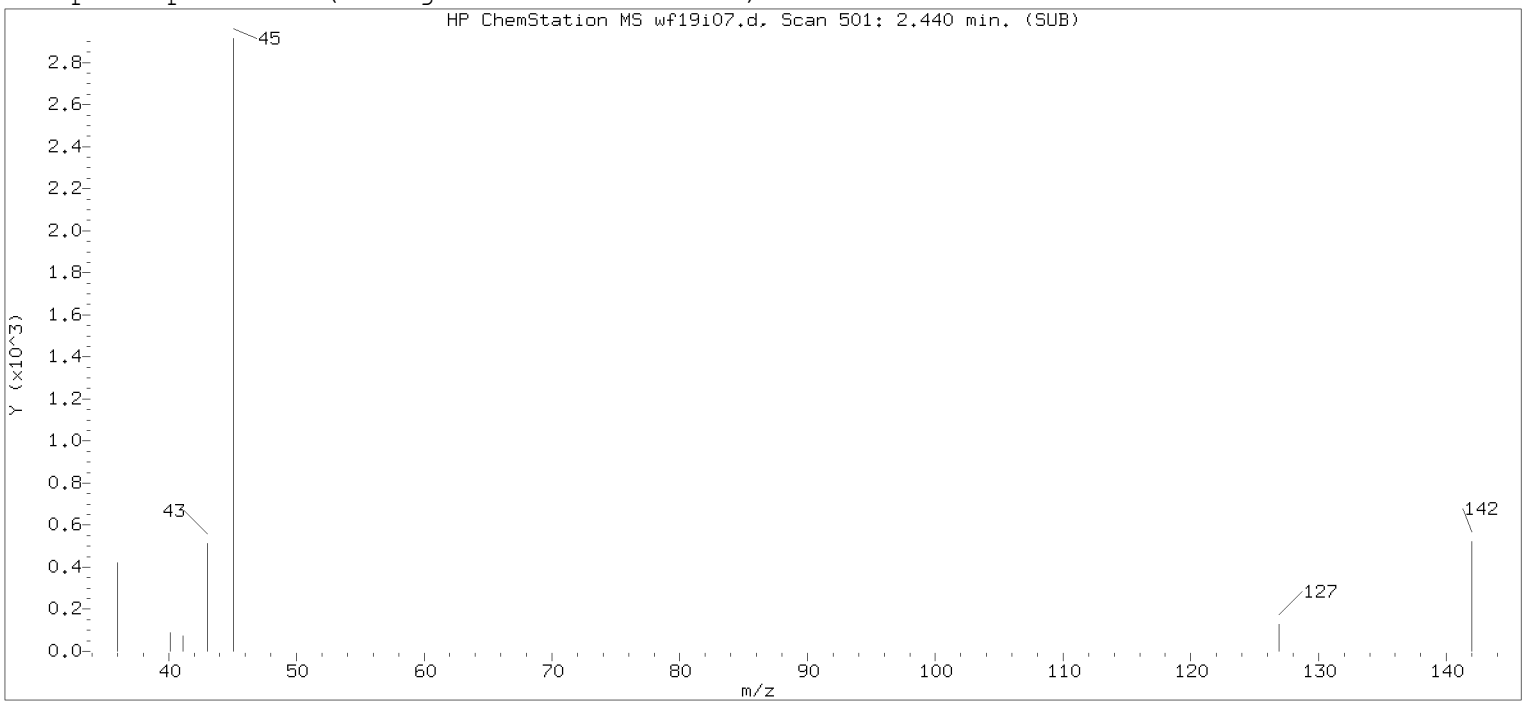
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 511
Retention Time (minutes): 2.472
Quant Ion : 142.00
Area (flag) : 6057M
On-Column Amount (ng) : 0.8710
Integration start scan : 483 Integration stop scan: 538
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

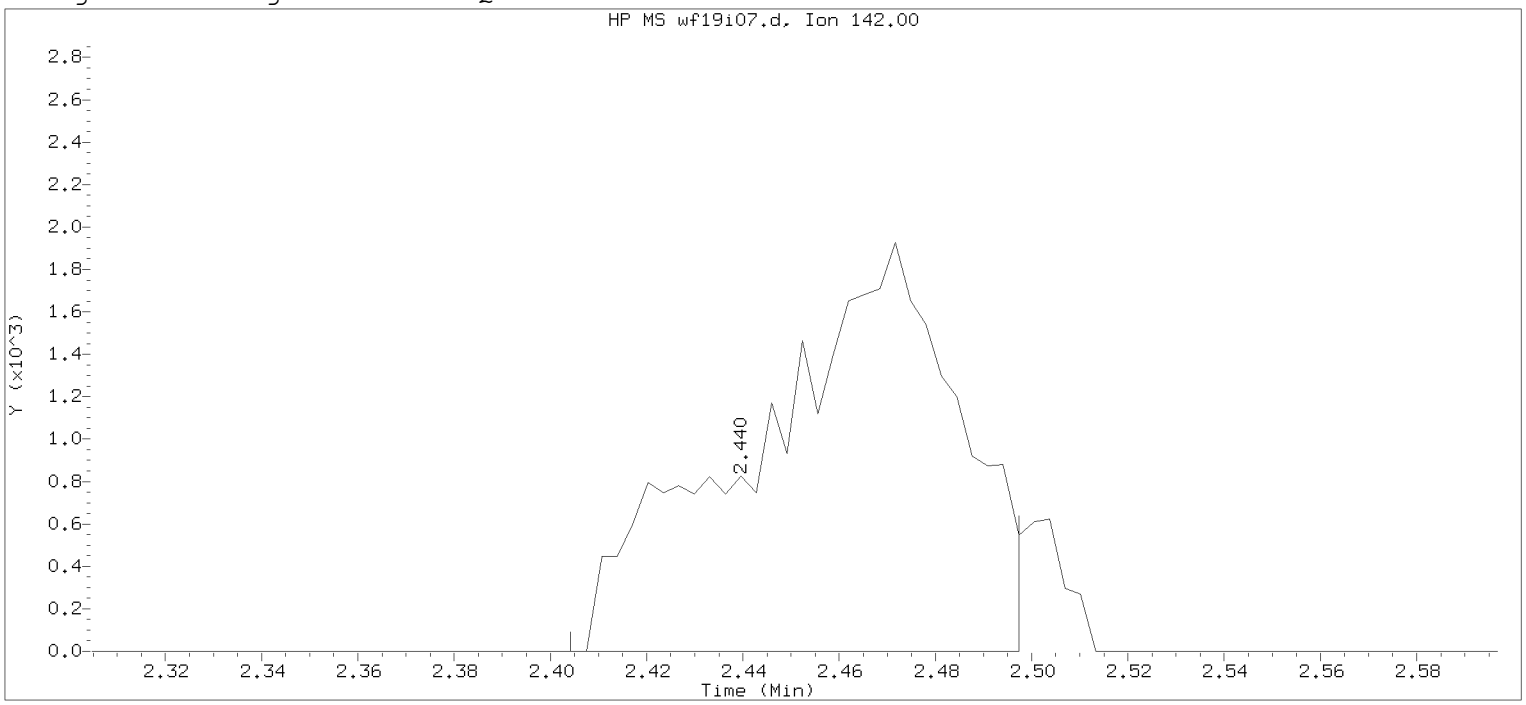
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

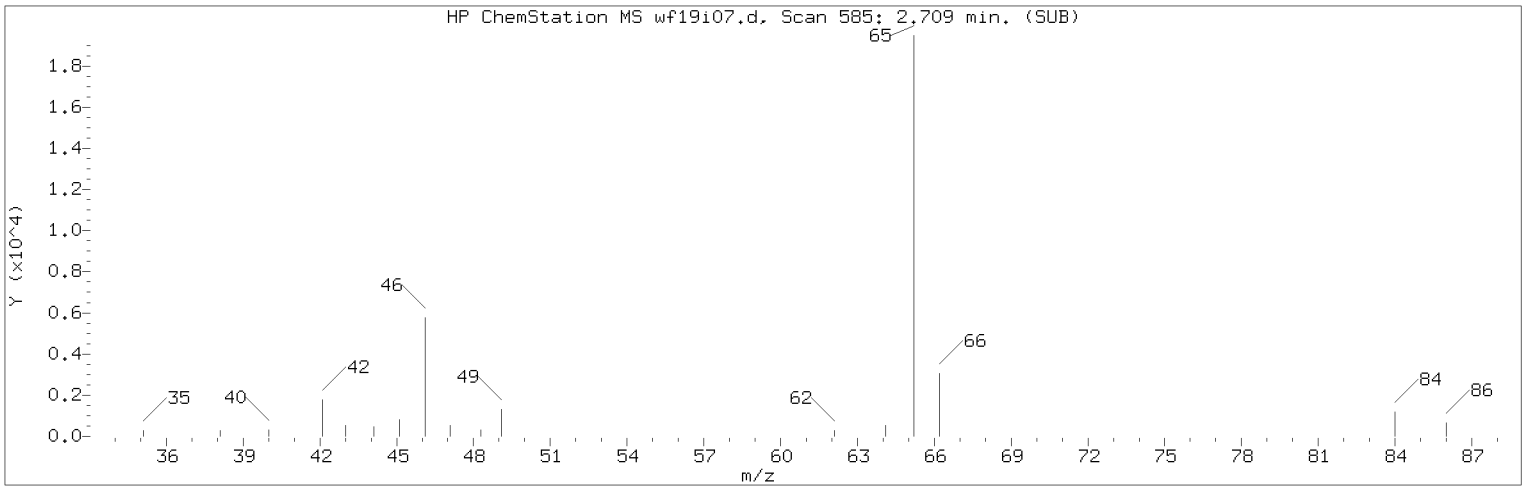
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

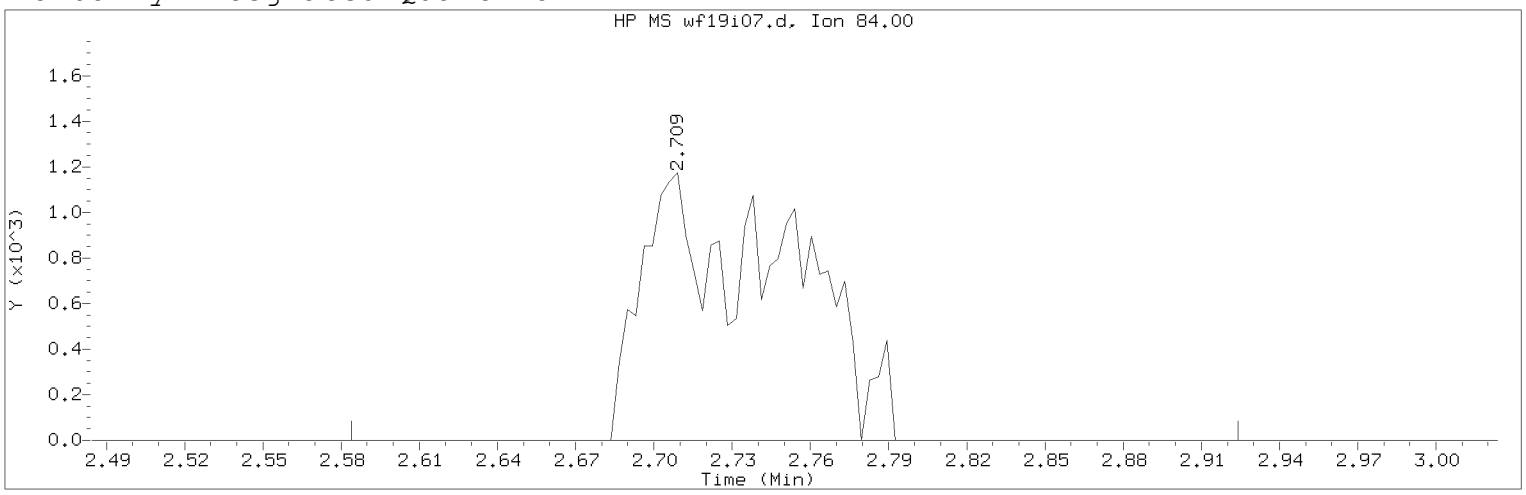
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 501
Retention Time (minutes): 2.440
Quant Ion : 142.00
Area : 5658
On-column Amount (ng) : 0.8993
Integration start scan : 489 Integration stop scan: 518
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

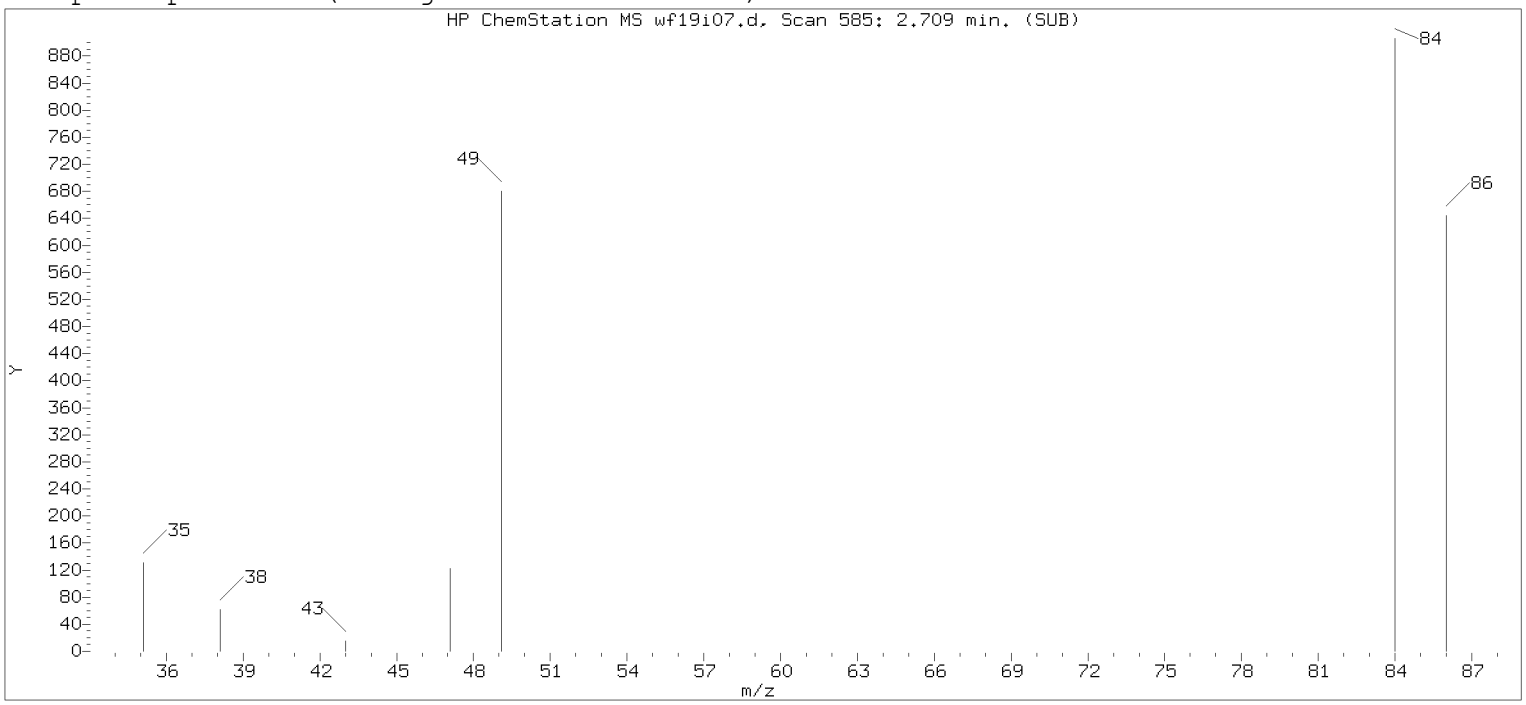
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area (flag) : 4508M
On-Column Amount (ng) : 1.0163
Integration start scan : 545 Integration stop scan: 651
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

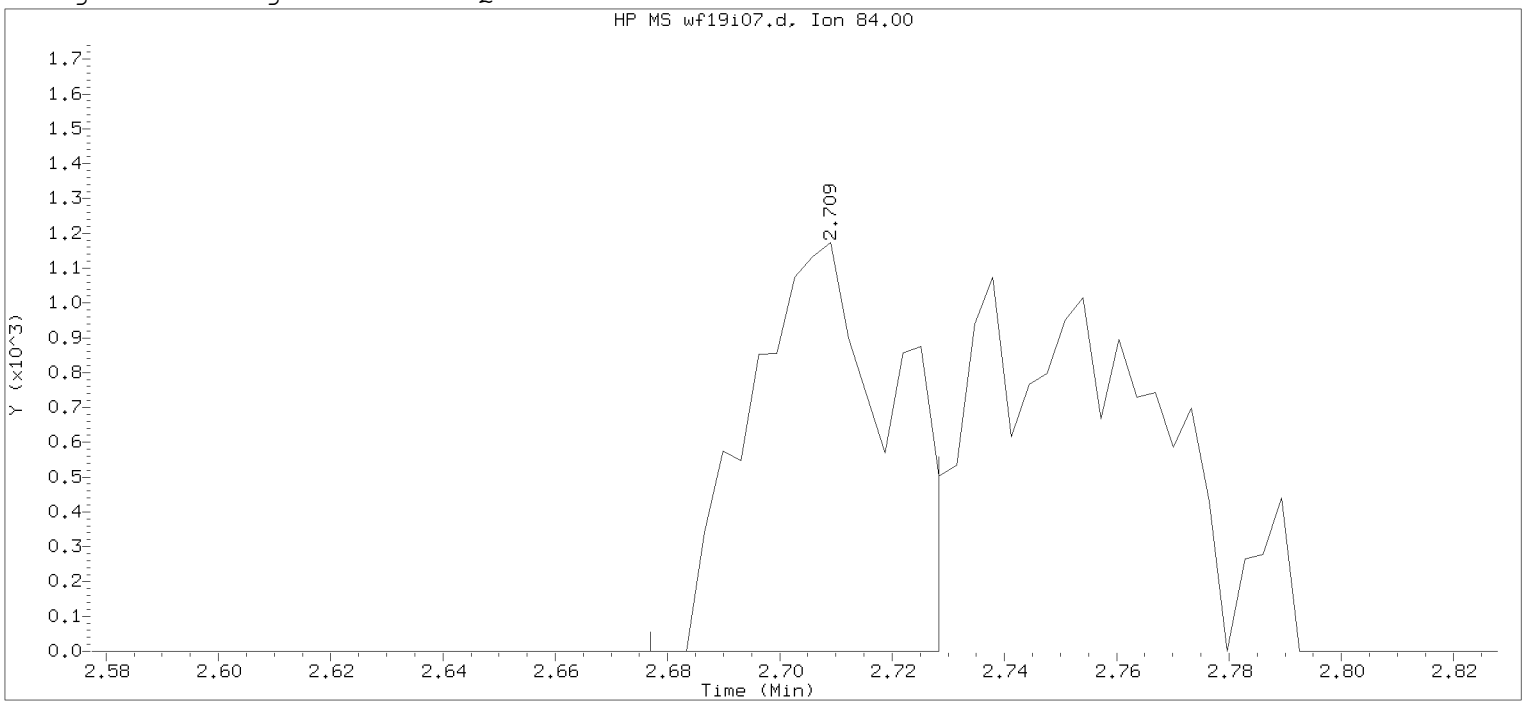
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

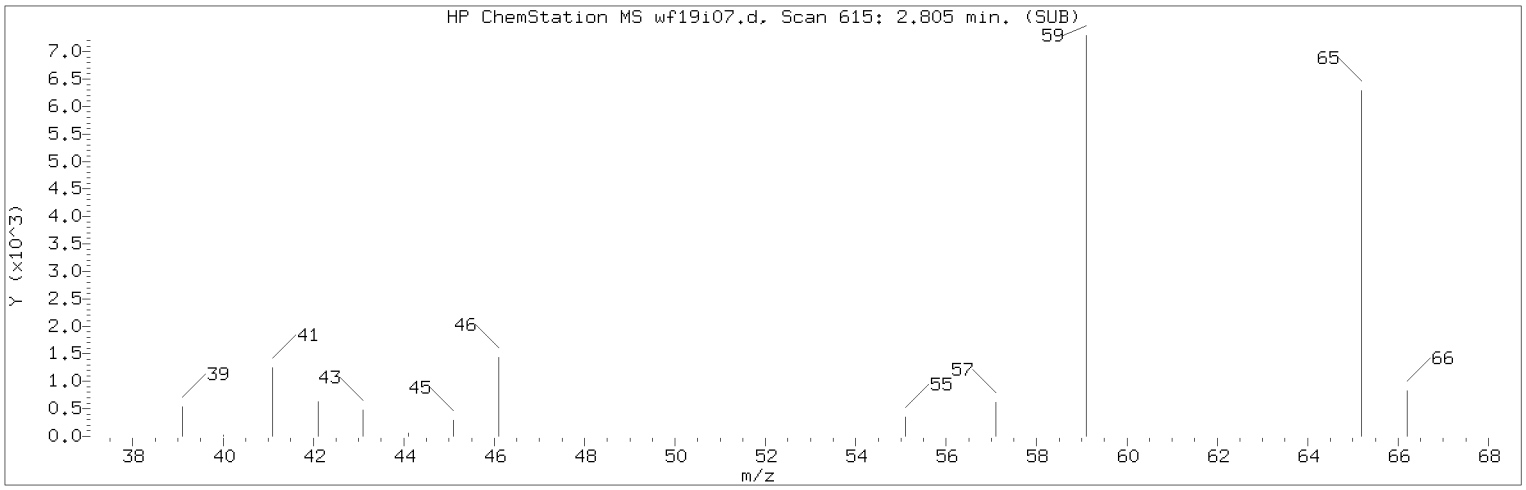
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

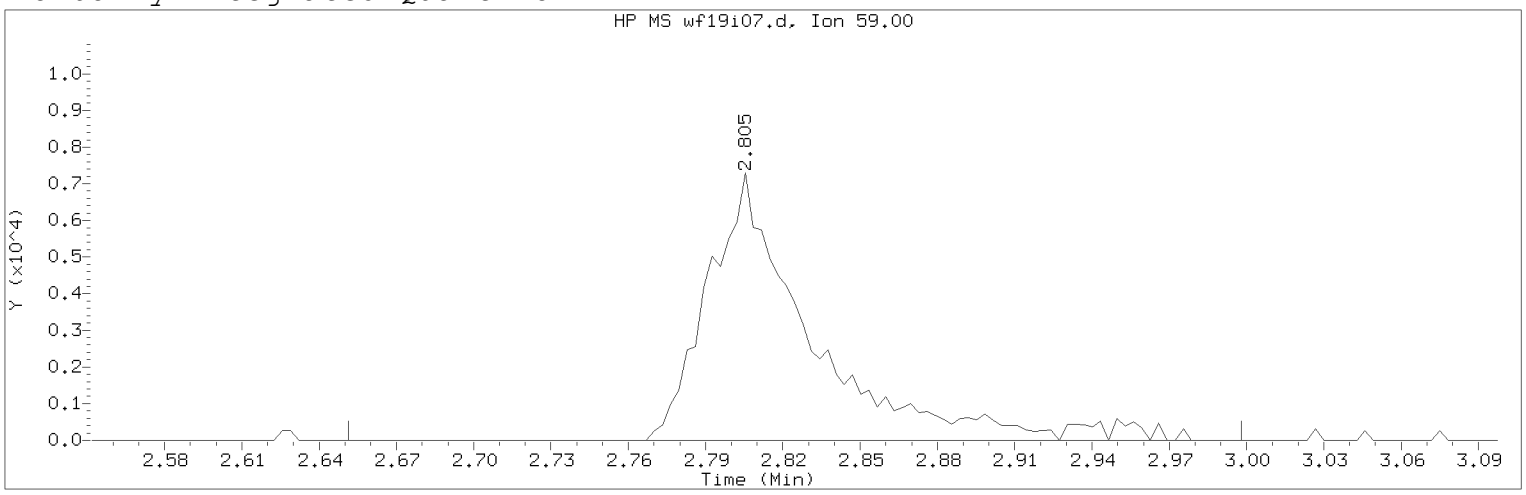
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area : 2067
On-column Amount (ng) : 0.5781
Integration start scan : 574 Integration stop scan: 590
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

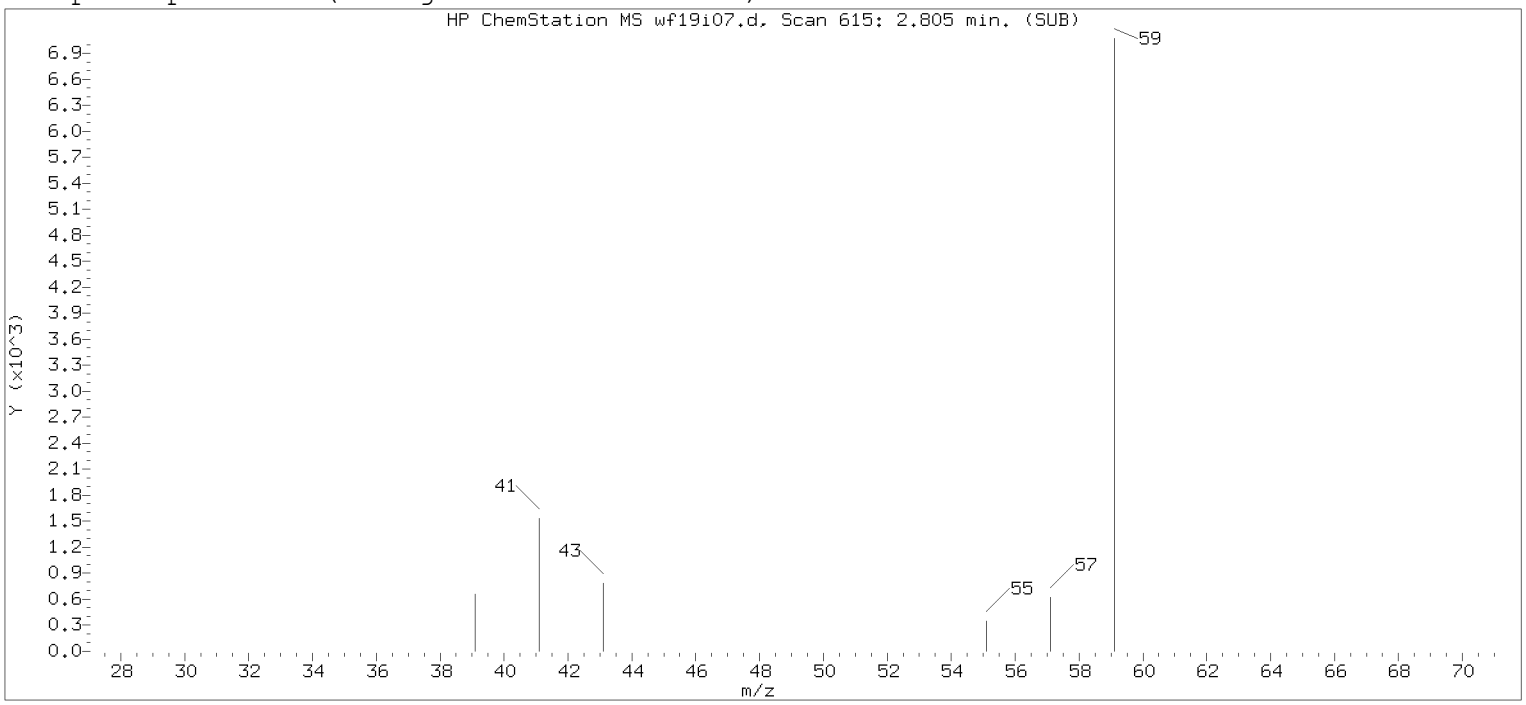
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 615
Retention Time (minutes): 2.805
Quant Ion : 59.00
Area (flag) : 20393M
On-Column Amount (ng) : 20.5984
Integration start scan : 566 Integration stop scan: 674
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

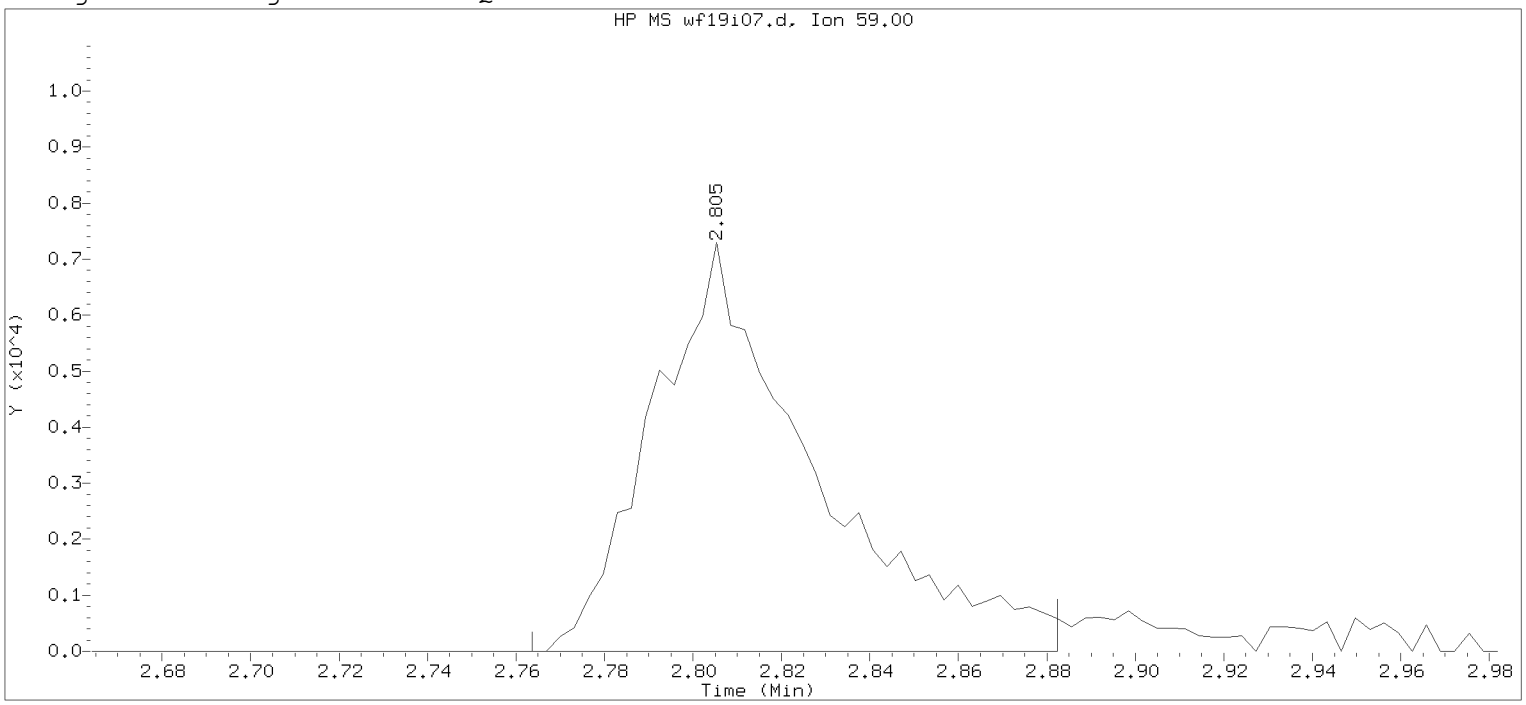
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

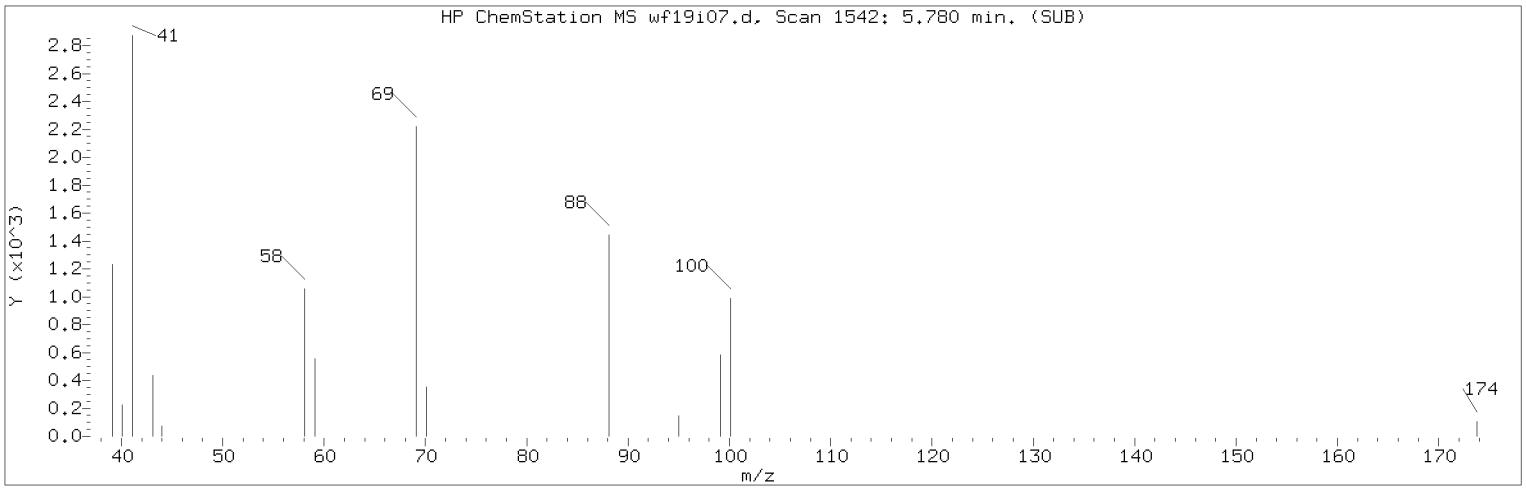
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

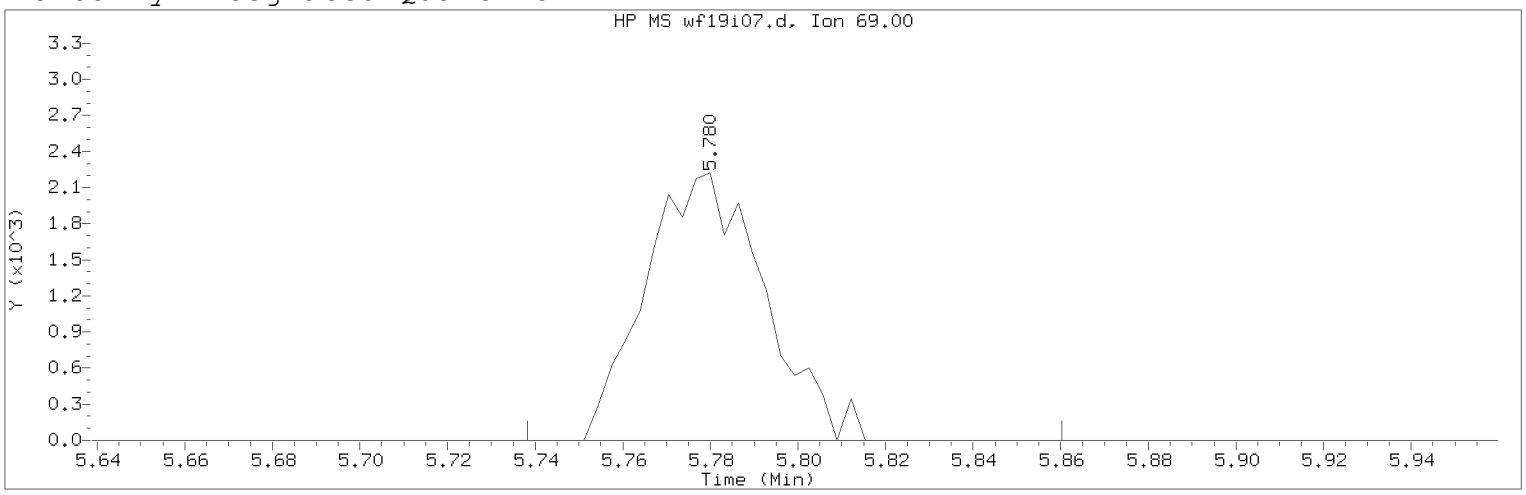
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 615
Retention Time (minutes): 2.805
Quant Ion : 59.00
Area : 18308
On-column Amount (ng) : 18.7752
Integration start scan : 601 Integration stop scan: 638
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

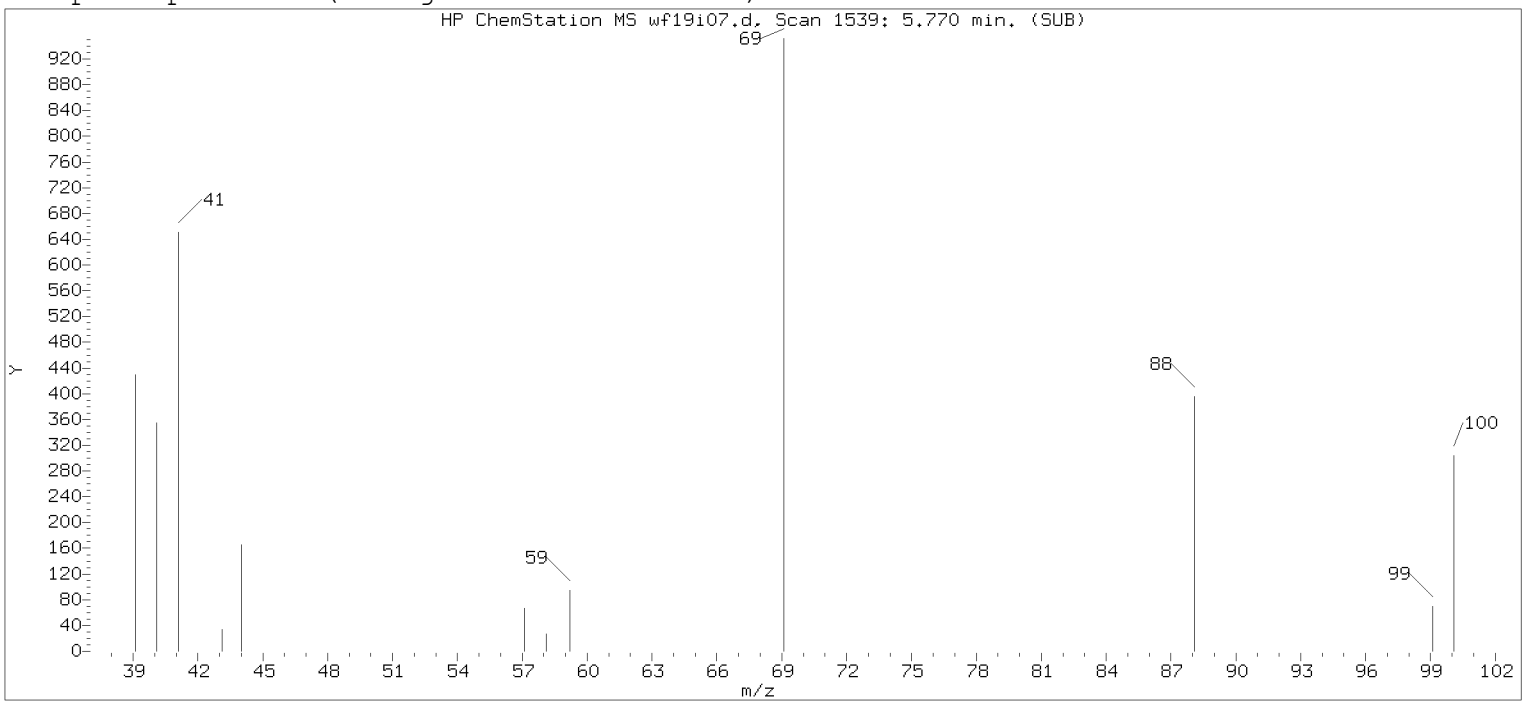
Compound Number : 77
Compound Name : Methyl Methacrylate
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 69.00
Area (flag) : 4194M
On-Column Amount (ng) : 0.8617
Integration start scan : 1528 Integration stop scan: 1566
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

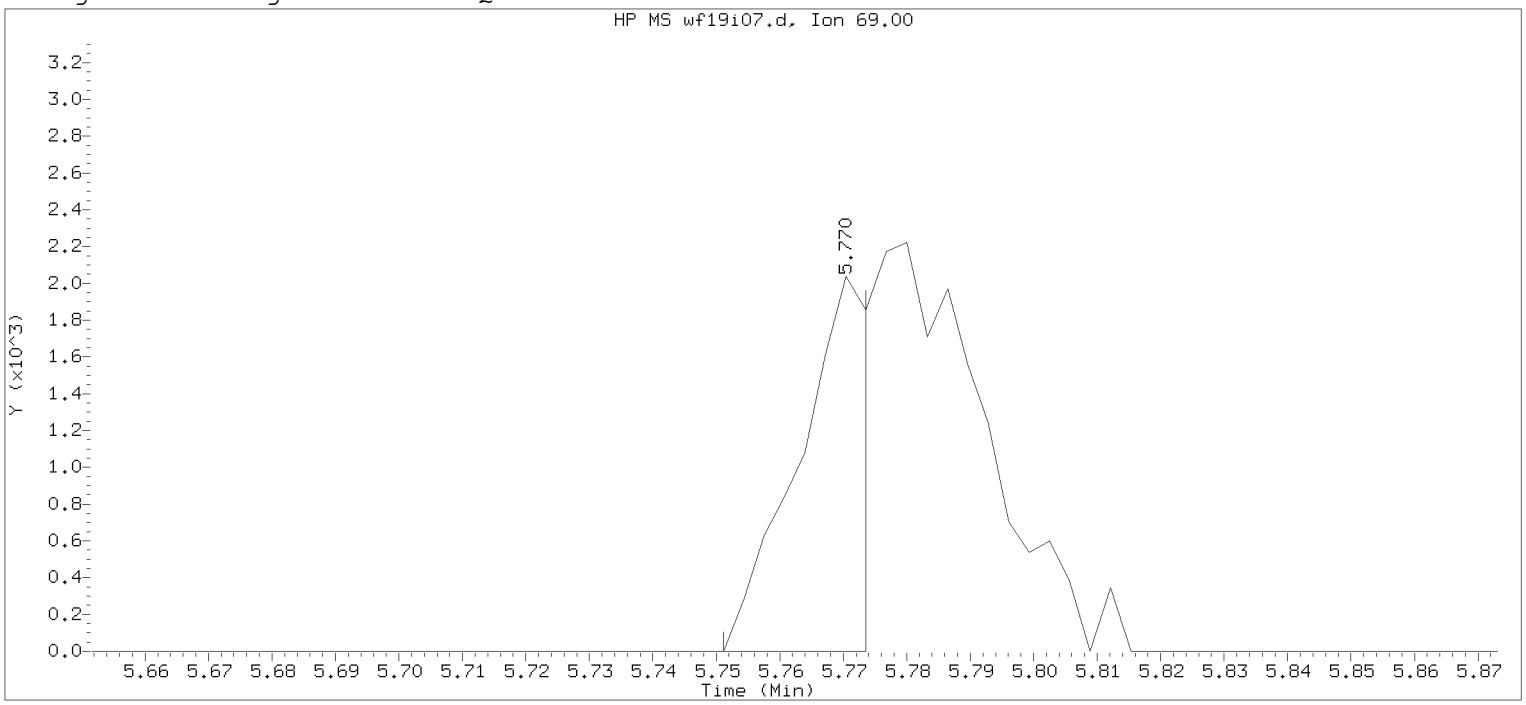
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

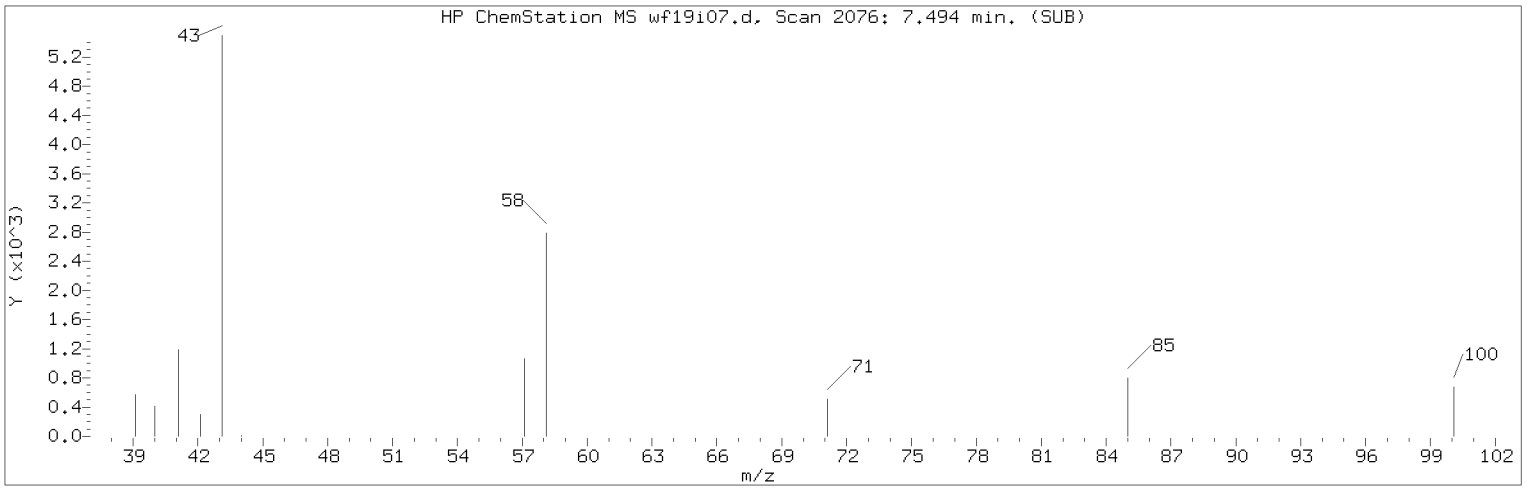
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

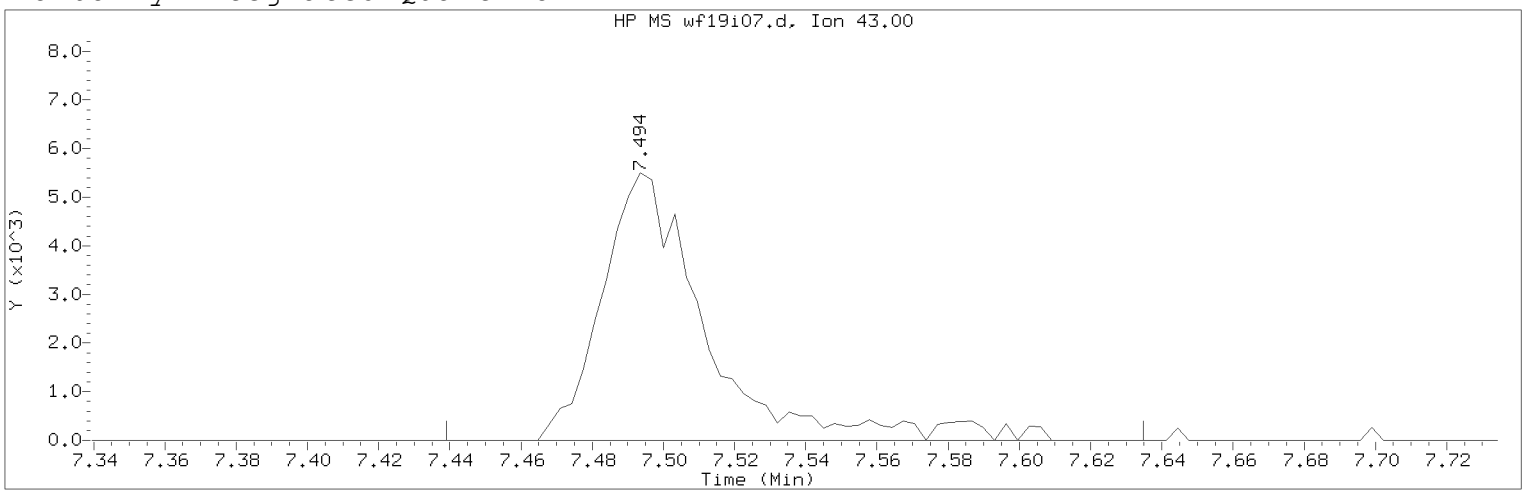
Compound Number	: 77		
Compound Name	: Methyl Methacrylate		
Scan Number	: 1539		
Retention Time (minutes)	: 5.770		
Quant Ion	: 69.00		
Area	: 1428		
On-column Amount (ng)	: 0.3220		
Integration start scan	: 1532	Integration stop scan:	1539
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ap[illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

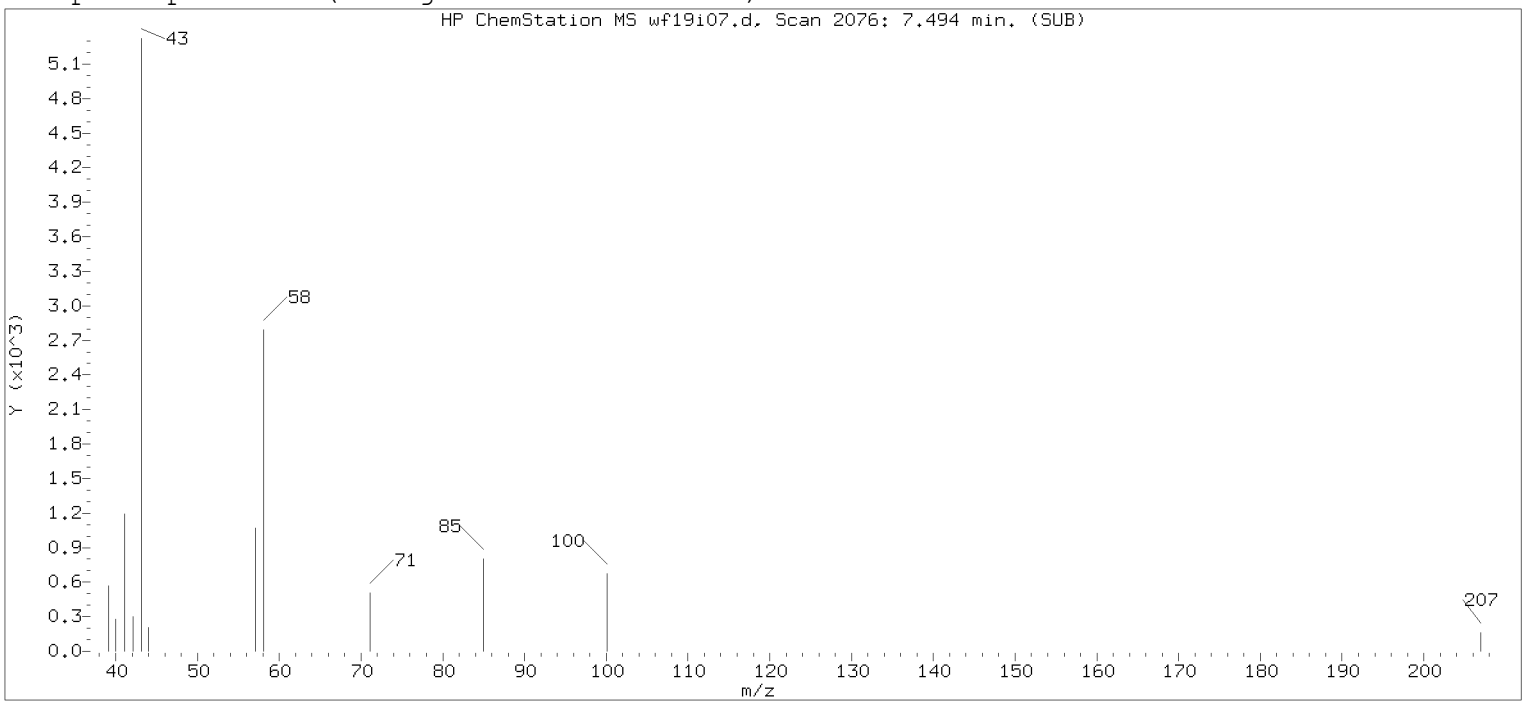
Compound Number : 97
Compound Name : 2-Hexanone
Scan Number : 2076
Retention Time (minutes): 7.494
Quant Ion : 43.00
Area (flag) : 11260M
On-Column Amount (ng) : 1.7534
Integration start scan : 2058 Integration stop scan: 2119
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

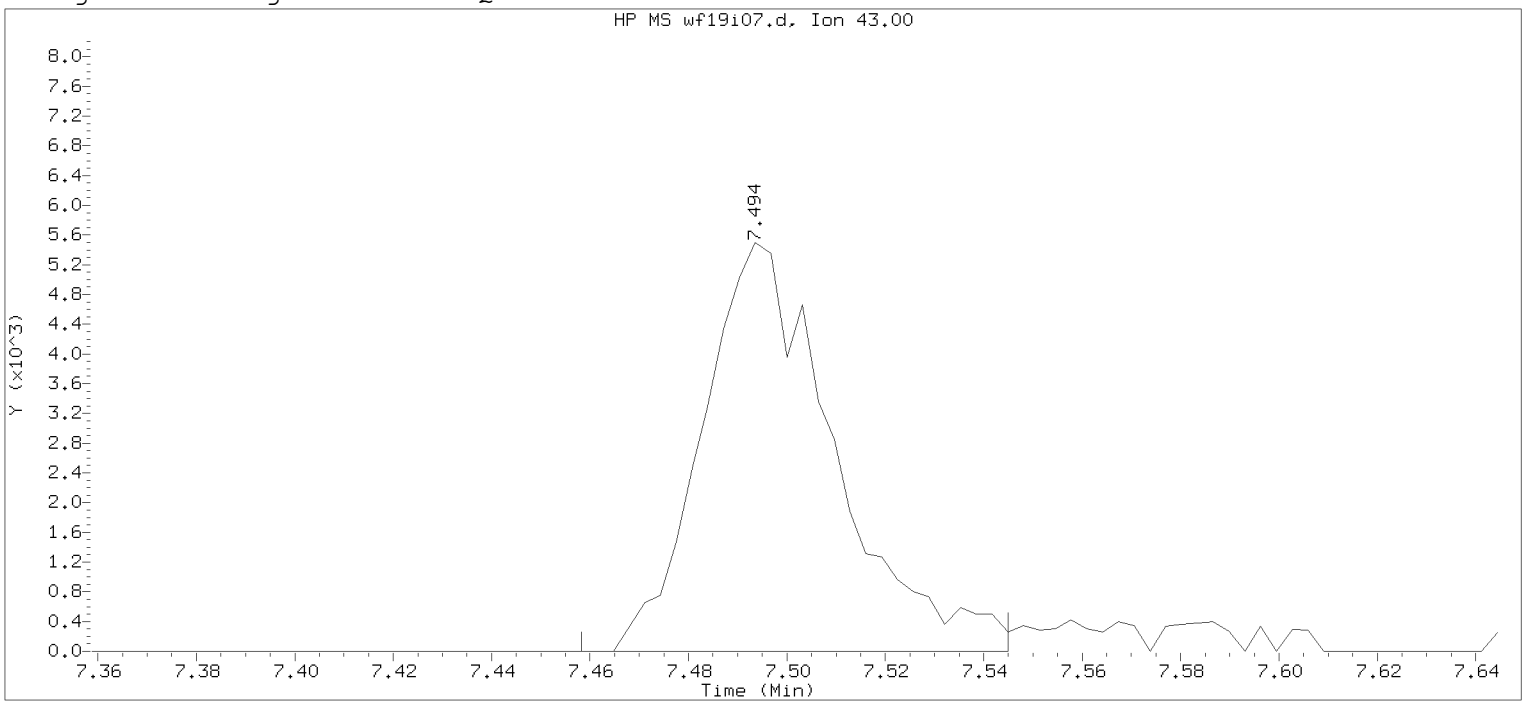
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



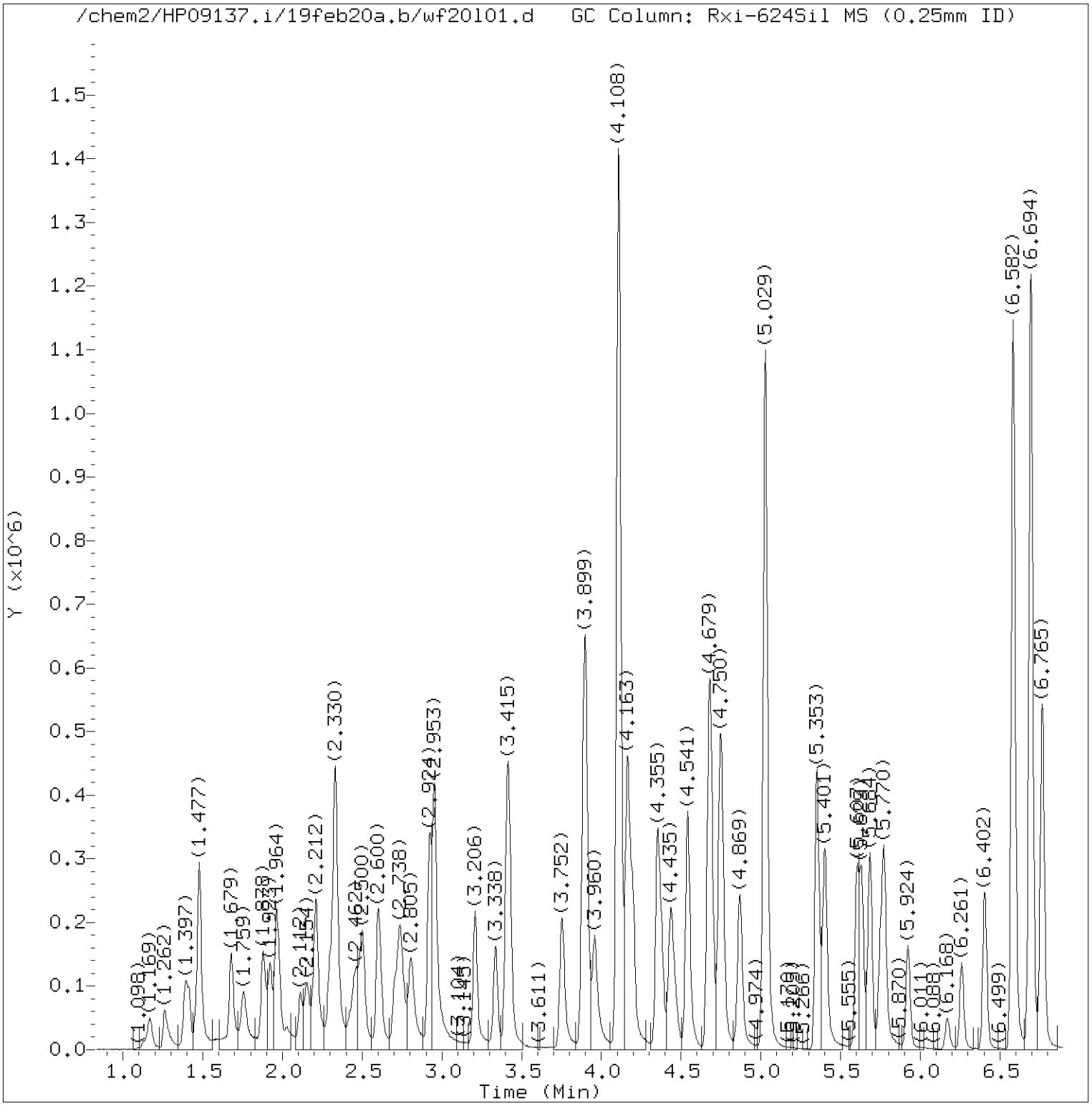
Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 97
Compound Name : 2-Hexanone
Scan Number : 2076
Retention Time (minutes): 7.494
Quant Ion : 43.00
Area : 10210
On-column Amount (ng) : 1.6088
Integration start scan : 2064 Integration stop scan: 2091
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

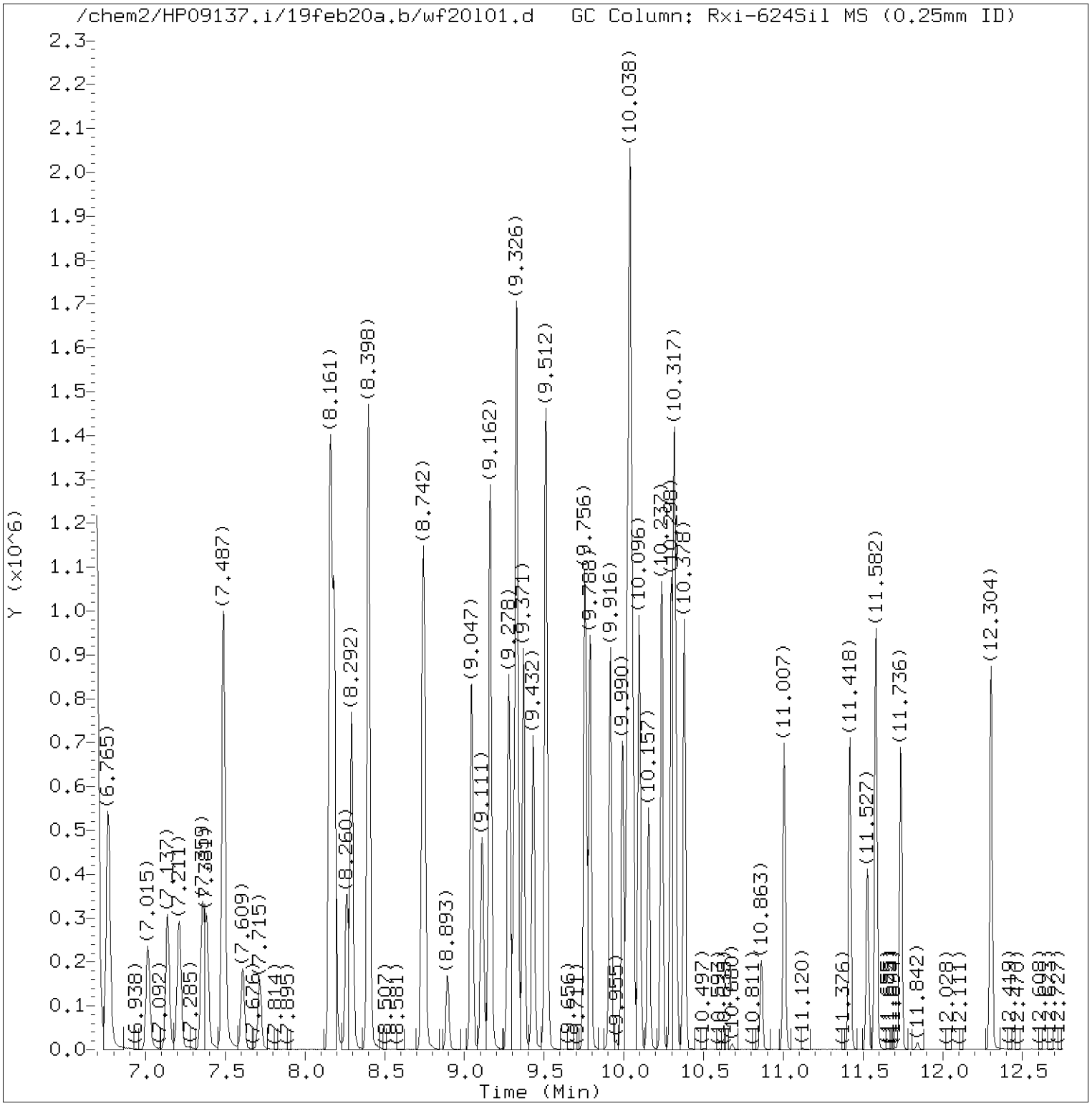
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.259	85	96568	17.290
4) Chloromethane	(2)	1.390	50	134773	19.379
6) Vinyl Chloride	(2)	1.467	62	127103	19.936
5) 1,3-Butadiene	(2)	1.480	39	88405	20.858
8) Bromomethane	(2)	1.679	94	87704	17.442
9) Chloroethane	(2)	1.756	64	73983	17.634
10) Dichlorofluoromethane	(2)	1.878	67	146532	18.044
12) Trichlorofluoromethane	(2)	1.923	101	121162	17.894
11) n-Pentane	(2)	1.961	43	114802	17.828
13) Ethanol	(1)	2.035	45	59325	572.099
15) Freon 123a	(2)	2.147	67	103271M	20.410
16) Acrolein	(1)	2.212	56	220979	134.998
17) 1,1-Dichloroethene	(2)	2.324	96	88878	23.338
19) Freon 113	(2)	2.327	101	74386	22.243
18) Acetone	(1)	2.337	58	114607	144.043
21) 2-Propanol	(1)	2.446	45	89998	152.244
22) Methyl Iodide	(2)	2.465	142	157275M	21.550
23) Carbon Disulfide	(2)	2.504	76	282096	21.025
25) Allyl Chloride	(2)	2.600	41	131552	19.828
27) Methyl Acetate	(2)	2.616	43	111319	19.385
28) Methylene Chloride	(2)	2.703	84	100603M	21.612
29)*t-Butyl alcohol-d10	(1)	2.731	65	227371	250.000
30) t-Butyl alcohol	(1)	2.805	59	207128	196.421
31) Acrylonitrile	(2)	2.921	53	304471	100.782
32) trans-1,2-Dichloroethene	(2)	2.953	96	92997	22.506
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	207314	20.606
34) n-Hexane	(2)	3.206	57	116893	21.143
36) 1,1-Dichloroethane	(2)	3.338	63	164243	21.936
38) di-Isopropyl ether	(2)	3.409	45	314239	21.846
39) 2-Chloro-1,3-butadiene	(2)	3.425	53	138541	21.364
40) Ethyl t-butyl ether	(2)	3.752	59	221032	21.080
45) 2,2-Dichloropropane	(2)	3.883	77	75689	22.509
42) cis-1,2-Dichloroethene	(2)	3.887	96	105718	22.787
44) 2-Butanone	(2)	3.899	43	639144	147.256
47) Propionitrile	(1)	3.960	54	199803	152.452
48) Methacrylonitrile	(2)	4.108	67	496119	152.733
49) Bromochloromethane	(2)	4.114	128	48427	20.081
50) Tetrahydrofuran	(1)	4.169	71	115894	95.544

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	4.195	83	156016	22.208
52)$Dibromofluoromethane	(2)	4.352	113	198099	49.504
53) 1,1,1-Trichloroethane	(2)	4.378	97	119941	22.691
54) Cyclohexane	(2)	4.439	56	142075	20.310
55) 1,1-Dichloropropene	(2)	4.541	75	123671	21.957
56) Carbon Tetrachloride	(2)	4.541	117	94740	20.885
58) Isobutyl Alcohol	(1)	4.673	41	185481	482.472
57)$1,2-Dichloroethane-d4	(2)	4.686	102	52871	49.678
60) Benzene	(2)	4.747	78	392054	21.655
61) 1,2-Dichloroethane	(2)	4.763	62	124290	22.224
65) t-Amyl methyl ether	(2)	4.869	73	220654	20.542
66)*Fluorobenzene	(2)	5.029	96	863762	50.000
67) n-Heptane	(2)	5.032	43	107071	20.263
69) n-Butanol	(1)	5.353	56	328345	961.937
71) Trichloroethene	(2)	5.404	95	97160	22.161
73) Methylcyclohexane	(2)	5.607	83	130478	20.499
74) 1,2-Dichloropropane	(2)	5.632	63	104752	22.537
75) Dibromomethane	(2)	5.751	93	62949	21.944
77) Methyl Methacrylate	(2)	5.773	69	102016	19.973
76) 1,4-Dioxane	(1)	5.783	88	51130M	501.065
79) Bromodichloromethane	(2)	5.924	83	113283	21.493
43) 1,2-Dichloroethene (Total)	(2)		96	198715	45.294
80) 2-Nitropropane	(2)	6.171	41	30099	16.878
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	66371	18.730
82) cis-1,3-Dichloropropene	(2)	6.406	75	158517	21.874
83) 4-Methyl-2-pentanone	(2)	6.582	43	843026	98.533
84)$Toluene-d8	(3)	6.694	98	904644	50.573
89) Toluene	(3)	6.765	92	252495	21.912
90) trans-1,3-Dichloropropene	(3)	7.012	75	141627	20.646
92) Ethyl Methacrylate	(3)	7.137	69	174648	20.719
93) 1,1,2-Trichloroethane	(3)	7.208	97	101734	22.938
94) Tetrachloroethene	(3)	7.359	166	102889	22.005
95) 1,3-Dichloropropane	(3)	7.388	76	169229	21.968
97) 2-Hexanone	(3)	7.487	43	652921	97.295
98) Dibromochloromethane	(3)	7.609	129	93639	21.617
100) 1,2-Dibromoethane	(3)	7.715	107	106921	21.943
101)*Chlorobenzene-d5	(3)	8.161	117	713862	50.000
103) Chlorobenzene	(3)	8.183	112	280419	21.937

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
104) 1,1,1,2-Tetrachloroethane	(3)	8.260	131	87309	21.253
105) Ethylbenzene	(3)	8.292	91	476224	21.744
107) m+p-Xylene	(3)	8.398	106	380724	43.723
108) o-Xylene	(3)	8.735	106	183750	21.450
110) Styrene	(3)	8.748	104	318309	22.150
111) Bromoform	(3)	8.896	173	67300	19.963
112) Isopropylbenzene	(3)	9.047	105	467195	22.194
113) Cyclohexanone	(1)	9.111	55	180831	392.853
115)$4-Bromofluorobenzene	(3)	9.162	95	356184	49.772
116) Bromobenzene	(4)	9.278	156	123084	21.520
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	166416	21.576
118) 1,2,3-Trichloropropane	(4)	9.310	110	50955	21.933
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	259117	104.764
120) n-Propylbenzene	(4)	9.371	91	558993	22.171
121) 2-Chlorotoluene	(4)	9.432	126	114743	22.064
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	396619	21.812
122) 4-Chlorotoluene	(4)	9.518	126	121267	21.782
125) tert-Butylbenzene	(4)	9.753	134	89119	21.572
126) Pentachloroethane	(4)	9.765	167	66140	20.252
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	411236	21.462
128) sec-Butylbenzene	(4)	9.916	105	488887	21.903
130) 1,3-Dichlorobenzene	(4)	9.990	146	235017	21.548
131) p-Isopropyltoluene	(4)	10.022	119	430620	21.794
132)*1,4-Dichlorobenzene-d4	(4)	10.038	152	397089	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	245420	21.706
91) 1,3-Dichloropropene (total)	(3)		100	300144	42.520
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	439986	21.341
136) Benzyl Chloride	(4)	10.157	91	312431	19.742
137) 1,3-Diethylbenzene	(4)	10.237	119	260974	21.021
138) 1,4-Diethylbenzene	(4)	10.298	119	270284	20.320
140) n-Butylbenzene	(4)	10.314	92	213919	21.451
139) 1,2-Dichlorobenzene	(4)	10.324	146	235762	21.788
141) 1,2-Diethylbenzene	(4)	10.381	119	223186	21.293
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	36179	20.640
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	174405	21.019
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	171135	21.483
148) Hexachlorobutadiene	(4)	11.530	225	58819	20.731
149) Naphthalene	(4)	11.582	128	578423	21.460

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

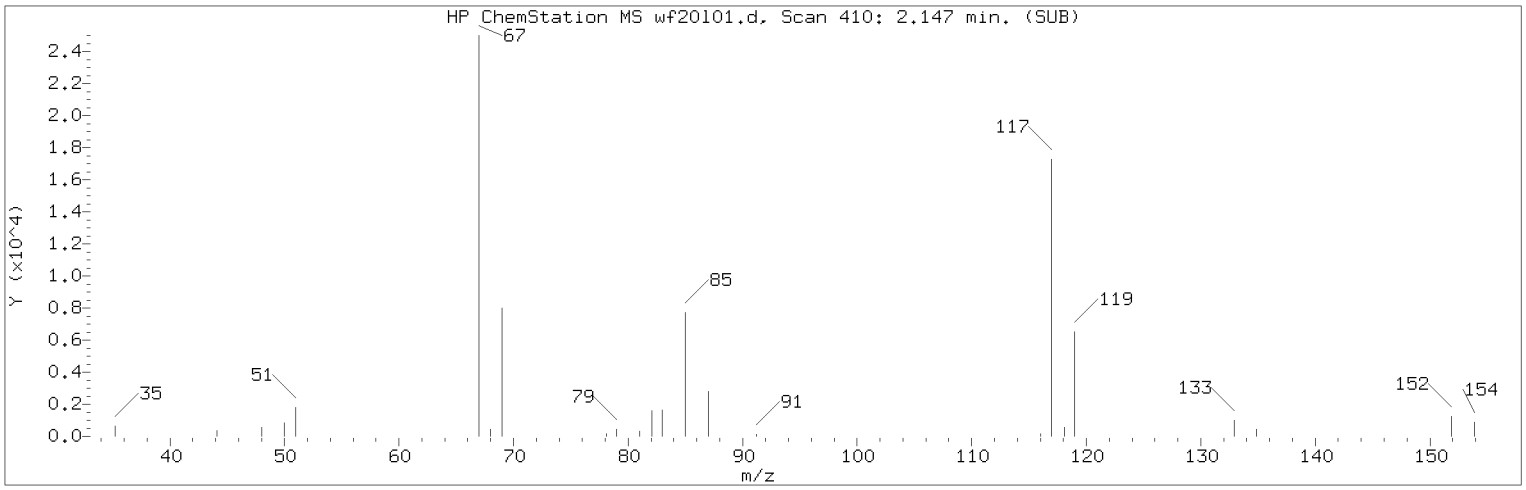
Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

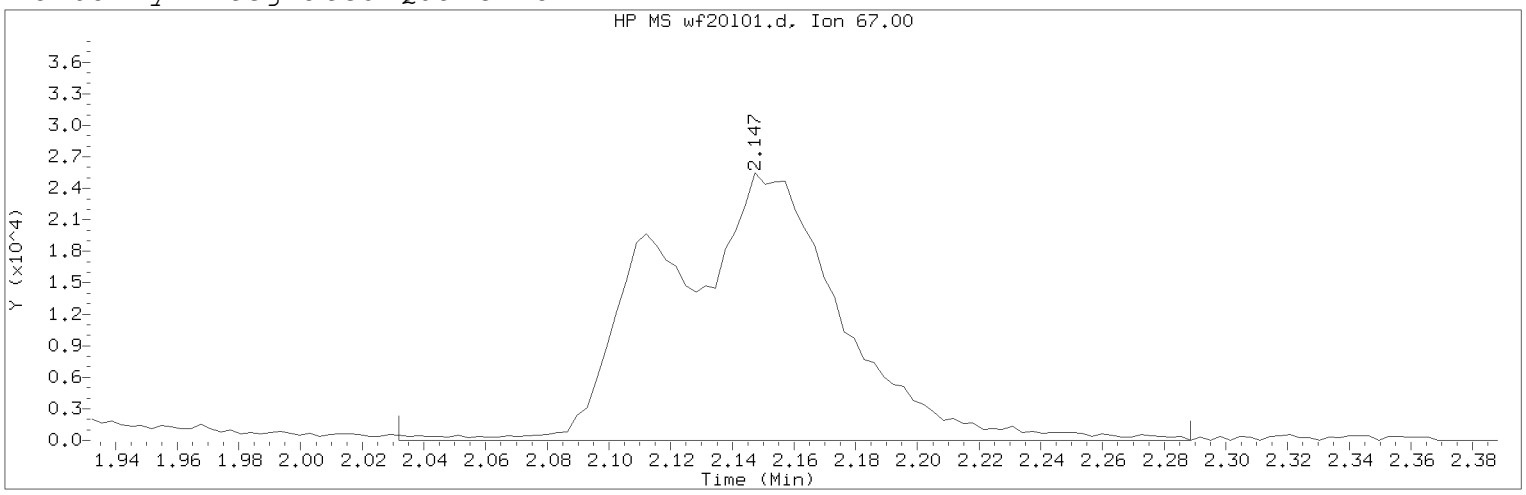
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	166855	21.460
109) Xylene (Total)	(3)		106	564474	65.173
151) 2-Methylnaphthalene	(4)	12.304	142	303477	19.735
142) Diethylbenzene (total)	(4)		100	754444	62.634

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20101.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

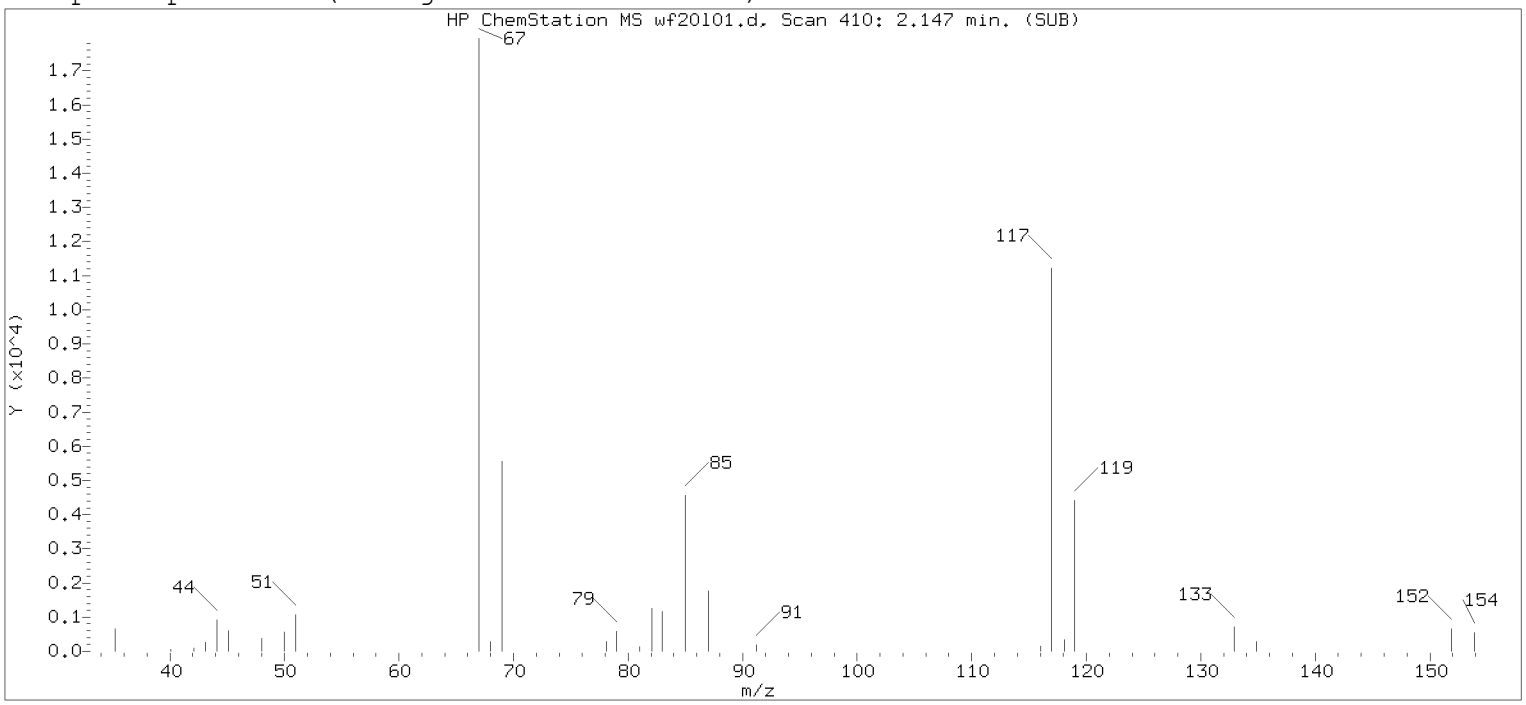
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 410
Retention Time (minutes): 2.147
Quant Ion : 67.00
Area (flag) : 103271M
On-Column Amount (ng) : 20.4098
Integration start scan : 373 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

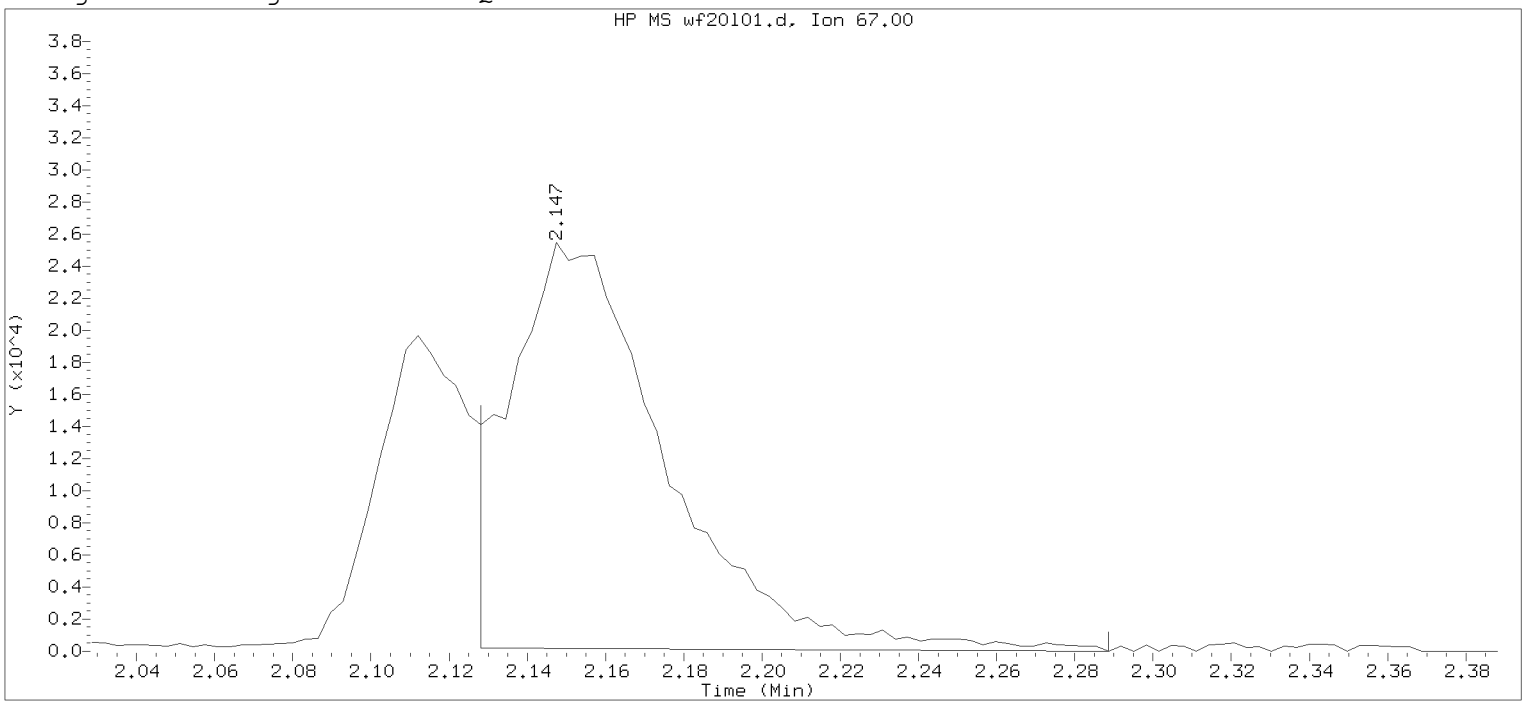
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:55.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20101.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

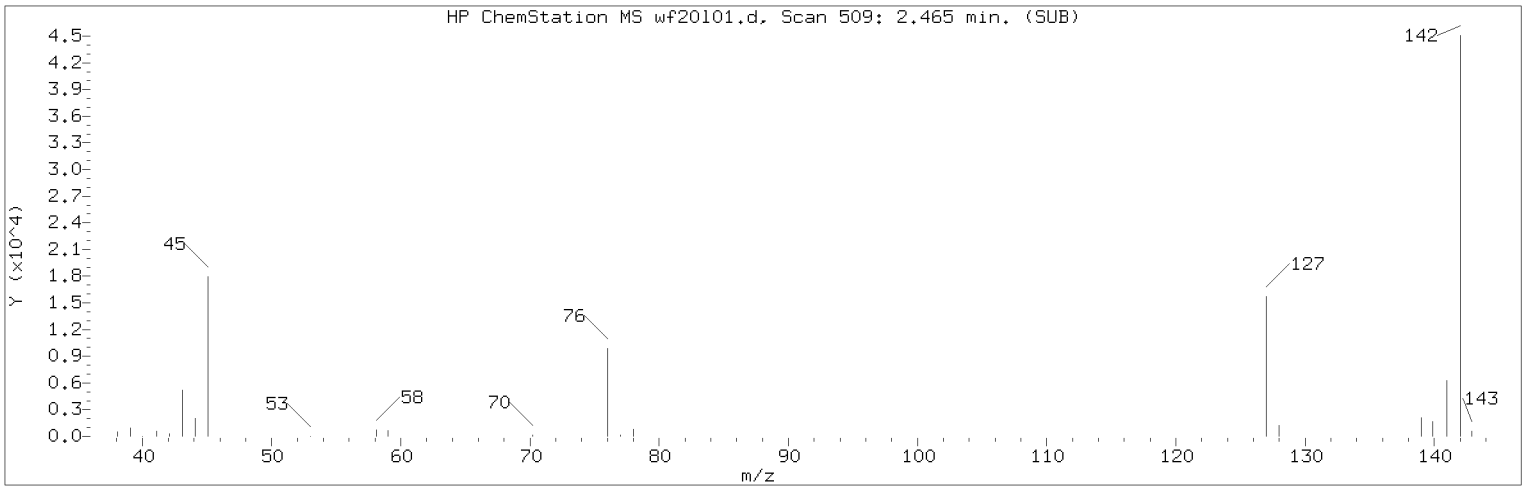
Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-FEB-2019 11:23
Date, time and analyst ID of latest file update: 20-Feb-2019 12:22 Automation

Sample Name: LCSW62 Lab Sample ID: LCSW62

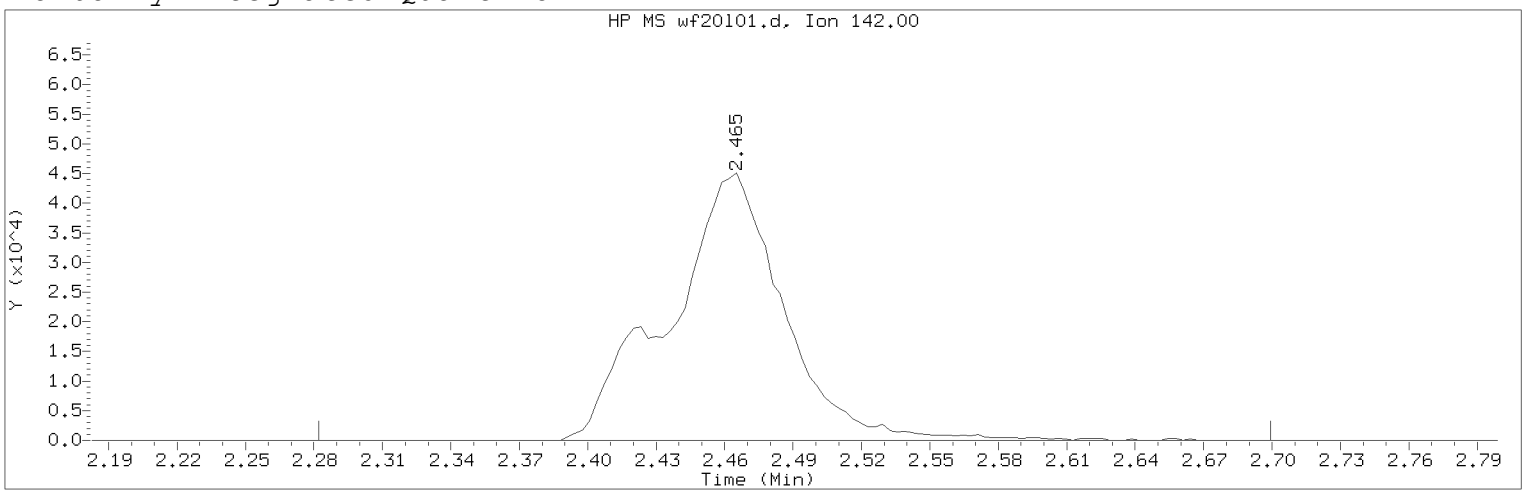
Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 410		
Retention Time (minutes)	: 2.147		
Quant Ion	: 67.00		
Area	: 69986		
On-column Amount (ng)	: 13.8316		
Integration start scan	: 403	Integration stop scan:	453
Y at integration start	: 195	Y at integration end:	0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20101.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

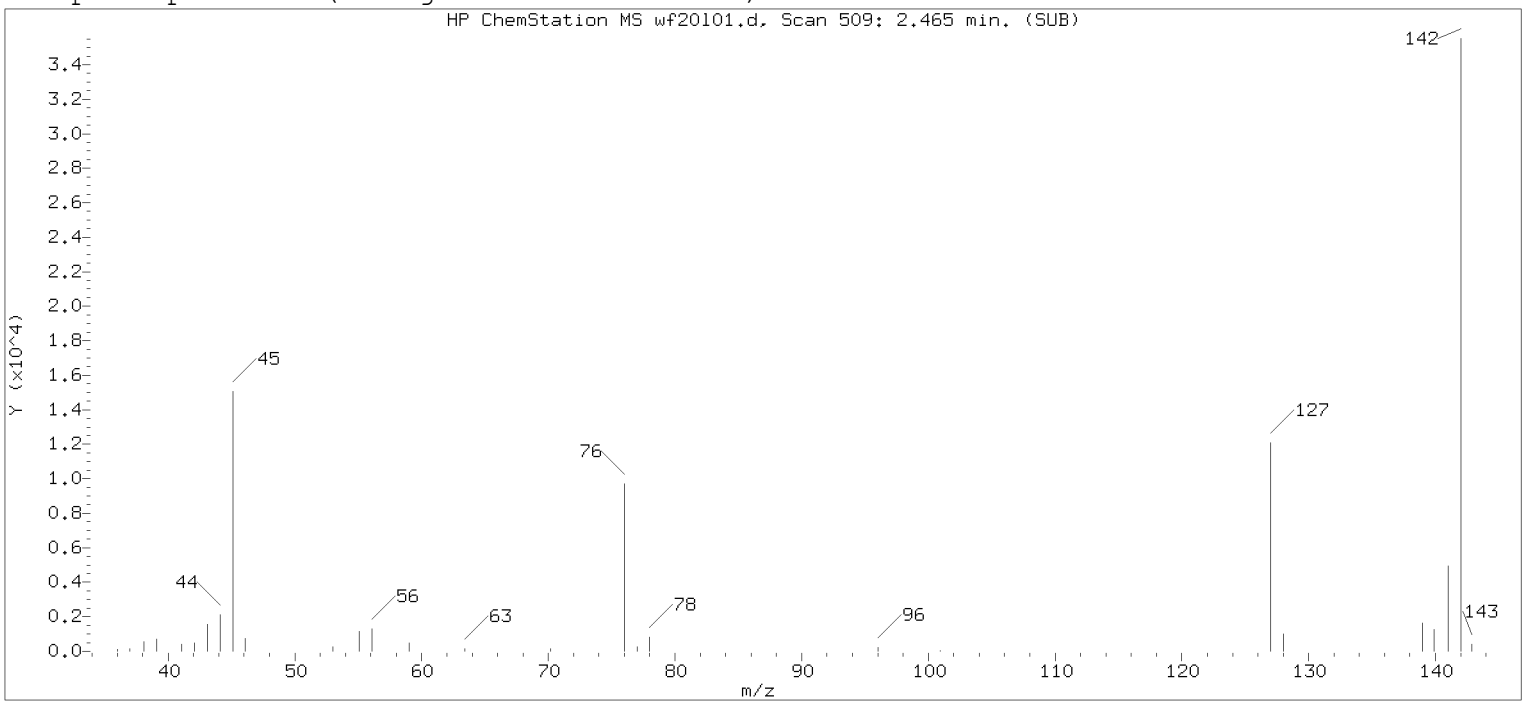
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area (flag) : 157275M
On-Column Amount (ng) : 21.5504
Integration start scan : 451 Integration stop scan: 581
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

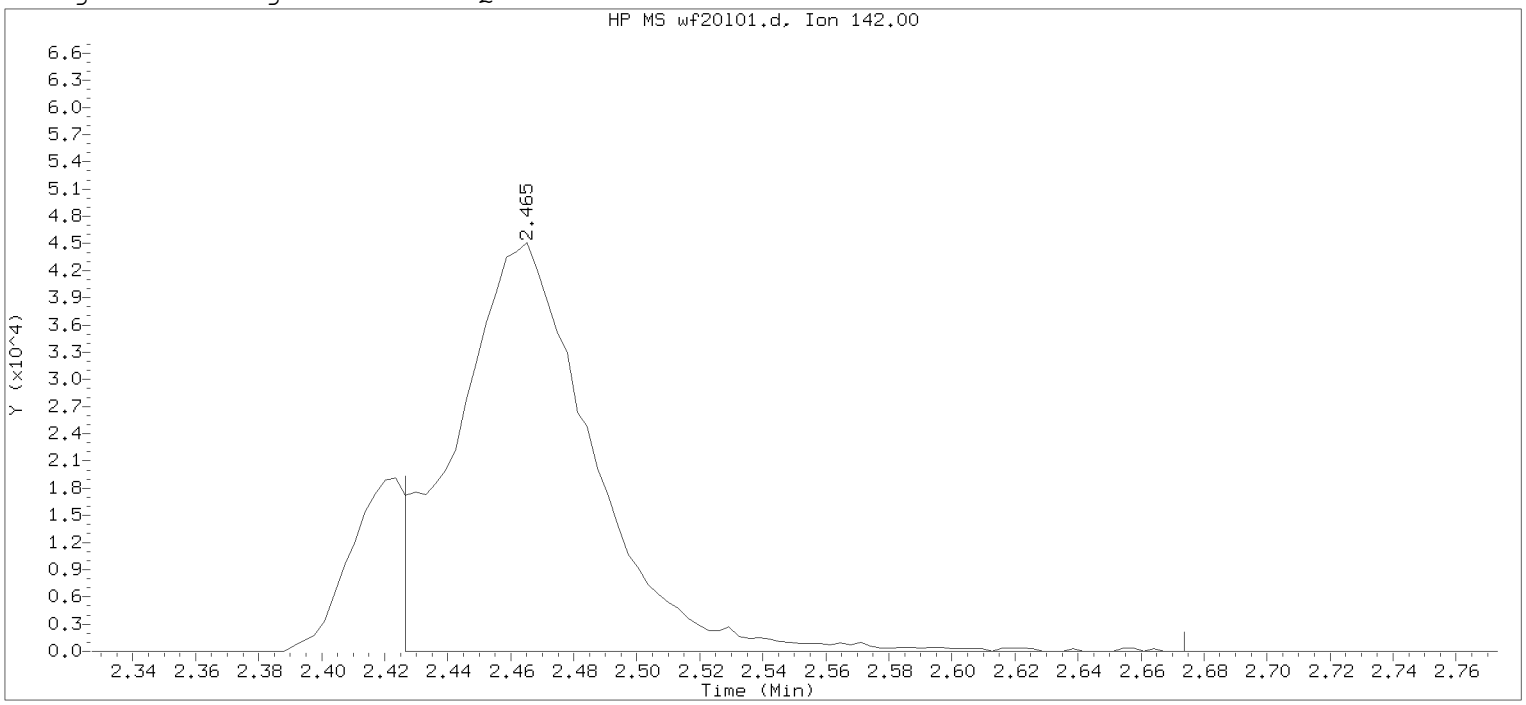
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:55.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20101.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

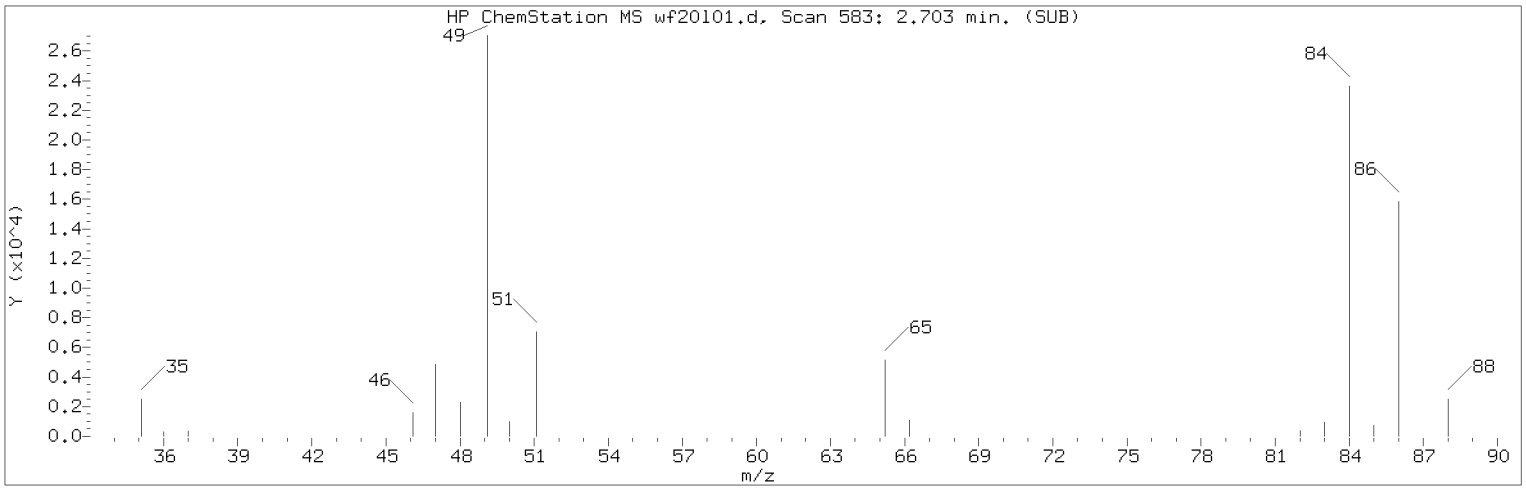
Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-FEB-2019 11:23
Date, time and analyst ID of latest file update: 20-Feb-2019 12:22 Automation

Sample Name: LCSW62 Lab Sample ID: LCSW62

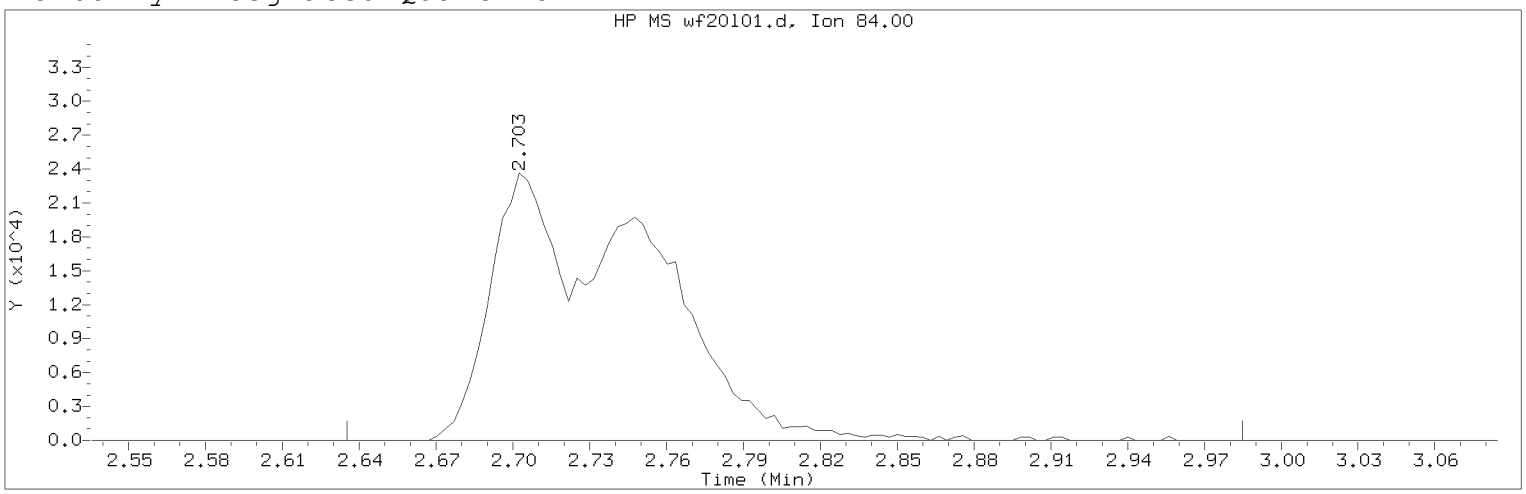
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area : 135289
On-column Amount (ng) : 18.5378
Integration start scan : 496 Integration stop scan: 573
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20101.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

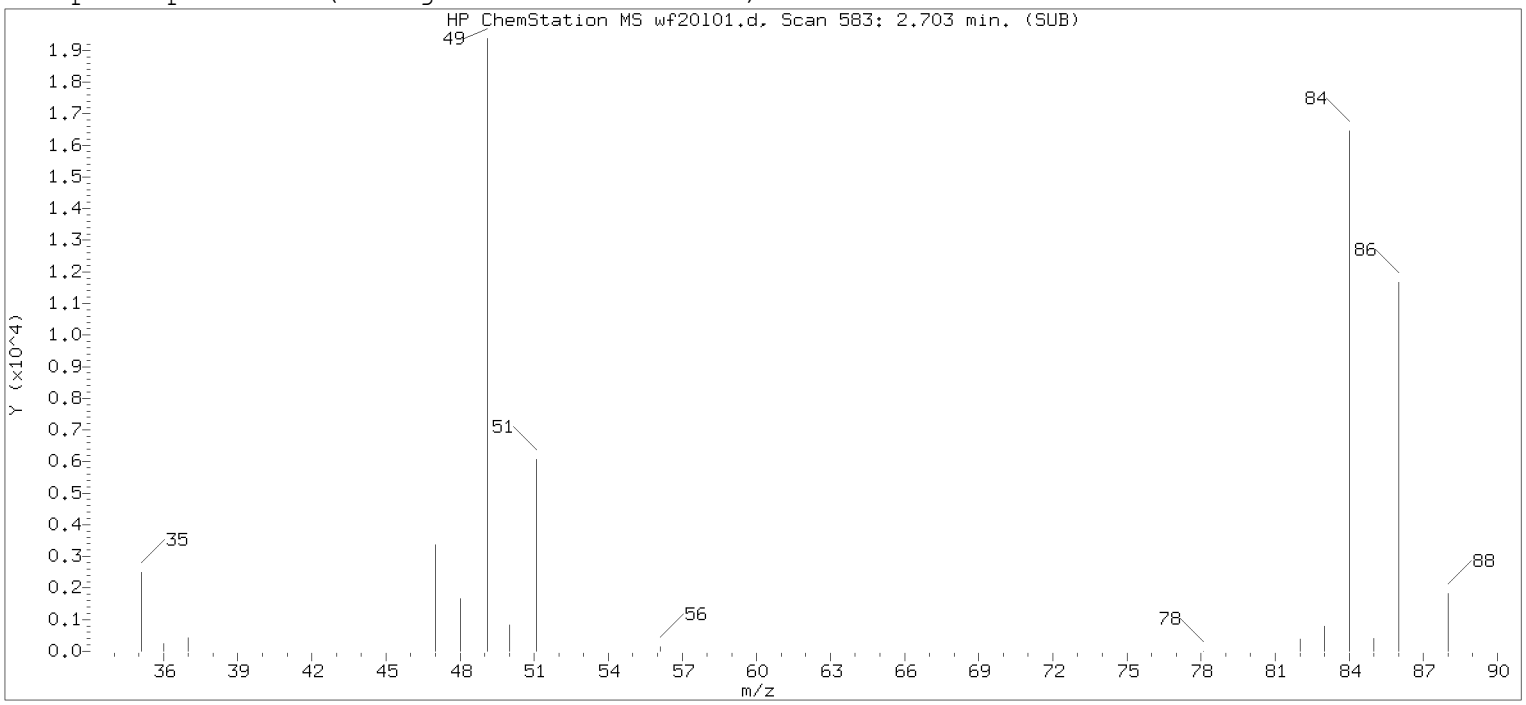
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 583
Retention Time (minutes): 2.703
Quant Ion : 84.00
Area (flag) : 100603M
On-Column Amount (ng) : 21.6116
Integration start scan : 561 Integration stop scan: 670
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

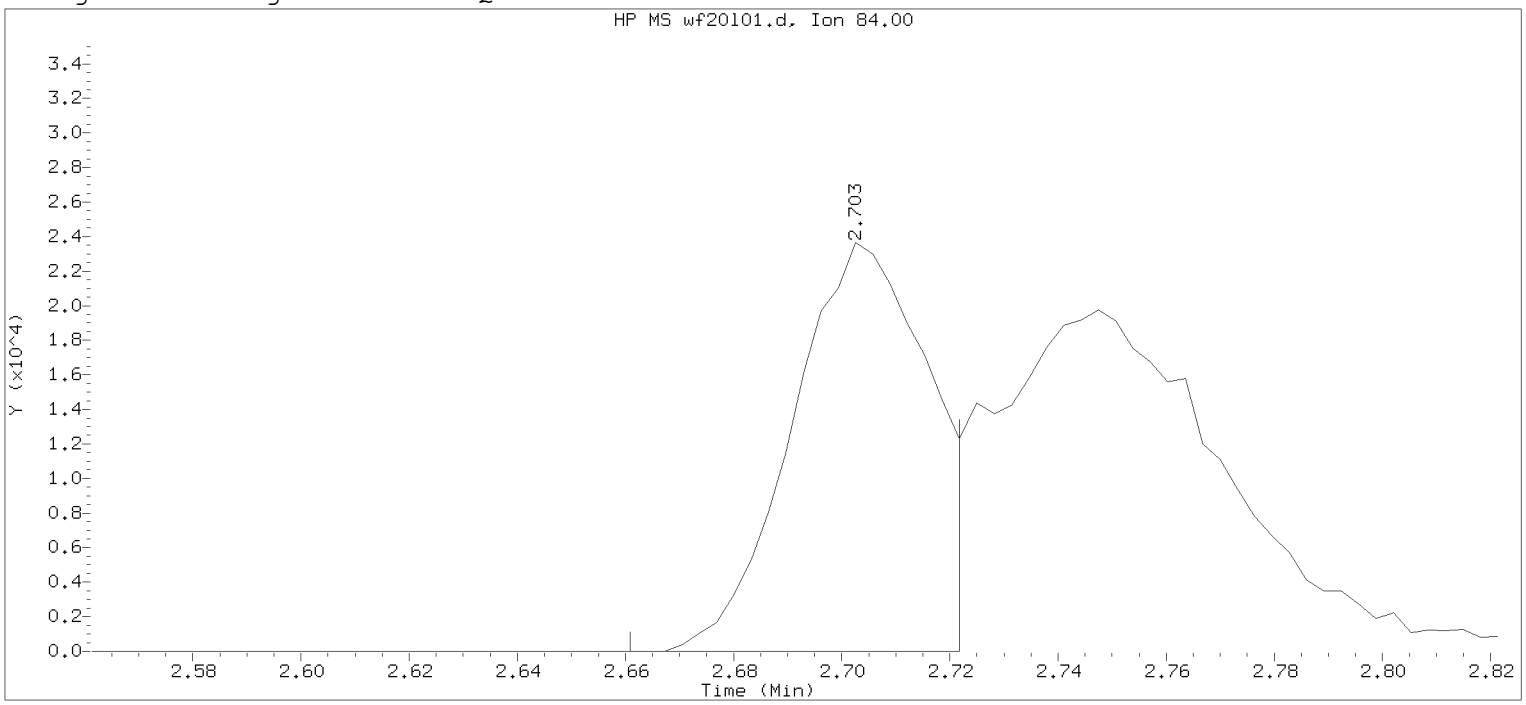
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:55.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

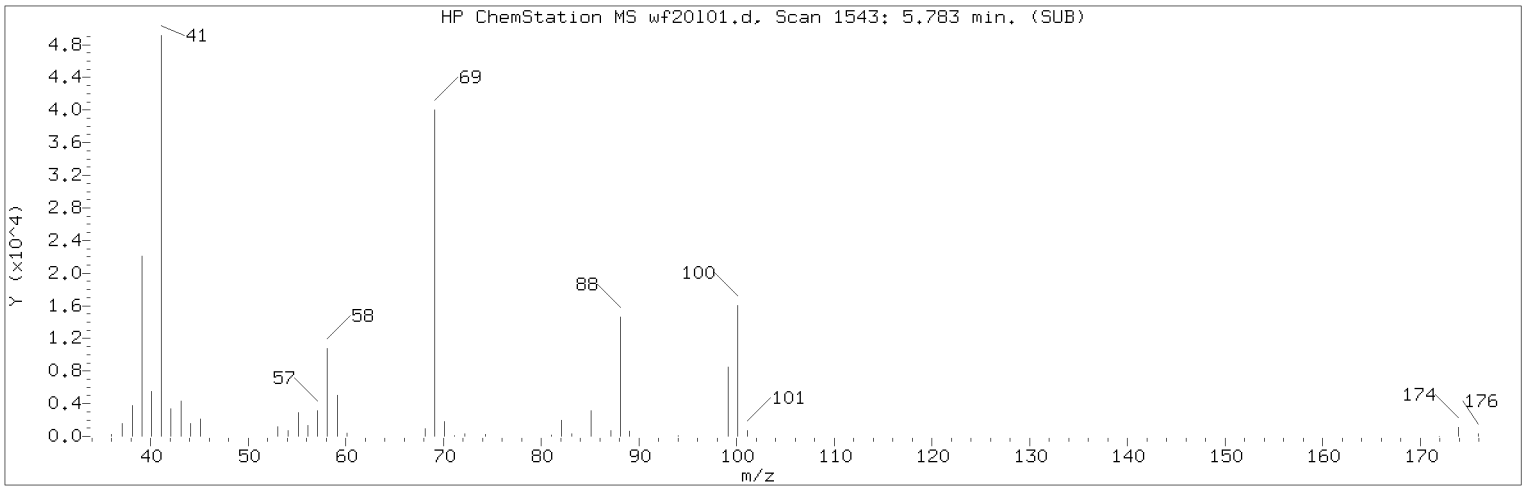
Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-FEB-2019 11:23
Date, time and analyst ID of latest file update: 20-Feb-2019 12:22 Automation

Sample Name: LCSW62 Lab Sample ID: LCSW62

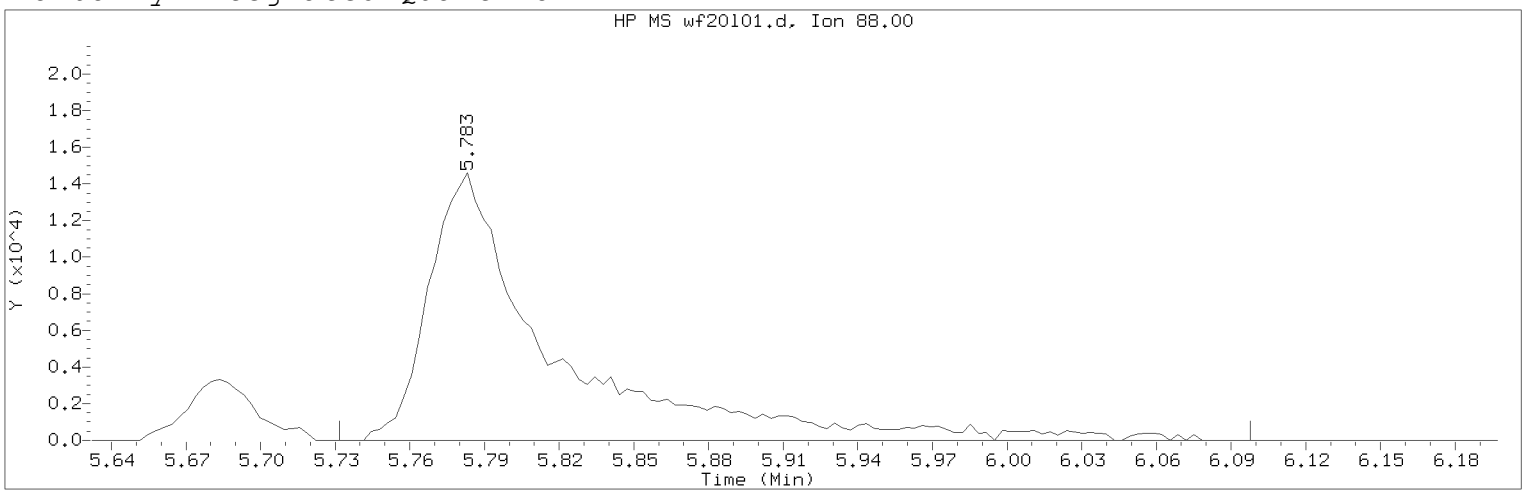
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 583
Retention Time (minutes): 2.703
Quant Ion : 84.00
Area : 40948
On-column Amount (ng) : 8.7967
Integration start scan : 569 Integration stop scan: 588
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20101.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

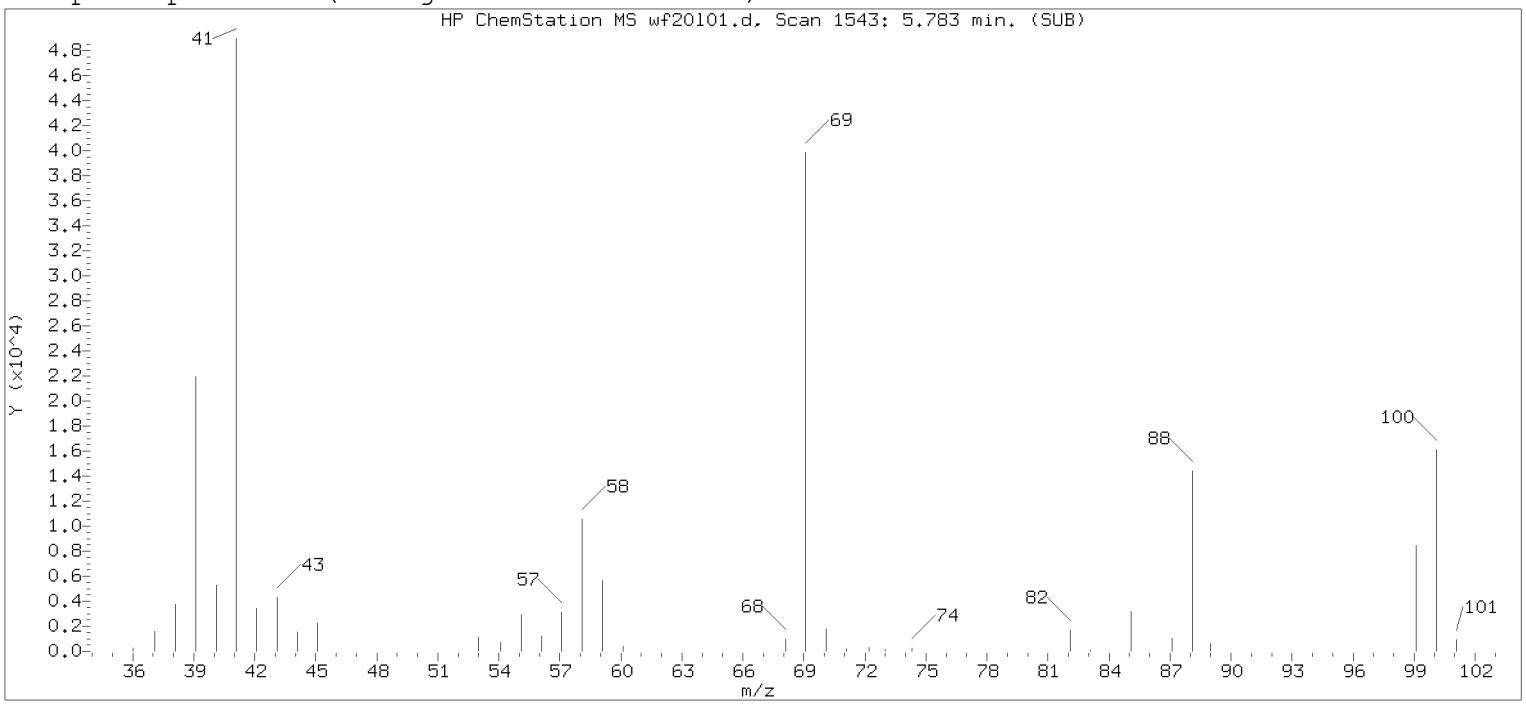
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1543
Retention Time (minutes): 5.783
Quant Ion : 88.00
Area (flag) : 51130M
On-Column Amount (ng) : 501.0652
Integration start scan : 1526 Integration stop scan: 1640
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

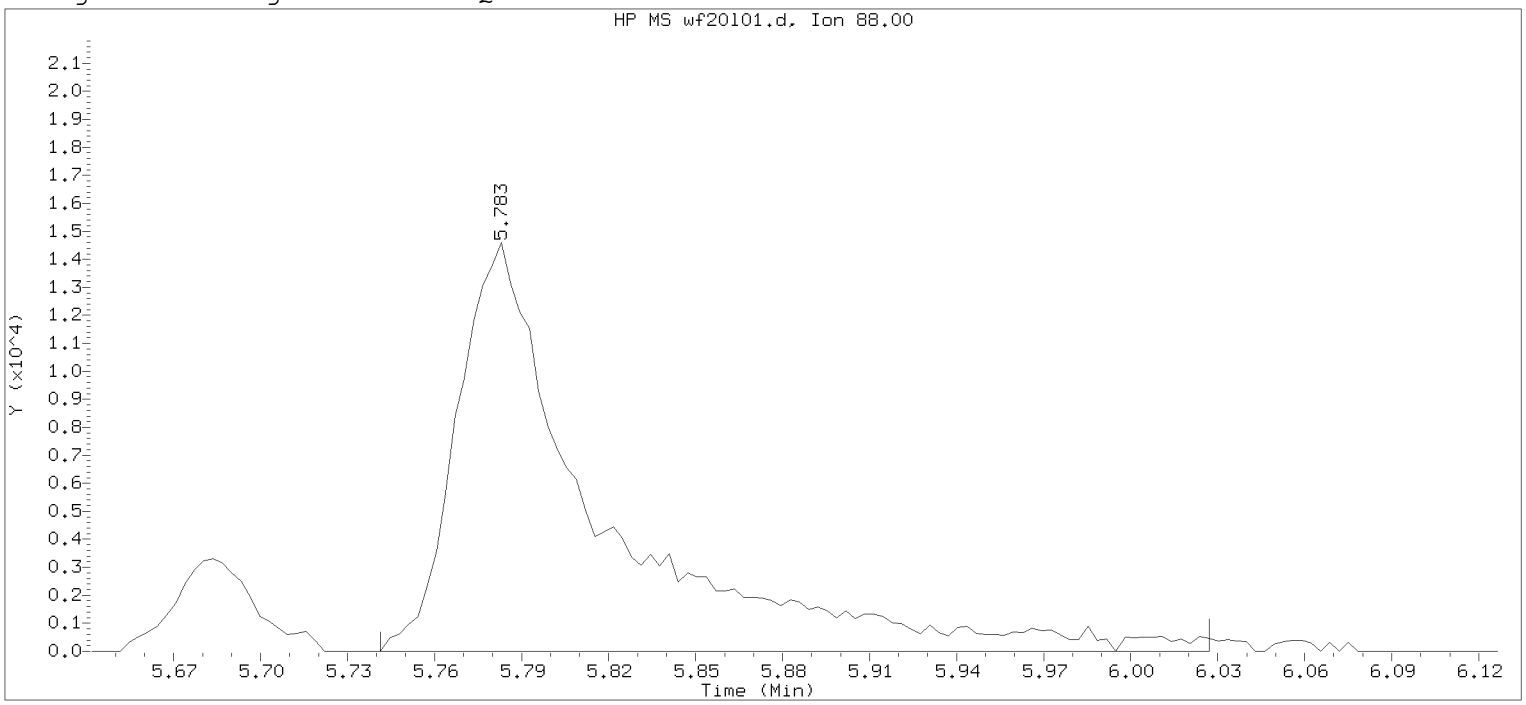
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:55.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20101.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-FEB-2019 11:23
Date, time and analyst ID of latest file update: 20-Feb-2019 12:22 Automation

Sample Name: LCSW62 Lab Sample ID: LCSW62

Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1543		
Retention Time (minutes)	: 5.783		
Quant Ion	: 88.00		
Area	: 50345		
On-column Amount (ng)	: 493.3796		
Integration start scan	: 1529	Integration stop scan:	1618
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: APR27582

Data File: /chem2/HP09137.i/19may18a.b/wy18t01.d

Date : 18-MAY-2019 21:44

Client ID: BFB FEB05-19

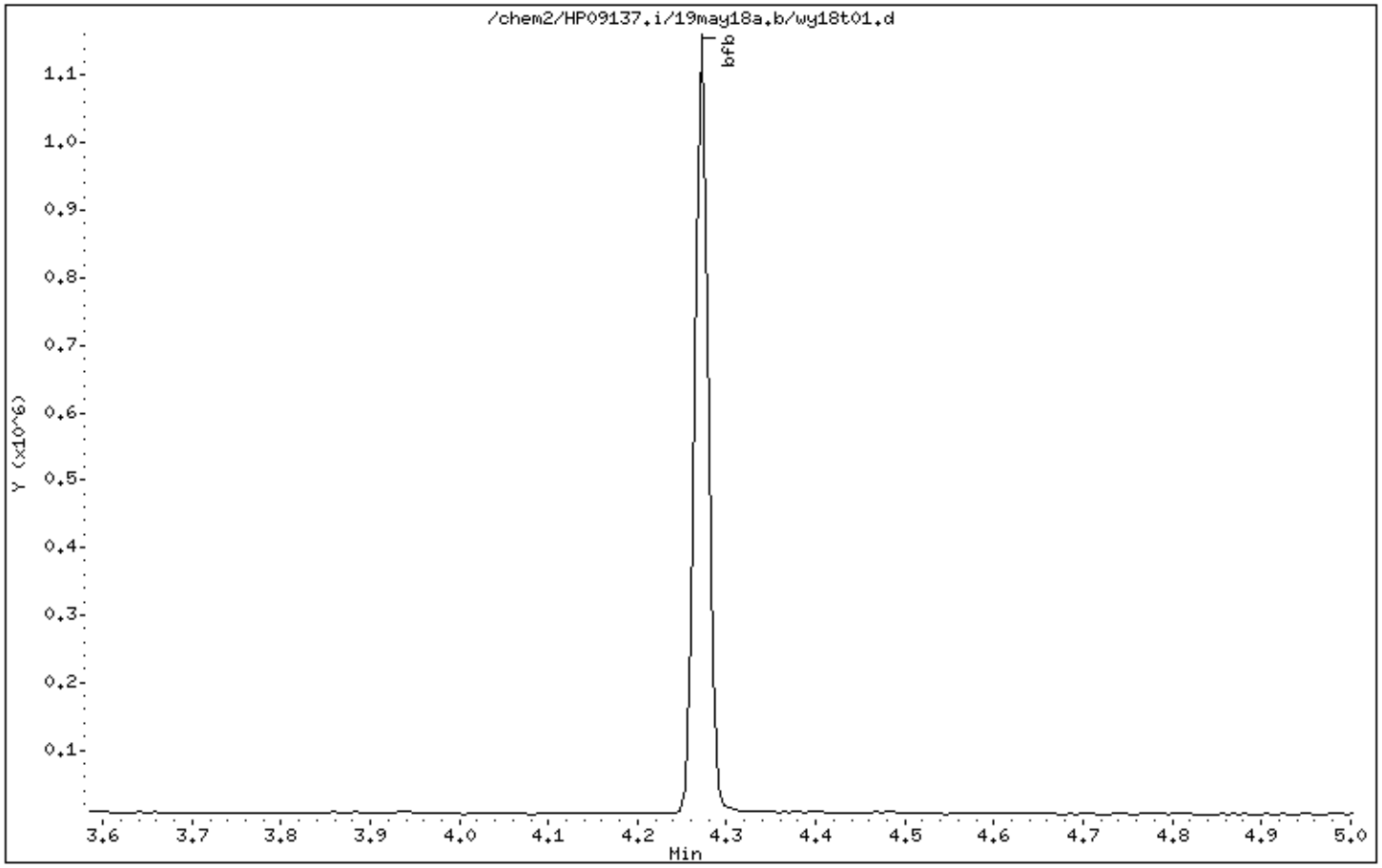
Instrument: HP09137.i

Sample Info: BFB FEB05-19;BFB 50NG;1;3;;;;;;

Operator: SEJ02002

Column phase: DB-624

Column diameter: 0.18



Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Data File: /chem2/HP09137.i/19may18a.b/wy18t01.d

Date : 18-MAY-2019 21:44

Client ID: BFB FEB05-19

Instrument: HP09137.i

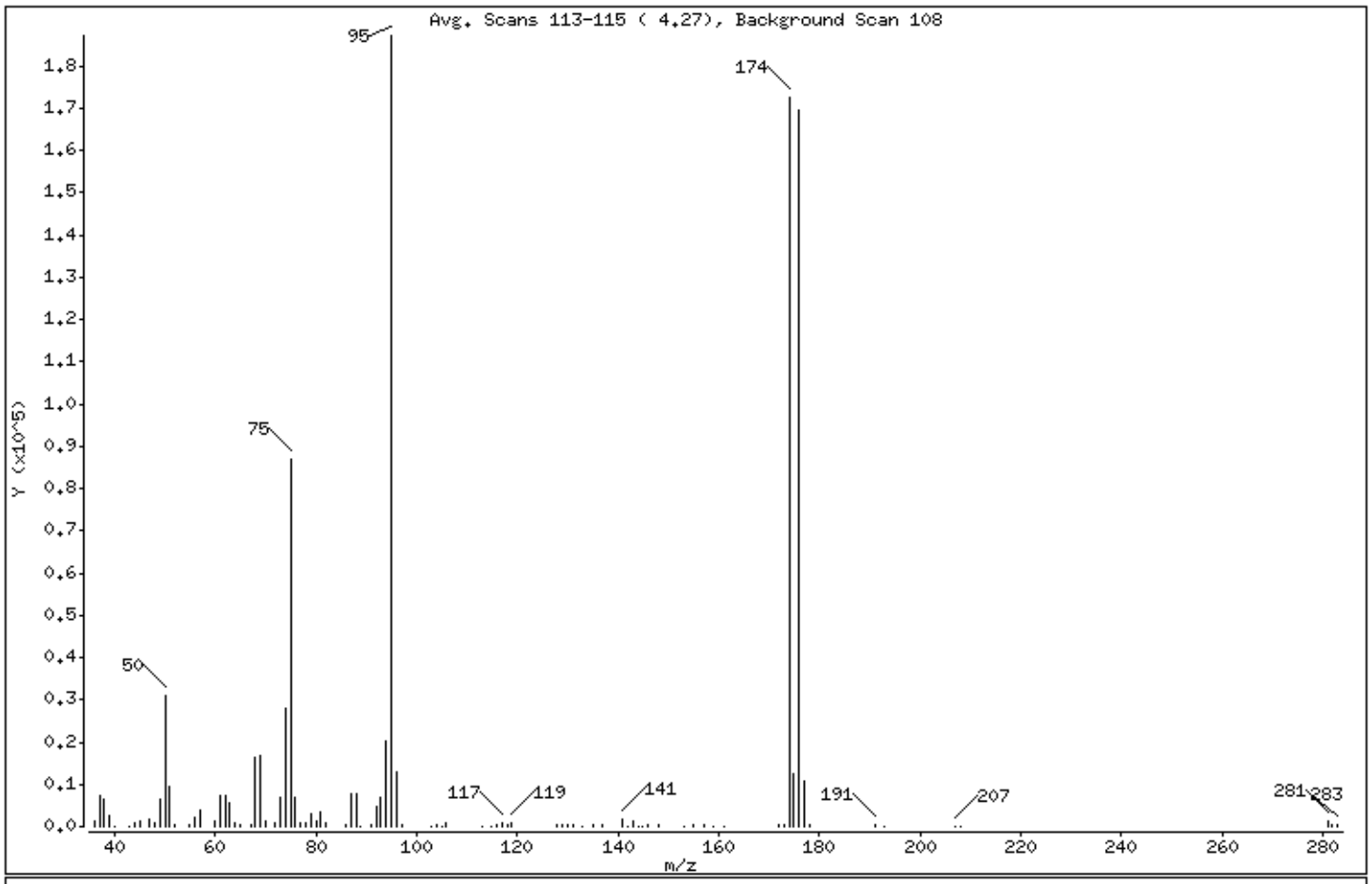
Sample Info: BFB FEB05-19;BFB 50NG;1;3;;;;;;

Operator: SEJ02002

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.64
75	30.00 - 60.00% of mass 95	46.44
96	5.00 - 9.00% of mass 95	6.84
173	Less than 2.00% of mass 174	0.33 (0.35)
174	50.00 - 100.00% of mass 95	92.20
175	5.00 - 9.00% of mass 174	6.62 (7.18)
176	95.00 - 101.00% of mass 174	90.49 (98.15)
177	5.00 - 9.00% of mass 176	5.78 (6.39)

Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Data File: /chem2/HP09137.i/19may18a.b/wy18t01.d

Date : 18-MAY-2019 21:44

Client ID: BFB FEB05-19 Instrument: HP09137.i

Sample Info: BFB FEB05-19;BFB 50NG;1;3;;;;;;

Operator: SEJ02002

Column phase: DB-624 Column diameter: 0.18

Data File: wy18t01.d
Spectrum: Avg. Scans 113-115 (4.27), Background Scan 108
Location of Maximum: 95.00
Number of points: 92

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1414	68.00	16311	97.00	533	148.00	466
37.00	7288	69.00	16776	103.00	96	153.00	192
38.00	6360	70.00	1438	104.00	608	155.00	524
39.00	2795	72.00	980	105.00	87	157.00	343
40.00	170	73.00	6743	106.00	720	159.00	126
43.00	84	74.00	27880	113.00	116	161.00	88
44.00	721	75.00	86912	115.00	83	172.00	581
45.00	1255	76.00	7035	116.00	245	173.00	612
47.00	1797	77.00	979	117.00	826	174.00	172544
48.00	1056	78.00	855	118.00	540	175.00	12390
49.00	6270	79.00	3149	119.00	742	176.00	169344
50.00	31136	80.00	1130	128.00	458	177.00	10814
51.00	9678	81.00	3355	129.00	226	178.00	239
52.00	540	82.00	664	130.00	571	191.00	391
55.00	418	86.00	282	131.00	309	193.00	114
56.00	2342	87.00	7726	133.00	152	207.00	198
57.00	4063	88.00	7828	135.00	308	208.00	108
60.00	1375	89.00	106	137.00	244	281.00	1125
61.00	7524	91.00	526	141.00	1515	282.00	357
62.00	7305	92.00	4844	142.00	90	283.00	276
63.00	5378	93.00	7062	143.00	1365		
64.00	712	94.00	20424	144.00	85		
65.00	289	95.00	187136	145.00	84		
67.00	539	96.00	12793	146.00	273		

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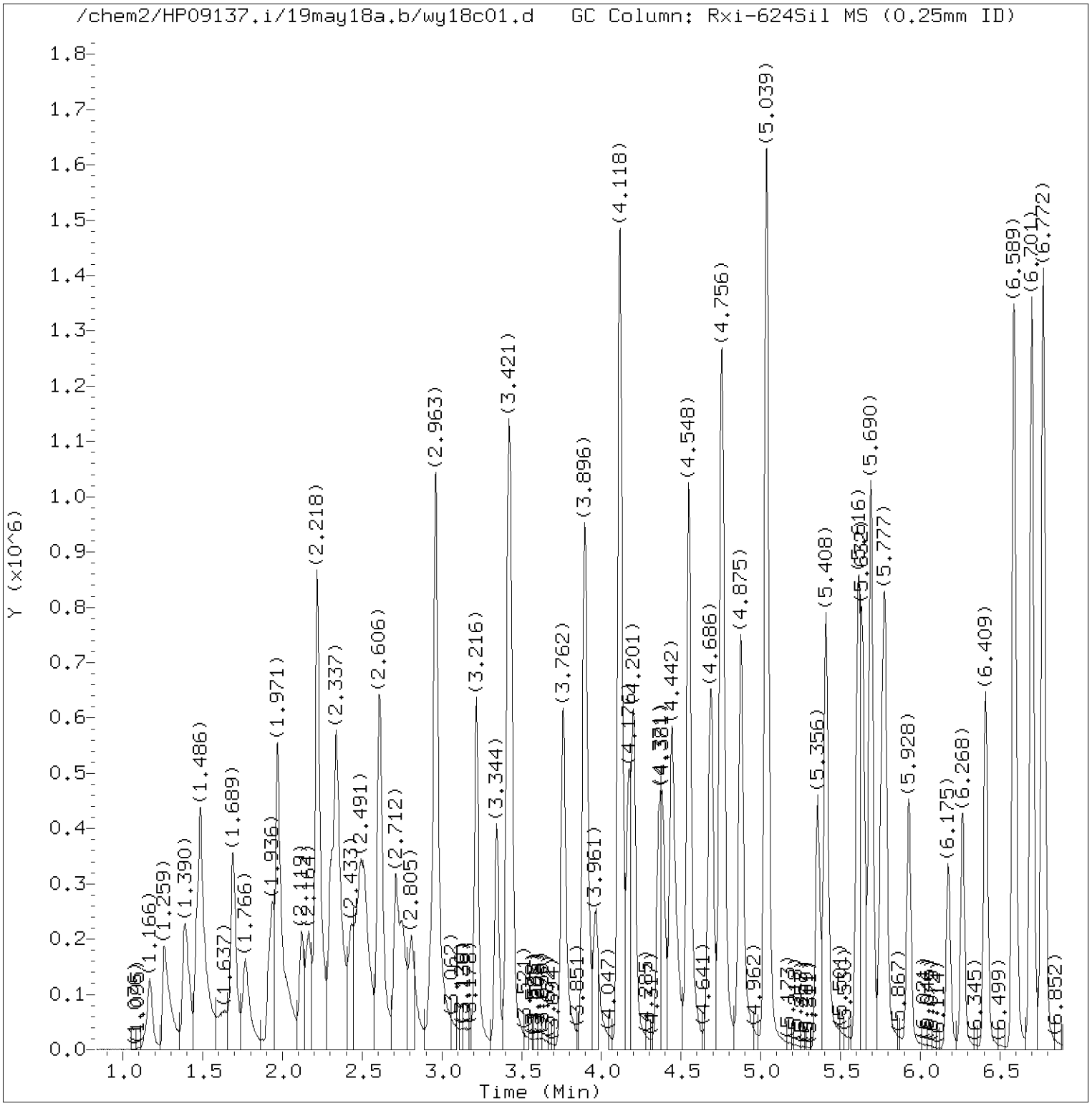
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

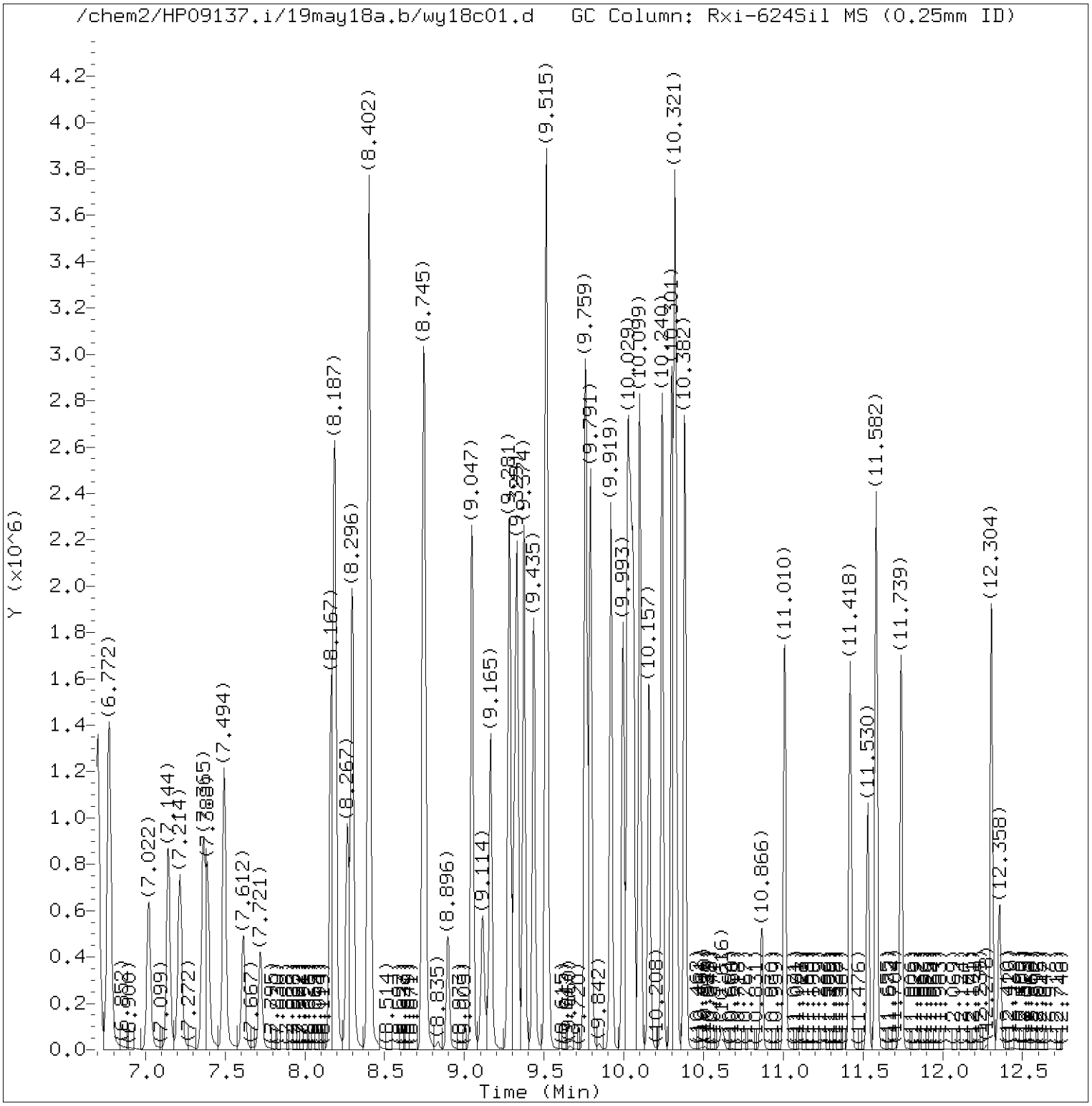
Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.259	85	389477	58.679
4) Chloromethane	(2)	1.384	50	348458	42.161
6) Vinyl Chloride	(2)	1.461	62	337342	44.524
5) 1,3-Butadiene	(2)	1.486	39	202998	40.303
8) Bromomethane	(2)	1.692	94	277344	46.414
9) Chloroethane	(2)	1.769	64	208032	41.725
12) Trichlorofluoromethane	(2)	1.932	101	425684	52.901
11) n-Pentane	(2)	1.971	43	309759	40.477
13) Ethanol	(1)	2.035	45	57065	659.199
15) Freon 123a	(2)	2.119	67	270649M	45.010
16) Acrolein	(1)	2.218	56	850771	622.590
17) 1,1-Dichloroethene	(2)	2.308	96	234343M	51.779
17) 1,1-Dichloroethene	(2)	2.301	63	88931	38.947
18) Acetone	(1)	2.340	58	81695	122.996
19) Freon 113	(2)	2.343	101	203135	51.113
21) 2-Propanol	(1)	2.449	45	118831	240.796
22) Methyl Iodide	(2)	2.478	142	438530M	50.563
23) Carbon Disulfide	(2)	2.513	76	688325M	43.170
25) Allyl Chloride	(2)	2.606	41	365252	46.325
27) Methyl Acetate	(2)	2.622	43	295355	43.278
28) Methylene Chloride	(2)	2.712	84	255875M	46.253
29)*t-Butyl alcohol-d10	(1)	2.738	65	189811	250.000
30) t-Butyl alcohol	(1)	2.812	59	232462	264.067
31) Acrylonitrile	(2)	2.930	53	166868	46.478
32) trans-1,2-Dichloroethene	(2)	2.963	96	242897	49.465
33) Methyl Tertiary Butyl Ether	(2)	2.963	73	650683	54.421
34) n-Hexane	(2)	3.219	57	317302	48.293
36) 1,1-Dichloroethane	(2)	3.344	63	415239	46.667
38) di-Isopropyl ether	(2)	3.415	45	761418	44.542
39) 2-Chloro-1,3-butadiene	(2)	3.431	53	381575	49.514
40) Ethyl t-butyl ether	(2)	3.762	59	623126	50.008
42) cis-1,2-Dichloroethene	(2)	3.893	96	264290	47.936
45) 2,2-Dichloropropane	(2)	3.893	77	165548	41.427
44) 2-Butanone	(2)	3.909	43	451723	87.576
47) Propionitrile	(1)	3.967	54	324612	296.695
48) Methacrylonitrile	(2)	4.115	67	426452	110.473
49) Bromochloromethane	(2)	4.124	128	149245	52.075
50) Tetrahydrofuran	(1)	4.172	71	129121	127.513

M = Compound was manually integrated.
* = Compound is an internal standard.

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Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	4.201	83	415434	49.761
52)$Dibromofluoromethane	(2)	4.362	113	229325	48.223
52)$Dibromofluoromethane	(2)	4.358	111	233674	47.866
53) 1,1,1-Trichloroethane	(2)	4.384	97	310606	49.446
54) Cyclohexane	(2)	4.442	56	389364	46.837
54) Cyclohexane	(2)	4.442	84	316164	45.945
54) Cyclohexane	(2)	4.442	69	118873	47.580
55) 1,1-Dichloropropene	(2)	4.548	75	322157	48.131
56) Carbon Tetrachloride	(2)	4.551	117	264516	49.068
58) Isobutyl Alcohol	(1)	4.679	41	221106M	688.951
57)$1,2-Dichloroethane-d4	(2)	4.692	102	61687	48.774
57)$1,2-Dichloroethane-d4	(2)	4.692	65	275360	50.014
57)$1,2-Dichloroethane-d4	(2)	4.695	104	40301	50.035
60) Benzene	(2)	4.753	78	1015277	47.189
61) 1,2-Dichloroethane	(2)	4.769	62	327047	49.208
61) 1,2-Dichloroethane	(2)	4.769	98	32539	51.460
65) t-Amyl methyl ether	(2)	4.875	73	630268	49.374
66)*Fluorobenzene	(2)	5.032	96	1026490	50.000
67) n-Heptane	(2)	5.039	43	291159	46.367
69) n-Butanol	(1)	5.356	56	362062	1270.611
71) Trichloroethene	(2)	5.408	95	256734	49.275
73) Methylcyclohexane	(2)	5.610	83	386933	51.154
73) Methylcyclohexane	(2)	5.613	98	179823	51.129
74) 1,2-Dichloropropane	(2)	5.639	63	251947	45.613
75) Dibromomethane	(2)	5.758	93	170629	50.053
77) Methyl Methacrylate	(2)	5.777	69	276637	45.574
76) 1,4-Dioxane	(1)	5.783	88	59193M	694.875
79) Bromodichloromethane	(2)	5.928	83	305197	48.726
43) 1,2-Dichloroethene (Total)	(2)		96	507187	97.401
80) 2-Nitropropane	(2)	6.175	41	217430	102.597
81) 2-Chloroethyl Vinyl Ether	(2)	6.264	63	197123	46.809
82) cis-1,3-Dichloropropene	(2)	6.409	75	404573	46.978
83) 4-Methyl-2-pentanone	(2)	6.589	43	965889	94.996
84)$Toluene-d8	(3)	6.701	98	1002334	51.390
84)$Toluene-d8	(3)	6.701	100	661862	51.170
89) Toluene	(3)	6.772	92	660052	52.533
90) trans-1,3-Dichloropropene	(3)	7.019	75	376388	50.320
92) Ethyl Methacrylate	(3)	7.144	69	473852	51.555

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on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) 1,1,2-Trichloroethane	(3)	7.218	97	259285	53.617
94) Tetrachloroethene	(3)	7.362	166	285295	55.958
95) 1,3-Dichloropropane	(3)	7.388	76	433682	51.632
97) 2-Hexanone	(3)	7.494	43	771018	105.370
98) Dibromochloromethane	(3)	7.615	129	262007	55.472
100) 1,2-Dibromoethane	(3)	7.718	107	285438	53.724
101)*Chlorobenzene-d5	(3)	8.161	117	778376	50.000
103) Chlorobenzene	(3)	8.190	112	740508	53.127
104) 1,1,1,2-Tetrachloroethane	(3)	8.267	131	243504	54.363
105) Ethylbenzene	(3)	8.296	91	1251399	52.403
107) m+p-Xylene	(3)	8.402	106	1017623	107.179
108) o-Xylene	(3)	8.739	106	491071	52.574
110) Styrene	(3)	8.751	104	848188	54.131
111) Bromoform	(3)	8.896	173	201322	54.767
112) Isopropylbenzene	(3)	9.047	105	1214414	52.909
113) Cyclohexanone	(1)	9.114	55	235742	613.490
115)$4-Bromofluorobenzene	(3)	9.165	95	368437	47.217
115)$4-Bromofluorobenzene	(3)	9.165	174	334133	50.746
116) Bromobenzene	(4)	9.281	156	341954	53.469
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	441469	51.188
118) 1,2,3-Trichloropropane	(4)	9.316	110	138660	53.377
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	311625	112.678
120) n-Propylbenzene	(4)	9.374	91	1420091	50.371
121) 2-Chlorotoluene	(4)	9.435	126	307146	52.818
123) 1,3,5-Trimethylbenzene	(4)	9.512	105	1042743	51.284
122) 4-Chlorotoluene	(4)	9.518	126	331412	53.238
125) tert-Butylbenzene	(4)	9.759	134	236534	51.203
126) Pentachloroethane	(4)	9.769	167	203886	55.832
127) 1,2,4-Trimethylbenzene	(4)	9.791	105	1095700	51.139
128) sec-Butylbenzene	(4)	9.919	105	1243502	49.824
130) 1,3-Dichlorobenzene	(4)	9.993	146	641768	52.624
131) p-Isopropyltoluene	(4)	10.025	119	1126699	50.997
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	444015	50.000
134) 1,4-Dichlorobenzene	(4)	10.061	146	665243	52.618
91) 1,3-Dichloropropene (total)	(3)		100	780961	97.297
135) 1,2,3-Trimethylbenzene	(4)	10.099	105	1207600	52.383
136) Benzyl Chloride	(4)	10.157	91	884562	49.987
137) 1,3-Diethylbenzene	(4)	10.240	119	708507	51.037

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$ = Compound is a surrogate standard.

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on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
138) 1,4-Diethylbenzene	(4)	10.301	119	746561	50.195
140) n-Butylbenzene	(4)	10.317	92	534448	47.928
139) 1,2-Dichlorobenzene	(4)	10.327	146	641494	53.019
141) 1,2-Diethylbenzene	(4)	10.382	119	604765	51.600
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	96797	49.386
145) 1,3,5-Trichlorobenzene	(4)	11.010	180	448931	48.387
147) 1,2,4-Trichlorobenzene	(4)	11.421	180	422444	47.426
148) Hexachlorobutadiene	(4)	11.530	225	154012	48.546
149) Naphthalene	(4)	11.585	128	1480377	49.118
150) 1,2,3-Trichlorobenzene	(4)	11.739	180	414019	47.621
109) Xylene (Total)	(3)		106	1508694	159.753
151) 2-Methylnaphthalene	(4)	12.304	142	680143	39.554
142) Diethylbenzene (total)	(4)		100	2059833	152.832

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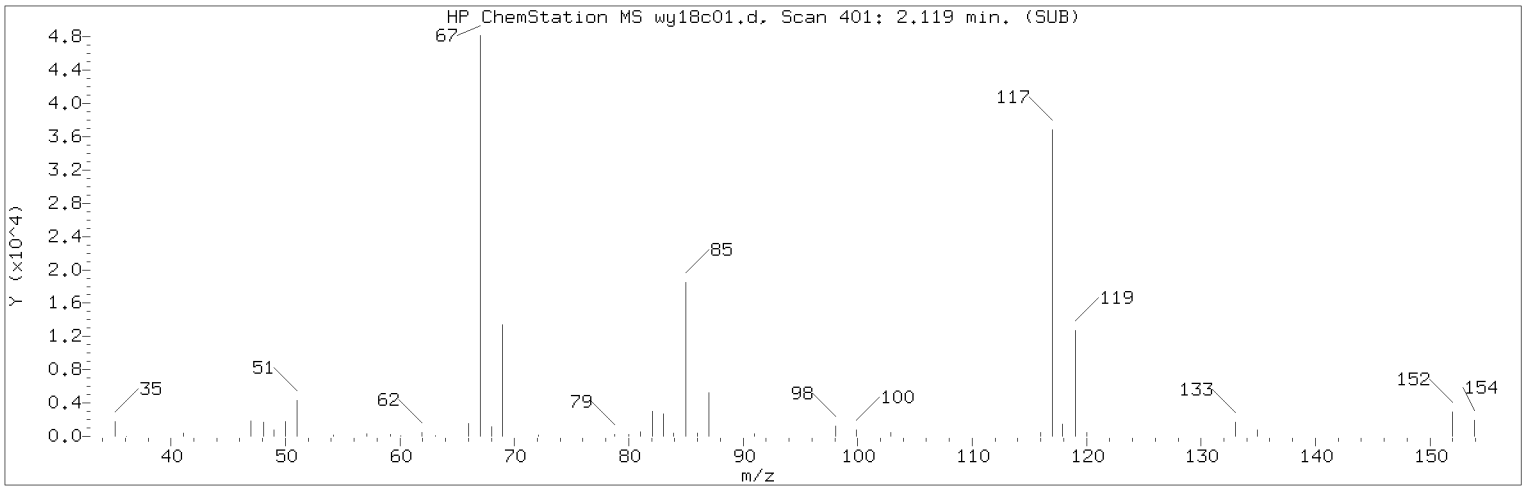
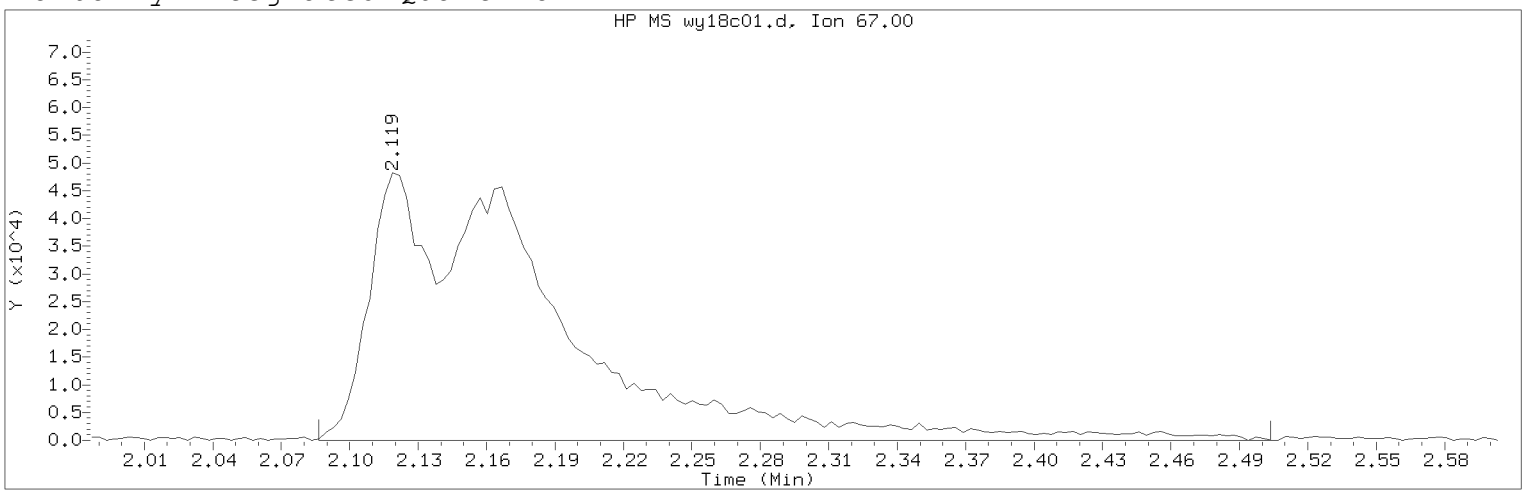
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

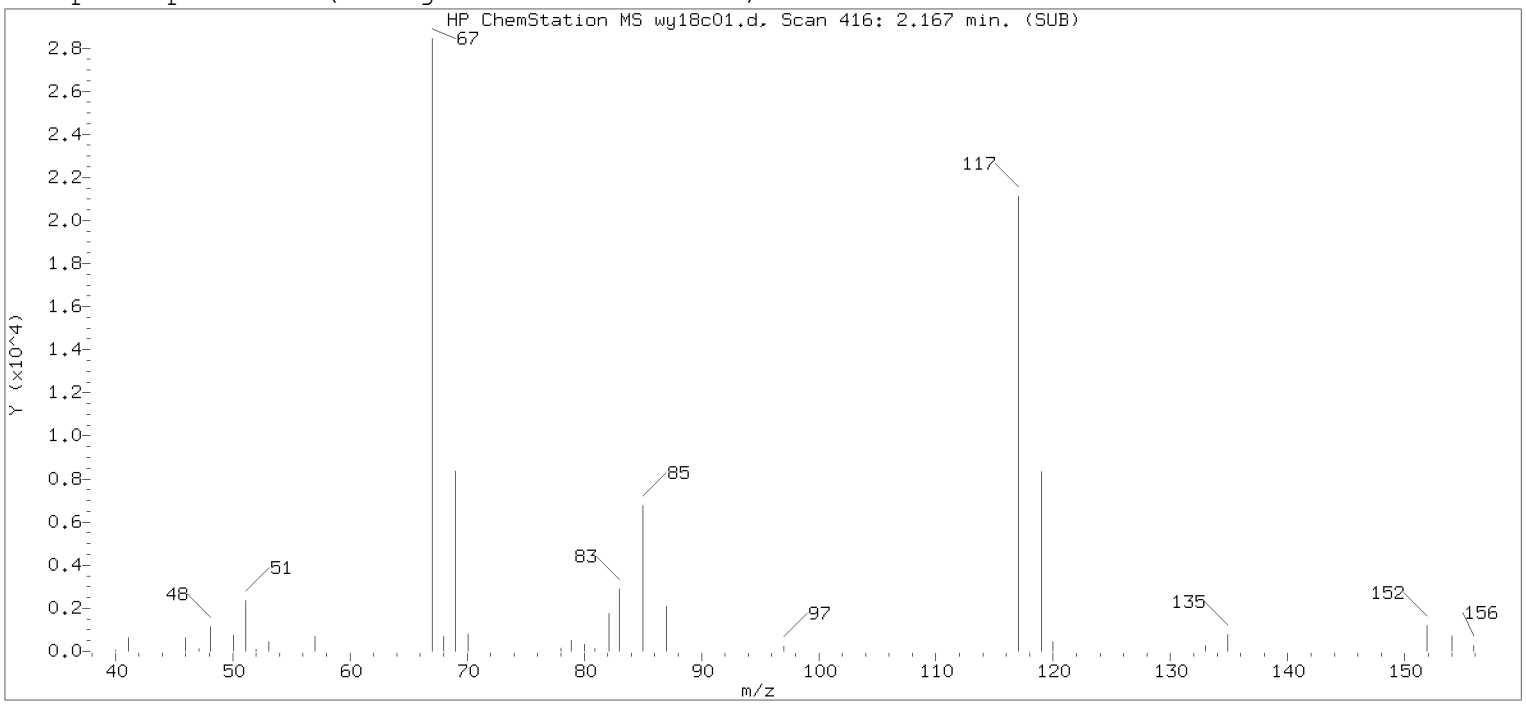
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 401
Retention Time (minutes): 2.119
Quant Ion : 67.00
Area (flag) : 270649M
On-Column Amount (ng) : 45.0099
Integration start scan : 390 Integration stop scan: 520
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

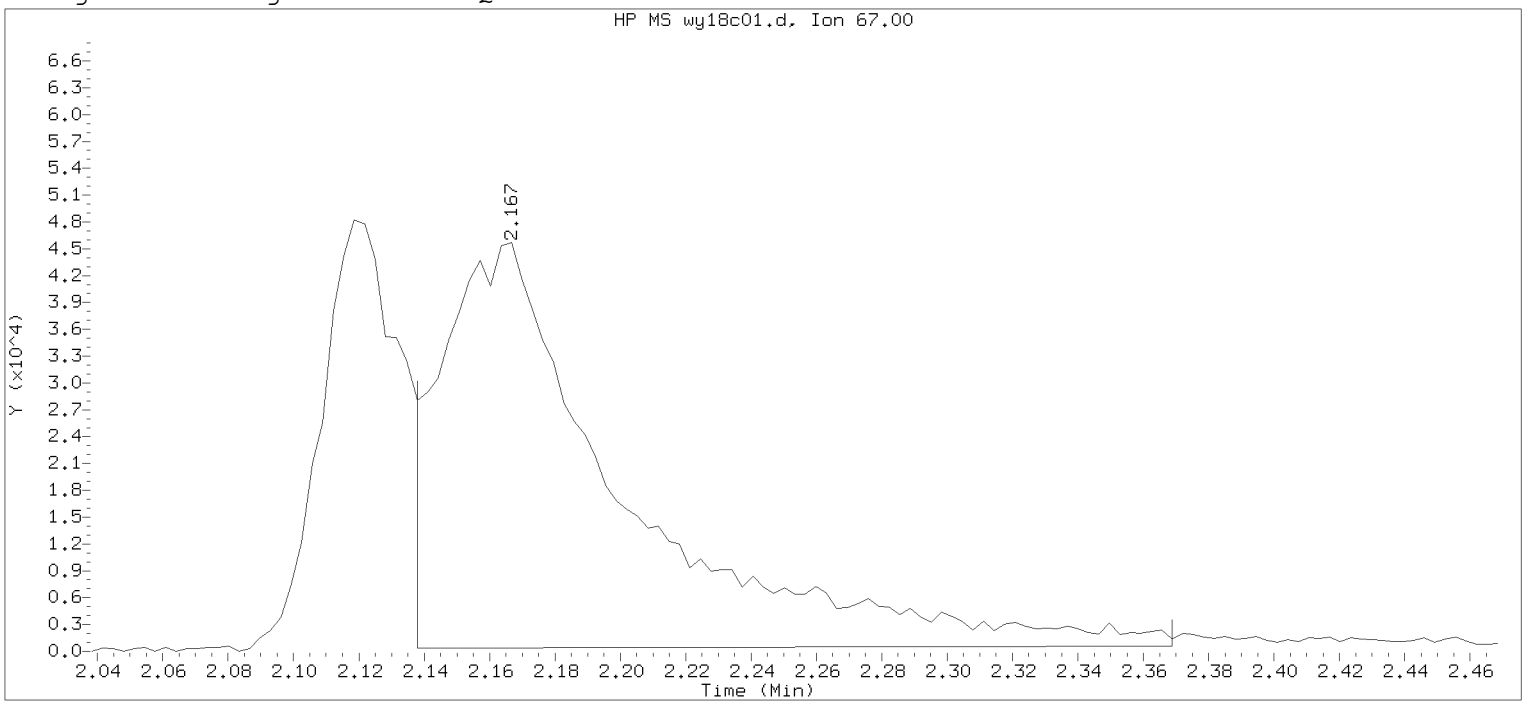
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 416		
Retention Time (minutes)	: 2.167		
Quant Ion	: 67.00		
Area	: 175550		
On-column Amount (ng)	: 29.1946		
Integration start scan	: 406	Integration stop scan:	478
Y at integration start	: 337	Y at integration end:	564

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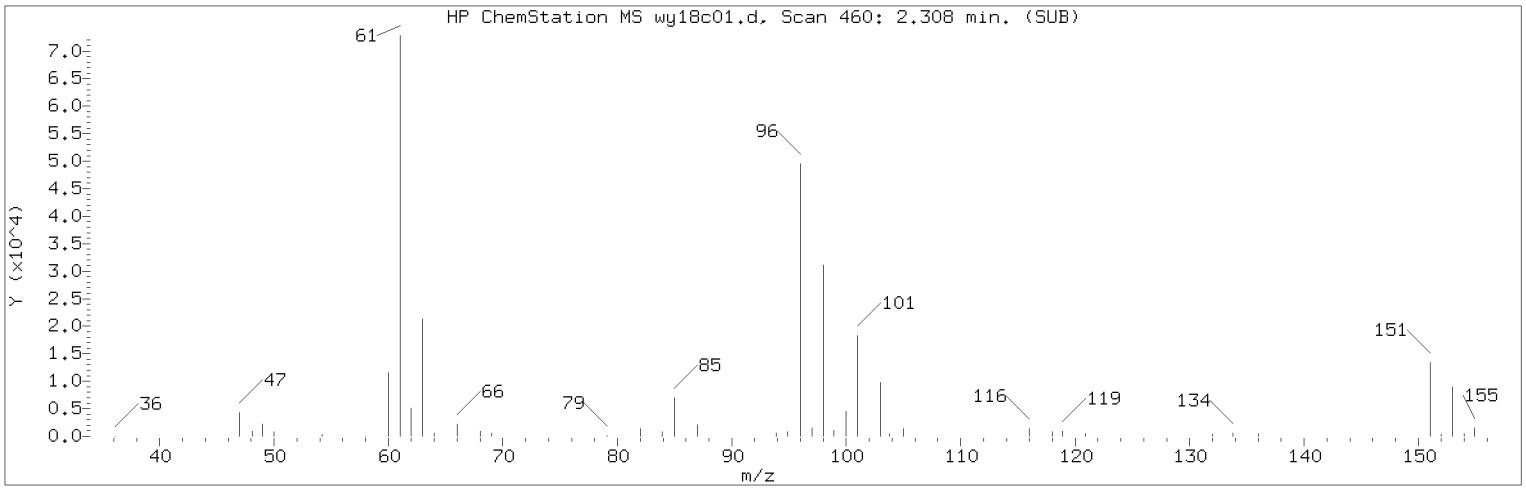
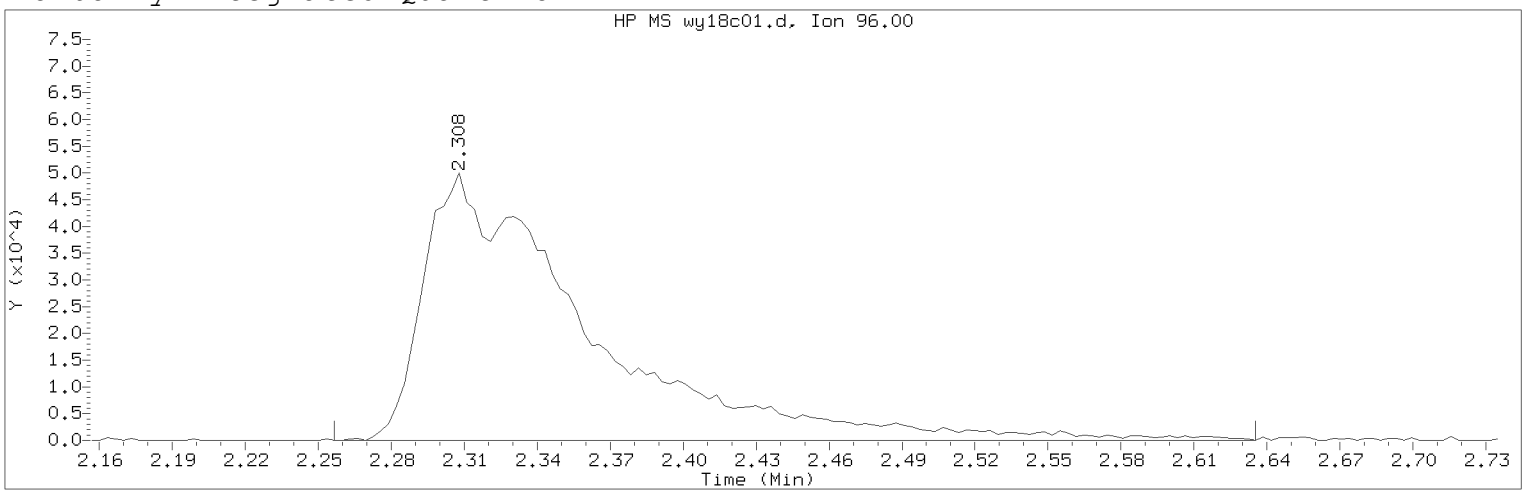
Target 3.5 esignature user's page 280

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

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Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

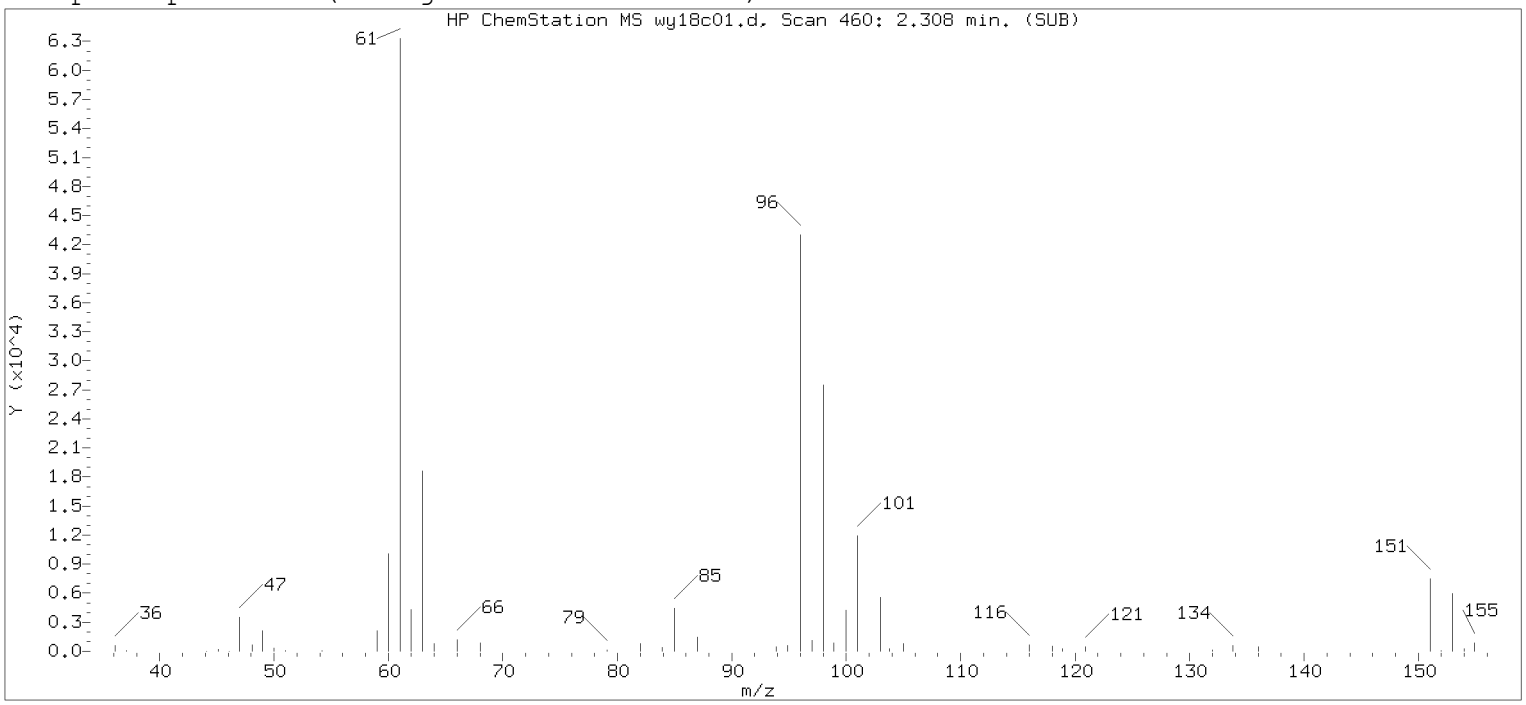
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 460
Retention Time (minutes): 2.308
Quant Ion : 96.00
Area (flag) : 234343M
On-Column Amount (ng) : 51.7791
Integration start scan : 443 Integration stop scan: 561
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

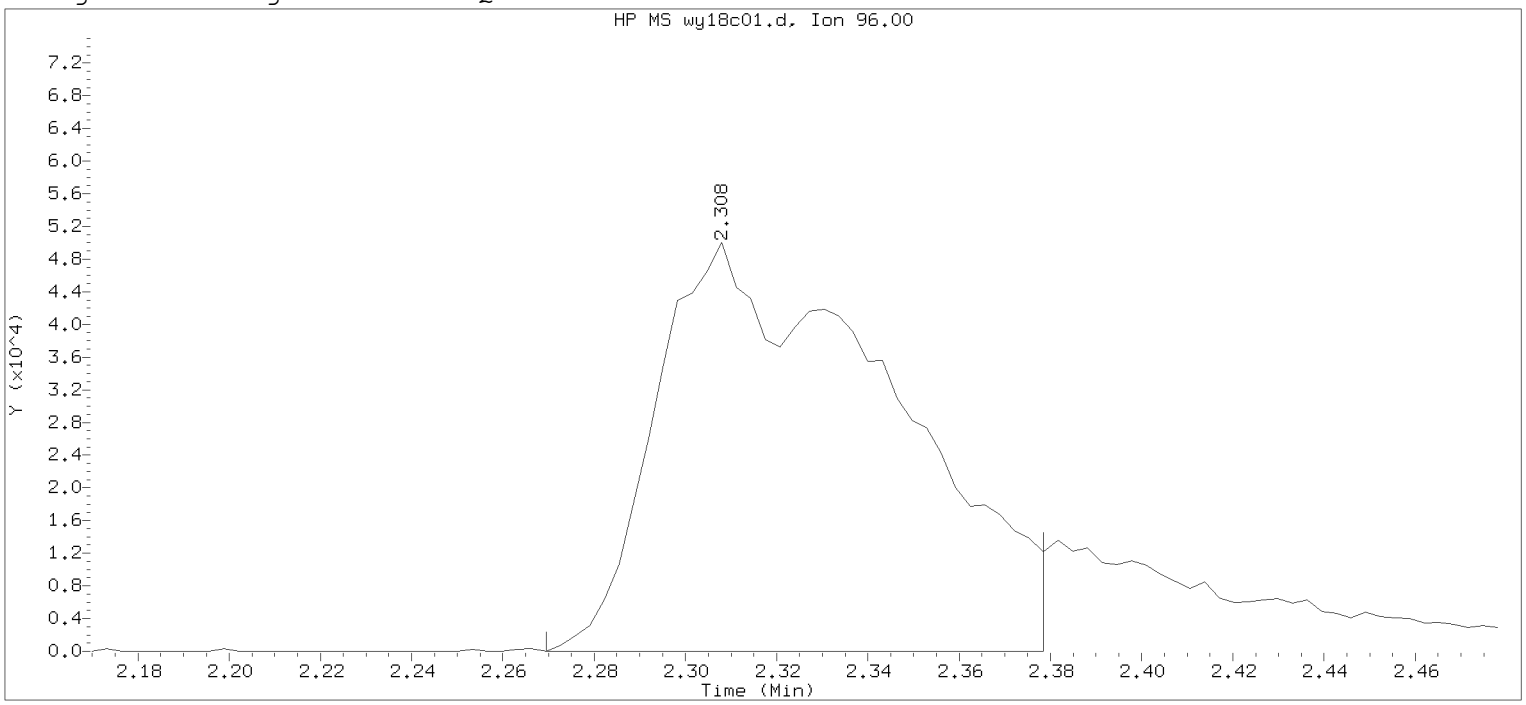
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

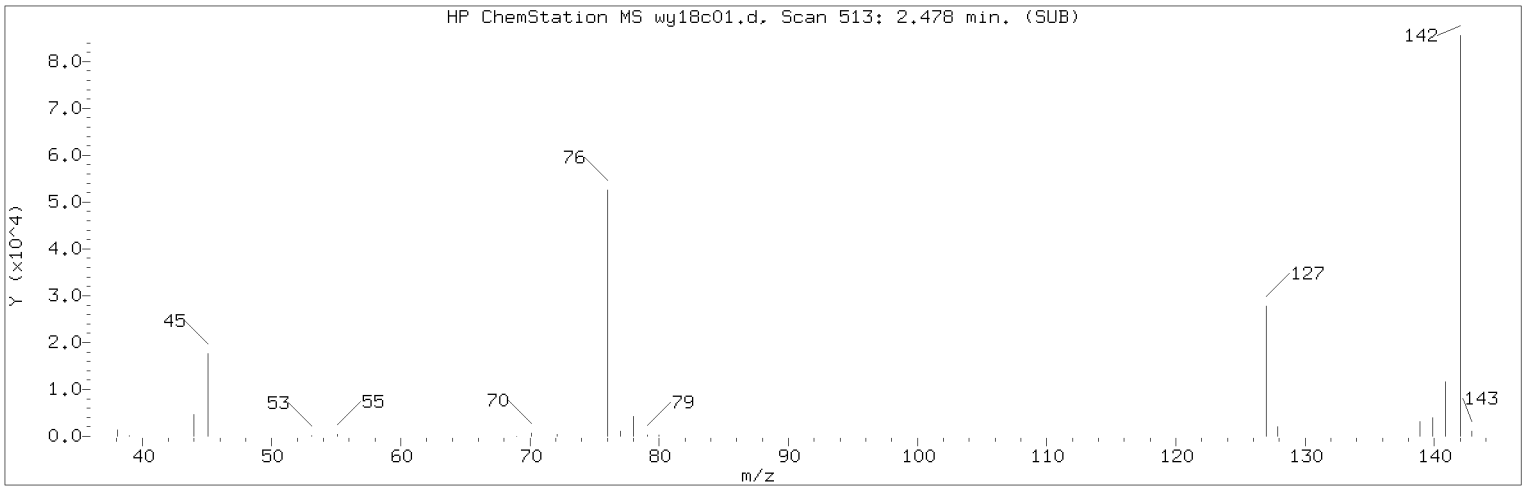
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

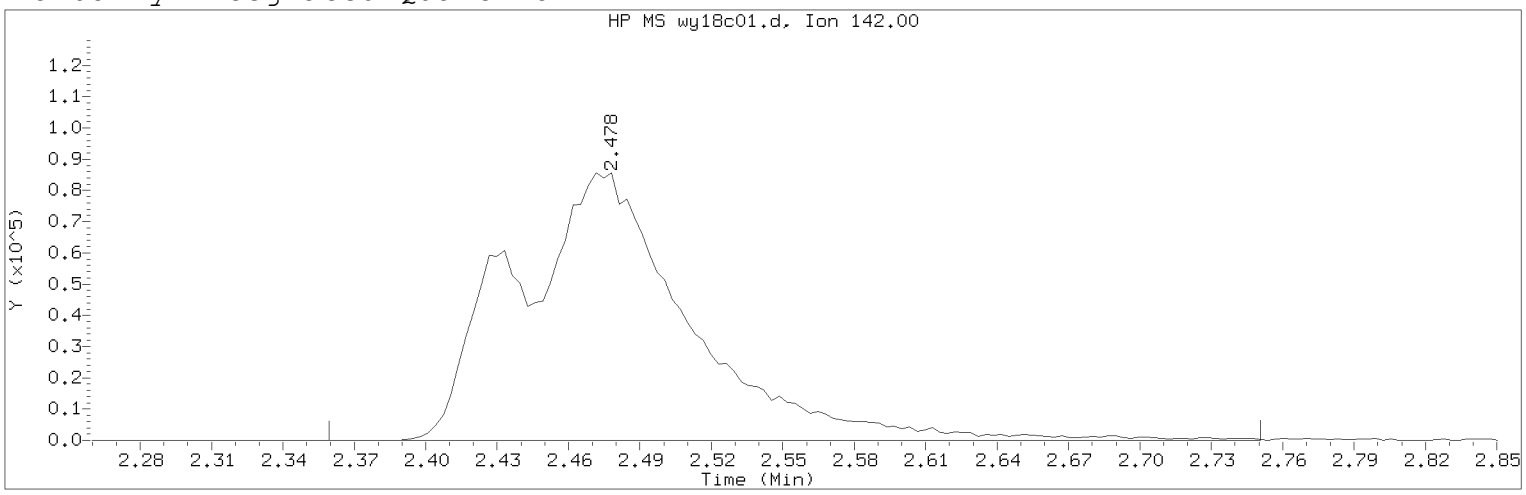
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 460
Retention Time (minutes): 2.308
Quant Ion : 96.00
Area : 181112
On-column Amount (ng) : 40.0175
Integration start scan : 447 Integration stop scan: 481
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

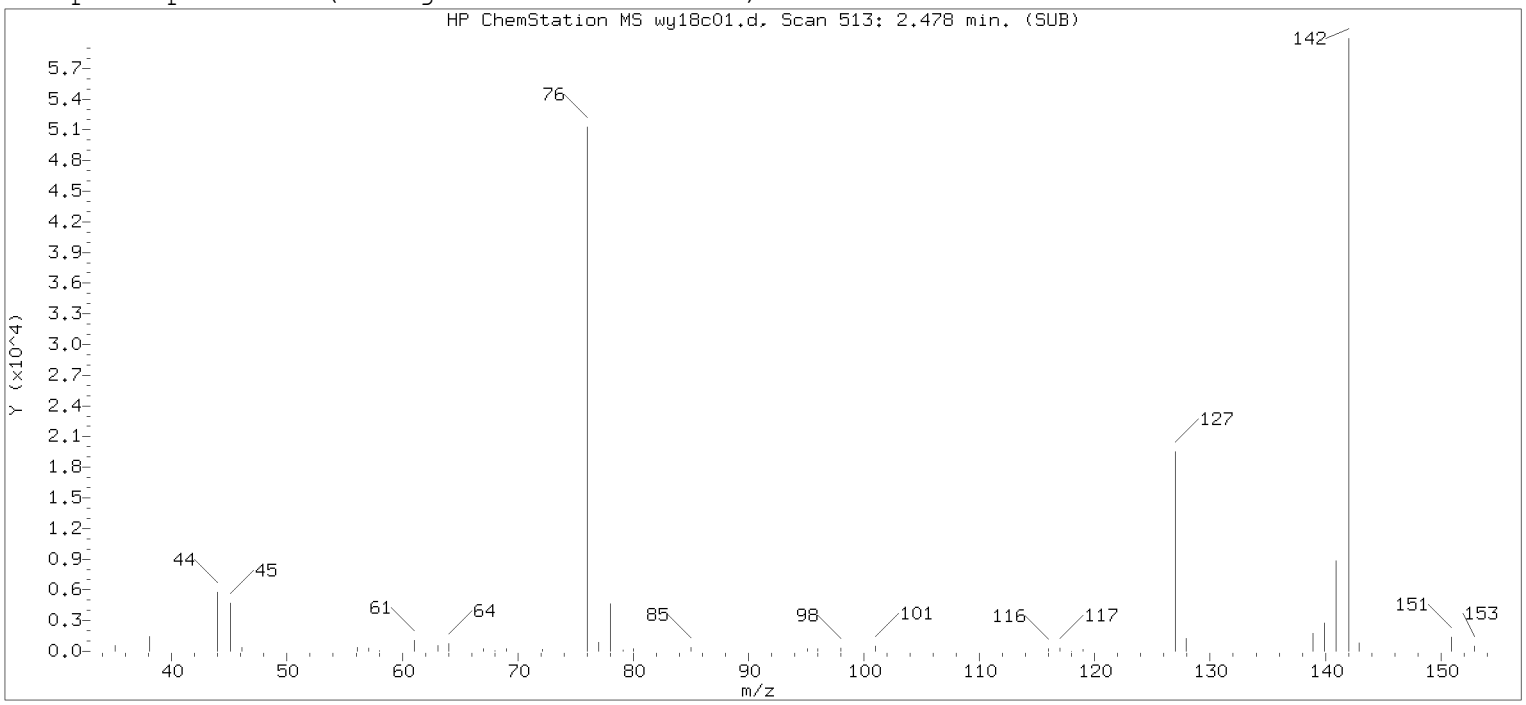
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 513
Retention Time (minutes): 2.478
Quant Ion : 142.00
Area (flag) : 438530M
On-Column Amount (ng) : 50.5633
Integration start scan : 475 Integration stop scan: 597
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

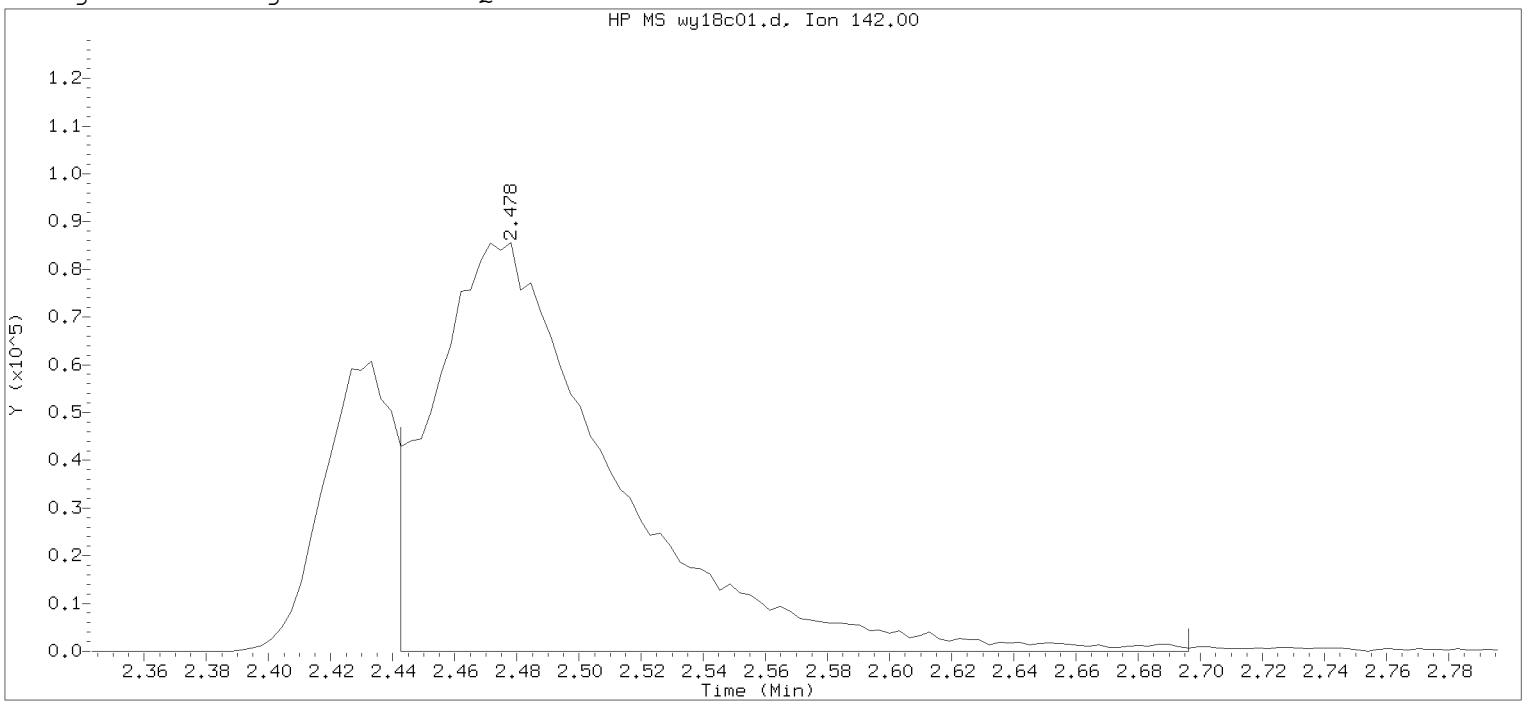
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

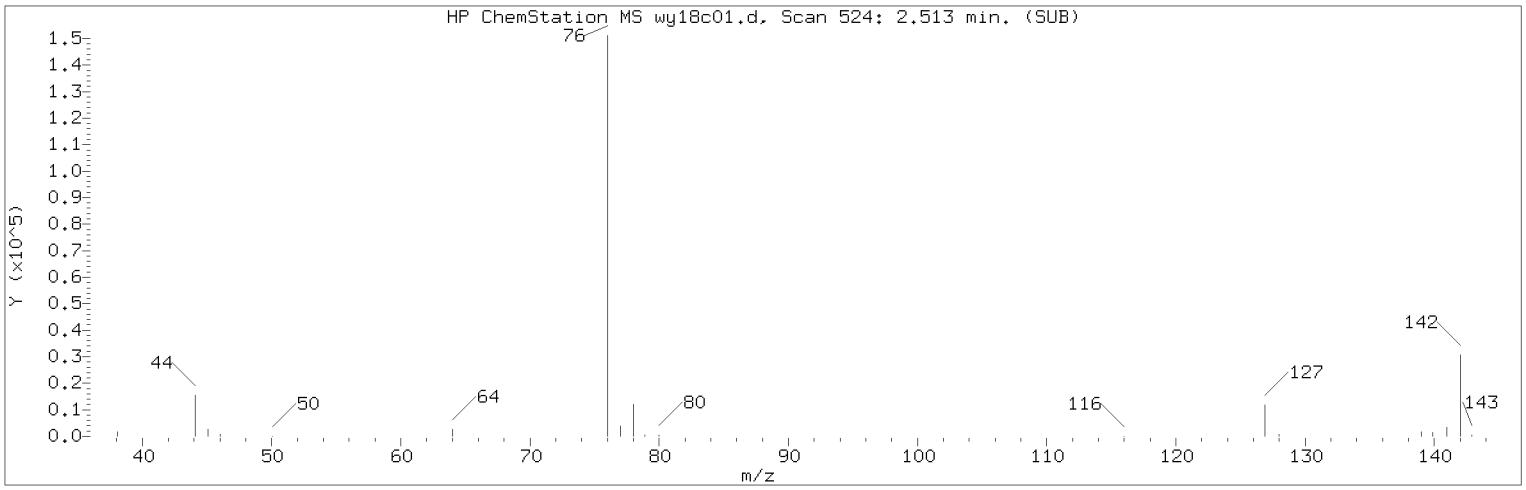
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

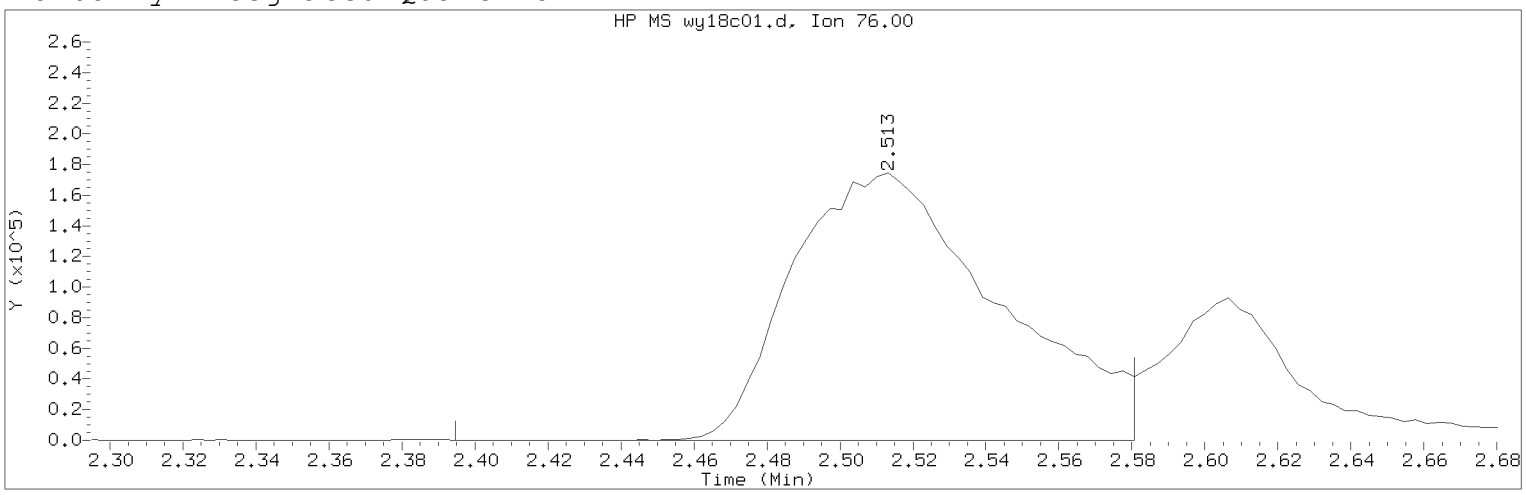
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 513
Retention Time (minutes): 2.478
Quant Ion : 142.00
Area : 343036
On-column Amount (ng) : 39.5527
Integration start scan : 501 Integration stop scan: 580
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

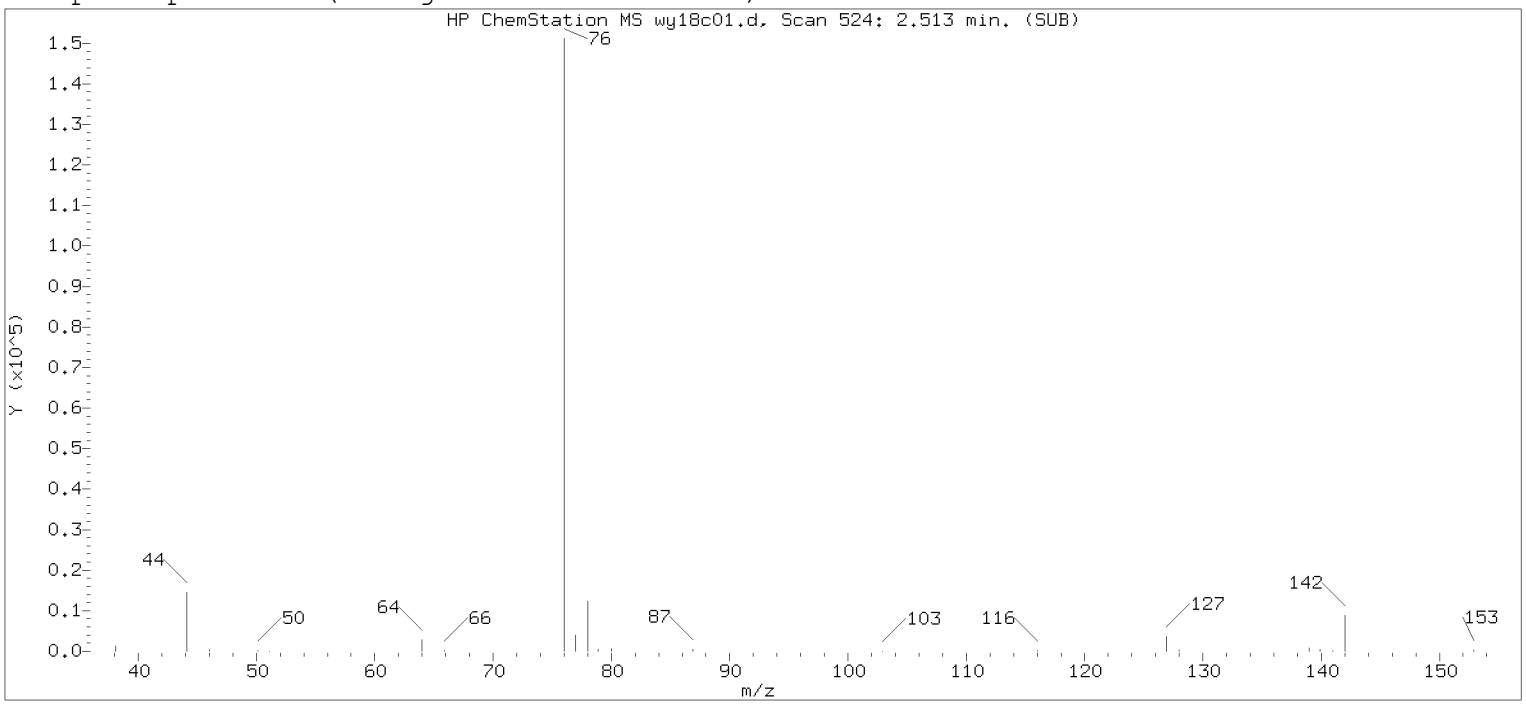
Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 524
Retention Time (minutes): 2.513
Quant Ion : 76.00
Area (flag) : 688325M
On-Column Amount (ng) : 43.1699
Integration start scan : 486 Integration stop scan: 544
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

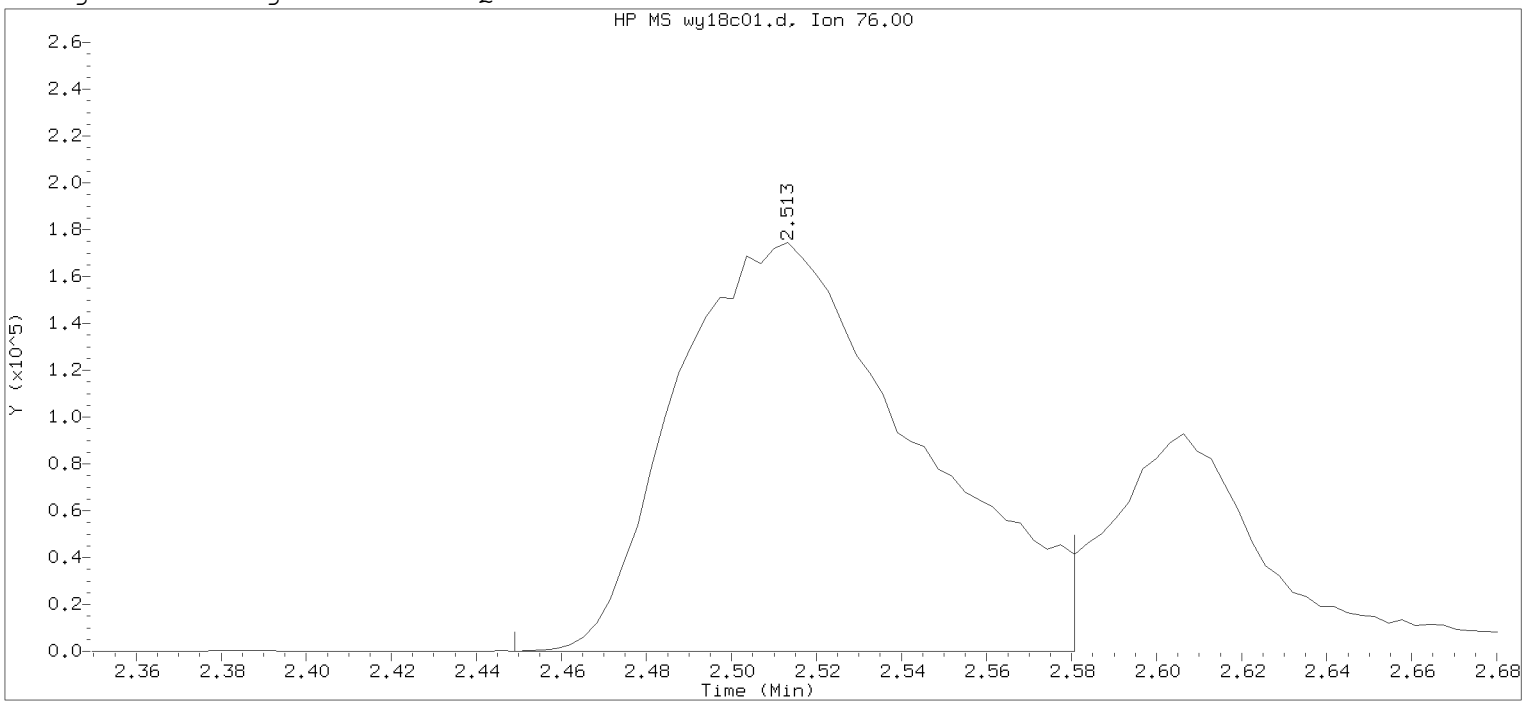
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

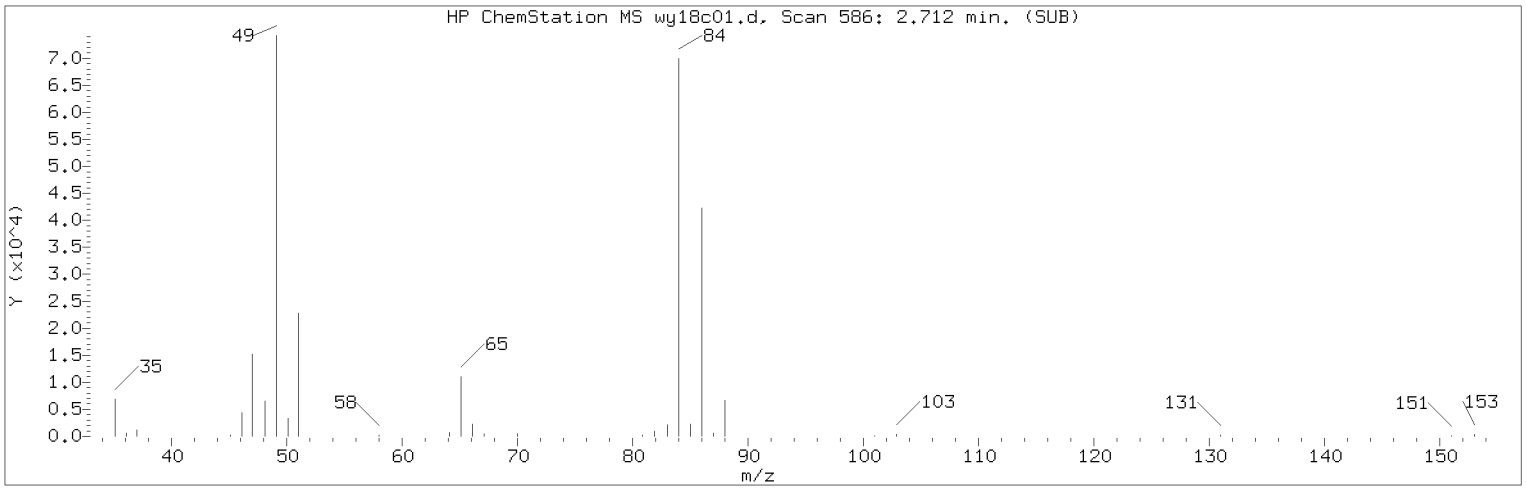
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

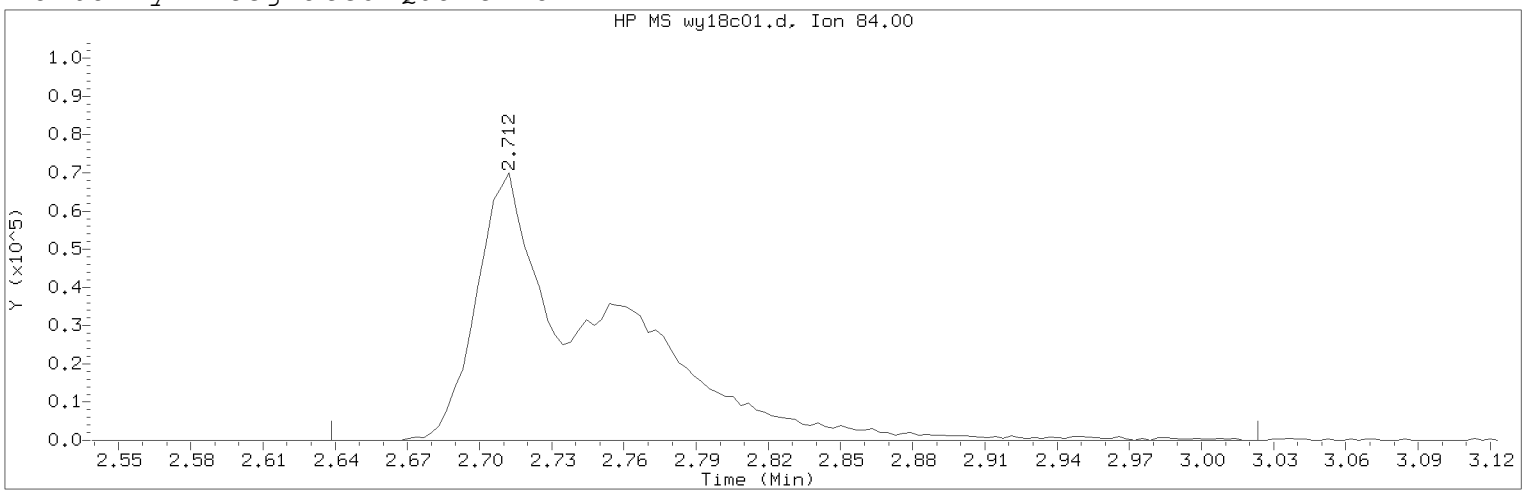
Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 524
Retention Time (minutes): 2.513
Quant Ion : 76.00
Area : 684283
On-column Amount (ng) : 42.9163
Integration start scan : 503 Integration stop scan: 544
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

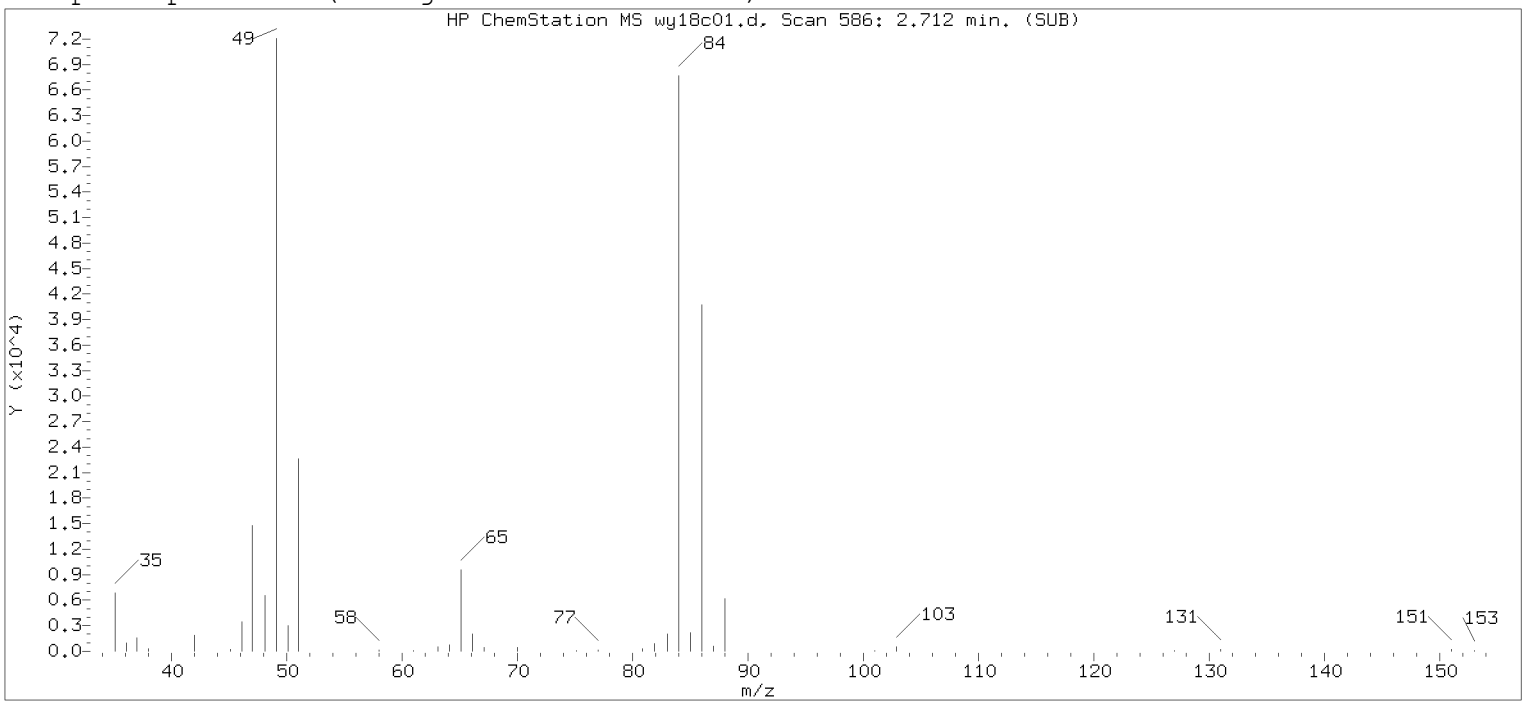
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 586
Retention Time (minutes): 2.712
Quant Ion : 84.00
Area (flag) : 255875M
On-Column Amount (ng) : 46.2534
Integration start scan : 562 Integration stop scan: 682
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

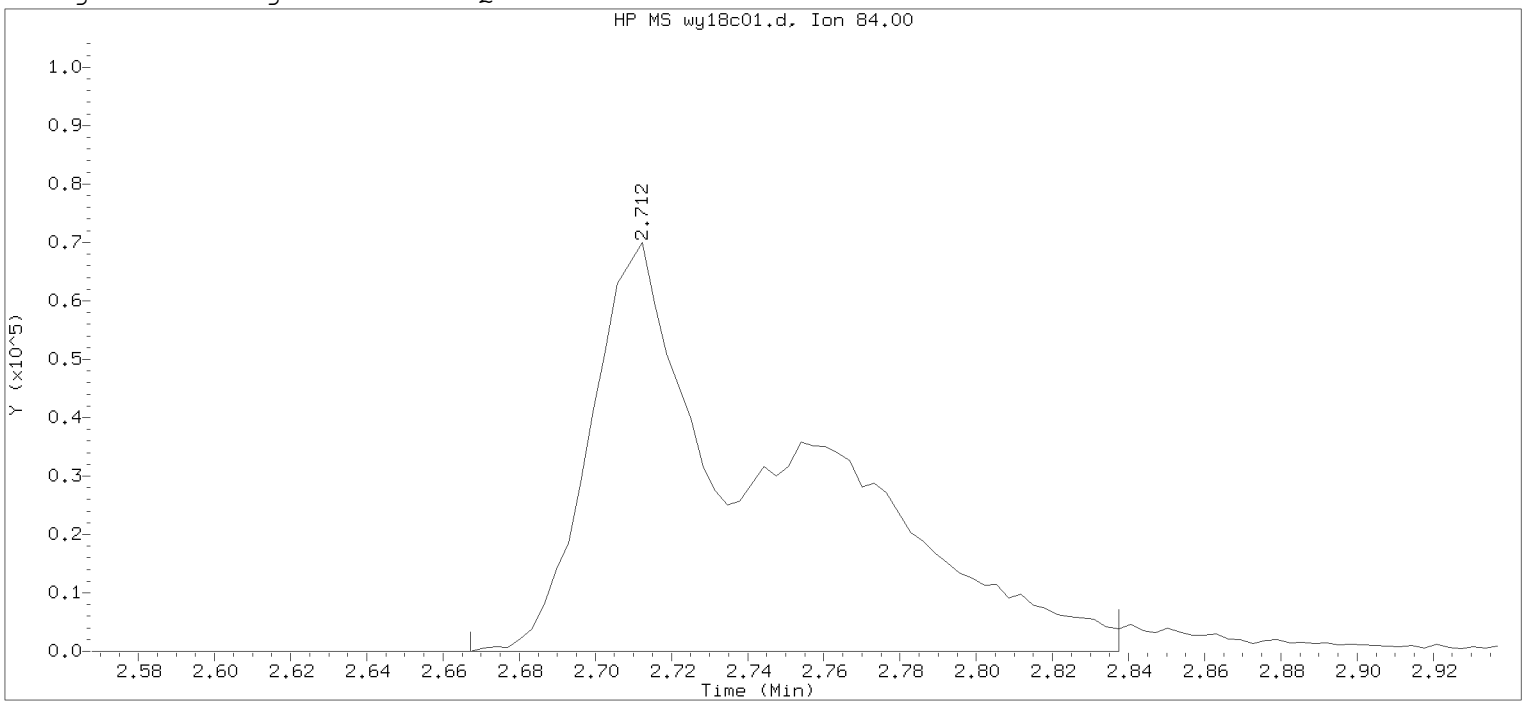
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

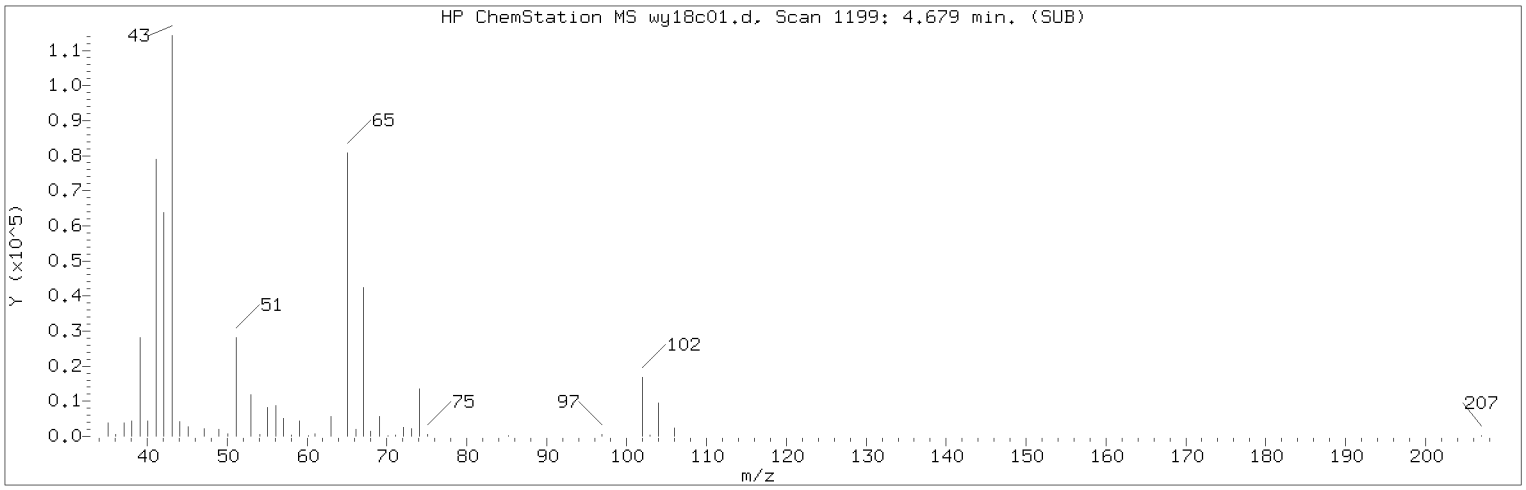
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

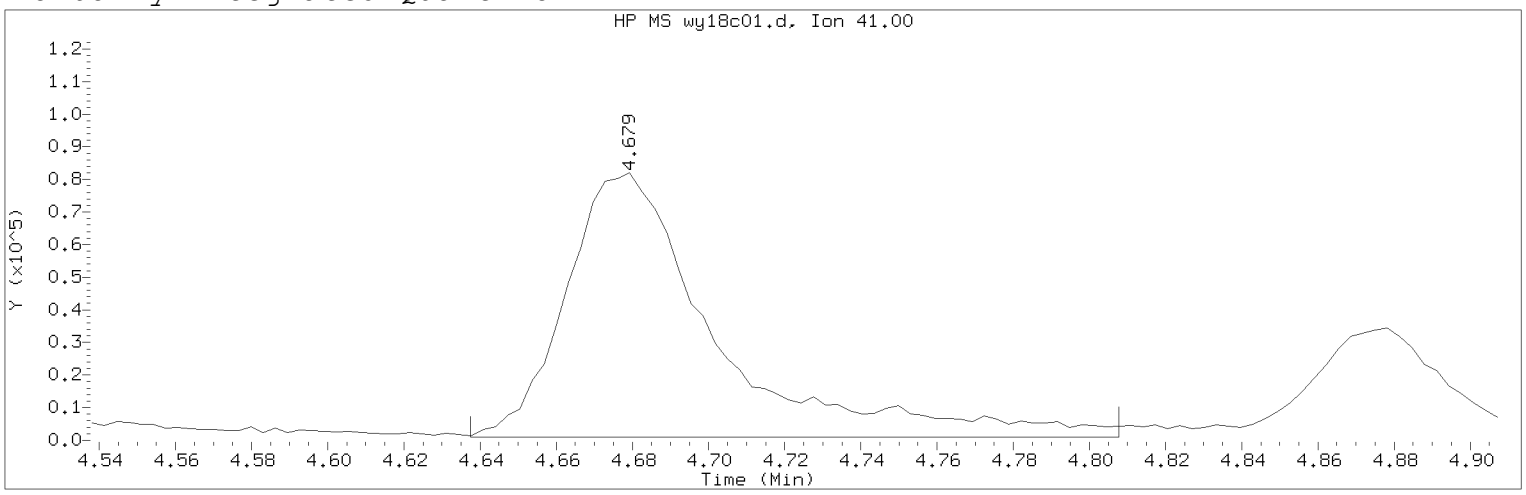
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 586
Retention Time (minutes): 2.712
Quant Ion : 84.00
Area : 242758
On-column Amount (ng) : 43.8824
Integration start scan : 571 Integration stop scan: 624
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user's name

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

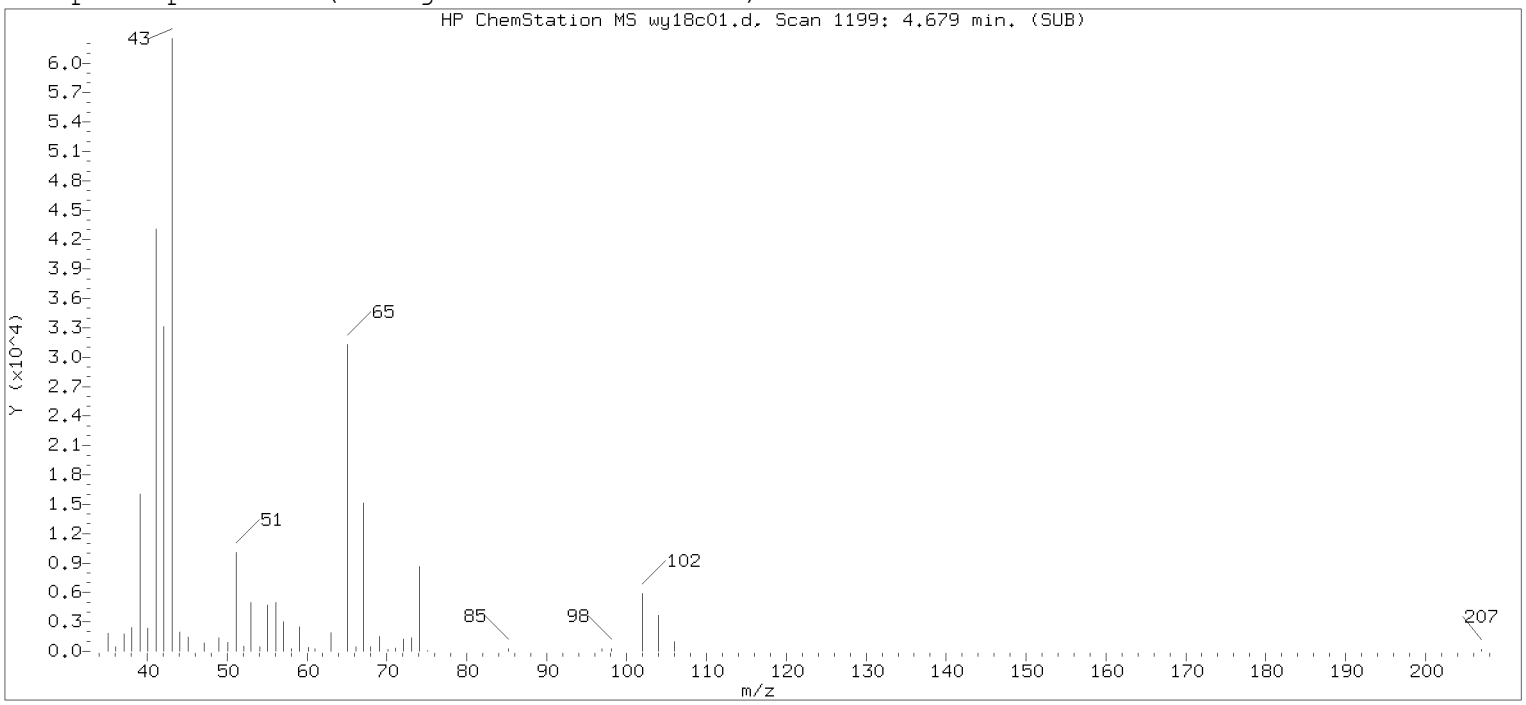
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 1199
Retention Time (minutes): 4.679
Quant Ion : 41.00
Area (flag) : 221106M
On-Column Amount (ng) : 688.9512
Integration start scan : 1185 Integration stop scan: 1238
Y at integration start : 974 Y at integration end: 974

Reason for manual integration: improper integration

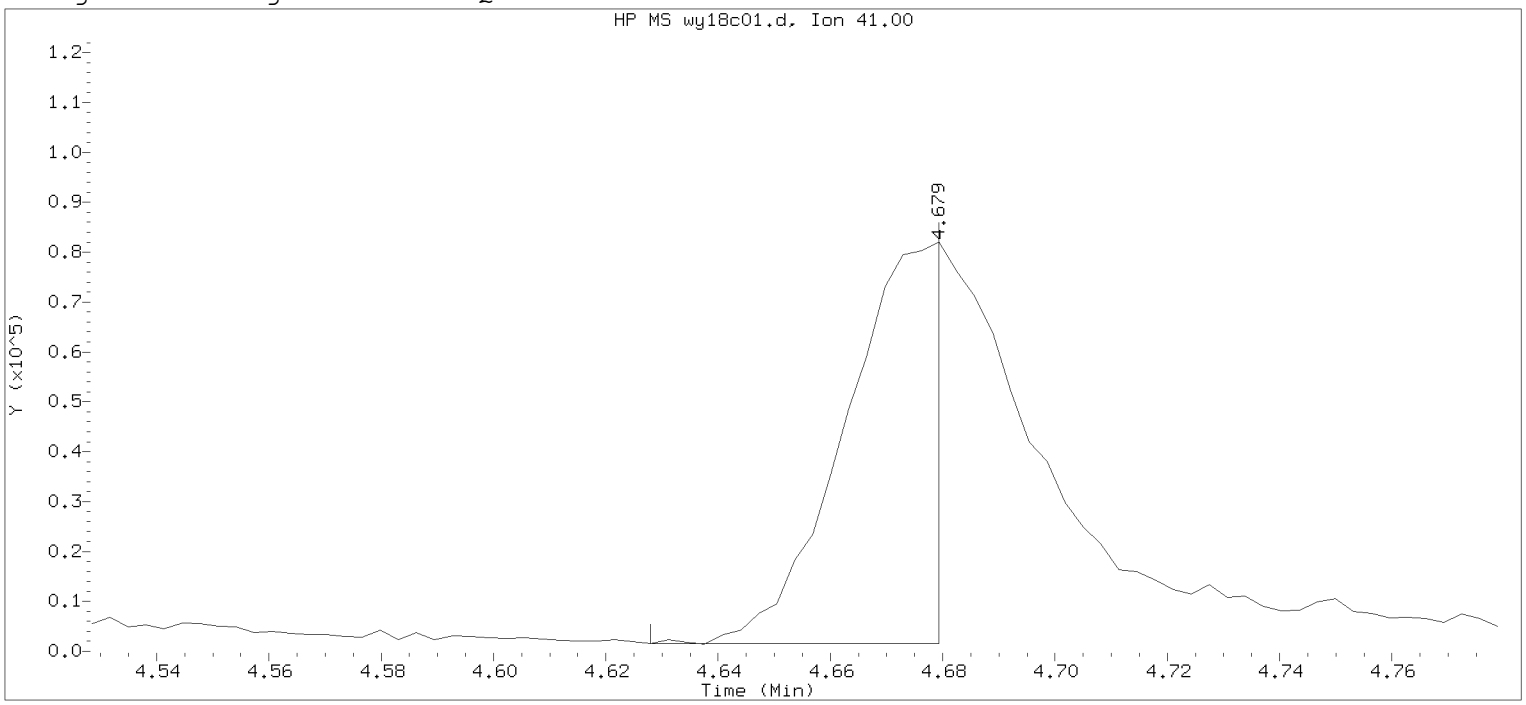
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 1199
Retention Time (minutes): 4.679
Quant Ion : 41.00
Area : 89313
On-column Amount (ng) : 278.2945
Integration start scan : 1182 Integration stop scan: 1198
Y at integration start : 1601 Y at integration end: 1601

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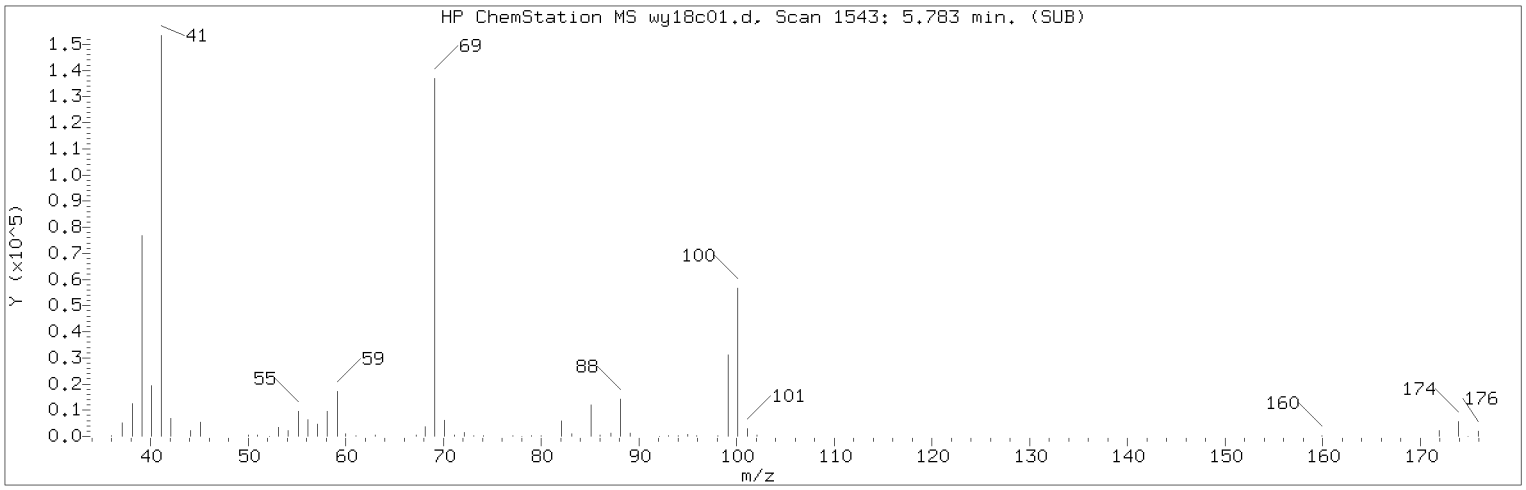
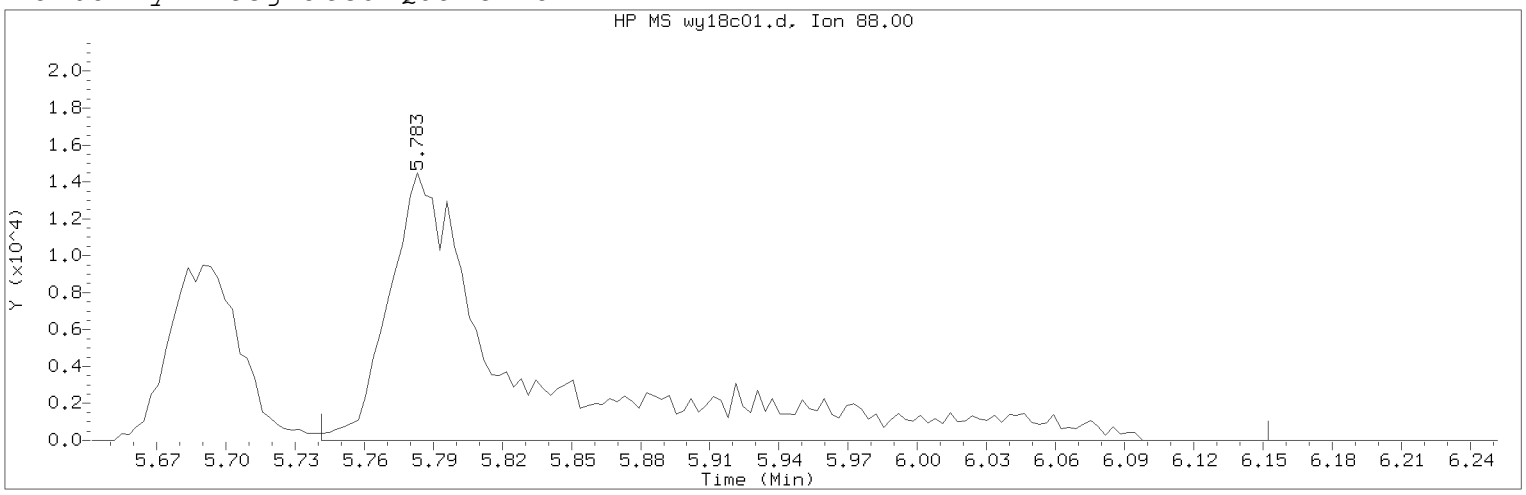
Target 3.5 esignature user's page 290

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:28 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

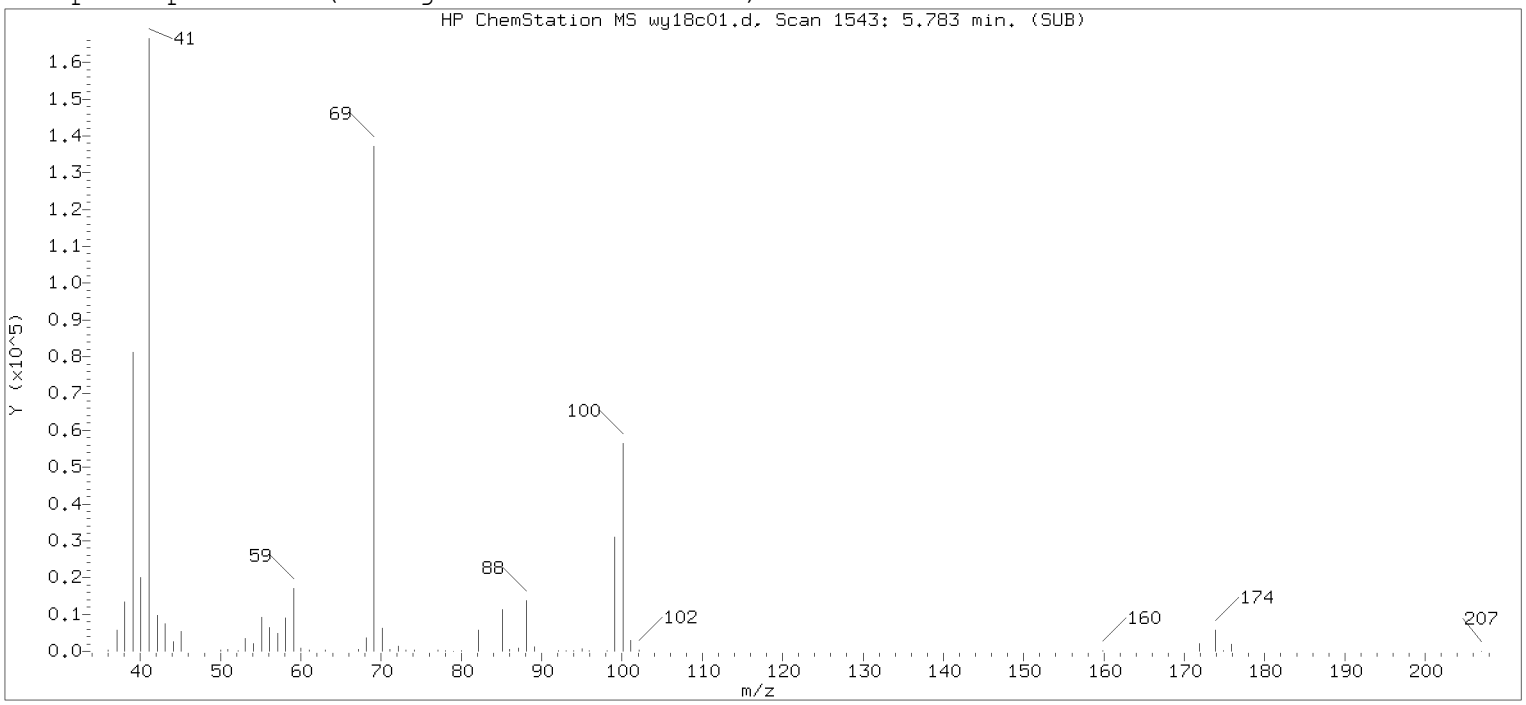
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1543
Retention Time (minutes): 5.783
Quant Ion : 88.00
Area (flag) : 59193M
On-Column Amount (ng) : 694.8747
Integration start scan : 1529 Integration stop scan: 1657
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

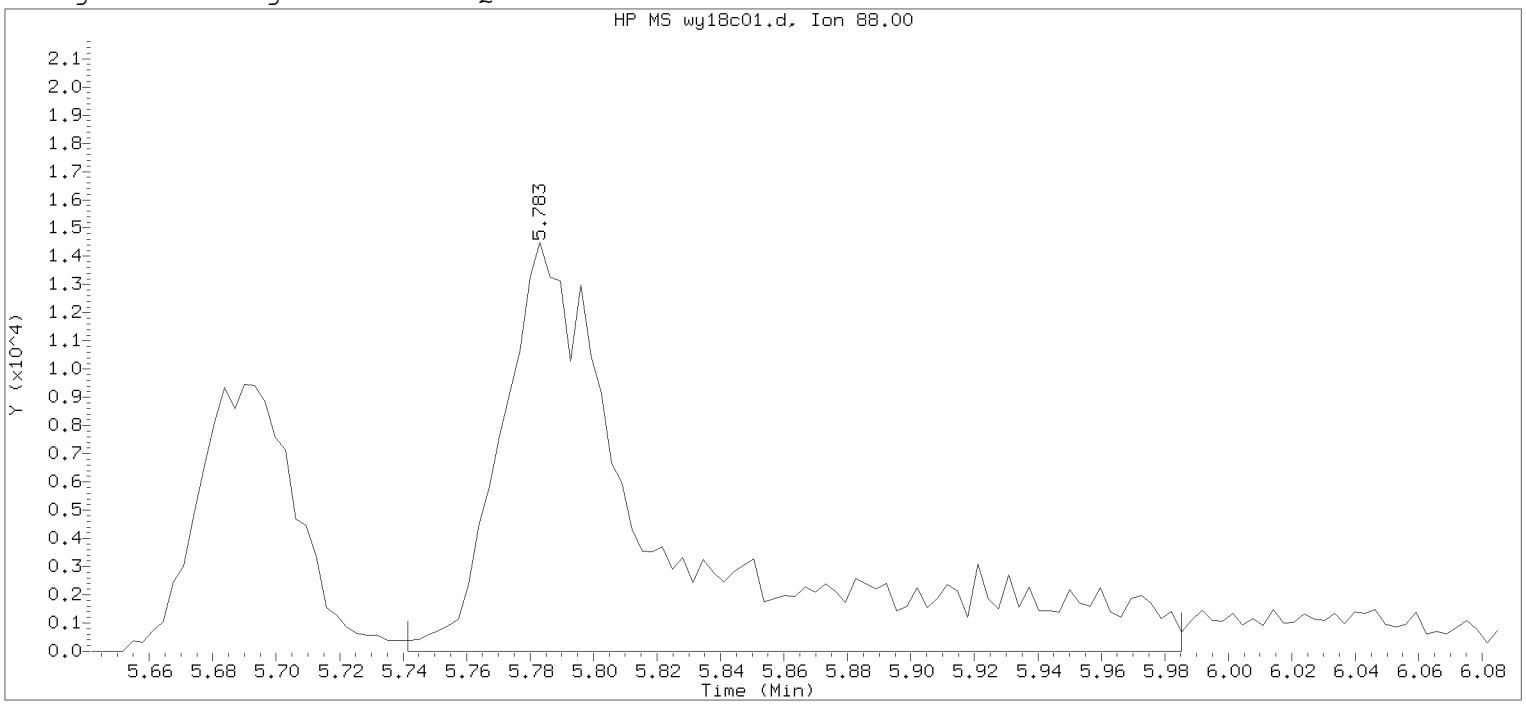
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 22:28.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18c01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:05 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:21 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1543		
Retention Time (minutes)	: 5.783		
Quant Ion	: 88.00		
Area	: 52617		
On-column Amount (ng)	: 617.6776		
Integration start scan	: 1529	Integration stop scan:	1605
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Sara E. Johnson on 05/18/2019 at 22:28.
Target 3.5 esignature user's page 2

Data File: /chem2/HP09137.i/19may19a.b/wy19t01.d

Page 1

Date : 19-MAY-2019 11:04

Client ID: BFB FEB05-19

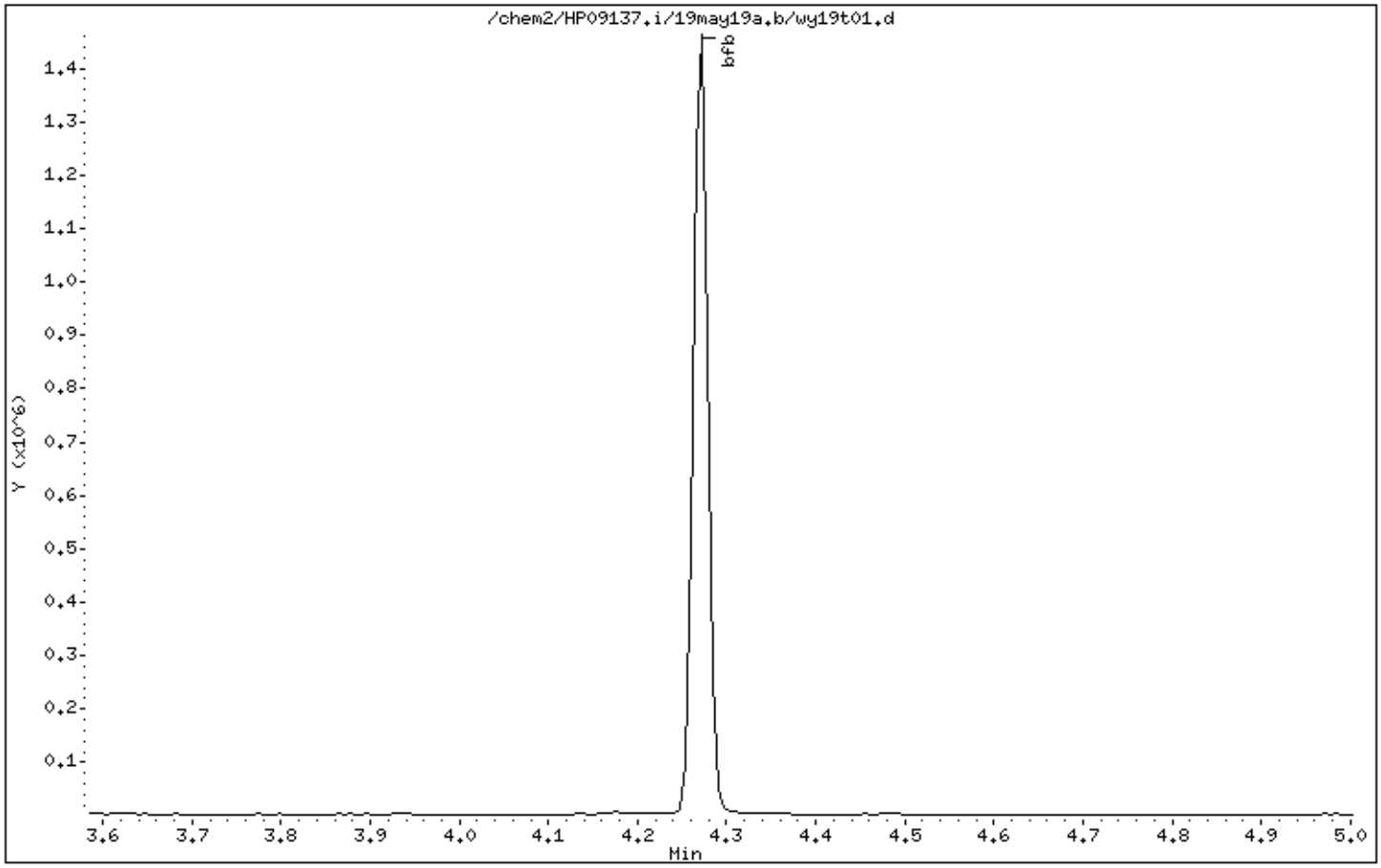
Instrument: HP09137.i

Sample Info: BFB FEB05-19;BFB 50NG;1;3;;;;;;

Operator: CBR01947

Column phase: DB-624

Column diameter: 0.18



Digitally signed by on 05/19/2019 at 11:09.
Target 3.5 esignature user ID: cbr01947

Data File: /chem2/HP09137.i/19may19a.b/wy19t01.d

Date : 19-MAY-2019 11:04

Client ID: BFB FEB05-19

Instrument: HP09137.i

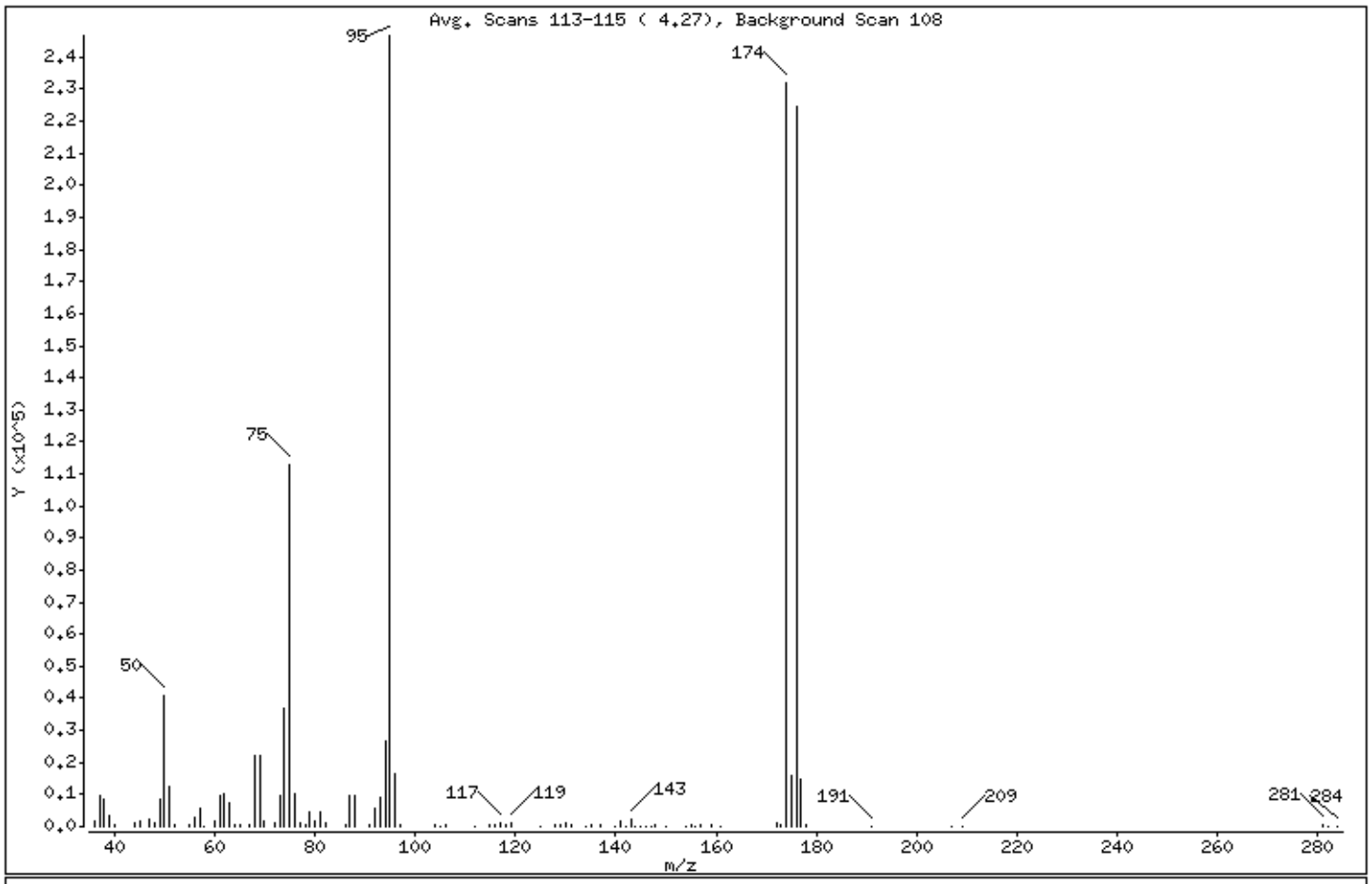
Sample Info: BFB FEB05-19;BFB 50NG;1;3;;;;;;

Operator: CBR01947

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.56
75	30.00 - 60.00% of mass 95	45.66
96	5.00 - 9.00% of mass 95	6.73
173	Less than 2.00% of mass 174	0.17 (0.18)
174	50.00 - 100.00% of mass 95	94.07
175	5.00 - 9.00% of mass 174	6.39 (6.80)
176	95.00 - 101.00% of mass 174	90.96 (96.69)
177	5.00 - 9.00% of mass 176	6.02 (6.62)

Digitally signed by on 05/19/2019 at 11:09.
Target 3.5 esignature user ID: cbr01947

Data File: /chem2/HP09137.i/19may19a.b/wy19t01.d

Date : 19-MAY-2019 11:04

Client ID: BFB FEB05-19 Instrument: HP09137.i

Sample Info: BFB FEB05-19;BFB 50NG;1;3;;;;;;

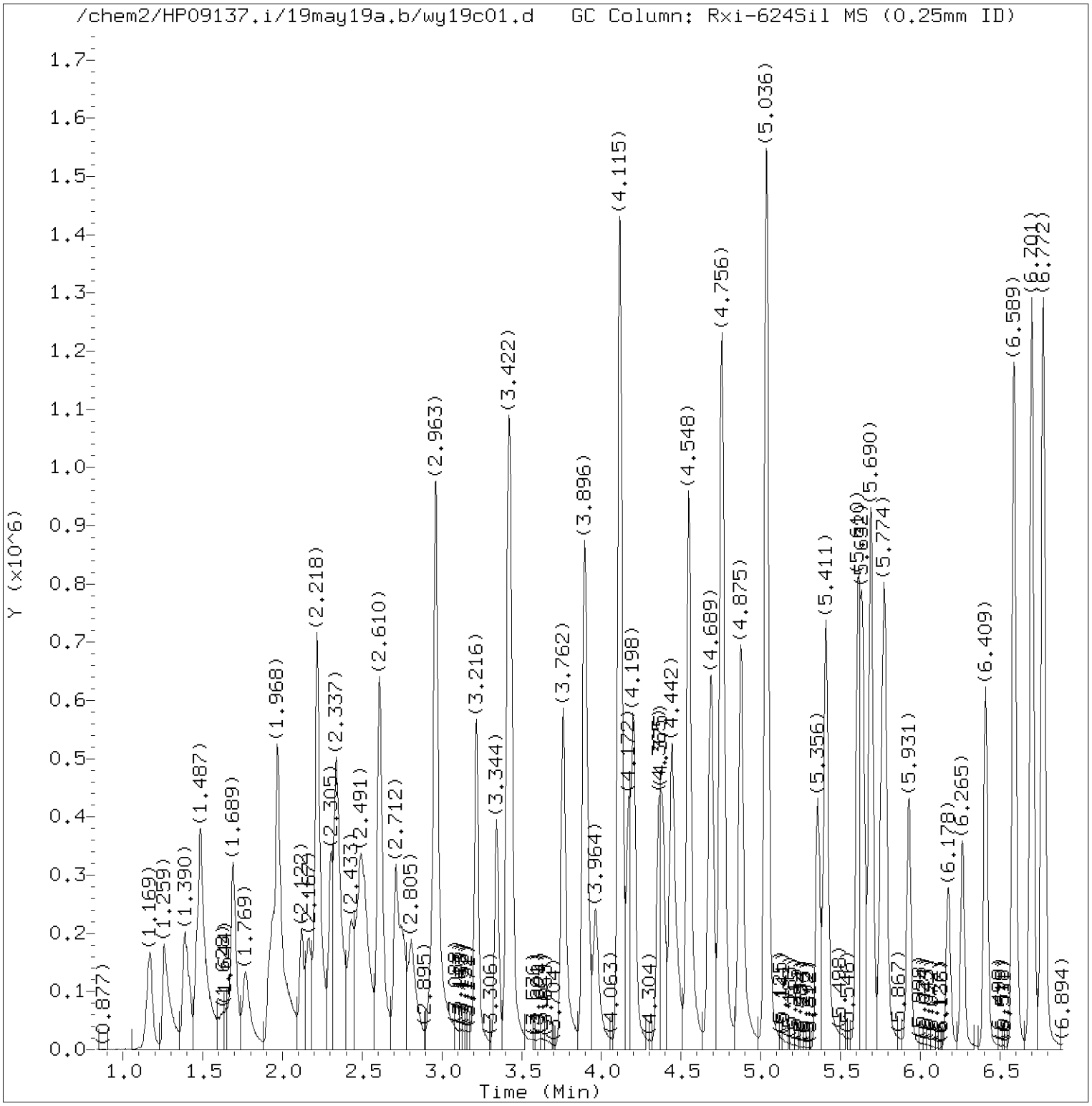
Operator: CBR01947

Column phase: DB-624 Column diameter: 0.18

Data File: wy19t01.d
Spectrum: Avg. Scans 113-115 (4.27), Background Scan 108
Location of Maximum: 95.00
Number of points: 94

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1858	68.00	21936	104.00	809	147.00	154
37.00	9821	69.00	22160	105.00	134	148.00	598
38.00	8516	70.00	1632	106.00	689	150.00	189
39.00	3503	72.00	1262	112.00	112	154.00	84
40.00	307	73.00	9738	115.00	327	155.00	785
44.00	931	74.00	36824	116.00	695	156.00	87
45.00	1717	75.00	112680	117.00	1403	157.00	461
47.00	2402	76.00	10291	118.00	783	159.00	390
48.00	1098	77.00	1373	119.00	1097	161.00	200
49.00	8785	78.00	794	125.00	86	172.00	888
50.00	40864	79.00	4421	128.00	814	173.00	417
51.00	12463	80.00	1472	129.00	394	174.00	232128
52.00	486	81.00	4364	130.00	996	175.00	15778
55.00	490	82.00	909	131.00	316	176.00	224448
56.00	2568	86.00	351	134.00	84	177.00	14866
57.00	5406	87.00	9756	135.00	298	178.00	381
58.00	137	88.00	9469	137.00	389	191.00	86
60.00	1697	91.00	691	140.00	92	207.00	52
61.00	9430	92.00	5836	141.00	1905	209.00	106
62.00	10000	93.00	9249	142.00	186	281.00	651
63.00	7221	94.00	26384	143.00	2336	282.00	87
64.00	823	95.00	246720	144.00	98	284.00	85
65.00	648	96.00	16608	145.00	86		
67.00	557	97.00	551	146.00	237		

Digitally signed by on 05/19/2019 at 11:09.
Target 3.5 esignature user ID: cbr01947



Total Ion Chromatogram (TIC)

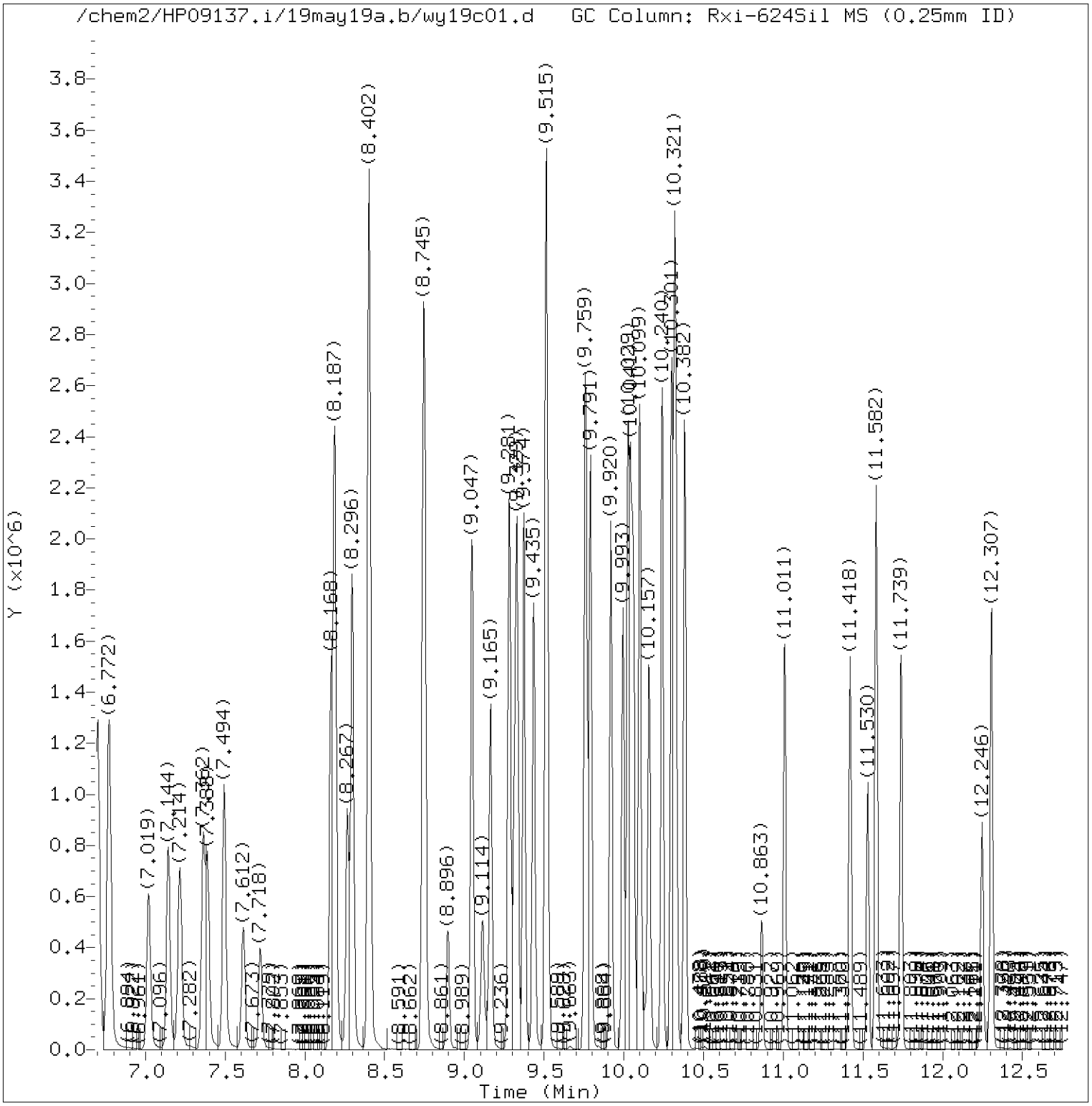
Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.259	85	352640	56.551
4) Chloromethane	(2)	1.390	50	283940	36.568
6) Vinyl Chloride	(2)	1.464	62	282008	39.618
5) 1,3-Butadiene	(2)	1.483	39	178597M	37.742
8) Bromomethane	(2)	1.689	94	244194M	43.498
9) Chloroethane	(2)	1.775	64	176670	37.717
12) Trichlorofluoromethane	(2)	1.936	101	380635	50.350
11) n-Pentane	(2)	1.968	43	289216	40.226
13) Ethanol	(1)	2.032	45	62951	734.166
15) Freon 123a	(2)	2.119	67	260018M	46.027
16) Acrolein	(1)	2.218	56	640475	473.191
17) 1,1-Dichloroethene	(2)	2.308	96	211031	49.632
17) 1,1-Dichloroethene	(2)	2.305	63	87772	40.916
19) Freon 113	(2)	2.340	101	186282	49.892
18) Acetone	(1)	2.343	58	68390	103.952
21) 2-Propanol	(1)	2.452	45	117545	240.475
22) Methyl Iodide	(2)	2.478	142	417167M	51.198
23) Carbon Disulfide	(2)	2.513	76	625100	41.730
25) Allyl Chloride	(2)	2.606	41	348321	47.023
27) Methyl Acetate	(2)	2.622	43	277295	43.249
28) Methylene Chloride	(2)	2.712	84	247023M	47.529
29)*t-Butyl alcohol-d10	(1)	2.735	65	188008	250.000
30) t-Butyl alcohol	(1)	2.809	59	224779	257.788
31) Acrylonitrile	(2)	2.927	53	138578	41.085
32) trans-1,2-Dichloroethene	(2)	2.959	96	224566	48.678
33) Methyl Tertiary Butyl Ether	(2)	2.966	73	654020	58.224
34) n-Hexane	(2)	3.219	57	276401	44.777
36) 1,1-Dichloroethane	(2)	3.344	63	388866	46.518
38) di-Isopropyl ether	(2)	3.415	45	721801	44.945
39) 2-Chloro-1,3-butadiene	(2)	3.431	53	362173	50.023
40) Ethyl t-butyl ether	(2)	3.762	59	610607	52.160
42) cis-1,2-Dichloroethene	(2)	3.893	96	247374	47.758
45) 2,2-Dichloropropane	(2)	3.893	77	151453	40.341
44) 2-Butanone	(2)	3.909	43	386737	79.806
47) Propionitrile	(1)	3.964	54	310763	286.761
48) Methacrylonitrile	(2)	4.115	67	399389	110.127
49) Bromochloromethane	(2)	4.121	128	143715	53.375
50) Tetrahydrofuran	(1)	4.172	71	109736	109.408

M = Compound was manually integrated.
* = Compound is an internal standard.

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Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	4.205	83	395256	50.393
52)$Dibromofluoromethane	(2)	4.359	113	218524	48.911
52)$Dibromofluoromethane	(2)	4.359	111	225901	49.255
53) 1,1,1-Trichloroethane	(2)	4.384	97	299166	50.692
54) Cyclohexane	(2)	4.442	56	334661	42.849
54) Cyclohexane	(2)	4.445	84	273818	42.354
54) Cyclohexane	(2)	4.445	69	103238	43.983
55) 1,1-Dichloropropene	(2)	4.548	75	297029	47.235
56) Carbon Tetrachloride	(2)	4.548	117	253960	50.144
58) Isobutyl Alcohol	(1)	4.679	41	209718	659.732
57)$1,2-Dichloroethane-d4	(2)	4.692	102	59029	49.678
57)$1,2-Dichloroethane-d4	(2)	4.692	65	268706	51.949
57)$1,2-Dichloroethane-d4	(2)	4.699	104	38086	50.330
60) Benzene	(2)	4.753	78	956474	47.320
61) 1,2-Dichloroethane	(2)	4.766	62	323596	51.825
61) 1,2-Dichloroethane	(2)	4.769	98	30974	52.140
65) t-Amyl methyl ether	(2)	4.875	73	595645	49.667
66)*Fluorobenzene	(2)	5.036	96	964374	50.000
67) n-Heptane	(2)	5.042	43	256307	43.446
69) n-Butanol	(1)	5.356	56	332536	1178.185
71) Trichloroethene	(2)	5.408	95	240785	49.191
73) Methylcyclohexane	(2)	5.610	83	374982	52.767
73) Methylcyclohexane	(2)	5.610	98	177591	53.746
74) 1,2-Dichloropropane	(2)	5.639	63	238789	46.015
75) Dibromomethane	(2)	5.758	93	160891	50.236
77) Methyl Methacrylate	(2)	5.780	69	258851	45.390
76) 1,4-Dioxane	(1)	5.790	88	62396M	739.493
79) Bromodichloromethane	(2)	5.931	83	295143	50.156
43) 1,2-Dichloroethene (Total)	(2)		96	471940	96.436
80) 2-Nitropropane	(2)	6.175	41	186445	93.643
81) 2-Chloroethyl Vinyl Ether	(2)	6.265	63	159799	40.390
82) cis-1,3-Dichloropropene	(2)	6.409	75	373890	46.211
83) 4-Methyl-2-pentanone	(2)	6.589	43	822463	86.100
84)$Toluene-d8	(3)	6.701	98	955436	51.302
84)$Toluene-d8	(3)	6.698	100	628540	50.892
89) Toluene	(3)	6.772	92	617042	51.433
90) trans-1,3-Dichloropropene	(3)	7.019	75	356889	49.970
92) Ethyl Methacrylate	(3)	7.144	69	428005	48.769

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) 1,1,2-Trichloroethane	(3)	7.214	97	246583	53.402
94) Tetrachloroethene	(3)	7.362	166	259537	53.314
95) 1,3-Dichloropropane	(3)	7.388	76	414876	51.729
97) 2-Hexanone	(3)	7.494	43	636485	91.099
98) Dibromochloromethane	(3)	7.612	129	249068	55.226
100) 1,2-Dibromoethane	(3)	7.721	107	272757	53.766
101)*Chlorobenzene-d5	(3)	8.161	117	743223	50.000
103) Chlorobenzene	(3)	8.190	112	705379	53.000
104) 1,1,1,2-Tetrachloroethane	(3)	8.267	131	232934	54.462
105) Ethylbenzene	(3)	8.296	91	1149585	50.417
107) m+p-Xylene	(3)	8.405	106	934781	103.111
108) o-Xylene	(3)	8.742	106	458704	51.431
110) Styrene	(3)	8.752	104	791610	52.909
111) Bromoform	(3)	8.896	173	187730	53.485
112) Isopropylbenzene	(3)	9.047	105	1085971	49.551
113) Cyclohexanone	(1)	9.114	55	197148	517.974
115)$4-Bromofluorobenzene	(3)	9.165	95	356326	47.825
115)$4-Bromofluorobenzene	(3)	9.165	174	325361	51.751
116) Bromobenzene	(4)	9.281	156	323557	52.490
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	411616	49.517
118) 1,2,3-Trichloropropane	(4)	9.316	110	131304	52.441
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	307098	115.205
120) n-Propylbenzene	(4)	9.374	91	1259814	46.361
121) 2-Chlorotoluene	(4)	9.435	126	280278	50.006
123) 1,3,5-Trimethylbenzene	(4)	9.512	105	939146	47.921
122) 4-Chlorotoluene	(4)	9.518	126	305442	50.906
125) tert-Butylbenzene	(4)	9.756	134	209936	47.150
126) Pentachloroethane	(4)	9.769	167	189428	53.818
127) 1,2,4-Trimethylbenzene	(4)	9.791	105	1003727	48.604
128) sec-Butylbenzene	(4)	9.920	105	1072764	44.595
130) 1,3-Dichlorobenzene	(4)	9.997	146	590614	50.246
131) p-Isopropyltoluene	(4)	10.025	119	970536	45.576
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	427964	50.000
134) 1,4-Dichlorobenzene	(4)	10.061	146	617413	50.667
91) 1,3-Dichloropropene (total)	(3)		100	730779	96.181
135) 1,2,3-Trimethylbenzene	(4)	10.099	105	1114497	50.158
136) Benzyl Chloride	(4)	10.160	91	826017	48.429
137) 1,3-Diethylbenzene	(4)	10.240	119	655395	48.982

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$ = Compound is a surrogate standard.

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on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
138) 1,4-Diethylbenzene	(4)	10.298	119	681827	47.562
140) n-Butylbenzene	(4)	10.317	92	467531	43.499
139) 1,2-Dichlorobenzene	(4)	10.327	146	592526	50.809
141) 1,2-Diethylbenzene	(4)	10.382	119	550184	48.703
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	89927	47.602
145) 1,3,5-Trichlorobenzene	(4)	11.011	180	403236	45.092
147) 1,2,4-Trichlorobenzene	(4)	11.421	180	381282	44.410
148) Hexachlorobutadiene	(4)	11.530	225	150776	49.308
149) Naphthalene	(4)	11.582	128	1363562	46.939
150) 1,2,3-Trichlorobenzene	(4)	11.739	180	379630	45.303
109) Xylene (Total)	(3)		106	1393485	154.542
151) 2-Methylnaphthalene	(4)	12.307	142	646953	39.035
142) Diethylbenzene (total)	(4)		100	1887406	145.247

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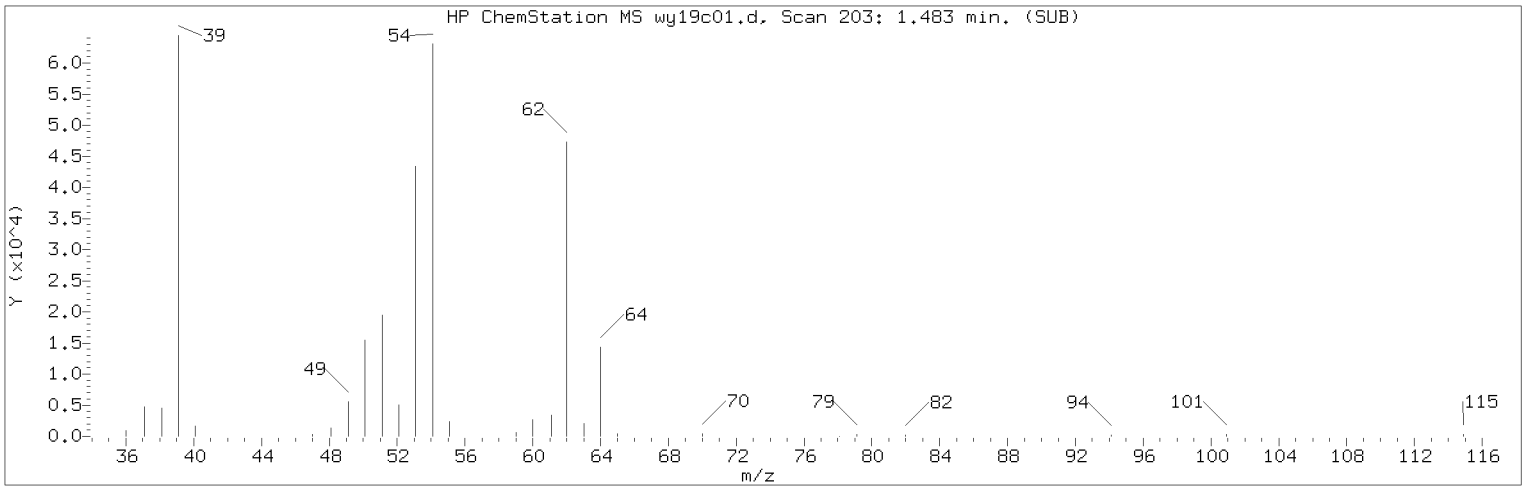
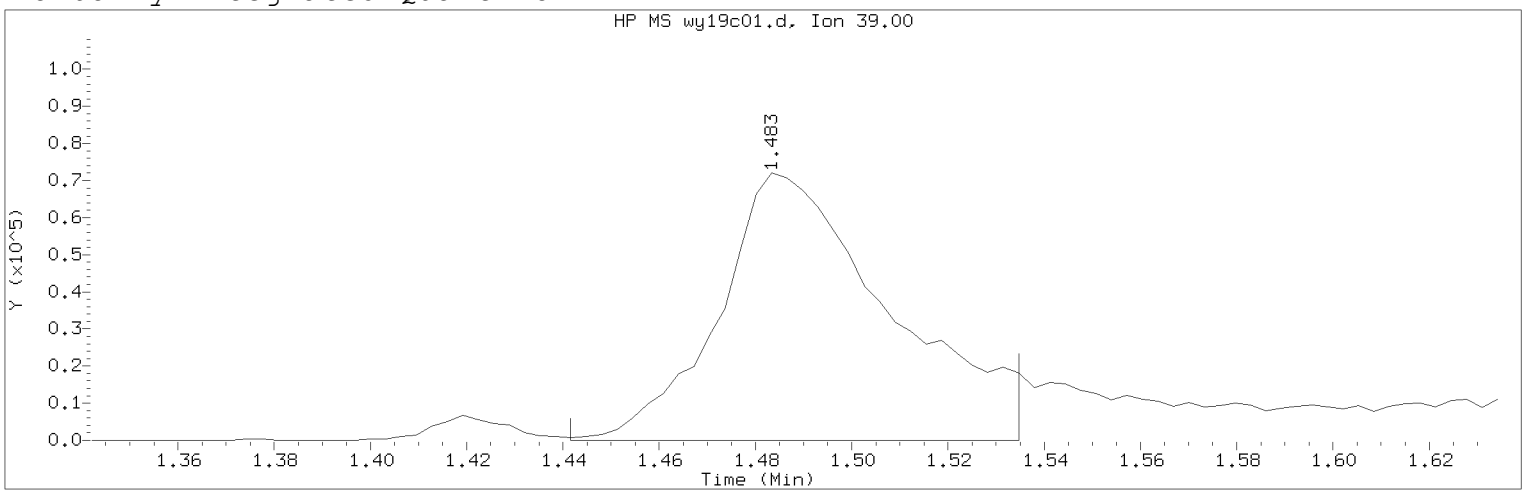
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

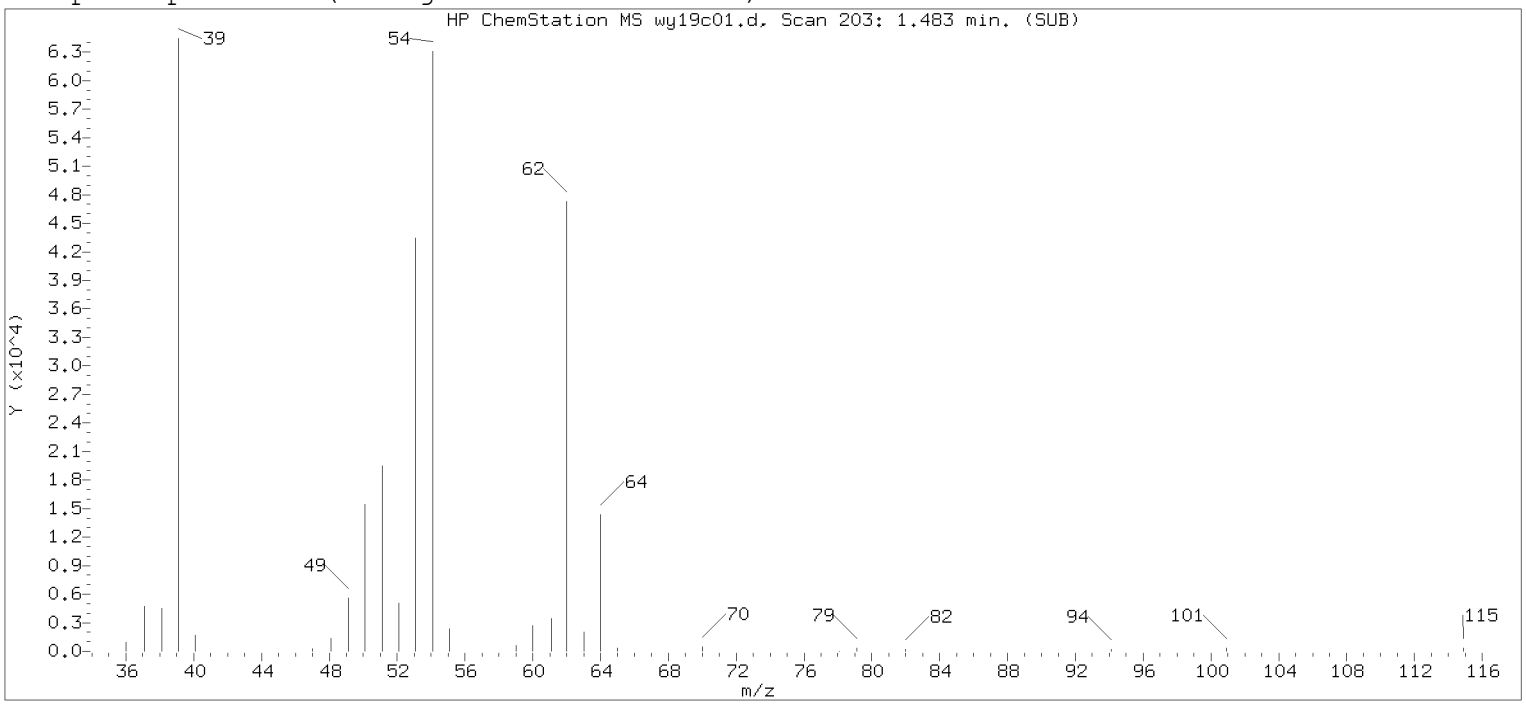
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 203
Retention Time (minutes): 1.483
Quant Ion : 39.00
Area (flag) : 178597M
On-Column Amount (ng) : 37.7421
Integration start scan : 189 Integration stop scan: 218
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

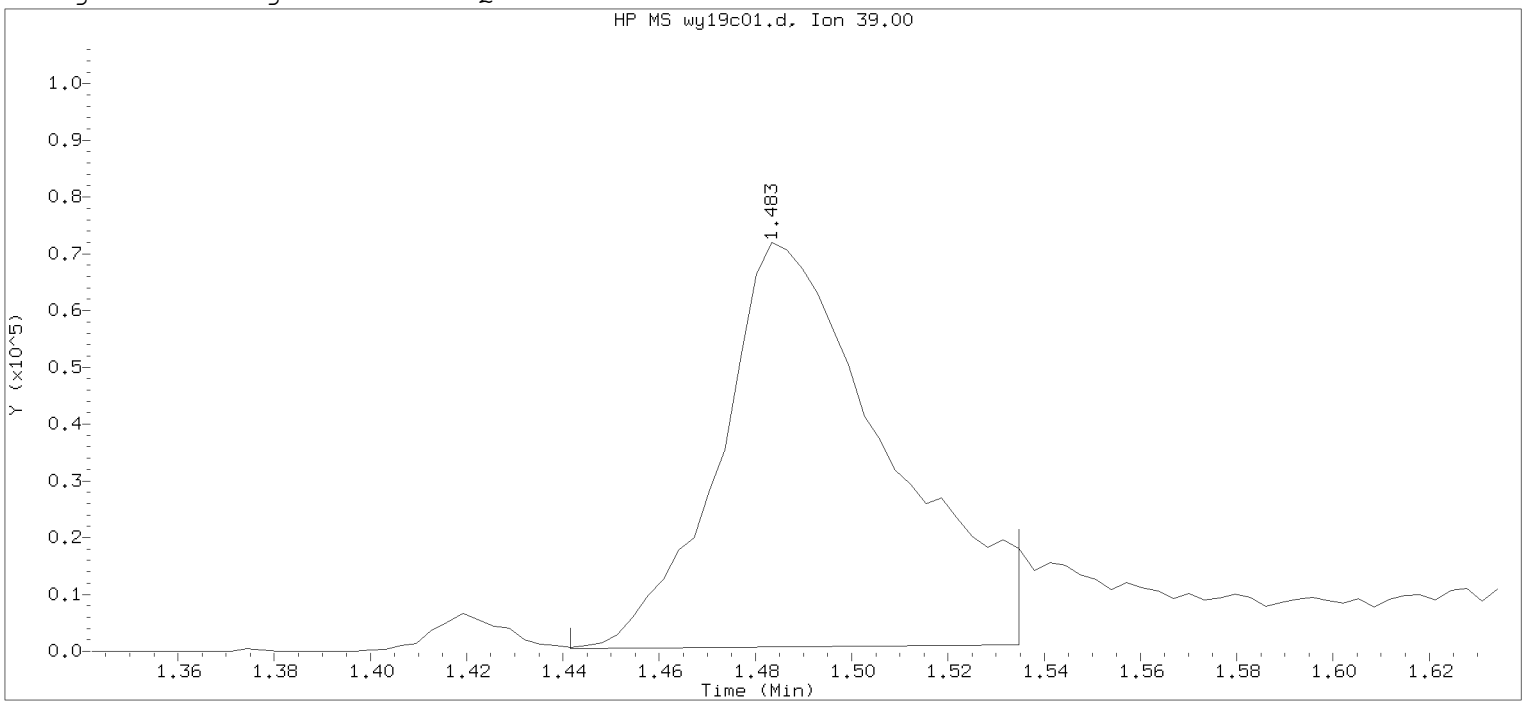
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 21:37.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

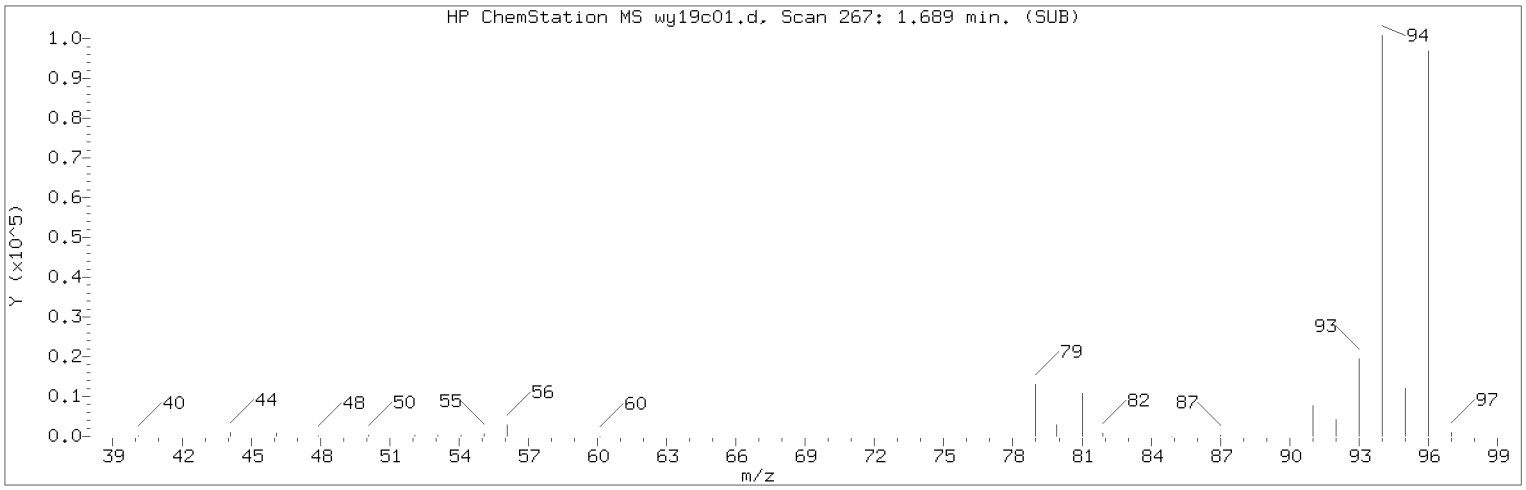
Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 11:47 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

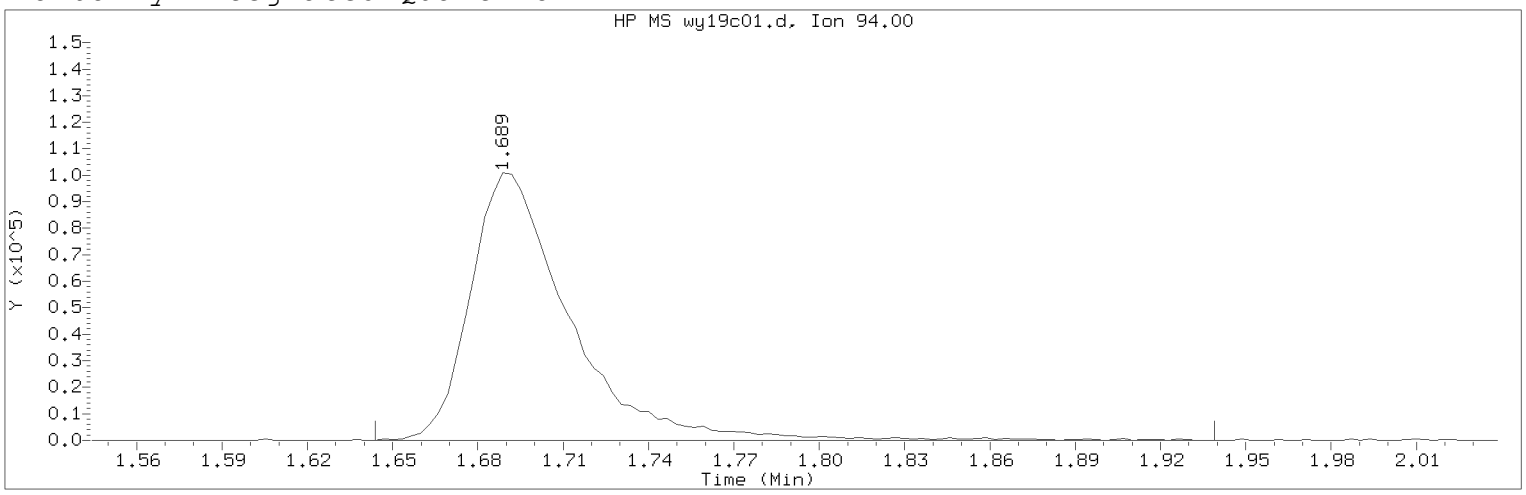
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 203
Retention Time (minutes): 1.483
Quant Ion : 39.00
Area : 172513
On-column Amount (ng) : 36.4565
Integration start scan : 189 Integration stop scan: 218
Y at integration start : 396 Y at integration end: 1136

Digitally signed by Chelsea B. Stong on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbr01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

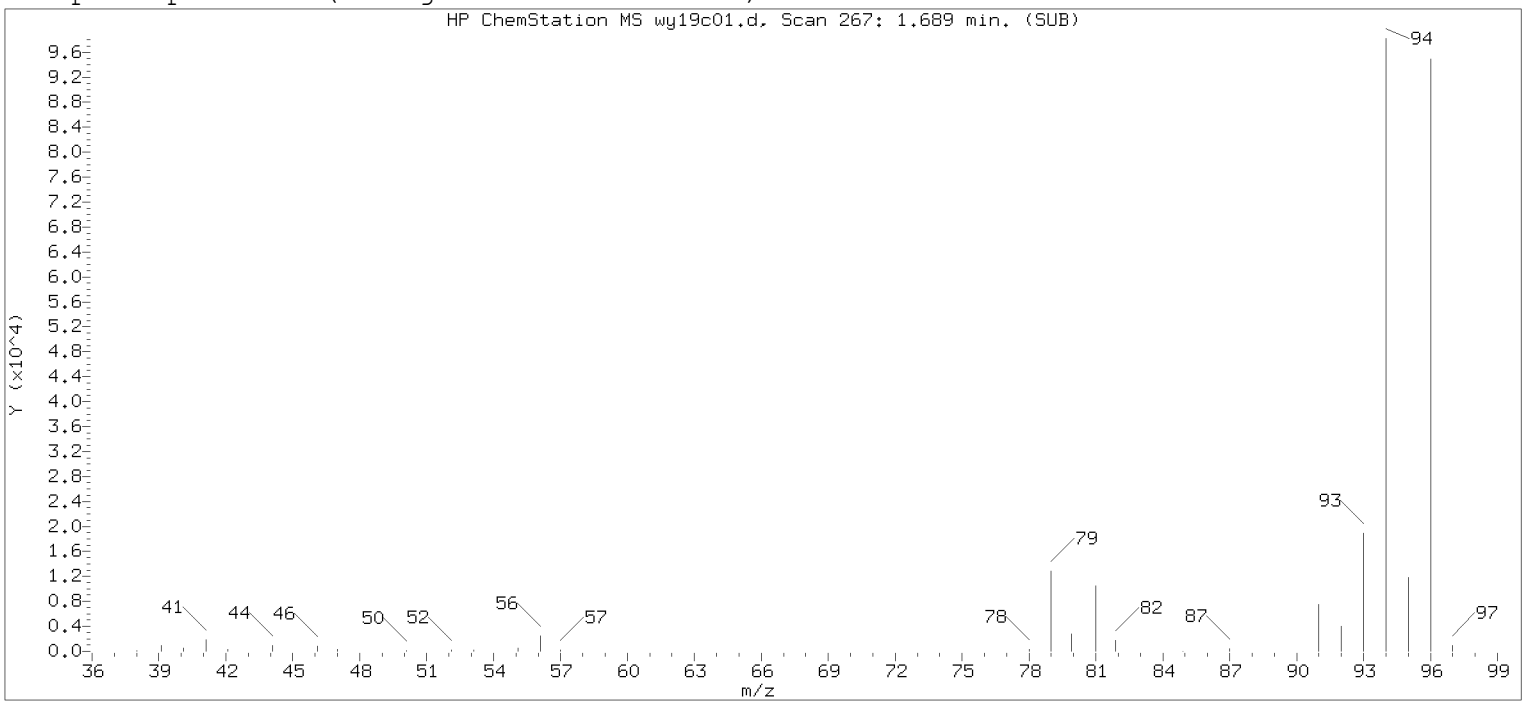
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 267
Retention Time (minutes): 1.689
Quant Ion : 94.00
Area (flag) : 244194M
On-Column Amount (ng) : 43.4984
Integration start scan : 252 Integration stop scan: 344
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

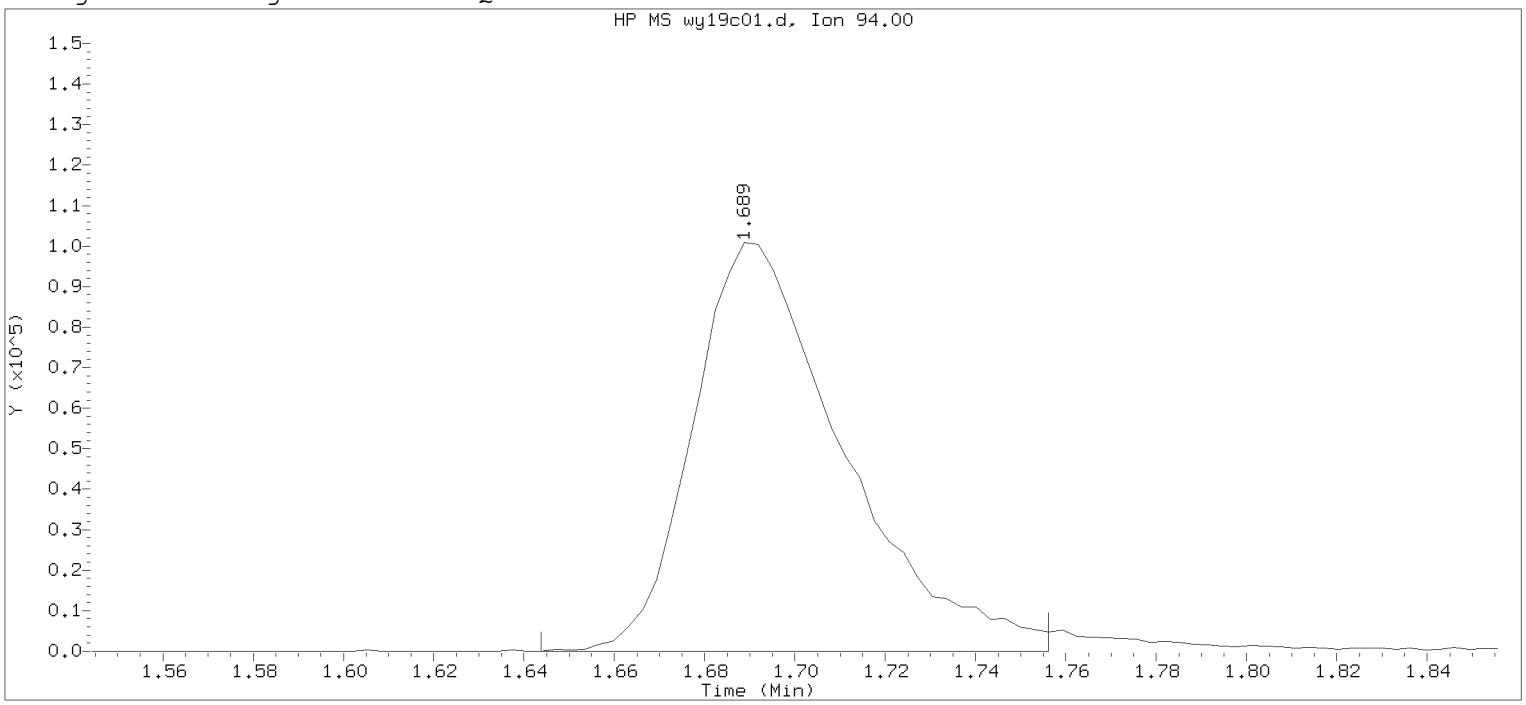
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 21:37.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

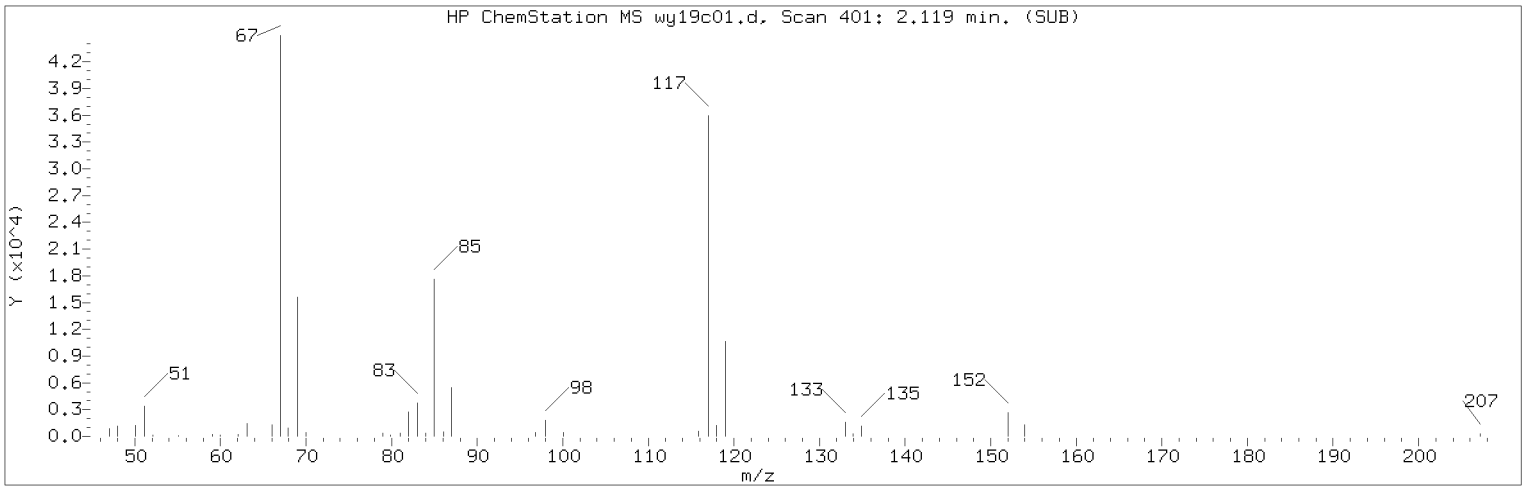
Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 11:47 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

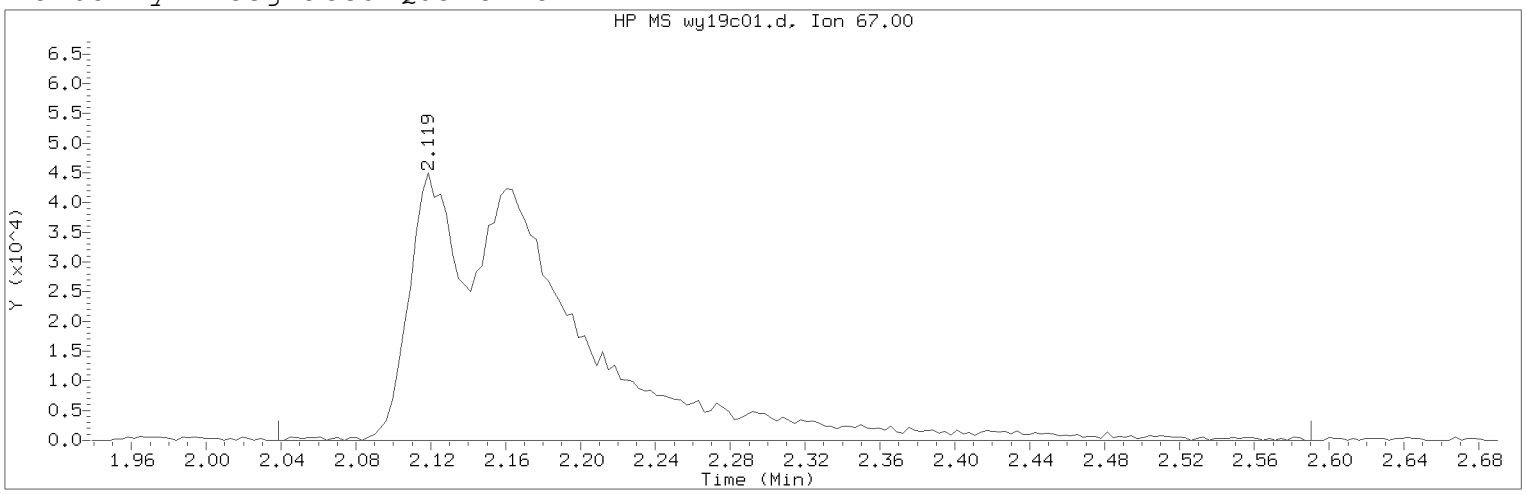
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 267
Retention Time (minutes): 1.689
Quant Ion : 94.00
Area : 232869
On-column Amount (ng) : 41.4809
Integration start scan : 252 Integration stop scan: 287
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbr01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

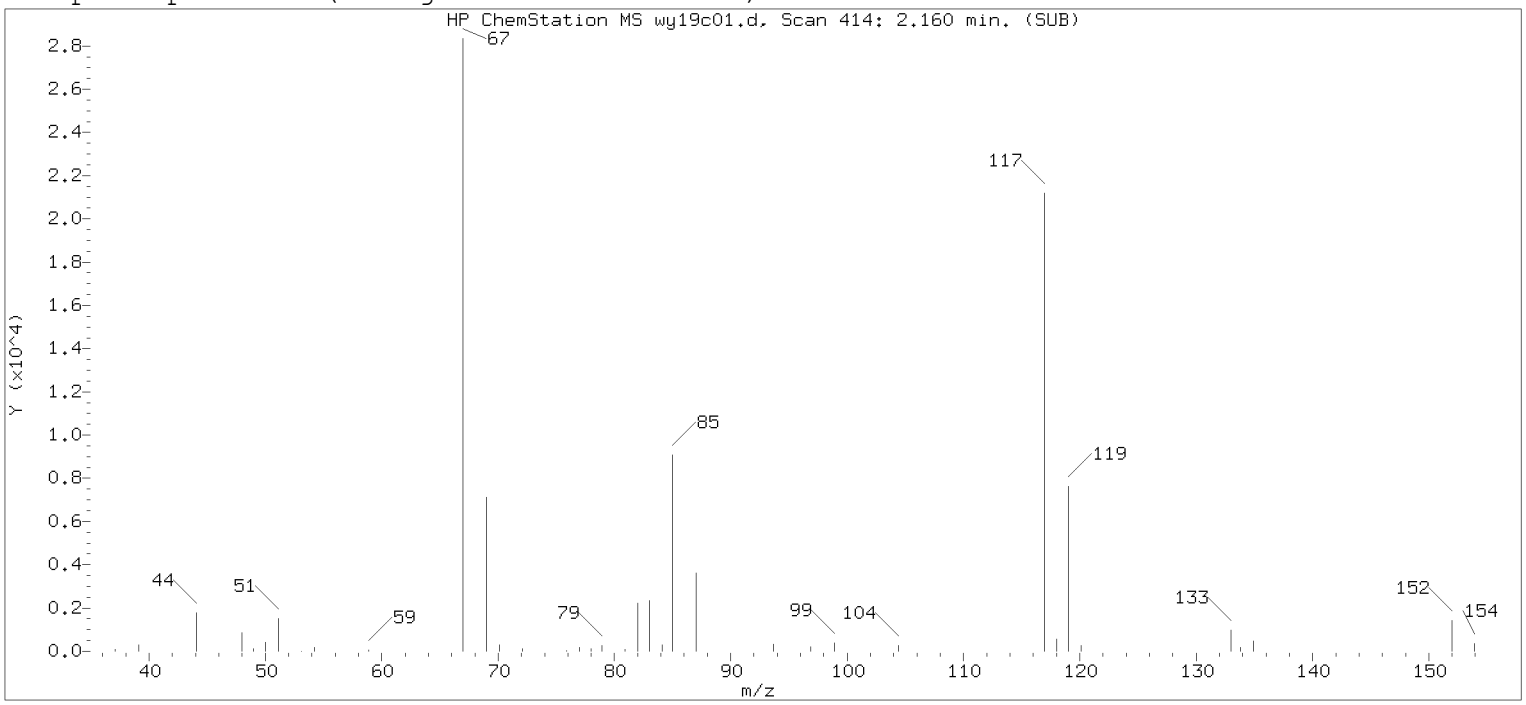
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 401
Retention Time (minutes): 2.119
Quant Ion : 67.00
Area (flag) : 260018M
On-Column Amount (ng) : 46.0271
Integration start scan : 375 Integration stop scan: 547
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

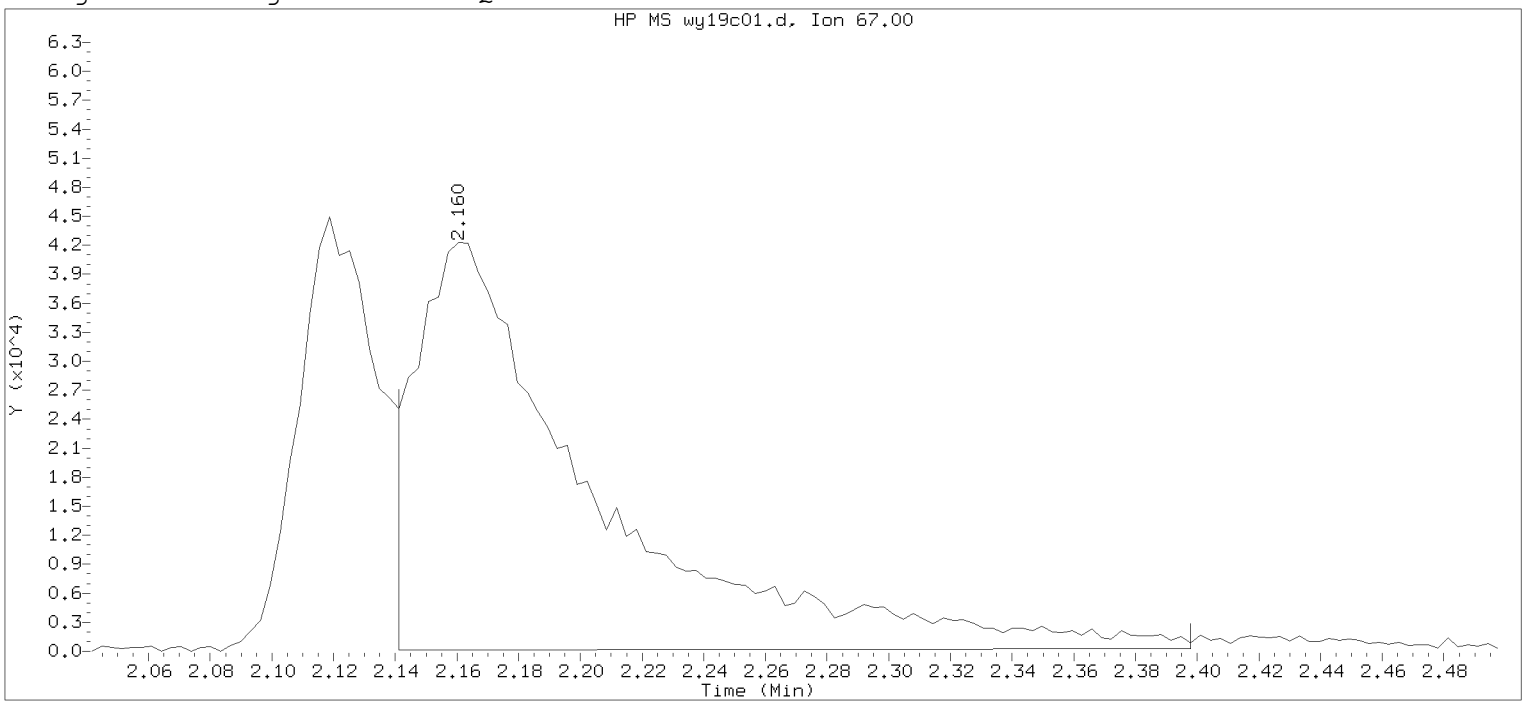
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 21:37.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

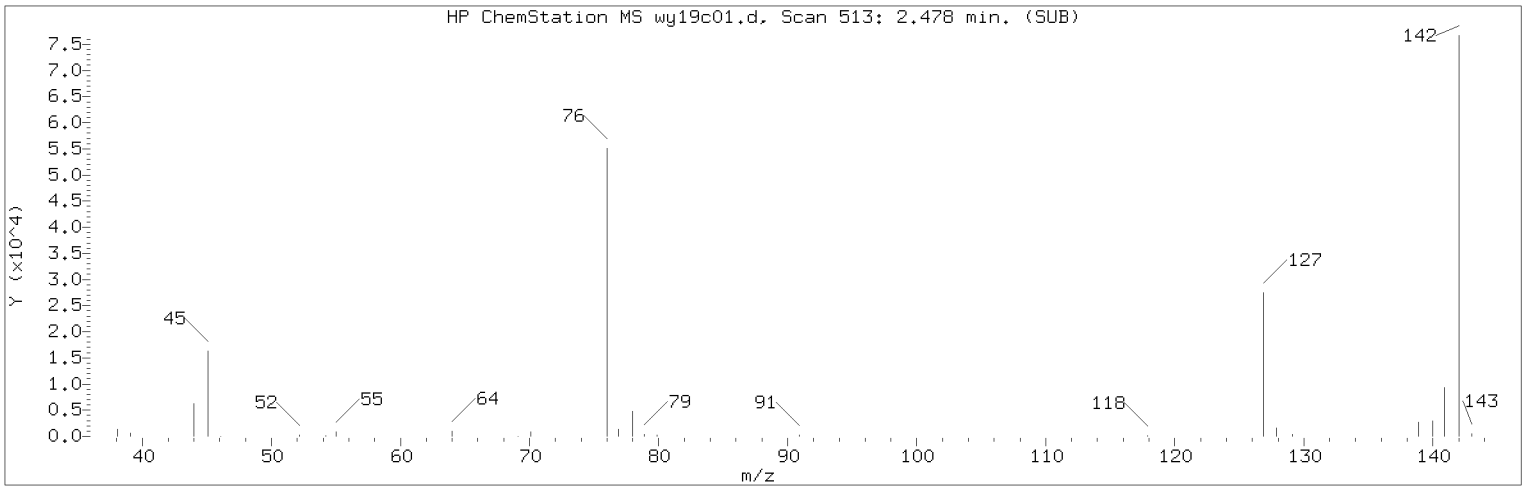
Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 11:47 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

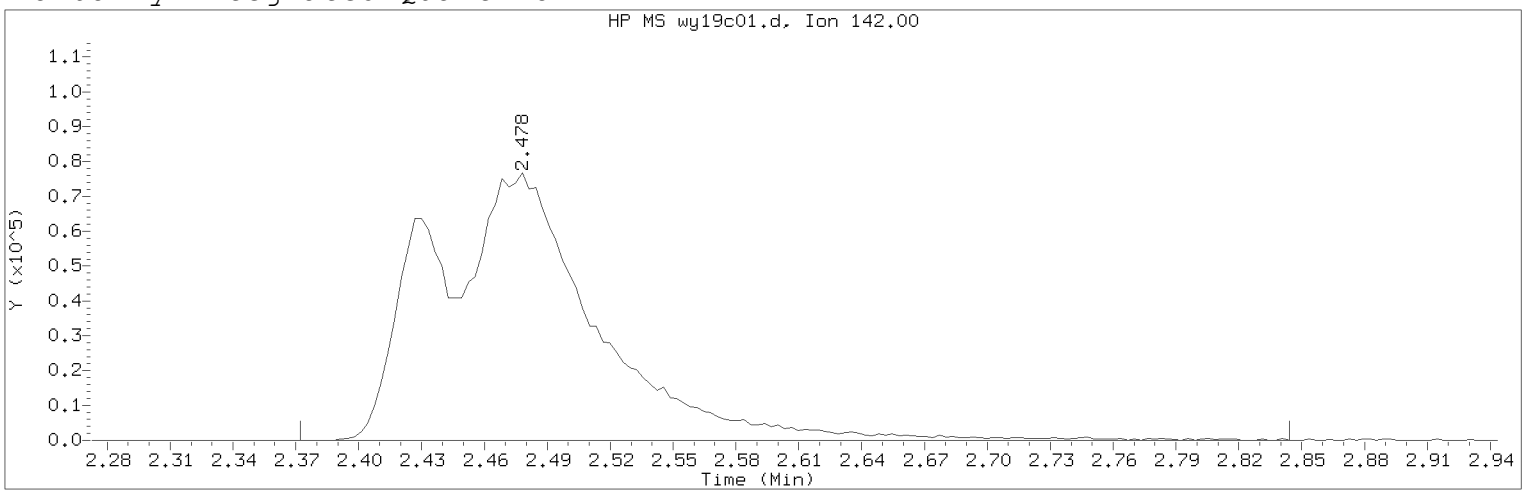
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 414
Retention Time (minutes): 2.160
Quant Ion : 67.00
Area : 168794
On-column Amount (ng) : 29.8791
Integration start scan : 407 Integration stop scan: 487
Y at integration start : 157 Y at integration end: 269

Digitally signed by Chelsea B. Stong on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbr01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

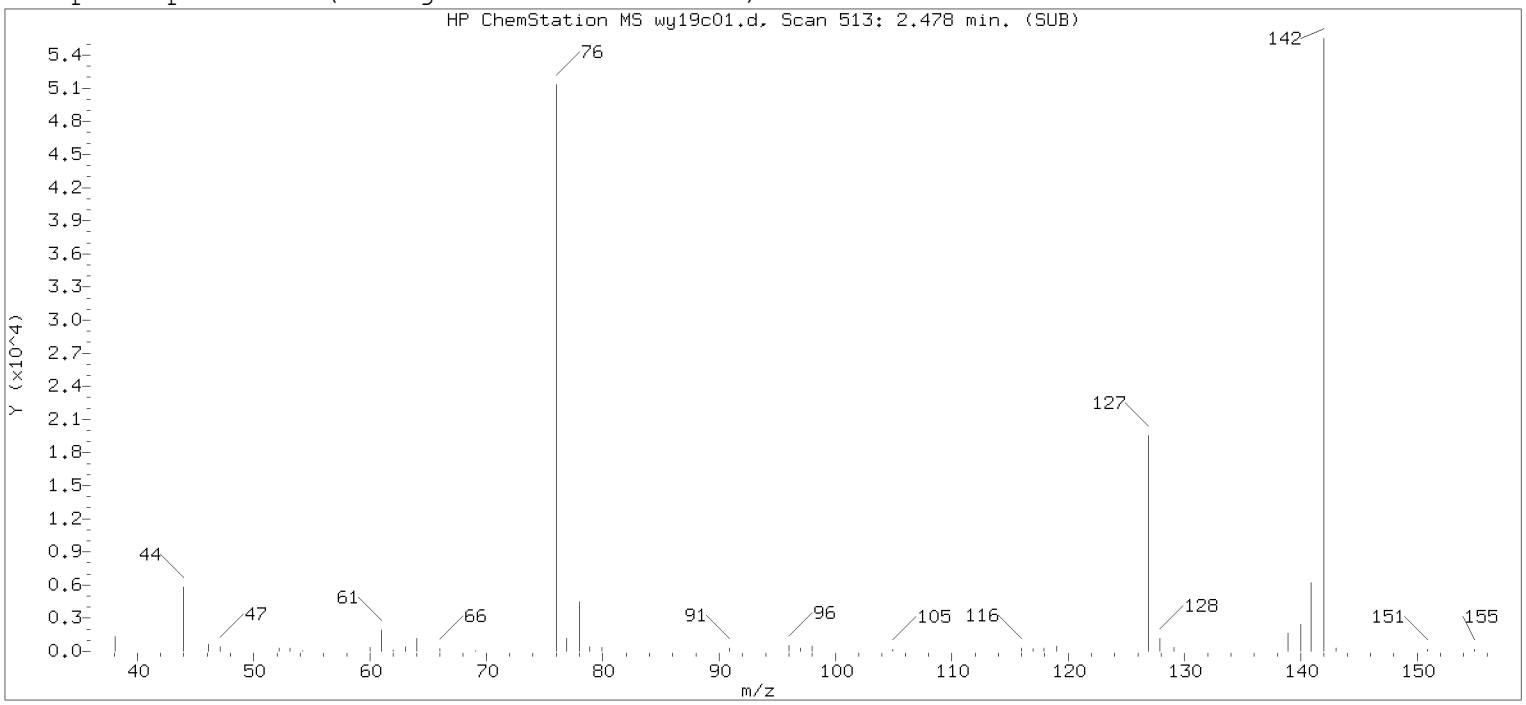
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 513
Retention Time (minutes): 2.478
Quant Ion : 142.00
Area (flag) : 417167M
On-Column Amount (ng) : 51.1983
Integration start scan : 479 Integration stop scan: 626
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

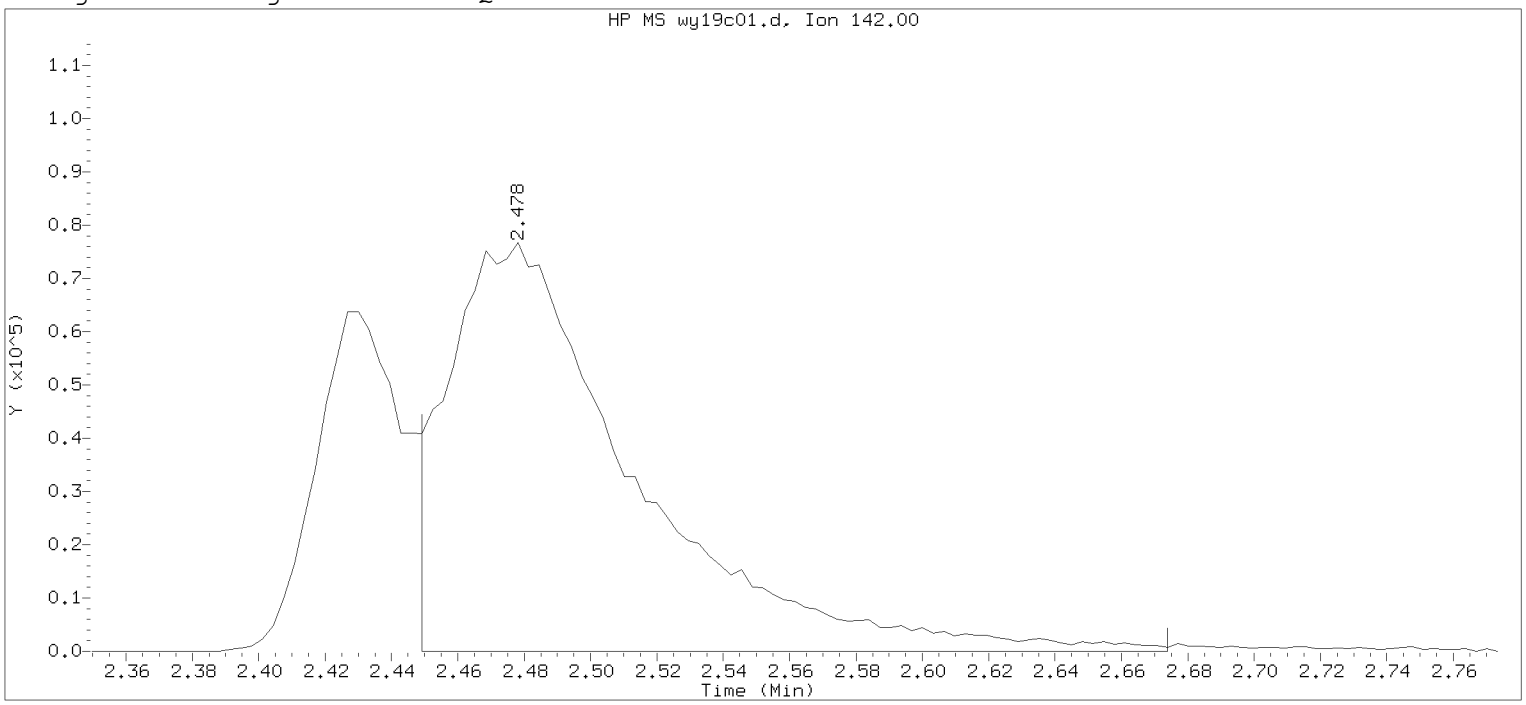
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 21:37.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

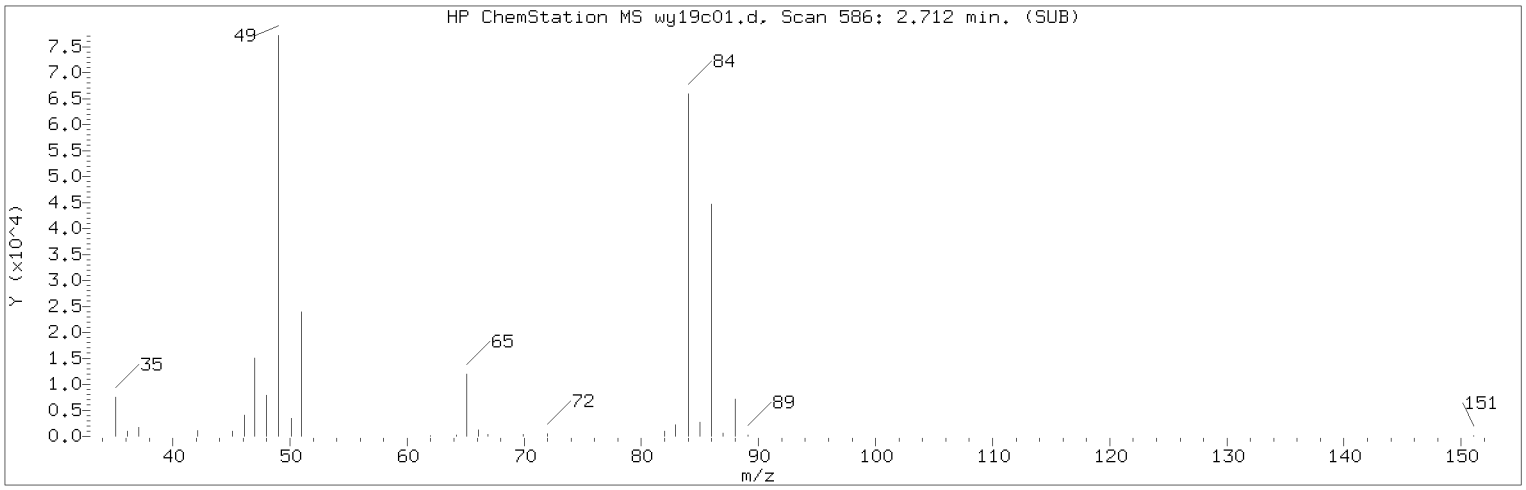
Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 11:47 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

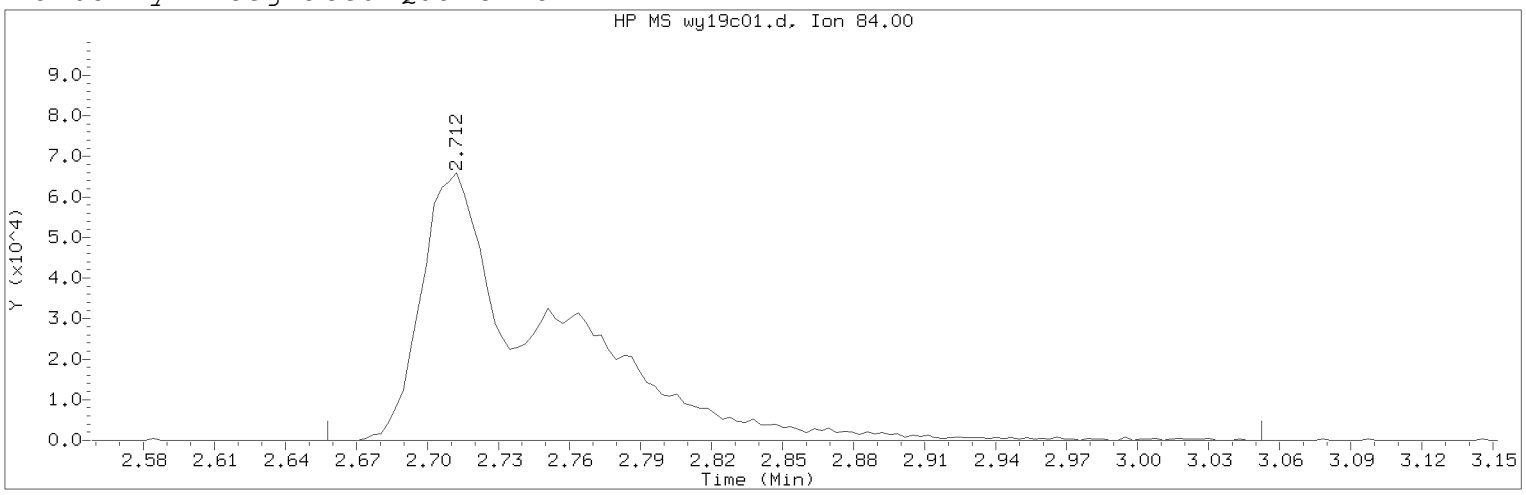
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 513
Retention Time (minutes): 2.478
Quant Ion : 142.00
Area : 298488
On-column Amount (ng) : 36.6330
Integration start scan : 503 Integration stop scan: 573
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbr01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

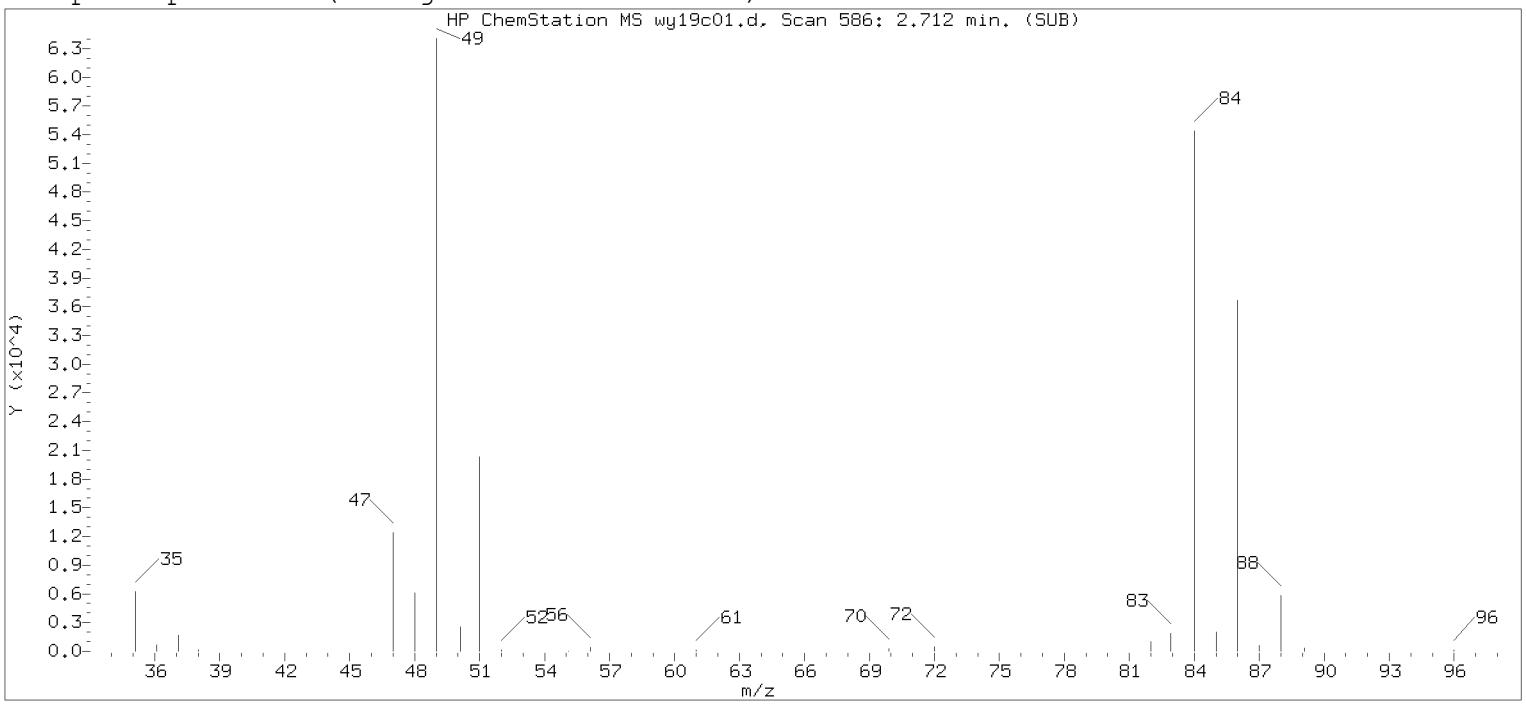
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 586
Retention Time (minutes): 2.712
Quant Ion : 84.00
Area (flag) : 247023M
On-Column Amount (ng) : 47.5295
Integration start scan : 568 Integration stop scan: 691
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

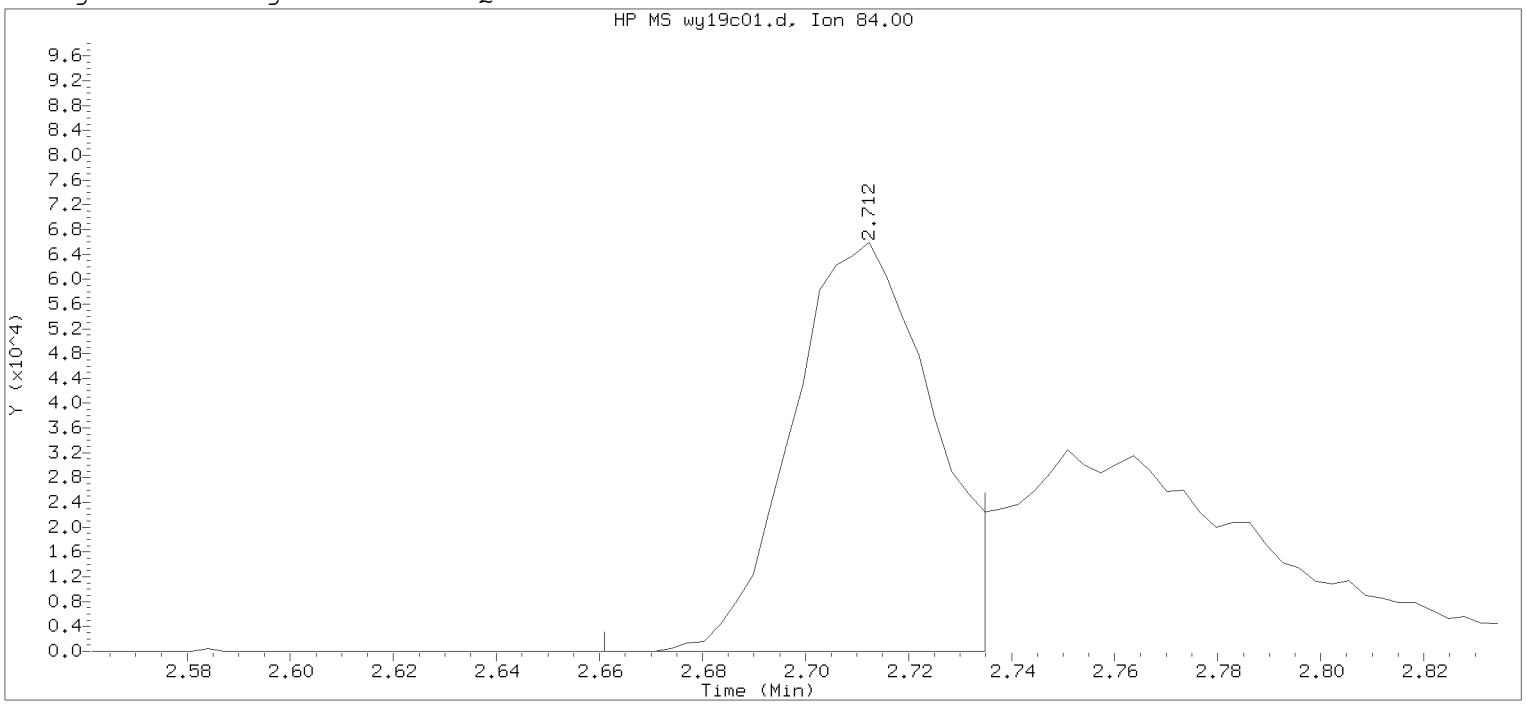
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 21:37.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

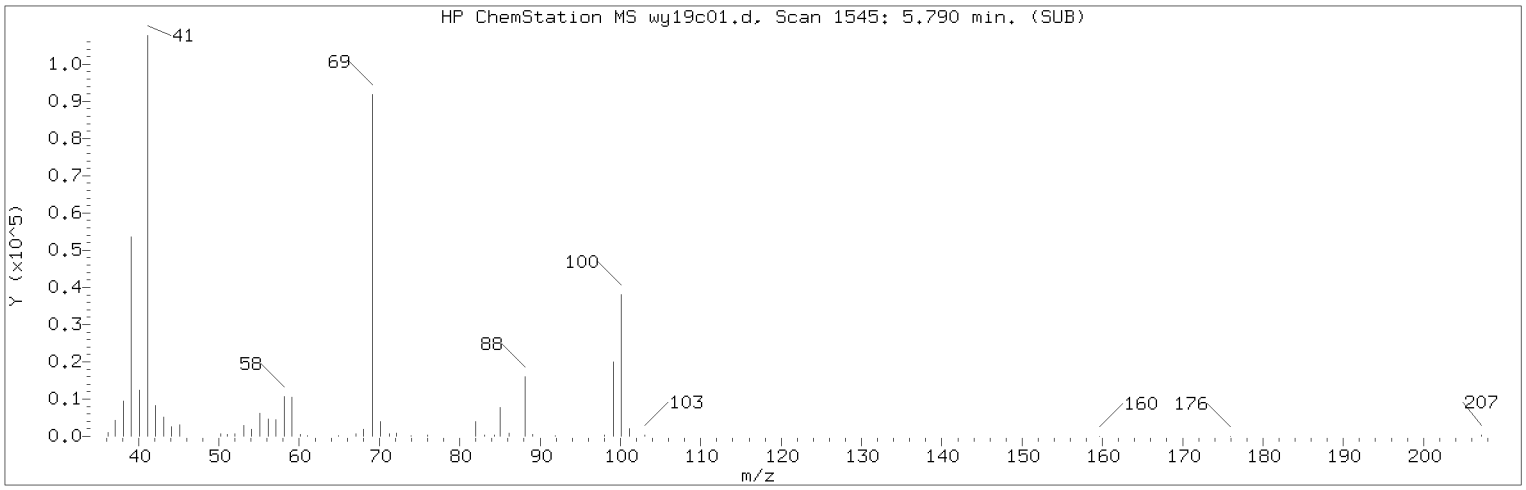
Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 11:47 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

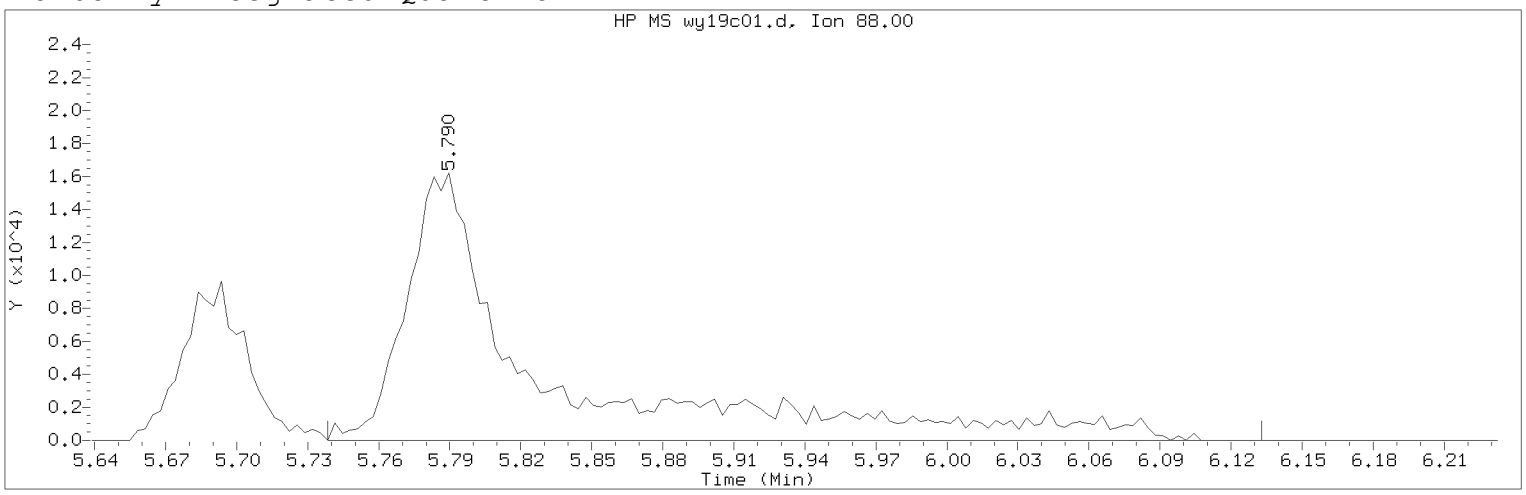
Compound Number	: 28		
Compound Name	: Methylene Chloride		
Scan Number	: 586		
Retention Time (minutes)	: 2.712		
Quant Ion	: 84.00		
Area	: 123849		
On-column Amount (ng)	: 23.8297		
Integration start scan	: 569	Integration stop scan:	592
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Chelsea B. Stong on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: CBR01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 12:05 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

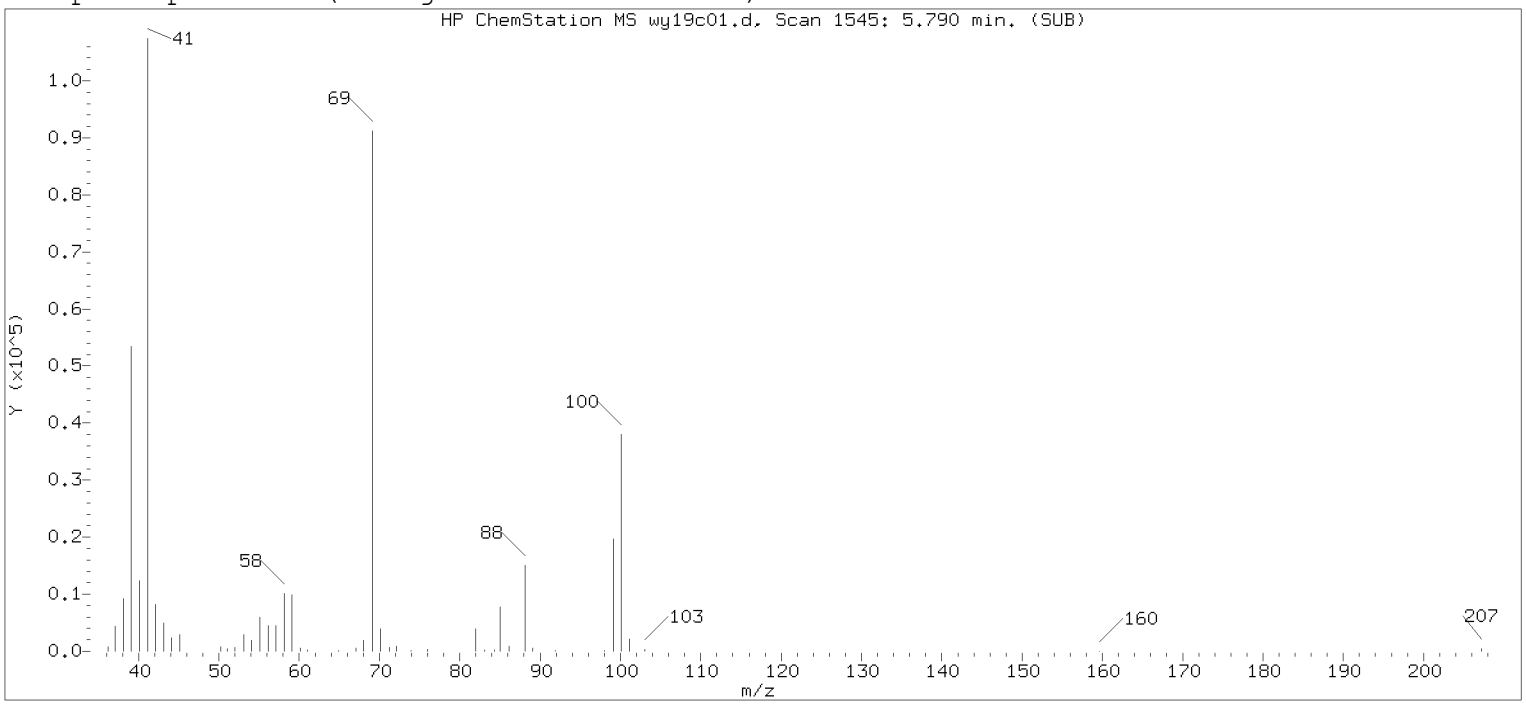
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1545
Retention Time (minutes): 5.790
Quant Ion : 88.00
Area (flag) : 62396M
On-Column Amount (ng) : 739.4932
Integration start scan : 1528 Integration stop scan: 1651
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

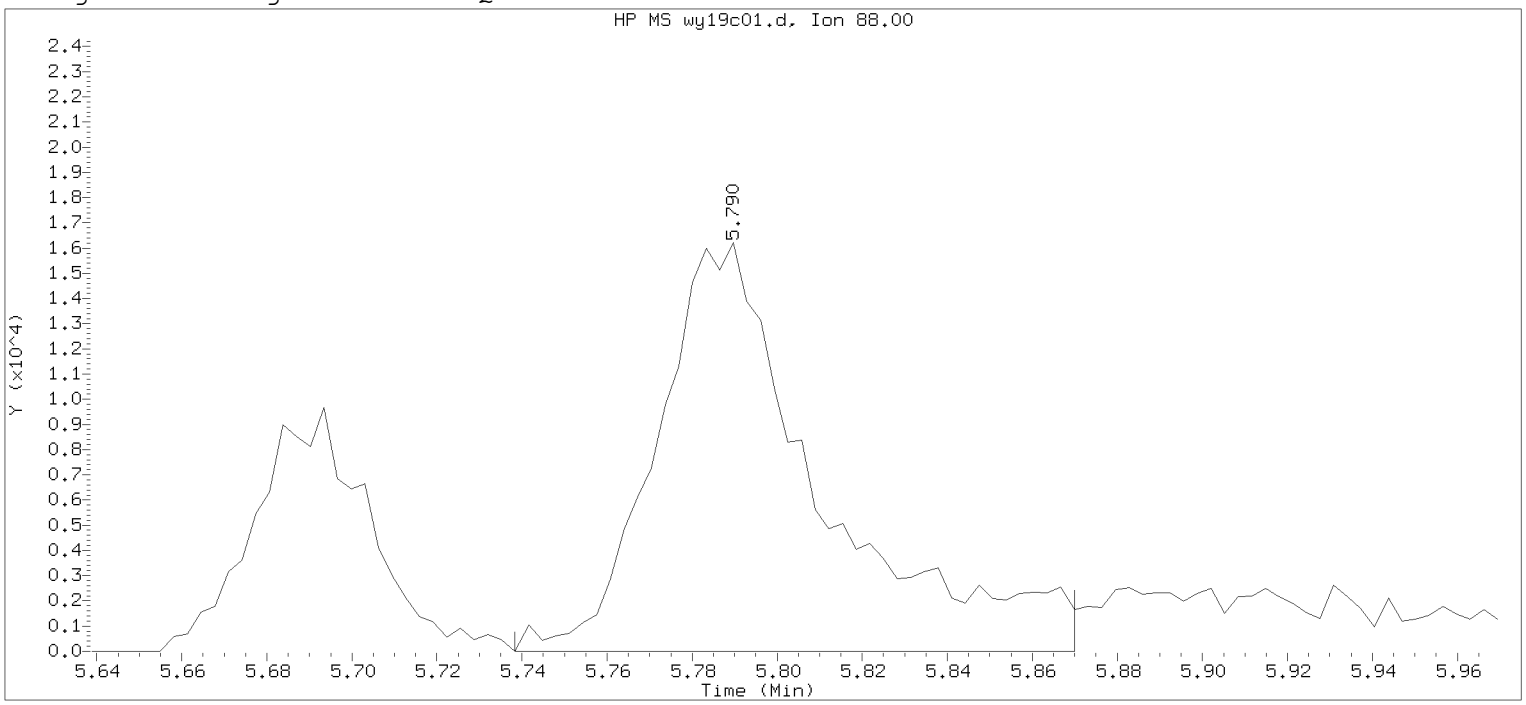
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 21:37.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19c01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 11:32 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 19-MAY-2019 11:47
Date, time and analyst ID of latest file update: 19-May-2019 11:47 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1545
Retention Time (minutes): 5.790
Quant Ion : 88.00
Area : 43240
On-column Amount (ng) : 512.4648
Integration start scan : 1528 Integration stop scan: 1569
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 05/19/2019 at 12:05.
Target 3.5 esignature user ID: cbr01947

MDL0.5 Lancaster Laboratories Analysis Summary for GC/MS Volatiles MDL0.5

Data file: /chem2/HP09137.i/19may19a.b/wy19m01.d Injection date and time: **19-MAY-2019 13:07**
Data file Sample Info. Line: MDL0.5;MDL0.5;1;3;MDL/LOQ;;;;wy19b02; Instrument ID: **HP09137.i** Batch: **W191381AB**
Date, time and analyst ID of latest file update: 19-May-2019 13:27 cbs01947

Blank Data file reference: **/chem2/HP09137.i/19may19a.b/wy19b02.d**

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: **MDL**
Calibration date and time (Last Method Edit): 19-MAY-2019 12:48
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may19a.b/wy19c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.738(-0.003)	594	65	169887 (-10)	250.00	
66) Fluorobenzene	5.032(0.003)	1309	96	917398 (-5)	50.00	
101) Chlorobenzene-d5	8.164(-0.003)	2285	117	708870 (-5)	50.00	
132) 1,4-Dichlorobenzene-d4	10.042(0.000)	2870	152	361566 (-16)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.359(-0.001)	113	207184	48.748	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692(-0.001)	102	55174	48.811	98%		80 - 120
84) Toluene-d8	(3)	6.698(0.001)	98	892077	50.221	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162(0.001)	95	307084	43.213	86%		80 - 120

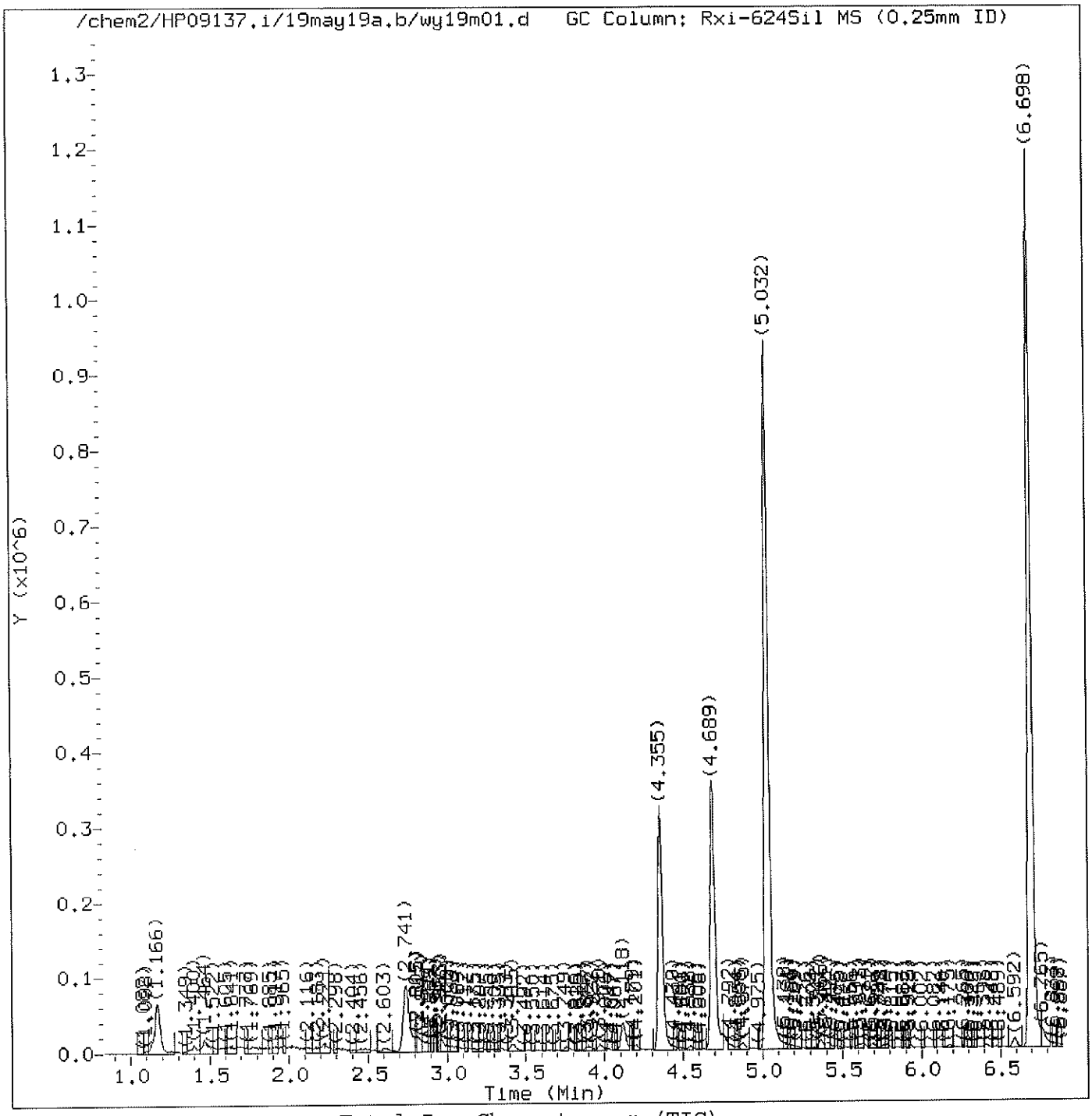
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (sample)	Blank Conc.	Qual.	Reporting Limit LOQ (in sample)
6) Vinyl Chloride	(2)	1.454(0.001)	62	2277	0.336	0.34	0.015	B J	0.2 1
9) Chloroethane	(2)	1.766(0.001)	64	2048M	0.460	0.46	0.047	B J	0.2 1

B = Compound detected in referenced method blank. M = Compound was manually integrated.

Total number of targets = 2

Digitally signed by Chelsea B. Stong on 05/19/2019 at 13:27. Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:25. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

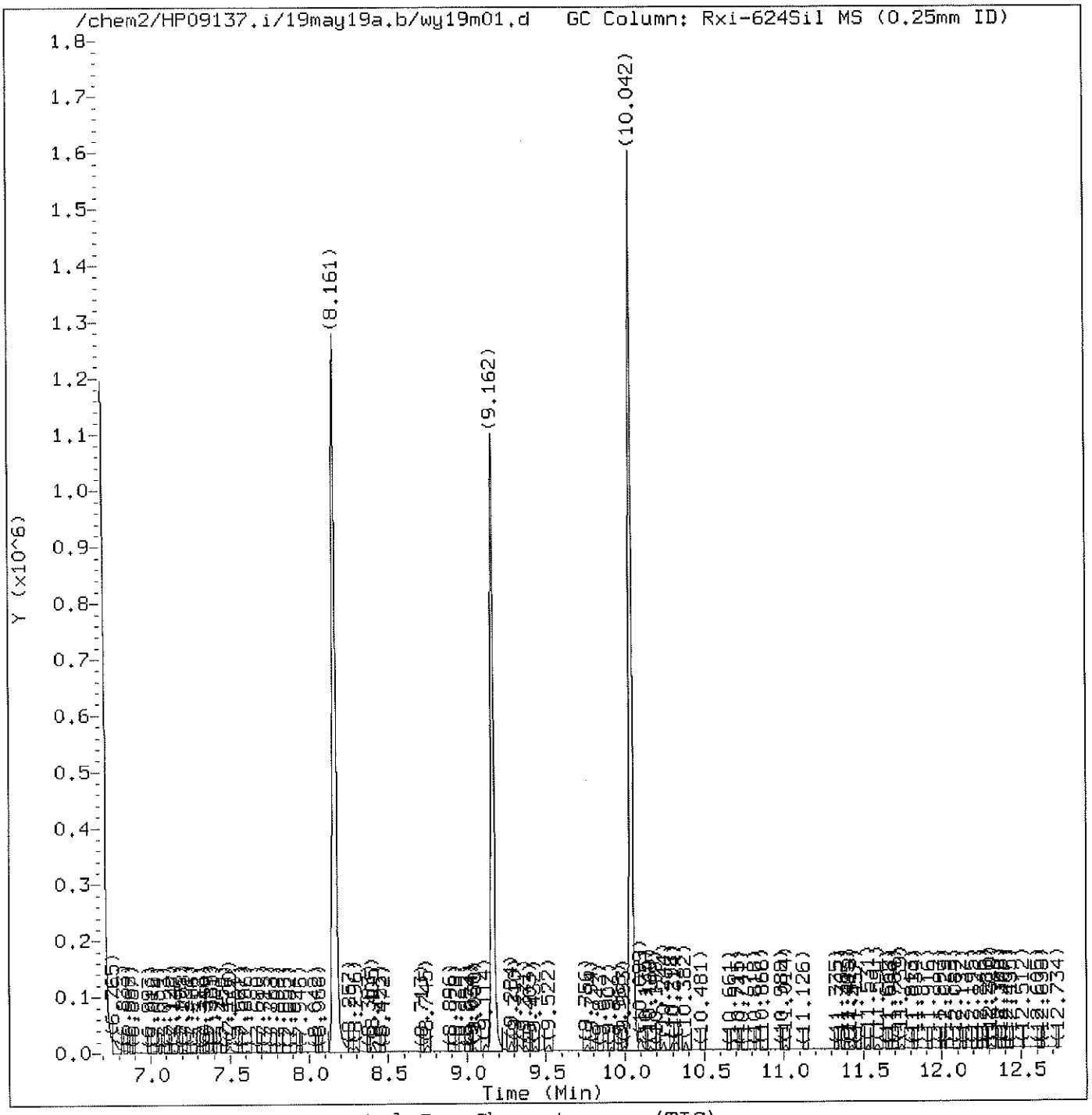
Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19m01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:07 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: MDL
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 13:27 cbs01947

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 13:27.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19m01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:07 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: MDL
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 13:27 cbs01947

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 13:27.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19m01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:07 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: MDL
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 13:27 cbs01947

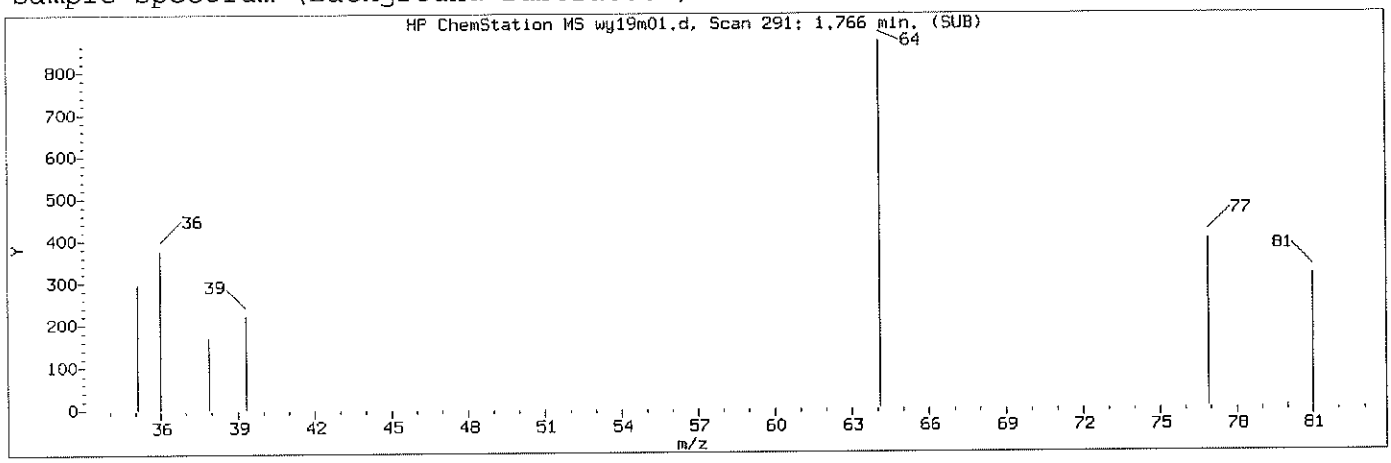
Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	1.455	62	2277	0.336
9) Chloroethane	(2)	1.766	64	2048M	0.460
29)*t-Butyl alcohol-d10	(1)	2.738	65	169887	250.000
52)$Dibromofluoromethane	(2)	4.359	113	207184	48.748
57)$1,2-Dichloroethane-d4	(2)	4.692	102	55174	48.811
66)*Fluorobenzene	(2)	5.032	96	917398	50.000
84)$Toluene-d8	(3)	6.698	98	892077	50.221
101)*Chlorobenzene-d5	(3)	8.164	117	708870	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	307084	43.213
132)*1,4-Dichlorobenzene-d4	(4)	10.042	152	361566	50.000

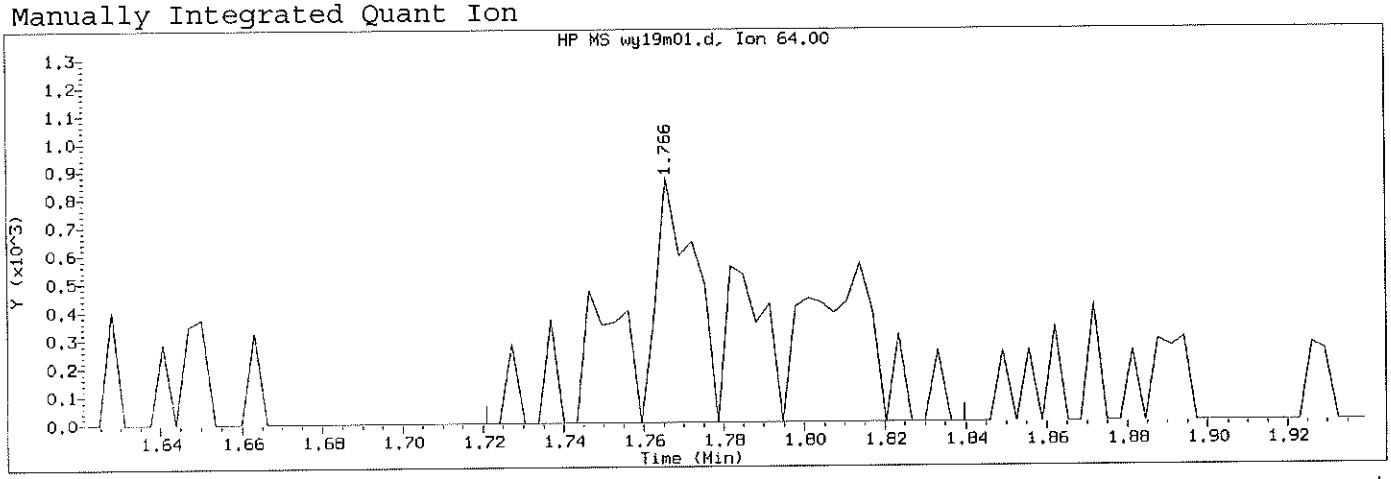
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 13:27.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19m01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:07 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: MDL
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 13:27 cbs01947

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

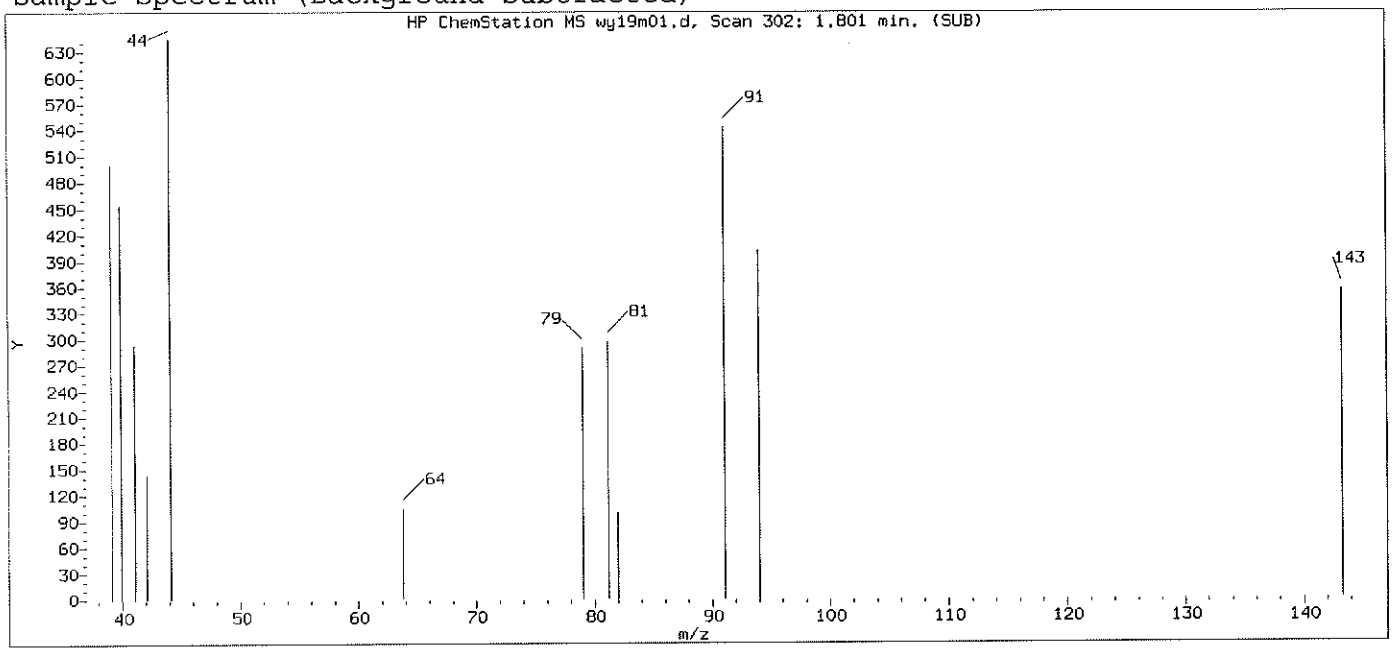
Compound Number	: 9		
Compound Name	: Chloroethane		
Scan Number	: 291		
Retention Time (minutes)	: 1.766		
Quant Ion	: 64.00		
Area (flag)	: 2048M		
On-Column Amount (ng)	: 0.4597		
Integration start scan	: 276	Integration stop scan:	313
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

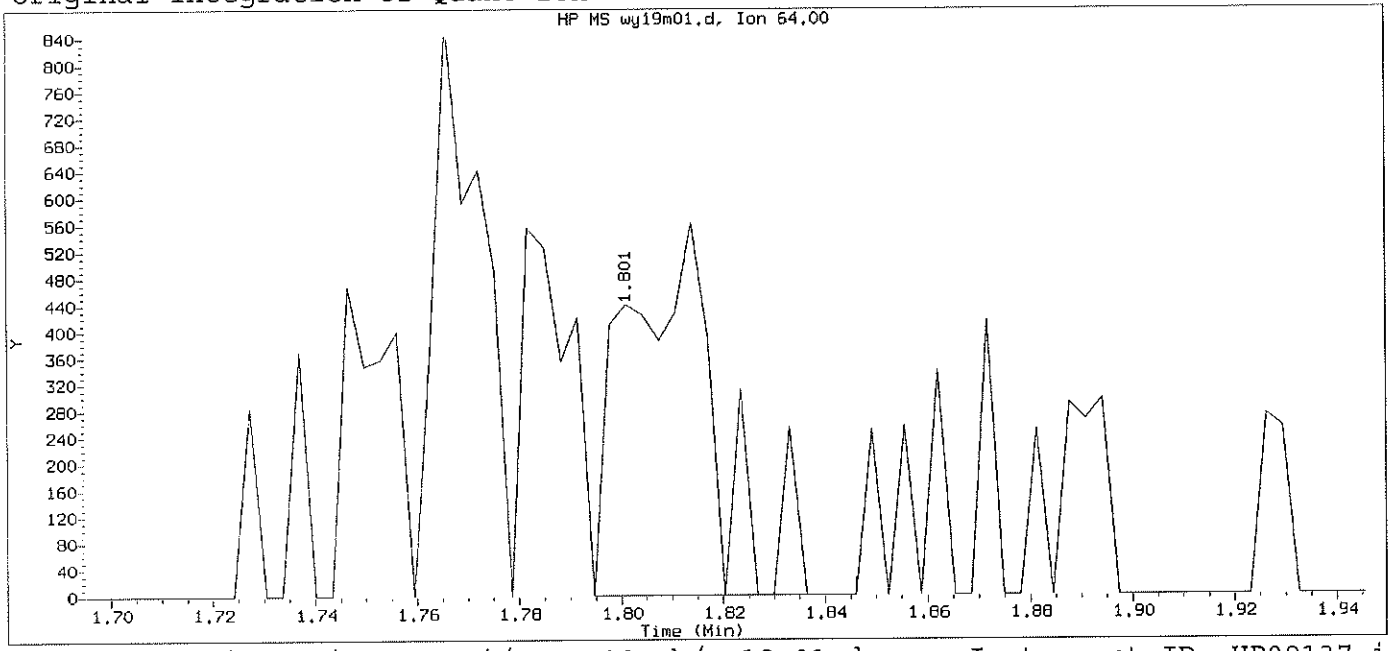
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 05/19/2019 at 13:27. Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:25.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19m01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 13:07 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: MDL
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 13:23 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Compound Number	: 9		
Compound Name	: Chloroethane		
Scan Number	: 302		
Retention Time (minutes)	: 1.801		
Quant Ion	: 64.00		
Area	: 693		
On-column Amount (ng)	: 0.1556		
Integration start scan	: 299	Integration stop scan:	315
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Chelsea B. Stong on 05/19/2019 at 13:27.
Target 3.5 esignature user ID: cbs01947

Raw QC Data

Volatiles by GC/MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKW23

Data file: /chem2/HP09137.i/19may18a.b/wy18b01.d
Data file Sample Info. Line: VBLKW23;VBLKW23;1;3;;;;;;
Injection date and time: **18-MAY-2019 23:17**
Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.744 (-0.006)	596	65	177555 (-6)	250.00	
66) Fluorobenzene	5.032 (0.000)	1309	96	947707 (-8)	50.00	
101) Chlorobenzene-d5	8.161 (0.000)	2284	117	739589 (-5)	50.00	
132) 1,4-Dichlorobenzene-d4	10.045 (-0.003)	2871	152	377751 (-15)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.358 (0.001)	113	213781	48.691	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692 (0.000)	102	57565	49.298	99%		80 - 120
84) Toluene-d8	(3)	6.698 (0.000)	98	928949	50.125	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.165 (0.000)	95	320336	43.206	86%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)			Not Detected					0.2	1
4) Chloromethane	(2)			Not Detected					0.2	1
5) 1,3-Butadiene	(2)			Not Detected					1	3
6) Vinyl Chloride	(2)			Not Detected					0.2	1
8) Bromomethane	(2)			Not Detected					0.3	1
9) Chloroethane	(2)			Not Detected					0.2	1
11) n-Pentane	(2)			Not Detected					0.4	10
12) Trichlorofluoromethane	(2)			Not Detected					0.2	1
13) Ethanol	(1)			Not Detected					280	750
15) Freon 123a	(2)			Not Detected					0.4	5
16) Acrolein	(1)			Not Detected					2	100
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
21) 2-Propanol	(1)			Not Detected					18	100
22) Methyl Iodide	(2)			Not Detected					0.2	1
23) Carbon Disulfide	(2)			Not Detected					0.2	5
25) Allyl Chloride	(2)			Not Detected					0.3	5
27) Methyl Acetate	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
30) t-Butyl alcohol	(1)			Not Detected					12	50
31) Acrylonitrile	(2)			Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)			Not Detected					0.2	1
34) n-Hexane	(2)			Not Detected					0.2	5
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
38) di-Isopropyl ether	(2)			Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)			Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)			Not Detected					0.2	2

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:42. Target 3.5 esignature user ID: sej02002

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may18a.b/wy18b01.d Injection date and time: **18-MAY-2019 23:17**
Data file Sample Info. Line: VBLKW23;VBLKW23;1;3;;;;;; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)				Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					0.2	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					0.2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
73) Methylcyclohexane	(2)				Not Detected					0.2	5
74) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
75) Dibromomethane	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
77) Methyl Methacrylate	(2)				Not Detected					0.2	5
79) Bromodichloromethane	(2)				Not Detected					0.2	1
80) 2-Nitropropane	(2)				Not Detected					0.8	10
81) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
82) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
83) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
89) Toluene	(3)				Not Detected					0.2	1
90) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
91) 1,3-Dichloropropene (total)	(3)				Not Detected					0.2	5
92) Ethyl Methacrylate	(3)				Not Detected					0.2	5
93) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
95) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
97) 2-Hexanone	(3)				Not Detected					0.3	10
98) Dibromochloromethane	(3)				Not Detected					0.2	1
100) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
103) Chlorobenzene	(3)				Not Detected					0.2	1
104) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
110) Styrene	(3)				Not Detected					0.2	5
111) Bromoform	(3)				Not Detected					0.2	4
112) Isopropylbenzene	(3)				Not Detected					0.2	5
113) Cyclohexanone	(1)				Not Detected					25	100
116) Bromobenzene	(4)				Not Detected					0.2	5
117) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
118) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
119) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50
120) n-Propylbenzene	(4)				Not Detected					0.2	5
121) 2-Chlorotoluene	(4)				Not Detected					0.2	5

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:42. Target 3.5 esignature user ID: sej02002

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may18a.b/wy18b01.d Injection date and time: **18-MAY-2019 23:17**
Data file Sample Info. Line: VBLKW23;VBLKW23;1;3;;;;;; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

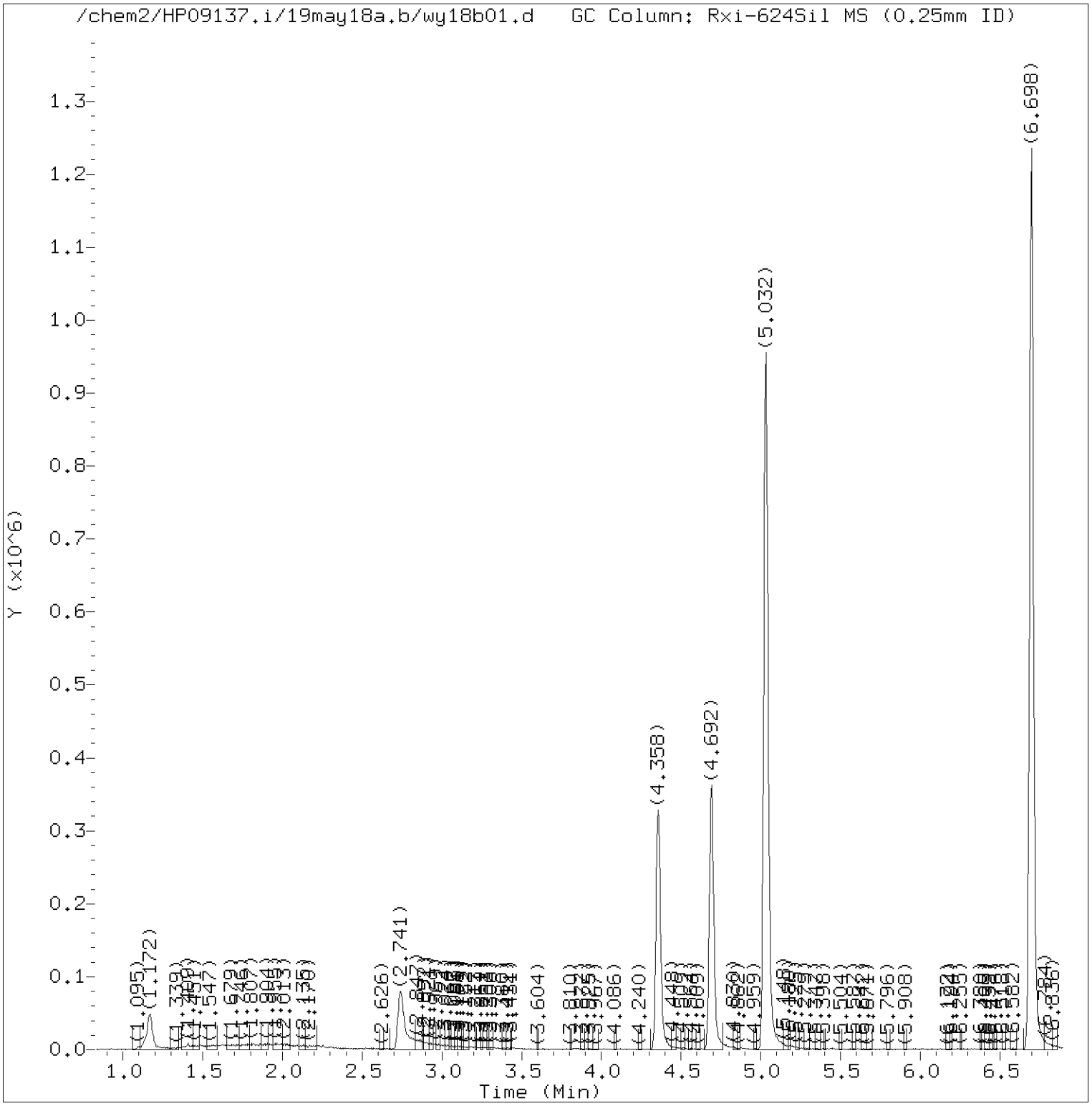
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
122) 4-Chlorotoluene	(4)				Not Detected					0.2	5
123) 1,3,5-Trimethylbenzene	(4)				Not Detected					0.3	5
125) tert-Butylbenzene	(4)				Not Detected					0.3	5
126) Pentachloroethane	(4)				Not Detected					0.2	5
127) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5
128) sec-Butylbenzene	(4)				Not Detected					0.2	5
130) 1,3-Dichlorobenzene	(4)				Not Detected					0.2	5
131) p-Isopropyltoluene	(4)				Not Detected					0.2	5
134) 1,4-Dichlorobenzene	(4)				Not Detected					0.2	5
135) 1,2,3-Trimethylbenzene	(4)				Not Detected					0.3	5
136) Benzyl Chloride	(4)				Not Detected					0.3	5
137) 1,3-Diethylbenzene	(4)				Not Detected					0.2	5
138) 1,4-Diethylbenzene	(4)				Not Detected					0.2	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
140) n-Butylbenzene	(4)				Not Detected					0.2	5
141) 1,2-Diethylbenzene	(4)				Not Detected					0.2	5
142) Diethylbenzene (total)	(4)				Not Detected					0.2	5
143) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.3	5
145) 1,3,5-Trichlorobenzene	(4)				Not Detected					0.2	5
147) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	5
148) Hexachlorobutadiene	(4)				Not Detected					0.7	5
149) Naphthalene	(4)				Not Detected					1	5
150) 1,2,3-Trichlorobenzene	(4)				Not Detected					0.4	5
151) 2-Methylnaphthalene	(4)				Not Detected					0.7	5

Total number of targets = 109

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:42. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

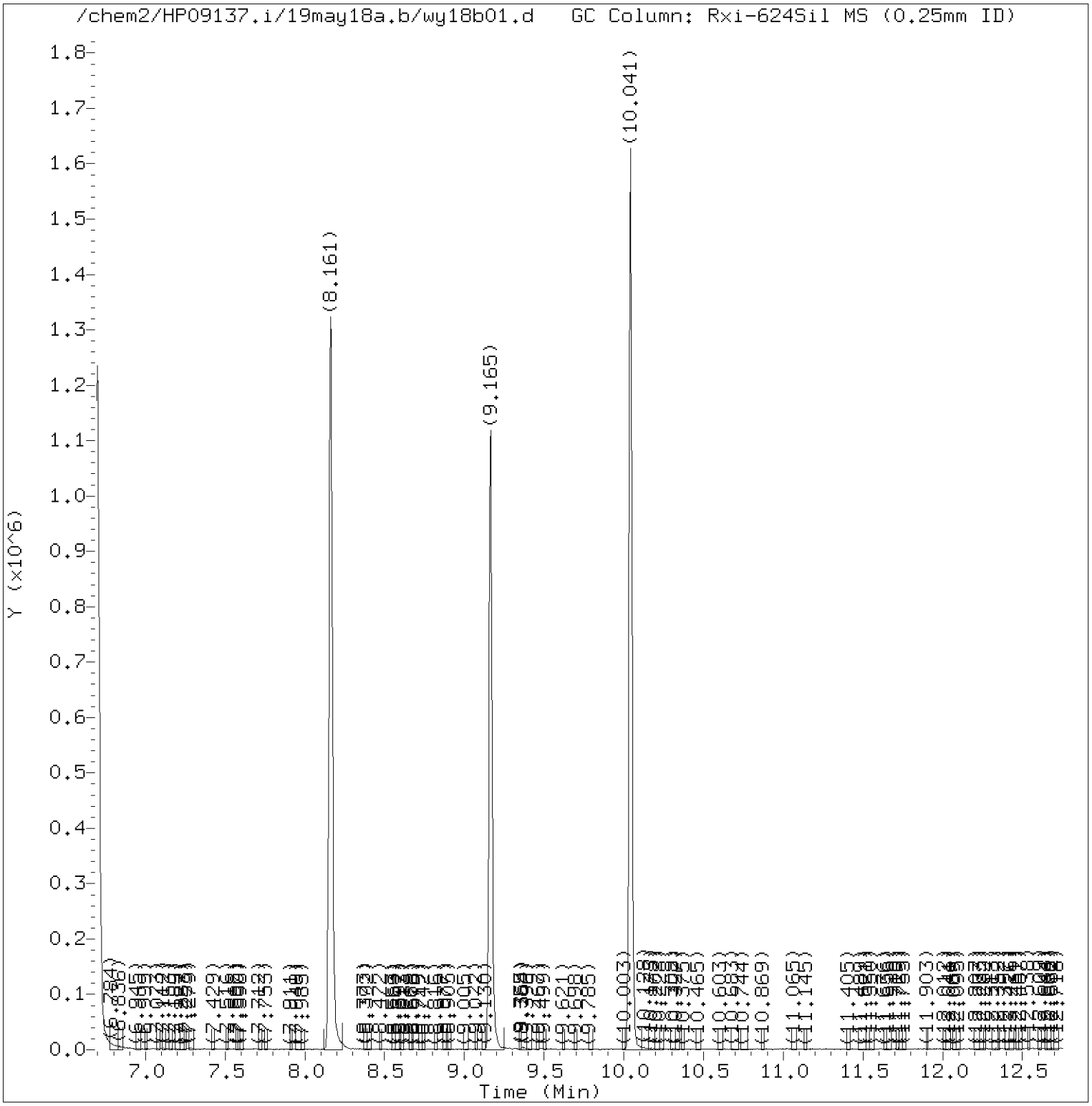
Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18b01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 23:17 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: VBLKW23 Lab Sample ID: VBLKW23

Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:42.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18b01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 23:17 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: VBLKW23 Lab Sample ID: VBLKW23

Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:42.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18b01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 23:17 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: VBLKW23 Lab Sample ID: VBLKW23

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.744	65	177555	250.000
52)$Dibromofluoromethane	(2)	4.358	113	213781	48.691
57)$1,2-Dichloroethane-d4	(2)	4.692	102	57565	49.298
66)*Fluorobenzene	(2)	5.032	96	947707	50.000
84)$Toluene-d8	(3)	6.698	98	928949	50.125
101)*Chlorobenzene-d5	(3)	8.161	117	739589	50.000
115)$4-Bromofluorobenzene	(3)	9.165	95	320336	43.206
132)*1,4-Dichlorobenzene-d4	(4)	10.045	152	377751	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:42.
Target 3.5 esignature user ID: sej02002

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKW24

Data file: /chem2/HP09137.i/19may19a.b/wy19b02.d Injection date and time: **19-MAY-2019 12:20**
Data file Sample Info. Line: VBLKW24;VBLKW24;1;3;;;;;; Instrument ID: **HP09137.i** Batch: **W191381AB**
Date, time and analyst ID of latest file update: 04-Jun-2019 15:08 rrm00219

Blank Data file reference: **Does not exist or can't be found**

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: **18116**
Calibration date and time (Last Method Edit): 04-JUN-2019 15:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may19a.b/wy19c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.741	(-0.006)	595	65	161128	(-14)	250.00	
66) Fluorobenzene	5.032	(0.003)	1309	96	907592	(-6)	50.00	
101) Chlorobenzene-d5	8.164	(-0.003)	2285	117	688339	(-7)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041	(0.000)	2870	152	358292	(-16)	50.00	

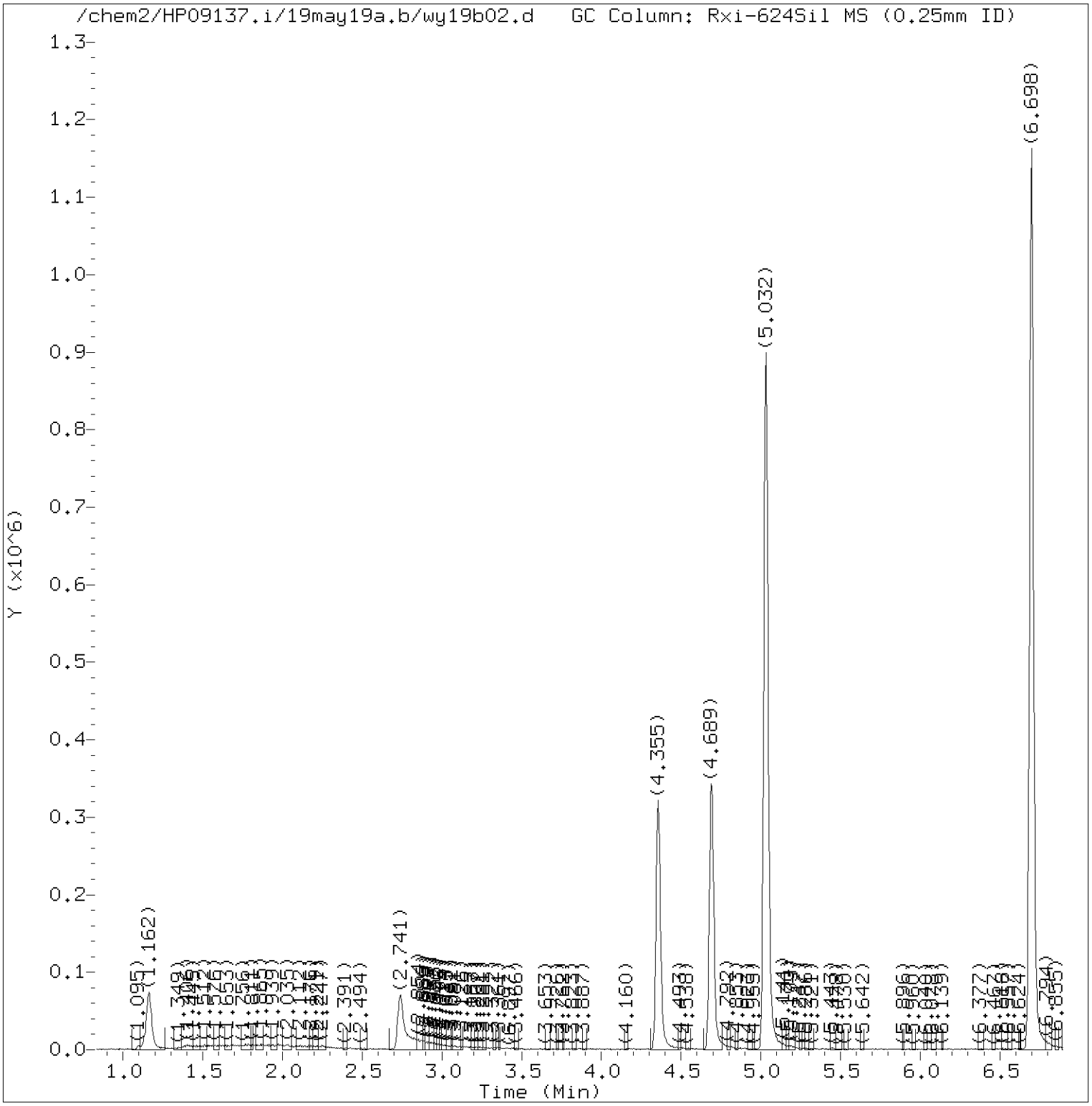
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.355	(0.000)	113	204712	48.686	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692	(-0.001)	102	55555	49.680	99%		80 - 120
84) Toluene-d8	(3)	6.698	(0.001)	98	862842	50.024	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.001)	95	300353	43.527	87%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
9) Chloroethane	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
94) Tetrachloroethene	(3)				Not Detected					0.2	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5

Total number of targets = 12

Digitally signed by Roy R. Mellott on 06/04/2019 at 15:09. Target 3.5 esignature user ID: rrm00219

Secondary review performed and digitally signed by Roy R. Mellott on 06/12/2019 at 17:16. PARALLAX ID: rrm00219



Total Ion Chromatogram (TIC)

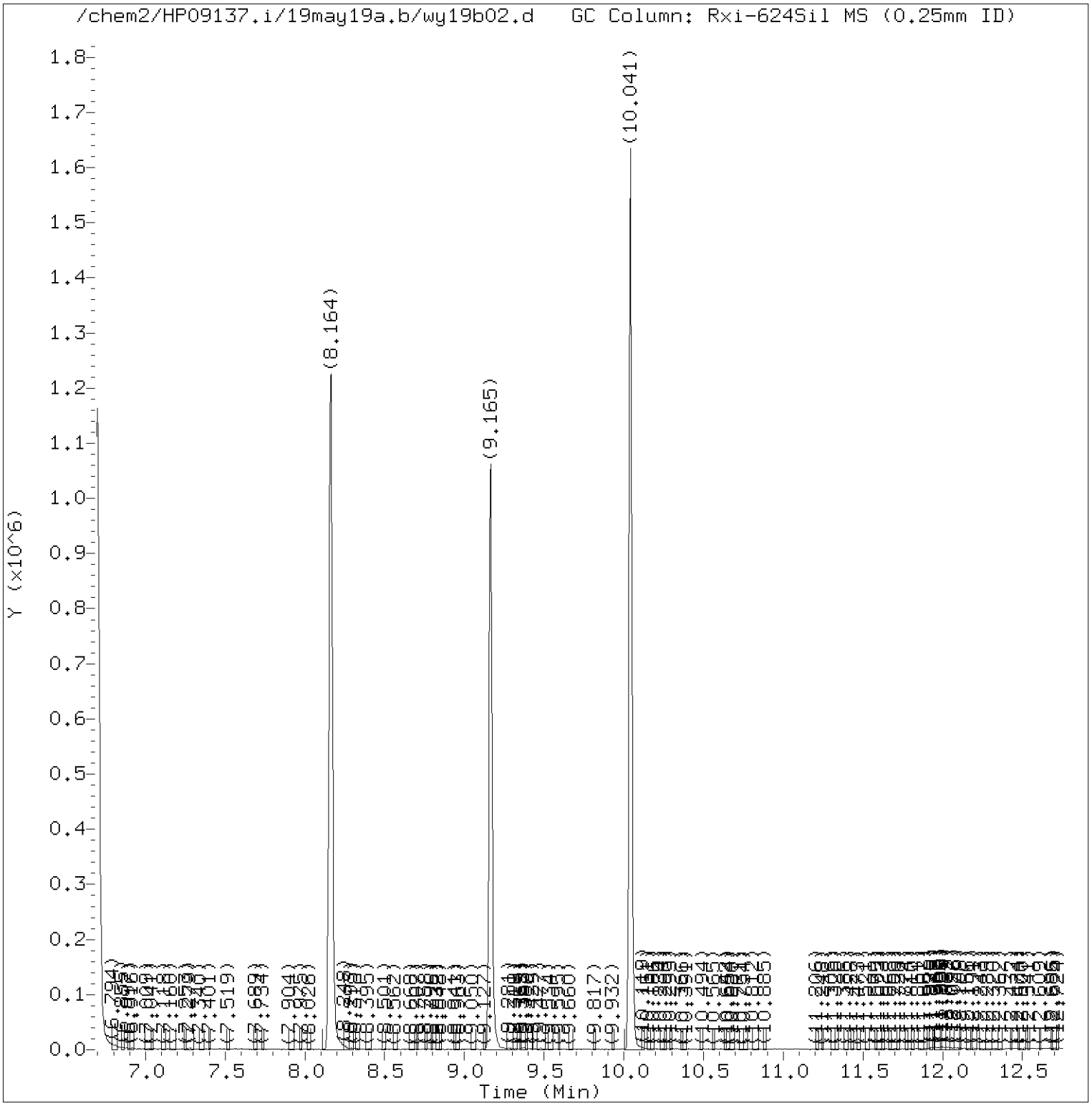
Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19b02.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 12:20 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 04-Jun-2019 15:08 rrm00219

Sample Name: VBLKW24 Lab Sample ID: VBLKW24

Digitally signed by Roy R. Mellott
on 06/04/2019 at 15:09.
Target 3.5 esignature user ID: rrm00219



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19b02.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 12:20 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 04-Jun-2019 15:08 rrm00219

Sample Name: VBLKW24 Lab Sample ID: VBLKW24

Digitally signed by Roy R. Mellott
on 06/04/2019 at 15:09.
Target 3.5 esignature user ID: rrm00219

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19b02.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 12:20 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 04-JUN-2019 15:00
Date, time and analyst ID of latest file update: 04-Jun-2019 15:08 rrm00219

Sample Name: VBLKW24 Lab Sample ID: VBLKW24

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.741	65	161128	250.000
52)$Dibromofluoromethane	(2)	4.355	113	204712	48.686
57)$1,2-Dichloroethane-d4	(2)	4.692	102	55555	49.680
66)*Fluorobenzene	(2)	5.032	96	907592	50.000
84)$Toluene-d8	(3)	6.698	98	862842	50.024
101)*Chlorobenzene-d5	(3)	8.164	117	688339	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	300353	43.527
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	358292	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Roy R. Mellott
on 06/04/2019 at 15:09.
Target 3.5 esignature user ID: rrm00219

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSW23

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSW23

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/18/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	18	
74-87-3	Chloromethane	16	
106-99-0	1,3-Butadiene	26	
75-01-4	Vinyl Chloride	17	
74-83-9	Bromomethane	16	
75-00-3	Chloroethane	16	
109-66-0	n-Pentane	14	
75-69-4	Trichlorofluoromethane	18	
64-17-5	Ethanol	380	J
354-23-4	Freon 123a	19	
107-02-8	Acrolein	150	
75-35-4	1,1-Dichloroethene	22	
67-64-1	Acetone	230	
76-13-1	Freon 113	21	
67-63-0	2-Propanol	160	
74-88-4	Methyl Iodide	20	
75-15-0	Carbon Disulfide	15	
107-05-1	Allyl Chloride	19	
79-20-9	Methyl Acetate	18	
75-09-2	Methylene Chloride	20	
75-65-0	t-Butyl alcohol	210	
107-13-1	Acrylonitrile	90	
156-60-5	trans-1,2-Dichloroethene	21	
1634-04-4	Methyl Tertiary Butyl Ether	24	
110-54-3	n-Hexane	19	
75-34-3	1,1-Dichloroethane	21	
108-20-3	di-Isopropyl ether	20	
126-99-8	2-Chloro-1,3-butadiene	21	
637-92-3	Ethyl t-butyl ether	22	
156-59-2	cis-1,2-Dichloroethene	23	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSW23

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSW23

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/18/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	44	
78-93-3	2-Butanone	140	
594-20-7	2,2-Dichloropropane	20	
107-12-0	Propionitrile	200	
126-98-7	Methacrylonitrile	140	
74-97-5	Bromochloromethane	21	
109-99-9	Tetrahydrofuran	130	
67-66-3	Chloroform	22	
71-55-6	1,1,1-Trichloroethane	22	
110-82-7	Cyclohexane	17	
563-58-6	1,1-Dichloropropene	21	
56-23-5	Carbon Tetrachloride	21	
78-83-1	Isobutyl Alcohol	560	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	23	
994-05-8	t-Amyl methyl ether	23	
142-82-5	n-Heptane	19	
71-36-3	n-Butanol	1000	
79-01-6	Trichloroethene	21	
108-87-2	Methylcyclohexane	20	
78-87-5	1,2-Dichloropropane	21	
74-95-3	Dibromomethane	22	
123-91-1	1,4-Dioxane	630	
80-62-6	Methyl Methacrylate	18	
75-27-4	Bromodichloromethane	21	
79-46-9	2-Nitropropane	17	
110-75-8	2-Chloroethyl Vinyl Ether	19	
10061-01-5	cis-1,3-Dichloropropene	20	
108-10-1	4-Methyl-2-pentanone	91	
108-88-3	Toluene	24	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSW23

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSW23

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/18/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	20	
542-75-6	1,3-Dichloropropene (total)	40	
97-63-2	Ethyl Methacrylate	20	
79-00-5	1,1,2-Trichloroethane	24	
127-18-4	Tetrachloroethene	25	
142-28-9	1,3-Dichloropropane	22	
591-78-6	2-Hexanone	99	
124-48-1	Dibromochloromethane	23	
106-93-4	1,2-Dibromoethane	23	
108-90-7	Chlorobenzene	24	
630-20-6	1,1,1,2-Tetrachloroethane	23	
100-41-4	Ethylbenzene	23	
179601-23-1	m+p-Xylene	47	
95-47-6	o-Xylene	23	
1330-20-7	Xylene (Total)	70	
100-42-5	Styrene	23	
75-25-2	Bromoform	21	
98-82-8	Isopropylbenzene	23	
108-94-1	Cyclohexanone	520	
108-86-1	Bromobenzene	24	
79-34-5	1,1,2,2-Tetrachloroethane	23	
96-18-4	1,2,3-Trichloropropane	24	
110-57-6	trans-1,4-Dichloro-2-butene	75	
103-65-1	n-Propylbenzene	23	
95-49-8	2-Chlorotoluene	23	
106-43-4	4-Chlorotoluene	23	
108-67-8	1,3,5-Trimethylbenzene	22	
98-06-6	tert-Butylbenzene	22	
76-01-7	Pentachloroethane	22	
95-63-6	1,2,4-Trimethylbenzene	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSW23

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSW23

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may18a.b/wy18s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/18/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
135-98-8	sec-Butylbenzene	21	
541-73-1	1,3-Dichlorobenzene	23	
99-87-6	p-Isopropyltoluene	21	
106-46-7	1,4-Dichlorobenzene	23	
526-73-8	1,2,3-Trimethylbenzene	21	
100-44-7	Benzyl Chloride	18	
141-93-5	1,3-Diethylbenzene	20	
105-05-5	1,4-Diethylbenzene	19	
95-50-1	1,2-Dichlorobenzene	23	
104-51-8	n-Butylbenzene	20	
135-01-3	1,2-Diethylbenzene	21	
25340-17-4	Diethylbenzene (total)	60	
96-12-8	1,2-Dibromo-3-chloropropane	20	
108-70-3	1,3,5-Trichlorobenzene	20	
120-82-1	1,2,4-Trichlorobenzene	20	
87-68-3	Hexachlorobutadiene	19	
91-20-3	Naphthalene	20	
87-61-6	1,2,3-Trichlorobenzene	20	
91-57-6	2-Methylnaphthalene	14	

Data file: /chem2/HP09137.i/19may18a.b/wy18s01.d Injection date and time: **18-MAY-2019 22:29**
Data file Sample Info. Line: LCSW23;LCSW23;1;3;LCS;;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.732	(0.006)	592	65	185223	(-2)	250.00	
66) Fluorobenzene	5.032	(0.000)	1309	96	1049302	(2)	50.00	
101) Chlorobenzene-d5	8.161	(0.000)	2284	117	796496	(2)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041	(0.000)	2870	152	447919	(1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.359	(0.001)	113	232125	47.750	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692	(0.000)	102	60342	46.673	93%		80 - 120
84) Toluene-d8	(3)	6.698	(0.000)	98	1024508	51.332	103%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.000)	95	372564	46.660	93%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	1.259	(-0.000)	85	122405	18.041	18.04			0.2	1
4) Chloromethane	(2)	1.390	(-0.001)	50	131544	15.570	15.57			0.2	1
5) 1,3-Butadiene	(2)	1.464	(0.004)	39	134278M	26.080	26.08			1	3
6) Vinyl Chloride	(2)	1.464	(-0.000)	62	129632	16.738	16.74			0.2	1
8) Bromomethane	(2)	1.692	(-0.000)	94	96074M	15.728	15.73			0.3	1
9) Chloroethane	(2)	1.766	(0.000)	64	80293	15.754	15.75			0.2	1
11) n-Pentane	(2)	1.965	(0.001)	43	110412	14.114	14.11			0.4	10
12) Trichlorofluoromethane	(2)	1.932	(-0.000)	101	151761	18.450	18.45			0.2	1
13) Ethanol	(1)	2.032	(-0.000)	45	32125M	380.291	380.29		J	280	750
15) Freon 123a	(2)	2.119	(-0.000)	67	114541M	18.634	18.63			0.4	5
16) Acrolein	(1)	2.215	(-0.000)	56	203467	152.584	152.58			2	100
17) 1,1-Dichloroethene	(2)	2.298	(0.001)	96	99685M	21.547	21.55			0.2	1
18) Acetone	(1)	2.340	(-0.002)	58	150531M	232.245	232.25			0.7	20
19) Freon 113	(2)	2.334	(0.001)	101	84299	20.750	20.75			0.2	10
21) 2-Propanol	(1)	2.456	(-0.004)	45	76314M	158.471	158.47			18	100
22) Methyl Iodide	(2)	2.475	(0.000)	142	178264M	20.107	20.11			0.2	1
23) Carbon Disulfide	(2)	2.507	(0.001)	76	241845	14.838	14.84			0.2	5
25) Allyl Chloride	(2)	2.603	(0.000)	41	149787	18.585	18.58			0.3	5
27) Methyl Acetate	(2)	2.619	(0.000)	43	128160	18.371	18.37			0.2	5
28) Methylene Chloride	(2)	2.709	(0.000)	84	110369	19.517	19.52			0.3	1
30) t-Butyl alcohol	(1)	2.812	(-0.002)	59	183621	213.752	213.75			12	50
31) Acrylonitrile	(2)	2.924	(0.001)	53	329808	89.865	89.87			0.3	20
32) trans-1,2-Dichloroethene	(2)	2.959	(0.000)	96	106977	21.312	21.31			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	2.963	(-0.000)	73	291896M	23.883	23.88			0.2	1
34) n-Hexane	(2)	3.213	(0.001)	57	128915	19.194	19.19			0.2	5
36) 1,1-Dichloroethane	(2)	3.341	(0.000)	63	186937	20.552	20.55			0.2	1
38) di-Isopropyl ether	(2)	3.415	(-0.000)	45	348753	19.958	19.96			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	3.431	(-0.000)	53	166663	21.156	21.16			0.2	5
40) Ethyl t-butyl ether	(2)	3.758	(0.000)	59	277001	21.747	21.75			0.2	1
42) cis-1,2-Dichloroethene	(2)	3.890	(0.000)	96	127328	22.592	22.59			0.2	1
43) 1,2-Dichloroethene (Total)	(2)			96	234305	43.904	43.90			0.2	2

M = Compound was manually integrated.

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43. Target 3.5 esignature user ID: sej02002

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may18a.b/wy18s01.d Injection date and time: **18-MAY-2019 22:29**
Data file Sample Info. Line: LCSW23;LCSW23;1;3;LCS;;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	3.906(0.000)	43	729335	138.323	138.32			0.3	10
45) 2,2-Dichloropropane	(2)	3.893(-0.000)	77	80613	19.734	19.73			0.3	1
47) Propionitrile	(1)	3.961(-0.001)	54	209125	195.875	195.87			14	100
48) Methacrylonitrile	(2)	4.111(0.000)	67	565031	143.190	143.19			6	50
49) Bromochloromethane	(2)	4.121(0.000)	128	61890	21.125	21.13			0.2	5
50) Tetrahydrofuran	(1)	4.169(-0.002)	71	132152	133.738	133.74			0.7	10
51) Chloroform	(2)	4.201(-0.000)	83	187903	22.018	22.02			0.2	1
53) 1,1,1-Trichloroethane	(2)	4.381(0.000)	97	140386	21.862	21.86			0.3	1
54) Cyclohexane	(2)	4.442(0.000)	56	148098	17.427	17.43			0.2	5
55) 1,1-Dichloropropene	(2)	4.548(-0.000)	75	143514	20.975	20.98			0.2	5
56) Carbon Tetrachloride	(2)	4.548(0.000)	117	113827	20.656	20.66			0.2	1
58) Isobutyl Alcohol	(1)	4.679(-0.003)	41	176096	562.293	562.29			36	250
60) Benzene	(2)	4.750(0.000)	78	466958	21.232	21.23			0.2	1
61) 1,2-Dichloroethane	(2)	4.769(-0.000)	62	154308	22.713	22.71			0.3	1
65) t-Amyl methyl ether	(2)	4.875(0.000)	73	300472	23.026	23.03			0.8	5
67) n-Heptane	(2)	5.032(0.001)	43	121659	18.953	18.95			0.2	5
69) n-Butanol	(1)	5.356(-0.004)	56	277598	998.326	998.33			61	250
71) Trichloroethene	(2)	5.405(0.000)	95	113492	21.309	21.31			0.2	1
73) Methylcyclohexane	(2)	5.604(0.001)	83	158337	20.478	20.48			0.2	5
74) 1,2-Dichloropropane	(2)	5.636(0.000)	63	117626	20.832	20.83			0.2	1
75) Dibromomethane	(2)	5.754(0.000)	93	76975	22.089	22.09			0.2	1
76) 1,4-Dioxane	(1)	5.790(-0.007)	88	52768M	634.789	634.79			29	250
77) Methyl Methacrylate	(2)	5.777(0.000)	69	111925	18.038	18.04			0.2	5
79) Bromodichloromethane	(2)	5.928(0.000)	83	133551	20.858	20.86			0.2	1
80) 2-Nitropropane	(2)	6.172(0.000)	41	35846	16.547	16.55			0.8	10
81) 2-Chloroethyl Vinyl Ether	(2)	6.265(0.000)	63	83042	19.291	19.29			0.2	10
82) cis-1,3-Dichloropropene	(2)	6.409(0.000)	75	173429	19.700	19.70			0.2	1
83) 4-Methyl-2-pentanone	(2)	6.586(0.000)	43	948076	91.217	91.22			0.5	10
89) Toluene	(3)	6.768(0.000)	92	305184	23.737	23.74			0.2	1
90) trans-1,3-Dichloropropene	(3)	7.019(-0.000)	75	156038	20.386	20.39			0.2	1
91) 1,3-Dichloropropene (total)	(3)		100	329467	40.087	40.09			0.2	5
92) Ethyl Methacrylate	(3)	7.137(0.000)	69	186320	19.810	19.81			0.2	5
93) 1,1,2-Trichloroethane	(3)	7.214(0.000)	97	120891	24.430	24.43			0.2	1
94) Tetrachloroethene	(3)	7.359(0.000)	166	127987	24.532	24.53			0.2	1
95) 1,3-Dichloropropane	(3)	7.388(0.000)	76	193133	22.470	22.47			0.2	1
97) 2-Hexanone	(3)	7.490(0.000)	43	742042	99.103	99.10			0.3	10
98) Dibromochloromethane	(3)	7.612(0.000)	129	111188	23.005	23.00			0.2	1
100) 1,2-Dibromoethane	(3)	7.718(0.000)	107	126964	23.353	23.35			0.2	1
103) Chlorobenzene	(3)	8.187(0.000)	112	337353	23.653	23.65			0.2	1
104) 1,1,1,2-Tetrachloroethane	(3)	8.267(0.000)	131	105671	23.054	23.05			0.2	1
105) Ethylbenzene	(3)	8.296(0.000)	91	559952	22.915	22.91			0.4	1
107) m+p-Xylene	(3)	8.402(0.000)	106	455044	46.836	46.84			1	5
108) o-Xylene	(3)	8.739(0.000)	106	218577	22.868	22.87			0.4	1
109) Xylene (Total)	(3)		106	673621	69.705	69.70			1	5
110) Styrene	(3)	8.752(0.000)	104	365013	22.765	22.76			0.2	5
111) Bromoform	(3)	8.896(0.000)	173	79455	21.123	21.12			0.2	4
112) Isopropylbenzene	(3)	9.047(0.000)	105	540716	23.022	23.02			0.2	5
113) Cyclohexanone	(1)	9.114(-0.007)	55	193408	515.788	515.79			25	100
116) Bromobenzene	(4)	9.278(0.000)	156	153402	23.777	23.78			0.2	5
117) 1,1,2,2-Tetrachloroethane	(4)	9.284(-0.000)	83	195987	22.527	22.53			0.2	1
118) 1,2,3-Trichloropropane	(4)	9.313(0.000)	110	63106	24.081	24.08			0.2	5
119) trans-1,4-Dichloro-2-butene	(4)	9.329(-0.000)	53	210559	75.471	75.47			6	50
120) n-Propylbenzene	(4)	9.371(0.000)	91	640815	22.532	22.53			0.2	5
121) 2-Chlorotoluene	(4)	9.435(-0.000)	126	136708	23.304	23.30			0.2	5

M = Compound was manually integrated.

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43. Target 3.5 esignature user ID: sej02002

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may18a.b/wy18s01.d Injection date and time: **18-MAY-2019 22:29**
Data file Sample Info. Line: LCSW23;LCSW23;1;3;LCS;;;;wy18b01; Instrument ID: **HP09137.i** Batch: **W191381AA**
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Blank Data file reference: **/chem2/HP09137.i/19may18a.b/wy18b01.d**

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 18-MAY-2019 22:21
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may18a.b/wy18c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
122) 4-Chlorotoluene	(4)	9.518(-0.000)	126	144449	23.002	23.00			0.2	5
123) 1,3,5-Trimethylbenzene	(4)	9.509(0.000)	105	460582	22.455	22.45			0.3	5
125) tert-Butylbenzene	(4)	9.759(-0.000)	134	102225	21.936	21.94			0.3	5
126) Pentachloroethane	(4)	9.766(0.000)	167	80695	21.905	21.90			0.2	5
127) 1,2,4-Trimethylbenzene	(4)	9.791(-0.000)	105	476442	22.043	22.04			1	5
128) sec-Butylbenzene	(4)	9.920(-0.000)	105	534870	21.244	21.24			0.2	5
130) 1,3-Dichlorobenzene	(4)	9.993(-0.000)	146	282658	22.976	22.98			0.2	5
131) p-Isopropyltoluene	(4)	10.022(0.000)	119	474445	21.287	21.29			0.2	5
134) 1,4-Dichlorobenzene	(4)	10.058(0.000)	146	297886	23.356	23.36			0.2	5
135) 1,2,3-Trimethylbenzene	(4)	10.099(-0.000)	105	495935	21.325	21.33			0.3	5
136) Benzyl Chloride	(4)	10.157(0.000)	91	327217	18.330	18.33			0.3	5
137) 1,3-Diethylbenzene	(4)	10.240(0.000)	119	280737	20.047	20.05			0.2	5
138) 1,4-Diethylbenzene	(4)	10.298(0.000)	119	291396	19.421	19.42			0.2	5
139) 1,2-Dichlorobenzene	(4)	10.324(0.000)	146	284707	23.326	23.33			0.2	5
140) n-Butylbenzene	(4)	10.317(0.000)	92	221191	19.663	19.66			0.2	5
141) 1,2-Diethylbenzene	(4)	10.382(-0.000)	119	248487	21.017	21.02			0.2	5
142) Diethylbenzene (total)	(4)		100	820620	60.484	60.48			0.2	5
143) 1,2-Dibromo-3-chloropropane	(4)	10.866(-0.000)	75	40024	20.242	20.24			0.3	5
145) 1,3,5-Trichlorobenzene	(4)	11.007(0.000)	180	189511	20.248	20.25			0.2	5
147) 1,2,4-Trichlorobenzene	(4)	11.418(0.000)	180	178556	19.871	19.87			0.3	5
148) Hexachlorobutadiene	(4)	11.527(0.000)	225	61764	19.299	19.30			0.7	5
149) Naphthalene	(4)	11.582(0.000)	128	604155	19.871	19.87			1	5
150) 1,2,3-Trichlorobenzene	(4)	11.739(0.000)	180	177733	20.265	20.26			0.4	5
151) 2-Methylnaphthalene	(4)	12.307(-0.000)	142	234395	13.513	13.51			0.7	5

Total number of targets = 109

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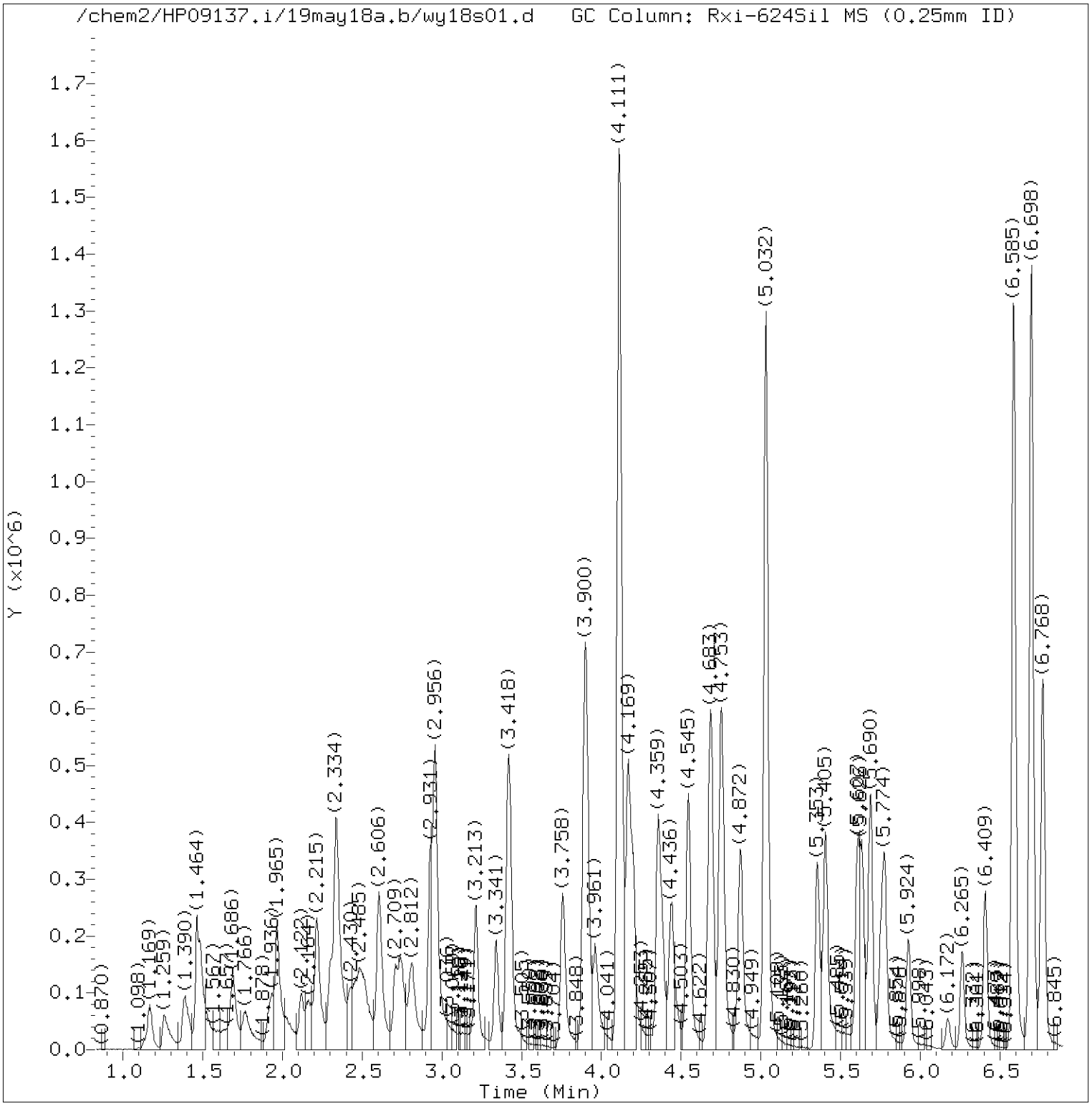
Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

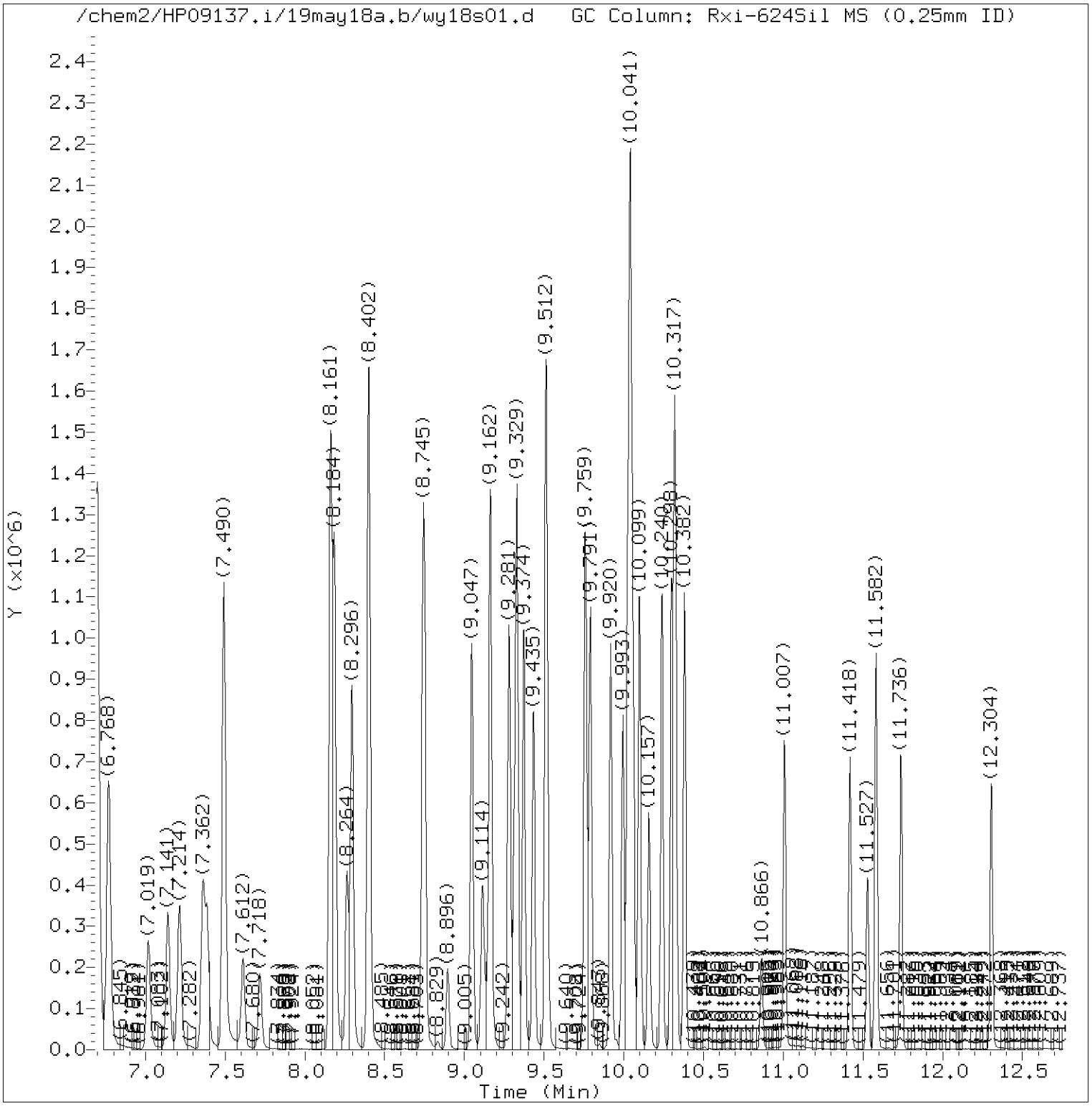
Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.259	85	122405	18.041
4) Chloromethane	(2)	1.390	50	131544	15.570
5) 1,3-Butadiene	(2)	1.464	39	134278M	26.080
6) Vinyl Chloride	(2)	1.464	62	129632	16.738
8) Bromomethane	(2)	1.692	94	96074M	15.728
9) Chloroethane	(2)	1.766	64	80293	15.754
12) Trichlorofluoromethane	(2)	1.933	101	151761	18.450
11) n-Pentane	(2)	1.965	43	110412	14.114
13) Ethanol	(1)	2.032	45	32125M	380.291
15) Freon 123a	(2)	2.119	67	114541M	18.634
16) Acrolein	(1)	2.215	56	203467	152.584
17) 1,1-Dichloroethene	(2)	2.298	96	99685M	21.547
19) Freon 113	(2)	2.334	101	84299	20.750
18) Acetone	(1)	2.340	58	150531M	232.245
21) 2-Propanol	(1)	2.456	45	76314M	158.471
22) Methyl Iodide	(2)	2.475	142	178264M	20.107
23) Carbon Disulfide	(2)	2.507	76	241845	14.838
25) Allyl Chloride	(2)	2.603	41	149787	18.585
27) Methyl Acetate	(2)	2.619	43	128160	18.371
28) Methylene Chloride	(2)	2.709	84	110369	19.517
29)*t-Butyl alcohol-d10	(1)	2.732	65	185223	250.000
30) t-Butyl alcohol	(1)	2.812	59	183621	213.752
31) Acrylonitrile	(2)	2.924	53	329808	89.865
32) trans-1,2-Dichloroethene	(2)	2.959	96	106977	21.312
33) Methyl Tertiary Butyl Ether	(2)	2.963	73	291896M	23.883
34) n-Hexane	(2)	3.213	57	128915	19.194
36) 1,1-Dichloroethane	(2)	3.341	63	186937	20.552
38) di-Isopropyl ether	(2)	3.415	45	348753	19.958
39) 2-Chloro-1,3-butadiene	(2)	3.431	53	166663	21.156
40) Ethyl t-butyl ether	(2)	3.758	59	277001	21.747
42) cis-1,2-Dichloroethene	(2)	3.890	96	127328	22.592
45) 2,2-Dichloropropane	(2)	3.893	77	80613	19.734
44) 2-Butanone	(2)	3.906	43	729335	138.323
47) Propionitrile	(1)	3.961	54	209125	195.875
48) Methacrylonitrile	(2)	4.111	67	565031	143.190
49) Bromochloromethane	(2)	4.121	128	61890	21.125
50) Tetrahydrofuran	(1)	4.169	71	132152	133.738
51) Chloroform	(2)	4.201	83	187903	22.018

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
52)$Dibromofluoromethane	(2)	4.359	113	232125	47.750
53) 1,1,1-Trichloroethane	(2)	4.381	97	140386	21.862
54) Cyclohexane	(2)	4.442	56	148098	17.427
55) 1,1-Dichloropropene	(2)	4.548	75	143514	20.975
56) Carbon Tetrachloride	(2)	4.548	117	113827	20.656
58) Isobutyl Alcohol	(1)	4.679	41	176096	562.293
57)$1,2-Dichloroethane-d4	(2)	4.692	102	60342	46.673
60) Benzene	(2)	4.750	78	466958	21.232
61) 1,2-Dichloroethane	(2)	4.769	62	154308	22.713
65) t-Amyl methyl ether	(2)	4.875	73	300472	23.026
67) n-Heptane	(2)	5.032	43	121659	18.953
66)*Fluorobenzene	(2)	5.032	96	1049302	50.000
69) n-Butanol	(1)	5.356	56	277598	998.326
71) Trichloroethene	(2)	5.405	95	113492	21.309
73) Methylcyclohexane	(2)	5.604	83	158337	20.478
74) 1,2-Dichloropropane	(2)	5.636	63	117626	20.832
75) Dibromomethane	(2)	5.754	93	76975	22.089
77) Methyl Methacrylate	(2)	5.777	69	111925	18.038
76) 1,4-Dioxane	(1)	5.790	88	52768M	634.789
79) Bromodichloromethane	(2)	5.928	83	133551	20.858
43) 1,2-Dichloroethene (Total)	(2)		96	234305	43.904
80) 2-Nitropropane	(2)	6.172	41	35846	16.547
81) 2-Chloroethyl Vinyl Ether	(2)	6.265	63	83042	19.291
82) cis-1,3-Dichloropropene	(2)	6.409	75	173429	19.700
83) 4-Methyl-2-pentanone	(2)	6.585	43	948076	91.217
84)$Toluene-d8	(3)	6.698	98	1024508	51.332
89) Toluene	(3)	6.768	92	305184	23.737
90) trans-1,3-Dichloropropene	(3)	7.019	75	156038	20.386
92) Ethyl Methacrylate	(3)	7.137	69	186320	19.810
93) 1,1,2-Trichloroethane	(3)	7.214	97	120891	24.430
94) Tetrachloroethene	(3)	7.359	166	127987	24.532
95) 1,3-Dichloropropane	(3)	7.388	76	193133	22.470
97) 2-Hexanone	(3)	7.490	43	742042	99.103
98) Dibromochloromethane	(3)	7.612	129	111188	23.005
100) 1,2-Dibromoethane	(3)	7.718	107	126964	23.353
101)*Chlorobenzene-d5	(3)	8.161	117	796496	50.000
103) Chlorobenzene	(3)	8.187	112	337353	23.653
104) 1,1,1,2-Tetrachloroethane	(3)	8.267	131	105671	23.054

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
105) Ethylbenzene	(3)	8.296	91	559952	22.915
107) m+p-Xylene	(3)	8.402	106	455044	46.836
108) o-Xylene	(3)	8.739	106	218577	22.868
110) Styrene	(3)	8.752	104	365013	22.765
111) Bromoform	(3)	8.896	173	79455	21.123
112) Isopropylbenzene	(3)	9.047	105	540716	23.022
113) Cyclohexanone	(1)	9.114	55	193408	515.788
115)$4-Bromofluorobenzene	(3)	9.162	95	372564	46.660
116) Bromobenzene	(4)	9.278	156	153402	23.777
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	195987	22.527
118) 1,2,3-Trichloropropane	(4)	9.313	110	63106	24.081
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	210559	75.471
120) n-Propylbenzene	(4)	9.371	91	640815	22.532
121) 2-Chlorotoluene	(4)	9.435	126	136708	23.304
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	460582	22.455
122) 4-Chlorotoluene	(4)	9.518	126	144449	23.002
125) tert-Butylbenzene	(4)	9.759	134	102225	21.936
126) Pentachloroethane	(4)	9.766	167	80695	21.905
127) 1,2,4-Trimethylbenzene	(4)	9.791	105	476442	22.043
128) sec-Butylbenzene	(4)	9.920	105	534870	21.244
130) 1,3-Dichlorobenzene	(4)	9.993	146	282658	22.976
131) p-Isopropyltoluene	(4)	10.022	119	474445	21.287
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	447919	50.000
134) 1,4-Dichlorobenzene	(4)	10.058	146	297886	23.356
91) 1,3-Dichloropropene (total)	(3)		100	329467	40.087
135) 1,2,3-Trimethylbenzene	(4)	10.099	105	495935	21.325
136) Benzyl Chloride	(4)	10.157	91	327217	18.330
137) 1,3-Diethylbenzene	(4)	10.240	119	280737	20.047
138) 1,4-Diethylbenzene	(4)	10.298	119	291396	19.421
140) n-Butylbenzene	(4)	10.317	92	221191	19.663
139) 1,2-Dichlorobenzene	(4)	10.324	146	284707	23.326
141) 1,2-Diethylbenzene	(4)	10.382	119	248487	21.017
143) 1,2-Dibromo-3-chloropropane	(4)	10.866	75	40024	20.242
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	189511	20.248
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	178556	19.871
148) Hexachlorobutadiene	(4)	11.527	225	61764	19.299
149) Naphthalene	(4)	11.582	128	604155	19.871
150) 1,2,3-Trichlorobenzene	(4)	11.739	180	177733	20.265

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
109) Xylene (Total)	(3)		106	673621	69.705
151) 2-Methylnaphthalene	(4)	12.307	142	234395	13.513
142) Diethylbenzene (total)	(4)		100	820620	60.484

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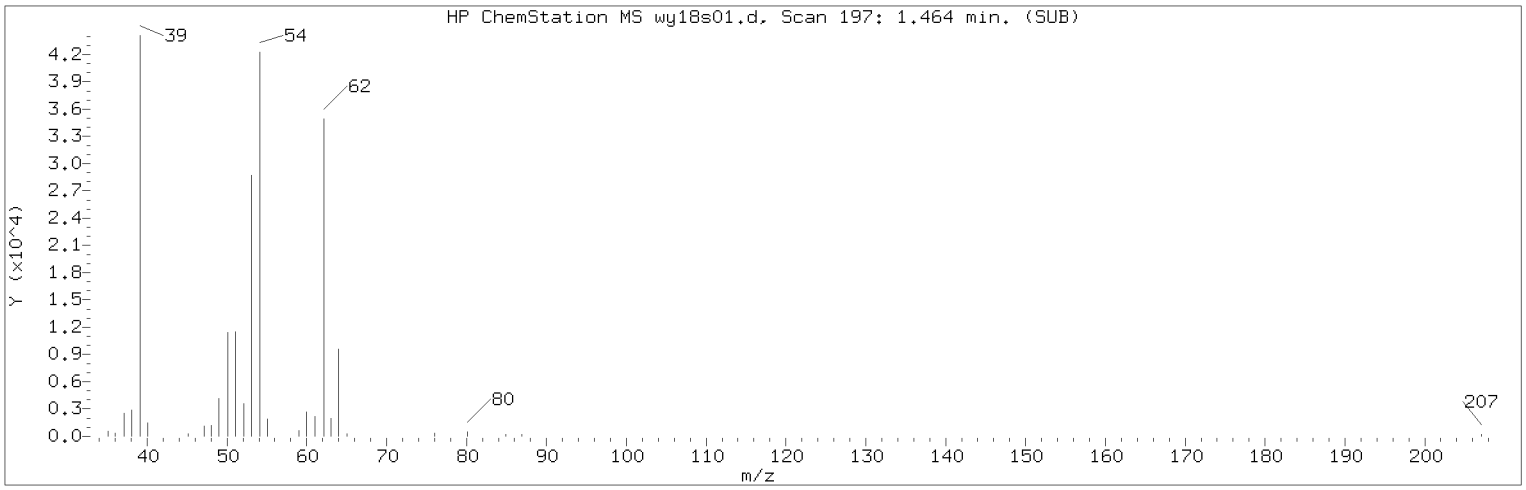
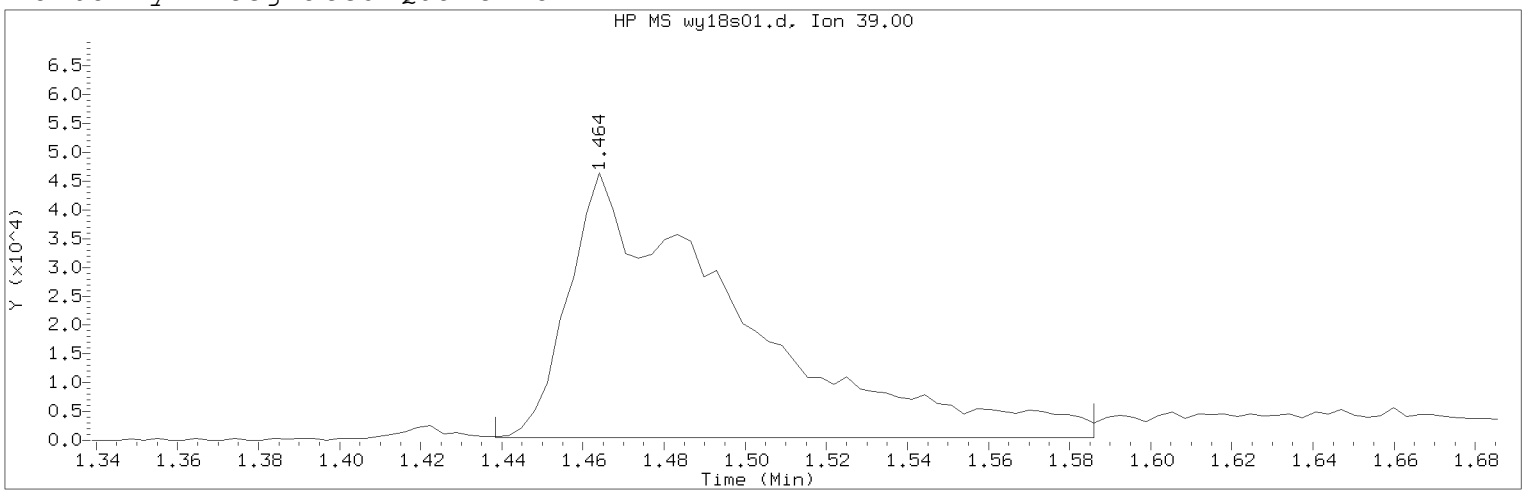
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

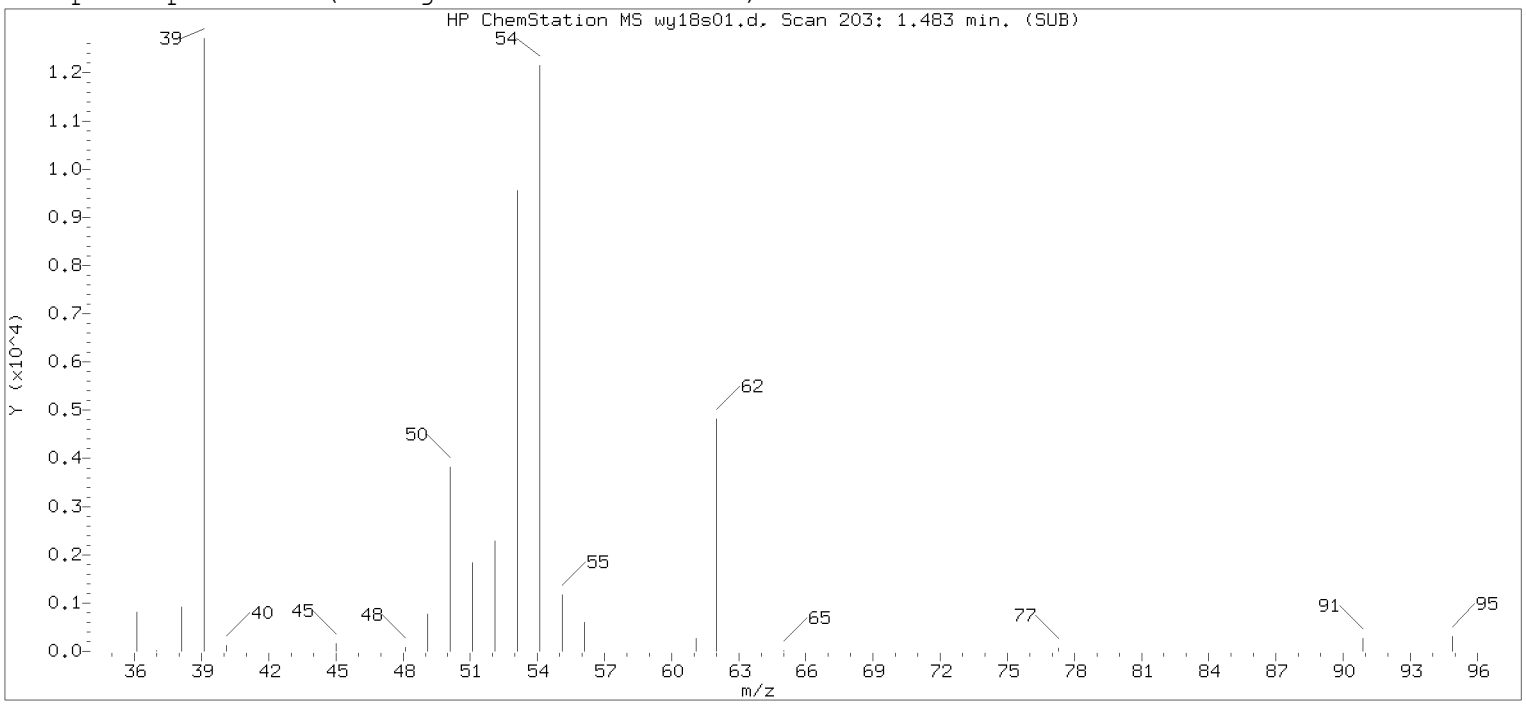
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 197
Retention Time (minutes): 1.464
Quant Ion : 39.00
Area (flag) : 134278M
On-Column Amount (ng) : 26.0797
Integration start scan : 188 Integration stop scan: 234
Y at integration start : 473 Y at integration end: 473

Reason for manual integration: improper integration

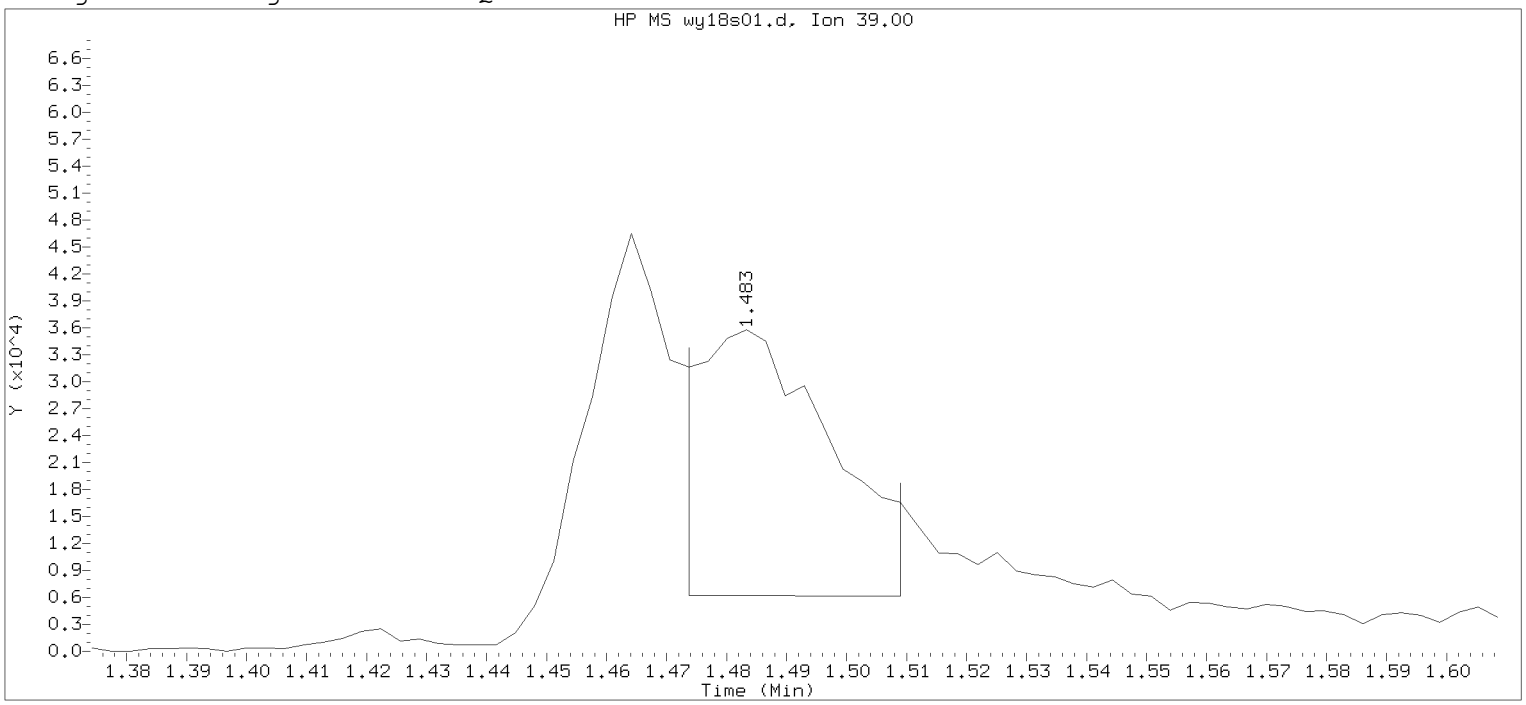
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 203
Retention Time (minutes): 1.483
Quant Ion : 39.00
Area : 44904
On-column Amount (ng) : 8.7215
Integration start scan : 199 Integration stop scan: 210
Y at integration start : 6187 Y at integration end: 6121

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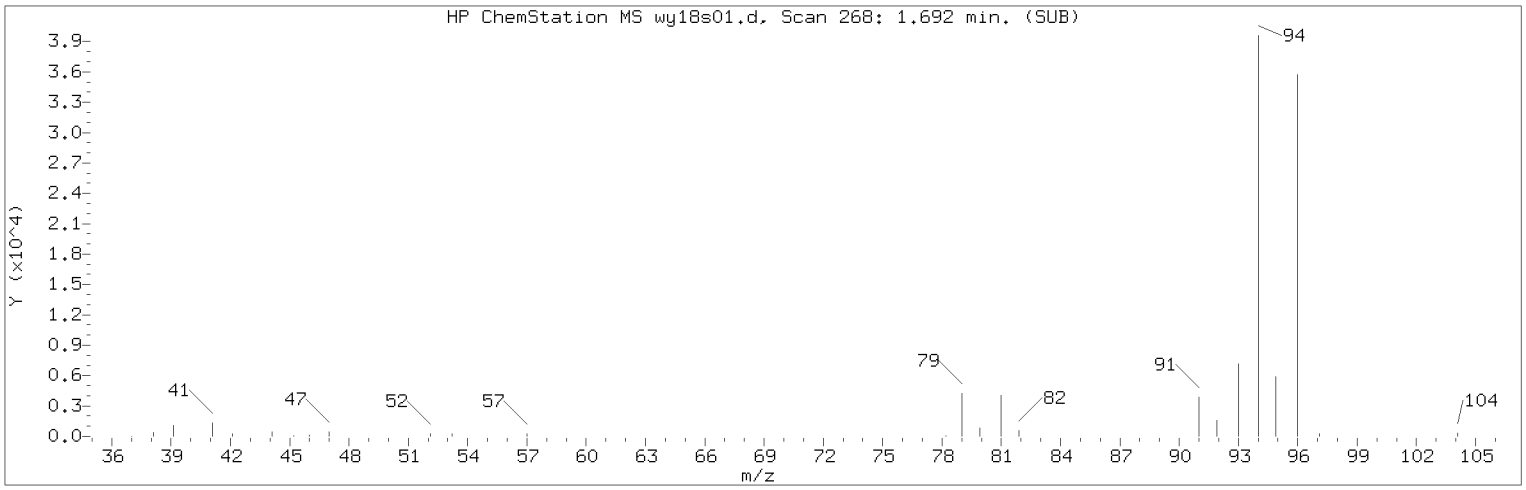
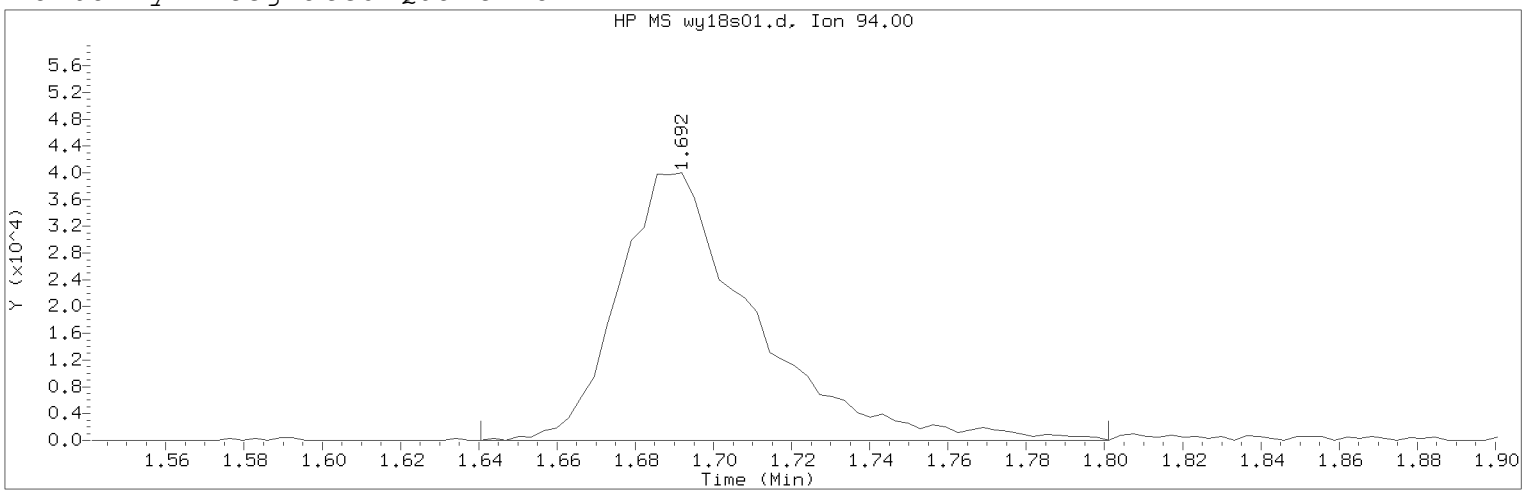
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

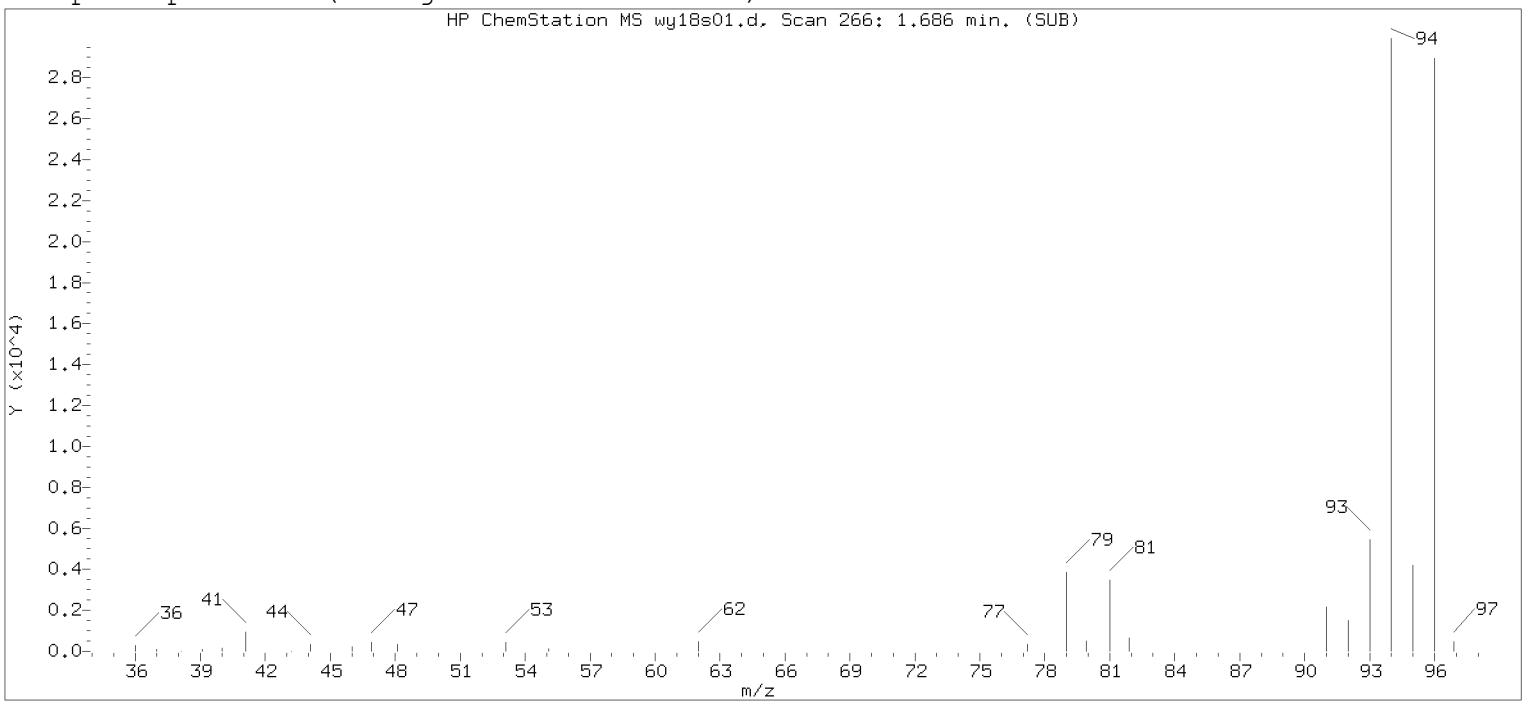
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 268
Retention Time (minutes): 1.692
Quant Ion : 94.00
Area (flag) : 96074M
On-Column Amount (ng) : 15.7285
Integration start scan : 251 Integration stop scan: 301
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

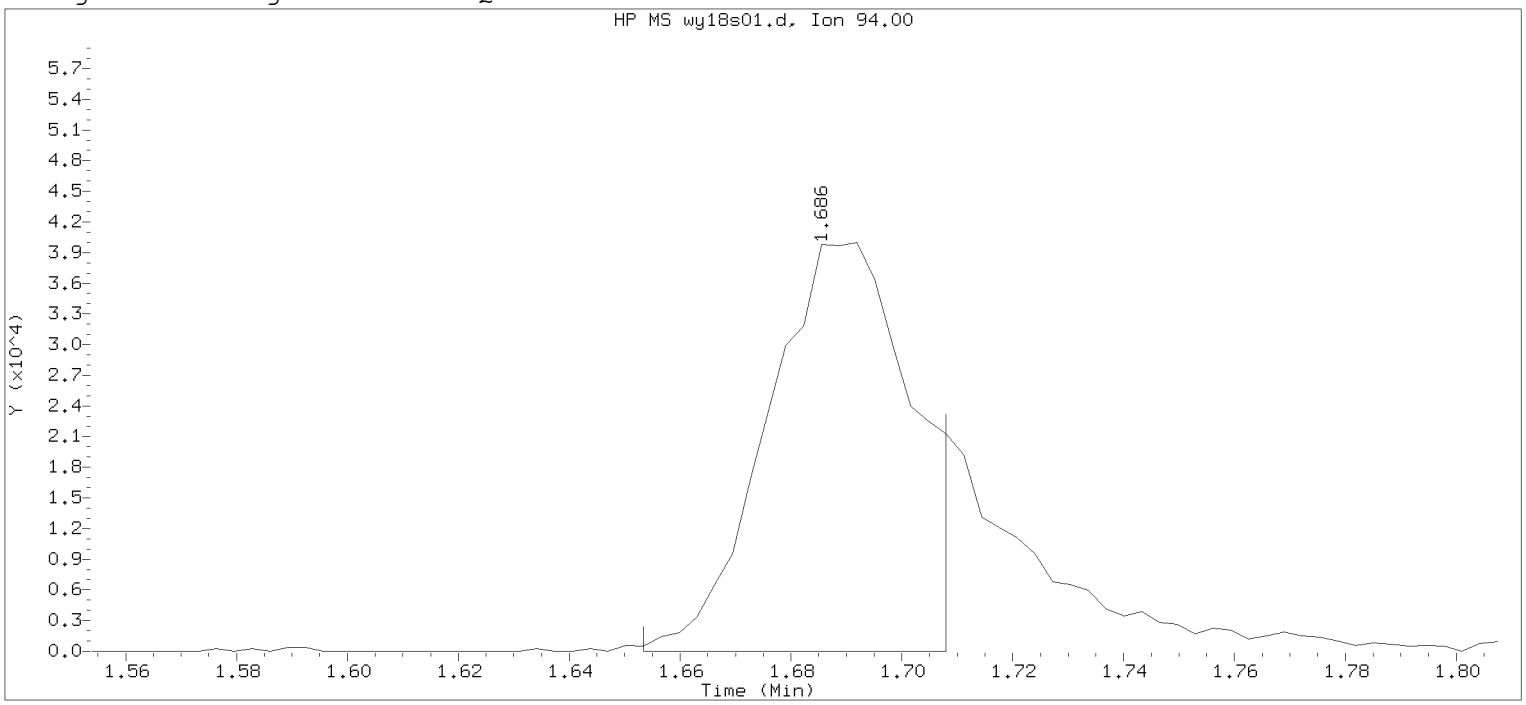
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

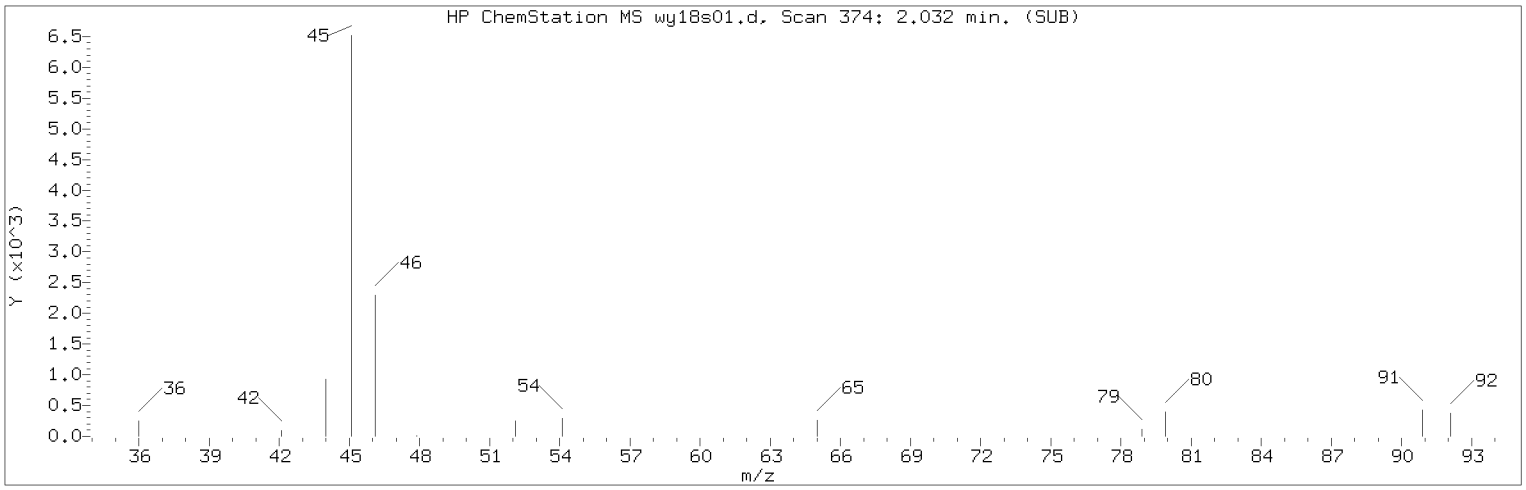
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

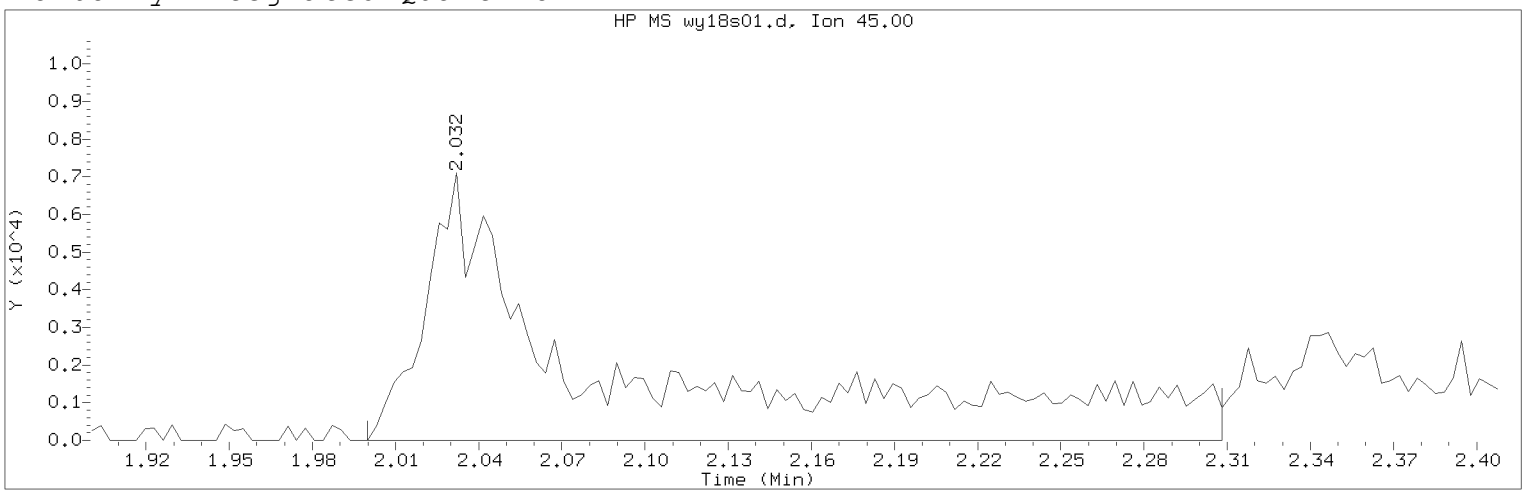
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 266
Retention Time (minutes): 1.686
Quant Ion : 94.00
Area : 70808
On-column Amount (ng) : 11.5922
Integration start scan : 255 Integration stop scan: 272
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user's name

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

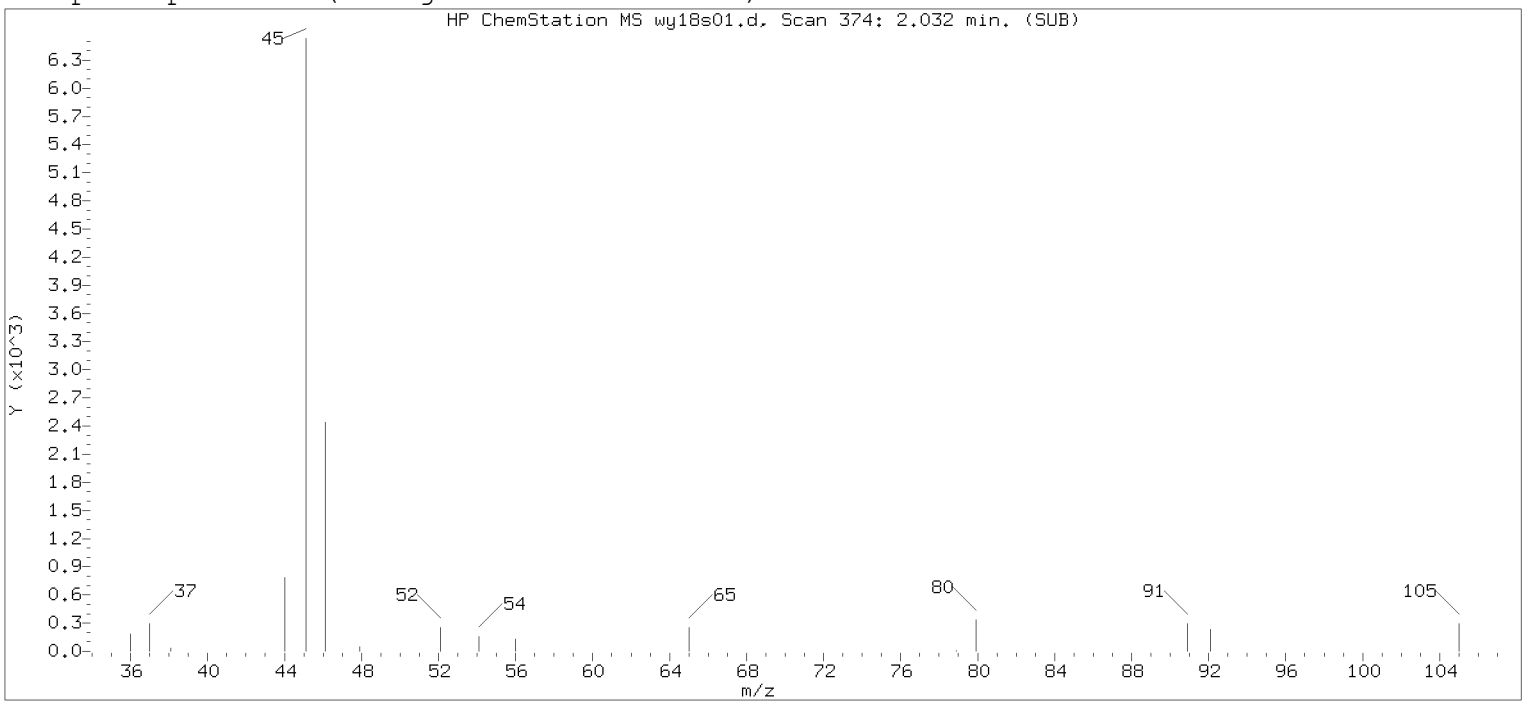
Compound Number : 13
Compound Name : Ethanol
Scan Number : 374
Retention Time (minutes): 2.032
Quant Ion : 45.00
Area (flag) : 32125M
On-Column Amount (ng) : 380.2913
Integration start scan : 363 Integration stop scan: 459
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

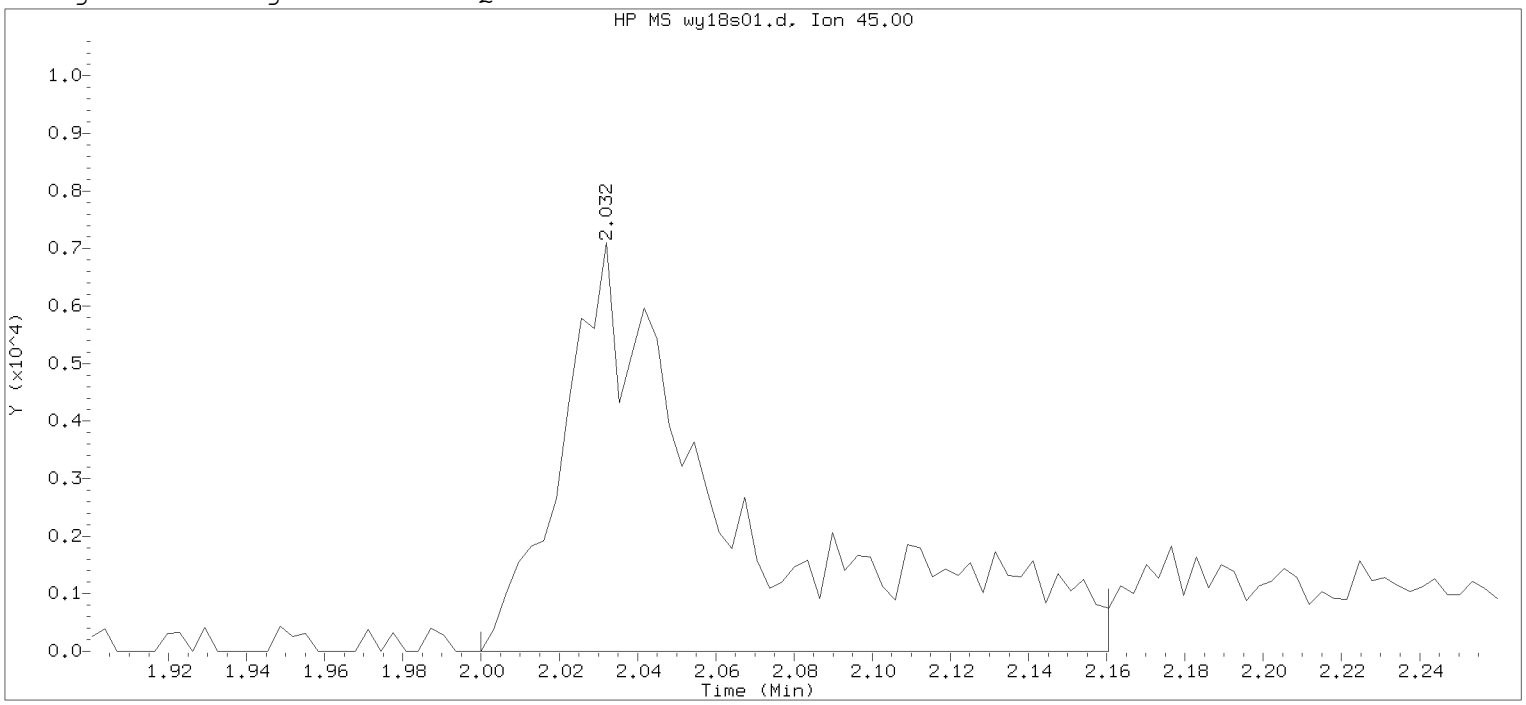
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

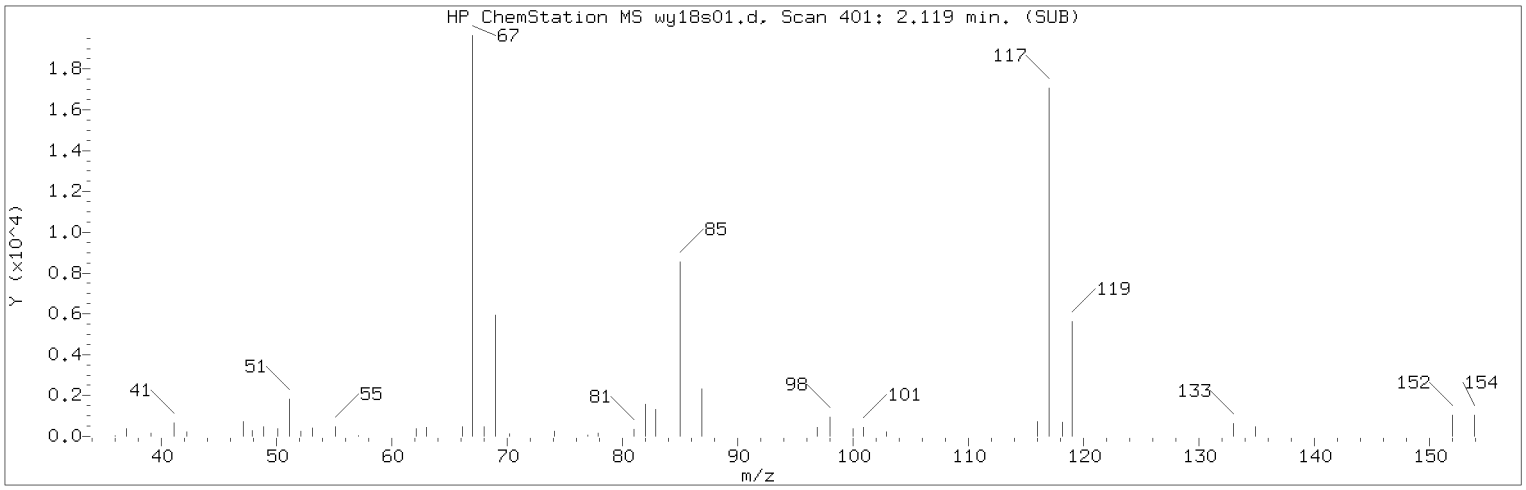
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

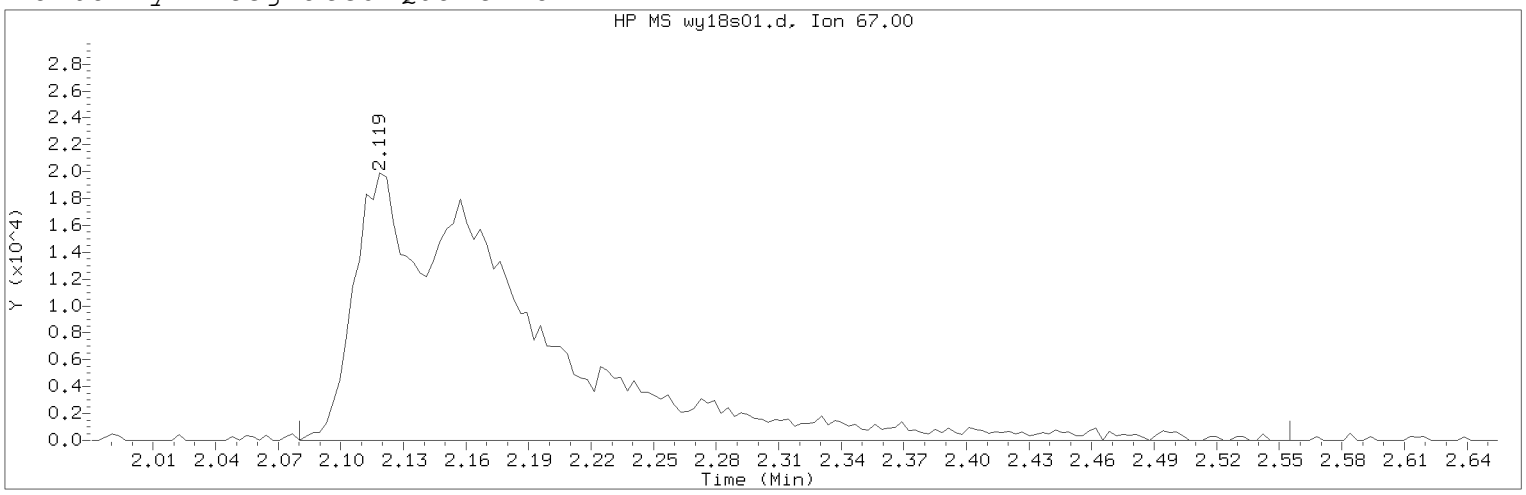
Compound Number : 13
Compound Name : Ethanol
Scan Number : 374
Retention Time (minutes): 2.032
Quant Ion : 45.00
Area : 21467
On-column Amount (ng) : 254.1253
Integration start scan : 363 Integration stop scan: 413
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user's name

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

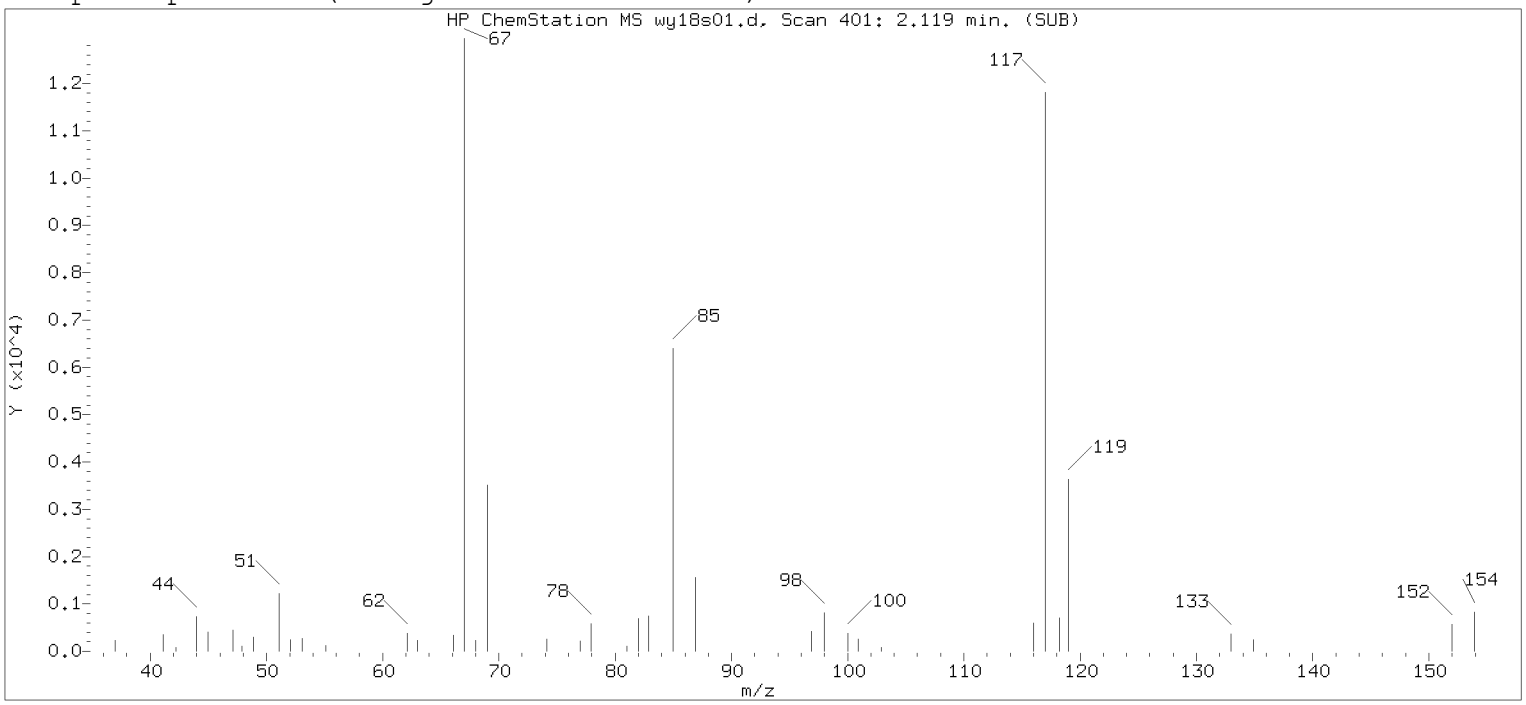
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 401
Retention Time (minutes): 2.119
Quant Ion : 67.00
Area (flag) : 114541M
On-Column Amount (ng) : 18.6344
Integration start scan : 388 Integration stop scan: 536
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

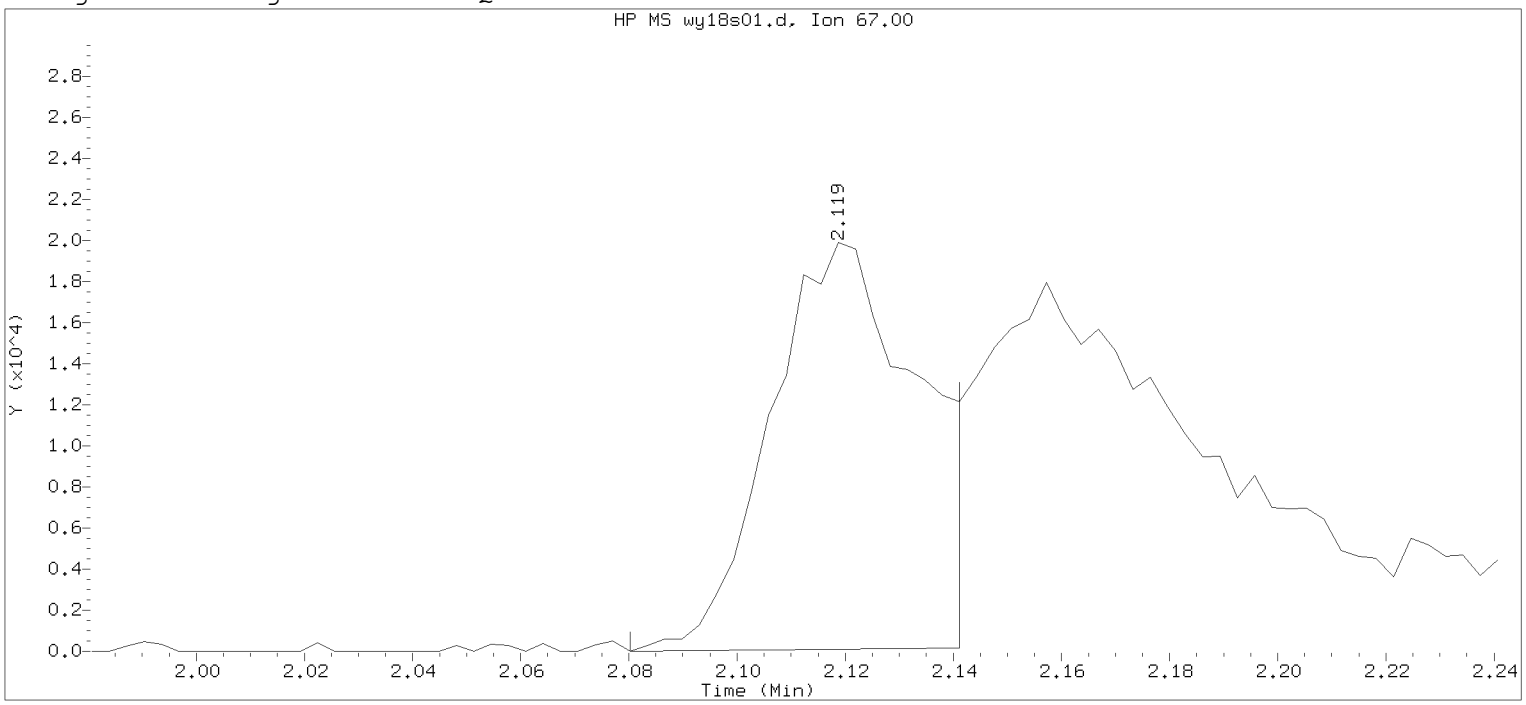
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

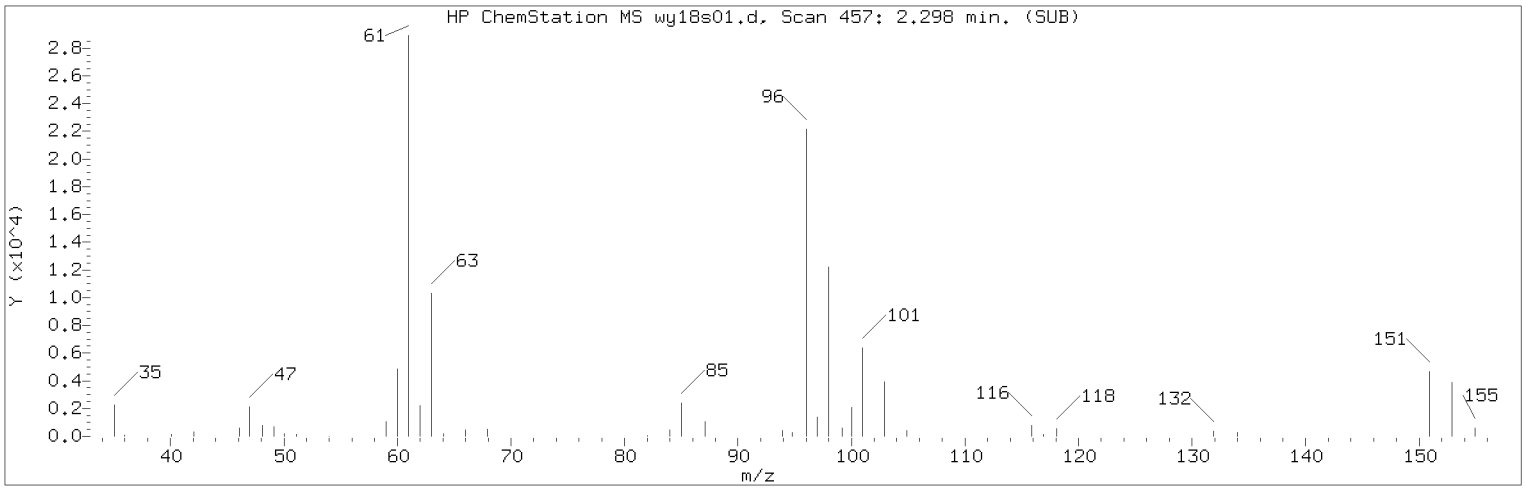
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

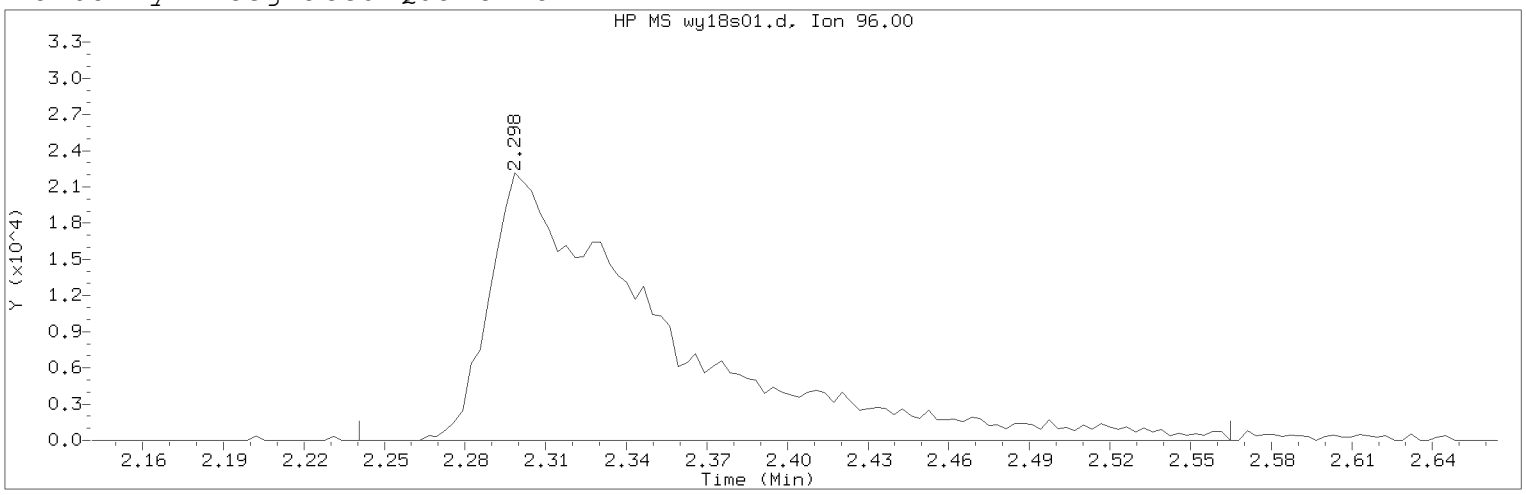
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 401
Retention Time (minutes): 2.119
Quant Ion : 67.00
Area : 37059
On-column Amount (ng) : 6.0292
Integration start scan : 388 Integration stop scan: 407
Y at integration start : 0 Y at integration end: 164

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

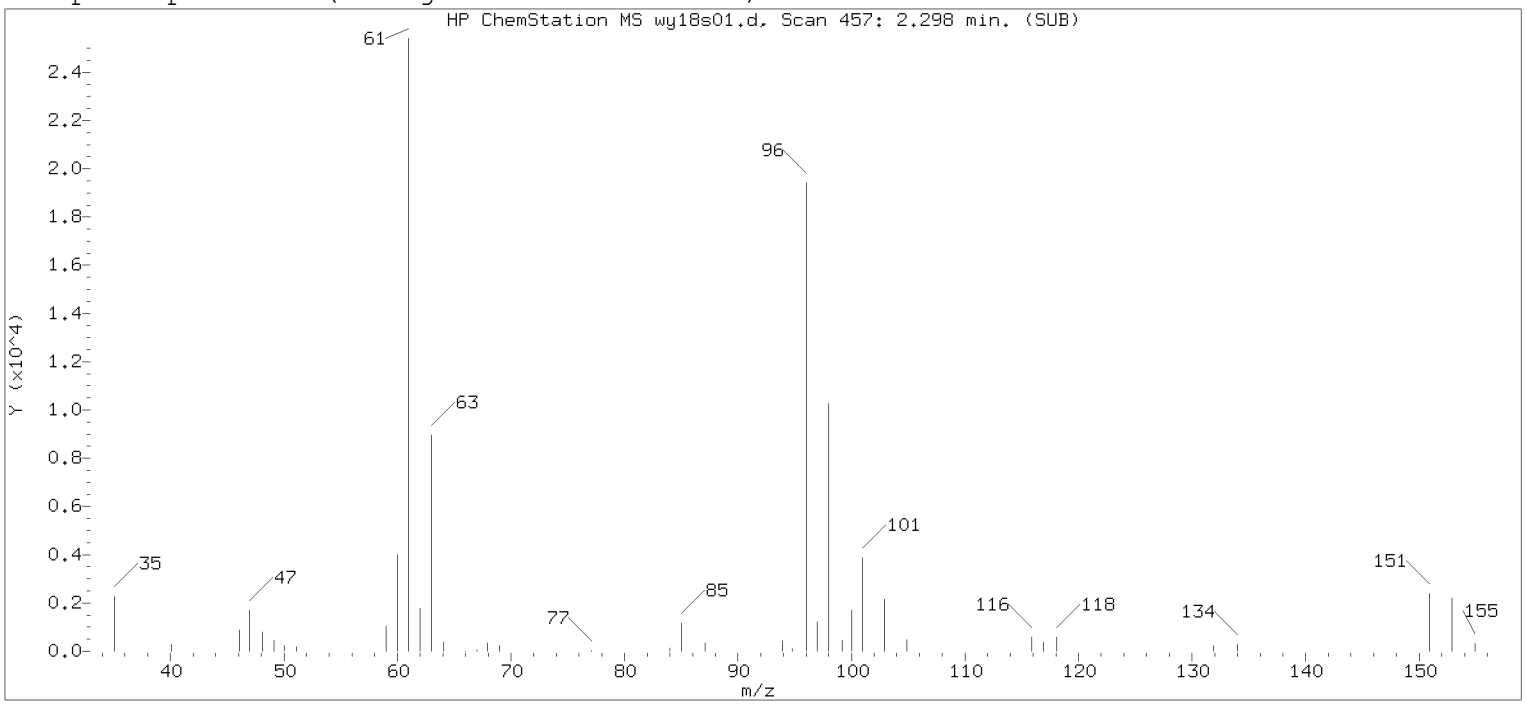
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 457
Retention Time (minutes): 2.298
Quant Ion : 96.00
Area (flag) : 99685M
On-Column Amount (ng) : 21.5470
Integration start scan : 438 Integration stop scan: 539
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

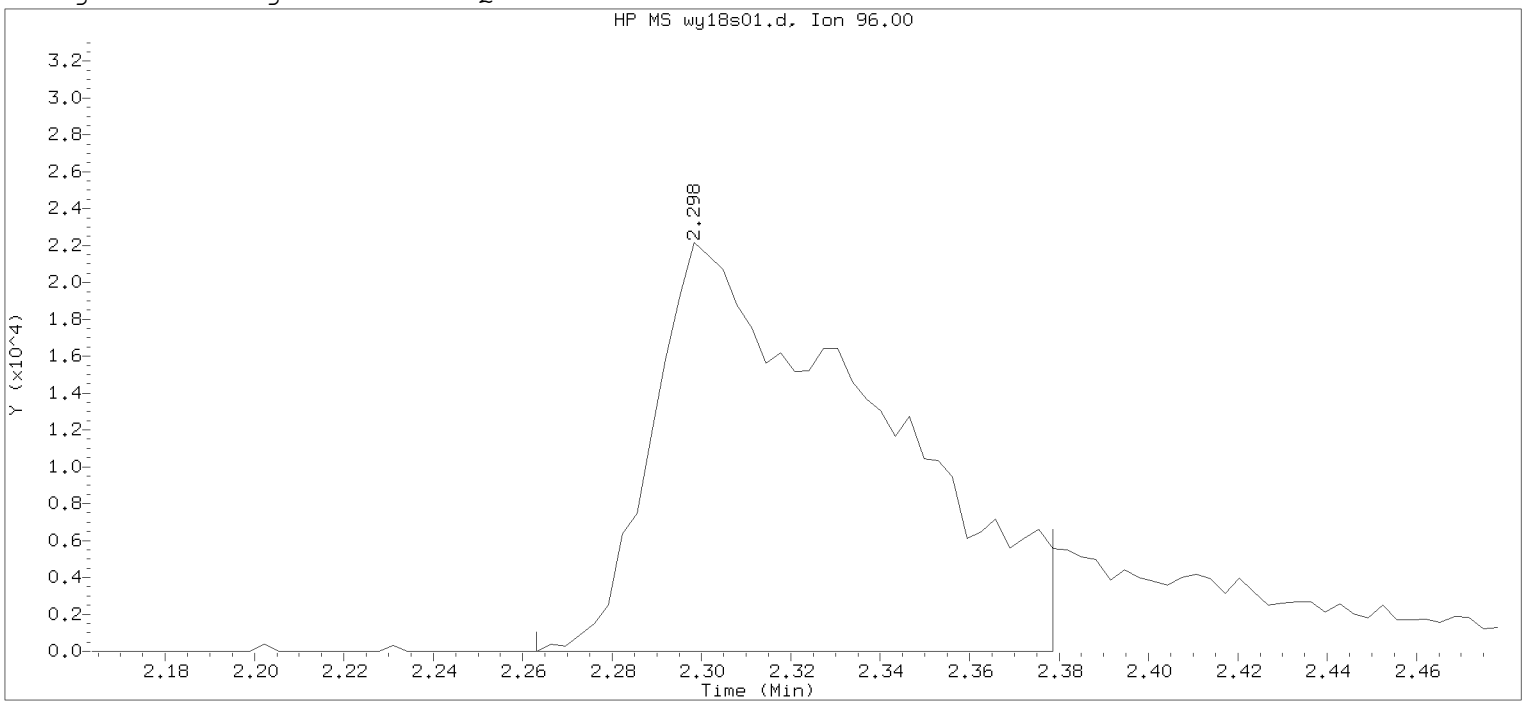
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

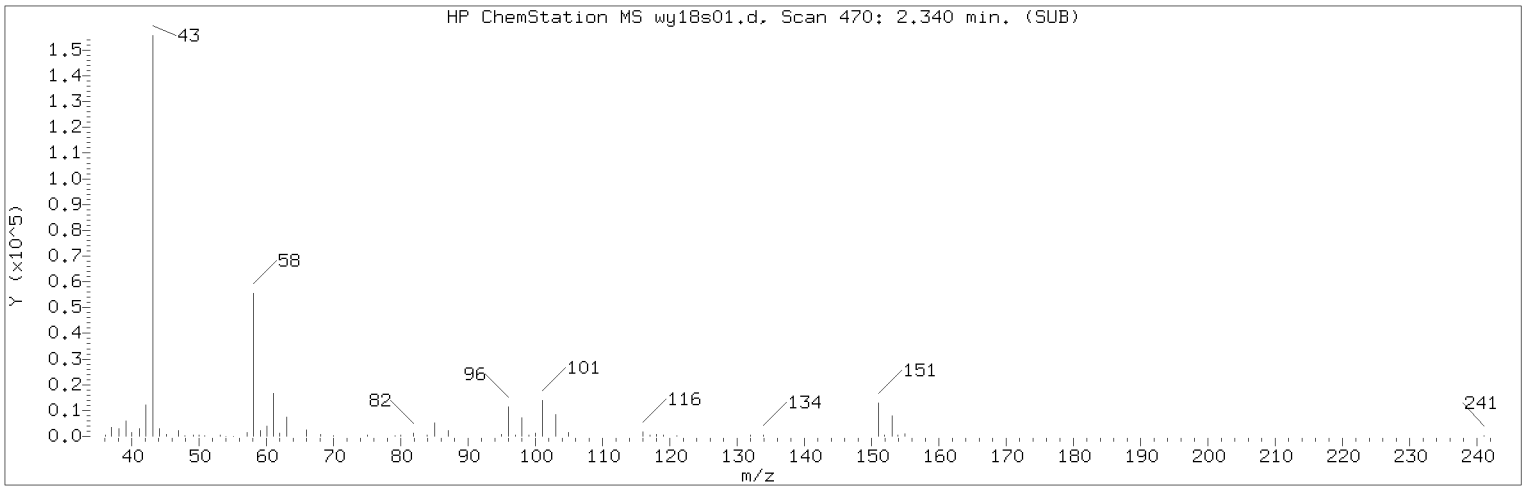
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

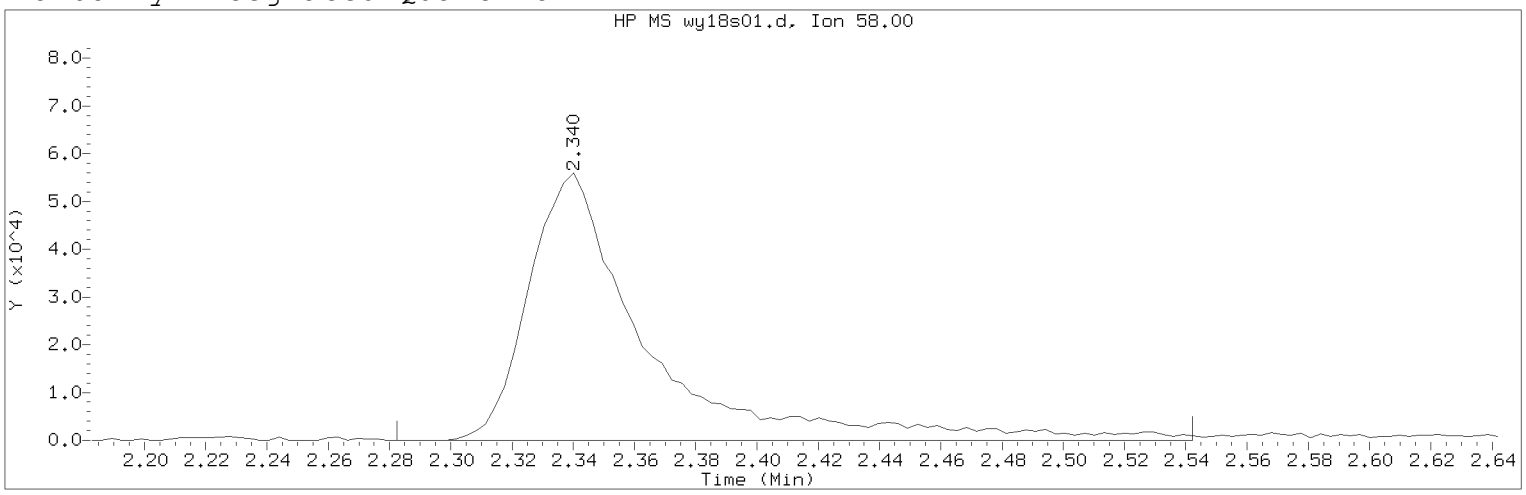
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 457
Retention Time (minutes): 2.298
Quant Ion : 96.00
Area : 76748
On-column Amount (ng) : 16.5892
Integration start scan : 445 Integration stop scan: 481
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

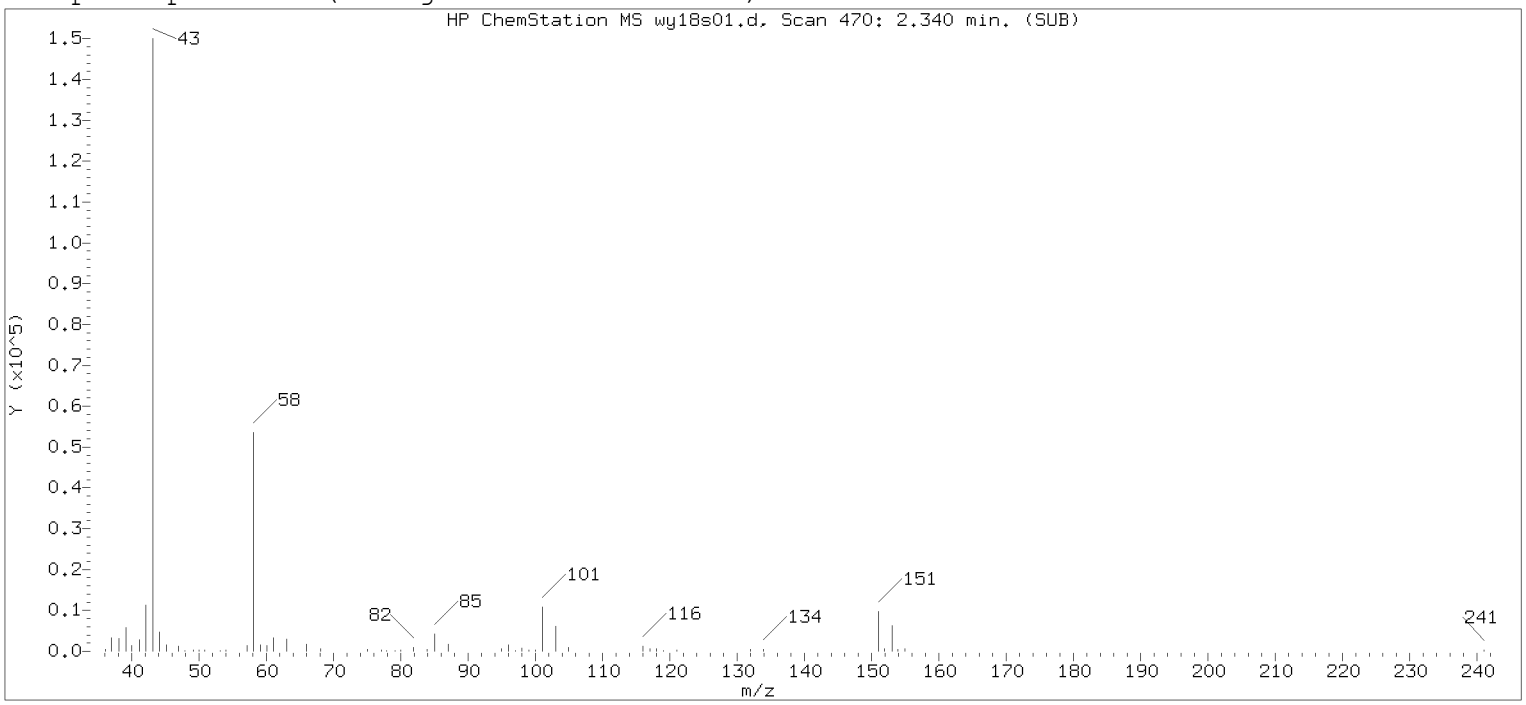
Compound Number : 18
Compound Name : Acetone
Scan Number : 470
Retention Time (minutes): 2.340
Quant Ion : 58.00
Area (flag) : 150531M
On-Column Amount (ng) : 232.2450
Integration start scan : 451 Integration stop scan: 532
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

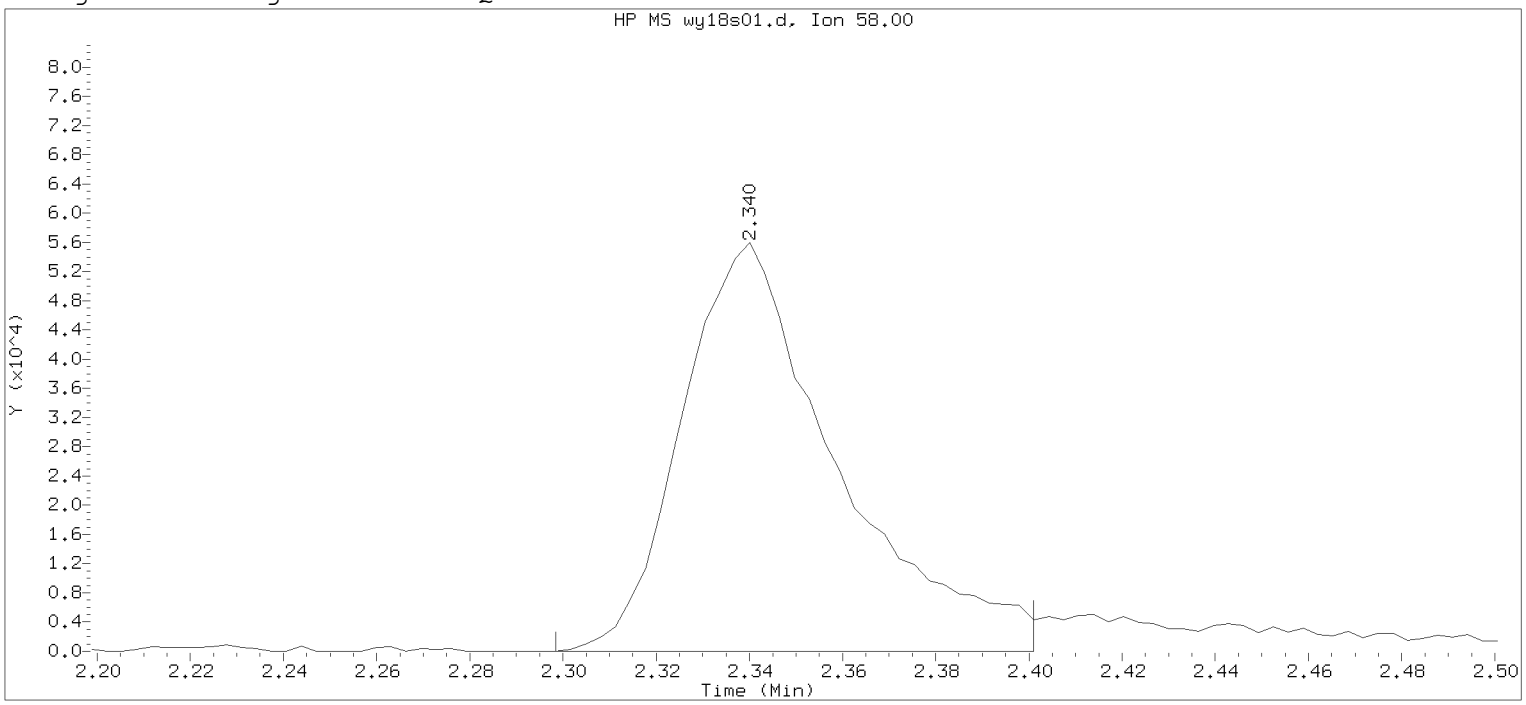
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

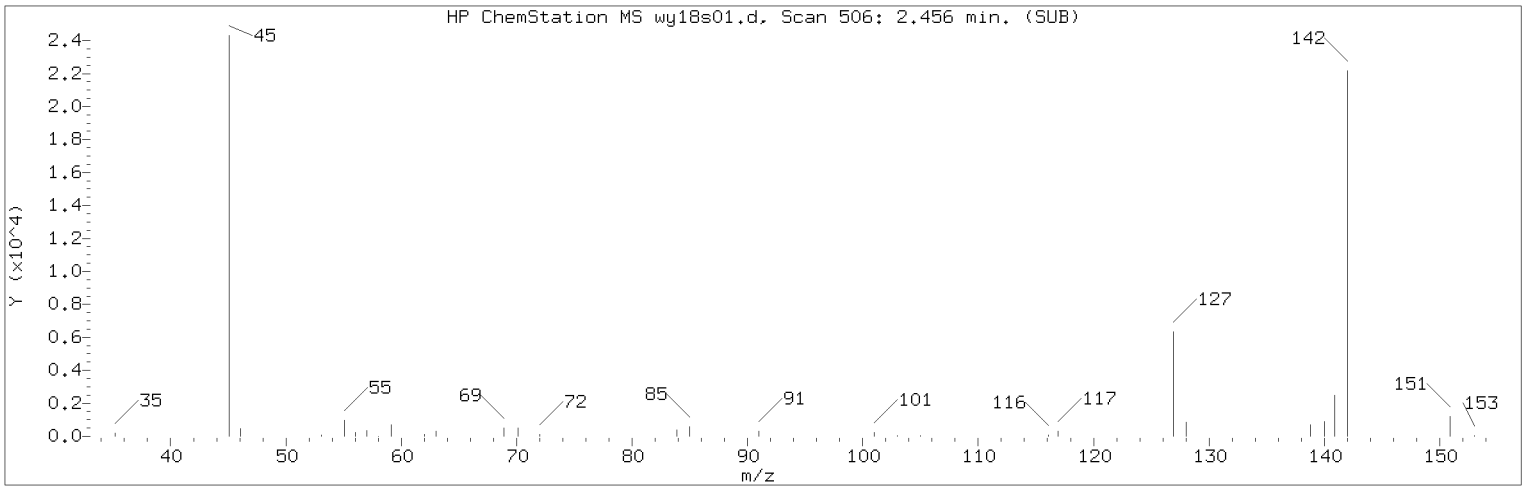
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

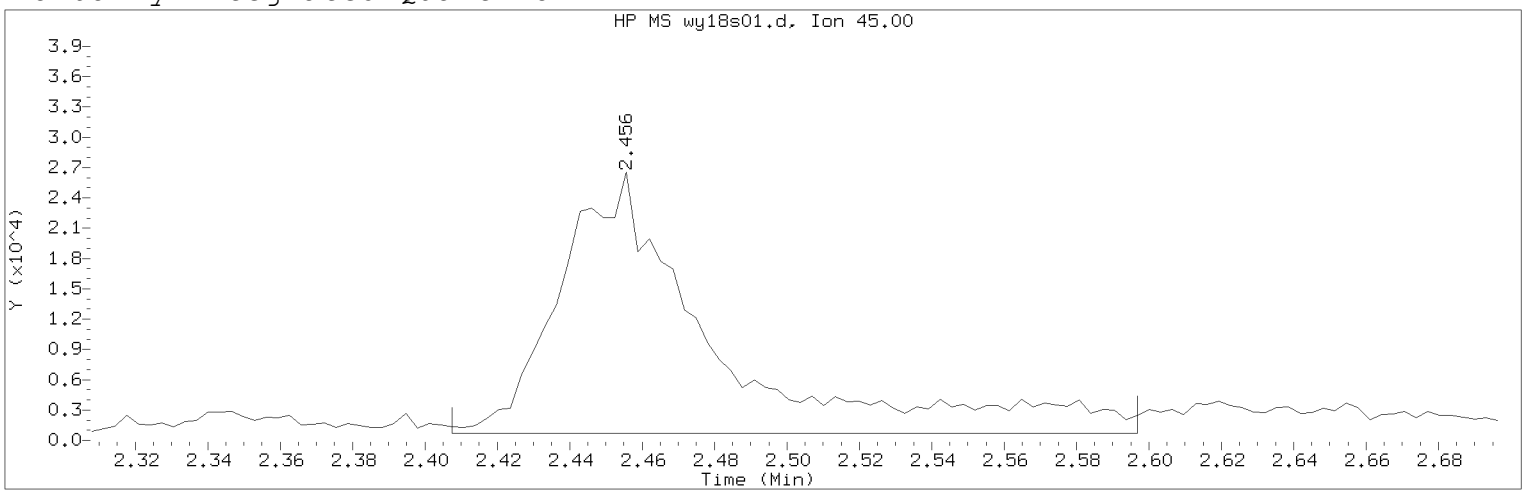
Compound Number	: 18		
Compound Name	: Acetone		
Scan Number	: 470		
Retention Time (minutes)	: 2.340		
Quant Ion	: 58.00		
Area	: 128903		
On-column Amount (ng)	: 198.8773		
Integration start scan	: 456	Integration stop scan:	488
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user's name

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

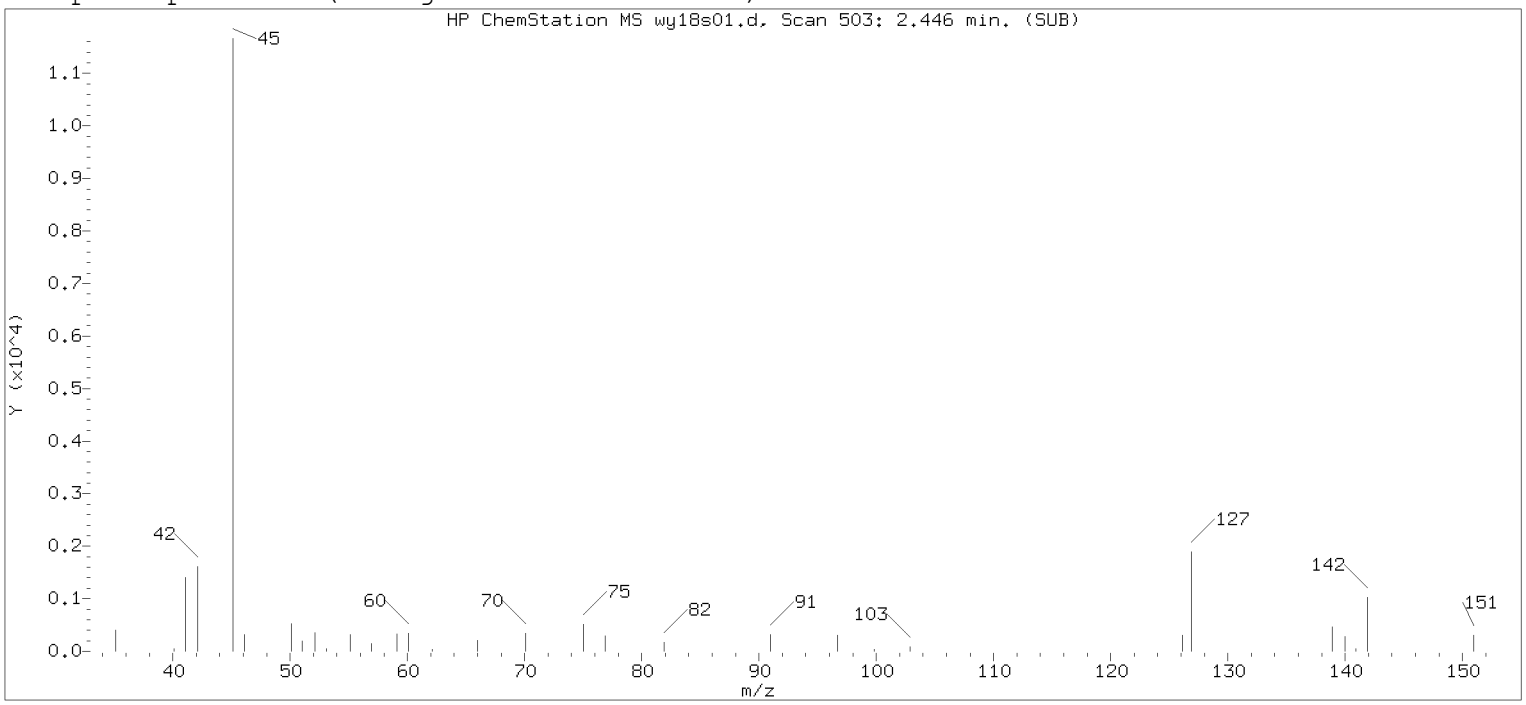
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 506
Retention Time (minutes): 2.456
Quant Ion : 45.00
Area (flag) : 76314M
On-Column Amount (ng) : 158.4713
Integration start scan : 490 Integration stop scan: 549
Y at integration start : 676 Y at integration end: 676

Reason for manual integration: improper integration

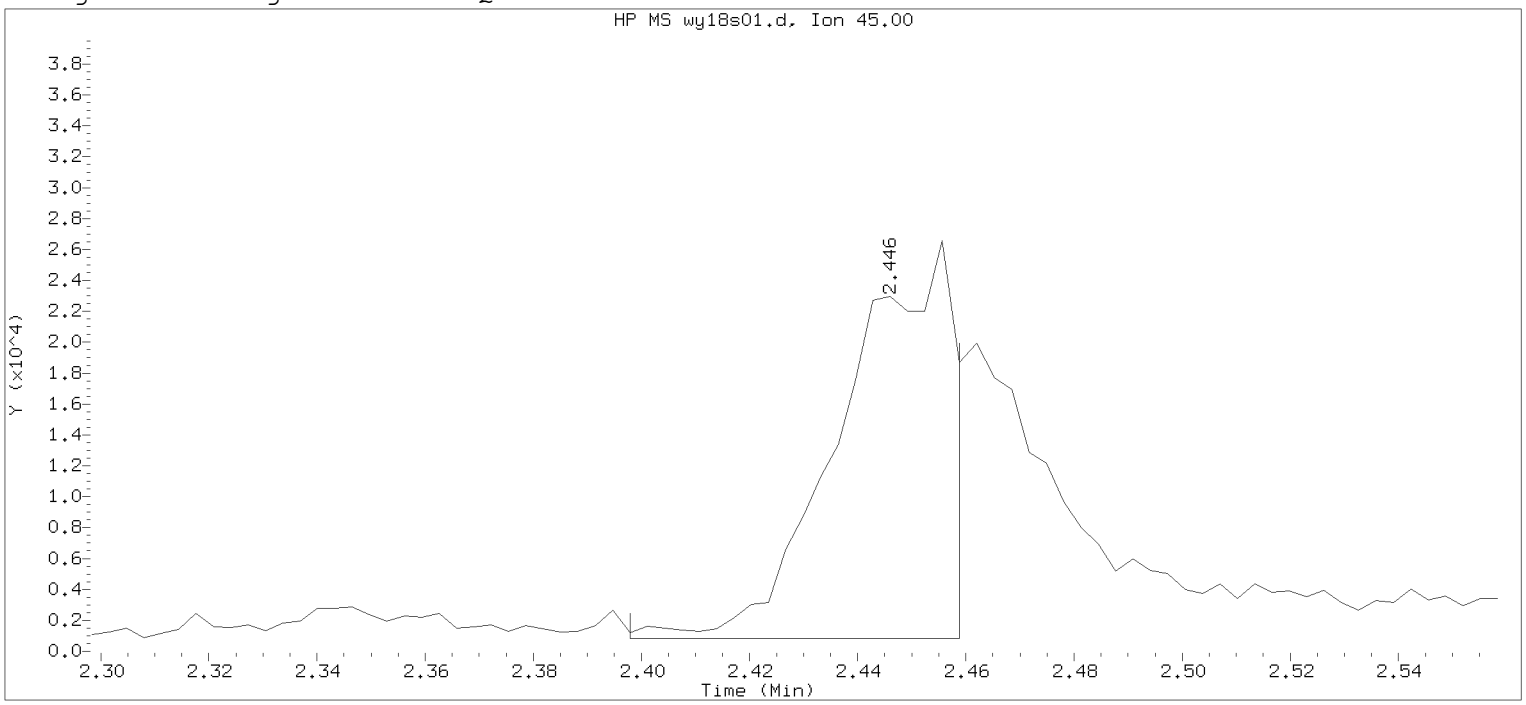
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

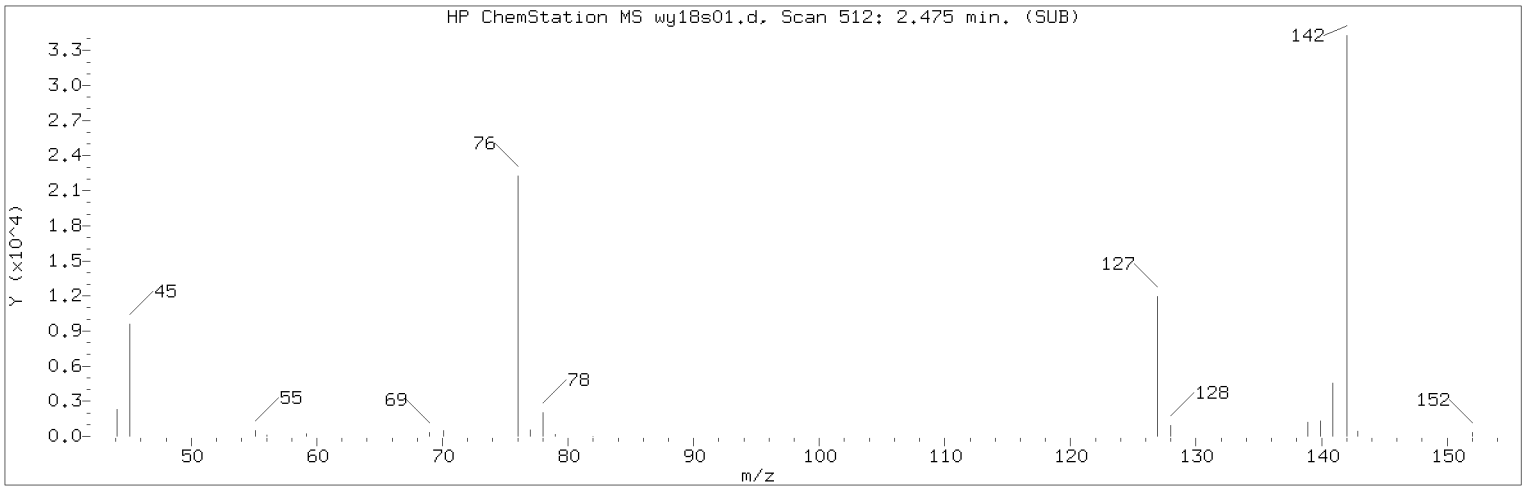
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

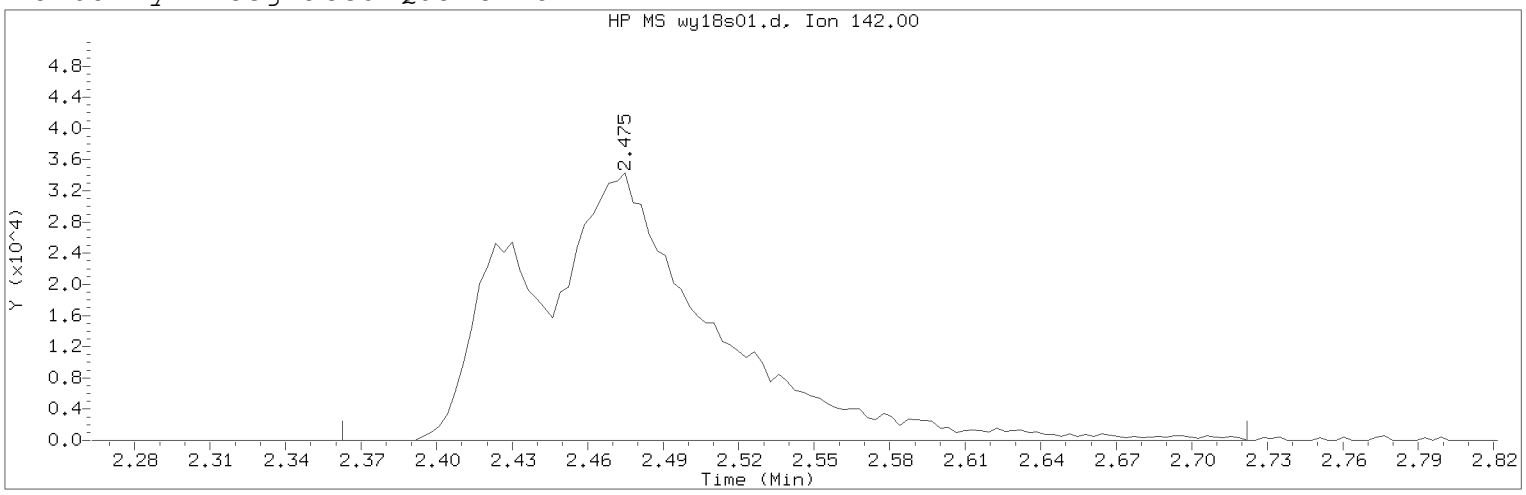
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 503
Retention Time (minutes): 2.446
Quant Ion : 45.00
Area : 35429
On-column Amount (ng) : 73.5706
Integration start scan : 487 Integration stop scan: 506
Y at integration start : 815 Y at integration end: 815

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

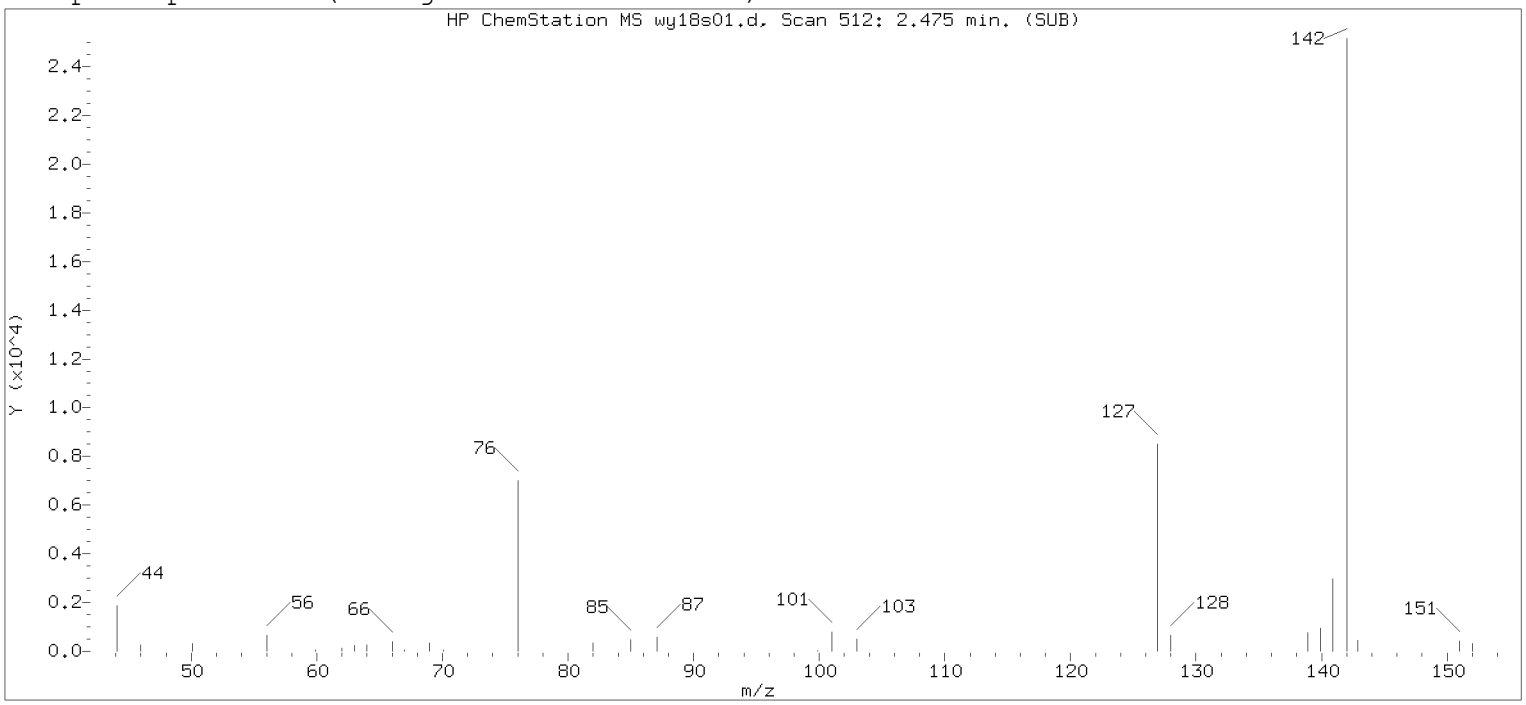
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 512
Retention Time (minutes): 2.475
Quant Ion : 142.00
Area (flag) : 178264M
On-Column Amount (ng) : 20.1073
Integration start scan : 476 Integration stop scan: 588
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

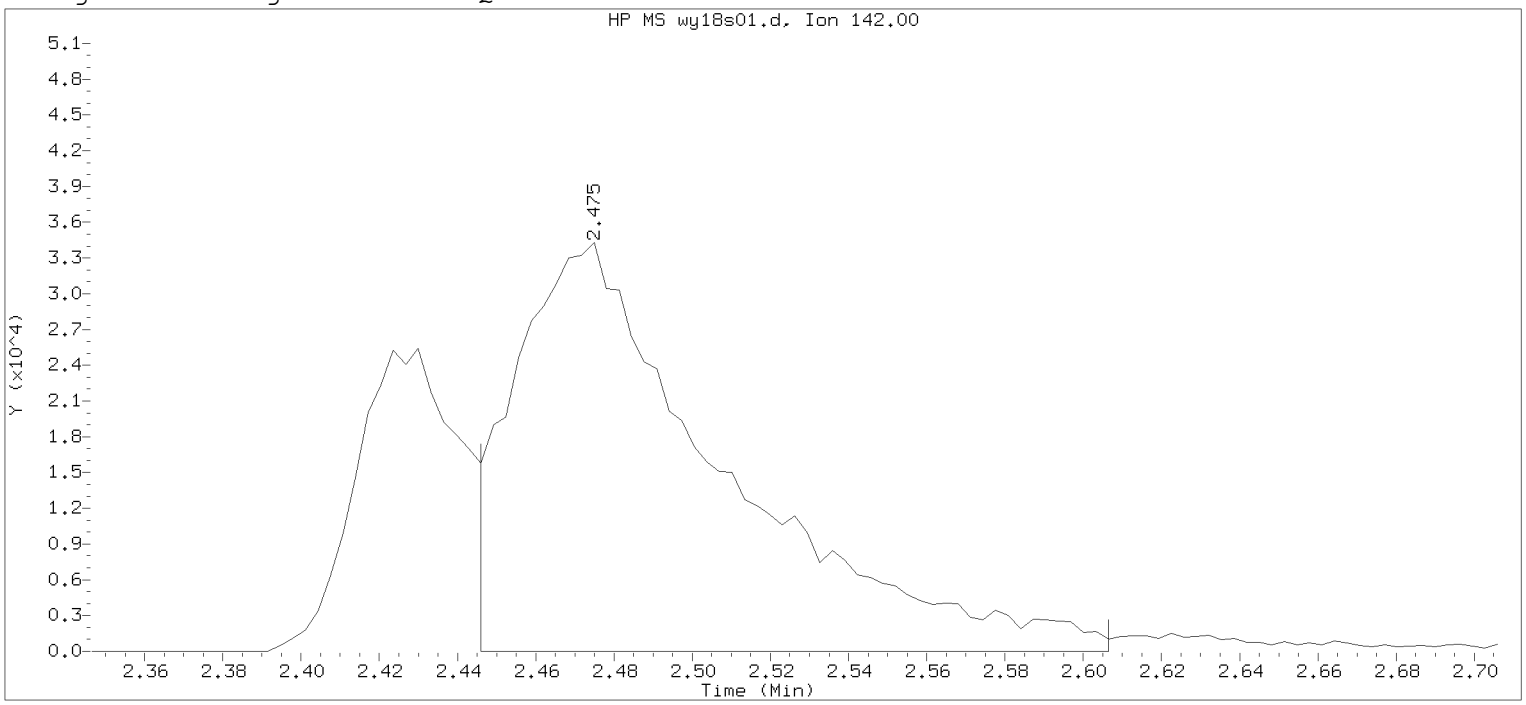
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

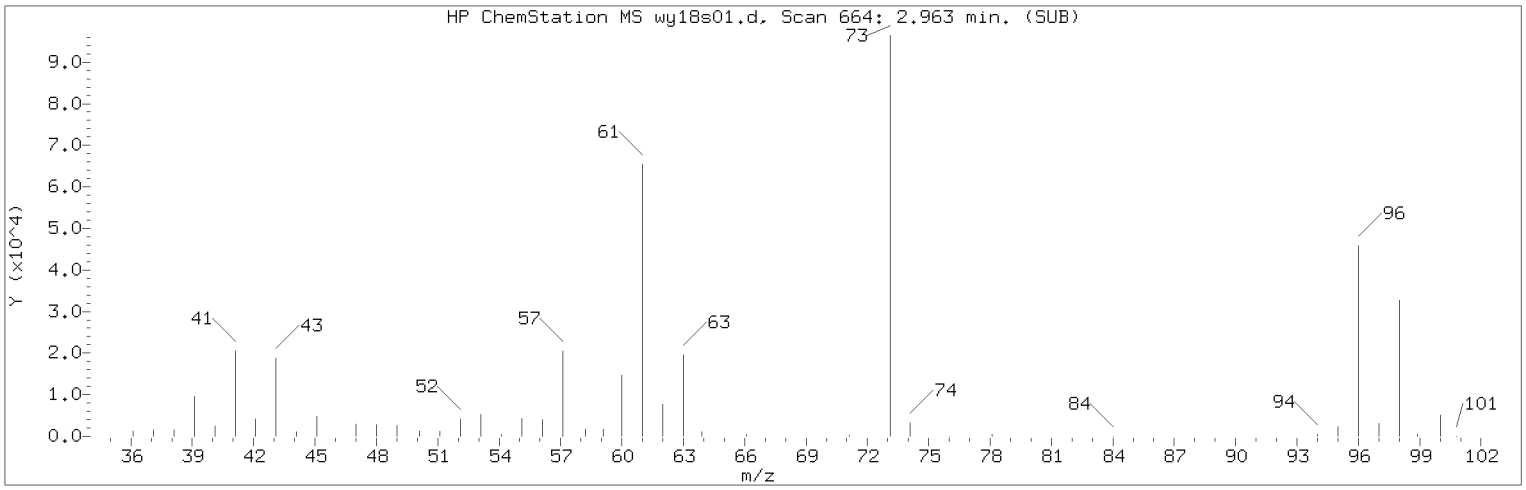
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

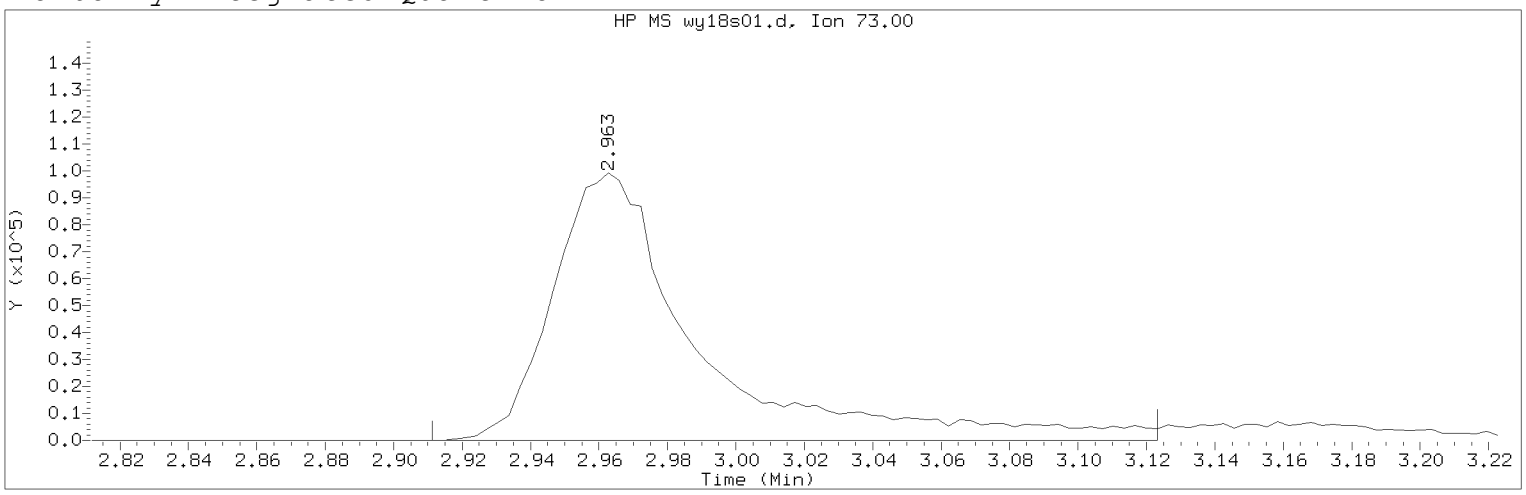
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 512
Retention Time (minutes): 2.475
Quant Ion : 142.00
Area : 127323
On-column Amount (ng) : 14.3615
Integration start scan : 502 Integration stop scan: 552
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

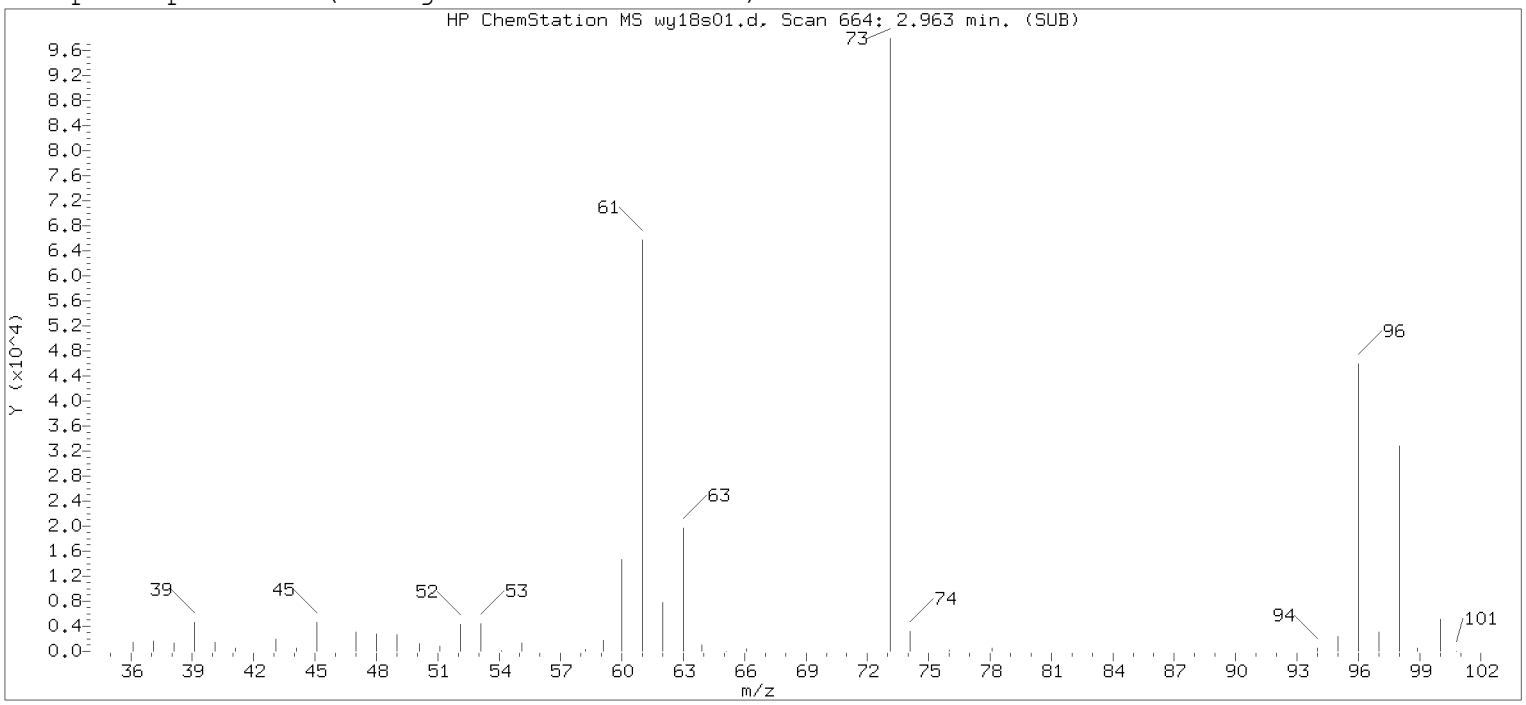
Compound Number : 33
Compound Name : Methyl Tertiary Butyl Ether
Scan Number : 664
Retention Time (minutes): 2.963
Quant Ion : 73.00
Area (flag) : 291896M
On-Column Amount (ng) : 23.8826
Integration start scan : 647 Integration stop scan: 713
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

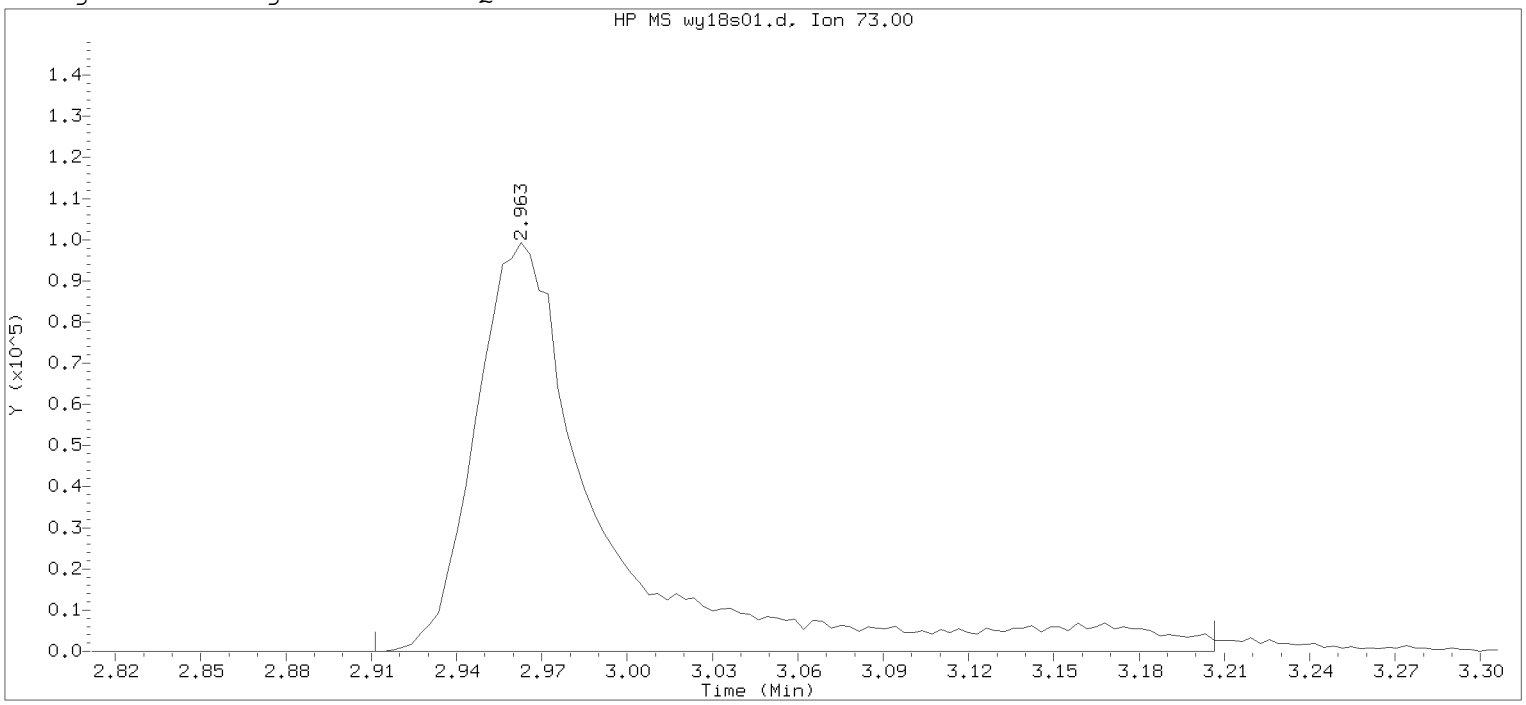
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



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Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

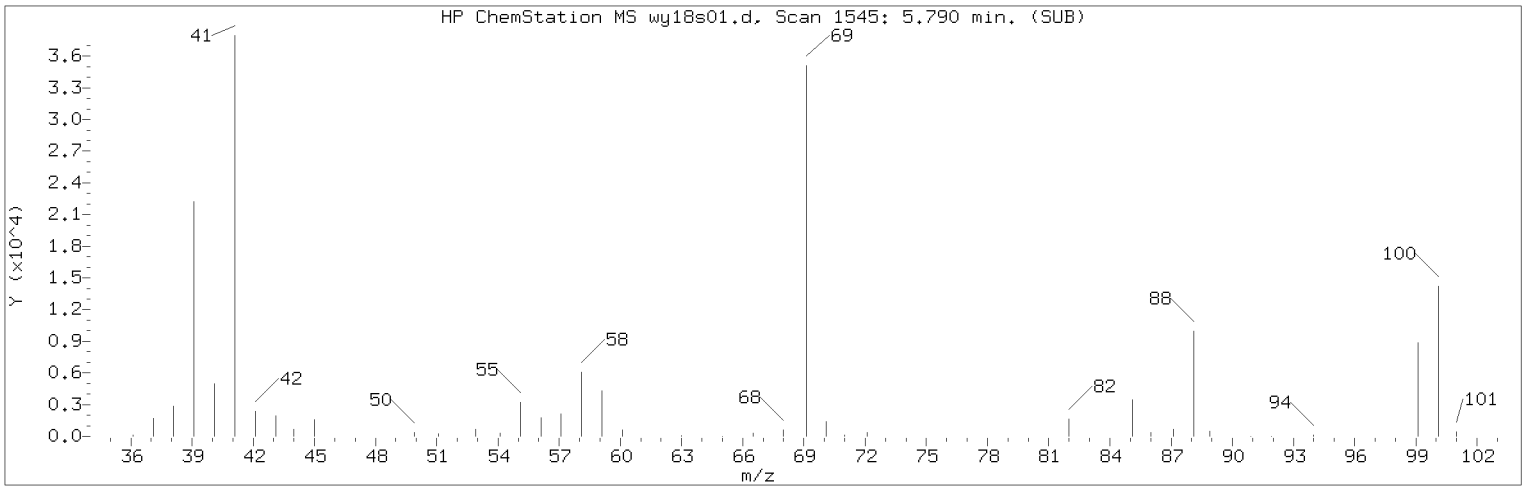
Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

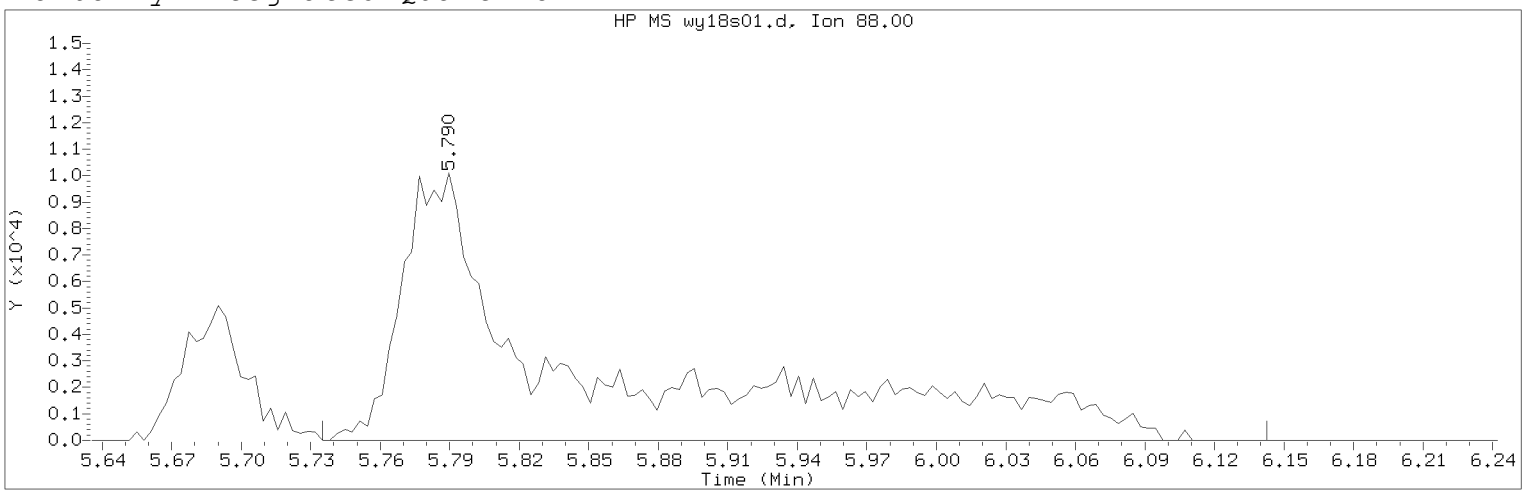
Compound Number : 33
Compound Name : Methyl Tertiary Butyl Ether
Scan Number : 664
Retention Time (minutes): 2.963
Quant Ion : 73.00
Area : 317126
On-column Amount (ng) : 25.9469
Integration start scan : 647 Integration stop scan: 739
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user's signature

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 23:42 sej02002

Sample Name: LCSW23 Lab Sample ID: LCSW23

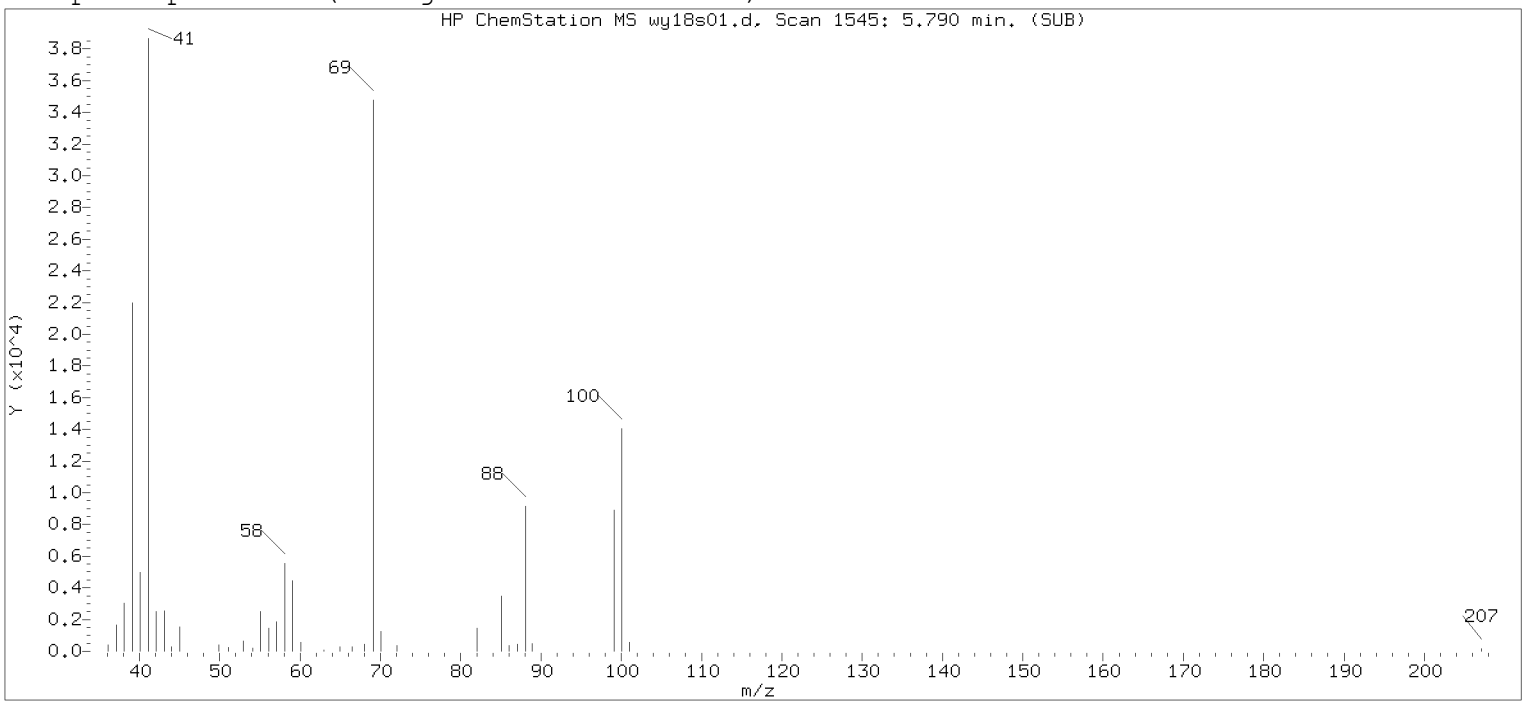
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1545
Retention Time (minutes): 5.790
Quant Ion : 88.00
Area (flag) : 52768M
On-Column Amount (ng) : 634.7888
Integration start scan : 1527 Integration stop scan: 1654
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

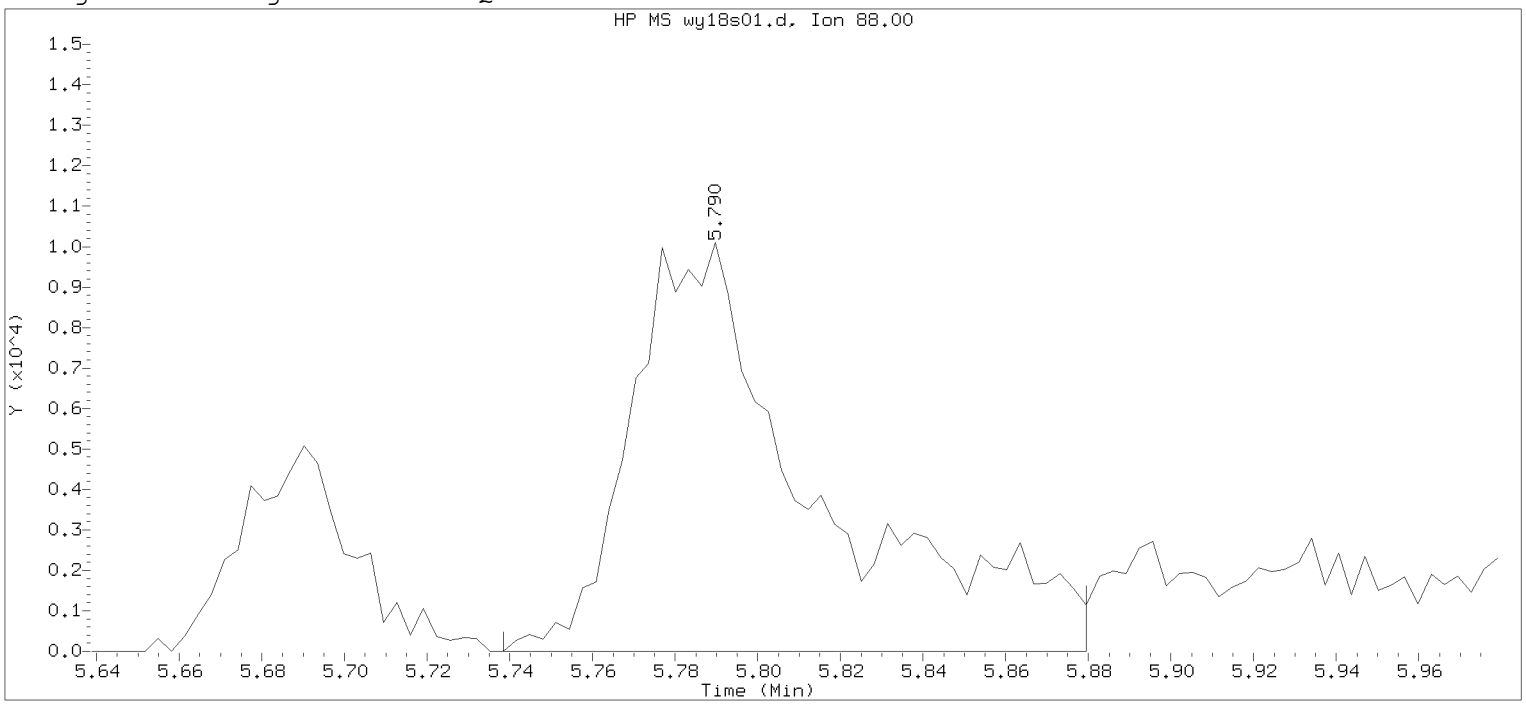
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/18/2019 at 23:43.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:11.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may18a.b/wy18s01.d Instrument ID: HP09137.i
Injection date and time: 18-MAY-2019 22:29 Analyst ID: SEJ02002

Method used: /chem2/HP09137.i/19may18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAY-2019 22:21
Date, time and analyst ID of latest file update: 18-May-2019 22:45 Automation

Sample Name: LCSW23 Lab Sample ID: LCSW23

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1545
Retention Time (minutes): 5.790
Quant Ion : 88.00
Area : 31240
On-column Amount (ng) : 375.8212
Integration start scan : 1528 Integration stop scan: 1572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/18/2019 at 23:43.
Target 3.5 esignature user's signature

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSW24

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSW24

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may19a.b/wy19l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/19/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	15	
75-00-3	Chloroethane	14	
75-35-4	1,1-Dichloroethene	19	
75-34-3	1,1-Dichloroethane	20	
156-59-2	cis-1,2-Dichloroethene	22	
71-55-6	1,1,1-Trichloroethane	21	
79-01-6	Trichloroethene	20	
123-91-1	1,4-Dioxane	690	
127-18-4	Tetrachloroethene	24	
179601-23-1	m+p-Xylene	45	
95-47-6	o-Xylene	21	
1330-20-7	Xylene (Total)	66	

Data file: /chem2/HP09137.i/19may19a.b/wy19l01.d Injection date and time: **19-MAY-2019 12:44**
Data file Sample Info. Line: LCSW24;LCSW24;1;3;LCS;;;;wy19b02; Instrument ID: **HP09137.i** Batch: **W191381AB**
Date, time and analyst ID of latest file update: 19-May-2019 13:01 cbs01947

Blank Data file reference: **/chem2/HP09137.i/19may19a.b/wy19b02.d**

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: **18116**
Calibration date and time (Last Method Edit): 19-MAY-2019 12:48
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may19a.b/wy19c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.738	(-0.003)	594	65	145218	(-23)	250.00	
66) Fluorobenzene	5.032	(0.003)	1309	96	948146	(-2)	50.00	
101) Chlorobenzene-d5	8.161	(0.000)	2284	117	728644	(-2)	50.00	
132) 1,4-Dichlorobenzene-d4	10.042	(0.000)	2870	152	414799	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.355	(0.000)	113	213555	48.617	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.686	(0.001)	102	58903	50.421	101%		80 - 120
84) Toluene-d8	(3)	6.698	(0.000)	98	940627	51.517	103%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.000)	95	344125	47.112	94%		80 - 120

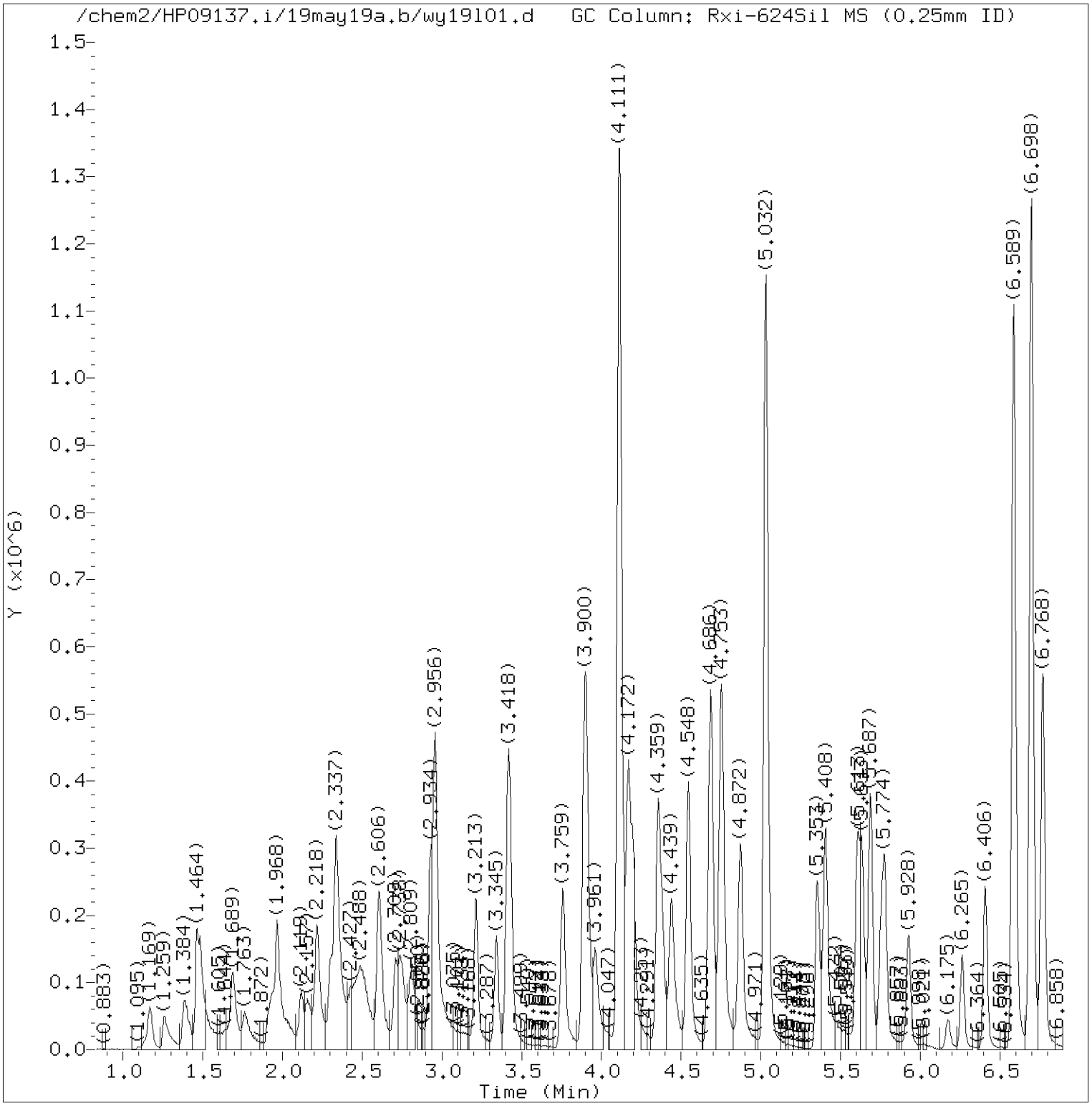
Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)	1.461	(0.000)	62	107567	15.370	15.37			0.2	1
9) Chloroethane	(2)	1.762	(0.002)	64	65713	14.269	14.27			0.2	1
17) 1,1-Dichloroethene	(2)	2.302	(0.000)	96	81171	19.417	19.42			0.2	1
36) 1,1-Dichloroethane	(2)	3.344	(-0.000)	63	165423	20.127	20.13			0.2	1
42) cis-1,2-Dichloroethene	(2)	3.890	(0.000)	96	110799	21.757	21.76			0.2	1
53) 1,1,1-Trichloroethane	(2)	4.381	(0.000)	97	119649	20.621	20.62			0.3	1
71) Trichloroethene	(2)	5.408	(-0.000)	95	97973	20.358	20.36			0.2	1
76) 1,4-Dioxane	(1)	5.790	(0.002)	88	44699M	685.856	685.86			29	250
94) Tetrachloroethene	(3)	7.362	(0.000)	166	112966	23.670	23.67			0.2	1
107) m+p-Xylene	(3)	8.402	(0.000)	106	401071	45.125	45.13			1	5
108) o-Xylene	(3)	8.739	(0.000)	106	186836	21.368	21.37			0.4	1
109) Xylene (Total)	(3)			106	587907	66.493	66.49			1	5

M = Compound was manually integrated.

Total number of targets = 12

Digitally signed by Chelsea B. Stong on 05/19/2019 at 13:02. Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:25. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

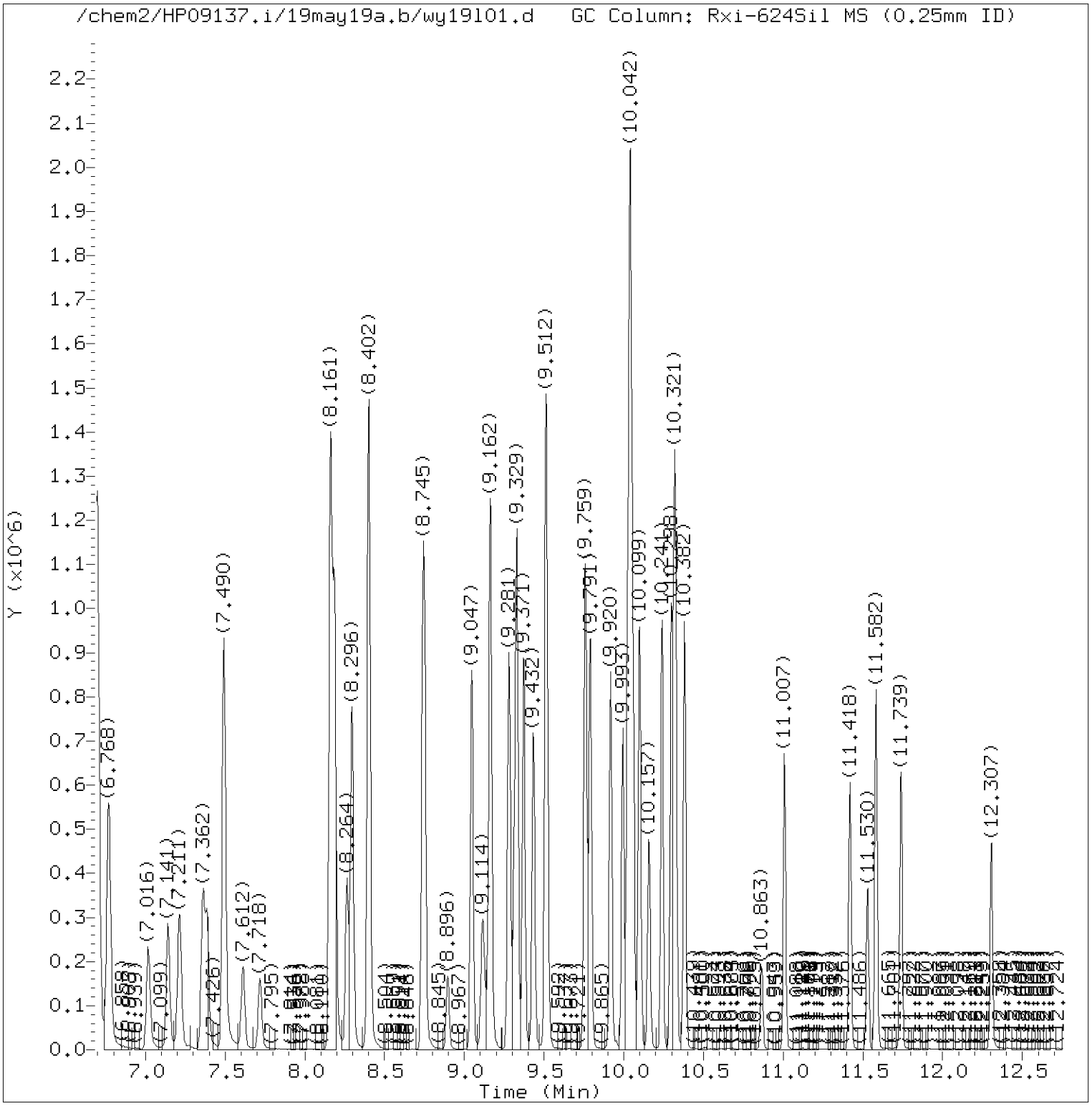
Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19l01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 12:44 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 13:01 cbs01947

Sample Name: LCSW24 Lab Sample ID: LCSW24

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 13:02.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19l01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 12:44 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 13:01 cbs01947

Sample Name: LCSW24 Lab Sample ID: LCSW24

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 13:02.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may19a.b/wy19l01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 12:44 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 13:01 cbs01947

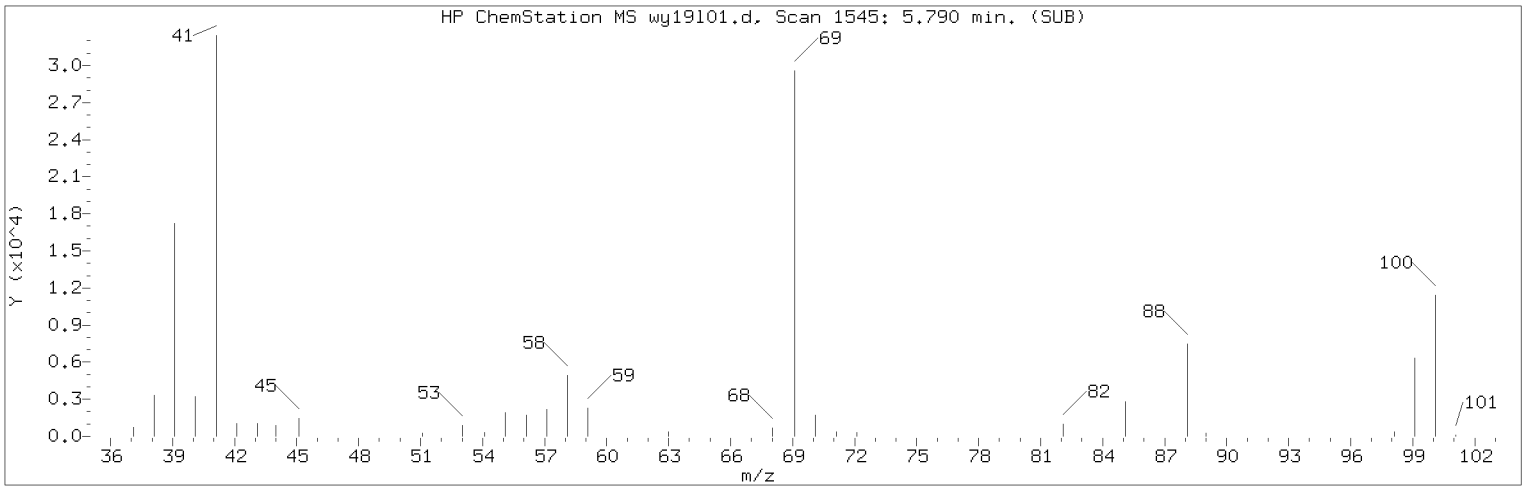
Sample Name: LCSW24 Lab Sample ID: LCSW24

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	1.461	62	107567	15.370
9) Chloroethane	(2)	1.763	64	65713	14.269
17) 1,1-Dichloroethene	(2)	2.302	96	81171	19.417
29)*t-Butyl alcohol-d10	(1)	2.738	65	145218	250.000
36) 1,1-Dichloroethane	(2)	3.345	63	165423	20.127
42) cis-1,2-Dichloroethene	(2)	3.890	96	110799	21.757
52)$Dibromofluoromethane	(2)	4.355	113	213555	48.617
53) 1,1,1-Trichloroethane	(2)	4.381	97	119649	20.621
57)$1,2-Dichloroethane-d4	(2)	4.686	102	58903	50.421
66)*Fluorobenzene	(2)	5.032	96	948146	50.000
71) Trichloroethene	(2)	5.408	95	97973	20.358
76) 1,4-Dioxane	(1)	5.790	88	44699M	685.856
84)$Toluene-d8	(3)	6.698	98	940627	51.517
94) Tetrachloroethene	(3)	7.362	166	112966	23.670
101)*Chlorobenzene-d5	(3)	8.161	117	728644	50.000
107) m+p-Xylene	(3)	8.402	106	401071	45.125
108) o-Xylene	(3)	8.739	106	186836	21.368
115)$4-Bromofluorobenzene	(3)	9.162	95	344125	47.112
132)*1,4-Dichlorobenzene-d4	(4)	10.042	152	414799	50.000
109) Xylene (Total)	(3)		106	587907	66.493

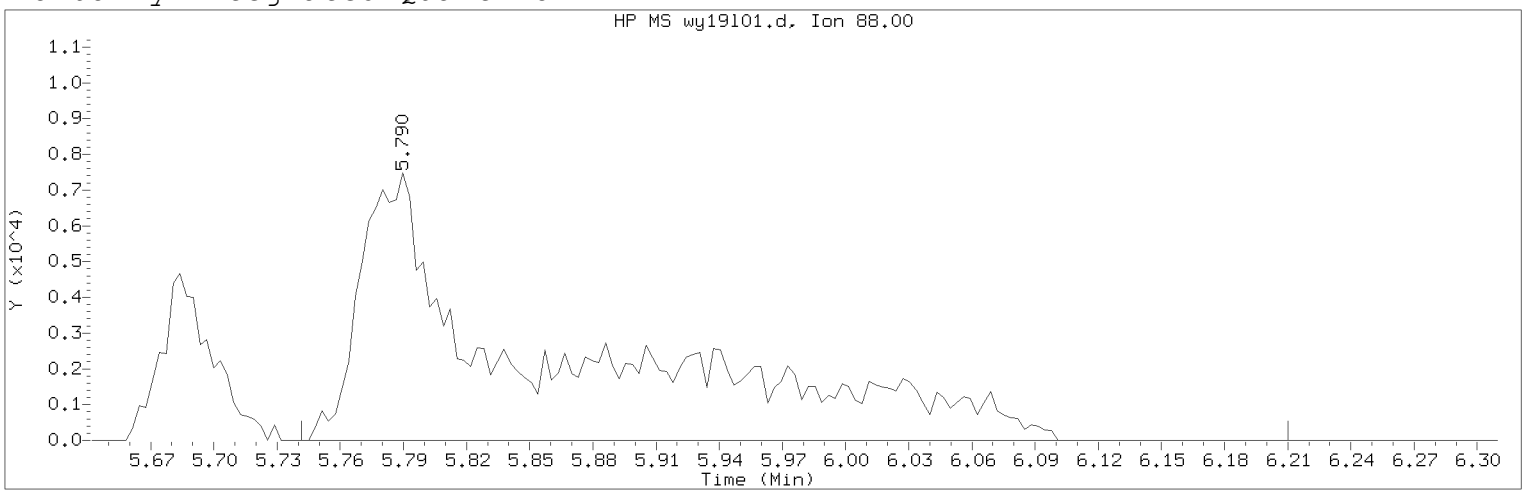
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Chelsea B. Stong
on 05/19/2019 at 13:02.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19l01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 12:44 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 13:01 cbs01947

Sample Name: LCSW24 Lab Sample ID: LCSW24

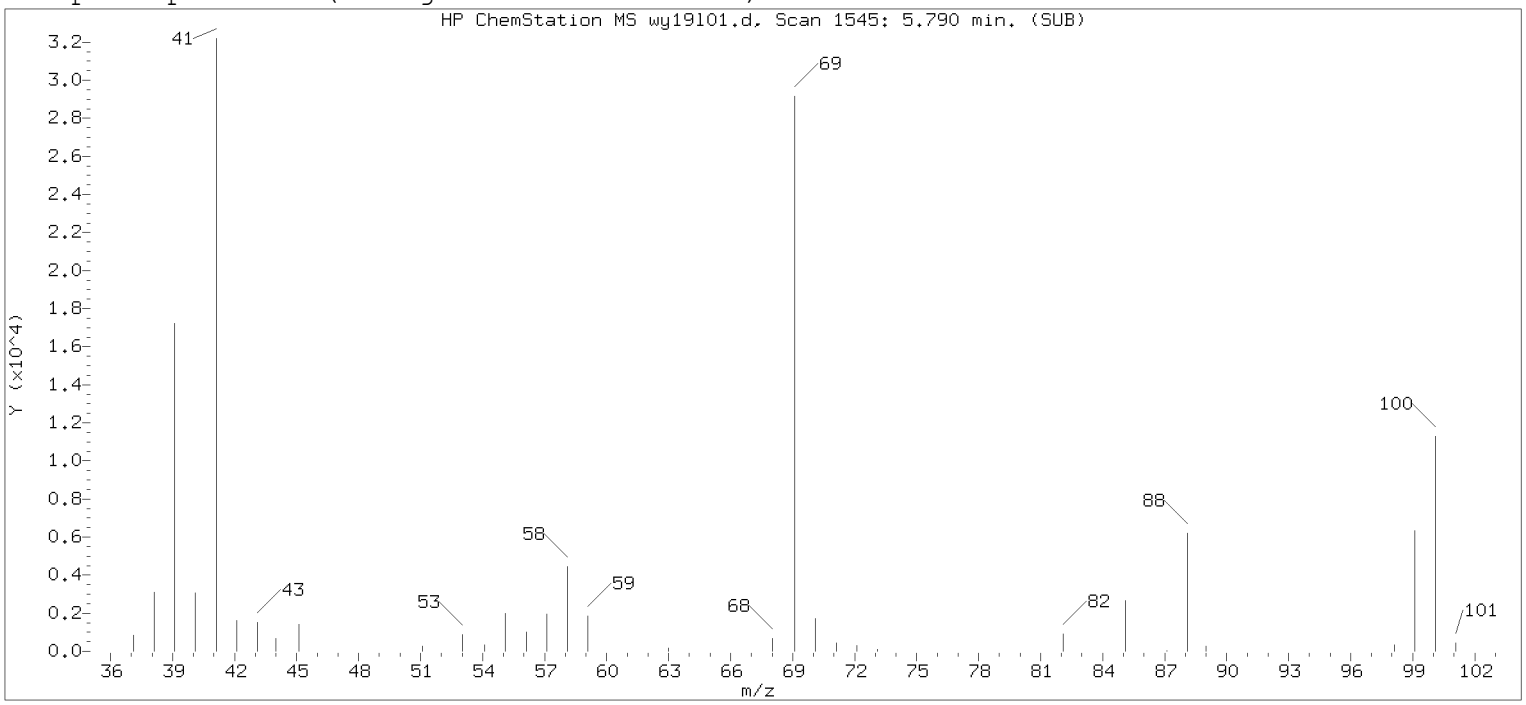
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1545
Retention Time (minutes): 5.790
Quant Ion : 88.00
Area (flag) : 44699M
On-Column Amount (ng) : 685.8561
Integration start scan : 1529 Integration stop scan: 1675
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

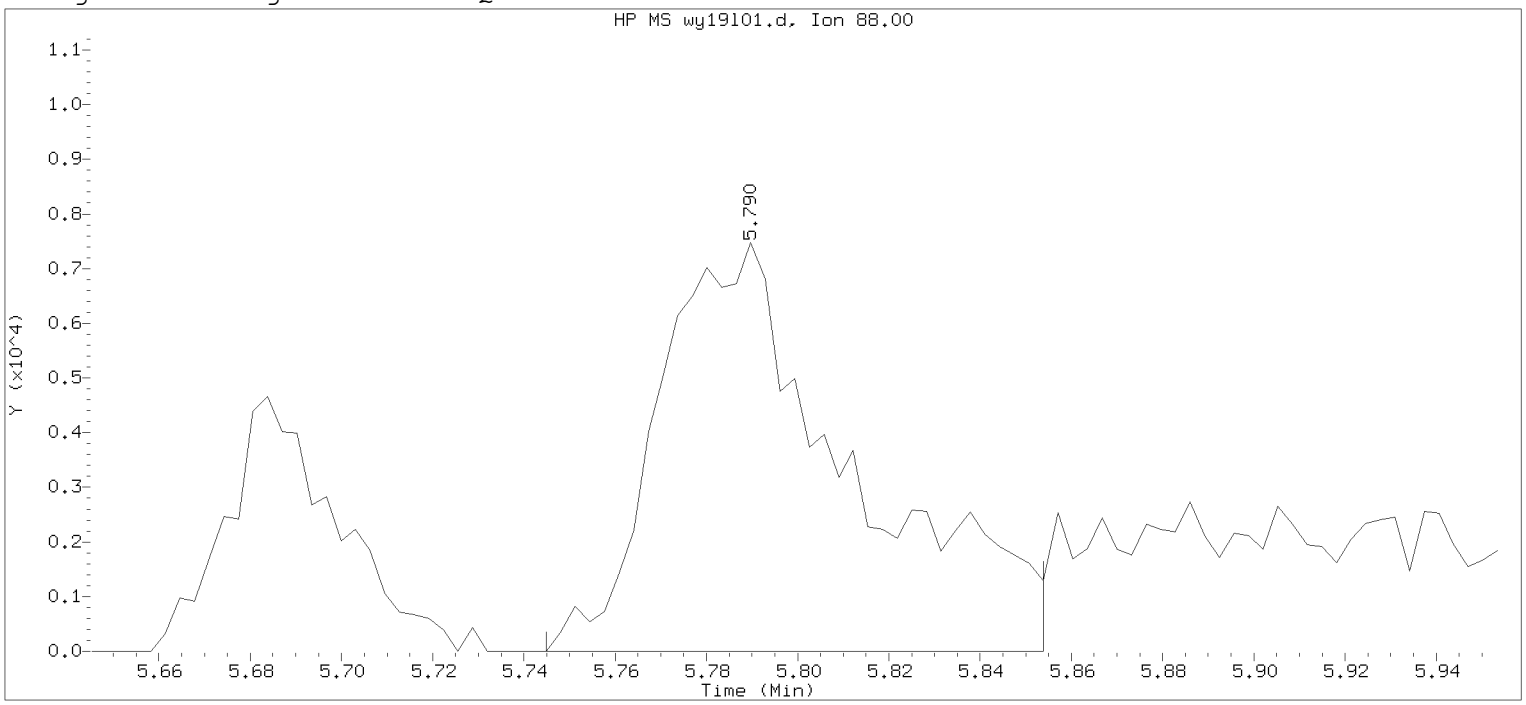
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/19/2019 at 13:02.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kari Becker on 05/20/2019 at 22:25.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may19a.b/wy19l01.d Instrument ID: HP09137.i
Injection date and time: 19-MAY-2019 12:44 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may19a.b/m8260c5.m Sublist used: 18116
Calibration date and time: 19-MAY-2019 12:48
Date, time and analyst ID of latest file update: 19-May-2019 12:59 Automation

Sample Name: LCSW24 Lab Sample ID: LCSW24

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1545
Retention Time (minutes): 5.790
Quant Ion : 88.00
Area : 21779
On-column Amount (ng) : 334.1842
Integration start scan : 1530 Integration stop scan: 1564
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 05/19/2019 at 13:02.
Target 3.5 esignature user ID: cbr01947

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 | 717-656-2300 | Fax: 717-656-2681 | www.LancasterLabs.com

NYSDEC ASP Category B Data Package

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Project: AD-New Windsor, NY
Groundwater and Water Samples
Collected on 05/11/19-05/13/19

SDG# JCV91-V.2

GROUP	SAMPLE NUMBERS
2044042	1057949-1057968

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-18-27
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman **Date:** **08/05/2019**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Katherine Klinefelter at (717) 556-7256.

2425 New Holland Pike, Lancaster, PA 17601 | 717-656-2300 | Fax: 717-656-2681 | www.LancasterLabs.com

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Sample Reference List for SDG Number JCV91
with a Data Package Type of NYSDEC B

06556 - The Johnson Company, Inc.

Project: AD-New Windsor, NY

Lab Sample Number	Client Sample ID	Collection Date	Date Received	Lab Sample Code
1057949	MW-1S	05/11/2019 09:37	05/14/2019 10:25	91J01
1057950	DUP-03	05/11/2019 10:00	05/14/2019 10:25	91J02
1057951	MW-1D	05/11/2019 10:52	05/14/2019 10:25	91J03
1057952	J11-BR01	05/11/2019 13:45	05/14/2019 10:25	91J04
1057953	J11-UC01	05/11/2019 12:44	05/14/2019 10:25	91J05
1057954	J11-UC02	05/11/2019 14:54	05/14/2019 10:25	91J06
1057955	J11-BR02	05/11/2019 16:32	05/14/2019 10:25	91J07
1057956	J02-BR01	05/13/2019 13:52	05/14/2019 10:25	91J08
1057957	EBAWR051319	05/13/2019 14:30	05/14/2019 10:25	91J09
1057958	TB051119	05/11/2019 00:00	05/14/2019 10:25	91J10
1057959	J20-UC02	05/12/2019 09:57	05/14/2019 10:25	91J11
1057960	J20-BR02	05/12/2019 11:57	05/14/2019 10:25	91J12
1057961	J20-UC01	05/12/2019 12:42	05/14/2019 10:25	91J13
1057962	J20-BR01	05/12/2019 14:02	05/14/2019 10:25	91J14
1057963	J19-UC02	05/12/2019 15:18	05/14/2019 10:25	91J15
1057964	RIZ-19	05/12/2019 16:30	05/14/2019 10:25	91J16
1057965	J17-UC02	05/13/2019 08:54	05/14/2019 10:25	91J17
1057966	J17-BR01	05/13/2019 10:27	05/14/2019 10:25	91J18
1057967	J02-UC01	05/13/2019 11:32	05/14/2019 10:25	91J19
1057968	J02-BR02	05/13/2019 13:04	05/14/2019 10:25	91J20

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Sample pH Log

SDG: JCV91

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
1057949	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/24/2019 8:37:14AM	1693
1057950	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/24/2019 8:37:10AM	1693
1057951	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/24/2019 8:37:10AM	1693
1057952	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/24/2019 8:37:10AM	1693
1057953	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/24/2019 8:37:10AM	1693
1057954	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/24/2019 8:37:11AM	1693
1057955	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/24/2019 8:37:11AM	1693
1057956	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/24/2019 8:37:11AM	1693
1057957	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/24/2019 8:37:11AM	1693
1057958	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/24/2019 8:37:11AM	1693
1057959	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/24/2019 8:37:11AM	1693
1057960	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/24/2019 8:37:12AM	1693
1057961	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/24/2019 8:37:12AM	1693
1057962	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/24/2019 8:37:12AM	1693
1057963	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/24/2019 8:37:12AM	1693
1057964	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/24/2019 8:37:12AM	1693
1057965	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/24/2019 8:37:13AM	1693
1057966	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/24/2019 8:37:13AM	1693
1057967	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/24/2019 8:37:13AM	1693
1057968	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/24/2019 8:37:13AM	1693

*pH Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

**Chlorine Present Code Key
NA = Chlorine Not Checked
Y = Chlorine Present
N = Chlorine Not Present

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11997 VOCs- 5ml Water by 8260C/D

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Report Date: May 24, 2019 13:47

Project: AD-New Windsor, NY

Account #: 06556
Group Number: 2044042
SDG: JCV91
PO Number: 1-0145-05
State of Sample Origin: NY

Electronic Copy To	The Johnson Company, Inc.	Attn: Tristan Hardy
Electronic Copy To	The Johnson Company, Inc.	Attn: George Lester

Respectfully Submitted,

Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
MW-1S Grab Groundwater	05/11/2019 09:37	1057949
DUP-03 Grab Groundwater	05/11/2019 10:00	1057950
MW-1D Grab Groundwater	05/11/2019 10:52	1057951
J11-BR01 Grab Groundwater	05/11/2019 13:45	1057952
J11-UC01 Grab Groundwater	05/11/2019 12:44	1057953
J11-UC02 Grab Groundwater	05/11/2019 14:54	1057954
J11-BR02 Grab Groundwater	05/11/2019 16:32	1057955
J02-BR01 Grab Groundwater	05/13/2019 13:52	1057956
EBAWR051319 Grab Water	05/13/2019 14:30	1057957
TB051119 Water	05/11/2019	1057958
J20-UC02 Grab Groundwater	05/12/2019 09:57	1057959
J20-BR02 Grab Groundwater	05/12/2019 11:57	1057960
J20-UC01 Grab Groundwater	05/12/2019 12:42	1057961
J20-BR01 Grab Groundwater	05/12/2019 14:02	1057962
J19-UC02 Grab Groundwater	05/12/2019 15:18	1057963
RIZ-19 Grab Groundwater	05/12/2019 16:30	1057964
J17-UC02 Grab Groundwater	05/13/2019 08:54	1057965
J17-BR01 Grab Groundwater	05/13/2019 10:27	1057966
J02-UC01 Grab Groundwater	05/13/2019 11:32	1057967
J02-BR02 Grab Groundwater	05/13/2019 13:04	1057968

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **MW-1S Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/11/2019 09:37
SDG#: JCV91-01

The Johnson Company, Inc.
ELLE Sample #: GW 1057949
ELLE Group #: 2044042
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	0.7 J	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191433AA	05/23/2019 20:56	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191433AA	05/23/2019 20:55	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-03 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/11/2019 10:00
SDG#: JCV91-02

The Johnson Company, Inc.
ELLE Sample #: GW 1057950
ELLE Group #: 2044042
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	0.4 J	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191433AA	05/23/2019 21:16	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191433AA	05/23/2019 21:15	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-1D Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/11/2019 10:52
SDG#: JCV91-03

The Johnson Company, Inc.
ELLE Sample #: GW 1057951
ELLE Group #: 2044042
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	1	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	0.7 J	0.3	1	1
11997	Trichloroethene	79-01-6	1	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191433AA	05/23/2019 21:35	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191433AA	05/23/2019 21:34	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **J11-BR01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/11/2019 13:45
SDG#: JCV91-04

The Johnson Company, Inc.
ELLE Sample #: GW 1057952
ELLE Group #: 2044042
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191433AA	05/23/2019 21:55	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191433AA	05/23/2019 21:54	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **J11-UC01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/11/2019 12:44
SDG#: JCV91-05

The Johnson Company, Inc.
ELLE Sample #: GW 1057953
ELLE Group #: 2044042
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191433AA	05/23/2019 22:15	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191433AA	05/23/2019 22:14	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **J11-UC02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/11/2019 14:54
SDG#: JCV91-06

The Johnson Company, Inc.
ELLE Sample #: GW 1057954
ELLE Group #: 2044042
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191433AA	05/23/2019 22:35	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191433AA	05/23/2019 22:34	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **J11-BR02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/11/2019 16:32
SDG#: JCV91-07

The Johnson Company, Inc.
ELLE Sample #: GW 1057955
ELLE Group #: 2044042
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191433AA	05/23/2019 22:54	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191433AA	05/23/2019 22:53	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **J02-BR01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/13/2019 13:52
SDG#: JCV91-08

The Johnson Company, Inc.
ELLE Sample #: GW 1057956
ELLE Group #: 2044042
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191433AA	05/23/2019 23:14	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191433AA	05/23/2019 23:13	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **EBAWR051319 Grab Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/13/2019 14:30
SDG#: JCV91-09EB

The Johnson Company, Inc.
ELLE Sample #: GW 1057957
ELLE Group #: 2044042
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	0.4 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191433AA	05/23/2019 20:36	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191433AA	05/23/2019 20:35	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB051119 Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/11/2019
SDG#: JCV91-10TB

The Johnson Company, Inc.
ELLE Sample #: GW 1057958
ELLE Group #: 2044042
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191433AA	05/23/2019 20:16	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191433AA	05/23/2019 20:15	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **J20-UC02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/12/2019 09:57
SDG#: JCV91-11

The Johnson Company, Inc.
ELLE Sample #: GW 1057959
ELLE Group #: 2044042
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.8 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	0.8 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	0.4 J	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	0.5 J	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191433AA	05/23/2019 23:34	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191433AA	05/23/2019 23:33	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **J20-BR02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/12/2019 11:57
SDG#: JCV91-12

The Johnson Company, Inc.
ELLE Sample #: GW 1057960
ELLE Group #: 2044042
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	1	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191433AA	05/23/2019 23:54	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191433AA	05/23/2019 23:53	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **J20-UC01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/12/2019 12:42
SDG#: JCV91-13

The Johnson Company, Inc.
ELLE Sample #: GW 1057961
ELLE Group #: 2044042
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.5 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	0.7 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	0.9 J	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191433AA	05/24/2019 00:14	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191433AA	05/24/2019 00:13	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **J20-BR01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/12/2019 14:02
SDG#: JCV91-14

The Johnson Company, Inc.
ELLE Sample #: GW 1057962
ELLE Group #: 2044042
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191433AA	05/24/2019 00:34	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191433AA	05/24/2019 00:33	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **J19-UC02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/12/2019 15:18
SDG#: JCV91-15

The Johnson Company, Inc.
ELLE Sample #: GW 1057963
ELLE Group #: 2044042
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.5 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	1	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191433AA	05/24/2019 00:53	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191433AA	05/24/2019 00:52	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **RIZ-19 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/12/2019 16:30
SDG#: JCV91-16

The Johnson Company, Inc.
ELLE Sample #: GW 1057964
ELLE Group #: 2044042
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	0.8 J	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	5	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191433AA	05/24/2019 01:13	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191433AA	05/24/2019 01:12	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **J17-UC02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/13/2019 08:54
SDG#: JCV91-17

The Johnson Company, Inc.
ELLE Sample #: GW 1057965
ELLE Group #: 2044042
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	1	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191433AA	05/24/2019 01:33	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191433AA	05/24/2019 01:32	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **J17-BR01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/13/2019 10:27
SDG#: JCV91-18

The Johnson Company, Inc.
ELLE Sample #: GW 1057966
ELLE Group #: 2044042
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191433AA	05/24/2019 01:53	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191433AA	05/24/2019 01:52	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **J02-UC01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/13/2019 11:32
SDG#: JCV91-19

The Johnson Company, Inc.
ELLE Sample #: GW 1057967
ELLE Group #: 2044042
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191433AA	05/24/2019 02:12	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191433AA	05/24/2019 02:11	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **J02-BR02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/13/2019 13:04
SDG#: JCV91-20

The Johnson Company, Inc.
ELLE Sample #: GW 1057968
ELLE Group #: 2044042
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191433AA	05/24/2019 02:32	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191433AA	05/24/2019 02:31	Don V Viray	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2044042
Reported: 05/24/2019 13:47

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: E191433AA	Sample number(s): 1057949-1057968		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: E191433AA	Sample number(s): 1057949-1057968								
Acetone	150	138.52	150	138.1	92	92	54-157	0	30
Benzene	20	22.27	20	22.04	111	110	80-120	1	30
2-Butanone	150	139.27	150	138.1	93	92	59-135	1	30
Carbon Disulfide	20	20.46	20	20.29	102	101	65-128	1	30
Chloroform	20	21.09	20	21.15	105	106	80-120	0	30
1,2-Dichlorobenzene	20	21.24	20	21.07	106	105	80-120	1	30
1,1-Dichloroethane	20	22.02	20	21.62	110	108	80-120	2	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2044042
Reported: 05/24/2019 13:47

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,2-Dichloroethane	20	20.17	20	20.26	101	101	73-124	0	30
1,1-Dichloroethene	20	21.58	20	21.49	108	107	80-131	0	30
cis-1,2-Dichloroethene	20	22.71	20	22.88	114	114	80-125	1	30
trans-1,2-Dichloroethene	20	21.58	20	21.73	108	109	80-126	1	30
1,4-Dioxane	500	545.96	500	567.8	109	114	63-146	4	30
Ethylbenzene	20	21.53	20	21.27	108	106	80-120	1	30
Freon 113	20	19.76	20	19.66	99	98	73-139	1	30
Methylene Chloride	20	21.88	20	21.64	109	108	80-120	1	30
Naphthalene	20	20.45	20	19.65	102	98	53-124	4	30
Tetrachloroethene	20	22.1	20	21.35	111	107	80-120	3	30
Toluene	20	21.95	20	21.71	110	109	80-120	1	30
1,1,1-Trichloroethane	20	20.63	20	20.38	103	102	67-126	1	30
Trichloroethene	20	21.52	20	21.36	108	107	80-120	1	30
Vinyl Chloride	20	19.39	20	19.12	97	96	56-120	1	30
Xylene (Total)	60	65.57	60	64.25	109	107	80-120	2	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: E191433AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1057949	95	100	99	98
1057950	96	102	99	98
1057951	96	100	99	98
1057952	97	99	98	98
1057953	96	103	100	98
1057954	96	101	99	97
1057955	96	100	99	97
1057956	97	101	98	97
1057957	95	99	99	98
1057958	96	100	100	98
1057959	97	99	99	99
1057960	96	100	99	97
1057961	97	101	99	97
1057962	96	100	99	97
1057963	97	101	98	97
1057964	96	99	99	96
1057965	96	99	98	97
1057966	97	100	99	98

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2044042
Reported: 05/24/2019 13:47

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: E191433AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1057967	96	103	99	97
1057968	96	100	99	97
Blank	96	101	99	97
LCS	96	103	100	98
LCSD	96	100	99	98
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 6556 Group # 2044042 Sample # 1057949-68

COC # 583010

Client Information

Client: The Johnson Company/VHB	Acct. #: 06556
Project Name/#: AD-New Windsor/1-0145-05/58300	PWSID #:
Project Manager: George Lester	P.O. #:
Sampler: Adam Roby	Quote #:
State where samples were collected: NY	For Compliance: Yes ☐ No ☒

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Matrix: Soil	Sediment	Tissue	Water: Potable	Ground	Surface	NPDES	Other:	Total # of Containers	Analysis Requested: 8260-VOCs	Remarks
MW-1S	5/11/19	937	X					X					3	X	
Dup-03	5/11/19	1000	X					X					3	X	
MW-1D	5/11/19	1052	X					X					3	X	
J11-BR01	5/11/19	1345	X					X					3	X	
J11-UC01	5/11/19	1244	X					X					3	X	
J11-UC02	5/11/19	1454	X					X					3	X	
J11-BR02	5/11/19	1632	X					X					3	X	
J02-BR01	5/13/19	1352	X					X					3	X	
EBAWR051319	5/13/19	1430	X					DI					3	X	Equip. Blank
TB051119	—	—	—					DI					2	X	TRIP BLANK

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days:

E-mail address: Glester@vhb.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	5/13/19	1500			
				5/14/19	1025

EDD Required? Yes No
If yes, format: Excel

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS FedEx X Other

Temperature upon receipt 12-17 °C

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 6556 Group # 2044042 Sample # 1057949-68

COC # 583012

Client Information

Client: The Johnson Company / VHB
Acct. #: 06556
Project Name/#: AB-New Windsor / 1-0145-5 / 58300
PWSID #:
Project Manager: George Lester
P.O. #:
Sampler: Adam Rafloy
Quote #:
State where samples were collected: NY
For Compliance: Yes ☐ No ☒

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water ☒ | Potable ☐ Ground ☐ NPDES ☐ Surface ☐ | Other: ____

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	H	8260 - VOCs
J20 - UC02	5/12/19	957	X		3		X
J20 - BR02	5/12/19	1157	X		3		X
J20 - UC01	5/12/19	1242	X		3		X
J20 - BR01	5/12/19	1402	X		3		X
J19 - UC02	5/12/19	1518	X		3		X
RIZ - 19	5/12/19	1630	X		3		X
J17 - UC02	5/13/19	854	X		3		X
J17 - BR01	5/13/19	1027	X		3		X
J02 - UC01	5/13/19	1132	X		3		X
J02 - BR02	5/13/19	1304	X		3		X

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: ____

E-mail address: Glester@vhb.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP)
Type VI (Raw Data Only)
Type III (Reduced non-CLP)
NJ DKQP
TX TRRP-13
NYSDEC Category A or B
MA MCP
CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	5/13/19	1500			
				5/14/19	1028

EDD Required? (Yes) No
If yes, format: Excel

Site-Specific QC (MS/MSD/Dup)? (Yes) No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx X Other ____

Temperature upon receipt 1.2-1.7 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 248904

Group Number(s): 2044042

Client: The Johnson Company

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	05/14/2019 10:25
Number of Packages:	2	Number of Projects:	2
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Simon Nies (25112) at 15:36 on 05/14/2019

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	1.2	DT	Wet	Y	Bagged	N
2	DT146	1.7	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17601-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCV91

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Solid	DF	Comments
1057949	MW-1S	X		1	
1057950	DUP-03	X		1	
1057951	MW-1D	X		1	
1057952	J11-BR01	X		1	
1057953	J11-UC01	X		1	
1057954	J11-UC02	X		1	
1057955	J11-BR02	X		1	
1057956	J02-BR01	X		1	
1057957	EBAWR051319	X		1	Equipment Blank
1057958	TB051119	X		1	Trip Blank
1057959	J20-UC02	X		1	
1057960	J20-BR02	X		1	
1057961	J20-UC01	X		1	
1057962	J20-BR01	X		1	
1057963	J19-UC02	X		1	
1057964	RIZ-19	X		1	
1057965	J17-UC02	X		1	
1057966	J17-BR01	X		1	
1057967	J02-UC01	X		1	
1057968	J02-BR02	X		1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCV91

GC/MS Volatiles

Fraction: Volatiles by GC/MS

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

1. Relative Response Factor (RRF)

$$RRF = \frac{AX}{Ais} \times \frac{Cis}{Cx}$$

Where:

Ax = Area of the characteristic ion for the compound to be measured
Ais = Area of the characteristic ion for the specific internal standard to be measured
Cis = Concentration of the internal standard
Cx = Concentration of the compound to be measured

2. % Relative Standard Deviation (%RSD)

$$\%RSD = \frac{standard\ deviation}{Mean} \times 100$$

3. % Difference

$$\%D = \frac{RRFc - RRFi}{RRFi} \times 100$$

Where:

RRFc = Relative response factor from the continuing calibration standard
RRFi = Mean relative response factor from the initial calibration

4. Concentration

$$Concentration\ (\mu g/L) = \frac{(Ax)(Is)(Df)}{(Ais)(RRF)}$$

Where:

Ax, Ais, and RRF are as given in 1. above
Is = Amount of internal standard added in parts per billion (µg/L)
Df = Dilution factor

5. % Recovery (% Rec)

$$\%Rec = \frac{SSR - SR}{SA} \times 100$$

Where:

SSR = Spiked sample result
SR = Sample result
SA = Spike added

6. Relative Percent Difference (RPD)

$$RPD = \frac{(MSR - MSRD)}{(1/2)(MSR + MSRD)} \times 100$$

Where:

MSR = Matrix spike recovery
MSRD = Matrix spike recovery duplicate

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: The Johnson Company, Inc.
SDG: JCV91

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
VOCs- 5ml Water by 8260C/D	E191433AA	VBLKE15	05/23/2019 19:56
		LCSE15	05/23/2019 18:57
		LCDE15	05/23/2019 19:17
		1057949	05/23/2019 20:56
		1057950	05/23/2019 21:16
		1057951	05/23/2019 21:35
		1057952	05/23/2019 21:55
		1057953	05/23/2019 22:15
		1057954	05/23/2019 22:35
		1057955	05/23/2019 22:54
		1057956	05/23/2019 23:14
		1057957	05/23/2019 20:36
		1057958	05/23/2019 20:16
		1057959	05/23/2019 23:34
		1057960	05/23/2019 23:54
		1057961	05/24/2019 00:14
		1057962	05/24/2019 00:34
		1057963	05/24/2019 00:53
		1057964	05/24/2019 01:13
		1057965	05/24/2019 01:33
		1057966	05/24/2019 01:53
		1057967	05/24/2019 02:12
		1057968	05/24/2019 02:32

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: JCV91
Matrix: LIQUID

Fraction: Volatiles by GC/MS

E191433AA / VBLKE15 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	05/23/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	05/23/19	N.D.	ug/l	0.2	1
Acetone	05/23/19	N.D.	ug/l	0.7	20
Freon 113	05/23/19	N.D.	ug/l	0.2	10
Carbon Disulfide	05/23/19	N.D.	ug/l	0.2	5
Methylene Chloride	05/23/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	05/23/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	05/23/19	N.D.	ug/l	0.2	1
2-Butanone	05/23/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	05/23/19	N.D.	ug/l	0.2	1
Chloroform	05/23/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	05/23/19	N.D.	ug/l	0.3	1
Benzene	05/23/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	05/23/19	N.D.	ug/l	0.3	1
Trichloroethene	05/23/19	N.D.	ug/l	0.2	1
1,4-Dioxane	05/23/19	N.D.	ug/l	29	250
Toluene	05/23/19	N.D.	ug/l	0.2	1
Tetrachloroethene	05/23/19	N.D.	ug/l	0.2	1
Ethylbenzene	05/23/19	N.D.	ug/l	0.4	1
Xylene (Total)	05/23/19	N.D.	ug/l	1	5
1,2-Dichlorobenzene	05/23/19	N.D.	ug/l	0.2	5
Naphthalene	05/23/19	N.D.	ug/l	1	5

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Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: JCV91
Matrix: LIQUID

Fraction: Volatiles by GC/MS

E191433AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKE15	101	80 - 120	97	80 - 120	96	80 - 120	99	80 - 120
LCSE15	103	80 - 120	98	80 - 120	96	80 - 120	100	80 - 120
LCDE15	100	80 - 120	98	80 - 120	96	80 - 120	99	80 - 120
1057949	100	80 - 120	98	80 - 120	95	80 - 120	99	80 - 120
1057950	102	80 - 120	98	80 - 120	96	80 - 120	99	80 - 120
1057951	100	80 - 120	98	80 - 120	96	80 - 120	99	80 - 120
1057952	99	80 - 120	98	80 - 120	97	80 - 120	98	80 - 120
1057953	103	80 - 120	98	80 - 120	96	80 - 120	100	80 - 120
1057954	101	80 - 120	97	80 - 120	96	80 - 120	99	80 - 120
1057955	100	80 - 120	97	80 - 120	96	80 - 120	99	80 - 120
1057956	101	80 - 120	97	80 - 120	97	80 - 120	98	80 - 120
1057957	99	80 - 120	98	80 - 120	95	80 - 120	99	80 - 120
1057958	100	80 - 120	98	80 - 120	96	80 - 120	100	80 - 120
1057959	99	80 - 120	99	80 - 120	97	80 - 120	99	80 - 120
1057960	100	80 - 120	97	80 - 120	96	80 - 120	99	80 - 120
1057961	101	80 - 120	97	80 - 120	97	80 - 120	99	80 - 120
1057962	100	80 - 120	97	80 - 120	96	80 - 120	99	80 - 120
1057963	101	80 - 120	97	80 - 120	97	80 - 120	98	80 - 120
1057964	99	80 - 120	96	80 - 120	96	80 - 120	99	80 - 120
1057965	99	80 - 120	97	80 - 120	96	80 - 120	98	80 - 120
1057966	100	80 - 120	98	80 - 120	97	80 - 120	99	80 - 120
1057967	103	80 - 120	97	80 - 120	96	80 - 120	99	80 - 120
1057968	100	80 - 120	97	80 - 120	96	80 - 120	99	80 - 120

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: JCV91
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSE15 LCSD: LCDE15	Batch: **E191433AA** (Sample number(s): 1057949-1057968)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	19.39	19.12	97	96	56-120	1	30
1,1-Dichloroethene	20	21.58	21.49	108	107	80-131	0	30
Acetone	150	138.52	138.1	92	92	54-157	0	30
Freon 113	20	19.76	19.66	99	98	73-139	1	30
Carbon Disulfide	20	20.46	20.29	102	101	65-128	1	30
Methylene Chloride	20	21.88	21.64	109	108	80-120	1	30
trans-1,2-Dichloroethene	20	21.58	21.73	108	109	80-126	1	30
1,1-Dichloroethane	20	22.02	21.62	110	108	80-120	2	30
2-Butanone	150	139.27	138.1	93	92	59-135	1	30
cis-1,2-Dichloroethene	20	22.71	22.88	114	114	80-125	1	30
1,1,1-Trichloroethane	20	20.63	20.38	103	102	67-126	1	30
Chloroform	20	21.09	21.15	105	106	80-120	0	30
1,2-Dichloroethane	20	20.17	20.26	101	101	73-124	0	30
Benzene	20	22.27	22.04	111	110	80-120	1	30
Trichloroethene	20	21.52	21.36	108	107	80-120	1	30
1,4-Dioxane	500	545.96	567.8	109	114	63-146	4	30
Toluene	20	21.95	21.71	110	109	80-120	1	30
Tetrachloroethene	20	22.1	21.35	111	107	80-120	3	30
Ethylbenzene	20	21.53	21.27	108	106	80-120	1	30
Xylene (Total)	60	65.57	64.25	109	107	80-120	2	30
1,2-Dichlorobenzene	20	21.24	21.07	106	105	80-120	1	30
Naphthalene	20	20.45	19.65	102	98	53-124	4	30

Fraction: Volatiles by GC/MS

11997: VOCs- 5ml Water by 8260C/D Analyte Name	Default MDL	Default LOQ	Units
Vinyl Chloride	0.2	1	ug/l
1,1-Dichloroethene	0.2	1	ug/l
Acetone	0.7	20	ug/l
Freon 113	0.2	10	ug/l
Carbon Disulfide	0.2	5	ug/l
Methylene Chloride	0.3	1	ug/l
trans-1,2-Dichloroethene	0.2	1	ug/l
1,1-Dichloroethane	0.2	1	ug/l
2-Butanone	0.3	10	ug/l
cis-1,2-Dichloroethene	0.2	1	ug/l
Chloroform	0.2	1	ug/l
1,1,1-Trichloroethane	0.3	1	ug/l
Benzene	0.2	1	ug/l
1,2-Dichloroethane	0.3	1	ug/l
Trichloroethene	0.2	1	ug/l
1,4-Dioxane	29	250	ug/l
Toluene	0.2	1	ug/l
Tetrachloroethene	0.2	1	ug/l
Ethylbenzene	0.4	1	ug/l
Xylene (Total)	1	5	ug/l
1,2-Dichlorobenzene	0.2	5	ug/l
Naphthalene	1	5	ug/l

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: em02t01.d BFB Injection Date: 05/02/19

Instrument ID: HP15648 BFB Injection Time: 11:50

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.46
75	30.0 - 60.0% of mass 95	48.11
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.61
173	Less than 2.0% of mass 174	0.52 (0.71)1
174	Greater than 50.0% of mass 95	72.95
175	5.0 - 9.0% of mass 174	5.31 (7.29)1
176	Greater than 95.0%, but less than 101.0% of mass 174	71.42 (97.90)1
177	5.0 - 9.0% of mass 176	4.77 (6.68)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	ea02i01.d	05/02/19	12:18
02	VSTD100	ea02i02.d	05/02/19	12:38
03	VSTD50	ea02i03.d	05/02/19	12:58
04	VSTD20	ea02i04.d	05/02/19	13:19
05	VSTD4	ea02i06.d	05/02/19	13:59
06	VSTD1	ea02i07.d	05/02/19	14:19
07	ICVELG	ea02v01.d	05/02/19	14:40

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ey23t05.d BFB Injection Date: 05/23/19

Instrument ID: HP15648 BFB Injection Time: 18:08

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.28
75	30.0 - 60.0% of mass 95	46.82
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.16
173	Less than 2.0% of mass 174	0.45 (0.62)1
174	Greater than 50.0% of mass 95	73.26
175	5.0 - 9.0% of mass 174	5.48 (7.48)1
176	Greater than 95.0%, but less than 101.0% of mass 174	70.52 (96.26)1
177	5.0 - 9.0% of mass 176	4.67 (6.62)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	ey23c05.d	05/23/19	18:37
02	LCSE15	ey23s31.d	05/23/19	18:57
03	LCDE15	ey23s32.d	05/23/19	19:17
04	VBLKE15	ey23b31.d	05/23/19	19:56
05	1057958	ey23s33.d	05/23/19	20:16
06	1057957	ey23s34.d	05/23/19	20:36
07	1057949	ey23s35.d	05/23/19	20:56
08	1057950	ey23s36.d	05/23/19	21:16
09	1057951	ey23s37.d	05/23/19	21:35
10	1057952	ey23s38.d	05/23/19	21:55
11	1057953	ey23s39.d	05/23/19	22:15
12	1057954	ey23s40.d	05/23/19	22:35
13	1057955	ey23s41.d	05/23/19	22:54
14	1057956	ey23s42.d	05/23/19	23:14
15	1057959	ey23s43.d	05/23/19	23:34
16	1057960	ey23s44.d	05/23/19	23:54
17	1057961	ey23s45.d	05/24/19	00:14
18	1057962	ey23s46.d	05/24/19	00:34
19	1057963	ey23s47.d	05/24/19	00:53
20	1057964	ey23s48.d	05/24/19	01:13
21	1057965	ey23s49.d	05/24/19	01:33
22	1057966	ey23s50.d	05/24/19	01:53

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ey23t05.d BFB Injection Date: 05/23/19

Instrument ID: HP15648 BFB Injection Time: 18:08

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.28
75	30.0 - 60.0% of mass 95	46.82
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.16
173	Less than 2.0% of mass 174	0.45 (0.62)1
174	Greater than 50.0% of mass 95	73.26
175	5.0 - 9.0% of mass 174	5.48 (7.48)1
176	Greater than 95.0%, but less than 101.0% of mass 174	70.52 (96.26)1
177	5.0 - 9.0% of mass 176	4.67 (6.62)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1057967	ey23s51.d	05/24/19	02:12
24	1057968	ey23s52.d	05/24/19	02:32

FORM V VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 Calibration Date(s): 05/02/19 05/02/19

Heated Purge: (Y/N) Y Calibration Times: 12:18 14:19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = ea02i07.d RRF 4 = ea02i06.d RRF 10= ea02i05.d
RRF 20= ea02i04.d RRF 50= ea02i03.d RRF100= ea02i02.d RRF300= ea02i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Dichlorodifluoromethane	#0.3916	0.4482	0.4237	0.4570	0.4455	0.4841	0.4365	0.4409	7	AVG #
Chloromethane	#0.3383	0.3817	0.3614	0.3684	0.3591	0.3645	0.3386	0.3588	4	AVG #
1,3-Butadiene	0.2502	0.2618	0.2980	0.2804	0.2616	0.2776	0.2587	0.2698	6	AVG
Vinyl Chloride	#0.3162	0.3360	0.3412	0.3542	0.3469	0.3721	0.3343	0.3430	5	AVG #
Bromomethane	#0.2736	0.2568	0.2600	0.2634	0.2562	0.2616	0.2365	0.2583	4	AVG #
Chloroethane	#0.1937	0.1942	0.1960	0.2014	0.1971	0.2028	0.1819	0.1953	4	AVG #
Dichlorofluoromethane	0.5765	0.4970	0.4846	0.4891	0.4820	0.5030	0.4656	0.4997	7	AVG
n-Pentane	0.3587	0.3369	0.4311	0.4208	0.4130	0.4371	0.4064	0.4006	9	AVG
Trichlorofluoromethane	#0.3986	0.4858	0.4826	0.5054	0.5039	0.5420	0.4949	0.4876	9	AVG #
Ethyl ether	0.1994	0.2149	0.1942	0.2064	0.2011	0.2081	0.1981	0.2032	3	AVG
Freon 123a	0.2912	0.2715	0.3000	0.2972	0.2790	0.2930	0.2780	0.2871	4	AVG
Acrolein	2.1219	1.9178	2.1323	2.0850	2.1946	2.0588	1.9285	2.0627	5	AVG
1,1-Dichloroethene	#0.1633	0.1871	0.2145	0.2118	0.2070	0.2146	0.2071	0.2008	9	AVG #
1,1-Dichloroethene(2)	#0.0949	0.0949	0.1130	0.1138	0.1075	0.1130	0.1081	0.1064	8	AVG #
Acetone	#0.9873	0.7968	0.8594	0.8325	0.8745	0.8448	0.8146	0.8586	7	AVG #
Freon 113	#0.1481	0.1837	0.2431	0.2470	0.2398	0.2546	0.2399	0.2223	18	AVG #
2-Propanol	0.5813	0.5029	0.5003	0.4966	0.5477	0.5041	0.4577	0.5129	8	AVG
Methyl Iodide	0.3226	0.3504	0.3983	0.3942	0.3867	0.3985	0.3829	0.3762	8	AVG
Carbon Disulfide	#0.6073	0.6122	0.7185	0.7174	0.6900	0.7231	0.6988	0.6810	7	AVG #
Allyl Chloride	0.4419	0.3851	0.3732	0.3829	0.3841	0.3915	0.3729	0.3902	6	AVG
Methyl Acetate	#0.1974	0.1965	0.1836	0.1908	0.1941	0.1931	0.1857	0.1916	3	AVG #
Methylene Chloride	#0.2277	0.2218	0.2355	0.2311	0.2278	0.2340	0.2232	0.2287	2	AVG #
t-Butyl alcohol	1.0042	0.9069	0.9616	0.9442	0.9894	0.9035	0.8321	0.9345	6	AVG
Acrylonitrile	0.1129	0.1169	0.1205	0.1167	0.1184	0.1189	0.1113	0.1165	3	AVG
trans-1,2-Dichloroethene	#0.2031	0.2082	0.2419	0.2351	0.2268	0.2387	0.2281	0.2260	7	AVG #
Methyl Tertiary Butyl Ether	#0.6923	0.6589	0.6949	0.6915	0.6732	0.6790	0.6269	0.6738	4	AVG #
n-Hexane	0.3142	0.3267	0.4344	0.4244	0.4194	0.4478	0.4052	0.3960	13	AVG
1,1-Dichloroethane	#0.3593	0.3997	0.4503	0.4468	0.4327	0.4453	0.4297	0.4234	8	AVG #
di-Isopropyl ether	0.6824	0.7156	0.7840	0.7706	0.7592	0.7745	0.7292	0.7451	5	AVG
2-Chloro-1,3-butadiene	0.3293	0.3676	0.4374	0.4274	0.4156	0.4332	0.4196	0.4043	10	AVG
Ethyl t-butyl ether	0.7086	0.7219	0.7805	0.7698	0.7415	0.7432	0.6793	0.7350	5	AVG
cis-1,2-Dichloroethene	#0.2475	0.2314	0.2606	0.2643	0.2548	0.2647	0.2541	0.2539	5	AVG #
2-Butanone	#0.2093	0.1500	0.1517	0.1520	0.1496	0.1458	0.1404	0.1570	15	AVG #
2,2-Dichloropropane	0.3184	0.3364	0.3992	0.3963	0.3819	0.4000	0.3827	0.3736	9	AVG
Propionitrile	1.2607	1.1839	1.2952	1.2628	1.2857	1.2838	1.2652	1.2625	3	AVG
Methacrylonitrile	0.1245	0.1203	0.1287	0.1269	0.1253	0.1264	0.1236	0.1251	2	AVG
Bromochloromethane	0.1186	0.1177	0.1256	0.1298	0.1310	0.1315	0.1285	0.1261	5	AVG
Tetrahydrofuran	1.6654	1.2020	1.3203	1.2482	1.3099	1.2757	1.2403	1.3231	12	AVG
Chloroform	#0.3600	0.3779	0.4236	0.4202	0.4077	0.4205	0.4090	0.4027	6	AVG #
1,1,1-Trichloroethane	#0.3346	0.3250	0.3926	0.3931	0.3801	0.3981	0.3849	0.3726	8	AVG #
Cyclohexane	#0.3566	0.3693	0.4981	0.4881	0.4884	0.5154	0.4879	0.4577	14	AVG #
Cyclohexane(2)	#0.2946	0.3116	0.4259	0.4259	0.4214	0.4510	0.4225	0.3933	16	AVG #
Cyclohexane(3)	#0.1345	0.1294	0.1574	0.1574	0.1518	0.1631	0.1524	0.1494	8	AVG #
1,1-Dichloropropene	0.2584	0.2912	0.3554	0.3540	0.3420	0.3606	0.3512	0.3304	12	AVG
Carbon Tetrachloride	#0.2508	0.2694	0.3412	0.3317	0.3314	0.3512	0.3429	0.3170	13	AVG #
Isobutyl Alcohol	0.4012	0.3088	0.3029	0.3005	0.3218	0.2920	0.2937	0.3173	12	AVG
Benzene	#0.8586	0.8937	1.0183	1.0118	0.9897	1.0204	0.9988	0.9702	7	AVG #
1,2-Dichloroethane	#0.3433	0.3154	0.3309	0.3258	0.3175	0.3260	0.3221	0.3259	3	AVG #
1,2-Dichloroethane(2)	#0.0255	0.0317	0.0296	0.0285	0.0276	0.0284	0.0280	0.0285	7	AVG #<-
t-Amyl methyl ether	0.7298	0.7180	0.7764	0.7530	0.7358	0.7353	0.6535	0.7288	5	AVG
n-Heptane	0.4530	0.3617	0.4364	0.4199	0.4356	0.4548	0.4099	0.4245	8	AVG
n-Butanol	0.2727	0.2502	0.2722	0.2694	0.3054	0.2766	0.2744	0.2744	6	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

FORM VI VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 Calibration Date(s): 05/02/19 05/02/19

Heated Purge: (Y/N) Y Calibration Times: 12:18 14:19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = ea02i07.d RRF 4 = ea02i06.d RRF 10= ea02i05.d
RRF 20= ea02i04.d RRF 50= ea02i03.d RRF100= ea02i02.d RRF300= ea02i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Trichloroethene	#0.2043	0.2256	0.2573	0.2547	0.2518	0.2621	0.2572	0.2447	9	AVG #
Methylcyclohexane	#0.4244	0.4702	0.5139	0.5443	0.5214	0.5552	0.5376	0.5096	9	AVG #
Methylcyclohexane(2)	#0.1939	0.2139	0.2381	0.2492	0.2416	0.2541	0.2494	0.2343	9	AVG #
1,2-Dichloropropane	#0.2098	0.2243	0.2509	0.2505	0.2474	0.2556	0.2512	0.2414	7	AVG #
Dibromomethane	0.1349	0.1371	0.1477	0.1464	0.1478	0.1496	0.1480	0.1445	4	AVG
1,4-Dioxane	0.0744	0.0705	0.0804	0.0777	0.0828	0.0791	0.0756	0.0772	5	AVG
Methyl Methacrylate	0.2402	0.2133	0.2175	0.2143	0.2169	0.2200	0.2183	0.2201	4	AVG
Bromodichloromethane	#0.2857	0.2738	0.3054	0.3056	0.3026	0.3158	0.3154	0.3006	5	AVG #
2-Nitropropane	0.1399	0.0913	0.0889	0.0942	0.0982	0.0928	0.0921	0.0996	18	AVG
2-Chloroethyl Vinyl Ether	0.1715	0.1774	0.1915	0.1892	0.1886	0.1936	0.1902	0.1860	4	AVG
cis-1,3-Dichloropropene	#0.3453	0.3606	0.4014	0.4027	0.4012	0.4157	0.4140	0.3916	7	AVG #
4-Methyl-2-pentanone	#0.3383	0.2988	0.3261	0.3832	0.3758	0.3248	0.3127	0.3371	9	AVG #
Toluene	#0.7183	0.7519	0.8713	0.8629	0.8691	0.8852	0.8593	0.8311	8	AVG #
trans-1,3-Dichloropropene	#0.4507	0.4568	0.5042	0.5119	0.5171	0.5201	0.5163	0.4967	6	AVG #
Ethyl Methacrylate	0.4990	0.5105	0.5301	0.5392	0.5438	0.5506	0.5335	0.5295	3	AVG
1,1,2-Trichloroethane	#0.2787	0.2679	0.2844	0.2862	0.2881	0.2913	0.2837	0.2829	3	AVG #
Tetrachloroethene	#0.2493	0.2905	0.3667	0.3625	0.3613	0.3745	0.3608	0.3379	14	AVG #
1,3-Dichloropropane	0.4596	0.4728	0.5052	0.5113	0.5140	0.5165	0.5009	0.4972	4	AVG
2-Hexanone	#0.3811	0.3239	0.3300	0.4225	0.3999	0.3139	0.2999	0.3530	13	AVG #
Dibromochloromethane	#0.2750	0.2747	0.3012	0.3086	0.3212	0.3296	0.3273	0.3054	8	AVG #
1,2-Dibromoethane	#0.2845	0.2882	0.3052	0.3079	0.3086	0.3094	0.3030	0.3010	3	AVG #
1-Chlorohexane	0.0265	0.0287	0.0286	0.0294	0.0288	0.0297	0.0294	0.0287	4	AVG
Chlorobenzene	#0.8094	0.8422	0.9672	0.9394	0.9623	0.9692	0.9434	0.9190	7	AVG #
1,1,1,2-Tetrachloroethane	0.2673	0.2807	0.3252	0.3208	0.3288	0.3349	0.3272	0.3121	9	AVG
Ethylbenzene	#1.4121	1.4256	1.7441	1.7113	1.7388	1.7781	1.6997	1.6442	9	AVG #
m+p-Xylene	#0.5399	0.5615	0.6750	0.6687	0.6751	0.6922	0.6681	0.6401	10	AVG #
o-Xylene	#0.5372	0.5532	0.6557	0.6412	0.6626	0.6709	0.6516	0.6246	9	AVG #
Styrene	#0.8233	0.9020	1.0828	1.0758	1.1037	1.1279	1.1067	1.0317	12	AVG #
Bromoform	#0.1729	0.1808	0.1961	0.2052	0.2185	0.2235	0.2281	0.2036	10	AVG #
Isopropylbenzene	#1.3263	1.4608	1.7667	1.7379	1.7886	1.8365	1.7169	1.6620	12	AVG #
Cyclohexanone	0.3294	0.2713	0.2784	0.2881	0.2963	0.2808	0.2922	0.2909	7	AVG
Bromobenzene	0.6087	0.6502	0.7262	0.7164	0.7358	0.7360	0.7036	0.6967	7	AVG
1,1,2,2-Tetrachloroethane	#0.7845	0.7987	0.8168	0.8187	0.8537	0.8155	0.7721	0.8086	3	AVG #
1,2,3-Trichloropropane	0.2495	0.2356	0.2417	0.2534	0.2515	0.2493	0.2344	0.2450	3	AVG
trans-1,4-Dichloro-2-butene	0.2497	0.2503	0.2693	0.2691	0.2836	0.2746	0.2633	0.2657	5	AVG
n-Propylbenzene	3.1110	3.2440	3.9606	3.8345	4.0038	4.0053	3.5519	3.6730	10	AVG
2-Chlorotoluene	0.6254	0.6608	0.7748	0.7426	0.7632	0.7756	0.7198	0.7232	8	AVG
4-Chlorotoluene	0.6544	0.6485	0.7844	0.7665	0.7924	0.7937	0.7491	0.7413	9	AVG
1,3,5-Trimethylbenzene	2.3256	2.2988	2.8200	2.7662	2.8887	2.8970	2.6560	2.6646	10	AVG
tert-Butylbenzene	0.4780	0.5163	0.6233	0.6262	0.6482	0.6554	0.5987	0.5923	12	AVG
Pentachloroethane	0.3812	0.3978	0.4354	0.4445	0.4800	0.4792	0.4686	0.4410	9	AVG
1,2,4-Trimethylbenzene	2.5648	2.3747	2.8773	2.7966	2.9394	2.9481	2.7051	2.7437	8	AVG
sec-Butylbenzene	2.6050	2.9074	3.6600	3.6053	3.7681	3.8178	3.2987	3.3803	14	AVG
1,3-Dichlorobenzene	#1.1936	1.1965	1.4183	1.3952	1.4539	1.4646	1.3820	1.3577	8	AVG #
p-Isopropyltoluene	2.3598	2.5560	3.1888	3.1427	3.3116	3.3298	2.9269	2.9736	13	AVG
1,4-Dichlorobenzene	#1.3060	1.2772	1.4380	1.3912	1.4524	1.4706	1.3870	1.3889	5	AVG #
1,2,3-Trimethylbenzene	2.7083	2.7246	2.9304	3.0307	3.0760	3.0984	2.8824	2.9215	5	AVG
Benzyl Chloride	1.6911	1.7195	1.8834	1.9216	2.0399	2.0199	1.9297	1.8865	7	AVG
1,3-Diethylbenzene	1.6290	1.7314	1.8968	1.9623	1.9896	2.0149	1.8829	1.8724	8	AVG
1,4-Diethylbenzene	1.7719	1.8707	2.0114	2.0605	2.1054	2.1388	2.0068	1.9951	7	AVG
1,2-Dichlorobenzene	#1.1767	1.1636	1.3625	1.3224	1.3784	1.3827	1.3122	1.2998	7	AVG #
n-Butylbenzene	1.1493	1.2202	1.5548	1.5424	1.6335	1.6516	1.4713	1.4605	14	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 Calibration Date(s): 05/02/19 05/02/19

Heated Purge: (Y/N) Y Calibration Times: 12:18 14:19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = ea02i07.d RRF 4 = ea02i06.d RRF 10= ea02i05.d
RRF 20= ea02i04.d RRF 50= ea02i03.d RRF100= ea02i02.d RRF300= ea02i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
1,2-Diethylbenzene	1.3583	1.4518	1.5389	1.6038	1.6143	1.6343	1.5289	1.5329	6	AVG
1,2-Dibromo-3-chloropropane	#0.1794	0.1830	0.1847	0.1904	0.1968	0.1897	0.1728	0.1853	4	AVG #
1,3,5-Trichlorobenzene	0.8536	0.8288	0.9981	0.9840	1.0454	1.0463	0.9344	0.9558	9	AVG
1,2,4-Trichlorobenzene	#0.7801	0.7779	0.9052	0.8678	0.9195	0.9155	0.8064	0.8532	7	AVG #
Hexachlorobutadiene	0.3282	0.3039	0.3855	0.3759	0.4141	0.4070	0.3455	0.3657	11	AVG
Naphthalene	2.9952	2.6900	2.8934	2.8339	2.9519	2.8694	2.4558	2.8128	7	AVG
1,2,3-Trichlorobenzene	0.7881	0.7489	0.8418	0.8210	0.8573	0.8591	0.7229	0.8056	7	AVG
2-Methylnaphthalene	2.2780	1.7286	1.7224	1.8153	1.7881	1.7672	1.3425	1.7774	15	AVG
Dibromofluoromethane	0.2335	0.2335	0.2324	0.2311	0.2288	0.2328	0.2346	0.2324	1	AVG
Dibromofluoromethane(2)	0.2384	0.2399	0.2384	0.2382	0.2362	0.2393	0.2395	0.2386	1	AVG
1,2-Dichloroethane-d4	0.0584	0.0589	0.0588	0.0593	0.0581	0.0581	0.0588	0.0586	1	AVG
1,2-Dichloroethane-d4(2)	0.3004	0.3003	0.2995	0.2952	0.2924	0.2961	0.2997	0.2976	1	AVG
1,2-Dichloroethane-d4(3)	0.0377	0.0387	0.0375	0.0370	0.0372	0.0376	0.0375	0.0376	1	AVG
Toluene-d8	1.3504	1.3607	1.3591	1.3623	1.3511	1.3697	1.3525	1.3580	1	AVG
Toluene-d8(2)	0.8695	0.8770	0.8684	0.8731	0.8667	0.8800	0.8757	0.8729	1	AVG
4-Bromofluorobenzene	0.5204	0.5258	0.5202	0.5220	0.5153	0.5256	0.5250	0.5220	1	AVG
4-Bromofluorobenzene(2)	0.3873	0.3905	0.3893	0.3919	0.3913	0.3958	0.3920	0.3912	1	AVG

Average %RSD 7

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP15648.i/19may02i.b/ea02i01.d	VSTD300
/chem/HP15648.i/19may02i.b/ea02i02.d	VSTD100
/chem/HP15648.i/19may02i.b/ea02i03.d	VSTD050
/chem/HP15648.i/19may02i.b/ea02i04.d	VSTD020
/chem/HP15648.i/19may02i.b/ea02i05.d	VSTD010
/chem/HP15648.i/19may02i.b/ea02i06.d	VSTD004
/chem/HP15648.i/19may02i.b/ea02i07.d	VSTD001

Area Summary

File ID:

Internal Standard Name	ea02i01.d	ea02i02.d	ea02i03.d	ea02i04.d	ea02i05.d	ea02i06.d	ea02i07.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	182177	181548	180628	183068	177210	185789	173827	180607	2	Yes
Fluorobenzene	1109741	1092189	1103103	1084837	1076899	1097962	1056656	1088770	2	Yes
Chlorobenzene-d5	837172	810686	802580	797090	797132	809751	781405	805117	2	Yes
1,4-Dichlorobenzene-d4	465360	438274	424423	424041	421829	430624	410887	430777	4	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	ea02i01.d	ea02i02.d	ea02i03.d	ea02i04.d	ea02i05.d	ea02i06.d	ea02i07.d	Avg. RT
t-Butyl alcohol-d10	2.487	2.486	2.487	2.480	2.493	2.480	2.480	2.485
Fluorobenzene	4.736	4.742	4.742	4.736	4.742	4.736	4.736	4.739
Chlorobenzene-d5	7.888	7.888	7.888	7.888	7.888	7.888	7.888	7.888
1,4-Dichlorobenzene-d4	9.796	9.796	9.796	9.796	9.796	9.796	9.796	9.796

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 05/03/2019 at 11:23.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 ICV Date: 05/02/19 Time: 14:40

Lab File ID: ea02v01.d Init. Calib. Date(s): 05/02/19 05/02/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
# Dichlorodifluoromethane	0.4409	0.3654	16.57	20	-17	#
# Chloromethane	0.3588	0.3208	17.88	20	-11	#
1,3-Butadiene	0.2698	0.2583	19.15	20	-4	
# Vinyl Chloride	0.3430	0.3213	18.74	20	-6	#
# Bromomethane	0.2583	0.2072	16.05	20	-20	#
# Chloroethane	0.1953	0.1741	17.83	20	-11	#
Dichlorofluoromethane	0.4997	0.3602	14.42	20	-28	
n-Pentane	0.4006	0.3915	19.55	20	-2	
# Trichlorofluoromethane	0.4876	0.4324	17.74	20	-11	#
Ethyl ether	0.2032	0.1924	18.94	20	-5	
Freon 123a	0.2871	0.2864	19.95	20	0	
Acrolein	2.0627	1.8854	137.11	150	-9	
# 1,1-Dichloroethene	0.2008	0.2188	21.79	20	9	#
# Acetone	0.8586	0.8017	140.06	150	-7	#
# Freon 113	0.2223	0.2463	22.15	20	11	#
2-Propanol	0.5129	0.5159	150.85	150	1	
Methyl Iodide	0.3762	0.3786	20.12	20	1	
# Carbon Disulfide	0.6810	0.6739	19.79	20	-1	#
Allyl Chloride	0.3902	0.3615	18.53	20	-7	
# Methyl Acetate	0.1916	0.1875	19.58	20	-2	#
# Methylene Chloride	0.2287	0.2377	20.79	20	4	#
t-Butyl alcohol	0.9345	0.8963	191.82	200	-4	
Acrylonitrile	0.1165	0.1033	88.68	100	-11	
# trans-1,2-Dichloroethene	0.2260	0.2257	19.98	20	0	#
# Methyl Tertiary Butyl Ether	0.6738	0.6586	19.55	20	-2	#
n-Hexane	0.3960	0.4096	20.68	20	3	
# 1,1-Dichloroethane	0.4234	0.4425	20.90	20	5	#
di-Isopropyl ether	0.7451	0.7685	20.63	20	3	
2-Chloro-1,3-butadiene	0.4043	0.4166	20.61	20	3	
Ethyl t-butyl ether	0.7350	0.7337	19.97	20	0	
# cis-1,2-Dichloroethene	0.2539	0.2927	23.06	20	15	#
# 2-Butanone	0.1570	0.1281	122.42	150	-18	#
2,2-Dichloropropane	0.3736	0.4097	21.94	20	10	
Propionitrile	1.2625	1.2956	153.94	150	3	
Methacrylonitrile	0.1251	0.1212	145.28	150	-3	
Bromochloromethane	0.1261	0.1211	19.20	20	-4	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 ICV Date: 05/02/19 Time: 14:40

Lab File ID: ea02v01.d Init. Calib. Date(s): 05/02/19 05/02/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Tetrahydrofuran	1.3231	1.1927	90.14	100	-10	
#	Chloroform	0.4027	0.4259	21.15	20	6	#
#	1,1,1-Trichloroethane	0.3726	0.4024	21.60	20	8	#
#	Cyclohexane	0.4577	0.4827	21.09	20	5	#
	1,1-Dichloropropene	0.3304	0.3592	21.74	20	9	
#	Carbon Tetrachloride	0.3170	0.3412	21.53	20	8	#
	Isobutyl Alcohol	0.3173	0.2908	458.30	500	-8	
#	Benzene	0.9702	1.0075	20.77	20	4	#
#	1,2-Dichloroethane	0.3259	0.3399	20.86	20	4	#
	t-Amyl methyl ether	0.7288	0.7392	20.28	20	1	
	n-Heptane	0.4245	0.4157	19.59	20	-2	
	n-Butanol	0.2744	0.2496	909.33	1000	-9	
#	Trichloroethene	0.2447	0.2627	21.47	20	7	#
#	Methylcyclohexane	0.5096	0.5042	19.79	20	-1	#
#	1,2-Dichloropropane	0.2414	0.2628	21.78	20	9	#
	Dibromomethane	0.1445	0.1493	20.66	20	3	
	1,4-Dioxane	0.0772	0.0645	417.29	500	-17	
	Methyl Methacrylate	0.2201	0.2058	18.70	20	-7	
#	Bromodichloromethane	0.3006	0.3136	20.86	20	4	#
	2-Nitropropane	0.0996	0.0812	16.29	20	-19	
	2-Chloroethyl Vinyl Ether	0.1860	0.1784	19.19	20	-4	
#	cis-1,3-Dichloropropene	0.3916	0.4059	20.73	20	4	#
#	4-Methyl-2-pentanone	0.3371	0.2899	86.00	100	-14	#
#	Toluene	0.8311	0.8895	21.40	20	7	#
#	trans-1,3-Dichloropropene	0.4967	0.4932	19.86	20	-1	#
	Ethyl Methacrylate	0.5295	0.5066	19.14	20	-4	
#	1,1,2-Trichloroethane	0.2829	0.3030	21.42	20	7	#
#	Tetrachloroethene	0.3379	0.3750	22.20	20	11	#
	1,3-Dichloropropane	0.4972	0.5182	20.85	20	4	
#	2-Hexanone	0.3530	0.2808	79.54	100	-20	#
#	Dibromochloromethane	0.3054	0.3161	20.70	20	4	#
#	1,2-Dibromoethane	0.3010	0.3129	20.80	20	4	#
	1-Chlorohexane	0.0287	0.0286	19.91	20	0	
#	Chlorobenzene	0.9190	0.9640	20.98	20	5	#
	1,1,1,2-Tetrachloroethane	0.3121	0.3277	21.00	20	5	
#	Ethylbenzene	1.6442	1.7729	21.57	20	8	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 ICV Date: 05/02/19 Time: 14:40

Lab File ID: ea02v01.d Init. Calib. Date(s): 05/02/19 05/02/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	m+p-Xylene	0.6401	0.6947	43.42	40	9	#
#	o-Xylene	0.6246	0.6715	21.50	20	8	#
#	Styrene	1.0317	1.1201	21.71	20	9	#
#	Bromoform	0.2036	0.1977	19.42	20	-3	#
#	Isopropylbenzene	1.6620	1.8222	21.93	20	10	#
	Cyclohexanone	0.2909	0.2773	476.61	500	-5	
	Bromobenzene	0.6967	0.7454	21.40	20	7	
#	1,1,2,2-Tetrachloroethane	0.8086	0.8399	20.77	20	4	#
	1,2,3-Trichloropropane	0.2450	0.2551	20.82	20	4	
	trans-1,4-Dichloro-2-butene	0.2657	0.2745	103.31	100	3	
	n-Propylbenzene	3.6730	4.0955	22.30	20	12	
	2-Chlorotoluene	0.7232	0.7742	21.41	20	7	
	4-Chlorotoluene	0.7413	0.8171	22.04	20	10	
	1,3,5-Trimethylbenzene	2.6646	2.9075	21.82	20	9	
	tert-Butylbenzene	0.5923	0.6601	22.29	20	11	
	Pentachloroethane	0.4410	0.4444	20.16	20	1	
	1,2,4-Trimethylbenzene	2.7437	2.9433	21.45	20	7	
	sec-Butylbenzene	3.3803	3.7584	22.24	20	11	
#	1,3-Dichlorobenzene	1.3577	1.4731	21.70	20	8	#
	p-Isopropyltoluene	2.9736	3.2339	21.75	20	9	
#	1,4-Dichlorobenzene	1.3889	1.4939	21.51	20	8	#
	1,2,3-Trimethylbenzene	2.9215	2.9709	20.34	20	2	
	Benzyl Chloride	1.8865	1.8362	19.47	20	-3	
	1,3-Diethylbenzene	1.8724	1.9127	20.43	20	2	
	1,4-Diethylbenzene	1.9951	1.9922	19.97	20	0	
#	1,2-Dichlorobenzene	1.2998	1.3803	21.24	20	6	#
	n-Butylbenzene	1.4605	1.5828	21.68	20	8	
	1,2-Diethylbenzene	1.5329	1.5705	20.49	20	2	
#	1,2-Dibromo-3-chloropropane	0.1853	0.1809	19.53	20	-2	#
	1,3,5-Trichlorobenzene	0.9558	1.0262	21.47	20	7	
#	1,2,4-Trichlorobenzene	0.8532	0.8956	20.99	20	5	#
	Hexachlorobutadiene	0.3657	0.3772	20.63	20	3	
	Naphthalene	2.8128	2.7329	19.43	20	-3	
	1,2,3-Trichlorobenzene	0.8056	0.8087	20.08	20	0	
	2-Methylnaphthalene	1.7774	1.3896	15.64	20	-22	

Average %Drift 7

Compounds with required minimum RRF.
Maximum % Drift = 30 %

^

Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem/HP15648.i/19may02i.b/ea02i07.d
/chem/HP15648.i/19may02i.b/ea02i06.d
/chem/HP15648.i/19may02i.b/ea02i05.d
/chem/HP15648.i/19may02i.b/ea02i04.d
/chem/HP15648.i/19may02i.b/ea02i03.d
/chem/HP15648.i/19may02i.b/ea02i02.d
/chem/HP15648.i/19may02i.b/ea02i01.d

File /chem/HP15648.i/19may02i.b/ea02i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem/HP15648.i/19may23b.b/ey23c05.d

RT Summary

Internal Standard Name	File ID: ey23c05.d	ICAL RT	In Spec
t-Butyl alcohol-d10	2.486	2.487	Yes
Fluorobenzene	4.736	4.742	Yes
Chlorobenzene-d5	7.894	7.888	Yes
1,4-Dichlorobenzene-d4	9.802	9.796	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: ey23c05.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	186532	180628	90314	361256	Yes
Fluorobenzene	1048658	1103103	551552	2206206	Yes
Chlorobenzene-d5	780977	802580	401290	1605160	Yes
1,4-Dichlorobenzene-d4	412517	424423	212212	848846	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 05/23/2019 at 19:11

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 Calibration Date: 05/23/19 Time: 18:37

Lab File ID: ey23c05.d Init. Calib. Date(s): 05/02/19 05/02/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.4409	0.3866	43.83	50	-12	#
# Chloromethane	0.3588	0.3938	54.87	50	10	#
1,3-Butadiene	0.2698	0.3094	57.34	50	15	
# Vinyl Chloride	0.3430	0.3557	51.85	50	4	#
# Bromomethane	0.2583	0.2381	46.09	50	-8	#
# Chloroethane	0.1953	0.1959	50.15	50	0	#
n-Pentane	0.4006	0.3318	41.41	50	-17	
# Trichlorofluoromethane	0.4876	0.4298	44.08	50	-12	#
Ethyl ether	0.2032	0.2238	55.08	50	10	
Freon 123a	0.2871	0.2810	48.94	50	-2	
Acrolein	2.0627	1.8775	455.11	500	-9	
# 1,1-Dichloroethene	0.2008	0.1993	49.63	50	-1	#
# 1,1-Dichloroethene(2)	0.1064	0.1046	49.13	50	-2	#
# Acetone	0.8586	0.8570	99.82	100	0	#
# Freon 113	0.2223	0.1884	42.36	50	-15	#
2-Propanol	0.5129	0.5990	291.92	250	17	
Methyl Iodide	0.3762	0.3762	49.99	50	0	
# Carbon Disulfide	0.6810	0.7006	51.44	50	3	#
Allyl Chloride	0.3902	0.4086	52.36	50	5	
# Methyl Acetate	0.1916	0.2126	55.49	50	11	#
# Methylene Chloride	0.2287	0.2292	50.10	50	0	#
t-Butyl alcohol	0.9345	0.9548	255.42	250	2	
Acrylonitrile	0.1165	0.1227	52.64	50	5	
# trans-1,2-Dichloroethene	0.2260	0.2272	50.26	50	1	#
# Methyl Tertiary Butyl Ether	0.6738	0.6790	50.39	50	1	#
n-Hexane	0.3960	0.2714	34.26	50	-31	<-
# 1,1-Dichloroethane	0.4234	0.4377	51.69	50	3	#
di-Isopropyl ether	0.7451	0.8351	56.04	50	12	
2-Chloro-1,3-butadiene	0.4043	0.4049	50.07	50	0	
Ethyl t-butyl ether	0.7350	0.7504	51.05	50	2	
# cis-1,2-Dichloroethene	0.2539	0.2531	49.84	50	0	#
# 2-Butanone	0.1570	0.1493	95.09	100	-5	#
2,2-Dichloropropane	0.3736	0.3587	48.01	50	-4	
Propionitrile	1.2625	1.3304	263.46	250	5	
Methacrylonitrile	0.1251	0.1307	130.55	125	4	
Bromochloromethane	0.1261	0.1253	49.66	50	-1	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 Calibration Date: 05/23/19 Time: 18:37

Lab File ID: ey23c05.d Init. Calib. Date(s): 05/02/19 05/02/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
Tetrahydrofuran	1.3231	1.1304	85.43	100	-15	
# Chloroform	0.4027	0.3970	49.29	50	-1	#
# 1,1,1-Trichloroethane	0.3726	0.3475	46.62	50	-7	#
# Cyclohexane	0.4577	0.3877	42.36	50	-15	#
# Cyclohexane(2)	0.3933	0.3196	40.63	50	-19	#
# Cyclohexane(3)	0.1494	0.1160	38.83	50	-22	#<-
1,1-Dichloropropene	0.3304	0.3334	50.46	50	1	
# Carbon Tetrachloride	0.3170	0.2911	45.92	50	-8	#
Isobutyl Alcohol	0.3173	0.3079	606.61	625	-3	
# Benzene	0.9702	1.0011	51.59	50	3	#
# 1,2-Dichloroethane	0.3259	0.2962	45.45	50	-9	#
# 1,2-Dichloroethane(2)	0.0285	0.0274	48.04	50	-4	#<-
t-Amyl methyl ether	0.7288	0.7343	50.37	50	1	
n-Heptane	0.4245	0.2430	28.62	50	-43	<-
n-Butanol	0.2744	0.2710	1234.29	1250	-1	
# Trichloroethene	0.2447	0.2429	49.62	50	-1	#
# Methylcyclohexane	0.5096	0.4561	44.76	50	-10	#
# Methylcyclohexane(2)	0.2343	0.2080	44.39	50	-11	#
# 1,2-Dichloropropane	0.2414	0.2541	52.63	50	5	#
Dibromomethane	0.1445	0.1388	48.03	50	-4	
1,4-Dioxane	0.0772	0.0862	697.53	625	12	
Methyl Methacrylate	0.2201	0.2162	49.12	50	-2	
# Bromodichloromethane	0.3006	0.2837	47.18	50	-6	#
2-Nitropropane	0.0996	0.0743	74.60	100	-25	<-
2-Chloroethyl Vinyl Ether	0.1860	0.1864	50.10	50	0	
# cis-1,3-Dichloropropene	0.3916	0.3843	49.07	50	-2	#
# 4-Methyl-2-pentanone	0.3371	0.3107	92.16	100	-8	#
# Toluene	0.8311	0.8278	49.80	50	0	#
# trans-1,3-Dichloropropene	0.4967	0.4639	46.70	50	-7	#
Ethyl Methacrylate	0.5295	0.5198	49.08	50	-2	
# 1,1,2-Trichloroethane	0.2829	0.2772	48.99	50	-2	#
# Tetrachloroethene	0.3379	0.3302	48.86	50	-2	#
1,3-Dichloropropane	0.4972	0.4959	49.87	50	0	
# 2-Hexanone	0.3530	0.2947	83.47	100	-17	#
# Dibromochloromethane	0.3054	0.2852	46.70	50	-7	#
# 1,2-Dibromoethane	0.3010	0.2896	48.11	50	-4	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 Calibration Date: 05/23/19 Time: 18:37

Lab File ID: ey23c05.d Init. Calib. Date(s): 05/02/19 05/02/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
1-Chlorohexane	0.0287	0.0237	41.19	50	-18	
# Chlorobenzene	0.9190	0.8848	48.14	50	-4	#
1,1,1,2-Tetrachloroethane	0.3121	0.3004	48.13	50	-4	
# Ethylbenzene	1.6442	1.5984	48.61	50	-3	#
# m+p-Xylene	0.6401	0.6136	95.87	100	-4	#
# o-Xylene	0.6246	0.6014	48.14	50	-4	#
# Styrene	1.0317	0.9994	48.43	50	-3	#
# Bromoform	0.2036	0.1849	45.42	50	-9	#
# Isopropylbenzene	1.6620	1.5353	46.19	50	-8	#
Cyclohexanone	0.2909	0.3626	778.89	625	25	<-
Bromobenzene	0.6967	0.6784	48.68	50	-3	
# 1,1,2,2-Tetrachloroethane	0.8086	0.7866	48.64	50	-3	#
1,2,3-Trichloropropane	0.2450	0.2351	47.97	50	-4	
trans-1,4-Dichloro-2-butene	0.2657	0.2032	95.59	125	-24	<-
n-Propylbenzene	3.6730	3.3649	45.81	50	-8	
2-Chlorotoluene	0.7232	0.6873	47.52	50	-5	
4-Chlorotoluene	0.7413	0.7044	47.51	50	-5	
1,3,5-Trimethylbenzene	2.6646	2.4502	45.98	50	-8	
tert-Butylbenzene	0.5923	0.5290	44.65	50	-11	
Pentachloroethane	0.4410	0.4139	46.94	50	-6	
1,2,4-Trimethylbenzene	2.7437	2.5363	46.22	50	-8	
sec-Butylbenzene	3.3803	2.9517	43.66	50	-13	
# 1,3-Dichlorobenzene	1.3577	1.3043	48.03	50	-4	#
p-Isopropyltoluene	2.9736	2.6155	43.98	50	-12	
# 1,4-Dichlorobenzene	1.3889	1.3124	47.24	50	-6	#
1,2,3-Trimethylbenzene	2.9215	2.8401	48.61	50	-3	
Benzyl Chloride	1.8865	1.7822	47.24	50	-6	
1,3-Diethylbenzene	1.8724	1.7780	47.48	50	-5	
1,4-Diethylbenzene	1.9951	1.8774	47.05	50	-6	
# 1,2-Dichlorobenzene	1.2998	1.2288	47.27	50	-5	#
n-Butylbenzene	1.4605	1.2315	42.16	50	-16	
1,2-Diethylbenzene	1.5329	1.4627	47.71	50	-5	
# 1,2-Dibromo-3-chloropropane	0.1853	0.1631	44.01	50	-12	#
1,3,5-Trichlorobenzene	0.9558	0.8399	43.94	50	-12	
# 1,2,4-Trichlorobenzene	0.8532	0.7656	44.87	50	-10	#
Hexachlorobutadiene	0.3657	0.2772	37.90	50	-24	<-

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 Calibration Date: 05/23/19 Time: 18:37

Lab File ID: ey23c05.d Init. Calib. Date(s): 05/02/19 05/02/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
Naphthalene	2.8128	2.5896	46.03	50	-8	
1,2,3-Trichlorobenzene	0.8056	0.7254	45.02	50	-10	
2-Methylnaphthalene	1.7774	1.4088	39.63	50	-21	<-
Dibromofluoromethane	0.2324	0.2267	48.77	50	-2	
Dibromofluoromethane(2)	0.2386	0.2318	48.59	50	-3	
1,2-Dichloroethane-d4	0.0586	0.0588	50.11	50	0	
1,2-Dichloroethane-d4(2)	0.2976	0.2779	46.68	50	-7	
1,2-Dichloroethane-d4(3)	0.0376	0.0371	49.38	50	-1	
Toluene-d8	1.3580	1.3506	49.73	50	-1	
Toluene-d8(2)	0.8729	0.8732	50.02	50	0	
4-Bromofluorobenzene	0.5220	0.5104	48.89	50	-2	
4-Bromofluorobenzene(2)	0.3912	0.3884	49.65	50	-1	

Average %Drift 7

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ey23c05.d Date Analyzed: 05/23/19

Instrument ID: HP15648 Time Analyzed: 18:37

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	186532	2.486	1048658	4.736	780977	7.894	412517	9.802
UPPER LIMIT	373064	2.986	2097316	5.236	1561954	8.394	825034	10.302
LOWER LIMIT	93266	1.986	524329	4.236	390488	7.394	206258	9.302
LAB SAMPLE ID								
01 LCSE15	185779	2.499	1036772	4.742	765543	7.894	410136	9.802
02 LCDE15	181547	2.493	1030537	4.736	769001	7.894	411269	9.802
03 VBLKE15	180608	2.486	1045030	4.736	777324	7.894	416762	9.802
04 1057958	178616	2.487	1041456	4.736	772669	7.894	414867	9.802
05 1057957	180452	2.493	1039499	4.736	775846	7.894	414421	9.802
06 1057949	187896	2.487	1065863	4.736	791154	7.894	425863	9.802
07 1057950	188128	2.486	1080680	4.736	800792	7.894	427634	9.802
08 1057951	182253	2.487	1040754	4.736	774077	7.894	414412	9.802
09 1057952	180025	2.480	1034914	4.736	781014	7.894	418294	9.802
10 1057953	185911	2.487	1072709	4.736	795209	7.894	430192	9.802
11 1057954	183435	2.480	1042287	4.736	777459	7.894	415889	9.802
12 1057955	176697	2.492	1021770	4.736	763158	7.894	411734	9.802
13 1057956	175595	2.486	1028234	4.742	774450	7.894	414225	9.802
14 1057959	177785	2.499	1049937	4.742	780992	7.894	423248	9.802
15 1057960	182730	2.480	1047515	4.736	783201	7.894	420401	9.802
16 1057961	177783	2.499	1033263	4.742	775998	7.894	416701	9.802
17 1057962	181524	2.492	1041937	4.736	778879	7.894	420500	9.802
18 1057963	174994	2.486	1016113	4.742	769965	7.894	409883	9.802
19 1057964	178272	2.499	1013611	4.742	755224	7.894	404901	9.802
20 1057965	178743	2.492	1017404	4.736	759072	7.894	408618	9.802
21 1057966	177934	2.492	1015867	4.736	761770	7.894	412598	9.802
22 1057967	177377	2.487	1007868	4.742	750617	7.894	406445	9.802

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ey23c05.d Date Analyzed: 05/23/19

Instrument ID: HP15648 Time Analyzed: 18:37

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA) AREA #	RT #	IS2(FBZ) AREA #	RT #	IS3(CBZ) AREA #	RT #	IS4(DCB) AREA #	RT #
12 HOUR STD	186532	2.486	1048658	4.736	780977	7.894	412517	9.802
UPPER LIMIT	373064	2.986	2097316	5.236	1561954	8.394	825034	10.302
LOWER LIMIT	93266	1.986	524329	4.236	390488	7.394	206258	9.302
LAB SAMPLE ID								
23 1057968	172765	2.492	1025333	4.736	763531	7.894	410444	9.802

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

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Sample Data

Volatiles by GC/MS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

91J01

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1057949

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s35.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	0.7	J
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23s35.d
Data file Sample Info. Line: 91J01;1057949;1;0;;JCV91;;;ey23b31;
Date, time and analyst ID of latest file update: 23-May-2019 21:12 Automation

Injection date and time: **23-MAY-2019 20:56**
Instrument ID: **HP15648.i** Batch: **E191433AA**

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.487(0.000)	246	65	187896 (1)	250.00	
66) Fluorobenzene	4.736(0.000)	615	96	1065863 (2)	50.00	
101) Chlorobenzene-d5	7.894(0.000)	1133	117	791154 (1)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802(0.000)	1446	152	425863 (3)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.072(0.000)	113	236101	47.659	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.395(0.001)	102	62247	49.792	100%		80 - 120
84) Toluene-d8	(3)	6.382(0.000)	98	1064262	49.530	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918(0.000)	95	403539	48.853	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	5.114(-0.001)	95	3459	0.663	0.66		J	0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Don V. Viray on 05/23/2019 at 22:17. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP15648.i/19may23b.b/ey23s35.d Injection date and time: **23-MAY-2019 20:56**
Data file Sample Info. Line: 91J01;1057949;1;0;;JCV91;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 21:12 Automation

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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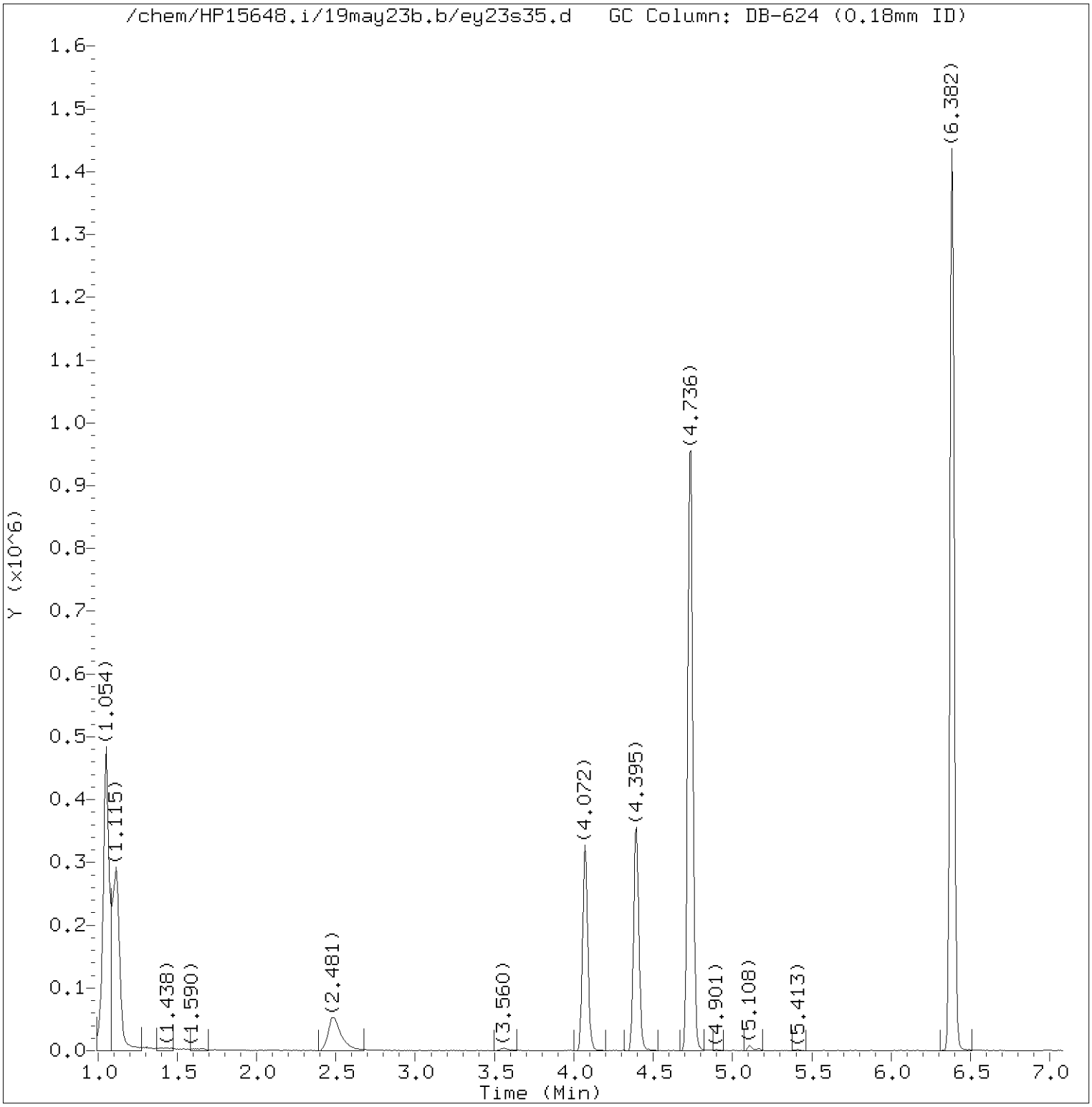
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 05/23/2019 at 22:17. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

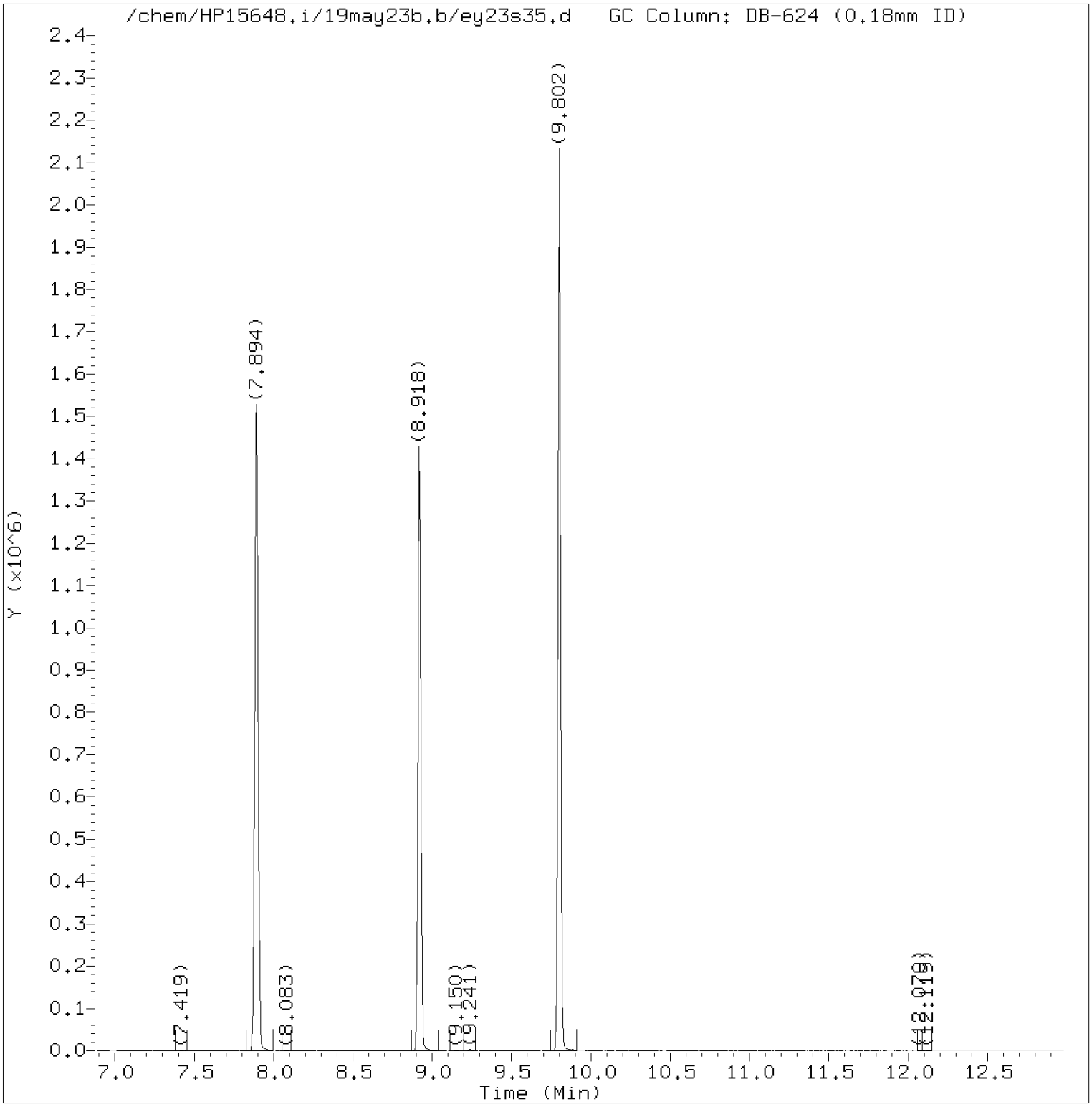
Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s35.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 20:56 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 21:12 Automation

Sample Name: 91J01 Lab Sample ID: 1057949

Digitally signed by Don V. Viray
on 05/23/2019 at 22:17.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s35.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 20:56 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 21:12 Automation

Sample Name: 91J01 Lab Sample ID: 1057949

Digitally signed by Don V. Viray
on 05/23/2019 at 22:17.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s35.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 20:56 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 21:12 Automation

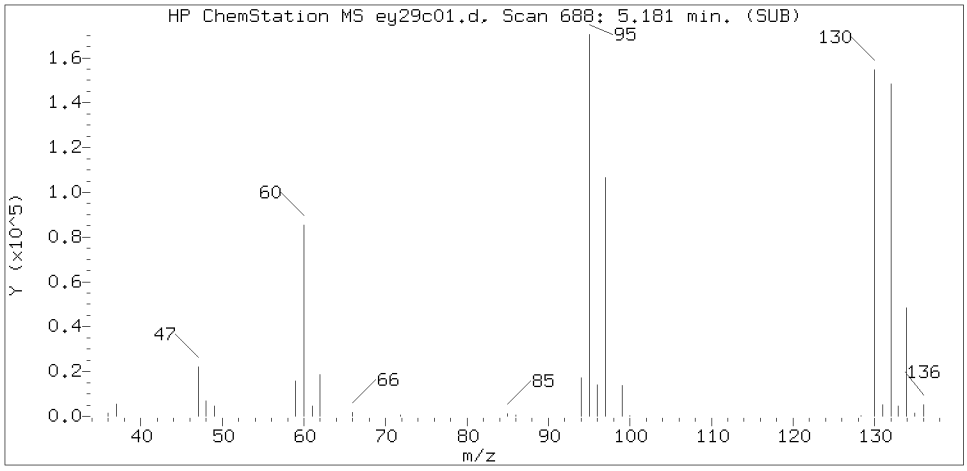
Sample Name: 91J01 Lab Sample ID: 1057949

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.487	65	187896	250.000
52)$Dibromofluoromethane	(2)	4.072	113	236101	47.659
57)$1,2-Dichloroethane-d4	(2)	4.395	102	62247	49.792
66)*Fluorobenzene	(2)	4.736	96	1065863	50.000
71) Trichloroethene	(2)	5.114	95	3459	0.663
84)$Toluene-d8	(3)	6.382	98	1064262	49.530
101)*Chlorobenzene-d5	(3)	7.894	117	791154	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	403539	48.853
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	425863	50.000

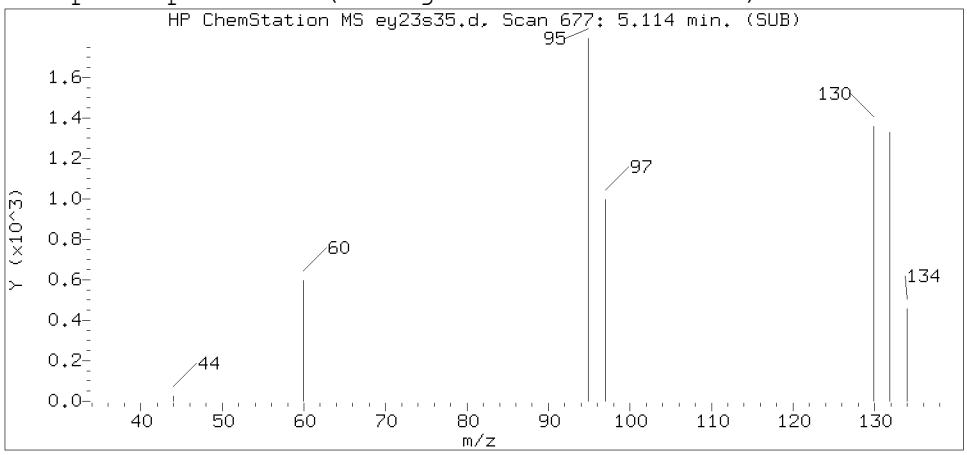
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/23/2019 at 22:17.
Target 3.5 esignature user ID: dvv10203

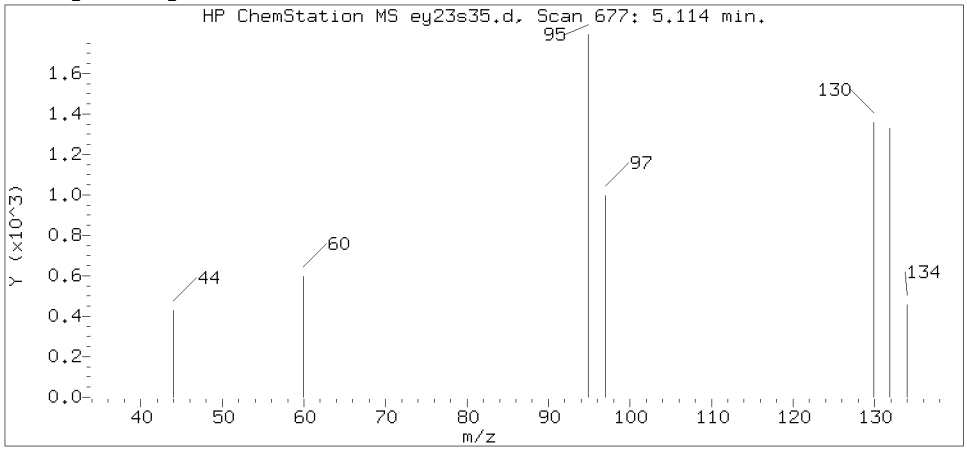
Reference Standard Spectrum for Trichloroethene

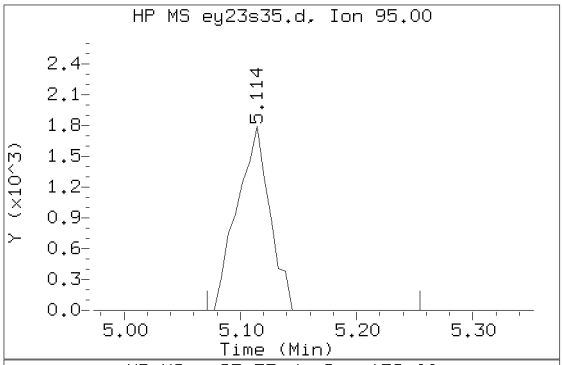


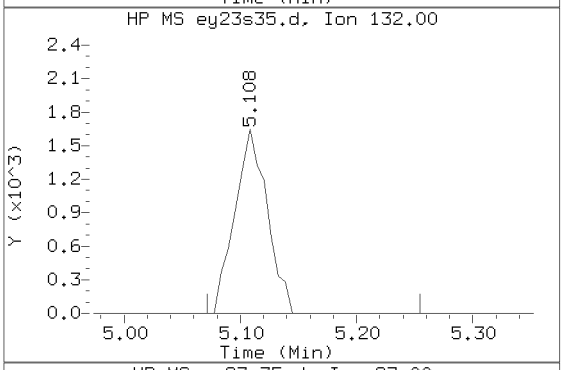
Sample Spectrum (Background Subtracted)

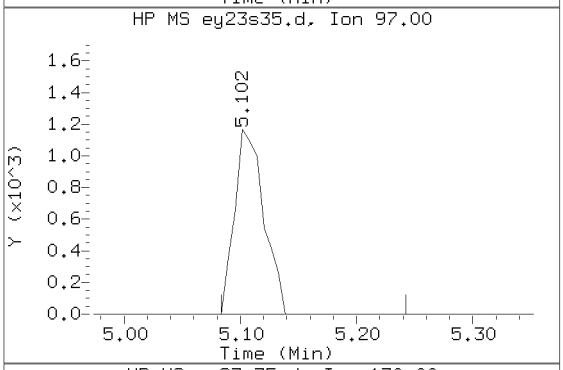


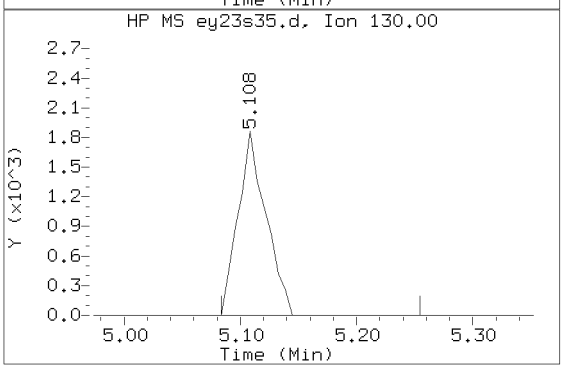
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may23b.b/ey23s35.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 20:56 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 21:12 Automation

Sample Name: 91J01 Lab Sample ID: 1057949

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 677
Retention Time (minutes): 5.114
Relative Retention Time :-0.00128
Quant Ion : 95.00
Area (flag) : 3459
On-Column Amount (ng) : 0.6632

Digitally signed by Don V. Viray on 05/23/2019 at 22:17.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

91J02

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1057950

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s36.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	0.4	J
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23s36.d
Injection date and time: **23-MAY-2019 21:16**
Data file Sample Info. Line: 91J02;1057950;1;0;;JCV91;;;ey23b31;
Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 21:32 Automation

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.486(0.000)	246	65	188128 (1)	250.00	
66) Fluorobenzene	4.736(0.000)	615	96	1080680 (3)	50.00	
101) Chlorobenzene-d5	7.894(0.000)	1133	117	800792 (3)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802(0.000)	1446	152	427634 (4)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.071(0.000)	113	241197	48.020	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.395(0.001)	102	64417	50.821	102%		80 - 120
84) Toluene-d8	(3)	6.382(0.000)	98	1081171	49.711	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918(0.000)	95	409512	48.980	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	5.108(-0.000)	95	2324	0.439	0.44		J	0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Don V. Viray on 05/23/2019 at 22:17. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP15648.i/19may23b.b/ey23s36.d Injection date and time: **23-MAY-2019 21:16**
Data file Sample Info. Line: 91J02;1057950;1;0;;JCV91;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 21:32 Automation

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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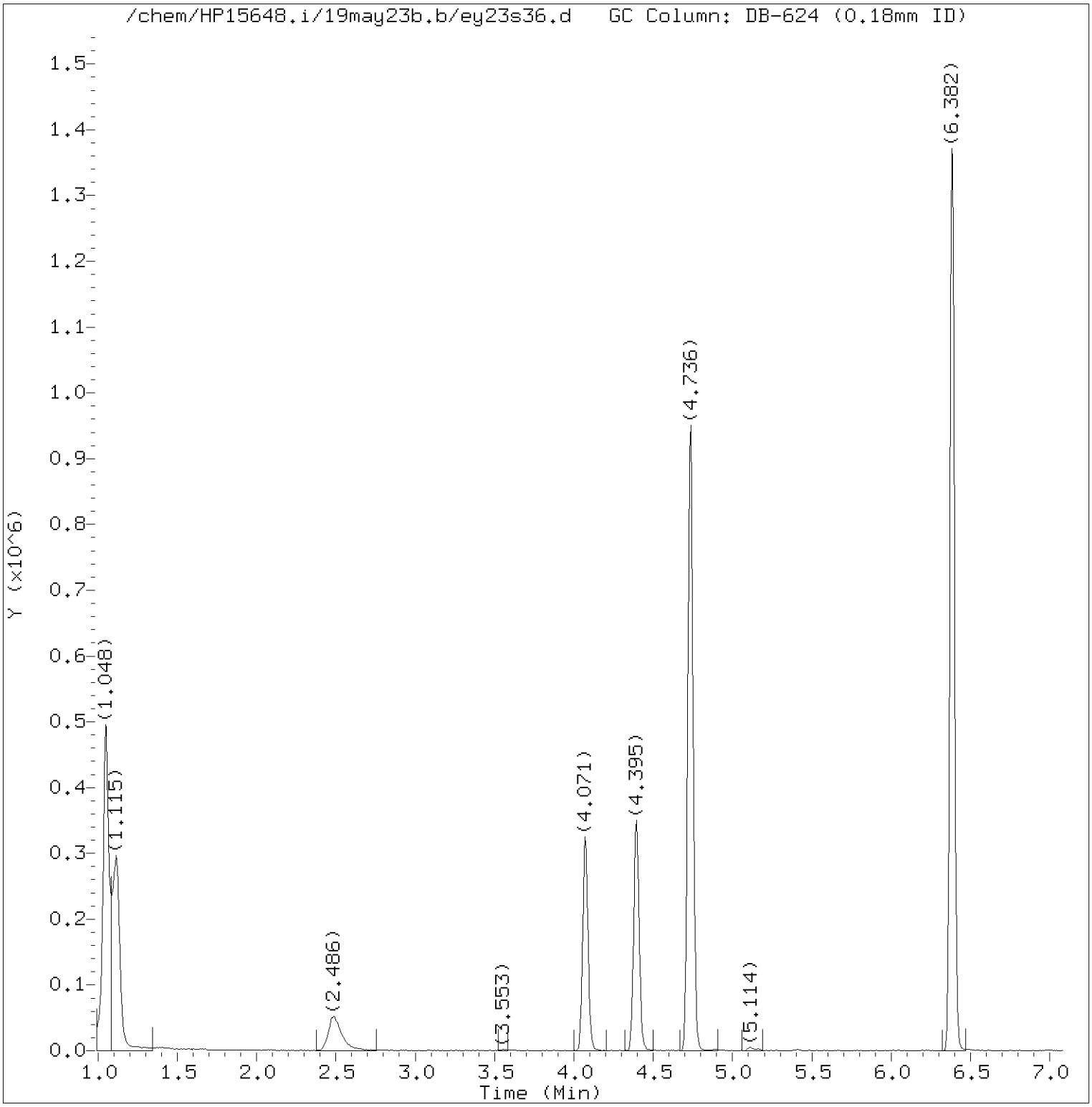
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 05/23/2019 at 22:17. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

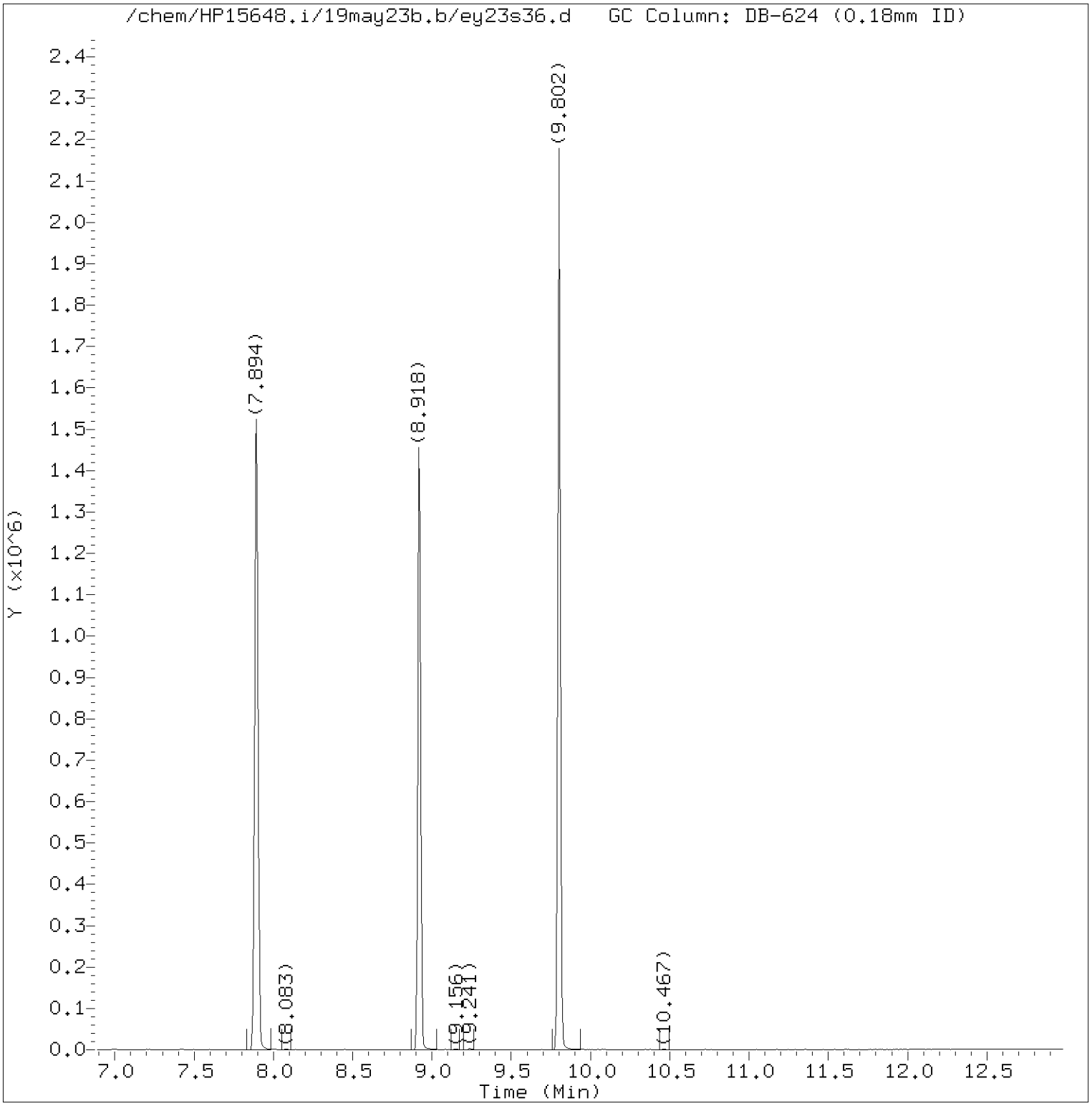
Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s36.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 21:16 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 21:32 Automation

Sample Name: 91J02 Lab Sample ID: 1057950

Digitally signed by Don V. Viray
on 05/23/2019 at 22:17.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s36.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 21:16 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 21:32 Automation

Sample Name: 91J02 Lab Sample ID: 1057950

Digitally signed by Don V. Viray
on 05/23/2019 at 22:17.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s36.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 21:16 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 21:32 Automation

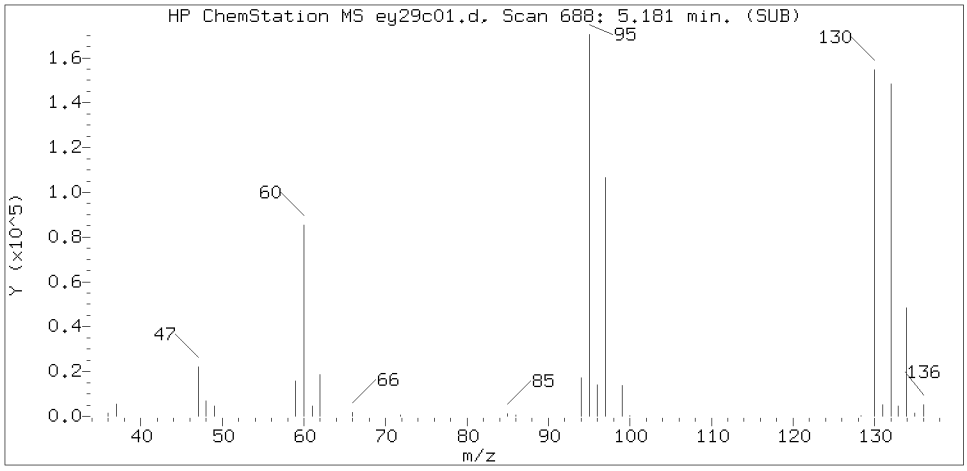
Sample Name: 91J02 Lab Sample ID: 1057950

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.486	65	188128	250.000
52)$Dibromofluoromethane	(2)	4.071	113	241197	48.020
57)$1,2-Dichloroethane-d4	(2)	4.395	102	64417	50.821
66)*Fluorobenzene	(2)	4.736	96	1080680	50.000
71) Trichloroethene	(2)	5.108	95	2324	0.439
84)$Toluene-d8	(3)	6.382	98	1081171	49.711
101)*Chlorobenzene-d5	(3)	7.894	117	800792	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	409512	48.980
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	427634	50.000

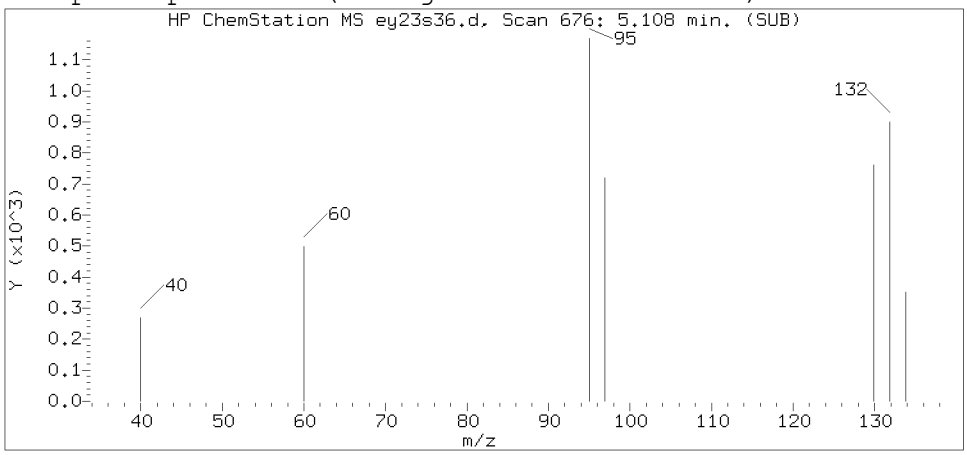
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/23/2019 at 22:17.
Target 3.5 esignature user ID: dvv10203

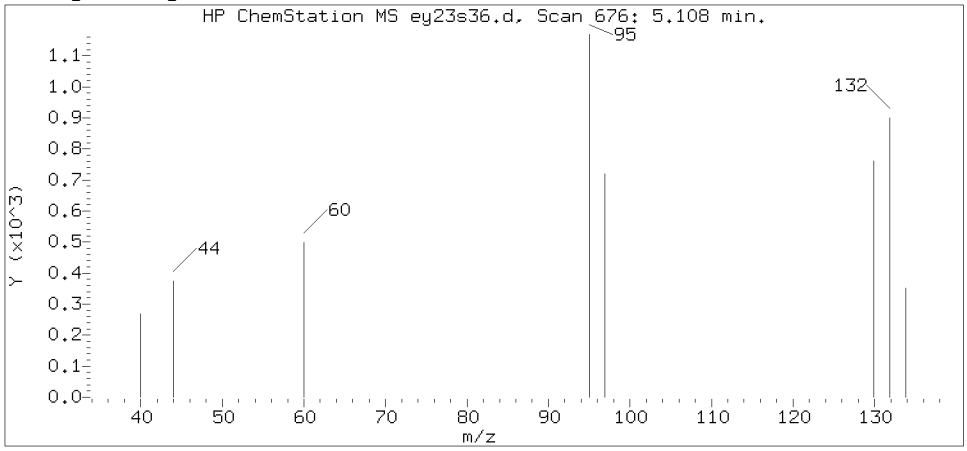
Reference Standard Spectrum for Trichloroethene

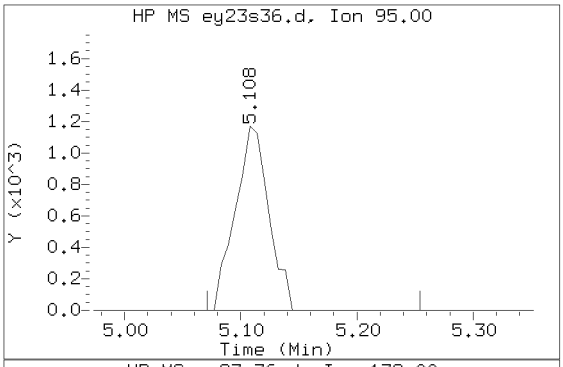


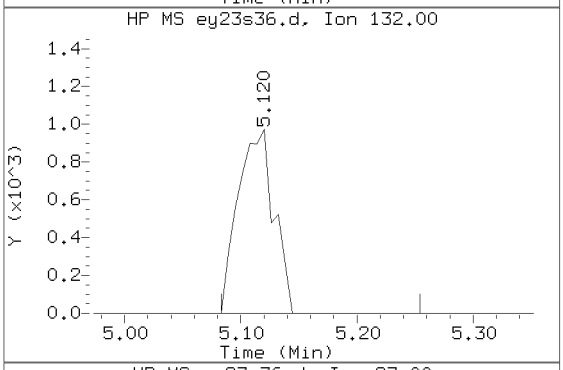
Sample Spectrum (Background Subtracted)

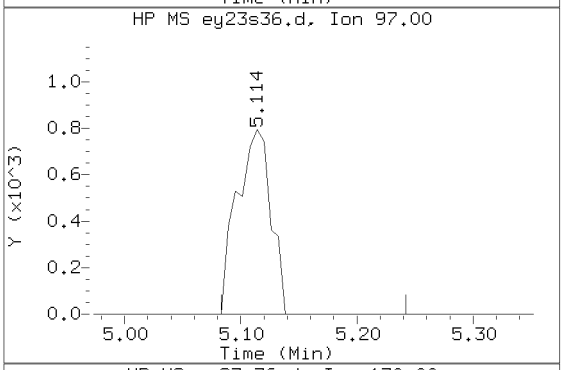


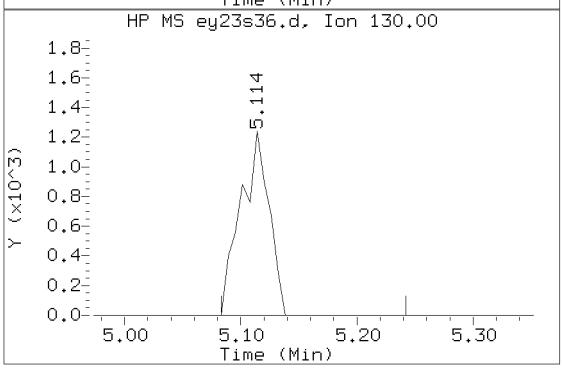
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may23b.b/ey23s36.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 21:16 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 21:32 Automation

Sample Name: 91J02 Lab Sample ID: 1057950

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 676
Retention Time (minutes): 5.108
Relative Retention Time :-0.00000
Quant Ion : 95.00
Area (flag) : 2324
On-Column Amount (ng) : 0.4395

Digitally signed by Don V. Viray on 05/23/2019 at 22:17.
Target 3.5 esignature user ID: dvv10203

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
91J03

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1057951

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s37.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	0.7	J
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23s37.d Injection date and time: **23-MAY-2019 21:35**
Data file Sample Info. Line: 91J03;1057951;1;0;;JCV91;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 22:16 dvv10203

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.487	(0.000)	246	65	182253	(-2)	250.00	
66) Fluorobenzene	4.736	(0.000)	615	96	1040754	(-1)	50.00	
101) Chlorobenzene-d5	7.894	(0.000)	1133	117	774077	(-1)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802	(0.000)	1446	152	414412	(0)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.072	(0.000)	113	231841	47.928	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.395	(0.001)	102	61037	50.002	100%		80 - 120
84) Toluene-d8	(3)	6.382	(0.000)	98	1037804	49.364	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918	(0.000)	95	396101	49.011	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	3.078	(-0.000)	63	8821	1.001	1.00			0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	4.096	(0.001)	97	5487	0.707	0.71		J	0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	5.114	(-0.001)	95	6396	1.256	1.26			0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 05/23/2019 at 22:17. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP15648.i/19may23b.b/ey23s37.d Injection date and time: **23-MAY-2019 21:35**
Data file Sample Info. Line: 91J03;1057951;1;0;;JCV91;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 22:16 dvv10203

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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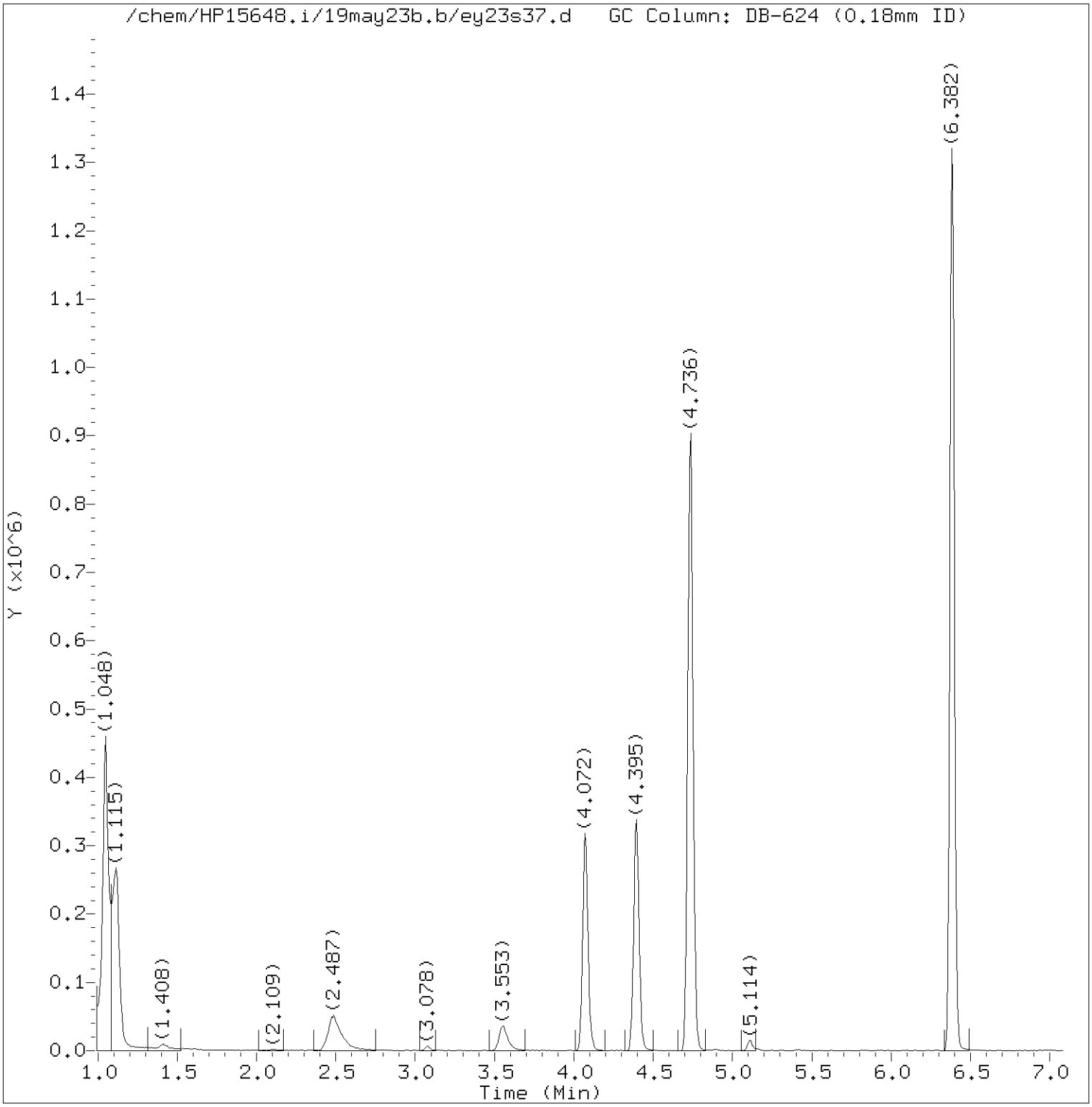
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 05/23/2019 at 22:17. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

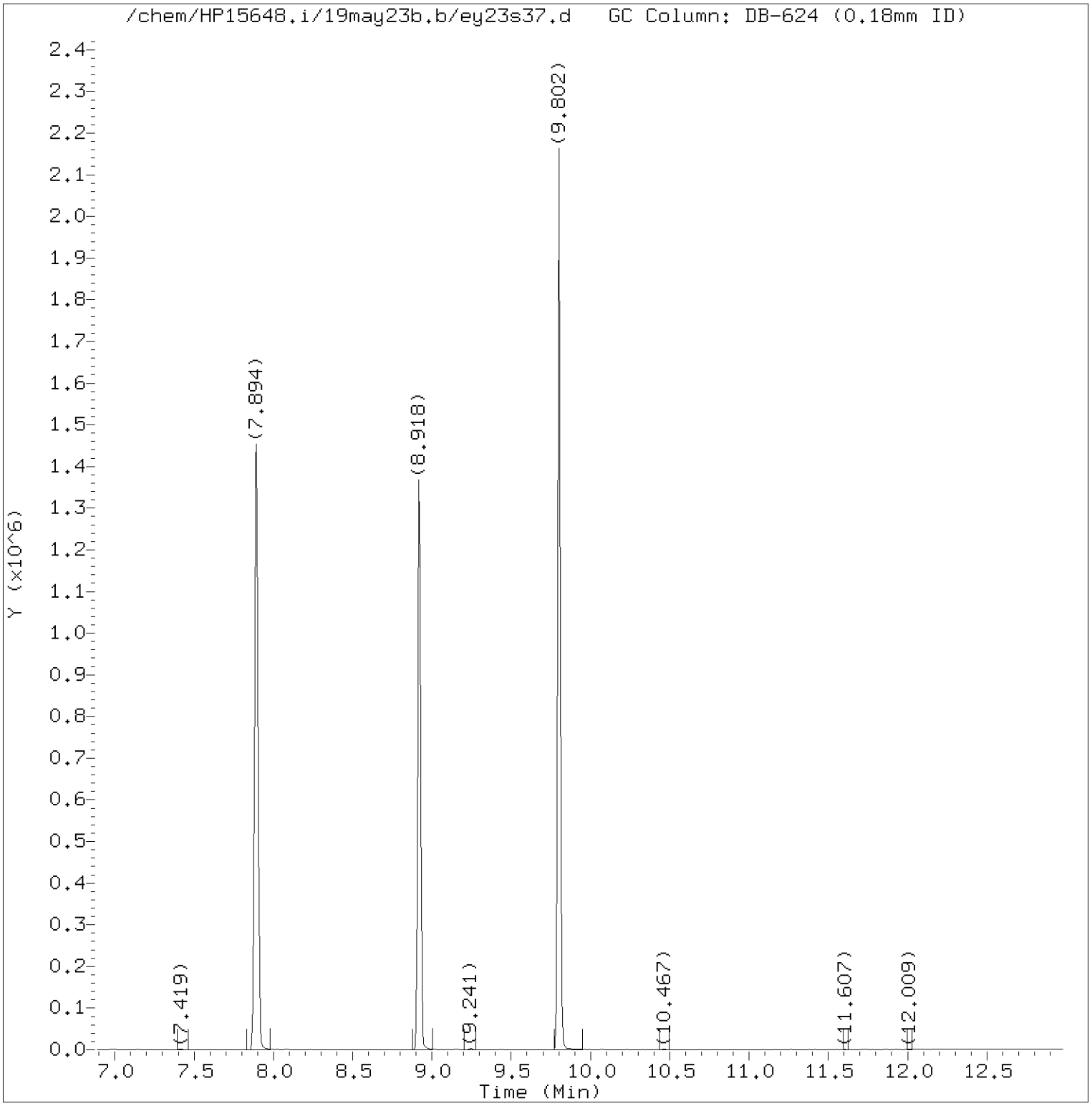
Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s37.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 21:35 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 22:16 dvv10203

Sample Name: 91J03 Lab Sample ID: 1057951

Digitally signed by Don V. Viray
on 05/23/2019 at 22:17.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s37.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 21:35 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 22:16 dvv10203

Sample Name: 91J03 Lab Sample ID: 1057951

Digitally signed by Don V. Viray
on 05/23/2019 at 22:17.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s37.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 21:35 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 22:16 dvv10203

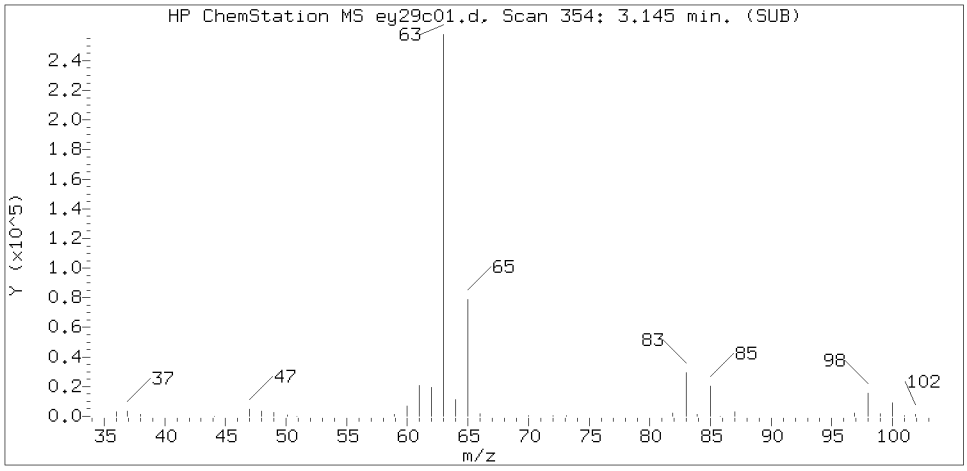
Sample Name: 91J03 Lab Sample ID: 1057951

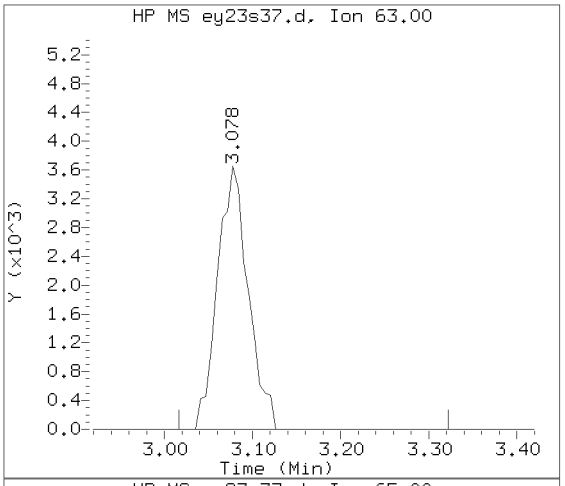
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.487	65	182253	250.000
36) 1,1-Dichloroethane	(2)	3.078	63	8821	1.001
52)$Dibromofluoromethane	(2)	4.072	113	231841	47.928
53) 1,1,1-Trichloroethane	(2)	4.096	97	5487	0.707
57)$1,2-Dichloroethane-d4	(2)	4.395	102	61037	50.002
66)*Fluorobenzene	(2)	4.736	96	1040754	50.000
71) Trichloroethene	(2)	5.114	95	6396	1.256
84)$Toluene-d8	(3)	6.382	98	1037804	49.364
101)*Chlorobenzene-d5	(3)	7.894	117	774077	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	396101	49.011
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	414412	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

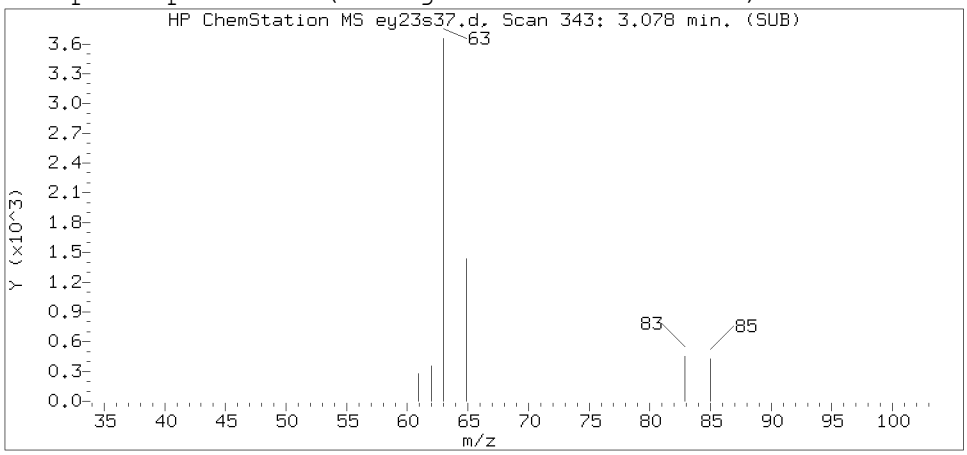
Digitally signed by Don V. Viray
on 05/23/2019 at 22:17.
Target 3.5 esignature user ID: dvv10203

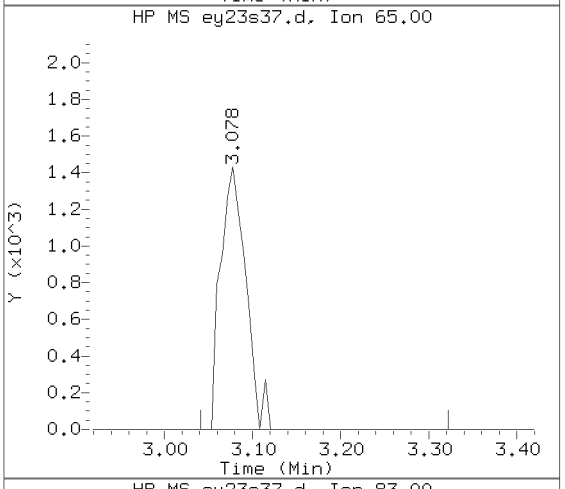
Reference Standard Spectrum for 1,1-Dichloroethane



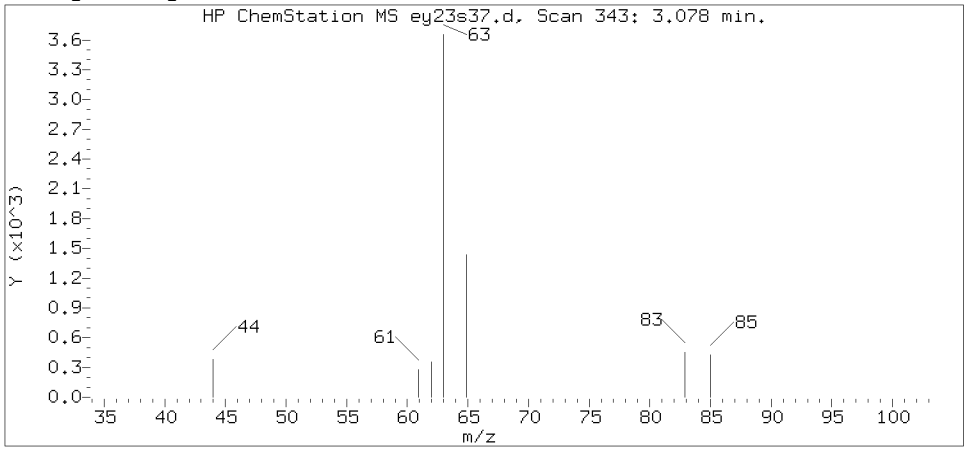


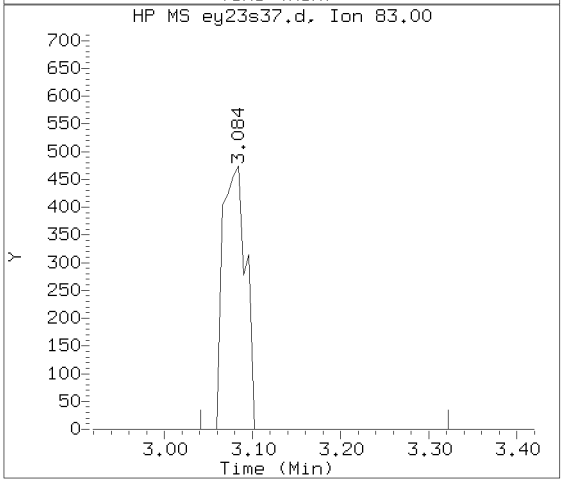
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19may23b.b/ey23s37.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 21:35 Analyst ID: DVV10203

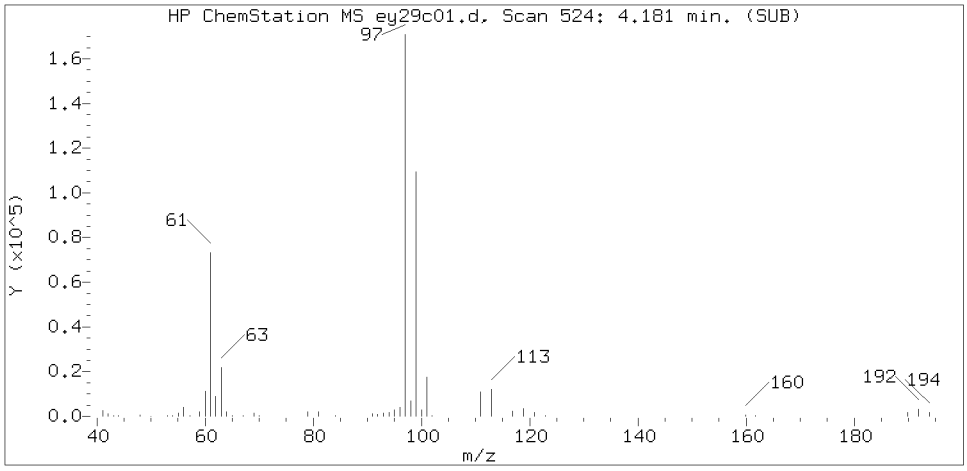
Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 22:16 dvv10203

Sample Name: 91J03 Lab Sample ID: 1057951

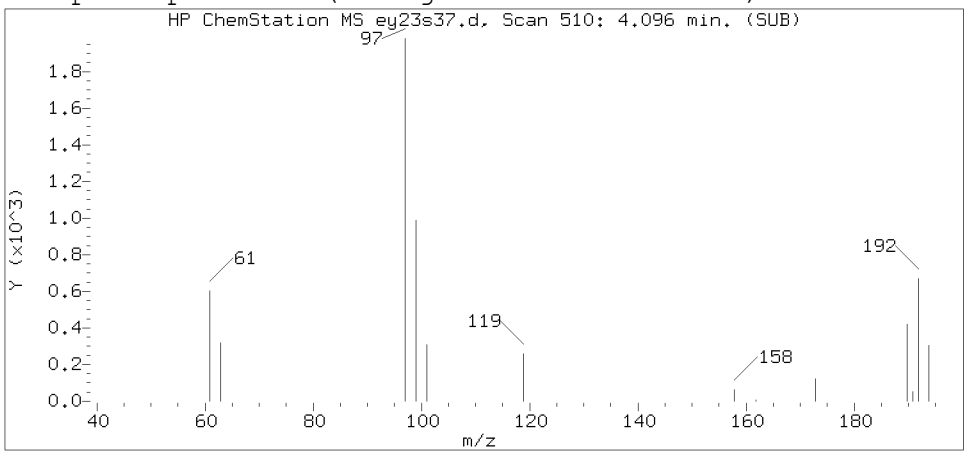
Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 343
Retention Time (minutes): 3.078
Relative Retention Time :-0.00001
Quant Ion : 63.00
Area (flag) : 8821
On-Column Amount (ng) : 1.0009

Digitally signed by Don V. Viray on 05/23/2019 at 22:17.
Target 3.5 esignature user ID: dvv10203

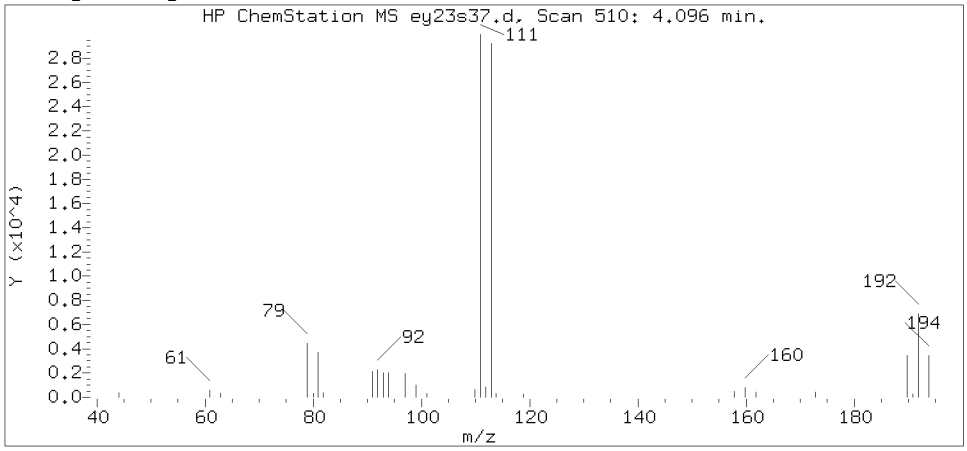
Reference Standard Spectrum for 1,1,1-Trichloroethane

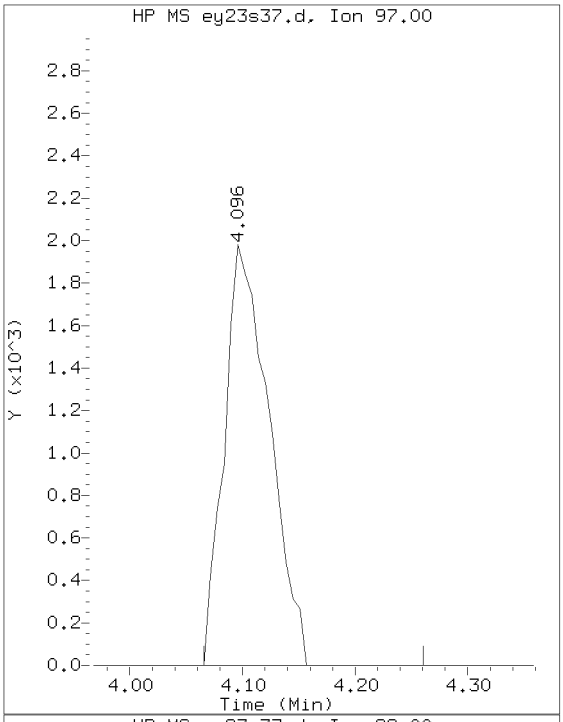


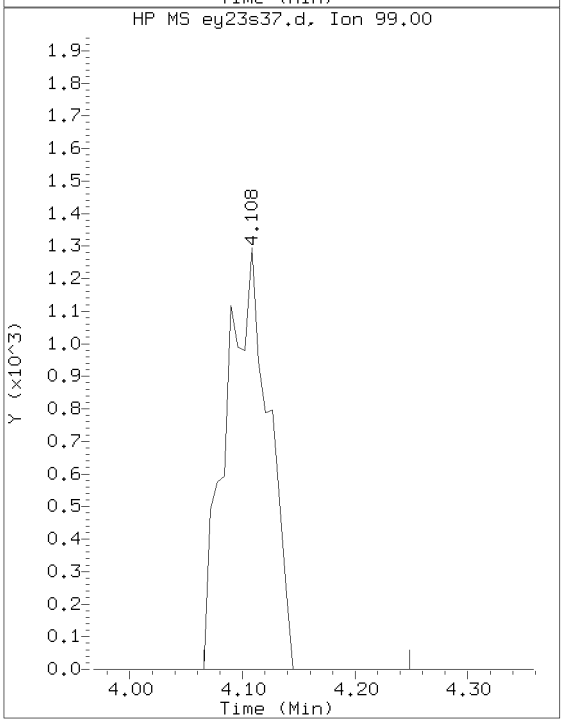
Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)







Data File: /chem/HP15648.i/19may23b.b/ey23s37.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 21:35 Analyst ID: DVV10203

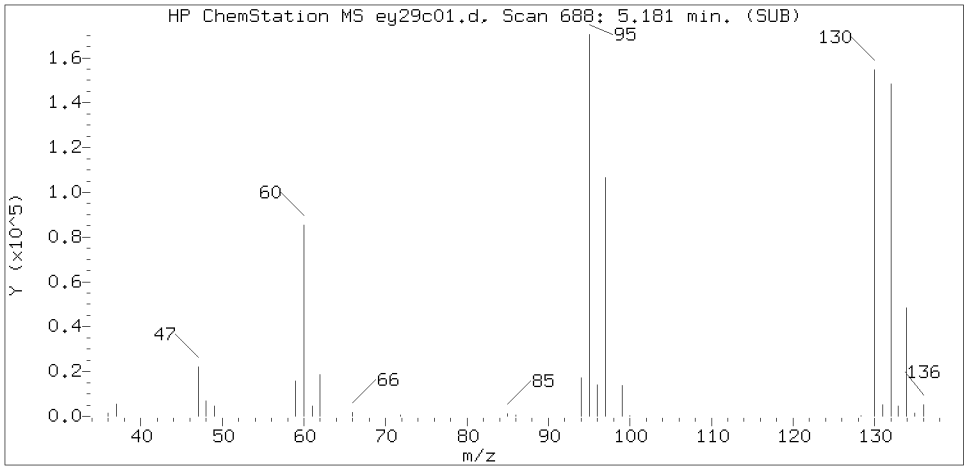
Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 22:16 dvv10203

Sample Name: 91J03 Lab Sample ID: 1057951

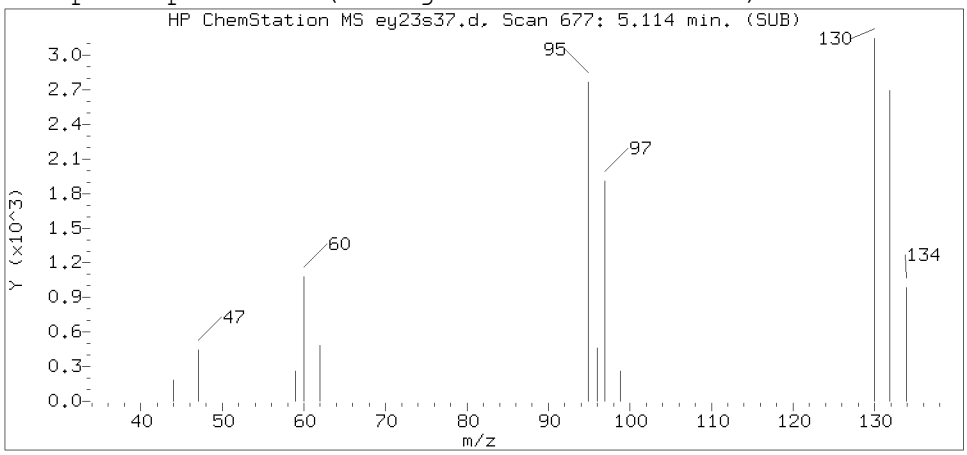
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 510
Retention Time (minutes): 4.096
Relative Retention Time : 0.00128
Quant Ion : 97.00
Area (flag) : 5487
On-Column Amount (ng) : 0.7074

Digitally signed by Don V. Viray on 05/23/2019 at 22:17.
Target 3.5 esignature user ID: dvv10203

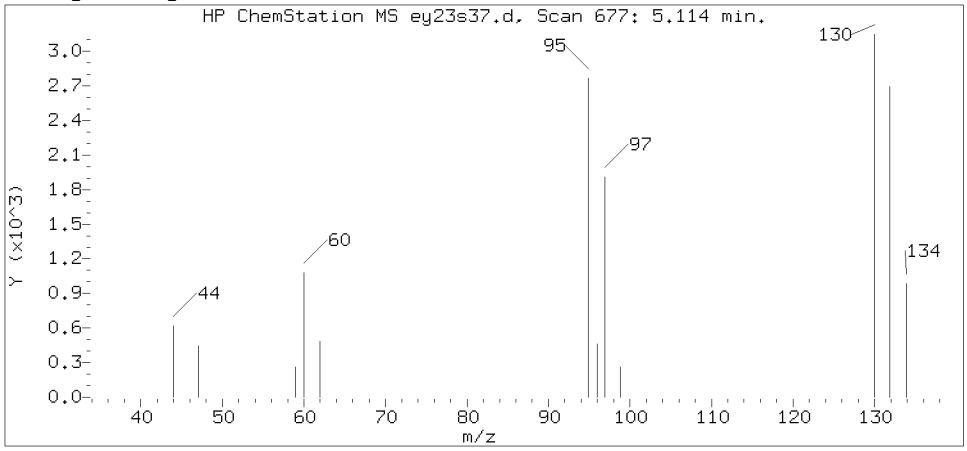
Reference Standard Spectrum for Trichloroethene

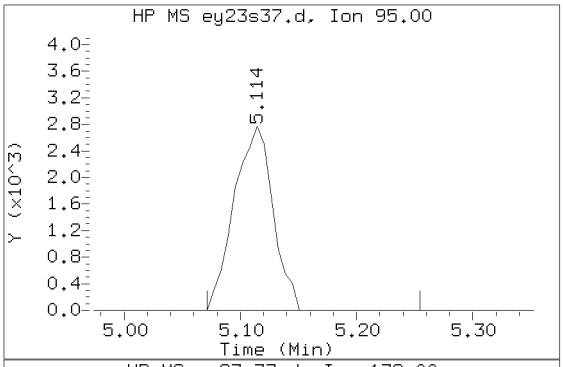


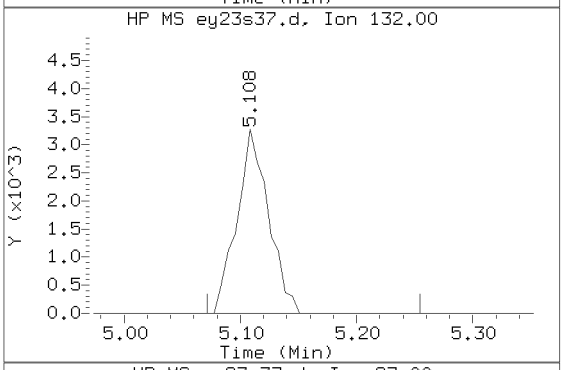
Sample Spectrum (Background Subtracted)

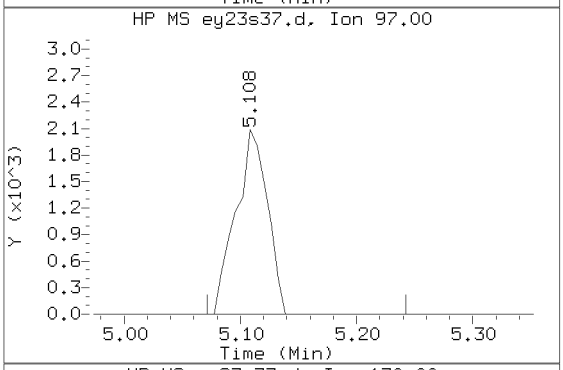


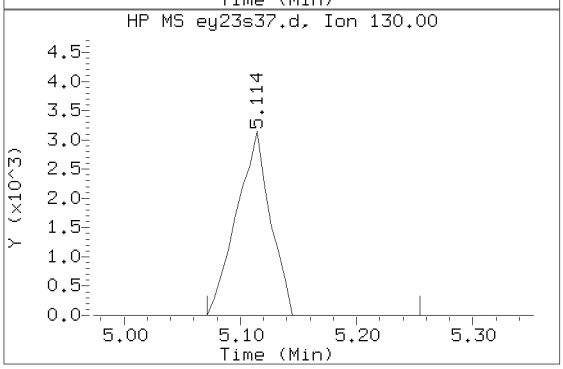
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may23b.b/ey23s37.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 21:35 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 22:16 dvv10203

Sample Name: 91J03 Lab Sample ID: 1057951

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 677
Retention Time (minutes): 5.114
Relative Retention Time :-0.00128
Quant Ion : 95.00
Area (flag) : 6396
On-Column Amount (ng) : 1.2556

Digitally signed by Don V. Viray on 05/23/2019 at 22:17.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

91J04

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1057952

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s38.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23s38.d
Injection date and time: **23-MAY-2019 21:55**
Data file Sample Info. Line: 91J04;1057952;1;0;;JCV91;;;ey23b31;
Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 22:11 Automation

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.480	(0.006)	245	65	180025	(-3)	250.00	
66) Fluorobenzene	4.736	(0.000)	615	96	1034914	(-1)	50.00	
101) Chlorobenzene-d5	7.894	(0.000)	1133	117	781014	(0)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802	(0.000)	1446	152	418294	(1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.072	(0.000)	113	232121	48.256	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.395	(0.001)	102	60286	49.666	99%		80 - 120
84) Toluene-d8	(3)	6.388	(-0.001)	98	1043982	49.217	98%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918	(0.000)	95	400636	49.132	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 05/23/2019 at 22:17. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP15648.i/19may23b.b/ey23s38.d Injection date and time: **23-MAY-2019 21:55**
Data file Sample Info. Line: 91J04;1057952;1;0;;JCV91;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 22:11 Automation

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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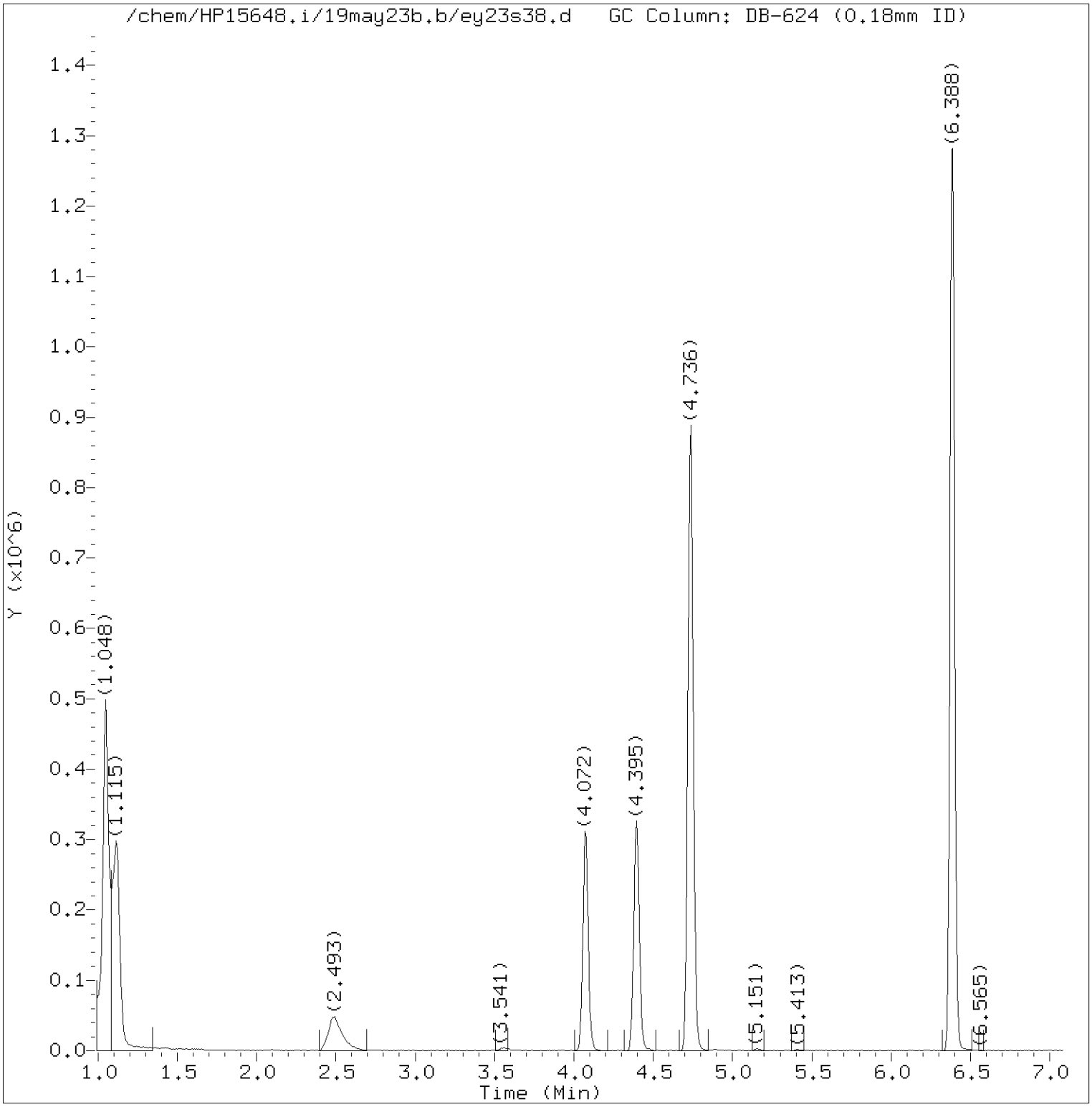
Total number of targets = 24

Digitally signed by Don V. Viray on 05/23/2019 at 22:17. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

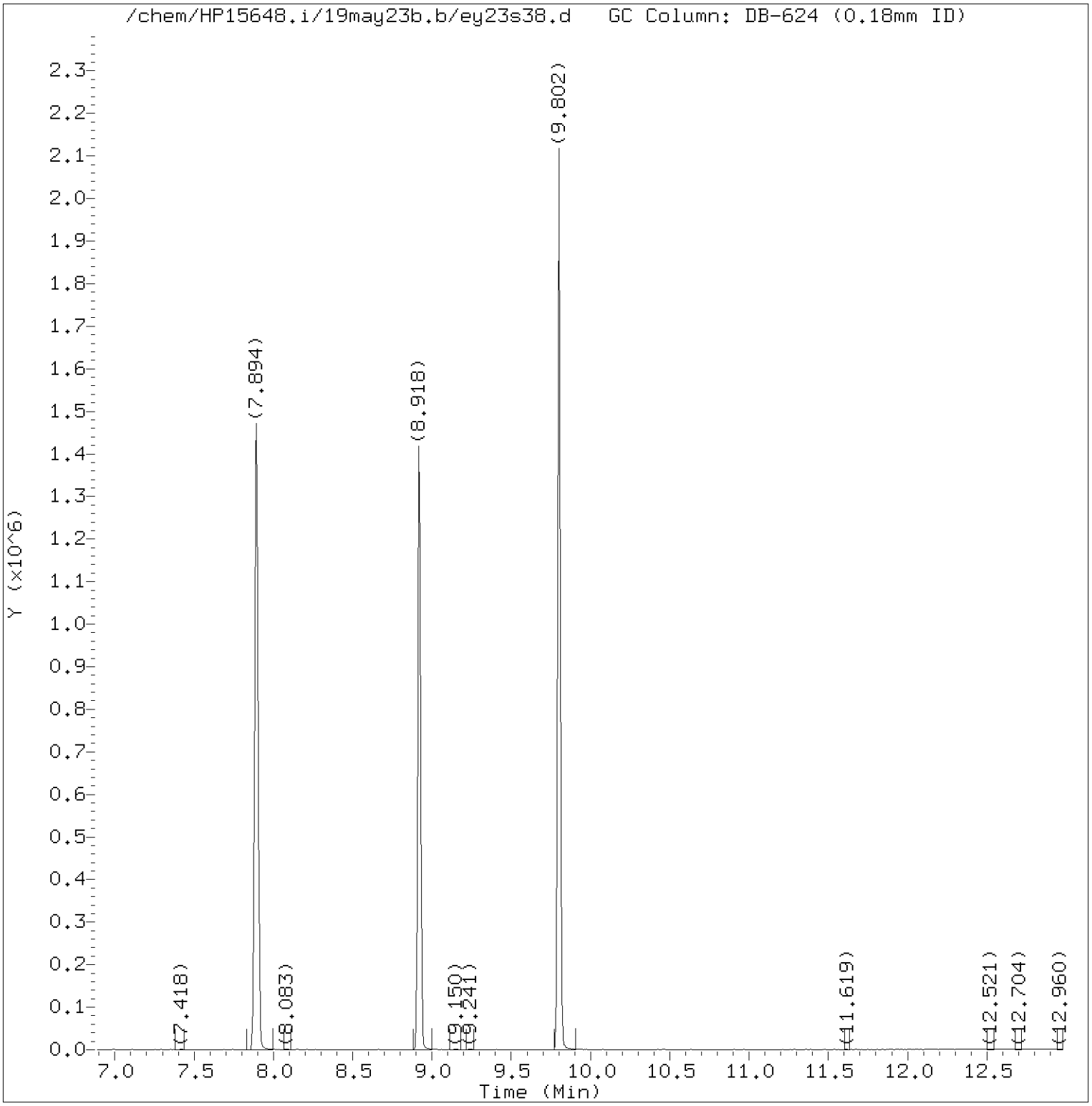
Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s38.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 21:55 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 22:11 Automation

Sample Name: 91J04 Lab Sample ID: 1057952

Digitally signed by Don V. Viray
on 05/23/2019 at 22:17.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s38.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 21:55 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 22:11 Automation

Sample Name: 91J04 Lab Sample ID: 1057952

Digitally signed by Don V. Viray
on 05/23/2019 at 22:17.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s38.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 21:55 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 22:11 Automation

Sample Name: 91J04 Lab Sample ID: 1057952

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.480	65	180025	250.000
52)$Dibromofluoromethane	(2)	4.072	113	232121	48.256
57)$1,2-Dichloroethane-d4	(2)	4.395	102	60286	49.666
66)*Fluorobenzene	(2)	4.736	96	1034914	50.000
84)$Toluene-d8	(3)	6.388	98	1043982	49.217
101)*Chlorobenzene-d5	(3)	7.894	117	781014	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	400636	49.132
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	418294	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/23/2019 at 22:17.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

91J05

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1057953

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s39.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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91J05 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1057953

Data file: /chem/HP15648.i/19may23b.b/ey23s39.d Injection date and time: **23-MAY-2019 22:15**
Data file Sample Info. Line: 91J05;1057953;1;0;;JCV91;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 23:31 dvv10203

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.487(0.000)	246	65	185911 (0)	250.00	
66) Fluorobenzene	4.736(0.000)	615	96	1072709 (2)	50.00	
101) Chlorobenzene-d5	7.894(0.000)	1133	117	795209 (2)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802(0.000)	1446	152	430192 (4)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.078(-0.001)	113	239494	48.035	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.401(0.000)	102	64541	51.297	103%		80 - 120
84) Toluene-d8	(3)	6.388(-0.001)	98	1075949	49.819	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918(0.000)	95	407269	49.053	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)			Not Detected					0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Don V. Viray on 05/23/2019 at 23:32. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP15648.i/19may23b.b/ey23s39.d Injection date and time: **23-MAY-2019 22:15**
Data file Sample Info. Line: 91J05;1057953;1;0;;JCV91;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 23:31 dvv10203

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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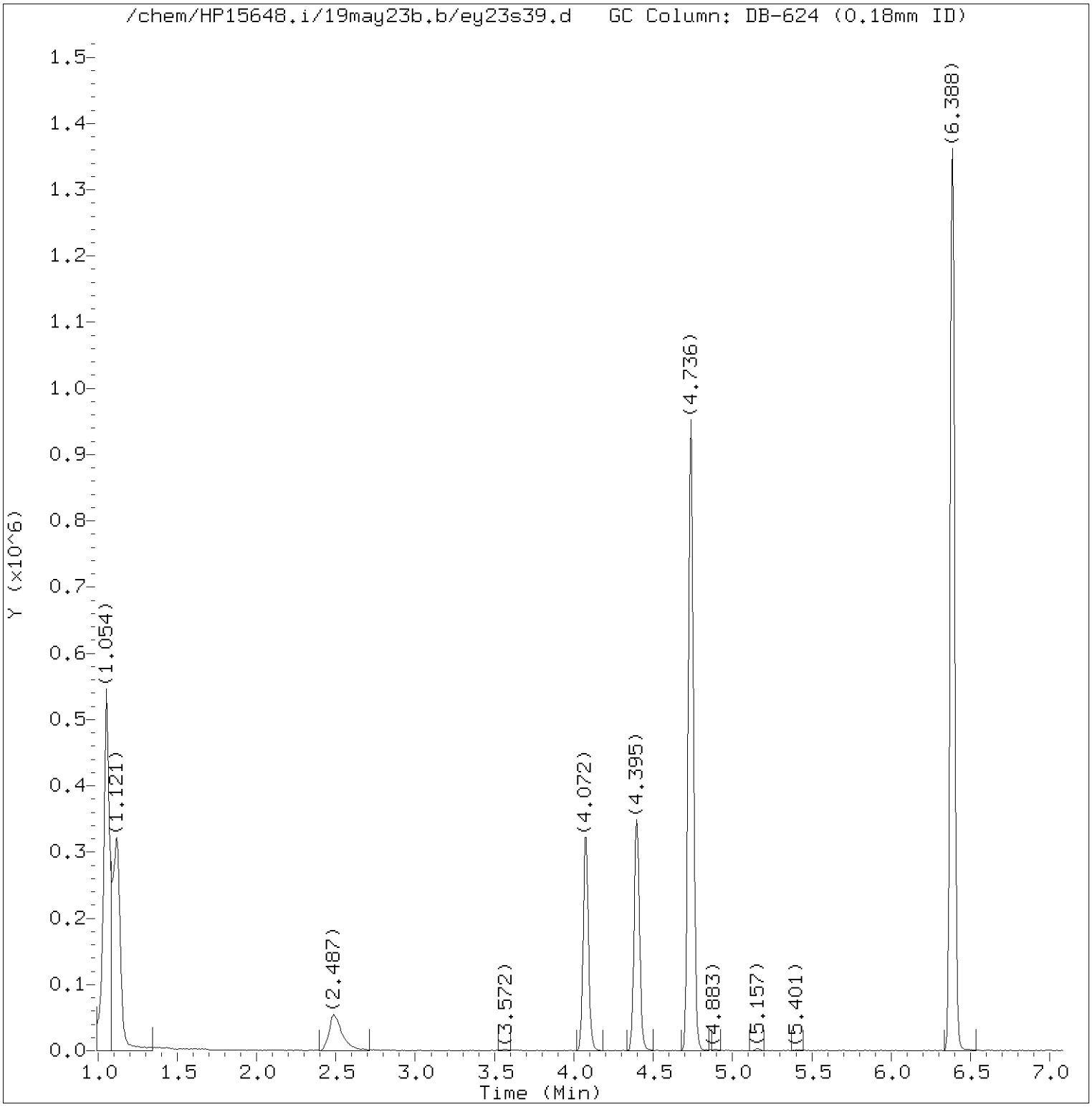
Total number of targets = 24

Digitally signed by Don V. Viray on 05/23/2019 at 23:32. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

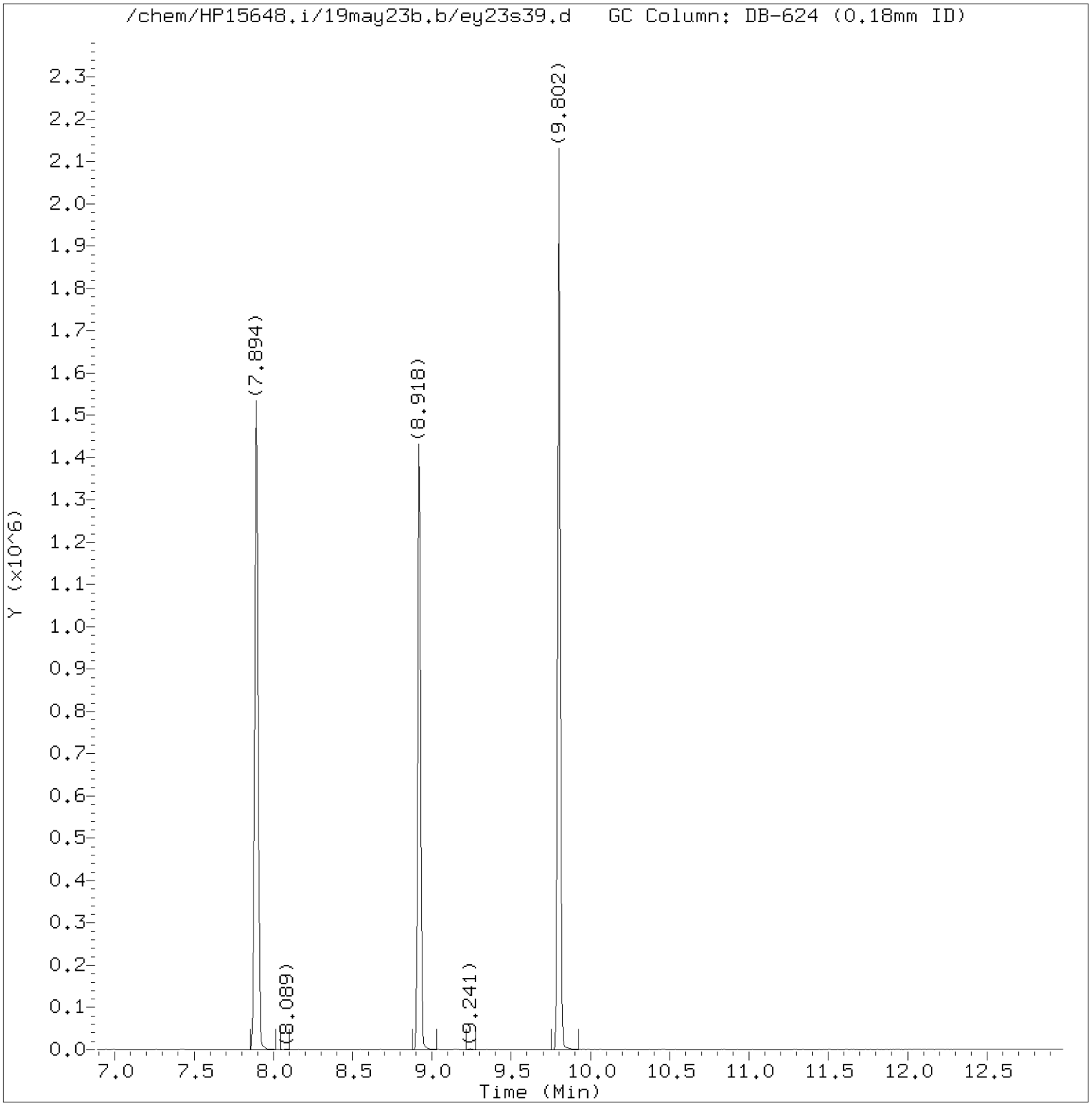
Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s39.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 22:15 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 23:31 dvv10203

Sample Name: 91J05 Lab Sample ID: 1057953

Digitally signed by Don V. Viray
on 05/23/2019 at 23:32.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s39.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 22:15 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 23:31 dvv10203

Sample Name: 91J05 Lab Sample ID: 1057953

Digitally signed by Don V. Viray
on 05/23/2019 at 23:32.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s39.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 22:15 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 23:31 dvv10203

Sample Name: 91J05 Lab Sample ID: 1057953

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.487	65	185911	250.000
52)$Dibromofluoromethane	(2)	4.078	113	239494	48.035
57)$1,2-Dichloroethane-d4	(2)	4.401	102	64541	51.297
66)*Fluorobenzene	(2)	4.736	96	1072709	50.000
84)$Toluene-d8	(3)	6.388	98	1075949	49.819
101)*Chlorobenzene-d5	(3)	7.894	117	795209	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	407269	49.053
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	430192	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/23/2019 at 23:32.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

91J06

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1057954

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s40.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23s40.d
Injection date and time: **23-MAY-2019 22:35**
Data file Sample Info. Line: 91J06;1057954;1;0;;JCV91;;;ey23b31;
Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 22:51 Automation

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.480	(0.006)	245	65	183435	(-2)	250.00	
66) Fluorobenzene	4.736	(0.000)	615	96	1042287	(-1)	50.00	
101) Chlorobenzene-d5	7.894	(0.000)	1133	117	777459	(0)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802	(0.000)	1446	152	415889	(1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.072	(0.000)	113	231577	47.803	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.395	(0.001)	102	61948	50.674	101%		80 - 120
84) Toluene-d8	(3)	6.382	(0.000)	98	1042395	49.367	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918	(0.000)	95	393667	48.498	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 05/23/2019 at 23:32. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP15648.i/19may23b.b/ey23s40.d Injection date and time: **23-MAY-2019 22:35**
Data file Sample Info. Line: 91J06;1057954;1;0;;JCV91;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 22:51 Automation

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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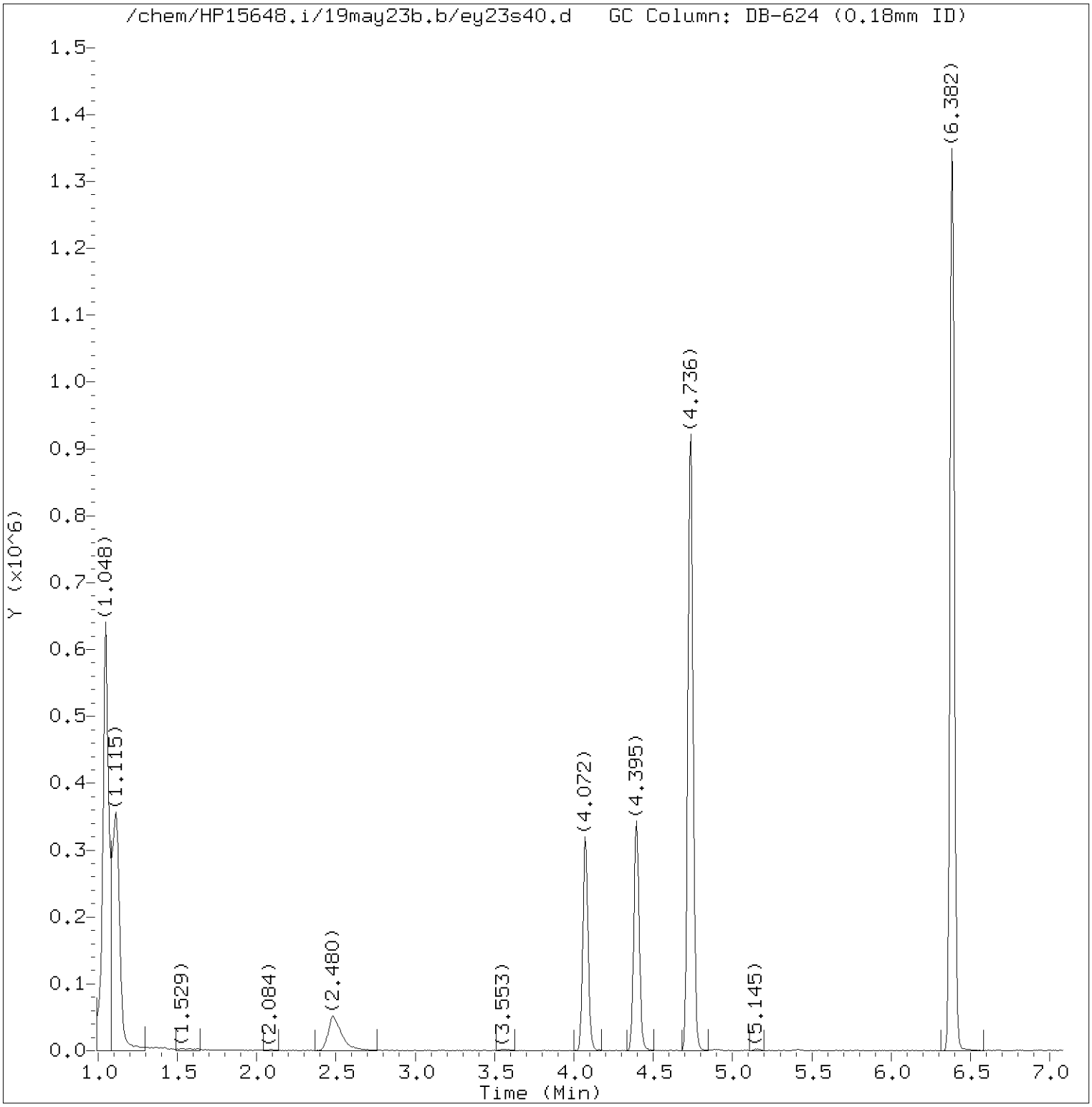
Total number of targets = 24

Digitally signed by Don V. Viray on 05/23/2019 at 23:32. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

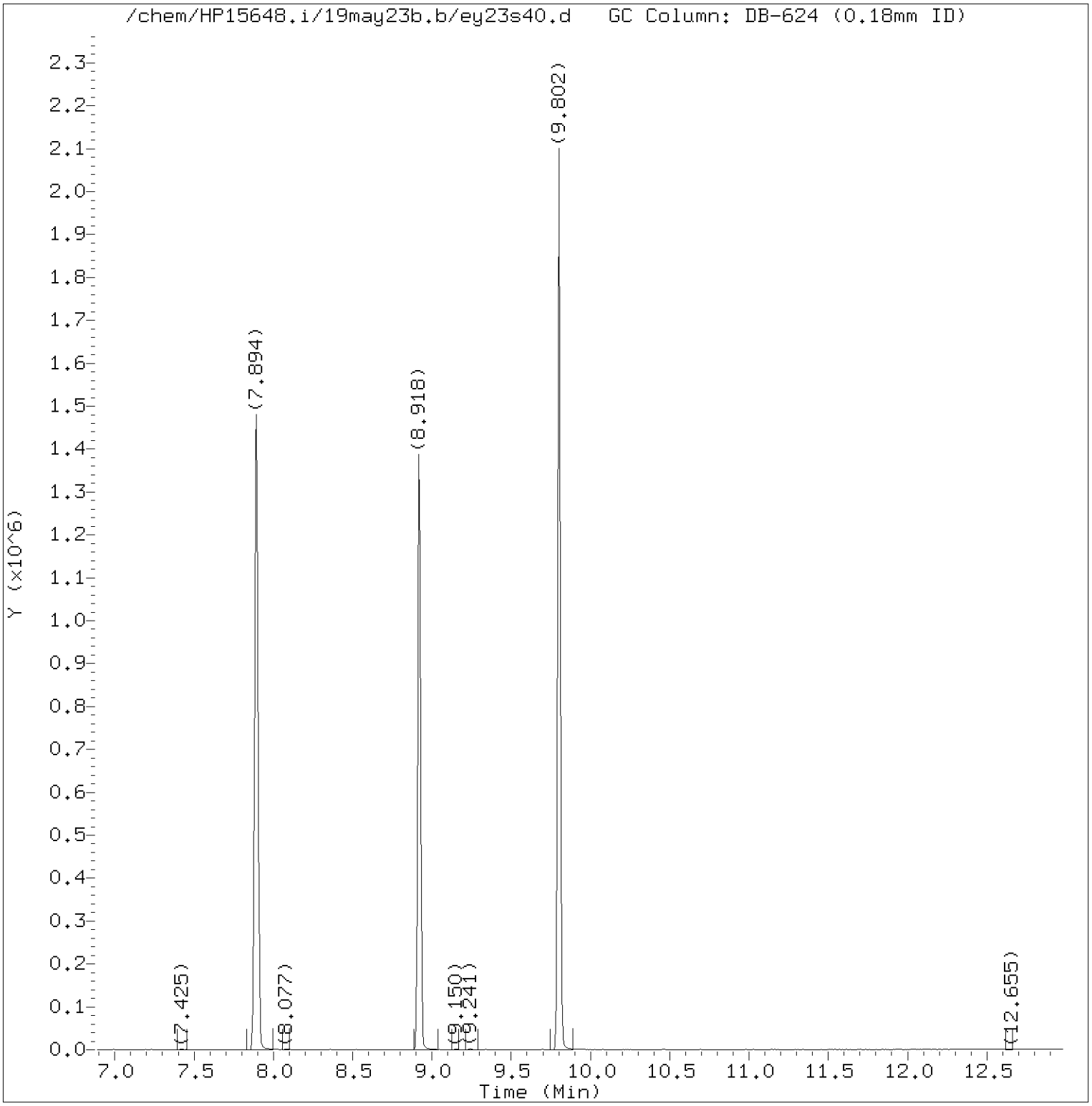
Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s40.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 22:35 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 22:51 Automation

Sample Name: 91J06 Lab Sample ID: 1057954

Digitally signed by Don V. Viray
on 05/23/2019 at 23:32.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s40.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 22:35 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 22:51 Automation

Sample Name: 91J06 Lab Sample ID: 1057954

Digitally signed by Don V. Viray
on 05/23/2019 at 23:32.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s40.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 22:35 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 22:51 Automation

Sample Name: 91J06 Lab Sample ID: 1057954

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.480	65	183435	250.000
52)$Dibromofluoromethane	(2)	4.072	113	231577	47.803
57)$1,2-Dichloroethane-d4	(2)	4.395	102	61948	50.674
66)*Fluorobenzene	(2)	4.736	96	1042287	50.000
84)$Toluene-d8	(3)	6.382	98	1042395	49.367
101)*Chlorobenzene-d5	(3)	7.894	117	777459	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	393667	48.498
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	415889	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/23/2019 at 23:32.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

91J07

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1057955

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s41.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23s41.d
Injection date and time: **23-MAY-2019 22:54**
Data file Sample Info. Line: 91J07;1057955;1;0;;JCV91;;;ey23b31;
Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 23:32 dvv10203

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.493(-0.006)	247	65	176697 (-5)	250.00	
66) Fluorobenzene	4.736(0.000)	615	96	1021770 (-3)	50.00	
101) Chlorobenzene-d5	7.894(0.000)	1133	117	763158 (-2)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802(0.000)	1446	152	411734 (0)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.078(-0.001)	113	227795	47.966	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.401(0.000)	102	60201	50.233	100%		80 - 120
84) Toluene-d8	(3)	6.388(-0.001)	98	1030414	49.714	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918(0.000)	95	388063	48.703	97%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)			Not Detected					0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Don V. Viray on 05/23/2019 at 23:33. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP15648.i/19may23b.b/ey23s41.d Injection date and time: **23-MAY-2019 22:54**
Data file Sample Info. Line: 91J07;1057955;1;0;;JCV91;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 23:32 dvv10203

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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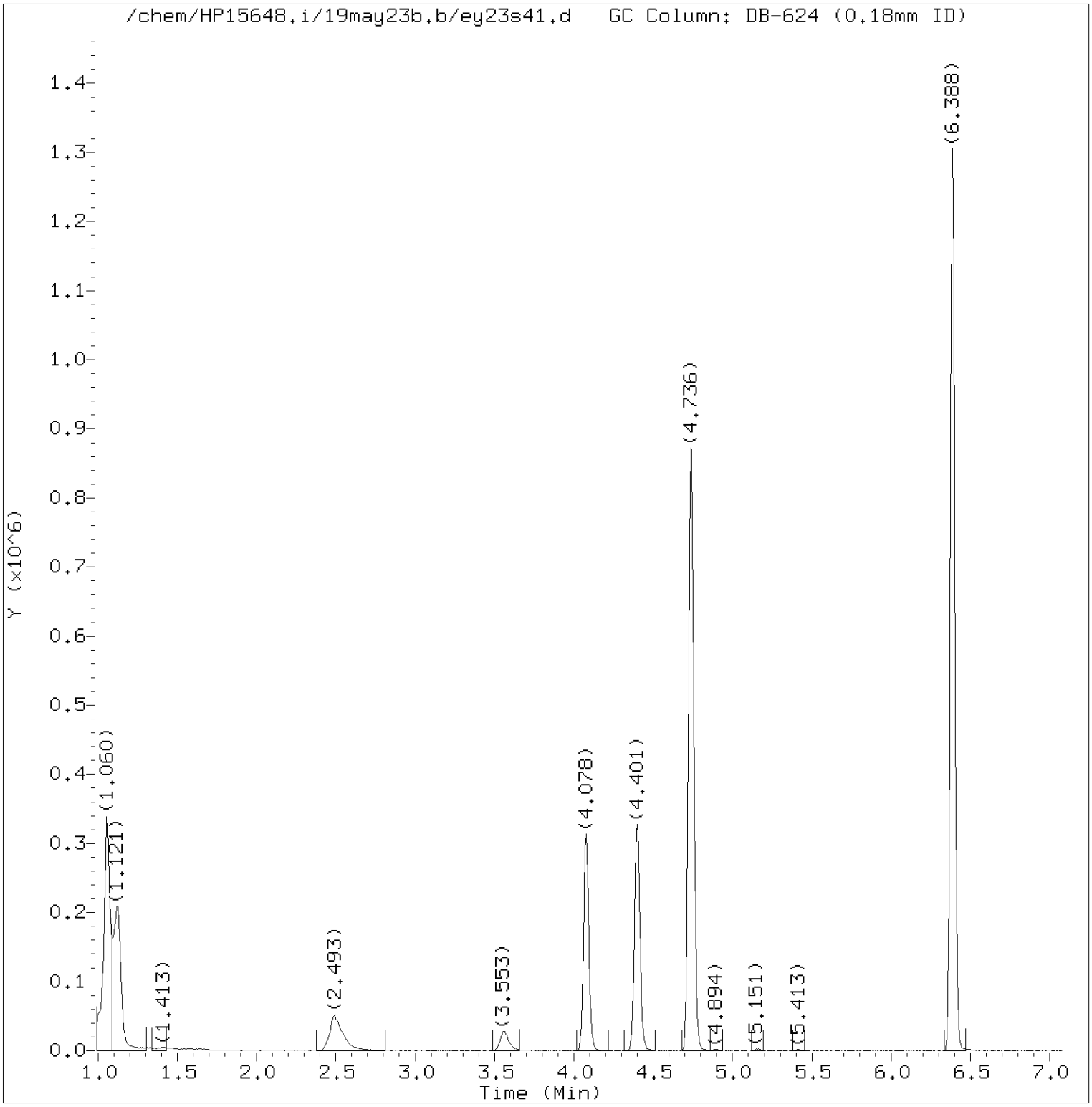
Total number of targets = 24

Digitally signed by Don V. Viray on 05/23/2019 at 23:33. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

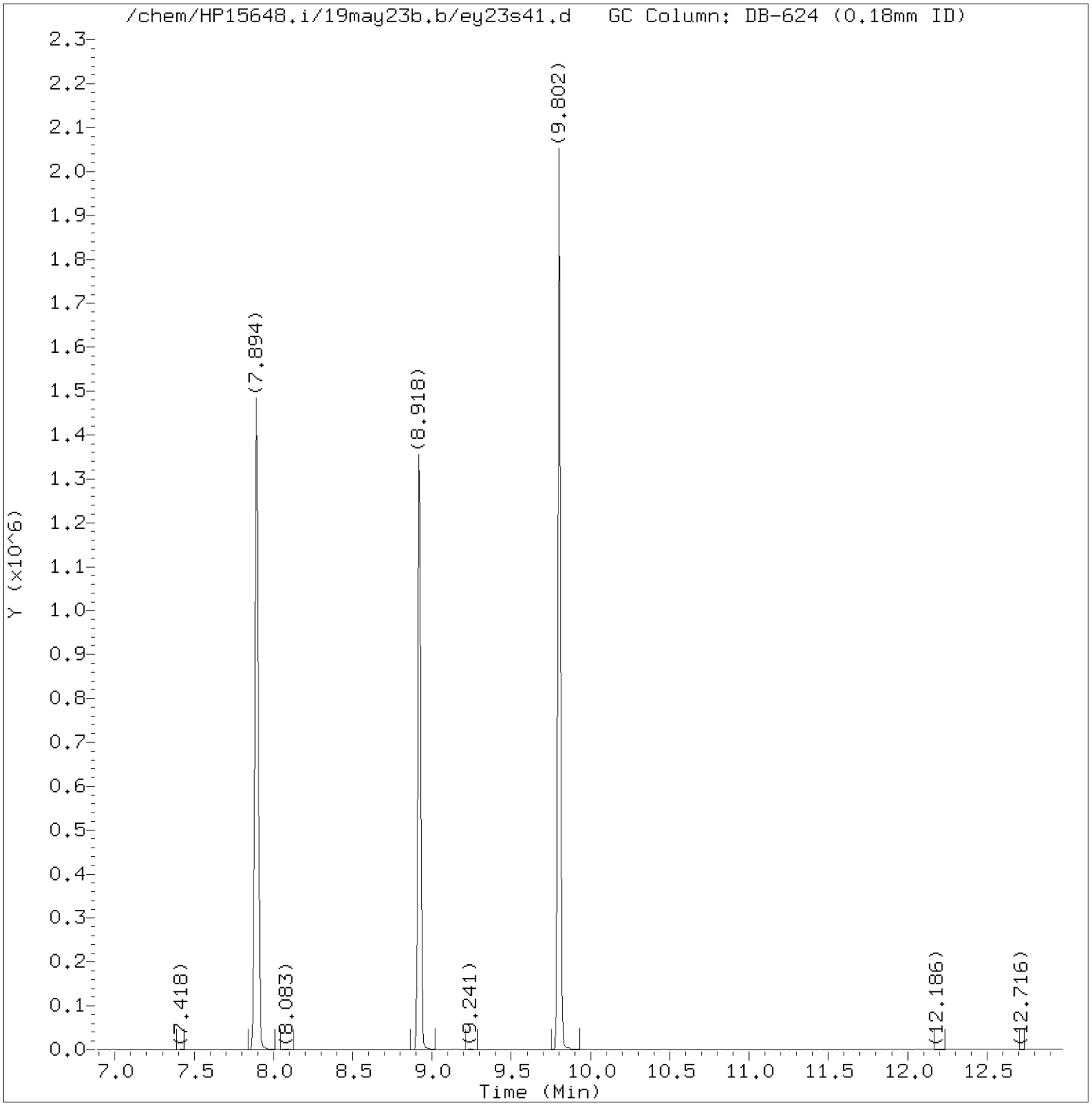
Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s41.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 22:54 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 23:32 dvv10203

Sample Name: 91J07 Lab Sample ID: 1057955

Digitally signed by Don V. Viray
on 05/23/2019 at 23:33.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s41.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 22:54 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 23:32 dvv10203

Sample Name: 91J07 Lab Sample ID: 1057955

Digitally signed by Don V. Viray
on 05/23/2019 at 23:33.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s41.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 22:54 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 23:32 dvv10203

Sample Name: 91J07 Lab Sample ID: 1057955

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.493	65	176697	250.000
52)$Dibromofluoromethane	(2)	4.078	113	227795	47.966
57)$1,2-Dichloroethane-d4	(2)	4.401	102	60201	50.233
66)*Fluorobenzene	(2)	4.736	96	1021770	50.000
84)$Toluene-d8	(3)	6.388	98	1030414	49.714
101)*Chlorobenzene-d5	(3)	7.894	117	763158	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	388063	48.703
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	411734	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/23/2019 at 23:33.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

91J08

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1057956

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s42.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23s42.d Injection date and time: **23-MAY-2019 23:14**
Data file Sample Info. Line: 91J08;1057956;1;0;;JCV91;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 23:30 Automation

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.486	(0.000)	246	65	175595	(-6)	250.00	
66) Fluorobenzene	4.742	(-0.006)	616	96	1028234	(-2)	50.00	
101) Chlorobenzene-d5	7.894	(0.000)	1133	117	774450	(-1)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802	(0.000)	1446	152	414225	(0)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.078	(0.000)	113	232402	48.629	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.401	(0.001)	102	60760	50.381	101%		80 - 120
84) Toluene-d8	(3)	6.388	(-0.001)	98	1035140	49.214	98%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918	(0.000)	95	392084	48.490	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 05/23/2019 at 23:33. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP15648.i/19may23b.b/ey23s42.d Injection date and time: **23-MAY-2019 23:14**
Data file Sample Info. Line: 91J08;1057956;1;0;;JCV91;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 23:30 Automation

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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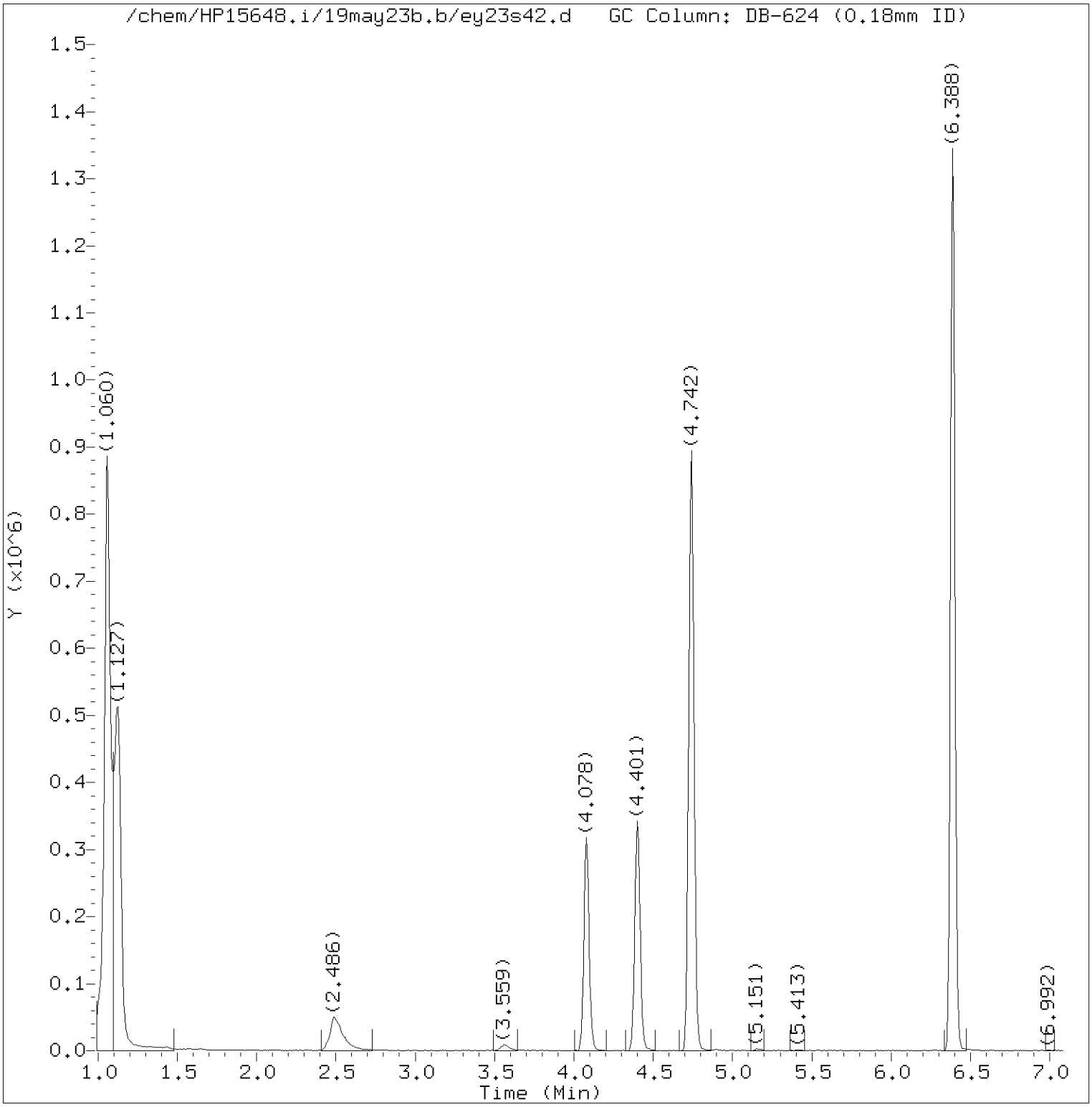
Total number of targets = 24

Digitally signed by Don V. Viray on 05/23/2019 at 23:33. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

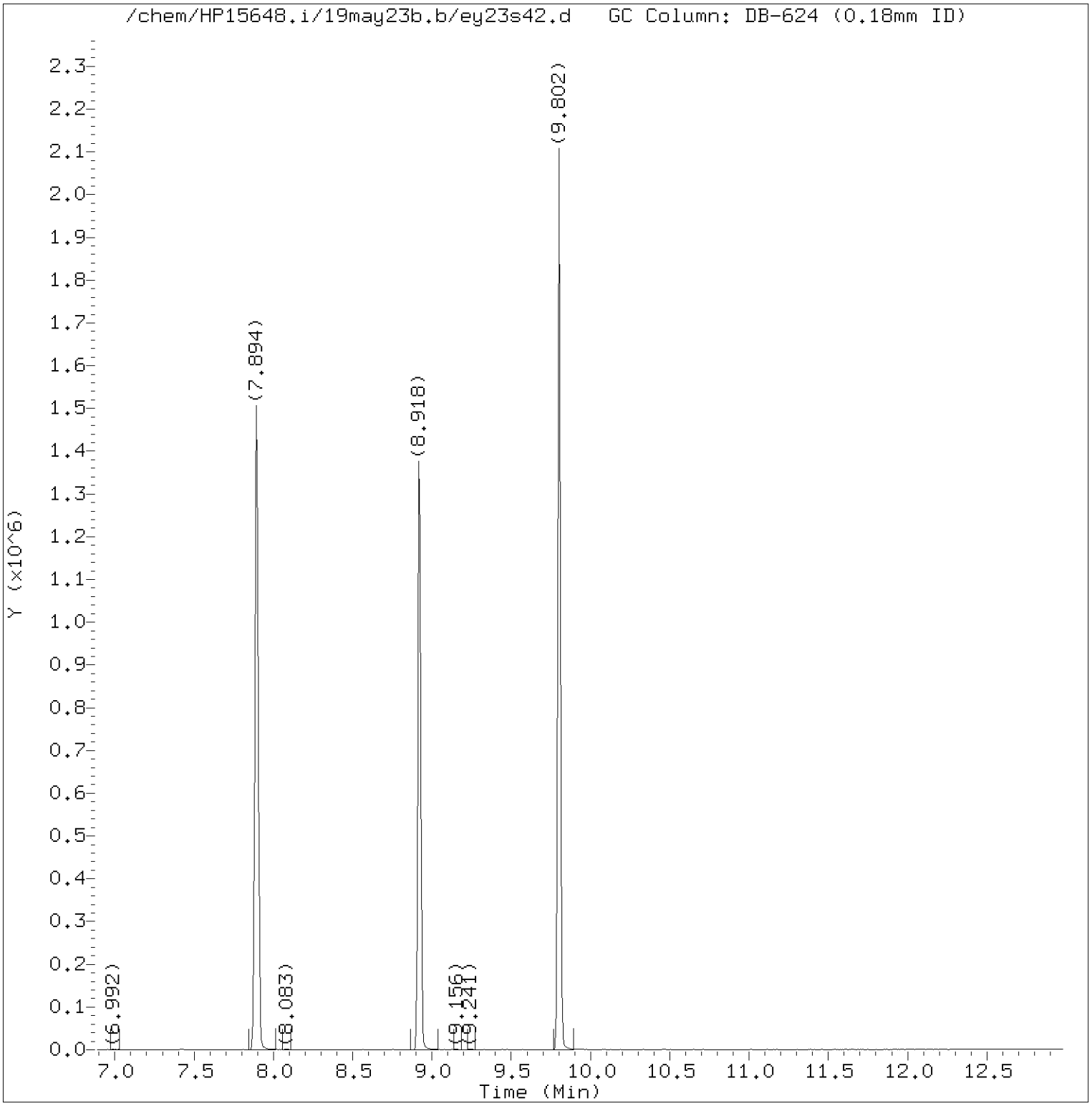
Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s42.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 23:14 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 23:30 Automation

Sample Name: 91J08 Lab Sample ID: 1057956

Digitally signed by Don V. Viray
on 05/23/2019 at 23:33.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s42.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 23:14 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 23:30 Automation

Sample Name: 91J08 Lab Sample ID: 1057956

Digitally signed by Don V. Viray
on 05/23/2019 at 23:33.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s42.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 23:14 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 23:30 Automation

Sample Name: 91J08 Lab Sample ID: 1057956

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.486	65	175595	250.000
52)$Dibromofluoromethane	(2)	4.078	113	232402	48.629
57)$1,2-Dichloroethane-d4	(2)	4.401	102	60760	50.381
66)*Fluorobenzene	(2)	4.742	96	1028234	50.000
84)$Toluene-d8	(3)	6.388	98	1035140	49.214
101)*Chlorobenzene-d5	(3)	7.894	117	774450	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	392084	48.490
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	414225	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/23/2019 at 23:33.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

91J09

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1057957

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s34.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	0.4	J
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23s34.d
Injection date and time: **23-MAY-2019 20:36**
Data file Sample Info. Line: 91J09;1057957;1;0;;JCV91;;;ey23b31;
Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 20:52 Automation

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.493(-0.006)	247	65	180452 (-3)	250.00	
66) Fluorobenzene	4.736(0.000)	615	96	1039499 (-1)	50.00	
101) Chlorobenzene-d5	7.894(0.000)	1133	117	775846 (-1)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802(0.000)	1446	152	414421 (0)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.072(0.000)	113	230400	47.687	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.401(0.000)	102	60590	49.696	99%		80 - 120
84) Toluene-d8	(3)	6.382(0.000)	98	1045095	49.598	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918(0.000)	95	395451	48.819	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)	3.919(-0.000)	83	3017	0.360	0.36		J	0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)			Not Detected					0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Don V. Viray on 05/23/2019 at 22:17. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP15648.i/19may23b.b/ey23s34.d Injection date and time: **23-MAY-2019 20:36**
Data file Sample Info. Line: 91J09;1057957;1;0;;JCV91;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 20:52 Automation

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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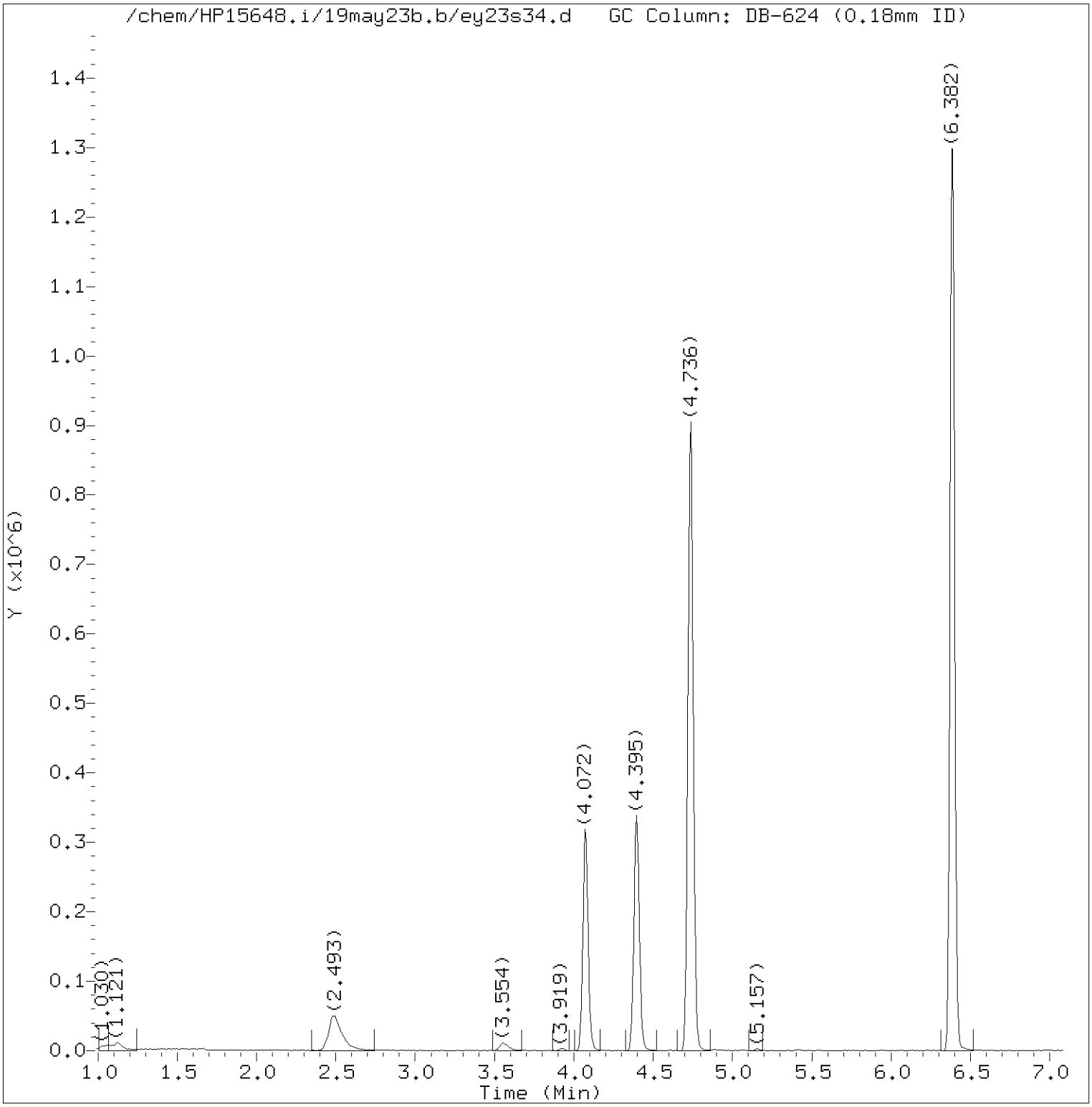
Total number of targets = 24

Digitally signed by Don V. Viray on 05/23/2019 at 22:17. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

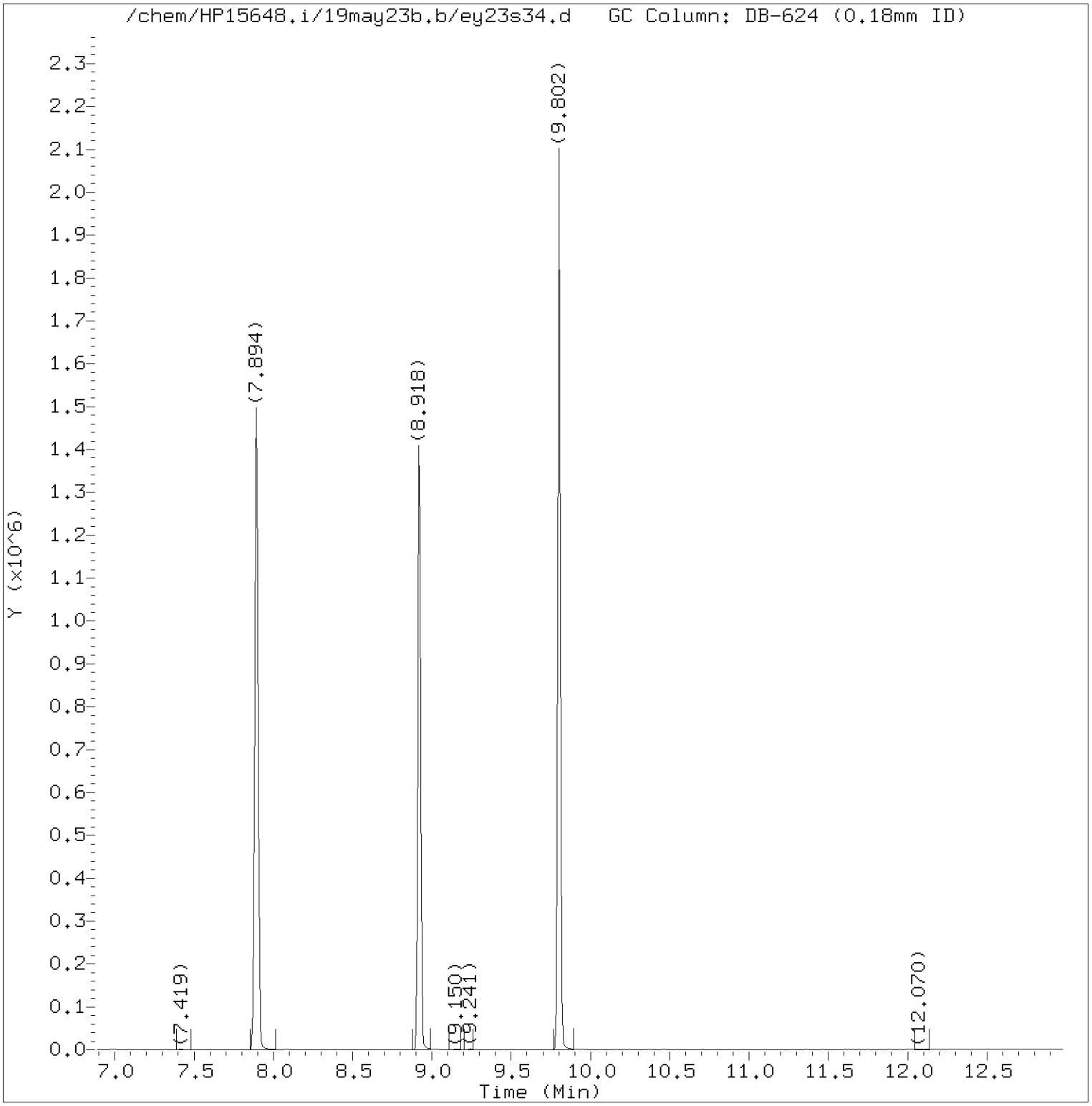
Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s34.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 20:36 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:52 Automation

Sample Name: 91J09 Lab Sample ID: 1057957

Digitally signed by Don V. Viray
on 05/23/2019 at 22:17.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s34.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 20:36 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:52 Automation

Sample Name: 91J09 Lab Sample ID: 1057957

Digitally signed by Don V. Viray
on 05/23/2019 at 22:17.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s34.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 20:36 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:52 Automation

Sample Name: 91J09 Lab Sample ID: 1057957

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.493	65	180452	250.000
51) Chloroform	(2)	3.919	83	3017	0.360
52)$Dibromofluoromethane	(2)	4.072	113	230400	47.687
57)$1,2-Dichloroethane-d4	(2)	4.401	102	60590	49.696
66)*Fluorobenzene	(2)	4.736	96	1039499	50.000
84)$Toluene-d8	(3)	6.382	98	1045095	49.598
101)*Chlorobenzene-d5	(3)	7.894	117	775846	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	395451	48.819
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	414421	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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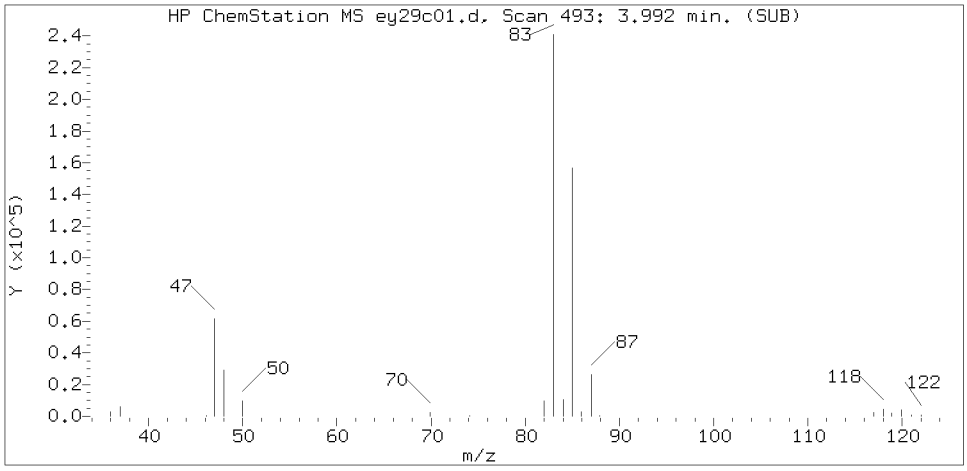
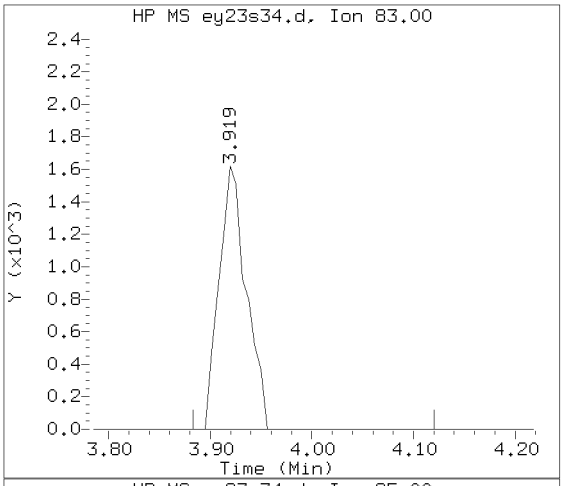
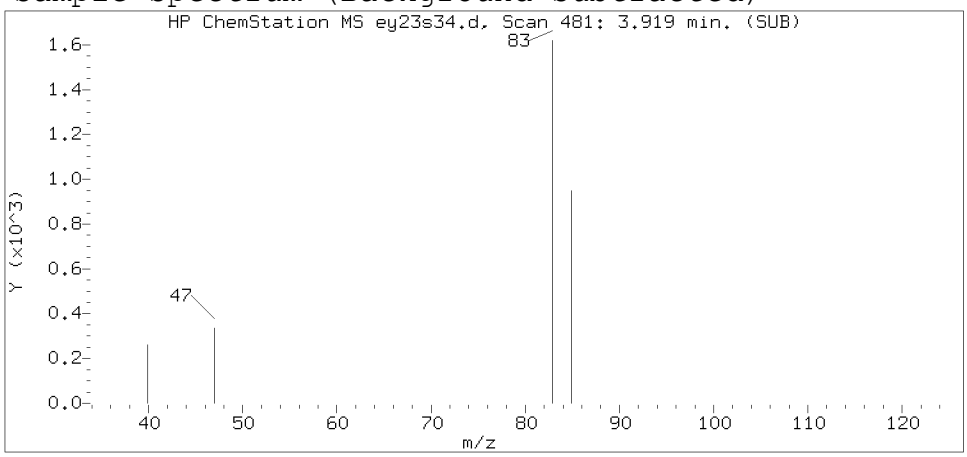
on 05/23/2019 at 22:17.
Target 3.5 esignature user ID: dvv10203

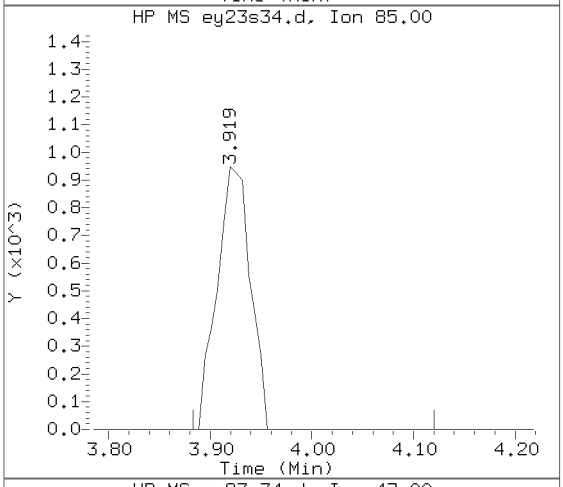
Reference Standard Spectrum for Chloroform



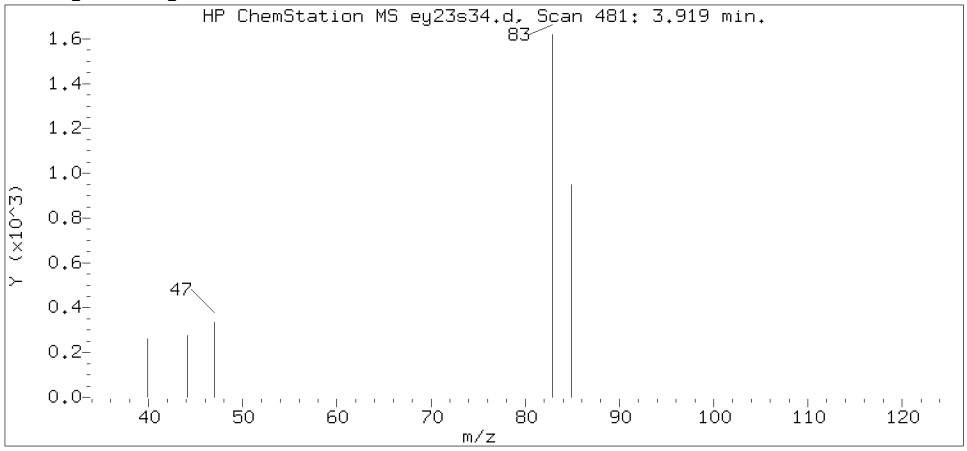


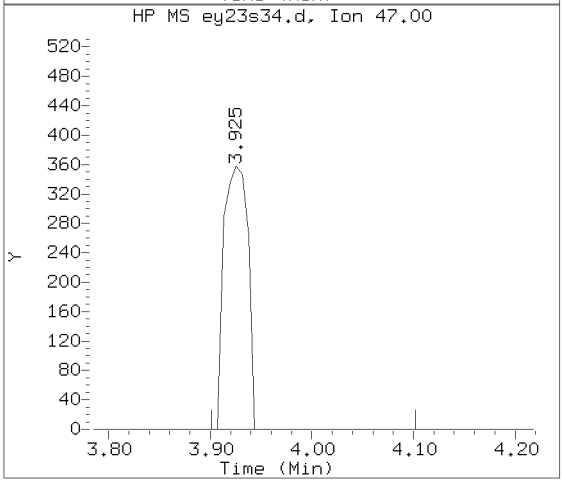
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19may23b.b/ey23s34.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 20:36 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:52 Automation

Sample Name: 91J09 Lab Sample ID: 1057957

Compound Number : 51
Compound Name : Chloroform
Scan Number : 481
Retention Time (minutes): 3.919
Relative Retention Time :-0.00001
Quant Ion : 83.00
Area (flag) : 3017
On-Column Amount (ng) : 0.3604

Digitally signed by Don V. Viray on 05/23/2019 at 22:17.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

91J10

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1057958

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s33.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23s33.d
Injection date and time: **23-MAY-2019 20:16**
Data file Sample Info. Line: 91J10;1057958;1;0;;JCV91;;;ey23b31;
Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 20:32 Automation

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.487(0.000)	246	65	178616	(-4)	250.00	
66) Fluorobenzene	4.736(0.000)	615	96	1041456	(-1)	50.00	
101) Chlorobenzene-d5	7.894(0.000)	1133	117	772669	(-1)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802(0.000)	1446	152	414867	(1)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.072(0.000)	113	232363	48.003	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.395(0.001)	102	61041	49.972	100%		80 - 120
84) Toluene-d8	(3)	6.382(0.000)	98	1048029	49.941	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918(0.000)	95	395741	49.055	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)			Not Detected					0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Don V. Viray on 05/23/2019 at 22:17. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP15648.i/19may23b.b/ey23s33.d Injection date and time: **23-MAY-2019 20:16**
Data file Sample Info. Line: 91J10;1057958;1;0;;JCV91;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 20:32 Automation

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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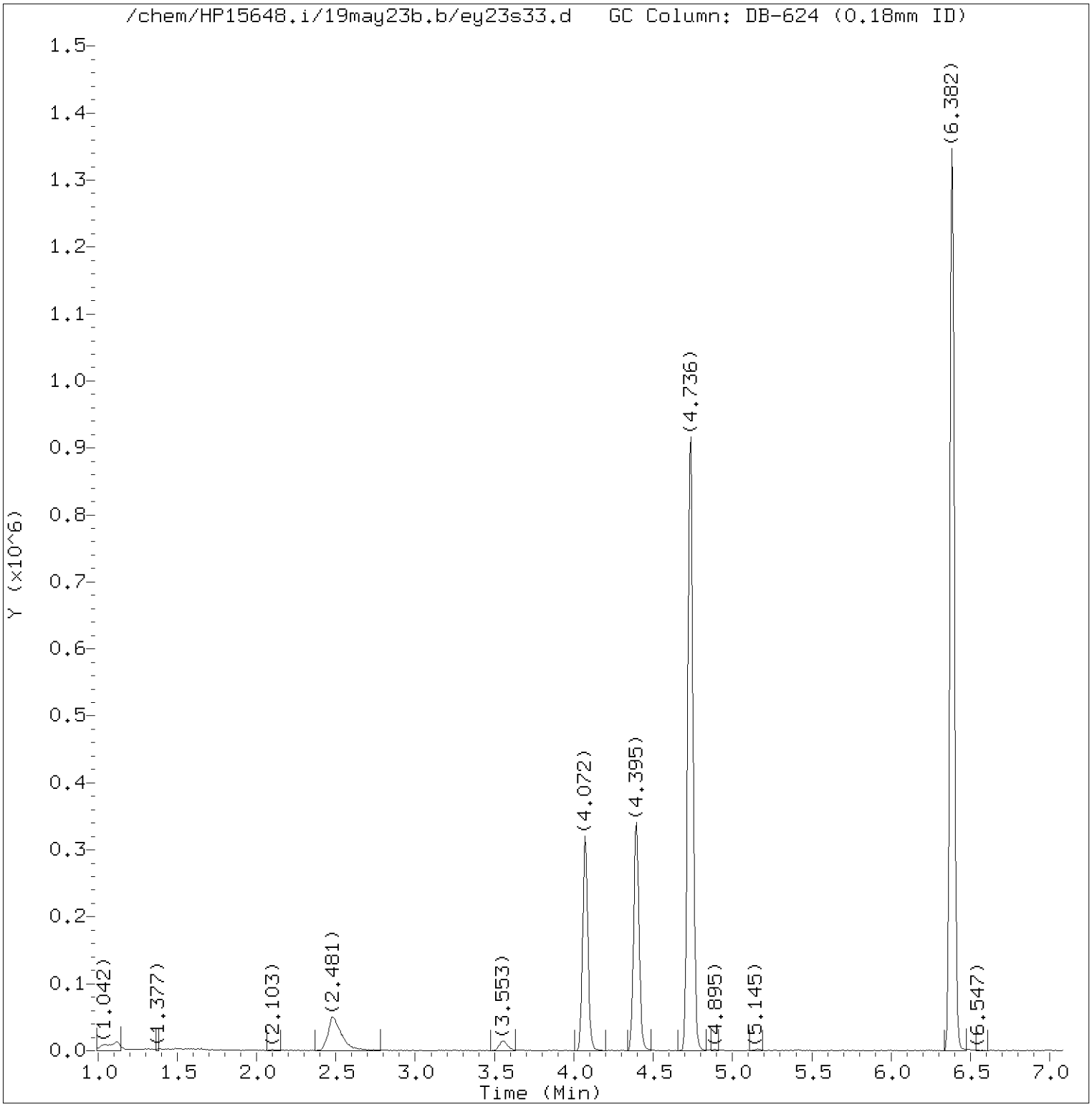
Total number of targets = 24

Digitally signed by Don V. Viray on 05/23/2019 at 22:17. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

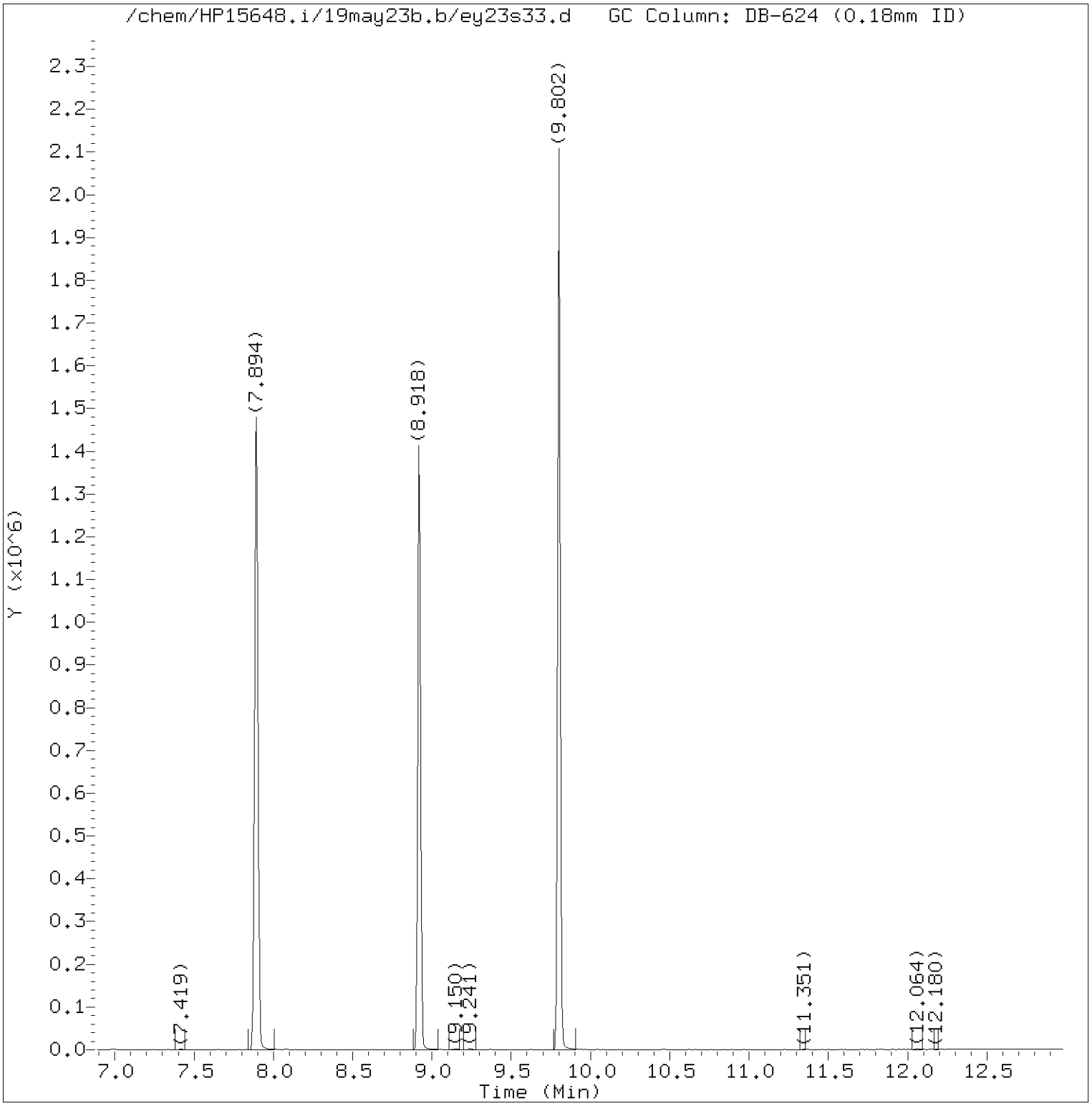
Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s33.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 20:16 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:32 Automation

Sample Name: 91J10 Lab Sample ID: 1057958

Digitally signed by Don V. Viray
on 05/23/2019 at 22:17.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s33.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 20:16 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:32 Automation

Sample Name: 91J10 Lab Sample ID: 1057958

Digitally signed by Don V. Viray
on 05/23/2019 at 22:17.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s33.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 20:16 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:32 Automation

Sample Name: 91J10 Lab Sample ID: 1057958

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.487	65	178616	250.000
52)$Dibromofluoromethane	(2)	4.072	113	232363	48.003
57)$1,2-Dichloroethane-d4	(2)	4.395	102	61041	49.972
66)*Fluorobenzene	(2)	4.736	96	1041456	50.000
84)$Toluene-d8	(3)	6.382	98	1048029	49.941
101)*Chlorobenzene-d5	(3)	7.894	117	772669	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	395741	49.055
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	414867	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/23/2019 at 22:17.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

91J11

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1057959

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s43.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	0.4	J
75-34-3	1,1-Dichloroethane	0.8	J
156-59-2	cis-1,2-Dichloroethene	0.8	J
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	0.5	J
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23s43.d
Injection date and time: **23-MAY-2019 23:34**
Data file Sample Info. Line: 91J11;1057959;1;0;;JCV91;;;ey23b31;
Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 24-May-2019 00:46 dvv10203

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.499(-0.012)	248	65	177785 (-5)	250.00	
66) Fluorobenzene	4.742(-0.006)	616	96	1049937 (0)	50.00	
101) Chlorobenzene-d5	7.894(0.000)	1133	117	780992 (0)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802(0.000)	1446	152	423248 (3)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.078(0.000)	113	235775	48.315	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.401(0.001)	102	61221	49.714	99%		80 - 120
84) Toluene-d8	(3)	6.388(-0.001)	98	1049508	49.479	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918(0.000)	95	402731	49.390	99%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)	2.718(-0.000)	96	1868	0.394	0.39		J	0.2	1
36) 1,1-Dichloroethane	(2)	3.078(0.000)	63	6878	0.774	0.77		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	3.627(-0.001)	96	4219	0.791	0.79		J	0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	5.114(0.000)	95	2448	0.476	0.48		J	0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Don V. Viray on 05/24/2019 at 00:46. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP15648.i/19may23b.b/ey23s43.d Injection date and time: **23-MAY-2019 23:34**
Data file Sample Info. Line: 91J11;1057959;1;0;;JCV91;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 24-May-2019 00:46 dvv10203

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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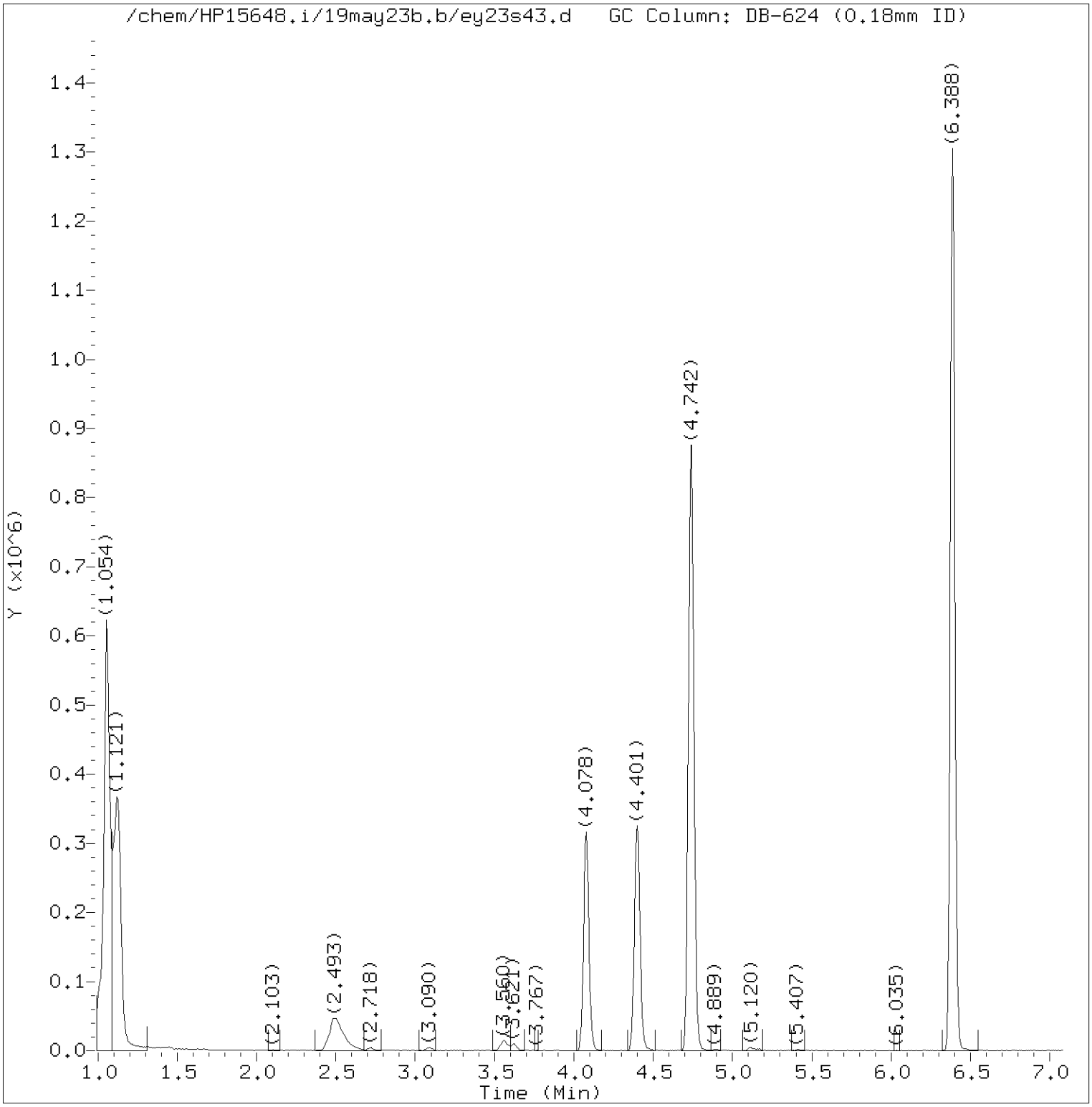
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 05/24/2019 at 00:46. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

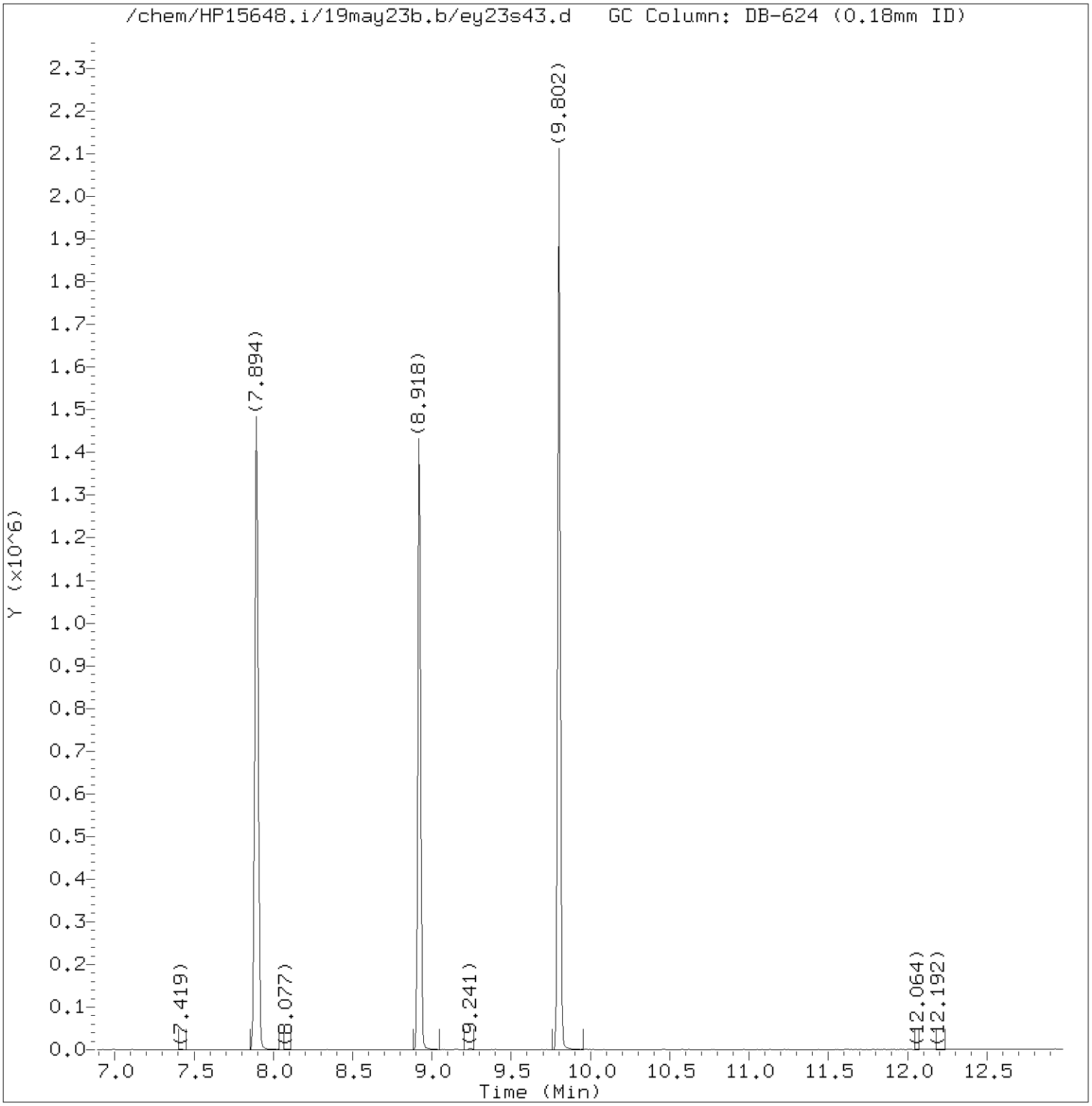
Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s43.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 23:34 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 00:46 dvv10203

Sample Name: 91J11 Lab Sample ID: 1057959

Digitally signed by Don V. Viray
on 05/24/2019 at 00:46.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s43.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 23:34 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 00:46 dvv10203

Sample Name: 91J11 Lab Sample ID: 1057959

Digitally signed by Don V. Viray
on 05/24/2019 at 00:46.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s43.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 23:34 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 00:46 dvv10203

Sample Name: 91J11 Lab Sample ID: 1057959

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.499	65	177785	250.000
32) trans-1,2-Dichloroethene	(2)	2.718	96	1868	0.394
36) 1,1-Dichloroethane	(2)	3.078	63	6878	0.774
42) cis-1,2-Dichloroethene	(2)	3.627	96	4219	0.791
52)$Dibromofluoromethane	(2)	4.078	113	235775	48.315
57)$1,2-Dichloroethane-d4	(2)	4.401	102	61221	49.714
66)*Fluorobenzene	(2)	4.742	96	1049937	50.000
71) Trichloroethene	(2)	5.114	95	2448	0.476
84)$Toluene-d8	(3)	6.388	98	1049508	49.479
101)*Chlorobenzene-d5	(3)	7.894	117	780992	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	402731	49.390
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	423248	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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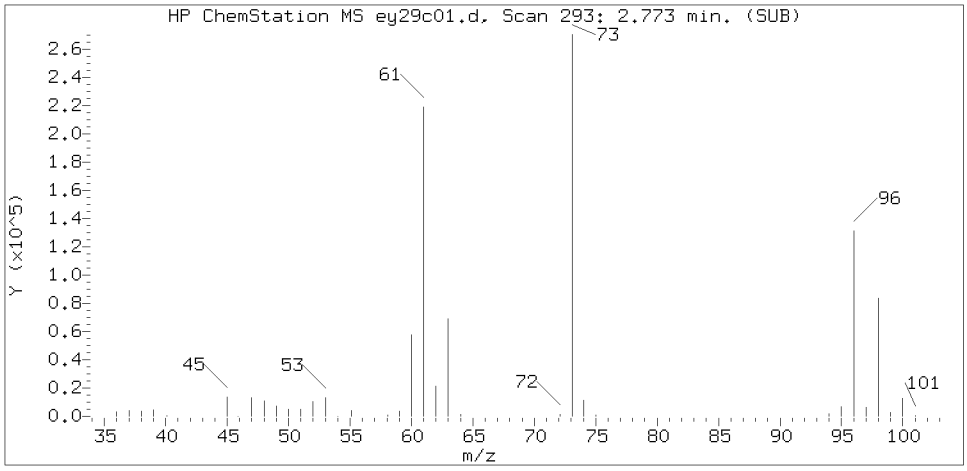
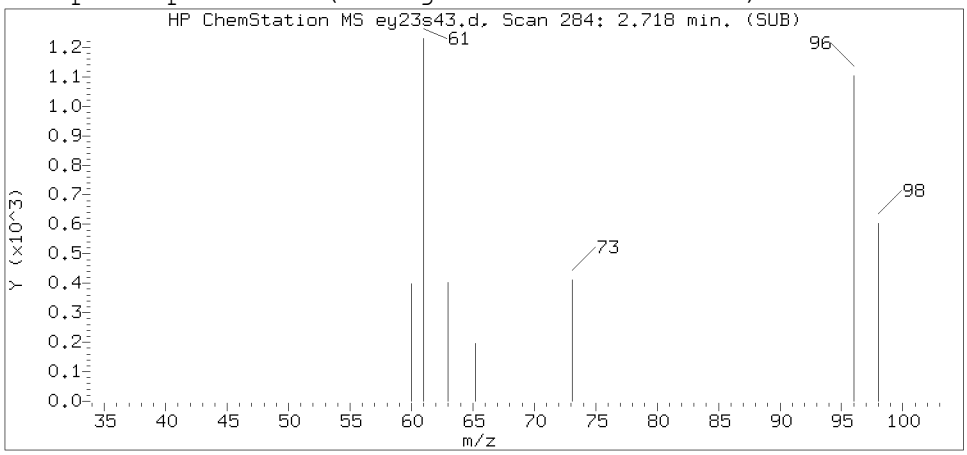
on 05/24/2019 at 00:46.
Target 3.5 esignature user ID: dvv10203

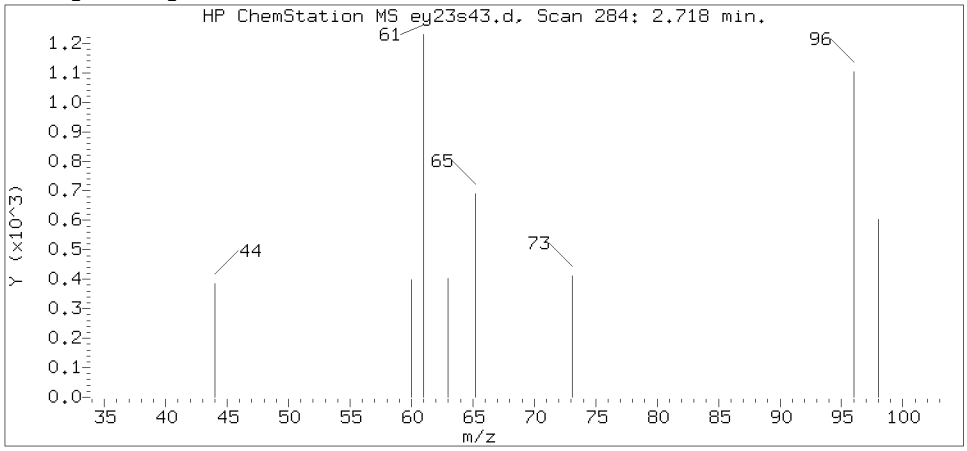
Reference Standard Spectrum for trans-1,2-Dichloroethene

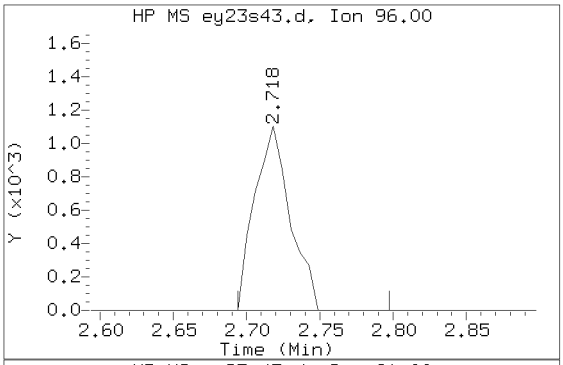


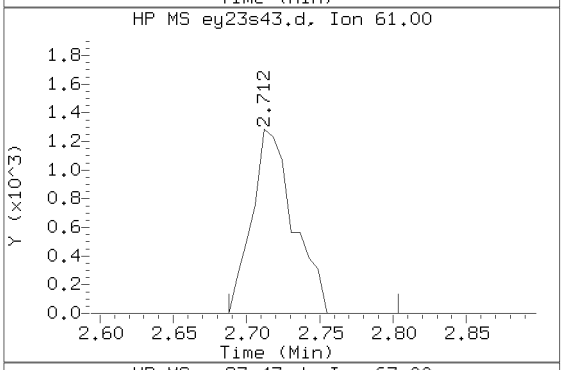
Sample Spectrum (Background Subtracted)

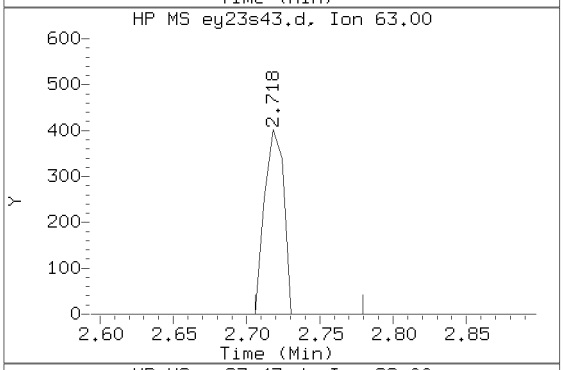


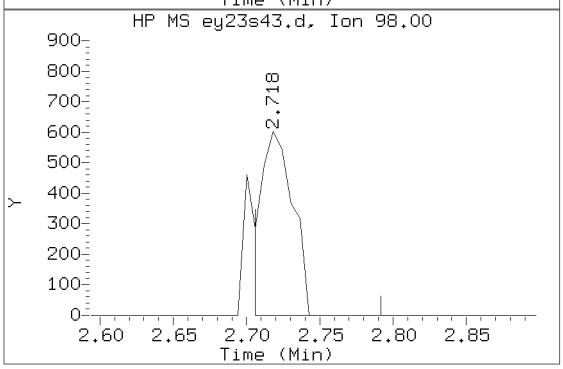
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may23b.b/ey23s43.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 23:34 Analyst ID: DVV10203

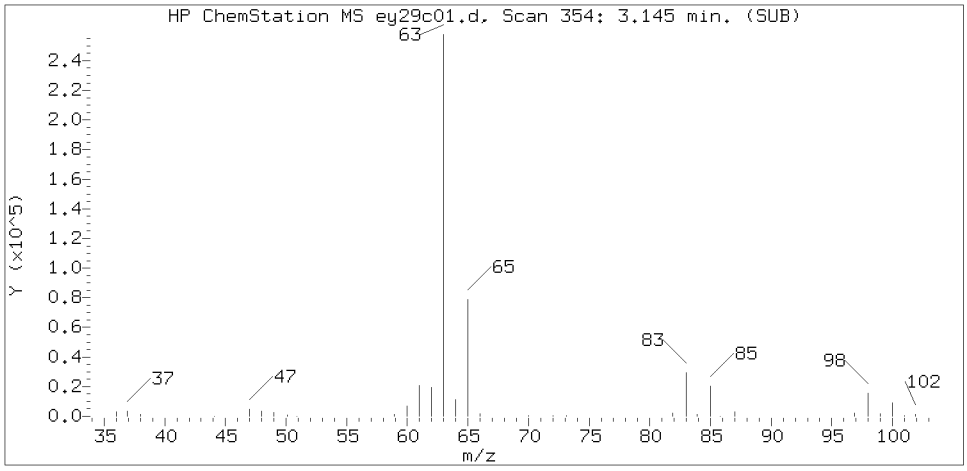
Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 00:46 dvv10203

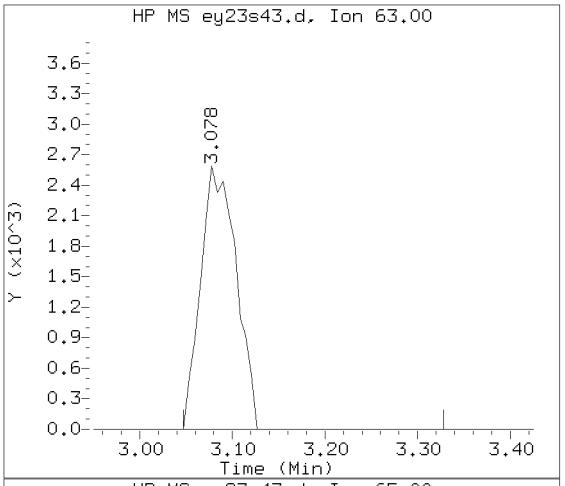
Sample Name: 91J11 Lab Sample ID: 1057959

Compound Number : 32
Compound Name : trans-1,2-Dichloroethene
Scan Number : 284
Retention Time (minutes): 2.718
Relative Retention Time :-0.00057
Quant Ion : 96.00
Area (flag) : 1868
On-Column Amount (ng) : 0.3936

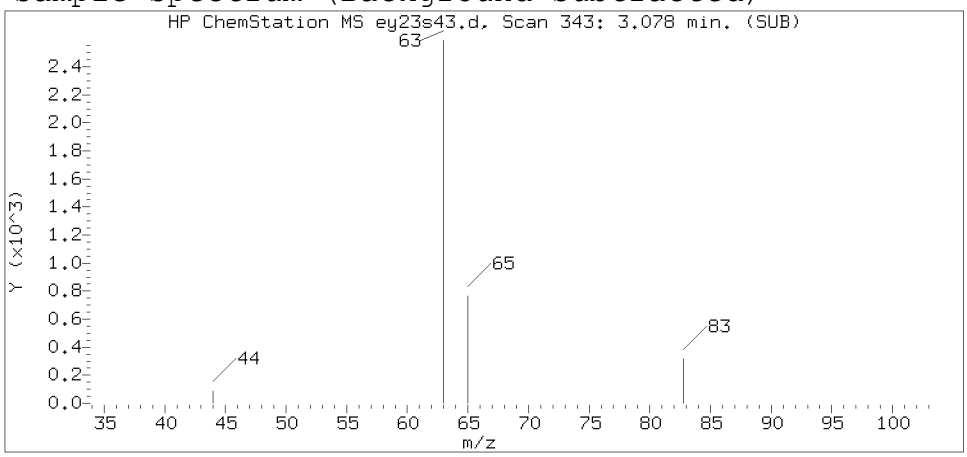
Digitally signed by Don V. Viray on 05/24/2019 at 00:46.
Target 3.5 esignature user ID: dvv10203

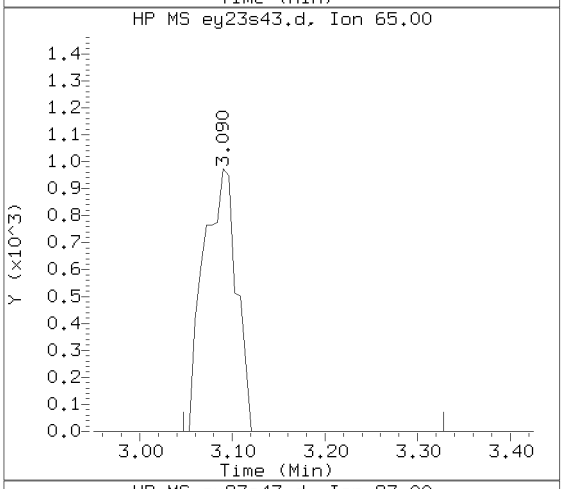
Reference Standard Spectrum for 1,1-Dichloroethane



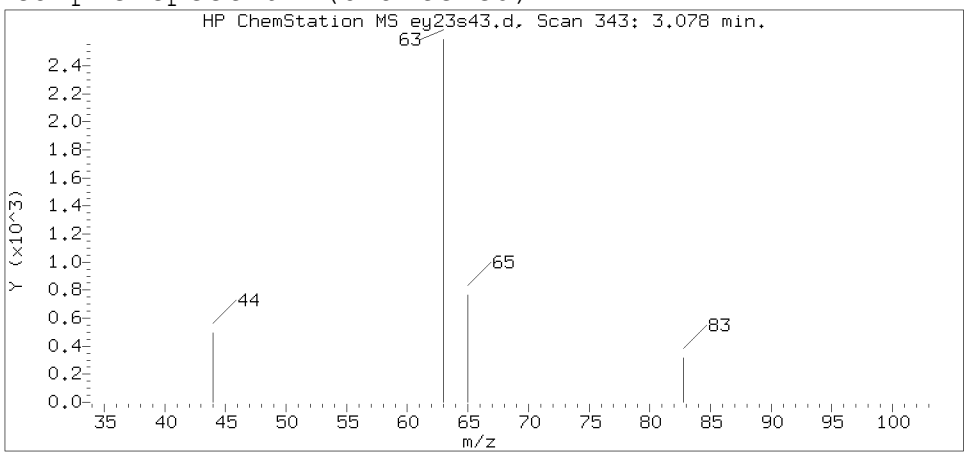


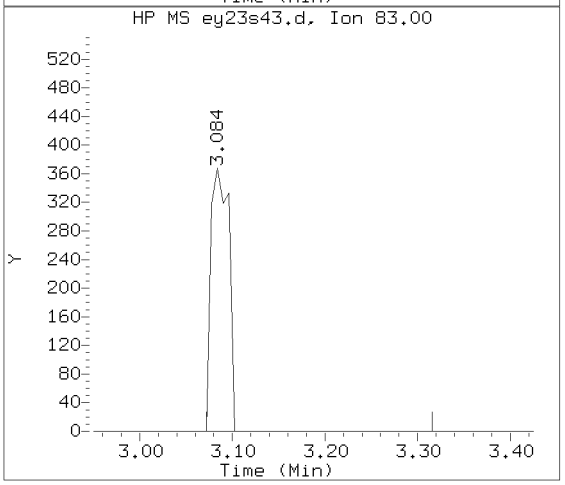
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19may23b.b/ey23s43.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 23:34 Analyst ID: DVV10203

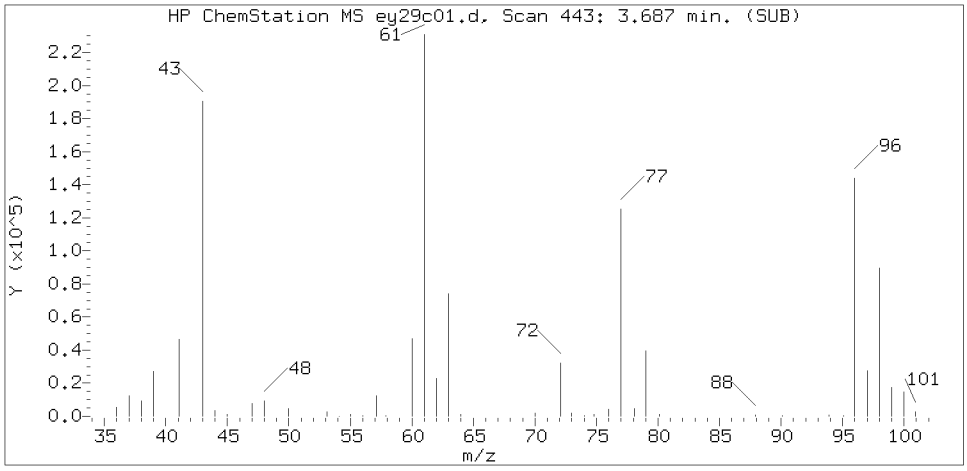
Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 00:46 dvv10203

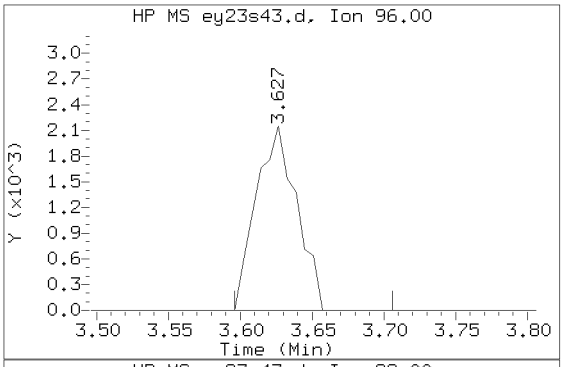
Sample Name: 91J11 Lab Sample ID: 1057959

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 343
Retention Time (minutes): 3.078
Relative Retention Time : 0.00082
Quant Ion : 63.00
Area (flag) : 6878
On-Column Amount (ng) : 0.7736

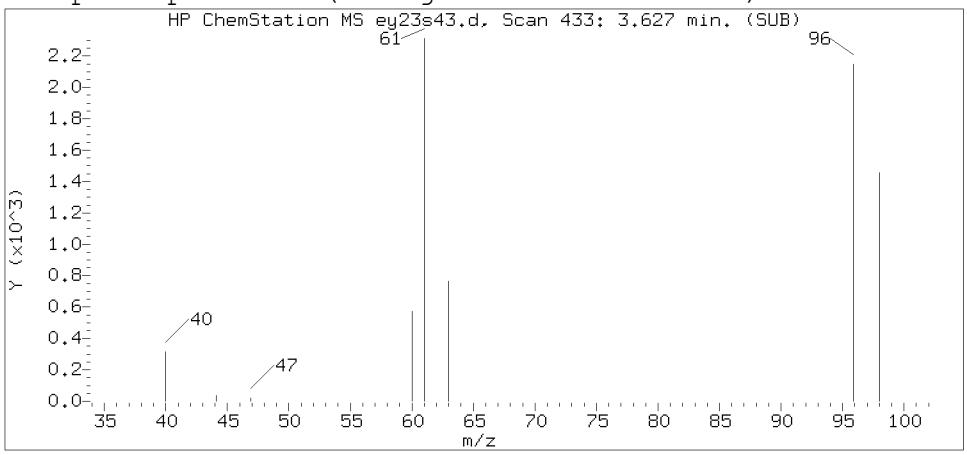
Digitally signed by Don V. Viray on 05/24/2019 at 00:46.
Target 3.5 esignature user ID: dvv10203

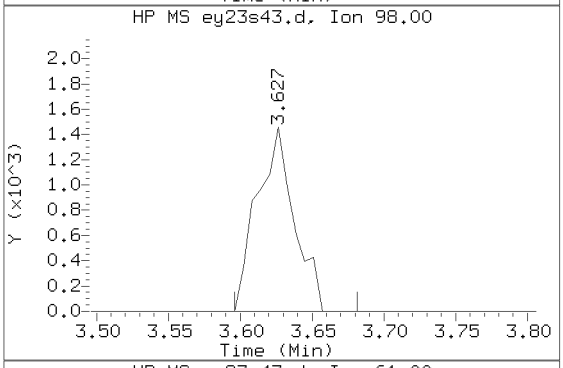
Reference Standard Spectrum for cis-1,2-Dichloroethene

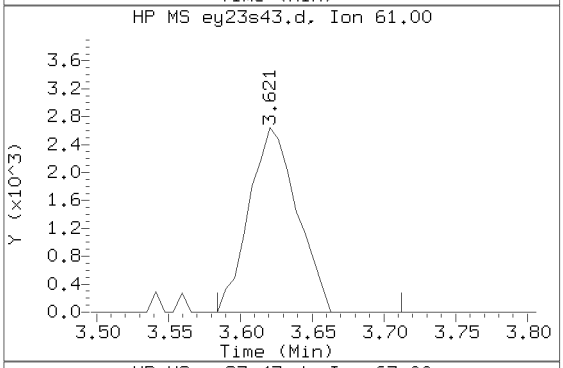




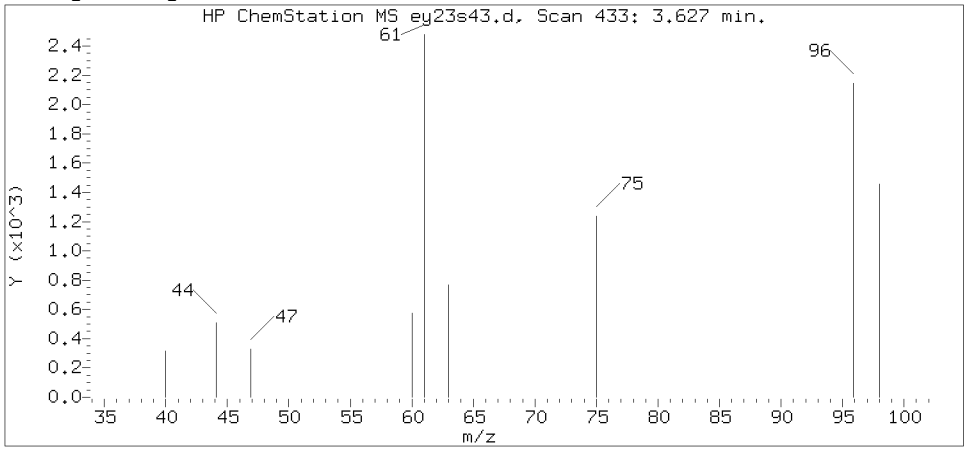
Sample Spectrum (Background Subtracted)

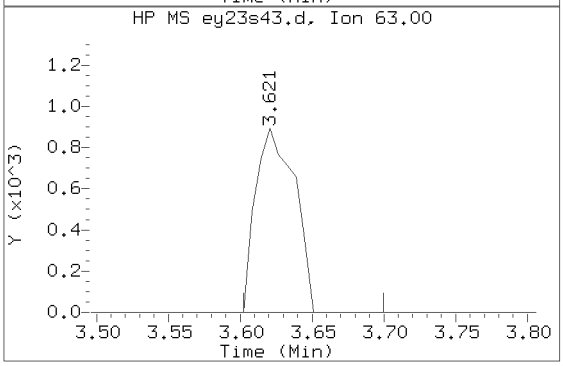






Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19may23b.b/ey23s43.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 23:34 Analyst ID: DVV10203

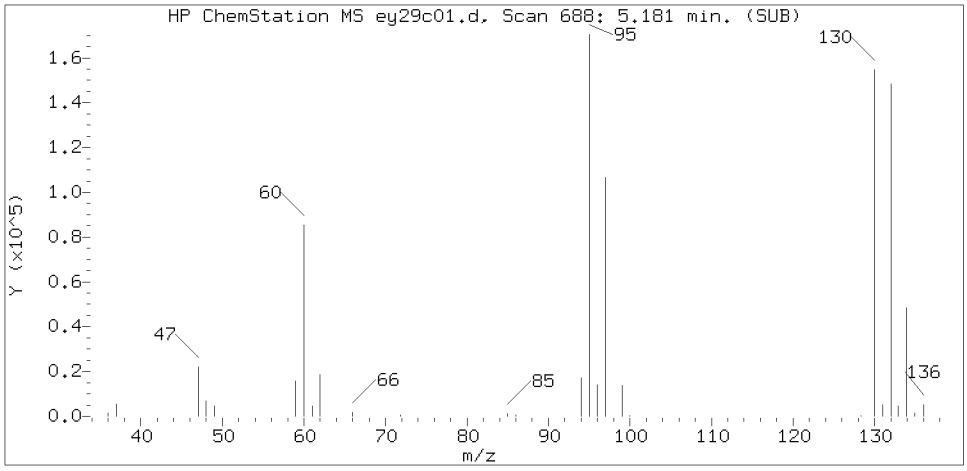
Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 00:46 dvv10203

Sample Name: 91J11 Lab Sample ID: 1057959

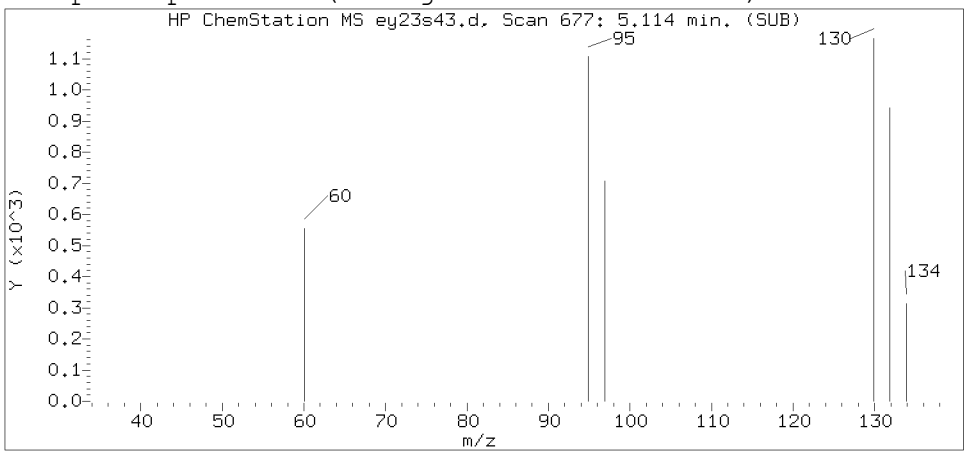
Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 433
Retention Time (minutes): 3.627
Relative Retention Time :-0.00160
Quant Ion : 96.00
Area (flag) : 4219
On-Column Amount (ng) : 0.7913

Digitally signed by Don V. Viray on 05/24/2019 at 00:46.
Target 3.5 esignature user ID: dvv10203

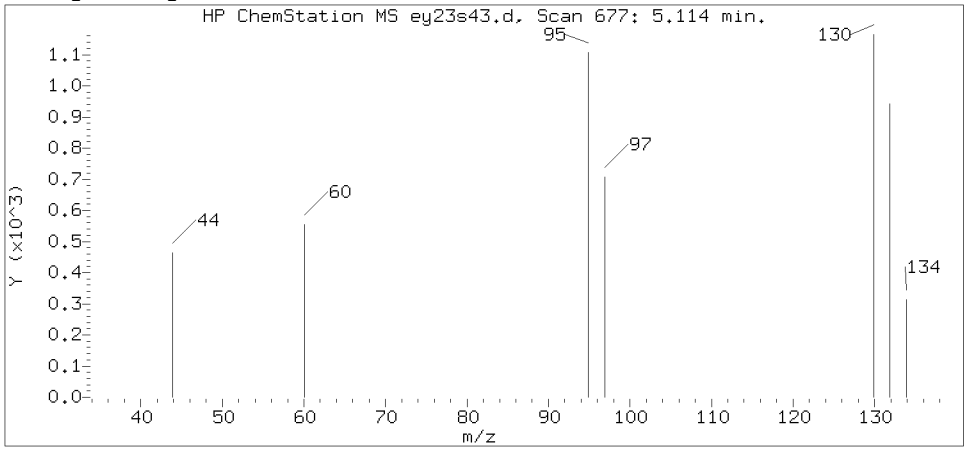
Reference Standard Spectrum for Trichloroethene

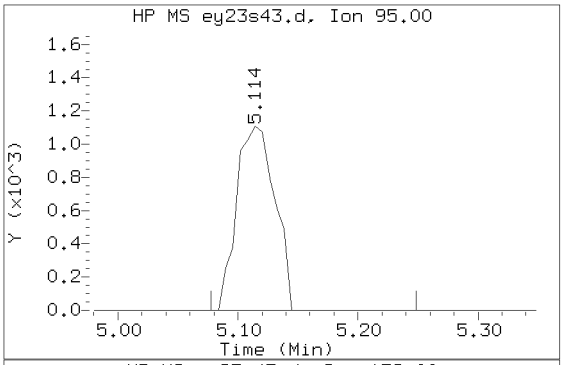


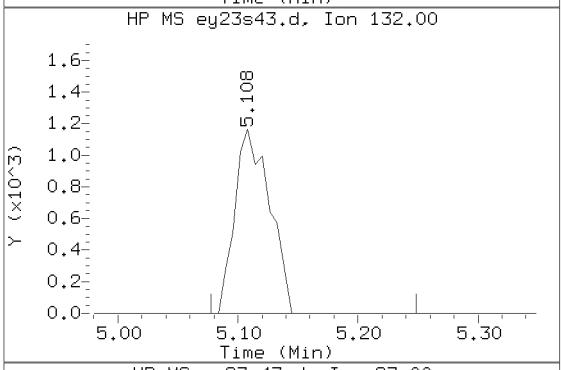
Sample Spectrum (Background Subtracted)

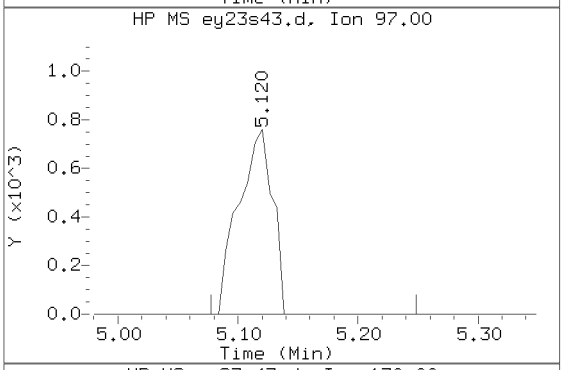


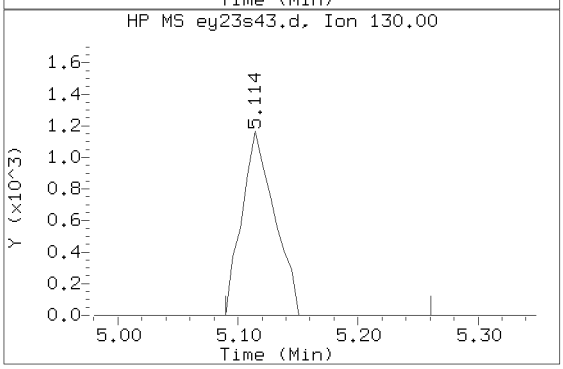
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may23b.b/ey23s43.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 23:34 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 00:46 dvv10203

Sample Name: 91J11 Lab Sample ID: 1057959

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 677
Retention Time (minutes)	: 5.114
Relative Retention Time	: 0.00010
Quant Ion	: 95.00
Area (flag)	: 2448
On-Column Amount (ng)	: 0.4764

Digitally signed by Don V. Viray on 05/24/2019 at 00:46.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

91J12

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1057960

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s44.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23s44.d Injection date and time: **23-MAY-2019 23:54**
Data file Sample Info. Line: 91J12;1057960;1;0;;JCV91;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 24-May-2019 00:46 dvv10203

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.480	(0.006)	245	65	182730	(-2)	250.00	
66) Fluorobenzene	4.736	(0.000)	615	96	1047515	(0)	50.00	
101) Chlorobenzene-d5	7.894	(0.000)	1133	117	783201	(0)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802	(0.000)	1446	152	420401	(2)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.072	(0.000)	113	232699	47.794	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.395	(0.001)	102	61455	50.019	100%		80 - 120
84) Toluene-d8	(3)	6.388	(-0.001)	98	1049604	49.344	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918	(0.000)	95	397221	48.577	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	4.102	(-0.000)	97	9469	1.213	1.21			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 05/24/2019 at 00:47. Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23s44.d Injection date and time: **23-MAY-2019 23:54**
Data file Sample Info. Line: 91J12;1057960;1;0;;JCV91;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 24-May-2019 00:46 dvv10203

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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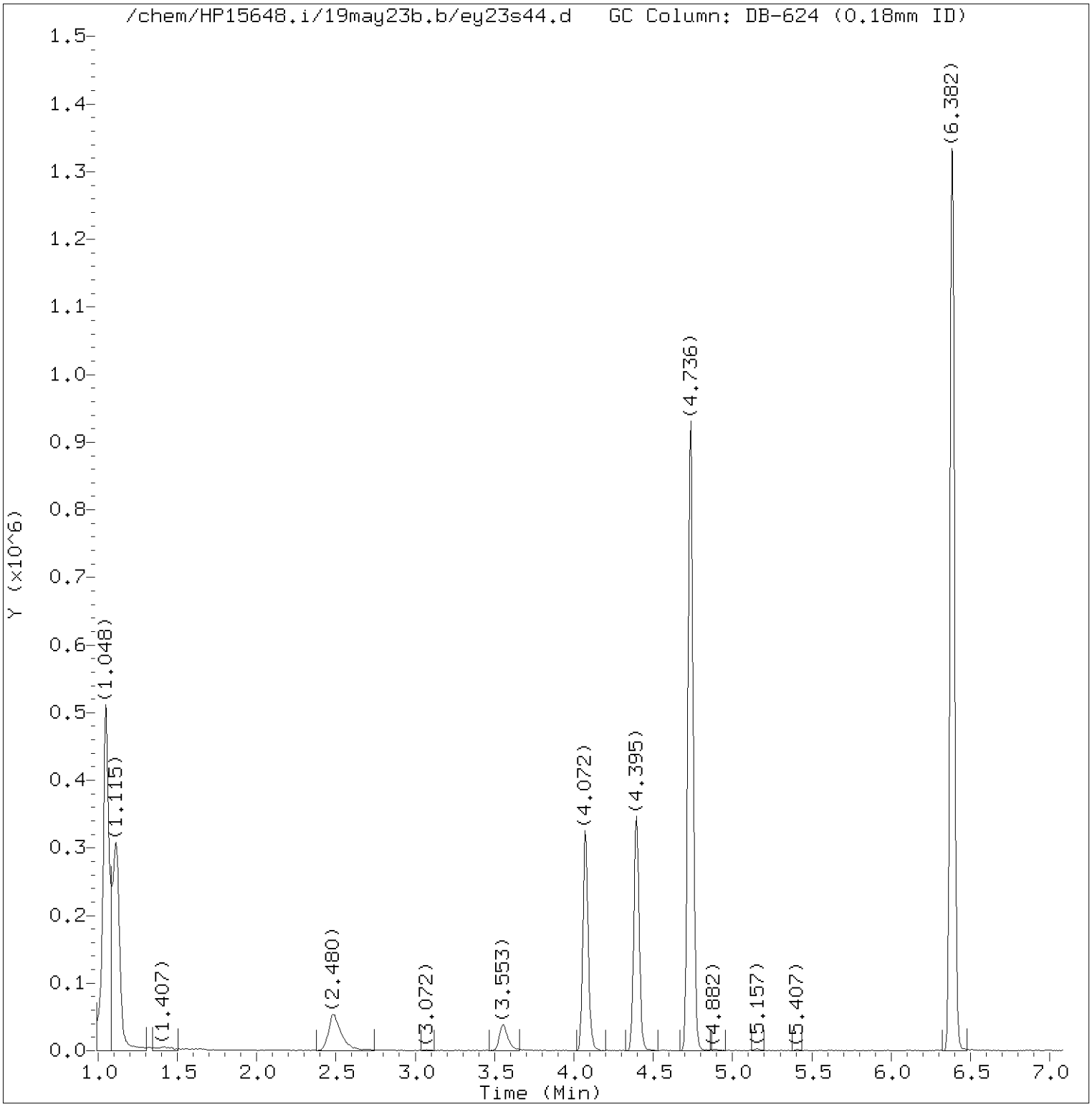
Total number of targets = 24

Digitally signed by Don V. Viray on 05/24/2019 at 00:47. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

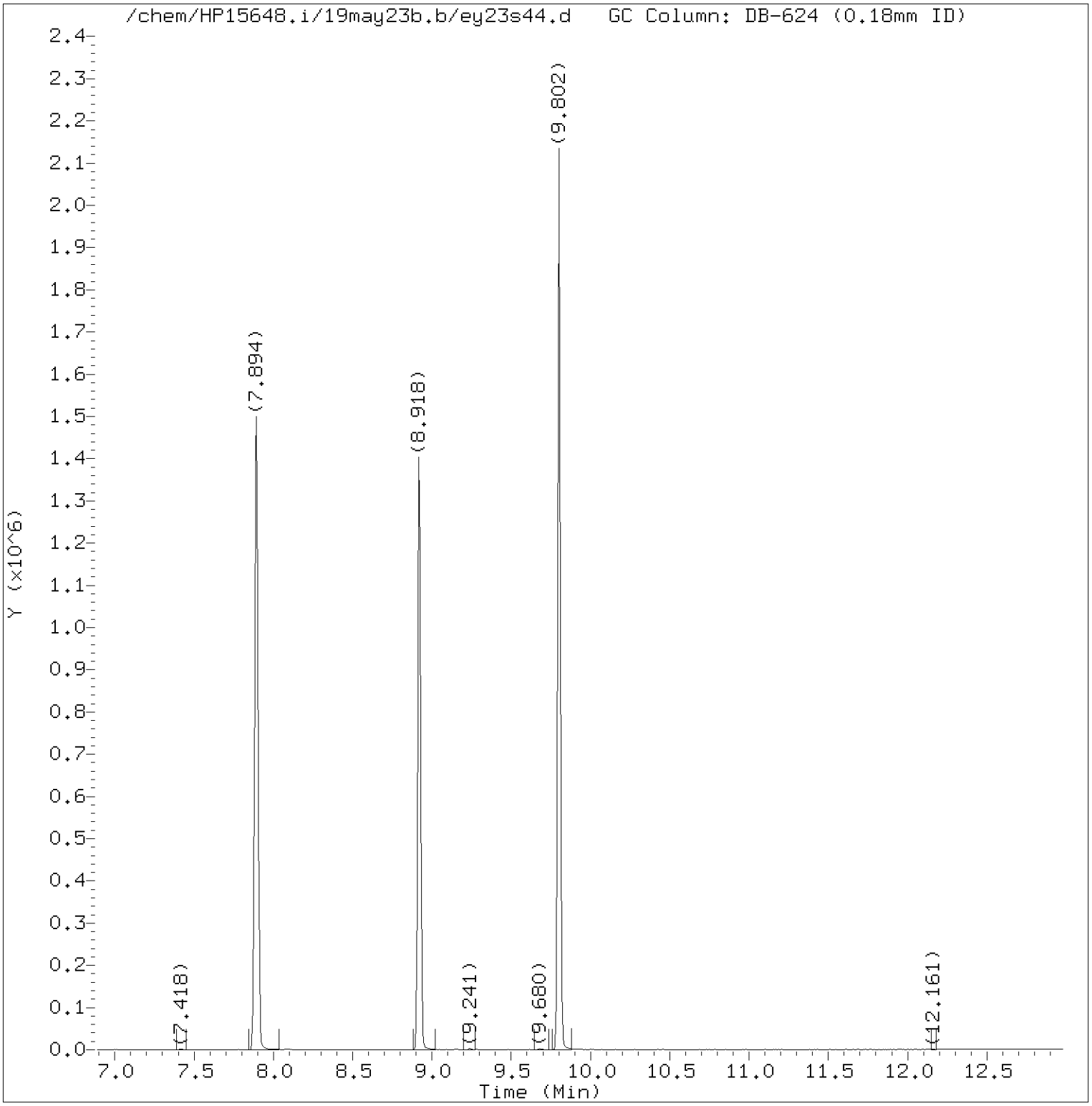
Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s44.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 23:54 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 00:46 dvv10203

Sample Name: 91J12 Lab Sample ID: 1057960

Digitally signed by Don V. Viray
on 05/24/2019 at 00:47.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s44.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 23:54 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 00:46 dvv10203

Sample Name: 91J12 Lab Sample ID: 1057960

Digitally signed by Don V. Viray
on 05/24/2019 at 00:47.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s44.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 23:54 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 00:46 dvv10203

Sample Name: 91J12 Lab Sample ID: 1057960

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.480	65	182730	250.000
52)$Dibromofluoromethane	(2)	4.072	113	232699	47.794
53) 1,1,1-Trichloroethane	(2)	4.102	97	9469	1.213
57)$1,2-Dichloroethane-d4	(2)	4.395	102	61455	50.019
66)*Fluorobenzene	(2)	4.736	96	1047515	50.000
84)$Toluene-d8	(3)	6.388	98	1049604	49.344
101)*Chlorobenzene-d5	(3)	7.894	117	783201	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	397221	48.577
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	420401	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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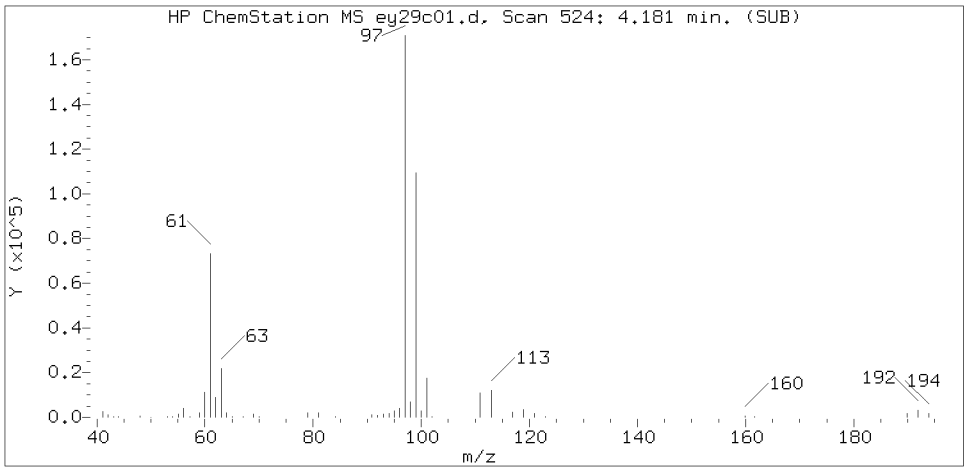
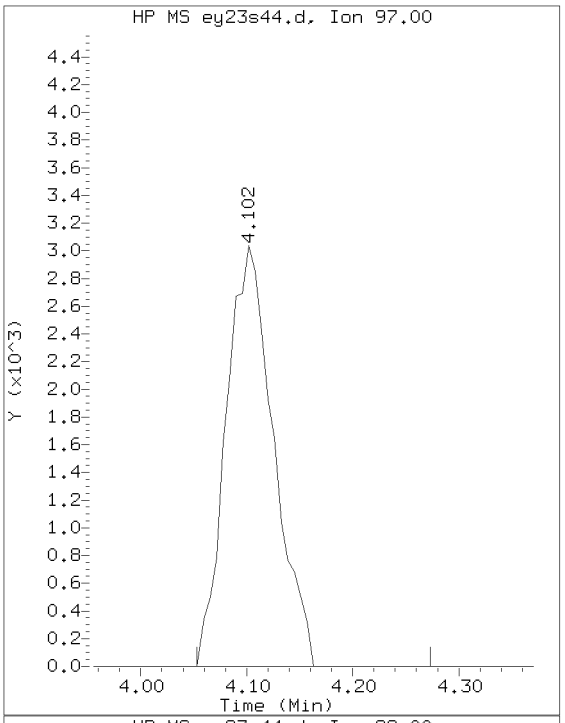
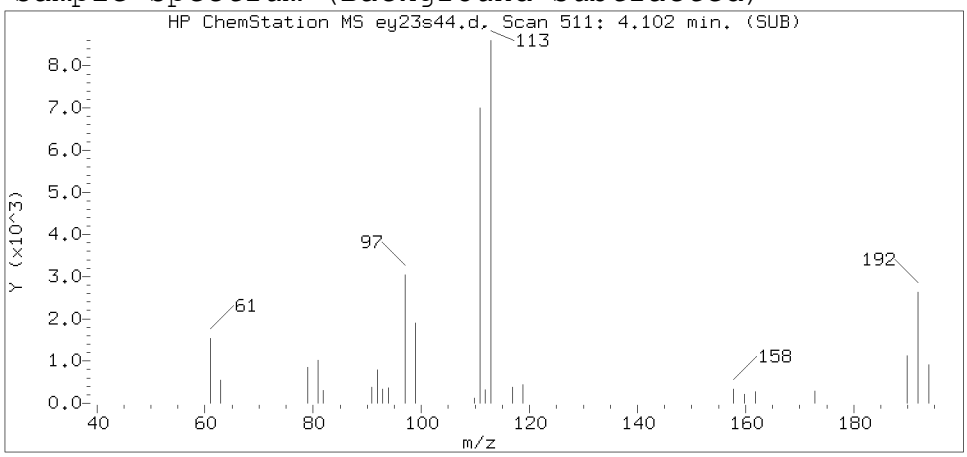
on 05/24/2019 at 00:47.
Target 3.5 esignature user ID: dvv10203

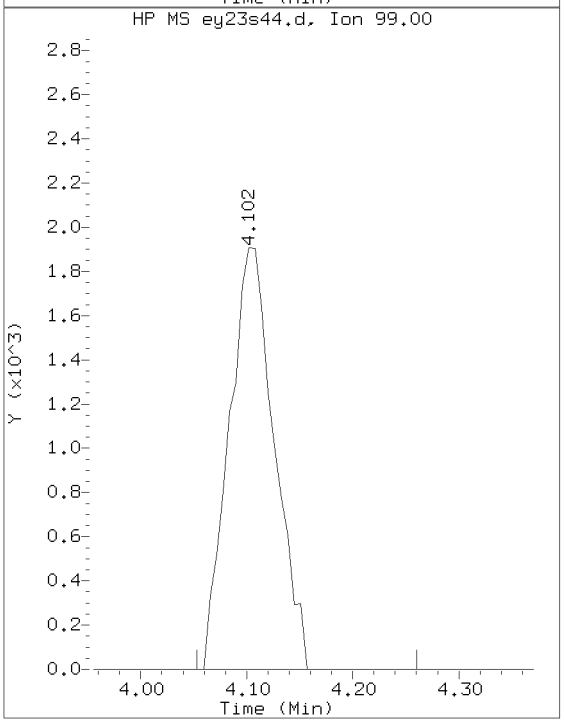
Reference Standard Spectrum for 1,1,1-Trichloroethane



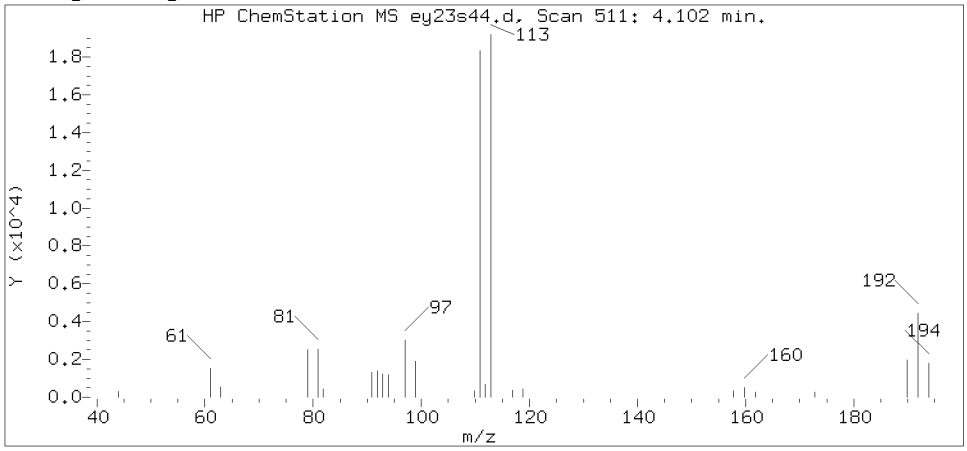


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP15648.i/19may23b.b/ey23s44.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 23:54 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 00:46 dvv10203

Sample Name: 91J12 Lab Sample ID: 1057960

Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 511
Retention Time (minutes): 4.102
Relative Retention Time :-0.00000
Quant Ion : 97.00
Area (flag) : 9469
On-Column Amount (ng) : 1.2129

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Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

91J13

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1057961

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s45.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/24/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.5	J
156-59-2	cis-1,2-Dichloroethene	0.7	J
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	0.9	J
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23s45.d
Data file Sample Info. Line: 91J13;1057961;1;0;;JCV91;;;ey23b31;
Date, time and analyst ID of latest file update: 24-May-2019 00:30 Automation

Injection date and time: **24-MAY-2019 00:14**
Instrument ID: **HP15648.i** Batch: **E191433AA**

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.499 (-0.012)	248	65	177783 (-5)	250.00	
66) Fluorobenzene	4.742 (-0.006)	616	96	1033263 (-1)	50.00	
101) Chlorobenzene-d5	7.894 (0.000)	1133	117	775998 (-1)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802 (0.000)	1446	152	416701 (1)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.078 (0.000)	113	233920	48.708	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.401 (0.001)	102	61382	50.649	101%		80 - 120
84) Toluene-d8	(3)	6.388 (-0.001)	98	1038883	49.293	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918 (0.000)	95	394817	48.731	97%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	3.084 (-0.000)	63	4457	0.509	0.51		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	3.626 (-0.001)	96	3871	0.738	0.74		J	0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	5.108 (0.001)	95	4675	0.924	0.92		J	0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Don V. Viray on 05/24/2019 at 00:47. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP15648.i/19may23b.b/ey23s45.d Injection date and time: **24-MAY-2019 00:14**
Data file Sample Info. Line: 91J13;1057961;1;0;;JCV91;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 24-May-2019 00:30 Automation

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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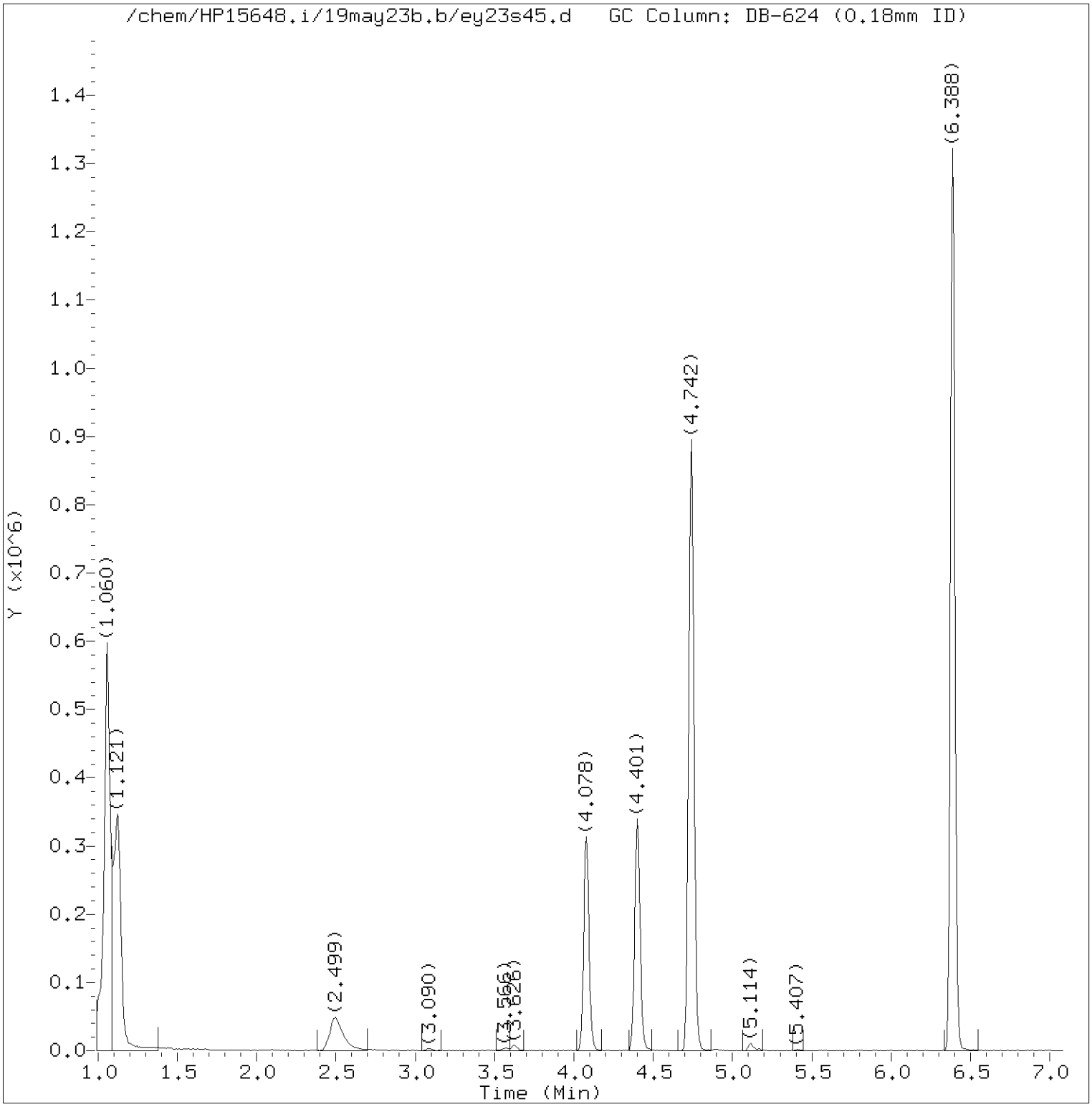
Total number of targets = 24

Digitally signed by Don V. Viray on 05/24/2019 at 00:47. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

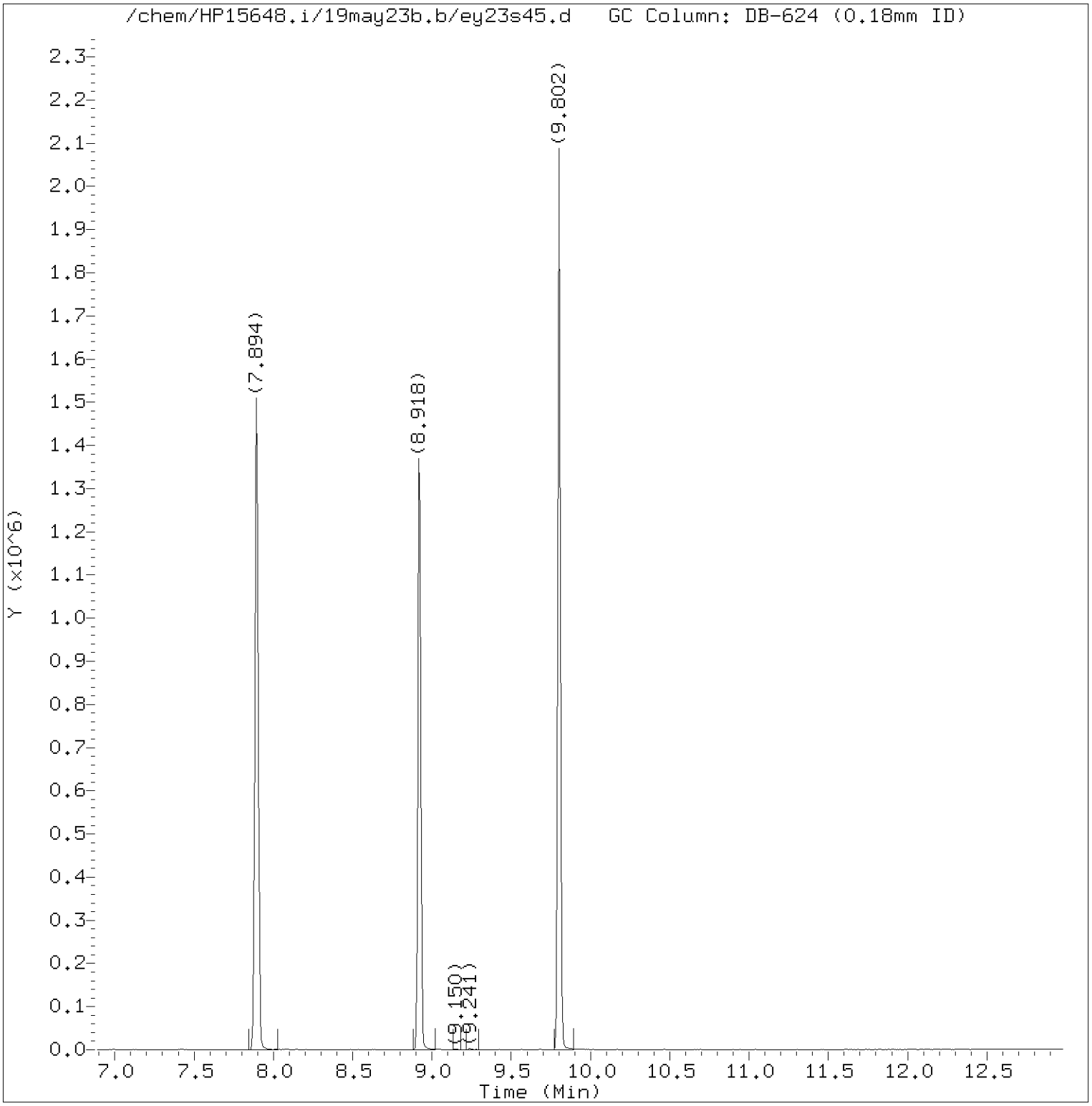
Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s45.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 00:14 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 00:30 Automation

Sample Name: 91J13 Lab Sample ID: 1057961

Digitally signed by Don V. Viray
on 05/24/2019 at 00:47.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s45.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 00:14 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 00:30 Automation

Sample Name: 91J13 Lab Sample ID: 1057961

Digitally signed by Don V. Viray
on 05/24/2019 at 00:47.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s45.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 00:14 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 00:30 Automation

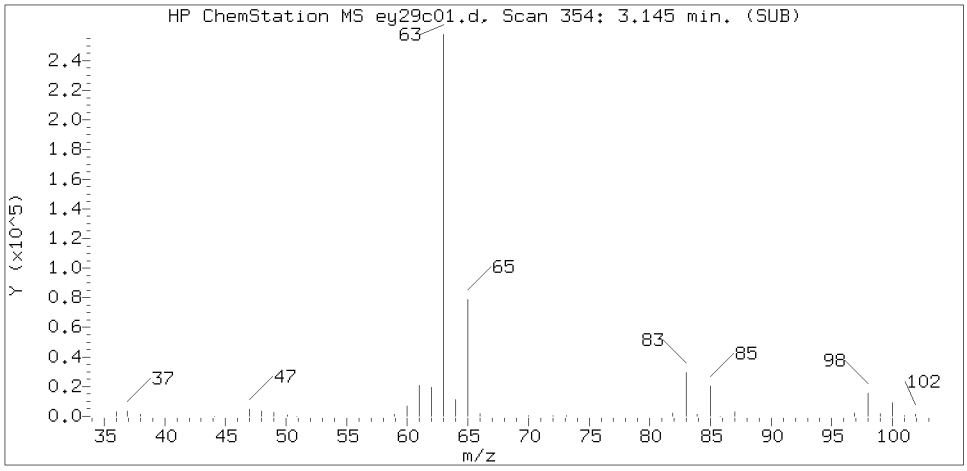
Sample Name: 91J13 Lab Sample ID: 1057961

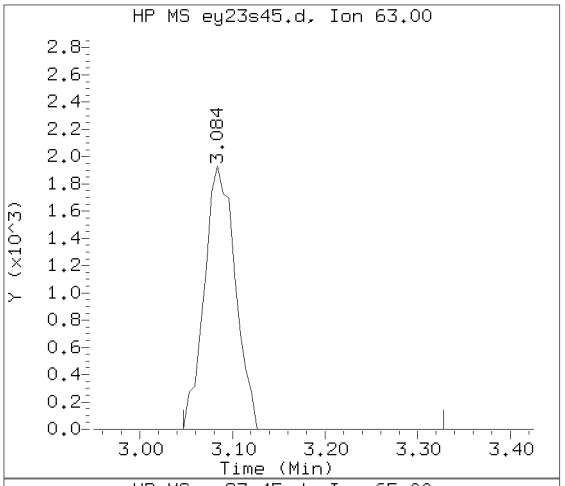
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.499	65	177783	250.000
36) 1,1-Dichloroethane	(2)	3.084	63	4457	0.509
42) cis-1,2-Dichloroethene	(2)	3.626	96	3871	0.738
52)$Dibromofluoromethane	(2)	4.078	113	233920	48.708
57)$1,2-Dichloroethane-d4	(2)	4.401	102	61382	50.649
66)*Fluorobenzene	(2)	4.742	96	1033263	50.000
71) Trichloroethene	(2)	5.108	95	4675	0.924
84)$Toluene-d8	(3)	6.388	98	1038883	49.293
101)*Chlorobenzene-d5	(3)	7.894	117	775998	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	394817	48.731
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	416701	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

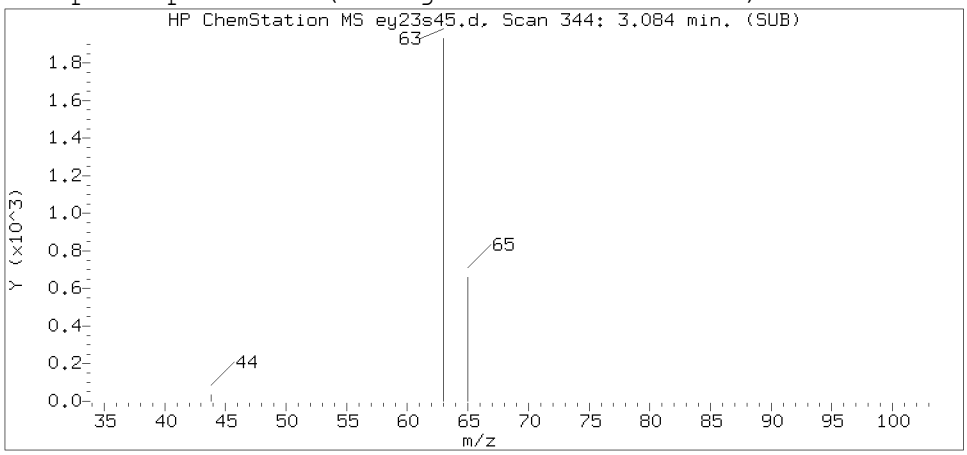
Digitally signed by Don V. Viray
on 05/24/2019 at 00:47.
Target 3.5 esignature user ID: dvv10203

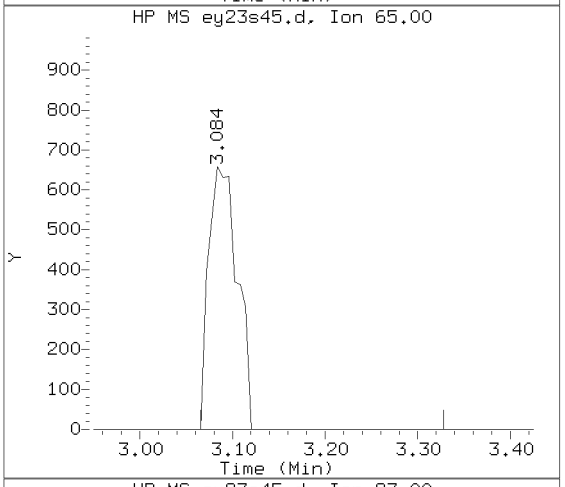
Reference Standard Spectrum for 1,1-Dichloroethane



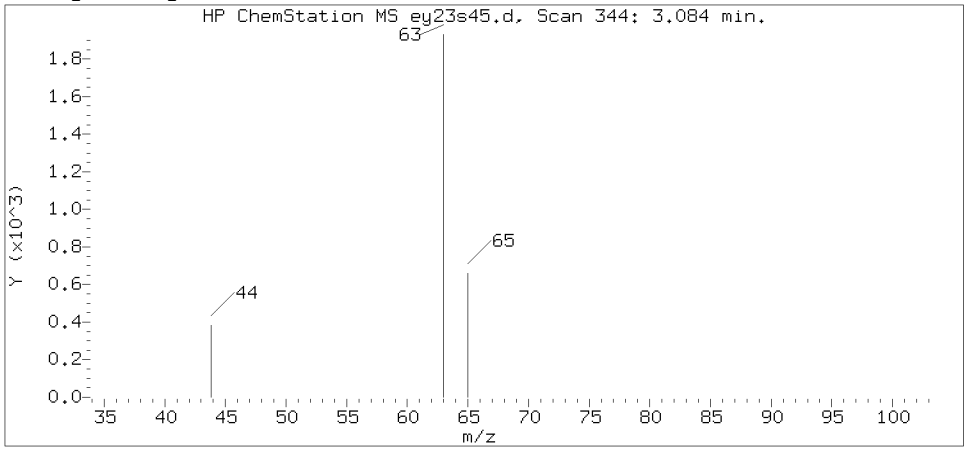


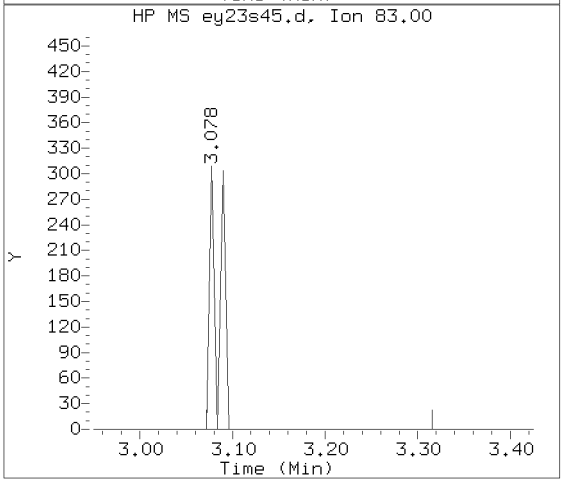
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19may23b.b/ey23s45.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 00:14 Analyst ID: DVV10203

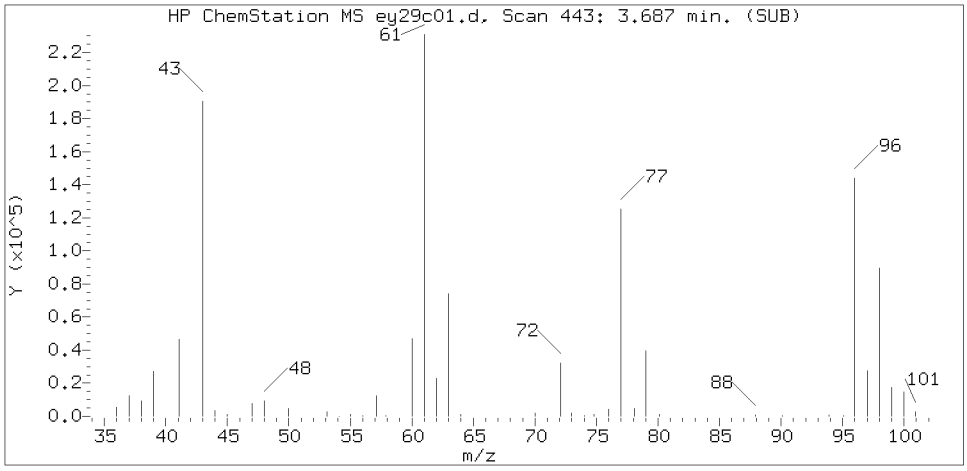
Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 00:30 Automation

Sample Name: 91J13 Lab Sample ID: 1057961

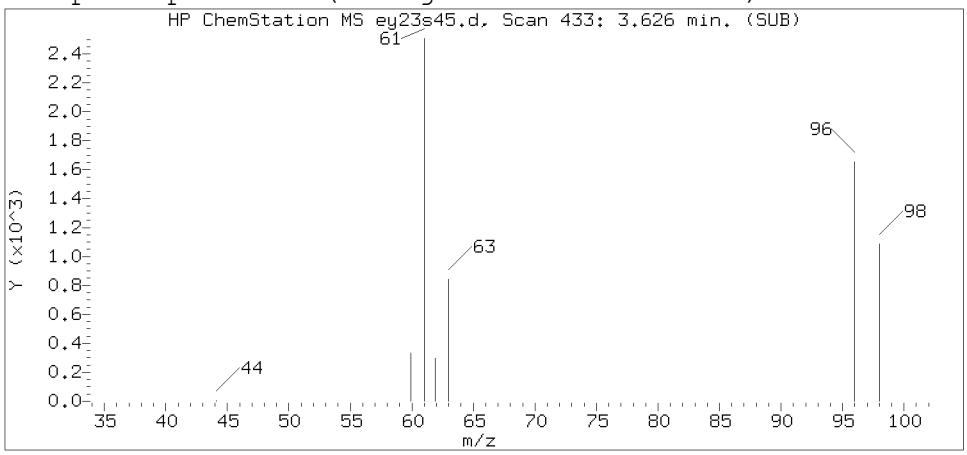
Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 344
Retention Time (minutes): 3.084
Relative Retention Time :-0.00046
Quant Ion : 63.00
Area (flag) : 4457
On-Column Amount (ng) : 0.5095

Digitally signed by Don V. Viray on 05/24/2019 at 00:47.
Target 3.5 esignature user ID: dvv10203

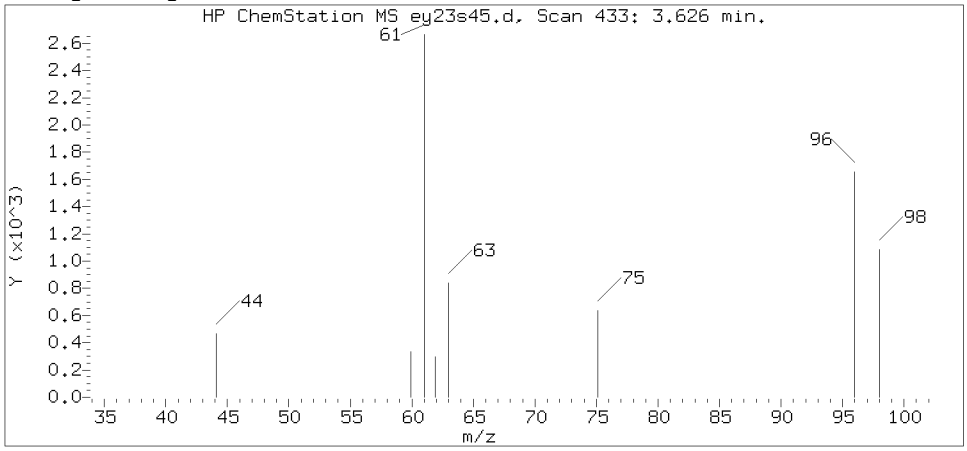
Reference Standard Spectrum for cis-1,2-Dichloroethene

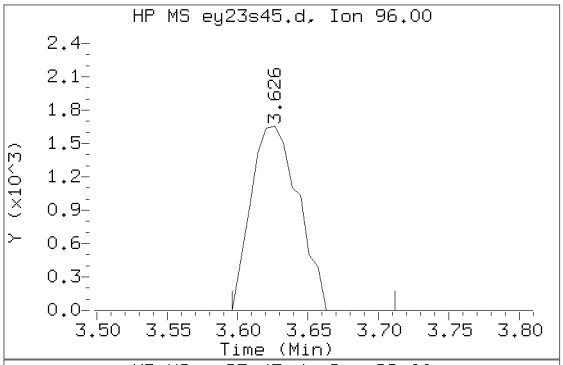


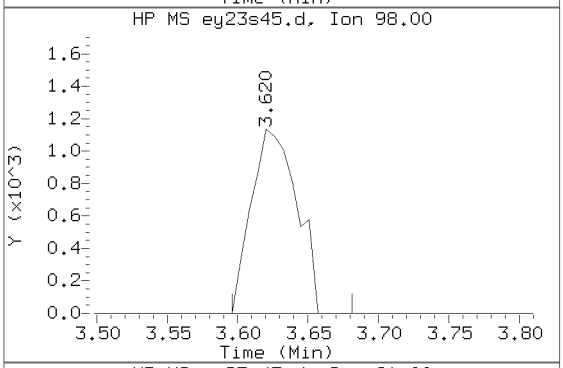
Sample Spectrum (Background Subtracted)

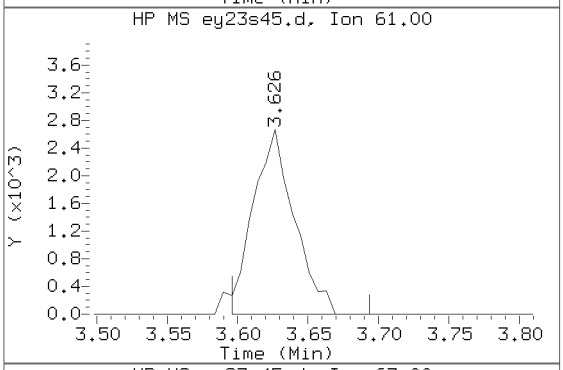


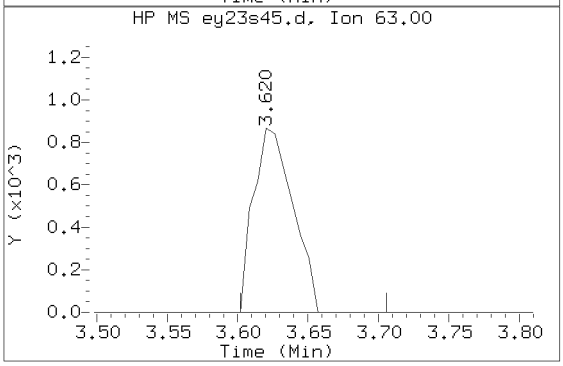
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may23b.b/ey23s45.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 00:14 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 00:30 Automation

Sample Name: 91J13 Lab Sample ID: 1057961

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 433
Retention Time (minutes): 3.626
Relative Retention Time :-0.00159
Quant Ion : 96.00
Area (flag) : 3871
On-Column Amount (ng) : 0.7377

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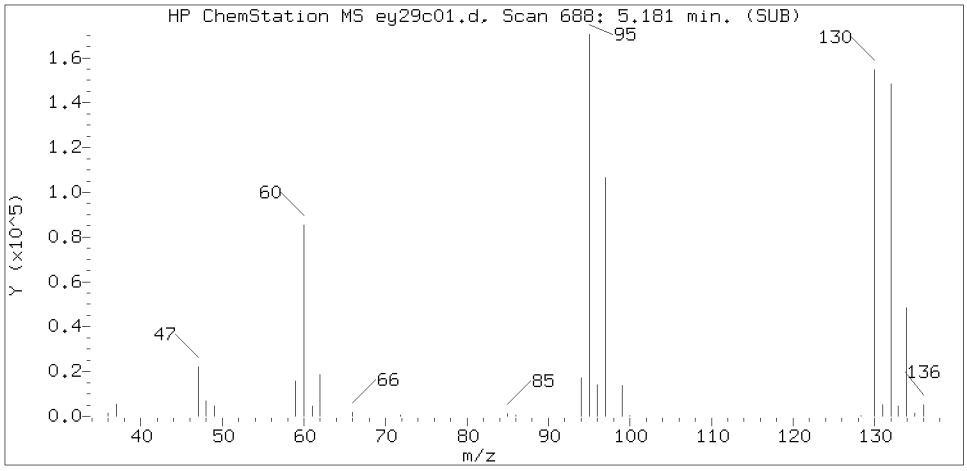
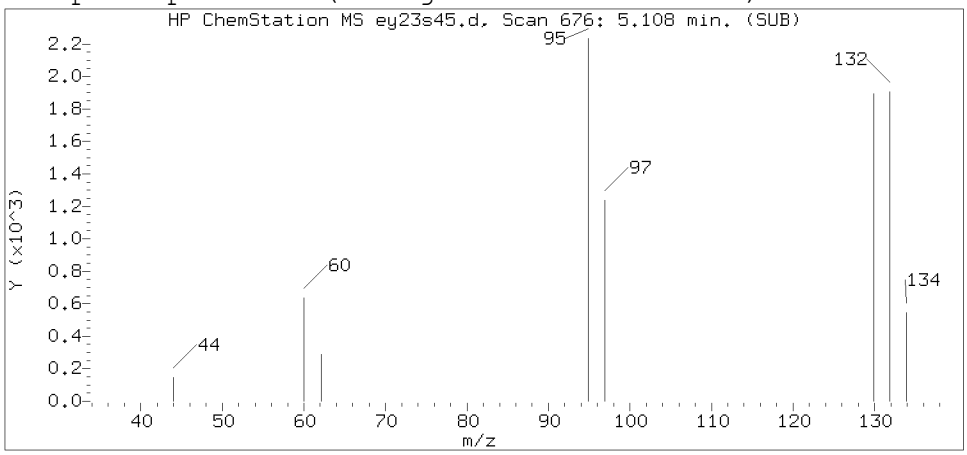
Target 3.5 esignature user ID: dvv10203

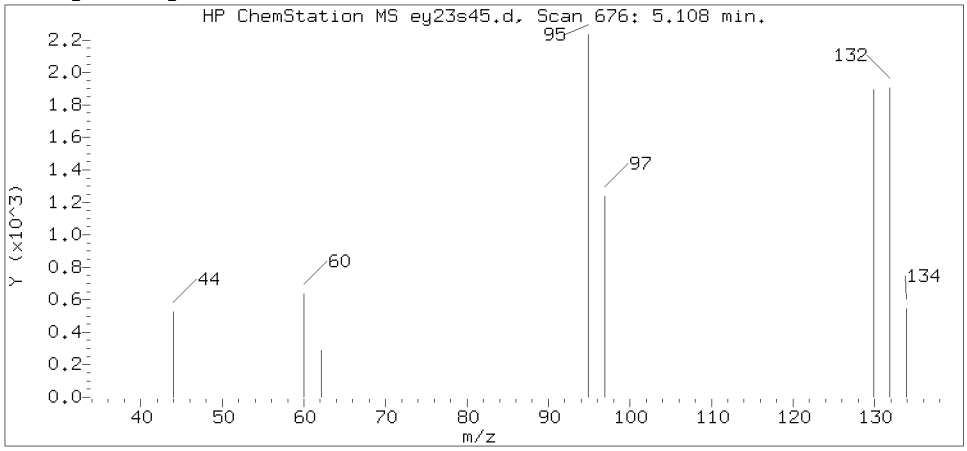
Reference Standard Spectrum for Trichloroethene

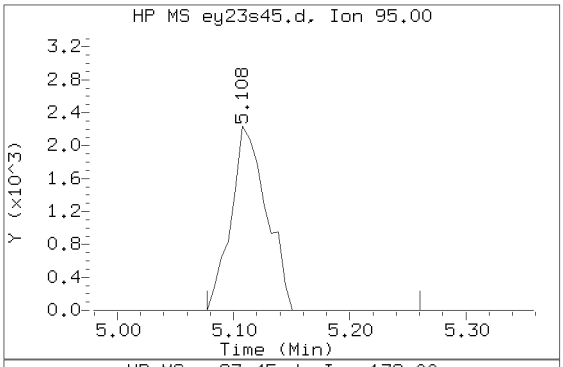


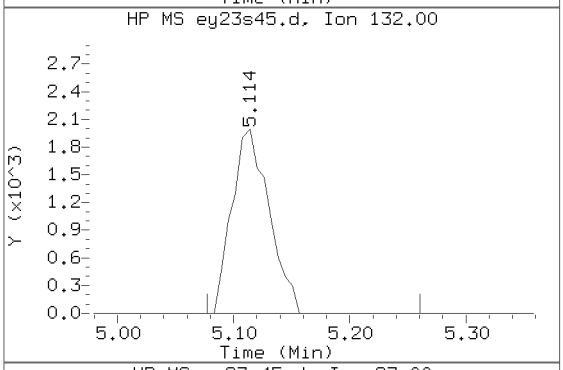
Sample Spectrum (Background Subtracted)

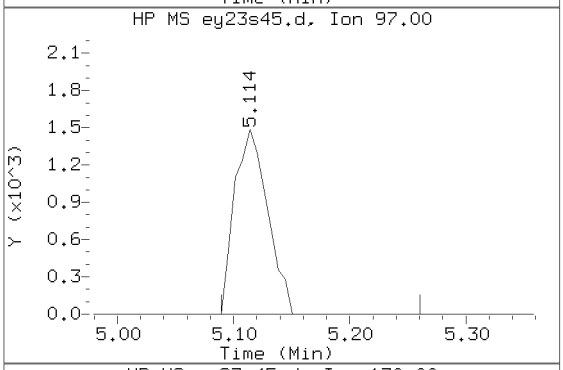


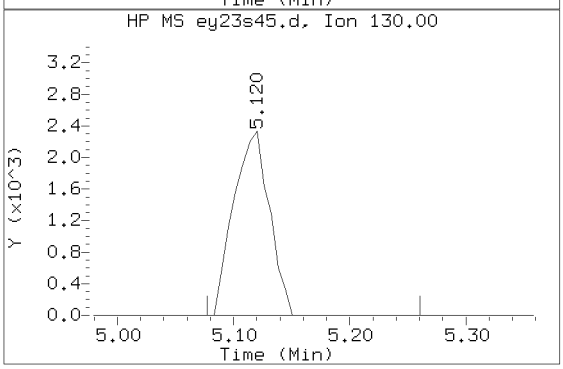
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may23b.b/ey23s45.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 00:14 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 00:30 Automation

Sample Name: 91J13 Lab Sample ID: 1057961

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 676
Retention Time (minutes)	: 5.108
Relative Retention Time	: 0.00139
Quant Ion	: 95.00
Area (flag)	: 4675
On-Column Amount (ng)	: 0.9245

Digitally signed by Don V. Viray on 05/24/2019 at 00:47.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

91J14

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1057962

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s46.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/24/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23s46.d
Injection date and time: **24-MAY-2019 00:34**
Data file Sample Info. Line: 91J14;1057962;1;0;;JCV91;;;ey23b31;
Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 24-May-2019 00:49 Automation

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.493(-0.006)	247	65	181524 (-3)	250.00	
66) Fluorobenzene	4.736(0.000)	615	96	1041937 (-1)	50.00	
101) Chlorobenzene-d5	7.894(0.000)	1133	117	778879 (0)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802(0.000)	1446	152	420500 (2)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.072(0.000)	113	232676	48.046	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.395(0.001)	102	60955	49.878	100%		80 - 120
84) Toluene-d8	(3)	6.388(-0.001)	98	1047348	49.511	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918(0.000)	95	396413	48.747	97%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)			Not Detected					0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Jason M. Long on 05/24/2019 at 08:26. Target 3.5 esignature user ID: jml01693

Data file: /chem/HP15648.i/19may23b.b/ey23s46.d Injection date and time: **24-MAY-2019 00:34**
Data file Sample Info. Line: 91J14;1057962;1;0;;JCV91;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 24-May-2019 00:49 Automation

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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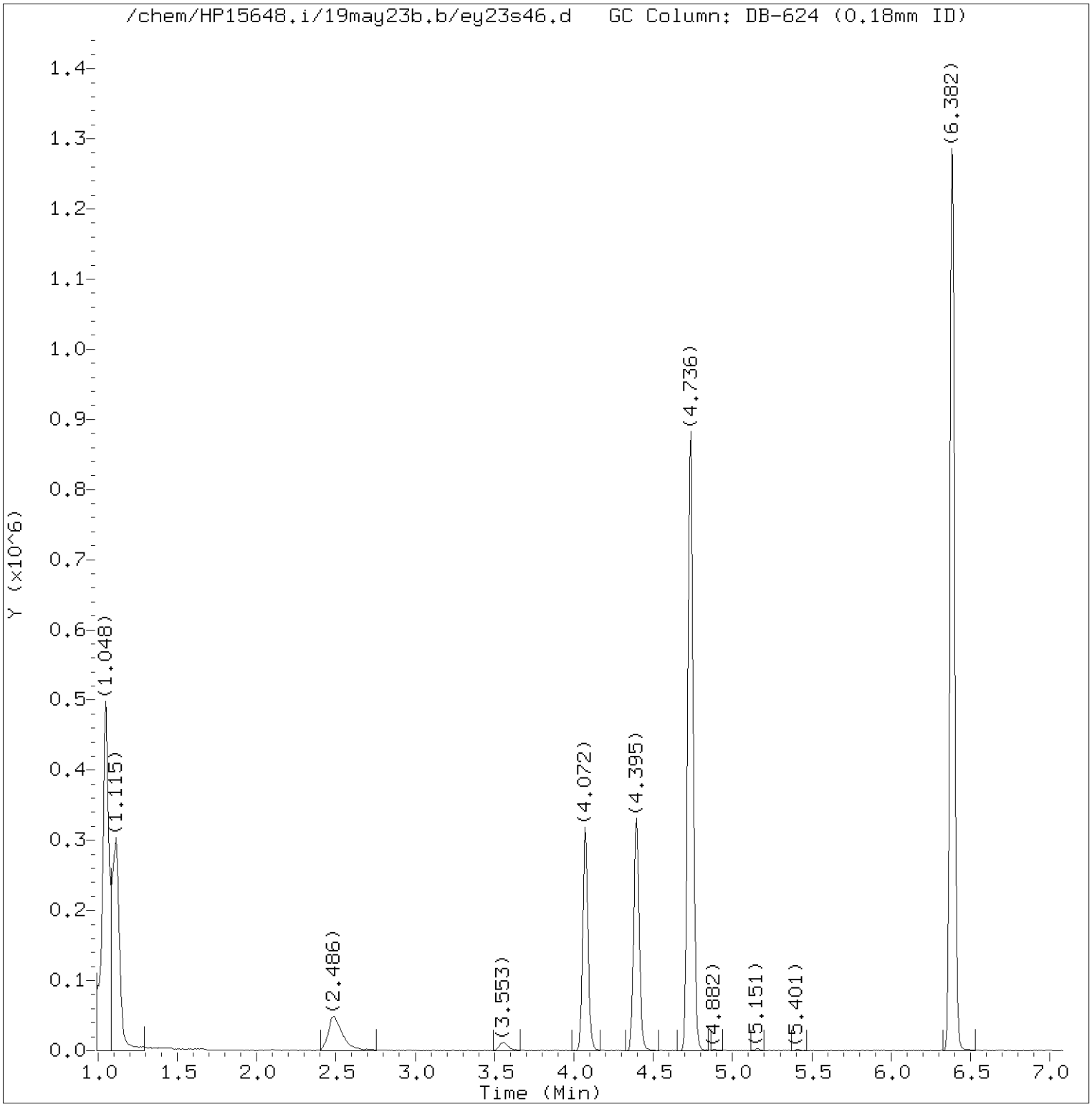
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Jason M. Long on 05/24/2019 at 08:26. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

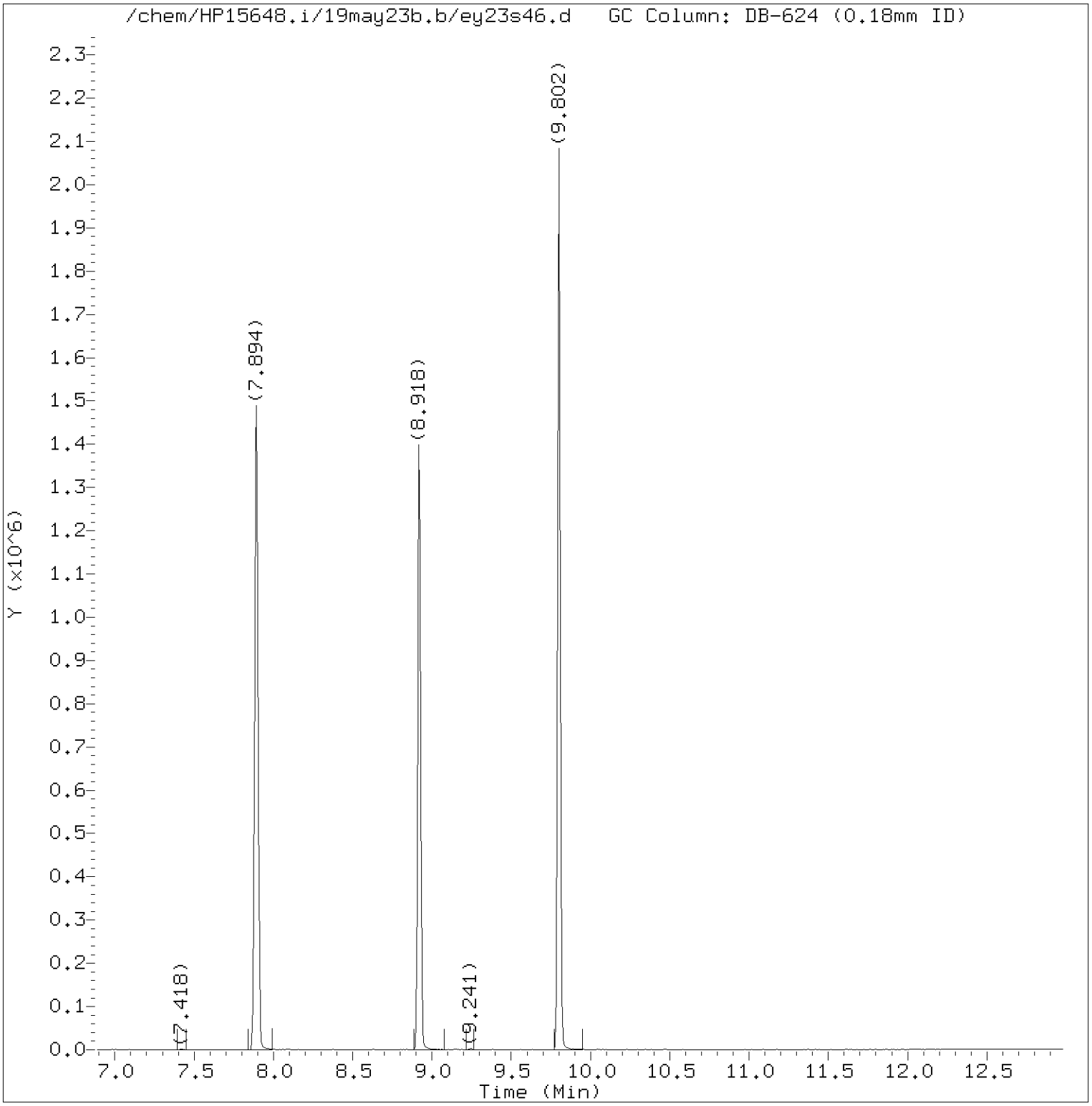
Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s46.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 00:34 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 00:49 Automation

Sample Name: 91J14 Lab Sample ID: 1057962

Digitally signed by Jason M. Long
on 05/24/2019 at 08:26.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s46.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 00:34 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 00:49 Automation

Sample Name: 91J14 Lab Sample ID: 1057962

Digitally signed by Jason M. Long
on 05/24/2019 at 08:26.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s46.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 00:34 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 00:49 Automation

Sample Name: 91J14 Lab Sample ID: 1057962

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.493	65	181524	250.000
52)$Dibromofluoromethane	(2)	4.072	113	232676	48.046
57)$1,2-Dichloroethane-d4	(2)	4.395	102	60955	49.878
66)*Fluorobenzene	(2)	4.736	96	1041937	50.000
84)$Toluene-d8	(3)	6.388	98	1047348	49.511
101)*Chlorobenzene-d5	(3)	7.894	117	778879	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	396413	48.747
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	420500	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/24/2019 at 08:26.
Target 3.5 esignature user ID: jml01693

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

91J15

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1057963

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s47.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/24/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.5	J
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23s47.d
Injection date and time: **24-MAY-2019 00:53**
Data file Sample Info. Line: 91J15;1057963;1;0;;JCV91;;;ey23b31;
Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 24-May-2019 01:09 Automation

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.486	(0.000)	246	65	174994	(-6)	250.00	
66) Fluorobenzene	4.742	(-0.006)	616	96	1016113	(-3)	50.00	
101) Chlorobenzene-d5	7.894	(0.000)	1133	117	769965	(-1)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802	(0.000)	1446	152	409883	(-1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.078	(0.000)	113	229119	48.514	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.401	(0.001)	102	60461	50.731	101%		80 - 120
84) Toluene-d8	(3)	6.388	(-0.001)	98	1022068	48.875	98%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918	(0.000)	95	388578	48.337	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	3.084	(-0.000)	63	4482	0.521	0.52		J	0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	4.108	(-0.000)	97	11078	1.463	1.46			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

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Data file: /chem/HP15648.i/19may23b.b/ey23s47.d Injection date and time: **24-MAY-2019 00:53**
Data file Sample Info. Line: 91J15;1057963;1;0;;JCV91;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 24-May-2019 01:09 Automation

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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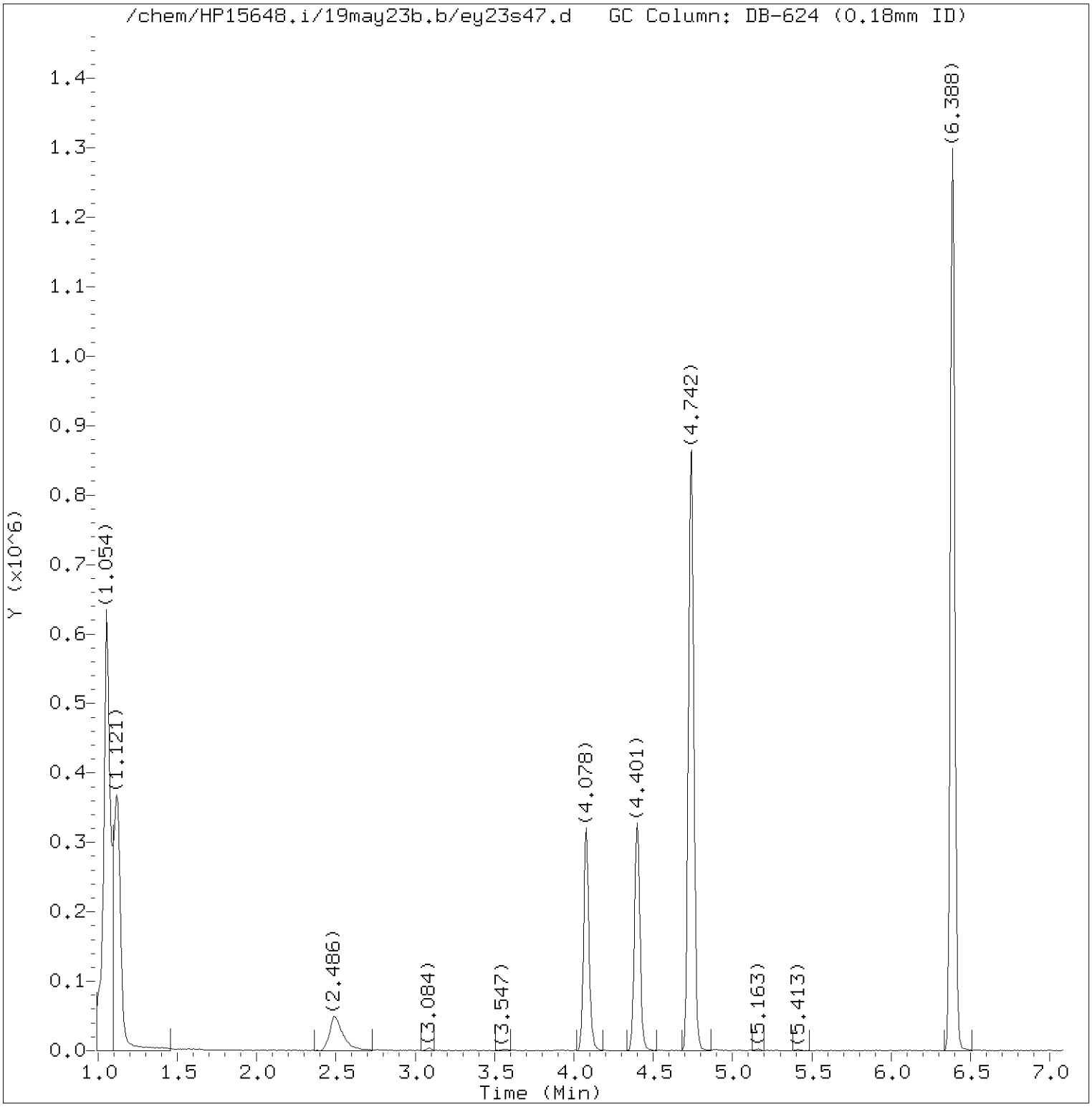
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Jason M. Long on 05/24/2019 at 08:26. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

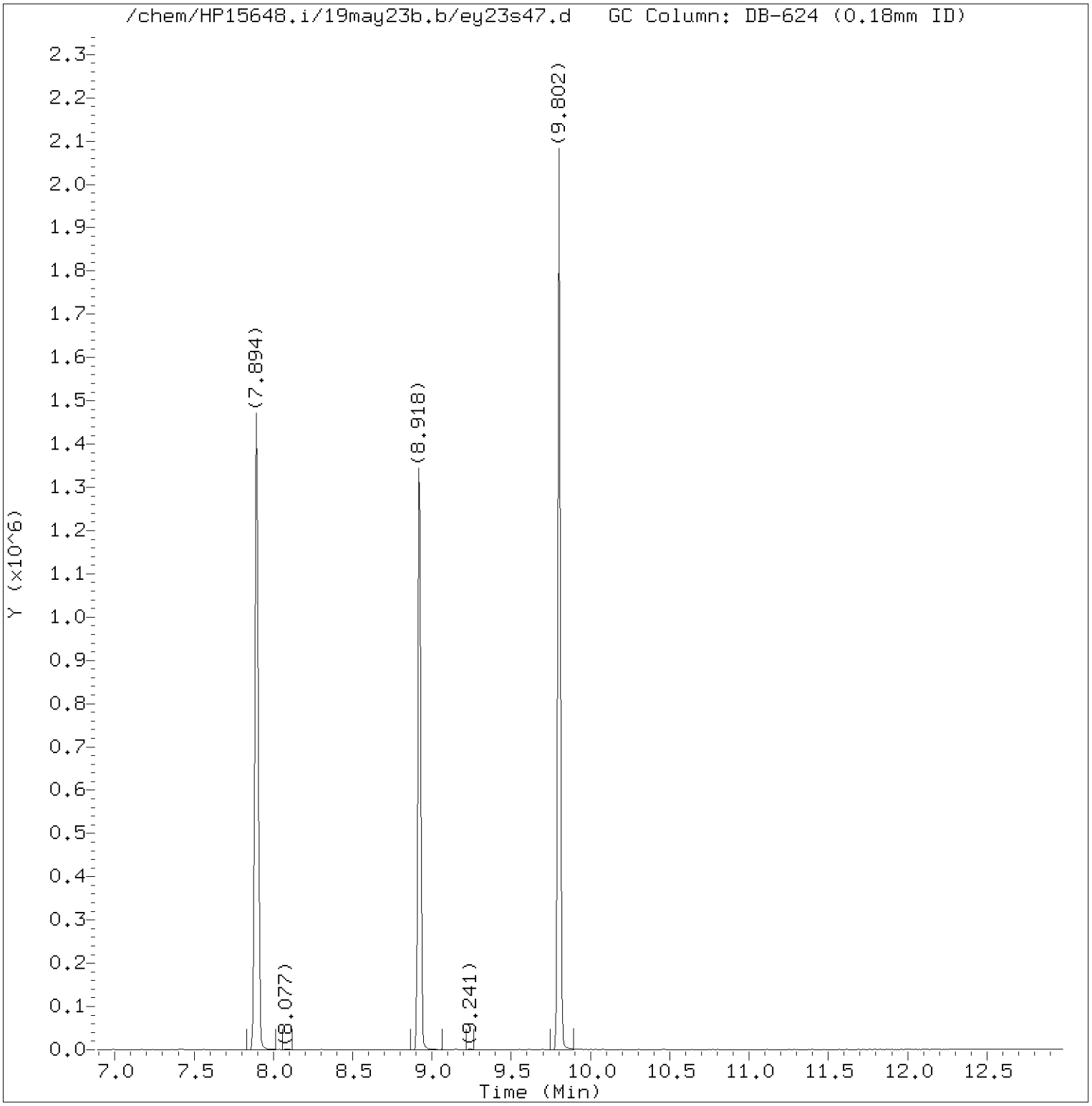
Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s47.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 00:53 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 01:09 Automation

Sample Name: 91J15 Lab Sample ID: 1057963

Digitally signed by Jason M. Long
on 05/24/2019 at 08:26.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s47.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 00:53 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 01:09 Automation

Sample Name: 91J15 Lab Sample ID: 1057963

Digitally signed by Jason M. Long
on 05/24/2019 at 08:26.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s47.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 00:53 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 01:09 Automation

Sample Name: 91J15 Lab Sample ID: 1057963

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.486	65	174994	250.000
36) 1,1-Dichloroethane	(2)	3.084	63	4482	0.521
52)$Dibromofluoromethane	(2)	4.078	113	229119	48.514
53) 1,1,1-Trichloroethane	(2)	4.108	97	11078	1.463
57)$1,2-Dichloroethane-d4	(2)	4.401	102	60461	50.731
66)*Fluorobenzene	(2)	4.742	96	1016113	50.000
84)$Toluene-d8	(3)	6.388	98	1022068	48.875
101)*Chlorobenzene-d5	(3)	7.894	117	769965	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	388578	48.337
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	409883	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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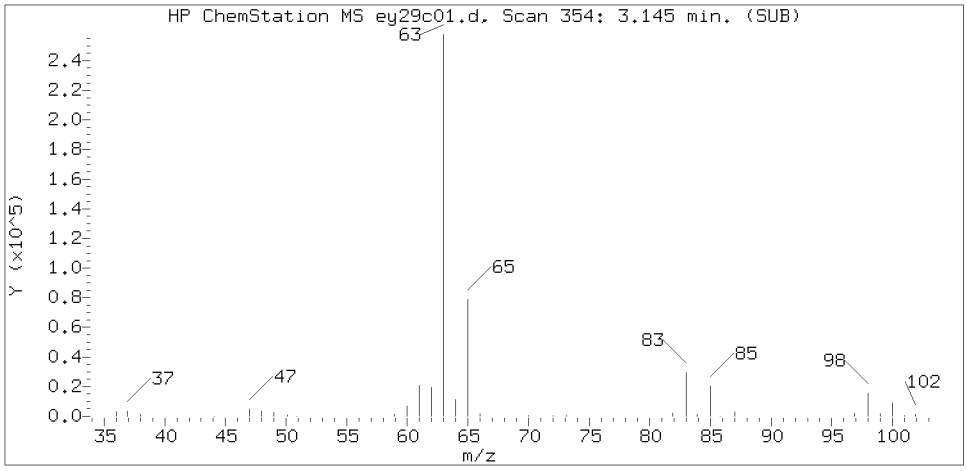
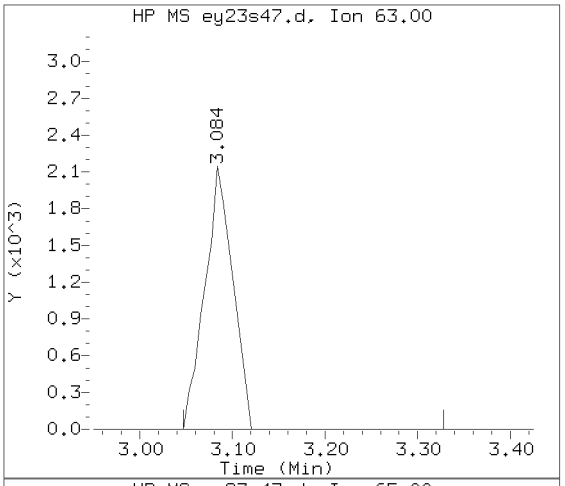
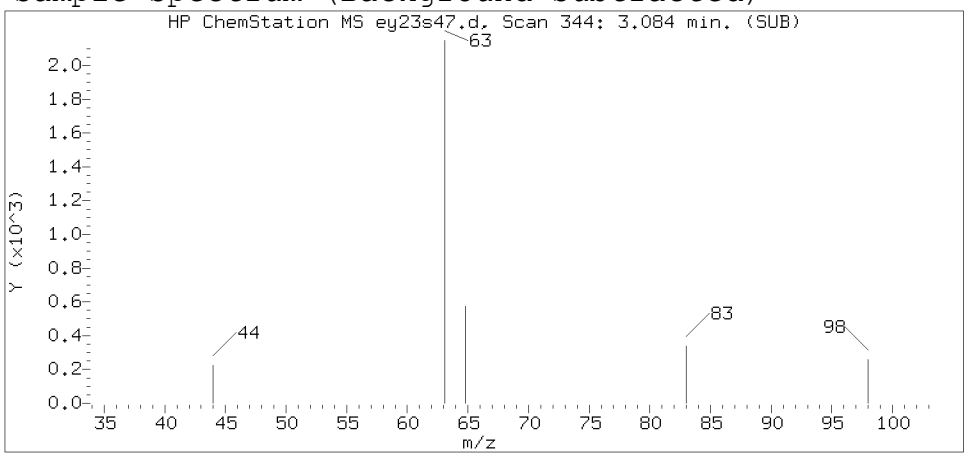
on 05/24/2019 at 08:26.
Target 3.5 esignature user ID: jml01693

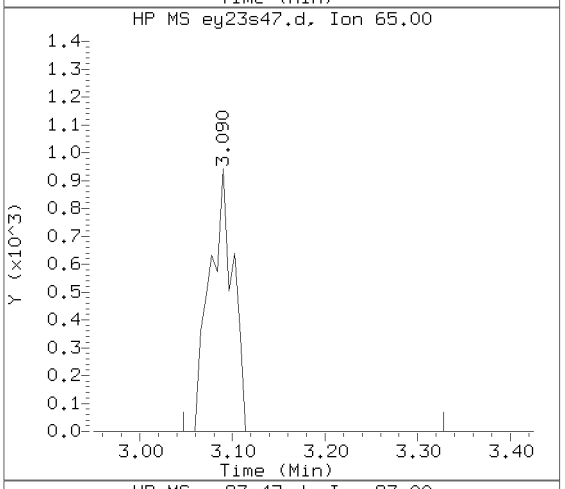
Reference Standard Spectrum for 1,1-Dichloroethane



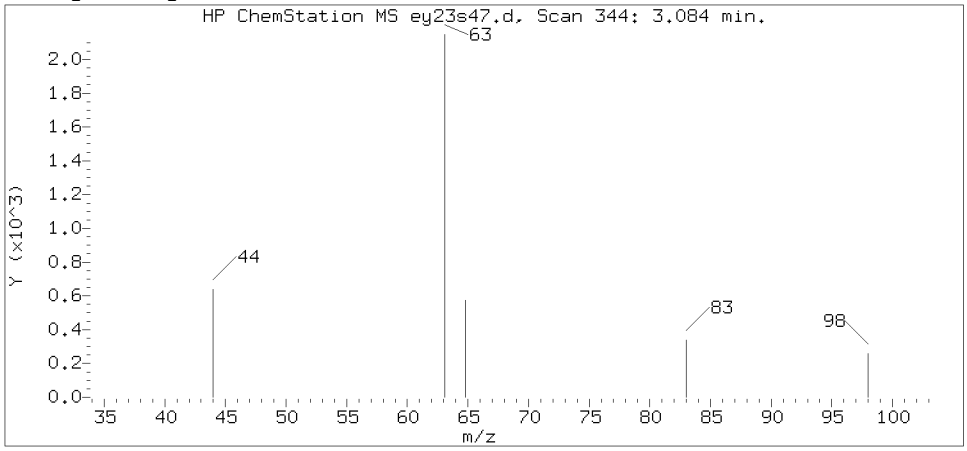


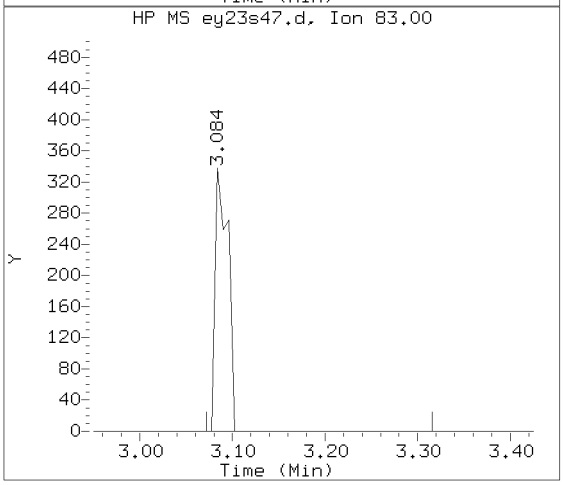
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19may23b.b/ey23s47.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 00:53 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 01:09 Automation

Sample Name: 91J15 Lab Sample ID: 1057963

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 344
Retention Time (minutes): 3.084
Relative Retention Time :-0.00046
Quant Ion : 63.00
Area (flag) : 4482
On-Column Amount (ng) : 0.5209

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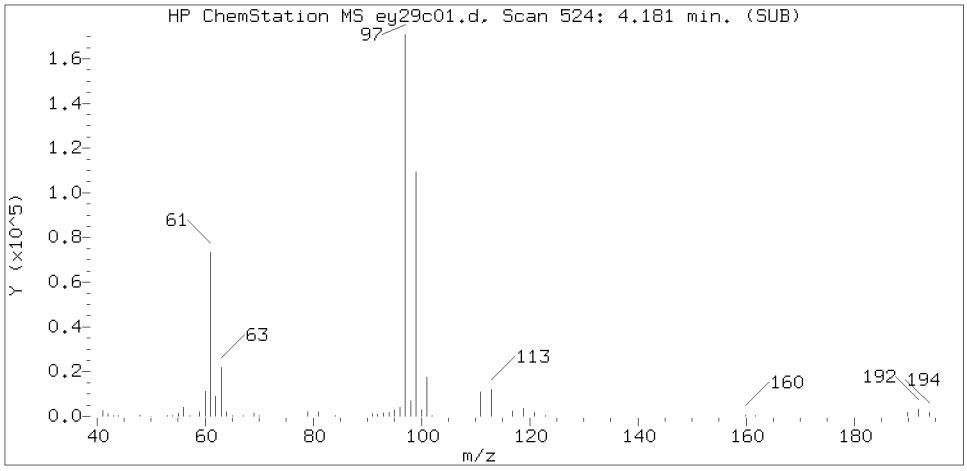
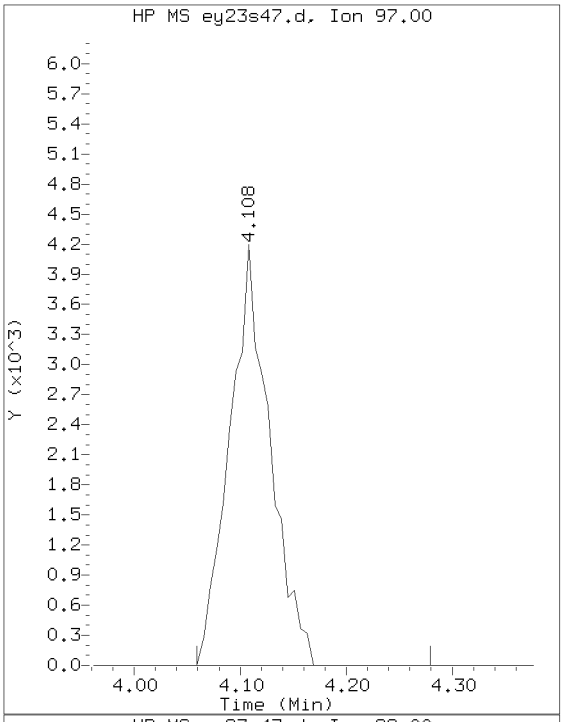
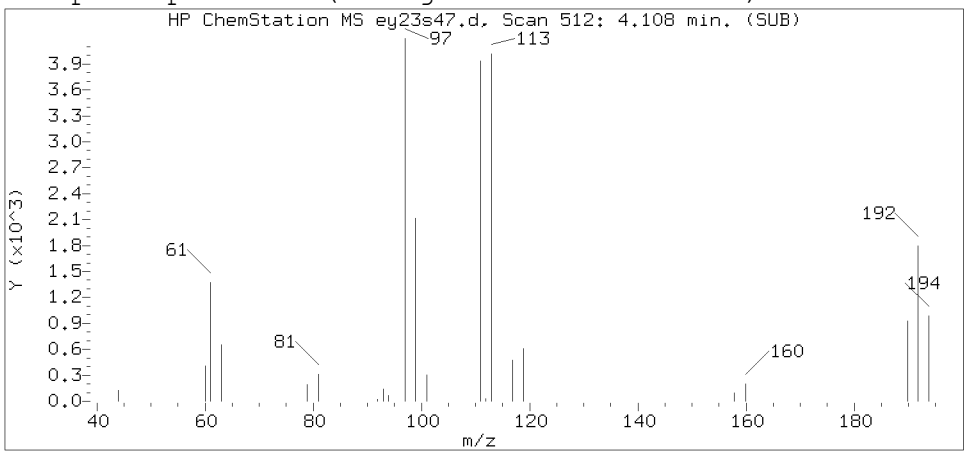
Target 3.5 esignature user ID: jml01693

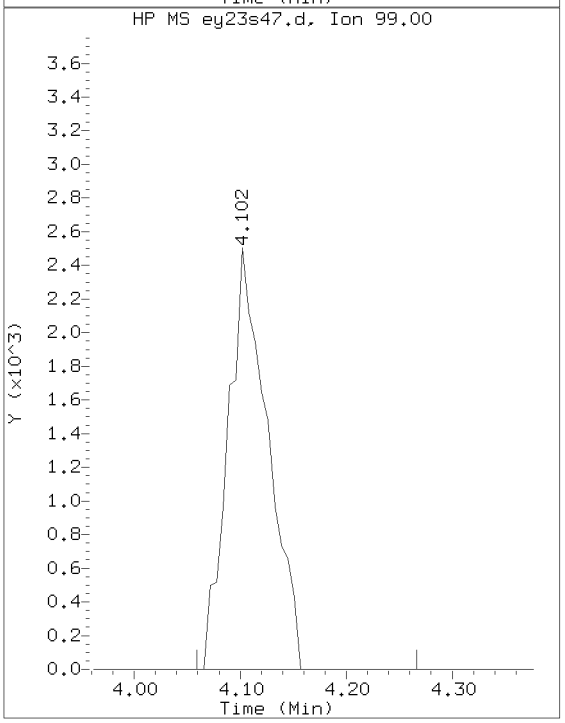
Reference Standard Spectrum for 1,1,1-Trichloroethane



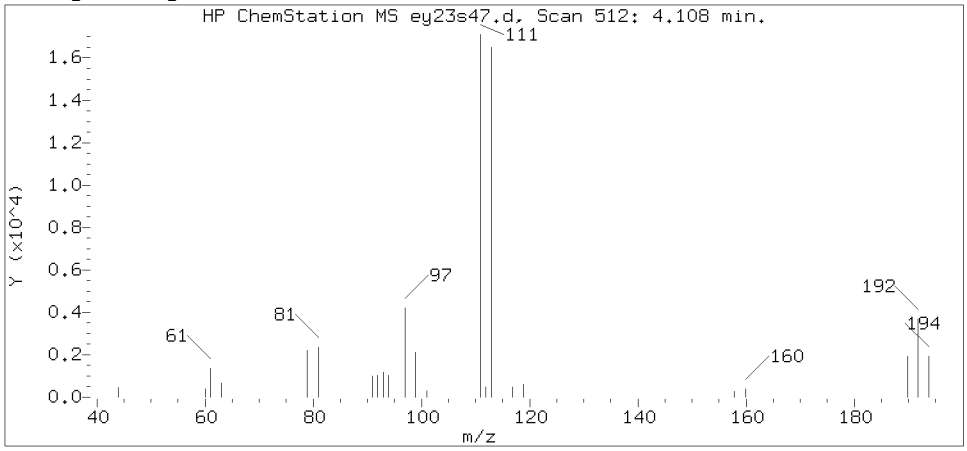


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP15648.i/19may23b.b/ey23s47.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 00:53 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 01:09 Automation

Sample Name: 91J15 Lab Sample ID: 1057963

Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 512
Retention Time (minutes): 4.108
Relative Retention Time :-0.00017
Quant Ion : 97.00
Area (flag) : 11078
On-Column Amount (ng) : 1.4629

Digitally signed by Jason M. Long on 05/24/2019 at 08:26.
Target 3.5 esignature user ID: jml01693

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

91J16

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1057964

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s48.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/24/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	5	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	0.8	J
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23s48.d
Injection date and time: **24-MAY-2019 01:13**
Data file Sample Info. Line: 91J16;1057964;1;0;;JCV91;;;ey23b31;
Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 24-May-2019 01:29 Automation

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.499(-0.012)	248	65	178272 (-4)	250.00	
66) Fluorobenzene	4.742(-0.006)	616	96	1013611 (-3)	50.00	
101) Chlorobenzene-d5	7.894(0.000)	1133	117	755224 (-3)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802(0.000)	1446	152	404901 (-2)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.078(0.000)	113	226190	48.012	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.401(0.001)	102	58754	49.421	99%		80 - 120
84) Toluene-d8	(3)	6.388(-0.001)	98	1012375	49.357	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918(0.000)	95	379057	48.073	96%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	5.114(0.000)	95	24573	4.953	4.95			0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)	7.065(-0.001)	166	4214	0.826	0.83		J	0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Jason M. Long on 05/24/2019 at 08:26. Target 3.5 esignature user ID: jml01693

Data file: /chem/HP15648.i/19may23b.b/ey23s48.d Injection date and time: **24-MAY-2019 01:13**
Data file Sample Info. Line: 91J16;1057964;1;0;;JCV91;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 24-May-2019 01:29 Automation

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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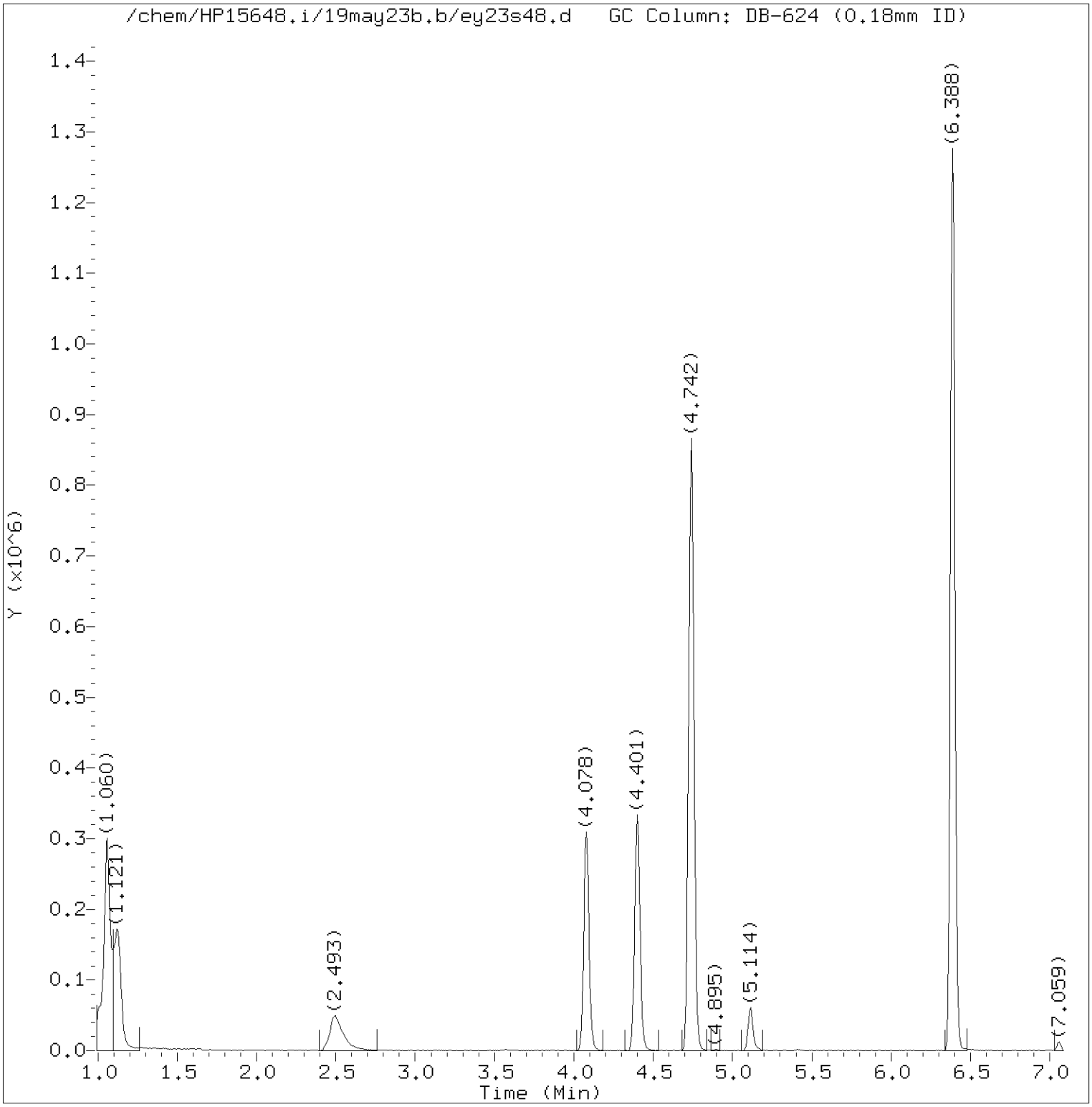
Total number of targets = 24

Digitally signed by Jason M. Long on 05/24/2019 at 08:26. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

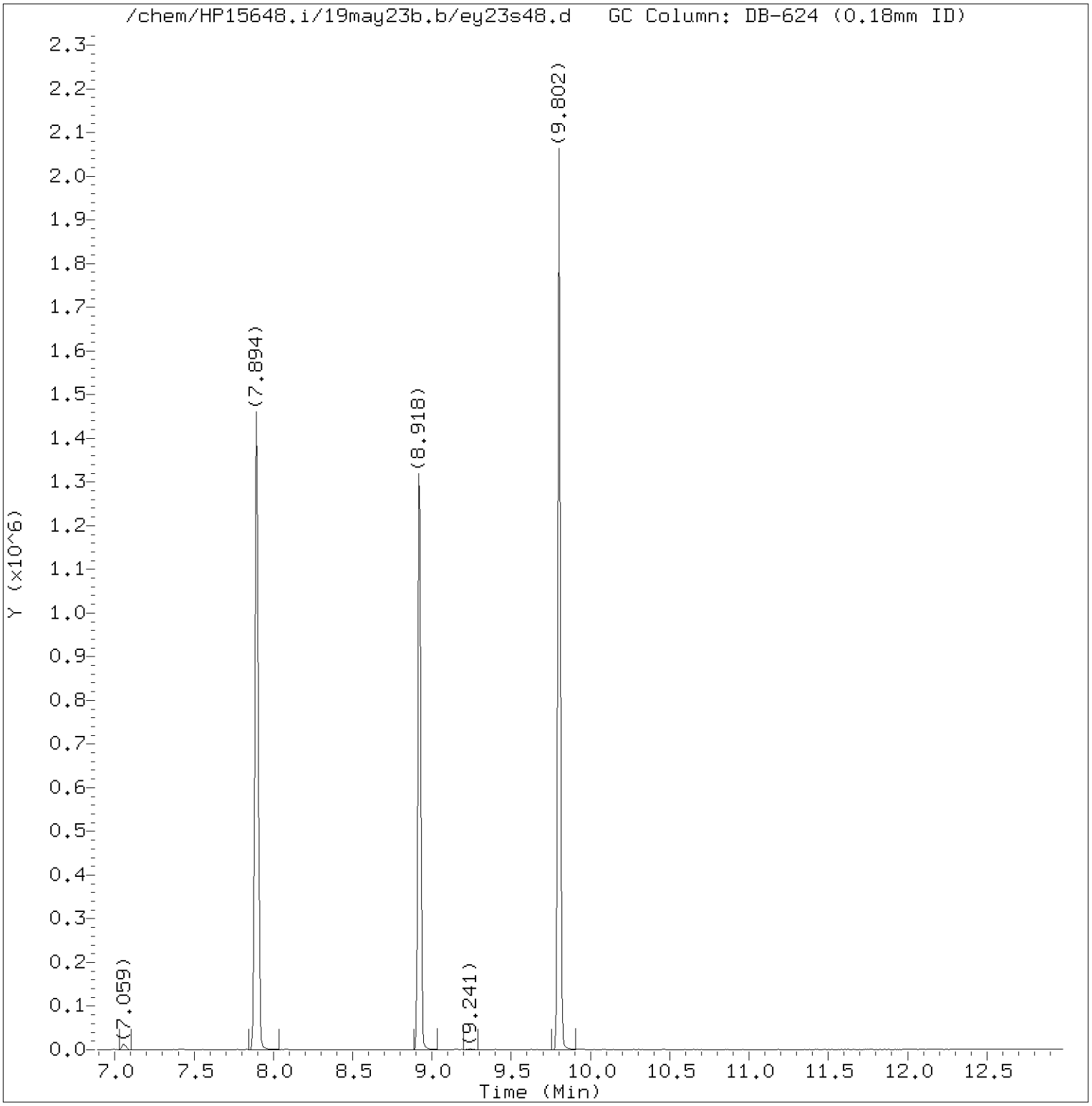
Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s48.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 01:13 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 01:29 Automation

Sample Name: 91J16 Lab Sample ID: 1057964

Digitally signed by Jason M. Long
on 05/24/2019 at 08:26.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s48.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 01:13 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 01:29 Automation

Sample Name: 91J16 Lab Sample ID: 1057964

Digitally signed by Jason M. Long
on 05/24/2019 at 08:26.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s48.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 01:13 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 01:29 Automation

Sample Name: 91J16 Lab Sample ID: 1057964

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.499	65	178272	250.000
52)$Dibromofluoromethane	(2)	4.078	113	226190	48.012
57)$1,2-Dichloroethane-d4	(2)	4.401	102	58754	49.421
66)*Fluorobenzene	(2)	4.742	96	1013611	50.000
71) Trichloroethene	(2)	5.114	95	24573	4.953
84)$Toluene-d8	(3)	6.388	98	1012375	49.357
94) Tetrachloroethene	(3)	7.065	166	4214	0.826
101)*Chlorobenzene-d5	(3)	7.894	117	755224	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	379057	48.073
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	404901	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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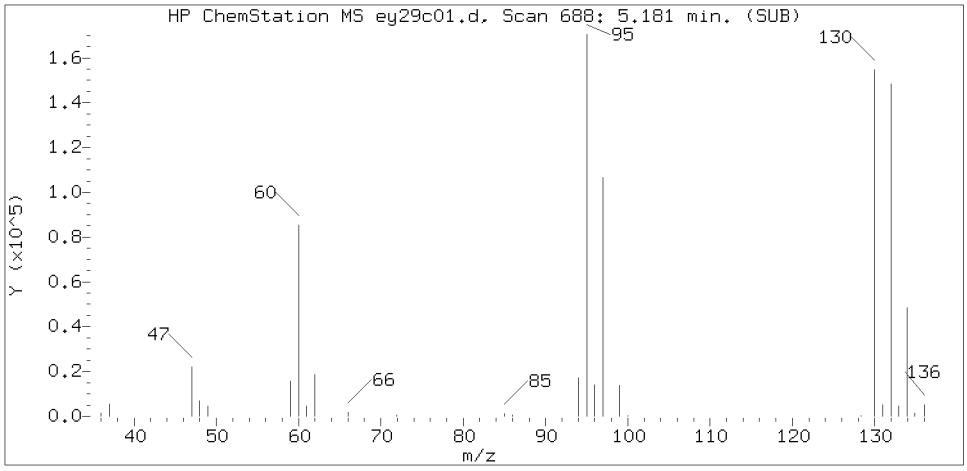
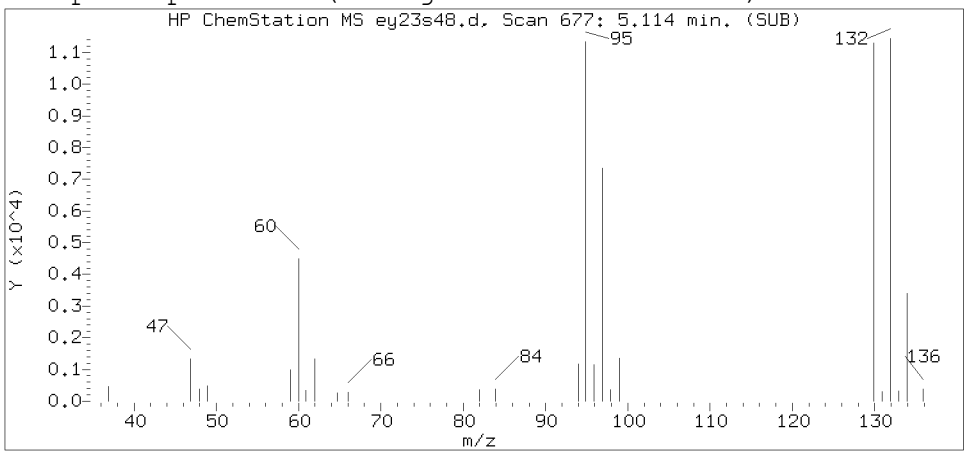
on 05/24/2019 at 08:26.
Target 3.5 esignature user ID: jml01693

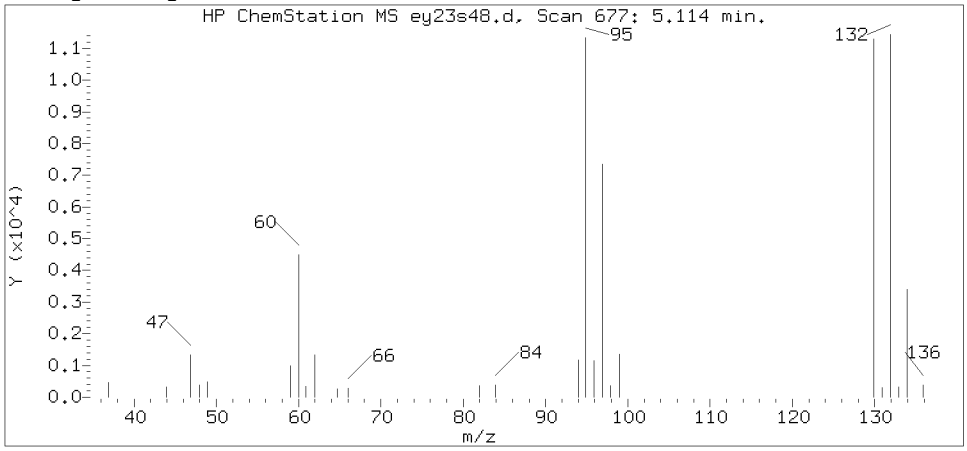
Reference Standard Spectrum for Trichloroethene

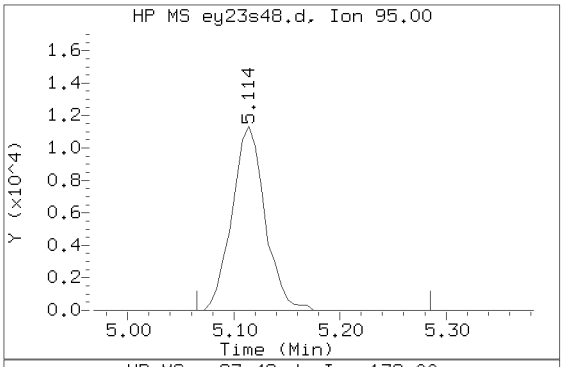


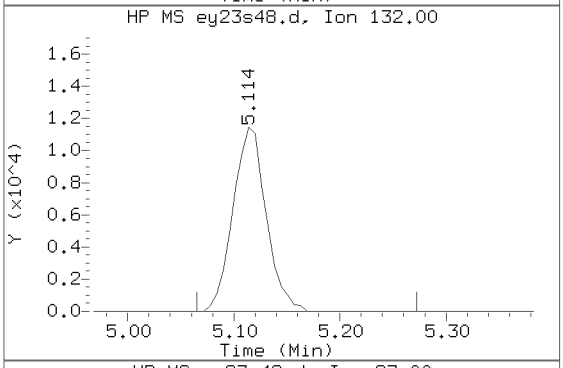
Sample Spectrum (Background Subtracted)

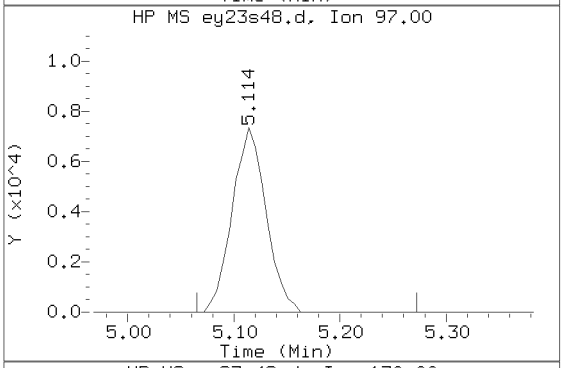


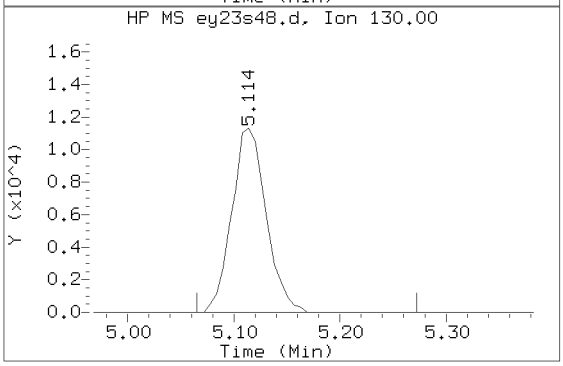
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may23b.b/ey23s48.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 01:13 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 01:29 Automation

Sample Name: 91J16 Lab Sample ID: 1057964

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 677
Retention Time (minutes): 5.114
Relative Retention Time : 0.00011
Quant Ion : 95.00
Area (flag) : 24573
On-Column Amount (ng) : 4.9532

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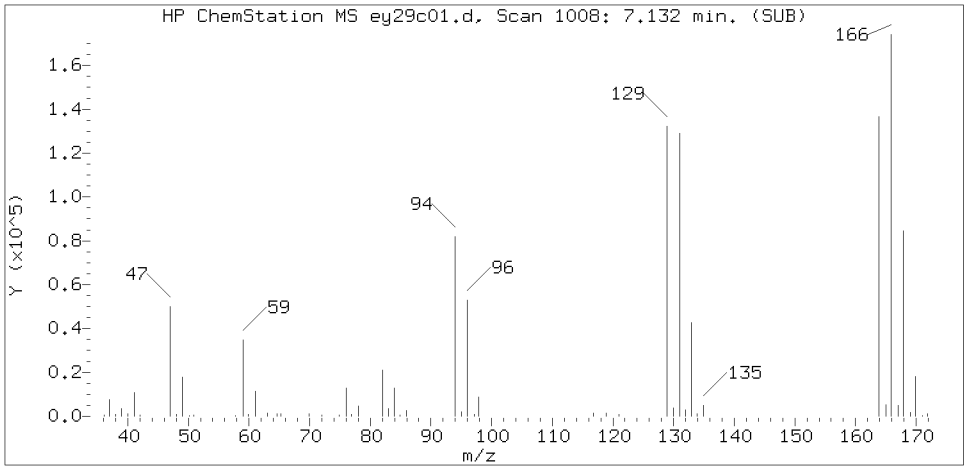
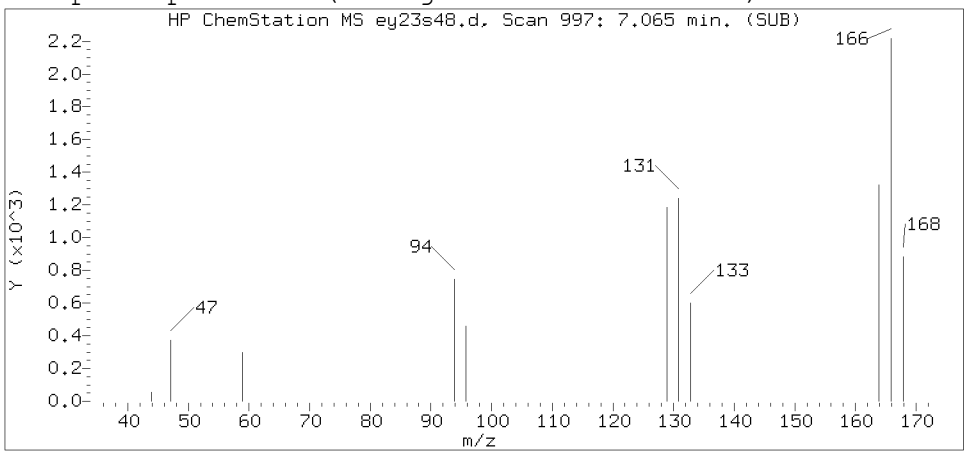
Target 3.5 esignature user ID: jml01683

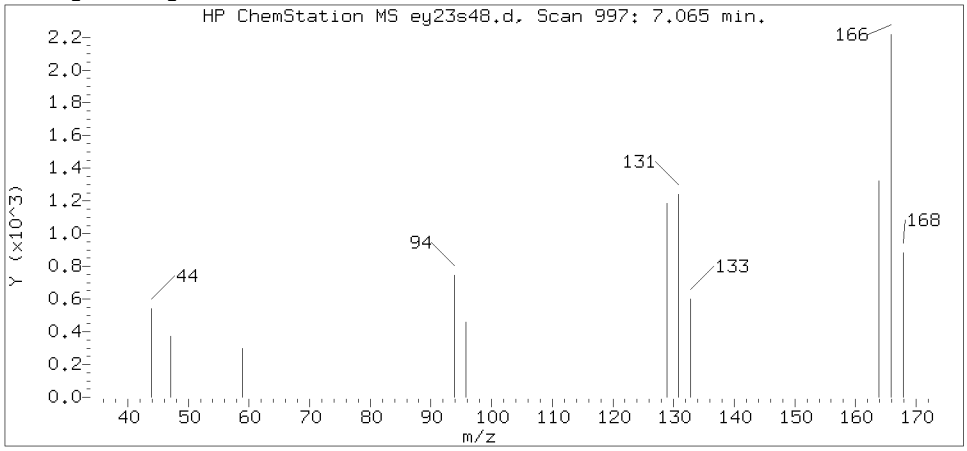
Reference Standard Spectrum for Tetrachloroethene

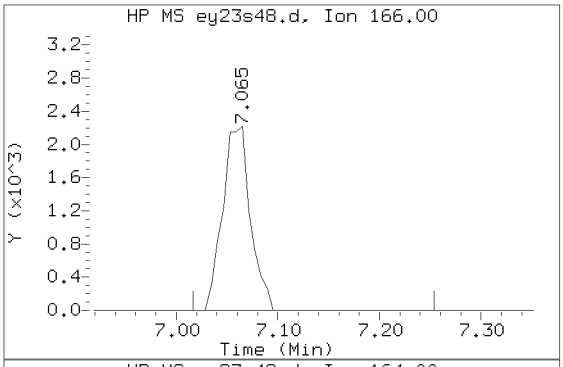


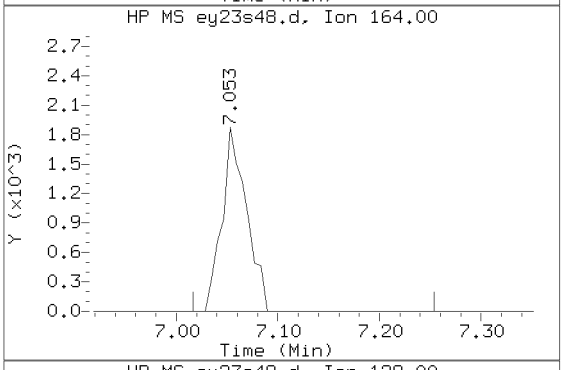
Sample Spectrum (Background Subtracted)

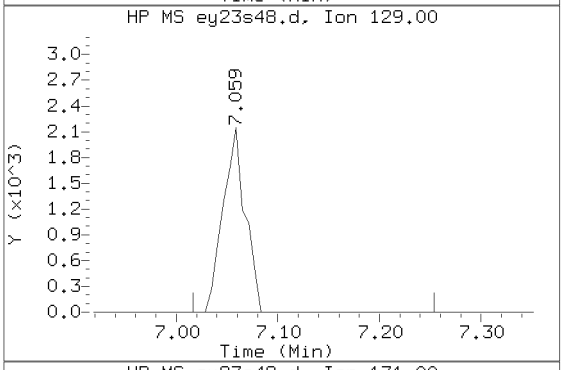


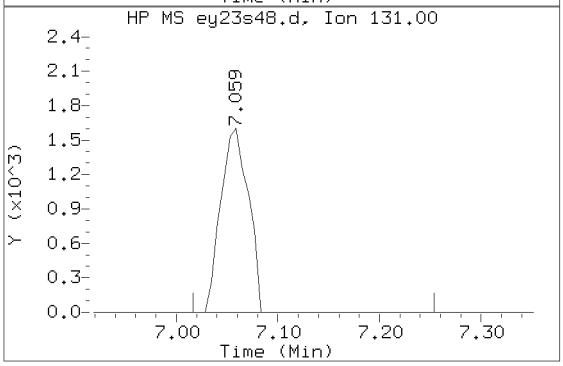
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may23b.b/ey23s48.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 01:13 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 01:29 Automation

Sample Name: 91J16 Lab Sample ID: 1057964

Compound Number : 94
Compound Name : Tetrachloroethene
Scan Number : 997
Retention Time (minutes): 7.065
Relative Retention Time :-0.00155
Quant Ion : 166.00
Area (flag) : 4214
On-Column Amount (ng) : 0.8258

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Target 3.5 esignature user ID: jml01683

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

91J17

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1057965

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s49.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/24/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23s49.d Injection date and time: **24-MAY-2019 01:33**
Data file Sample Info. Line: 91J17;1057965;1;0;;JCV91;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 24-May-2019 08:09 jml01693

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.493	(-0.006)	247	65	178743	(-4)	250.00	
66) Fluorobenzene	4.736	(0.000)	615	96	1017404	(-3)	50.00	
101) Chlorobenzene-d5	7.894	(0.000)	1133	117	759072	(-3)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802	(0.000)	1446	152	408618	(-1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.072	(0.000)	113	227644	48.140	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.395	(0.001)	102	59313	49.705	99%		80 - 120
84) Toluene-d8	(3)	6.382	(0.000)	98	1014209	49.196	98%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918	(0.000)	95	384963	48.574	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)	3.919	(-0.000)	83	9682	1.182	1.18			0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Jason M. Long on 05/24/2019 at 08:26. Target 3.5 esignature user ID: jml01693

Data file: /chem/HP15648.i/19may23b.b/ey23s49.d Injection date and time: **24-MAY-2019 01:33**
Data file Sample Info. Line: 91J17;1057965;1;0;;JCV91;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 24-May-2019 08:09 jml01693

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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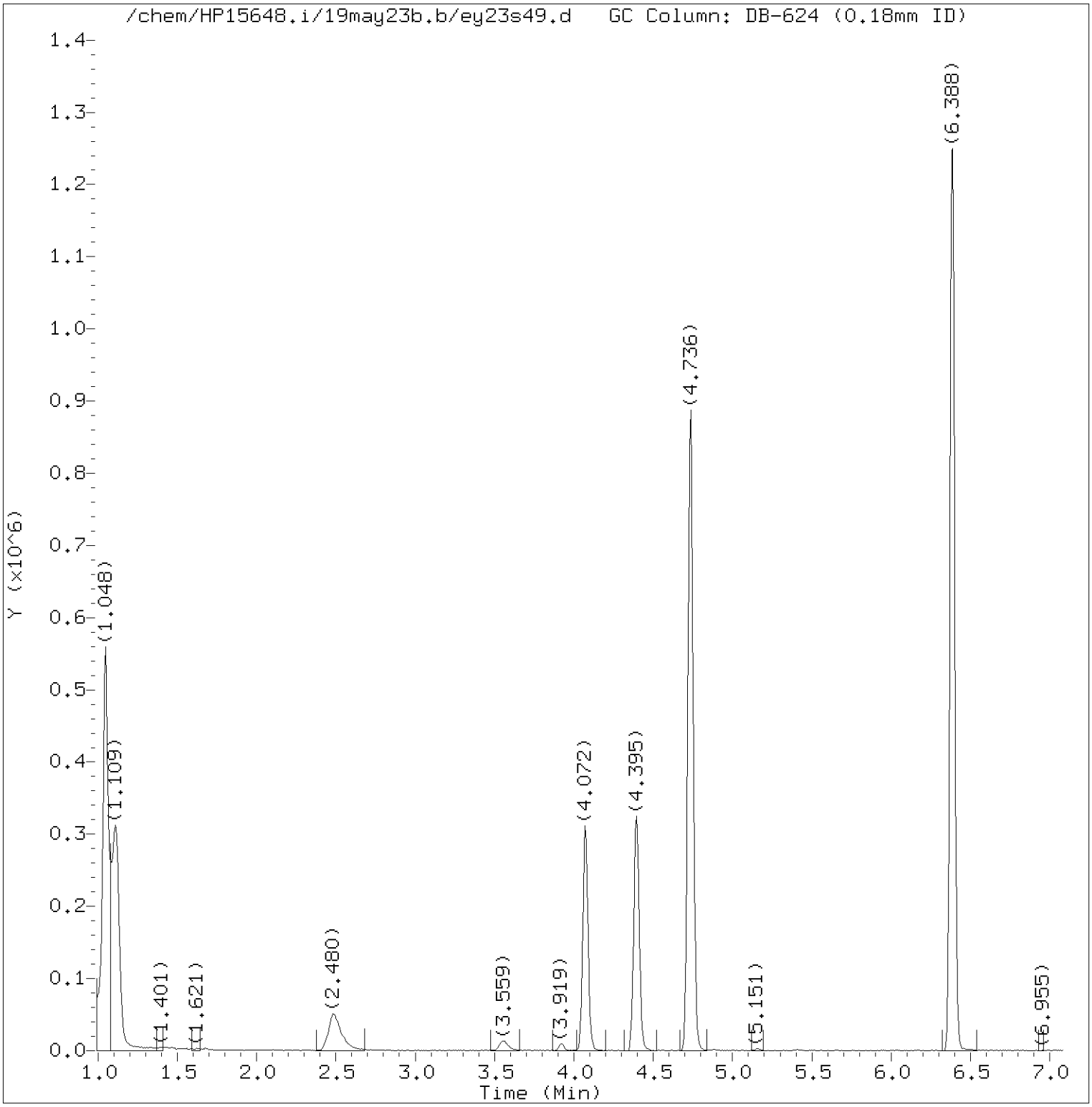
Total number of targets = 24

Digitally signed by Jason M. Long on 05/24/2019 at 08:26. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

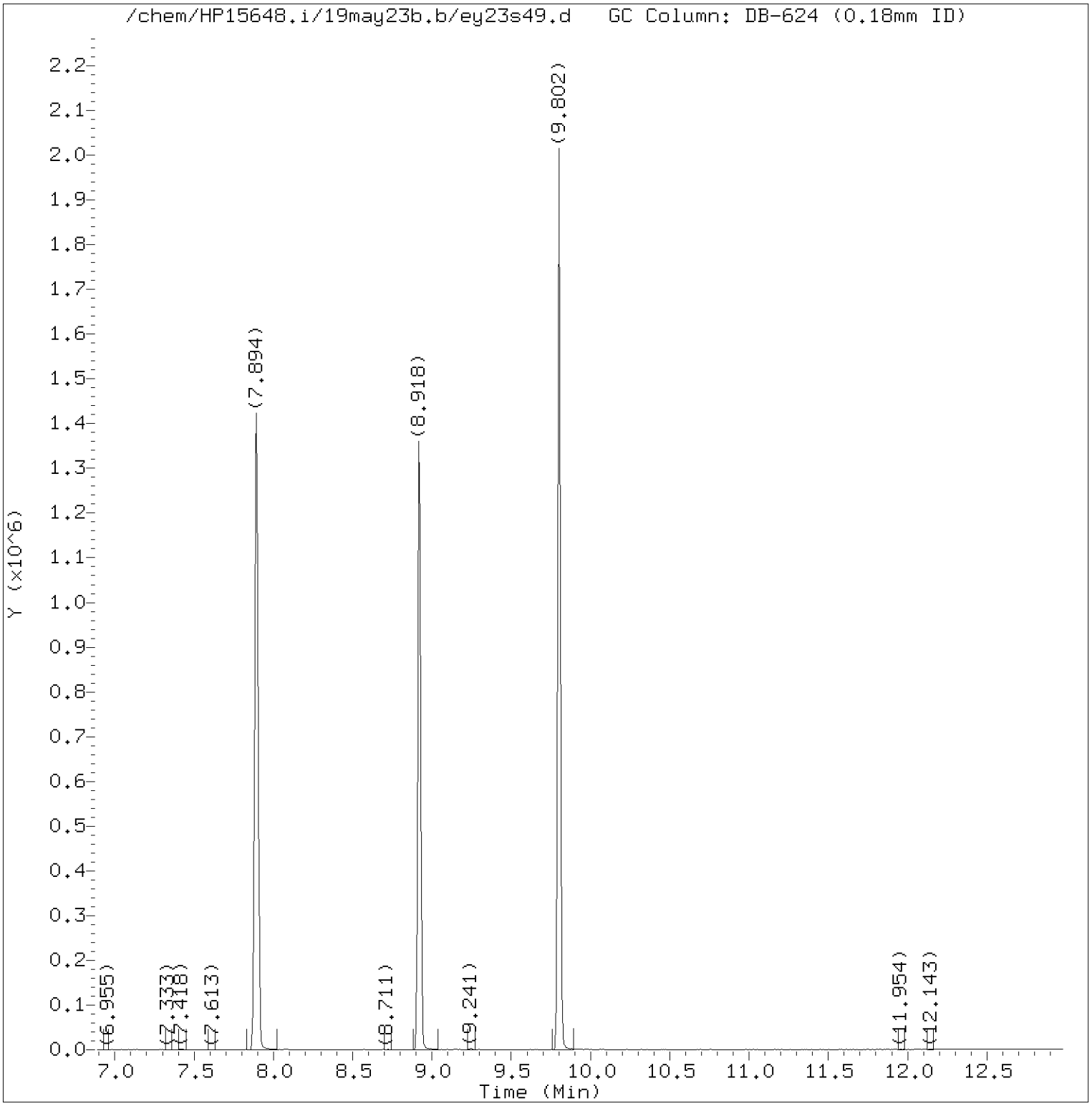
Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s49.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 01:33 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 08:09 jml01693

Sample Name: 91J17 Lab Sample ID: 1057965

Digitally signed by Jason M. Long
on 05/24/2019 at 08:26.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s49.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 01:33 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 08:09 jml01693

Sample Name: 91J17 Lab Sample ID: 1057965

Digitally signed by Jason M. Long
on 05/24/2019 at 08:26.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s49.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 01:33 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 08:09 jml01693

Sample Name: 91J17 Lab Sample ID: 1057965

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.493	65	178743	250.000
51) Chloroform	(2)	3.919	83	9682	1.182
52)$Dibromofluoromethane	(2)	4.072	113	227644	48.140
57)$1,2-Dichloroethane-d4	(2)	4.395	102	59313	49.705
66)*Fluorobenzene	(2)	4.736	96	1017404	50.000
84)$Toluene-d8	(3)	6.382	98	1014209	49.196
101)*Chlorobenzene-d5	(3)	7.894	117	759072	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	384963	48.574
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	408618	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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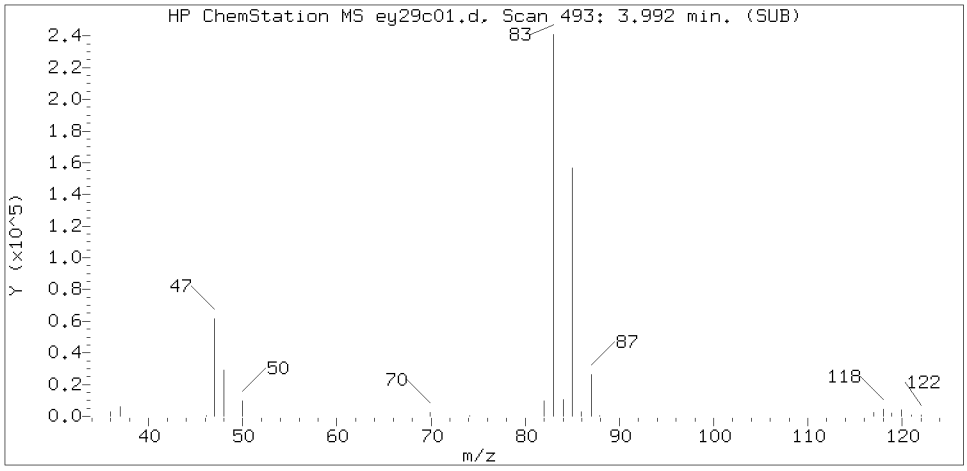
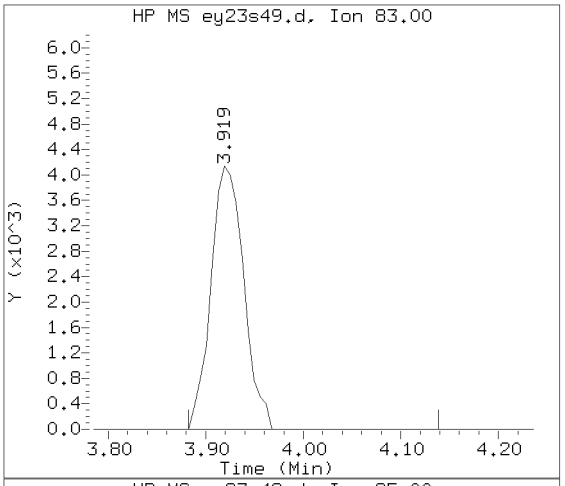
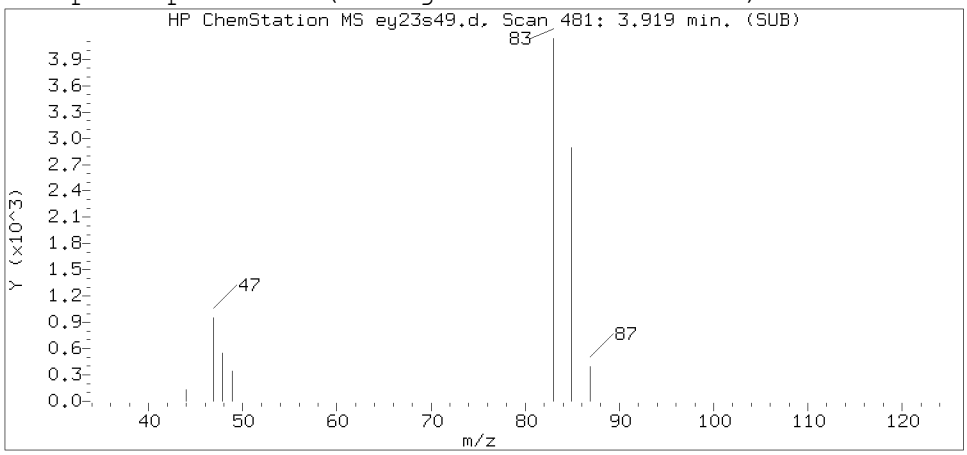
on 05/24/2019 at 08:26.
Target 3.5 esignature user ID: jml01693

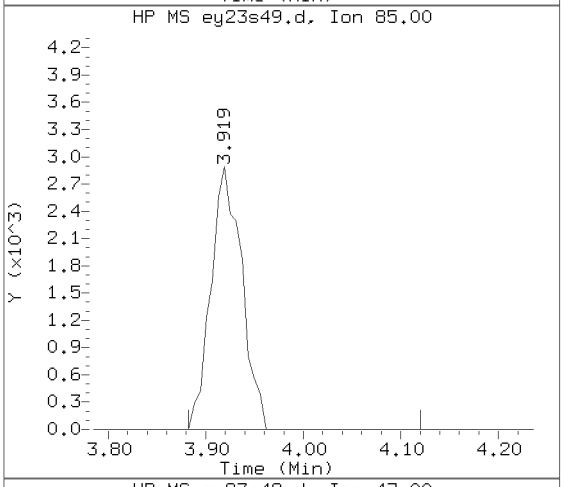
Reference Standard Spectrum for Chloroform



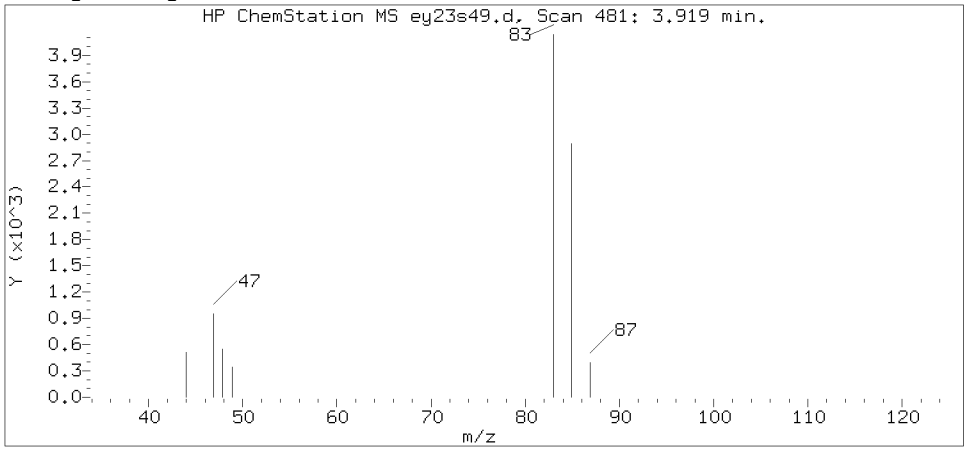


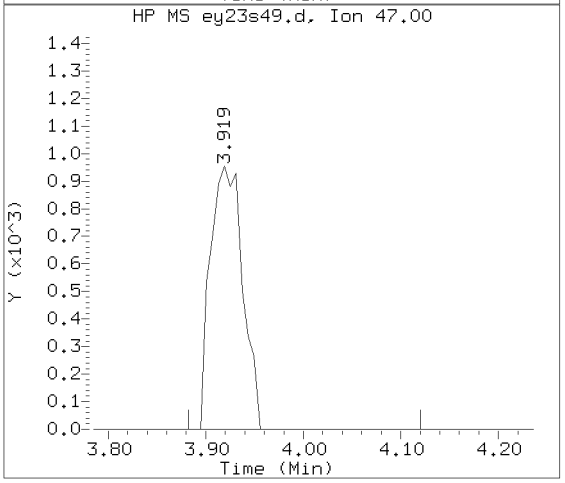
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19may23b.b/ey23s49.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 01:33 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 08:09 jml01693

Sample Name: 91J17 Lab Sample ID: 1057965

Compound Number : 51
Compound Name : Chloroform
Scan Number : 481
Retention Time (minutes): 3.919
Relative Retention Time :-0.00000
Quant Ion : 83.00
Area (flag) : 9682
On-Column Amount (ng) : 1.1816

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Target 3.5 esignature user ID: jml01693

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

91J18

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1057966

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s50.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/24/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23s50.d
Injection date and time: **24-MAY-2019 01:53**
Data file Sample Info. Line: 91J18;1057966;1;0;;JCV91;;;ey23b31;
Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 24-May-2019 08:24 jml01693

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.493(-0.006)	247	65	177934 (-5)	250.00	
66) Fluorobenzene	4.736(0.000)	615	96	1015867 (-3)	50.00	
101) Chlorobenzene-d5	7.894(0.000)	1133	117	761770 (-2)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802(0.000)	1446	152	412598 (0)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.072(0.000)	113	228649	48.426	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.395(0.001)	102	59475	49.916	100%		80 - 120
84) Toluene-d8	(3)	6.388(-0.001)	98	1027772	49.677	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918(0.000)	95	388938	48.902	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)			Not Detected					0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Jason M. Long on 05/24/2019 at 08:27. Target 3.5 esignature user ID: jml01693

Data file: /chem/HP15648.i/19may23b.b/ey23s50.d Injection date and time: **24-MAY-2019 01:53**
Data file Sample Info. Line: 91J18;1057966;1;0;;JCV91;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 24-May-2019 08:24 jml01693

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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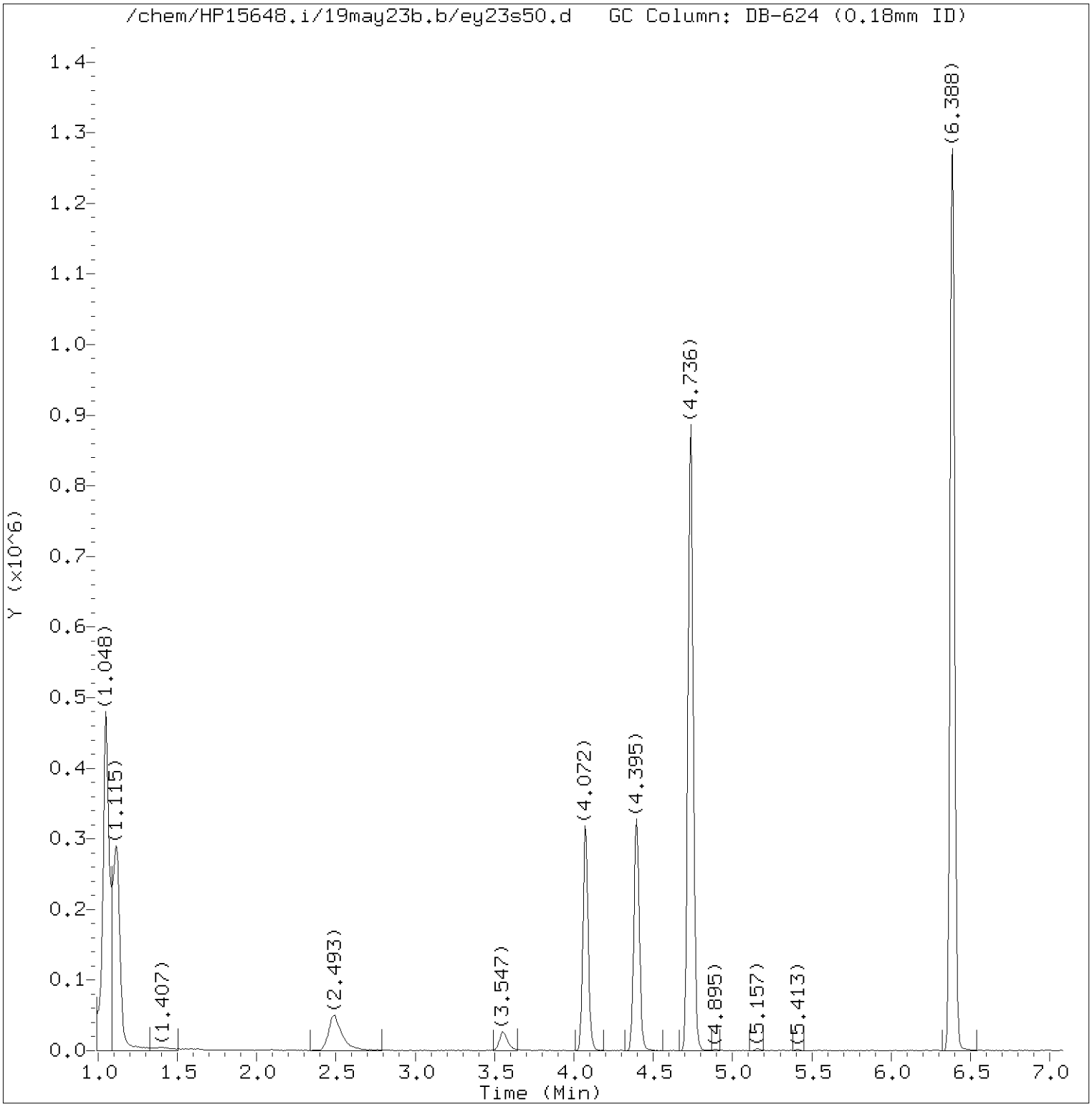
Total number of targets = 24

Digitally signed by Jason M. Long on 05/24/2019 at 08:27. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

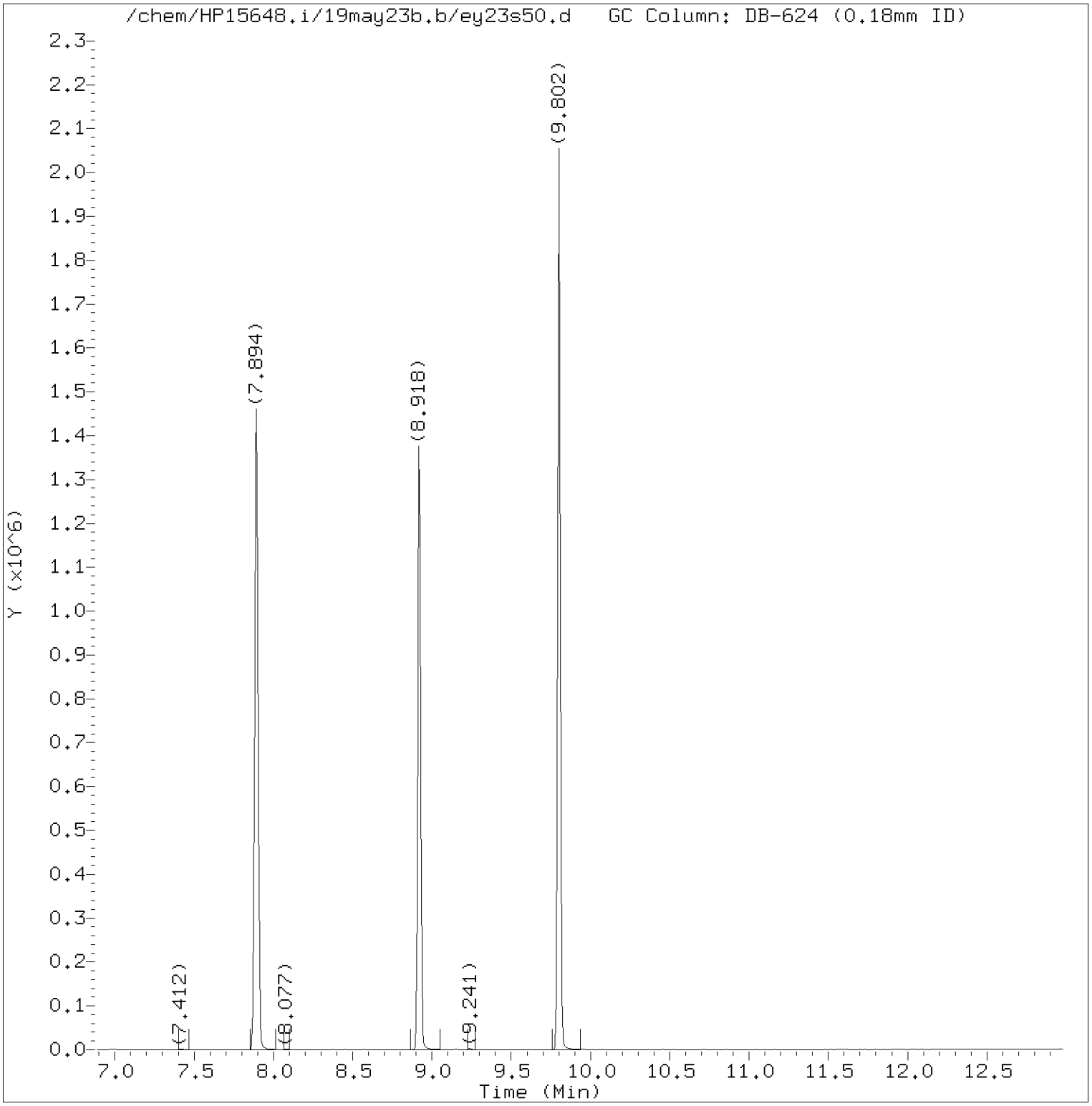
Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s50.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 01:53 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 08:24 jml01693

Sample Name: 91J18 Lab Sample ID: 1057966

Digitally signed by Jason M. Long
on 05/24/2019 at 08:27.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s50.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 01:53 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 08:24 jml01693

Sample Name: 91J18 Lab Sample ID: 1057966

Digitally signed by Jason M. Long
on 05/24/2019 at 08:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s50.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 01:53 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 08:24 jml01693

Sample Name: 91J18 Lab Sample ID: 1057966

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.493	65	177934	250.000
52)$Dibromofluoromethane	(2)	4.072	113	228649	48.426
57)$1,2-Dichloroethane-d4	(2)	4.395	102	59475	49.916
66)*Fluorobenzene	(2)	4.736	96	1015867	50.000
84)$Toluene-d8	(3)	6.388	98	1027772	49.677
101)*Chlorobenzene-d5	(3)	7.894	117	761770	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	388938	48.902
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	412598	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 05/24/2019 at 08:27.
Target 3.5 esignature user ID: jml01693

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
91J19

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1057967

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s51.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/24/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23s51.d
Injection date and time: **24-MAY-2019 02:12**
Data file Sample Info. Line: 91J19;1057967;1;0;;JCV91;;;ey23b31;
Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 24-May-2019 08:24 jml01693

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.487	(0.000)	246	65	177377	(-5)	250.00	
66) Fluorobenzene	4.742	(-0.006)	616	96	1007868	(-4)	50.00	
101) Chlorobenzene-d5	7.894	(0.000)	1133	117	750617	(-4)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802	(0.000)	1446	152	406445	(-1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.078	(0.000)	113	224656	47.958	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.401	(0.001)	102	60605	51.268	103%		80 - 120
84) Toluene-d8	(3)	6.388	(-0.001)	98	1009967	49.542	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918	(0.000)	95	379938	48.480	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Jason M. Long on 05/24/2019 at 08:27. Target 3.5 esignature user ID: jml01693

Data file: /chem/HP15648.i/19may23b.b/ey23s51.d Injection date and time: **24-MAY-2019 02:12**
Data file Sample Info. Line: 91J19;1057967;1;0;;JCV91;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 24-May-2019 08:24 jml01693

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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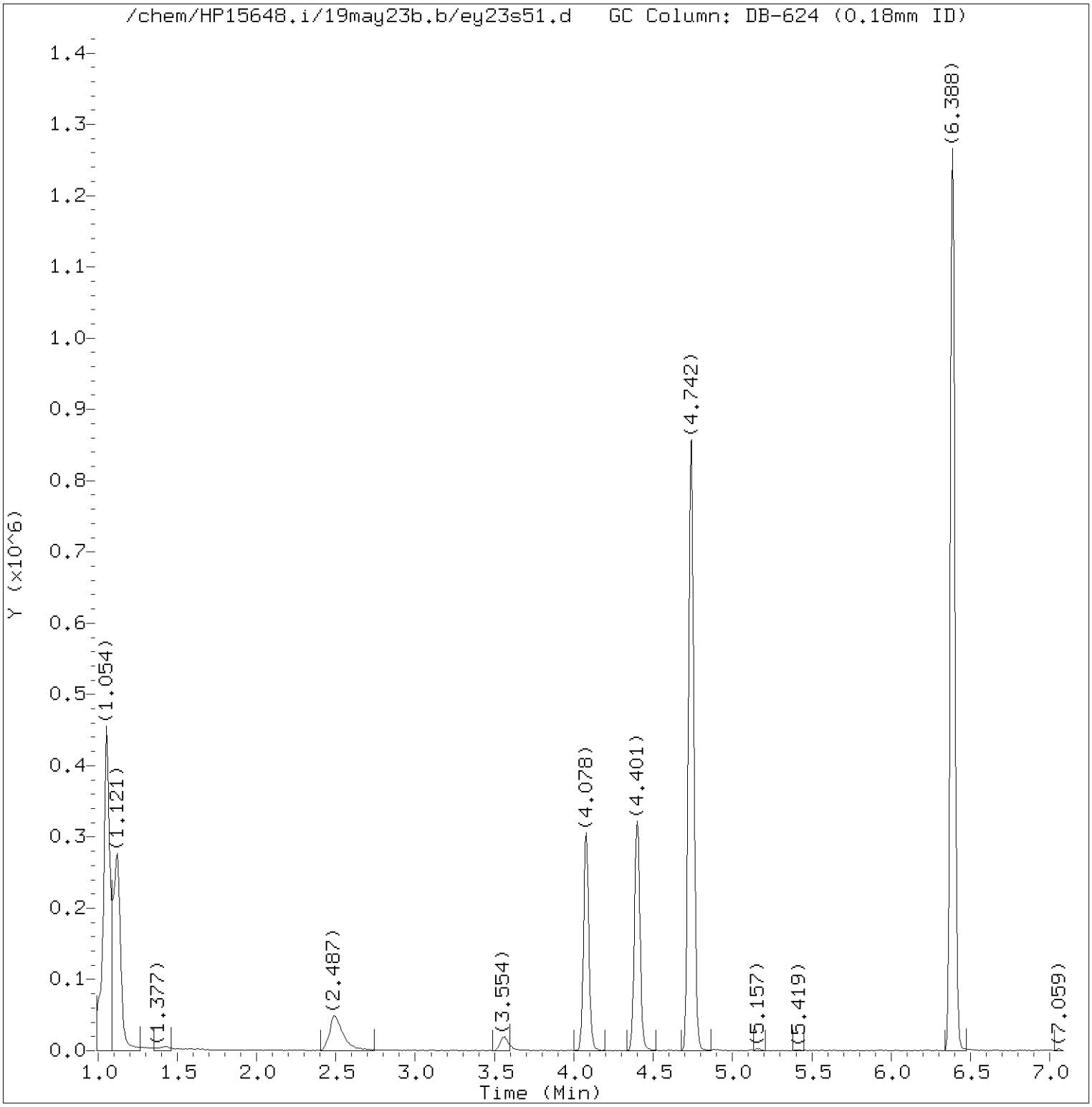
Total number of targets = 24

Digitally signed by Jason M. Long on 05/24/2019 at 08:27. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

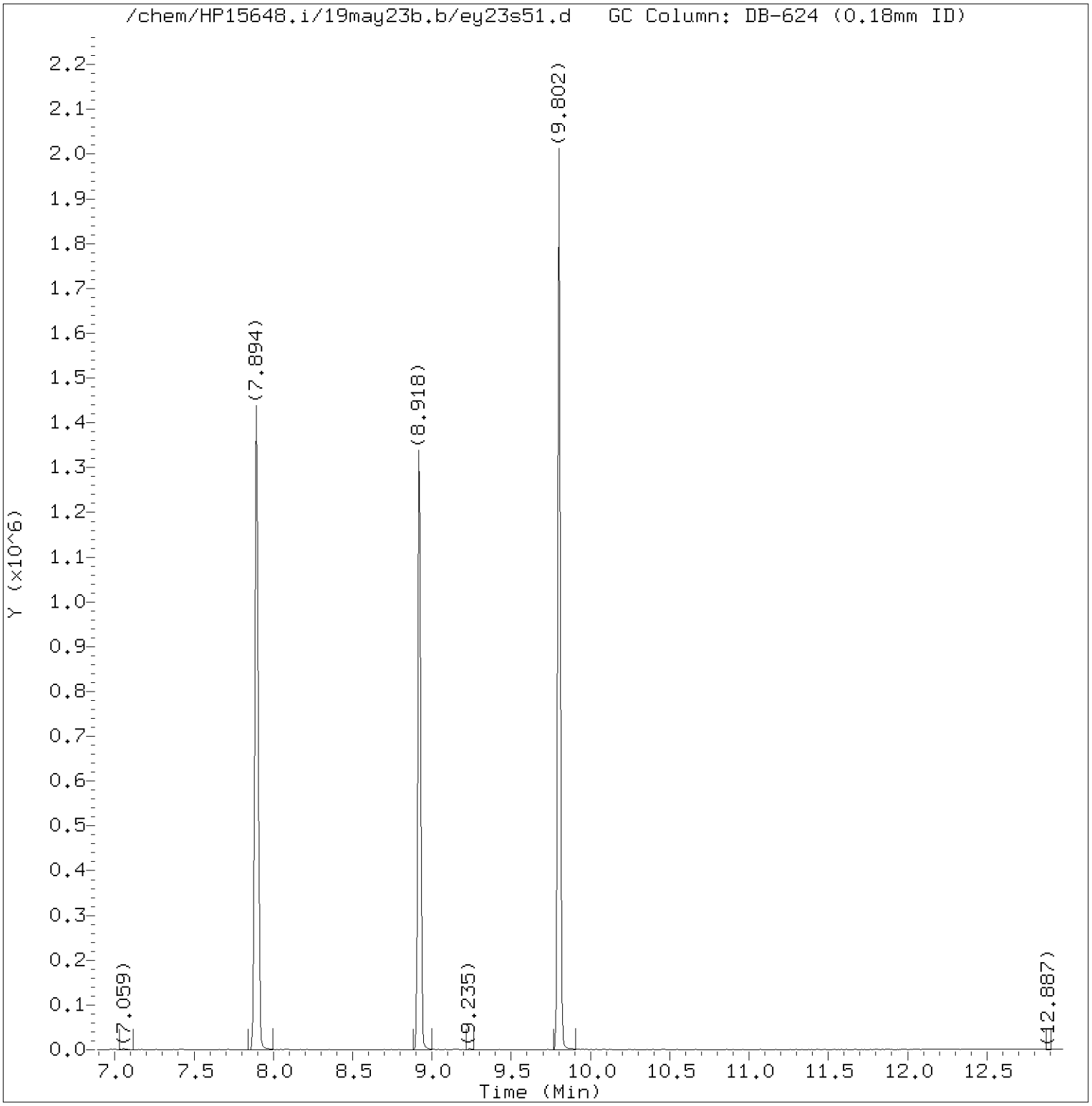
Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s51.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 02:12 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 08:24 jml01693

Sample Name: 91J19 Lab Sample ID: 1057967

Digitally signed by Jason M. Long
on 05/24/2019 at 08:27.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s51.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 02:12 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 08:24 jml01693

Sample Name: 91J19 Lab Sample ID: 1057967

Digitally signed by Jason M. Long
on 05/24/2019 at 08:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s51.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 02:12 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 08:24 jml01693

Sample Name: 91J19 Lab Sample ID: 1057967

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.487	65	177377	250.000
52)$Dibromofluoromethane	(2)	4.078	113	224656	47.958
57)$1,2-Dichloroethane-d4	(2)	4.401	102	60605	51.268
66)*Fluorobenzene	(2)	4.742	96	1007868	50.000
84)$Toluene-d8	(3)	6.388	98	1009967	49.542
101)*Chlorobenzene-d5	(3)	7.894	117	750617	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	379938	48.480
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	406445	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 05/24/2019 at 08:27.
Target 3.5 esignature user ID: jml01693

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

91J20

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1057968

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s52.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/24/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

^

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23s52.d Injection date and time: **24-MAY-2019 02:32**
Data file Sample Info. Line: 91J20;1057968;1;0;;JCV91;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 24-May-2019 08:24 jml01693

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.493(-0.006)	247	65	172765 (-7)	250.00	
66) Fluorobenzene	4.736(0.000)	615	96	1025333 (-2)	50.00	
101) Chlorobenzene-d5	7.894(0.000)	1133	117	763531 (-2)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802(0.000)	1446	152	410444 (-1)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.072(0.000)	113	227643	47.768	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.395(0.001)	102	60072	49.951	100%		80 - 120
84) Toluene-d8	(3)	6.388(-0.001)	98	1022300	49.298	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918(0.000)	95	387293	48.583	97%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)			Not Detected					0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

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Data file: /chem/HP15648.i/19may23b.b/ey23s52.d Injection date and time: **24-MAY-2019 02:32**
Data file Sample Info. Line: 91J20;1057968;1;0;;JCV91;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 24-May-2019 08:24 jml01693

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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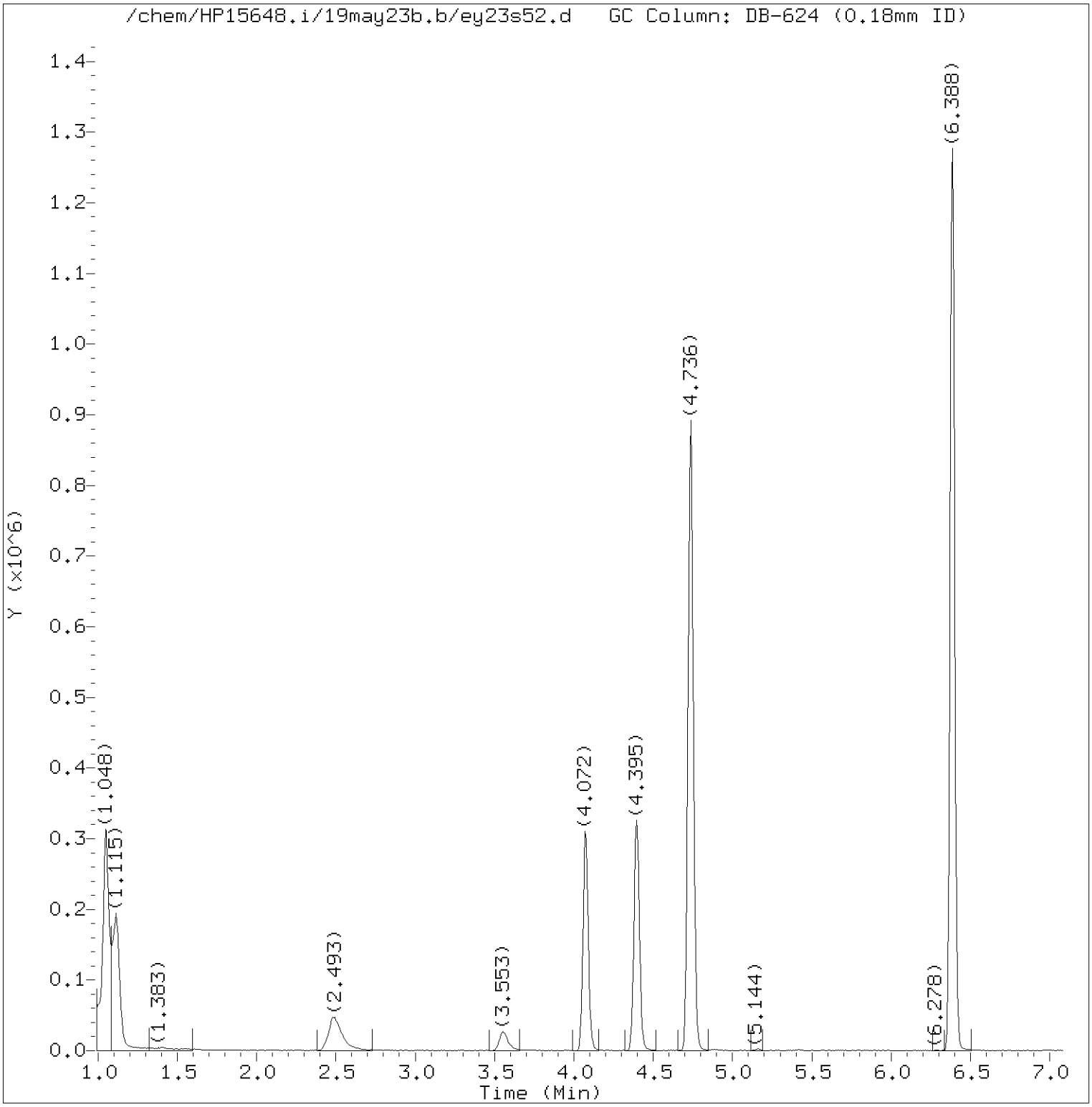
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Jason M. Long on 05/24/2019 at 08:27. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

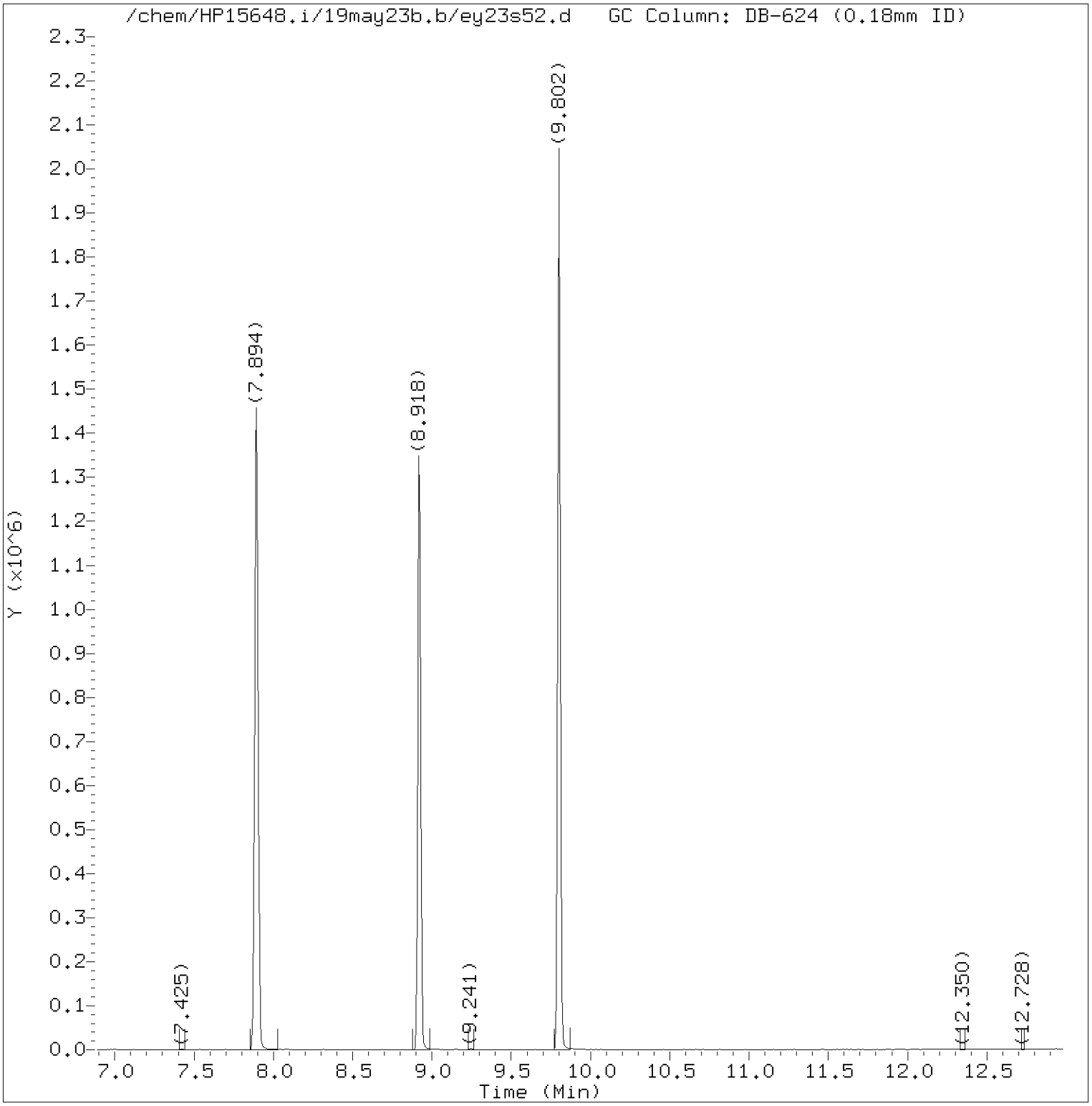
Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s52.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 02:32 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 08:24 jml01693

Sample Name: 91J20 Lab Sample ID: 1057968

Digitally signed by Jason M. Long
on 05/24/2019 at 08:27.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s52.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 02:32 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 08:24 jml01693

Sample Name: 91J20 Lab Sample ID: 1057968

Digitally signed by Jason M. Long
on 05/24/2019 at 08:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s52.d Instrument ID: HP15648.i
Injection date and time: 24-MAY-2019 02:32 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 24-May-2019 08:24 jml01693

Sample Name: 91J20 Lab Sample ID: 1057968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.493	65	172765	250.000
52)$Dibromofluoromethane	(2)	4.072	113	227643	47.768
57)$1,2-Dichloroethane-d4	(2)	4.395	102	60072	49.951
66)*Fluorobenzene	(2)	4.736	96	1025333	50.000
84)$Toluene-d8	(3)	6.388	98	1022300	49.298
101)*Chlorobenzene-d5	(3)	7.894	117	763531	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	387293	48.583
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	410444	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 05/24/2019 at 08:27.
Target 3.5 esignature user ID: jml01693

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP15648 **HP #27**

Data Directory Path is - d:\data\19MAY02I\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
KAS02648	EA02T01.D	50ng BFB	05/02/2019	11:50		
KAS02648	EA02X01.D	BLK	05/02/2019	11:58		
KAS02648	EA02I01.D	VSTD300	05/02/2019	12:18		
KAS02648	EA02I02.D	VSTD100	05/02/2019	12:38		
KAS02648	EA02I03.D	VSTD050	05/02/2019	12:58		
KAS02648	EA02I04.D	VSTD020	05/02/2019	13:19		
KAS02648	EA02I05.D	VSTD010	05/02/2019	13:39		
KAS02648	EA02I06.D	VSTD004	05/02/2019	13:59		
KAS02648	EA02I07.D	VSTD001	05/02/2019	14:19		
KAS02648	EA02V01.D	ICVELG	05/02/2019	14:40		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP15648 **HP #27**

Data Directory Path is - D:\DATA\19MAY23B\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
DVV10203	EY23T05.D	50ng BFB	05/23/2019	18:08		
DVV10203	EY23X31.D	BLK	05/23/2019	18:17	E191433AA	
DVV10203	EY23C05.D	VSTD050	05/23/2019	18:37	E191433AA	
DVV10203	EY23S31.D	LCSE15	05/23/2019	18:57	E191433AA	
DVV10203	EY23S32.D	LCDE15	05/23/2019	19:17	E191433AA	
DVV10203	EY23X32.D	BLK	05/23/2019	19:36	E191433AA	
DVV10203	EY23B31.D	VBLKE15	05/23/2019	19:56	E191433AA	
DVV10203	EY23S33.D	1057958	05/23/2019	20:16	E191433AA	
DVV10203	EY23S34.D	1057957	05/23/2019	20:36	E191433AA	
DVV10203	EY23S35.D	1057949	05/23/2019	20:56	E191433AA	
DVV10203	EY23S36.D	1057950	05/23/2019	21:16	E191433AA	
DVV10203	EY23S37.D	1057951	05/23/2019	21:35	E191433AA	
DVV10203	EY23S38.D	1057952	05/23/2019	21:55	E191433AA	
DVV10203	EY23S39.D	1057953	05/23/2019	22:15	E191433AA	
DVV10203	EY23S40.D	1057954	05/23/2019	22:35	E191433AA	
DVV10203	EY23S41.D	1057955	05/23/2019	22:54	E191433AA	
DVV10203	EY23S42.D	1057956	05/23/2019	23:14	E191433AA	
DVV10203	EY23S43.D	1057959	05/23/2019	23:34	E191433AA	
DVV10203	EY23S44.D	1057960	05/23/2019	23:54	E191433AA	
DVV10203	EY23S45.D	1057961	05/24/2019	00:14	E191433AA	
DVV10203	EY23S46.D	1057962	05/24/2019	00:34	E191433AA	
DVV10203	EY23S47.D	1057963	05/24/2019	00:53	E191433AA	
DVV10203	EY23S48.D	1057964	05/24/2019	01:13	E191433AA	
DVV10203	EY23S49.D	1057965	05/24/2019	01:33	E191433AA	
DVV10203	EY23S50.D	1057966	05/24/2019	01:53	E191433AA	
DVV10203	EY23S51.D	1057967	05/24/2019	02:12	E191433AA	
DVV10203	EY23S52.D	1057968	05/24/2019	02:32	E191433AA	

Data File: /chem/HP15648.i/19may02i.b/em02t01.d

Date : 02-MAY-2019 11:50

Client ID: BFB FEB05-19

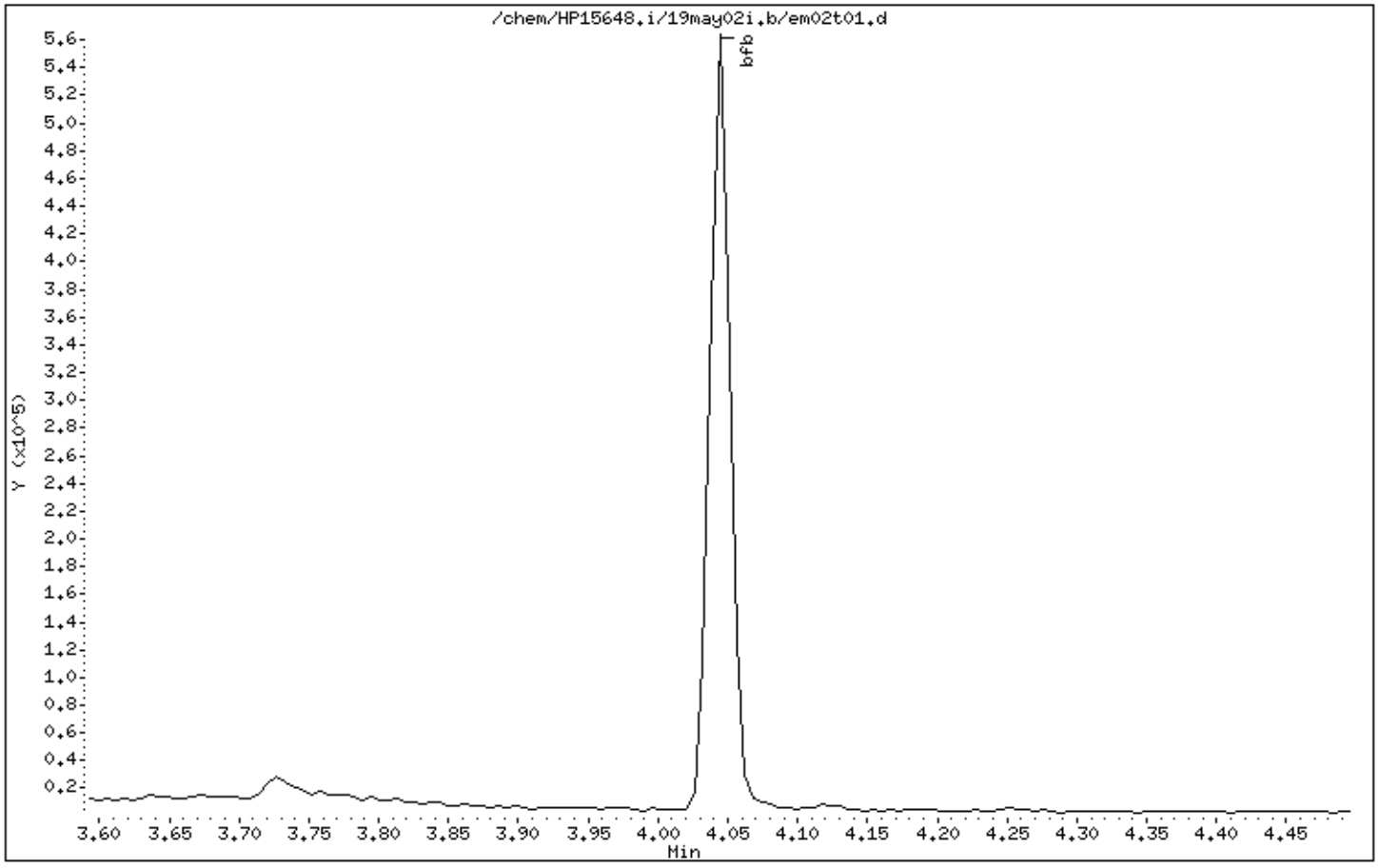
Instrument: HP15648.i

Sample Info: BFB FEB05-19;50ng BFB;1;3;;;;;;

Operator: KAS02648

Column phase: DB-624

Column diameter: 0.18



Digitally signed by Kevin A. Sposito on 05/02/2019 at 13:17.
Target 3.5 esignature user ID: kas02648

Data File: /chem/HP15648.i/19may02i.b/em02t01.d

Date : 02-MAY-2019 11:50

Client ID: BFB FEB05-19

Instrument: HP15648.i

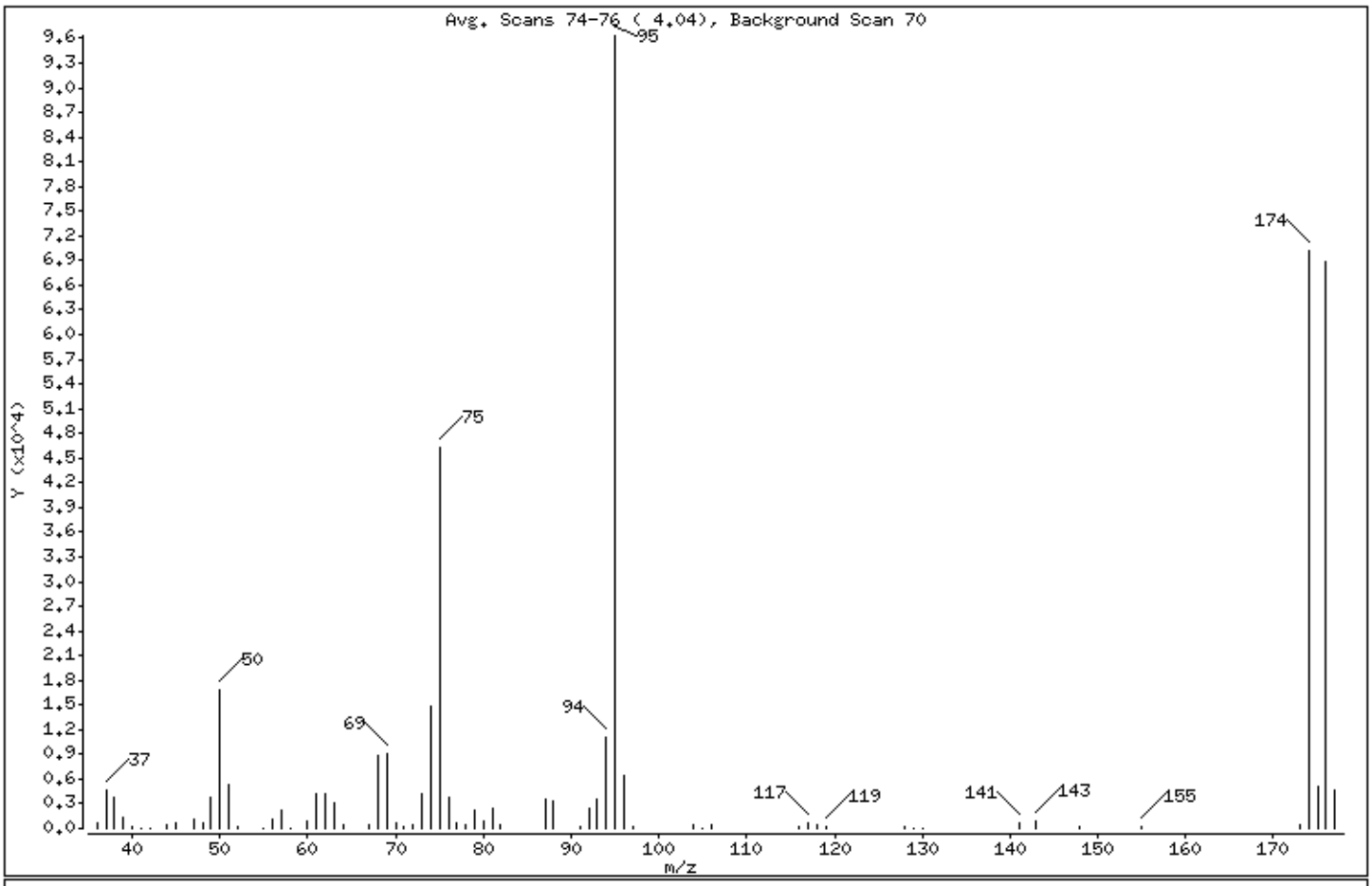
Sample Info: BFB FEB05-19;50ng BFB;1;3;;;;;;

Operator: KAS02648

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.46
75	30.00 - 60.00% of mass 95	48.11
96	5.00 - 9.00% of mass 95	6.61
173	Less than 2.00% of mass 174	0.52 (0.71)
174	50.00 - 100.00% of mass 95	72.95
175	5.00 - 9.00% of mass 174	5.31 (7.29)
176	95.00 - 101.00% of mass 174	71.42 (97.90)
177	5.00 - 9.00% of mass 176	4.77 (6.68)

Digitally signed by Kevin A. Sposito on 05/02/2019 at 13:17.
Target 3.5 esignature user ID: kas02648

Date : 02-MAY-2019 11:50

Client ID: BFB FEB05-19 Instrument: HP15648.i

Sample Info: BFB FEB05-19;50ng BFB;1;3;;;;;;

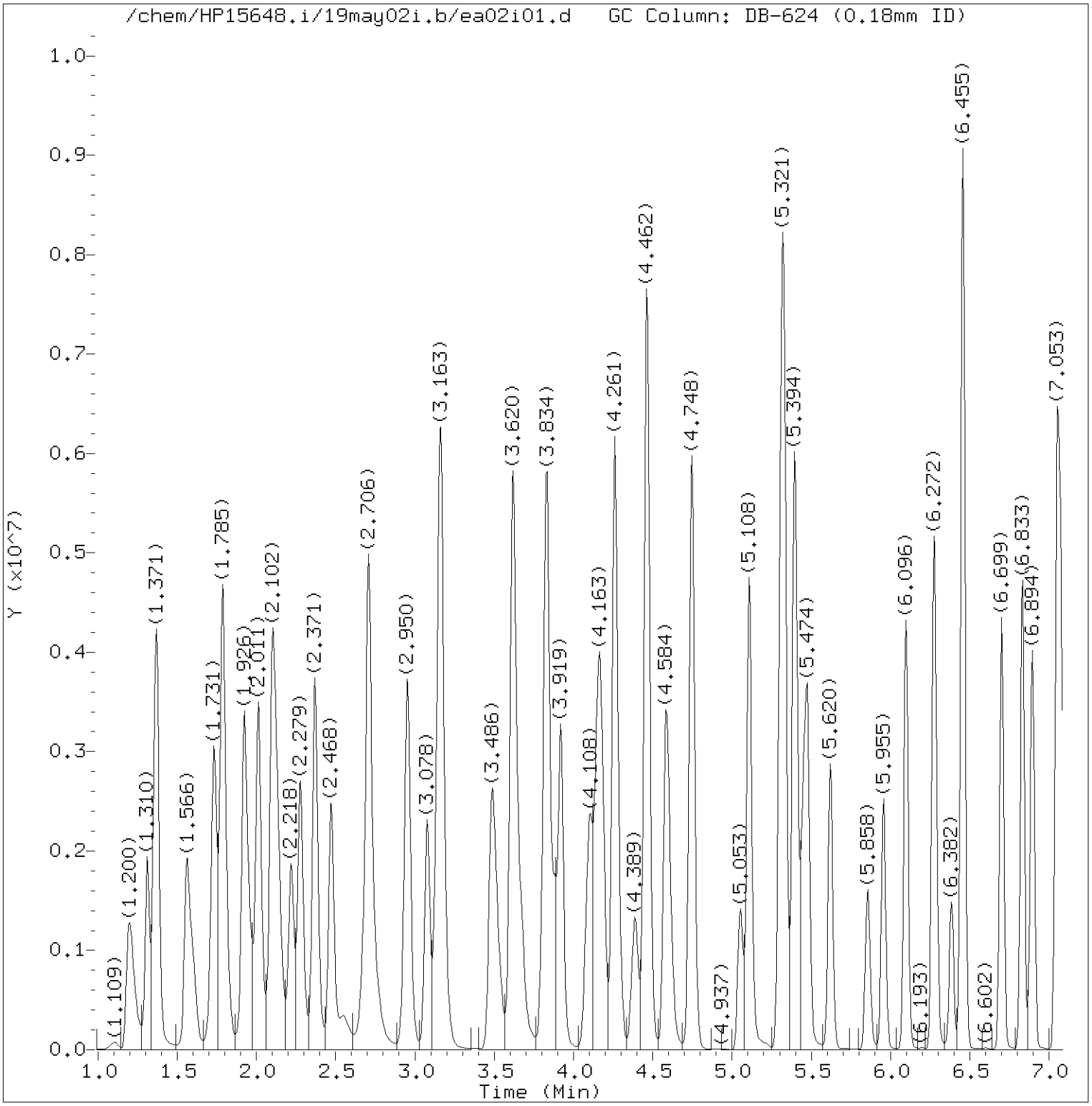
Operator: KAS02648

Column phase: DB-624 Column diameter: 0.18

Data File: em02t01.d
Spectrum: Avg. Scans 74-76 (4.04), Background Scan 70
Location of Maximum: 95.00
Number of points: 68

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	709	58.00	95	79.00	2288	118.00	348
37.00	4561	60.00	828	80.00	814	119.00	285
38.00	3814	61.00	4111	81.00	2445	128.00	232
39.00	1311	62.00	4111	82.00	496	129.00	90
40.00	178	63.00	3165	87.00	3521	130.00	97
41.00	70	64.00	350	88.00	3413	141.00	749
42.00	30	67.00	389	91.00	231	143.00	780
44.00	401	68.00	8818	92.00	2517	148.00	206
45.00	730	69.00	9085	93.00	3469	155.00	115
47.00	1065	70.00	584	94.00	10989	173.00	499
48.00	589	71.00	205	95.00	96312	174.00	70256
49.00	3662	72.00	519	96.00	6367	175.00	5119
50.00	16816	73.00	4109	97.00	316	176.00	68784
51.00	5303	74.00	14838	104.00	356	177.00	4594
52.00	306	75.00	46336	105.00	90		
55.00	25	76.00	3854	106.00	357		
56.00	1165	77.00	614	116.00	202		
57.00	2120	78.00	447	117.00	610		

Digitally signed by Kevin A. Sposito on 05/02/2019 at 13:17.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

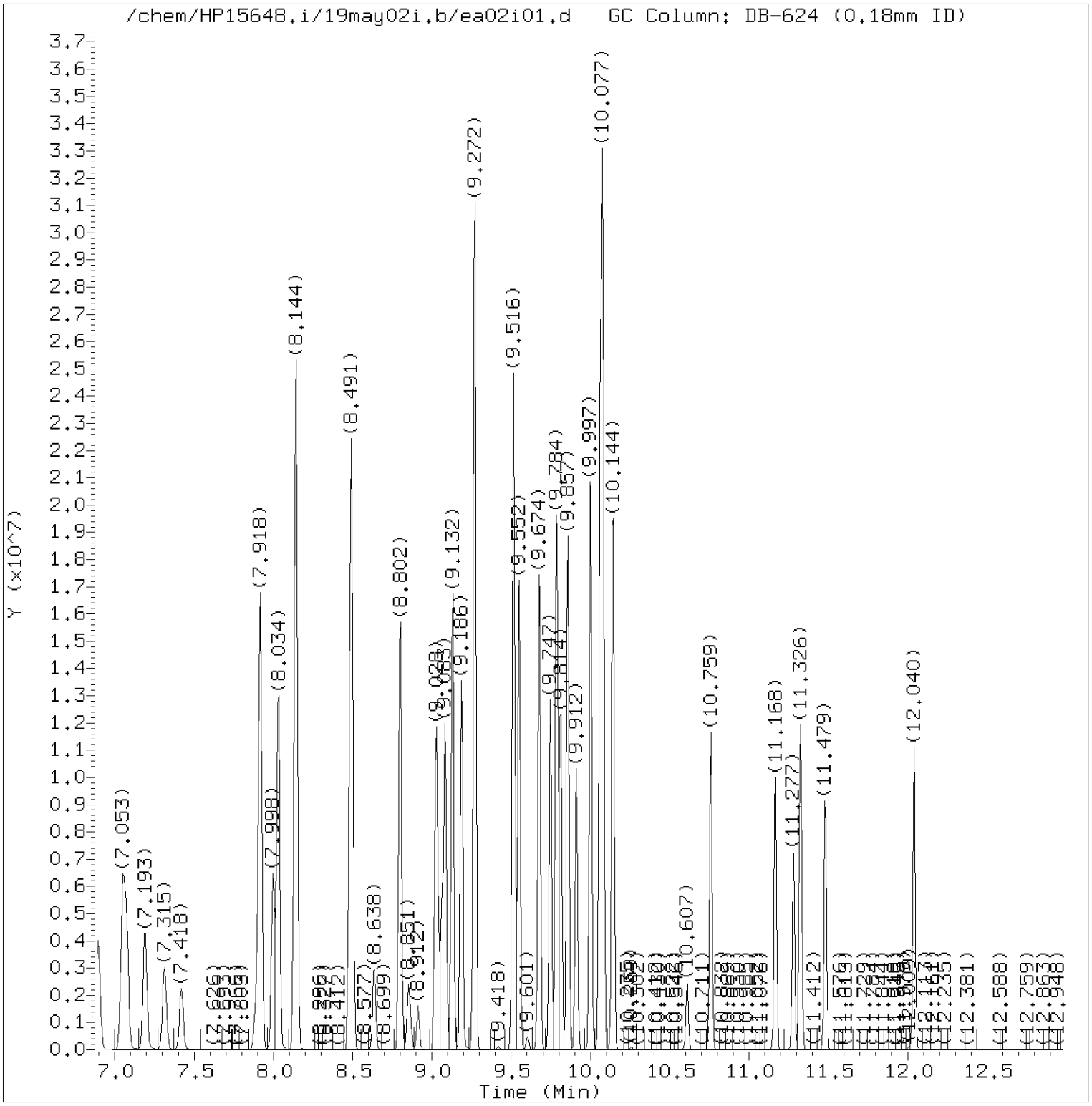
Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:18 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:18 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:18 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.200	85	2906166	296.953
4) Chloromethane	(2)	1.310	50	2254425	283.059
5) 1,3-Butadiene	(2)	1.365	39	1722833	287.746
6) Vinyl Chloride	(2)	1.377	62	2225616	292.360
8) Bromomethane	(2)	1.560	94	1574434	274.660
9) Chloroethane	(2)	1.596	64	1211026	279.405
10) Dichlorofluoromethane	(2)	1.731	67	3100315	279.549
11) n-Pentane	(2)	1.785	43	2705921	304.357
12) Trichlorofluoromethane	(2)	1.785	101	3295520	304.517
14) Ethyl ether	(2)	1.920	59	1319214	292.557
15) Freon 123a	(2)	1.932	67	1851021	290.469
16) Acrolein	(1)	2.011	56	4215944	2804.809
17) 1,1-Dichloroethene	(2)	2.102	96	1379201	309.496
17) 1,1-Dichloroethene	(2)	2.102	63	719687	304.636
18) Acetone	(1)	2.121	58	356146	569.259
19) Freon 113	(2)	2.127	101	1597407	323.716
21) 2-Propanol	(1)	2.218	45	500270	1338.397
22) Methyl Iodide	(2)	2.218	142	2549716	305.336
23) Carbon Disulfide	(2)	2.279	76	4652656	307.807
25) Allyl Chloride	(2)	2.371	41	2482871	286.679
27) Methyl Acetate	(2)	2.377	43	1236385	290.739
28) Methylene Chloride	(2)	2.474	84	1486387	292.787
29)*t-Butyl alcohol-d10	(1)	2.487	65	182177M	250.000
30) t-Butyl alcohol	(1)	2.554	59	909529	1335.569
31) Acrylonitrile	(2)	2.669	53	741004	286.565
32) trans-1,2-Dichloroethene	(2)	2.706	96	1518687	302.775
33) Methyl Tertiary Butyl Ether	(2)	2.712	73	4173936	279.102
34) n-Hexane	(2)	2.950	57	2697938	306.945
36) 1,1-Dichloroethane	(2)	3.078	63	2860856	304.437
38) di-Isopropyl ether	(2)	3.145	45	4855550	293.622
39) 2-Chloro-1,3-butadiene	(2)	3.163	53	2793933	311.363
40) Ethyl t-butyl ether	(2)	3.486	59	4523242	277.283
42) cis-1,2-Dichloroethene	(2)	3.614	96	1692007	300.230
44) 2-Butanone	(2)	3.620	43	1869810	536.703
43) 1,2-Dichloroethene (Total)	(2)		96	3210694	603.005
45) 2,2-Dichloropropane	(2)	3.627	77	2548114	307.331
47) Propionitrile	(1)	3.675	54	1382996	1503.291
48) Methacrylonitrile	(2)	3.828	67	2056836	740.790

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:18 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.840	128	855897	305.774
50) Tetrahydrofuran	(1)	3.883	71	542274	562.427
51) Chloroform	(2)	3.919	83	2723444	304.700
52)$Dibromofluoromethane	(2)	4.072	113	260383	50.482
52)$Dibromofluoromethane	(2)	4.072	111	265769	50.195
53) 1,1,1-Trichloroethane	(2)	4.108	97	2563048	309.899
54) Cyclohexane	(2)	4.163	56	3248354	319.779
54) Cyclohexane	(2)	4.163	84	2813078	322.287
54) Cyclohexane	(2)	4.163	69	1014470	305.895
55) 1,1-Dichloropropene	(2)	4.261	75	2338503	318.889
56) Carbon Tetrachloride	(2)	4.267	117	2283316	324.568
58) Isobutyl Alcohol	(1)	4.383	41	802638	3471.480
57)$1,2-Dichloroethane-d4	(2)	4.395	102	65262	50.139
57)$1,2-Dichloroethane-d4	(2)	4.395	65	332626	50.350
57)$1,2-Dichloroethane-d4	(2)	4.401	104	41667	49.931
60) Benzene	(2)	4.462	78	6650669	308.857
61) 1,2-Dichloroethane	(2)	4.474	62	2144855	296.564
61) 1,2-Dichloroethane	(2)	4.474	98	186290	294.722
65) t-Amyl methyl ether	(2)	4.584	73	4351085	268.981
66)*Fluorobenzene	(2)	4.736	96	1109741	50.000
67) n-Heptane	(2)	4.748	43	2729213	289.696
69) n-Butanol	(1)	5.053	56	1499951	7500.429
71) Trichloroethene	(2)	5.108	95	1712366	315.254
73) Methylcyclohexane	(2)	5.315	83	3579502	316.487
73) Methylcyclohexane	(2)	5.315	98	1660753	319.326
74) 1,2-Dichloropropane	(2)	5.334	63	1672353	312.157
75) Dibromomethane	(2)	5.449	93	985591	307.313
77) Methyl Methacrylate	(2)	5.474	69	1453690	297.605
76) 1,4-Dioxane	(1)	5.474	88	206550M	3670.170
79) Bromodichloromethane	(2)	5.620	83	2100224	314.772
80) 2-Nitropropane	(2)	5.858	41	1226974	554.888
81) 2-Chloroethyl Vinyl Ether	(2)	5.955	63	1266127	306.703
82) cis-1,3-Dichloropropene	(2)	6.096	75	2756286	317.159
83) 4-Methyl-2-pentanone	(2)	6.272	43	4163760	556.513
84)$Toluene-d8	(3)	6.382	98	1132255	49.798
84)$Toluene-d8	(3)	6.382	100	733116	50.159
89) Toluene	(3)	6.455	92	4316378	310.174
90) trans-1,3-Dichloropropene	(3)	6.699	75	2593259	311.806

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:18 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropene (total)	(3)		100	5349545	628.966
92) Ethyl Methacrylate	(3)	6.833	69	2679715	302.245
93) 1,1,2-Trichloroethane	(3)	6.894	97	1424846	300.831
94) Tetrachloroethene	(3)	7.053	166	1812324	320.314
95) 1,3-Dichloropropane	(3)	7.077	76	2515958	302.236
97) 2-Hexanone	(3)	7.187	43	3013219	509.766
102) 1-Chlorohexane	(3)	7.315	91	147486	306.684
98) Dibromochloromethane	(3)	7.315	129	1644236	321.580
100) 1,2-Dibromoethane	(3)	7.418	107	1521779	301.980
101)*Chlorobenzene-d5	(3)	7.888	117	837172	50.000
103) Chlorobenzene	(3)	7.912	112	4738727	307.957
104) 1,1,1,2-Tetrachloroethane	(3)	7.998	131	1643534	314.487
105) Ethylbenzene	(3)	8.034	91	8537750	310.123
107) m+p-Xylene	(3)	8.144	106	6712223	626.314
109) Xylene (Total)	(3)		106	9985127	939.248
108) o-Xylene	(3)	8.485	106	3272904	312.934
110) Styrene	(3)	8.498	104	5559059	321.800
111) Bromoform	(3)	8.638	173	1145519	336.078
112) Isopropylbenzene	(3)	8.802	105	8623821	309.909
113) Cyclohexanone	(1)	8.851	55	798572	3766.754
115)$4-Bromofluorobenzene	(3)	8.912	95	439486	50.281
115)$4-Bromofluorobenzene	(3)	8.912	174	328166	50.106
116) Bromobenzene	(4)	9.028	156	1964427	302.948
117) 1,1,2,2-Tetrachloroethane	(4)	9.034	83	2155898	286.474
118) 1,2,3-Trichloropropane	(4)	9.065	110	654486	286.966
119) trans-1,4-Dichloro-2-butene	(4)	9.083	53	1838046	743.236
120) n-Propylbenzene	(4)	9.132	91	9917479	290.107
121) 2-Chlorotoluene	(4)	9.186	126	2009851	298.616
123) 1,3,5-Trimethylbenzene	(4)	9.272	105	7415968	299.029
122) 4-Chlorotoluene	(4)	9.272	126	2091553	303.153
125) tert-Butylbenzene	(4)	9.516	134	1671548	303.224
126) Pentachloroethane	(4)	9.522	167	1308344	318.796
127) 1,2,4-Trimethylbenzene	(4)	9.552	105	7553186	295.782
128) sec-Butylbenzene	(4)	9.674	105	9210624	292.759
130) 1,3-Dichlorobenzene	(4)	9.747	146	3858840	305.366
131) p-Isopropyltoluene	(4)	9.784	119	8172512	295.288
132)*1,4-Dichlorobenzene-d4	(4)	9.796	152	465360	50.000
134) 1,4-Dichlorobenzene	(4)	9.814	146	3872626	299.582

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:18 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	9.857	105	8048173	295.983
136) Benzyl Chloride	(4)	9.912	91	5388006	306.876
137) 1,3-Diethylbenzene	(4)	10.003	119	5257249	301.675
138) 1,4-Diethylbenzene	(4)	10.058	119	5603342	301.763
140) n-Butylbenzene	(4)	10.077	92	4108136	302.228
139) 1,2-Dichlorobenzene	(4)	10.077	146	3663766	302.854
142) Diethylbenzene (total)	(4)		100	15129418	902.648
141) 1,2-Diethylbenzene	(4)	10.144	119	4268827	299.210
143) 1,2-Dibromo-3-chloropropane	(4)	10.607	75	482596	279.881
145) 1,3,5-Trichlorobenzene	(4)	10.759	180	2608984	293.280
147) 1,2,4-Trichlorobenzene	(4)	11.168	180	2251660	283.549
148) Hexachlorobutadiene	(4)	11.284	225	964707	283.411
149) Naphthalene	(4)	11.326	128	6856969	261.922
150) 1,2,3-Trichlorobenzene	(4)	11.479	180	2018371	269.197
151) 2-Methylnaphthalene	(4)	12.040	142	3748601	226.595

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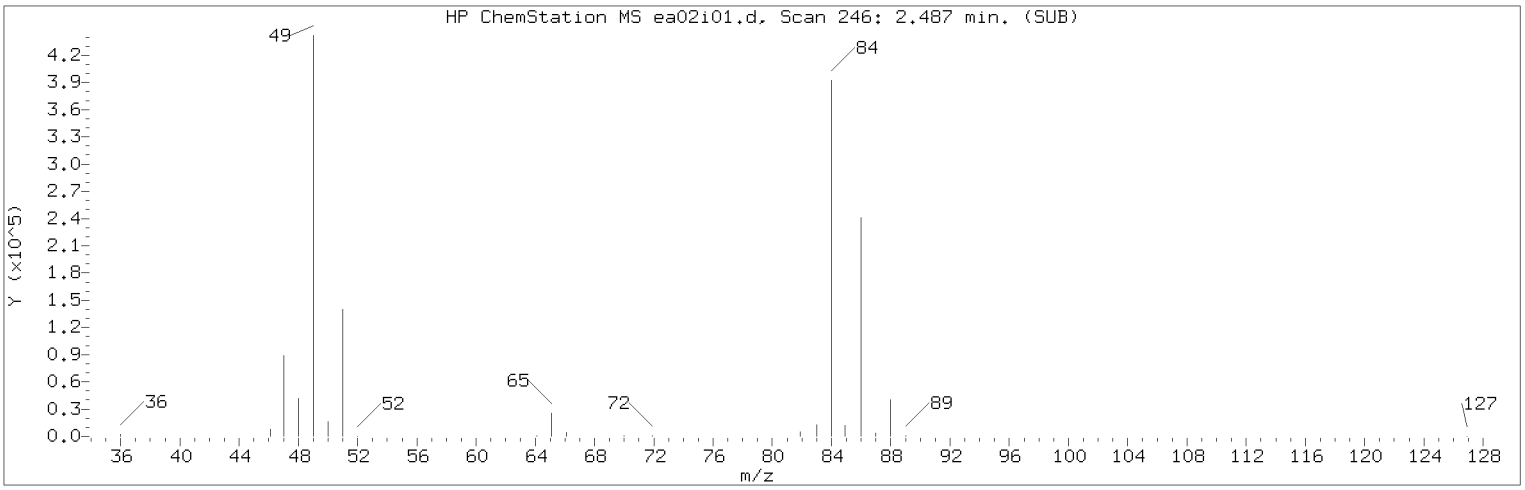
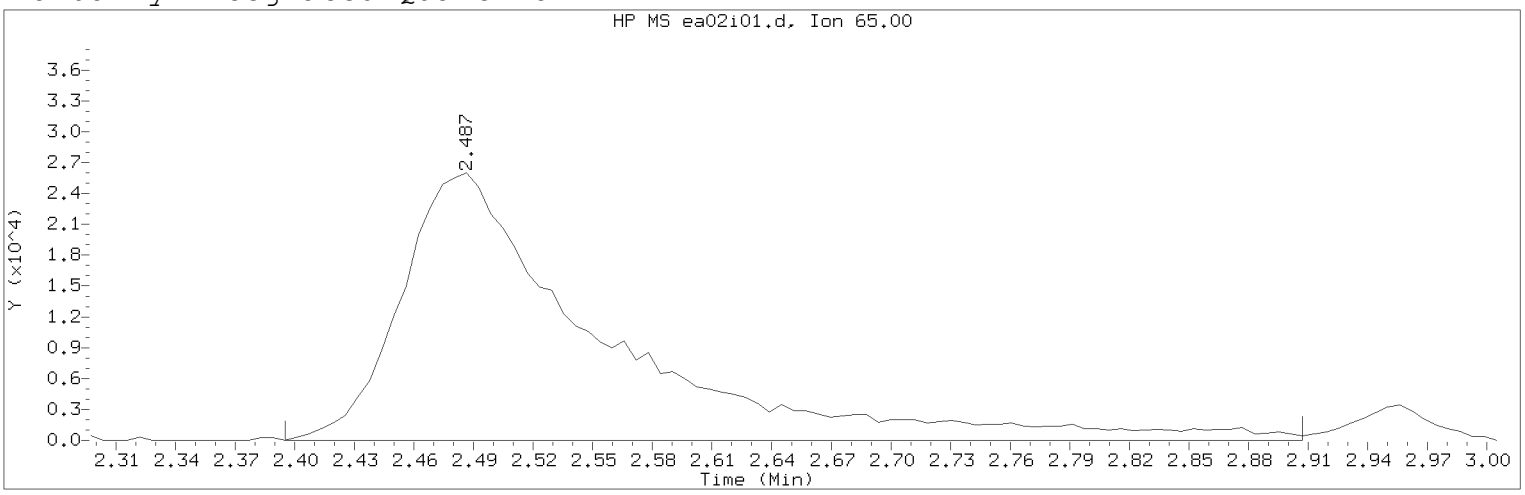
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:18 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

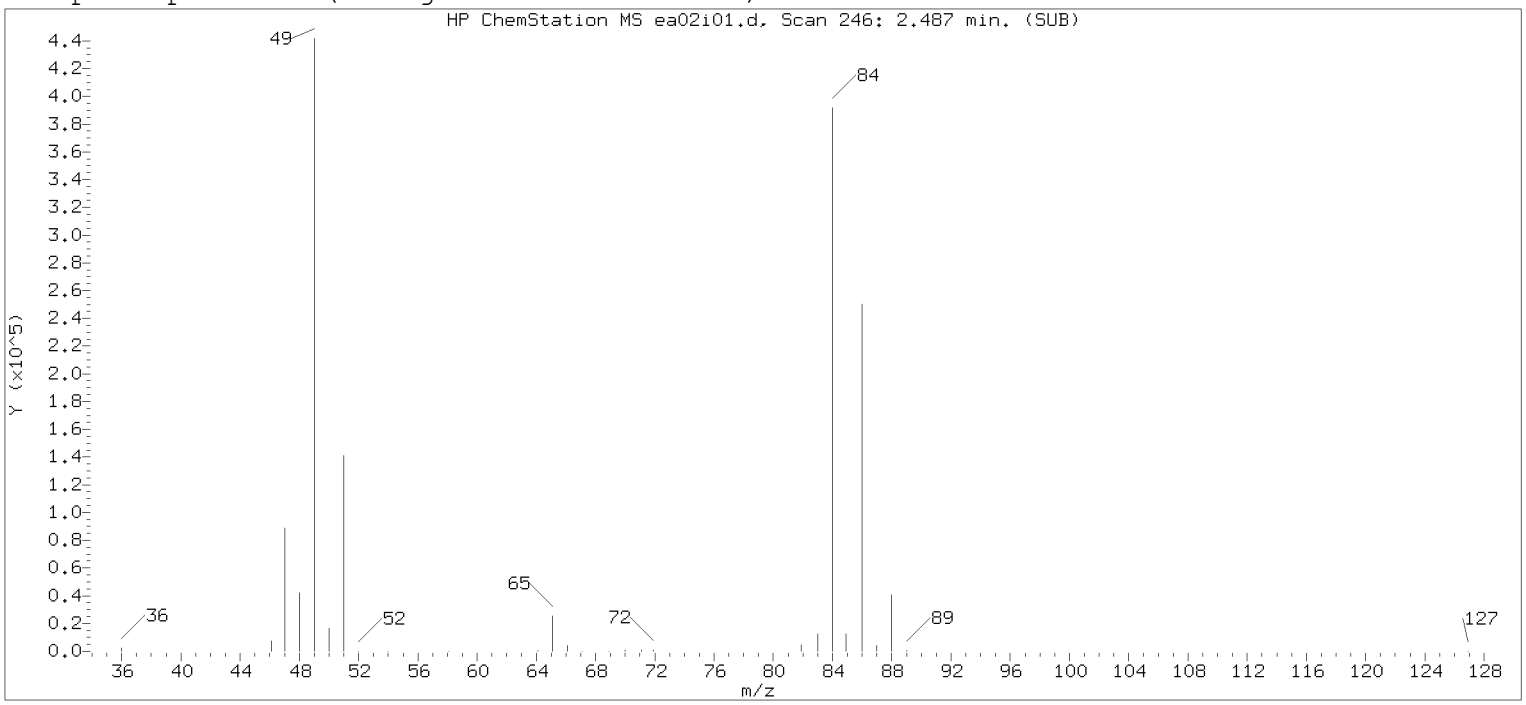
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 246
Retention Time (minutes): 2.487
Quant Ion : 65.00
Area (flag) : 182177M
On-Column Amount (ng) : 250.0000
Integration start scan : 230 Integration stop scan: 314
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

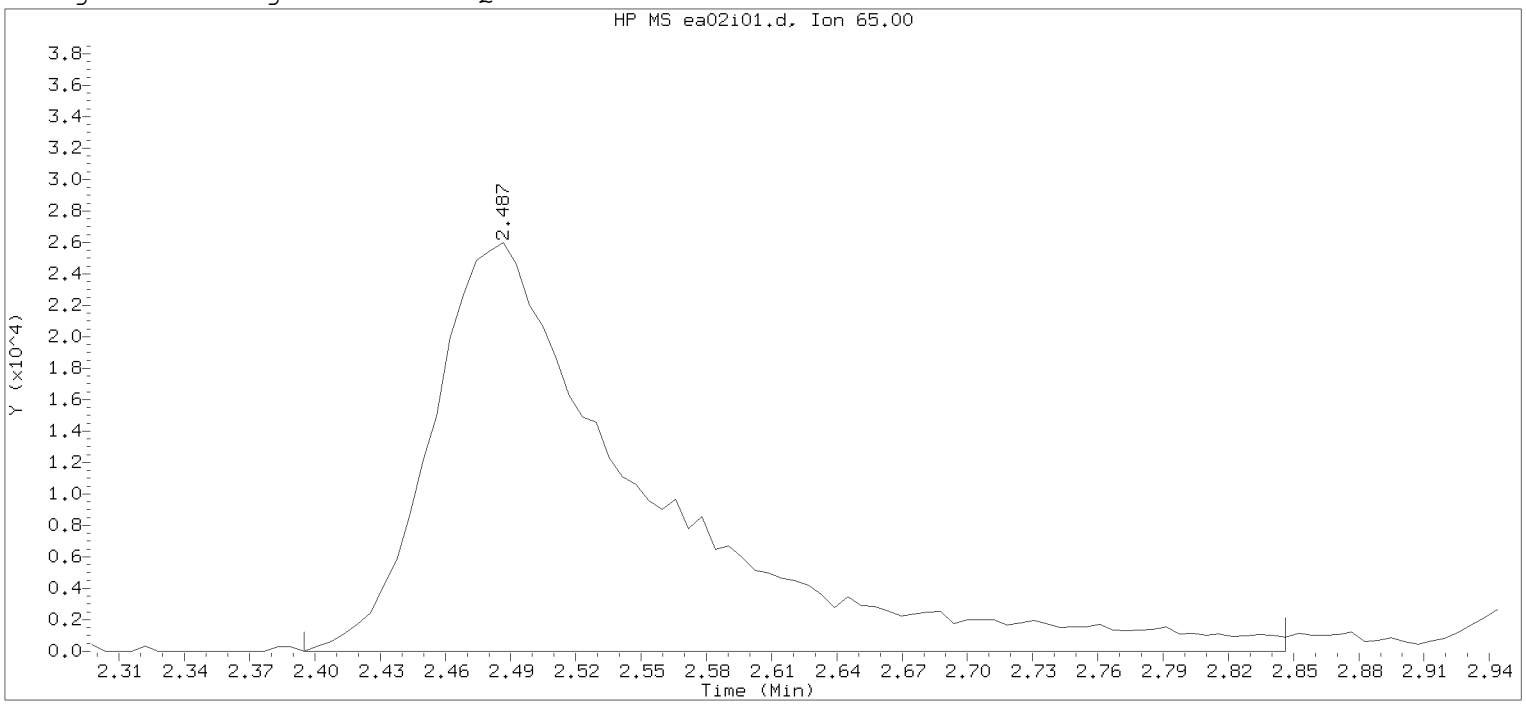
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:18 Analyst ID: KAS02648

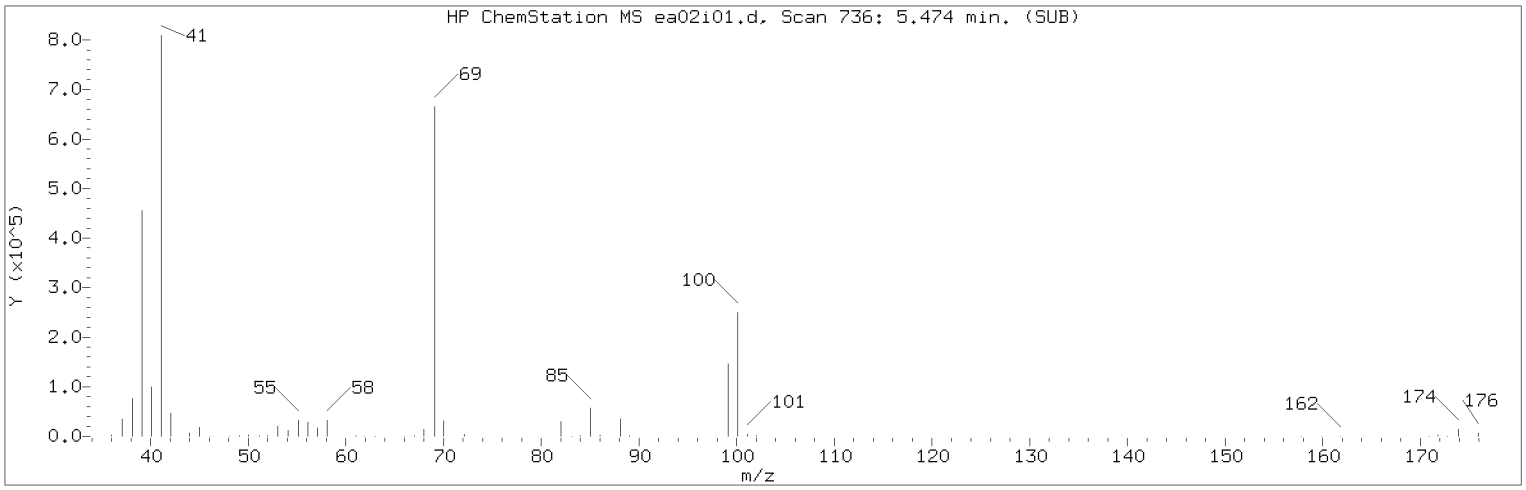
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 12:34
Date, time and analyst ID of latest file update: 02-May-2019 12:34 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

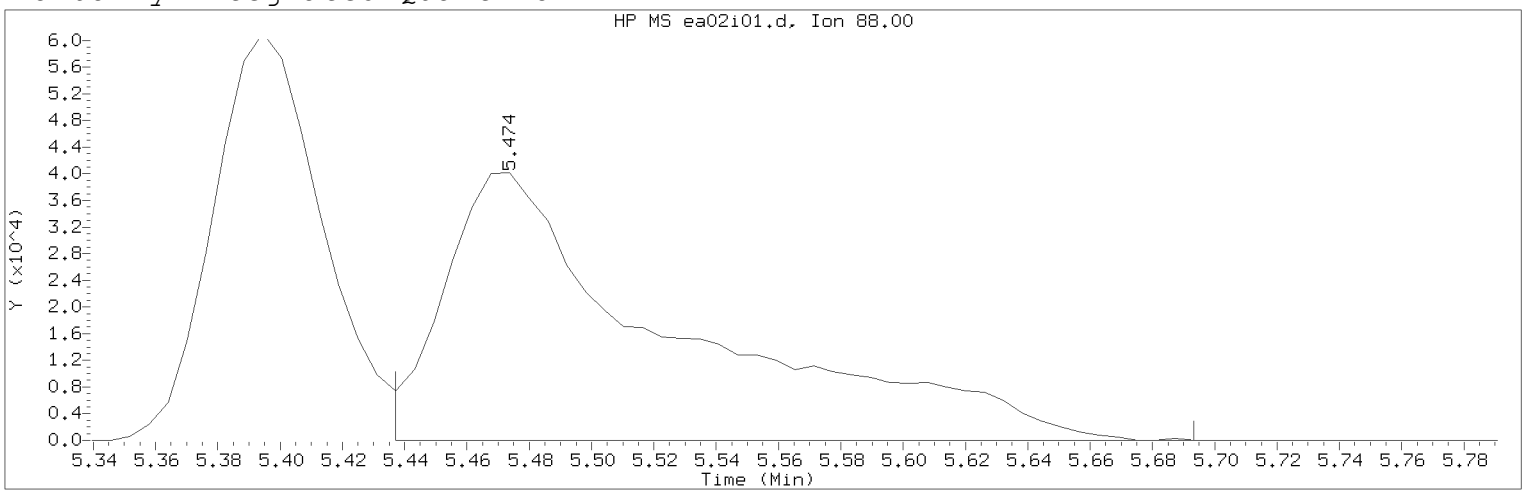
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 246
Retention Time (minutes): 2.487
Quant Ion : 65.00
Area : 178841
On-column Amount (ng) : 250.0000
Integration start scan : 230 Integration stop scan: 304
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:23.
Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:18 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

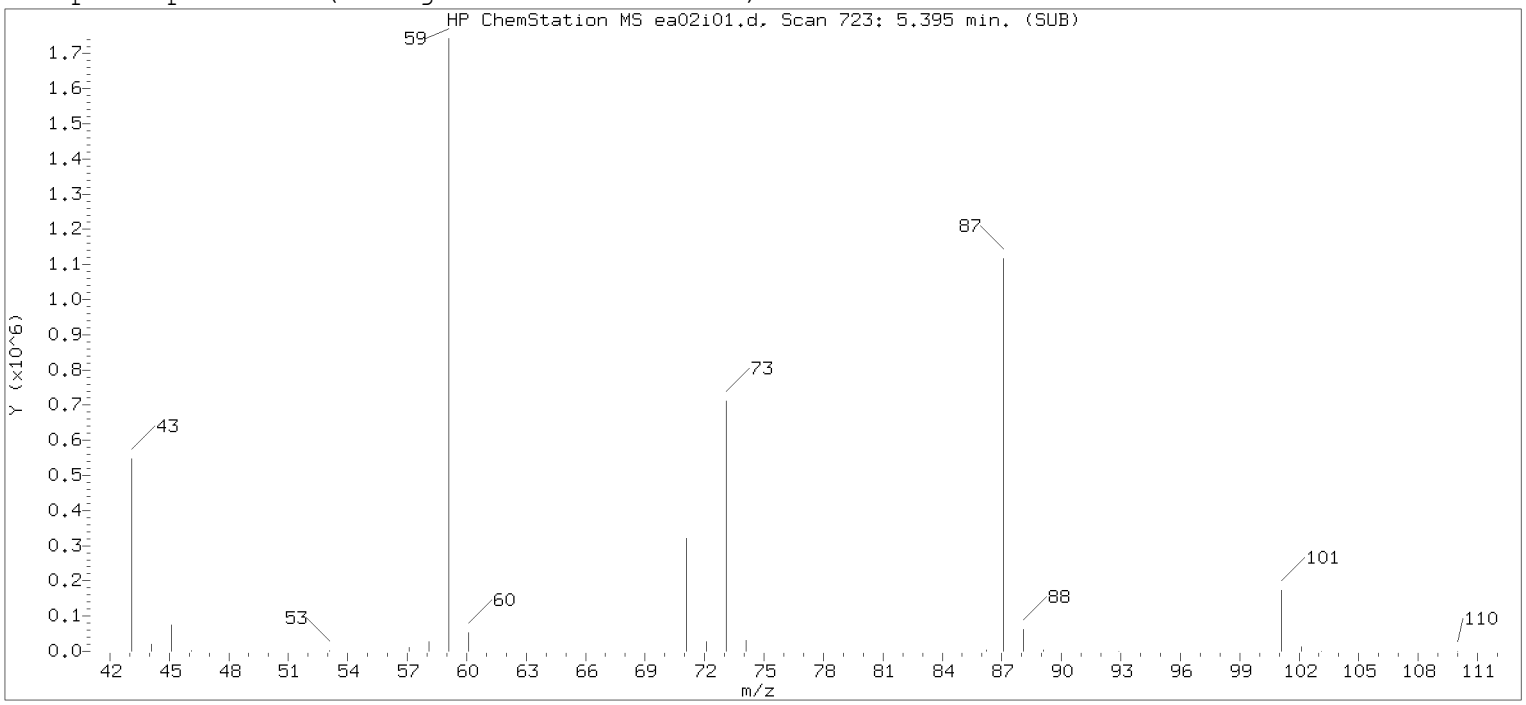
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 736
Retention Time (minutes): 5.474
Quant Ion : 88.00
Area (flag) : 206550M
On-Column Amount (ng) : 3670.1696
Integration start scan : 729 Integration stop scan: 771
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

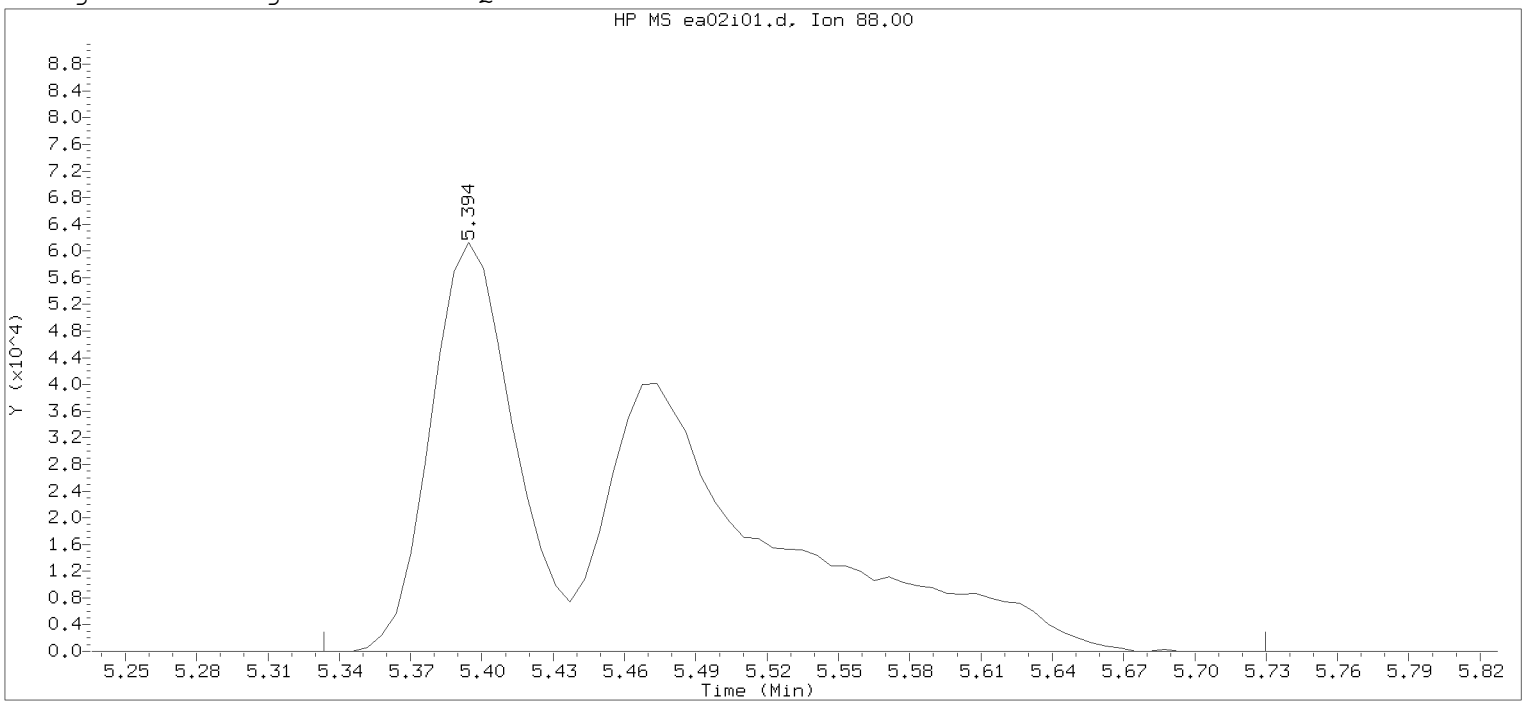
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



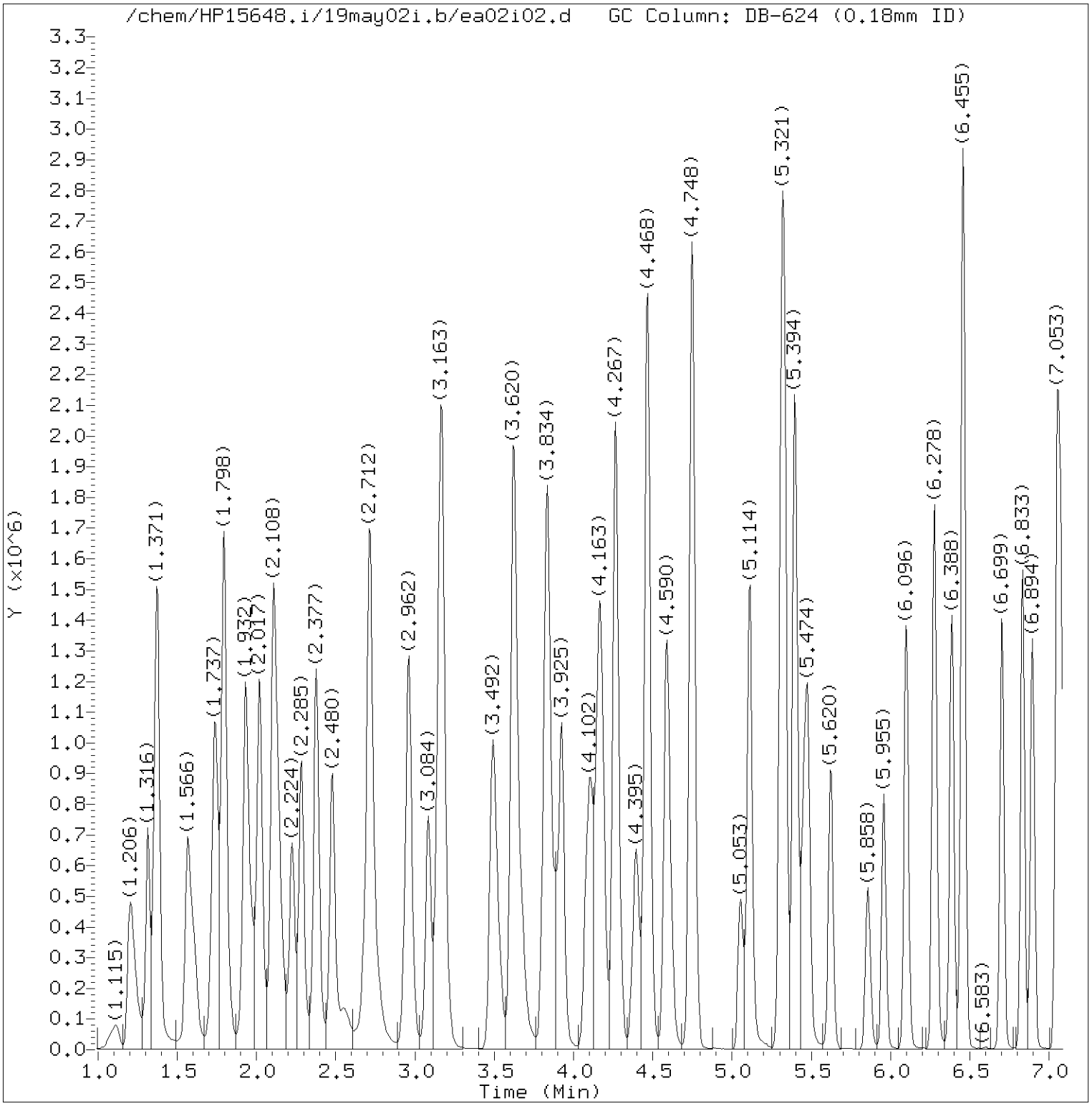
Data File: /chem/HP15648.i/19may02i.b/ea02i01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:18 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 12:34
Date, time and analyst ID of latest file update: 02-May-2019 12:34 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 723		
Retention Time (minutes)	: 5.394		
Quant Ion	: 88.00		
Area	: 353084		
On-column Amount (ng)	: 6582.2441		
Integration start scan	: 712	Integration stop scan:	777
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: KAS02648



Total Ion Chromatogram (TIC)

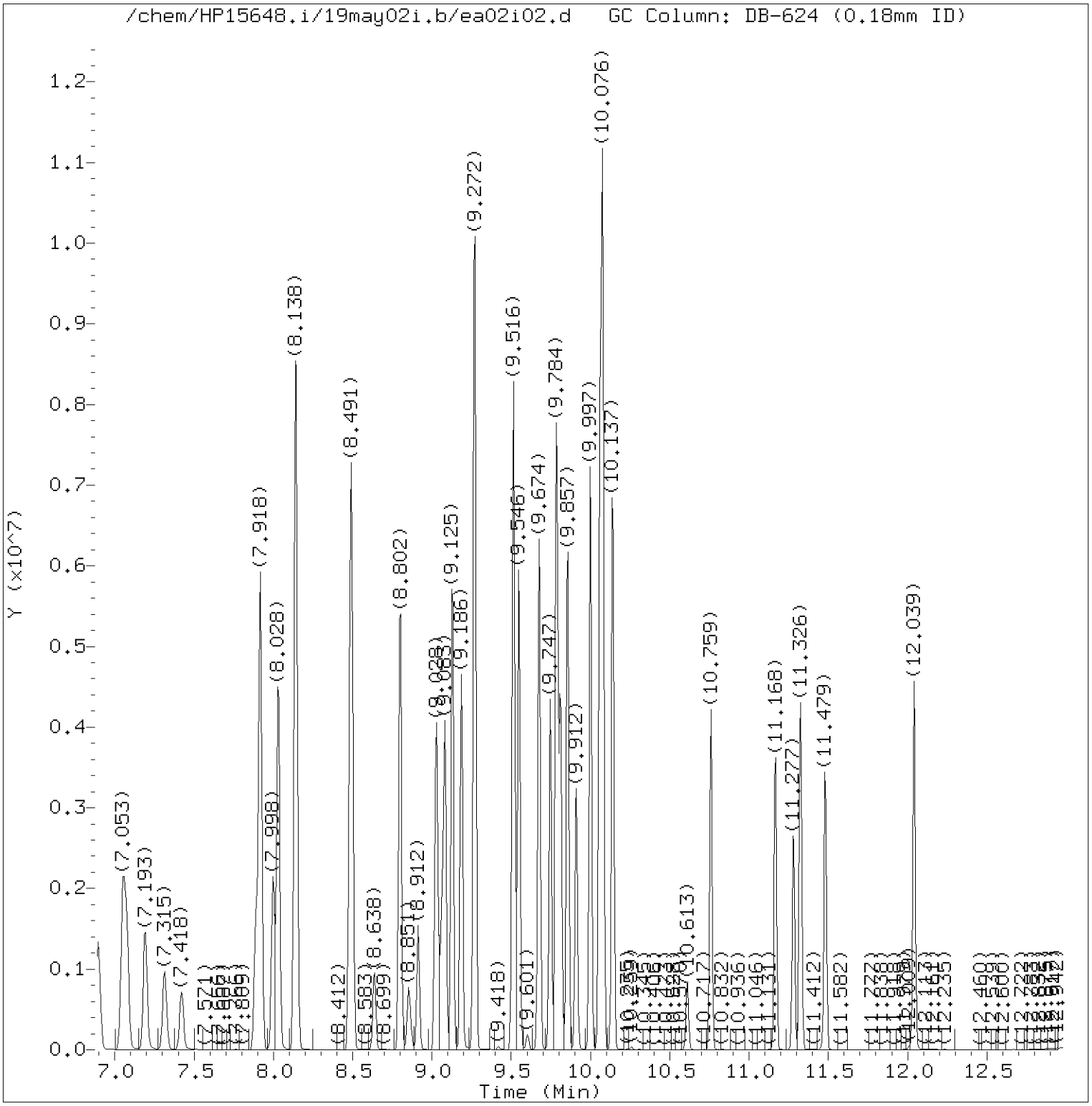
Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i02.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:38 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i02.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:38 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i02.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:38 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.206	85	1057497	109.792
4) Chloromethane	(2)	1.316	50	796238	101.580
5) 1,3-Butadiene	(2)	1.365	39	606352	102.900
6) Vinyl Chloride	(2)	1.377	62	812724	108.476
8) Bromomethane	(2)	1.566	94	571455	101.292
9) Chloroethane	(2)	1.602	64	443073	103.867
10) Dichlorofluoromethane	(2)	1.737	67	1098676	100.657
12) Trichlorofluoromethane	(2)	1.791	101	1183931	111.157
11) n-Pentane	(2)	1.798	43	954822	109.123
14) Ethyl ether	(2)	1.932	59	454502	102.413
15) Freon 123a	(2)	1.938	67	639936	102.035
16) Acrolein	(1)	2.017	56	1495072	998.097
17) 1,1-Dichloroethene	(2)	2.108	96	468803	106.891
17) 1,1-Dichloroethene	(2)	2.108	63	246840	106.164
18) Acetone	(1)	2.127	58	122701	196.803
19) Freon 113	(2)	2.133	101	556250	114.536
22) Methyl Iodide	(2)	2.224	142	870581	105.930
21) 2-Propanol	(1)	2.230	45	183041M	491.395
23) Carbon Disulfide	(2)	2.285	76	1579593	106.181
25) Allyl Chloride	(2)	2.377	41	855089	100.317
27) Methyl Acetate	(2)	2.383	43	421780	100.777
28) Methylene Chloride	(2)	2.480	84	511191	102.312
29)*t-Butyl alcohol-d10	(1)	2.486	65	181548	250.000
30) t-Butyl alcohol	(1)	2.554	59	328046	483.378
31) Acrylonitrile	(2)	2.675	53	259638	102.022
33) Methyl Tertiary Butyl Ether	(2)	2.712	73	1483236	100.774
32) trans-1,2-Dichloroethene	(2)	2.718	96	521497	105.640
34) n-Hexane	(2)	2.962	57	978189	113.077
36) 1,1-Dichloroethane	(2)	3.084	63	972798	105.184
38) di-Isopropyl ether	(2)	3.157	45	1691701	103.944
39) 2-Chloro-1,3-butadiene	(2)	3.169	53	946251	107.147
40) Ethyl t-butyl ether	(2)	3.492	59	1623442	101.119
42) cis-1,2-Dichloroethene	(2)	3.620	96	578292	104.261
43) 1,2-Dichloroethene (Total)	(2)		96	1099789	209.901
44) 2-Butanone	(2)	3.626	43	636859	185.739
45) 2,2-Dichloropropane	(2)	3.633	77	873799	107.084
47) Propionitrile	(1)	3.675	54	466126	508.426
48) Methacrylonitrile	(2)	3.828	67	689988	252.500

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i02.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:38 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.846	128	287223	104.261
50) Tetrahydrofuran	(1)	3.883	71	185275	192.826
51) Chloroform	(2)	3.925	83	918513	104.415
52)$Dibromofluoromethane	(2)	4.078	113	254291	50.093
52)$Dibromofluoromethane	(2)	4.078	111	261398	50.163
53) 1,1,1-Trichloroethane	(2)	4.108	97	869571	106.830
54) Cyclohexane	(2)	4.163	56	1125895	112.618
54) Cyclohexane	(2)	4.169	84	985185	114.684
54) Cyclohexane	(2)	4.169	69	356298	109.162
55) 1,1-Dichloropropene	(2)	4.261	75	787701	109.141
56) Carbon Tetrachloride	(2)	4.273	117	767253	110.816
58) Isobutyl Alcohol	(1)	4.389	41	265063	1150.393
57)$1,2-Dichloroethane-d4	(2)	4.401	102	63472	49.548
57)$1,2-Dichloroethane-d4	(2)	4.401	65	323406	49.741
57)$1,2-Dichloroethane-d4	(2)	4.395	104	41040	49.970
60) Benzene	(2)	4.462	78	2229034	105.180
61) 1,2-Dichloroethane	(2)	4.474	62	712169	100.053
61) 1,2-Dichloroethane	(2)	4.474	98	62130	99.873
65) t-Amyl methyl ether	(2)	4.590	73	1606177	100.888
66)*Fluorobenzene	(2)	4.742	96	1092189M	50.000
67) n-Heptane	(2)	4.754	43	993450	107.146
69) n-Butanol	(1)	5.053	56	502203	2519.941
71) Trichloroethene	(2)	5.108	95	572515	107.096
73) Methylcyclohexane	(2)	5.315	83	1212678	108.944
73) Methylcyclohexane	(2)	5.315	98	555126	108.454
74) 1,2-Dichloropropane	(2)	5.333	63	558434	105.911
75) Dibromomethane	(2)	5.449	93	326866	103.557
76) 1,4-Dioxane	(1)	5.468	88	71800M	1280.228
77) Methyl Methacrylate	(2)	5.480	69	480609	99.973
79) Bromodichloromethane	(2)	5.620	83	689767	105.041
80) 2-Nitropropane	(2)	5.858	41	405279	186.229
81) 2-Chloroethyl Vinyl Ether	(2)	5.955	63	422968	104.105
82) cis-1,3-Dichloropropene	(2)	6.096	75	907962	106.156
83) 4-Methyl-2-pentanone	(2)	6.278	43	1418981	192.704
84)$Toluene-d8	(3)	6.388	98	1110379	50.431
84)$Toluene-d8	(3)	6.388	100	713420	50.406
89) Toluene	(3)	6.455	92	1435215	106.504
90) trans-1,3-Dichloropropene	(3)	6.699	75	843315	104.711

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i02.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:38 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropene (total)	(3)		100	1751277	210.867
92) Ethyl Methacrylate	(3)	6.833	69	892672	103.974
93) 1,1,2-Trichloroethane	(3)	6.894	97	472271	102.969
94) Tetrachloroethene	(3)	7.053	166	607143	110.814
95) 1,3-Dichloropropane	(3)	7.077	76	837368	103.877
97) 2-Hexanone	(3)	7.193	43	1017793	177.812
102) 1-Chlorohexane	(3)	7.315	91	48225	103.556
98) Dibromochloromethane	(3)	7.315	129	534422	107.937
100) 1,2-Dibromoethane	(3)	7.418	107	501631	102.795
101)*Chlorobenzene-d5	(3)	7.888	117	810686	50.000
103) Chlorobenzene	(3)	7.912	112	1571499	105.464
104) 1,1,1,2-Tetrachloroethane	(3)	7.998	131	543015	107.300
105) Ethylbenzene	(3)	8.028	91	2882952	108.141
107) m+p-Xylene	(3)	8.144	106	2244615	216.287
109) Xylene (Total)	(3)		106	3332431	323.695
108) o-Xylene	(3)	8.485	106	1087816	107.408
110) Styrene	(3)	8.497	104	1828710	109.318
111) Bromoform	(3)	8.638	173	362358	109.784
112) Isopropylbenzene	(3)	8.802	105	2977700	110.504
113) Cyclohexanone	(1)	8.851	55	254890	1206.446
115)$4-Bromofluorobenzene	(3)	8.912	95	426075	50.339
115)$4-Bromofluorobenzene	(3)	8.912	174	320832	50.586
116) Bromobenzene	(4)	9.028	156	645162	105.644
117) 1,1,2,2-Tetrachloroethane	(4)	9.034	83	714863	100.861
118) 1,2,3-Trichloropropane	(4)	9.064	110	218490	101.720
119) trans-1,4-Dichloro-2-butene	(4)	9.083	53	601767	258.370
120) n-Propylbenzene	(4)	9.125	91	3510878	109.048
121) 2-Chlorotoluene	(4)	9.186	126	679828	107.249
123) 1,3,5-Trimethylbenzene	(4)	9.272	105	2539386	108.722
122) 4-Chlorotoluene	(4)	9.272	126	695726	107.072
125) tert-Butylbenzene	(4)	9.516	134	574483	110.654
126) Pentachloroethane	(4)	9.522	167	420036	108.673
127) 1,2,4-Trimethylbenzene	(4)	9.546	105	2584177	107.450
128) sec-Butylbenzene	(4)	9.674	105	3346526	112.943
130) 1,3-Dichlorobenzene	(4)	9.747	146	1283786	107.870
131) p-Isopropyltoluene	(4)	9.784	119	2918688	111.975
132)*1,4-Dichlorobenzene-d4	(4)	9.796	152	438274	50.000
134) 1,4-Dichlorobenzene	(4)	9.814	146	1289063	105.883

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i02.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:38 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	9.857	105	2715906	106.054
136) Benzyl Chloride	(4)	9.912	91	1770534	107.074
137) 1,3-Diethylbenzene	(4)	9.997	119	1766150	107.610
138) 1,4-Diethylbenzene	(4)	10.058	119	1874793	107.205
139) 1,2-Dichlorobenzene	(4)	10.076	146	1212029	106.381
140) n-Butylbenzene	(4)	10.076	92	1447719	113.088
141) 1,2-Diethylbenzene	(4)	10.137	119	1432531	106.614
142) Diethylbenzene (total)	(4)		100	5073474	321.429
143) 1,2-Dibromo-3-chloropropane	(4)	10.607	75	166262	102.383
145) 1,3,5-Trichlorobenzene	(4)	10.759	180	917160	109.471
147) 1,2,4-Trichlorobenzene	(4)	11.168	180	802499	107.303
148) Hexachlorobutadiene	(4)	11.284	225	356785	111.294
149) Naphthalene	(4)	11.326	128	2515193	102.013
150) 1,2,3-Trichlorobenzene	(4)	11.479	180	753037	106.642
151) 2-Methylnaphthalene	(4)	12.039	142	1549061	99.425

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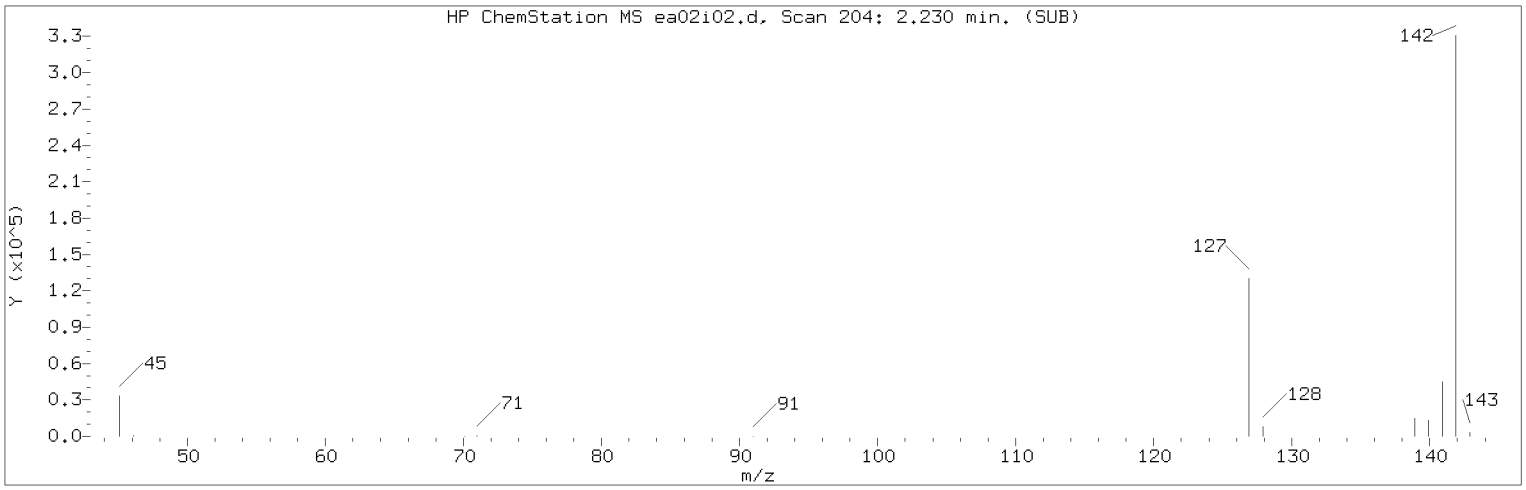
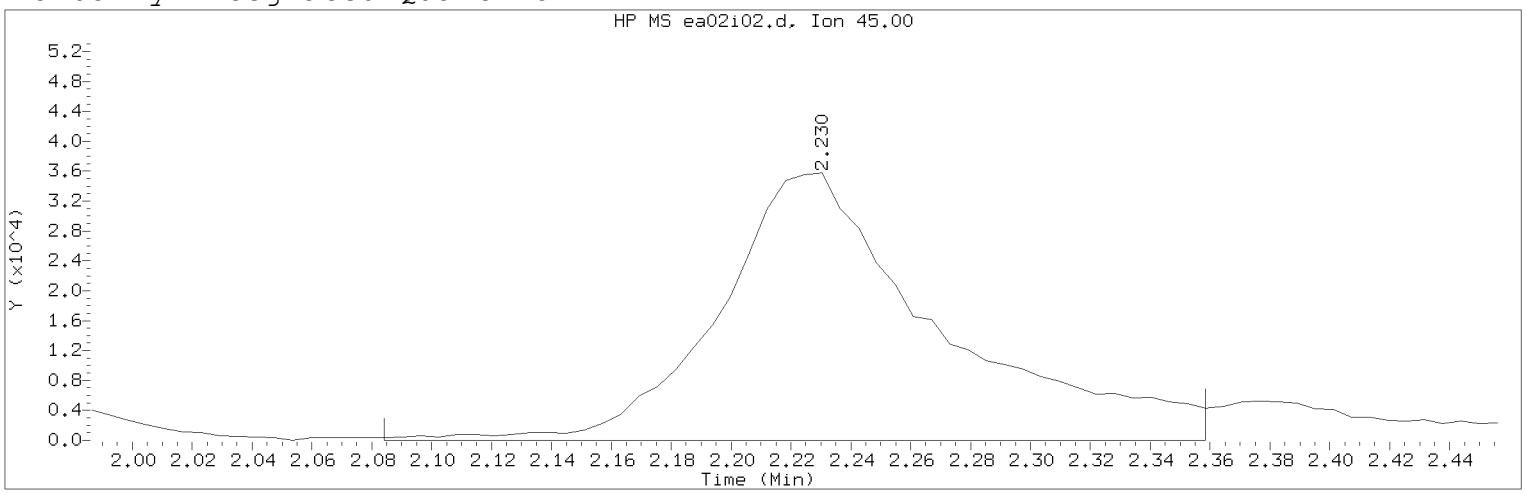
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i02.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:38 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

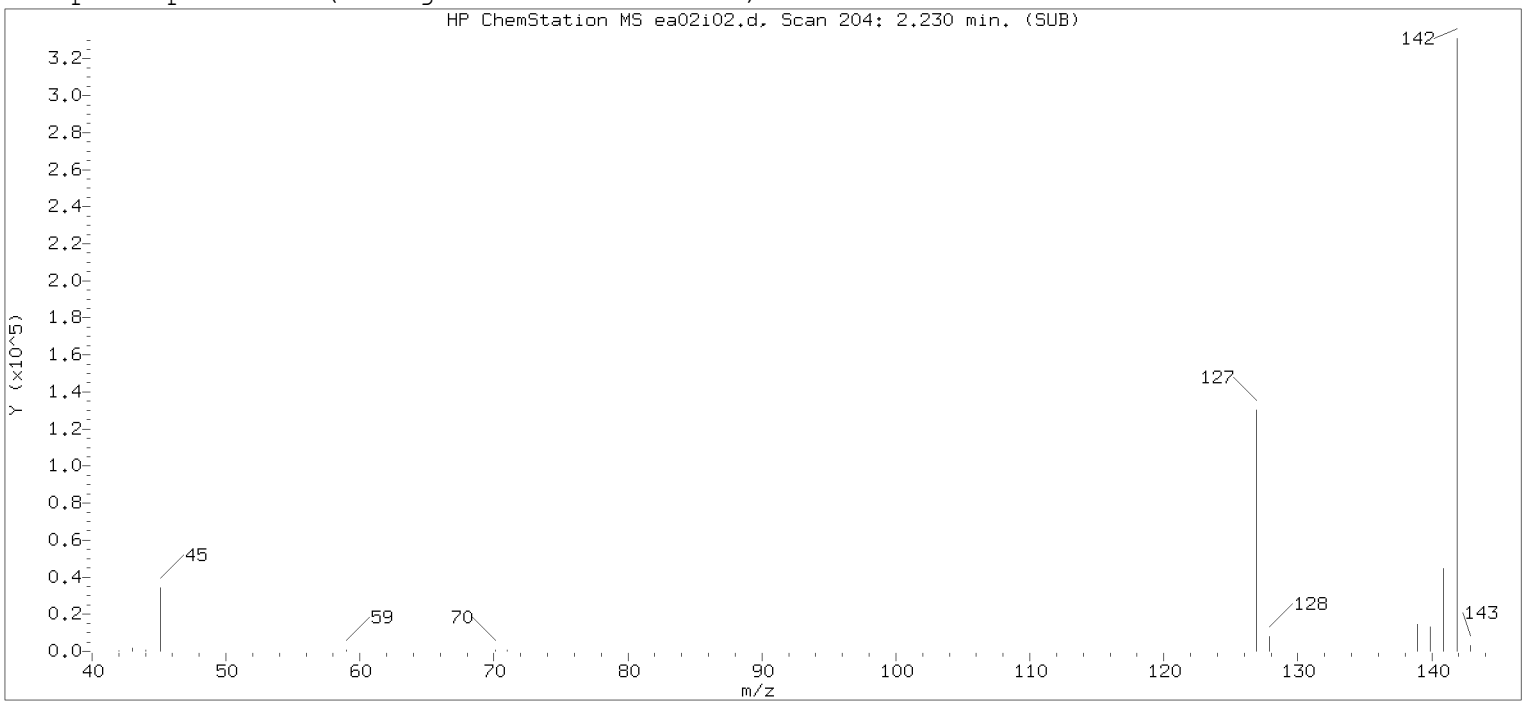
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 204
Retention Time (minutes): 2.230
Quant Ion : 45.00
Area (flag) : 183041M
On-Column Amount (ng) : 491.3951
Integration start scan : 179 Integration stop scan: 224
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

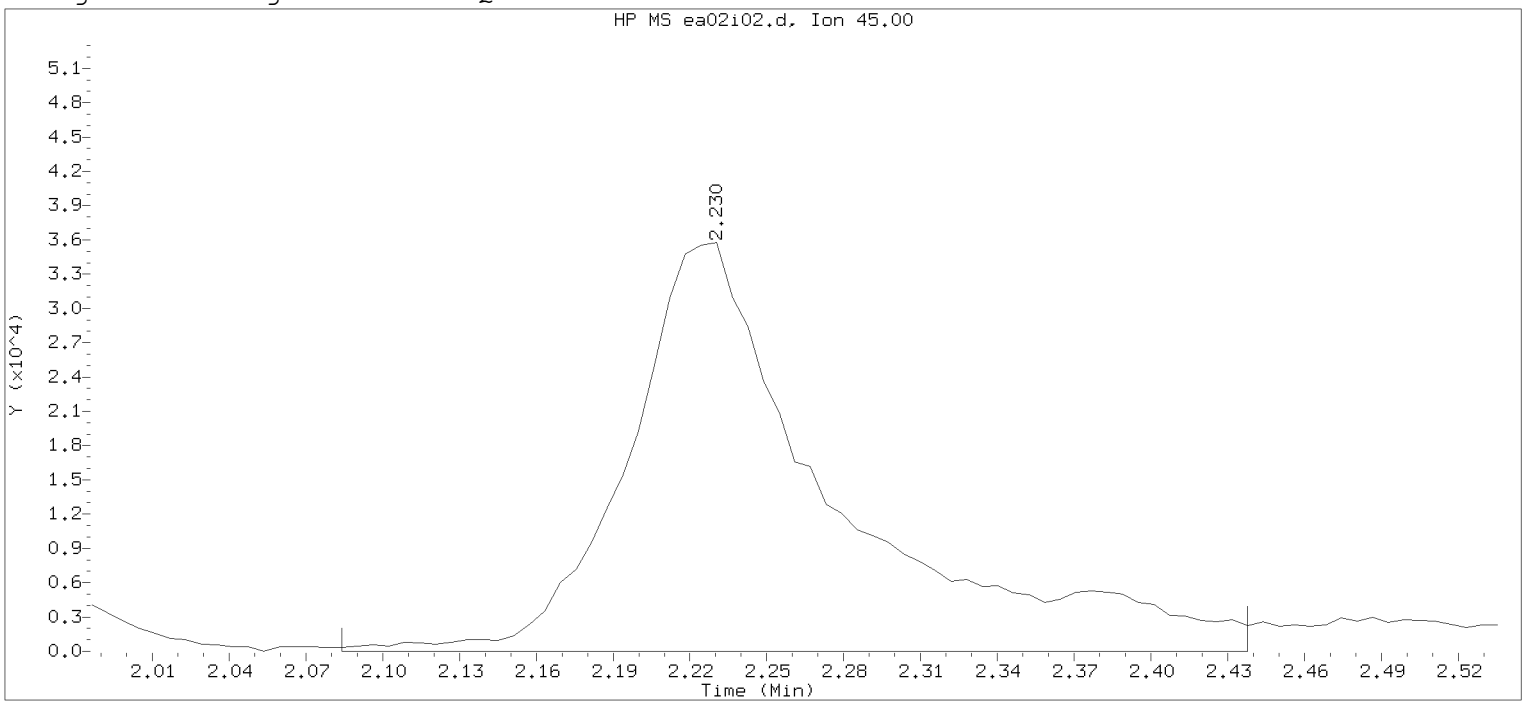
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i02.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:38 Analyst ID: KAS02648

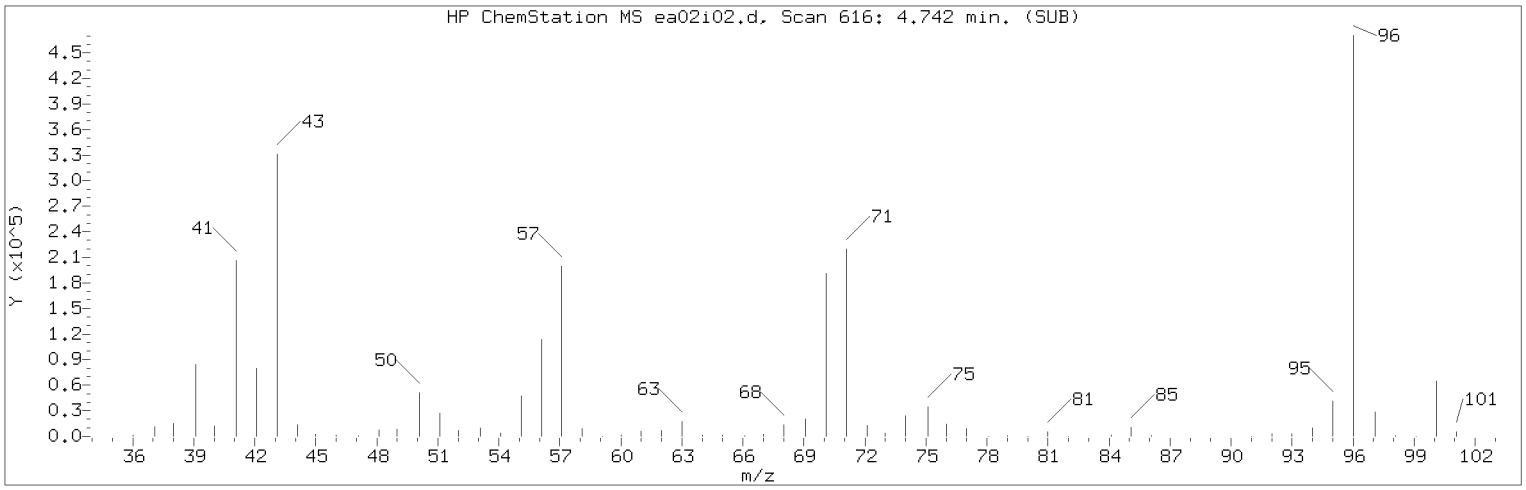
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 12:54
Date, time and analyst ID of latest file update: 02-May-2019 12:54 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

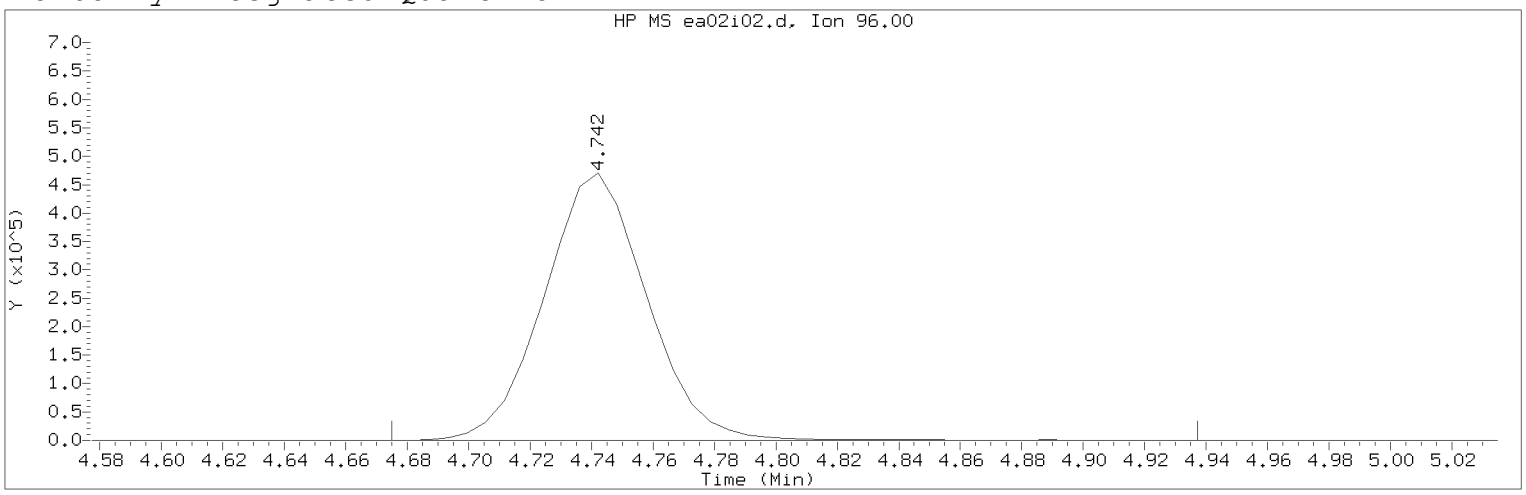
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 204
Retention Time (minutes): 2.230
Quant Ion : 45.00
Area : 200842
On-column Amount (ng) : 512.3974
Integration start scan : 179 Integration stop scan: 237
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:23.
Target 3.5 esignature user: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i02.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:38 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

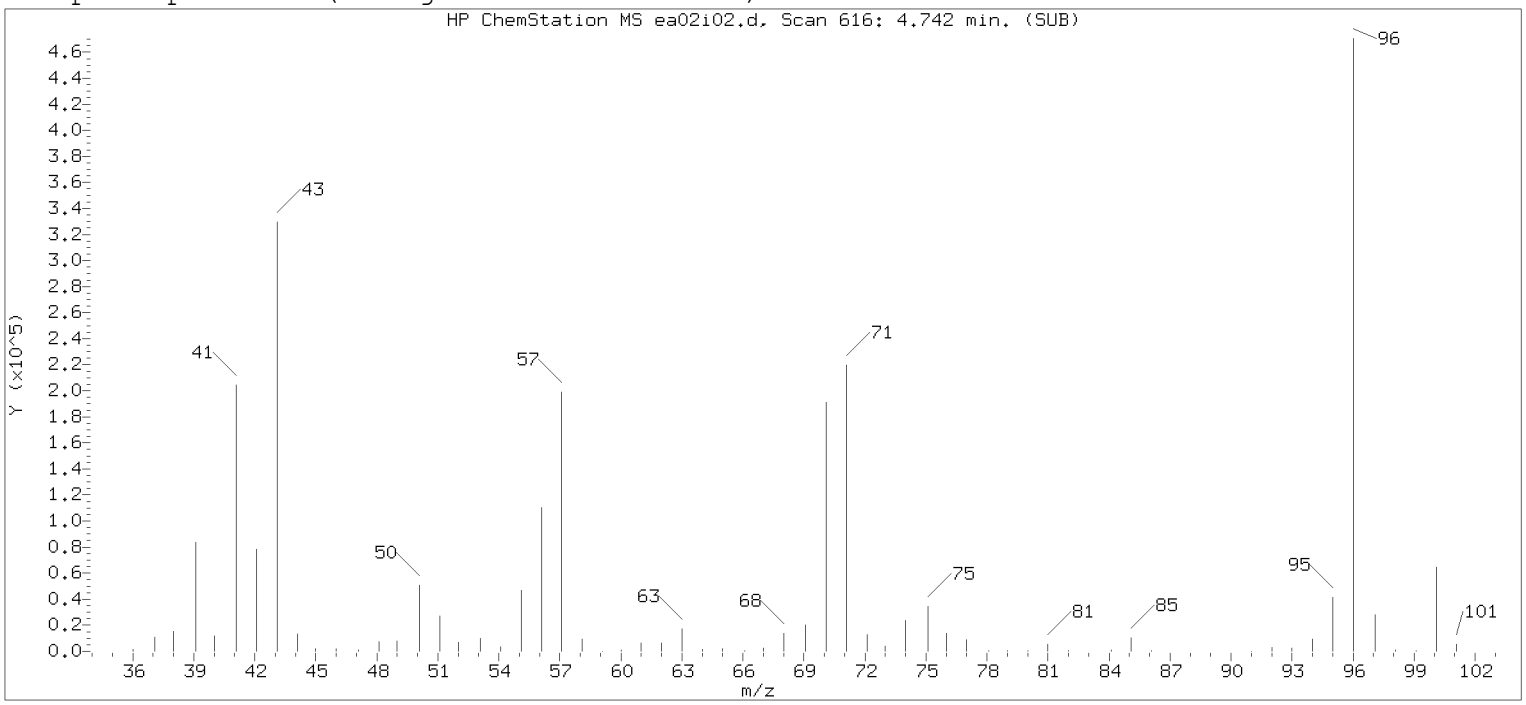
Compound Number : 66
Compound Name : Fluorobenzene
Scan Number : 616
Retention Time (minutes): 4.742
Quant Ion : 96.00
Area (flag) : 1092189M
On-Column Amount (ng) : 50.0000
Integration start scan : 604 Integration stop scan: 647
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

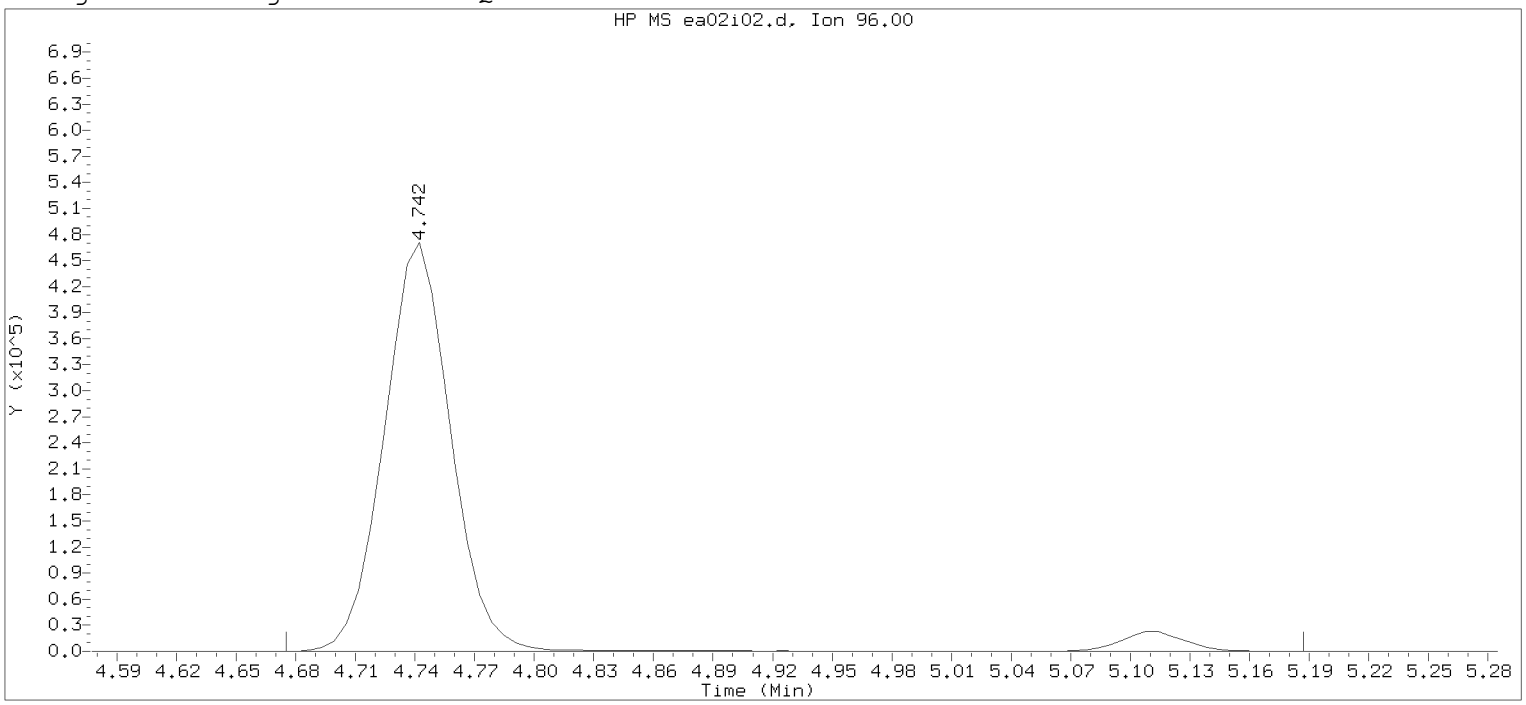
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i02.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:38 Analyst ID: KAS02648

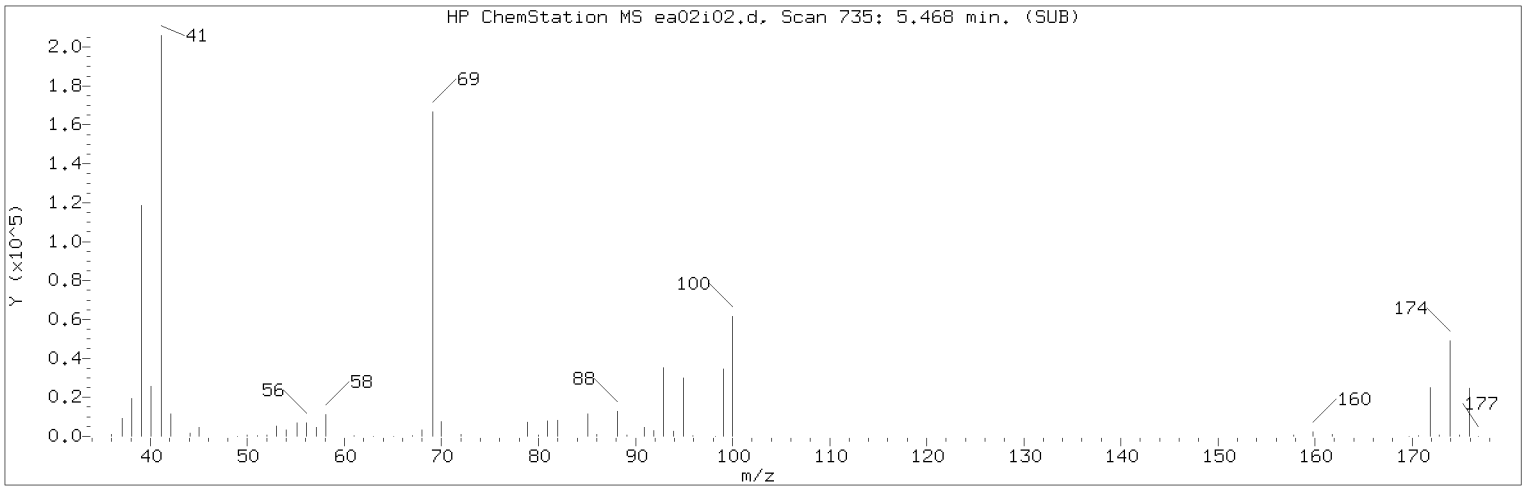
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 12:54
Date, time and analyst ID of latest file update: 02-May-2019 12:54 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

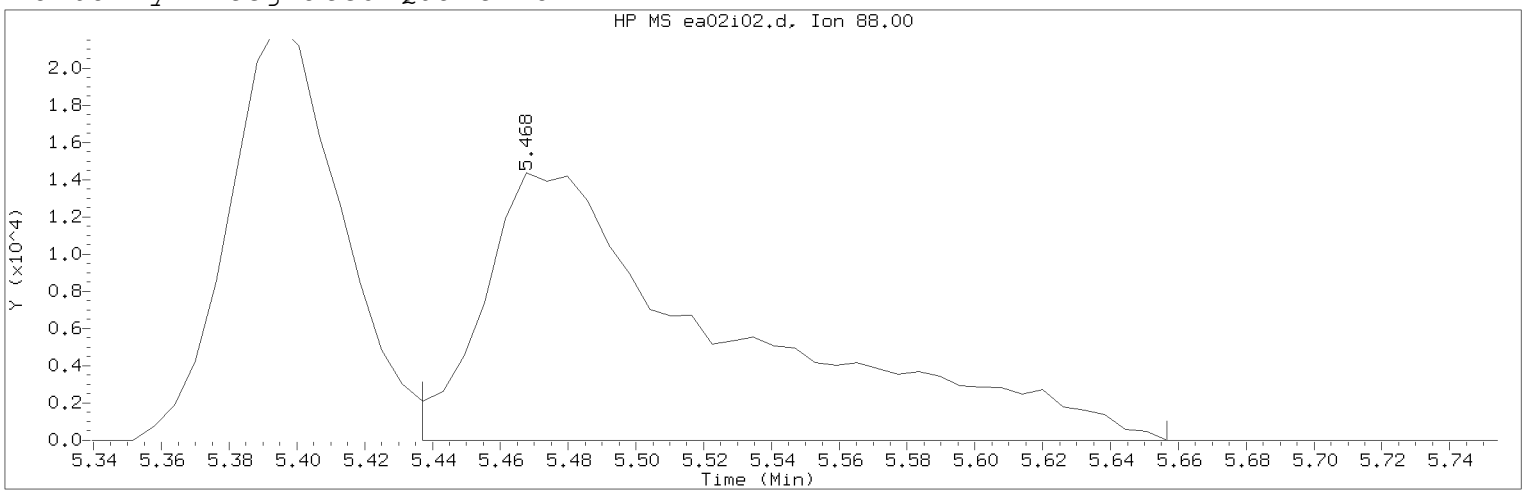
Compound Number : 66
Compound Name : Fluorobenzene
Scan Number : 616
Retention Time (minutes): 4.742
Quant Ion : 96.00
Area : 1142551
On-column Amount (ng) : 50.0000
Integration start scan : 604 Integration stop scan: 688
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:23.
Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i02.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:38 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

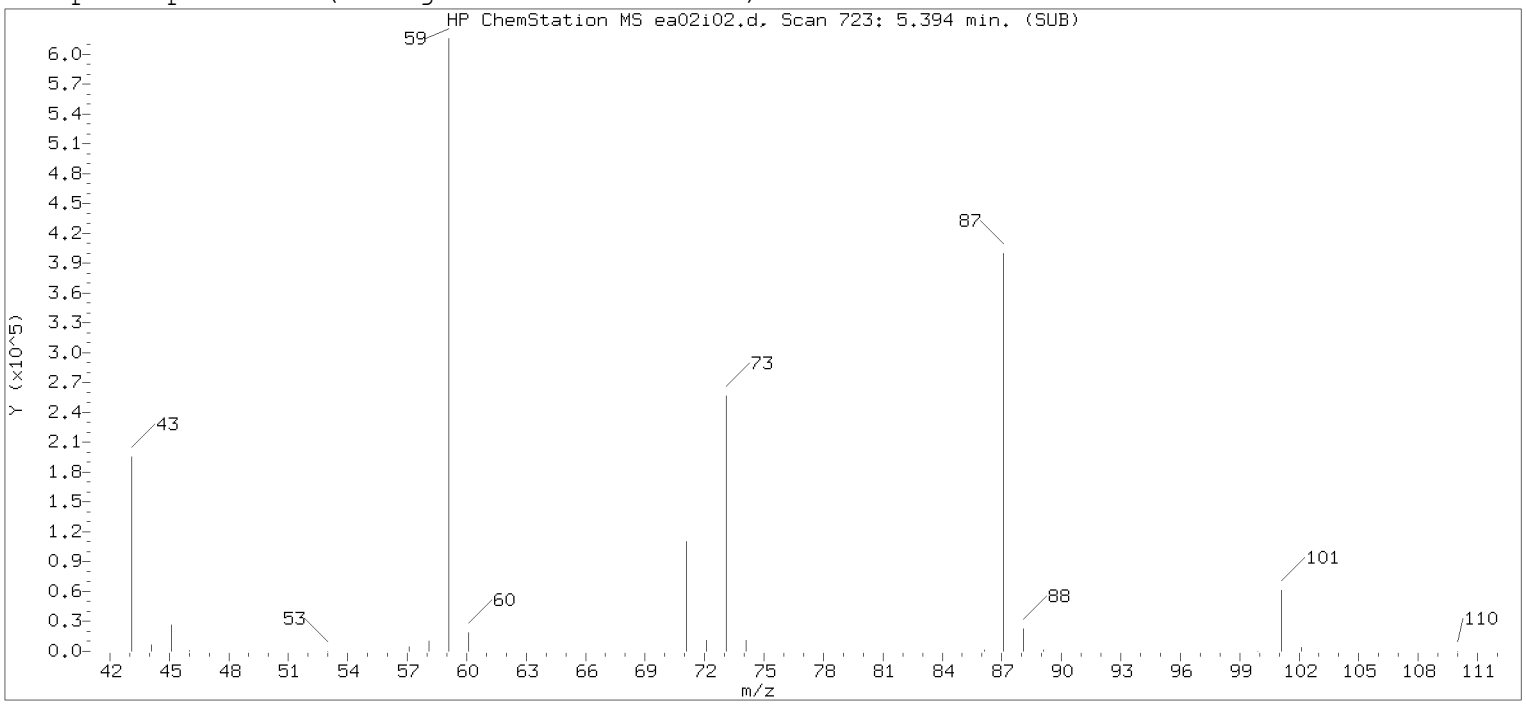
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 735
Retention Time (minutes): 5.468
Quant Ion : 88.00
Area (flag) : 71800M
On-Column Amount (ng) : 1280.2284
Integration start scan : 729 Integration stop scan: 765
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

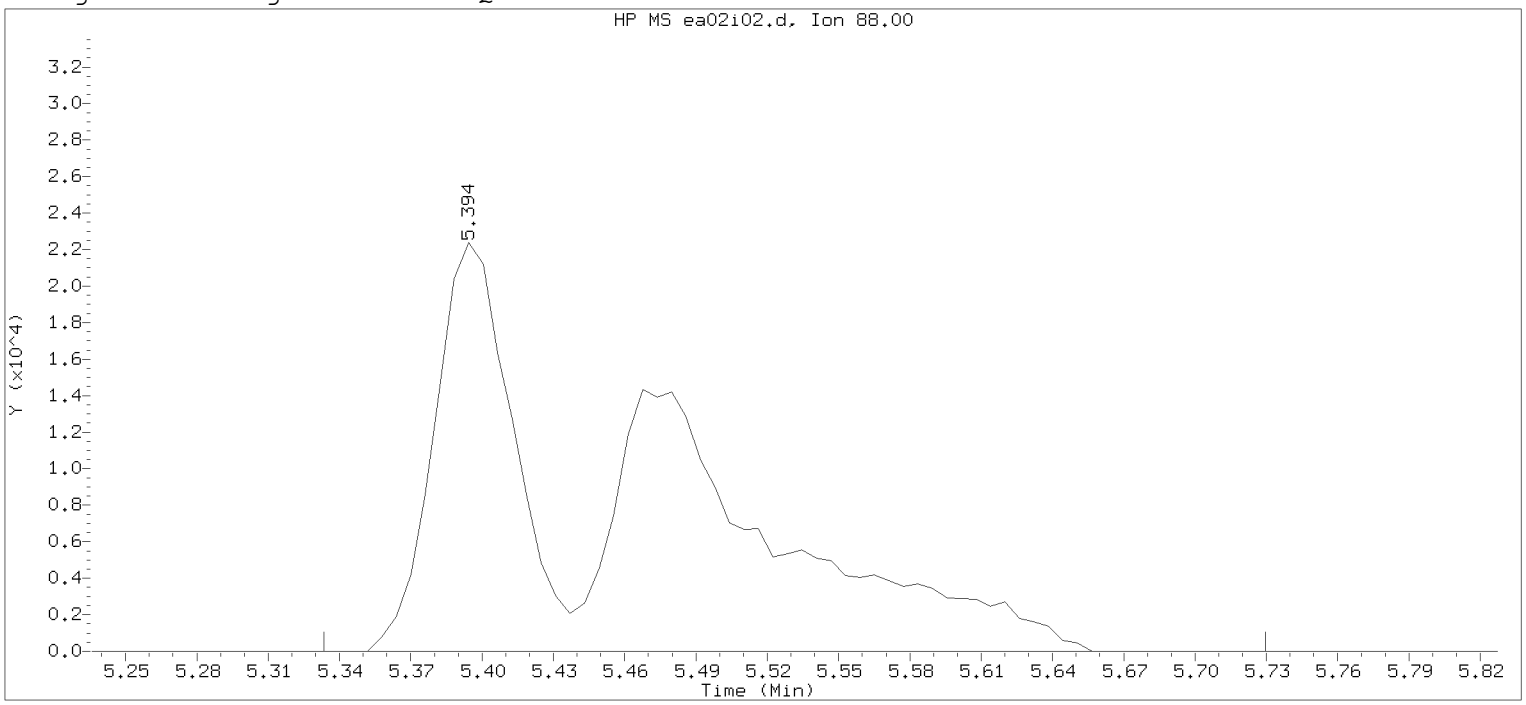
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



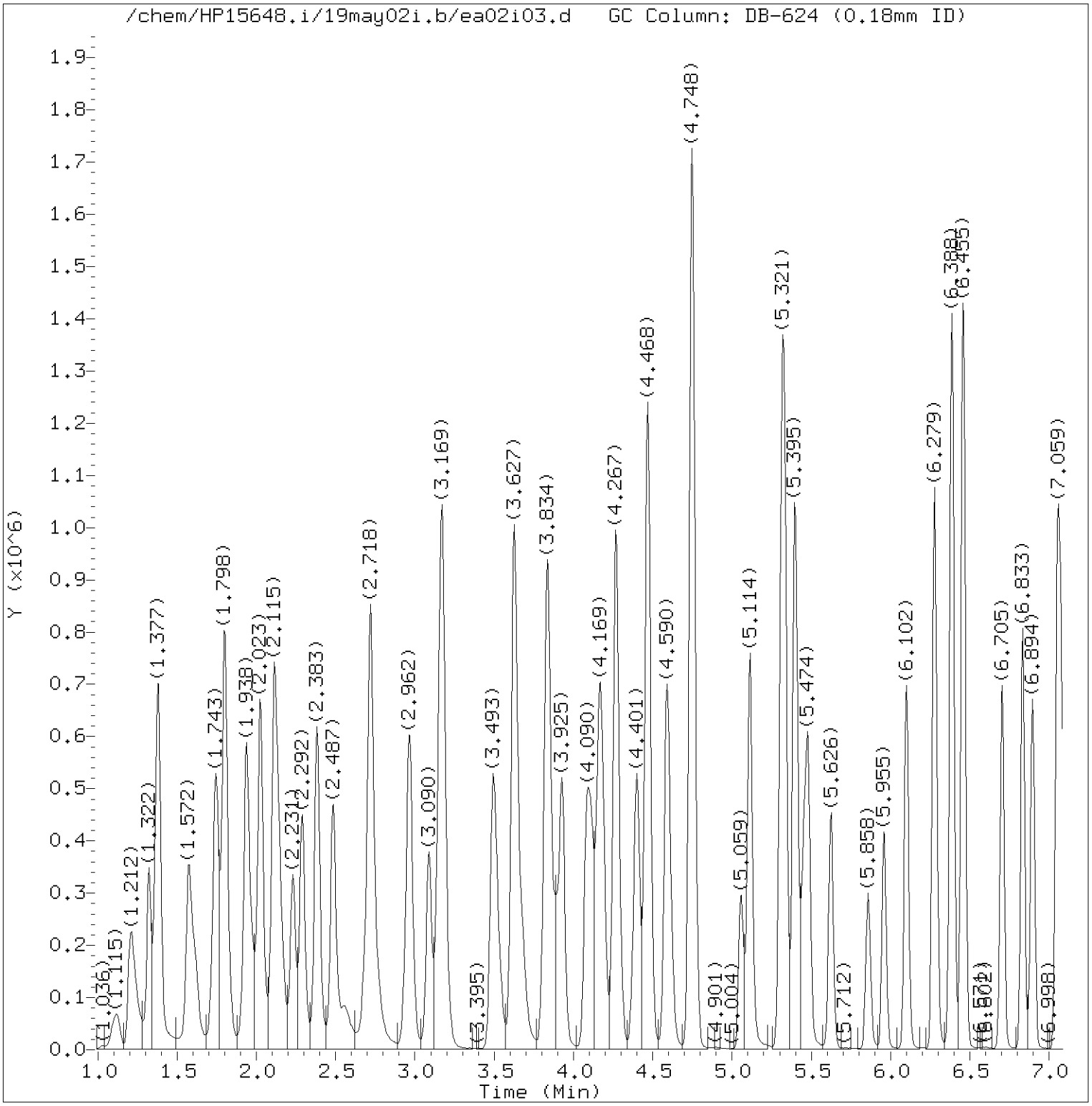
Data File: /chem/HP15648.i/19may02i.b/ea02i02.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:38 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 12:54
Date, time and analyst ID of latest file update: 02-May-2019 12:54 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 723
Retention Time (minutes): 5.394
Quant Ion : 88.00
Area : 122745
On-column Amount (ng) : 2033.4053
Integration start scan : 712 Integration stop scan: 777
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:23.
Target 3.5 esignature user kas02234



Total Ion Chromatogram (TIC)

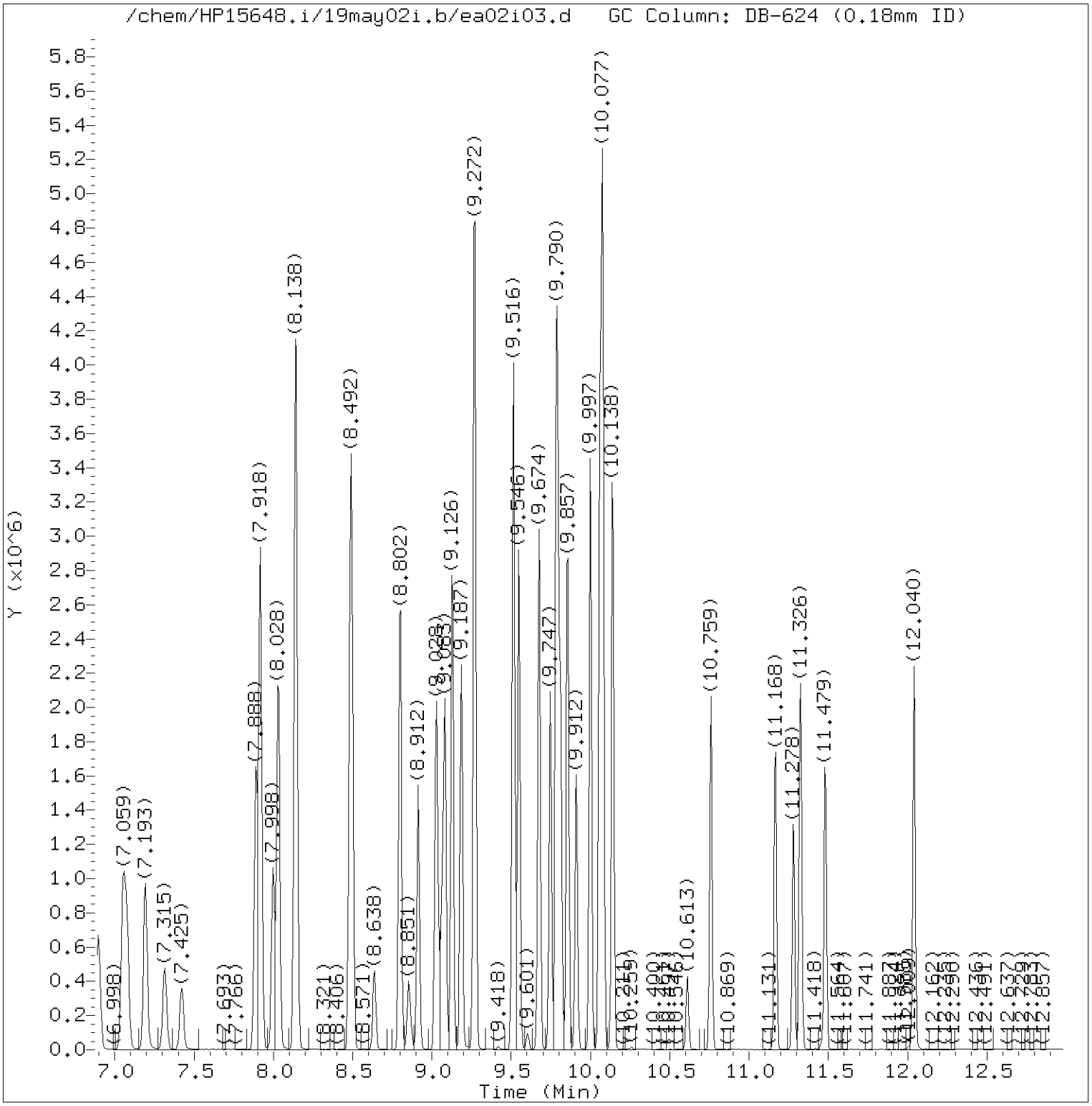
Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i03.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:58 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i03.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:58 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i03.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:58 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.206	85	491441	50.518
4) Chloromethane	(2)	1.322	50	396101	50.033
5) 1,3-Butadiene	(2)	1.371	39	288571	48.487
6) Vinyl Chloride	(2)	1.389	62	382684	50.572
8) Bromomethane	(2)	1.572	94	282577	49.592
9) Chloroethane	(2)	1.609	64	217424	50.465
10) Dichlorofluoromethane	(2)	1.743	67	531684	48.229
11) n-Pentane	(2)	1.798	43	455551	51.548
12) Trichlorofluoromethane	(2)	1.798	101	555812	51.668
14) Ethyl ether	(2)	1.938	59	221821	49.488
15) Freon 123a	(2)	1.944	67	307715	48.578
16) Acrolein	(1)	2.023	56	792814	531.971
17) 1,1-Dichloroethene	(2)	2.115	96	228300	51.539
17) 1,1-Dichloroethene	(2)	2.115	63	118548	50.482
18) Acetone	(1)	2.133	58	63182	101.855
19) Freon 113	(2)	2.133	101	264534	53.931
21) 2-Propanol	(1)	2.231	45	98922	266.920
22) Methyl Iodide	(2)	2.231	142	426531	51.386
23) Carbon Disulfide	(2)	2.292	76	761105	50.656
25) Allyl Chloride	(2)	2.383	41	423647	49.210
27) Methyl Acetate	(2)	2.389	43	214160	50.663
28) Methylene Chloride	(2)	2.487	84	251264	49.792
29)*t-Butyl alcohol-d10	(1)	2.487	65	180628	250.000
30) t-Butyl alcohol	(1)	2.566	59	178705	264.664
31) Acrylonitrile	(2)	2.682	53	130595	50.808
32) trans-1,2-Dichloroethene	(2)	2.718	96	250159	50.173
33) Methyl Tertiary Butyl Ether	(2)	2.718	73	742577	49.953
34) n-Hexane	(2)	2.962	57	462685	52.957
36) 1,1-Dichloroethane	(2)	3.090	63	477337	51.101
38) di-Isopropyl ether	(2)	3.163	45	837459	50.947
39) 2-Chloro-1,3-butadiene	(2)	3.175	53	458409	51.394
40) Ethyl t-butyl ether	(2)	3.493	59	817953	50.444
43) 1,2-Dichloroethene (Total)	(2)		96	531177	100.337
42) cis-1,2-Dichloroethene	(2)	3.627	96	281018	50.164
44) 2-Butanone	(2)	3.633	43	330096	95.320
45) 2,2-Dichloropropane	(2)	3.633	77	421237	51.112
47) Propionitrile	(1)	3.688	54	232239	254.604
48) Methacrylonitrile	(2)	3.828	67	345491	125.181

* = Compound is an internal standard.

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Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i03.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:58 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.846	128	144530	51.945
50) Tetrahydrofuran	(1)	3.889	71	94644	99.003
51) Chloroform	(2)	3.925	83	449769	50.623
52)$Dibromofluoromethane	(2)	4.078	113	252421	49.233
52)$Dibromofluoromethane	(2)	4.084	111	260538	49.503
53) 1,1,1-Trichloroethane	(2)	4.108	97	419270	50.999
54) Cyclohexane	(2)	4.169	56	538783	53.359
54) Cyclohexane	(2)	4.169	84	464880	53.581
54) Cyclohexane	(2)	4.163	69	167418	50.786
55) 1,1-Dichloropropene	(2)	4.267	75	377295	51.759
56) Carbon Tetrachloride	(2)	4.273	117	365602	52.282
58) Isobutyl Alcohol	(1)	4.389	41	145329	633.951
57)$1,2-Dichloroethane-d4	(2)	4.407	102	64123M	49.561
57)$1,2-Dichloroethane-d4	(2)	4.401	65	322513	49.113
57)$1,2-Dichloroethane-d4	(2)	4.401	104	41014	49.444
60) Benzene	(2)	4.468	78	1091746	51.006
61) 1,2-Dichloroethane	(2)	4.480	62	350214	48.715
61) 1,2-Dichloroethane	(2)	4.480	98	30424	48.422
65) t-Amyl methyl ether	(2)	4.590	73	811648	50.477
66)*Fluorobenzene	(2)	4.742	96	1103103	50.000
67) n-Heptane	(2)	4.754	43	480473	51.307
69) n-Butanol	(1)	5.053	56	275793	1390.916
71) Trichloroethene	(2)	5.114	95	277804	51.453
73) Methylcyclohexane	(2)	5.315	83	575213	51.164
73) Methylcyclohexane	(2)	5.315	98	266514	51.553
74) 1,2-Dichloropropane	(2)	5.334	63	272931	51.251
75) Dibromomethane	(2)	5.449	93	162995	51.129
77) Methyl Methacrylate	(2)	5.480	69	239316	49.288
76) 1,4-Dioxane	(1)	5.480	88	37412M	670.472
79) Bromodichloromethane	(2)	5.626	83	333835	50.335
80) 2-Nitropropane	(2)	5.858	41	216686	98.584
81) 2-Chloroethyl Vinyl Ether	(2)	5.955	63	208027	50.695
82) cis-1,3-Dichloropropene	(2)	6.102	75	442585	51.234
83) 4-Methyl-2-pentanone	(2)	6.279	43	829048	111.474
84)$Toluene-d8	(3)	6.388	98	1084355	49.747
84)$Toluene-d8	(3)	6.388	100	695604	49.644
89) Toluene	(3)	6.455	92	697495	52.282
90) trans-1,3-Dichloropropene	(3)	6.705	75	414995	52.049

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i03.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:58 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropene (total)	(3)		100	857580	103.282
92) Ethyl Methacrylate	(3)	6.833	69	436447	51.349
93) 1,1,2-Trichloroethane	(3)	6.894	97	231186	50.915
94) Tetrachloroethene	(3)	7.053	166	289975	53.460
95) 1,3-Dichloropropane	(3)	7.077	76	412522	51.691
97) 2-Hexanone	(3)	7.193	43	641897	113.275
102) 1-Chlorohexane	(3)	7.315	91	23153	50.220
98) Dibromochloromethane	(3)	7.315	129	257788	52.591
100) 1,2-Dibromoethane	(3)	7.425	107	247682	51.268
101)*Chlorobenzene-d5	(3)	7.888	117	802580	50.000
103) Chlorobenzene	(3)	7.912	112	772328	52.355
104) 1,1,1,2-Tetrachloroethane	(3)	7.998	131	263854	52.664
105) Ethylbenzene	(3)	8.034	91	1395496	52.874
107) m+p-Xylene	(3)	8.144	106	1083606	105.469
109) Xylene (Total)	(3)		106	1615423	158.509
108) o-Xylene	(3)	8.485	106	531817	53.040
110) Styrene	(3)	8.498	104	885848	53.490
111) Bromoform	(3)	8.638	173	175347	53.662
112) Isopropylbenzene	(3)	8.802	105	1435481	53.809
113) Cyclohexanone	(1)	8.851	55	133779	636.428
115)$4-Bromofluorobenzene	(3)	8.912	95	413535	49.351
115)$4-Bromofluorobenzene	(3)	8.912	174	314086	50.023
116) Bromobenzene	(4)	9.028	156	312283	52.805
117) 1,1,2,2-Tetrachloroethane	(4)	9.034	83	362326	52.789
118) 1,2,3-Trichloropropane	(4)	9.065	110	106759	51.325
119) trans-1,4-Dichloro-2-butene	(4)	9.083	53	300927	133.420
120) n-Propylbenzene	(4)	9.126	91	1699323	54.503
121) 2-Chlorotoluene	(4)	9.187	126	323936	52.771
123) 1,3,5-Trimethylbenzene	(4)	9.272	105	1226047	54.205
122) 4-Chlorotoluene	(4)	9.272	126	336301	53.446
125) tert-Butylbenzene	(4)	9.516	134	275119	54.721
126) Pentachloroethane	(4)	9.522	167	203718	54.427
127) 1,2,4-Trimethylbenzene	(4)	9.546	105	1247539	53.566
128) sec-Butylbenzene	(4)	9.674	105	1599273	55.736
130) 1,3-Dichlorobenzene	(4)	9.747	146	617058	53.540
131) p-Isopropyltoluene	(4)	9.784	119	1405536	55.683
132)*1,4-Dichlorobenzene-d4	(4)	9.796	152	424423	50.000
134) 1,4-Dichlorobenzene	(4)	9.814	146	616421	52.285

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i03.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:58 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	9.857	105	1305514	52.643
136) Benzyl Chloride	(4)	9.912	91	865800	54.068
137) 1,3-Diethylbenzene	(4)	9.997	119	844443	53.130
138) 1,4-Diethylbenzene	(4)	10.058	119	893582	52.765
139) 1,2-Dichlorobenzene	(4)	10.077	146	585041	53.025
140) n-Butylbenzene	(4)	10.077	92	693315	55.926
141) 1,2-Diethylbenzene	(4)	10.138	119	685126	52.654
142) Diethylbenzene (total)	(4)		100	2423151	158.549
143) 1,2-Dibromo-3-chloropropane	(4)	10.613	75	83532	53.117
145) 1,3,5-Trichlorobenzene	(4)	10.759	180	443712	54.689
147) 1,2,4-Trichlorobenzene	(4)	11.168	180	390267	53.886
148) Hexachlorobutadiene	(4)	11.284	225	175745	56.610
149) Naphthalene	(4)	11.326	128	1252847	52.472
150) 1,2,3-Trichlorobenzene	(4)	11.479	180	363868	53.211
151) 2-Methylnaphthalene	(4)	12.040	142	758910	50.299

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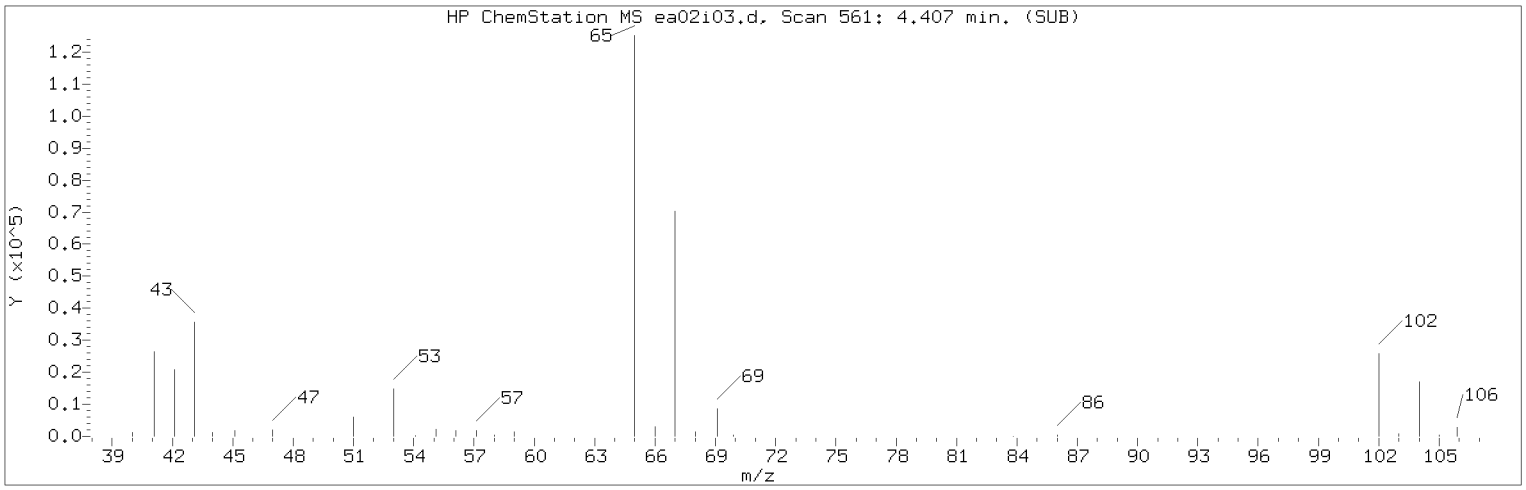
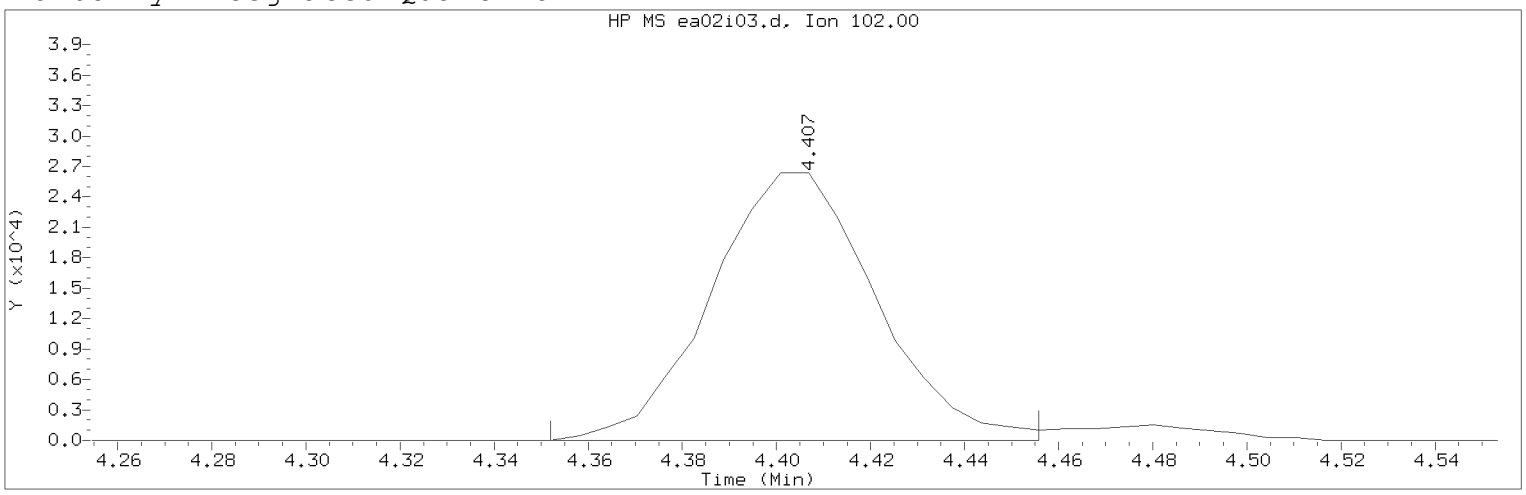
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i03.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:58 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

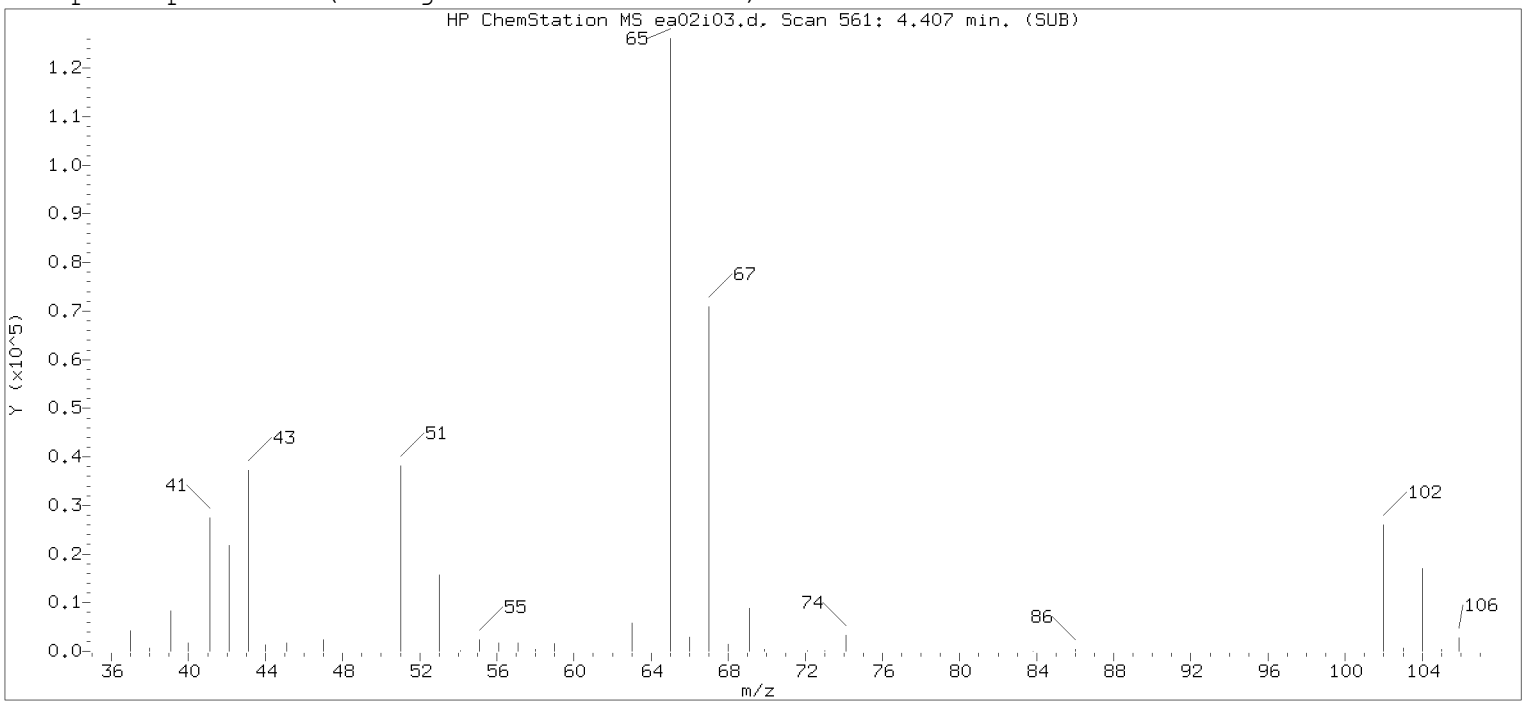
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 561
Retention Time (minutes): 4.407
Quant Ion : 102.00
Area (flag) : 64123M
On-Column Amount (ng) : 49.5607
Integration start scan : 551 Integration stop scan: 568
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

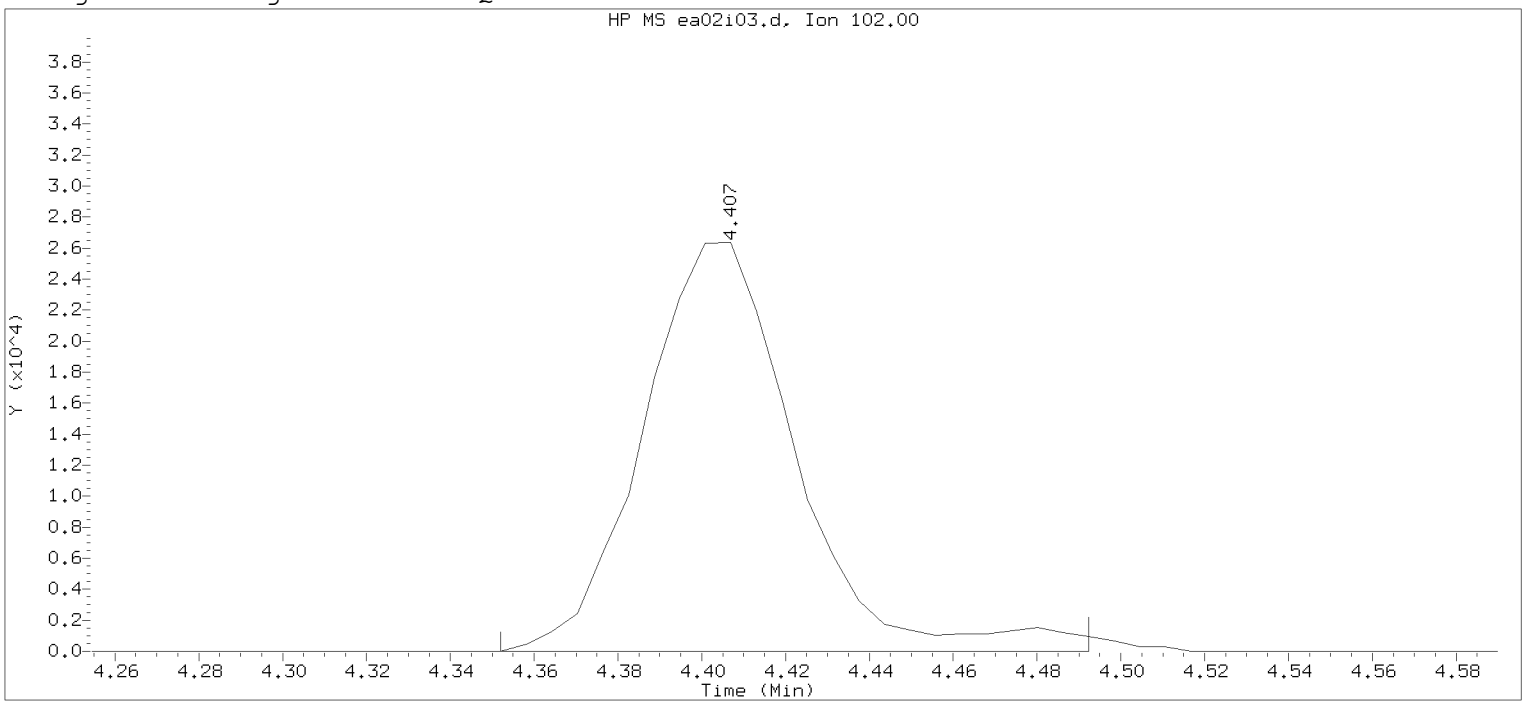
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i03.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:58 Analyst ID: KAS02648

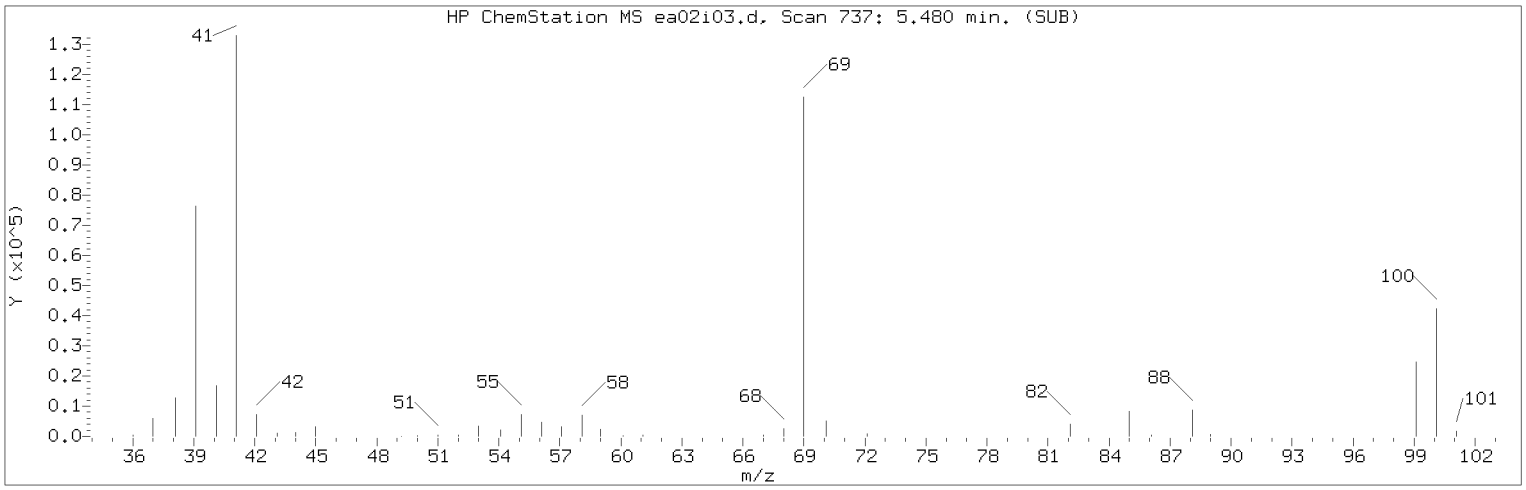
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 13:14
Date, time and analyst ID of latest file update: 02-May-2019 13:14 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

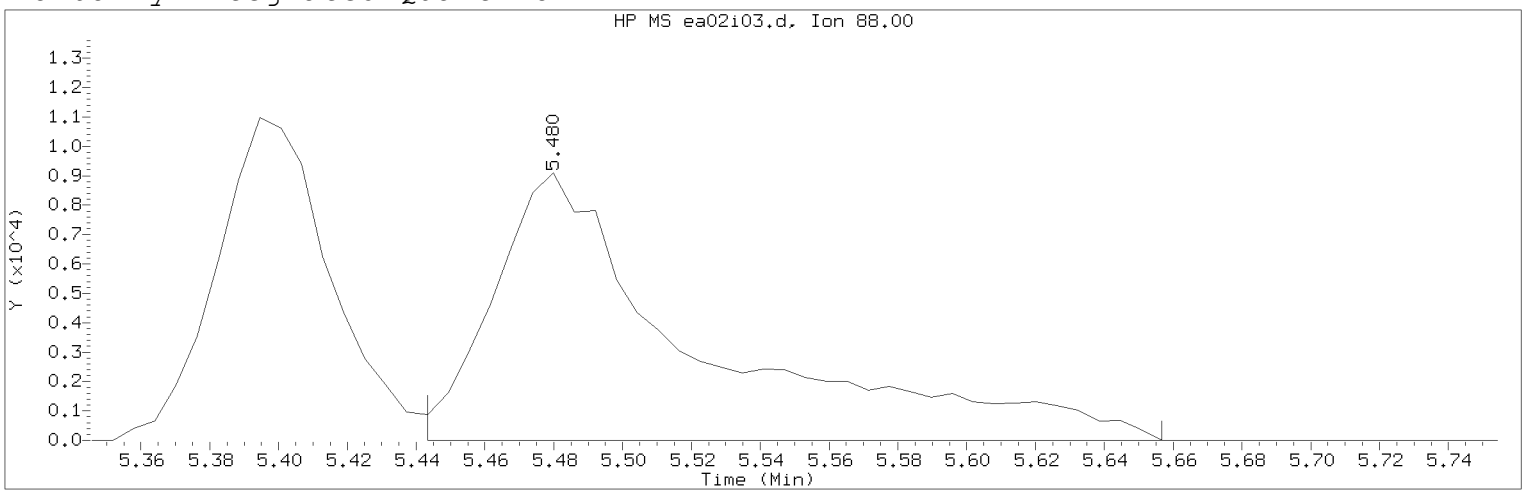
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 561
Retention Time (minutes): 4.407
Quant Ion : 102.00
Area : 66596
On-column Amount (ng) : 50.9805
Integration start scan : 551 Integration stop scan: 574
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:23.
Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i03.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:58 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

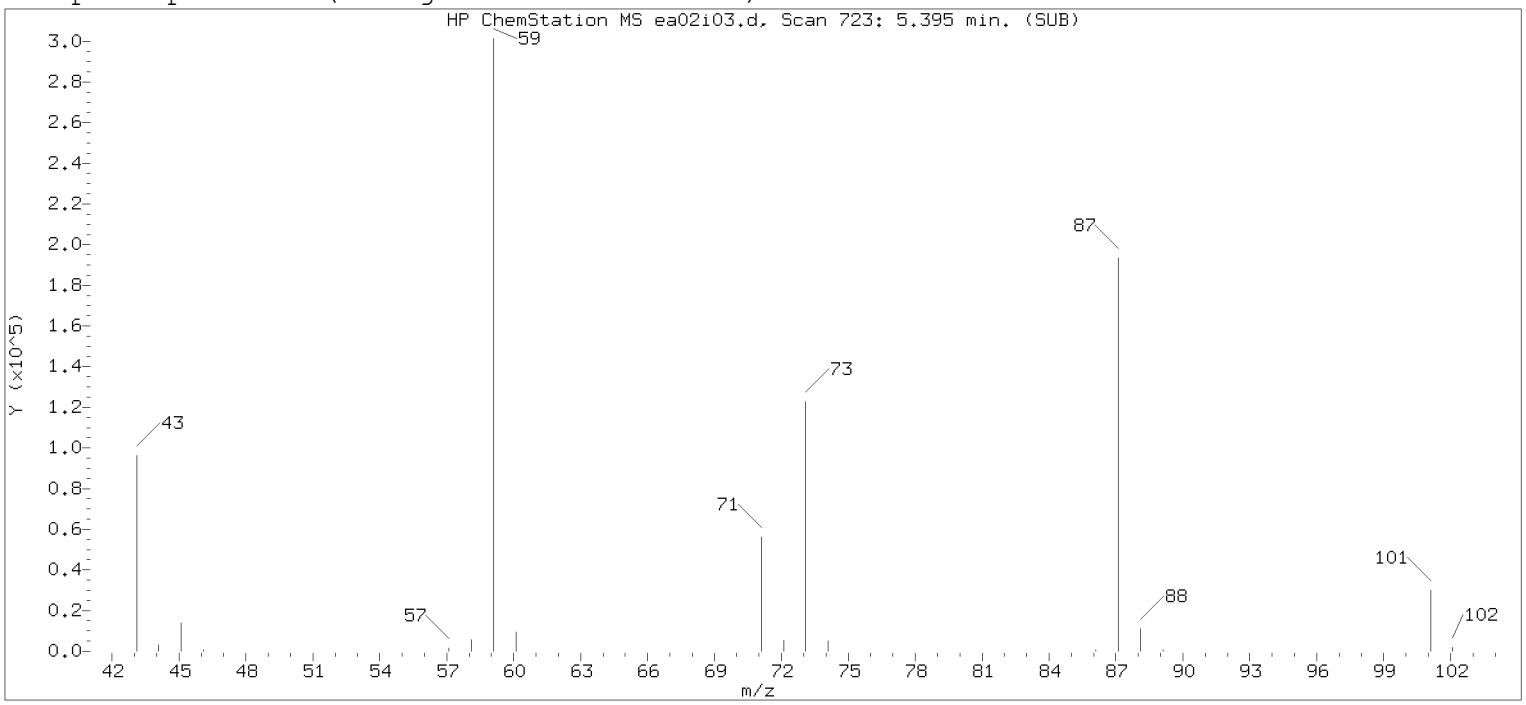
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 737
Retention Time (minutes): 5.480
Quant Ion : 88.00
Area (flag) : 37412M
On-Column Amount (ng) : 670.4715
Integration start scan : 730 Integration stop scan: 765
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

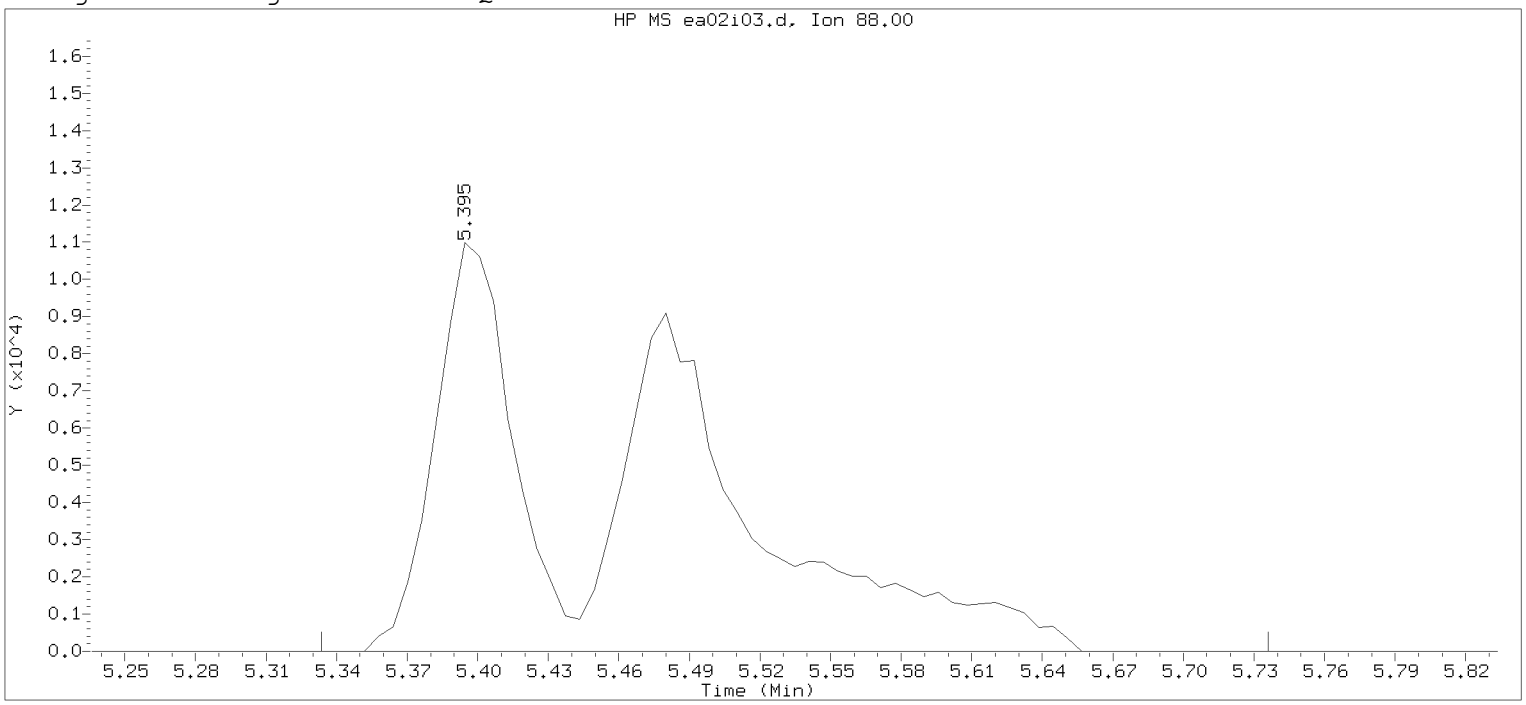
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



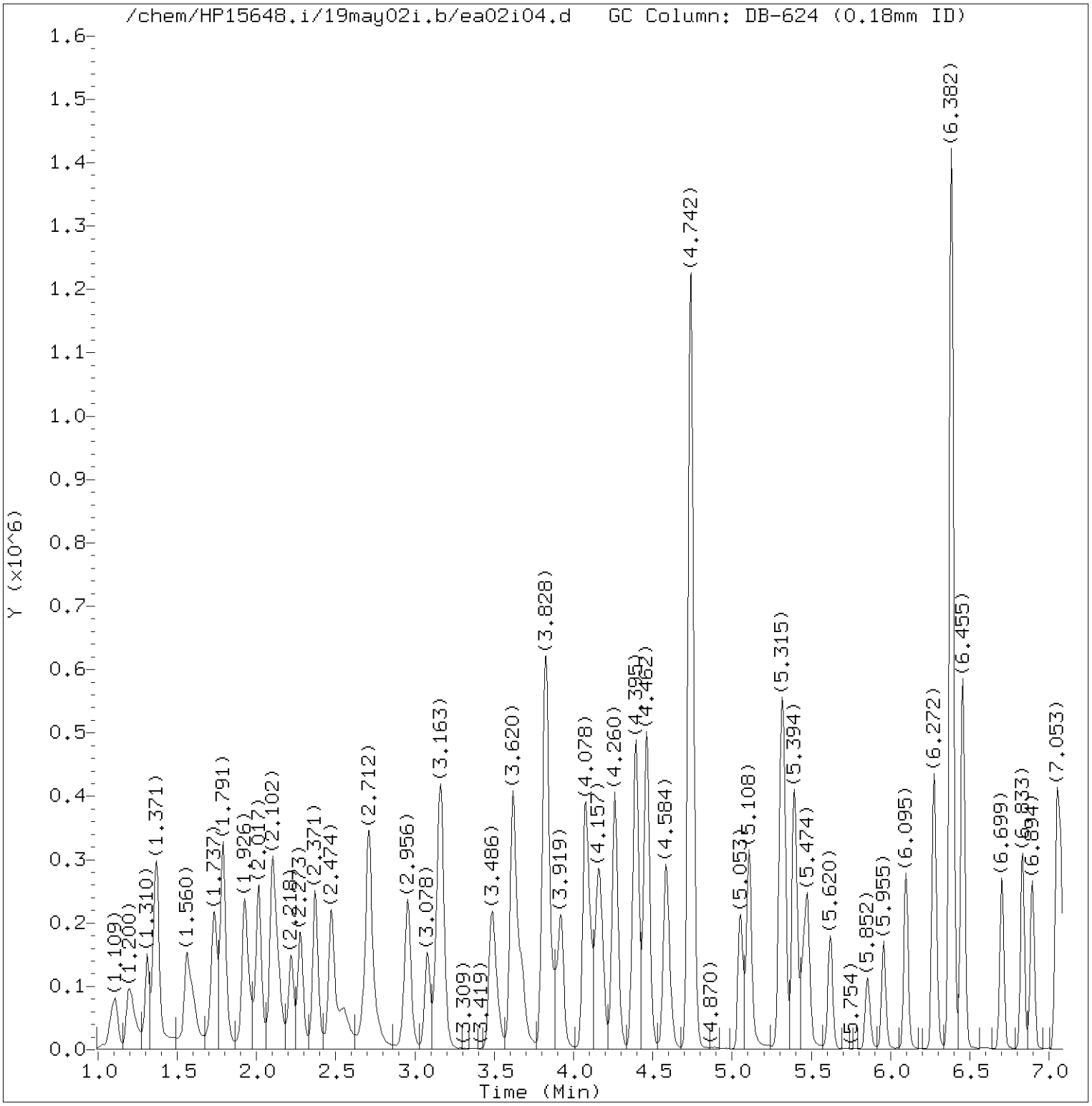
Data File: /chem/HP15648.i/19may02i.b/ea02i03.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:58 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 13:14
Date, time and analyst ID of latest file update: 02-May-2019 13:14 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 723
Retention Time (minutes): 5.395
Quant Ion : 88.00
Area : 62540
On-column Amount (ng) : 938.3364
Integration start scan : 712 Integration stop scan: 778
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:23.
Target 3.5 esignature user: kevin.sposito



Total Ion Chromatogram (TIC)

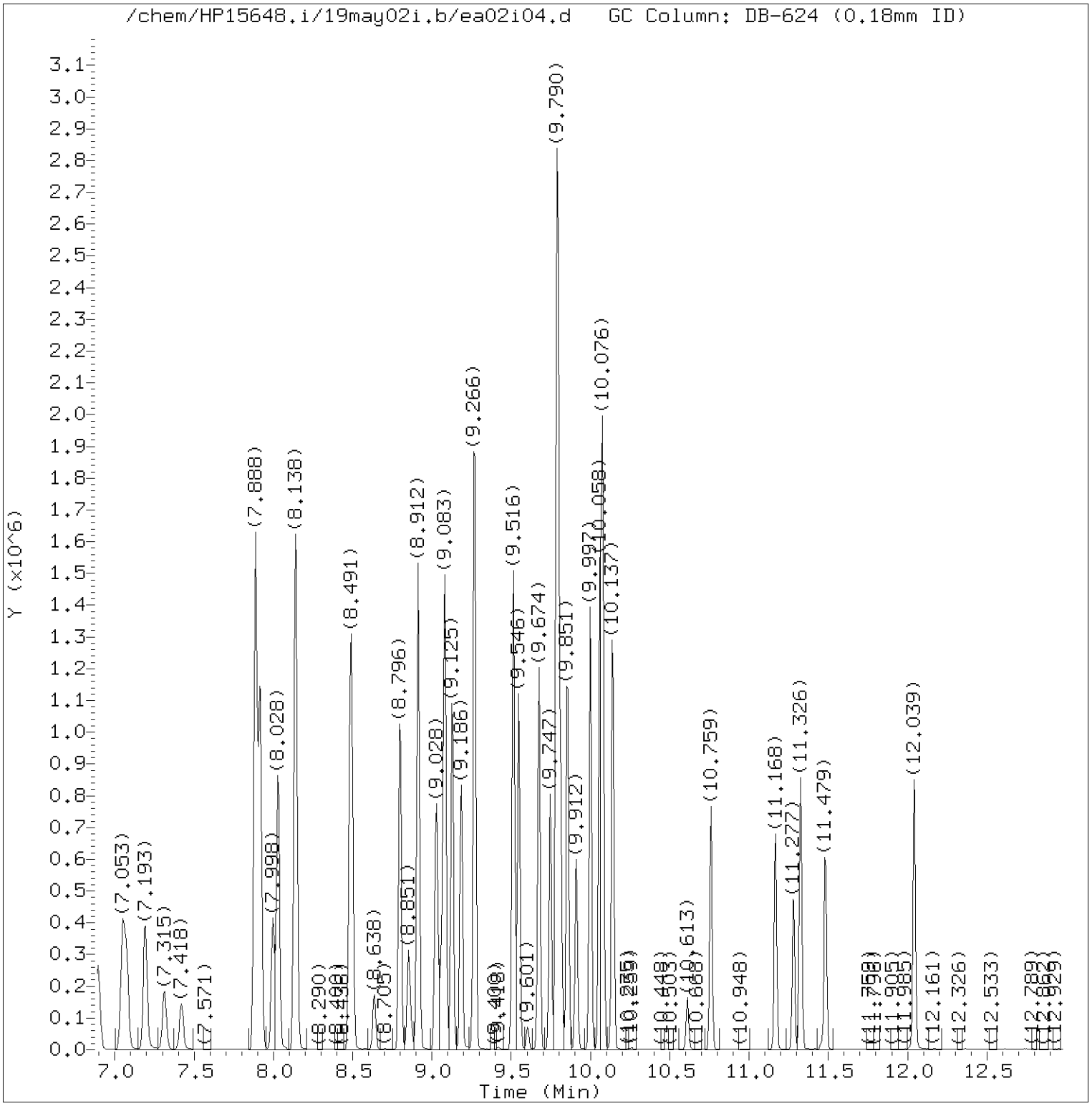
Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i04.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i04.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i04.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.194	85	198330	20.731
4) Chloromethane	(2)	1.310	50	159855	20.532
5) 1,3-Butadiene	(2)	1.365	39	121668	20.787
6) Vinyl Chloride	(2)	1.377	62	153712	20.655
8) Bromomethane	(2)	1.560	94	114281	20.394
9) Chloroethane	(2)	1.596	64	87378	20.622
10) Dichlorofluoromethane	(2)	1.730	67	212233	19.576
12) Trichlorofluoromethane	(2)	1.785	101	219300	20.729
11) n-Pentane	(2)	1.791	43	182616	21.012
14) Ethyl ether	(2)	1.926	59	89575	20.321
15) Freon 123a	(2)	1.932	67	128978	20.704
16) Acrolein	(1)	2.017	56	305361	202.164
17) 1,1-Dichloroethene	(2)	2.102	96	91925	21.102
17) 1,1-Dichloroethene	(2)	2.102	63	49360	21.373
18) Acetone	(1)	2.121	58	24385	38.787
19) Freon 113	(2)	2.121	101	107186	22.220
21) 2-Propanol	(1)	2.218	45	72726M	193.620
22) Methyl Iodide	(2)	2.218	142	171049	20.954
23) Carbon Disulfide	(2)	2.279	76	311317	21.069
25) Allyl Chloride	(2)	2.371	41	166167	19.627
27) Methyl Acetate	(2)	2.377	43	82801	19.918
28) Methylene Chloride	(2)	2.474	84	100284	20.207
29)*t-Butyl alcohol-d10	(1)	2.480	65	183068	250.000
30) t-Butyl alcohol	(1)	2.553	59	138278	202.062
31) Acrylonitrile	(2)	2.669	53	50641	20.034
32) trans-1,2-Dichloroethene	(2)	2.706	96	102003	20.803
33) Methyl Tertiary Butyl Ether	(2)	2.706	73	300079	20.526
34) n-Hexane	(2)	2.950	57	184155	21.432
36) 1,1-Dichloroethane	(2)	3.078	63	193890	21.106
38) di-Isopropyl ether	(2)	3.151	45	334410	20.686
39) 2-Chloro-1,3-butadiene	(2)	3.163	53	185471	21.144
40) Ethyl t-butyl ether	(2)	3.486	59	334052	20.948
42) cis-1,2-Dichloroethene	(2)	3.614	96	114688	20.817
45) 2,2-Dichloropropane	(2)	3.620	77	171976	21.218
43) 1,2-Dichloroethene (Total)	(2)		96	216691	41.620
44) 2-Butanone	(2)	3.626	43	131883	38.724
47) Propionitrile	(1)	3.675	54	184944	200.052
48) Methacrylonitrile	(2)	3.822	67	275352	101.447

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i04.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.840	128	56323	20.584
50) Tetrahydrofuran	(1)	3.882	71	36562	37.736
51) Chloroform	(2)	3.919	83	182337	20.868
52)$Dibromofluoromethane	(2)	4.071	113	250655	49.711
52)$Dibromofluoromethane	(2)	4.071	111	258391	49.922
53) 1,1,1-Trichloroethane	(2)	4.102	97	170588	21.099
54) Cyclohexane	(2)	4.157	56	211825	21.331
54) Cyclohexane	(2)	4.163	84	184804	21.659
54) Cyclohexane	(2)	4.157	69	68320	21.074
55) 1,1-Dichloropropene	(2)	4.260	75	153621	21.429
56) Carbon Tetrachloride	(2)	4.267	117	143944	20.931
58) Isobutyl Alcohol	(1)	4.382	41	110026	473.556
57)$1,2-Dichloroethane-d4	(2)	4.395	102	64385	50.601
57)$1,2-Dichloroethane-d4	(2)	4.395	65	320214	49.584
57)$1,2-Dichloroethane-d4	(2)	4.401	104	40103	49.160
60) Benzene	(2)	4.462	78	439043	20.857
61) 1,2-Dichloroethane	(2)	4.474	62	141378	19.997
61) 1,2-Dichloroethane	(2)	4.474	98	12384	20.042
65) t-Amyl methyl ether	(2)	4.584	73	326737	20.662
66)*Fluorobenzene	(2)	4.736	96	1084837	50.000
67) n-Heptane	(2)	4.748	43	182211	19.785
69) n-Butanol	(1)	5.053	56	197297	981.772
71) Trichloroethene	(2)	5.108	95	110532	20.817
73) Methylcyclohexane	(2)	5.309	83	236192	21.363
73) Methylcyclohexane	(2)	5.309	98	108136	21.269
74) 1,2-Dichloropropane	(2)	5.327	63	108688	20.753
75) Dibromomethane	(2)	5.443	93	63524	20.262
77) Methyl Methacrylate	(2)	5.474	69	92979	19.472
76) 1,4-Dioxane	(1)	5.474	88	28463M	503.295
79) Bromodichloromethane	(2)	5.620	83	132626	20.334
80) 2-Nitropropane	(2)	5.852	41	81741	37.815
81) 2-Chloroethyl Vinyl Ether	(2)	5.955	63	82098	20.344
82) cis-1,3-Dichloropropene	(2)	6.095	75	174764	20.571
83) 4-Methyl-2-pentanone	(2)	6.272	43	332570	45.471
84)$Toluene-d8	(3)	6.382	98	1085847	50.158
84)$Toluene-d8	(3)	6.382	100	695925	50.009
89) Toluene	(3)	6.455	92	275108	20.763
90) trans-1,3-Dichloropropene	(3)	6.699	75	163222	20.612

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i04.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropene (total)	(3)		100	337986	41.184
92) Ethyl Methacrylate	(3)	6.833	69	171905	20.364
93) 1,1,2-Trichloroethane	(3)	6.894	97	91241	20.233
94) Tetrachloroethene	(3)	7.053	166	115563	21.452
95) 1,3-Dichloropropane	(3)	7.077	76	163005	20.566
97) 2-Hexanone	(3)	7.193	43	269398	47.868
102) 1-Chlorohexane	(3)	7.315	91	9366	20.455
98) Dibromochloromethane	(3)	7.315	129	98398	20.212
100) 1,2-Dibromoethane	(3)	7.418	107	98178	20.462
101)*Chlorobenzene-d5	(3)	7.888	117	797090	50.000
103) Chlorobenzene	(3)	7.912	112	299511	20.443
104) 1,1,1,2-Tetrachloroethane	(3)	7.998	131	102289	20.557
105) Ethylbenzene	(3)	8.028	91	545633	20.816
107) m+p-Xylene	(3)	8.138	106	426427	41.791
109) Xylene (Total)	(3)		106	630869	62.321
108) o-Xylene	(3)	8.485	106	204442	20.530
110) Styrene	(3)	8.497	104	342997	20.854
111) Bromoform	(3)	8.638	173	65436	20.163
112) Isopropylbenzene	(3)	8.796	105	554112	20.914
113) Cyclohexanone	(1)	8.851	55	105484	495.132
115)$4-Bromofluorobenzene	(3)	8.912	95	416080	49.996
115)$4-Bromofluorobenzene	(3)	8.912	174	312405	50.098
116) Bromobenzene	(4)	9.028	156	121520	20.567
117) 1,1,2,2-Tetrachloroethane	(4)	9.034	83	138867	20.251
118) 1,2,3-Trichloropropane	(4)	9.064	110	42985	20.684
119) trans-1,4-Dichloro-2-butene	(4)	9.083	53	228205	101.269
120) n-Propylbenzene	(4)	9.125	91	650397	20.879
121) 2-Chlorotoluene	(4)	9.186	126	125956	20.538
123) 1,3,5-Trimethylbenzene	(4)	9.266	105	469196	20.763
122) 4-Chlorotoluene	(4)	9.272	126	130006	20.679
126) Pentachloroethane	(4)	9.516	167	75393	20.161
125) tert-Butylbenzene	(4)	9.516	134	106208	21.144
127) 1,2,4-Trimethylbenzene	(4)	9.546	105	474341	20.385
128) sec-Butylbenzene	(4)	9.674	105	611514	21.331
130) 1,3-Dichlorobenzene	(4)	9.747	146	236655	20.552
131) p-Isopropyltoluene	(4)	9.784	119	533050	21.137
132)*1,4-Dichlorobenzene-d4	(4)	9.796	152	424041	50.000
134) 1,4-Dichlorobenzene	(4)	9.814	146	235972	20.033

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i04.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	9.851	105	514049	20.747
136) Benzyl Chloride	(4)	9.912	91	325935	20.373
137) 1,3-Diethylbenzene	(4)	9.997	119	332831	20.960
138) 1,4-Diethylbenzene	(4)	10.058	119	349498	20.656
139) 1,2-Dichlorobenzene	(4)	10.076	146	224297	20.347
140) n-Butylbenzene	(4)	10.076	92	261616	21.122
141) 1,2-Diethylbenzene	(4)	10.137	119	272039	20.926
142) Diethylbenzene (total)	(4)		100	954368	62.541
143) 1,2-Dibromo-3-chloropropane	(4)	10.613	75	32302	20.559
145) 1,3,5-Trichlorobenzene	(4)	10.759	180	166897	20.589
147) 1,2,4-Trichlorobenzene	(4)	11.168	180	147192	20.342
148) Hexachlorobutadiene	(4)	11.283	225	63752	20.554
149) Naphthalene	(4)	11.326	128	480680	20.150
150) 1,2,3-Trichlorobenzene	(4)	11.485	180	139253	20.382
151) 2-Methylnaphthalene	(4)	12.039	142	307903	20.426

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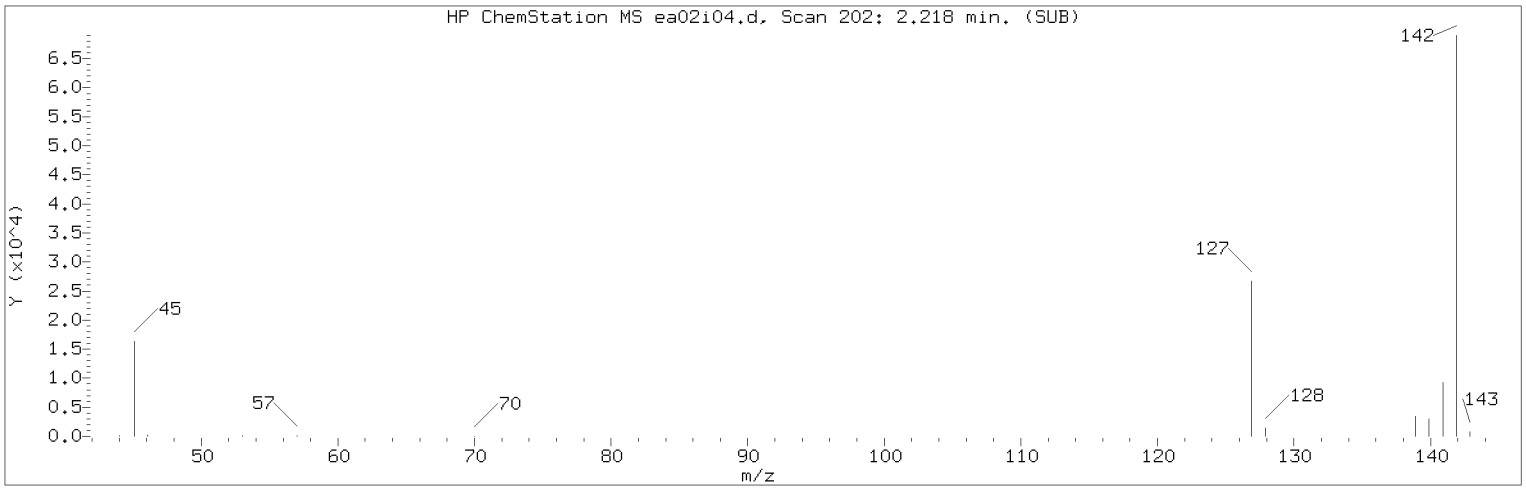
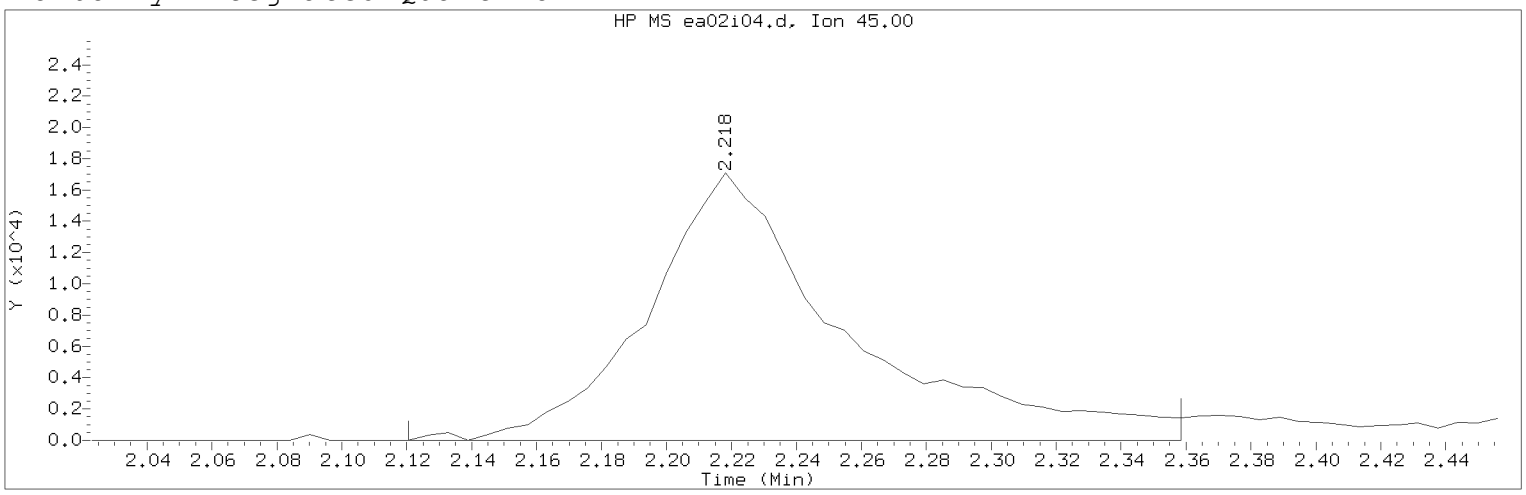
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i04.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

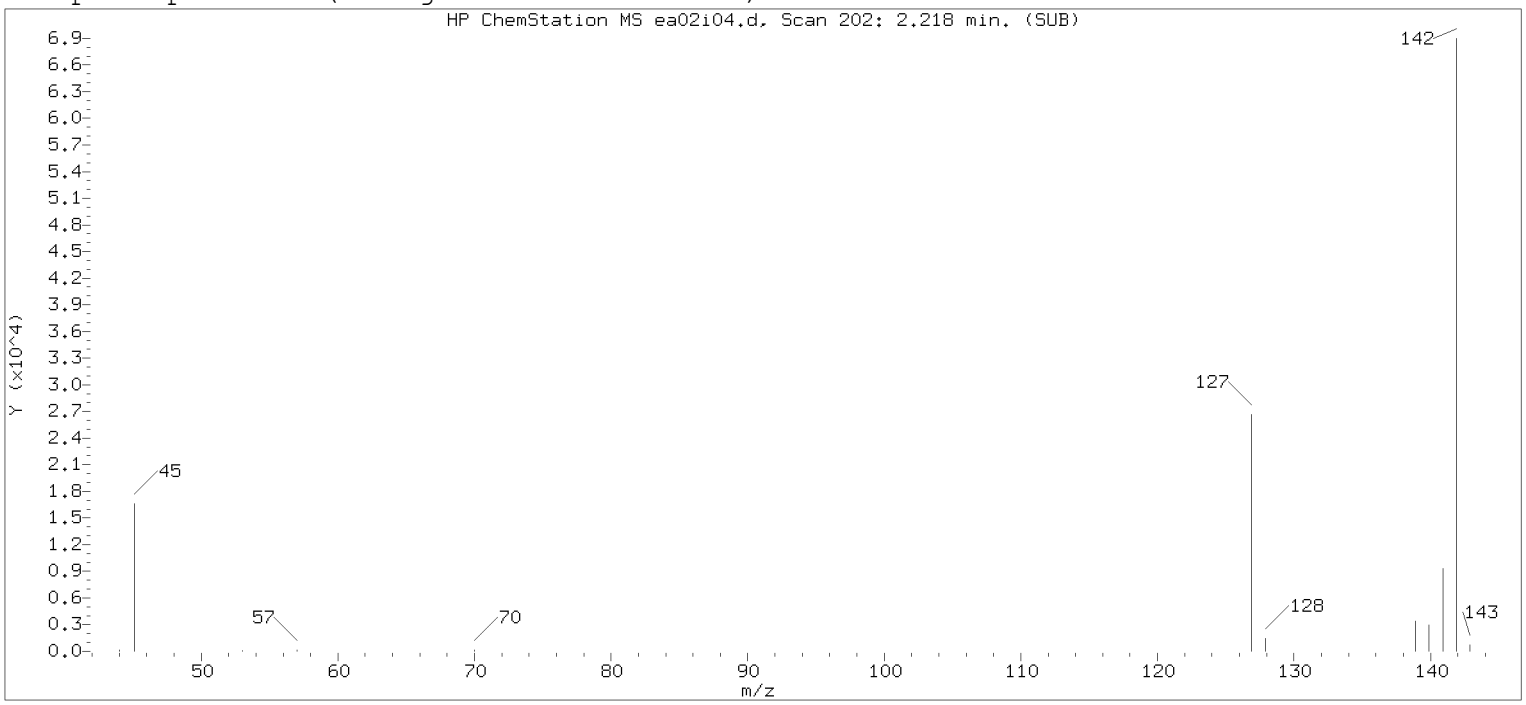
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 202
Retention Time (minutes): 2.218
Quant Ion : 45.00
Area (flag) : 72726M
On-Column Amount (ng) : 193.6204
Integration start scan : 185 Integration stop scan: 224
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

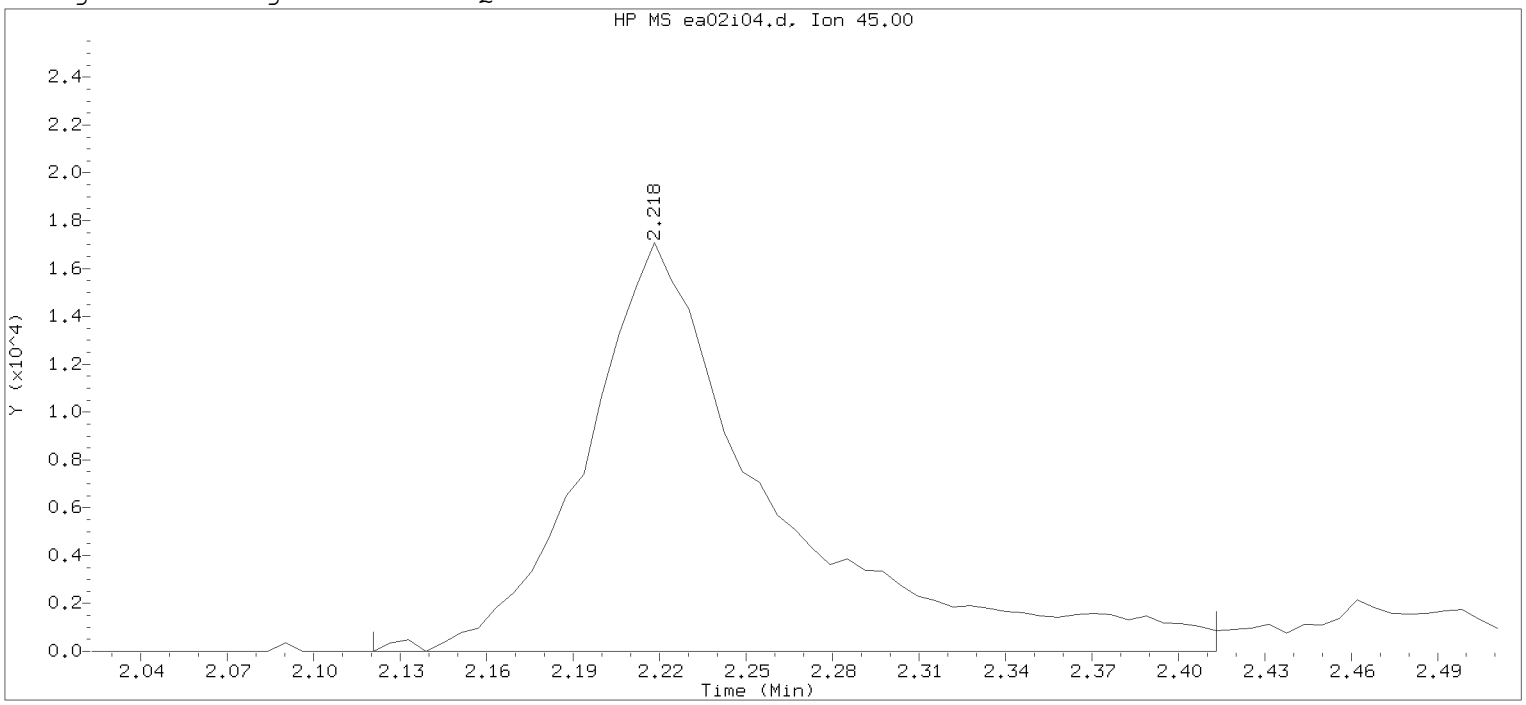
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i04.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:19 Analyst ID: KAS02648

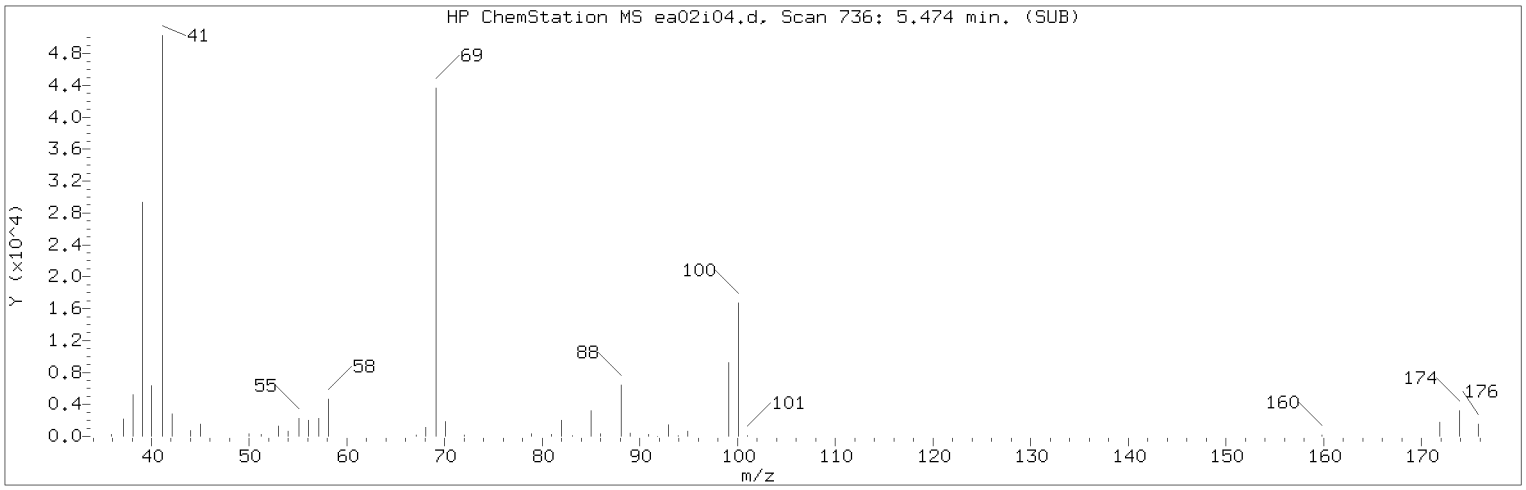
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 13:34
Date, time and analyst ID of latest file update: 02-May-2019 13:34 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

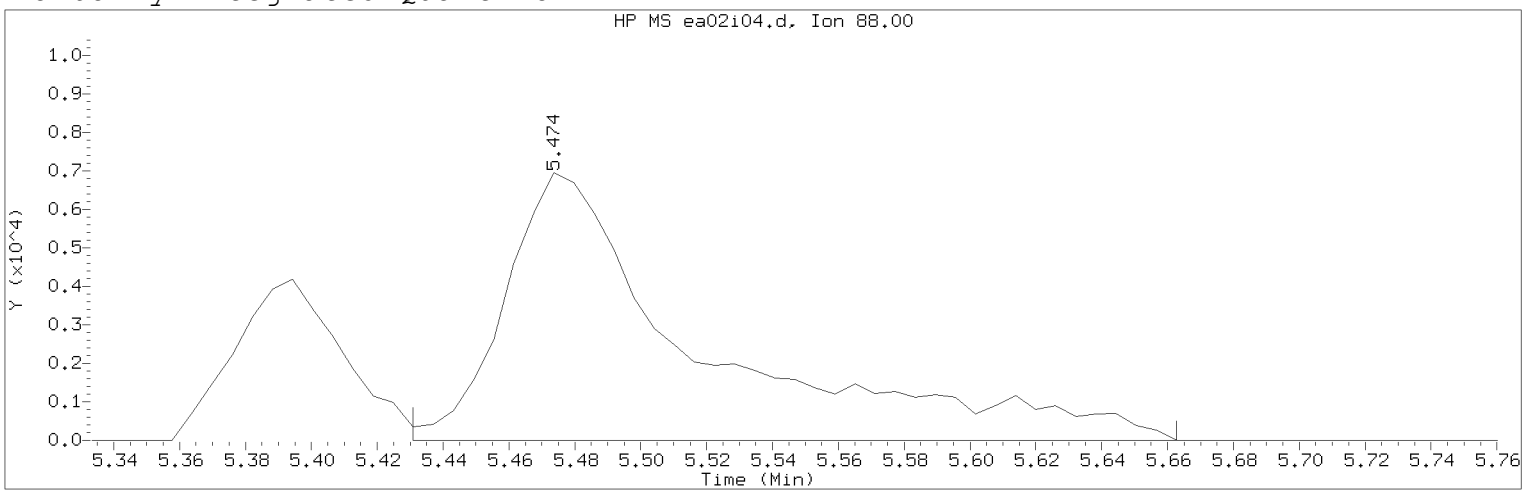
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 202
Retention Time (minutes): 2.218
Quant Ion : 45.00
Area : 76828
On-column Amount (ng) : 194.1056
Integration start scan : 185 Integration stop scan: 233
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:23.
Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i04.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

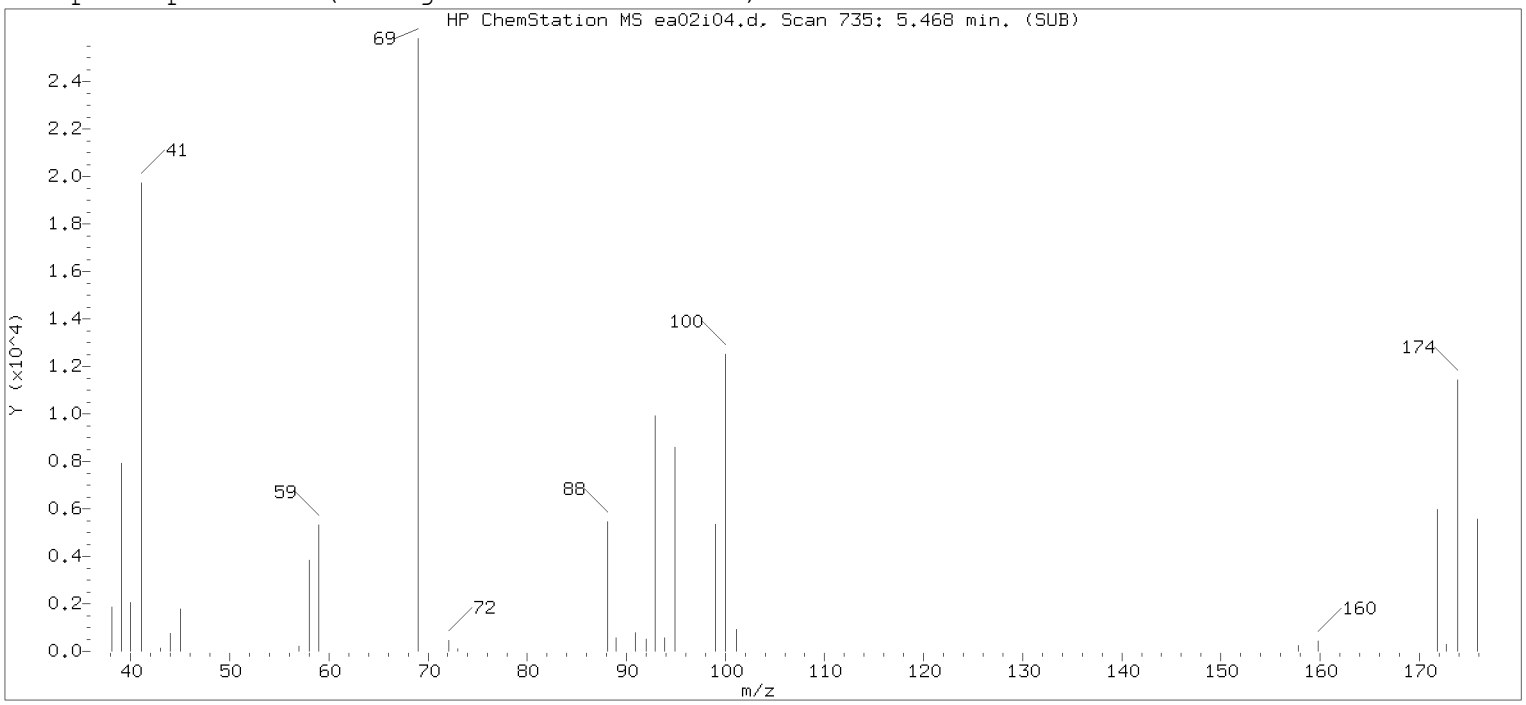
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 736
Retention Time (minutes): 5.474
Quant Ion : 88.00
Area (flag) : 28463M
On-Column Amount (ng) : 503.2951
Integration start scan : 728 Integration stop scan: 766
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

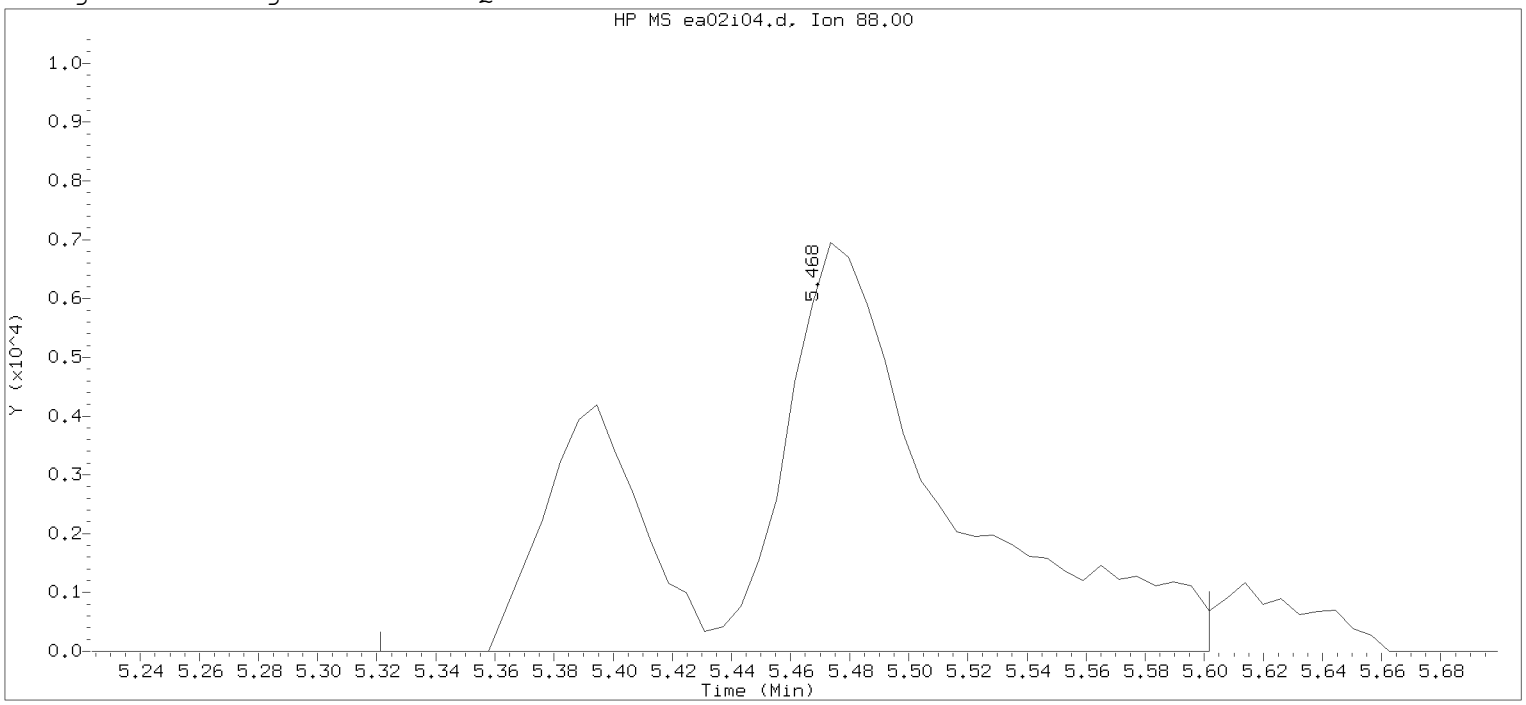
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



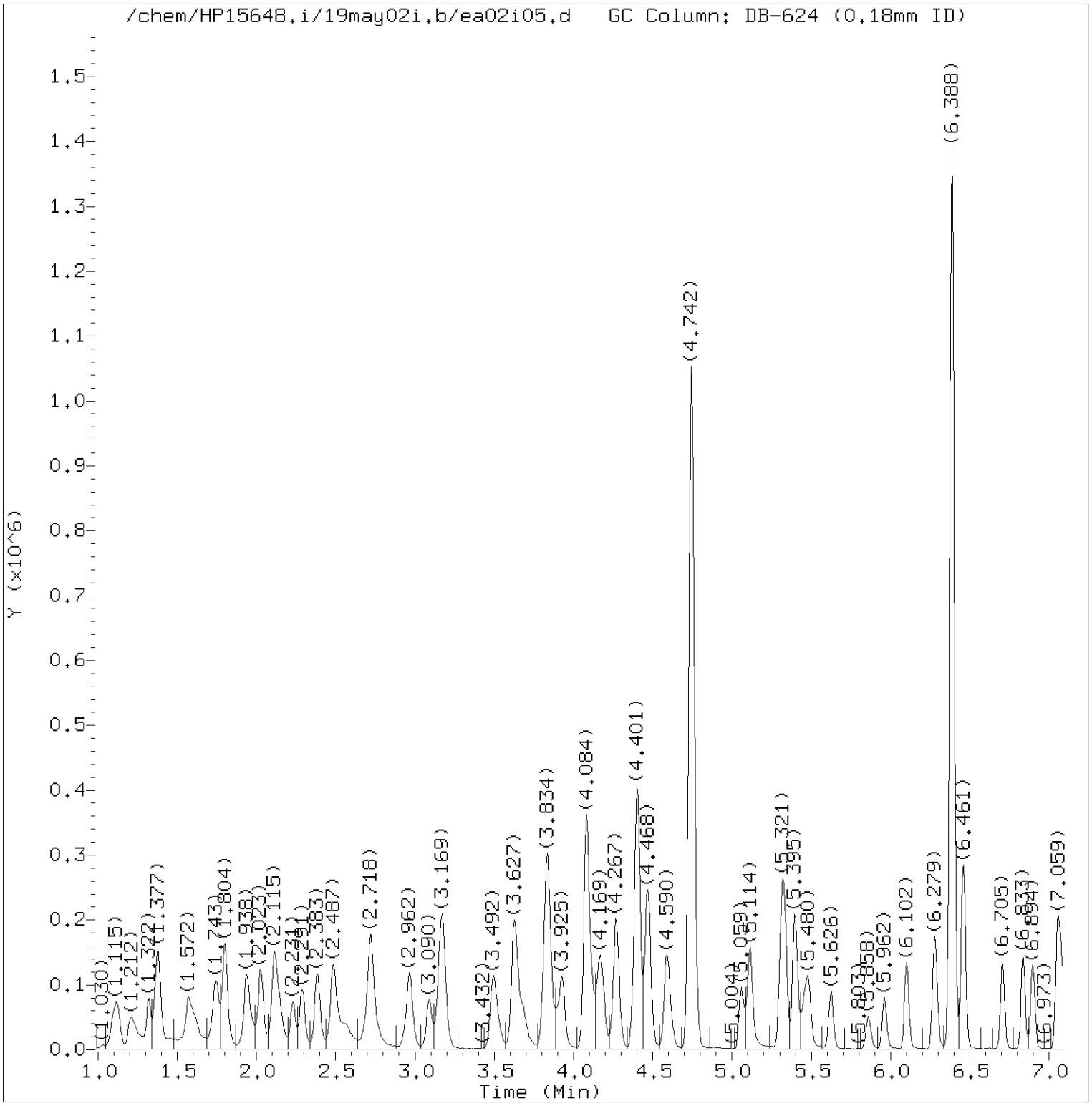
Data File: /chem/HP15648.i/19may02i.b/ea02i04.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 13:34
Date, time and analyst ID of latest file update: 02-May-2019 13:34 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 735
Retention Time (minutes): 5.468
Quant Ion : 88.00
Area : 35474
On-column Amount (ng) : 502.2593
Integration start scan : 710 Integration stop scan: 756
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:23.
Target 3.5 esignature user: kas02254



Total Ion Chromatogram (TIC)

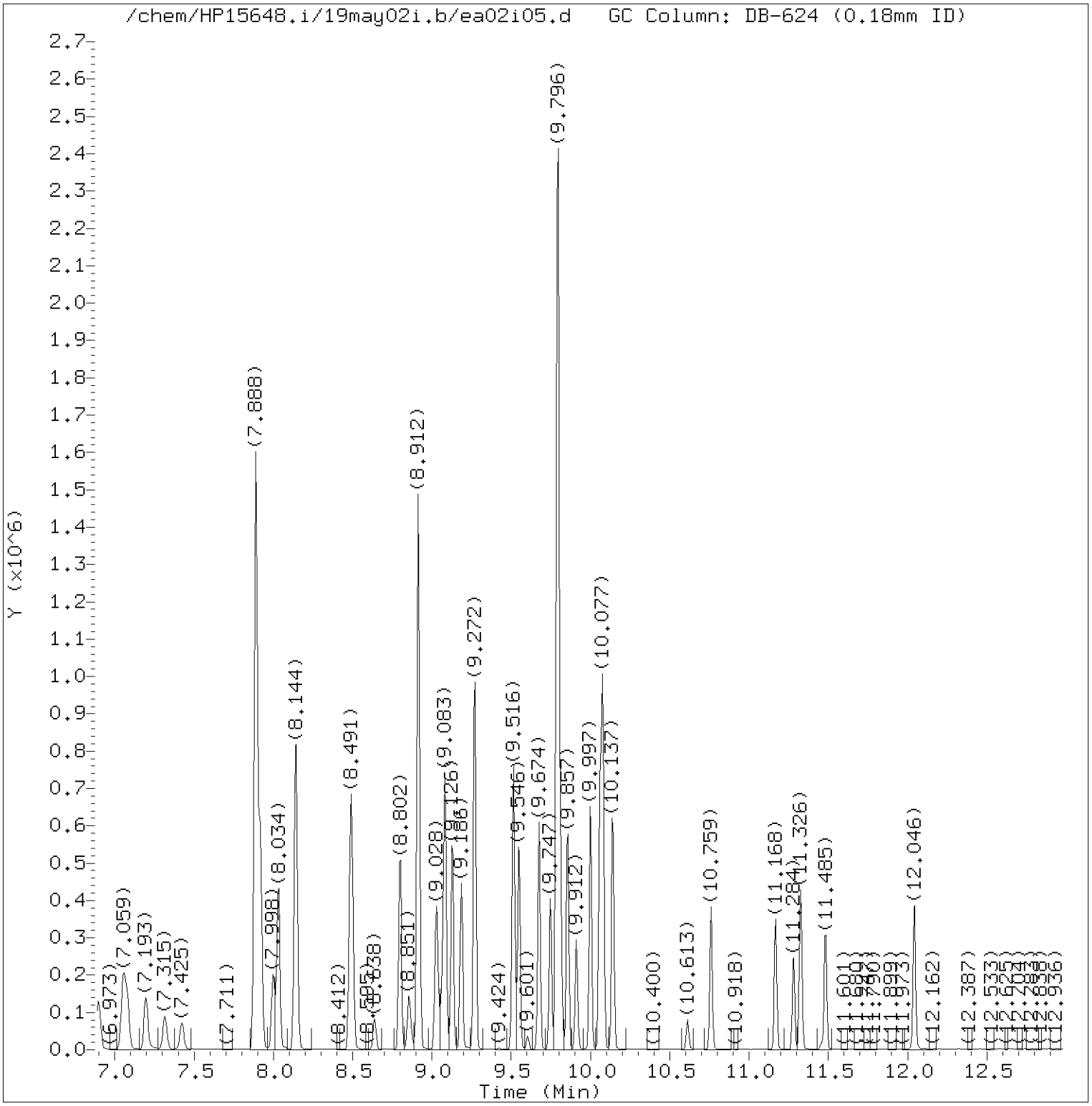
Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.206	85	91253	9.609
4) Chloromethane	(2)	1.322	50	77838	10.071
5) 1,3-Butadiene	(2)	1.371	39	64184	11.047
6) Vinyl Chloride	(2)	1.389	62	73497	9.949
8) Bromomethane	(2)	1.572	94	55994	10.066
9) Chloroethane	(2)	1.609	64	42208	10.035
10) Dichlorofluoromethane	(2)	1.743	67	104373	9.698
12) Trichlorofluoromethane	(2)	1.798	101	103939	9.897
11) n-Pentane	(2)	1.804	43	92850	10.762
14) Ethyl ether	(2)	1.938	59	41825	9.558
15) Freon 123a	(2)	1.944	67	64604	10.447
16) Acrolein	(1)	2.023	56	151147	103.374
17) 1,1-Dichloroethene	(2)	2.115	96	46199	10.683
17) 1,1-Dichloroethene	(2)	2.109	63	24329	10.612
19) Freon 113	(2)	2.127	101	52358	10.934
18) Acetone	(1)	2.145	58	12183	20.019
21) 2-Propanol	(1)	2.231	45	35466M	97.543
22) Methyl Iodide	(2)	2.231	142	85794	10.587
23) Carbon Disulfide	(2)	2.291	76	154742	10.549
25) Allyl Chloride	(2)	2.383	41	80384	9.564
27) Methyl Acetate	(2)	2.389	43	39535	9.580
28) Methylene Chloride	(2)	2.480	84	50731	10.298
29)*t-Butyl alcohol-d10	(1)	2.493	65	177210	250.000
30) t-Butyl alcohol	(1)	2.566	59	68160M	102.893
31) Acrylonitrile	(2)	2.682	53	25962	10.346
33) Methyl Tertiary Butyl Ether	(2)	2.718	73	149658	10.312
32) trans-1,2-Dichloroethene	(2)	2.724	96	52103	10.704
34) n-Hexane	(2)	2.962	57	93559	10.969
36) 1,1-Dichloroethane	(2)	3.084	63	96982	10.635
38) di-Isopropyl ether	(2)	3.157	45	168855	10.522
39) 2-Chloro-1,3-butadiene	(2)	3.175	53	94205	10.819
40) Ethyl t-butyl ether	(2)	3.499	59	168104	10.619
43) 1,2-Dichloroethene (Total)	(2)		96	108231	20.967
42) cis-1,2-Dichloroethene	(2)	3.633	96	56128	10.263
44) 2-Butanone	(2)	3.633	43	65344	19.328
45) 2,2-Dichloropropane	(2)	3.633	77	85984	10.687
47) Propionitrile	(1)	3.688	54	91806	102.588
48) Methacrylonitrile	(2)	3.834	67	138604	51.442

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.852	128	27052	9.959
50) Tetrahydrofuran	(1)	3.901	71	18718	19.958
51) Chloroform	(2)	3.931	83	91245	10.520
52)$Dibromofluoromethane	(2)	4.084	113	250313	50.009
52)$Dibromofluoromethane	(2)	4.084	111	256689	49.959
53) 1,1,1-Trichloroethane	(2)	4.114	97	84560	10.536
54) Cyclohexane	(2)	4.169	56	107271	10.882
54) Cyclohexane	(2)	4.169	84	91726	10.829
54) Cyclohexane	(2)	4.169	69	33904	10.535
55) 1,1-Dichloropropene	(2)	4.267	75	76543	10.756
56) Carbon Tetrachloride	(2)	4.273	117	73483	10.764
58) Isobutyl Alcohol	(1)	4.389	41	53683	238.692
57)$1,2-Dichloroethane-d4	(2)	4.407	102	63297	50.113
57)$1,2-Dichloroethane-d4	(2)	4.401	65	322525	50.310
57)$1,2-Dichloroethane-d4	(2)	4.401	104	40434	49.931
60) Benzene	(2)	4.462	78	219317	10.496
61) 1,2-Dichloroethane	(2)	4.480	62	71263	10.154
61) 1,2-Dichloroethane	(2)	4.480	98	6383	10.406
65) t-Amyl methyl ether	(2)	4.590	73	167224	10.653
66)*Fluorobenzene	(2)	4.742	96	1076899	50.000
67) n-Heptane	(2)	4.754	43	93994	10.281
69) n-Butanol	(1)	5.059	56	96491	496.022
71) Trichloroethene	(2)	5.114	95	55420	10.514
73) Methylcyclohexane	(2)	5.315	83	110690	10.085
73) Methylcyclohexane	(2)	5.315	98	51289	10.162
74) 1,2-Dichloropropane	(2)	5.340	63	54033	10.393
75) Dibromomethane	(2)	5.455	93	31812	10.222
77) Methyl Methacrylate	(2)	5.480	69	46845	9.883
76) 1,4-Dioxane	(1)	5.486	88	14248M	260.268
79) Bromodichloromethane	(2)	5.626	83	65776	10.159
80) 2-Nitropropane	(2)	5.858	41	38291	17.845
81) 2-Chloroethyl Vinyl Ether	(2)	5.962	63	41241	10.295
82) cis-1,3-Dichloropropene	(2)	6.102	75	86454	10.251
83) 4-Methyl-2-pentanone	(2)	6.279	43	140486	19.349
84)$Toluene-d8	(3)	6.388	98	1083413	50.043
84)$Toluene-d8	(3)	6.388	100	692258	49.743
89) Toluene	(3)	6.461	92	138911	10.484
90) trans-1,3-Dichloropropene	(3)	6.705	75	80388	10.151

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on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropene (total)	(3)		100	166842	20.403
92) Ethyl Methacrylate	(3)	6.833	69	84518	10.012
93) 1,1,2-Trichloroethane	(3)	6.894	97	45346	10.055
94) Tetrachloroethene	(3)	7.053	166	58455	10.850
95) 1,3-Dichloropropane	(3)	7.077	76	80550	10.162
97) 2-Hexanone	(3)	7.193	43	105237	18.698
102) 1-Chlorohexane	(3)	7.315	91	4557	9.952
98) Dibromochloromethane	(3)	7.315	129	48020	9.864
100) 1,2-Dibromoethane	(3)	7.425	107	48664	10.142
101)*Chlorobenzene-d5	(3)	7.888	117	797132	50.000
103) Chlorobenzene	(3)	7.918	112	154200	10.524
104) 1,1,1,2-Tetrachloroethane	(3)	7.998	131	51846	10.419
105) Ethylbenzene	(3)	8.034	91	278057	10.607
107) m+p-Xylene	(3)	8.144	106	215226	21.091
109) Xylene (Total)	(3)		106	319767	31.589
108) o-Xylene	(3)	8.485	106	104541	10.498
110) Styrene	(3)	8.498	104	172620	10.494
111) Bromoform	(3)	8.638	173	31259	9.632
112) Isopropylbenzene	(3)	8.802	105	281661	10.630
113) Cyclohexanone	(1)	8.857	55	49341M	239.258
115)$4-Bromofluorobenzene	(3)	8.912	95	414663	49.824
115)$4-Bromofluorobenzene	(3)	8.912	174	310338	49.764
116) Bromobenzene	(4)	9.028	156	61266	10.423
117) 1,1,2,2-Tetrachloroethane	(4)	9.034	83	68911	10.102
118) 1,2,3-Trichloropropane	(4)	9.065	110	20390	9.863
119) trans-1,4-Dichloro-2-butene	(4)	9.083	53	113604	50.678
120) n-Propylbenzene	(4)	9.126	91	334143	10.783
121) 2-Chlorotoluene	(4)	9.186	126	65363	10.714
123) 1,3,5-Trimethylbenzene	(4)	9.272	105	237914M	10.583
122) 4-Chlorotoluene	(4)	9.272	126	66178	10.582
125) tert-Butylbenzene	(4)	9.516	134	52583	10.523
126) Pentachloroethane	(4)	9.522	167	36732	9.874
127) 1,2,4-Trimethylbenzene	(4)	9.546	105	242745	10.487
128) sec-Butylbenzene	(4)	9.674	105	308777	10.827
130) 1,3-Dichlorobenzene	(4)	9.747	146	119654	10.446
131) p-Isopropyltoluene	(4)	9.784	119	269023	10.723
132)*1,4-Dichlorobenzene-d4	(4)	9.796	152	421829	50.000
134) 1,4-Dichlorobenzene	(4)	9.814	146	121315	10.353

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on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	9.857	105	247228	10.030
136) Benzyl Chloride	(4)	9.912	91	158897	9.984
137) 1,3-Diethylbenzene	(4)	9.997	119	160025	10.130
138) 1,4-Diethylbenzene	(4)	10.058	119	169697	10.082
139) 1,2-Dichlorobenzene	(4)	10.077	146	114951	10.483
140) n-Butylbenzene	(4)	10.077	92	131171	10.646
141) 1,2-Diethylbenzene	(4)	10.137	119	129831	10.039
142) Diethylbenzene (total)	(4)		100	459553	30.251
143) 1,2-Dibromo-3-chloropropane	(4)	10.613	75	15579	9.967
145) 1,3,5-Trichlorobenzene	(4)	10.759	180	84202	10.442
147) 1,2,4-Trichlorobenzene	(4)	11.168	180	76366	10.609
148) Hexachlorobutadiene	(4)	11.284	225	32522	10.540
149) Naphthalene	(4)	11.326	128	244102	10.286
150) 1,2,3-Trichlorobenzene	(4)	11.485	180	71022	10.450
151) 2-Methylnaphthalene	(4)	12.046	142	145313	9.690

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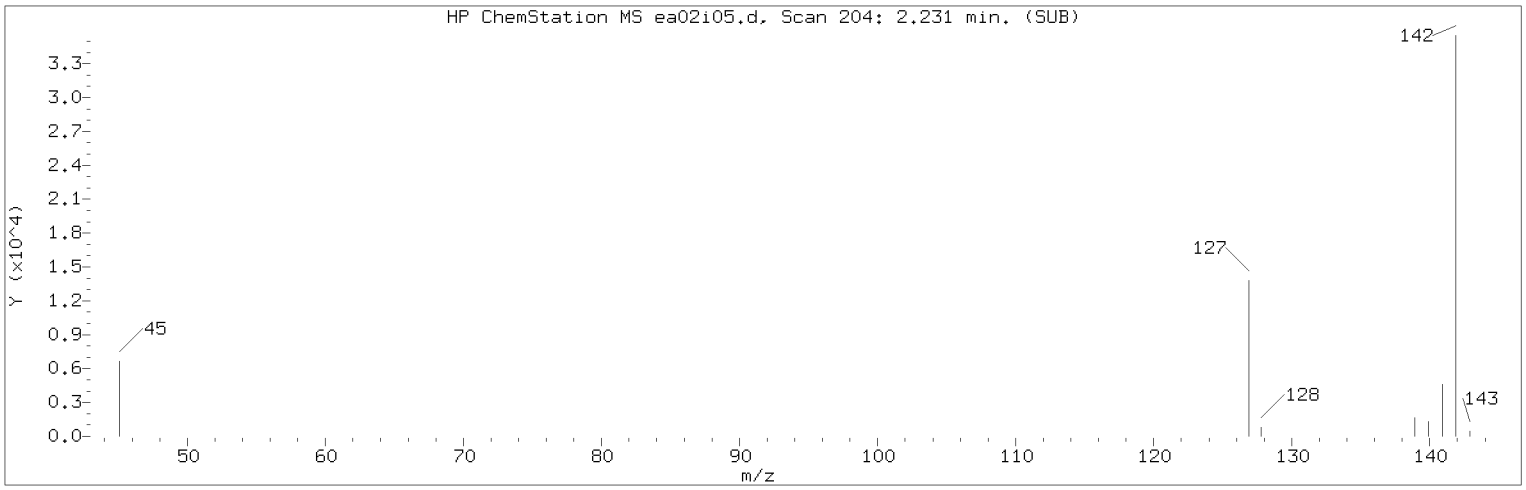
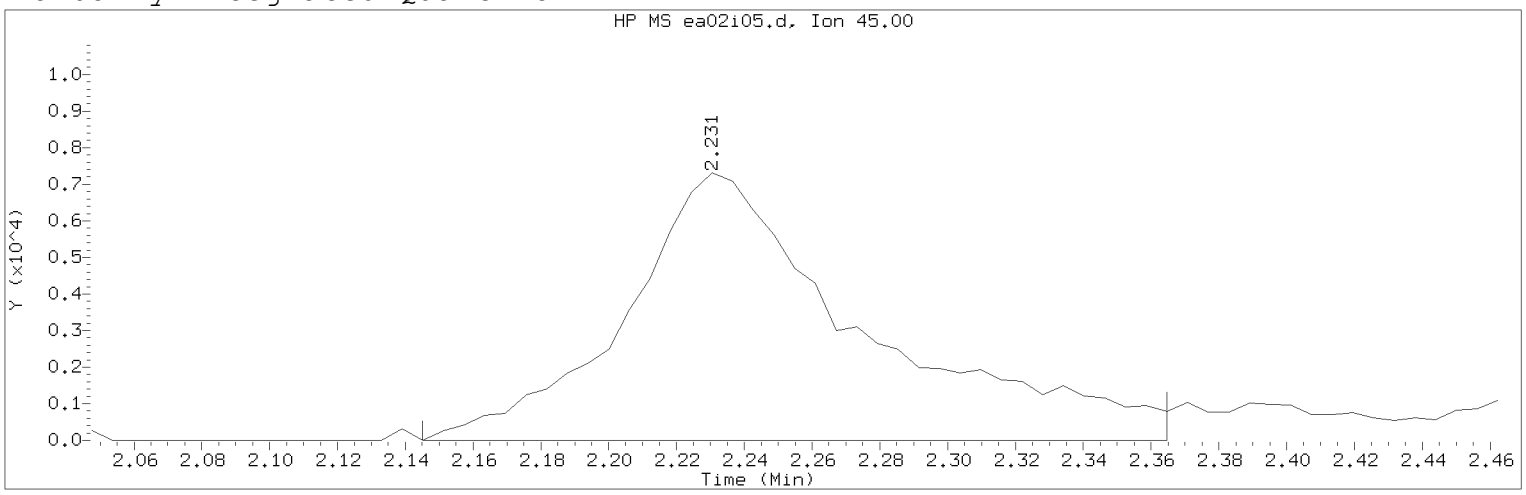
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

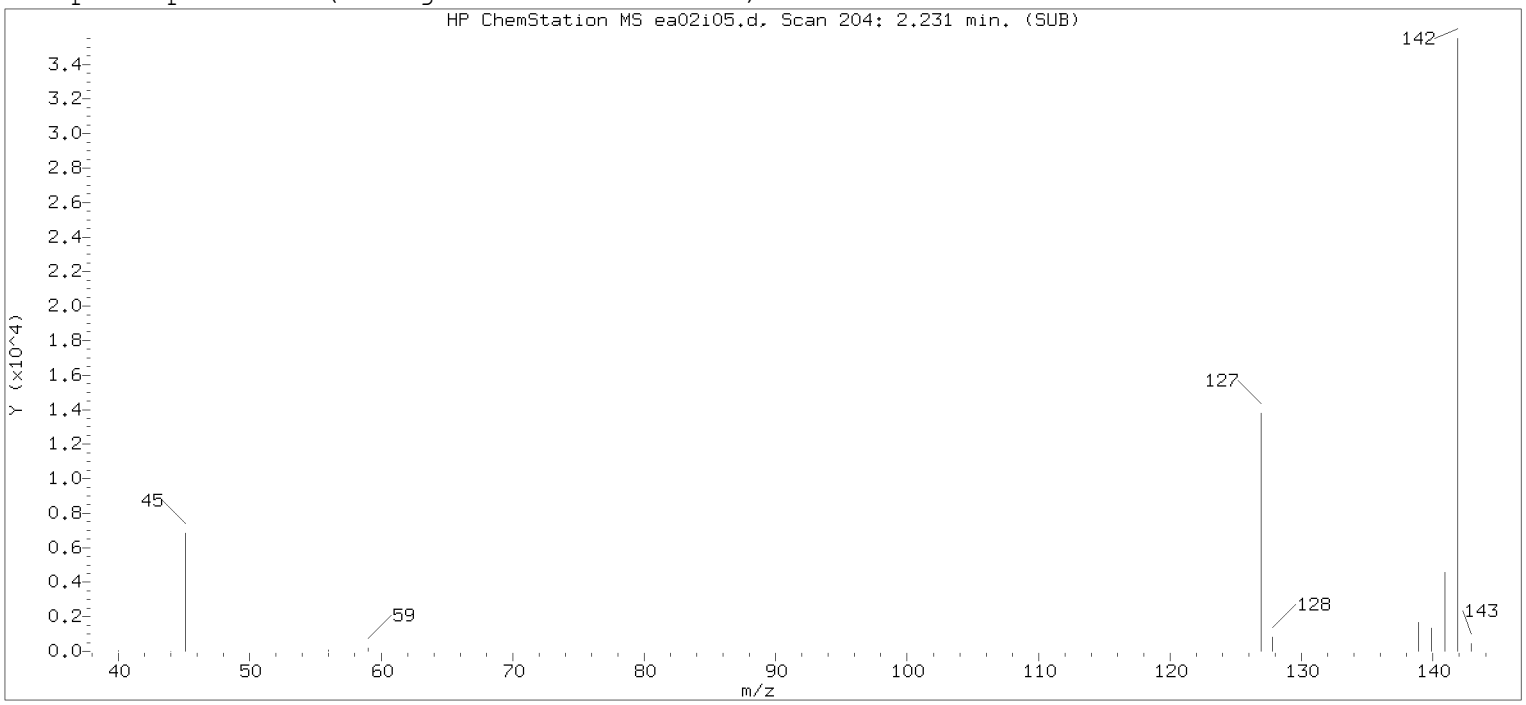
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 204
Retention Time (minutes): 2.231
Quant Ion : 45.00
Area (flag) : 35466M
On-Column Amount (ng) : 97.5434
Integration start scan : 189 Integration stop scan: 225
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

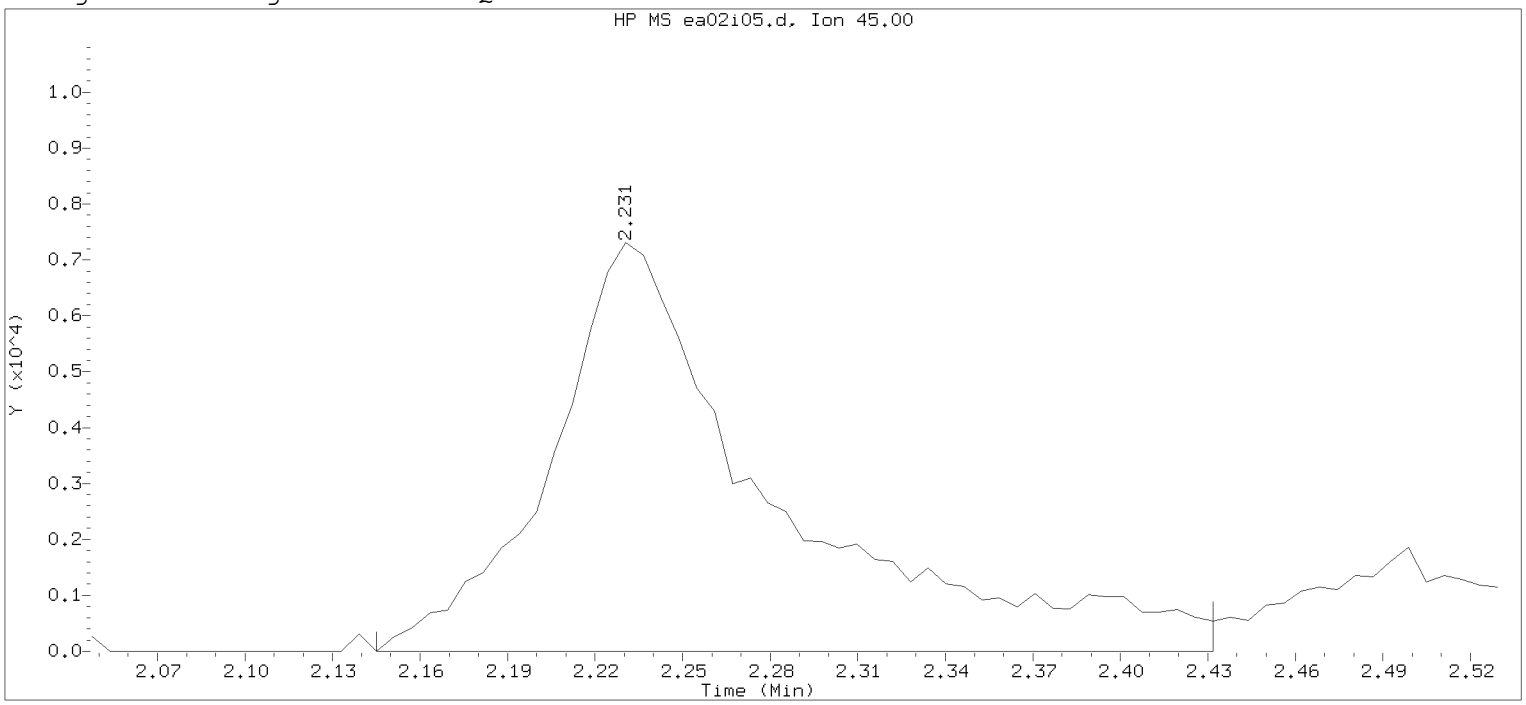
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

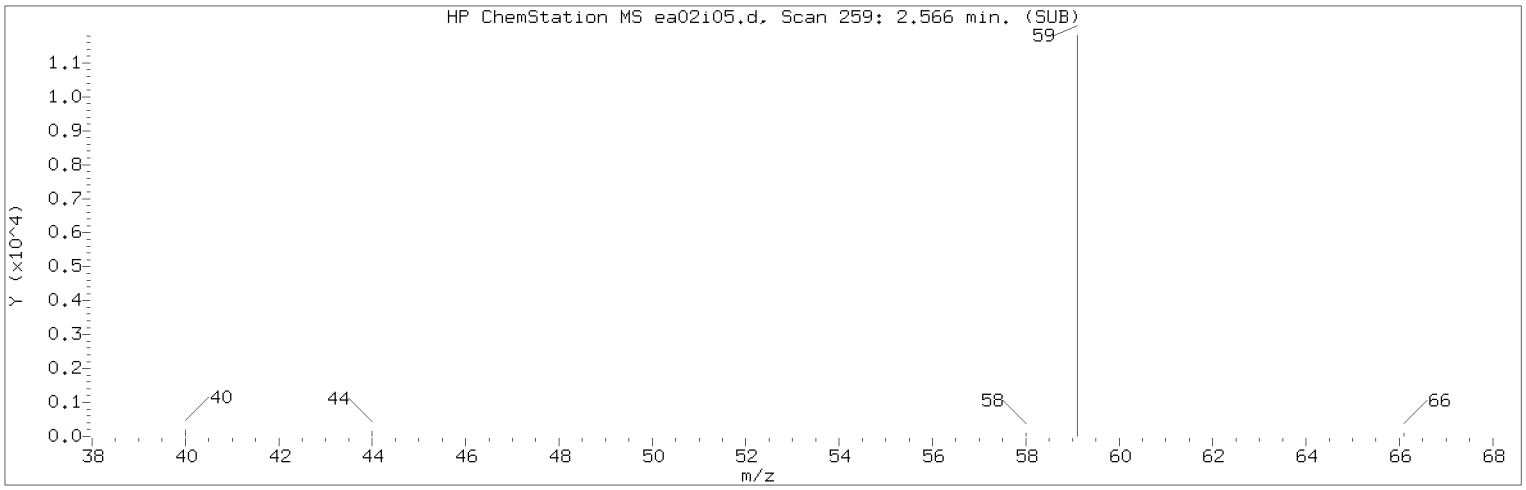
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 13:55
Date, time and analyst ID of latest file update: 02-May-2019 13:55 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

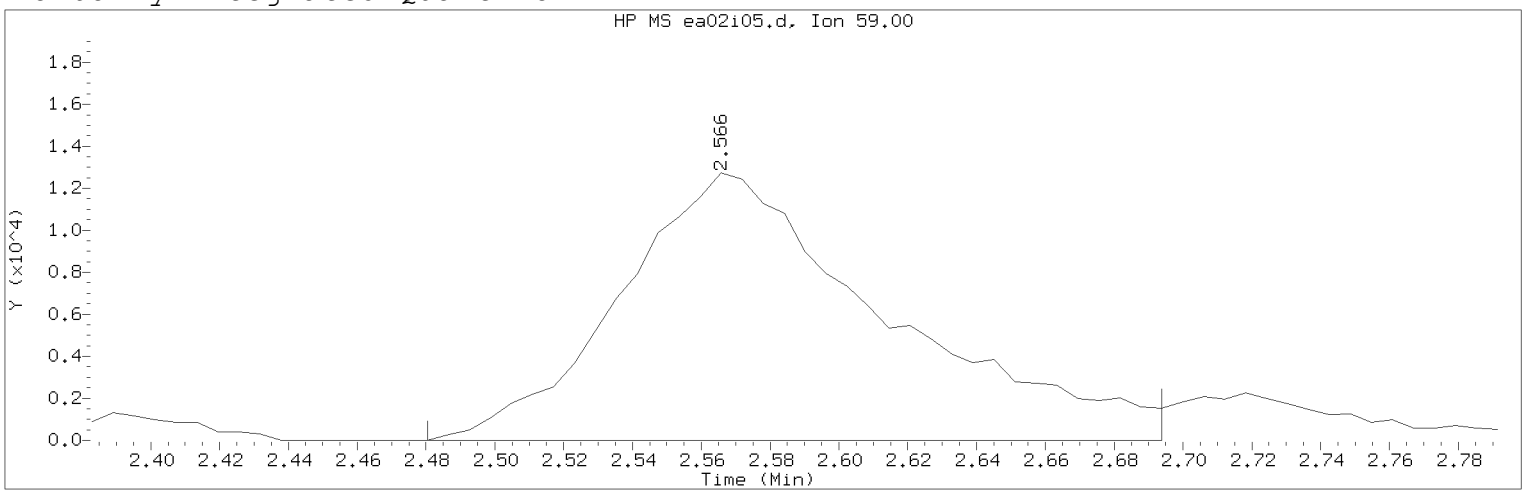
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 204
Retention Time (minutes): 2.231
Quant Ion : 45.00
Area : 38598
On-column Amount (ng) : 101.1327
Integration start scan : 189 Integration stop scan: 236
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

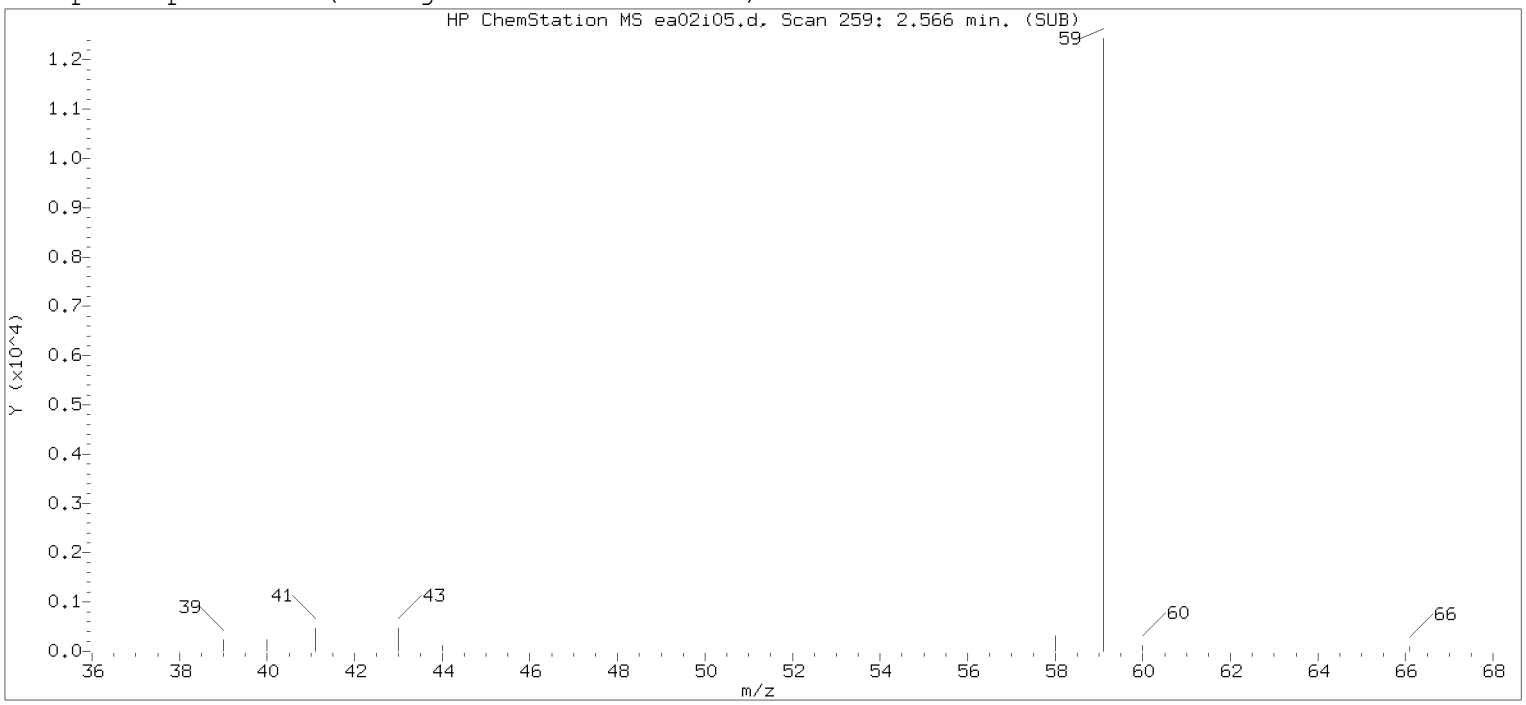
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 259
Retention Time (minutes): 2.566
Quant Ion : 59.00
Area (flag) : 68160M
On-Column Amount (ng) : 102.8928
Integration start scan : 244 Integration stop scan: 279
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

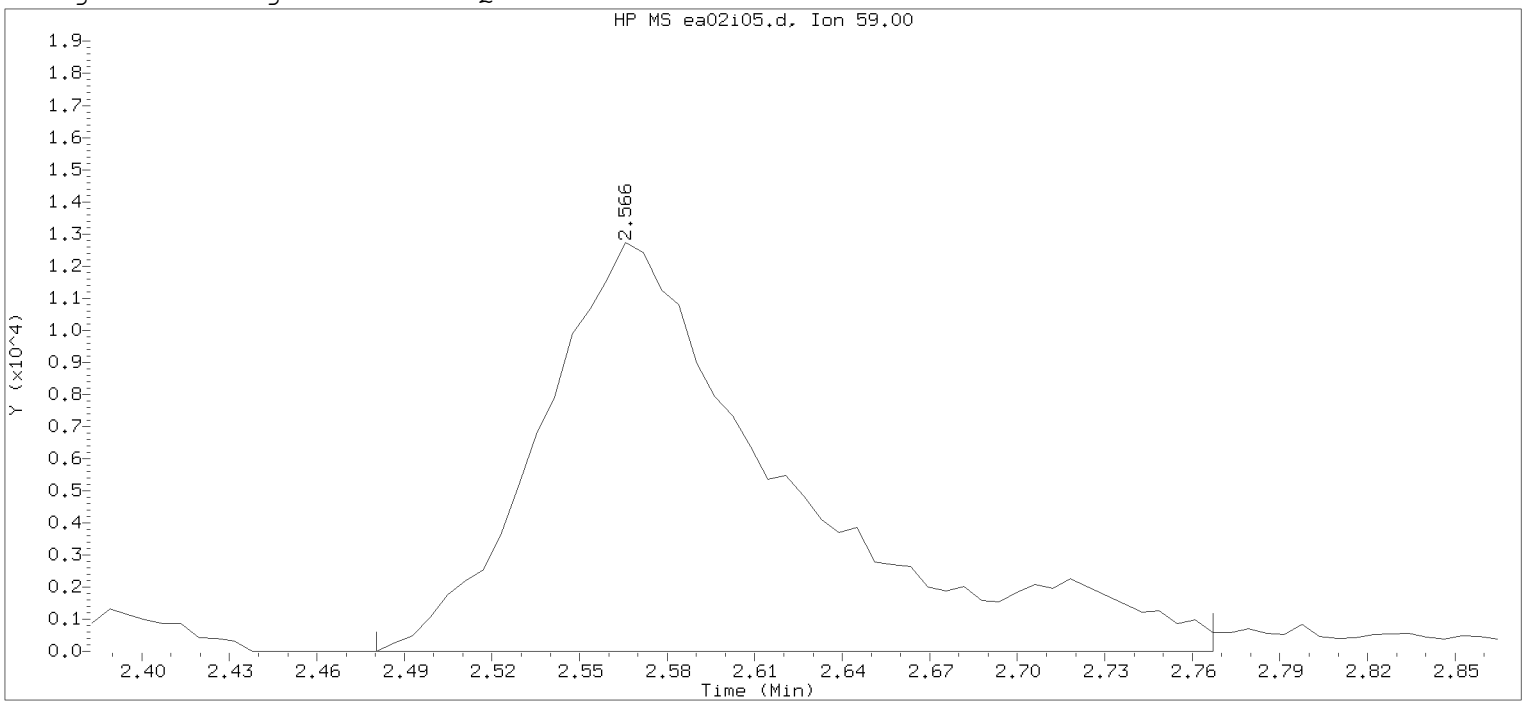
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

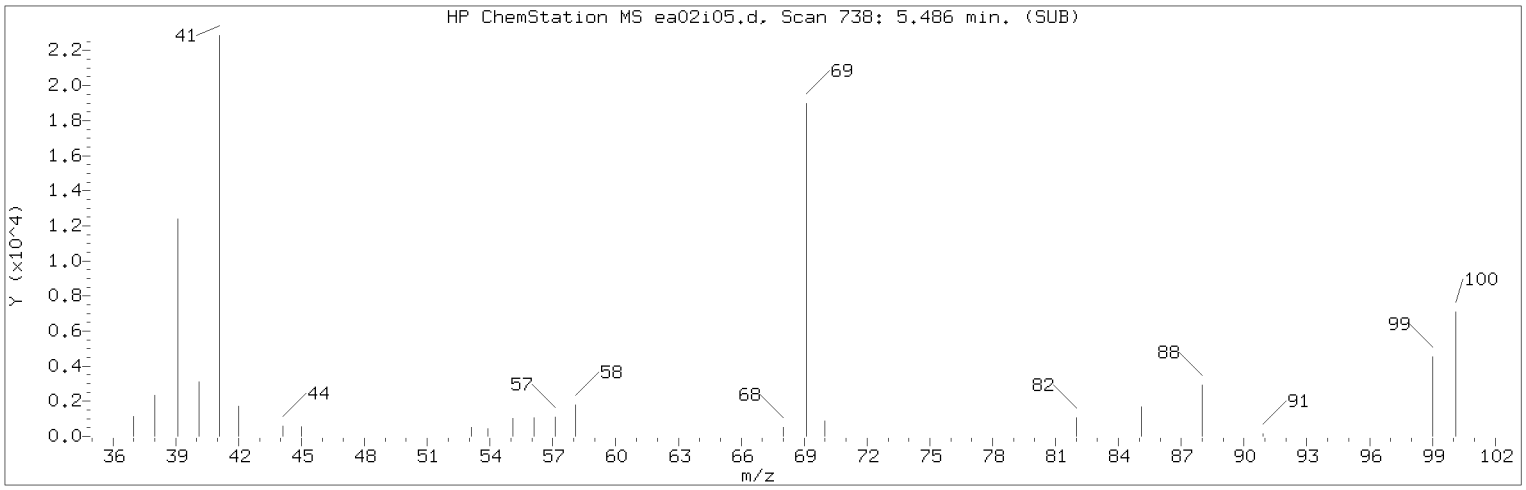
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 13:55
Date, time and analyst ID of latest file update: 02-May-2019 13:55 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

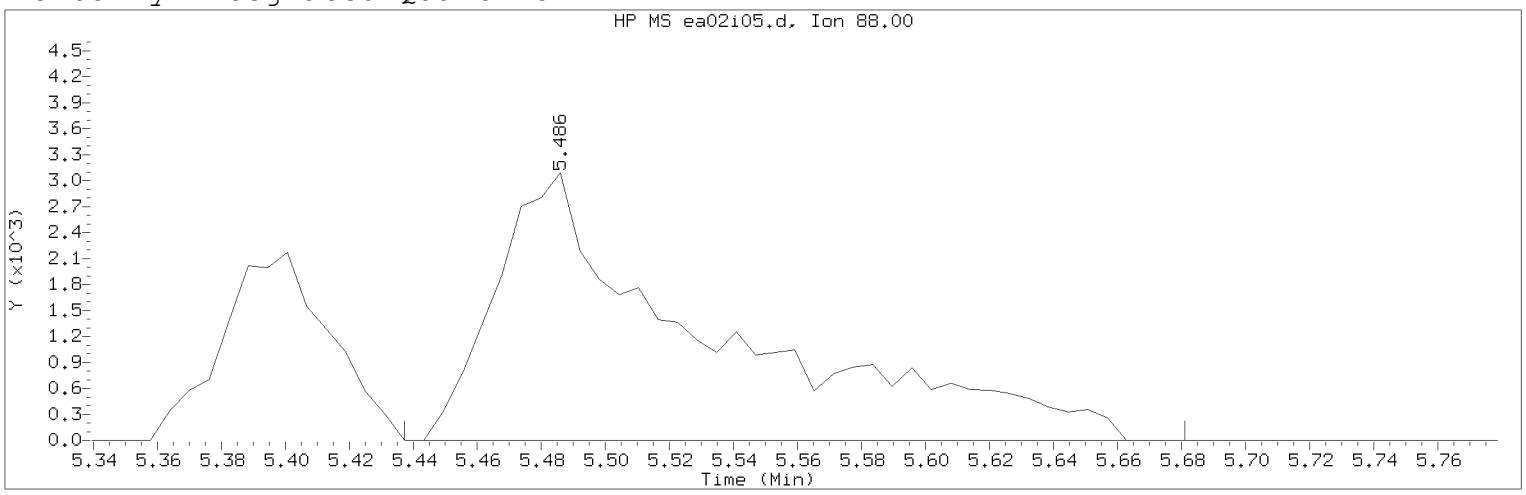
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 259
Retention Time (minutes): 2.566
Quant Ion : 59.00
Area : 74733
On-column Amount (ng) : 111.0268
Integration start scan : 244 Integration stop scan: 291
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

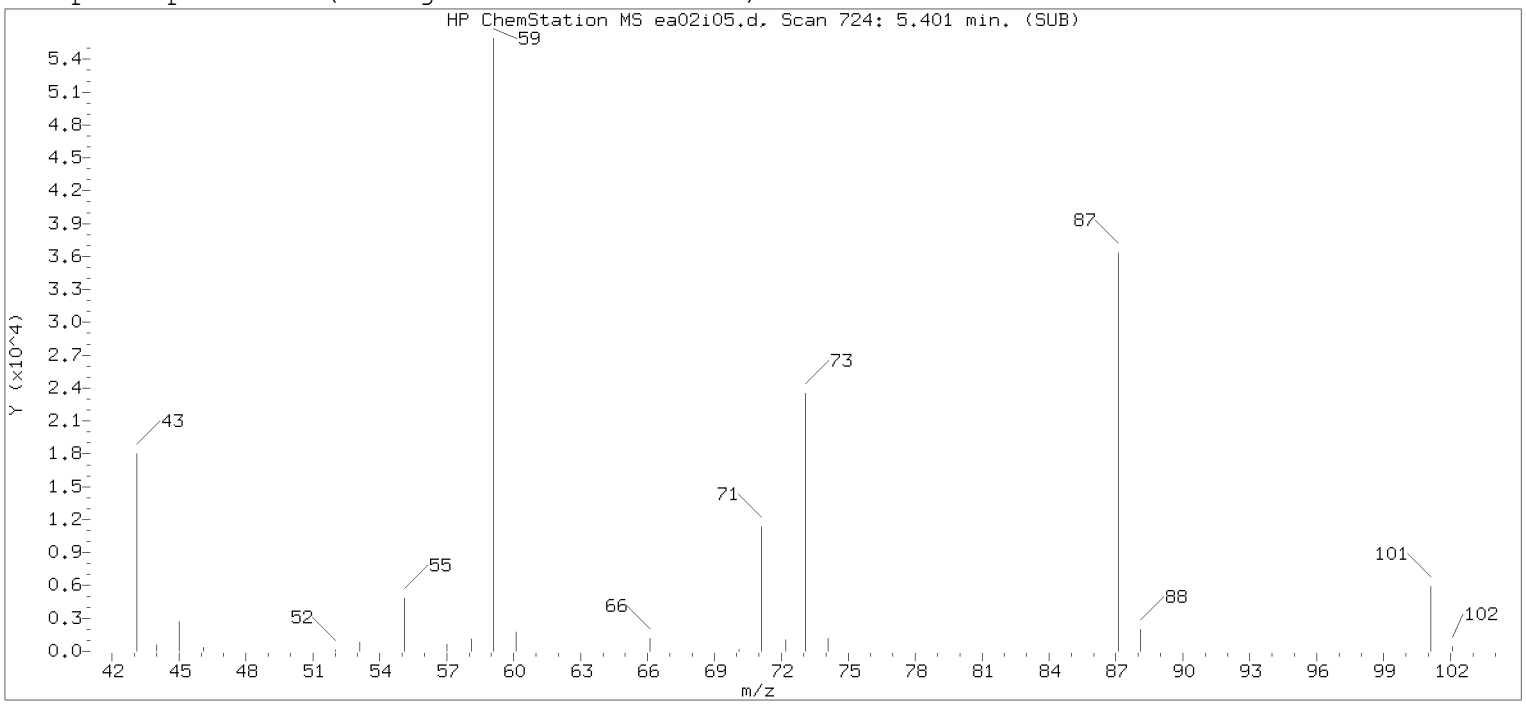
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 738
Retention Time (minutes): 5.486
Quant Ion : 88.00
Area (flag) : 14248M
On-Column Amount (ng) : 260.2676
Integration start scan : 729 Integration stop scan: 769
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

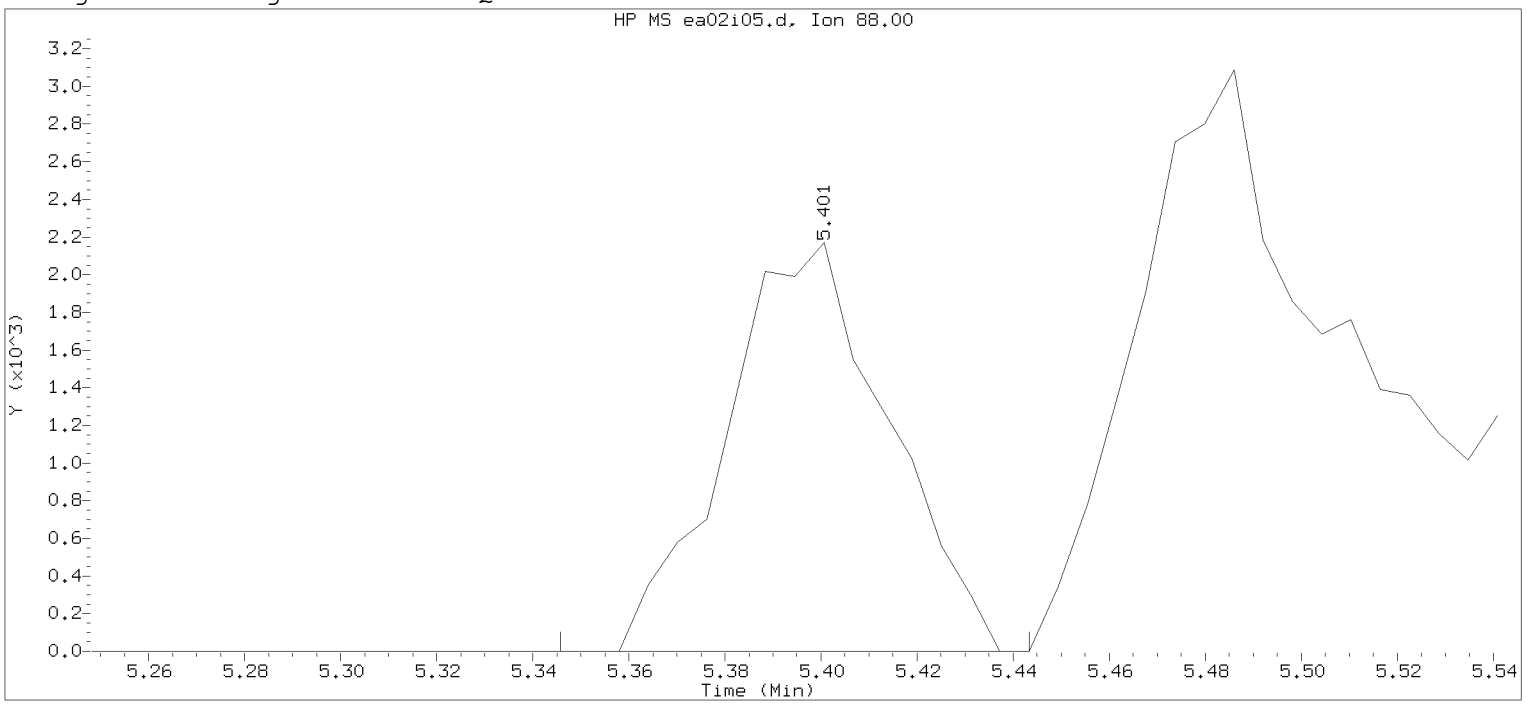
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

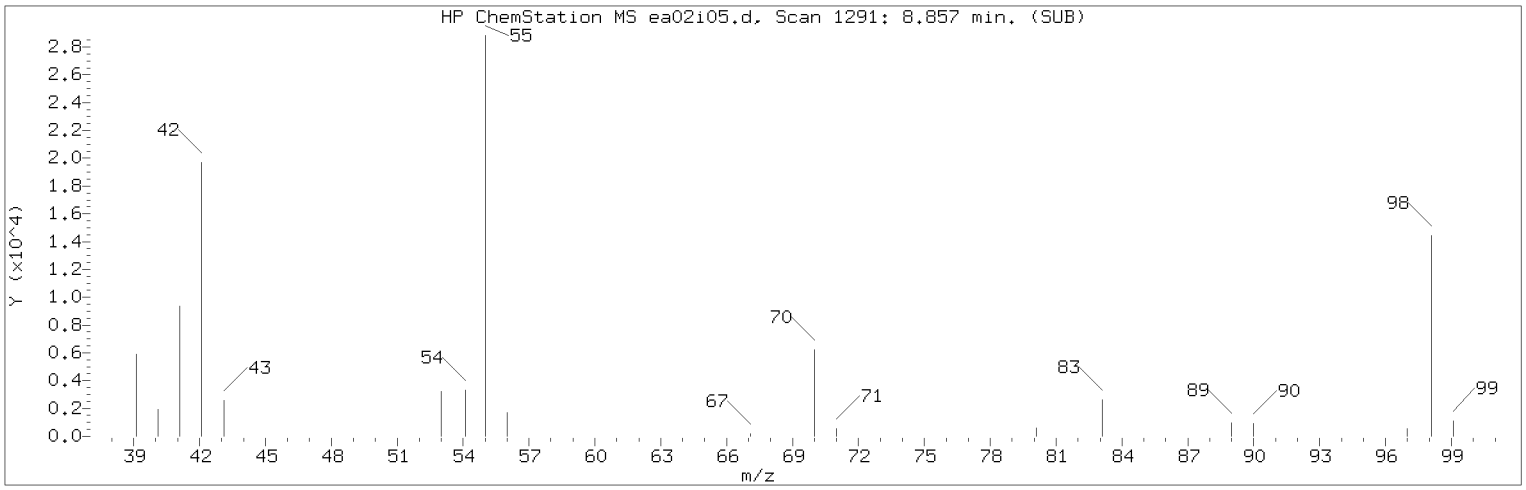
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 13:55
Date, time and analyst ID of latest file update: 02-May-2019 13:55 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

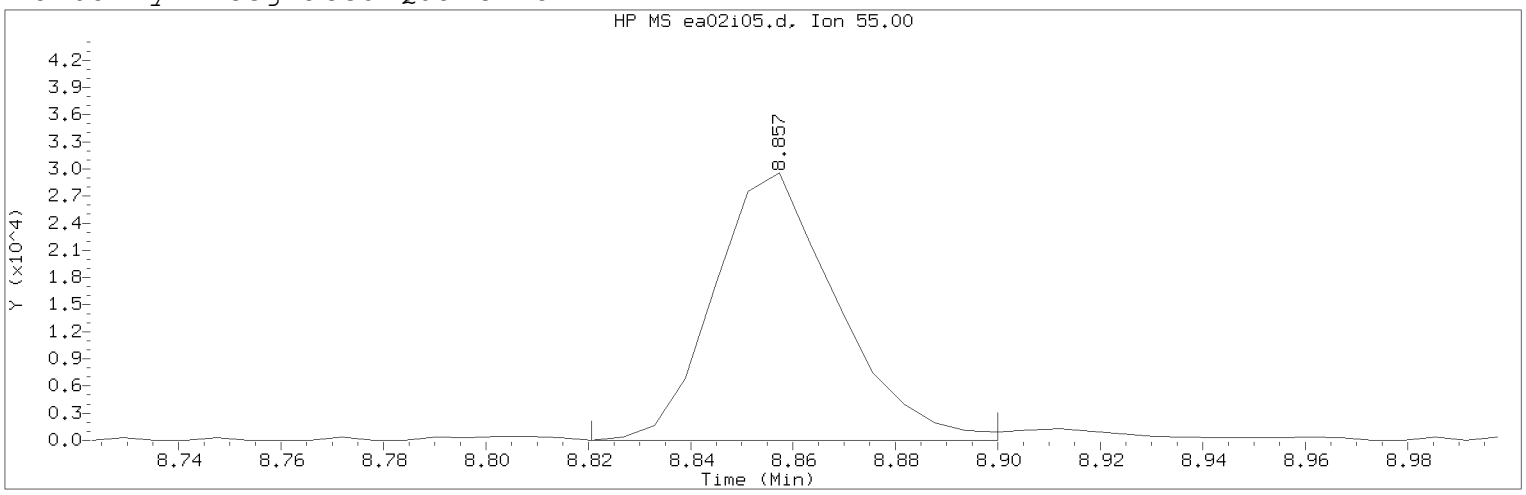
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 724
Retention Time (minutes): 5.401
Quant Ion : 88.00
Area : 5083
On-column Amount (ng) : 79.2477
Integration start scan : 714 Integration stop scan: 730
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

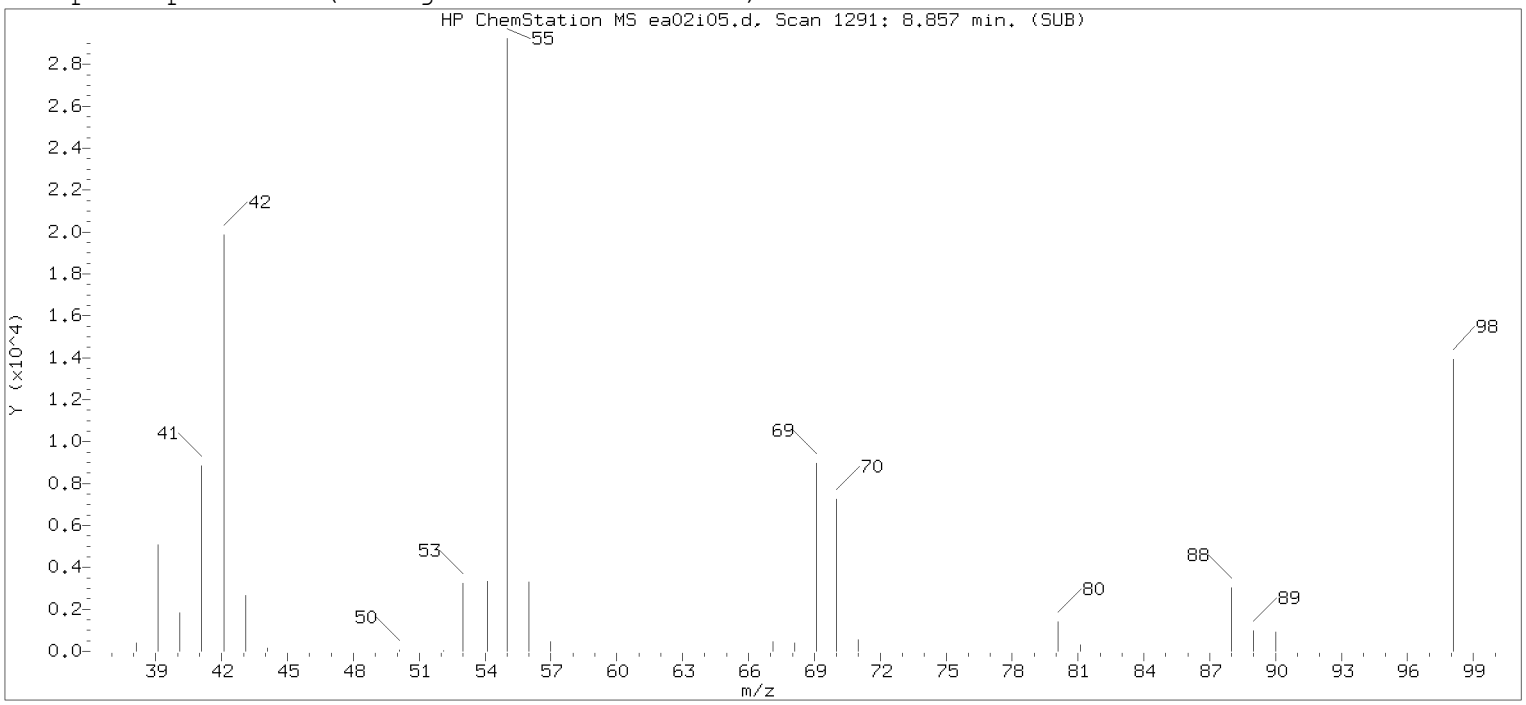
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1291
Retention Time (minutes): 8.857
Quant Ion : 55.00
Area (flag) : 49341M
On-Column Amount (ng) : 239.2580
Integration start scan : 1284 Integration stop scan: 1297
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

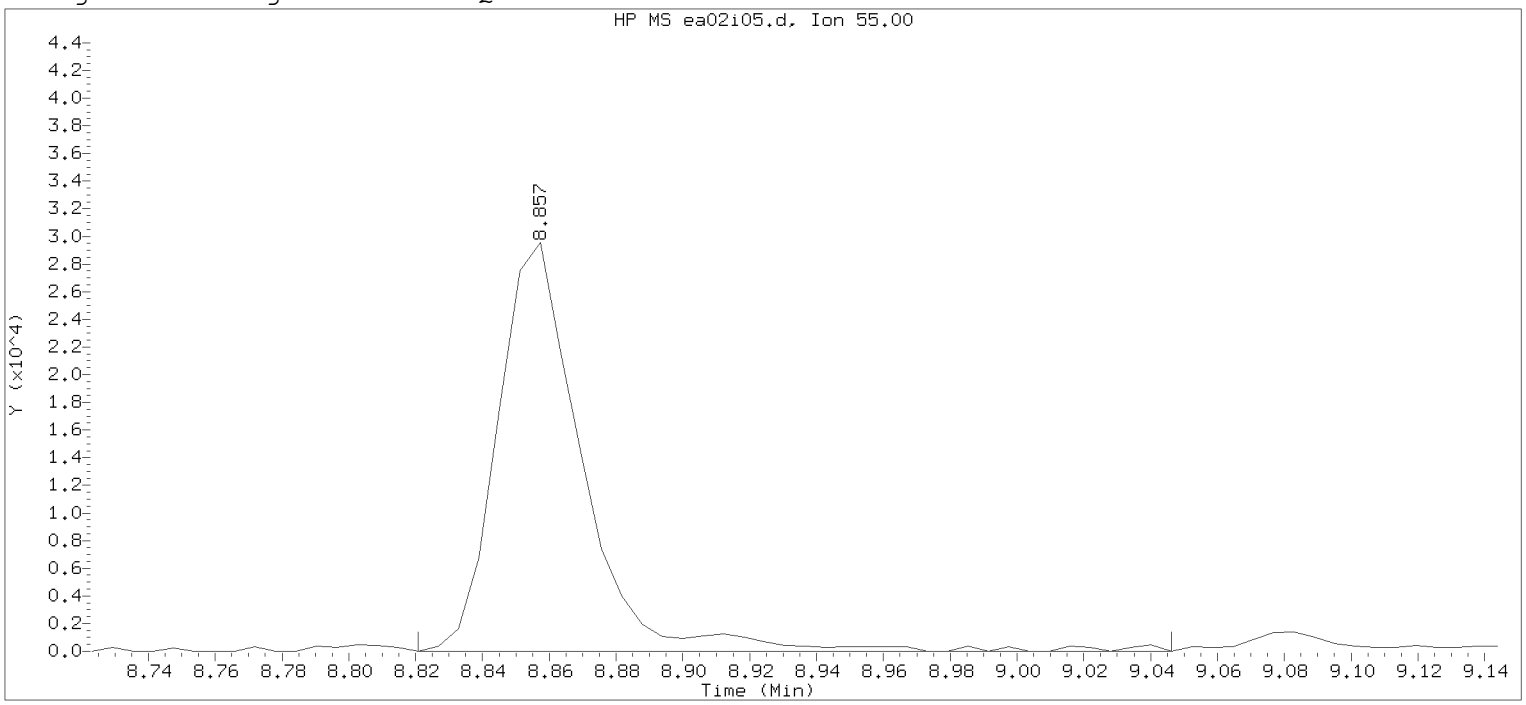
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

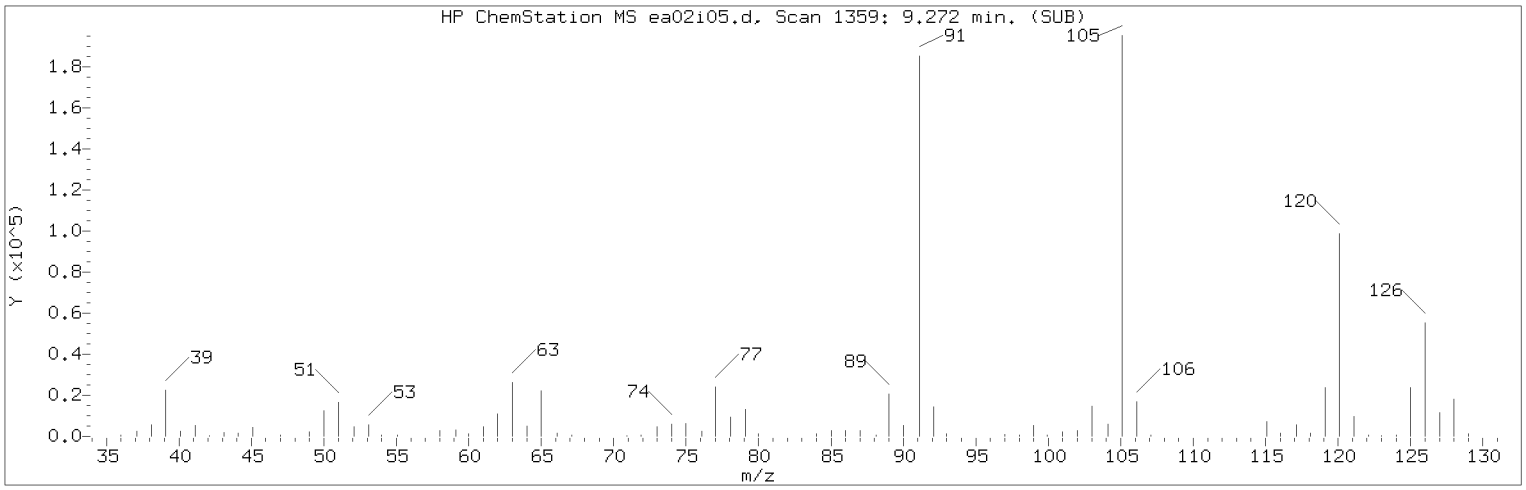
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 13:55
Date, time and analyst ID of latest file update: 02-May-2019 13:55 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

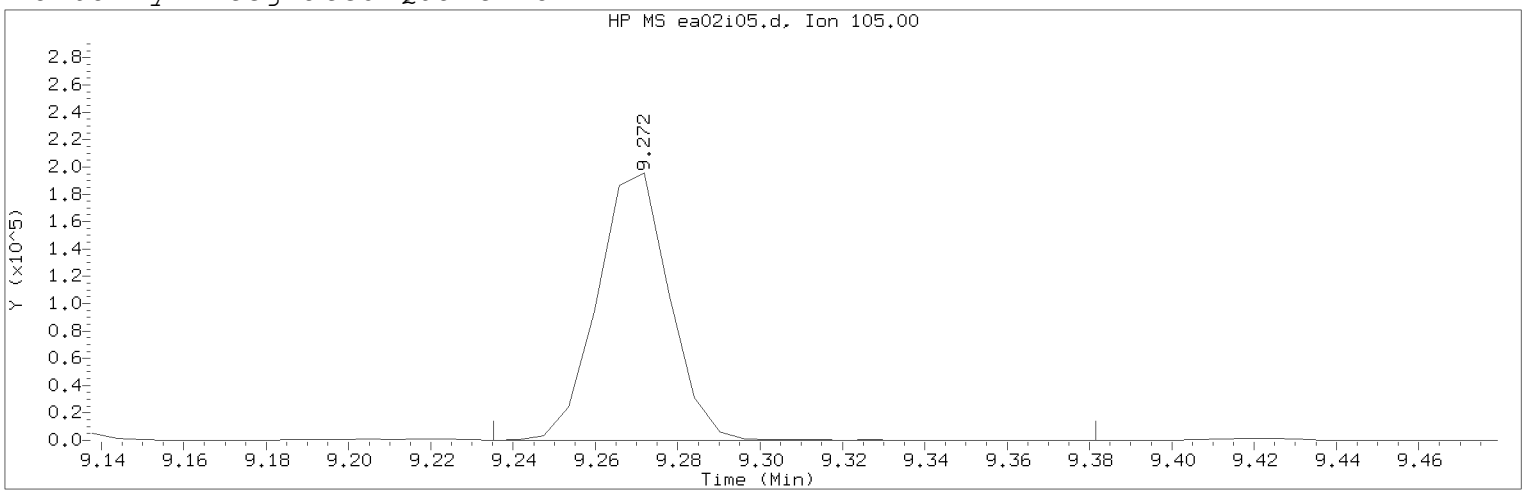
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1291
Retention Time (minutes): 8.857
Quant Ion : 55.00
Area : 52457
On-column Amount (ng) : 240.2568
Integration start scan : 1284 Integration stop scan: 1321
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

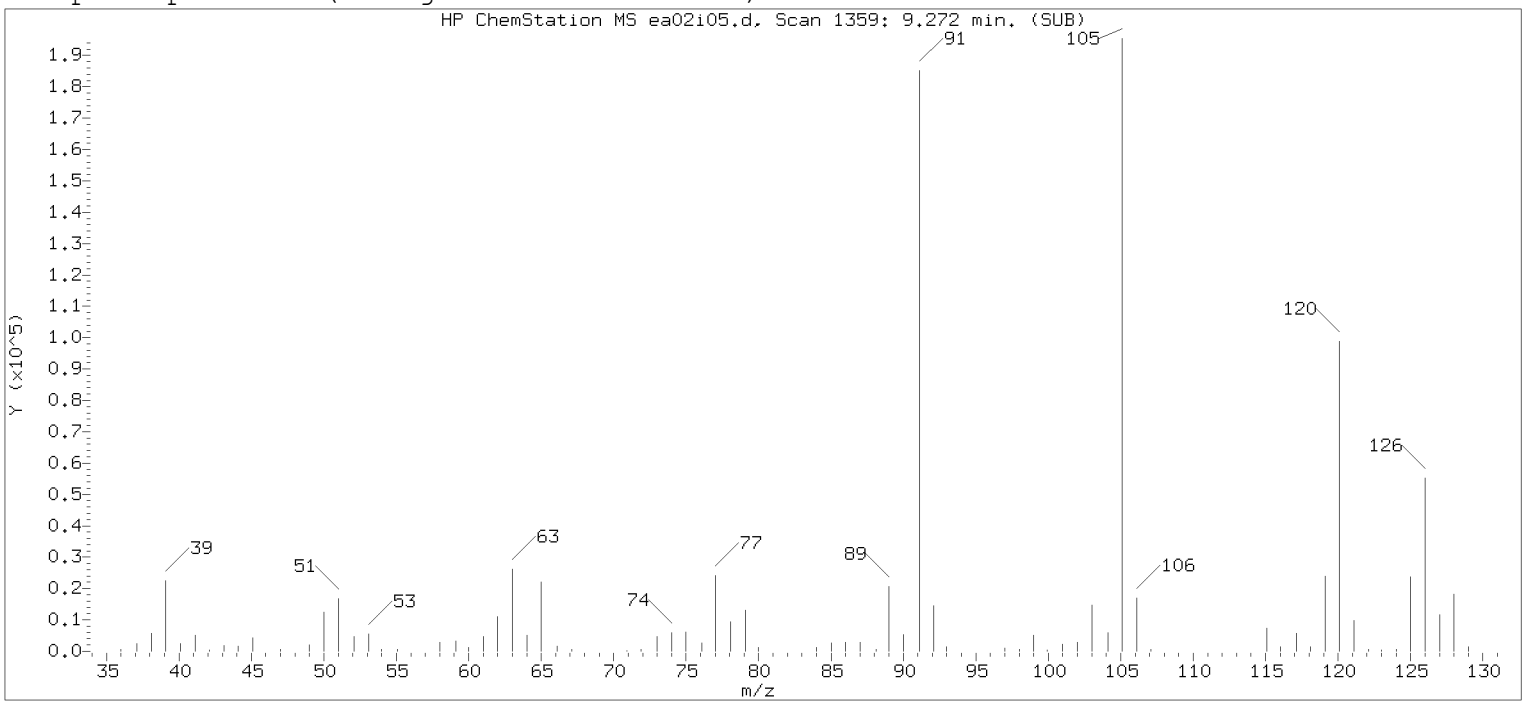
Compound Number : 123
Compound Name : 1,3,5-Trimethylbenzene
Scan Number : 1359
Retention Time (minutes): 9.272
Quant Ion : 105.00
Area (flag) : 237914M
On-Column Amount (ng) : 10.5832
Integration start scan : 1352 Integration stop scan: 1376
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

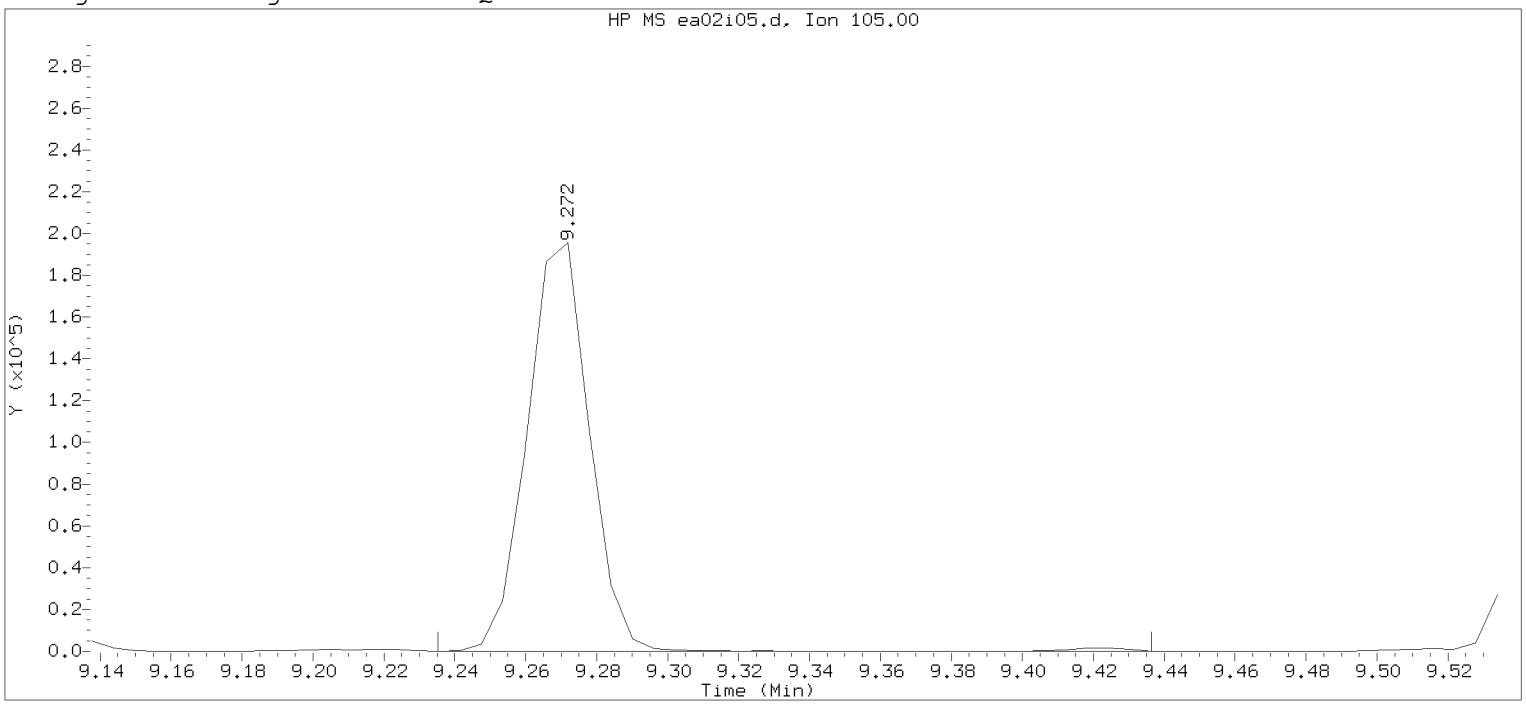
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



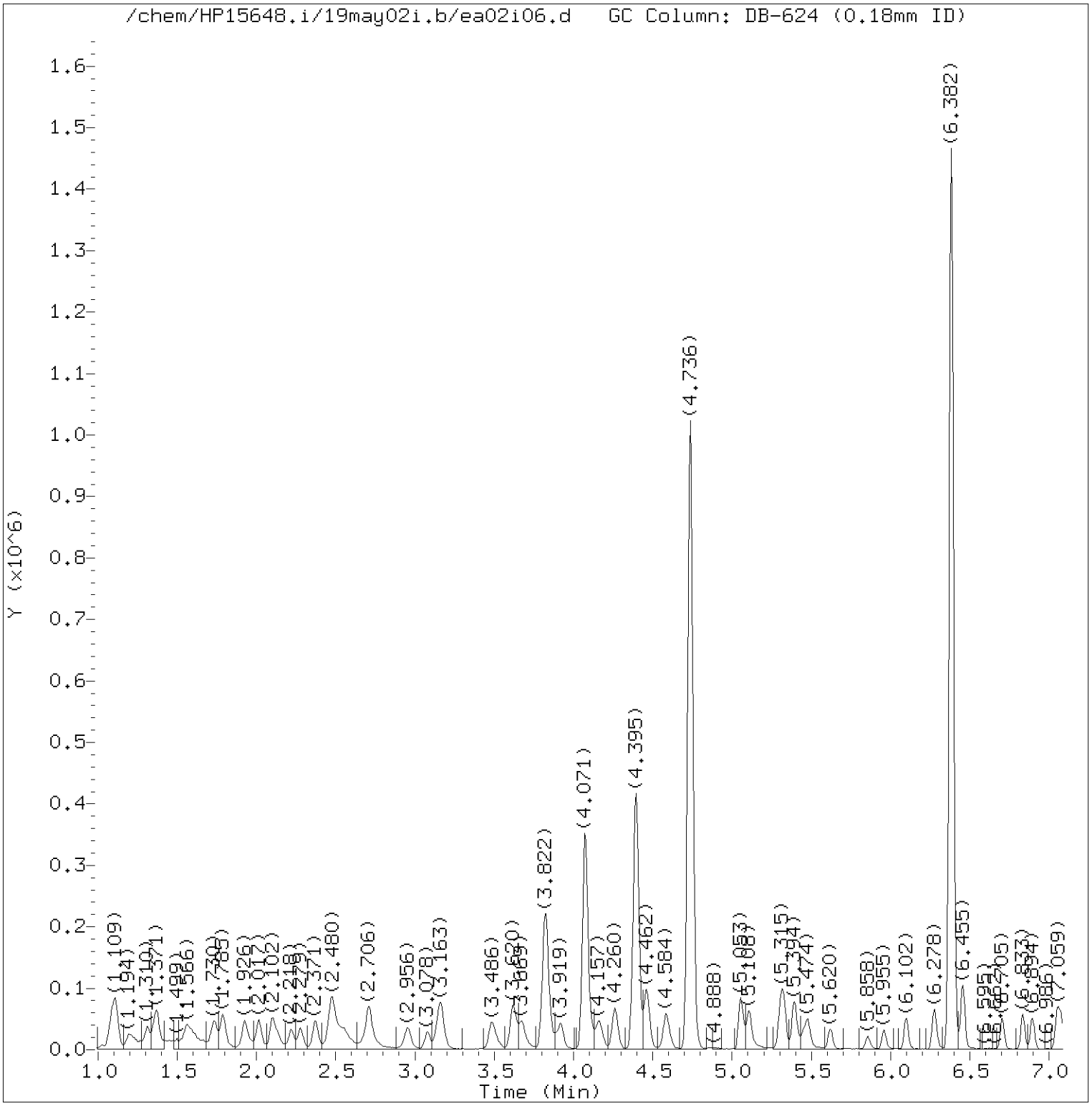
Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 13:55
Date, time and analyst ID of latest file update: 02-May-2019 13:55 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 123
Compound Name : 1,3,5-Trimethylbenzene
Scan Number : 1359
Retention Time (minutes): 9.272
Quant Ion : 105.00
Area : 239671
On-column Amount (ng) : 10.7825
Integration start scan : 1352 Integration stop scan: 1385
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user kas02648



Total Ion Chromatogram (TIC)

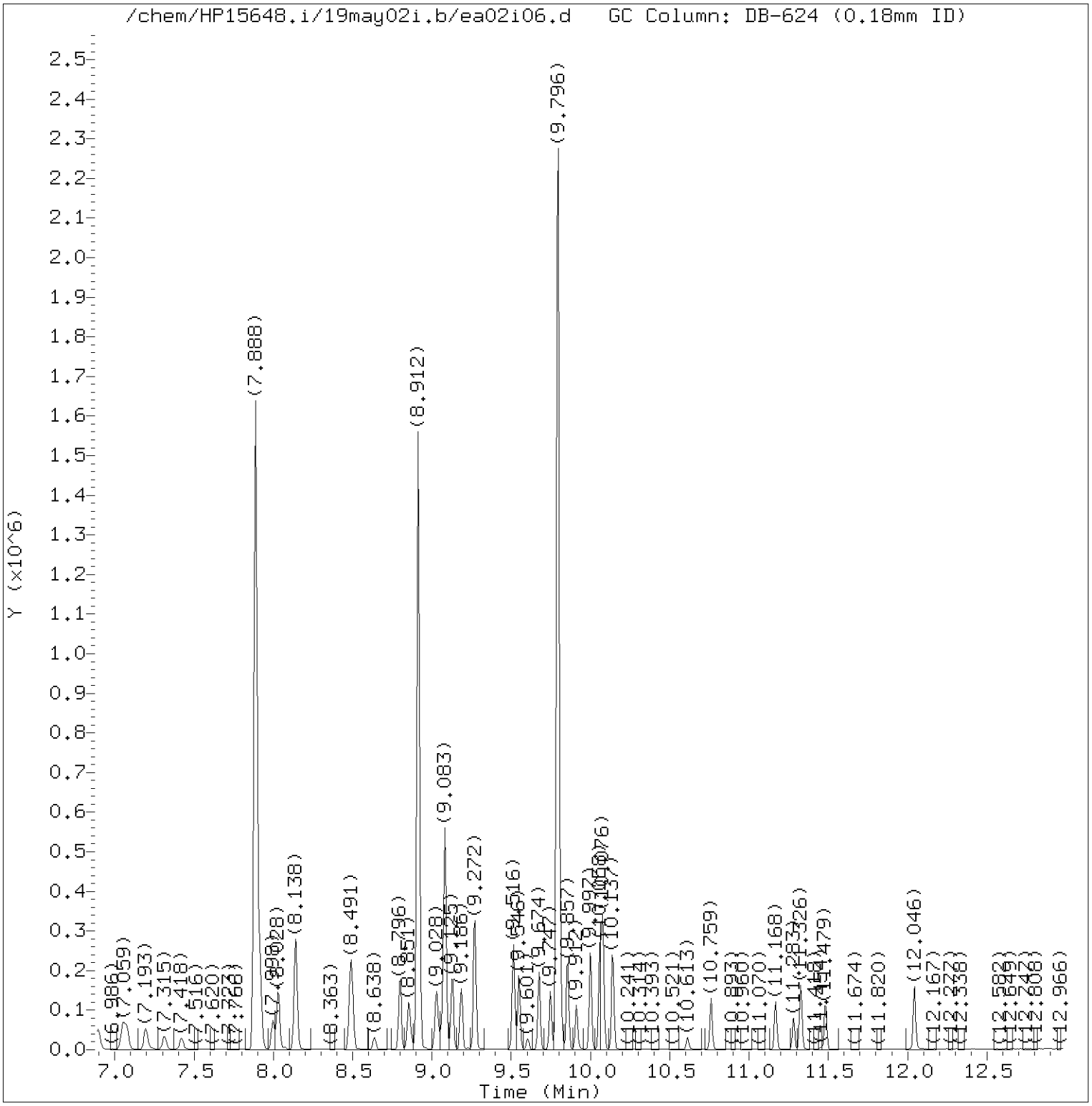
Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
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Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.194	85	39365	4.065
4) Chloromethane	(2)	1.310	50	33525M	4.254
5) 1,3-Butadiene	(2)	1.365	39	22996M	3.882
6) Vinyl Chloride	(2)	1.377	62	29512	3.918
8) Bromomethane	(2)	1.566	94	22555	3.977
9) Chloroethane	(2)	1.596	64	17055M	3.977
10) Dichlorofluoromethane	(2)	1.730	67	43654	3.978
11) n-Pentane	(2)	1.785	43	29593	3.364
12) Trichlorofluoromethane	(2)	1.791	101	42675	3.986
14) Ethyl ether	(2)	1.926	59	18873	4.230
15) Freon 123a	(2)	1.932	67	23846	3.782
16) Acrolein	(1)	2.017	56	57009	37.190
17) 1,1-Dichloroethene	(2)	2.096	96	16431	3.727
17) 1,1-Dichloroethene	(2)	2.102	63	8336	3.566
19) Freon 113	(2)	2.121	101	16139	3.306
18) Acetone	(1)	2.127	58	4737	7.424
22) Methyl Iodide	(2)	2.218	142	30776	3.725
21) 2-Propanol	(1)	2.224	45	29898	78.433
23) Carbon Disulfide	(2)	2.279	76	53776	3.596
25) Allyl Chloride	(2)	2.371	41	33827	3.948
27) Methyl Acetate	(2)	2.383	43	17260	4.102
28) Methylene Chloride	(2)	2.474	84	19478	3.878
29)*t-Butyl alcohol-d10	(1)	2.480	65	185789	250.000
30) t-Butyl alcohol	(1)	2.553	59	53920	77.638
31) Acrylonitrile	(2)	2.675	53	10264	4.012
32) trans-1,2-Dichloroethene	(2)	2.706	96	18291	3.686
33) Methyl Tertiary Butyl Ether	(2)	2.712	73	57875	3.911
34) n-Hexane	(2)	2.956	57	28696	3.300
36) 1,1-Dichloroethane	(2)	3.078	63	35104	3.776
38) di-Isopropyl ether	(2)	3.145	45	62857	3.842
39) 2-Chloro-1,3-butadiene	(2)	3.163	53	32289	3.637
40) Ethyl t-butyl ether	(2)	3.480	59	63410	3.929
45) 2,2-Dichloropropane	(2)	3.614	77	29552	3.603
42) cis-1,2-Dichloroethene	(2)	3.620	96	20326	3.645
43) 1,2-Dichloroethene (Total)	(2)		96	38617	7.331
44) 2-Butanone	(2)	3.633	43	26351	7.645
47) Propionitrile	(1)	3.675	54	70387	75.022
48) Methacrylonitrile	(2)	3.822	67	105707	38.480

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.840	128	10341	3.734
50) Tetrahydrofuran	(1)	3.889	71	7146	7.267
51) Chloroform	(2)	3.919	83	33193	3.753
52)$Dibromofluoromethane	(2)	4.071	113	256361	50.235
52)$Dibromofluoromethane	(2)	4.071	111	263390	50.280
53) 1,1,1-Trichloroethane	(2)	4.108	97	28550	3.489
54) Cyclohexane	(2)	4.157	56	32434	3.227
54) Cyclohexane	(2)	4.157	84	27368M	3.169
54) Cyclohexane	(2)	4.163	69	11364	3.463
55) 1,1-Dichloropropene	(2)	4.260	75	25580	3.526
56) Carbon Tetrachloride	(2)	4.267	117	23664	3.400
58) Isobutyl Alcohol	(1)	4.388	41	45894	194.637
57)$1,2-Dichloroethane-d4	(2)	4.395	102	64682	50.227
57)$1,2-Dichloroethane-d4	(2)	4.395	65	329693	50.442
57)$1,2-Dichloroethane-d4	(2)	4.395	104	42497	51.472
60) Benzene	(2)	4.456	78	78502	3.685
61) 1,2-Dichloroethane	(2)	4.474	62	27707	3.872
61) 1,2-Dichloroethane	(2)	4.474	98	2782	4.449
65) t-Amyl methyl ether	(2)	4.584	73	63068	3.941
66)*Fluorobenzene	(2)	4.736	96	1097962	50.000
67) n-Heptane	(2)	4.748	43	31772	3.409
69) n-Butanol	(1)	5.053	56	74387	364.737
71) Trichloroethene	(2)	5.108	95	19819	3.688
73) Methylcyclohexane	(2)	5.309	83	41305	3.691
73) Methylcyclohexane	(2)	5.309	98	18786	3.651
74) 1,2-Dichloropropane	(2)	5.327	63	19704	3.717
75) Dibromomethane	(2)	5.449	93	12040	3.794
77) Methyl Methacrylate	(2)	5.480	69	18732	3.876
76) 1,4-Dioxane	(1)	5.480	88	10482M	182.633
79) Bromodichloromethane	(2)	5.620	83	24051	3.643
80) 2-Nitropropane	(2)	5.858	41	16042	7.333
81) 2-Chloroethyl Vinyl Ether	(2)	5.961	63	15583	3.815
82) cis-1,3-Dichloropropene	(2)	6.102	75	31673	3.684
83) 4-Methyl-2-pentanone	(2)	6.272	43	52496	7.092
84)$Toluene-d8	(3)	6.382	98	1101805	50.100
84)$Toluene-d8	(3)	6.382	100	710184	50.236
89) Toluene	(3)	6.455	92	48709	3.619
90) trans-1,3-Dichloropropene	(3)	6.699	75	29590	3.678

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on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropene (total)	(3)		100	61263	7.362
92) Ethyl Methacrylate	(3)	6.833	69	33068	3.856
93) 1,1,2-Trichloroethane	(3)	6.894	97	17354	3.788
94) Tetrachloroethene	(3)	7.053	166	18817	3.438
95) 1,3-Dichloropropane	(3)	7.077	76	30628	3.804
97) 2-Hexanone	(3)	7.193	43	41964	7.340
102) 1-Chlorohexane	(3)	7.309	91	1856M	3.990
98) Dibromochloromethane	(3)	7.315	129	17794	3.598
100) 1,2-Dibromoethane	(3)	7.424	107	18670	3.830
101)*Chlorobenzene-d5	(3)	7.888	117	809751	50.000
103) Chlorobenzene	(3)	7.912	112	54556	3.666
104) 1,1,1,2-Tetrachloroethane	(3)	7.998	131	18181	3.597
105) Ethylbenzene	(3)	8.028	91	92350	3.468
107) m+p-Xylene	(3)	8.138	106	72749	7.018
109) Xylene (Total)	(3)		106	108587	10.561
108) o-Xylene	(3)	8.485	106	35838	3.543
110) Styrene	(3)	8.497	104	58430	3.497
111) Bromoform	(3)	8.638	173	11711	3.552
112) Isopropylbenzene	(3)	8.802	105	94631	3.516
113) Cyclohexanone	(1)	8.857	55	40325M	186.510
115)$4-Bromofluorobenzene	(3)	8.912	95	425794	50.364
115)$4-Bromofluorobenzene	(3)	8.912	174	316240	49.920
116) Bromobenzene	(4)	9.028	156	22401	3.733
117) 1,1,2,2-Tetrachloroethane	(4)	9.034	83	27514	3.951
118) 1,2,3-Trichloropropane	(4)	9.064	110	8115	3.845
119) trans-1,4-Dichloro-2-butene	(4)	9.083	53	86236	37.683
120) n-Propylbenzene	(4)	9.125	91	111755	3.533
121) 2-Chlorotoluene	(4)	9.186	126	22763	3.655
123) 1,3,5-Trimethylbenzene	(4)	9.266	105	79192	3.451
122) 4-Chlorotoluene	(4)	9.272	126	22342	3.500
125) tert-Butylbenzene	(4)	9.516	134	17788	3.487
126) Pentachloroethane	(4)	9.522	167	13703	3.608
127) 1,2,4-Trimethylbenzene	(4)	9.546	105	81809	3.462
128) sec-Butylbenzene	(4)	9.674	105	100161	3.440
130) 1,3-Dichlorobenzene	(4)	9.747	146	41221	3.525
131) p-Isopropyltoluene	(4)	9.784	119	88054	3.438
132)*1,4-Dichlorobenzene-d4	(4)	9.796	152	430624	50.000
134) 1,4-Dichlorobenzene	(4)	9.814	146	44000	3.678

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on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	9.857	105	93862	3.730
136) Benzyl Chloride	(4)	9.912	91	59237	3.646
137) 1,3-Diethylbenzene	(4)	9.997	119	59646	3.699
138) 1,4-Diethylbenzene	(4)	10.058	119	64445	3.751
139) 1,2-Dichlorobenzene	(4)	10.076	146	40086	3.581
140) n-Butylbenzene	(4)	10.076	92	42037	3.342
141) 1,2-Diethylbenzene	(4)	10.137	119	50016	3.789
142) Diethylbenzene (total)	(4)		100	174107	11.238
143) 1,2-Dibromo-3-chloropropane	(4)	10.613	75	6306	3.952
145) 1,3,5-Trichlorobenzene	(4)	10.759	180	28552	3.468
147) 1,2,4-Trichlorobenzene	(4)	11.168	180	26798	3.647
148) Hexachlorobutadiene	(4)	11.283	225	10471	3.324
149) Naphthalene	(4)	11.326	128	92672	3.825
150) 1,2,3-Trichlorobenzene	(4)	11.485	180	25801	3.719
151) 2-Methylnaphthalene	(4)	12.046	142	59551	3.890

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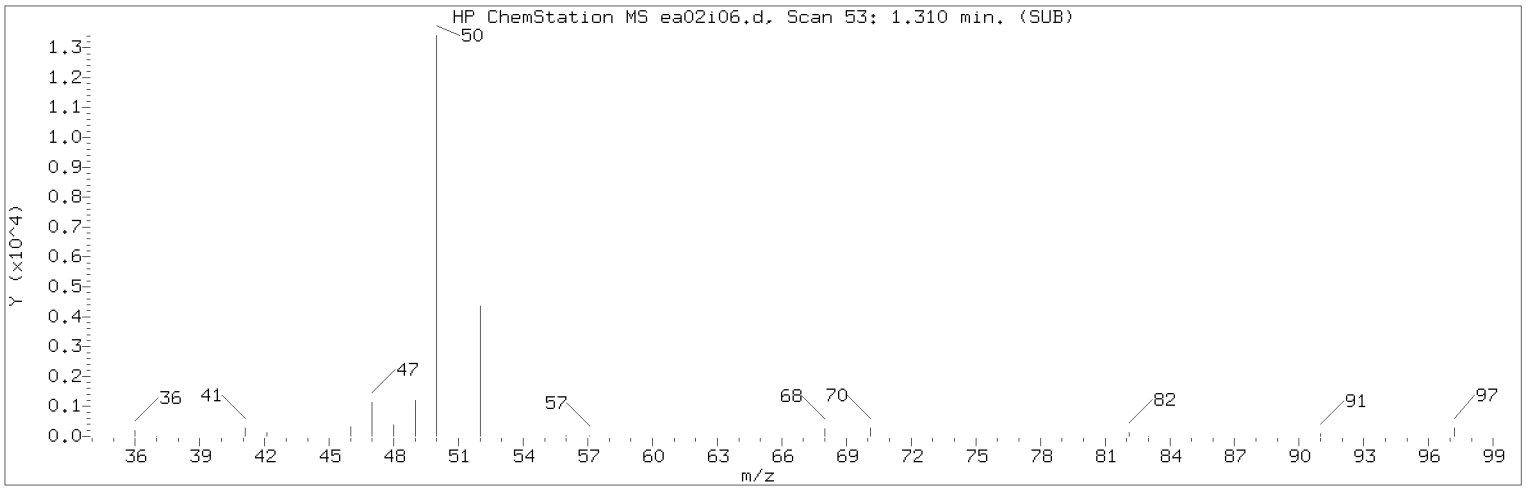
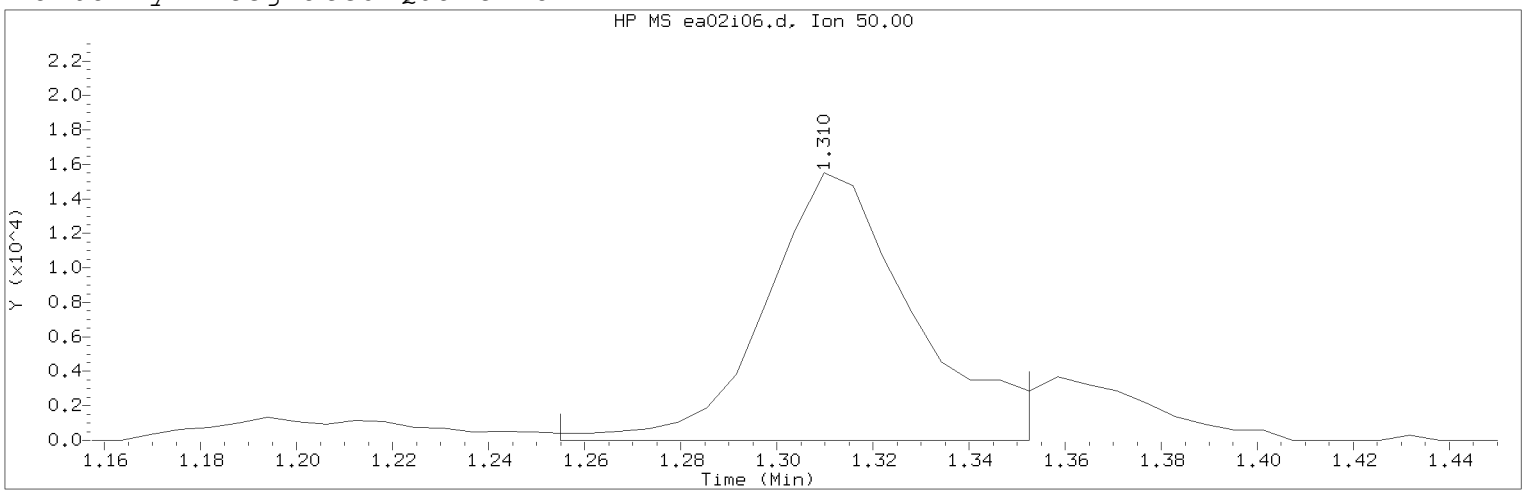
Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

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Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

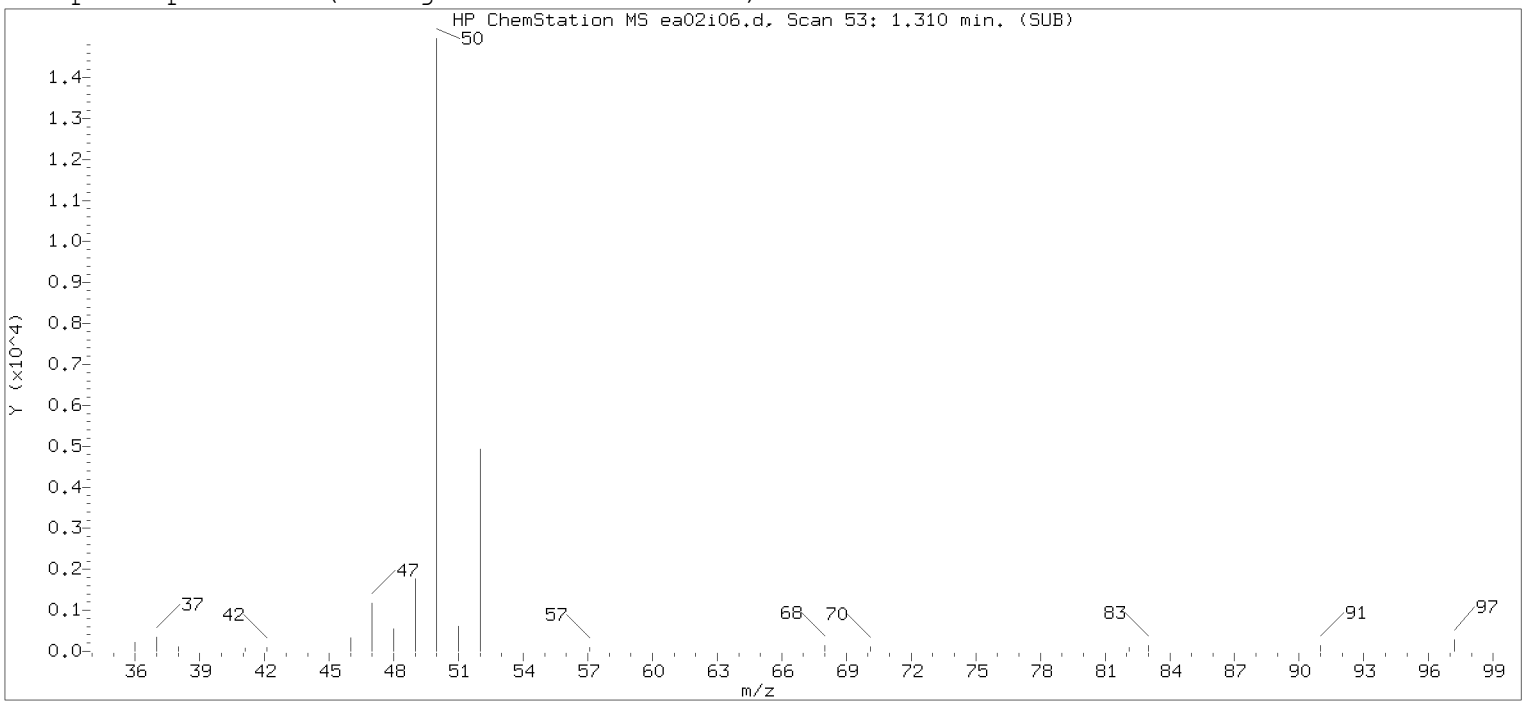
Compound Number : 4
Compound Name : Chloromethane
Scan Number : 53
Retention Time (minutes): 1.310
Quant Ion : 50.00
Area (flag) : 33525M
On-Column Amount (ng) : 4.2545
Integration start scan : 43 Integration stop scan: 59
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

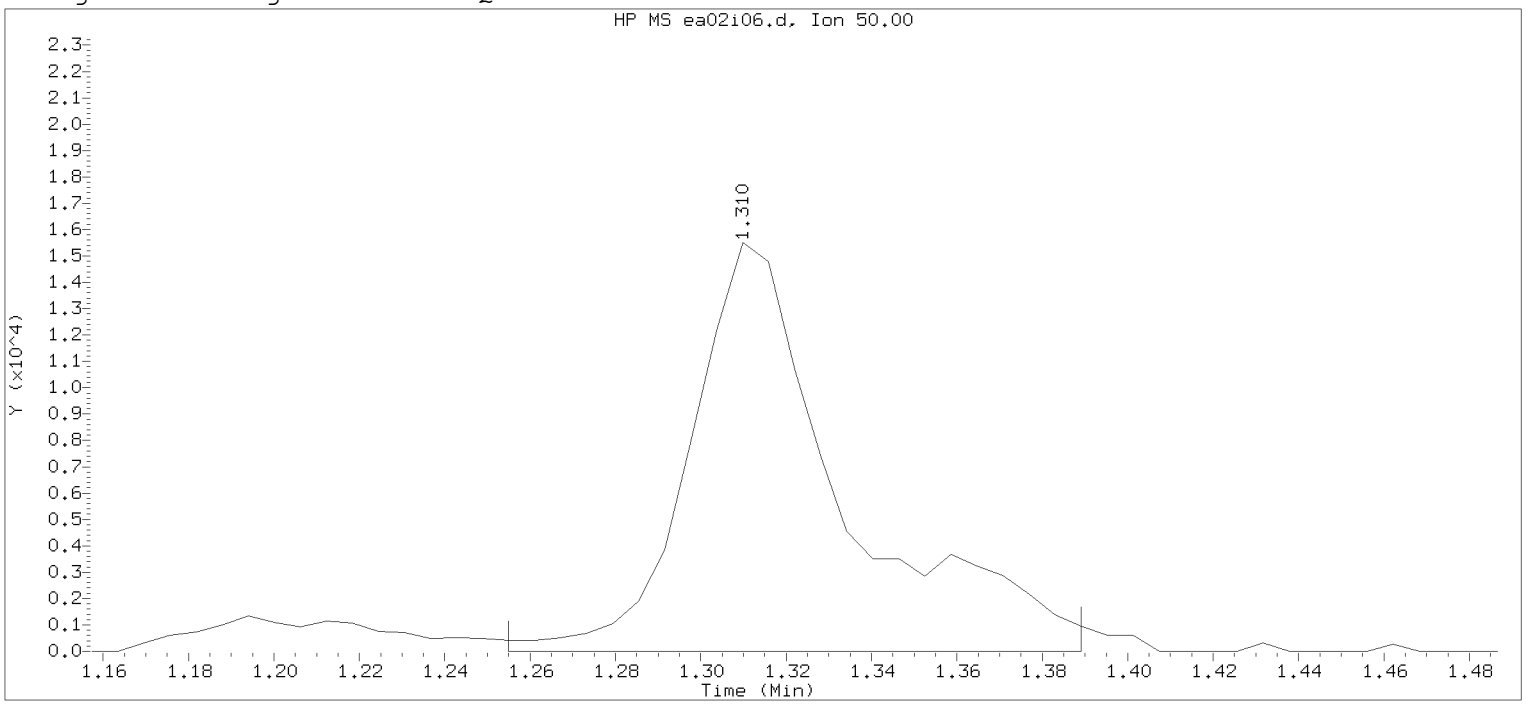
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

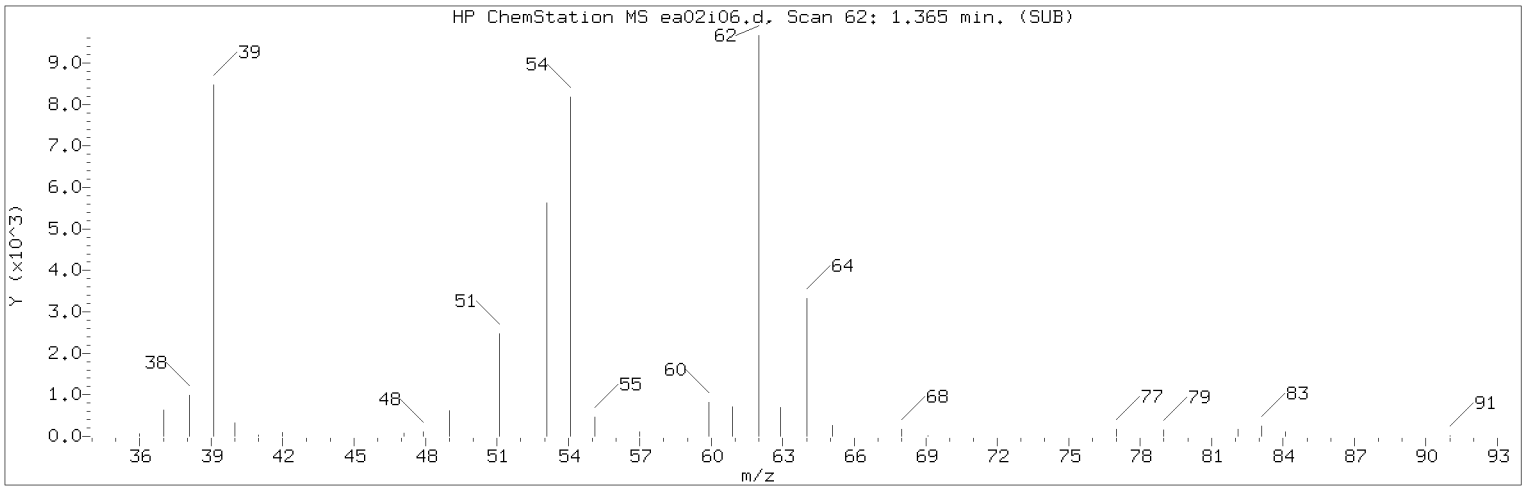
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:15
Date, time and analyst ID of latest file update: 02-May-2019 14:15 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

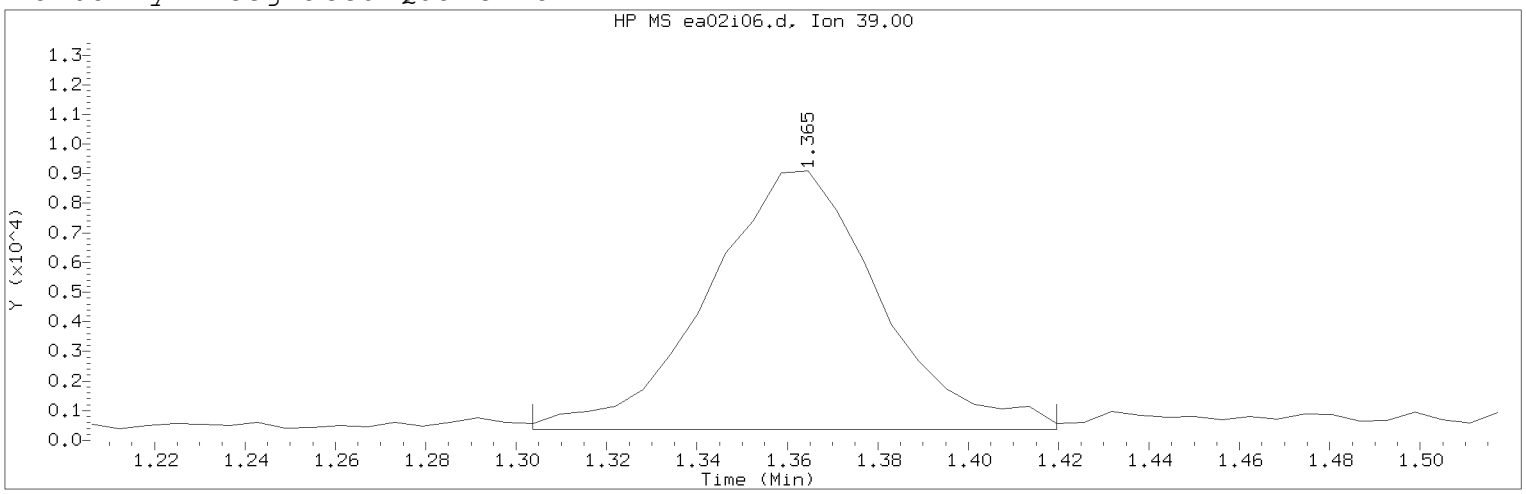
Compound Number : 4
Compound Name : Chloromethane
Scan Number : 53
Retention Time (minutes): 1.310
Quant Ion : 50.00
Area : 38499
On-column Amount (ng) : 4.7449
Integration start scan : 43 Integration stop scan: 65
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

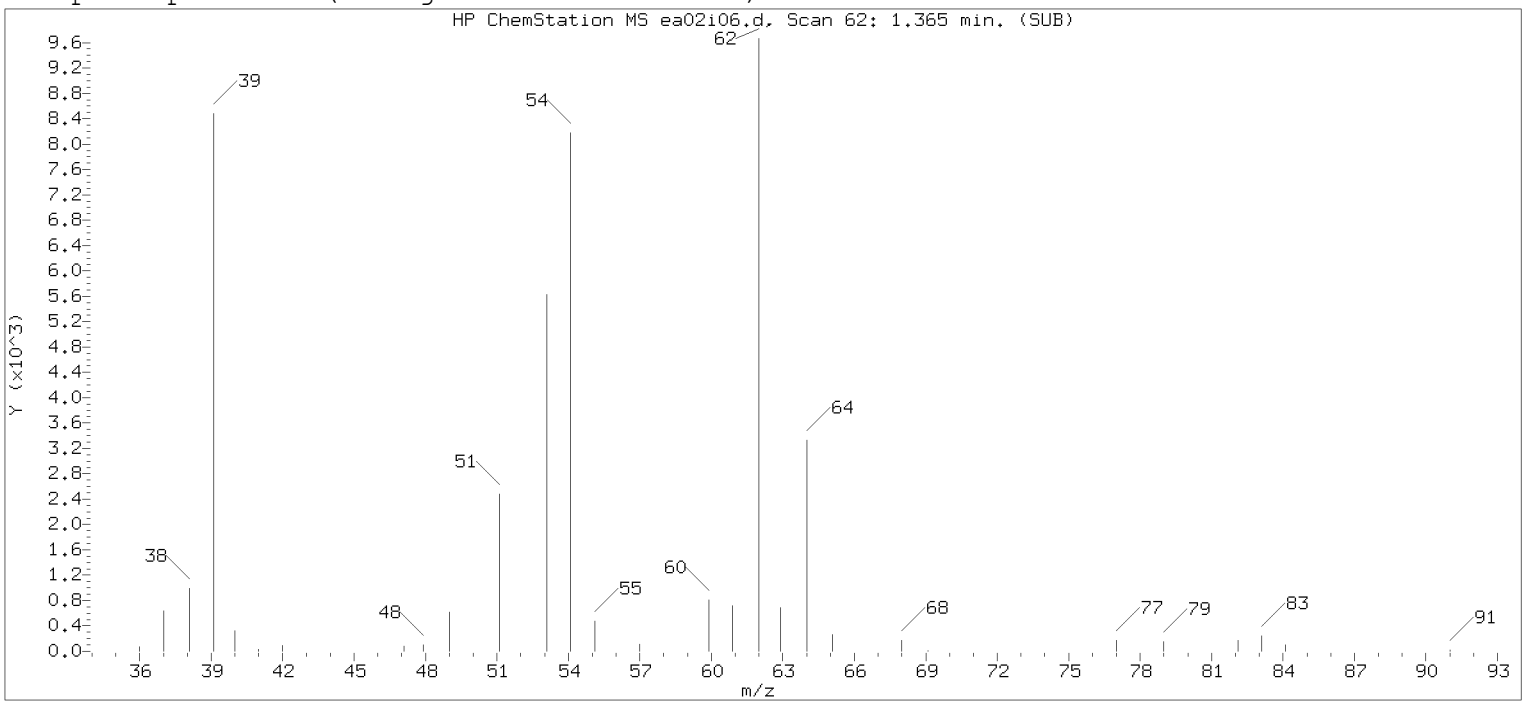
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 62
Retention Time (minutes): 1.365
Quant Ion : 39.00
Area (flag) : 22996M
On-Column Amount (ng) : 3.8820
Integration start scan : 51 Integration stop scan: 70
Y at integration start : 375 Y at integration end: 375

Reason for manual integration: improper integration

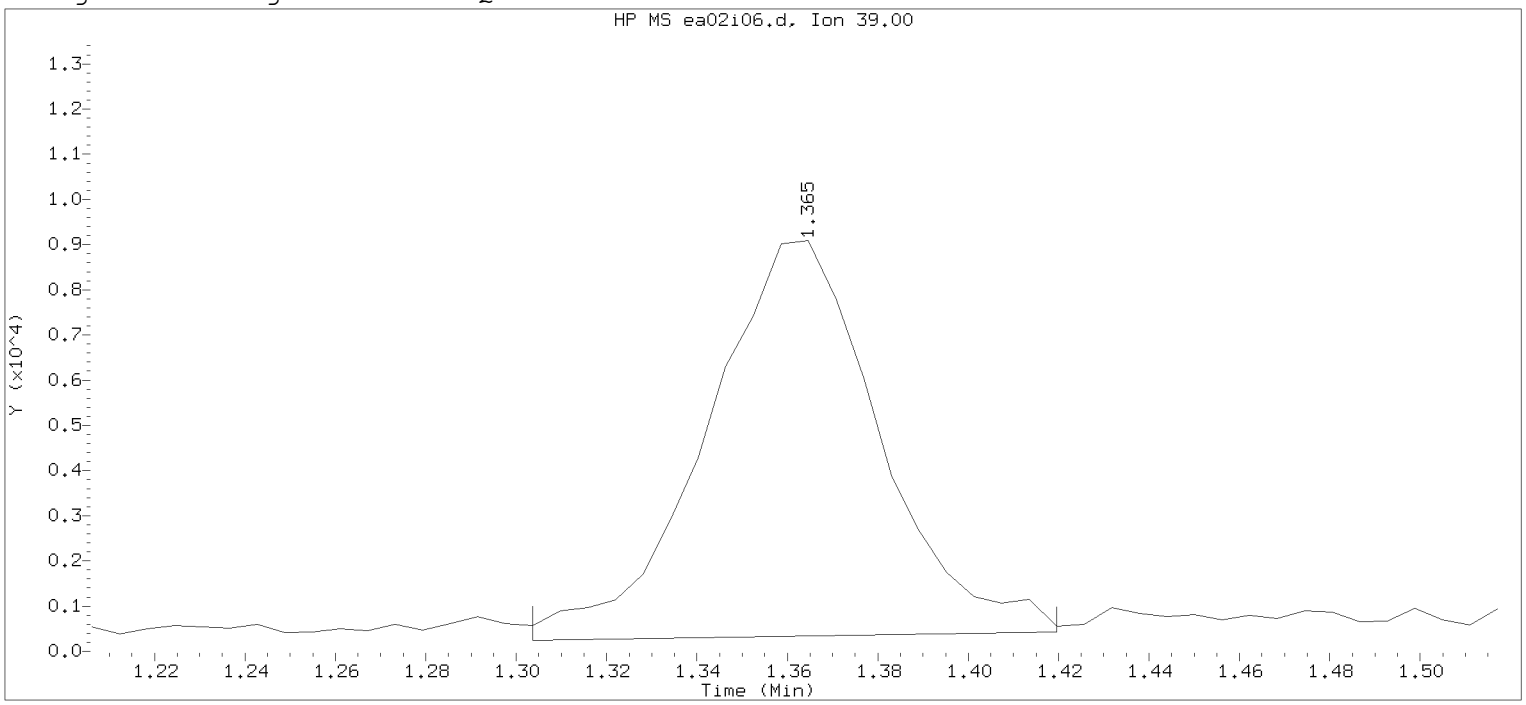
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

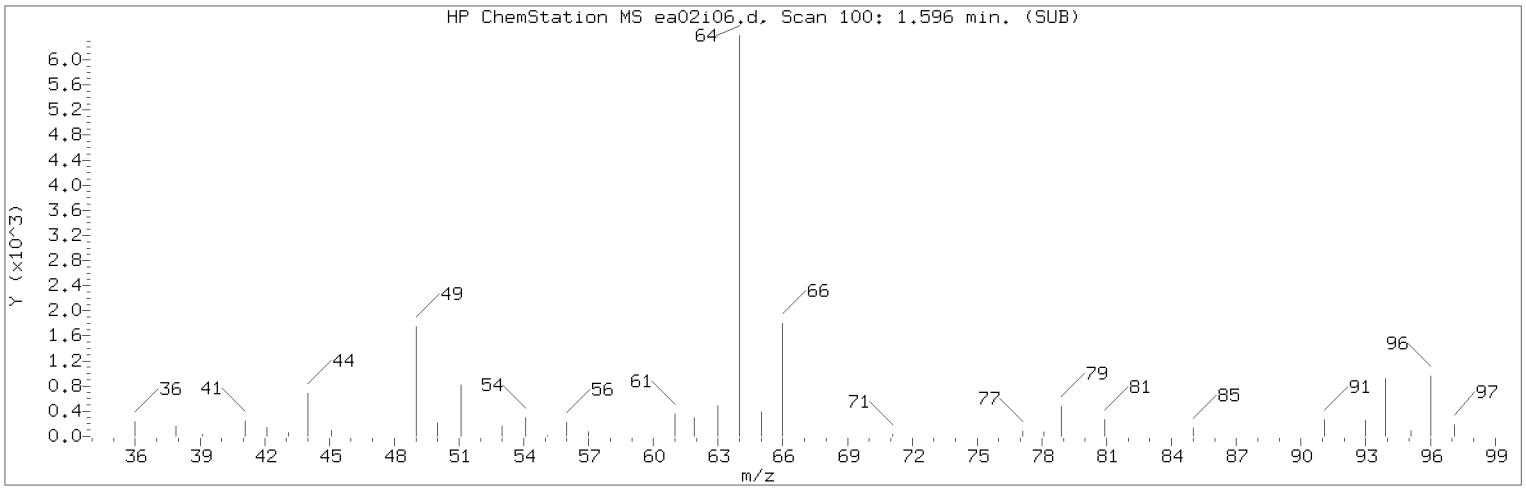
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:15
Date, time and analyst ID of latest file update: 02-May-2019 14:15 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

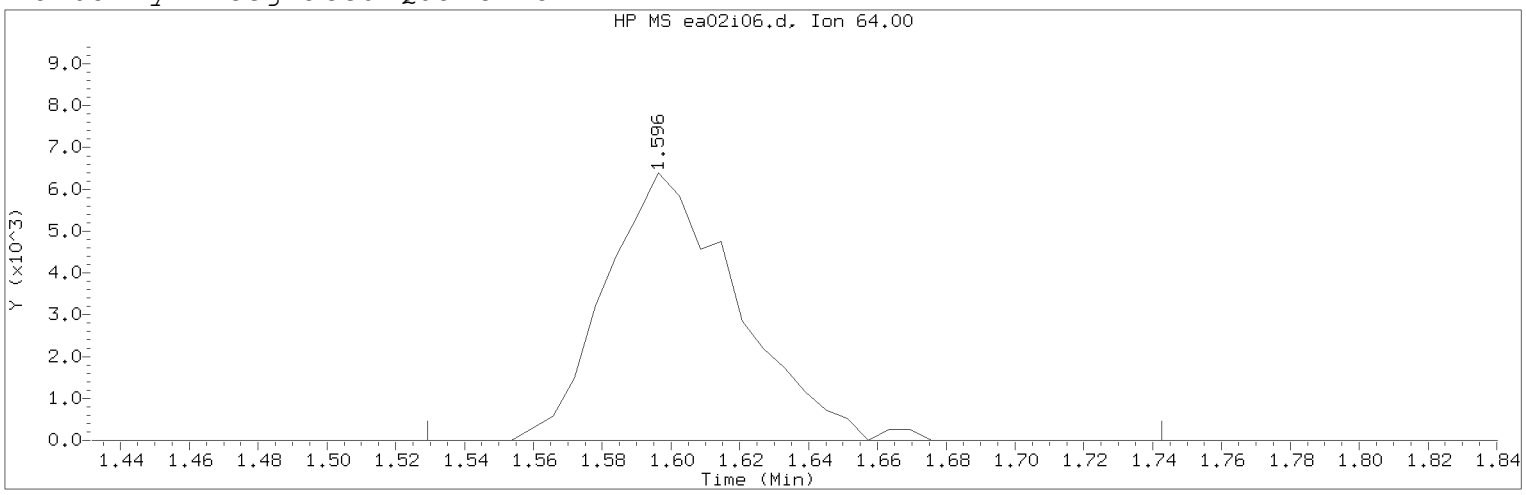
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 62
Retention Time (minutes): 1.365
Quant Ion : 39.00
Area : 23167
On-column Amount (ng) : 3.6324
Integration start scan : 51 Integration stop scan: 70
Y at integration start : 248 Y at integration end: 433

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

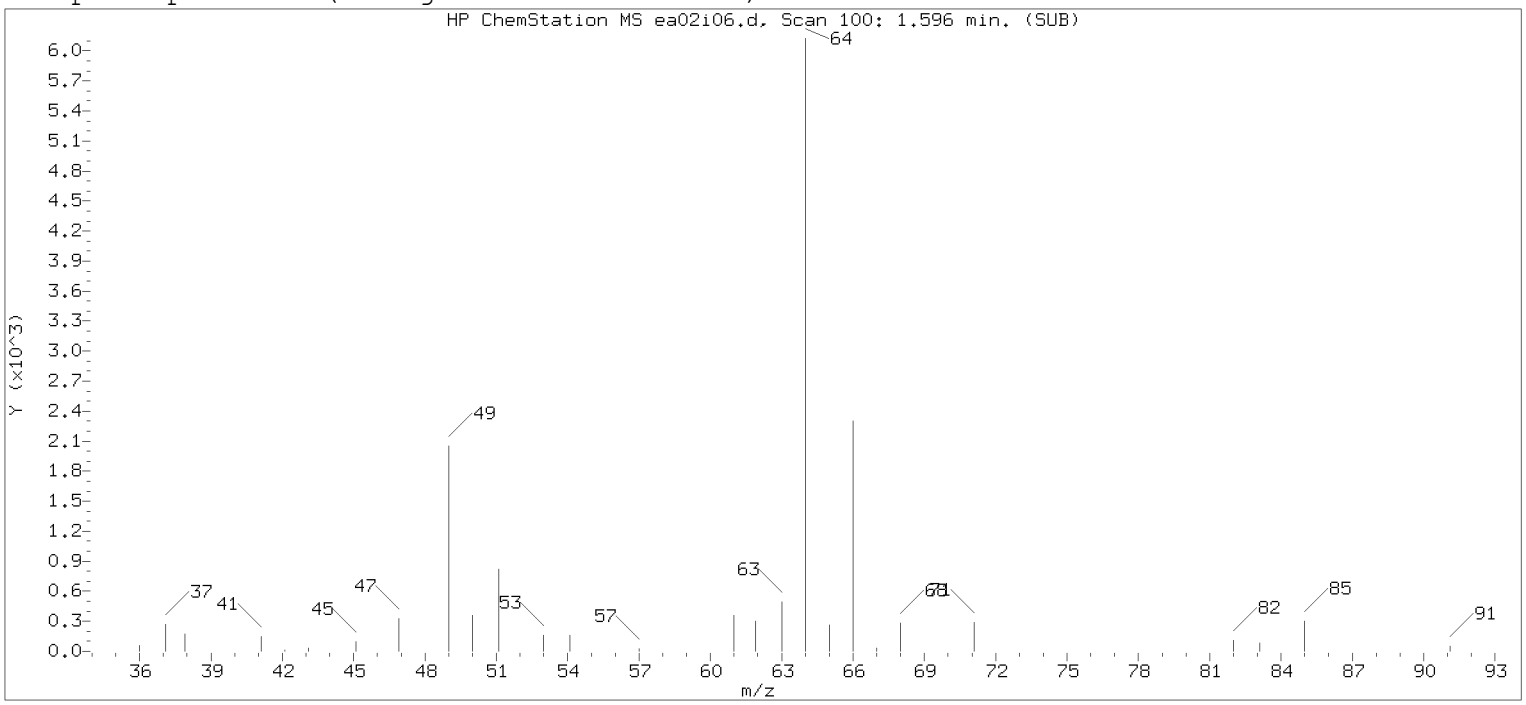
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 100
Retention Time (minutes): 1.596
Quant Ion : 64.00
Area (flag) : 17055M
On-Column Amount (ng) : 3.9771
Integration start scan : 88 Integration stop scan: 123
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

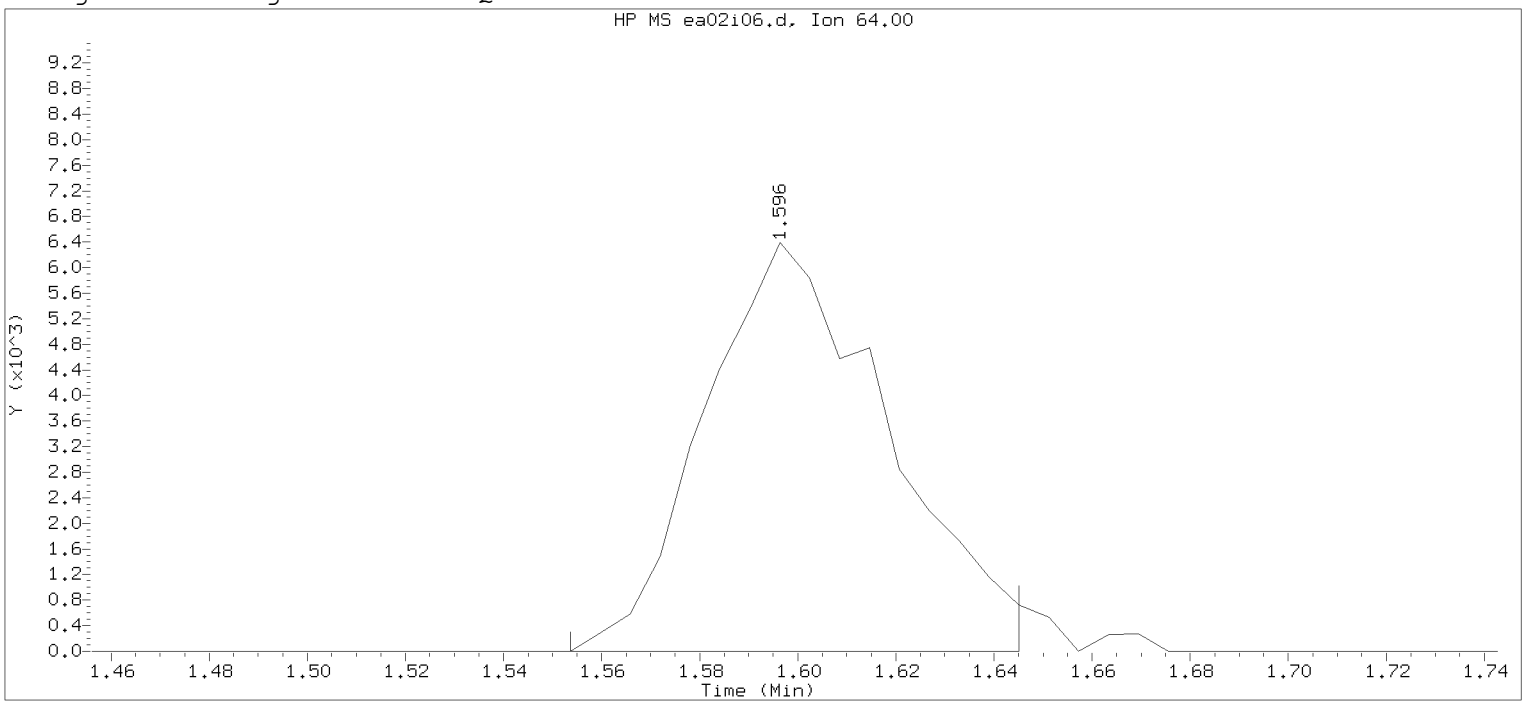
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

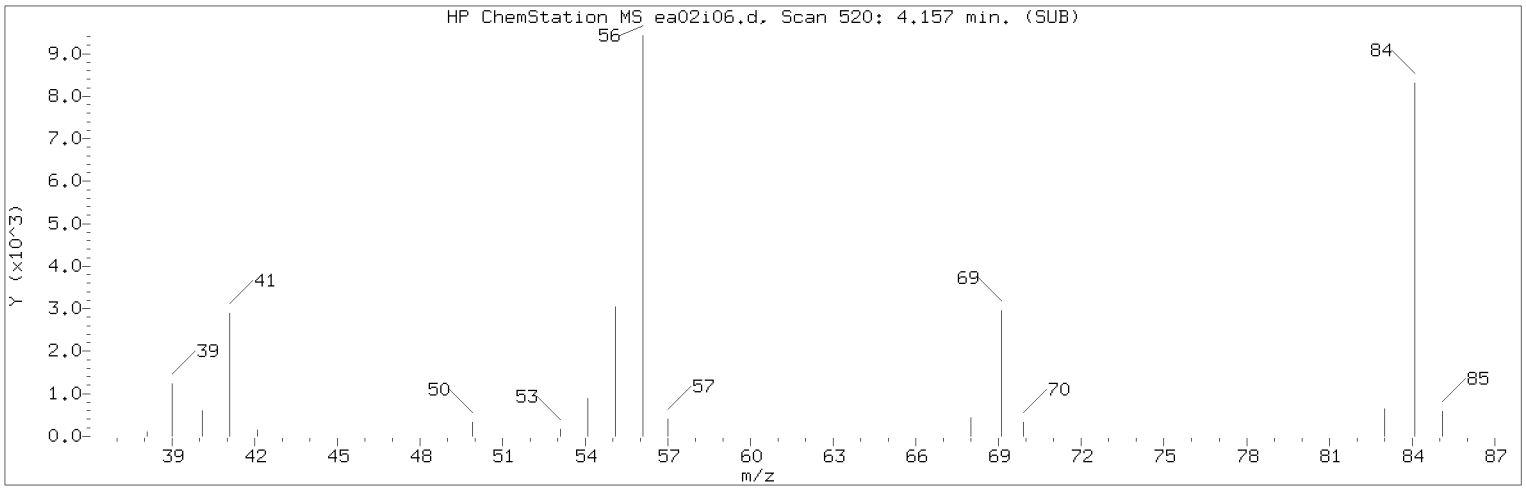
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:15
Date, time and analyst ID of latest file update: 02-May-2019 14:15 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

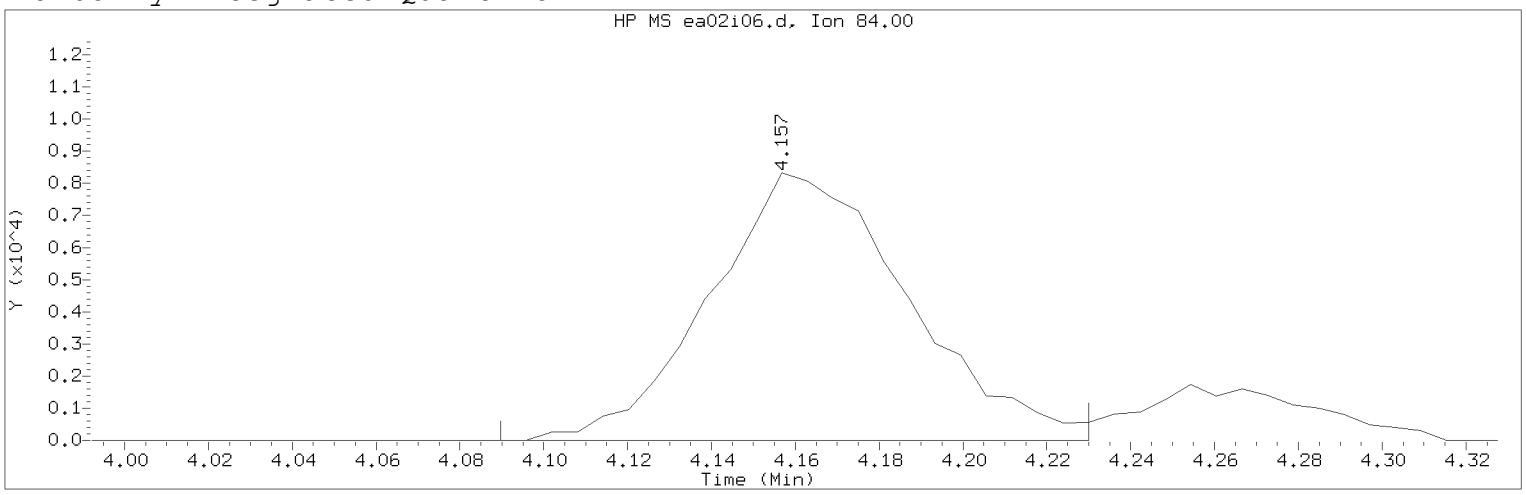
Compound Number	: 9		
Compound Name	: Chloroethane		
Scan Number	: 100		
Retention Time (minutes)	: 1.596		
Quant Ion	: 64.00		
Area	: 16538		
On-column Amount (ng)	: 3.9075		
Integration start scan	: 92	Integration stop scan:	107
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

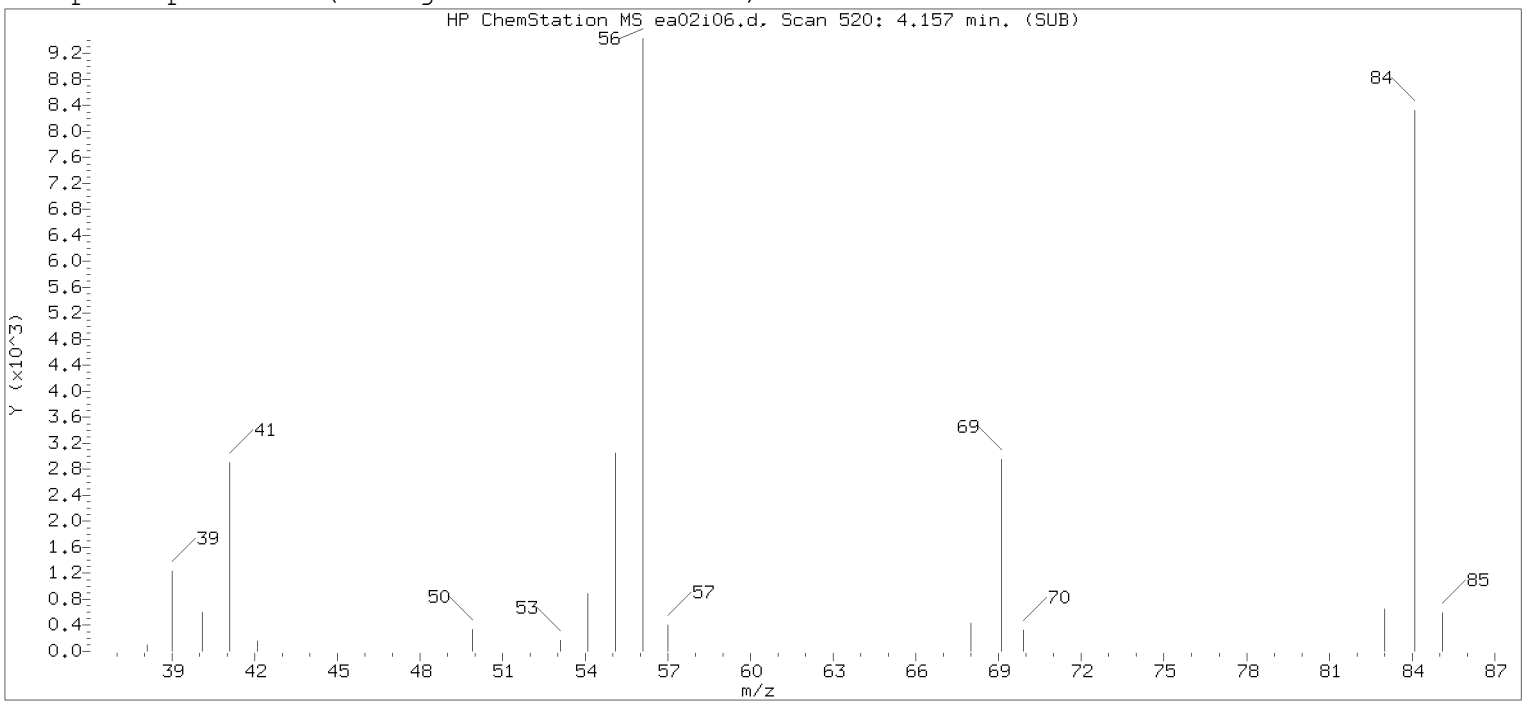
Compound Number : 54
Compound Name : Cyclohexane
Scan Number : 520
Retention Time (minutes): 4.157
Quant Ion : 84.00
Area (flag) : 27368M
On-Column Amount (ng) : 3.1691
Integration start scan : 508 Integration stop scan: 531
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

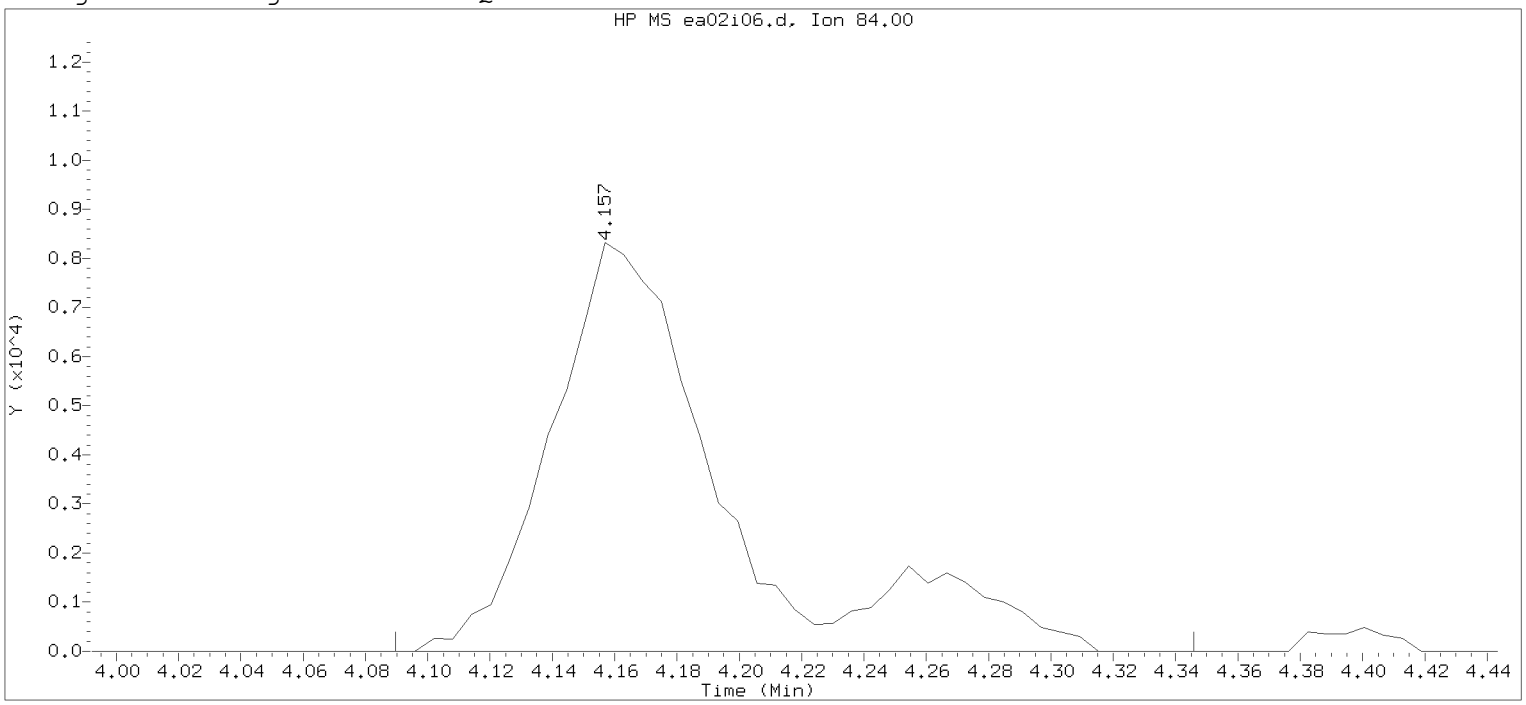
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

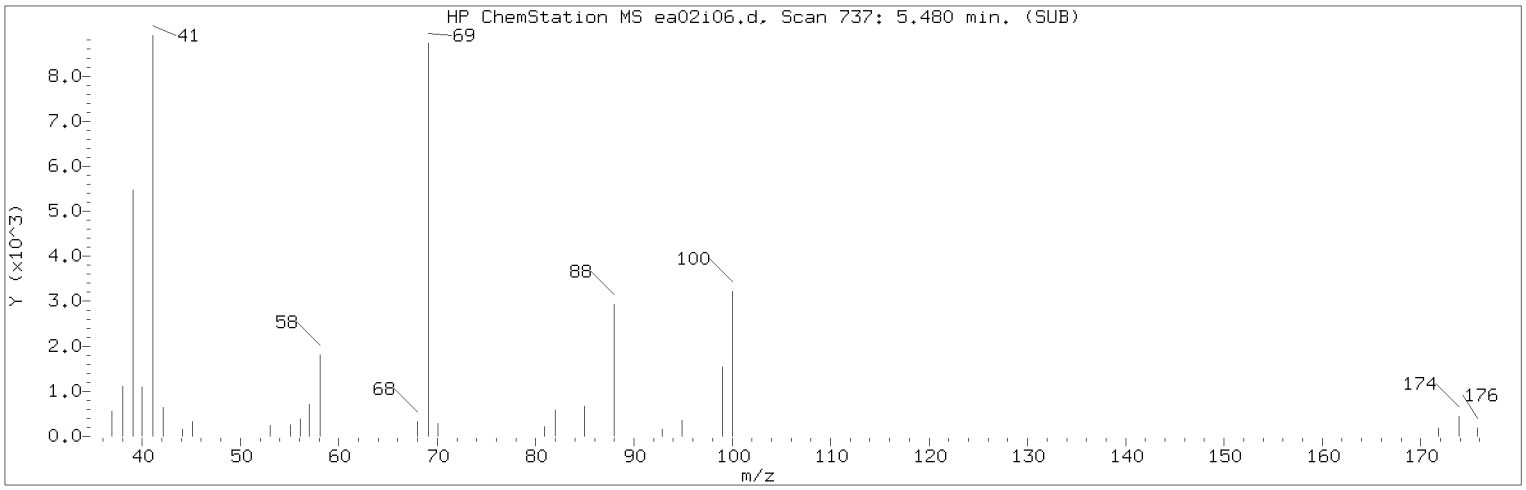
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:15
Date, time and analyst ID of latest file update: 02-May-2019 14:15 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

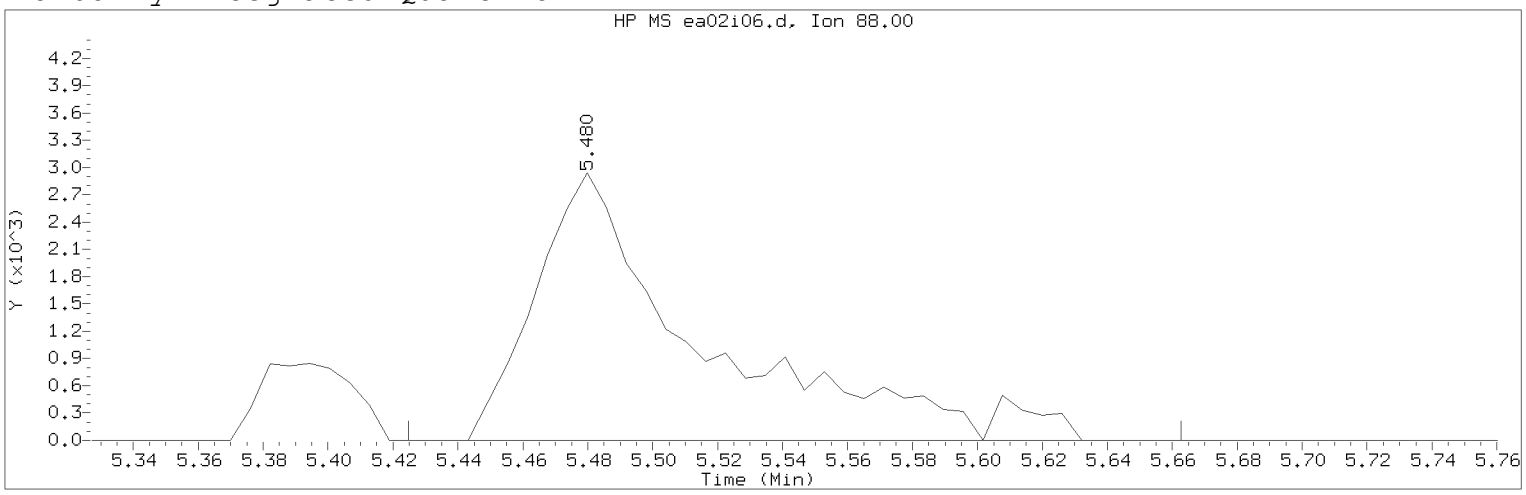
Compound Number : 54
Compound Name : Cyclohexane
Scan Number : 520
Retention Time (minutes): 4.157
Quant Ion : 84.00
Area : 32176
On-column Amount (ng) : 3.7152
Integration start scan : 508 Integration stop scan: 550
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

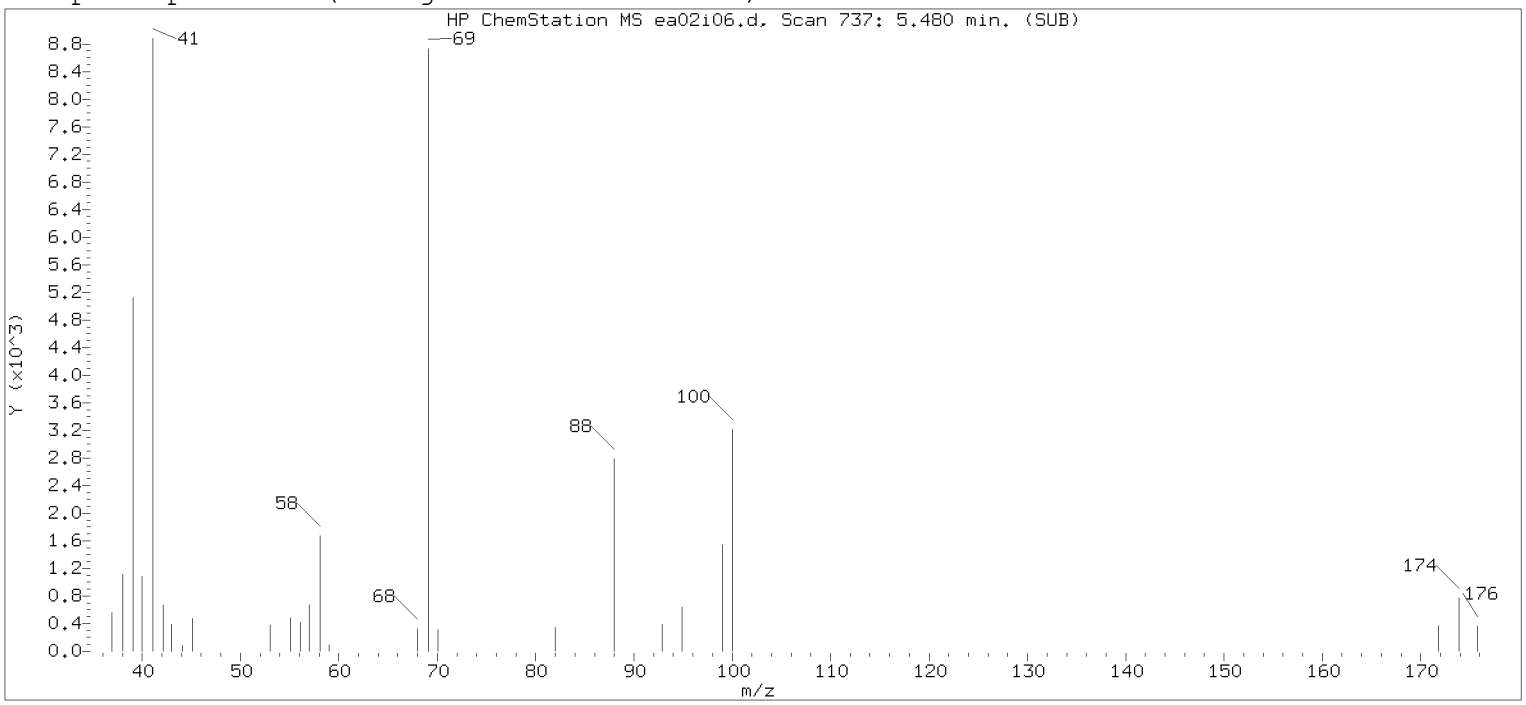
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 737
Retention Time (minutes): 5.480
Quant Ion : 88.00
Area (flag) : 10482M
On-Column Amount (ng) : 182.6327
Integration start scan : 727 Integration stop scan: 766
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

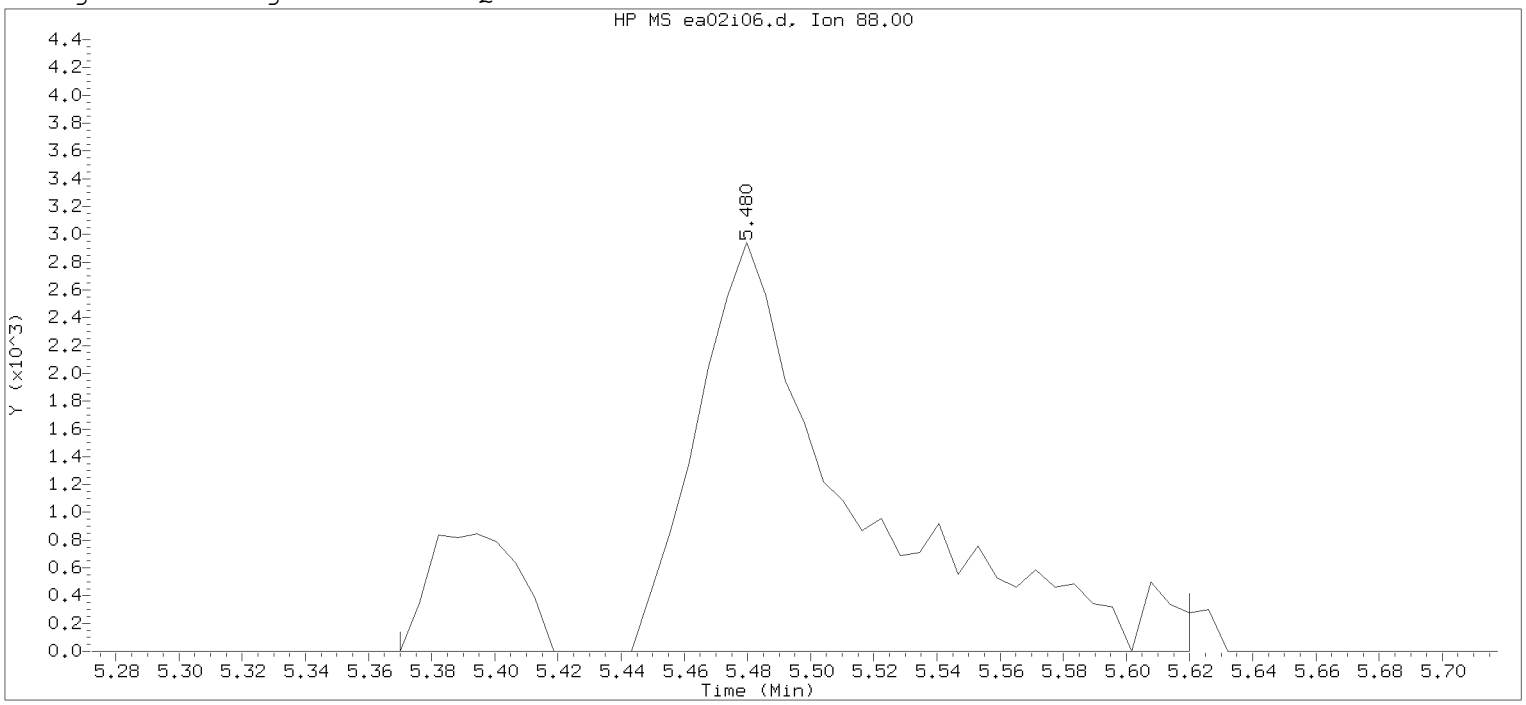
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

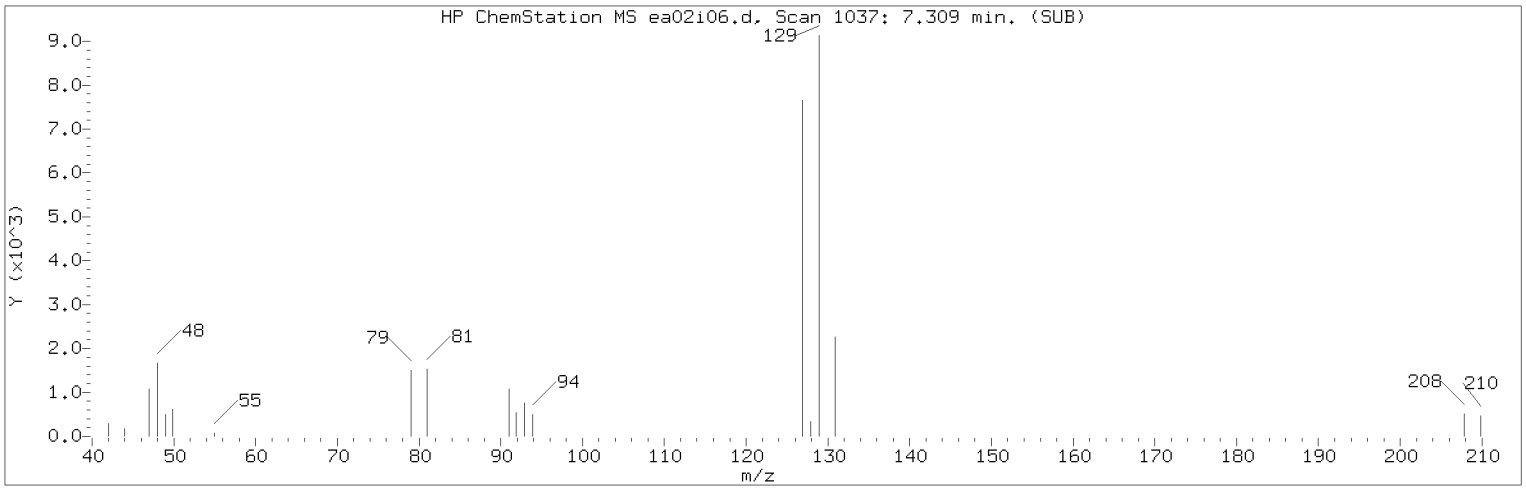
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:15
Date, time and analyst ID of latest file update: 02-May-2019 14:15 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

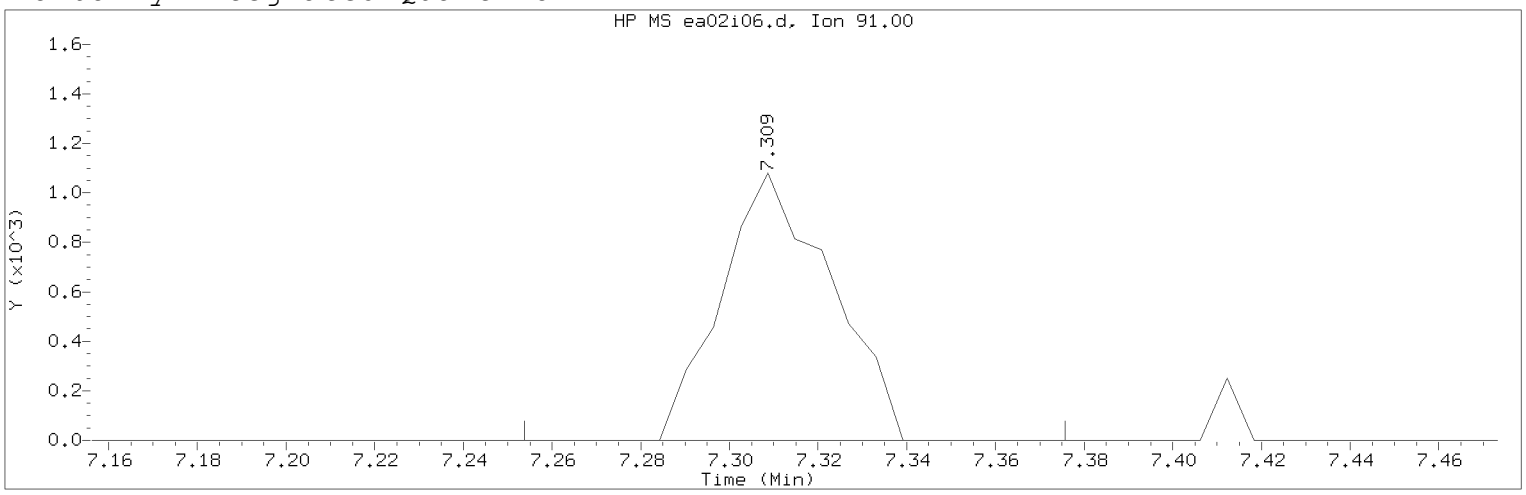
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 737
Retention Time (minutes): 5.480
Quant Ion : 88.00
Area : 12027
On-column Amount (ng) : 173.6218
Integration start scan : 718 Integration stop scan: 759
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

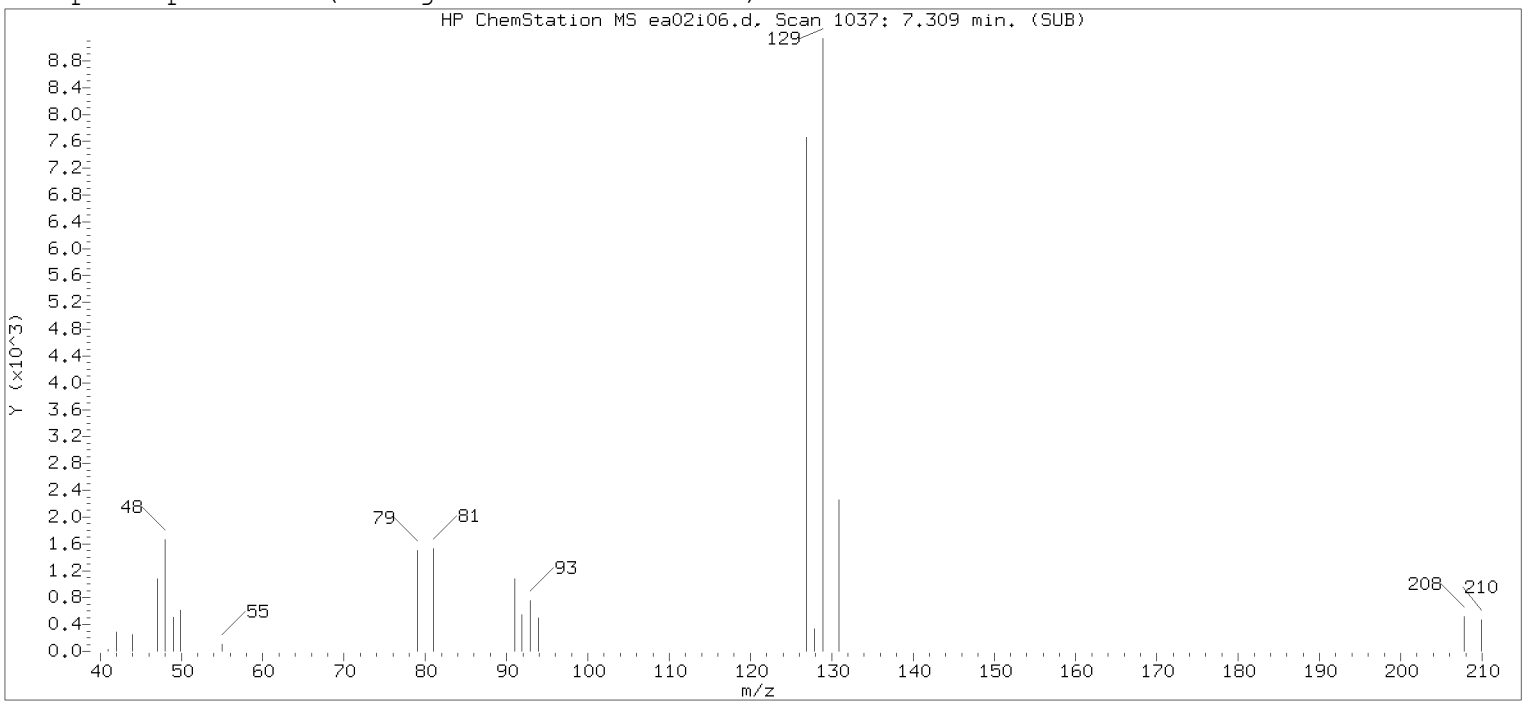
Compound Number : 102
Compound Name : 1-Chlorohexane
Scan Number : 1037
Retention Time (minutes): 7.309
Quant Ion : 91.00
Area (flag) : 1856M
On-Column Amount (ng) : 3.9901
Integration start scan : 1027 Integration stop scan: 1047
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

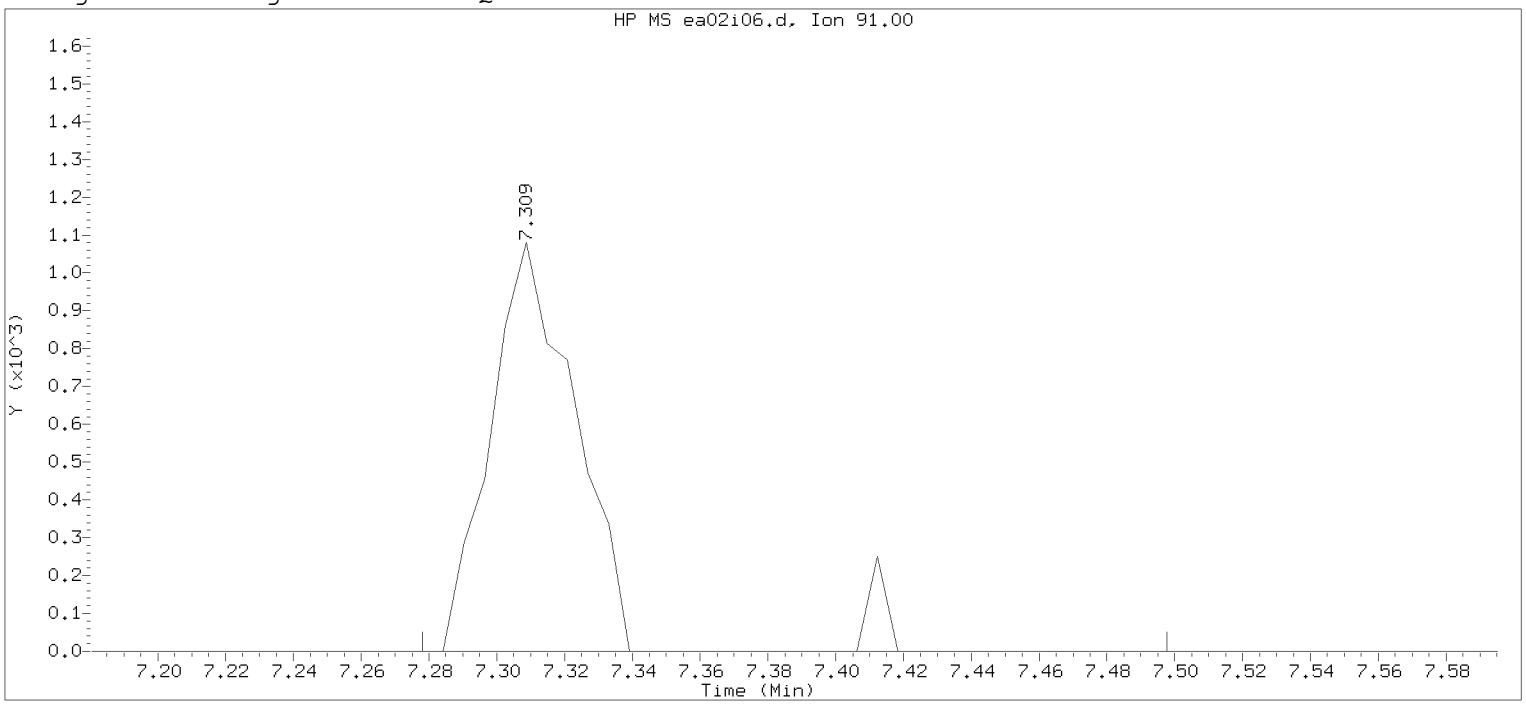
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

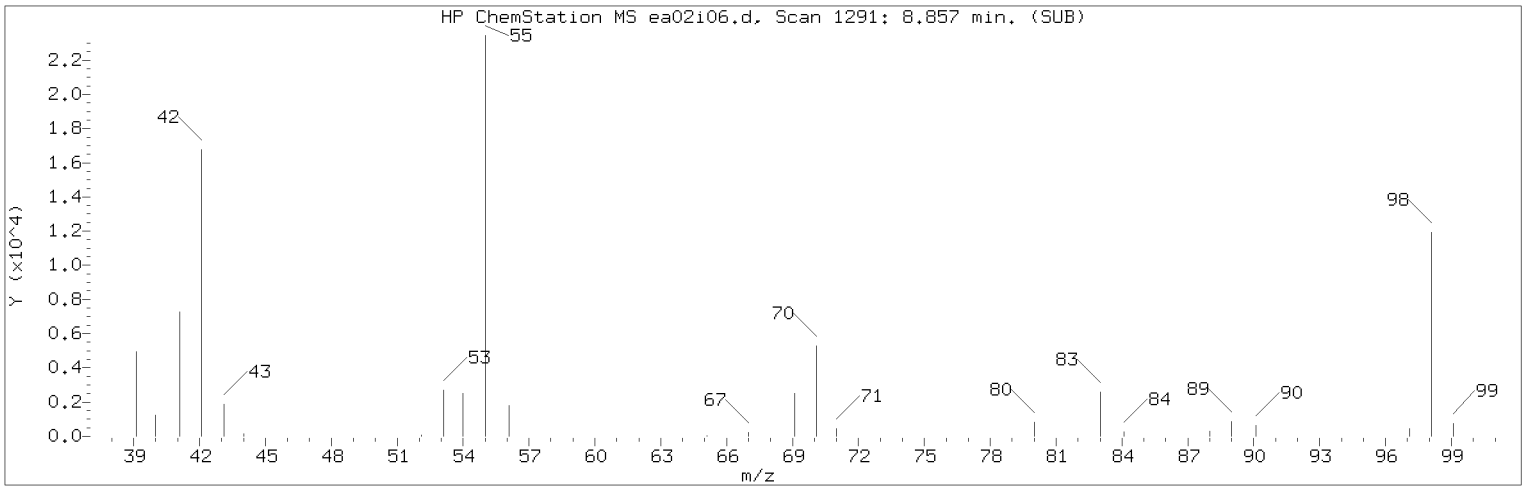
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:15
Date, time and analyst ID of latest file update: 02-May-2019 14:15 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

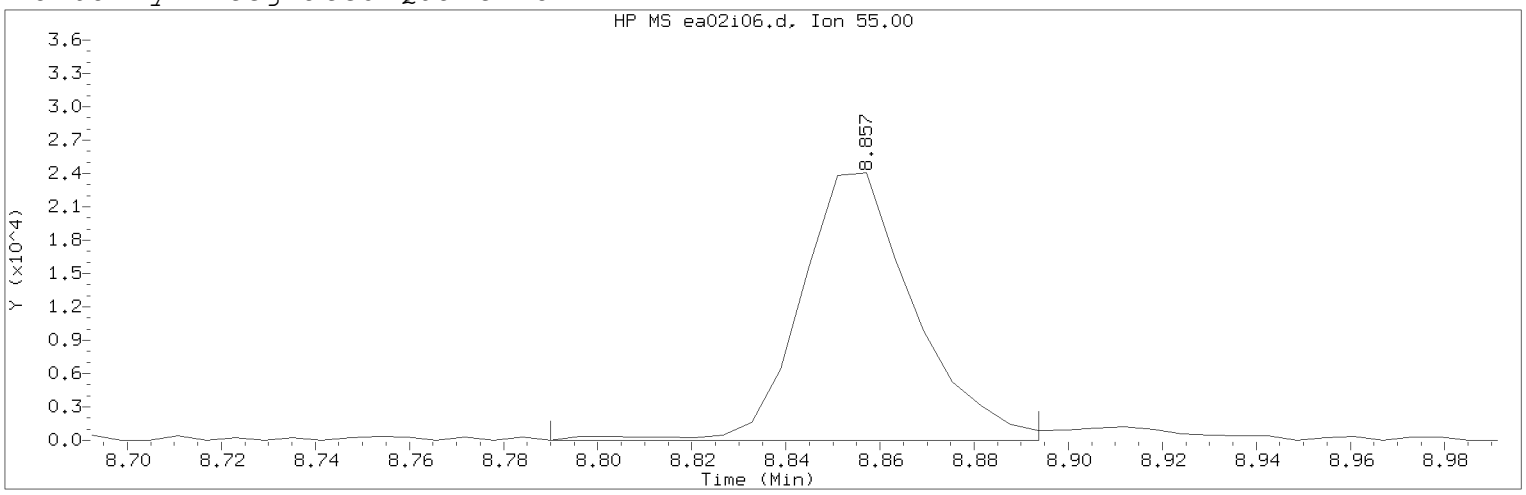
Compound Number : 102
Compound Name : 1-Chlorohexane
Scan Number : 1037
Retention Time (minutes): 7.309
Quant Ion : 91.00
Area : 1948
On-column Amount (ng) : 4.3686
Integration start scan : 1031 Integration stop scan: 1067
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

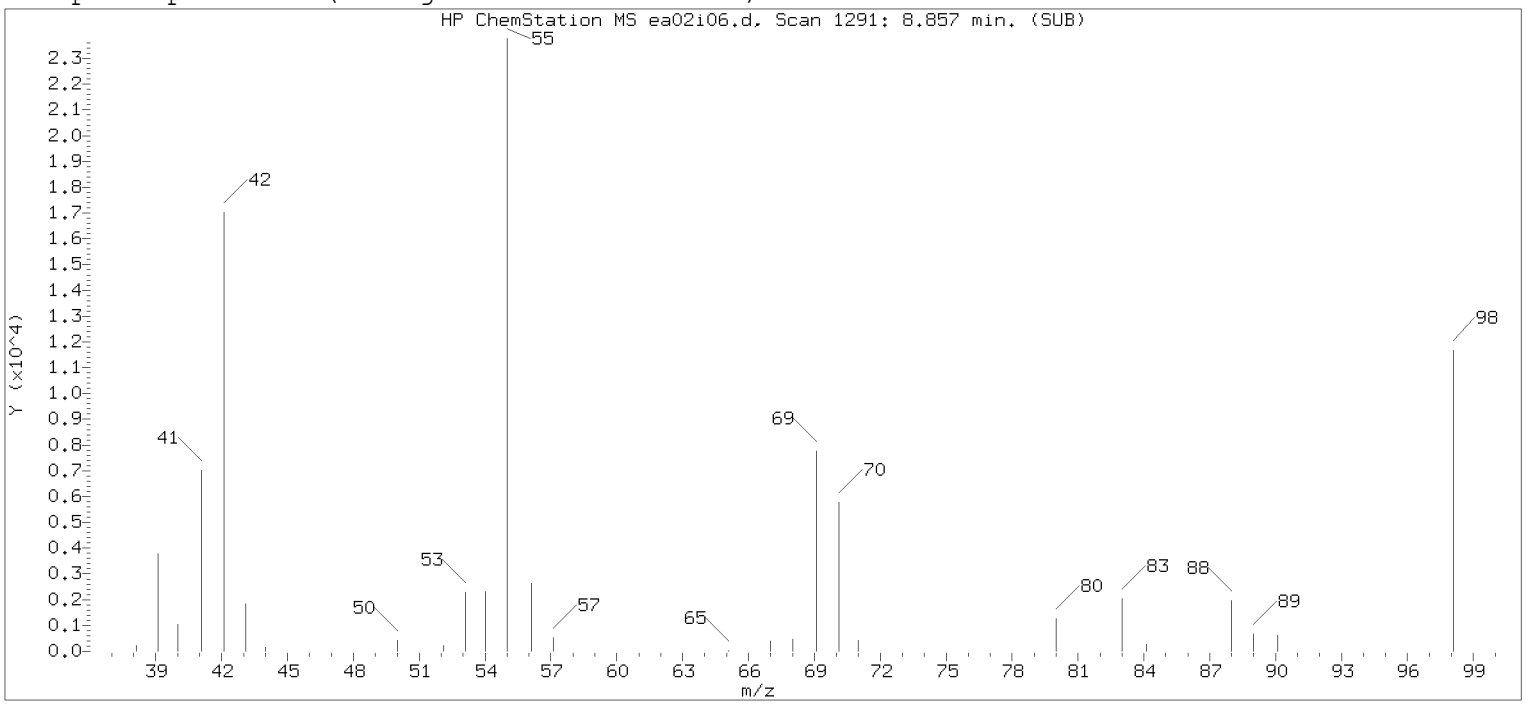
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1291
Retention Time (minutes): 8.857
Quant Ion : 55.00
Area (flag) : 40325M
On-Column Amount (ng) : 186.5096
Integration start scan : 1279 Integration stop scan: 1296
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

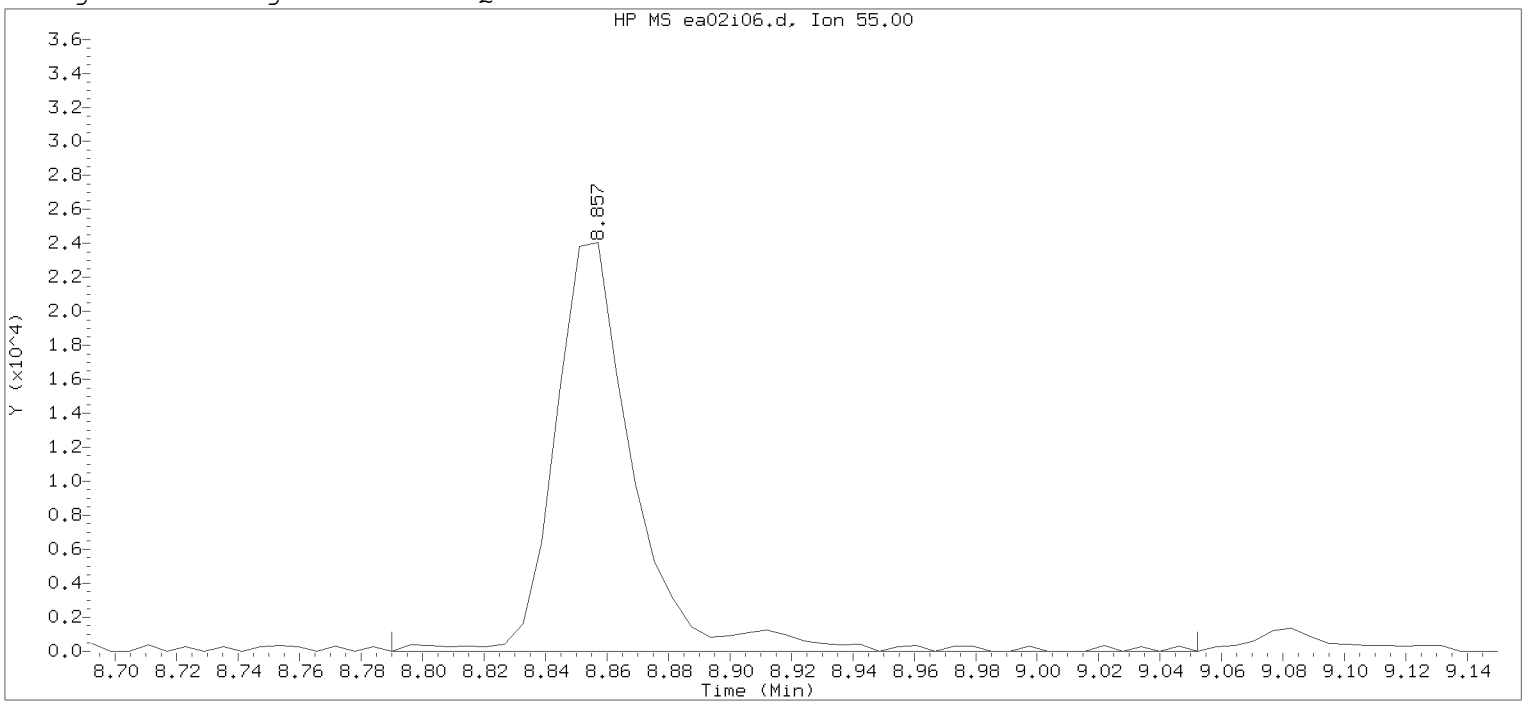
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



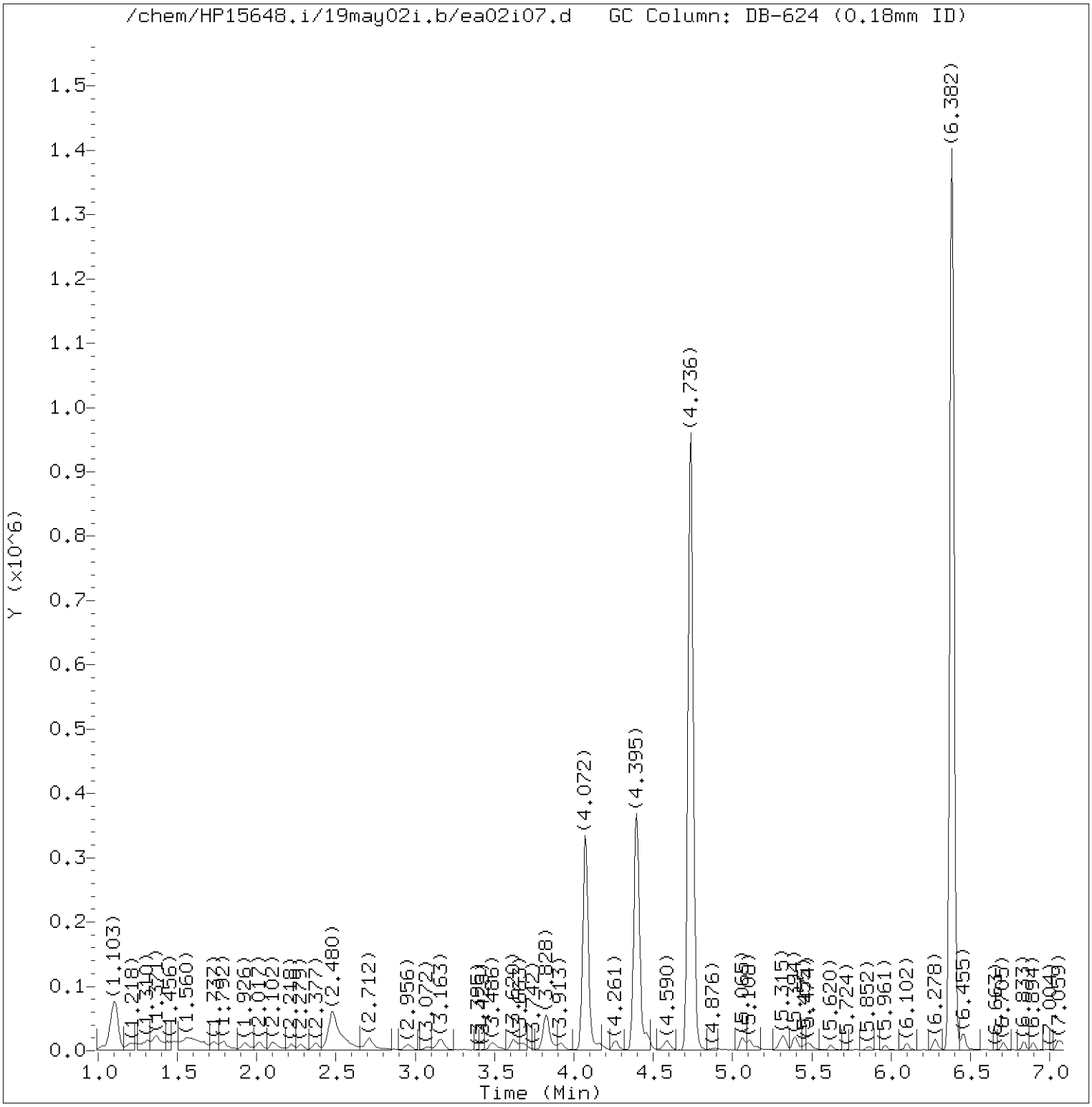
Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:15
Date, time and analyst ID of latest file update: 02-May-2019 14:15 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1291
Retention Time (minutes): 8.857
Quant Ion : 55.00
Area : 43430
On-column Amount (ng) : 191.6651
Integration start scan : 1279 Integration stop scan: 1322
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kas02648



Total Ion Chromatogram (TIC)

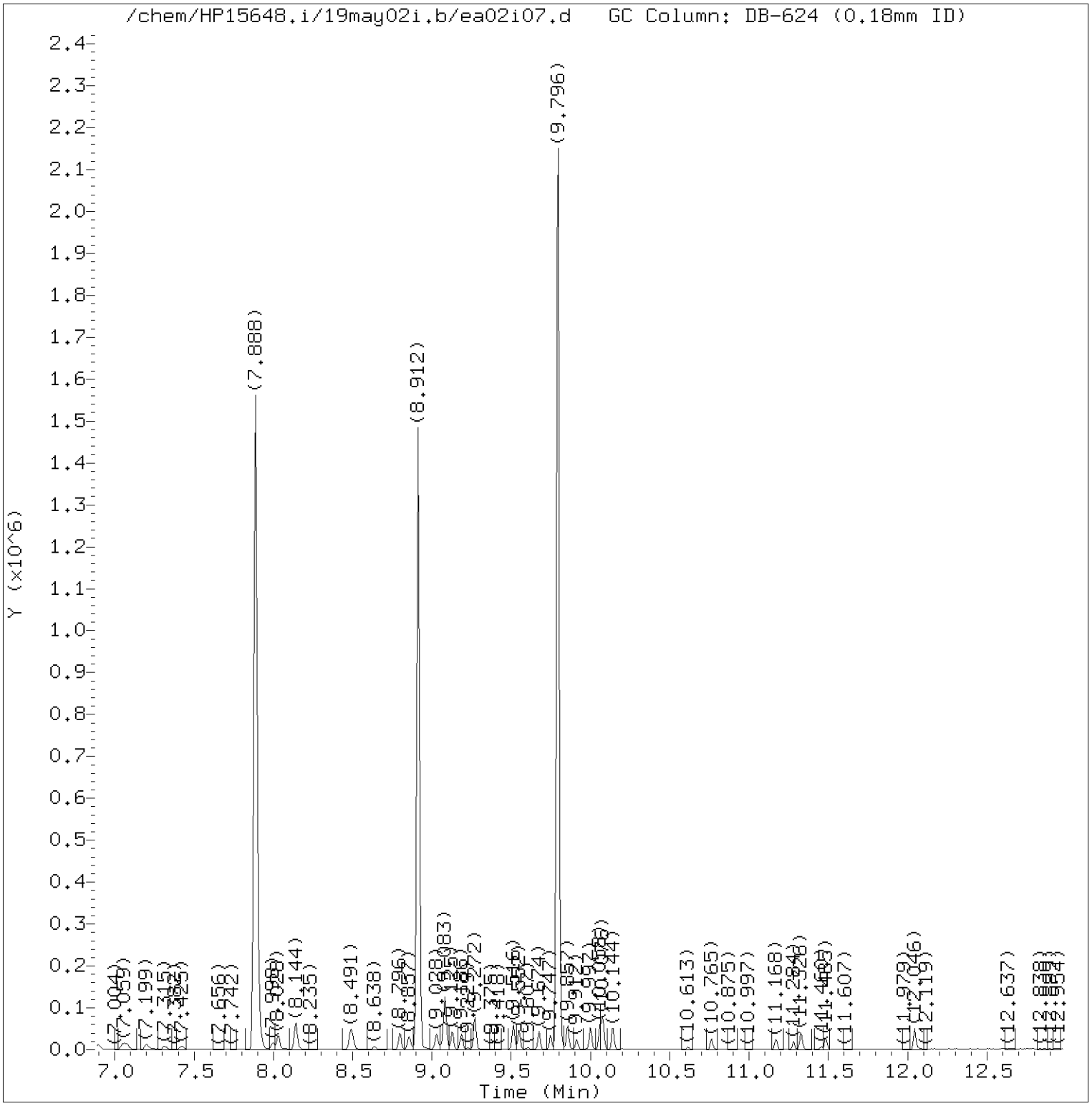
Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.194	85	8276	0.888
4) Chloromethane	(2)	1.310	50	7149M	0.943
5) 1,3-Butadiene	(2)	1.359	39	5288M	0.928
6) Vinyl Chloride	(2)	1.377	62	6683	0.922
8) Bromomethane	(2)	1.566	94	5781	1.059
9) Chloroethane	(2)	1.603	64	4093	0.992
10) Dichlorofluoromethane	(2)	1.737	67	12184	1.154
12) Trichlorofluoromethane	(2)	1.785	101	8423	0.817
11) n-Pentane	(2)	1.792	43	7580	0.895
14) Ethyl ether	(2)	1.920	59	4214	0.981
15) Freon 123a	(2)	1.926	67	6155	1.014
16) Acrolein	(1)	2.023	56	14754	10.287
17) 1,1-Dichloroethene	(2)	2.102	96	3452	0.814
17) 1,1-Dichloroethene	(2)	2.102	63	2006	0.892
18) Acetone	(1)	2.127	58	1373	2.300
19) Freon 113	(2)	2.133	101	3130	0.666
21) 2-Propanol	(1)	2.218	45	8084	22.666
22) Methyl Iodide	(2)	2.218	142	6818	0.857
23) Carbon Disulfide	(2)	2.279	76	12834	0.892
25) Allyl Chloride	(2)	2.377	41	9338	1.132
27) Methyl Acetate	(2)	2.383	43	4172	1.030
28) Methylene Chloride	(2)	2.474	84	4812	0.995
29)*t-Butyl alcohol-d10	(1)	2.480	65	173827	250.000
30) t-Butyl alcohol	(1)	2.554	59	13964	21.490
31) Acrylonitrile	(2)	2.669	53	2386	0.969
32) trans-1,2-Dichloroethene	(2)	2.712	96	4293	0.899
33) Methyl Tertiary Butyl Ether	(2)	2.712	73	14630	1.027
34) n-Hexane	(2)	2.950	57	6641	0.794
36) 1,1-Dichloroethane	(2)	3.072	63	7593	0.849
38) di-Isopropyl ether	(2)	3.151	45	14421	0.916
39) 2-Chloro-1,3-butadiene	(2)	3.169	53	6959	0.814
40) Ethyl t-butyl ether	(2)	3.486	59	14975	0.964
42) cis-1,2-Dichloroethene	(2)	3.614	96	5231	0.975
43) 1,2-Dichloroethene (Total)	(2)		96	9524	1.874
45) 2,2-Dichloropropane	(2)	3.627	77	6728	0.852
44) 2-Butanone	(2)	3.639	43	8847	2.667
47) Propionitrile	(1)	3.681	54	17532	19.972
48) Methacrylonitrile	(2)	3.828	67	26319	9.955

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.840	128	2507	0.941
50) Tetrahydrofuran	(1)	3.889	71	2316	2.517
51) Chloroform	(2)	3.925	83	7608	0.894
52)$Dibromofluoromethane	(2)	4.072	113	246724	50.237
52)$Dibromofluoromethane	(2)	4.072	111	251959	49.978
53) 1,1,1-Trichloroethane	(2)	4.096	97	7071	0.898
54) Cyclohexane	(2)	4.157	56	7536	0.779
54) Cyclohexane	(2)	4.169	84	6226M	0.749
54) Cyclohexane	(2)	4.163	69	2842	0.900
55) 1,1-Dichloropropene	(2)	4.261	75	5460	0.782
56) Carbon Tetrachloride	(2)	4.267	117	5301M	0.791
58) Isobutyl Alcohol	(1)	4.376	41	13949	63.229
57)$1,2-Dichloroethane-d4	(2)	4.395	102	61734	49.812
57)$1,2-Dichloroethane-d4	(2)	4.395	65	317397	50.459
57)$1,2-Dichloroethane-d4	(2)	4.395	104	39802	50.092
60) Benzene	(2)	4.456	78	18144	0.885
61) 1,2-Dichloroethane	(2)	4.468	62	7254	1.053
61) 1,2-Dichloroethane	(2)	4.383	98	539	0.896
65) t-Amyl methyl ether	(2)	4.590	73	15424	1.001
66)*Fluorobenzene	(2)	4.736	96	1056656	50.000
67) n-Heptane	(2)	4.742	43	9573	1.067
69) n-Butanol	(1)	5.065	56	18959	99.358
71) Trichloroethene	(2)	5.108	95	4318	0.835
73) Methylcyclohexane	(2)	5.309	83	8969	0.833
73) Methylcyclohexane	(2)	5.315	98	4098	0.828
74) 1,2-Dichloropropane	(2)	5.340	63	4433	0.869
75) Dibromomethane	(2)	5.449	93	2851	0.934
77) Methyl Methacrylate	(2)	5.486	69	5077	1.092
76) 1,4-Dioxane	(1)	5.486	88	2587	48.176
79) Bromodichloromethane	(2)	5.620	83	6037	0.950
80) 2-Nitropropane	(2)	5.864	41	5912	2.808
81) 2-Chloroethyl Vinyl Ether	(2)	5.961	63	3625	0.922
82) cis-1,3-Dichloropropene	(2)	6.102	75	7298	0.882
83) 4-Methyl-2-pentanone	(2)	6.278	43	14298	2.007
84)$Toluene-d8	(3)	6.382	98	1055244	49.723
84)$Toluene-d8	(3)	6.382	100	679416	49.803
89) Toluene	(3)	6.455	92	11225	0.864
90) trans-1,3-Dichloropropene	(3)	6.705	75	7043	0.907

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on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropene (total)	(3)		100	14341	1.789
92) Ethyl Methacrylate	(3)	6.839	69	7799	0.942
93) 1,1,2-Trichloroethane	(3)	6.894	97	4355	0.985
94) Tetrachloroethene	(3)	7.047	166	3896	0.738
95) 1,3-Dichloropropane	(3)	7.077	76	7183	0.924
97) 2-Hexanone	(3)	7.199	43	11912	2.159
98) Dibromochloromethane	(3)	7.315	129	4297	0.900
102) 1-Chlorohexane	(3)	7.327	91	414	0.922
100) 1,2-Dibromoethane	(3)	7.425	107	4446	0.945
101)*Chlorobenzene-d5	(3)	7.888	117	781405	50.000
103) Chlorobenzene	(3)	7.912	112	12650	0.881
104) 1,1,1,2-Tetrachloroethane	(3)	7.998	131	4178	0.857
105) Ethylbenzene	(3)	8.034	91	22068	0.859
107) m+p-Xylene	(3)	8.144	106	16874	1.687
109) Xylene (Total)	(3)		106	25270	2.547
108) o-Xylene	(3)	8.485	106	8396	0.860
110) Styrene	(3)	8.498	104	12867	0.798
111) Bromoform	(3)	8.638	173	2702	0.849
112) Isopropylbenzene	(3)	8.796	105	20728	0.798
113) Cyclohexanone	(1)	8.857	55	11452M	56.612
115)$4-Bromofluorobenzene	(3)	8.912	95	406667	49.846
115)$4-Bromofluorobenzene	(3)	8.912	174	302623	49.503
116) Bromobenzene	(4)	9.028	156	5002	0.874
117) 1,1,2,2-Tetrachloroethane	(4)	9.034	83	6447	0.970
118) 1,2,3-Trichloropropane	(4)	9.065	110	2050	1.018
119) trans-1,4-Dichloro-2-butene	(4)	9.083	53	20522	9.398
120) n-Propylbenzene	(4)	9.125	91	25565	0.847
121) 2-Chlorotoluene	(4)	9.186	126	5139	0.865
123) 1,3,5-Trimethylbenzene	(4)	9.272	105	19111	0.873
122) 4-Chlorotoluene	(4)	9.272	126	5378	0.883
125) tert-Butylbenzene	(4)	9.510	134	3928	0.807
126) Pentachloroethane	(4)	9.516	167	3133	0.865
127) 1,2,4-Trimethylbenzene	(4)	9.552	105	21077	0.935
128) sec-Butylbenzene	(4)	9.674	105	21407	0.771
130) 1,3-Dichlorobenzene	(4)	9.747	146	9809	0.879
131) p-Isopropyltoluene	(4)	9.784	119	19392	0.794
132)*1,4-Dichlorobenzene-d4	(4)	9.796	152	410887	50.000
134) 1,4-Dichlorobenzene	(4)	9.814	146	10732	0.940

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on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	9.857	105	22256	0.927
136) Benzyl Chloride	(4)	9.912	91	13897	0.896
137) 1,3-Diethylbenzene	(4)	9.997	119	13387	0.870
138) 1,4-Diethylbenzene	(4)	10.058	119	14561	0.888
140) n-Butylbenzene	(4)	10.076	92	9445M	0.787
139) 1,2-Dichlorobenzene	(4)	10.083	146	9670	0.905
142) Diethylbenzene (total)	(4)		100	39110	2.644
141) 1,2-Diethylbenzene	(4)	10.144	119	11162M	0.886
143) 1,2-Dibromo-3-chloropropane	(4)	10.613	75	1474	0.968
145) 1,3,5-Trichlorobenzene	(4)	10.765	180	7015	0.893
147) 1,2,4-Trichlorobenzene	(4)	11.168	180	6411	0.914
148) Hexachlorobutadiene	(4)	11.284	225	2697	0.897
149) Naphthalene	(4)	11.326	128	24614	1.065
150) 1,2,3-Trichlorobenzene	(4)	11.485	180	6476	0.978
151) 2-Methylnaphthalene	(4)	12.046	142	18720	1.282

M = Compound was manually integrated.

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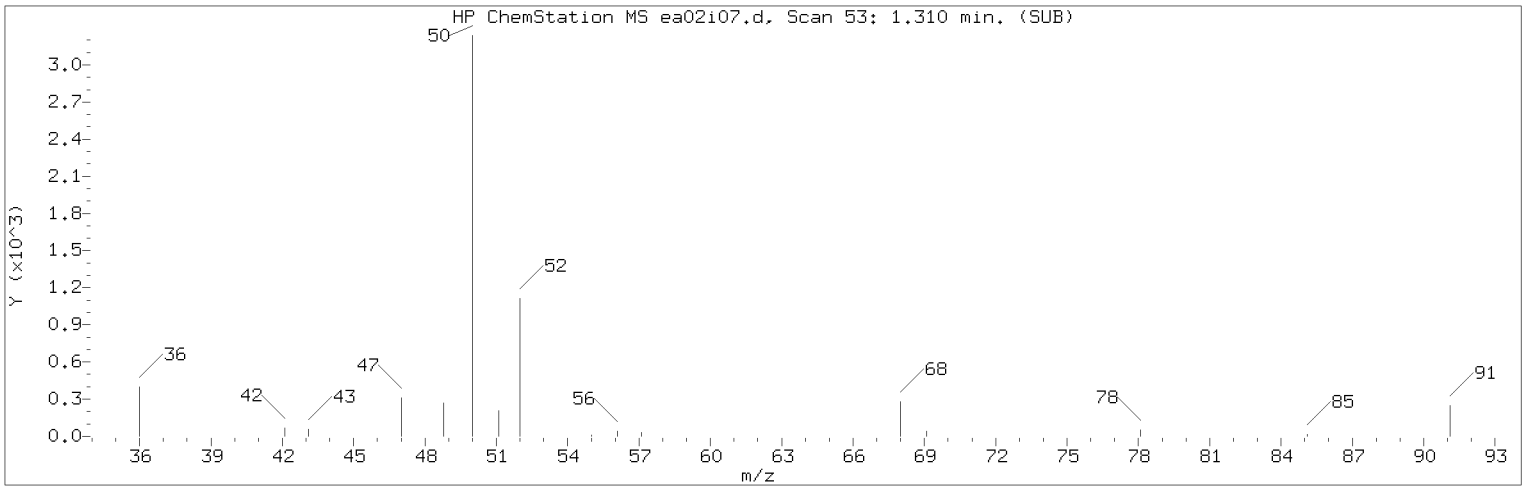
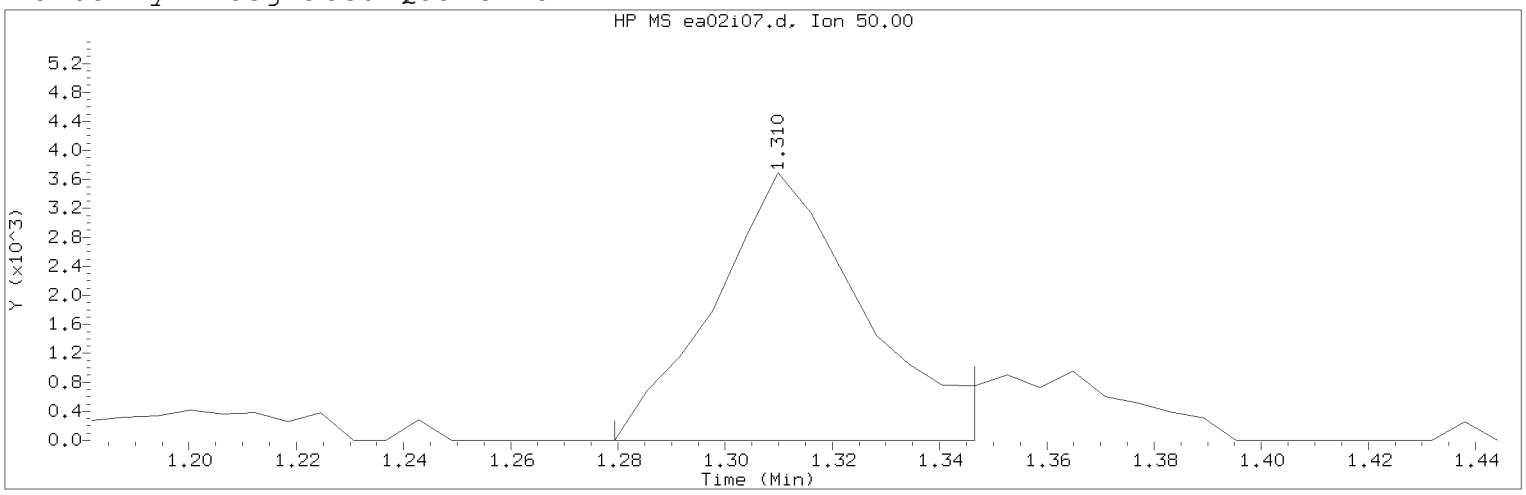
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

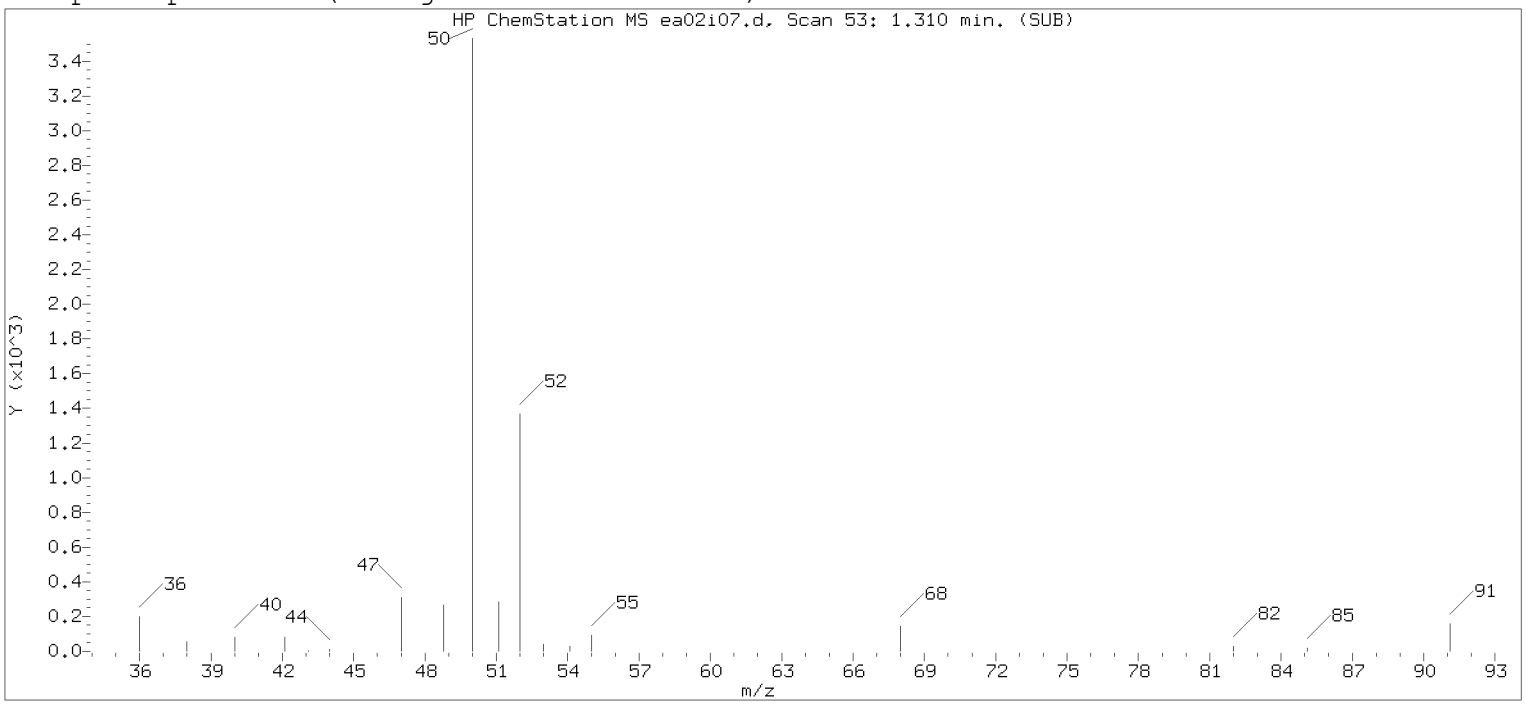
Compound Number : 4
Compound Name : Chloromethane
Scan Number : 53
Retention Time (minutes): 1.310
Quant Ion : 50.00
Area (flag) : 7149M
On-Column Amount (ng) : 0.9427
Integration start scan : 47 Integration stop scan: 58
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

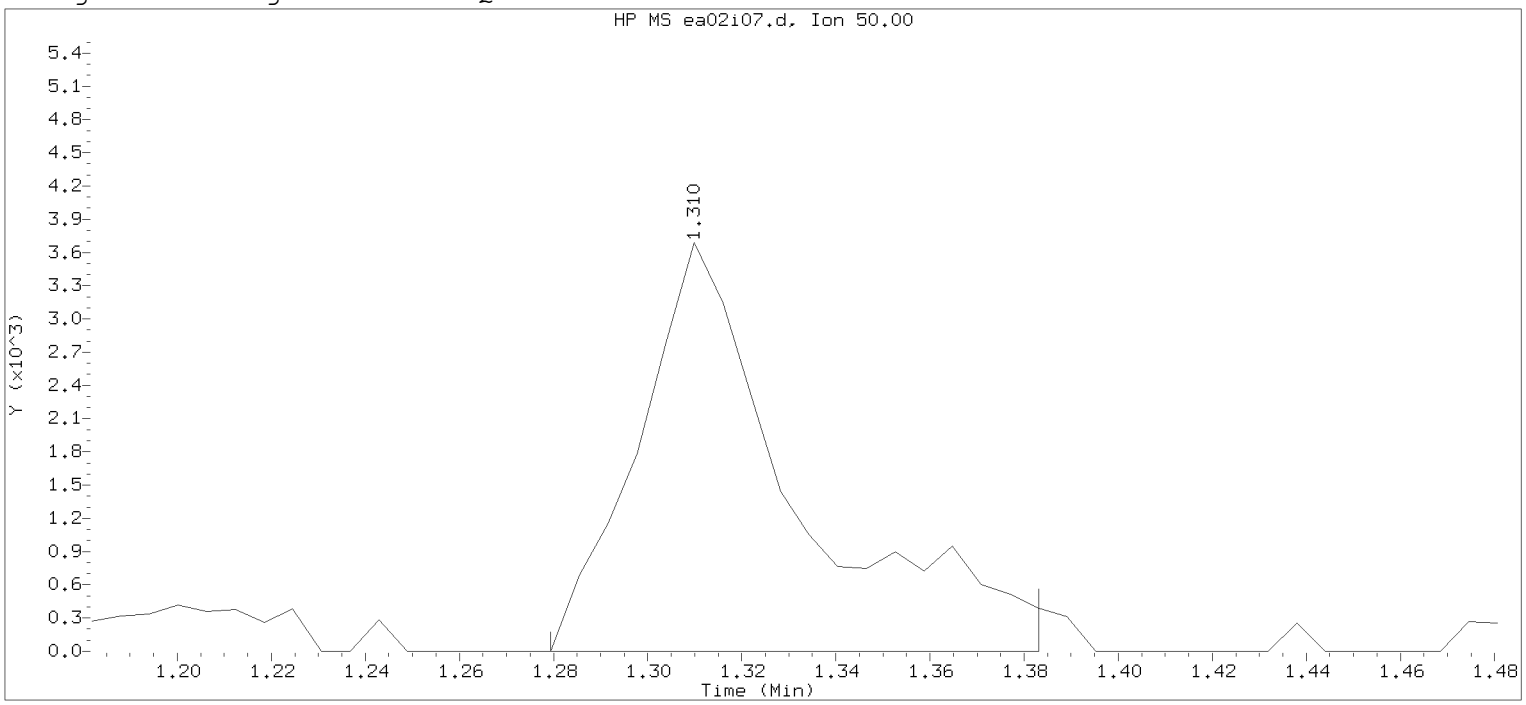
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

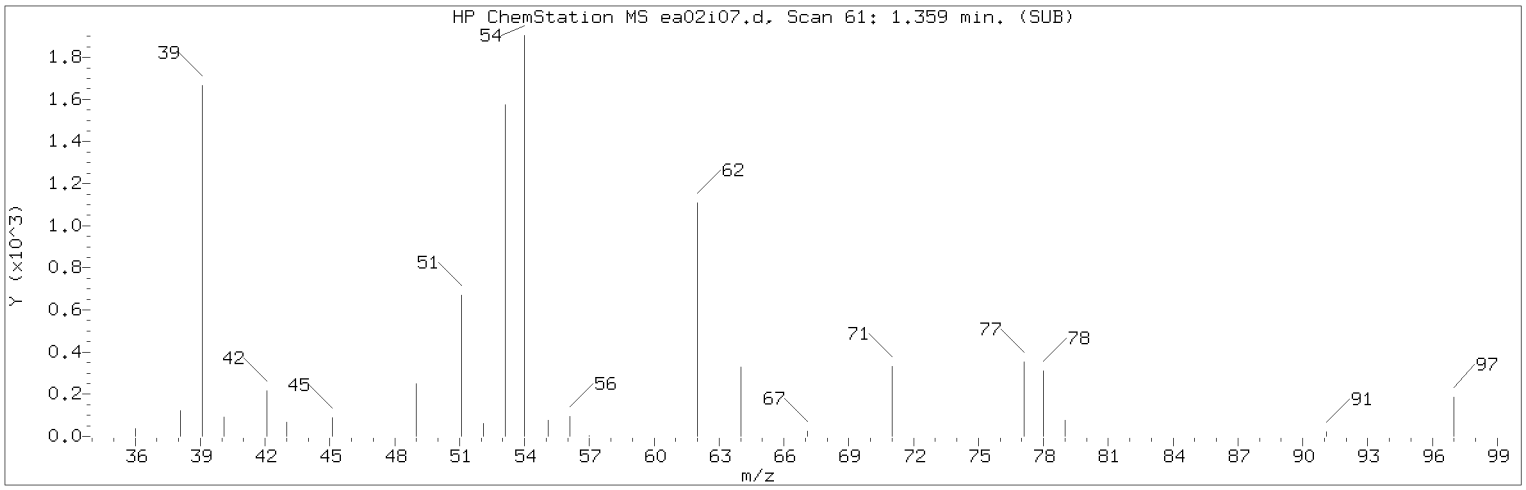
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:35
Date, time and analyst ID of latest file update: 02-May-2019 14:35 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

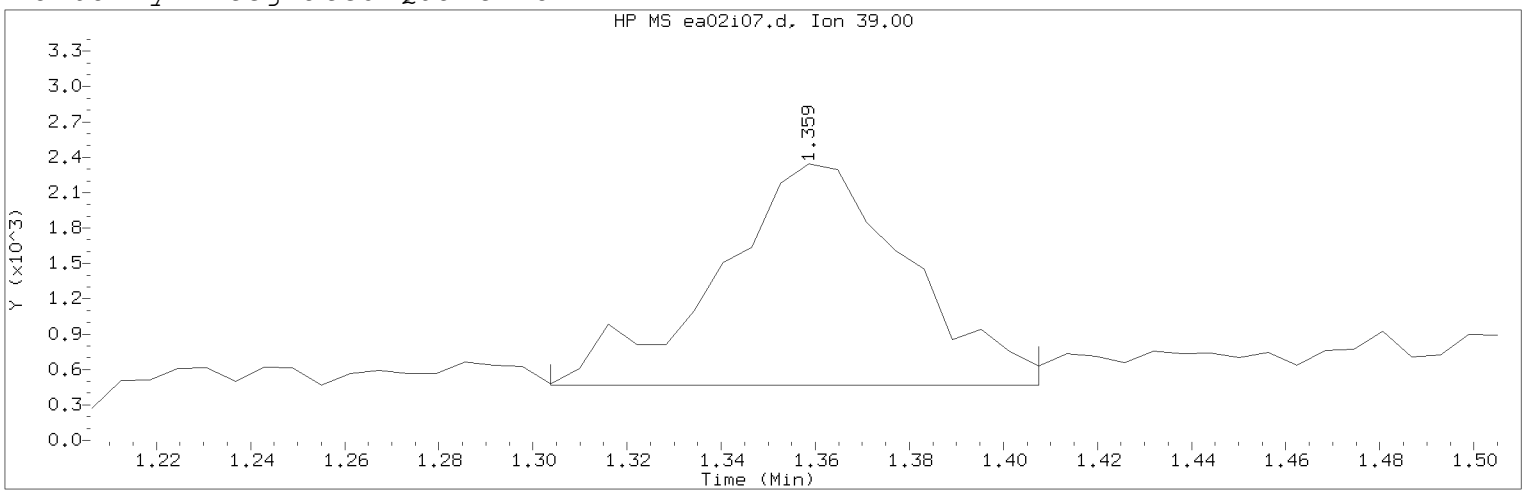
Compound Number : 4
Compound Name : Chloromethane
Scan Number : 53
Retention Time (minutes): 1.310
Quant Ion : 50.00
Area : 8571
On-column Amount (ng) : 1.0837
Integration start scan : 47 Integration stop scan: 64
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

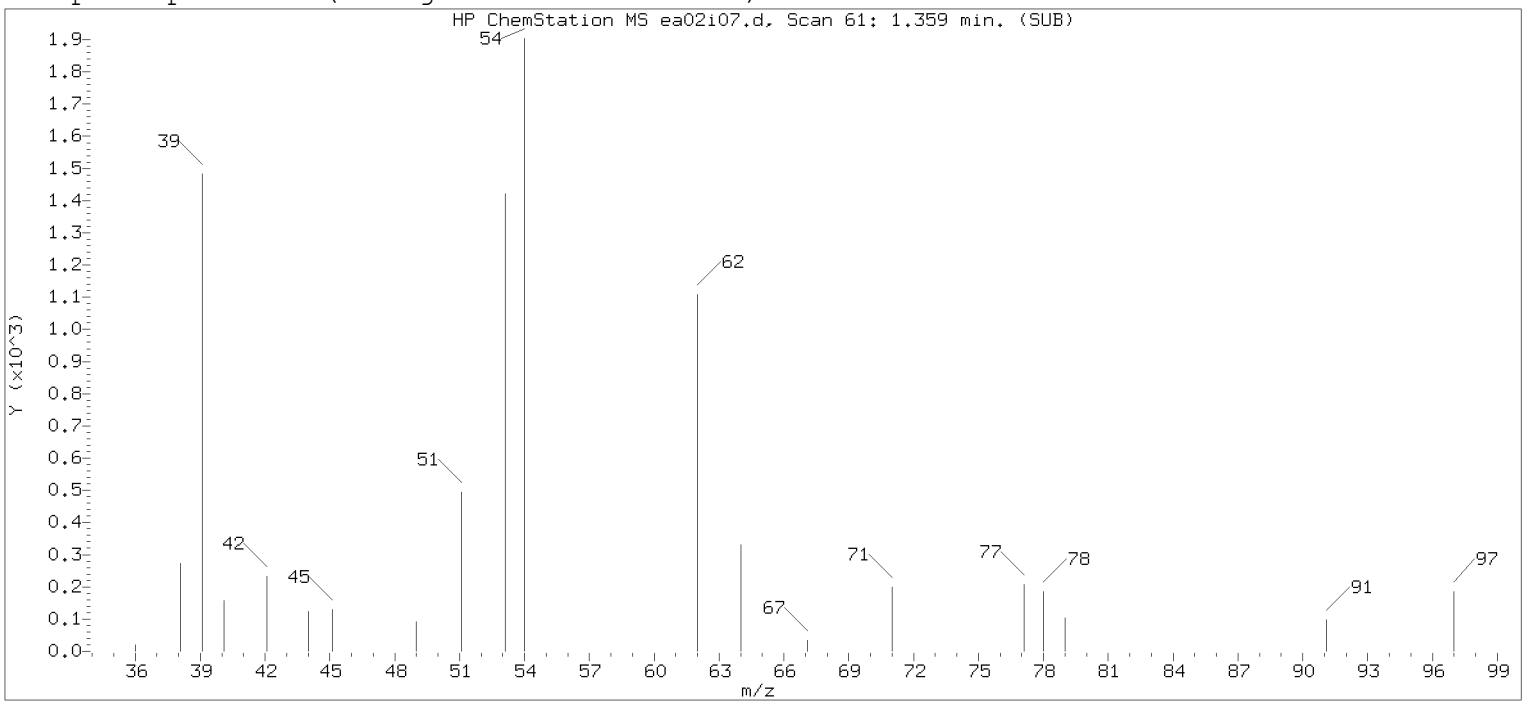
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 61
Retention Time (minutes): 1.359
Quant Ion : 39.00
Area (flag) : 5288M
On-Column Amount (ng) : 0.9276
Integration start scan : 51 Integration stop scan: 68
Y at integration start : 466 Y at integration end: 466

Reason for manual integration: improper integration

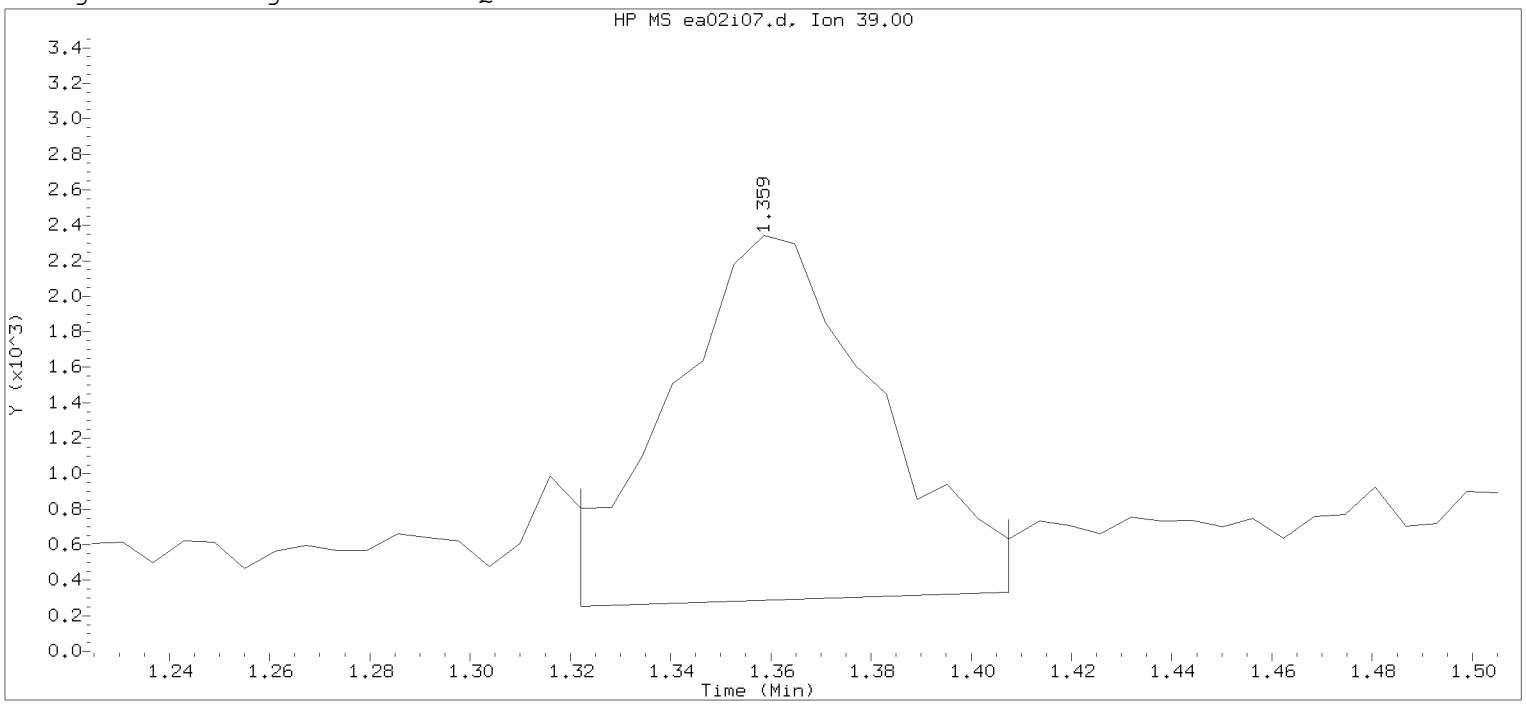
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

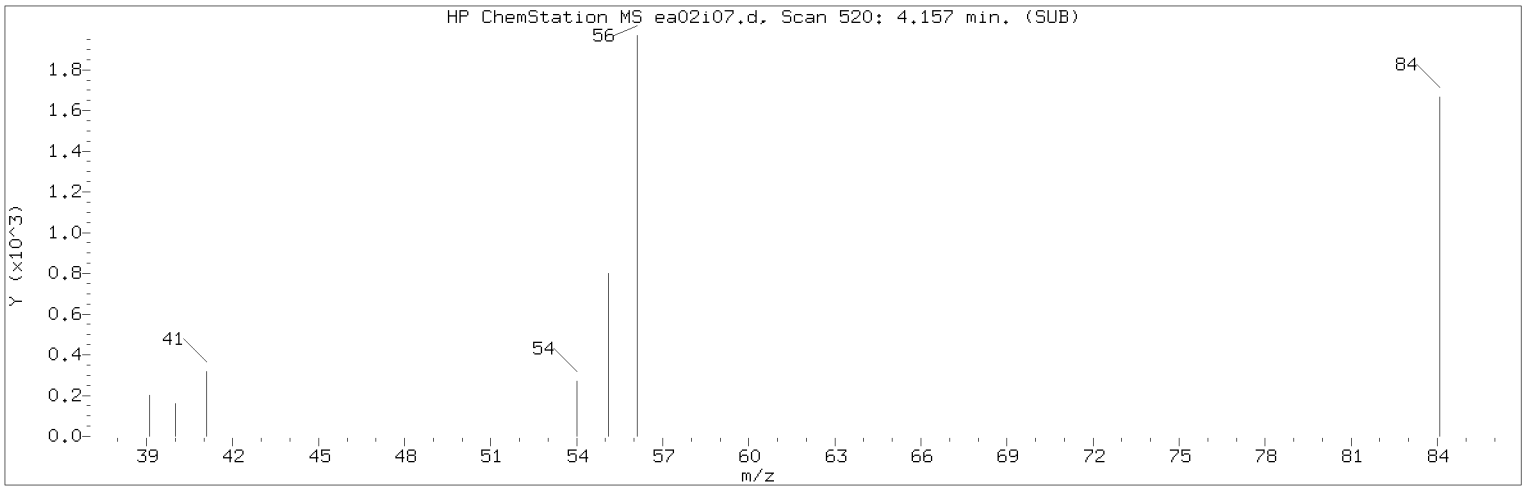
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:35
Date, time and analyst ID of latest file update: 02-May-2019 14:35 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

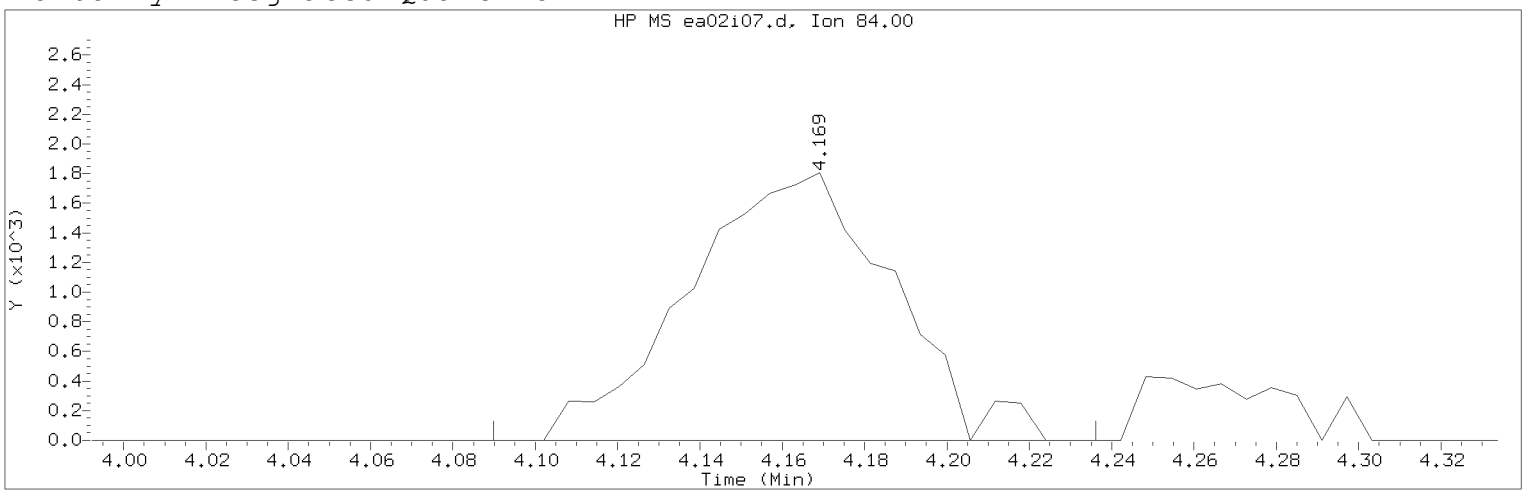
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 61
Retention Time (minutes): 1.359
Quant Ion : 39.00
Area : 5839
On-column Amount (ng) : 1.0158
Integration start scan : 54 Integration stop scan: 68
Y at integration start : 252 Y at integration end: 332

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

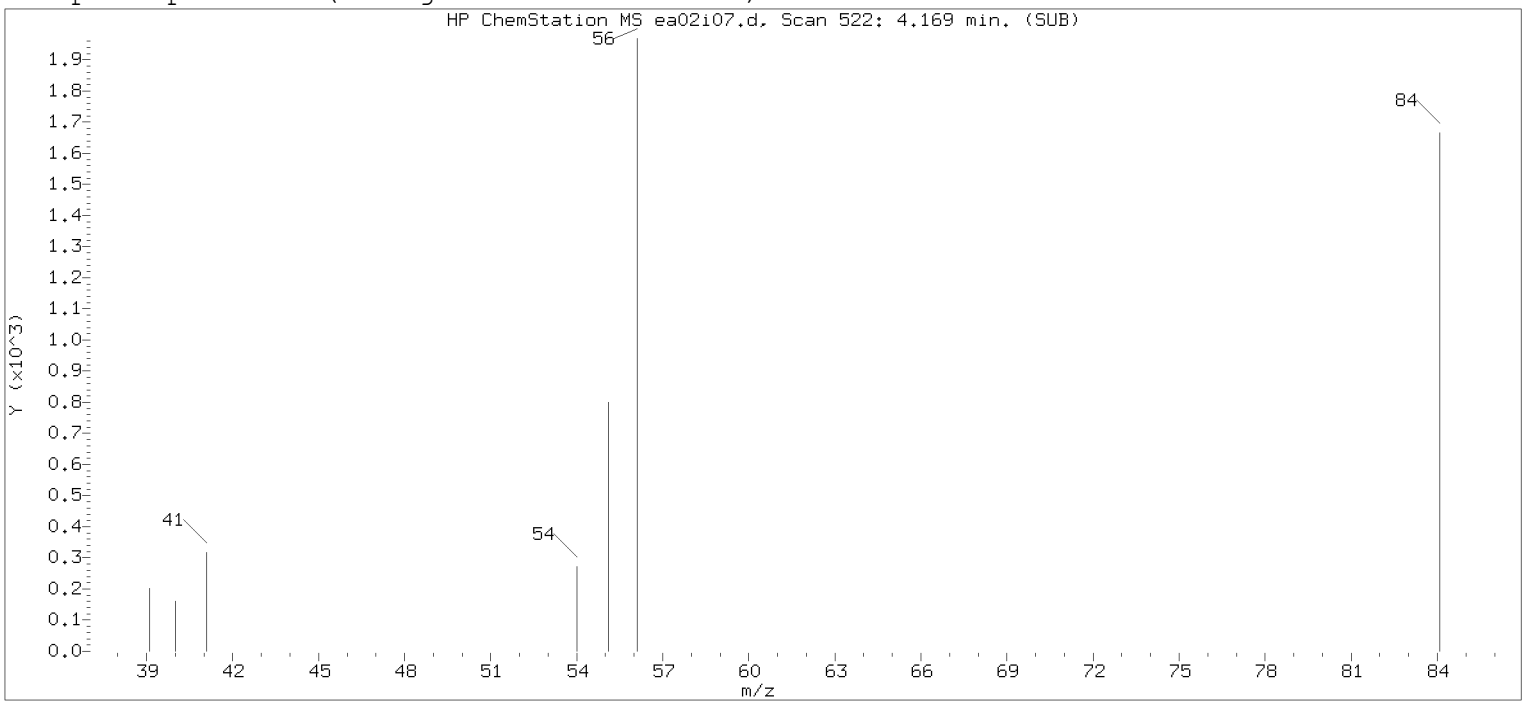
Compound Number : 54
Compound Name : Cyclohexane
Scan Number : 522
Retention Time (minutes): 4.169
Quant Ion : 84.00
Area (flag) : 6226M
On-Column Amount (ng) : 0.7491
Integration start scan : 508 Integration stop scan: 532
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

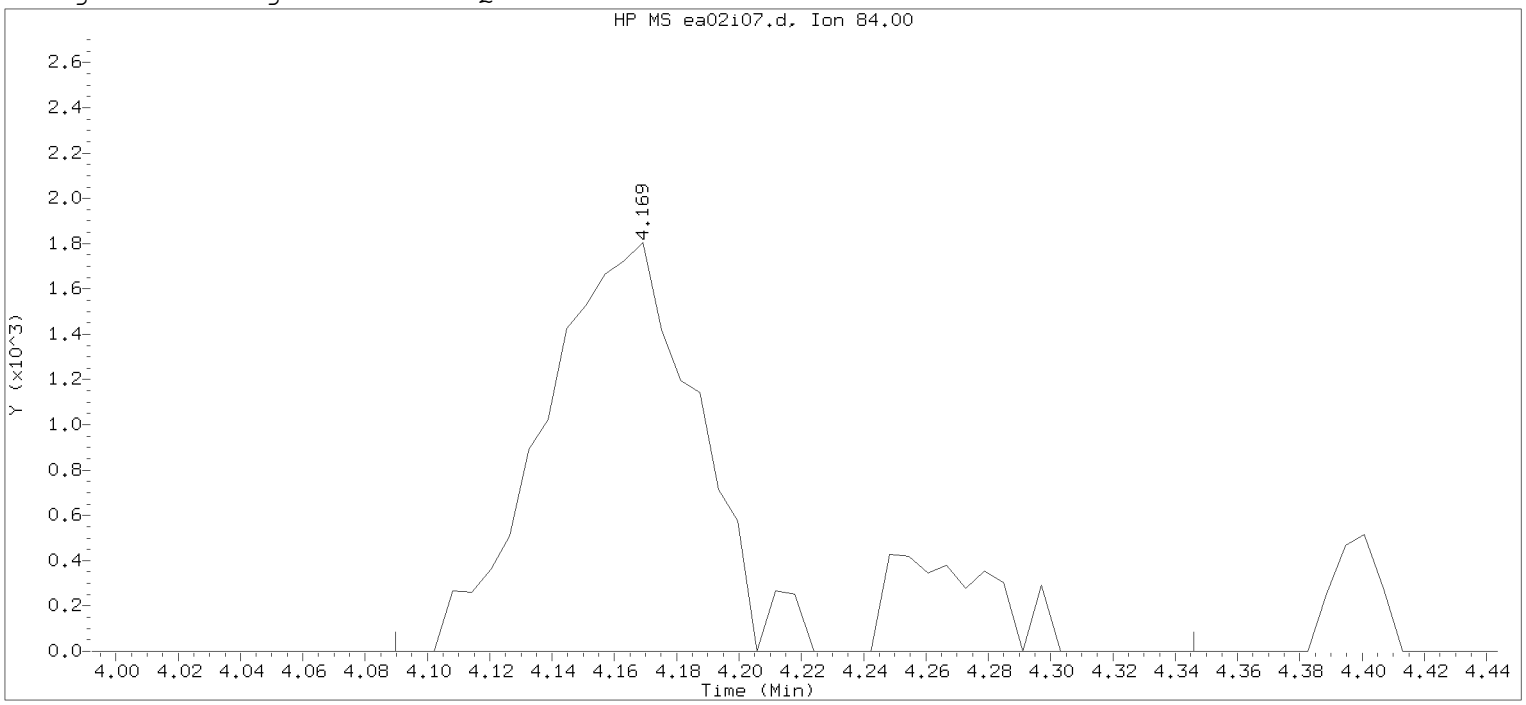
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

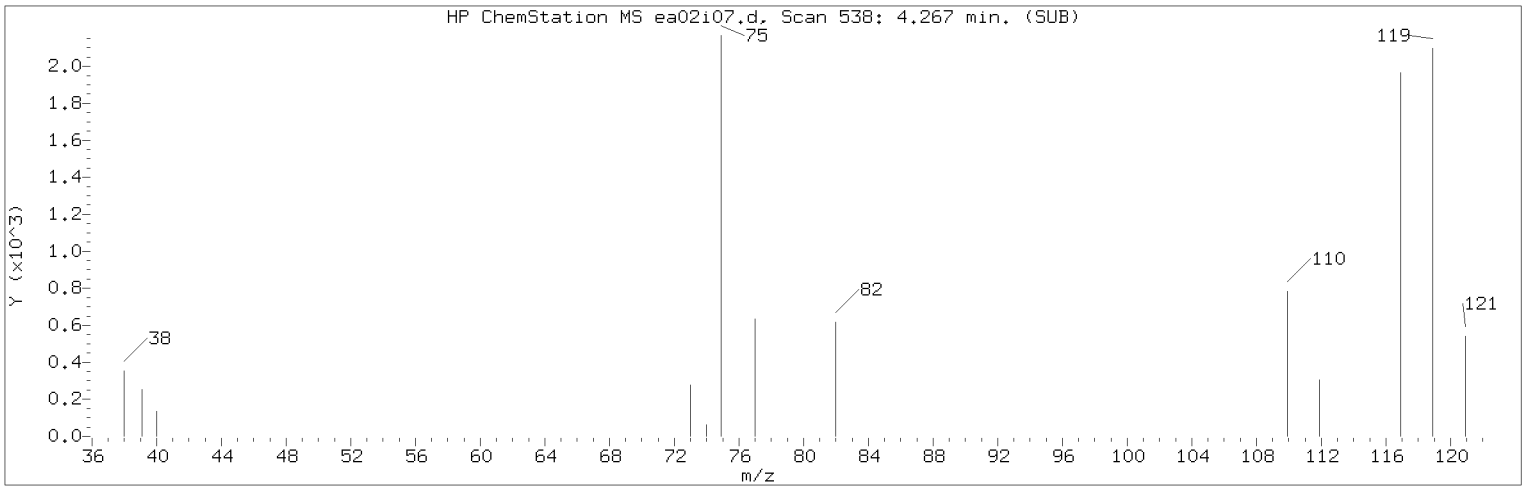
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:35
Date, time and analyst ID of latest file update: 02-May-2019 14:35 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

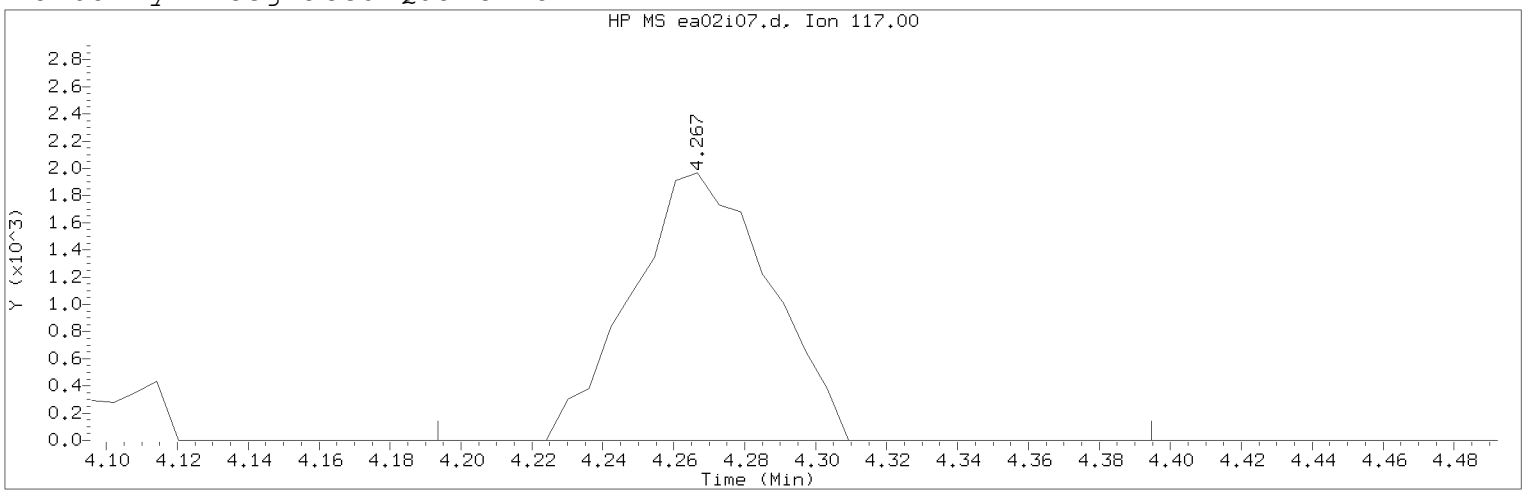
Compound Number : 54
Compound Name : Cyclohexane
Scan Number : 522
Retention Time (minutes): 4.169
Quant Ion : 84.00
Area : 7251
On-column Amount (ng) : 0.8468
Integration start scan : 508 Integration stop scan: 550
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

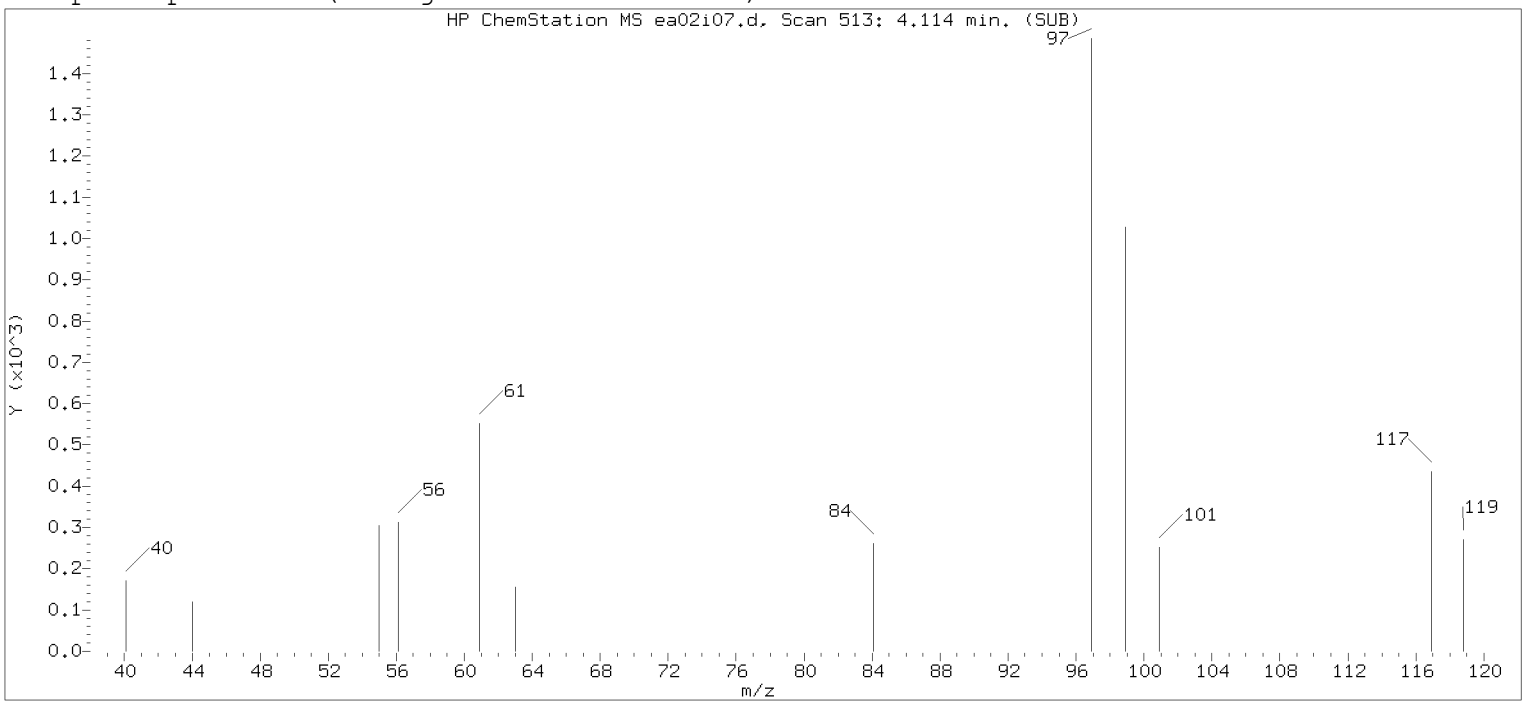
Compound Number : 56
Compound Name : Carbon Tetrachloride
Scan Number : 538
Retention Time (minutes): 4.267
Quant Ion : 117.00
Area (flag) : 5301M
On-Column Amount (ng) : 0.7914
Integration start scan : 525 Integration stop scan: 558
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

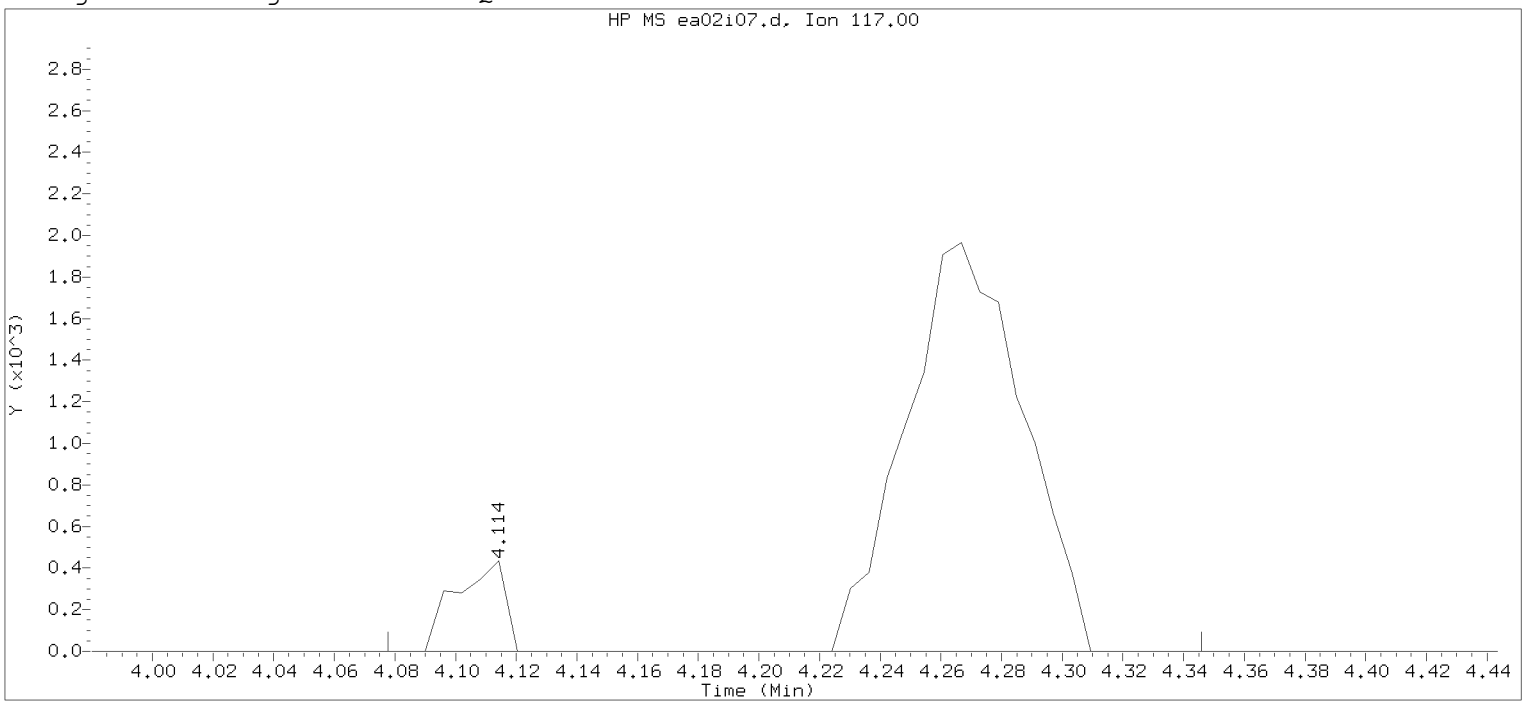
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

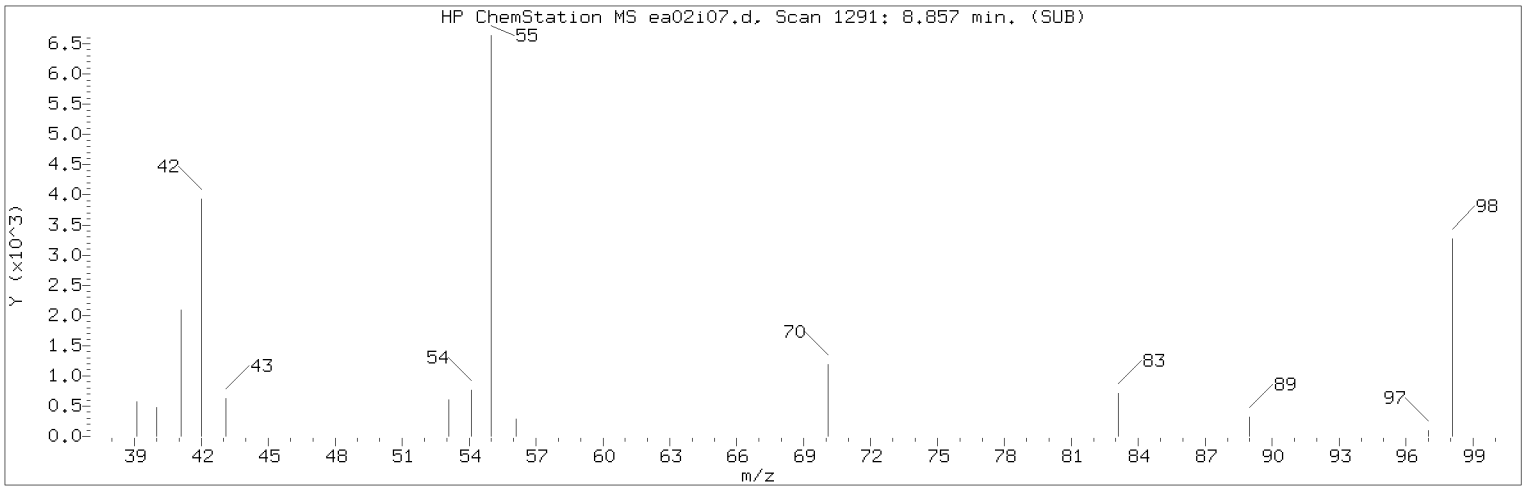
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:35
Date, time and analyst ID of latest file update: 02-May-2019 14:35 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

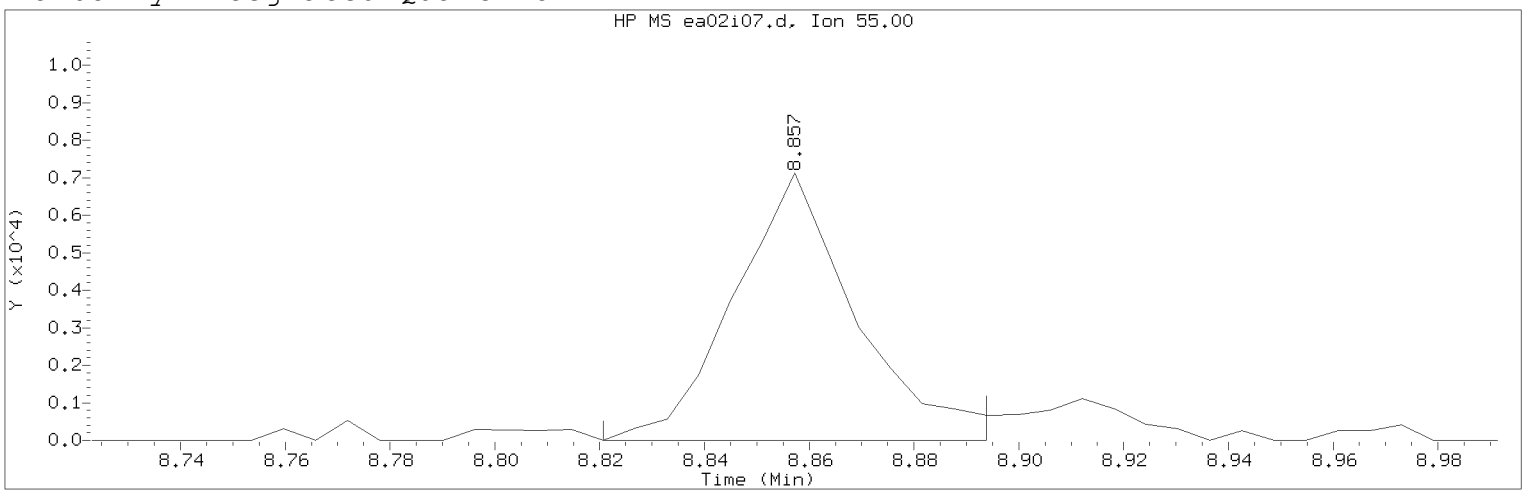
Compound Number : 56
Compound Name : Carbon Tetrachloride
Scan Number : 513
Retention Time (minutes): 4.114
Quant Ion : 117.00
Area : 5796
On-column Amount (ng) : 0.8623
Integration start scan : 506 Integration stop scan: 550
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

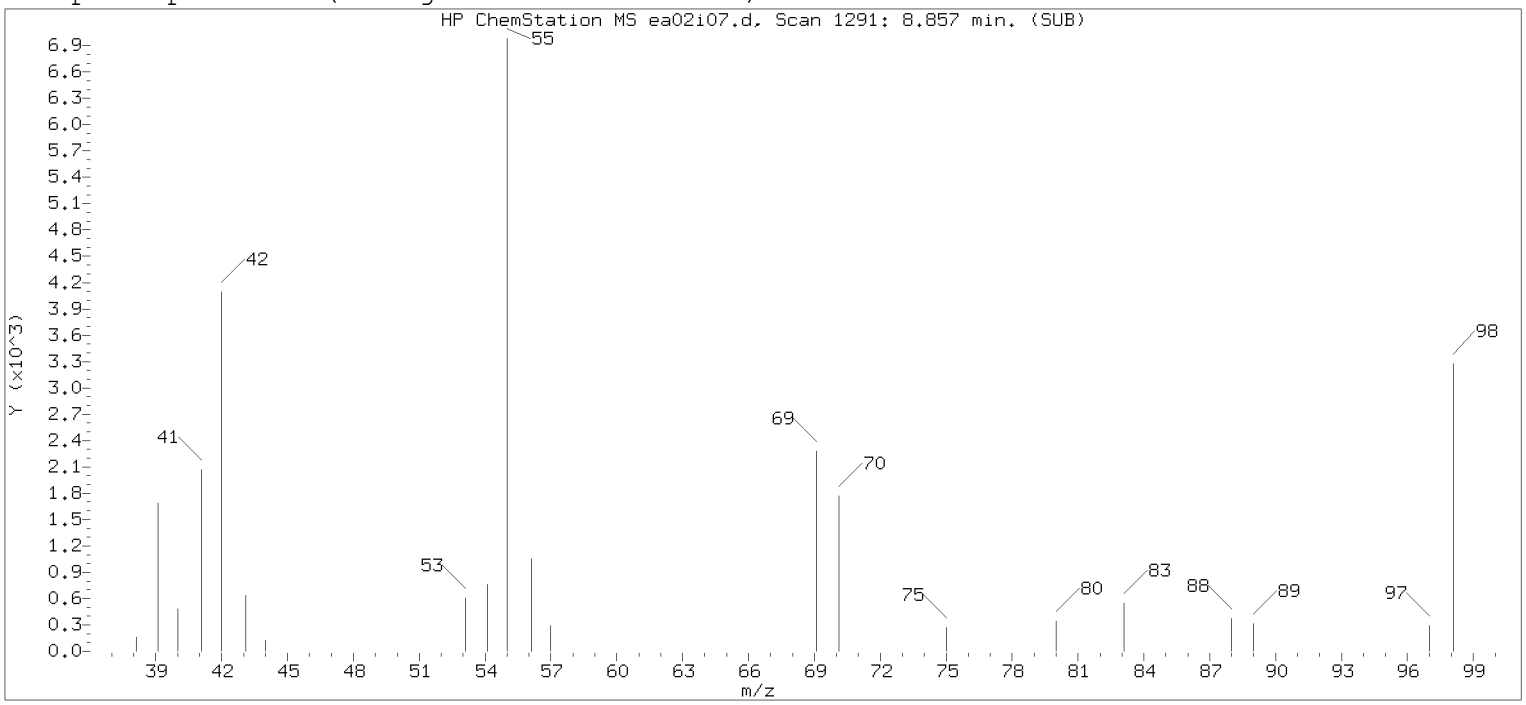
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1291
Retention Time (minutes): 8.857
Quant Ion : 55.00
Area (flag) : 11452M
On-Column Amount (ng) : 56.6123
Integration start scan : 1284 Integration stop scan: 1296
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

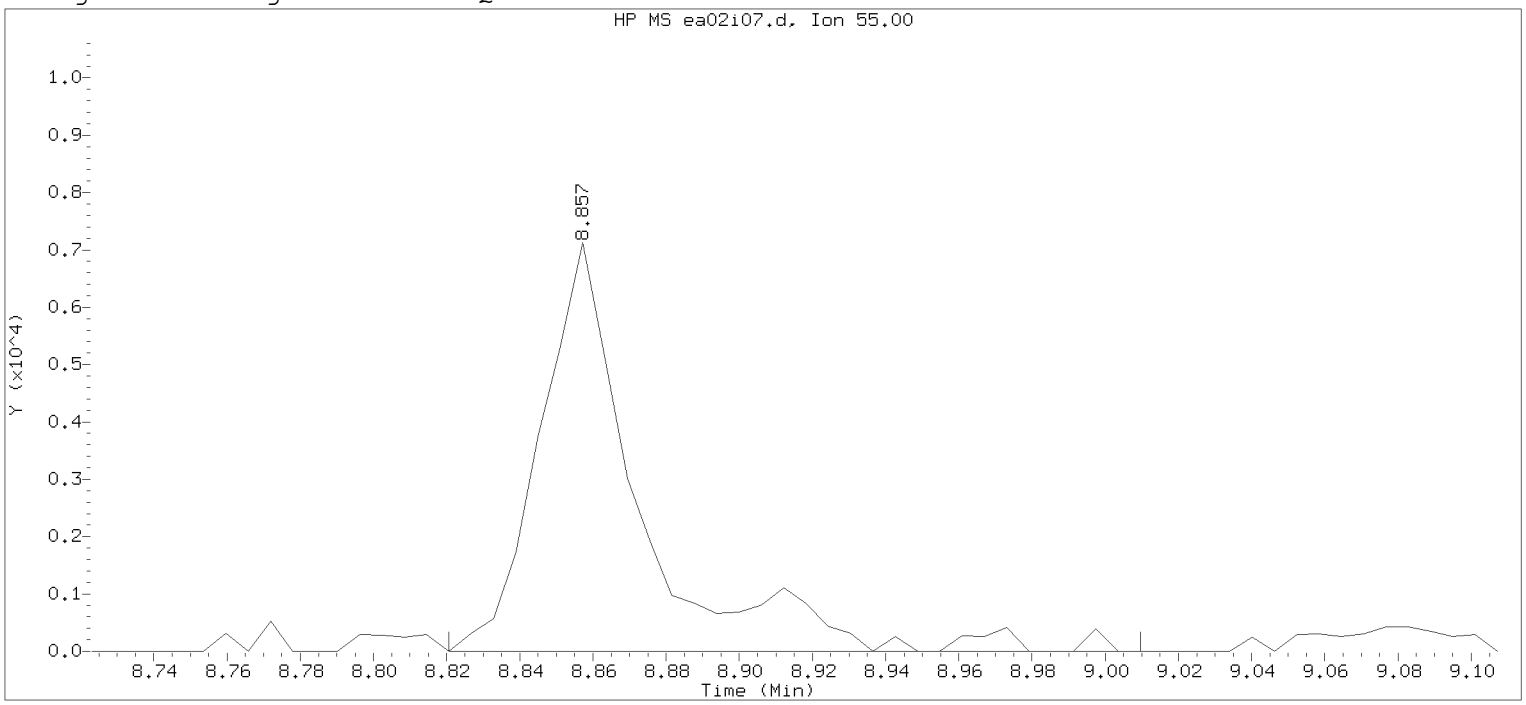
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

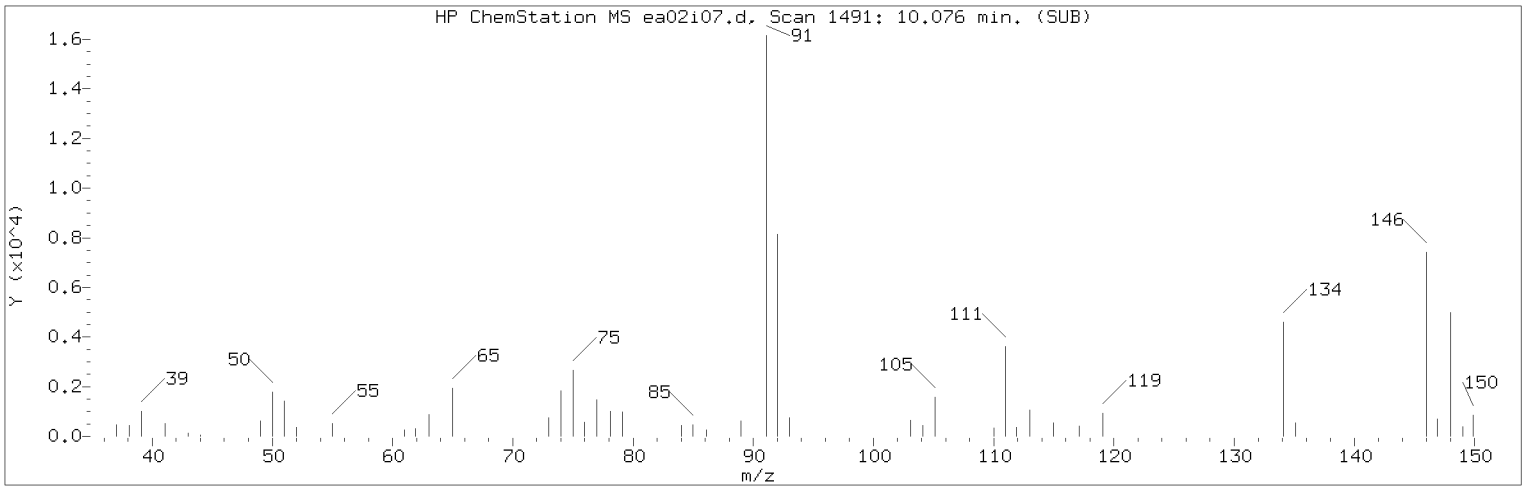
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:35
Date, time and analyst ID of latest file update: 02-May-2019 14:35 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

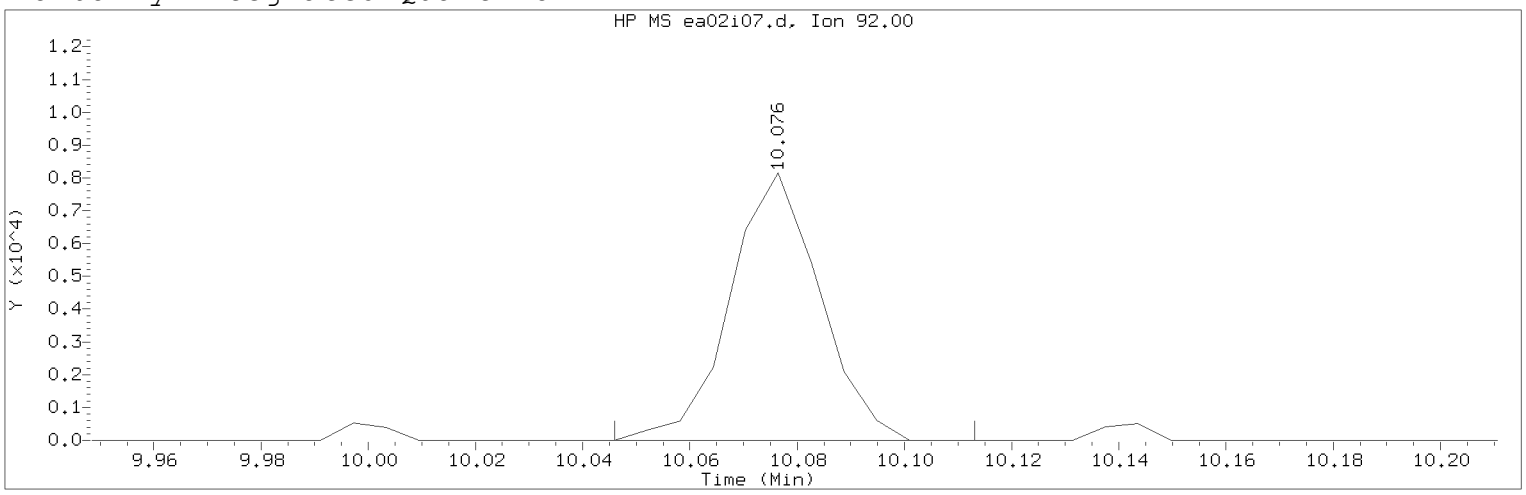
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1291
Retention Time (minutes): 8.857
Quant Ion : 55.00
Area : 13563
On-column Amount (ng) : 63.7728
Integration start scan : 1284 Integration stop scan: 1315
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

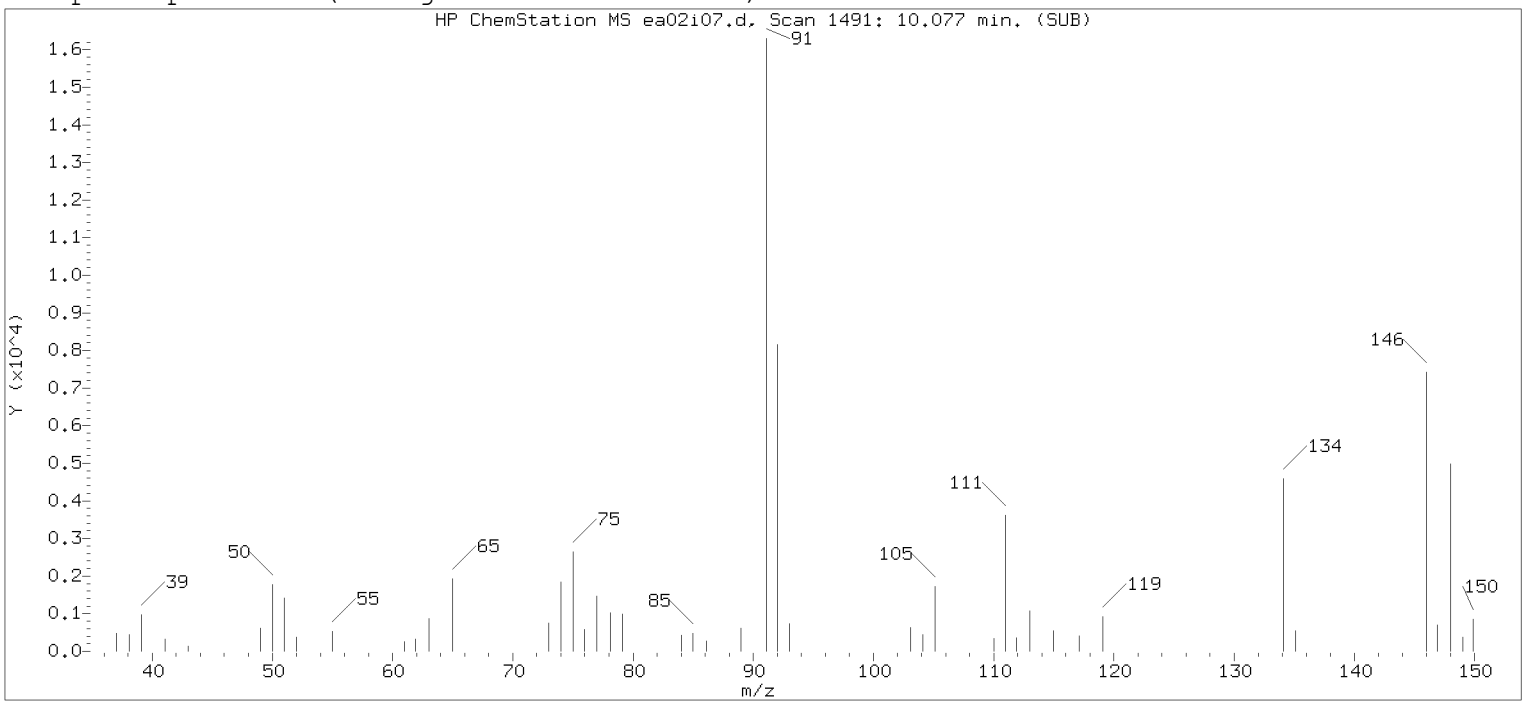
Compound Number : 140
Compound Name : n-Butylbenzene
Scan Number : 1491
Retention Time (minutes): 10.076
Quant Ion : 92.00
Area (flag) : 9445M
On-Column Amount (ng) : 0.7870
Integration start scan : 1485 Integration stop scan: 1496
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

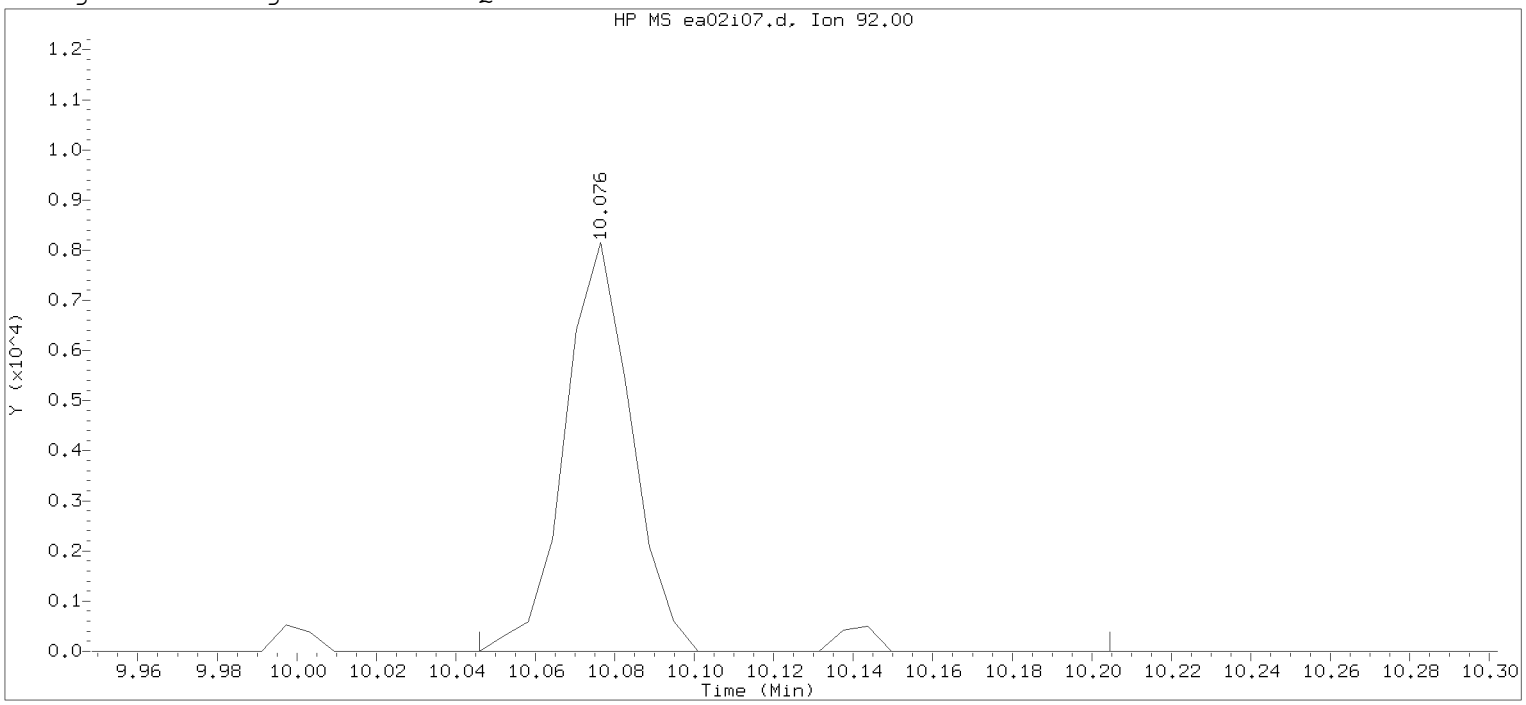
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

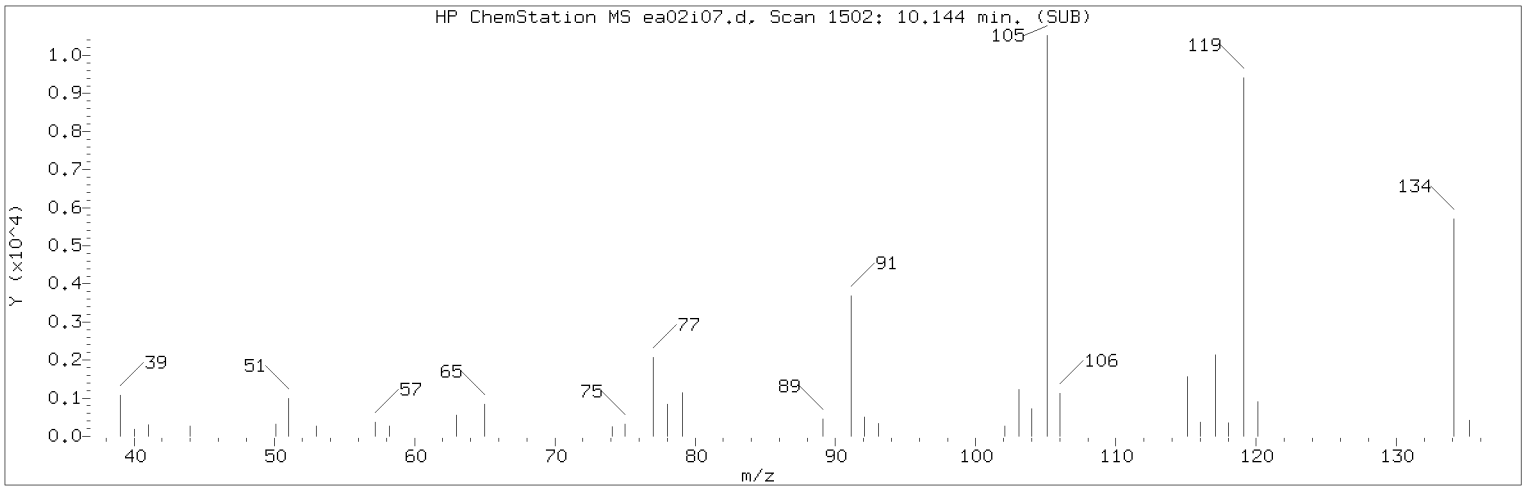
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:35
Date, time and analyst ID of latest file update: 02-May-2019 14:35 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

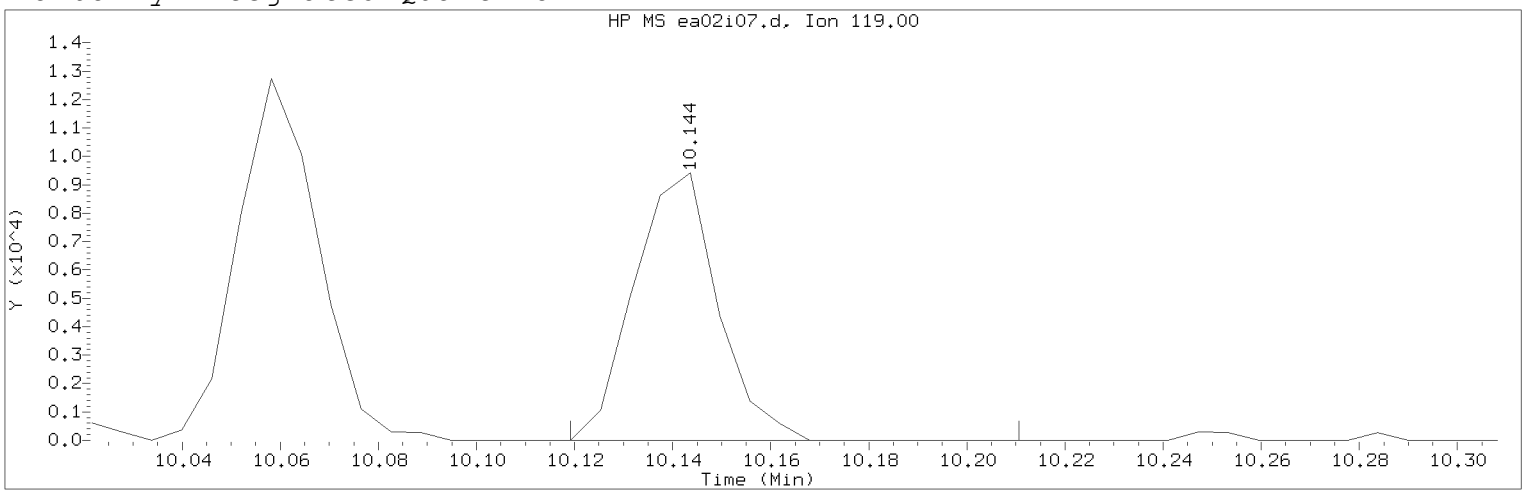
Compound Number : 140
Compound Name : n-Butylbenzene
Scan Number : 1491
Retention Time (minutes): 10.076
Quant Ion : 92.00
Area : 9783
On-column Amount (ng) : 0.8119
Integration start scan : 1485 Integration stop scan: 1511
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

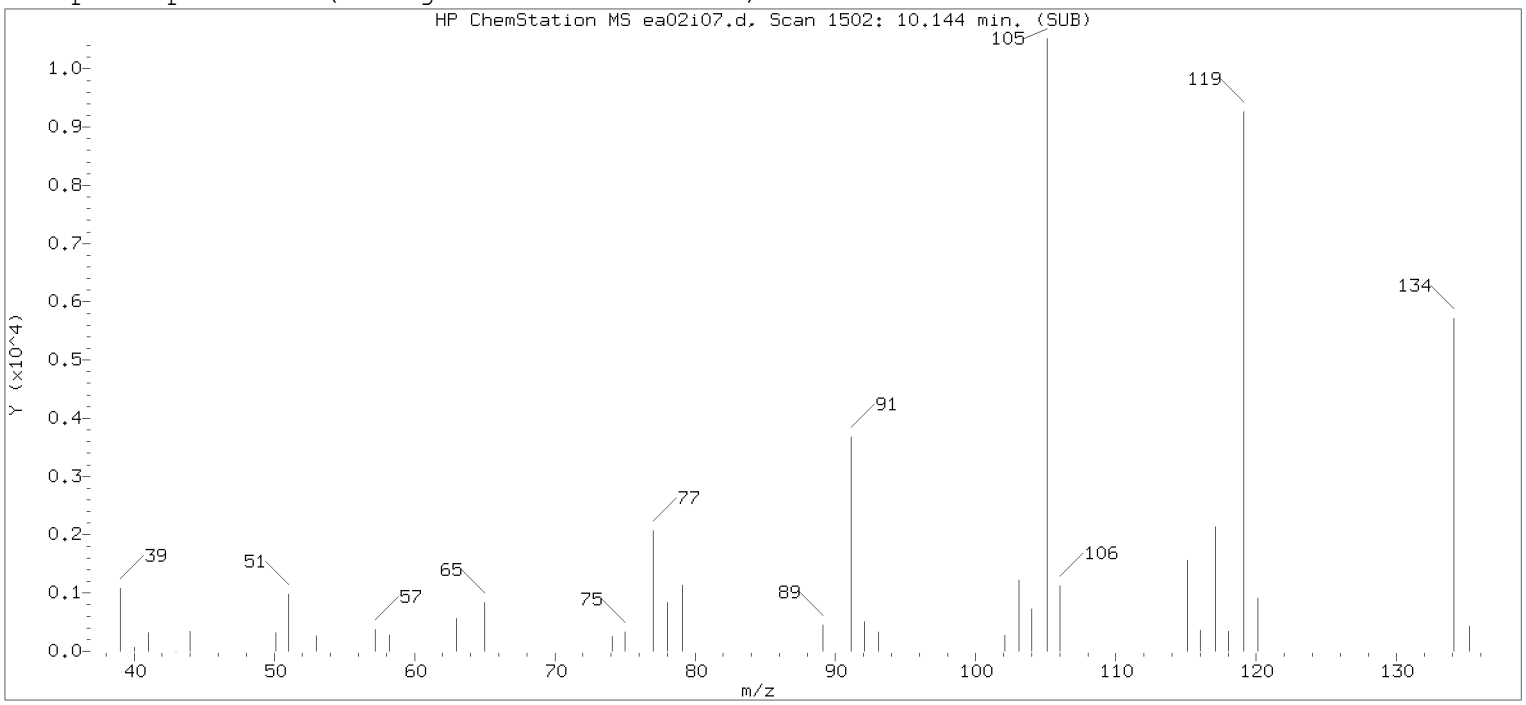
Compound Number : 141
Compound Name : 1,2-Diethylbenzene
Scan Number : 1502
Retention Time (minutes): 10.144
Quant Ion : 119.00
Area (flag) : 11162M
On-Column Amount (ng) : 0.8861
Integration start scan : 1497 Integration stop scan: 1512
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

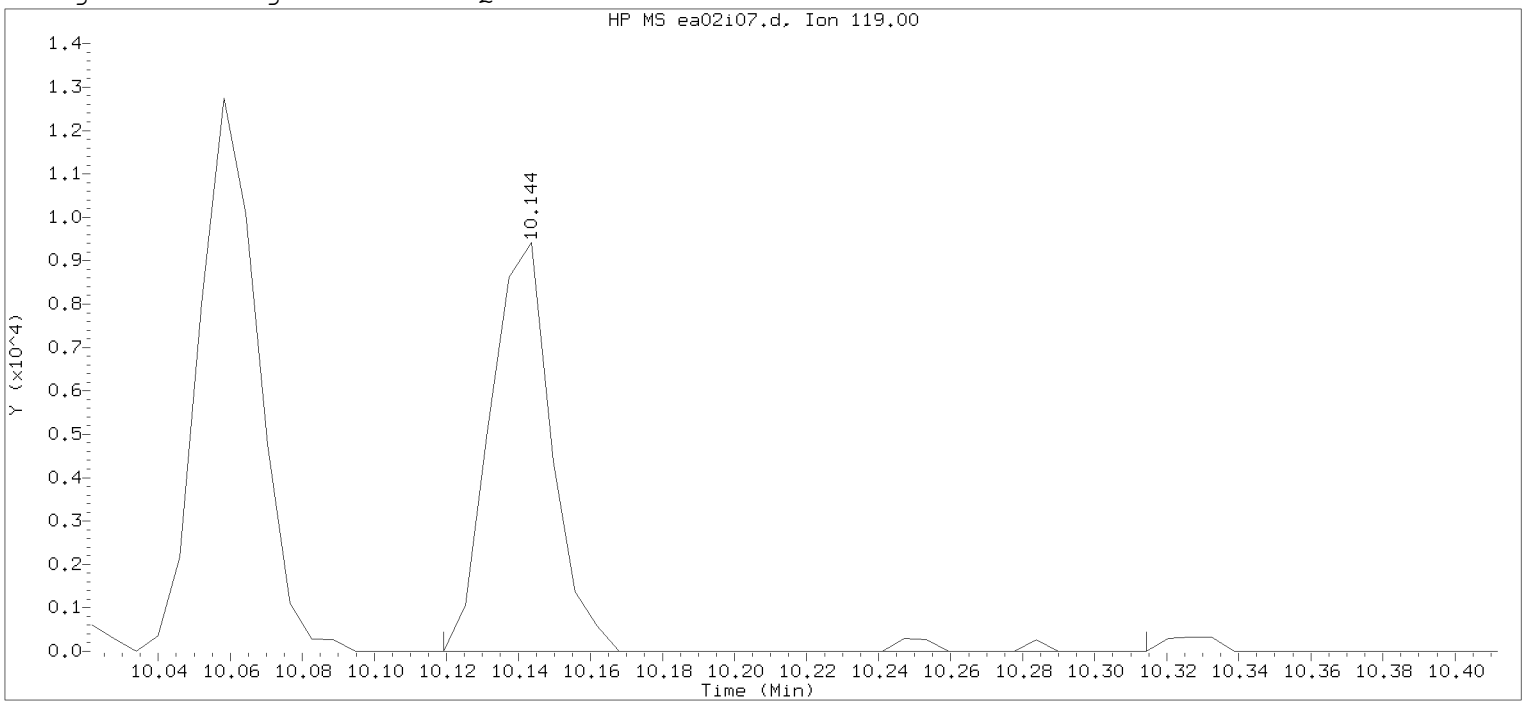
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



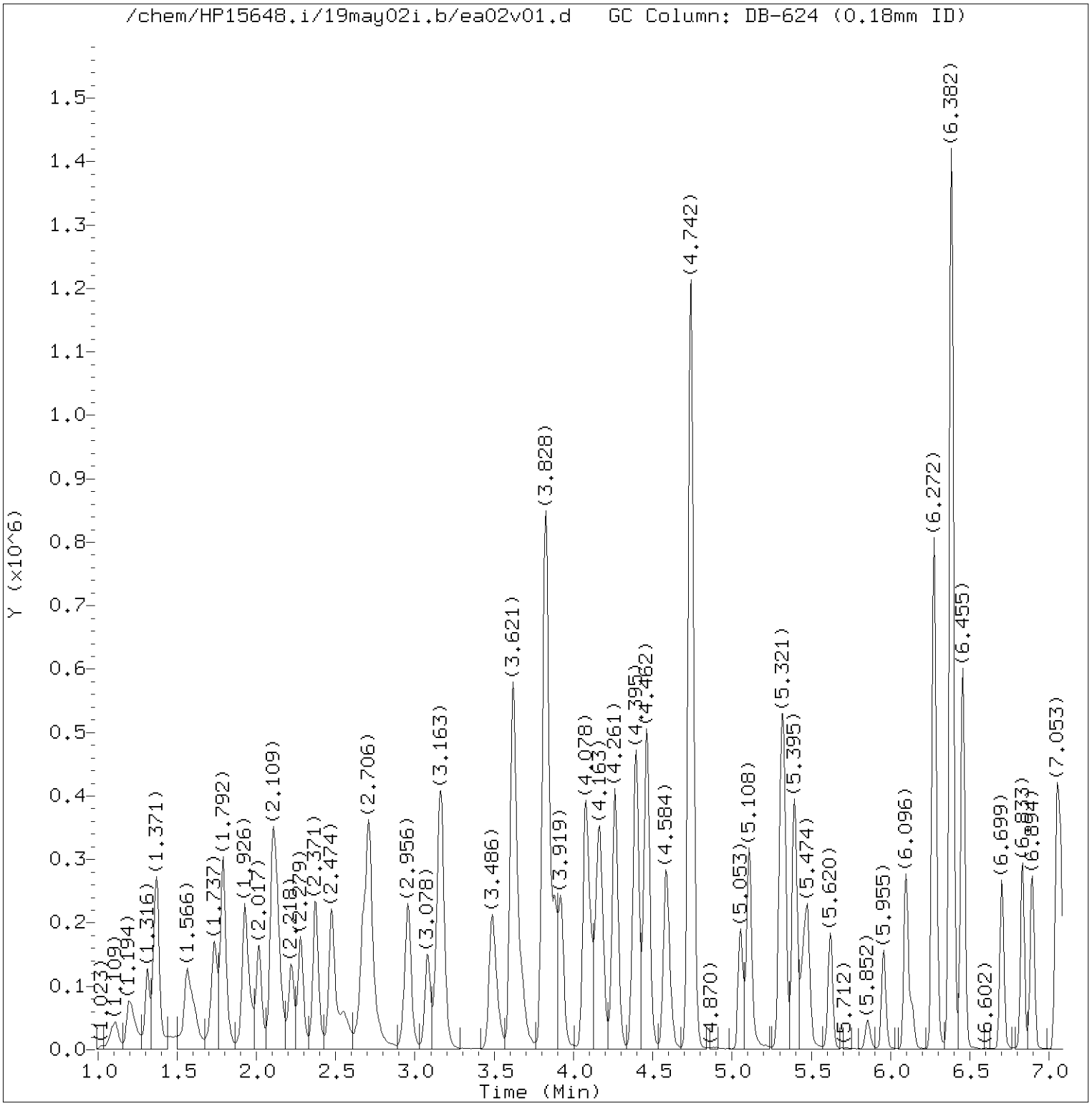
Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:35
Date, time and analyst ID of latest file update: 02-May-2019 14:35 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 141
Compound Name : 1,2-Diethylbenzene
Scan Number : 1502
Retention Time (minutes): 10.144
Quant Ion : 119.00
Area : 11465
On-column Amount (ng) : 0.9071
Integration start scan : 1497 Integration stop scan: 1529
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kas02648



Total Ion Chromatogram (TIC)

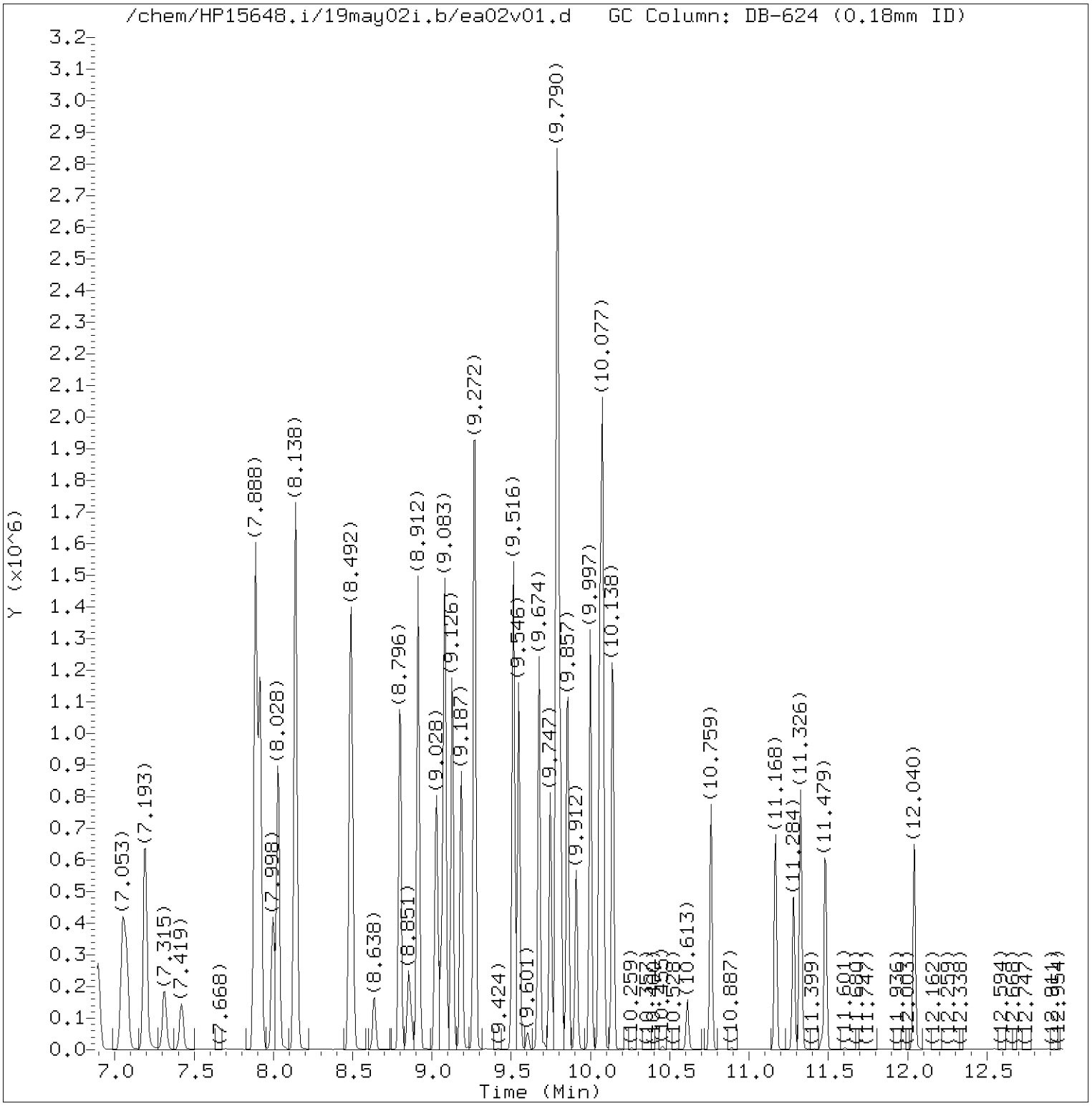
Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02v01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: ICVELG Lab Sample ID: ICVELG

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02v01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: ICVELG Lab Sample ID: ICVELG

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02v01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: ICVELG Lab Sample ID: ICVELG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.200	85	157554	16.575
4) Chloromethane	(2)	1.310	50	138314	17.880
5) 1,3-Butadiene	(2)	1.365	39	111375	19.152
6) Vinyl Chloride	(2)	1.377	62	138546M	18.737
8) Bromomethane	(2)	1.566	94	89348	16.047
9) Chloroethane	(2)	1.603	64	75052	17.828
10) Dichlorofluoromethane	(2)	1.731	67	155300	14.417
11) n-Pentane	(2)	1.792	43	168798	19.547
12) Trichlorofluoromethane	(2)	1.792	101	186438	17.737
14) Ethyl ether	(2)	1.926	59	82970	18.944
15) Freon 123a	(2)	1.938	67	123486	19.951
16) Acrolein	(1)	2.017	56	192490	137.106
17) 1,1-Dichloroethene	(2)	2.103	96	94326	21.793
18) Acetone	(1)	2.127	58	81846	140.062
19) Freon 113	(2)	2.133	101	106182	22.154
21) 2-Propanol	(1)	2.218	45	52666	150.852
22) Methyl Iodide	(2)	2.224	142	163223	20.124
23) Carbon Disulfide	(2)	2.279	76	290564	19.791
25) Allyl Chloride	(2)	2.371	41	155859	18.528
27) Methyl Acetate	(2)	2.377	43	80861	19.577
28) Methylene Chloride	(2)	2.474	84	102497	20.786
29)*t-Butyl alcohol-d10	(1)	2.481	65	170158	250.000
30) t-Butyl alcohol	(1)	2.554	59	122013	191.821
31) Acrylonitrile	(2)	2.669	53	222719	88.677
33) Methyl Tertiary Butyl Ether	(2)	2.706	73	283967	19.549
32) trans-1,2-Dichloroethene	(2)	2.712	96	97327	19.977
34) n-Hexane	(2)	2.956	57	176585	20.684
36) 1,1-Dichloroethane	(2)	3.078	63	190806	20.905
38) di-Isopropyl ether	(2)	3.151	45	331341	20.629
39) 2-Chloro-1,3-butadiene	(2)	3.169	53	179631	20.610
40) Ethyl t-butyl ether	(2)	3.486	59	316354	19.966
45) 2,2-Dichloropropane	(2)	3.621	77	176651	21.936
42) cis-1,2-Dichloroethene	(2)	3.621	96	126216	23.058
44) 2-Butanone	(2)	3.621	43	414260	122.422
43) 1,2-Dichloroethene (Total)	(2)		96	223543	43.035
47) Propionitrile	(1)	3.675	54	132277	153.939
48) Methacrylonitrile	(2)	3.822	67	391794	145.279
49) Bromochloromethane	(2)	3.840	128	52199	19.200

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02v01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: ICVELG Lab Sample ID: ICVELG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	3.883	71	81176	90.140
51) Chloroform	(2)	3.919	83	183633	21.152
52)$Dibromofluoromethane	(2)	4.072	113	249025	49.707
53) 1,1,1-Trichloroethane	(2)	4.102	97	173501	21.598
54) Cyclohexane	(2)	4.157	56	208106	21.092
55) 1,1-Dichloropropene	(2)	4.261	75	154873	21.743
56) Carbon Tetrachloride	(2)	4.267	117	147124	21.531
58) Isobutyl Alcohol	(1)	4.383	41	98973	458.303
57)$1,2-Dichloroethane-d4	(2)	4.395	102	62723	49.613
60) Benzene	(2)	4.462	78	434381	20.769
61) 1,2-Dichloroethane	(2)	4.468	62	146557	20.863
65) t-Amyl methyl ether	(2)	4.584	73	318703	20.284
66)*Fluorobenzene	(2)	4.736	96	1077884	50.000
67) n-Heptane	(2)	4.748	43	179235	19.587
69) n-Butanol	(1)	5.053	56	169852	909.329
71) Trichloroethene	(2)	5.108	95	113251	21.466
73) Methylcyclohexane	(2)	5.309	83	217374	19.787
74) 1,2-Dichloropropane	(2)	5.327	63	113326	21.778
75) Dibromomethane	(2)	5.449	93	64371	20.664
77) Methyl Methacrylate	(2)	5.474	69	88720	18.700
76) 1,4-Dioxane	(1)	5.474	88	21935M	417.292
79) Bromodichloromethane	(2)	5.620	83	135211	20.864
80) 2-Nitropropane	(2)	5.858	41	34992M	16.293
81) 2-Chloroethyl Vinyl Ether	(2)	5.955	63	76939	19.188
82) cis-1,3-Dichloropropene	(2)	6.096	75	174990	20.731
83) 4-Methyl-2-pentanone	(2)	6.272	43	624989	86.003
84)$Toluene-d8	(3)	6.382	98	1073507	49.836
89) Toluene	(3)	6.455	92	282180	21.404
90) trans-1,3-Dichloropropene	(3)	6.699	75	156479	19.860
91) 1,3-Dichloropropene (total)	(3)		100	331469	40.590
92) Ethyl Methacrylate	(3)	6.833	69	160727	19.135
93) 1,1,2-Trichloroethane	(3)	6.894	97	96119	21.421
94) Tetrachloroethene	(3)	7.053	166	118981	22.197
95) 1,3-Dichloropropane	(3)	7.077	76	164400	20.846
97) 2-Hexanone	(3)	7.193	43	445446	79.545
102) 1-Chlorohexane	(3)	7.309	91	9073	19.914
98) Dibromochloromethane	(3)	7.315	129	100275	20.701
100) 1,2-Dibromoethane	(3)	7.419	107	99280	20.795

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02v01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: ICVELG Lab Sample ID: ICVELG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101)*Chlorobenzene-d5	(3)	7.888	117	793121	50.000
103) Chlorobenzene	(3)	7.912	112	305825	20.979
104) 1,1,1,2-Tetrachloroethane	(3)	7.998	131	103964	20.998
105) Ethylbenzene	(3)	8.028	91	562461	21.565
107) m+p-Xylene	(3)	8.138	106	440814	43.417
109) Xylene (Total)	(3)		106	653848	64.917
108) o-Xylene	(3)	8.485	106	213034	21.500
110) Styrene	(3)	8.498	104	355360	21.713
111) Bromoform	(3)	8.638	173	62709	19.420
112) Isopropylbenzene	(3)	8.796	105	578096	21.929
113) Cyclohexanone	(1)	8.851	55	94378	476.612
115)$4-Bromofluorobenzene	(3)	8.912	95	416047	50.243
116) Bromobenzene	(4)	9.028	156	124788	21.398
117) 1,1,2,2-Tetrachloroethane	(4)	9.034	83	140609	20.774
118) 1,2,3-Trichloropropane	(4)	9.065	110	42705	20.819
119) trans-1,4-Dichloro-2-butene	(4)	9.083	53	229774	103.307
120) n-Propylbenzene	(4)	9.126	91	685643	22.301
121) 2-Chlorotoluene	(4)	9.187	126	129612	21.412
123) 1,3,5-Trimethylbenzene	(4)	9.266	105	486746	21.823
122) 4-Chlorotoluene	(4)	9.272	126	136785	22.044
125) tert-Butylbenzene	(4)	9.516	134	110507	22.289
126) Pentachloroethane	(4)	9.522	167	74397	20.156
127) 1,2,4-Trimethylbenzene	(4)	9.546	105	492746	21.455
128) sec-Butylbenzene	(4)	9.674	105	629202	22.237
130) 1,3-Dichlorobenzene	(4)	9.747	146	246616	21.699
131) p-Isopropyltoluene	(4)	9.784	119	541397	21.750
132)*1,4-Dichlorobenzene-d4	(4)	9.796	152	418532	50.000
134) 1,4-Dichlorobenzene	(4)	9.814	146	250094	21.512
135) 1,2,3-Trimethylbenzene	(4)	9.857	105	497366	20.338
136) Benzyl Chloride	(4)	9.912	91	307403	19.467
137) 1,3-Diethylbenzene	(4)	9.997	119	320212	20.430
138) 1,4-Diethylbenzene	(4)	10.058	119	333514	19.971
139) 1,2-Dichlorobenzene	(4)	10.077	146	231073	21.238
140) n-Butylbenzene	(4)	10.077	92	264981	21.675
141) 1,2-Diethylbenzene	(4)	10.138	119	262917	20.490
142) Diethylbenzene (total)	(4)		100	916643	60.891
143) 1,2-Dibromo-3-chloropropane	(4)	10.613	75	30280	19.526
145) 1,3,5-Trichlorobenzene	(4)	10.759	180	171807	21.474

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02v01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:40 Analyst ID: KAS02648

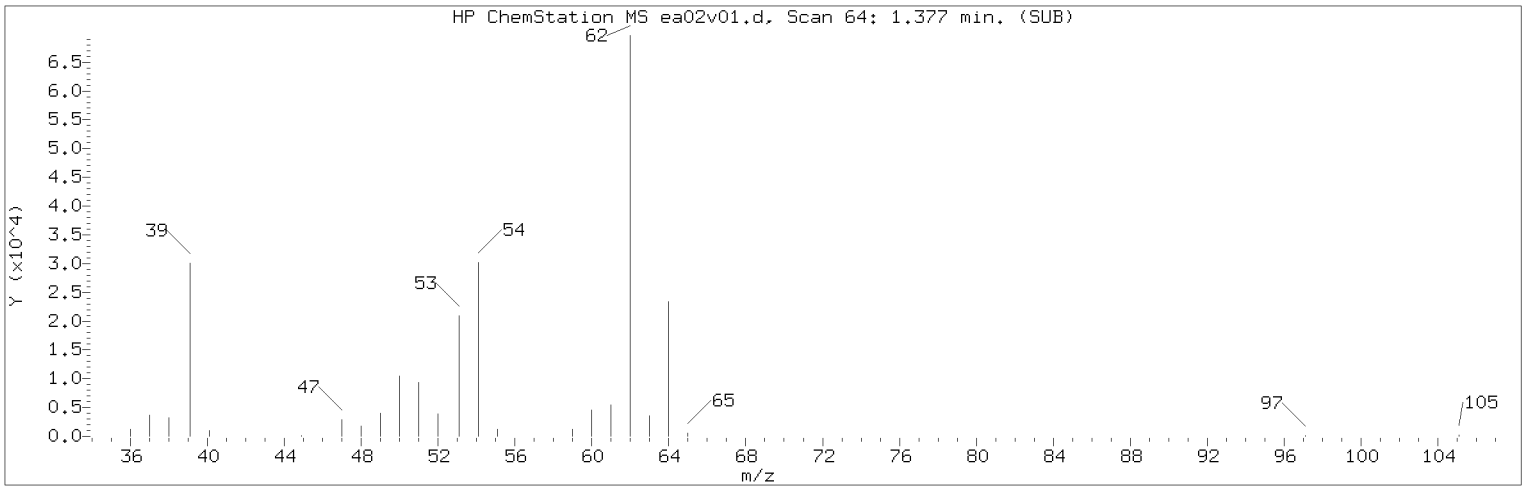
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: ICVELG Lab Sample ID: ICVELG

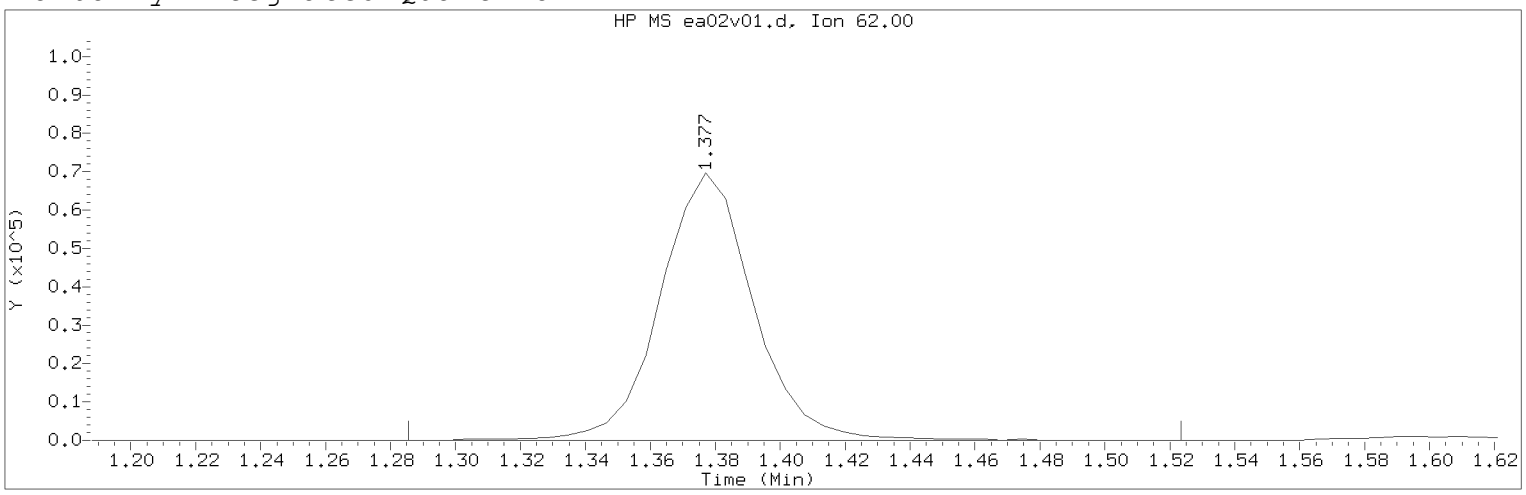
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) 1,2,4-Trichlorobenzene	(4)	11.168	180	149943	20.995
148) Hexachlorobutadiene	(4)	11.284	225	63148	20.627
149) Naphthalene	(4)	11.326	128	457519	19.432
150) 1,2,3-Trichlorobenzene	(4)	11.485	180	135388	20.077
151) 2-Methylnaphthalene	(4)	12.046	142	232643	15.636

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02v01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: ICVELG Lab Sample ID: ICVELG

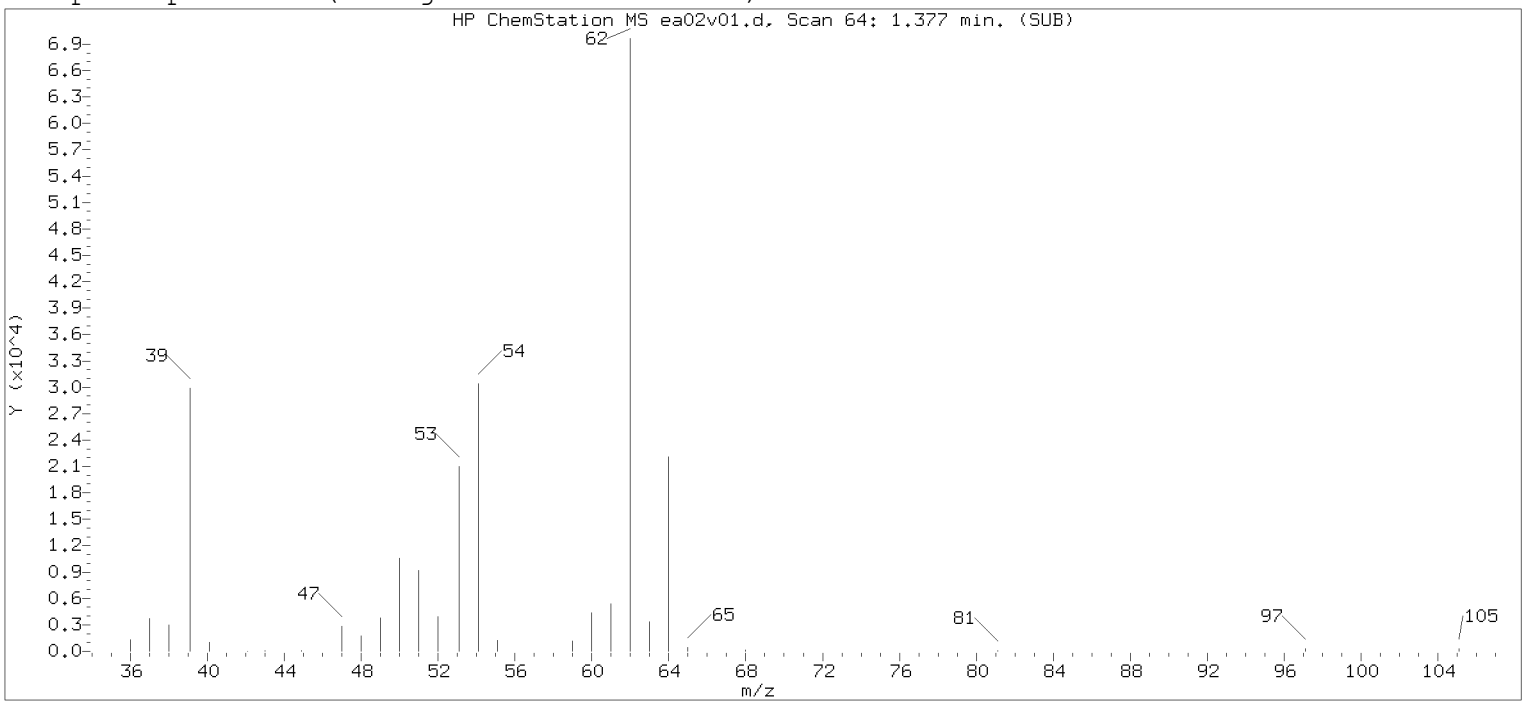
Compound Number : 6
Compound Name : Vinyl Chloride
Scan Number : 64
Retention Time (minutes): 1.377
Quant Ion : 62.00
Area (flag) : 138546M
On-Column Amount (ng) : 18.7375
Integration start scan : 48 Integration stop scan: 87
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

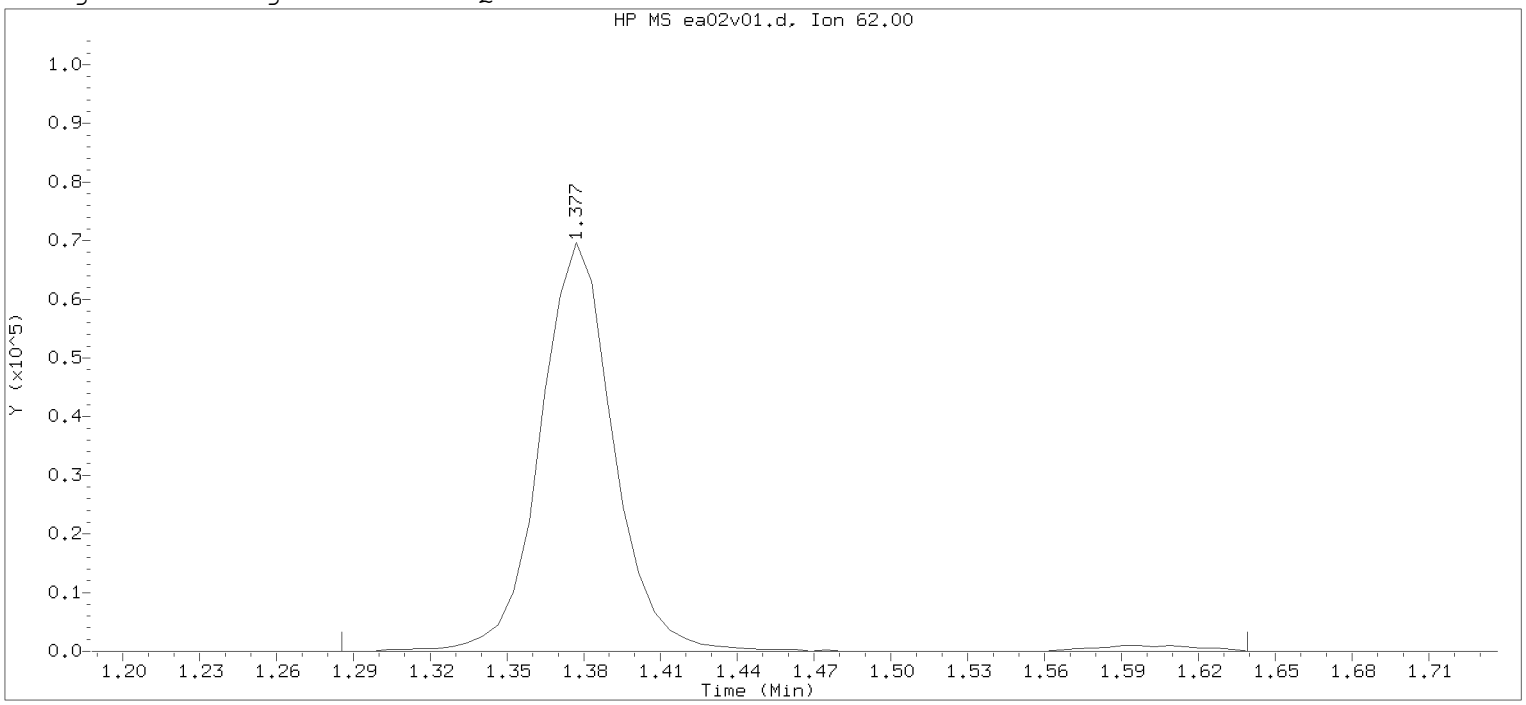
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02v01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:40 Analyst ID: KAS02648

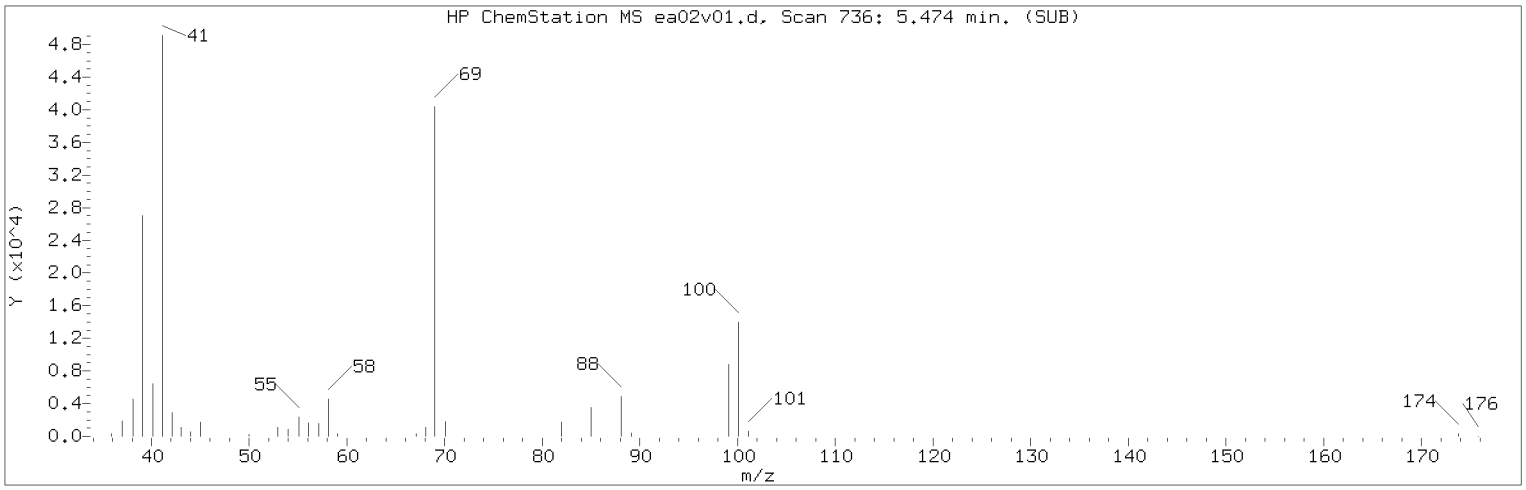
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:35
Date, time and analyst ID of latest file update: 02-May-2019 14:56 Automation

Sample Name: ICVELG Lab Sample ID: ICVELG

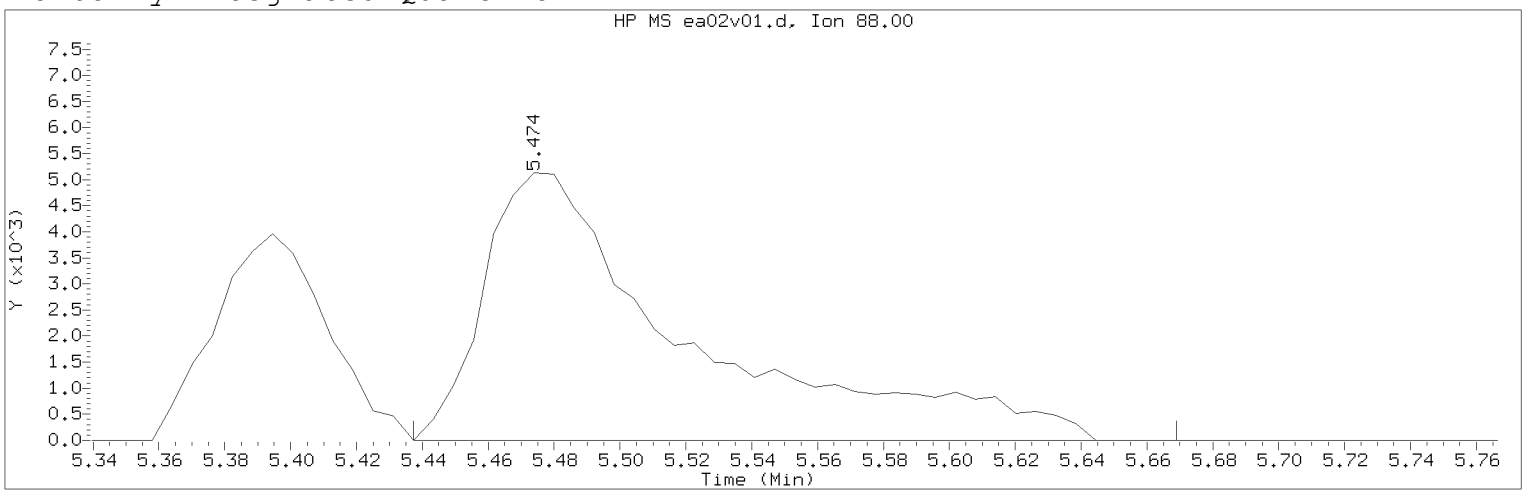
Compound Number : 6
Compound Name : Vinyl Chloride
Scan Number : 64
Retention Time (minutes): 1.377
Quant Ion : 62.00
Area : 141476
On-column Amount (ng) : 19.2653
Integration start scan : 48 Integration stop scan: 106
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kevin.sposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02v01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: ICVELG Lab Sample ID: ICVELG

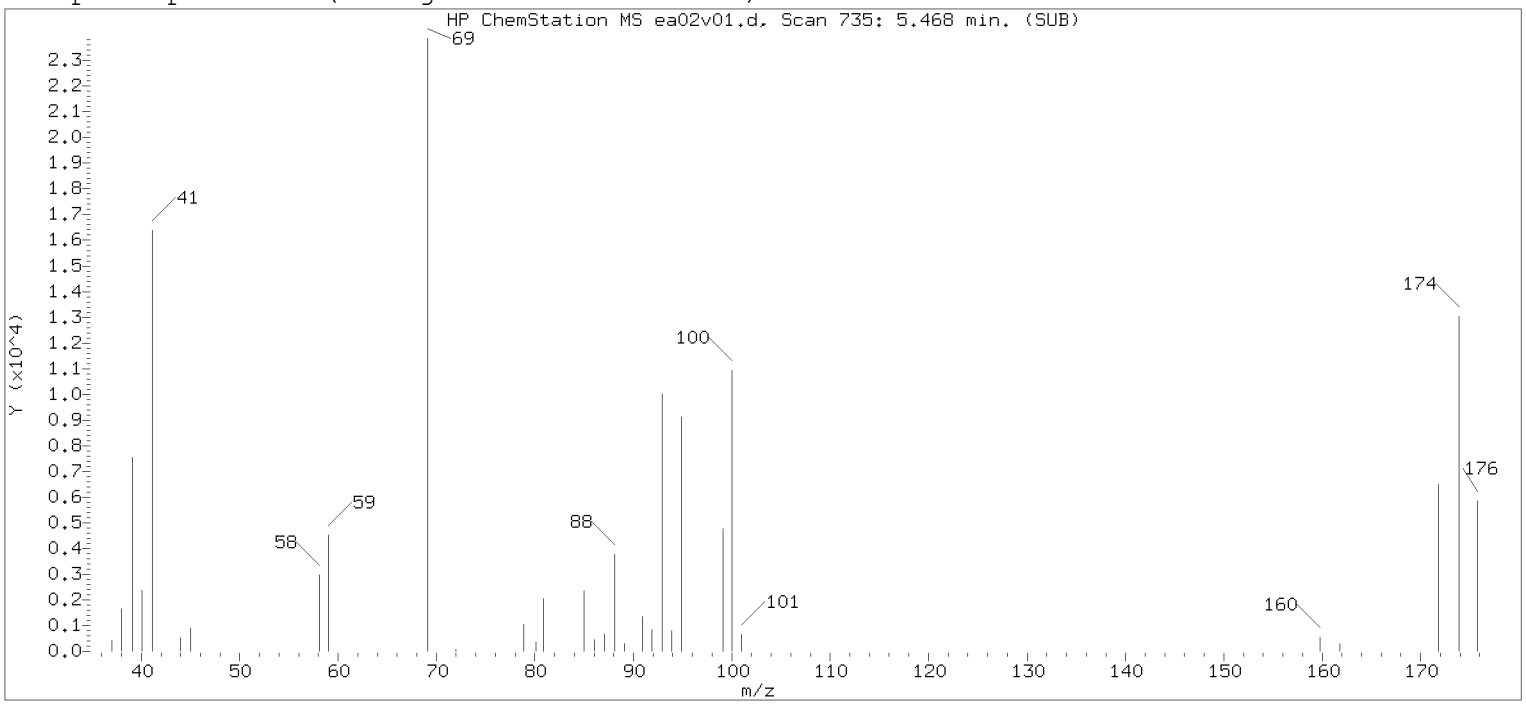
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 736
Retention Time (minutes): 5.474
Quant Ion : 88.00
Area (flag) : 21935M
On-Column Amount (ng) : 417.2917
Integration start scan : 729 Integration stop scan: 767
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

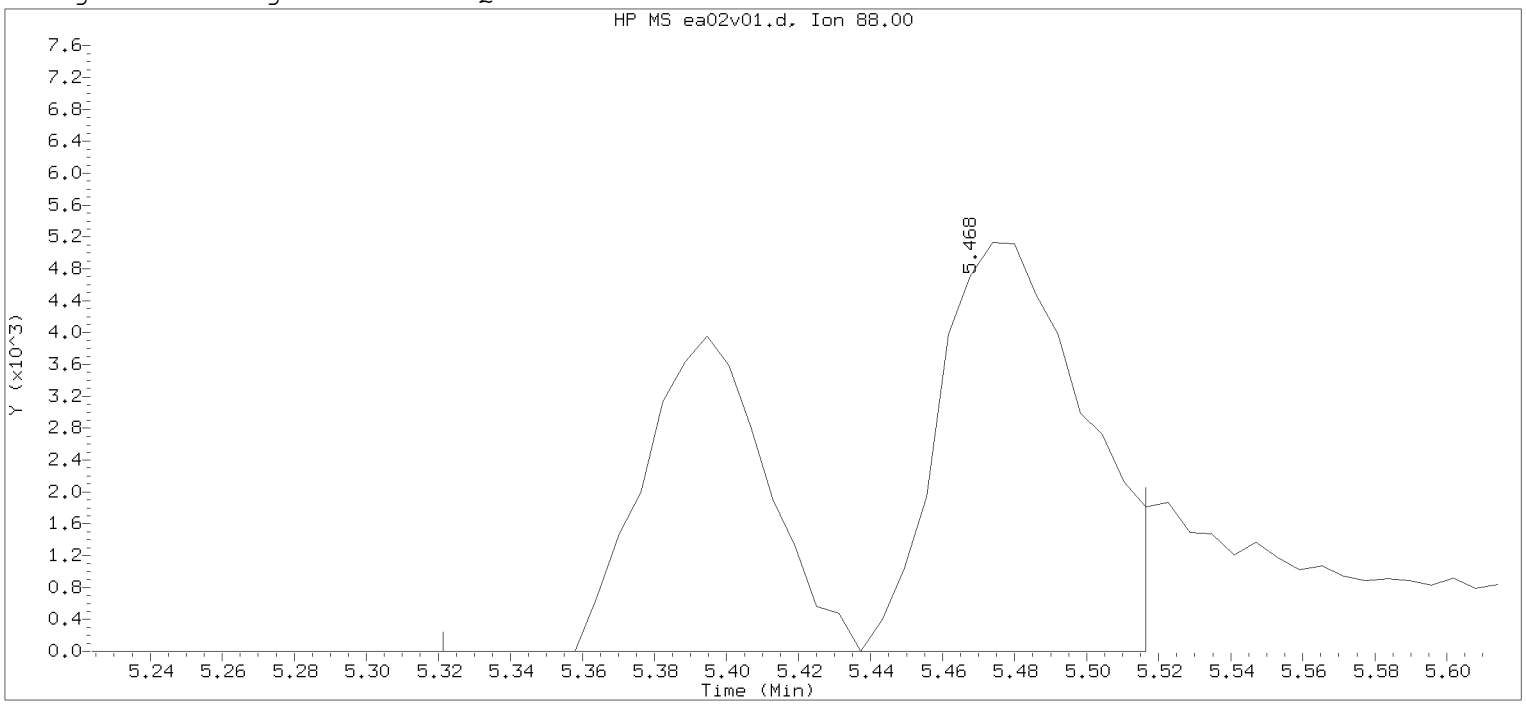
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02v01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:40 Analyst ID: KAS02648

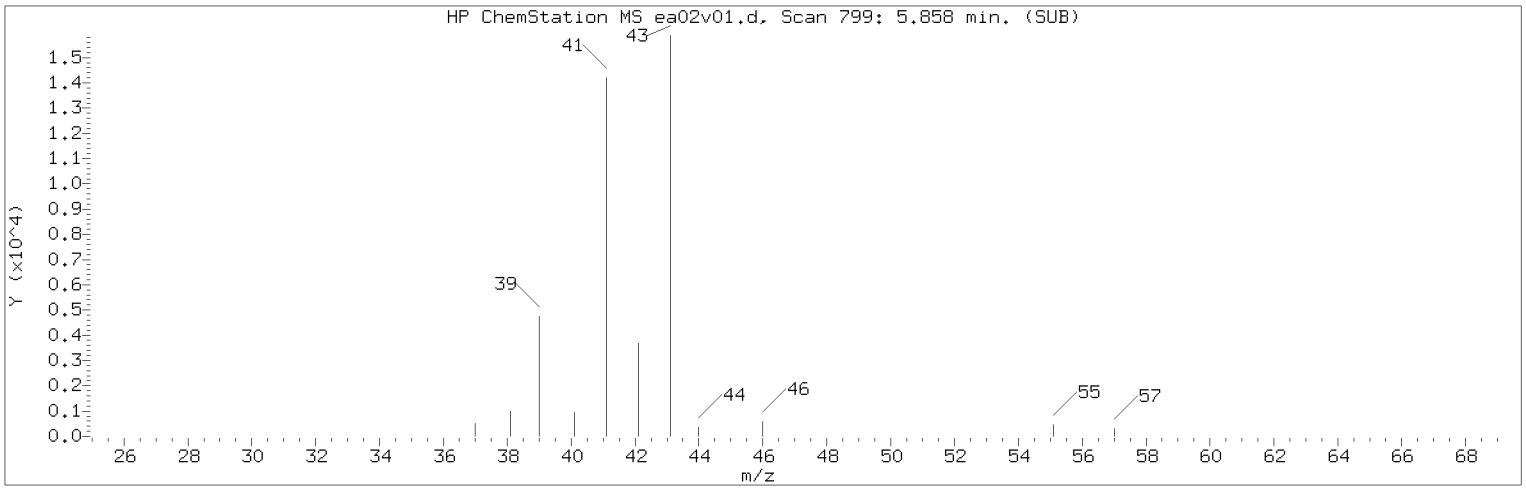
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:35
Date, time and analyst ID of latest file update: 02-May-2019 14:56 Automation

Sample Name: ICVELG Lab Sample ID: ICVELG

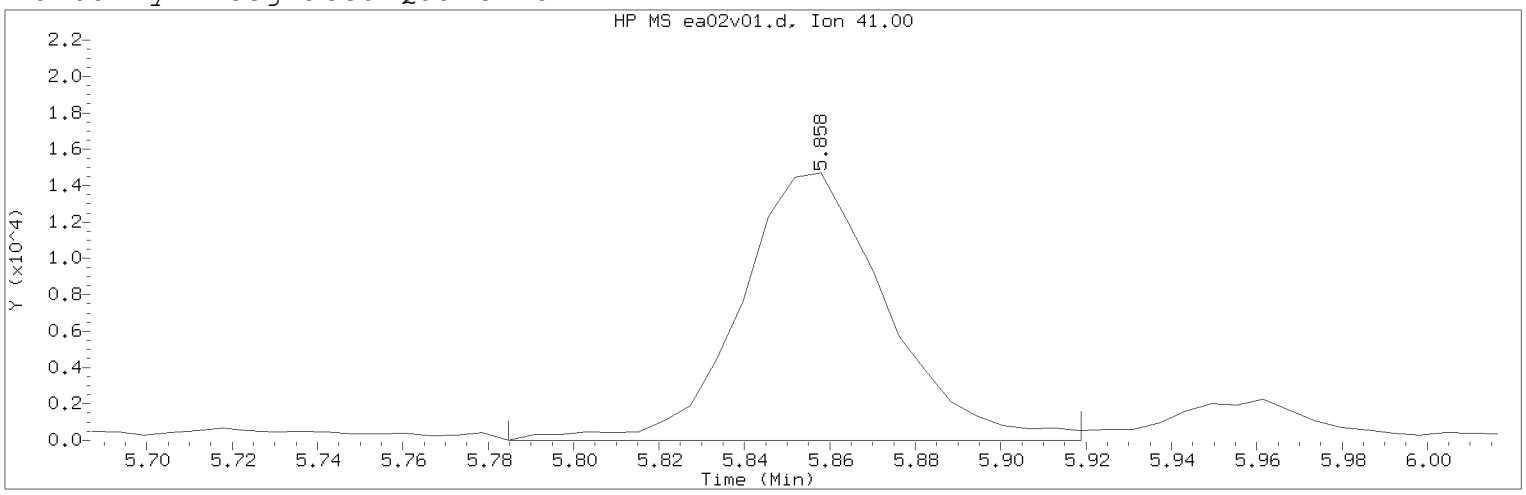
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 735
Retention Time (minutes): 5.468
Quant Ion : 88.00
Area : 23797
On-column Amount (ng) : 356.6382
Integration start scan : 710 Integration stop scan: 742
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02v01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: ICVELG Lab Sample ID: ICVELG

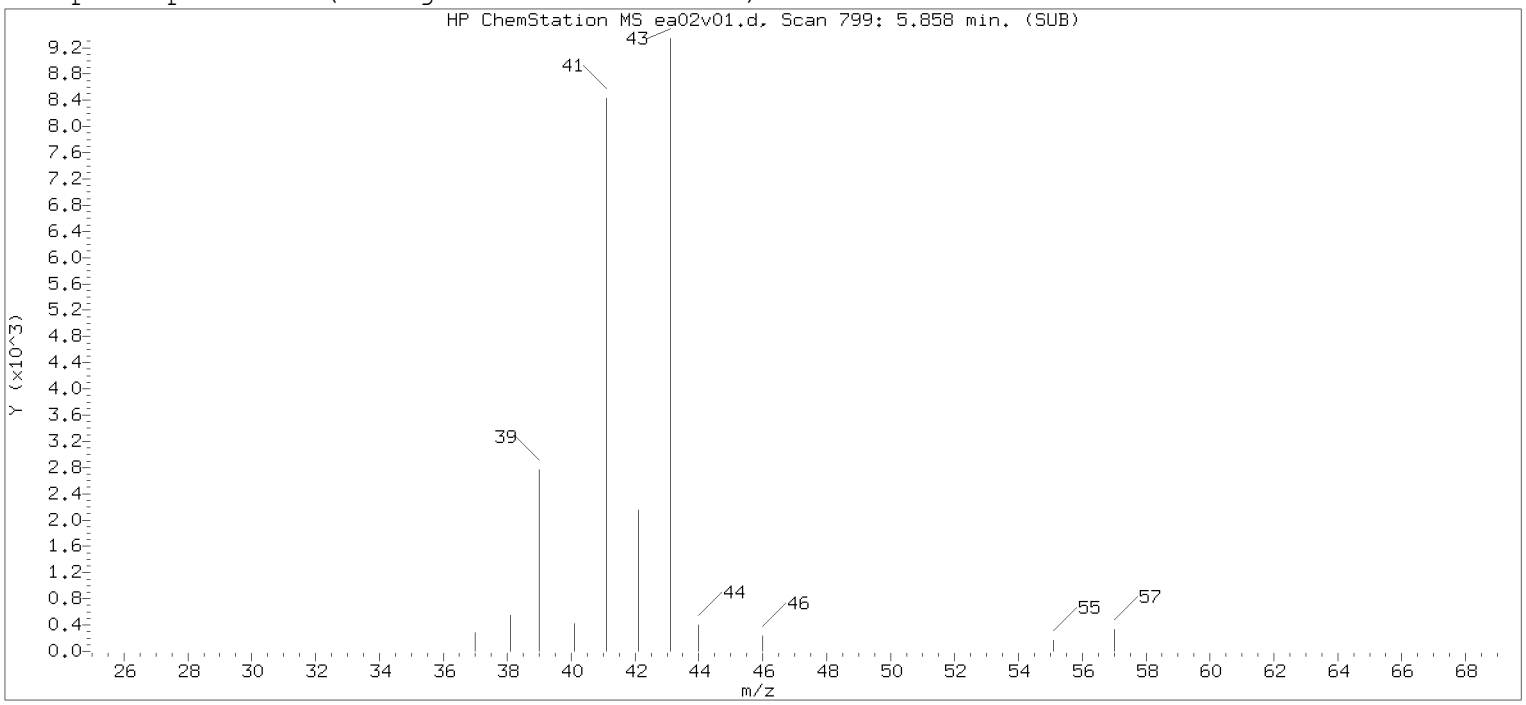
Compound Number : 80
Compound Name : 2-Nitropropane
Scan Number : 799
Retention Time (minutes): 5.858
Quant Ion : 41.00
Area (flag) : 34992M
On-Column Amount (ng) : 16.2925
Integration start scan : 786 Integration stop scan: 808
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

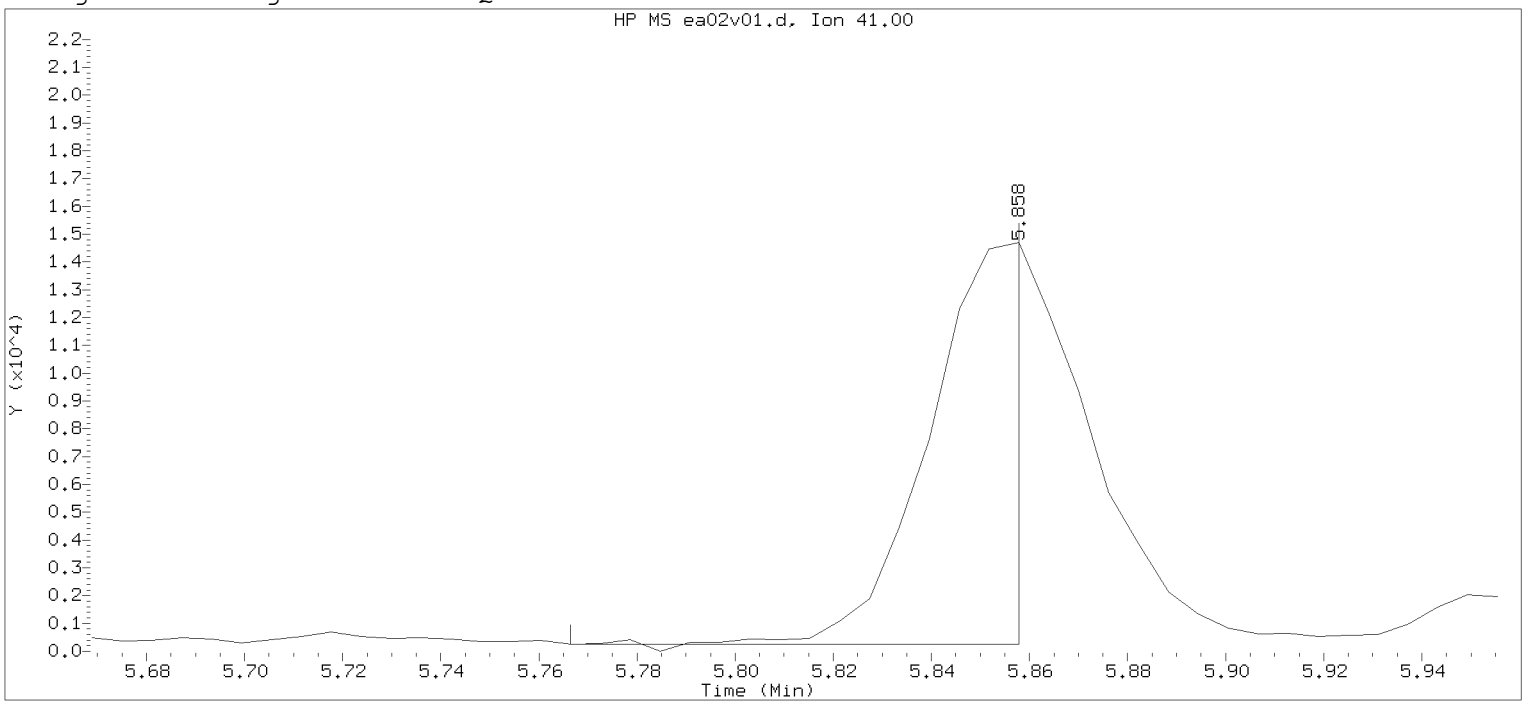
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02v01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:35
Date, time and analyst ID of latest file update: 02-May-2019 14:56 Automation

Sample Name: ICVELG Lab Sample ID: ICVELG

Compound Number : 80
Compound Name : 2-Nitropropane
Scan Number : 799
Retention Time (minutes): 5.858
Quant Ion : 41.00
Area : 17624
On-column Amount (ng) : 8.2544
Integration start scan : 783 Integration stop scan: 798
Y at integration start : 252 Y at integration end: 252

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user kas02648

Data File: /chem/HP15648.i/19may23b.b/ey23t05.d

Date : 23-MAY-2019 18:08

Client ID: BFB FEB05-19

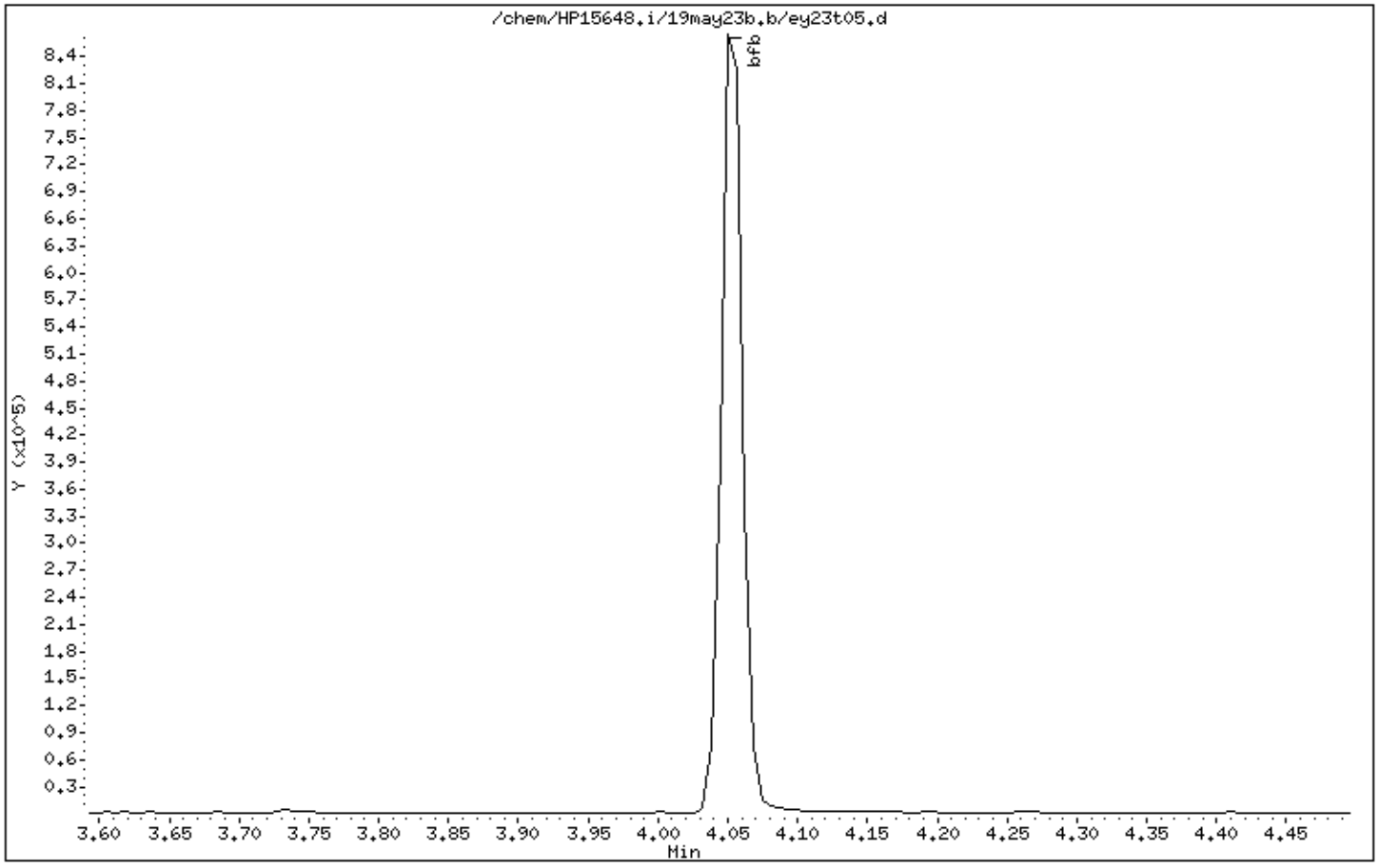
Instrument: HP15648.i

Sample Info: BFB FEB05-19;50ng BFB;1;3;;;;;;

Operator: DVV10203

Column phase: DB-624

Column diameter: 0.18



Digitally signed by Don V. Viray on 05/23/2019 at 18:09.
Target 3.5 esignature user ID: dvv10203

Data File: /chem/HP15648.i/19may23b.b/ey23t05.d

Date : 23-MAY-2019 18:08

Client ID: BFB FEB05-19

Instrument: HP15648.i

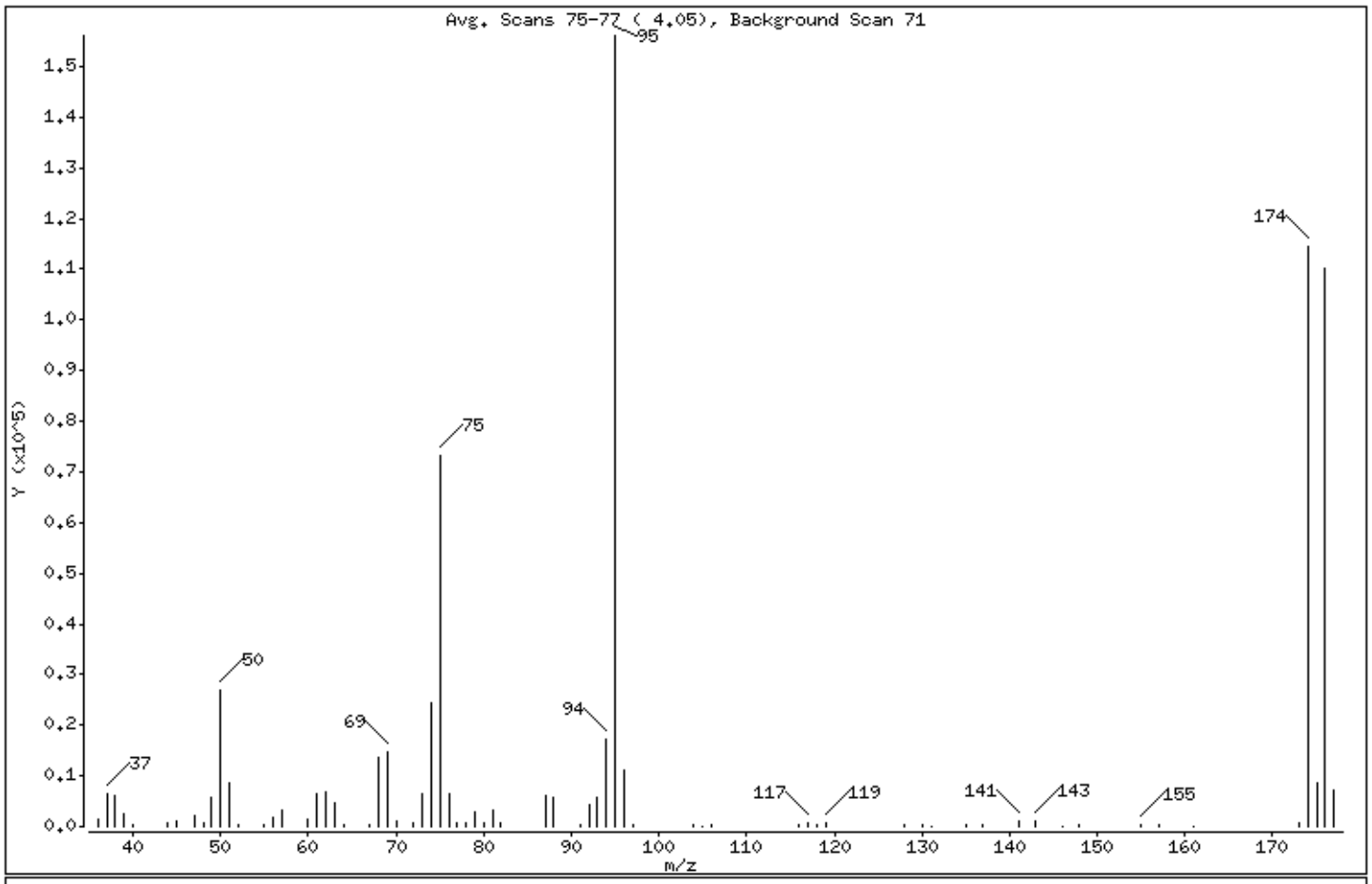
Sample Info: BFB FEB05-19;50ng BFB;1;3;;;;;;

Operator: DVV10203

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.28
75	30.00 - 60.00% of mass 95	46.82
96	5.00 - 9.00% of mass 95	7.16
173	Less than 2.00% of mass 174	0.45 (0.62)
174	50.00 - 100.00% of mass 95	73.26
175	5.00 - 9.00% of mass 174	5.48 (7.48)
176	95.00 - 101.00% of mass 174	70.52 (96.26)
177	5.00 - 9.00% of mass 176	4.67 (6.62)

Digitally signed by Don V. Viray on 05/23/2019 at 18:09.
Target 3.5 esignature user ID: dvv10203

Data File: /chem/HP15648.i/19may23b.b/ey23t05.d

Date : 23-MAY-2019 18:08

Client ID: BFB FEB05-19 Instrument: HP15648.i

Sample Info: BFB FEB05-19;50ng BFB;1;3;;;;;;

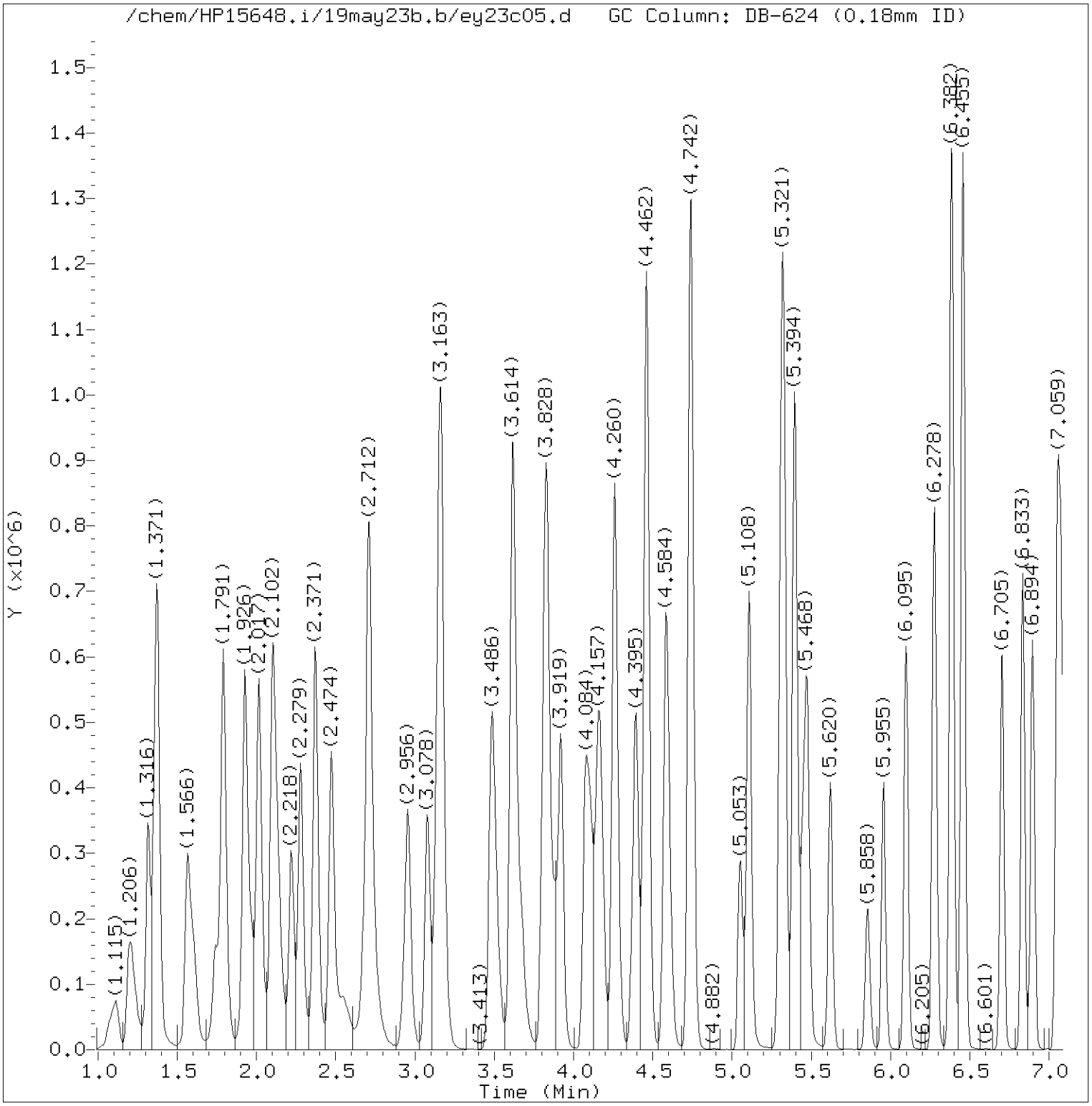
Operator: DVV10203

Column phase: DB-624 Column diameter: 0.18

Data File: ey23t05.d
Spectrum: Avg. Scans 75-77 (4.05), Background Scan 71
Location of Maximum: 95.00
Number of points: 69

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1293	62.00	6705	87.00	6181	131.00	85
37.00	6572	63.00	4549	88.00	5908	135.00	225
38.00	6046	64.00	524	91.00	449	137.00	209
39.00	2443	67.00	380	92.00	4181	141.00	1229
40.00	301	68.00	13745	93.00	5698	143.00	1073
44.00	708	69.00	14643	94.00	17280	146.00	103
45.00	1226	70.00	1239	95.00	156096	148.00	238
47.00	2003	72.00	789	96.00	11175	155.00	280
48.00	850	73.00	6470	97.00	193	157.00	214
49.00	5735	74.00	24248	104.00	478	161.00	101
50.00	26976	75.00	73088	105.00	95	173.00	704
51.00	8707	76.00	6442	106.00	525	174.00	114368
52.00	208	77.00	865	116.00	387	175.00	8555
55.00	303	78.00	616	117.00	756	176.00	110088
56.00	1973	79.00	2886	118.00	332	177.00	7290
57.00	3388	80.00	882	119.00	702		
60.00	1423	81.00	3117	128.00	491		
61.00	6613	82.00	675	130.00	531		

Digitally signed by Don V. Viray on 05/23/2019 at 18:09.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

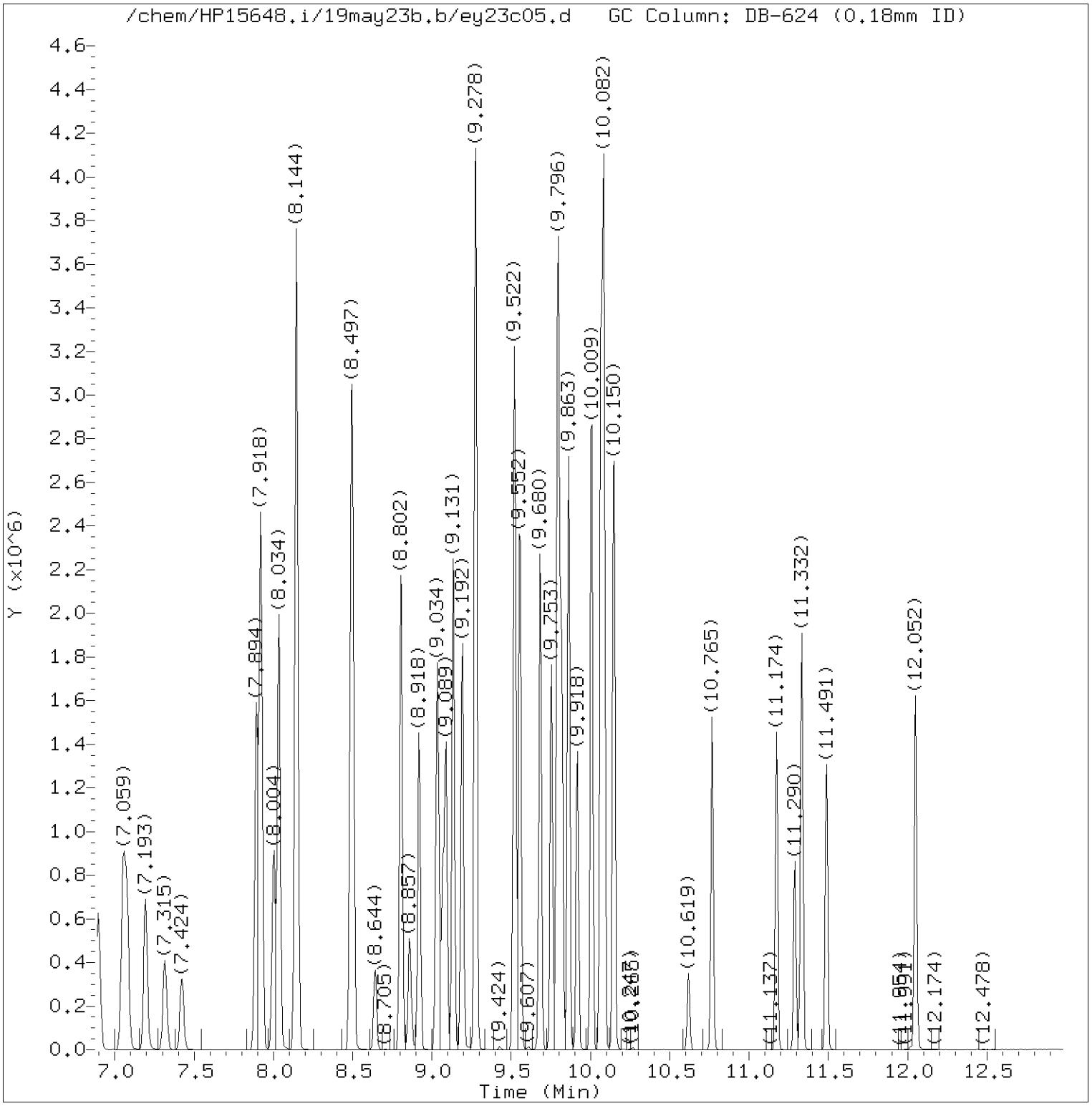
Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23c05.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 18:37 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 19:11 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Don V. Viray
on 05/23/2019 at 19:11.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23c05.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 18:37 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 19:11 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Don V. Viray
on 05/23/2019 at 19:11.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23c05.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 18:37 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 19:11 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.206	85	405377	43.834
4) Chloromethane	(2)	1.316	50	412957	54.870
5) 1,3-Butadiene	(2)	1.365	39	324412	57.339
6) Vinyl Chloride	(2)	1.383	62	372985	51.850
8) Bromomethane	(2)	1.566	94	249659	46.090
9) Chloroethane	(2)	1.602	64	205409	50.152
12) Trichlorofluoromethane	(2)	1.791	101	450757	44.078
11) n-Pentane	(2)	1.791	43	347915	41.412
14) Ethyl ether	(2)	1.926	59	234692	55.078
15) Freon 123a	(2)	1.938	67	294704	48.940
16) Acrolein	(1)	2.017	56	700440	455.113
17) 1,1-Dichloroethene	(2)	2.102	96	208986	49.629
17) 1,1-Dichloroethene	(2)	2.102	63	109677	49.129
18) Acetone	(1)	2.121	58	63945	99.823
19) Freon 113	(2)	2.121	101	197519	42.359
21) 2-Propanol	(1)	2.212	45	111724	291.922
22) Methyl Iodide	(2)	2.218	142	394493	49.993
23) Carbon Disulfide	(2)	2.279	76	734679	51.435
25) Allyl Chloride	(2)	2.371	41	428521	52.360
27) Methyl Acetate	(2)	2.377	43	222978	55.488
28) Methylene Chloride	(2)	2.474	84	240327	50.097
29)*t-Butyl alcohol-d10	(1)	2.486	65	186532	250.000
30) t-Butyl alcohol	(1)	2.553	59	178102	255.422
31) Acrylonitrile	(2)	2.669	53	128624	52.640
32) trans-1,2-Dichloroethene	(2)	2.712	96	238239	50.263
33) Methyl Tertiary Butyl Ether	(2)	2.712	73	712047	50.386
34) n-Hexane	(2)	2.956	57	284567	34.261
36) 1,1-Dichloroethane	(2)	3.078	63	459008	51.690
38) di-Isopropyl ether	(2)	3.151	45	875776	56.044
39) 2-Chloro-1,3-butadiene	(2)	3.163	53	424578	50.072
40) Ethyl t-butyl ether	(2)	3.486	59	786906	51.049
42) cis-1,2-Dichloroethene	(2)	3.614	96	265405	49.837
44) 2-Butanone	(2)	3.620	43	313037	95.087
43) 1,2-Dichloroethene (Total)	(2)		96	503644	100.100
45) 2,2-Dichloropropane	(2)	3.626	77	376127	48.008
47) Propionitrile	(1)	3.675	54	248170	263.458
48) Methacrylonitrile	(2)	3.822	67	342537	130.554
49) Bromochloromethane	(2)	3.840	128	131354	49.660

* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 05/23/2019 at 19:11.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23c05.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 18:37 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 19:11 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	3.882	71	84339	85.431
51) Chloroform	(2)	3.919	83	416288	49.287
52)$Dibromofluoromethane	(2)	4.071	113	237710	48.770
52)$Dibromofluoromethane	(2)	4.071	111	243105	48.589
53) 1,1,1-Trichloroethane	(2)	4.102	97	364365	46.622
54) Cyclohexane	(2)	4.163	56	406615	42.360
54) Cyclohexane	(2)	4.163	84	335152	40.634
54) Cyclohexane	(2)	4.157	69	121682	38.828
55) 1,1-Dichloropropene	(2)	4.260	75	349656	50.458
56) Carbon Tetrachloride	(2)	4.267	117	305247	45.918
58) Isobutyl Alcohol	(1)	4.382	41	143606	606.608
57)$1,2-Dichloroethane-d4	(2)	4.401	102	61636	50.112
57)$1,2-Dichloroethane-d4	(2)	4.395	65	291396	46.679
57)$1,2-Dichloroethane-d4	(2)	4.395	104	38940	49.381
60) Benzene	(2)	4.456	78	1049825	51.594
61) 1,2-Dichloroethane	(2)	4.468	62	310599	45.447
61) 1,2-Dichloroethane	(2)	4.468	98	28694	48.040
65) t-Amyl methyl ether	(2)	4.584	73	770020	50.375
66)*Fluorobenzene	(2)	4.736	96	1048658M	50.000
67) n-Heptane	(2)	4.748	43	254774	28.619
69) n-Butanol	(1)	5.053	56	252736	1234.288
71) Trichloroethene	(2)	5.108	95	254699	49.623
73) Methylcyclohexane	(2)	5.315	83	478325	44.755
73) Methylcyclohexane	(2)	5.315	98	218159	44.390
74) 1,2-Dichloropropane	(2)	5.327	63	266423	52.626
75) Dibromomethane	(2)	5.449	93	145555	48.028
77) Methyl Methacrylate	(2)	5.474	69	226736	49.122
76) 1,4-Dioxane	(1)	5.474	88	40194M	697.535
79) Bromodichloromethane	(2)	5.620	83	297496	47.184
80) 2-Nitropropane	(2)	5.852	41	155880	74.602
81) 2-Chloroethyl Vinyl Ether	(2)	5.955	63	195434	50.099
82) cis-1,3-Dichloropropene	(2)	6.095	75	402963	49.069
83) 4-Methyl-2-pentanone	(2)	6.278	43	651577	92.160
84)$Toluene-d8	(3)	6.382	98	1054820	49.730
84)$Toluene-d8	(3)	6.388	100	681978	50.018
89) Toluene	(3)	6.455	92	646482	49.799
90) trans-1,3-Dichloropropene	(3)	6.705	75	362293	46.696
91) 1,3-Dichloropropene (total)	(3)		100	765256	95.764

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/23/2019 at 19:11.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23c05.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 18:37 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 19:11 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	6.833	69	405919	49.078
93) 1,1,2-Trichloroethane	(3)	6.894	97	216456	48.989
94) Tetrachloroethene	(3)	7.053	166	257910	48.863
95) 1,3-Dichloropropane	(3)	7.077	76	387256	49.867
97) 2-Hexanone	(3)	7.193	43	460270	83.470
102) 1-Chlorohexane	(3)	7.315	91	18481	41.195
98) Dibromochloromethane	(3)	7.315	129	222750	46.700
100) 1,2-Dibromoethane	(3)	7.424	107	226160	48.108
101)*Chlorobenzene-d5	(3)	7.894	117	780977	50.000
103) Chlorobenzene	(3)	7.918	112	691039	48.140
104) 1,1,1,2-Tetrachloroethane	(3)	8.004	131	234626	48.126
105) Ethylbenzene	(3)	8.034	91	1248298	48.605
107) m+p-Xylene	(3)	8.144	106	958483	95.871
109) Xylene (Total)	(3)		106	1428198	144.013
108) o-Xylene	(3)	8.491	106	469715	48.143
110) Styrene	(3)	8.504	104	780506	48.433
111) Bromoform	(3)	8.644	173	144422	45.420
112) Isopropylbenzene	(3)	8.808	105	1199021	46.189
113) Cyclohexanone	(1)	8.857	55	169076	778.889
115)$4-Bromofluorobenzene	(3)	8.918	95	398621	48.887
115)$4-Bromofluorobenzene	(3)	8.918	174	303352	49.650
116) Bromobenzene	(4)	9.034	156	279840	48.684
117) 1,1,2,2-Tetrachloroethane	(4)	9.040	83	324479	48.640
118) 1,2,3-Trichloropropane	(4)	9.070	110	96989	47.973
119) trans-1,4-Dichloro-2-butene	(4)	9.089	53	209561	95.593
120) n-Propylbenzene	(4)	9.131	91	1388074	45.805
121) 2-Chlorotoluene	(4)	9.192	126	283523	47.521
123) 1,3,5-Trimethylbenzene	(4)	9.272	105	1010750	45.977
122) 4-Chlorotoluene	(4)	9.278	126	290582	47.513
125) tert-Butylbenzene	(4)	9.522	134	218209	44.654
126) Pentachloroethane	(4)	9.528	167	170758	46.937
127) 1,2,4-Trimethylbenzene	(4)	9.558	105	1046286	46.221
128) sec-Butylbenzene	(4)	9.680	105	1217640	43.660
130) 1,3-Dichlorobenzene	(4)	9.753	146	538055	48.033
131) p-Isopropyltoluene	(4)	9.790	119	1078943	43.978
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	412517	50.000
134) 1,4-Dichlorobenzene	(4)	9.820	146	541370	47.245
135) 1,2,3-Trimethylbenzene	(4)	9.863	105	1171589	48.606

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/23/2019 at 19:11.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23c05.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 18:37 Analyst ID: DVV10203

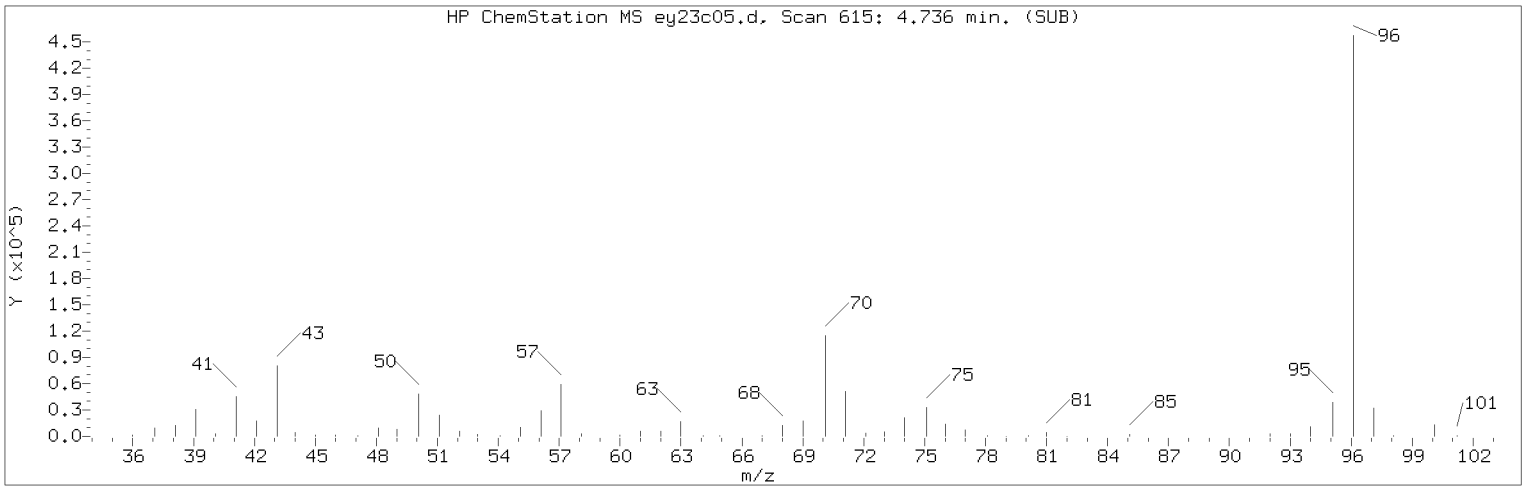
Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 19:11 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

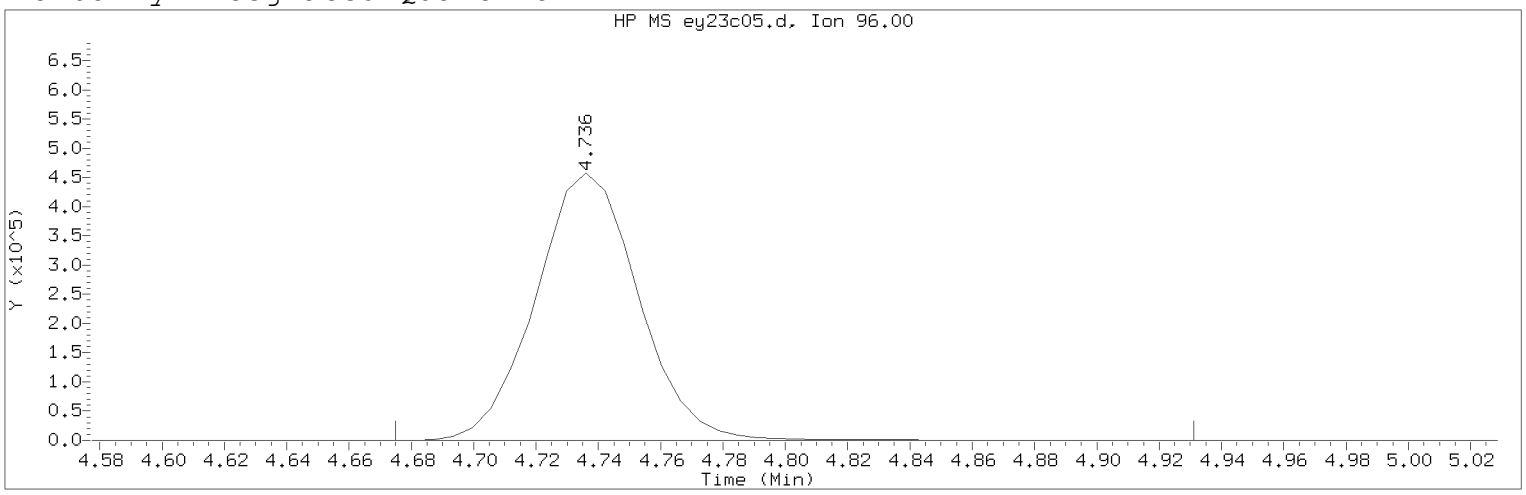
	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
136)	Benzyl Chloride	(4)	9.918	91	735196	47.237
137)	1,3-Diethylbenzene	(4)	10.009	119	733473	47.480
138)	1,4-Diethylbenzene	(4)	10.064	119	774476	47.052
140)	n-Butylbenzene	(4)	10.082	92	508010	42.161
139)	1,2-Dichlorobenzene	(4)	10.082	146	506905	47.269
142)	Diethylbenzene (total)	(4)		100	2111337	142.242
141)	1,2-Diethylbenzene	(4)	10.150	119	603388	47.710
143)	1,2-Dibromo-3-chloropropane	(4)	10.619	75	67270	44.011
145)	1,3,5-Trichlorobenzene	(4)	10.765	180	346493	43.939
147)	1,2,4-Trichlorobenzene	(4)	11.174	180	315836	44.868
148)	Hexachlorobutadiene	(4)	11.290	225	114353	37.898
149)	Naphthalene	(4)	11.332	128	1068254	46.032
150)	1,2,3-Trichlorobenzene	(4)	11.491	180	299242	45.023
151)	2-Methylnaphthalene	(4)	12.052	142	581151	39.629

Digitally signed by Don V. Viray
on 05/23/2019 at 19:11.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may23b.b/ey23c05.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 18:37 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 19:11 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

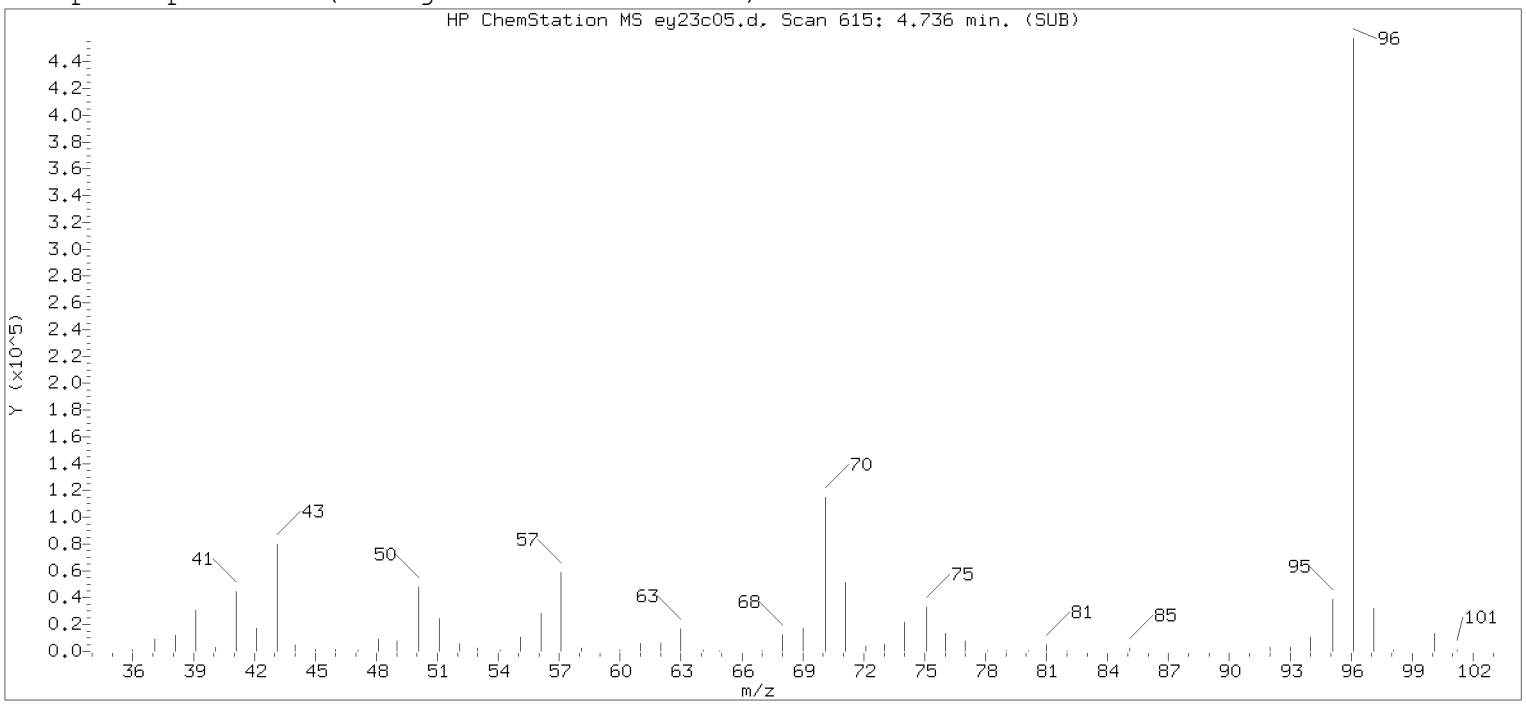
Compound Number : 66
Compound Name : Fluorobenzene
Scan Number : 615
Retention Time (minutes): 4.736
Quant Ion : 96.00
Area (flag) : 1048658M
On-Column Amount (ng) : 50.0000
Integration start scan : 604 Integration stop scan: 646
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

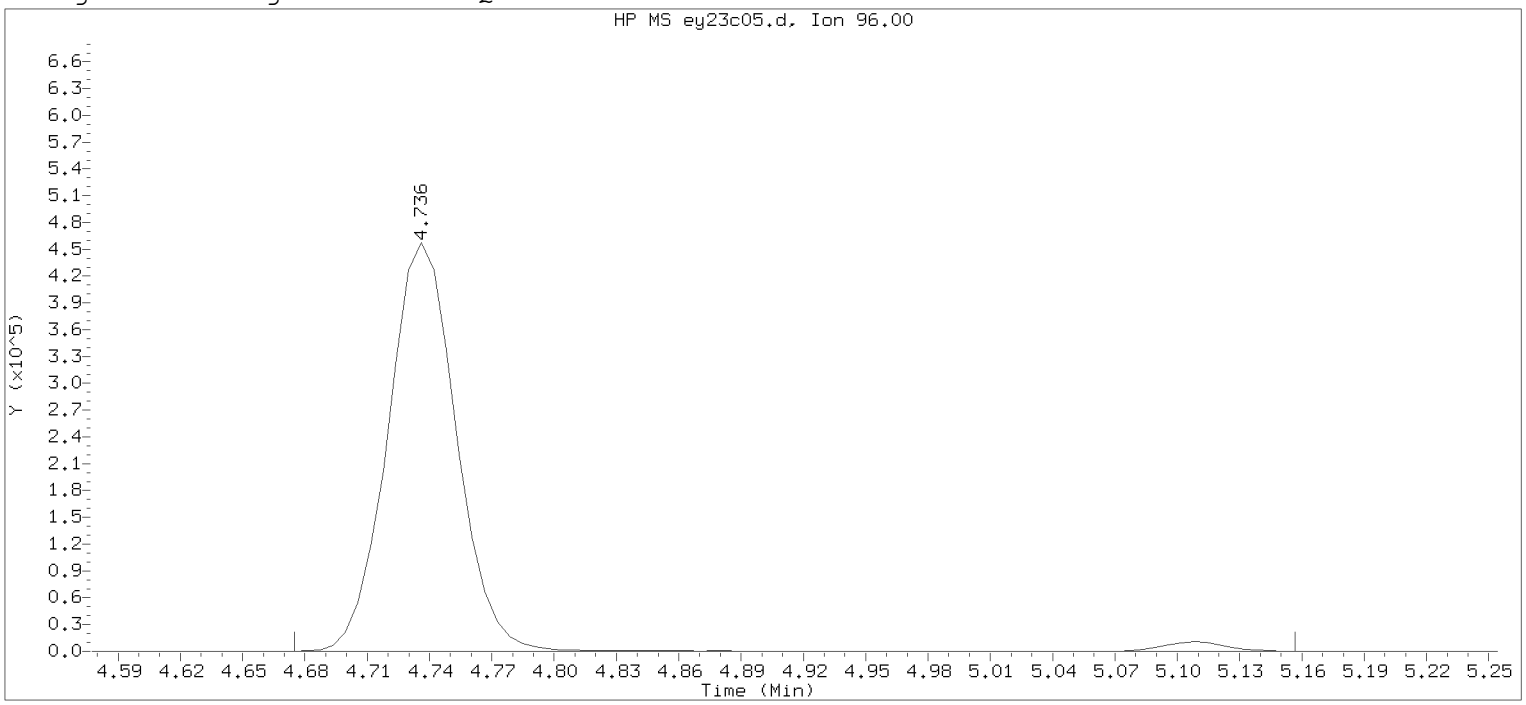
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 19:11.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may23b.b/ey23c05.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 18:37 Analyst ID: DVV10203

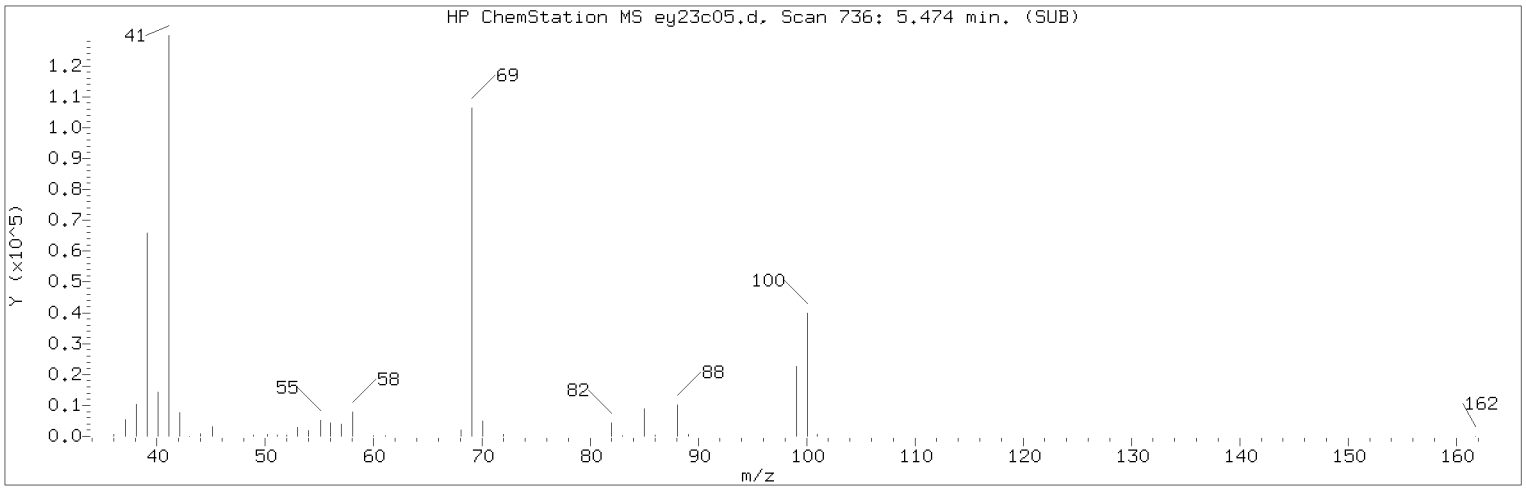
Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 18:53 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

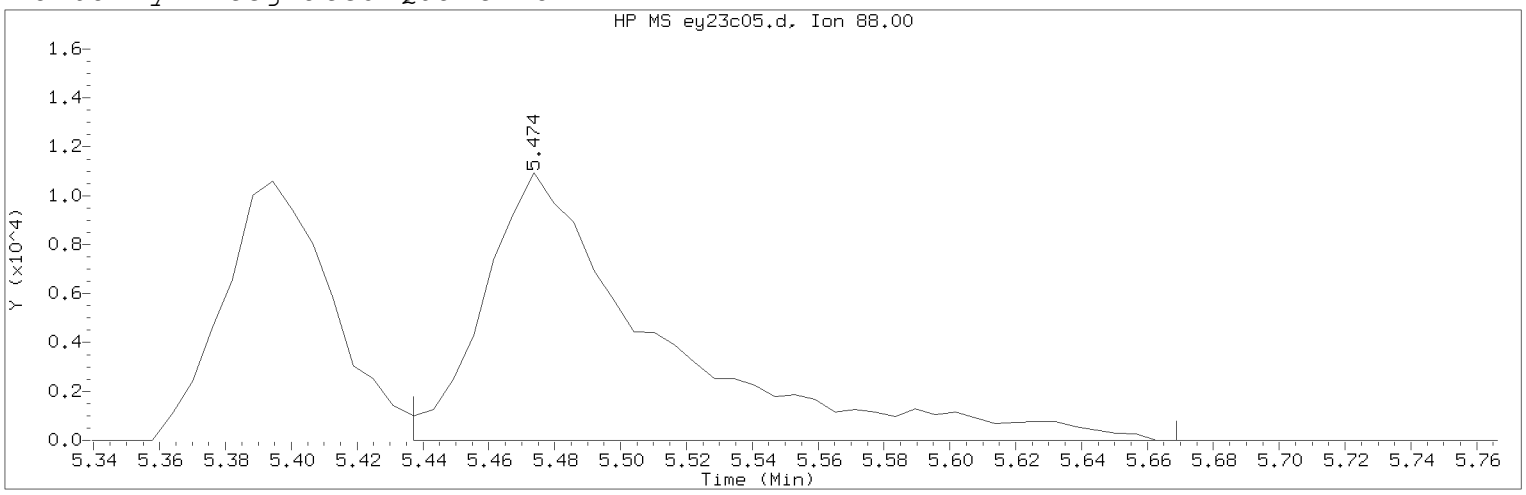
Compound Number : 66
Compound Name : Fluorobenzene
Scan Number : 615
Retention Time (minutes): 4.736
Quant Ion : 96.00
Area : 1070575
On-column Amount (ng) : 50.0000
Integration start scan : 604 Integration stop scan: 683
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/23/2019 at 19:11.
Target 3.5 esignature user id: dvviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may23b.b/ey23c05.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 18:37 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 19:11 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

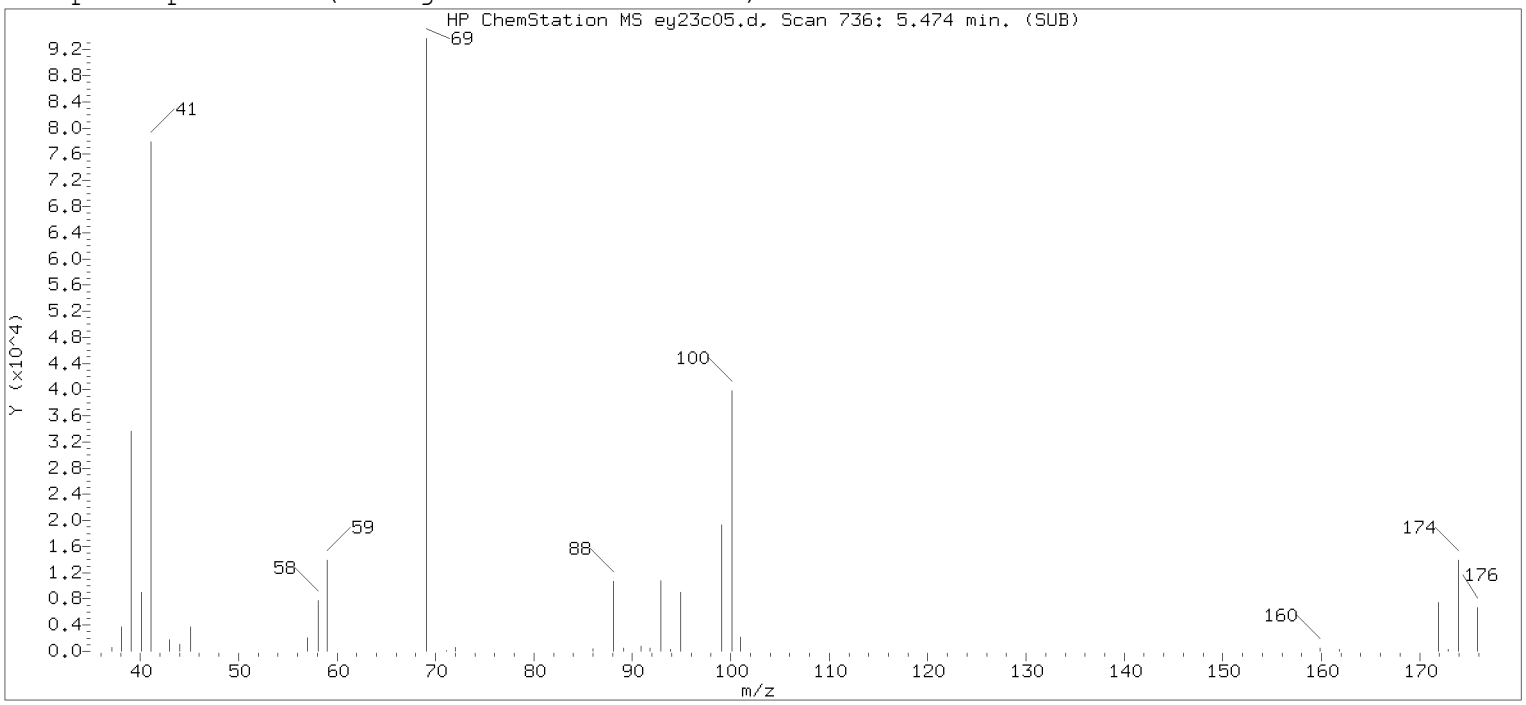
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 736
Retention Time (minutes): 5.474
Quant Ion : 88.00
Area (flag) : 40194M
On-Column Amount (ng) : 697.5346
Integration start scan : 729 Integration stop scan: 767
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

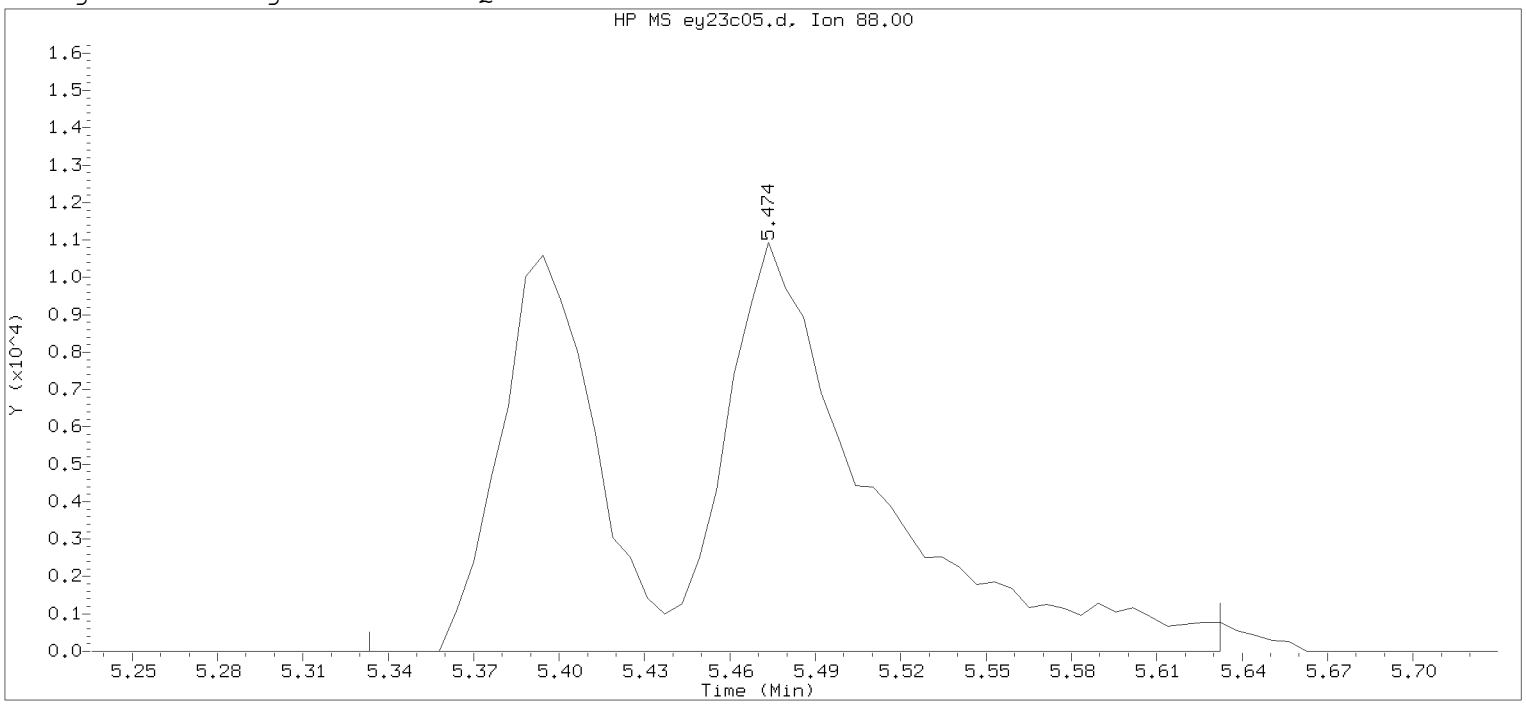
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 19:11.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may23b.b/ey23c05.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 18:37 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 18:53 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 736
Retention Time (minutes): 5.474
Quant Ion : 88.00
Area : 63473
On-column Amount (ng) : 1101.5265
Integration start scan : 712 Integration stop scan: 761
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/23/2019 at 19:11.
Target 3.5 esignature user id: dvv10203

Raw QC Data

Volatiles by GC/MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKE15

Data file: /chem/HP15648.i/19may23b.b/ey23b31.d
Injection date and time: **23-MAY-2019 19:56**
Data file Sample Info. Line: VBLKE15;VBLKE15;1;3;;;;;;
Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 20:17 dvv10203

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.487(0.000)	246	65	180608	(-3)	250.00	
66) Fluorobenzene	4.736(0.000)	615	96	1045030	(0)	50.00	
101) Chlorobenzene-d5	7.894(0.000)	1133	117	777324	(0)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802(0.000)	1446	152	416762	(1)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.072(0.000)	113	232960	47.962	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.395(0.001)	102	62182	50.731	101%		80 - 120
84) Toluene-d8	(3)	6.388(-0.001)	98	1046297	49.560	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918(0.000)	95	395072	48.679	97%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)			Not Detected					0.2	1
4) Chloromethane	(2)			Not Detected					0.2	1
5) 1,3-Butadiene	(2)			Not Detected					1	3
6) Vinyl Chloride	(2)			Not Detected					0.2	1
8) Bromomethane	(2)			Not Detected					0.3	1
9) Chloroethane	(2)			Not Detected					0.2	1
11) n-Pentane	(2)			Not Detected					0.4	10
12) Trichlorofluoromethane	(2)			Not Detected					0.2	1
14) Ethyl ether	(2)			Not Detected					0.2	5
15) Freon 123a	(2)			Not Detected					0.4	5
16) Acrolein	(1)			Not Detected					2	100
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
21) 2-Propanol	(1)			Not Detected					18	100
22) Methyl Iodide	(2)			Not Detected					0.2	1
23) Carbon Disulfide	(2)			Not Detected					0.2	5
25) Allyl Chloride	(2)			Not Detected					0.3	5
27) Methyl Acetate	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
30) t-Butyl alcohol	(1)			Not Detected					12	50
31) Acrylonitrile	(2)			Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)			Not Detected					0.2	1
34) n-Hexane	(2)			Not Detected					0.2	5
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
38) di-Isopropyl ether	(2)			Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)			Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)			Not Detected					0.2	2

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23b31.d Injection date and time: **23-MAY-2019 19:56**
Data file Sample Info. Line: VBLKE15;VBLKE15;1;3;;;;;; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 20:17 dvv10203

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)				Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					0.2	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					0.2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
73) Methylcyclohexane	(2)				Not Detected					0.2	5
74) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
75) Dibromomethane	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
77) Methyl Methacrylate	(2)				Not Detected					0.2	5
79) Bromodichloromethane	(2)				Not Detected					0.2	1
80) 2-Nitropropane	(2)				Not Detected					0.8	10
81) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
82) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
83) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
89) Toluene	(3)				Not Detected					0.2	1
90) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
91) 1,3-Dichloropropene (total)	(3)				Not Detected					0.2	5
92) Ethyl Methacrylate	(3)				Not Detected					0.2	5
93) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
95) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
97) 2-Hexanone	(3)				Not Detected					0.3	10
98) Dibromochloromethane	(3)				Not Detected					0.2	1
100) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
102) 1-Chlorohexane	(3)				Not Detected					0.3	5
103) Chlorobenzene	(3)				Not Detected					0.2	1
104) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
110) Styrene	(3)				Not Detected					0.2	5
111) Bromoform	(3)				Not Detected					0.2	4
112) Isopropylbenzene	(3)				Not Detected					0.2	5
113) Cyclohexanone	(1)				Not Detected					25	100
116) Bromobenzene	(4)				Not Detected					0.2	5
117) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
118) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
119) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50
120) n-Propylbenzene	(4)				Not Detected					0.2	5

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23b31.d Injection date and time: **23-MAY-2019 19:56**
Data file Sample Info. Line: VBLKE15;VBLKE15;1;3;;;;;; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 20:17 dvv10203

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
121) 2-Chlorotoluene	(4)				Not Detected					0.2	5
122) 4-Chlorotoluene	(4)				Not Detected					0.2	5
123) 1,3,5-Trimethylbenzene	(4)				Not Detected					0.3	5
125) tert-Butylbenzene	(4)				Not Detected					0.3	5
126) Pentachloroethane	(4)				Not Detected					0.2	5
127) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5
128) sec-Butylbenzene	(4)				Not Detected					0.2	5
130) 1,3-Dichlorobenzene	(4)				Not Detected					0.2	5
131) p-Isopropyltoluene	(4)				Not Detected					0.2	5
134) 1,4-Dichlorobenzene	(4)				Not Detected					0.2	5
135) 1,2,3-Trimethylbenzene	(4)				Not Detected					0.3	5
136) Benzyl Chloride	(4)				Not Detected					0.3	5
137) 1,3-Diethylbenzene	(4)				Not Detected					0.2	5
138) 1,4-Diethylbenzene	(4)				Not Detected					0.2	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
140) n-Butylbenzene	(4)				Not Detected					0.2	5
141) 1,2-Diethylbenzene	(4)				Not Detected					0.2	5
142) Diethylbenzene (total)	(4)				Not Detected					0.2	5
143) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.3	5
145) 1,3,5-Trichlorobenzene	(4)				Not Detected					0.2	5
147) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	5
148) Hexachlorobutadiene	(4)				Not Detected					0.7	5
149) Naphthalene	(4)				Not Detected					1	5
150) 1,2,3-Trichlorobenzene	(4)				Not Detected					0.4	5
151) 2-Methylnaphthalene	(4)				Not Detected					0.7	5

Total number of targets = 110

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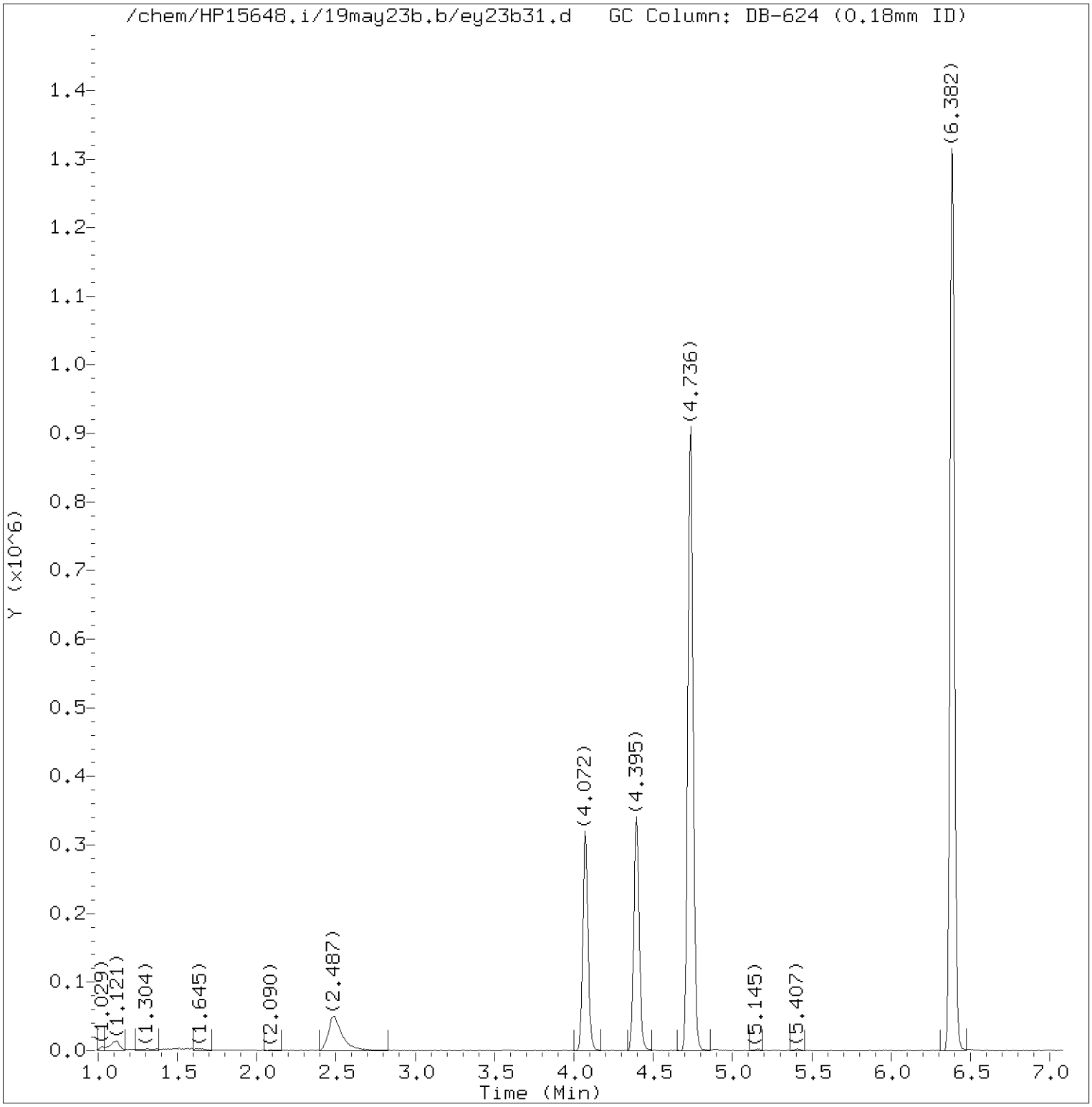
Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

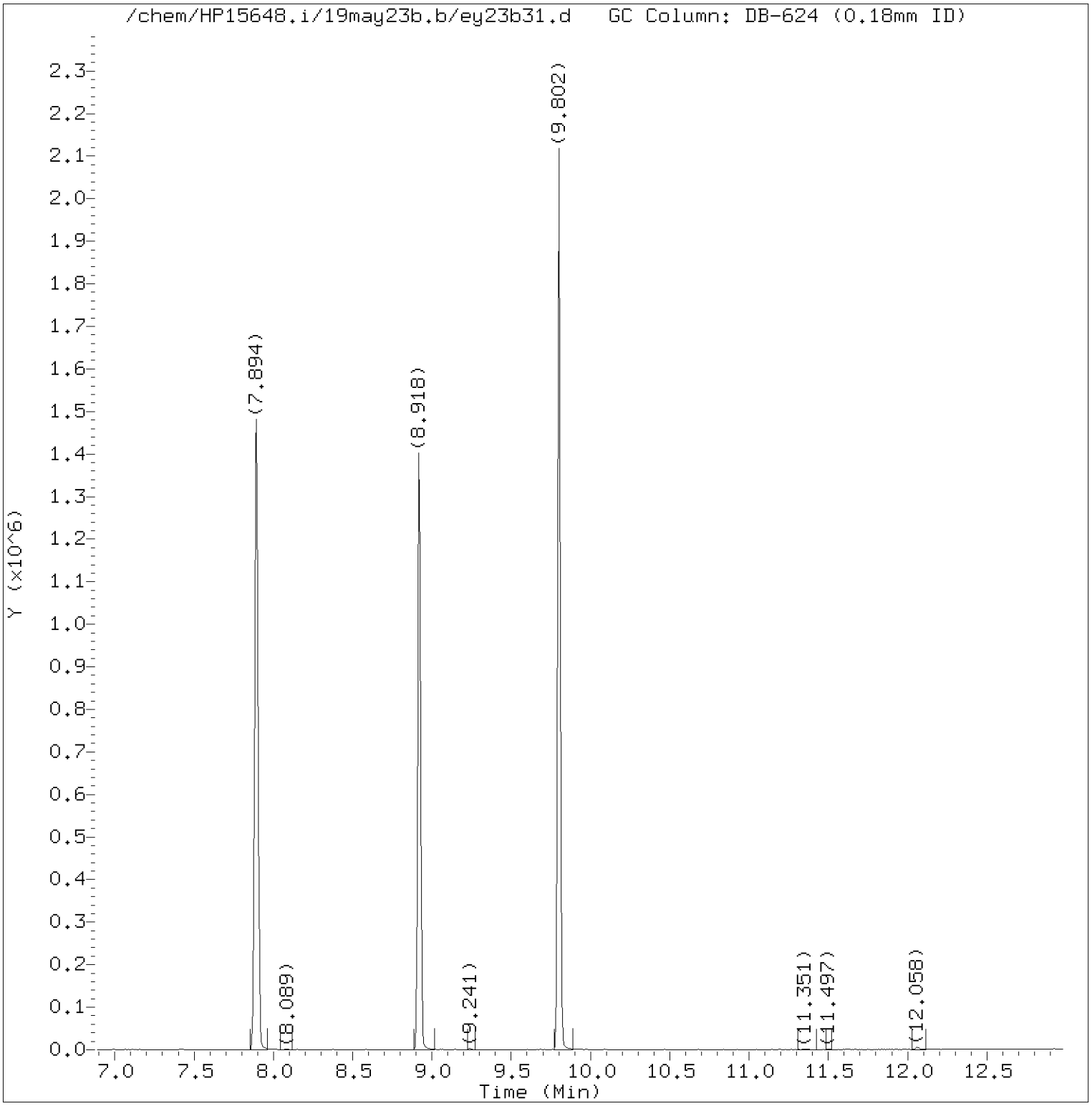
Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23b31.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 19:56 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:17 dvv10203

Sample Name: VBLKE15 Lab Sample ID: VBLKE15

Digitally signed by Don V. Viray
on 05/23/2019 at 20:31.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23b31.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 19:56 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:17 dvv10203

Sample Name: VBLKE15 Lab Sample ID: VBLKE15

Digitally signed by Don V. Viray
on 05/23/2019 at 20:31.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23b31.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 19:56 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:17 dvv10203

Sample Name: VBLKE15 Lab Sample ID: VBLKE15

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.487	65	180608	250.000
52)$Dibromofluoromethane	(2)	4.072	113	232960	47.962
57)$1,2-Dichloroethane-d4	(2)	4.395	102	62182	50.731
66)*Fluorobenzene	(2)	4.736	96	1045030	50.000
84)$Toluene-d8	(3)	6.388	98	1046297	49.560
101)*Chlorobenzene-d5	(3)	7.894	117	777324	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	395072	48.679
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	416762	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/23/2019 at 20:31.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSE15

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSE15

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s31.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	13	
74-87-3	Chloromethane	20	
106-99-0	1,3-Butadiene	26	
75-01-4	Vinyl Chloride	19	
74-83-9	Bromomethane	14	
75-00-3	Chloroethane	18	
109-66-0	n-Pentane	20	
75-69-4	Trichlorofluoromethane	16	
60-29-7	Ethyl ether	20	
354-23-4	Freon 123a	20	
107-02-8	Acrolein	130	
75-35-4	1,1-Dichloroethene	22	
67-64-1	Acetone	140	
76-13-1	Freon 113	20	
67-63-0	2-Propanol	170	
74-88-4	Methyl Iodide	20	
75-15-0	Carbon Disulfide	20	
107-05-1	Allyl Chloride	20	
79-20-9	Methyl Acetate	22	
75-09-2	Methylene Chloride	22	
75-65-0	t-Butyl alcohol	200	
107-13-1	Acrylonitrile	100	
156-60-5	trans-1,2-Dichloroethene	22	
1634-04-4	Methyl Tertiary Butyl Ether	20	
110-54-3	n-Hexane	19	
75-34-3	1,1-Dichloroethane	22	
108-20-3	di-Isopropyl ether	23	
126-99-8	2-Chloro-1,3-butadiene	20	
637-92-3	Ethyl t-butyl ether	21	
156-59-2	cis-1,2-Dichloroethene	23	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSE15

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSE15

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s31.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	44	
78-93-3	2-Butanone	140	
594-20-7	2,2-Dichloropropane	21	
107-12-0	Propionitrile	160	
126-98-7	Methacrylonitrile	160	
74-97-5	Bromochloromethane	20	
109-99-9	Tetrahydrofuran	86	
67-66-3	Chloroform	21	
71-55-6	1,1,1-Trichloroethane	21	
110-82-7	Cyclohexane	20	
563-58-6	1,1-Dichloropropene	22	
56-23-5	Carbon Tetrachloride	20	
78-83-1	Isobutyl Alcohol	500	
71-43-2	Benzene	22	
107-06-2	1,2-Dichloroethane	20	
994-05-8	t-Amyl methyl ether	21	
142-82-5	n-Heptane	18	
71-36-3	n-Butanol	970	
79-01-6	Trichloroethene	22	
108-87-2	Methylcyclohexane	19	
78-87-5	1,2-Dichloropropane	23	
74-95-3	Dibromomethane	20	
123-91-1	1,4-Dioxane	550	
80-62-6	Methyl Methacrylate	19	
75-27-4	Bromodichloromethane	20	
79-46-9	2-Nitropropane	14	
110-75-8	2-Chloroethyl Vinyl Ether	19	
10061-01-5	cis-1,3-Dichloropropene	21	
108-10-1	4-Methyl-2-pentanone	92	
108-88-3	Toluene	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSE15

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSE15

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s31.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	20	
542-75-6	1,3-Dichloropropene (total)	40	
97-63-2	Ethyl Methacrylate	19	
79-00-5	1,1,2-Trichloroethane	21	
127-18-4	Tetrachloroethene	22	
142-28-9	1,3-Dichloropropane	21	
591-78-6	2-Hexanone	85	
124-48-1	Dibromochloromethane	20	
106-93-4	1,2-Dibromoethane	21	
544-10-5	1-Chlorohexane	18	
108-90-7	Chlorobenzene	21	
630-20-6	1,1,1,2-Tetrachloroethane	21	
100-41-4	Ethylbenzene	22	
179601-23-1	m+p-Xylene	44	
95-47-6	o-Xylene	22	
1330-20-7	Xylene (Total)	66	
100-42-5	Styrene	21	
75-25-2	Bromoform	18	
98-82-8	Isopropylbenzene	22	
108-94-1	Cyclohexanone	500	
108-86-1	Bromobenzene	22	
79-34-5	1,1,2,2-Tetrachloroethane	21	
96-18-4	1,2,3-Trichloropropane	20	
110-57-6	trans-1,4-Dichloro-2-butene	80	
103-65-1	n-Propylbenzene	22	
95-49-8	2-Chlorotoluene	22	
106-43-4	4-Chlorotoluene	22	
108-67-8	1,3,5-Trimethylbenzene	21	
98-06-6	tert-Butylbenzene	22	
76-01-7	Pentachloroethane	20	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSE15

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSE15

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s31.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
95-63-6	1,2,4-Trimethylbenzene	21	
135-98-8	sec-Butylbenzene	22	
541-73-1	1,3-Dichlorobenzene	22	
99-87-6	p-Isopropyltoluene	21	
106-46-7	1,4-Dichlorobenzene	21	
526-73-8	1,2,3-Trimethylbenzene	20	
100-44-7	Benzyl Chloride	18	
141-93-5	1,3-Diethylbenzene	20	
105-05-5	1,4-Diethylbenzene	20	
95-50-1	1,2-Dichlorobenzene	21	
104-51-8	n-Butylbenzene	21	
135-01-3	1,2-Diethylbenzene	20	
25340-17-4	Diethylbenzene (total)	61	
96-12-8	1,2-Dibromo-3-chloropropane	19	
108-70-3	1,3,5-Trichlorobenzene	21	
120-82-1	1,2,4-Trichlorobenzene	22	
87-68-3	Hexachlorobutadiene	21	
91-20-3	Naphthalene	20	
87-61-6	1,2,3-Trichlorobenzene	21	
91-57-6	2-Methylnaphthalene	17	

Data file: /chem/HP15648.i/19may23b.b/ey23s31.d Injection date and time: **23-MAY-2019 18:57**
Data file Sample Info. Line: LCSE15;LCSE15;1;3;LCS;;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 20:18 dvv10203

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.499	(-0.012)	248	65	185779M	(0)	250.00	
66) Fluorobenzene	4.742	(-0.006)	616	96	1036772	(-1)	50.00	
101) Chlorobenzene-d5	7.894	(0.000)	1133	117	765543	(-2)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802	(0.000)	1446	152	410136	(-1)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.078	(0.000)	113	230760	47.887	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.401	(0.001)	102	62774	51.622	103%		80 - 120
84) Toluene-d8	(3)	6.388	(-0.001)	98	1037196	49.885	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918	(0.000)	95	393417	49.221	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	1.212	(-0.000)	85	120239	13.151	13.15			0.2	1
4) Chloromethane	(2)	1.322	(-0.000)	50	145458	19.549	19.55			0.2	1
5) 1,3-Butadiene	(2)	1.371	(-0.000)	39	142903M	25.547	25.55			1	3
6) Vinyl Chloride	(2)	1.383	(0.000)	62	137929	19.394	19.39			0.2	1
8) Bromomethane	(2)	1.572	(-0.000)	94	77039	14.385	14.39			0.3	1
9) Chloroethane	(2)	1.609	(-0.000)	64	71264	17.599	17.60			0.2	1
11) n-Pentane	(2)	1.798	(-0.000)	43	162983	19.622	19.62			0.4	10
12) Trichlorofluoromethane	(2)	1.792	(0.000)	101	156850	15.514	15.51			0.2	1
14) Ethyl ether	(2)	1.932	(-0.000)	59	86178	20.456	20.46			0.2	5
15) Freon 123a	(2)	1.938	(0.000)	67	120656	20.266	20.27			0.4	5
16) Acrolein	(1)	2.023	(0.001)	56	200580	130.856	130.86			2	100
17) 1,1-Dichloroethene	(2)	2.109	(-0.000)	96	89834	21.578	21.58			0.2	1
18) Acetone	(1)	2.133	(-0.000)	58	88379	138.525	138.52			0.7	20
19) Freon 113	(2)	2.133	(-0.002)	101	91098	19.760	19.76			0.2	10
21) 2-Propanol	(1)	2.224	(-0.000)	45	66320	173.989	173.99			18	100
22) Methyl Iodide	(2)	2.231	(-0.001)	142	155783	19.968	19.97			0.2	1
23) Carbon Disulfide	(2)	2.285	(-0.000)	76	288945	20.461	20.46			0.2	5
25) Allyl Chloride	(2)	2.377	(-0.000)	41	163914	20.258	20.26			0.3	5
27) Methyl Acetate	(2)	2.389	(-0.001)	43	86937	21.882	21.88			0.2	5
28) Methylene Chloride	(2)	2.480	(-0.000)	84	103789	21.883	21.88			0.3	1
30) t-Butyl alcohol	(1)	2.566	(0.000)	59	141111	203.193	203.19			12	50
31) Acrylonitrile	(2)	2.682	(-0.001)	53	244955	101.398	101.40			0.3	20
32) trans-1,2-Dichloroethene	(2)	2.718	(-0.000)	96	101133	21.582	21.58			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	2.724	(-0.001)	73	285847	20.459	20.46			0.2	1
34) n-Hexane	(2)	2.962	(-0.000)	57	157897	19.228	19.23			0.2	5
36) 1,1-Dichloroethane	(2)	3.084	(-0.000)	63	193342	22.023	22.02			0.2	1
38) di-Isopropyl ether	(2)	3.157	(-0.000)	45	354054	22.917	22.92			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	3.176	(-0.001)	53	169173	20.180	20.18			0.2	5
40) Ethyl t-butyl ether	(2)	3.492	(-0.000)	59	318192	20.879	20.88			0.2	1
42) cis-1,2-Dichloroethene	(2)	3.620	(-0.000)	96	119579	22.711	22.71			0.2	1

M = Compound was manually integrated.

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23s31.d Injection date and time: **23-MAY-2019 18:57**
Data file Sample Info. Line: LCSE15;LCSE15;1;3;LCS;;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 20:18 dvv10203

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
43) 1,2-Dichloroethene (Total)	(2)		96	220712	44.293	44.29			0.2	2
44) 2-Butanone	(2)	3.627(-0.000)	43	453282	139.265	139.27			0.3	10
45) 2,2-Dichloropropane	(2)	3.627(0.000)	77	164222	21.201	21.20			0.3	1
47) Propionitrile	(1)	3.682(0.004)	54	146738	156.409	156.41			14	100
48) Methacrylonitrile	(2)	3.828(-0.000)	67	409730	157.954	157.95			6	50
49) Bromochloromethane	(2)	3.846(-0.000)	128	51794	19.806	19.81			0.2	5
50) Tetrahydrofuran	(1)	3.889(0.005)	71	84566	86.008	86.01			0.7	10
51) Chloroform	(2)	3.925(-0.000)	83	176107	21.090	21.09			0.2	1
53) 1,1,1-Trichloroethane	(2)	4.114(-0.001)	97	159381	20.627	20.63			0.3	1
54) Cyclohexane	(2)	4.163(0.001)	56	193539	20.394	20.39			0.2	5
55) 1,1-Dichloropropene	(2)	4.261(0.001)	75	150620	21.985	21.98			0.2	5
56) Carbon Tetrachloride	(2)	4.273(-0.000)	117	133118	20.254	20.25			0.2	1
58) Isobutyl Alcohol	(1)	4.389(0.006)	41	118331	501.869	501.87			36	250
60) Benzene	(2)	4.462(-0.000)	78	447995	22.269	22.27			0.2	1
61) 1,2-Dichloroethane	(2)	4.474(-0.000)	62	136279	20.169	20.17			0.3	1
65) t-Amyl methyl ether	(2)	4.590(-0.000)	73	317693	21.022	21.02			0.8	5
67) n-Heptane	(2)	4.748(0.001)	43	162358	18.447	18.45			0.2	5
69) n-Butanol	(1)	5.053(0.010)	56	197937	970.584	970.58			61	250
71) Trichloroethene	(2)	5.114(0.000)	95	109193	21.518	21.52			0.2	1
73) Methylcyclohexane	(2)	5.315(0.001)	83	196634	18.609	18.61			0.2	5
74) 1,2-Dichloropropane	(2)	5.334(0.000)	63	115836	23.143	23.14			0.2	1
75) Dibromomethane	(2)	5.449(0.001)	93	61209	20.429	20.43			0.2	1
76) 1,4-Dioxane	(1)	5.480(0.008)	88	31333M	545.959	545.96			29	250
77) Methyl Methacrylate	(2)	5.480(0.000)	69	84527	18.523	18.52			0.2	5
79) Bromodichloromethane	(2)	5.620(0.001)	83	126418	20.280	20.28			0.2	1
80) 2-Nitropropane	(2)	5.858(0.000)	41	28703	13.894	13.89			0.8	10
81) 2-Chloroethyl Vinyl Ether	(2)	5.962(0.000)	63	75199	19.498	19.50			0.2	10
82) cis-1,3-Dichloropropene	(2)	6.102(0.000)	75	168456	20.748	20.75			0.2	1
83) 4-Methyl-2-pentanone	(2)	6.279(0.001)	43	641202	91.732	91.73			0.5	10
89) Toluene	(3)	6.461(-0.000)	92	279302	21.949	21.95			0.2	1
90) trans-1,3-Dichloropropene	(3)	6.705(-0.000)	75	148735	19.557	19.56			0.2	1
91) 1,3-Dichloropropene (total)	(3)		100	317191	40.305	40.30			0.2	5
92) Ethyl Methacrylate	(3)	6.839(-0.000)	69	151496	18.686	18.69			0.2	5
93) 1,1,2-Trichloroethane	(3)	6.900(-0.000)	97	93016	21.476	21.48			0.2	1
94) Tetrachloroethene	(3)	7.053(-0.000)	166	114363	22.104	22.10			0.2	1
95) 1,3-Dichloropropane	(3)	7.077(-0.000)	76	160786	21.122	21.12			0.2	1
97) 2-Hexanone	(3)	7.193(-0.000)	43	459668	85.041	85.04			0.3	10
98) Dibromochloromethane	(3)	7.315(-0.000)	129	93461	19.989	19.99			0.2	1
100) 1,2-Dibromoethane	(3)	7.425(-0.000)	107	94913	20.597	20.60			0.2	1
102) 1-Chlorohexane	(3)	7.315(-0.000)	91	7813	17.767	17.77			0.3	5
103) Chlorobenzene	(3)	7.918(0.000)	112	302089	21.469	21.47			0.2	1
104) 1,1,1,2-Tetrachloroethane	(3)	8.004(0.000)	131	99925	20.909	20.91			0.2	1
105) Ethylbenzene	(3)	8.034(0.000)	91	541980	21.529	21.53			0.4	1
107) m+p-Xylene	(3)	8.144(0.000)	106	429417	43.818	43.82			1	5
108) o-Xylene	(3)	8.492(0.000)	106	207989	21.747	21.75			0.4	1
109) Xylene (Total)	(3)		106	637406	65.565	65.57			1	5
110) Styrene	(3)	8.504(0.000)	104	336118	21.278	21.28			0.2	5
111) Bromoform	(3)	8.644(0.000)	173	56184	18.026	18.03			0.2	4
112) Isopropylbenzene	(3)	8.809(0.000)	105	558480	21.948	21.95			0.2	5
113) Cyclohexanone	(1)	8.857(0.017)	55	107773M	498.494	498.49			25	100
116) Bromobenzene	(4)	9.034(-0.000)	156	123457	21.603	21.60			0.2	5
117) 1,1,2,2-Tetrachloroethane	(4)	9.040(-0.000)	83	137313	20.703	20.70			0.2	1
118) 1,2,3-Trichloropropane	(4)	9.071(-0.000)	110	40633	20.215	20.21			0.2	5
119) trans-1,4-Dichloro-2-butene	(4)	9.089(-0.000)	53	173410	79.562	79.56			6	50

M = Compound was manually integrated.

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23s31.d Injection date and time: **23-MAY-2019 18:57**
Data file Sample Info. Line: LCSE15;LCSE15;1;3;LCS;;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 20:18 dvv10203

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) n-Propylbenzene	(4)	9.138(-0.000)	91	667991	22.171	22.17			0.2	5
121) 2-Chlorotoluene	(4)	9.193(-0.000)	126	127614	21.513	21.51			0.2	5
122) 4-Chlorotoluene	(4)	9.278(-0.000)	126	130989	21.542	21.54			0.2	5
123) 1,3,5-Trimethylbenzene	(4)	9.278(-0.000)	105	467118	21.371	21.37			0.3	5
125) tert-Butylbenzene	(4)	9.522(-0.000)	134	105495	21.714	21.71			0.3	5
126) Pentachloroethane	(4)	9.528(-0.000)	167	70969	19.621	19.62			0.2	5
127) 1,2,4-Trimethylbenzene	(4)	9.558(-0.000)	105	474166	21.068	21.07			1	5
128) sec-Butylbenzene	(4)	9.680(-0.000)	105	607056	21.893	21.89			0.2	5
130) 1,3-Dichlorobenzene	(4)	9.754(-0.000)	146	239984	21.548	21.55			0.2	5
131) p-Isopropyltoluene	(4)	9.790(-0.000)	119	517777	21.227	21.23			0.2	5
134) 1,4-Dichlorobenzene	(4)	9.820(0.000)	146	243012	21.330	21.33			0.2	5
135) 1,2,3-Trimethylbenzene	(4)	9.863(0.000)	105	485234	20.248	20.25			0.3	5
136) Benzyl Chloride	(4)	9.918(0.000)	91	283223	18.303	18.30			0.3	5
137) 1,3-Diethylbenzene	(4)	10.010(0.000)	119	310711	20.230	20.23			0.2	5
138) 1,4-Diethylbenzene	(4)	10.064(0.000)	119	326958	19.979	19.98			0.2	5
139) 1,2-Dichlorobenzene	(4)	10.083(0.000)	146	226499	21.244	21.24			0.2	5
140) n-Butylbenzene	(4)	10.083(0.000)	92	254344	21.231	21.23			0.2	5
141) 1,2-Diethylbenzene	(4)	10.150(0.000)	119	255373	20.310	20.31			0.2	5
142) Diethylbenzene (total)	(4)		100	893042	60.519	60.52			0.2	5
143) 1,2-Dibromo-3-chloropropane	(4)	10.619(0.000)	75	28497	18.752	18.75			0.3	5
145) 1,3,5-Trichlorobenzene	(4)	10.766(0.000)	180	167374	21.348	21.35			0.2	5
147) 1,2,4-Trichlorobenzene	(4)	11.174(0.000)	180	151277	21.615	21.62			0.3	5
148) Hexachlorobutadiene	(4)	11.290(0.000)	225	64164	21.388	21.39			0.7	5
149) Naphthalene	(4)	11.332(0.000)	128	471813	20.449	20.45			1	5
150) 1,2,3-Trichlorobenzene	(4)	11.491(0.000)	180	141359	21.392	21.39			0.4	5
151) 2-Methylnaphthalene	(4)	12.052(0.000)	142	252341	17.307	17.31			0.7	5

Total number of targets = 110

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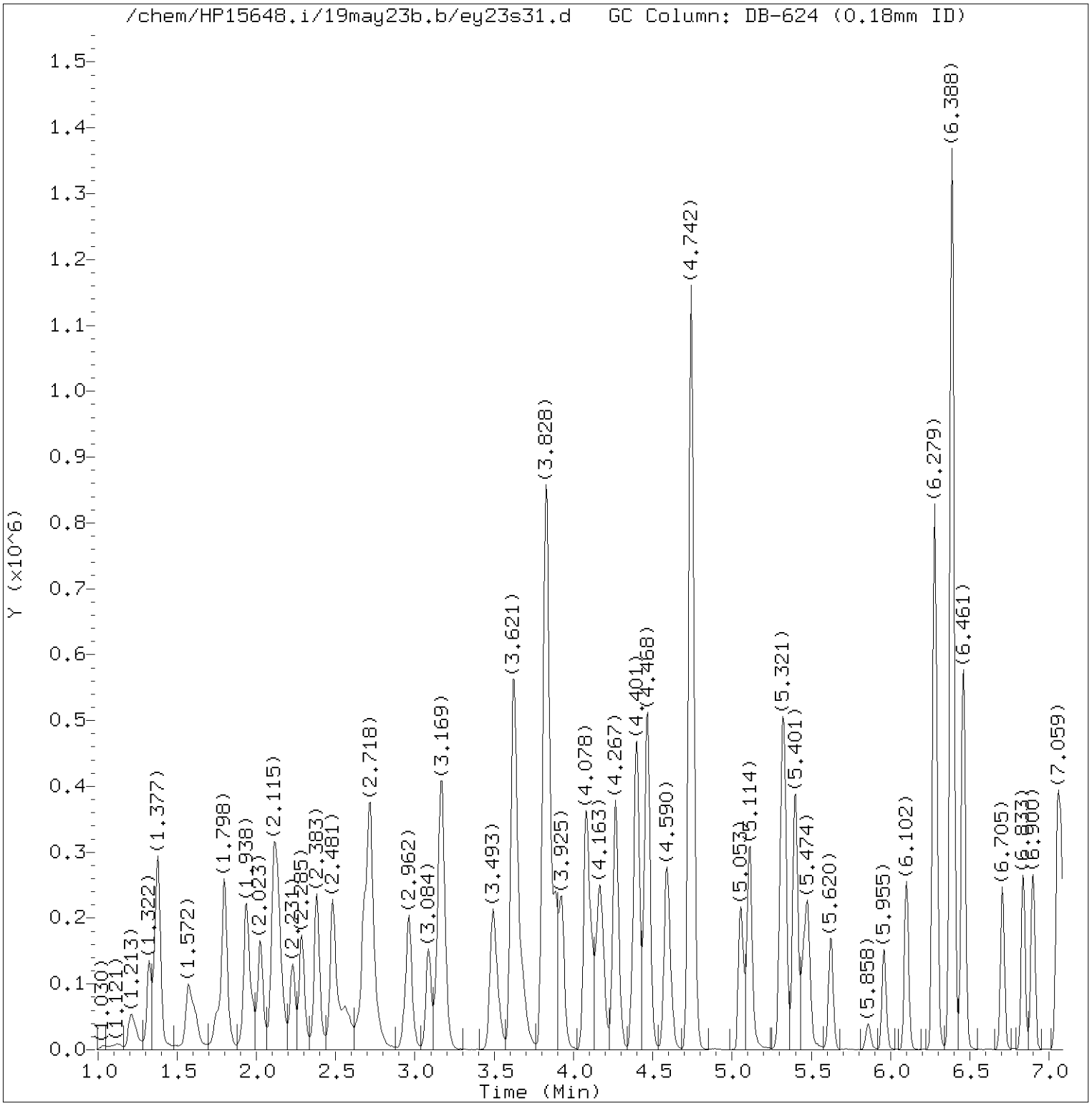
Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s31.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 18:57 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:18 dvv10203

Sample Name: LCSE15 Lab Sample ID: LCSE15

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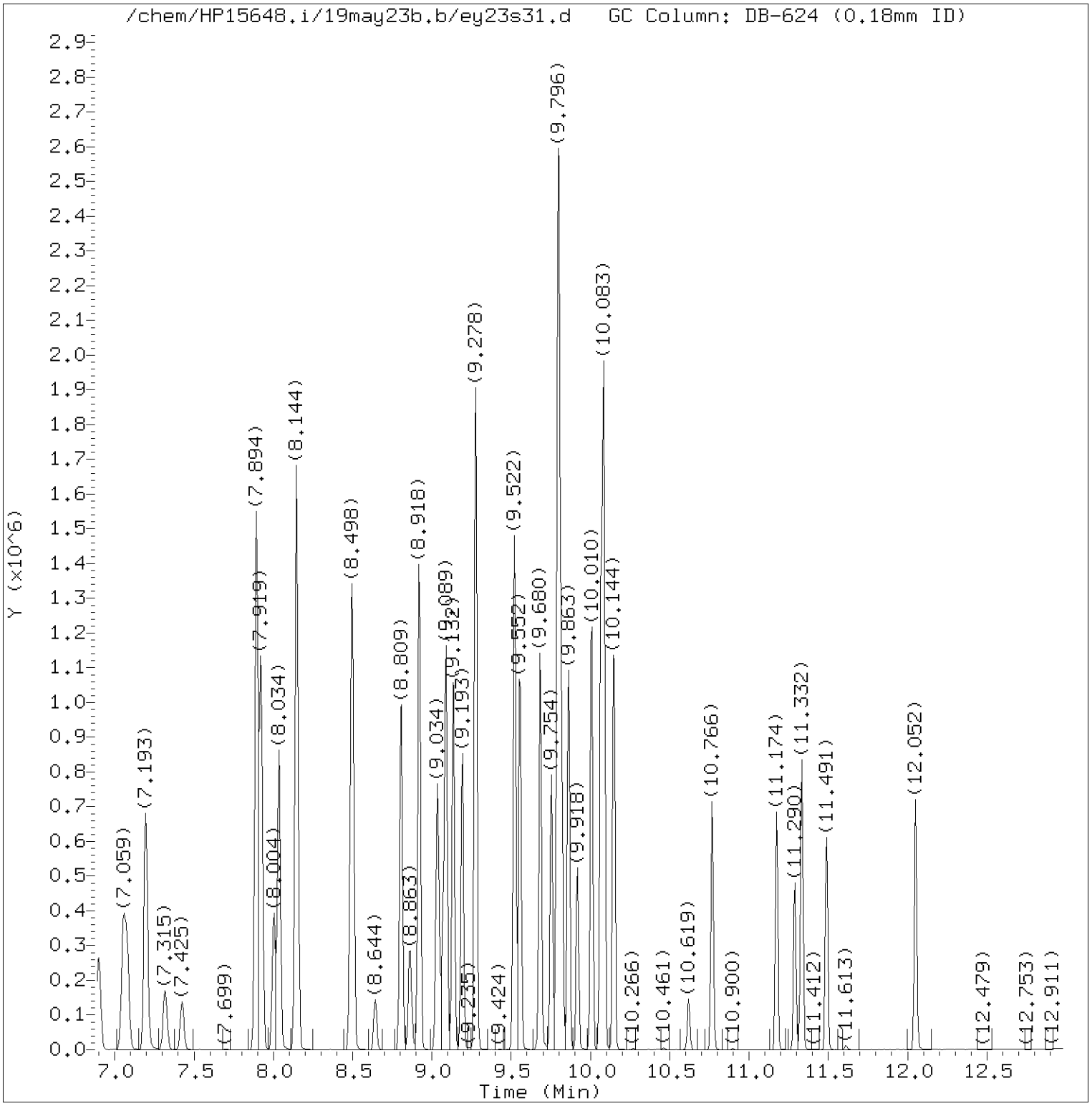
on 05/23/2019 at 20:31.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s31.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 18:57 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:18 dvv10203

Sample Name: LCSE15 Lab Sample ID: LCSE15

Digitally signed by Don V. Viray
on 05/23/2019 at 20:31.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s31.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 18:57 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:18 dvv10203

Sample Name: LCSE15 Lab Sample ID: LCSE15

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.213	85	120239	13.151
4) Chloromethane	(2)	1.322	50	145458	19.549
5) 1,3-Butadiene	(2)	1.371	39	142903M	25.547
6) Vinyl Chloride	(2)	1.383	62	137929	19.394
8) Bromomethane	(2)	1.572	94	77039	14.385
9) Chloroethane	(2)	1.609	64	71264	17.599
12) Trichlorofluoromethane	(2)	1.792	101	156850	15.514
11) n-Pentane	(2)	1.798	43	162983	19.622
14) Ethyl ether	(2)	1.932	59	86178	20.456
15) Freon 123a	(2)	1.938	67	120656	20.266
16) Acrolein	(1)	2.023	56	200580	130.856
17) 1,1-Dichloroethene	(2)	2.109	96	89834	21.578
18) Acetone	(1)	2.133	58	88379	138.525
19) Freon 113	(2)	2.133	101	91098	19.760
21) 2-Propanol	(1)	2.225	45	66320	173.989
22) Methyl Iodide	(2)	2.231	142	155783	19.968
23) Carbon Disulfide	(2)	2.285	76	288945	20.461
25) Allyl Chloride	(2)	2.377	41	163914	20.258
27) Methyl Acetate	(2)	2.389	43	86937	21.882
28) Methylene Chloride	(2)	2.481	84	103789	21.883
29)*t-Butyl alcohol-d10	(1)	2.499	65	185779M	250.000
30) t-Butyl alcohol	(1)	2.566	59	141111	203.193
31) Acrylonitrile	(2)	2.682	53	244955	101.398
32) trans-1,2-Dichloroethene	(2)	2.718	96	101133	21.582
33) Methyl Tertiary Butyl Ether	(2)	2.724	73	285847	20.459
34) n-Hexane	(2)	2.962	57	157897	19.228
36) 1,1-Dichloroethane	(2)	3.084	63	193342	22.023
38) di-Isopropyl ether	(2)	3.157	45	354054	22.917
39) 2-Chloro-1,3-butadiene	(2)	3.176	53	169173	20.180
40) Ethyl t-butyl ether	(2)	3.493	59	318192	20.879
42) cis-1,2-Dichloroethene	(2)	3.621	96	119579	22.711
43) 1,2-Dichloroethene (Total)	(2)		96	220712	44.293
44) 2-Butanone	(2)	3.627	43	453282	139.265
45) 2,2-Dichloropropane	(2)	3.627	77	164222	21.201
47) Propionitrile	(1)	3.682	54	146738	156.409
48) Methacrylonitrile	(2)	3.828	67	409730	157.954
49) Bromochloromethane	(2)	3.846	128	51794	19.806
50) Tetrahydrofuran	(1)	3.889	71	84566	86.008

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 05/23/2019 at 20:31.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s31.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 18:57 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:18 dvv10203

Sample Name: LCSE15 Lab Sample ID: LCSE15

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	3.925	83	176107	21.090
52)$Dibromofluoromethane	(2)	4.078	113	230760	47.887
53) 1,1,1-Trichloroethane	(2)	4.114	97	159381	20.627
54) Cyclohexane	(2)	4.163	56	193539	20.394
55) 1,1-Dichloropropene	(2)	4.261	75	150620	21.985
56) Carbon Tetrachloride	(2)	4.273	117	133118	20.254
58) Isobutyl Alcohol	(1)	4.389	41	118331	501.869
57)$1,2-Dichloroethane-d4	(2)	4.401	102	62774	51.622
60) Benzene	(2)	4.462	78	447995	22.269
61) 1,2-Dichloroethane	(2)	4.474	62	136279	20.169
65) t-Amyl methyl ether	(2)	4.590	73	317693	21.022
66)*Fluorobenzene	(2)	4.742	96	1036772	50.000
67) n-Heptane	(2)	4.748	43	162358	18.447
69) n-Butanol	(1)	5.053	56	197937	970.584
71) Trichloroethene	(2)	5.114	95	109193	21.518
73) Methylcyclohexane	(2)	5.315	83	196634	18.609
74) 1,2-Dichloropropane	(2)	5.334	63	115836	23.143
75) Dibromomethane	(2)	5.449	93	61209	20.429
76) 1,4-Dioxane	(1)	5.480	88	31333M	545.959
77) Methyl Methacrylate	(2)	5.480	69	84527	18.523
79) Bromodichloromethane	(2)	5.620	83	126418	20.280
80) 2-Nitropropane	(2)	5.858	41	28703	13.894
81) 2-Chloroethyl Vinyl Ether	(2)	5.962	63	75199	19.498
82) cis-1,3-Dichloropropene	(2)	6.102	75	168456	20.748
83) 4-Methyl-2-pentanone	(2)	6.279	43	641202	91.732
84)$Toluene-d8	(3)	6.388	98	1037196	49.885
89) Toluene	(3)	6.461	92	279302	21.949
90) trans-1,3-Dichloropropene	(3)	6.705	75	148735	19.557
91) 1,3-Dichloropropene (total)	(3)		100	317191	40.305
92) Ethyl Methacrylate	(3)	6.839	69	151496	18.686
93) 1,1,2-Trichloroethane	(3)	6.900	97	93016	21.476
94) Tetrachloroethene	(3)	7.053	166	114363	22.104
95) 1,3-Dichloropropane	(3)	7.077	76	160786	21.122
97) 2-Hexanone	(3)	7.193	43	459668	85.041
102) 1-Chlorohexane	(3)	7.315	91	7813	17.767
98) Dibromochloromethane	(3)	7.315	129	93461	19.989
100) 1,2-Dibromoethane	(3)	7.425	107	94913	20.597
101)*Chlorobenzene-d5	(3)	7.894	117	765543	50.000

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on 05/23/2019 at 20:31.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s31.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 18:57 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:18 dvv10203

Sample Name: LCSE15 Lab Sample ID: LCSE15

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
103) Chlorobenzene	(3)	7.919	112	302089	21.469
104) 1,1,1,2-Tetrachloroethane	(3)	8.004	131	99925	20.909
105) Ethylbenzene	(3)	8.034	91	541980	21.529
107) m+p-Xylene	(3)	8.144	106	429417	43.818
109) Xylene (Total)	(3)		106	637406	65.565
108) o-Xylene	(3)	8.492	106	207989	21.747
110) Styrene	(3)	8.504	104	336118	21.278
111) Bromoform	(3)	8.644	173	56184	18.026
112) Isopropylbenzene	(3)	8.809	105	558480	21.948
113) Cyclohexanone	(1)	8.857	55	107773M	498.494
115)$4-Bromofluorobenzene	(3)	8.918	95	393417	49.221
116) Bromobenzene	(4)	9.034	156	123457	21.603
117) 1,1,2,2-Tetrachloroethane	(4)	9.040	83	137313	20.703
118) 1,2,3-Trichloropropane	(4)	9.071	110	40633	20.215
119) trans-1,4-Dichloro-2-butene	(4)	9.089	53	173410	79.562
120) n-Propylbenzene	(4)	9.138	91	667991	22.171
121) 2-Chlorotoluene	(4)	9.193	126	127614	21.513
122) 4-Chlorotoluene	(4)	9.278	126	130989	21.542
123) 1,3,5-Trimethylbenzene	(4)	9.278	105	467118	21.371
125) tert-Butylbenzene	(4)	9.522	134	105495	21.714
126) Pentachloroethane	(4)	9.528	167	70969	19.621
127) 1,2,4-Trimethylbenzene	(4)	9.558	105	474166	21.068
128) sec-Butylbenzene	(4)	9.680	105	607056	21.893
130) 1,3-Dichlorobenzene	(4)	9.754	146	239984	21.548
131) p-Isopropyltoluene	(4)	9.790	119	517777	21.227
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	410136	50.000
134) 1,4-Dichlorobenzene	(4)	9.821	146	243012	21.330
135) 1,2,3-Trimethylbenzene	(4)	9.863	105	485234	20.248
136) Benzyl Chloride	(4)	9.918	91	283223	18.303
137) 1,3-Diethylbenzene	(4)	10.010	119	310711	20.230
138) 1,4-Diethylbenzene	(4)	10.064	119	326958	19.979
140) n-Butylbenzene	(4)	10.083	92	254344	21.231
139) 1,2-Dichlorobenzene	(4)	10.083	146	226499	21.244
142) Diethylbenzene (total)	(4)		100	893042	60.519
141) 1,2-Diethylbenzene	(4)	10.150	119	255373	20.310
143) 1,2-Dibromo-3-chloropropane	(4)	10.619	75	28497	18.752
145) 1,3,5-Trichlorobenzene	(4)	10.766	180	167374	21.348
147) 1,2,4-Trichlorobenzene	(4)	11.174	180	151277	21.615

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Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s31.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 18:57 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:18 dvv10203

Sample Name: LCSE15 Lab Sample ID: LCSE15

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) Hexachlorobutadiene	(4)	11.290	225	64164	21.388
149) Naphthalene	(4)	11.332	128	471813	20.449
150) 1,2,3-Trichlorobenzene	(4)	11.491	180	141359	21.392
151) 2-Methylnaphthalene	(4)	12.052	142	252341	17.307

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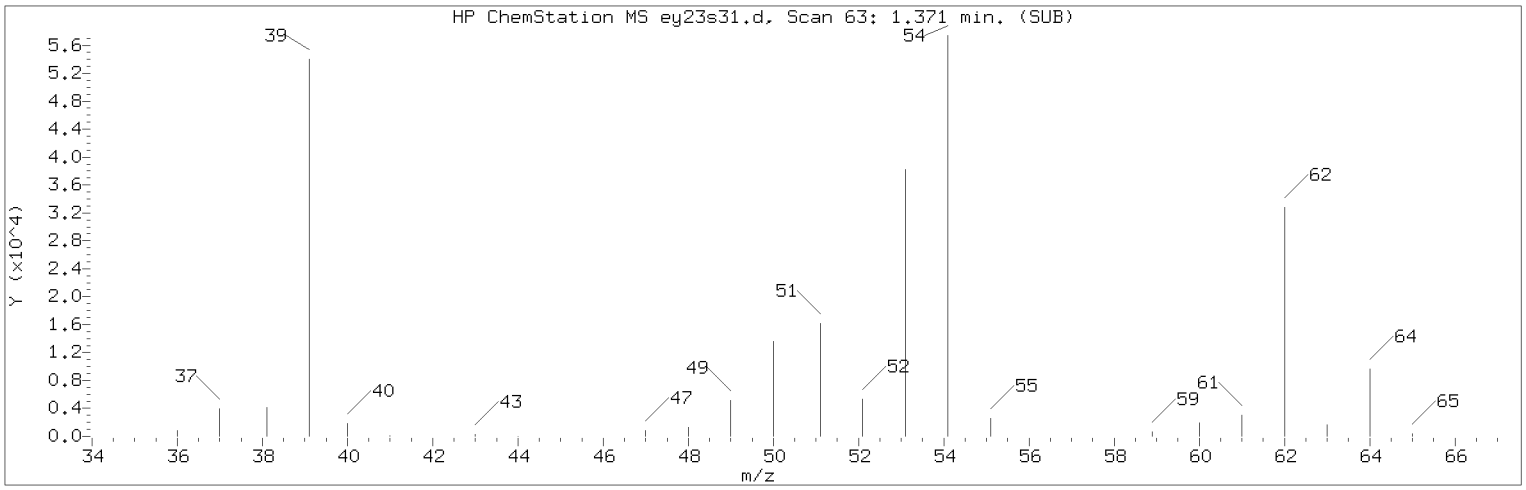
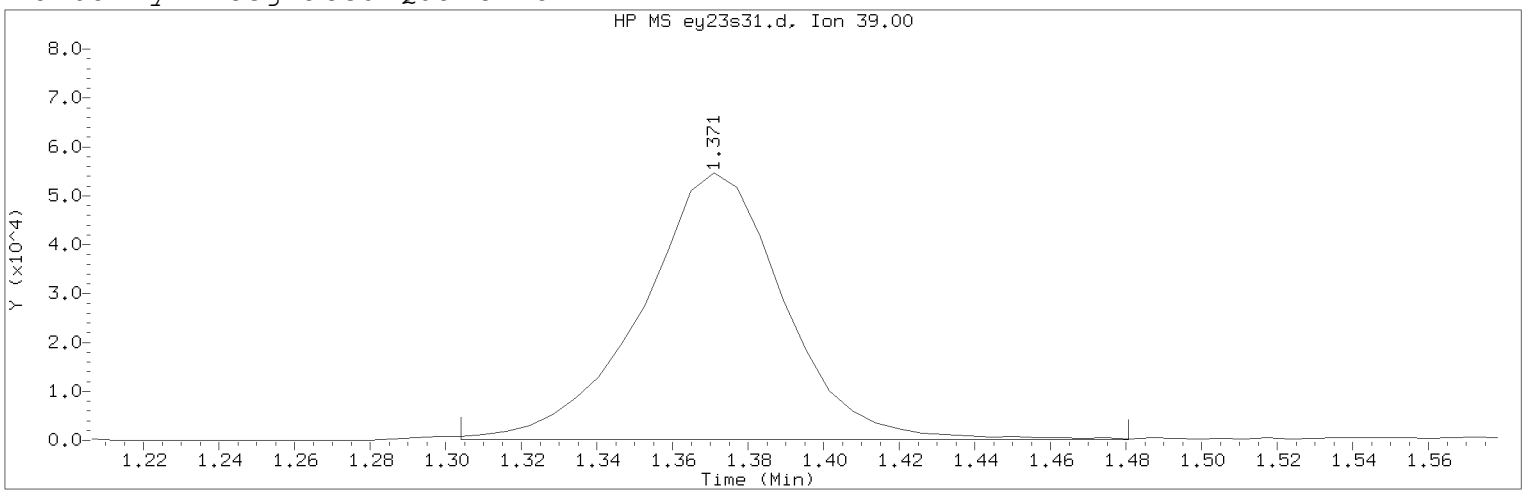
on 05/23/2019 at 20:31.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may23b.b/ey23s31.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 18:57 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:18 dvv10203

Sample Name: LCSE15 Lab Sample ID: LCSE15

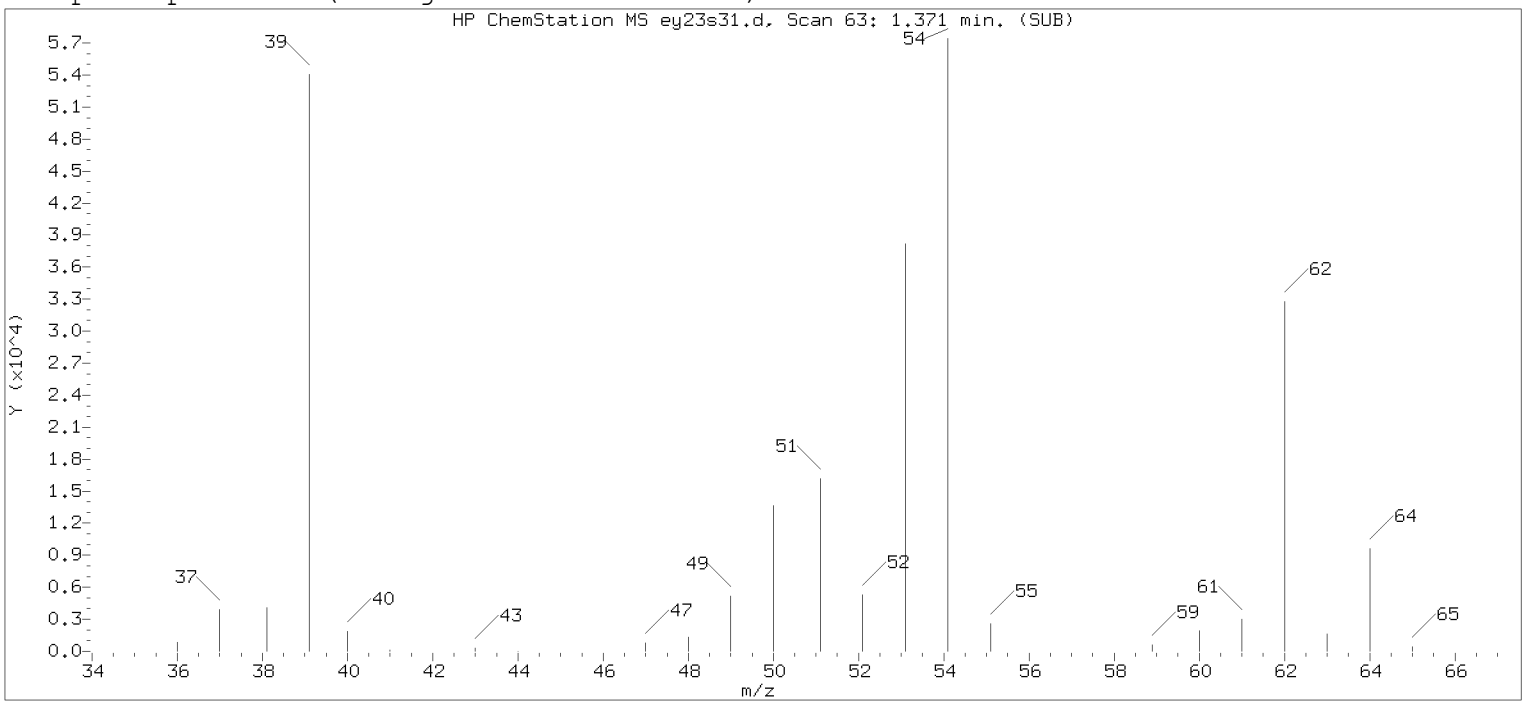
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 63
Retention Time (minutes): 1.371
Quant Ion : 39.00
Area (flag) : 142903M
On-Column Amount (ng) : 25.5473
Integration start scan : 51 Integration stop scan: 80
Y at integration start : 141 Y at integration end: 141

Reason for manual integration: improper integration

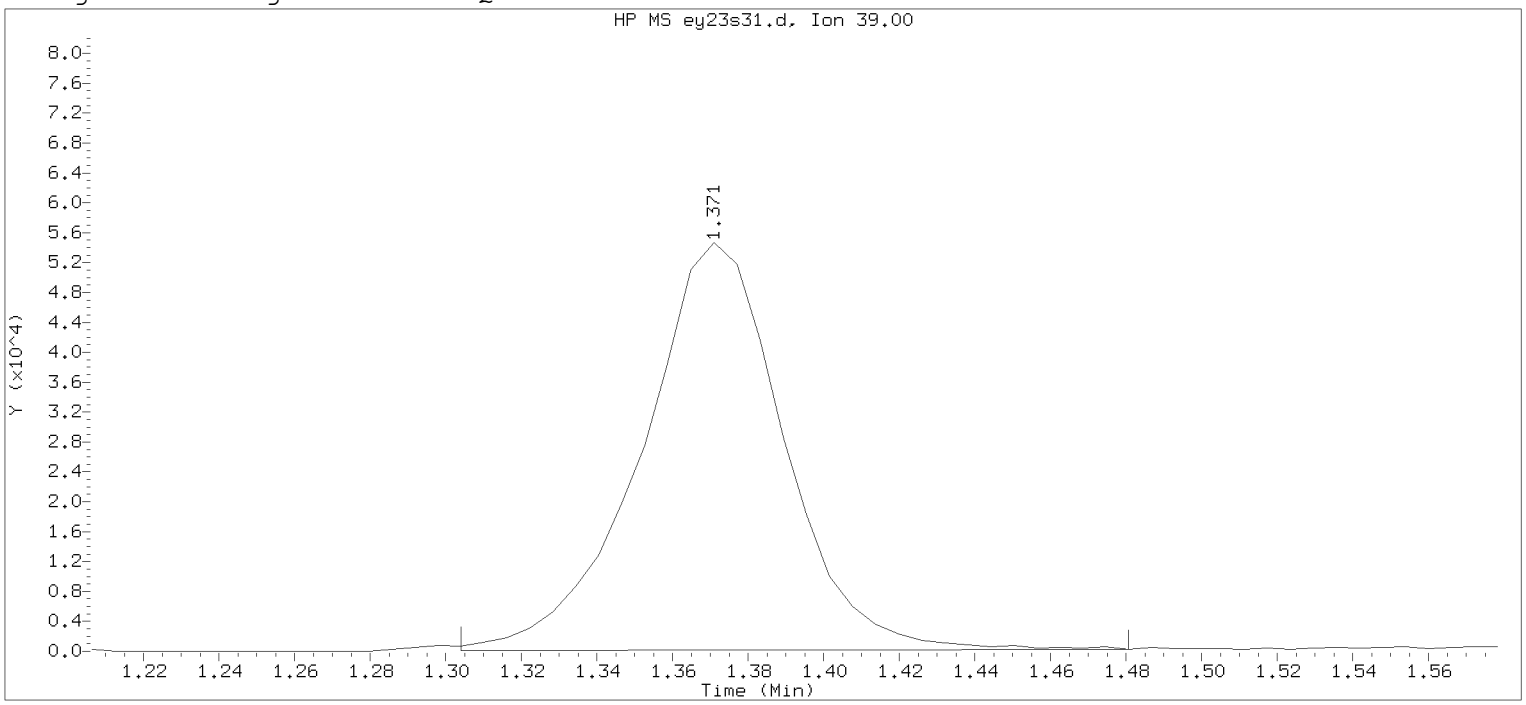
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:31.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may23b.b/ey23s31.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 18:57 Analyst ID: DVV10203

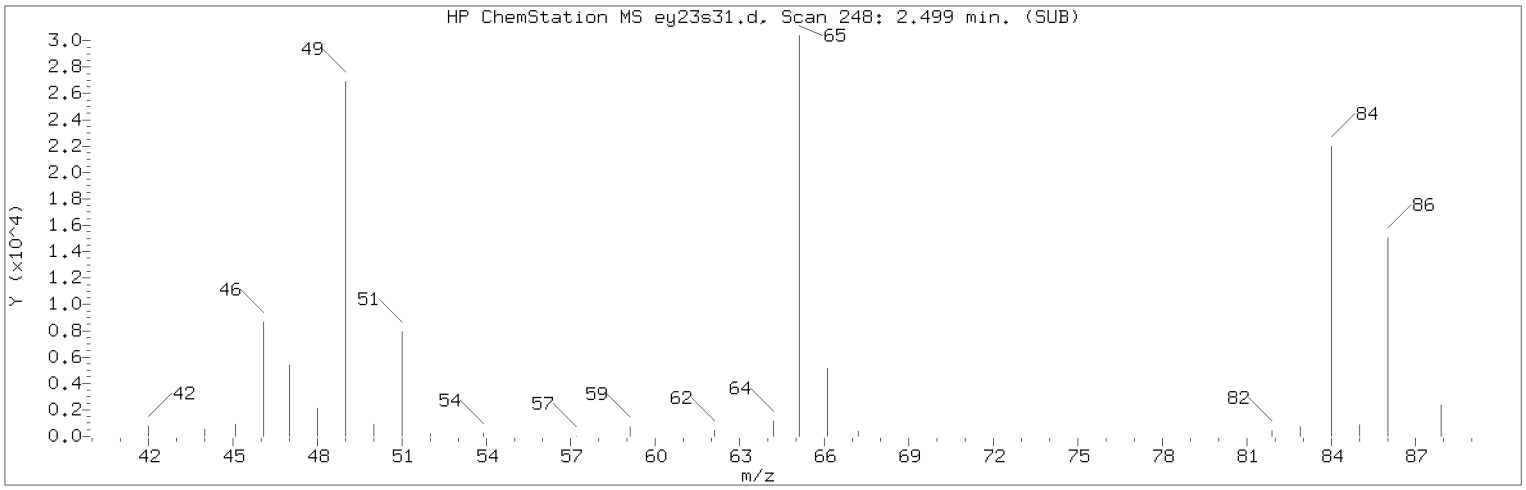
Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 19:13 Automation

Sample Name: LCSE15 Lab Sample ID: LCSE15

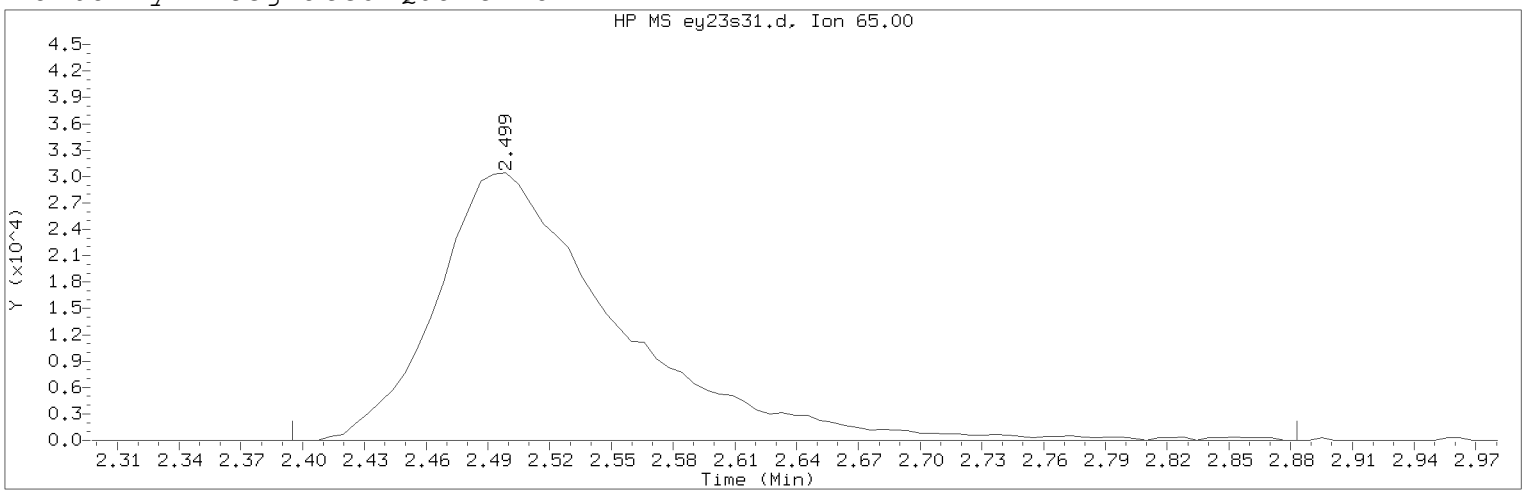
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 63
Retention Time (minutes): 1.371
Quant Ion : 39.00
Area : 142719
On-column Amount (ng) : 25.5145
Integration start scan : 51 Integration stop scan: 80
Y at integration start : 45 Y at integration end: 247

Digitally signed by Don V. Viray on 05/23/2019 at 20:31.
Target 3.5 esignature user id: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may23b.b/ey23s31.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 18:57 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:18 dvv10203

Sample Name: LCSE15 Lab Sample ID: LCSE15

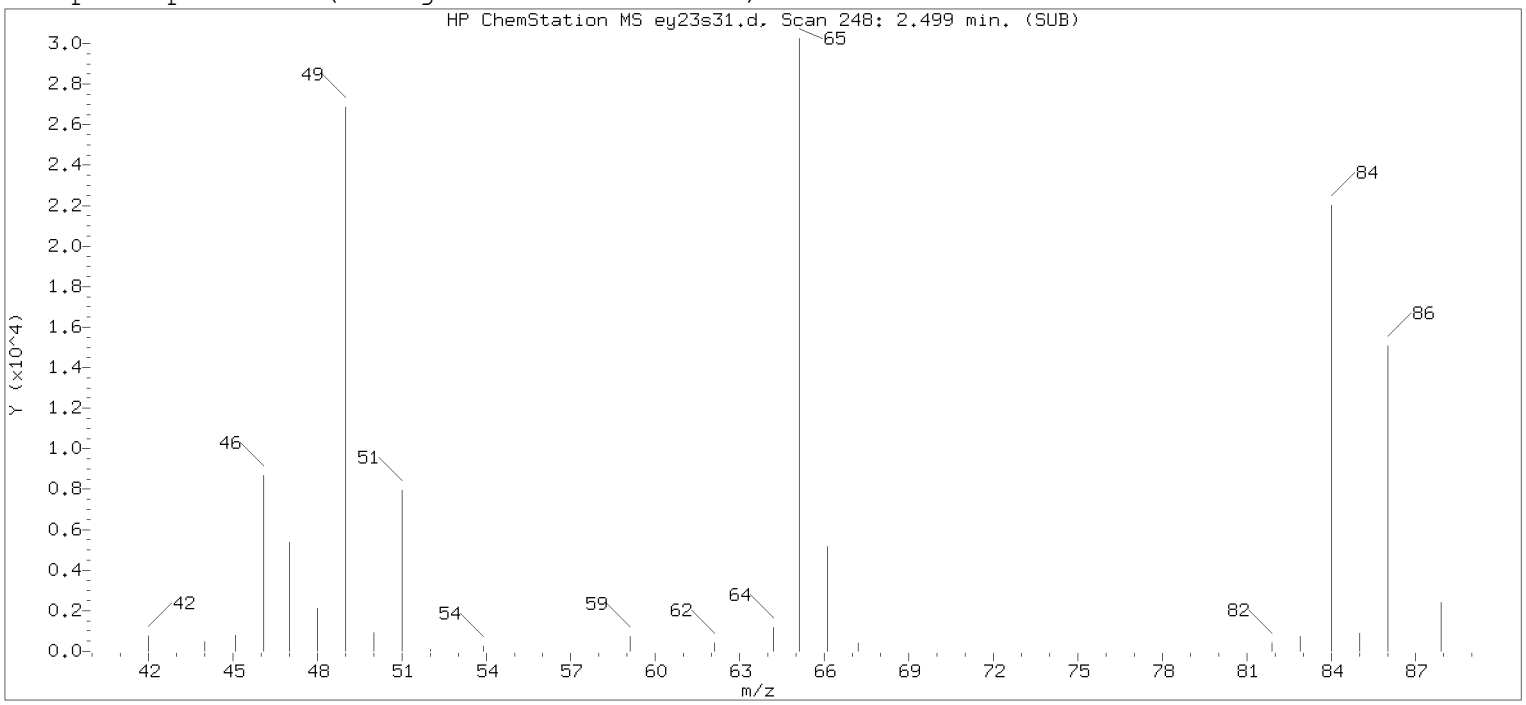
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 248
Retention Time (minutes): 2.499
Quant Ion : 65.00
Area (flag) : 185779M
On-Column Amount (ng) : 250.0000
Integration start scan : 230 Integration stop scan: 310
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

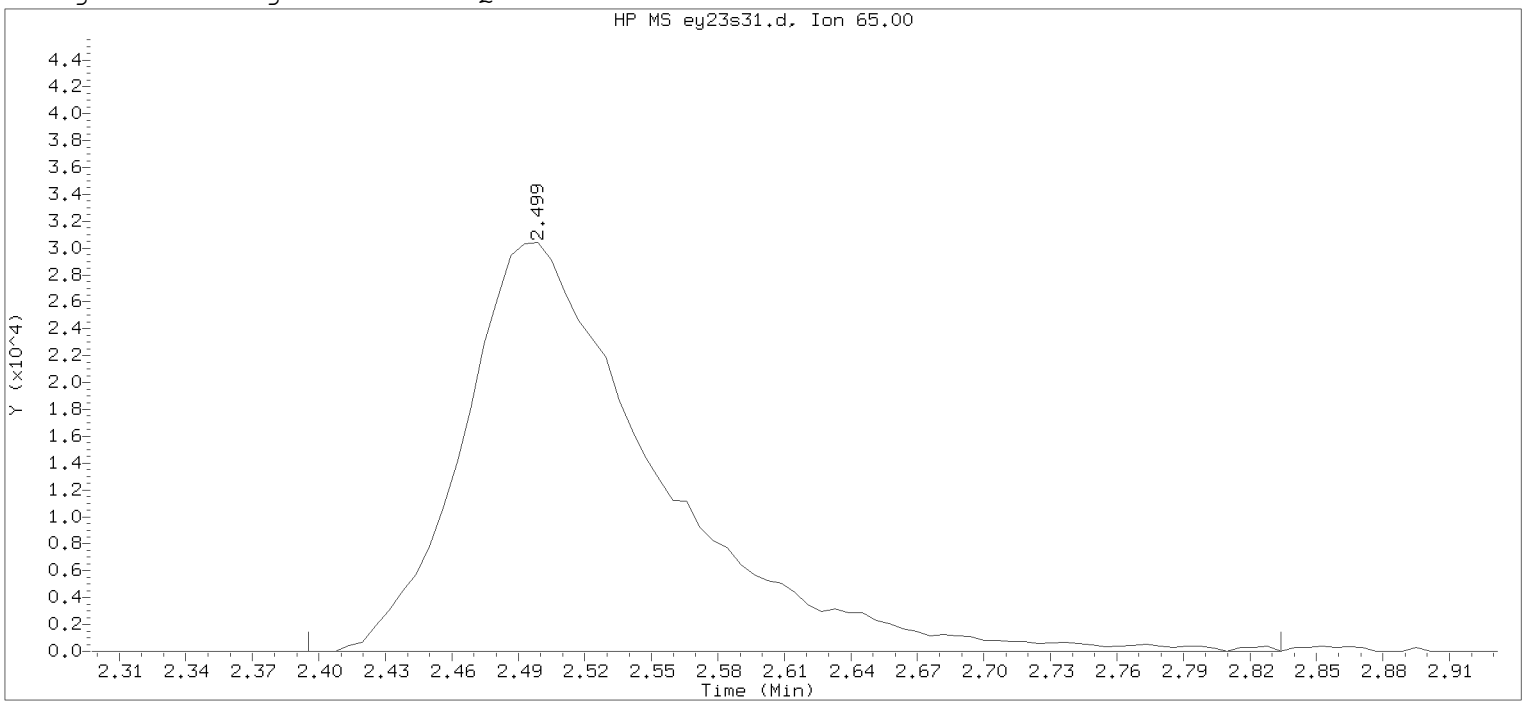
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:31.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may23b.b/ey23s31.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 18:57 Analyst ID: DVV10203

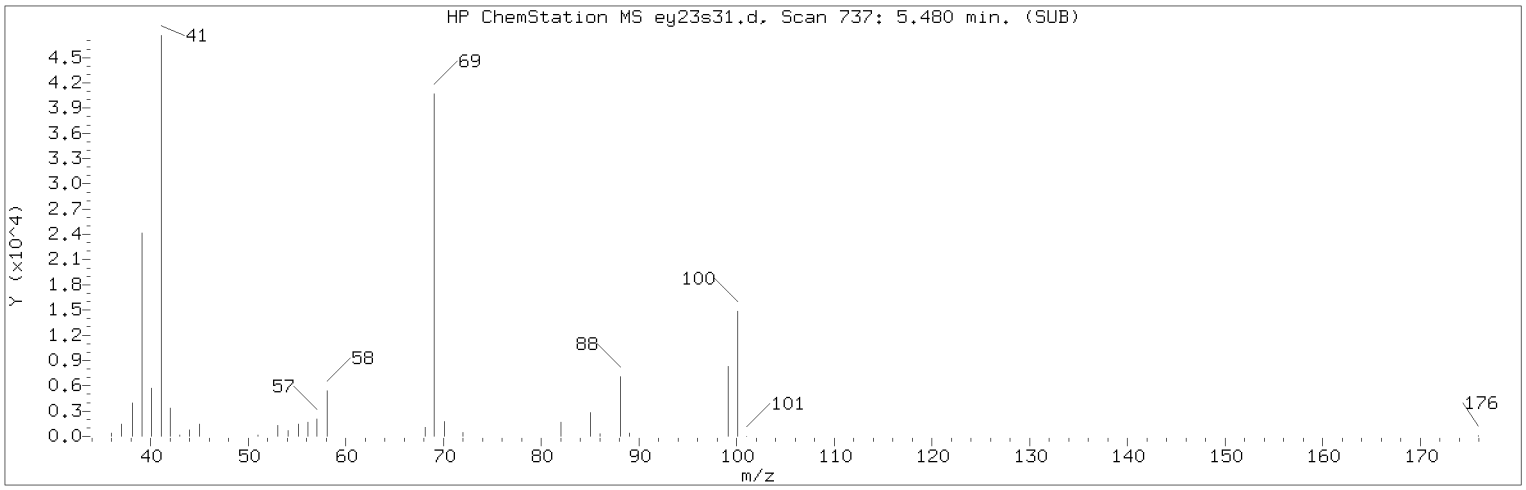
Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 19:13 Automation

Sample Name: LCSE15 Lab Sample ID: LCSE15

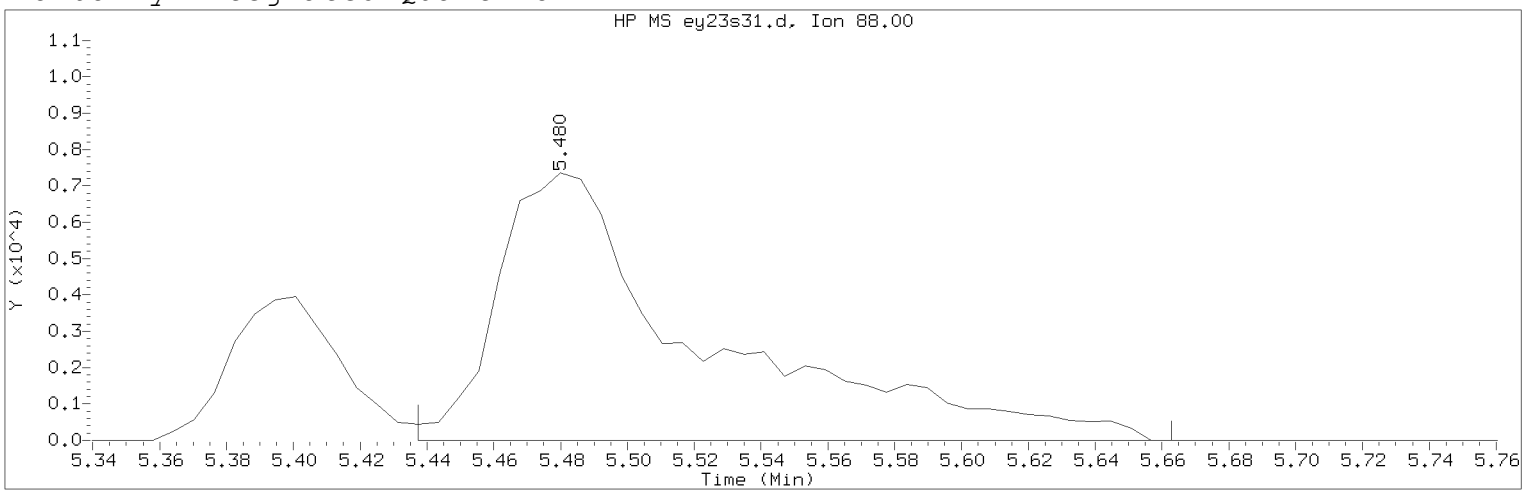
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 248
Retention Time (minutes): 2.499
Quant Ion : 65.00
Area : 185108
On-column Amount (ng) : 250.0000
Integration start scan : 230 Integration stop scan: 302
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/23/2019 at 20:31.
Target 3.5 esignature user id: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may23b.b/ey23s31.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 18:57 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:18 dvv10203

Sample Name: LCSE15 Lab Sample ID: LCSE15

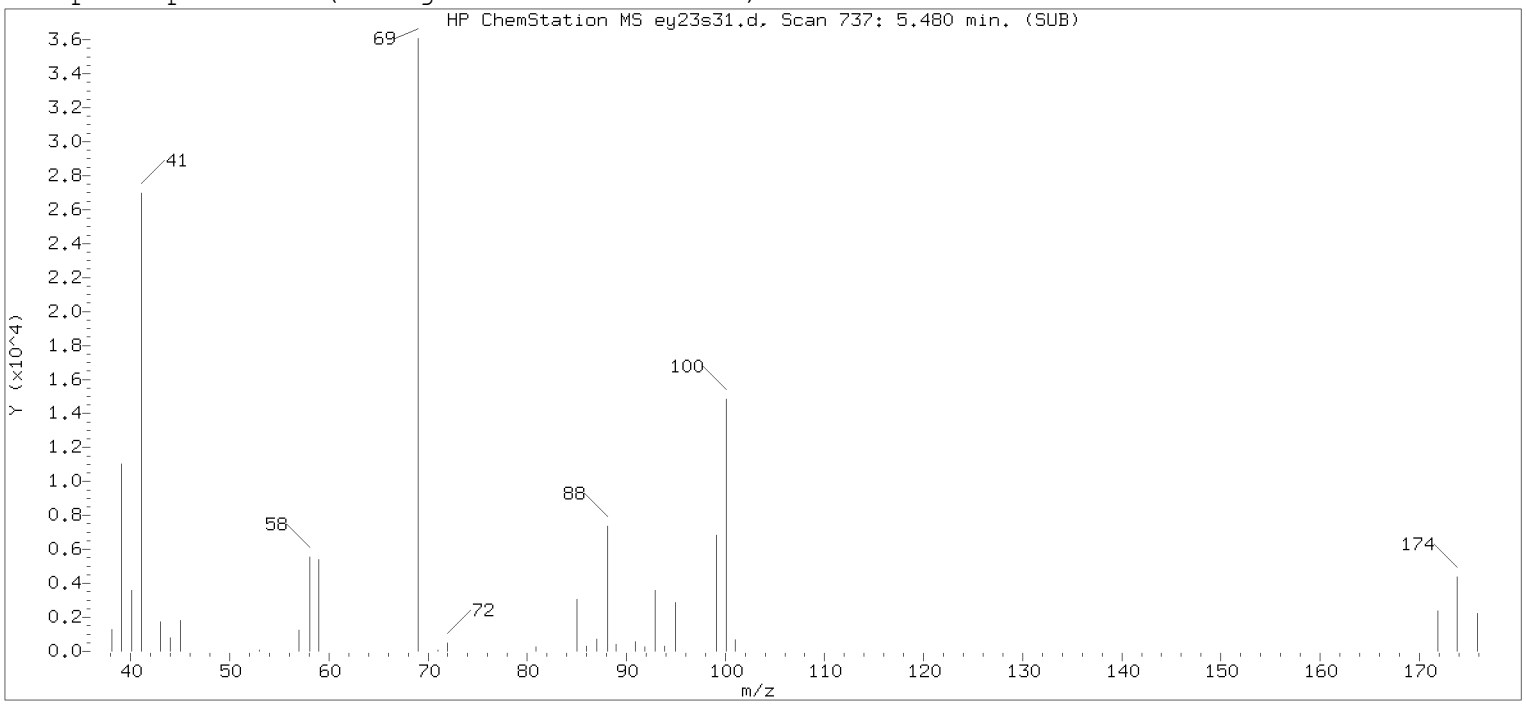
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 737
Retention Time (minutes): 5.480
Quant Ion : 88.00
Area (flag) : 31333M
On-Column Amount (ng) : 545.9588
Integration start scan : 729 Integration stop scan: 766
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

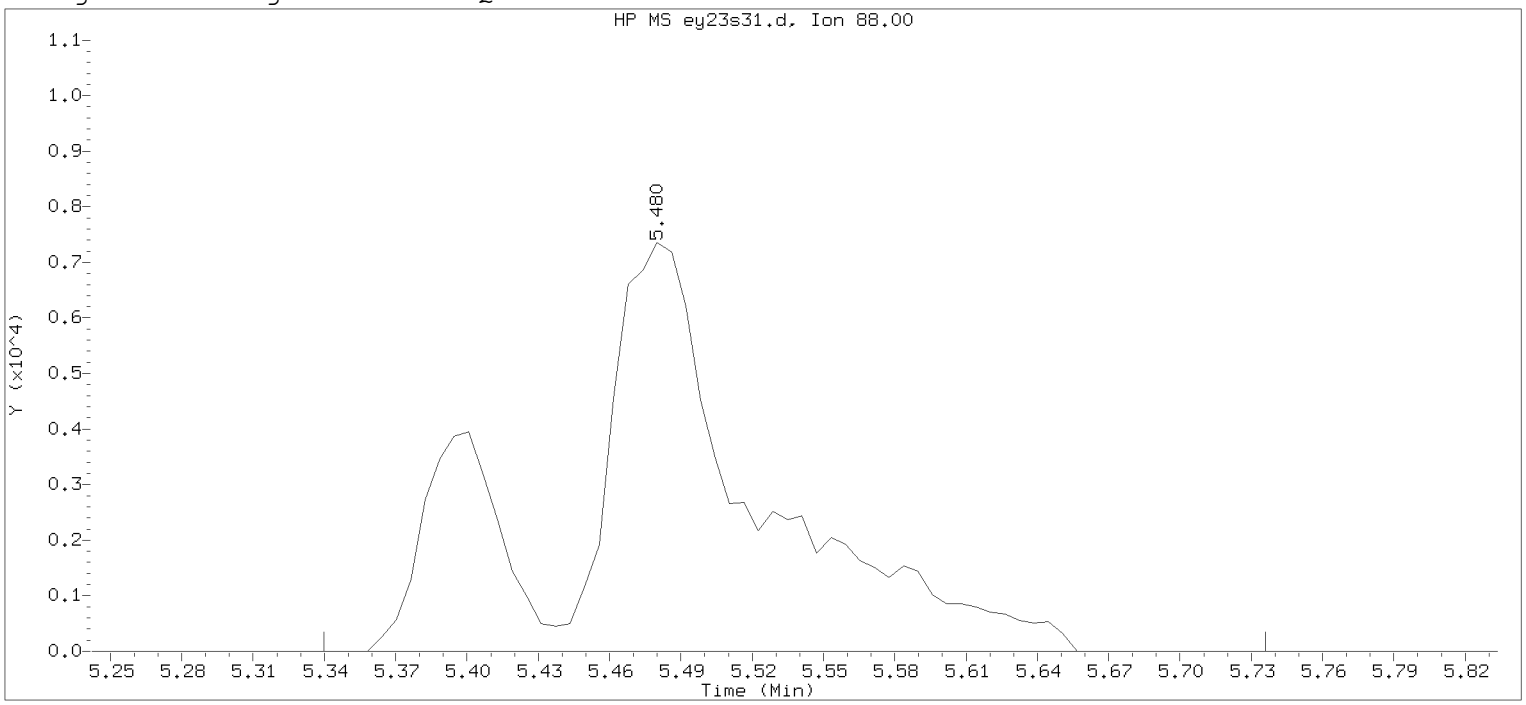
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:31.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may23b.b/ey23s31.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 18:57 Analyst ID: DVV10203

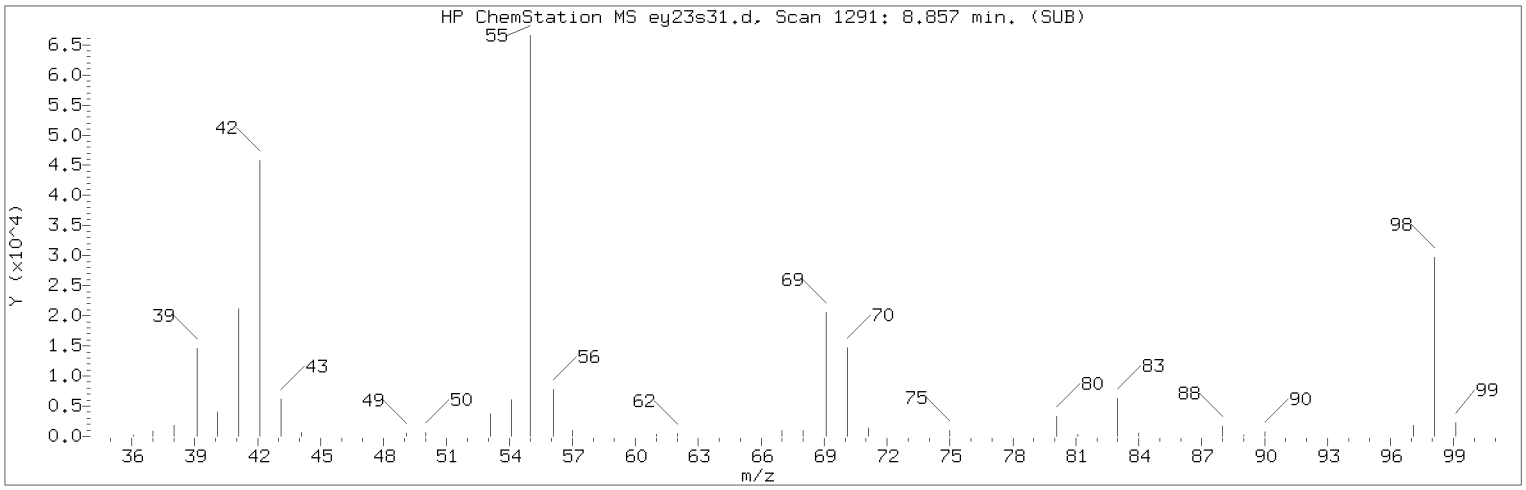
Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 19:13 Automation

Sample Name: LCSE15 Lab Sample ID: LCSE15

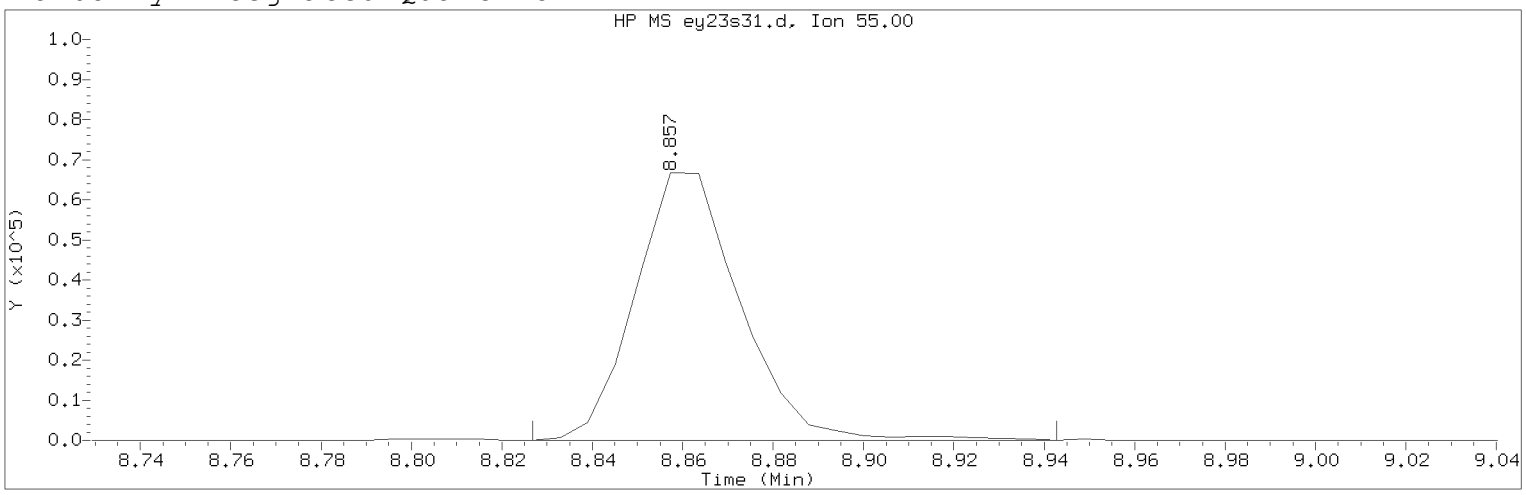
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 737
Retention Time (minutes): 5.480
Quant Ion : 88.00
Area : 40327
On-column Amount (ng) : 705.2235
Integration start scan : 713 Integration stop scan: 778
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/23/2019 at 20:31.
Target 3.5 esignature user id: dviray.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may23b.b/ey23s31.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 18:57 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:18 dvv10203

Sample Name: LCSE15 Lab Sample ID: LCSE15

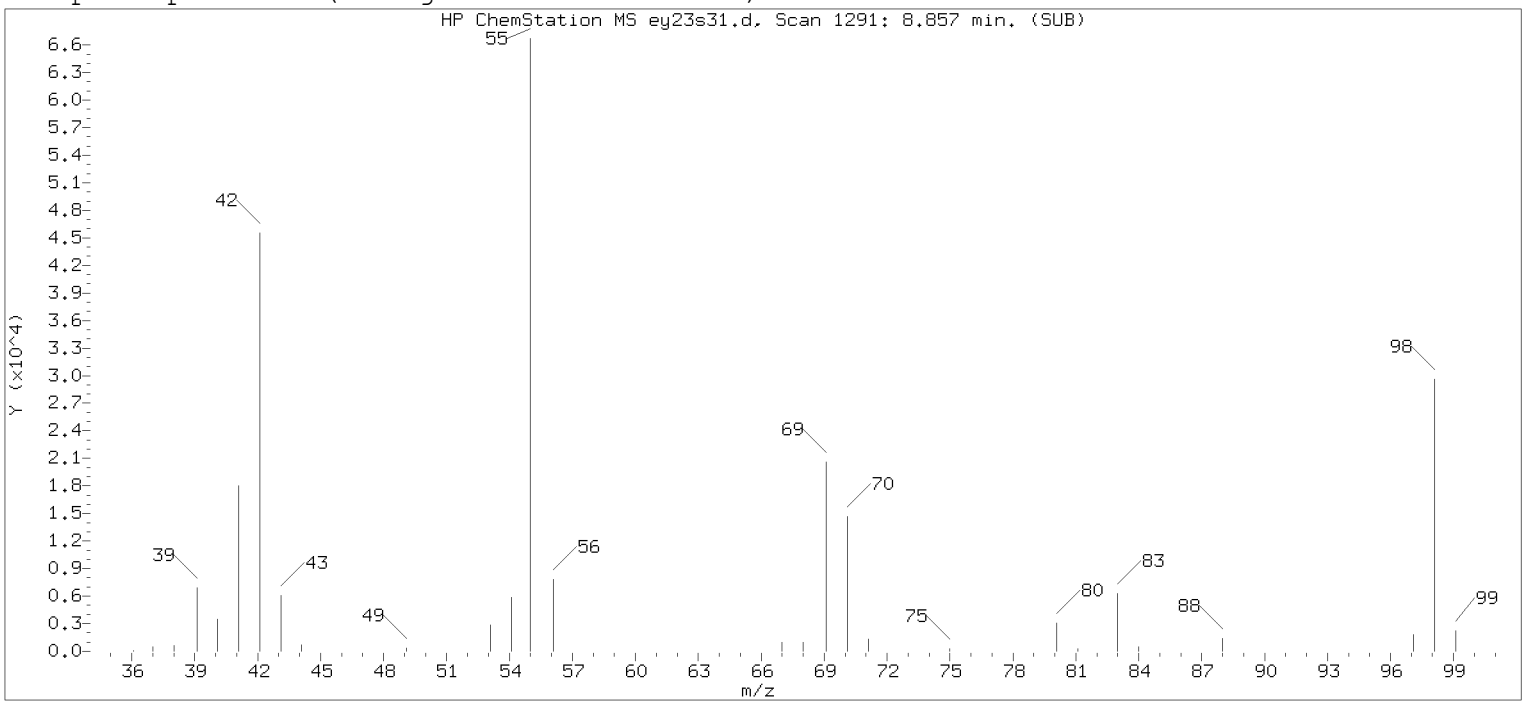
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1291
Retention Time (minutes): 8.857
Quant Ion : 55.00
Area (flag) : 107773M
On-Column Amount (ng) : 498.4942
Integration start scan : 1285 Integration stop scan: 1304
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

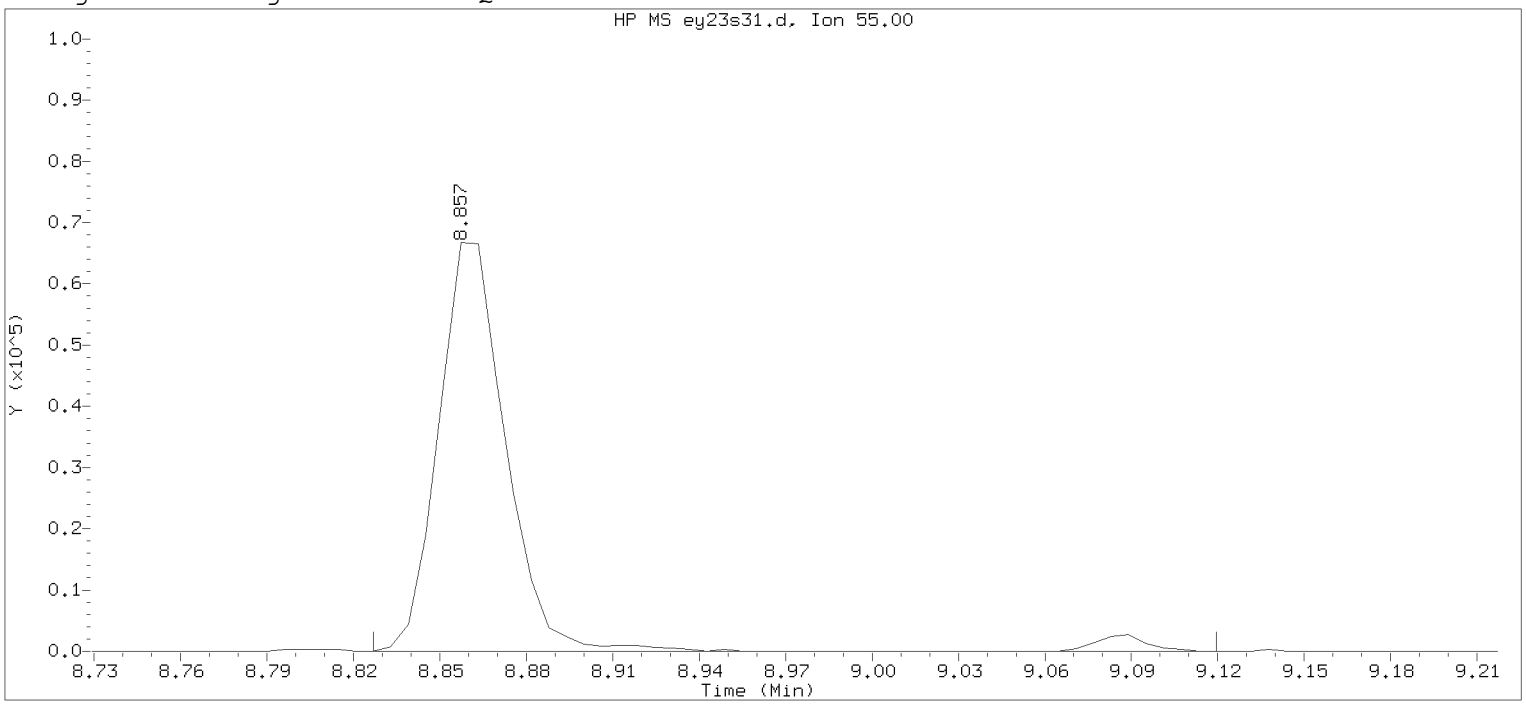
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:31.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may23b.b/ey23s31.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 18:57 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 19:13 Automation

Sample Name: LCSE15 Lab Sample ID: LCSE15

Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1291
Retention Time (minutes): 8.857
Quant Ion : 55.00
Area : 111192
On-column Amount (ng) : 516.1732
Integration start scan : 1285 Integration stop scan: 1333
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/23/2019 at 20:31.
Target 3.5 esignature user id: dvviray

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCDE15

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDE15

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s32.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	13	
74-87-3	Chloromethane	20	
106-99-0	1,3-Butadiene	25	
75-01-4	Vinyl Chloride	19	
74-83-9	Bromomethane	15	
75-00-3	Chloroethane	18	
109-66-0	n-Pentane	19	
75-69-4	Trichlorofluoromethane	15	
60-29-7	Ethyl ether	20	
354-23-4	Freon 123a	20	
107-02-8	Acrolein	130	
75-35-4	1,1-Dichloroethene	21	
67-64-1	Acetone	140	
76-13-1	Freon 113	20	
67-63-0	2-Propanol	160	
74-88-4	Methyl Iodide	20	
75-15-0	Carbon Disulfide	20	
107-05-1	Allyl Chloride	20	
79-20-9	Methyl Acetate	22	
75-09-2	Methylene Chloride	22	
75-65-0	t-Butyl alcohol	220	
107-13-1	Acrylonitrile	100	
156-60-5	trans-1,2-Dichloroethene	22	
1634-04-4	Methyl Tertiary Butyl Ether	20	
110-54-3	n-Hexane	19	
75-34-3	1,1-Dichloroethane	22	
108-20-3	di-Isopropyl ether	23	
126-99-8	2-Chloro-1,3-butadiene	20	
637-92-3	Ethyl t-butyl ether	21	
156-59-2	cis-1,2-Dichloroethene	23	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCDE15

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDE15

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s32.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	45	
78-93-3	2-Butanone	140	
594-20-7	2,2-Dichloropropane	21	
107-12-0	Propionitrile	160	
126-98-7	Methacrylonitrile	160	
74-97-5	Bromochloromethane	20	
109-99-9	Tetrahydrofuran	86	
67-66-3	Chloroform	21	
71-55-6	1,1,1-Trichloroethane	20	
110-82-7	Cyclohexane	20	
563-58-6	1,1-Dichloropropene	21	
56-23-5	Carbon Tetrachloride	20	
78-83-1	Isobutyl Alcohol	500	
71-43-2	Benzene	22	
107-06-2	1,2-Dichloroethane	20	
994-05-8	t-Amyl methyl ether	21	
142-82-5	n-Heptane	18	
71-36-3	n-Butanol	980	
79-01-6	Trichloroethene	21	
108-87-2	Methylcyclohexane	18	
78-87-5	1,2-Dichloropropane	23	
74-95-3	Dibromomethane	20	
123-91-1	1,4-Dioxane	570	
80-62-6	Methyl Methacrylate	19	
75-27-4	Bromodichloromethane	20	
79-46-9	2-Nitropropane	14	
110-75-8	2-Chloroethyl Vinyl Ether	19	
10061-01-5	cis-1,3-Dichloropropene	21	
108-10-1	4-Methyl-2-pentanone	91	
108-88-3	Toluene	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCDE15

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDE15

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s32.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	19	
542-75-6	1,3-Dichloropropene (total)	40	
97-63-2	Ethyl Methacrylate	18	
79-00-5	1,1,2-Trichloroethane	21	
127-18-4	Tetrachloroethene	21	
142-28-9	1,3-Dichloropropane	21	
591-78-6	2-Hexanone	84	
124-48-1	Dibromochloromethane	20	
106-93-4	1,2-Dibromoethane	20	
544-10-5	1-Chlorohexane	18	
108-90-7	Chlorobenzene	21	
630-20-6	1,1,1,2-Tetrachloroethane	20	
100-41-4	Ethylbenzene	21	
179601-23-1	m+p-Xylene	43	
95-47-6	o-Xylene	21	
1330-20-7	Xylene (Total)	64	
100-42-5	Styrene	21	
75-25-2	Bromoform	18	
98-82-8	Isopropylbenzene	22	
108-94-1	Cyclohexanone	490	
108-86-1	Bromobenzene	21	
79-34-5	1,1,2,2-Tetrachloroethane	20	
96-18-4	1,2,3-Trichloropropane	20	
110-57-6	trans-1,4-Dichloro-2-butene	79	
103-65-1	n-Propylbenzene	22	
95-49-8	2-Chlorotoluene	21	
106-43-4	4-Chlorotoluene	21	
108-67-8	1,3,5-Trimethylbenzene	21	
98-06-6	tert-Butylbenzene	21	
76-01-7	Pentachloroethane	19	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCDE15

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDE15

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may23b.b/ey23s32.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
95-63-6	1,2,4-Trimethylbenzene	21	
135-98-8	sec-Butylbenzene	22	
541-73-1	1,3-Dichlorobenzene	21	
99-87-6	p-Isopropyltoluene	21	
106-46-7	1,4-Dichlorobenzene	21	
526-73-8	1,2,3-Trimethylbenzene	20	
100-44-7	Benzyl Chloride	18	
141-93-5	1,3-Diethylbenzene	20	
105-05-5	1,4-Diethylbenzene	20	
95-50-1	1,2-Dichlorobenzene	21	
104-51-8	n-Butylbenzene	21	
135-01-3	1,2-Diethylbenzene	20	
25340-17-4	Diethylbenzene (total)	60	
96-12-8	1,2-Dibromo-3-chloropropane	18	
108-70-3	1,3,5-Trichlorobenzene	21	
120-82-1	1,2,4-Trichlorobenzene	21	
87-68-3	Hexachlorobutadiene	21	
91-20-3	Naphthalene	20	
87-61-6	1,2,3-Trichlorobenzene	21	
91-57-6	2-Methylnaphthalene	16	

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23s32.d Injection date and time: **23-MAY-2019 19:17**
Data file Sample Info. Line: LCDE15;LCDE15;1;3;LCSD;;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 20:19 dvv10203

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.493	(-0.006)	247	65	181547M	(-3)	250.00	
66) Fluorobenzene	4.736	(0.000)	615	96	1030537	(-2)	50.00	
101) Chlorobenzene-d5	7.894	(0.000)	1133	117	769001	(-2)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802	(0.000)	1446	152	411269	(0)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.078	(-0.001)	113	230725	48.170	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.395	(0.001)	102	60496	50.050	100%		80 - 120
84) Toluene-d8	(3)	6.388	(-0.001)	98	1038453	49.721	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918	(0.000)	95	393275	48.982	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	1.212	(-0.001)	85	117988	12.983	12.98			0.2	1
4) Chloromethane	(2)	1.322	(-0.001)	50	146326	19.784	19.78			0.2	1
5) 1,3-Butadiene	(2)	1.371	(-0.001)	39	140567	25.282	25.28			1	3
6) Vinyl Chloride	(2)	1.383	(-0.000)	62	135169	19.121	19.12			0.2	1
8) Bromomethane	(2)	1.566	(-0.000)	94	78418	14.731	14.73			0.3	1
9) Chloroethane	(2)	1.609	(-0.001)	64	71023	17.646	17.65			0.2	1
11) n-Pentane	(2)	1.792	(-0.000)	43	160346	19.422	19.42			0.4	10
12) Trichlorofluoromethane	(2)	1.792	(-0.000)	101	155334	15.457	15.46			0.2	1
14) Ethyl ether	(2)	1.932	(-0.001)	59	84857	20.265	20.26			0.2	5
15) Freon 123a	(2)	1.938	(-0.000)	67	117752	19.898	19.90			0.4	5
16) Acrolein	(1)	2.023	(-0.000)	56	200914	134.129	134.13			2	100
17) 1,1-Dichloroethene	(2)	2.109	(-0.001)	96	88935	21.491	21.49			0.2	1
18) Acetone	(1)	2.127	(-0.000)	58	86099	138.097	138.10			0.7	20
19) Freon 113	(2)	2.127	(-0.001)	101	90090	19.660	19.66			0.2	10
21) 2-Propanol	(1)	2.224	(-0.002)	45	58814	157.894	157.89			18	100
22) Methyl Iodide	(2)	2.224	(-0.001)	142	152488	19.664	19.66			0.2	1
23) Carbon Disulfide	(2)	2.285	(-0.001)	76	284866	20.294	20.29			0.2	5
25) Allyl Chloride	(2)	2.377	(-0.001)	41	162268	20.176	20.18			0.3	5
27) Methyl Acetate	(2)	2.383	(-0.001)	43	85784	21.723	21.72			0.2	5
28) Methylene Chloride	(2)	2.480	(-0.001)	84	101997	21.635	21.64			0.3	1
30) t-Butyl alcohol	(1)	2.560	(0.000)	59	148849	219.331	219.33			12	50
31) Acrylonitrile	(2)	2.676	(-0.001)	53	241057	100.388	100.39			0.3	20
32) trans-1,2-Dichloroethene	(2)	2.712	(-0.000)	96	101223	21.731	21.73			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	2.718	(-0.001)	73	284006	20.450	20.45			0.2	1
34) n-Hexane	(2)	2.962	(-0.001)	57	157830	19.336	19.34			0.2	5
36) 1,1-Dichloroethane	(2)	3.078	(-0.000)	63	188626	21.615	21.62			0.2	1
38) di-Isopropyl ether	(2)	3.157	(-0.001)	45	349667	22.770	22.77			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	3.169	(-0.001)	53	166276	19.954	19.95			0.2	5
40) Ethyl t-butyl ether	(2)	3.486	(-0.000)	59	312801	20.649	20.65			0.2	1
42) cis-1,2-Dichloroethene	(2)	3.620	(-0.001)	96	119746	22.881	22.88			0.2	1

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23s32.d Injection date and time: **23-MAY-2019 19:17**
Data file Sample Info. Line: LCDE15;LCDE15;1;3;LCSD;;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 20:19 dvv10203

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
43) 1,2-Dichloroethene (Total)	(2)		96	220969	44.612	44.61			0.2	2
44) 2-Butanone	(2)	3.620(-0.000)	43	446791	138.102	138.10			0.3	10
45) 2,2-Dichloropropane	(2)	3.633(-0.001)	77	161177	20.934	20.93			0.3	1
47) Propionitrile	(1)	3.675(0.003)	54	145787	159.018	159.02			14	100
48) Methacrylonitrile	(2)	3.822(-0.000)	67	401482	155.711	155.71			6	50
49) Bromochloromethane	(2)	3.846(-0.001)	128	51719	19.897	19.90			0.2	5
50) Tetrahydrofuran	(1)	3.883(0.003)	71	82186	85.536	85.54			0.7	10
51) Chloroform	(2)	3.925(-0.001)	83	175521	21.147	21.15			0.2	1
53) 1,1,1-Trichloroethane	(2)	4.108(-0.001)	97	156555	20.384	20.38			0.3	1
54) Cyclohexane	(2)	4.163(-0.000)	56	190919	20.239	20.24			0.2	5
55) 1,1-Dichloropropene	(2)	4.261(-0.000)	75	145830	21.414	21.41			0.2	5
56) Carbon Tetrachloride	(2)	4.273(-0.001)	117	130004	19.900	19.90			0.2	1
58) Isobutyl Alcohol	(1)	4.383(0.004)	41	114888	498.625	498.63			36	250
60) Benzene	(2)	4.462(-0.001)	78	440740	22.041	22.04			0.2	1
61) 1,2-Dichloroethane	(2)	4.474(-0.001)	62	136047	20.257	20.26			0.3	1
65) t-Amyl methyl ether	(2)	4.590(-0.001)	73	312142	20.779	20.78			0.8	5
67) n-Heptane	(2)	4.748(0.000)	43	159009	18.175	18.18			0.2	5
69) n-Butanol	(1)	5.053(0.005)	56	195515	981.056	981.06			61	250
71) Trichloroethene	(2)	5.108(0.000)	95	107728	21.358	21.36			0.2	1
73) Methylcyclohexane	(2)	5.315(0.000)	83	193119	18.387	18.39			0.2	5
74) 1,2-Dichloropropane	(2)	5.334(-0.001)	63	113390	22.792	22.79			0.2	1
75) Dibromomethane	(2)	5.449(0.000)	93	60561	20.335	20.33			0.2	1
76) 1,4-Dioxane	(1)	5.480(0.003)	88	31844M	567.797	567.80			29	250
77) Methyl Methacrylate	(2)	5.474(0.000)	69	86145	18.991	18.99			0.2	5
79) Bromodichloromethane	(2)	5.620(0.000)	83	124516	20.096	20.10			0.2	1
80) 2-Nitropropane	(2)	5.858(-0.001)	41	28609	13.933	13.93			0.8	10
81) 2-Chloroethyl Vinyl Ether	(2)	5.955(0.000)	63	73592M	19.197	19.20			0.2	10
82) cis-1,3-Dichloropropene	(2)	6.102(-0.001)	75	166649	20.650	20.65			0.2	1
83) 4-Methyl-2-pentanone	(2)	6.278(0.000)	43	633367	91.160	91.16			0.5	10
89) Toluene	(3)	6.455(-0.000)	92	277463	21.706	21.71			0.2	1
90) trans-1,3-Dichloropropene	(3)	6.705(-0.000)	75	145170	19.002	19.00			0.2	1
91) 1,3-Dichloropropene (total)	(3)		100	311819	39.652	39.65			0.2	5
92) Ethyl Methacrylate	(3)	6.833(-0.000)	69	150561	18.487	18.49			0.2	5
93) 1,1,2-Trichloroethane	(3)	6.894(-0.000)	97	93435M	21.476	21.48			0.2	1
94) Tetrachloroethene	(3)	7.053(-0.000)	166	110942	21.346	21.35			0.2	1
95) 1,3-Dichloropropane	(3)	7.077(-0.000)	76	160867	21.038	21.04			0.2	1
97) 2-Hexanone	(3)	7.193(-0.000)	43	453832	83.584	83.58			0.3	10
98) Dibromochloromethane	(3)	7.315(-0.000)	129	91900	19.567	19.57			0.2	1
100) 1,2-Dibromoethane	(3)	7.425(-0.000)	107	93293	20.154	20.15			0.2	1
102) 1-Chlorohexane	(3)	7.315(-0.000)	91	8048M	18.219	18.22			0.3	5
103) Chlorobenzene	(3)	7.918(-0.000)	112	300241	21.242	21.24			0.2	1
104) 1,1,1,2-Tetrachloroethane	(3)	8.004(-0.000)	131	96687	20.141	20.14			0.2	1
105) Ethylbenzene	(3)	8.034(0.000)	91	537769	21.265	21.27			0.4	1
107) m+p-Xylene	(3)	8.144(-0.000)	106	424286	43.100	43.10			1	5
108) o-Xylene	(3)	8.492(0.000)	106	203242	21.155	21.16			0.4	1
109) Xylene (Total)	(3)		106	627528	64.255	64.25			1	5
110) Styrene	(3)	8.504(0.000)	104	334953	21.108	21.11			0.2	5
111) Bromoform	(3)	8.644(0.000)	173	56734	18.120	18.12			0.2	4
112) Isopropylbenzene	(3)	8.802(0.000)	105	552167	21.602	21.60			0.2	5
113) Cyclohexanone	(1)	8.863(0.006)	55	104410M	494.197	494.20			25	100
116) Bromobenzene	(4)	9.034(-0.000)	156	120460	21.020	21.02			0.2	5
117) 1,1,2,2-Tetrachloroethane	(4)	9.040(-0.000)	83	134725	20.257	20.26			0.2	1
118) 1,2,3-Trichloropropane	(4)	9.071(-0.000)	110	40245	19.967	19.97			0.2	5
119) trans-1,4-Dichloro-2-butene	(4)	9.089(-0.000)	53	173223	79.257	79.26			6	50

M = Compound was manually integrated.

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may23b.b/ey23s32.d Injection date and time: **23-MAY-2019 19:17**
Data file Sample Info. Line: LCDE15;LCDE15;1;3;LCSD;;;;ey23b31; Instrument ID: **HP15648.i** Batch: **E191433AA**
Date, time and analyst ID of latest file update: 23-May-2019 20:19 dvv10203

Blank Data file reference: **/chem/HP15648.i/19may23b.b/ey23b31.d**

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-MAY-2019 18:53
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may23b.b/ey23c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

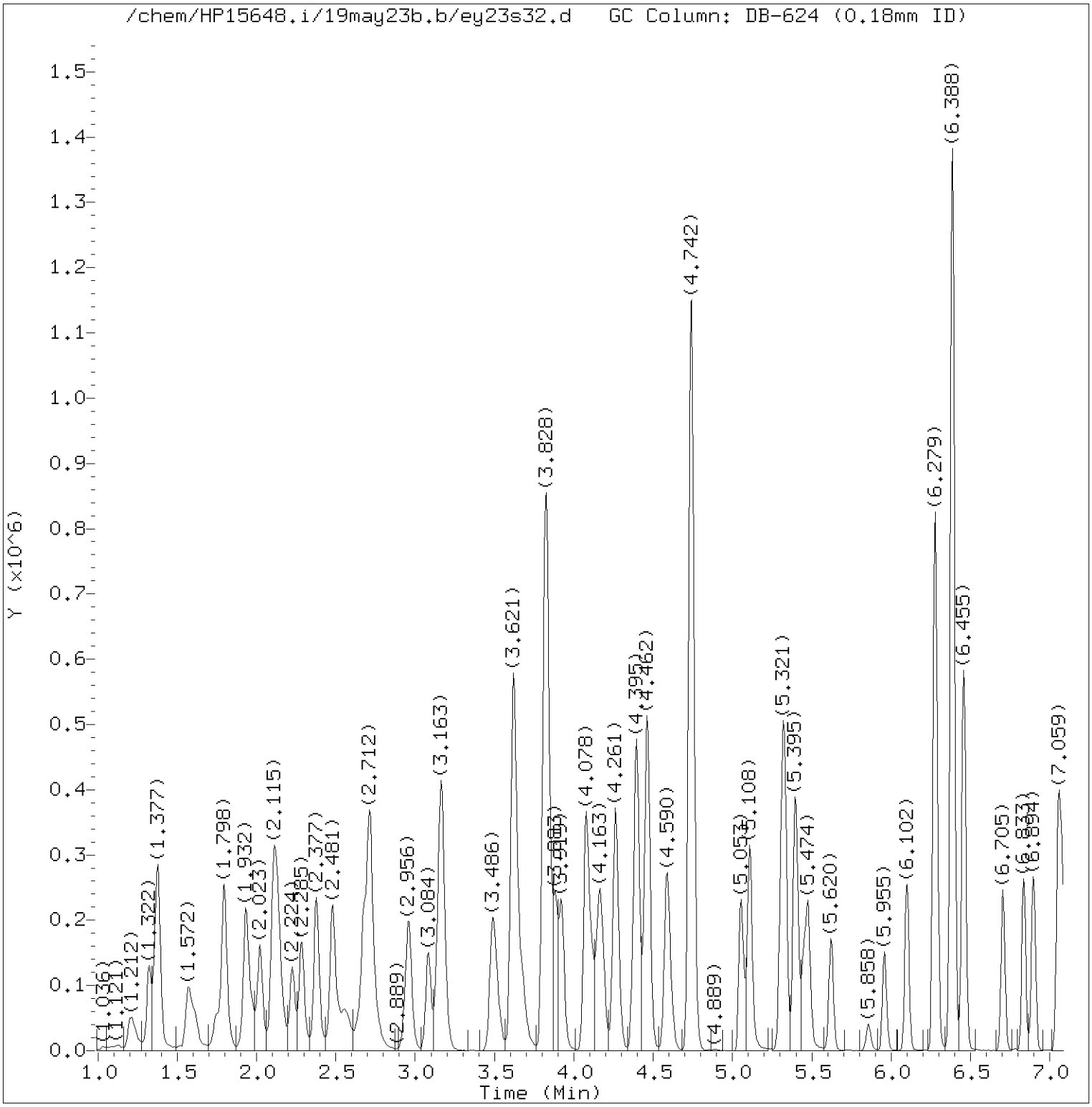
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) n-Propylbenzene	(4)	9.132(-0.000)	91	655269	21.689	21.69			0.2	5
121) 2-Chlorotoluene	(4)	9.193(-0.000)	126	125649	21.124	21.12			0.2	5
122) 4-Chlorotoluene	(4)	9.278(-0.000)	126	125972	20.660	20.66			0.2	5
123) 1,3,5-Trimethylbenzene	(4)	9.278(-0.000)	105	465980	21.261	21.26			0.3	5
125) tert-Butylbenzene	(4)	9.522(-0.000)	134	103120	21.167	21.17			0.3	5
126) Pentachloroethane	(4)	9.528(-0.000)	167	70082	19.322	19.32			0.2	5
127) 1,2,4-Trimethylbenzene	(4)	9.558(-0.000)	105	467844	20.730	20.73			1	5
128) sec-Butylbenzene	(4)	9.680(-0.000)	105	605850	21.790	21.79			0.2	5
130) 1,3-Dichlorobenzene	(4)	9.754(-0.000)	146	237974	21.309	21.31			0.2	5
131) p-Isopropyltoluene	(4)	9.790(-0.000)	119	513764	21.005	21.00			0.2	5
134) 1,4-Dichlorobenzene	(4)	9.820(-0.000)	146	241741	21.160	21.16			0.2	5
135) 1,2,3-Trimethylbenzene	(4)	9.863(0.000)	105	485145	20.188	20.19			0.3	5
136) Benzyl Chloride	(4)	9.918(0.000)	91	275310	17.743	17.74			0.3	5
137) 1,3-Diethylbenzene	(4)	10.010(0.000)	119	306649	19.911	19.91			0.2	5
138) 1,4-Diethylbenzene	(4)	10.064(0.000)	119	325286	19.822	19.82			0.2	5
139) 1,2-Dichlorobenzene	(4)	10.083(0.000)	146	225235	21.067	21.07			0.2	5
140) n-Butylbenzene	(4)	10.083(0.000)	92	252301	21.003	21.00			0.2	5
141) 1,2-Diethylbenzene	(4)	10.150(0.000)	119	254142	20.156	20.16			0.2	5
142) Diethylbenzene (total)	(4)		100	886077	59.889	59.89			0.2	5
143) 1,2-Dibromo-3-chloropropane	(4)	10.619(0.000)	75	27196	17.847	17.85			0.3	5
145) 1,3,5-Trichlorobenzene	(4)	10.766(0.000)	180	165236	21.017	21.02			0.2	5
147) 1,2,4-Trichlorobenzene	(4)	11.174(0.000)	180	147138	20.966	20.97			0.3	5
148) Hexachlorobutadiene	(4)	11.290(0.000)	225	63969	21.264	21.26			0.7	5
149) Naphthalene	(4)	11.332(0.000)	128	454658	19.651	19.65			1	5
150) 1,2,3-Trichlorobenzene	(4)	11.491(0.000)	180	138954	20.970	20.97			0.4	5
151) 2-Methylnaphthalene	(4)	12.052(0.000)	142	238389	16.305	16.31			0.7	5

Total number of targets = 110

Digitally signed by Don V. Viray on 05/23/2019 at 20:32. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

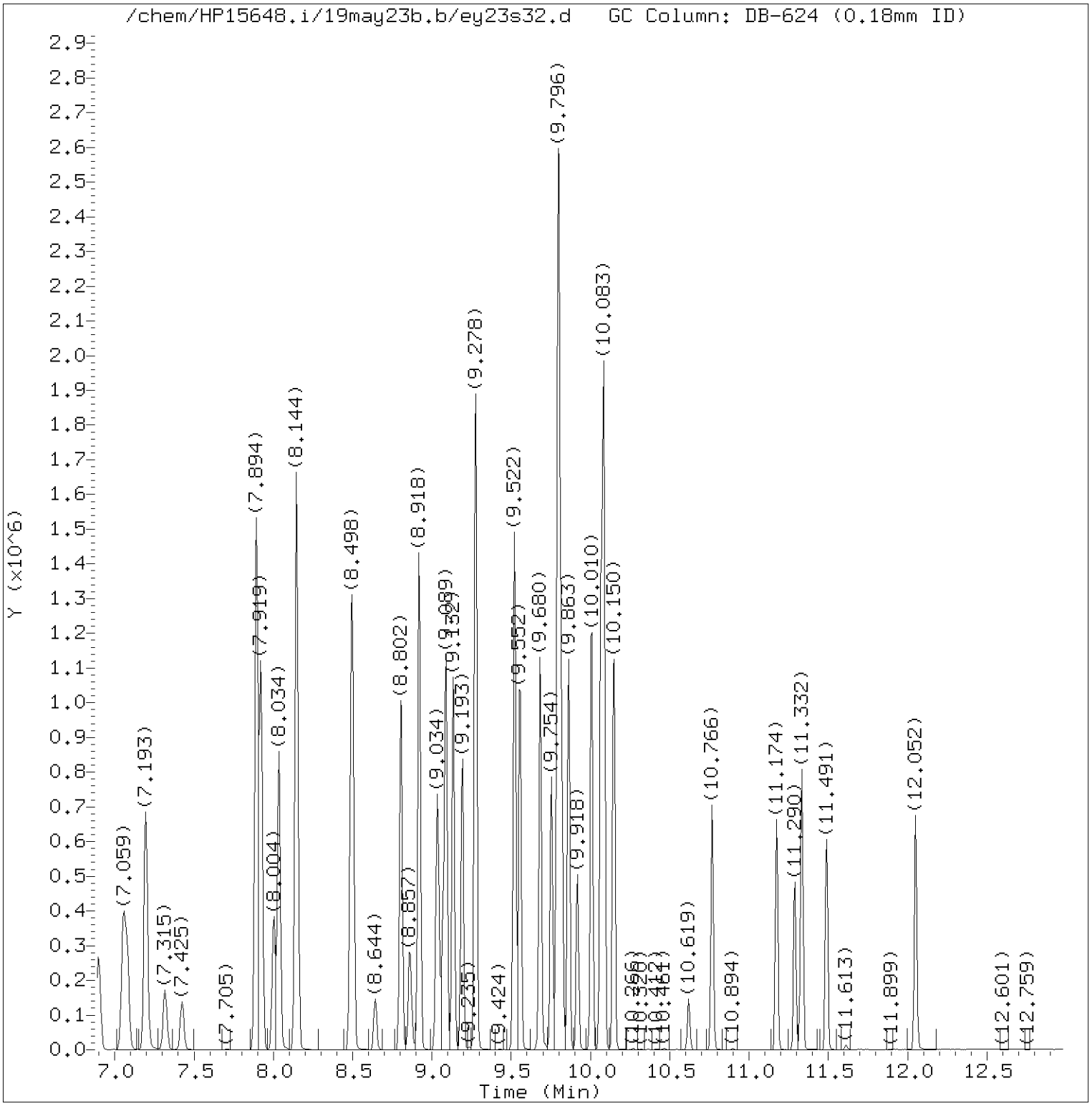
Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s32.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 19:17 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:19 dvv10203

Sample Name: LCDE15 Lab Sample ID: LCDE15

Digitally signed by Don V. Viray
on 05/23/2019 at 20:32.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s32.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 19:17 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:19 dvv10203

Sample Name: LCDE15 Lab Sample ID: LCDE15

Digitally signed by Don V. Viray
on 05/23/2019 at 20:32.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s32.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 19:17 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:19 dvv10203

Sample Name: LCDE15 Lab Sample ID: LCDE15

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.212	85	117988	12.983
4) Chloromethane	(2)	1.322	50	146326	19.784
5) 1,3-Butadiene	(2)	1.371	39	140567	25.282
6) Vinyl Chloride	(2)	1.383	62	135169	19.121
8) Bromomethane	(2)	1.566	94	78418	14.731
9) Chloroethane	(2)	1.609	64	71023	17.646
11) n-Pentane	(2)	1.792	43	160346	19.422
12) Trichlorofluoromethane	(2)	1.792	101	155334	15.457
14) Ethyl ether	(2)	1.932	59	84857	20.265
15) Freon 123a	(2)	1.938	67	117752	19.898
16) Acrolein	(1)	2.023	56	200914	134.129
17) 1,1-Dichloroethene	(2)	2.109	96	88935	21.491
18) Acetone	(1)	2.127	58	86099	138.097
19) Freon 113	(2)	2.127	101	90090	19.660
21) 2-Propanol	(1)	2.224	45	58814	157.894
22) Methyl Iodide	(2)	2.224	142	152488	19.664
23) Carbon Disulfide	(2)	2.285	76	284866	20.294
25) Allyl Chloride	(2)	2.377	41	162268	20.176
27) Methyl Acetate	(2)	2.383	43	85784	21.723
28) Methylene Chloride	(2)	2.481	84	101997	21.635
29)*t-Butyl alcohol-d10	(1)	2.493	65	181547M	250.000
30) t-Butyl alcohol	(1)	2.560	59	148849	219.331
31) Acrylonitrile	(2)	2.676	53	241057	100.388
32) trans-1,2-Dichloroethene	(2)	2.712	96	101223	21.731
33) Methyl Tertiary Butyl Ether	(2)	2.718	73	284006	20.450
34) n-Hexane	(2)	2.962	57	157830	19.336
36) 1,1-Dichloroethane	(2)	3.078	63	188626	21.615
38) di-Isopropyl ether	(2)	3.157	45	349667	22.770
39) 2-Chloro-1,3-butadiene	(2)	3.169	53	166276	19.954
40) Ethyl t-butyl ether	(2)	3.486	59	312801	20.649
42) cis-1,2-Dichloroethene	(2)	3.621	96	119746	22.881
44) 2-Butanone	(2)	3.621	43	446791	138.102
43) 1,2-Dichloroethene (Total)	(2)		96	220969	44.612
45) 2,2-Dichloropropane	(2)	3.633	77	161177	20.934
47) Propionitrile	(1)	3.675	54	145787	159.018
48) Methacrylonitrile	(2)	3.822	67	401482	155.711
49) Bromochloromethane	(2)	3.846	128	51719	19.897
50) Tetrahydrofuran	(1)	3.883	71	82186	85.536

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 05/23/2019 at 20:32.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s32.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 19:17 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:19 dvv10203

Sample Name: LCDE15 Lab Sample ID: LCDE15

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	3.925	83	175521	21.147
52)$Dibromofluoromethane	(2)	4.078	113	230725	48.170
53) 1,1,1-Trichloroethane	(2)	4.108	97	156555	20.384
54) Cyclohexane	(2)	4.163	56	190919	20.239
55) 1,1-Dichloropropene	(2)	4.261	75	145830	21.414
56) Carbon Tetrachloride	(2)	4.273	117	130004	19.900
58) Isobutyl Alcohol	(1)	4.383	41	114888	498.625
57)$1,2-Dichloroethane-d4	(2)	4.395	102	60496	50.050
60) Benzene	(2)	4.462	78	440740	22.041
61) 1,2-Dichloroethane	(2)	4.474	62	136047	20.257
65) t-Amyl methyl ether	(2)	4.590	73	312142	20.779
66)*Fluorobenzene	(2)	4.736	96	1030537	50.000
67) n-Heptane	(2)	4.748	43	159009	18.175
69) n-Butanol	(1)	5.053	56	195515	981.056
71) Trichloroethene	(2)	5.108	95	107728	21.358
73) Methylcyclohexane	(2)	5.315	83	193119	18.387
74) 1,2-Dichloropropane	(2)	5.334	63	113390	22.792
75) Dibromomethane	(2)	5.449	93	60561	20.335
77) Methyl Methacrylate	(2)	5.474	69	86145	18.991
76) 1,4-Dioxane	(1)	5.480	88	31844M	567.797
79) Bromodichloromethane	(2)	5.620	83	124516	20.096
80) 2-Nitropropane	(2)	5.858	41	28609	13.933
81) 2-Chloroethyl Vinyl Ether	(2)	5.955	63	73592M	19.197
82) cis-1,3-Dichloropropene	(2)	6.102	75	166649	20.650
83) 4-Methyl-2-pentanone	(2)	6.279	43	633367	91.160
84)$Toluene-d8	(3)	6.388	98	1038453	49.721
89) Toluene	(3)	6.455	92	277463	21.706
90) trans-1,3-Dichloropropene	(3)	6.705	75	145170	19.002
91) 1,3-Dichloropropene (total)	(3)		100	311819	39.652
92) Ethyl Methacrylate	(3)	6.833	69	150561	18.487
93) 1,1,2-Trichloroethane	(3)	6.894	97	93435M	21.476
94) Tetrachloroethene	(3)	7.053	166	110942	21.346
95) 1,3-Dichloropropane	(3)	7.077	76	160867	21.038
97) 2-Hexanone	(3)	7.193	43	453832	83.584
102) 1-Chlorohexane	(3)	7.315	91	8048M	18.219
98) Dibromochloromethane	(3)	7.315	129	91900	19.567
100) 1,2-Dibromoethane	(3)	7.425	107	93293	20.154
101)*Chlorobenzene-d5	(3)	7.894	117	769001	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/23/2019 at 20:32.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s32.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 19:17 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:19 dvv10203

Sample Name: LCDE15 Lab Sample ID: LCDE15

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
103) Chlorobenzene	(3)	7.919	112	300241	21.242
104) 1,1,1,2-Tetrachloroethane	(3)	8.004	131	96687	20.141
105) Ethylbenzene	(3)	8.034	91	537769	21.265
107) m+p-Xylene	(3)	8.144	106	424286	43.100
109) Xylene (Total)	(3)		106	627528	64.255
108) o-Xylene	(3)	8.492	106	203242	21.155
110) Styrene	(3)	8.504	104	334953	21.108
111) Bromoform	(3)	8.644	173	56734	18.120
112) Isopropylbenzene	(3)	8.802	105	552167	21.602
113) Cyclohexanone	(1)	8.863	55	104410M	494.197
115)$4-Bromofluorobenzene	(3)	8.918	95	393275	48.982
116) Bromobenzene	(4)	9.034	156	120460	21.020
117) 1,1,2,2-Tetrachloroethane	(4)	9.040	83	134725	20.257
118) 1,2,3-Trichloropropane	(4)	9.071	110	40245	19.967
119) trans-1,4-Dichloro-2-butene	(4)	9.089	53	173223	79.257
120) n-Propylbenzene	(4)	9.132	91	655269	21.689
121) 2-Chlorotoluene	(4)	9.193	126	125649	21.124
122) 4-Chlorotoluene	(4)	9.278	126	125972	20.660
123) 1,3,5-Trimethylbenzene	(4)	9.278	105	465980	21.261
125) tert-Butylbenzene	(4)	9.522	134	103120	21.167
126) Pentachloroethane	(4)	9.528	167	70082	19.322
127) 1,2,4-Trimethylbenzene	(4)	9.558	105	467844	20.730
128) sec-Butylbenzene	(4)	9.680	105	605850	21.790
130) 1,3-Dichlorobenzene	(4)	9.754	146	237974	21.309
131) p-Isopropyltoluene	(4)	9.790	119	513764	21.005
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	411269	50.000
134) 1,4-Dichlorobenzene	(4)	9.821	146	241741	21.160
135) 1,2,3-Trimethylbenzene	(4)	9.863	105	485145	20.188
136) Benzyl Chloride	(4)	9.918	91	275310	17.743
137) 1,3-Diethylbenzene	(4)	10.010	119	306649	19.911
138) 1,4-Diethylbenzene	(4)	10.064	119	325286	19.822
140) n-Butylbenzene	(4)	10.083	92	252301	21.003
139) 1,2-Dichlorobenzene	(4)	10.083	146	225235	21.067
142) Diethylbenzene (total)	(4)		100	886077	59.889
141) 1,2-Diethylbenzene	(4)	10.150	119	254142	20.156
143) 1,2-Dibromo-3-chloropropane	(4)	10.619	75	27196	17.847
145) 1,3,5-Trichlorobenzene	(4)	10.766	180	165236	21.017
147) 1,2,4-Trichlorobenzene	(4)	11.174	180	147138	20.966

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/23/2019 at 20:32.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may23b.b/ey23s32.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 19:17 Analyst ID: DVV10203

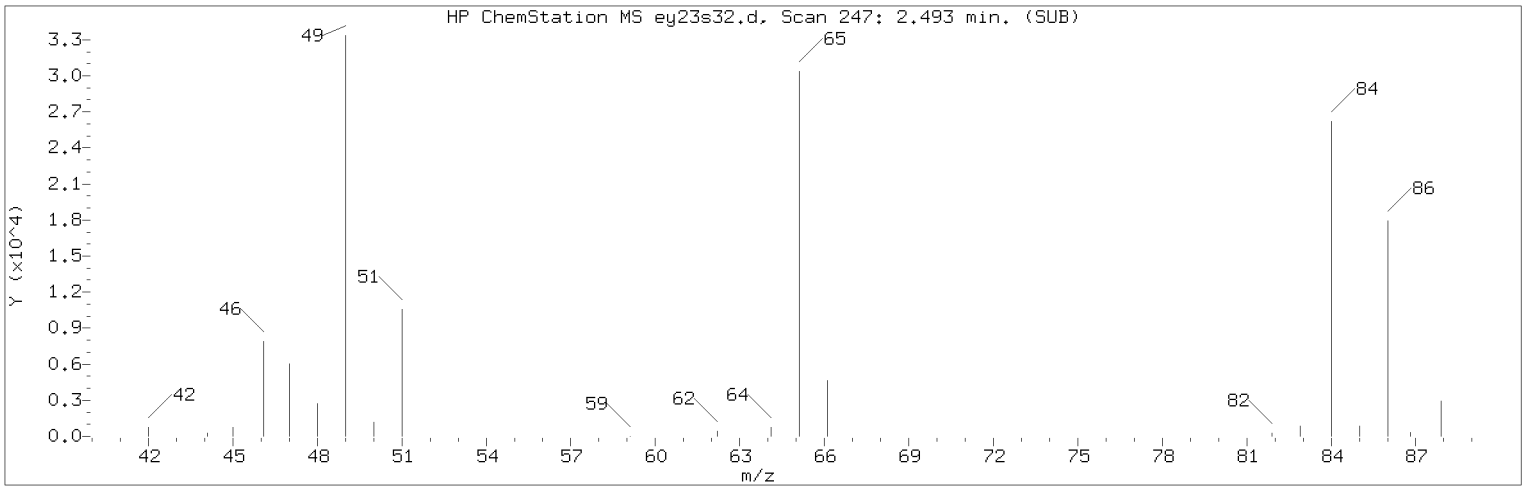
Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:19 dvv10203

Sample Name: LCDE15 Lab Sample ID: LCDE15

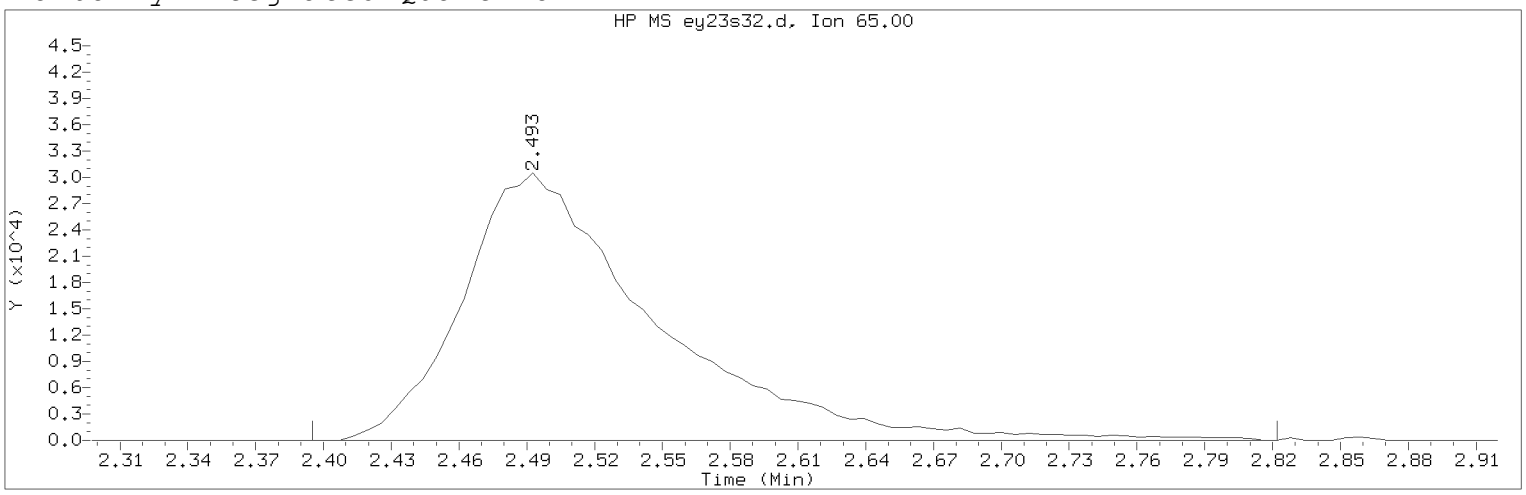
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) Hexachlorobutadiene	(4)	11.290	225	63969	21.264
149) Naphthalene	(4)	11.332	128	454658	19.651
150) 1,2,3-Trichlorobenzene	(4)	11.491	180	138954	20.970
151) 2-Methylnaphthalene	(4)	12.052	142	238389	16.305

Digitally signed by Don V. Viray
on 05/23/2019 at 20:32.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may23b.b/ey23s32.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 19:17 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:19 dvv10203

Sample Name: LCDE15 Lab Sample ID: LCDE15

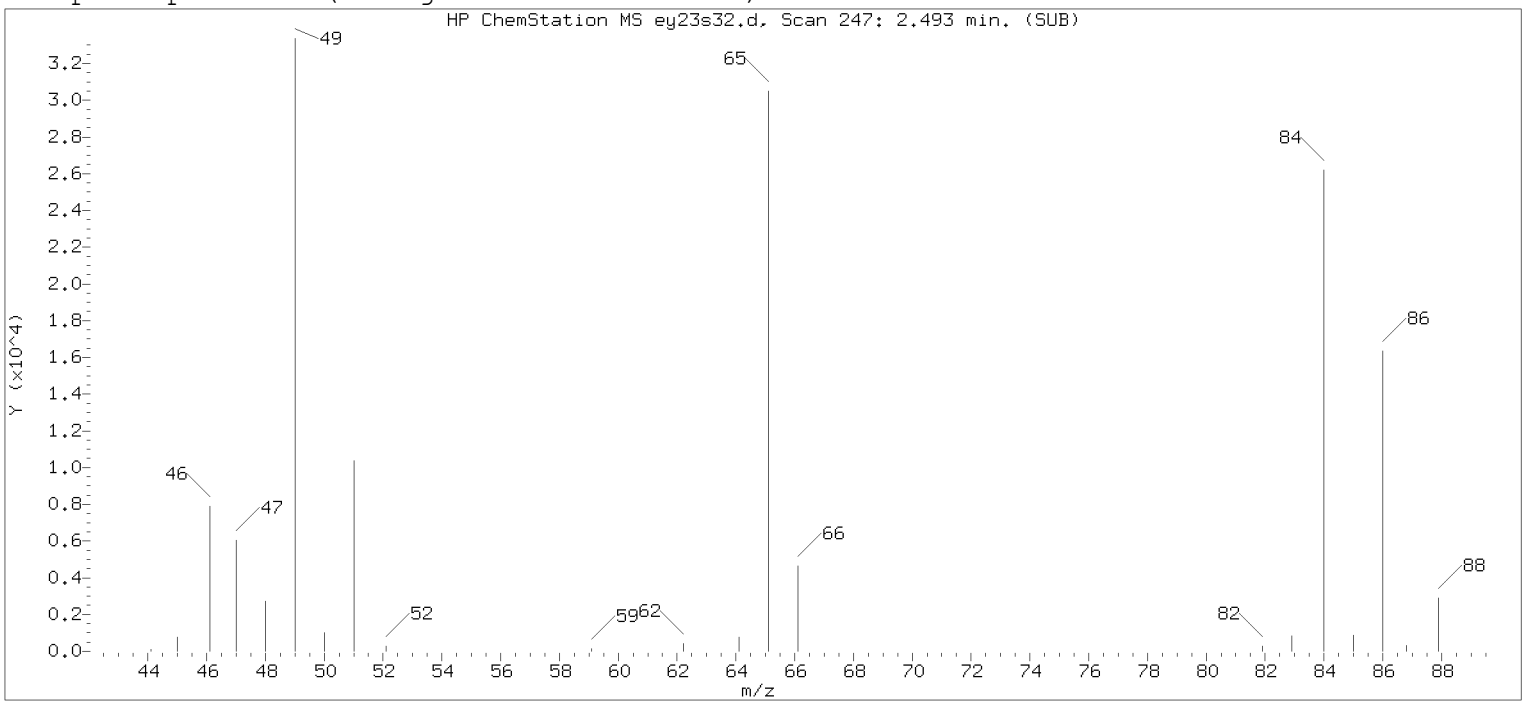
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 247
Retention Time (minutes): 2.493
Quant Ion : 65.00
Area (flag) : 181547M
On-Column Amount (ng) : 250.0000
Integration start scan : 230 Integration stop scan: 300
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

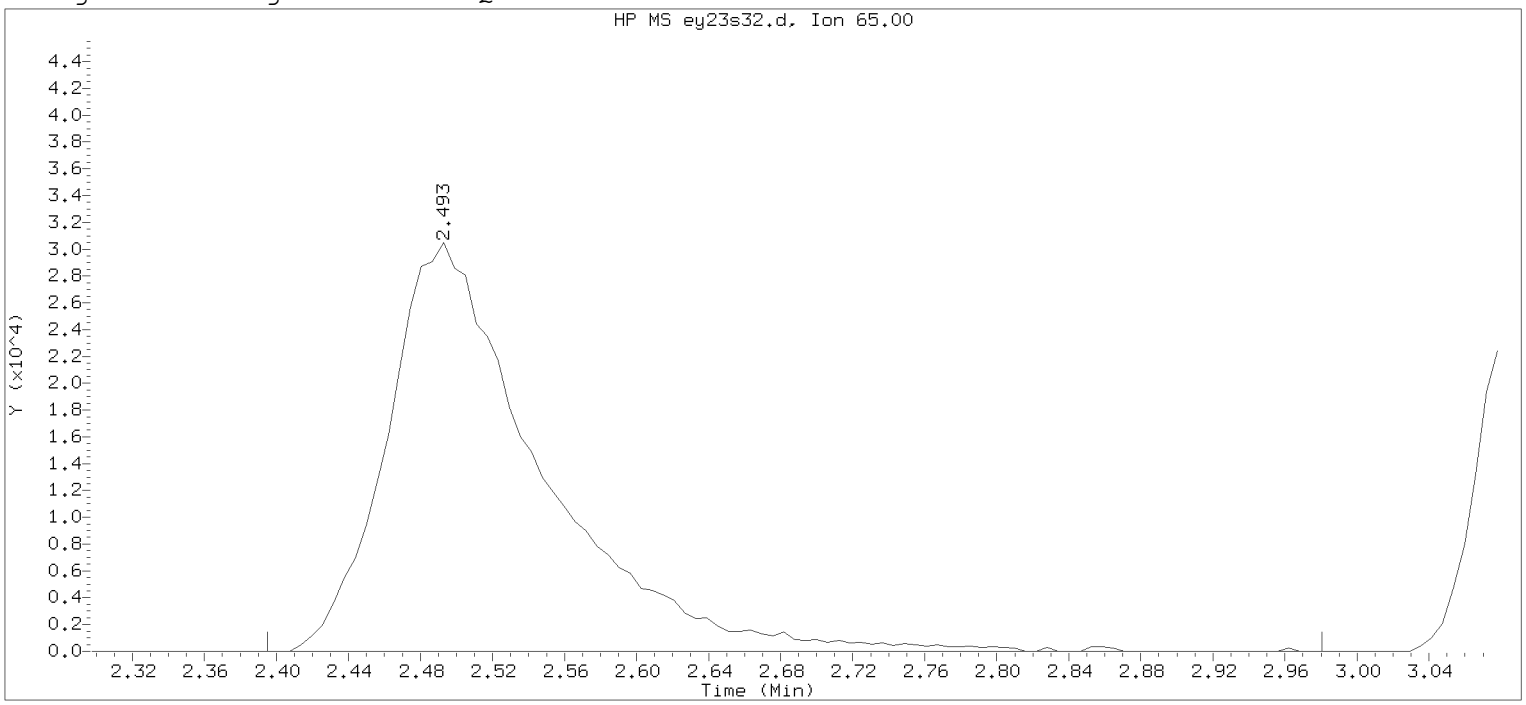
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:32.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may23b.b/ey23s32.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 19:17 Analyst ID: DVV10203

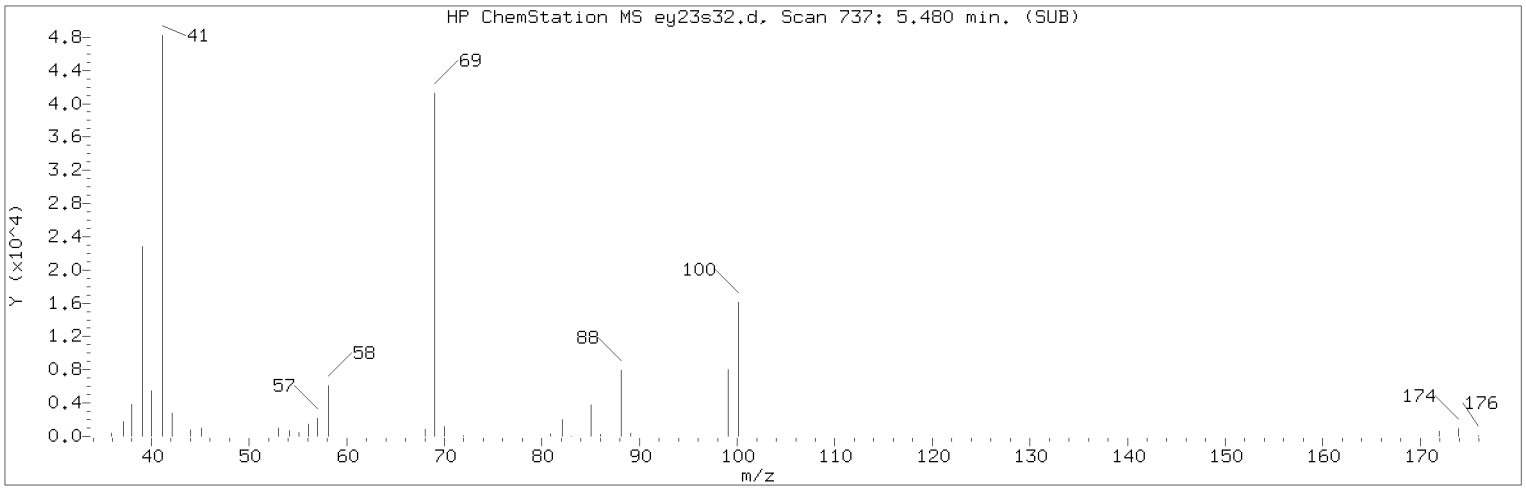
Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 19:57 dvv10203

Sample Name: LCDE15 Lab Sample ID: LCDE15

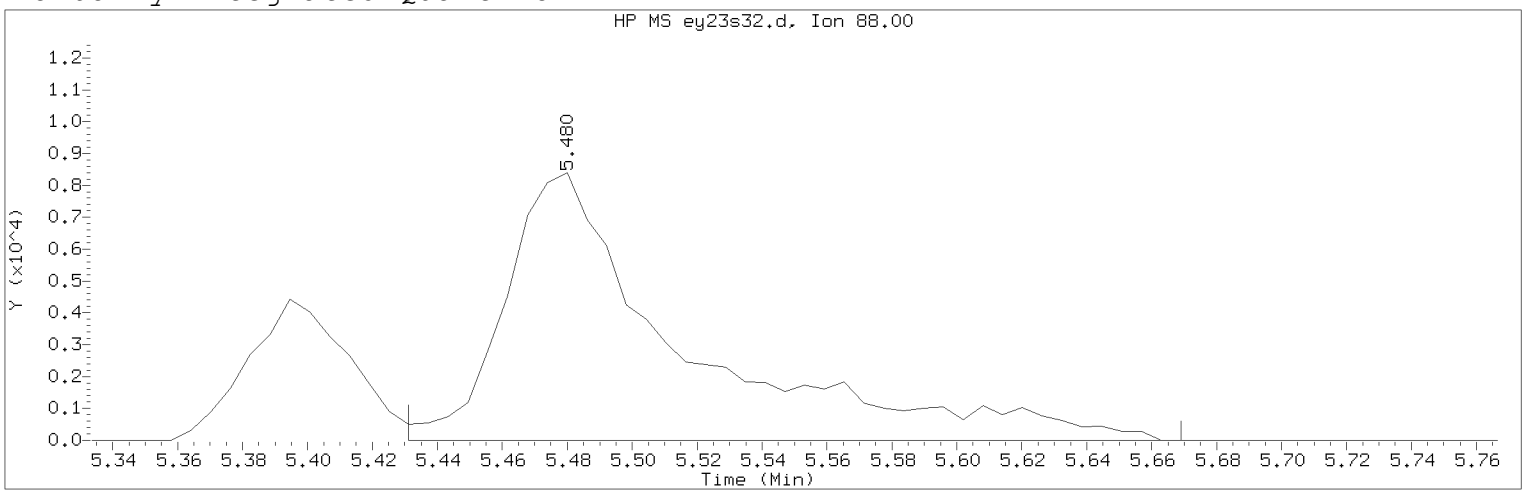
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 247
Retention Time (minutes): 2.493
Quant Ion : 65.00
Area : 182079
On-column Amount (ng) : 250.0000
Integration start scan : 230 Integration stop scan: 326
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/23/2019 at 20:32.
Target 3.5 esignature user id: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may23b.b/ey23s32.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 19:17 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:19 dvv10203

Sample Name: LCDE15 Lab Sample ID: LCDE15

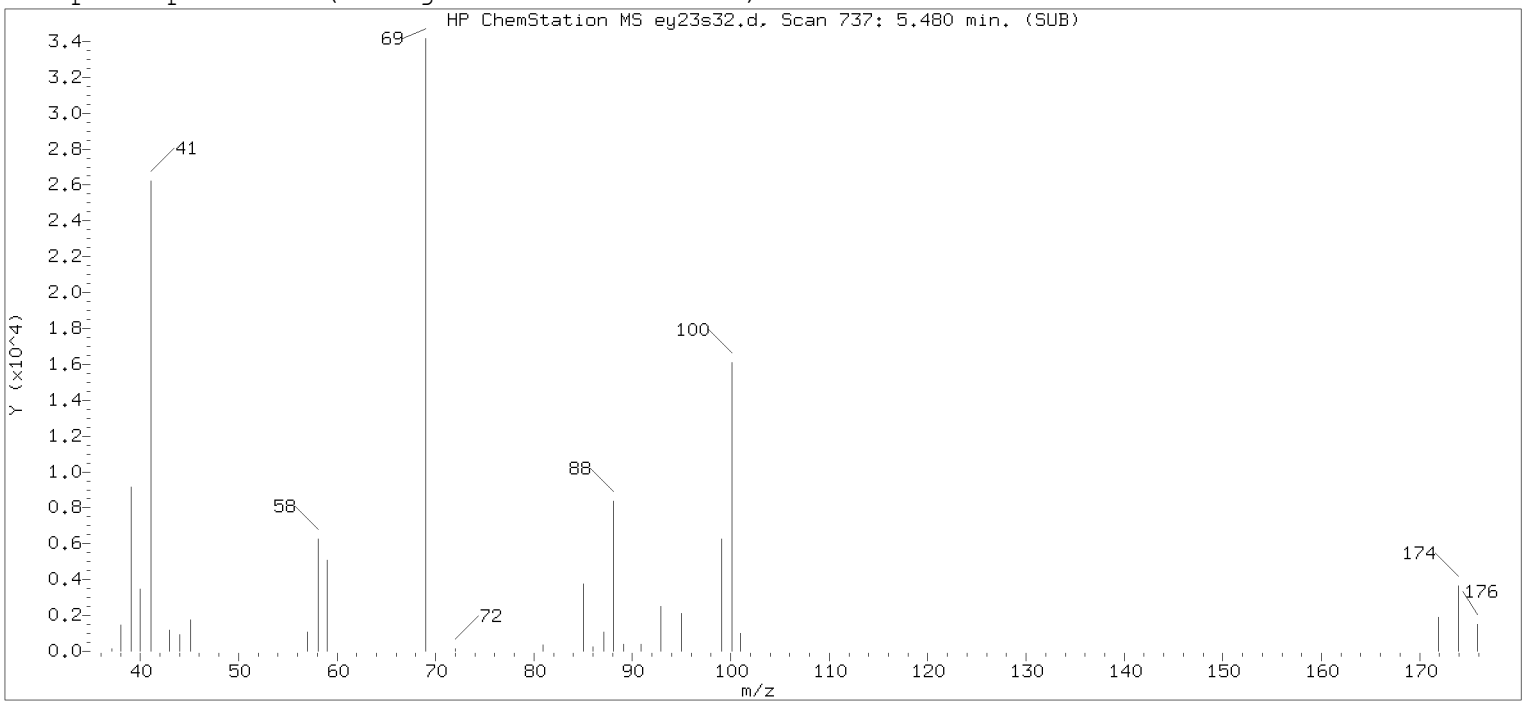
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 737
Retention Time (minutes): 5.480
Quant Ion : 88.00
Area (flag) : 31844M
On-Column Amount (ng) : 567.7969
Integration start scan : 728 Integration stop scan: 767
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

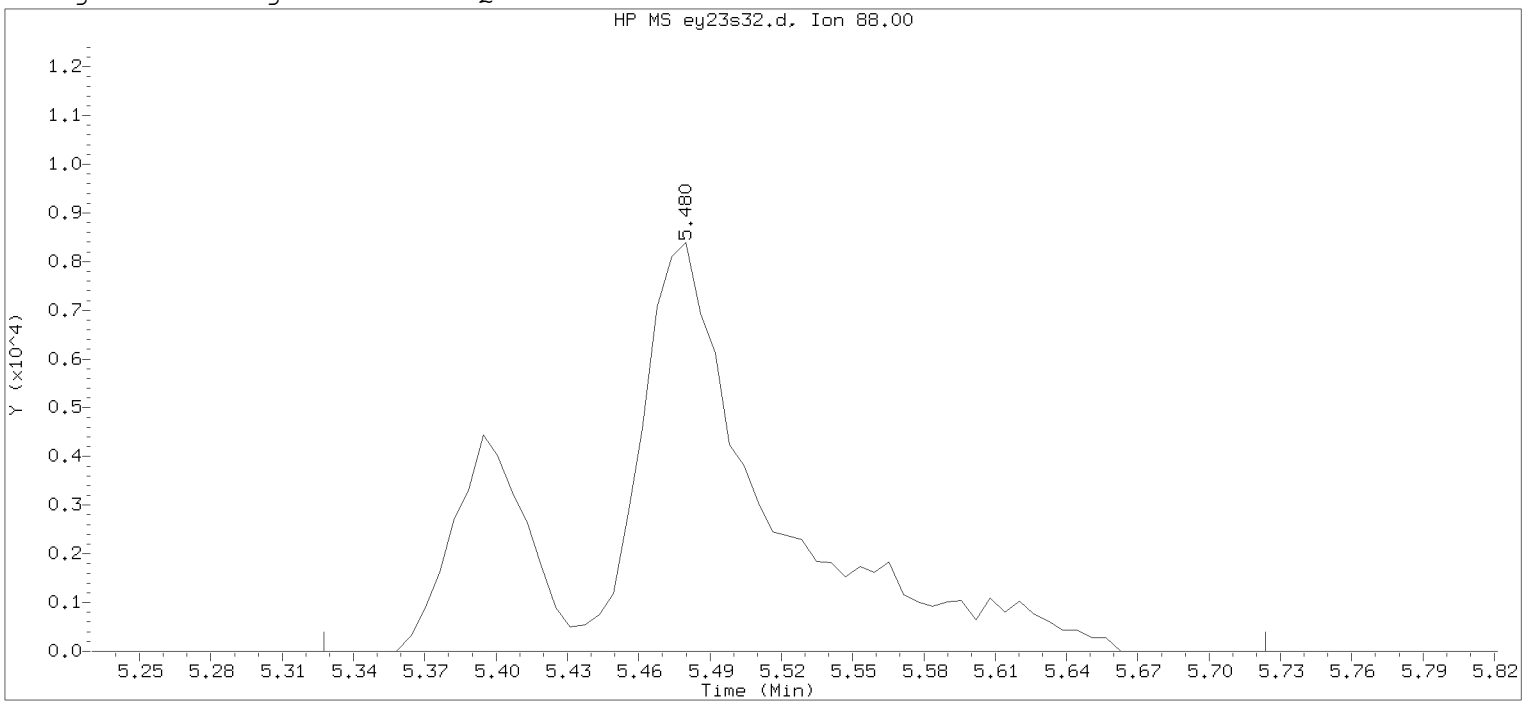
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:32.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



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Injection date and time: 23-MAY-2019 19:17 Analyst ID: DVV10203

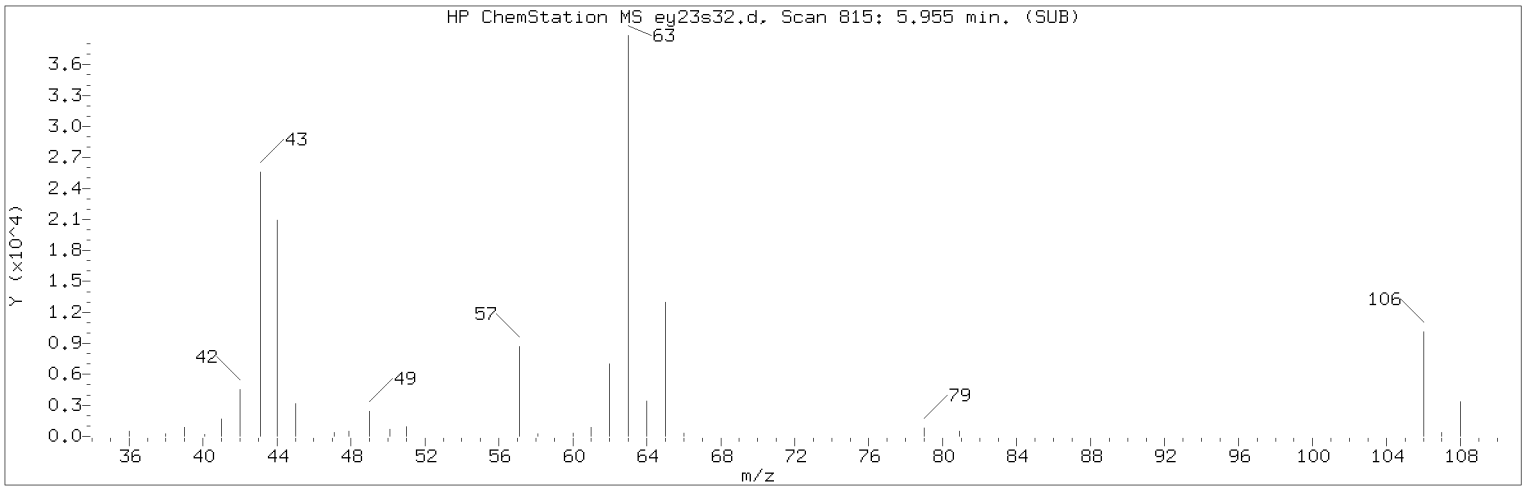
Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 19:57 dvv10203

Sample Name: LCDE15 Lab Sample ID: LCDE15

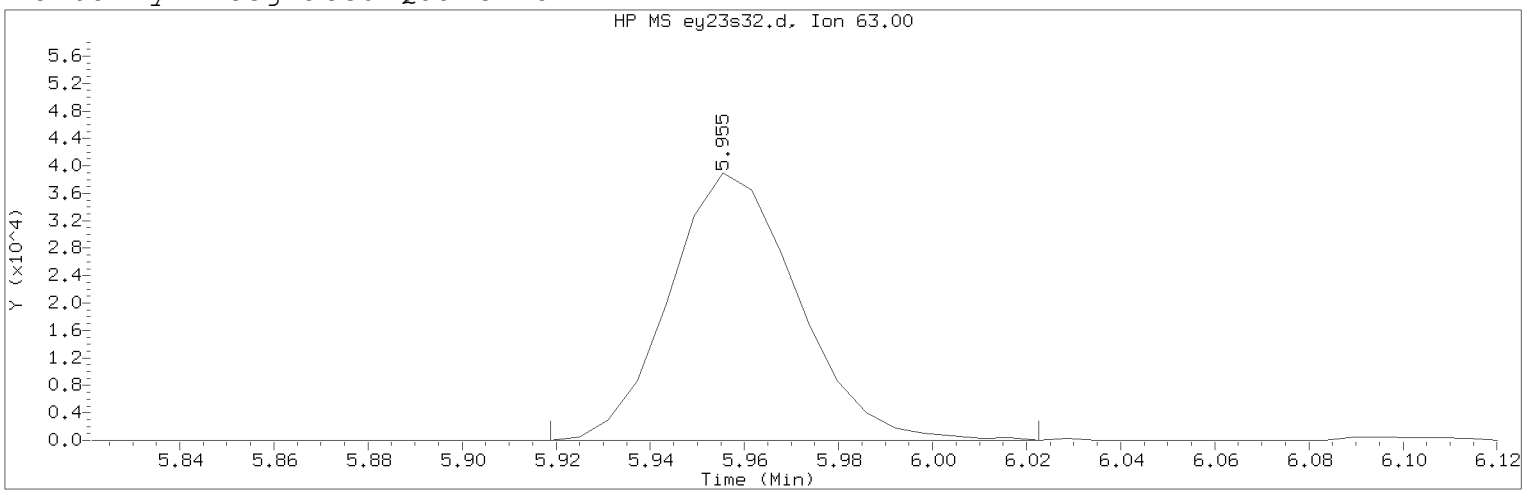
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 737
Retention Time (minutes): 5.480
Quant Ion : 88.00
Area : 41323
On-column Amount (ng) : 734.6771
Integration start scan : 711 Integration stop scan: 776
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/23/2019 at 20:32.
Target 3.5 esignature user id: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may23b.b/ey23s32.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 19:17 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:19 dvv10203

Sample Name: LCDE15 Lab Sample ID: LCDE15

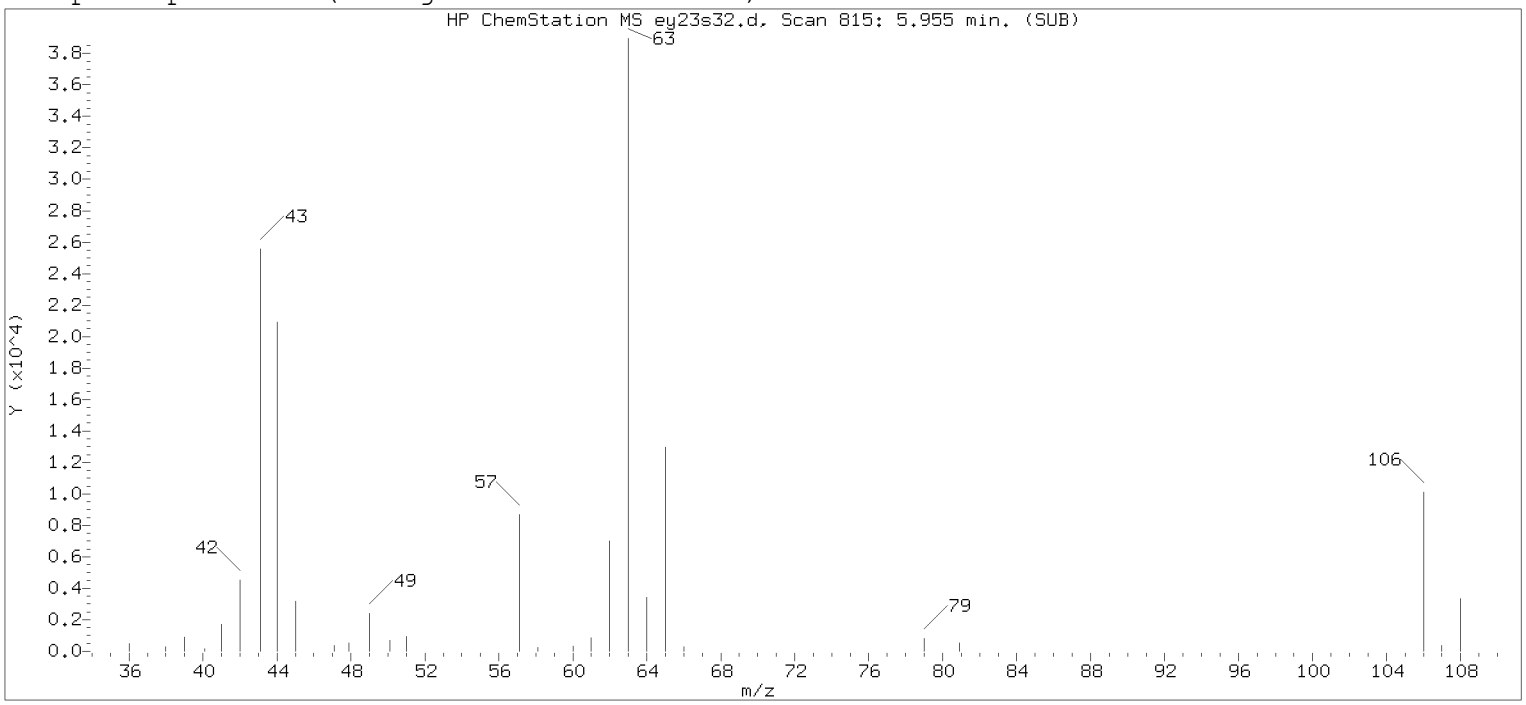
Compound Number : 81
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 815
Retention Time (minutes): 5.955
Quant Ion : 63.00
Area (flag) : 73592M
On-Column Amount (ng) : 19.1968
Integration start scan : 808 Integration stop scan: 825
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

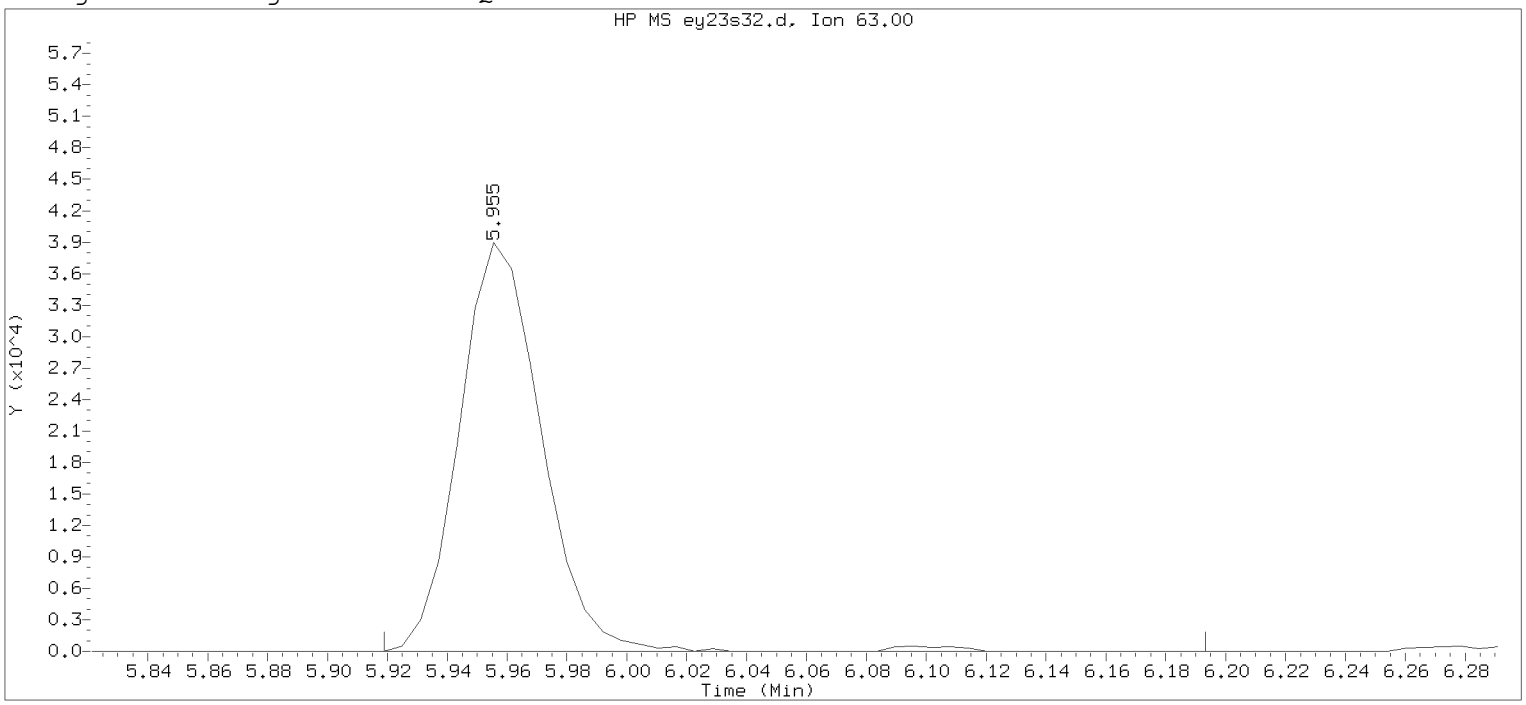
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:32.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may23b.b/ey23s32.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 19:17 Analyst ID: DVV10203

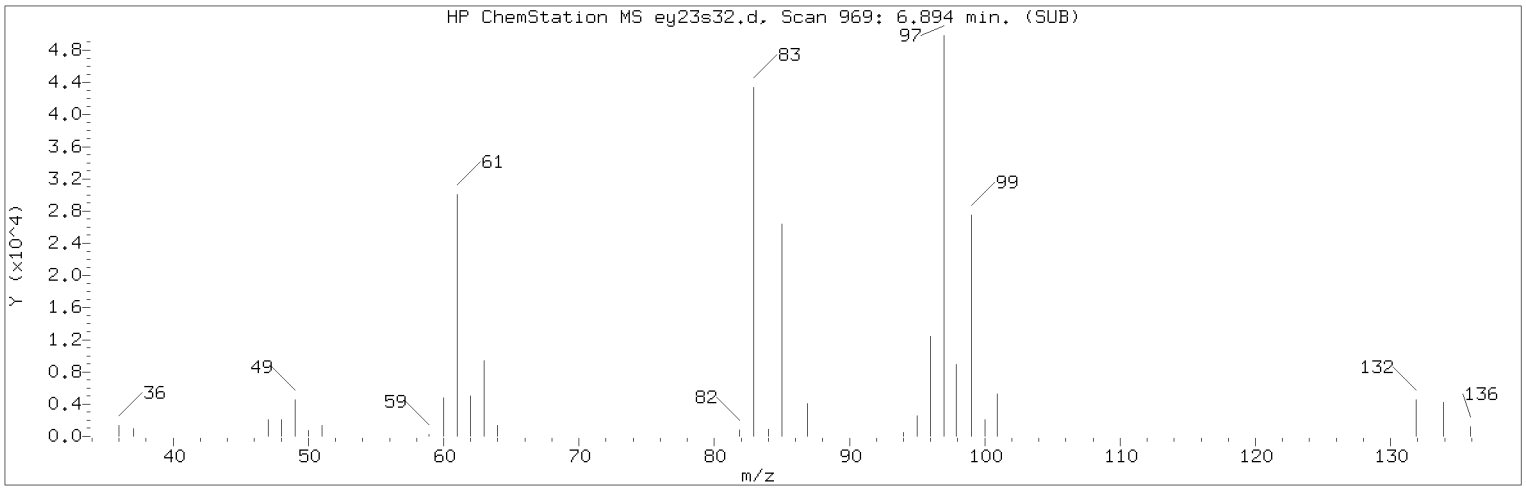
Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 19:57 dvv10203

Sample Name: LCDE15 Lab Sample ID: LCDE15

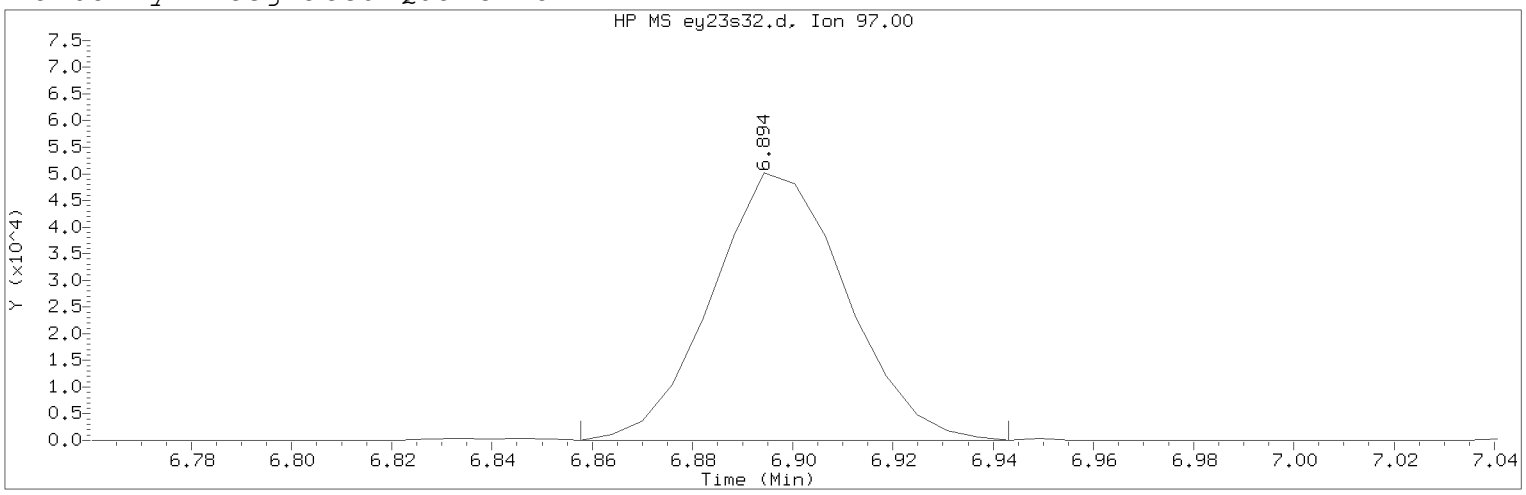
Compound Number : 81
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 815
Retention Time (minutes): 5.955
Quant Ion : 63.00
Area : 74440
On-column Amount (ng) : 19.4181
Integration start scan : 808 Integration stop scan: 853
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/23/2019 at 20:32.
Target 3.5 esignature user id: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may23b.b/ey23s32.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 19:17 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:19 dvv10203

Sample Name: LCDE15 Lab Sample ID: LCDE15

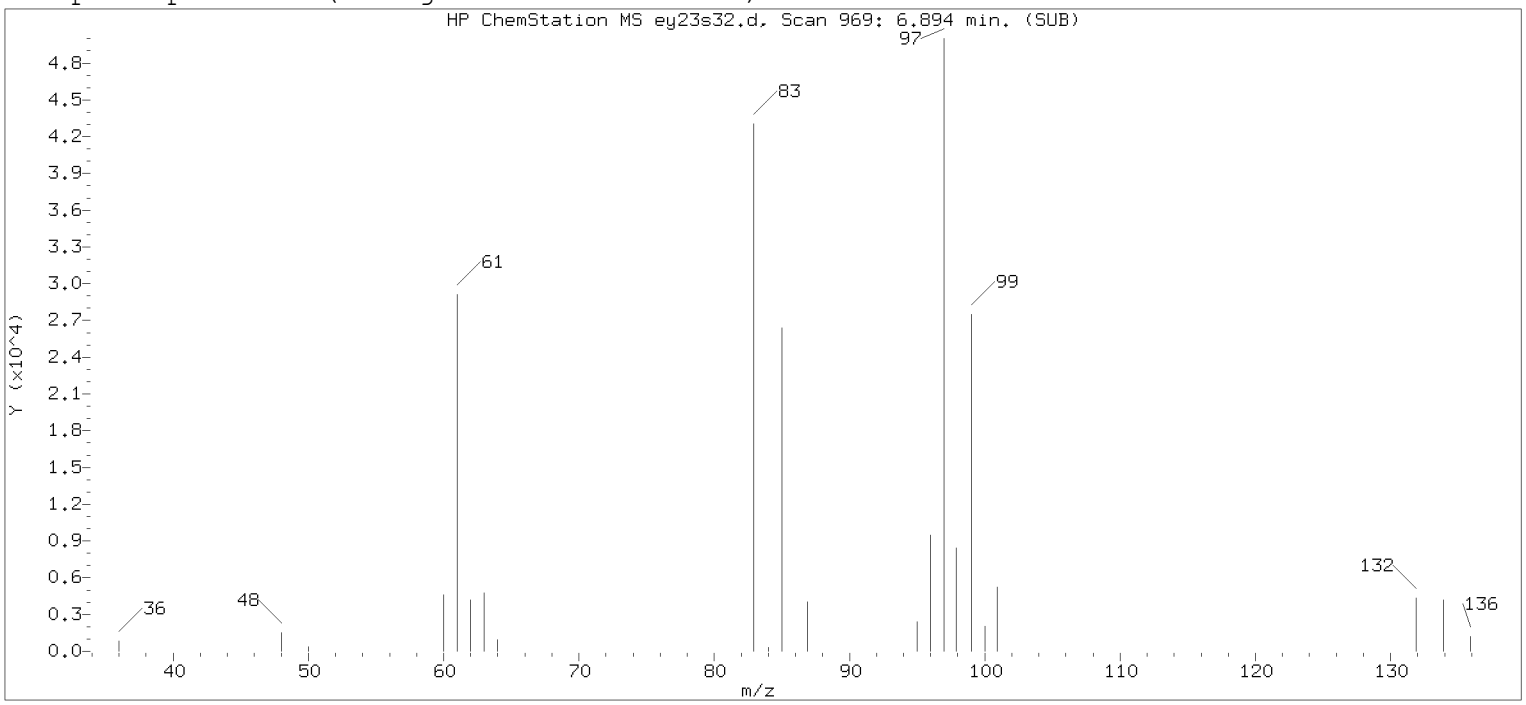
Compound Number : 93
Compound Name : 1,1,2-Trichloroethane
Scan Number : 969
Retention Time (minutes): 6.894
Quant Ion : 97.00
Area (flag) : 93435M
On-Column Amount (ng) : 21.4759
Integration start scan : 962 Integration stop scan: 976
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

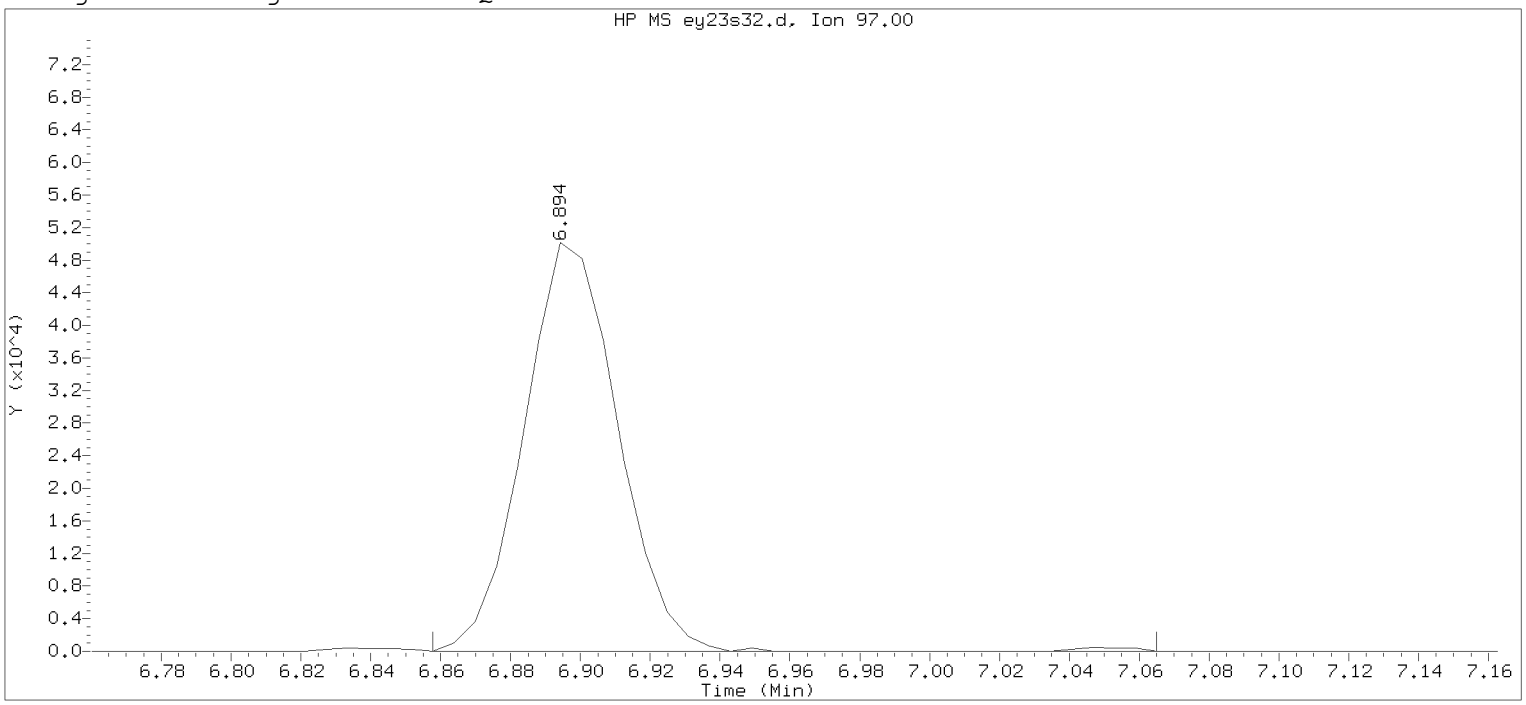
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:32.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may23b.b/ey23s32.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 19:17 Analyst ID: DVV10203

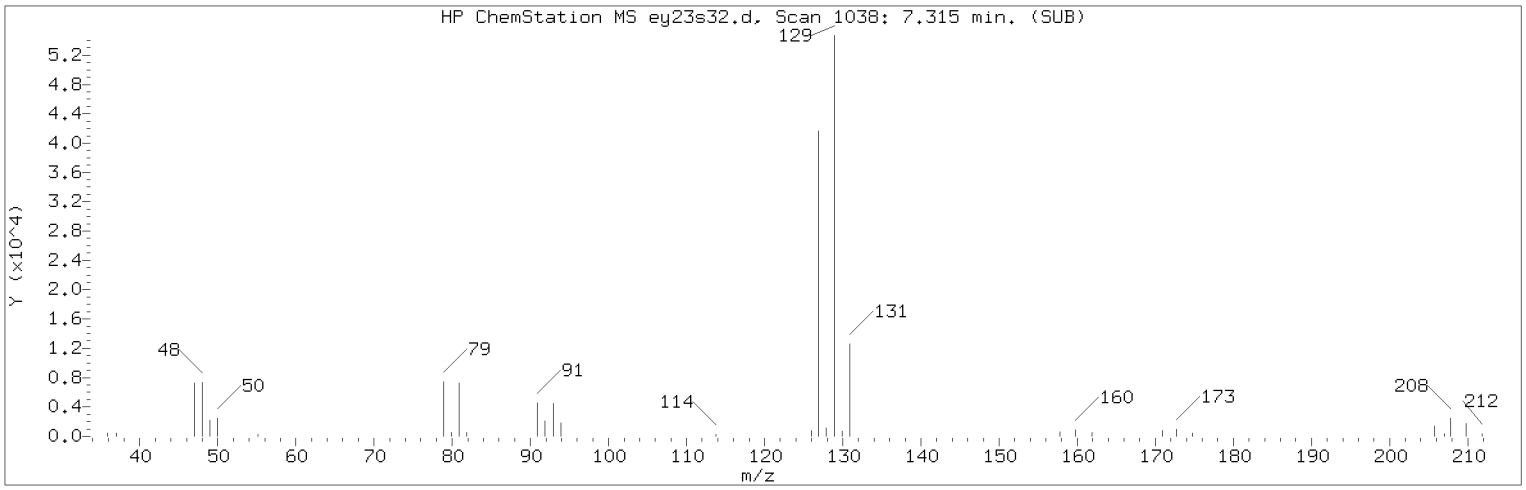
Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 19:57 dvv10203

Sample Name: LCDE15 Lab Sample ID: LCDE15

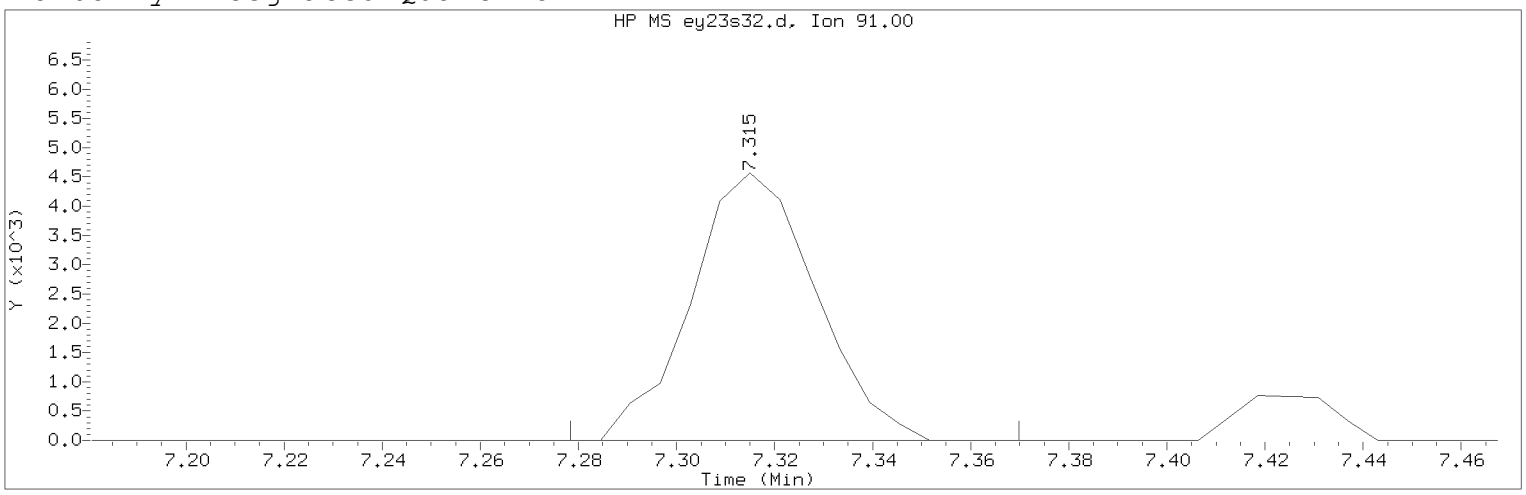
Compound Number : 93
Compound Name : 1,1,2-Trichloroethane
Scan Number : 969
Retention Time (minutes): 6.894
Quant Ion : 97.00
Area : 94123
On-column Amount (ng) : 21.6342
Integration start scan : 962 Integration stop scan: 996
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/23/2019 at 20:32.
Target 3.5 esignature user id: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may23b.b/ey23s32.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 19:17 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:19 dvv10203

Sample Name: LCDE15 Lab Sample ID: LCDE15

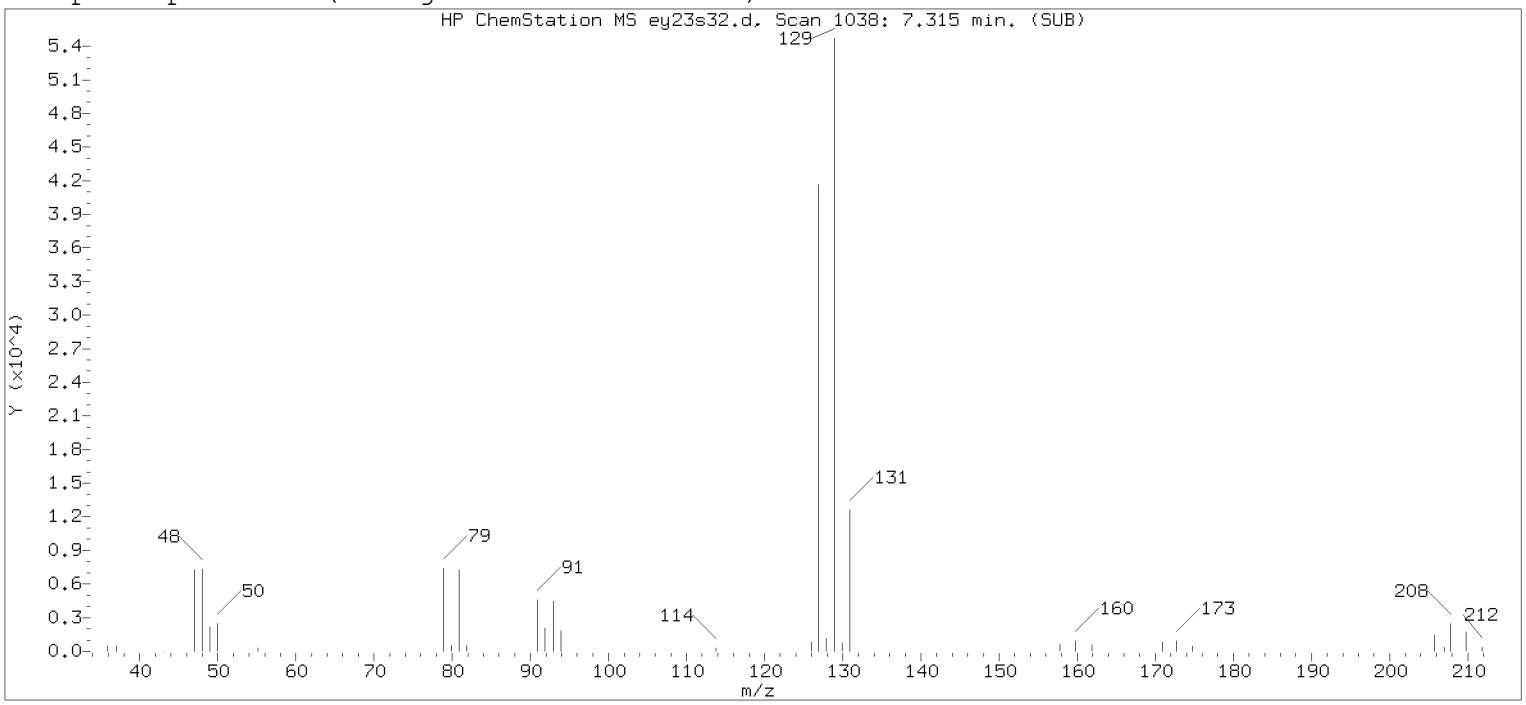
Compound Number : 102
Compound Name : 1-Chlorohexane
Scan Number : 1038
Retention Time (minutes): 7.315
Quant Ion : 91.00
Area (flag) : 8048M
On-Column Amount (ng) : 18.2186
Integration start scan : 1031 Integration stop scan: 1046
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

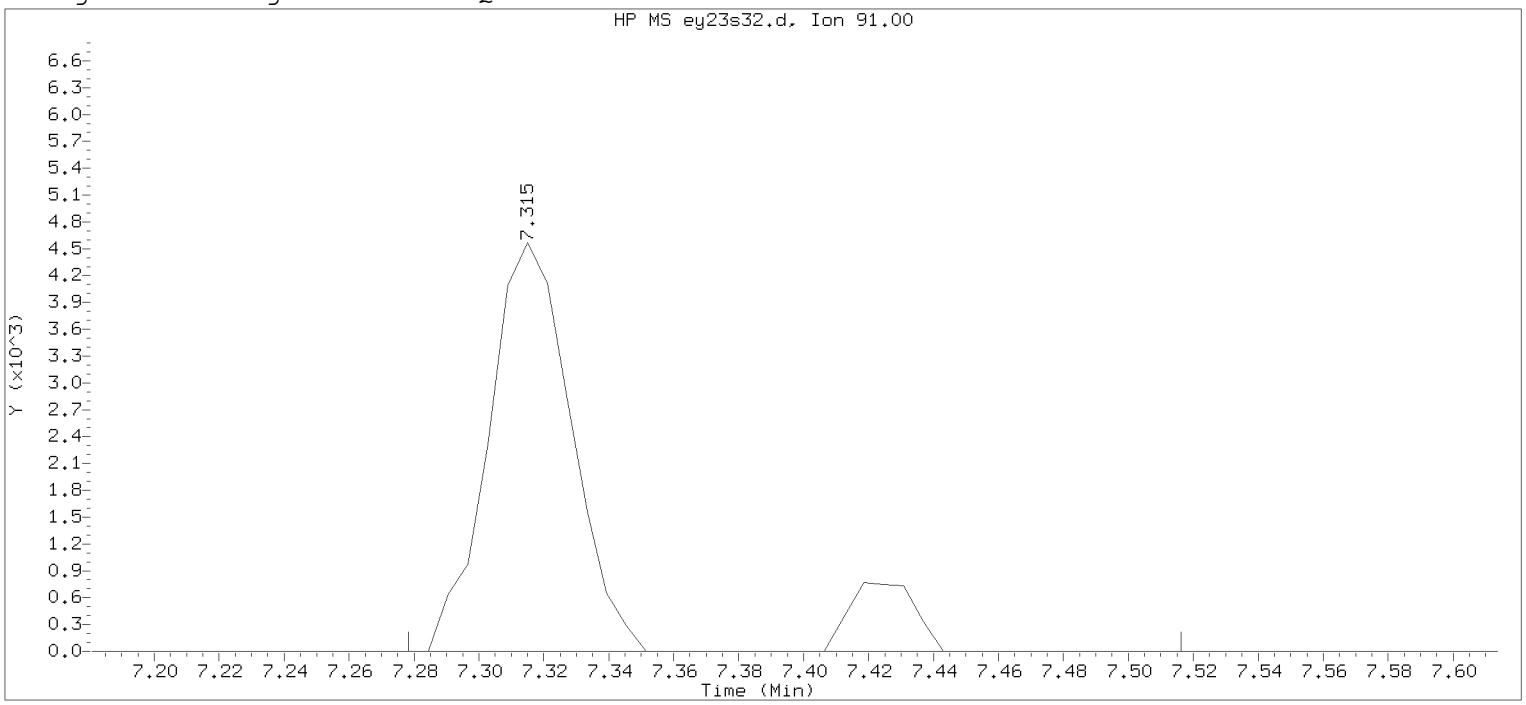
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:32.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may23b.b/ey23s32.d Instrument ID: HP15648.i
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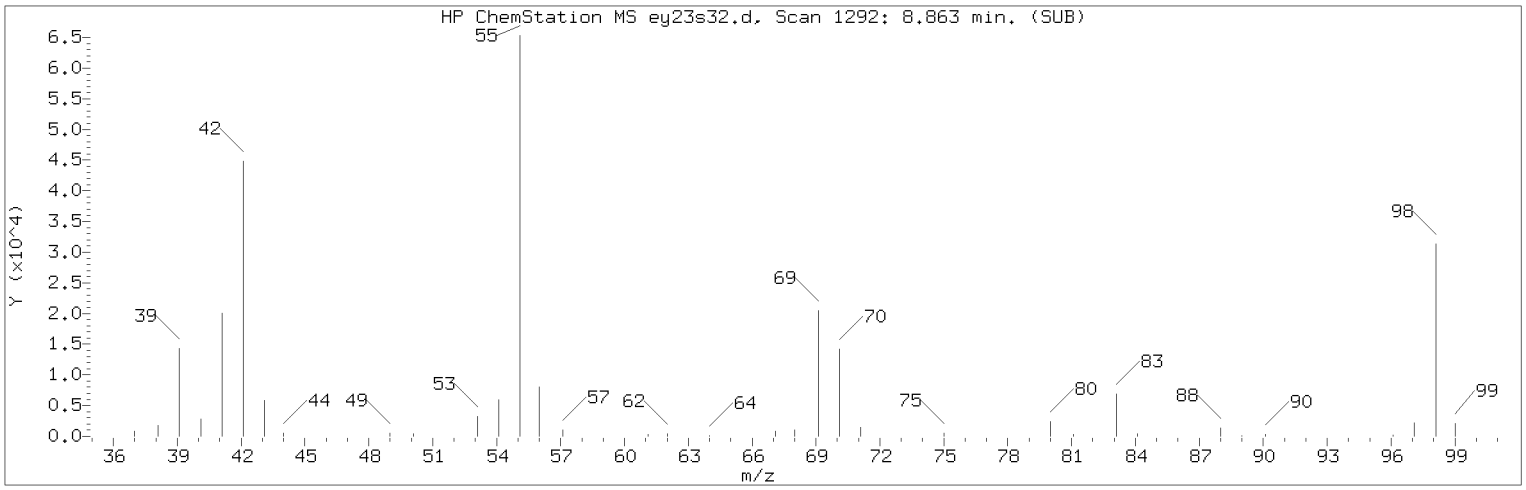
Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 19:57 dvv10203

Sample Name: LCDE15 Lab Sample ID: LCDE15

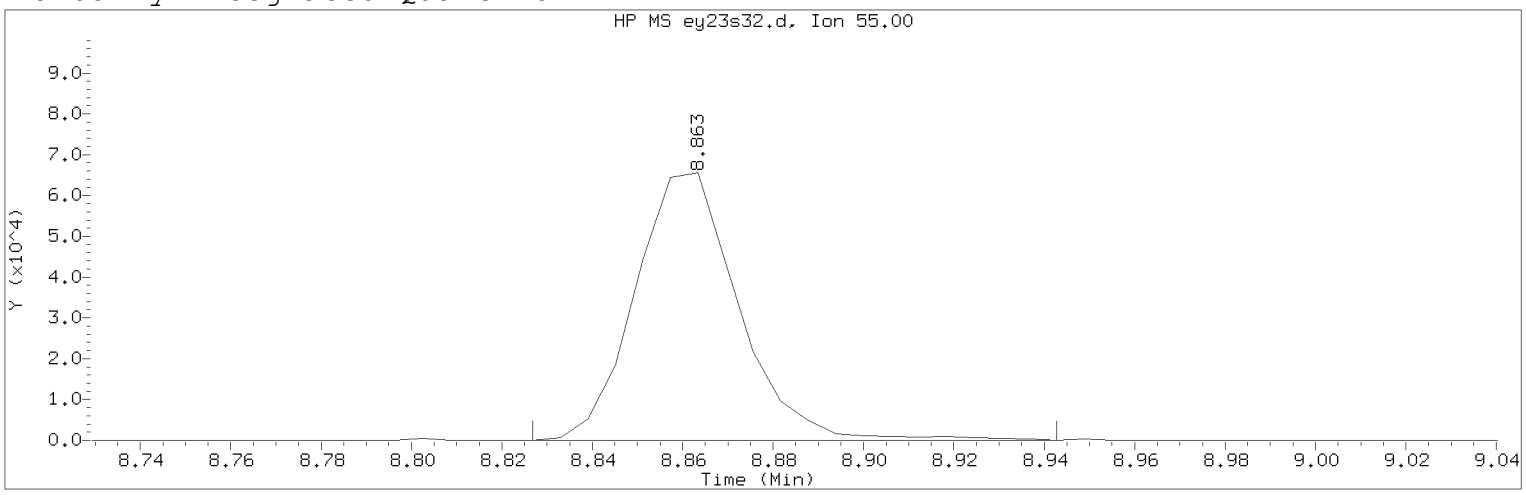
Compound Number : 102
Compound Name : 1-Chlorohexane
Scan Number : 1038
Retention Time (minutes): 7.315
Quant Ion : 91.00
Area : 9129
On-column Amount (ng) : 20.6669
Integration start scan : 1031 Integration stop scan: 1070
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/23/2019 at 20:32.
Target 3.5 esignature user id: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may23b.b/ey23s32.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 19:17 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 20:19 dvv10203

Sample Name: LCDE15 Lab Sample ID: LCDE15

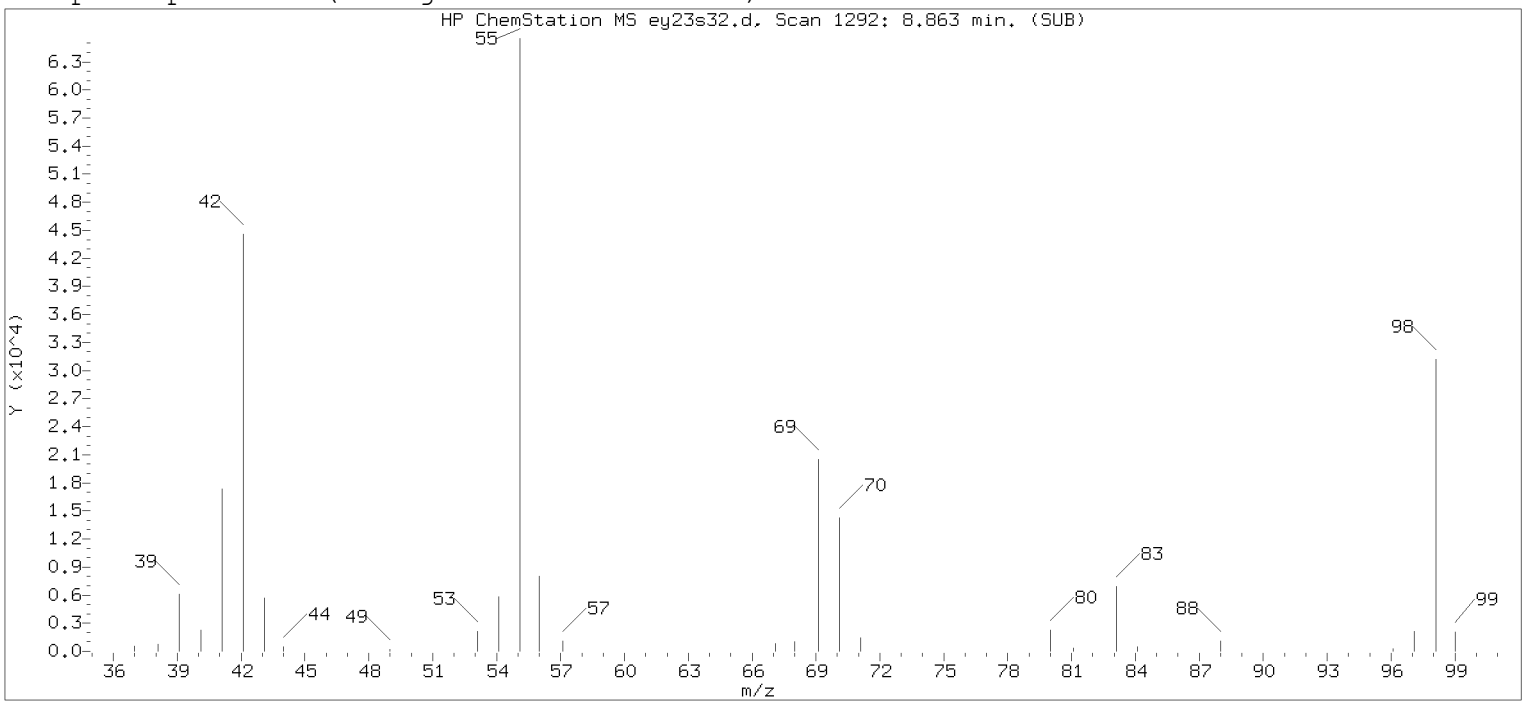
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1292
Retention Time (minutes): 8.863
Quant Ion : 55.00
Area (flag) : 104410M
On-Column Amount (ng) : 494.1966
Integration start scan : 1285 Integration stop scan: 1304
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

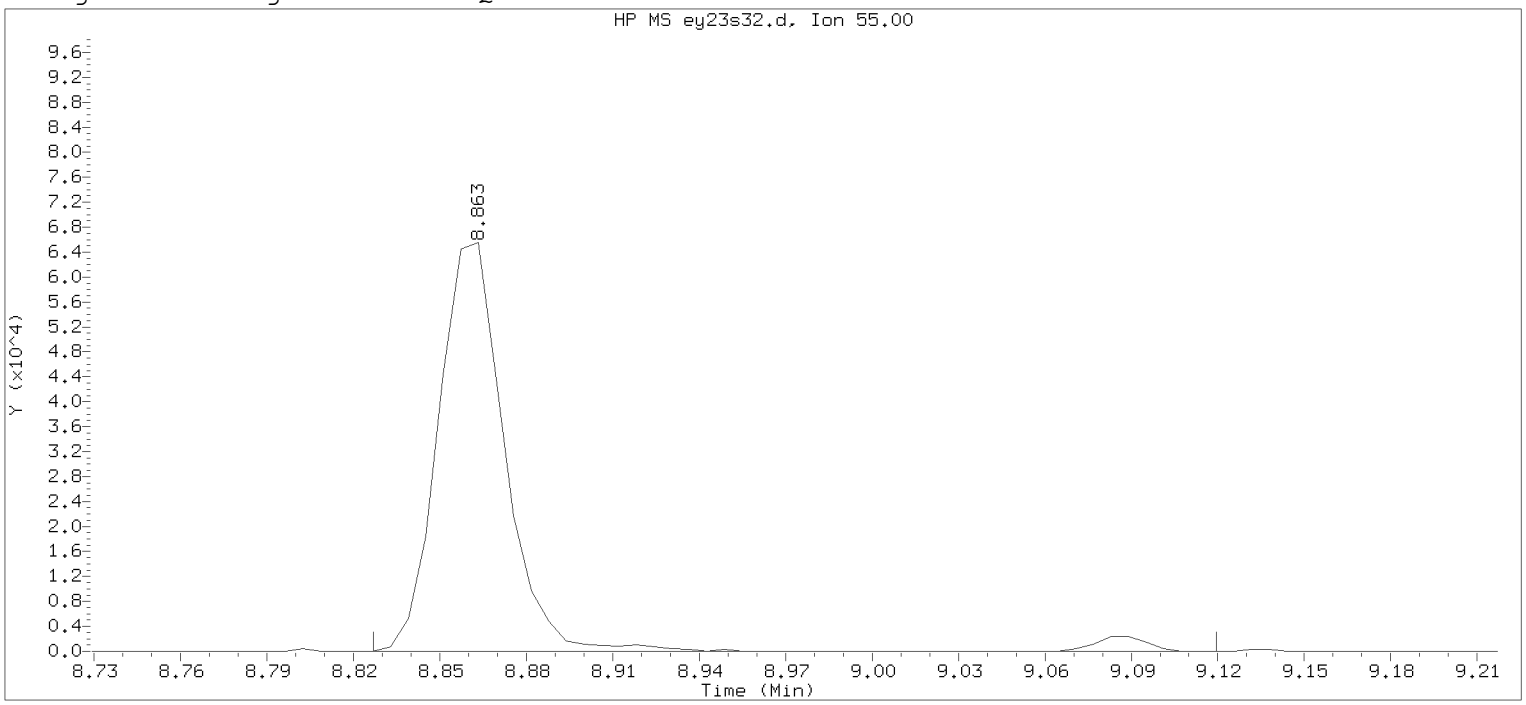
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:32.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 13:03.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may23b.b/ey23s32.d Instrument ID: HP15648.i
Injection date and time: 23-MAY-2019 19:17 Analyst ID: DVV10203

Method used: /chem/HP15648.i/19may23b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 18:53
Date, time and analyst ID of latest file update: 23-May-2019 19:57 dvv10203

Sample Name: LCDE15 Lab Sample ID: LCDE15

Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1292
Retention Time (minutes): 8.863
Quant Ion : 55.00
Area : 107509
On-column Amount (ng) : 507.3784
Integration start scan : 1285 Integration stop scan: 1333
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/23/2019 at 20:32.
Target 3.5 esignature user id: dvv10203

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2425 New Holland Pike, Lancaster, PA 17601 | 717-656-2300 | Fax: 717-656-2681 | www.LancasterLabs.com

NYSDEC ASP Category B Data Package

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Project: AD-New Windsor, NY
Groundwater and Water Samples
Collected on 05/08/19-05/10/19

SDG# JCV92-V.2

GROUP	SAMPLE NUMBERS
2044092	1058214-1058233

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-18-27
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M. Kauffman **Date:** **08/05/2019**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Katherine Klinefelter at (717) 556-7256.

2425 New Holland Pike, Lancaster, PA 17601 | 717-656-2300 | Fax: 717-656-2681 | www.LancasterLabs.com

Table of Contents for SDG# JCV92

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Sample Reference List for SDG Number JCV92
with a Data Package Type of NYSDEC B

06556 - The Johnson Company, Inc.
Project: AD-New Windsor, NY

Lab Sample Number	Client Sample ID	Collection Date	Date Received	Lab Sample Code
1058214	DUP-02	05/08/2019 09:00	05/14/2019 10:25	92J01
1058215	J14-BR02	05/08/2019 10:28	05/14/2019 10:25	92J02
1058216	J14-BR01	05/08/2019 11:43	05/14/2019 10:25	92J03
1058217	J14-BR01 MS	05/08/2019 11:43	05/14/2019 10:25	92J03
1058218	J14-BR01 MSD	05/08/2019 11:43	05/14/2019 10:25	92J03
1058219	J14-UC02	05/08/2019 12:53	05/14/2019 10:25	92J04
1058220	J14-UC01	05/08/2019 13:38	05/14/2019 10:25	92J05
1058221	MW-2	05/08/2019 15:33	05/14/2019 10:25	92J06
1058222	MW-2I	05/08/2019 17:23	05/14/2019 10:25	92J07
1058223	DUP-01	05/09/2019 08:00	05/14/2019 10:25	92J08
1058224	J04-BR02	05/09/2019 09:18	05/14/2019 10:25	92J09
1058225	J04-BR01	05/09/2019 10:13	05/14/2019 10:25	92J10
1058226	J05-BR02	05/09/2019 12:53	05/14/2019 10:25	92J11
1058227	J05-BR01	05/09/2019 14:03	05/14/2019 10:25	92J12
1058228	J23-UC01	05/09/2019 15:43	05/14/2019 10:25	92J13
1058229	J23-UC02	05/09/2019 16:28	05/14/2019 10:25	92J14
1058230	RIZ-7	05/09/2019 17:28	05/14/2019 10:25	92J15
1058231	J06-UC01	05/10/2019 09:03	05/14/2019 10:25	92J16
1058232	J06-UC02	05/10/2019 10:08	05/14/2019 10:25	92J17
1058233	EB051019TRO	05/10/2019 10:15	05/14/2019 10:25	92J18

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Sample pH Log

SDG: JCV92

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
1058214	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/22/2019 10:20:13AM	492
1058214	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/22/2019 10:20:13AM	492
1058215	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/22/2019 10:20:13AM	492
1058216	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/22/2019 10:20:13AM	492
1058217	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/22/2019 10:20:13AM	492
1058218	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/22/2019 10:20:14AM	492
1058219	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/22/2019 10:20:14AM	492
1058220	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/22/2019 10:20:14AM	492
1058221	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/22/2019 11:01:18PM	10203
1058221	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/22/2019 11:01:18PM	10203
1058222	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/22/2019 10:20:14AM	492
1058223	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/22/2019 11:01:18PM	10203
1058224	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/22/2019 11:01:18PM	10203
1058225	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/22/2019 11:01:18PM	10203
1058226	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/22/2019 11:01:18PM	10203
1058227	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/22/2019 11:01:19PM	10203
1058228	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/22/2019 11:01:19PM	10203
1058228	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/22/2019 11:01:19PM	10203
1058229	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/22/2019 11:01:19PM	10203
1058229	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/22/2019 11:01:19PM	10203
1058230	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/22/2019 11:01:19PM	10203
1058231	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/23/2019 7:26:29AM	492
1058232	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/23/2019 7:26:29AM	492
1058233	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/23/2019 7:26:29AM	492

*pH Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

**Chlorine Present Code Key
NA = Chlorine Not Checked
Y = Chlorine Present
N = Chlorine Not Present

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11997 VOCs- 5ml Water by 8260C/D

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Report Date: May 23, 2019 22:27

Project: AD-New Windsor, NY

Account #: 06556
Group Number: 2044092
SDG: JCV92
PO Number: 1-0145-05
State of Sample Origin: NY

Electronic Copy To	The Johnson Company, Inc.	Attn: Tristan Hardy
Electronic Copy To	The Johnson Company, Inc.	Attn: George Lester

Respectfully Submitted,

Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
DUP-02 Grab Groundwater	05/08/2019 09:00	1058214
J14-BR02 Grab Groundwater	05/08/2019 10:28	1058215
J14-BR01 Grab Groundwater	05/08/2019 11:43	1058216
J14-BR01 MS Grab Groundwater	05/08/2019 11:43	1058217
J14-BR01 MSD Grab Groundwater	05/08/2019 11:43	1058218
J14-UC02 Grab Groundwater	05/08/2019 12:53	1058219
J14-UC01 Grab Groundwater	05/08/2019 13:38	1058220
MW-2 Grab Groundwater	05/08/2019 15:33	1058221
MW-2I Grab Groundwater	05/08/2019 17:23	1058222
DUP-01 Grab Groundwater	05/09/2019 08:00	1058223
J04-BR02 Grab Groundwater	05/09/2019 09:18	1058224
J04-BR01 Grab Groundwater	05/09/2019 10:13	1058225
J05-BR02 Grab Groundwater	05/09/2019 12:53	1058226
J05-BR01 Grab Groundwater	05/09/2019 14:03	1058227
J23-UC01 Grab Groundwater	05/09/2019 15:43	1058228
J23-UC02 Grab Groundwater	05/09/2019 16:28	1058229
RIZ-7 Grab Groundwater	05/09/2019 17:28	1058230
J06-UC01 Grab Groundwater	05/10/2019 09:03	1058231
J06-UC02 Grab Groundwater	05/10/2019 10:08	1058232
EB051019TRO Grab Water	05/10/2019 10:15	1058233

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **DUP-02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/08/2019 09:00
SDG#: JCV92-01FD

The Johnson Company, Inc.
ELLE Sample #: GW 1058214
ELLE Group #: 2044092
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	1	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	7	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	15	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	0.2 J	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	3	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	58	0.3	1	1
11997	Trichloroethene	79-01-6	320	2	10	10
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4191415AA	05/22/2019 06:58	Don V Viray	1
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4191415AA	05/22/2019 07:21	Don V Viray	10
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4191415AA	05/22/2019 06:57	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	4191415AA	05/22/2019 07:20	Don V Viray	10

*=This limit was used in the evaluation of the final result

Sample Description: **J14-BR02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/08/2019 10:28
SDG#: JCV92-02

The Johnson Company, Inc.
ELLE Sample #: GW 1058215
ELLE Group #: 2044092
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4191415AA	05/22/2019 05:27	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4191415AA	05/22/2019 05:26	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **J14-BR01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/08/2019 11:43
SDG#: JCV92-03BKG

The Johnson Company, Inc.
ELLE Sample #: GW 1058216
ELLE Group #: 2044092
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	1 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	0.2 J	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.6 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	3	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4191415AA	05/22/2019 03:57	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4191415AA	05/22/2019 03:56	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **J14-BR01 MS Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/08/2019 11:43
SDG#: JCV92-03MS

The Johnson Company, Inc.
ELLE Sample #: GW 1058217
ELLE Group #: 2044092
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	150	0.7	20	1
11997	Benzene	71-43-2	22	0.2	1	1
11997	2-Butanone	78-93-3	120	0.3	10	1
11997	Carbon Disulfide	75-15-0	23	0.2	5	1
11997	Chloroform	67-66-3	21	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	21	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	22	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	19	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	25	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	24	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	23	0.2	1	1
11997	1,4-Dioxane	123-91-1	570	29	250	1
11997	Ethylbenzene	100-41-4	21	0.4	1	1
11997	Freon 113	76-13-1	24	0.2	10	1
11997	Methylene Chloride	75-09-2	22	0.3	1	1
11997	Naphthalene	91-20-3	20	1	5	1
11997	Tetrachloroethene	127-18-4	22	0.2	1	1
11997	Toluene	108-88-3	22	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	24	0.3	1	1
11997	Trichloroethene	79-01-6	22	0.2	1	1
11997	Vinyl Chloride	75-01-4	16	0.2	1	1
11997	Xylene (Total)	1330-20-7	64	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4191415AA	05/22/2019 04:19	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4191415AA	05/22/2019 04:18	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **J14-BR01 MSD Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/08/2019 11:43
SDG#: JCV92-03MSD

The Johnson Company, Inc.
ELLE Sample #: GW 1058218
ELLE Group #: 2044092
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	150	0.7	20	1
11997	Benzene	71-43-2	21	0.2	1	1
11997	2-Butanone	78-93-3	120	0.3	10	1
11997	Carbon Disulfide	75-15-0	22	0.2	5	1
11997	Chloroform	67-66-3	20	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	20	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	21	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	18	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	24	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	23	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	22	0.2	1	1
11997	1,4-Dioxane	123-91-1	550	29	250	1
11997	Ethylbenzene	100-41-4	20	0.4	1	1
11997	Freon 113	76-13-1	23	0.2	10	1
11997	Methylene Chloride	75-09-2	22	0.3	1	1
11997	Naphthalene	91-20-3	20	1	5	1
11997	Tetrachloroethene	127-18-4	21	0.2	1	1
11997	Toluene	108-88-3	21	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	23	0.3	1	1
11997	Trichloroethene	79-01-6	21	0.2	1	1
11997	Vinyl Chloride	75-01-4	16	0.2	1	1
11997	Xylene (Total)	1330-20-7	62	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4191415AA	05/22/2019 04:42	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4191415AA	05/22/2019 04:41	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **J14-UC02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/08/2019 12:53
SDG#: JCV92-04

The Johnson Company, Inc.
ELLE Sample #: GW 1058219
ELLE Group #: 2044092
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4191415AA	05/22/2019 05:50	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4191415AA	05/22/2019 05:49	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **J14-UC01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/08/2019 13:38
SDG#: JCV92-05

The Johnson Company, Inc.
ELLE Sample #: GW 1058220
ELLE Group #: 2044092
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	7	200	10
11997	Benzene	71-43-2	N.D.	2	10	10
11997	2-Butanone	78-93-3	N.D.	3	100	10
11997	Carbon Disulfide	75-15-0	N.D.	2	50	10
11997	Chloroform	67-66-3	N.D.	2	10	10
11997	1,2-Dichlorobenzene	95-50-1	N.D.	2	50	10
11997	1,1-Dichloroethane	75-34-3	N.D.	2	10	10
11997	1,2-Dichloroethane	107-06-2	N.D.	3	10	10
11997	1,1-Dichloroethene	75-35-4	N.D.	2	10	10
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	2	10	10
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	2	10	10
11997	1,4-Dioxane	123-91-1	N.D.	290	2,500	10
11997	Ethylbenzene	100-41-4	N.D.	4	10	10
11997	Freon 113	76-13-1	N.D.	2	100	10
11997	Methylene Chloride	75-09-2	N.D.	3	10	10
11997	Naphthalene	91-20-3	N.D.	10	50	10
11997	Tetrachloroethene	127-18-4	N.D.	2	10	10
11997	Toluene	108-88-3	N.D.	2	10	10
11997	1,1,1-Trichloroethane	71-55-6	N.D.	3	10	10
11997	Trichloroethene	79-01-6	N.D.	2	10	10
11997	Vinyl Chloride	75-01-4	N.D.	2	10	10
11997	Xylene (Total)	1330-20-7	N.D.	10	50	10

Reporting limits were raised due to sample foaming.

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4191415AA	05/22/2019 06:13	Don V Viray	10
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4191415AA	05/22/2019 06:12	Don V Viray	10

*=This limit was used in the evaluation of the final result

Sample Description: **MW-2 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/08/2019 15:33
SDG#: JCV92-06

The Johnson Company, Inc.
ELLE Sample #: GW 1058221
ELLE Group #: 2044092
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	2	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	7	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	17	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	0.2 J	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	0.3 J	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	3	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	66	0.3	1	1
11997	Trichloroethene	79-01-6	340	2	10	10
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191421AA	05/22/2019 11:39	Jason M Long	1
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191421AA	05/22/2019 12:00	Jason M Long	10
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191421AA	05/22/2019 11:38	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	E191421AA	05/22/2019 11:59	Jason M Long	10

*=This limit was used in the evaluation of the final result

Sample Description: **MW-2I Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/08/2019 17:23
SDG#: JCV92-07

The Johnson Company, Inc.
ELLE Sample #: GW 1058222
ELLE Group #: 2044092
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	0.4 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	3	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4191415AA	05/22/2019 06:35	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4191415AA	05/22/2019 06:34	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/09/2019 08:00
SDG#: JCV92-08FD

The Johnson Company, Inc.
ELLE Sample #: GW 1058223
ELLE Group #: 2044092
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	2	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	0.4 J	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	0.9 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	0.9 J	0.3	1	1
11997	Trichloroethene	79-01-6	11	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191421AA	05/22/2019 13:41	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191421AA	05/22/2019 13:40	Jason M Long	1

*=This limit was used in the evaluation of the final result

Sample Description: **J04-BR02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/09/2019 09:18
SDG#: JCV92-09

The Johnson Company, Inc.
ELLE Sample #: GW 1058224
ELLE Group #: 2044092
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191421AA	05/22/2019 14:01	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191421AA	05/22/2019 14:00	Jason M Long	1

*=This limit was used in the evaluation of the final result

Sample Description: **J04-BR01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/09/2019 10:13
SDG#: JCV92-10

The Johnson Company, Inc.
ELLE Sample #: GW 1058225
ELLE Group #: 2044092
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191421AA	05/22/2019 14:21	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191421AA	05/22/2019 14:20	Jason M Long	1

*=This limit was used in the evaluation of the final result

Sample Description: **J05-BR02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/09/2019 12:53
SDG#: JCV92-11

The Johnson Company, Inc.
ELLE Sample #: GW 1058226
ELLE Group #: 2044092
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	2	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	0.4 J	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	0.9 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	0.8 J	0.3	1	1
11997	Trichloroethene	79-01-6	11	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191421AA	05/22/2019 14:42	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191421AA	05/22/2019 14:41	Jason M Long	1

*=This limit was used in the evaluation of the final result

Sample Description: **J05-BR01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/09/2019 14:03
SDG#: JCV92-12

The Johnson Company, Inc.
ELLE Sample #: GW 1058227
ELLE Group #: 2044092
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	2	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	0.5 J	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191421AA	05/22/2019 15:02	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191421AA	05/22/2019 15:01	Jason M Long	1

*=This limit was used in the evaluation of the final result

Sample Description: **J23-UC01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/09/2019 15:43
SDG#: JCV92-13

The Johnson Company, Inc.
ELLE Sample #: GW 1058228
ELLE Group #: 2044092
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.9 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	19	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	2	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	1 J	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	4	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	260	0.3	1	1
11997	Trichloroethene	79-01-6	460	2	10	10
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191421AA	05/22/2019 15:22	Jason M Long	1
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191421AA	05/22/2019 15:43	Jason M Long	10
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191421AA	05/22/2019 15:21	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	E191421AA	05/22/2019 15:42	Jason M Long	10

*=This limit was used in the evaluation of the final result

Sample Description: **J23-UC02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/09/2019 16:28
SDG#: JCV92-14

The Johnson Company, Inc.
ELLE Sample #: GW 1058229
ELLE Group #: 2044092
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	9	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	0.8 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	0.4 J	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	5	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	140	0.3	1	1
11997	Trichloroethene	79-01-6	550	2	10	10
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191421AA	05/22/2019 16:03	Jason M Long	1
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191421AA	05/22/2019 16:23	Jason M Long	10
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191421AA	05/22/2019 16:02	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	E191421AA	05/22/2019 16:22	Jason M Long	10

*=This limit was used in the evaluation of the final result

Sample Description: **RIZ-7 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/09/2019 17:28
SDG#: JCV92-15

The Johnson Company, Inc.
ELLE Sample #: GW 1058230
ELLE Group #: 2044092
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	0.3 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	2	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	2	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E191421AA	05/22/2019 16:43	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E191421AA	05/22/2019 16:42	Jason M Long	1

*=This limit was used in the evaluation of the final result

Sample Description: **J06-UC01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/10/2019 09:03
SDG#: JCV92-16

The Johnson Company, Inc.
ELLE Sample #: GW 1058231
ELLE Group #: 2044092
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	0.5 J	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4191422AA	05/23/2019 07:14	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4191422AA	05/23/2019 07:13	Patrick T Herres	1

*=This limit was used in the evaluation of the final result

Sample Description: **J06-UC02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/10/2019 10:08
SDG#: JCV92-17

The Johnson Company, Inc.
ELLE Sample #: GW 1058232
ELLE Group #: 2044092
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4191422AA	05/23/2019 07:37	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4191422AA	05/23/2019 07:36	Patrick T Herres	1

*=This limit was used in the evaluation of the final result

Sample Description: **EB051019TRO Grab Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/10/2019 10:15
SDG#: JCV92-18EB

The Johnson Company, Inc.
ELLE Sample #: GW 1058233
ELLE Group #: 2044092
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	0.3 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4191422AA	05/23/2019 03:27	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4191422AA	05/23/2019 03:26	Patrick T Herres	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2044092
Reported: 05/23/2019 22:27

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 4191415AA	Sample number(s): 1058214-1058220,1058222		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: 4191422AA	Sample number(s): 1058231-1058233		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2044092
Reported: 05/23/2019 22:27

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: E191421AA	Sample number(s): 1058221,1058223-1058230		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 4191415AA	Sample number(s): 1058214-1058220,1058222								
Acetone	150	152.02			101		54-157		
Benzene	20	21.21			106		80-120		
2-Butanone	150	127.31			85		59-135		
Carbon Disulfide	20	20.38			102		65-128		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2044092
Reported: 05/23/2019 22:27

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Chloroform	20	19.74			99		80-120		
1,2-Dichlorobenzene	20	21.43			107		80-120		
1,1-Dichloroethane	20	20.54			103		80-120		
1,2-Dichloroethane	20	18.52			93		73-124		
1,1-Dichloroethene	20	23.22			116		80-131		
cis-1,2-Dichloroethene	20	22.62			113		80-125		
trans-1,2-Dichloroethene	20	22.25			111		80-126		
1,4-Dioxane	500	534.91			107		63-146		
Ethylbenzene	20	20.77			104		80-120		
Freon 113	20	20.05			100		73-139		
Methylene Chloride	20	21.97			110		80-120		
Naphthalene	20	21.06			105		53-124		
Tetrachloroethene	20	21.29			106		80-120		
Toluene	20	21.14			106		80-120		
1,1,1-Trichloroethane	20	18.9			95		67-126		
Trichloroethene	20	20.83			104		80-120		
Vinyl Chloride	20	15.2			76		56-120		
Xylene (Total)	60	62.73			105		80-120		
Batch number: 4191422AA	Sample number(s): 1058231-1058233								
Acetone	150	137.77			92		54-157		
Benzene	20	20.22			101		80-120		
2-Butanone	150	120.5			80		59-135		
Carbon Disulfide	20	20.72			104		65-128		
Chloroform	20	18.69			93		80-120		
1,2-Dichlorobenzene	20	20.23			101		80-120		
1,1-Dichloroethane	20	19.84			99		80-120		
1,2-Dichloroethane	20	17.64			88		73-124		
1,1-Dichloroethene	20	22.58			113		80-131		
cis-1,2-Dichloroethene	20	21.8			109		80-125		
trans-1,2-Dichloroethene	20	21.26			106		80-126		
1,4-Dioxane	500	624.96			125		63-146		
Ethylbenzene	20	19.75			99		80-120		
Freon 113	20	21.59			108		73-139		
Methylene Chloride	20	20.97			105		80-120		
Naphthalene	20	20.91			105		53-124		
Tetrachloroethene	20	20.47			102		80-120		
Toluene	20	20.35			102		80-120		
1,1,1-Trichloroethane	20	17.93			90		67-126		
Trichloroethene	20	19.73			99		80-120		
Vinyl Chloride	20	15.2			76		56-120		
Xylene (Total)	60	59.64			99		80-120		
Batch number: E191421AA	Sample number(s): 1058221,1058223-1058230								
Acetone	150	167.14			111		54-157		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2044092
Reported: 05/23/2019 22:27

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Benzene	20	22.2			111		80-120		
2-Butanone	150	140.46			94		59-135		
Carbon Disulfide	20	20.37			102		65-128		
Chloroform	20	21.53			108		80-120		
1,2-Dichlorobenzene	20	21.41			107		80-120		
1,1-Dichloroethane	20	22.3			112		80-120		
1,2-Dichloroethane	20	20.42			102		73-124		
1,1-Dichloroethene	20	21.51			108		80-131		
cis-1,2-Dichloroethene	20	22.81			114		80-125		
trans-1,2-Dichloroethene	20	21.68			108		80-126		
1,4-Dioxane	500	492.11			98		63-146		
Ethylbenzene	20	21.76			109		80-120		
Freon 113	20	21.35			107		73-139		
Methylene Chloride	20	22.01			110		80-120		
Naphthalene	20	20.16			101		53-124		
Tetrachloroethene	20	21.91			110		80-120		
Toluene	20	22.24			111		80-120		
1,1,1-Trichloroethane	20	20.86			104		67-126		
Trichloroethene	20	21.76			109		80-120		
Vinyl Chloride	20	22.35			112		56-120		
Xylene (Total)	60	65.46			109		80-120		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 4191415AA	Sample number(s): 1058214-1058220,1058222 UNSPK: 1058216									
Acetone	1.09	150	153.49	150	149.04	102	99	54-157	3	30
Benzene	N.D.	20	21.73	20	21.1	109	105	80-120	3	30
2-Butanone	N.D.	150	123.74	150	118.46	82	79	59-135	4	30
Carbon Disulfide	0.209	20	23.06	20	22.02	114	109	65-128	5	30
Chloroform	N.D.	20	20.64	20	19.69	103	98	80-120	5	30
1,2-Dichlorobenzene	N.D.	20	21.28	20	20.35	106	102	80-120	4	30
1,1-Dichloroethane	0.640	20	22.19	20	21.18	108	103	80-120	5	30
1,2-Dichloroethane	N.D.	20	18.85	20	18.15	94	91	73-124	4	30
1,1-Dichloroethene	N.D.	20	24.97	20	24.21	125	121	80-131	3	30
cis-1,2-Dichloroethene	N.D.	20	23.66	20	22.6	118	113	80-120	5	30
trans-1,2-Dichloroethene	N.D.	20	23.19	20	22.43	116	112	80-120	3	30
1,4-Dioxane	N.D.	500	568.28	500	547.19	114	109	63-146	4	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2044092
Reported: 05/23/2019 22:27

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Ethylbenzene	N.D.	20	21.42	20	20.47	107	102	80-120	5	30
Freon 113	N.D.	20	24.12	20	23.14	121	116	73-139	4	30
Methylene Chloride	N.D.	20	22.27	20	21.62	111	108	80-120	3	30
Naphthalene	N.D.	20	20.32	20	19.54	102	98	53-124	4	30
Tetrachloroethene	N.D.	20	22.3	20	21.3	112	107	80-120	5	30
Toluene	N.D.	20	21.78	20	20.9	109	105	80-120	4	30
1,1,1-Trichloroethane	3.31	20	23.8	20	22.79	102	97	67-126	4	30
Trichloroethene	N.D.	20	21.69	20	21.03	108	105	80-120	3	30
Vinyl Chloride	N.D.	20	16.21	20	15.59	81	78	56-120	4	30
Xylene (Total)	N.D.	60	64.19	60	61.86	107	103	80-120	4	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: 4191415AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1058214	98	101	100	94
1058215	96	101	101	94
1058216	97	102	100	94
1058217	97	99	101	96
1058218	98	102	100	96
1058219	97	103	101	95
1058220	96	99	101	94
1058222	96	100	100	95
Blank	95	99	102	94
LCS	96	100	101	95
MS	97	99	101	96
MSD	98	102	100	96
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: 4191422AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1058231	97	103	100	94
1058232	95	100	101	93
1058233	96	101	99	94

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2044092
Reported: 05/23/2019 22:27

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: 4191422AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
Blank	97	103	100	95
LCS	94	101	100	95
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: E191421AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1058221	94	99	99	98
1058223	95	100	99	97
1058224	95	101	99	98
1058225	96	99	100	99
1058226	95	99	99	99
1058227	95	103	100	98
1058228	96	100	99	99
1058229	96	100	99	97
1058230	96	101	99	98
Blank	97	100	99	98
LCS	98	99	99	98
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 6556 Group # 2044092 Sample # 1058214-33

COC # 583008

Client Information

Client: VHB/TheJohnsonCo	Acct. #: 06556
Project Name/#: AD-New Windsor	PWSID #:
Project Manager: George Lester	P.O. #: 1-0145-05/54300
Sampler: Bob Osborne TIC	Quote #:
State where samples were collected: NY	For Compliance: Yes ☐ No ☒

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Matrix: Soil/Sediment	Tissue	Water: Ground	Potable	Surface	NPDES	Other:	Total # of Containers	Analysis Requested: 8260 - VOCs	Preservation: H	Remarks
Dup-02	5-8-19	0900	X				X					3	X		
J14-BR02		1028	X				X					3	X		
J14-BR01		1143	X				X					9	X		MS/MSD
J14-UC02		1253	X				X					3	X		
J14-UC01		1338	X				X					3	X		
MW-2		1533	X				X					3	X		
MW-2I	5-8-19	1723	X				X					3	X		
Dup-01	5-9-19	0800	X				X					3	X		
J04-BR02		0918	X				X					3	X		
J04-BR01	5-9-19	1013	X				X					3	X		

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days:

E-mail address: Glester@vhb.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP)
Type III (Reduced non-CLP)
NYSDEC Category A or B
Type VI (Raw Data Only)
NJ DKQP
MA MCP
TX TRRP-13
CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	5/13/19	1500			
				5/14/19	1025

EDD Required? Yes No
If yes, format: Excel

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS FedEx X Other

Temperature upon receipt 1.2-1.7 °C

Environmental Analysis Request/Chain of Custody

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Acct. # 6556 Group # 2044092 Sample # 1058214-33

COC #583009

Client Information

Client: VHB / The Johnsen Co	Acct. #: 06556
Project Name/#: AD-New Windsor	PWSID #:
Project Manager: George Lester	P.O. #: 58300/1-0145-05
Sampler: Bob Osborne (TRO)	Quote #:
State where samples were collected: NY	For Compliance: Yes ☐ No ☒

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water ☒ Potable ☐ Ground ☐ NPDES ☐ Surface ☐ | Other: Lab DI

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	8260 - VOCs
J05 - BR02	5-9-19	1253	X		W	X
J05 - BR01		1403	X		W	X
J23 - UC01		1543	X		W	X
J23 - UC02	↓	1628	X		W	X
RIZ-7	5-9-19	1728	X		W	X
J06 - UC01	5-10-19	0903	X		W	X
J06 - UC02	↓	1008	X		W	X
EB05-1019TRO	5-10-19	1015	X		W	X

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: _____

E-mail address: glester@vhb.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	5/13/19	1500			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	5/14/19	1025

EDD Required? Yes No

If yes, format: Excel

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS _____ FedEx X Other _____

Temperature upon receipt 1.2-1.7 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 248904

Group Number(s): 2044092

Client: The Johnson Company

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	05/14/2019 10:25
Number of Packages:	2	Number of Projects:	2
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Simon Nies (25112) at 15:36 on 05/14/2019

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	1.2	DT	Wet	Y	Bagged	N
2	DT146	1.7	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17601-5994
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCV92

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
1058214	DUP-02	X		1; 10	Field Duplicate Sample
1058215	J14-BR02	X		1	
1058216	J14-BR01	X		1	Unspiked
1058217	J14-BR01 MS	X		1	Matrix Spike
1058218	J14-BR01 MSD	X		1	Matrix Spike Duplicate
1058219	J14-UC02	X		1	
1058220	J14-UC01	X		10	
1058221	MW-2	X		1; 10	
1058222	MW-2I	X		1	
1058223	DUP-01	X		1	Field Duplicate Sample
1058224	J04-BR02	X		1	
1058225	J04-BR01	X		1	
1058226	J05-BR02	X		1	
1058227	J05-BR01	X		1	
1058228	J23-UC01	X		1; 10	
1058229	J23-UC02	X		1; 10	
1058230	RIZ-7	X		1	
1058231	J06-UC01	X		1	
1058232	J06-UC02	X		1	
1058233	EB051019TRO	X		1	Equipment Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCV92

GC/MS Volatiles

Fraction: Volatiles by GC/MS

CALIBRATION/STANDARDIZATION:

(Sample number(s): 1058231-1058233: Analysis: 11997)
A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

All QC is within specification.

SAMPLE ANALYSIS:

(Sample number(s): 1058220: Analysis: 11997)
Reporting limits were raised due to sample foaming.

No additional problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

1. Relative Response Factor (RRF)

$$RRF = \frac{AX}{Ais} \times \frac{Cis}{Cx}$$

Where:

Ax = Area of the characteristic ion for the compound to be measured
Ais = Area of the characteristic ion for the specific internal standard to be measured
Cis = Concentration of the internal standard
Cx = Concentration of the compound to be measured

2. % Relative Standard Deviation (%RSD)

$$\%RSD = \frac{standard\ deviation}{Mean} \times 100$$

3. % Difference

$$\%D = \frac{RRFc - RRFi}{RRFi} \times 100$$

Where:

RRFc = Relative response factor from the continuing calibration standard
RRFi = Mean relative response factor from the initial calibration

4. Concentration

$$Concentration\ (\mu g / L) = \frac{(Ax)(Is)(Df)}{(Ais)(RRF)}$$

Where:

Ax, Ais, and RRF are as given in 1. above
Is = Amount of internal standard added in parts per billion (µg/L)
Df = Dilution factor

5. % Recovery (% Rec)

$$\%Rec = \frac{SSR - SR}{SA} \times 100$$

Where:

SSR = Spiked sample result
SR = Sample result
SA = Spike added

6. Relative Percent Difference (RPD)

$$RPD = \frac{(MSR - MSRD)}{(1/2)(MSR + MSRD)} \times 100$$

Where:

MSR = Matrix spike recovery
MSRD = Matrix spike recovery duplicate

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: The Johnson Company, Inc.
SDG: JCV92

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
VOCs- 5ml Water by 8260C/D	4191415AA	VBLK424	05/21/2019 21:52
		LCS424	05/21/2019 21:07
		1058214	05/22/2019 06:58
		1058214	05/22/2019 07:21
		1058215	05/22/2019 05:27
		1058216 UNSPK	05/22/2019 03:57
		1058217 MS	05/22/2019 04:19
		1058218 MSD	05/22/2019 04:42
		1058219	05/22/2019 05:50
		1058220	05/22/2019 06:13
		1058222	05/22/2019 06:35
VOCs- 5ml Water by 8260C/D	4191422AA	VBLK426	05/22/2019 22:32
		LCS426	05/22/2019 21:01
		1058231	05/23/2019 07:14
		1058232	05/23/2019 07:37
		1058233	05/23/2019 03:27
VOCs- 5ml Water by 8260C/D	E191421AA	VBLKE11	05/22/2019 10:39
		LCSE11	05/22/2019 10:18
		1058221	05/22/2019 11:39
		1058221	05/22/2019 12:00
		1058223	05/22/2019 13:41
		1058224	05/22/2019 14:01
		1058225	05/22/2019 14:21
		1058226	05/22/2019 14:42
		1058227	05/22/2019 15:02
		1058228	05/22/2019 15:22
		1058228	05/22/2019 15:43
		1058229	05/22/2019 16:03
		1058229	05/22/2019 16:23
		1058230	05/22/2019 16:43

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Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: JCV92
Matrix: LIQUID

Fraction: Volatiles by GC/MS

4191415AA / VBLK424 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	05/21/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	05/21/19	N.D.	ug/l	0.2	1
Acetone	05/21/19	N.D.	ug/l	0.7	20
Freon 113	05/21/19	N.D.	ug/l	0.2	10
Carbon Disulfide	05/21/19	N.D.	ug/l	0.2	5
Methylene Chloride	05/21/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	05/21/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	05/21/19	N.D.	ug/l	0.2	1
2-Butanone	05/21/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	05/21/19	N.D.	ug/l	0.2	1
Chloroform	05/21/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	05/21/19	N.D.	ug/l	0.3	1
Benzene	05/21/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	05/21/19	N.D.	ug/l	0.3	1
Trichloroethene	05/21/19	N.D.	ug/l	0.2	1
1,4-Dioxane	05/21/19	N.D.	ug/l	29	250
Toluene	05/21/19	N.D.	ug/l	0.2	1
Tetrachloroethene	05/21/19	N.D.	ug/l	0.2	1
Ethylbenzene	05/21/19	N.D.	ug/l	0.4	1
Xylene (Total)	05/21/19	N.D.	ug/l	1	5
1,2-Dichlorobenzene	05/21/19	N.D.	ug/l	0.2	5
Naphthalene	05/21/19	N.D.	ug/l	1	5

4191422AA / VBLK426 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	05/22/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	05/22/19	N.D.	ug/l	0.2	1
Acetone	05/22/19	N.D.	ug/l	0.7	20
Freon 113	05/22/19	N.D.	ug/l	0.2	10
Carbon Disulfide	05/22/19	N.D.	ug/l	0.2	5
Methylene Chloride	05/22/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	05/22/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	05/22/19	N.D.	ug/l	0.2	1
2-Butanone	05/22/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	05/22/19	N.D.	ug/l	0.2	1
Chloroform	05/22/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	05/22/19	N.D.	ug/l	0.3	1
Benzene	05/22/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	05/22/19	N.D.	ug/l	0.3	1
Trichloroethene	05/22/19	N.D.	ug/l	0.2	1
1,4-Dioxane	05/22/19	N.D.	ug/l	29	250
Toluene	05/22/19	N.D.	ug/l	0.2	1
Tetrachloroethene	05/22/19	N.D.	ug/l	0.2	1
Ethylbenzene	05/22/19	N.D.	ug/l	0.4	1
Xylene (Total)	05/22/19	N.D.	ug/l	1	5

Fraction: Volatiles by GC/MS

4191422AA / VBLK426 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
1,2-Dichlorobenzene	05/22/19	N.D.	ug/l	0.2	5
Naphthalene	05/22/19	N.D.	ug/l	1	5

E191421AA / VBLKE11 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	05/22/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	05/22/19	N.D.	ug/l	0.2	1
Acetone	05/22/19	N.D.	ug/l	0.7	20
Freon 113	05/22/19	N.D.	ug/l	0.2	10
Carbon Disulfide	05/22/19	N.D.	ug/l	0.2	5
Methylene Chloride	05/22/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	05/22/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	05/22/19	N.D.	ug/l	0.2	1
2-Butanone	05/22/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	05/22/19	N.D.	ug/l	0.2	1
Chloroform	05/22/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	05/22/19	N.D.	ug/l	0.3	1
Benzene	05/22/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	05/22/19	N.D.	ug/l	0.3	1
Trichloroethene	05/22/19	N.D.	ug/l	0.2	1
1,4-Dioxane	05/22/19	N.D.	ug/l	29	250
Toluene	05/22/19	N.D.	ug/l	0.2	1
Tetrachloroethene	05/22/19	N.D.	ug/l	0.2	1
Ethylbenzene	05/22/19	N.D.	ug/l	0.4	1
Xylene (Total)	05/22/19	N.D.	ug/l	1	5
1,2-Dichlorobenzene	05/22/19	N.D.	ug/l	0.2	5
Naphthalene	05/22/19	N.D.	ug/l	1	5

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Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: JCV92
Matrix: LIQUID

Fraction: Volatiles by GC/MS

4191415AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLK424	99	80 - 120	94	80 - 120	95	80 - 120	102	80 - 120
LCS424	100	80 - 120	95	80 - 120	96	80 - 120	101	80 - 120
1058214	101	80 - 120	94	80 - 120	98	80 - 120	100	80 - 120
1058215	101	80 - 120	94	80 - 120	96	80 - 120	101	80 - 120
1058216 UNSPK	102	80 - 120	94	80 - 120	97	80 - 120	100	80 - 120
1058217 MS	99	80 - 120	96	80 - 120	97	80 - 120	101	80 - 120
1058218 MSD	102	80 - 120	96	80 - 120	98	80 - 120	100	80 - 120
1058219	103	80 - 120	95	80 - 120	97	80 - 120	101	80 - 120
1058220	99	80 - 120	94	80 - 120	96	80 - 120	101	80 - 120
1058222	100	80 - 120	95	80 - 120	96	80 - 120	100	80 - 120

4191422AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLK426	103	80 - 120	95	80 - 120	97	80 - 120	100	80 - 120
LCS426	101	80 - 120	95	80 - 120	94	80 - 120	100	80 - 120
1058231	103	80 - 120	94	80 - 120	97	80 - 120	100	80 - 120
1058232	100	80 - 120	93	80 - 120	95	80 - 120	101	80 - 120
1058233	101	80 - 120	94	80 - 120	96	80 - 120	99	80 - 120

E191421AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKE11	100	80 - 120	98	80 - 120	97	80 - 120	99	80 - 120
LCSE11	99	80 - 120	98	80 - 120	98	80 - 120	99	80 - 120
1058221	99	80 - 120	98	80 - 120	94	80 - 120	99	80 - 120
1058223	100	80 - 120	97	80 - 120	95	80 - 120	99	80 - 120
1058224	101	80 - 120	98	80 - 120	95	80 - 120	99	80 - 120
1058225	99	80 - 120	99	80 - 120	96	80 - 120	100	80 - 120
1058226	99	80 - 120	99	80 - 120	95	80 - 120	99	80 - 120
1058227	103	80 - 120	98	80 - 120	95	80 - 120	100	80 - 120
1058228	100	80 - 120	99	80 - 120	96	80 - 120	99	80 - 120
1058229	100	80 - 120	97	80 - 120	96	80 - 120	99	80 - 120
1058230	101	80 - 120	98	80 - 120	96	80 - 120	99	80 - 120

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 1058216 MS: 1058217 MSD: 1058218 **Analyte**	Batch: **4191415AA** (Sample number(s): 1058214-1058220, 1058222)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	N.D.	16.21	15.59	81	78	56-120	4	30
1,1-Dichloroethene	20	N.D.	24.97	24.21	125	121	80-131	3	30
Acetone	150	1.09 J	153.49	149.04	102	99	54-157	3	30
Freon 113	20	N.D.	24.12	23.14	121	116	73-139	4	30
Carbon Disulfide	20	0.209 J	23.06	22.02	114	109	65-128	5	30
Methylene Chloride	20	N.D.	22.27	21.62	111	108	80-120	3	30
trans-1,2-Dichloroethene	20	N.D.	23.19	22.43	116	112	80-120	3	30
1,1-Dichloroethane	20	0.640 J	22.19	21.18	108	103	80-120	5	30
2-Butanone	150	N.D.	123.74	118.46	82	79	59-135	4	30
cis-1,2-Dichloroethene	20	N.D.	23.66	22.6	118	113	80-120	5	30
1,1,1-Trichloroethane	20	3.31	23.8	22.79	102	97	67-126	4	30
Chloroform	20	N.D.	20.64	19.69	103	98	80-120	5	30
1,2-Dichloroethane	20	N.D.	18.85	18.15	94	91	73-124	4	30
Benzene	20	N.D.	21.73	21.1	109	105	80-120	3	30
Trichloroethene	20	N.D.	21.69	21.03	108	105	80-120	3	30
1,4-Dioxane	500	N.D.	568.28	547.19	114	109	63-146	4	30
Toluene	20	N.D.	21.78	20.9	109	105	80-120	4	30
Tetrachloroethene	20	N.D.	22.3	21.3	112	107	80-120	5	30
Ethylbenzene	20	N.D.	21.42	20.47	107	102	80-120	5	30
Xylene (Total)	60	N.D.	64.19	61.86	107	103	80-120	4	30
1,2-Dichlorobenzene	20	N.D.	21.28	20.35	106	102	80-120	4	30
Naphthalene	20	N.D.	20.32	19.54	102	98	53-124	4	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: JCV92
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCS424	Batch: **4191415AA** (Sample number(s): 1058214-1058220, 1058222)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	15.2	NA	76	NA	56-120	NA	NA
1,1-Dichloroethene	20	23.22	NA	116	NA	80-131	NA	NA
Acetone	150	152.02	NA	101	NA	54-157	NA	NA
Freon 113	20	20.05	NA	100	NA	73-139	NA	NA
Carbon Disulfide	20	20.38	NA	102	NA	65-128	NA	NA
Methylene Chloride	20	21.97	NA	110	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	22.25	NA	111	NA	80-126	NA	NA
1,1-Dichloroethane	20	20.54	NA	103	NA	80-120	NA	NA
2-Butanone	150	127.31	NA	85	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	22.62	NA	113	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	18.9	NA	95	NA	67-126	NA	NA
Chloroform	20	19.74	NA	99	NA	80-120	NA	NA
1,2-Dichloroethane	20	18.52	NA	93	NA	73-124	NA	NA
Benzene	20	21.21	NA	106	NA	80-120	NA	NA
Trichloroethene	20	20.83	NA	104	NA	80-120	NA	NA
1,4-Dioxane	500	534.91	NA	107	NA	63-146	NA	NA
Toluene	20	21.14	NA	106	NA	80-120	NA	NA
Tetrachloroethene	20	21.29	NA	106	NA	80-120	NA	NA
Ethylbenzene	20	20.77	NA	104	NA	80-120	NA	NA
Xylene (Total)	60	62.73	NA	105	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	21.43	NA	107	NA	80-120	NA	NA
Naphthalene	20	21.06	NA	105	NA	53-124	NA	NA

LCS: LCS426	Batch: **4191422AA** (Sample number(s): 1058231-1058233)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	15.2	NA	76	NA	56-120	NA	NA
1,1-Dichloroethene	20	22.58	NA	113	NA	80-131	NA	NA
Acetone	150	137.77	NA	92	NA	54-157	NA	NA
Freon 113	20	21.59	NA	108	NA	73-139	NA	NA
Carbon Disulfide	20	20.72	NA	104	NA	65-128	NA	NA
Methylene Chloride	20	20.97	NA	105	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	21.26	NA	106	NA	80-126	NA	NA
1,1-Dichloroethane	20	19.84	NA	99	NA	80-120	NA	NA
2-Butanone	150	120.5	NA	80	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	21.8	NA	109	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	17.93	NA	90	NA	67-126	NA	NA
Chloroform	20	18.69	NA	93	NA	80-120	NA	NA
1,2-Dichloroethane	20	17.64	NA	88	NA	73-124	NA	NA
Benzene	20	20.22	NA	101	NA	80-120	NA	NA
Trichloroethene	20	19.73	NA	99	NA	80-120	NA	NA

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCS426	Batch: **4191422AA** (Sample number(s): 1058231-1058233)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
1,4-Dioxane	500	624.96	NA	125	NA	63-146	NA	NA
Toluene	20	20.35	NA	102	NA	80-120	NA	NA
Tetrachloroethene	20	20.47	NA	102	NA	80-120	NA	NA
Ethylbenzene	20	19.75	NA	99	NA	80-120	NA	NA
Xylene (Total)	60	59.64	NA	99	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	20.23	NA	101	NA	80-120	NA	NA
Naphthalene	20	20.91	NA	105	NA	53-124	NA	NA

LCS: LCSE11	Batch: **E191421AA** (Sample number(s): 1058221, 1058223-1058230)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	22.35	NA	112	NA	56-120	NA	NA
1,1-Dichloroethene	20	21.51	NA	108	NA	80-131	NA	NA
Acetone	150	167.14	NA	111	NA	54-157	NA	NA
Freon 113	20	21.35	NA	107	NA	73-139	NA	NA
Carbon Disulfide	20	20.37	NA	102	NA	65-128	NA	NA
Methylene Chloride	20	22.01	NA	110	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	21.68	NA	108	NA	80-126	NA	NA
1,1-Dichloroethane	20	22.3	NA	112	NA	80-120	NA	NA
2-Butanone	150	140.46	NA	94	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	22.81	NA	114	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	20.86	NA	104	NA	67-126	NA	NA
Chloroform	20	21.53	NA	108	NA	80-120	NA	NA
1,2-Dichloroethane	20	20.42	NA	102	NA	73-124	NA	NA
Benzene	20	22.2	NA	111	NA	80-120	NA	NA
Trichloroethene	20	21.76	NA	109	NA	80-120	NA	NA
1,4-Dioxane	500	492.11	NA	98	NA	63-146	NA	NA
Toluene	20	22.24	NA	111	NA	80-120	NA	NA
Tetrachloroethene	20	21.91	NA	110	NA	80-120	NA	NA
Ethylbenzene	20	21.76	NA	109	NA	80-120	NA	NA
Xylene (Total)	60	65.46	NA	109	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	21.41	NA	107	NA	80-120	NA	NA
Naphthalene	20	20.16	NA	101	NA	53-124	NA	NA

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LOQ/MDL Summary
GC/MS Volatiles

SDG: JCV92

Fraction: Volatiles by GC/MS

11997: VOCs- 5ml Water by 8260C/D Analyte Name	Default MDL	Default LOQ	Units
Vinyl Chloride	0.2	1	ug/l
1,1-Dichloroethene	0.2	1	ug/l
Acetone	0.7	20	ug/l
Freon 113	0.2	10	ug/l
Carbon Disulfide	0.2	5	ug/l
Methylene Chloride	0.3	1	ug/l
trans-1,2-Dichloroethene	0.2	1	ug/l
1,1-Dichloroethane	0.2	1	ug/l
2-Butanone	0.3	10	ug/l
cis-1,2-Dichloroethene	0.2	1	ug/l
Chloroform	0.2	1	ug/l
1,1,1-Trichloroethane	0.3	1	ug/l
Benzene	0.2	1	ug/l
1,2-Dichloroethane	0.3	1	ug/l
Trichloroethene	0.2	1	ug/l
1,4-Dioxane	29	250	ug/l
Toluene	0.2	1	ug/l
Tetrachloroethene	0.2	1	ug/l
Ethylbenzene	0.4	1	ug/l
Xylene (Total)	1	5	ug/l
1,2-Dichlorobenzene	0.2	5	ug/l
Naphthalene	1	5	ug/l

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: em02t01.d BFB Injection Date: 05/02/19

Instrument ID: HP15648 BFB Injection Time: 11:50

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.46
75	30.0 - 60.0% of mass 95	48.11
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.61
173	Less than 2.0% of mass 174	0.52 (0.71)1
174	Greater than 50.0% of mass 95	72.95
175	5.0 - 9.0% of mass 174	5.31 (7.29)1
176	Greater than 95.0%, but less than 101.0% of mass 174	71.42 (97.90)1
177	5.0 - 9.0% of mass 176	4.77 (6.68)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	ea02i01.d	05/02/19	12:18
02	VSTD100	ea02i02.d	05/02/19	12:38
03	VSTD50	ea02i03.d	05/02/19	12:58
04	VSTD20	ea02i04.d	05/02/19	13:19
05	VSTD4	ea02i06.d	05/02/19	13:59
06	VSTD1	ea02i07.d	05/02/19	14:19
07	ICVELG	ea02v01.d	05/02/19	14:40

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ey22t01.d BFB Injection Date: 05/22/19

Instrument ID: HP15648 BFB Injection Time: 09:19

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.59
75	30.0 - 60.0% of mass 95	47.07
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.53
173	Less than 2.0% of mass 174	0.58 (0.76)1
174	Greater than 50.0% of mass 95	75.71
175	5.0 - 9.0% of mass 174	5.56 (7.35)1
176	Greater than 95.0%, but less than 101.0% of mass 174	73.03 (96.47)1
177	5.0 - 9.0% of mass 176	4.76 (6.52)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	ey22c01.d	05/22/19	09:59
02	LCSE11	ey22s01.d	05/22/19	10:18
03	VBLKE11	ey22b01.d	05/22/19	10:39
04	1054833	ey22s02.d	05/22/19	10:59
05	1054838	ey22s03.d	05/22/19	11:19
06	1058221	ey22s04.d	05/22/19	11:39
07	1058221DL	ey22s05.d	05/22/19	12:00
08	1057215	ey22s06.d	05/22/19	12:20
09	1057216MS	ey22s07.d	05/22/19	12:40
10	1057217MSD	ey22s08.d	05/22/19	13:00
11	1057215DL	ey22s09.d	05/22/19	13:21
12	1058223	ey22s10.d	05/22/19	13:41
13	1058224	ey22s11.d	05/22/19	14:01
14	1058225	ey22s12.d	05/22/19	14:21
15	1058226	ey22s13.d	05/22/19	14:42
16	1058227	ey22s14.d	05/22/19	15:02
17	1058228	ey22s15.d	05/22/19	15:22
18	1058228DL	ey22s16.d	05/22/19	15:43
19	1058229	ey22s17.d	05/22/19	16:03
20	1058229DL	ey22s18.d	05/22/19	16:23
21	1058230	ey22s19.d	05/22/19	16:43
22	1057212	ey22s20.d	05/22/19	17:03

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ey22t01.d BFB Injection Date: 05/22/19

Instrument ID: HP15648 BFB Injection Time: 09:19

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.59
75	30.0 - 60.0% of mass 95	47.07
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.53
173	Less than 2.0% of mass 174	0.58 (0.76)1
174	Greater than 50.0% of mass 95	75.71
175	5.0 - 9.0% of mass 174	5.56 (7.35)1
176	Greater than 95.0%, but less than 101.0% of mass 174	73.03 (96.47)1
177	5.0 - 9.0% of mass 176	4.76 (6.52)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1057213	ey22s21.d	05/22/19	17:24
24	1057214	ey22s22.d	05/22/19	17:44
25	1057218	ey22s23.d	05/22/19	18:04
26	1057219	ey22s24.d	05/22/19	18:24
27	1057222	ey22s25.d	05/22/19	18:45
28	1057220	ey22s26.d	05/22/19	19:05
29	1057220DL	ey22s27.d	05/22/19	19:25
30	1057221	ey22s28.d	05/22/19	19:46
31	1057221DL	ey22s29.d	05/22/19	20:06

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: 4a23t01.d BFB Injection Date: 04/23/19

Instrument ID: HP23297 BFB Injection Time: 14:13

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.42
75	30.0 - 60.0% of mass 95	46.67
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.99
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	89.33
175	5.0 - 9.0% of mass 174	6.21 (6.95)1
176	Greater than 95.0%, but less than 101.0% of mass 174	88.11 (98.63)1
177	5.0 - 9.0% of mass 176	5.49 (6.23)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD1	4a23i01.d	04/23/19	14:57
02	VSTD4	4a23i02.d	04/23/19	15:20
03	VSTD10	4a23i03.d	04/23/19	15:43
04	VSTD20	4a23i04.d	04/23/19	16:06
05	VSTD50	4a23i05.d	04/23/19	16:28
06	VSTD100	4a23i06.d	04/23/19	16:51
07	VSTD300	4a23i07.d	04/23/19	17:14
08	ICV401	4a23v01.d	04/23/19	18:00

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: 4y21t05.d BFB Injection Date: 05/21/19

Instrument ID: HP23297 BFB Injection Time: 19:58

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.25
75	30.0 - 60.0% of mass 95	43.76
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.11
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	86.78
175	5.0 - 9.0% of mass 174	6.49 (7.48)1
176	Greater than 95.0%, but less than 101.0% of mass 174	83.43 (96.14)1
177	5.0 - 9.0% of mass 176	5.32 (6.37)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	4y21c05.d	05/21/19	20:44
02	LCS423	4y21s41.d	05/21/19	21:07
03	LCS424	4y21s71.d	05/21/19	21:07
04	MDL423 - MDL423	4y21m41.d	05/21/19	21:29
05	MDL424 - MDL424	4y21m71.d	05/21/19	21:29
06	VBLK423	4y21b41.d	05/21/19	21:52
07	VBLK424	4y21b71.d	05/21/19	21:52
08	1054444	4y21s42.d	05/21/19	22:15
09	1054443	4y21s43.d	05/21/19	22:38
10	1053781	4y21s44.d	05/21/19	23:00
11	1054441	4y21s45.d	05/21/19	23:23
12	1054441MS	4y21s46.d	05/22/19	00:09
13	1054441MSD	4y21s47.d	05/22/19	00:32
14	1054442	4y21s48.d	05/22/19	01:17
15	1053775	4y21s49.d	05/22/19	01:40
16	1053776	4y21s50.d	05/22/19	02:03
17	1053777	4y21s51.d	05/22/19	02:26
18	1053778	4y21s52.d	05/22/19	02:48
19	1053779	4y21s53.d	05/22/19	03:11
20	1053780	4y21s54.d	05/22/19	03:34
21	1058216	4y21s72.d	05/22/19	03:57
22	1058217MS	4y21s73.d	05/22/19	04:19

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: 4y21t05.d BFB Injection Date: 05/21/19

Instrument ID: HP23297 BFB Injection Time: 19:58

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.25
75	30.0 - 60.0% of mass 95	43.76
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.11
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	86.78
175	5.0 - 9.0% of mass 174	6.49 (7.48)1
176	Greater than 95.0%, but less than 101.0% of mass 174	83.43 (96.14)1
177	5.0 - 9.0% of mass 176	5.32 (6.37)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1058218MSD	4y21s74.d	05/22/19	04:42
24	1058215	4y21s75.d	05/22/19	05:27
25	1058219	4y21s76.d	05/22/19	05:50
26	1058220	4y21s77.d	05/22/19	06:13
27	1058222	4y21s78.d	05/22/19	06:35
28	1058214	4y21s79.d	05/22/19	06:58
29	1058214DL	4y21s80.d	05/22/19	07:21
30	1057940	4y21s81.d	05/22/19	07:43

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: 4y22t10.d BFB Injection Date: 05/22/19

Instrument ID: HP23297 BFB Injection Time: 19:58

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.03
75	30.0 - 60.0% of mass 95	41.38
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.55
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	93.50
175	5.0 - 9.0% of mass 174	6.73 (7.20)1
176	Greater than 95.0%, but less than 101.0% of mass 174	90.83 (97.14)1
177	5.0 - 9.0% of mass 176	6.18 (6.81)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD150	4y22c05.d	05/22/19	20:38
02	LCS426	4y22s41.d	05/22/19	21:01
03	LCS427	4y22s61.d	05/22/19	21:01
04	MDL050 - MDL050	4y22m10.d	05/22/19	22:09
05	MDLA50 - MDLA50	4y22m20.d	05/22/19	22:09
06	VBLK426	4y22b05.d	05/22/19	22:32
07	VBLK427	4y22b10.d	05/22/19	22:32
08	1063033	4y22s62.d	05/22/19	23:16
09	1063026	4y22s63.d	05/22/19	23:39
10	1060395	4y22s64.d	05/23/19	00:02
11	1060395MS	4y22s65.d	05/23/19	00:25
12	1060395MSD	4y22s66.d	05/23/19	00:47
13	1060396	4y22s67.d	05/23/19	01:10
14	1056479	4y22s42.d	05/23/19	01:56
15	1056657	4y22s43.d	05/23/19	02:18
16	1056732	4y22s44.d	05/23/19	02:41
17	1056733	4y22s45.d	05/23/19	03:04
18	1058233	4y22s46.d	05/23/19	03:27
19	1056738	4y22s47.d	05/23/19	03:50
20	1056739MS	4y22s48.d	05/23/19	04:12
21	1056740MSD	4y22s49.d	05/23/19	04:35
22	1056477	4y22s50.d	05/23/19	04:58

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: 4y22t10.d BFB Injection Date: 05/22/19

Instrument ID: HP23297 BFB Injection Time: 19:58

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.03
75	30.0 - 60.0% of mass 95	41.38
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.55
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	93.50
175	5.0 - 9.0% of mass 174	6.73 (7.20)1
176	Greater than 95.0%, but less than 101.0% of mass 174	90.83 (97.14)1
177	5.0 - 9.0% of mass 176	6.18 (6.81)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1056478	4y22s51.d	05/23/19	05:21
24	1056734	4y22s52.d	05/23/19	05:43
25	1056735	4y22s53.d	05/23/19	06:06
26	1056736	4y22s54.d	05/23/19	06:29
27	1056737	4y22s55.d	05/23/19	06:52
28	1058231	4y22s56.d	05/23/19	07:14
29	1058232	4y22s57.d	05/23/19	07:37

FORM V VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 Calibration Date(s): 05/02/19 05/02/19

Heated Purge: (Y/N) Y Calibration Times: 12:18 14:19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = ea02i07.d RRF 4 = ea02i06.d RRF 10= ea02i05.d
RRF 20= ea02i04.d RRF 50= ea02i03.d RRF100= ea02i02.d RRF300= ea02i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
Dichlorodifluoromethane	#0.3916	0.4482	0.4237	0.4570	0.4455	0.4841	0.4365	0.4409	7	AVG	#
Chloromethane	#0.3383	0.3817	0.3614	0.3684	0.3591	0.3645	0.3386	0.3588	4	AVG	#
1,3-Butadiene	0.2502	0.2618	0.2980	0.2804	0.2616	0.2776	0.2587	0.2698	6	AVG	
Vinyl Chloride	#0.3162	0.3360	0.3412	0.3542	0.3469	0.3721	0.3343	0.3430	5	AVG	#
Bromomethane	#0.2736	0.2568	0.2600	0.2634	0.2562	0.2616	0.2365	0.2583	4	AVG	#
Chloroethane	#0.1937	0.1942	0.1960	0.2014	0.1971	0.2028	0.1819	0.1953	4	AVG	#
Dichlorofluoromethane	0.5765	0.4970	0.4846	0.4891	0.4820	0.5030	0.4656	0.4997	7	AVG	
n-Pentane	0.3587	0.3369	0.4311	0.4208	0.4130	0.4371	0.4064	0.4006	9	AVG	
Trichlorofluoromethane	#0.3986	0.4858	0.4826	0.5054	0.5039	0.5420	0.4949	0.4876	9	AVG	#
Ethyl ether	0.1994	0.2149	0.1942	0.2064	0.2011	0.2081	0.1981	0.2032	3	AVG	
Freon 123a	0.2912	0.2715	0.3000	0.2972	0.2790	0.2930	0.2780	0.2871	4	AVG	
Acrolein	2.1219	1.9178	2.1323	2.0850	2.1946	2.0588	1.9285	2.0627	5	AVG	
1,1-Dichloroethene	#0.1633	0.1871	0.2145	0.2118	0.2070	0.2146	0.2071	0.2008	9	AVG	#
1,1-Dichloroethene(2)	#0.0949	0.0949	0.1130	0.1138	0.1075	0.1130	0.1081	0.1064	8	AVG	#
Acetone	#0.9873	0.7968	0.8594	0.8325	0.8745	0.8448	0.8146	0.8586	7	AVG	#
Freon 113	#0.1481	0.1837	0.2431	0.2470	0.2398	0.2546	0.2399	0.2223	18	AVG	#
2-Propanol	0.5813	0.5029	0.5003	0.4966	0.5477	0.5041	0.4577	0.5129	8	AVG	
Methyl Iodide	0.3226	0.3504	0.3983	0.3942	0.3867	0.3985	0.3829	0.3762	8	AVG	
Carbon Disulfide	#0.6073	0.6122	0.7185	0.7174	0.6900	0.7231	0.6988	0.6810	7	AVG	#
Allyl Chloride	0.4419	0.3851	0.3732	0.3829	0.3841	0.3915	0.3729	0.3902	6	AVG	
Methyl Acetate	#0.1974	0.1965	0.1836	0.1908	0.1941	0.1931	0.1857	0.1916	3	AVG	#
Methylene Chloride	#0.2277	0.2218	0.2355	0.2311	0.2278	0.2340	0.2232	0.2287	2	AVG	#
t-Butyl alcohol	1.0042	0.9069	0.9616	0.9442	0.9894	0.9035	0.8321	0.9345	6	AVG	
Acrylonitrile	0.1129	0.1169	0.1205	0.1167	0.1184	0.1189	0.1113	0.1165	3	AVG	
trans-1,2-Dichloroethene	#0.2031	0.2082	0.2419	0.2351	0.2268	0.2387	0.2281	0.2260	7	AVG	#
Methyl Tertiary Butyl Ether	#0.6923	0.6589	0.6949	0.6915	0.6732	0.6790	0.6269	0.6738	4	AVG	#
n-Hexane	0.3142	0.3267	0.4344	0.4244	0.4194	0.4478	0.4052	0.3960	13	AVG	
1,1-Dichloroethane	#0.3593	0.3997	0.4503	0.4468	0.4327	0.4453	0.4297	0.4234	8	AVG	#
di-Isopropyl ether	0.6824	0.7156	0.7840	0.7706	0.7592	0.7745	0.7292	0.7451	5	AVG	
2-Chloro-1,3-butadiene	0.3293	0.3676	0.4374	0.4274	0.4156	0.4332	0.4196	0.4043	10	AVG	
Ethyl t-butyl ether	0.7086	0.7219	0.7805	0.7698	0.7415	0.7432	0.6793	0.7350	5	AVG	
cis-1,2-Dichloroethene	#0.2475	0.2314	0.2606	0.2643	0.2548	0.2647	0.2541	0.2539	5	AVG	#
2-Butanone	#0.2093	0.1500	0.1517	0.1520	0.1496	0.1458	0.1404	0.1570	15	AVG	#
2,2-Dichloropropane	0.3184	0.3364	0.3992	0.3963	0.3819	0.4000	0.3827	0.3736	9	AVG	
Propionitrile	1.2607	1.1839	1.2952	1.2628	1.2857	1.2838	1.2652	1.2625	3	AVG	
Methacrylonitrile	0.1245	0.1203	0.1287	0.1269	0.1253	0.1264	0.1236	0.1251	2	AVG	
Bromochloromethane	0.1186	0.1177	0.1256	0.1298	0.1310	0.1315	0.1285	0.1261	5	AVG	
Tetrahydrofuran	1.6654	1.2020	1.3203	1.2482	1.3099	1.2757	1.2403	1.3231	12	AVG	
Chloroform	#0.3600	0.3779	0.4236	0.4202	0.4077	0.4205	0.4090	0.4027	6	AVG	#
1,1,1-Trichloroethane	#0.3346	0.3250	0.3926	0.3931	0.3801	0.3981	0.3849	0.3726	8	AVG	#
Cyclohexane	#0.3566	0.3693	0.4981	0.4881	0.4884	0.5154	0.4879	0.4577	14	AVG	#
Cyclohexane(2)	#0.2946	0.3116	0.4259	0.4259	0.4214	0.4510	0.4225	0.3933	16	AVG	#
Cyclohexane(3)	#0.1345	0.1294	0.1574	0.1574	0.1518	0.1631	0.1524	0.1494	8	AVG	#
1,1-Dichloropropene	0.2584	0.2912	0.3554	0.3540	0.3420	0.3606	0.3512	0.3304	12	AVG	
Carbon Tetrachloride	#0.2508	0.2694	0.3412	0.3317	0.3314	0.3512	0.3429	0.3170	13	AVG	#
Isobutyl Alcohol	0.4012	0.3088	0.3029	0.3005	0.3218	0.2920	0.2937	0.3173	12	AVG	
Benzene	#0.8586	0.8937	1.0183	1.0118	0.9897	1.0204	0.9988	0.9702	7	AVG	#
1,2-Dichloroethane	#0.3433	0.3154	0.3309	0.3258	0.3175	0.3260	0.3221	0.3259	3	AVG	#
1,2-Dichloroethane(2)	#0.0255	0.0317	0.0296	0.0285	0.0276	0.0284	0.0280	0.0285	7	AVG	#<-
t-Amyl methyl ether	0.7298	0.7180	0.7764	0.7530	0.7358	0.7353	0.6535	0.7288	5	AVG	
n-Heptane	0.4530	0.3617	0.4364	0.4199	0.4356	0.4548	0.4099	0.4245	8	AVG	
n-Butanol	0.2727	0.2502	0.2722	0.2694	0.3054	0.2766	0.2744	0.2744	6	AVG	

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

FORM VI VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 Calibration Date(s): 05/02/19 05/02/19

Heated Purge: (Y/N) Y Calibration Times: 12:18 14:19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = ea02i07.d RRF 4 = ea02i06.d RRF 10= ea02i05.d
RRF 20= ea02i04.d RRF 50= ea02i03.d RRF100= ea02i02.d RRF300= ea02i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Trichloroethene	#0.2043	0.2256	0.2573	0.2547	0.2518	0.2621	0.2572	0.2447	9	AVG #
Methylcyclohexane	#0.4244	0.4702	0.5139	0.5443	0.5214	0.5552	0.5376	0.5096	9	AVG #
Methylcyclohexane(2)	#0.1939	0.2139	0.2381	0.2492	0.2416	0.2541	0.2494	0.2343	9	AVG #
1,2-Dichloropropane	#0.2098	0.2243	0.2509	0.2505	0.2474	0.2556	0.2512	0.2414	7	AVG #
Dibromomethane	0.1349	0.1371	0.1477	0.1464	0.1478	0.1496	0.1480	0.1445	4	AVG
1,4-Dioxane	0.0744	0.0705	0.0804	0.0777	0.0828	0.0791	0.0756	0.0772	5	AVG
Methyl Methacrylate	0.2402	0.2133	0.2175	0.2143	0.2169	0.2200	0.2183	0.2201	4	AVG
Bromodichloromethane	#0.2857	0.2738	0.3054	0.3056	0.3026	0.3158	0.3154	0.3006	5	AVG #
2-Nitropropane	0.1399	0.0913	0.0889	0.0942	0.0982	0.0928	0.0921	0.0996	18	AVG
2-Chloroethyl Vinyl Ether	0.1715	0.1774	0.1915	0.1892	0.1886	0.1936	0.1902	0.1860	4	AVG
cis-1,3-Dichloropropene	#0.3453	0.3606	0.4014	0.4027	0.4012	0.4157	0.4140	0.3916	7	AVG #
4-Methyl-2-pentanone	#0.3383	0.2988	0.3261	0.3832	0.3758	0.3248	0.3127	0.3371	9	AVG #
Toluene	#0.7183	0.7519	0.8713	0.8629	0.8691	0.8852	0.8593	0.8311	8	AVG #
trans-1,3-Dichloropropene	#0.4507	0.4568	0.5042	0.5119	0.5171	0.5201	0.5163	0.4967	6	AVG #
Ethyl Methacrylate	0.4990	0.5105	0.5301	0.5392	0.5438	0.5506	0.5335	0.5295	3	AVG
1,1,2-Trichloroethane	#0.2787	0.2679	0.2844	0.2862	0.2881	0.2913	0.2837	0.2829	3	AVG #
Tetrachloroethene	#0.2493	0.2905	0.3667	0.3625	0.3613	0.3745	0.3608	0.3379	14	AVG #
1,3-Dichloropropane	0.4596	0.4728	0.5052	0.5113	0.5140	0.5165	0.5009	0.4972	4	AVG
2-Hexanone	#0.3811	0.3239	0.3300	0.4225	0.3999	0.3139	0.2999	0.3530	13	AVG #
Dibromochloromethane	#0.2750	0.2747	0.3012	0.3086	0.3212	0.3296	0.3273	0.3054	8	AVG #
1,2-Dibromoethane	#0.2845	0.2882	0.3052	0.3079	0.3086	0.3094	0.3030	0.3010	3	AVG #
1-Chlorohexane	0.0265	0.0287	0.0286	0.0294	0.0288	0.0297	0.0294	0.0287	4	AVG
Chlorobenzene	#0.8094	0.8422	0.9672	0.9394	0.9623	0.9692	0.9434	0.9190	7	AVG #
1,1,1,2-Tetrachloroethane	0.2673	0.2807	0.3252	0.3208	0.3288	0.3349	0.3272	0.3121	9	AVG
Ethylbenzene	#1.4121	1.4256	1.7441	1.7113	1.7388	1.7781	1.6997	1.6442	9	AVG #
m+p-Xylene	#0.5399	0.5615	0.6750	0.6687	0.6751	0.6922	0.6681	0.6401	10	AVG #
o-Xylene	#0.5372	0.5532	0.6557	0.6412	0.6626	0.6709	0.6516	0.6246	9	AVG #
Styrene	#0.8233	0.9020	1.0828	1.0758	1.1037	1.1279	1.1067	1.0317	12	AVG #
Bromoform	#0.1729	0.1808	0.1961	0.2052	0.2185	0.2235	0.2281	0.2036	10	AVG #
Isopropylbenzene	#1.3263	1.4608	1.7667	1.7379	1.7886	1.8365	1.7169	1.6620	12	AVG #
Cyclohexanone	0.3294	0.2713	0.2784	0.2881	0.2963	0.2808	0.2922	0.2909	7	AVG
Bromobenzene	0.6087	0.6502	0.7262	0.7164	0.7358	0.7360	0.7036	0.6967	7	AVG
1,1,2,2-Tetrachloroethane	#0.7845	0.7987	0.8168	0.8187	0.8537	0.8155	0.7721	0.8086	3	AVG #
1,2,3-Trichloropropane	0.2495	0.2356	0.2417	0.2534	0.2515	0.2493	0.2344	0.2450	3	AVG
trans-1,4-Dichloro-2-butene	0.2497	0.2503	0.2693	0.2691	0.2836	0.2746	0.2633	0.2657	5	AVG
n-Propylbenzene	3.1110	3.2440	3.9606	3.8345	4.0038	4.0053	3.5519	3.6730	10	AVG
2-Chlorotoluene	0.6254	0.6608	0.7748	0.7426	0.7632	0.7756	0.7198	0.7232	8	AVG
4-Chlorotoluene	0.6544	0.6485	0.7844	0.7665	0.7924	0.7937	0.7491	0.7413	9	AVG
1,3,5-Trimethylbenzene	2.3256	2.2988	2.8200	2.7662	2.8887	2.8970	2.6560	2.6646	10	AVG
tert-Butylbenzene	0.4780	0.5163	0.6233	0.6262	0.6482	0.6554	0.5987	0.5923	12	AVG
Pentachloroethane	0.3812	0.3978	0.4354	0.4445	0.4800	0.4792	0.4686	0.4410	9	AVG
1,2,4-Trimethylbenzene	2.5648	2.3747	2.8773	2.7966	2.9394	2.9481	2.7051	2.7437	8	AVG
sec-Butylbenzene	2.6050	2.9074	3.6600	3.6053	3.7681	3.8178	3.2987	3.3803	14	AVG
1,3-Dichlorobenzene	#1.1936	1.1965	1.4183	1.3952	1.4539	1.4646	1.3820	1.3577	8	AVG #
p-Isopropyltoluene	2.3598	2.5560	3.1888	3.1427	3.3116	3.3298	2.9269	2.9736	13	AVG
1,4-Dichlorobenzene	#1.3060	1.2772	1.4380	1.3912	1.4524	1.4706	1.3870	1.3889	5	AVG #
1,2,3-Trimethylbenzene	2.7083	2.7246	2.9304	3.0307	3.0760	3.0984	2.8824	2.9215	5	AVG
Benzyl Chloride	1.6911	1.7195	1.8834	1.9216	2.0399	2.0199	1.9297	1.8865	7	AVG
1,3-Diethylbenzene	1.6290	1.7314	1.8968	1.9623	1.9896	2.0149	1.8829	1.8724	8	AVG
1,4-Diethylbenzene	1.7719	1.8707	2.0114	2.0605	2.1054	2.1388	2.0068	1.9951	7	AVG
1,2-Dichlorobenzene	#1.1767	1.1636	1.3625	1.3224	1.3784	1.3827	1.3122	1.2998	7	AVG #
n-Butylbenzene	1.1493	1.2202	1.5548	1.5424	1.6335	1.6516	1.4713	1.4605	14	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 Calibration Date(s): 05/02/19 05/02/19

Heated Purge: (Y/N) Y Calibration Times: 12:18 14:19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = ea02i07.d RRF 4 = ea02i06.d RRF 10= ea02i05.d
RRF 20= ea02i04.d RRF 50= ea02i03.d RRF100= ea02i02.d RRF300= ea02i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
1,2-Diethylbenzene	1.3583	1.4518	1.5389	1.6038	1.6143	1.6343	1.5289	1.5329	6	AVG
1,2-Dibromo-3-chloropropane#	0.1794	0.1830	0.1847	0.1904	0.1968	0.1897	0.1728	0.1853	4	AVG #
1,3,5-Trichlorobenzene	0.8536	0.8288	0.9981	0.9840	1.0454	1.0463	0.9344	0.9558	9	AVG
1,2,4-Trichlorobenzene #	0.7801	0.7779	0.9052	0.8678	0.9195	0.9155	0.8064	0.8532	7	AVG #
Hexachlorobutadiene	0.3282	0.3039	0.3855	0.3759	0.4141	0.4070	0.3455	0.3657	11	AVG
Naphthalene	2.9952	2.6900	2.8934	2.8339	2.9519	2.8694	2.4558	2.8128	7	AVG
1,2,3-Trichlorobenzene	0.7881	0.7489	0.8418	0.8210	0.8573	0.8591	0.7229	0.8056	7	AVG
2-Methylnaphthalene	2.2780	1.7286	1.7224	1.8153	1.7881	1.7672	1.3425	1.7774	15	AVG
Dibromofluoromethane	0.2335	0.2335	0.2324	0.2311	0.2288	0.2328	0.2346	0.2324	1	AVG
Dibromofluoromethane(2)	0.2384	0.2399	0.2384	0.2382	0.2362	0.2393	0.2395	0.2386	1	AVG
1,2-Dichloroethane-d4	0.0584	0.0589	0.0588	0.0593	0.0581	0.0581	0.0588	0.0586	1	AVG
1,2-Dichloroethane-d4(2)	0.3004	0.3003	0.2995	0.2952	0.2924	0.2961	0.2997	0.2976	1	AVG
1,2-Dichloroethane-d4(3)	0.0377	0.0387	0.0375	0.0370	0.0372	0.0376	0.0375	0.0376	1	AVG
Toluene-d8	1.3504	1.3607	1.3591	1.3623	1.3511	1.3697	1.3525	1.3580	1	AVG
Toluene-d8(2)	0.8695	0.8770	0.8684	0.8731	0.8667	0.8800	0.8757	0.8729	1	AVG
4-Bromofluorobenzene	0.5204	0.5258	0.5202	0.5220	0.5153	0.5256	0.5250	0.5220	1	AVG
4-Bromofluorobenzene(2)	0.3873	0.3905	0.3893	0.3919	0.3913	0.3958	0.3920	0.3912	1	AVG

Average %RSD 7

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP15648.i/19may02i.b/ea02i01.d	VSTD300
/chem/HP15648.i/19may02i.b/ea02i02.d	VSTD100
/chem/HP15648.i/19may02i.b/ea02i03.d	VSTD050
/chem/HP15648.i/19may02i.b/ea02i04.d	VSTD020
/chem/HP15648.i/19may02i.b/ea02i05.d	VSTD010
/chem/HP15648.i/19may02i.b/ea02i06.d	VSTD004
/chem/HP15648.i/19may02i.b/ea02i07.d	VSTD001

Area Summary

File ID:

Internal Standard Name	ea02i01.d	ea02i02.d	ea02i03.d	ea02i04.d	ea02i05.d	ea02i06.d	ea02i07.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	182177	181548	180628	183068	177210	185789	173827	180607	2	Yes
Fluorobenzene	1109741	1092189	1103103	1084837	1076899	1097962	1056656	1088770	2	Yes
Chlorobenzene-d5	837172	810686	802580	797090	797132	809751	781405	805117	2	Yes
1,4-Dichlorobenzene-d4	465360	438274	424423	424041	421829	430624	410887	430777	4	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	ea02i01.d	ea02i02.d	ea02i03.d	ea02i04.d	ea02i05.d	ea02i06.d	ea02i07.d	Avg. RT
t-Butyl alcohol-d10	2.487	2.486	2.487	2.480	2.493	2.480	2.480	2.485
Fluorobenzene	4.736	4.742	4.742	4.736	4.742	4.736	4.736	4.739
Chlorobenzene-d5	7.888	7.888	7.888	7.888	7.888	7.888	7.888	7.888
1,4-Dichlorobenzene-d4	9.796	9.796	9.796	9.796	9.796	9.796	9.796	9.796

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 05/03/2019 at 11:23.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 ICV Date: 05/02/19 Time: 14:40

Lab File ID: ea02v01.d Init. Calib. Date(s): 05/02/19 05/02/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.4409	0.3654	16.57	20	-17	#
# Chloromethane	0.3588	0.3208	17.88	20	-11	#
1,3-Butadiene	0.2698	0.2583	19.15	20	-4	
# Vinyl Chloride	0.3430	0.3213	18.74	20	-6	#
# Bromomethane	0.2583	0.2072	16.05	20	-20	#
# Chloroethane	0.1953	0.1741	17.83	20	-11	#
Dichlorofluoromethane	0.4997	0.3602	14.42	20	-28	
n-Pentane	0.4006	0.3915	19.55	20	-2	
# Trichlorofluoromethane	0.4876	0.4324	17.74	20	-11	#
Ethyl ether	0.2032	0.1924	18.94	20	-5	
Freon 123a	0.2871	0.2864	19.95	20	0	
Acrolein	2.0627	1.8854	137.11	150	-9	
# 1,1-Dichloroethene	0.2008	0.2188	21.79	20	9	#
# Acetone	0.8586	0.8017	140.06	150	-7	#
# Freon 113	0.2223	0.2463	22.15	20	11	#
2-Propanol	0.5129	0.5159	150.85	150	1	
Methyl Iodide	0.3762	0.3786	20.12	20	1	
# Carbon Disulfide	0.6810	0.6739	19.79	20	-1	#
Allyl Chloride	0.3902	0.3615	18.53	20	-7	
# Methyl Acetate	0.1916	0.1875	19.58	20	-2	#
# Methylene Chloride	0.2287	0.2377	20.79	20	4	#
t-Butyl alcohol	0.9345	0.8963	191.82	200	-4	
Acrylonitrile	0.1165	0.1033	88.68	100	-11	
# trans-1,2-Dichloroethene	0.2260	0.2257	19.98	20	0	#
# Methyl Tertiary Butyl Ether	0.6738	0.6586	19.55	20	-2	#
n-Hexane	0.3960	0.4096	20.68	20	3	
# 1,1-Dichloroethane	0.4234	0.4425	20.90	20	5	#
di-Isopropyl ether	0.7451	0.7685	20.63	20	3	
2-Chloro-1,3-butadiene	0.4043	0.4166	20.61	20	3	
Ethyl t-butyl ether	0.7350	0.7337	19.97	20	0	
# cis-1,2-Dichloroethene	0.2539	0.2927	23.06	20	15	#
# 2-Butanone	0.1570	0.1281	122.42	150	-18	#
2,2-Dichloropropane	0.3736	0.4097	21.94	20	10	
Propionitrile	1.2625	1.2956	153.94	150	3	
Methacrylonitrile	0.1251	0.1212	145.28	150	-3	
Bromochloromethane	0.1261	0.1211	19.20	20	-4	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 ICV Date: 05/02/19 Time: 14:40

Lab File ID: ea02v01.d Init. Calib. Date(s): 05/02/19 05/02/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Tetrahydrofuran	1.3231	1.1927	90.14	100	-10	
#	Chloroform	0.4027	0.4259	21.15	20	6	#
#	1,1,1-Trichloroethane	0.3726	0.4024	21.60	20	8	#
#	Cyclohexane	0.4577	0.4827	21.09	20	5	#
	1,1-Dichloropropene	0.3304	0.3592	21.74	20	9	
#	Carbon Tetrachloride	0.3170	0.3412	21.53	20	8	#
	Isobutyl Alcohol	0.3173	0.2908	458.30	500	-8	
#	Benzene	0.9702	1.0075	20.77	20	4	#
#	1,2-Dichloroethane	0.3259	0.3399	20.86	20	4	#
	t-Amyl methyl ether	0.7288	0.7392	20.28	20	1	
	n-Heptane	0.4245	0.4157	19.59	20	-2	
	n-Butanol	0.2744	0.2496	909.33	1000	-9	
#	Trichloroethene	0.2447	0.2627	21.47	20	7	#
#	Methylcyclohexane	0.5096	0.5042	19.79	20	-1	#
#	1,2-Dichloropropane	0.2414	0.2628	21.78	20	9	#
	Dibromomethane	0.1445	0.1493	20.66	20	3	
	1,4-Dioxane	0.0772	0.0645	417.29	500	-17	
	Methyl Methacrylate	0.2201	0.2058	18.70	20	-7	
#	Bromodichloromethane	0.3006	0.3136	20.86	20	4	#
	2-Nitropropane	0.0996	0.0812	16.29	20	-19	
	2-Chloroethyl Vinyl Ether	0.1860	0.1784	19.19	20	-4	
#	cis-1,3-Dichloropropene	0.3916	0.4059	20.73	20	4	#
#	4-Methyl-2-pentanone	0.3371	0.2899	86.00	100	-14	#
#	Toluene	0.8311	0.8895	21.40	20	7	#
#	trans-1,3-Dichloropropene	0.4967	0.4932	19.86	20	-1	#
	Ethyl Methacrylate	0.5295	0.5066	19.14	20	-4	
#	1,1,2-Trichloroethane	0.2829	0.3030	21.42	20	7	#
#	Tetrachloroethene	0.3379	0.3750	22.20	20	11	#
	1,3-Dichloropropane	0.4972	0.5182	20.85	20	4	
#	2-Hexanone	0.3530	0.2808	79.54	100	-20	#
#	Dibromochloromethane	0.3054	0.3161	20.70	20	4	#
#	1,2-Dibromoethane	0.3010	0.3129	20.80	20	4	#
	1-Chlorohexane	0.0287	0.0286	19.91	20	0	
#	Chlorobenzene	0.9190	0.9640	20.98	20	5	#
	1,1,1,2-Tetrachloroethane	0.3121	0.3277	21.00	20	5	
#	Ethylbenzene	1.6442	1.7729	21.57	20	8	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 ICV Date: 05/02/19 Time: 14:40

Lab File ID: ea02v01.d Init. Calib. Date(s): 05/02/19 05/02/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	m+p-Xylene	0.6401	0.6947	43.42	40	9	#
#	o-Xylene	0.6246	0.6715	21.50	20	8	#
#	Styrene	1.0317	1.1201	21.71	20	9	#
#	Bromoform	0.2036	0.1977	19.42	20	-3	#
#	Isopropylbenzene	1.6620	1.8222	21.93	20	10	#
	Cyclohexanone	0.2909	0.2773	476.61	500	-5	
	Bromobenzene	0.6967	0.7454	21.40	20	7	
#	1,1,2,2-Tetrachloroethane	0.8086	0.8399	20.77	20	4	#
	1,2,3-Trichloropropane	0.2450	0.2551	20.82	20	4	
	trans-1,4-Dichloro-2-butene	0.2657	0.2745	103.31	100	3	
	n-Propylbenzene	3.6730	4.0955	22.30	20	12	
	2-Chlorotoluene	0.7232	0.7742	21.41	20	7	
	4-Chlorotoluene	0.7413	0.8171	22.04	20	10	
	1,3,5-Trimethylbenzene	2.6646	2.9075	21.82	20	9	
	tert-Butylbenzene	0.5923	0.6601	22.29	20	11	
	Pentachloroethane	0.4410	0.4444	20.16	20	1	
	1,2,4-Trimethylbenzene	2.7437	2.9433	21.45	20	7	
	sec-Butylbenzene	3.3803	3.7584	22.24	20	11	
#	1,3-Dichlorobenzene	1.3577	1.4731	21.70	20	8	#
	p-Isopropyltoluene	2.9736	3.2339	21.75	20	9	
#	1,4-Dichlorobenzene	1.3889	1.4939	21.51	20	8	#
	1,2,3-Trimethylbenzene	2.9215	2.9709	20.34	20	2	
	Benzyl Chloride	1.8865	1.8362	19.47	20	-3	
	1,3-Diethylbenzene	1.8724	1.9127	20.43	20	2	
	1,4-Diethylbenzene	1.9951	1.9922	19.97	20	0	
#	1,2-Dichlorobenzene	1.2998	1.3803	21.24	20	6	#
	n-Butylbenzene	1.4605	1.5828	21.68	20	8	
	1,2-Diethylbenzene	1.5329	1.5705	20.49	20	2	
#	1,2-Dibromo-3-chloropropane	0.1853	0.1809	19.53	20	-2	#
	1,3,5-Trichlorobenzene	0.9558	1.0262	21.47	20	7	
#	1,2,4-Trichlorobenzene	0.8532	0.8956	20.99	20	5	#
	Hexachlorobutadiene	0.3657	0.3772	20.63	20	3	
	Naphthalene	2.8128	2.7329	19.43	20	-3	
	1,2,3-Trichlorobenzene	0.8056	0.8087	20.08	20	0	
	2-Methylnaphthalene	1.7774	1.3896	15.64	20	-22	

Average %Drift 7

Compounds with required minimum RRF.
Maximum % Drift = 30 %

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6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 Calibration Date(s): 04/23/19 04/23/19

Heated Purge: (Y/N) Y Calibration Times: 14:57 17:14

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = 4a23i01.d RRF 4 = 4a23i02.d RRF 10= 4a23i03.d
RRF 20= 4a23i04.d RRF 50= 4a23i05.d RRF100= 4a23i06.d RRF300= 4a23i07.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
Dichlorodifluoromethane	#0.3267	0.4301	0.4096	0.4057	0.3789	0.3659	0.3519	0.3813	9	AVG	#
Chloromethane	#0.3643	0.4154	0.4109	0.3853	0.3581	0.3329	0.3180	0.3693	10	AVG	#
1,3-Butadiene	0.1993	0.2306	0.2133	0.2023	0.1987	0.1834	0.1741	0.2002	9	AVG	
Vinyl Chloride	#0.3535	0.3970	0.3956	0.3801	0.3483	0.3341	0.3186	0.3610	8	AVG	#
Bromomethane	#0.3083	0.3321	0.3229	0.3033	0.2819	0.2698	0.2555	0.2962	10	AVG	#
Chloroethane	#0.2114	0.2233	0.2149	0.2062	0.1905	0.1801	0.1693	0.1994	10	AVG	#
Dichlorofluoromethane	0.5461	0.5216	0.5016	0.4730	0.4412	0.4101	0.3824	0.4680	13	AVG	
n-Pentane	0.3188	0.3864	0.3448	0.3639	0.3660	0.3532	0.3430	0.3537	6	AVG	
Trichlorofluoromethane	#0.3835	0.4771	0.4693	0.4666	0.4363	0.4226	0.4093	0.4378	8	AVG	#
Ethanol	0.0850	0.1007	0.0950	0.0679	0.0764	0.0939	0.0702	0.0842	15	AVG	
Freon 123a	0.2440	0.2728	0.2625	0.2571	0.2500	0.2421	0.2347	0.2519	5	AVG	
Acrolein	1.3863	1.3676	1.4443	1.4906	1.4336	1.2732	1.5267	1.4175	6	AVG	
1,1-Dichloroethene	#0.1484	0.1846	0.1824	0.1767	0.1812	0.1735	0.1738	0.1744	7	AVG	#
1,1-Dichloroethene(2)	#0.0891	0.1005	0.0947	0.0924	0.0926	0.0881	0.0871	0.0921	5	AVG	#<-
Acetone	#0.6209	0.6742	0.7140	0.7505	0.7189	0.6492	0.7447	0.6961	7	AVG	#
Freon 113	#0.1583	0.2066	0.1979	0.1964	0.2002	0.1922	0.1916	0.1919	8	AVG	#
2-Propanol	0.5879	0.5527	0.5785	0.5371	0.5719	0.5861	0.5011	0.5593	6	AVG	
Methyl Iodide	0.3016	0.3638	0.3670	0.3548	0.3593	0.3461	0.3397	0.3475	6	AVG	
Carbon Disulfide	#0.5353	0.6647	0.6483	0.6318	0.6453	0.6169	0.6107	0.6219	7	AVG	#
Allyl Chloride	0.4359	0.4174	0.3945	0.3700	0.3733	0.3606	0.3551	0.3867	8	AVG	
Methyl Acetate	#0.4196	0.3955	0.3621	0.3515	0.3386	0.3445	0.3306	0.3632	9	AVG	#
Methylene Chloride	#0.2218	0.2342	0.2253	0.2207	0.2232	0.2129	0.2081	0.2209	4	AVG	#
t-Butyl alcohol	0.9755	0.9750	1.0394	1.0036	1.0249	0.9650	0.9032	0.9838	5	AVG	
Acrylonitrile	0.1769	0.1954	0.2050	0.2016	0.1881	0.1875	0.1774	0.1903	6	AVG	
trans-1,2-Dichloroethene	#0.1801	0.2161	0.2156	0.2143	0.2175	0.2090	0.2060	0.2084	6	AVG	#
Methyl Tertiary Butyl Ether	#0.6149	0.6592	0.6590	0.6402	0.6358	0.6005	0.5507	0.6229	6	AVG	#
n-Hexane	0.2958	0.3804	0.3499	0.3498	0.3581	0.3410	0.3340	0.3441	8	AVG	
1,1-Dichloroethane	#0.3509	0.4141	0.4033	0.3948	0.3989	0.3810	0.3675	0.3872	6	AVG	#
di-Isopropyl ether	0.7404	0.8094	0.7977	0.7927	0.7926	0.7477	0.6919	0.7675	6	AVG	
2-Chloro-1,3-butadiene	0.2952	0.3697	0.3685	0.3609	0.3694	0.3501	0.3403	0.3506	8	AVG	
Ethyl t-butyl ether	0.6533	0.6948	0.7072	0.6909	0.6751	0.6282	0.5653	0.6592	7	AVG	
cis-1,2-Dichloroethene	#0.2131	0.2489	0.2482	0.2446	0.2499	0.2399	0.2372	0.2403	5	AVG	#
2-Butanone	#0.3144	0.3066	0.3125	0.3076	0.2795	0.2854	0.2612	0.2953	7	AVG	#
2,2-Dichloropropane	0.2632	0.3260	0.3157	0.3126	0.3152	0.3007	0.2920	0.3036	7	AVG	
Propionitrile	0.9747	0.9795	1.0643	1.0776	1.1070	0.9850	1.1267	1.0450	6	AVG	
Methacrylonitrile	0.1696	0.1776	0.1841	0.1853	0.1835	0.1811	0.1751	0.1795	3	AVG	
Bromochloromethane	0.1176	0.1312	0.1368	0.1348	0.1367	0.1346	0.1370	0.1327	5	AVG	
Tetrahydrofuran	0.9882	0.9675	1.0425	1.0861	1.0524	0.9424	1.1415	1.0315	7	AVG	
Chloroform	#0.3690	0.3939	0.3987	0.3870	0.3909	0.3711	0.3591	0.3814	4	AVG	#
1,1,1-Trichloroethane	#0.2865	0.3391	0.3296	0.3267	0.3296	0.3147	0.3087	0.3193	6	AVG	#
Cyclohexane	#0.3722	0.4475	0.4218	0.4264	0.4278	0.4087	0.4021	0.4152	6	AVG	#
Cyclohexane(2)	#0.2874	0.3626	0.3451	0.3520	0.3540	0.3379	0.3346	0.3391	7	AVG	#
Cyclohexane(3)	#0.1038	0.1292	0.1299	0.1266	0.1313	0.1246	0.1232	0.1241	8	AVG	#
1,1-Dichloropropene	0.2740	0.3184	0.3102	0.3065	0.3116	0.2978	0.2929	0.3016	5	AVG	
Carbon Tetrachloride	#0.2380	0.2905	0.2851	0.2817	0.2892	0.2795	0.2778	0.2774	6	AVG	#
Isobutyl Alcohol	0.3406	0.3433	0.3589	0.3440	0.3533	0.3366	0.3481	0.3464	2	AVG	
Benzene	#0.8667	0.9646	0.9535	0.9390	0.9408	0.8929	0.8636	0.9173	5	AVG	#
1,2-Dichloroethane	#0.3434	0.3210	0.3192	0.3085	0.3106	0.2944	0.2792	0.3109	7	AVG	#
1,2-Dichloroethane(2)	#0.0125	0.0288	0.0285	0.0283	0.0279	0.0270	0.0266	0.0257	23	AVG	#<-
t-Amyl methyl ether	0.6688	0.7105	0.7215	0.7061	0.6841	0.6283	0.5467	0.6666	9	AVG	
n-Heptane	0.3907	0.4407	0.4062	0.4157	0.4036	0.3896	0.3895	0.4051	5	AVG	
n-Butanol	0.2516	0.2739	0.2990	0.2784	0.2919	0.2915	0.3050	0.2845	6	AVG	

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 Calibration Date(s): 04/23/19 04/23/19

Heated Purge: (Y/N) Y Calibration Times: 14:57 17:14

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = 4a23i01.d RRF 4 = 4a23i02.d RRF 10= 4a23i03.d
RRF 20= 4a23i04.d RRF 50= 4a23i05.d RRF100= 4a23i06.d RRF300= 4a23i07.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Trichloroethene	#0.2039	0.2446	0.2417	0.2373	0.2407	0.2318	0.2287	0.2327	6	AVG #
Methylcyclohexane	#0.3633	0.4602	0.4469	0.4526	0.4499	0.4435	0.4510	0.4382	8	AVG #
Methylcyclohexane(2)	#0.1575	0.1947	0.1907	0.1983	0.1956	0.1923	0.1987	0.1897	8	AVG #
1,2-Dichloropropane	#0.2217	0.2481	0.2460	0.2459	0.2498	0.2389	0.2364	0.2410	4	AVG #
Dibromomethane	0.1397	0.1590	0.1612	0.1607	0.1620	0.1575	0.1548	0.1564	5	AVG
1,4-Dioxane	0.0571	0.0834	0.0869	0.0598	0.0678	0.0852	0.0726	0.0733	17	AVG
Methyl Methacrylate	0.2610	0.2693	0.2764	0.2767	0.2800	0.2772	0.2697	0.2729	2	AVG
Bromodichloromethane	#0.2547	0.2857	0.2894	0.2912	0.2960	0.2882	0.2831	0.2840	5	AVG #
2-Nitropropane	0.1345	0.1467	0.1449	0.1429	0.1351	0.1375	0.1261	0.1382	5	AVG
2-Chloroethyl Vinyl Ether	0.2058	0.2213	0.2239	0.2259	0.2275	0.2201	0.2189	0.2205	3	AVG
cis-1,3-Dichloropropene	#0.3327	0.3733	0.3848	0.3842	0.3962	0.3815	0.3761	0.3755	5	AVG #
4-Methyl-2-pentanone	#0.5211	0.5424	0.5670	0.5620	0.5206	0.5221	0.4742	0.5299	6	AVG #
Toluene	#0.7051	0.7790	0.7786	0.7536	0.7613	0.7247	0.6937	0.7423	5	AVG #
trans-1,3-Dichloropropene	#0.3755	0.4278	0.4471	0.4489	0.4646	0.4547	0.4386	0.4367	7	AVG #
Ethyl Methacrylate	0.5214	0.5431	0.5639	0.5646	0.5703	0.5557	0.5233	0.5489	4	AVG
1,1,2-Trichloroethane	#0.2850	0.2887	0.3012	0.2982	0.2981	0.2845	0.2751	0.2901	3	AVG #
Tetrachloroethene	#0.2896	0.3331	0.3386	0.3318	0.3367	0.3209	0.3158	0.3238	5	AVG #
1,3-Dichloropropane	0.4648	0.5040	0.5004	0.4911	0.4910	0.4743	0.4456	0.4816	4	AVG
2-Hexanone	#0.5219	0.5394	0.5823	0.5598	0.5189	0.5162	0.4593	0.5282	7	AVG #
Dibromochloromethane	#0.2709	0.2916	0.3128	0.3135	0.3239	0.3218	0.3143	0.3070	6	AVG #
1,2-Dibromoethane	#0.3006	0.3234	0.3303	0.3285	0.3321	0.3204	0.3066	0.3203	4	AVG #
Chlorobenzene	#0.7677	0.8826	0.8817	0.8589	0.8620	0.8265	0.7932	0.8389	5	AVG #
1,1,1,2-Tetrachloroethane	0.2365	0.2790	0.2896	0.2918	0.3011	0.2904	0.2941	0.2832	8	AVG
Ethylbenzene	#1.2807	1.4990	1.5029	1.4668	1.4787	1.4116	1.3405	1.4257	6	AVG #
m+p-Xylene	#0.5027	0.5841	0.5973	0.5829	0.5918	0.5690	0.5516	0.5685	6	AVG #
o-Xylene	#0.5182	0.5793	0.5857	0.5763	0.5833	0.5604	0.5521	0.5651	4	AVG #
Styrene	#0.7963	0.9410	0.9703	0.9755	0.9939	0.9678	0.9367	0.9402	7	AVG #
Bromoform	#0.2005	0.2172	0.2369	0.2469	0.2624	0.2637	0.2656	0.2419	10	AVG #
Isopropylbenzene	#1.2737	1.4521	1.4912	1.4687	1.4823	1.4055	1.3218	1.4136	6	AVG #
Cyclohexanone	0.2594	0.3065	0.3380	0.2494	0.2827	0.3165	0.2965	0.2927	11	AVG
Bromobenzene	0.6436	0.6992	0.7167	0.7067	0.7005	0.6986	0.7324	0.6997	4	AVG
1,1,2,2-Tetrachloroethane	#0.8794	0.9346	0.9478	0.9461	0.9322	0.9252	0.8848	0.9214	3	AVG #
1,2,3-Trichloropropane	0.2722	0.2857	0.2952	0.2772	0.2770	0.2755	0.2676	0.2786	3	AVG
trans-1,4-Dichloro-2-butene	0.2802	0.3028	0.3176	0.3203	0.3105	0.3078	0.2811	0.3029	5	AVG
n-Propylbenzene	2.8469	3.1895	3.1794	3.1221	3.0671	2.9455	2.7131	3.0091	6	AVG
2-Chlorotoluene	0.5874	0.6366	0.6634	0.6426	0.6348	0.6229	0.6113	0.6284	4	AVG
4-Chlorotoluene	0.6188	0.6722	0.6740	0.6679	0.6597	0.6515	0.6412	0.6550	3	AVG
1,3,5-Trimethylbenzene	1.9963	2.2416	2.2771	2.2534	2.2357	2.1754	2.0642	2.1777	5	AVG
tert-Butylbenzene	0.4138	0.4621	0.4630	0.4619	0.4630	0.4674	0.4689	0.4572	4	AVG
Pentachloroethane	0.3633	0.3826	0.4080	0.4228	0.4225	0.4418	0.4769	0.4168	9	AVG
1,2,4-Trimethylbenzene	2.0554	2.3038	2.3660	2.3535	2.3451	2.2891	2.2028	2.2737	5	AVG
sec-Butylbenzene	2.4610	2.9115	2.9154	2.8968	2.8858	2.7989	2.6044	2.7820	6	AVG
1,3-Dichlorobenzene	#1.2294	1.3133	1.3351	1.3284	1.3306	1.3206	1.3224	1.3114	3	AVG #
p-Isopropyltoluene	2.1397	2.4650	2.5393	2.5467	2.5420	2.4979	2.4004	2.4473	6	AVG
1,4-Dichlorobenzene	#1.2354	1.3723	1.3874	1.3654	1.3565	1.3407	1.3470	1.3435	4	AVG #
1,2,3-Trimethylbenzene	2.2706	2.4574	2.5566	2.4975	2.4835	2.4533	2.3710	2.4414	4	AVG
Benzyl Chloride	1.5313	1.6782	1.8069	1.9041	1.9732	1.9980	1.9002	1.8274	9	AVG
1,3-Diethylbenzene	1.3338	1.5517	1.6009	1.5797	1.5572	1.5541	1.5303	1.5297	6	AVG
1,4-Diethylbenzene	1.4420	1.6197	1.7010	1.6759	1.6617	1.6614	1.6425	1.6292	5	AVG
1,2-Dichlorobenzene	#1.2076	1.2902	1.3097	1.2938	1.3037	1.2748	1.2653	1.2779	3	AVG #
n-Butylbenzene	1.1355	1.2986	1.3007	1.2855	1.2894	1.2570	1.2089	1.2537	5	AVG
1,2-Diethylbenzene	1.1427	1.2967	1.3440	1.3191	1.3059	1.3063	1.3124	1.2896	5	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 Calibration Date(s): 04/23/19 04/23/19

Heated Purge: (Y/N) Y Calibration Times: 14:57 17:14

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = 4a23i01.d RRF 4 = 4a23i02.d RRF 10= 4a23i03.d
RRF 20= 4a23i04.d RRF 50= 4a23i05.d RRF100= 4a23i06.d RRF300= 4a23i07.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
1,2-Dibromo-3-chloropropane	#0.2549	0.2354	0.2434	0.2510	0.2424	0.2465	0.2280	0.2431	4	AVG #
1,3,5-Trichlorobenzene	0.9398	0.9667	0.9783	0.9779	0.9747	0.9548	0.9520	0.9635	2	AVG
1,2,4-Trichlorobenzene	#0.9302	0.9255	0.9228	0.9132	0.9071	0.9007	0.8905	0.9128	2	AVG #
Hexachlorobutadiene	0.4929	0.4116	0.4079	0.4127	0.4069	0.4065	0.4144	0.4218	7	AVG
Naphthalene	3.0700	3.1681	3.2507	3.3121	3.2475	3.2113	2.8788	3.1627	5	AVG
1,2,3-Trichlorobenzene	0.8664	0.8820	0.8928	0.8820	0.8796	0.8757	0.8602	0.8770	1	AVG
2-Methylnaphthalene	1.8121	1.8709	2.0081	2.0258	2.0370	2.0913	2.0011	1.9780	5	AVG
Dibromofluoromethane	0.2449	0.2473	0.2436	0.2473	0.2467	0.2490	0.2465	0.2465	1	AVG
Dibromofluoromethane(2)	0.2505	0.2524	0.2500	0.2536	0.2532	0.2535	0.2532	0.2524	1	AVG
1,2-Dichloroethane-d4	0.0592	0.0603	0.0594	0.0626	0.0590	0.0608	0.0603	0.0602	2	AVG
1,2-Dichloroethane-d4(2)	0.2921	0.2974	0.2927	0.3011	0.2871	0.2899	0.2794	0.2914	2	AVG
1,2-Dichloroethane-d4(3)	0.0372	0.0389	0.0375	0.0392	0.0386	0.0391	0.0386	0.0384	2	AVG
Toluene-d8	1.3037	1.2987	1.2995	1.2961	1.2908	1.2654	1.2287	1.2833	2	AVG
Toluene-d8(2)	0.8413	0.8391	0.8471	0.8340	0.8397	0.8255	0.8041	0.8330	2	AVG
4-Bromofluorobenzene	0.4849	0.4948	0.4951	0.4965	0.4943	0.4885	0.4698	0.4891	2	AVG
4-Bromofluorobenzene(2)	0.4271	0.4339	0.4368	0.4368	0.4388	0.4316	0.4181	0.4319	2	AVG

Average %RSD 6

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

FORM VI VOA

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP23297.i/19apr23i.b/4a23i01.d	VSTD001
/chem/HP23297.i/19apr23i.b/4a23i02.d	VSTD004
/chem/HP23297.i/19apr23i.b/4a23i03.d	VSTD010
/chem/HP23297.i/19apr23i.b/4a23i04.d	VSTD020
/chem/HP23297.i/19apr23i.b/4a23i05.d	VSTD050
/chem/HP23297.i/19apr23i.b/4a23i06.d	VSTD100
/chem/HP23297.i/19apr23i.b/4a23i07.d	VSTD300

Area Summary

File ID:

Internal Standard Name	4a23i01.d	4a23i02.d	4a23i03.d	4a23i04.d	4a23i05.d	4a23i06.d	4a23i07.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	443119	444616	425898	424635	399880	478539	387659	429192	7	Yes
Fluorobenzene	1140514	1107948	1094665	1136829	1115257	1169857	1215570	1140091	4	Yes
Chlorobenzene-d5	904161	883788	864912	909723	896314	947309	1005411	915945	5	Yes
1,4-Dichlorobenzene-d4	489109	497310	484581	508580	508818	529436	563820	511665	5	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	4a23i01.d	4a23i02.d	4a23i03.d	4a23i04.d	4a23i05.d	4a23i06.d	4a23i07.d	Avg. RT
t-Butyl alcohol-d10	4.374	4.374	4.374	4.367	4.380	4.367	4.373	4.373
Fluorobenzene	7.866	7.872	7.866	7.866	7.872	7.872	7.871	7.869
Chlorobenzene-d5	11.309	11.309	11.309	11.309	11.309	11.309	11.309	11.309
1,4-Dichlorobenzene-d4	13.189	13.189	13.189	13.189	13.189	13.189	13.188	13.189

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 04/24/2019 at 14:29.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 ICV Date: 04/23/19 Time: 18:00

Lab File ID: 4a23v01.d Init. Calib. Date(s): 04/23/19 04/23/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3813	0.3057	16.04	20	-20	#
# Chloromethane	0.3693	0.3563	19.30	20	-4	#
1,3-Butadiene	0.2002	0.2511	25.08	20	25	
# Vinyl Chloride	0.3610	0.3524	19.52	20	-2	#
# Bromomethane	0.2962	0.2584	17.45	20	-13	#
# Chloroethane	0.1994	0.1842	18.48	20	-8	#
Dichlorofluoromethane	0.4680	0.4592	19.62	20	-2	
n-Pentane	0.3537	0.4087	23.11	20	16	
# Trichlorofluoromethane	0.4378	0.3962	18.10	20	-9	#
Ethanol	0.0842	0.0918	545.20	500	9	
Freon 123a	0.2519	0.2578	20.47	20	2	
Acrolein	1.4175	1.0420	110.27	150	-26	
# 1,1-Dichloroethene	0.1744	0.2021	23.18	20	16	#
# Acetone	0.6961	0.5898	127.10	150	-15	#
# Freon 113	0.1919	0.2038	21.24	20	6	#
2-Propanol	0.5593	0.5516	147.94	150	-1	
Methyl Iodide	0.3475	0.3802	21.88	20	9	
# Carbon Disulfide	0.6219	0.7086	22.79	20	14	#
Allyl Chloride	0.3867	0.3720	19.24	20	-4	
# Methyl Acetate	0.3632	0.3527	19.42	20	-3	#
# Methylene Chloride	0.2209	0.2377	21.52	20	8	#
t-Butyl alcohol	0.9838	0.9503	193.18	200	-3	
Acrylonitrile	0.1903	0.1711	89.90	100	-10	
# trans-1,2-Dichloroethene	0.2084	0.2148	20.62	20	3	#
# Methyl Tertiary Butyl Ether	0.6229	0.6378	20.48	20	2	#
n-Hexane	0.3441	0.3503	20.36	20	2	
# 1,1-Dichloroethane	0.3872	0.4106	21.21	20	6	#
di-Isopropyl ether	0.7675	0.7938	20.69	20	3	
2-Chloro-1,3-butadiene	0.3506	0.3620	20.65	20	3	
Ethyl t-butyl ether	0.6592	0.6685	20.28	20	1	
# cis-1,2-Dichloroethene	0.2403	0.2828	23.55	20	18	#
# 2-Butanone	0.2953	0.2626	133.38	150	-11	#
2,2-Dichloropropane	0.3036	0.3264	21.50	20	7	
Propionitrile	1.0450	0.9918	142.37	150	-5	
Methacrylonitrile	0.1795	0.1772	148.06	150	-1	
Bromochloromethane	0.1327	0.1319	19.88	20	-1	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 ICV Date: 04/23/19 Time: 18:00

Lab File ID: 4a23v01.d Init. Calib. Date(s): 04/23/19 04/23/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
Tetrahydrofuran	1.0315	0.8723	84.57	100	-15	
# Chloroform	0.3814	0.3980	20.87	20	4	#
# 1,1,1-Trichloroethane	0.3193	0.3411	21.37	20	7	#
# Cyclohexane	0.4152	0.4130	19.89	20	-1	#
1,1-Dichloropropene	0.3016	0.3169	21.01	20	5	
# Carbon Tetrachloride	0.2774	0.2892	20.85	20	4	#
Isobutyl Alcohol	0.3464	0.3290	474.83	500	-5	
# Benzene	0.9173	0.9615	20.96	20	5	#
# 1,2-Dichloroethane	0.3109	0.3251	20.92	20	5	#
t-Amyl methyl ether	0.6666	0.6900	20.70	20	4	
n-Heptane	0.4051	0.3964	19.57	20	-2	
n-Butanol	0.2845	0.2776	975.76	1000	-2	
# Trichloroethene	0.2327	0.2430	20.89	20	4	#
# Methylcyclohexane	0.4382	0.4332	19.77	20	-1	#
# 1,2-Dichloropropane	0.2410	0.2559	21.24	20	6	#
Dibromomethane	0.1564	0.1625	20.78	20	4	
1,4-Dioxane	0.0733	0.0814	555.81	500	11	
Methyl Methacrylate	0.2729	0.2625	19.24	20	-4	
# Bromodichloromethane	0.2840	0.2952	20.79	20	4	#
2-Nitropropane	0.1382	0.1161	16.80	20	-16	
2-Chloroethyl Vinyl Ether	0.2205	0.2314	20.99	20	5	
# cis-1,3-Dichloropropene	0.3755	0.3946	21.02	20	5	#
# 4-Methyl-2-pentanone	0.5299	0.4805	90.67	100	-9	#
# Toluene	0.7423	0.7698	20.74	20	4	#
# trans-1,3-Dichloropropene	0.4367	0.4361	19.97	20	0	#
Ethyl Methacrylate	0.5489	0.5291	19.28	20	-4	
# 1,1,2-Trichloroethane	0.2901	0.3078	21.22	20	6	#
# Tetrachloroethene	0.3238	0.3403	21.02	20	5	#
1,3-Dichloropropane	0.4816	0.4904	20.36	20	2	
# 2-Hexanone	0.5282	0.4819	91.23	100	-9	#
# Dibromochloromethane	0.3070	0.3186	20.76	20	4	#
# 1,2-Dibromoethane	0.3203	0.3306	20.65	20	3	#
# Chlorobenzene	0.8389	0.8648	20.62	20	3	#
1,1,1,2-Tetrachloroethane	0.2832	0.2927	20.67	20	3	
# Ethylbenzene	1.4257	1.4706	20.63	20	3	#
# m+p-Xylene	0.5685	0.5925	41.69	40	4	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 ICV Date: 04/23/19 Time: 18:00

Lab File ID: 4a23v01.d Init. Calib. Date(s): 04/23/19 04/23/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	o-Xylene	0.5651	0.5765	20.40	20	2	#
#	Styrene	0.9402	0.9869	20.99	20	5	#
#	Bromoform	0.2419	0.2390	19.76	20	-1	#
#	Isopropylbenzene	1.4136	1.4785	20.92	20	5	#
	Cyclohexanone	0.2927	0.3201	546.72	500	9	
	Bromobenzene	0.6997	0.7061	20.18	20	1	
#	1,1,2,2-Tetrachloroethane	0.9214	0.9427	20.46	20	2	#
	1,2,3-Trichloropropane	0.2786	0.2873	20.62	20	3	
	trans-1,4-Dichloro-2-butene	0.3029	0.3121	103.02	100	3	
	n-Propylbenzene	3.0091	3.1679	21.06	20	5	
	2-Chlorotoluene	0.6284	0.6439	20.49	20	2	
	4-Chlorotoluene	0.6550	0.6790	20.73	20	4	
	1,3,5-Trimethylbenzene	2.1777	2.2607	20.76	20	4	
	tert-Butylbenzene	0.4572	0.4631	20.26	20	1	
	Pentachloroethane	0.4168	0.4074	19.55	20	-2	
	1,2,4-Trimethylbenzene	2.2737	2.3364	20.55	20	3	
	sec-Butylbenzene	2.7820	2.9246	21.03	20	5	
#	1,3-Dichlorobenzene	1.3114	1.3172	20.09	20	0	#
	p-Isopropyltoluene	2.4473	2.5479	20.82	20	4	
#	1,4-Dichlorobenzene	1.3435	1.3795	20.54	20	3	#
	1,2,3-Trimethylbenzene	2.4414	2.5153	20.61	20	3	
	Benzyl Chloride	1.8274	1.8193	19.91	20	0	
	1,3-Diethylbenzene	1.5297	1.5532	20.31	20	2	
	1,4-Diethylbenzene	1.6292	1.6187	19.87	20	-1	
#	1,2-Dichlorobenzene	1.2779	1.3085	20.48	20	2	#
	n-Butylbenzene	1.2537	1.2811	20.44	20	2	
	1,2-Diethylbenzene	1.2896	1.3235	20.53	20	3	
#	1,2-Dibromo-3-chloropropane	0.2431	0.2474	20.36	20	2	#
	1,3,5-Trichlorobenzene	0.9635	0.9873	20.50	20	2	
#	1,2,4-Trichlorobenzene	0.9128	0.9361	20.51	20	3	#
	Hexachlorobutadiene	0.4218	0.4586	21.74	20	9	
	Naphthalene	3.1627	3.2815	20.75	20	4	
	1,2,3-Trichlorobenzene	0.8770	0.9033	20.60	20	3	
	2-Methylnaphthalene	1.9780	2.1348	21.59	20	8	
				Average %Drift		5	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

^

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem/HP15648.i/19may02i.b/ea02i07.d
/chem/HP15648.i/19may02i.b/ea02i06.d
/chem/HP15648.i/19may02i.b/ea02i05.d
/chem/HP15648.i/19may02i.b/ea02i04.d
/chem/HP15648.i/19may02i.b/ea02i03.d
/chem/HP15648.i/19may02i.b/ea02i02.d
/chem/HP15648.i/19may02i.b/ea02i01.d

File /chem/HP15648.i/19may02i.b/ea02i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem/HP15648.i/19may22a.b/ey22c01.d

RT Summary

Internal Standard Name	File ID: ey22c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	2.474	2.487	Yes
Fluorobenzene	4.730	4.742	Yes
Chlorobenzene-d5	7.894	7.888	Yes
1,4-Dichlorobenzene-d4	9.802	9.796	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: ey22c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	171108	180628	90314	361256	Yes
Fluorobenzene	1081602	1103103	551552	2206206	Yes
Chlorobenzene-d5	811311	802580	401290	1605160	Yes
1,4-Dichlorobenzene-d4	422148	424423	212212	848846	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 Calibration Date: 05/22/19 Time: 09:59

Lab File ID: ey22c01.d Init. Calib. Date(s): 05/02/19 05/02/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.4409	0.4503	51.06	50	2	#
# Chloromethane	0.3588	0.4220	58.80	50	18	#
1,3-Butadiene	0.2698	0.3116	57.76	50	16	
# Vinyl Chloride	0.3430	0.3886	56.65	50	13	#
# Bromomethane	0.2583	0.2550	49.37	50	-1	#
# Chloroethane	0.1953	0.2126	54.43	50	9	#
Dichlorofluoromethane	0.4997	0.5222	52.25	50	5	
n-Pentane	0.4006	0.4430	55.29	50	11	
# Trichlorofluoromethane	0.4876	0.4989	51.16	50	2	#
Ethyl ether	0.2032	0.2362	58.12	50	16	
Freon 123a	0.2871	0.2912	50.71	50	1	
Acrolein	2.0627	2.3043	558.56	500	12	
# 1,1-Dichloroethene	0.2008	0.2032	50.59	50	1	#
# 1,1-Dichloroethene(2)	0.1064	0.1075	50.51	50	1	#
# Acetone	0.8586	0.9488	110.52	100	11	#
# Freon 113	0.2223	0.2391	53.78	50	8	#
2-Propanol	0.5129	0.5366	261.54	250	5	
Methyl Iodide	0.3762	0.3750	49.84	50	0	
# Carbon Disulfide	0.6810	0.6901	50.66	50	1	#
Allyl Chloride	0.3902	0.4300	55.10	50	10	
# Methyl Acetate	0.1916	0.2251	58.75	50	17	#
# Methylene Chloride	0.2287	0.2330	50.94	50	2	#
t-Butyl alcohol	0.9345	0.9262	247.77	250	-1	
Acrylonitrile	0.1165	0.1300	55.80	50	12	
# trans-1,2-Dichloroethene	0.2260	0.2313	51.17	50	2	#
# Methyl Tertiary Butyl Ether	0.6738	0.6949	51.56	50	3	#
n-Hexane	0.3960	0.4397	55.51	50	11	
# 1,1-Dichloroethane	0.4234	0.4516	53.33	50	7	#
di-Isopropyl ether	0.7451	0.8598	57.70	50	15	
2-Chloro-1,3-butadiene	0.4043	0.4223	52.23	50	4	
Ethyl t-butyl ether	0.7350	0.7773	52.88	50	6	
# cis-1,2-Dichloroethene	0.2539	0.2623	51.66	50	3	#
# 2-Butanone	0.1570	0.1594	101.53	100	2	#
2,2-Dichloropropane	0.3736	0.3744	50.11	50	0	
Propionitrile	1.2625	1.4716	291.41	250	17	
Methacrylonitrile	0.1251	0.1334	133.28	125	7	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 Calibration Date: 05/22/19 Time: 09:59

Lab File ID: ey22c01.d Init. Calib. Date(s): 05/02/19 05/02/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
Bromochloromethane	0.1261	0.1321	52.37	50	5	
Tetrahydrofuran	1.3231	1.3624	102.97	100	3	
# Chloroform	0.4027	0.4120	51.15	50	2	#
# 1,1,1-Trichloroethane	0.3726	0.3652	49.01	50	-2	#
# Cyclohexane	0.4577	0.5217	57.00	50	14	#
# Cyclohexane(2)	0.3933	0.4357	55.39	50	11	#
# Cyclohexane(3)	0.1494	0.1591	53.22	50	6	#
1,1-Dichloropropene	0.3304	0.3562	53.91	50	8	
# Carbon Tetrachloride	0.3170	0.3129	49.36	50	-1	#
Isobutyl Alcohol	0.3173	0.3200	630.38	625	1	
# Benzene	0.9702	1.0411	53.65	50	7	#
# 1,2-Dichloroethane	0.3259	0.3084	47.32	50	-5	#
# 1,2-Dichloroethane(2)	0.0285	0.0285	50.08	50	0	#<-
t-Amyl methyl ether	0.7288	0.7552	51.81	50	4	
n-Heptane	0.4245	0.4516	53.20	50	6	
n-Butanol	0.2744	0.2732	1244.55	1250	0	
# Trichloroethene	0.2447	0.2557	52.23	50	4	#
# Methylcyclohexane	0.5096	0.5654	55.48	50	11	#
# Methylcyclohexane(2)	0.2343	0.2570	54.84	50	10	#
# 1,2-Dichloropropane	0.2414	0.2679	55.48	50	11	#
Dibromomethane	0.1445	0.1447	50.08	50	0	
1,4-Dioxane	0.0772	0.0762	616.32	625	-1	
Methyl Methacrylate	0.2201	0.2224	50.53	50	1	
# Bromodichloromethane	0.3006	0.2942	48.93	50	-2	#
2-Nitropropane	0.0996	0.0802	80.46	100	-20	
2-Chloroethyl Vinyl Ether	0.1860	0.1953	52.51	50	5	
# cis-1,3-Dichloropropene	0.3916	0.3972	50.72	50	1	#
# 4-Methyl-2-pentanone	0.3371	0.3433	101.84	100	2	#
# Toluene	0.8311	0.8769	52.75	50	6	#
# trans-1,3-Dichloropropene	0.4967	0.4706	47.37	50	-5	#
Ethyl Methacrylate	0.5295	0.5431	51.28	50	3	
# 1,1,2-Trichloroethane	0.2829	0.2902	51.30	50	3	#
# Tetrachloroethene	0.3379	0.3540	52.37	50	5	#
1,3-Dichloropropane	0.4972	0.5214	52.44	50	5	
# 2-Hexanone	0.3530	0.3259	92.30	100	-8	#
# Dibromochloromethane	0.3054	0.2909	47.63	50	-5	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 Calibration Date: 05/22/19 Time: 09:59

Lab File ID: ey22c01.d Init. Calib. Date(s): 05/02/19 05/02/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	1,2-Dibromoethane	0.3010	0.2999	49.83	50	0	#
	1-Chlorohexane	0.0287	0.0251	43.71	50	-13	
#	Chlorobenzene	0.9190	0.9438	51.35	50	3	#
	1,1,1,2-Tetrachloroethane	0.3121	0.3089	49.48	50	-1	
#	Ethylbenzene	1.6442	1.7472	53.13	50	6	#
#	m+p-Xylene	0.6401	0.6690	104.52	100	5	#
#	o-Xylene	0.6246	0.6468	51.77	50	4	#
#	Styrene	1.0317	1.0624	51.49	50	3	#
#	Bromoform	0.2036	0.1844	45.29	50	-9	#
#	Isopropylbenzene	1.6620	1.7409	52.38	50	5	#
	Cyclohexanone	0.2909	0.2931	629.73	625	1	
	Bromobenzene	0.6967	0.7280	52.25	50	4	
#	1,1,2,2-Tetrachloroethane	0.8086	0.8191	50.65	50	1	#
	1,2,3-Trichloropropane	0.2450	0.2449	49.98	50	0	
	trans-1,4-Dichloro-2-butene	0.2657	0.2112	99.33	125	-21	<-
	n-Propylbenzene	3.6730	3.9602	53.91	50	8	
	2-Chlorotoluene	0.7232	0.7503	51.88	50	4	
	4-Chlorotoluene	0.7413	0.7725	52.10	50	4	
	1,3,5-Trimethylbenzene	2.6646	2.8148	52.82	50	6	
	tert-Butylbenzene	0.5923	0.6272	52.95	50	6	
	Pentachloroethane	0.4410	0.4415	50.07	50	0	
	1,2,4-Trimethylbenzene	2.7437	2.8790	52.47	50	5	
	sec-Butylbenzene	3.3803	3.6806	54.44	50	9	
#	1,3-Dichlorobenzene	1.3577	1.4263	52.52	50	5	#
	p-Isopropyltoluene	2.9736	3.1692	53.29	50	7	
#	1,4-Dichlorobenzene	1.3889	1.4073	50.66	50	1	#
	1,2,3-Trimethylbenzene	2.9215	3.0438	52.09	50	4	
	Benzyl Chloride	1.8865	1.8525	49.10	50	-2	
	1,3-Diethylbenzene	1.8724	1.9526	52.14	50	4	
	1,4-Diethylbenzene	1.9951	2.0663	51.79	50	4	
#	1,2-Dichlorobenzene	1.2998	1.3266	51.03	50	2	#
	n-Butylbenzene	1.4605	1.5482	53.00	50	6	
	1,2-Diethylbenzene	1.5329	1.5979	52.12	50	4	
#	1,2-Dibromo-3-chloropropane	0.1853	0.1652	44.59	50	-11	#
	1,3,5-Trichlorobenzene	0.9558	0.9910	51.84	50	4	
#	1,2,4-Trichlorobenzene	0.8532	0.8684	50.89	50	2	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 Calibration Date: 05/22/19 Time: 09:59

Lab File ID: ey22c01.d Init. Calib. Date(s): 05/02/19 05/02/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Hexachlorobutadiene	0.3657	0.3711	50.73	50	1
Naphthalene	2.8128	2.7511	48.90	50	-2
1,2,3-Trichlorobenzene	0.8056	0.7976	49.51	50	-1
2-Methylnaphthalene	1.7774	1.4816	41.68	50	-17
Dibromofluoromethane	0.2324	0.2240	48.19	50	-4
Dibromofluoromethane(2)	0.2386	0.2311	48.43	50	-3
1,2-Dichloroethane-d4	0.0586	0.0584	49.76	50	0
1,2-Dichloroethane-d4(2)	0.2976	0.2809	47.18	50	-6
1,2-Dichloroethane-d4(3)	0.0376	0.0366	48.70	50	-3
Toluene-d8	1.3580	1.3440	49.49	50	-1
Toluene-d8(2)	0.8729	0.8616	49.35	50	-1
4-Bromofluorobenzene	0.5220	0.5116	49.00	50	-2
4-Bromofluorobenzene(2)	0.3912	0.3842	49.11	50	-2

Average %Drift 5

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem/HP23297.i/19apr23i.b/4a23i01.d
/chem/HP23297.i/19apr23i.b/4a23i02.d
/chem/HP23297.i/19apr23i.b/4a23i03.d
/chem/HP23297.i/19apr23i.b/4a23i04.d
/chem/HP23297.i/19apr23i.b/4a23i05.d
/chem/HP23297.i/19apr23i.b/4a23i06.d
/chem/HP23297.i/19apr23i.b/4a23i07.d

File /chem/HP23297.i/19apr23i.b/4a23i05.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem/HP23297.i/19may21b.b/4y21c05.d

RT Summary

Internal Standard Name	File ID: 4y21c05.d	ICAL RT	In Spec
t-Butyl alcohol-d10	4.361	4.380	Yes
Fluorobenzene	7.865	7.872	Yes
Chlorobenzene-d5	11.309	11.309	Yes
1,4-Dichlorobenzene-d4	13.189	13.189	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: 4y21c05.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	400087	399880	199940	799760	Yes
Fluorobenzene	1200798	1115257	557628	2230514	Yes
Chlorobenzene-d5	954478	896314	448157	1792628	Yes
1,4-Dichlorobenzene-d4	521521	508818	254409	1017636	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 Calibration Date: 05/21/19 Time: 20:44

Lab File ID: 4y21c05.d Init. Calib. Date(s): 04/23/19 04/23/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3813	0.2924	38.35	50	-23	#<-
# Chloromethane	0.3693	0.2988	40.46	50	-19	#
1,3-Butadiene	0.2002	0.3406	85.03	50	70	<-
# Vinyl Chloride	0.3610	0.2886	39.97	50	-20	#
# Bromomethane	0.2962	0.2397	40.45	50	-19	#
# Chloroethane	0.1994	0.1603	40.21	50	-20	#
n-Pentane	0.3537	0.3345	47.28	50	-5	
# Trichlorofluoromethane	0.4378	0.3296	37.65	50	-25	#<-
Freon 123a	0.2519	0.2317	45.99	50	-8	
Acrolein	1.4175	1.3669	482.17	500	-4	
# 1,1-Dichloroethene	0.1744	0.1744	50.00	50	0	#
# 1,1-Dichloroethene(2)	0.0921	0.0841	45.68	50	-9	#<-
# Acetone	0.6961	0.7083	101.76	100	2	#
# Freon 113	0.1919	0.1782	46.42	50	-7	#
2-Propanol	0.5593	0.5513	246.41	250	-1	
Methyl Iodide	0.3475	0.3623	52.14	50	4	
# Carbon Disulfide	0.6219	0.6456	51.91	50	4	#
Allyl Chloride	0.3867	0.3138	40.57	50	-19	
# Methyl Acetate	0.3632	0.3113	42.86	50	-14	#
# Methylene Chloride	0.2209	0.2120	48.00	50	-4	#
t-Butyl alcohol	0.9838	0.9250	235.05	250	-6	
Acrylonitrile	0.1903	0.1706	44.82	50	-10	
# trans-1,2-Dichloroethene	0.2084	0.2036	48.87	50	-2	#
# Methyl Tertiary Butyl Ether	0.6229	0.5559	44.62	50	-11	#
n-Hexane	0.3441	0.3069	44.59	50	-11	
# 1,1-Dichloroethane	0.3872	0.3577	46.18	50	-8	#
di-Isopropyl ether	0.7675	0.7063	46.02	50	-8	
2-Chloro-1,3-butadiene	0.3506	0.3081	43.94	50	-12	
Ethyl t-butyl ether	0.6592	0.5762	43.70	50	-13	
# cis-1,2-Dichloroethene	0.2403	0.2290	47.67	50	-5	#
# 2-Butanone	0.2953	0.2413	81.71	100	-18	#
2,2-Dichloropropane	0.3036	0.2433	40.06	50	-20	
Propionitrile	1.0450	1.1254	269.24	250	8	
Methacrylonitrile	0.1795	0.1705	118.76	125	-5	
Bromochloromethane	0.1327	0.1241	46.77	50	-6	
Tetrahydrofuran	1.0315	1.0100	97.91	100	-2	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 Calibration Date: 05/21/19 Time: 20:44

Lab File ID: 4y21c05.d Init. Calib. Date(s): 04/23/19 04/23/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Chloroform	0.3814	0.3345	43.85	50	-12	#
# 1,1,1-Trichloroethane	0.3193	0.2702	42.31	50	-15	#
# Cyclohexane	0.4152	0.3570	42.98	50	-14	#
# Cyclohexane(2)	0.3391	0.2991	44.11	50	-12	#
# Cyclohexane(3)	0.1241	0.1089	43.87	50	-12	#
1,1-Dichloropropene	0.3016	0.2738	45.39	50	-9	
# Carbon Tetrachloride	0.2774	0.2265	40.82	50	-18	#
Isobutyl Alcohol	0.3464	0.3436	619.94	625	-1	
# Benzene	0.9173	0.8558	46.65	50	-7	#
# 1,2-Dichloroethane	0.3109	0.2520	40.52	50	-19	#
# 1,2-Dichloroethane(2)	0.0257	0.0259	50.51	50	1	#<-
t-Amyl methyl ether	0.6666	0.5780	43.35	50	-13	
n-Heptane	0.4051	0.2971	36.67	50	-27	<-
n-Butanol	0.2845	0.2911	1279.02	1250	2	
# Trichloroethene	0.2327	0.2142	46.03	50	-8	#
# Methylcyclohexane	0.4382	0.3785	43.19	50	-14	#
# Methylcyclohexane(2)	0.1897	0.1629	42.95	50	-14	#
# 1,2-Dichloropropane	0.2410	0.2237	46.41	50	-7	#
Dibromomethane	0.1564	0.1436	45.89	50	-8	
1,4-Dioxane	0.0733	0.0796	679.07	625	9	
Methyl Methacrylate	0.2729	0.2495	45.71	50	-9	
# Bromodichloromethane	0.2840	0.2405	42.34	50	-15	#
2-Nitropropane	0.1382	0.0956	69.14	100	-31	<-
2-Chloroethyl Vinyl Ether	0.2205	0.2020	45.82	50	-8	
# cis-1,3-Dichloropropene	0.3755	0.3287	43.76	50	-12	#
# 4-Methyl-2-pentanone	0.5299	0.4380	82.66	100	-17	#
# Toluene	0.7423	0.6849	46.13	50	-8	#
# trans-1,3-Dichloropropene	0.4367	0.3742	42.84	50	-14	#
Ethyl Methacrylate	0.5489	0.5051	46.01	50	-8	
# 1,1,2-Trichloroethane	0.2901	0.2715	46.80	50	-6	#
# Tetrachloroethene	0.3238	0.3014	46.55	50	-7	#
1,3-Dichloropropane	0.4816	0.4488	46.60	50	-7	
# 2-Hexanone	0.5282	0.4440	84.05	100	-16	#
# Dibromochloromethane	0.3070	0.2600	42.35	50	-15	#
# 1,2-Dibromoethane	0.3203	0.3013	47.04	50	-6	#
# Chlorobenzene	0.8389	0.7817	46.59	50	-7	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 Calibration Date: 05/21/19 Time: 20:44

Lab File ID: 4y21c05.d Init. Calib. Date(s): 04/23/19 04/23/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
1,1,1,2-Tetrachloroethane	0.2832	0.2573	45.42	50	-9	
# Ethylbenzene	1.4257	1.3010	45.63	50	-9	#
# m+p-Xylene	0.5685	0.5254	92.42	100	-8	#
# o-Xylene	0.5651	0.5176	45.80	50	-8	#
# Styrene	0.9402	0.8807	46.84	50	-6	#
# Bromoform	0.2419	0.1925	39.78	50	-20	#
# Isopropylbenzene	1.4136	1.2895	45.61	50	-9	#
Cyclohexanone	0.2927	0.3003	641.30	625	3	
Bromobenzene	0.6997	0.6481	46.32	50	-7	
# 1,1,2,2-Tetrachloroethane	0.9214	0.8923	48.42	50	-3	#
1,2,3-Trichloropropane	0.2786	0.2562	45.98	50	-8	
trans-1,4-Dichloro-2-butene	0.3029	0.1215	50.13	125	-60	<-
n-Propylbenzene	3.0091	2.7900	46.36	50	-7	
2-Chlorotoluene	0.6284	0.5878	46.77	50	-6	
4-Chlorotoluene	0.6550	0.6160	47.02	50	-6	
1,3,5-Trimethylbenzene	2.1777	2.0101	46.15	50	-8	
tert-Butylbenzene	0.4572	0.4236	46.33	50	-7	
Pentachloroethane	0.4168	0.3687	44.23	50	-12	
1,2,4-Trimethylbenzene	2.2737	2.0954	46.08	50	-8	
sec-Butylbenzene	2.7820	2.5441	45.72	50	-9	
# 1,3-Dichlorobenzene	1.3114	1.2182	46.44	50	-7	#
p-Isopropyltoluene	2.4473	2.2165	45.28	50	-9	
# 1,4-Dichlorobenzene	1.3435	1.2437	46.29	50	-7	#
1,2,3-Trimethylbenzene	2.4414	2.2399	45.87	50	-8	
Benzyl Chloride	1.8274	1.6526	45.22	50	-10	
1,3-Diethylbenzene	1.5297	1.3996	45.75	50	-9	
1,4-Diethylbenzene	1.6292	1.4688	45.08	50	-10	
# 1,2-Dichlorobenzene	1.2779	1.1855	46.39	50	-7	#
n-Butylbenzene	1.2537	1.0925	43.57	50	-13	
1,2-Diethylbenzene	1.2896	1.1707	45.39	50	-9	
# 1,2-Dibromo-3-chloropropane	0.2431	0.2016	41.46	50	-17	#
1,3,5-Trichlorobenzene	0.9635	0.8607	44.67	50	-11	
# 1,2,4-Trichlorobenzene	0.9128	0.8173	44.77	50	-10	#
Hexachlorobutadiene	0.4218	0.3179	37.68	50	-25	<-
Naphthalene	3.1627	3.0060	47.52	50	-5	
1,2,3-Trichlorobenzene	0.8770	0.7982	45.51	50	-9	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 Calibration Date: 05/21/19 Time: 20:44

Lab File ID: 4y21c05.d Init. Calib. Date(s): 04/23/19 04/23/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
2-Methylnaphthalene	1.9780	1.7160	43.38	50	-13
Dibromofluoromethane	0.2465	0.2393	48.55	50	-3
Dibromofluoromethane(2)	0.2524	0.2473	49.00	50	-2
1,2-Dichloroethane-d4	0.0602	0.0603	50.04	50	0
1,2-Dichloroethane-d4(2)	0.2914	0.2566	44.04	50	-12
1,2-Dichloroethane-d4(3)	0.0384	0.0385	50.08	50	0
Toluene-d8	1.2833	1.2862	50.11	50	0
Toluene-d8(2)	0.8330	0.8365	50.21	50	0
4-Bromofluorobenzene	0.4891	0.4655	47.58	50	-5
4-Bromofluorobenzene(2)	0.4319	0.4250	49.20	50	-2

Average %Drift 11

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem/HP23297.i/19apr23i.b/4a23i01.d
/chem/HP23297.i/19apr23i.b/4a23i02.d
/chem/HP23297.i/19apr23i.b/4a23i03.d
/chem/HP23297.i/19apr23i.b/4a23i04.d
/chem/HP23297.i/19apr23i.b/4a23i05.d
/chem/HP23297.i/19apr23i.b/4a23i06.d
/chem/HP23297.i/19apr23i.b/4a23i07.d

File /chem/HP23297.i/19apr23i.b/4a23i05.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem/HP23297.i/19may22b.b/4y22c05.d

RT Summary

Internal Standard Name	File ID: 4y22c05.d	ICAL RT	In Spec
t-Butyl alcohol-d10	4.367	4.380	Yes
Fluorobenzene	7.865	7.872	Yes
Chlorobenzene-d5	11.309	11.309	Yes
1,4-Dichlorobenzene-d4	13.189	13.189	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: 4y22c05.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	381074	399880	199940	799760	Yes
Fluorobenzene	1232150	1115257	557628	2230514	Yes
Chlorobenzene-d5	977851	896314	448157	1792628	Yes
1,4-Dichlorobenzene-d4	539804	508818	254409	1017636	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 Calibration Date: 05/22/19 Time: 20:38

Lab File ID: 4y22c05.d Init. Calib. Date(s): 04/23/19 04/23/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF150	ACTUAL CONC.	TRUE CONC.	% DRIFT	
# Dichlorodifluoromethane	0.3813	0.3249	127.83	150	-15	#
# Chloromethane	0.3693	0.2924	118.76	150	-21	#<-
1,3-Butadiene	0.2002	0.2940	220.20	150	47	|<-
# Vinyl Chloride	0.3610	0.2848	118.34	150	-21	#<-
# Bromomethane	0.2962	0.2295	116.19	150	-23	#<-
# Chloroethane	0.1994	0.1529	115.04	150	-23	#<-
n-Pentane	0.3537	0.3677	155.93	150	4	|
# Trichlorofluoromethane	0.4378	0.3448	118.12	150	-21	#<-
Ethanol	0.0842	0.0736	3281.80	3750	-12	|
Freon 123a	0.2519	0.2337	139.19	150	-7	|
Acrolein	1.4175	1.3888	1469.70	1500	-2	|
# 1,1-Dichloroethene	0.1744	0.1731	148.94	150	-1	#
# 1,1-Dichloroethene(2)	0.0921	0.0817	133.13	150	-11	#<-
# Acetone	0.6961	0.6746	290.73	300	-3	#
# Freon 113	0.1919	0.1937	151.45	150	1	#
2-Propanol	0.5593	0.6246	837.53	750	12	|
Methyl Iodide	0.3475	0.3559	153.63	150	2	|
# Carbon Disulfide	0.6219	0.6370	153.64	150	2	#
Allyl Chloride	0.3867	0.3420	132.66	150	-12	|
# Methyl Acetate	0.3632	0.3179	131.30	150	-12	#
# Methylene Chloride	0.2209	0.2103	142.79	150	-5	#
t-Butyl alcohol	0.9838	1.0768	820.87	750	9	|
Acrylonitrile	0.1903	0.1585	124.93	150	-17	|
# trans-1,2-Dichloroethene	0.2084	0.2044	147.18	150	-2	#
# Methyl Tertiary Butyl Ether	0.6229	0.5578	134.32	150	-10	#
n-Hexane	0.3441	0.3399	148.14	150	-1	|
# 1,1-Dichloroethane	0.3872	0.3579	138.63	150	-8	#
di-Isopropyl ether	0.7675	0.7057	137.94	150	-8	|
2-Chloro-1,3-butadiene	0.3506	0.3107	132.94	150	-11	|
Ethyl t-butyl ether	0.6592	0.5751	130.86	150	-13	|
# cis-1,2-Dichloroethene	0.2403	0.2352	146.83	150	-2	#
# 2-Butanone	0.2953	0.2247	228.24	\300	-24	#<-
2,2-Dichloropropane	0.3036	0.2505	123.78	150	-17	|
Propionitrile	1.0450	1.2398	889.80	750	19	|
Methacrylonitrile	0.1795	0.1775	370.81	375	-1	|
Bromochloromethane	0.1327	0.1324	149.75	150	0	|

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 Calibration Date: 05/22/19 Time: 20:38

Lab File ID: 4y22c05.d Init. Calib. Date(s): 04/23/19 04/23/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF150	CONC.	CONC.	DRIFT	
Tetrahydrofuran	1.0315	1.0355	301.15	300	0	
# Chloroform	0.3814	0.3418	134.41	150	-10	#
# 1,1,1-Trichloroethane	0.3193	0.2751	129.26	150	-14	#
# Cyclohexane	0.4152	0.3941	142.39	150	-5	#
# Cyclohexane(2)	0.3391	0.3299	145.96	150	-3	#
# Cyclohexane(3)	0.1241	0.1194	144.38	150	-4	#
1,1-Dichloropropene	0.3016	0.2797	139.07	150	-7	
# Carbon Tetrachloride	0.2774	0.2412	130.43	150	-13	#
Isobutyl Alcohol	0.3464	0.4160	2251.66	1875	20	
# Benzene	0.9173	0.8630	141.12	150	-6	#
# 1,2-Dichloroethane	0.3109	0.2509	121.07	150	-19	#
# 1,2-Dichloroethane(2)	0.0257	0.0272	159.16	150	6	#<-
t-Amyl methyl ether	0.6666	0.5754	129.49	150	-14	
n-Heptane	0.4051	0.3485	129.01	150	-14	
n-Butanol	0.2845	0.3895	5134.80	3750	37	<-
# Trichloroethene	0.2327	0.2191	141.24	150	-6	#
# Methylcyclohexane	0.4382	0.4468	152.95	150	2	#
# Methylcyclohexane(2)	0.1897	0.1945	153.80	150	3	#
# 1,2-Dichloropropane	0.2410	0.2314	144.05	150	-4	#
Dibromomethane	0.1564	0.1500	143.82	150	-4	
1,4-Dioxane	0.0733	0.1007	2576.94	1875	37	<-
Methyl Methacrylate	0.2729	0.2722	149.63	150	0	
# Bromodichloromethane	0.2840	0.2632	139.00	150	-7	#
2-Nitropropane	0.1382	0.0931	202.03	300	-33	<-
2-Chloroethyl Vinyl Ether	0.2205	0.2128	144.77	150	-3	
# cis-1,3-Dichloropropene	0.3755	0.3639	145.34	150	-3	#
# 4-Methyl-2-pentanone	0.5299	0.4140	234.39	300	-22	#<-
# Toluene	0.7423	0.7118	143.84	150	-4	#
# trans-1,3-Dichloropropene	0.4367	0.4275	146.83	150	-2	#
Ethyl Methacrylate	0.5489	0.5735	156.73	150	4	
# 1,1,2-Trichloroethane	0.2901	0.2981	154.11	150	3	#
# Tetrachloroethene	0.3238	0.3154	146.13	150	-3	#
1,3-Dichloropropane	0.4816	0.4753	148.06	150	-1	
# 2-Hexanone	0.5282	0.4138	235.02	300	-22	#<-
# Dibromochloromethane	0.3070	0.3112	152.05	150	1	#
# 1,2-Dibromoethane	0.3203	0.3341	156.44	150	4	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 Calibration Date: 05/22/19 Time: 20:38

Lab File ID: 4y22c05.d Init. Calib. Date(s): 04/23/19 04/23/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF150	CONC.	CONC.	DRIFT	
# Chlorobenzene	0.8389	0.8337	149.07	150	-1	#
1,1,1,2-Tetrachloroethane	0.2832	0.2881	152.57	150	2	
# Ethylbenzene	1.4257	1.3790	145.08	150	-3	#
# m+p-Xylene	0.5685	0.5634	297.32	300	-1	#
# o-Xylene	0.5651	0.5595	148.53	150	-1	#
# Styrene	0.9402	0.9658	154.08	150	3	#
# Bromoform	0.2419	0.2584	160.23	150	7	#
# Isopropylbenzene	1.4136	1.3915	147.65	150	-2	#
Cyclohexanone	0.2927	0.3302	2114.96	1875	13	
Bromobenzene	0.6997	0.7284	156.15	150	4	
# 1,1,2,2-Tetrachloroethane	0.9214	1.0182	165.76	150	11	#
1,2,3-Trichloropropane	0.2786	0.2912	156.77	150	5	
trans-1,4-Dichloro-2-butene	0.3029	0.1722	213.22	375	-43	<-
n-Propylbenzene	3.0091	2.9584	147.48	150	-2	
2-Chlorotoluene	0.6284	0.6450	153.95	150	3	
4-Chlorotoluene	0.6550	0.6787	155.42	150	4	
1,3,5-Trimethylbenzene	2.1777	2.1767	149.94	150	0	
tert-Butylbenzene	0.4572	0.4789	157.13	150	5	
Pentachloroethane	0.4168	0.4238	152.49	150	2	
1,2,4-Trimethylbenzene	2.2737	2.3042	152.01	150	1	
sec-Butylbenzene	2.7820	2.8010	151.03	150	1	
# 1,3-Dichlorobenzene	1.3114	1.3749	157.27	150	5	#
p-Isopropyltoluene	2.4473	2.4899	152.61	150	2	
# 1,4-Dichlorobenzene	1.3435	1.4017	156.50	150	4	#
1,2,3-Trimethylbenzene	2.4414	2.3173	142.37	150	-5	
Benzyl Chloride	1.8274	2.0653	169.53	150	13	
1,3-Diethylbenzene	1.5297	1.4615	143.32	150	-4	
1,4-Diethylbenzene	1.6292	1.5557	143.23	150	-5	
# 1,2-Dichlorobenzene	1.2779	1.3335	156.53	150	4	#
n-Butylbenzene	1.2537	1.2236	146.40	150	-2	
1,2-Diethylbenzene	1.2896	1.2315	143.24	150	-5	
# 1,2-Dibromo-3-chloropropane	0.2431	0.2434	150.20	150	0	#
1,3,5-Trichlorobenzene	0.9635	0.9950	154.92	150	3	
# 1,2,4-Trichlorobenzene	0.9128	0.9609	157.90	150	5	#
Hexachlorobutadiene	0.4218	0.3836	136.40	150	-9	
Naphthalene	3.1627	3.4391	163.11	150	9	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 Calibration Date: 05/22/19 Time: 20:38

Lab File ID: 4y22c05.d Init. Calib. Date(s): 04/23/19 04/23/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF150	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,2,3-Trichlorobenzene	0.8770	0.9434	161.37	150	8
2-Methylnaphthalene	1.9780	1.9008	144.14	150	-4
Dibromofluoromethane	0.2465	0.2385	48.38	50	-3
Dibromofluoromethane(2)	0.2524	0.2435	48.24	50	-4
1,2-Dichloroethane-d4	0.0602	0.0595	49.39	50	-1
1,2-Dichloroethane-d4(2)	0.2914	0.2475	42.47	50	-15
1,2-Dichloroethane-d4(3)	0.0384	0.0381	49.58	50	-1
Toluene-d8	1.2833	1.2721	49.57	50	-1
Toluene-d8(2)	0.8330	0.8348	50.11	50	0
4-Bromofluorobenzene	0.4891	0.4635	47.38	50	-5
4-Bromofluorobenzene(2)	0.4319	0.4262	49.34	50	-1

Average %Drift 8

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

Sample Data

Volatiles by GC/MS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

92J01

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058214

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may21b.b/4y21s79.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	7	
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	0.2	J
75-34-3	1,1-Dichloroethane	1	
156-59-2	cis-1,2-Dichloroethene	15	
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	58	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	340	E
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	3	
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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92J01 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1058214

Data file: /chem/HP23297.i/19may21b.b/4y21s79.d Injection date and time: **22-MAY-2019 06:58**
Data file Sample Info. Line: 92J01;1058214;1;0;;JCV92;;;4y21b71; Instrument ID: **HP23297.i** Batch: **4191415AA**
Date, time and analyst ID of latest file update: 22-May-2019 07:22 amd00492

Blank Data file reference: **/chem/HP23297.i/19may21b.b/4y21b71.d**

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-MAY-2019 22:23
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may21b.b/4y21c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.355	(0.006)	456	65	355501	(-11)	250.00	
66) Fluorobenzene	7.865	(0.000)	1033	96	1153420	(-4)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	903523	(-5)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189	(0.000)	1908	152	494515	(-5)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.971	(0.000)	113	279988	49.247	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434	(-0.001)	102	69940	50.345	101%		80 - 120
83) Toluene-d8	(3)	9.867	(0.000)	98	1156198	49.859	100%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.306	(0.000)	95	416864	47.163	94%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	3.656	(-0.000)	96	27776	6.905	6.90			0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)	4.757	(0.000)	96	1045	0.217	0.22		J	0.2	1
36) 1,1-Dichloroethane	(2)	5.438	(-0.000)	63	12003	1.344	1.34			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.272	(0.000)	96	84480	15.243	15.24			0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	6.983	(-0.000)	97	426828	57.955	57.95			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.340	(-0.000)	95	1846964	344.088	344.09		E	0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)	10.481	(0.000)	166	14700	2.512	2.51			0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

E = Compound concentration above calibration range.

Digitally signed by Kevin A. Sposito on 05/22/2019 at 11:46. Target 3.5 esignature user ID: kas02648

Data file: /chem/HP23297.i/19may21b.b/4y21s79.d Injection date and time: **22-MAY-2019 06:58**
Data file Sample Info. Line: 92J01;1058214;1;0;;JCV92;;;4y21b71; Instrument ID: **HP23297.i** Batch: **4191415AA**
Date, time and analyst ID of latest file update: 22-May-2019 07:22 amd00492

Blank Data file reference: **/chem/HP23297.i/19may21b.b/4y21b71.d**

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-MAY-2019 22:23
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may21b.b/4y21c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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BLANK INTENTIONALLY

Total number of targets = 24

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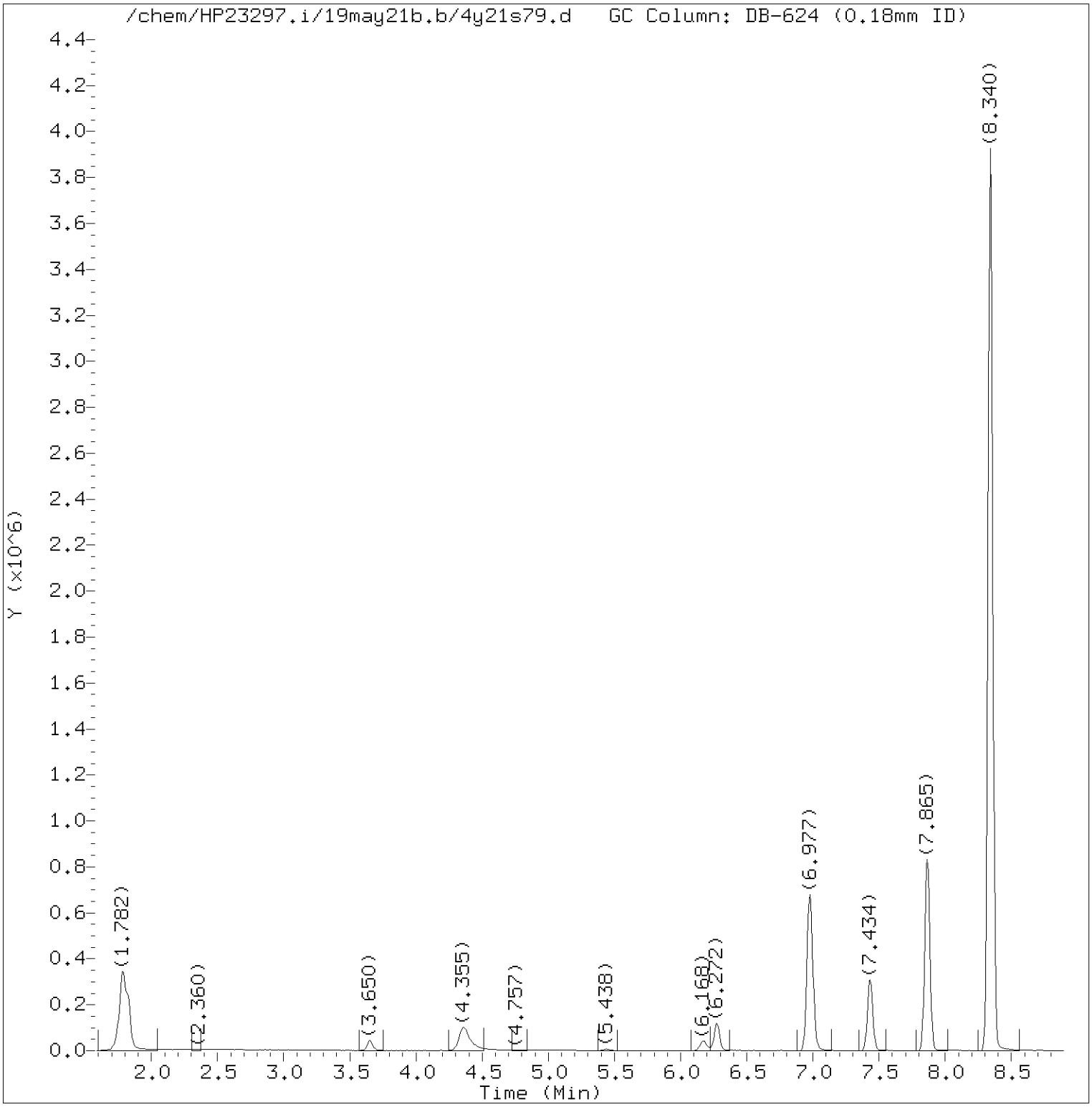
Secondary review performed and digitally signed by Marla S. Brewer on 05/22/2019 at 15:09. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

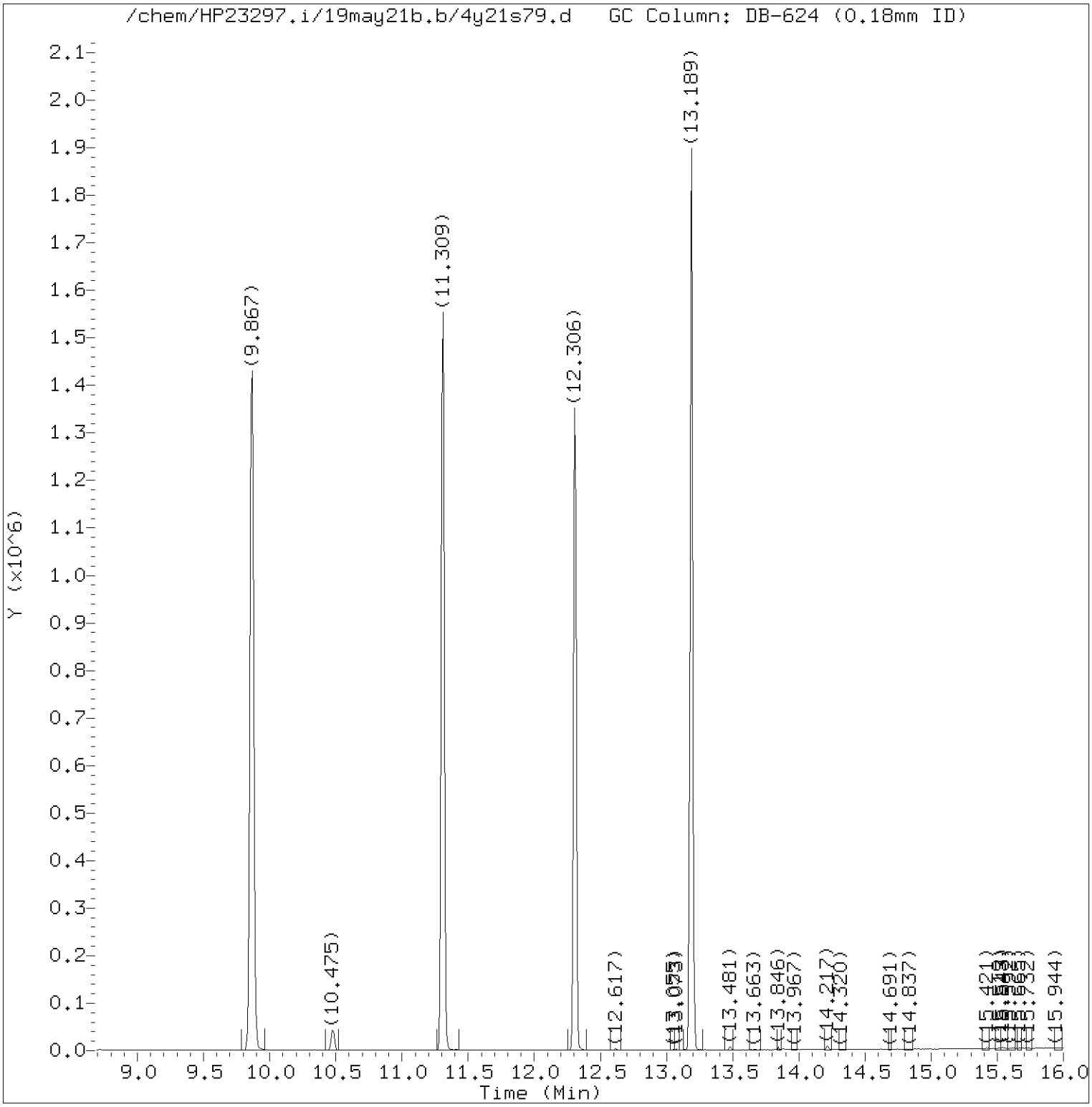
Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s79.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 06:58 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 07:22 amd00492

Sample Name: 92J01 Lab Sample ID: 1058214

Digitally signed by Kevin A. Sposito
on 05/22/2019 at 11:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s79.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 06:58 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 07:22 amd00492

Sample Name: 92J01 Lab Sample ID: 1058214

Digitally signed by Kevin A. Sposito
on 05/22/2019 at 11:46.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s79.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 06:58 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 07:22 amd00492

Sample Name: 92J01 Lab Sample ID: 1058214

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	3.656	96	27776	6.905
29)*t-Butyl alcohol-d10	(1)	4.355	65	355501	250.000
32) trans-1,2-Dichloroethene	(2)	4.757	96	1045	0.217
36) 1,1-Dichloroethane	(2)	5.438	63	12003	1.344
42) cis-1,2-Dichloroethene	(2)	6.272	96	84480	15.243
52)$Dibromofluoromethane	(2)	6.971	113	279988	49.247
53) 1,1,1-Trichloroethane	(2)	6.983	97	426828	57.955
57)$1,2-Dichloroethane-d4	(2)	7.434	102	69940	50.345
66)*Fluorobenzene	(2)	7.865	96	1153420	50.000
71) Trichloroethene	(2)	8.340	95	1846964	344.088
83)$Toluene-d8	(3)	9.867	98	1156198	49.859
93) Tetrachloroethene	(3)	10.481	166	14700	2.512
100)*Chlorobenzene-d5	(3)	11.309	117	903523	50.000
114)$4-Bromofluorobenzene	(3)	12.306	95	416864	47.163
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	494515	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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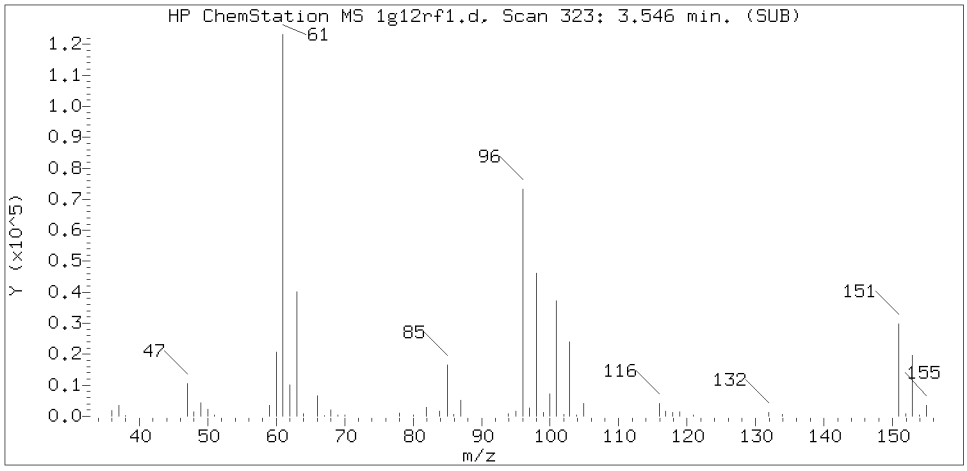
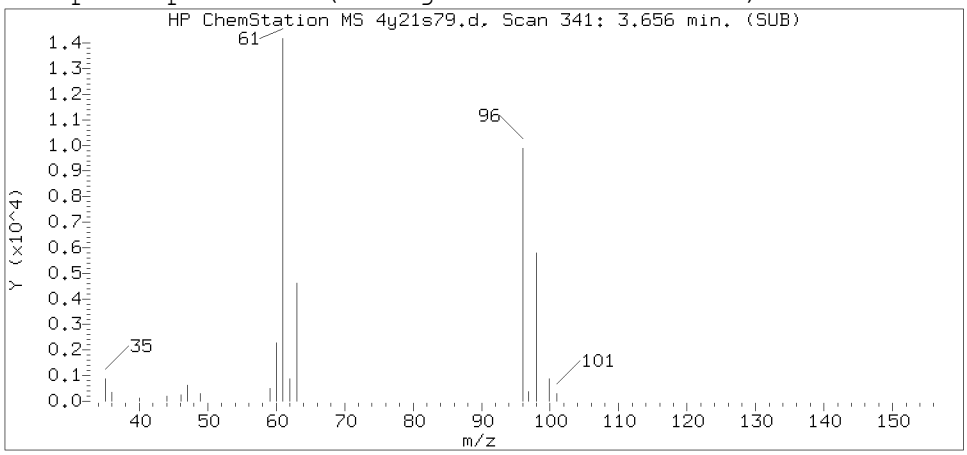
on 05/22/2019 at 11:46.
Target 3.5 esignature user ID: kas02648

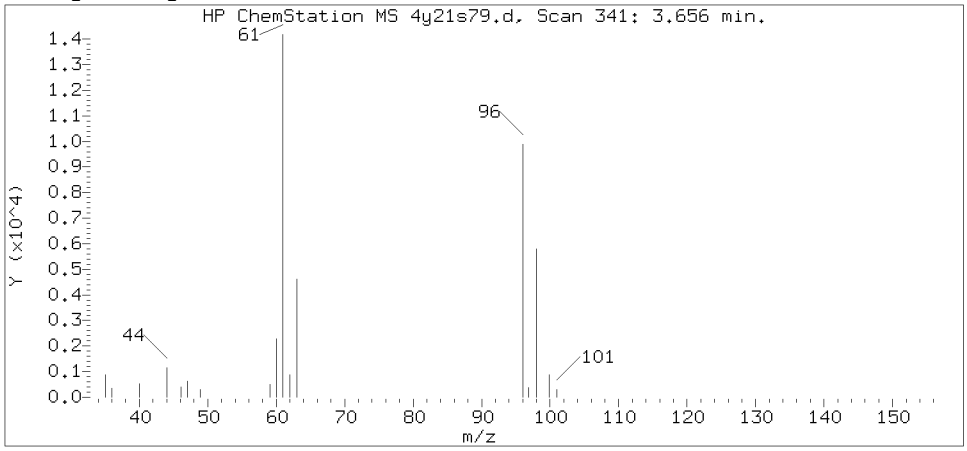
Reference Standard Spectrum for 1,1-Dichloroethene

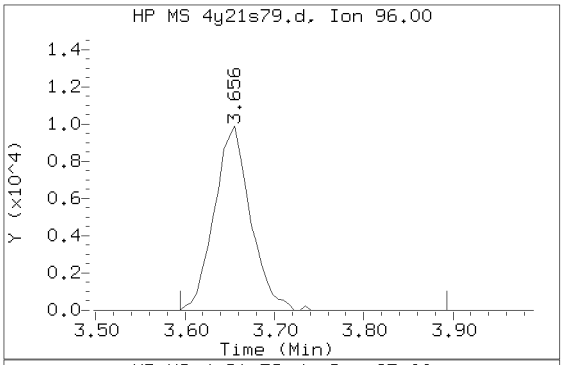


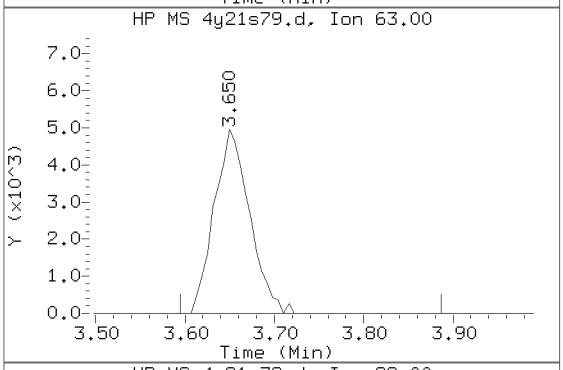
Sample Spectrum (Background Subtracted)

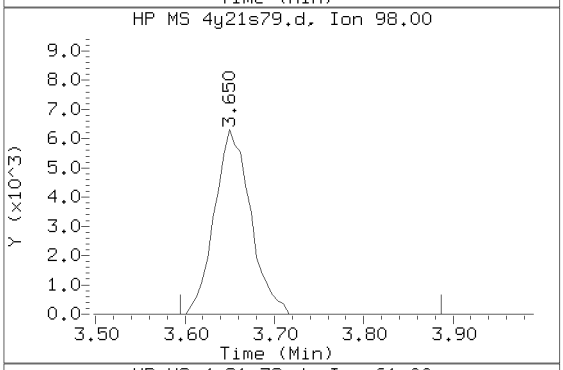


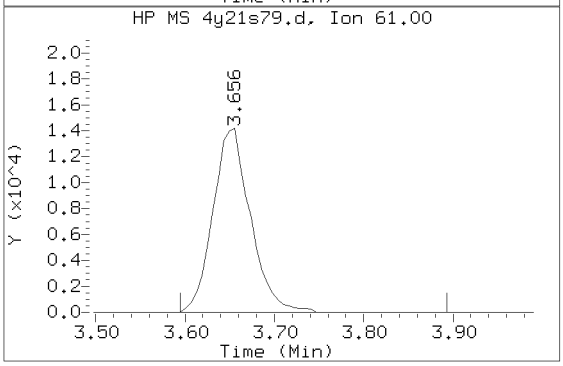
Sample Spectrum (Unaltered)











Data File: /chem/HP23297.i/19may21b.b/4y21s79.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 06:58 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 07:22 amd00492

Sample Name: 92J01 Lab Sample ID: 1058214

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 341
Retention Time (minutes): 3.656
Relative Retention Time :-0.00077
Quant Ion : 96.00
Area (flag) : 27776
On-Column Amount (ng) : 6.9049

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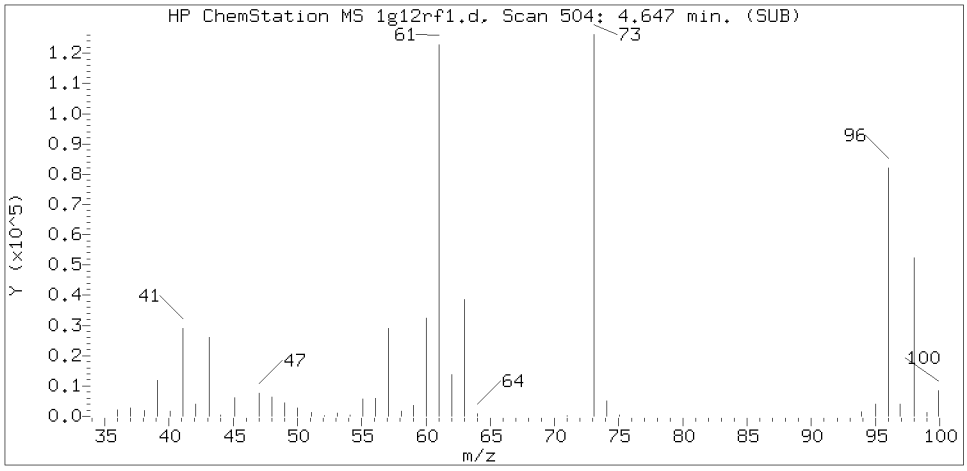
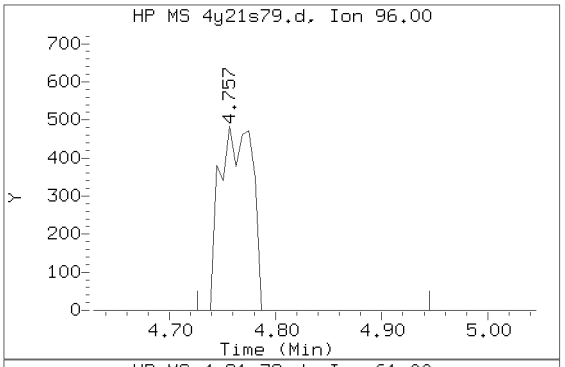
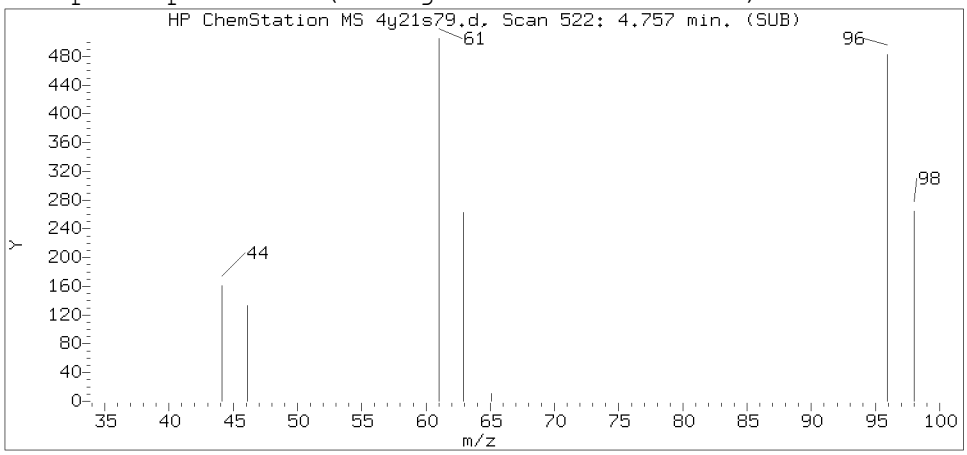
Target 3.5 esignature user ID: kas02648

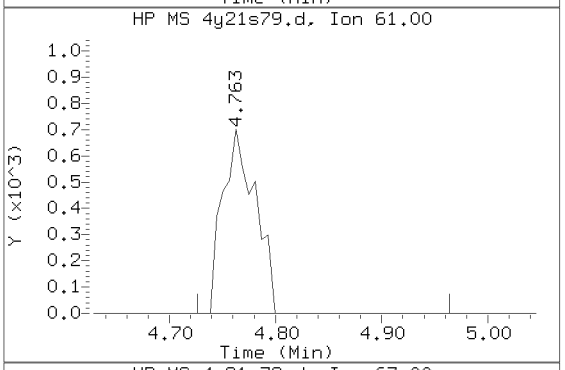
Reference Standard Spectrum for trans-1,2-Dichloroethene

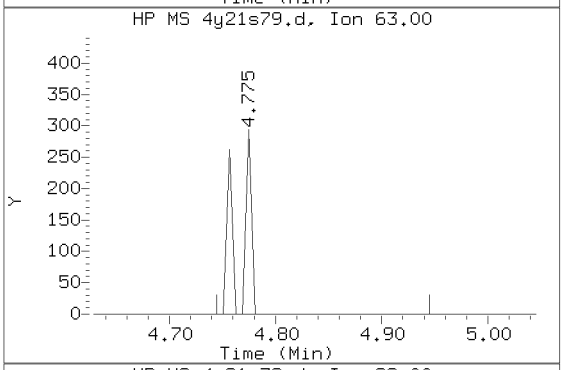




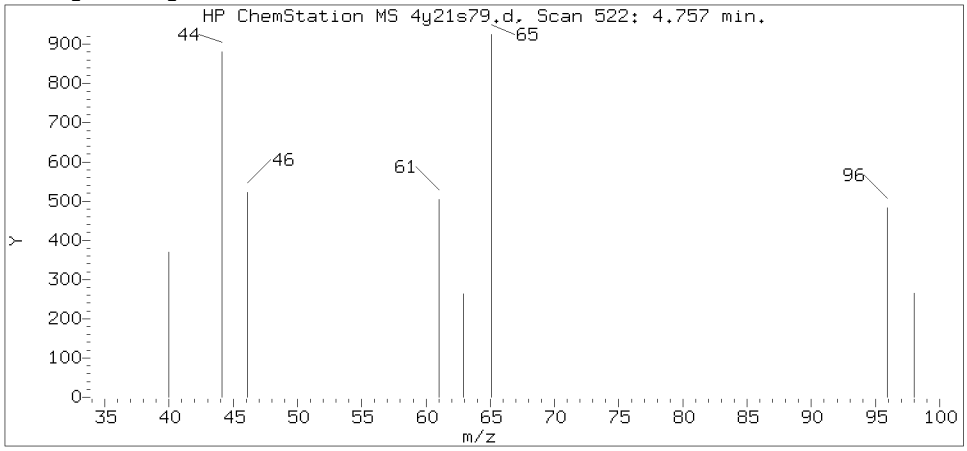
Sample Spectrum (Background Subtracted)

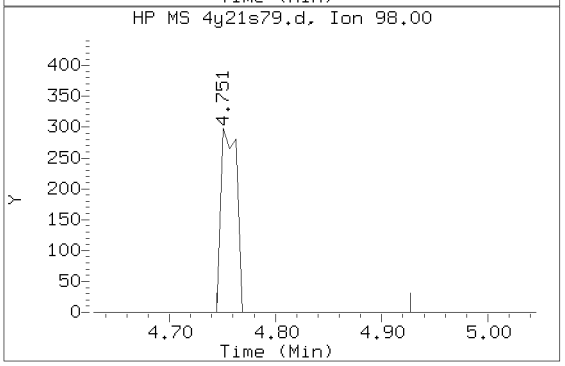






Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may21b.b/4y21s79.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 06:58 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 07:22 amd00492

Sample Name: 92J01 Lab Sample ID: 1058214

Compound Number	: 32
Compound Name	: trans-1,2-Dichloroethene
Scan Number	: 522
Retention Time (minutes)	: 4.757
Relative Retention Time	: 0.00077
Quant Ion	: 96.00
Area (flag)	: 1045
On-Column Amount (ng)	: 0.2174

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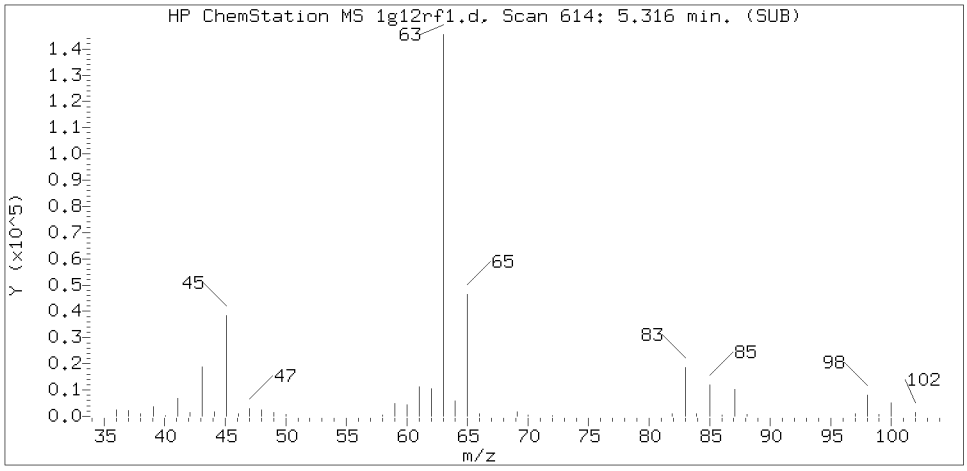
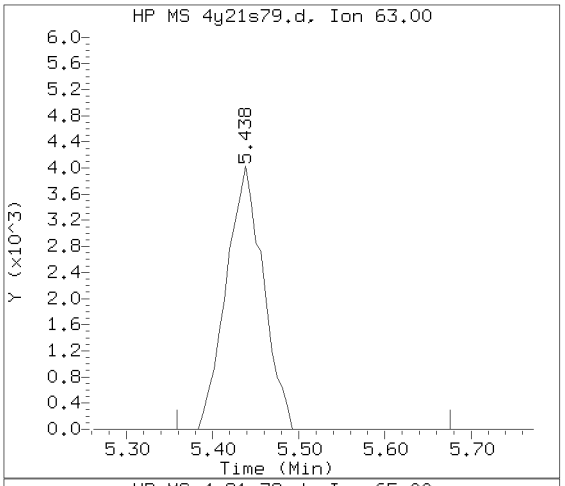
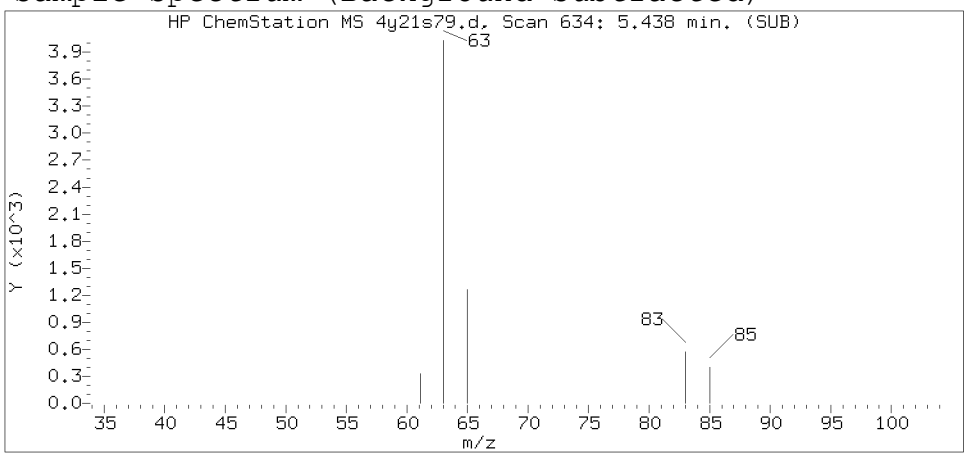
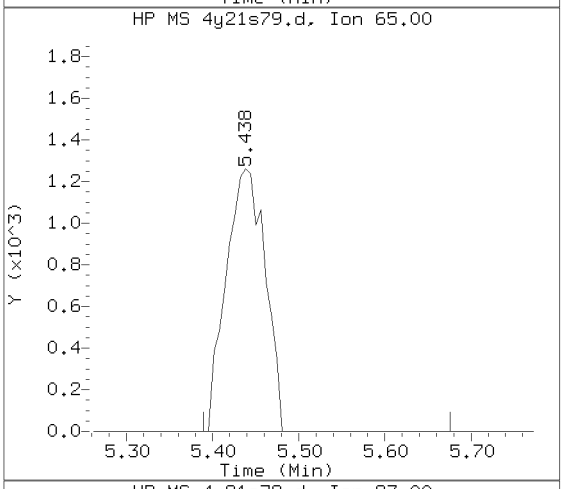
Reference Standard Spectrum for 1,1-Dichloroethane



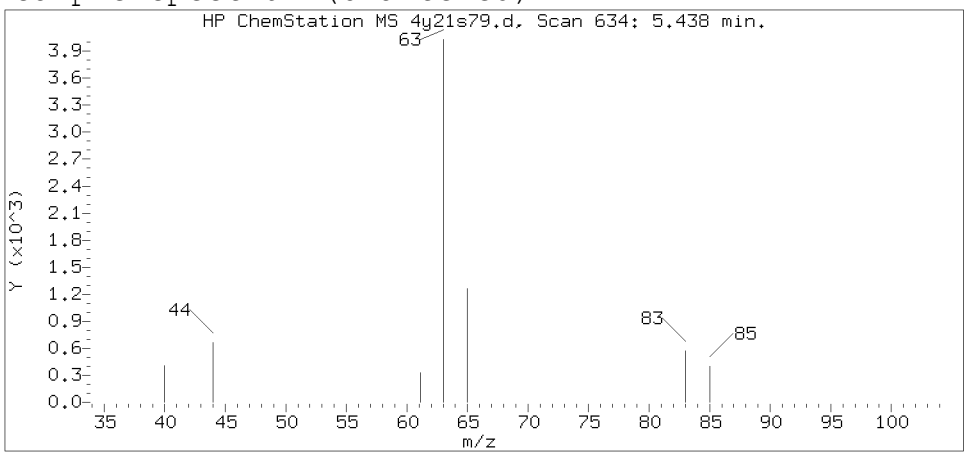


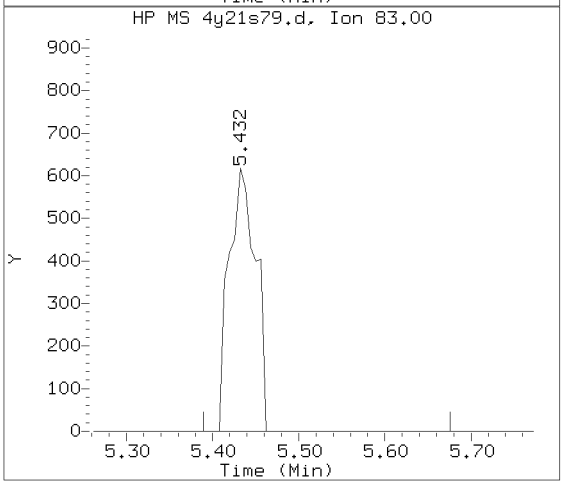
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may21b.b/4y21s79.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 06:58 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 07:22 amd00492

Sample Name: 92J01 Lab Sample ID: 1058214

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 634
Retention Time (minutes): 5.438
Relative Retention Time :-0.00077
Quant Ion : 63.00
Area (flag) : 12003
On-Column Amount (ng) : 1.3437

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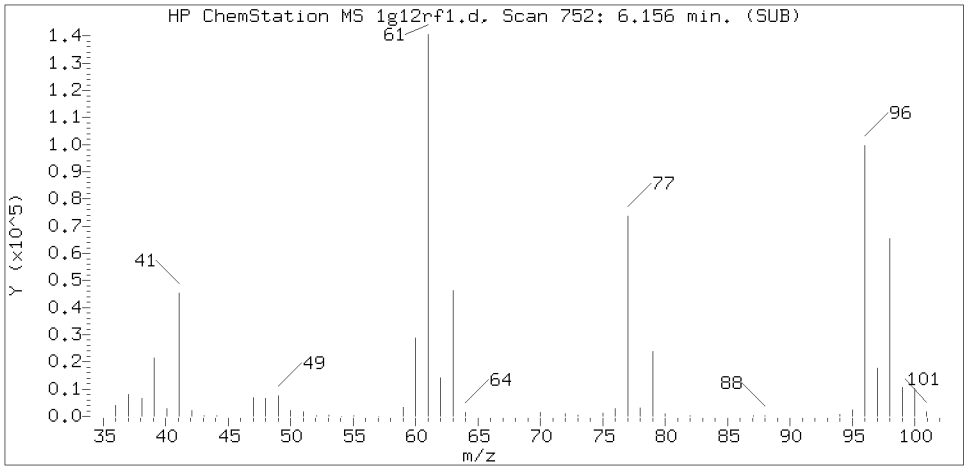
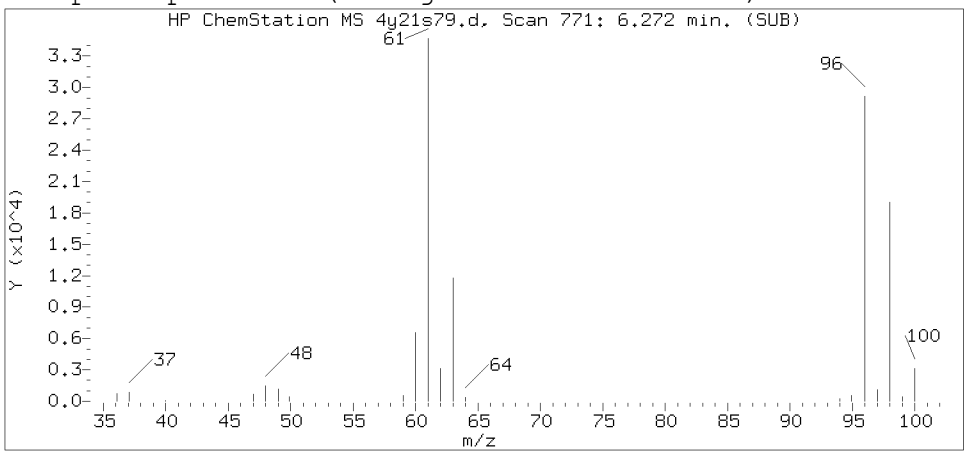
Target 3.5 esignature user ID: kas02648

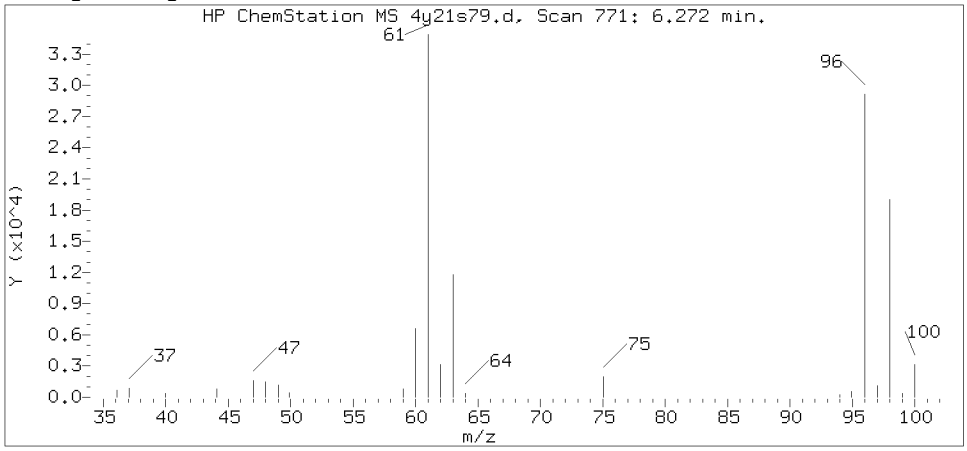
Reference Standard Spectrum for cis-1,2-Dichloroethene

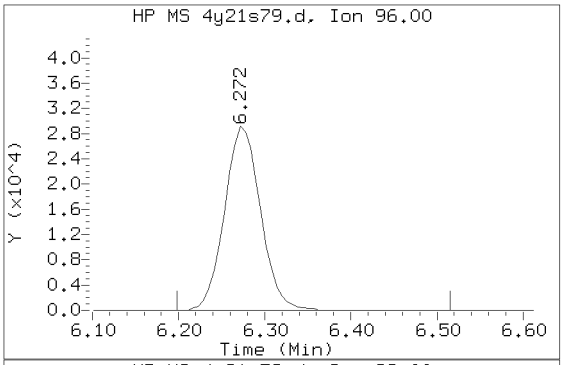


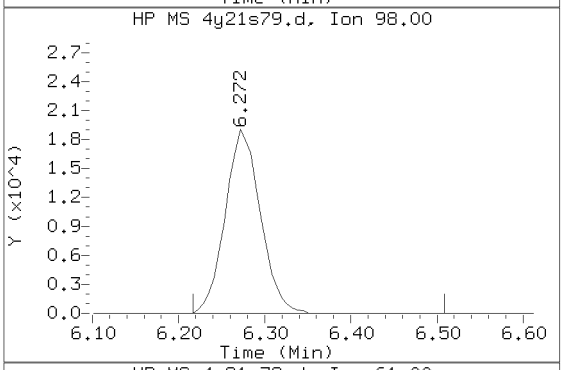
Sample Spectrum (Background Subtracted)

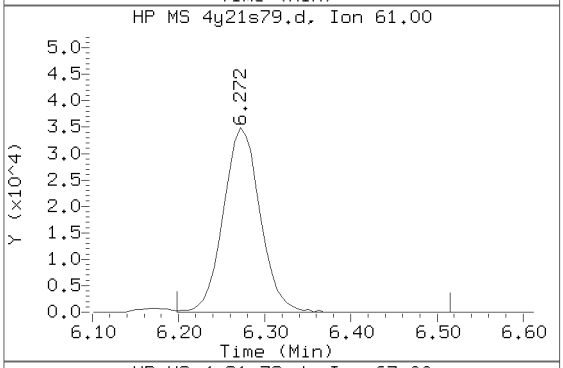


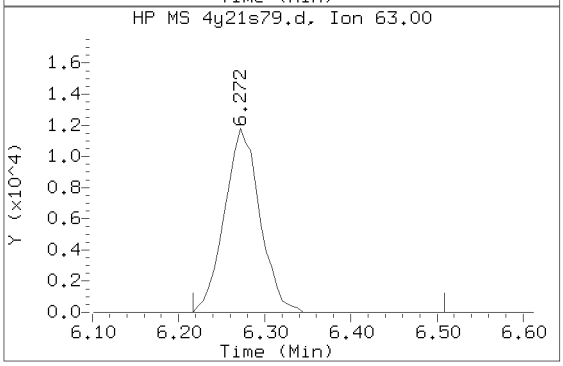
Sample Spectrum (Unaltered)











Data File: /chem/HP23297.i/19may21b.b/4y21s79.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 06:58 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 07:22 amd00492

Sample Name: 92J01 Lab Sample ID: 1058214

Compound Number	: 42
Compound Name	: cis-1,2-Dichloroethene
Scan Number	: 771
Retention Time (minutes)	: 6.272
Relative Retention Time	: 0.00000
Quant Ion	: 96.00
Area (flag)	: 84480
On-Column Amount (ng)	: 15.2426

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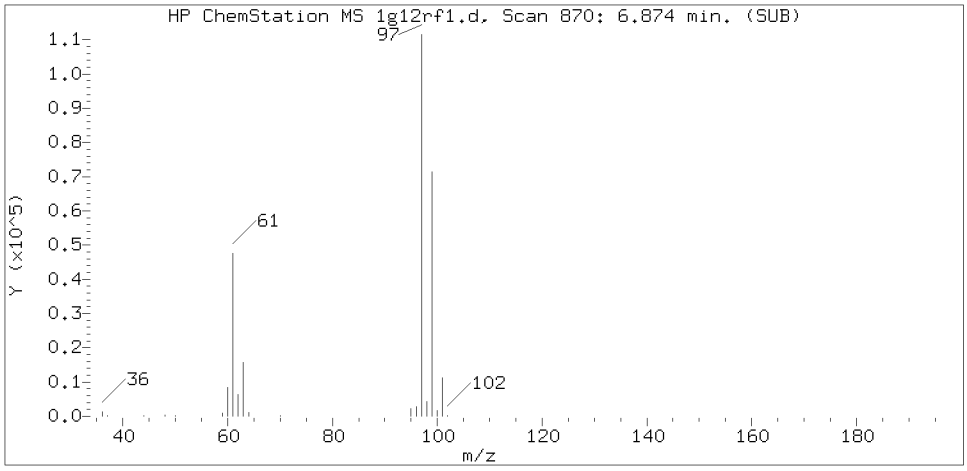
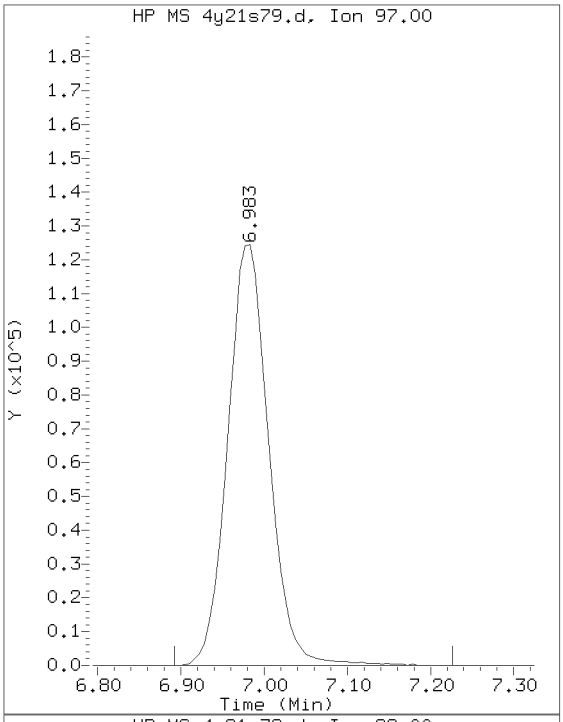
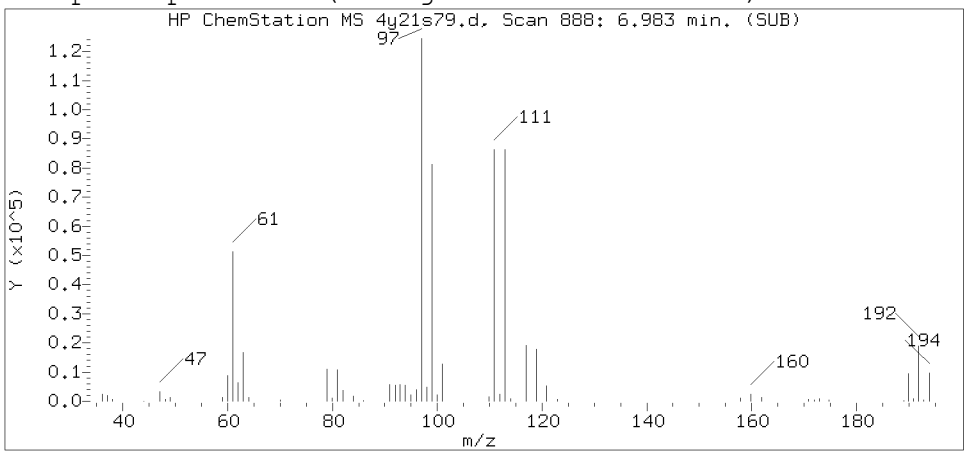
Target 3.5 esignature user ID: kas02648

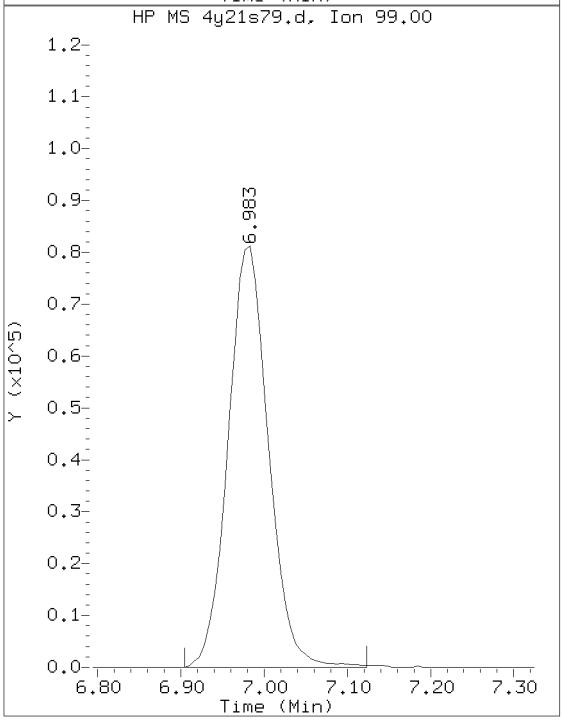
Reference Standard Spectrum for 1,1,1-Trichloroethane



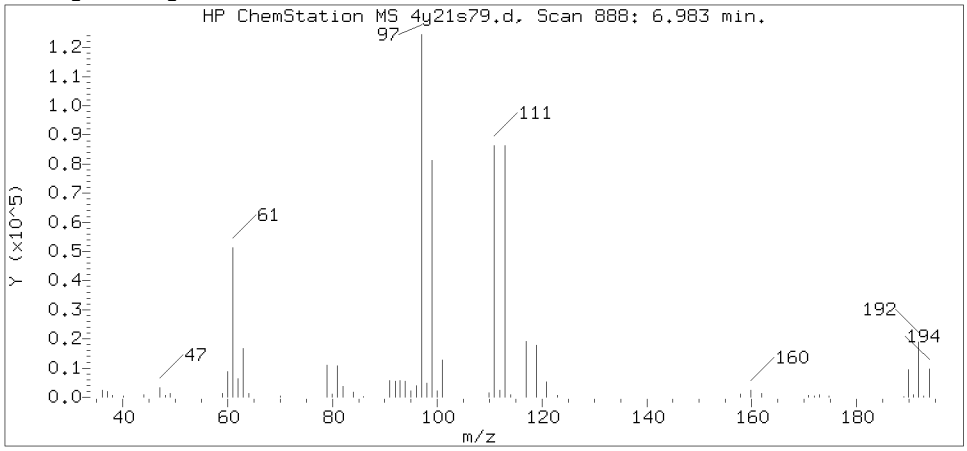


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP23297.i/19may21b.b/4y21s79.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 06:58 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 07:22 amd00492

Sample Name: 92J01 Lab Sample ID: 1058214

Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 888
Retention Time (minutes): 6.983
Relative Retention Time :-0.00077
Quant Ion : 97.00
Area (flag) : 426828
On-Column Amount (ng) : 57.9547

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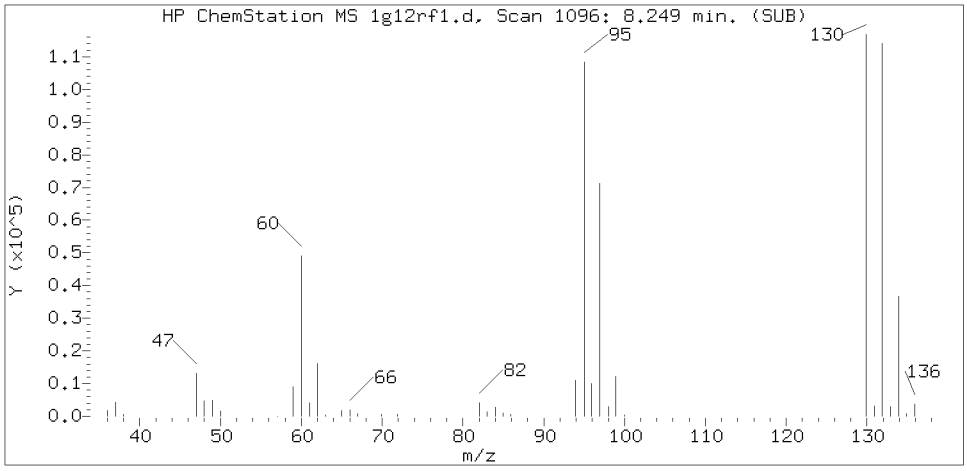
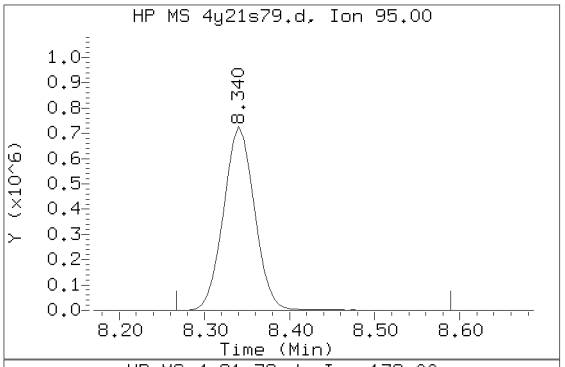
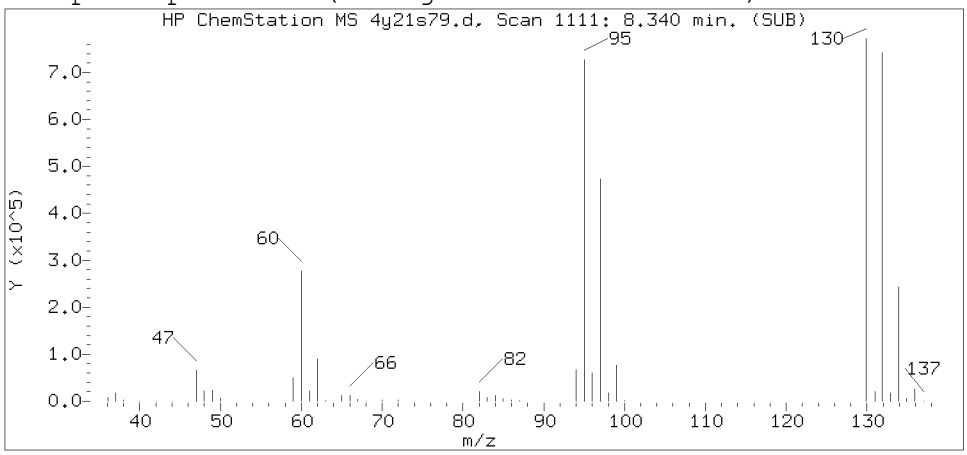
Target 3.5 esignature user ID: kas02648

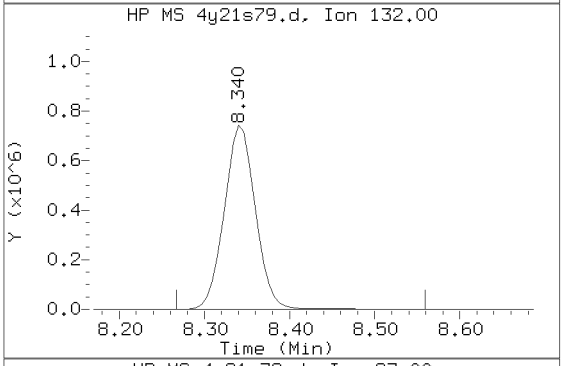
Reference Standard Spectrum for Trichloroethene

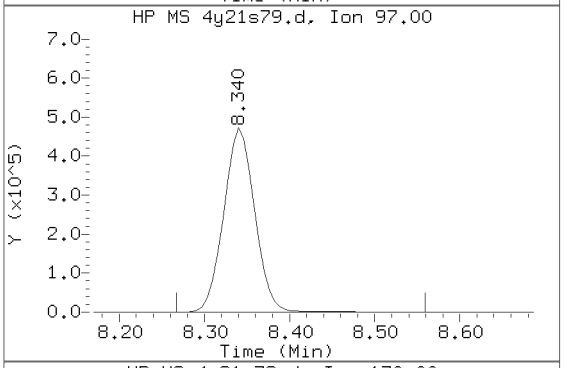




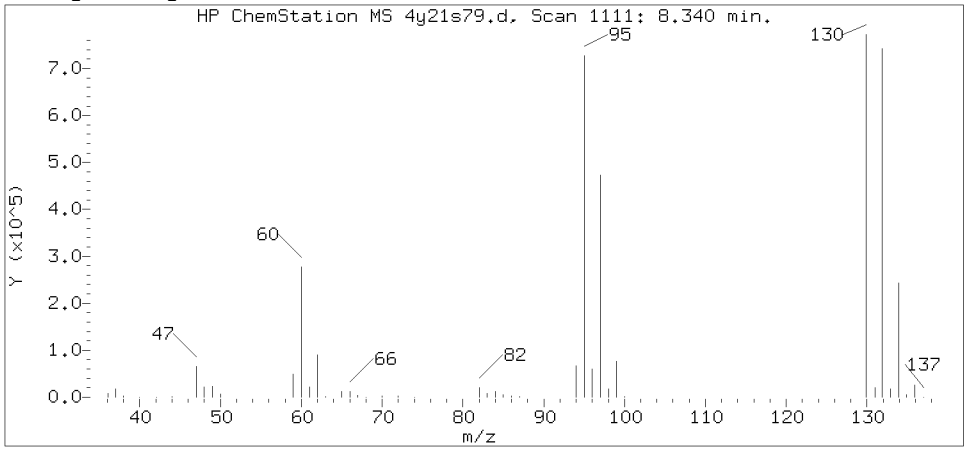
Sample Spectrum (Background Subtracted)

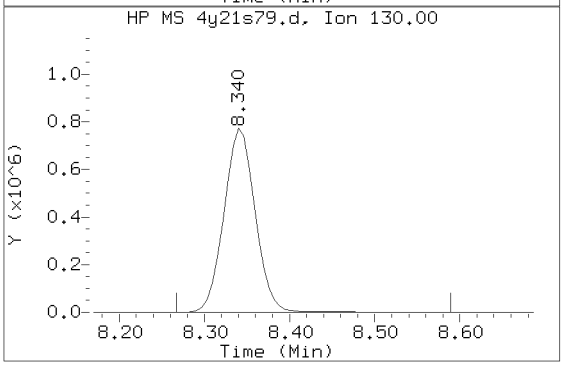






Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may21b.b/4y21s79.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 06:58 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 07:22 amd00492

Sample Name: 92J01 Lab Sample ID: 1058214

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 1111
Retention Time (minutes): 8.340
Relative Retention Time :-0.00000
Quant Ion : 95.00
Area (flag) : 1846964
On-Column Amount (ng) : 344.0882

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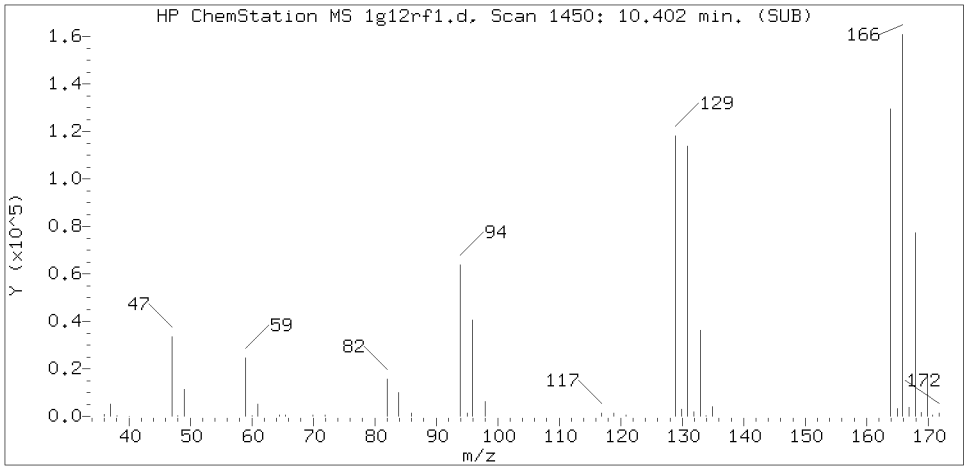
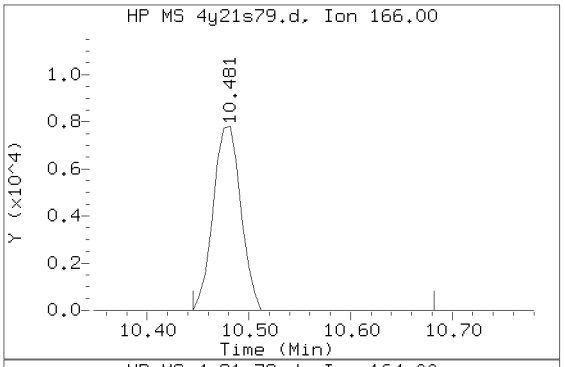
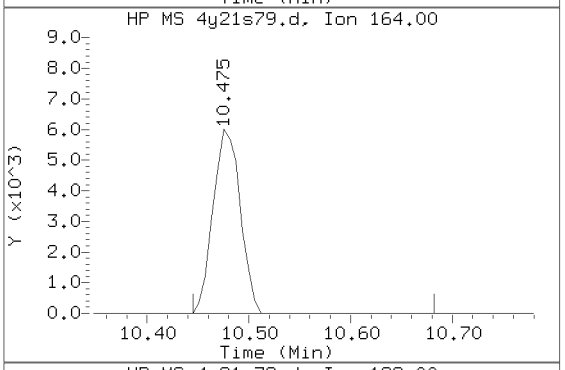
Target 3.5 esignature user ID: kas02648

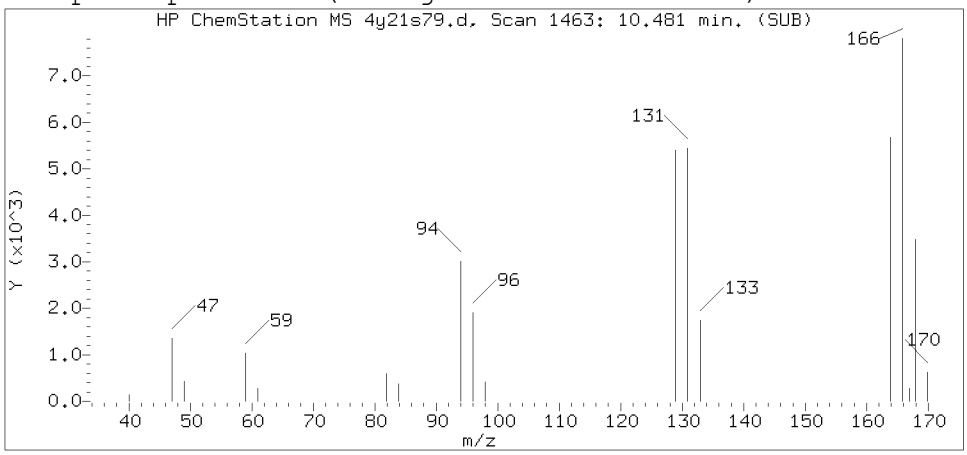
Reference Standard Spectrum for Tetrachloroethene

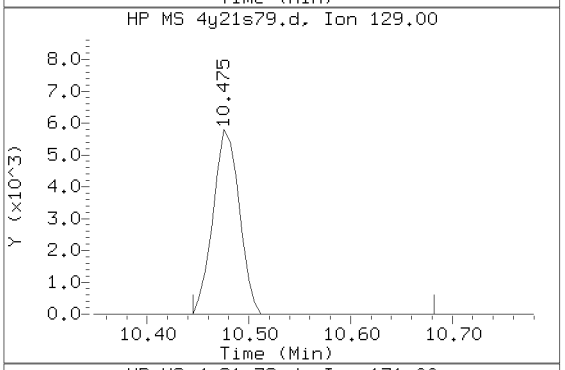




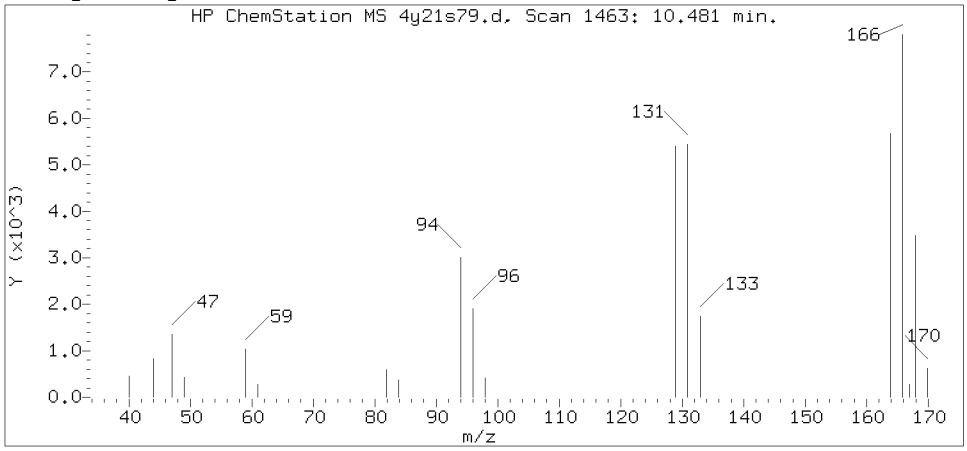


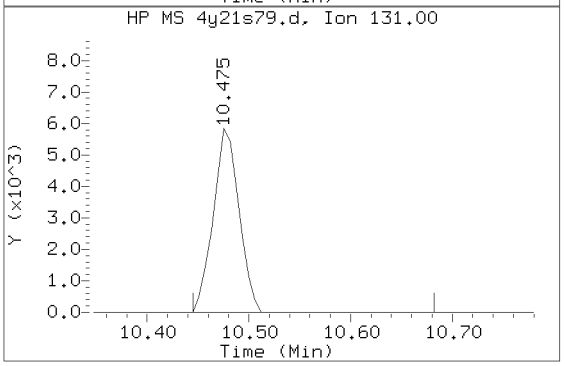
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may21b.b/4y21s79.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 06:58 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 07:22 amd00492

Sample Name: 92J01 Lab Sample ID: 1058214

Compound Number : 93
Compound Name : Tetrachloroethene
Scan Number : 1463
Retention Time (minutes): 10.481
Relative Retention Time : 0.00000
Quant Ion : 166.00
Area (flag) : 14700
On-Column Amount (ng) : 2.5123

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Target 3.5 esignature user ID: kas02648

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

92J01DL

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058214

Sample wt/vol: 0.50 (g/mL) mL Lab File ID: HP23297.i/19may21b.b/4y21s80.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	10	U
75-35-4	1,1-Dichloroethene	5	J D
67-64-1	Acetone	200	U
76-13-1	Freon 113	100	U
75-15-0	Carbon Disulfide	50	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	15	D
78-93-3	2-Butanone	100	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	51	D
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	320	D
123-91-1	1,4-Dioxane	2500	U
108-88-3	Toluene	10	U
127-18-4	Tetrachloroethene	2	J D
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (Total)	50	U
95-50-1	1,2-Dichlorobenzene	50	U
91-20-3	Naphthalene	50	U

FORM I VOA

^

92J01DL

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1058214DL

Data file: /chem/HP23297.i/19may21b.b/4y21s80.d Injection date and time: **22-MAY-2019 07:21**
Data file Sample Info. Line: 92J01DL;1058214DL;1;0;;JCV92;;;4y21b71; Instrument ID: **HP23297.i** Batch: **4191415AA**
Date, time and analyst ID of latest file update: 22-May-2019 07:38 Automation

Blank Data file reference: **/chem/HP23297.i/19may21b.b/4y21b71.d**

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-MAY-2019 22:23
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may21b.b/4y21c05.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 0.5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.361	(0.000)	457	65	350618	(-12)	250.00	
66) Fluorobenzene	7.865	(0.000)	1033	96	1127266	(-6)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	881744	(-8)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189	(0.000)	1908	152	471924	(-10)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977	(-0.001)	113	272110	48.972	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.433	(-0.001)	102	68724	50.618	101%		80 - 120
83) Toluene-d8	(3)	9.867	(0.000)	98	1137320	50.257	101%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.306	(0.000)	95	405443	47.004	94%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					2	10
17) 1,1-Dichloroethene	(2)	3.656	(-0.000)	96	2129	0.542	5.42		J	2	10
18) Acetone	(1)				Not Detected					7	200
19) Freon 113	(2)				Not Detected					2	100
23) Carbon Disulfide	(2)				Not Detected					2	50
28) Methylene Chloride	(2)				Not Detected					3	10
32) trans-1,2-Dichloroethene	(2)				Not Detected					2	10
36) 1,1-Dichloroethane	(2)				Not Detected					2	10
42) cis-1,2-Dichloroethene	(2)	6.278	(-0.000)	96	7978	1.473	14.73			2	10
44) 2-Butanone	(2)				Not Detected					3	100
51) Chloroform	(2)				Not Detected					2	10
53) 1,1,1-Trichloroethane	(2)	6.977	(0.000)	97	36985	5.138	51.38			3	10
60) Benzene	(2)				Not Detected					2	10
61) 1,2-Dichloroethane	(2)				Not Detected					3	10
71) Trichloroethene	(2)	8.340	(-0.000)	95	166231	31.687	316.87			2	10
75) 1,4-Dioxane	(1)				Not Detected					290	2500
88) Toluene	(3)				Not Detected					2	10
93) Tetrachloroethene	(3)	10.481	(0.000)	166	1321	0.231	2.31		J	2	10
104) Ethylbenzene	(3)				Not Detected					4	10
106) m+p-Xylene	(3)				Not Detected					10	50
107) o-Xylene	(3)				Not Detected					4	10
108) Xylene (Total)	(3)				Not Detected					10	50
138) 1,2-Dichlorobenzene	(4)				Not Detected					2	50
148) Naphthalene	(4)				Not Detected					10	50

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may21b.b/4y21s80.d Injection date and time: **22-MAY-2019 07:21**
Data file Sample Info. Line: 92J01DL;1058214DL;1;0;;JCV92;;;4y21b71; Instrument ID: **HP23297.i** Batch: **4191415AA**
Date, time and analyst ID of latest file update: 22-May-2019 07:38 Automation

Blank Data file reference: **/chem/HP23297.i/19may21b.b/4y21b71.d**

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-MAY-2019 22:23
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may21b.b/4y21c05.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 0.5 ml

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BLANK INTENTIONALLY

Total number of targets = 24

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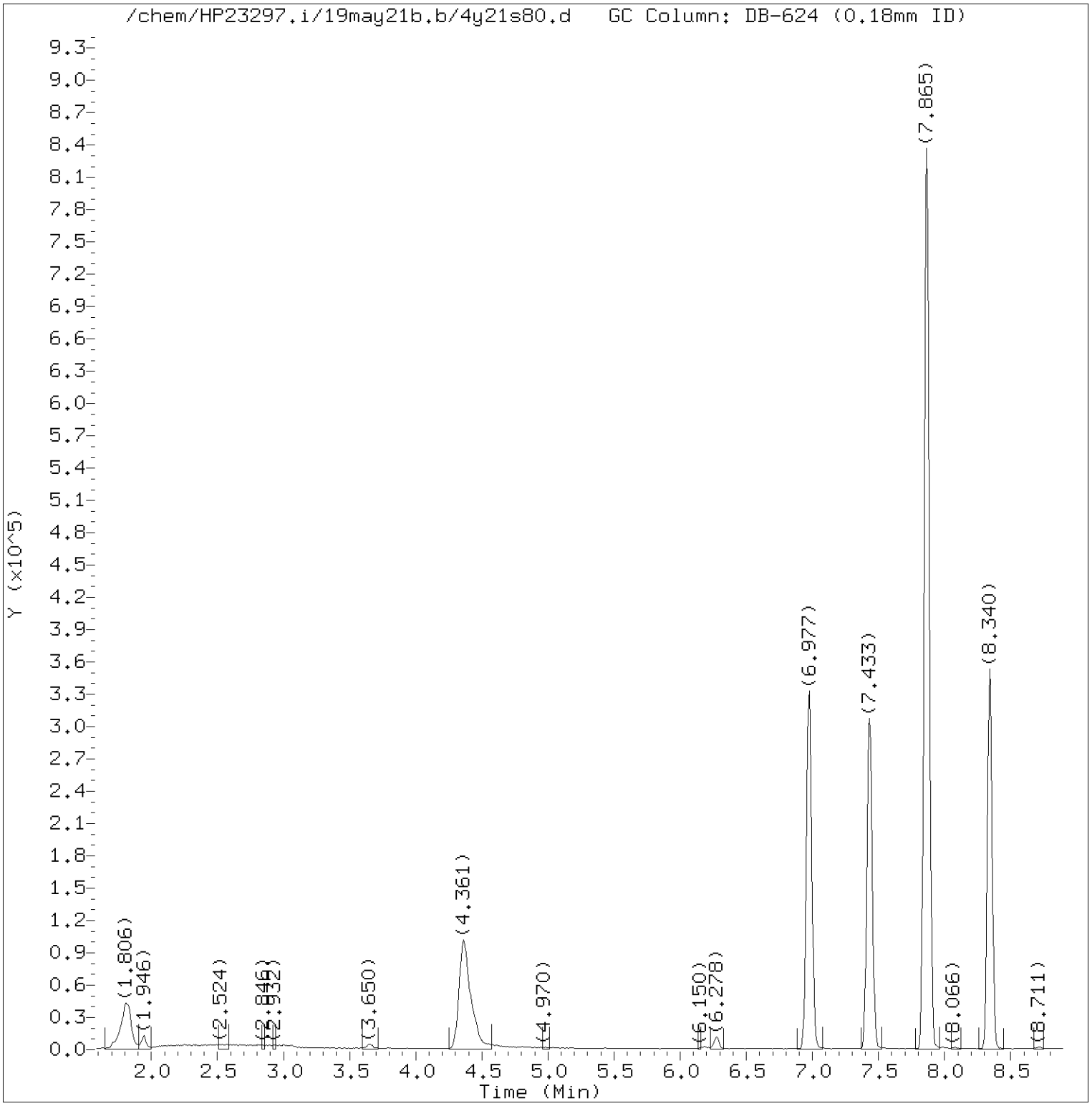
Secondary review performed and digitally signed by Marla S. Brewer on 05/22/2019 at 15:09. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

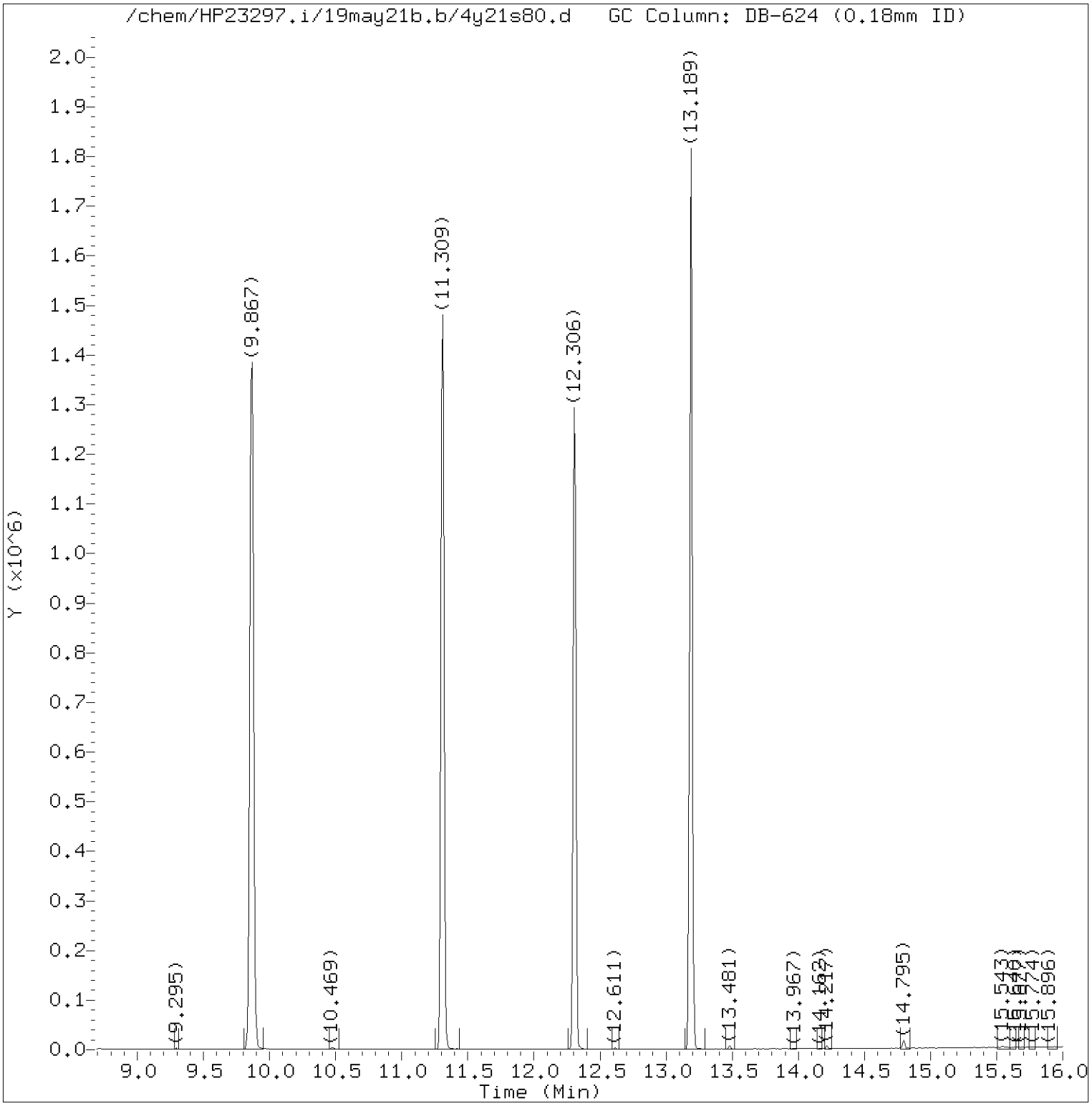
Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s80.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 07:21 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 07:38 Automation

Sample Name: 92J01DL Lab Sample ID: 1058214DL

Digitally signed by Kevin A. Sposito
on 05/22/2019 at 11:46.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s80.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 07:21 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 07:38 Automation

Sample Name: 92J01DL Lab Sample ID: 1058214DL

Digitally signed by Kevin A. Sposito
on 05/22/2019 at 11:46.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s80.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 07:21 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 07:38 Automation

Sample Name: 92J01DL Lab Sample ID: 1058214DL

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	3.656	96	2129	0.542
29)*t-Butyl alcohol-d10	(1)	4.361	65	350618	250.000
42) cis-1,2-Dichloroethene	(2)	6.278	96	7978	1.473
53) 1,1,1-Trichloroethane	(2)	6.977	97	36985	5.138
52)$Dibromofluoromethane	(2)	6.977	113	272110	48.972
57)$1,2-Dichloroethane-d4	(2)	7.433	102	68724	50.618
66)*Fluorobenzene	(2)	7.865	96	1127266	50.000
71) Trichloroethene	(2)	8.340	95	166231	31.687
83)$Toluene-d8	(3)	9.867	98	1137320	50.257
93) Tetrachloroethene	(3)	10.481	166	1321	0.231
100)*Chlorobenzene-d5	(3)	11.309	117	881744	50.000
114)$4-Bromofluorobenzene	(3)	12.306	95	405443	47.004
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	471924	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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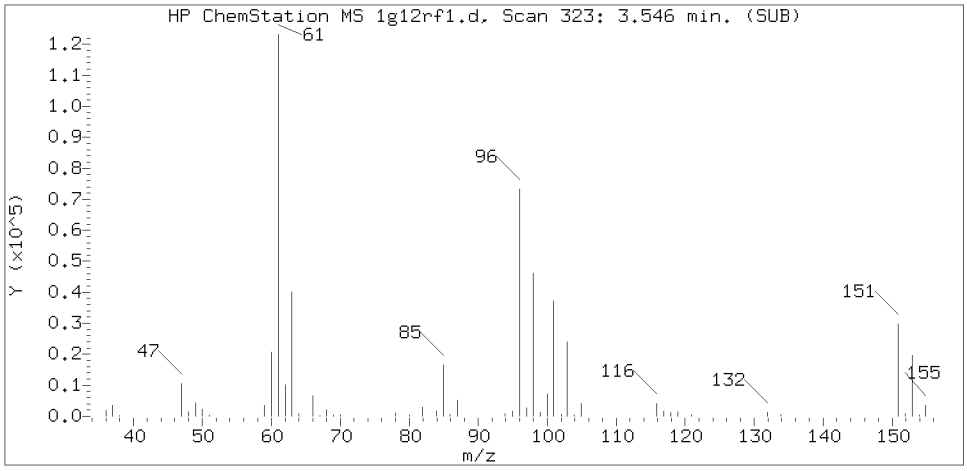
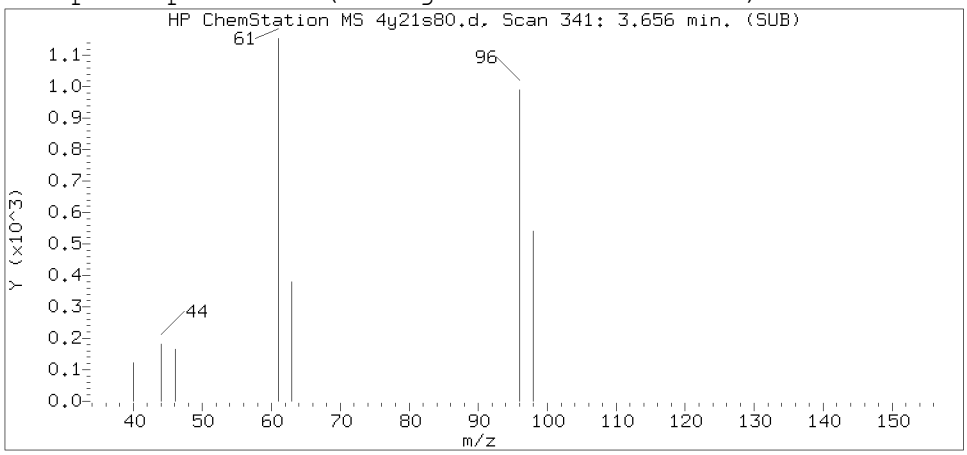
Target 3.5 esignature user ID: kas02648

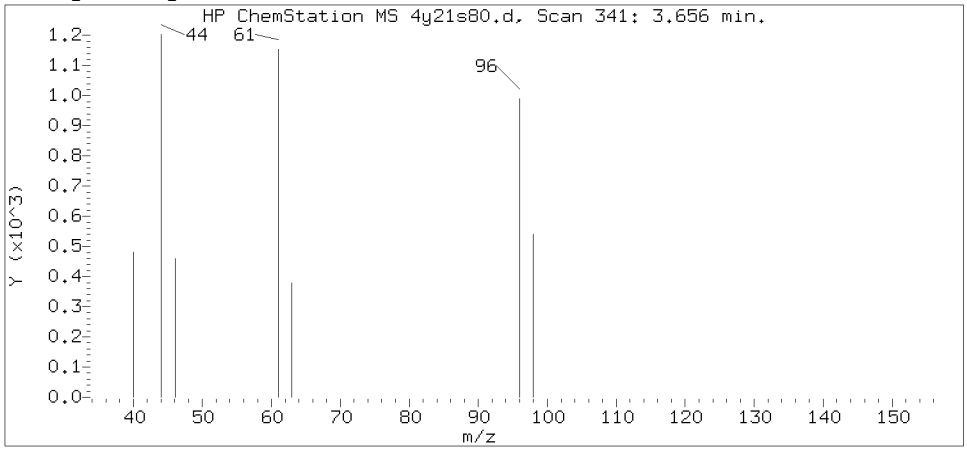
Reference Standard Spectrum for 1,1-Dichloroethene

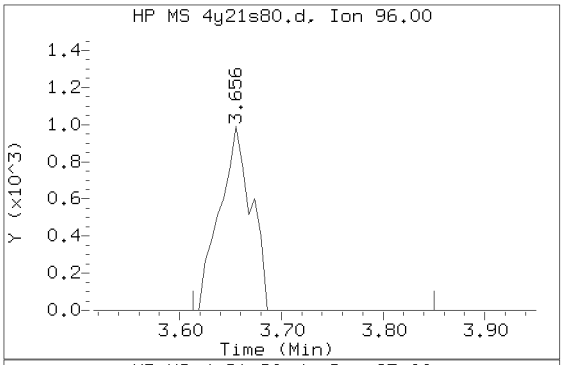


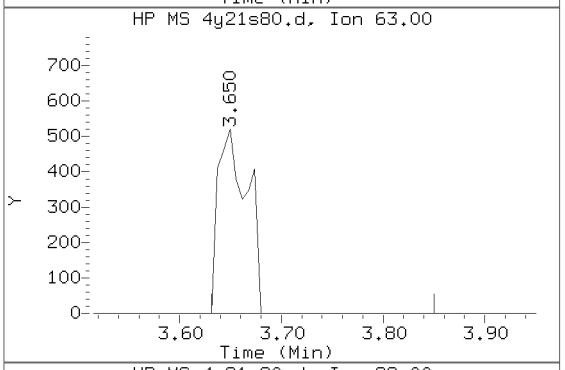
Sample Spectrum (Background Subtracted)

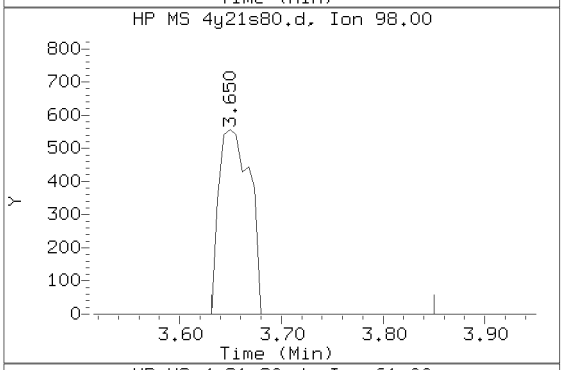


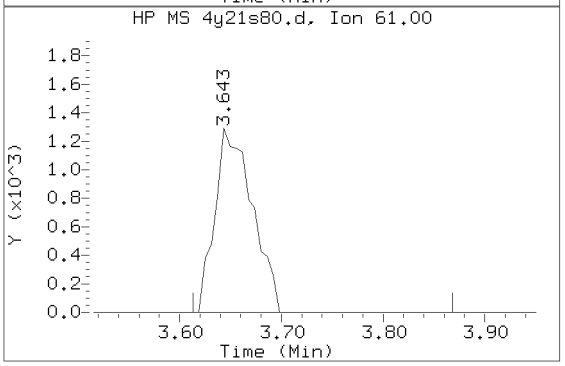
Sample Spectrum (Unaltered)











Data File: /chem/HP23297.i/19may21b.b/4y21s80.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 07:21 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 07:38 Automation

Sample Name: 92J01DL Lab Sample ID: 1058214DL

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 341
Retention Time (minutes): 3.656
Relative Retention Time :-0.00077
Quant Ion : 96.00
Area (flag) : 2129
On-Column Amount (ng) : 0.5417

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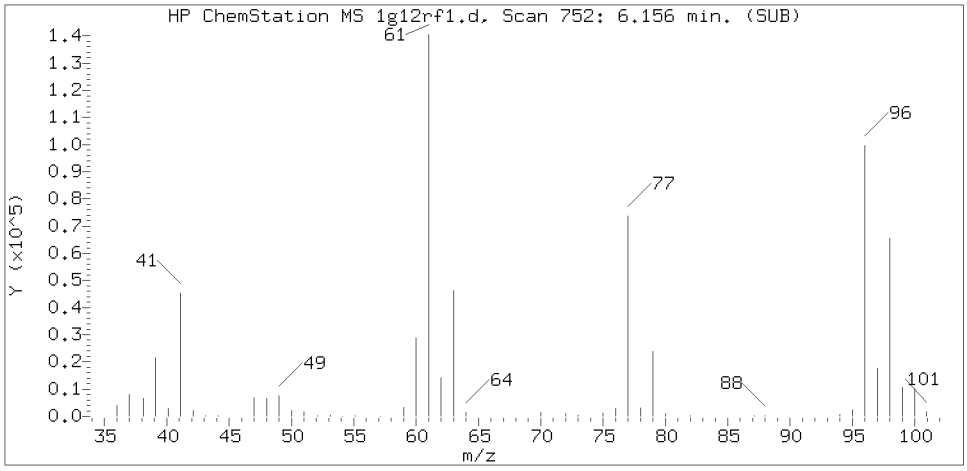
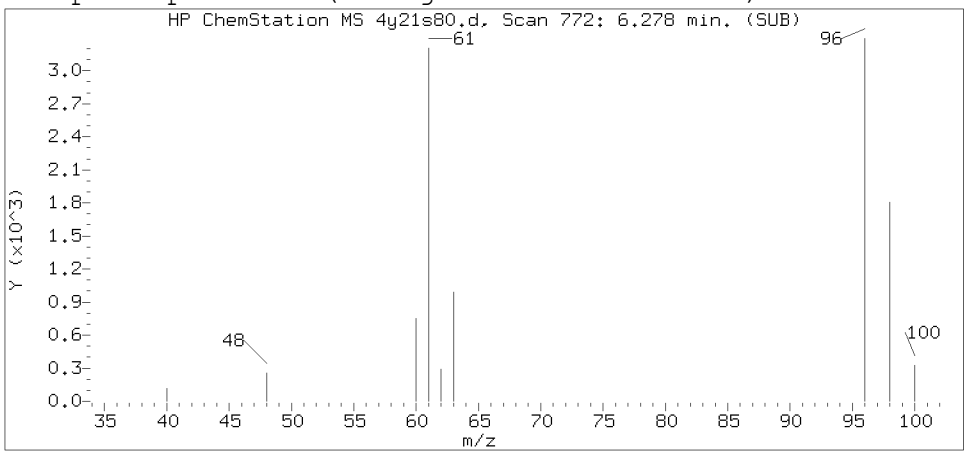
Target 3.5 esignature user ID: kas02648

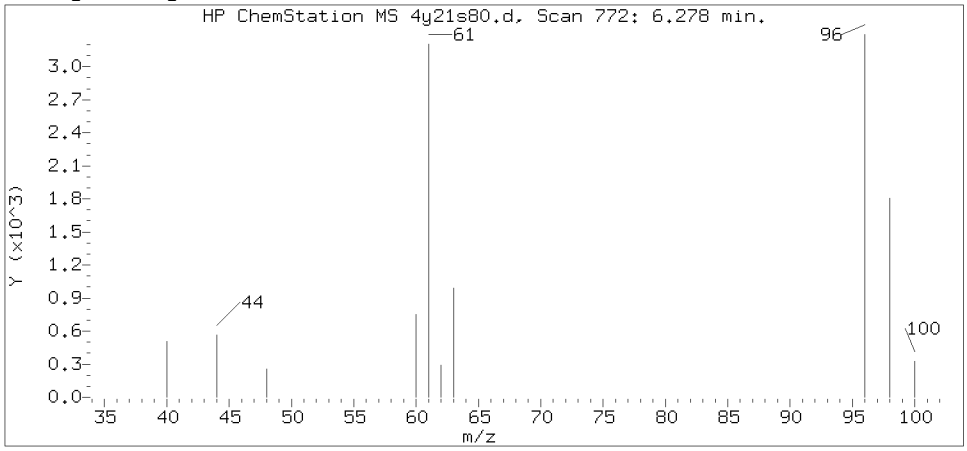
Reference Standard Spectrum for cis-1,2-Dichloroethene

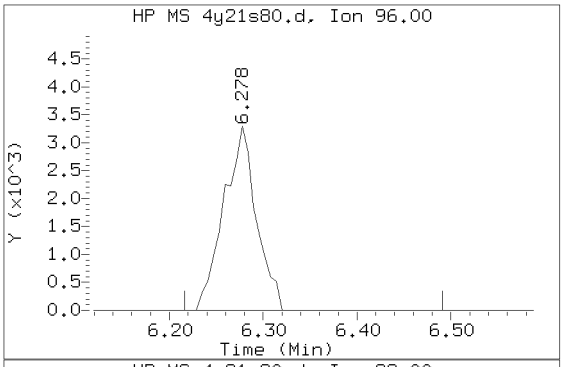


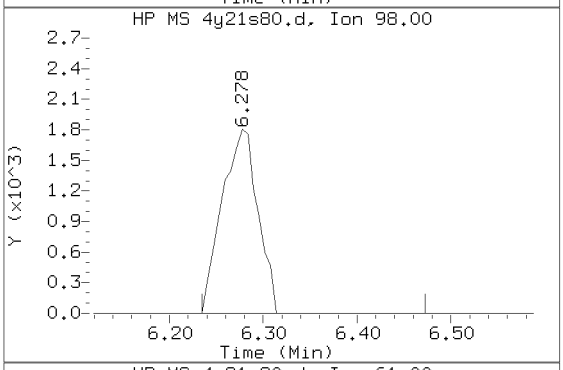
Sample Spectrum (Background Subtracted)

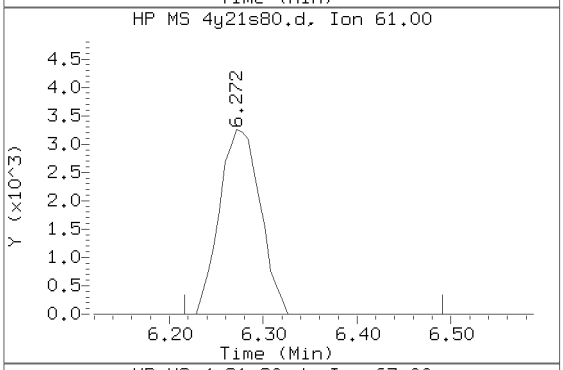


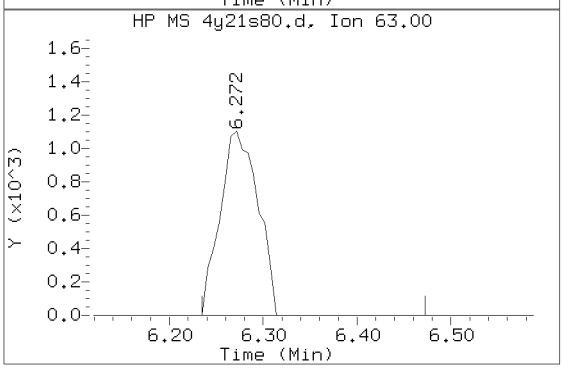
Sample Spectrum (Unaltered)











Data File: /chem/HP23297.i/19may21b.b/4y21s80.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 07:21 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 07:38 Automation

Sample Name: 92J01DL Lab Sample ID: 1058214DL

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 772
Retention Time (minutes): 6.278
Relative Retention Time :-0.00077
Quant Ion : 96.00
Area (flag) : 7978
On-Column Amount (ng) : 1.4730

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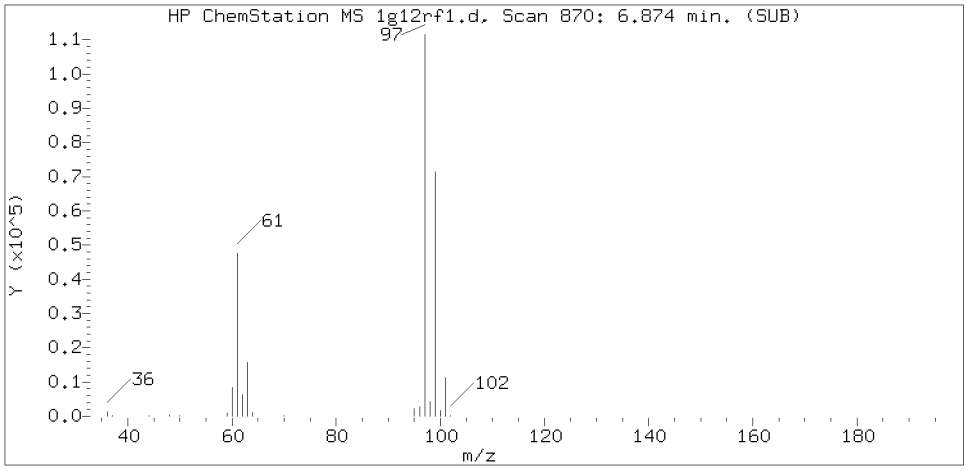
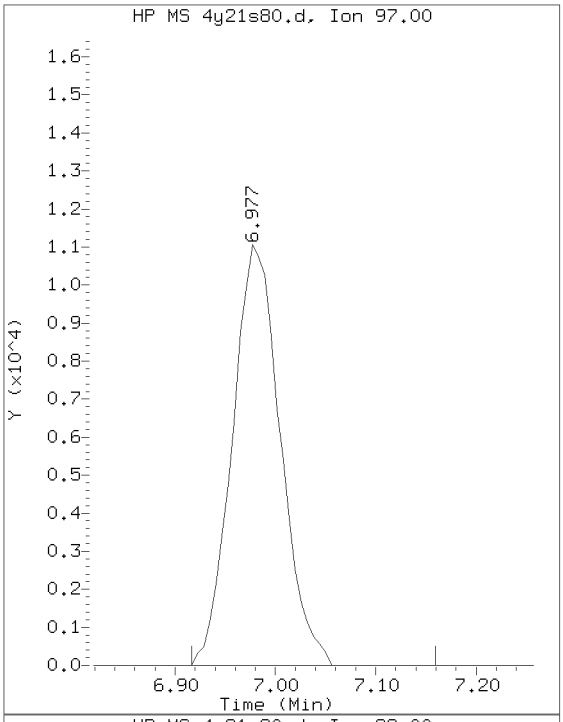
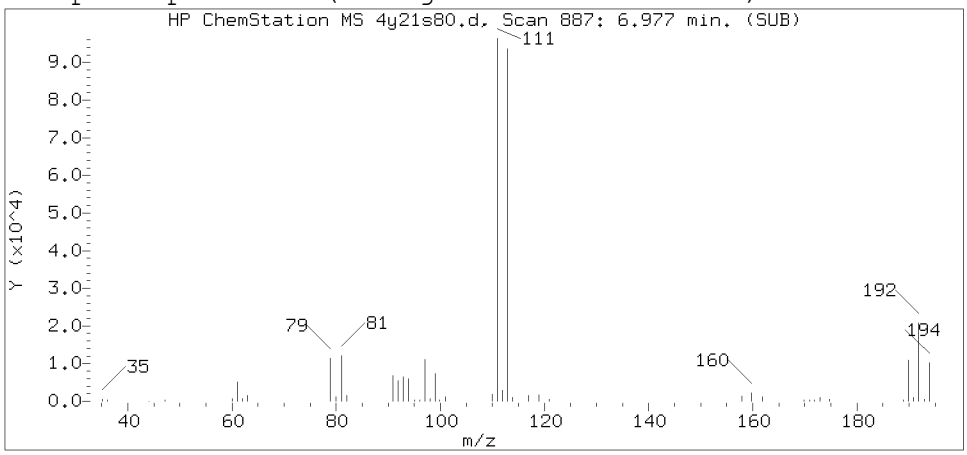
Target 3.5 esignature user ID: kas02648

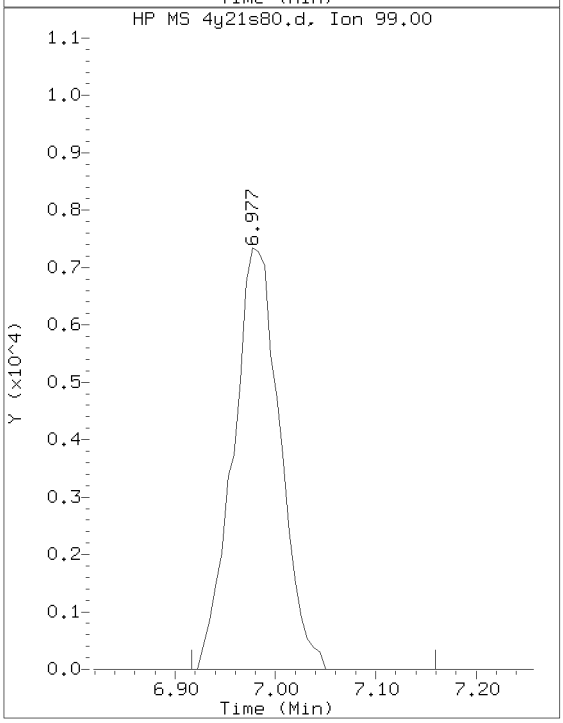
Reference Standard Spectrum for 1,1,1-Trichloroethane



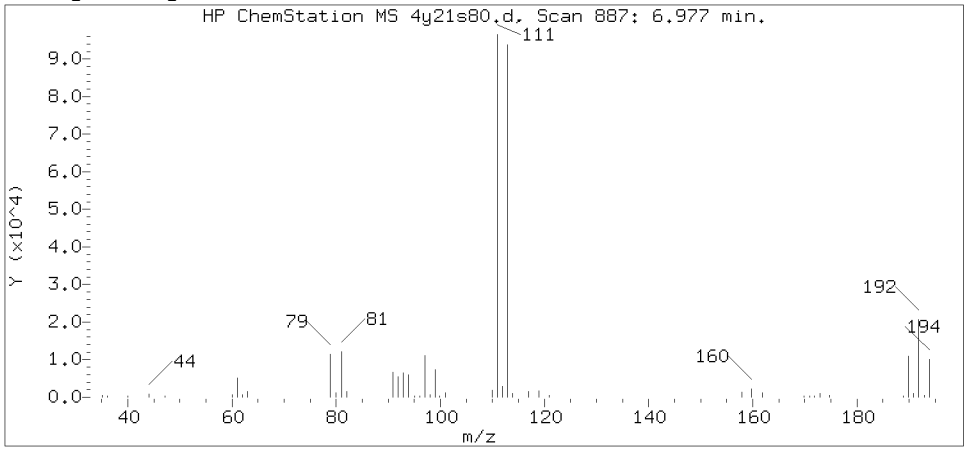


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP23297.i/19may21b.b/4y21s80.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 07:21 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 07:38 Automation

Sample Name: 92J01DL Lab Sample ID: 1058214DL

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 887
Retention Time (minutes)	: 6.977
Relative Retention Time	: 0.00000
Quant Ion	: 97.00
Area (flag)	: 36985
On-Column Amount (ng)	: 5.1384

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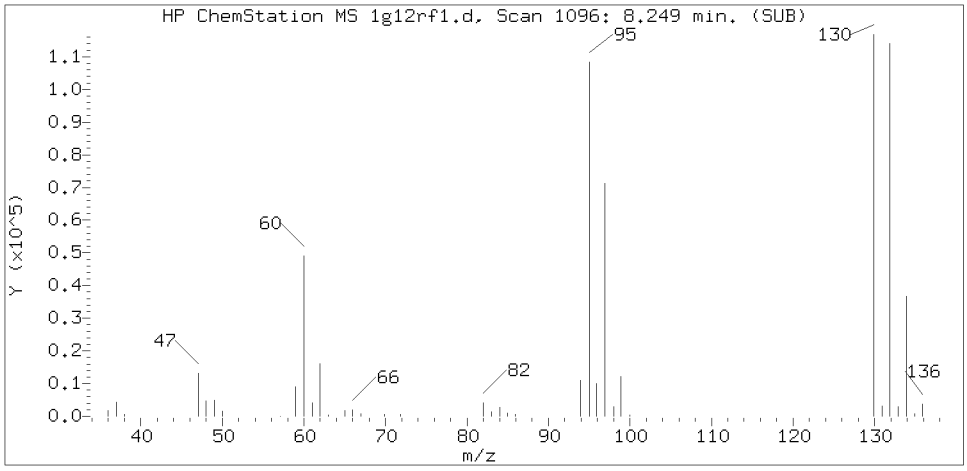
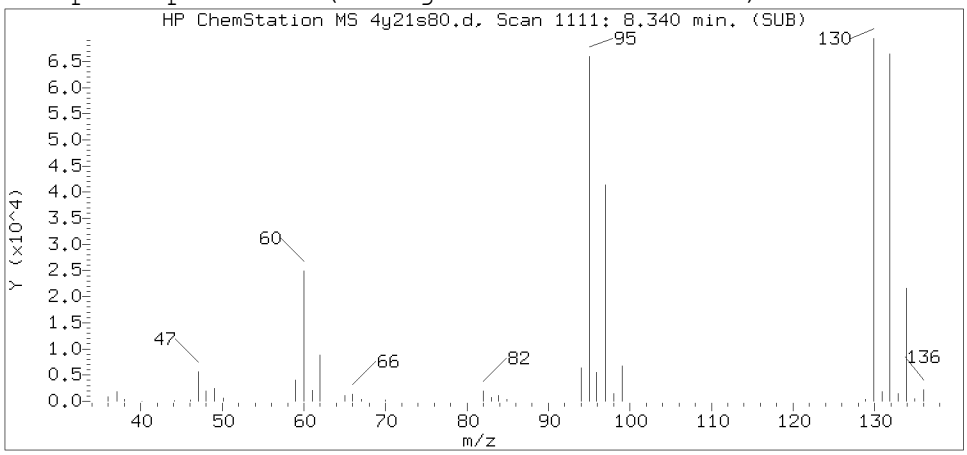
Target 3.5 esignature user ID: kas02648

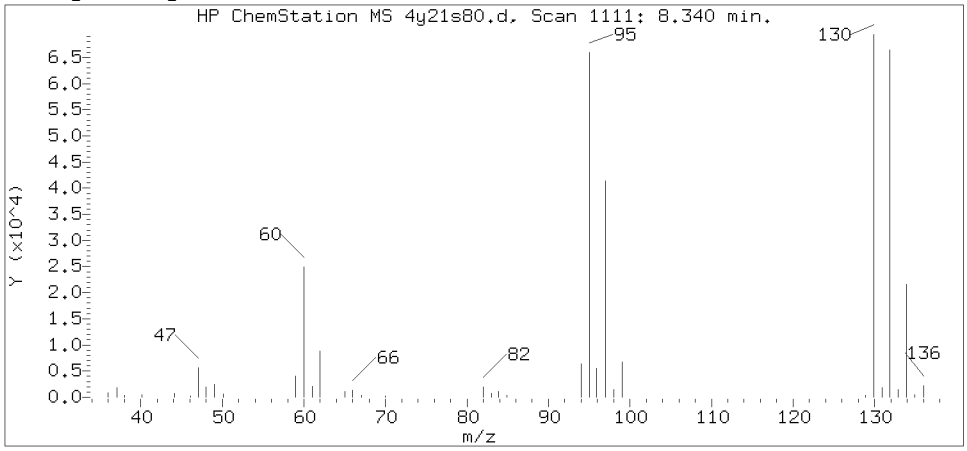
Reference Standard Spectrum for Trichloroethene

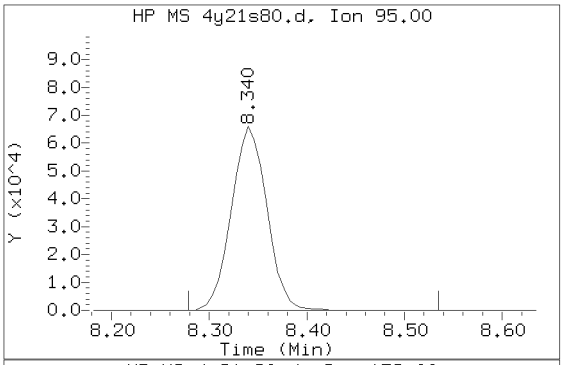


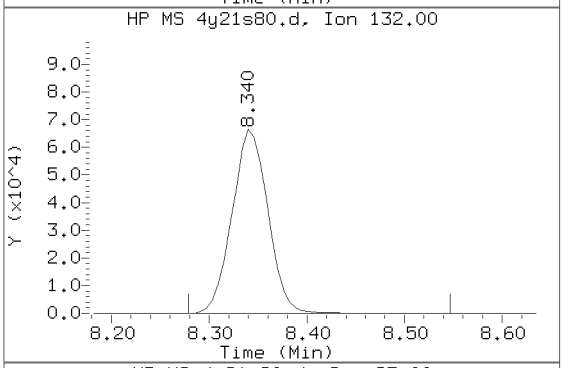
Sample Spectrum (Background Subtracted)

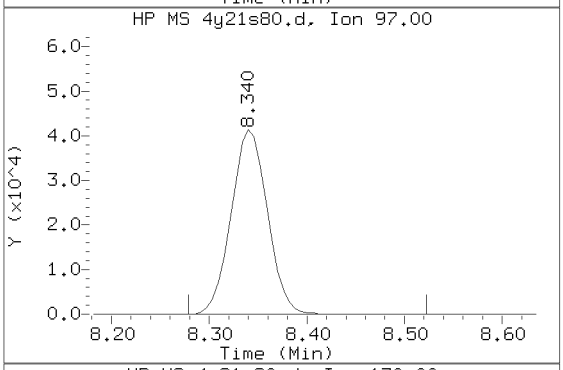


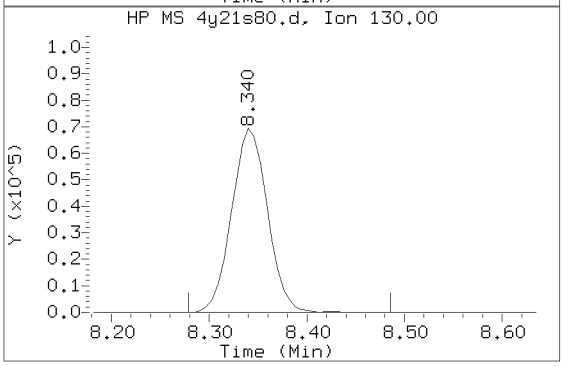
Sample Spectrum (Unaltered)











Data File: /chem/HP23297.i/19may21b.b/4y21s80.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 07:21 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 07:38 Automation

Sample Name: 92J01DL Lab Sample ID: 1058214DL

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 1111
Retention Time (minutes): 8.340
Relative Retention Time :-0.00000
Quant Ion : 95.00
Area (flag) : 166231
On-Column Amount (ng) : 31.6874

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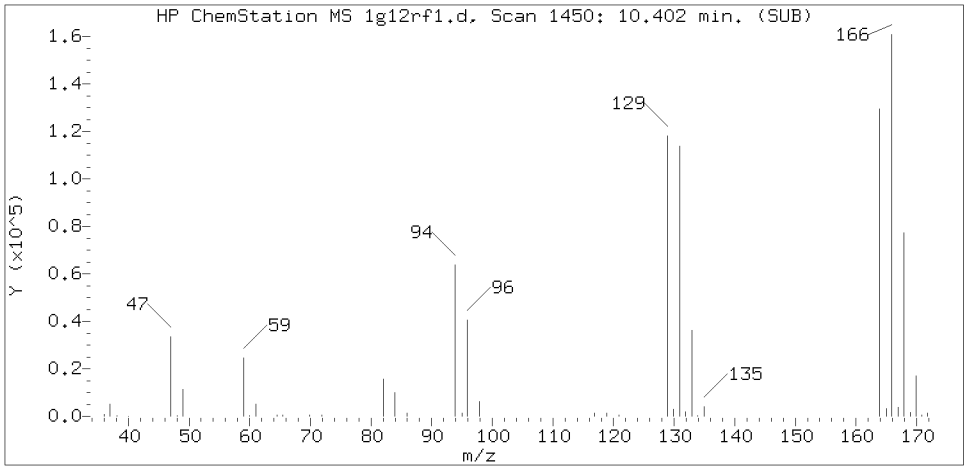
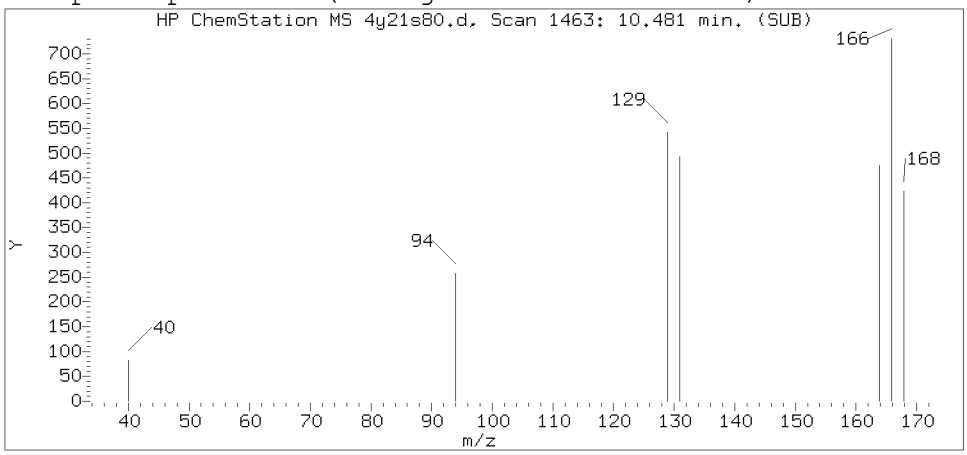
Target 3.5 esignature user ID: kas02648

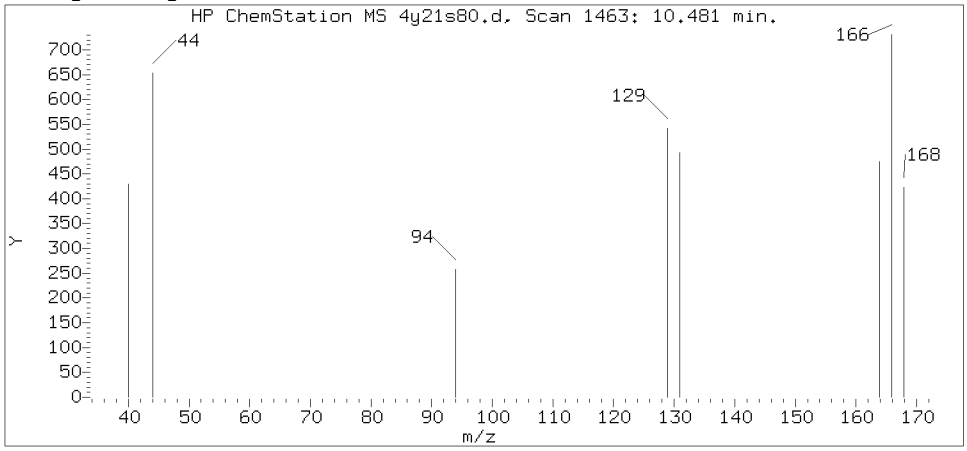
Reference Standard Spectrum for Tetrachloroethene

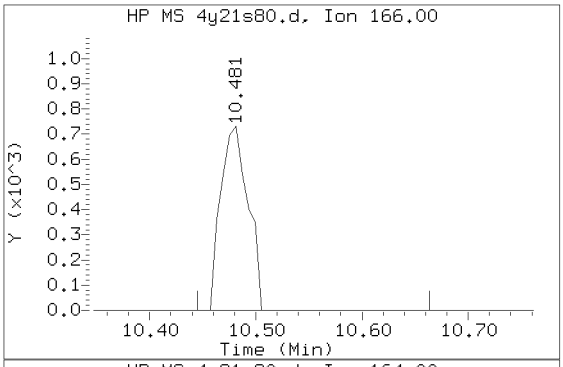


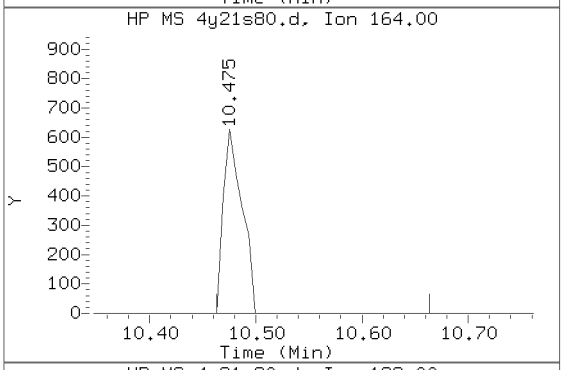
Sample Spectrum (Background Subtracted)

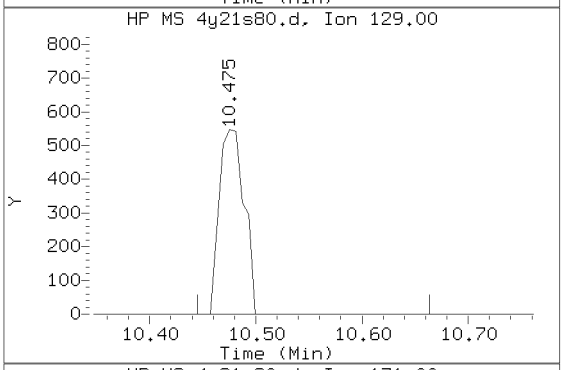


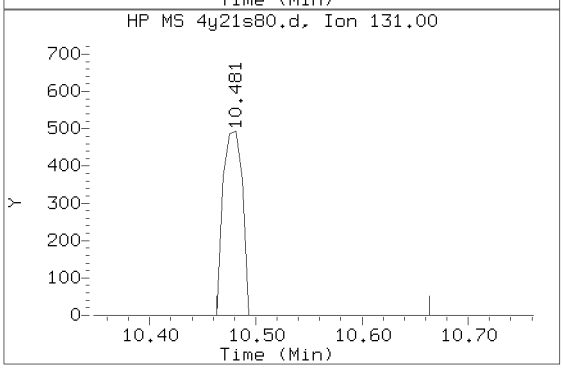
Sample Spectrum (Unaltered)











Data File: /chem/HP23297.i/19may21b.b/4y21s80.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 07:21 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 07:38 Automation

Sample Name: 92J01DL Lab Sample ID: 1058214DL

Compound Number : 93
Compound Name : Tetrachloroethene
Scan Number : 1463
Retention Time (minutes): 10.481
Relative Retention Time : 0.00000
Quant Ion : 166.00
Area (flag) : 1321
On-Column Amount (ng) : 0.2315

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Target 3.5 esignature user ID: kas02648

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

92J02

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058215

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may21b.b/4y21s75.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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92J02 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1058215

Data file: /chem/HP23297.i/19may21b.b/4y21s75.d Injection date and time: **22-MAY-2019 05:27**
Data file Sample Info. Line: 92J02;1058215;1;0;;JCV92;;;4y21b71; Instrument ID: **HP23297.i** Batch: **4191415AA**
Date, time and analyst ID of latest file update: 22-May-2019 05:45 Automation

Blank Data file reference: **/chem/HP23297.i/19may21b.b/4y21b71.d**

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-MAY-2019 22:23
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may21b.b/4y21c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.373	(-0.012)	459	65	347486	(-13)	250.00	
66) Fluorobenzene	7.865	(0.000)	1033	96	1119956	(-7)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	870469	(-9)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189	(0.000)	1908	152	479636	(-8)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977	(-0.001)	113	266130	48.208	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.433	(-0.001)	102	68186	50.549	101%		80 - 120
83) Toluene-d8	(3)	9.867	(0.000)	98	1125245	50.367	101%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.306	(0.000)	95	402262	47.239	94%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Kevin A. Sposito on 05/22/2019 at 11:45. Target 3.5 esignature user ID: kas02648

Data file: /chem/HP23297.i/19may21b.b/4y21s75.d Injection date and time: **22-MAY-2019 05:27**
Data file Sample Info. Line: 92J02;1058215;1;0;;JCV92;;;4y21b71; Instrument ID: **HP23297.i** Batch: **4191415AA**
Date, time and analyst ID of latest file update: 22-May-2019 05:45 Automation

Blank Data file reference: **/chem/HP23297.i/19may21b.b/4y21b71.d**

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-MAY-2019 22:23
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may21b.b/4y21c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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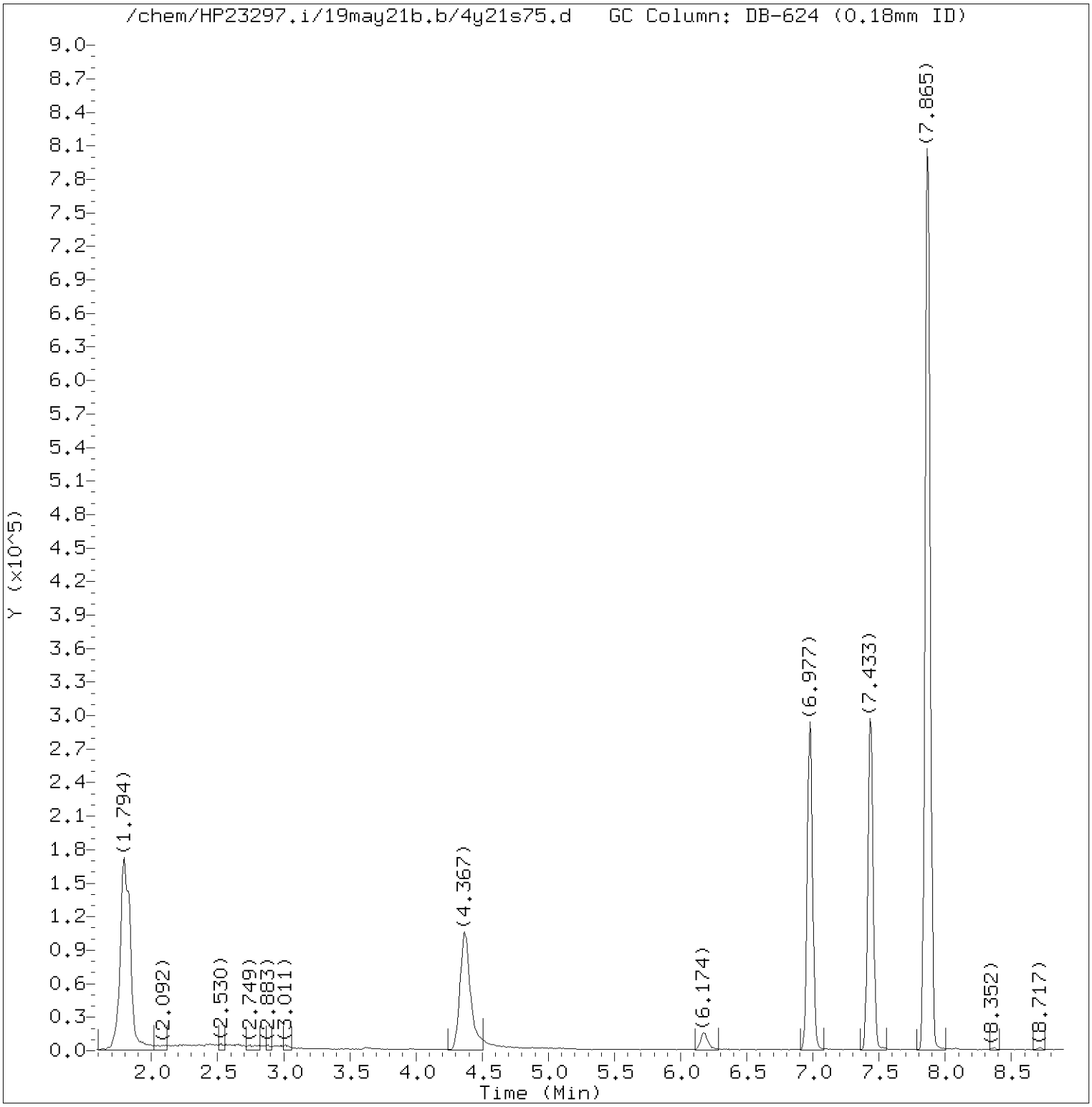
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Kevin A. Sposito on 05/22/2019 at 11:45. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Marla S. Brewer on 05/22/2019 at 15:09. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

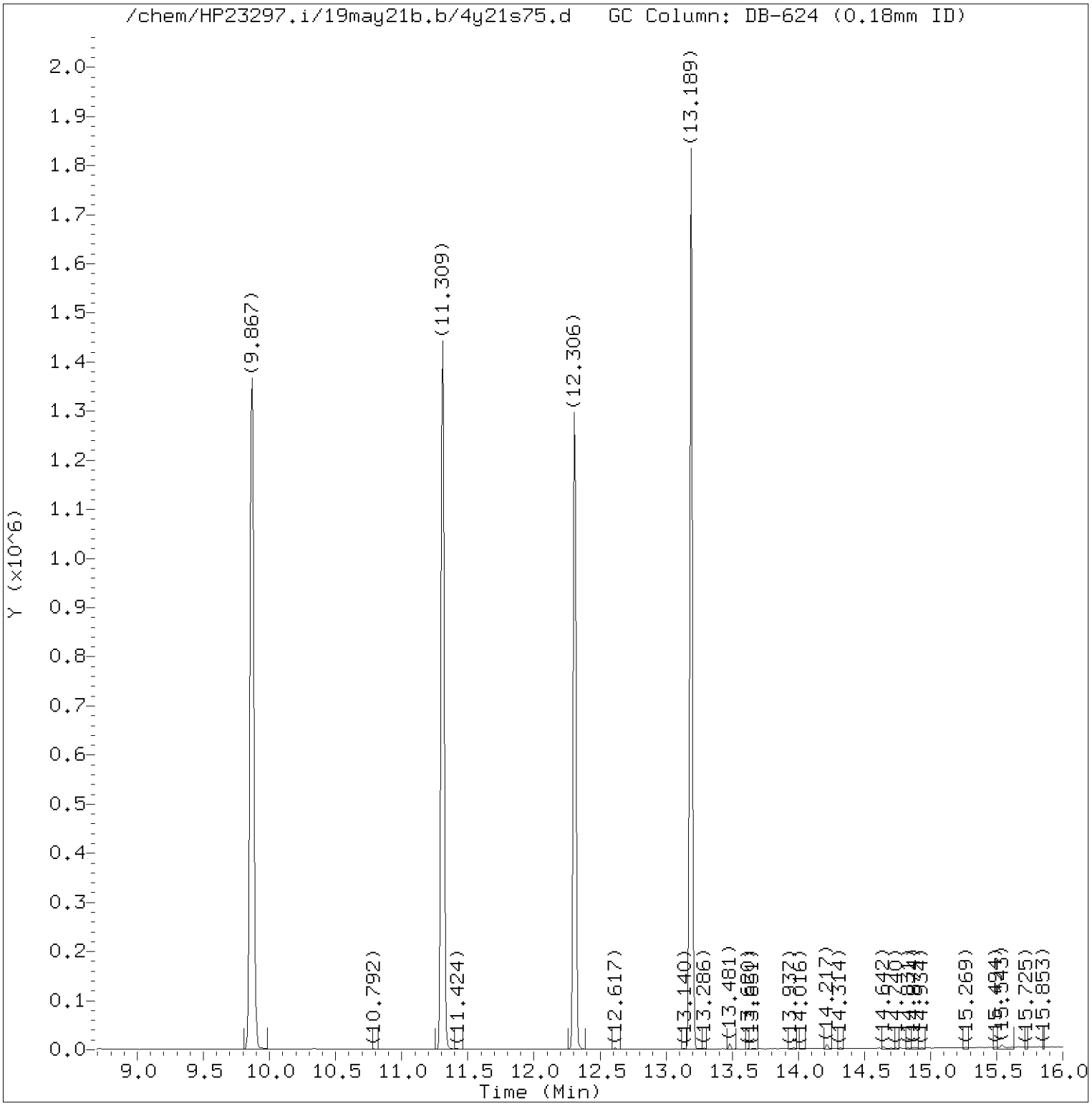
Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s75.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 05:27 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 05:45 Automation

Sample Name: 92J02 Lab Sample ID: 1058215

Digitally signed by Kevin A. Sposito
on 05/22/2019 at 11:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s75.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 05:27 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 05:45 Automation

Sample Name: 92J02 Lab Sample ID: 1058215

Digitally signed by Kevin A. Sposito
on 05/22/2019 at 11:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s75.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 05:27 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 05:45 Automation

Sample Name: 92J02 Lab Sample ID: 1058215

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.373	65	347486	250.000
52)$Dibromofluoromethane	(2)	6.977	113	266130	48.208
57)$1,2-Dichloroethane-d4	(2)	7.433	102	68186	50.549
66)*Fluorobenzene	(2)	7.865	96	1119956	50.000
83)$Toluene-d8	(3)	9.867	98	1125245	50.367
100)*Chlorobenzene-d5	(3)	11.309	117	870469	50.000
114)$4-Bromofluorobenzene	(3)	12.306	95	402262	47.239
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	479636	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/22/2019 at 11:45.
Target 3.5 esignature user ID: kas02648

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

92J03

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058216

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may21b.b/4y21s72.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	1	J
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	0.2	J
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.6	J
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	3	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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92J03 Lancaster Laboratories 1058216
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may21b.b/4y21s72.d Injection date and time: **22-MAY-2019 03:57**
Data file Sample Info. Line: 92J03;1058216;1;0;;JCV92;;;4y21b71; Instrument ID: **HP23297.i** Batch: **4191415AA**
Date, time and analyst ID of latest file update: 22-May-2019 11:48 kas02648

Blank Data file reference: **/chem/HP23297.i/19may21b.b/4y21b71.d**

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 08:03
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may21b.b/4y21c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.368	(-0.006)	458	65	364784	(-9)	250.00	
66) Fluorobenzene	7.866	(0.000)	1033	96	1119407	(-7)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	878020	(-8)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189	(0.000)	1908	152	469364	(-10)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977	(-0.001)	113	268641	48.687	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.440	(-0.002)	102	68583	50.868	102%		80 - 120
83) Toluene-d8	(3)	9.867	(0.000)	98	1125001	49.923	100%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.307	(0.000)	95	402360	46.844	94%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)	3.692	(-0.000)	58	1104	1.087	1.09		J	0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)	3.972	(-0.002)	76	2912	0.209	0.21		J	0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.444	(-0.001)	63	5548	0.640	0.64		J	0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	6.984	(-0.000)	97	23629	3.306	3.31			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Kevin A. Sposito on 05/22/2019 at 11:48. Target 3.5 esignature user ID: kas02648

Data file: /chem/HP23297.i/19may21b.b/4y21s72.d Injection date and time: **22-MAY-2019 03:57**
Data file Sample Info. Line: 92J03;1058216;1;0;;JCV92;;;4y21b71; Instrument ID: **HP23297.i** Batch: **4191415AA**
Date, time and analyst ID of latest file update: 22-May-2019 11:48 kas02648

Blank Data file reference: **/chem/HP23297.i/19may21b.b/4y21b71.d**

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 08:03
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may21b.b/4y21c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

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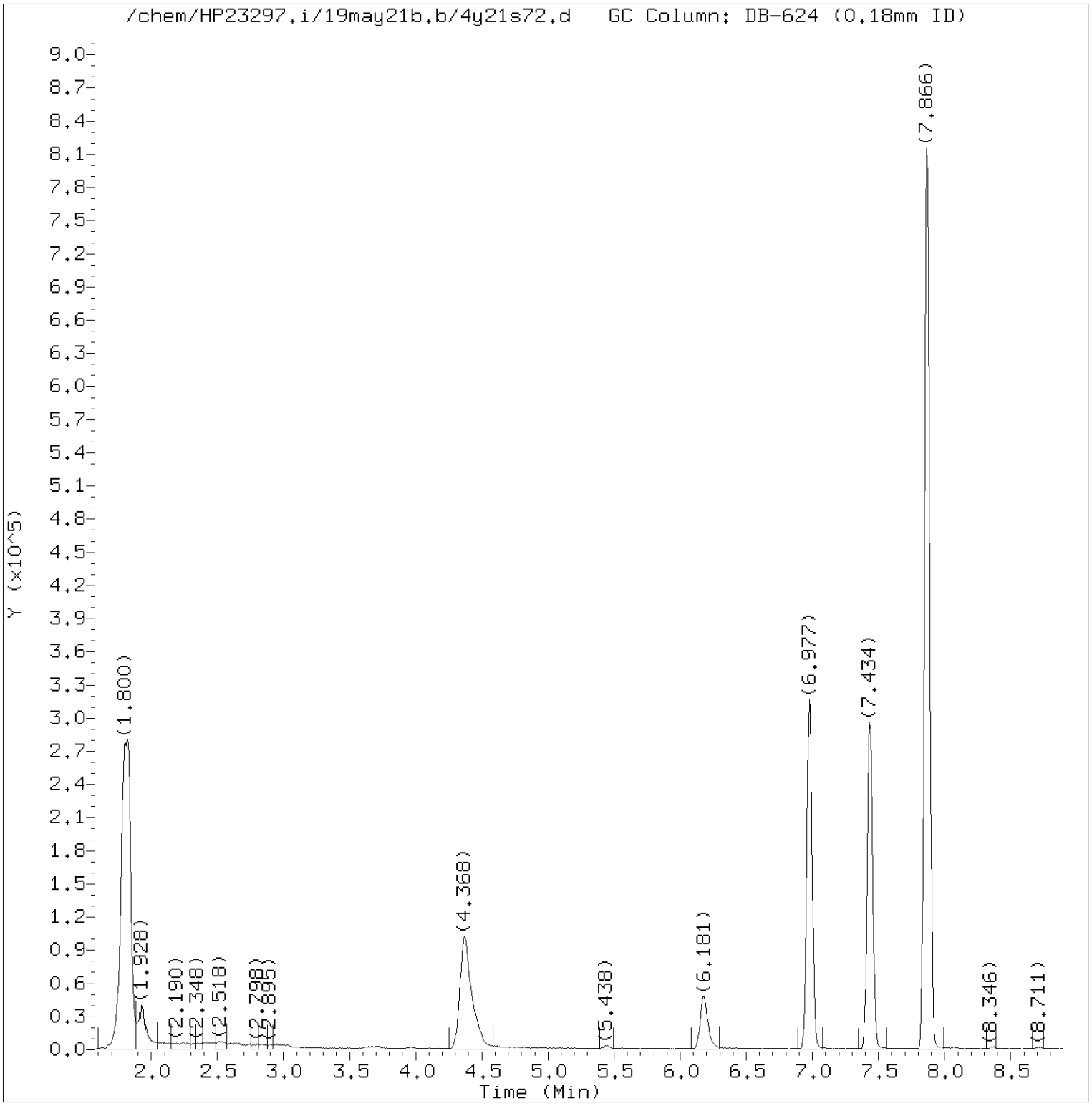
Secondary review performed and digitally signed by Marla S. Brewer on 05/22/2019 at 15:09. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

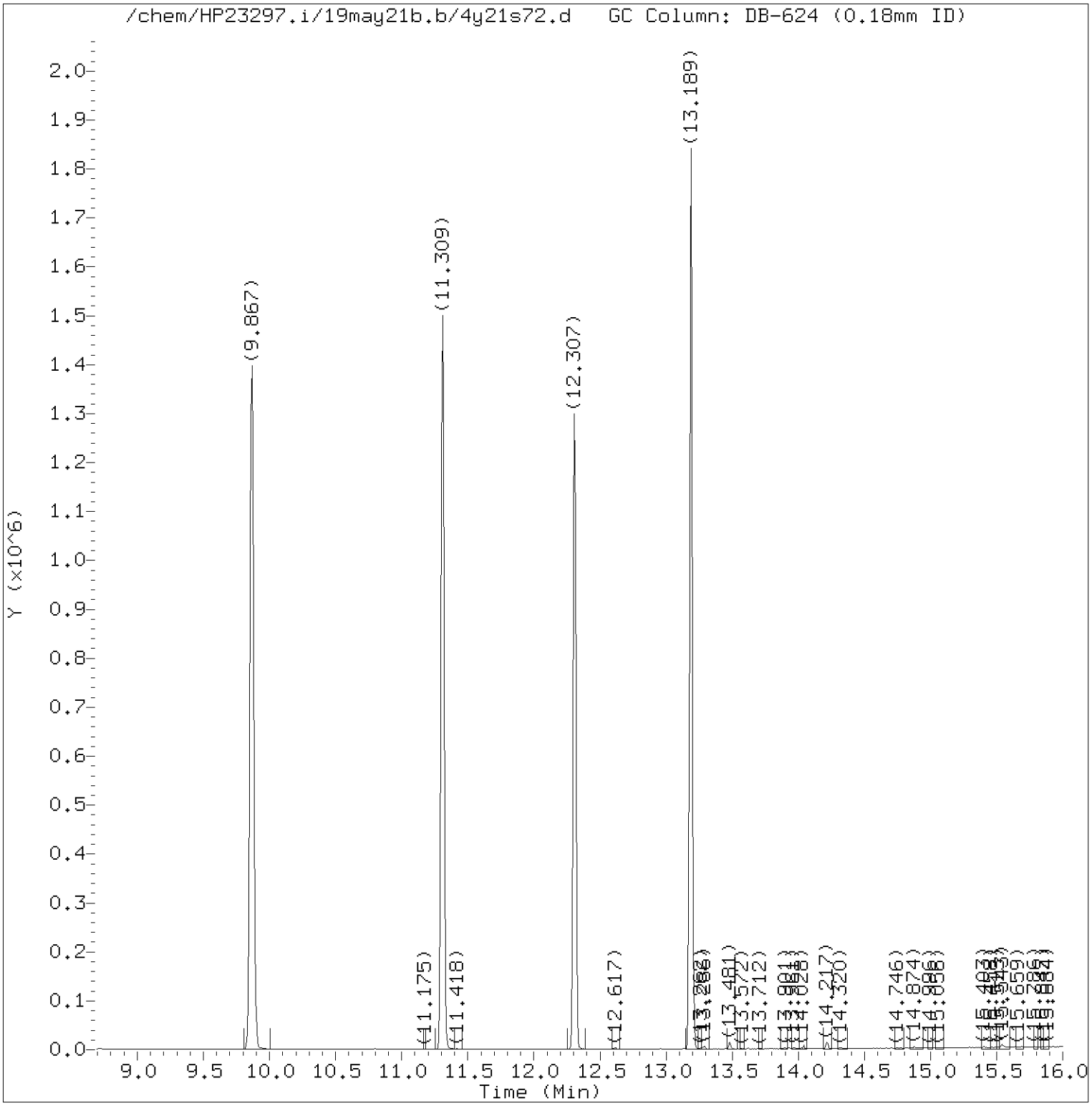
Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s72.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 03:57 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 08:03
Date, time and analyst ID of latest file update: 22-May-2019 11:48 kas02648

Sample Name: 92J03 Lab Sample ID: 1058216

Digitally signed by Kevin A. Sposito
on 05/22/2019 at 11:48.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s72.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 03:57 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 08:03
Date, time and analyst ID of latest file update: 22-May-2019 11:48 kas02648

Sample Name: 92J03 Lab Sample ID: 1058216

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on 05/22/2019 at 11:48.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s72.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 03:57 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 08:03
Date, time and analyst ID of latest file update: 22-May-2019 11:48 kas02648

Sample Name: 92J03 Lab Sample ID: 1058216

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
18) Acetone	(1)	3.692	58	1104	1.087
23) Carbon Disulfide	(2)	3.972	76	2912	0.209
29)*t-Butyl alcohol-d10	(1)	4.368	65	364784	250.000
36) 1,1-Dichloroethane	(2)	5.444	63	5548	0.640
52)$Dibromofluoromethane	(2)	6.977	113	268641	48.687
53) 1,1,1-Trichloroethane	(2)	6.984	97	23629	3.306
57)$1,2-Dichloroethane-d4	(2)	7.440	102	68583	50.868
66)*Fluorobenzene	(2)	7.866	96	1119407	50.000
83)$Toluene-d8	(3)	9.867	98	1125001	49.923
100)*Chlorobenzene-d5	(3)	11.309	117	878020	50.000
114)$4-Bromofluorobenzene	(3)	12.307	95	402360	46.844
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	469364	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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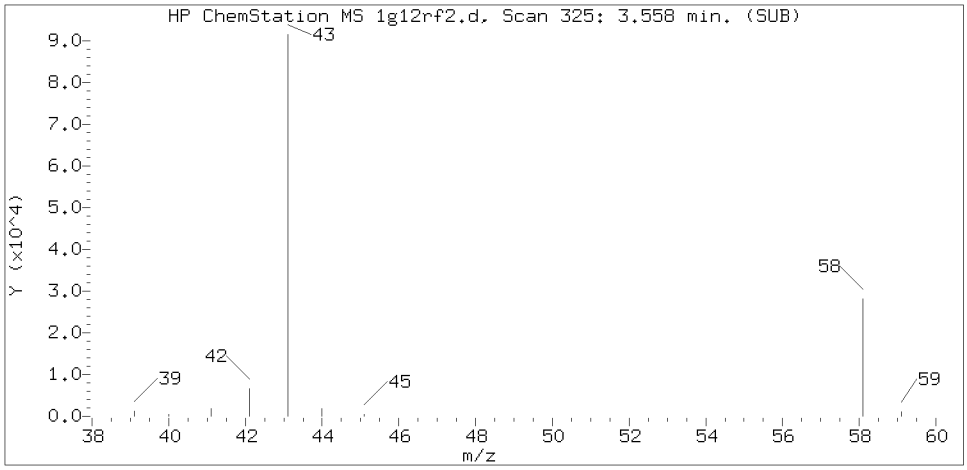
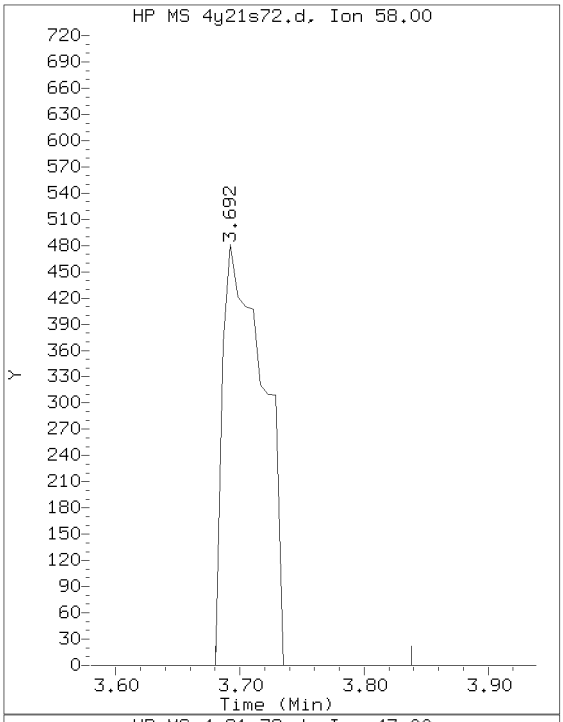
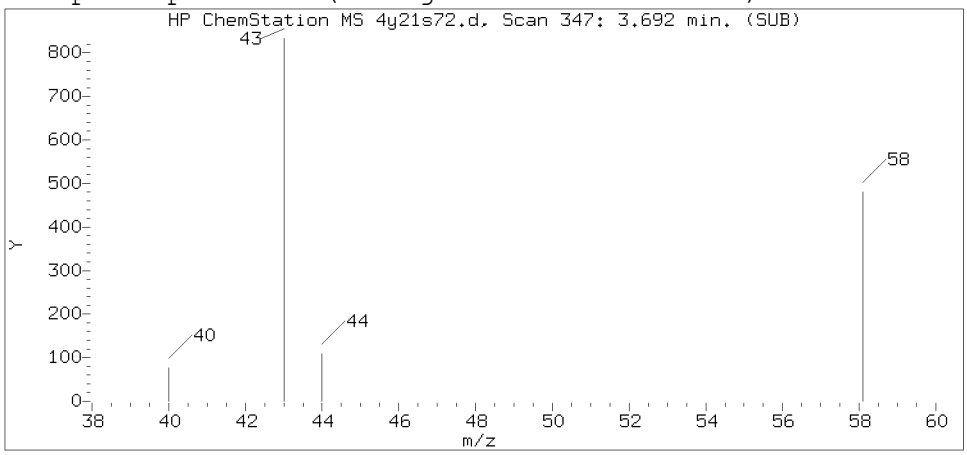
on 05/22/2019 at 11:48.
Target 3.5 esignature user ID: kas02648

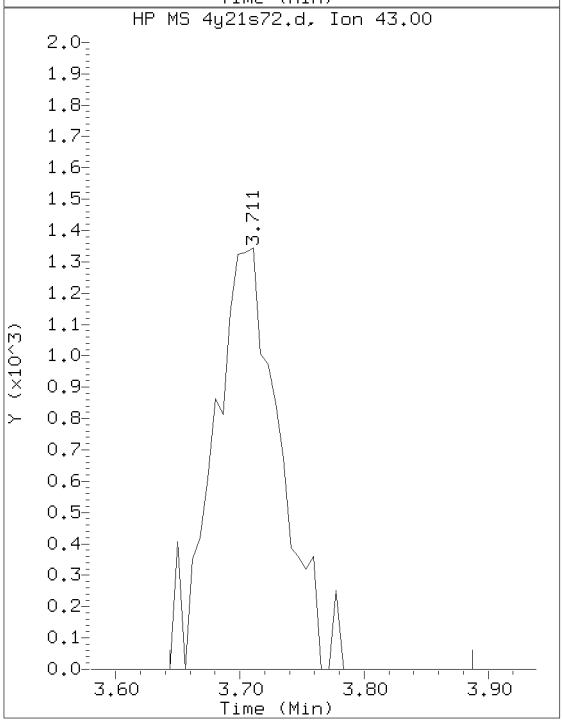
Reference Standard Spectrum for Acetone



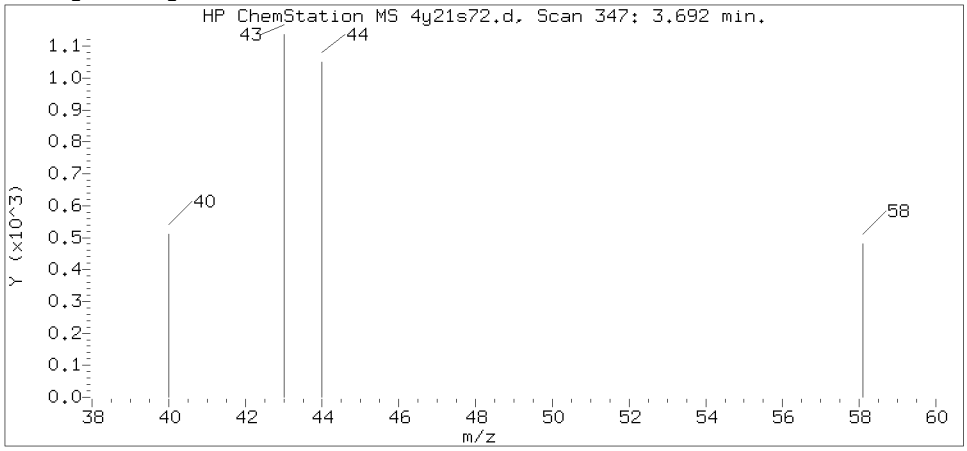


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP23297.i/19may21b.b/4y21s72.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 03:57 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 08:03
Date, time and analyst ID of latest file update: 22-May-2019 11:48 kas02648

Sample Name: 92J03 Lab Sample ID: 1058216

Compound Number	: 18
Compound Name	: Acetone
Scan Number	: 347
Retention Time (minutes)	: 3.692
Relative Retention Time	:-0.00022
Quant Ion	: 58.00
Area (flag)	: 1104
On-Column Amount (ng)	: 1.0870

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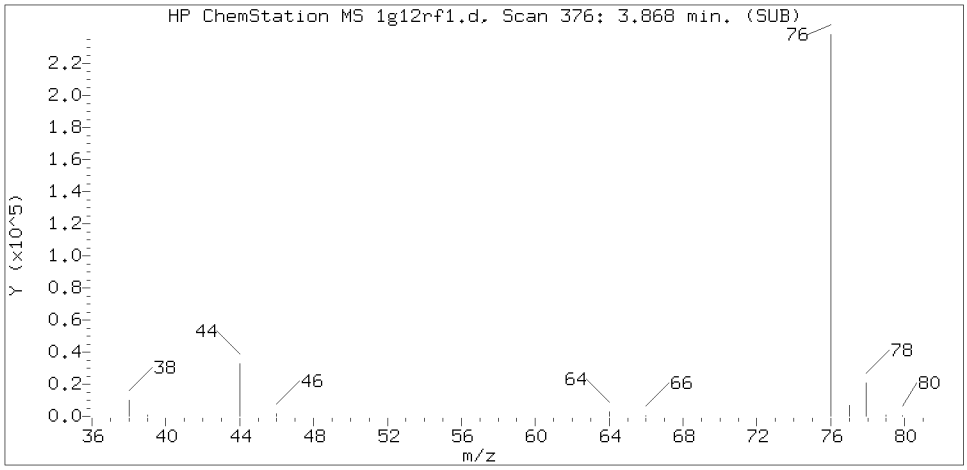
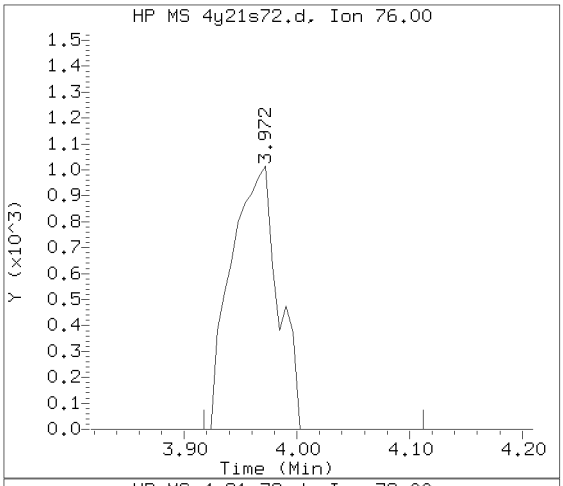
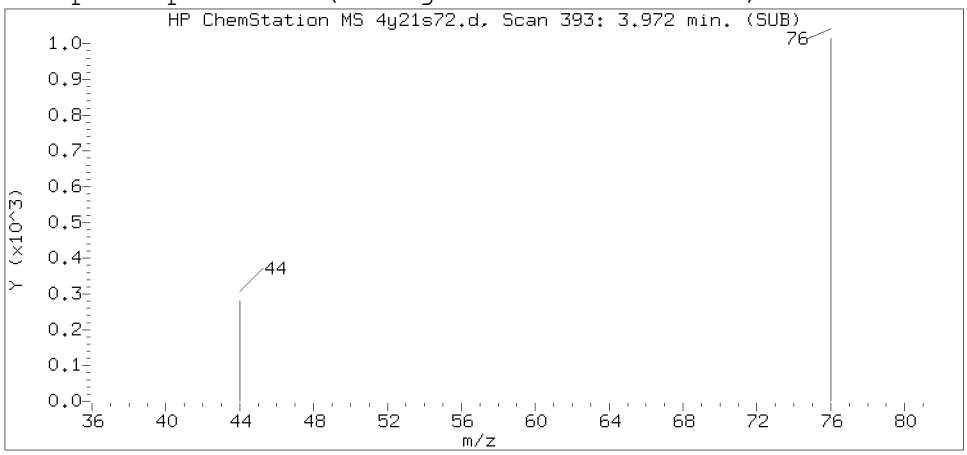
Target 3.5 esignature user ID: kas02648

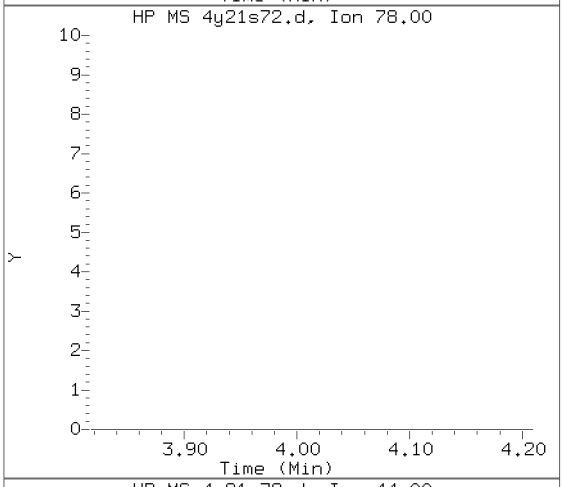
Reference Standard Spectrum for Carbon Disulfide



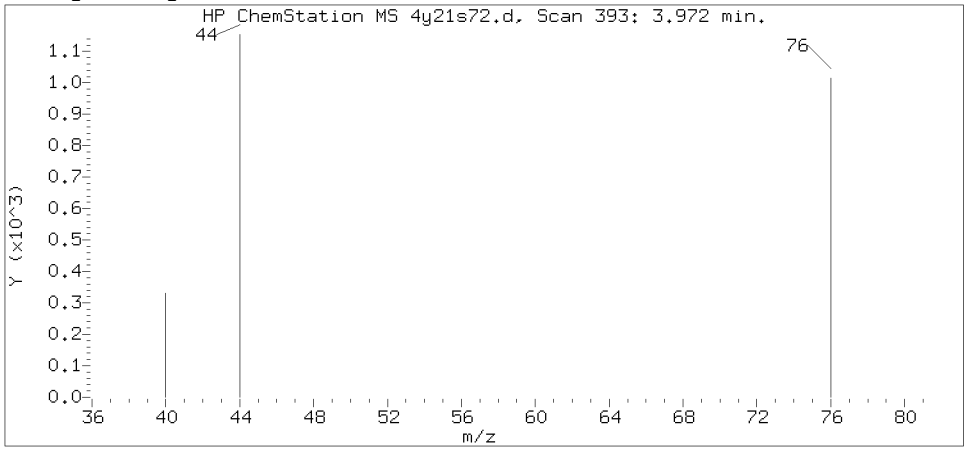


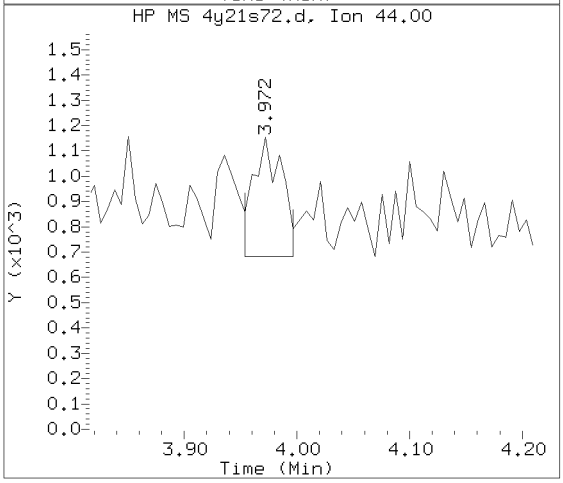
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may21b.b/4y21s72.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 03:57 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 08:03
Date, time and analyst ID of latest file update: 22-May-2019 11:48 kas02648

Sample Name: 92J03 Lab Sample ID: 1058216

Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 393
Retention Time (minutes): 3.972
Relative Retention Time :-0.00233
Quant Ion : 76.00
Area (flag) : 2912
On-Column Amount (ng) : 0.2092

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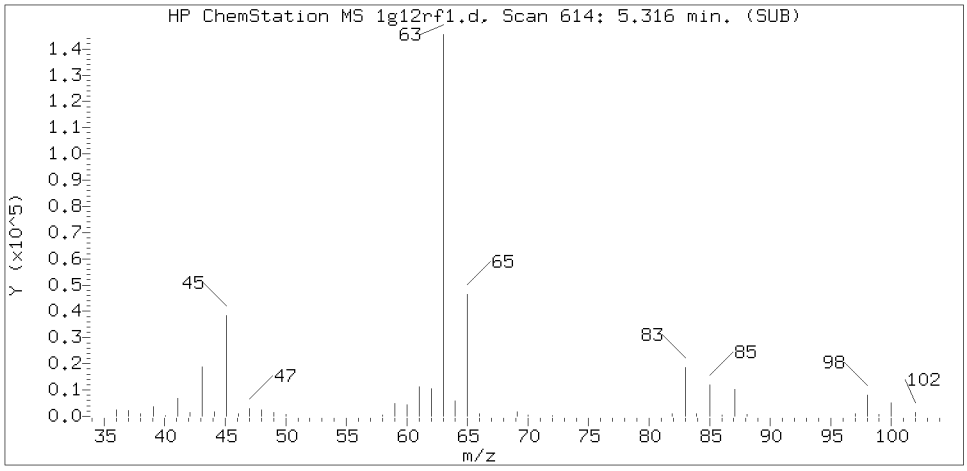
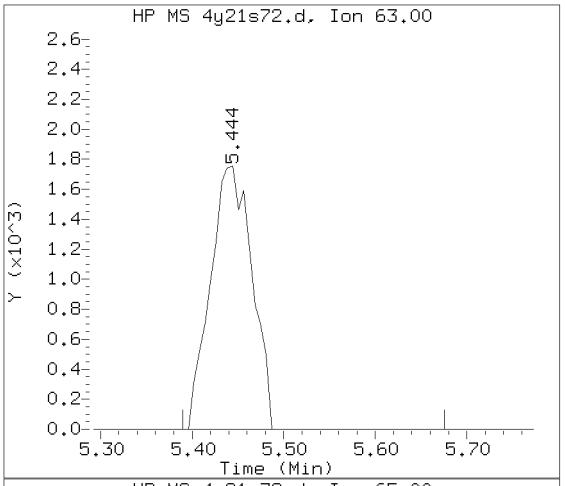
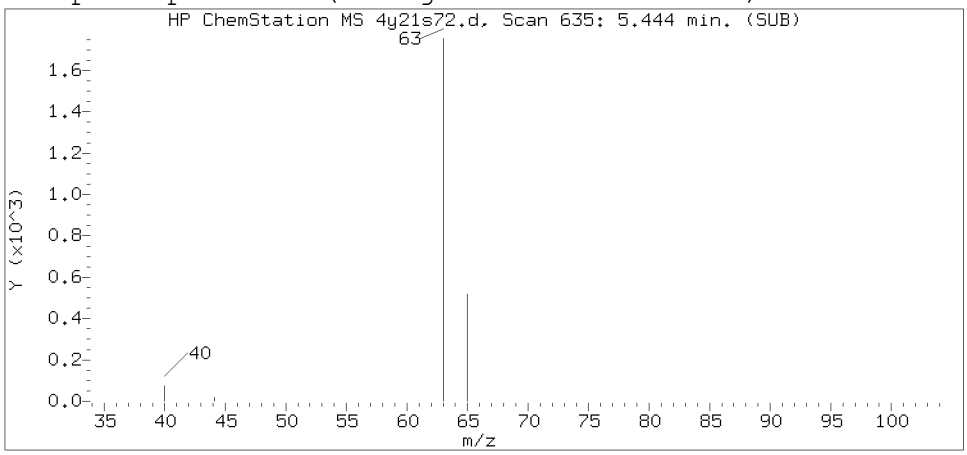
Target 3.5 esignature user ID: kas02648

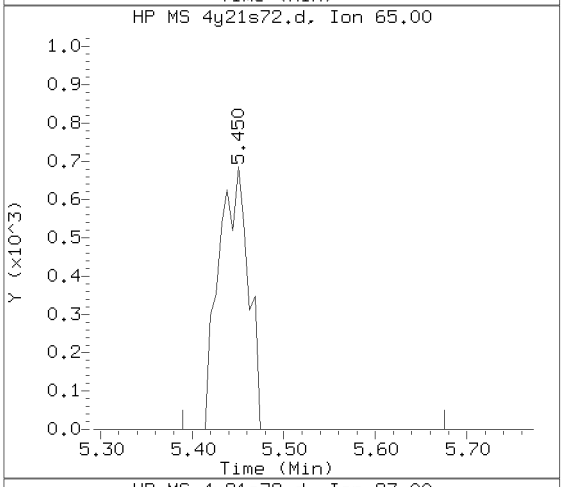
Reference Standard Spectrum for 1,1-Dichloroethane



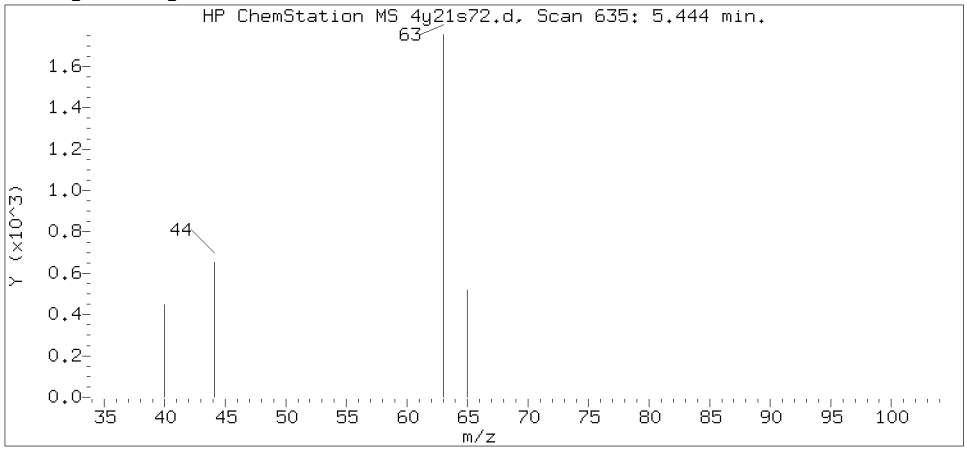


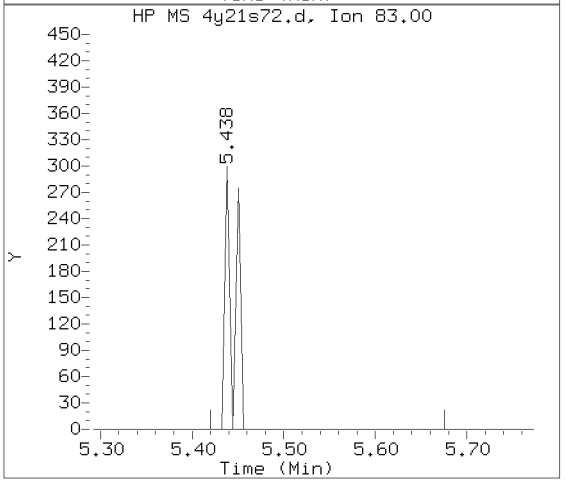
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may21b.b/4y21s72.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 03:57 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 08:03
Date, time and analyst ID of latest file update: 22-May-2019 11:48 kas02648

Sample Name: 92J03 Lab Sample ID: 1058216

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 635
Retention Time (minutes): 5.444
Relative Retention Time :-0.00155
Quant Ion : 63.00
Area (flag) : 5548
On-Column Amount (ng) : 0.6399

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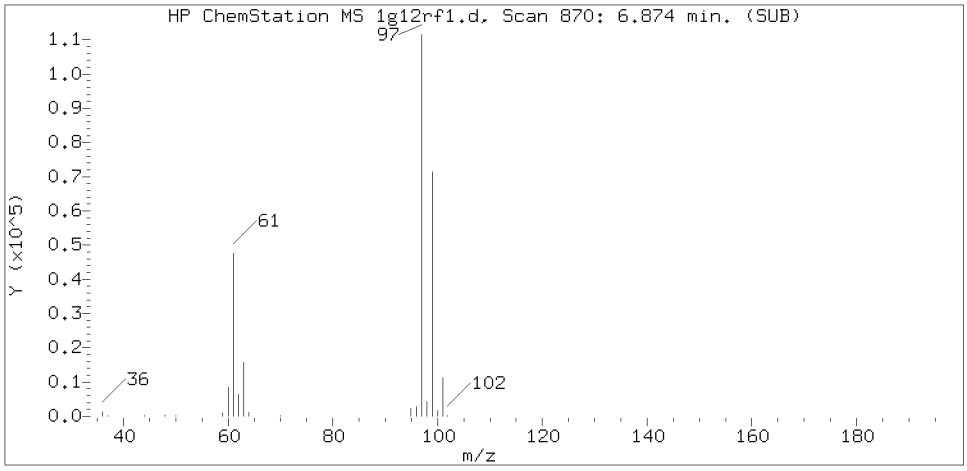
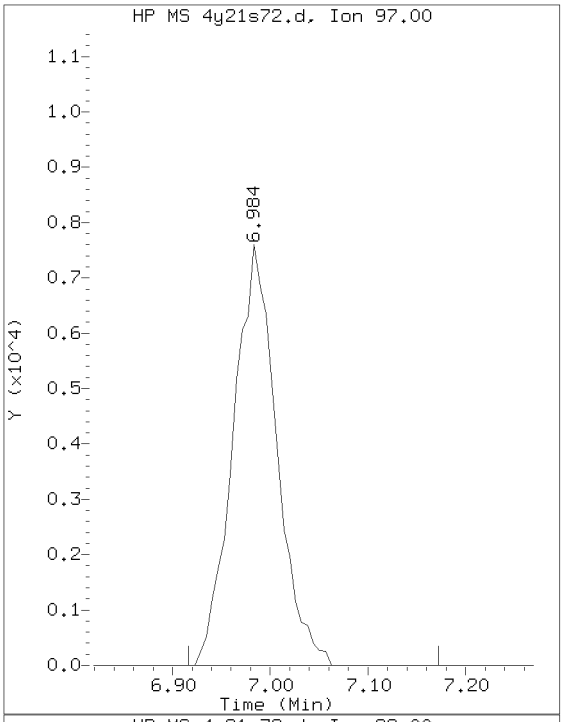
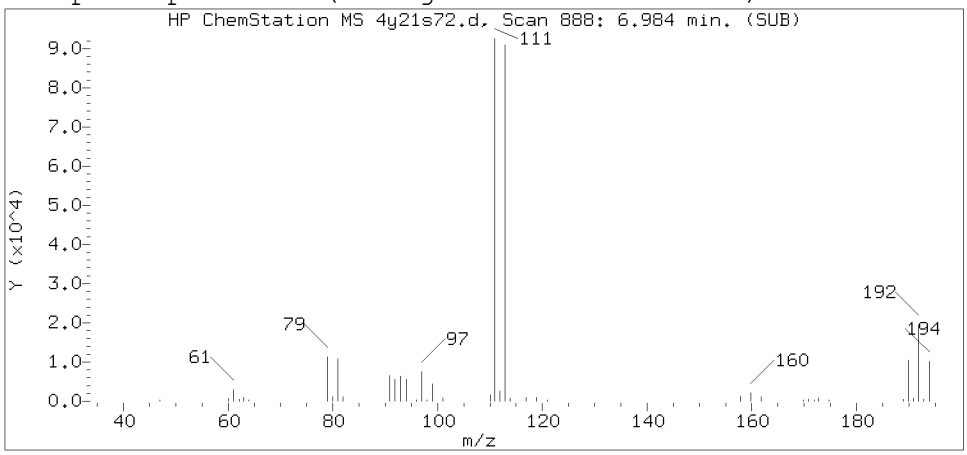
Target 3.5 esignature user ID: kas02648

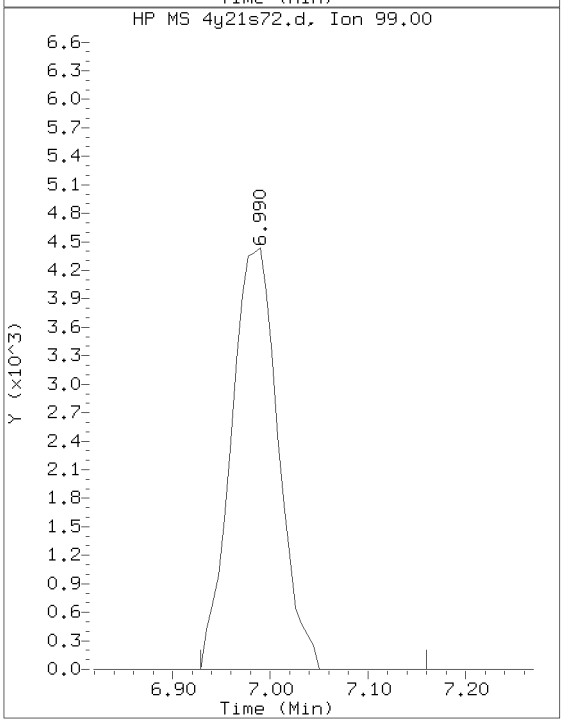
Reference Standard Spectrum for 1,1,1-Trichloroethane



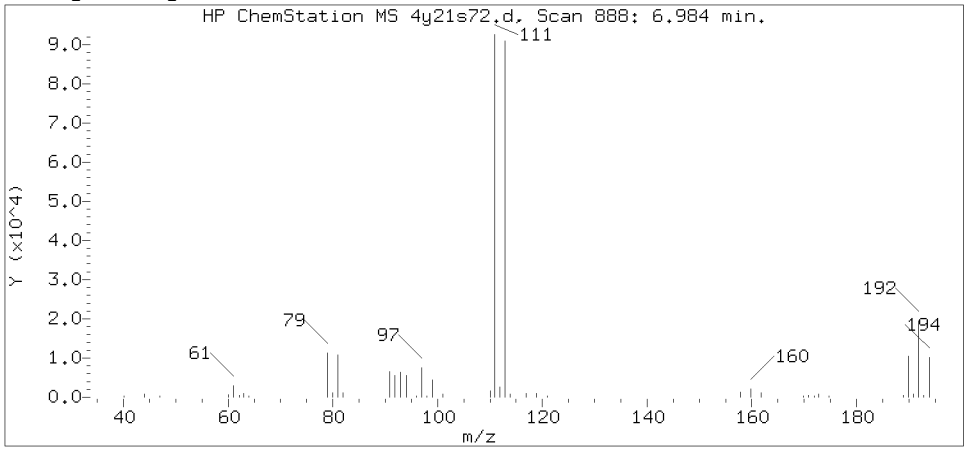


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP23297.i/19may21b.b/4y21s72.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 03:57 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 08:03
Date, time and analyst ID of latest file update: 22-May-2019 11:48 kas02648

Sample Name: 92J03 Lab Sample ID: 1058216

Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 888
Retention Time (minutes): 6.984
Relative Retention Time :-0.00078
Quant Ion : 97.00
Area (flag) : 23629
On-Column Amount (ng) : 3.3058

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Target 3.5 esignature user ID: kas02648

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

92J04

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058219

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may21b.b/4y21s76.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may21b.b/4y21s76.d
Injection date and time: **22-MAY-2019 05:50**
Data file Sample Info. Line: 92J04;1058219;1;0;;JCV92;;;4y21b71;
Instrument ID: **HP23297.i** Batch: **4191415AA**
Date, time and analyst ID of latest file update: 22-May-2019 06:08 Automation

Blank Data file reference: **/chem/HP23297.i/19may21b.b/4y21b71.d**

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-MAY-2019 22:23
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may21b.b/4y21c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.367(-0.006)	458	65	376603 (-6)	250.00	
66) Fluorobenzene	7.866(0.000)	1033	96	1146234 (-5)	50.00	
100) Chlorobenzene-d5	11.309(0.000)	1599	117	889099 (-7)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189(0.000)	1908	152	485230 (-7)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.971(0.000)	113	274260	48.542	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434(-0.001)	102	70794	51.279	103%		80 - 120
83) Toluene-d8	(3)	9.867(0.000)	98	1154180	50.580	101%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.307(0.000)	95	411260	47.284	95%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)			Not Detected					0.2	1
75) 1,4-Dioxane	(1)			Not Detected					29	250
88) Toluene	(3)			Not Detected					0.2	1
93) Tetrachloroethene	(3)			Not Detected					0.2	1
104) Ethylbenzene	(3)			Not Detected					0.4	1
106) m+p-Xylene	(3)			Not Detected					1	5
107) o-Xylene	(3)			Not Detected					0.4	1
108) Xylene (Total)	(3)			Not Detected					1	5
138) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
148) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Kevin A. Sposito on 05/22/2019 at 11:45. Target 3.5 esignature user ID: kas02648

Data file: /chem/HP23297.i/19may21b.b/4y21s76.d Injection date and time: **22-MAY-2019 05:50**
Data file Sample Info. Line: 92J04;1058219;1;0;;JCV92;;;4y21b71; Instrument ID: **HP23297.i** Batch: **4191415AA**
Date, time and analyst ID of latest file update: 22-May-2019 06:08 Automation

Blank Data file reference: **/chem/HP23297.i/19may21b.b/4y21b71.d**

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-MAY-2019 22:23
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may21b.b/4y21c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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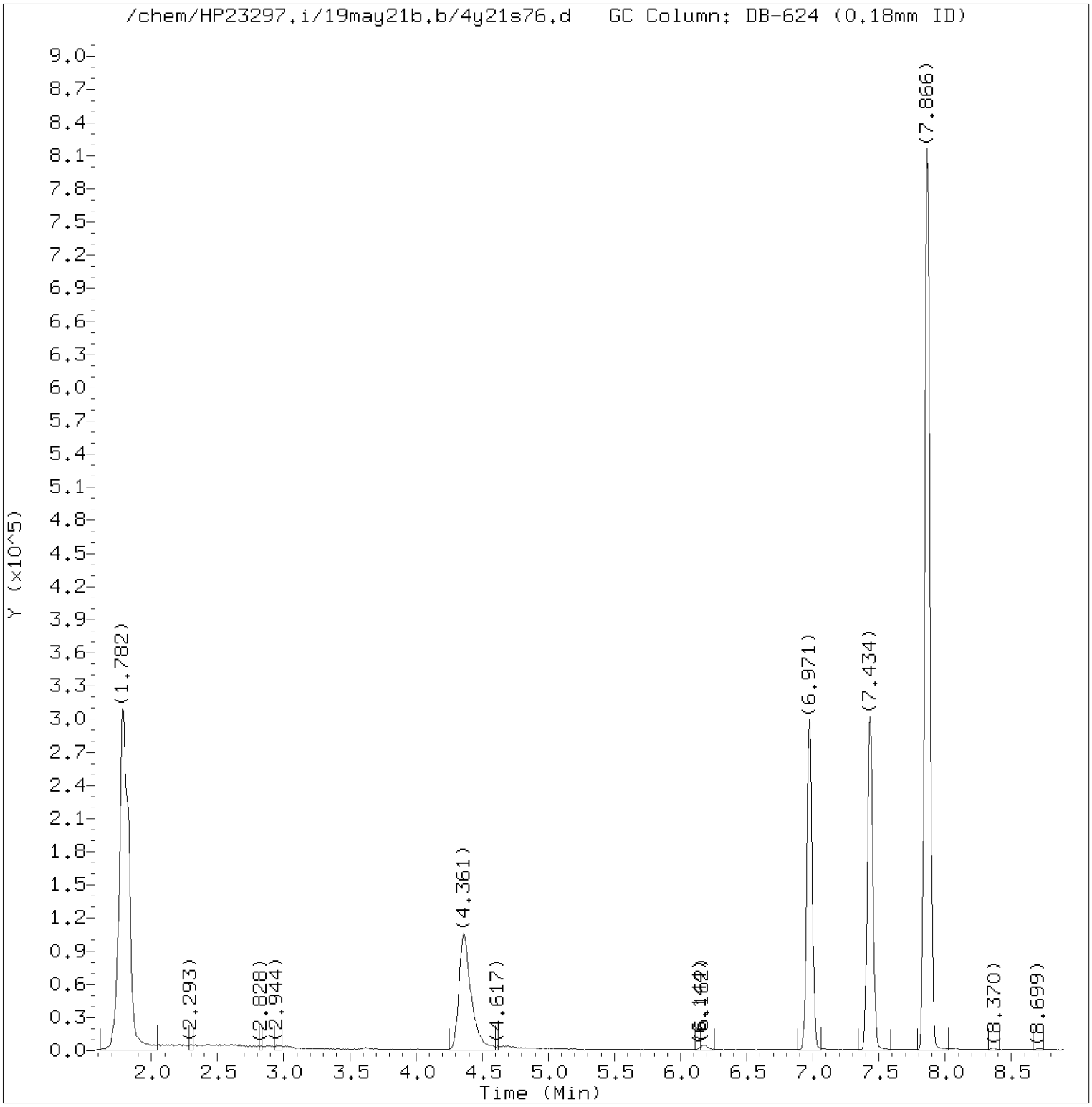
Total number of targets = 24

Digitally signed by Kevin A. Sposito on 05/22/2019 at 11:45. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Marla S. Brewer on 05/22/2019 at 15:09. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

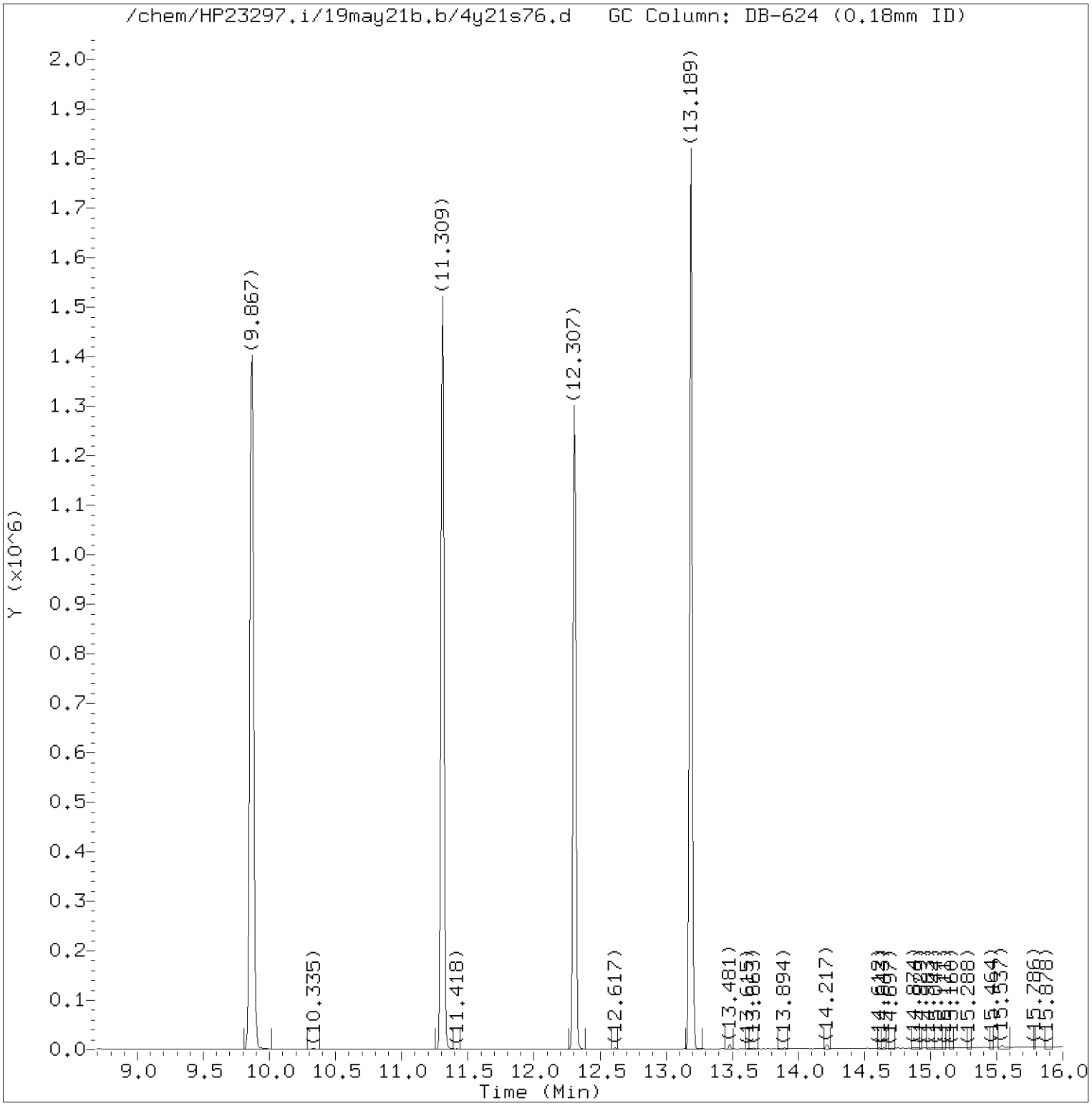
Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s76.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 05:50 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 06:08 Automation

Sample Name: 92J04 Lab Sample ID: 1058219

Digitally signed by Kevin A. Sposito
on 05/22/2019 at 11:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s76.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 05:50 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 06:08 Automation

Sample Name: 92J04 Lab Sample ID: 1058219

Digitally signed by Kevin A. Sposito
on 05/22/2019 at 11:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s76.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 05:50 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 06:08 Automation

Sample Name: 92J04 Lab Sample ID: 1058219

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.367	65	376603	250.000
52)$Dibromofluoromethane	(2)	6.971	113	274260	48.542
57)$1,2-Dichloroethane-d4	(2)	7.434	102	70794	51.279
66)*Fluorobenzene	(2)	7.866	96	1146234	50.000
83)$Toluene-d8	(3)	9.867	98	1154180	50.580
100)*Chlorobenzene-d5	(3)	11.309	117	889099	50.000
114)$4-Bromofluorobenzene	(3)	12.307	95	411260	47.284
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	485230	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/22/2019 at 11:45.
Target 3.5 esignature user ID: kas02648

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
92J05

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058220

Sample wt/vol: 0.50 (g/mL) mL Lab File ID: HP23297.i/19may21b.b/4y21s77.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	10	U
75-35-4	1,1-Dichloroethene	10	U
67-64-1	Acetone	200	U
76-13-1	Freon 113	100	U
75-15-0	Carbon Disulfide	50	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	100	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U
123-91-1	1,4-Dioxane	2500	U
108-88-3	Toluene	10	U
127-18-4	Tetrachloroethene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (Total)	50	U
95-50-1	1,2-Dichlorobenzene	50	U
91-20-3	Naphthalene	50	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may21b.b/4y21s77.d
Data file Sample Info. Line: 92J05;1058220;1;0;;JCV92;;;4y21b71;
Date, time and analyst ID of latest file update: 22-May-2019 06:30 Automation

Injection date and time: **22-MAY-2019 06:13**
Instrument ID: **HP23297.i** Batch: **4191415AA**

Blank Data file reference: **/chem/HP23297.i/19may21b.b/4y21b71.d**

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-MAY-2019 22:23
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may21b.b/4y21c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 0.5 ml

Analysis Comments:2708

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.362	(0.000)	457	65	346247	(-13)	250.00	
66) Fluorobenzene	7.866	(0.000)	1033	96	1140338	(-5)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	880770	(-8)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189	(0.000)	1908	152	467723	(-10)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.971	(0.000)	113	268831	47.827	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434	(-0.001)	102	67698	49.291	99%		80 - 120
83) Toluene-d8	(3)	9.867	(0.000)	98	1144011	50.608	101%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.307	(0.000)	95	404200	46.911	94%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					2	10
17) 1,1-Dichloroethene	(2)				Not Detected					2	10
18) Acetone	(1)				Not Detected					7	200
19) Freon 113	(2)				Not Detected					2	100
23) Carbon Disulfide	(2)				Not Detected					2	50
28) Methylene Chloride	(2)				Not Detected					3	10
32) trans-1,2-Dichloroethene	(2)				Not Detected					2	10
36) 1,1-Dichloroethane	(2)				Not Detected					2	10
42) cis-1,2-Dichloroethene	(2)				Not Detected					2	10
44) 2-Butanone	(2)				Not Detected					3	100
51) Chloroform	(2)				Not Detected					2	10
53) 1,1,1-Trichloroethane	(2)				Not Detected					3	10
60) Benzene	(2)				Not Detected					2	10
61) 1,2-Dichloroethane	(2)				Not Detected					3	10
71) Trichloroethene	(2)				Not Detected					2	10
75) 1,4-Dioxane	(1)				Not Detected					290	2500
88) Toluene	(3)				Not Detected					2	10
93) Tetrachloroethene	(3)				Not Detected					2	10
104) Ethylbenzene	(3)				Not Detected					4	10
106) m+p-Xylene	(3)				Not Detected					10	50
107) o-Xylene	(3)				Not Detected					4	10
108) Xylene (Total)	(3)				Not Detected					10	50
138) 1,2-Dichlorobenzene	(4)				Not Detected					2	50
148) Naphthalene	(4)				Not Detected					10	50

Digitally signed by Kevin A. Sposito on 05/22/2019 at 11:45. Target 3.5 esignature user ID: kas02648

Data file: /chem/HP23297.i/19may21b.b/4y21s77.d Injection date and time: **22-MAY-2019 06:13**
Data file Sample Info. Line: 92J05;1058220;1;0;;JCV92;;;4y21b71; Instrument ID: **HP23297.i** Batch: **4191415AA**
Date, time and analyst ID of latest file update: 22-May-2019 06:30 Automation

Blank Data file reference: **/chem/HP23297.i/19may21b.b/4y21b71.d**

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-MAY-2019 22:23
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may21b.b/4y21c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 0.5 ml

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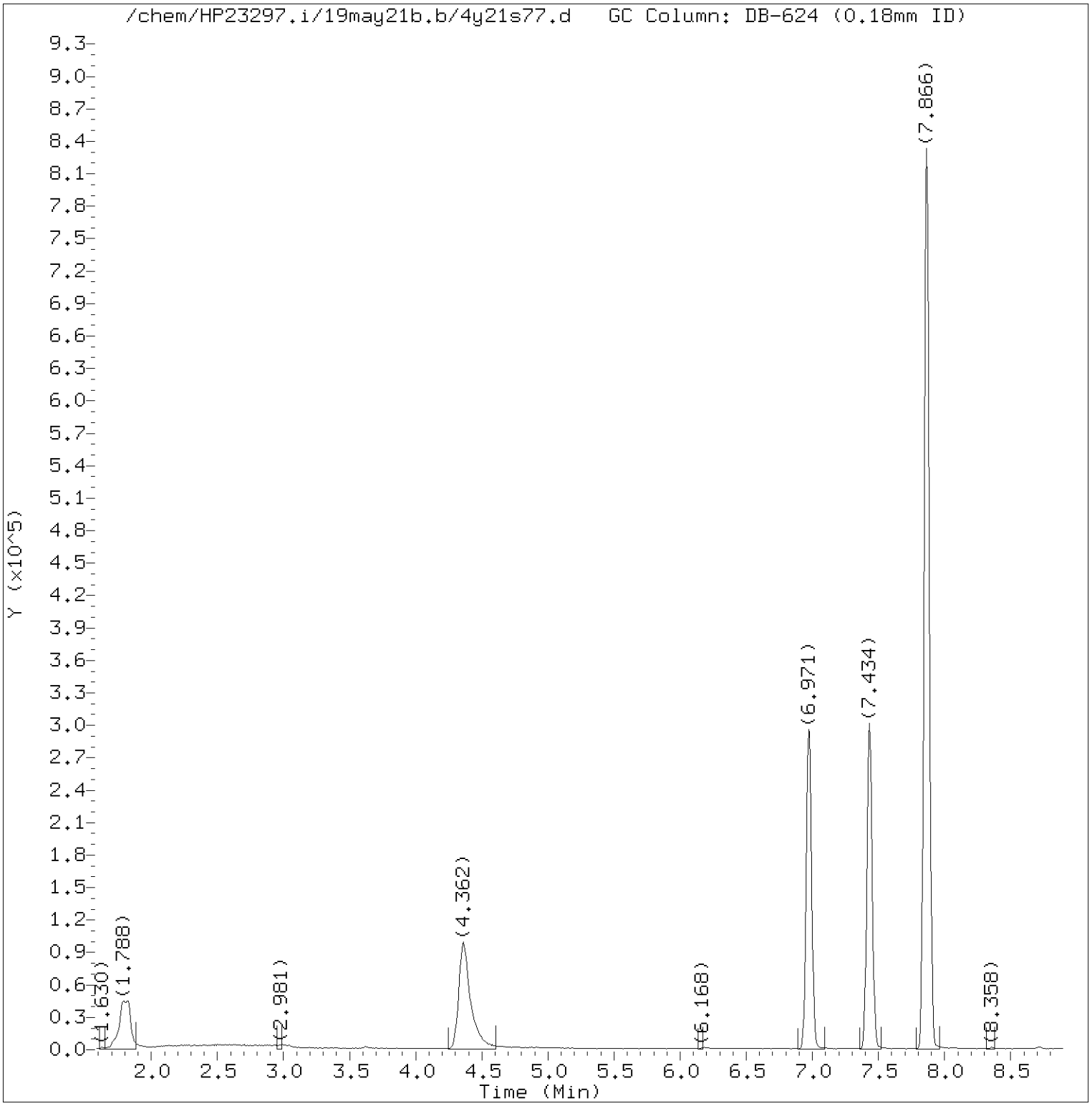
Total number of targets = 24

Digitally signed by Kevin A. Sposito on 05/22/2019 at 11:45. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Marla S. Brewer on 05/22/2019 at 15:09. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

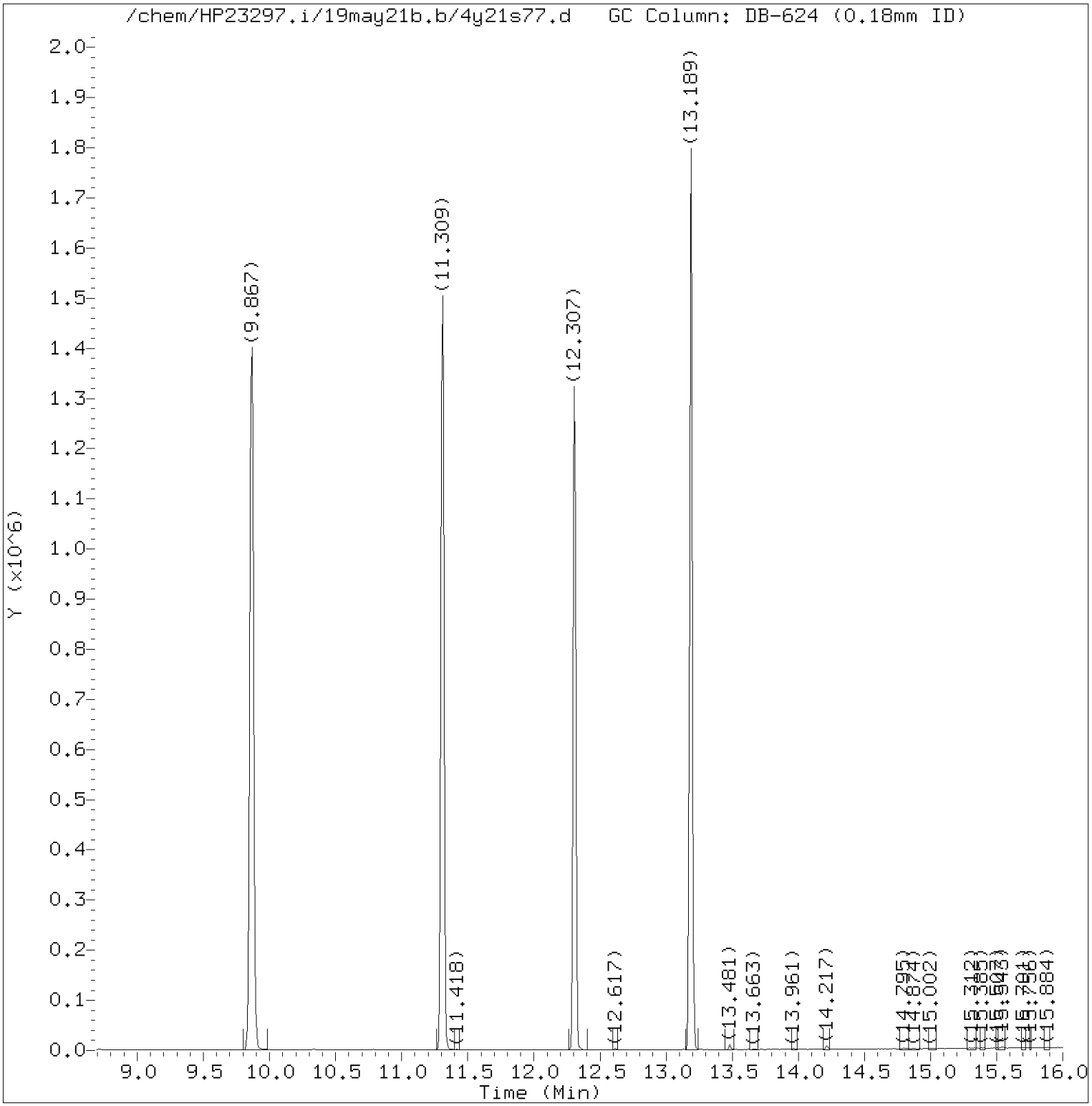
Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s77.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 06:13 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 06:30 Automation

Sample Name: 92J05 Lab Sample ID: 1058220

Digitally signed by Kevin A. Sposito
on 05/22/2019 at 11:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s77.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 06:13 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 06:30 Automation

Sample Name: 92J05 Lab Sample ID: 1058220

Digitally signed by Kevin A. Sposito
on 05/22/2019 at 11:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s77.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 06:13 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 06:30 Automation

Sample Name: 92J05 Lab Sample ID: 1058220

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.362	65	346247	250.000
52)$Dibromofluoromethane	(2)	6.971	113	268831	47.827
57)$1,2-Dichloroethane-d4	(2)	7.434	102	67698	49.291
66)*Fluorobenzene	(2)	7.866	96	1140338	50.000
83)$Toluene-d8	(3)	9.867	98	1144011	50.608
100)*Chlorobenzene-d5	(3)	11.309	117	880770	50.000
114)$4-Bromofluorobenzene	(3)	12.307	95	404200	46.911
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	467723	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/22/2019 at 11:45.
Target 3.5 esignature user ID: kas02648

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
92J06

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058221

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may22a.b/ey22s04.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	7	
67-64-1	Acetone	20	U
76-13-1	Freon 113	0.3	J
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	0.2	J
75-34-3	1,1-Dichloroethane	2	
156-59-2	cis-1,2-Dichloroethene	17	
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	66	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	380	E
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	3	
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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92J06 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1058221

Data file: /chem/HP15648.i/19may22a.b/ey22s04.d Injection date and time: **22-MAY-2019 11:39**
Data file Sample Info. Line: 92J06;1058221;1;0;;JCV92;;;ey22b01; Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 14:46 jml01693

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 10:43
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.474(0.000)	244	65	165843 (-3)	250.00	
66) Fluorobenzene	4.736(-0.006)	615	96	1083614 (0)	50.00	
101) Chlorobenzene-d5	7.894(0.000)	1133	117	803718 (-1)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802(0.000)	1446	152	427159 (1)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.072(0.000)	113	237964	47.248	94%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.395(0.000)	102	62949	49.528	99%		80 - 120
84) Toluene-d8	(3)	6.382(0.000)	98	1081221	49.533	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918(0.000)	95	409773	48.833	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	2.096(0.000)	96	30616	7.036	7.04			0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)	2.121(-0.000)	101	1407	0.292	0.29		J	0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)	2.688(0.004)	96	1133	0.231	0.23		J	0.2	1
36) 1,1-Dichloroethane	(2)	3.084(-0.001)	63	13958	1.521	1.52			0.2	1
42) cis-1,2-Dichloroethene	(2)	3.614(-0.000)	96	91293	16.590	16.59			0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	4.102(0.001)	97	529257	65.535	65.54			0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	5.108(0.000)	95	2021933	381.222	381.22		E	0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)	7.059(-0.000)	166	15477	2.849	2.85			0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

E = Compound concentration above calibration range.

Digitally signed by Jason M. Long on 05/22/2019 at 14:49. Target 3.5 esignature user ID: jml01693

Data file: /chem/HP15648.i/19may22a.b/ey22s04.d Injection date and time: **22-MAY-2019 11:39**
Data file Sample Info. Line: 92J06;1058221;1;0;;JCV92;;;ey22b01; Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 14:46 jml01693

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 10:43
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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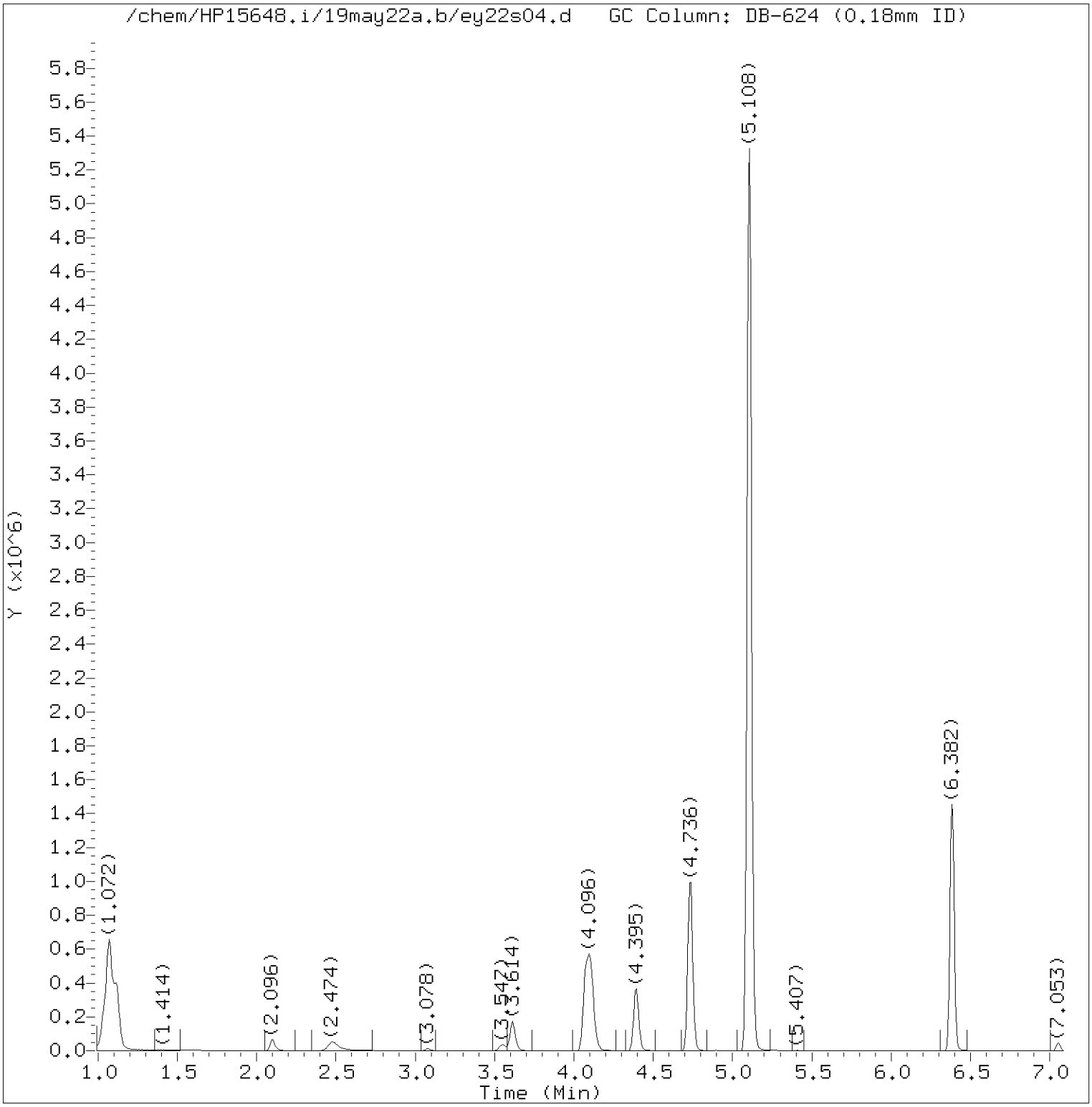
Total number of targets = 24

Digitally signed by Jason M. Long on 05/22/2019 at 14:49. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/23/2019 at 14:19. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s04.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 11:39 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 10:43
Date, time and analyst ID of latest file update: 22-May-2019 14:46 jml01693

Sample Name: 92J06 Lab Sample ID: 1058221

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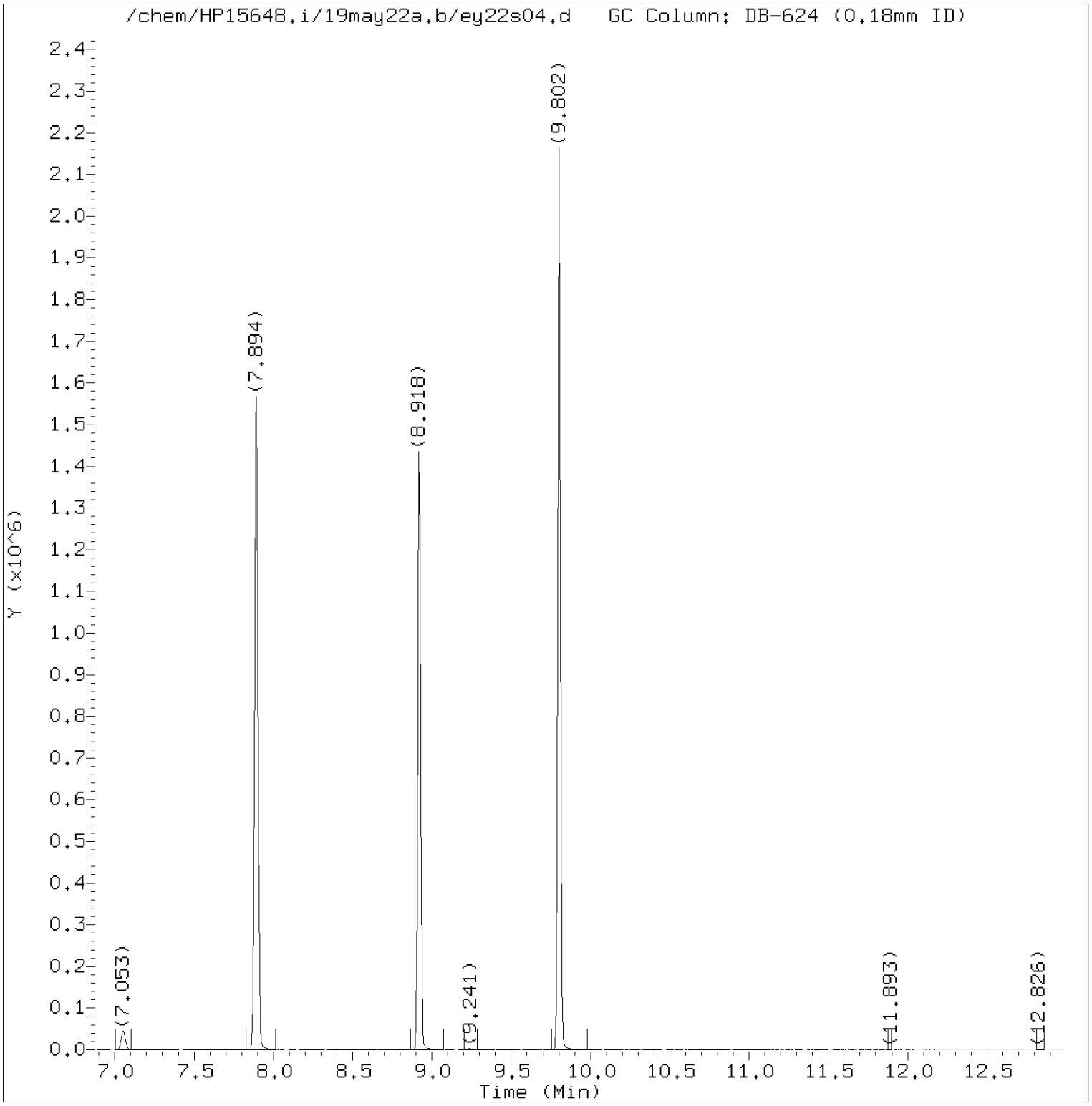
on 05/22/2019 at 14:49.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s04.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 11:39 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 10:43
Date, time and analyst ID of latest file update: 22-May-2019 14:46 jml01693

Sample Name: 92J06 Lab Sample ID: 1058221

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Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s04.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 11:39 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 10:43
Date, time and analyst ID of latest file update: 22-May-2019 14:46 jml01693

Sample Name: 92J06 Lab Sample ID: 1058221

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	2.096	96	30616	7.036
19) Freon 113	(2)	2.121	101	1407	0.292
29)*t-Butyl alcohol-d10	(1)	2.474	65	165843	250.000
32) trans-1,2-Dichloroethene	(2)	2.688	96	1133	0.231
36) 1,1-Dichloroethane	(2)	3.084	63	13958	1.521
42) cis-1,2-Dichloroethene	(2)	3.614	96	91293	16.590
52)$Dibromofluoromethane	(2)	4.072	113	237964	47.248
53) 1,1,1-Trichloroethane	(2)	4.102	97	529257	65.535
57)$1,2-Dichloroethane-d4	(2)	4.395	102	62949	49.528
66)*Fluorobenzene	(2)	4.736	96	1083614	50.000
71) Trichloroethene	(2)	5.108	95	2021933	381.222
84)$Toluene-d8	(3)	6.382	98	1081221	49.533
94) Tetrachloroethene	(3)	7.059	166	15477	2.849
101)*Chlorobenzene-d5	(3)	7.894	117	803718	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	409773	48.833
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	427159	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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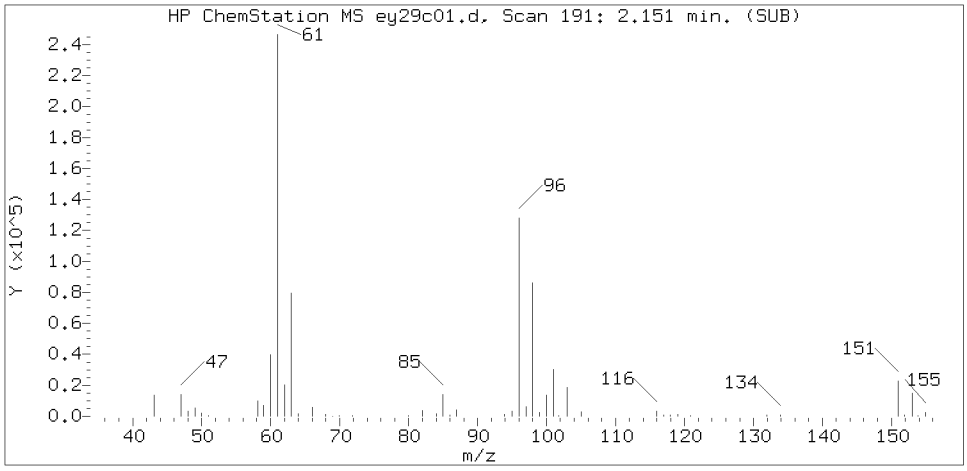
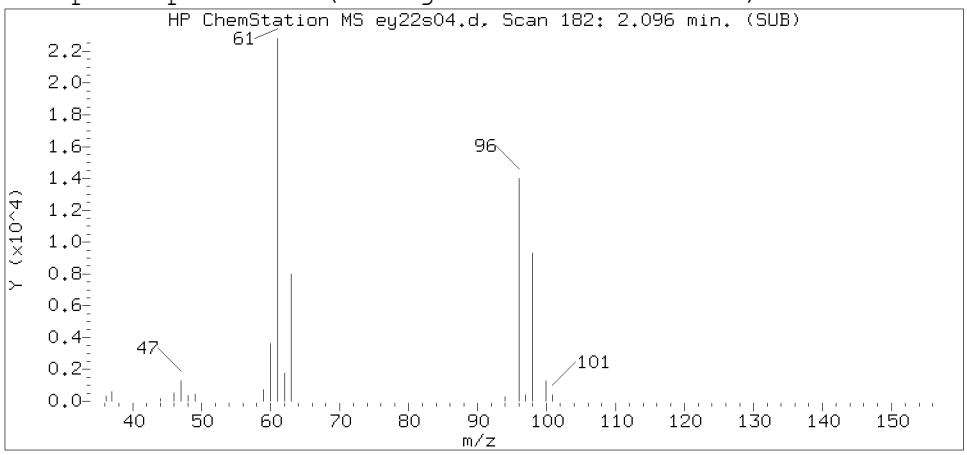
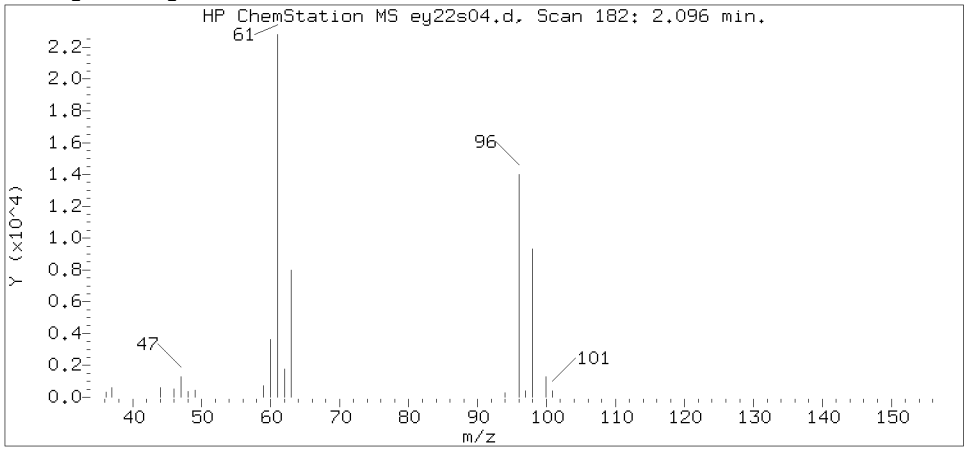
Reference Standard Spectrum for 1,1-Dichloroethene

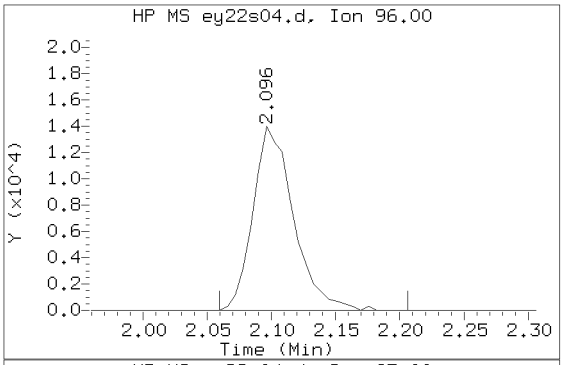


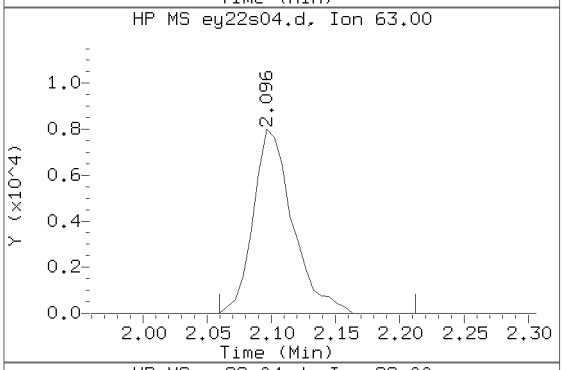
Sample Spectrum (Background Subtracted)

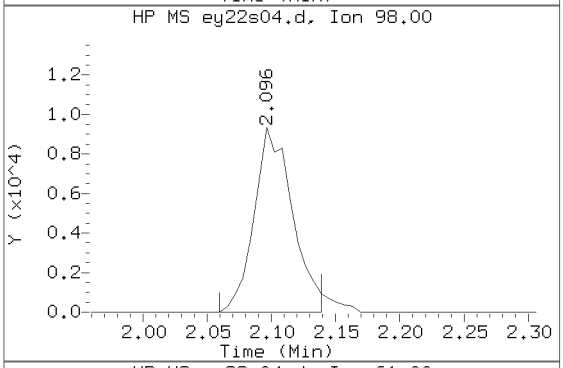


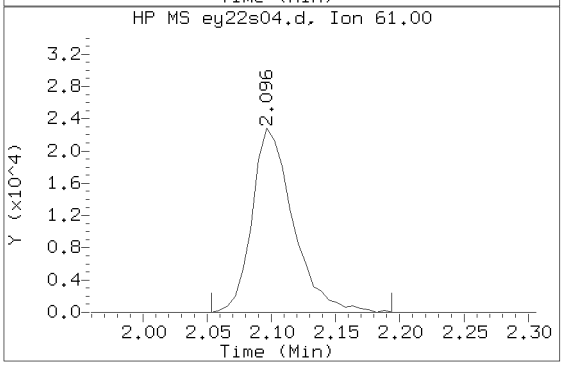
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s04.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 11:39 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 10:43
Date, time and analyst ID of latest file update: 22-May-2019 14:46 jml01693

Sample Name: 92J06 Lab Sample ID: 1058221

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 182
Retention Time (minutes): 2.096
Relative Retention Time : 0.00056
Quant Ion : 96.00
Area (flag) : 30616
On-Column Amount (ng) : 7.0359

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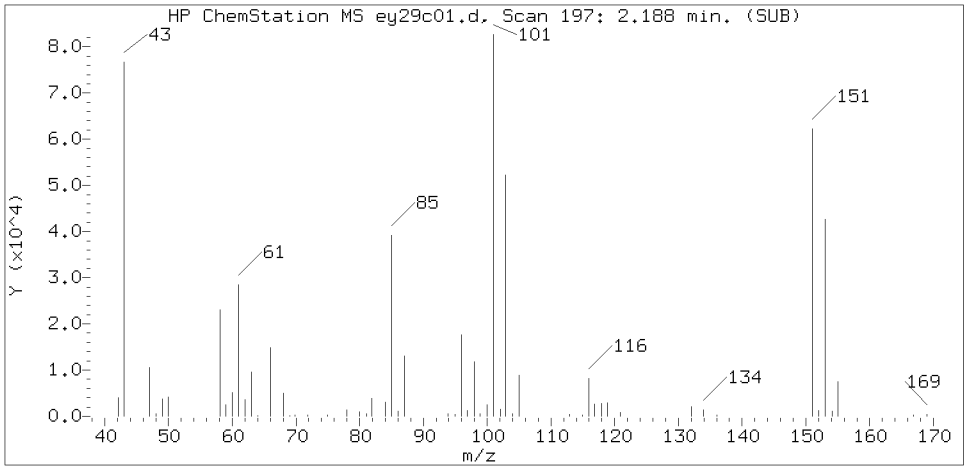
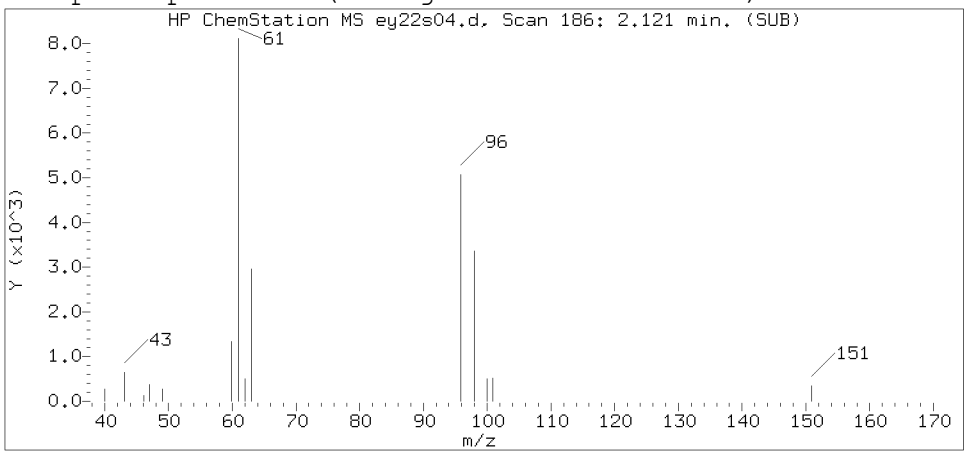
Target 3.5 esignature user ID: jml01693

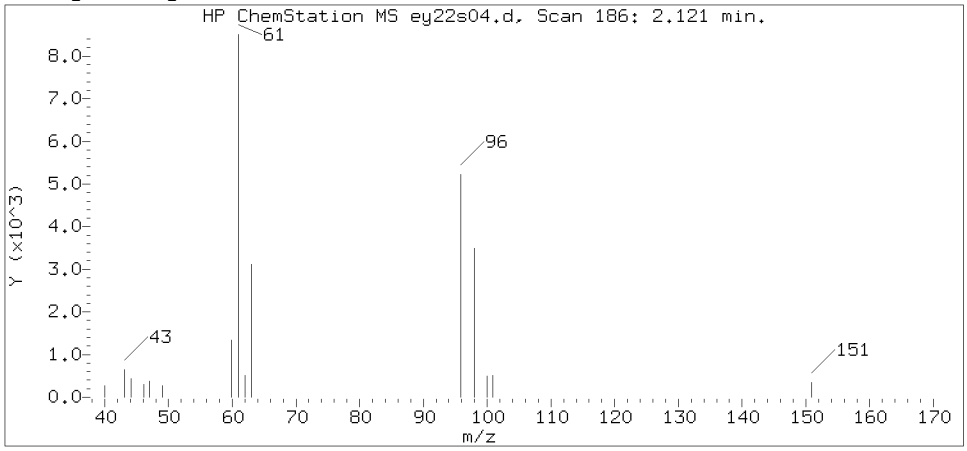
Reference Standard Spectrum for Freon 113

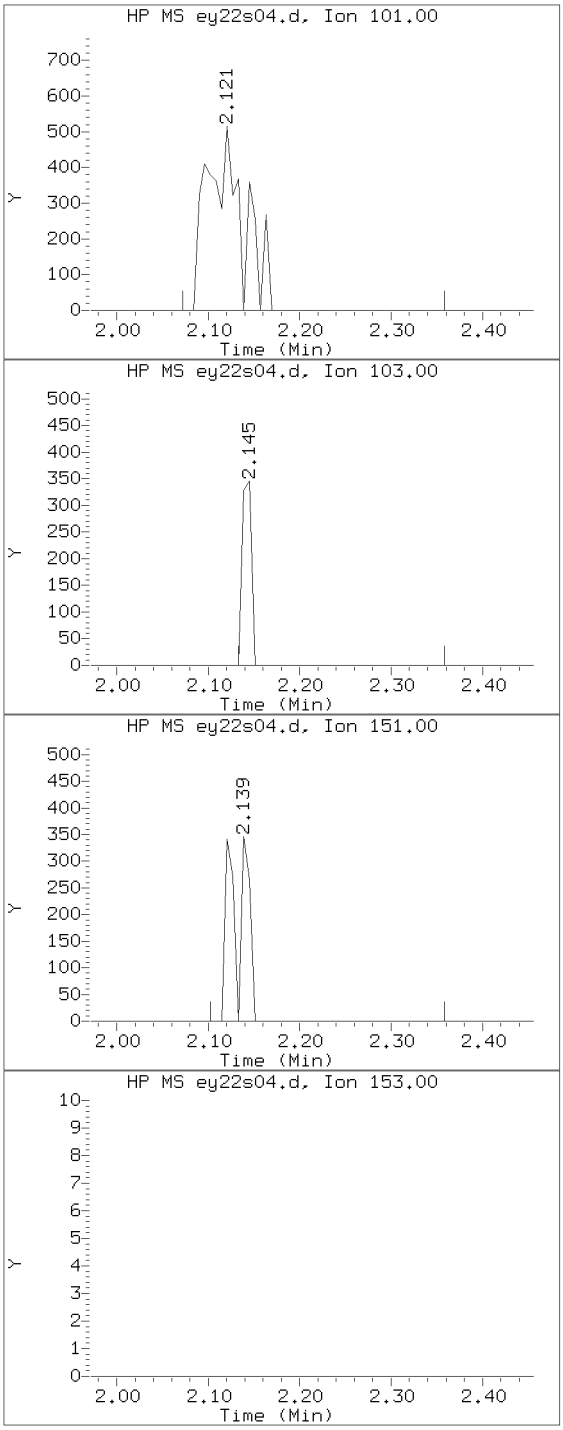


Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19may22a.b/ey22s04.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 11:39 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 10:43
Date, time and analyst ID of latest file update: 22-May-2019 14:46 jml01693

Sample Name: 92J06 Lab Sample ID: 1058221

Compound Number	: 19
Compound Name	: Freon 113
Scan Number	: 186
Retention Time (minutes)	: 2.121
Relative Retention Time	:-0.00072
Quant Ion	: 101.00
Area (flag)	: 1407
On-Column Amount (ng)	: 0.2920

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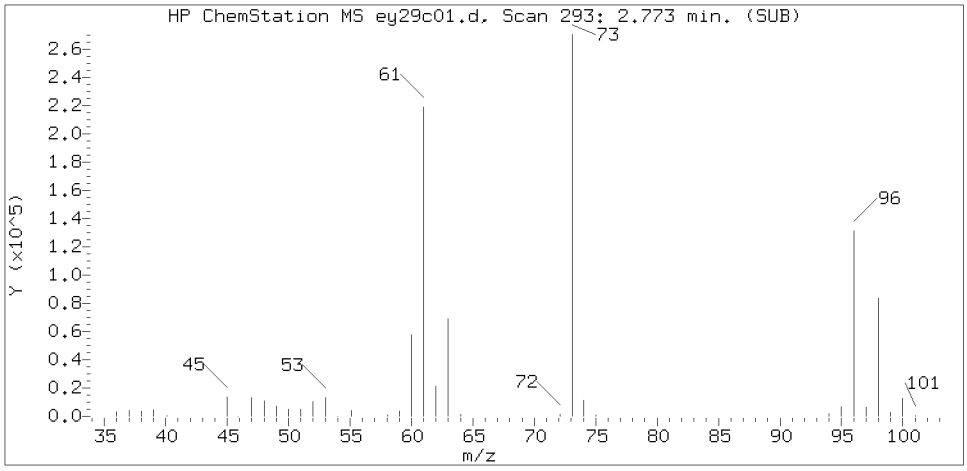
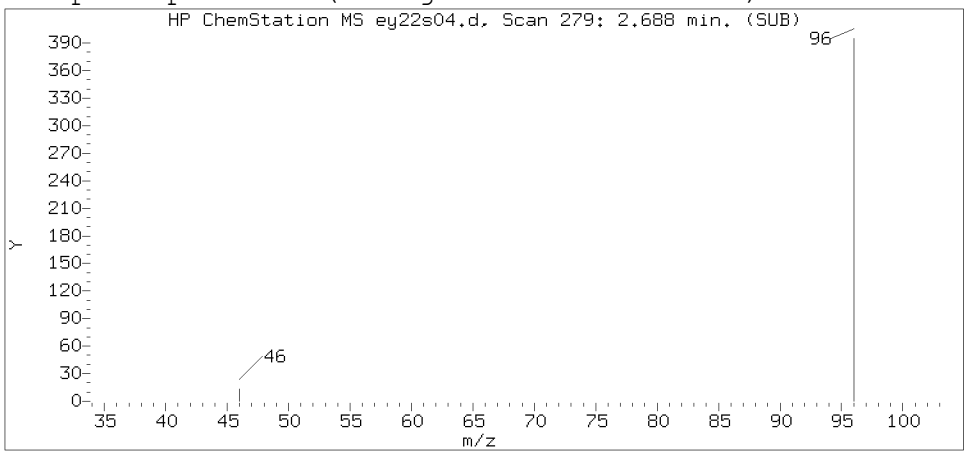
Target 3.5 esignature user ID: jml01693

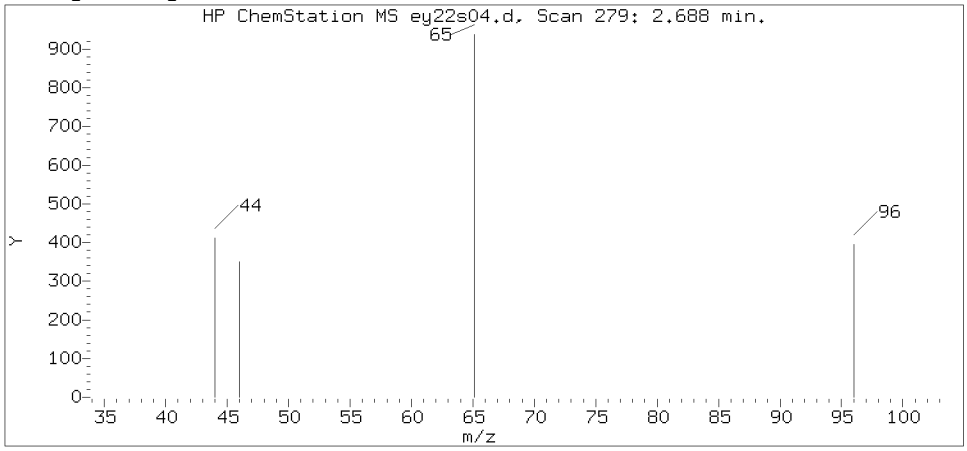
Reference Standard Spectrum for trans-1,2-Dichloroethene

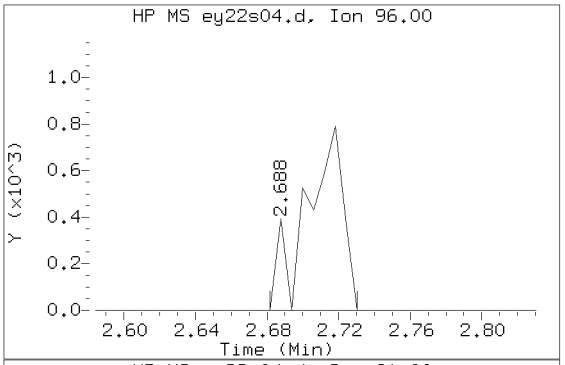


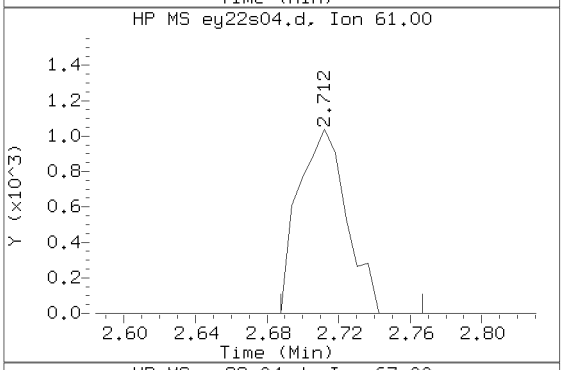
Sample Spectrum (Background Subtracted)

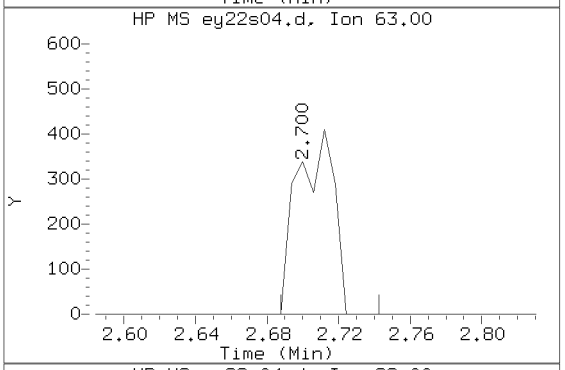


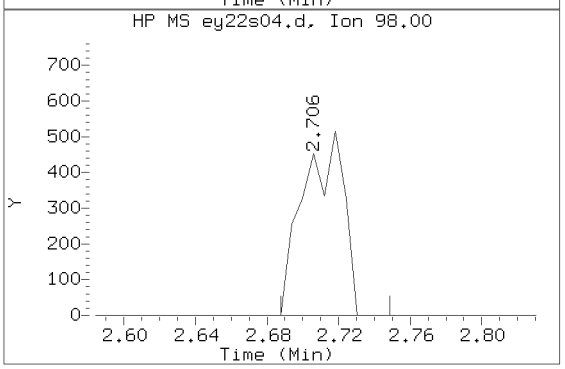
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s04.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 11:39 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 10:43
Date, time and analyst ID of latest file update: 22-May-2019 14:46 jml01693

Sample Name: 92J06 Lab Sample ID: 1058221

Compound Number : 32
Compound Name : trans-1,2-Dichloroethene
Scan Number : 279
Retention Time (minutes): 2.688
Relative Retention Time : 0.00459
Quant Ion : 96.00
Area (flag) : 1133
On-Column Amount (ng) : 0.2313

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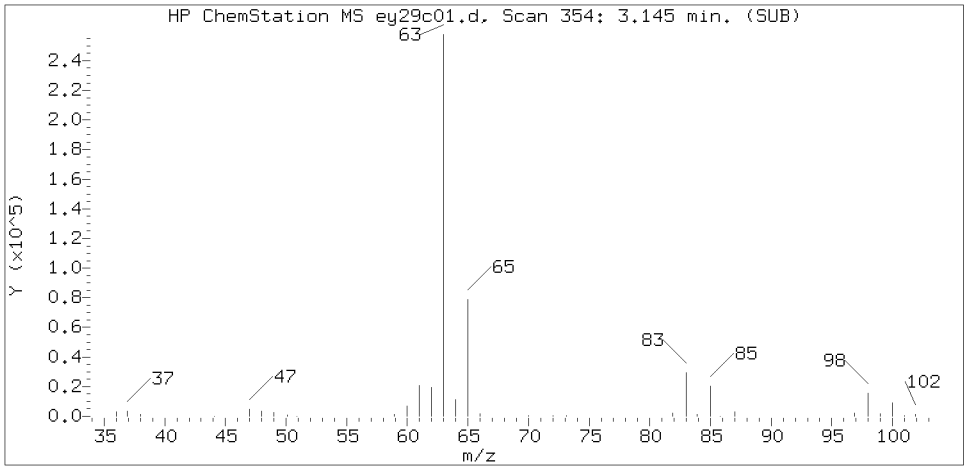
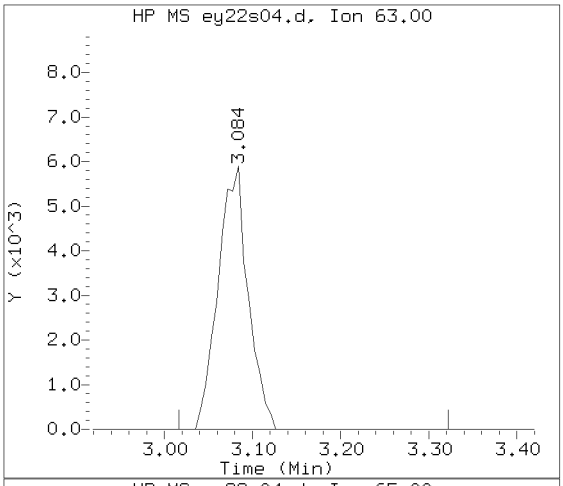
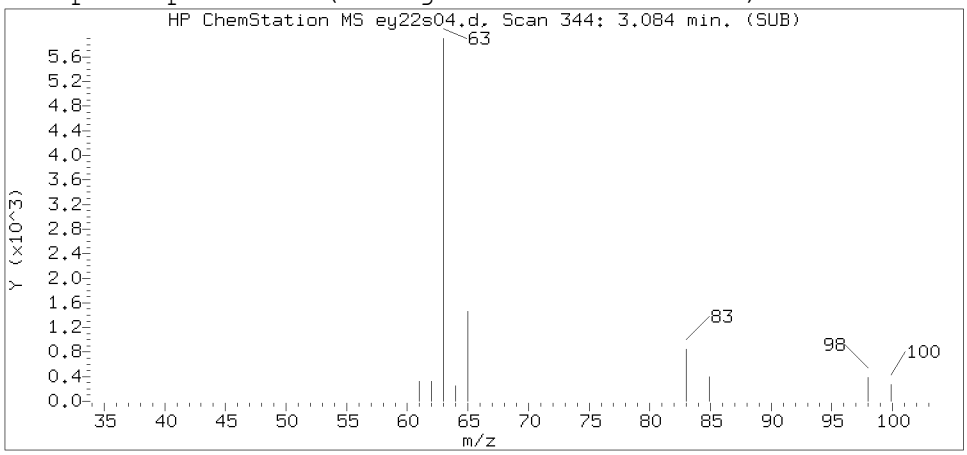
Target 3.5 esignature user ID: jml01693

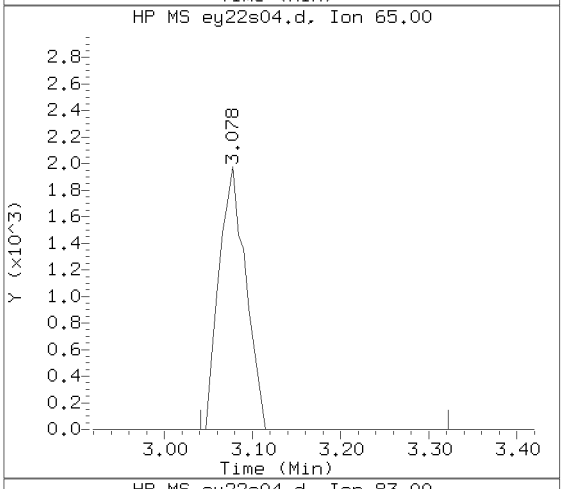
Reference Standard Spectrum for 1,1-Dichloroethane



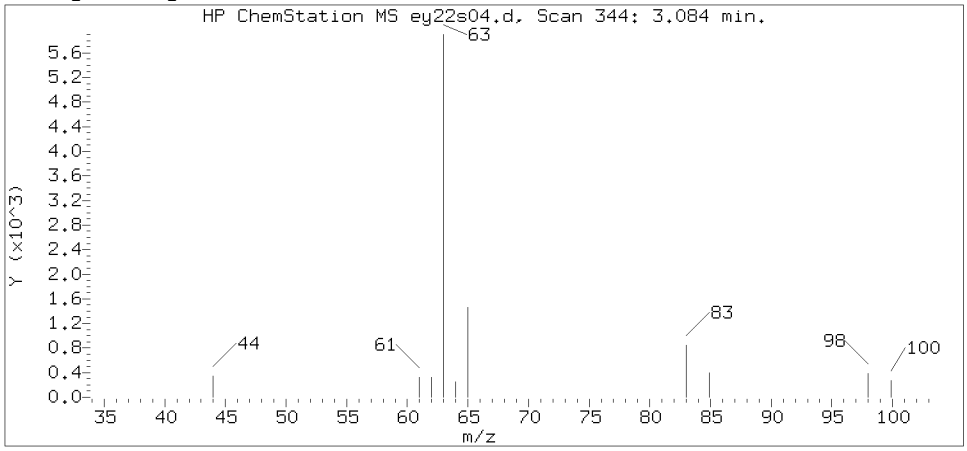


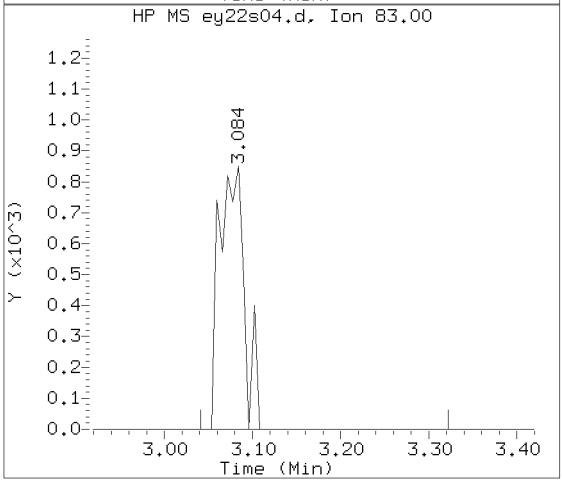
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19may22a.b/ey22s04.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 11:39 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 10:43
Date, time and analyst ID of latest file update: 22-May-2019 14:46 jml01693

Sample Name: 92J06 Lab Sample ID: 1058221

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 344
Retention Time (minutes): 3.084
Relative Retention Time :-0.00174
Quant Ion : 63.00
Area (flag) : 13958
On-Column Amount (ng) : 1.5212

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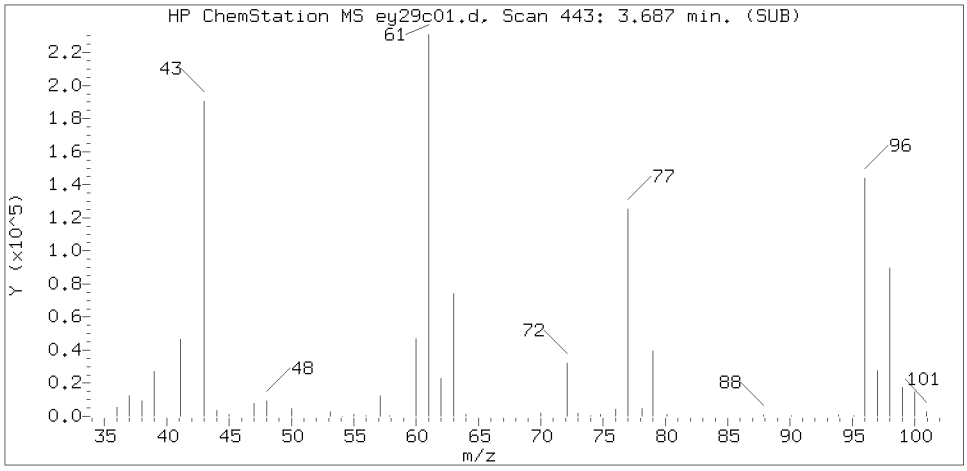
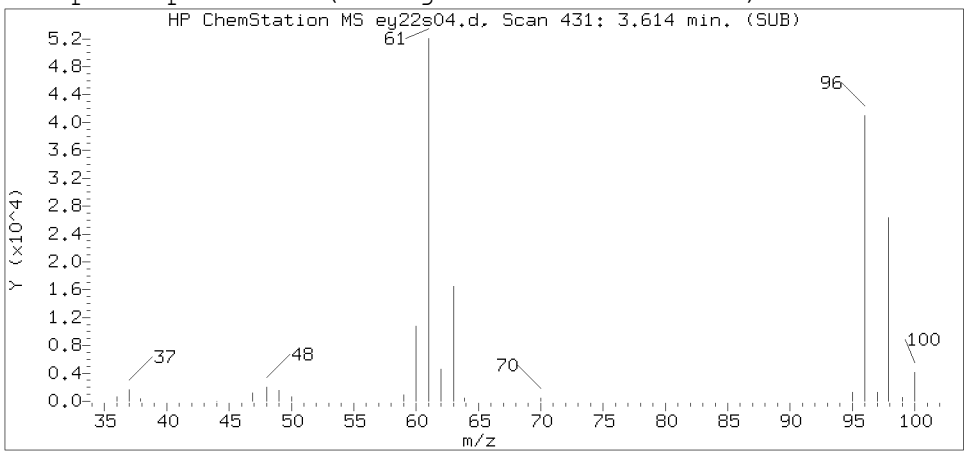
Target 3.5 esignature user ID: jml01693

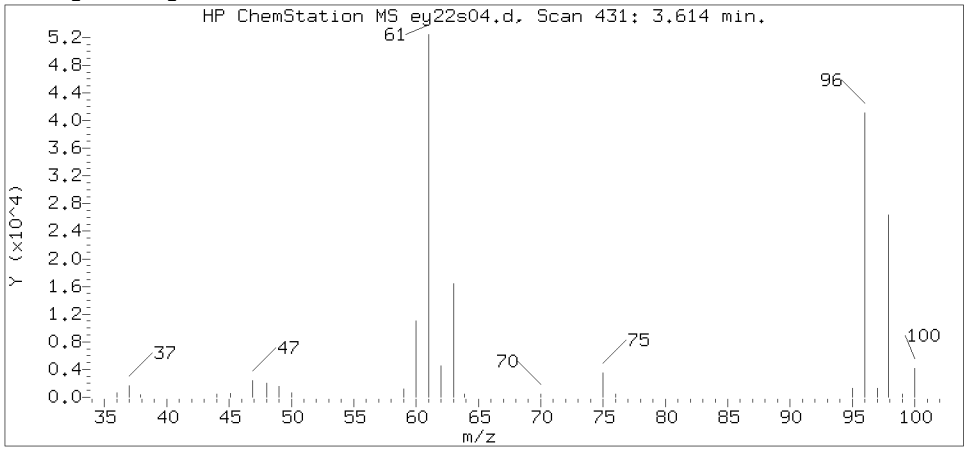
Reference Standard Spectrum for cis-1,2-Dichloroethene

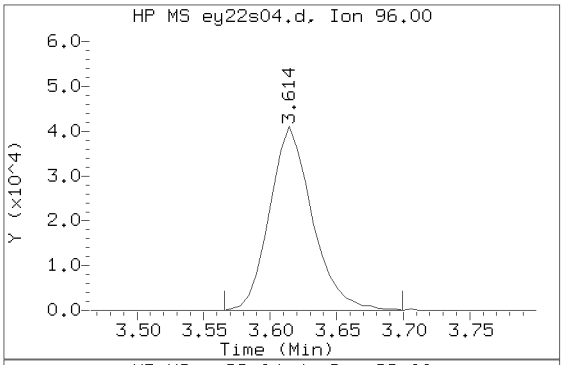


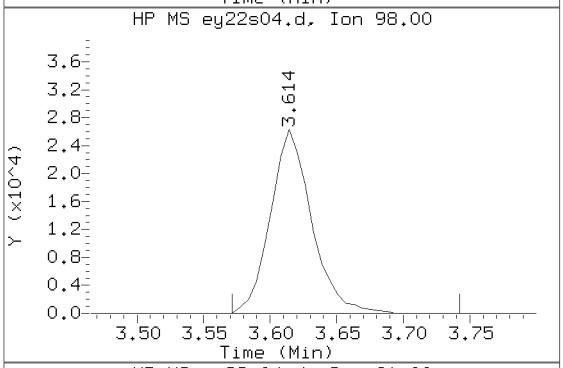
Sample Spectrum (Background Subtracted)

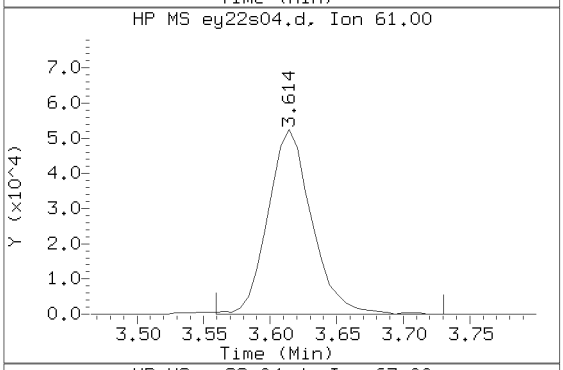


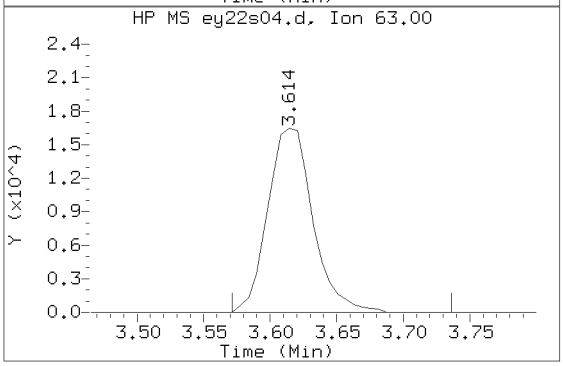
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s04.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 11:39 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 10:43
Date, time and analyst ID of latest file update: 22-May-2019 14:46 jml01693

Sample Name: 92J06 Lab Sample ID: 1058221

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 431
Retention Time (minutes): 3.614
Relative Retention Time :-0.00031
Quant Ion : 96.00
Area (flag) : 91293
On-Column Amount (ng) : 16.5896

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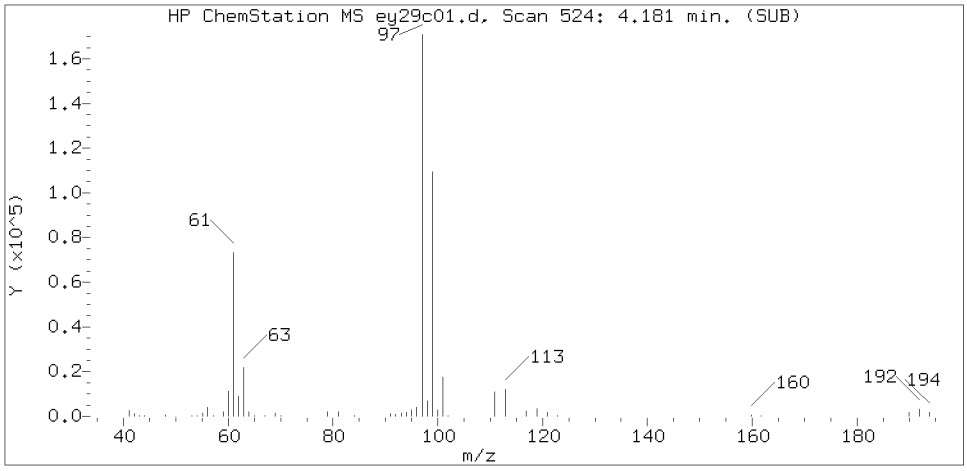
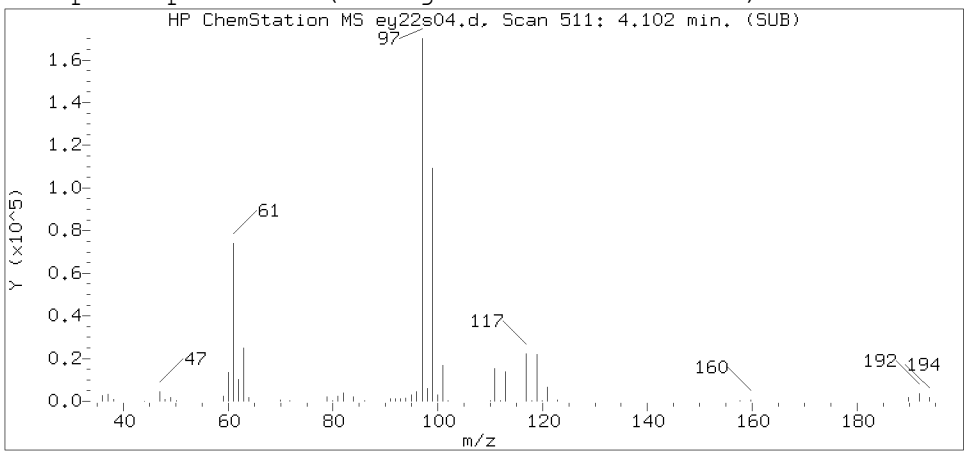
Target 3.5 esignature user ID: jml01693

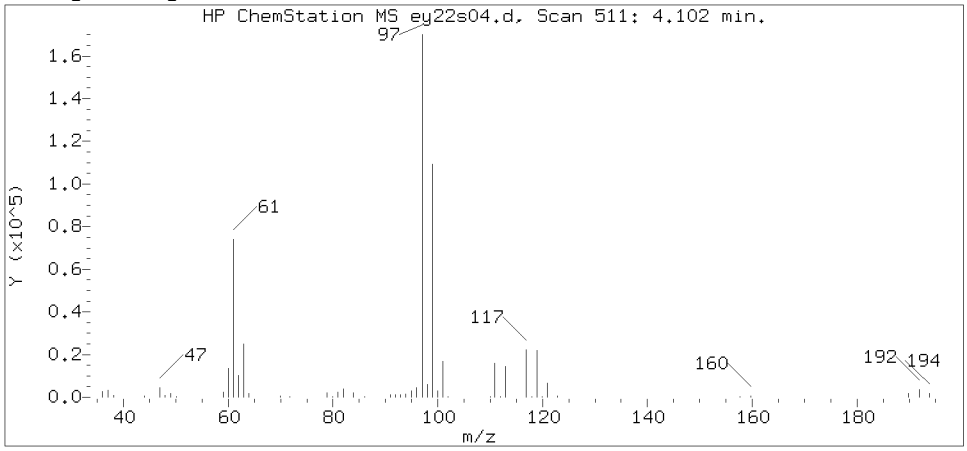
Reference Standard Spectrum for 1,1,1-Trichloroethane

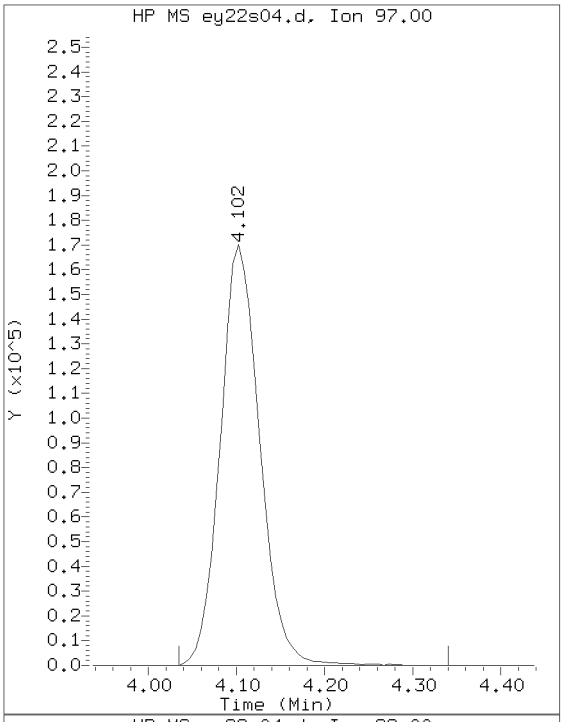


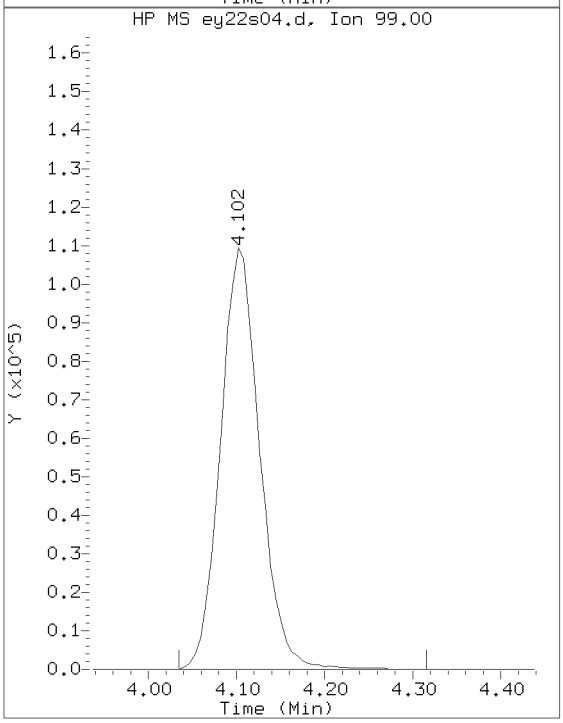
Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)







Data File: /chem/HP15648.i/19may22a.b/ey22s04.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 11:39 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 10:43
Date, time and analyst ID of latest file update: 22-May-2019 14:46 jml01693

Sample Name: 92J06 Lab Sample ID: 1058221

Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 511
Retention Time (minutes): 4.102
Relative Retention Time : 0.00112
Quant Ion : 97.00
Area (flag) : 529257
On-Column Amount (ng) : 65.5355

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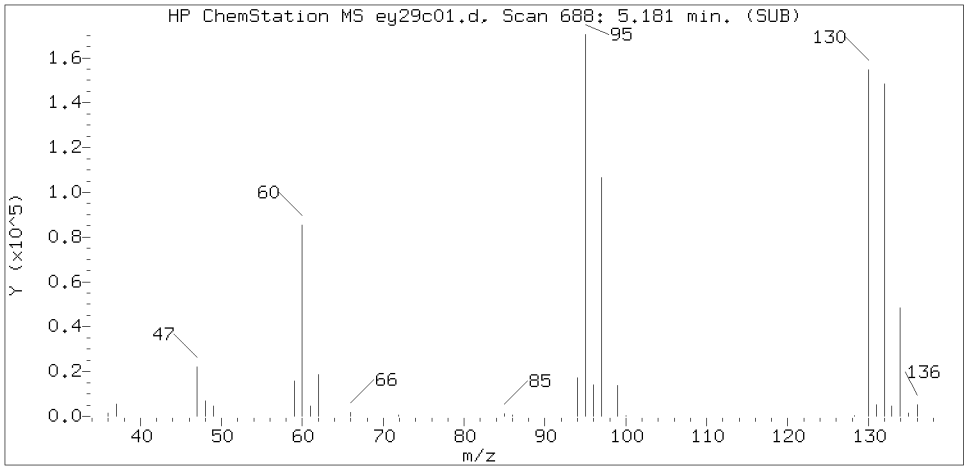
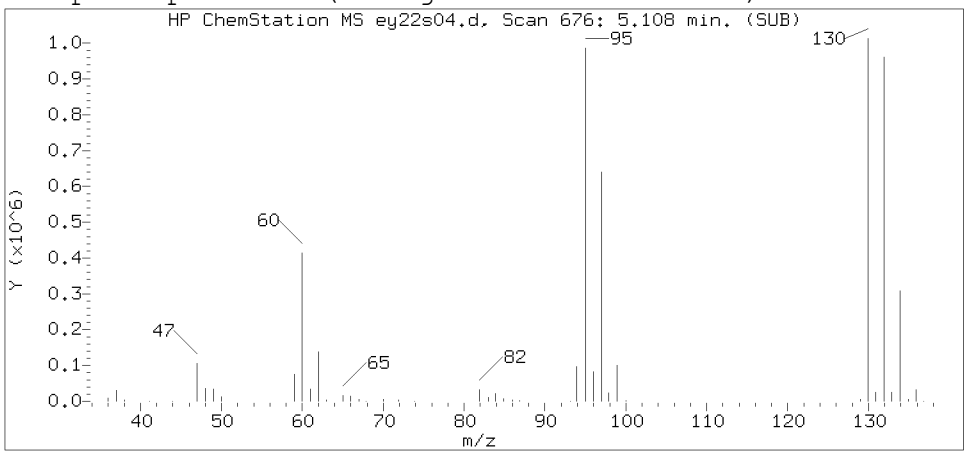
Target 3.5 esignature user ID: jml01693

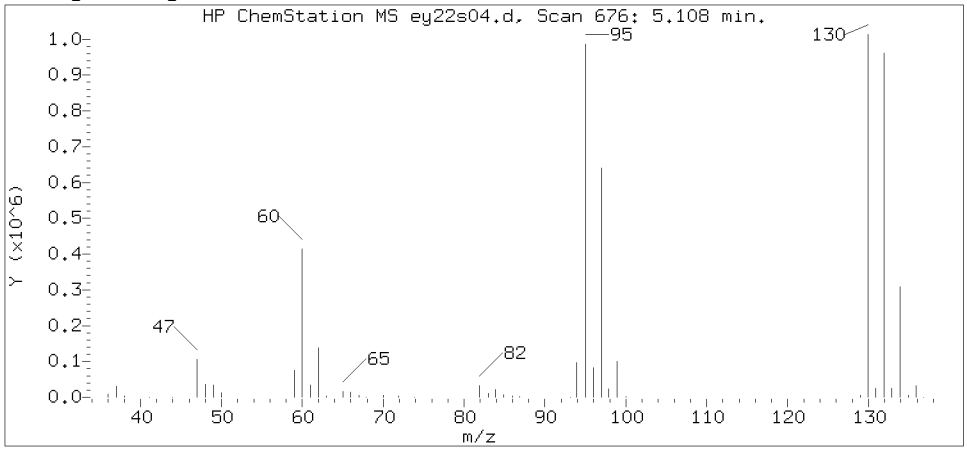
Reference Standard Spectrum for Trichloroethene

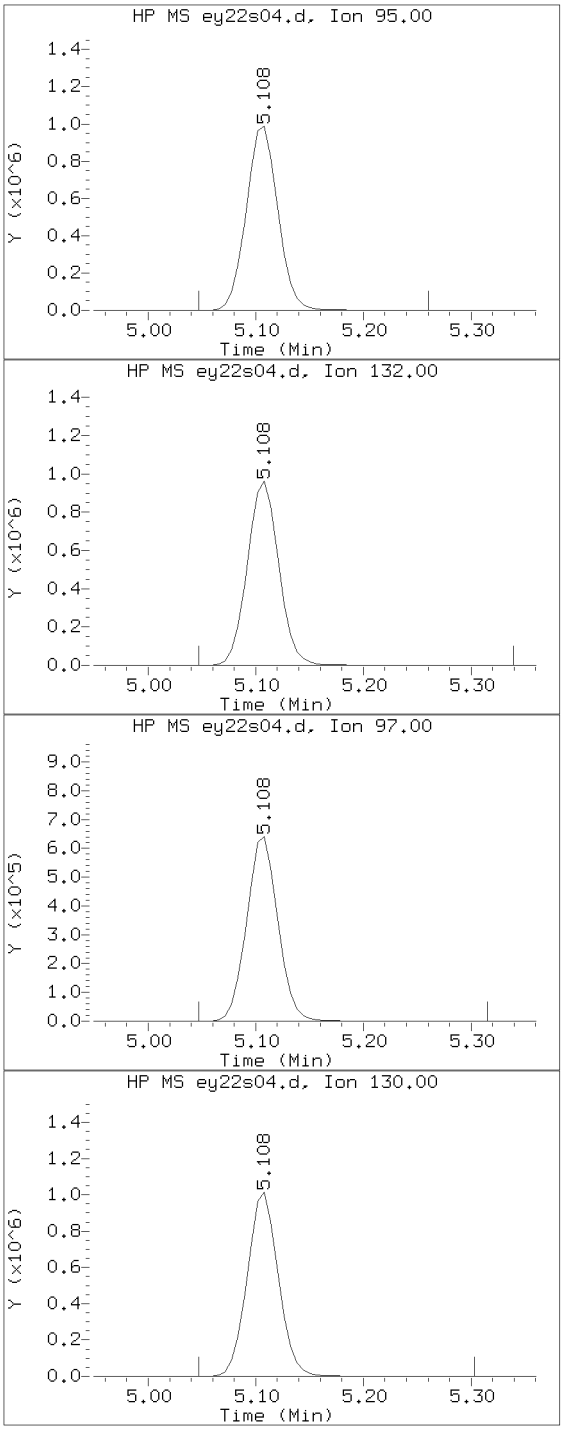


Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19may22a.b/ey22s04.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 11:39 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 10:43
Date, time and analyst ID of latest file update: 22-May-2019 14:46 jml01693

Sample Name: 92J06 Lab Sample ID: 1058221

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 676
Retention Time (minutes)	: 5.108
Relative Retention Time	: 0.00011
Quant Ion	: 95.00
Area (flag)	: 2021933
On-Column Amount (ng)	: 381.2223

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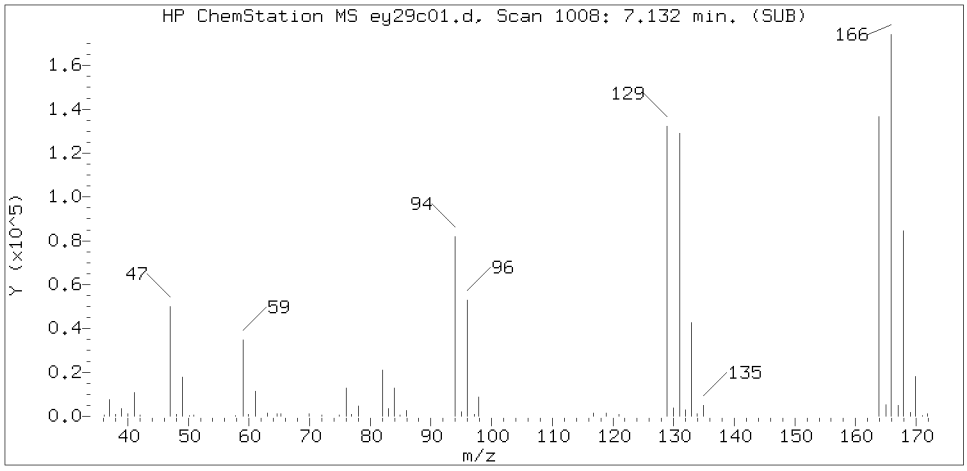
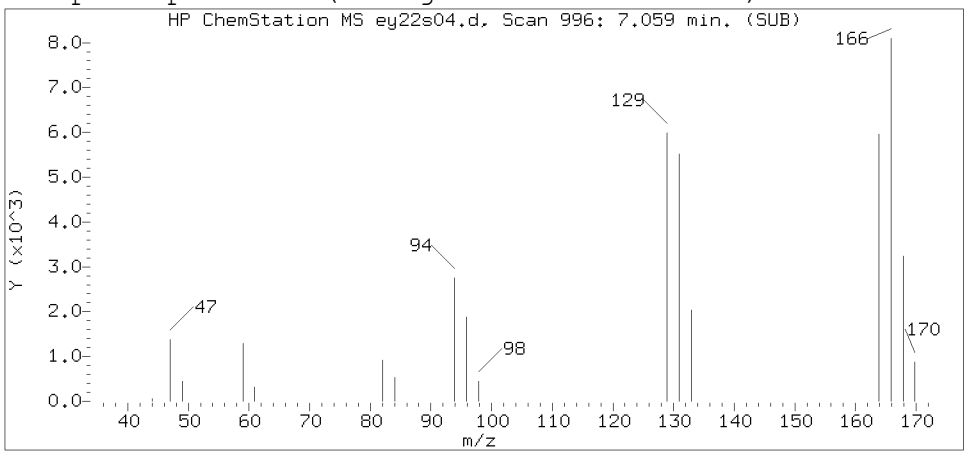
Target 3.5 esignature user ID: jml01693

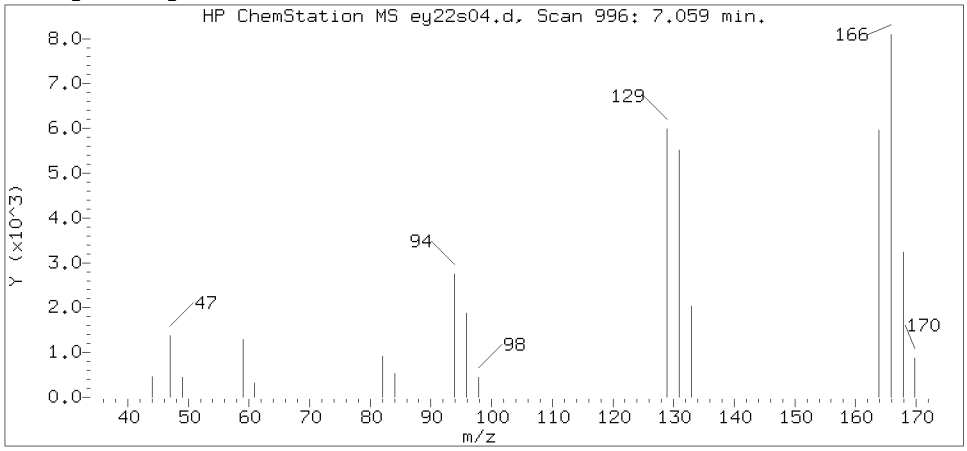
Reference Standard Spectrum for Tetrachloroethene

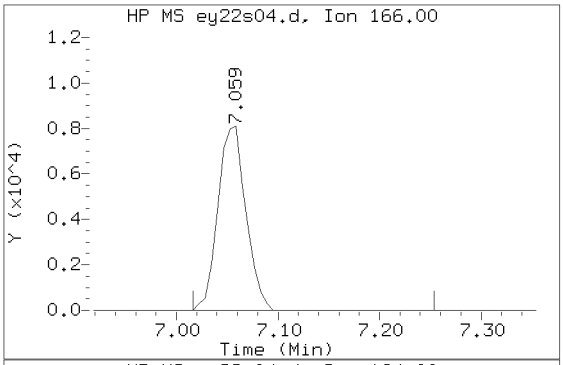


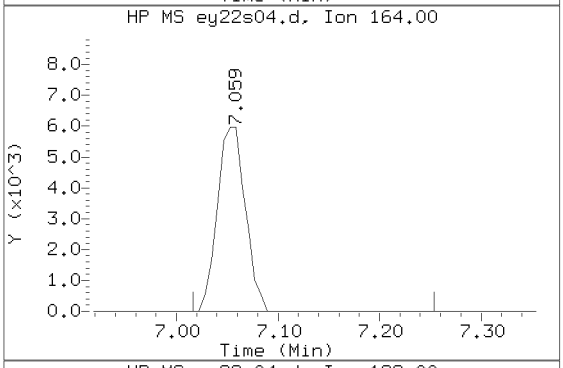
Sample Spectrum (Background Subtracted)

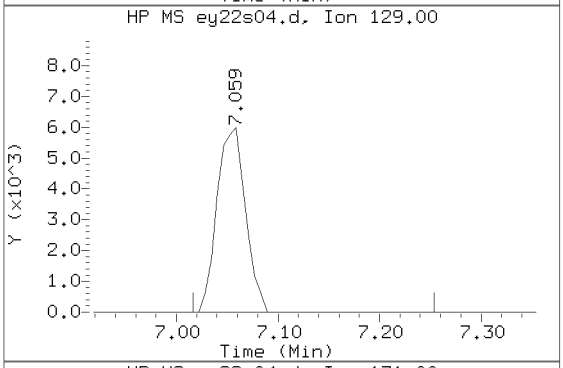


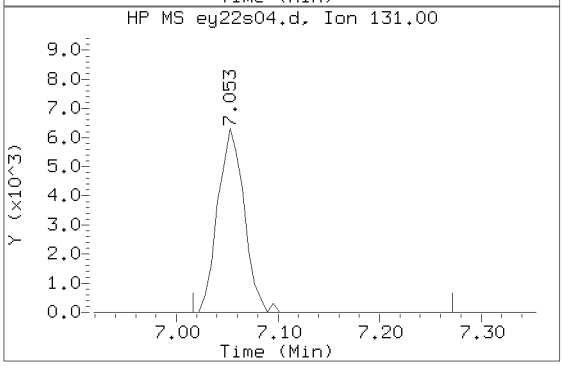
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s04.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 11:39 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 10:43
Date, time and analyst ID of latest file update: 22-May-2019 14:46 jml01693

Sample Name: 92J06 Lab Sample ID: 1058221

Compound Number : 94
Compound Name : Tetrachloroethene
Scan Number : 996
Retention Time (minutes): 7.059
Relative Retention Time :-0.00077
Quant Ion : 166.00
Area (flag) : 15477
On-Column Amount (ng) : 2.8493

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Target 3.5 esignature user ID: jml01693

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

92J06DL

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058221

Sample wt/vol: 0.50 (g/mL) mL Lab File ID: HP15648.i/19may22a.b/ey22s05.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	10	U
75-35-4	1,1-Dichloroethene	5	J D
67-64-1	Acetone	200	U
76-13-1	Freon 113	100	U
75-15-0	Carbon Disulfide	50	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	16	D
78-93-3	2-Butanone	100	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	57	D
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	340	D
123-91-1	1,4-Dioxane	2500	U
108-88-3	Toluene	10	U
127-18-4	Tetrachloroethene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (Total)	50	U
95-50-1	1,2-Dichlorobenzene	50	U
91-20-3	Naphthalene	50	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may22a.b/ey22s05.d Injection date and time: **22-MAY-2019 12:00**
Data file Sample Info. Line: 92J06DL;1058221DL;1;0;;JCV92;;;ey22b01; Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 12:15 Automation

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 10:43
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 0.5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.493	(-0.018)	247	65	166063	(-3)	250.00	
66) Fluorobenzene	4.736	(-0.006)	615	96	1075664	(-1)	50.00	
101) Chlorobenzene-d5	7.894	(0.000)	1133	117	801521	(-1)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802	(0.000)	1446	152	426036	(1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.078	(-0.001)	113	239067	47.818	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.395	(0.000)	102	63151	50.055	100%		80 - 120
84) Toluene-d8	(3)	6.388	(-0.001)	98	1076544	49.454	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918	(0.000)	95	413064	49.360	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					2	10
17) 1,1-Dichloroethene	(2)	2.102	(-0.000)	96	2300	0.533	5.33		J	2	10
18) Acetone	(1)				Not Detected					7	200
19) Freon 113	(2)				Not Detected					2	100
23) Carbon Disulfide	(2)				Not Detected					2	50
28) Methylene Chloride	(2)				Not Detected					3	10
32) trans-1,2-Dichloroethene	(2)				Not Detected					2	10
36) 1,1-Dichloroethane	(2)				Not Detected					2	10
42) cis-1,2-Dichloroethene	(2)	3.620	(-0.001)	96	8646	1.583	15.83			2	10
44) 2-Butanone	(2)				Not Detected					3	100
51) Chloroform	(2)				Not Detected					2	10
53) 1,1,1-Trichloroethane	(2)	4.108	(-0.000)	97	45620	5.691	56.91			3	10
60) Benzene	(2)				Not Detected					2	10
61) 1,2-Dichloroethane	(2)				Not Detected					3	10
71) Trichloroethene	(2)	5.108	(0.000)	95	178268	33.860	338.60			2	10
76) 1,4-Dioxane	(1)				Not Detected					290	2500
89) Toluene	(3)				Not Detected					2	10
94) Tetrachloroethene	(3)				Not Detected					2	10
105) Ethylbenzene	(3)				Not Detected					4	10
107) m+p-Xylene	(3)				Not Detected					10	50
108) o-Xylene	(3)				Not Detected					4	10
109) Xylene (Total)	(3)				Not Detected					10	50
139) 1,2-Dichlorobenzene	(4)				Not Detected					2	50
149) Naphthalene	(4)				Not Detected					10	50

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may22a.b/ey22s05.d Injection date and time: **22-MAY-2019 12:00**
Data file Sample Info. Line: 92J06DL;1058221DL;1;0;;JCV92;;;ey22b01; Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 12:15 Automation

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 10:43
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 0.5 ml

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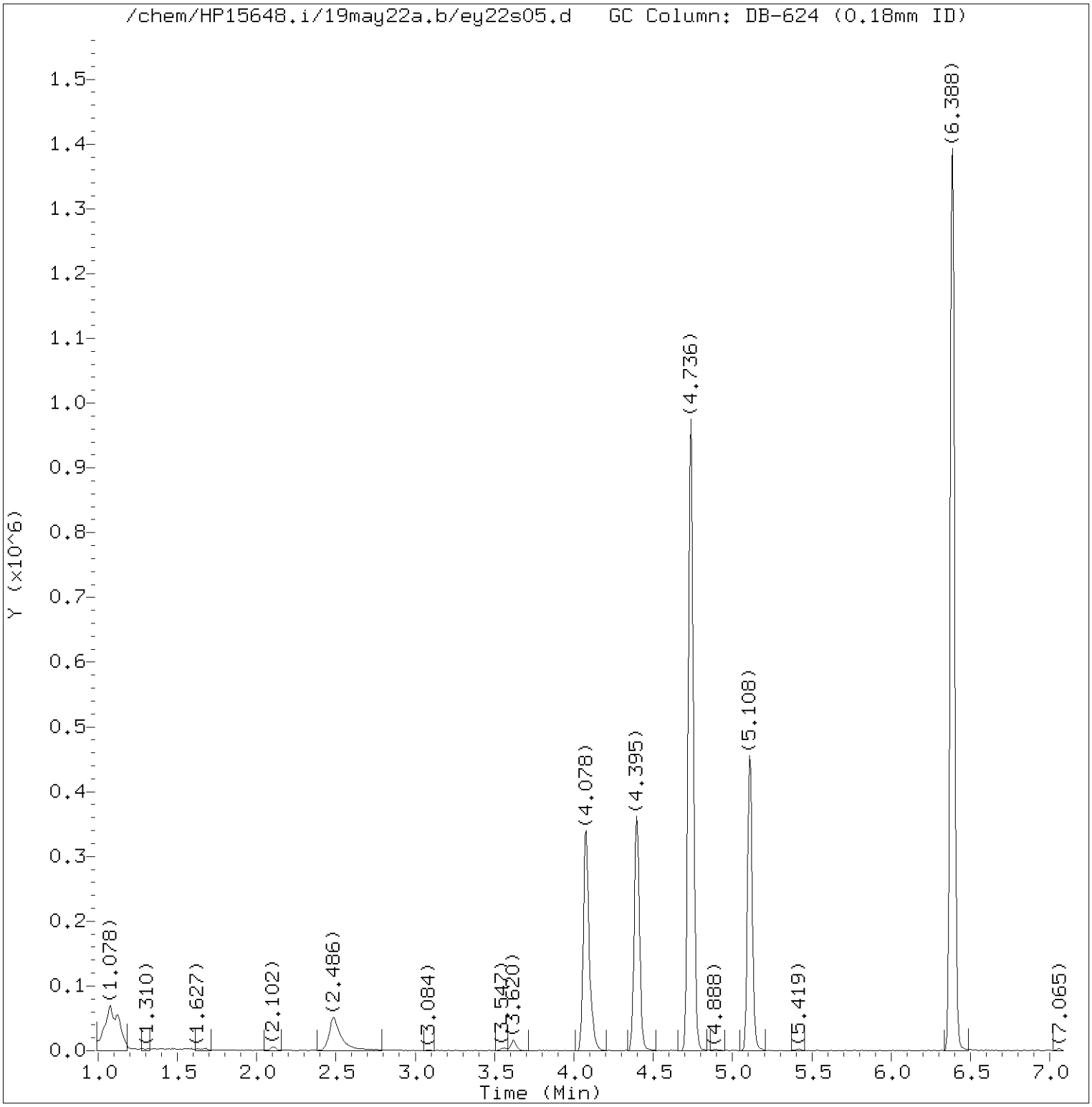
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Jason M. Long on 05/22/2019 at 14:49. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/23/2019 at 14:19. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s05.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 12:00 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 10:43
Date, time and analyst ID of latest file update: 22-May-2019 12:15 Automation

Sample Name: 92J06DL Lab Sample ID: 1058221DL

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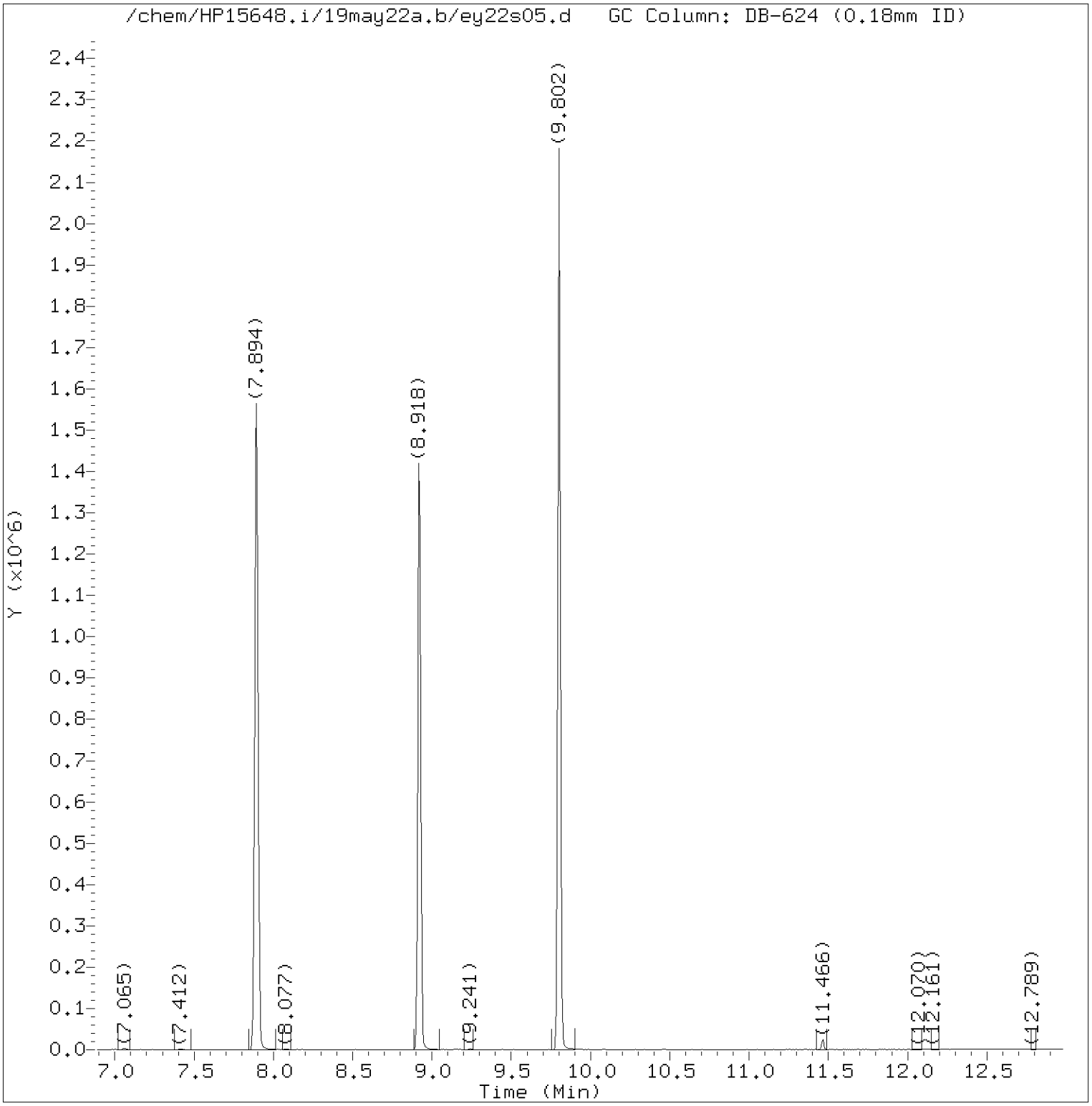
on 05/22/2019 at 14:49.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s05.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 12:00 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 10:43
Date, time and analyst ID of latest file update: 22-May-2019 12:15 Automation

Sample Name: 92J06DL Lab Sample ID: 1058221DL

Digitally signed by Jason M. Long
on 05/22/2019 at 14:49.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s05.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 12:00 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 10:43
Date, time and analyst ID of latest file update: 22-May-2019 12:15 Automation

Sample Name: 92J06DL Lab Sample ID: 1058221DL

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	2.102	96	2300	0.533
29)*t-Butyl alcohol-d10	(1)	2.493	65	166063	250.000
42) cis-1,2-Dichloroethene	(2)	3.620	96	8646	1.583
52)$Dibromofluoromethane	(2)	4.078	113	239067	47.818
53) 1,1,1-Trichloroethane	(2)	4.108	97	45620	5.691
57)$1,2-Dichloroethane-d4	(2)	4.395	102	63151	50.055
66)*Fluorobenzene	(2)	4.736	96	1075664	50.000
71) Trichloroethene	(2)	5.108	95	178268	33.860
84)$Toluene-d8	(3)	6.388	98	1076544	49.454
101)*Chlorobenzene-d5	(3)	7.894	117	801521	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	413064	49.360
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	426036	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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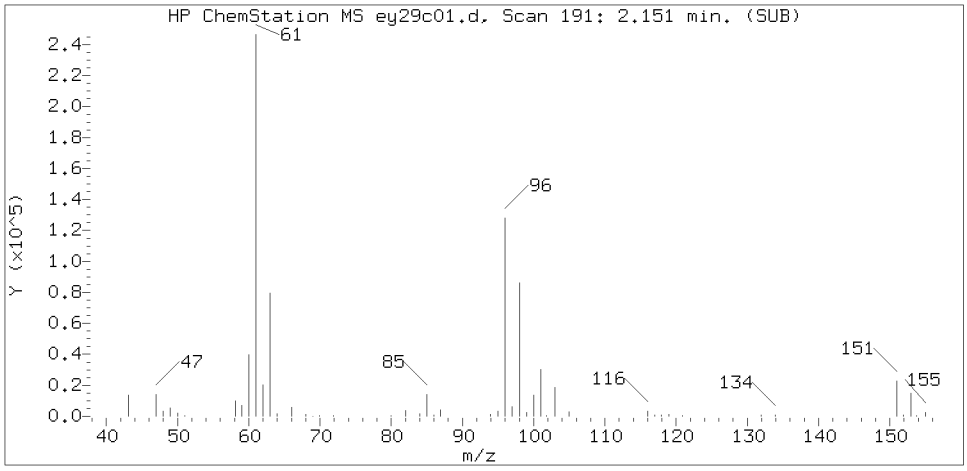
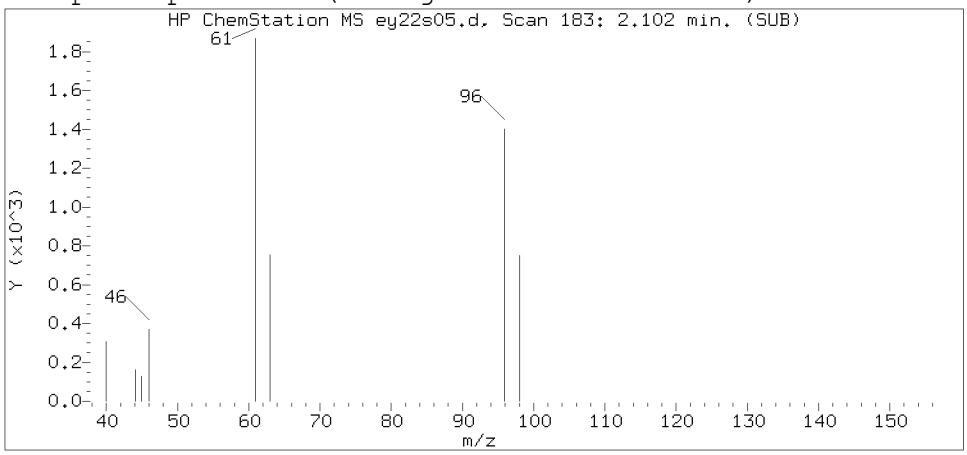
on 05/22/2019 at 14:49.
Target 3.5 esignature user ID: jml01693

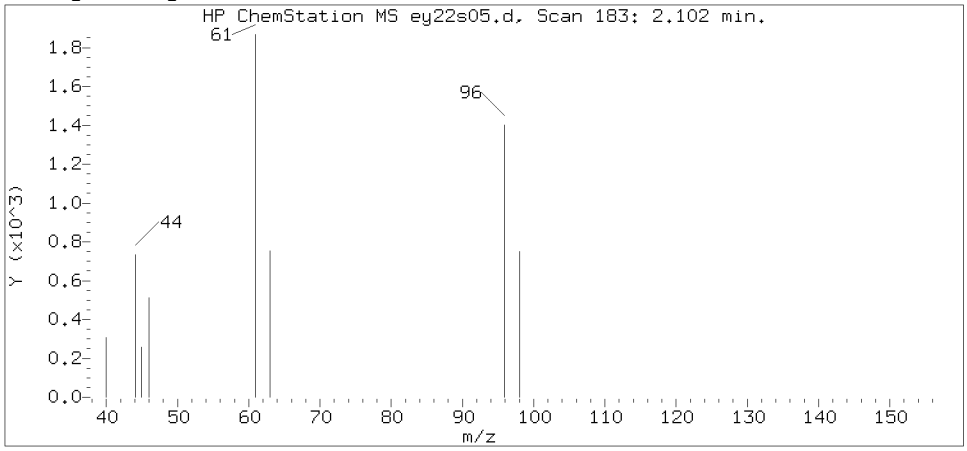
Reference Standard Spectrum for 1,1-Dichloroethene

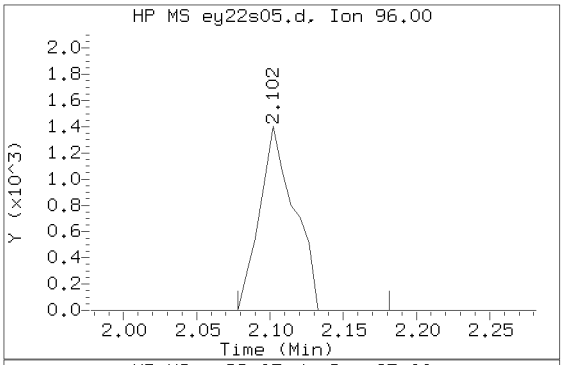


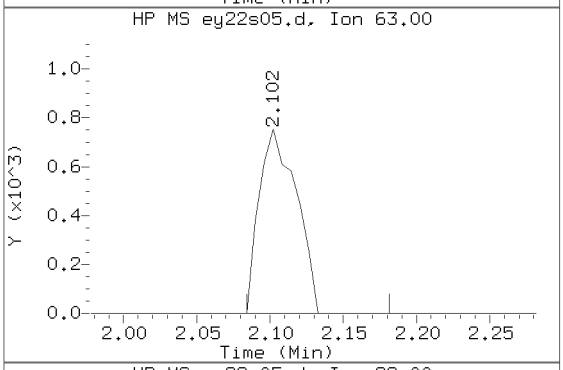
Sample Spectrum (Background Subtracted)

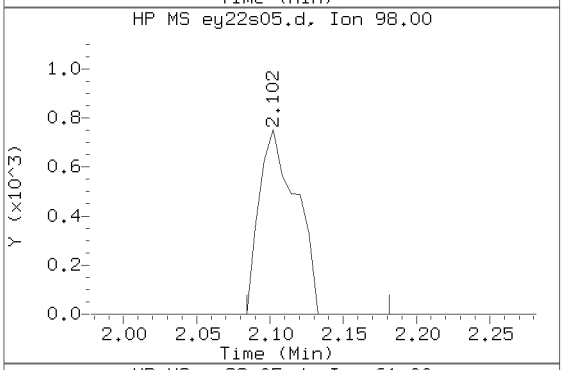


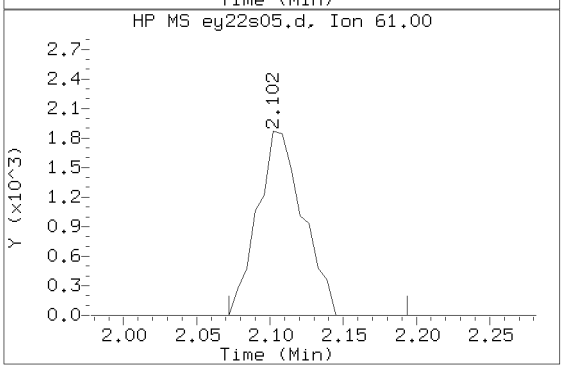
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s05.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 12:00 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 10:43
Date, time and analyst ID of latest file update: 22-May-2019 12:15 Automation

Sample Name: 92J06DL Lab Sample ID: 1058221DL

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 183
Retention Time (minutes): 2.102
Relative Retention Time :-0.00071
Quant Ion : 96.00
Area (flag) : 2300
On-Column Amount (ng) : 0.5326

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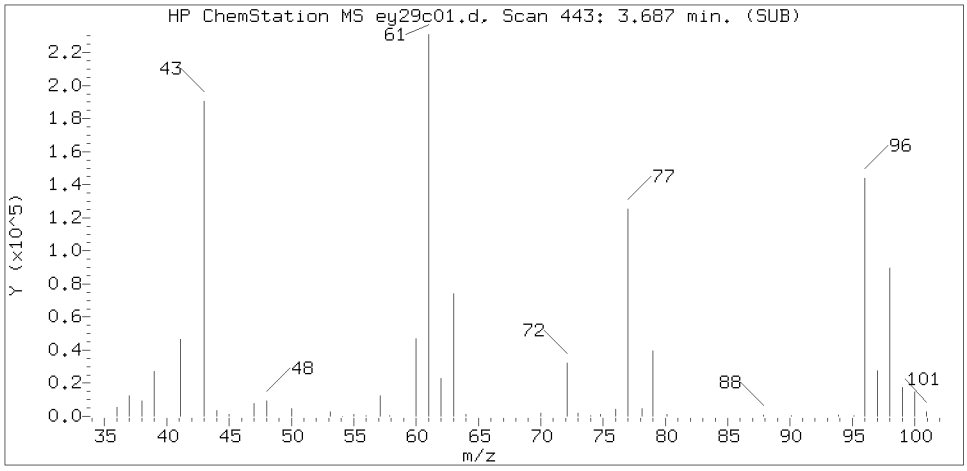
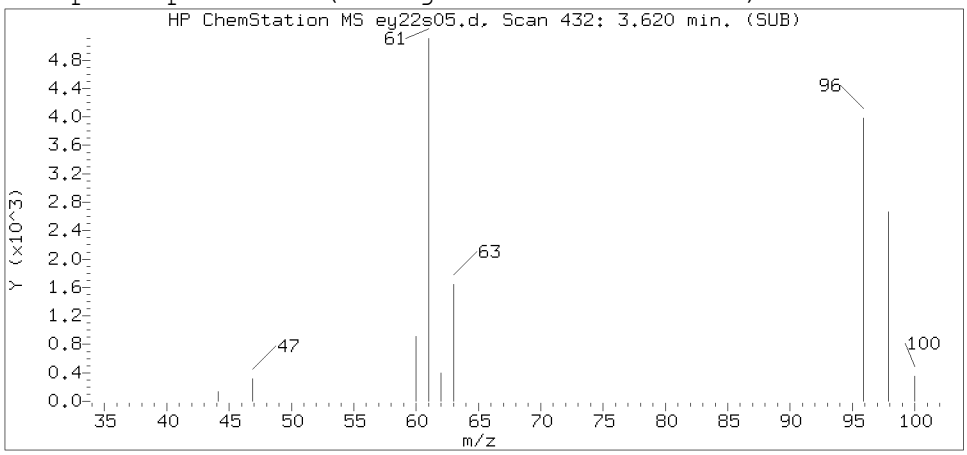
Target 3.5 esignature user ID: jml01693

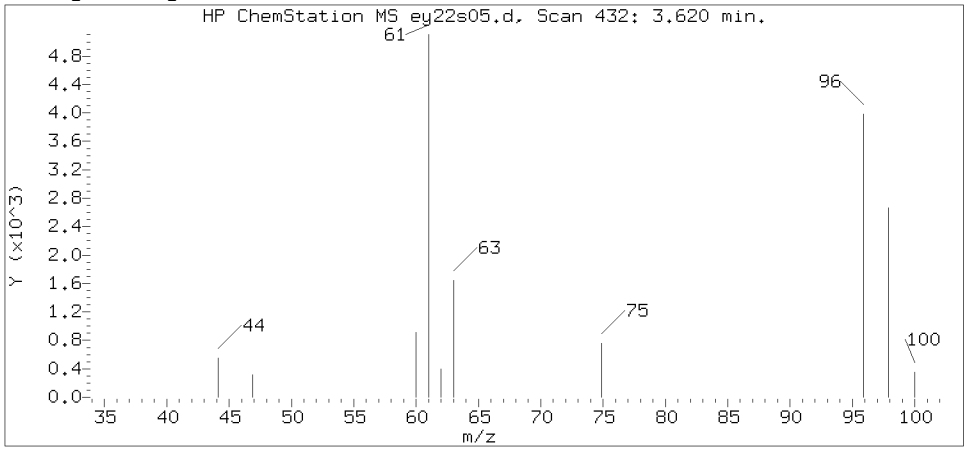
Reference Standard Spectrum for cis-1,2-Dichloroethene

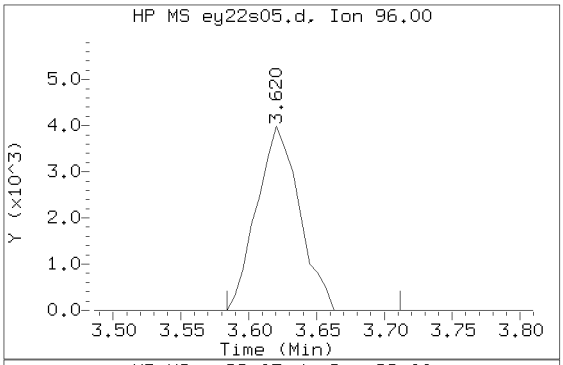


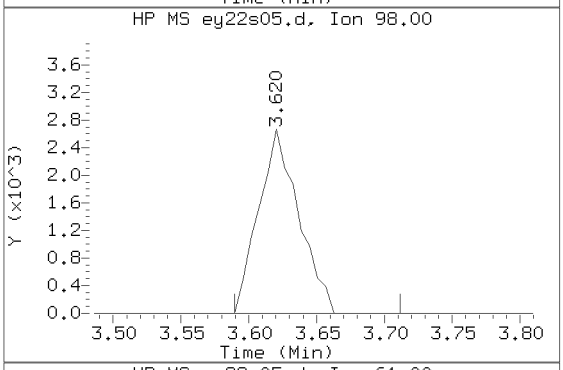
Sample Spectrum (Background Subtracted)

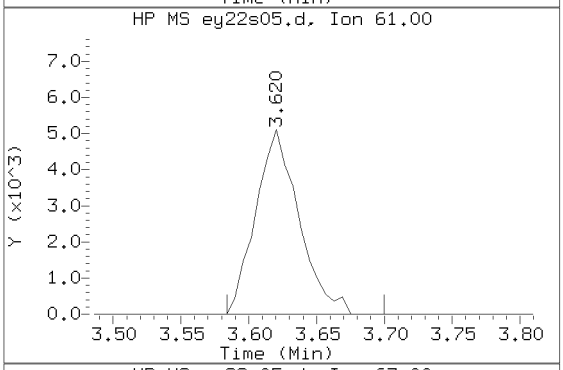


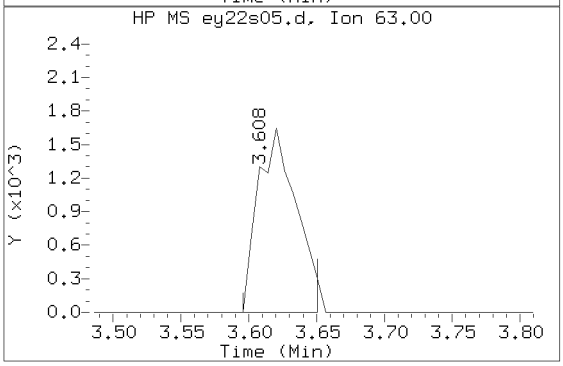
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s05.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 12:00 Analyst ID: JML01693

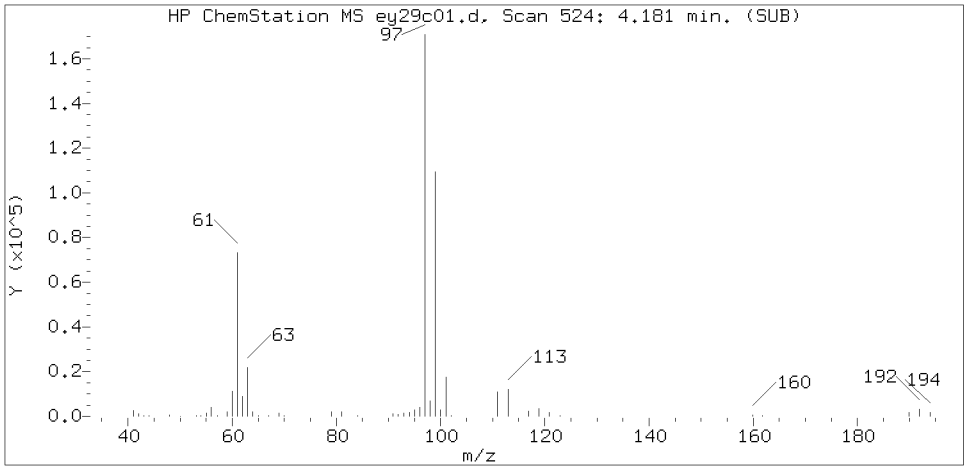
Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 10:43
Date, time and analyst ID of latest file update: 22-May-2019 12:15 Automation

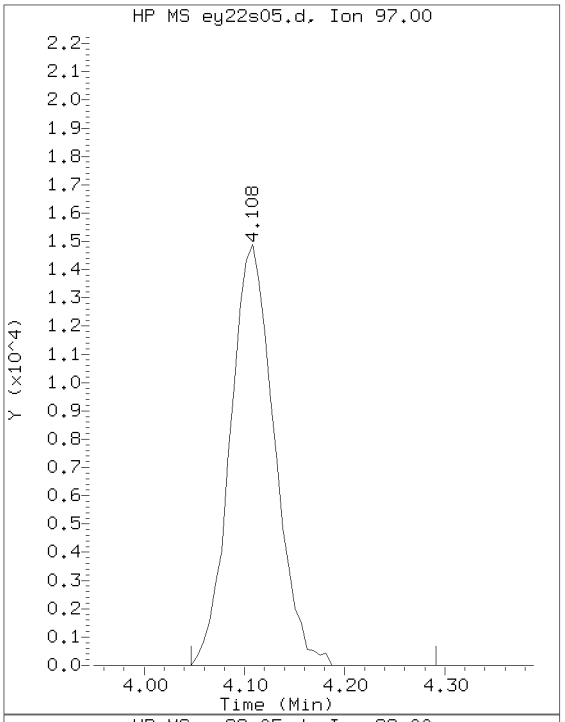
Sample Name: 92J06DL Lab Sample ID: 1058221DL

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 432
Retention Time (minutes): 3.620
Relative Retention Time :-0.00159
Quant Ion : 96.00
Area (flag) : 8646
On-Column Amount (ng) : 1.5828

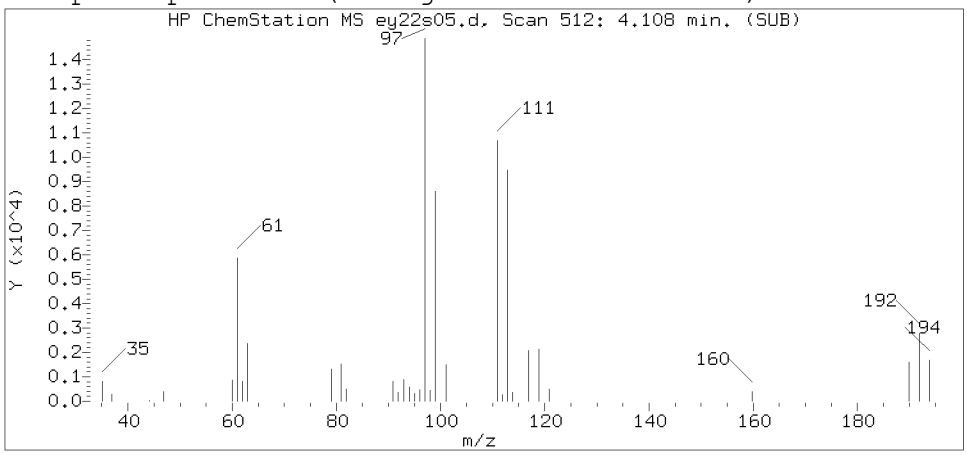
Digitally signed by Jason M. Long on 05/22/2019 at 14:49.
Target 3.5 esignature user ID: jml01693

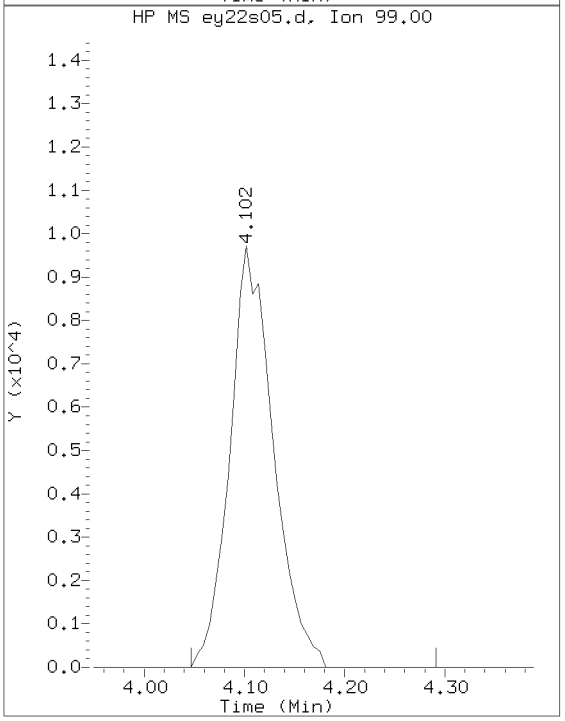
Reference Standard Spectrum for 1,1,1-Trichloroethane



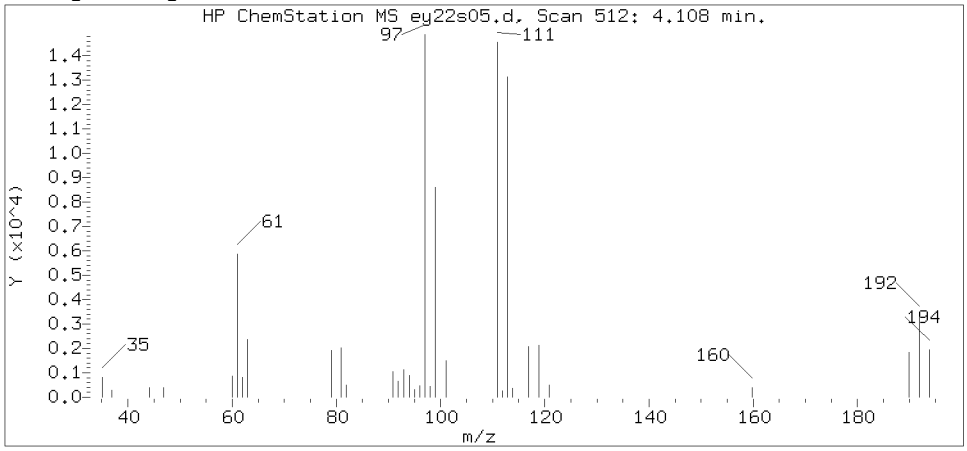


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP15648.i/19may22a.b/ey22s05.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 12:00 Analyst ID: JML01693

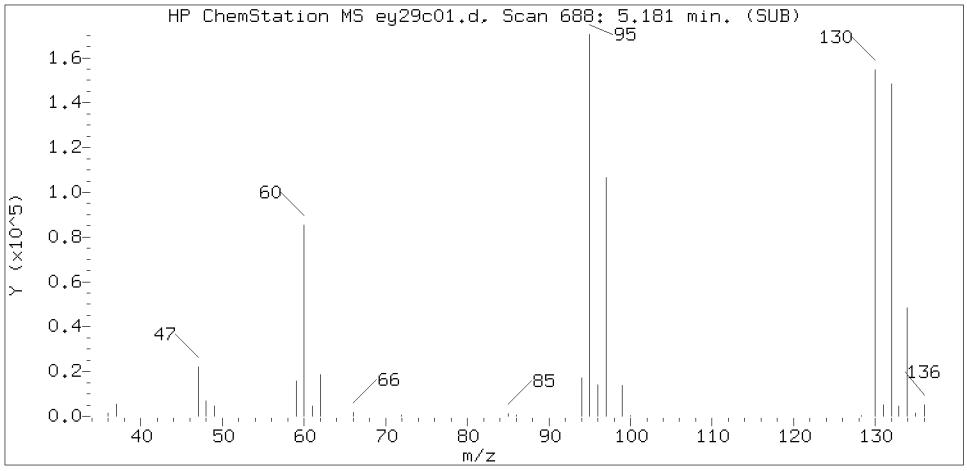
Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 10:43
Date, time and analyst ID of latest file update: 22-May-2019 12:15 Automation

Sample Name: 92J06DL Lab Sample ID: 1058221DL

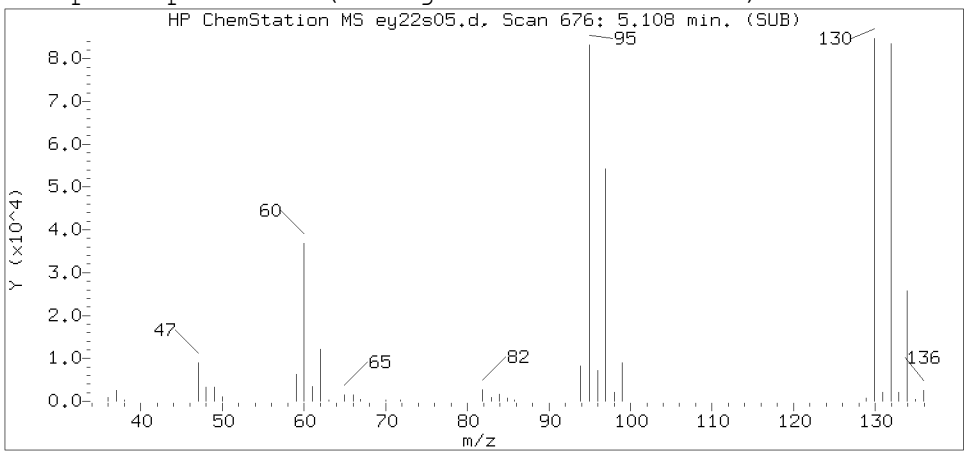
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 512
Retention Time (minutes): 4.108
Relative Retention Time :-0.00017
Quant Ion : 97.00
Area (flag) : 45620
On-Column Amount (ng) : 5.6907

Digitally signed by Jason M. Long on 05/22/2019 at 14:49.
Target 3.5 esignature user ID: jml01693

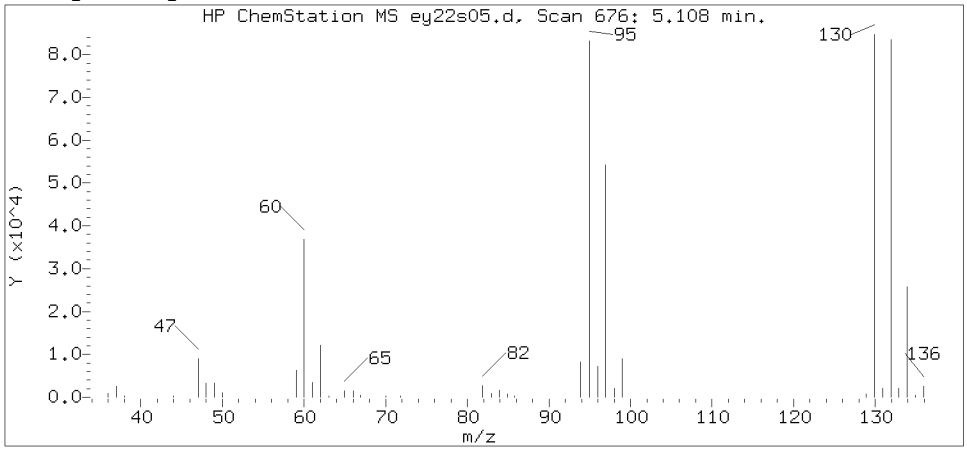
Reference Standard Spectrum for Trichloroethene

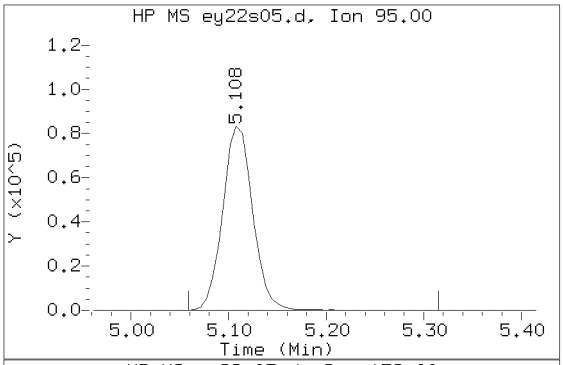


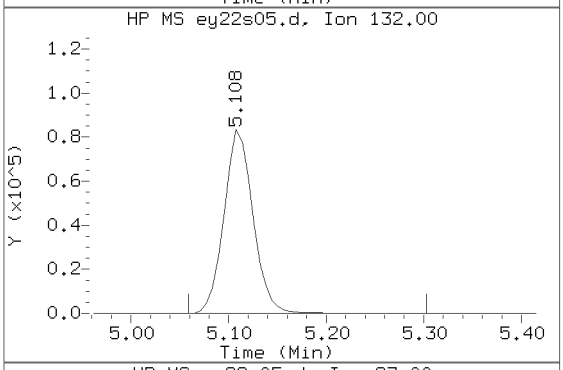
Sample Spectrum (Background Subtracted)

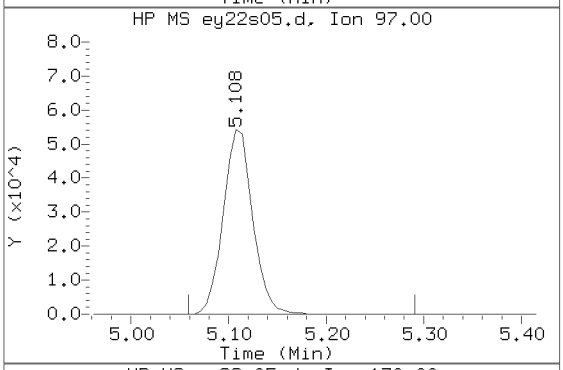


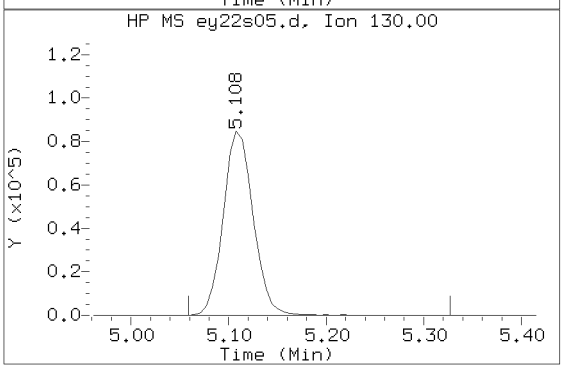
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s05.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 12:00 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 10:43
Date, time and analyst ID of latest file update: 22-May-2019 12:15 Automation

Sample Name: 92J06DL Lab Sample ID: 1058221DL

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 676
Retention Time (minutes)	: 5.108
Relative Retention Time	: 0.00010
Quant Ion	: 95.00
Area (flag)	: 178268
On-Column Amount (ng)	: 33.8598

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Target 3.5 esignature user ID: jml01693

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

92J07

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058222

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may21b.b/4y21s78.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	0.4	J
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	3	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may21b.b/4y21s78.d Injection date and time: **22-MAY-2019 06:35**
Data file Sample Info. Line: 92J07;1058222;1;0;;JCV92;;;4y21b71; Instrument ID: **HP23297.i** Batch: **4191415AA**
Date, time and analyst ID of latest file update: 22-May-2019 06:53 Automation

Blank Data file reference: **/chem/HP23297.i/19may21b.b/4y21b71.d**

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-MAY-2019 22:23
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may21b.b/4y21c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.367	(-0.006)	458	65	340718	(-15)	250.00	
66) Fluorobenzene	7.865	(0.000)	1033	96	1116948	(-7)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	870777	(-9)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189	(0.000)	1908	152	480037	(-8)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977	(-0.001)	113	263802	47.915	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.433	(-0.001)	102	67575	50.231	100%		80 - 120
83) Toluene-d8	(3)	9.867	(0.000)	98	1118678	50.055	100%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.306	(0.000)	95	404493	47.484	95%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)	6.278	(-0.000)	96	2320	0.432	0.43		J	0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.340	(-0.000)	95	13577	2.612	2.61			0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Kevin A. Sposito on 05/22/2019 at 11:45. Target 3.5 esignature user ID: kas02648

Data file: /chem/HP23297.i/19may21b.b/4y21s78.d Injection date and time: **22-MAY-2019 06:35**
Data file Sample Info. Line: 92J07;1058222;1;0;;JCV92;;;4y21b71; Instrument ID: **HP23297.i** Batch: **4191415AA**
Date, time and analyst ID of latest file update: 22-May-2019 06:53 Automation

Blank Data file reference: **/chem/HP23297.i/19may21b.b/4y21b71.d**

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-MAY-2019 22:23
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may21b.b/4y21c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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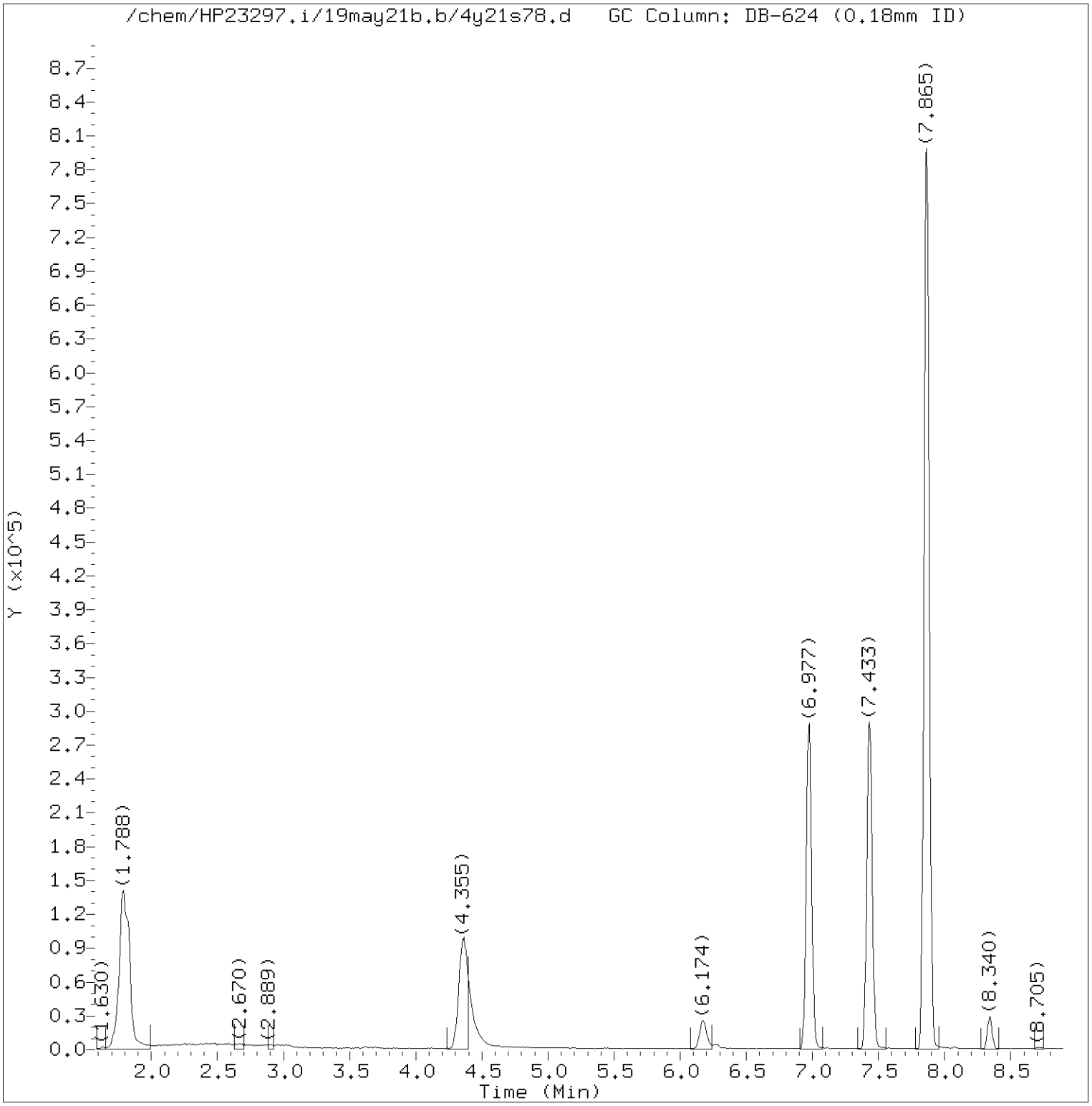
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Kevin A. Sposito on 05/22/2019 at 11:45. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Marla S. Brewer on 05/22/2019 at 15:09. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

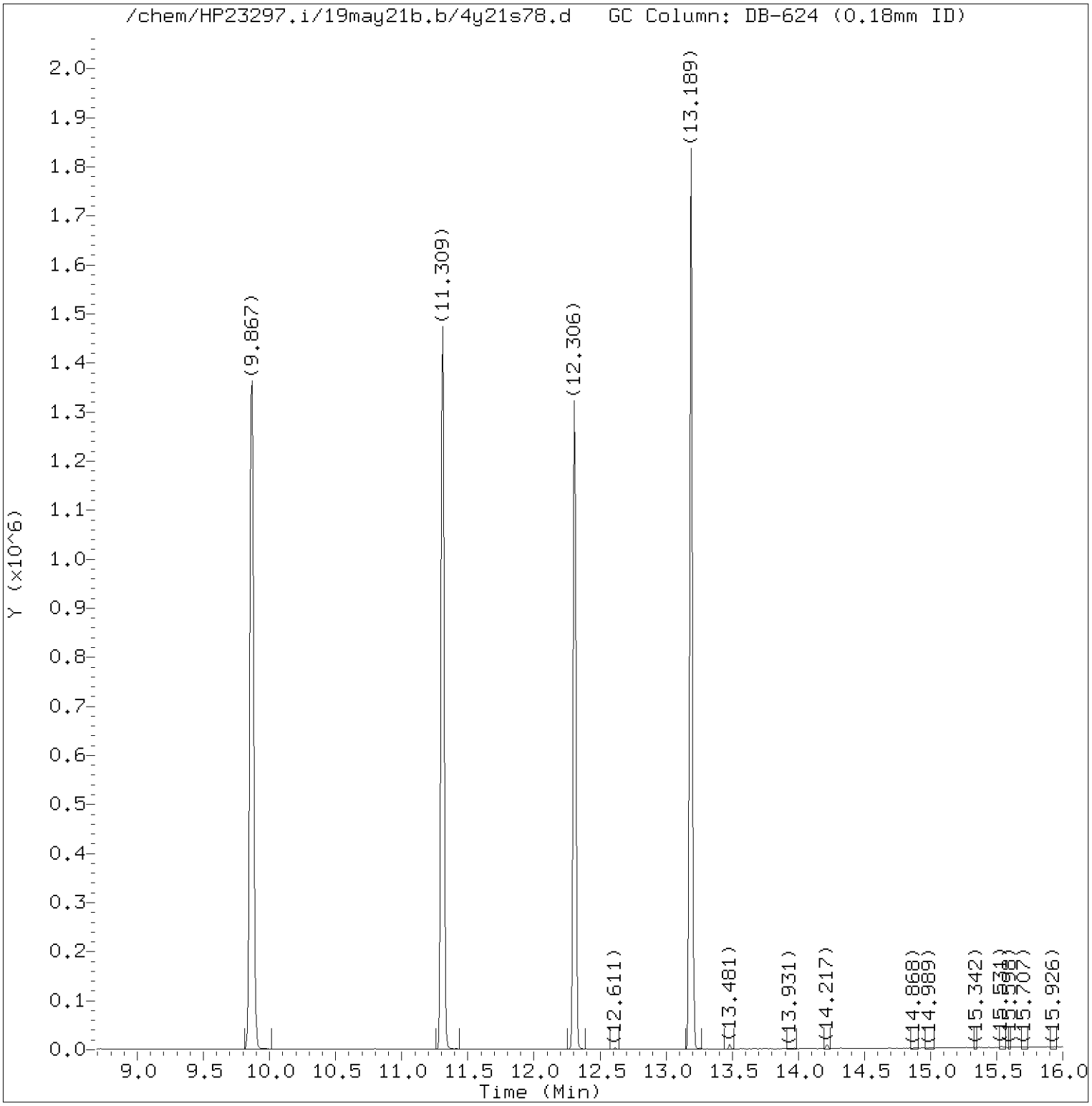
Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s78.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 06:35 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 06:53 Automation

Sample Name: 92J07 Lab Sample ID: 1058222

Digitally signed by Kevin A. Sposito
on 05/22/2019 at 11:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s78.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 06:35 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 06:53 Automation

Sample Name: 92J07 Lab Sample ID: 1058222

Digitally signed by Kevin A. Sposito
on 05/22/2019 at 11:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s78.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 06:35 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 06:53 Automation

Sample Name: 92J07 Lab Sample ID: 1058222

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.367	65	340718	250.000
42) cis-1,2-Dichloroethene	(2)	6.278	96	2320	0.432
52)$Dibromofluoromethane	(2)	6.977	113	263802	47.915
57)$1,2-Dichloroethane-d4	(2)	7.433	102	67575	50.231
66)*Fluorobenzene	(2)	7.865	96	1116948	50.000
71) Trichloroethene	(2)	8.340	95	13577	2.612
83)$Toluene-d8	(3)	9.867	98	1118678	50.055
100)*Chlorobenzene-d5	(3)	11.309	117	870777	50.000
114)$4-Bromofluorobenzene	(3)	12.306	95	404493	47.484
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	480037	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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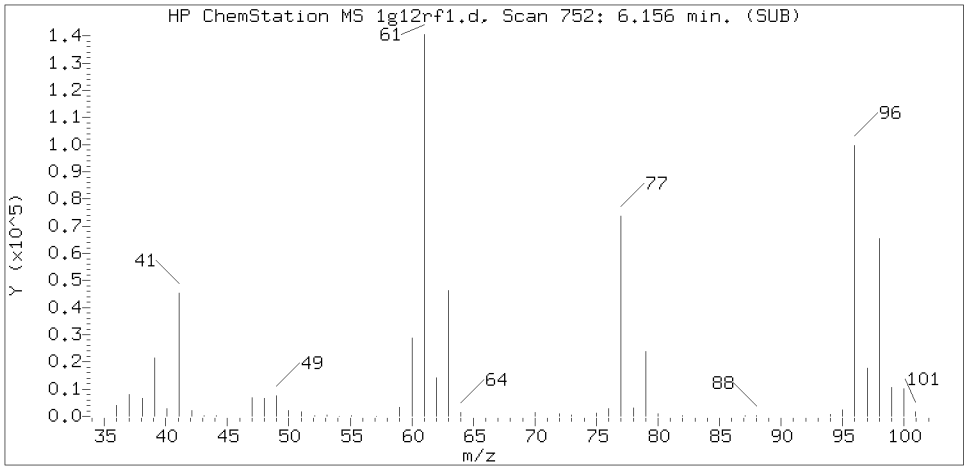
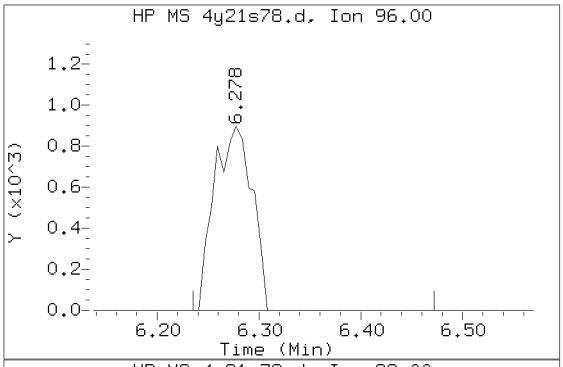
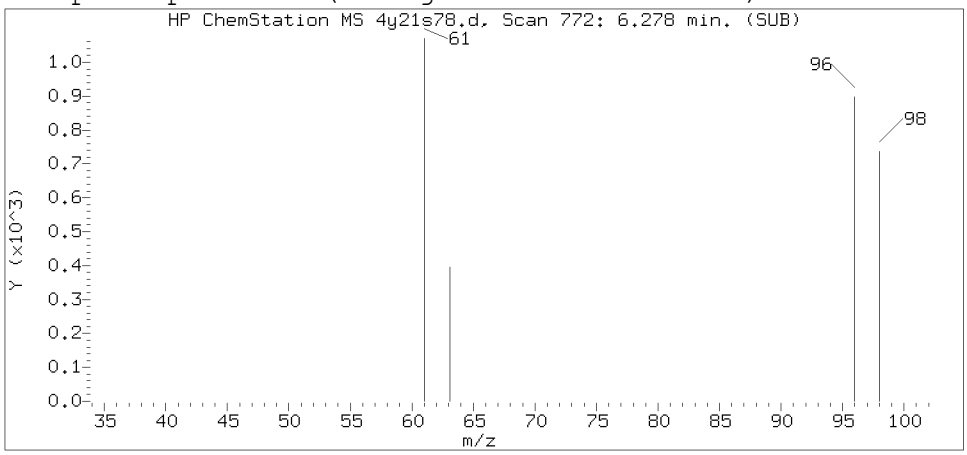
on 05/22/2019 at 11:45.
Target 3.5 esignature user ID: kas02648

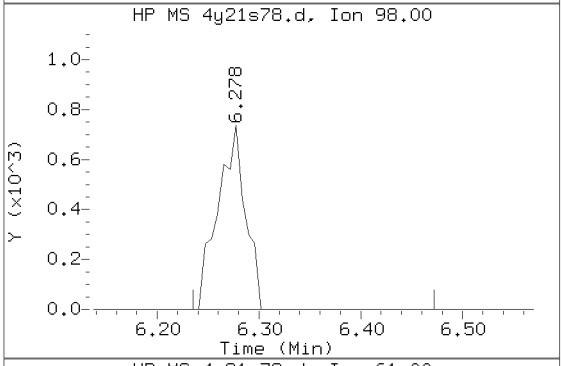
Reference Standard Spectrum for cis-1,2-Dichloroethene

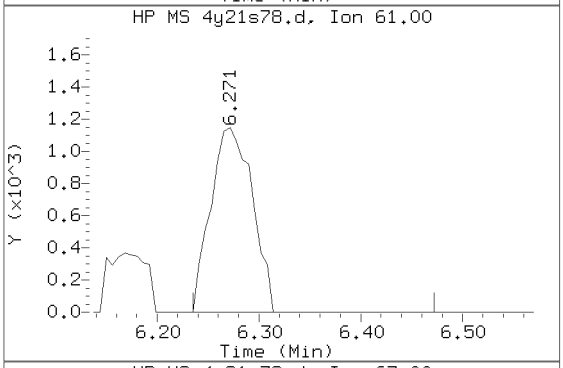




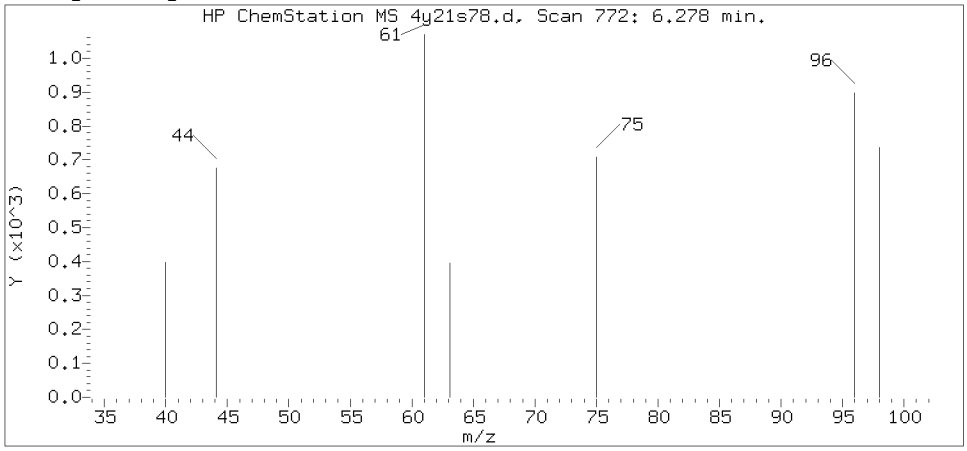
Sample Spectrum (Background Subtracted)

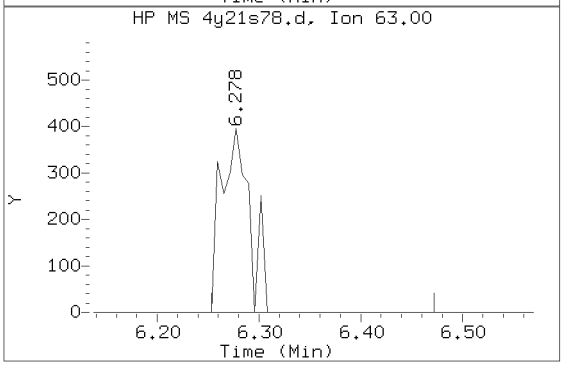






Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may21b.b/4y21s78.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 06:35 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 06:53 Automation

Sample Name: 92J07 Lab Sample ID: 1058222

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 772
Retention Time (minutes): 6.278
Relative Retention Time :-0.00077
Quant Ion : 96.00
Area (flag) : 2320
On-Column Amount (ng) : 0.4323

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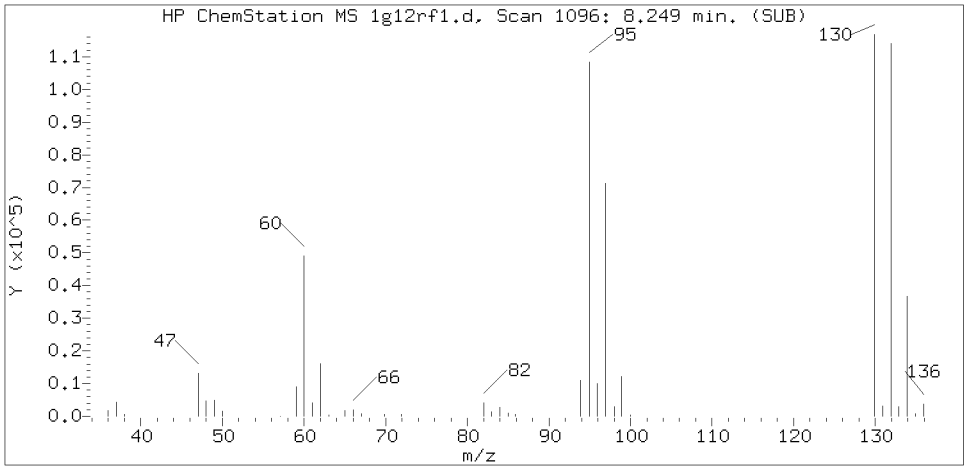
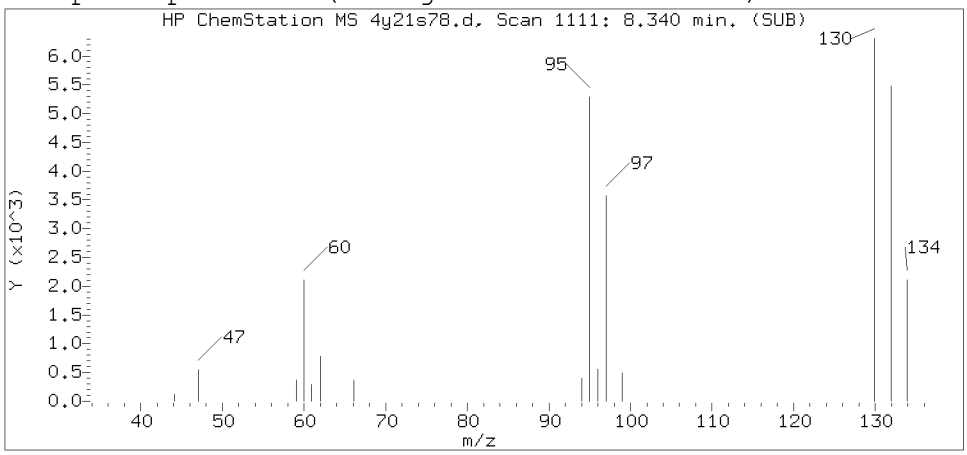
Target 3.5 esignature user ID: kas02648

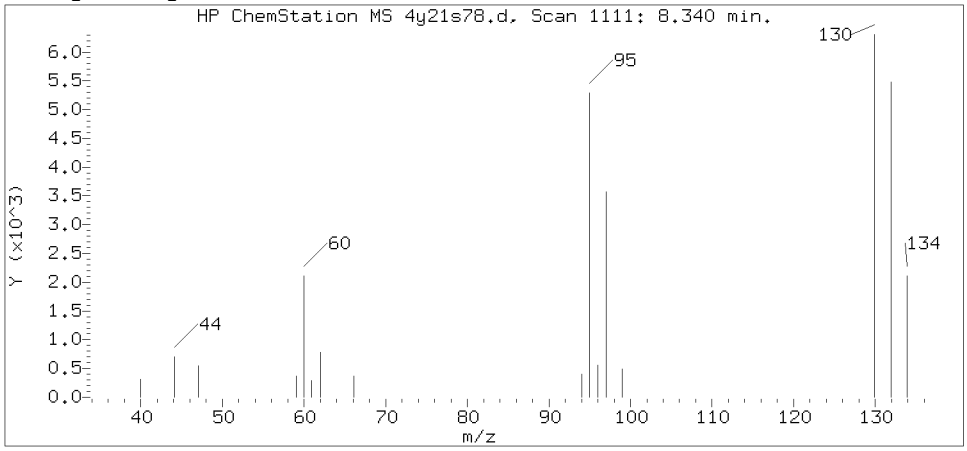
Reference Standard Spectrum for Trichloroethene

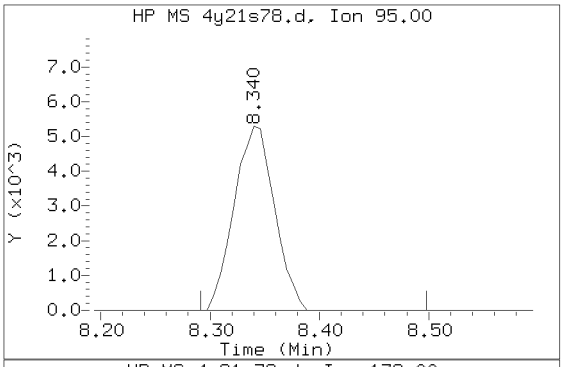


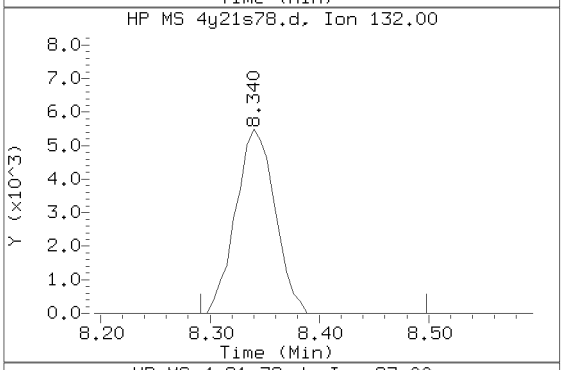
Sample Spectrum (Background Subtracted)

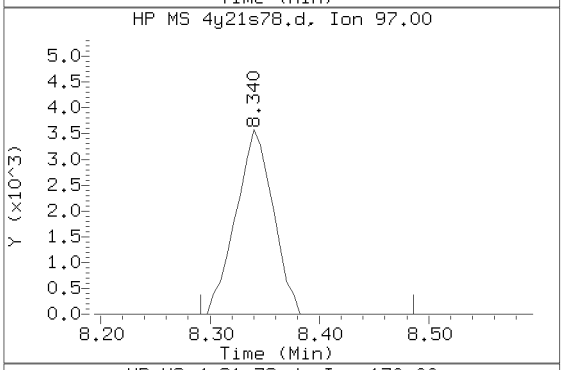


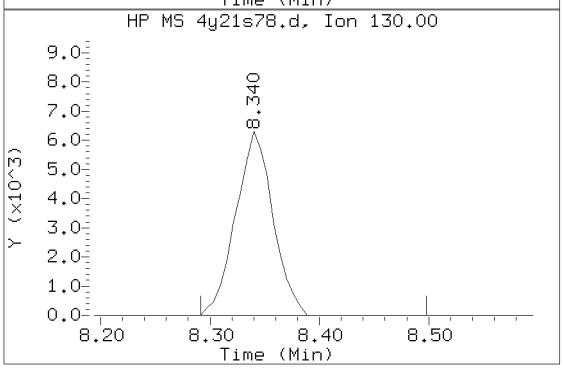
Sample Spectrum (Unaltered)











Data File: /chem/HP23297.i/19may21b.b/4y21s78.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 06:35 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 06:53 Automation

Sample Name: 92J07 Lab Sample ID: 1058222

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 1111
Retention Time (minutes): 8.340
Relative Retention Time :-0.00000
Quant Ion : 95.00
Area (flag) : 13577
On-Column Amount (ng) : 2.6121

Digitally signed by Kevin A. Sposito on 05/22/2019 at 11:45.
Target 3.5 esignature user ID: kas02648

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

92J08

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058223

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may22a.b/ey22s10.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	0.4	J
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	2	
156-59-2	cis-1,2-Dichloroethene	0.9	J
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	0.9	J
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	11	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

^

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may22a.b/ey22s10.d Injection date and time: **22-MAY-2019 13:41**
Data file Sample Info. Line: 92J08;1058223;1;0;;JCV92;;;ey22b01; Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 14:48 jml01693

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:52
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.487(-0.012)	246	65	167083 (-2)	250.00	
66) Fluorobenzene	4.736(-0.006)	615	96	1080083 (0)	50.00	
101) Chlorobenzene-d5	7.894(0.000)	1133	117	805121 (-1)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802(0.000)	1446	152	427545 (1)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.078(-0.001)	113	238413	47.492	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.395(0.000)	102	63147	49.847	100%		80 - 120
84) Toluene-d8	(3)	6.388(-0.001)	98	1077905	49.295	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918(0.000)	95	407528	48.480	97%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	2.108(-0.002)	96	1595M	0.368	0.37		J	0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	3.078(-0.000)	63	17335	1.895	1.90			0.2	1
42) cis-1,2-Dichloroethene	(2)	3.620(-0.001)	96	4884	0.890	0.89		J	0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	4.108(-0.000)	97	6970	0.866	0.87		J	0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	5.108(0.000)	95	59604	11.275	11.27			0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

M = Compound was manually integrated.

Digitally signed by Jason M. Long on 05/22/2019 at 14:50. Target 3.5 esignature user ID: jml01693

Data file: /chem/HP15648.i/19may22a.b/ey22s10.d Injection date and time: **22-MAY-2019 13:41**
Data file Sample Info. Line: 92J08;1058223;1;0;;JCV92;;;ey22b01; Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 14:48 jml01693

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:52
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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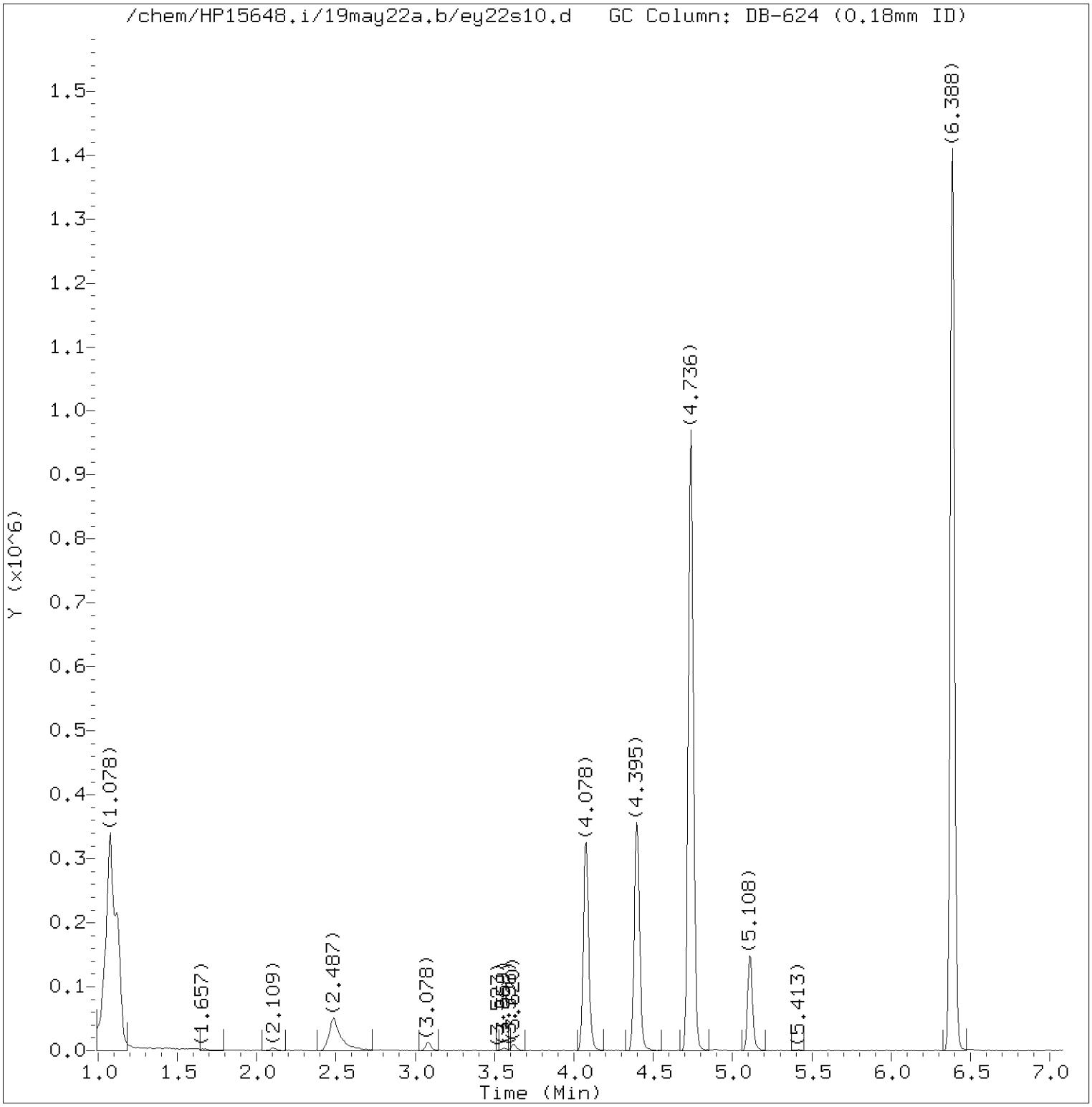
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Jason M. Long on 05/22/2019 at 14:50. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/23/2019 at 14:20. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

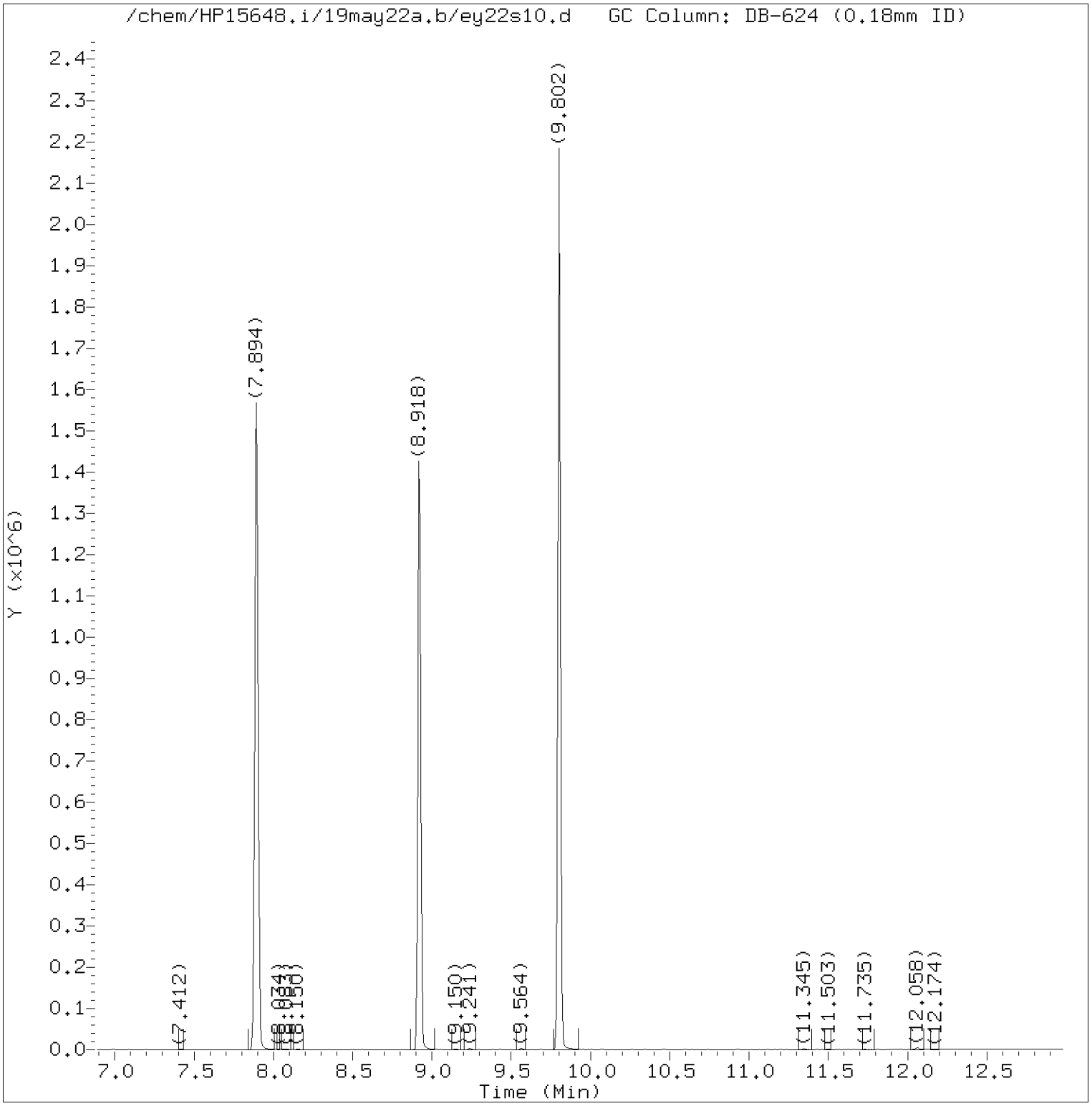
Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s10.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 13:41 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:48 jml01693

Sample Name: 92J08 Lab Sample ID: 1058223

Digitally signed by Jason M. Long
on 05/22/2019 at 14:50.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s10.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 13:41 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:48 jml01693

Sample Name: 92J08 Lab Sample ID: 1058223

Digitally signed by Jason M. Long
on 05/22/2019 at 14:50.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s10.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 13:41 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:48 jml01693

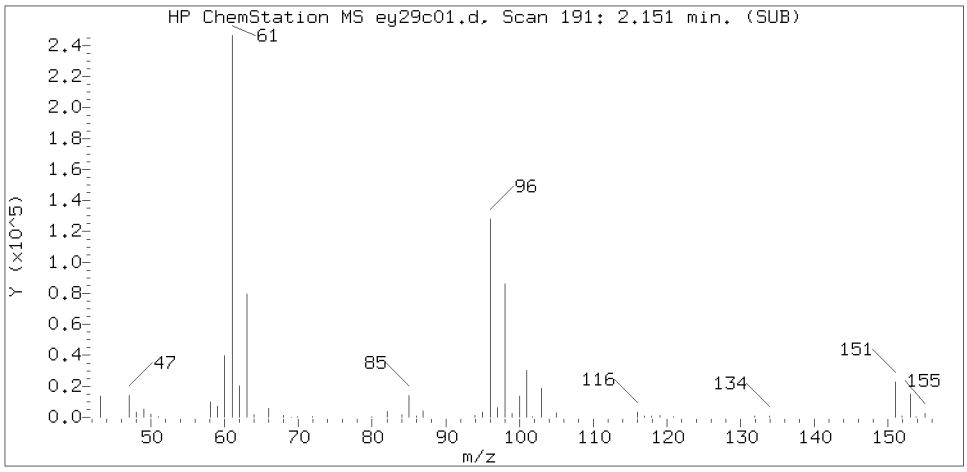
Sample Name: 92J08 Lab Sample ID: 1058223

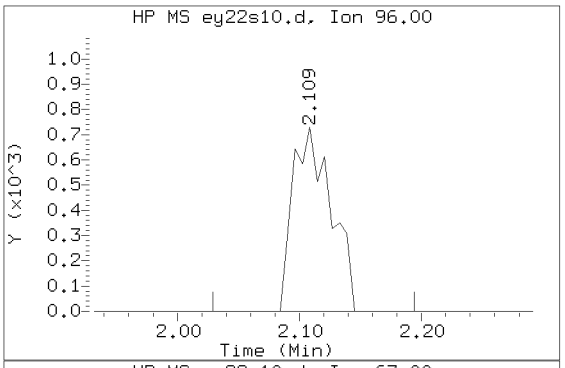
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	2.109	96	1595M	0.368
29)*t-Butyl alcohol-d10	(1)	2.487	65	167083	250.000
36) 1,1-Dichloroethane	(2)	3.078	63	17335	1.895
42) cis-1,2-Dichloroethene	(2)	3.620	96	4884	0.890
52)$Dibromofluoromethane	(2)	4.078	113	238413	47.492
53) 1,1,1-Trichloroethane	(2)	4.108	97	6970	0.866
57)$1,2-Dichloroethane-d4	(2)	4.395	102	63147	49.847
66)*Fluorobenzene	(2)	4.736	96	1080083	50.000
71) Trichloroethene	(2)	5.108	95	59604	11.275
84)$Toluene-d8	(3)	6.388	98	1077905	49.295
101)*Chlorobenzene-d5	(3)	7.894	117	805121	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	407528	48.480
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	427545	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

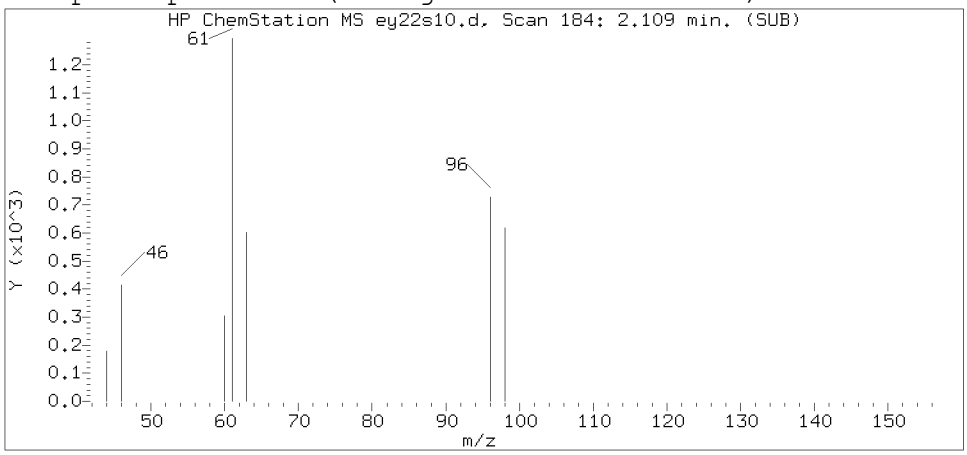
Digitally signed by Jason M. Long
on 05/22/2019 at 14:50.
Target 3.5 esignature user ID: jml01693

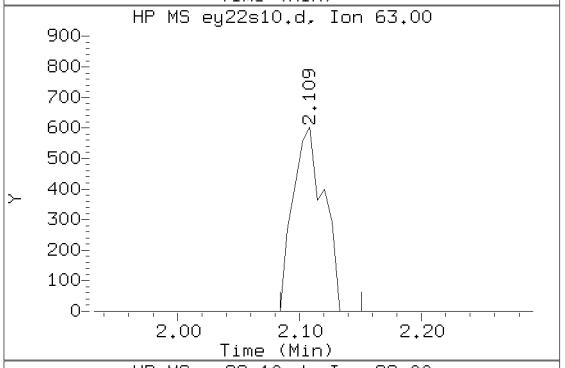
Reference Standard Spectrum for 1,1-Dichloroethene

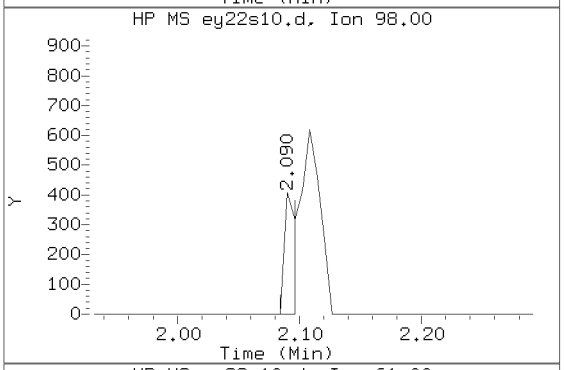




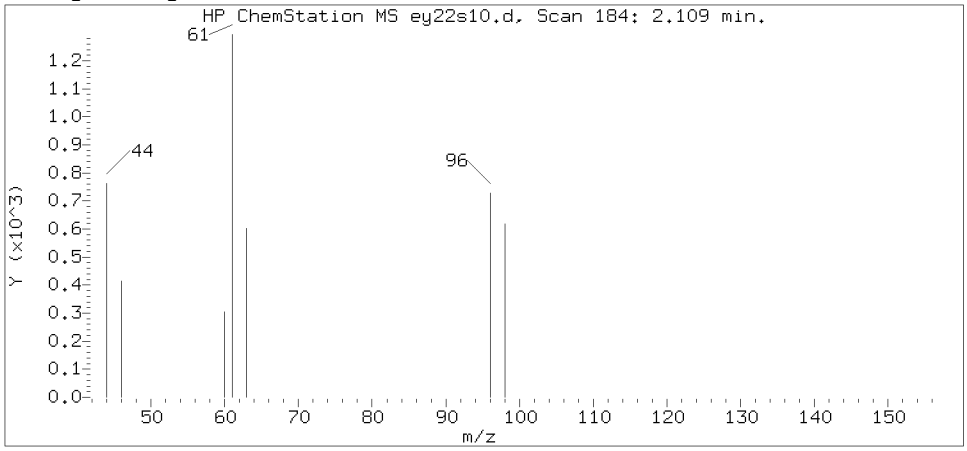
Sample Spectrum (Background Subtracted)

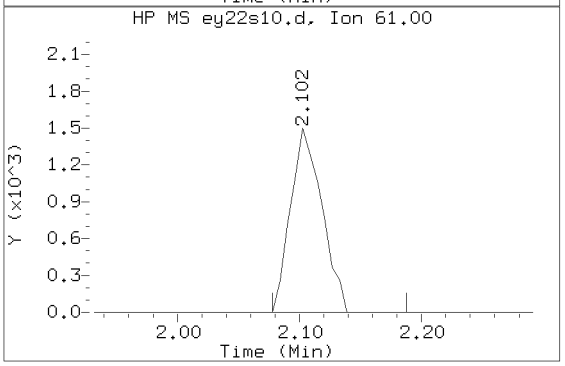






Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19may22a.b/ey22s10.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 13:41 Analyst ID: JML01693

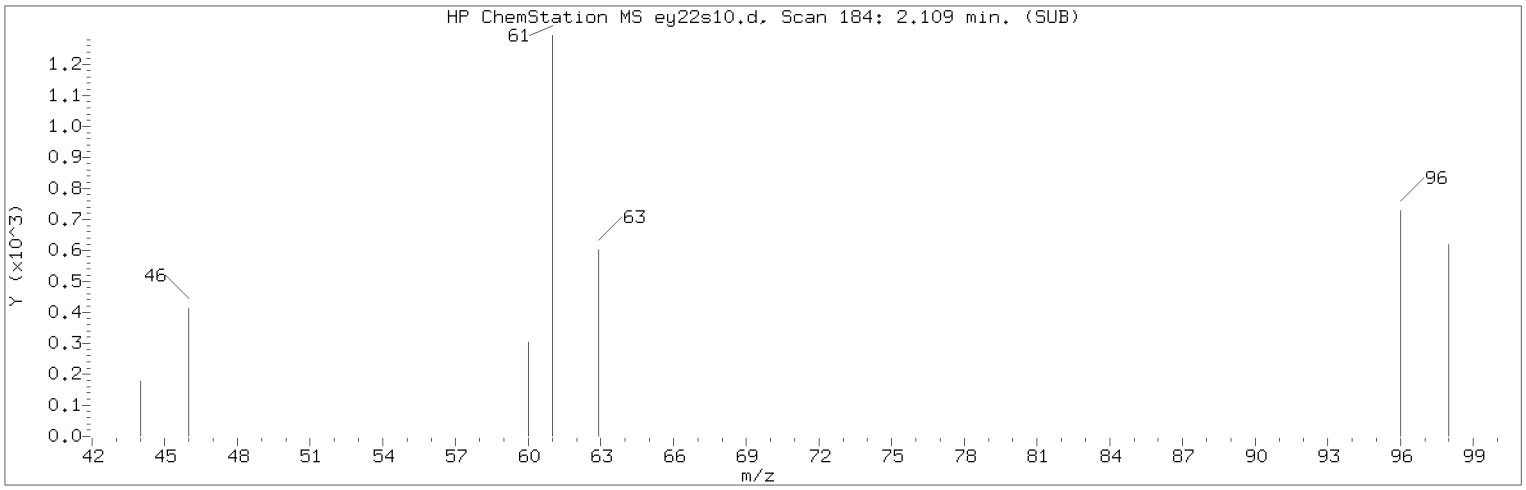
Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:48 jml01693

Sample Name: 92J08 Lab Sample ID: 1058223

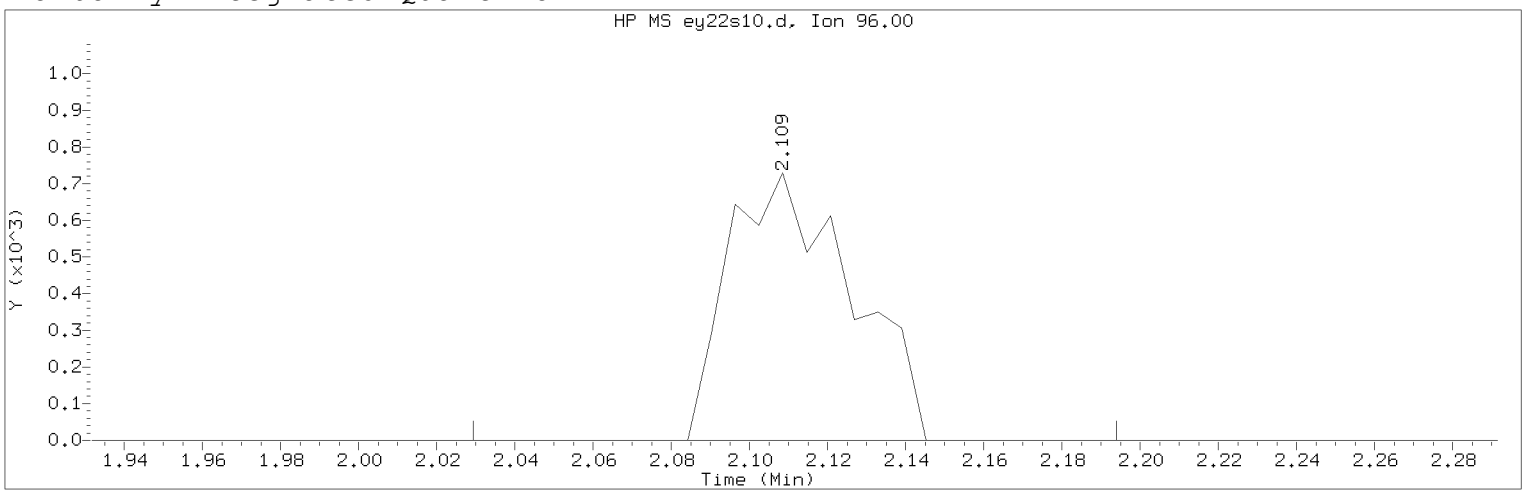
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 184
Retention Time (minutes): 2.109
Relative Retention Time :-0.00201
Quant Ion : 96.00
Area (flag) : 1595M
On-Column Amount (ng) : 0.3678

Digitally signed by Jason M. Long on 05/22/2019 at 14:50.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may22a.b/ey22s10.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 13:41 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:48 jml01693

Sample Name: 92J08 Lab Sample ID: 1058223

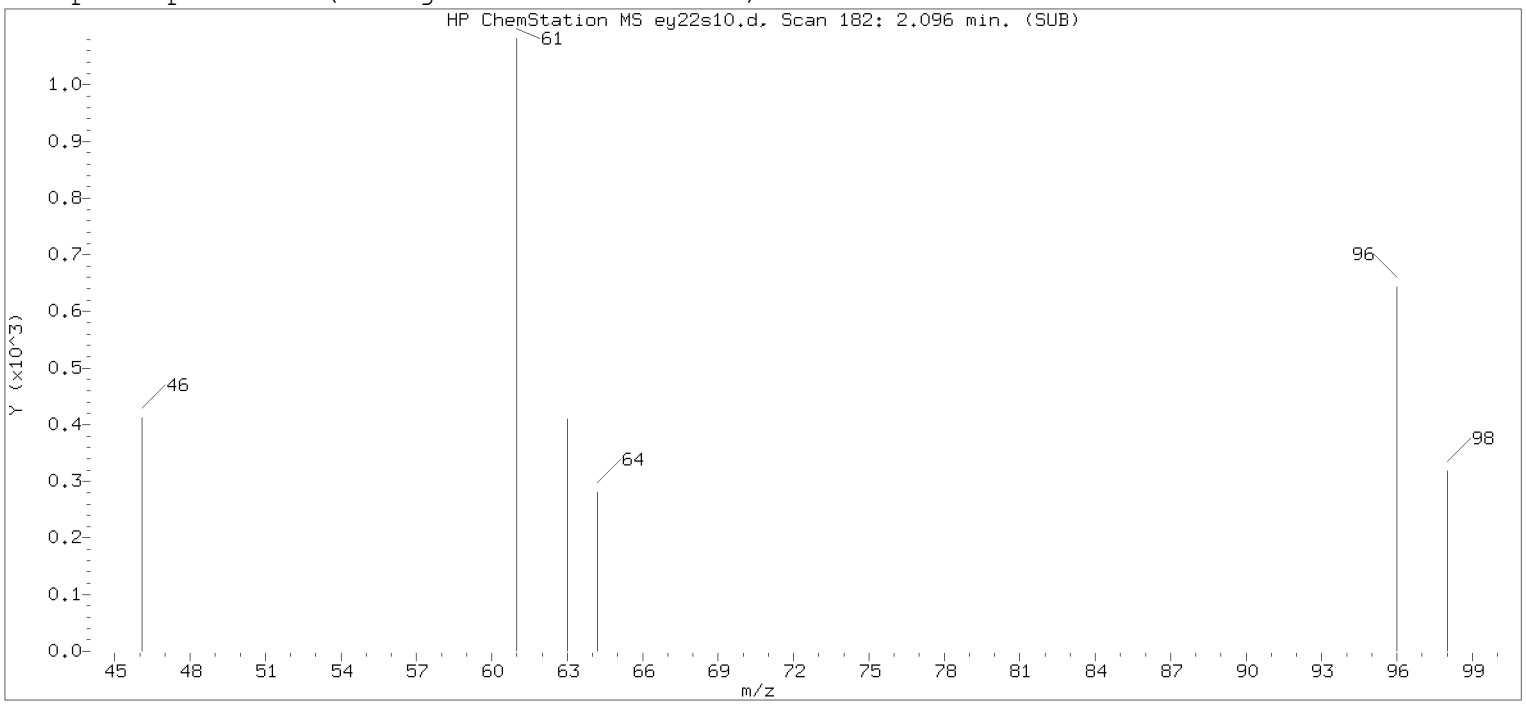
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 184
Retention Time (minutes): 2.109
Quant Ion : 96.00
Area (flag) : 1595M
On-Column Amount (ng) : 0.3678
Integration start scan : 170 Integration stop scan: 197
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

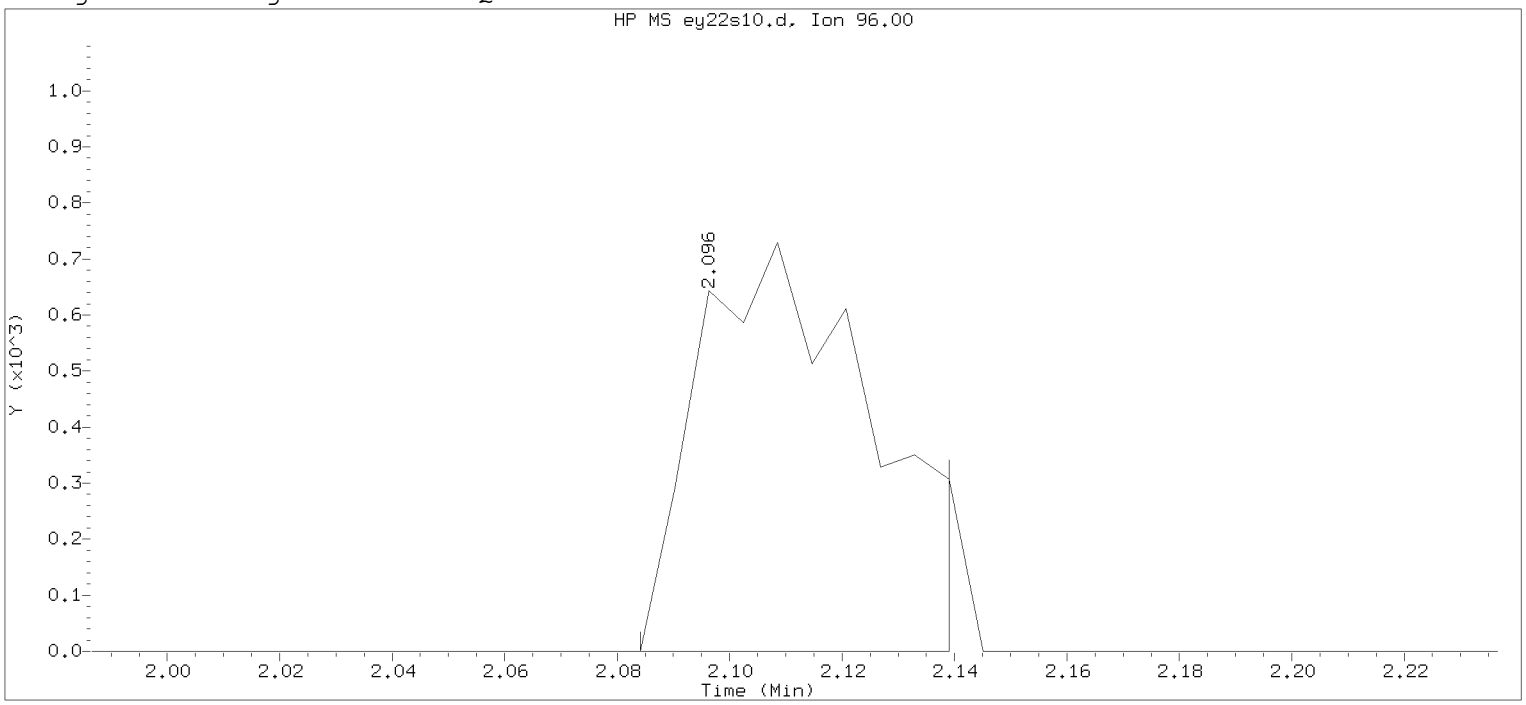
Analyst responsible for change: Digitally signed by Jason M. Long
on 05/22/2019 at 14:50.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/23/2019 at 14:20.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may22a.b/ey22s10.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 13:41 Analyst ID: JML01693

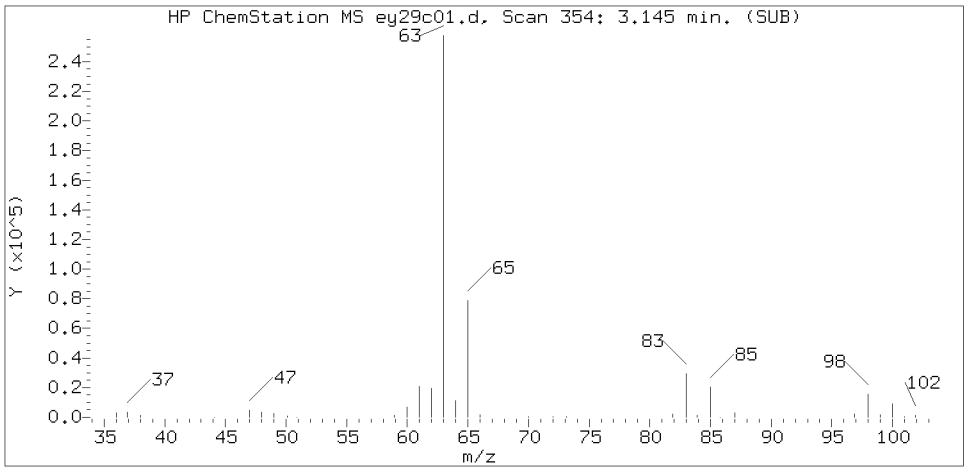
Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 13:57 Automation

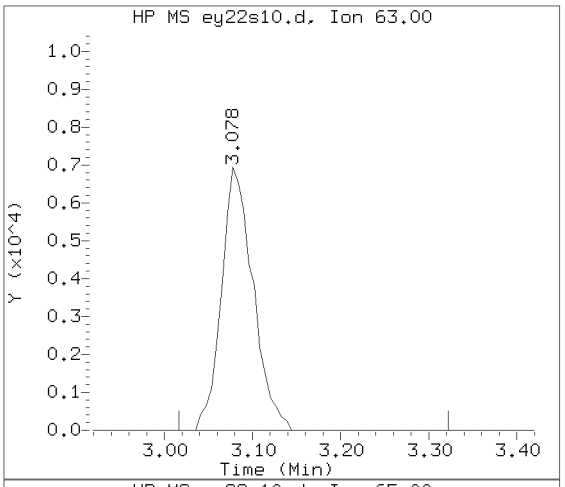
Sample Name: 92J08 Lab Sample ID: 1058223

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 182
Retention Time (minutes): 2.096
Quant Ion : 96.00
Area : 1539
On-column Amount (ng) : 0.3548
Integration start scan : 179 Integration stop scan: 188
Y at integration start : 0 Y at integration end: 0

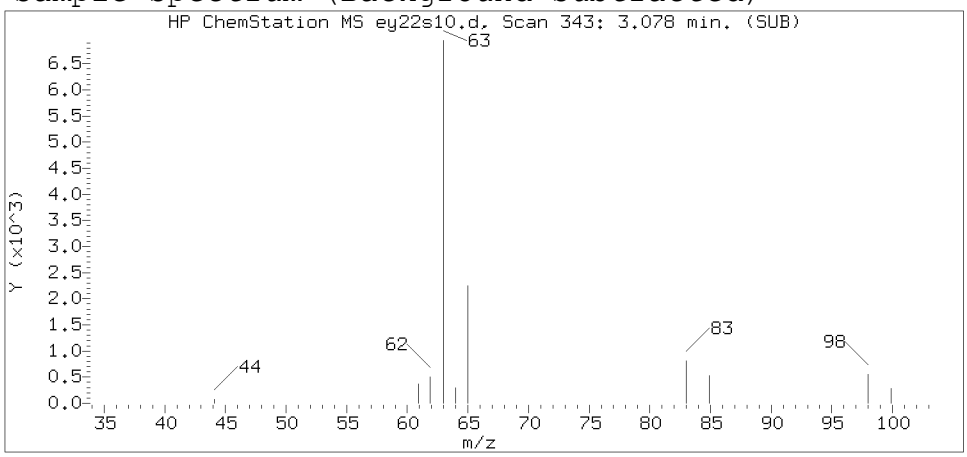
Digitally signed by Jason M. Long on 05/22/2019 at 14:50.
Target 3.5 esignature user ID: jmlong

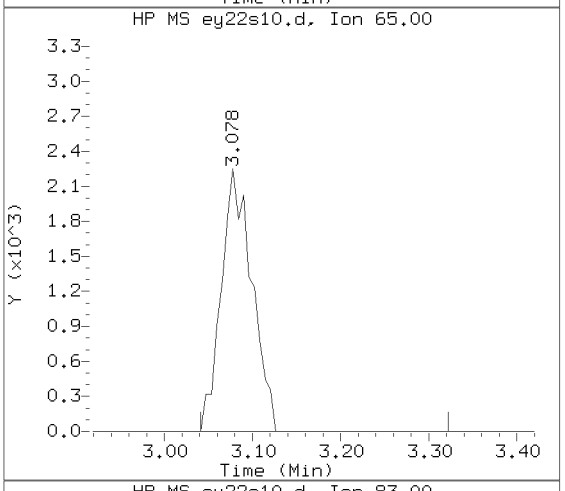
Reference Standard Spectrum for 1,1-Dichloroethane



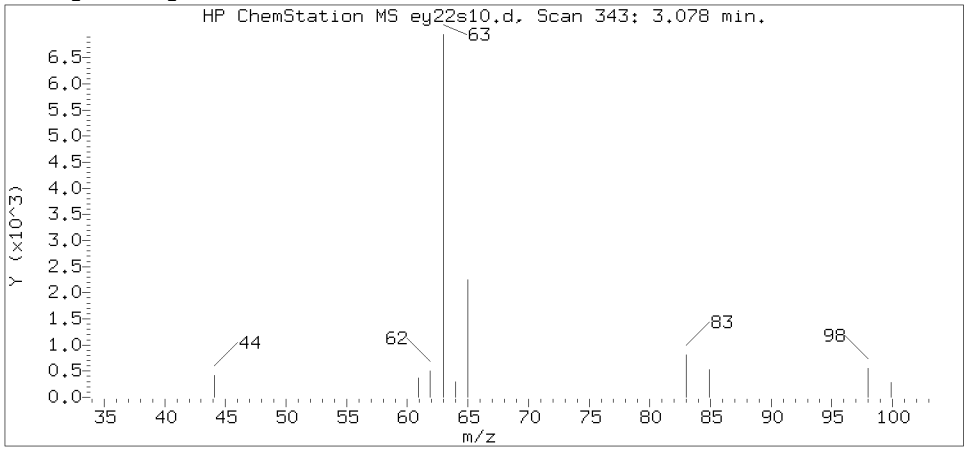


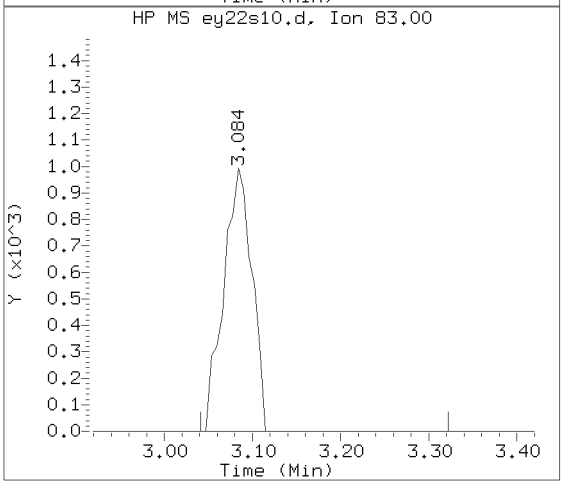
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19may22a.b/ey22s10.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 13:41 Analyst ID: JML01693

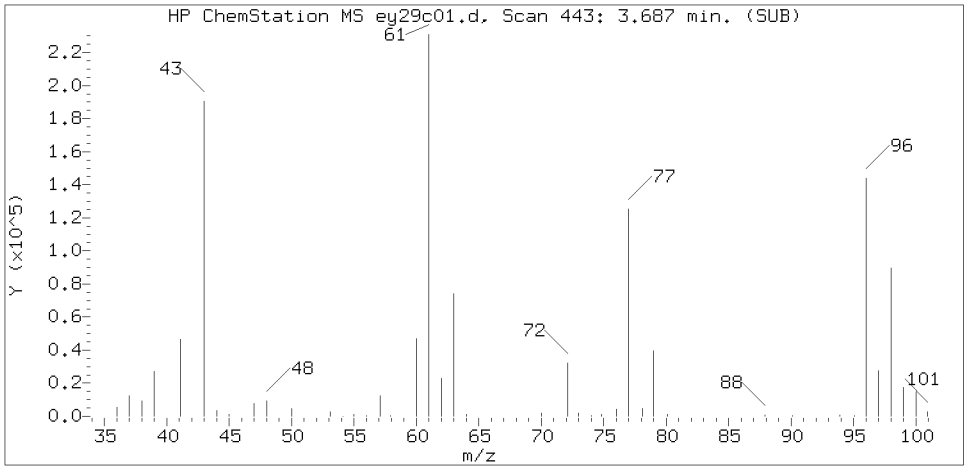
Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:48 jml01693

Sample Name: 92J08 Lab Sample ID: 1058223

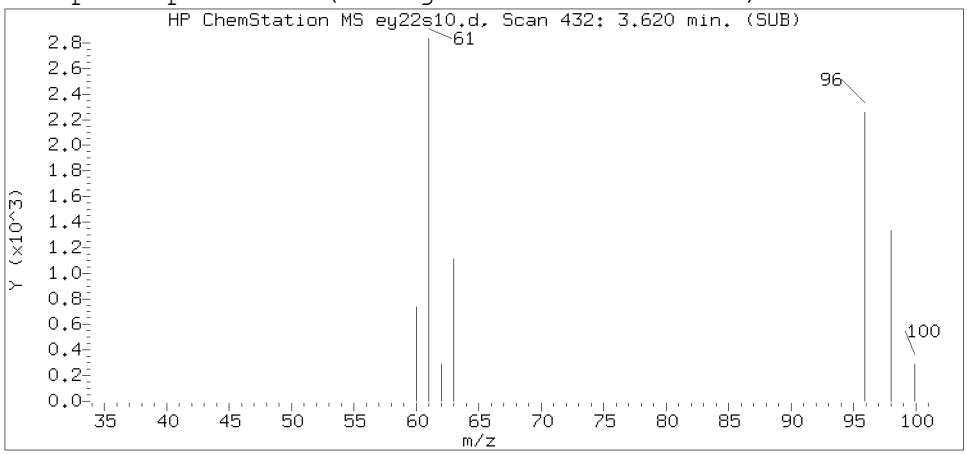
Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 343
Retention Time (minutes): 3.078
Relative Retention Time :-0.00046
Quant Ion : 63.00
Area (flag) : 17335
On-Column Amount (ng) : 1.8954

Digitally signed by Jason M. Long on 05/22/2019 at 14:50.
Target 3.5 esignature user ID: jml01693

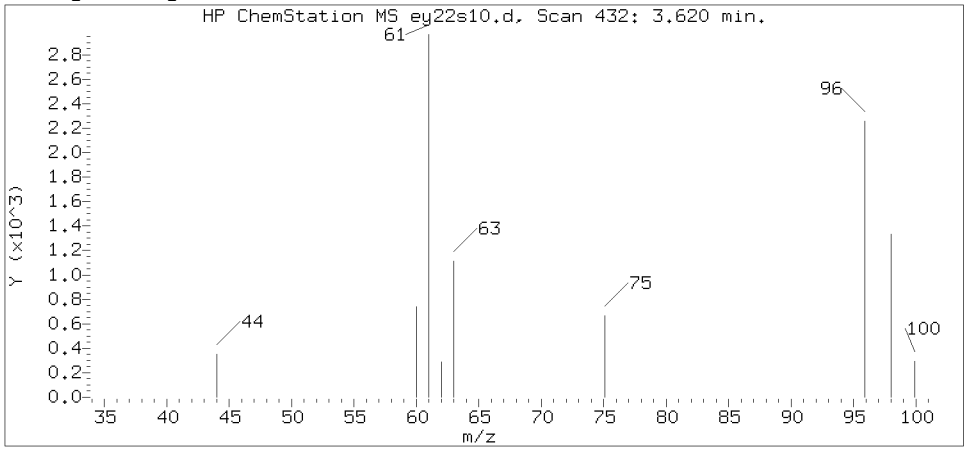
Reference Standard Spectrum for cis-1,2-Dichloroethene

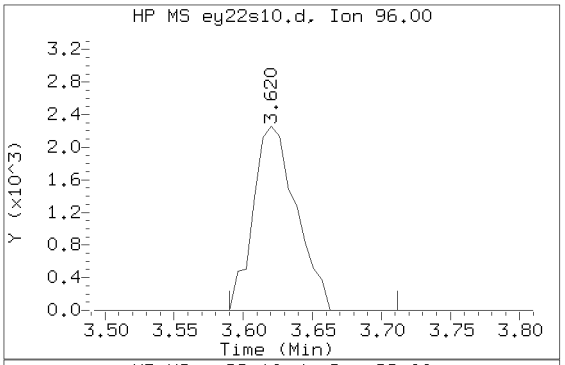


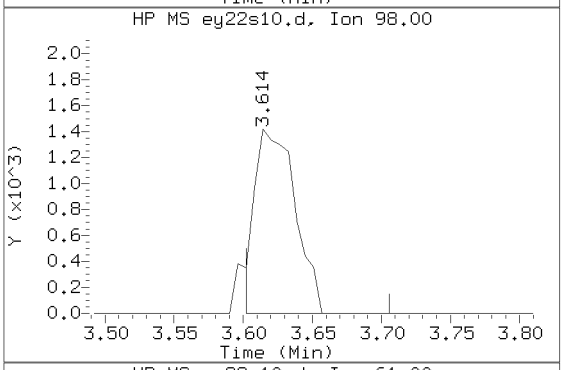
Sample Spectrum (Background Subtracted)

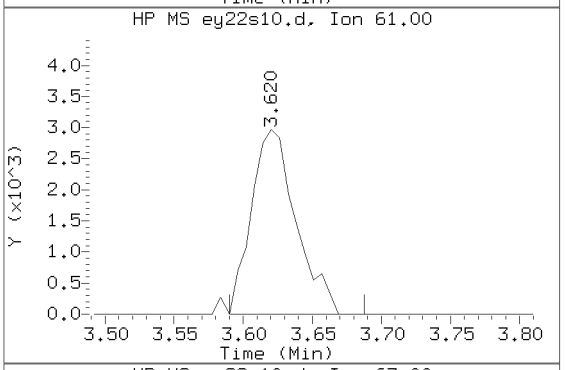


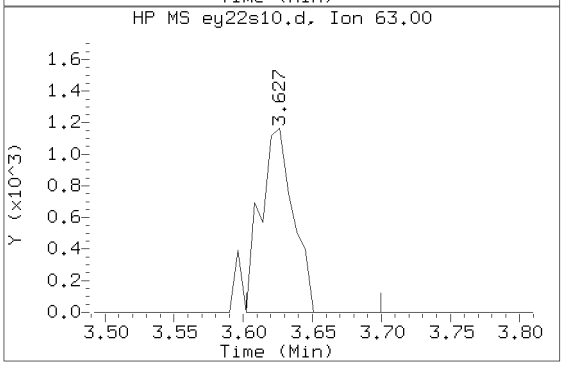
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s10.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 13:41 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:48 jml01693

Sample Name: 92J08 Lab Sample ID: 1058223

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 432
Retention Time (minutes): 3.620
Relative Retention Time :-0.00160
Quant Ion : 96.00
Area (flag) : 4884
On-Column Amount (ng) : 0.8904

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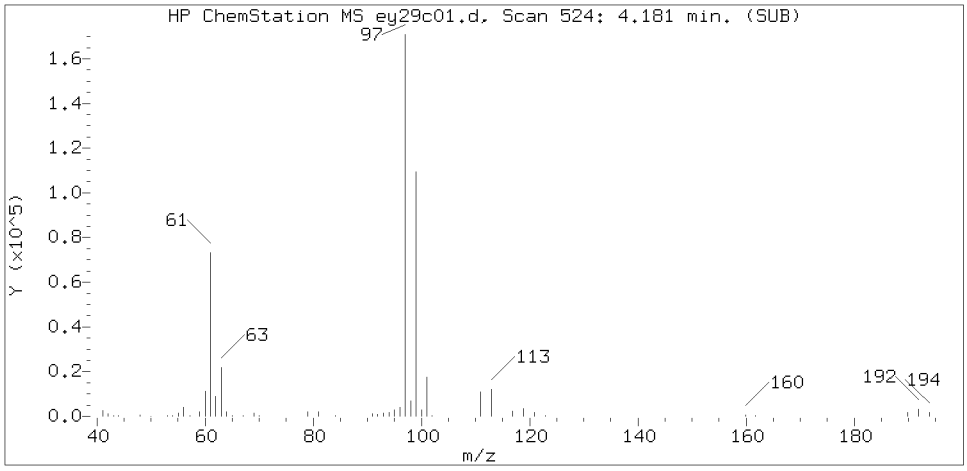
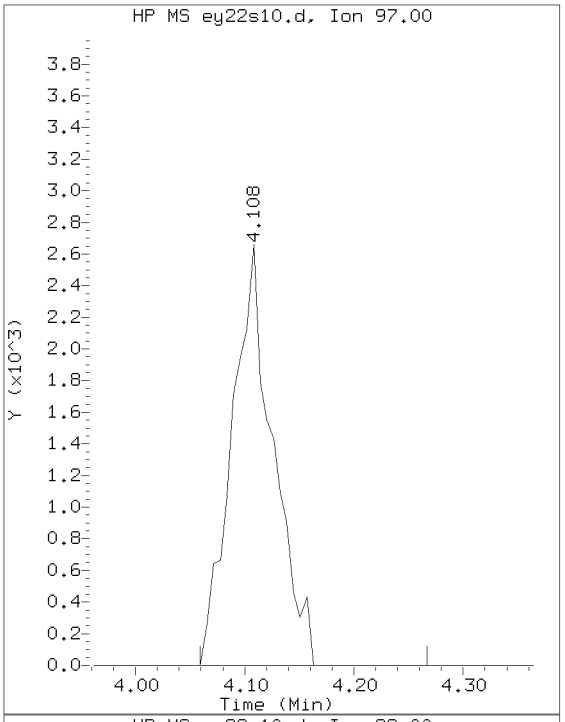
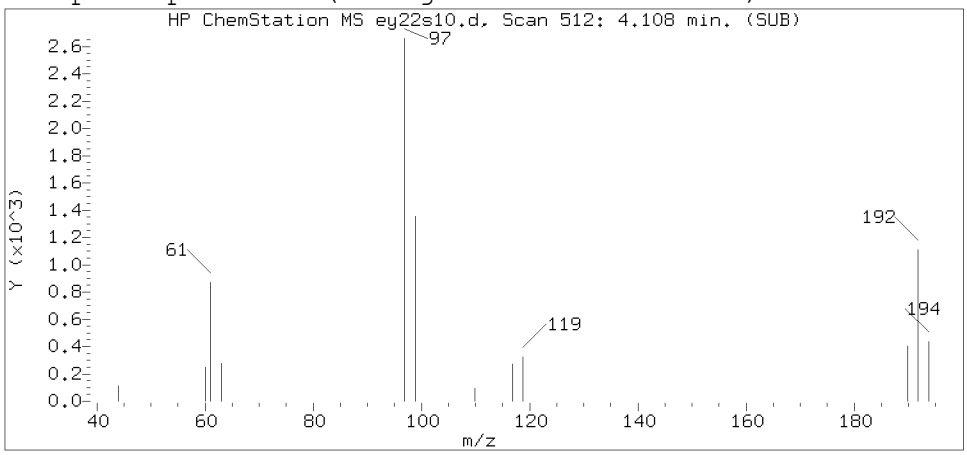
Target 3.5 esignature user ID: jml01693

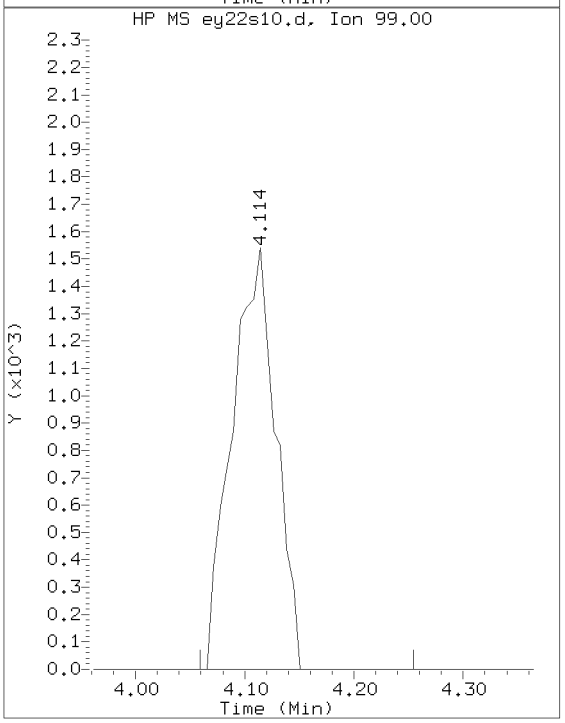
Reference Standard Spectrum for 1,1,1-Trichloroethane



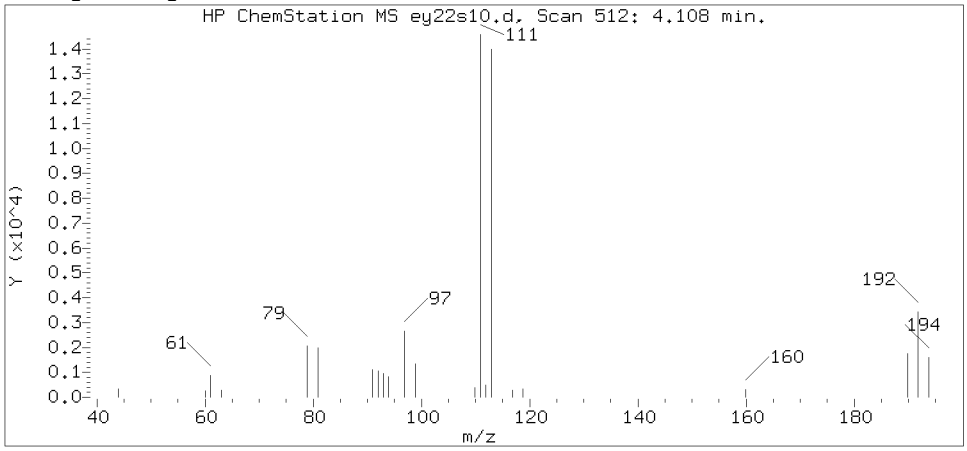


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP15648.i/19may22a.b/ey22s10.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 13:41 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:48 jml01693

Sample Name: 92J08 Lab Sample ID: 1058223

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 512
Retention Time (minutes)	: 4.108
Relative Retention Time	:-0.00017
Quant Ion	: 97.00
Area (flag)	: 6970
On-Column Amount (ng)	: 0.8659

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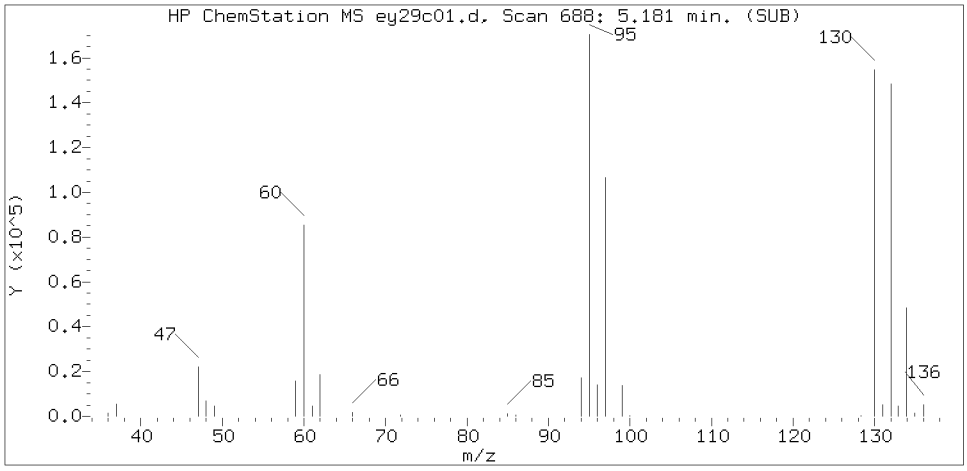
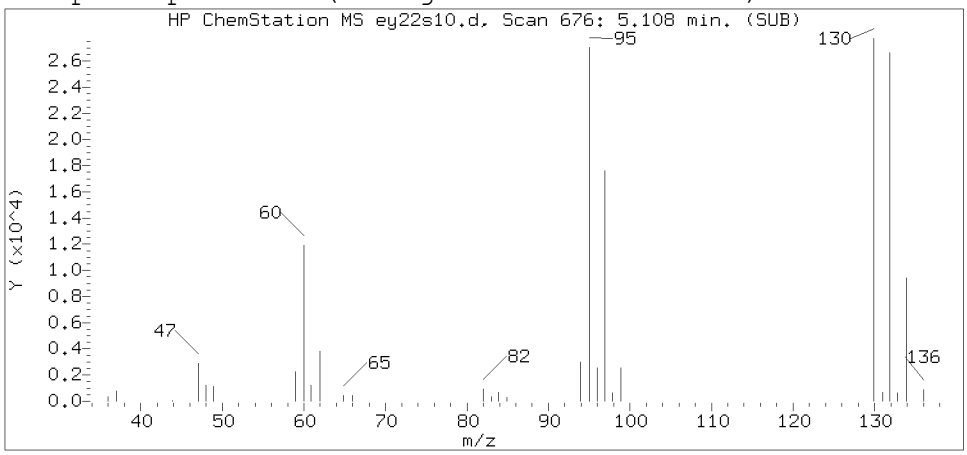
Target 3.5 esignature user ID: jml01693

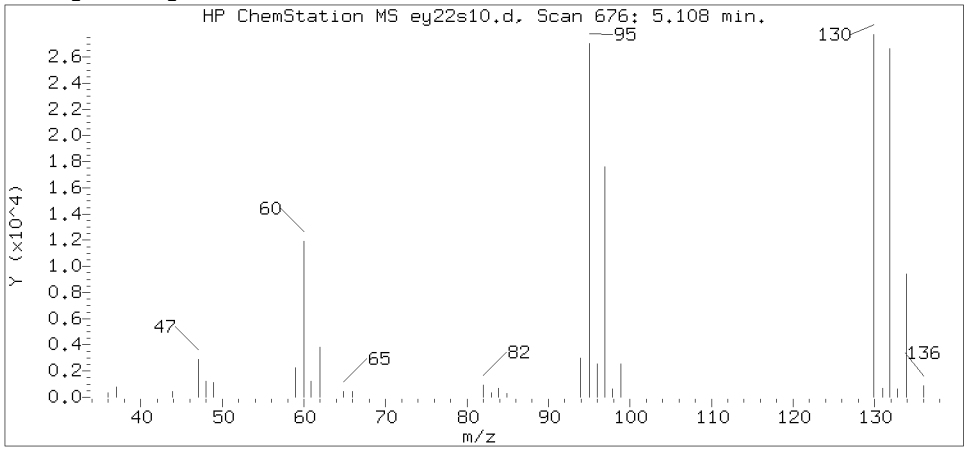
Reference Standard Spectrum for Trichloroethene

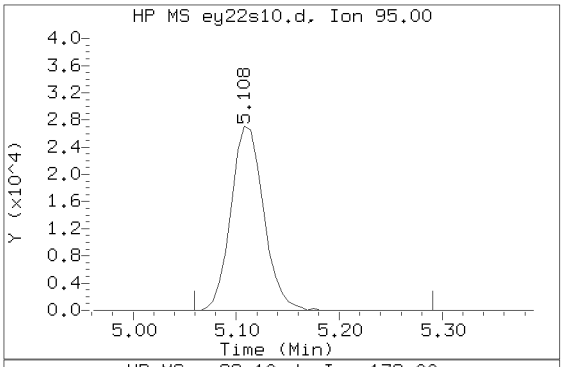


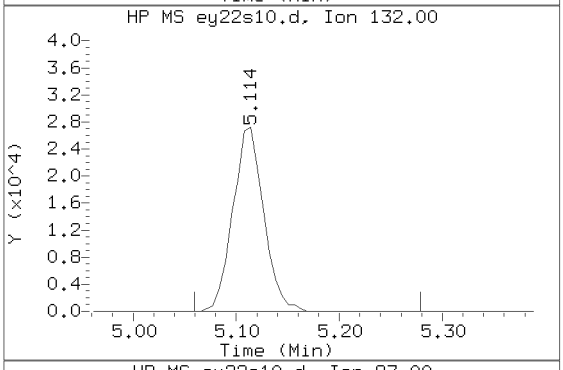
Sample Spectrum (Background Subtracted)

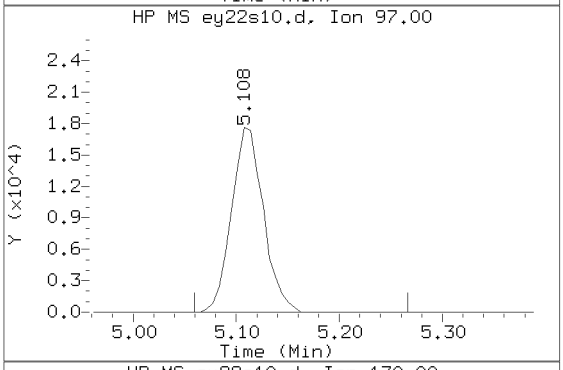


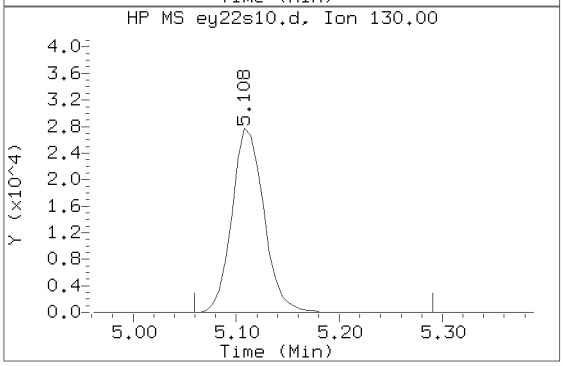
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s10.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 13:41 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:48 jml01693

Sample Name: 92J08 Lab Sample ID: 1058223

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 676
Retention Time (minutes)	: 5.108
Relative Retention Time	: 0.00010
Quant Ion	: 95.00
Area (flag)	: 59604
On-Column Amount (ng)	: 11.2747

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Target 3.5 esignature user ID: jml01693

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

92J09

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058224

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may22a.b/ey22s11.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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92J09 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1058224

Data file: /chem/HP15648.i/19may22a.b/ey22s11.d Injection date and time: **22-MAY-2019 14:01**
Data file Sample Info. Line: 92J09;1058224;1;0;;JCV92;;;ey22b01; Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 14:17 Automation

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:52
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.486	(-0.012)	246	65	165482	(-3)	250.00	
66) Fluorobenzene	4.736	(-0.006)	615	96	1097303	(1)	50.00	
101) Chlorobenzene-d5	7.894	(0.000)	1133	117	820310	(1)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802	(0.000)	1446	152	444212	(5)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.072	(0.000)	113	242894	47.625	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.395	(0.000)	102	65249	50.698	101%		80 - 120
84) Toluene-d8	(3)	6.388	(-0.001)	98	1099893	49.369	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918	(0.000)	95	418333	48.844	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

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Data file: /chem/HP15648.i/19may22a.b/ey22s11.d Injection date and time: **22-MAY-2019 14:01**
Data file Sample Info. Line: 92J09;1058224;1;0;;JCV92;;;ey22b01; Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 14:17 Automation

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:52
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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Total number of targets = 24

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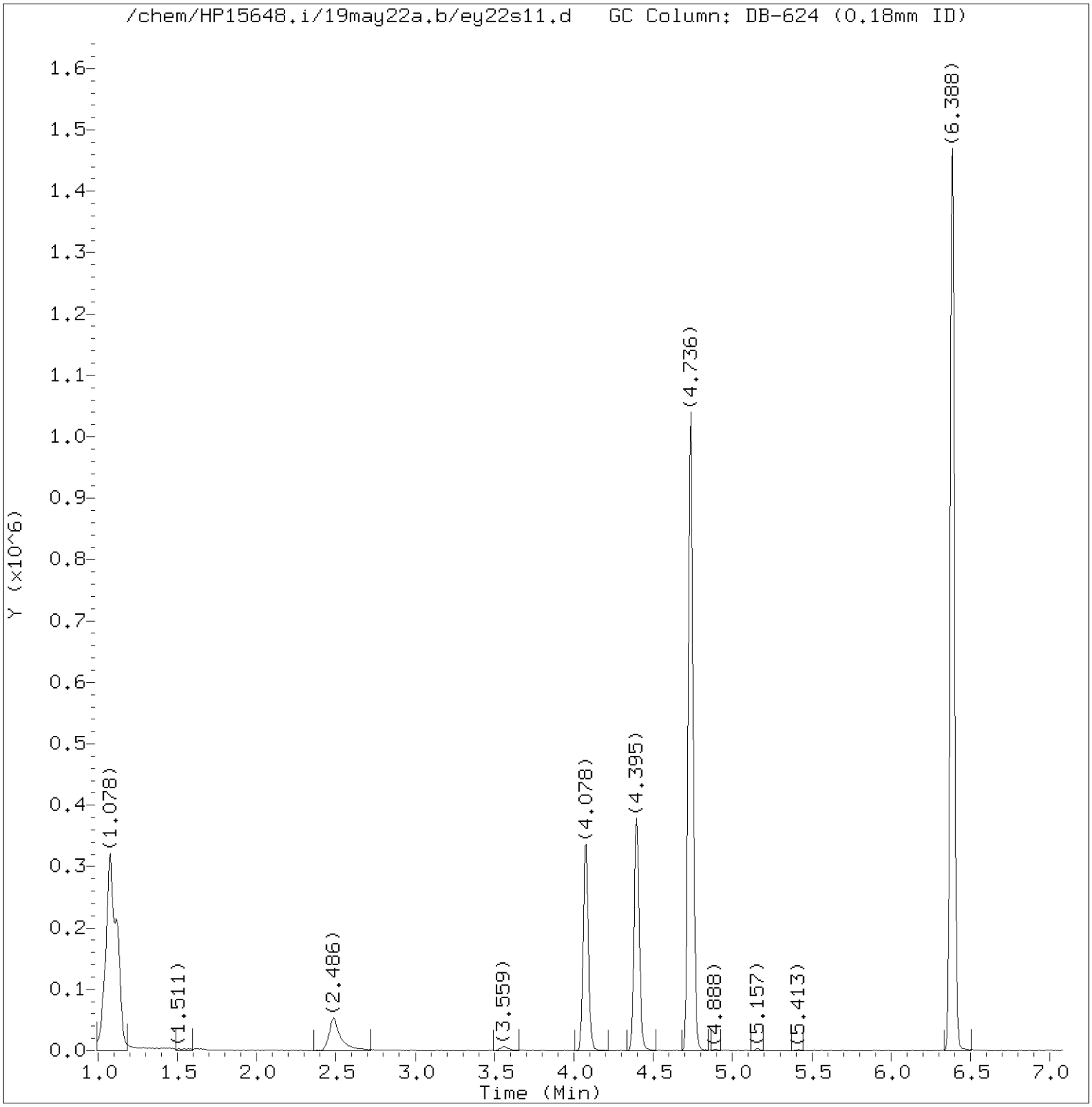
Secondary review performed and digitally signed by Chelsea B. Riehl on 05/23/2019 at 14:20. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

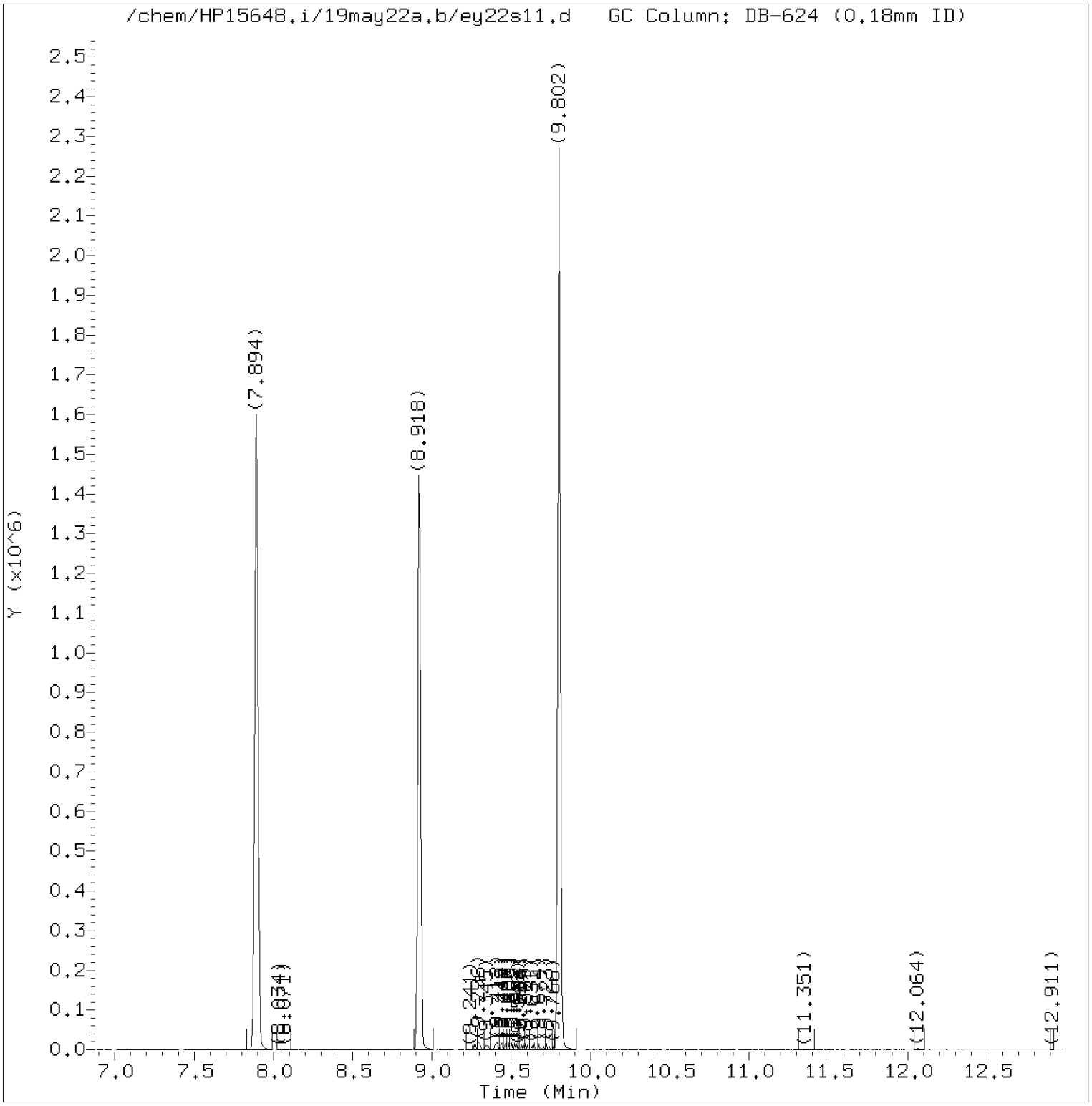
Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s11.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 14:01 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:17 Automation

Sample Name: 92J09 Lab Sample ID: 1058224

Digitally signed by Jason M. Long
on 05/22/2019 at 14:50.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s11.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 14:01 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:17 Automation

Sample Name: 92J09 Lab Sample ID: 1058224

Digitally signed by Jason M. Long
on 05/22/2019 at 14:50.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s11.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 14:01 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:17 Automation

Sample Name: 92J09 Lab Sample ID: 1058224

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.486	65	165482	250.000
52)$Dibromofluoromethane	(2)	4.072	113	242894	47.625
57)$1,2-Dichloroethane-d4	(2)	4.395	102	65249	50.698
66)*Fluorobenzene	(2)	4.736	96	1097303	50.000
84)$Toluene-d8	(3)	6.388	98	1099893	49.369
101)*Chlorobenzene-d5	(3)	7.894	117	820310	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	418333	48.844
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	444212	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 05/22/2019 at 14:50.
Target 3.5 esignature user ID: jml01693

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

92J10

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058225

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may22a.b/ey22s12.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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92J10 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1058225

Data file: /chem/HP15648.i/19may22a.b/ey22s12.d Injection date and time: **22-MAY-2019 14:21**
Data file Sample Info. Line: 92J10;1058225;1;0;;JCV92;;;ey22b01; Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 14:37 Automation

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:52
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.487(-0.012)	246	65	166551 (-3)	250.00	
66) Fluorobenzene	4.736(-0.006)	615	96	1078189 (0)	50.00	
101) Chlorobenzene-d5	7.894(0.000)	1133	117	799023 (-2)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802(0.000)	1446	152	424117 (0)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.078(-0.001)	113	239773	47.846	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.401(-0.001)	102	62715	49.593	99%		80 - 120
84) Toluene-d8	(3)	6.388(-0.001)	98	1083964	49.950	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918(0.000)	95	413544	49.572	99%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)			Not Detected					0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Jason M. Long on 05/22/2019 at 14:50. Target 3.5 esignature user ID: jml01693

Data file: /chem/HP15648.i/19may22a.b/ey22s12.d Injection date and time: **22-MAY-2019 14:21**
Data file Sample Info. Line: 92J10;1058225;1;0;;JCV92;;;ey22b01; Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 14:37 Automation

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:52
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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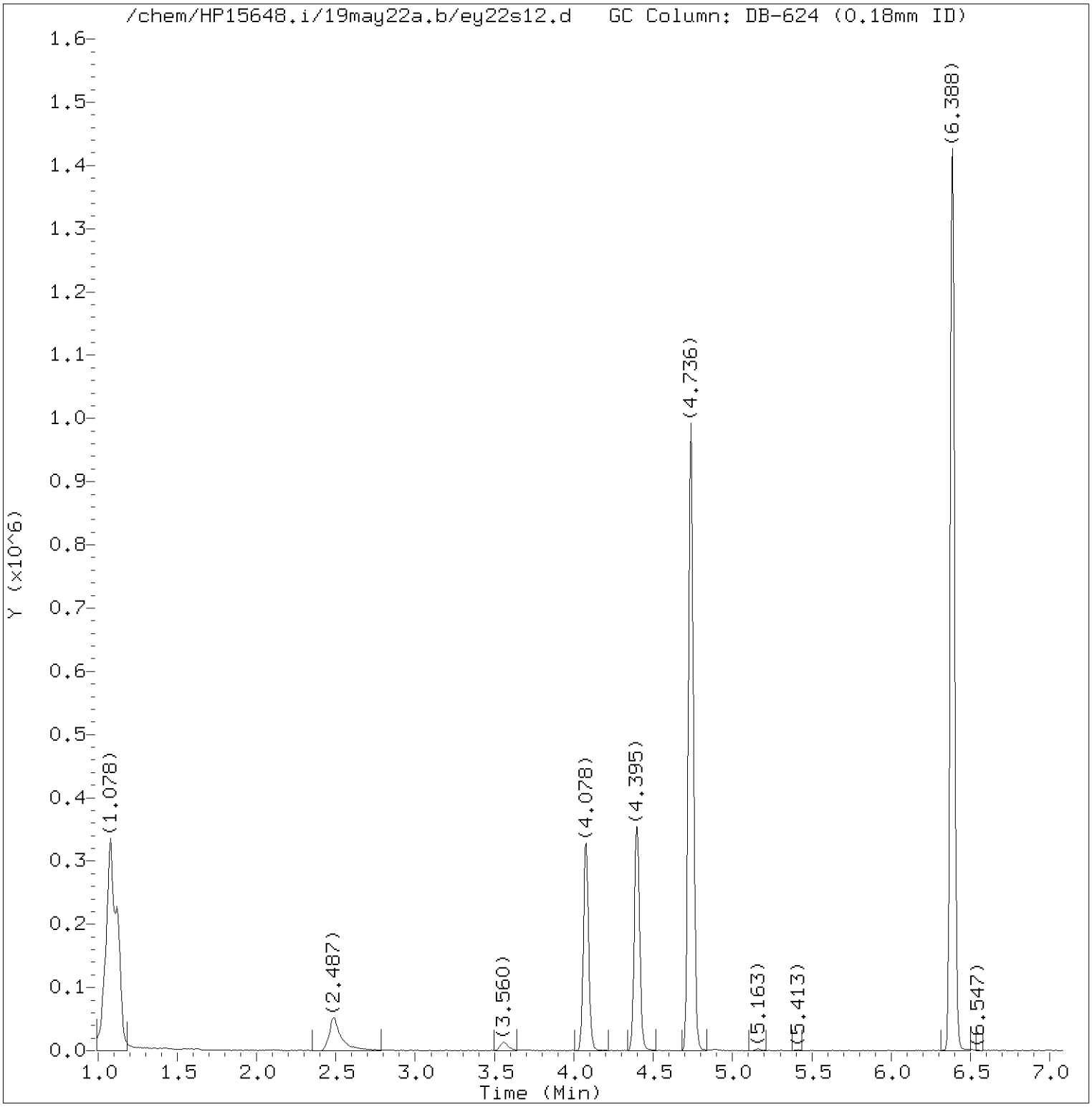
Total number of targets = 24

Digitally signed by Jason M. Long on 05/22/2019 at 14:50. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/23/2019 at 14:20. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

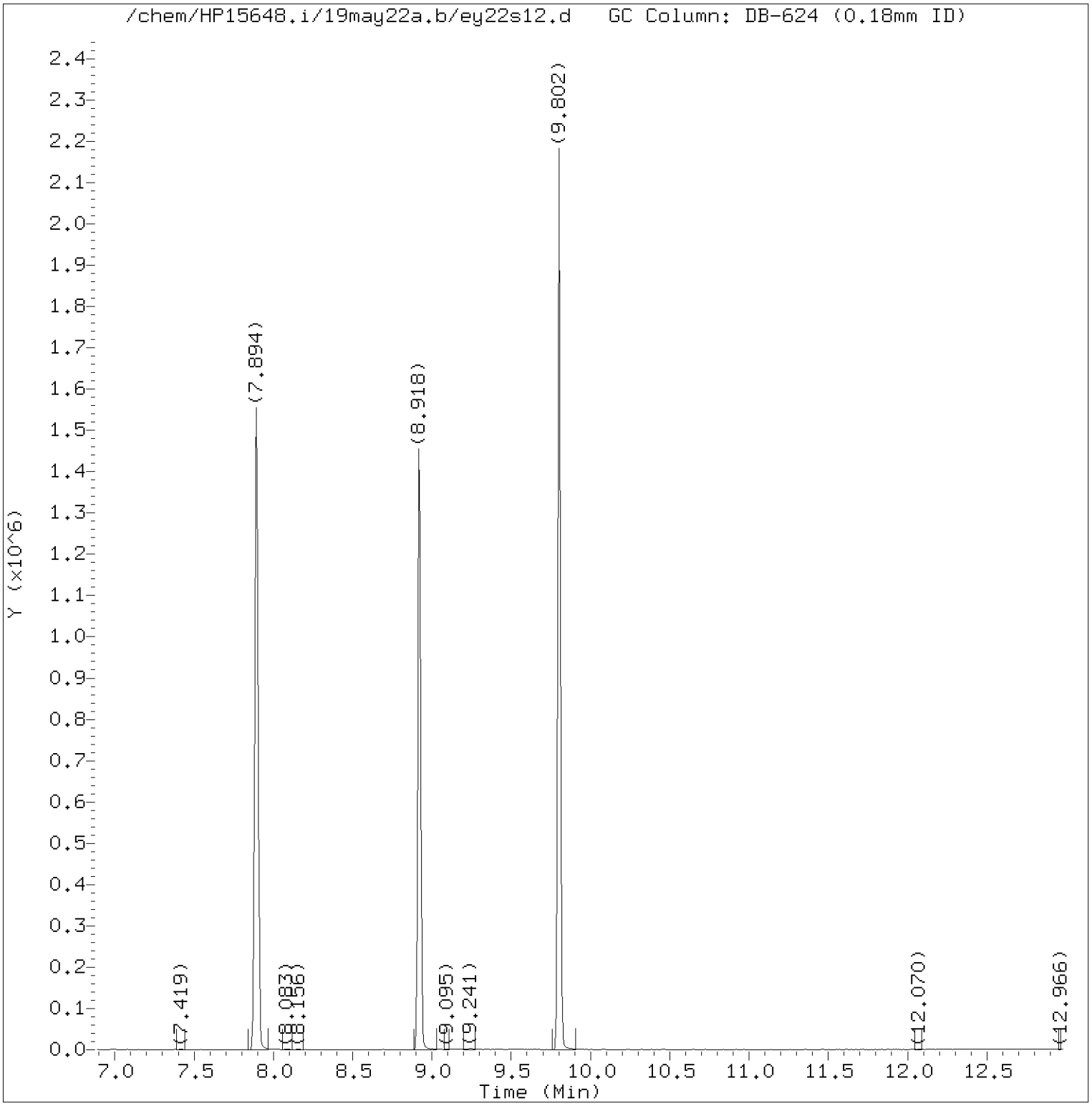
Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s12.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 14:21 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:37 Automation

Sample Name: 92J10 Lab Sample ID: 1058225

Digitally signed by Jason M. Long
on 05/22/2019 at 14:50.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s12.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 14:21 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:37 Automation

Sample Name: 92J10 Lab Sample ID: 1058225

Digitally signed by Jason M. Long
on 05/22/2019 at 14:50.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s12.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 14:21 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:37 Automation

Sample Name: 92J10 Lab Sample ID: 1058225

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.487	65	166551	250.000
52)$Dibromofluoromethane	(2)	4.078	113	239773	47.846
57)$1,2-Dichloroethane-d4	(2)	4.401	102	62715	49.593
66)*Fluorobenzene	(2)	4.736	96	1078189	50.000
84)$Toluene-d8	(3)	6.388	98	1083964	49.950
101)*Chlorobenzene-d5	(3)	7.894	117	799023	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	413544	49.572
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	424117	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 05/22/2019 at 14:50.
Target 3.5 esignature user ID: jml01693

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

92J11

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058226

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may22a.b/ey22s13.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	0.4	J
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	2	
156-59-2	cis-1,2-Dichloroethene	0.9	J
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	0.8	J
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	11	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may22a.b/ey22s13.d
Injection date and time: **22-MAY-2019 14:42**
Data file Sample Info. Line: 92J11;1058226;1;0;;JCV92;;;ey22b01;
Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 14:57 Automation

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:52
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.487(-0.012)	246	65	169065 (-1)	250.00	
66) Fluorobenzene	4.736(-0.006)	615	96	1106436 (2)	50.00	
101) Chlorobenzene-d5	7.894(0.000)	1133	117	819561 (1)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802(0.000)	1446	152	433388 (3)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.078(-0.001)	113	243934	47.434	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.401(-0.001)	102	64205	49.475	99%		80 - 120
84) Toluene-d8	(3)	6.388(-0.001)	98	1099296	49.387	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918(0.000)	95	422285	49.351	99%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	2.109(-0.002)	96	1574	0.354	0.35		J	0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	3.090(-0.003)	63	16837	1.797	1.80			0.2	1
42) cis-1,2-Dichloroethene	(2)	3.627(-0.002)	96	5123	0.912	0.91		J	0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	4.114(-0.001)	97	6950	0.843	0.84		J	0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	5.114(-0.001)	95	59135	10.920	10.92			0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Jason M. Long on 05/22/2019 at 15:00. Target 3.5 esignature user ID: jml01693

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may22a.b/ey22s13.d Injection date and time: **22-MAY-2019 14:42**
Data file Sample Info. Line: 92J11;1058226;1;0;;JCV92;;;ey22b01; Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 14:57 Automation

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:52
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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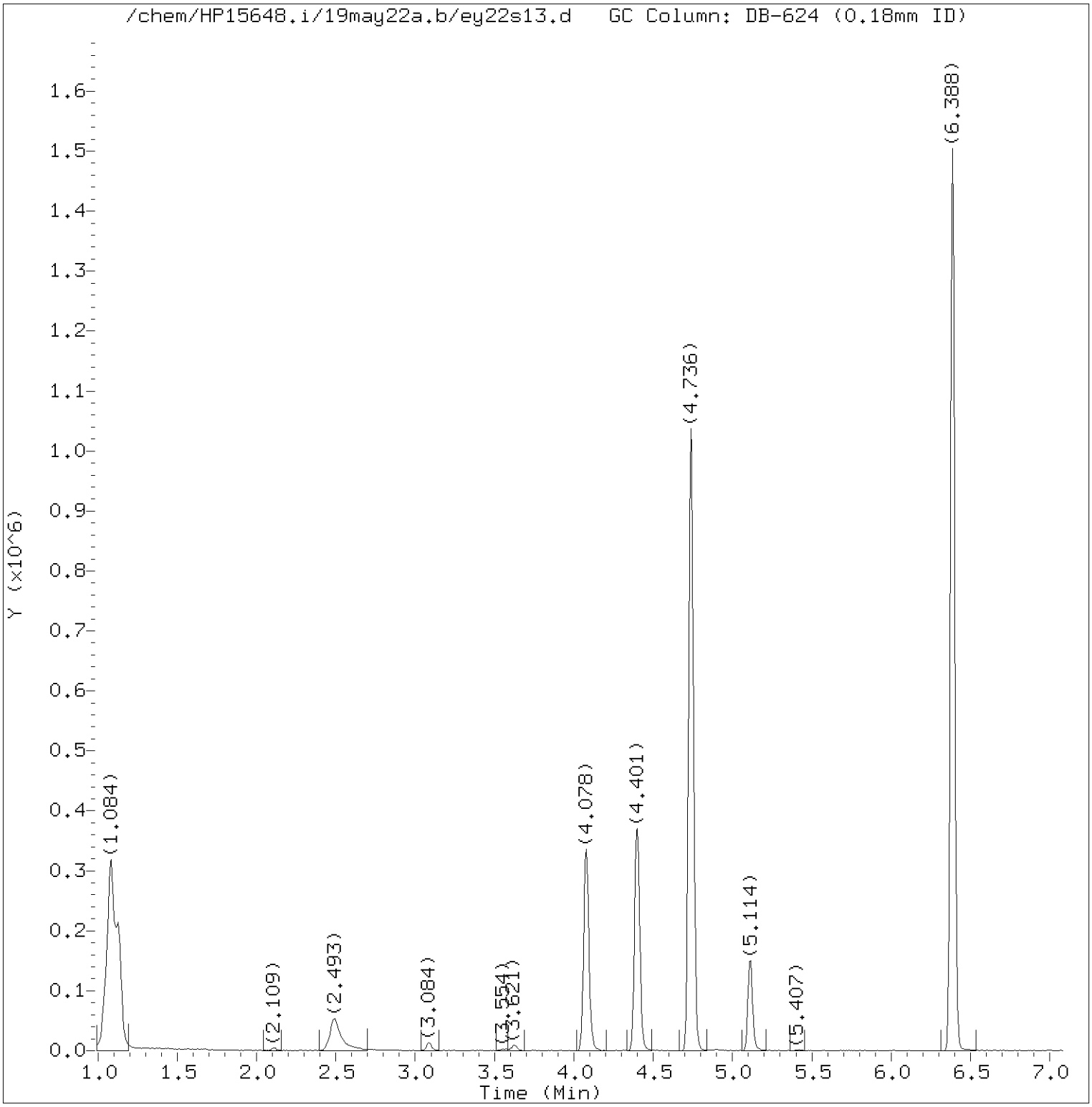
Total number of targets = 24

Digitally signed by Jason M. Long on 05/22/2019 at 15:00. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/23/2019 at 14:20. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

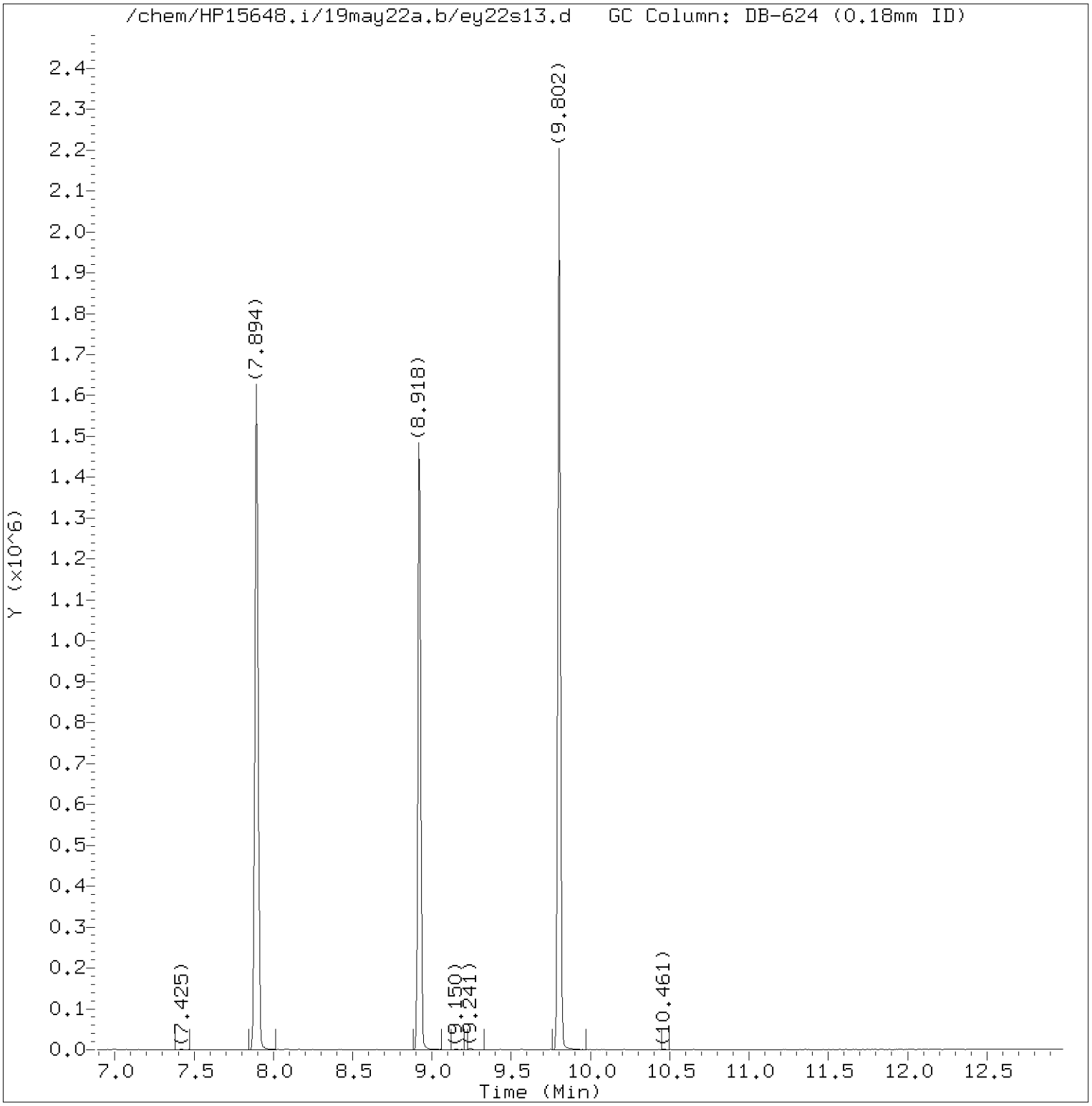
Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s13.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 14:42 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:57 Automation

Sample Name: 92J11 Lab Sample ID: 1058226

Digitally signed by Jason M. Long
on 05/22/2019 at 15:00.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s13.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 14:42 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:57 Automation

Sample Name: 92J11 Lab Sample ID: 1058226

Digitally signed by Jason M. Long
on 05/22/2019 at 15:00.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s13.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 14:42 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:57 Automation

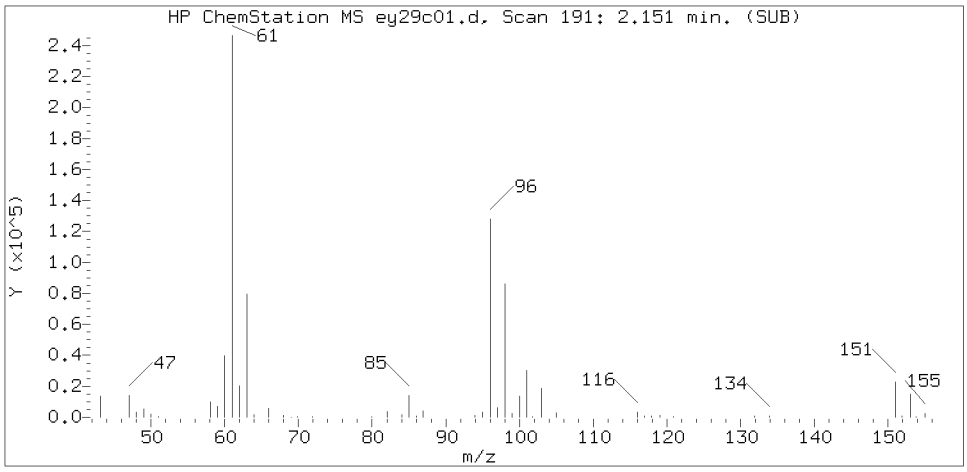
Sample Name: 92J11 Lab Sample ID: 1058226

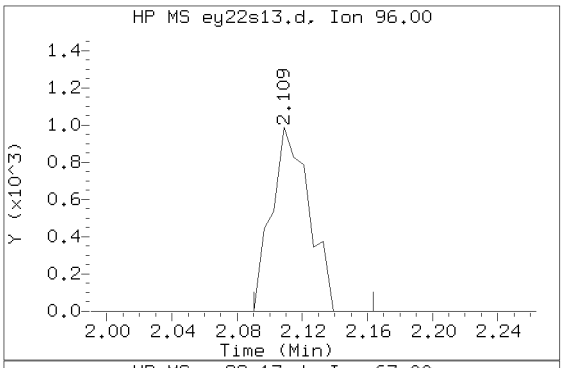
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	2.109	96	1574	0.354
29)*t-Butyl alcohol-d10	(1)	2.487	65	169065	250.000
36) 1,1-Dichloroethane	(2)	3.090	63	16837	1.797
42) cis-1,2-Dichloroethene	(2)	3.627	96	5123	0.912
52)$Dibromofluoromethane	(2)	4.078	113	243934	47.434
53) 1,1,1-Trichloroethane	(2)	4.114	97	6950	0.843
57)$1,2-Dichloroethane-d4	(2)	4.401	102	64205	49.475
66)*Fluorobenzene	(2)	4.736	96	1106436	50.000
71) Trichloroethene	(2)	5.114	95	59135	10.920
84)$Toluene-d8	(3)	6.388	98	1099296	49.387
101)*Chlorobenzene-d5	(3)	7.894	117	819561	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	422285	49.351
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	433388	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

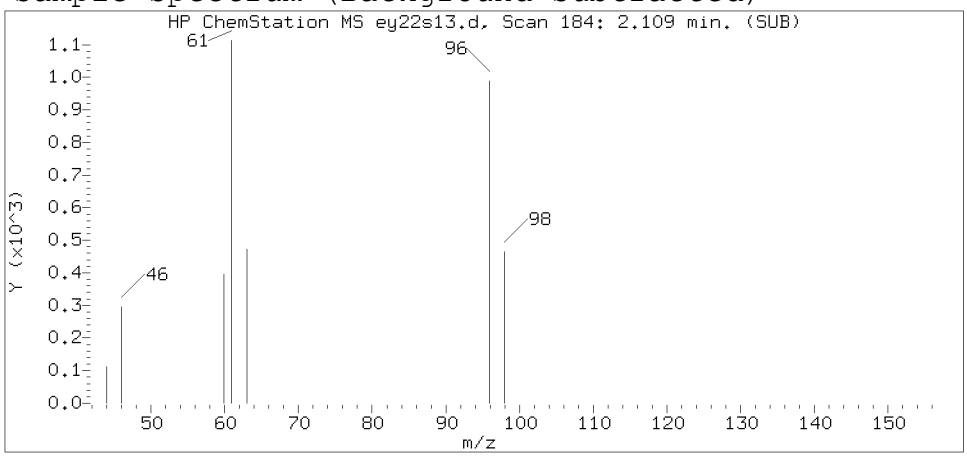
Digitally signed by Jason M. Long
on 05/22/2019 at 15:00.
Target 3.5 esignature user ID: jml01693

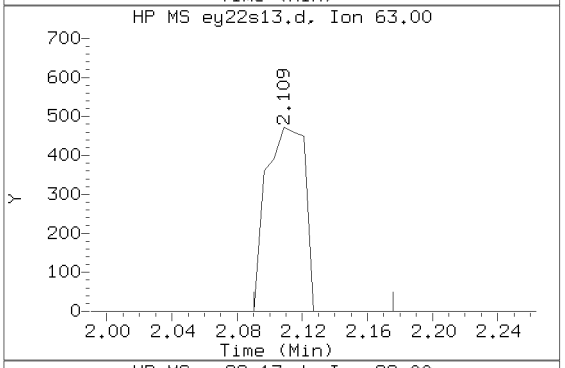
Reference Standard Spectrum for 1,1-Dichloroethene

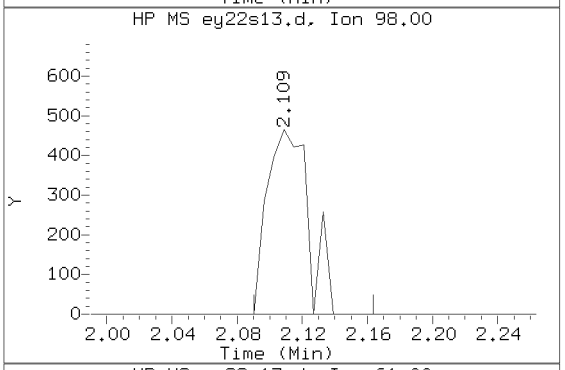




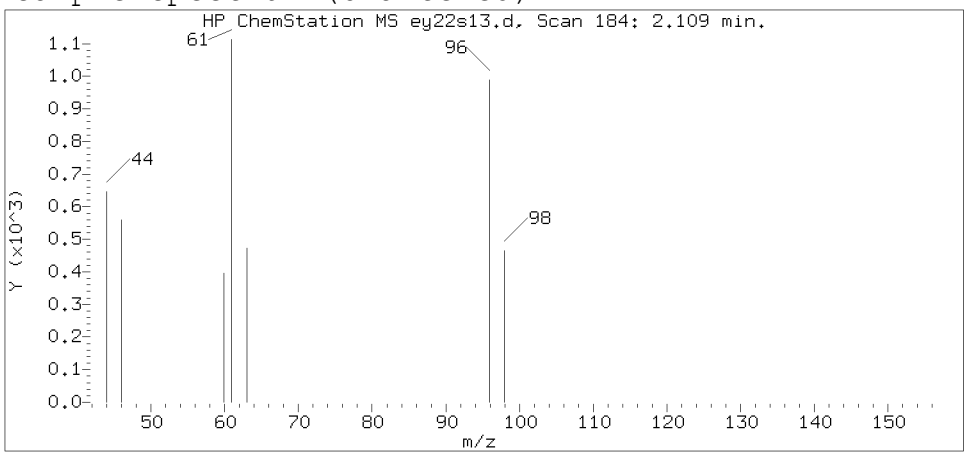
Sample Spectrum (Background Subtracted)

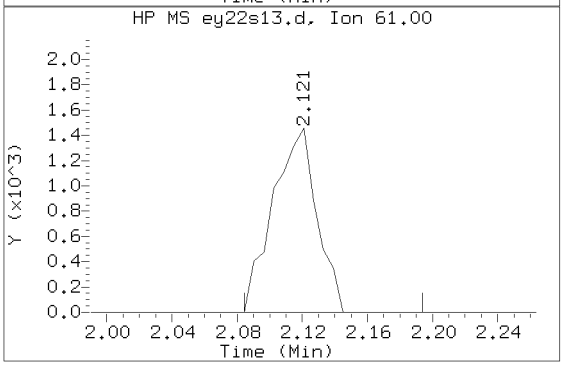






Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19may22a.b/ey22s13.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 14:42 Analyst ID: JML01693

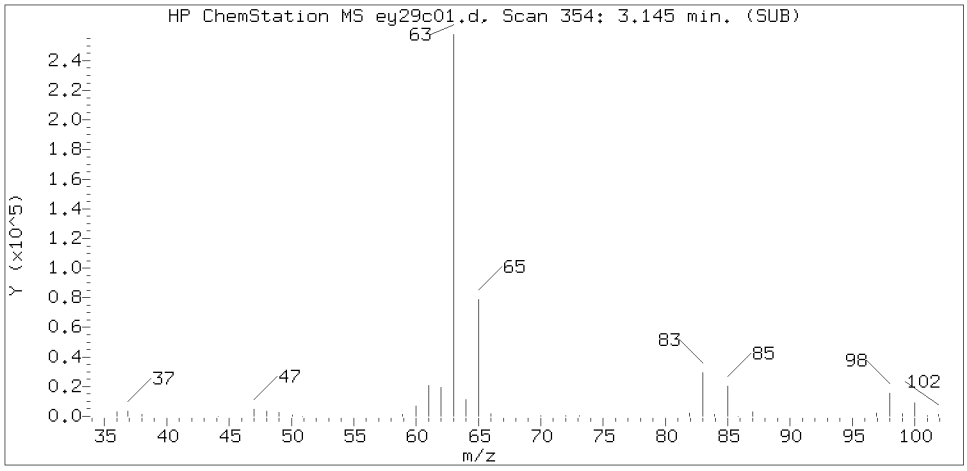
Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:57 Automation

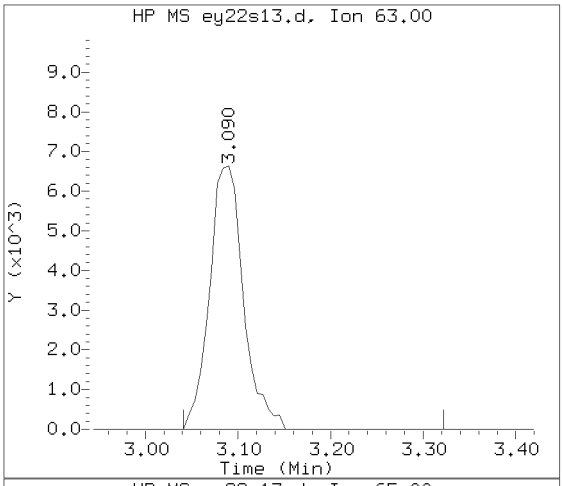
Sample Name: 92J11 Lab Sample ID: 1058226

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 184
Retention Time (minutes): 2.109
Relative Retention Time :-0.00203
Quant Ion : 96.00
Area (flag) : 1574
On-Column Amount (ng) : 0.3544

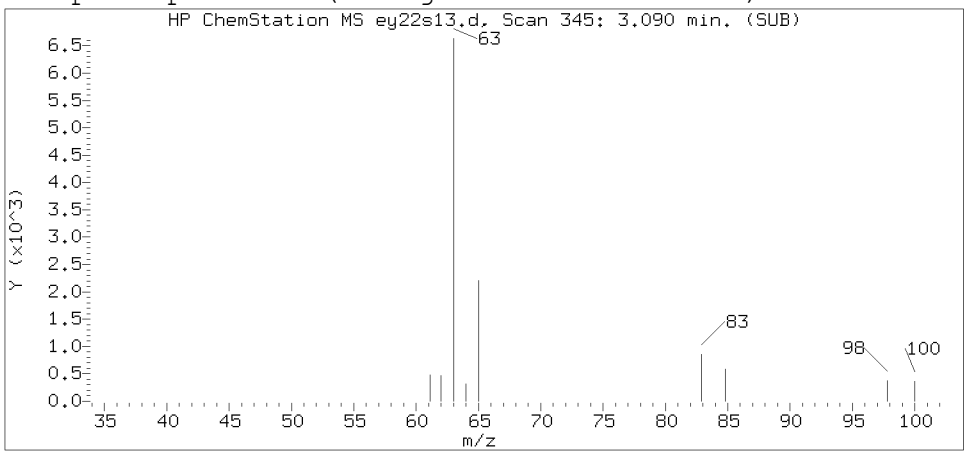
Digitally signed by Jason M. Long on 05/22/2019 at 15:00.
Target 3.5 esignature user ID: jml01693

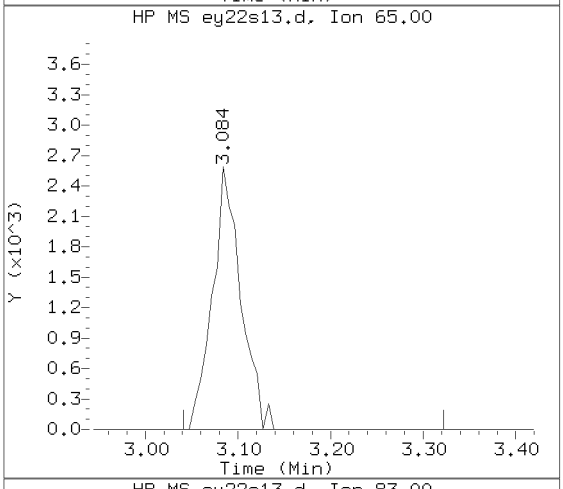
Reference Standard Spectrum for 1,1-Dichloroethane



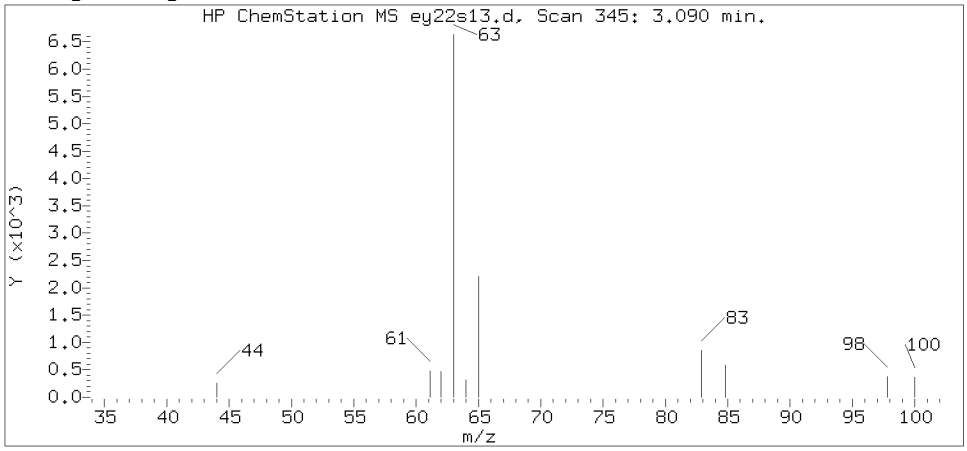


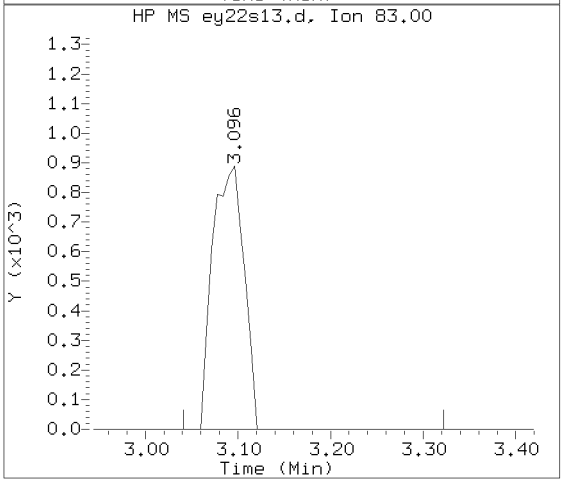
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19may22a.b/ey22s13.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 14:42 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:57 Automation

Sample Name: 92J11 Lab Sample ID: 1058226

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 345
Retention Time (minutes): 3.090
Relative Retention Time :-0.00304
Quant Ion : 63.00
Area (flag) : 16837
On-Column Amount (ng) : 1.7971

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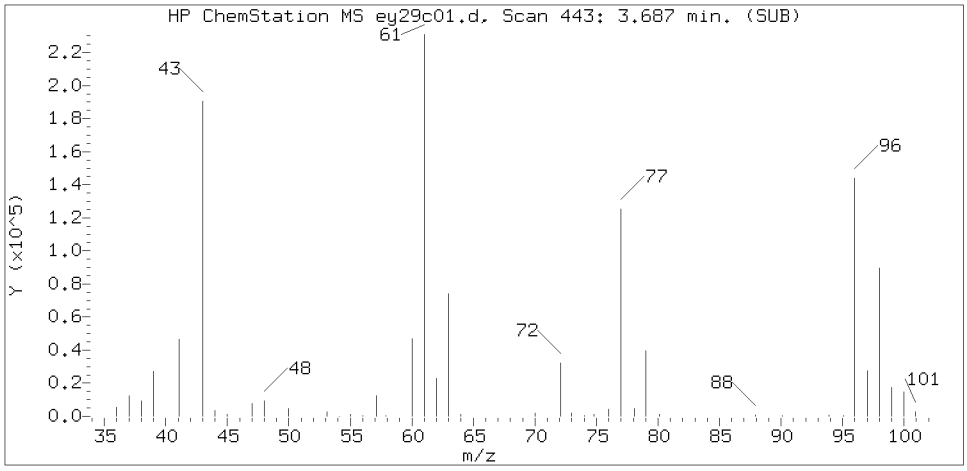
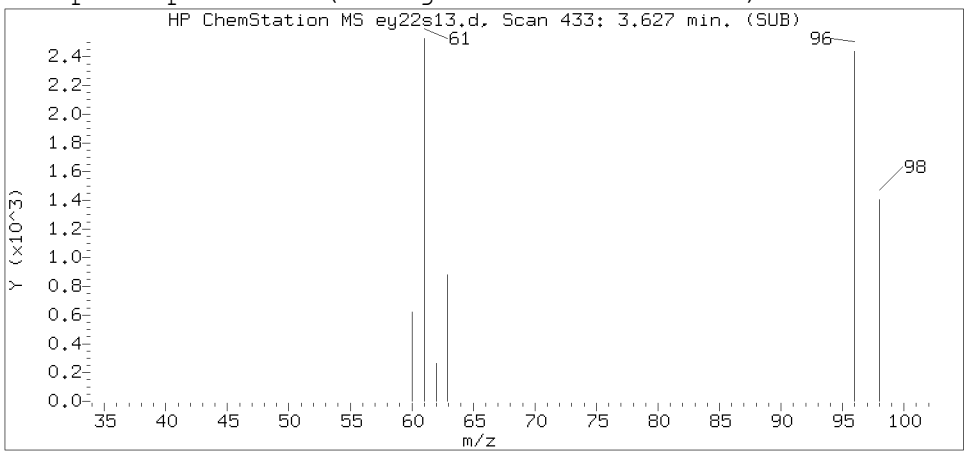
Target 3.5 esignature user ID: jml01693

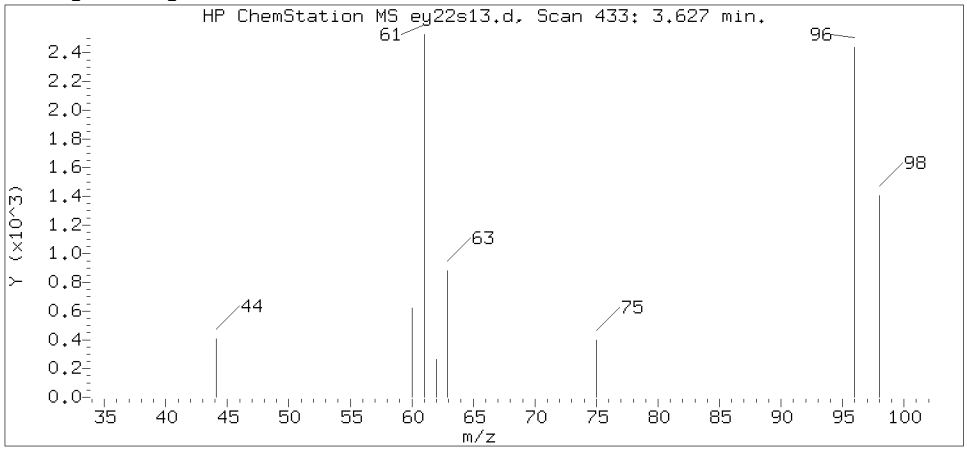
Reference Standard Spectrum for cis-1,2-Dichloroethene

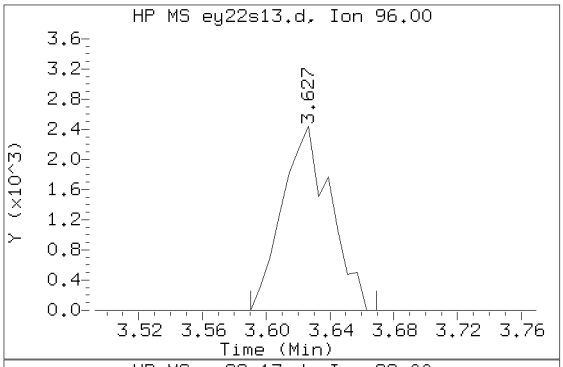


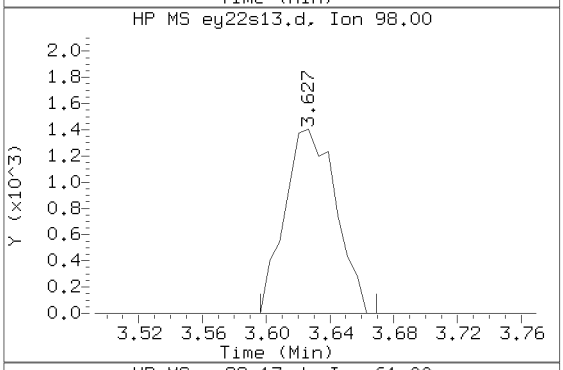
Sample Spectrum (Background Subtracted)

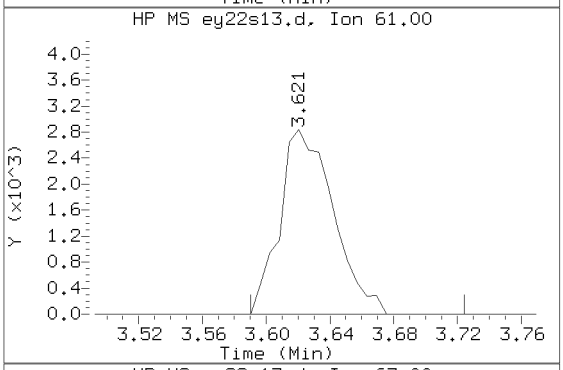


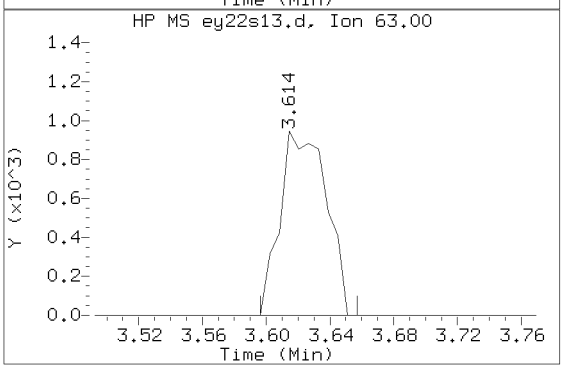
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s13.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 14:42 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:57 Automation

Sample Name: 92J11 Lab Sample ID: 1058226

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 433
Retention Time (minutes): 3.627
Relative Retention Time :-0.00289
Quant Ion : 96.00
Area (flag) : 5123
On-Column Amount (ng) : 0.9118

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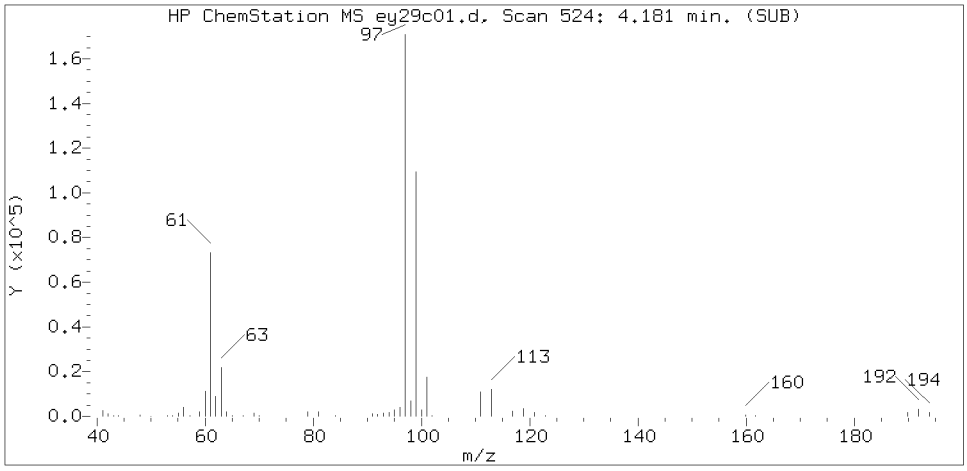
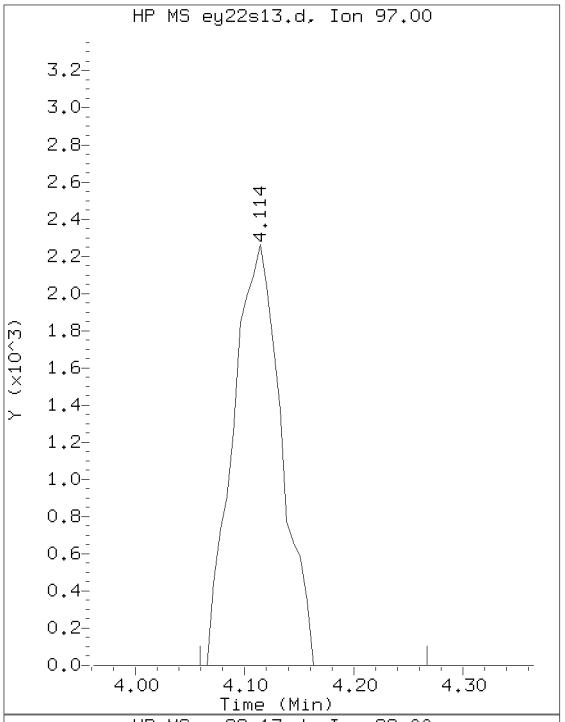
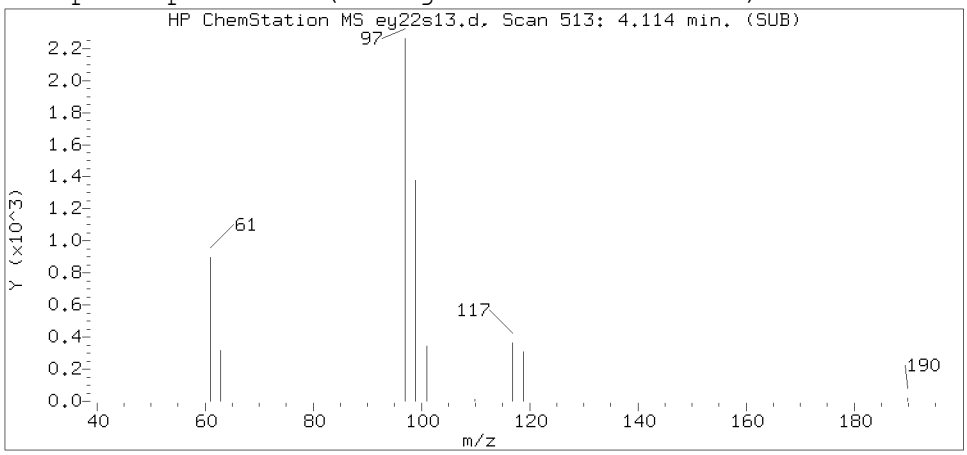
Target 3.5 esignature user ID: jml01693

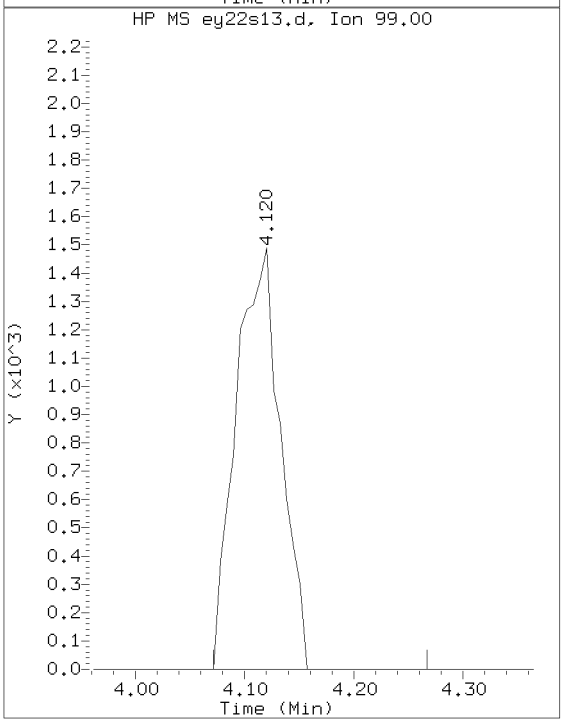
Reference Standard Spectrum for 1,1,1-Trichloroethane



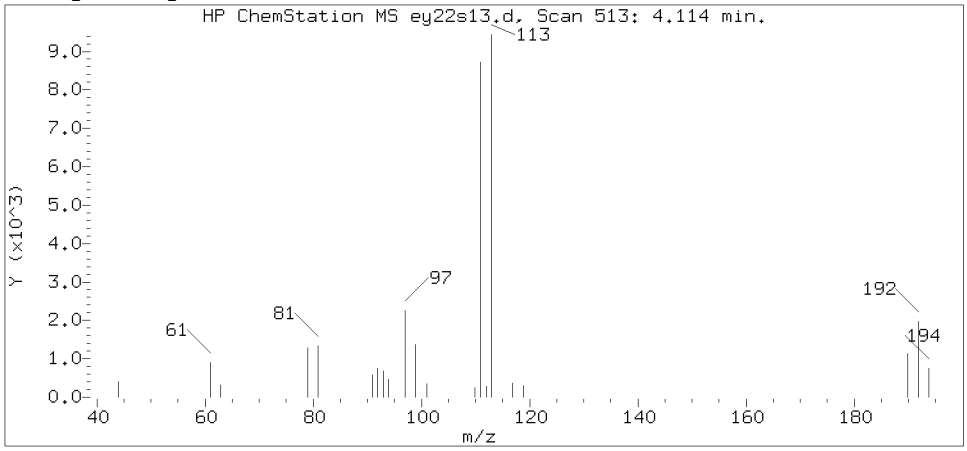


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP15648.i/19may22a.b/ey22s13.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 14:42 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:57 Automation

Sample Name: 92J11 Lab Sample ID: 1058226

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 513
Retention Time (minutes)	: 4.114
Relative Retention Time	:-0.00146
Quant Ion	: 97.00
Area (flag)	: 6950
On-Column Amount (ng)	: 0.8429

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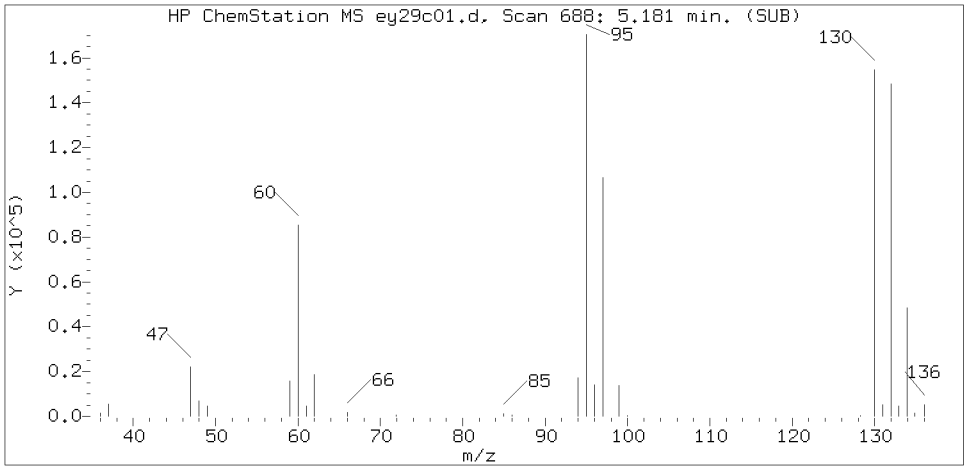
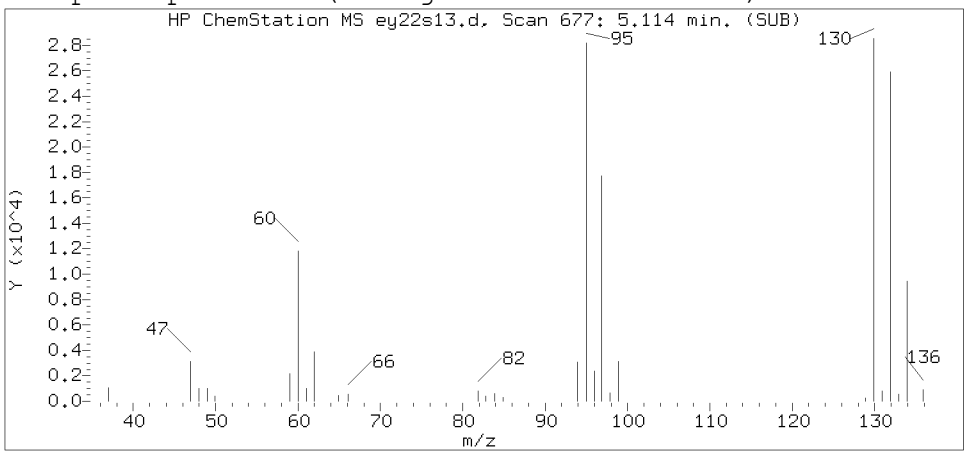
Target 3.5 esignature user ID: jml01693

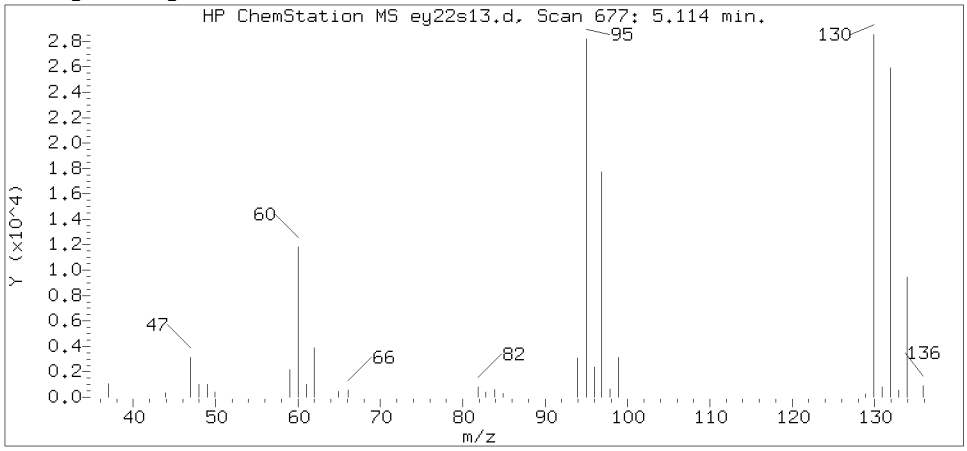
Reference Standard Spectrum for Trichloroethene

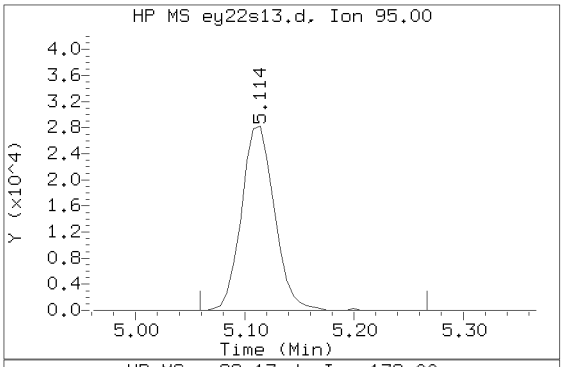


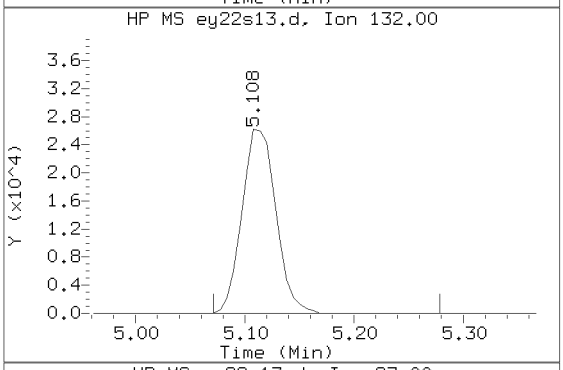
Sample Spectrum (Background Subtracted)

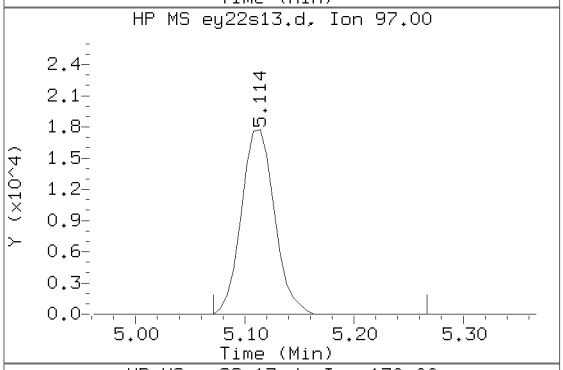


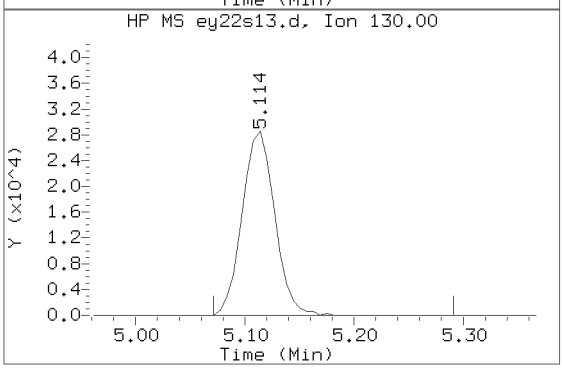
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s13.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 14:42 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:57 Automation

Sample Name: 92J11 Lab Sample ID: 1058226

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 677
Retention Time (minutes)	: 5.114
Relative Retention Time	:-0.00118
Quant Ion	: 95.00
Area (flag)	: 59135
On-Column Amount (ng)	: 10.9197

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Target 3.5 esignature user ID: jml01693

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
92J12

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058227

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may22a.b/ey22s14.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	2	
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	0.5	J
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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92J12 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1058227

Data file: /chem/HP15648.i/19may22a.b/ey22s14.d Injection date and time: **22-MAY-2019 15:02**
Data file Sample Info. Line: 92J12;1058227;1;0;;JCV92;;;ey22b01; Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 17:48 dvv10203

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:52
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.474	(0.000)	244	65	168156	(-2)	250.00	
66) Fluorobenzene	4.736	(-0.006)	615	96	1091420	(1)	50.00	
101) Chlorobenzene-d5	7.894	(0.000)	1133	117	810346	(0)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802	(0.000)	1446	152	429183	(2)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.072	(0.000)	113	241748	47.656	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.395	(0.000)	102	65913	51.490	103%		80 - 120
84) Toluene-d8	(3)	6.382	(0.000)	98	1098693	49.921	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918	(0.000)	95	412725	48.782	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	3.078	(-0.000)	63	16753	1.813	1.81			0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	5.108	(0.000)	95	2557	0.479	0.48		J	0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 05/22/2019 at 17:51. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP15648.i/19may22a.b/ey22s14.d Injection date and time: **22-MAY-2019 15:02**
Data file Sample Info. Line: 92J12;1058227;1;0;;JCV92;;;ey22b01; Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 17:48 dvv10203

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:52
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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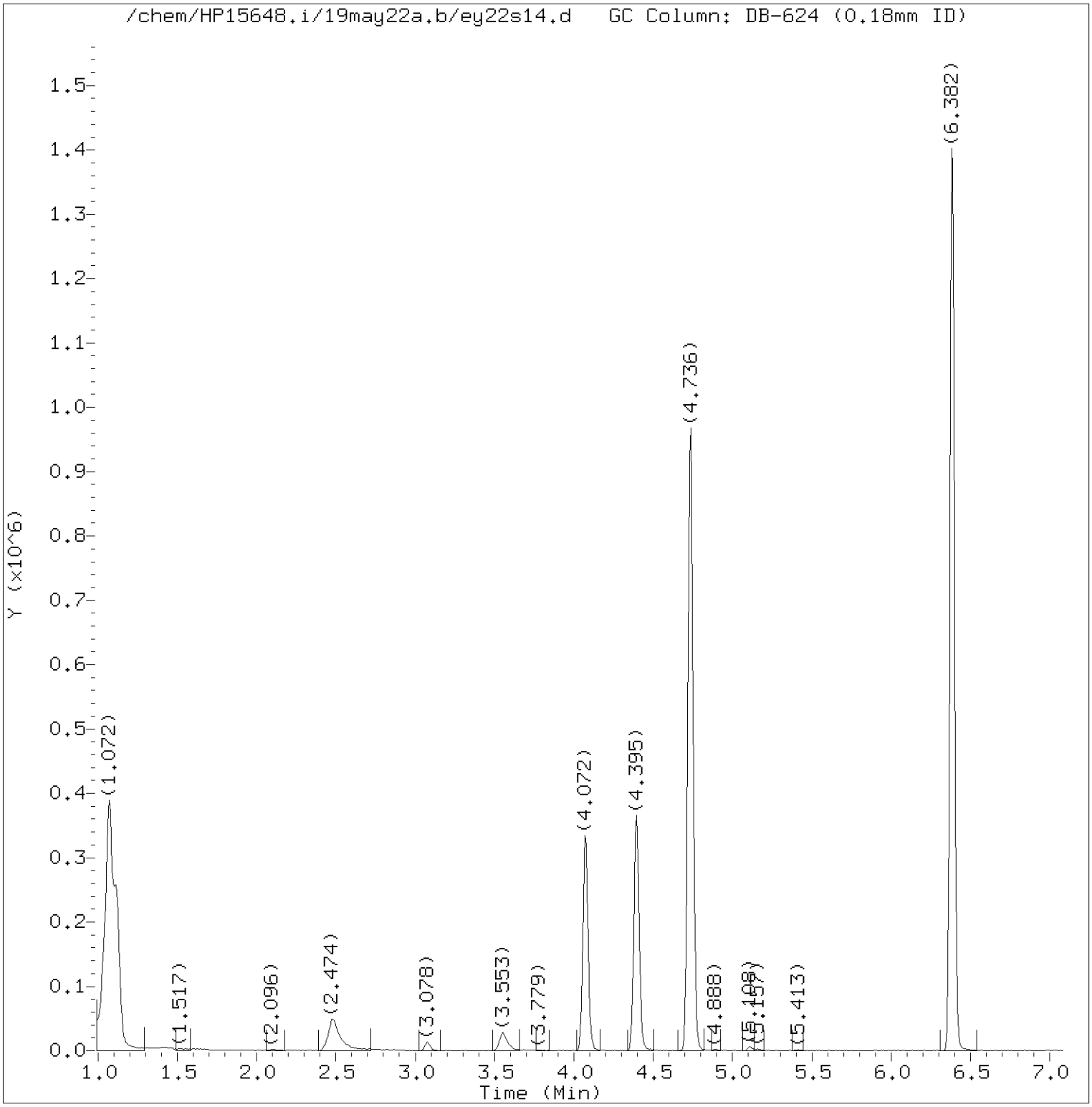
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 05/22/2019 at 17:51. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/23/2019 at 14:20. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

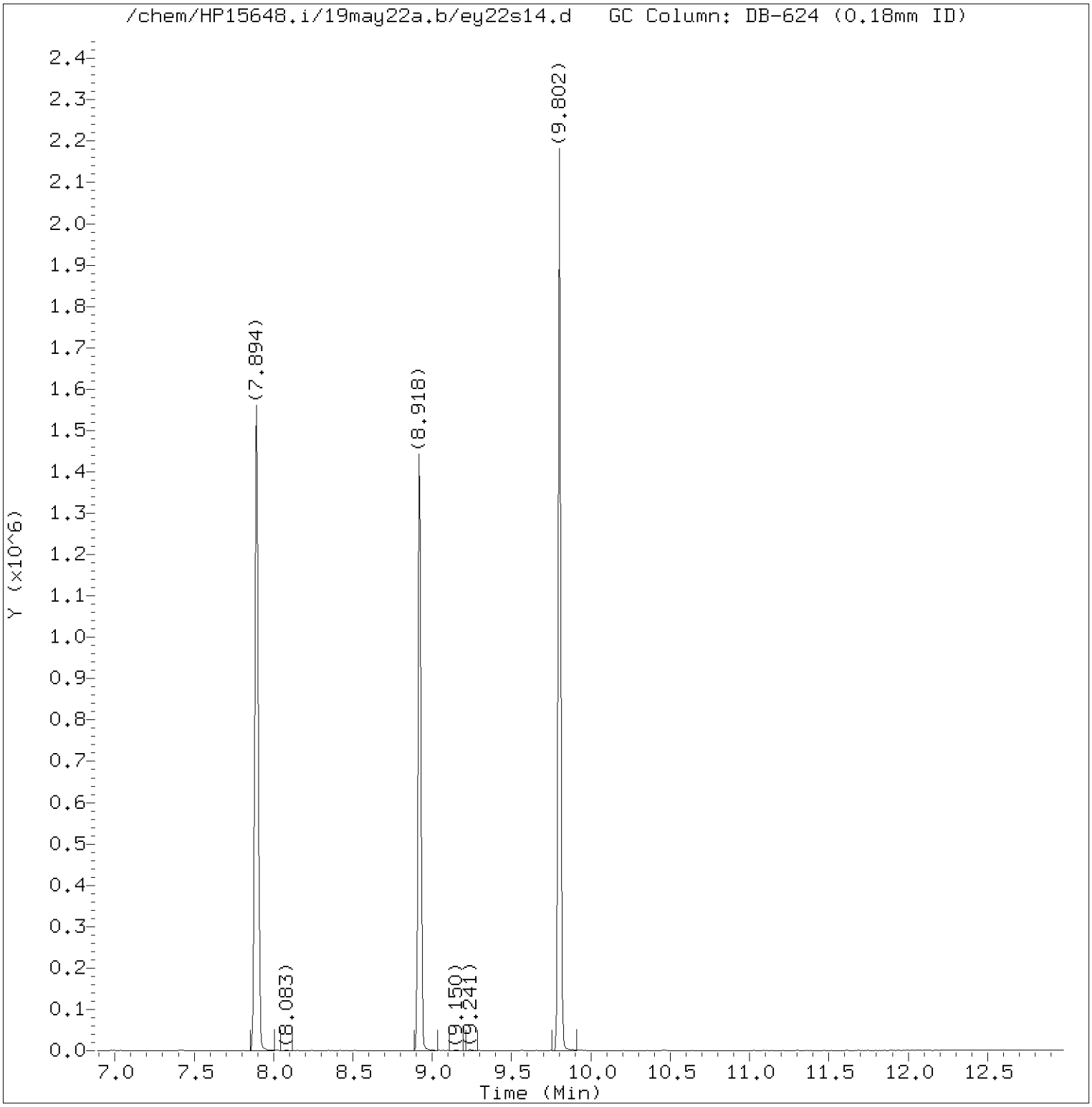
Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s14.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 15:02 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 17:48 dvv10203

Sample Name: 92J12 Lab Sample ID: 1058227

Digitally signed by Don V. Viray
on 05/22/2019 at 17:51.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s14.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 15:02 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 17:48 dvv10203

Sample Name: 92J12 Lab Sample ID: 1058227

Digitally signed by Don V. Viray
on 05/22/2019 at 17:51.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s14.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 15:02 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 17:48 dvv10203

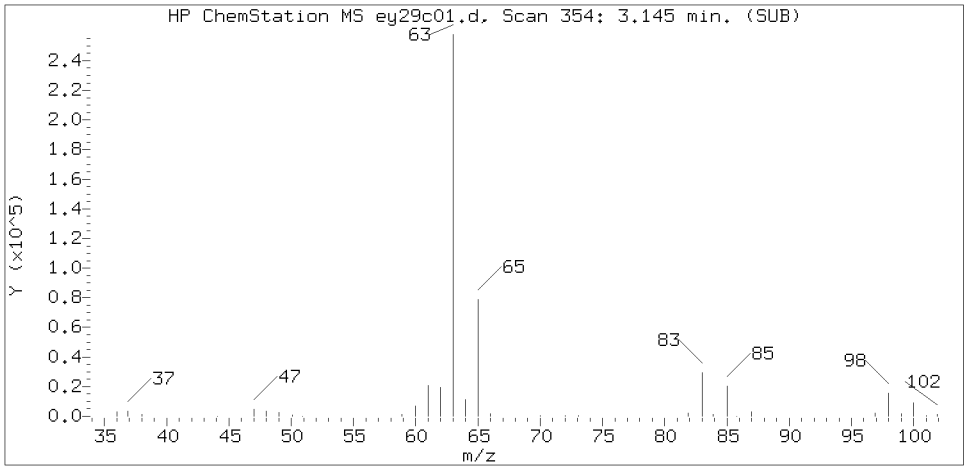
Sample Name: 92J12 Lab Sample ID: 1058227

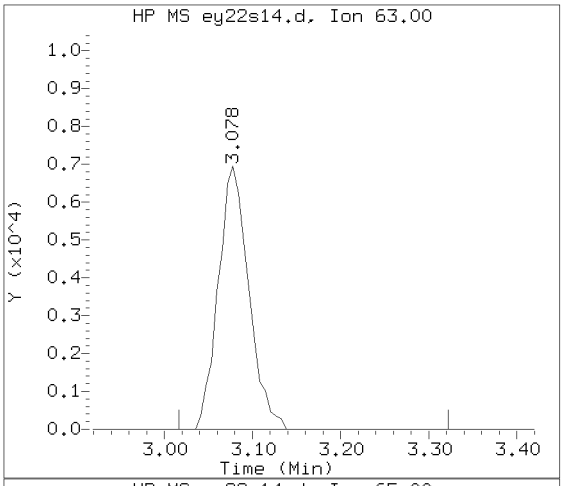
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.474	65	168156	250.000
36) 1,1-Dichloroethane	(2)	3.078	63	16753	1.813
52)$Dibromofluoromethane	(2)	4.072	113	241748	47.656
57)$1,2-Dichloroethane-d4	(2)	4.395	102	65913	51.490
66)*Fluorobenzene	(2)	4.736	96	1091420	50.000
71) Trichloroethene	(2)	5.108	95	2557	0.479
84)$Toluene-d8	(3)	6.382	98	1098693	49.921
101)*Chlorobenzene-d5	(3)	7.894	117	810346	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	412725	48.782
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	429183	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

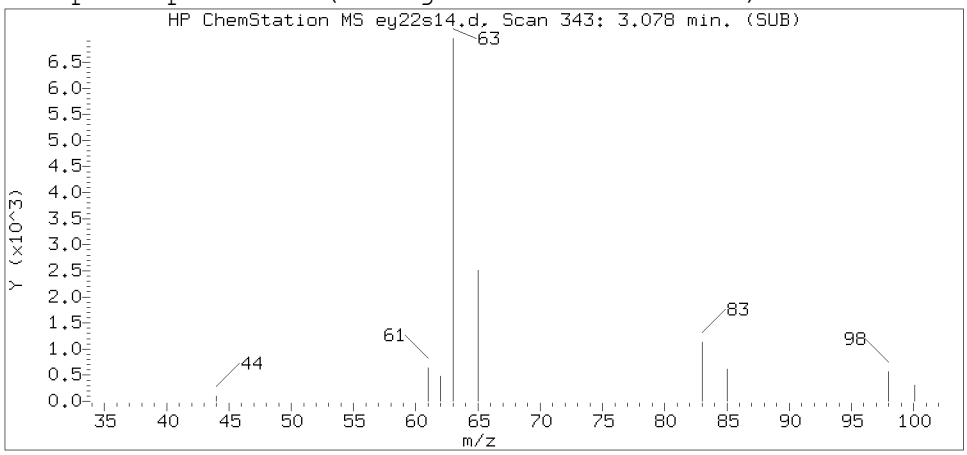
Digitally signed by Don V. Viray
on 05/22/2019 at 17:51.
Target 3.5 esignature user ID: dvv10203

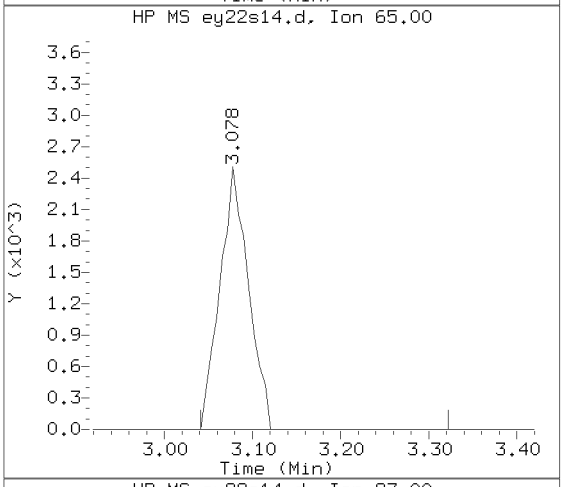
Reference Standard Spectrum for 1,1-Dichloroethane



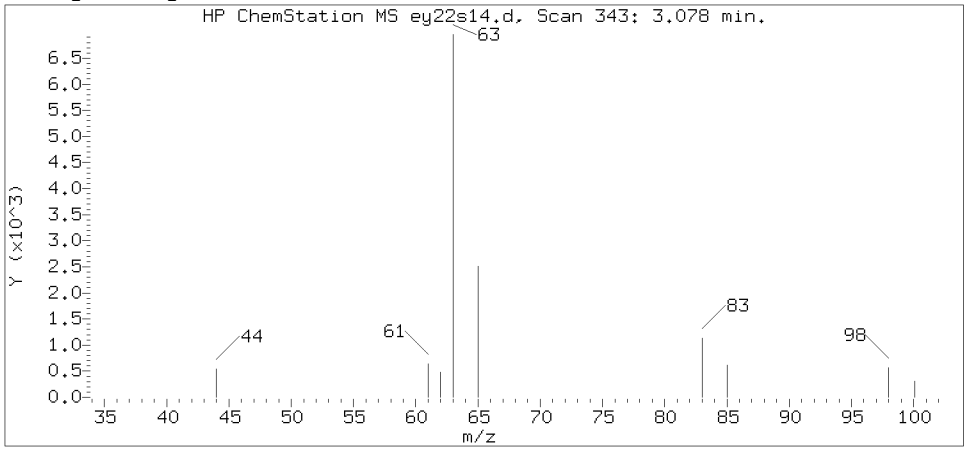


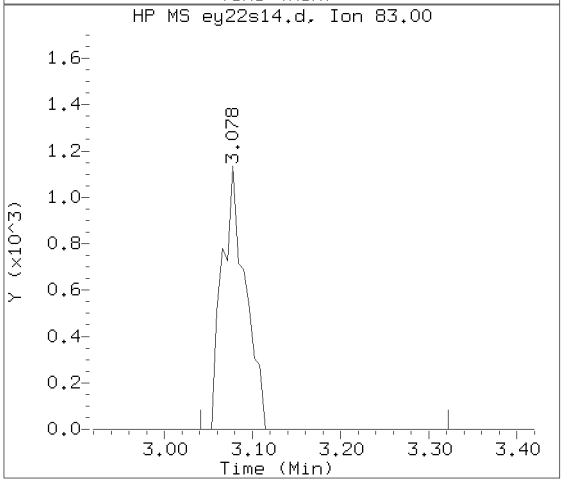
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19may22a.b/ey22s14.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 15:02 Analyst ID: JML01693

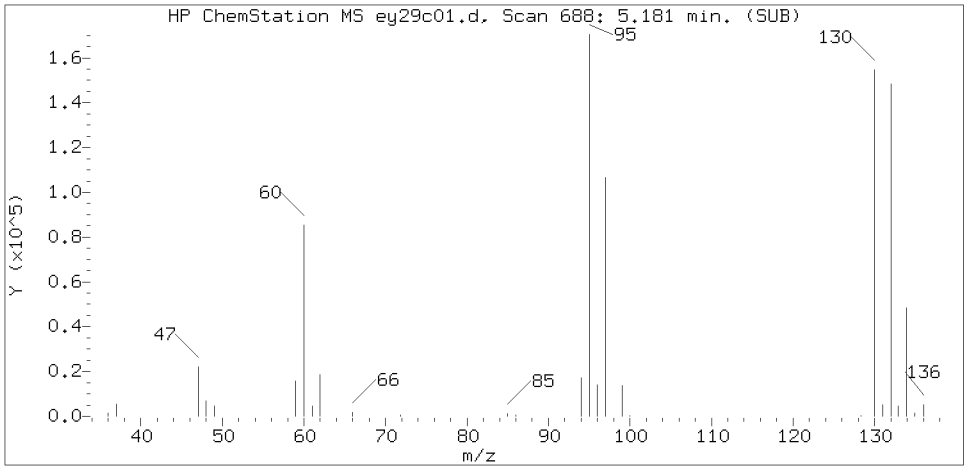
Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 17:48 dvv10203

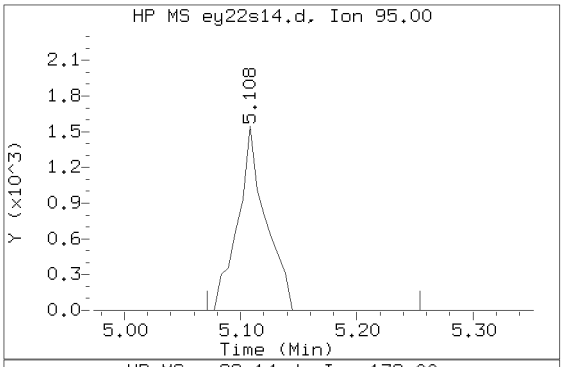
Sample Name: 92J12 Lab Sample ID: 1058227

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 343
Retention Time (minutes): 3.078
Relative Retention Time :-0.00046
Quant Ion : 63.00
Area (flag) : 16753
On-Column Amount (ng) : 1.8127

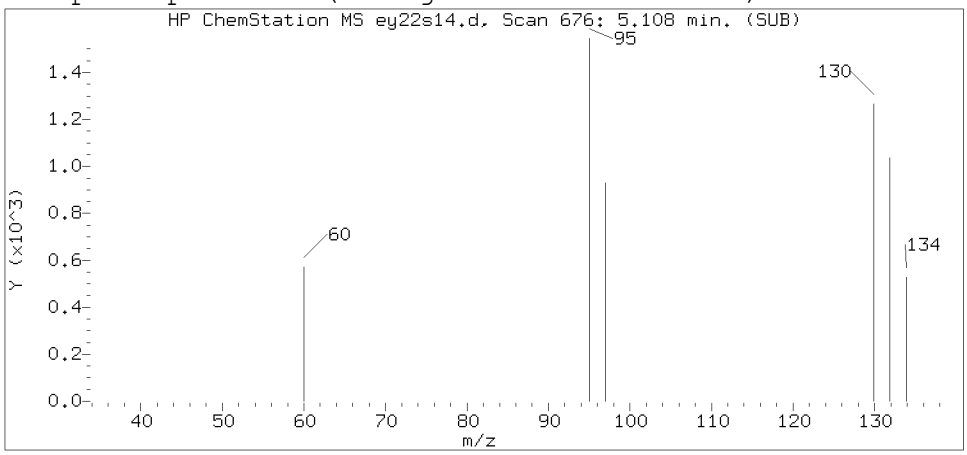
Digitally signed by Don V. Viray on 05/22/2019 at 17:51.
Target 3.5 esignature user ID: dvv10203

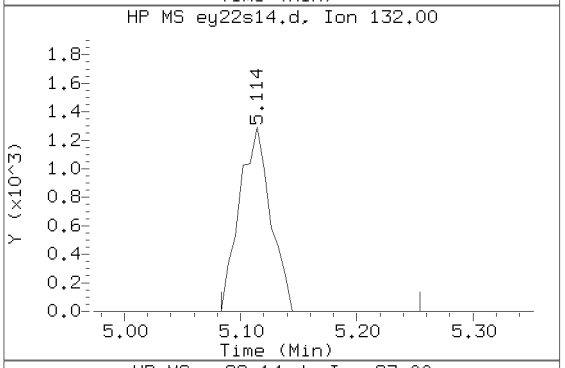
Reference Standard Spectrum for Trichloroethene

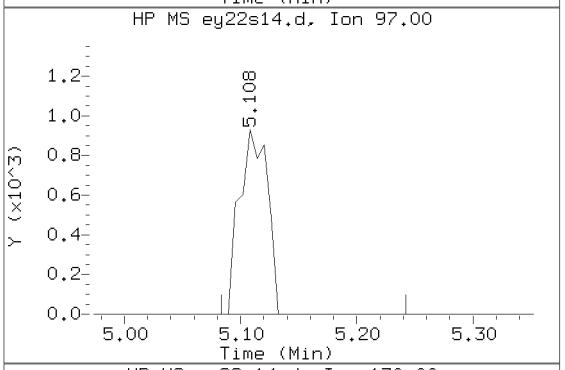




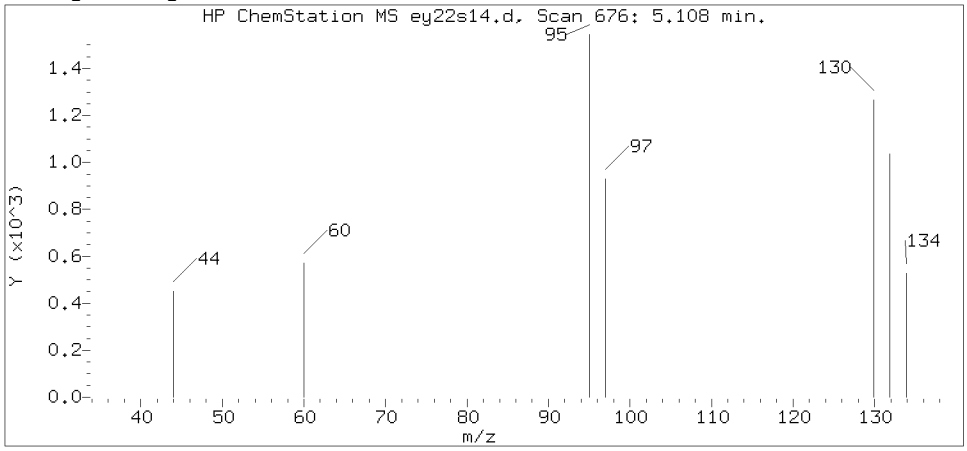
Sample Spectrum (Background Subtracted)

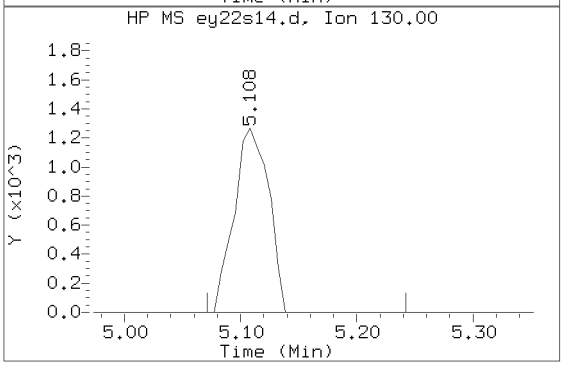






Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19may22a.b/ey22s14.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 15:02 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 17:48 dvv10203

Sample Name: 92J12 Lab Sample ID: 1058227

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 676
Retention Time (minutes)	: 5.108
Relative Retention Time	: 0.00010
Quant Ion	: 95.00
Area (flag)	: 2557
On-Column Amount (ng)	: 0.4787

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Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

92J13

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058228

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may22a.b/ey22s15.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	19	
67-64-1	Acetone	20	U
76-13-1	Freon 113	1	J
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.9	J
156-59-2	cis-1,2-Dichloroethene	2	
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	260	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	510	E
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	4	
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may22a.b/ey22s15.d
Injection date and time: **22-MAY-2019 15:22**
Data file Sample Info. Line: 92J13;1058228;1;0;;JCV92;;;ey22b01;
Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 15:38 Automation

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:52
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.474(0.000)	244	65	167093 (-2)	250.00	
66) Fluorobenzene	4.736(-0.006)	615	96	1094915 (1)	50.00	
101) Chlorobenzene-d5	7.894(0.000)	1133	117	816037 (1)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802(0.000)	1446	152	429788 (2)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.072(0.000)	113	244586	48.061	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.395(0.000)	102	63978	49.819	100%		80 - 120
84) Toluene-d8	(3)	6.382(0.000)	98	1102549	49.747	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918(0.000)	95	419686	49.259	99%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	2.102(-0.000)	96	83307	18.948	18.95			0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)	2.127(-0.002)	101	5152	1.058	1.06		J	0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	3.078(-0.000)	63	8704	0.939	0.94		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	3.620(-0.001)	96	9893	1.779	1.78			0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	4.102(0.001)	97	2141168	262.395	262.39			0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	5.108(0.000)	95	2712196	506.089	506.09		E	0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)	7.053(-0.000)	166	21672	3.930	3.93			0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

E = Compound concentration above calibration range.

Digitally signed by Don V. Viray on 05/22/2019 at 17:51. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP15648.i/19may22a.b/ey22s15.d Injection date and time: **22-MAY-2019 15:22**
Data file Sample Info. Line: 92J13;1058228;1;0;;JCV92;;;ey22b01; Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 15:38 Automation

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:52
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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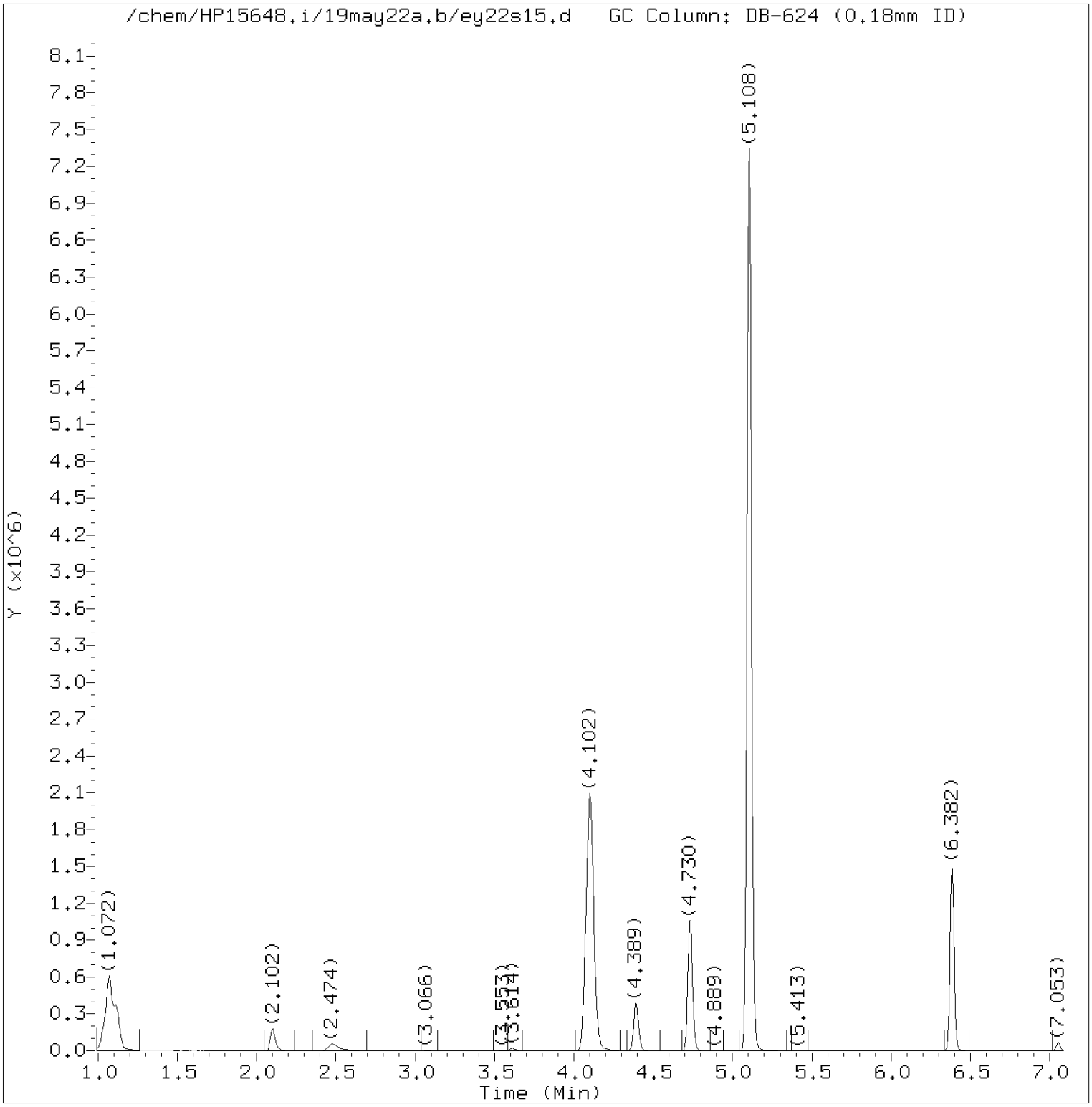
Total number of targets = 24

Digitally signed by Don V. Viray on 05/22/2019 at 17:51. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/23/2019 at 14:20. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

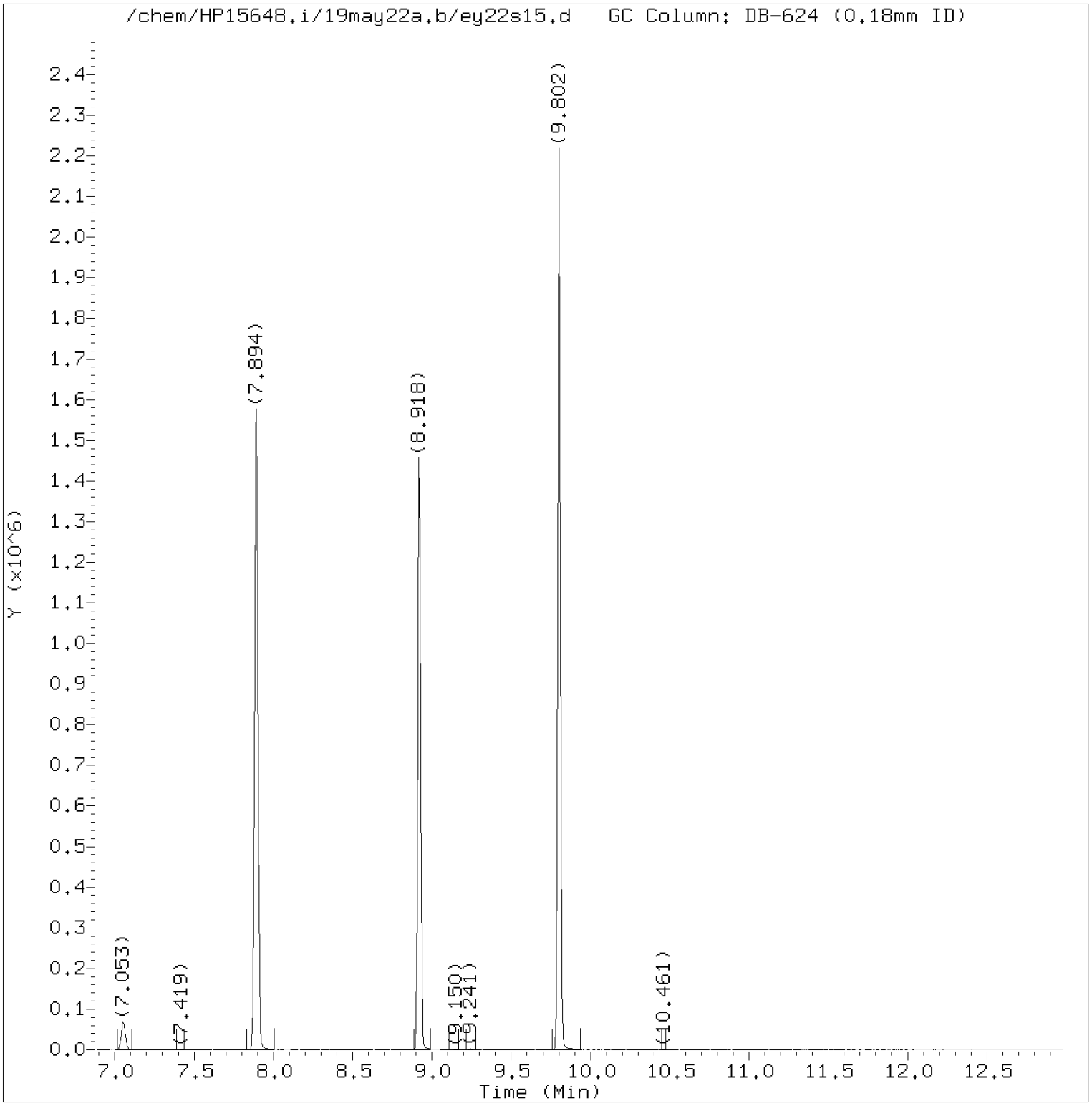
Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s15.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 15:22 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 15:38 Automation

Sample Name: 92J13 Lab Sample ID: 1058228

Digitally signed by Don V. Viray
on 05/22/2019 at 17:51.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s15.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 15:22 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 15:38 Automation

Sample Name: 92J13 Lab Sample ID: 1058228

Digitally signed by Don V. Viray
on 05/22/2019 at 17:51.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s15.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 15:22 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 15:38 Automation

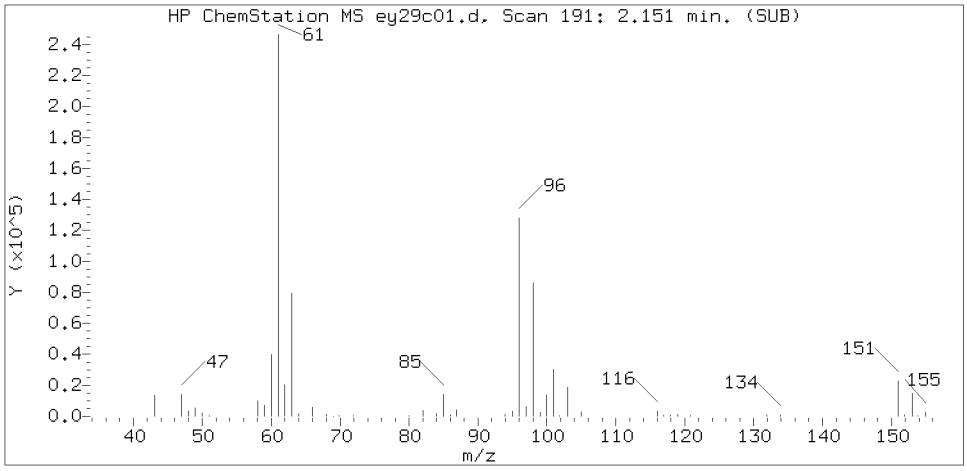
Sample Name: 92J13 Lab Sample ID: 1058228

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	2.102	96	83307	18.948
19) Freon 113	(2)	2.127	101	5152	1.058
29)*t-Butyl alcohol-d10	(1)	2.474	65	167093	250.000
36) 1,1-Dichloroethane	(2)	3.078	63	8704	0.939
42) cis-1,2-Dichloroethene	(2)	3.620	96	9893	1.779
52)$Dibromofluoromethane	(2)	4.072	113	244586	48.061
53) 1,1,1-Trichloroethane	(2)	4.102	97	2141168	262.395
57)$1,2-Dichloroethane-d4	(2)	4.395	102	63978	49.819
66)*Fluorobenzene	(2)	4.736	96	1094915	50.000
71) Trichloroethene	(2)	5.108	95	2712196	506.089
84)$Toluene-d8	(3)	6.382	98	1102549	49.747
94) Tetrachloroethene	(3)	7.053	166	21672	3.930
101)*Chlorobenzene-d5	(3)	7.894	117	816037	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	419686	49.259
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	429788	50.000

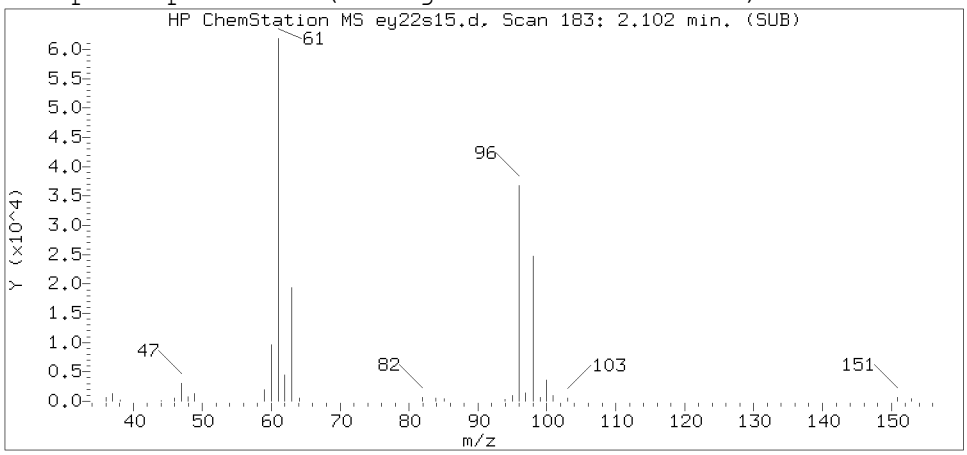
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/22/2019 at 17:51.
Target 3.5 esignature user ID: dvv10203

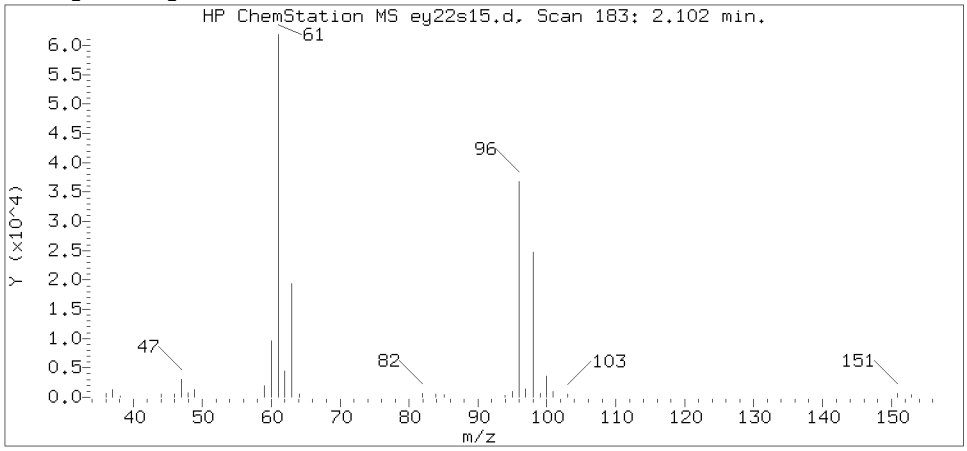
Reference Standard Spectrum for 1,1-Dichloroethene

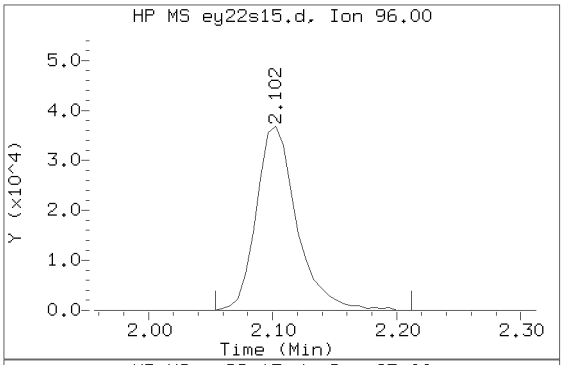


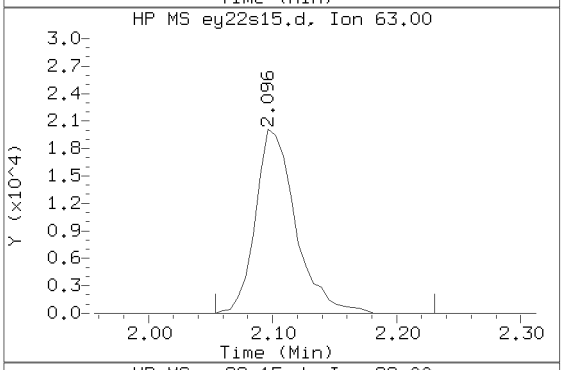
Sample Spectrum (Background Subtracted)

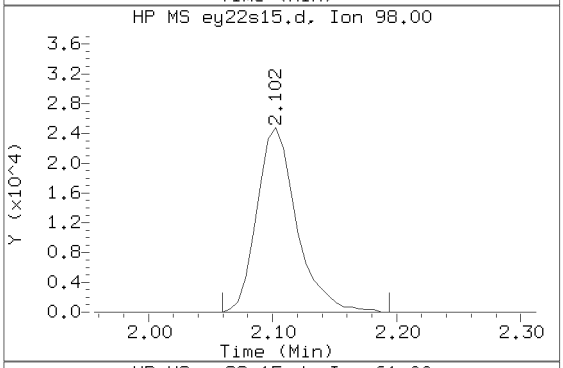


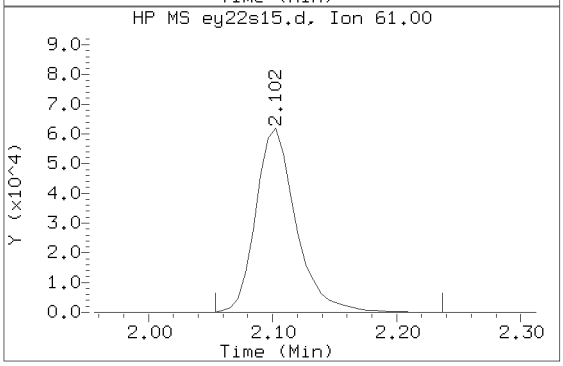
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s15.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 15:22 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 15:38 Automation

Sample Name: 92J13 Lab Sample ID: 1058228

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 183
Retention Time (minutes): 2.102
Relative Retention Time :-0.00073
Quant Ion : 96.00
Area (flag) : 83307
On-Column Amount (ng) : 18.9475

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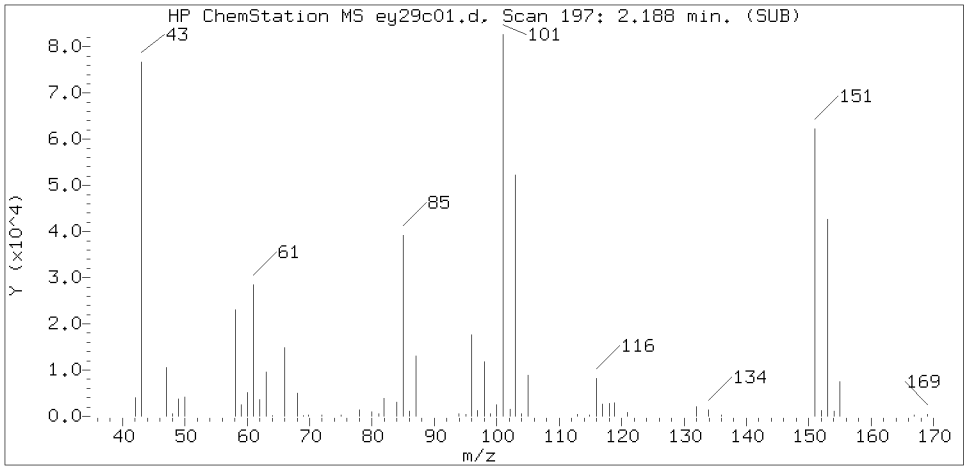
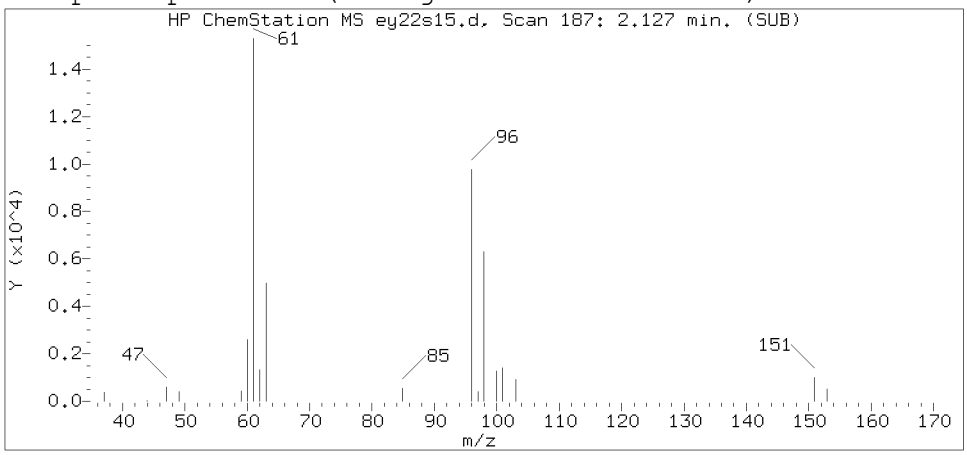
Target 3.5 esignature user ID: dvv10203

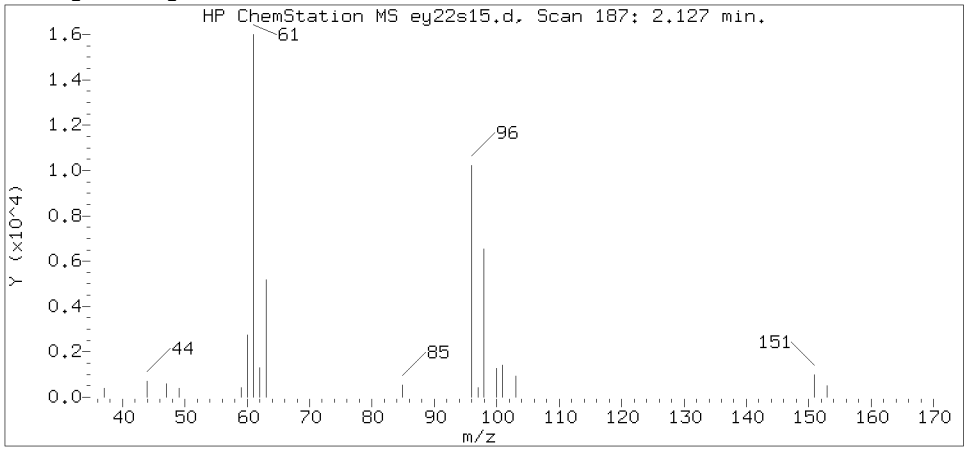
Reference Standard Spectrum for Freon 113

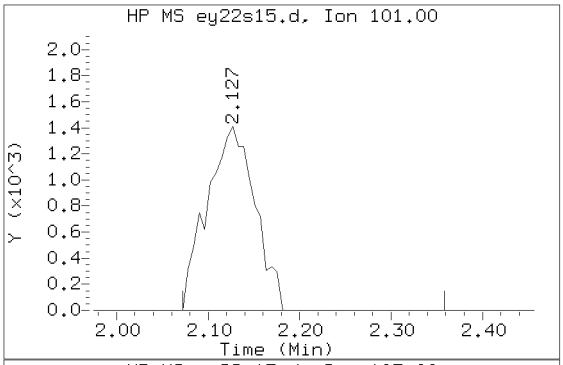


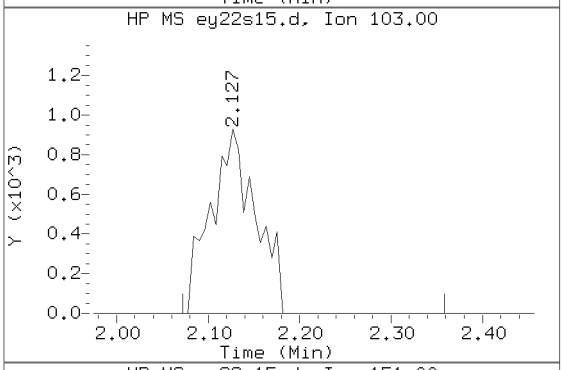
Sample Spectrum (Background Subtracted)

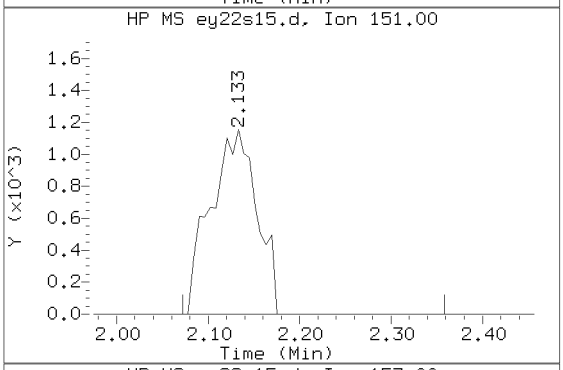


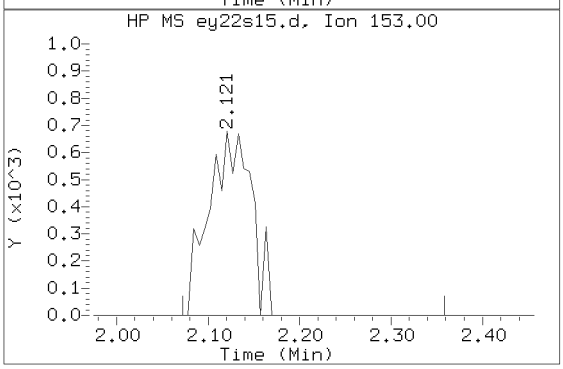
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s15.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 15:22 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 15:38 Automation

Sample Name: 92J13 Lab Sample ID: 1058228

Compound Number : 19
Compound Name : Freon 113
Scan Number : 187
Retention Time (minutes): 2.127
Relative Retention Time :-0.00201
Quant Ion : 101.00
Area (flag) : 5152
On-Column Amount (ng) : 1.0583

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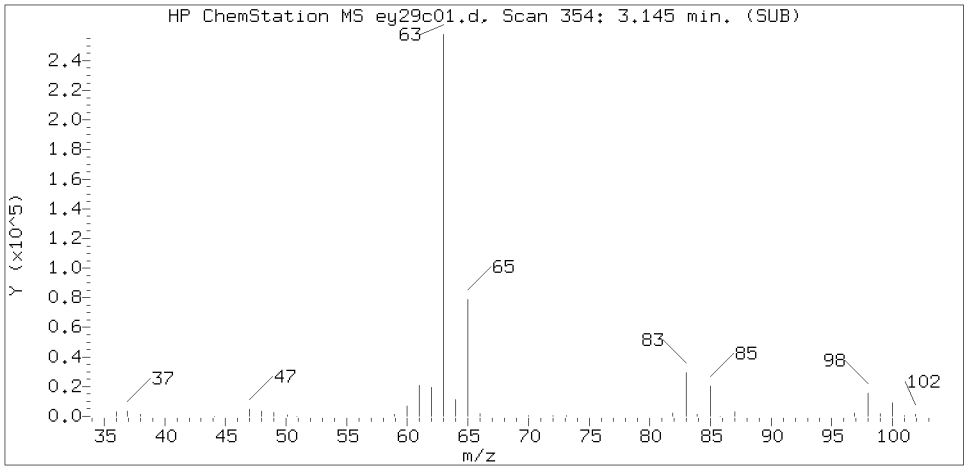
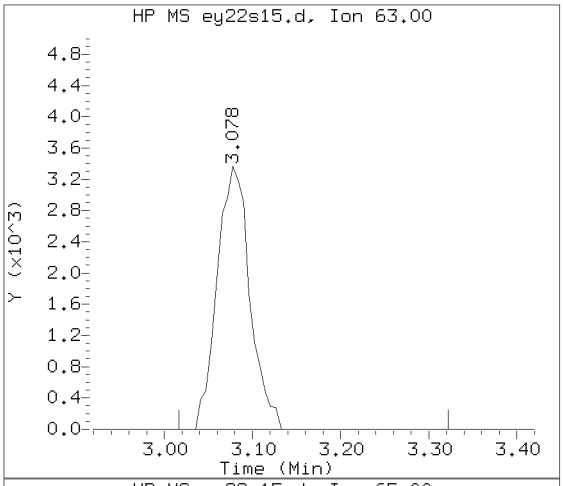
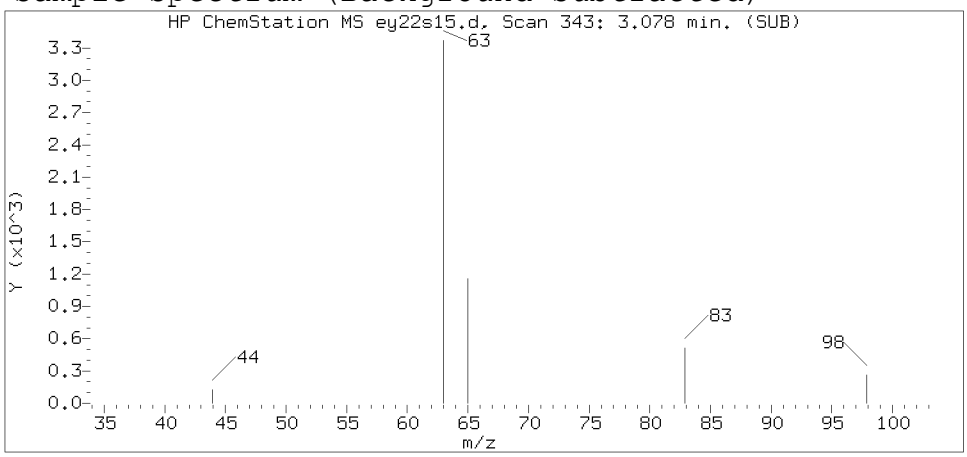
Target 3.5 esignature user ID: dvv10203

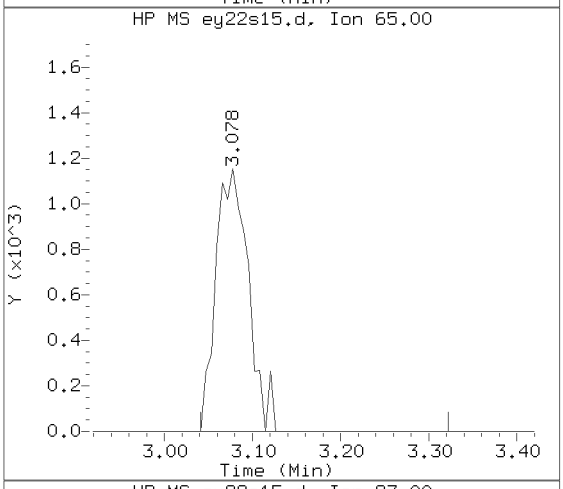
Reference Standard Spectrum for 1,1-Dichloroethane



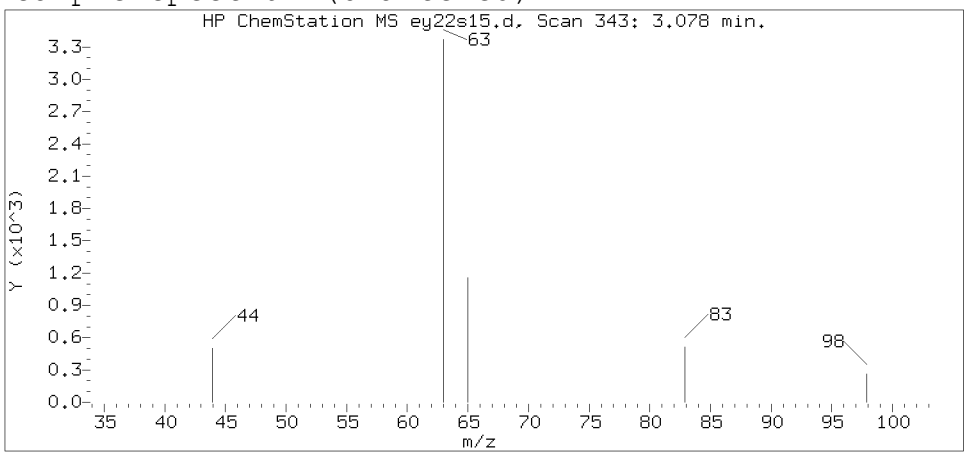


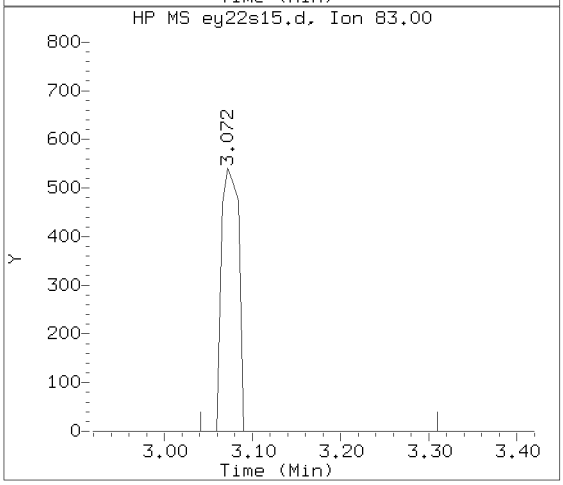
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19may22a.b/ey22s15.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 15:22 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 15:38 Automation

Sample Name: 92J13 Lab Sample ID: 1058228

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 343
Retention Time (minutes): 3.078
Relative Retention Time :-0.00046
Quant Ion : 63.00
Area (flag) : 8704
On-Column Amount (ng) : 0.9388

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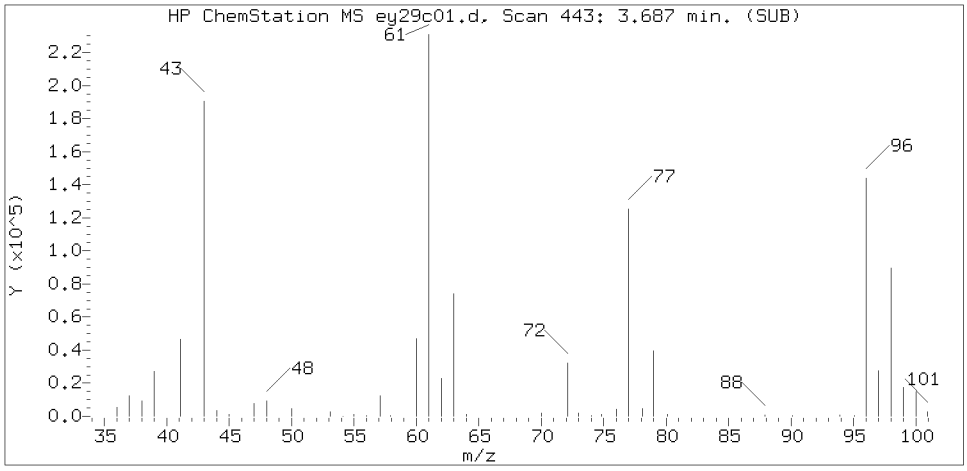
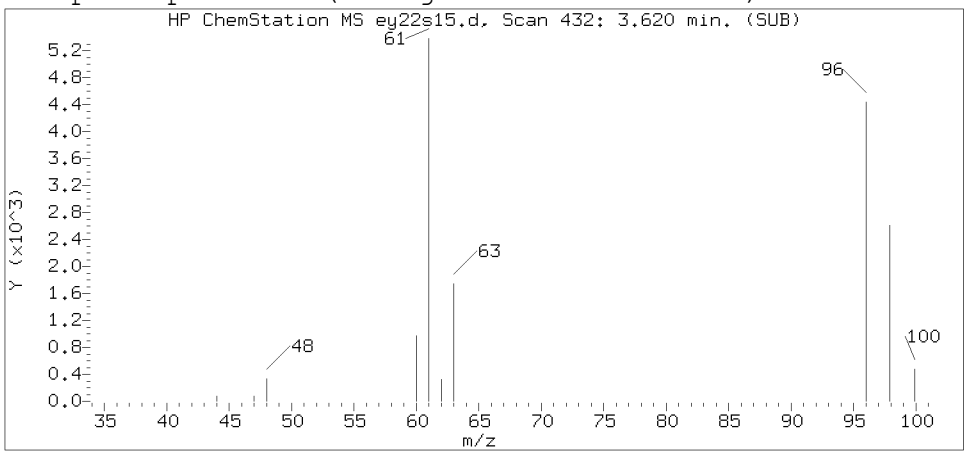
Target 3.5 esignature user ID: dvv10203

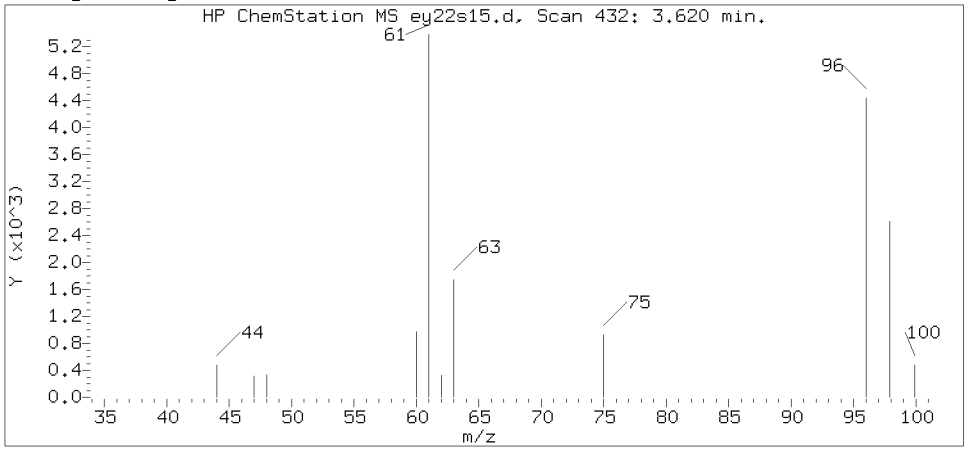
Reference Standard Spectrum for cis-1,2-Dichloroethene

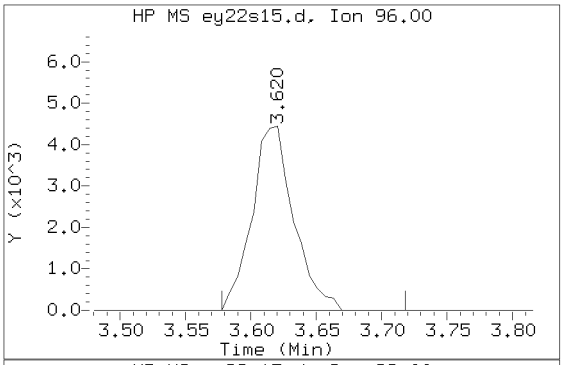


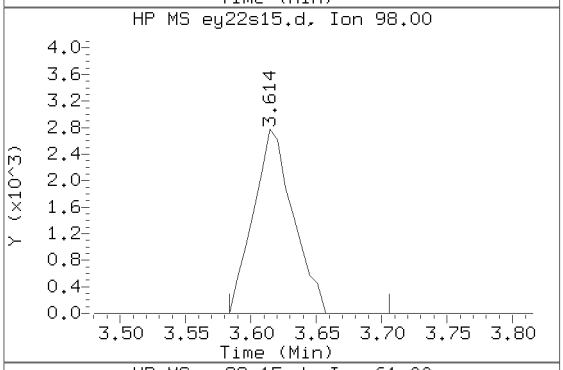
Sample Spectrum (Background Subtracted)

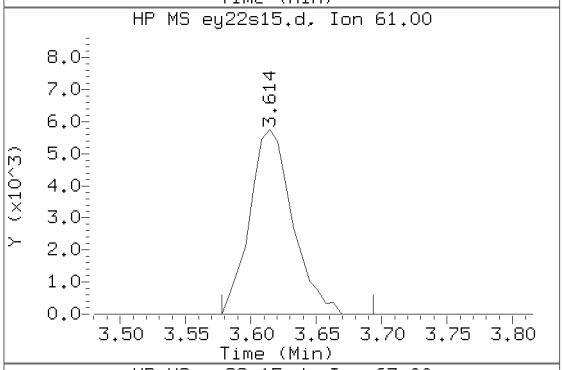


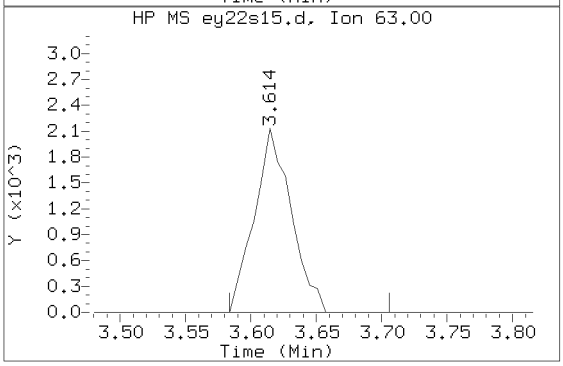
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s15.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 15:22 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 15:38 Automation

Sample Name: 92J13 Lab Sample ID: 1058228

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 432
Retention Time (minutes): 3.620
Relative Retention Time :-0.00160
Quant Ion : 96.00
Area (flag) : 9893
On-Column Amount (ng) : 1.7792

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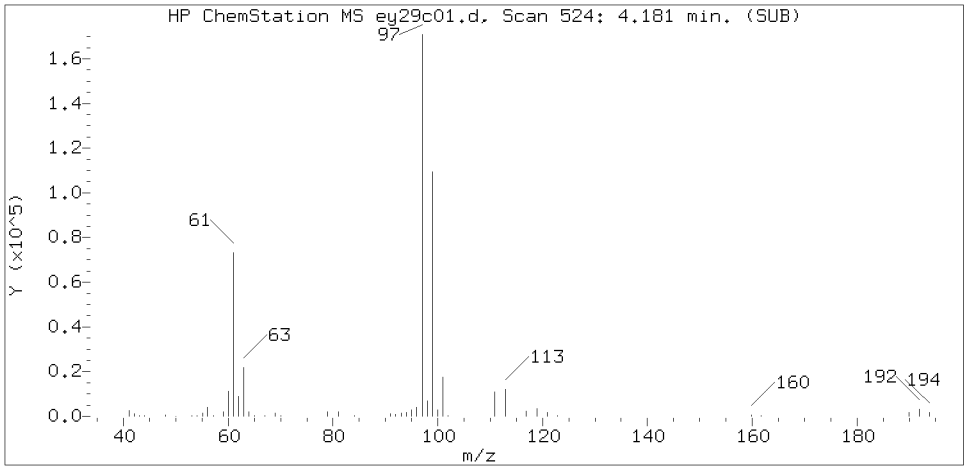
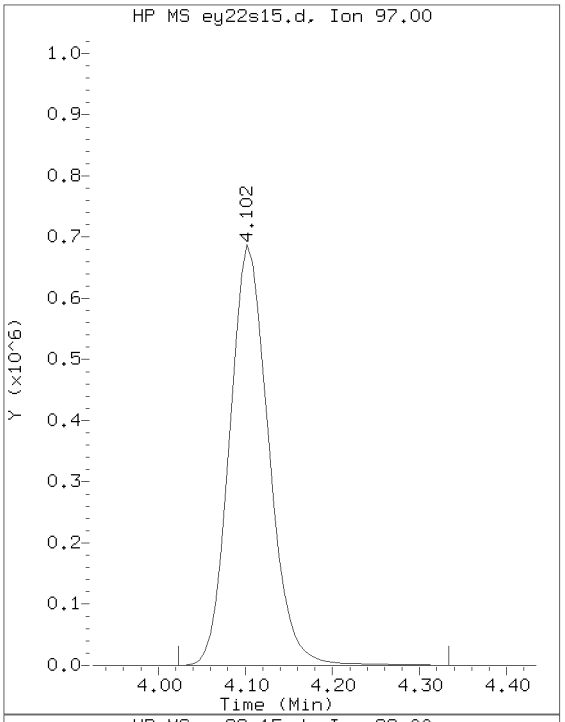
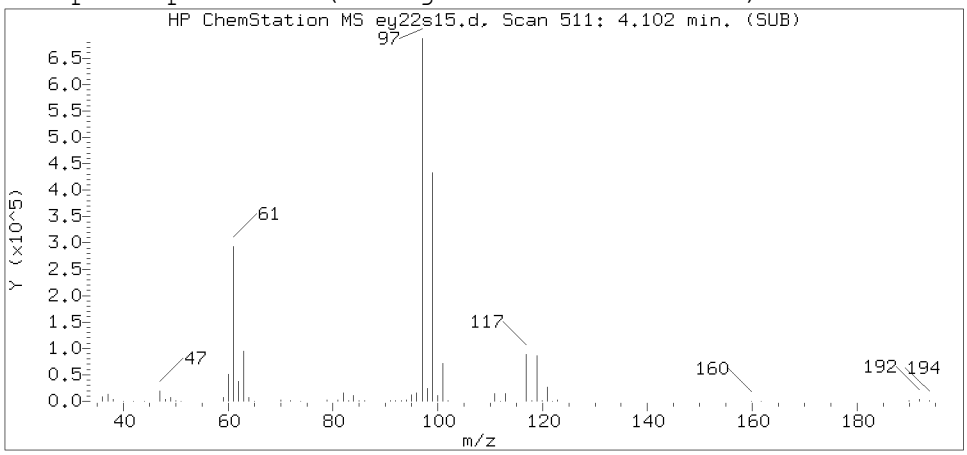
Target 3.5 esignature user ID: dvv10203

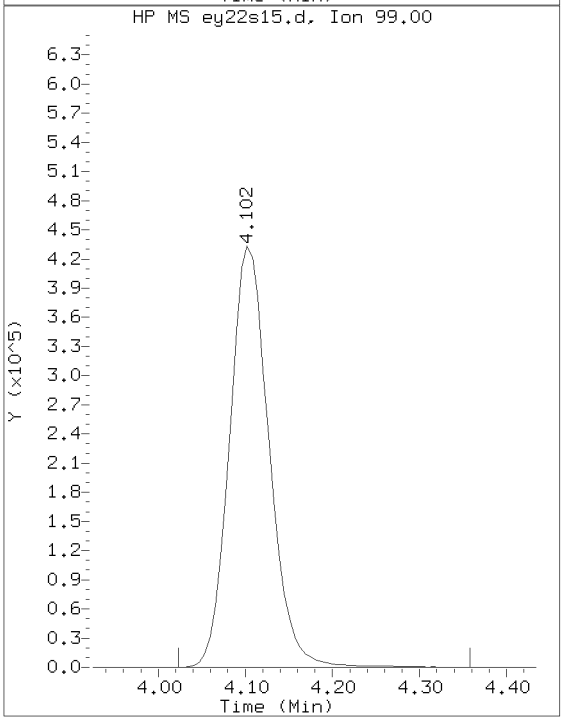
Reference Standard Spectrum for 1,1,1-Trichloroethane



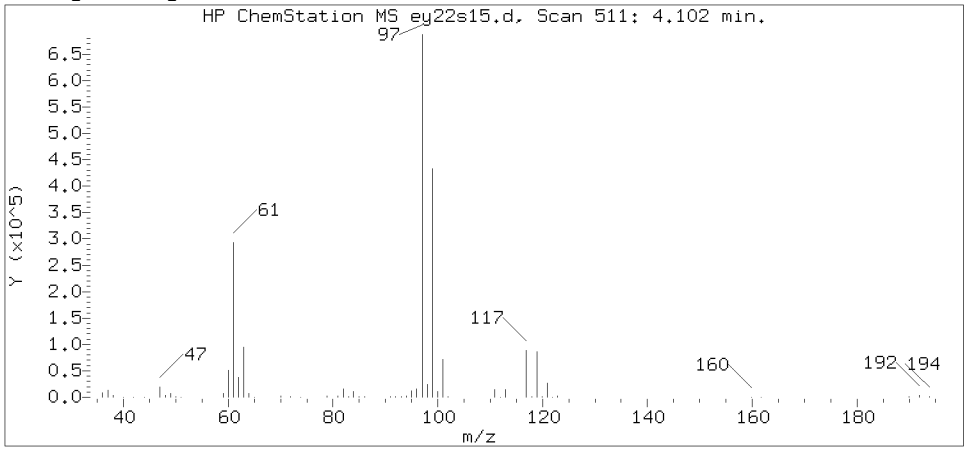


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP15648.i/19may22a.b/ey22s15.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 15:22 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 15:38 Automation

Sample Name: 92J13 Lab Sample ID: 1058228

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 511
Retention Time (minutes)	: 4.102
Relative Retention Time	: 0.00111
Quant Ion	: 97.00
Area (flag)	: 2141168
On-Column Amount (ng)	: 262.3946

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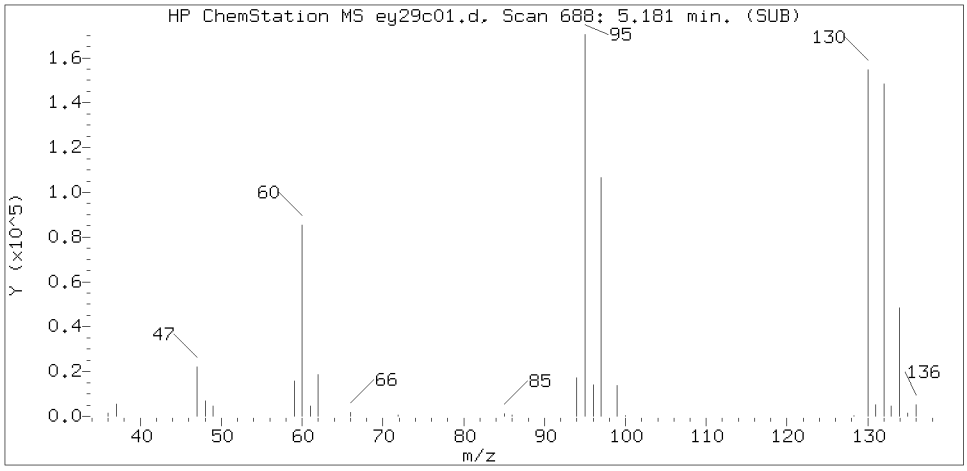
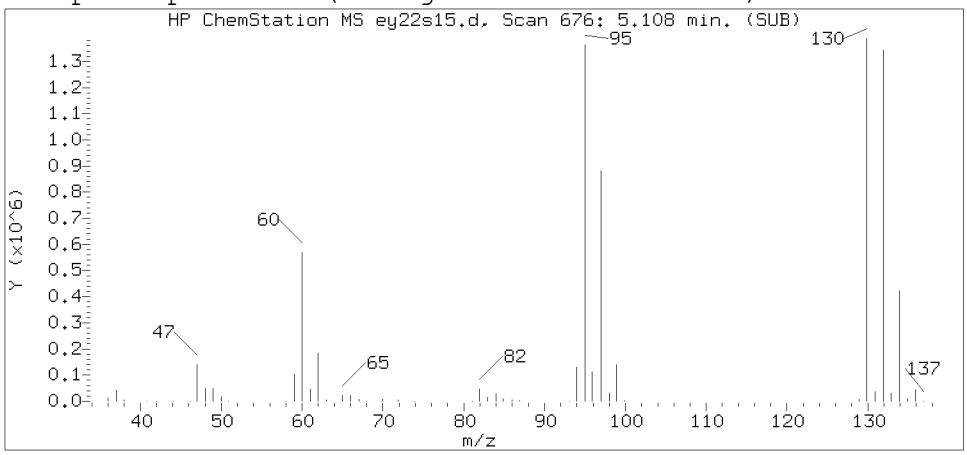
Target 3.5 esignature user ID: dvv10203

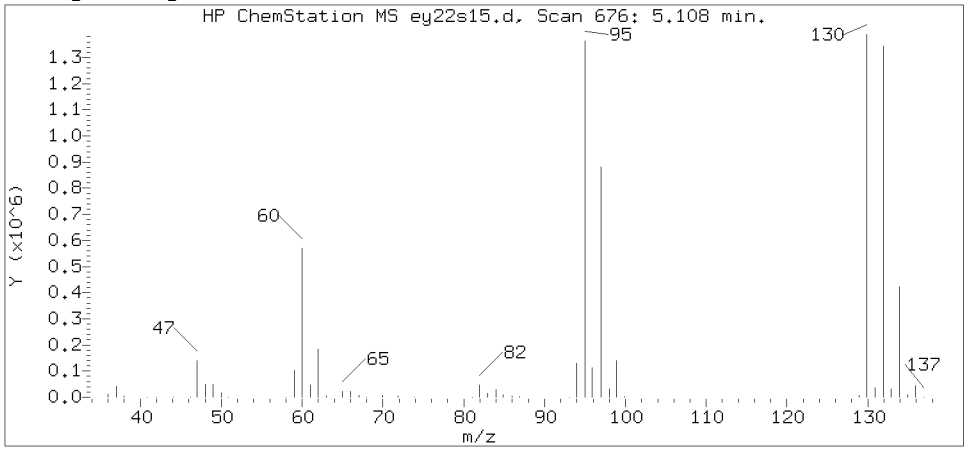
Reference Standard Spectrum for Trichloroethene

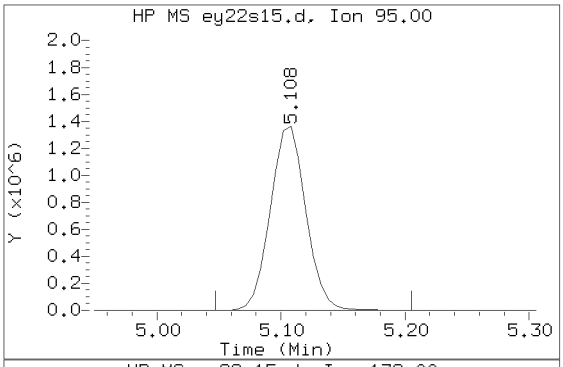


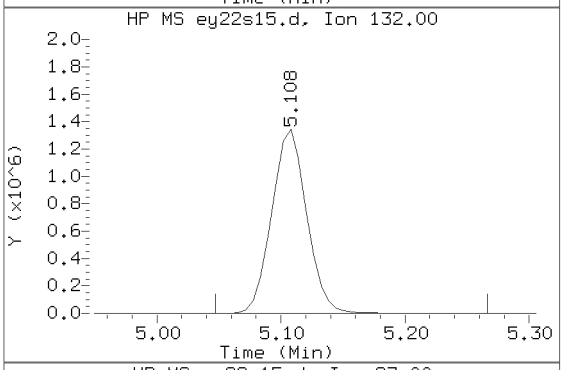
Sample Spectrum (Background Subtracted)

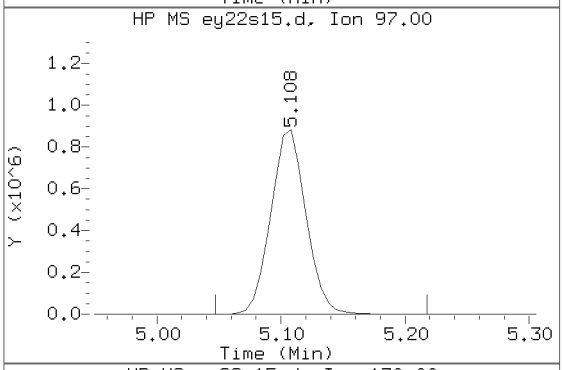


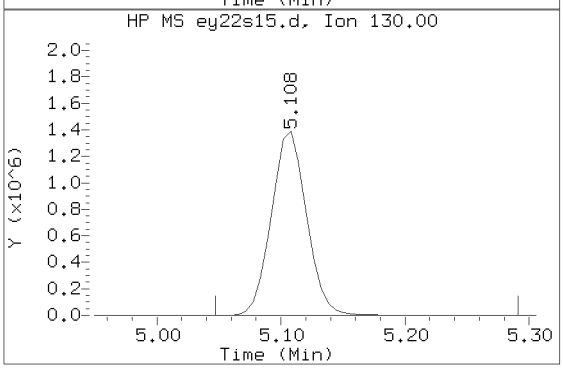
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s15.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 15:22 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 15:38 Automation

Sample Name: 92J13 Lab Sample ID: 1058228

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 676
Retention Time (minutes)	: 5.108
Relative Retention Time	: 0.00010
Quant Ion	: 95.00
Area (flag)	: 2712196
On-Column Amount (ng)	: 506.0889

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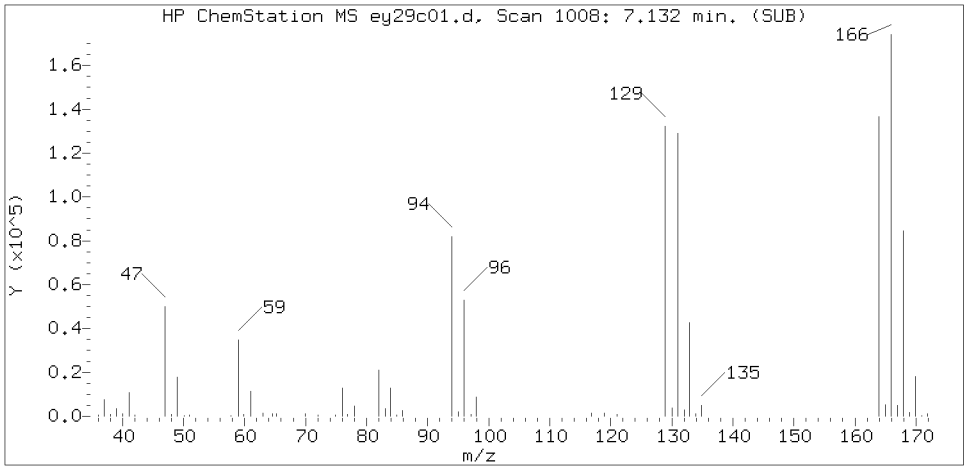
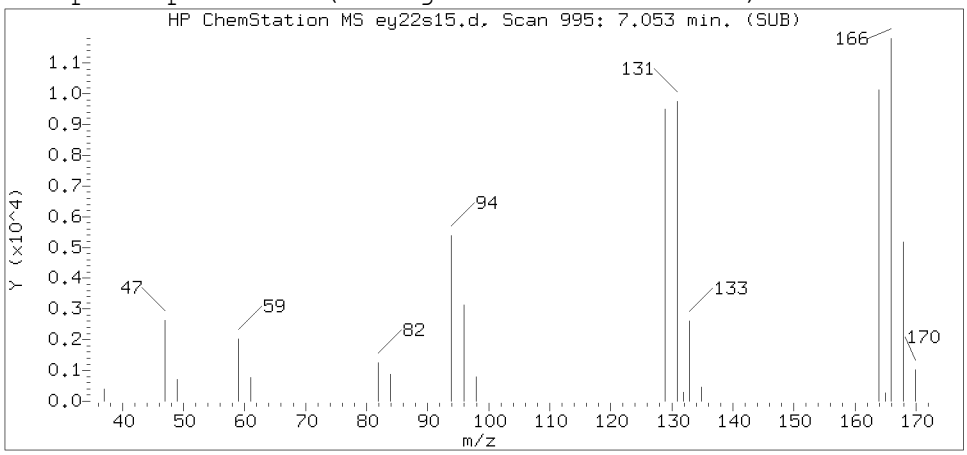
Target 3.5 esignature user ID: dvv10203

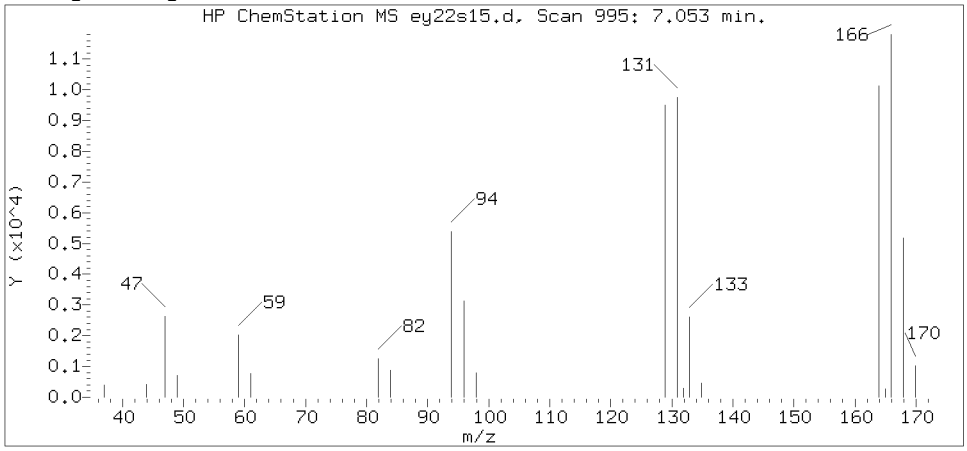
Reference Standard Spectrum for Tetrachloroethene

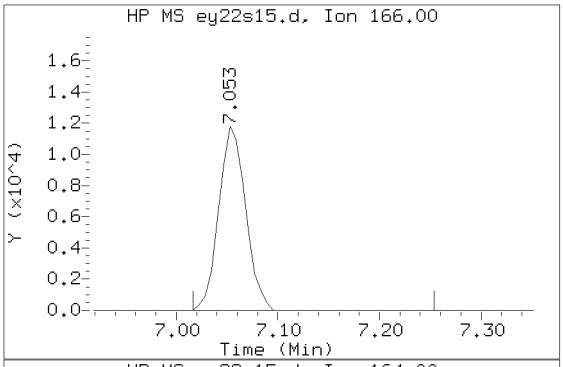


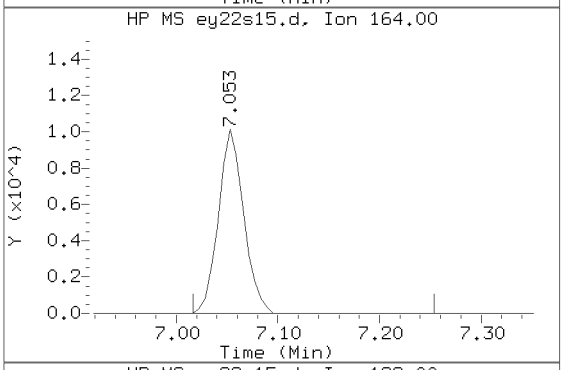
Sample Spectrum (Background Subtracted)

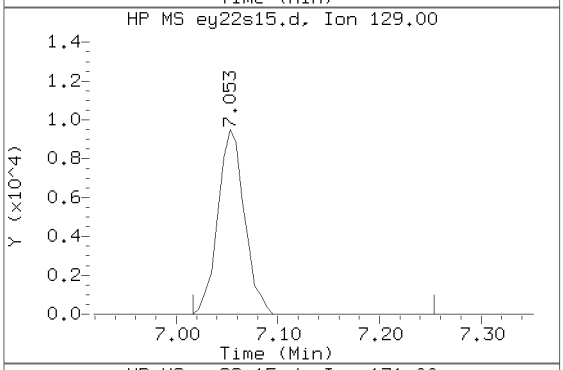


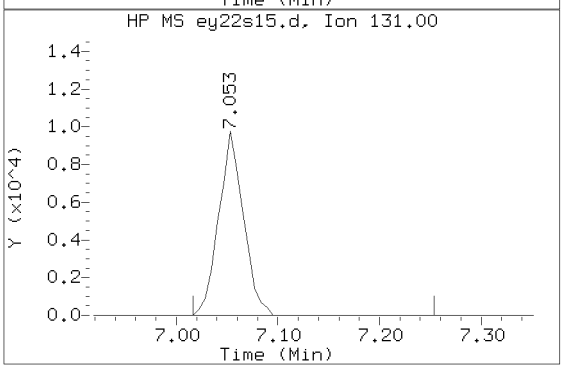
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s15.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 15:22 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 15:38 Automation

Sample Name: 92J13 Lab Sample ID: 1058228

Compound Number : 94
Compound Name : Tetrachloroethene
Scan Number : 995
Retention Time (minutes): 7.053
Relative Retention Time :-0.00000
Quant Ion : 166.00
Area (flag) : 21672
On-Column Amount (ng) : 3.9296

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Target 3.5 esignature user ID: dvv10203

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
92J13DL

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058228

Sample wt/vol: 0.50 (g/mL) mL Lab File ID: HP15648.i/19may22a.b/ey22s16.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	10	U
75-35-4	1,1-Dichloroethene	17	D
67-64-1	Acetone	200	U
76-13-1	Freon 113	100	U
75-15-0	Carbon Disulfide	50	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	100	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	230	D
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	460	D
123-91-1	1,4-Dioxane	2500	U
108-88-3	Toluene	10	U
127-18-4	Tetrachloroethene	3	J D
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (Total)	50	U
95-50-1	1,2-Dichlorobenzene	50	U
91-20-3	Naphthalene	50	U

FORM I VOA

^

92J13DL

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1058228DL

Data file: /chem/HP15648.i/19may22a.b/ey22s16.d Injection date and time: **22-MAY-2019 15:43**
Data file Sample Info. Line: 92J13DL;1058228DL;1;0;;JCV92;;;ey22b01; Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 17:49 dvv10203

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:52
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 0.5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.474	(0.000)	244	65	181944	(6)	250.00	
66) Fluorobenzene	4.730	(0.000)	614	96	1111527	(3)	50.00	
101) Chlorobenzene-d5	7.894	(0.000)	1133	117	827597	(2)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802	(0.000)	1446	152	436997	(4)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.072	(-0.001)	113	246262	47.667	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.389	(0.000)	102	66487	50.998	102%		80 - 120
84) Toluene-d8	(3)	6.382	(0.000)	98	1114899	49.602	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918	(0.000)	95	425506	49.244	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					2	10
17) 1,1-Dichloroethene	(2)	2.102	(-0.001)	96	7493	1.679	16.79			2	10
18) Acetone	(1)				Not Detected					7	200
19) Freon 113	(2)				Not Detected					2	100
23) Carbon Disulfide	(2)				Not Detected					2	50
28) Methylene Chloride	(2)				Not Detected					3	10
32) trans-1,2-Dichloroethene	(2)				Not Detected					2	10
36) 1,1-Dichloroethane	(2)				Not Detected					2	10
42) cis-1,2-Dichloroethene	(2)				Not Detected					2	10
44) 2-Butanone	(2)				Not Detected					3	100
51) Chloroform	(2)				Not Detected					2	10
53) 1,1,1-Trichloroethane	(2)	4.102	(-0.000)	97	190904	23.045	230.45			3	10
60) Benzene	(2)				Not Detected					2	10
61) 1,2-Dichloroethane	(2)				Not Detected					3	10
71) Trichloroethene	(2)	5.102	(0.000)	95	250312	46.010	460.10			2	10
76) 1,4-Dioxane	(1)				Not Detected					290	2500
89) Toluene	(3)				Not Detected					2	10
94) Tetrachloroethene	(3)	7.053	(-0.000)	166	1791	0.320	3.20		J	2	10
105) Ethylbenzene	(3)				Not Detected					4	10
107) m+p-Xylene	(3)				Not Detected					10	50
108) o-Xylene	(3)				Not Detected					4	10
109) Xylene (Total)	(3)				Not Detected					10	50
139) 1,2-Dichlorobenzene	(4)				Not Detected					2	50
149) Naphthalene	(4)				Not Detected					10	50

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may22a.b/ey22s16.d Injection date and time: **22-MAY-2019 15:43**
Data file Sample Info. Line: 92J13DL;1058228DL;1;0;;JCV92;;;ey22b01; Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 17:49 dvv10203

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:52
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 0.5 ml

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WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

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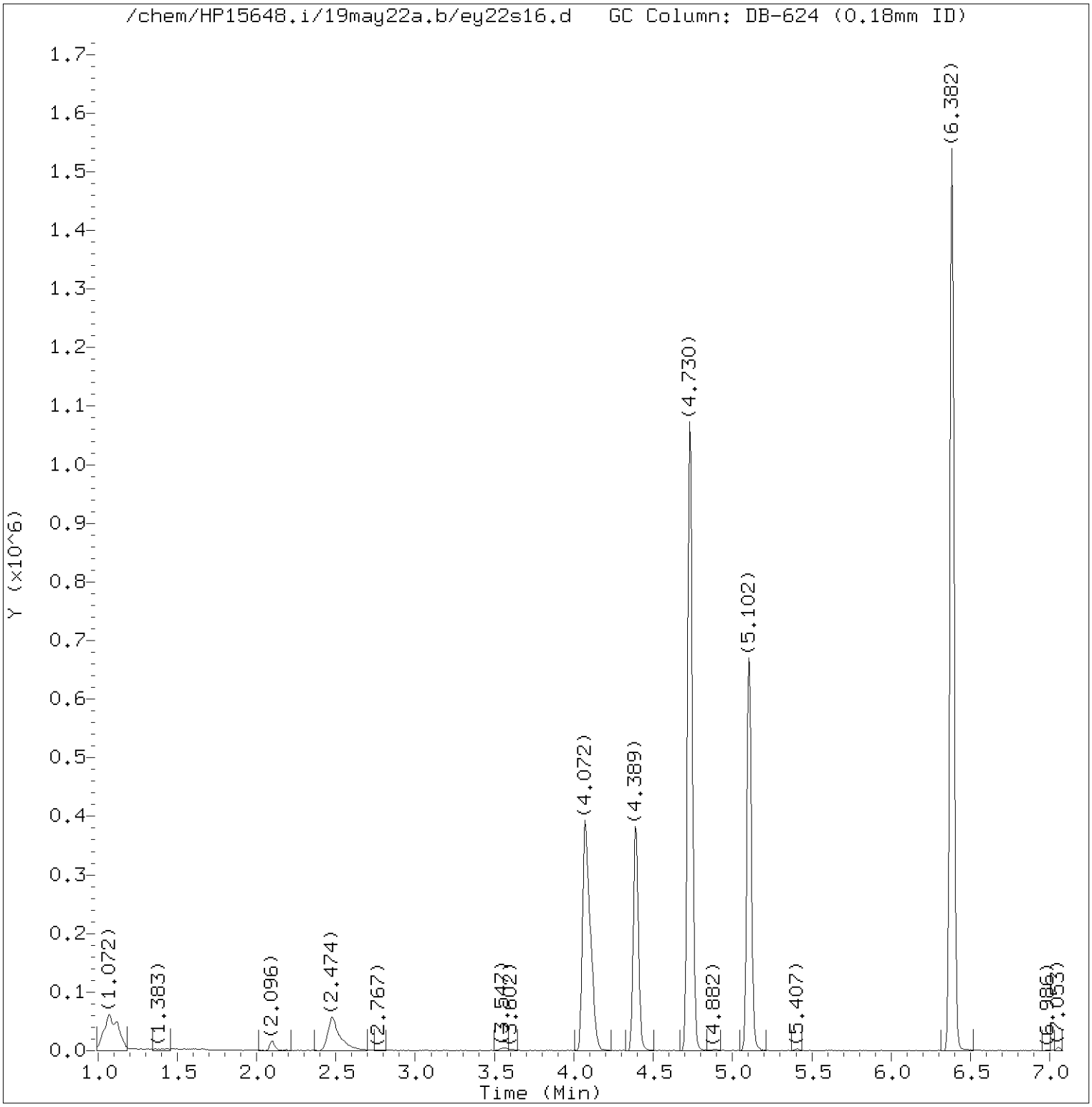
Secondary review performed and digitally signed by Chelsea B. Riehl on 05/23/2019 at 14:20. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

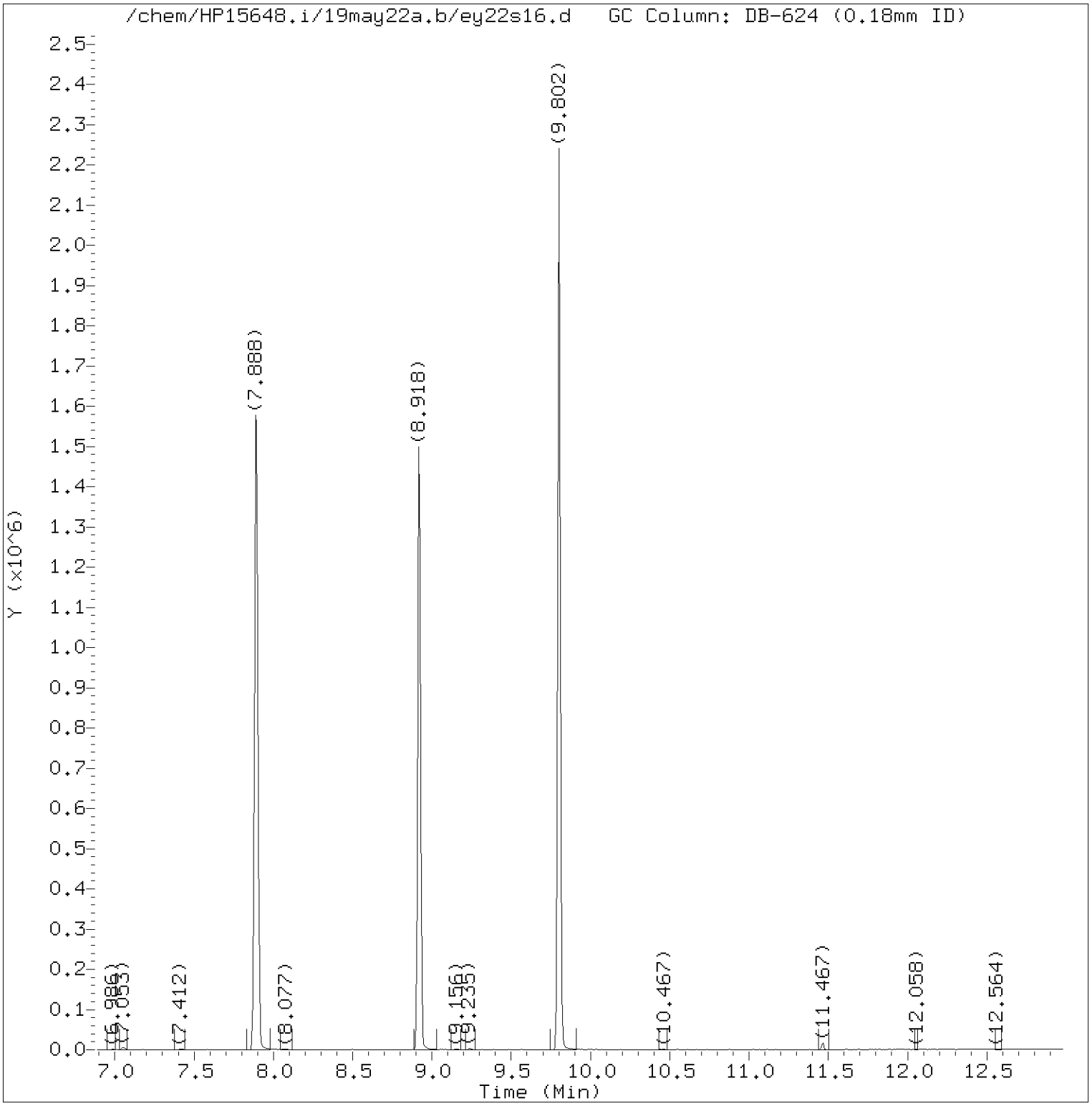
Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s16.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 17:49 dvv10203

Sample Name: 92J13DL Lab Sample ID: 1058228DL

Digitally signed by Don V. Viray
on 05/22/2019 at 17:52.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s16.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 17:49 dvv10203

Sample Name: 92J13DL Lab Sample ID: 1058228DL

Digitally signed by Don V. Viray
on 05/22/2019 at 17:52.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s16.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 17:49 dvv10203

Sample Name: 92J13DL Lab Sample ID: 1058228DL

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	2.103	96	7493	1.679
29)*t-Butyl alcohol-d10	(1)	2.474	65	181944	250.000
52)$Dibromofluoromethane	(2)	4.072	113	246262	47.667
53) 1,1,1-Trichloroethane	(2)	4.102	97	190904	23.045
57)$1,2-Dichloroethane-d4	(2)	4.389	102	66487	50.998
66)*Fluorobenzene	(2)	4.730	96	1111527	50.000
71) Trichloroethene	(2)	5.102	95	250312	46.010
84)$Toluene-d8	(3)	6.382	98	1114899	49.602
94) Tetrachloroethene	(3)	7.053	166	1791	0.320
101)*Chlorobenzene-d5	(3)	7.894	117	827597	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	425506	49.244
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	436997	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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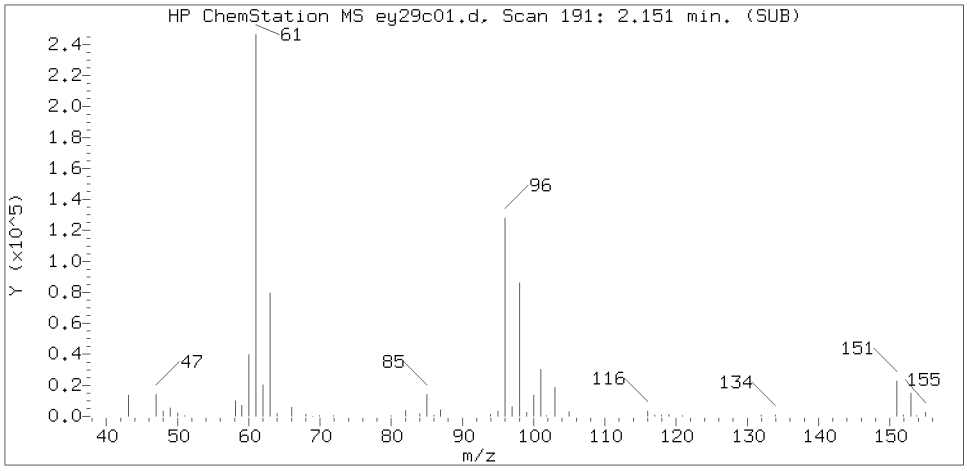
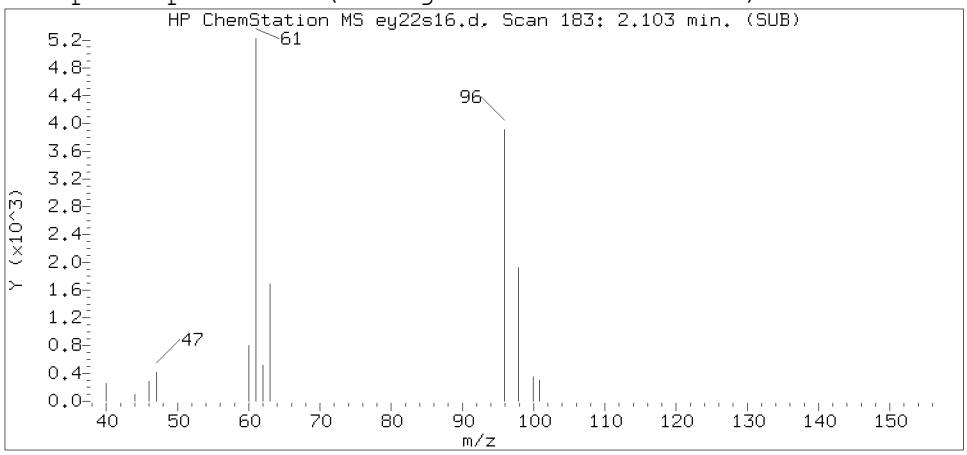
on 05/22/2019 at 17:52.
Target 3.5 esignature user ID: dvv10203

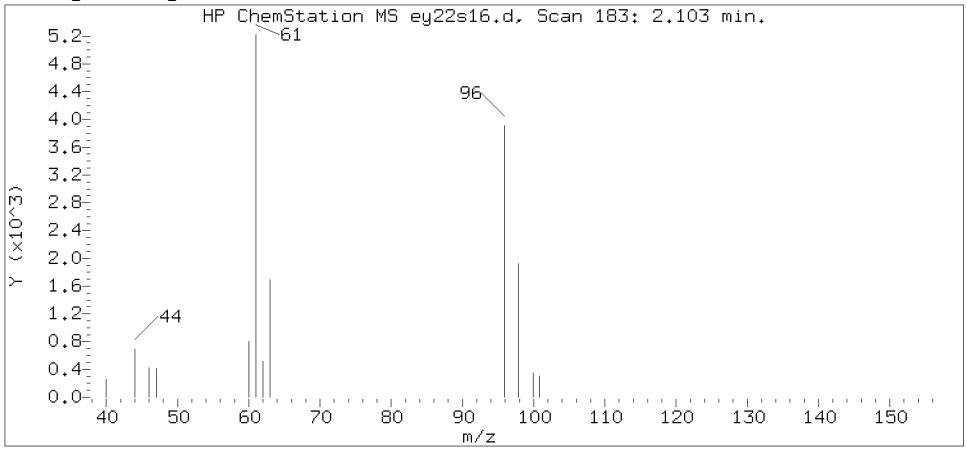
Reference Standard Spectrum for 1,1-Dichloroethene

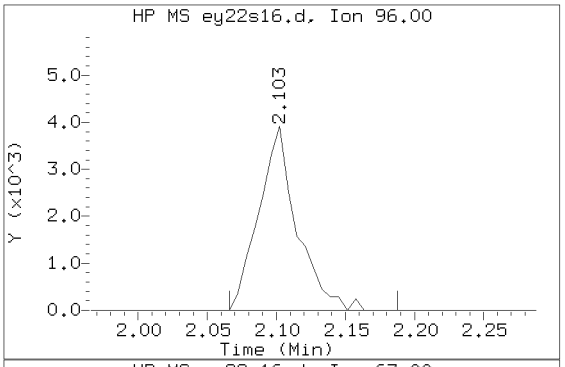


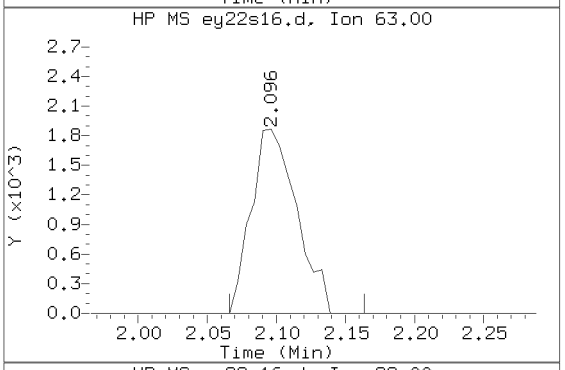
Sample Spectrum (Background Subtracted)

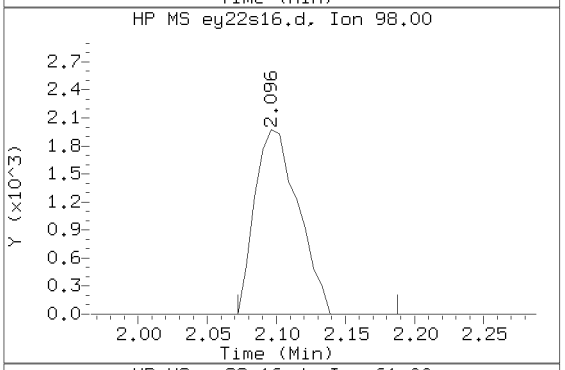


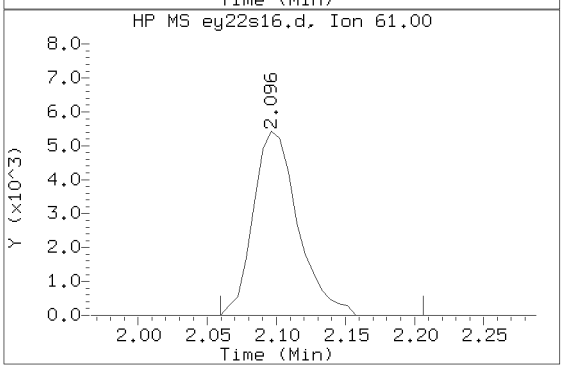
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s16.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 17:49 dvv10203

Sample Name: 92J13DL Lab Sample ID: 1058228DL

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 183
Retention Time (minutes): 2.103
Relative Retention Time :-0.00131
Quant Ion : 96.00
Area (flag) : 7493
On-Column Amount (ng) : 1.6787

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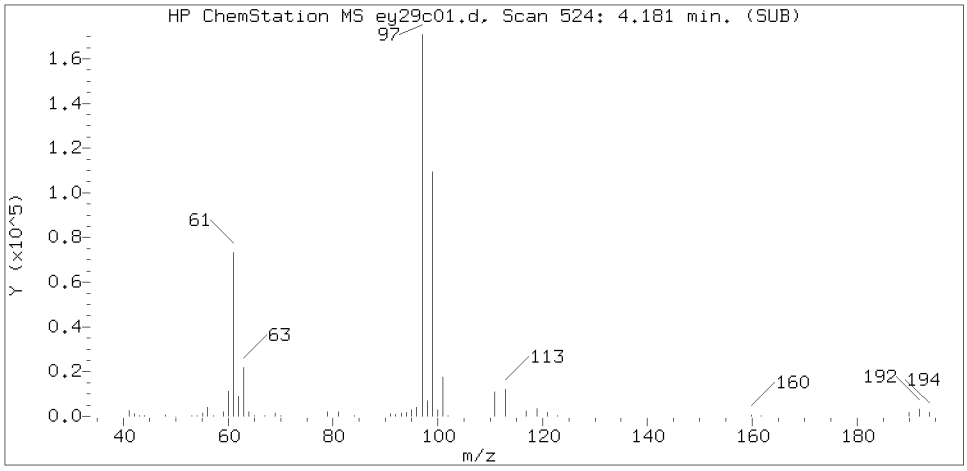
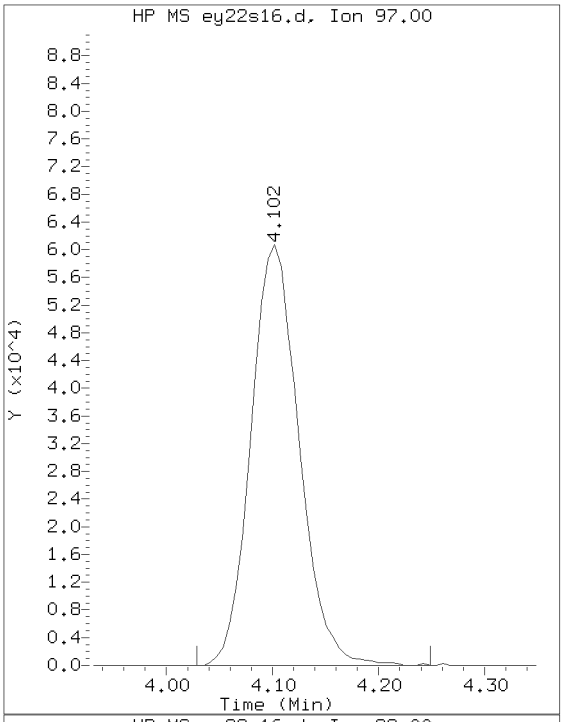
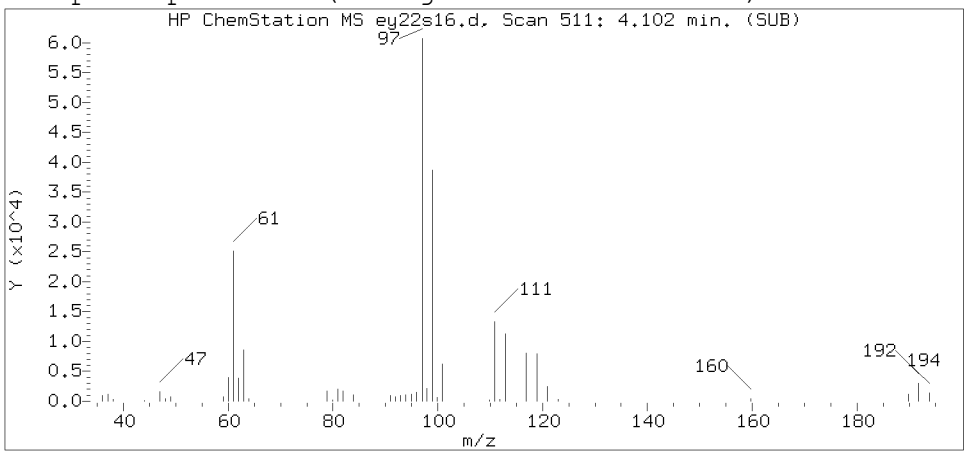
Target 3.5 esignature user ID: dvv10203

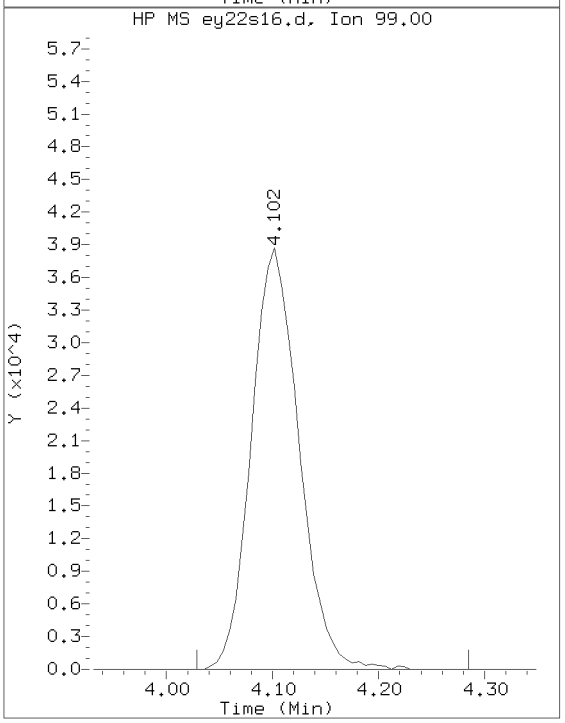
Reference Standard Spectrum for 1,1,1-Trichloroethane



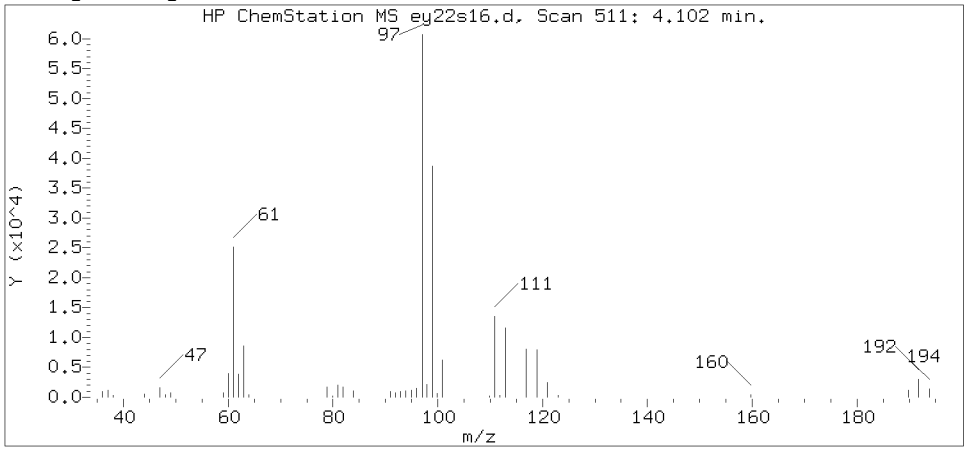


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP15648.i/19may22a.b/ey22s16.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 17:49 dvv10203

Sample Name: 92J13DL Lab Sample ID: 1058228DL

Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 511
Retention Time (minutes): 4.102
Relative Retention Time :-0.00000
Quant Ion : 97.00
Area (flag) : 190904
On-Column Amount (ng) : 23.0452

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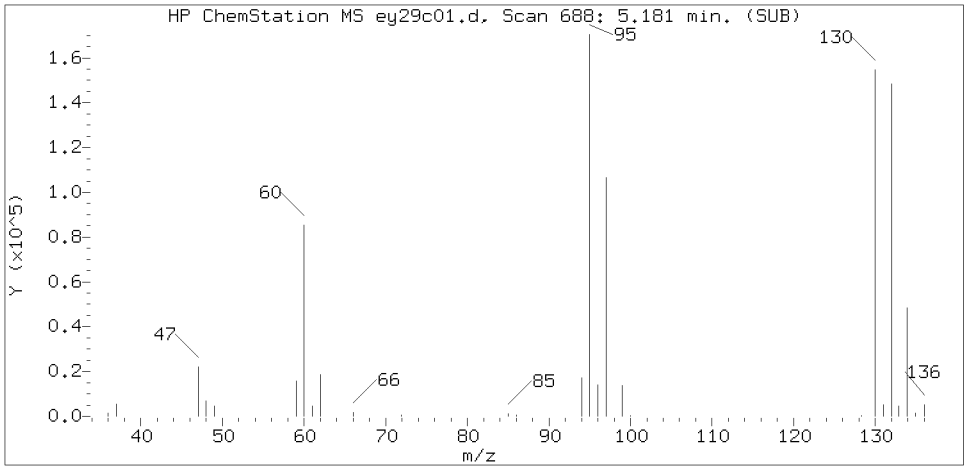
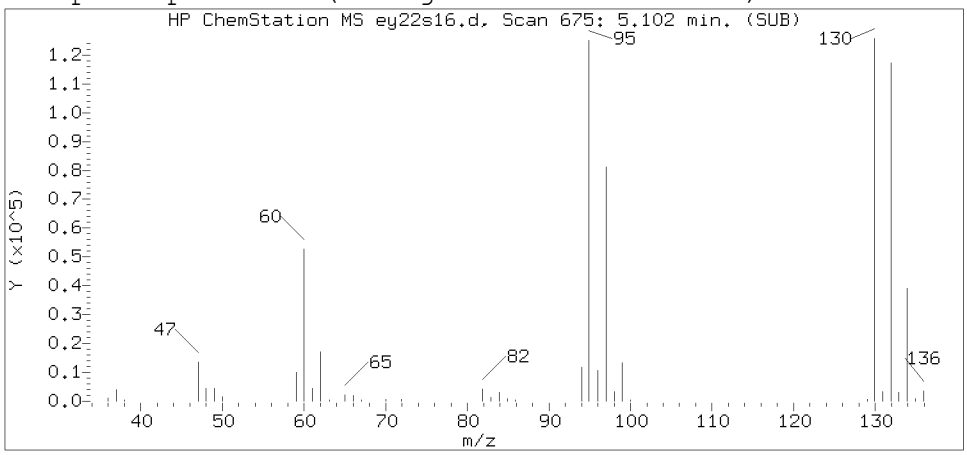
Target 3.5 esignature user ID: dvv10203

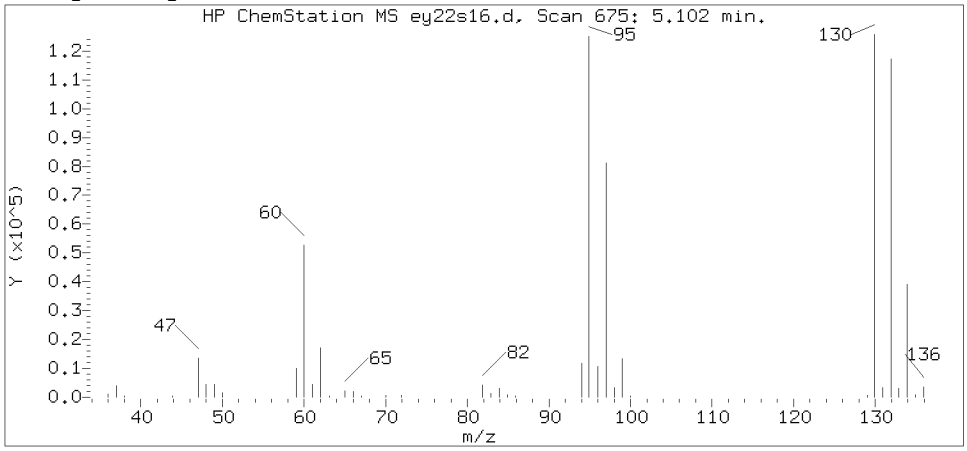
Reference Standard Spectrum for Trichloroethene

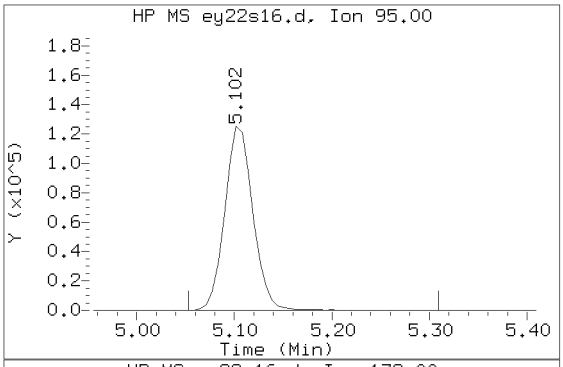


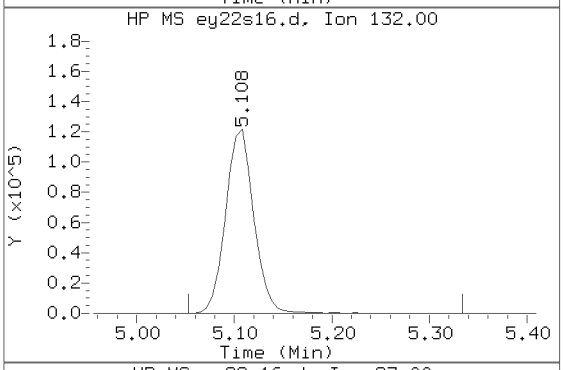
Sample Spectrum (Background Subtracted)

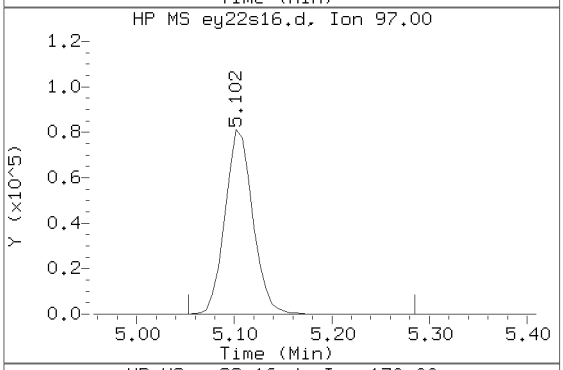


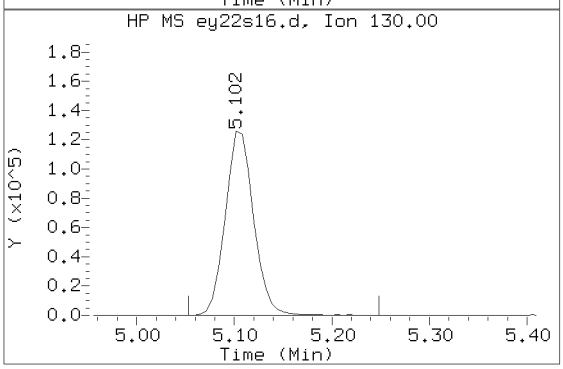
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s16.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 17:49 dvv10203

Sample Name: 92J13DL Lab Sample ID: 1058228DL

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 675
Retention Time (minutes)	: 5.102
Relative Retention Time	: 0.00001
Quant Ion	: 95.00
Area (flag)	: 250312
On-Column Amount (ng)	: 46.0095

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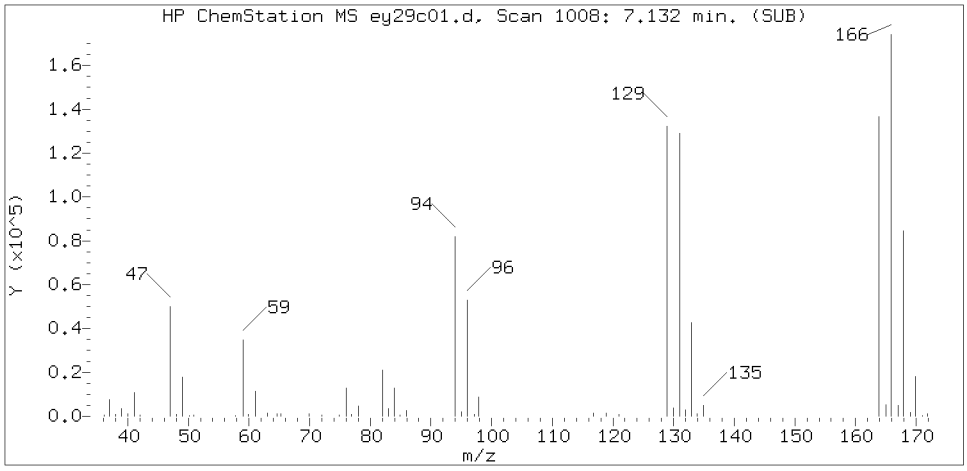
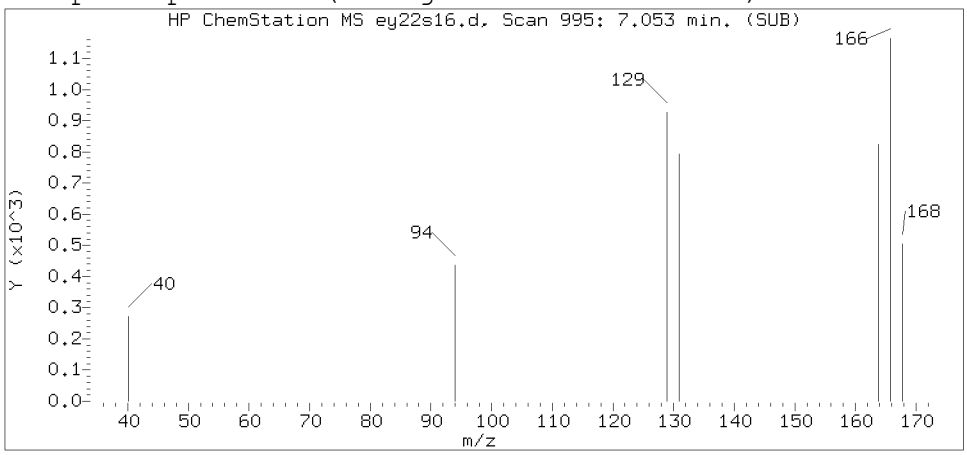
Target 3.5 esignature user ID: dvv10203

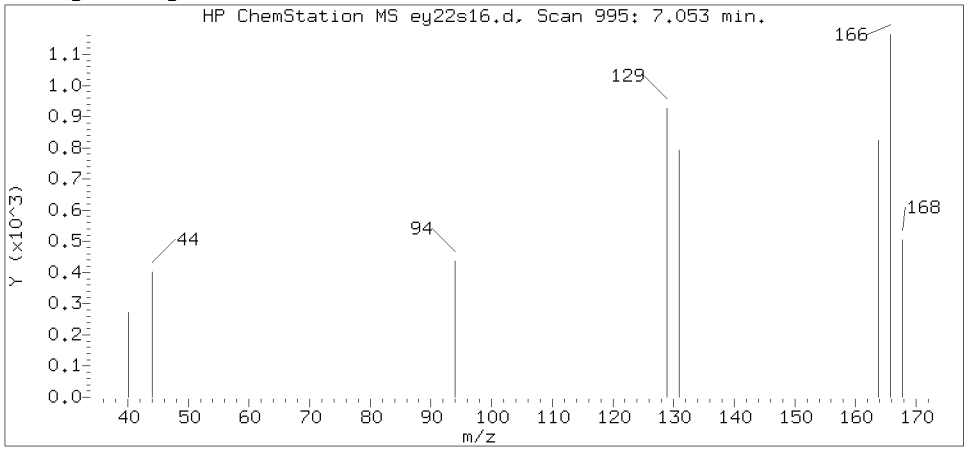
Reference Standard Spectrum for Tetrachloroethene

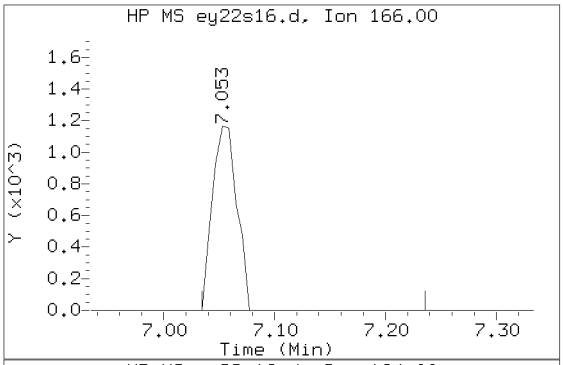


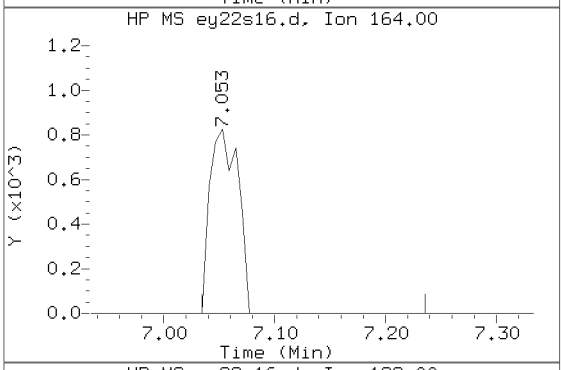
Sample Spectrum (Background Subtracted)

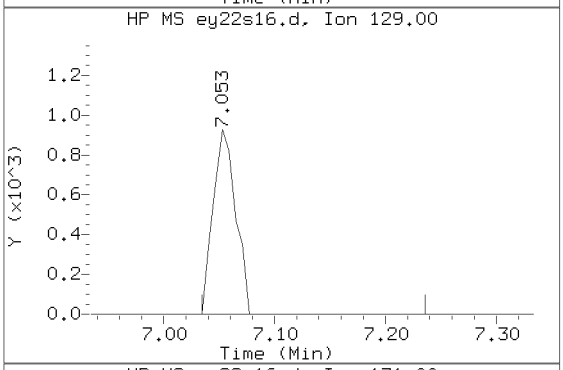


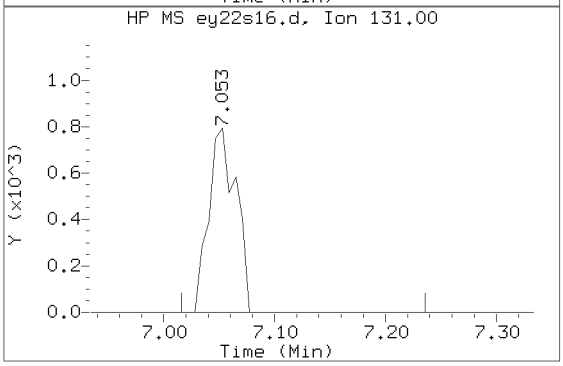
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s16.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 17:49 dvv10203

Sample Name: 92J13DL Lab Sample ID: 1058228DL

Compound Number : 94
Compound Name : Tetrachloroethene
Scan Number : 995
Retention Time (minutes): 7.053
Relative Retention Time :-0.00000
Quant Ion : 166.00
Area (flag) : 1791
On-Column Amount (ng) : 0.3202

Digitally signed by Don V. Viray on 05/22/2019 at 17:52.
Target 3.5 esignature user ID: dvv10203

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
92J14

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058229

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may22a.b/ey22s17.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	9	
67-64-1	Acetone	20	U
76-13-1	Freon 113	0.4	J
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	0.8	J
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	140	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	610	E
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	5	
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

^

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may22a.b/ey22s17.d
Data file Sample Info. Line: 92J14;1058229;1;0;;JCV92;;;ey22b01;
Date, time and analyst ID of latest file update: 22-May-2019 16:19 Automation

Injection date and time: **22-MAY-2019 16:03**
Instrument ID: **HP15648.i** Batch: **E191421AA**

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:52
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.480(-0.006)	245	65	165182 (-3)	250.00	
66) Fluorobenzene	4.736(-0.006)	615	96	1111641 (3)	50.00	
101) Chlorobenzene-d5	7.894(0.000)	1133	117	824113 (2)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802(0.000)	1446	152	437572 (4)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.072(0.000)	113	247292	47.862	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.395(0.000)	102	65447	50.196	100%		80 - 120
84) Toluene-d8	(3)	6.382(0.000)	98	1107679	49.489	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918(0.000)	95	418198	48.603	97%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	2.102(-0.000)	96	39895	8.937	8.94			0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)	2.121(-0.000)	101	2110	0.427	0.43		J	0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)	3.614(-0.000)	96	4695	0.832	0.83		J	0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	4.102(0.001)	97	1170455	141.278	141.28			0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	5.108(0.000)	95	3313025	608.900	608.90		E	0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)	7.053(-0.000)	166	26292	4.721	4.72			0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

E = Compound concentration above calibration range.

Digitally signed by Don V. Viray on 05/22/2019 at 17:52. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP15648.i/19may22a.b/ey22s17.d Injection date and time: **22-MAY-2019 16:03**
Data file Sample Info. Line: 92J14;1058229;1;0;;JCV92;;;ey22b01; Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 16:19 Automation

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:52
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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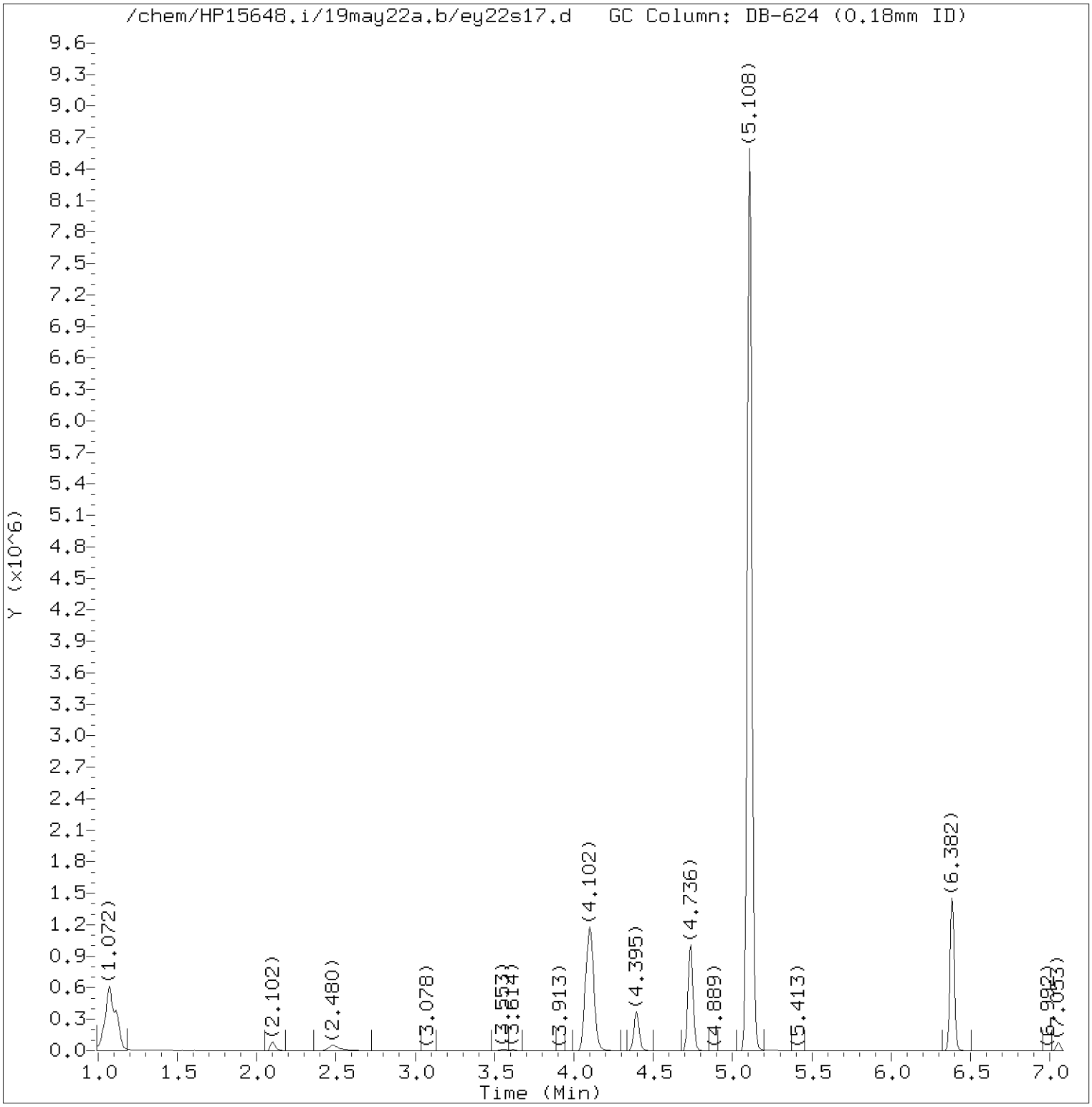
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 05/22/2019 at 17:52. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/23/2019 at 14:20. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

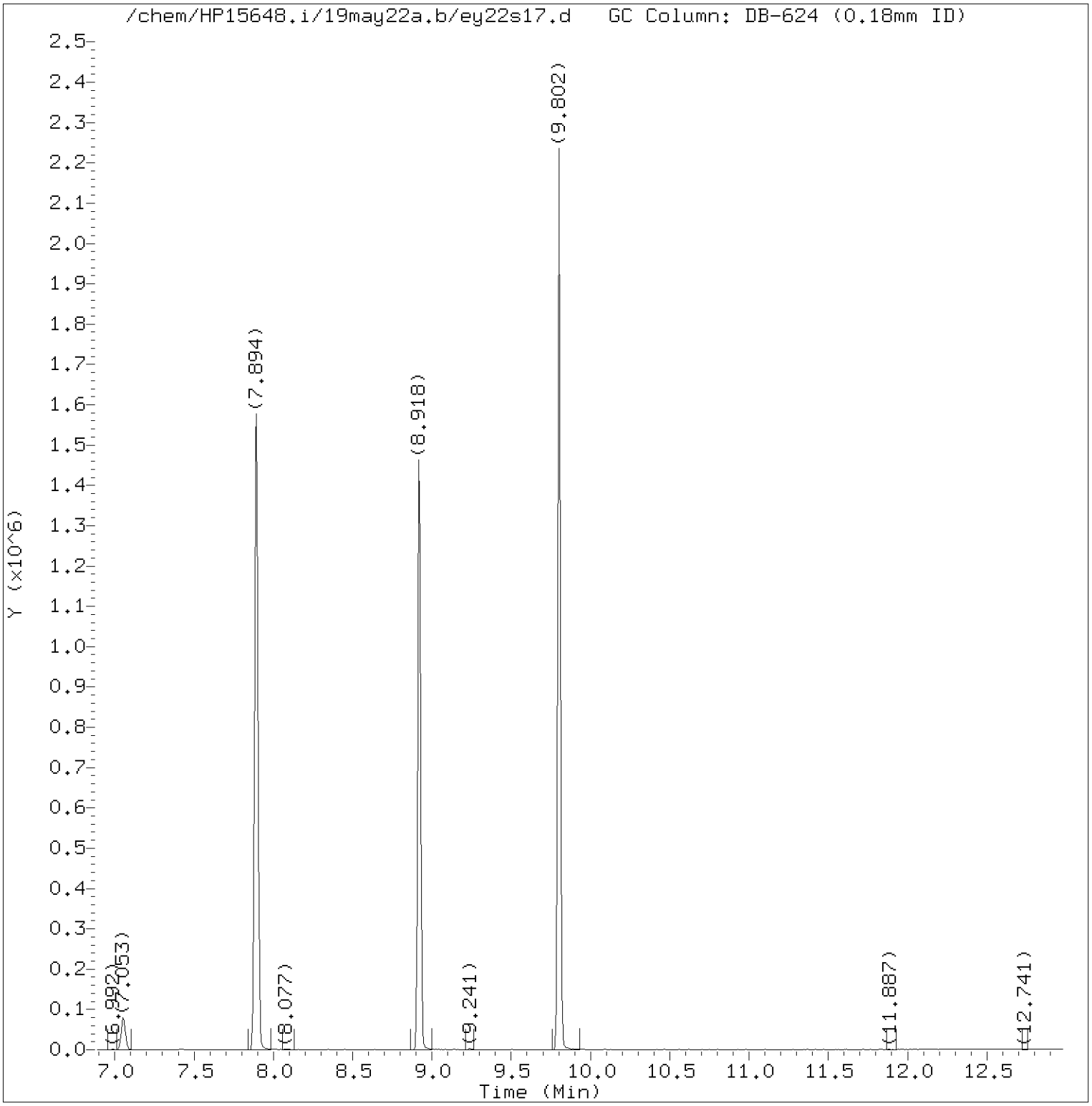
Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s17.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 16:03 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 16:19 Automation

Sample Name: 92J14 Lab Sample ID: 1058229

Digitally signed by Don V. Viray
on 05/22/2019 at 17:52.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s17.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 16:03 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 16:19 Automation

Sample Name: 92J14 Lab Sample ID: 1058229

Digitally signed by Don V. Viray
on 05/22/2019 at 17:52.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s17.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 16:03 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 16:19 Automation

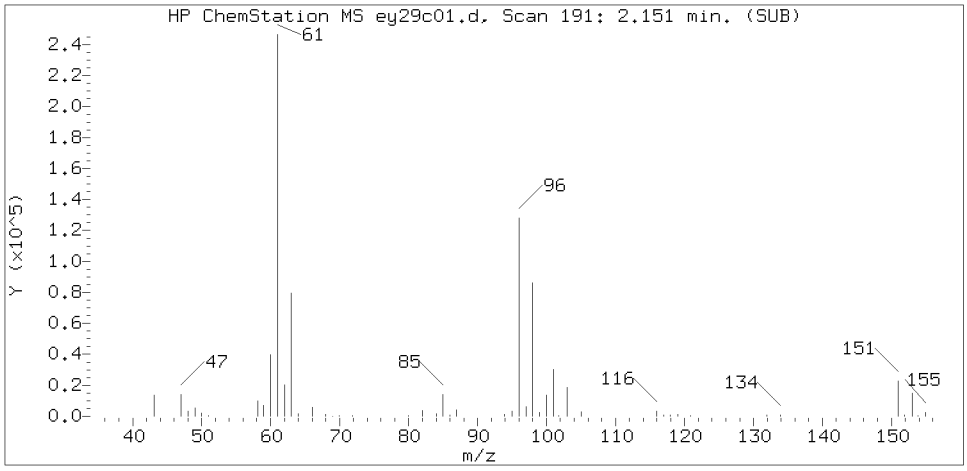
Sample Name: 92J14 Lab Sample ID: 1058229

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	2.102	96	39895	8.937
19) Freon 113	(2)	2.121	101	2110	0.427
29)*t-Butyl alcohol-d10	(1)	2.480	65	165182	250.000
42) cis-1,2-Dichloroethene	(2)	3.614	96	4695	0.832
52)$Dibromofluoromethane	(2)	4.072	113	247292	47.862
53) 1,1,1-Trichloroethane	(2)	4.102	97	1170455	141.278
57)$1,2-Dichloroethane-d4	(2)	4.395	102	65447	50.196
66)*Fluorobenzene	(2)	4.736	96	1111641	50.000
71) Trichloroethene	(2)	5.108	95	3313025	608.900
84)$Toluene-d8	(3)	6.382	98	1107679	49.489
94) Tetrachloroethene	(3)	7.053	166	26292	4.721
101)*Chlorobenzene-d5	(3)	7.894	117	824113	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	418198	48.603
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	437572	50.000

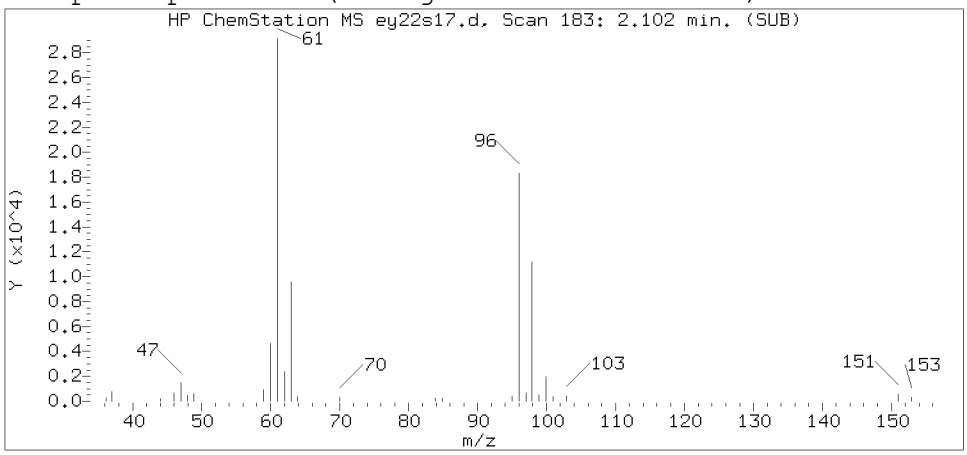
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/22/2019 at 17:52.
Target 3.5 esignature user ID: dvv10203

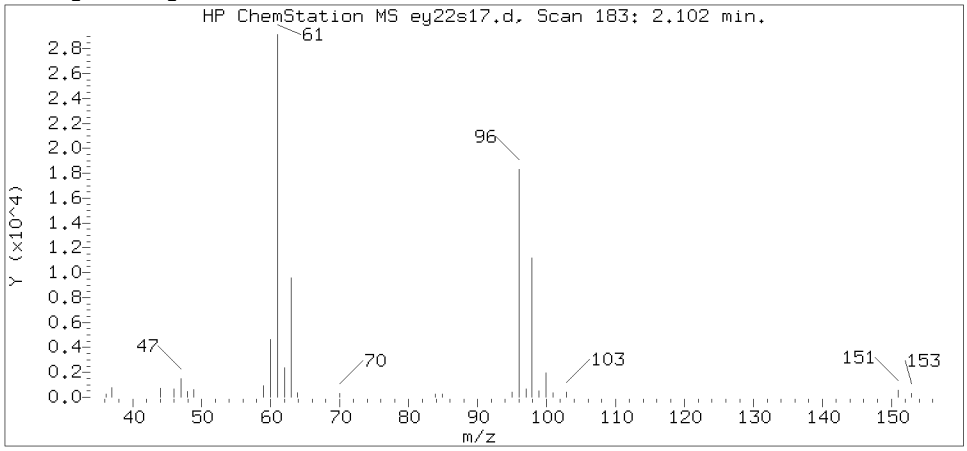
Reference Standard Spectrum for 1,1-Dichloroethene

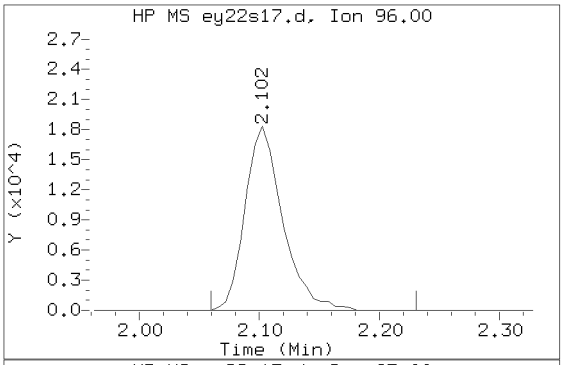


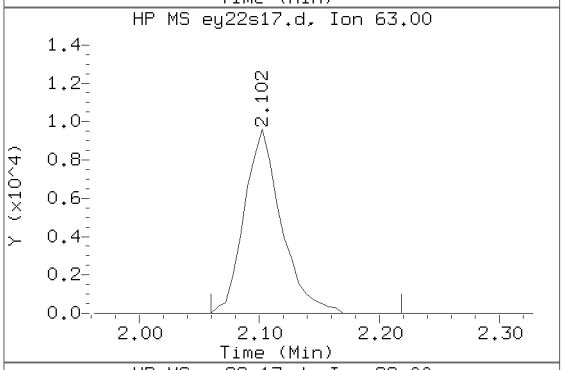
Sample Spectrum (Background Subtracted)

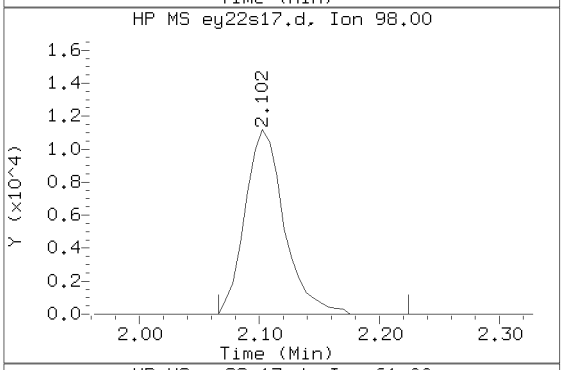


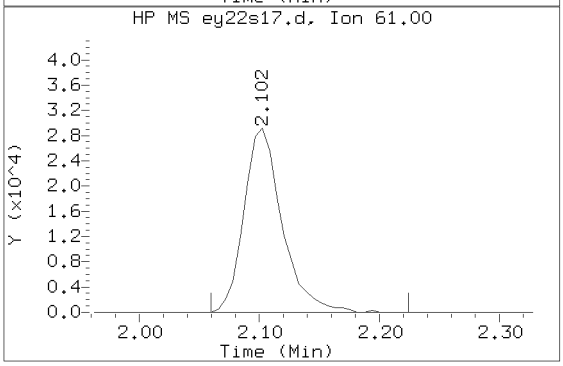
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s17.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 16:03 Analyst ID: JML01693

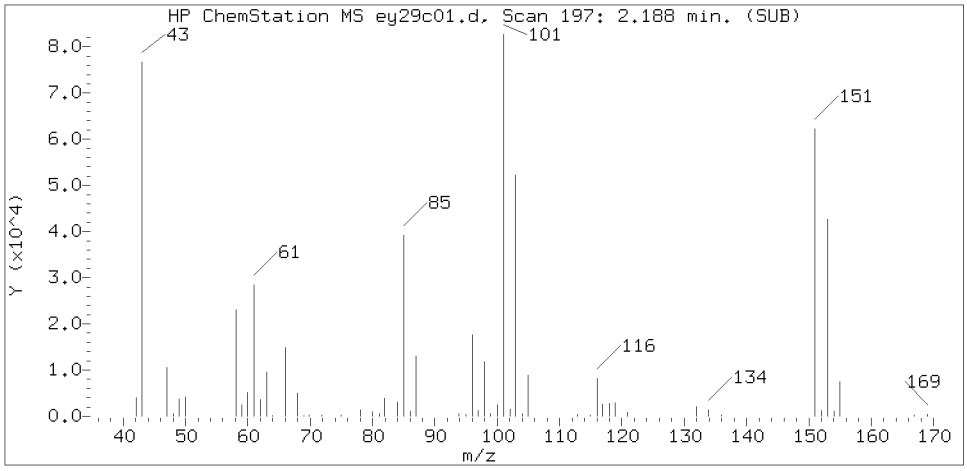
Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 16:19 Automation

Sample Name: 92J14 Lab Sample ID: 1058229

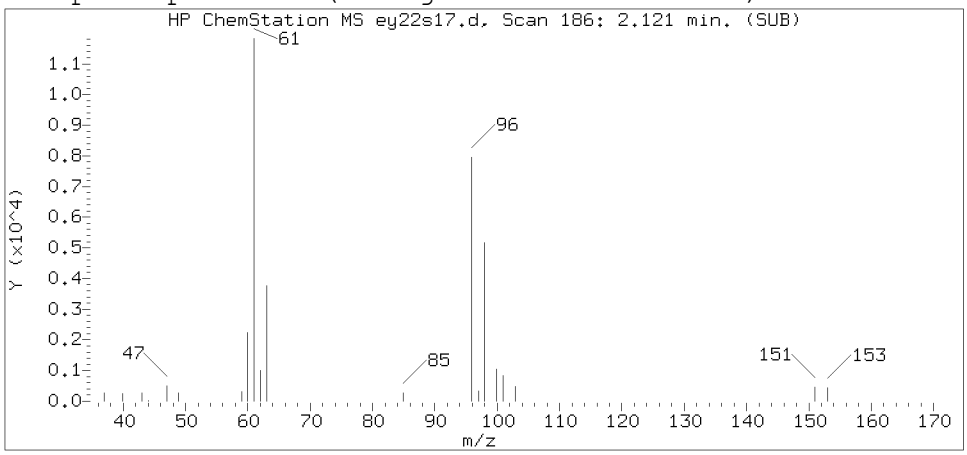
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 183
Retention Time (minutes): 2.102
Relative Retention Time :-0.00073
Quant Ion : 96.00
Area (flag) : 39895
On-Column Amount (ng) : 8.9374

Digitally signed by Don V. Viray on 05/22/2019 at 17:52.
Target 3.5 esignature user ID: dvv10203

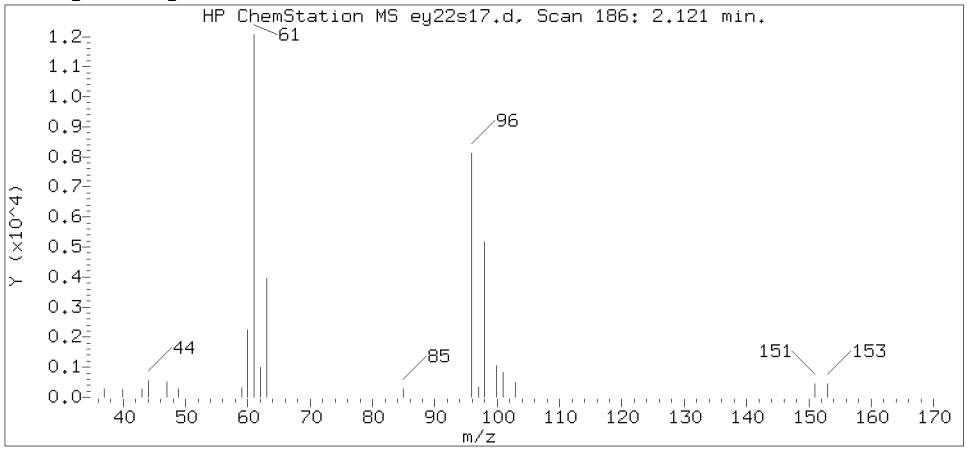
Reference Standard Spectrum for Freon 113

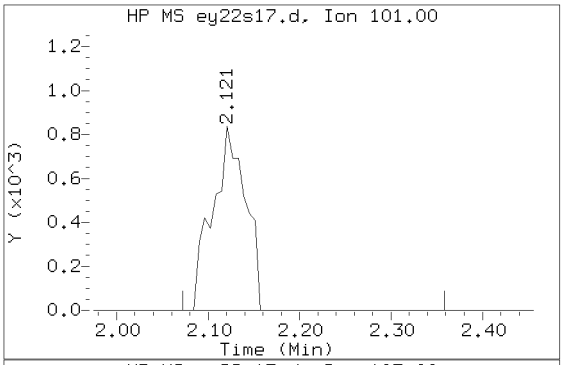


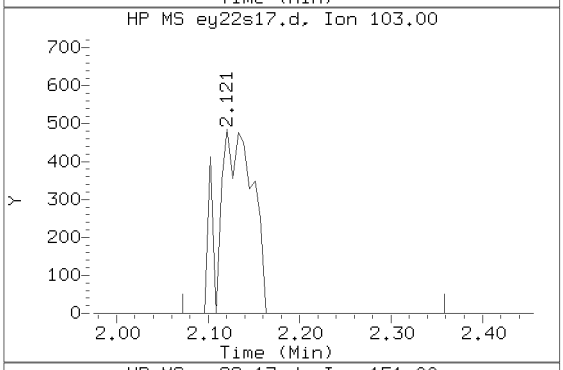
Sample Spectrum (Background Subtracted)

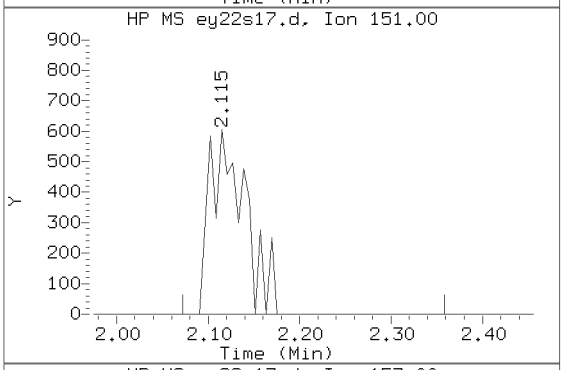


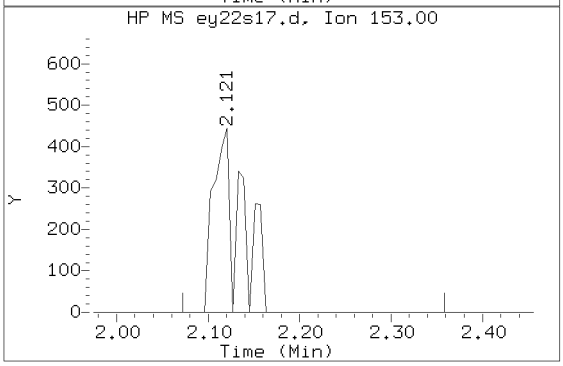
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s17.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 16:03 Analyst ID: JML01693

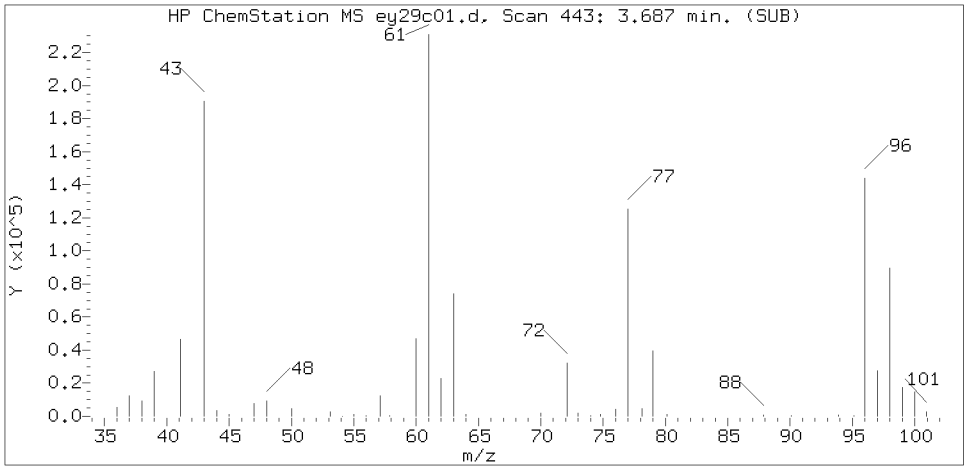
Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 16:19 Automation

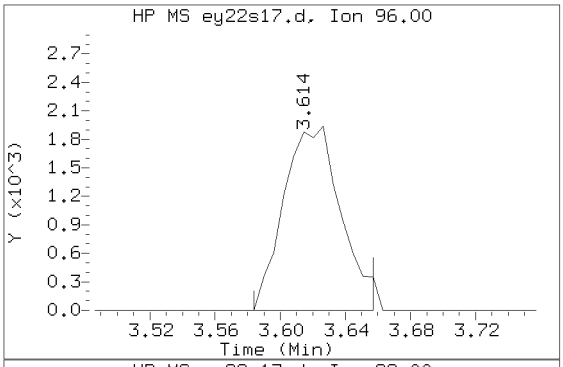
Sample Name: 92J14 Lab Sample ID: 1058229

Compound Number : 19
Compound Name : Freon 113
Scan Number : 186
Retention Time (minutes): 2.121
Relative Retention Time :-0.00072
Quant Ion : 101.00
Area (flag) : 2110
On-Column Amount (ng) : 0.4269

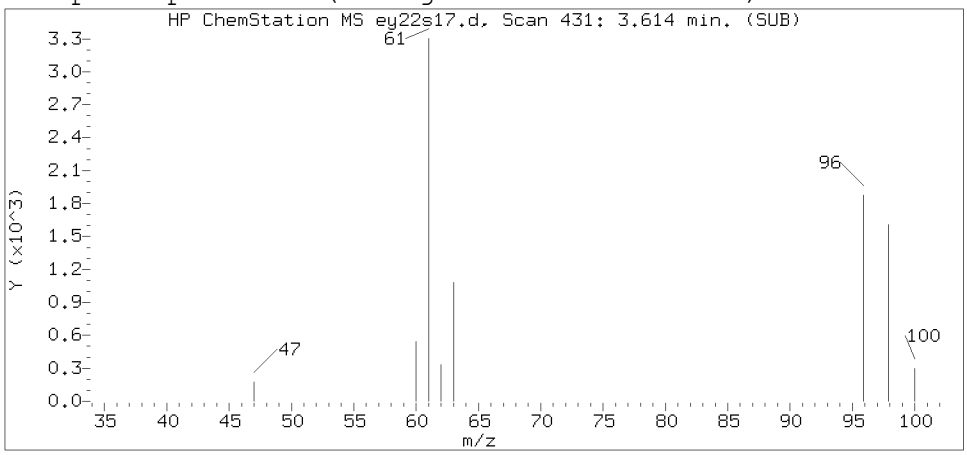
Digitally signed by Don V. Viray on 05/22/2019 at 17:52.
Target 3.5 esignature user ID: dvv10203

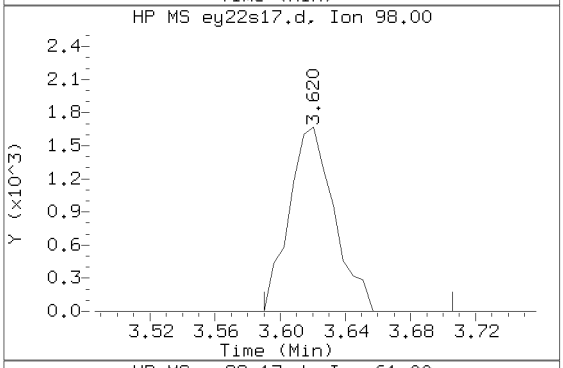
Reference Standard Spectrum for cis-1,2-Dichloroethene

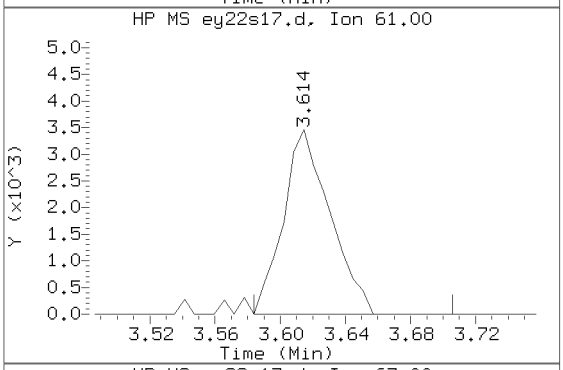




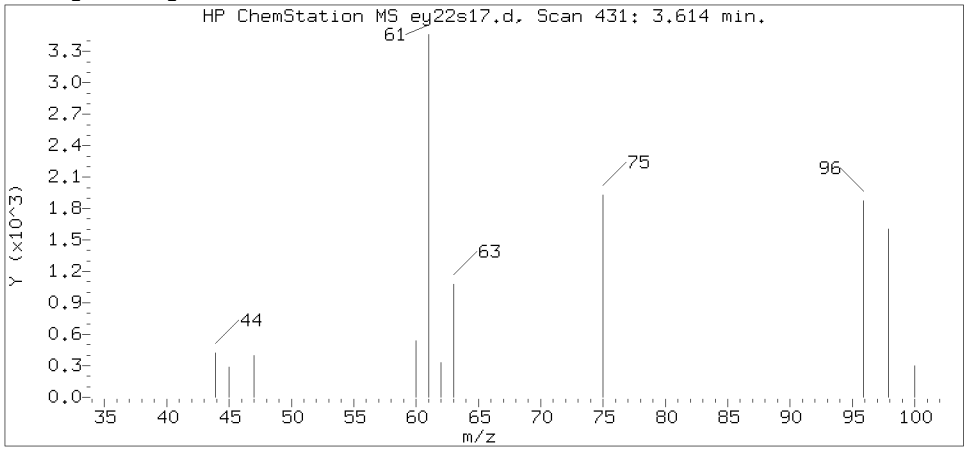
Sample Spectrum (Background Subtracted)

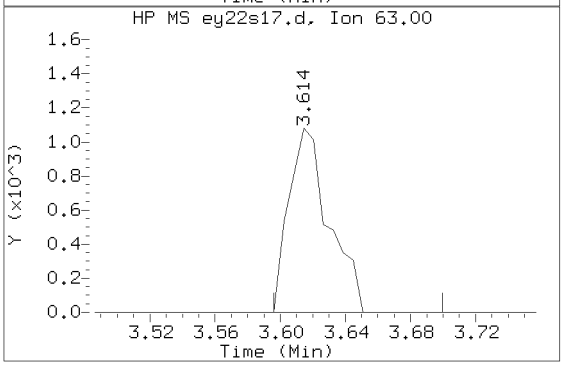






Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19may22a.b/ey22s17.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 16:03 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 16:19 Automation

Sample Name: 92J14 Lab Sample ID: 1058229

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 431
Retention Time (minutes): 3.614
Relative Retention Time :-0.00031
Quant Ion : 96.00
Area (flag) : 4695
On-Column Amount (ng) : 0.8317

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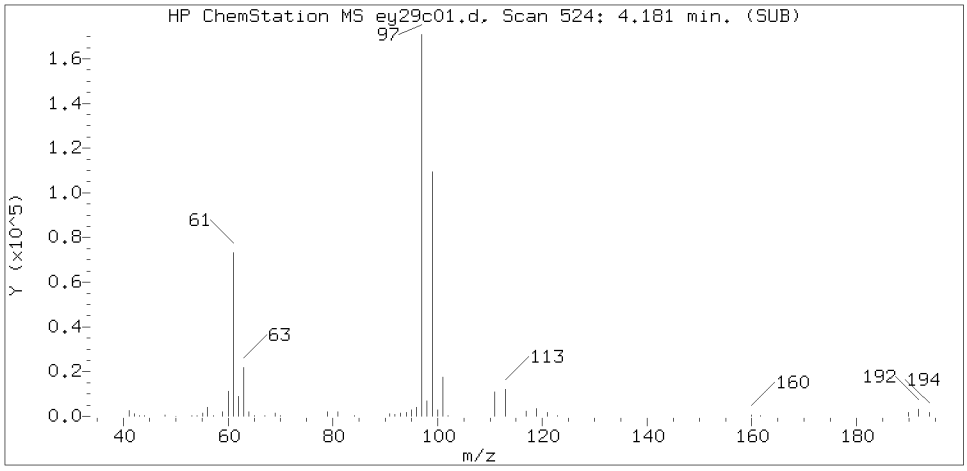
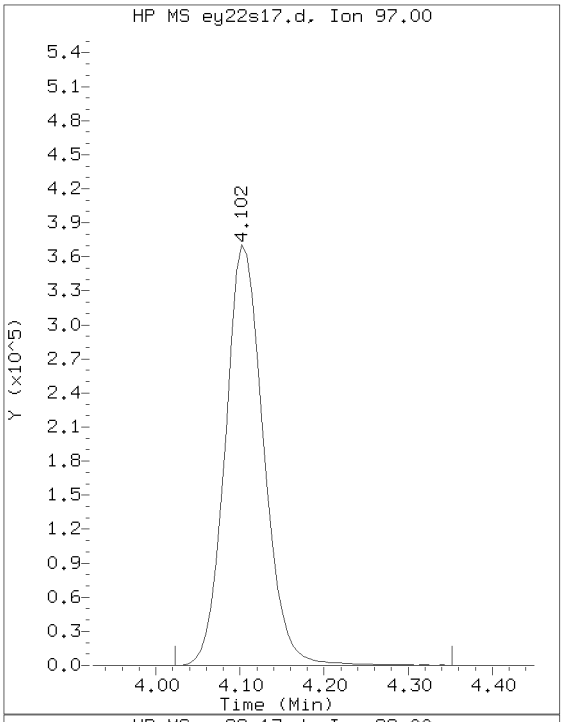
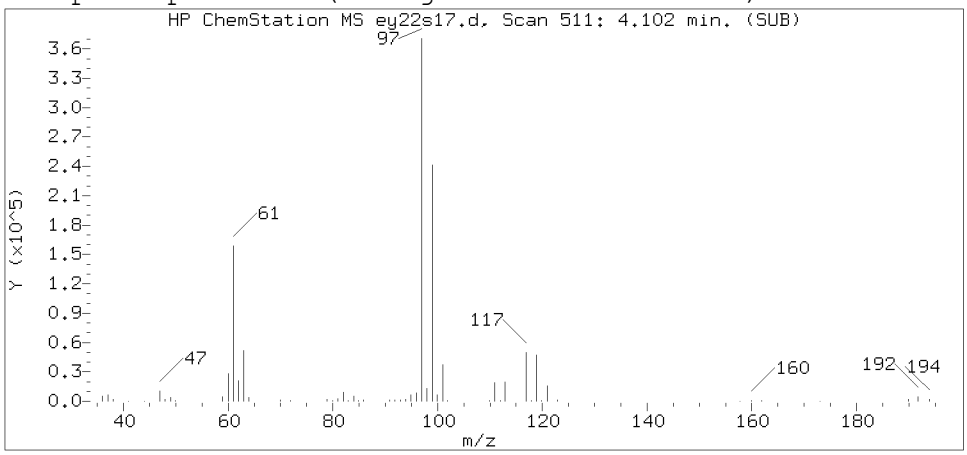
Target 3.5 esignature user ID: dvv10203

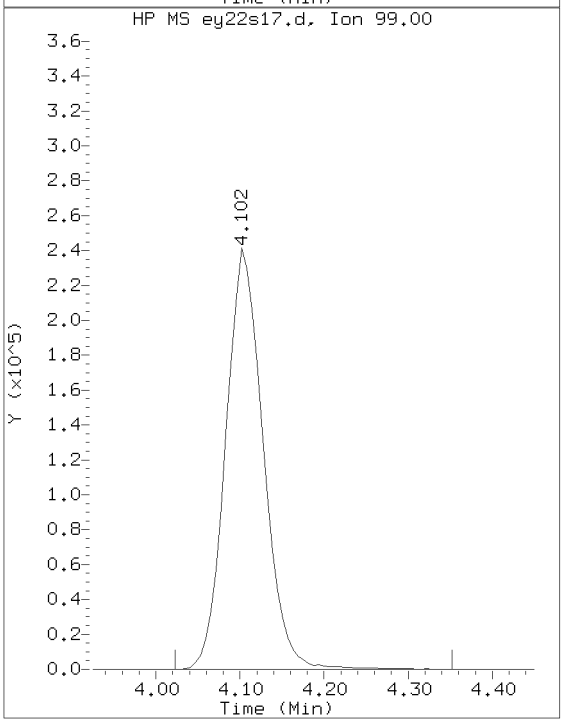
Reference Standard Spectrum for 1,1,1-Trichloroethane



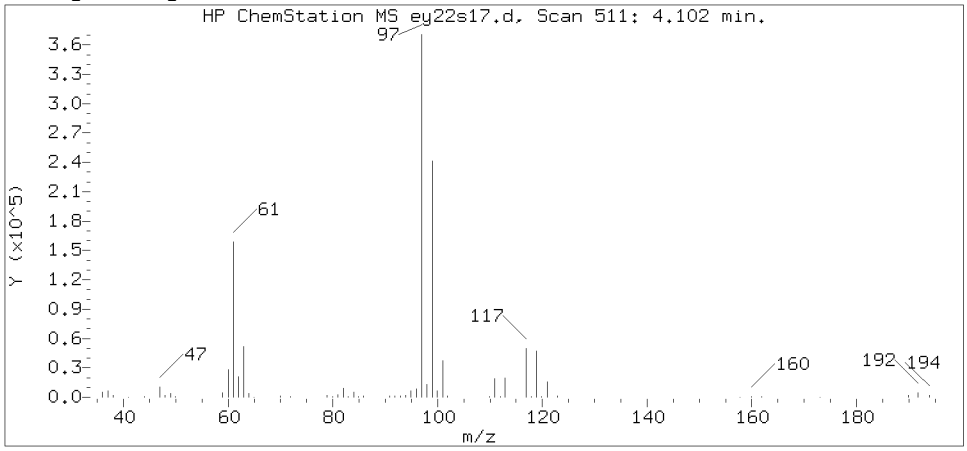


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP15648.i/19may22a.b/ey22s17.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 16:03 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 16:19 Automation

Sample Name: 92J14 Lab Sample ID: 1058229

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 511
Retention Time (minutes)	: 4.102
Relative Retention Time	: 0.00111
Quant Ion	: 97.00
Area (flag)	: 1170455
On-Column Amount (ng)	: 141.2780

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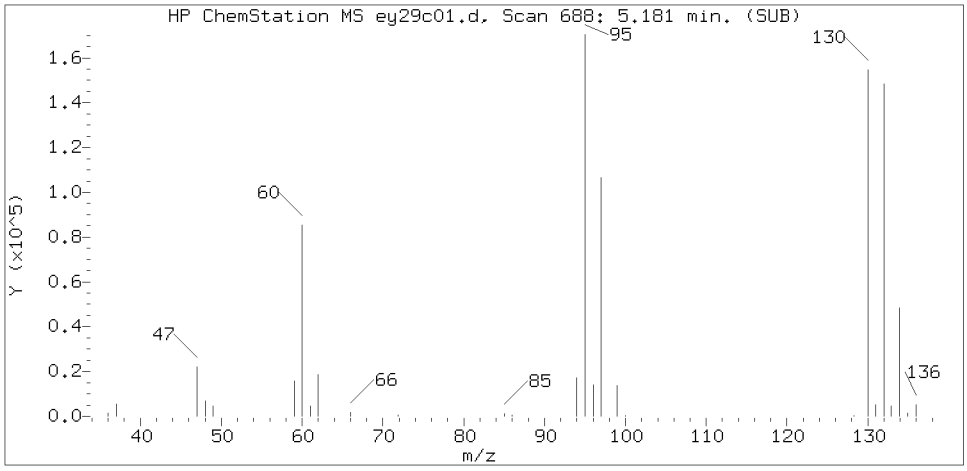
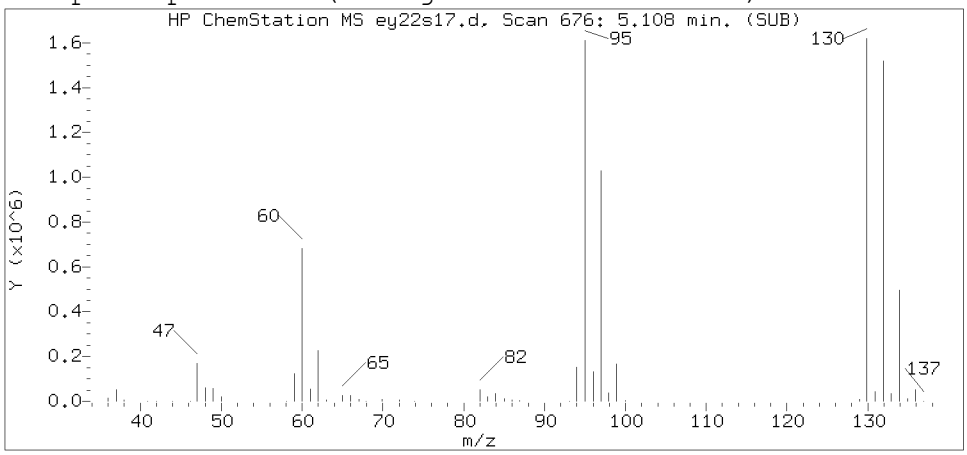
Target 3.5 esignature user ID: dvv10203

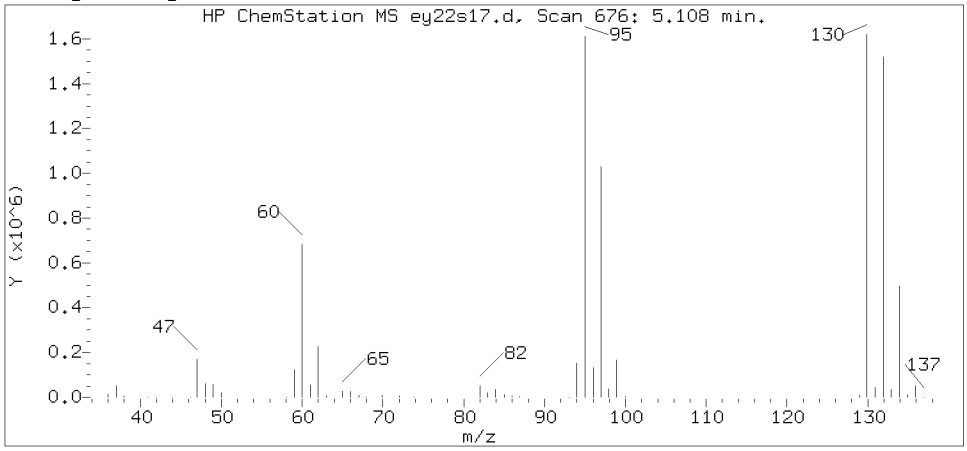
Reference Standard Spectrum for Trichloroethene

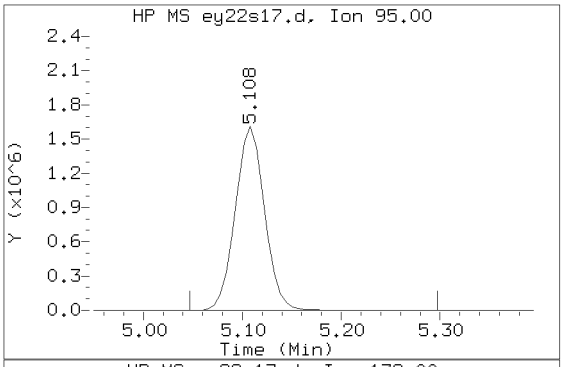


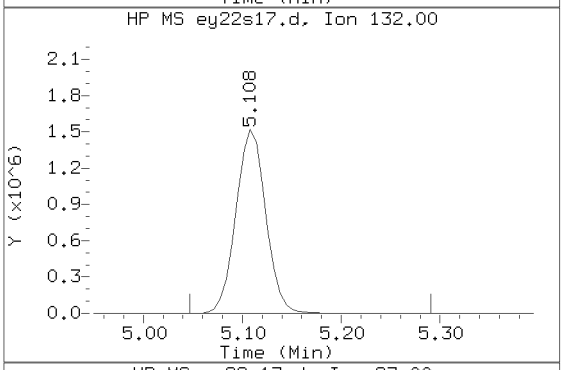
Sample Spectrum (Background Subtracted)

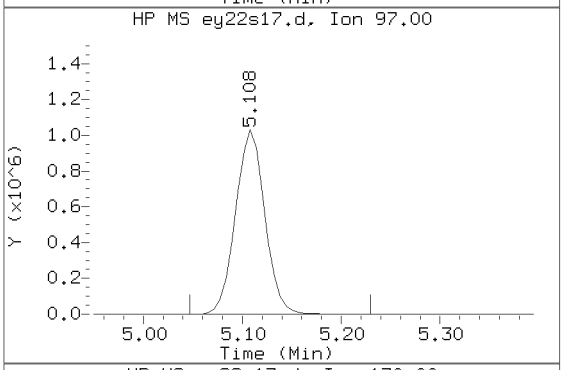


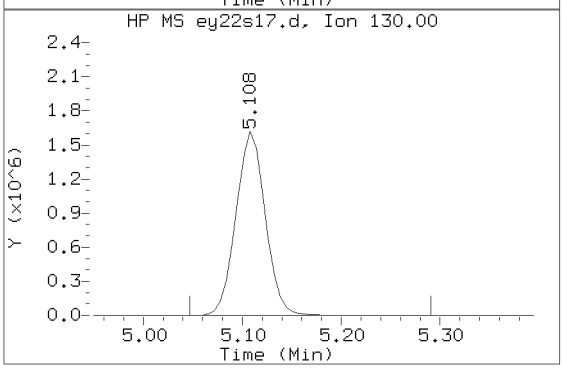
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s17.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 16:03 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 16:19 Automation

Sample Name: 92J14 Lab Sample ID: 1058229

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 676
Retention Time (minutes)	: 5.108
Relative Retention Time	: 0.00010
Quant Ion	: 95.00
Area (flag)	: 3313025
On-Column Amount (ng)	: 608.9002

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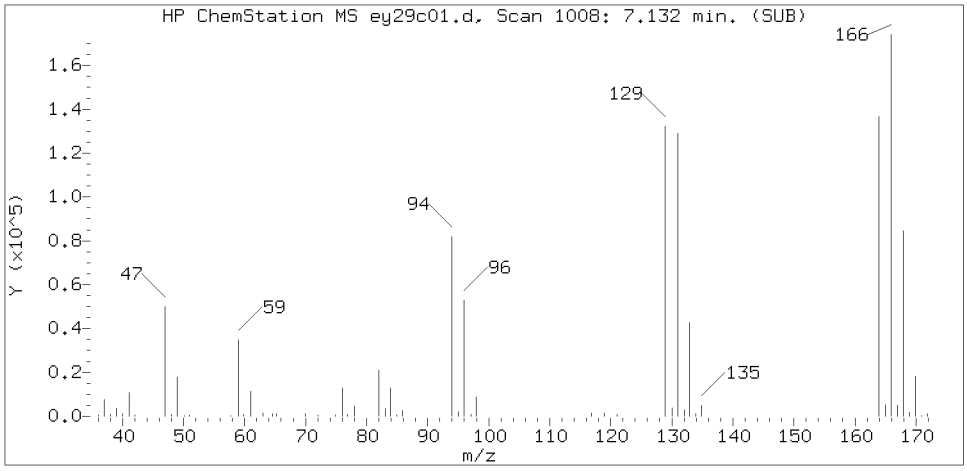
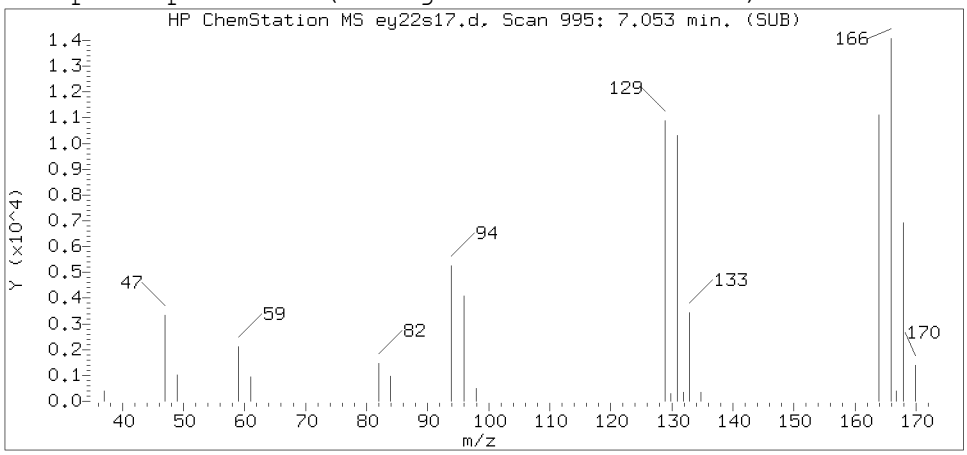
Target 3.5 esignature user ID: dvv10203

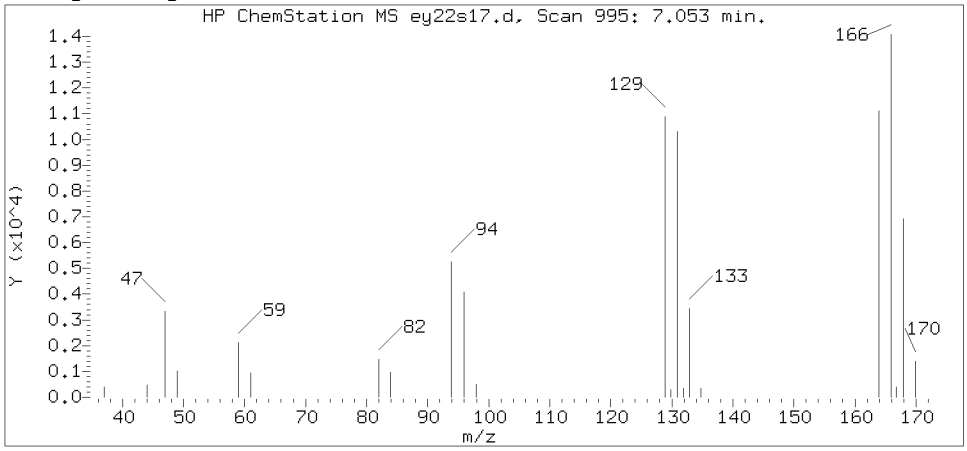
Reference Standard Spectrum for Tetrachloroethene

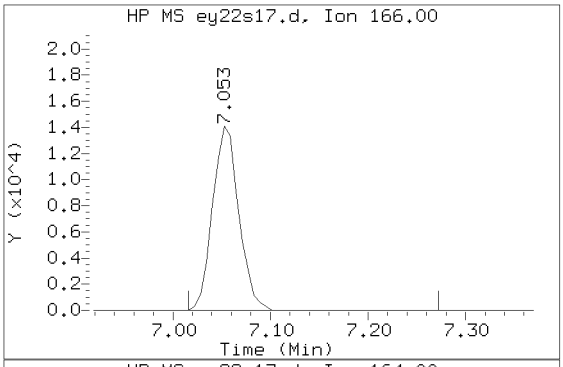


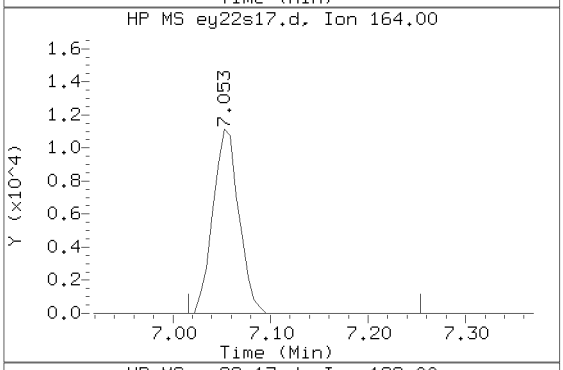
Sample Spectrum (Background Subtracted)

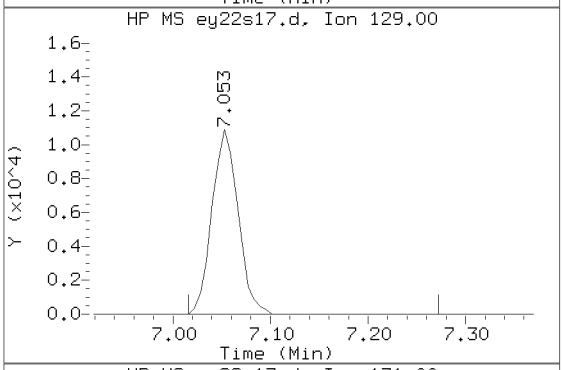


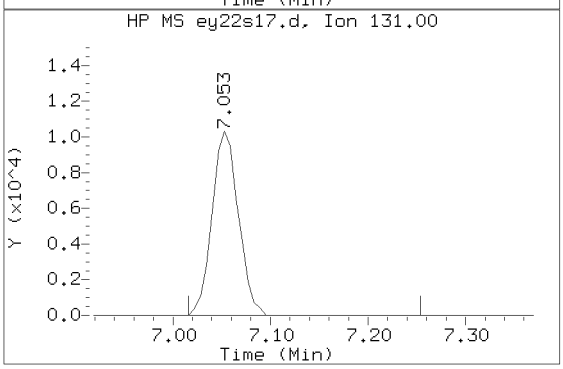
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s17.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 16:03 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 16:19 Automation

Sample Name: 92J14 Lab Sample ID: 1058229

Compound Number : 94
Compound Name : Tetrachloroethene
Scan Number : 995
Retention Time (minutes): 7.053
Relative Retention Time :-0.00000
Quant Ion : 166.00
Area (flag) : 26292
On-Column Amount (ng) : 4.7206

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Target 3.5 esignature user ID: dvv10203

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
92J14DL

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058229

Sample wt/vol: 0.50 (g/mL) mL Lab File ID: HP15648.i/19may22a.b/ey22s18.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	10	U
75-35-4	1,1-Dichloroethene	7	J D
67-64-1	Acetone	200	U
76-13-1	Freon 113	100	U
75-15-0	Carbon Disulfide	50	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	100	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	120	D
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	550	D
123-91-1	1,4-Dioxane	2500	U
108-88-3	Toluene	10	U
127-18-4	Tetrachloroethene	4	J D
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (Total)	50	U
95-50-1	1,2-Dichlorobenzene	50	U
91-20-3	Naphthalene	50	U

FORM I VOA

^

92J14DL

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1058229DL

Data file: /chem/HP15648.i/19may22a.b/ey22s18.d Injection date and time: **22-MAY-2019 16:23**
Data file Sample Info. Line: 92J14DL;1058229DL;1;0;;JCV92;;;ey22b01; Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 17:50 dvv10203

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:52
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 0.5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.480	(-0.006)	245	65	167759	(-2)	250.00	
66) Fluorobenzene	4.736	(-0.006)	615	96	1087606M	(1)	50.00	
101) Chlorobenzene-d5	7.894	(0.000)	1133	117	810192	(0)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802	(0.000)	1446	152	432357	(2)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.072	(0.000)	113	239537	47.385	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.395	(0.000)	102	64188	50.318	101%		80 - 120
84) Toluene-d8	(3)	6.388	(-0.001)	98	1096128	49.814	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918	(0.000)	95	412974	48.821	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					2	10
17) 1,1-Dichloroethene	(2)	2.115	(-0.003)	96	3264	0.747	7.47		J	2	10
18) Acetone	(1)				Not Detected					7	200
19) Freon 113	(2)				Not Detected					2	100
23) Carbon Disulfide	(2)				Not Detected					2	50
28) Methylene Chloride	(2)				Not Detected					3	10
32) trans-1,2-Dichloroethene	(2)				Not Detected					2	10
36) 1,1-Dichloroethane	(2)				Not Detected					2	10
42) cis-1,2-Dichloroethene	(2)				Not Detected					2	10
44) 2-Butanone	(2)				Not Detected					3	100
51) Chloroform	(2)				Not Detected					2	10
53) 1,1,1-Trichloroethane	(2)	4.108	(-0.000)	97	98535	12.156	121.56			3	10
60) Benzene	(2)				Not Detected					2	10
61) 1,2-Dichloroethane	(2)				Not Detected					3	10
71) Trichloroethene	(2)	5.108	(0.000)	95	291493	54.757	547.57			2	10
76) 1,4-Dioxane	(1)				Not Detected					290	2500
89) Toluene	(3)				Not Detected					2	10
94) Tetrachloroethene	(3)	7.059	(-0.000)	166	2123	0.388	3.88		J	2	10
105) Ethylbenzene	(3)				Not Detected					4	10
107) m+p-Xylene	(3)				Not Detected					10	50
108) o-Xylene	(3)				Not Detected					4	10
109) Xylene (Total)	(3)				Not Detected					10	50
139) 1,2-Dichlorobenzene	(4)				Not Detected					2	50
149) Naphthalene	(4)				Not Detected					10	50

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may22a.b/ey22s18.d Injection date and time: **22-MAY-2019 16:23**
Data file Sample Info. Line: 92J14DL;1058229DL;1;0;;JCV92;;;ey22b01; Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 17:50 dvv10203

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:52
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 0.5 ml

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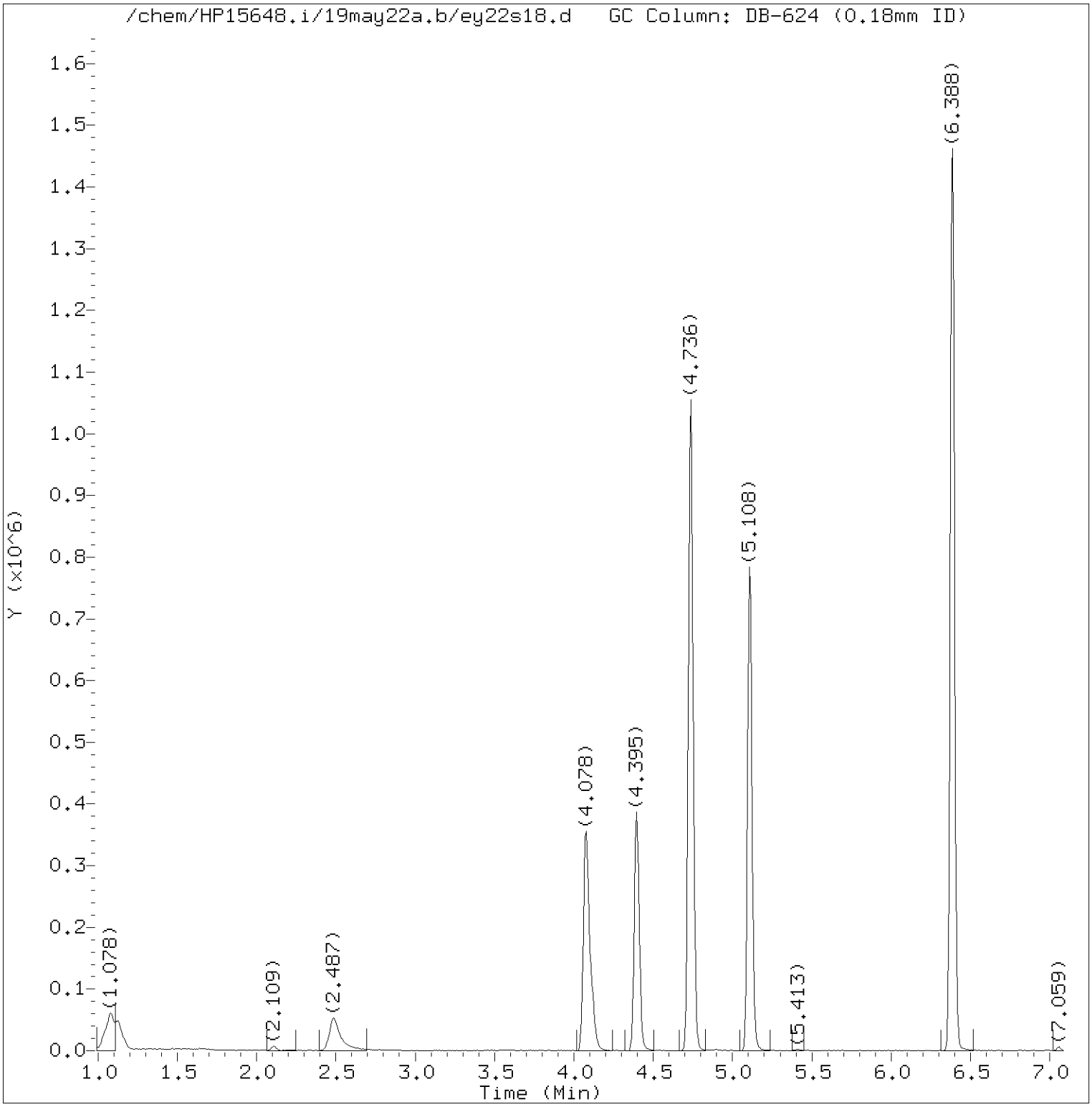
Total number of targets = 24

Digitally signed by Don V. Viray on 05/22/2019 at 17:52. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/23/2019 at 14:20. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

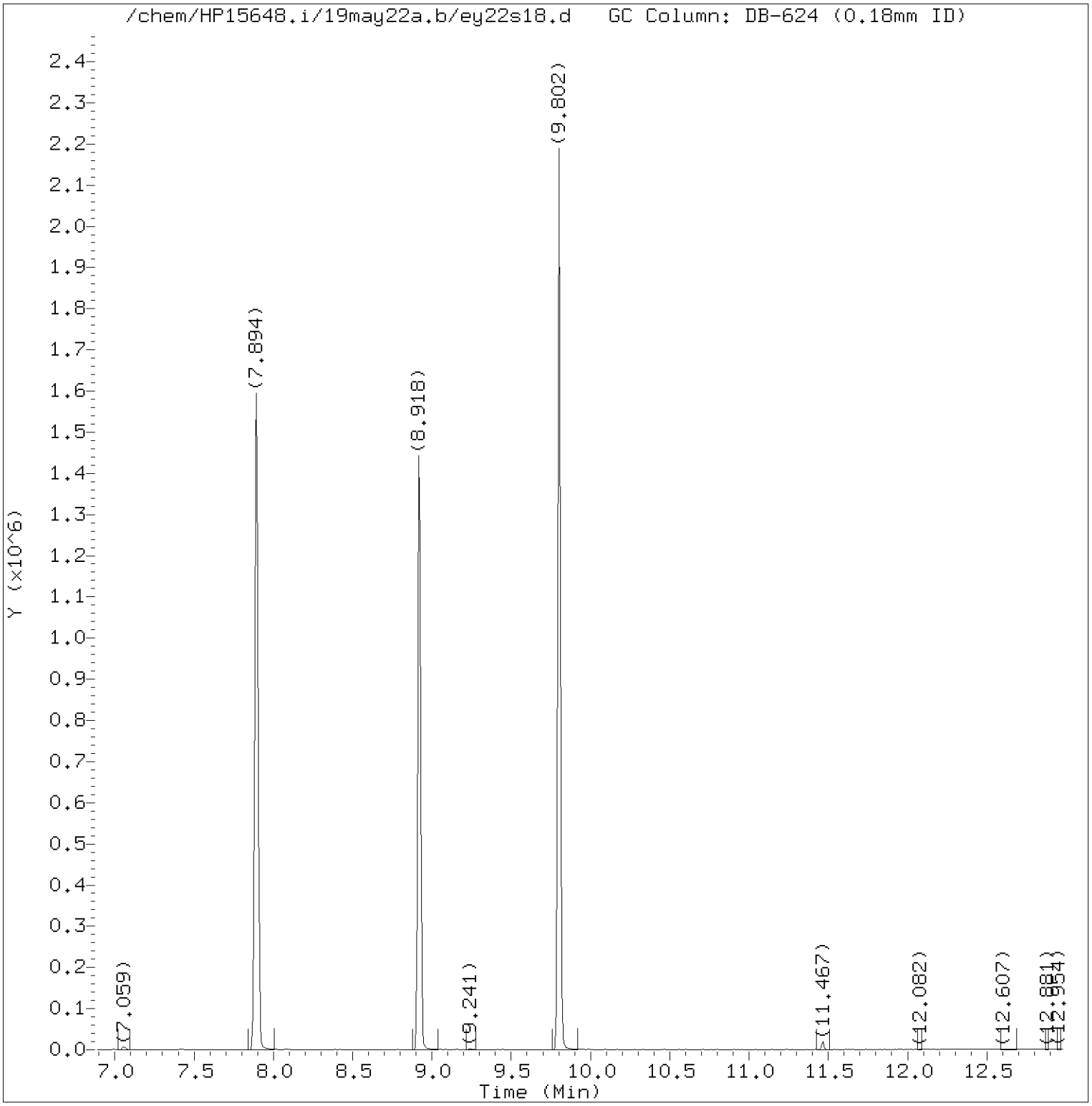
Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s18.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 16:23 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 17:50 dvv10203

Sample Name: 92J14DL Lab Sample ID: 1058229DL

Digitally signed by Don V. Viray
on 05/22/2019 at 17:52.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s18.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 16:23 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 17:50 dvv10203

Sample Name: 92J14DL Lab Sample ID: 1058229DL

Digitally signed by Don V. Viray
on 05/22/2019 at 17:52.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s18.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 16:23 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 17:50 dvv10203

Sample Name: 92J14DL Lab Sample ID: 1058229DL

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	2.115	96	3264	0.747
29)*t-Butyl alcohol-d10	(1)	2.480	65	167759	250.000
52)$Dibromofluoromethane	(2)	4.072	113	239537	47.385
53) 1,1,1-Trichloroethane	(2)	4.108	97	98535	12.156
57)$1,2-Dichloroethane-d4	(2)	4.395	102	64188	50.318
66)*Fluorobenzene	(2)	4.736	96	1087606M	50.000
71) Trichloroethene	(2)	5.108	95	291493	54.757
84)$Toluene-d8	(3)	6.388	98	1096128	49.814
94) Tetrachloroethene	(3)	7.059	166	2123	0.388
101)*Chlorobenzene-d5	(3)	7.894	117	810192	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	412974	48.821
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	432357	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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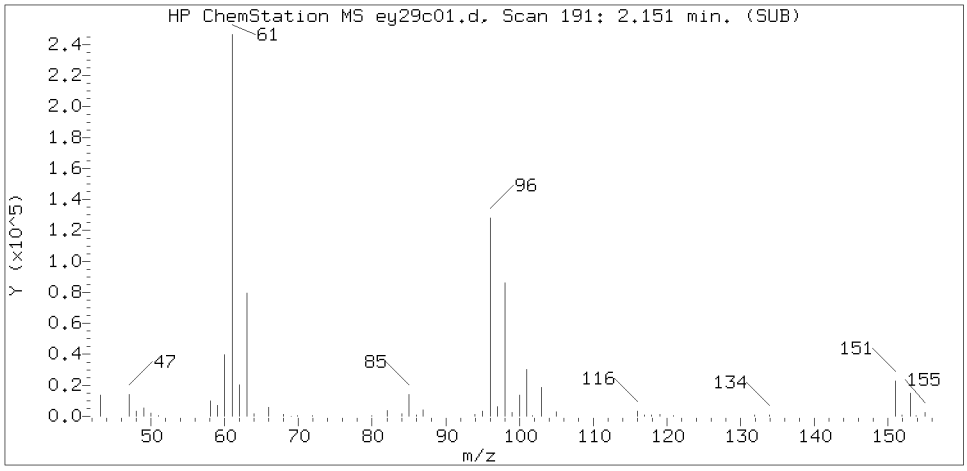
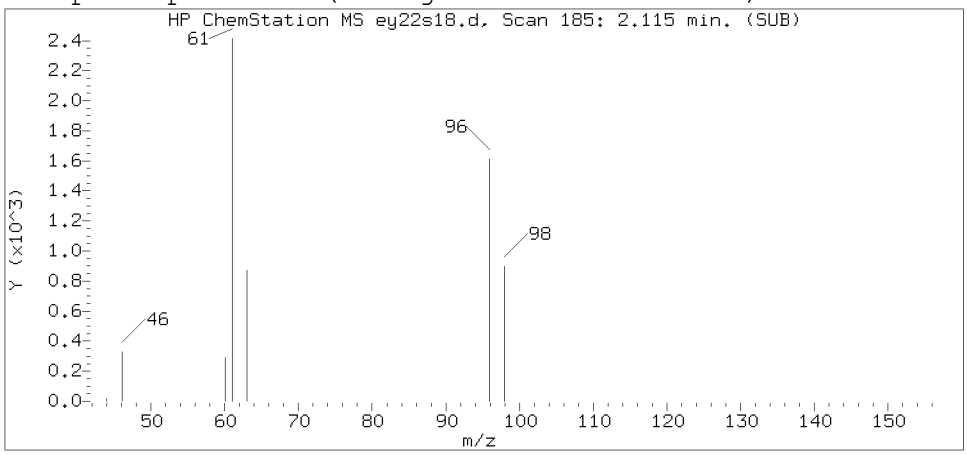
on 05/22/2019 at 17:52.
Target 3.5 esignature user ID: dvv10203

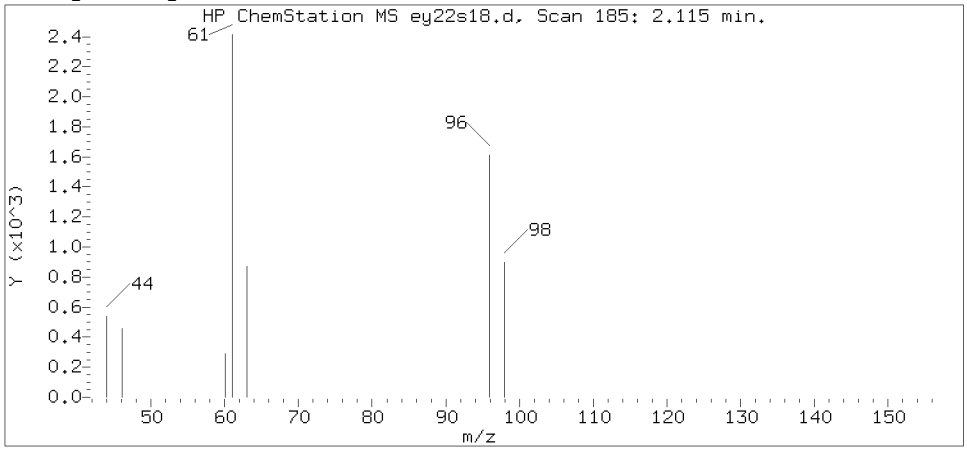
Reference Standard Spectrum for 1,1-Dichloroethene

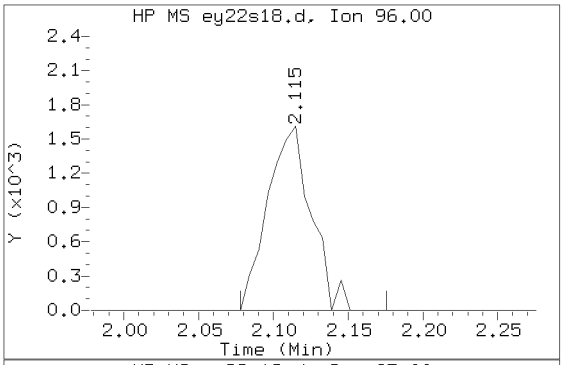


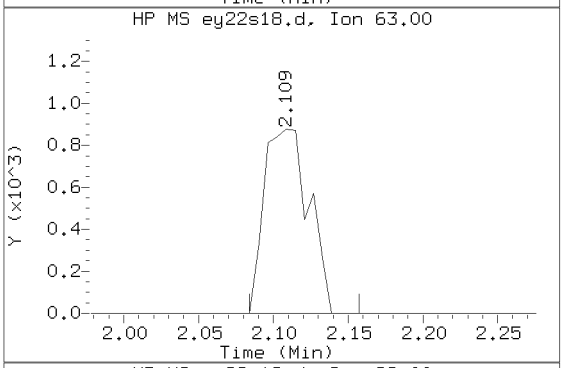
Sample Spectrum (Background Subtracted)

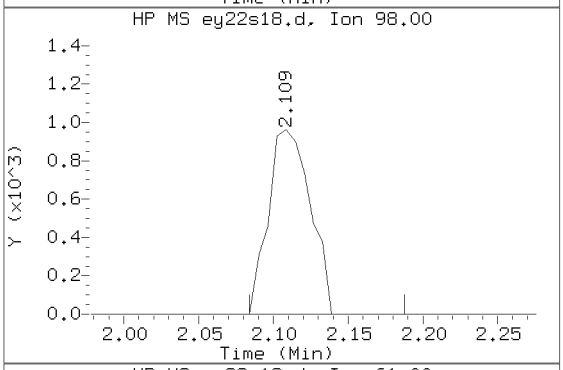


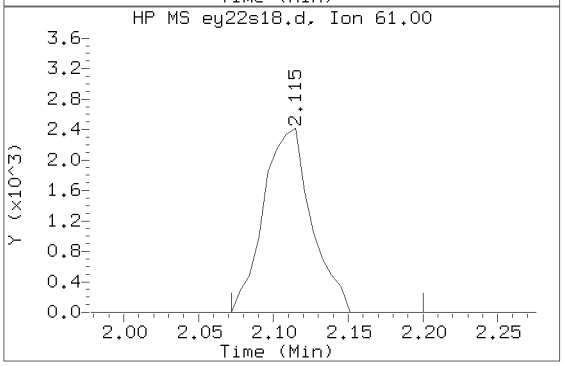
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s18.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 16:23 Analyst ID: JML01693

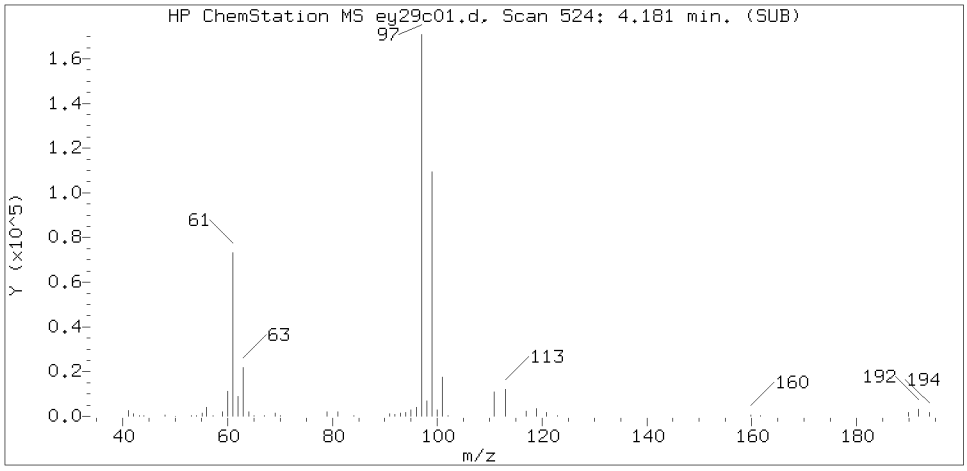
Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 17:50 dvv10203

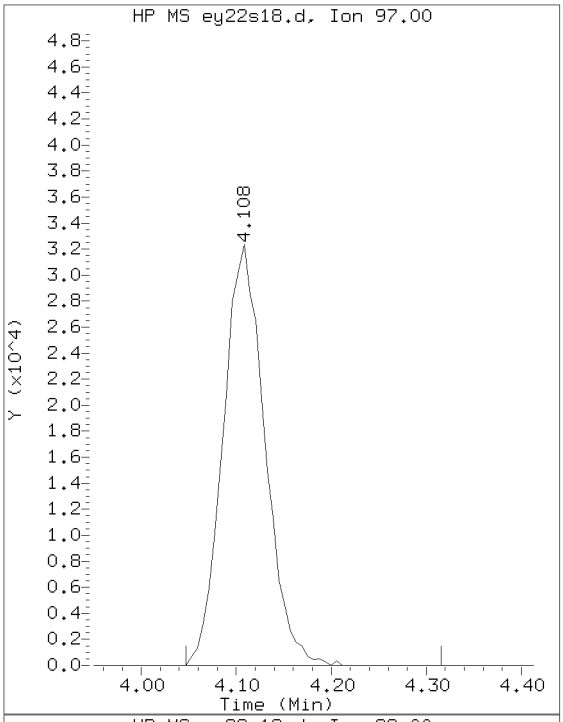
Sample Name: 92J14DL Lab Sample ID: 1058229DL

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 185
Retention Time (minutes): 2.115
Relative Retention Time :-0.00331
Quant Ion : 96.00
Area (flag) : 3264
On-Column Amount (ng) : 0.7474

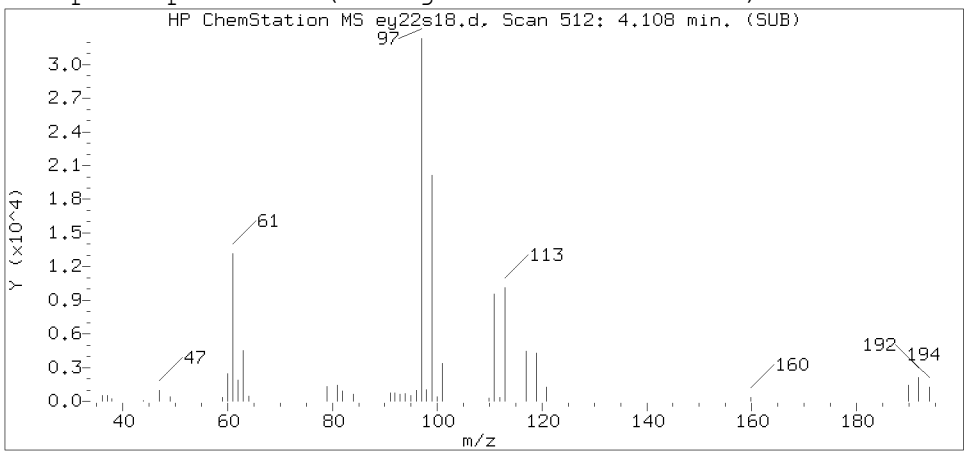
Digitally signed by Don V. Viray on 05/22/2019 at 17:52.
Target 3.5 esignature user ID: dvv10203

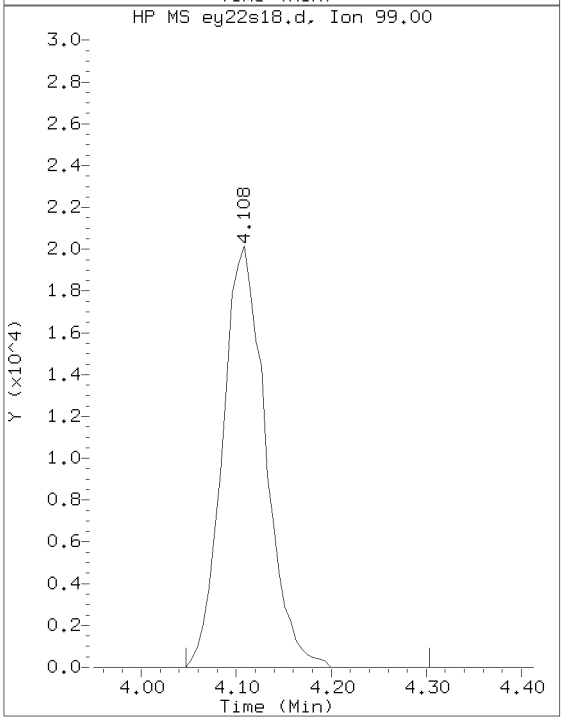
Reference Standard Spectrum for 1,1,1-Trichloroethane



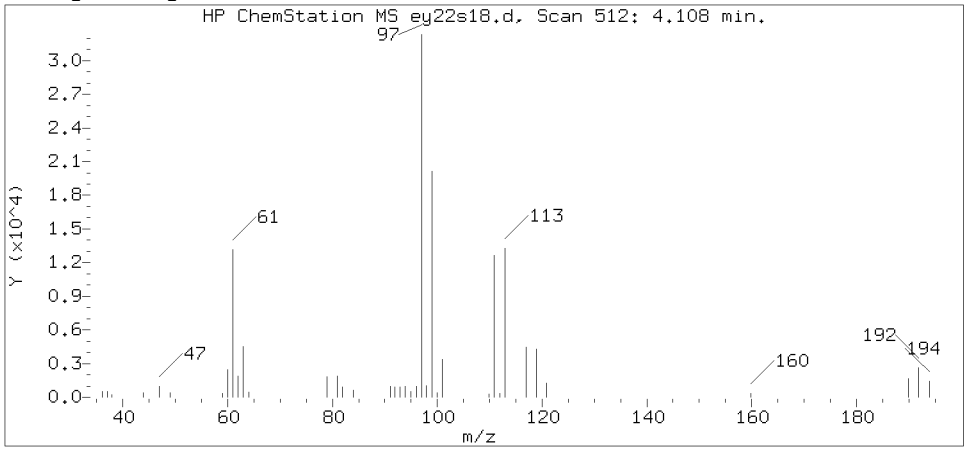


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP15648.i/19may22a.b/ey22s18.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 16:23 Analyst ID: JML01693

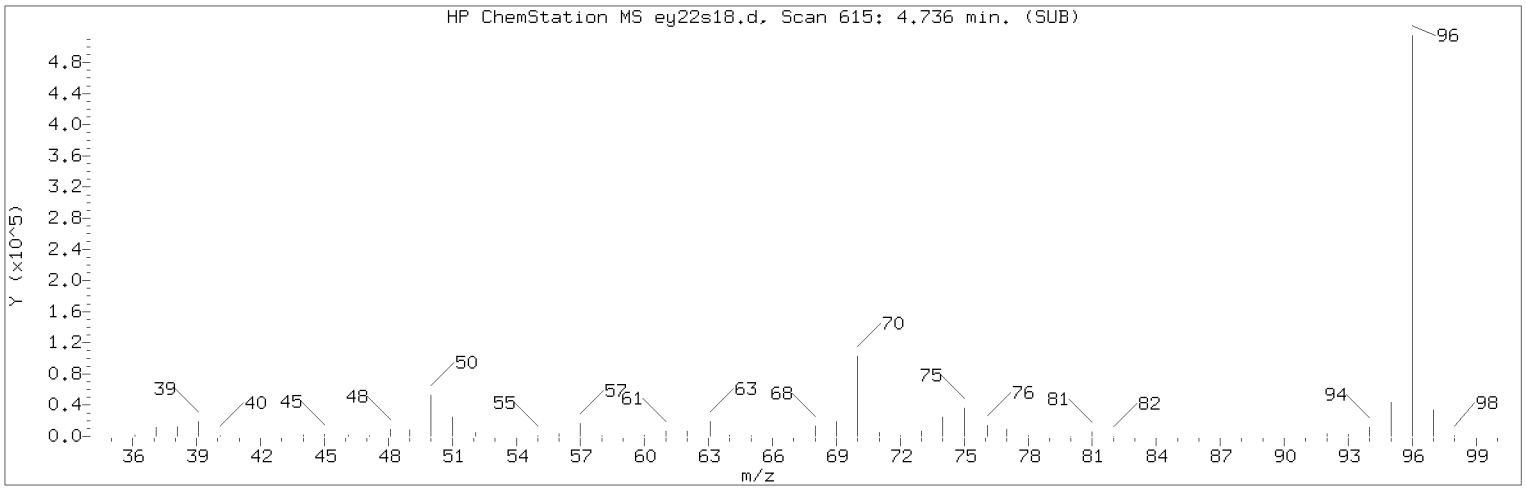
Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 17:50 dvv10203

Sample Name: 92J14DL Lab Sample ID: 1058229DL

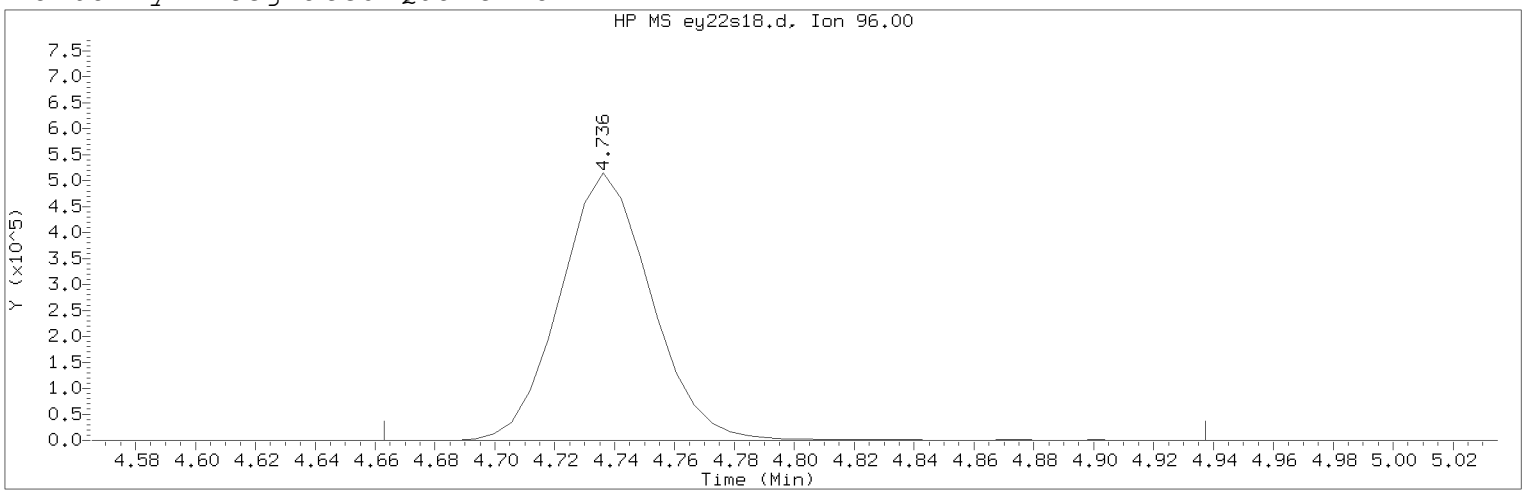
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 512
Retention Time (minutes): 4.108
Relative Retention Time :-0.00017
Quant Ion : 97.00
Area (flag) : 98535
On-Column Amount (ng) : 12.1564

Digitally signed by Don V. Viray on 05/22/2019 at 17:52.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may22a.b/ey22s18.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 16:23 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 17:50 dvv10203

Sample Name: 92J14DL Lab Sample ID: 1058229DL

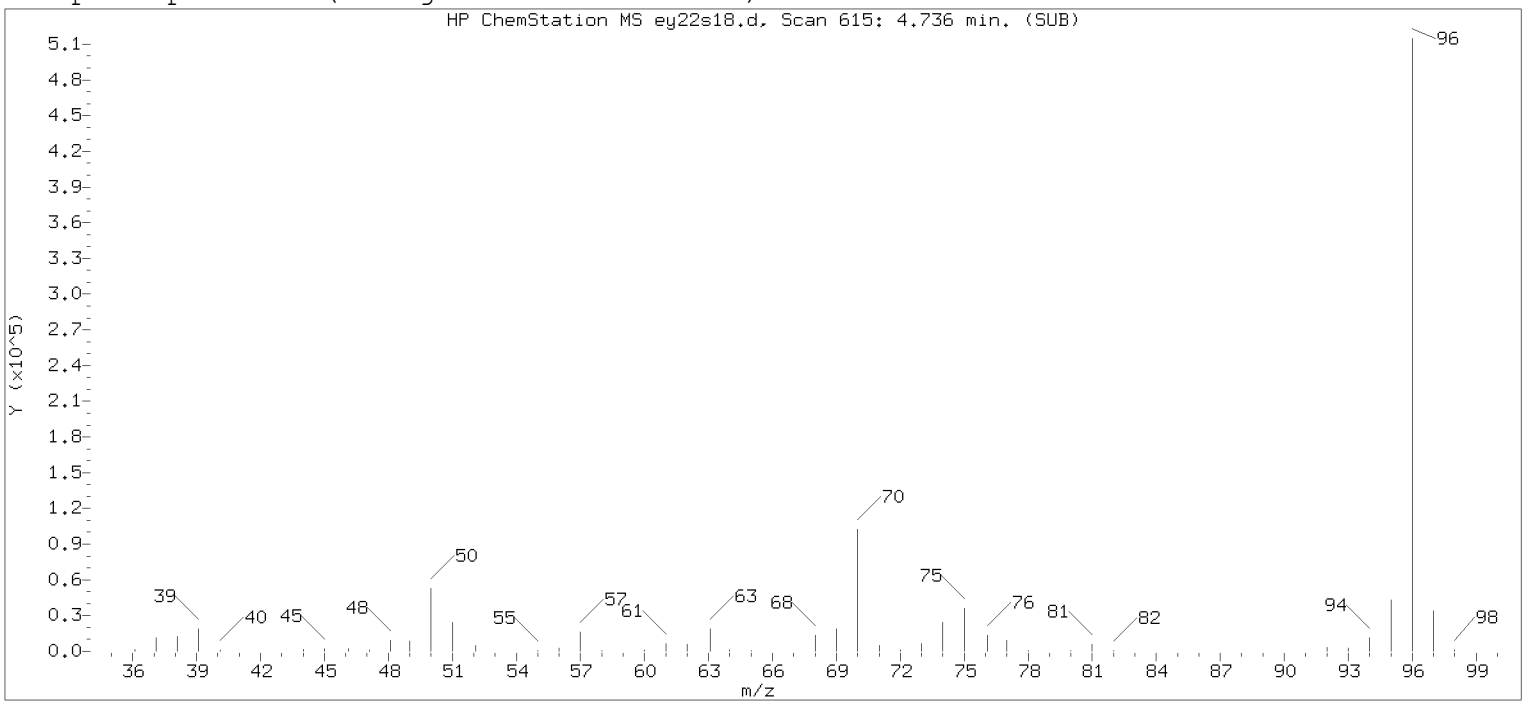
Compound Number : 66
Compound Name : Fluorobenzene
Scan Number : 615
Retention Time (minutes): 4.736
Quant Ion : 96.00
Area (flag) : 1087606M
On-Column Amount (ng) : 50.0000
Integration start scan : 602 Integration stop scan: 647
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

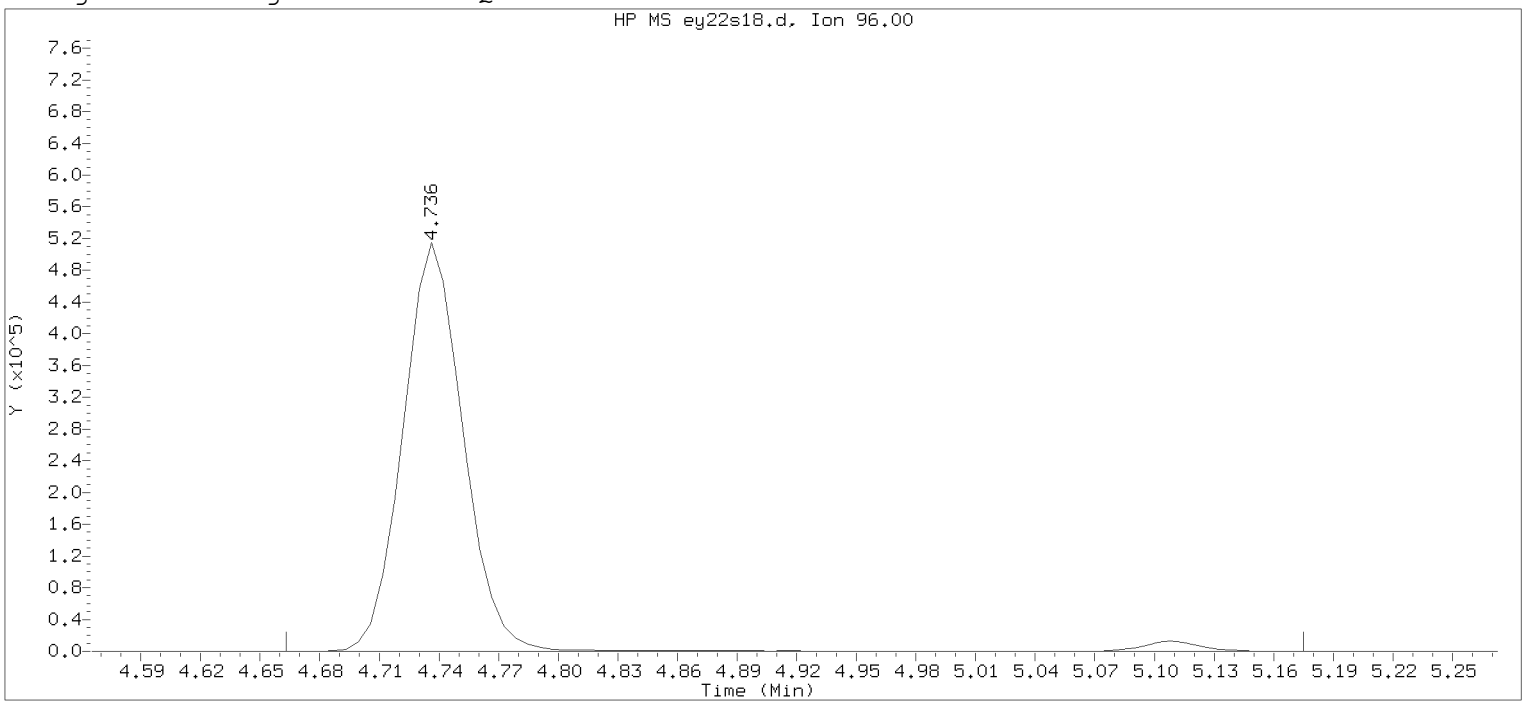
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/22/2019 at 17:52.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/23/2019 at 14:20.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may22a.b/ey22s18.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 16:23 Analyst ID: JML01693

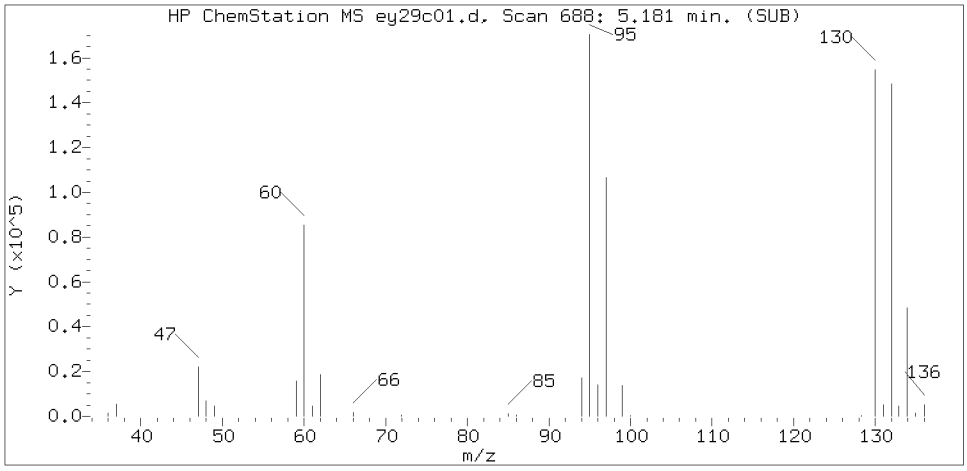
Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 16:39 Automation

Sample Name: 92J14DL Lab Sample ID: 1058229DL

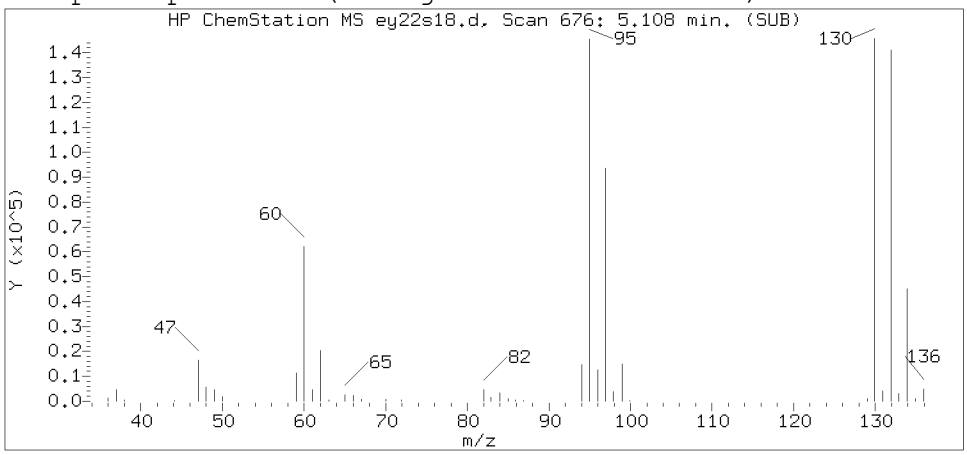
Compound Number	: 66		
Compound Name	: Fluorobenzene		
Scan Number	: 615		
Retention Time (minutes)	: 4.736		
Quant Ion	: 96.00		
Area	: 1112919		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 602	Integration stop scan:	686
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 05/22/2019 at 17:52.
Target 3.5 esignature user id: dviray

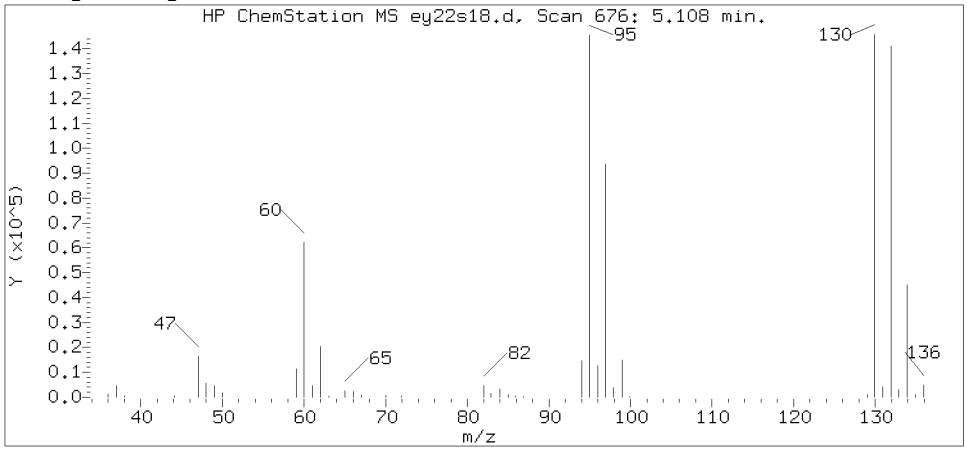
Reference Standard Spectrum for Trichloroethene

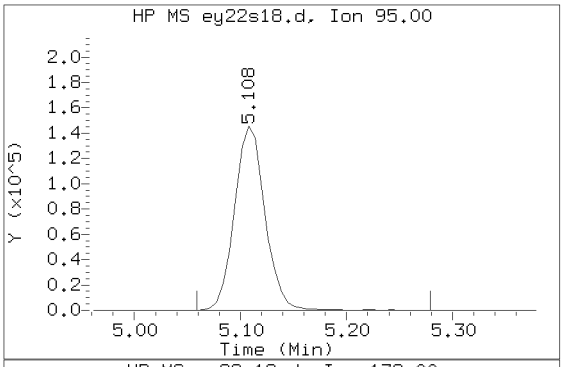


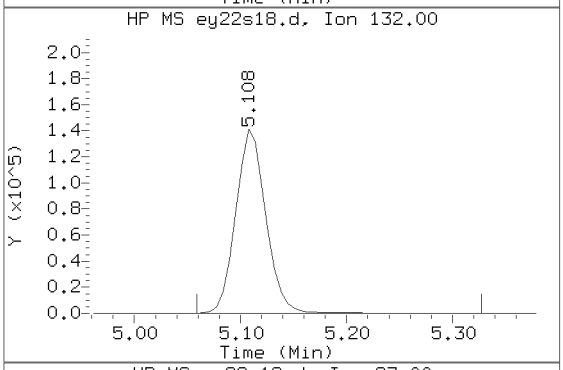
Sample Spectrum (Background Subtracted)

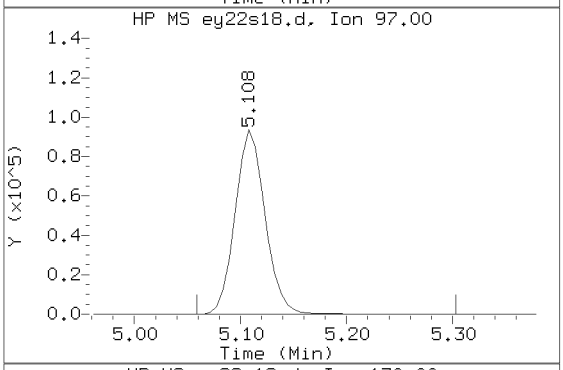


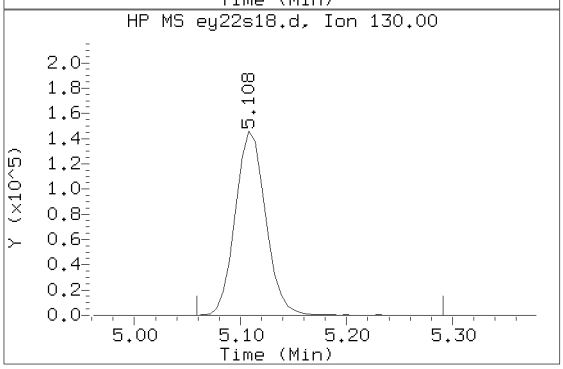
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s18.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 16:23 Analyst ID: JML01693

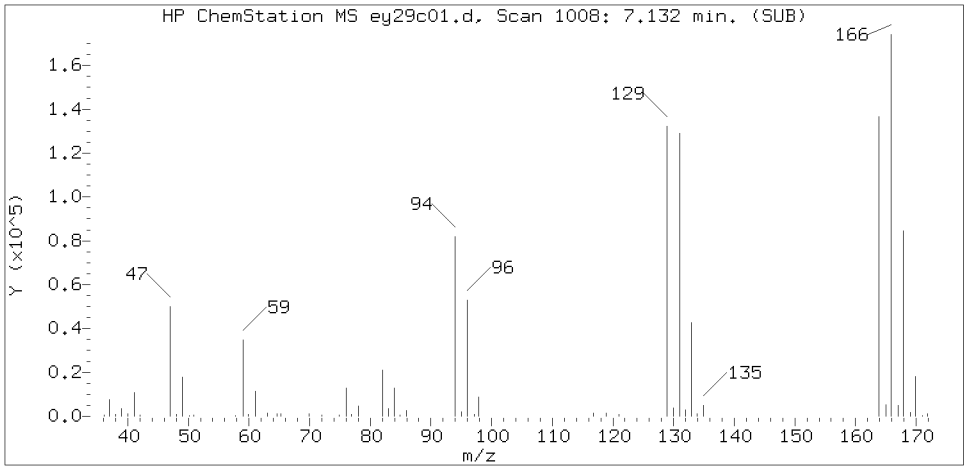
Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 17:50 dvv10203

Sample Name: 92J14DL Lab Sample ID: 1058229DL

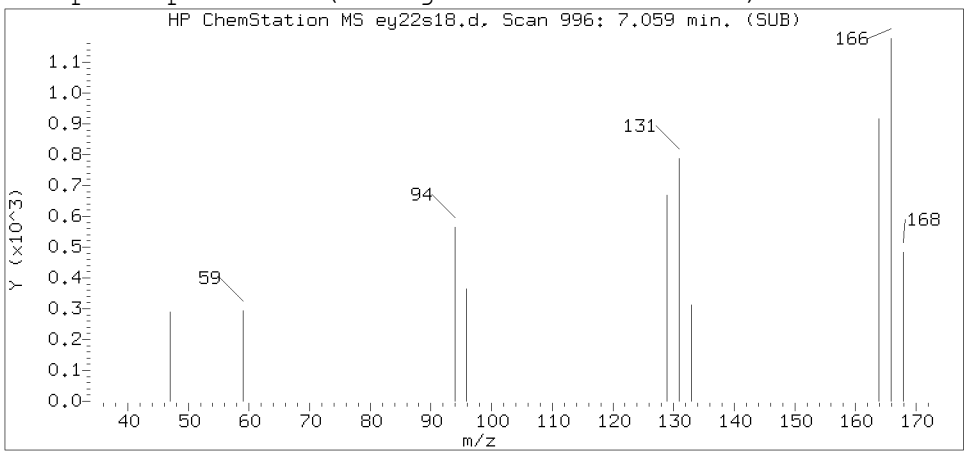
Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 676
Retention Time (minutes)	: 5.108
Relative Retention Time	: 0.00011
Quant Ion	: 95.00
Area (flag)	: 291493
On-Column Amount (ng)	: 54.7574

Digitally signed by Don V. Viray on 05/22/2019 at 17:52.
Target 3.5 esignature user ID: dvv10203

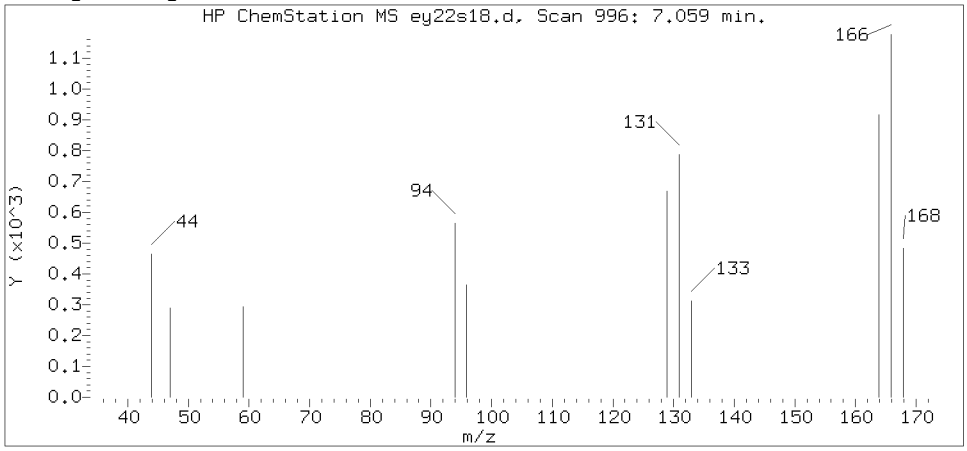
Reference Standard Spectrum for Tetrachloroethene

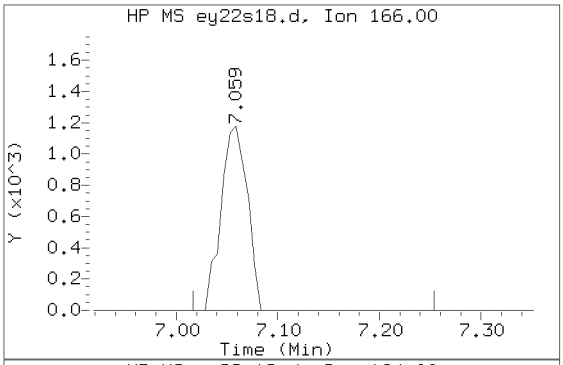


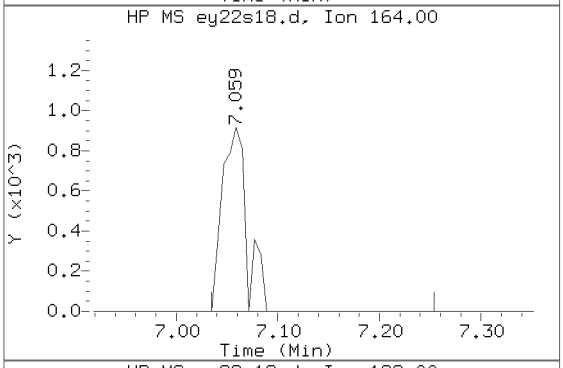
Sample Spectrum (Background Subtracted)

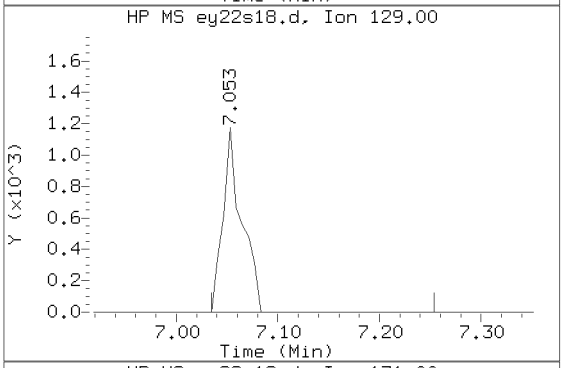


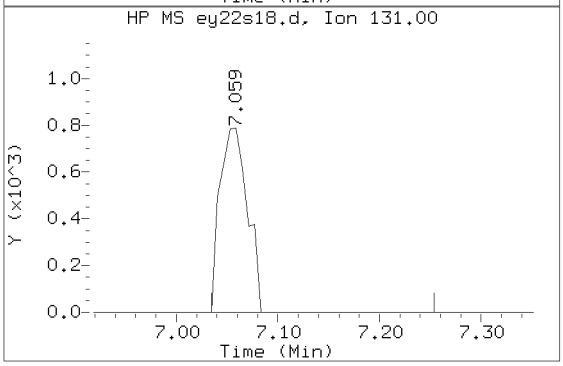
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s18.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 16:23 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 17:50 dvv10203

Sample Name: 92J14DL Lab Sample ID: 1058229DL

Compound Number : 94
Compound Name : Tetrachloroethene
Scan Number : 996
Retention Time (minutes): 7.059
Relative Retention Time :-0.00077
Quant Ion : 166.00
Area (flag) : 2123
On-Column Amount (ng) : 0.3877

Digitally signed by Don V. Viray on 05/22/2019 at 17:52.
Target 3.5 esignature user ID: dvv10203

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
92J15

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058230

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may22a.b/ey22s19.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	0.3	J
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	2	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	2	
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

^

92J15 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1058230

Data file: /chem/HP15648.i/19may22a.b/ey22s19.d Injection date and time: **22-MAY-2019 16:43**
Data file Sample Info. Line: 92J15;1058230;1;0;;JCV92;;;ey22b01; Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 16:59 Automation

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:52
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.487(-0.012)	246	65	174195 (2)	250.00	
66) Fluorobenzene	4.736(-0.006)	615	96	1099338 (2)	50.00	
101) Chlorobenzene-d5	7.894(0.000)	1133	117	820014 (1)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802(0.000)	1446	152	437810 (4)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.072(0.000)	113	244503	47.852	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.395(0.000)	102	65319	50.658	101%		80 - 120
84) Toluene-d8	(3)	6.388(-0.001)	98	1105529	49.640	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918(0.000)	95	418903	48.929	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)	3.620(-0.001)	96	1631	0.292	0.29		J	0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	5.108(0.000)	95	11173	2.077	2.08			0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)	7.059(-0.000)	166	8485	1.531	1.53			0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Don V. Viray on 05/22/2019 at 17:52. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP15648.i/19may22a.b/ey22s19.d Injection date and time: **22-MAY-2019 16:43**
Data file Sample Info. Line: 92J15;1058230;1;0;;JCV92;;;ey22b01; Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 16:59 Automation

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:52
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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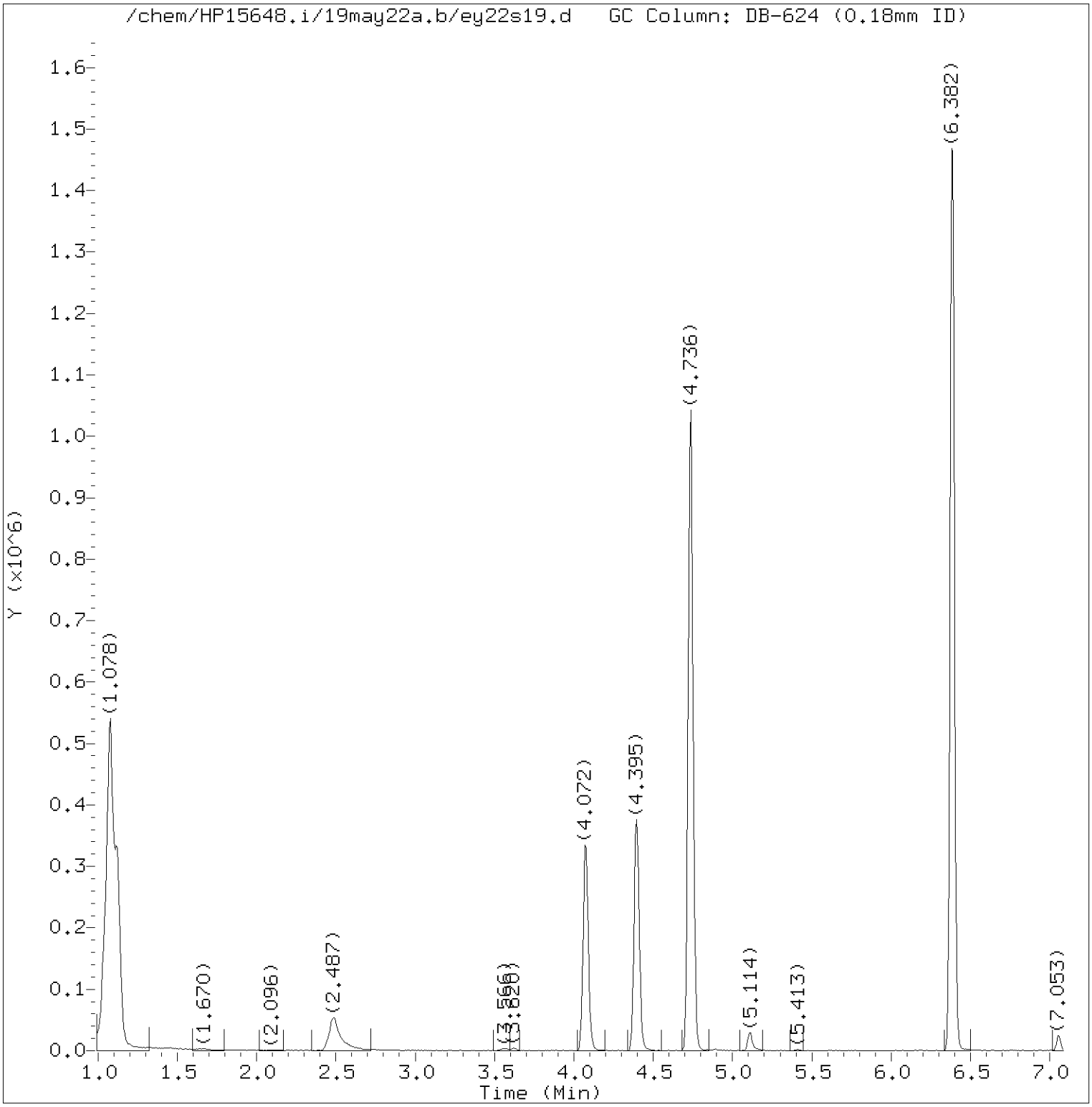
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 05/22/2019 at 17:52. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/23/2019 at 14:20. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

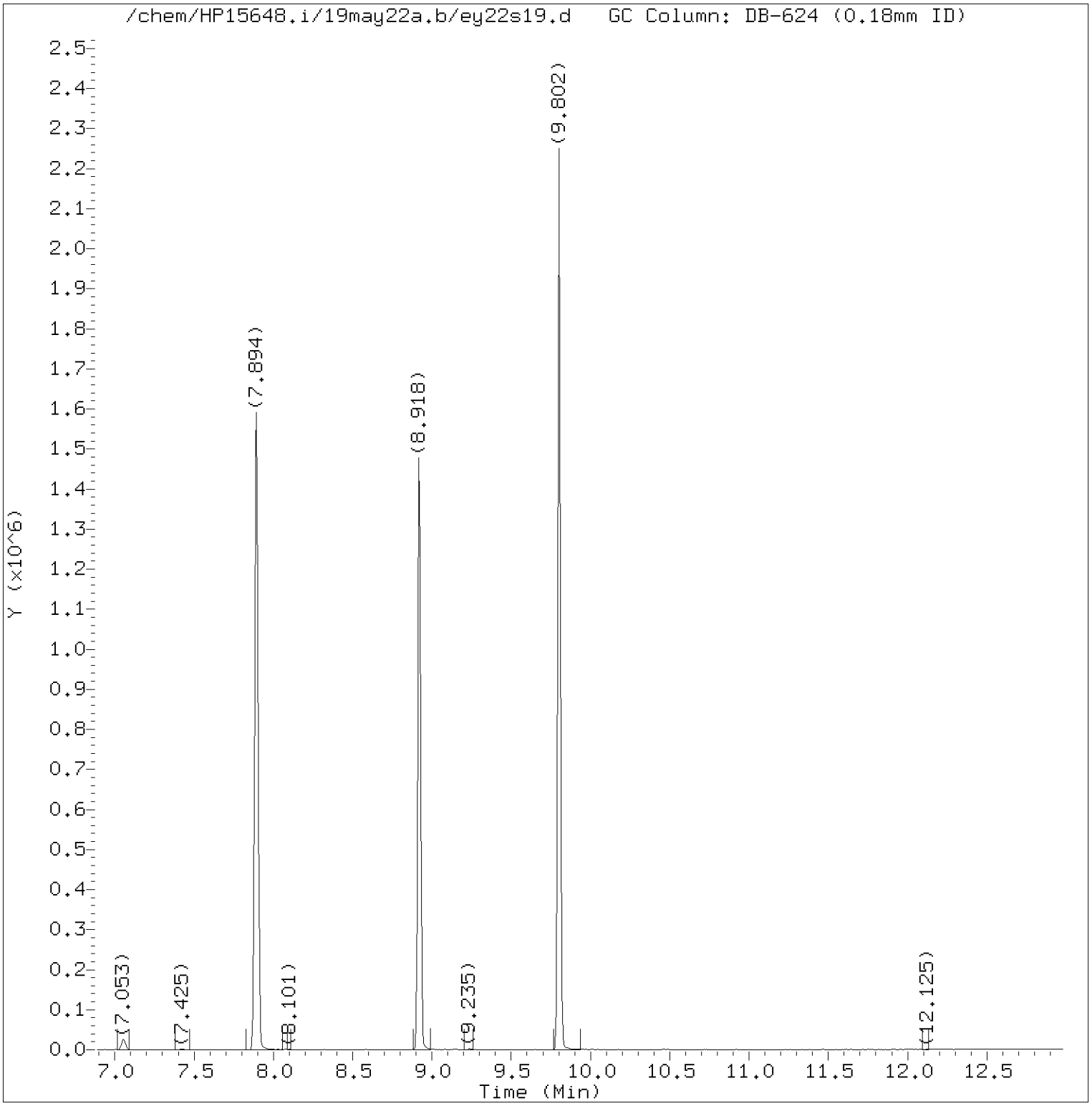
Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s19.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 16:43 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 16:59 Automation

Sample Name: 92J15 Lab Sample ID: 1058230

Digitally signed by Don V. Viray
on 05/22/2019 at 17:52.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s19.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 16:43 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 16:59 Automation

Sample Name: 92J15 Lab Sample ID: 1058230

Digitally signed by Don V. Viray
on 05/22/2019 at 17:52.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s19.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 16:43 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 16:59 Automation

Sample Name: 92J15 Lab Sample ID: 1058230

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.487	65	174195	250.000
42) cis-1,2-Dichloroethene	(2)	3.620	96	1631	0.292
52)$Dibromofluoromethane	(2)	4.072	113	244503	47.852
57)$1,2-Dichloroethane-d4	(2)	4.395	102	65319	50.658
66)*Fluorobenzene	(2)	4.736	96	1099338	50.000
71) Trichloroethene	(2)	5.108	95	11173	2.077
84)$Toluene-d8	(3)	6.388	98	1105529	49.640
94) Tetrachloroethene	(3)	7.059	166	8485	1.531
101)*Chlorobenzene-d5	(3)	7.894	117	820014	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	418903	48.929
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	437810	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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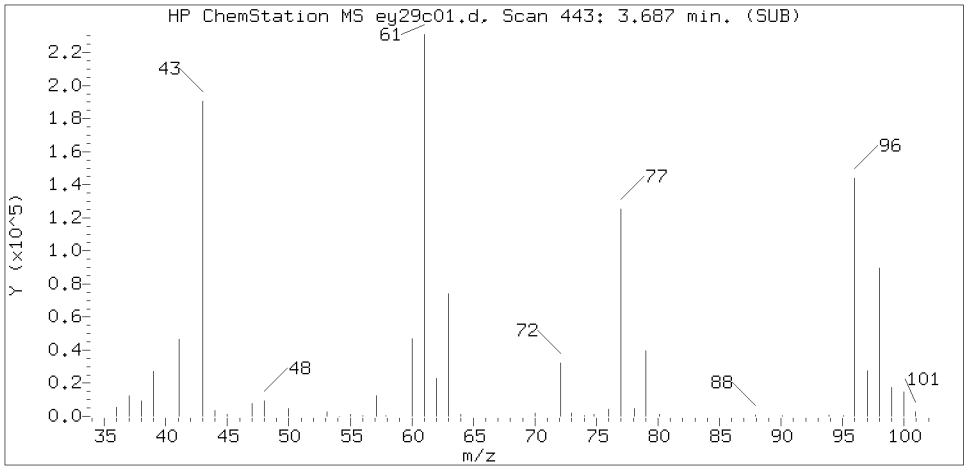
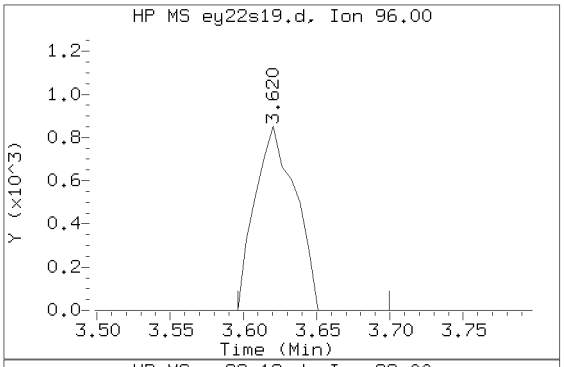
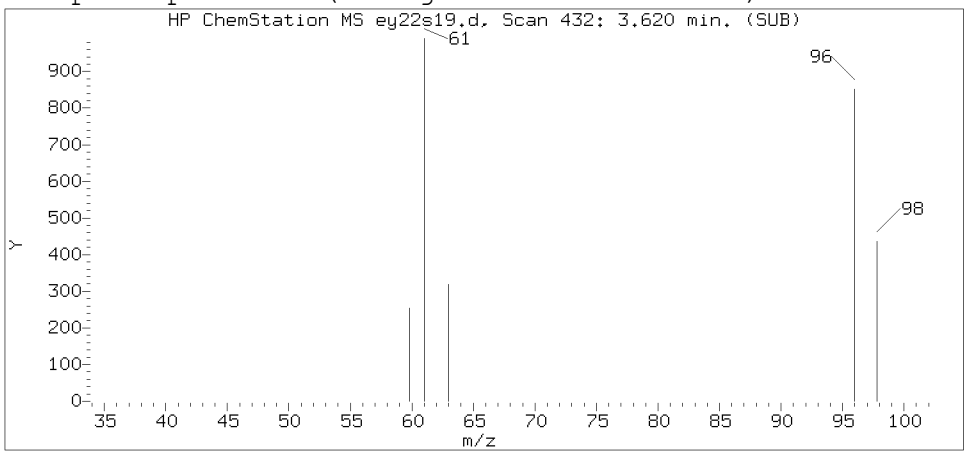
on 05/22/2019 at 17:52.
Target 3.5 esignature user ID: dvv10203

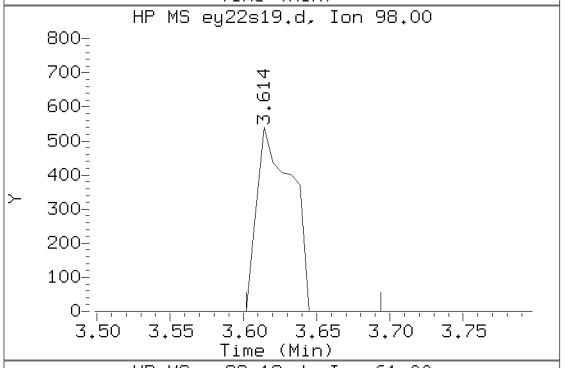
Reference Standard Spectrum for cis-1,2-Dichloroethene

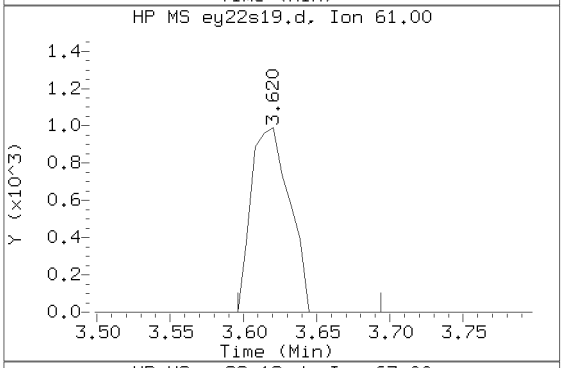




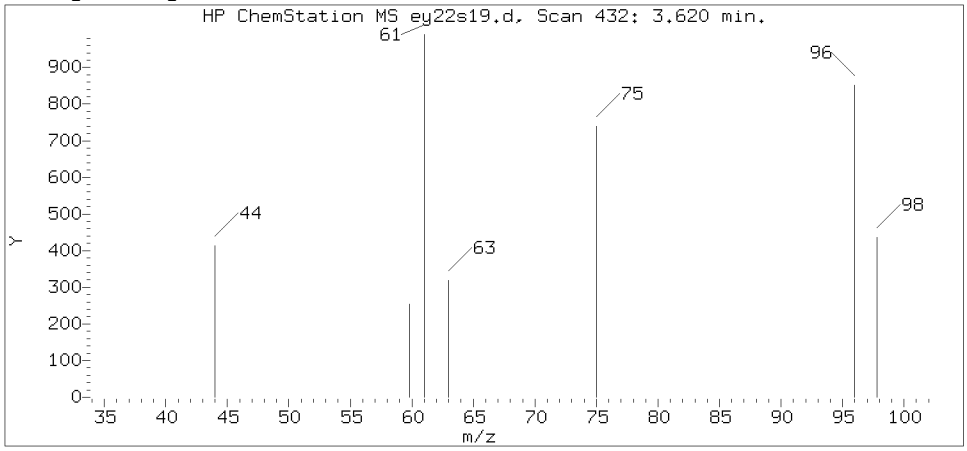
Sample Spectrum (Background Subtracted)

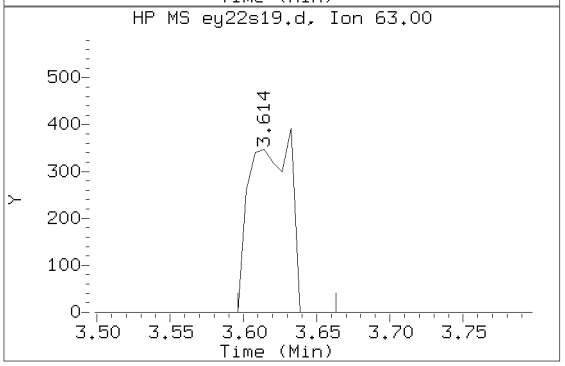






Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19may22a.b/ey22s19.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 16:43 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 16:59 Automation

Sample Name: 92J15 Lab Sample ID: 1058230

Compound Number	: 42
Compound Name	: cis-1,2-Dichloroethene
Scan Number	: 432
Retention Time (minutes)	: 3.620
Relative Retention Time	:-0.00160
Quant Ion	: 96.00
Area (flag)	: 1631
On-Column Amount (ng)	: 0.2921

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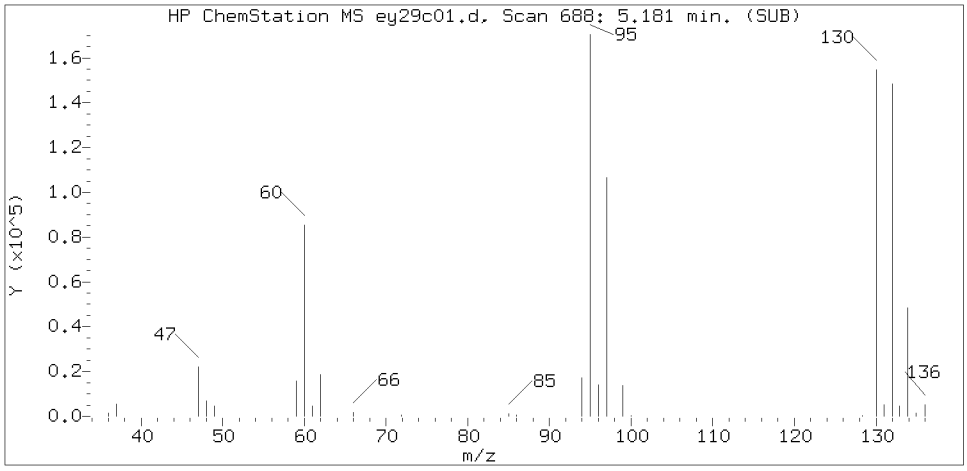
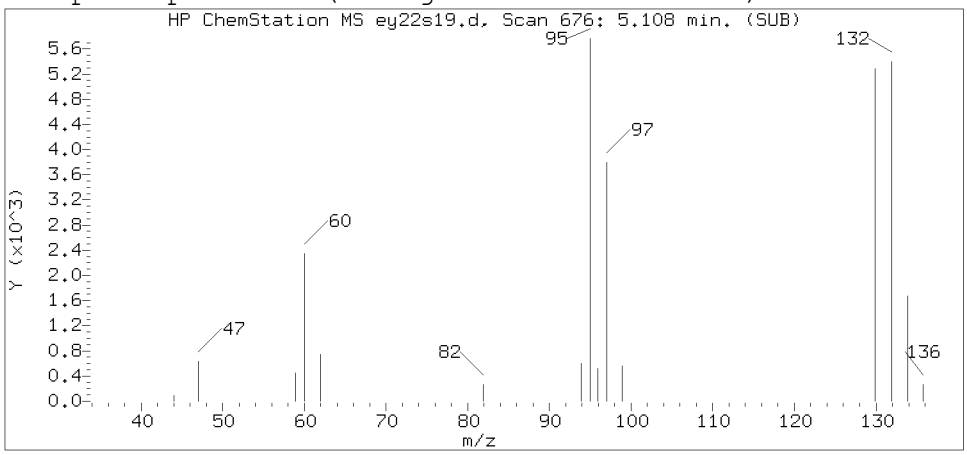
Target 3.5 esignature user ID: dvv10293

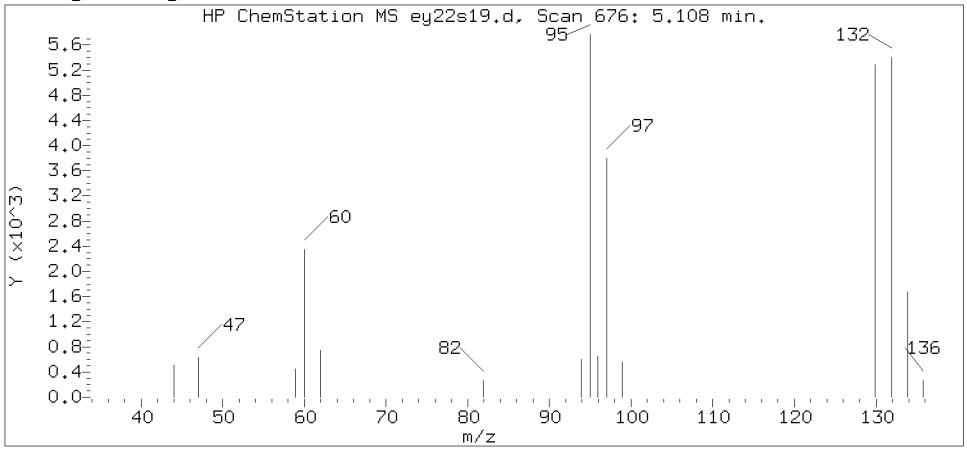
Reference Standard Spectrum for Trichloroethene

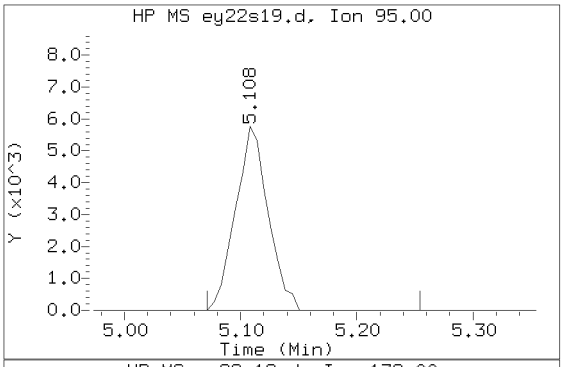


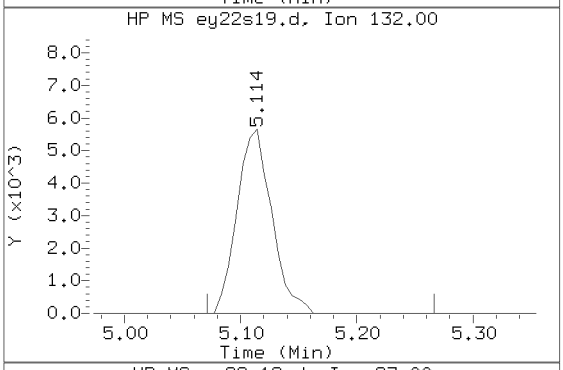
Sample Spectrum (Background Subtracted)

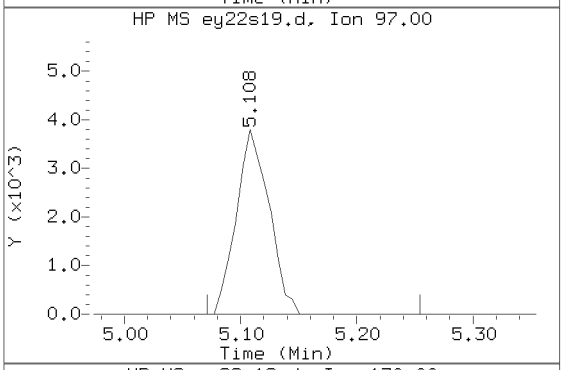


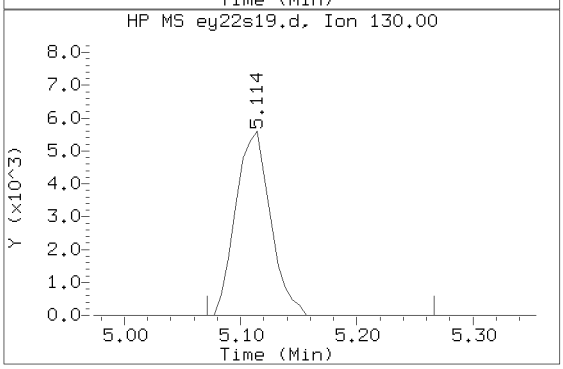
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s19.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 16:43 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 16:59 Automation

Sample Name: 92J15 Lab Sample ID: 1058230

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 676
Retention Time (minutes)	: 5.108
Relative Retention Time	: 0.00011
Quant Ion	: 95.00
Area (flag)	: 11173
On-Column Amount (ng)	: 2.0766

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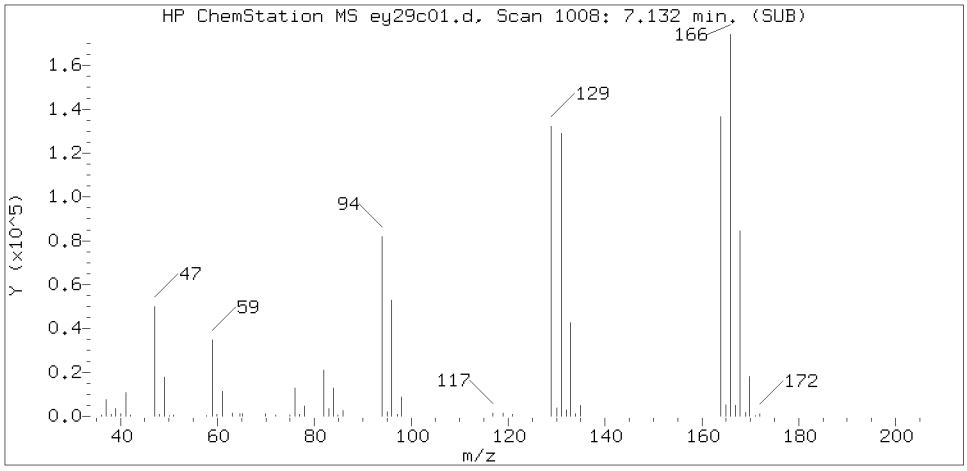
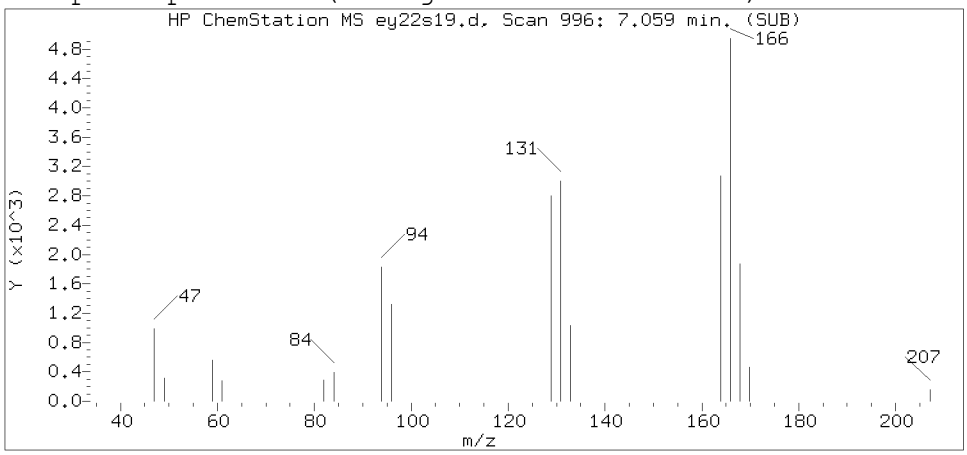
Target 3.5 esignature user ID: dvv10293

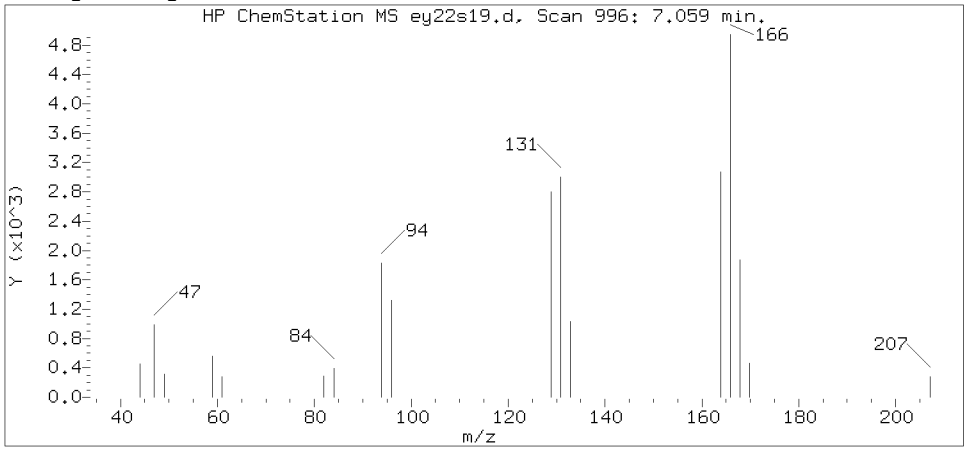
Reference Standard Spectrum for Tetrachloroethene

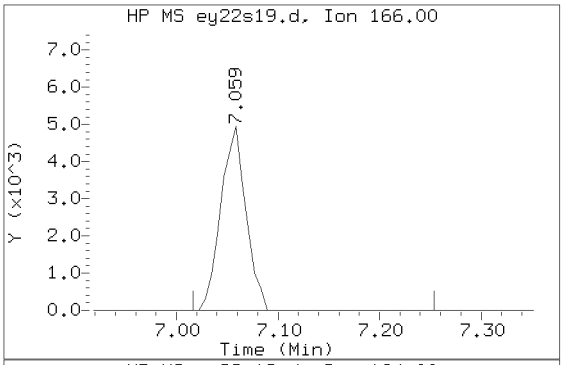


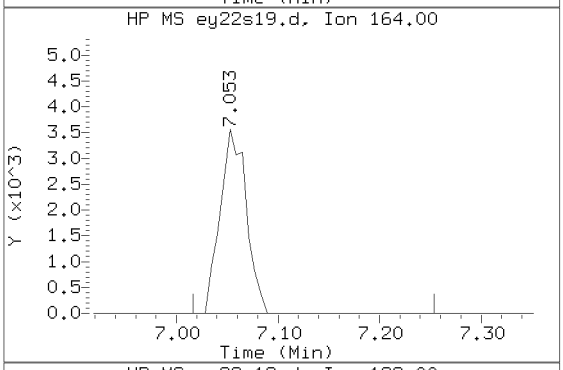
Sample Spectrum (Background Subtracted)

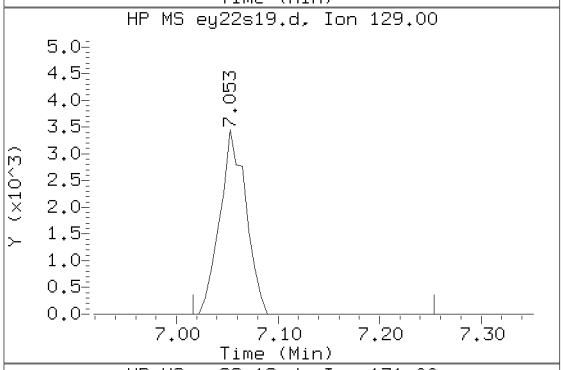


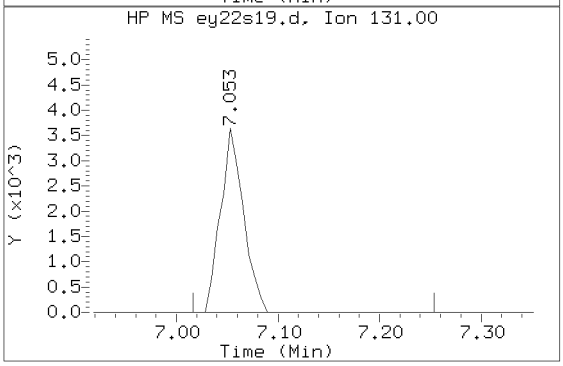
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22s19.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 16:43 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 16:59 Automation

Sample Name: 92J15 Lab Sample ID: 1058230

Compound Number : 94
Compound Name : Tetrachloroethene
Scan Number : 996
Retention Time (minutes): 7.059
Relative Retention Time :-0.00077
Quant Ion : 166.00
Area (flag) : 8485
On-Column Amount (ng) : 1.5311

Digitally signed by Don V. Viray on 05/22/2019 at 17:52.
Target 3.5 esignature user ID: dvv10293

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

92J16

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058231

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may22b.b/4y22s56.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	0.5	J
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

^

Data file: /chem/HP23297.i/19may22b.b/4y22s56.d Injection date and time: **23-MAY-2019 07:14**
Data file Sample Info. Line: 92J16;1058231;1;0;;JCV92;;;4y22b05; Instrument ID: **HP23297.i** Batch: **4191422AA**
Date, time and analyst ID of latest file update: 23-May-2019 07:32 Automation

Blank Data file reference: **/chem/HP23297.i/19may22b.b/4y22b05.d**

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 00:21
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may22b.b/4y22c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:9274

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.361	(0.006)	457	65	348931	(-8)	250.00	
66) Fluorobenzene	7.865	(0.000)	1033	96	1203525	(-2)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	948354	(-3)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189	(0.000)	1908	152	510114	(-6)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977	(0.000)	113	288455	48.624	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.433	(0.000)	102	74956	51.710	103%		80 - 120
83) Toluene-d8	(3)	9.867	(0.000)	98	1215957	49.958	100%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.306	(0.000)	95	437365	47.143	94%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.340	(-0.000)	95	2649	0.473	0.47		J	0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Kevin A. Sposito on 05/23/2019 at 11:55. Target 3.5 esignature user ID: kas02648

Data file: /chem/HP23297.i/19may22b.b/4y22s56.d Injection date and time: **23-MAY-2019 07:14**
Data file Sample Info. Line: 92J16;1058231;1;0;;JCV92;;;4y22b05; Instrument ID: **HP23297.i** Batch: **4191422AA**
Date, time and analyst ID of latest file update: 23-May-2019 07:32 Automation

Blank Data file reference: **/chem/HP23297.i/19may22b.b/4y22b05.d**

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 00:21
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may22b.b/4y22c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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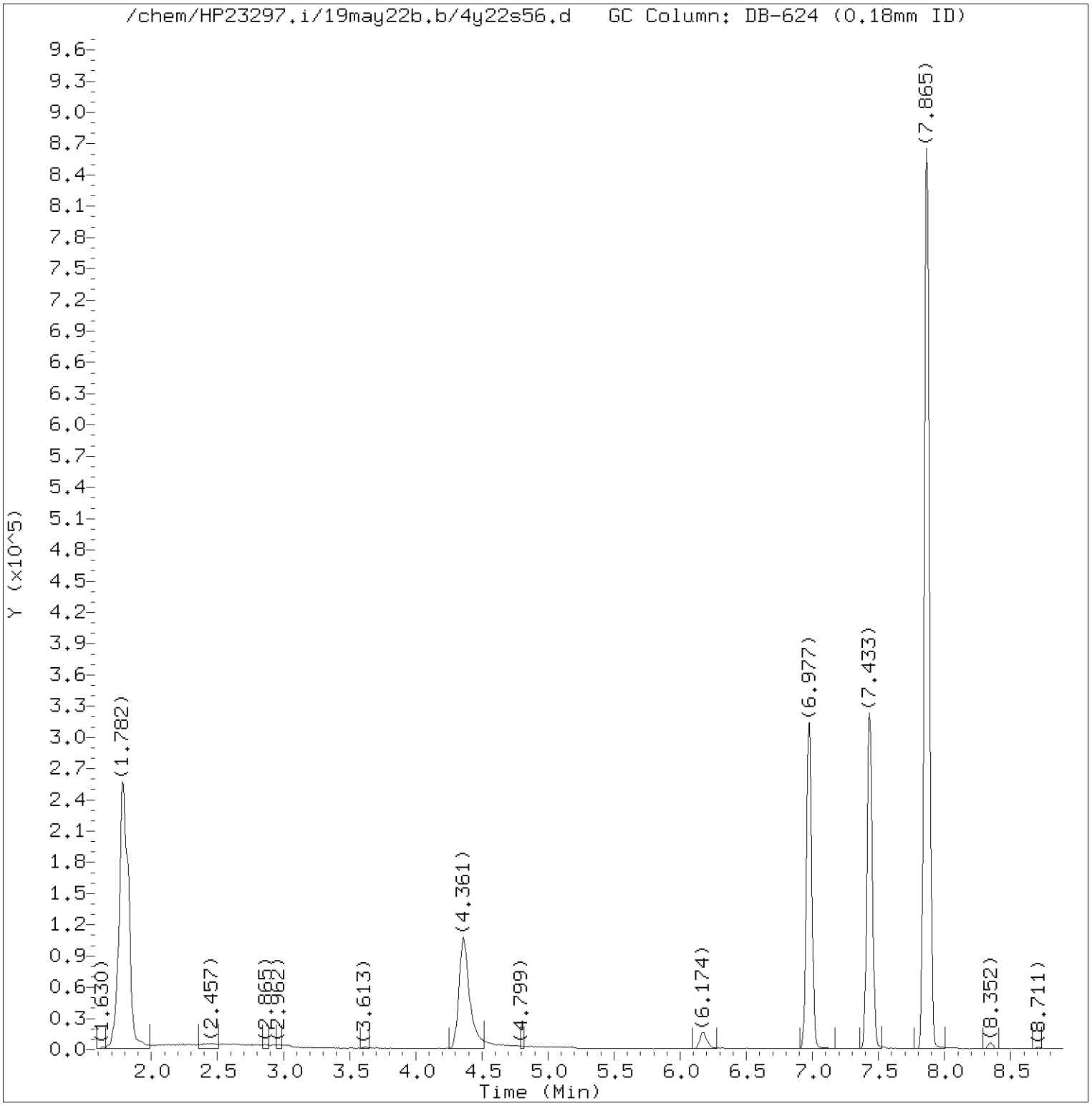
Total number of targets = 24

Digitally signed by Kevin A. Sposito on 05/23/2019 at 11:55. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kari Becker on 05/23/2019 at 15:57. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

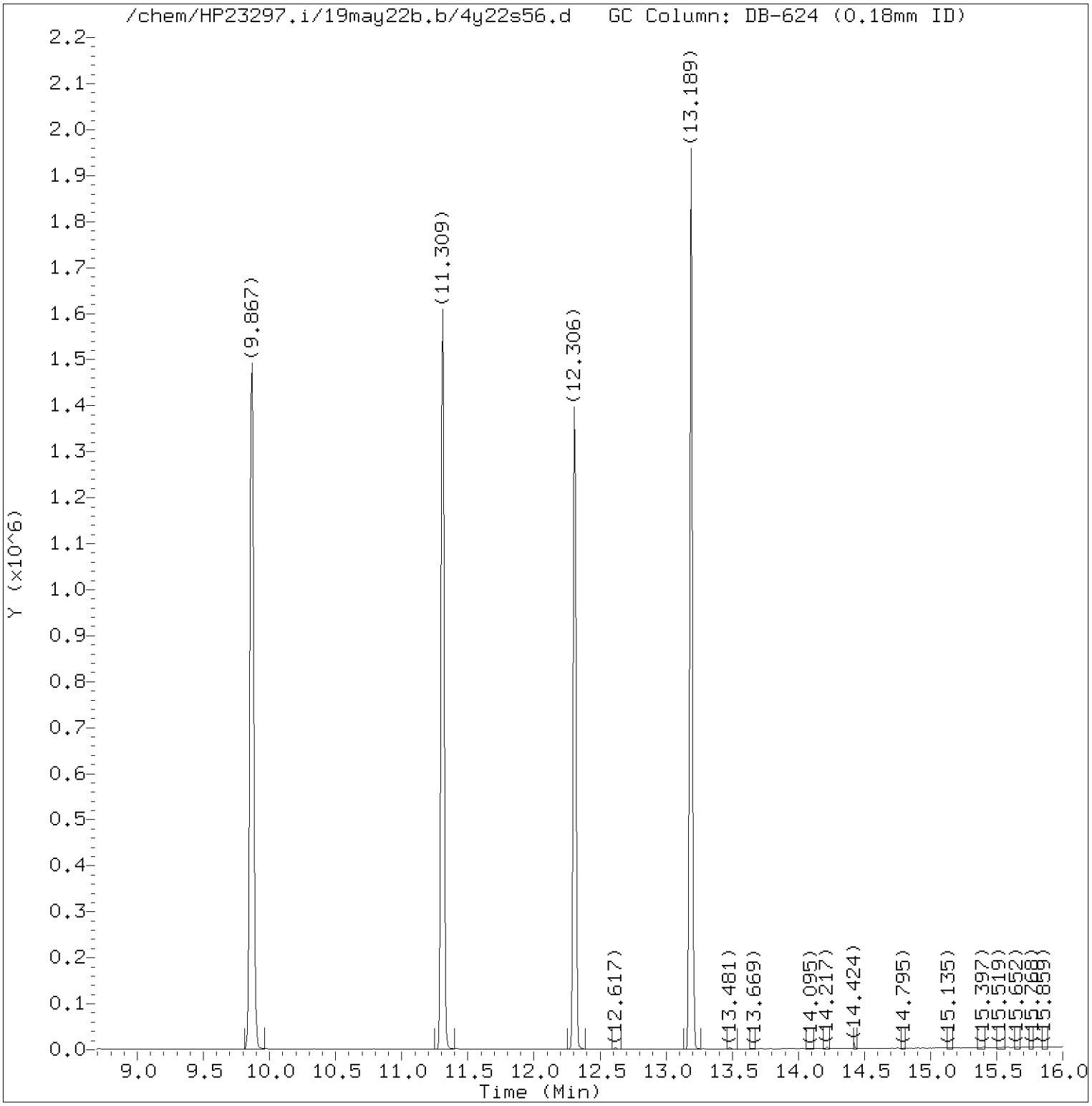
Target Revision 3.5

Data File: /chem/HP23297.i/19may22b.b/4y22s56.d Instrument ID: HP23297.i
Injection date and time: 23-MAY-2019 07:14 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 00:21
Date, time and analyst ID of latest file update: 23-May-2019 07:32 Automation

Sample Name: 92J16 Lab Sample ID: 1058231

Digitally signed by Kevin A. Sposito
on 05/23/2019 at 11:55.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may22b.b/4y22s56.d Instrument ID: HP23297.i
Injection date and time: 23-MAY-2019 07:14 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 00:21
Date, time and analyst ID of latest file update: 23-May-2019 07:32 Automation

Sample Name: 92J16 Lab Sample ID: 1058231

Digitally signed by Kevin A. Sposito
on 05/23/2019 at 11:55.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may22b.b/4y22s56.d Instrument ID: HP23297.i
Injection date and time: 23-MAY-2019 07:14 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 00:21
Date, time and analyst ID of latest file update: 23-May-2019 07:32 Automation

Sample Name: 92J16 Lab Sample ID: 1058231

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.361	65	348931	250.000
52)$Dibromofluoromethane	(2)	6.977	113	288455	48.624
57)$1,2-Dichloroethane-d4	(2)	7.433	102	74956	51.710
66)*Fluorobenzene	(2)	7.865	96	1203525	50.000
71) Trichloroethene	(2)	8.340	95	2649	0.473
83)$Toluene-d8	(3)	9.867	98	1215957	49.958
100)*Chlorobenzene-d5	(3)	11.309	117	948354	50.000
114)$4-Bromofluorobenzene	(3)	12.306	95	437365	47.143
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	510114	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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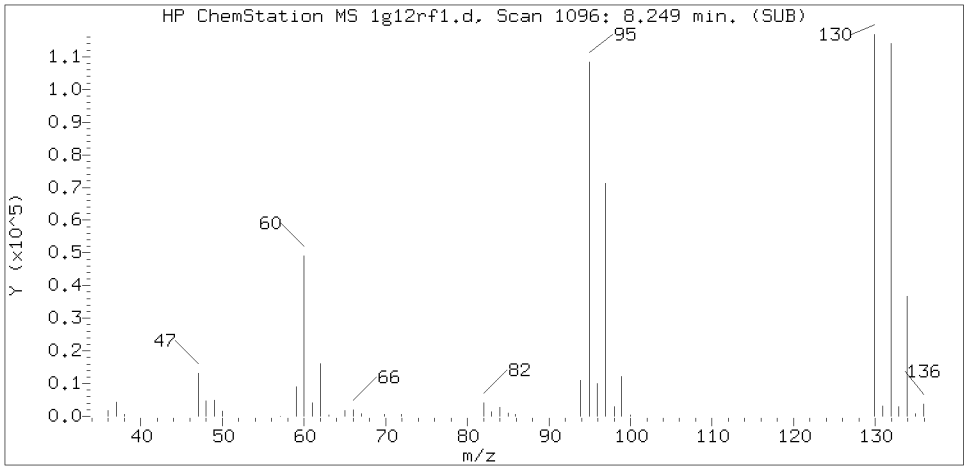
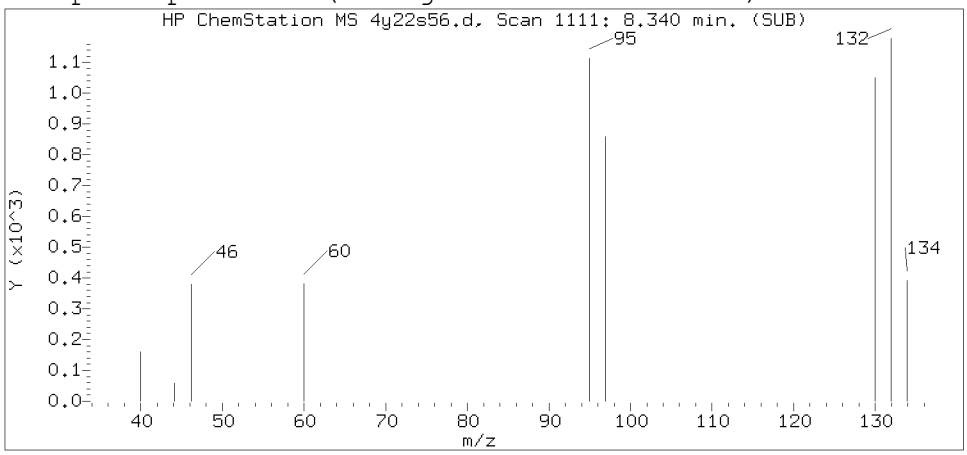
on 05/23/2019 at 11:55.
Target 3.5 esignature user ID: kas02648

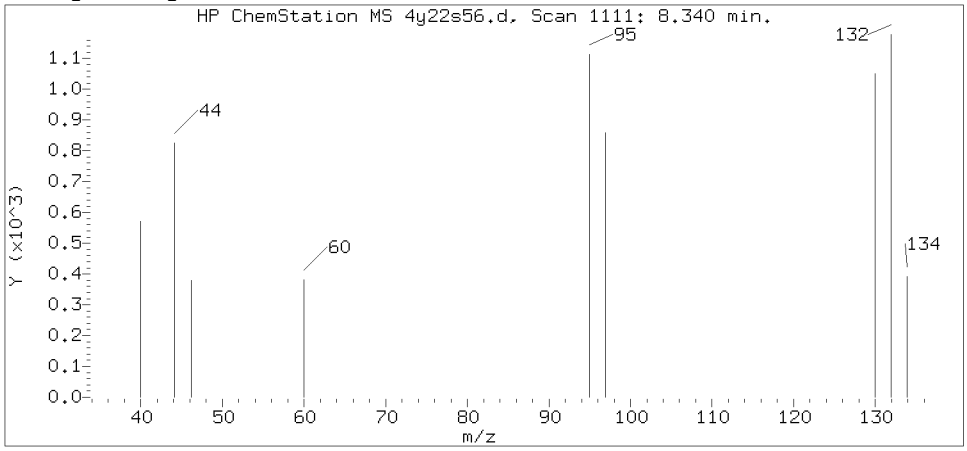
Reference Standard Spectrum for Trichloroethene

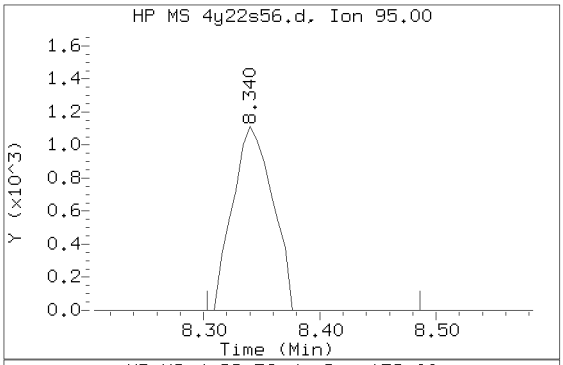


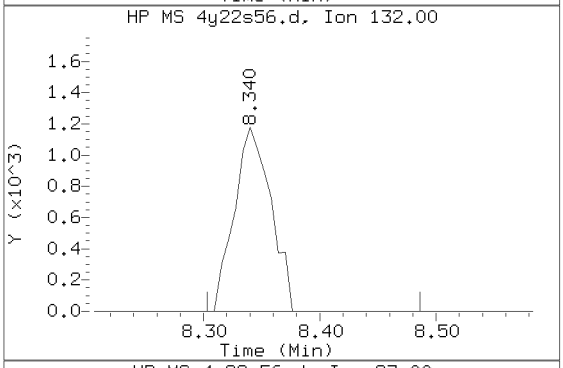
Sample Spectrum (Background Subtracted)

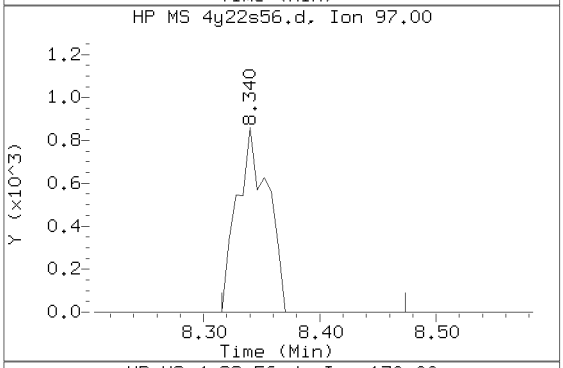


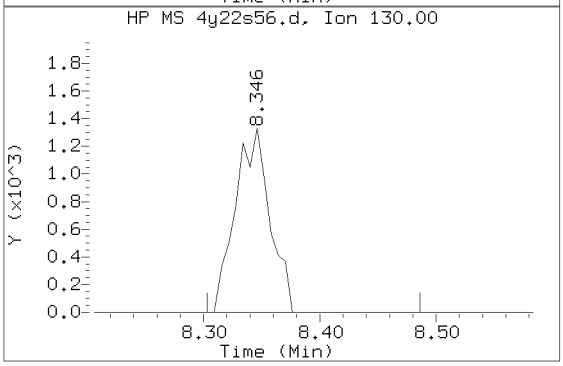
Sample Spectrum (Unaltered)











Data File: /chem/HP23297.i/19may22b.b/4y22s56.d Instrument ID: HP23297.i
Injection date and time: 23-MAY-2019 07:14 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 00:21
Date, time and analyst ID of latest file update: 23-May-2019 07:32 Automation

Sample Name: 92J16 Lab Sample ID: 1058231

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 1111
Retention Time (minutes): 8.340
Relative Retention Time :-0.00000
Quant Ion : 95.00
Area (flag) : 2649
On-Column Amount (ng) : 0.4731

Digitally signed by Kevin A. Sposito on 05/23/2019 at 11:55.
Target 3.5 esignature user ID: kas02648

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
92J17

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058232

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may22b.b/4y22s57.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Data file: /chem/HP23297.i/19may22b.b/4y22s57.d Injection date and time: **23-MAY-2019 07:37**
Data file Sample Info. Line: 92J17;1058232;1;0;;JCV92;;;4y22b05; Instrument ID: **HP23297.i** Batch: **4191422AA**
Date, time and analyst ID of latest file update: 23-May-2019 07:55 Automation

Blank Data file reference: **/chem/HP23297.i/19may22b.b/4y22b05.d**

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 00:21
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may22b.b/4y22c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:9274

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.373	(-0.006)	459	65	299085	(-22)	250.00	
66) Fluorobenzene	7.872	(-0.006)	1034	96	1161381	(-6)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	898858	(-8)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189	(0.000)	1908	152	476269	(-12)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977	(0.001)	113	271520	47.430	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434	(0.001)	102	70244	50.218	100%		80 - 120
83) Toluene-d8	(3)	9.867	(0.000)	98	1166737	50.575	101%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.306	(0.000)	95	410599	46.695	93%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Kevin A. Sposito on 05/23/2019 at 11:55. Target 3.5 esignature user ID: kas02648

Data file: /chem/HP23297.i/19may22b.b/4y22s57.d Injection date and time: **23-MAY-2019 07:37**
Data file Sample Info. Line: 92J17;1058232;1;0;;JCV92;;;4y22b05; Instrument ID: **HP23297.i** Batch: **4191422AA**
Date, time and analyst ID of latest file update: 23-May-2019 07:55 Automation

Blank Data file reference: **/chem/HP23297.i/19may22b.b/4y22b05.d**

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 00:21
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may22b.b/4y22c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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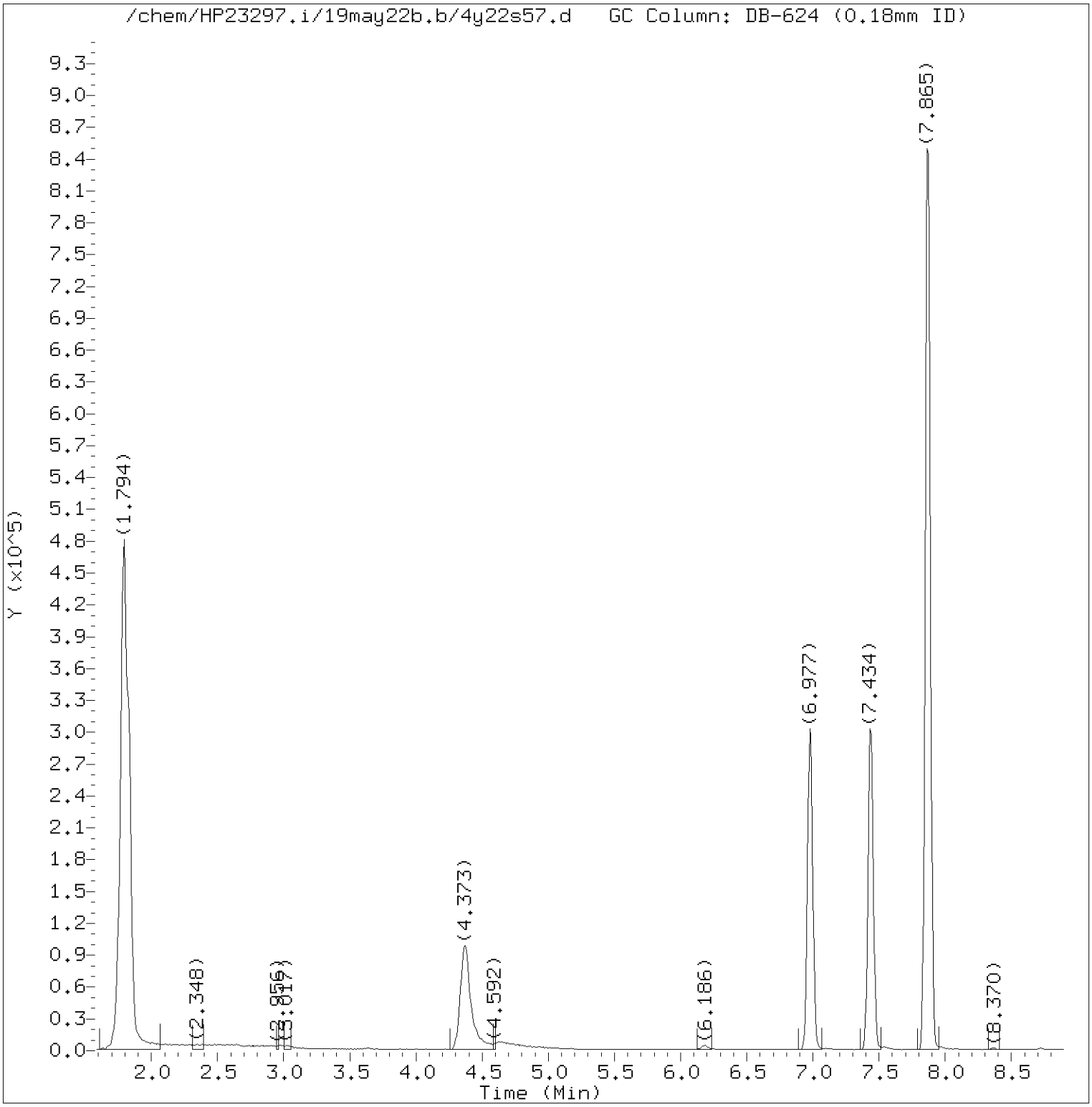
Total number of targets = 24

Digitally signed by Kevin A. Sposito on 05/23/2019 at 11:55. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kari Becker on 05/23/2019 at 15:58. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

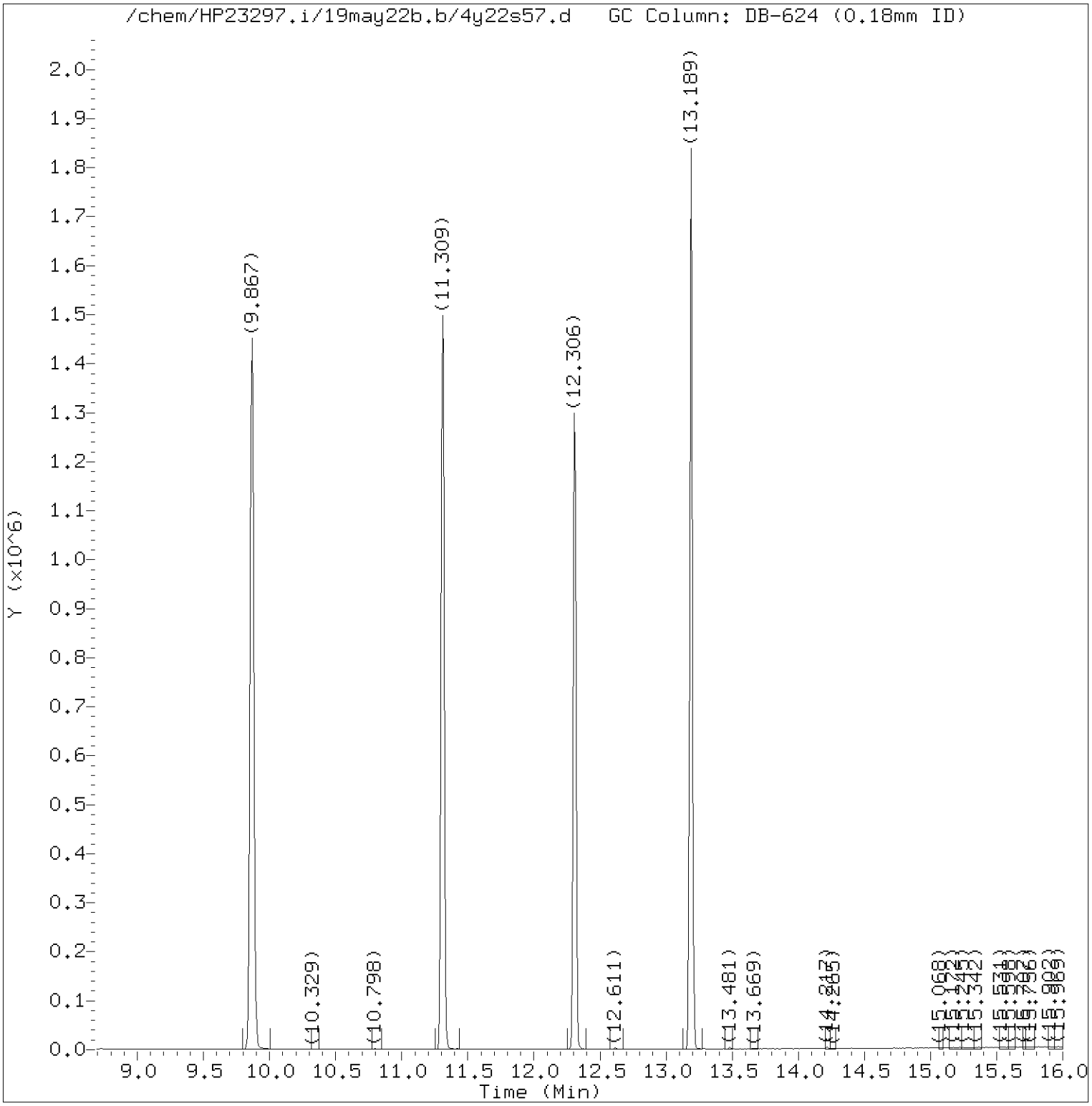
Target Revision 3.5

Data File: /chem/HP23297.i/19may22b.b/4y22s57.d Instrument ID: HP23297.i
Injection date and time: 23-MAY-2019 07:37 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 00:21
Date, time and analyst ID of latest file update: 23-May-2019 07:55 Automation

Sample Name: 92J17 Lab Sample ID: 1058232

Digitally signed by Kevin A. Sposito
on 05/23/2019 at 11:55.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may22b.b/4y22s57.d Instrument ID: HP23297.i
Injection date and time: 23-MAY-2019 07:37 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 00:21
Date, time and analyst ID of latest file update: 23-May-2019 07:55 Automation

Sample Name: 92J17 Lab Sample ID: 1058232

Digitally signed by Kevin A. Sposito
on 05/23/2019 at 11:55.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may22b.b/4y22s57.d Instrument ID: HP23297.i
Injection date and time: 23-MAY-2019 07:37 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 00:21
Date, time and analyst ID of latest file update: 23-May-2019 07:55 Automation

Sample Name: 92J17 Lab Sample ID: 1058232

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.373	65	299085	250.000
52)$Dibromofluoromethane	(2)	6.977	113	271520	47.430
57)$1,2-Dichloroethane-d4	(2)	7.434	102	70244	50.218
66)*Fluorobenzene	(2)	7.872	96	1161381	50.000
83)$Toluene-d8	(3)	9.867	98	1166737	50.575
100)*Chlorobenzene-d5	(3)	11.309	117	898858	50.000
114)$4-Bromofluorobenzene	(3)	12.306	95	410599	46.695
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	476269	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/23/2019 at 11:55.
Target 3.5 esignature user ID: kas02648

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

92J18

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058233

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may22b.b/4y22s46.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	0.3	J
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Data file: /chem/HP23297.i/19may22b.b/4y22s46.d Injection date and time: **23-MAY-2019 03:27**
Data file Sample Info. Line: 92J18;1058233;1;0;;JCV92;;;4y22b05; Instrument ID: **HP23297.i** Batch: **4191422AA**
Date, time and analyst ID of latest file update: 23-May-2019 07:01 amd00492

Blank Data file reference: **/chem/HP23297.i/19may22b.b/4y22b05.d**

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 00:21
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may22b.b/4y22c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:9274

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.361	(0.006)	457	65	400064	(5)	250.00	
66) Fluorobenzene	7.865	(0.000)	1033	96	1235111	(0)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	978507	(0)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189	(0.000)	1908	152	526669	(-2)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977	(0.000)	113	292495	48.044	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.440	(-0.001)	102	75276	50.602	101%		80 - 120
83) Toluene-d8	(3)	9.867	(0.000)	98	1247930	49.691	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.306	(0.000)	95	448010	46.802	94%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)	6.752	(0.000)	83	2665	0.283	0.28		J	0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Kevin A. Sposito on 05/23/2019 at 12:00. Target 3.5 esignature user ID: kas02648

Data file: /chem/HP23297.i/19may22b.b/4y22s46.d Injection date and time: **23-MAY-2019 03:27**
Data file Sample Info. Line: 92J18;1058233;1;0;;JCV92;;;4y22b05; Instrument ID: **HP23297.i** Batch: **4191422AA**
Date, time and analyst ID of latest file update: 23-May-2019 07:01 amd00492

Blank Data file reference: **/chem/HP23297.i/19may22b.b/4y22b05.d**

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 00:21
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may22b.b/4y22c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

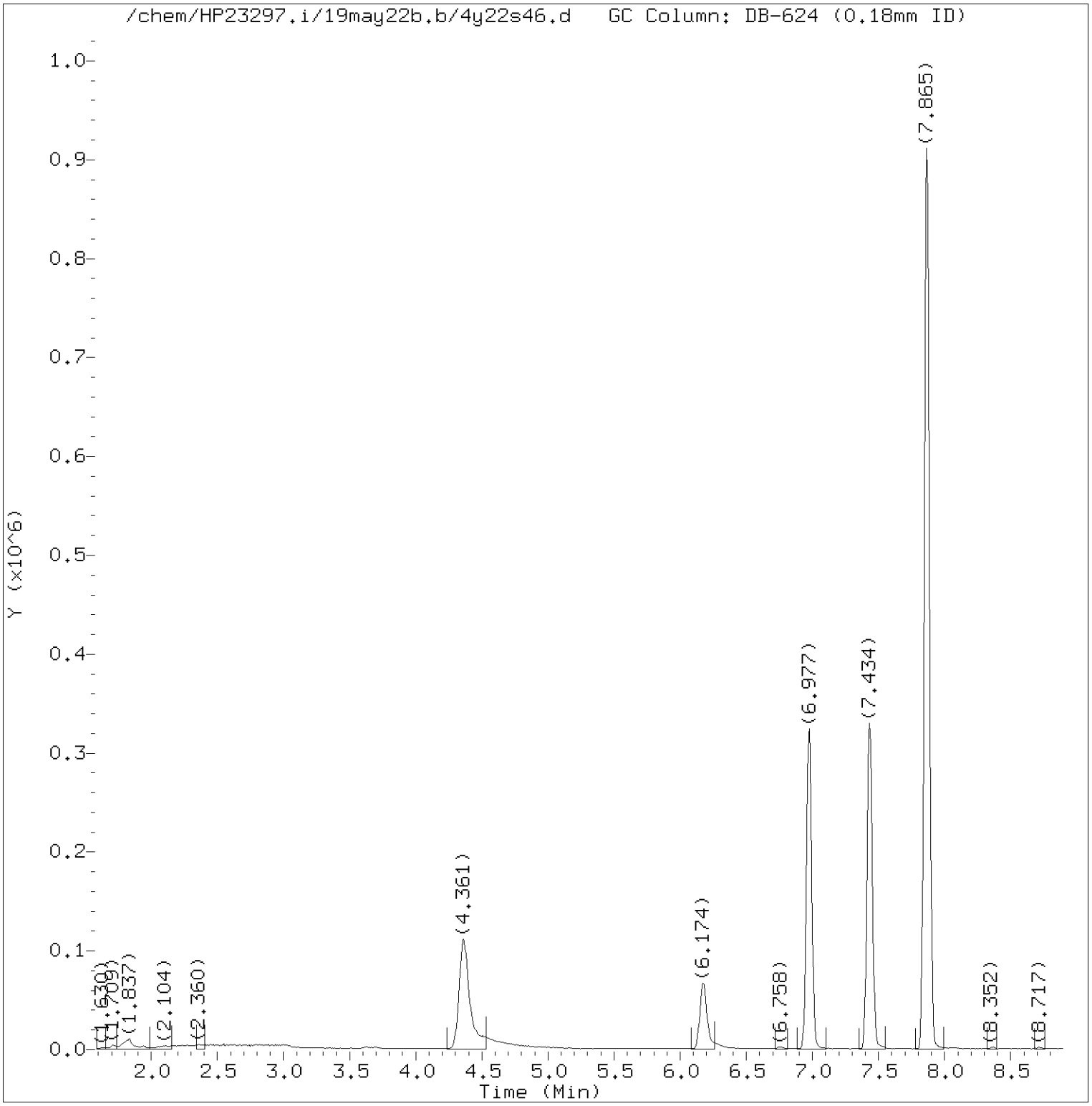
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Kevin A. Sposito on 05/23/2019 at 12:00. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kari Becker on 05/23/2019 at 15:50. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

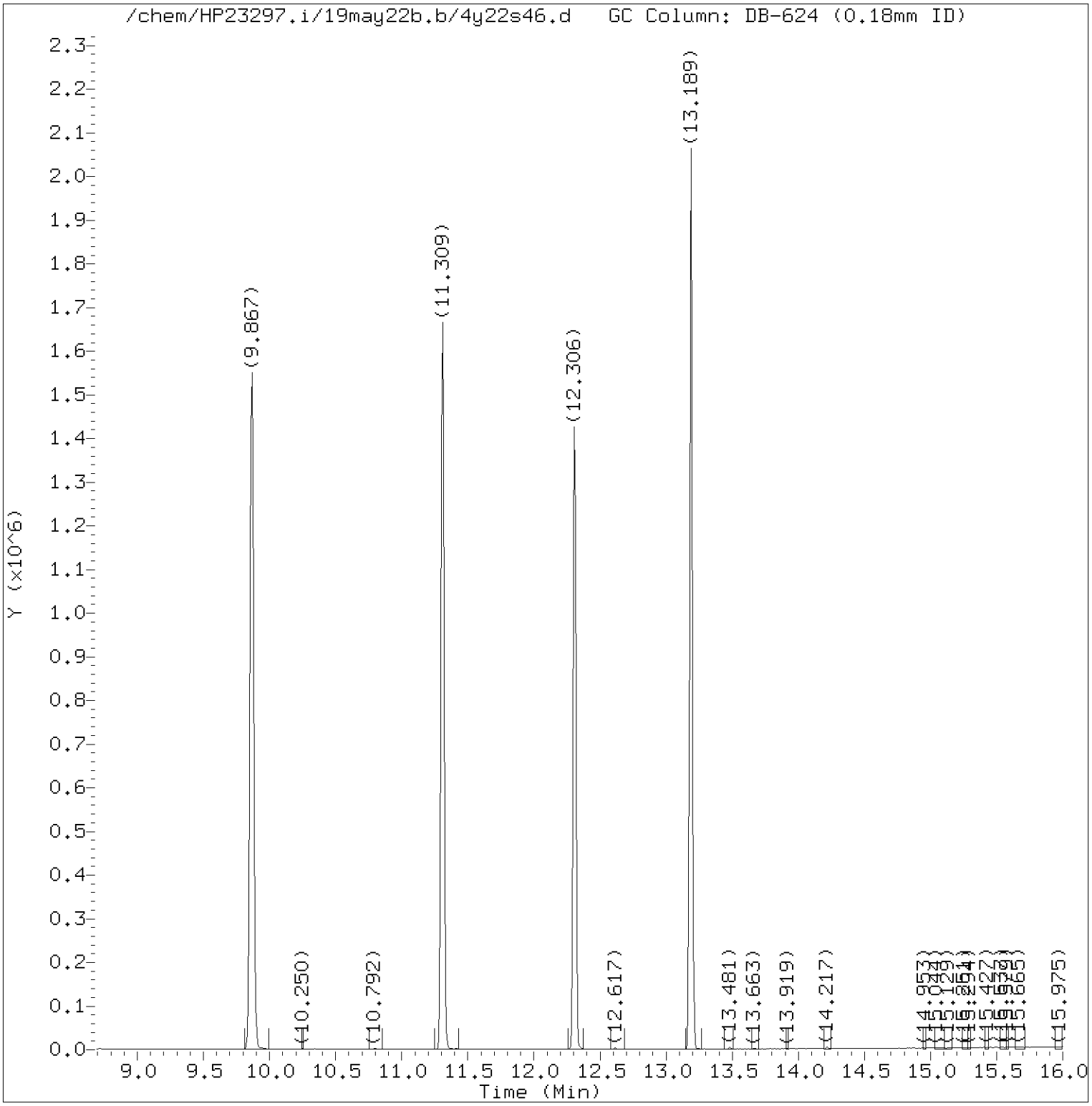
Target Revision 3.5

Data File: /chem/HP23297.i/19may22b.b/4y22s46.d Instrument ID: HP23297.i
Injection date and time: 23-MAY-2019 03:27 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 00:21
Date, time and analyst ID of latest file update: 23-May-2019 07:01 amd00492

Sample Name: 92J18 Lab Sample ID: 1058233

Digitally signed by Kevin A. Sposito
on 05/23/2019 at 12:00.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may22b.b/4y22s46.d Instrument ID: HP23297.i
Injection date and time: 23-MAY-2019 03:27 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 00:21
Date, time and analyst ID of latest file update: 23-May-2019 07:01 amd00492

Sample Name: 92J18 Lab Sample ID: 1058233

Digitally signed by Kevin A. Sposito
on 05/23/2019 at 12:00.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may22b.b/4y22s46.d Instrument ID: HP23297.i
Injection date and time: 23-MAY-2019 03:27 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 00:21
Date, time and analyst ID of latest file update: 23-May-2019 07:01 amd00492

Sample Name: 92J18 Lab Sample ID: 1058233

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.361	65	400064	250.000
51) Chloroform	(2)	6.752	83	2665	0.283
52)$Dibromofluoromethane	(2)	6.977	113	292495	48.044
57)$1,2-Dichloroethane-d4	(2)	7.440	102	75276	50.602
66)*Fluorobenzene	(2)	7.865	96	1235111	50.000
83)$Toluene-d8	(3)	9.867	98	1247930	49.691
100)*Chlorobenzene-d5	(3)	11.309	117	978507	50.000
114)$4-Bromofluorobenzene	(3)	12.306	95	448010	46.802
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	526669	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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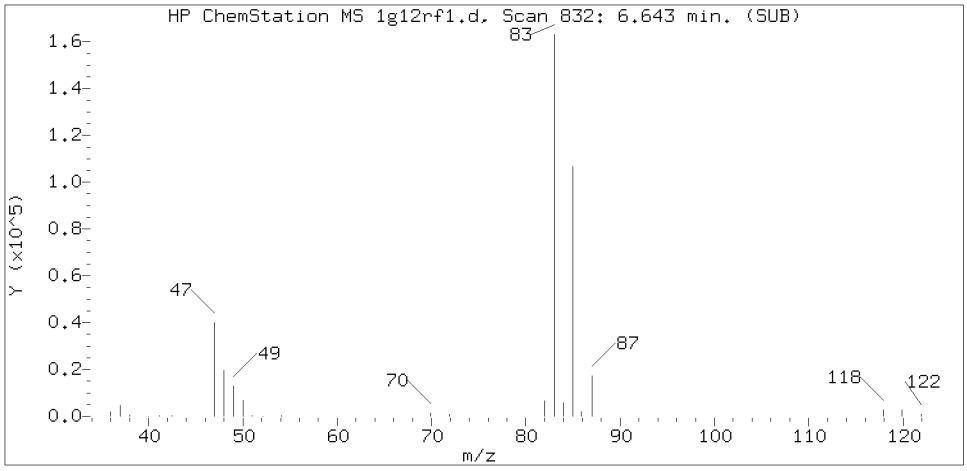
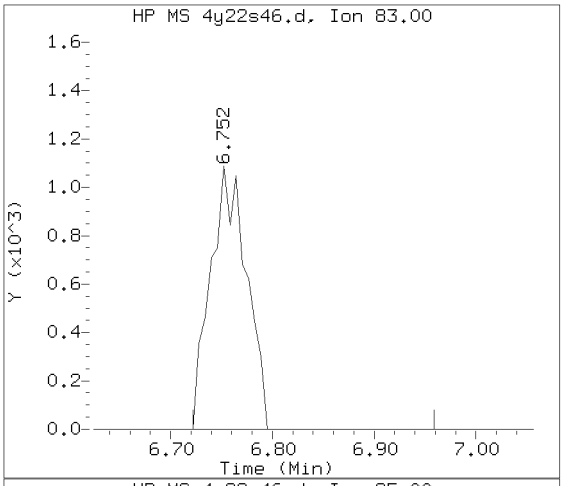
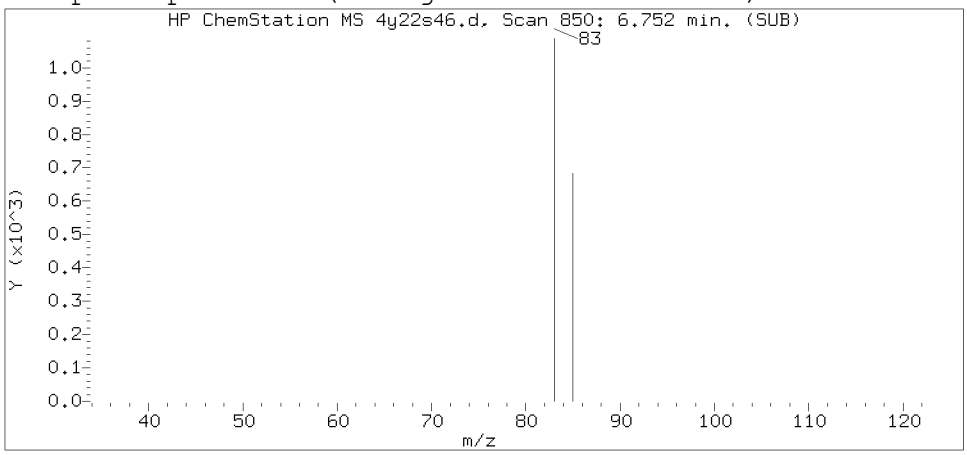
on 05/23/2019 at 12:00.
Target 3.5 esignature user ID: kas02648

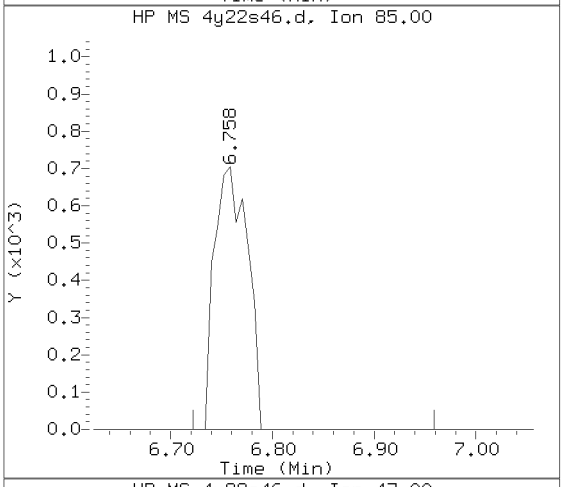
Reference Standard Spectrum for Chloroform



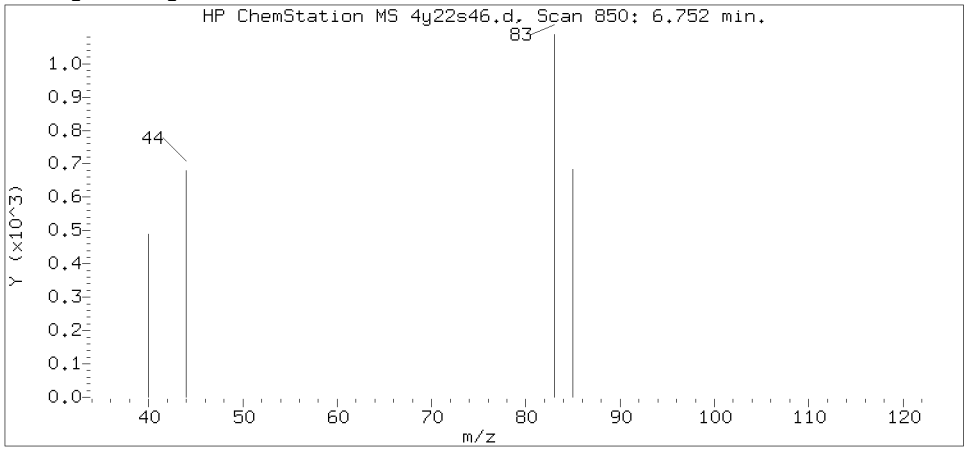


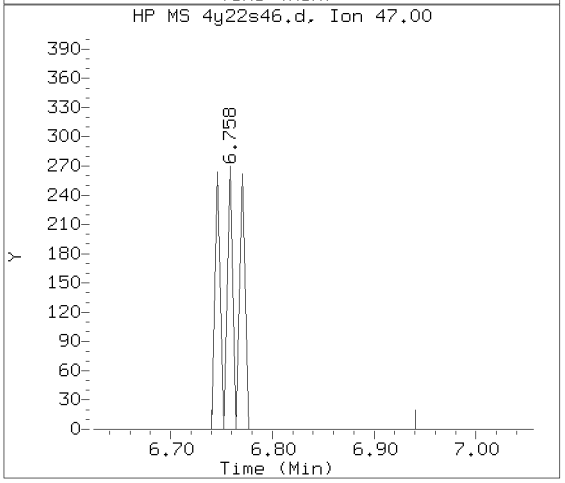
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may22b.b/4y22s46.d Instrument ID: HP23297.i
Injection date and time: 23-MAY-2019 03:27 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 00:21
Date, time and analyst ID of latest file update: 23-May-2019 07:01 amd00492

Sample Name: 92J18 Lab Sample ID: 1058233

Compound Number : 51
Compound Name : Chloroform
Scan Number : 850
Retention Time (minutes): 6.752
Relative Retention Time : 0.00077
Quant Ion : 83.00
Area (flag) : 2665
On-Column Amount (ng) : 0.2829

Digitally signed by Kevin A. Sposito on 05/23/2019 at 12:00.
Target 3.5 esignature user ID: kas02648

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP15648 **HP #27**

Data Directory Path is - d:\data\19MAY02I\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
KAS02648	EA02T01.D	50ng BFB	05/02/2019	11:50		
KAS02648	EA02X01.D	BLK	05/02/2019	11:58		
KAS02648	EA02I01.D	VSTD300	05/02/2019	12:18		
KAS02648	EA02I02.D	VSTD100	05/02/2019	12:38		
KAS02648	EA02I03.D	VSTD050	05/02/2019	12:58		
KAS02648	EA02I04.D	VSTD020	05/02/2019	13:19		
KAS02648	EA02I05.D	VSTD010	05/02/2019	13:39		
KAS02648	EA02I06.D	VSTD004	05/02/2019	13:59		
KAS02648	EA02I07.D	VSTD001	05/02/2019	14:19		
KAS02648	EA02V01.D	ICVELG	05/02/2019	14:40		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP23297 **HP #04**

Data Directory Path is - D:\DATA\19APR23I\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
JML01693	4A23T01.D	50NG BFB	04/23/2019	14:13		
JML01693	4A23X01.D	BLANK	04/23/2019	14:34		
JML01693	4A23I01.D	VSTD001	04/23/2019	14:57		
JML01693	4A23I02.D	VSTD004	04/23/2019	15:20		
JML01693	4A23I03.D	VSTD010	04/23/2019	15:43		
JML01693	4A23I04.D	VSTD020	04/23/2019	16:06		
JML01693	4A23I05.D	VSTD050	04/23/2019	16:28		
JML01693	4A23I06.D	VSTD100	04/23/2019	16:51		
JML01693	4A23I07.D	VSTD300	04/23/2019	17:14		
JML01693	4A23X02.D	BLANK	04/23/2019	17:37		
JML01693	4A23V01.D	ICV401	04/23/2019	18:00		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP15648 **HP #27**

Data Directory Path is - D:\DATA\19MAY22A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
JML01693	EY22T01.D	50ng BFB	05/22/2019	09:19		
JML01693	EY22X01.D	BLK	05/22/2019	09:38	E191421AA	
JML01693	EY22C01.D	VSTD050	05/22/2019	09:59	E191421AA	
JML01693	EY22S01.D	LCSE11	05/22/2019	10:18	E191421AA	
JML01693	EY22B01.D	VBLKE11	05/22/2019	10:39	E191421AA	
JML01693	EY22S02.D	1054833	05/22/2019	10:59	E191421AA	
JML01693	EY22S03.D	1054838	05/22/2019	11:19	E191421AA	
JML01693	EY22S04.D	1058221	05/22/2019	11:39	E191421AA	
JML01693	EY22S05.D	1058221DL	05/22/2019	12:00	E191421AA	10
JML01693	EY22S06.D	1057215	05/22/2019	12:20	E191421AA	
JML01693	EY22S07.D	1057216MS	05/22/2019	12:40	E191421AA	
JML01693	EY22S08.D	1057217MSD	05/22/2019	13:00	E191421AA	
JML01693	EY22S09.D	1057215DL	05/22/2019	13:21	E191421AA	10
JML01693	EY22S10.D	1058223	05/22/2019	13:41	E191421AA	
JML01693	EY22S11.D	1058224	05/22/2019	14:01	E191421AA	
JML01693	EY22S12.D	1058225	05/22/2019	14:21	E191421AA	
JML01693	EY22S13.D	1058226	05/22/2019	14:42	E191421AA	
JML01693	EY22S14.D	1058227	05/22/2019	15:02	E191421AA	
JML01693	EY22S15.D	1058228	05/22/2019	15:22	E191421AA	
JML01693	EY22S16.D	1058228DL	05/22/2019	15:43	E191421AA	10
JML01693	EY22S17.D	1058229	05/22/2019	16:03	E191421AA	
JML01693	EY22S18.D	1058229DL	05/22/2019	16:23	E191421AA	10
JML01693	EY22S19.D	1058230	05/22/2019	16:43	E191421AA	
JML01693	EY22S20.D	1057212	05/22/2019	17:03	E191421AA	
JML01693	EY22S21.D	1057213	05/22/2019	17:24	E191421AA	
JML01693	EY22S22.D	1057214	05/22/2019	17:44	E191421AA	
JML01693	EY22S23.D	1057218	05/22/2019	18:04	E191421AA	
JML01693	EY22S24.D	1057219	05/22/2019	18:24	E191421AA	
JML01693	EY22S25.D	1057222	05/22/2019	18:45	E191421AA	
JML01693	EY22S26.D	1057220	05/22/2019	19:05	E191421AA	5
JML01693	EY22S27.D	1057220DL	05/22/2019	19:25	E191421AA	50
JML01693	EY22S28.D	1057221	05/22/2019	19:46	E191421AA	5
JML01693	EY22S29.D	1057221DL	05/22/2019	20:06	E191421AA	50

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP23297 **HP #04**

Data Directory Path is - D:\DATA\19MAY21B\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
DVV10203	4Y21T05.D	50NG BFB	05/21/2019	19:58		
DVV10203	4Y21X41.D	BLK	05/21/2019	20:21	4191414AA	
DVV10203	4Y21C05.D	VSTD050	05/21/2019	20:44	4191414AA	
DVV10203	4Y21S41.D	LCS423	05/21/2019	21:07	4191414AA	
DVV10203	4Y21M41.D	MDL423	05/21/2019	21:29	4191414AA	
DVV10203	4Y21B41.D	VBLK423	05/21/2019	21:52	4191414AA	
DVV10203	4Y21S42.D	1054444	05/21/2019	22:15	4191414AA	
DVV10203	4Y21S43.D	1054443	05/21/2019	22:38	4191414AA	
DVV10203	4Y21S44.D	1053781	05/21/2019	23:00	4191414AA	
DVV10203	4Y21S45.D	1054441	05/21/2019	23:23	4191414AA	
DVV10203	4Y21X45.D	BLK	05/21/2019	23:46	4191414AA	
DVV10203	4Y21S46.D	1054441MS	05/22/2019	00:09	4191414AA	
DVV10203	4Y21S47.D	1054441MSD	05/22/2019	00:32	4191414AA	
DVV10203	4Y21X42.D	BLK	05/22/2019	00:54	4191414AA	
DVV10203	4Y21S48.D	1054442	05/22/2019	01:17	4191414AA	
DVV10203	4Y21S49.D	1053775	05/22/2019	01:40	4191414AA	
DVV10203	4Y21S50.D	1053776	05/22/2019	02:03	4191414AA	
DVV10203	4Y21S51.D	1053777	05/22/2019	02:26	4191414AA	
DVV10203	4Y21S52.D	1053778	05/22/2019	02:48	4191414AA	10
DVV10203	4Y21S53.D	1053779	05/22/2019	03:11	4191414AA	
DVV10203	4Y21S54.D	1053780	05/22/2019	03:34	4191414AA	10
DVV10203	4Y21S72.D	1058216	05/22/2019	03:57	4191415AA	
DVV10203	4Y21S73.D	1058217MS	05/22/2019	04:19	4191415AA	
DVV10203	4Y21S74.D	1058218MSD	05/22/2019	04:42	4191415AA	
DVV10203	4Y21X43.D	BLK	05/22/2019	05:05	4191414AA	
DVV10203	4Y21S75.D	1058215	05/22/2019	05:27	4191415AA	
DVV10203	4Y21S76.D	1058219	05/22/2019	05:50	4191415AA	
DVV10203	4Y21S77.D	1058220	05/22/2019	06:13	4191415AA	10
DVV10203	4Y21S78.D	1058222	05/22/2019	06:35	4191415AA	
DVV10203	4Y21S79.D	1058214	05/22/2019	06:58	4191415AA	
DVV10203	4Y21S80.D	1058214DL	05/22/2019	07:21	4191415AA	10
DVV10203	4Y21S81.D	1057940	05/22/2019	07:43	4191415AA	2

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP23297 **HP #04**

Data Directory Path is - D:\DATA\19MAY22B\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
pth10165	4Y22T10.D	50NG BFB	05/22/2019	19:58		
PTH10165	4Y22x05.D	VBLK426	05/22/2019	20:16	4191422AA	
PTH10165	4Y22C05.D	VSTD150	05/22/2019	20:38	4191422AA	
PTH10165	4Y22S41.D	LCS426	05/22/2019	21:01	4191422AA	
PTH10165	4Y22M05.D	LCS426	05/22/2019	21:24	4191422AA	
PTH10165	4Y22x06.D	VBLK426	05/22/2019	21:47	4191422AA	
PTH10165	4Y22M10.D	MDL050	05/22/2019	22:09	4191422AA	
PTH10165	4Y22B05.D	VBLK426	05/22/2019	22:32	4191422AA	
PTH10165	4Y22S62.D	1063033	05/22/2019	23:16	4191423AA	
PTH10165	4Y22S63.D	1063026	05/22/2019	23:39	4191423AA	
PTH10165	4Y22S64.D	1060395	05/23/2019	00:02	4191423AA	
PTH10165	4Y22S65.D	1060395MS	05/23/2019	00:25	4191423AA	
PTH10165	4Y22S66.D	1060395MSD	05/23/2019	00:47	4191423AA	
PTH10165	4Y22S67.D	1060396	05/23/2019	01:10	4191423AA	
PTH10165	4Y22x84.D	clnblank	05/23/2019	01:33	4191423AA	
PTH10165	4Y22S42.D	1056479	05/23/2019	01:56	4191422AA	
PTH10165	4Y22S43.D	1056657	05/23/2019	02:18	4191422AA	
PTH10165	4Y22S44.D	1056732	05/23/2019	02:41	4191422AA	
PTH10165	4Y22S45.D	1056733	05/23/2019	03:04	4191422AA	
PTH10165	4Y22S46.D	1058233	05/23/2019	03:27	4191422AA	
PTH10165	4Y22S47.D	1056738	05/23/2019	03:50	4191422AA	
PTH10165	4Y22S48.D	1056739MS	05/23/2019	04:12	4191422AA	
PTH10165	4Y22S49.D	1056740MSD	05/23/2019	04:35	4191422AA	
PTH10165	4Y22S50.D	1056477	05/23/2019	04:58	4191422AA	
PTH10165	4Y22S51.D	1056478	05/23/2019	05:21	4191422AA	
PTH10165	4Y22S52.D	1056734	05/23/2019	05:43	4191422AA	
PTH10165	4Y22S53.D	1056735	05/23/2019	06:06	4191422AA	
PTH10165	4Y22S54.D	1056736	05/23/2019	06:29	4191422AA	
PTH10165	4Y22S55.D	1056737	05/23/2019	06:52	4191422AA	
PTH10165	4Y22S56.D	1058231	05/23/2019	07:14	4191422AA	
PTH10165	4Y22S57.D	1058232	05/23/2019	07:37	4191422AA	

Data File: /chem/HP15648.i/19may02i.b/em02t01.d

Date : 02-MAY-2019 11:50

Client ID: BFB FEB05-19

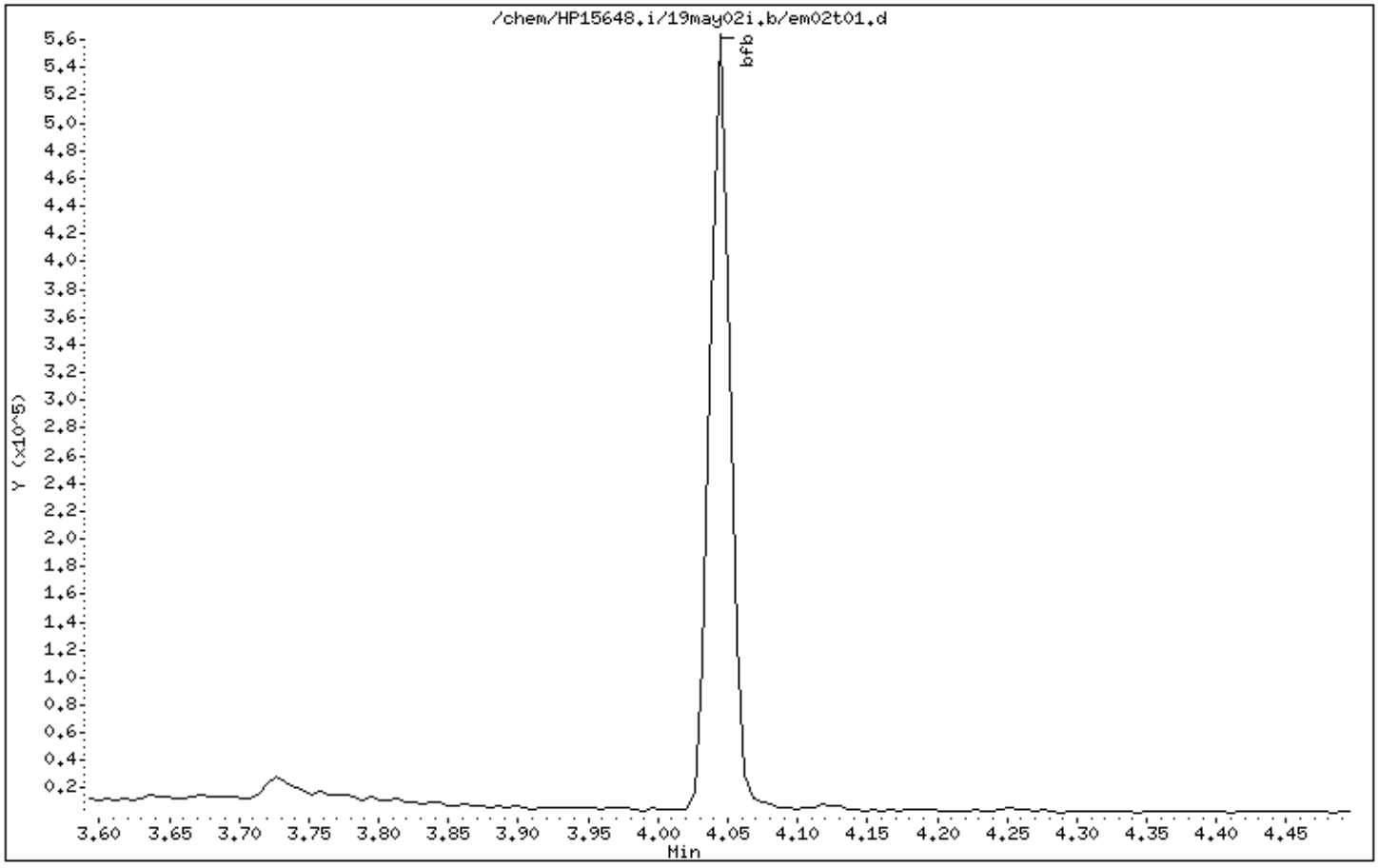
Instrument: HP15648.i

Sample Info: BFB FEB05-19;50ng BFB;1;3;;;;;;

Operator: KAS02648

Column phase: DB-624

Column diameter: 0.18



Digitally signed by Kevin A. Sposito on 05/02/2019 at 13:17.
Target 3.5 esignature user ID: kas02648

Data File: /chem/HP15648.i/19may02i.b/em02t01.d

Date : 02-MAY-2019 11:50

Client ID: BFB FEB05-19

Instrument: HP15648.i

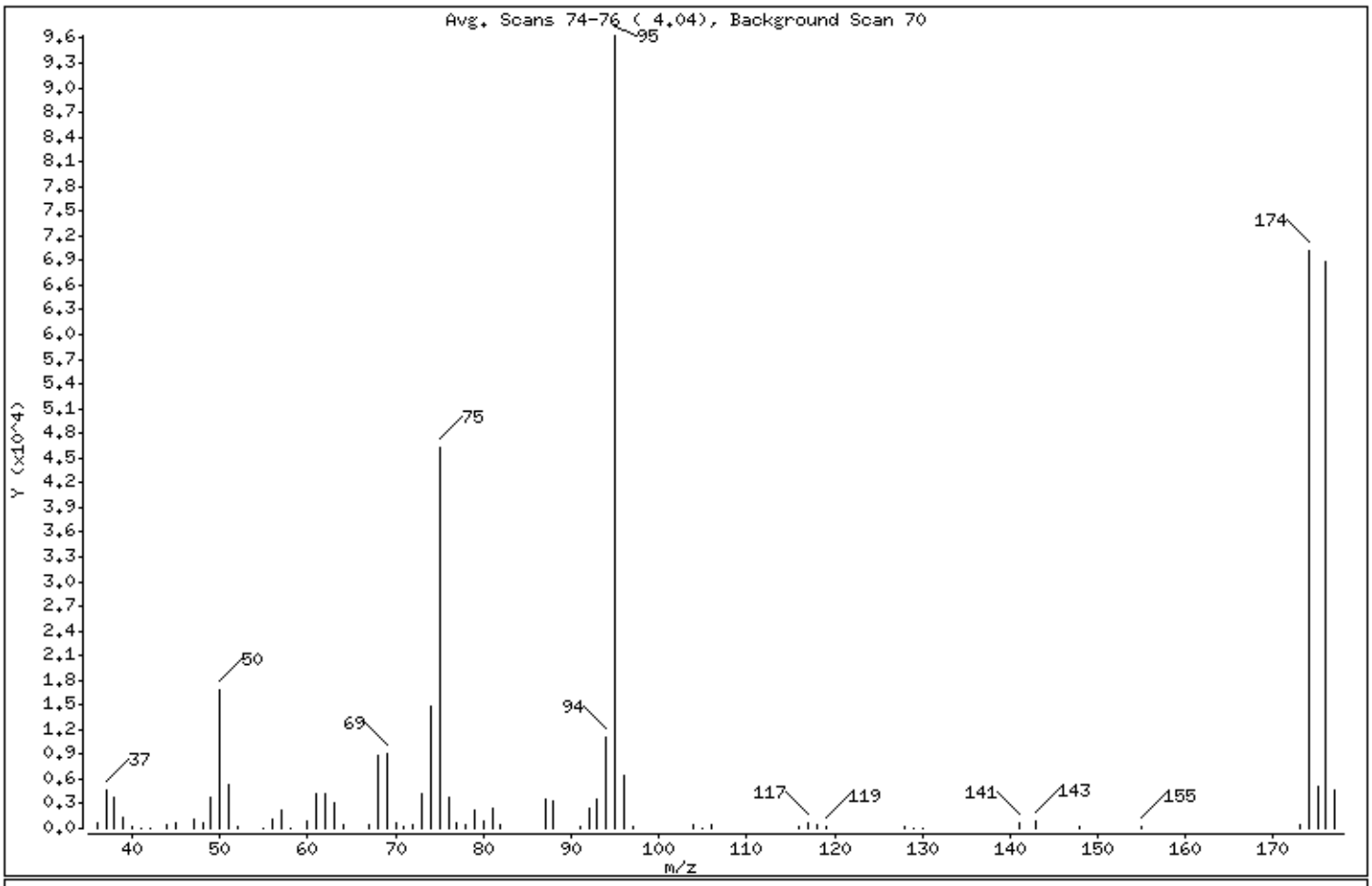
Sample Info: BFB FEB05-19;50ng BFB;1;3;;;;;;

Operator: KAS02648

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.46
75	30.00 - 60.00% of mass 95	48.11
96	5.00 - 9.00% of mass 95	6.61
173	Less than 2.00% of mass 174	0.52 (0.71)
174	50.00 - 100.00% of mass 95	72.95
175	5.00 - 9.00% of mass 174	5.31 (7.29)
176	95.00 - 101.00% of mass 174	71.42 (97.90)
177	5.00 - 9.00% of mass 176	4.77 (6.68)

Digitally signed by Kevin A. Sposito on 05/02/2019 at 13:17.
Target 3.5 esignature user ID: kas02648

Date : 02-MAY-2019 11:50

Client ID: BFB FEB05-19 Instrument: HP15648.i

Sample Info: BFB FEB05-19;50ng BFB;1;3;;;;;;

Operator: KAS02648

Column phase: DB-624 Column diameter: 0.18

Data File: em02t01.d
Spectrum: Avg. Scans 74-76 (4.04), Background Scan 70
Location of Maximum: 95.00
Number of points: 68

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	709	58.00	95	79.00	2288	118.00	348
37.00	4561	60.00	828	80.00	814	119.00	285
38.00	3814	61.00	4111	81.00	2445	128.00	232
39.00	1311	62.00	4111	82.00	496	129.00	90
40.00	178	63.00	3165	87.00	3521	130.00	97
41.00	70	64.00	350	88.00	3413	141.00	749
42.00	30	67.00	389	91.00	231	143.00	780
44.00	401	68.00	8818	92.00	2517	148.00	206
45.00	730	69.00	9085	93.00	3469	155.00	115
47.00	1065	70.00	584	94.00	10989	173.00	499
48.00	589	71.00	205	95.00	96312	174.00	70256
49.00	3662	72.00	519	96.00	6367	175.00	5119
50.00	16816	73.00	4109	97.00	316	176.00	68784
51.00	5303	74.00	14838	104.00	356	177.00	4594
52.00	306	75.00	46336	105.00	90		
55.00	25	76.00	3854	106.00	357		
56.00	1165	77.00	614	116.00	202		
57.00	2120	78.00	447	117.00	610		

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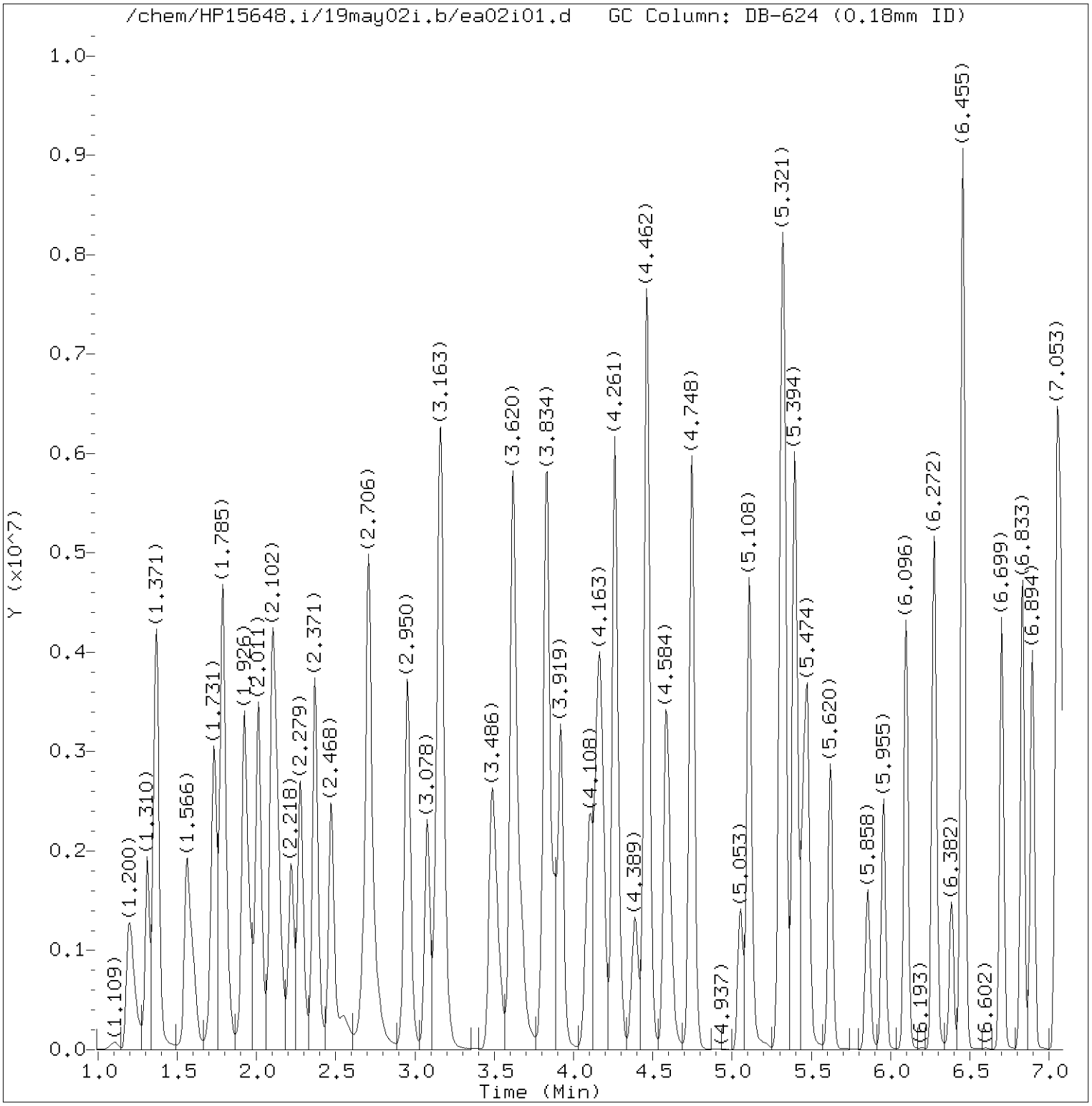
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

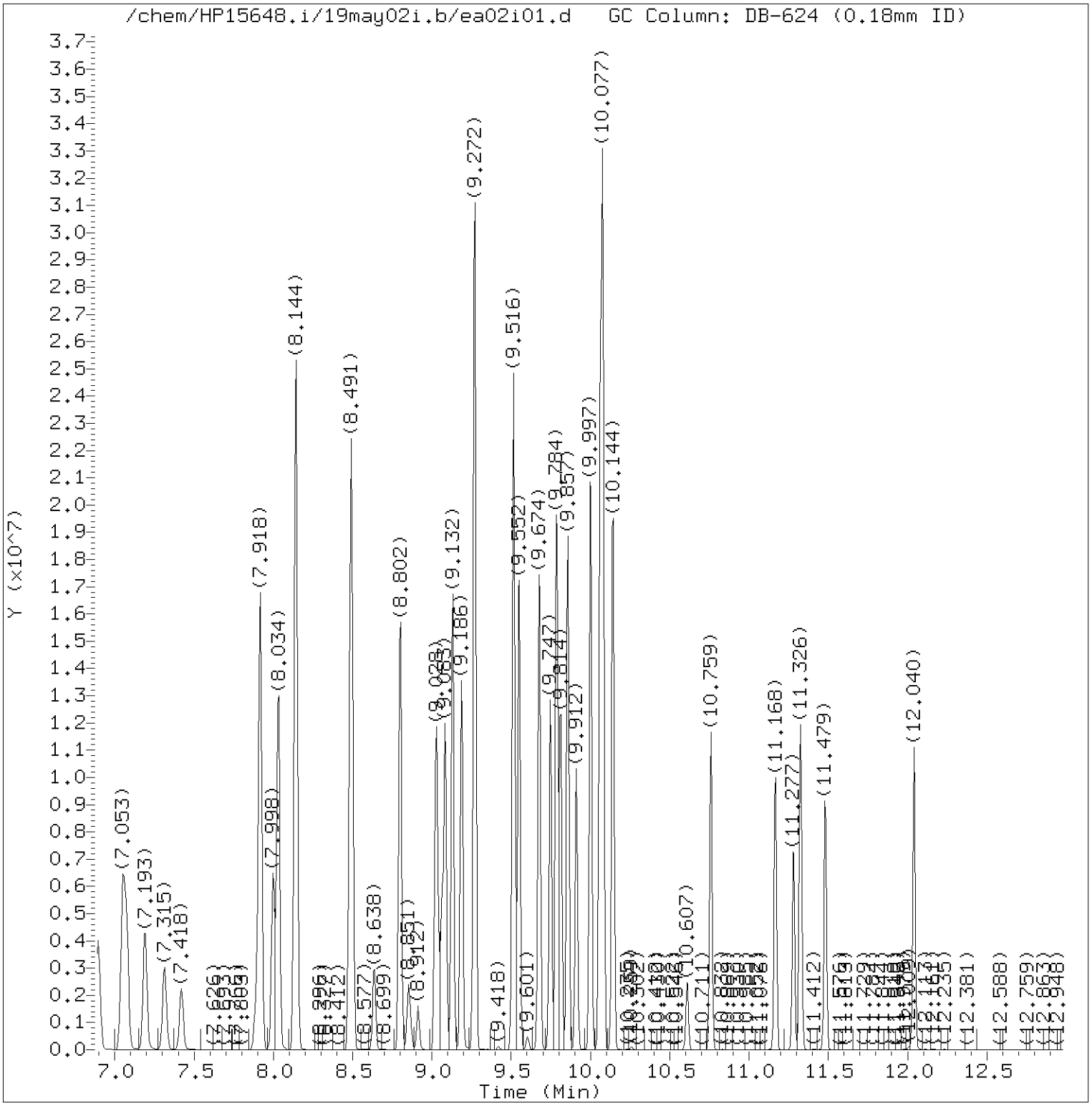
Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:18 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:18 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:18 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.200	85	2906166	296.953
4) Chloromethane	(2)	1.310	50	2254425	283.059
5) 1,3-Butadiene	(2)	1.365	39	1722833	287.746
6) Vinyl Chloride	(2)	1.377	62	2225616	292.360
8) Bromomethane	(2)	1.560	94	1574434	274.660
9) Chloroethane	(2)	1.596	64	1211026	279.405
10) Dichlorofluoromethane	(2)	1.731	67	3100315	279.549
11) n-Pentane	(2)	1.785	43	2705921	304.357
12) Trichlorofluoromethane	(2)	1.785	101	3295520	304.517
14) Ethyl ether	(2)	1.920	59	1319214	292.557
15) Freon 123a	(2)	1.932	67	1851021	290.469
16) Acrolein	(1)	2.011	56	4215944	2804.809
17) 1,1-Dichloroethene	(2)	2.102	96	1379201	309.496
17) 1,1-Dichloroethene	(2)	2.102	63	719687	304.636
18) Acetone	(1)	2.121	58	356146	569.259
19) Freon 113	(2)	2.127	101	1597407	323.716
21) 2-Propanol	(1)	2.218	45	500270	1338.397
22) Methyl Iodide	(2)	2.218	142	2549716	305.336
23) Carbon Disulfide	(2)	2.279	76	4652656	307.807
25) Allyl Chloride	(2)	2.371	41	2482871	286.679
27) Methyl Acetate	(2)	2.377	43	1236385	290.739
28) Methylene Chloride	(2)	2.474	84	1486387	292.787
29)*t-Butyl alcohol-d10	(1)	2.487	65	182177M	250.000
30) t-Butyl alcohol	(1)	2.554	59	909529	1335.569
31) Acrylonitrile	(2)	2.669	53	741004	286.565
32) trans-1,2-Dichloroethene	(2)	2.706	96	1518687	302.775
33) Methyl Tertiary Butyl Ether	(2)	2.712	73	4173936	279.102
34) n-Hexane	(2)	2.950	57	2697938	306.945
36) 1,1-Dichloroethane	(2)	3.078	63	2860856	304.437
38) di-Isopropyl ether	(2)	3.145	45	4855550	293.622
39) 2-Chloro-1,3-butadiene	(2)	3.163	53	2793933	311.363
40) Ethyl t-butyl ether	(2)	3.486	59	4523242	277.283
42) cis-1,2-Dichloroethene	(2)	3.614	96	1692007	300.230
44) 2-Butanone	(2)	3.620	43	1869810	536.703
43) 1,2-Dichloroethene (Total)	(2)		96	3210694	603.005
45) 2,2-Dichloropropane	(2)	3.627	77	2548114	307.331
47) Propionitrile	(1)	3.675	54	1382996	1503.291
48) Methacrylonitrile	(2)	3.828	67	2056836	740.790

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:18 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.840	128	855897	305.774
50) Tetrahydrofuran	(1)	3.883	71	542274	562.427
51) Chloroform	(2)	3.919	83	2723444	304.700
52)$Dibromofluoromethane	(2)	4.072	113	260383	50.482
52)$Dibromofluoromethane	(2)	4.072	111	265769	50.195
53) 1,1,1-Trichloroethane	(2)	4.108	97	2563048	309.899
54) Cyclohexane	(2)	4.163	56	3248354	319.779
54) Cyclohexane	(2)	4.163	84	2813078	322.287
54) Cyclohexane	(2)	4.163	69	1014470	305.895
55) 1,1-Dichloropropene	(2)	4.261	75	2338503	318.889
56) Carbon Tetrachloride	(2)	4.267	117	2283316	324.568
58) Isobutyl Alcohol	(1)	4.383	41	802638	3471.480
57)$1,2-Dichloroethane-d4	(2)	4.395	102	65262	50.139
57)$1,2-Dichloroethane-d4	(2)	4.395	65	332626	50.350
57)$1,2-Dichloroethane-d4	(2)	4.401	104	41667	49.931
60) Benzene	(2)	4.462	78	6650669	308.857
61) 1,2-Dichloroethane	(2)	4.474	62	2144855	296.564
61) 1,2-Dichloroethane	(2)	4.474	98	186290	294.722
65) t-Amyl methyl ether	(2)	4.584	73	4351085	268.981
66)*Fluorobenzene	(2)	4.736	96	1109741	50.000
67) n-Heptane	(2)	4.748	43	2729213	289.696
69) n-Butanol	(1)	5.053	56	1499951	7500.429
71) Trichloroethene	(2)	5.108	95	1712366	315.254
73) Methylcyclohexane	(2)	5.315	83	3579502	316.487
73) Methylcyclohexane	(2)	5.315	98	1660753	319.326
74) 1,2-Dichloropropane	(2)	5.334	63	1672353	312.157
75) Dibromomethane	(2)	5.449	93	985591	307.313
77) Methyl Methacrylate	(2)	5.474	69	1453690	297.605
76) 1,4-Dioxane	(1)	5.474	88	206550M	3670.170
79) Bromodichloromethane	(2)	5.620	83	2100224	314.772
80) 2-Nitropropane	(2)	5.858	41	1226974	554.888
81) 2-Chloroethyl Vinyl Ether	(2)	5.955	63	1266127	306.703
82) cis-1,3-Dichloropropene	(2)	6.096	75	2756286	317.159
83) 4-Methyl-2-pentanone	(2)	6.272	43	4163760	556.513
84)$Toluene-d8	(3)	6.382	98	1132255	49.798
84)$Toluene-d8	(3)	6.382	100	733116	50.159
89) Toluene	(3)	6.455	92	4316378	310.174
90) trans-1,3-Dichloropropene	(3)	6.699	75	2593259	311.806

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:18 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropene (total)	(3)		100	5349545	628.966
92) Ethyl Methacrylate	(3)	6.833	69	2679715	302.245
93) 1,1,2-Trichloroethane	(3)	6.894	97	1424846	300.831
94) Tetrachloroethene	(3)	7.053	166	1812324	320.314
95) 1,3-Dichloropropane	(3)	7.077	76	2515958	302.236
97) 2-Hexanone	(3)	7.187	43	3013219	509.766
102) 1-Chlorohexane	(3)	7.315	91	147486	306.684
98) Dibromochloromethane	(3)	7.315	129	1644236	321.580
100) 1,2-Dibromoethane	(3)	7.418	107	1521779	301.980
101)*Chlorobenzene-d5	(3)	7.888	117	837172	50.000
103) Chlorobenzene	(3)	7.912	112	4738727	307.957
104) 1,1,1,2-Tetrachloroethane	(3)	7.998	131	1643534	314.487
105) Ethylbenzene	(3)	8.034	91	8537750	310.123
107) m+p-Xylene	(3)	8.144	106	6712223	626.314
109) Xylene (Total)	(3)		106	9985127	939.248
108) o-Xylene	(3)	8.485	106	3272904	312.934
110) Styrene	(3)	8.498	104	5559059	321.800
111) Bromoform	(3)	8.638	173	1145519	336.078
112) Isopropylbenzene	(3)	8.802	105	8623821	309.909
113) Cyclohexanone	(1)	8.851	55	798572	3766.754
115)$4-Bromofluorobenzene	(3)	8.912	95	439486	50.281
115)$4-Bromofluorobenzene	(3)	8.912	174	328166	50.106
116) Bromobenzene	(4)	9.028	156	1964427	302.948
117) 1,1,2,2-Tetrachloroethane	(4)	9.034	83	2155898	286.474
118) 1,2,3-Trichloropropane	(4)	9.065	110	654486	286.966
119) trans-1,4-Dichloro-2-butene	(4)	9.083	53	1838046	743.236
120) n-Propylbenzene	(4)	9.132	91	9917479	290.107
121) 2-Chlorotoluene	(4)	9.186	126	2009851	298.616
123) 1,3,5-Trimethylbenzene	(4)	9.272	105	7415968	299.029
122) 4-Chlorotoluene	(4)	9.272	126	2091553	303.153
125) tert-Butylbenzene	(4)	9.516	134	1671548	303.224
126) Pentachloroethane	(4)	9.522	167	1308344	318.796
127) 1,2,4-Trimethylbenzene	(4)	9.552	105	7553186	295.782
128) sec-Butylbenzene	(4)	9.674	105	9210624	292.759
130) 1,3-Dichlorobenzene	(4)	9.747	146	3858840	305.366
131) p-Isopropyltoluene	(4)	9.784	119	8172512	295.288
132)*1,4-Dichlorobenzene-d4	(4)	9.796	152	465360	50.000
134) 1,4-Dichlorobenzene	(4)	9.814	146	3872626	299.582

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$ = Compound is a surrogate standard.

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on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:18 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	9.857	105	8048173	295.983
136) Benzyl Chloride	(4)	9.912	91	5388006	306.876
137) 1,3-Diethylbenzene	(4)	10.003	119	5257249	301.675
138) 1,4-Diethylbenzene	(4)	10.058	119	5603342	301.763
140) n-Butylbenzene	(4)	10.077	92	4108136	302.228
139) 1,2-Dichlorobenzene	(4)	10.077	146	3663766	302.854
142) Diethylbenzene (total)	(4)		100	15129418	902.648
141) 1,2-Diethylbenzene	(4)	10.144	119	4268827	299.210
143) 1,2-Dibromo-3-chloropropane	(4)	10.607	75	482596	279.881
145) 1,3,5-Trichlorobenzene	(4)	10.759	180	2608984	293.280
147) 1,2,4-Trichlorobenzene	(4)	11.168	180	2251660	283.549
148) Hexachlorobutadiene	(4)	11.284	225	964707	283.411
149) Naphthalene	(4)	11.326	128	6856969	261.922
150) 1,2,3-Trichlorobenzene	(4)	11.479	180	2018371	269.197
151) 2-Methylnaphthalene	(4)	12.040	142	3748601	226.595

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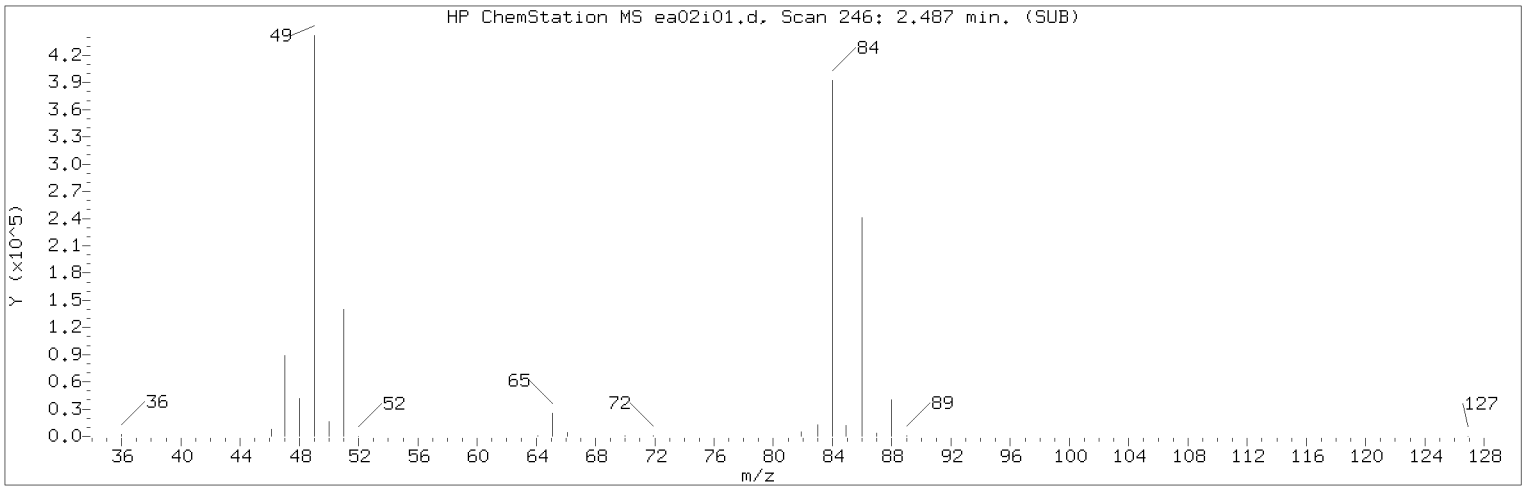
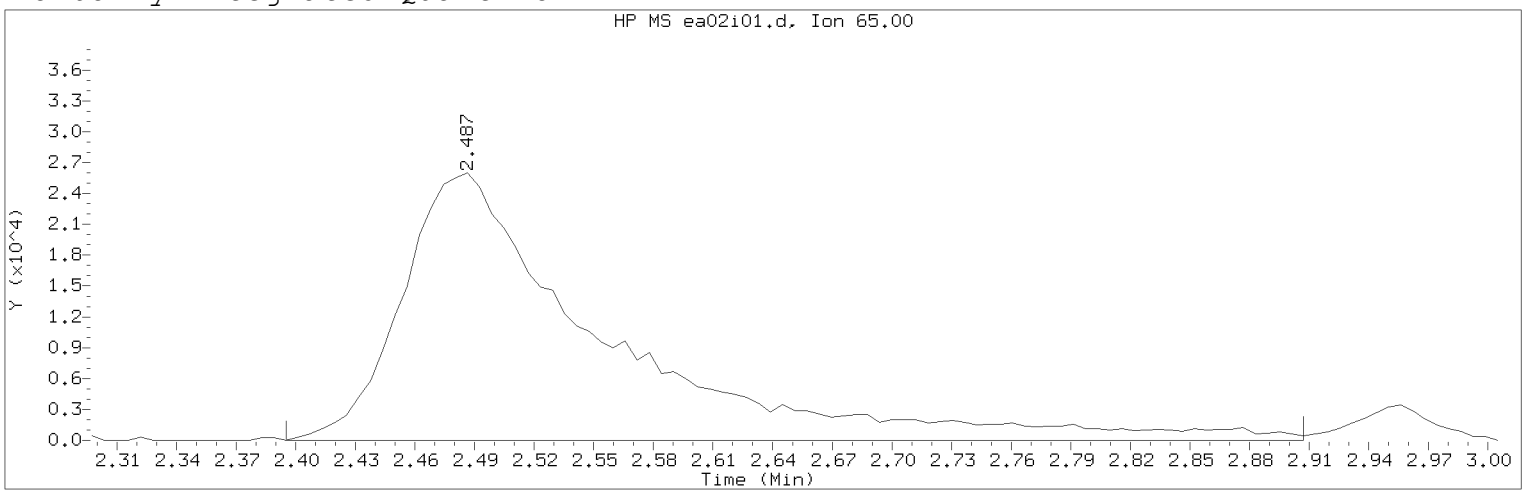
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:18 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

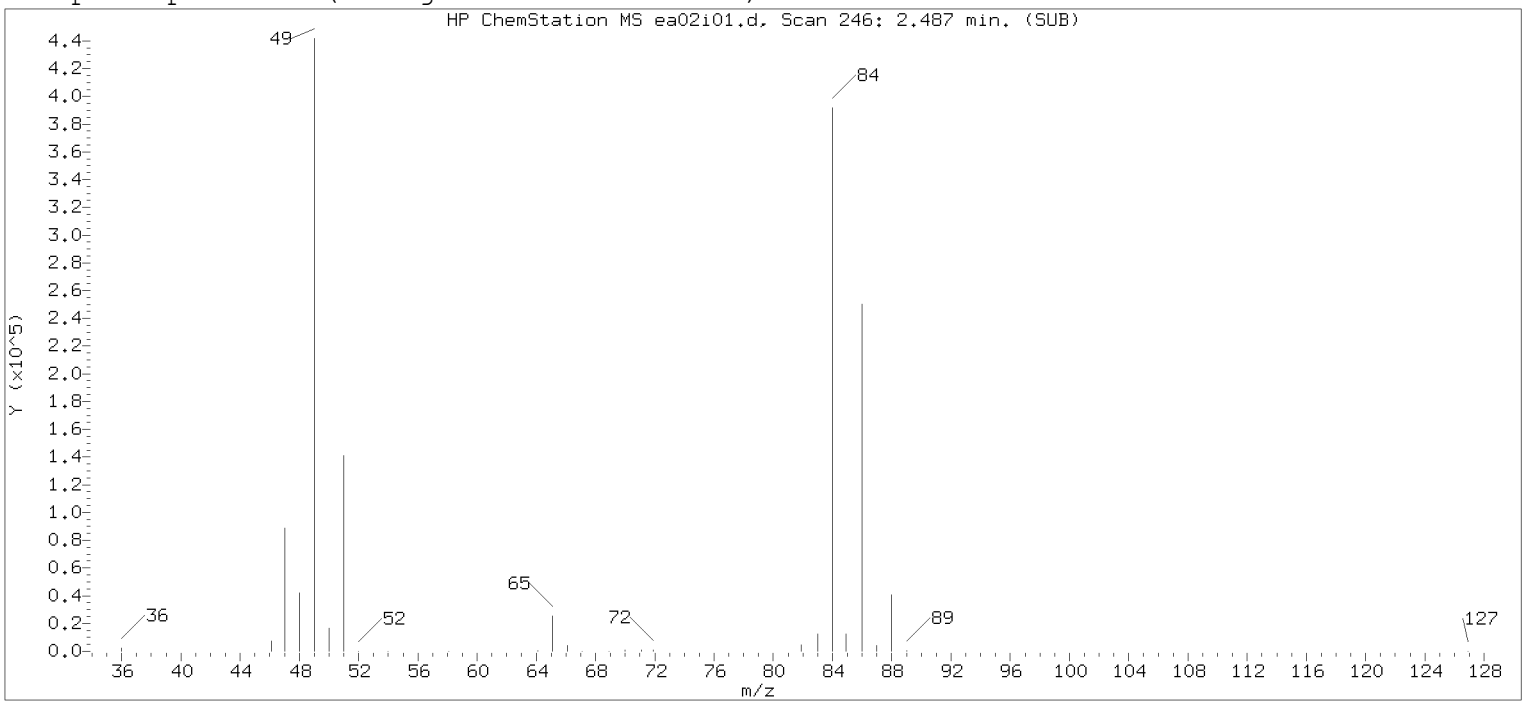
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 246
Retention Time (minutes): 2.487
Quant Ion : 65.00
Area (flag) : 182177M
On-Column Amount (ng) : 250.0000
Integration start scan : 230 Integration stop scan: 314
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

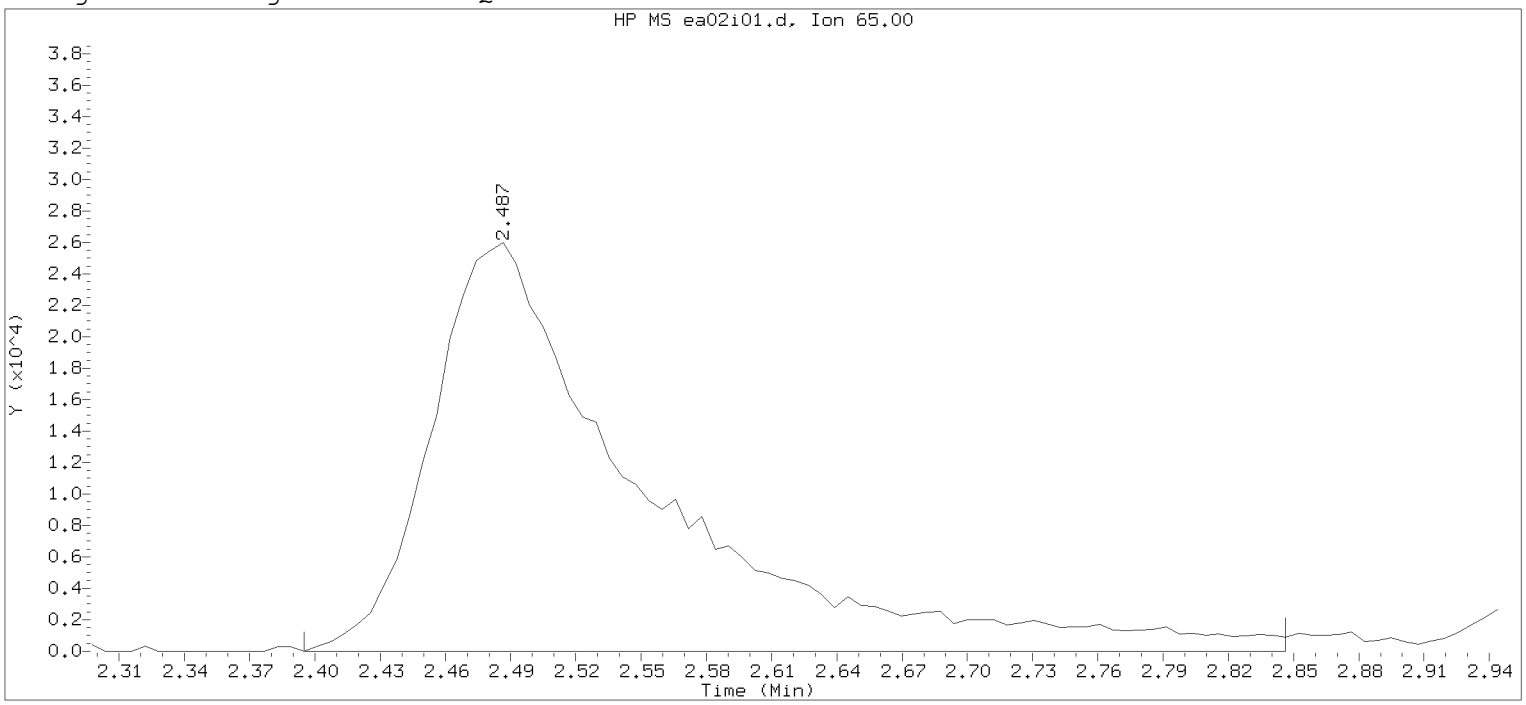
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:18 Analyst ID: KAS02648

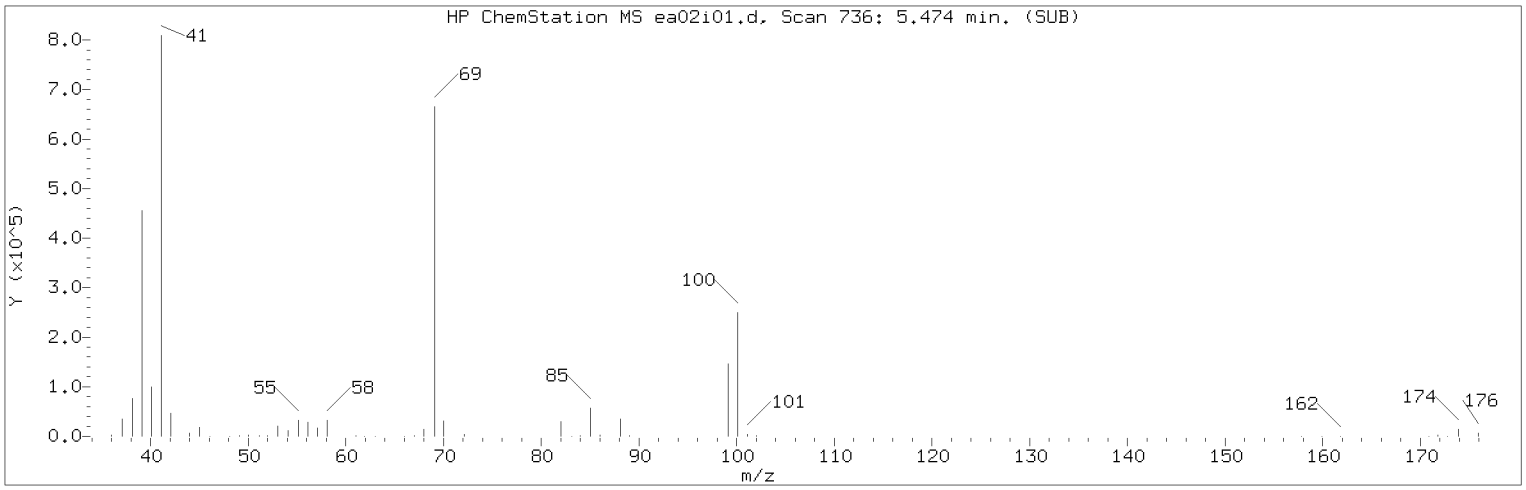
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 12:34
Date, time and analyst ID of latest file update: 02-May-2019 12:34 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

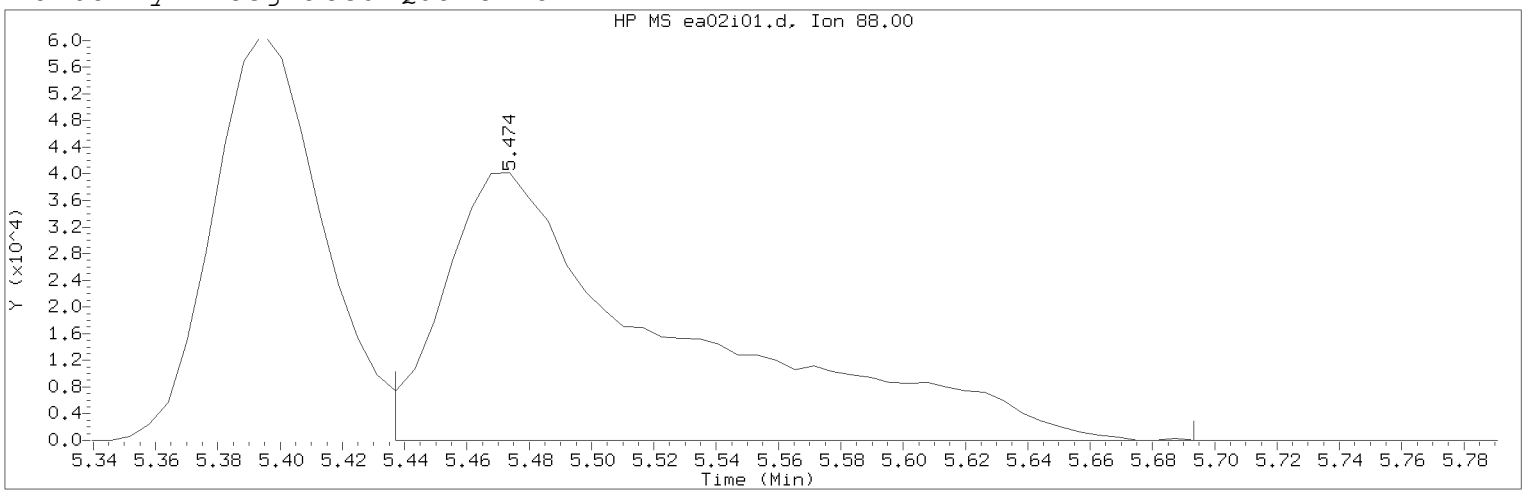
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 246
Retention Time (minutes): 2.487
Quant Ion : 65.00
Area : 178841
On-column Amount (ng) : 250.0000
Integration start scan : 230 Integration stop scan: 304
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:23.
Target 3.5 esignature user: kasposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:18 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

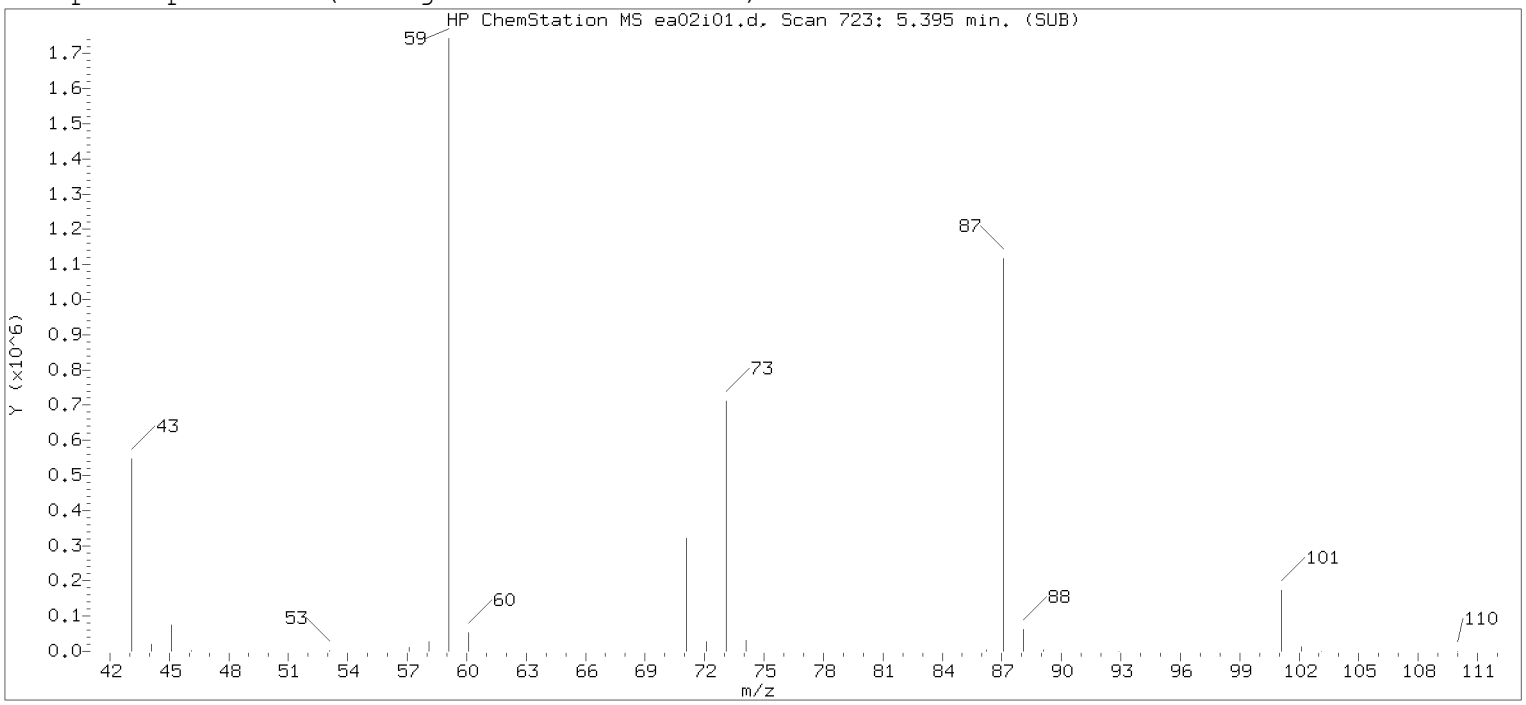
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 736
Retention Time (minutes): 5.474
Quant Ion : 88.00
Area (flag) : 206550M
On-Column Amount (ng) : 3670.1696
Integration start scan : 729 Integration stop scan: 771
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

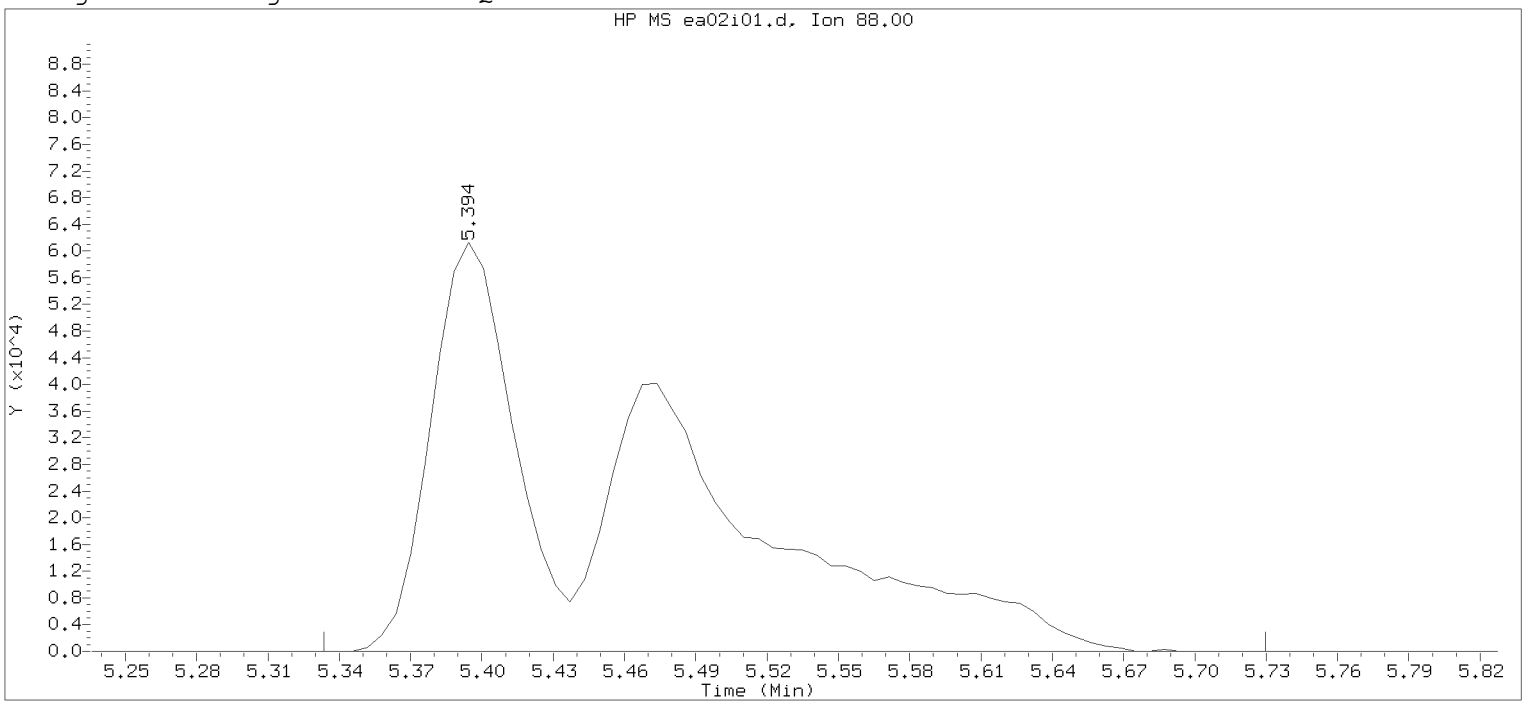
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:18 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 12:34
Date, time and analyst ID of latest file update: 02-May-2019 12:34 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 723		
Retention Time (minutes)	: 5.394		
Quant Ion	: 88.00		
Area	: 353084		
On-column Amount (ng)	: 6582.2441		
Integration start scan	: 712	Integration stop scan:	777
Y at integration start	: 0	Y at integration end:	0

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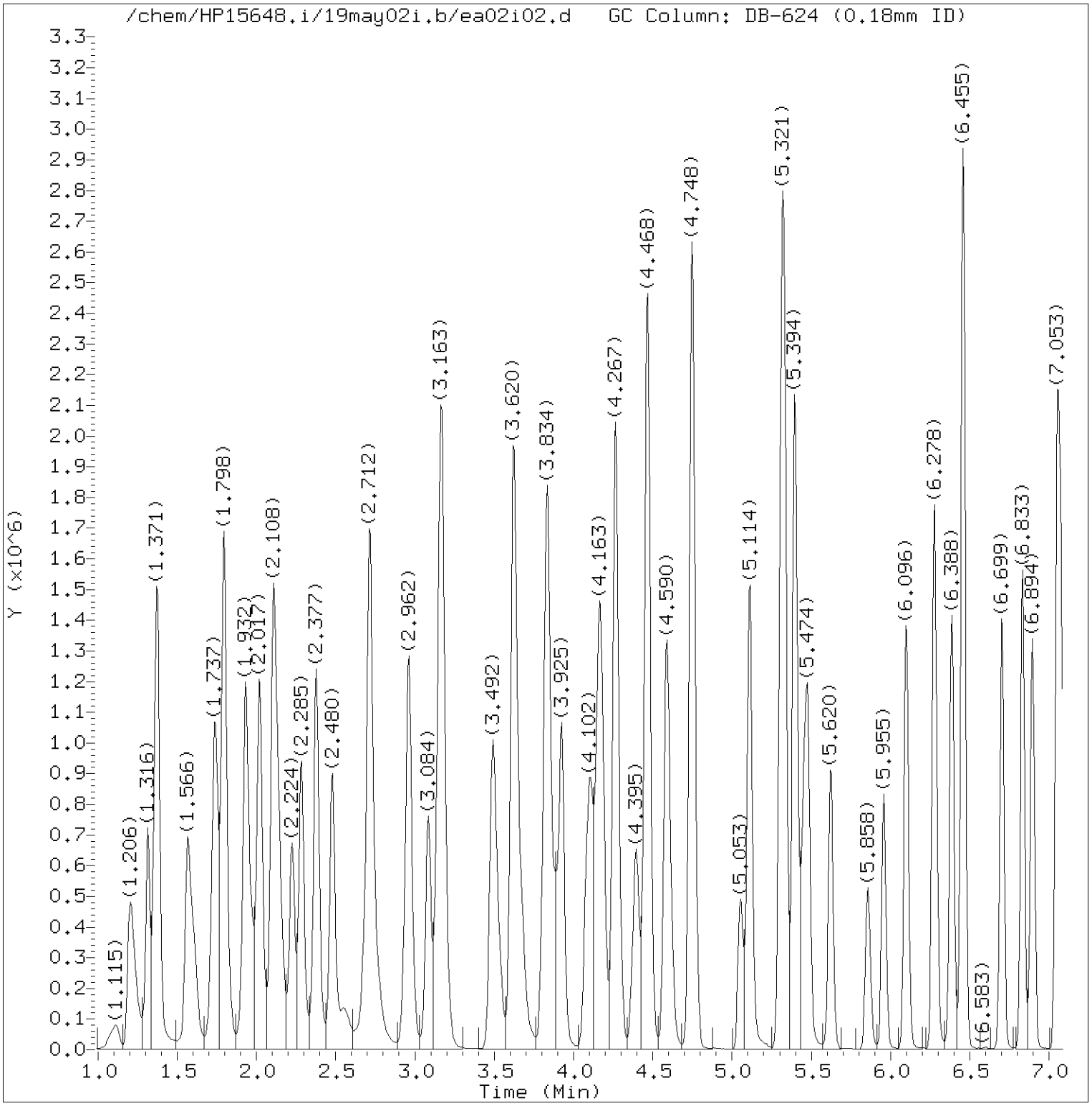
Target 3.5 esignature user: kevin.sposito



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i02.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:38 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

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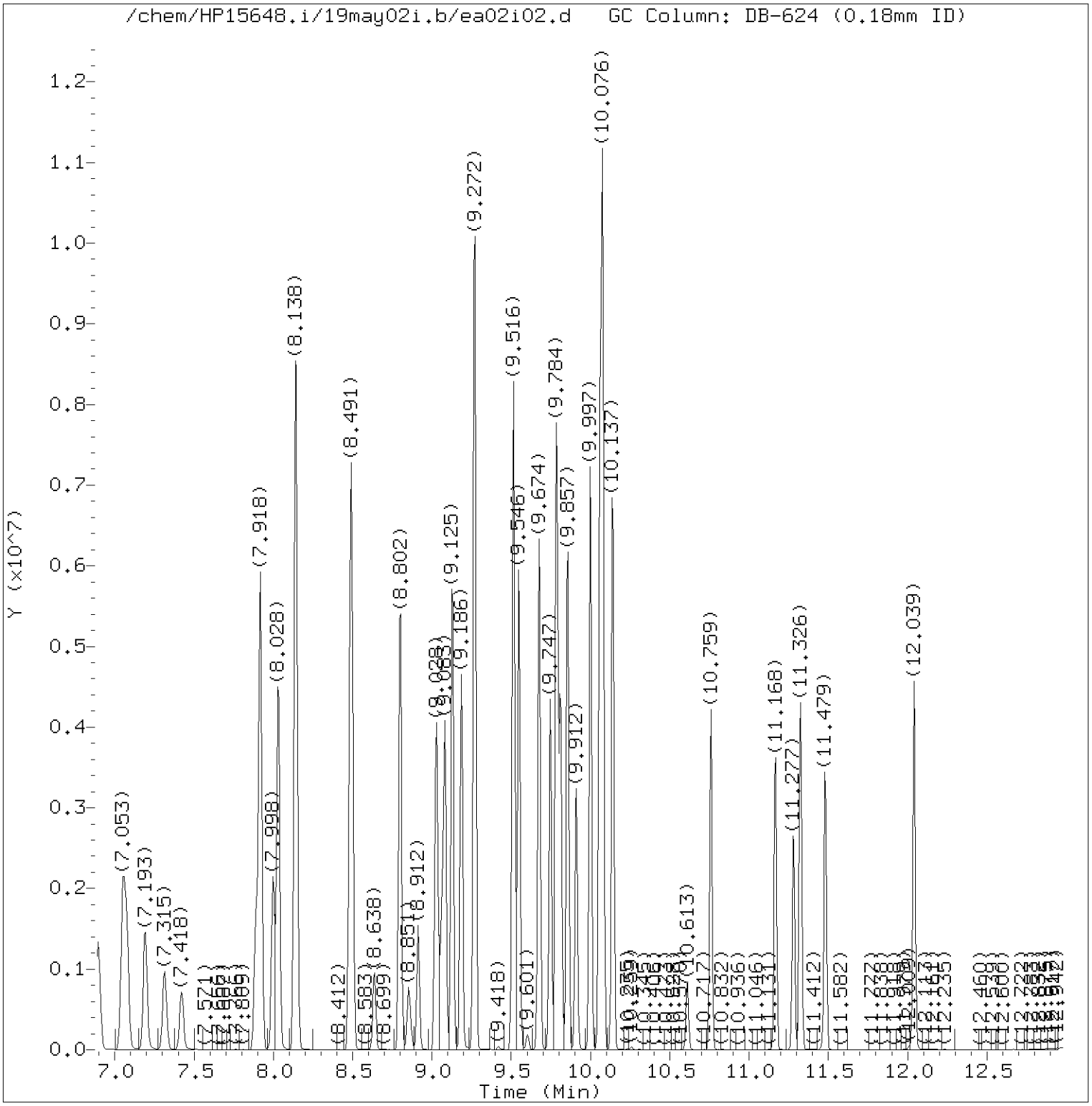
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i02.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:38 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

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on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i02.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:38 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.206	85	1057497	109.792
4) Chloromethane	(2)	1.316	50	796238	101.580
5) 1,3-Butadiene	(2)	1.365	39	606352	102.900
6) Vinyl Chloride	(2)	1.377	62	812724	108.476
8) Bromomethane	(2)	1.566	94	571455	101.292
9) Chloroethane	(2)	1.602	64	443073	103.867
10) Dichlorofluoromethane	(2)	1.737	67	1098676	100.657
12) Trichlorofluoromethane	(2)	1.791	101	1183931	111.157
11) n-Pentane	(2)	1.798	43	954822	109.123
14) Ethyl ether	(2)	1.932	59	454502	102.413
15) Freon 123a	(2)	1.938	67	639936	102.035
16) Acrolein	(1)	2.017	56	1495072	998.097
17) 1,1-Dichloroethene	(2)	2.108	96	468803	106.891
17) 1,1-Dichloroethene	(2)	2.108	63	246840	106.164
18) Acetone	(1)	2.127	58	122701	196.803
19) Freon 113	(2)	2.133	101	556250	114.536
22) Methyl Iodide	(2)	2.224	142	870581	105.930
21) 2-Propanol	(1)	2.230	45	183041M	491.395
23) Carbon Disulfide	(2)	2.285	76	1579593	106.181
25) Allyl Chloride	(2)	2.377	41	855089	100.317
27) Methyl Acetate	(2)	2.383	43	421780	100.777
28) Methylene Chloride	(2)	2.480	84	511191	102.312
29)*t-Butyl alcohol-d10	(1)	2.486	65	181548	250.000
30) t-Butyl alcohol	(1)	2.554	59	328046	483.378
31) Acrylonitrile	(2)	2.675	53	259638	102.022
33) Methyl Tertiary Butyl Ether	(2)	2.712	73	1483236	100.774
32) trans-1,2-Dichloroethene	(2)	2.718	96	521497	105.640
34) n-Hexane	(2)	2.962	57	978189	113.077
36) 1,1-Dichloroethane	(2)	3.084	63	972798	105.184
38) di-Isopropyl ether	(2)	3.157	45	1691701	103.944
39) 2-Chloro-1,3-butadiene	(2)	3.169	53	946251	107.147
40) Ethyl t-butyl ether	(2)	3.492	59	1623442	101.119
42) cis-1,2-Dichloroethene	(2)	3.620	96	578292	104.261
43) 1,2-Dichloroethene (Total)	(2)		96	1099789	209.901
44) 2-Butanone	(2)	3.626	43	636859	185.739
45) 2,2-Dichloropropane	(2)	3.633	77	873799	107.084
47) Propionitrile	(1)	3.675	54	466126	508.426
48) Methacrylonitrile	(2)	3.828	67	689988	252.500

M = Compound was manually integrated.
* = Compound is an internal standard.

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Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i02.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:38 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.846	128	287223	104.261
50) Tetrahydrofuran	(1)	3.883	71	185275	192.826
51) Chloroform	(2)	3.925	83	918513	104.415
52)$Dibromofluoromethane	(2)	4.078	113	254291	50.093
52)$Dibromofluoromethane	(2)	4.078	111	261398	50.163
53) 1,1,1-Trichloroethane	(2)	4.108	97	869571	106.830
54) Cyclohexane	(2)	4.163	56	1125895	112.618
54) Cyclohexane	(2)	4.169	84	985185	114.684
54) Cyclohexane	(2)	4.169	69	356298	109.162
55) 1,1-Dichloropropene	(2)	4.261	75	787701	109.141
56) Carbon Tetrachloride	(2)	4.273	117	767253	110.816
58) Isobutyl Alcohol	(1)	4.389	41	265063	1150.393
57)$1,2-Dichloroethane-d4	(2)	4.401	102	63472	49.548
57)$1,2-Dichloroethane-d4	(2)	4.401	65	323406	49.741
57)$1,2-Dichloroethane-d4	(2)	4.395	104	41040	49.970
60) Benzene	(2)	4.462	78	2229034	105.180
61) 1,2-Dichloroethane	(2)	4.474	62	712169	100.053
61) 1,2-Dichloroethane	(2)	4.474	98	62130	99.873
65) t-Amyl methyl ether	(2)	4.590	73	1606177	100.888
66)*Fluorobenzene	(2)	4.742	96	1092189M	50.000
67) n-Heptane	(2)	4.754	43	993450	107.146
69) n-Butanol	(1)	5.053	56	502203	2519.941
71) Trichloroethene	(2)	5.108	95	572515	107.096
73) Methylcyclohexane	(2)	5.315	83	1212678	108.944
73) Methylcyclohexane	(2)	5.315	98	555126	108.454
74) 1,2-Dichloropropane	(2)	5.333	63	558434	105.911
75) Dibromomethane	(2)	5.449	93	326866	103.557
76) 1,4-Dioxane	(1)	5.468	88	71800M	1280.228
77) Methyl Methacrylate	(2)	5.480	69	480609	99.973
79) Bromodichloromethane	(2)	5.620	83	689767	105.041
80) 2-Nitropropane	(2)	5.858	41	405279	186.229
81) 2-Chloroethyl Vinyl Ether	(2)	5.955	63	422968	104.105
82) cis-1,3-Dichloropropene	(2)	6.096	75	907962	106.156
83) 4-Methyl-2-pentanone	(2)	6.278	43	1418981	192.704
84)$Toluene-d8	(3)	6.388	98	1110379	50.431
84)$Toluene-d8	(3)	6.388	100	713420	50.406
89) Toluene	(3)	6.455	92	1435215	106.504
90) trans-1,3-Dichloropropene	(3)	6.699	75	843315	104.711

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i02.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:38 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropene (total)	(3)		100	1751277	210.867
92) Ethyl Methacrylate	(3)	6.833	69	892672	103.974
93) 1,1,2-Trichloroethane	(3)	6.894	97	472271	102.969
94) Tetrachloroethene	(3)	7.053	166	607143	110.814
95) 1,3-Dichloropropane	(3)	7.077	76	837368	103.877
97) 2-Hexanone	(3)	7.193	43	1017793	177.812
102) 1-Chlorohexane	(3)	7.315	91	48225	103.556
98) Dibromochloromethane	(3)	7.315	129	534422	107.937
100) 1,2-Dibromoethane	(3)	7.418	107	501631	102.795
101)*Chlorobenzene-d5	(3)	7.888	117	810686	50.000
103) Chlorobenzene	(3)	7.912	112	1571499	105.464
104) 1,1,1,2-Tetrachloroethane	(3)	7.998	131	543015	107.300
105) Ethylbenzene	(3)	8.028	91	2882952	108.141
107) m+p-Xylene	(3)	8.144	106	2244615	216.287
109) Xylene (Total)	(3)		106	3332431	323.695
108) o-Xylene	(3)	8.485	106	1087816	107.408
110) Styrene	(3)	8.497	104	1828710	109.318
111) Bromoform	(3)	8.638	173	362358	109.784
112) Isopropylbenzene	(3)	8.802	105	2977700	110.504
113) Cyclohexanone	(1)	8.851	55	254890	1206.446
115)$4-Bromofluorobenzene	(3)	8.912	95	426075	50.339
115)$4-Bromofluorobenzene	(3)	8.912	174	320832	50.586
116) Bromobenzene	(4)	9.028	156	645162	105.644
117) 1,1,2,2-Tetrachloroethane	(4)	9.034	83	714863	100.861
118) 1,2,3-Trichloropropane	(4)	9.064	110	218490	101.720
119) trans-1,4-Dichloro-2-butene	(4)	9.083	53	601767	258.370
120) n-Propylbenzene	(4)	9.125	91	3510878	109.048
121) 2-Chlorotoluene	(4)	9.186	126	679828	107.249
123) 1,3,5-Trimethylbenzene	(4)	9.272	105	2539386	108.722
122) 4-Chlorotoluene	(4)	9.272	126	695726	107.072
125) tert-Butylbenzene	(4)	9.516	134	574483	110.654
126) Pentachloroethane	(4)	9.522	167	420036	108.673
127) 1,2,4-Trimethylbenzene	(4)	9.546	105	2584177	107.450
128) sec-Butylbenzene	(4)	9.674	105	3346526	112.943
130) 1,3-Dichlorobenzene	(4)	9.747	146	1283786	107.870
131) p-Isopropyltoluene	(4)	9.784	119	2918688	111.975
132)*1,4-Dichlorobenzene-d4	(4)	9.796	152	438274	50.000
134) 1,4-Dichlorobenzene	(4)	9.814	146	1289063	105.883

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i02.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:38 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135)	1,2,3-Trimethylbenzene	(4)	9.857	105	2715906	106.054
136)	Benzyl Chloride	(4)	9.912	91	1770534	107.074
137)	1,3-Diethylbenzene	(4)	9.997	119	1766150	107.610
138)	1,4-Diethylbenzene	(4)	10.058	119	1874793	107.205
139)	1,2-Dichlorobenzene	(4)	10.076	146	1212029	106.381
140)	n-Butylbenzene	(4)	10.076	92	1447719	113.088
141)	1,2-Diethylbenzene	(4)	10.137	119	1432531	106.614
142)	Diethylbenzene (total)	(4)		100	5073474	321.429
143)	1,2-Dibromo-3-chloropropane	(4)	10.607	75	166262	102.383
145)	1,3,5-Trichlorobenzene	(4)	10.759	180	917160	109.471
147)	1,2,4-Trichlorobenzene	(4)	11.168	180	802499	107.303
148)	Hexachlorobutadiene	(4)	11.284	225	356785	111.294
149)	Naphthalene	(4)	11.326	128	2515193	102.013
150)	1,2,3-Trichlorobenzene	(4)	11.479	180	753037	106.642
151)	2-Methylnaphthalene	(4)	12.039	142	1549061	99.425

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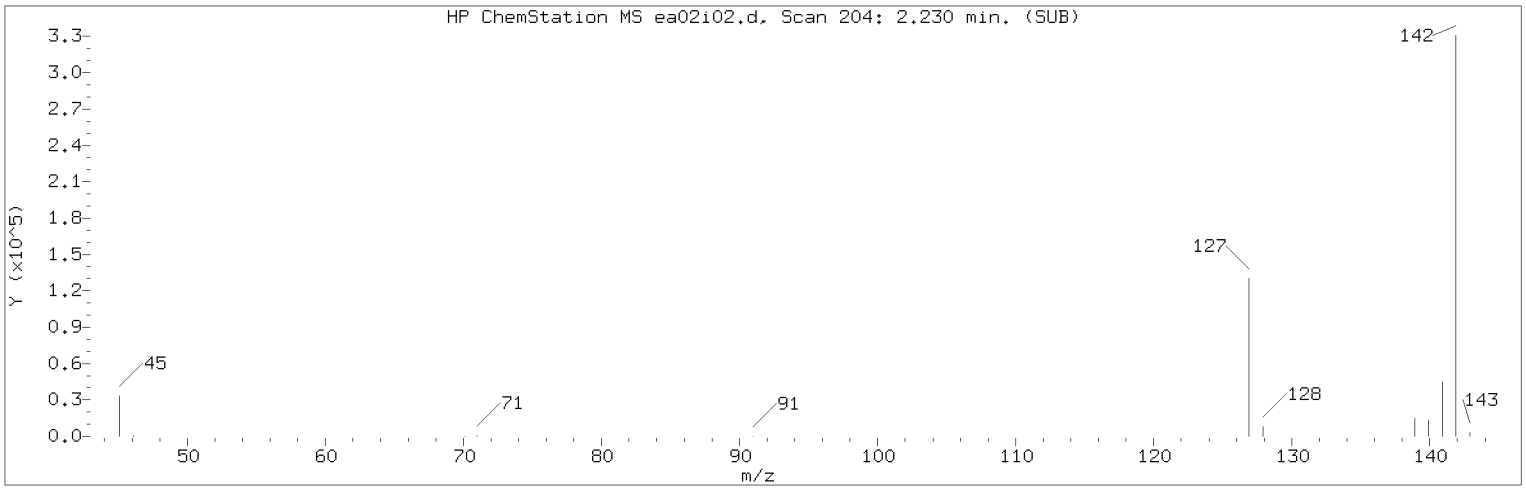
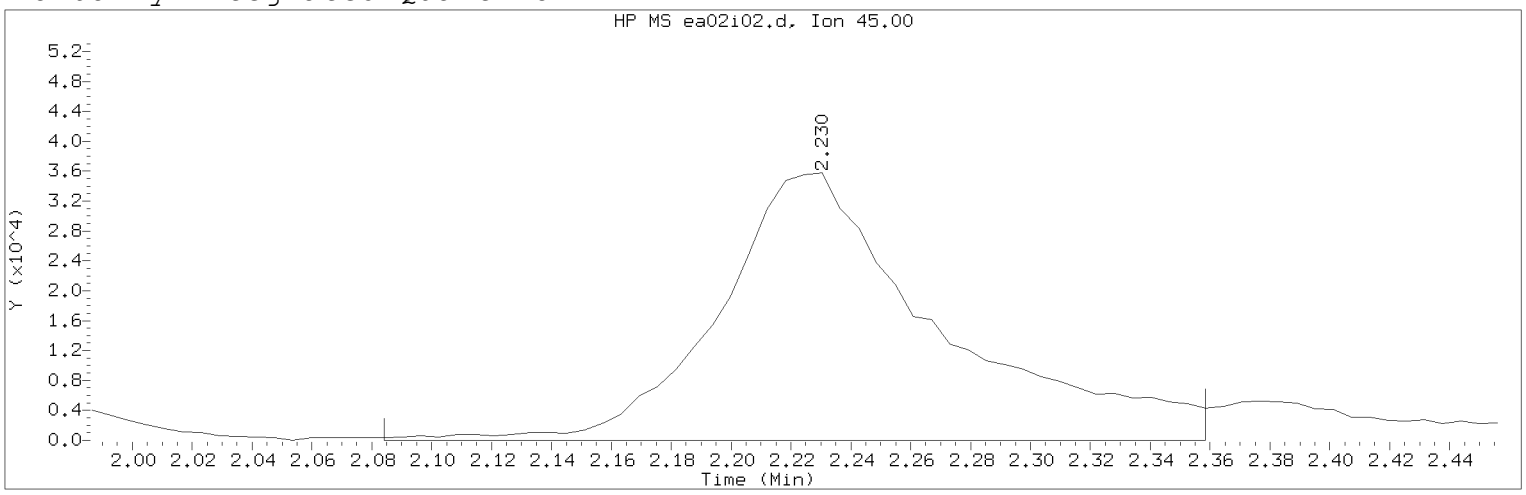
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i02.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:38 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

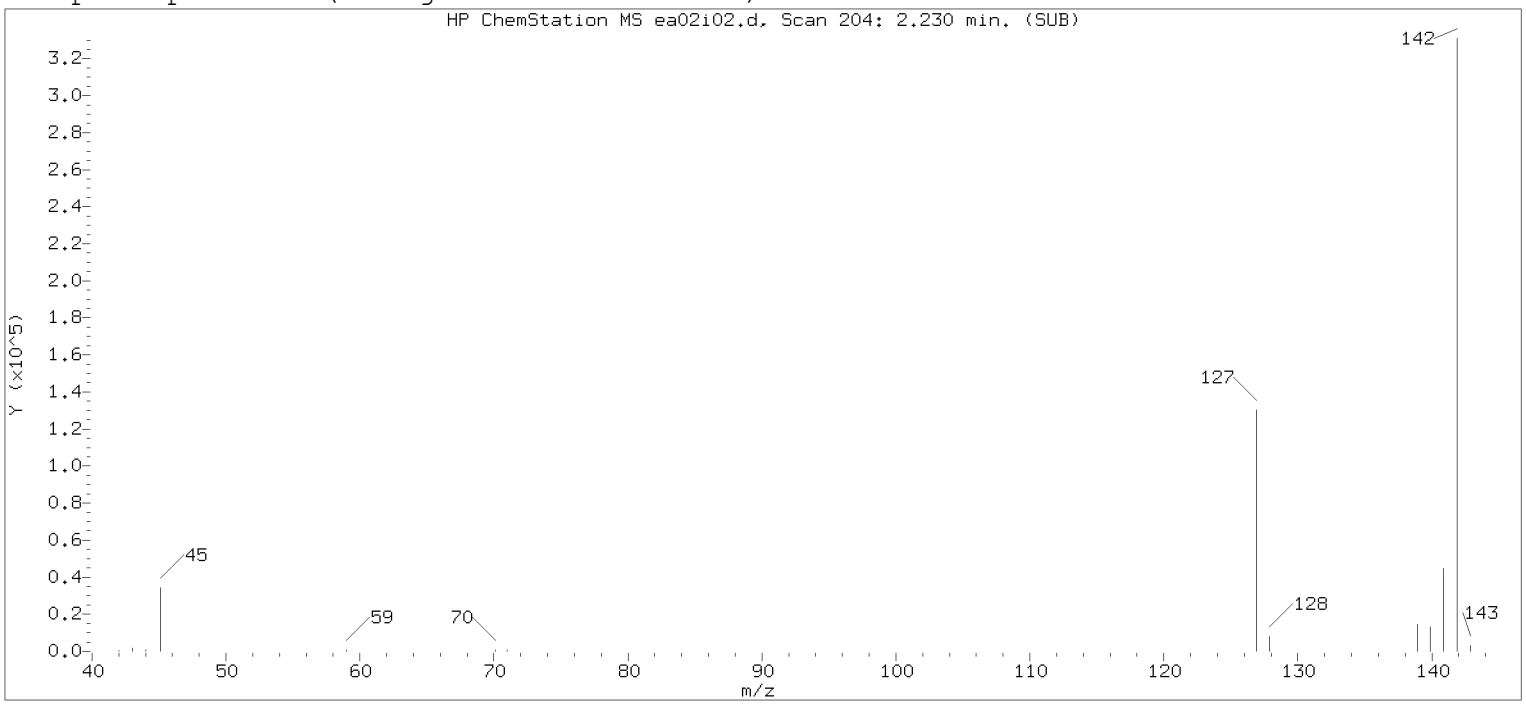
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 204
Retention Time (minutes): 2.230
Quant Ion : 45.00
Area (flag) : 183041M
On-Column Amount (ng) : 491.3951
Integration start scan : 179 Integration stop scan: 224
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

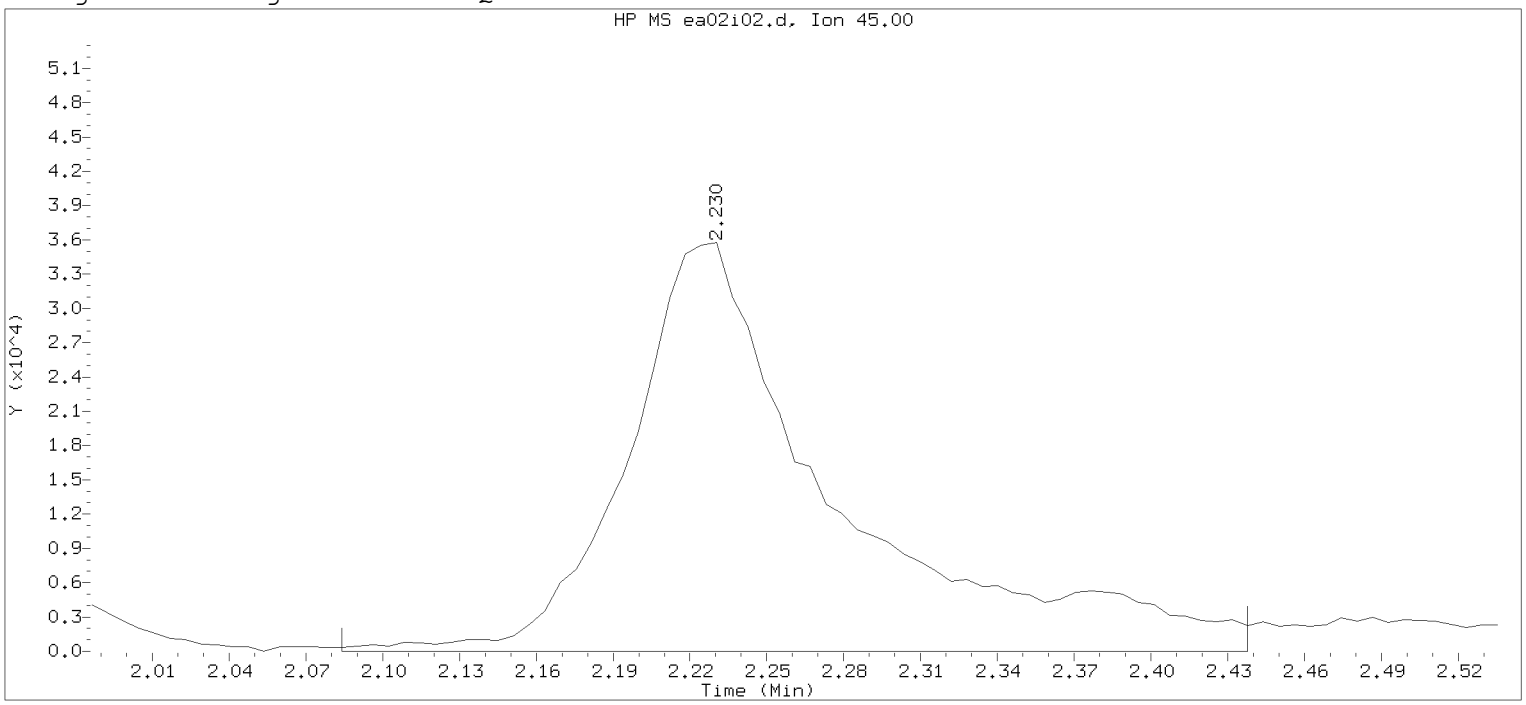
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i02.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:38 Analyst ID: KAS02648

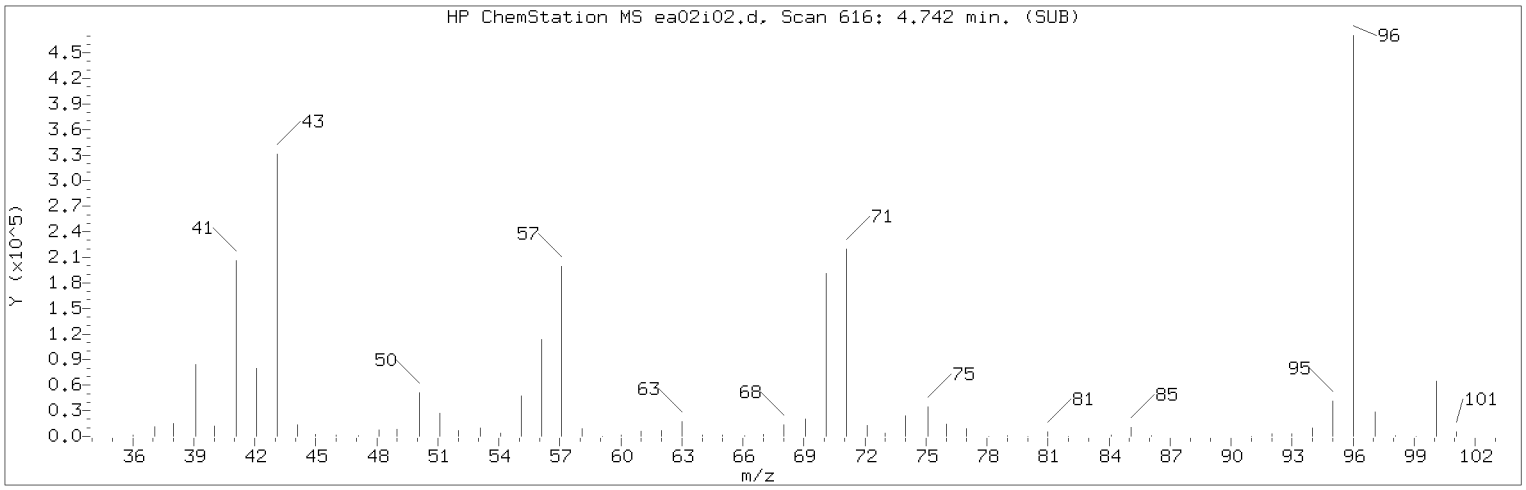
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 12:54
Date, time and analyst ID of latest file update: 02-May-2019 12:54 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

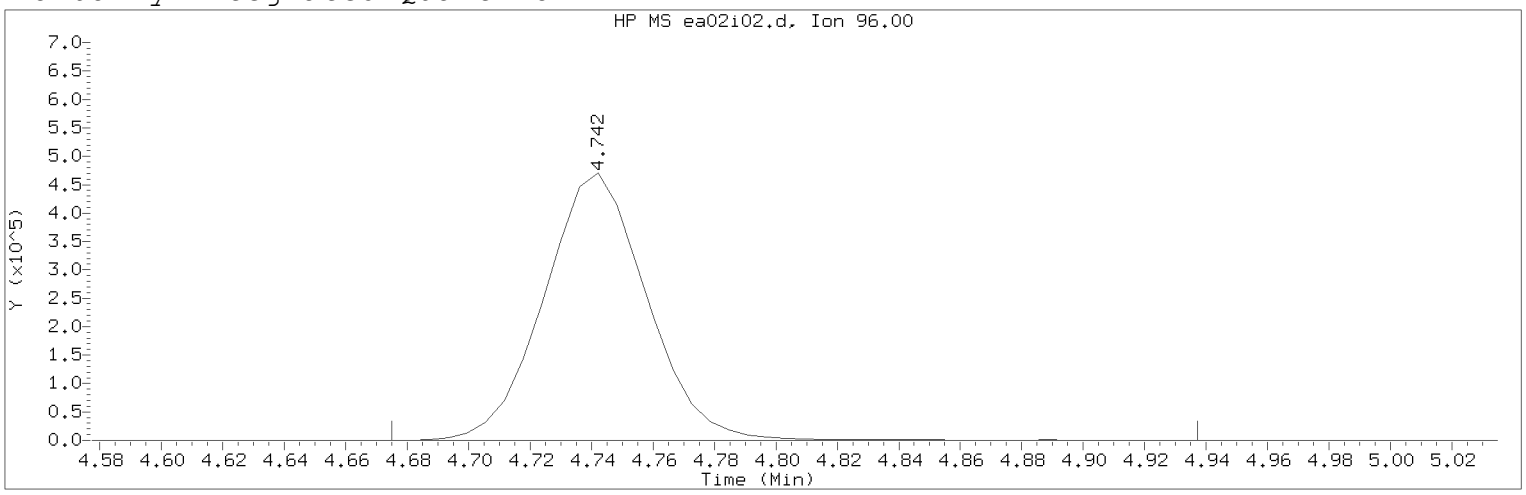
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 204
Retention Time (minutes): 2.230
Quant Ion : 45.00
Area : 200842
On-column Amount (ng) : 512.3974
Integration start scan : 179 Integration stop scan: 237
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:23.
Target 3.5 esignature user_id: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i02.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:38 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

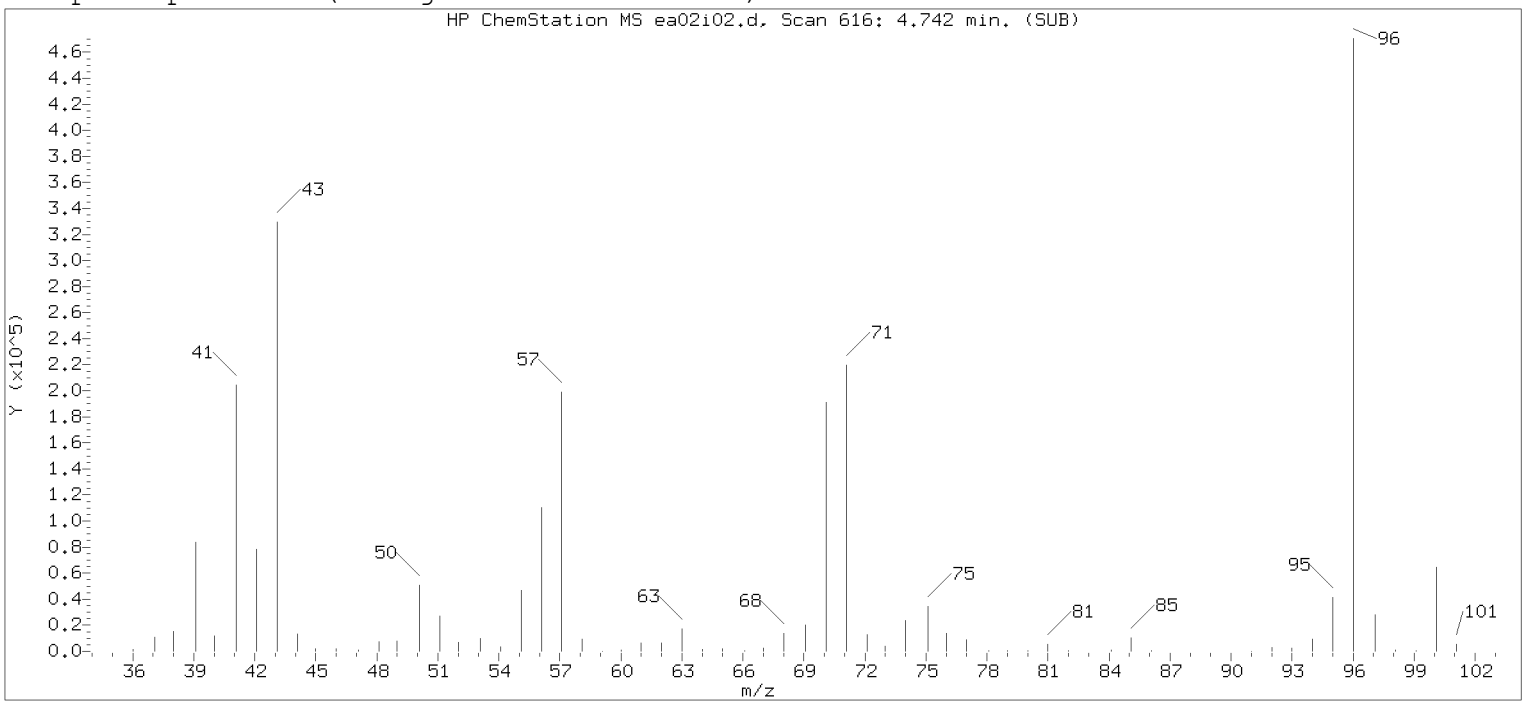
Compound Number : 66
Compound Name : Fluorobenzene
Scan Number : 616
Retention Time (minutes): 4.742
Quant Ion : 96.00
Area (flag) : 1092189M
On-Column Amount (ng) : 50.0000
Integration start scan : 604 Integration stop scan: 647
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

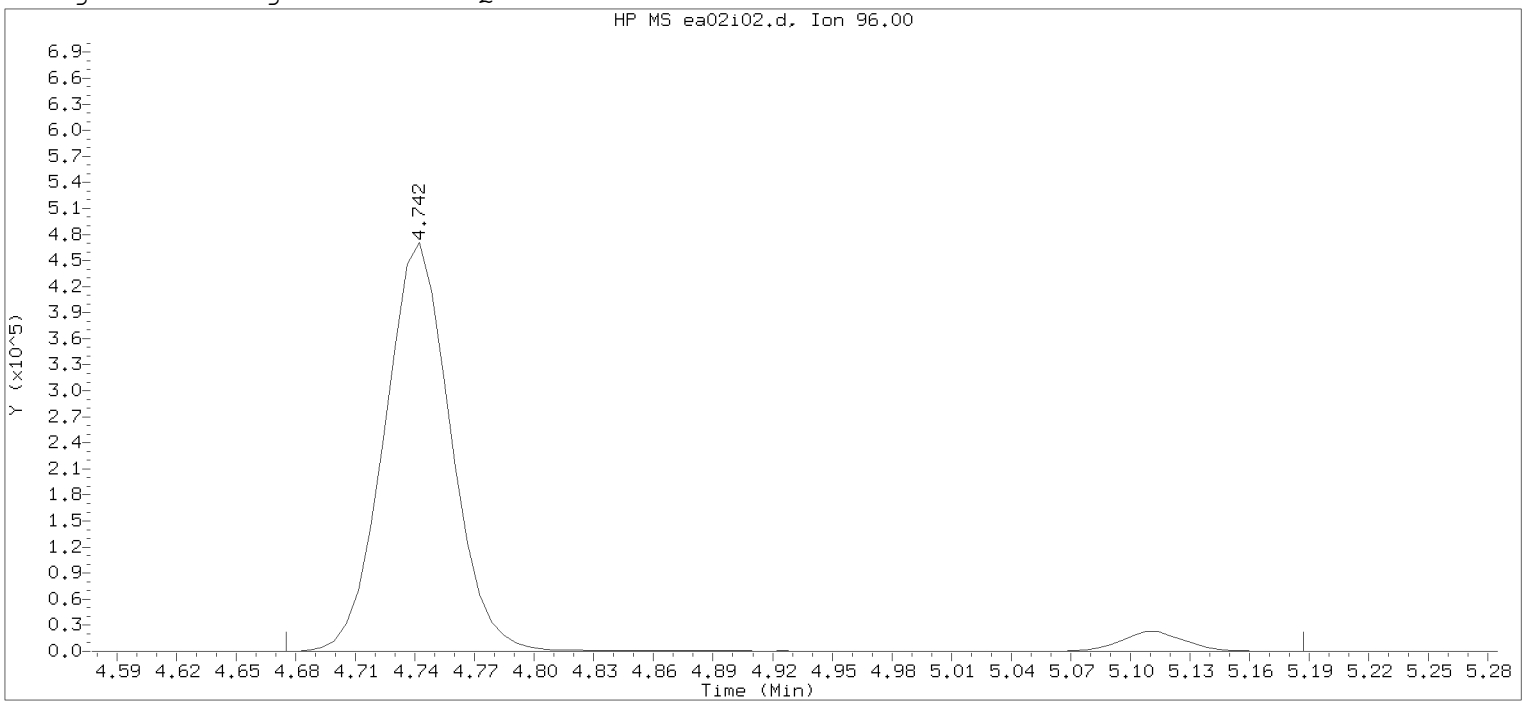
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i02.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:38 Analyst ID: KAS02648

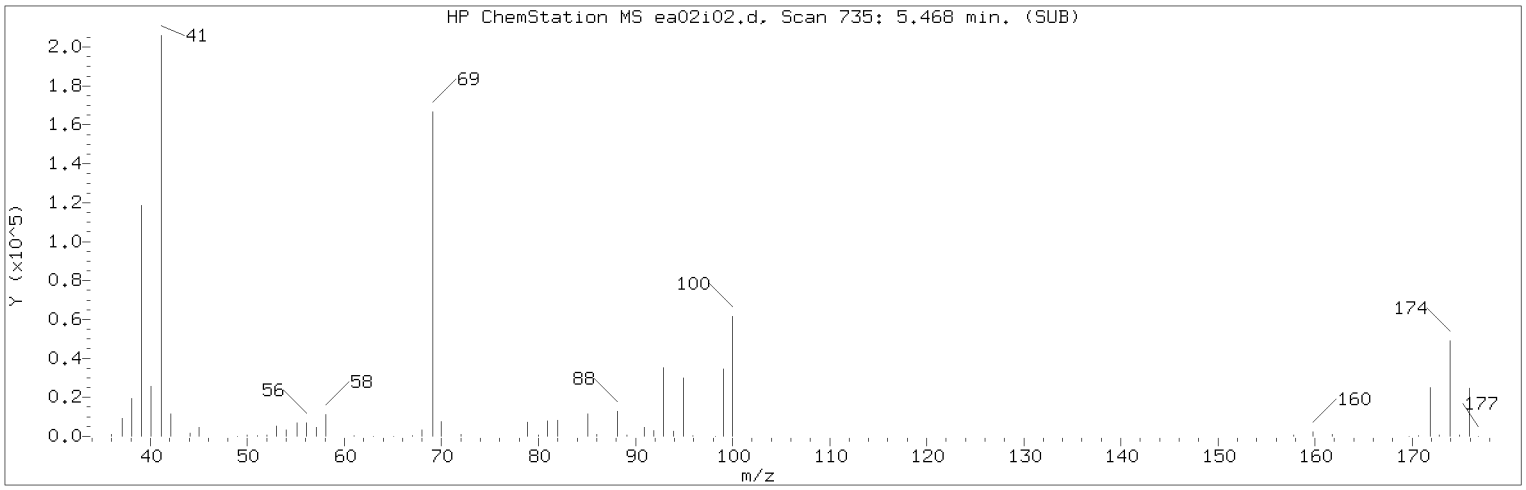
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 12:54
Date, time and analyst ID of latest file update: 02-May-2019 12:54 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

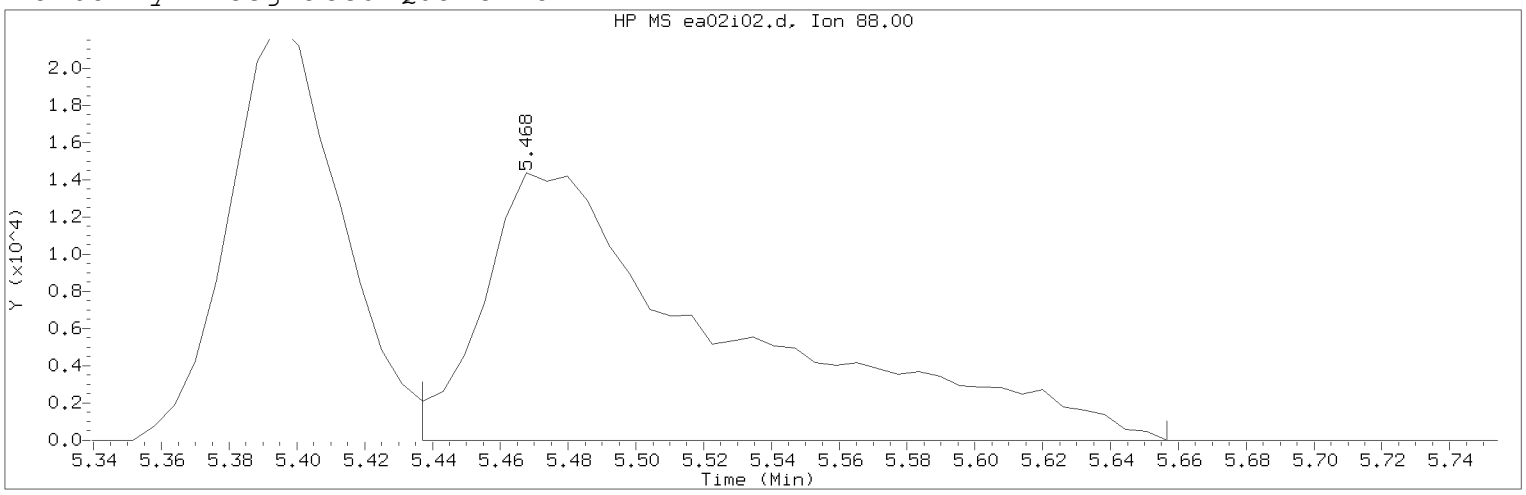
Compound Number	: 66		
Compound Name	: Fluorobenzene		
Scan Number	: 616		
Retention Time (minutes)	: 4.742		
Quant Ion	: 96.00		
Area	: 1142551		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 604	Integration stop scan:	688
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:23.
Target 3.5 esignature user: kevin.sposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i02.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:38 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

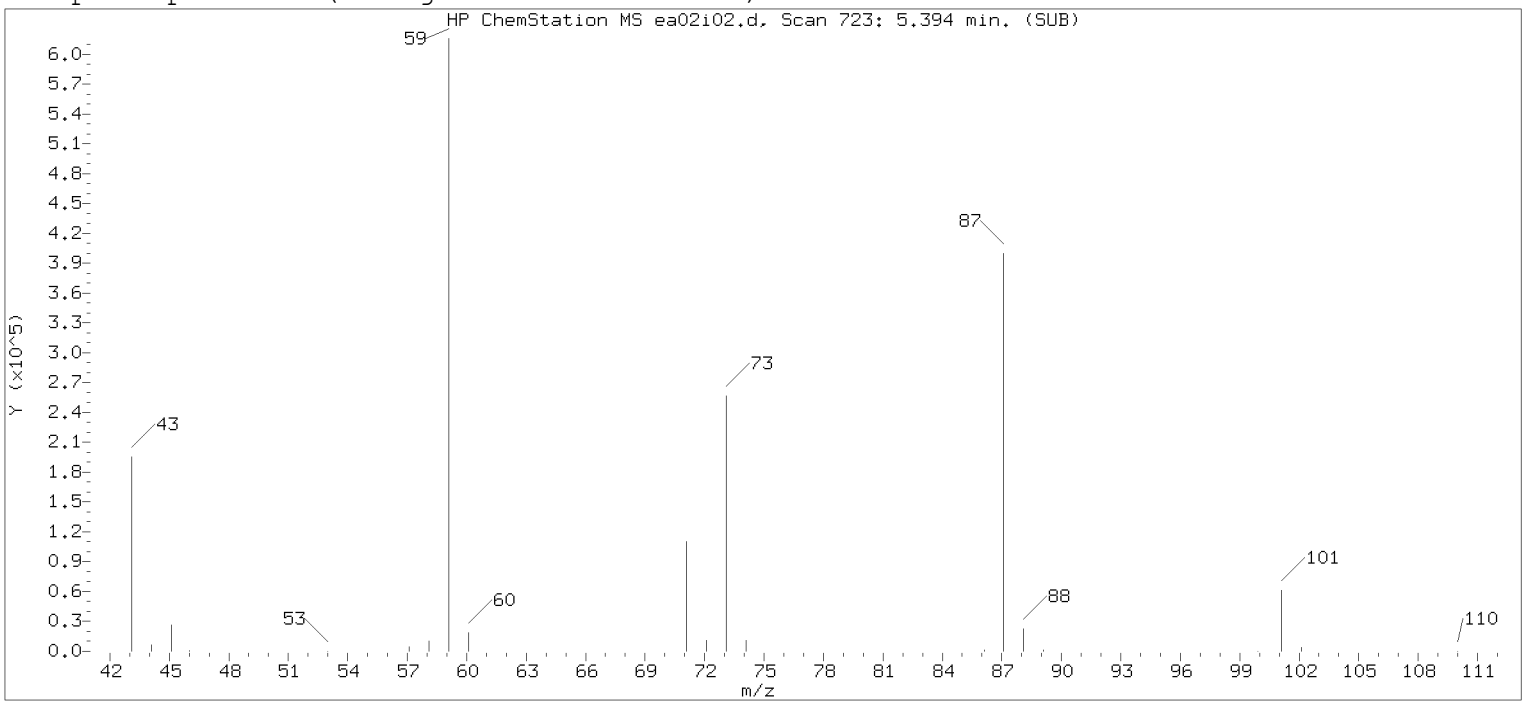
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 735
Retention Time (minutes): 5.468
Quant Ion : 88.00
Area (flag) : 71800M
On-Column Amount (ng) : 1280.2284
Integration start scan : 729 Integration stop scan: 765
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

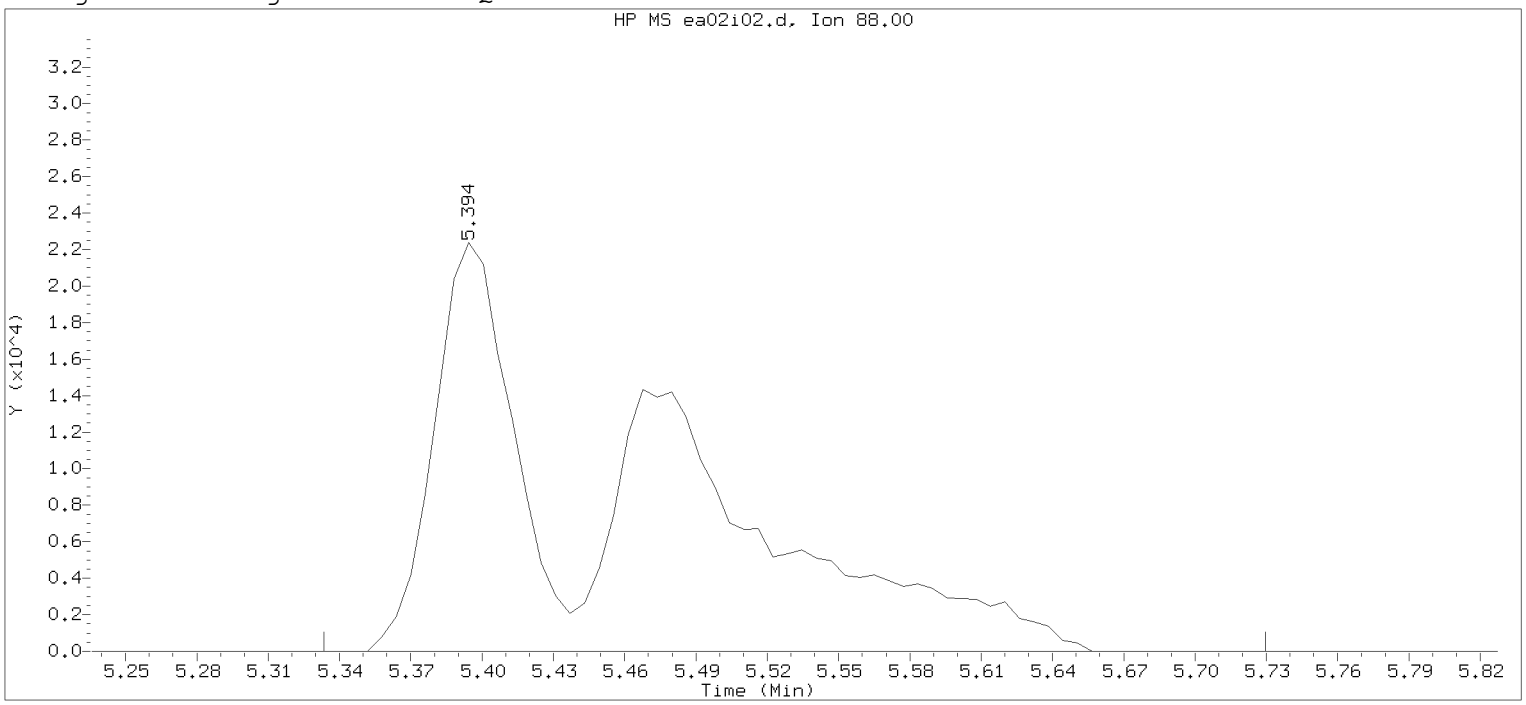
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



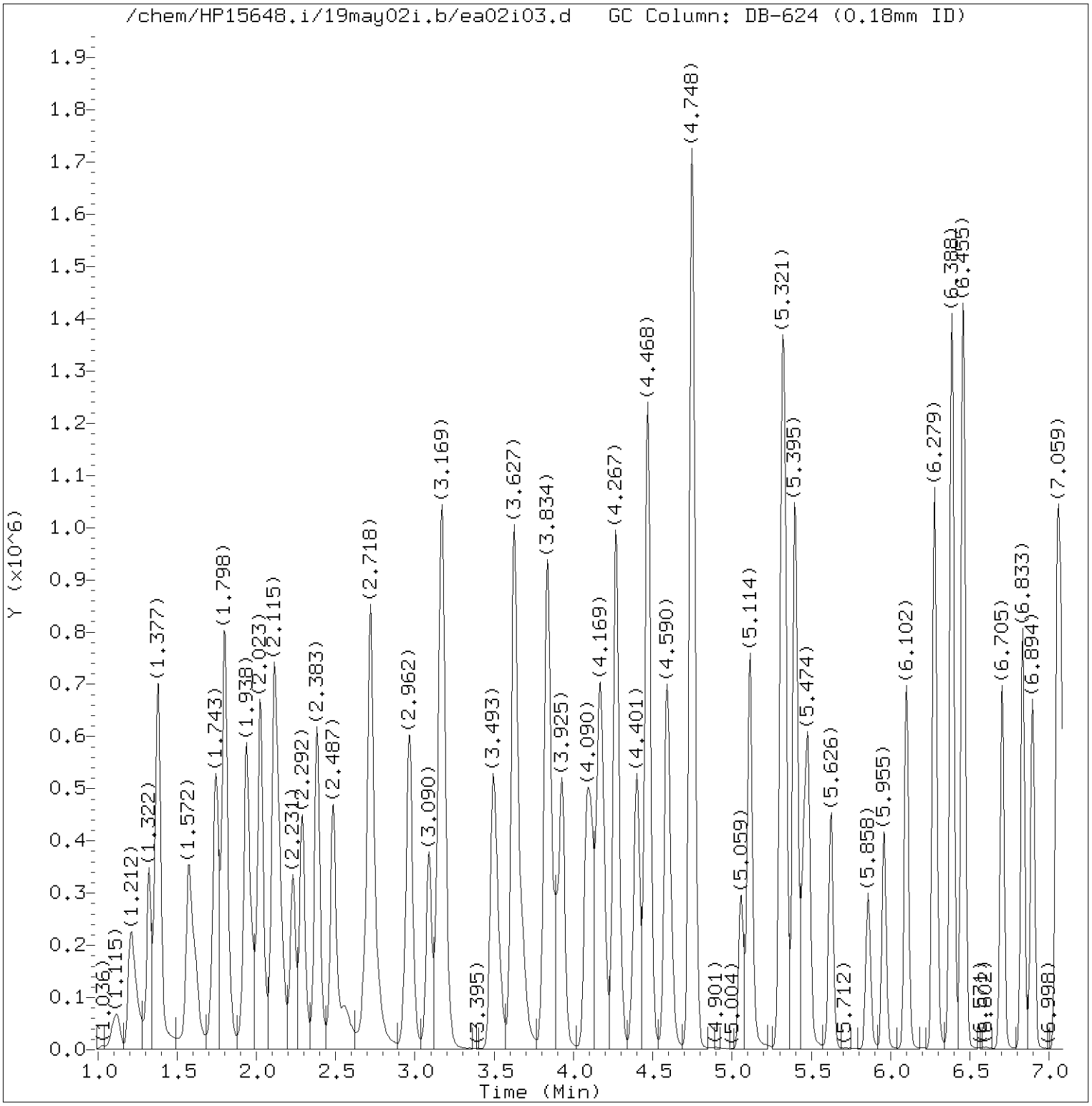
Data File: /chem/HP15648.i/19may02i.b/ea02i02.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:38 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 12:54
Date, time and analyst ID of latest file update: 02-May-2019 12:54 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 723
Retention Time (minutes): 5.394
Quant Ion : 88.00
Area : 122745
On-column Amount (ng) : 2033.4053
Integration start scan : 712 Integration stop scan: 777
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:23.
Target 3.5 esignature user: kas02648



Total Ion Chromatogram (TIC)

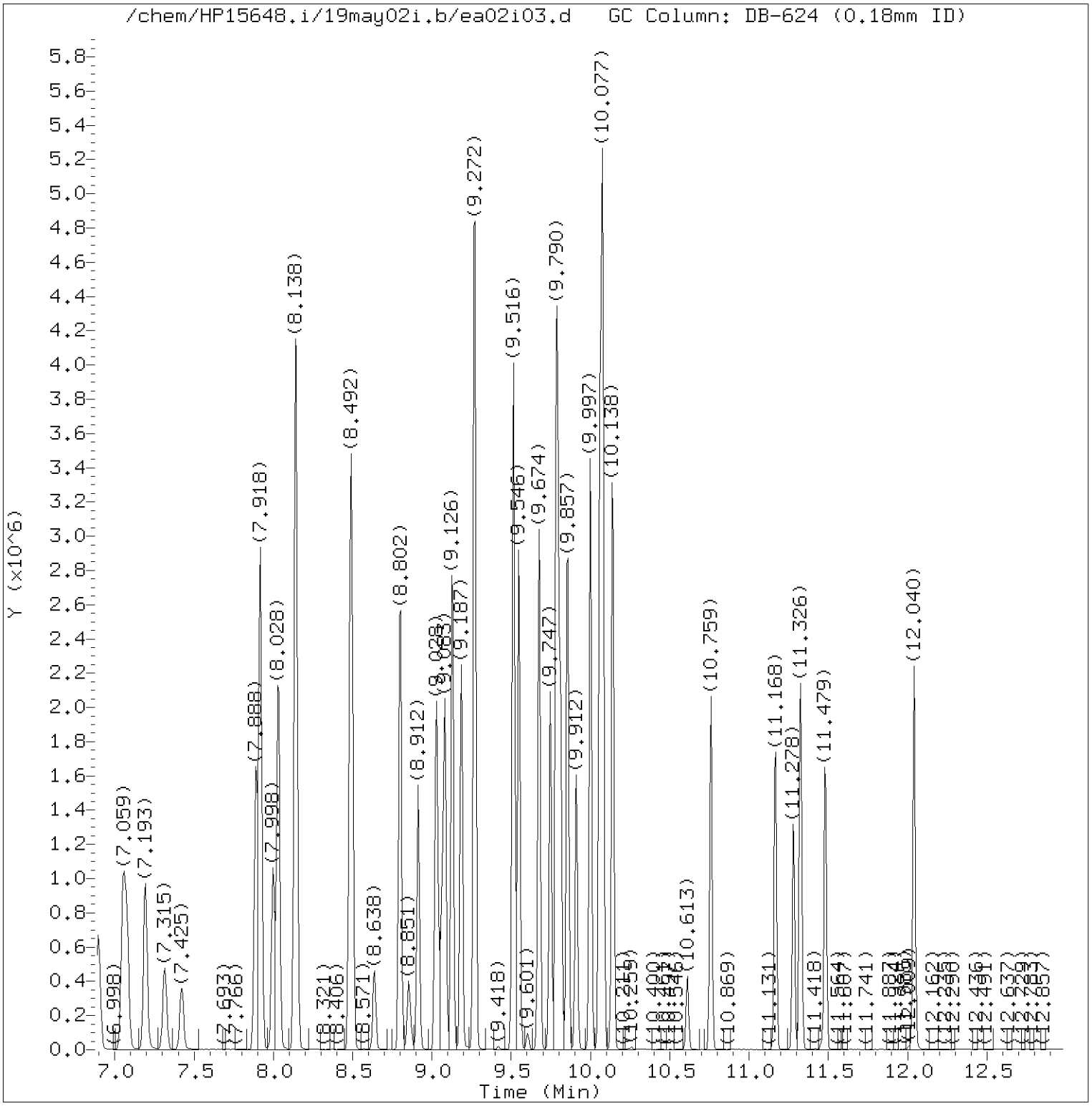
Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i03.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:58 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i03.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:58 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i03.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:58 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.206	85	491441	50.518
4) Chloromethane	(2)	1.322	50	396101	50.033
5) 1,3-Butadiene	(2)	1.371	39	288571	48.487
6) Vinyl Chloride	(2)	1.389	62	382684	50.572
8) Bromomethane	(2)	1.572	94	282577	49.592
9) Chloroethane	(2)	1.609	64	217424	50.465
10) Dichlorofluoromethane	(2)	1.743	67	531684	48.229
11) n-Pentane	(2)	1.798	43	455551	51.548
12) Trichlorofluoromethane	(2)	1.798	101	555812	51.668
14) Ethyl ether	(2)	1.938	59	221821	49.488
15) Freon 123a	(2)	1.944	67	307715	48.578
16) Acrolein	(1)	2.023	56	792814	531.971
17) 1,1-Dichloroethene	(2)	2.115	96	228300	51.539
17) 1,1-Dichloroethene	(2)	2.115	63	118548	50.482
18) Acetone	(1)	2.133	58	63182	101.855
19) Freon 113	(2)	2.133	101	264534	53.931
21) 2-Propanol	(1)	2.231	45	98922	266.920
22) Methyl Iodide	(2)	2.231	142	426531	51.386
23) Carbon Disulfide	(2)	2.292	76	761105	50.656
25) Allyl Chloride	(2)	2.383	41	423647	49.210
27) Methyl Acetate	(2)	2.389	43	214160	50.663
28) Methylene Chloride	(2)	2.487	84	251264	49.792
29)*t-Butyl alcohol-d10	(1)	2.487	65	180628	250.000
30) t-Butyl alcohol	(1)	2.566	59	178705	264.664
31) Acrylonitrile	(2)	2.682	53	130595	50.808
32) trans-1,2-Dichloroethene	(2)	2.718	96	250159	50.173
33) Methyl Tertiary Butyl Ether	(2)	2.718	73	742577	49.953
34) n-Hexane	(2)	2.962	57	462685	52.957
36) 1,1-Dichloroethane	(2)	3.090	63	477337	51.101
38) di-Isopropyl ether	(2)	3.163	45	837459	50.947
39) 2-Chloro-1,3-butadiene	(2)	3.175	53	458409	51.394
40) Ethyl t-butyl ether	(2)	3.493	59	817953	50.444
43) 1,2-Dichloroethene (Total)	(2)		96	531177	100.337
42) cis-1,2-Dichloroethene	(2)	3.627	96	281018	50.164
44) 2-Butanone	(2)	3.633	43	330096	95.320
45) 2,2-Dichloropropane	(2)	3.633	77	421237	51.112
47) Propionitrile	(1)	3.688	54	232239	254.604
48) Methacrylonitrile	(2)	3.828	67	345491	125.181

* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i03.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:58 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.846	128	144530	51.945
50) Tetrahydrofuran	(1)	3.889	71	94644	99.003
51) Chloroform	(2)	3.925	83	449769	50.623
52)$Dibromofluoromethane	(2)	4.078	113	252421	49.233
52)$Dibromofluoromethane	(2)	4.084	111	260538	49.503
53) 1,1,1-Trichloroethane	(2)	4.108	97	419270	50.999
54) Cyclohexane	(2)	4.169	56	538783	53.359
54) Cyclohexane	(2)	4.169	84	464880	53.581
54) Cyclohexane	(2)	4.163	69	167418	50.786
55) 1,1-Dichloropropene	(2)	4.267	75	377295	51.759
56) Carbon Tetrachloride	(2)	4.273	117	365602	52.282
58) Isobutyl Alcohol	(1)	4.389	41	145329	633.951
57)$1,2-Dichloroethane-d4	(2)	4.407	102	64123M	49.561
57)$1,2-Dichloroethane-d4	(2)	4.401	65	322513	49.113
57)$1,2-Dichloroethane-d4	(2)	4.401	104	41014	49.444
60) Benzene	(2)	4.468	78	1091746	51.006
61) 1,2-Dichloroethane	(2)	4.480	62	350214	48.715
61) 1,2-Dichloroethane	(2)	4.480	98	30424	48.422
65) t-Amyl methyl ether	(2)	4.590	73	811648	50.477
66)*Fluorobenzene	(2)	4.742	96	1103103	50.000
67) n-Heptane	(2)	4.754	43	480473	51.307
69) n-Butanol	(1)	5.053	56	275793	1390.916
71) Trichloroethene	(2)	5.114	95	277804	51.453
73) Methylcyclohexane	(2)	5.315	83	575213	51.164
73) Methylcyclohexane	(2)	5.315	98	266514	51.553
74) 1,2-Dichloropropane	(2)	5.334	63	272931	51.251
75) Dibromomethane	(2)	5.449	93	162995	51.129
77) Methyl Methacrylate	(2)	5.480	69	239316	49.288
76) 1,4-Dioxane	(1)	5.480	88	37412M	670.472
79) Bromodichloromethane	(2)	5.626	83	333835	50.335
80) 2-Nitropropane	(2)	5.858	41	216686	98.584
81) 2-Chloroethyl Vinyl Ether	(2)	5.955	63	208027	50.695
82) cis-1,3-Dichloropropene	(2)	6.102	75	442585	51.234
83) 4-Methyl-2-pentanone	(2)	6.279	43	829048	111.474
84)$Toluene-d8	(3)	6.388	98	1084355	49.747
84)$Toluene-d8	(3)	6.388	100	695604	49.644
89) Toluene	(3)	6.455	92	697495	52.282
90) trans-1,3-Dichloropropene	(3)	6.705	75	414995	52.049

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i03.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:58 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropene (total)	(3)		100	857580	103.282
92) Ethyl Methacrylate	(3)	6.833	69	436447	51.349
93) 1,1,2-Trichloroethane	(3)	6.894	97	231186	50.915
94) Tetrachloroethene	(3)	7.053	166	289975	53.460
95) 1,3-Dichloropropane	(3)	7.077	76	412522	51.691
97) 2-Hexanone	(3)	7.193	43	641897	113.275
102) 1-Chlorohexane	(3)	7.315	91	23153	50.220
98) Dibromochloromethane	(3)	7.315	129	257788	52.591
100) 1,2-Dibromoethane	(3)	7.425	107	247682	51.268
101)*Chlorobenzene-d5	(3)	7.888	117	802580	50.000
103) Chlorobenzene	(3)	7.912	112	772328	52.355
104) 1,1,1,2-Tetrachloroethane	(3)	7.998	131	263854	52.664
105) Ethylbenzene	(3)	8.034	91	1395496	52.874
107) m+p-Xylene	(3)	8.144	106	1083606	105.469
109) Xylene (Total)	(3)		106	1615423	158.509
108) o-Xylene	(3)	8.485	106	531817	53.040
110) Styrene	(3)	8.498	104	885848	53.490
111) Bromoform	(3)	8.638	173	175347	53.662
112) Isopropylbenzene	(3)	8.802	105	1435481	53.809
113) Cyclohexanone	(1)	8.851	55	133779	636.428
115)$4-Bromofluorobenzene	(3)	8.912	95	413535	49.351
115)$4-Bromofluorobenzene	(3)	8.912	174	314086	50.023
116) Bromobenzene	(4)	9.028	156	312283	52.805
117) 1,1,2,2-Tetrachloroethane	(4)	9.034	83	362326	52.789
118) 1,2,3-Trichloropropane	(4)	9.065	110	106759	51.325
119) trans-1,4-Dichloro-2-butene	(4)	9.083	53	300927	133.420
120) n-Propylbenzene	(4)	9.126	91	1699323	54.503
121) 2-Chlorotoluene	(4)	9.187	126	323936	52.771
123) 1,3,5-Trimethylbenzene	(4)	9.272	105	1226047	54.205
122) 4-Chlorotoluene	(4)	9.272	126	336301	53.446
125) tert-Butylbenzene	(4)	9.516	134	275119	54.721
126) Pentachloroethane	(4)	9.522	167	203718	54.427
127) 1,2,4-Trimethylbenzene	(4)	9.546	105	1247539	53.566
128) sec-Butylbenzene	(4)	9.674	105	1599273	55.736
130) 1,3-Dichlorobenzene	(4)	9.747	146	617058	53.540
131) p-Isopropyltoluene	(4)	9.784	119	1405536	55.683
132)*1,4-Dichlorobenzene-d4	(4)	9.796	152	424423	50.000
134) 1,4-Dichlorobenzene	(4)	9.814	146	616421	52.285

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i03.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:58 Analyst ID: KAS02648

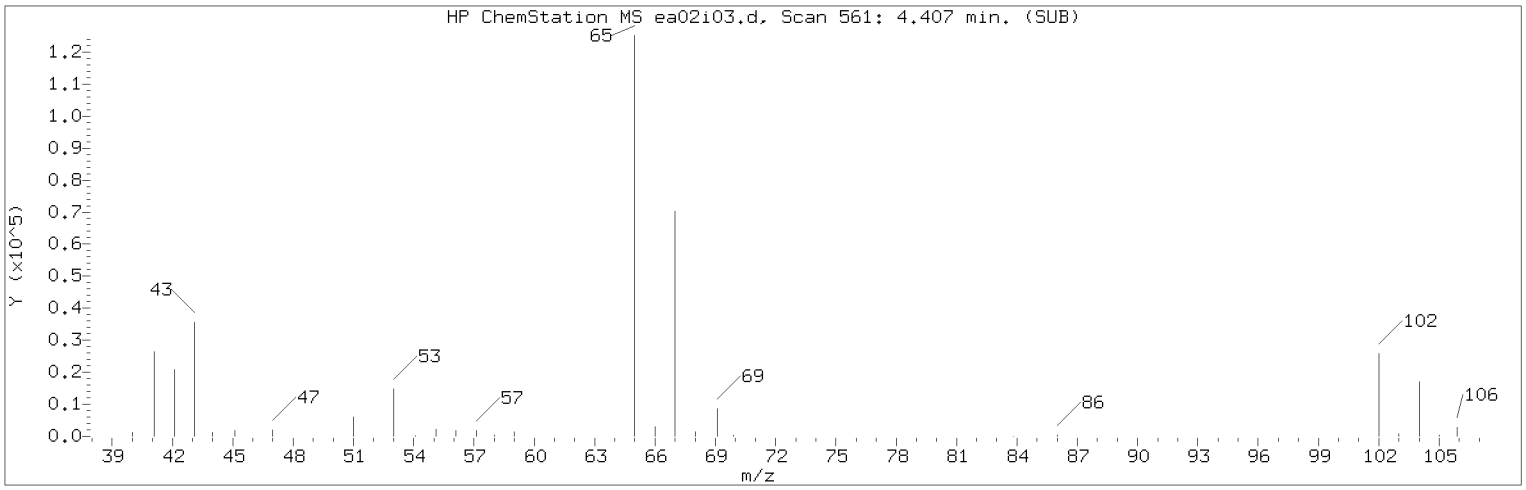
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

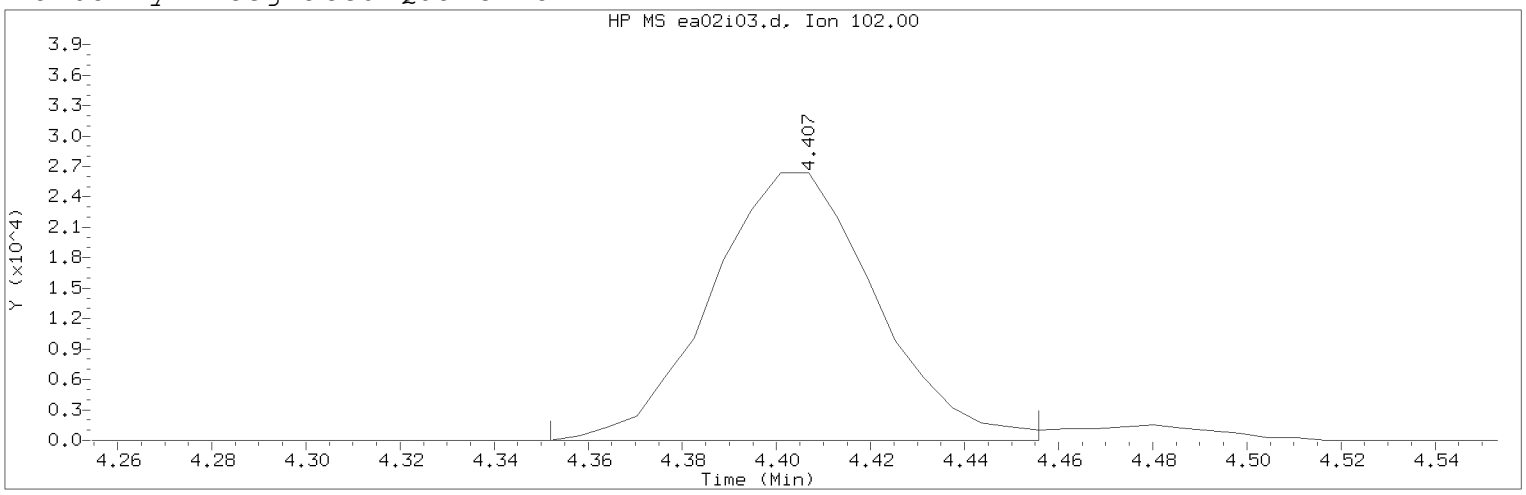
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	9.857	105	1305514	52.643
136) Benzyl Chloride	(4)	9.912	91	865800	54.068
137) 1,3-Diethylbenzene	(4)	9.997	119	844443	53.130
138) 1,4-Diethylbenzene	(4)	10.058	119	893582	52.765
139) 1,2-Dichlorobenzene	(4)	10.077	146	585041	53.025
140) n-Butylbenzene	(4)	10.077	92	693315	55.926
141) 1,2-Diethylbenzene	(4)	10.138	119	685126	52.654
142) Diethylbenzene (total)	(4)		100	2423151	158.549
143) 1,2-Dibromo-3-chloropropane	(4)	10.613	75	83532	53.117
145) 1,3,5-Trichlorobenzene	(4)	10.759	180	443712	54.689
147) 1,2,4-Trichlorobenzene	(4)	11.168	180	390267	53.886
148) Hexachlorobutadiene	(4)	11.284	225	175745	56.610
149) Naphthalene	(4)	11.326	128	1252847	52.472
150) 1,2,3-Trichlorobenzene	(4)	11.479	180	363868	53.211
151) 2-Methylnaphthalene	(4)	12.040	142	758910	50.299

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i03.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:58 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

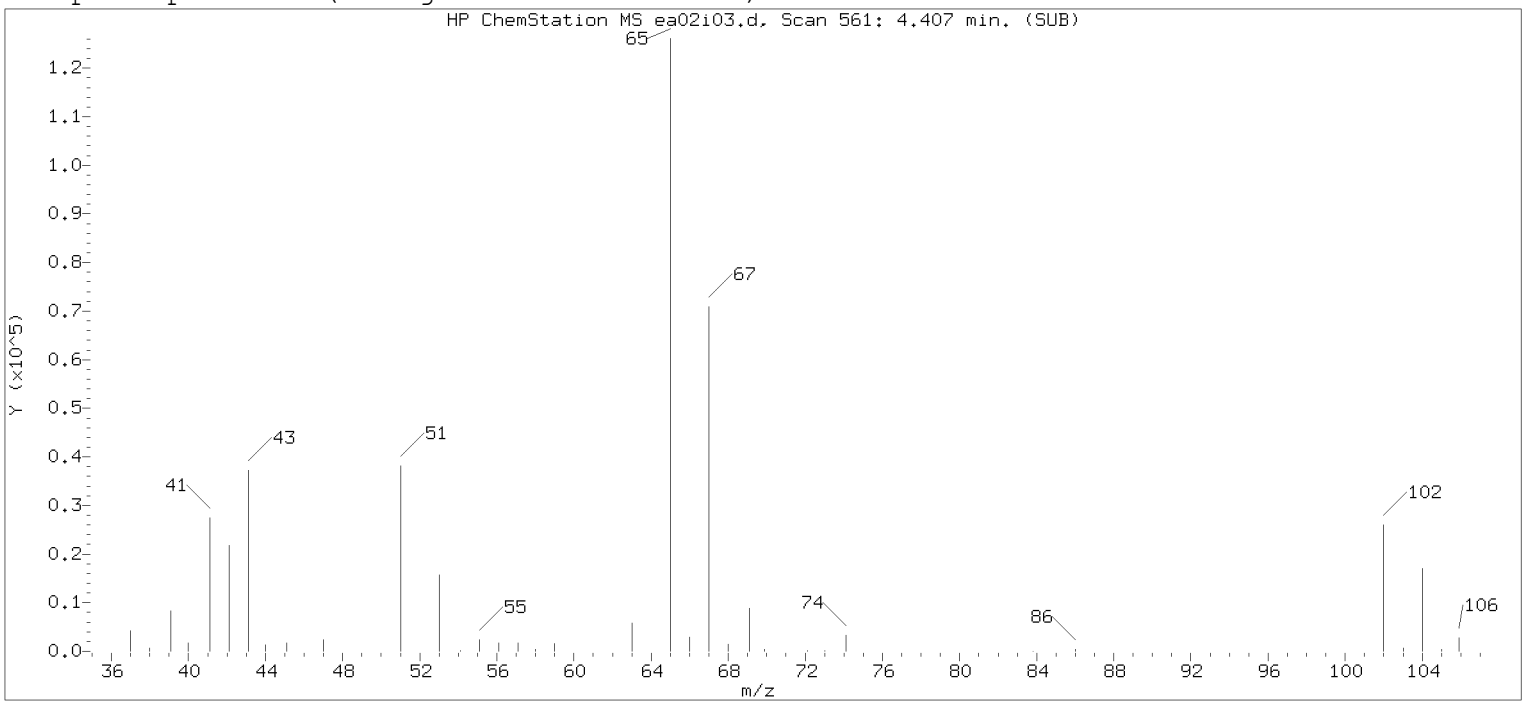
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 561
Retention Time (minutes): 4.407
Quant Ion : 102.00
Area (flag) : 64123M
On-Column Amount (ng) : 49.5607
Integration start scan : 551 Integration stop scan: 568
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

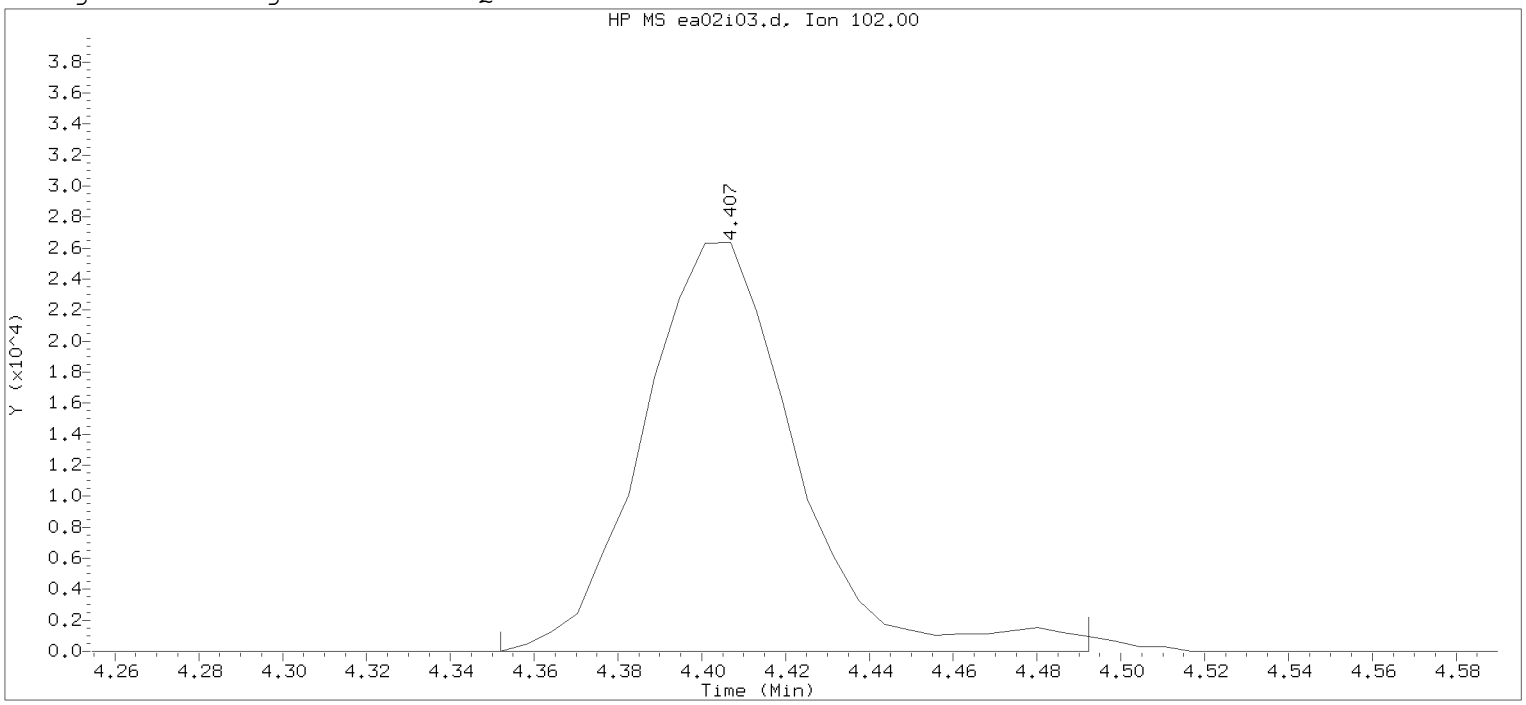
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i03.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:58 Analyst ID: KAS02648

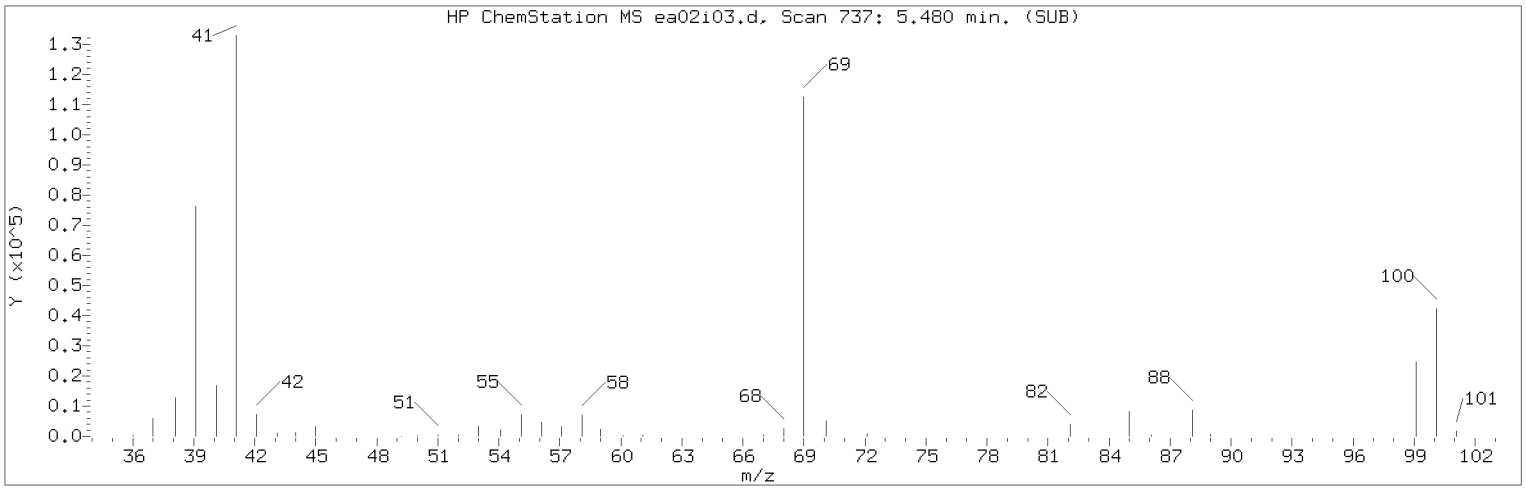
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 13:14
Date, time and analyst ID of latest file update: 02-May-2019 13:14 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

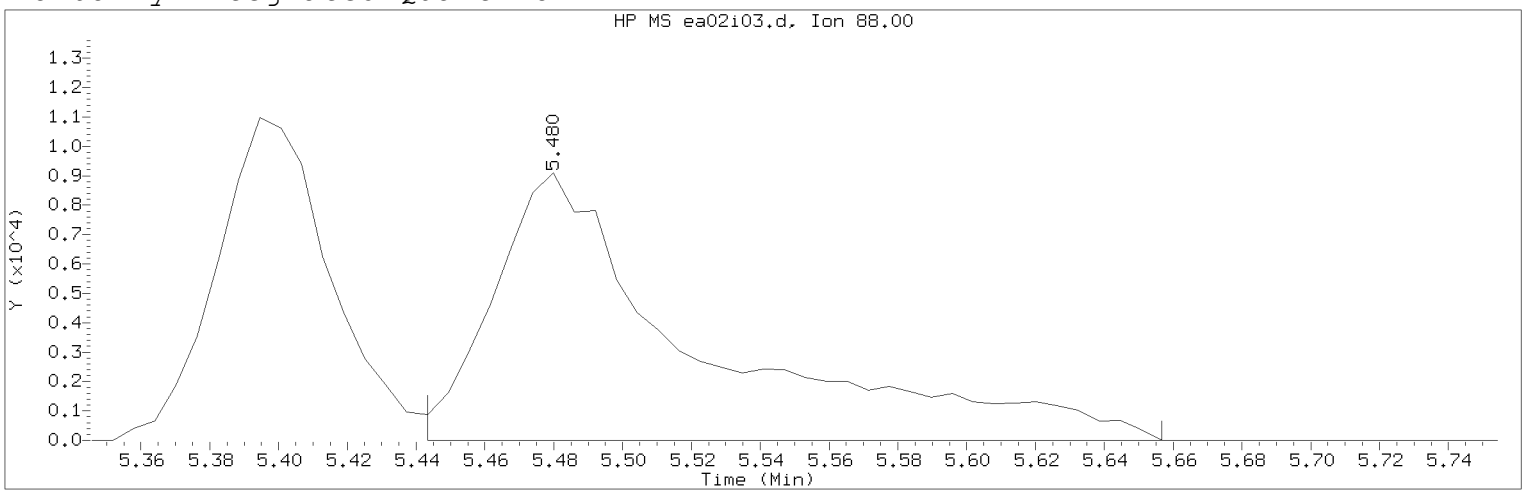
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 561
Retention Time (minutes): 4.407
Quant Ion : 102.00
Area : 66596
On-column Amount (ng) : 50.9805
Integration start scan : 551 Integration stop scan: 574
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:23.
Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i03.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:58 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:22
Date, time and analyst ID of latest file update: 03-May-2019 11:22 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

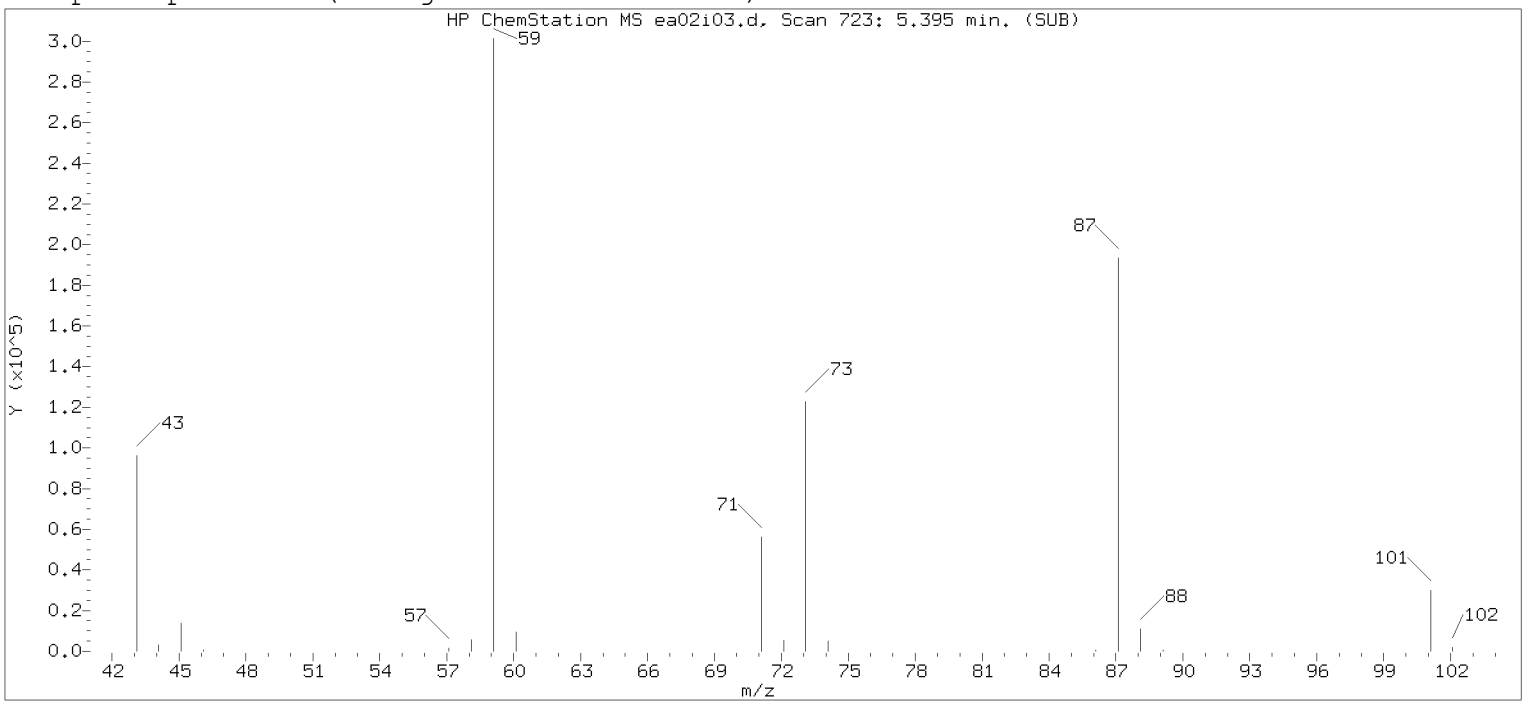
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 737
Retention Time (minutes): 5.480
Quant Ion : 88.00
Area (flag) : 37412M
On-Column Amount (ng) : 670.4715
Integration start scan : 730 Integration stop scan: 765
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

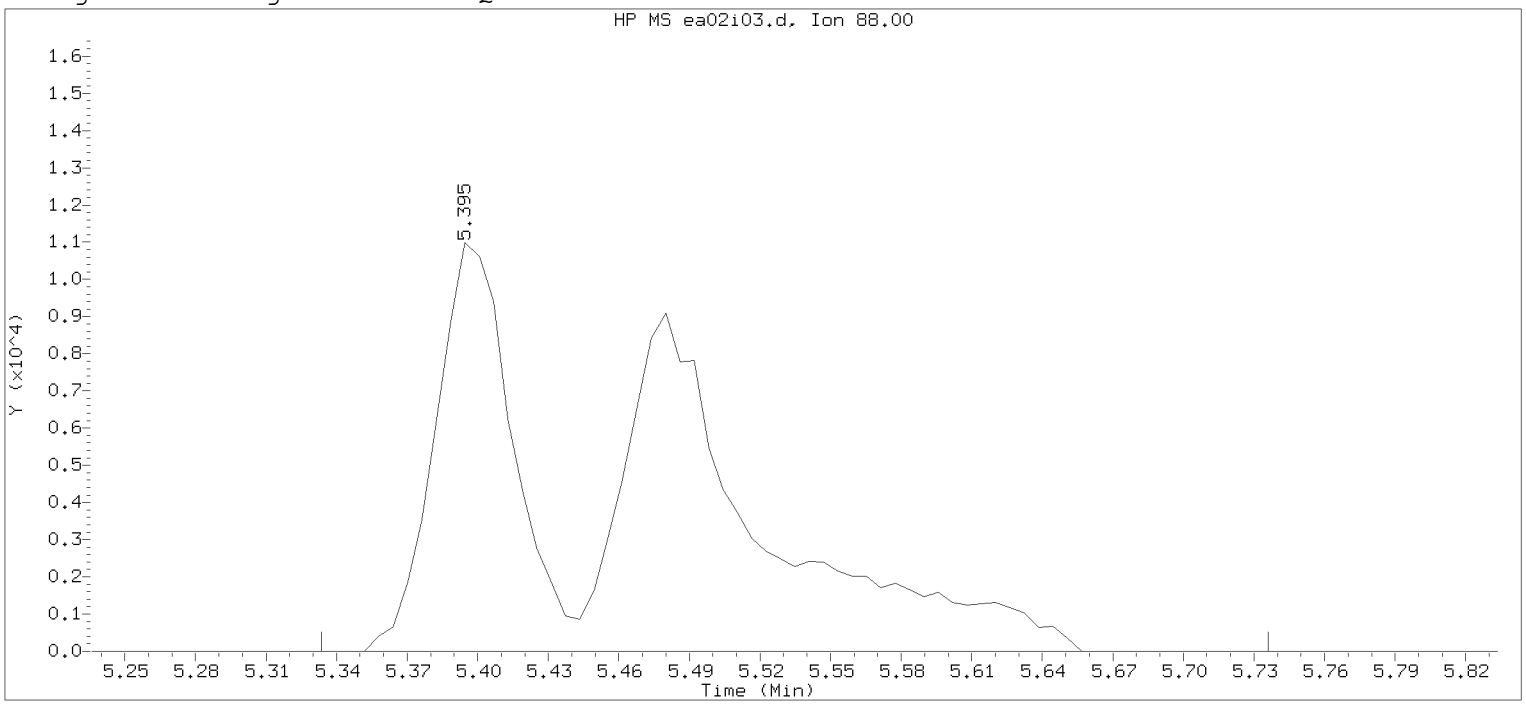
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



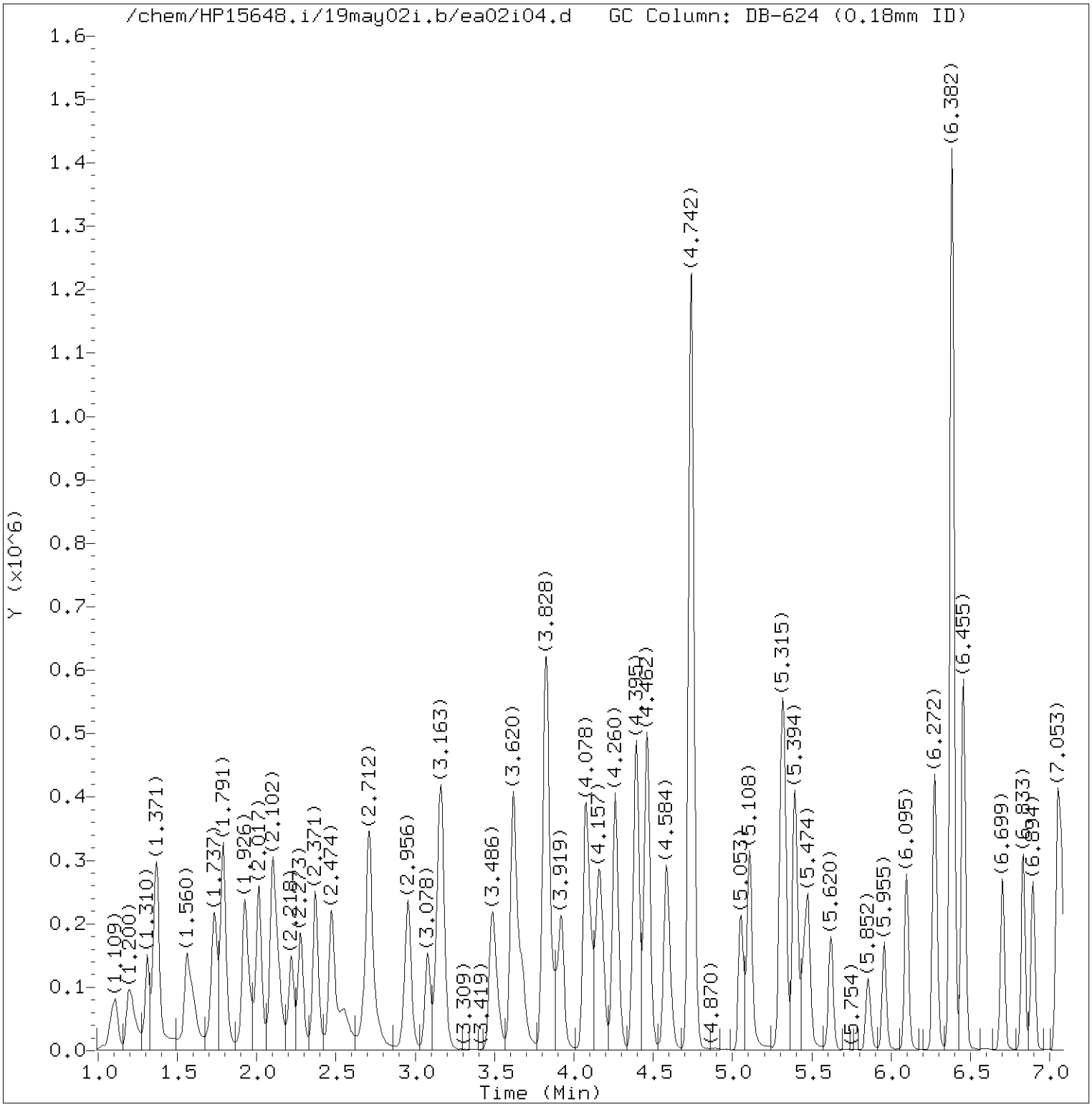
Data File: /chem/HP15648.i/19may02i.b/ea02i03.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 12:58 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 13:14
Date, time and analyst ID of latest file update: 02-May-2019 13:14 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 723
Retention Time (minutes): 5.395
Quant Ion : 88.00
Area : 62540
On-column Amount (ng) : 938.3364
Integration start scan : 712 Integration stop scan: 778
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:23.
Target 3.5 esignature user: kas02648



Total Ion Chromatogram (TIC)

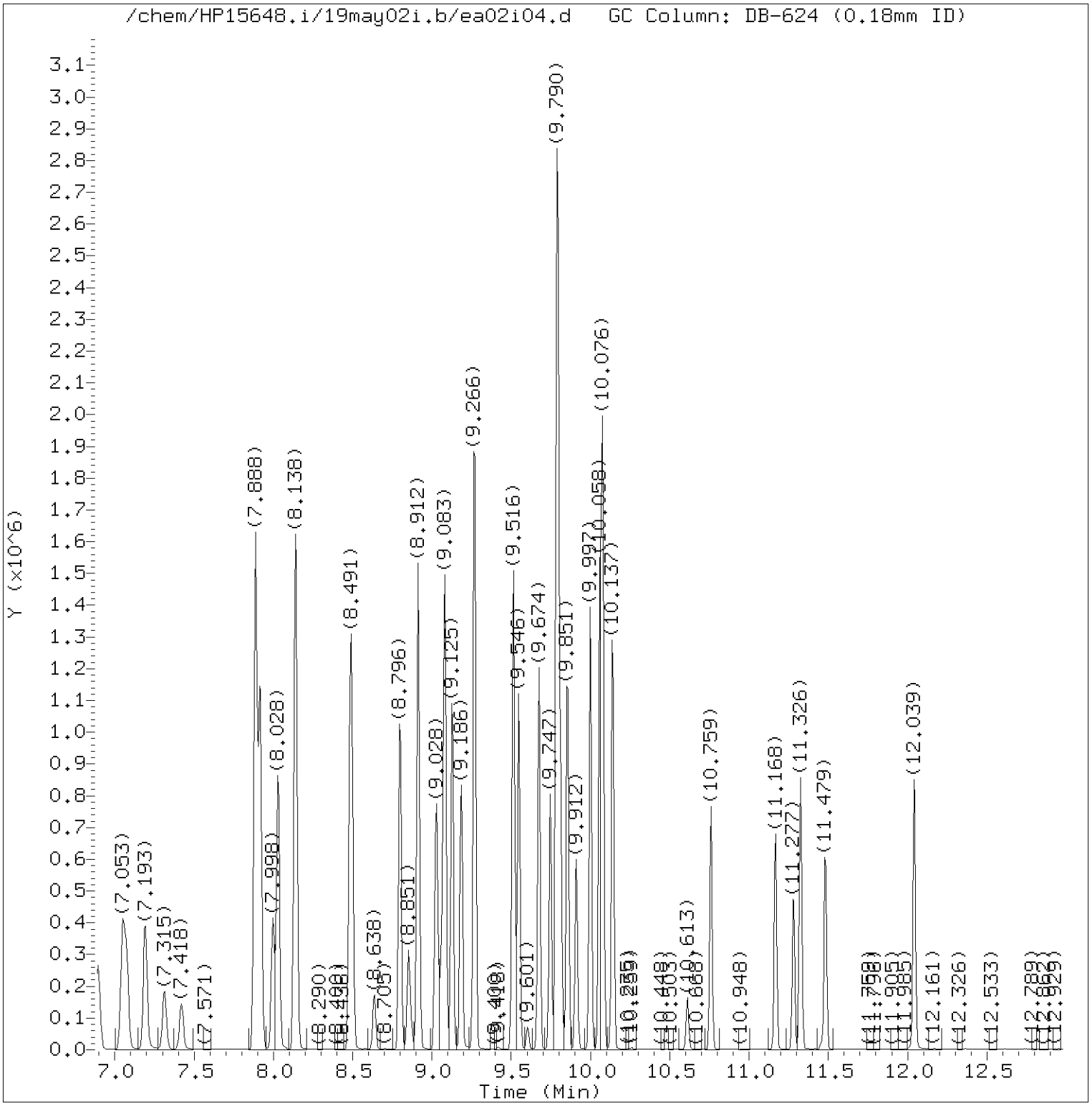
Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i04.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i04.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i04.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.194	85	198330	20.731
4) Chloromethane	(2)	1.310	50	159855	20.532
5) 1,3-Butadiene	(2)	1.365	39	121668	20.787
6) Vinyl Chloride	(2)	1.377	62	153712	20.655
8) Bromomethane	(2)	1.560	94	114281	20.394
9) Chloroethane	(2)	1.596	64	87378	20.622
10) Dichlorofluoromethane	(2)	1.730	67	212233	19.576
12) Trichlorofluoromethane	(2)	1.785	101	219300	20.729
11) n-Pentane	(2)	1.791	43	182616	21.012
14) Ethyl ether	(2)	1.926	59	89575	20.321
15) Freon 123a	(2)	1.932	67	128978	20.704
16) Acrolein	(1)	2.017	56	305361	202.164
17) 1,1-Dichloroethene	(2)	2.102	96	91925	21.102
17) 1,1-Dichloroethene	(2)	2.102	63	49360	21.373
18) Acetone	(1)	2.121	58	24385	38.787
19) Freon 113	(2)	2.121	101	107186	22.220
21) 2-Propanol	(1)	2.218	45	72726M	193.620
22) Methyl Iodide	(2)	2.218	142	171049	20.954
23) Carbon Disulfide	(2)	2.279	76	311317	21.069
25) Allyl Chloride	(2)	2.371	41	166167	19.627
27) Methyl Acetate	(2)	2.377	43	82801	19.918
28) Methylene Chloride	(2)	2.474	84	100284	20.207
29)*t-Butyl alcohol-d10	(1)	2.480	65	183068	250.000
30) t-Butyl alcohol	(1)	2.553	59	138278	202.062
31) Acrylonitrile	(2)	2.669	53	50641	20.034
32) trans-1,2-Dichloroethene	(2)	2.706	96	102003	20.803
33) Methyl Tertiary Butyl Ether	(2)	2.706	73	300079	20.526
34) n-Hexane	(2)	2.950	57	184155	21.432
36) 1,1-Dichloroethane	(2)	3.078	63	193890	21.106
38) di-Isopropyl ether	(2)	3.151	45	334410	20.686
39) 2-Chloro-1,3-butadiene	(2)	3.163	53	185471	21.144
40) Ethyl t-butyl ether	(2)	3.486	59	334052	20.948
42) cis-1,2-Dichloroethene	(2)	3.614	96	114688	20.817
45) 2,2-Dichloropropane	(2)	3.620	77	171976	21.218
43) 1,2-Dichloroethene (Total)	(2)		96	216691	41.620
44) 2-Butanone	(2)	3.626	43	131883	38.724
47) Propionitrile	(1)	3.675	54	184944	200.052
48) Methacrylonitrile	(2)	3.822	67	275352	101.447

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i04.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.840	128	56323	20.584
50) Tetrahydrofuran	(1)	3.882	71	36562	37.736
51) Chloroform	(2)	3.919	83	182337	20.868
52)$Dibromofluoromethane	(2)	4.071	113	250655	49.711
52)$Dibromofluoromethane	(2)	4.071	111	258391	49.922
53) 1,1,1-Trichloroethane	(2)	4.102	97	170588	21.099
54) Cyclohexane	(2)	4.157	56	211825	21.331
54) Cyclohexane	(2)	4.163	84	184804	21.659
54) Cyclohexane	(2)	4.157	69	68320	21.074
55) 1,1-Dichloropropene	(2)	4.260	75	153621	21.429
56) Carbon Tetrachloride	(2)	4.267	117	143944	20.931
58) Isobutyl Alcohol	(1)	4.382	41	110026	473.556
57)$1,2-Dichloroethane-d4	(2)	4.395	102	64385	50.601
57)$1,2-Dichloroethane-d4	(2)	4.395	65	320214	49.584
57)$1,2-Dichloroethane-d4	(2)	4.401	104	40103	49.160
60) Benzene	(2)	4.462	78	439043	20.857
61) 1,2-Dichloroethane	(2)	4.474	62	141378	19.997
61) 1,2-Dichloroethane	(2)	4.474	98	12384	20.042
65) t-Amyl methyl ether	(2)	4.584	73	326737	20.662
66)*Fluorobenzene	(2)	4.736	96	1084837	50.000
67) n-Heptane	(2)	4.748	43	182211	19.785
69) n-Butanol	(1)	5.053	56	197297	981.772
71) Trichloroethene	(2)	5.108	95	110532	20.817
73) Methylcyclohexane	(2)	5.309	83	236192	21.363
73) Methylcyclohexane	(2)	5.309	98	108136	21.269
74) 1,2-Dichloropropane	(2)	5.327	63	108688	20.753
75) Dibromomethane	(2)	5.443	93	63524	20.262
77) Methyl Methacrylate	(2)	5.474	69	92979	19.472
76) 1,4-Dioxane	(1)	5.474	88	28463M	503.295
79) Bromodichloromethane	(2)	5.620	83	132626	20.334
80) 2-Nitropropane	(2)	5.852	41	81741	37.815
81) 2-Chloroethyl Vinyl Ether	(2)	5.955	63	82098	20.344
82) cis-1,3-Dichloropropene	(2)	6.095	75	174764	20.571
83) 4-Methyl-2-pentanone	(2)	6.272	43	332570	45.471
84)$Toluene-d8	(3)	6.382	98	1085847	50.158
84)$Toluene-d8	(3)	6.382	100	695925	50.009
89) Toluene	(3)	6.455	92	275108	20.763
90) trans-1,3-Dichloropropene	(3)	6.699	75	163222	20.612

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i04.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropene (total)	(3)		100	337986	41.184
92) Ethyl Methacrylate	(3)	6.833	69	171905	20.364
93) 1,1,2-Trichloroethane	(3)	6.894	97	91241	20.233
94) Tetrachloroethene	(3)	7.053	166	115563	21.452
95) 1,3-Dichloropropane	(3)	7.077	76	163005	20.566
97) 2-Hexanone	(3)	7.193	43	269398	47.868
102) 1-Chlorohexane	(3)	7.315	91	9366	20.455
98) Dibromochloromethane	(3)	7.315	129	98398	20.212
100) 1,2-Dibromoethane	(3)	7.418	107	98178	20.462
101)*Chlorobenzene-d5	(3)	7.888	117	797090	50.000
103) Chlorobenzene	(3)	7.912	112	299511	20.443
104) 1,1,1,2-Tetrachloroethane	(3)	7.998	131	102289	20.557
105) Ethylbenzene	(3)	8.028	91	545633	20.816
107) m+p-Xylene	(3)	8.138	106	426427	41.791
109) Xylene (Total)	(3)		106	630869	62.321
108) o-Xylene	(3)	8.485	106	204442	20.530
110) Styrene	(3)	8.497	104	342997	20.854
111) Bromoform	(3)	8.638	173	65436	20.163
112) Isopropylbenzene	(3)	8.796	105	554112	20.914
113) Cyclohexanone	(1)	8.851	55	105484	495.132
115)$4-Bromofluorobenzene	(3)	8.912	95	416080	49.996
115)$4-Bromofluorobenzene	(3)	8.912	174	312405	50.098
116) Bromobenzene	(4)	9.028	156	121520	20.567
117) 1,1,2,2-Tetrachloroethane	(4)	9.034	83	138867	20.251
118) 1,2,3-Trichloropropane	(4)	9.064	110	42985	20.684
119) trans-1,4-Dichloro-2-butene	(4)	9.083	53	228205	101.269
120) n-Propylbenzene	(4)	9.125	91	650397	20.879
121) 2-Chlorotoluene	(4)	9.186	126	125956	20.538
123) 1,3,5-Trimethylbenzene	(4)	9.266	105	469196	20.763
122) 4-Chlorotoluene	(4)	9.272	126	130006	20.679
126) Pentachloroethane	(4)	9.516	167	75393	20.161
125) tert-Butylbenzene	(4)	9.516	134	106208	21.144
127) 1,2,4-Trimethylbenzene	(4)	9.546	105	474341	20.385
128) sec-Butylbenzene	(4)	9.674	105	611514	21.331
130) 1,3-Dichlorobenzene	(4)	9.747	146	236655	20.552
131) p-Isopropyltoluene	(4)	9.784	119	533050	21.137
132)*1,4-Dichlorobenzene-d4	(4)	9.796	152	424041	50.000
134) 1,4-Dichlorobenzene	(4)	9.814	146	235972	20.033

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i04.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:19 Analyst ID: KAS02648

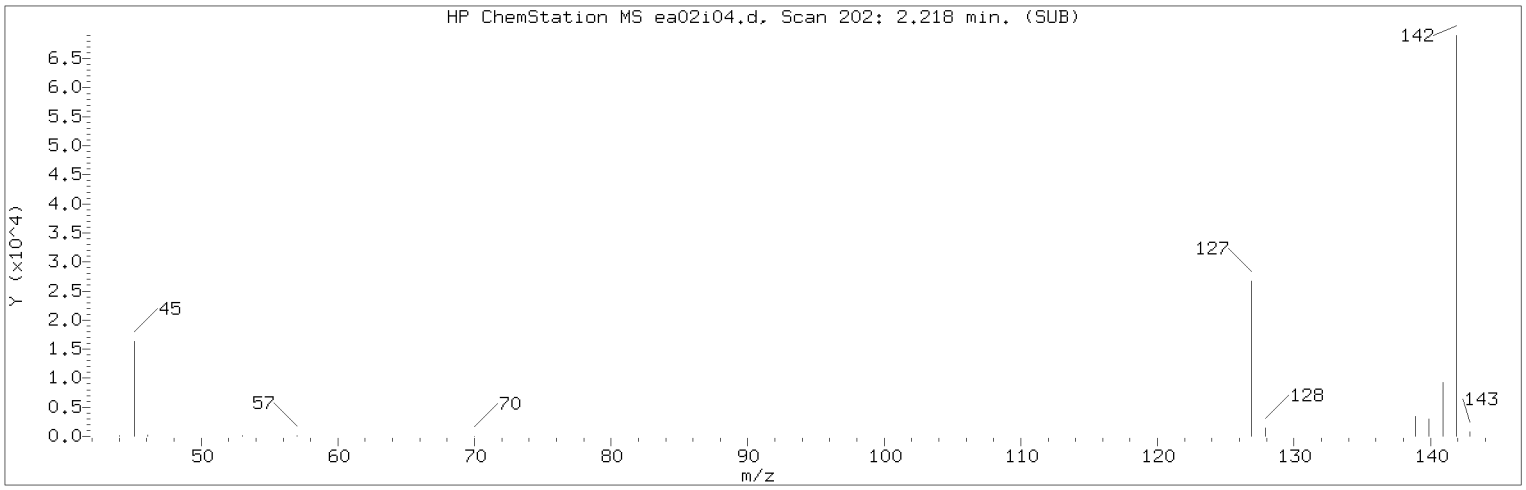
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

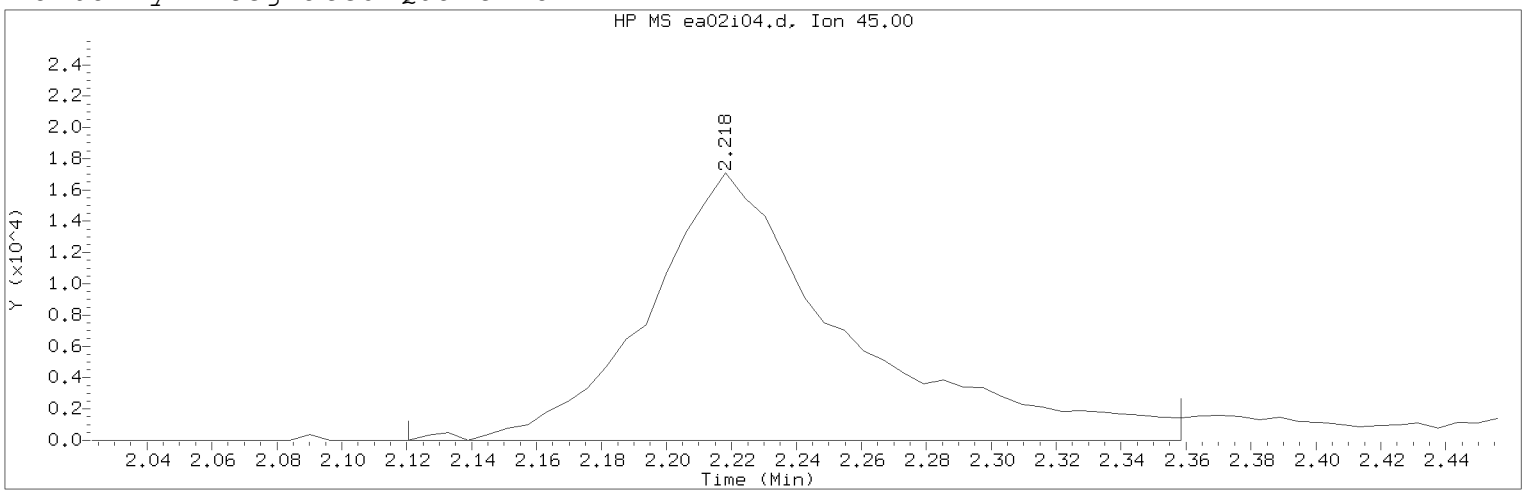
	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135)	1,2,3-Trimethylbenzene	(4)	9.851	105	514049	20.747
136)	Benzyl Chloride	(4)	9.912	91	325935	20.373
137)	1,3-Diethylbenzene	(4)	9.997	119	332831	20.960
138)	1,4-Diethylbenzene	(4)	10.058	119	349498	20.656
139)	1,2-Dichlorobenzene	(4)	10.076	146	224297	20.347
140)	n-Butylbenzene	(4)	10.076	92	261616	21.122
141)	1,2-Diethylbenzene	(4)	10.137	119	272039	20.926
142)	Diethylbenzene (total)	(4)		100	954368	62.541
143)	1,2-Dibromo-3-chloropropane	(4)	10.613	75	32302	20.559
145)	1,3,5-Trichlorobenzene	(4)	10.759	180	166897	20.589
147)	1,2,4-Trichlorobenzene	(4)	11.168	180	147192	20.342
148)	Hexachlorobutadiene	(4)	11.283	225	63752	20.554
149)	Naphthalene	(4)	11.326	128	480680	20.150
150)	1,2,3-Trichlorobenzene	(4)	11.485	180	139253	20.382
151)	2-Methylnaphthalene	(4)	12.039	142	307903	20.426

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i04.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

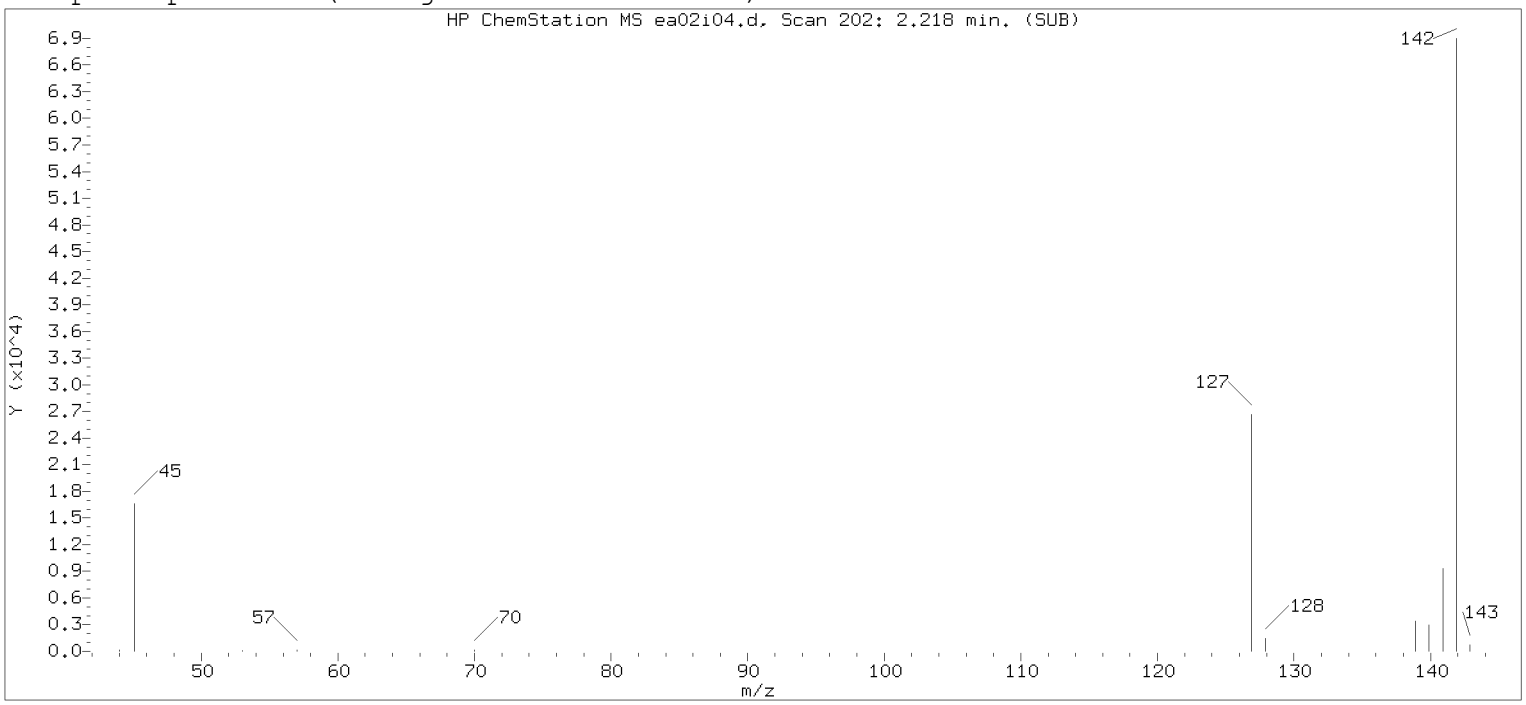
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 202
Retention Time (minutes): 2.218
Quant Ion : 45.00
Area (flag) : 72726M
On-Column Amount (ng) : 193.6204
Integration start scan : 185 Integration stop scan: 224
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

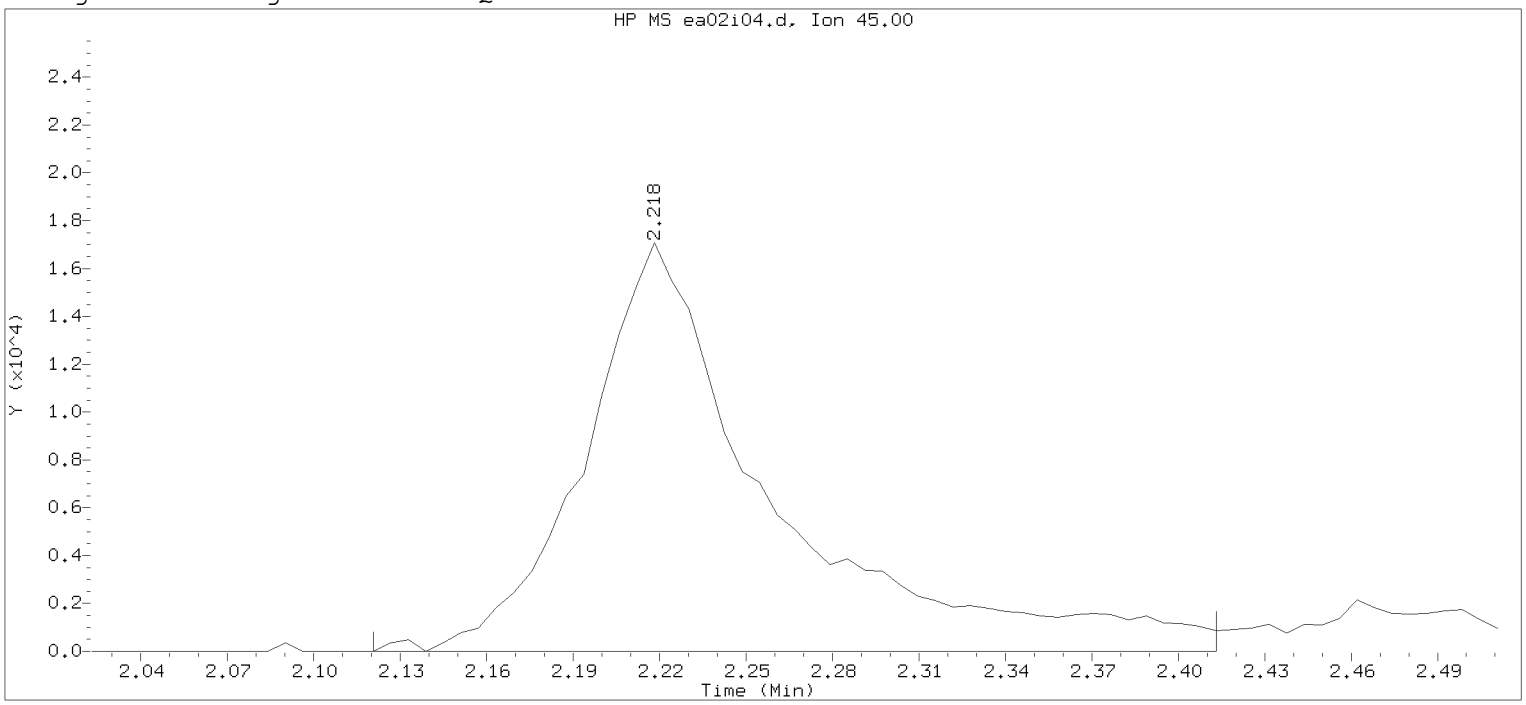
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i04.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:19 Analyst ID: KAS02648

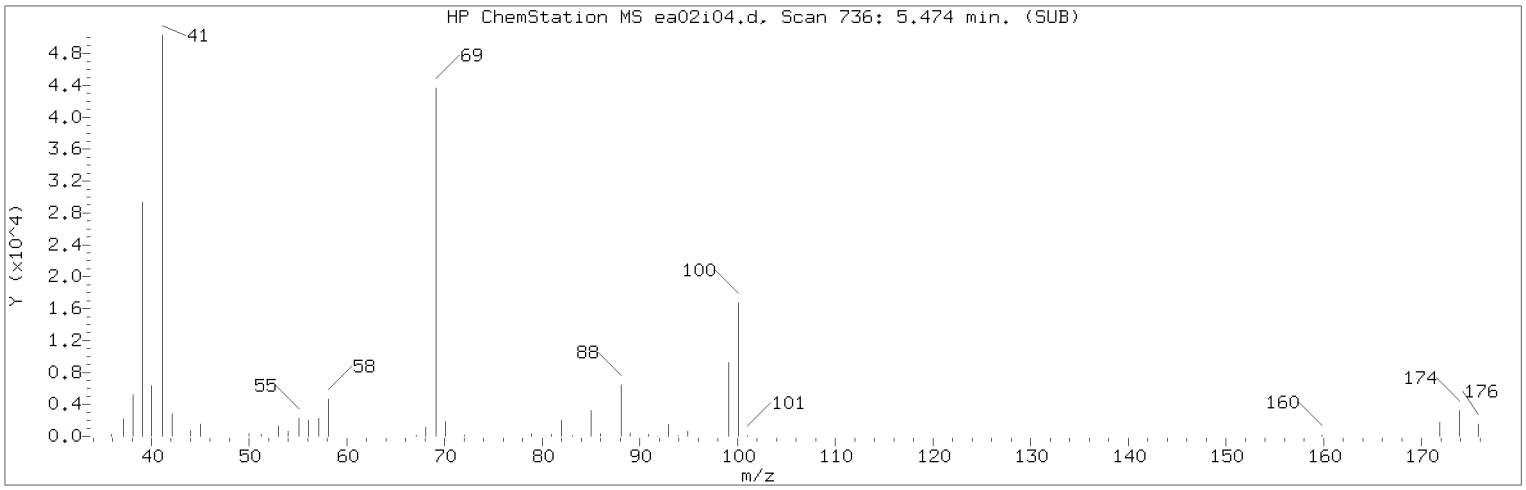
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 13:34
Date, time and analyst ID of latest file update: 02-May-2019 13:34 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

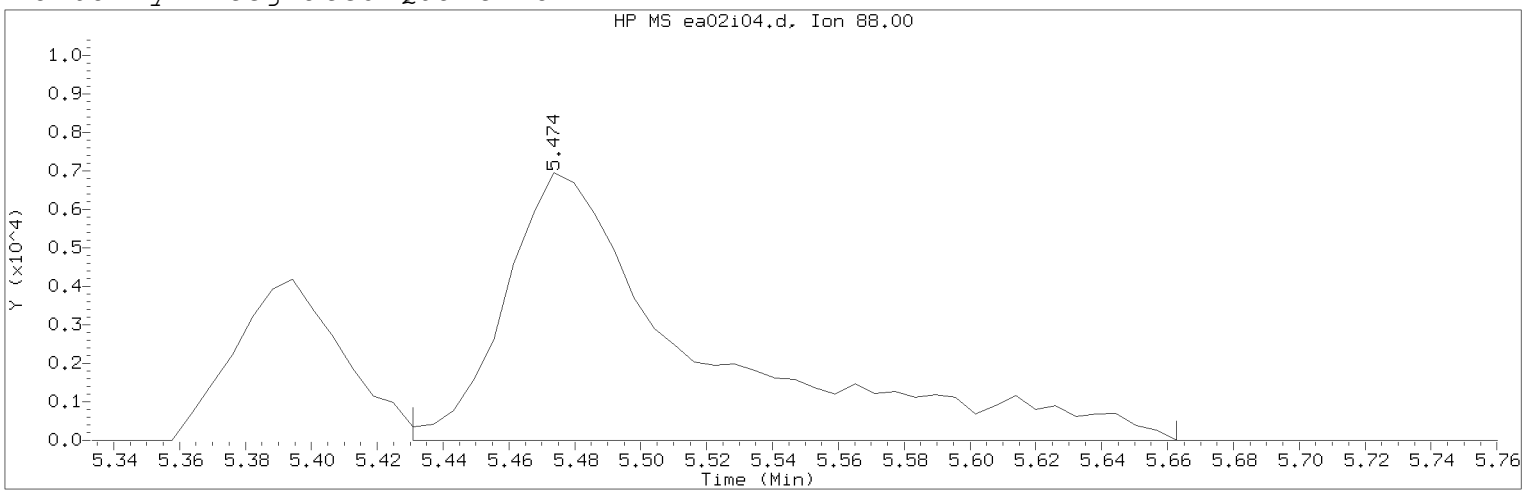
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 202
Retention Time (minutes): 2.218
Quant Ion : 45.00
Area : 76828
On-column Amount (ng) : 194.1056
Integration start scan : 185 Integration stop scan: 233
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:23.
Target 3.5 esignature user: kasposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i04.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

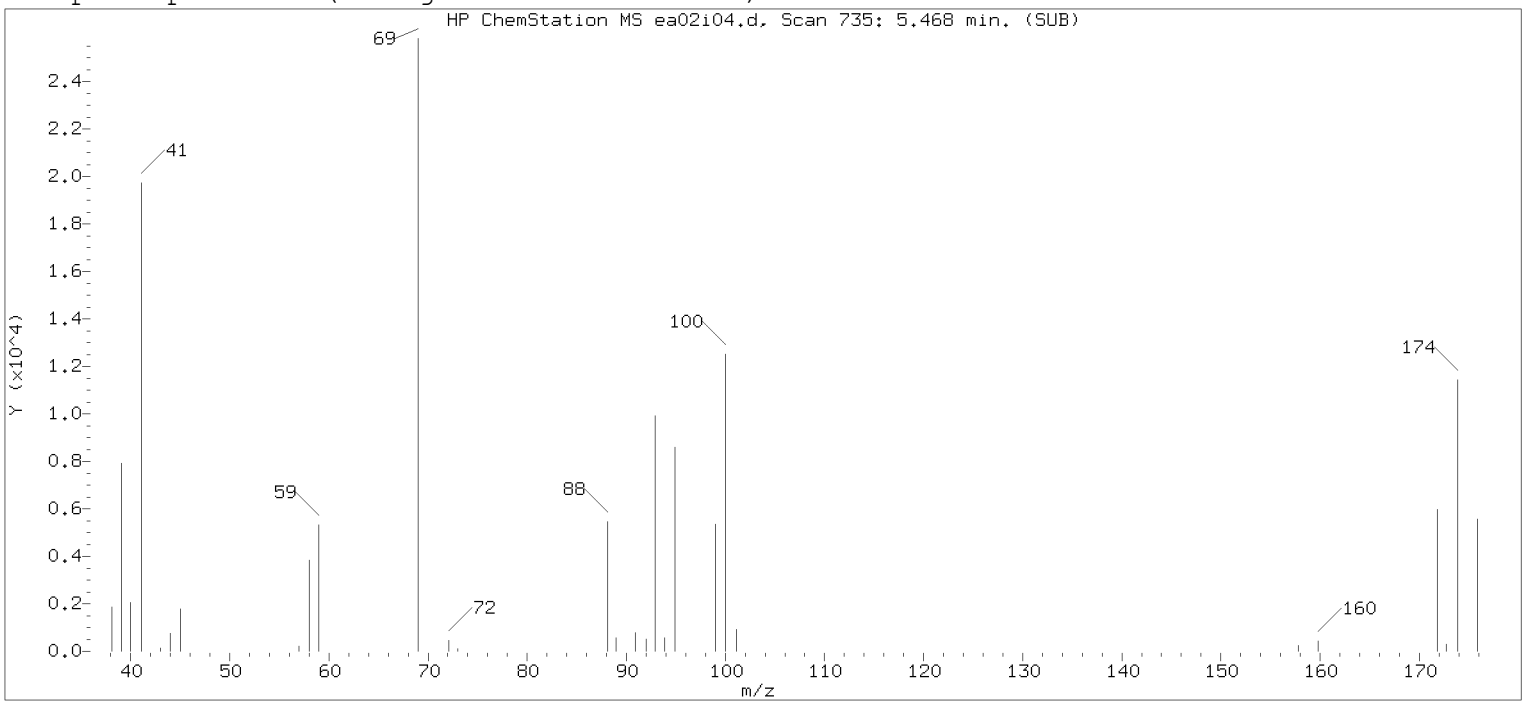
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 736
Retention Time (minutes): 5.474
Quant Ion : 88.00
Area (flag) : 28463M
On-Column Amount (ng) : 503.2951
Integration start scan : 728 Integration stop scan: 766
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

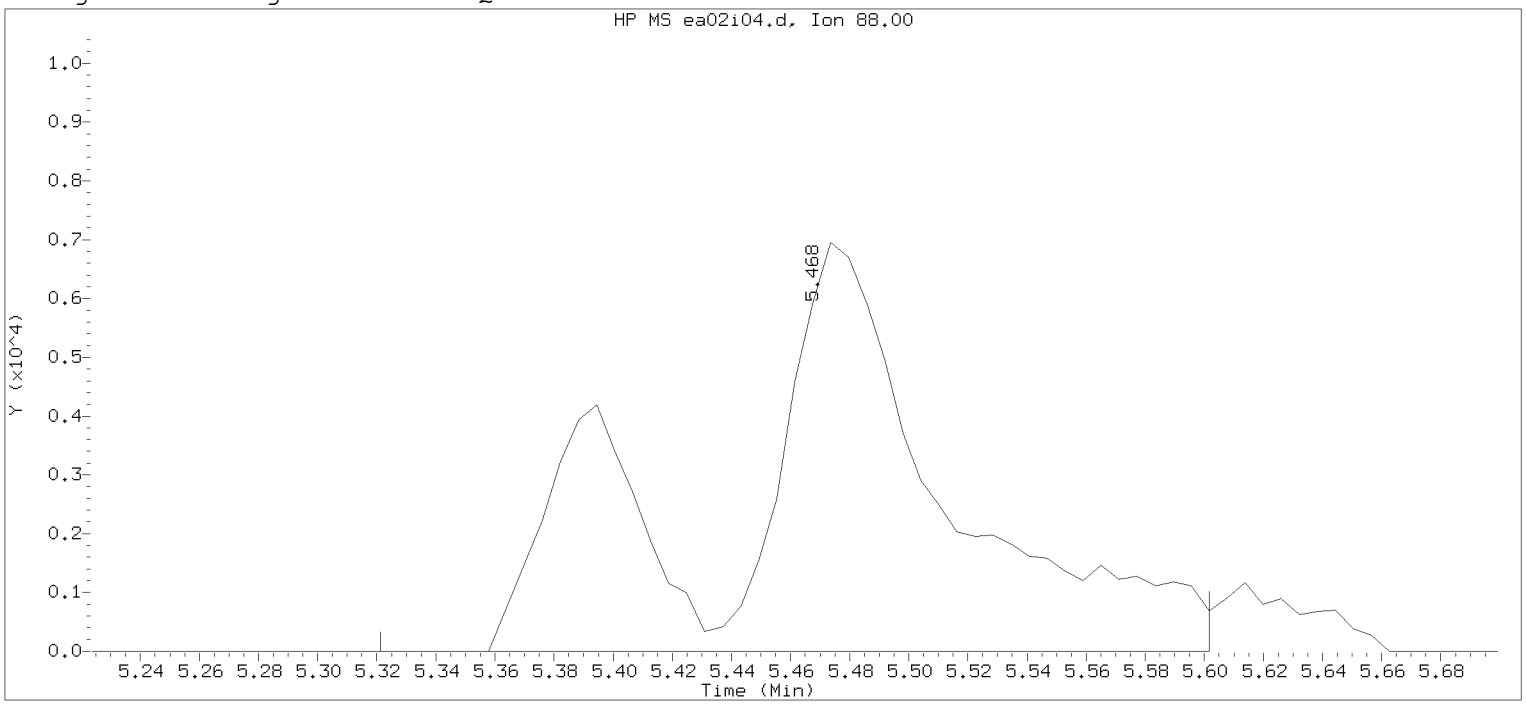
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:23.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



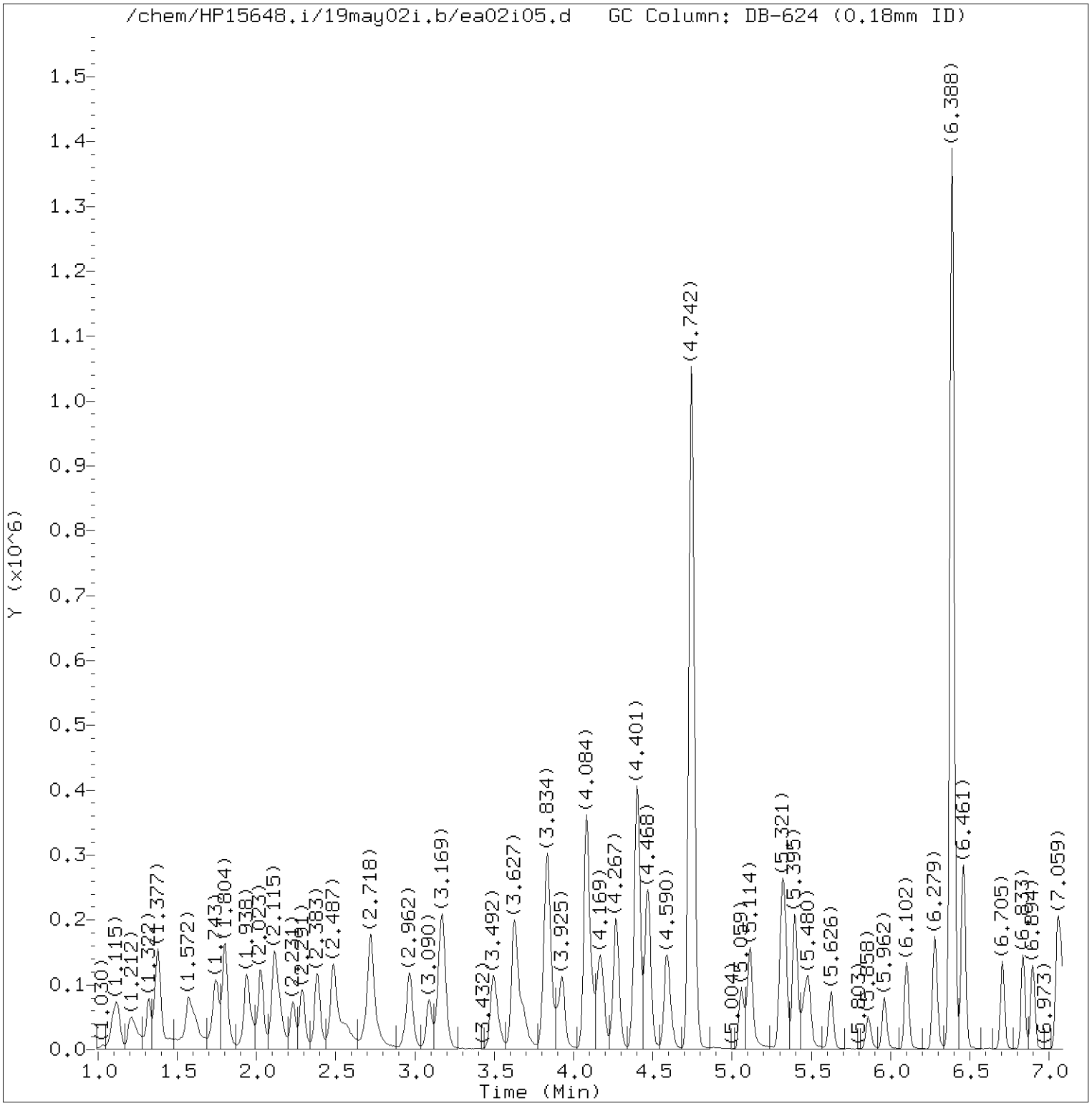
Data File: /chem/HP15648.i/19may02i.b/ea02i04.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 13:34
Date, time and analyst ID of latest file update: 02-May-2019 13:34 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 735
Retention Time (minutes): 5.468
Quant Ion : 88.00
Area : 35474
On-column Amount (ng) : 502.2593
Integration start scan : 710 Integration stop scan: 756
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:23.
Target 3.5 esignature user: kas02648



Total Ion Chromatogram (TIC)

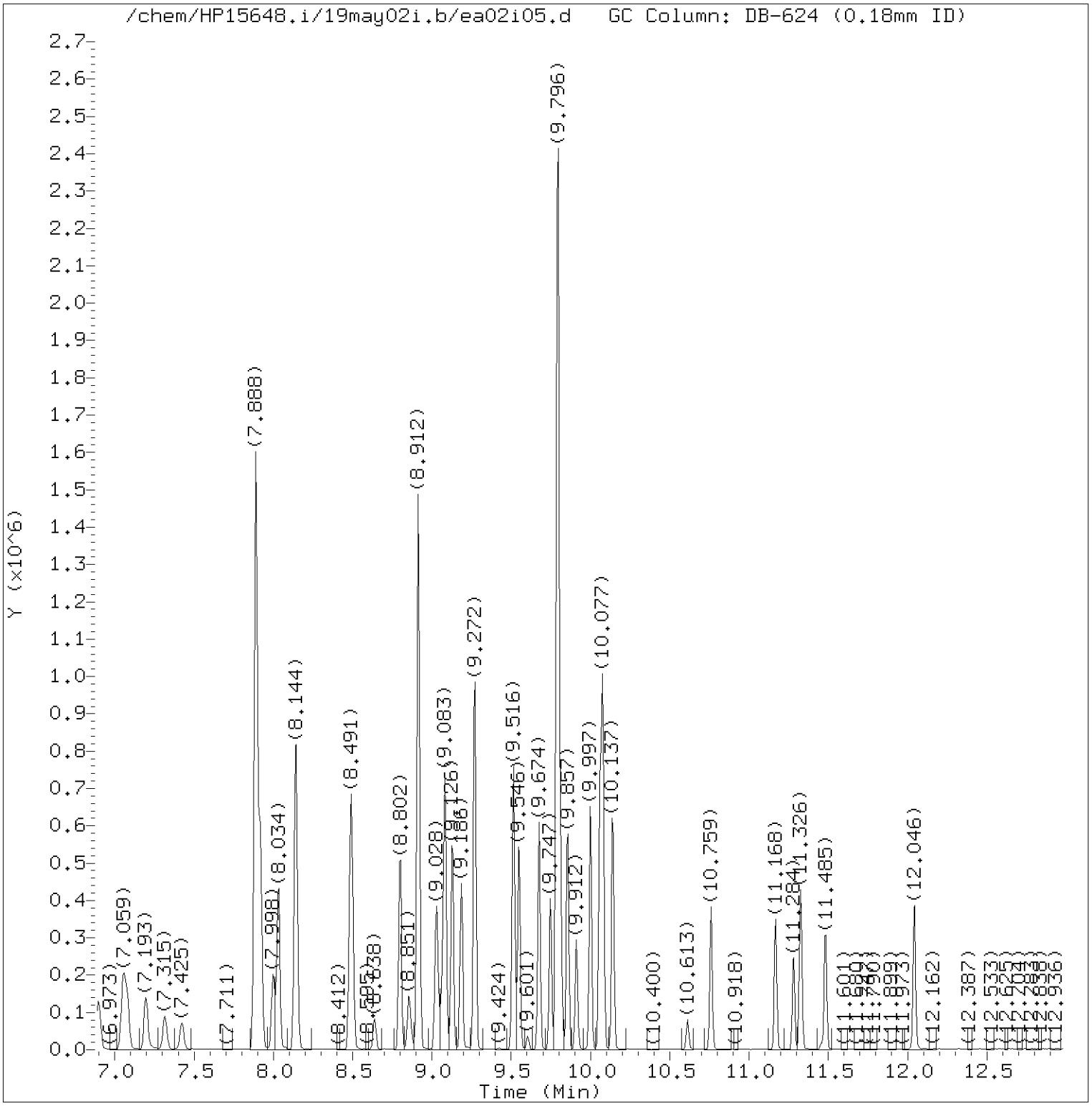
Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

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on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.206	85	91253	9.609
4) Chloromethane	(2)	1.322	50	77838	10.071
5) 1,3-Butadiene	(2)	1.371	39	64184	11.047
6) Vinyl Chloride	(2)	1.389	62	73497	9.949
8) Bromomethane	(2)	1.572	94	55994	10.066
9) Chloroethane	(2)	1.609	64	42208	10.035
10) Dichlorofluoromethane	(2)	1.743	67	104373	9.698
12) Trichlorofluoromethane	(2)	1.798	101	103939	9.897
11) n-Pentane	(2)	1.804	43	92850	10.762
14) Ethyl ether	(2)	1.938	59	41825	9.558
15) Freon 123a	(2)	1.944	67	64604	10.447
16) Acrolein	(1)	2.023	56	151147	103.374
17) 1,1-Dichloroethene	(2)	2.115	96	46199	10.683
17) 1,1-Dichloroethene	(2)	2.109	63	24329	10.612
19) Freon 113	(2)	2.127	101	52358	10.934
18) Acetone	(1)	2.145	58	12183	20.019
21) 2-Propanol	(1)	2.231	45	35466M	97.543
22) Methyl Iodide	(2)	2.231	142	85794	10.587
23) Carbon Disulfide	(2)	2.291	76	154742	10.549
25) Allyl Chloride	(2)	2.383	41	80384	9.564
27) Methyl Acetate	(2)	2.389	43	39535	9.580
28) Methylene Chloride	(2)	2.480	84	50731	10.298
29)*t-Butyl alcohol-d10	(1)	2.493	65	177210	250.000
30) t-Butyl alcohol	(1)	2.566	59	68160M	102.893
31) Acrylonitrile	(2)	2.682	53	25962	10.346
33) Methyl Tertiary Butyl Ether	(2)	2.718	73	149658	10.312
32) trans-1,2-Dichloroethene	(2)	2.724	96	52103	10.704
34) n-Hexane	(2)	2.962	57	93559	10.969
36) 1,1-Dichloroethane	(2)	3.084	63	96982	10.635
38) di-Isopropyl ether	(2)	3.157	45	168855	10.522
39) 2-Chloro-1,3-butadiene	(2)	3.175	53	94205	10.819
40) Ethyl t-butyl ether	(2)	3.499	59	168104	10.619
43) 1,2-Dichloroethene (Total)	(2)		96	108231	20.967
42) cis-1,2-Dichloroethene	(2)	3.633	96	56128	10.263
44) 2-Butanone	(2)	3.633	43	65344	19.328
45) 2,2-Dichloropropane	(2)	3.633	77	85984	10.687
47) Propionitrile	(1)	3.688	54	91806	102.588
48) Methacrylonitrile	(2)	3.834	67	138604	51.442

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.852	128	27052	9.959
50) Tetrahydrofuran	(1)	3.901	71	18718	19.958
51) Chloroform	(2)	3.931	83	91245	10.520
52)$Dibromofluoromethane	(2)	4.084	113	250313	50.009
52)$Dibromofluoromethane	(2)	4.084	111	256689	49.959
53) 1,1,1-Trichloroethane	(2)	4.114	97	84560	10.536
54) Cyclohexane	(2)	4.169	56	107271	10.882
54) Cyclohexane	(2)	4.169	84	91726	10.829
54) Cyclohexane	(2)	4.169	69	33904	10.535
55) 1,1-Dichloropropene	(2)	4.267	75	76543	10.756
56) Carbon Tetrachloride	(2)	4.273	117	73483	10.764
58) Isobutyl Alcohol	(1)	4.389	41	53683	238.692
57)$1,2-Dichloroethane-d4	(2)	4.407	102	63297	50.113
57)$1,2-Dichloroethane-d4	(2)	4.401	65	322525	50.310
57)$1,2-Dichloroethane-d4	(2)	4.401	104	40434	49.931
60) Benzene	(2)	4.462	78	219317	10.496
61) 1,2-Dichloroethane	(2)	4.480	62	71263	10.154
61) 1,2-Dichloroethane	(2)	4.480	98	6383	10.406
65) t-Amyl methyl ether	(2)	4.590	73	167224	10.653
66)*Fluorobenzene	(2)	4.742	96	1076899	50.000
67) n-Heptane	(2)	4.754	43	93994	10.281
69) n-Butanol	(1)	5.059	56	96491	496.022
71) Trichloroethene	(2)	5.114	95	55420	10.514
73) Methylcyclohexane	(2)	5.315	83	110690	10.085
73) Methylcyclohexane	(2)	5.315	98	51289	10.162
74) 1,2-Dichloropropane	(2)	5.340	63	54033	10.393
75) Dibromomethane	(2)	5.455	93	31812	10.222
77) Methyl Methacrylate	(2)	5.480	69	46845	9.883
76) 1,4-Dioxane	(1)	5.486	88	14248M	260.268
79) Bromodichloromethane	(2)	5.626	83	65776	10.159
80) 2-Nitropropane	(2)	5.858	41	38291	17.845
81) 2-Chloroethyl Vinyl Ether	(2)	5.962	63	41241	10.295
82) cis-1,3-Dichloropropene	(2)	6.102	75	86454	10.251
83) 4-Methyl-2-pentanone	(2)	6.279	43	140486	19.349
84)$Toluene-d8	(3)	6.388	98	1083413	50.043
84)$Toluene-d8	(3)	6.388	100	692258	49.743
89) Toluene	(3)	6.461	92	138911	10.484
90) trans-1,3-Dichloropropene	(3)	6.705	75	80388	10.151

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$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropene (total)	(3)		100	166842	20.403
92) Ethyl Methacrylate	(3)	6.833	69	84518	10.012
93) 1,1,2-Trichloroethane	(3)	6.894	97	45346	10.055
94) Tetrachloroethene	(3)	7.053	166	58455	10.850
95) 1,3-Dichloropropane	(3)	7.077	76	80550	10.162
97) 2-Hexanone	(3)	7.193	43	105237	18.698
102) 1-Chlorohexane	(3)	7.315	91	4557	9.952
98) Dibromochloromethane	(3)	7.315	129	48020	9.864
100) 1,2-Dibromoethane	(3)	7.425	107	48664	10.142
101)*Chlorobenzene-d5	(3)	7.888	117	797132	50.000
103) Chlorobenzene	(3)	7.918	112	154200	10.524
104) 1,1,1,2-Tetrachloroethane	(3)	7.998	131	51846	10.419
105) Ethylbenzene	(3)	8.034	91	278057	10.607
107) m+p-Xylene	(3)	8.144	106	215226	21.091
109) Xylene (Total)	(3)		106	319767	31.589
108) o-Xylene	(3)	8.485	106	104541	10.498
110) Styrene	(3)	8.498	104	172620	10.494
111) Bromoform	(3)	8.638	173	31259	9.632
112) Isopropylbenzene	(3)	8.802	105	281661	10.630
113) Cyclohexanone	(1)	8.857	55	49341M	239.258
115)$4-Bromofluorobenzene	(3)	8.912	95	414663	49.824
115)$4-Bromofluorobenzene	(3)	8.912	174	310338	49.764
116) Bromobenzene	(4)	9.028	156	61266	10.423
117) 1,1,2,2-Tetrachloroethane	(4)	9.034	83	68911	10.102
118) 1,2,3-Trichloropropane	(4)	9.065	110	20390	9.863
119) trans-1,4-Dichloro-2-butene	(4)	9.083	53	113604	50.678
120) n-Propylbenzene	(4)	9.126	91	334143	10.783
121) 2-Chlorotoluene	(4)	9.186	126	65363	10.714
123) 1,3,5-Trimethylbenzene	(4)	9.272	105	237914M	10.583
122) 4-Chlorotoluene	(4)	9.272	126	66178	10.582
125) tert-Butylbenzene	(4)	9.516	134	52583	10.523
126) Pentachloroethane	(4)	9.522	167	36732	9.874
127) 1,2,4-Trimethylbenzene	(4)	9.546	105	242745	10.487
128) sec-Butylbenzene	(4)	9.674	105	308777	10.827
130) 1,3-Dichlorobenzene	(4)	9.747	146	119654	10.446
131) p-Isopropyltoluene	(4)	9.784	119	269023	10.723
132)*1,4-Dichlorobenzene-d4	(4)	9.796	152	421829	50.000
134) 1,4-Dichlorobenzene	(4)	9.814	146	121315	10.353

M = Compound was manually integrated.
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Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

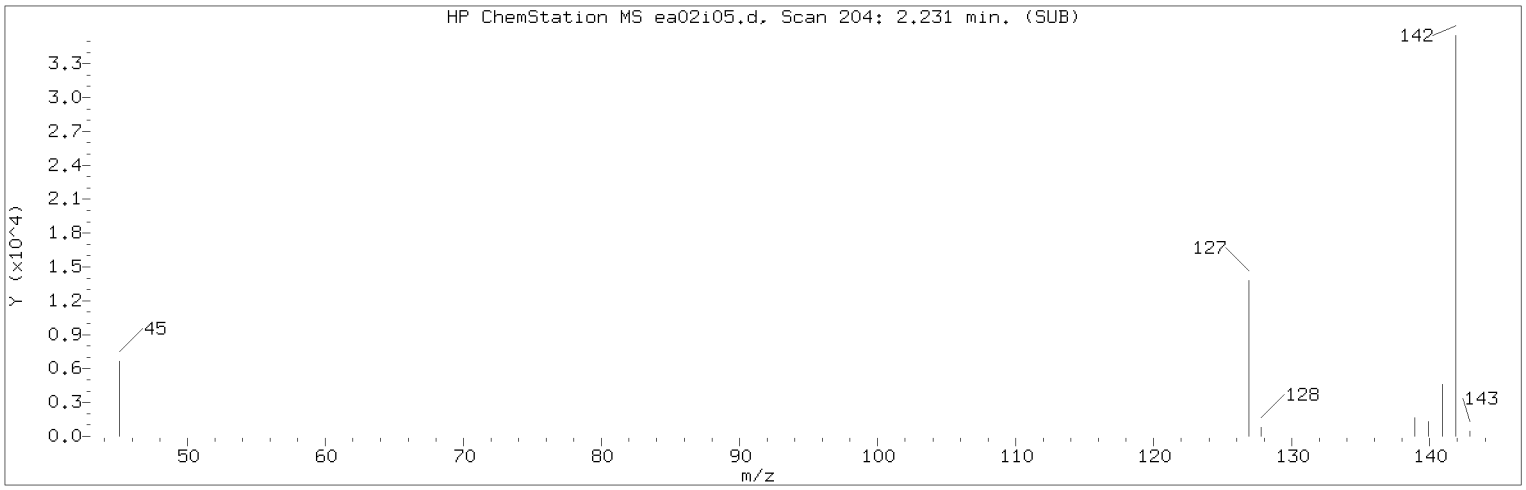
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

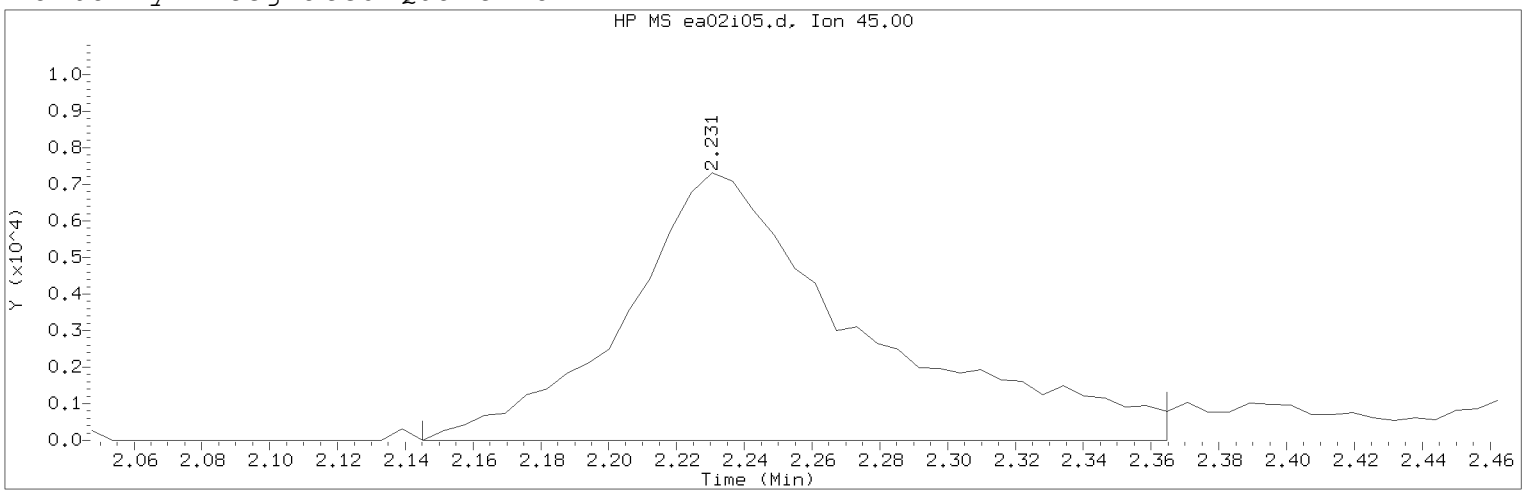
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	9.857	105	247228	10.030
136) Benzyl Chloride	(4)	9.912	91	158897	9.984
137) 1,3-Diethylbenzene	(4)	9.997	119	160025	10.130
138) 1,4-Diethylbenzene	(4)	10.058	119	169697	10.082
139) 1,2-Dichlorobenzene	(4)	10.077	146	114951	10.483
140) n-Butylbenzene	(4)	10.077	92	131171	10.646
141) 1,2-Diethylbenzene	(4)	10.137	119	129831	10.039
142) Diethylbenzene (total)	(4)		100	459553	30.251
143) 1,2-Dibromo-3-chloropropane	(4)	10.613	75	15579	9.967
145) 1,3,5-Trichlorobenzene	(4)	10.759	180	84202	10.442
147) 1,2,4-Trichlorobenzene	(4)	11.168	180	76366	10.609
148) Hexachlorobutadiene	(4)	11.284	225	32522	10.540
149) Naphthalene	(4)	11.326	128	244102	10.286
150) 1,2,3-Trichlorobenzene	(4)	11.485	180	71022	10.450
151) 2-Methylnaphthalene	(4)	12.046	142	145313	9.690

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

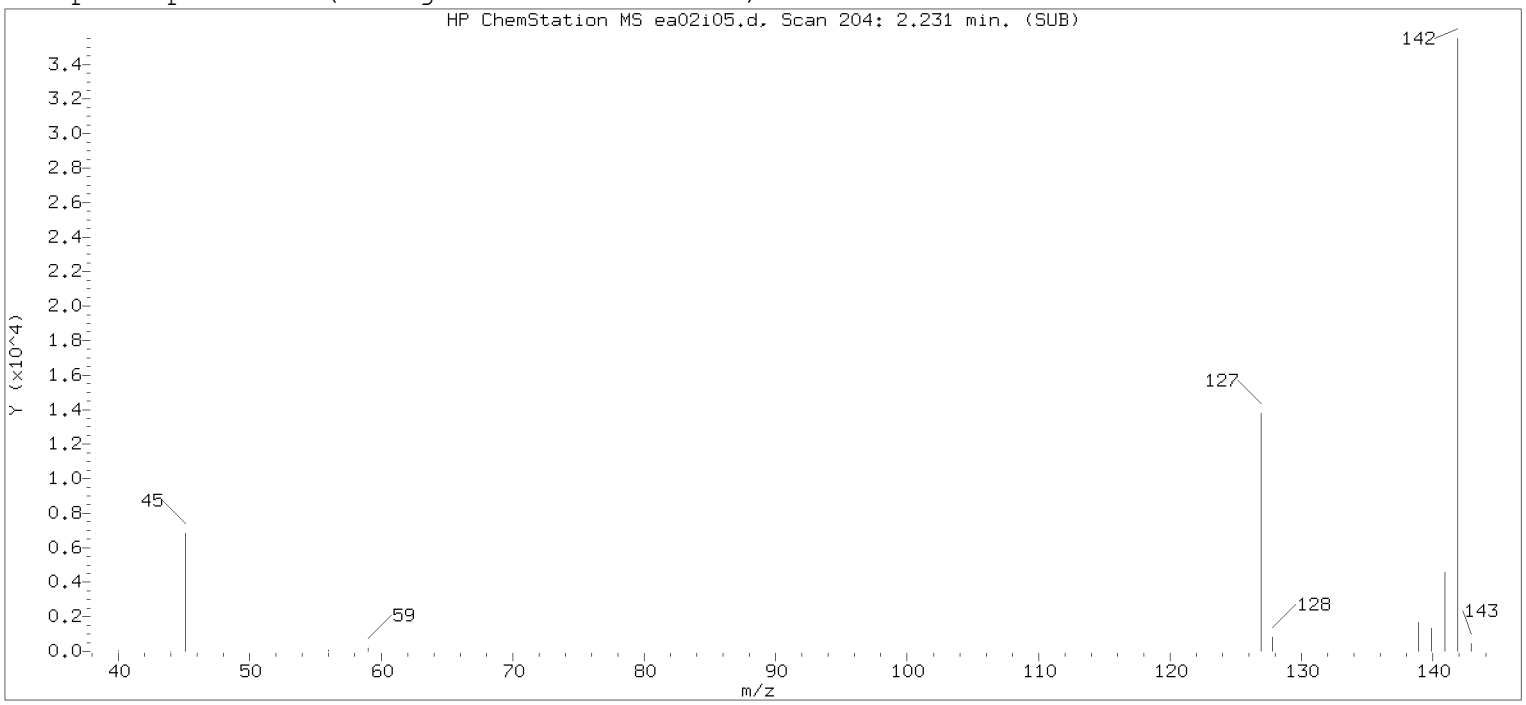
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 204
Retention Time (minutes): 2.231
Quant Ion : 45.00
Area (flag) : 35466M
On-Column Amount (ng) : 97.5434
Integration start scan : 189 Integration stop scan: 225
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

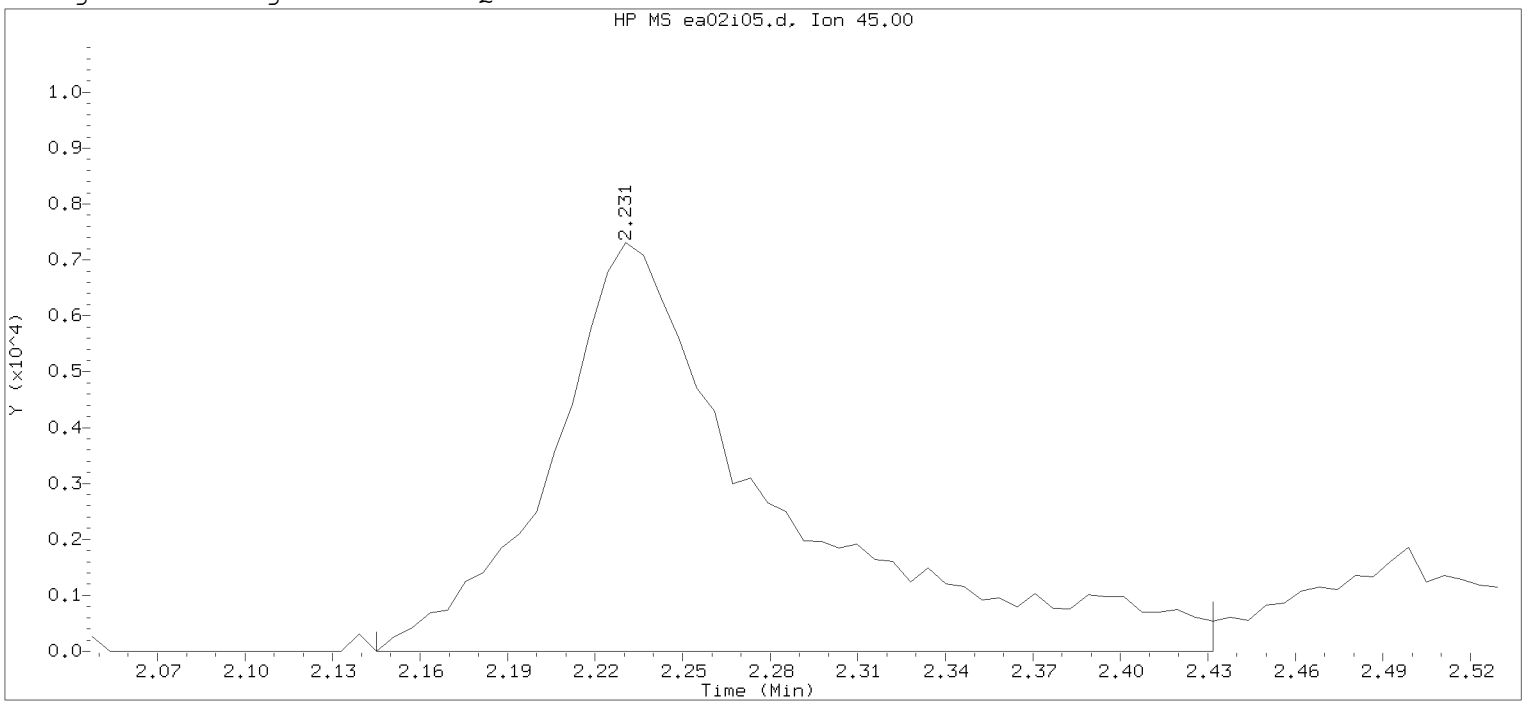
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

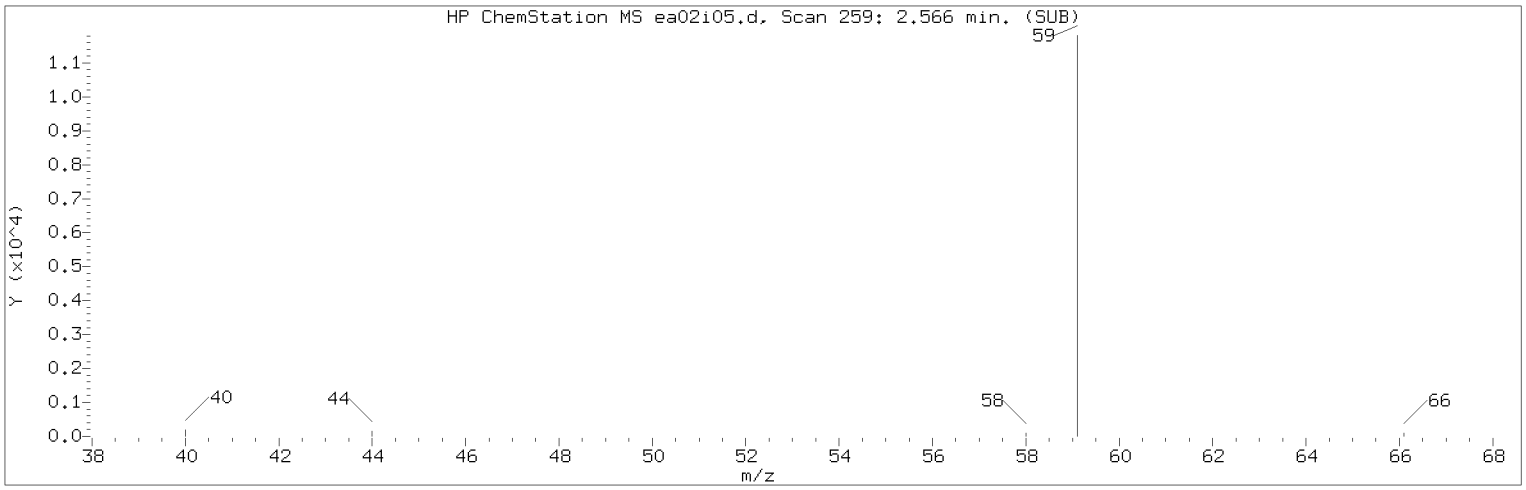
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 13:55
Date, time and analyst ID of latest file update: 02-May-2019 13:55 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

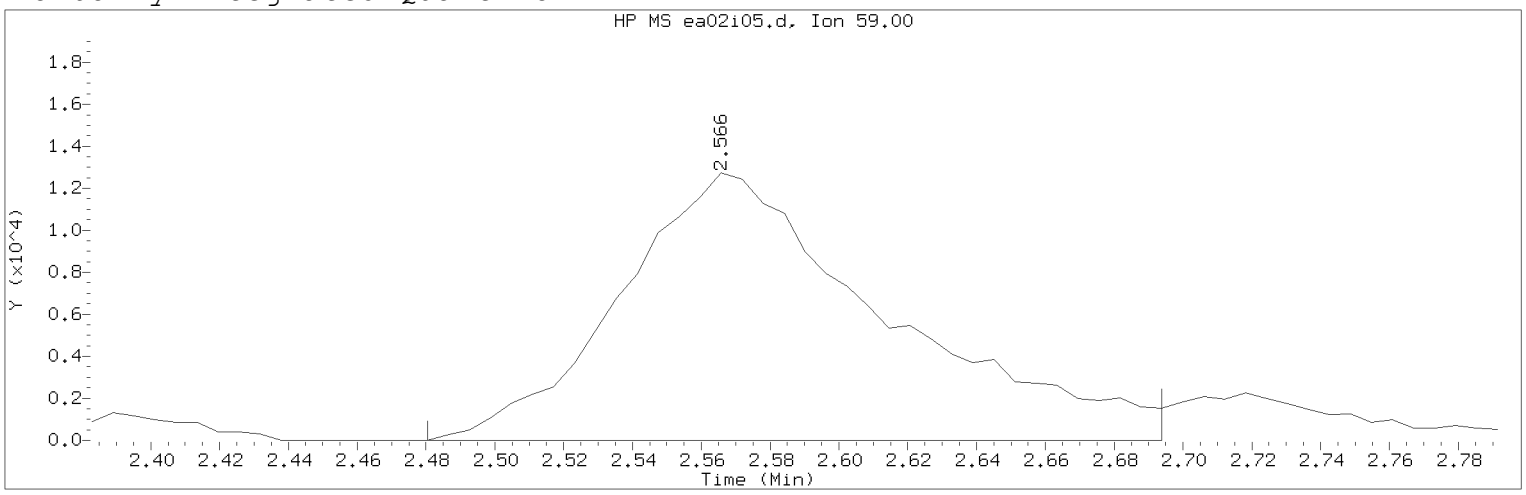
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 204
Retention Time (minutes): 2.231
Quant Ion : 45.00
Area : 38598
On-column Amount (ng) : 101.1327
Integration start scan : 189 Integration stop scan: 236
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

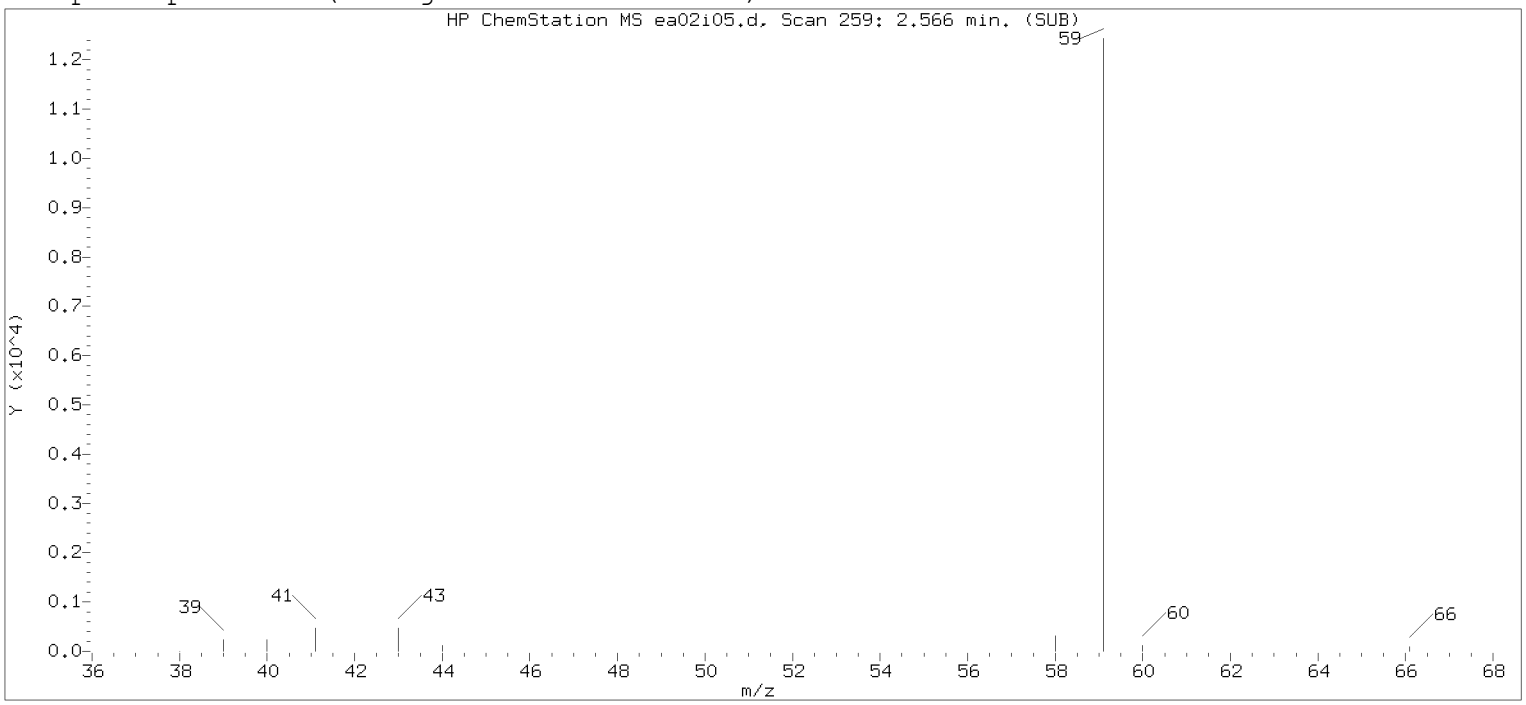
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 259
Retention Time (minutes): 2.566
Quant Ion : 59.00
Area (flag) : 68160M
On-Column Amount (ng) : 102.8928
Integration start scan : 244 Integration stop scan: 279
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

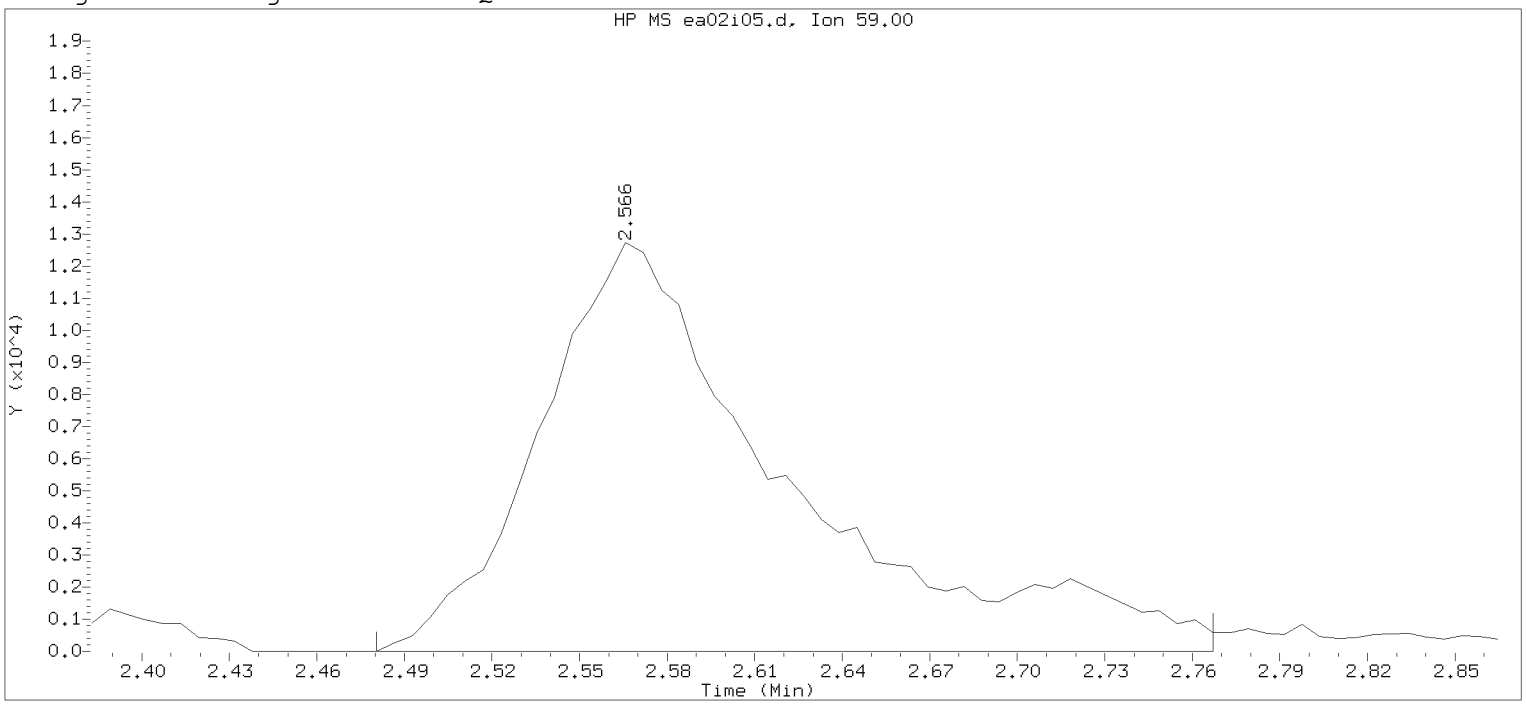
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

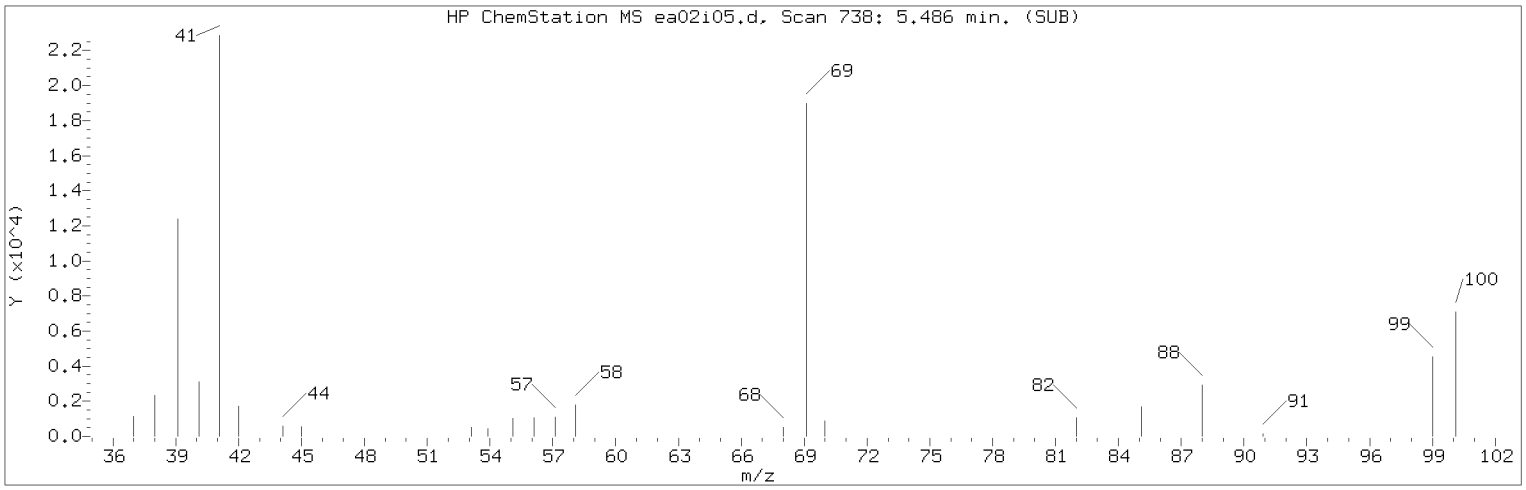
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 13:55
Date, time and analyst ID of latest file update: 02-May-2019 13:55 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

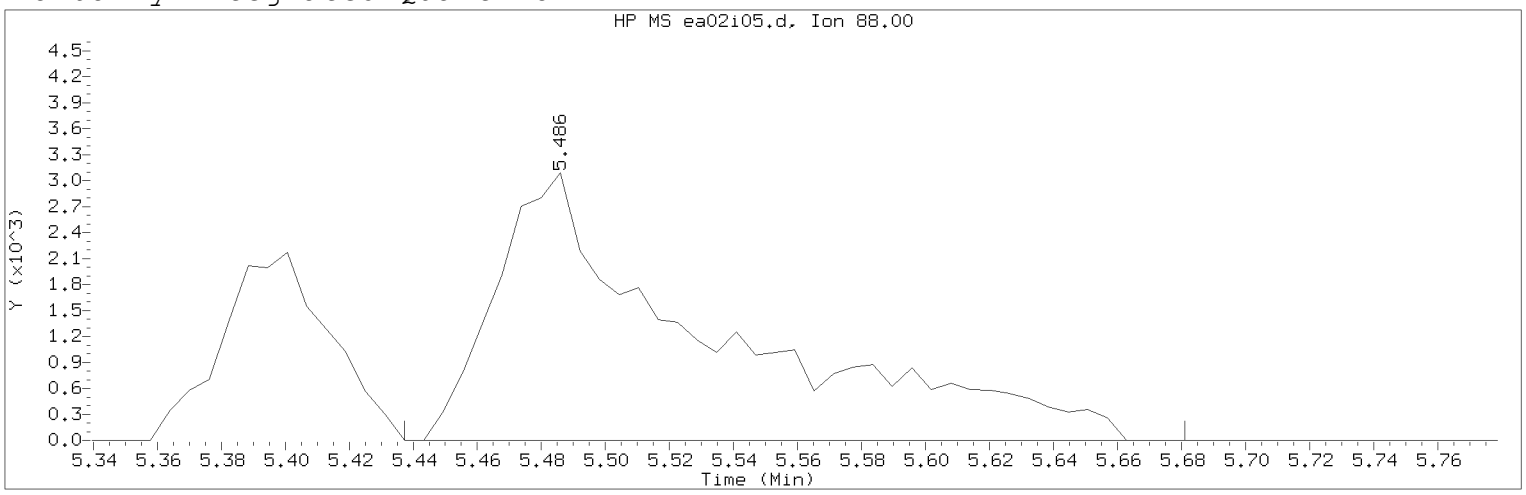
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 259
Retention Time (minutes): 2.566
Quant Ion : 59.00
Area : 74733
On-column Amount (ng) : 111.0268
Integration start scan : 244 Integration stop scan: 291
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

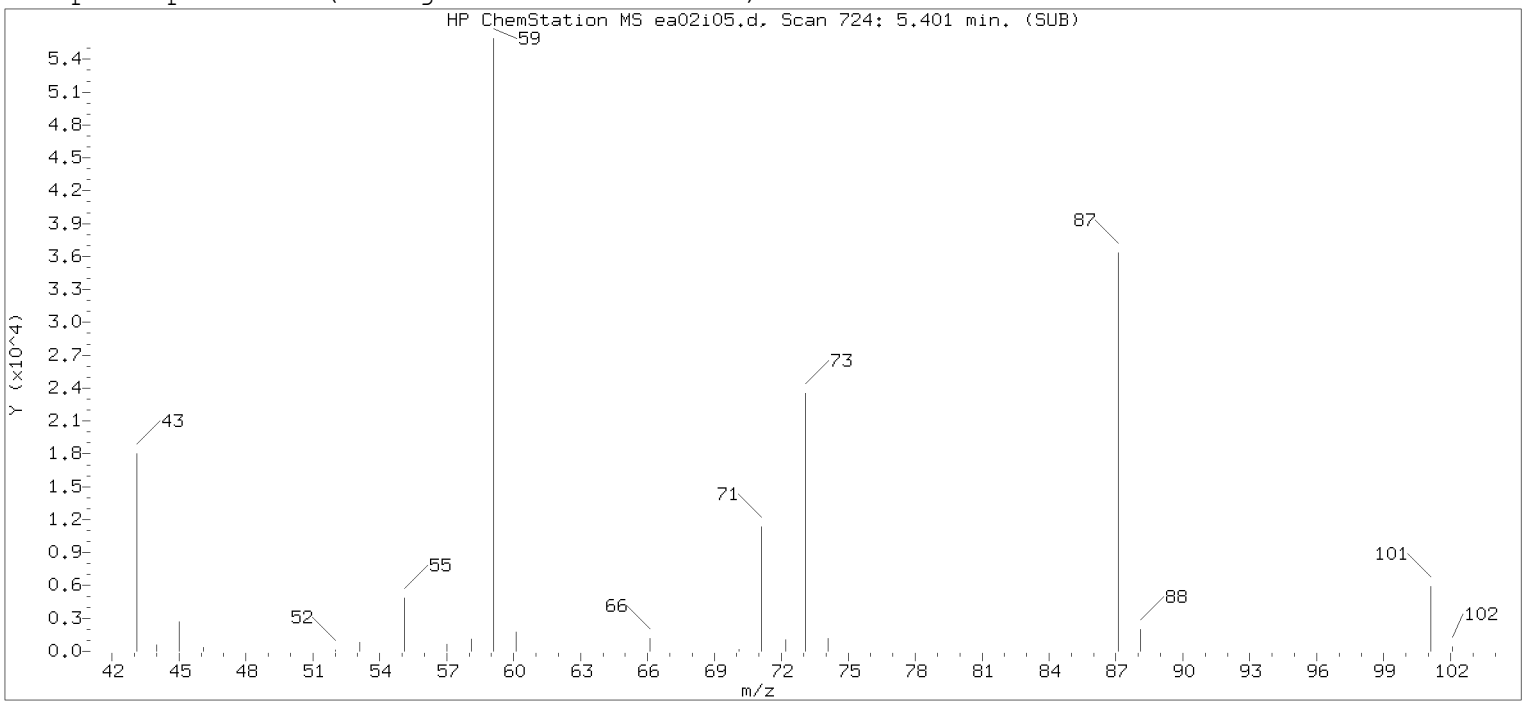
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 738
Retention Time (minutes): 5.486
Quant Ion : 88.00
Area (flag) : 14248M
On-Column Amount (ng) : 260.2676
Integration start scan : 729 Integration stop scan: 769
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

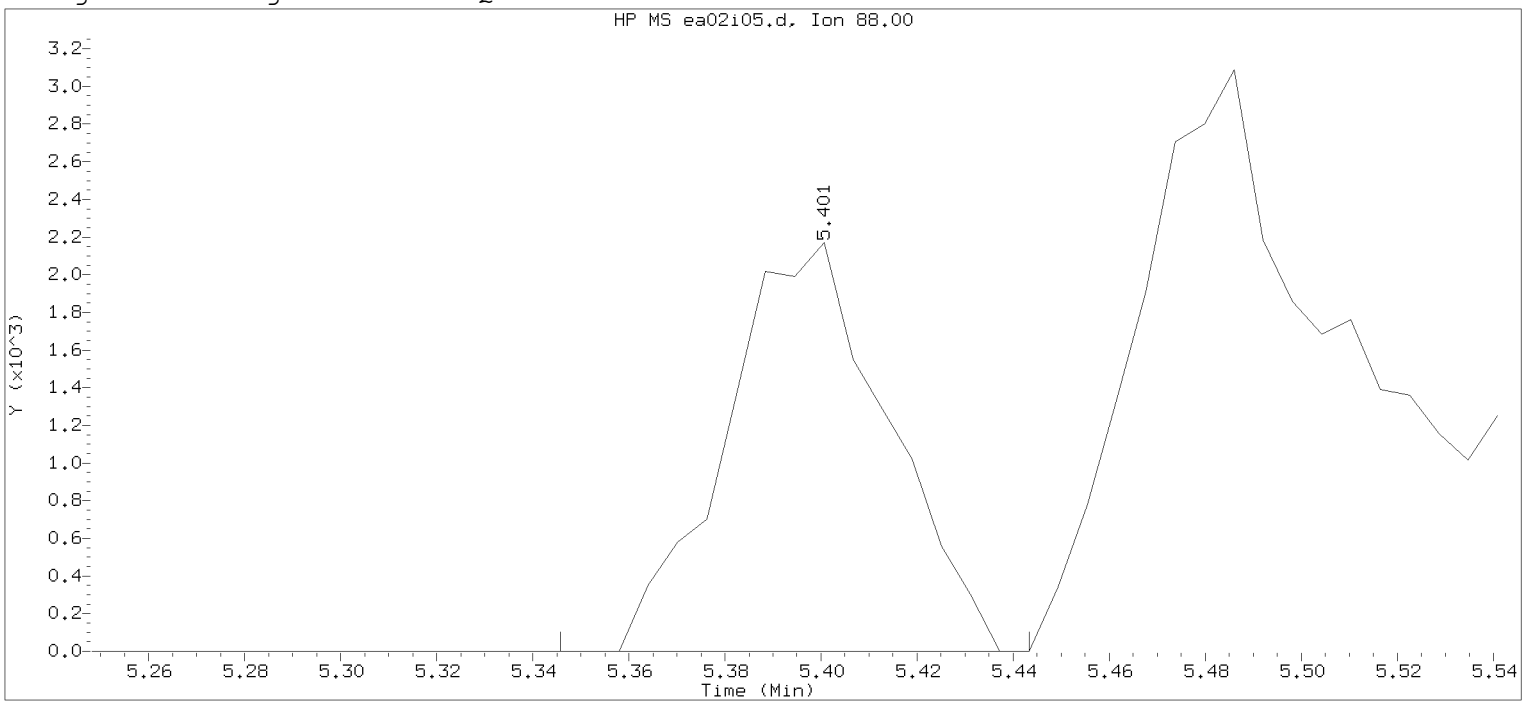
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

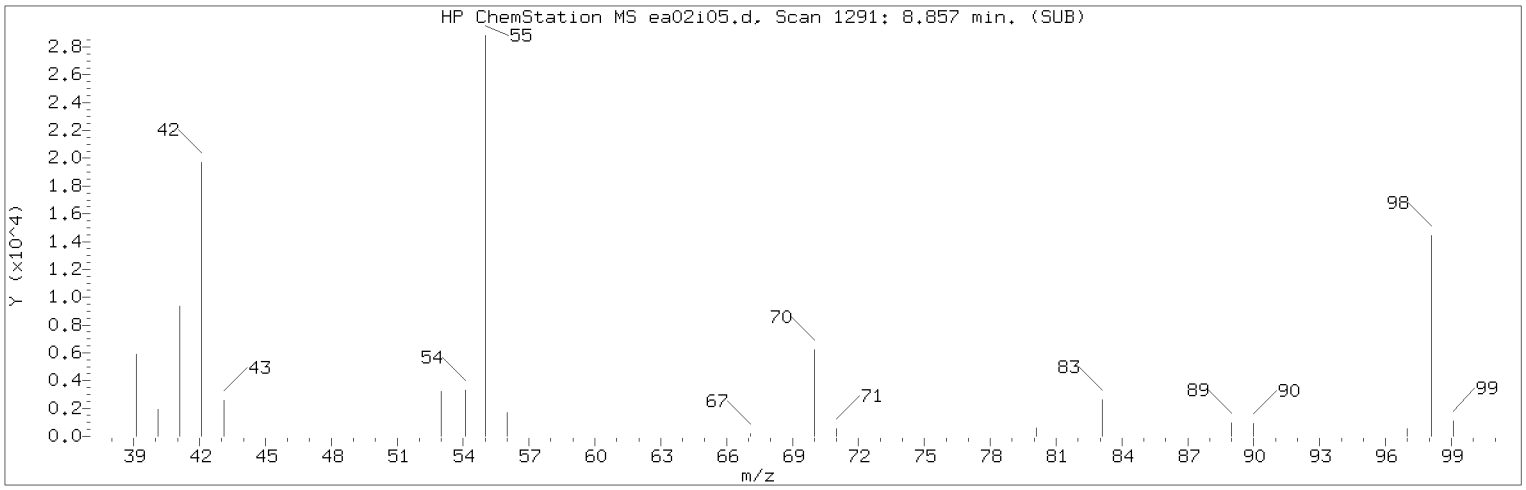
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 13:55
Date, time and analyst ID of latest file update: 02-May-2019 13:55 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

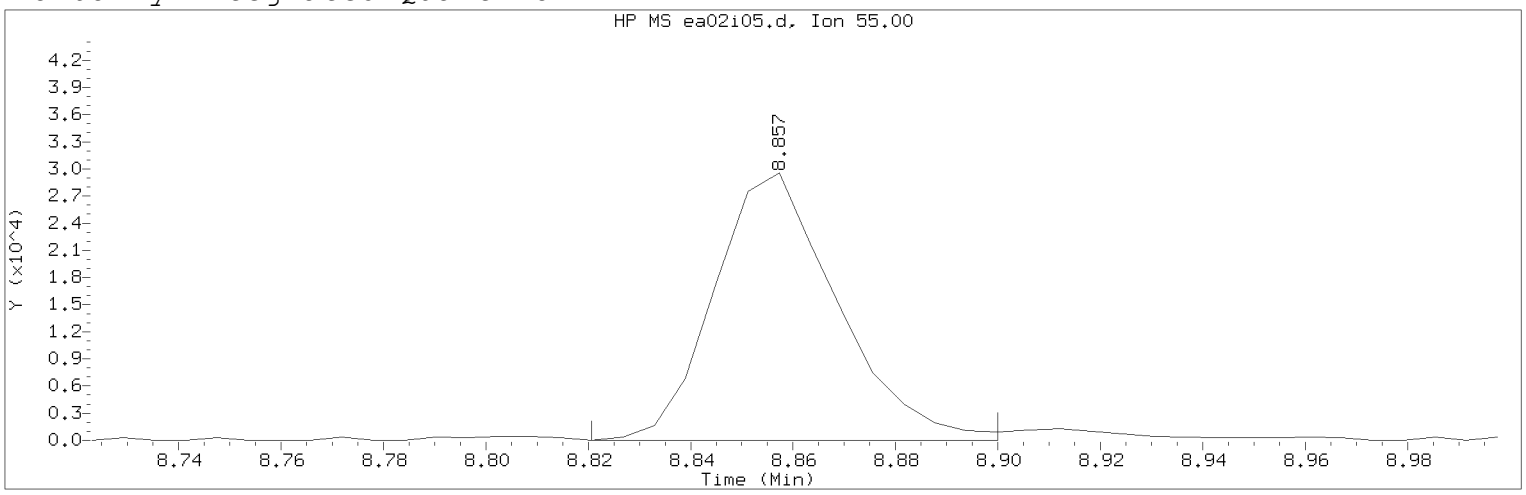
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 724
Retention Time (minutes): 5.401
Quant Ion : 88.00
Area : 5083
On-column Amount (ng) : 79.2477
Integration start scan : 714 Integration stop scan: 730
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kasposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

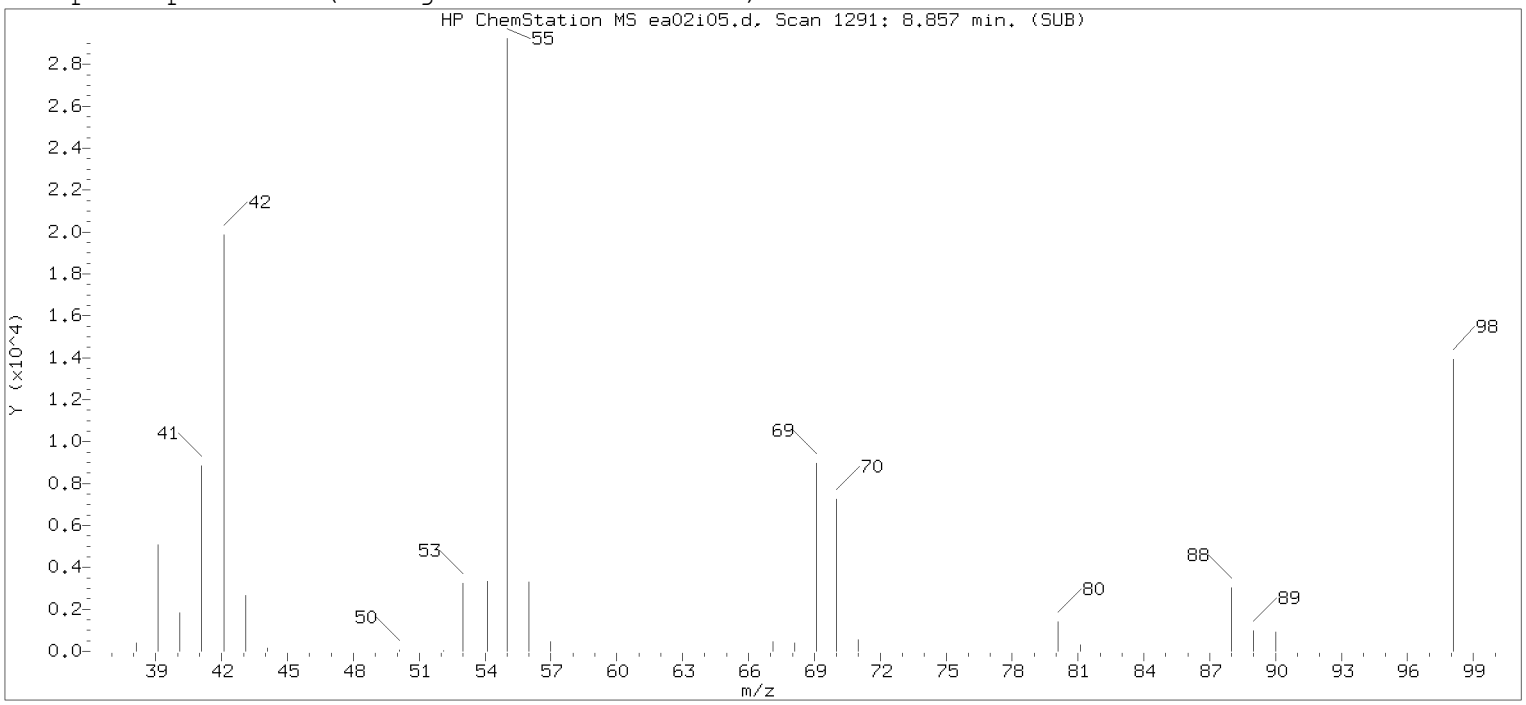
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1291
Retention Time (minutes): 8.857
Quant Ion : 55.00
Area (flag) : 49341M
On-Column Amount (ng) : 239.2580
Integration start scan : 1284 Integration stop scan: 1297
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

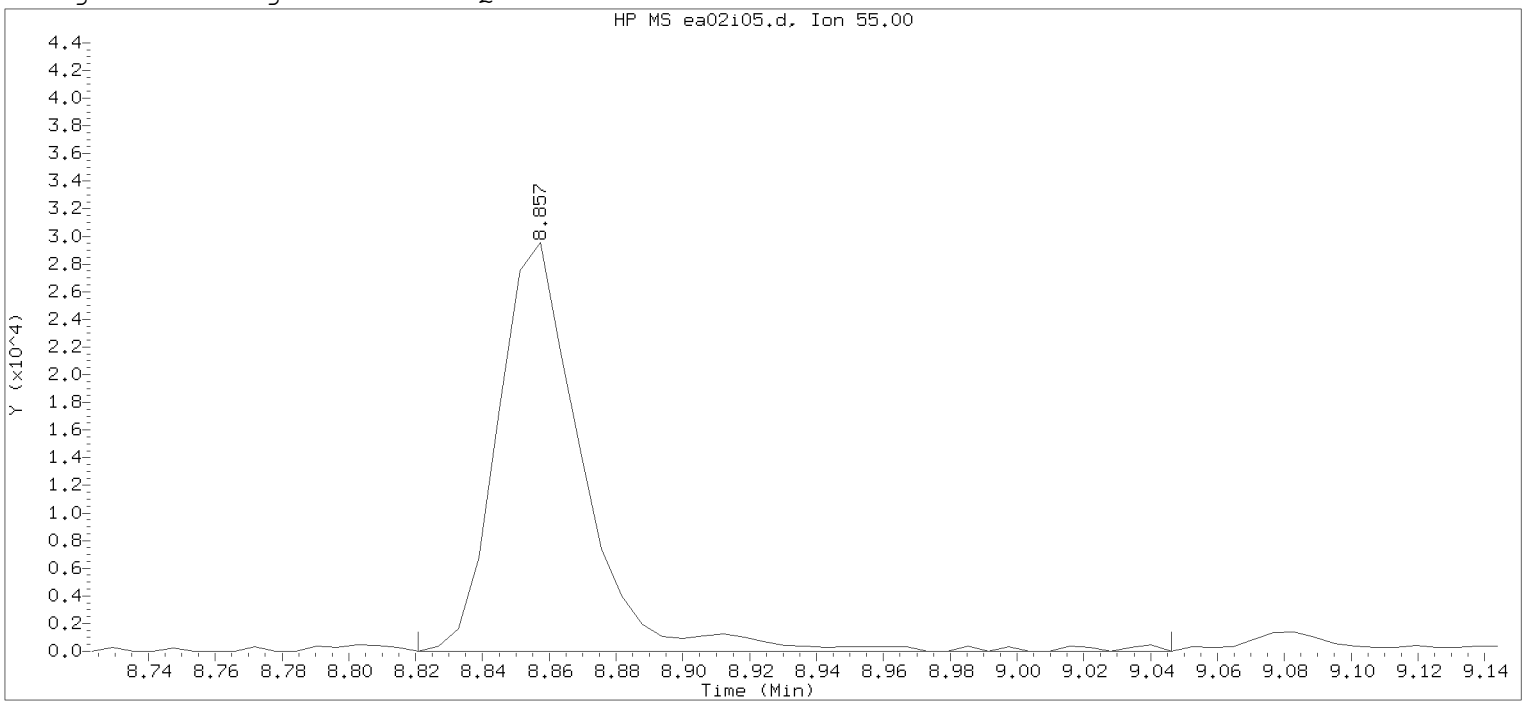
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 13:55
Date, time and analyst ID of latest file update: 02-May-2019 13:55 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1291
Retention Time (minutes): 8.857
Quant Ion : 55.00
Area : 52457
On-column Amount (ng) : 240.2568
Integration start scan : 1284 Integration stop scan: 1321
Y at integration start : 0 Y at integration end: 0

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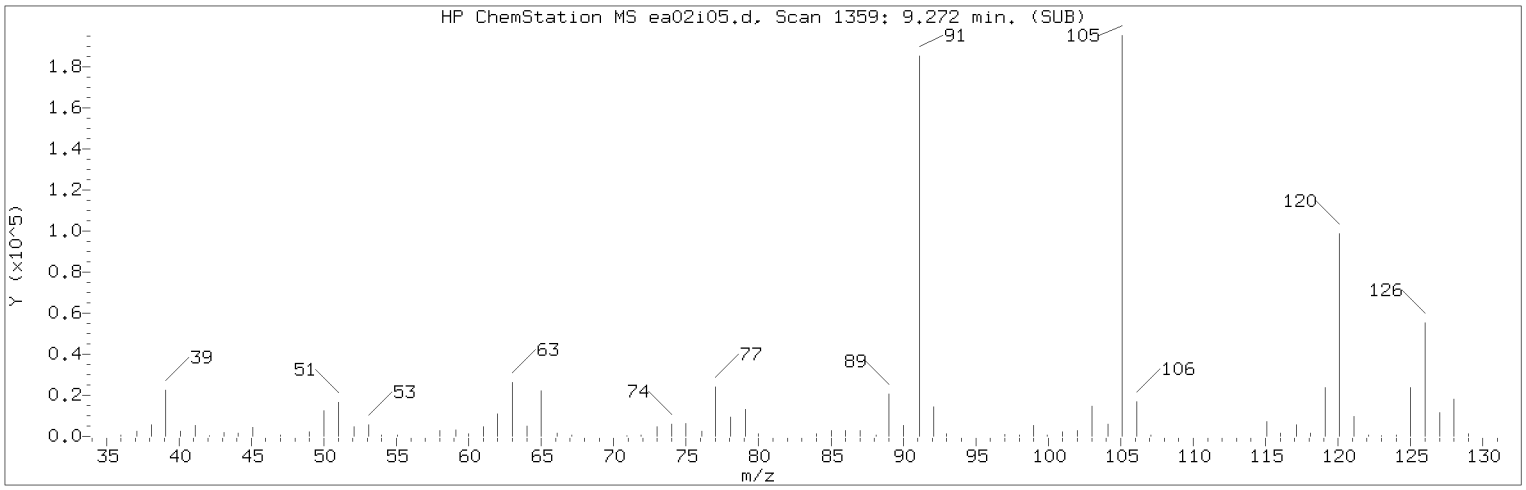
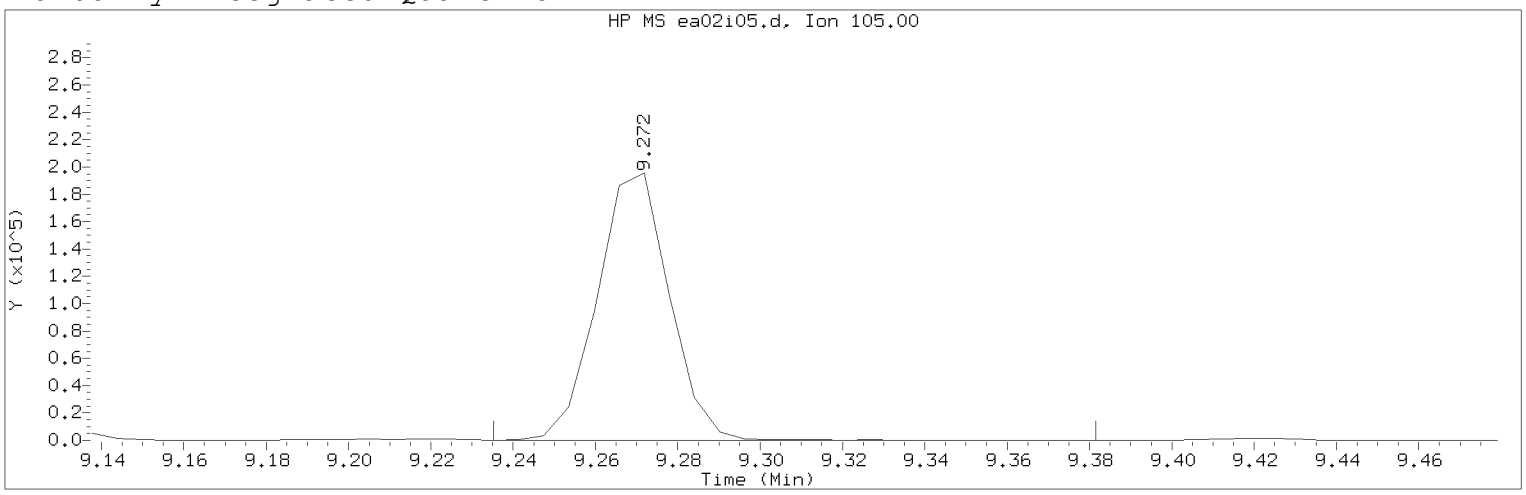
Target 3.5 esignature user: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

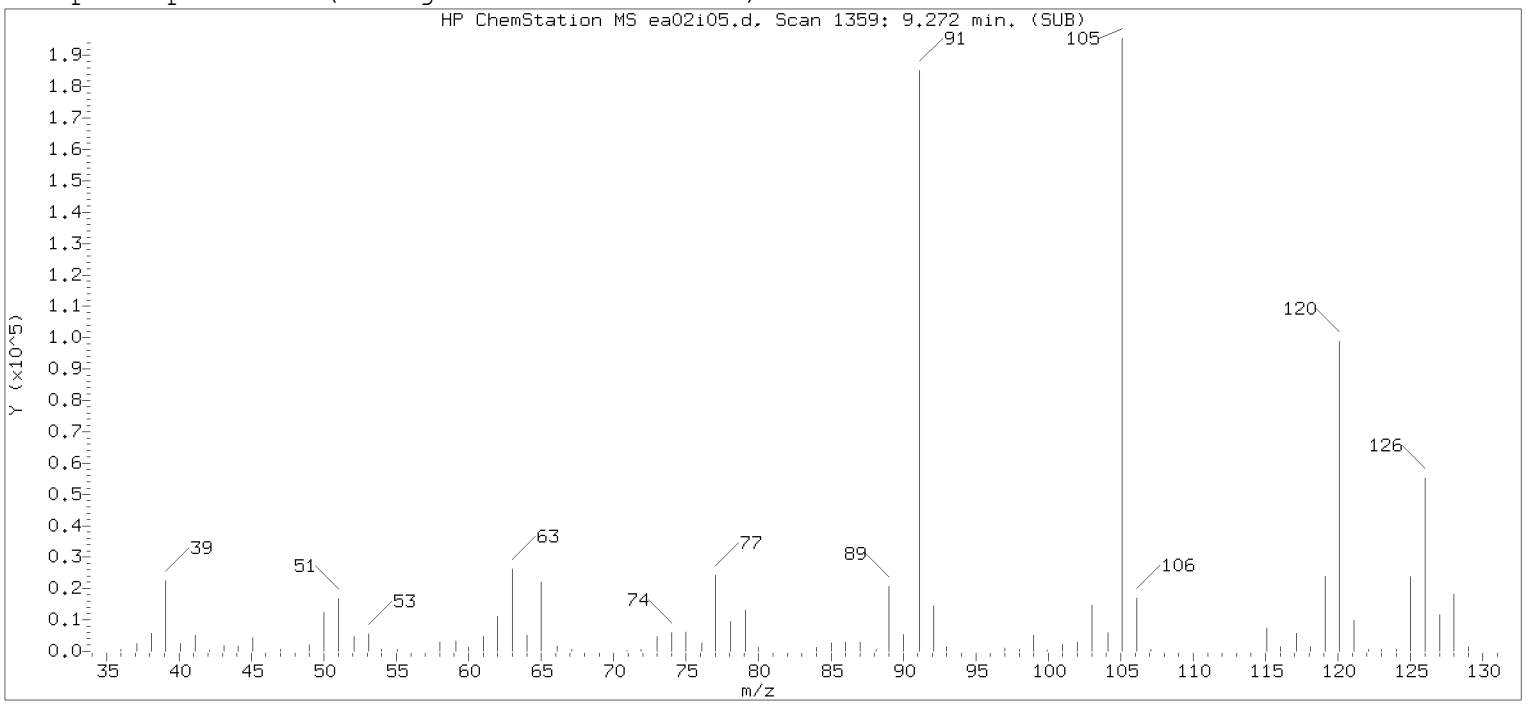
Compound Number : 123
Compound Name : 1,3,5-Trimethylbenzene
Scan Number : 1359
Retention Time (minutes): 9.272
Quant Ion : 105.00
Area (flag) : 237914M
On-Column Amount (ng) : 10.5832
Integration start scan : 1352 Integration stop scan: 1376
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

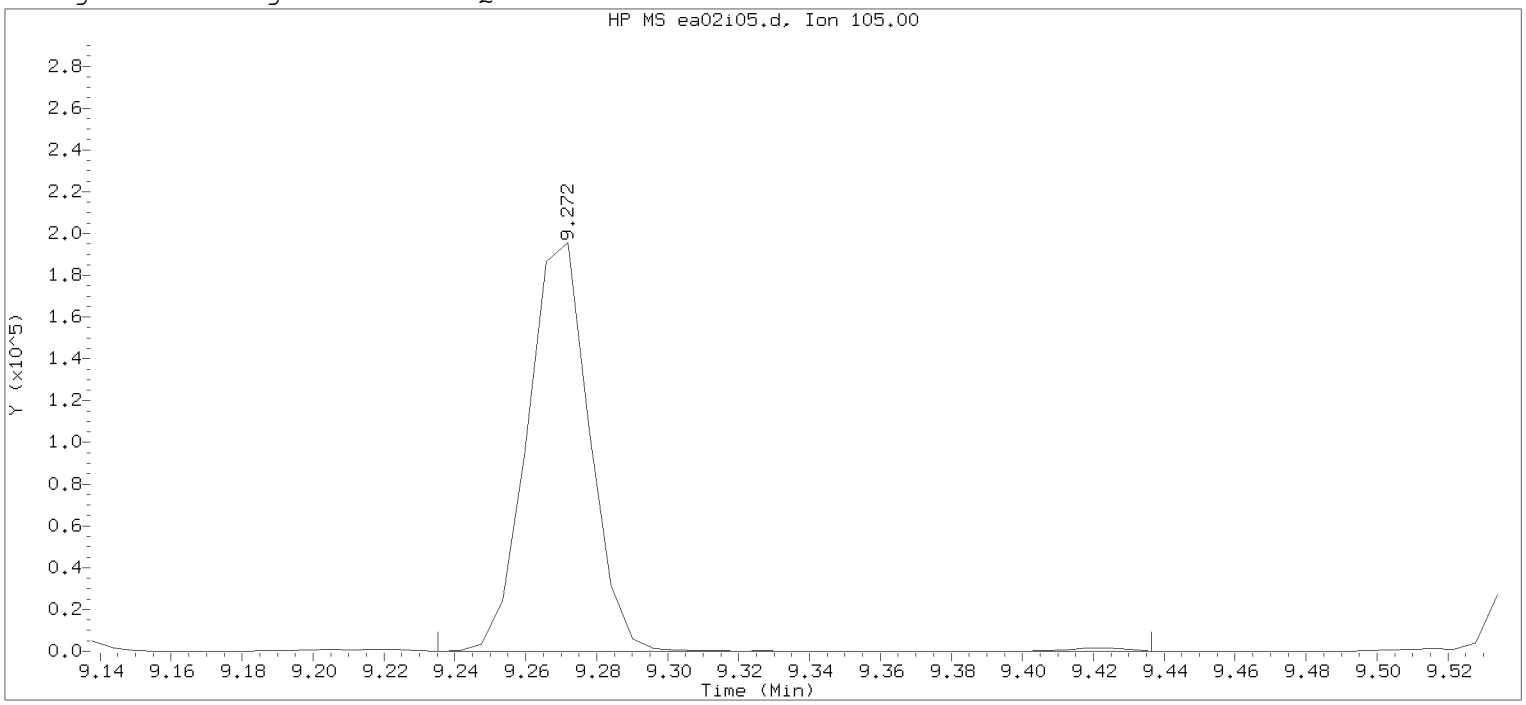
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



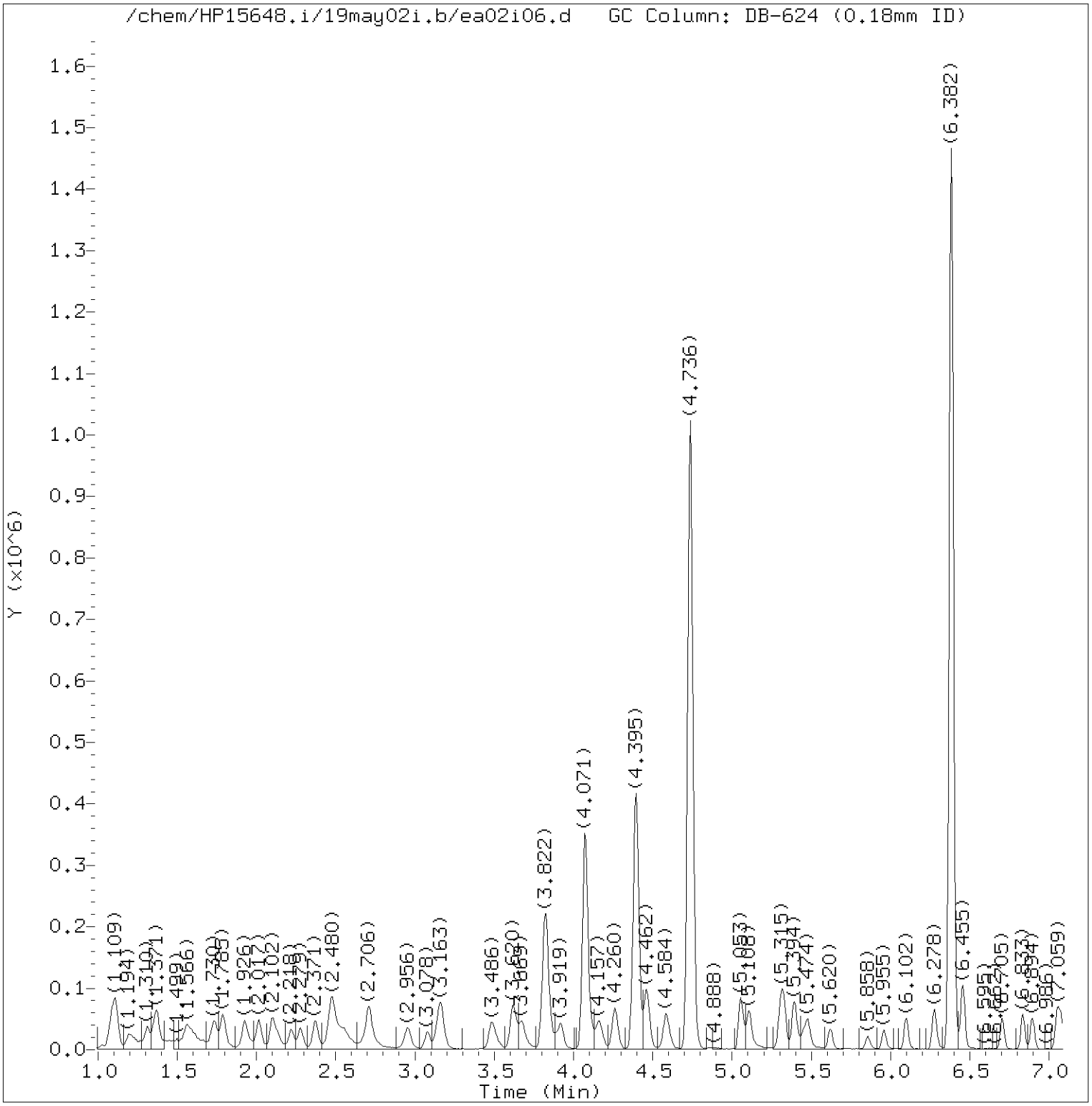
Data File: /chem/HP15648.i/19may02i.b/ea02i05.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 13:55
Date, time and analyst ID of latest file update: 02-May-2019 13:55 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 123
Compound Name : 1,3,5-Trimethylbenzene
Scan Number : 1359
Retention Time (minutes): 9.272
Quant Ion : 105.00
Area : 239671
On-column Amount (ng) : 10.7825
Integration start scan : 1352 Integration stop scan: 1385
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user kas02648



Total Ion Chromatogram (TIC)

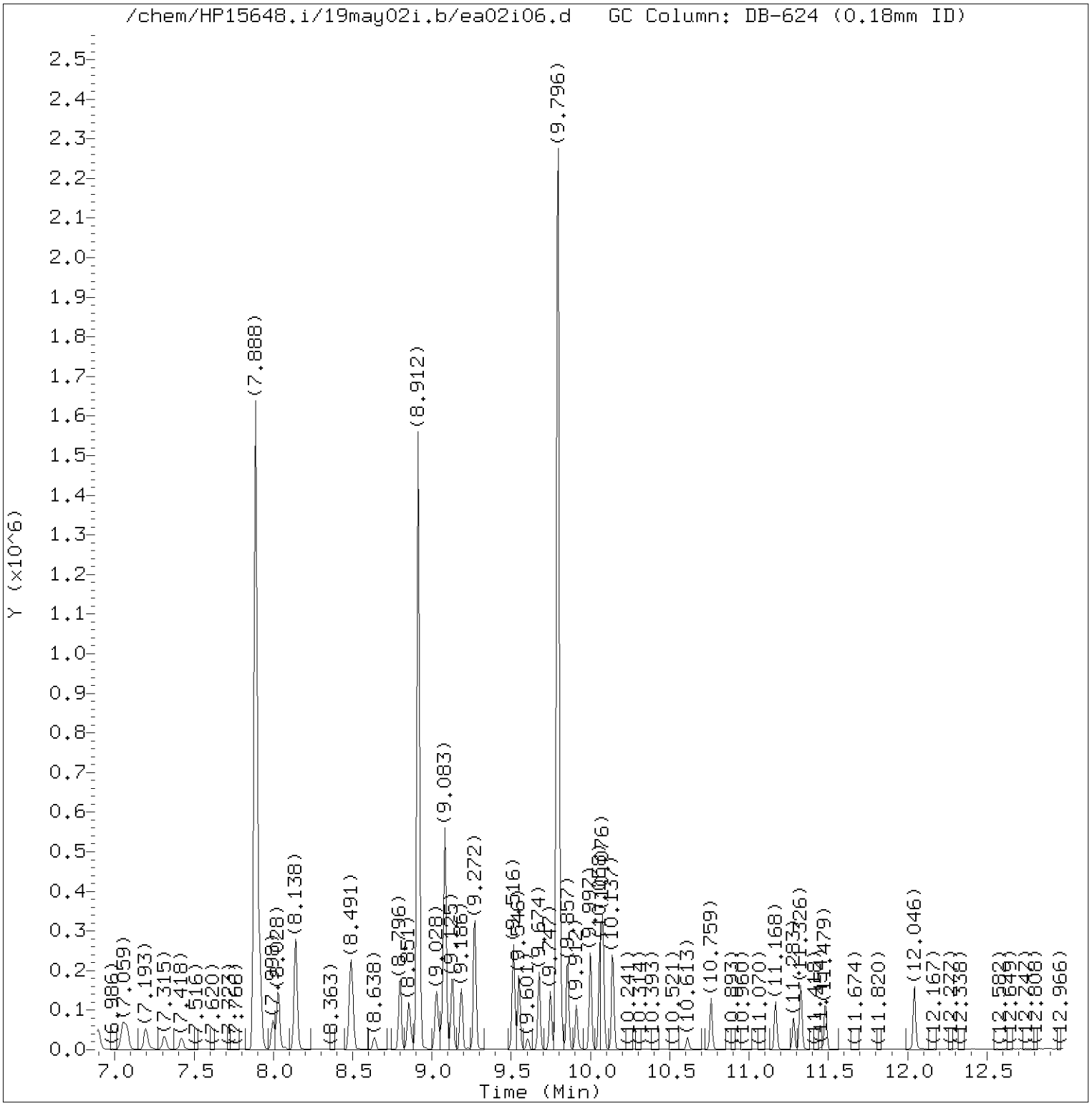
Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.194	85	39365	4.065
4) Chloromethane	(2)	1.310	50	33525M	4.254
5) 1,3-Butadiene	(2)	1.365	39	22996M	3.882
6) Vinyl Chloride	(2)	1.377	62	29512	3.918
8) Bromomethane	(2)	1.566	94	22555	3.977
9) Chloroethane	(2)	1.596	64	17055M	3.977
10) Dichlorofluoromethane	(2)	1.730	67	43654	3.978
11) n-Pentane	(2)	1.785	43	29593	3.364
12) Trichlorofluoromethane	(2)	1.791	101	42675	3.986
14) Ethyl ether	(2)	1.926	59	18873	4.230
15) Freon 123a	(2)	1.932	67	23846	3.782
16) Acrolein	(1)	2.017	56	57009	37.190
17) 1,1-Dichloroethene	(2)	2.096	96	16431	3.727
17) 1,1-Dichloroethene	(2)	2.102	63	8336	3.566
19) Freon 113	(2)	2.121	101	16139	3.306
18) Acetone	(1)	2.127	58	4737	7.424
22) Methyl Iodide	(2)	2.218	142	30776	3.725
21) 2-Propanol	(1)	2.224	45	29898	78.433
23) Carbon Disulfide	(2)	2.279	76	53776	3.596
25) Allyl Chloride	(2)	2.371	41	33827	3.948
27) Methyl Acetate	(2)	2.383	43	17260	4.102
28) Methylene Chloride	(2)	2.474	84	19478	3.878
29)*t-Butyl alcohol-d10	(1)	2.480	65	185789	250.000
30) t-Butyl alcohol	(1)	2.553	59	53920	77.638
31) Acrylonitrile	(2)	2.675	53	10264	4.012
32) trans-1,2-Dichloroethene	(2)	2.706	96	18291	3.686
33) Methyl Tertiary Butyl Ether	(2)	2.712	73	57875	3.911
34) n-Hexane	(2)	2.956	57	28696	3.300
36) 1,1-Dichloroethane	(2)	3.078	63	35104	3.776
38) di-Isopropyl ether	(2)	3.145	45	62857	3.842
39) 2-Chloro-1,3-butadiene	(2)	3.163	53	32289	3.637
40) Ethyl t-butyl ether	(2)	3.480	59	63410	3.929
45) 2,2-Dichloropropane	(2)	3.614	77	29552	3.603
42) cis-1,2-Dichloroethene	(2)	3.620	96	20326	3.645
43) 1,2-Dichloroethene (Total)	(2)		96	38617	7.331
44) 2-Butanone	(2)	3.633	43	26351	7.645
47) Propionitrile	(1)	3.675	54	70387	75.022
48) Methacrylonitrile	(2)	3.822	67	105707	38.480

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.840	128	10341	3.734
50) Tetrahydrofuran	(1)	3.889	71	7146	7.267
51) Chloroform	(2)	3.919	83	33193	3.753
52)$Dibromofluoromethane	(2)	4.071	113	256361	50.235
52)$Dibromofluoromethane	(2)	4.071	111	263390	50.280
53) 1,1,1-Trichloroethane	(2)	4.108	97	28550	3.489
54) Cyclohexane	(2)	4.157	56	32434	3.227
54) Cyclohexane	(2)	4.157	84	27368M	3.169
54) Cyclohexane	(2)	4.163	69	11364	3.463
55) 1,1-Dichloropropene	(2)	4.260	75	25580	3.526
56) Carbon Tetrachloride	(2)	4.267	117	23664	3.400
58) Isobutyl Alcohol	(1)	4.388	41	45894	194.637
57)$1,2-Dichloroethane-d4	(2)	4.395	102	64682	50.227
57)$1,2-Dichloroethane-d4	(2)	4.395	65	329693	50.442
57)$1,2-Dichloroethane-d4	(2)	4.395	104	42497	51.472
60) Benzene	(2)	4.456	78	78502	3.685
61) 1,2-Dichloroethane	(2)	4.474	62	27707	3.872
61) 1,2-Dichloroethane	(2)	4.474	98	2782	4.449
65) t-Amyl methyl ether	(2)	4.584	73	63068	3.941
66)*Fluorobenzene	(2)	4.736	96	1097962	50.000
67) n-Heptane	(2)	4.748	43	31772	3.409
69) n-Butanol	(1)	5.053	56	74387	364.737
71) Trichloroethene	(2)	5.108	95	19819	3.688
73) Methylcyclohexane	(2)	5.309	83	41305	3.691
73) Methylcyclohexane	(2)	5.309	98	18786	3.651
74) 1,2-Dichloropropane	(2)	5.327	63	19704	3.717
75) Dibromomethane	(2)	5.449	93	12040	3.794
77) Methyl Methacrylate	(2)	5.480	69	18732	3.876
76) 1,4-Dioxane	(1)	5.480	88	10482M	182.633
79) Bromodichloromethane	(2)	5.620	83	24051	3.643
80) 2-Nitropropane	(2)	5.858	41	16042	7.333
81) 2-Chloroethyl Vinyl Ether	(2)	5.961	63	15583	3.815
82) cis-1,3-Dichloropropene	(2)	6.102	75	31673	3.684
83) 4-Methyl-2-pentanone	(2)	6.272	43	52496	7.092
84)$Toluene-d8	(3)	6.382	98	1101805	50.100
84)$Toluene-d8	(3)	6.382	100	710184	50.236
89) Toluene	(3)	6.455	92	48709	3.619
90) trans-1,3-Dichloropropene	(3)	6.699	75	29590	3.678

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropene (total)	(3)		100	61263	7.362
92) Ethyl Methacrylate	(3)	6.833	69	33068	3.856
93) 1,1,2-Trichloroethane	(3)	6.894	97	17354	3.788
94) Tetrachloroethene	(3)	7.053	166	18817	3.438
95) 1,3-Dichloropropane	(3)	7.077	76	30628	3.804
97) 2-Hexanone	(3)	7.193	43	41964	7.340
102) 1-Chlorohexane	(3)	7.309	91	1856M	3.990
98) Dibromochloromethane	(3)	7.315	129	17794	3.598
100) 1,2-Dibromoethane	(3)	7.424	107	18670	3.830
101)*Chlorobenzene-d5	(3)	7.888	117	809751	50.000
103) Chlorobenzene	(3)	7.912	112	54556	3.666
104) 1,1,1,2-Tetrachloroethane	(3)	7.998	131	18181	3.597
105) Ethylbenzene	(3)	8.028	91	92350	3.468
107) m+p-Xylene	(3)	8.138	106	72749	7.018
109) Xylene (Total)	(3)		106	108587	10.561
108) o-Xylene	(3)	8.485	106	35838	3.543
110) Styrene	(3)	8.497	104	58430	3.497
111) Bromoform	(3)	8.638	173	11711	3.552
112) Isopropylbenzene	(3)	8.802	105	94631	3.516
113) Cyclohexanone	(1)	8.857	55	40325M	186.510
115)$4-Bromofluorobenzene	(3)	8.912	95	425794	50.364
115)$4-Bromofluorobenzene	(3)	8.912	174	316240	49.920
116) Bromobenzene	(4)	9.028	156	22401	3.733
117) 1,1,2,2-Tetrachloroethane	(4)	9.034	83	27514	3.951
118) 1,2,3-Trichloropropane	(4)	9.064	110	8115	3.845
119) trans-1,4-Dichloro-2-butene	(4)	9.083	53	86236	37.683
120) n-Propylbenzene	(4)	9.125	91	111755	3.533
121) 2-Chlorotoluene	(4)	9.186	126	22763	3.655
123) 1,3,5-Trimethylbenzene	(4)	9.266	105	79192	3.451
122) 4-Chlorotoluene	(4)	9.272	126	22342	3.500
125) tert-Butylbenzene	(4)	9.516	134	17788	3.487
126) Pentachloroethane	(4)	9.522	167	13703	3.608
127) 1,2,4-Trimethylbenzene	(4)	9.546	105	81809	3.462
128) sec-Butylbenzene	(4)	9.674	105	100161	3.440
130) 1,3-Dichlorobenzene	(4)	9.747	146	41221	3.525
131) p-Isopropyltoluene	(4)	9.784	119	88054	3.438
132)*1,4-Dichlorobenzene-d4	(4)	9.796	152	430624	50.000
134) 1,4-Dichlorobenzene	(4)	9.814	146	44000	3.678

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	9.857	105	93862	3.730
136) Benzyl Chloride	(4)	9.912	91	59237	3.646
137) 1,3-Diethylbenzene	(4)	9.997	119	59646	3.699
138) 1,4-Diethylbenzene	(4)	10.058	119	64445	3.751
139) 1,2-Dichlorobenzene	(4)	10.076	146	40086	3.581
140) n-Butylbenzene	(4)	10.076	92	42037	3.342
141) 1,2-Diethylbenzene	(4)	10.137	119	50016	3.789
142) Diethylbenzene (total)	(4)		100	174107	11.238
143) 1,2-Dibromo-3-chloropropane	(4)	10.613	75	6306	3.952
145) 1,3,5-Trichlorobenzene	(4)	10.759	180	28552	3.468
147) 1,2,4-Trichlorobenzene	(4)	11.168	180	26798	3.647
148) Hexachlorobutadiene	(4)	11.283	225	10471	3.324
149) Naphthalene	(4)	11.326	128	92672	3.825
150) 1,2,3-Trichlorobenzene	(4)	11.485	180	25801	3.719
151) 2-Methylnaphthalene	(4)	12.046	142	59551	3.890

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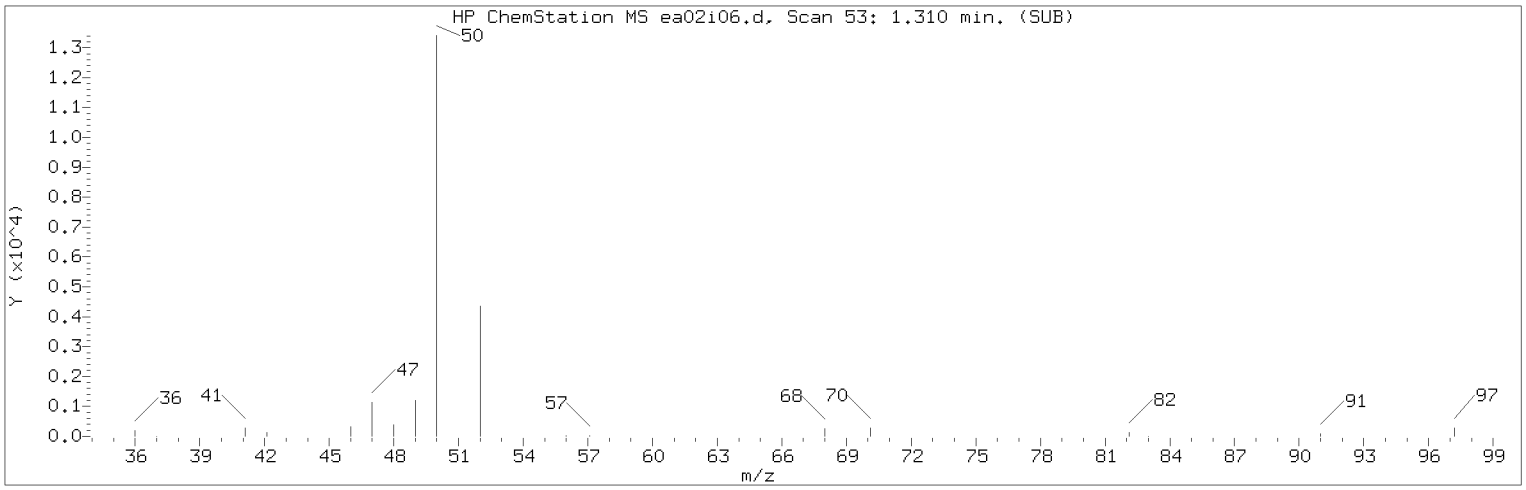
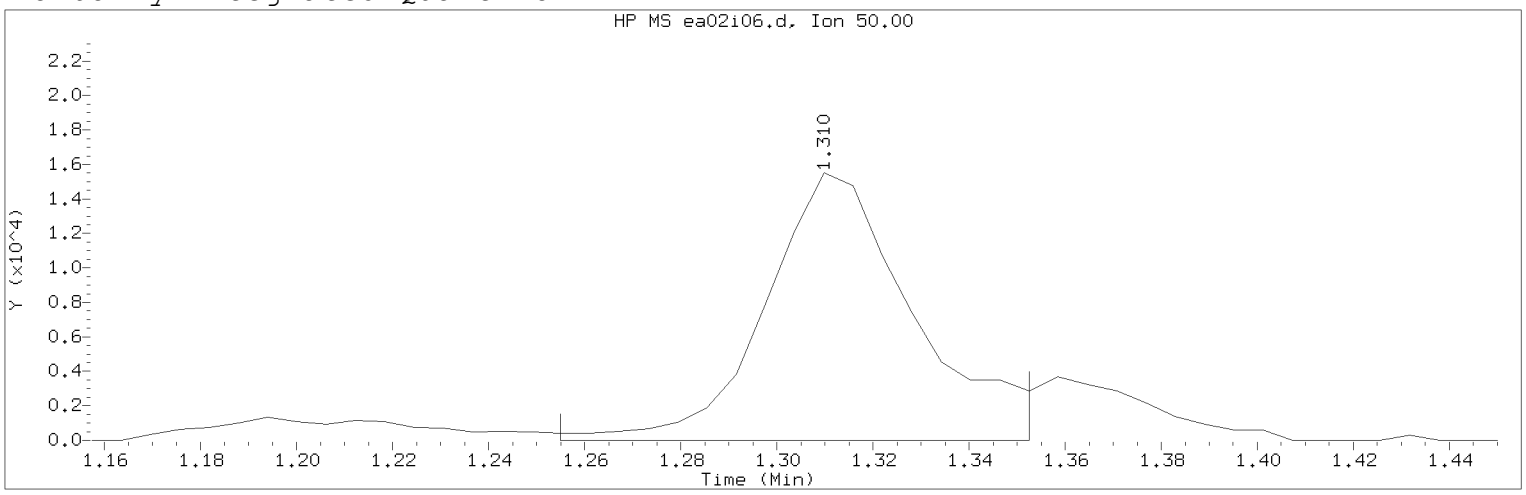
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

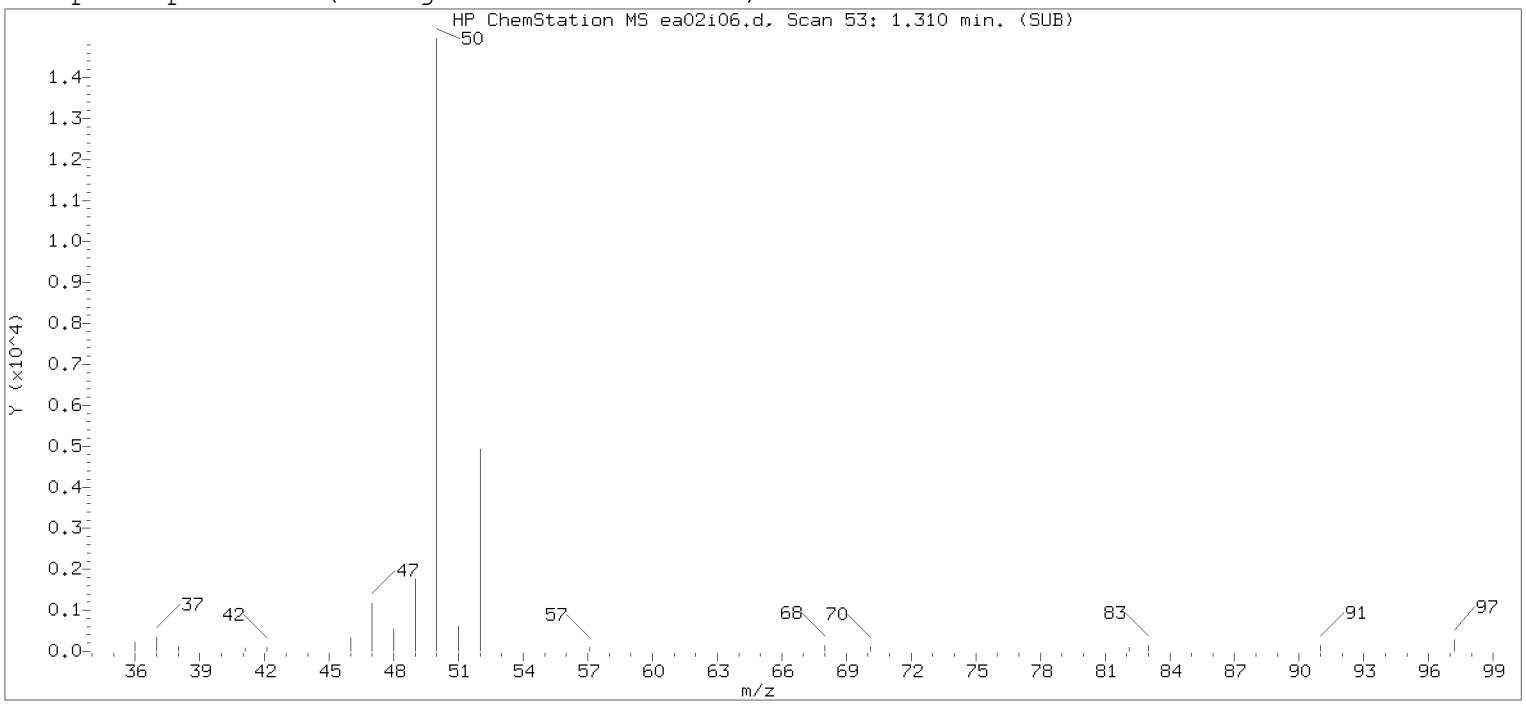
Compound Number : 4
Compound Name : Chloromethane
Scan Number : 53
Retention Time (minutes): 1.310
Quant Ion : 50.00
Area (flag) : 33525M
On-Column Amount (ng) : 4.2545
Integration start scan : 43 Integration stop scan: 59
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

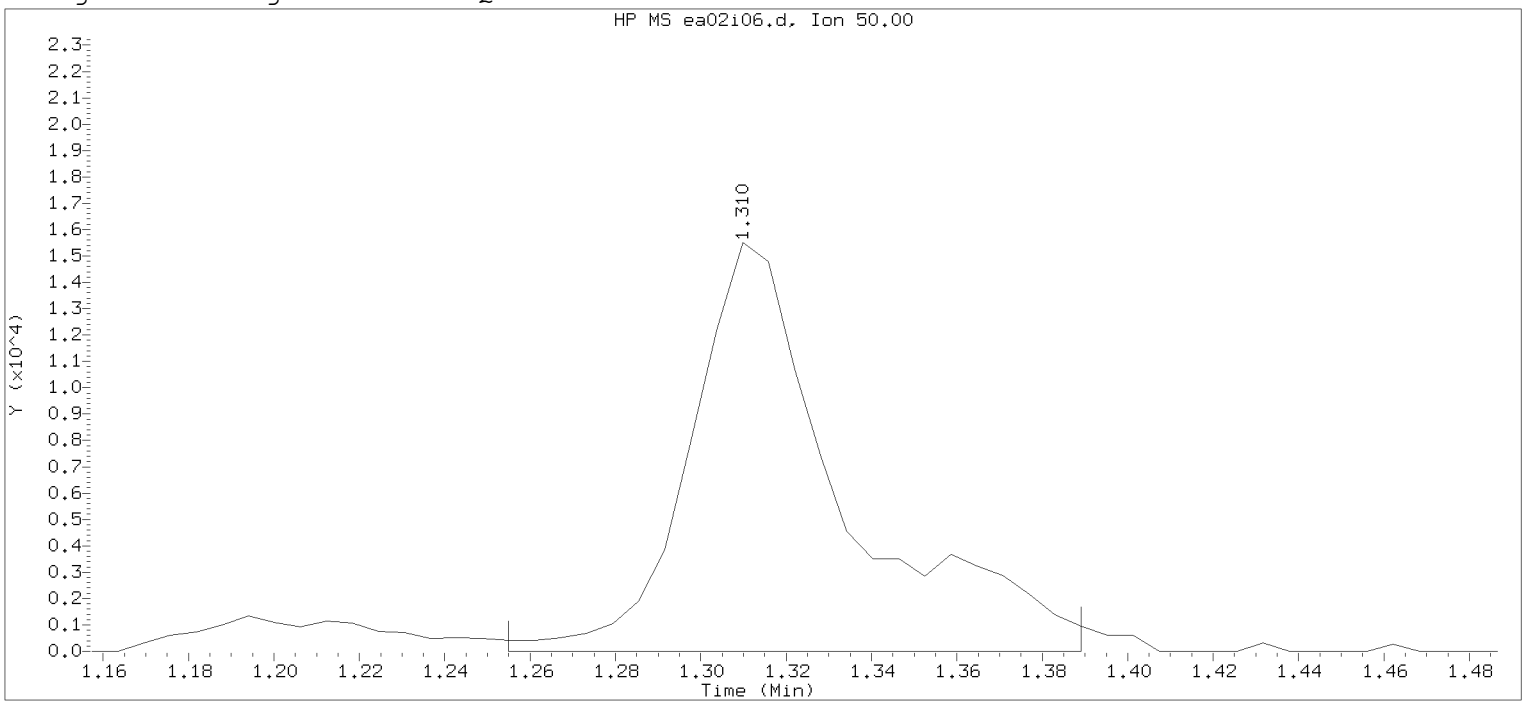
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

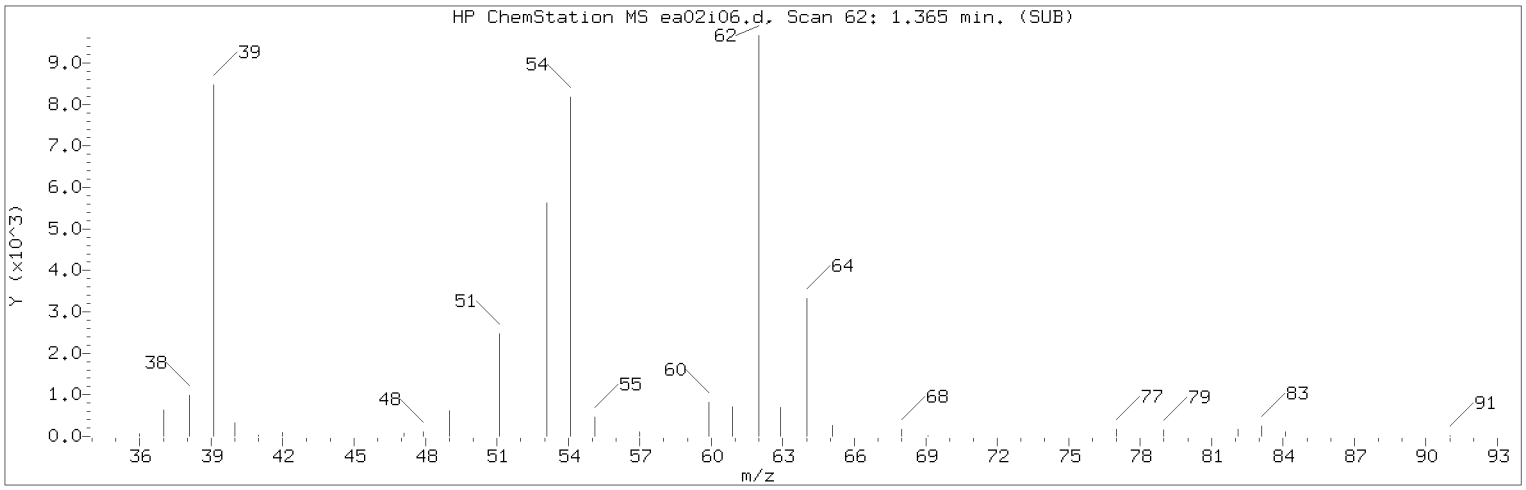
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:15
Date, time and analyst ID of latest file update: 02-May-2019 14:15 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

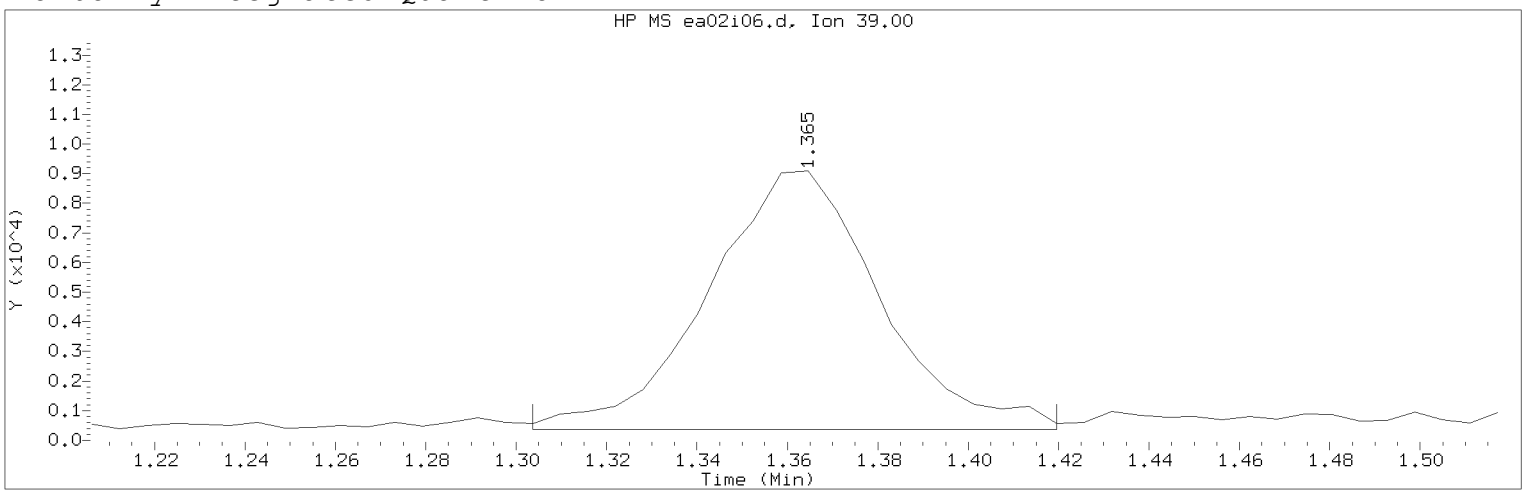
Compound Number	: 4		
Compound Name	: Chloromethane		
Scan Number	: 53		
Retention Time (minutes)	: 1.310		
Quant Ion	: 50.00		
Area	: 38499		
On-column Amount (ng)	: 4.7449		
Integration start scan	: 43	Integration stop scan:	65
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

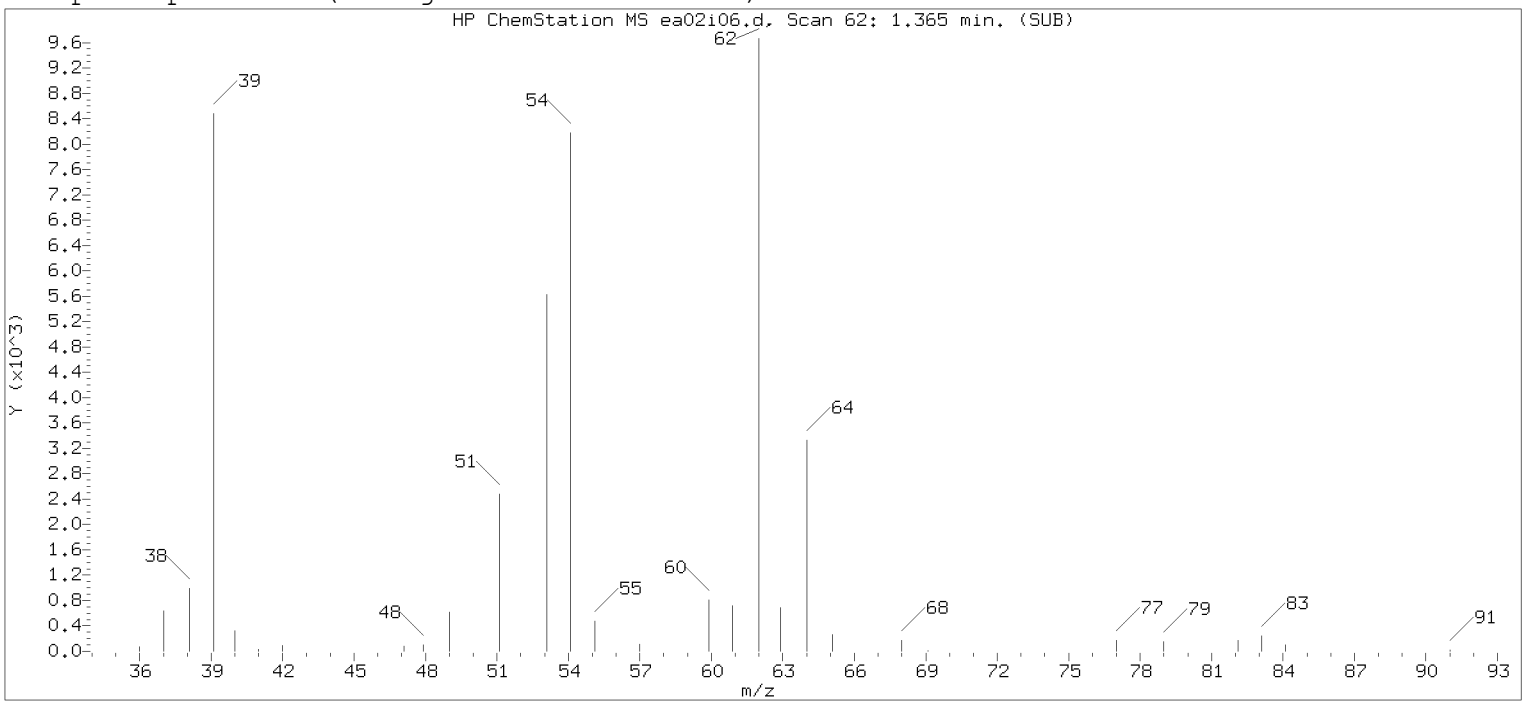
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 62
Retention Time (minutes): 1.365
Quant Ion : 39.00
Area (flag) : 22996M
On-Column Amount (ng) : 3.8820
Integration start scan : 51 Integration stop scan: 70
Y at integration start : 375 Y at integration end: 375

Reason for manual integration: improper integration

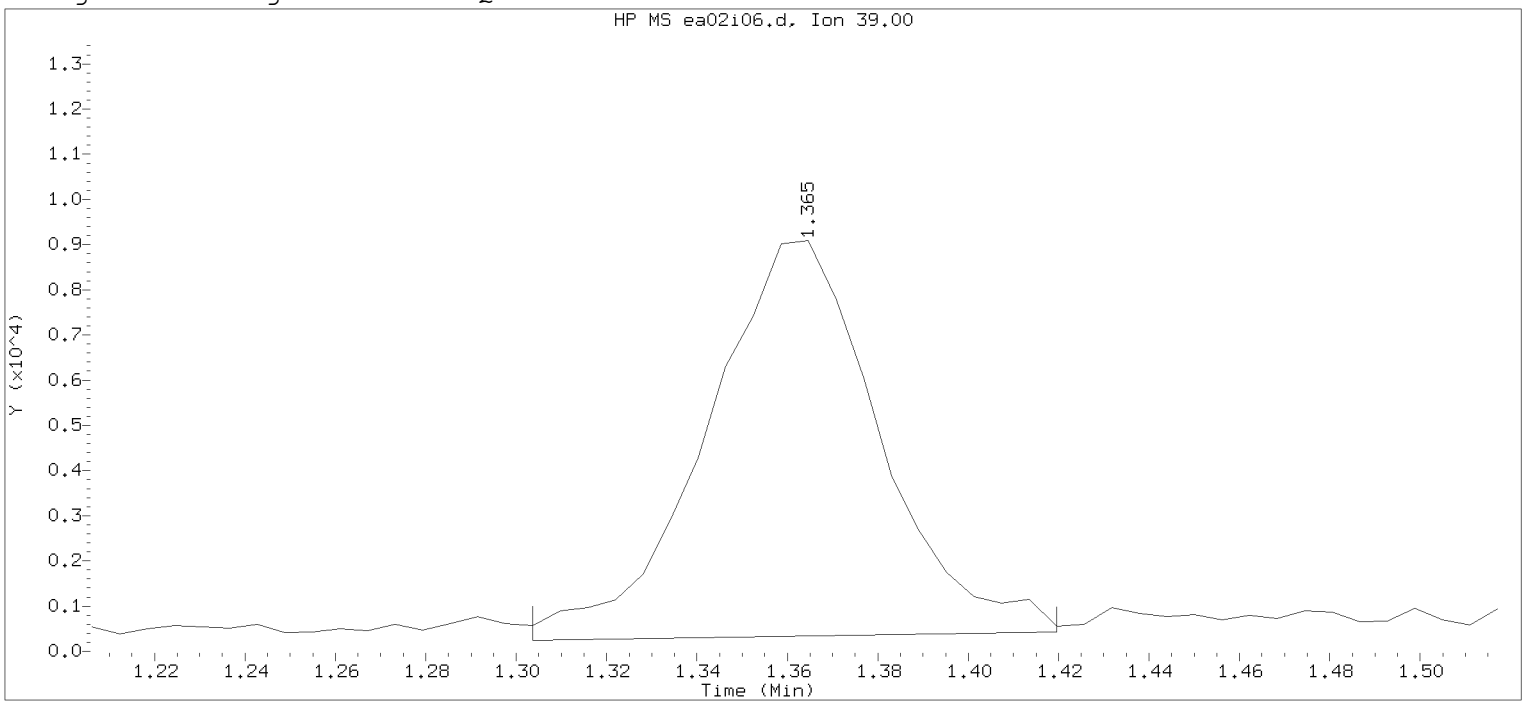
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

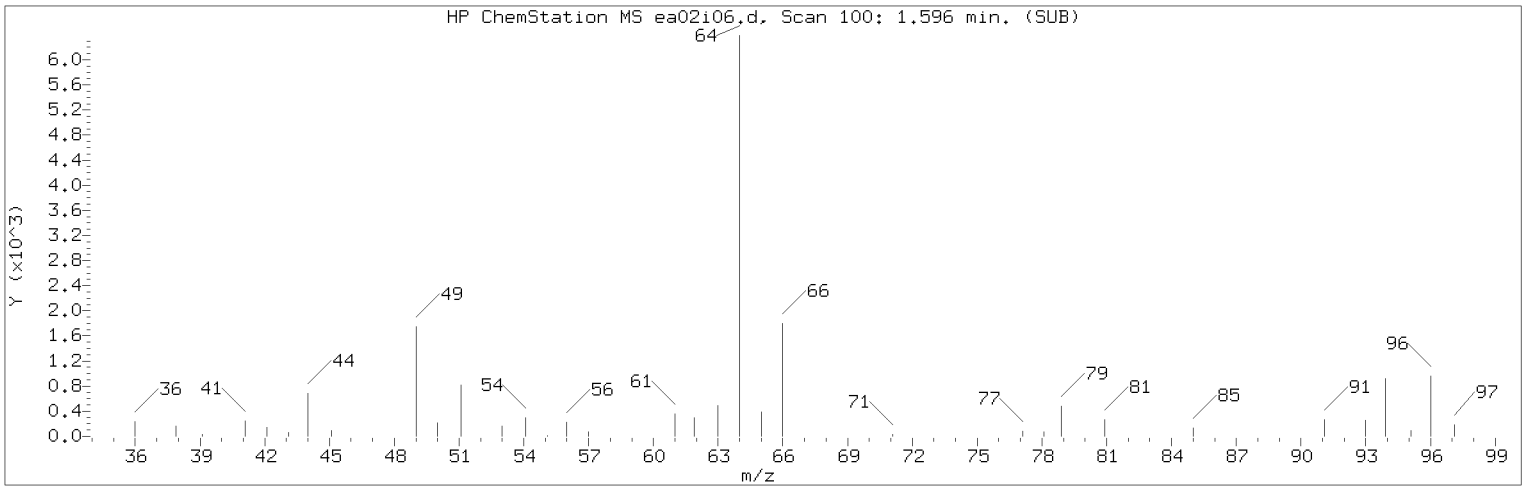
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:15
Date, time and analyst ID of latest file update: 02-May-2019 14:15 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

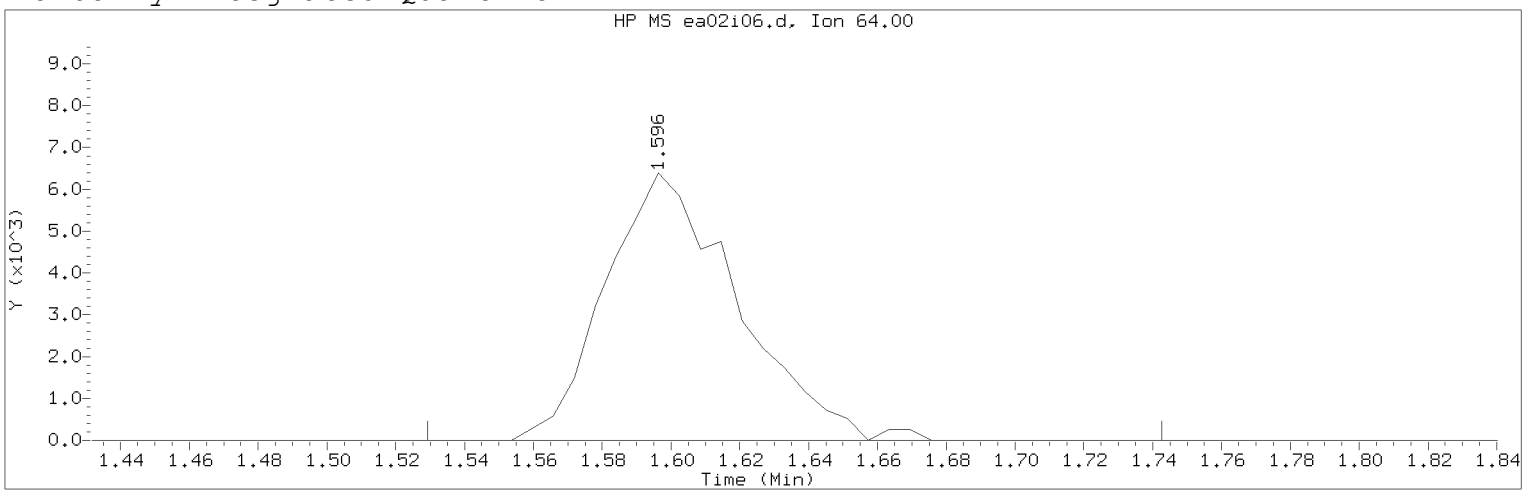
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 62
Retention Time (minutes): 1.365
Quant Ion : 39.00
Area : 23167
On-column Amount (ng) : 3.6324
Integration start scan : 51 Integration stop scan: 70
Y at integration start : 248 Y at integration end: 433

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kasposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

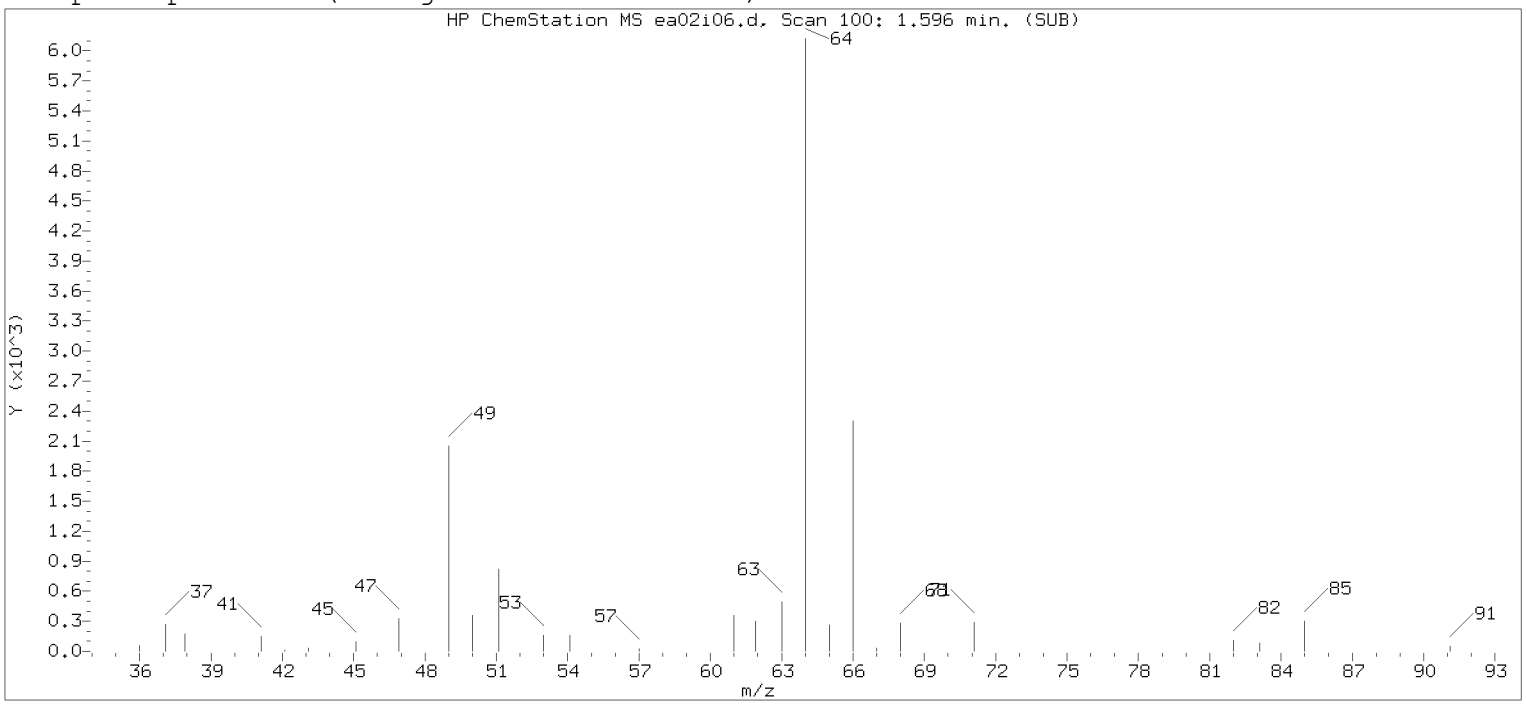
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 100
Retention Time (minutes): 1.596
Quant Ion : 64.00
Area (flag) : 17055M
On-Column Amount (ng) : 3.9771
Integration start scan : 88 Integration stop scan: 123
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

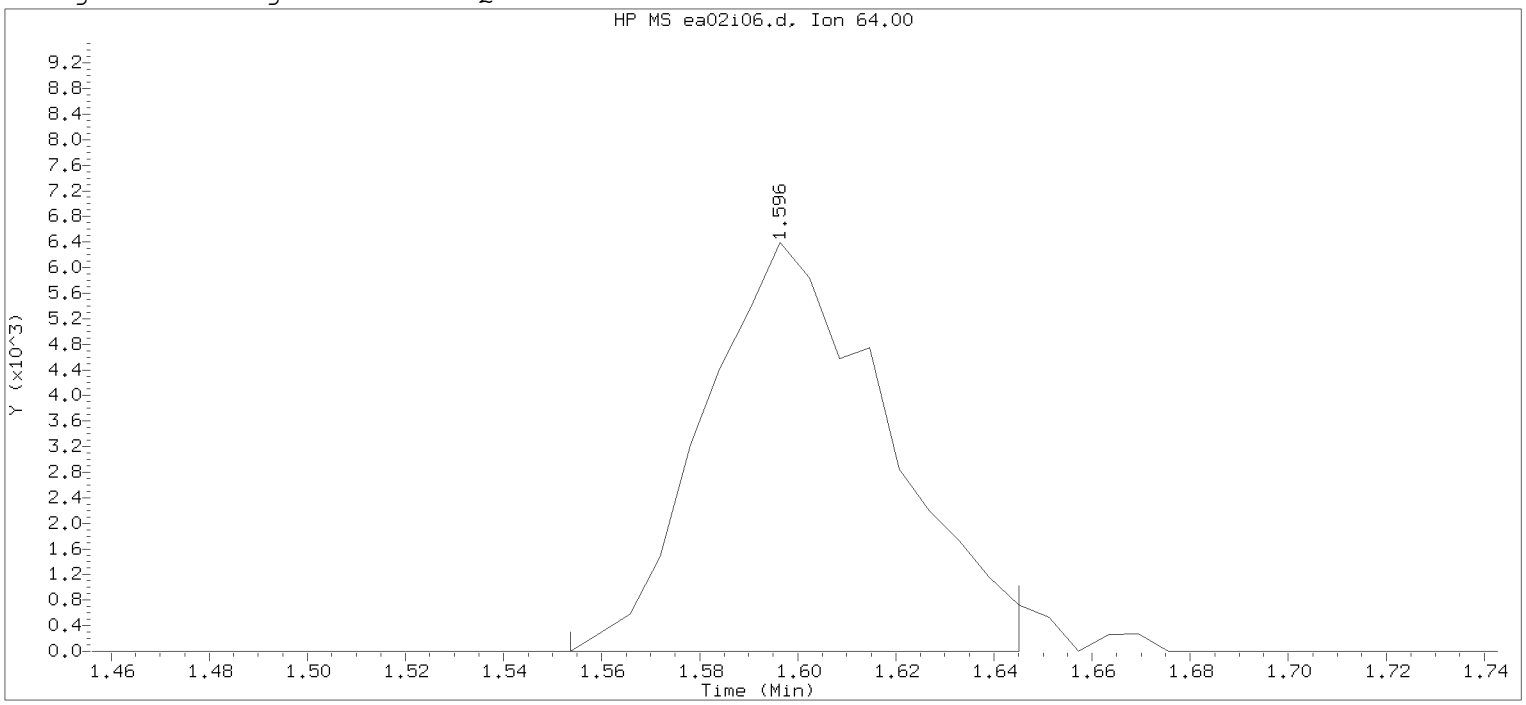
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

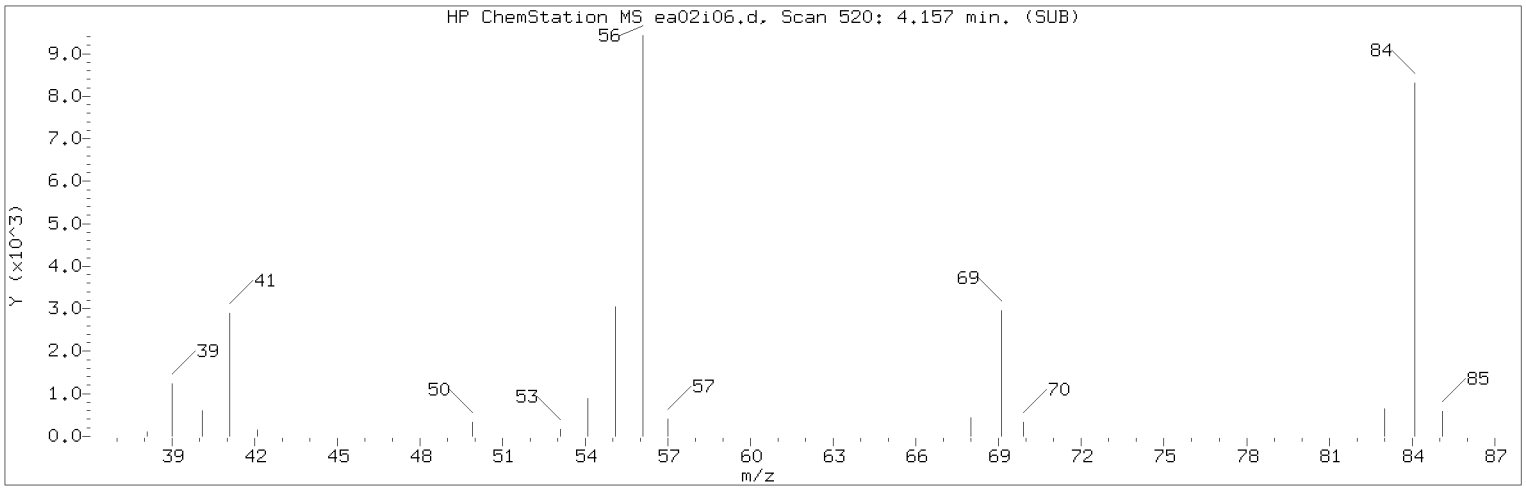
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:15
Date, time and analyst ID of latest file update: 02-May-2019 14:15 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

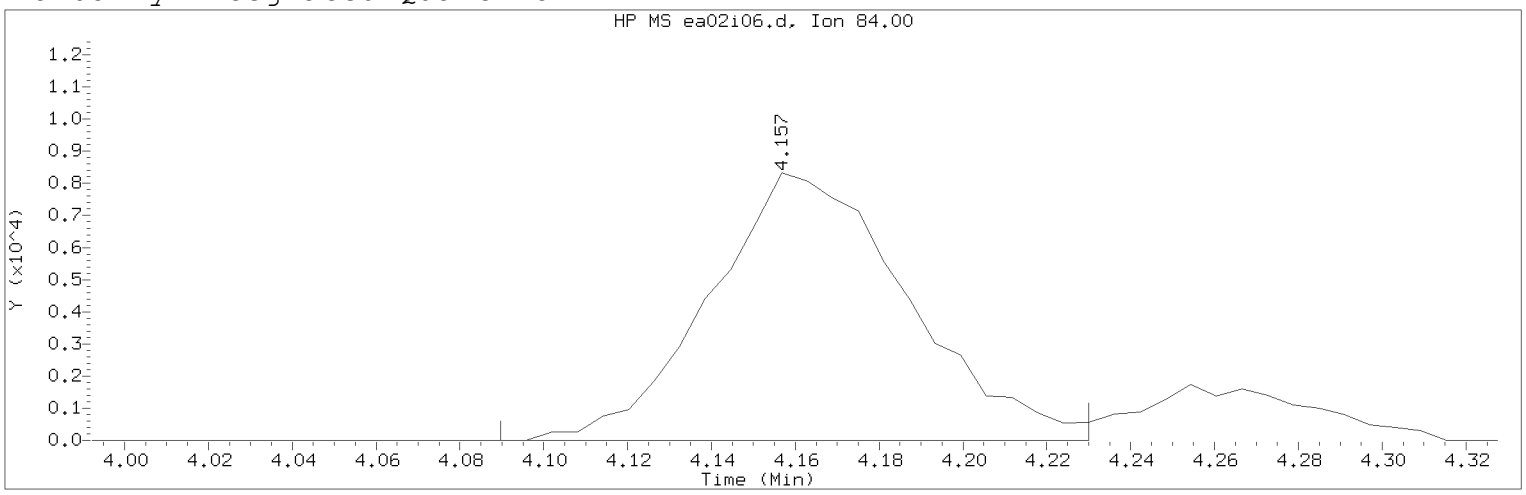
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 100
Retention Time (minutes): 1.596
Quant Ion : 64.00
Area : 16538
On-column Amount (ng) : 3.9075
Integration start scan : 92 Integration stop scan: 107
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

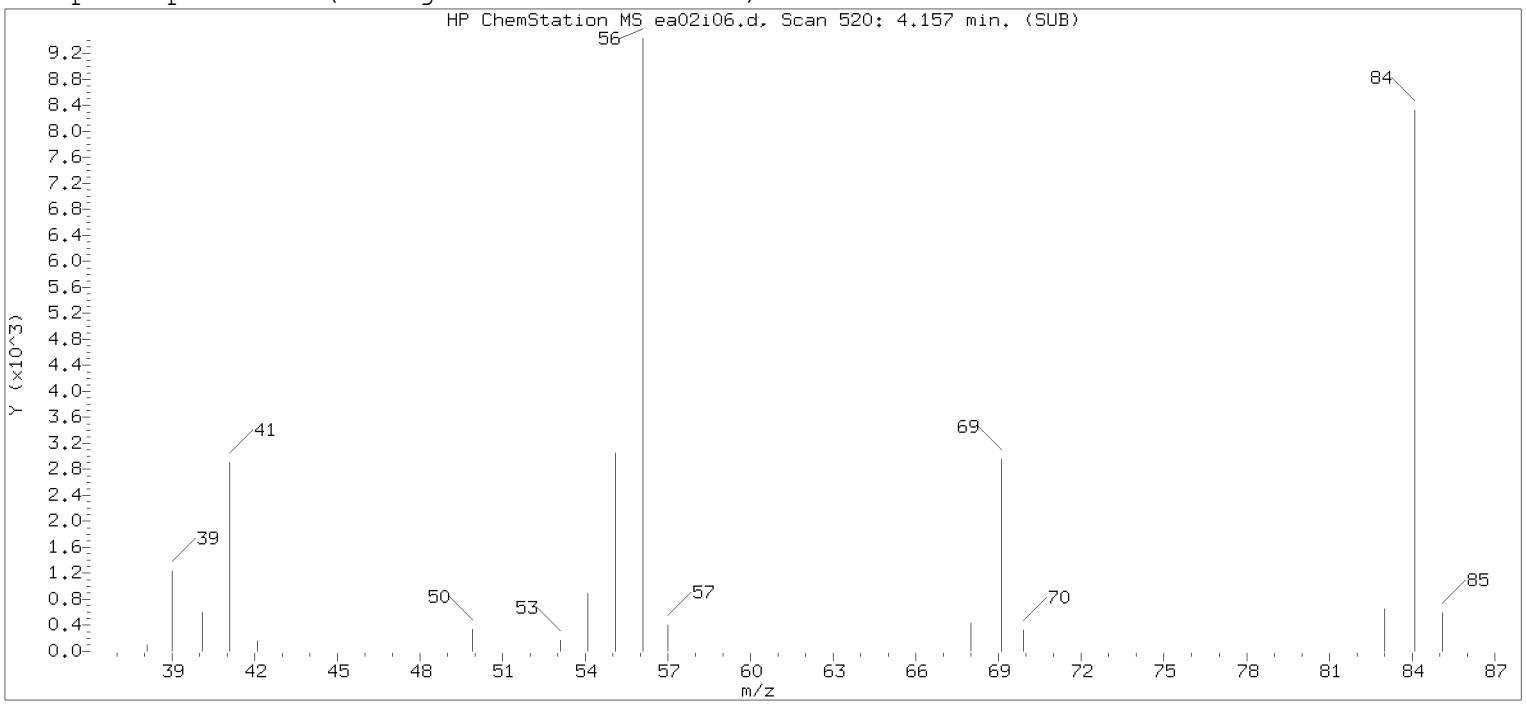
Compound Number : 54
Compound Name : Cyclohexane
Scan Number : 520
Retention Time (minutes): 4.157
Quant Ion : 84.00
Area (flag) : 27368M
On-Column Amount (ng) : 3.1691
Integration start scan : 508 Integration stop scan: 531
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

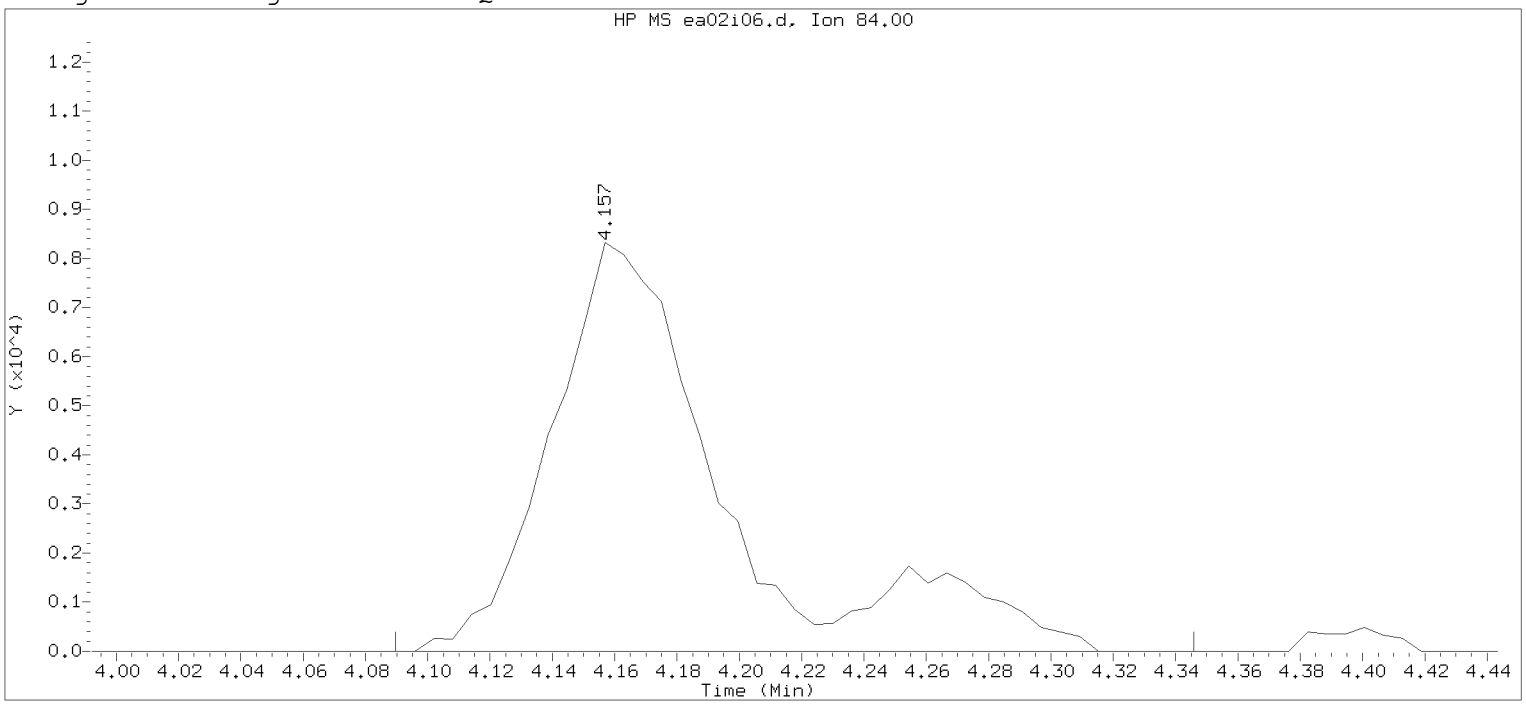
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

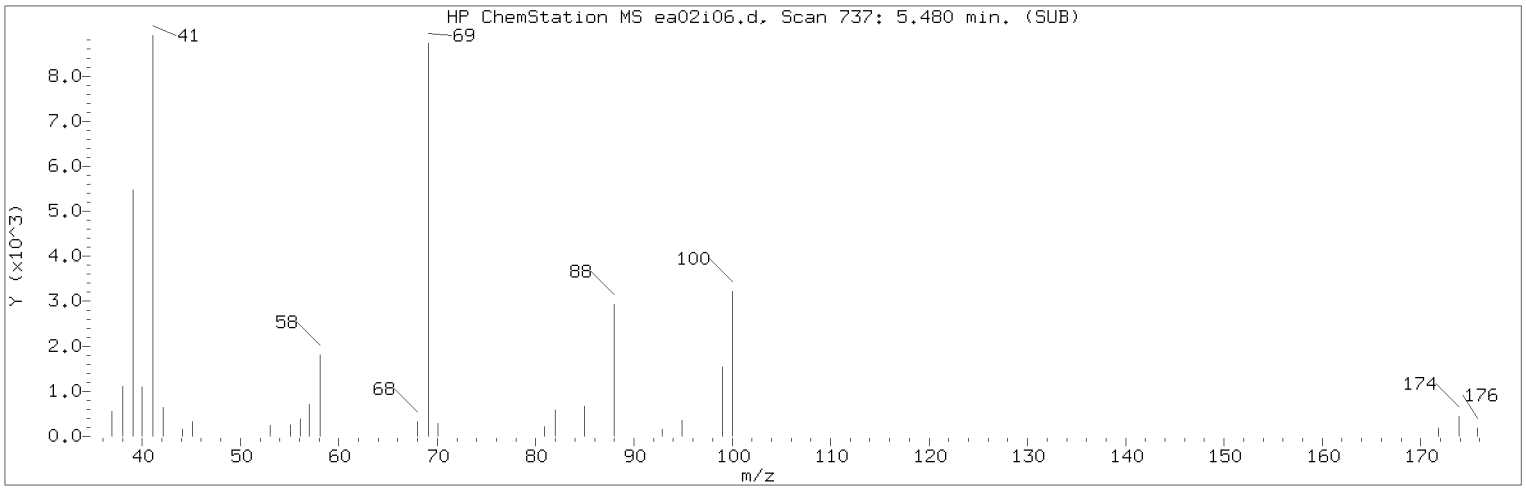
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:15
Date, time and analyst ID of latest file update: 02-May-2019 14:15 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

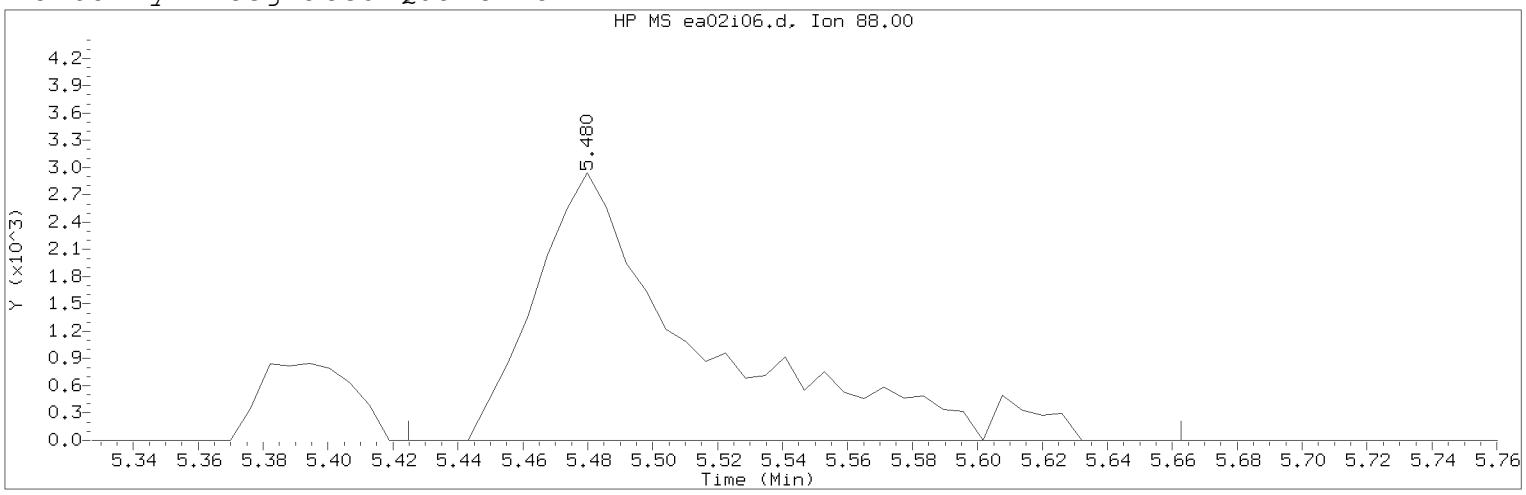
Compound Number : 54
Compound Name : Cyclohexane
Scan Number : 520
Retention Time (minutes): 4.157
Quant Ion : 84.00
Area : 32176
On-column Amount (ng) : 3.7152
Integration start scan : 508 Integration stop scan: 550
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

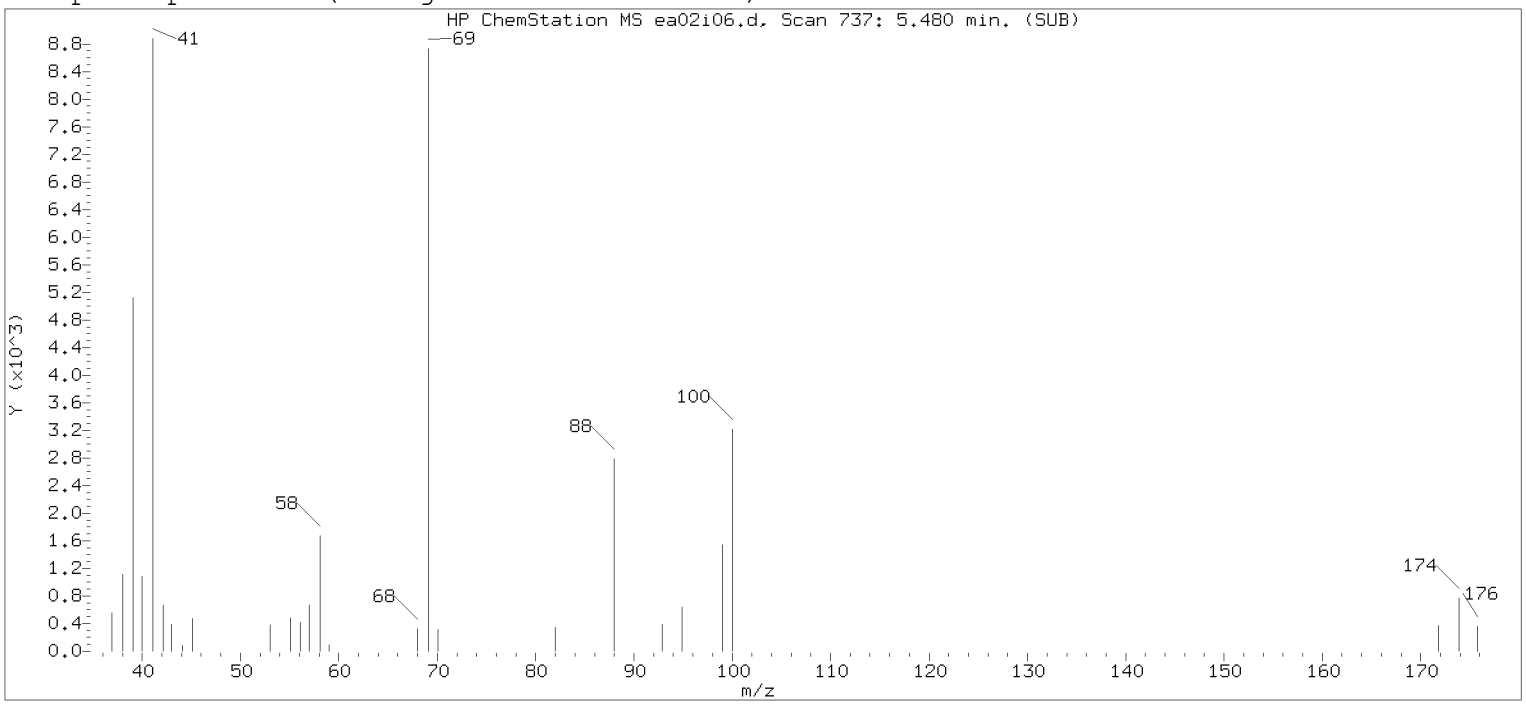
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 737
Retention Time (minutes): 5.480
Quant Ion : 88.00
Area (flag) : 10482M
On-Column Amount (ng) : 182.6327
Integration start scan : 727 Integration stop scan: 766
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

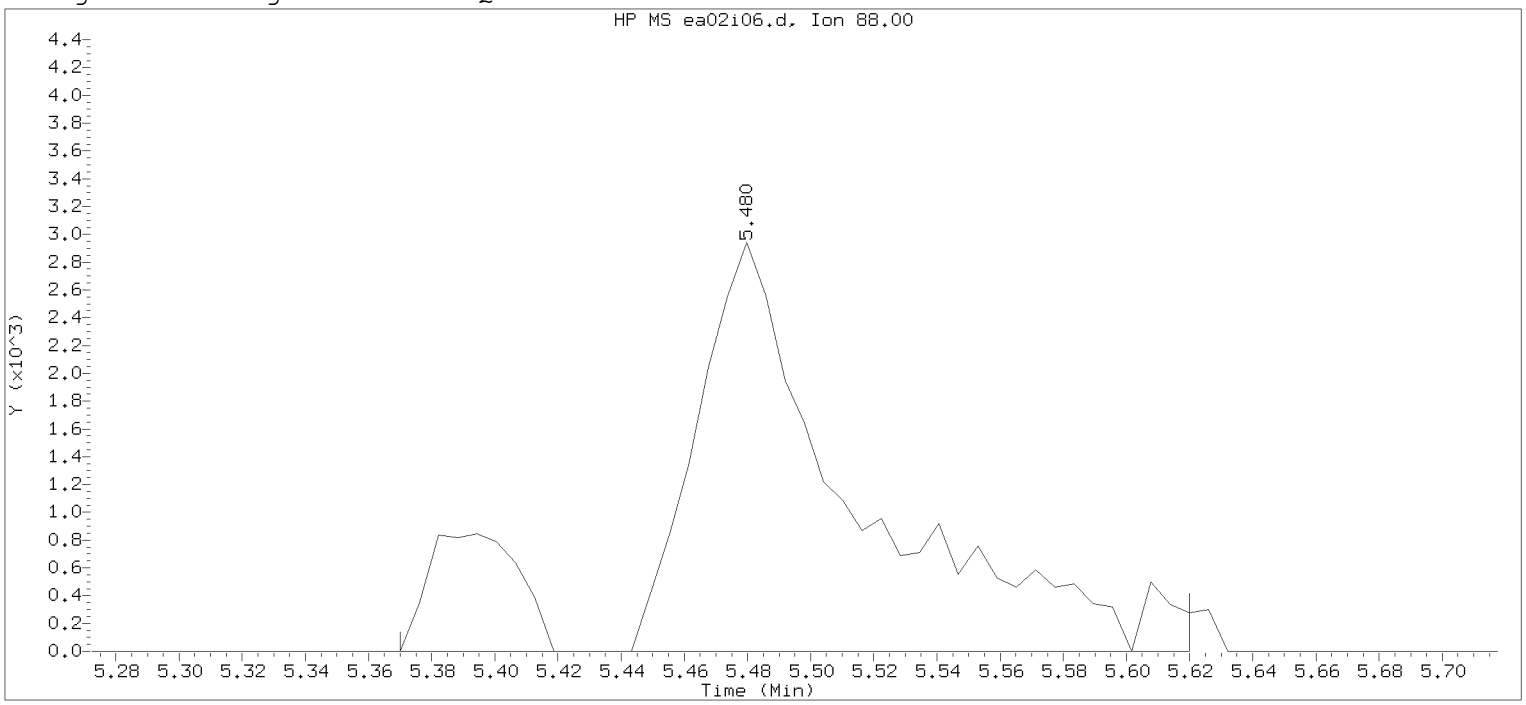
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

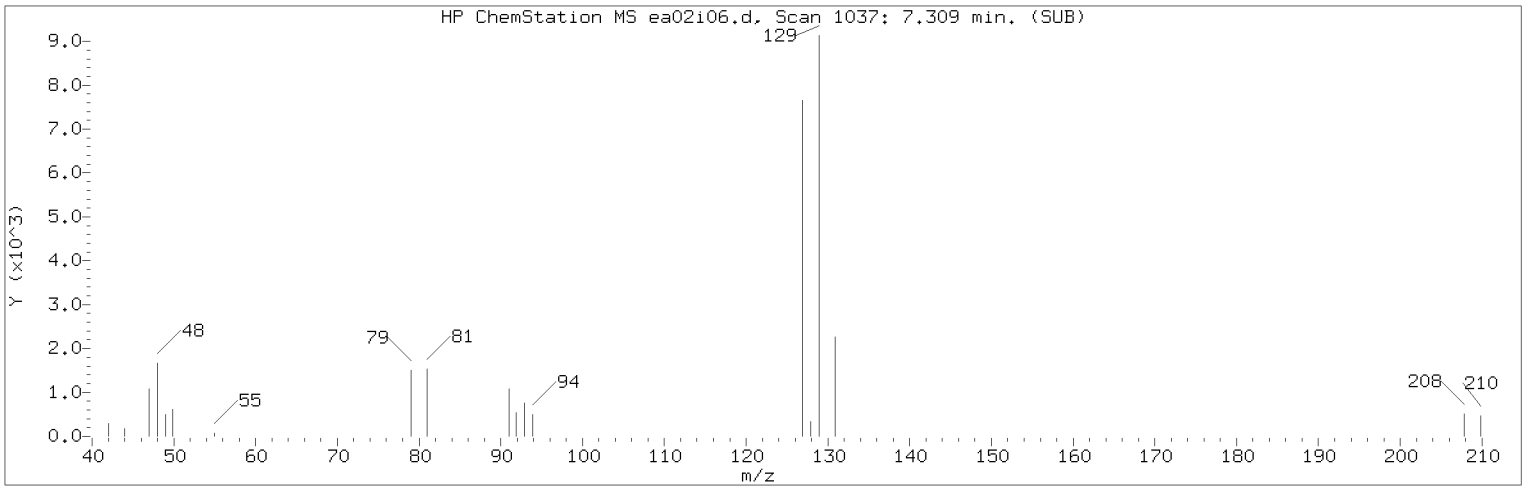
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:15
Date, time and analyst ID of latest file update: 02-May-2019 14:15 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

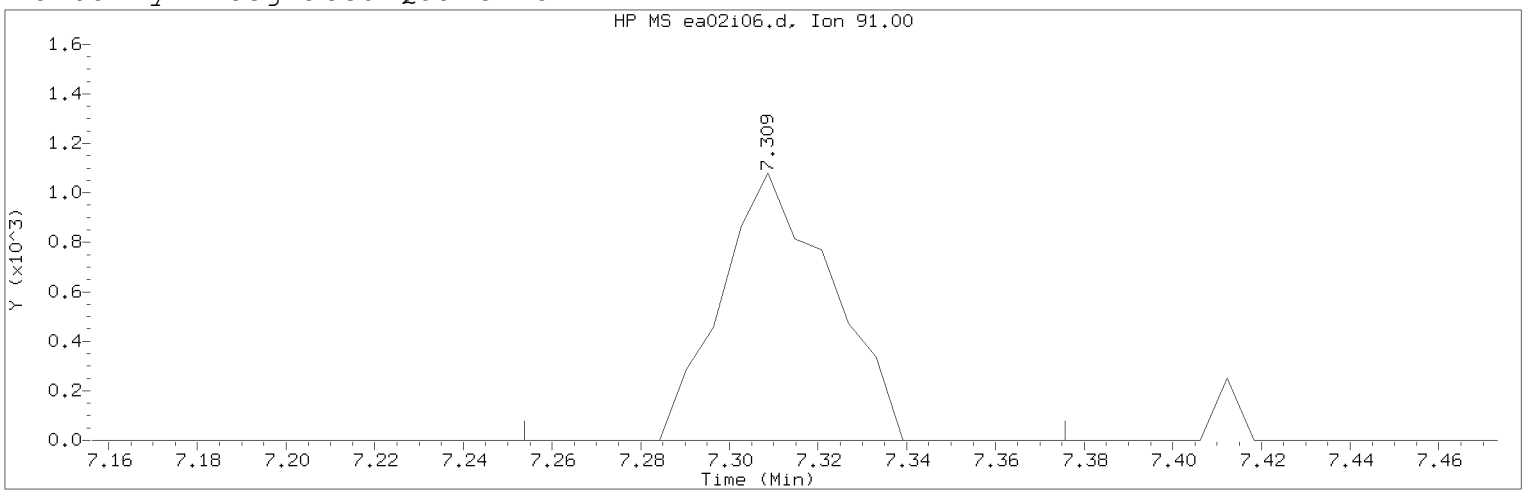
Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 737		
Retention Time (minutes)	: 5.480		
Quant Ion	: 88.00		
Area	: 12027		
On-column Amount (ng)	: 173.6218		
Integration start scan	: 718	Integration stop scan:	759
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kevin.sposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

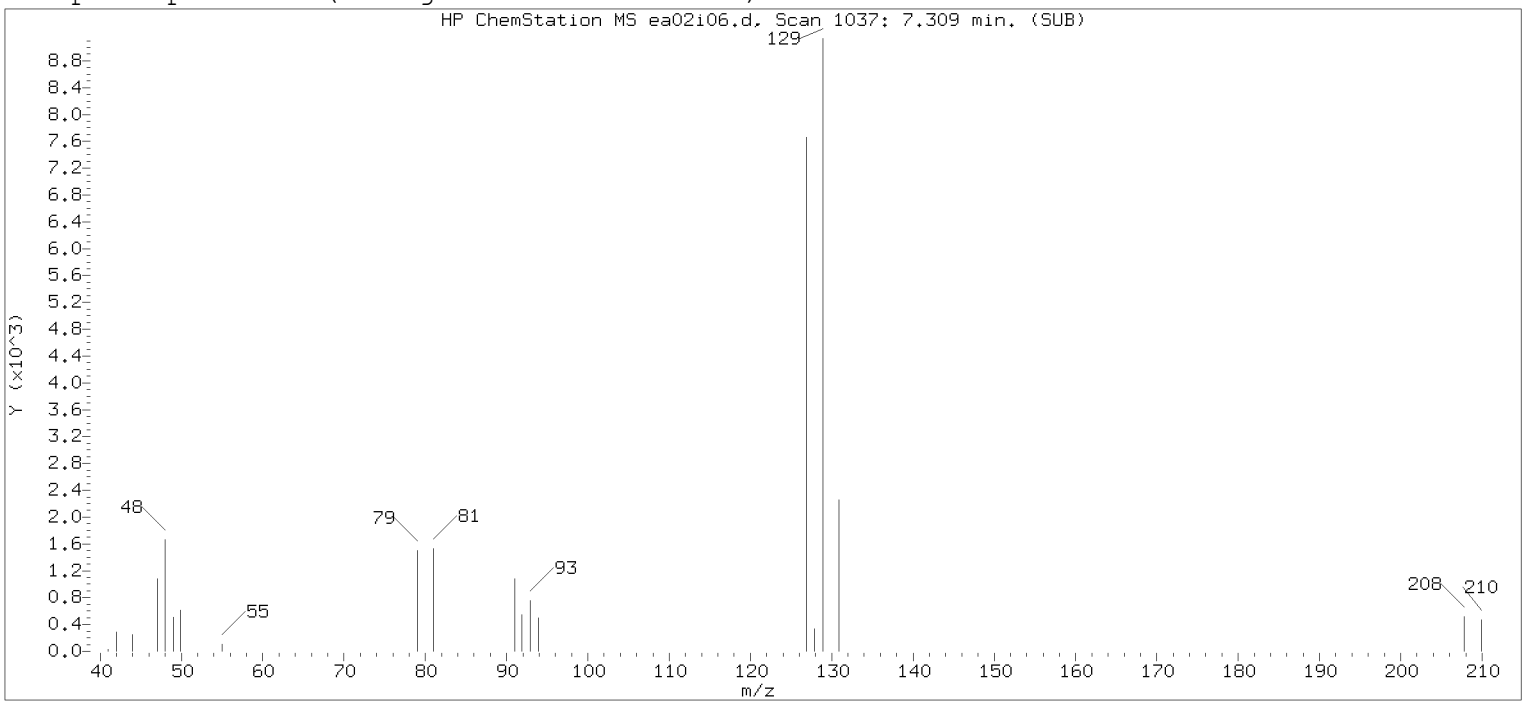
Compound Number : 102
Compound Name : 1-Chlorohexane
Scan Number : 1037
Retention Time (minutes): 7.309
Quant Ion : 91.00
Area (flag) : 1856M
On-Column Amount (ng) : 3.9901
Integration start scan : 1027 Integration stop scan: 1047
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

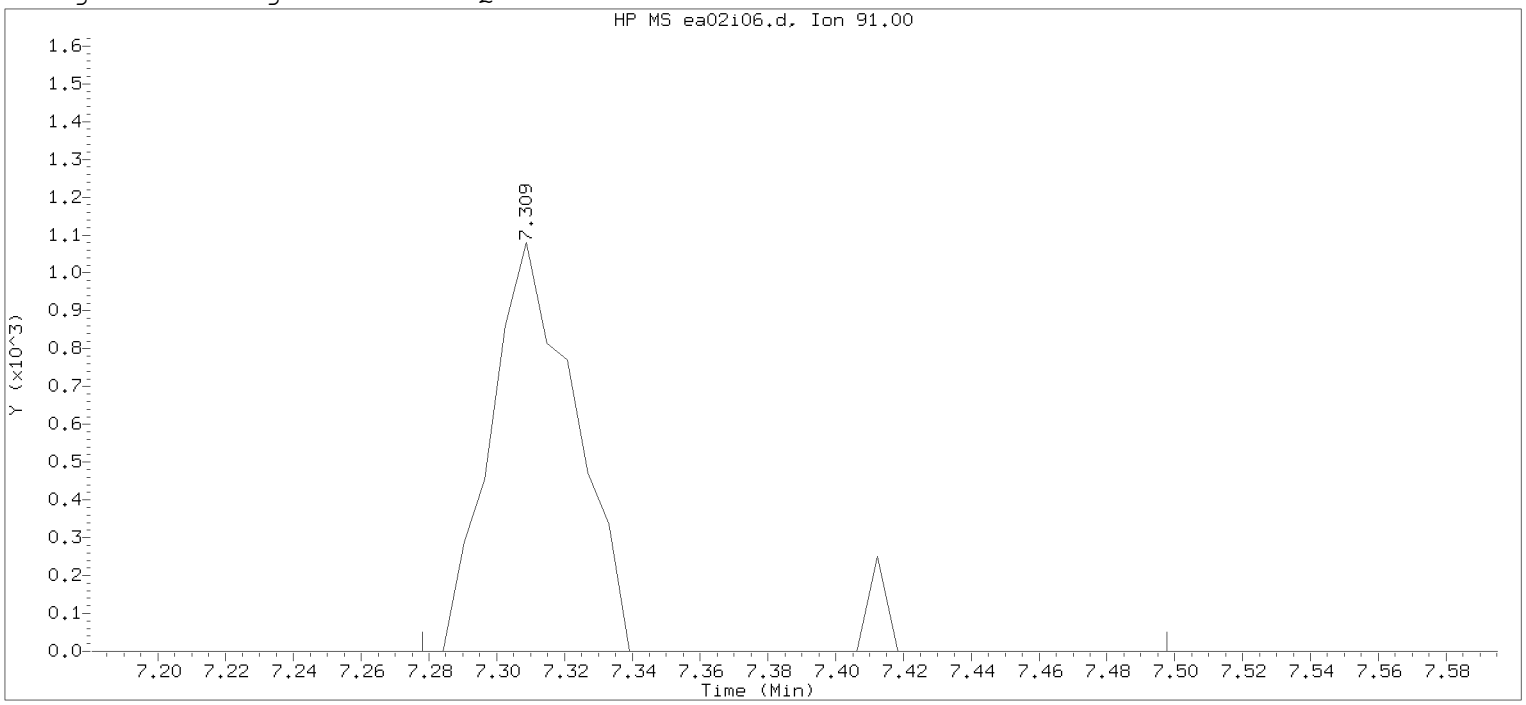
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

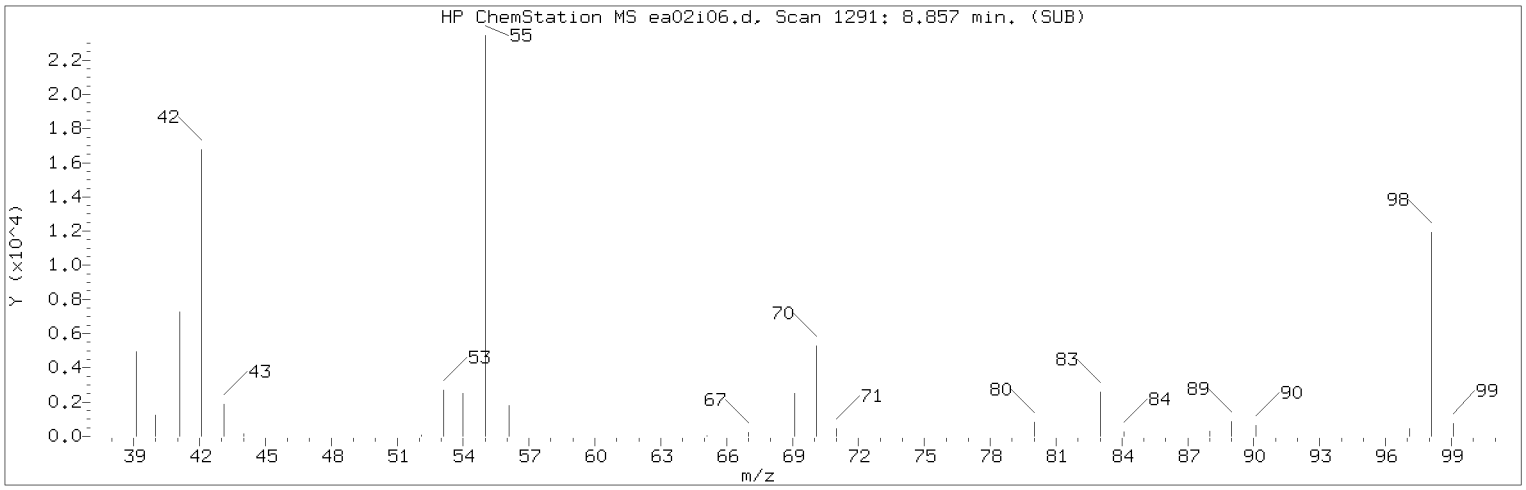
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:15
Date, time and analyst ID of latest file update: 02-May-2019 14:15 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

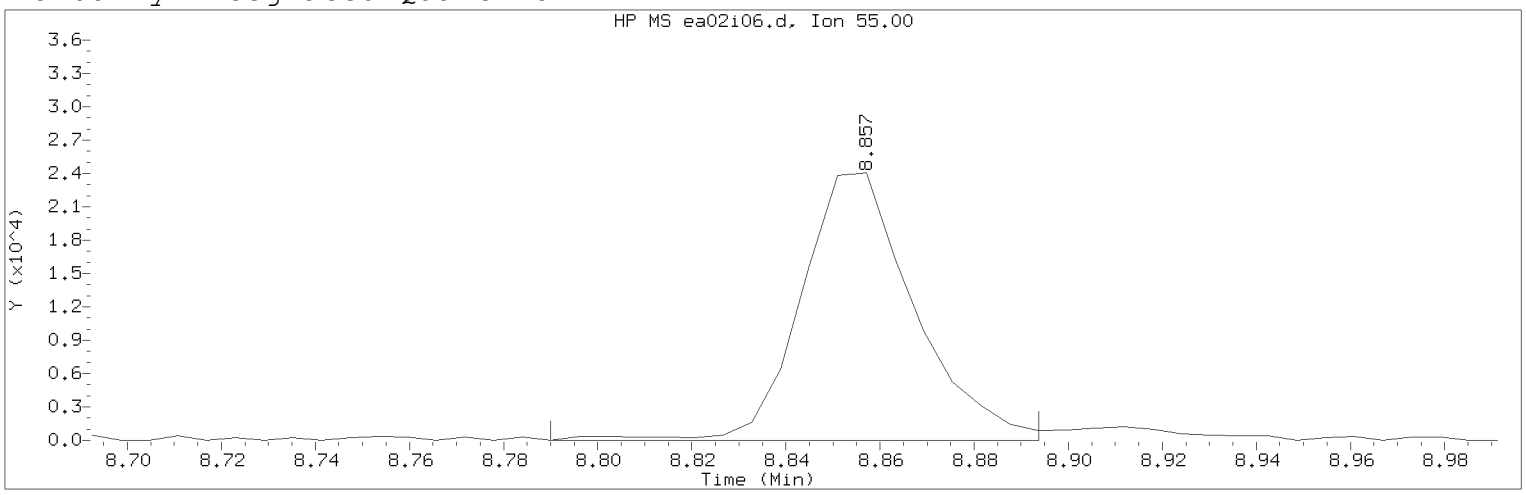
Compound Number : 102
Compound Name : 1-Chlorohexane
Scan Number : 1037
Retention Time (minutes): 7.309
Quant Ion : 91.00
Area : 1948
On-column Amount (ng) : 4.3686
Integration start scan : 1031 Integration stop scan: 1067
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

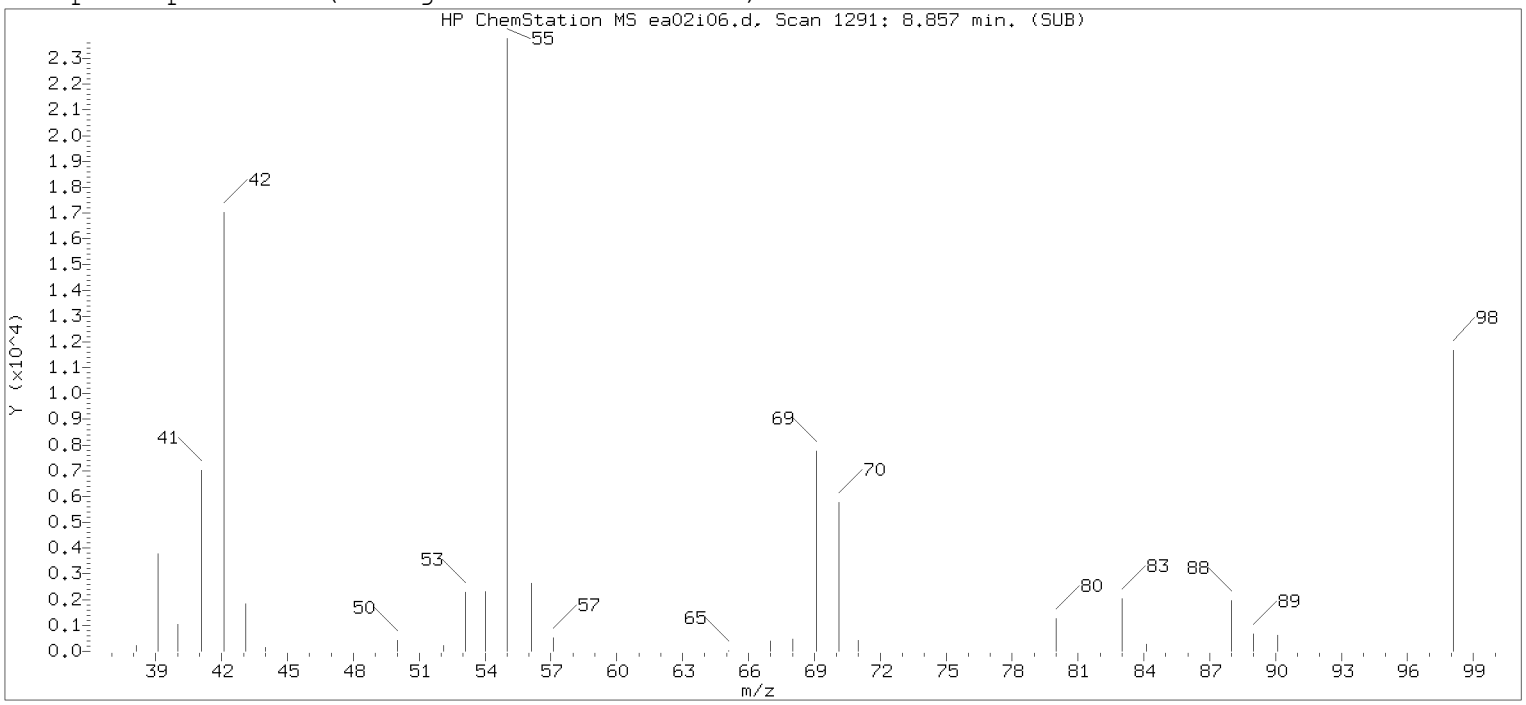
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1291
Retention Time (minutes): 8.857
Quant Ion : 55.00
Area (flag) : 40325M
On-Column Amount (ng) : 186.5096
Integration start scan : 1279 Integration stop scan: 1296
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

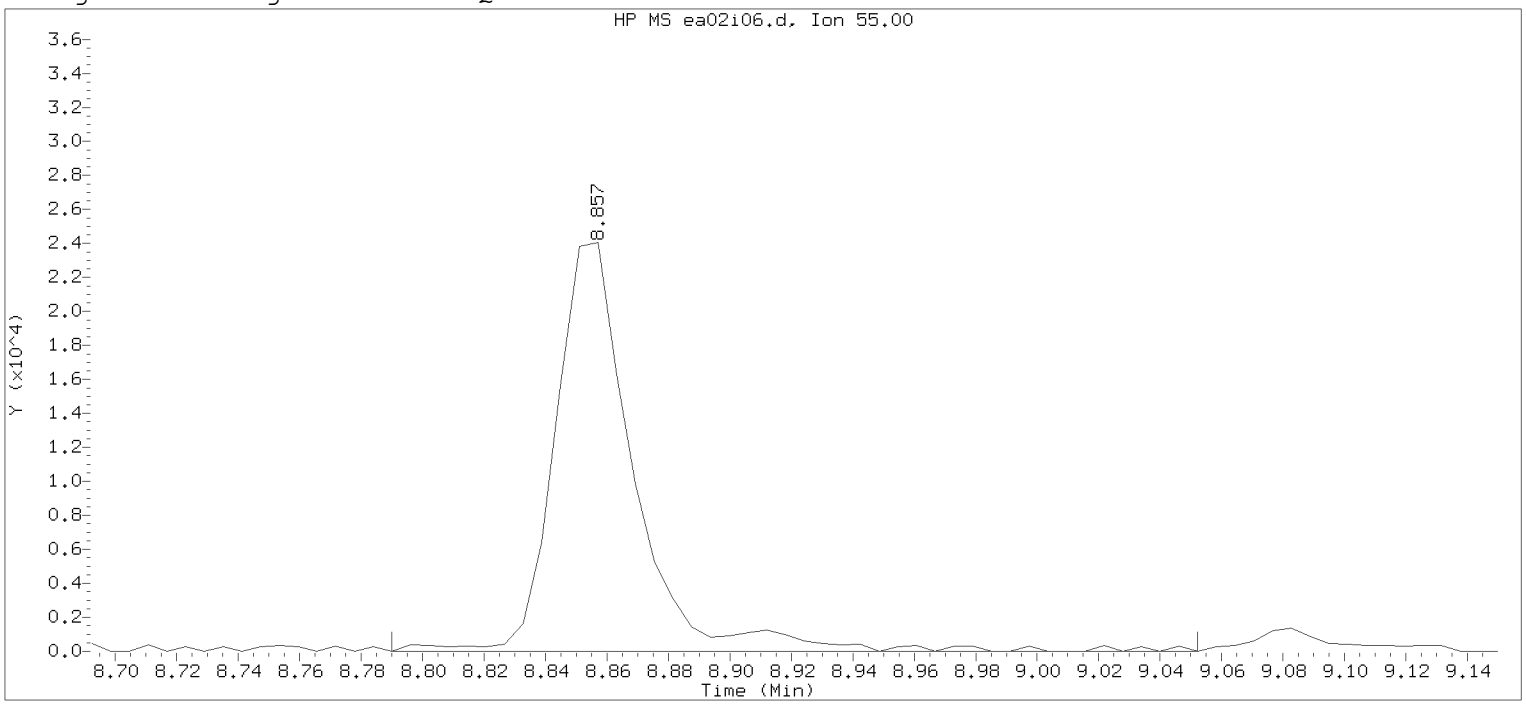
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



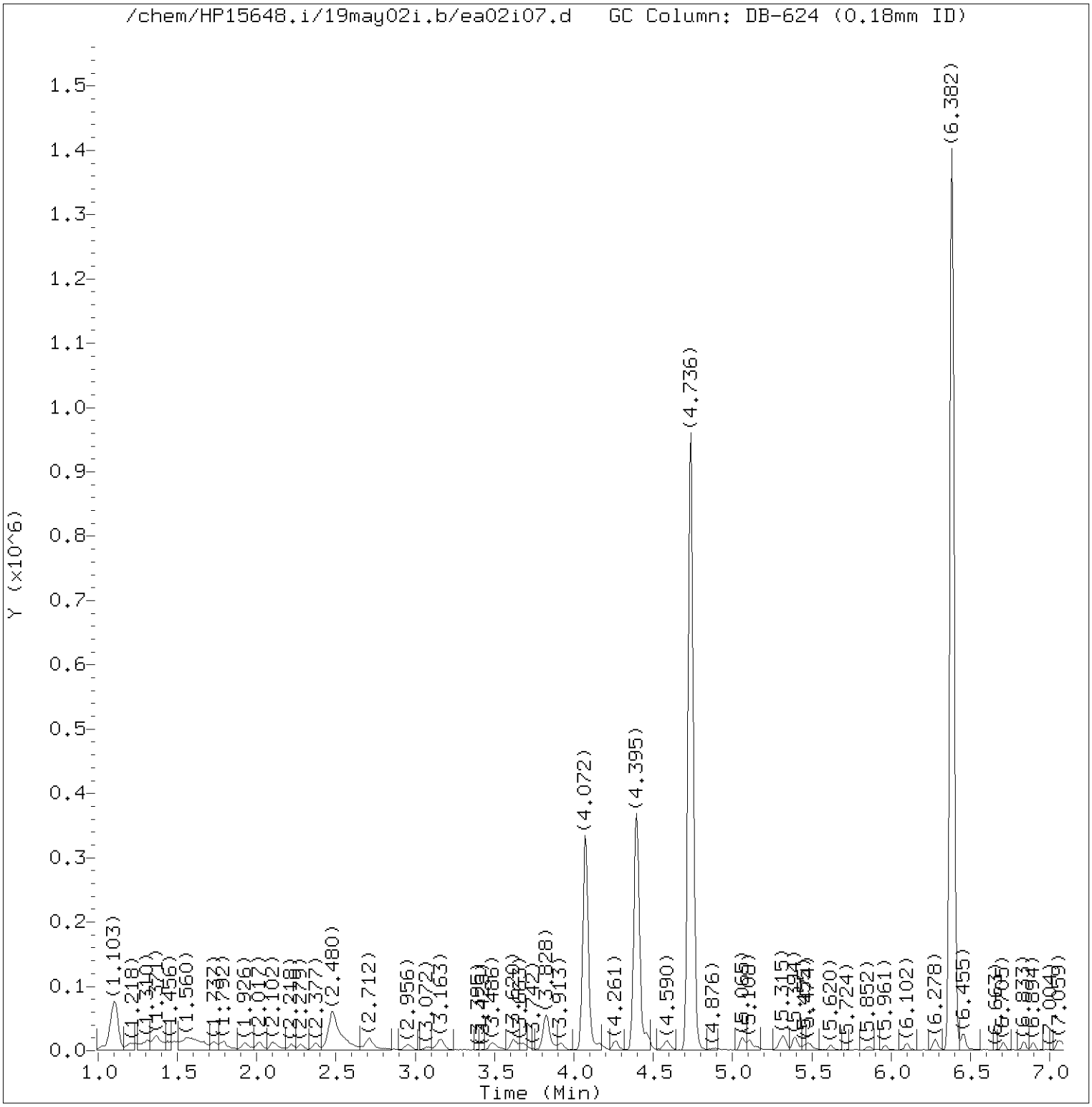
Data File: /chem/HP15648.i/19may02i.b/ea02i06.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 13:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:15
Date, time and analyst ID of latest file update: 02-May-2019 14:15 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number	: 113		
Compound Name	: Cyclohexanone		
Scan Number	: 1291		
Retention Time (minutes)	: 8.857		
Quant Ion	: 55.00		
Area	: 43430		
On-column Amount (ng)	: 191.6651		
Integration start scan	: 1279	Integration stop scan:	1322
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kevin.sposito



Total Ion Chromatogram (TIC)

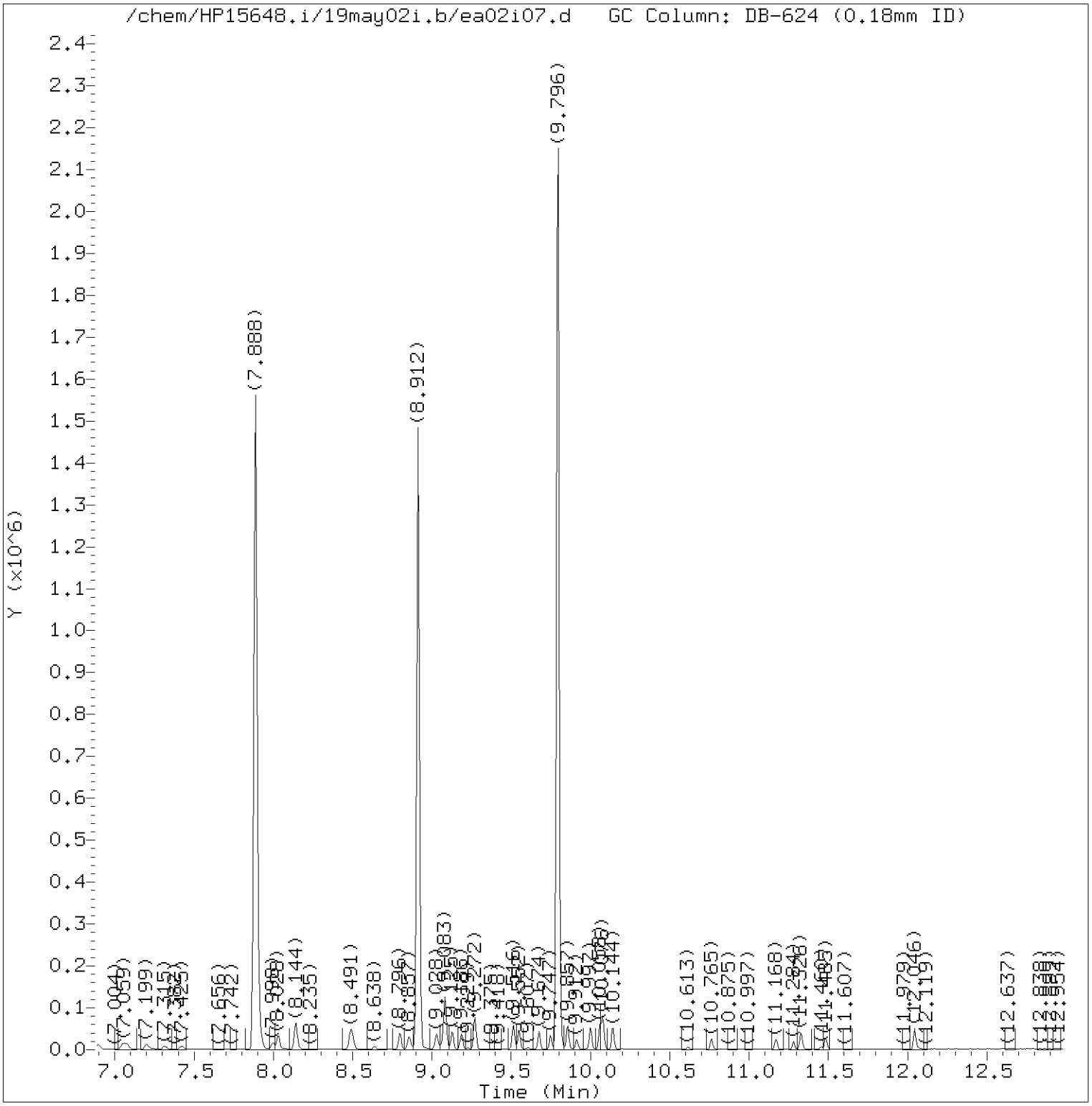
Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.194	85	8276	0.888
4) Chloromethane	(2)	1.310	50	7149M	0.943
5) 1,3-Butadiene	(2)	1.359	39	5288M	0.928
6) Vinyl Chloride	(2)	1.377	62	6683	0.922
8) Bromomethane	(2)	1.566	94	5781	1.059
9) Chloroethane	(2)	1.603	64	4093	0.992
10) Dichlorofluoromethane	(2)	1.737	67	12184	1.154
12) Trichlorofluoromethane	(2)	1.785	101	8423	0.817
11) n-Pentane	(2)	1.792	43	7580	0.895
14) Ethyl ether	(2)	1.920	59	4214	0.981
15) Freon 123a	(2)	1.926	67	6155	1.014
16) Acrolein	(1)	2.023	56	14754	10.287
17) 1,1-Dichloroethene	(2)	2.102	96	3452	0.814
17) 1,1-Dichloroethene	(2)	2.102	63	2006	0.892
18) Acetone	(1)	2.127	58	1373	2.300
19) Freon 113	(2)	2.133	101	3130	0.666
21) 2-Propanol	(1)	2.218	45	8084	22.666
22) Methyl Iodide	(2)	2.218	142	6818	0.857
23) Carbon Disulfide	(2)	2.279	76	12834	0.892
25) Allyl Chloride	(2)	2.377	41	9338	1.132
27) Methyl Acetate	(2)	2.383	43	4172	1.030
28) Methylene Chloride	(2)	2.474	84	4812	0.995
29)*t-Butyl alcohol-d10	(1)	2.480	65	173827	250.000
30) t-Butyl alcohol	(1)	2.554	59	13964	21.490
31) Acrylonitrile	(2)	2.669	53	2386	0.969
32) trans-1,2-Dichloroethene	(2)	2.712	96	4293	0.899
33) Methyl Tertiary Butyl Ether	(2)	2.712	73	14630	1.027
34) n-Hexane	(2)	2.950	57	6641	0.794
36) 1,1-Dichloroethane	(2)	3.072	63	7593	0.849
38) di-Isopropyl ether	(2)	3.151	45	14421	0.916
39) 2-Chloro-1,3-butadiene	(2)	3.169	53	6959	0.814
40) Ethyl t-butyl ether	(2)	3.486	59	14975	0.964
42) cis-1,2-Dichloroethene	(2)	3.614	96	5231	0.975
43) 1,2-Dichloroethene (Total)	(2)		96	9524	1.874
45) 2,2-Dichloropropane	(2)	3.627	77	6728	0.852
44) 2-Butanone	(2)	3.639	43	8847	2.667
47) Propionitrile	(1)	3.681	54	17532	19.972
48) Methacrylonitrile	(2)	3.828	67	26319	9.955

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.840	128	2507	0.941
50) Tetrahydrofuran	(1)	3.889	71	2316	2.517
51) Chloroform	(2)	3.925	83	7608	0.894
52)$Dibromofluoromethane	(2)	4.072	113	246724	50.237
52)$Dibromofluoromethane	(2)	4.072	111	251959	49.978
53) 1,1,1-Trichloroethane	(2)	4.096	97	7071	0.898
54) Cyclohexane	(2)	4.157	56	7536	0.779
54) Cyclohexane	(2)	4.169	84	6226M	0.749
54) Cyclohexane	(2)	4.163	69	2842	0.900
55) 1,1-Dichloropropene	(2)	4.261	75	5460	0.782
56) Carbon Tetrachloride	(2)	4.267	117	5301M	0.791
58) Isobutyl Alcohol	(1)	4.376	41	13949	63.229
57)$1,2-Dichloroethane-d4	(2)	4.395	102	61734	49.812
57)$1,2-Dichloroethane-d4	(2)	4.395	65	317397	50.459
57)$1,2-Dichloroethane-d4	(2)	4.395	104	39802	50.092
60) Benzene	(2)	4.456	78	18144	0.885
61) 1,2-Dichloroethane	(2)	4.468	62	7254	1.053
61) 1,2-Dichloroethane	(2)	4.383	98	539	0.896
65) t-Amyl methyl ether	(2)	4.590	73	15424	1.001
66)*Fluorobenzene	(2)	4.736	96	1056656	50.000
67) n-Heptane	(2)	4.742	43	9573	1.067
69) n-Butanol	(1)	5.065	56	18959	99.358
71) Trichloroethene	(2)	5.108	95	4318	0.835
73) Methylcyclohexane	(2)	5.309	83	8969	0.833
73) Methylcyclohexane	(2)	5.315	98	4098	0.828
74) 1,2-Dichloropropane	(2)	5.340	63	4433	0.869
75) Dibromomethane	(2)	5.449	93	2851	0.934
77) Methyl Methacrylate	(2)	5.486	69	5077	1.092
76) 1,4-Dioxane	(1)	5.486	88	2587	48.176
79) Bromodichloromethane	(2)	5.620	83	6037	0.950
80) 2-Nitropropane	(2)	5.864	41	5912	2.808
81) 2-Chloroethyl Vinyl Ether	(2)	5.961	63	3625	0.922
82) cis-1,3-Dichloropropene	(2)	6.102	75	7298	0.882
83) 4-Methyl-2-pentanone	(2)	6.278	43	14298	2.007
84)$Toluene-d8	(3)	6.382	98	1055244	49.723
84)$Toluene-d8	(3)	6.382	100	679416	49.803
89) Toluene	(3)	6.455	92	11225	0.864
90) trans-1,3-Dichloropropene	(3)	6.705	75	7043	0.907

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropene (total)	(3)		100	14341	1.789
92) Ethyl Methacrylate	(3)	6.839	69	7799	0.942
93) 1,1,2-Trichloroethane	(3)	6.894	97	4355	0.985
94) Tetrachloroethene	(3)	7.047	166	3896	0.738
95) 1,3-Dichloropropane	(3)	7.077	76	7183	0.924
97) 2-Hexanone	(3)	7.199	43	11912	2.159
98) Dibromochloromethane	(3)	7.315	129	4297	0.900
102) 1-Chlorohexane	(3)	7.327	91	414	0.922
100) 1,2-Dibromoethane	(3)	7.425	107	4446	0.945
101)*Chlorobenzene-d5	(3)	7.888	117	781405	50.000
103) Chlorobenzene	(3)	7.912	112	12650	0.881
104) 1,1,1,2-Tetrachloroethane	(3)	7.998	131	4178	0.857
105) Ethylbenzene	(3)	8.034	91	22068	0.859
107) m+p-Xylene	(3)	8.144	106	16874	1.687
109) Xylene (Total)	(3)		106	25270	2.547
108) o-Xylene	(3)	8.485	106	8396	0.860
110) Styrene	(3)	8.498	104	12867	0.798
111) Bromoform	(3)	8.638	173	2702	0.849
112) Isopropylbenzene	(3)	8.796	105	20728	0.798
113) Cyclohexanone	(1)	8.857	55	11452M	56.612
115)$4-Bromofluorobenzene	(3)	8.912	95	406667	49.846
115)$4-Bromofluorobenzene	(3)	8.912	174	302623	49.503
116) Bromobenzene	(4)	9.028	156	5002	0.874
117) 1,1,2,2-Tetrachloroethane	(4)	9.034	83	6447	0.970
118) 1,2,3-Trichloropropane	(4)	9.065	110	2050	1.018
119) trans-1,4-Dichloro-2-butene	(4)	9.083	53	20522	9.398
120) n-Propylbenzene	(4)	9.125	91	25565	0.847
121) 2-Chlorotoluene	(4)	9.186	126	5139	0.865
123) 1,3,5-Trimethylbenzene	(4)	9.272	105	19111	0.873
122) 4-Chlorotoluene	(4)	9.272	126	5378	0.883
125) tert-Butylbenzene	(4)	9.510	134	3928	0.807
126) Pentachloroethane	(4)	9.516	167	3133	0.865
127) 1,2,4-Trimethylbenzene	(4)	9.552	105	21077	0.935
128) sec-Butylbenzene	(4)	9.674	105	21407	0.771
130) 1,3-Dichlorobenzene	(4)	9.747	146	9809	0.879
131) p-Isopropyltoluene	(4)	9.784	119	19392	0.794
132)*1,4-Dichlorobenzene-d4	(4)	9.796	152	410887	50.000
134) 1,4-Dichlorobenzene	(4)	9.814	146	10732	0.940

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

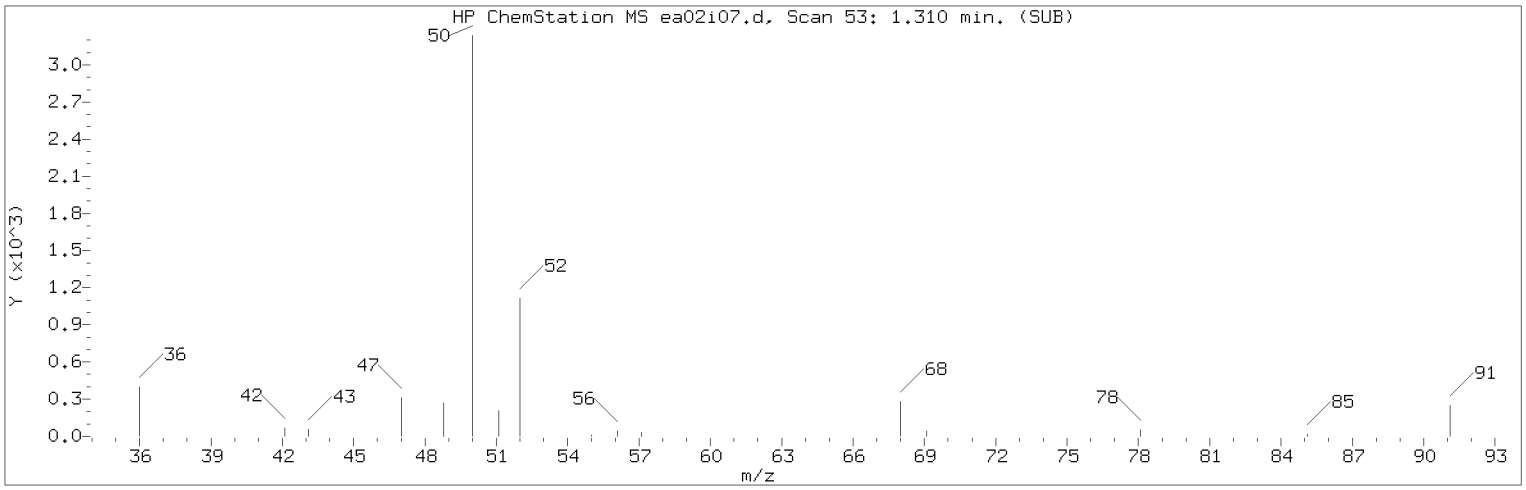
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	9.857	105	22256	0.927
136) Benzyl Chloride	(4)	9.912	91	13897	0.896
137) 1,3-Diethylbenzene	(4)	9.997	119	13387	0.870
138) 1,4-Diethylbenzene	(4)	10.058	119	14561	0.888
140) n-Butylbenzene	(4)	10.076	92	9445M	0.787
139) 1,2-Dichlorobenzene	(4)	10.083	146	9670	0.905
142) Diethylbenzene (total)	(4)		100	39110	2.644
141) 1,2-Diethylbenzene	(4)	10.144	119	11162M	0.886
143) 1,2-Dibromo-3-chloropropane	(4)	10.613	75	1474	0.968
145) 1,3,5-Trichlorobenzene	(4)	10.765	180	7015	0.893
147) 1,2,4-Trichlorobenzene	(4)	11.168	180	6411	0.914
148) Hexachlorobutadiene	(4)	11.284	225	2697	0.897
149) Naphthalene	(4)	11.326	128	24614	1.065
150) 1,2,3-Trichlorobenzene	(4)	11.485	180	6476	0.978
151) 2-Methylnaphthalene	(4)	12.046	142	18720	1.282

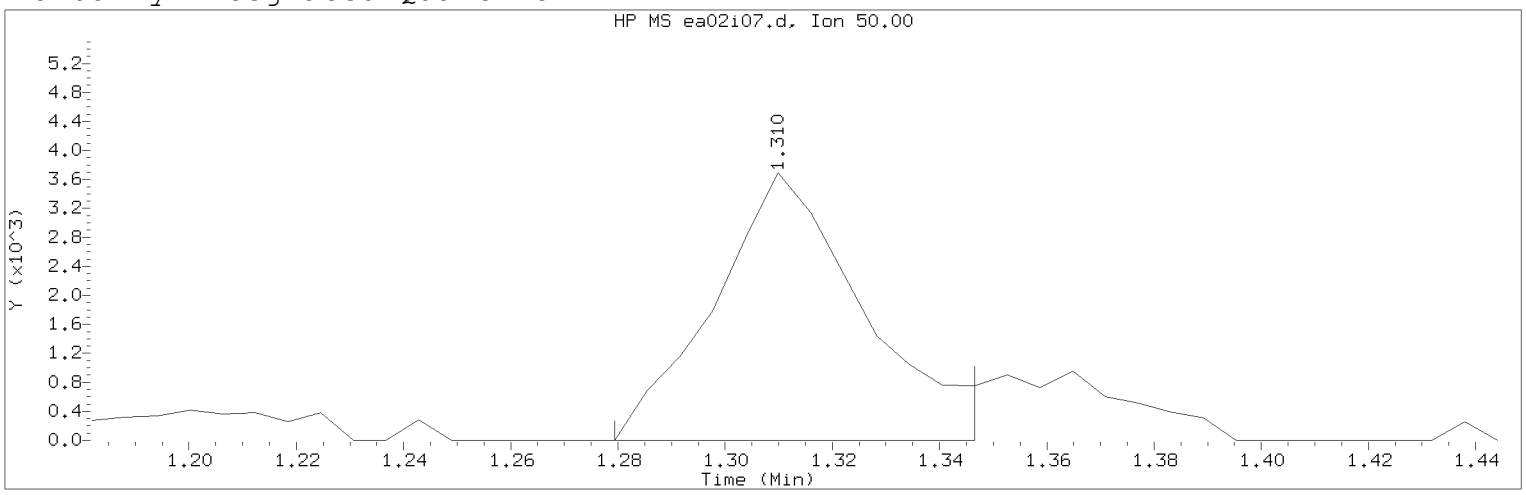
M = Compound was manually integrated.

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

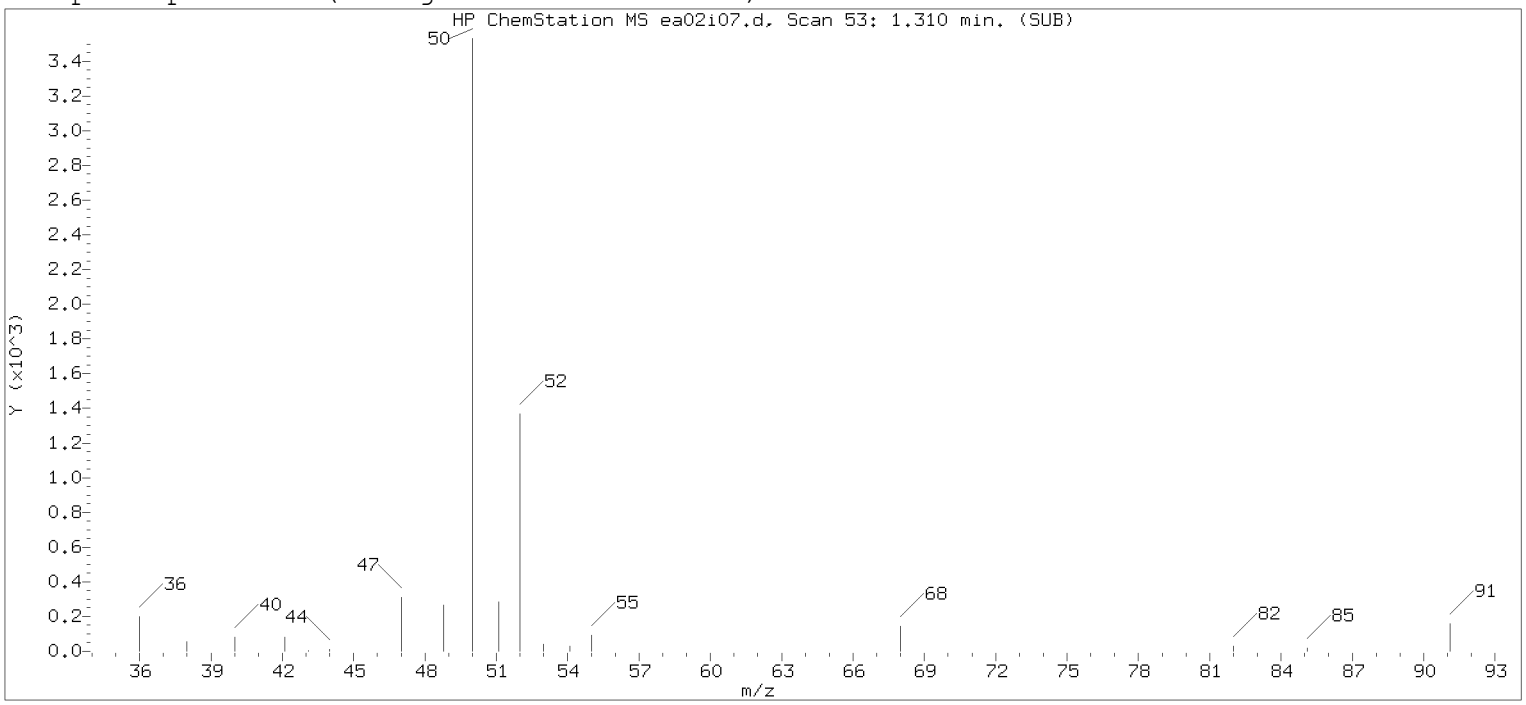
Compound Number : 4
Compound Name : Chloromethane
Scan Number : 53
Retention Time (minutes): 1.310
Quant Ion : 50.00
Area (flag) : 7149M
On-Column Amount (ng) : 0.9427
Integration start scan : 47 Integration stop scan: 58
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

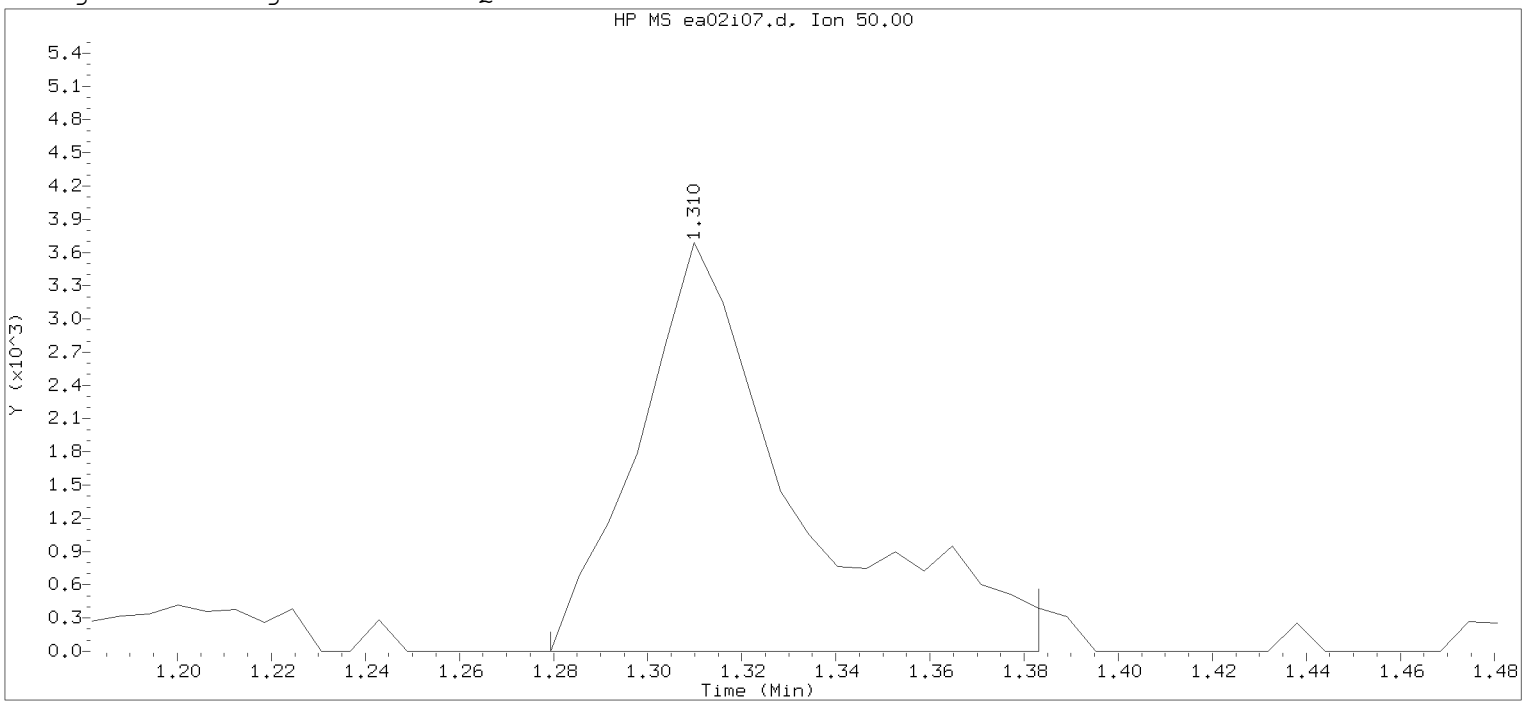
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

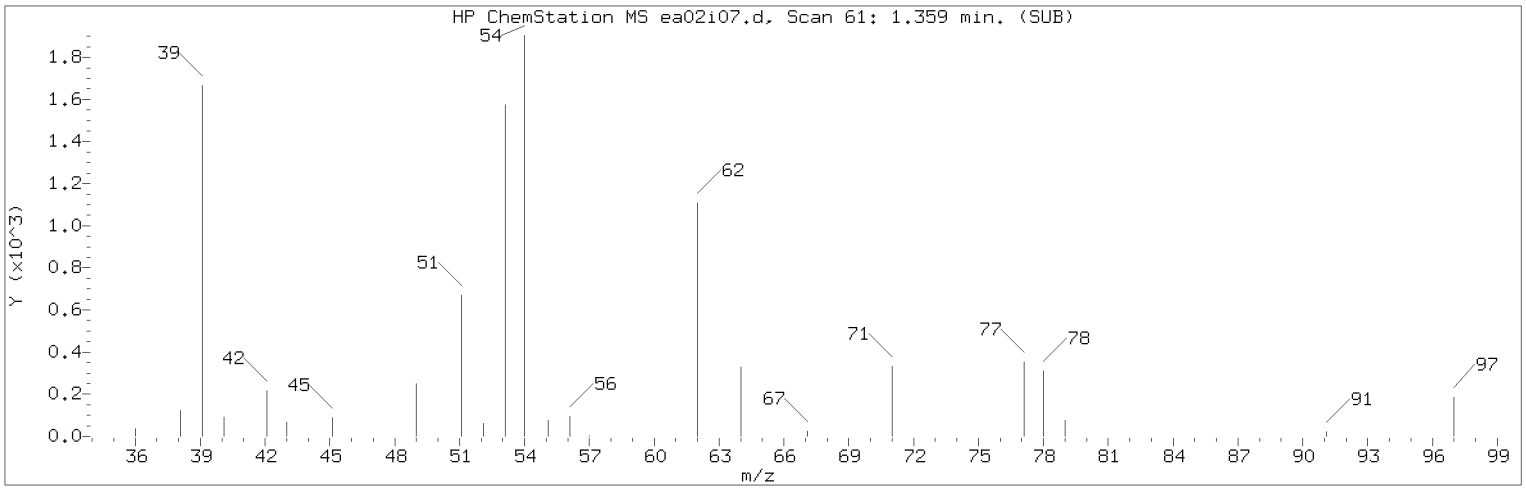
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:35
Date, time and analyst ID of latest file update: 02-May-2019 14:35 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

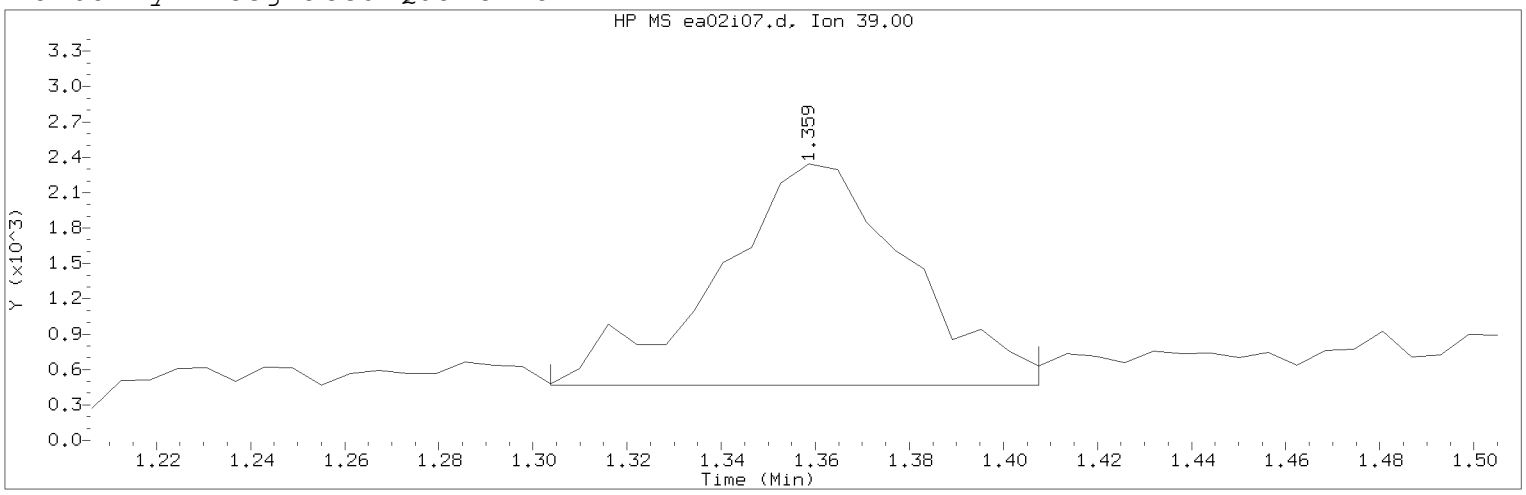
Compound Number : 4
Compound Name : Chloromethane
Scan Number : 53
Retention Time (minutes): 1.310
Quant Ion : 50.00
Area : 8571
On-column Amount (ng) : 1.0837
Integration start scan : 47 Integration stop scan: 64
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

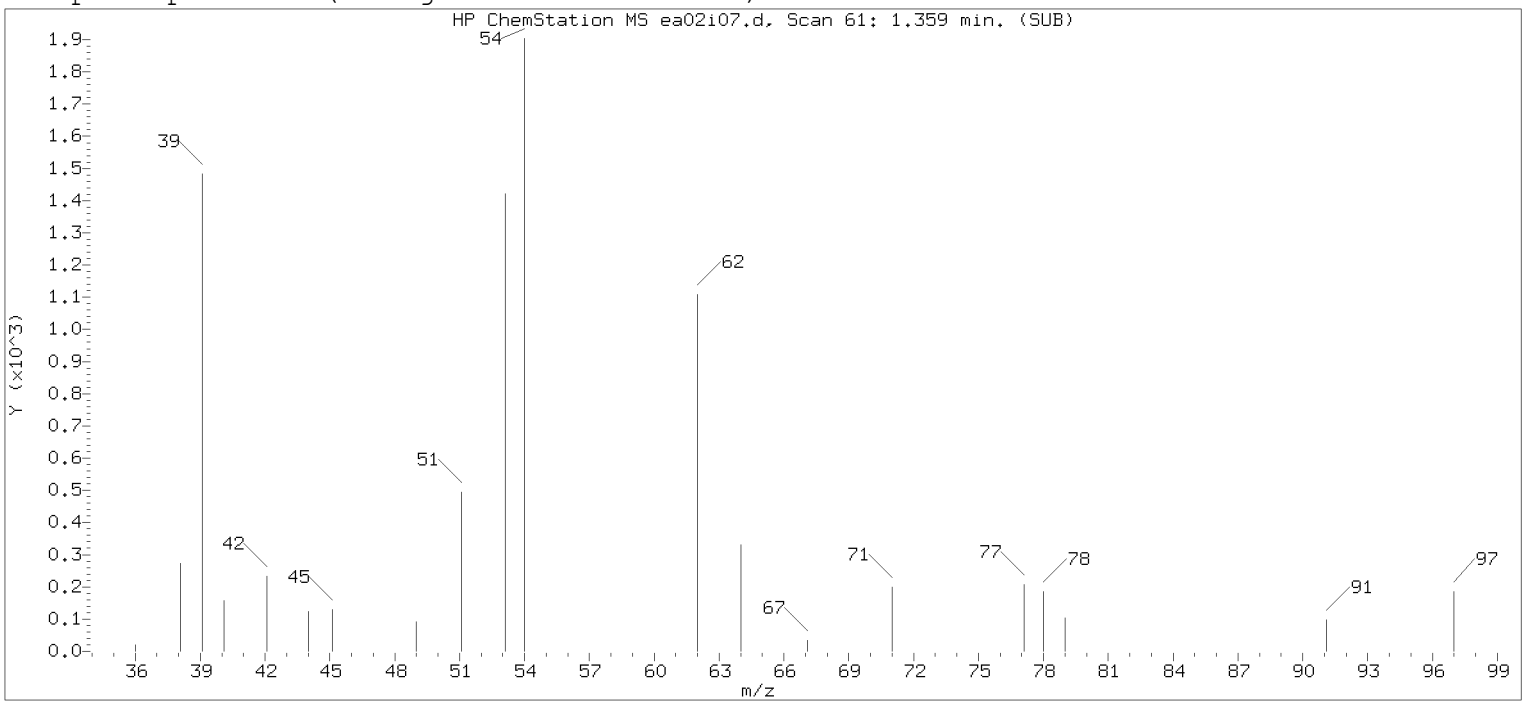
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 61
Retention Time (minutes): 1.359
Quant Ion : 39.00
Area (flag) : 5288M
On-Column Amount (ng) : 0.9276
Integration start scan : 51 Integration stop scan: 68
Y at integration start : 466 Y at integration end: 466

Reason for manual integration: improper integration

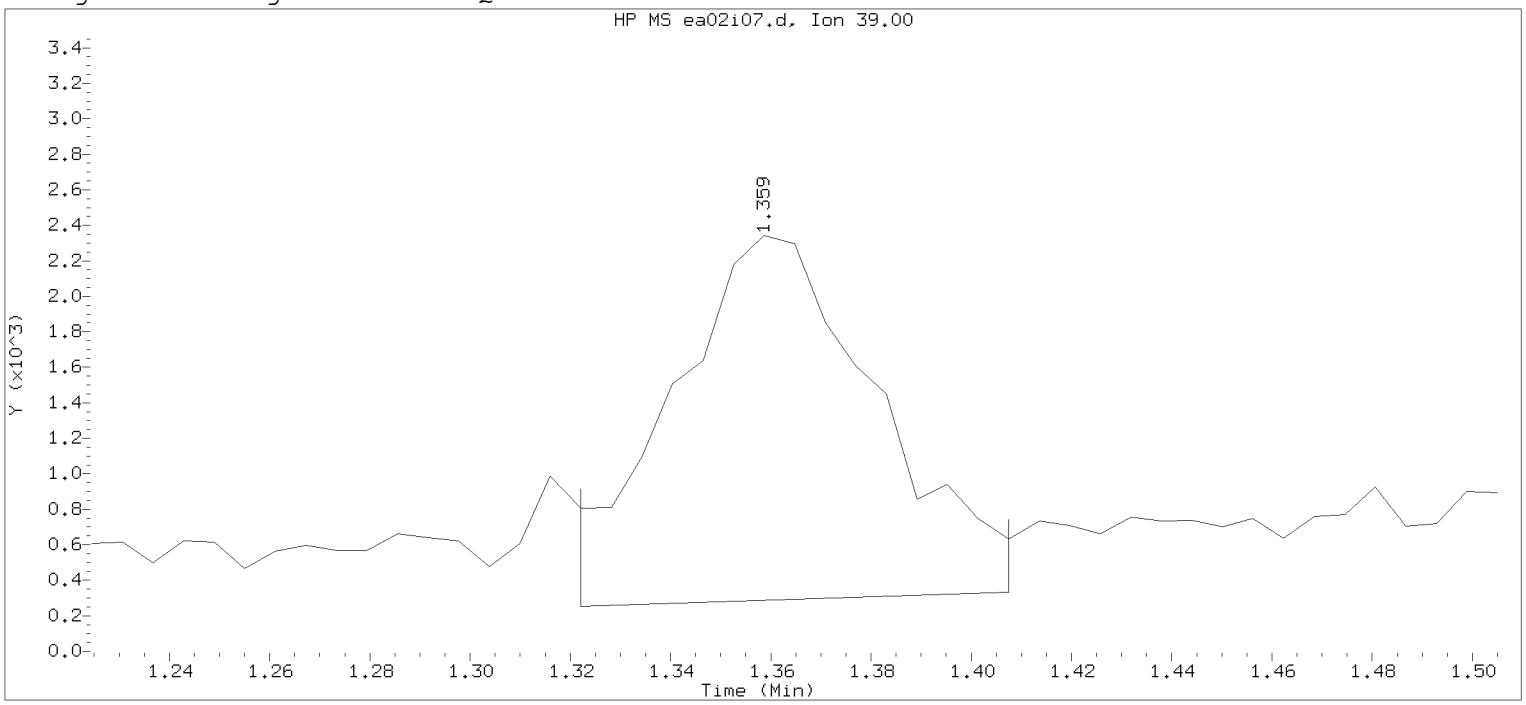
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

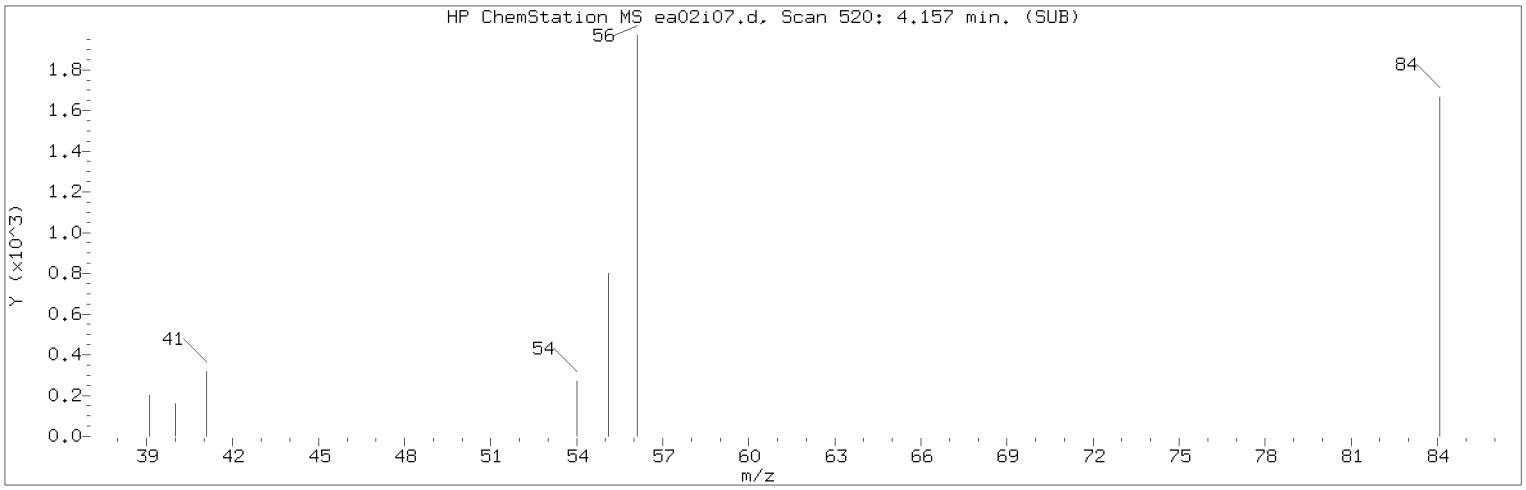
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:35
Date, time and analyst ID of latest file update: 02-May-2019 14:35 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

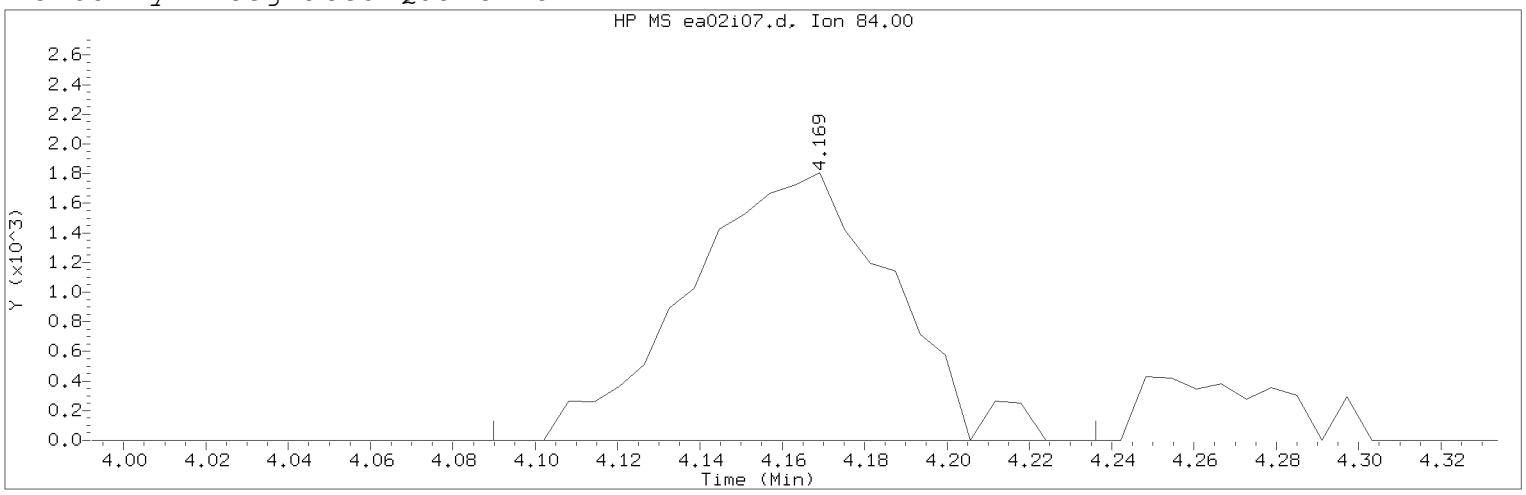
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 61
Retention Time (minutes): 1.359
Quant Ion : 39.00
Area : 5839
On-column Amount (ng) : 1.0158
Integration start scan : 54 Integration stop scan: 68
Y at integration start : 252 Y at integration end: 332

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kasposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

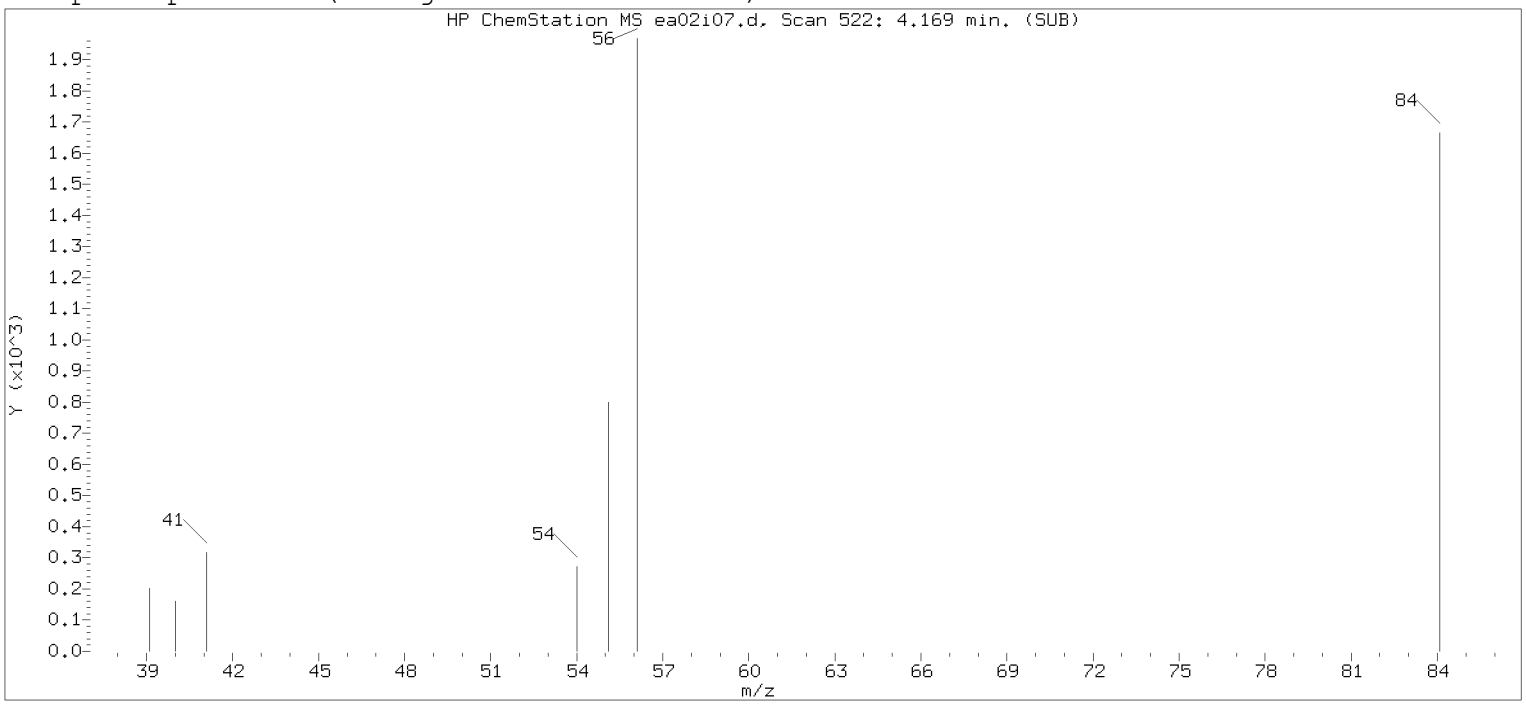
Compound Number : 54
Compound Name : Cyclohexane
Scan Number : 522
Retention Time (minutes): 4.169
Quant Ion : 84.00
Area (flag) : 6226M
On-Column Amount (ng) : 0.7491
Integration start scan : 508 Integration stop scan: 532
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

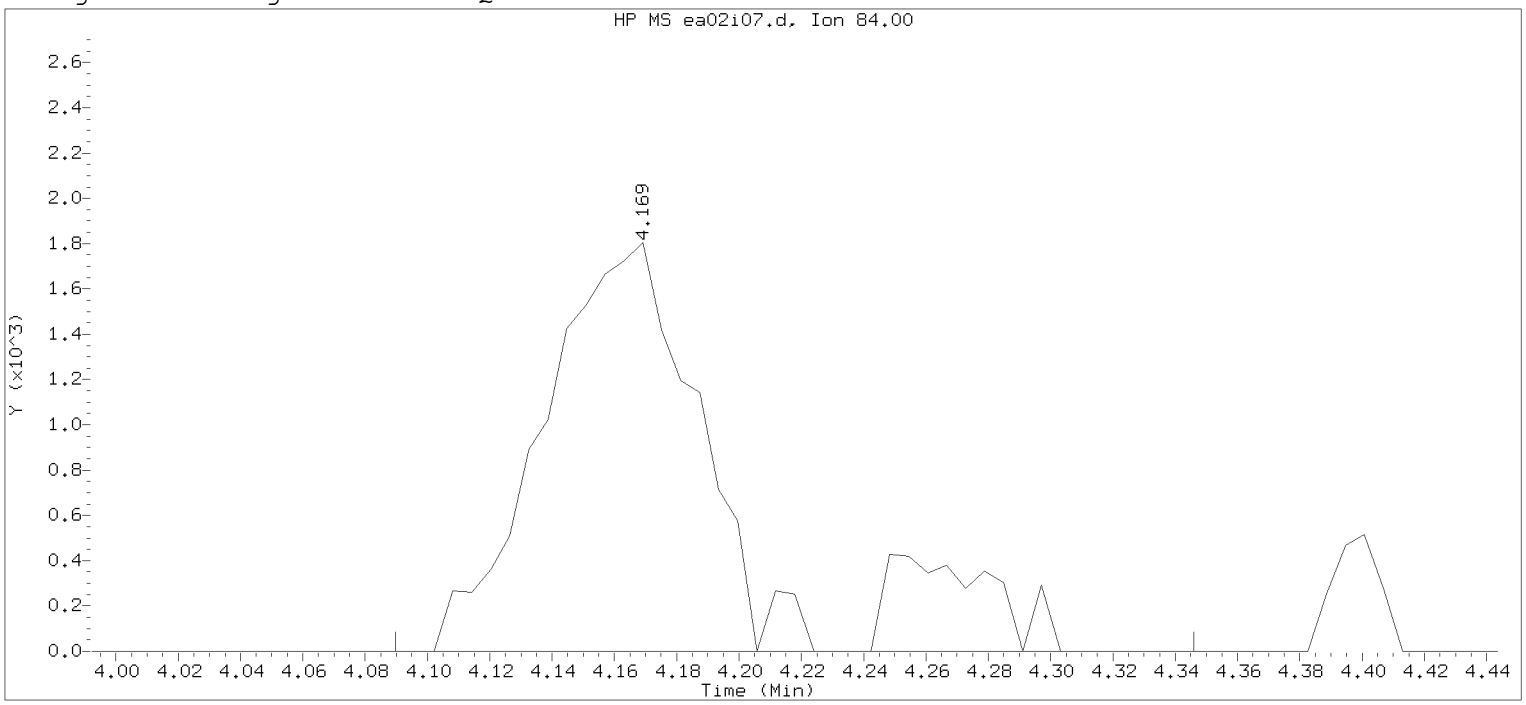
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

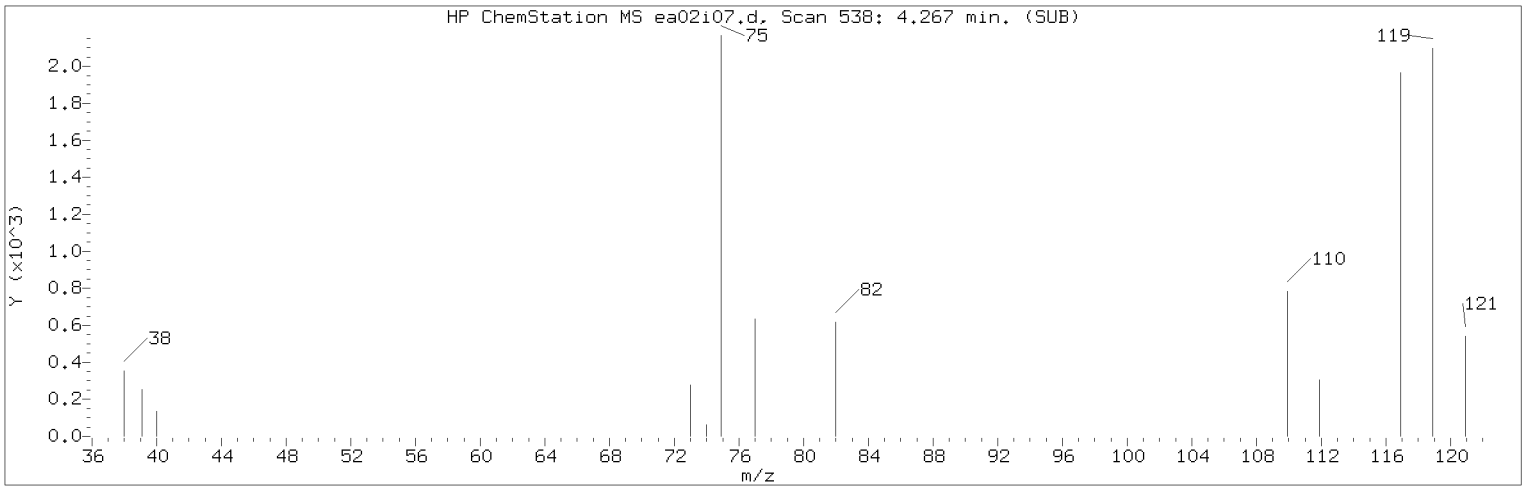
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:35
Date, time and analyst ID of latest file update: 02-May-2019 14:35 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

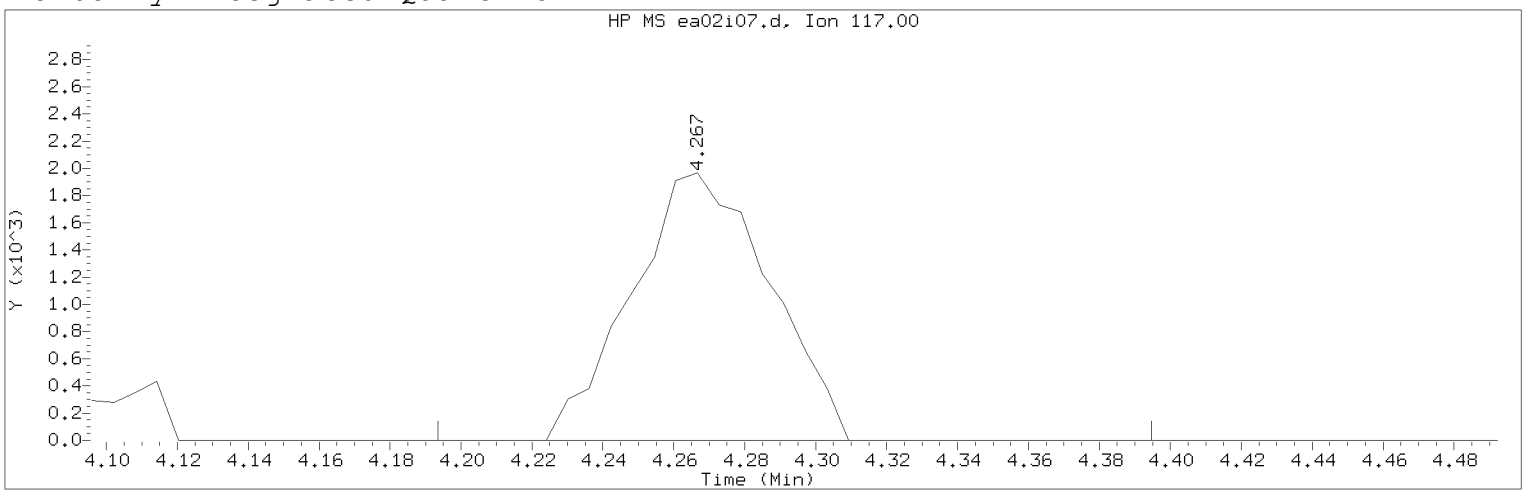
Compound Number : 54
Compound Name : Cyclohexane
Scan Number : 522
Retention Time (minutes): 4.169
Quant Ion : 84.00
Area : 7251
On-column Amount (ng) : 0.8468
Integration start scan : 508 Integration stop scan: 550
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

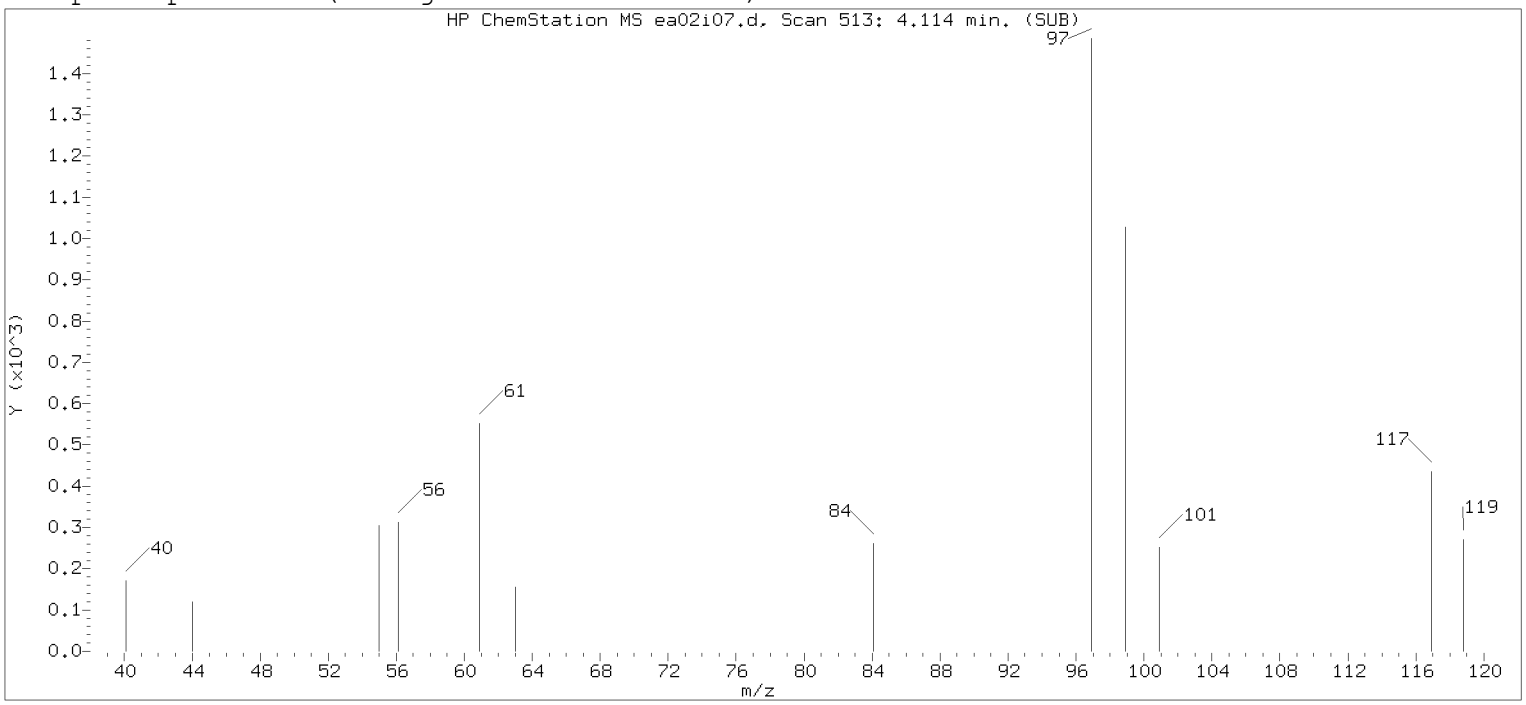
Compound Number : 56
Compound Name : Carbon Tetrachloride
Scan Number : 538
Retention Time (minutes): 4.267
Quant Ion : 117.00
Area (flag) : 5301M
On-Column Amount (ng) : 0.7914
Integration start scan : 525 Integration stop scan: 558
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

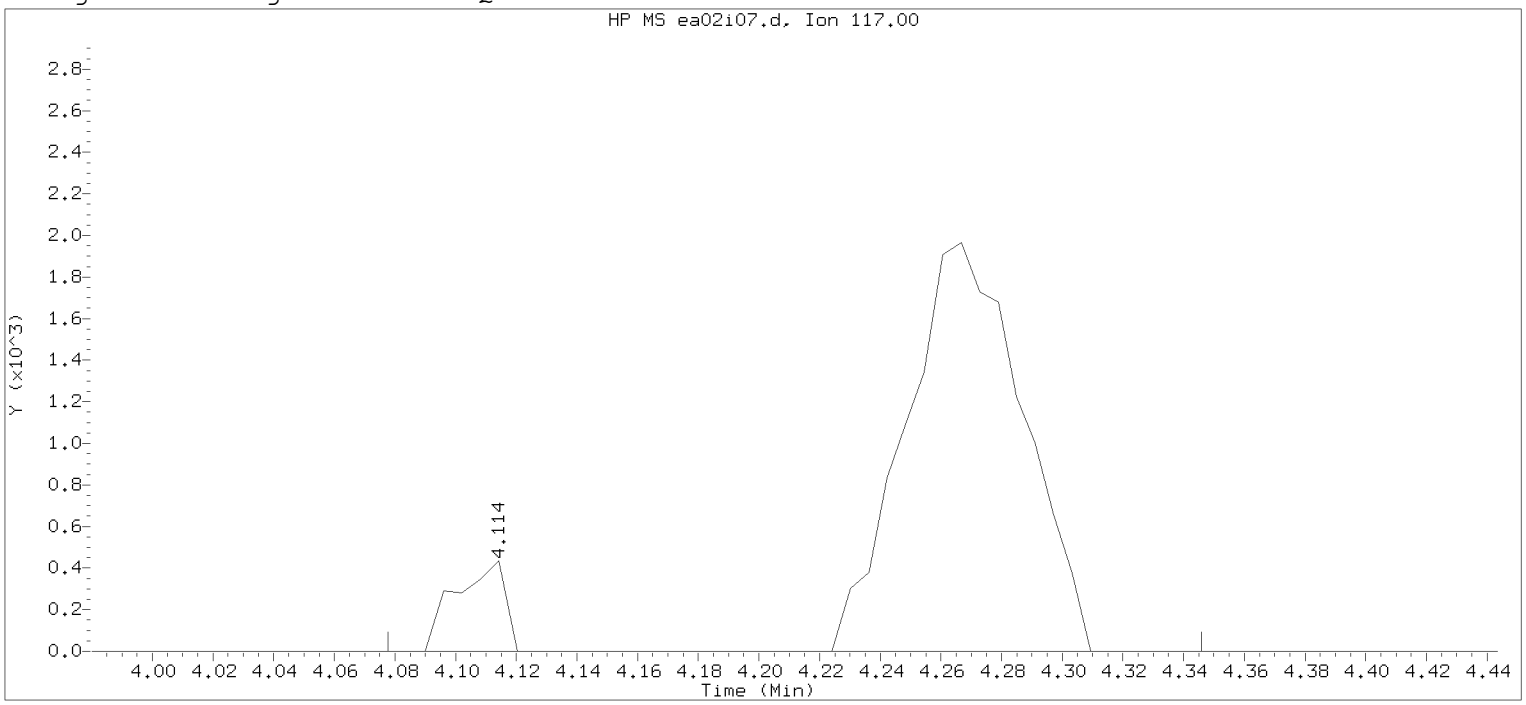
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

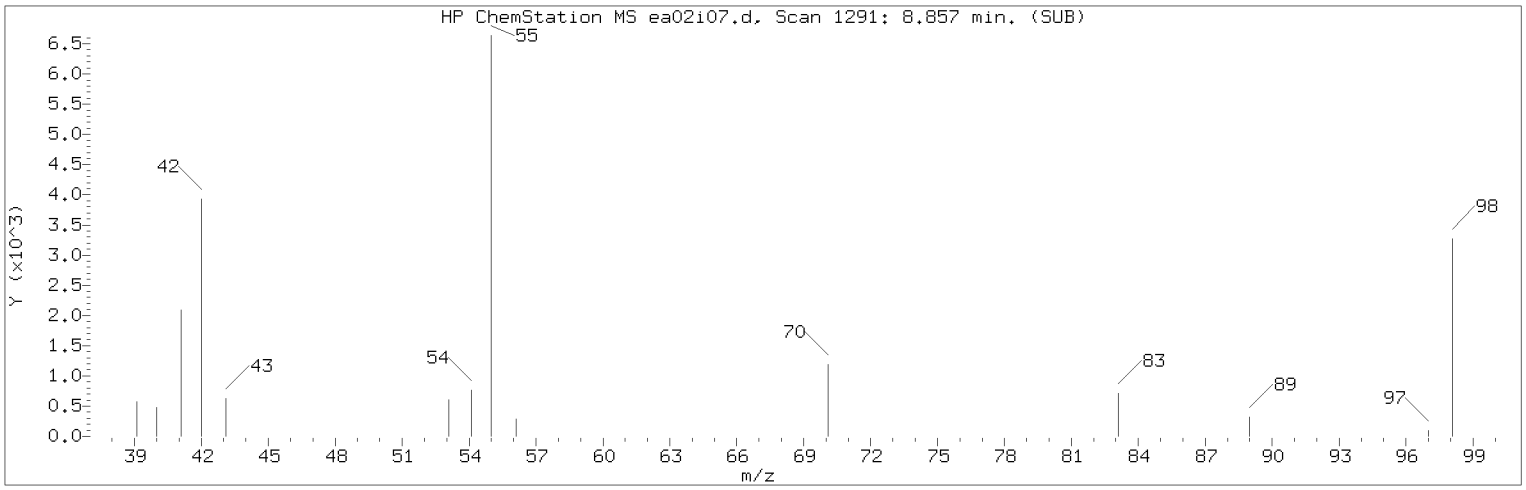
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:35
Date, time and analyst ID of latest file update: 02-May-2019 14:35 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

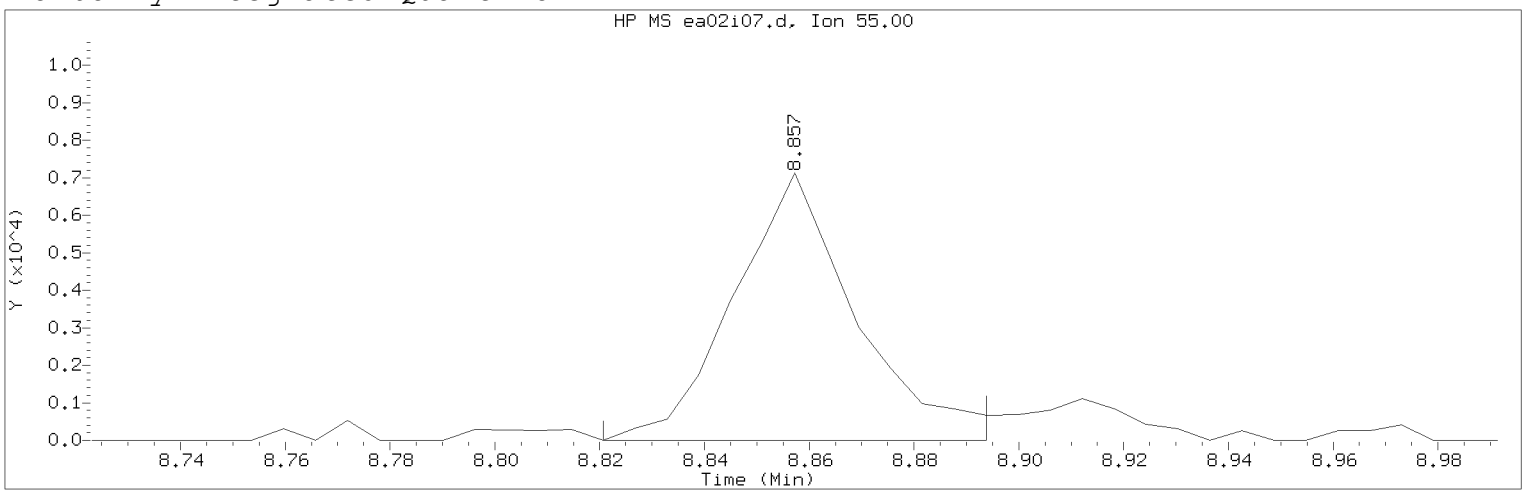
Compound Number : 56
Compound Name : Carbon Tetrachloride
Scan Number : 513
Retention Time (minutes): 4.114
Quant Ion : 117.00
Area : 5796
On-column Amount (ng) : 0.8623
Integration start scan : 506 Integration stop scan: 550
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

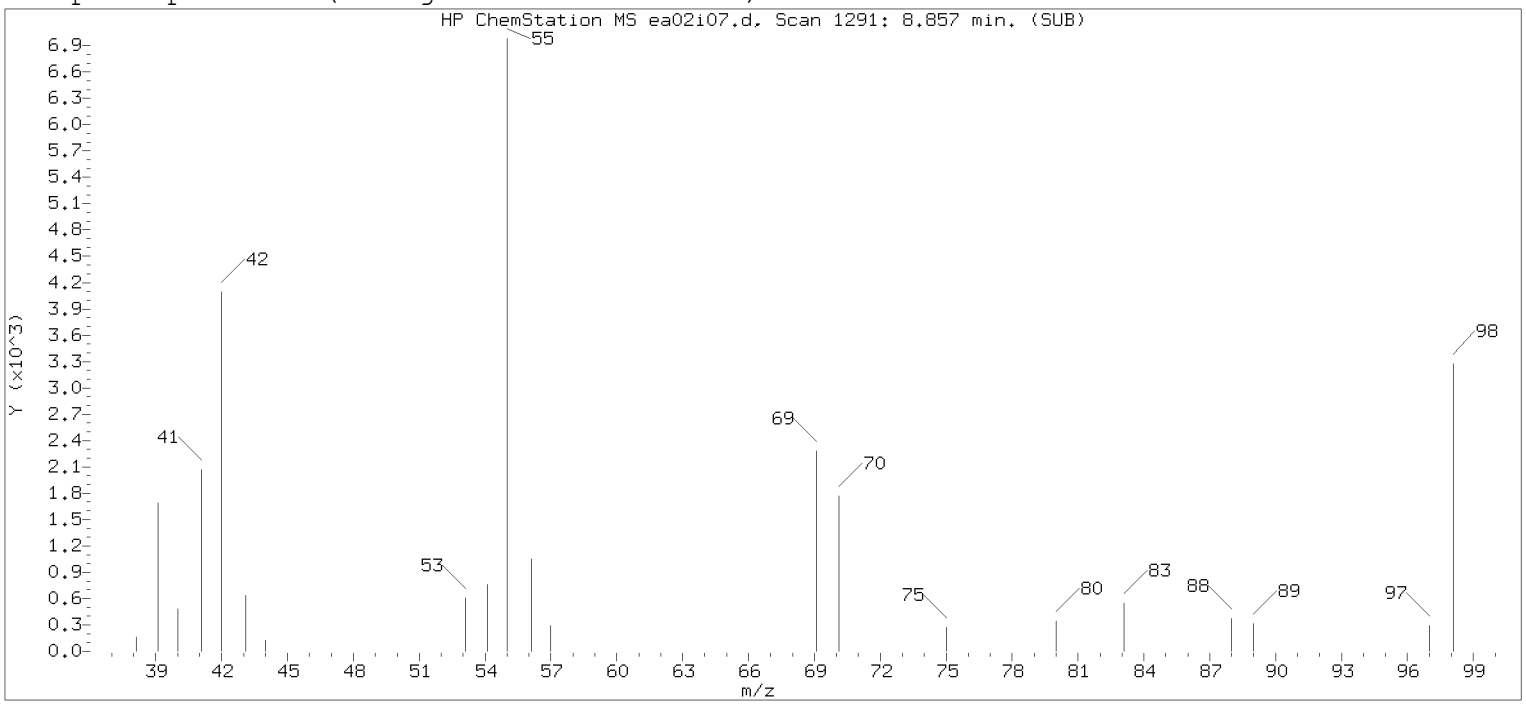
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1291
Retention Time (minutes): 8.857
Quant Ion : 55.00
Area (flag) : 11452M
On-Column Amount (ng) : 56.6123
Integration start scan : 1284 Integration stop scan: 1296
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

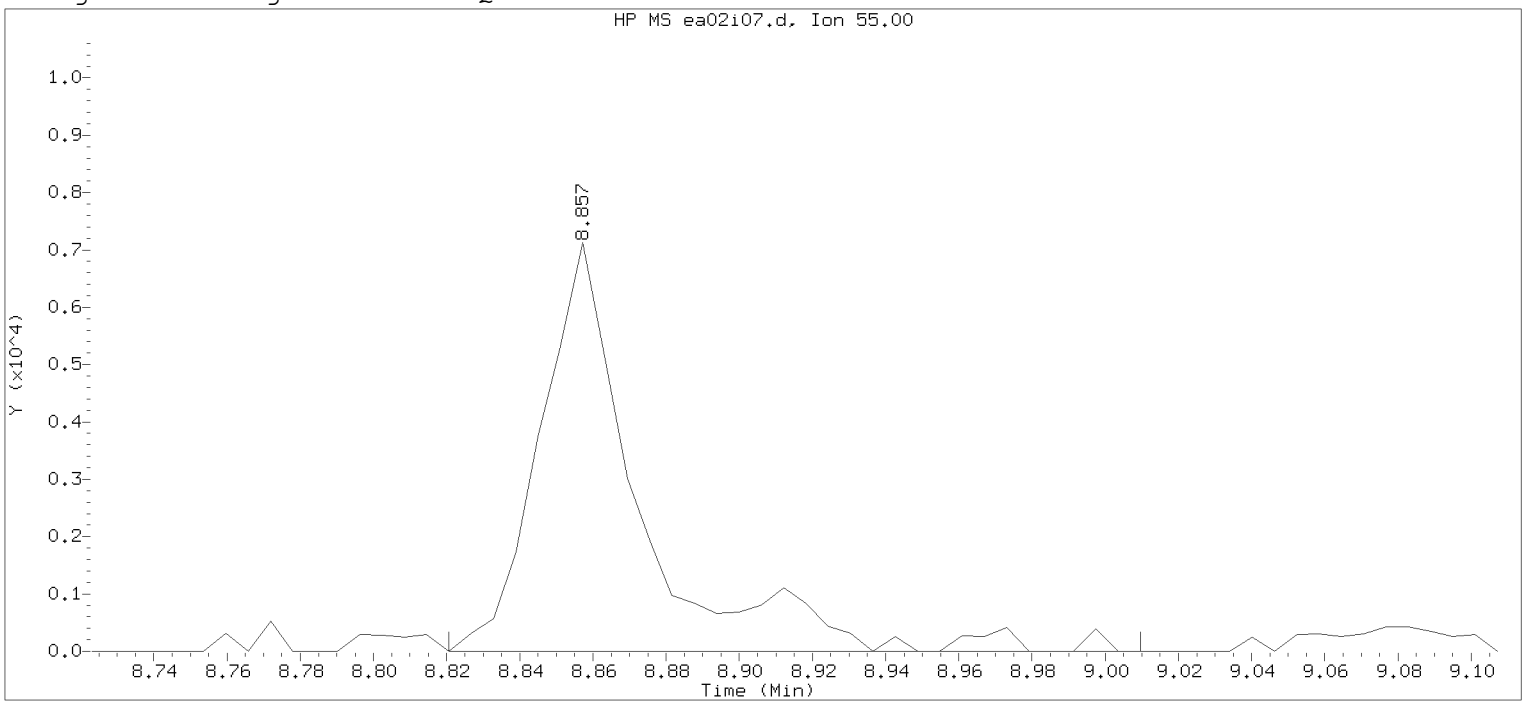
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

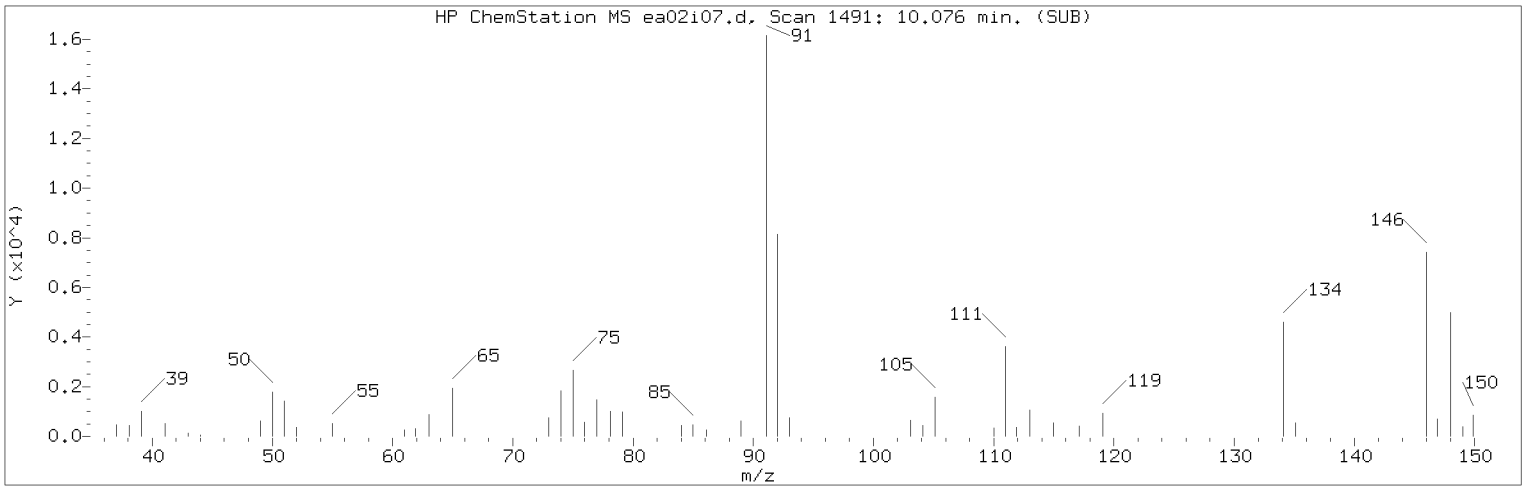
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:35
Date, time and analyst ID of latest file update: 02-May-2019 14:35 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

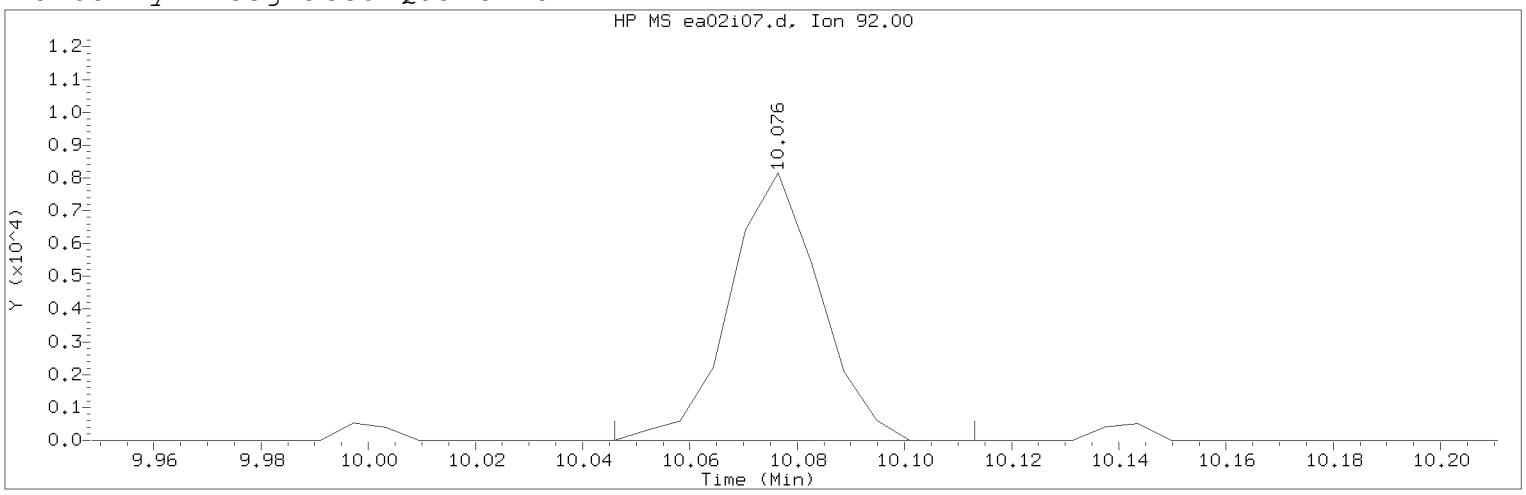
Compound Number	: 113		
Compound Name	: Cyclohexanone		
Scan Number	: 1291		
Retention Time (minutes)	: 8.857		
Quant Ion	: 55.00		
Area	: 13563		
On-column Amount (ng)	: 63.7728		
Integration start scan	: 1284	Integration stop scan	: 1315
Y at integration start	: 0	Y at integration end	: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

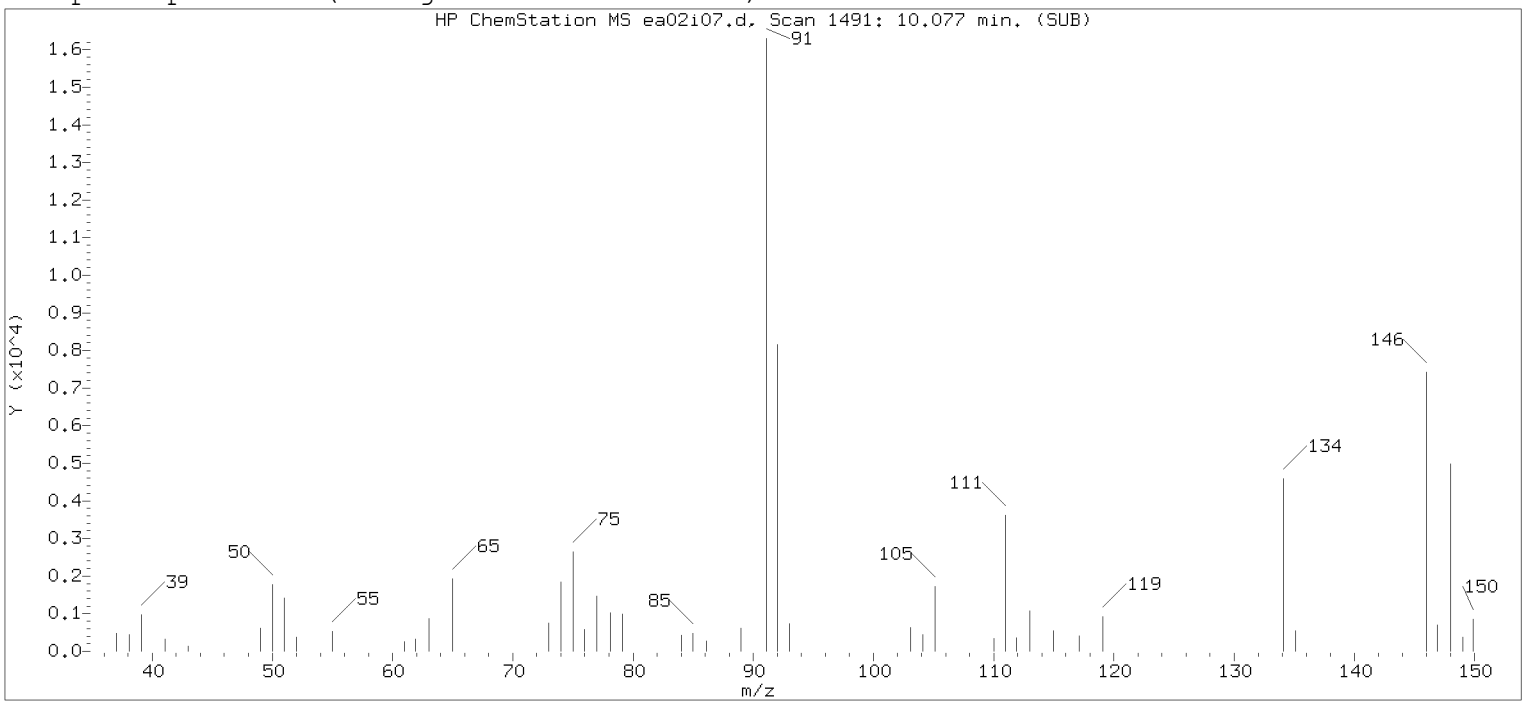
Compound Number : 140
Compound Name : n-Butylbenzene
Scan Number : 1491
Retention Time (minutes): 10.076
Quant Ion : 92.00
Area (flag) : 9445M
On-Column Amount (ng) : 0.7870
Integration start scan : 1485 Integration stop scan: 1496
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

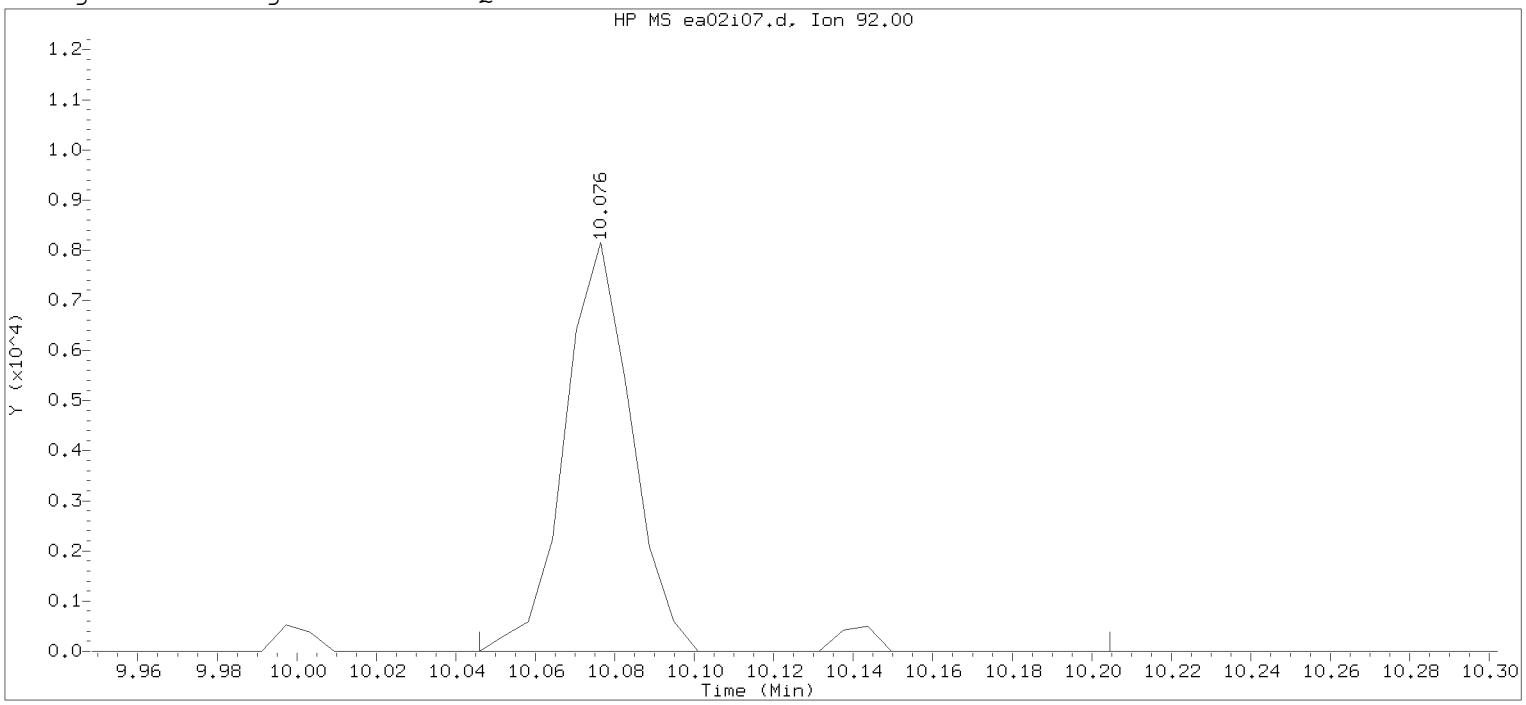
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

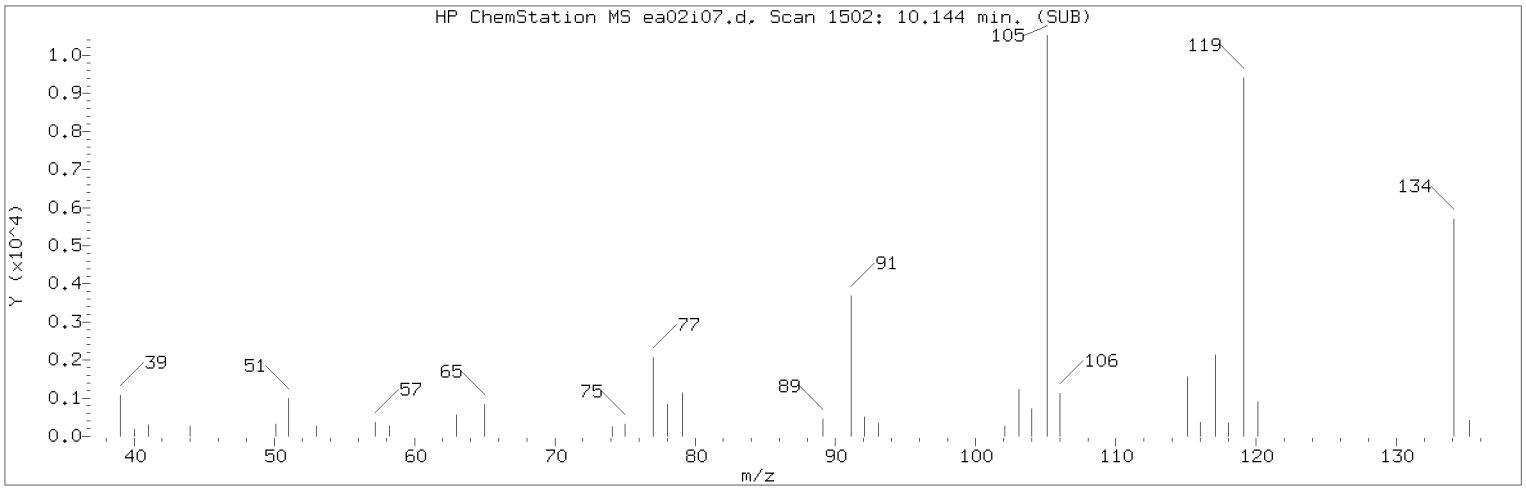
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:35
Date, time and analyst ID of latest file update: 02-May-2019 14:35 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

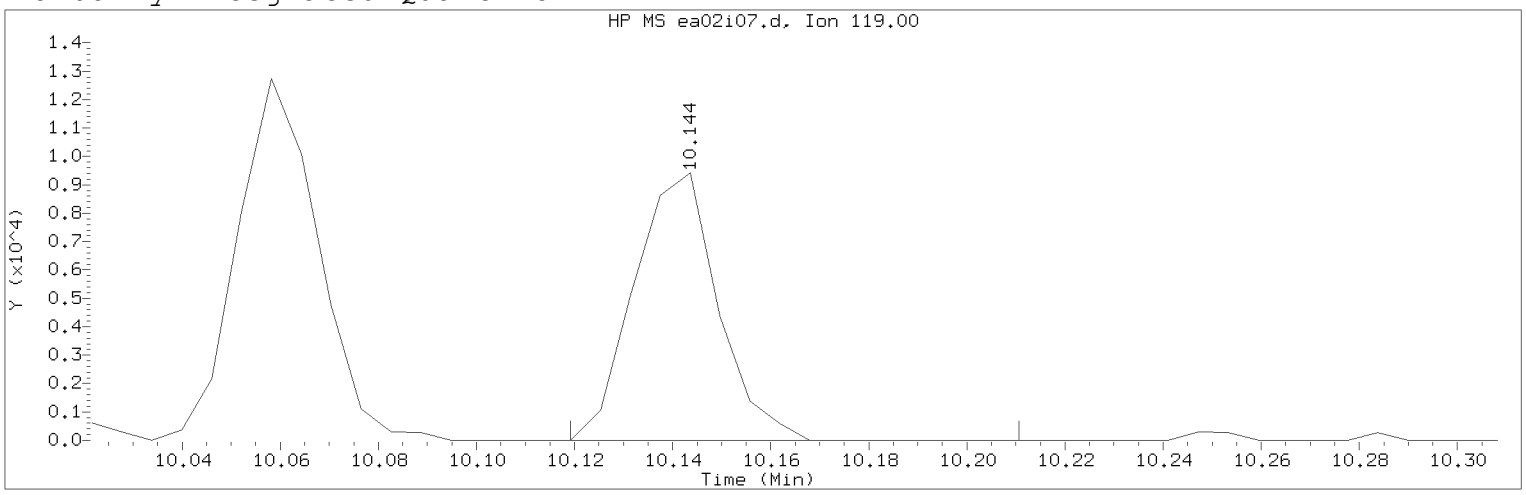
Compound Number : 140
Compound Name : n-Butylbenzene
Scan Number : 1491
Retention Time (minutes): 10.076
Quant Ion : 92.00
Area : 9783
On-column Amount (ng) : 0.8119
Integration start scan : 1485 Integration stop scan: 1511
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

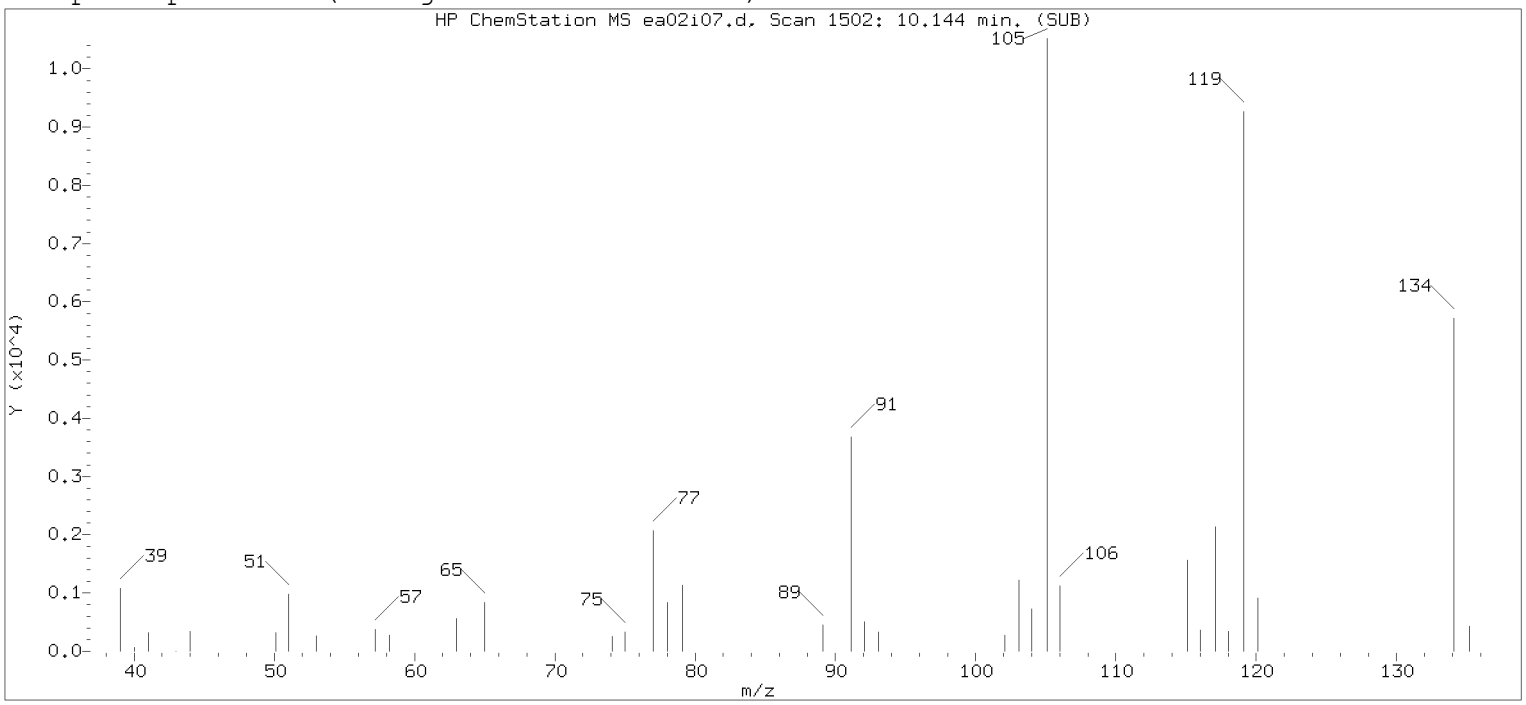
Compound Number : 141
Compound Name : 1,2-Diethylbenzene
Scan Number : 1502
Retention Time (minutes): 10.144
Quant Ion : 119.00
Area (flag) : 11162M
On-Column Amount (ng) : 0.8861
Integration start scan : 1497 Integration stop scan: 1512
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

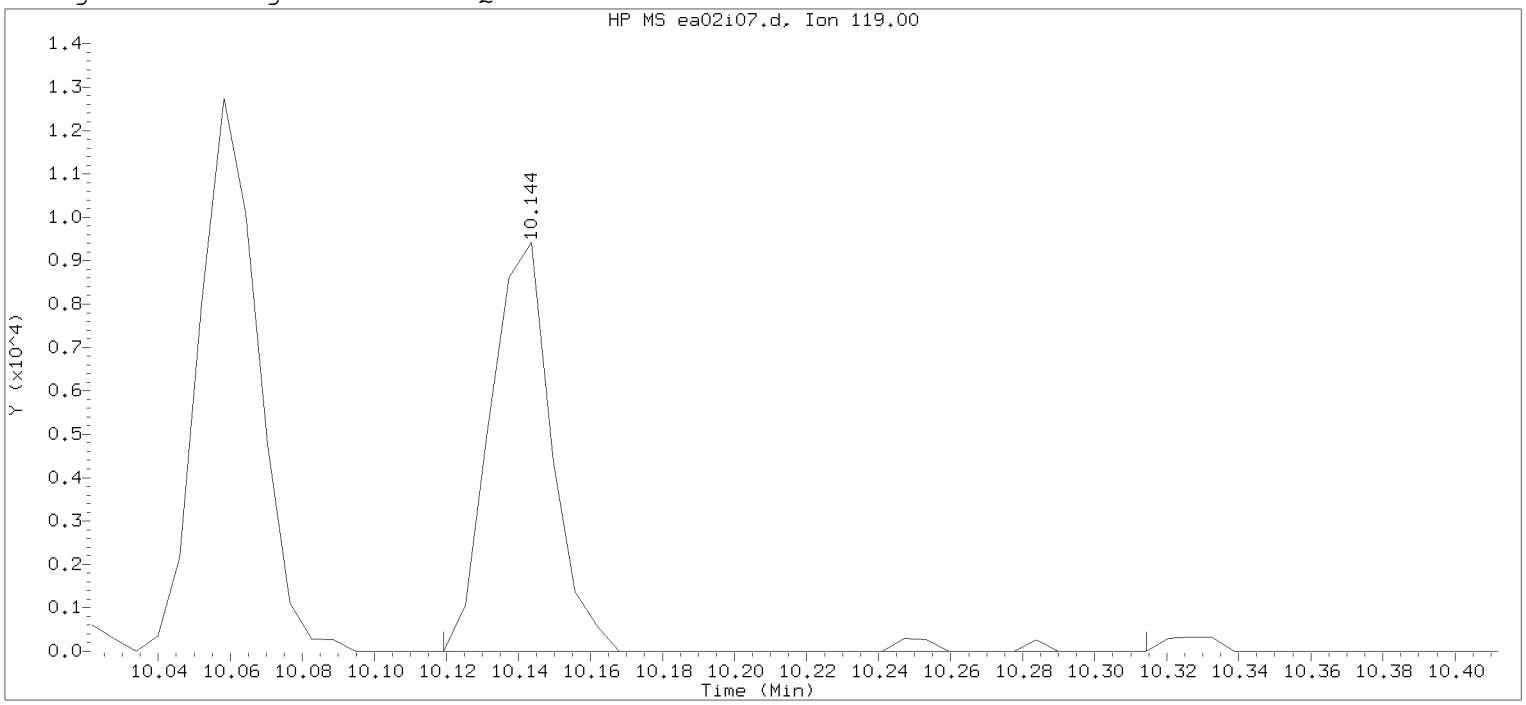
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



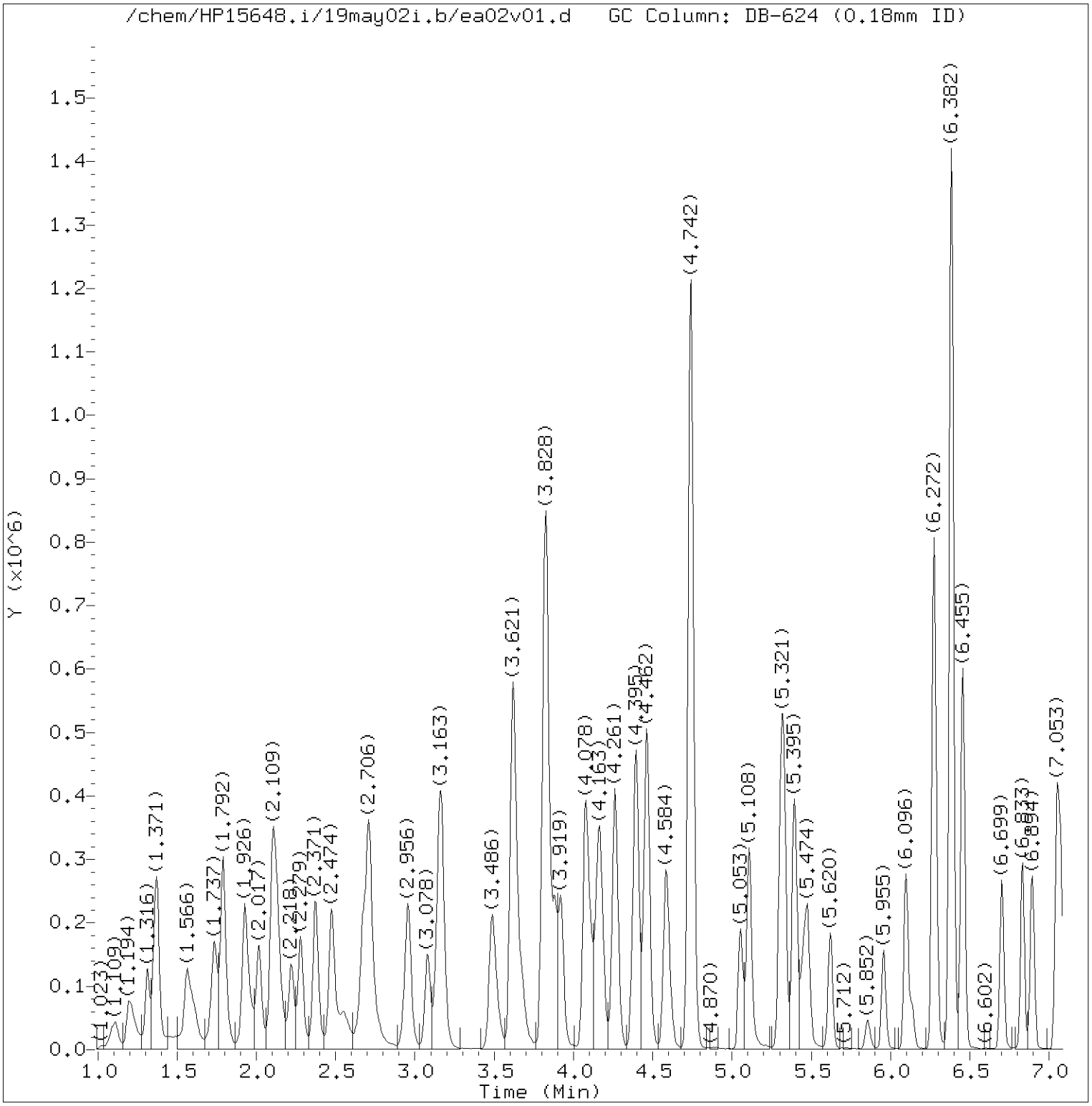
Data File: /chem/HP15648.i/19may02i.b/ea02i07.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:35
Date, time and analyst ID of latest file update: 02-May-2019 14:35 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 141
Compound Name : 1,2-Diethylbenzene
Scan Number : 1502
Retention Time (minutes): 10.144
Quant Ion : 119.00
Area : 11465
On-column Amount (ng) : 0.9071
Integration start scan : 1497 Integration stop scan: 1529
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kas02648



Total Ion Chromatogram (TIC)

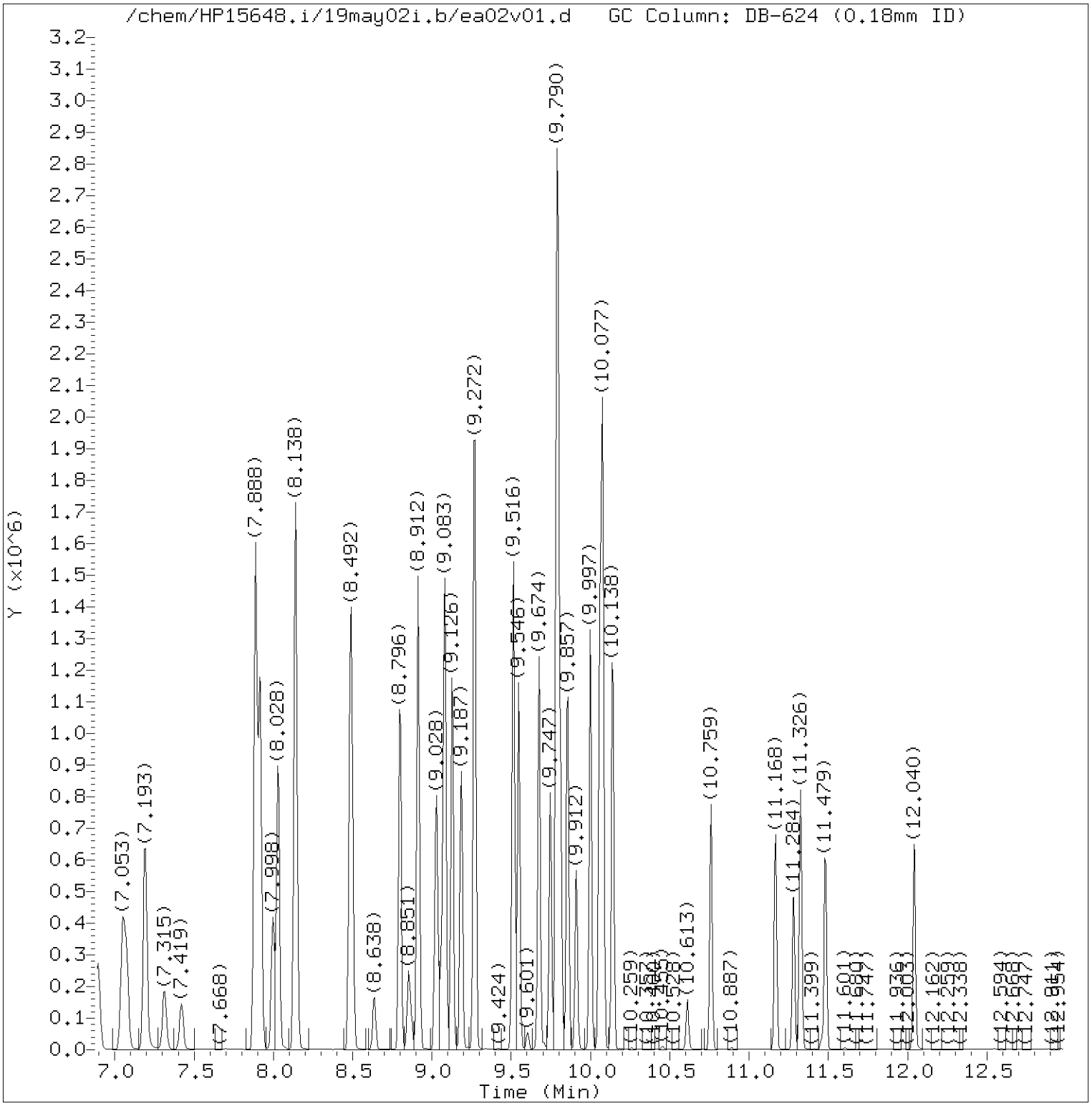
Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02v01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: ICVELG Lab Sample ID: ICVELG

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02v01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: ICVELG Lab Sample ID: ICVELG

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02v01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: ICVELG Lab Sample ID: ICVELG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.200	85	157554	16.575
4) Chloromethane	(2)	1.310	50	138314	17.880
5) 1,3-Butadiene	(2)	1.365	39	111375	19.152
6) Vinyl Chloride	(2)	1.377	62	138546M	18.737
8) Bromomethane	(2)	1.566	94	89348	16.047
9) Chloroethane	(2)	1.603	64	75052	17.828
10) Dichlorofluoromethane	(2)	1.731	67	155300	14.417
11) n-Pentane	(2)	1.792	43	168798	19.547
12) Trichlorofluoromethane	(2)	1.792	101	186438	17.737
14) Ethyl ether	(2)	1.926	59	82970	18.944
15) Freon 123a	(2)	1.938	67	123486	19.951
16) Acrolein	(1)	2.017	56	192490	137.106
17) 1,1-Dichloroethene	(2)	2.103	96	94326	21.793
18) Acetone	(1)	2.127	58	81846	140.062
19) Freon 113	(2)	2.133	101	106182	22.154
21) 2-Propanol	(1)	2.218	45	52666	150.852
22) Methyl Iodide	(2)	2.224	142	163223	20.124
23) Carbon Disulfide	(2)	2.279	76	290564	19.791
25) Allyl Chloride	(2)	2.371	41	155859	18.528
27) Methyl Acetate	(2)	2.377	43	80861	19.577
28) Methylene Chloride	(2)	2.474	84	102497	20.786
29)*t-Butyl alcohol-d10	(1)	2.481	65	170158	250.000
30) t-Butyl alcohol	(1)	2.554	59	122013	191.821
31) Acrylonitrile	(2)	2.669	53	222719	88.677
33) Methyl Tertiary Butyl Ether	(2)	2.706	73	283967	19.549
32) trans-1,2-Dichloroethene	(2)	2.712	96	97327	19.977
34) n-Hexane	(2)	2.956	57	176585	20.684
36) 1,1-Dichloroethane	(2)	3.078	63	190806	20.905
38) di-Isopropyl ether	(2)	3.151	45	331341	20.629
39) 2-Chloro-1,3-butadiene	(2)	3.169	53	179631	20.610
40) Ethyl t-butyl ether	(2)	3.486	59	316354	19.966
45) 2,2-Dichloropropane	(2)	3.621	77	176651	21.936
42) cis-1,2-Dichloroethene	(2)	3.621	96	126216	23.058
44) 2-Butanone	(2)	3.621	43	414260	122.422
43) 1,2-Dichloroethene (Total)	(2)		96	223543	43.035
47) Propionitrile	(1)	3.675	54	132277	153.939
48) Methacrylonitrile	(2)	3.822	67	391794	145.279
49) Bromochloromethane	(2)	3.840	128	52199	19.200

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02v01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: ICVELG Lab Sample ID: ICVELG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	3.883	71	81176	90.140
51) Chloroform	(2)	3.919	83	183633	21.152
52)$Dibromofluoromethane	(2)	4.072	113	249025	49.707
53) 1,1,1-Trichloroethane	(2)	4.102	97	173501	21.598
54) Cyclohexane	(2)	4.157	56	208106	21.092
55) 1,1-Dichloropropene	(2)	4.261	75	154873	21.743
56) Carbon Tetrachloride	(2)	4.267	117	147124	21.531
58) Isobutyl Alcohol	(1)	4.383	41	98973	458.303
57)$1,2-Dichloroethane-d4	(2)	4.395	102	62723	49.613
60) Benzene	(2)	4.462	78	434381	20.769
61) 1,2-Dichloroethane	(2)	4.468	62	146557	20.863
65) t-Amyl methyl ether	(2)	4.584	73	318703	20.284
66)*Fluorobenzene	(2)	4.736	96	1077884	50.000
67) n-Heptane	(2)	4.748	43	179235	19.587
69) n-Butanol	(1)	5.053	56	169852	909.329
71) Trichloroethene	(2)	5.108	95	113251	21.466
73) Methylcyclohexane	(2)	5.309	83	217374	19.787
74) 1,2-Dichloropropane	(2)	5.327	63	113326	21.778
75) Dibromomethane	(2)	5.449	93	64371	20.664
77) Methyl Methacrylate	(2)	5.474	69	88720	18.700
76) 1,4-Dioxane	(1)	5.474	88	21935M	417.292
79) Bromodichloromethane	(2)	5.620	83	135211	20.864
80) 2-Nitropropane	(2)	5.858	41	34992M	16.293
81) 2-Chloroethyl Vinyl Ether	(2)	5.955	63	76939	19.188
82) cis-1,3-Dichloropropene	(2)	6.096	75	174990	20.731
83) 4-Methyl-2-pentanone	(2)	6.272	43	624989	86.003
84)$Toluene-d8	(3)	6.382	98	1073507	49.836
89) Toluene	(3)	6.455	92	282180	21.404
90) trans-1,3-Dichloropropene	(3)	6.699	75	156479	19.860
91) 1,3-Dichloropropene (total)	(3)		100	331469	40.590
92) Ethyl Methacrylate	(3)	6.833	69	160727	19.135
93) 1,1,2-Trichloroethane	(3)	6.894	97	96119	21.421
94) Tetrachloroethene	(3)	7.053	166	118981	22.197
95) 1,3-Dichloropropane	(3)	7.077	76	164400	20.846
97) 2-Hexanone	(3)	7.193	43	445446	79.545
102) 1-Chlorohexane	(3)	7.309	91	9073	19.914
98) Dibromochloromethane	(3)	7.315	129	100275	20.701
100) 1,2-Dibromoethane	(3)	7.419	107	99280	20.795

M = Compound was manually integrated.
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Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02v01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: ICVELG Lab Sample ID: ICVELG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101)*Chlorobenzene-d5	(3)	7.888	117	793121	50.000
103) Chlorobenzene	(3)	7.912	112	305825	20.979
104) 1,1,1,2-Tetrachloroethane	(3)	7.998	131	103964	20.998
105) Ethylbenzene	(3)	8.028	91	562461	21.565
107) m+p-Xylene	(3)	8.138	106	440814	43.417
109) Xylene (Total)	(3)		106	653848	64.917
108) o-Xylene	(3)	8.485	106	213034	21.500
110) Styrene	(3)	8.498	104	355360	21.713
111) Bromoform	(3)	8.638	173	62709	19.420
112) Isopropylbenzene	(3)	8.796	105	578096	21.929
113) Cyclohexanone	(1)	8.851	55	94378	476.612
115)$4-Bromofluorobenzene	(3)	8.912	95	416047	50.243
116) Bromobenzene	(4)	9.028	156	124788	21.398
117) 1,1,2,2-Tetrachloroethane	(4)	9.034	83	140609	20.774
118) 1,2,3-Trichloropropane	(4)	9.065	110	42705	20.819
119) trans-1,4-Dichloro-2-butene	(4)	9.083	53	229774	103.307
120) n-Propylbenzene	(4)	9.126	91	685643	22.301
121) 2-Chlorotoluene	(4)	9.187	126	129612	21.412
123) 1,3,5-Trimethylbenzene	(4)	9.266	105	486746	21.823
122) 4-Chlorotoluene	(4)	9.272	126	136785	22.044
125) tert-Butylbenzene	(4)	9.516	134	110507	22.289
126) Pentachloroethane	(4)	9.522	167	74397	20.156
127) 1,2,4-Trimethylbenzene	(4)	9.546	105	492746	21.455
128) sec-Butylbenzene	(4)	9.674	105	629202	22.237
130) 1,3-Dichlorobenzene	(4)	9.747	146	246616	21.699
131) p-Isopropyltoluene	(4)	9.784	119	541397	21.750
132)*1,4-Dichlorobenzene-d4	(4)	9.796	152	418532	50.000
134) 1,4-Dichlorobenzene	(4)	9.814	146	250094	21.512
135) 1,2,3-Trimethylbenzene	(4)	9.857	105	497366	20.338
136) Benzyl Chloride	(4)	9.912	91	307403	19.467
137) 1,3-Diethylbenzene	(4)	9.997	119	320212	20.430
138) 1,4-Diethylbenzene	(4)	10.058	119	333514	19.971
139) 1,2-Dichlorobenzene	(4)	10.077	146	231073	21.238
140) n-Butylbenzene	(4)	10.077	92	264981	21.675
141) 1,2-Diethylbenzene	(4)	10.138	119	262917	20.490
142) Diethylbenzene (total)	(4)		100	916643	60.891
143) 1,2-Dibromo-3-chloropropane	(4)	10.613	75	30280	19.526
145) 1,3,5-Trichlorobenzene	(4)	10.759	180	171807	21.474

* = Compound is an internal standard.
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Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may02i.b/ea02v01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: ICVELG Lab Sample ID: ICVELG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) 1,2,4-Trichlorobenzene	(4)	11.168	180	149943	20.995
148) Hexachlorobutadiene	(4)	11.284	225	63148	20.627
149) Naphthalene	(4)	11.326	128	457519	19.432
150) 1,2,3-Trichlorobenzene	(4)	11.485	180	135388	20.077
151) 2-Methylnaphthalene	(4)	12.046	142	232643	15.636

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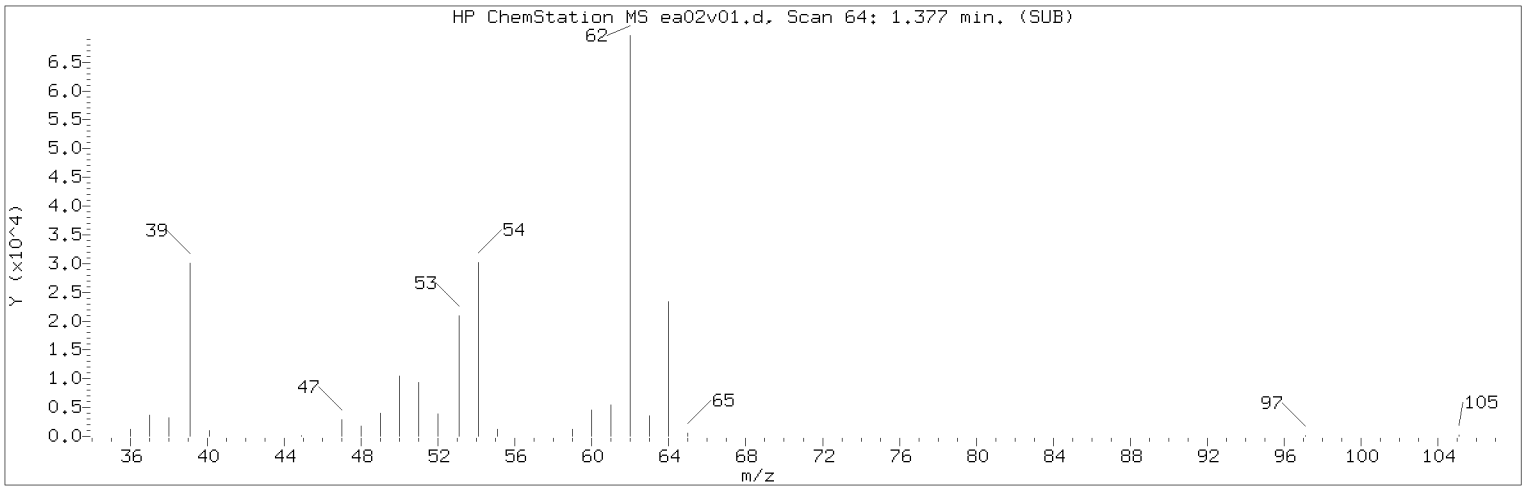
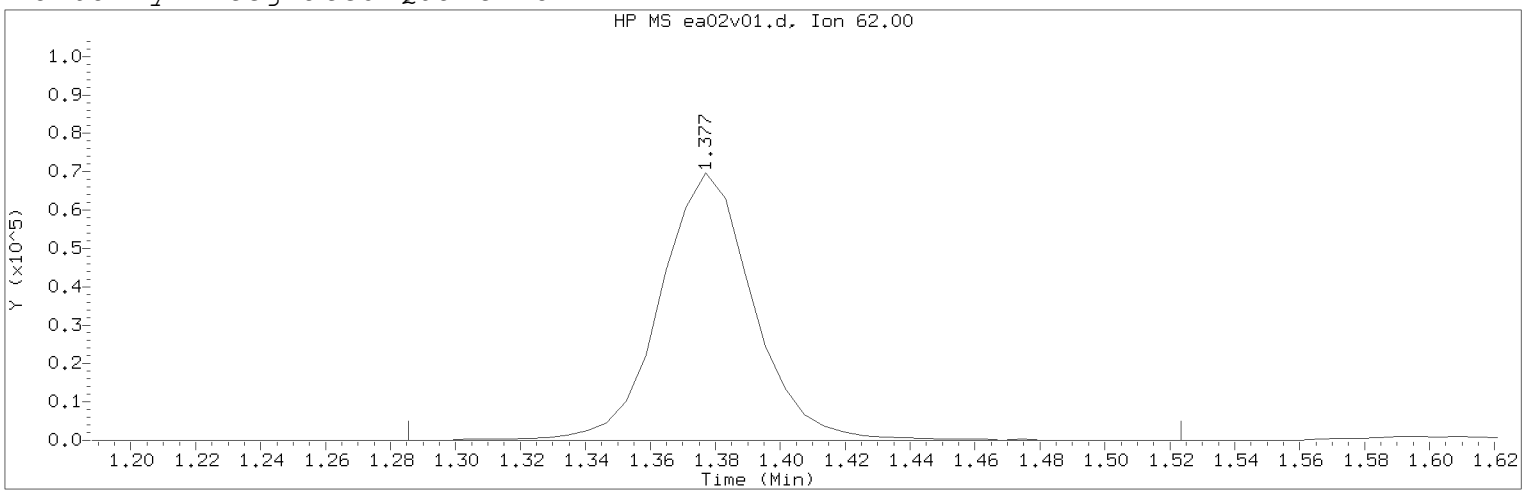
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02v01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: ICVELG Lab Sample ID: ICVELG

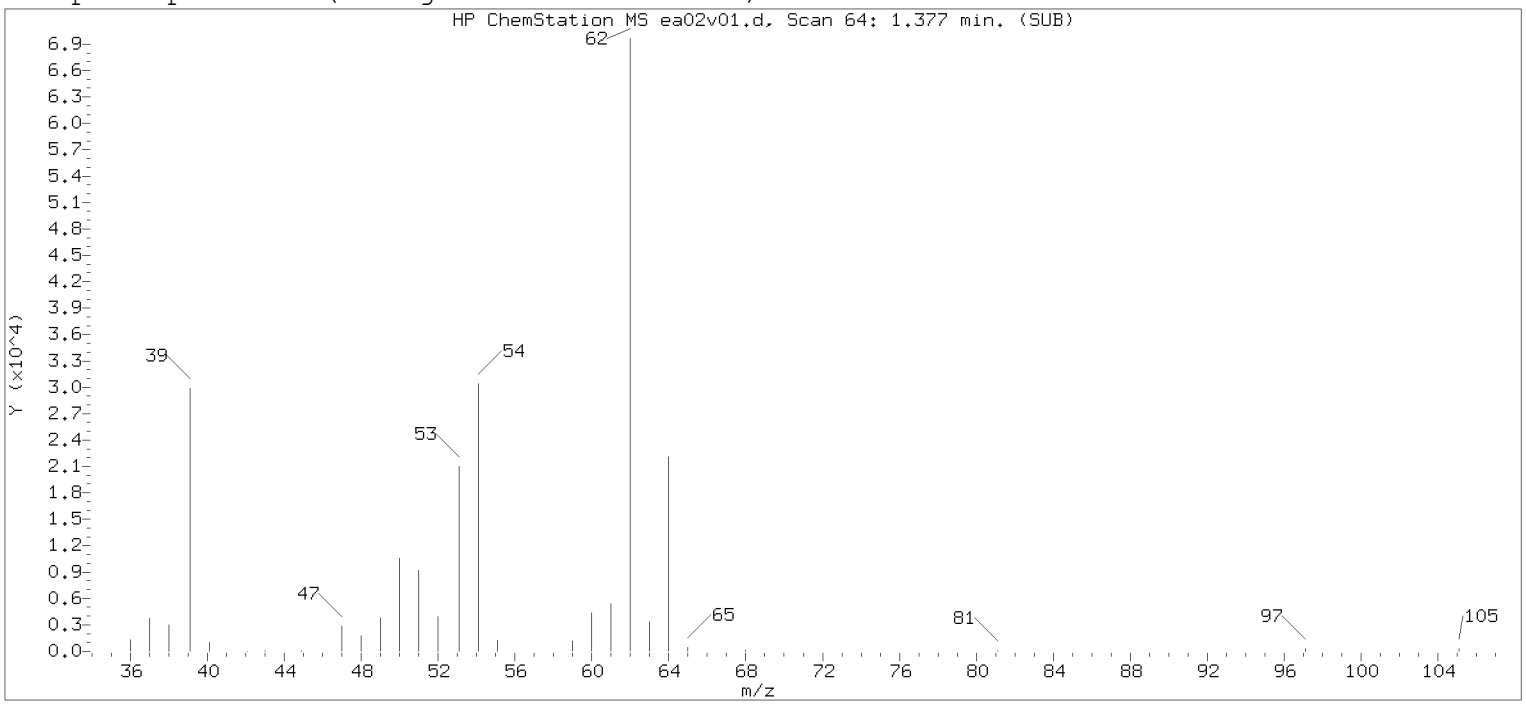
Compound Number : 6
Compound Name : Vinyl Chloride
Scan Number : 64
Retention Time (minutes): 1.377
Quant Ion : 62.00
Area (flag) : 138546M
On-Column Amount (ng) : 18.7375
Integration start scan : 48 Integration stop scan: 87
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

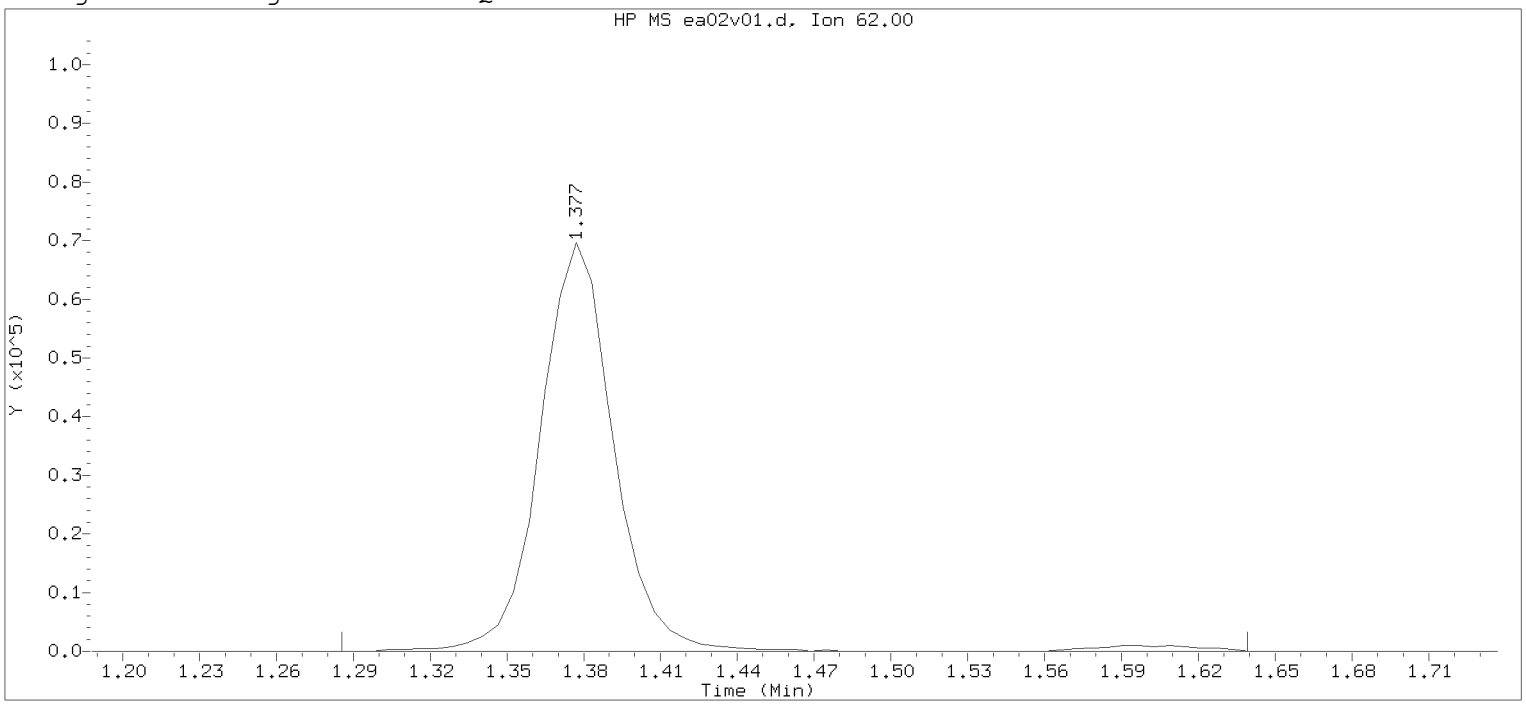
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02v01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:40 Analyst ID: KAS02648

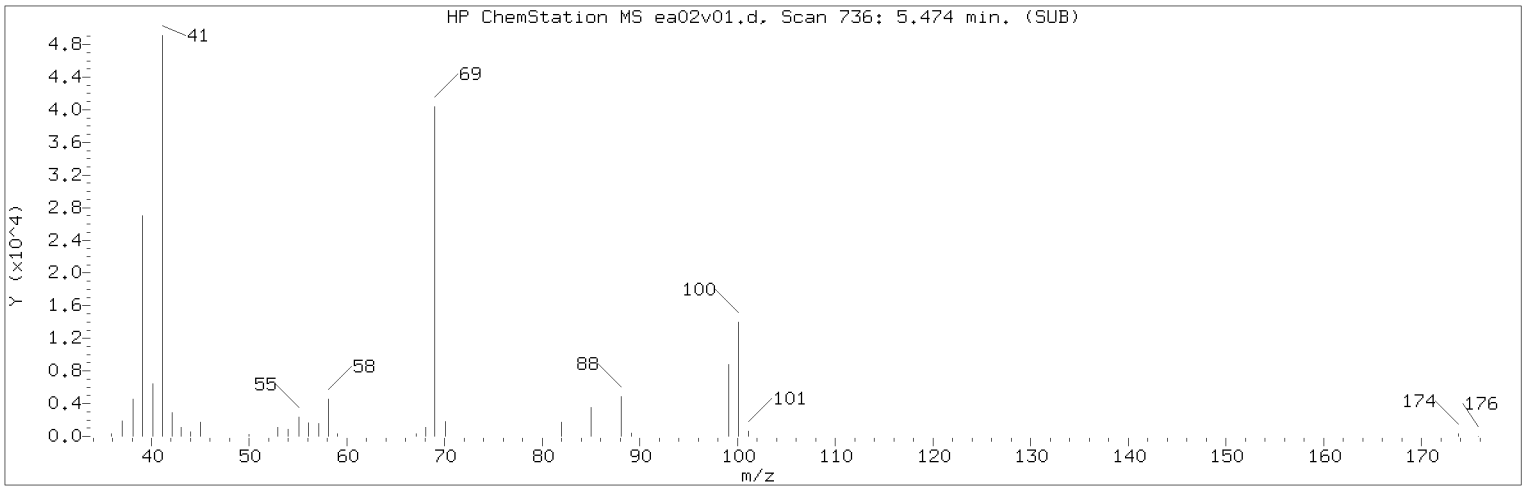
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:35
Date, time and analyst ID of latest file update: 02-May-2019 14:56 Automation

Sample Name: ICVELG Lab Sample ID: ICVELG

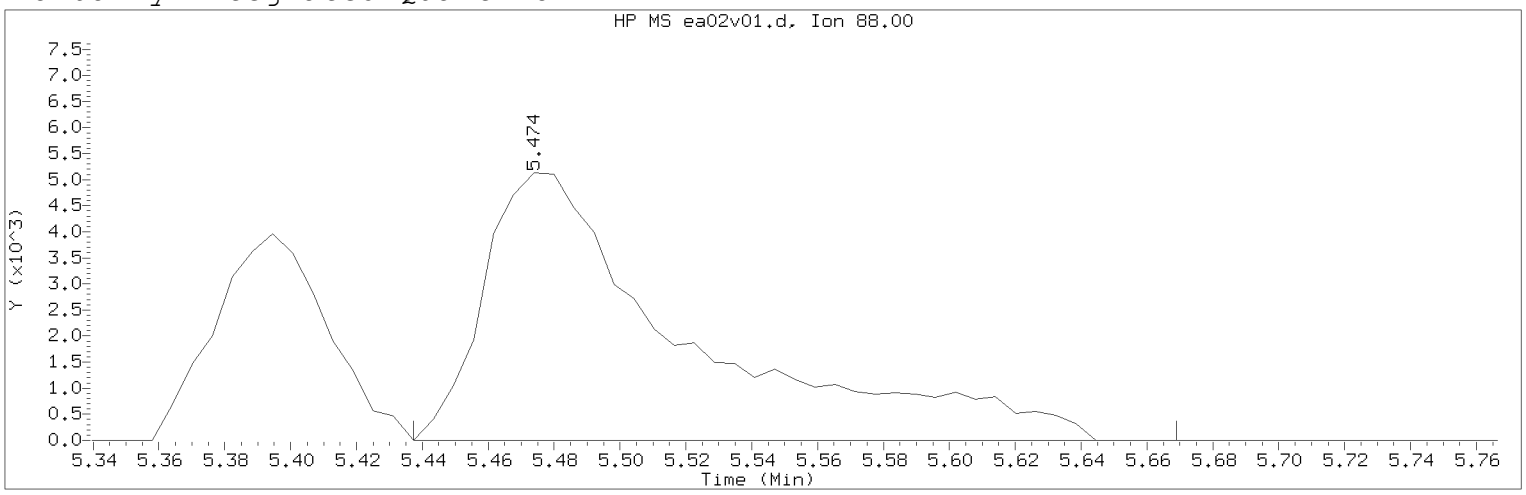
Compound Number : 6
Compound Name : Vinyl Chloride
Scan Number : 64
Retention Time (minutes): 1.377
Quant Ion : 62.00
Area : 141476
On-column Amount (ng) : 19.2653
Integration start scan : 48 Integration stop scan: 106
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02v01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: ICVELG Lab Sample ID: ICVELG

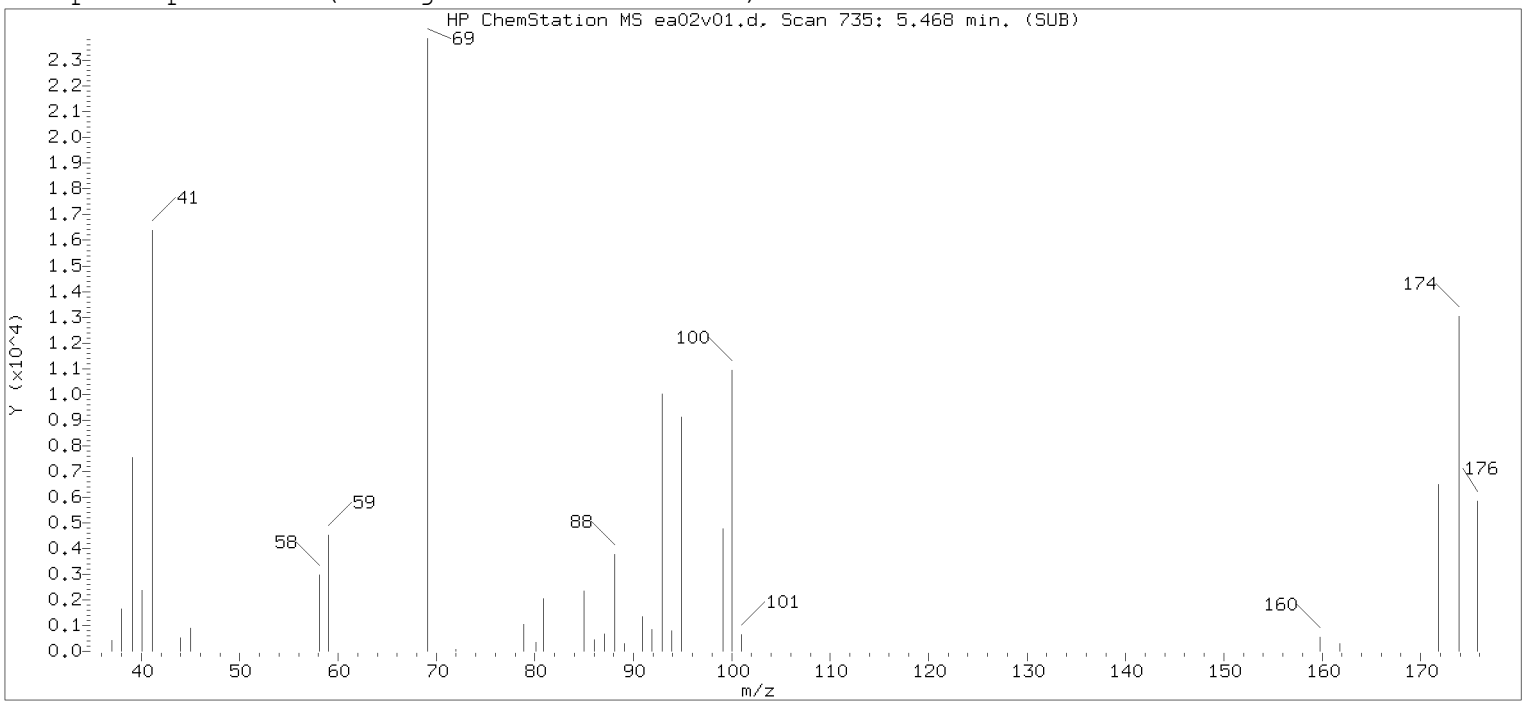
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 736
Retention Time (minutes): 5.474
Quant Ion : 88.00
Area (flag) : 21935M
On-Column Amount (ng) : 417.2917
Integration start scan : 729 Integration stop scan: 767
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

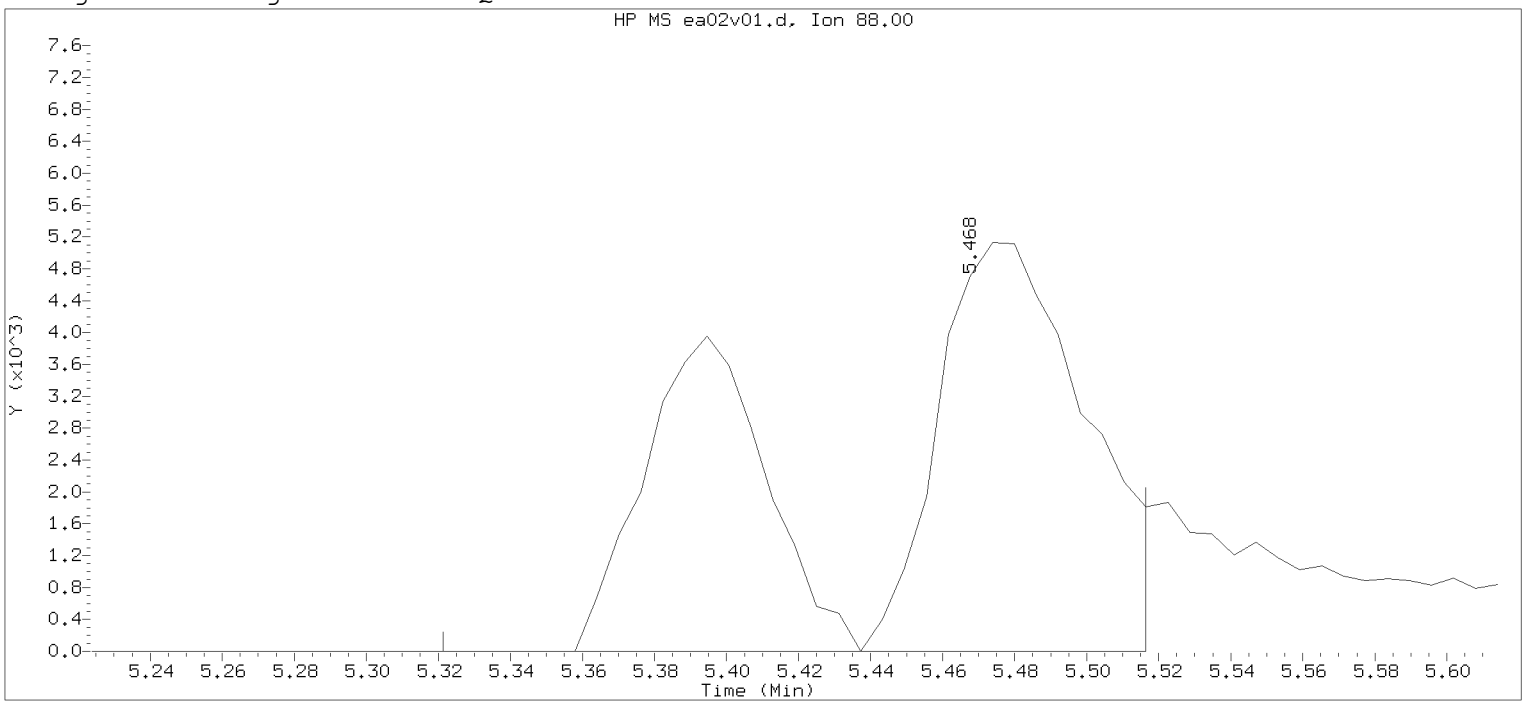
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02v01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:40 Analyst ID: KAS02648

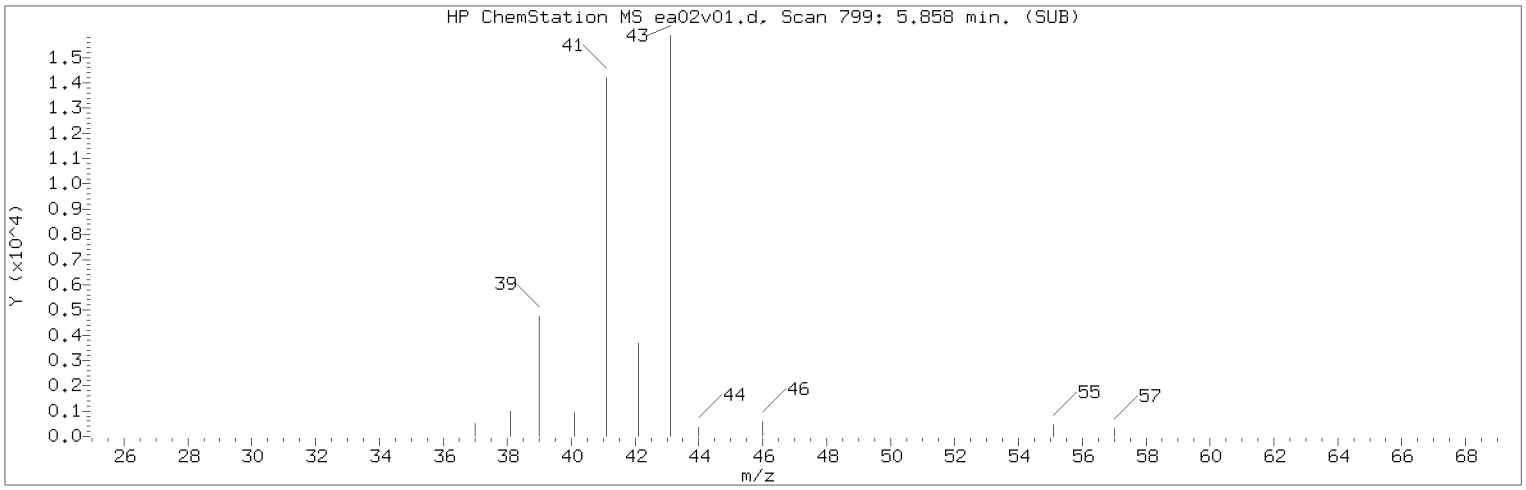
Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:35
Date, time and analyst ID of latest file update: 02-May-2019 14:56 Automation

Sample Name: ICVELG Lab Sample ID: ICVELG

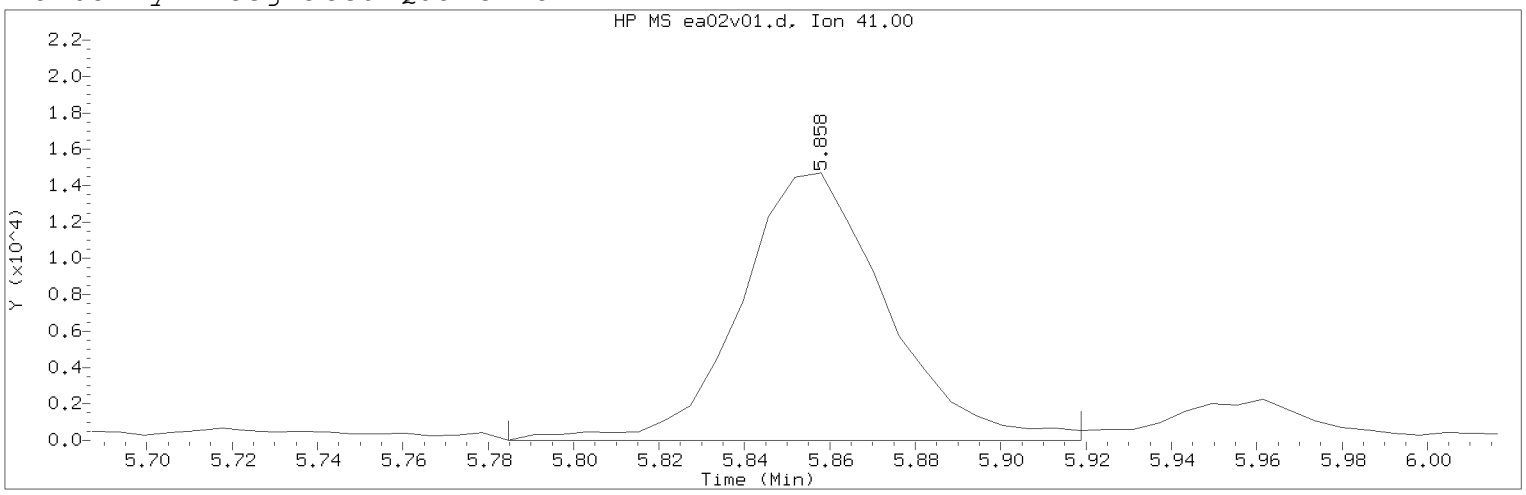
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 735
Retention Time (minutes): 5.468
Quant Ion : 88.00
Area : 23797
On-column Amount (ng) : 356.6382
Integration start scan : 710 Integration stop scan: 742
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user: kasposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02v01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 03-MAY-2019 11:23
Date, time and analyst ID of latest file update: 03-May-2019 11:23 kas02648

Sample Name: ICVELG Lab Sample ID: ICVELG

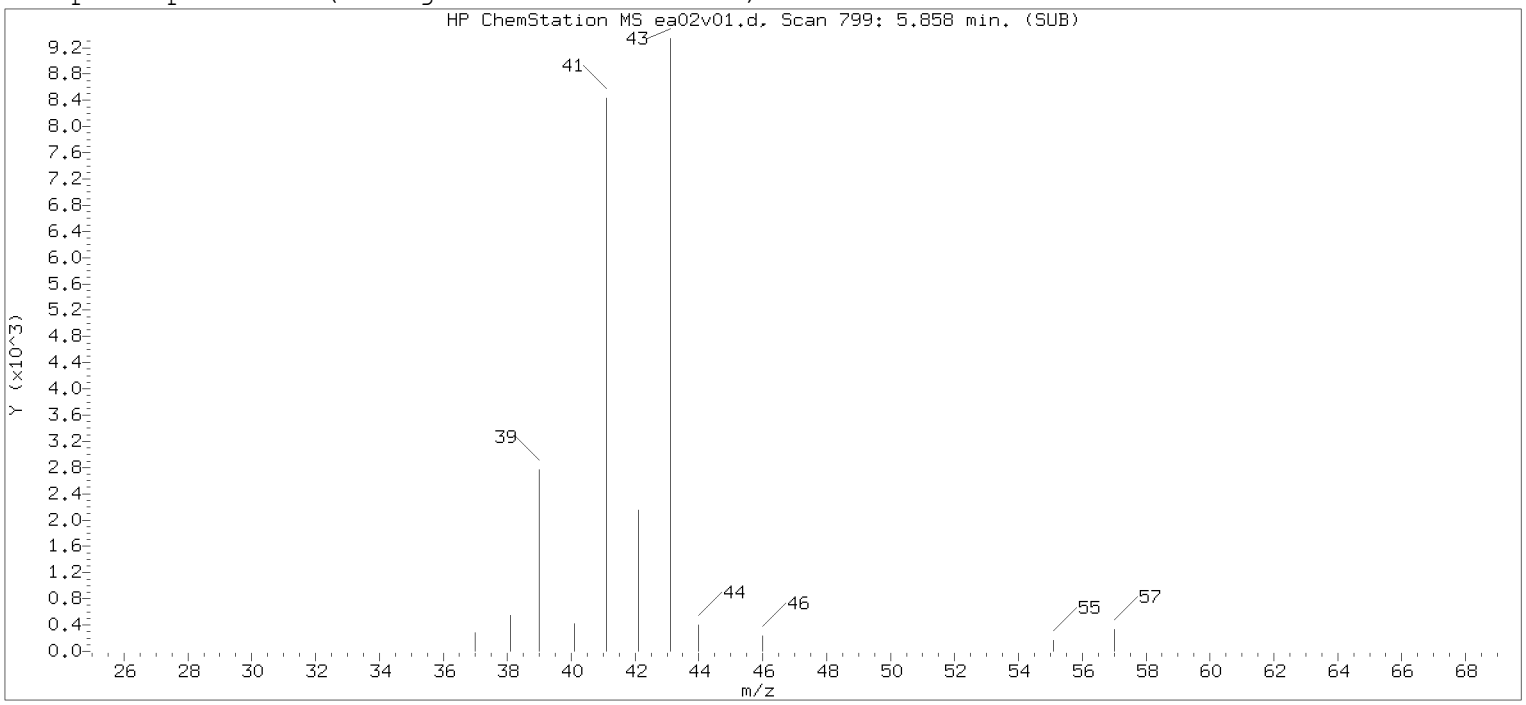
Compound Number : 80
Compound Name : 2-Nitropropane
Scan Number : 799
Retention Time (minutes): 5.858
Quant Ion : 41.00
Area (flag) : 34992M
On-Column Amount (ng) : 16.2925
Integration start scan : 786 Integration stop scan: 808
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

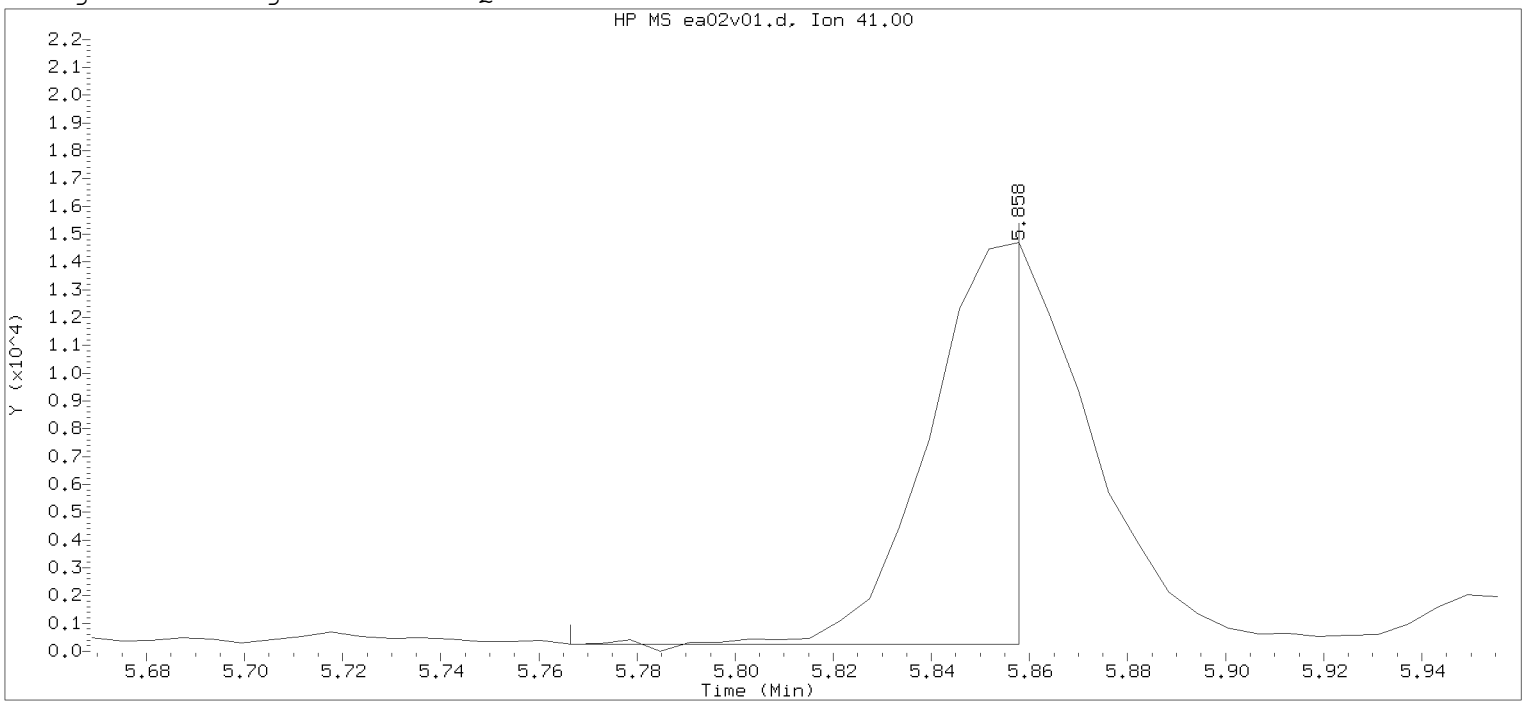
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/03/2019 at 11:24.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/03/2019 at 11:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may02i.b/ea02v01.d Instrument ID: HP15648.i
Injection date and time: 02-MAY-2019 14:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19may02i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 02-MAY-2019 14:35
Date, time and analyst ID of latest file update: 02-May-2019 14:56 Automation

Sample Name: ICVELG Lab Sample ID: ICVELG

Compound Number : 80
Compound Name : 2-Nitropropane
Scan Number : 799
Retention Time (minutes): 5.858
Quant Ion : 41.00
Area : 17624
On-column Amount (ng) : 8.2544
Integration start scan : 783 Integration stop scan: 798
Y at integration start : 252 Y at integration end: 252

Digitally signed by Kevin A. Sposito on 05/03/2019 at 11:24.
Target 3.5 esignature user kas02648

Data File: /chem/HP15648.i/19may22a.b/ey22t01.d

Date : 22-MAY-2019 09:19

Client ID: BFB FEB05-19

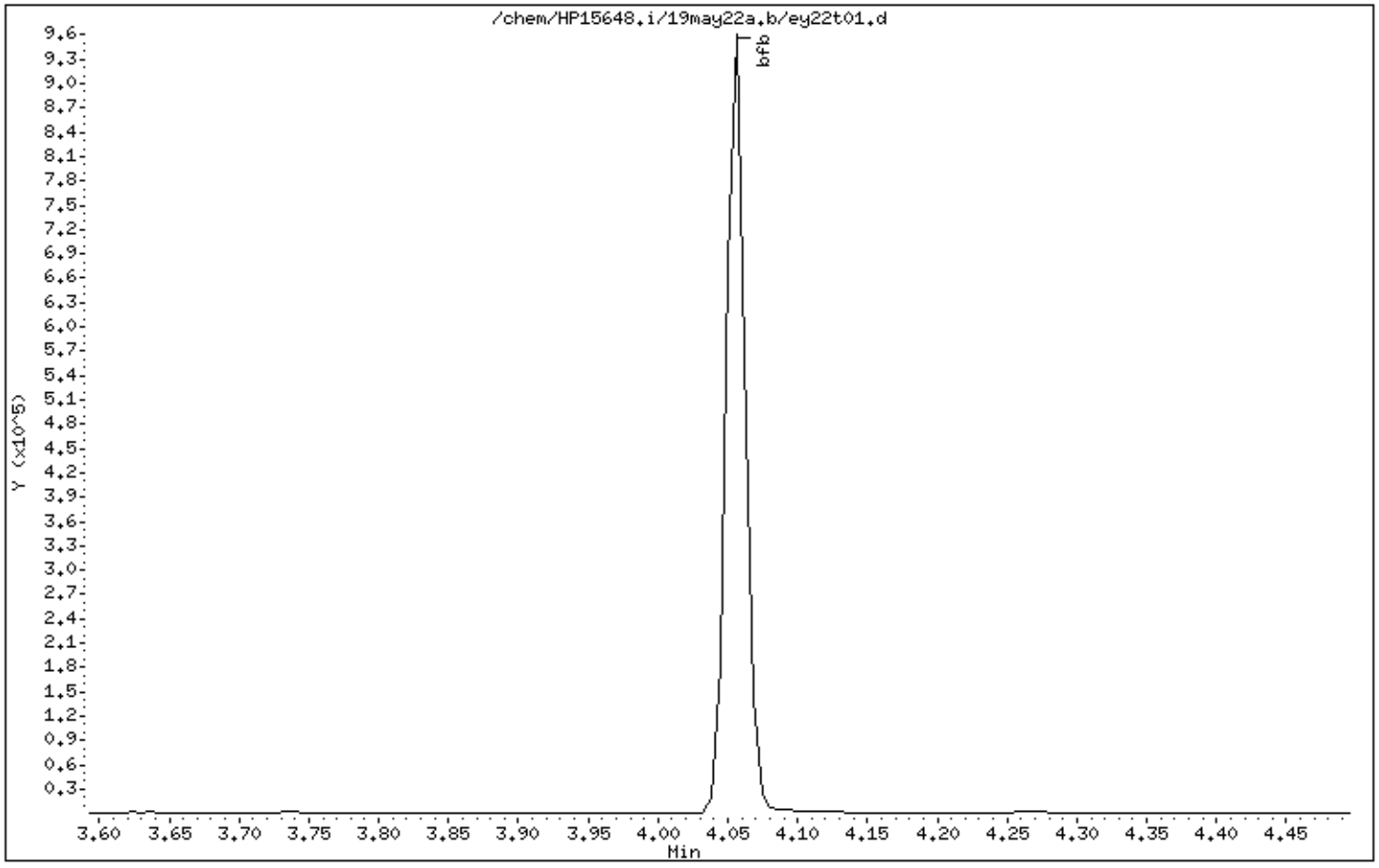
Instrument: HP15648.i

Sample Info: BFB FEB05-19;50ng BFB;1;3;;;;;;

Operator: JML01693

Column phase: DB-624

Column diameter: 0.18



Digitally signed by Jason M. Long on 05/22/2019 at 09:20.
Target 3.5 esignature user ID: jml01693

Data File: /chem/HP15648.i/19may22a.b/ey22t01.d

Date : 22-MAY-2019 09:19

Client ID: BFB FEB05-19

Instrument: HP15648.i

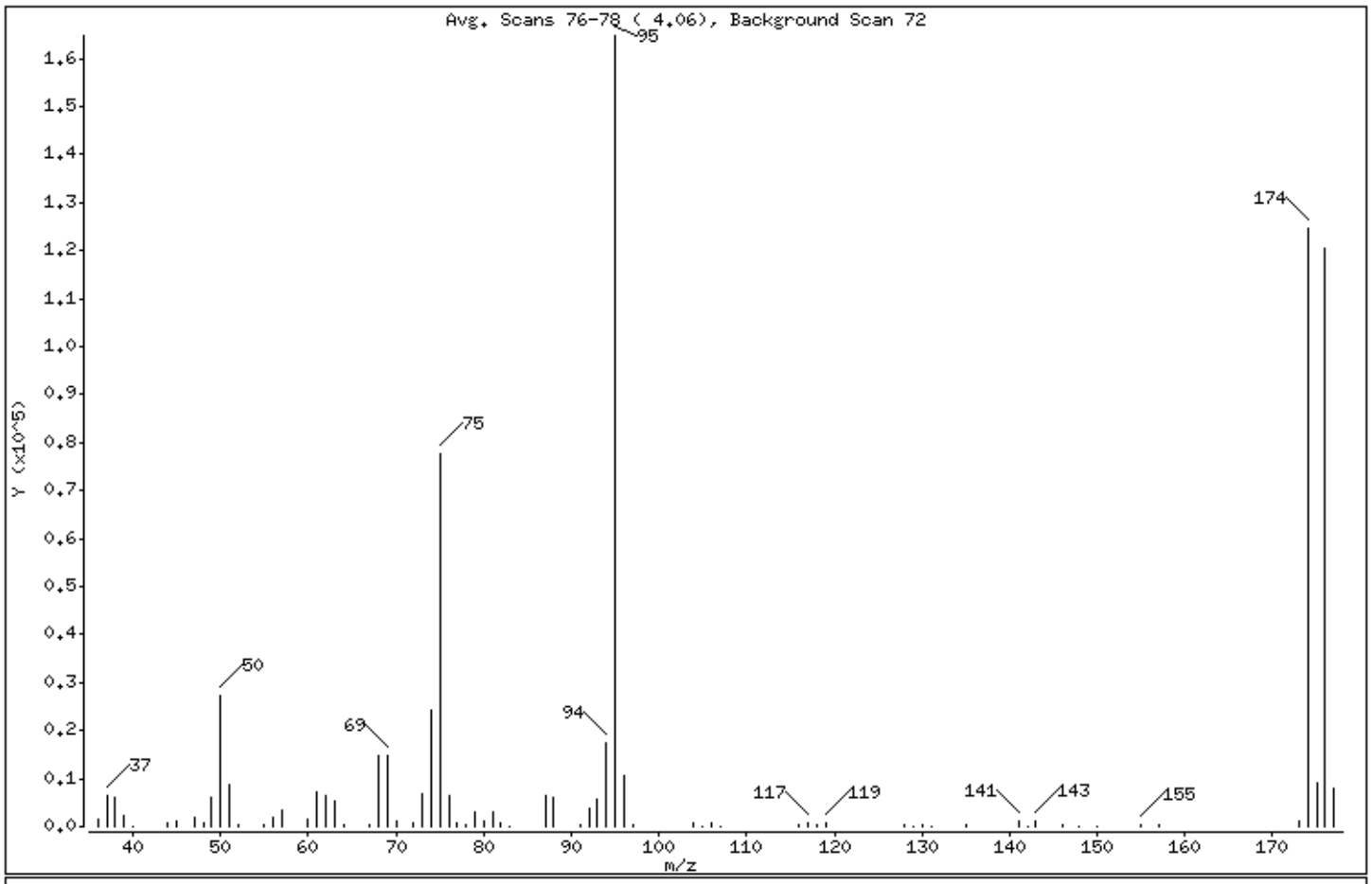
Sample Info: BFB FEB05-19;50ng BFB;1;3;;;;;;

Operator: JML01693

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.59
75	30.00 - 60.00% of mass 95	47.07
96	5.00 - 9.00% of mass 95	6.53
173	Less than 2.00% of mass 174	0.58 (0.76)
174	50.00 - 100.00% of mass 95	75.71
175	5.00 - 9.00% of mass 174	5.56 (7.35)
176	95.00 - 101.00% of mass 174	73.03 (96.47)
177	5.00 - 9.00% of mass 176	4.76 (6.52)

Digitally signed by Jason M. Long on 05/22/2019 at 09:20.
Target 3.5 esignature user ID: jml01693

Data File: /chem/HP15648.i/19may22a.b/ey22t01.d

Date : 22-MAY-2019 09:19

Client ID: BFB FEB05-19 Instrument: HP15648.i

Sample Info: BFB FEB05-19;50ng BFB;1;3;;;;;;

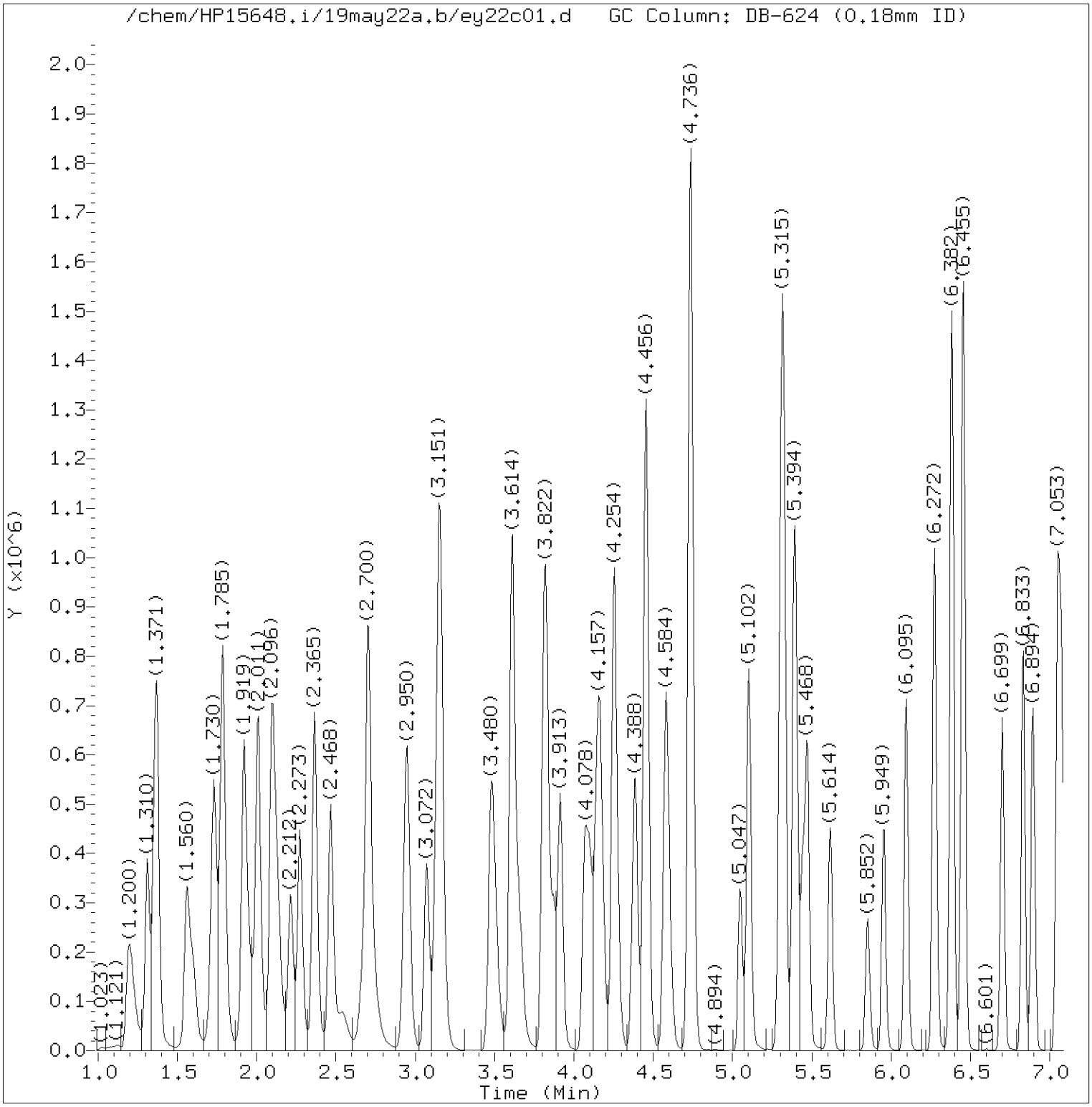
Operator: JML01693

Column phase: DB-624 Column diameter: 0.18

Data File: ey22t01.d
Spectrum: Avg. Scans 76-78 (4.06), Background Scan 72
Location of Maximum: 95.00
Number of points: 72

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1377	63.00	5183	88.00	6209	131.00	113
37.00	6577	64.00	484	91.00	429	135.00	204
38.00	5978	67.00	366	92.00	3959	141.00	1231
39.00	2379	68.00	14832	93.00	5713	142.00	90
40.00	113	69.00	14848	94.00	17376	143.00	1302
44.00	595	70.00	1186	95.00	164800	146.00	191
45.00	1226	72.00	759	96.00	10766	148.00	143
47.00	1901	73.00	6684	97.00	406	150.00	91
48.00	860	74.00	24288	104.00	571	155.00	342
49.00	5876	75.00	77592	105.00	92	157.00	213
50.00	27344	76.00	6299	106.00	611	173.00	950
51.00	8749	77.00	832	107.00	87	174.00	124800
52.00	447	78.00	506	116.00	418	175.00	9172
55.00	456	79.00	3072	117.00	705	176.00	120400
56.00	1952	80.00	971	118.00	497	177.00	7851
57.00	3482	81.00	2950	119.00	681		
60.00	1417	82.00	715	128.00	495		
61.00	7057	83.00	93	129.00	92		
62.00	6443	87.00	6575	130.00	496		

Digitally signed by Jason M. Long on 05/22/2019 at 09:20.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

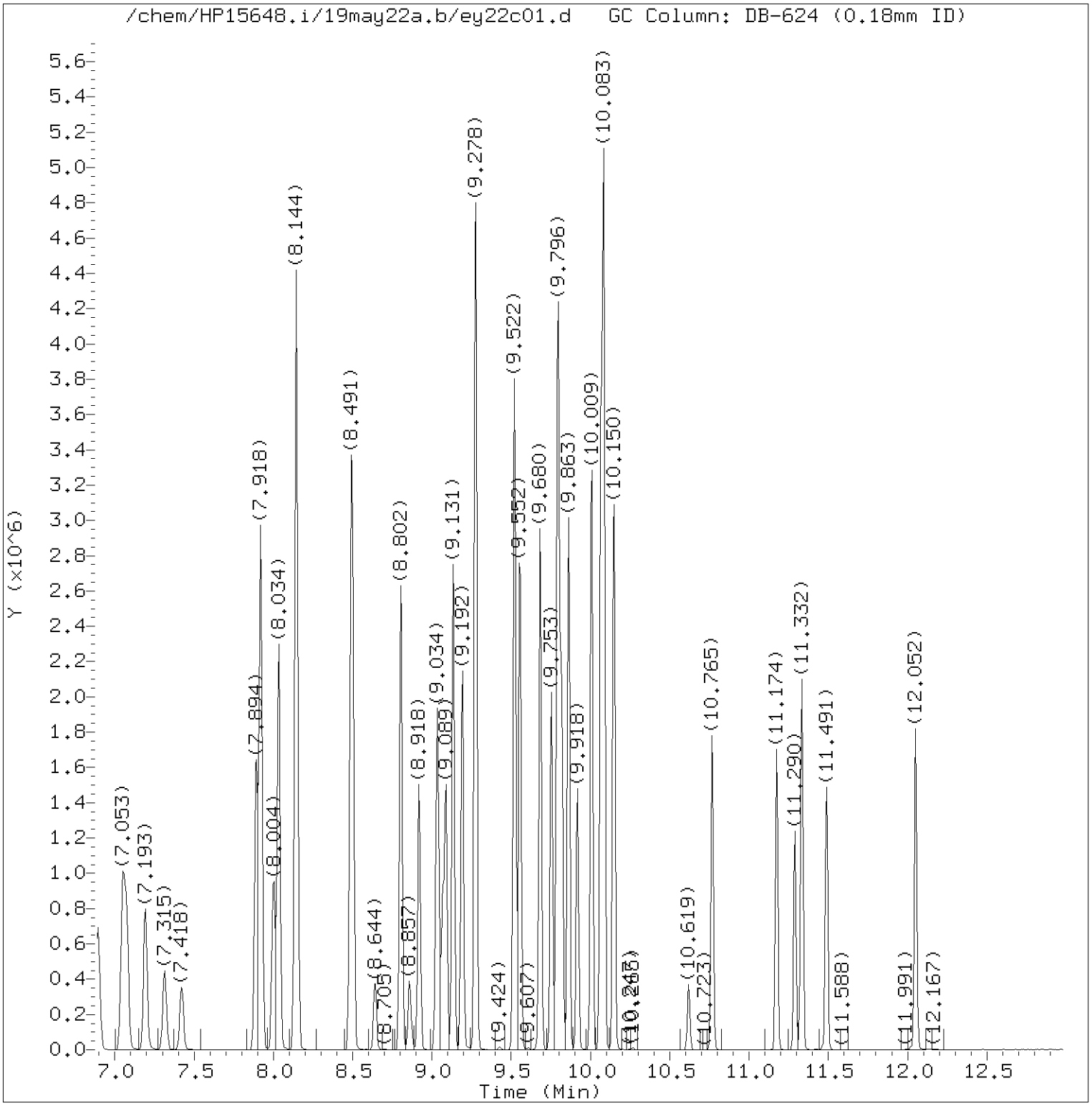
Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22c01.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 09:59 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 10:29
Date, time and analyst ID of latest file update: 22-May-2019 10:29 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Jason M. Long
on 05/22/2019 at 10:43.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22c01.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 09:59 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 10:29
Date, time and analyst ID of latest file update: 22-May-2019 10:29 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Jason M. Long
on 05/22/2019 at 10:43.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22c01.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 09:59 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 10:29
Date, time and analyst ID of latest file update: 22-May-2019 10:29 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.194	85	486998	51.056
4) Chloromethane	(2)	1.310	50	456470	58.804
5) 1,3-Butadiene	(2)	1.359	39	337067	57.761
6) Vinyl Chloride	(2)	1.377	62	420320	56.650
8) Bromomethane	(2)	1.560	94	275854	49.375
9) Chloroethane	(2)	1.596	64	229921	54.427
10) Dichlorofluoromethane	(2)	1.730	67	564792	52.251
11) n-Pentane	(2)	1.785	43	479139	55.295
12) Trichlorofluoromethane	(2)	1.785	101	539643	51.162
14) Ethyl ether	(2)	1.919	59	255447	58.123
15) Freon 123a	(2)	1.926	67	314951	50.709
16) Acrolein	(1)	2.011	56	788563	558.558
17) 1,1-Dichloroethene	(2)	2.096	96	219748	50.595
17) 1,1-Dichloroethene	(2)	2.096	63	116302	50.510
19) Freon 113	(2)	2.115	101	258657	53.781
18) Acetone	(1)	2.121	58	64942	110.517
21) 2-Propanol	(1)	2.206	45	91819	261.539
22) Methyl Iodide	(2)	2.212	142	405639	49.840
23) Carbon Disulfide	(2)	2.273	76	746374	50.663
25) Allyl Chloride	(2)	2.365	41	465122	55.101
27) Methyl Acetate	(2)	2.371	43	243497	58.749
28) Methylene Chloride	(2)	2.468	84	252065	50.943
29)*t-Butyl alcohol-d10	(1)	2.474	65	171108	250.000
30) t-Butyl alcohol	(1)	2.547	59	158481	247.771
31) Acrylonitrile	(2)	2.663	53	140640	55.804
32) trans-1,2-Dichloroethene	(2)	2.706	96	250162	51.171
33) Methyl Tertiary Butyl Ether	(2)	2.706	73	751581	51.564
34) n-Hexane	(2)	2.950	57	475528	55.508
36) 1,1-Dichloroethane	(2)	3.072	63	488407	53.326
38) di-Isopropyl ether	(2)	3.145	45	929990	57.701
39) 2-Chloro-1,3-butadiene	(2)	3.157	53	456757	52.226
40) Ethyl t-butyl ether	(2)	3.480	59	840782	52.882
44) 2-Butanone	(2)	3.608	43	344753	101.531
42) cis-1,2-Dichloroethene	(2)	3.608	96	283756	51.660
45) 2,2-Dichloropropane	(2)	3.620	77	404943	50.111
43) 1,2-Dichloroethene (Total)	(2)		96	533918	102.831
47) Propionitrile	(1)	3.663	54	251806	291.415
48) Methacrylonitrile	(2)	3.815	67	360683	133.283

* = Compound is an internal standard.

Digitally signed by Jason M. Long
on 05/22/2019 at 10:43.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22c01.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 09:59 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 10:29
Date, time and analyst ID of latest file update: 22-May-2019 10:29 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.834	128	142883	52.374
50) Tetrahydrofuran	(1)	3.870	71	93250	102.972
51) Chloroform	(2)	3.913	83	445594	51.150
52)$Dibromofluoromethane	(2)	4.065	113	242279	48.194
52)$Dibromofluoromethane	(2)	4.065	111	249933	48.432
53) 1,1,1-Trichloroethane	(2)	4.102	97	395046	49.008
54) Cyclohexane	(2)	4.157	56	564293	56.996
54) Cyclohexane	(2)	4.163	84	471203	55.389
54) Cyclohexane	(2)	4.163	69	172034	53.223
55) 1,1-Dichloropropene	(2)	4.254	75	385299	53.908
56) Carbon Tetrachloride	(2)	4.260	117	338417	49.357
58) Isobutyl Alcohol	(1)	4.376	41	136895	630.385
57)$1,2-Dichloroethane-d4	(2)	4.388	102	63126	49.760
57)$1,2-Dichloroethane-d4	(2)	4.388	65	303807	47.184
57)$1,2-Dichloroethane-d4	(2)	4.388	104	39613	48.705
60) Benzene	(2)	4.449	78	1126038	53.654
61) 1,2-Dichloroethane	(2)	4.462	62	333589	47.325
61) 1,2-Dichloroethane	(2)	4.462	98	30853	50.081
65) t-Amyl methyl ether	(2)	4.584	73	816787	51.807
66)*Fluorobenzene	(2)	4.730	96	1081602	50.000
67) n-Heptane	(2)	4.742	43	488451	53.196
69) n-Butanol	(1)	5.047	56	233765	1244.548
71) Trichloroethene	(2)	5.102	95	276521	52.233
73) Methylcyclohexane	(2)	5.309	83	611547	55.478
73) Methylcyclohexane	(2)	5.309	98	277962	54.836
74) 1,2-Dichloropropane	(2)	5.327	63	289713	55.484
75) Dibromomethane	(2)	5.443	93	156525	50.075
77) Methyl Methacrylate	(2)	5.474	69	240559	50.529
76) 1,4-Dioxane	(1)	5.474	88	32578M	616.323
79) Bromodichloromethane	(2)	5.614	83	318204	48.932
80) 2-Nitropropane	(2)	5.852	41	173392	80.455
81) 2-Chloroethyl Vinyl Ether	(2)	5.955	63	211268	52.508
82) cis-1,3-Dichloropropene	(2)	6.095	75	429590	50.718
83) 4-Methyl-2-pentanone	(2)	6.272	43	742636	101.840
84)$Toluene-d8	(3)	6.382	98	1090413	49.486
84)$Toluene-d8	(3)	6.382	100	699047	49.353
89) Toluene	(3)	6.455	92	711403	52.751
90) trans-1,3-Dichloropropene	(3)	6.699	75	381785	47.368

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 05/22/2019 at 10:43.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22c01.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 09:59 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 10:29
Date, time and analyst ID of latest file update: 22-May-2019 10:29 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropene (total)	(3)		100	811375	98.086
92) Ethyl Methacrylate	(3)	6.833	69	440642	51.284
93) 1,1,2-Trichloroethane	(3)	6.894	97	235449	51.295
94) Tetrachloroethene	(3)	7.053	166	287173	52.373
95) 1,3-Dichloropropane	(3)	7.077	76	423047	52.439
97) 2-Hexanone	(3)	7.193	43	528753	92.304
102) 1-Chlorohexane	(3)	7.315	91	20370	43.708
98) Dibromochloromethane	(3)	7.315	129	236011	47.630
100) 1,2-Dibromoethane	(3)	7.418	107	243332	49.826
101)*Chlorobenzene-d5	(3)	7.894	117	811311	50.000
103) Chlorobenzene	(3)	7.918	112	765739	51.350
104) 1,1,1,2-Tetrachloroethane	(3)	8.004	131	250616	49.484
105) Ethylbenzene	(3)	8.034	91	1417514	53.131
107) m+p-Xylene	(3)	8.144	106	1085557	104.522
109) Xylene (Total)	(3)		106	1610310	156.294
108) o-Xylene	(3)	8.491	106	524753	51.773
110) Styrene	(3)	8.504	104	861947	51.486
111) Bromoform	(3)	8.644	173	149615	45.294
112) Isopropylbenzene	(3)	8.802	105	1412451	52.376
113) Cyclohexanone	(1)	8.857	55	125395A	629.733
115)$4-Bromofluorobenzene	(3)	8.918	95	415056	48.999
115)$4-Bromofluorobenzene	(3)	8.918	174	311677	49.105
116) Bromobenzene	(4)	9.034	156	307324	52.246
117) 1,1,2,2-Tetrachloroethane	(4)	9.040	83	345788	50.651
118) 1,2,3-Trichloropropane	(4)	9.071	110	103402	49.979
119) trans-1,4-Dichloro-2-butene	(4)	9.089	53	222842	99.333
120) n-Propylbenzene	(4)	9.131	91	1671809	53.910
121) 2-Chlorotoluene	(4)	9.192	126	316734	51.876
123) 1,3,5-Trimethylbenzene	(4)	9.278	105	1188260	52.818
122) 4-Chlorotoluene	(4)	9.278	126	326099	52.104
125) tert-Butylbenzene	(4)	9.522	134	264778	52.948
126) Pentachloroethane	(4)	9.528	167	186399	50.068
127) 1,2,4-Trimethylbenzene	(4)	9.552	105	1215376	52.466
128) sec-Butylbenzene	(4)	9.680	105	1553778	54.442
130) 1,3-Dichlorobenzene	(4)	9.753	146	602098	52.524
131) p-Isopropyltoluene	(4)	9.790	119	1337892	53.289
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	422148	50.000
134) 1,4-Dichlorobenzene	(4)	9.820	146	594090	50.663

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 05/22/2019 at 10:43.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22c01.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 09:59 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 10:29
Date, time and analyst ID of latest file update: 22-May-2019 10:29 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	9.863	105	1284935	52.092
136) Benzyl Chloride	(4)	9.918	91	782043	49.101
137) 1,3-Diethylbenzene	(4)	10.009	119	824304	52.143
138) 1,4-Diethylbenzene	(4)	10.064	119	872293	51.785
140) n-Butylbenzene	(4)	10.083	92	653581	53.005
139) 1,2-Dichlorobenzene	(4)	10.083	146	560027	51.032
142) Diethylbenzene (total)	(4)		100	2371151	156.048
141) 1,2-Diethylbenzene	(4)	10.150	119	674554	52.121
143) 1,2-Dibromo-3-chloropropane	(4)	10.619	75	69748	44.591
145) 1,3,5-Trichlorobenzene	(4)	10.765	180	418350	51.841
147) 1,2,4-Trichlorobenzene	(4)	11.174	180	366614	50.893
148) Hexachlorobutadiene	(4)	11.290	225	156648	50.731
149) Naphthalene	(4)	11.332	128	1161378	48.903
150) 1,2,3-Trichlorobenzene	(4)	11.491	180	336714	49.506
151) 2-Methylnaphthalene	(4)	12.052	142	625465	41.678

Digitally signed by Jason M. Long
on 05/22/2019 at 10:43.
Target 3.5 esignature user ID: jml01693

Data File: /chem/HP23297.i/19apr23i.b/4a23t01.d

Date : 23-APR-2019 14:13

Client ID: bfb FEB05-19

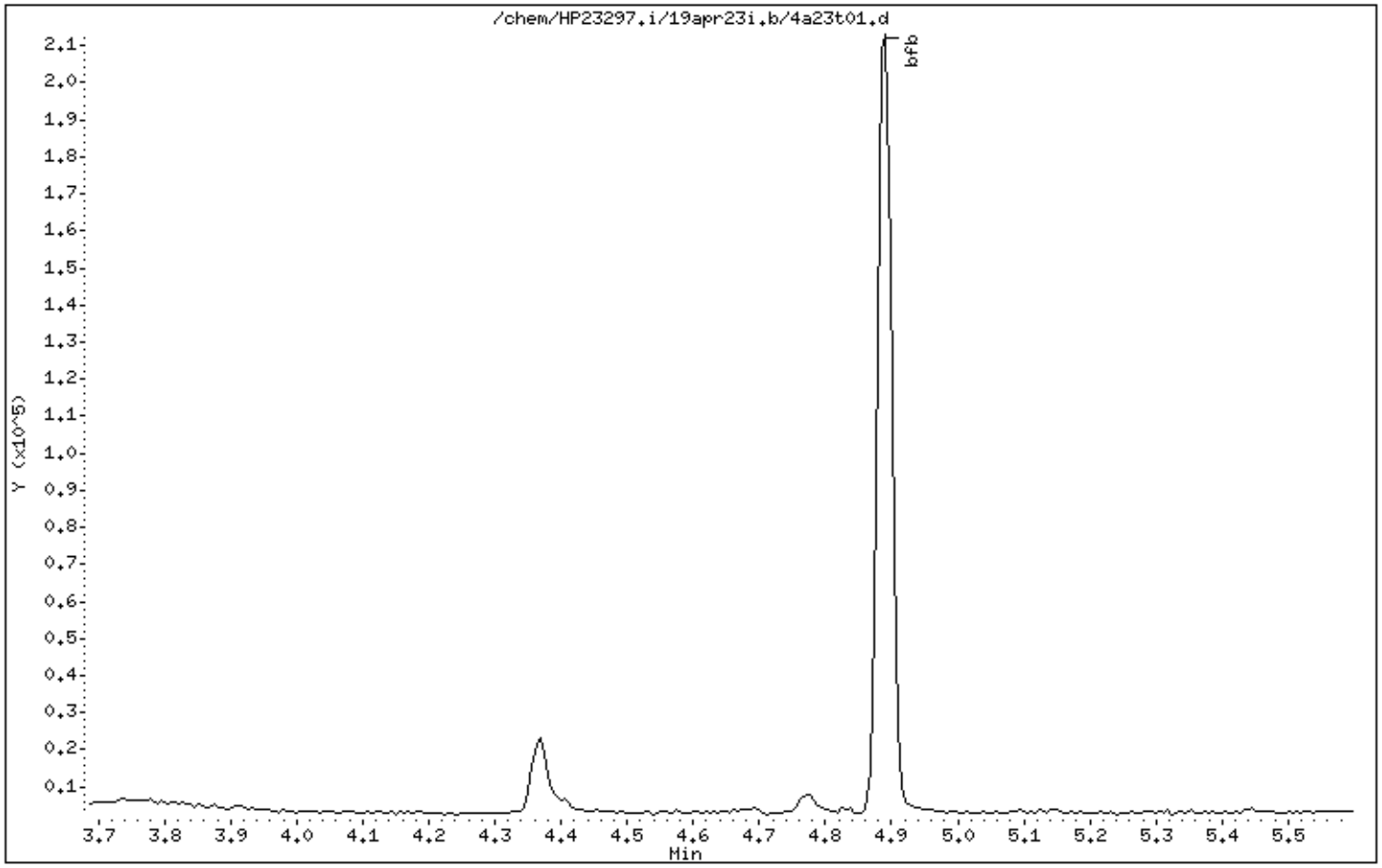
Instrument: HP23297.i

Sample Info: bfb FEB05-19;50NG BFB;1;3;;;;;;

Operator: JML01693

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Jason M. Long on 04/23/2019 at 14:18.
Target 3.5 esignature user ID: jml01693

Data File: /chem/HP23297.i/19apr23i.b/4a23t01.d

Date : 23-APR-2019 14:13

Client ID: bfb FEB05-19

Instrument: HP23297.i

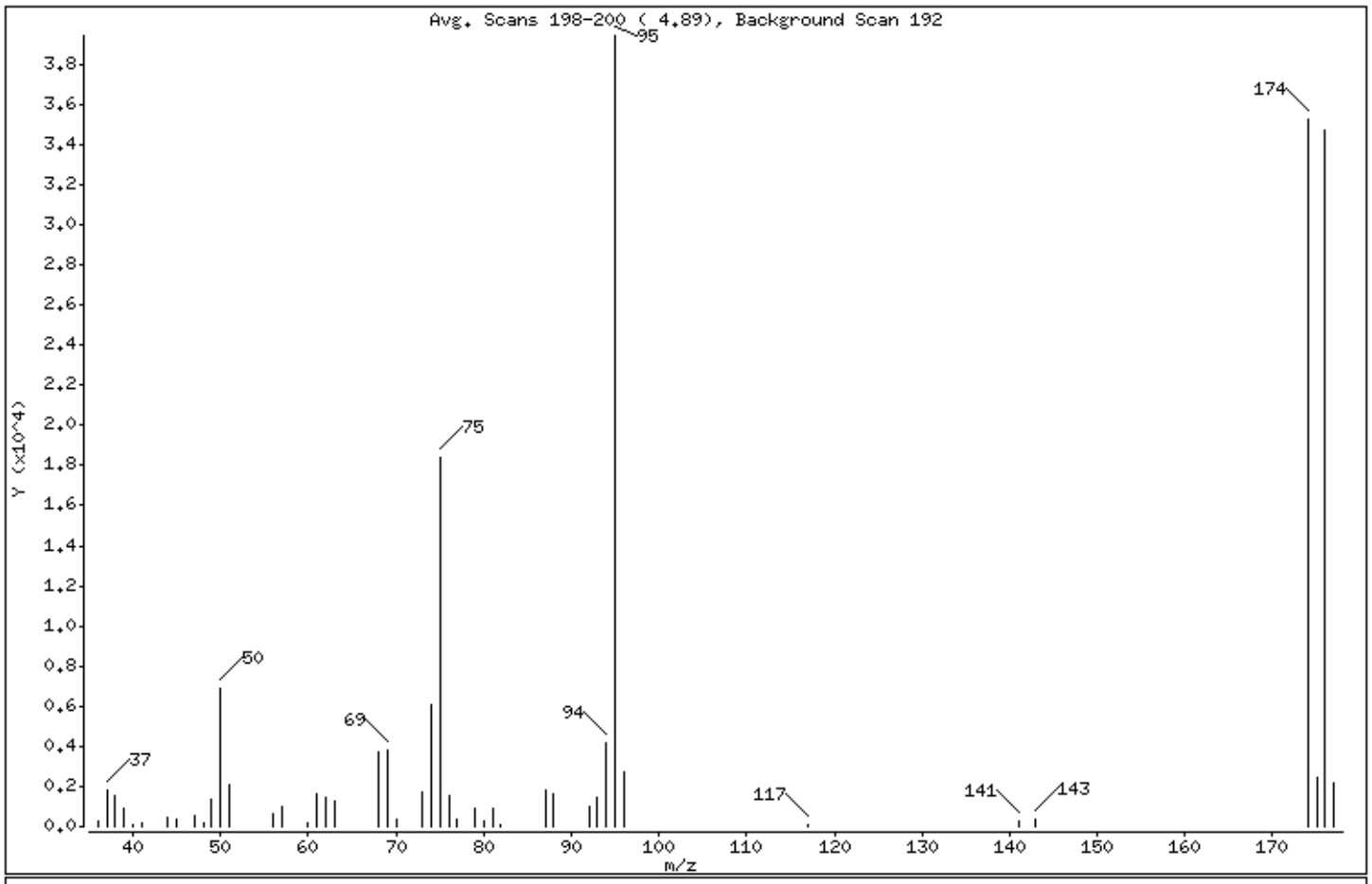
Sample Info: bfb FEB05-19;50NG BFB;1;3;;;;;;

Operator: JML01693

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.42
75	30.00 - 60.00% of mass 95	46.67
96	5.00 - 9.00% of mass 95	6.99
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	89.33
175	5.00 - 9.00% of mass 174	6.21 (6.95)
176	95.00 - 101.00% of mass 174	88.11 (98.63)
177	5.00 - 9.00% of mass 176	5.49 (6.23)

Digitally signed by Jason M. Long on 04/23/2019 at 14:18.
Target 3.5 esignature user ID: jml01693

Date : 23-APR-2019 14:13

Client ID: bfb FEB05-19 Instrument: HP23297.i

Sample Info: bfb FEB05-19;50NG BFB;1;3;;;;;;

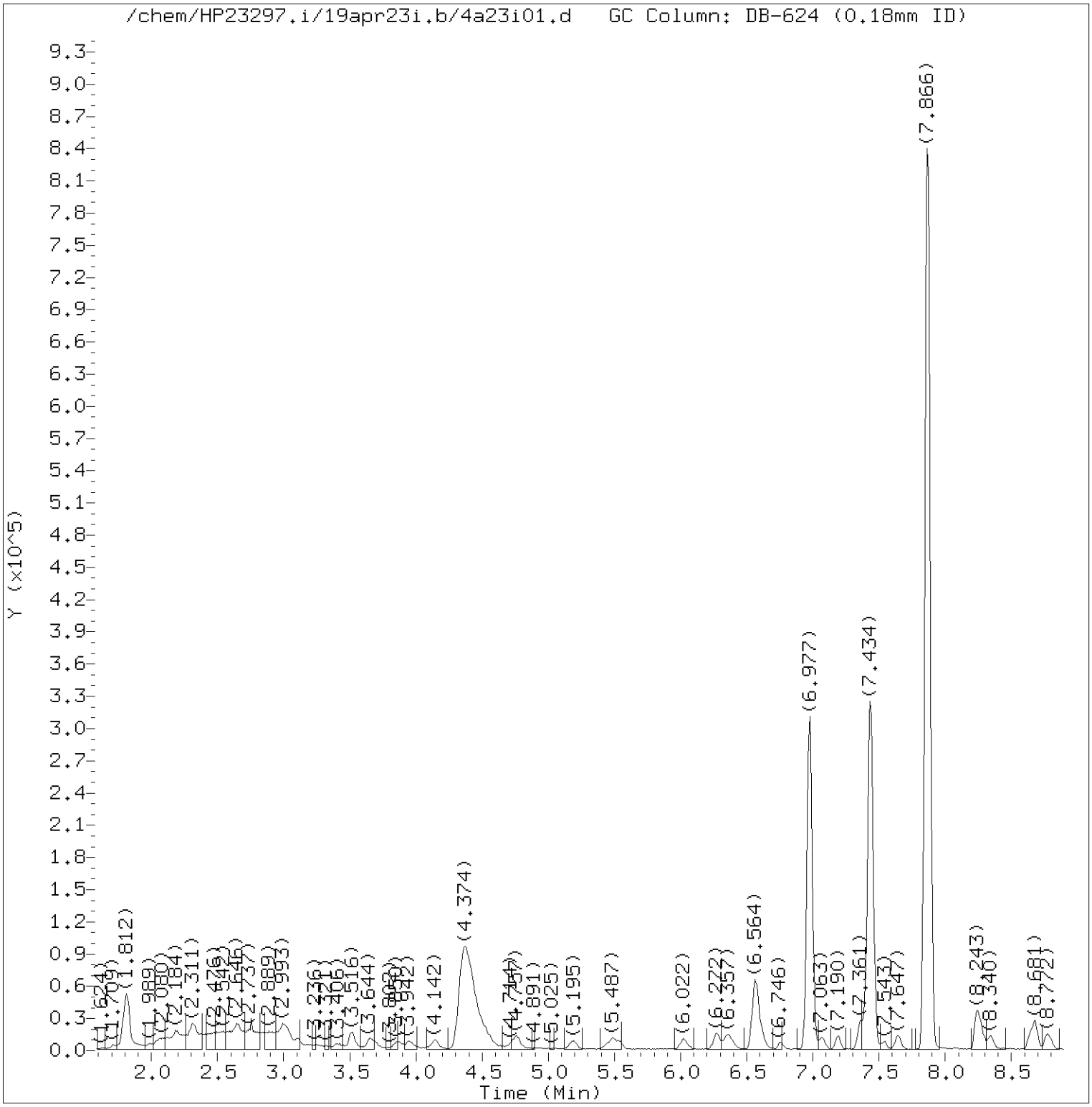
Operator: JML01693

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: 4a23t01.d
Spectrum: Avg. Scans 198-200 (4.89), Background Scan 192
Location of Maximum: 95.00
Number of points: 45

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	250	51.00	2127	75.00	18400	95.00	39432
37.00	1792	56.00	600	76.00	1586	96.00	2756
38.00	1571	57.00	960	77.00	352	117.00	91
39.00	862	60.00	214	79.00	900	141.00	248
40.00	49	61.00	1659	80.00	315	143.00	364
41.00	196	62.00	1489	81.00	918	174.00	35224
44.00	449	63.00	1237	82.00	124	175.00	2449
45.00	397	68.00	3678	87.00	1786	176.00	34744
47.00	515	69.00	3785	88.00	1643	177.00	2164
48.00	170	70.00	401	92.00	1017		
49.00	1378	73.00	1706	93.00	1453		
50.00	6870	74.00	6097	94.00	4156		

Digitally signed by Jason M. Long on 04/23/2019 at 14:18.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

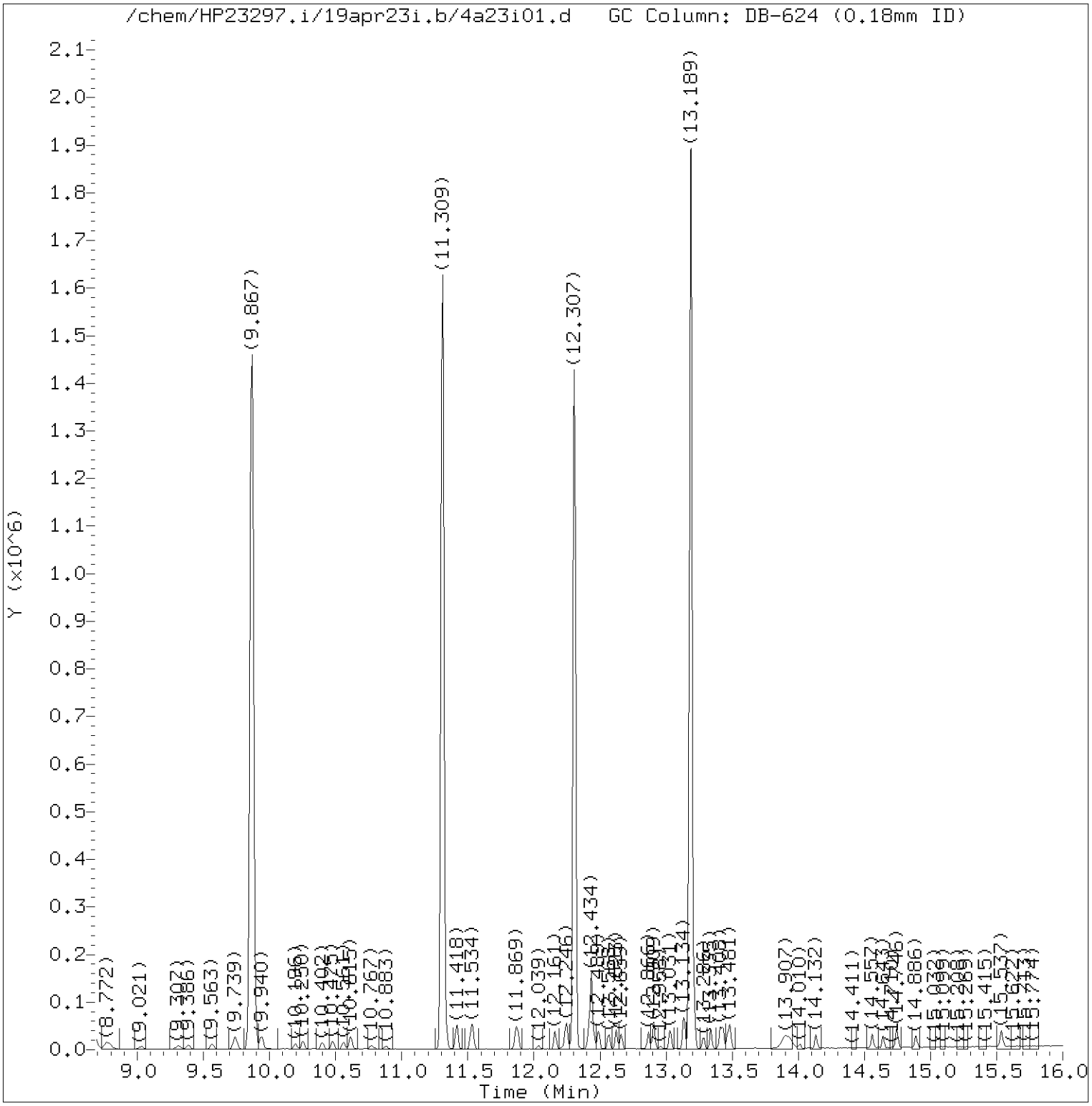
Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Jason M. Long
on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Jason M. Long
on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.983	85	7453	1.000
4) Chloromethane	(2)	2.190	50	8309	1.000
6) Vinyl Chloride	(2)	2.311	62	8064	1.000
5) 1,3-Butadiene	(2)	2.317	39	4546	1.000
8) Bromomethane	(2)	2.652	94	7033M	1.000
9) Chloroethane	(2)	2.749	64	4821	1.000
10) Dichlorofluoromethane	(2)	2.993	67	12456	1.000
12) Trichlorofluoromethane	(2)	3.047	101	8747	1.000
11) n-Pentane	(2)	3.108	43	7272M	1.000
13) Ethanol	(1)	3.218	45	9411	62.500
15) Freon 123a	(2)	3.406	67	5566	1.000
16) Acrolein	(1)	3.516	56	24572	10.000
17) 1,1-Dichloroethene	(2)	3.656	96	3386	1.000
17) 1,1-Dichloroethene	(2)	3.650	63	2033	1.000
19) Freon 113	(2)	3.680	101	3611	1.000
18) Acetone	(1)	3.710	58	2201	2.000
22) Methyl Iodide	(2)	3.850	142	6880	1.000
21) 2-Propanol	(1)	3.875	45	20840	20.000
23) Carbon Disulfide	(2)	3.948	76	12210	1.000
27) Methyl Acetate	(2)	4.142	43	9571M	1.000
25) Allyl Chloride	(2)	4.161	41	9944	1.000
28) Methylene Chloride	(2)	4.343	84	5060	1.000
29)*t-Butyl alcohol-d10	(1)	4.374	65	443119	250.000
30) t-Butyl alcohol	(1)	4.514	59	34580M	20.000
31) Acrylonitrile	(2)	4.708	53	4035	1.000
33) Methyl Tertiary Butyl Ether	(2)	4.757	73	14027	1.000
32) trans-1,2-Dichloroethene	(2)	4.763	96	4107	1.000
34) n-Hexane	(2)	5.183	57	6748	1.000
36) 1,1-Dichloroethane	(2)	5.438	63	8005	1.000
38) di-Isopropyl ether	(2)	5.493	45	16888	1.000
39) 2-Chloro-1,3-butadiene	(2)	5.542	53	6733	1.000
40) Ethyl t-butyl ether	(2)	6.016	59	14903	1.000
43) 1,2-Dichloroethene (Total)	(2)		96	8967	2.000
44) 2-Butanone	(2)	6.260	43	14345	2.000
42) cis-1,2-Dichloroethene	(2)	6.272	96	4860	1.000
45) 2,2-Dichloropropane	(2)	6.290	77	6004	1.000
47) Propionitrile	(1)	6.357	54	34552	20.000
48) Methacrylonitrile	(2)	6.558	67	38689	10.000

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.606	128	2682	1.000
50) Tetrahydrofuran	(1)	6.631	71	3503	2.000
51) Chloroform	(2)	6.764	83	8417	1.000
52)$Dibromofluoromethane	(2)	6.977	113	279337	50.000
52)$Dibromofluoromethane	(2)	6.977	111	285753	50.000
53) 1,1,1-Trichloroethane	(2)	6.977	97	6535	1.000
54) Cyclohexane	(2)	7.069	56	8489	1.000
54) Cyclohexane	(2)	7.069	84	6556	1.000
54) Cyclohexane	(2)	7.056	69	2368	1.000
56) Carbon Tetrachloride	(2)	7.184	117	5428	1.000
55) 1,1-Dichloropropene	(2)	7.190	75	6251	1.000
58) Isobutyl Alcohol	(1)	7.373	41	30183	50.000
57)$1,2-Dichloroethane-d4	(2)	7.434	102	67496	50.000
57)$1,2-Dichloroethane-d4	(2)	7.434	65	333102	50.000
57)$1,2-Dichloroethane-d4	(2)	7.434	104	42429	50.000
60) Benzene	(2)	7.464	78	19770	1.000
61) 1,2-Dichloroethane	(2)	7.543	62	7834	1.000
61) 1,2-Dichloroethane	(2)	7.531	98	286	1.000
65) t-Amyl methyl ether	(2)	7.640	73	15255	1.000
67) n-Heptane	(2)	7.866	43	8911	1.000
66)*Fluorobenzene	(2)	7.866	96	1140514	50.000
69) n-Butanol	(1)	8.243	56	44602	100.000
71) Trichloroethene	(2)	8.334	95	4652	1.000
72) Methylcyclohexane	(2)	8.644	83	8286	1.000
72) Methylcyclohexane	(2)	8.644	98	3592	1.000
73) 1,2-Dichloropropane	(2)	8.681	63	5058	1.000
76) Methyl Methacrylate	(2)	8.766	69	5953	1.000
74) Dibromomethane	(2)	8.790	93	3187	1.000
75) 1,4-Dioxane	(1)	8.802	88	5064	50.000
78) Bromodichloromethane	(2)	9.034	83	5810	1.000
79) 2-Nitropropane	(2)	9.307	41	6136	2.000
80) 2-Chloroethyl Vinyl Ether	(2)	9.386	63	4695	1.000
81) cis-1,3-Dichloropropene	(2)	9.569	75	7590	1.000
82) 4-Methyl-2-pentanone	(2)	9.739	43	23771	2.000
83)$Toluene-d8	(3)	9.867	98	1178775	50.000
83)$Toluene-d8	(3)	9.867	100	760681	50.000
88) Toluene	(3)	9.940	92	12751	1.000
90) 1,3-Dichloropropene (total)	(3)		100	14380	2.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.196	75	6790	1.000
91) Ethyl Methacrylate	(3)	10.250	69	9428	1.000
92) 1,1,2-Trichloroethane	(3)	10.396	97	5153	1.000
93) Tetrachloroethene	(3)	10.475	166	5236	1.000
94) 1,3-Dichloropropane	(3)	10.561	76	8405	1.000
96) 2-Hexanone	(3)	10.615	43	18874	2.000
97) Dibromochloromethane	(3)	10.774	129	4899	1.000
99) 1,2-Dibromoethane	(3)	10.883	107	5436	1.000
100)*Chlorobenzene-d5	(3)	11.309	117	904161	50.000
102) Chlorobenzene	(3)	11.333	112	13882	1.000
103) 1,1,1,2-Tetrachloroethane	(3)	11.412	131	4276	1.000
104) Ethylbenzene	(3)	11.418	91	23160	1.000
106) m+p-Xylene	(3)	11.528	106	18180	2.000
108) Xylene (Total)	(3)		106	27551	3.000
107) o-Xylene	(3)	11.862	106	9371	1.000
109) Styrene	(3)	11.881	104	14400	1.000
110) Bromoform	(3)	12.039	173	3626	1.000
111) Isopropylbenzene	(3)	12.161	105	23033	1.000
112) Cyclohexanone	(1)	12.246	55	22989M	50.000
114)$4-Bromofluorobenzene	(3)	12.307	95	438470	50.000
114)$4-Bromofluorobenzene	(3)	12.307	174	386155	50.000
116) 1,1,2,2-Tetrachloroethane	(4)	12.410	83	8602	1.000
115) Bromobenzene	(4)	12.422	156	6296	1.000
118) trans-1,4-Dichloro-2-butene	(4)	12.434	53	27412	10.000
117) 1,2,3-Trichloropropane	(4)	12.453	110	2663	1.000
119) n-Propylbenzene	(4)	12.489	91	27849	1.000
120) 2-Chlorotoluene	(4)	12.562	126	5746	1.000
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	19528	1.000
121) 4-Chlorotoluene	(4)	12.659	126	6053	1.000
124) tert-Butylbenzene	(4)	12.866	134	4048M	1.000
125) Pentachloroethane	(4)	12.903	167	3554	1.000
126) 1,2,4-Trimethylbenzene	(4)	12.909	105	20106	1.000
127) sec-Butylbenzene	(4)	13.031	105	24074	1.000
129) 1,3-Dichlorobenzene	(4)	13.134	146	12026	1.000
130) p-Isopropyltoluene	(4)	13.140	119	20931	1.000
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	489109	50.000
133) 1,4-Dichlorobenzene	(4)	13.201	146	12085	1.000
134) 1,2,3-Trimethylbenzene	(4)	13.213	105	22211	1.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

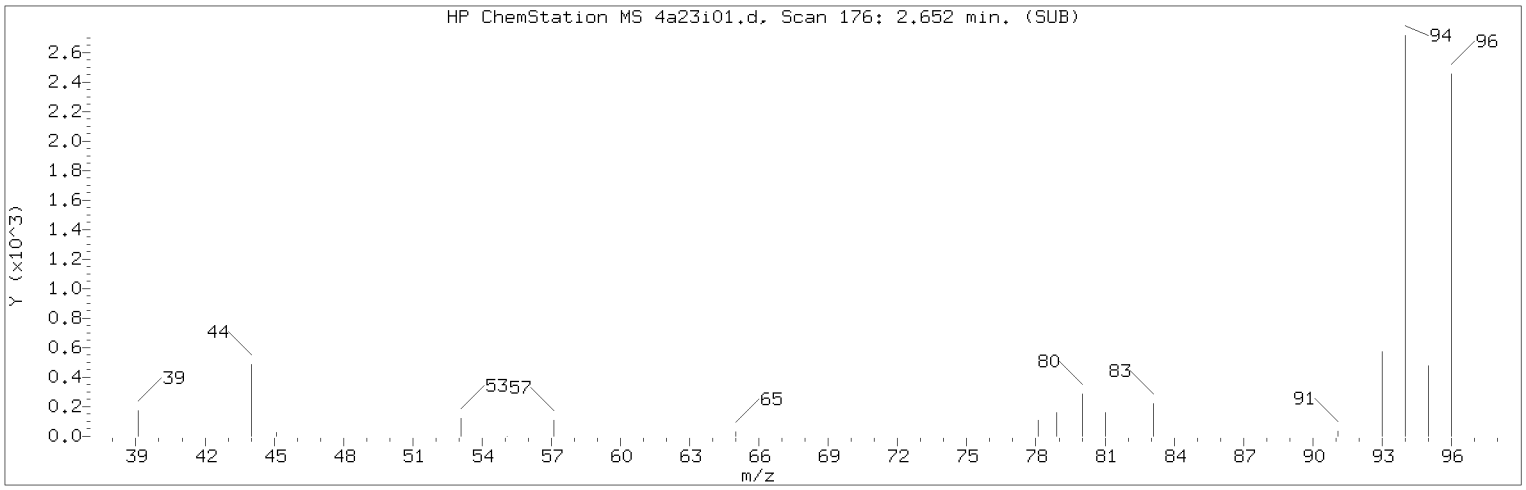
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.286	91	14979	1.000
136) 1,3-Diethylbenzene	(4)	13.341	119	13047	1.000
141) Diethylbenzene (total)	(4)		100	38331	3.000
137) 1,4-Diethylbenzene	(4)	13.408	119	14106	1.000
139) n-Butylbenzene	(4)	13.432	92	11108M	1.000
138) 1,2-Dichlorobenzene	(4)	13.469	146	11813	1.000
140) 1,2-Diethylbenzene	(4)	13.481	119	11178	1.000
142) 1,2-Dibromo-3-chloropropane	(4)	14.016	75	2493	1.000
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	9193	1.000
146) 1,2,4-Trichlorobenzene	(4)	14.557	180	9099	1.000
147) Hexachlorobutadiene	(4)	14.643	225	4822	1.000
148) Naphthalene	(4)	14.746	128	30031	1.000
149) 1,2,3-Trichlorobenzene	(4)	14.892	180	8475	1.000
150) 2-Methylnaphthalene	(4)	15.537	142	17726	1.000

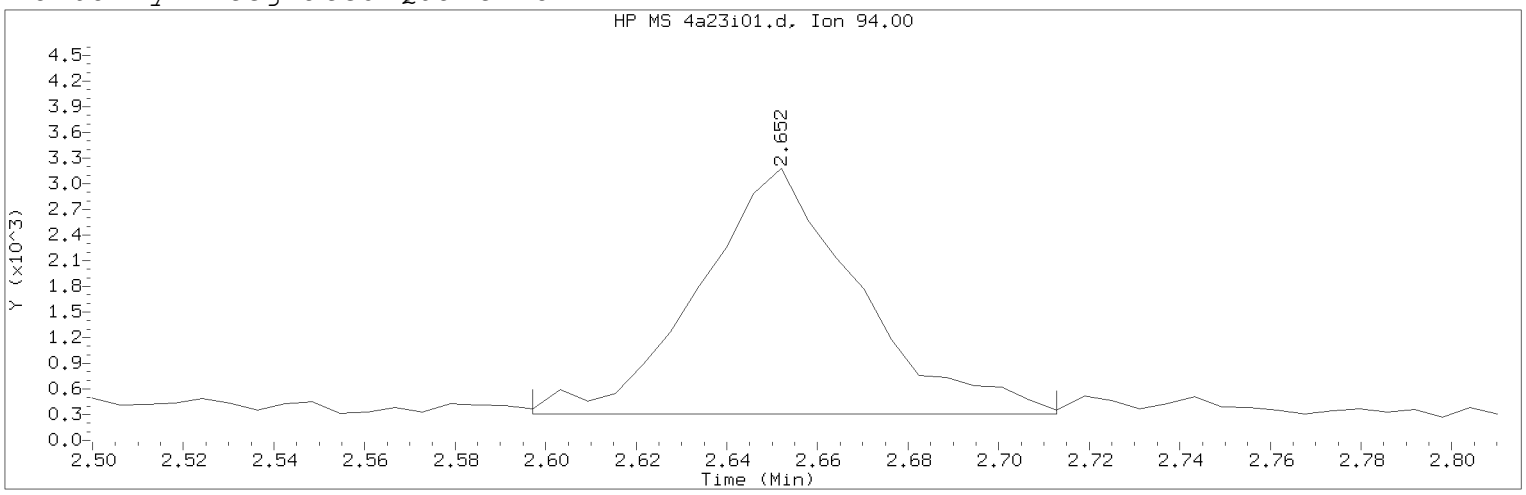
M = Compound was manually integrated.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

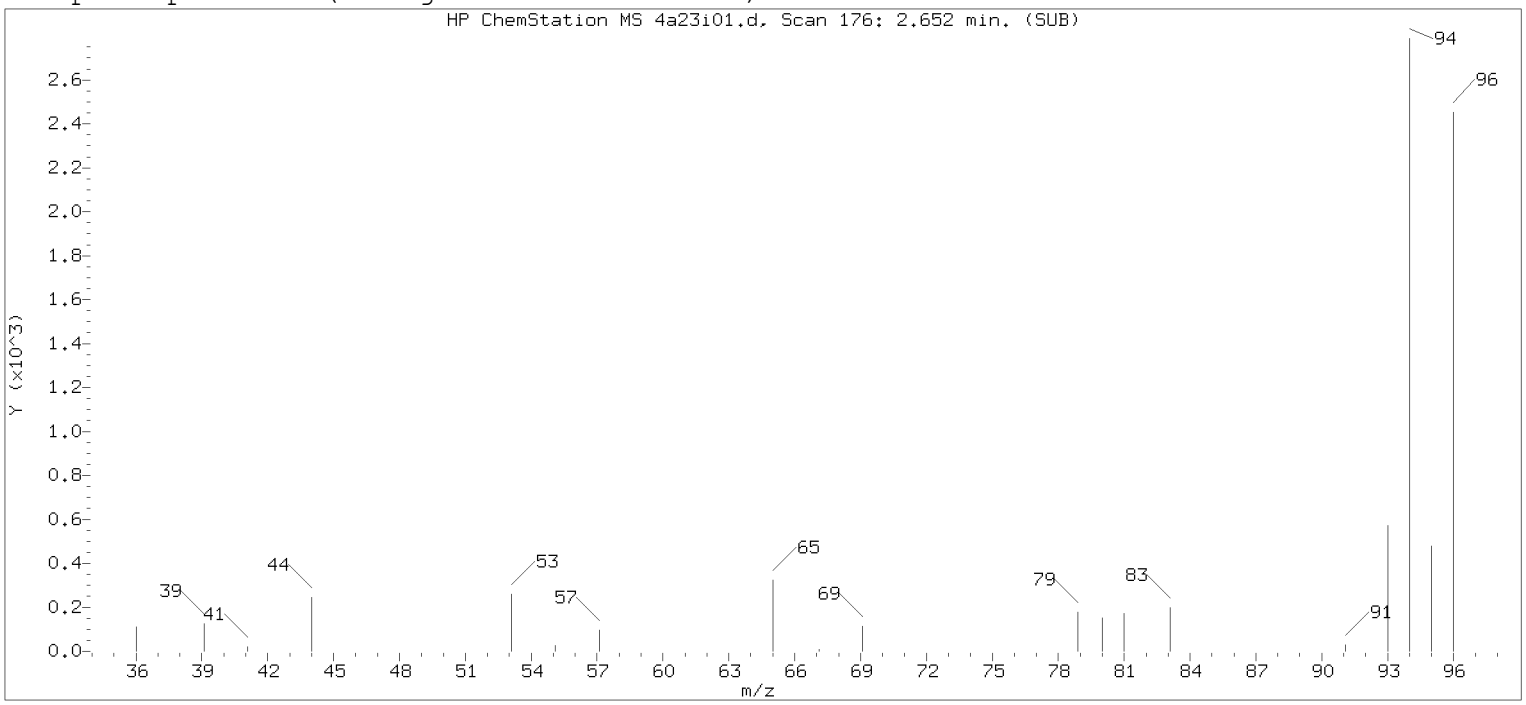
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 176
Retention Time (minutes): 2.652
Quant Ion : 94.00
Area (flag) : 7033M
On-Column Amount (ng) : 1.0000
Integration start scan : 166 Integration stop scan: 185
Y at integration start : 309 Y at integration end: 309

Reason for manual integration: improper integration

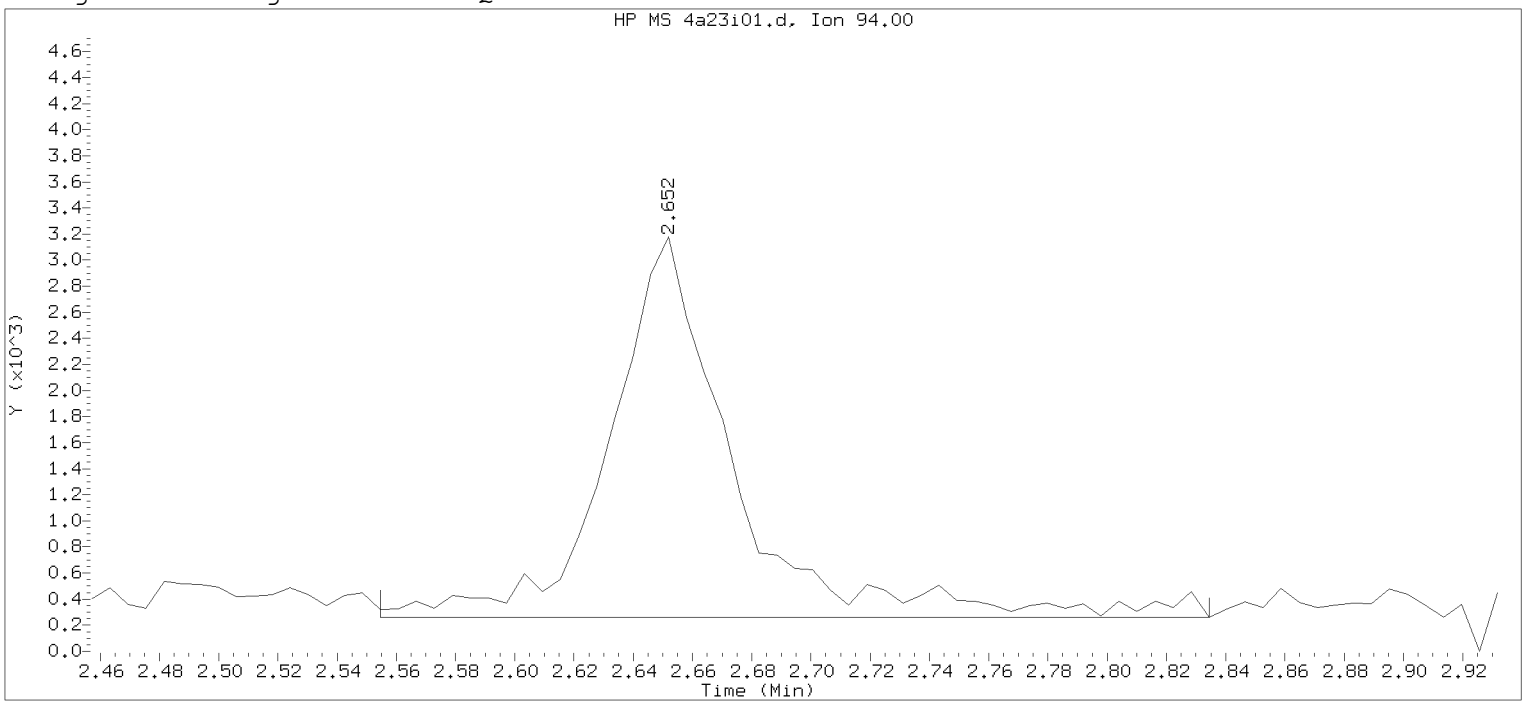
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

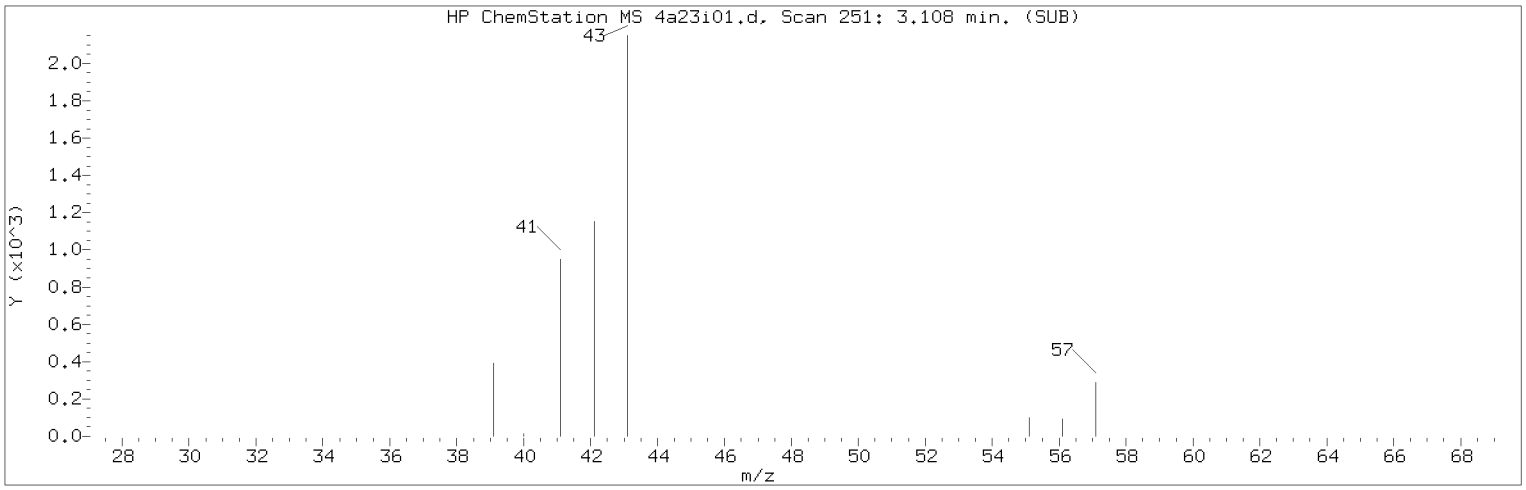
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 15:15
Date, time and analyst ID of latest file update: 23-Apr-2019 15:15 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

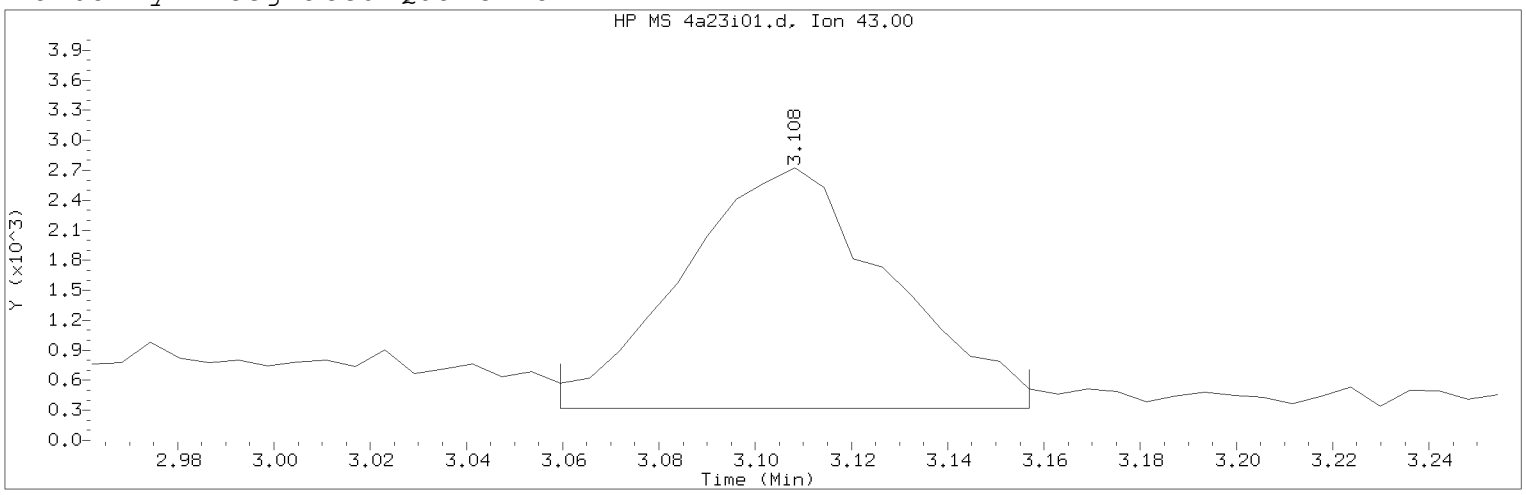
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 176
Retention Time (minutes): 2.652
Quant Ion : 94.00
Area : 8484
On-column Amount (ng) : 1.4800
Integration start scan : 159 Integration stop scan: 205
Y at integration start : 262 Y at integration end: 262

Digitally signed by Jason M. Long on 04/24/2019 at 14:26.
Target 3.5 esignature user_id: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

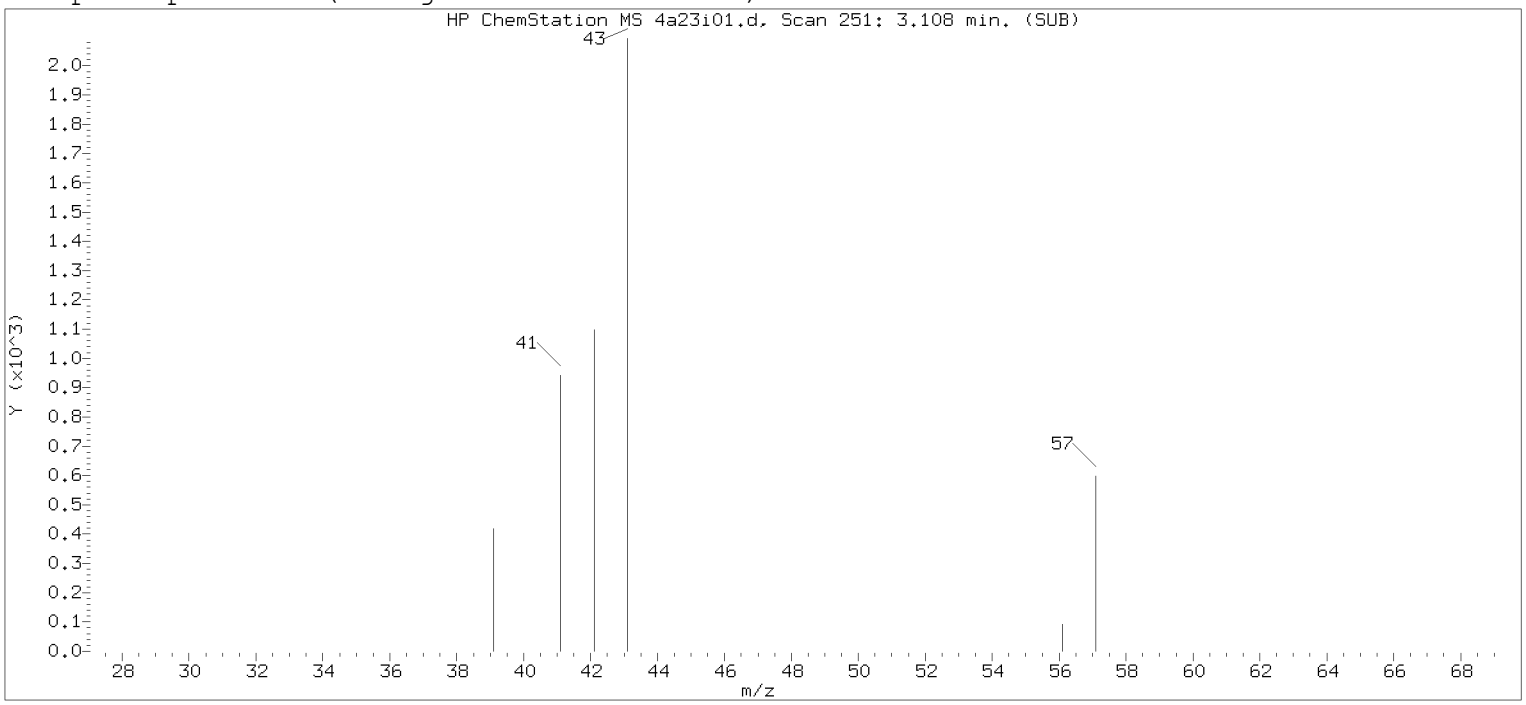
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 251
Retention Time (minutes): 3.108
Quant Ion : 43.00
Area (flag) : 7272M
On-Column Amount (ng) : 1.0000
Integration start scan : 242 Integration stop scan: 258
Y at integration start : 323 Y at integration end: 323

Reason for manual integration: improper integration

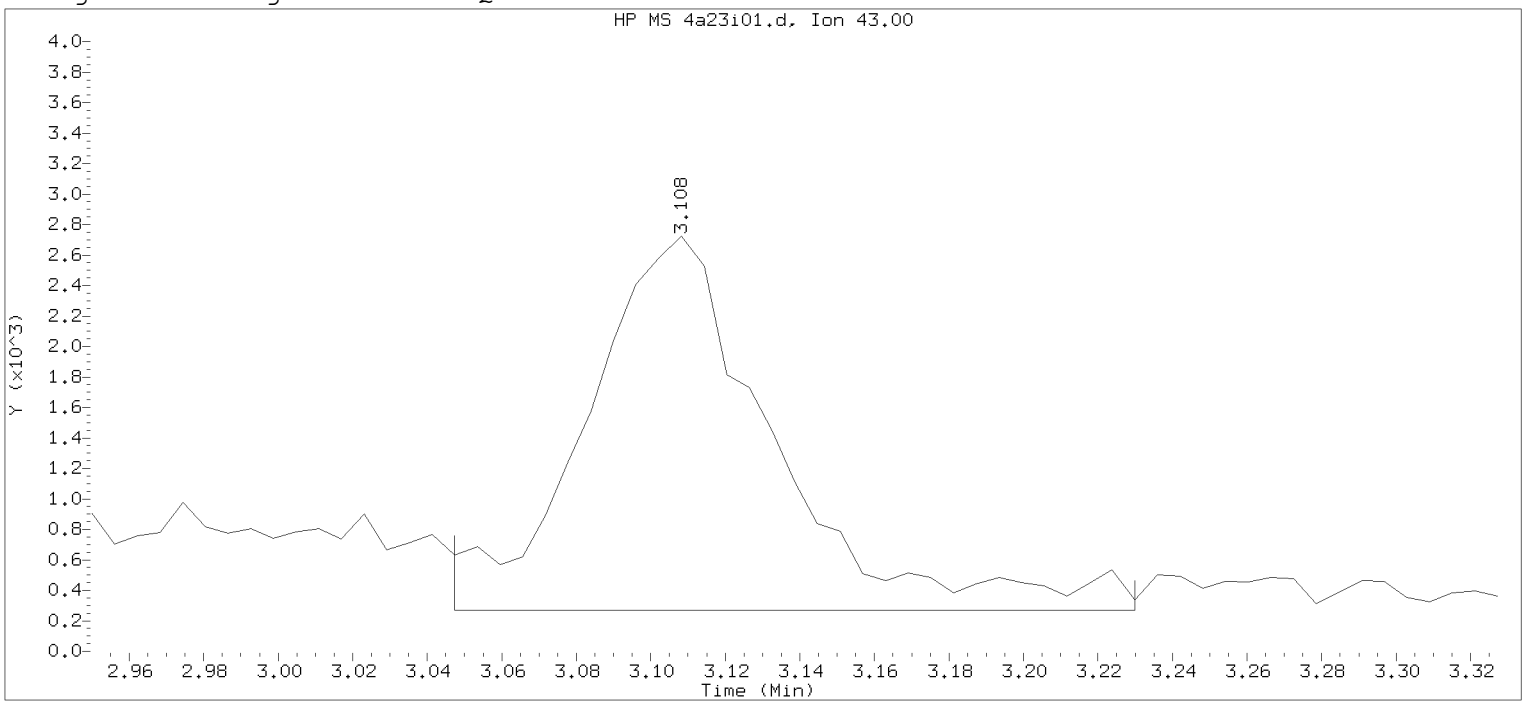
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

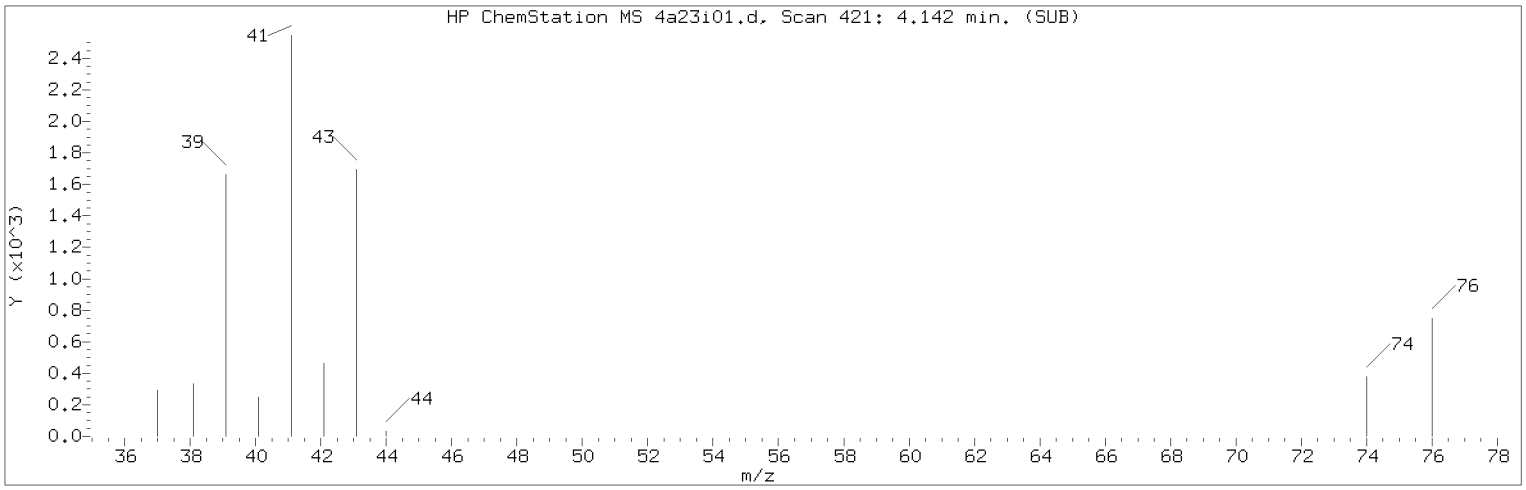
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 15:15
Date, time and analyst ID of latest file update: 23-Apr-2019 15:15 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

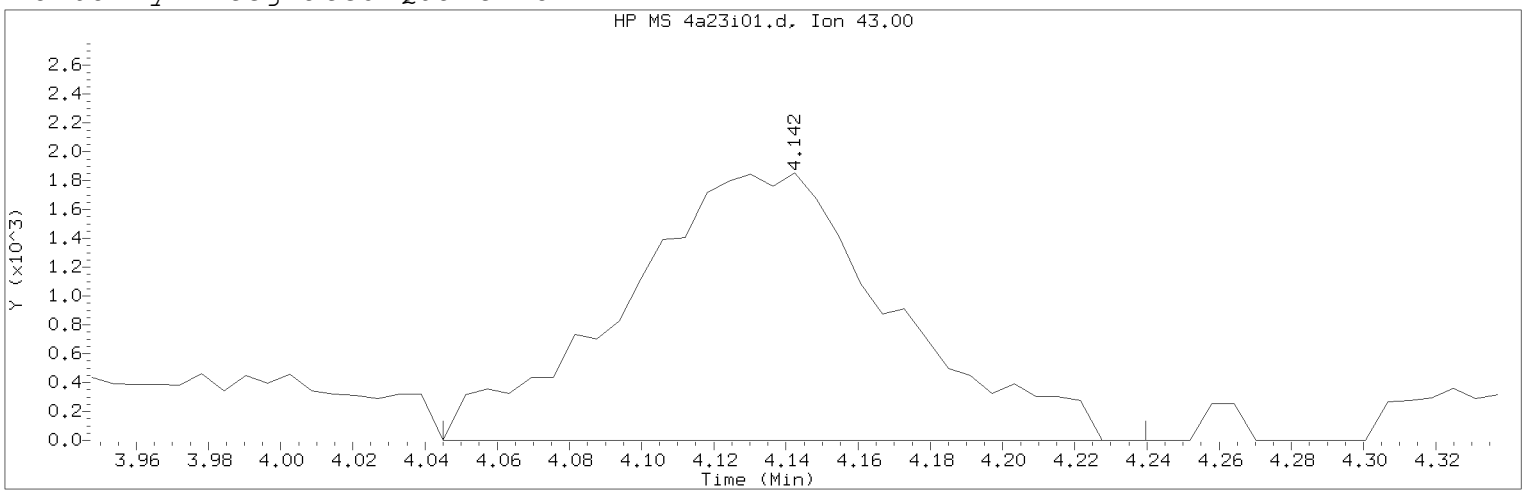
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 251
Retention Time (minutes): 3.108
Quant Ion : 43.00
Area : 8581
On-column Amount (ng) : 1.0868
Integration start scan : 240 Integration stop scan: 270
Y at integration start : 269 Y at integration end: 269

Digitally signed by Jason M. Long on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jmlo1440

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

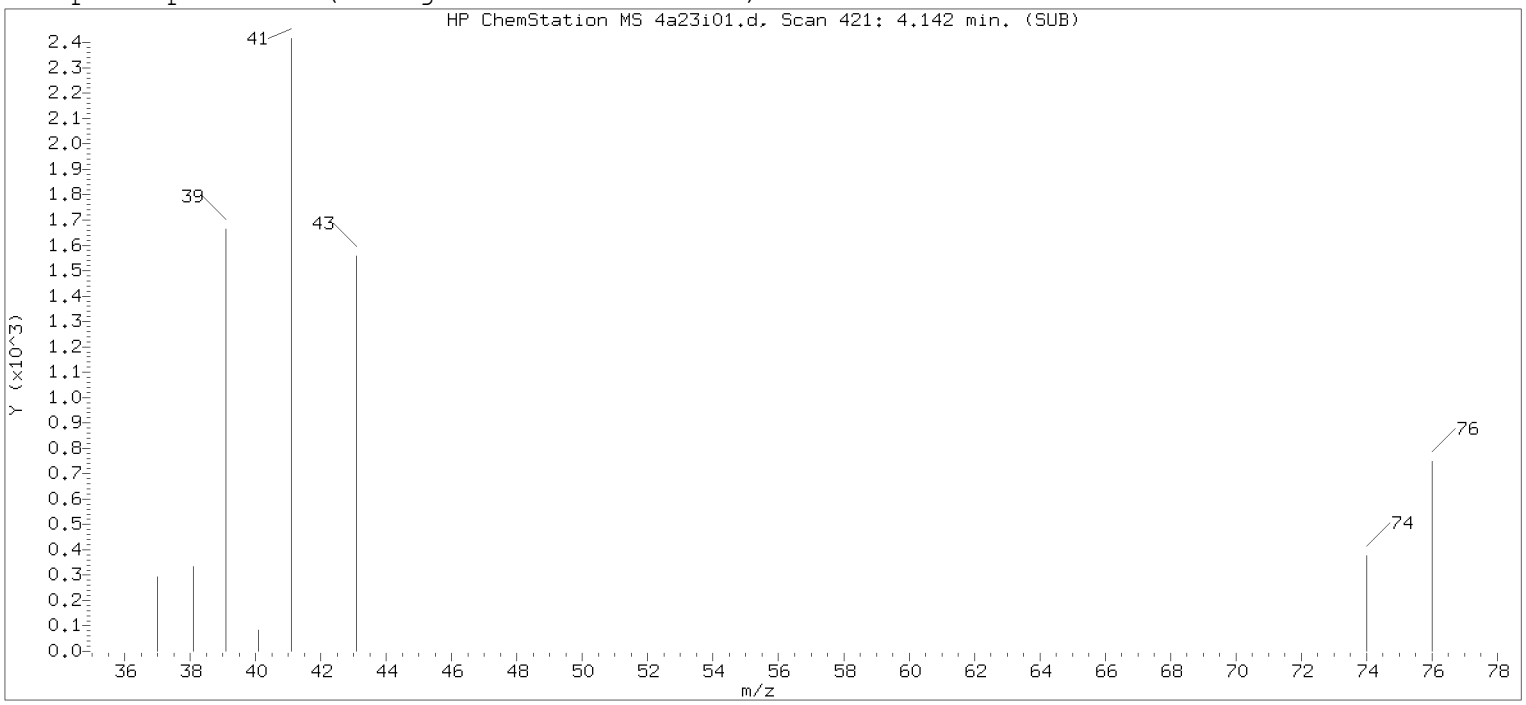
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 421
Retention Time (minutes): 4.142
Quant Ion : 43.00
Area (flag) : 9571M
On-Column Amount (ng) : 1.0000
Integration start scan : 404 Integration stop scan: 436
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

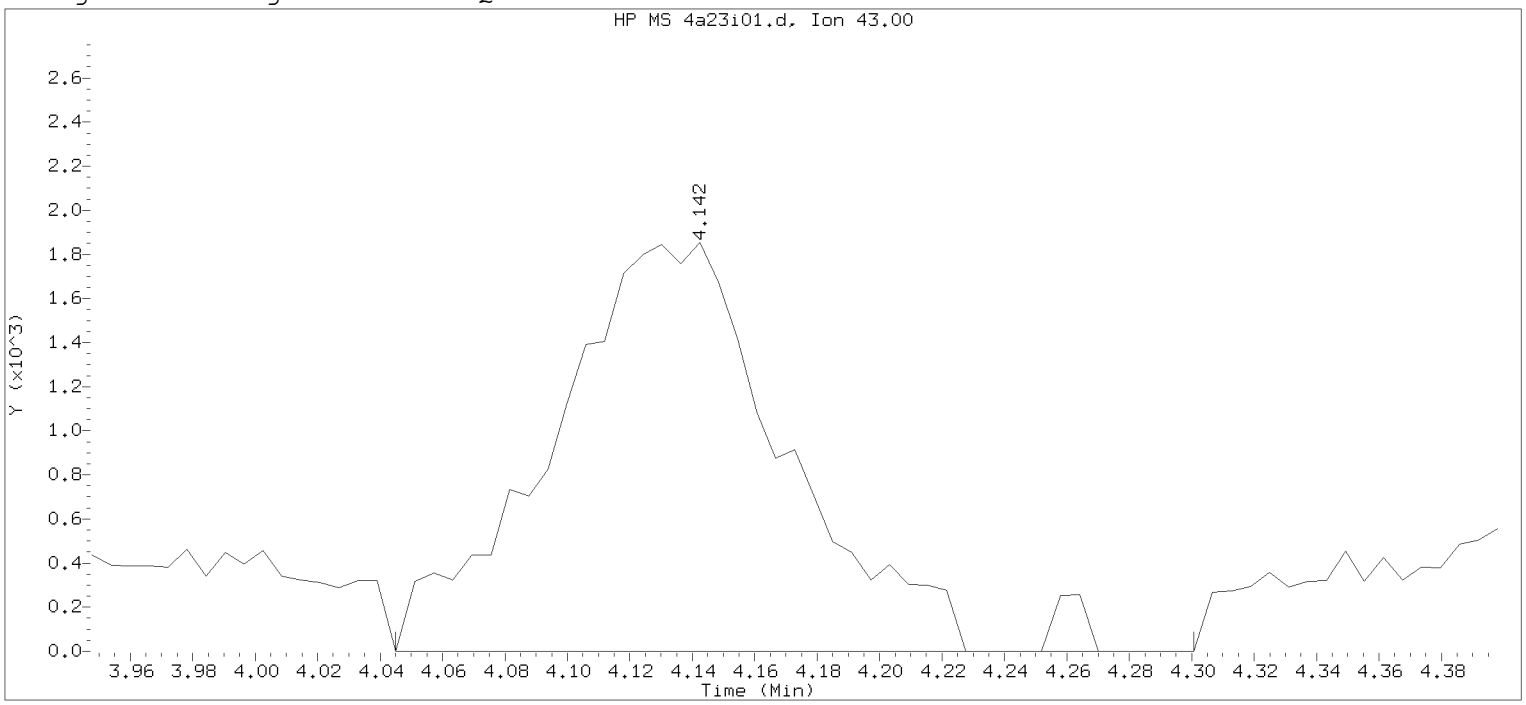
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

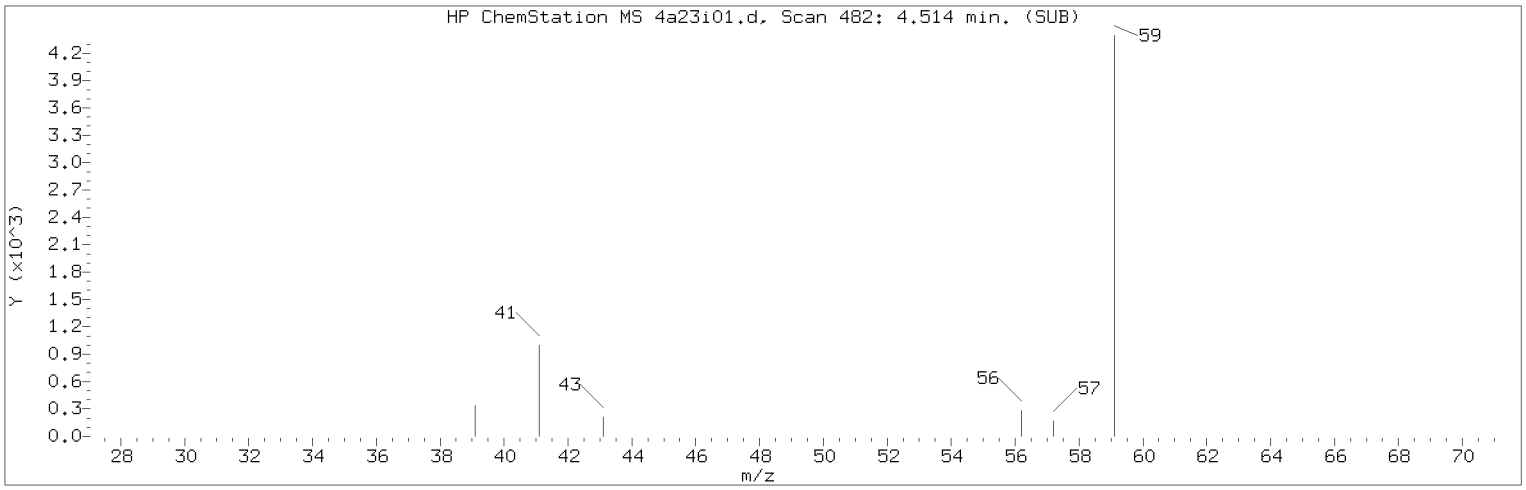
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 15:15
Date, time and analyst ID of latest file update: 23-Apr-2019 15:15 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

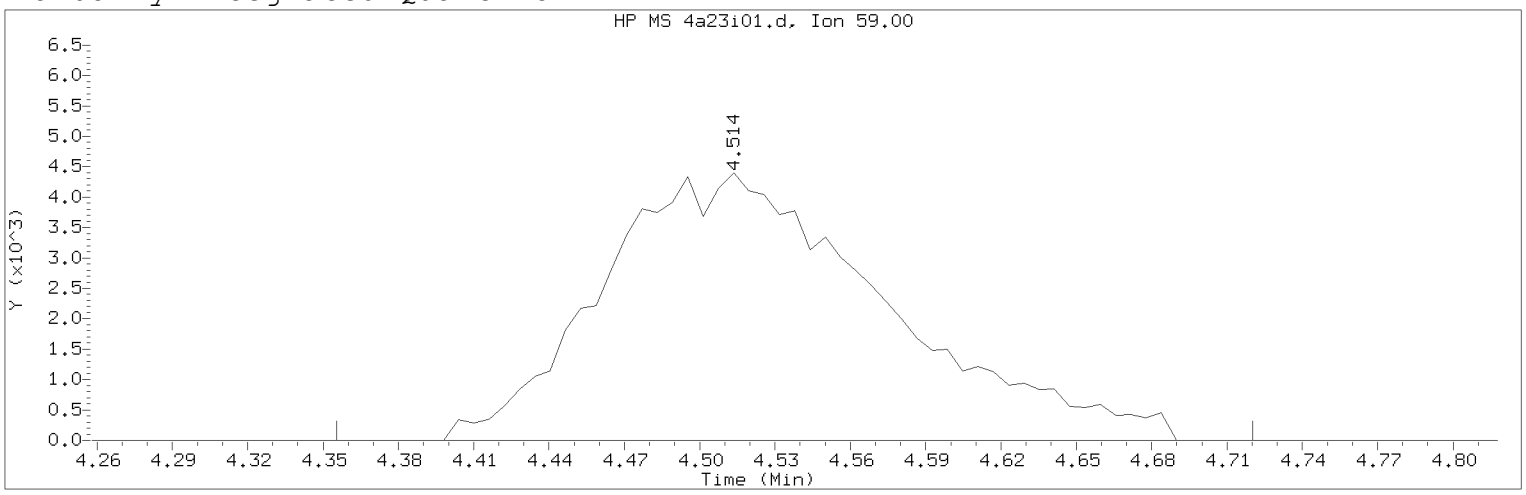
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 421
Retention Time (minutes): 4.142
Quant Ion : 43.00
Area : 9756
On-column Amount (ng) : 1.3808
Integration start scan : 404 Integration stop scan: 446
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

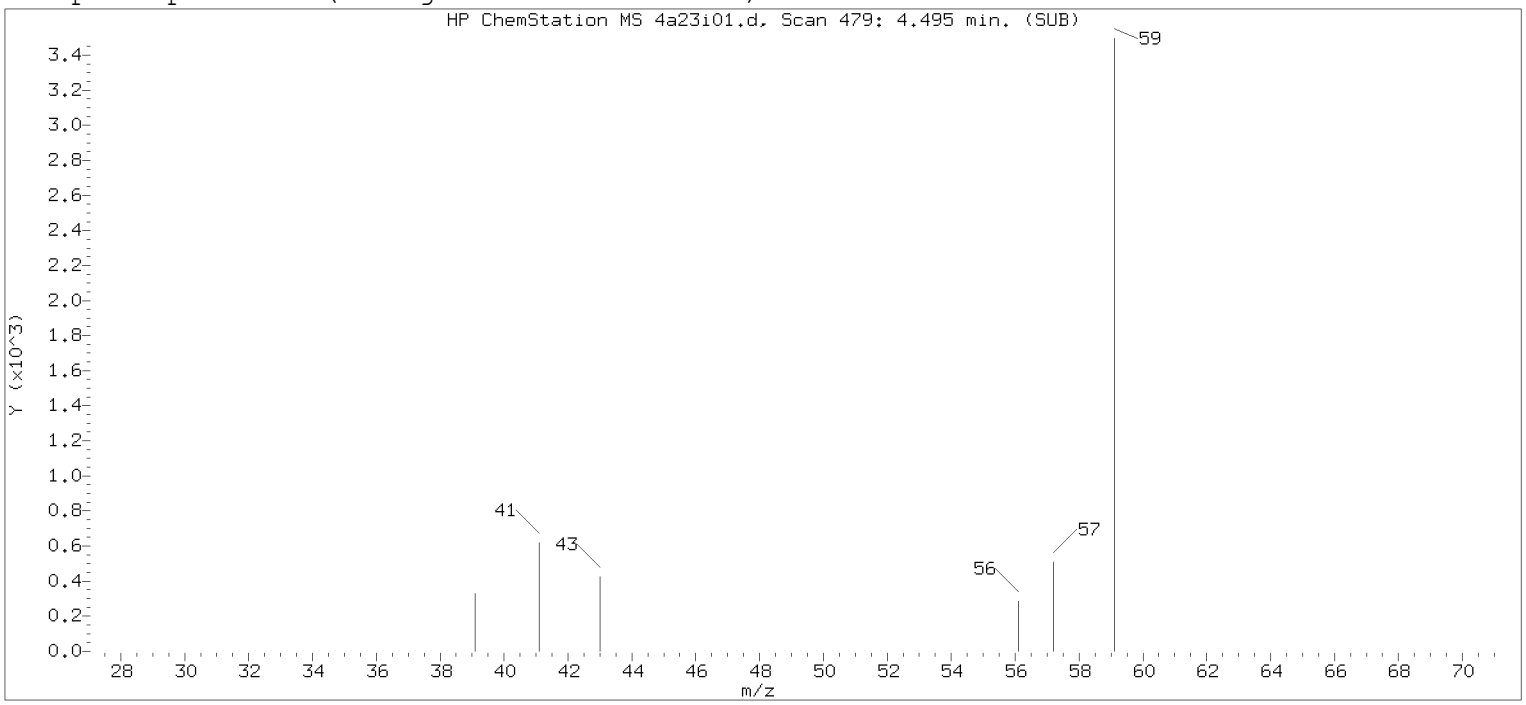
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 482
Retention Time (minutes): 4.514
Quant Ion : 59.00
Area (flag) : 34580M
On-Column Amount (ng) : 20.0000
Integration start scan : 455 Integration stop scan: 515
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

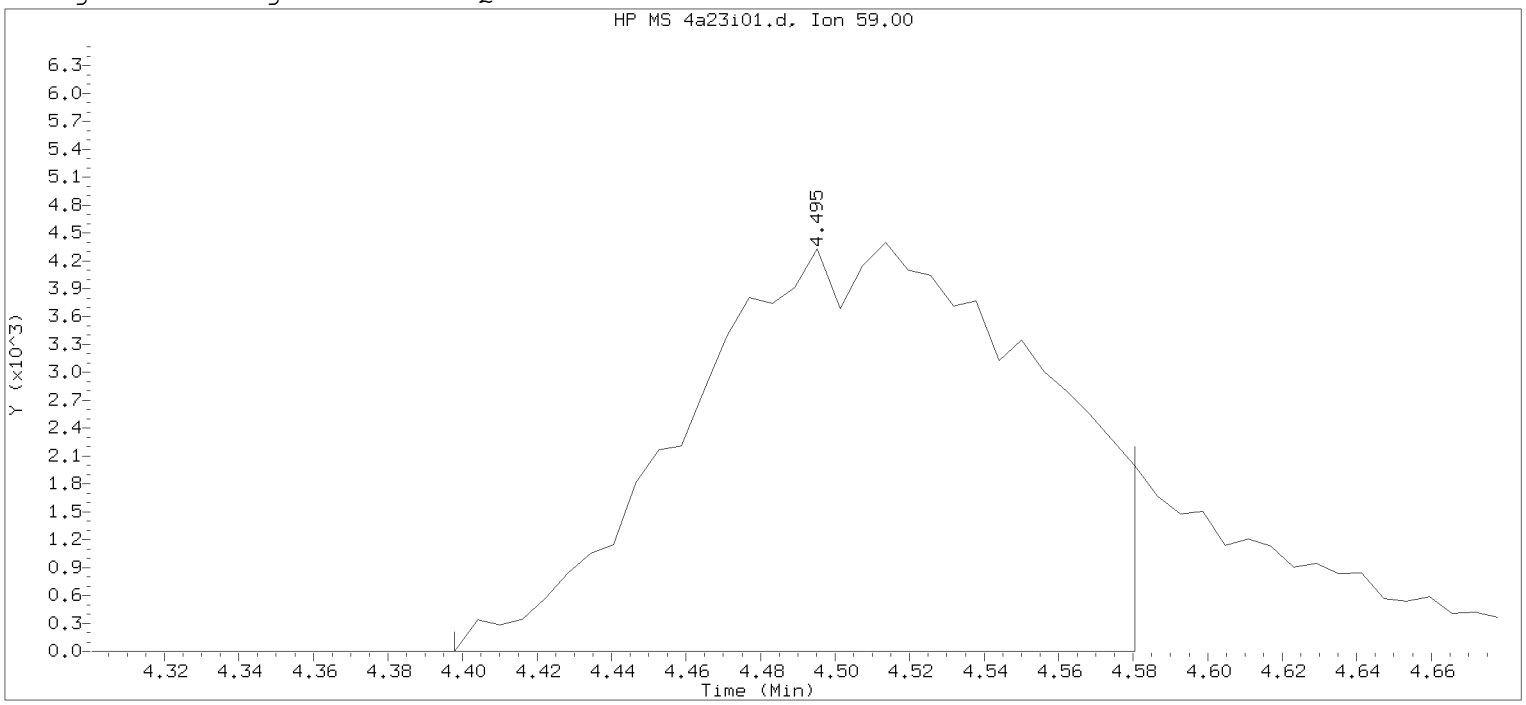
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

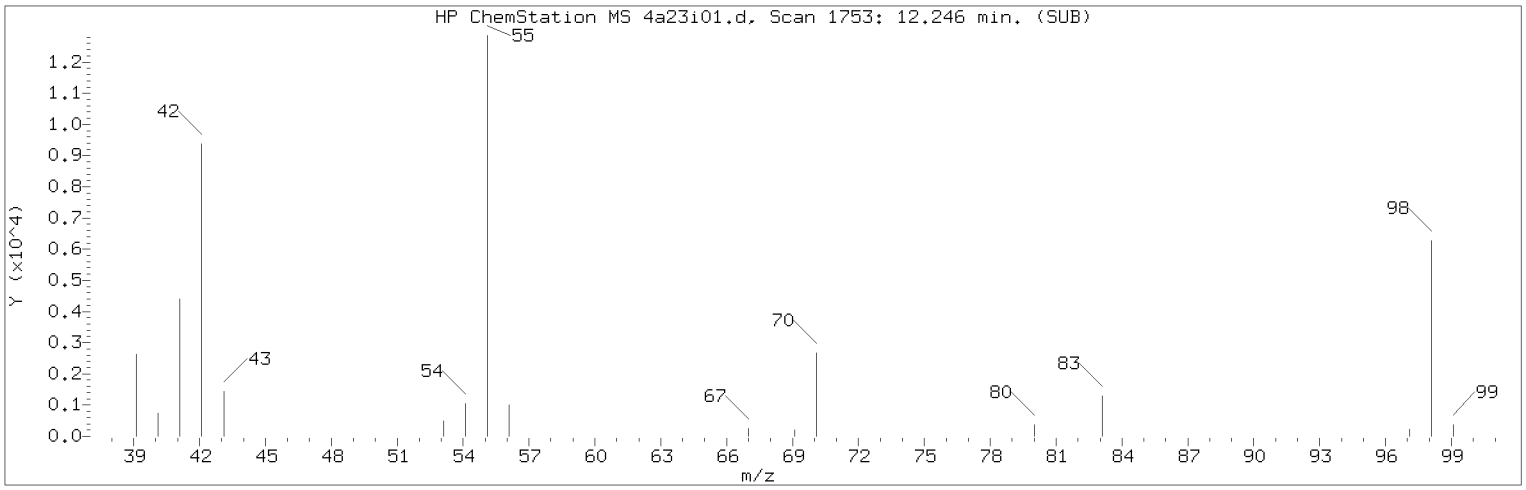
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 15:15
Date, time and analyst ID of latest file update: 23-Apr-2019 15:15 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

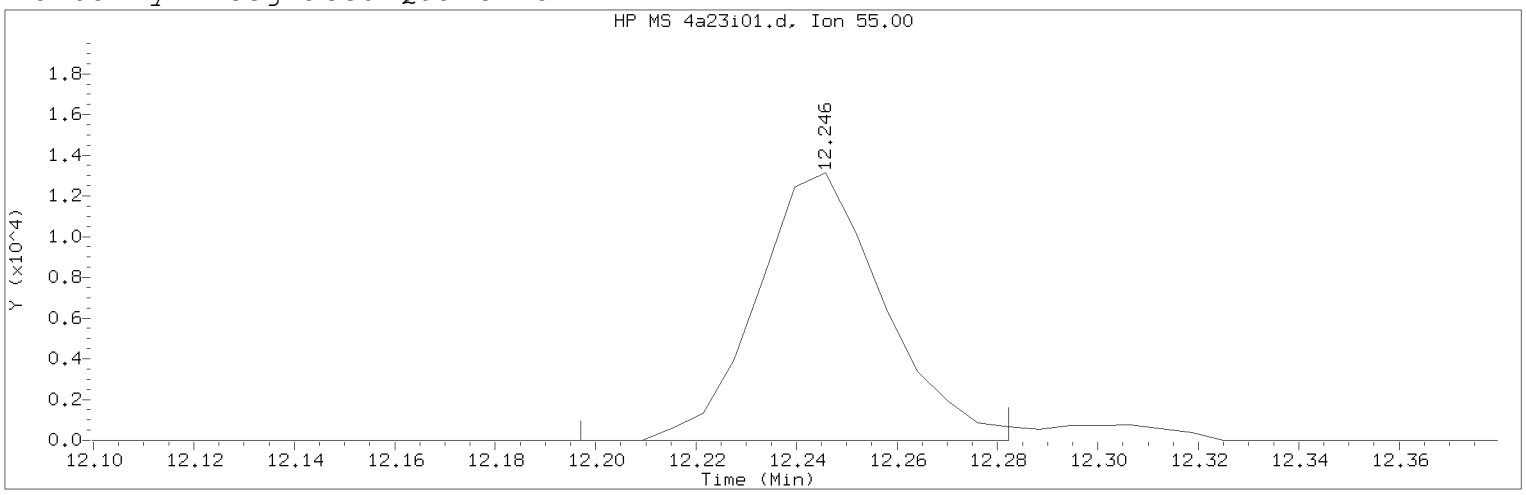
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 479
Retention Time (minutes): 4.495
Quant Ion : 59.00
Area : 28741
On-column Amount (ng) : 18.7893
Integration start scan : 462 Integration stop scan: 492
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:26.
Target 3.5 esignature user: jmlong1444

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

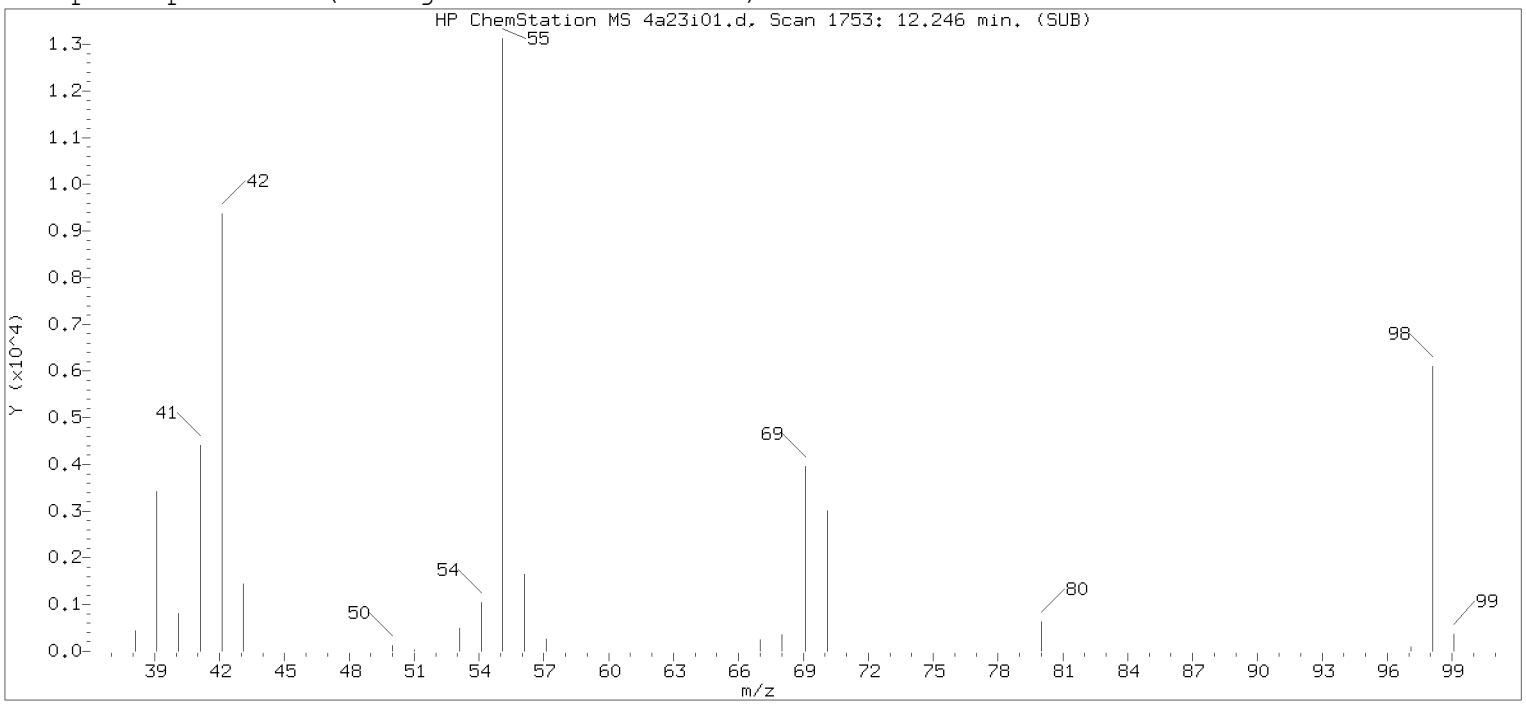
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1753
Retention Time (minutes): 12.246
Quant Ion : 55.00
Area (flag) : 22989M
On-Column Amount (ng) : 50.0000
Integration start scan : 1744 Integration stop scan: 1758
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

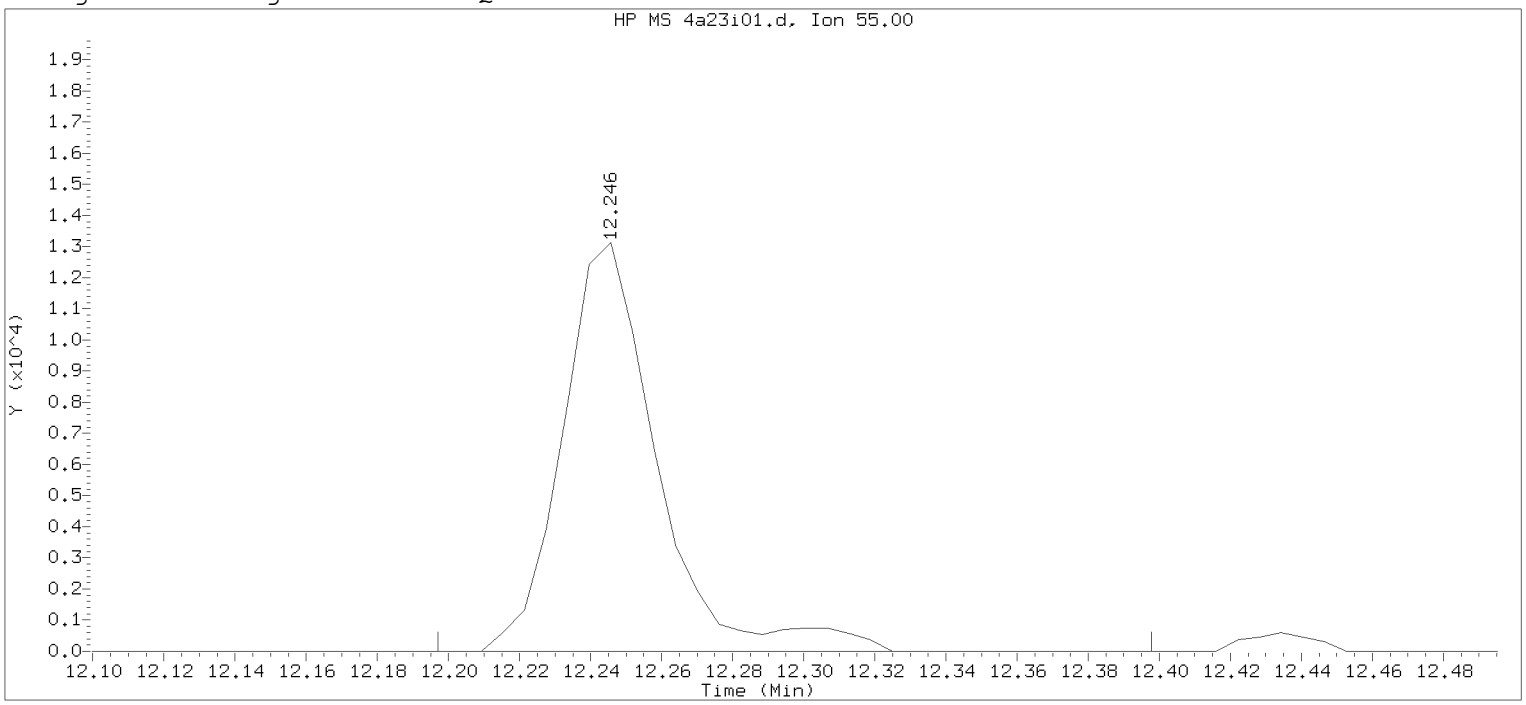
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

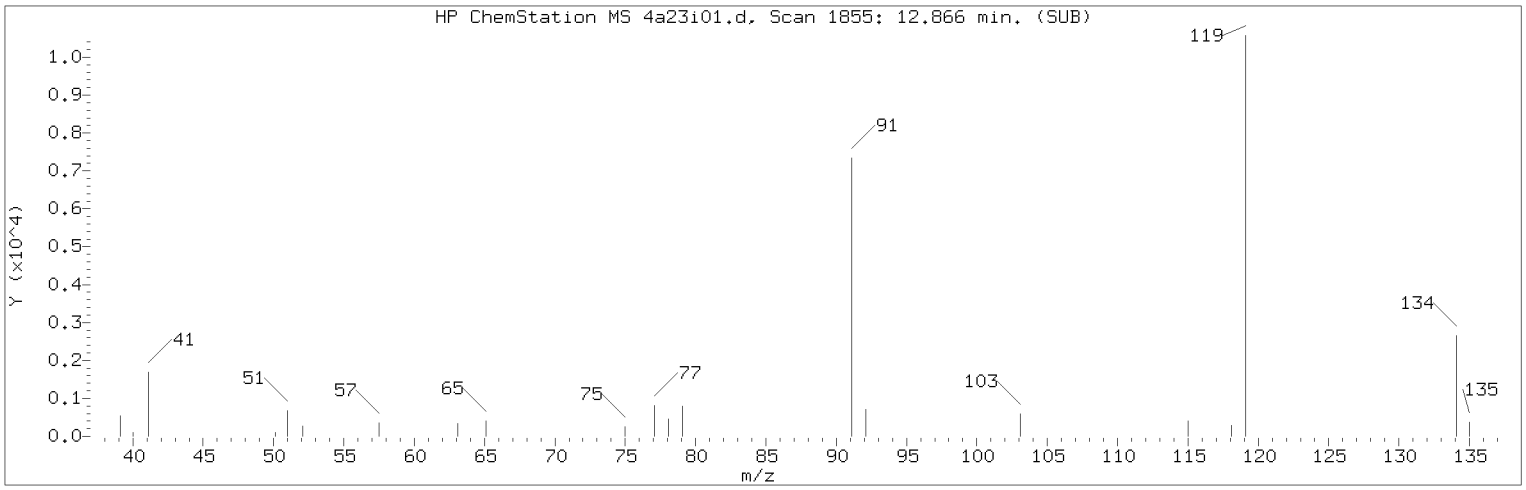
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 15:15
Date, time and analyst ID of latest file update: 23-Apr-2019 15:15 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

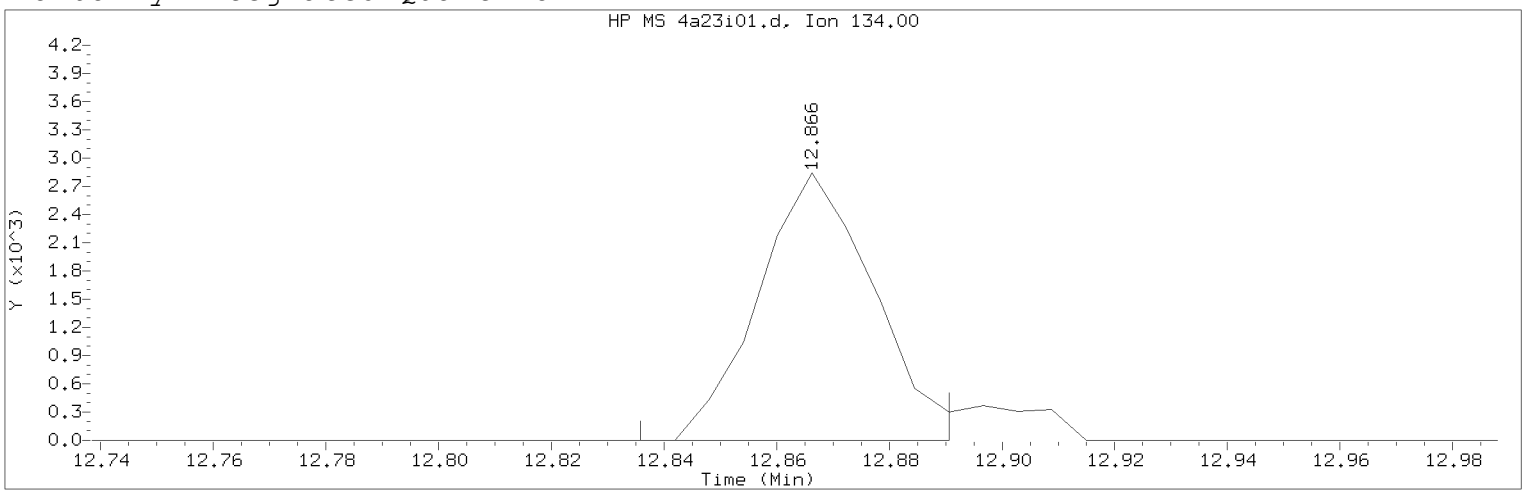
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1753
Retention Time (minutes): 12.246
Quant Ion : 55.00
Area : 24332
On-column Amount (ng) : 44.2430
Integration start scan : 1744 Integration stop scan: 1777
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jmlong446

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

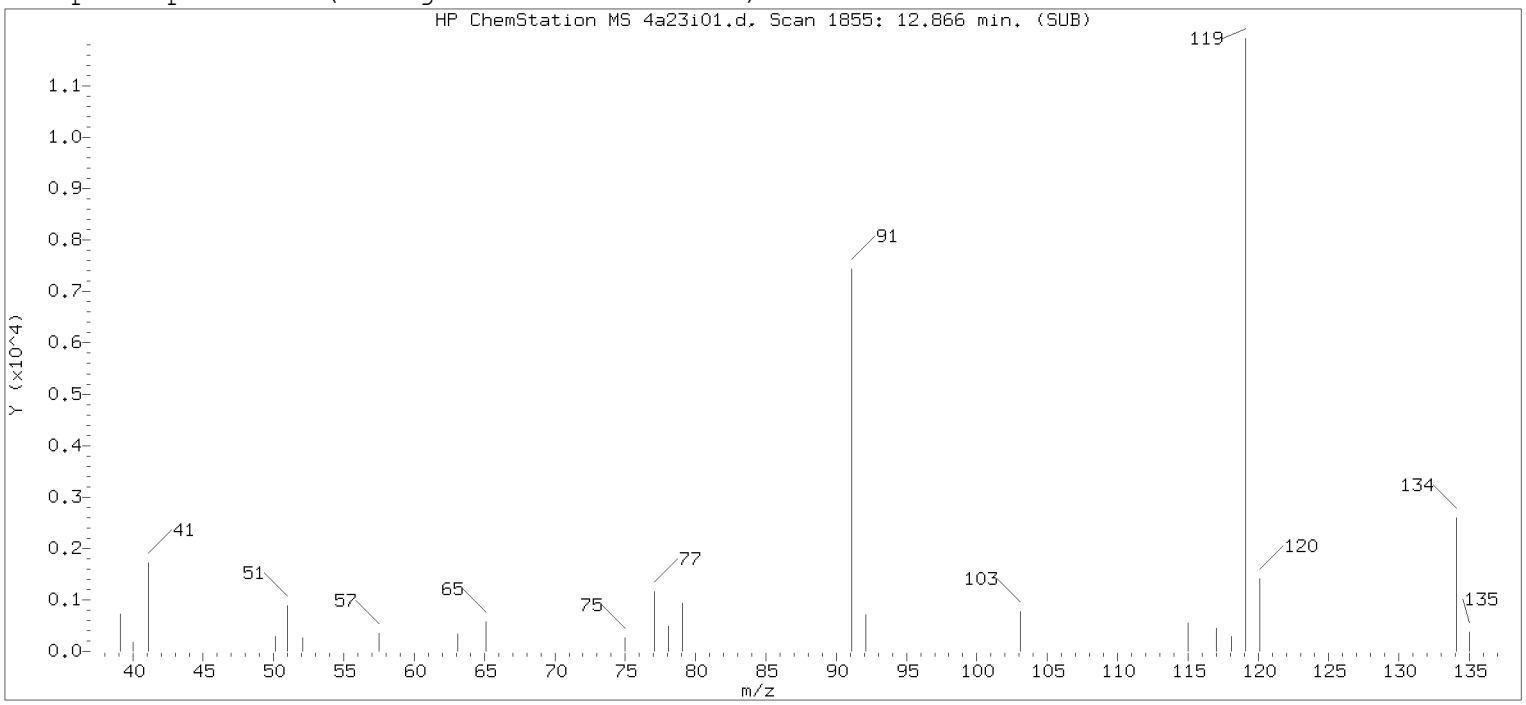
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area (flag) : 4048M
On-Column Amount (ng) : 1.0000
Integration start scan : 1849 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

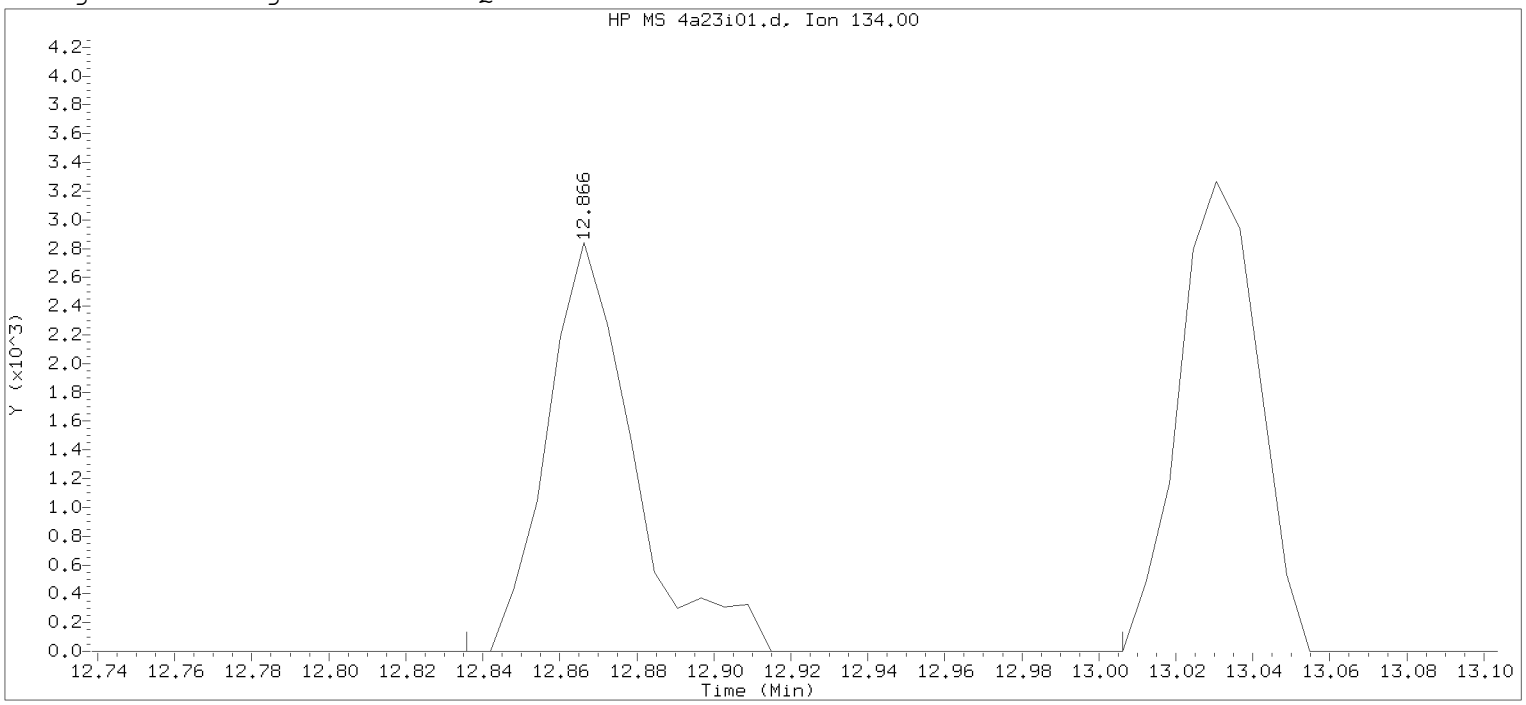
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

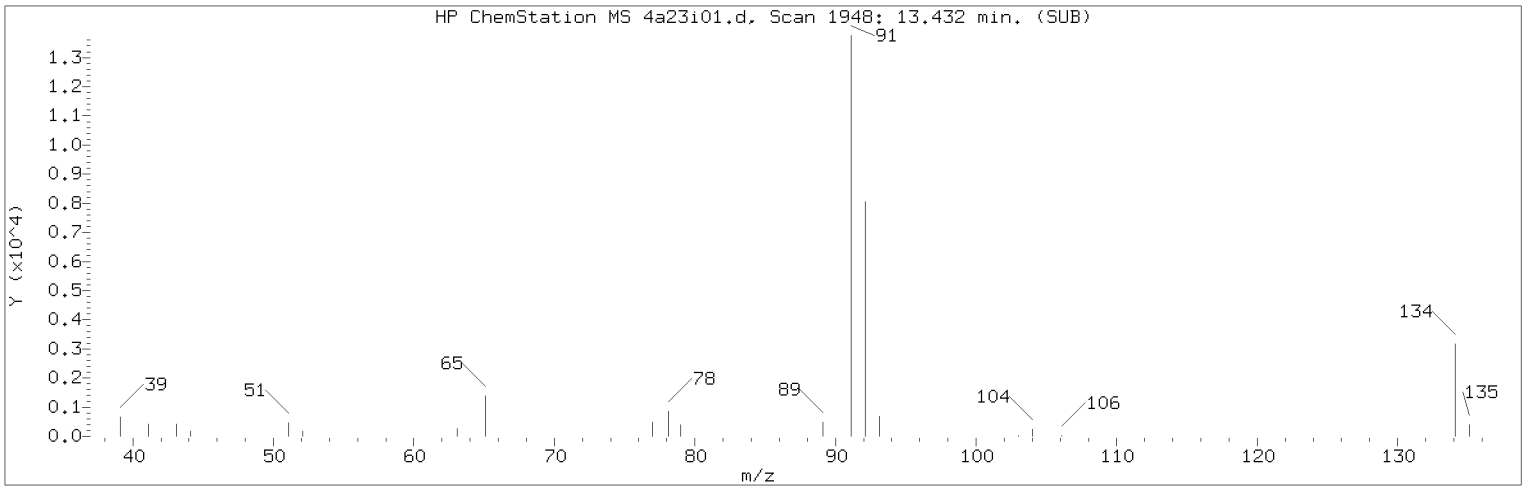
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 15:15
Date, time and analyst ID of latest file update: 23-Apr-2019 15:15 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

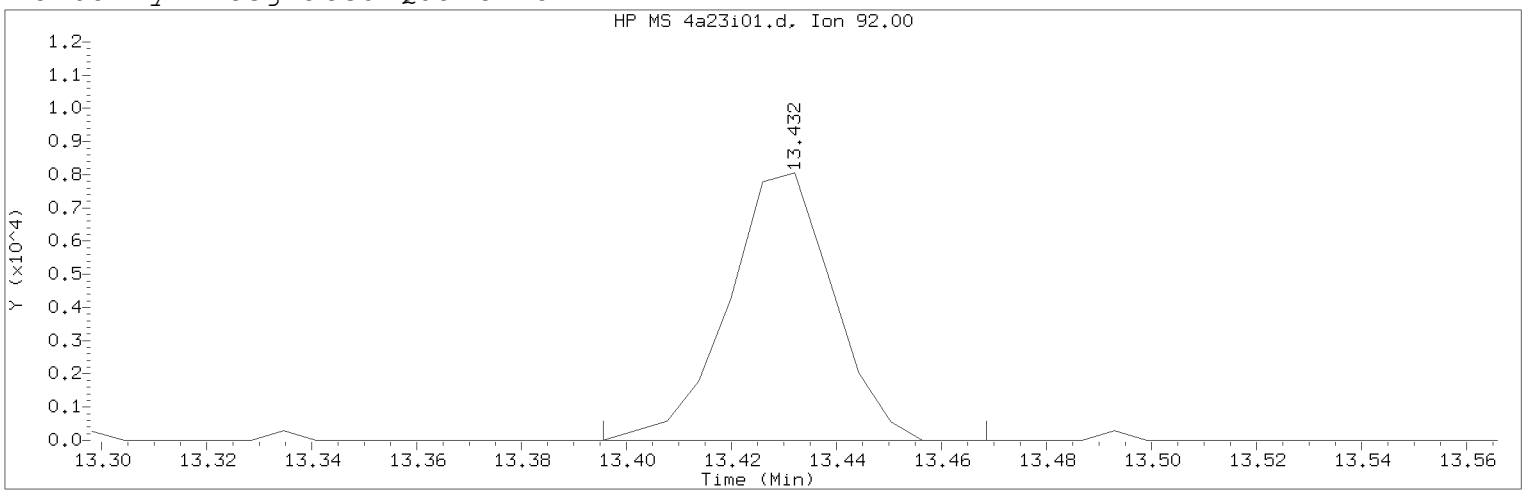
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area : 4414
On-column Amount (ng) : 0.9786
Integration start scan : 1849 Integration stop scan: 1877
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

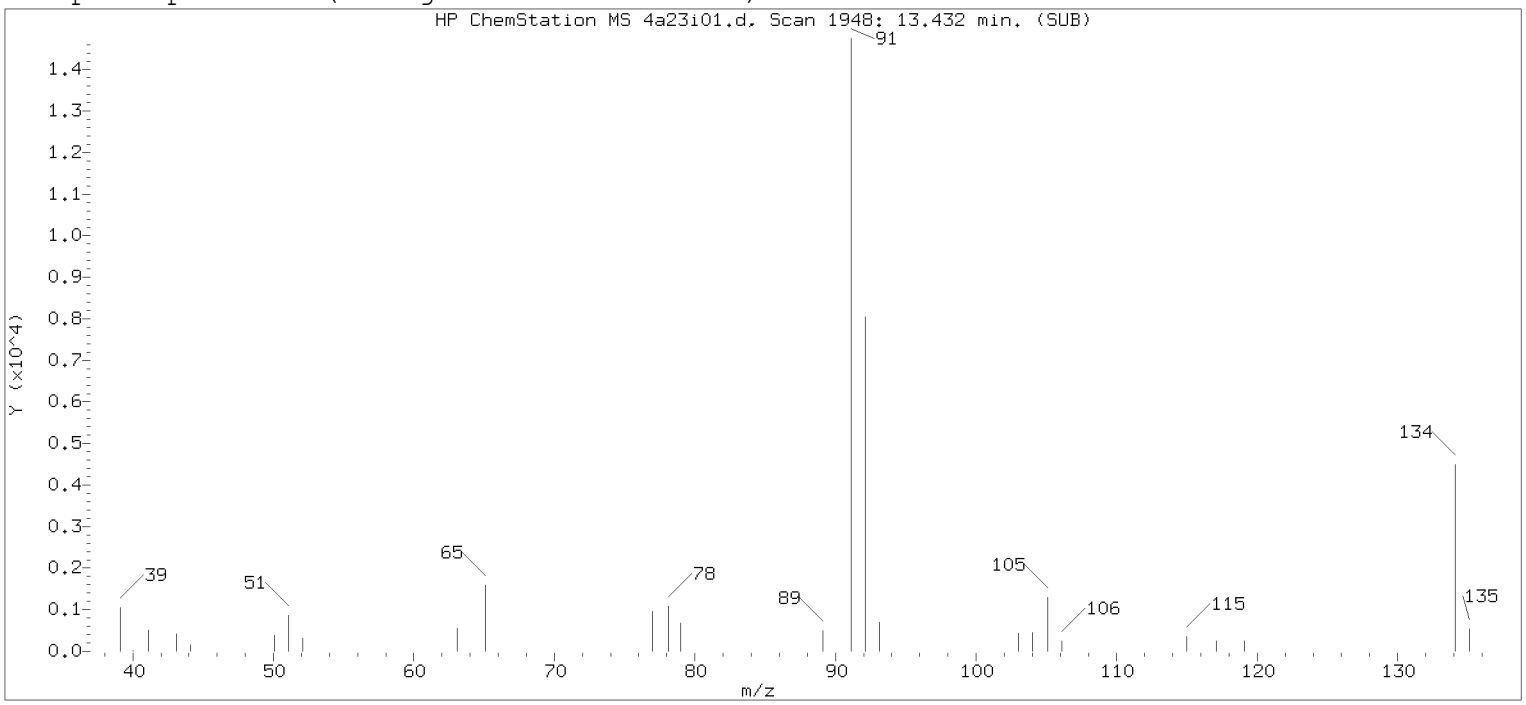
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1948
Retention Time (minutes): 13.432
Quant Ion : 92.00
Area (flag) : 11108M
On-Column Amount (ng) : 1.0000
Integration start scan : 1941 Integration stop scan: 1953
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

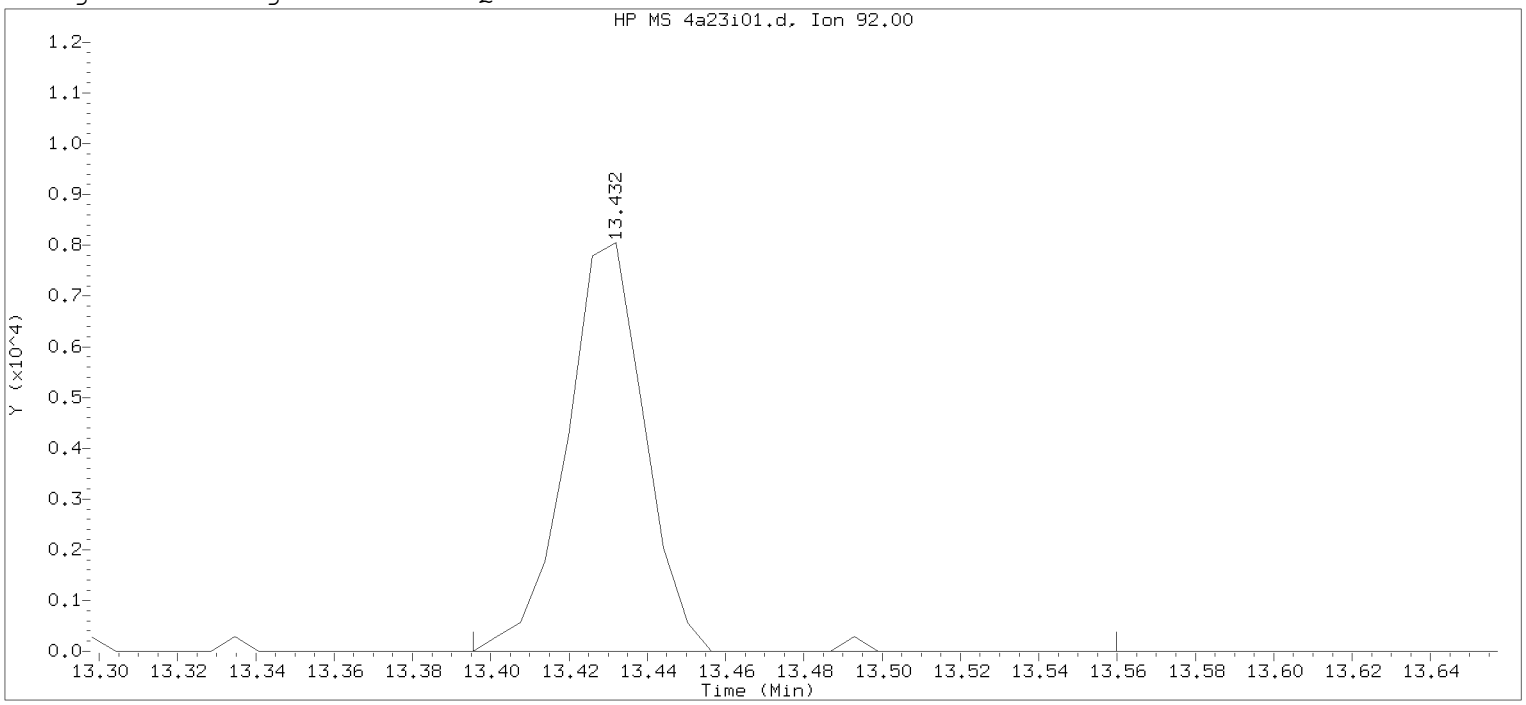
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



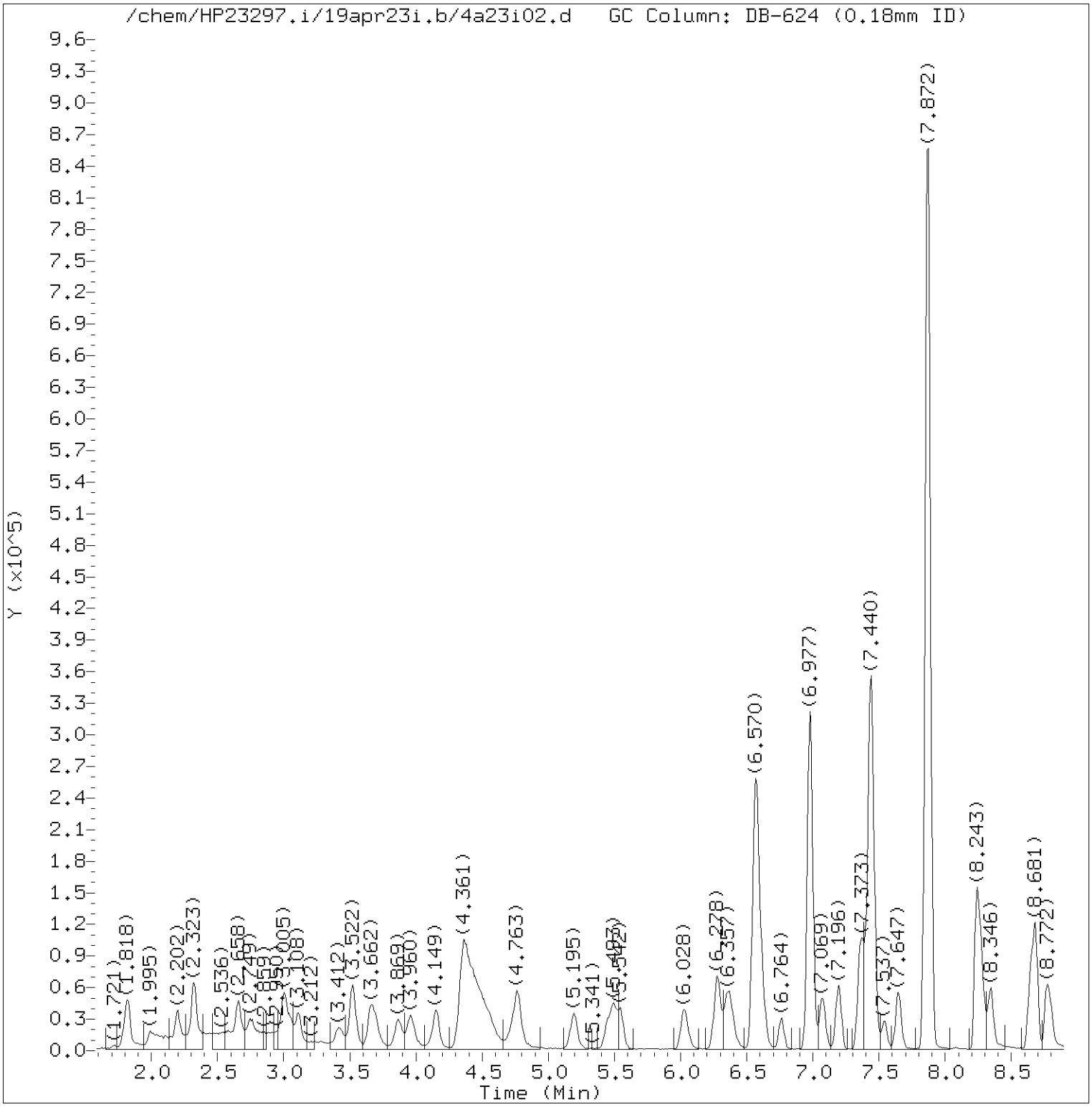
Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 15:15
Date, time and analyst ID of latest file update: 23-Apr-2019 15:15 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1948
Retention Time (minutes): 13.432
Quant Ion : 92.00
Area : 11213
On-column Amount (ng) : 0.9511
Integration start scan : 1941 Integration stop scan: 1968
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jmlong450



Total Ion Chromatogram (TIC)

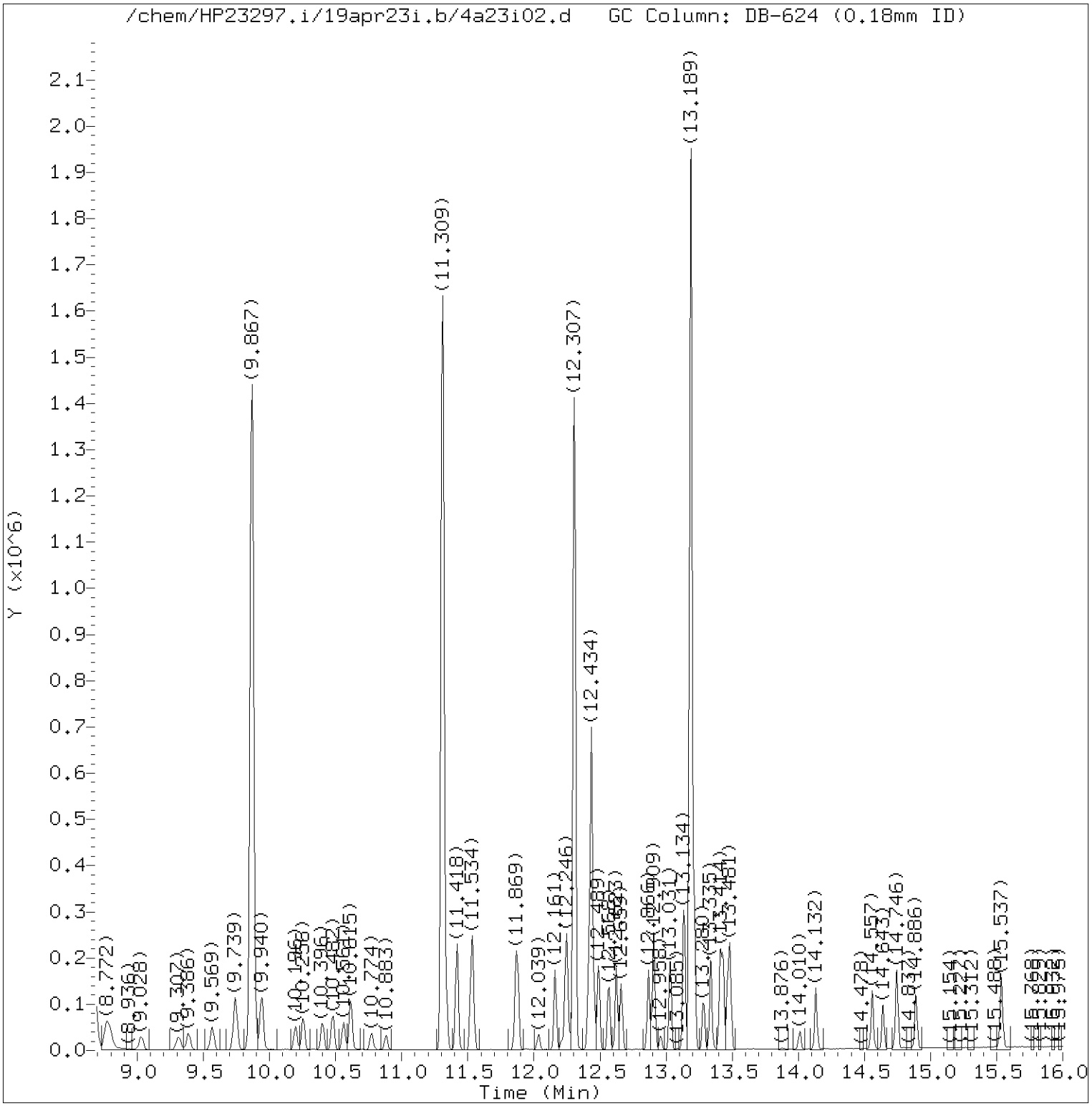
Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.995	85	38121	4.546
4) Chloromethane	(2)	2.196	50	36820	4.262
6) Vinyl Chloride	(2)	2.317	62	35190	4.232
5) 1,3-Butadiene	(2)	2.323	39	20442M	4.292
8) Bromomethane	(2)	2.658	94	29438M	4.149
9) Chloroethane	(2)	2.749	64	19790	4.110
10) Dichlorofluoromethane	(2)	3.005	67	46231	3.908
12) Trichlorofluoromethane	(2)	3.060	101	42287	4.435
11) n-Pentane	(2)	3.114	43	34246	4.383
13) Ethanol	(1)	3.279	45	44794M	271.264
15) Freon 123a	(2)	3.412	67	24177	4.223
16) Acrolein	(1)	3.522	56	97290	39.728
17) 1,1-Dichloroethene	(2)	3.656	96	16363	4.434
17) 1,1-Dichloroethene	(2)	3.656	63	8909	4.240
19) Freon 113	(2)	3.692	101	18312	4.529
18) Acetone	(1)	3.704	58	9593	8.330
22) Methyl Iodide	(2)	3.863	142	32244	4.374
21) 2-Propanol	(1)	3.881	45	78631M	77.530
23) Carbon Disulfide	(2)	3.960	76	58918	4.431
27) Methyl Acetate	(2)	4.136	43	35055	3.882
25) Allyl Chloride	(2)	4.155	41	36995	3.913
28) Methylene Chloride	(2)	4.361	84	20756	4.108
29)*t-Butyl alcohol-d10	(1)	4.374	65	444616	250.000
30) t-Butyl alcohol	(1)	4.520	59	138716	79.979
31) Acrylonitrile	(2)	4.726	53	17323	4.199
33) Methyl Tertiary Butyl Ether	(2)	4.763	73	58433	4.139
32) trans-1,2-Dichloroethene	(2)	4.769	96	19151	4.364
34) n-Hexane	(2)	5.195	57	33718	4.500
36) 1,1-Dichloroethane	(2)	5.444	63	36702	4.330
38) di-Isopropyl ether	(2)	5.493	45	71738	4.178
39) 2-Chloro-1,3-butadiene	(2)	5.548	53	32765	4.448
40) Ethyl t-butyl ether	(2)	6.028	59	61583	4.123
43) 1,2-Dichloroethene (Total)	(2)		96	41209	8.674
44) 2-Butanone	(2)	6.260	43	54351	7.899
42) cis-1,2-Dichloroethene	(2)	6.278	96	22058	4.310
45) 2,2-Dichloropropane	(2)	6.290	77	28892	4.426
47) Propionitrile	(1)	6.363	54	139356	80.196
48) Methacrylonitrile	(2)	6.570	67	157457	40.925

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.612	128	11629	4.219
50) Tetrahydrofuran	(1)	6.625	71	13766	7.916
51) Chloroform	(2)	6.764	83	34917	4.131
52)$Dibromofluoromethane	(2)	6.977	113	273943	50.237
52)$Dibromofluoromethane	(2)	6.977	111	279678	50.187
53) 1,1,1-Trichloroethane	(2)	6.983	97	30055	4.336
54) Cyclohexane	(2)	7.063	56	39669	4.368
54) Cyclohexane	(2)	7.069	84	32136	4.462
54) Cyclohexane	(2)	7.075	69	11453	4.436
56) Carbon Tetrachloride	(2)	7.190	117	25745	4.397
55) 1,1-Dichloropropene	(2)	7.196	75	28221	4.299
58) Isobutyl Alcohol	(1)	7.373	41	122096	200.786
57)$1,2-Dichloroethane-d4	(2)	7.440	102	66840	50.480
57)$1,2-Dichloroethane-d4	(2)	7.440	65	329512	50.453
57)$1,2-Dichloroethane-d4	(2)	7.440	104	43058	51.092
60) Benzene	(2)	7.458	78	85495	4.214
61) 1,2-Dichloroethane	(2)	7.543	62	28450	3.865
61) 1,2-Dichloroethane	(2)	7.543	98	2555	5.575
65) t-Amyl methyl ether	(2)	7.640	73	62974	4.121
67) n-Heptane	(2)	7.866	43	39061	4.241
66)*Fluorobenzene	(2)	7.872	96	1107948	50.000
69) n-Butanol	(1)	8.243	56	194818	416.914
71) Trichloroethene	(2)	8.346	95	21683	4.363
72) Methylcyclohexane	(2)	8.644	83	40794	4.471
72) Methylcyclohexane	(2)	8.650	98	17261	4.423
73) 1,2-Dichloropropane	(2)	8.687	63	21994	4.225
76) Methyl Methacrylate	(2)	8.760	69	23867	4.063
75) 1,4-Dioxane	(1)	8.790	88	29670	237.386
74) Dibromomethane	(2)	8.796	93	14097	4.259
78) Bromodichloromethane	(2)	9.028	83	25327	4.230
79) 2-Nitropropane	(2)	9.307	41	26005	8.347
80) 2-Chloroethyl Vinyl Ether	(2)	9.386	63	19613	4.145
81) cis-1,3-Dichloropropene	(2)	9.569	75	33085	4.230
82) 4-Methyl-2-pentanone	(2)	9.739	43	96160	8.161
83)$Toluene-d8	(3)	9.867	98	1147757	49.903
83)$Toluene-d8	(3)	9.867	100	741630	49.936
88) Toluene	(3)	9.940	92	55080	4.199
90) 1,3-Dichloropropene (total)	(3)		100	63331	8.490

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.196	75	30246	4.260
91) Ethyl Methacrylate	(3)	10.256	69	38402	4.082
92) 1,1,2-Trichloroethane	(3)	10.396	97	20410	4.026
93) Tetrachloroethene	(3)	10.482	166	23550	4.280
94) 1,3-Dichloropropane	(3)	10.561	76	35632	4.162
96) 2-Hexanone	(3)	10.615	43	76271	8.132
97) Dibromochloromethane	(3)	10.774	129	20616	4.147
99) 1,2-Dibromoethane	(3)	10.883	107	22868	4.146
100)*Chlorobenzene-d5	(3)	11.309	117	883788	50.000
102) Chlorobenzene	(3)	11.333	112	62399	4.278
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	19727	4.330
104) Ethylbenzene	(3)	11.418	91	105984	4.314
106) m+p-Xylene	(3)	11.534	106	82600	8.600
108) Xylene (Total)	(3)		106	123559	12.822
107) o-Xylene	(3)	11.862	106	40959	4.223
109) Styrene	(3)	11.875	104	66529	4.333
110) Bromoform	(3)	12.039	173	15357	4.160
111) Isopropylbenzene	(3)	12.161	105	102670	4.262
112) Cyclohexanone	(1)	12.246	55	109021	216.647
114)$4-Bromofluorobenzene	(3)	12.307	95	437336	50.505
114)$4-Bromofluorobenzene	(3)	12.307	174	383507	50.398
116) 1,1,2,2-Tetrachloroethane	(4)	12.410	83	37181	4.122
115) Bromobenzene	(4)	12.422	156	27819	4.166
118) trans-1,4-Dichloro-2-butene	(4)	12.434	53	120454	41.547
117) 1,2,3-Trichloropropane	(4)	12.453	110	11365	4.096
119) n-Propylbenzene	(4)	12.489	91	126895	4.227
120) 2-Chlorotoluene	(4)	12.568	126	25325	4.161
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	89182	4.232
121) 4-Chlorotoluene	(4)	12.659	126	26743	4.165
124) tert-Butylbenzene	(4)	12.866	134	18384M	4.220
125) Pentachloroethane	(4)	12.903	167	15222	4.103
126) 1,2,4-Trimethylbenzene	(4)	12.909	105	91657	4.228
127) sec-Butylbenzene	(4)	13.031	105	115833	4.335
129) 1,3-Dichlorobenzene	(4)	13.128	146	52251	4.132
130) p-Isopropyltoluene	(4)	13.140	119	98068	4.283
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	497310	50.000
133) 1,4-Dichlorobenzene	(4)	13.201	146	54595	4.210
134) 1,2,3-Trimethylbenzene	(4)	13.213	105	97768	4.158

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

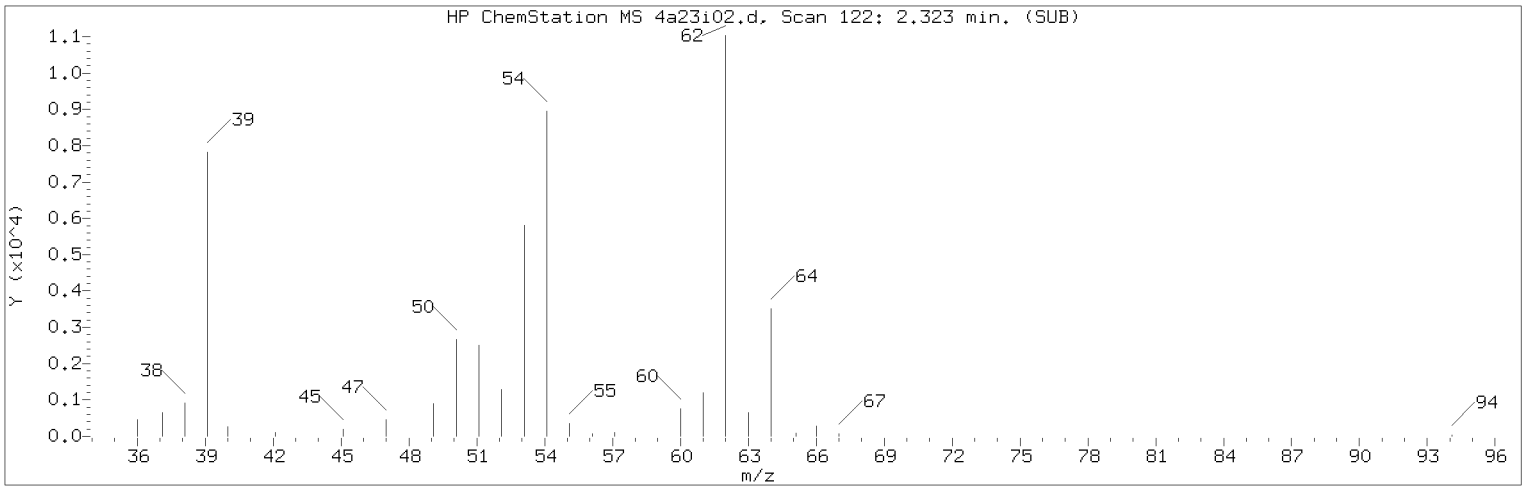
Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.280	91	66766	4.183
136) 1,3-Diethylbenzene	(4)	13.341	119	61735	4.302
141) Diethylbenzene (total)	(4)		100	177761	12.787
137) 1,4-Diethylbenzene	(4)	13.408	119	64438	4.232
139) n-Butylbenzene	(4)	13.432	92	51666M	4.268
138) 1,2-Dichlorobenzene	(4)	13.469	146	51332	4.132
140) 1,2-Diethylbenzene	(4)	13.487	119	51588	4.253
142) 1,2-Dibromo-3-chloropropane	(4)	14.010	75	9364	3.841
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	38459	4.056
146) 1,2,4-Trichlorobenzene	(4)	14.557	180	36821	3.990
147) Hexachlorobutadiene	(4)	14.643	225	16377	3.641
148) Naphthalene	(4)	14.746	128	126044	4.063
149) 1,2,3-Trichlorobenzene	(4)	14.886	180	35090	4.036
150) 2-Methylnaphthalene	(4)	15.537	142	74432	4.064

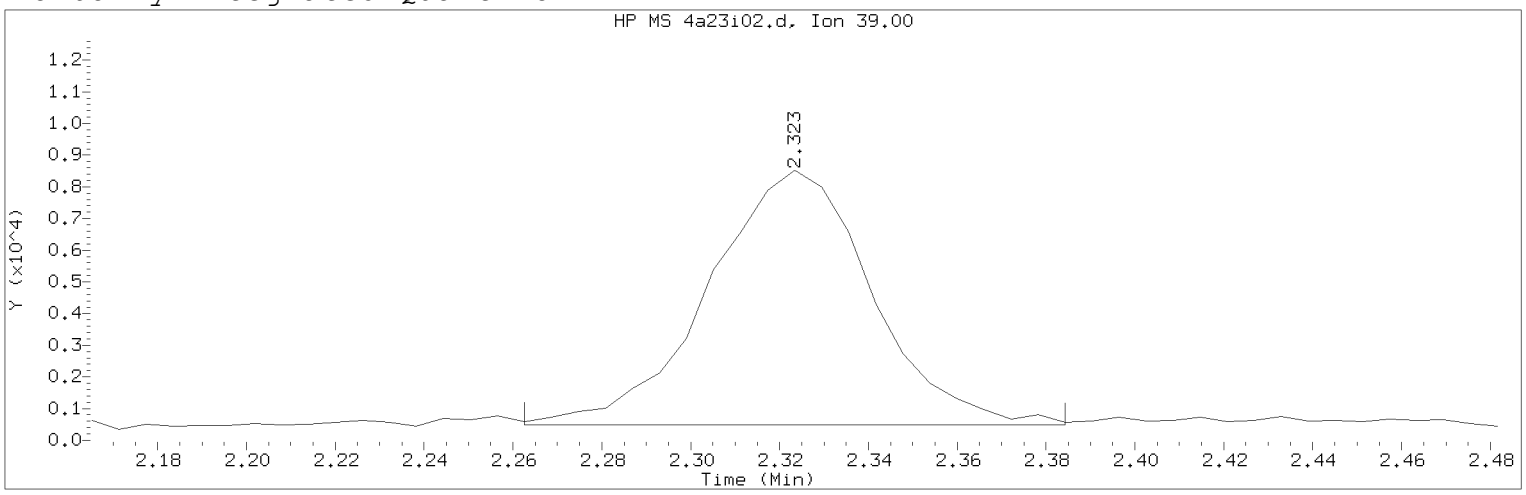
M = Compound was manually integrated.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

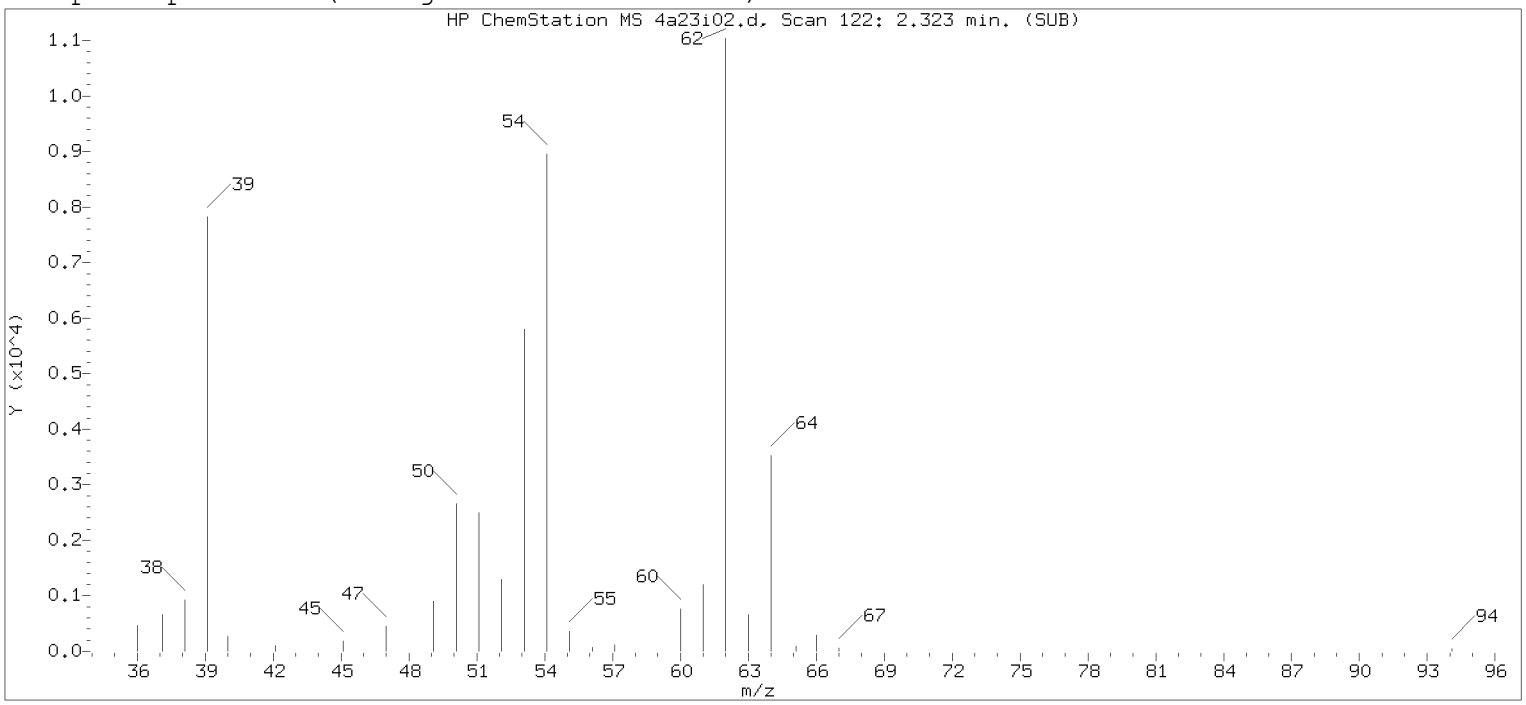
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 122
Retention Time (minutes): 2.323
Quant Ion : 39.00
Area (flag) : 20442M
On-Column Amount (ng) : 4.2915
Integration start scan : 111 Integration stop scan: 131
Y at integration start : 493 Y at integration end: 493

Reason for manual integration: improper integration

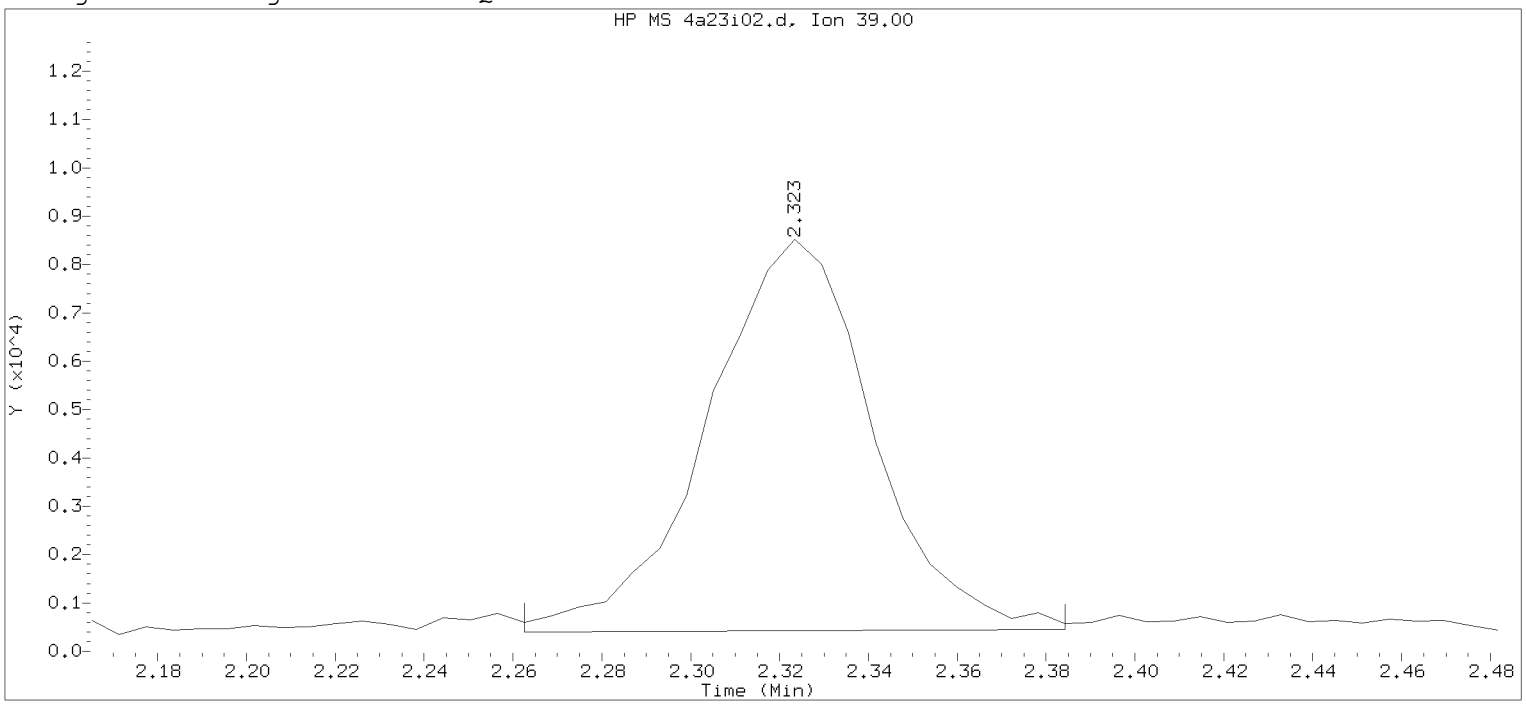
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

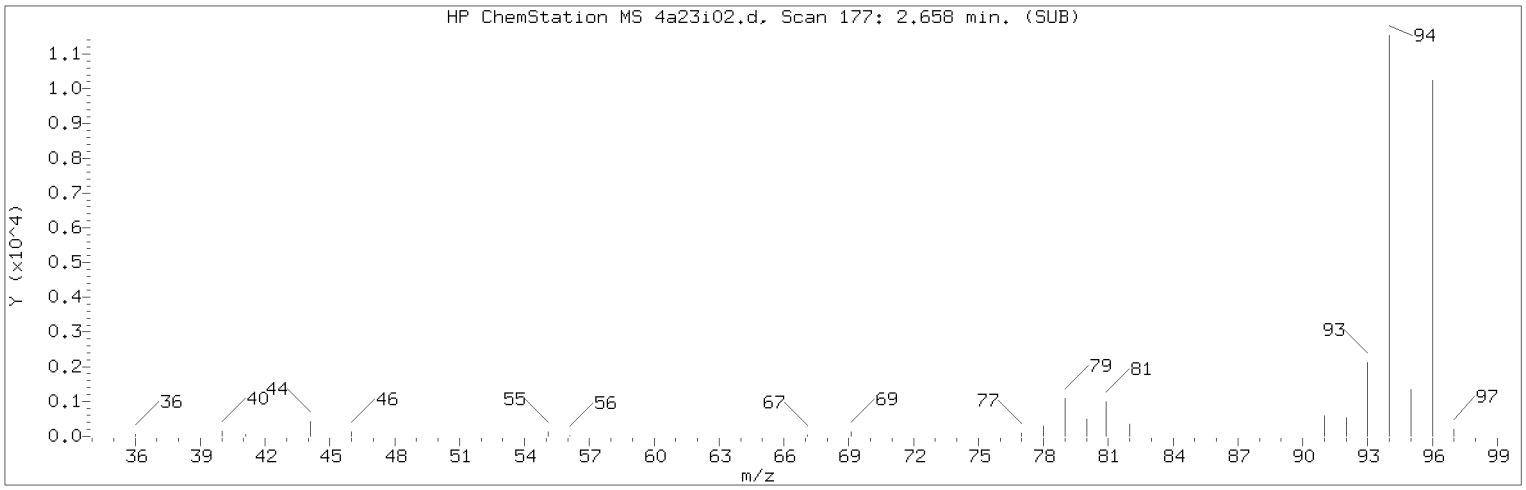
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 15:38
Date, time and analyst ID of latest file update: 23-Apr-2019 15:38 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

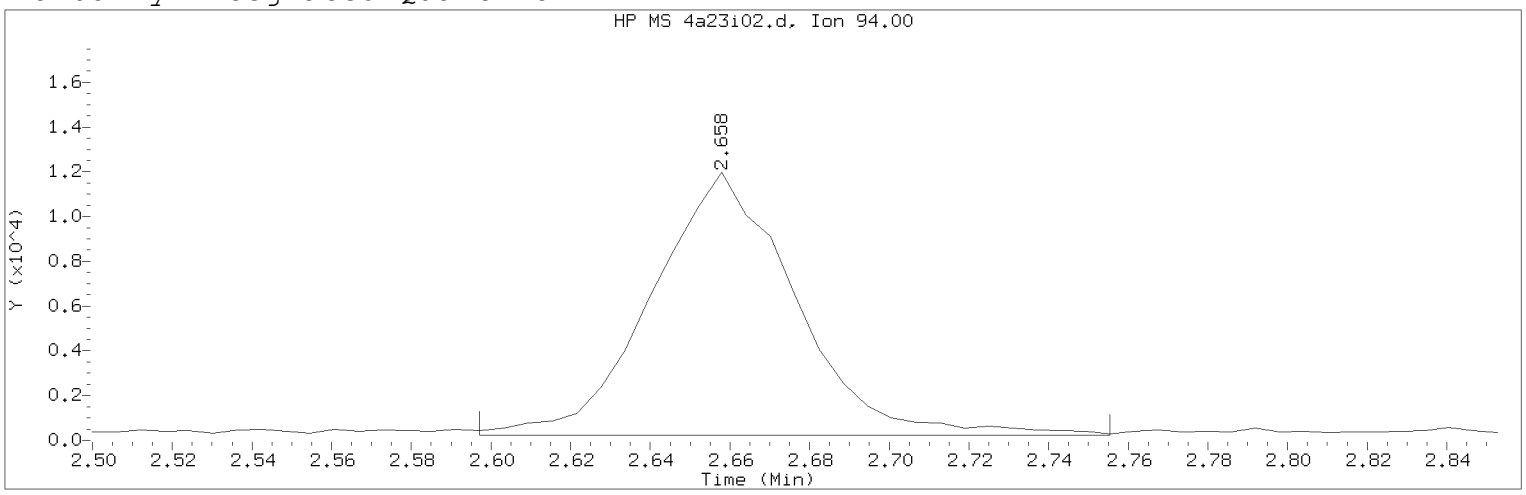
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 122
Retention Time (minutes): 2.323
Quant Ion : 39.00
Area : 20916
On-column Amount (ng) : 5.0290
Integration start scan : 111 Integration stop scan: 131
Y at integration start : 398 Y at integration end: 449

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user: jmlong1455

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

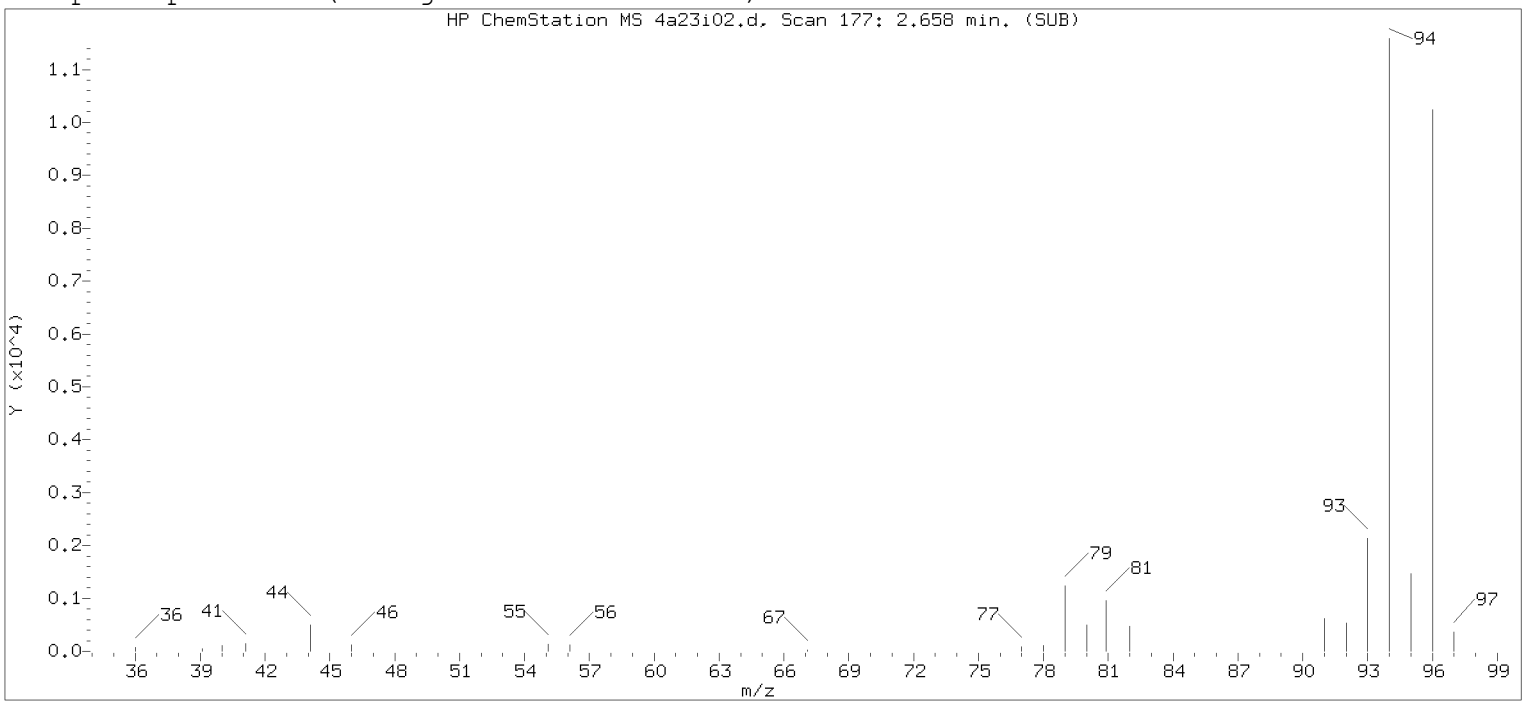
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 177
Retention Time (minutes): 2.658
Quant Ion : 94.00
Area (flag) : 29438M
On-Column Amount (ng) : 4.1486
Integration start scan : 166 Integration stop scan: 192
Y at integration start : 242 Y at integration end: 242

Reason for manual integration: improper integration

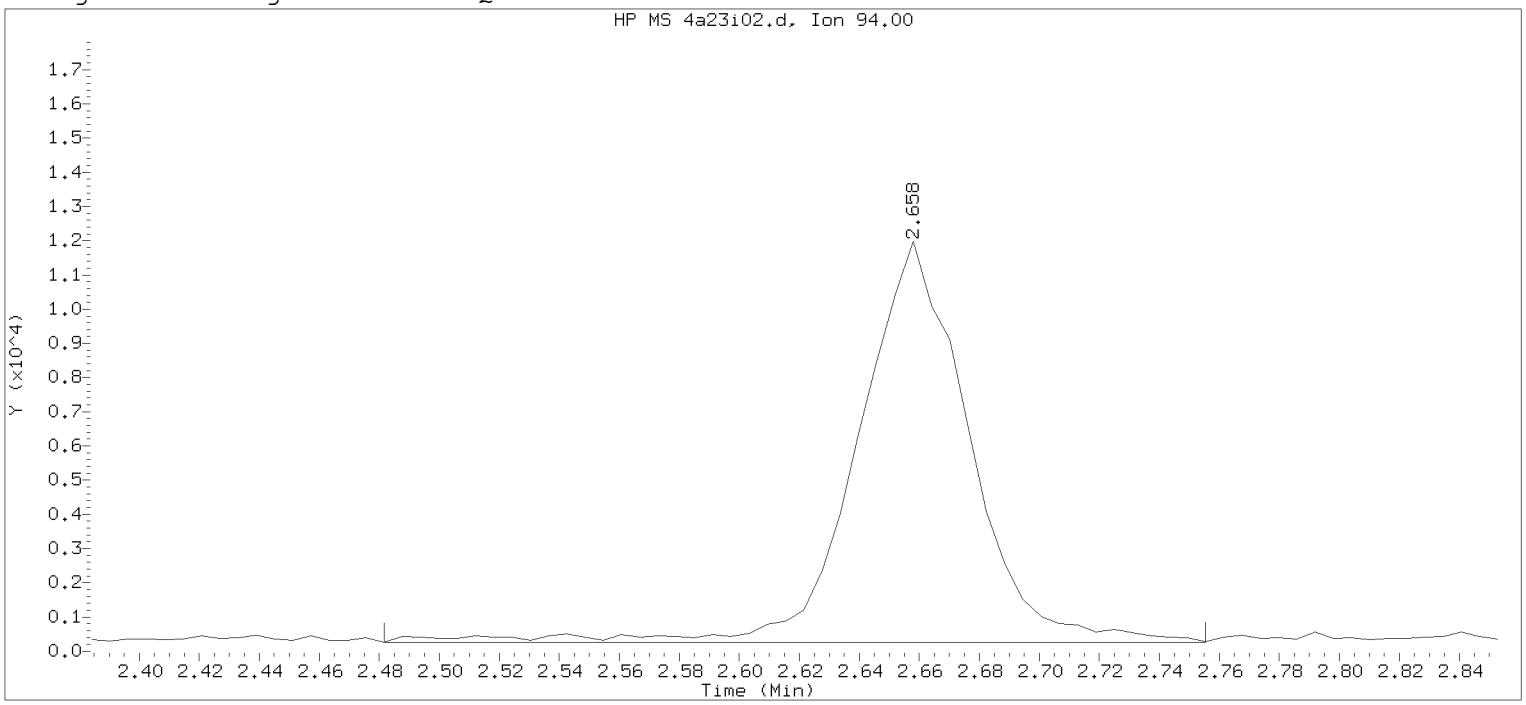
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

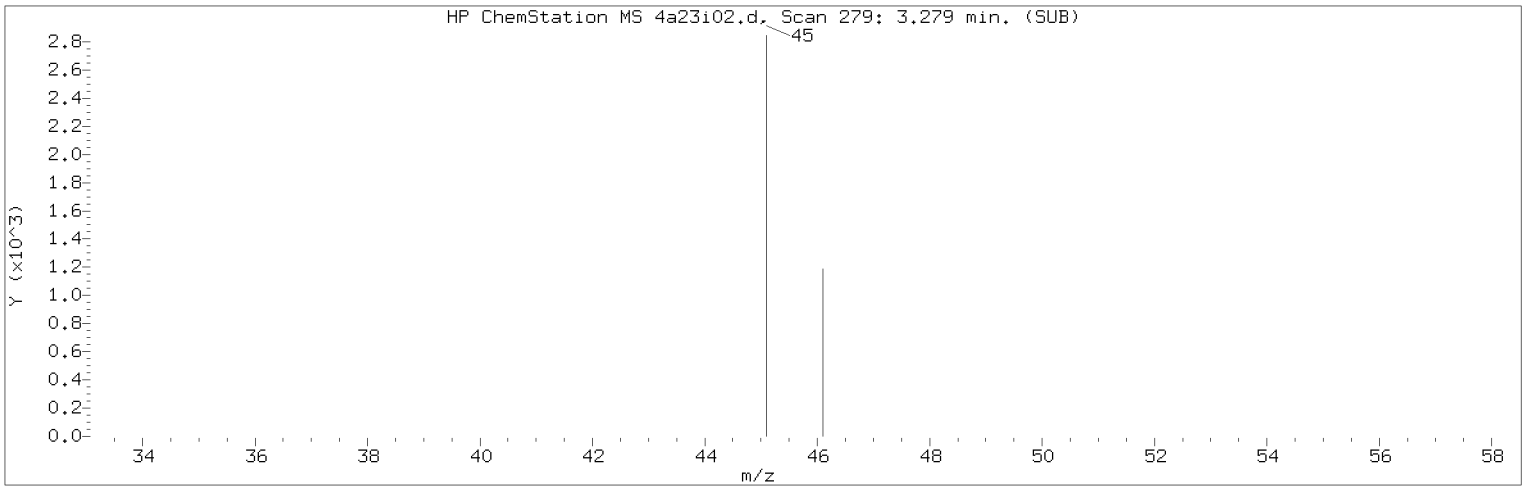
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 15:38
Date, time and analyst ID of latest file update: 23-Apr-2019 15:38 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

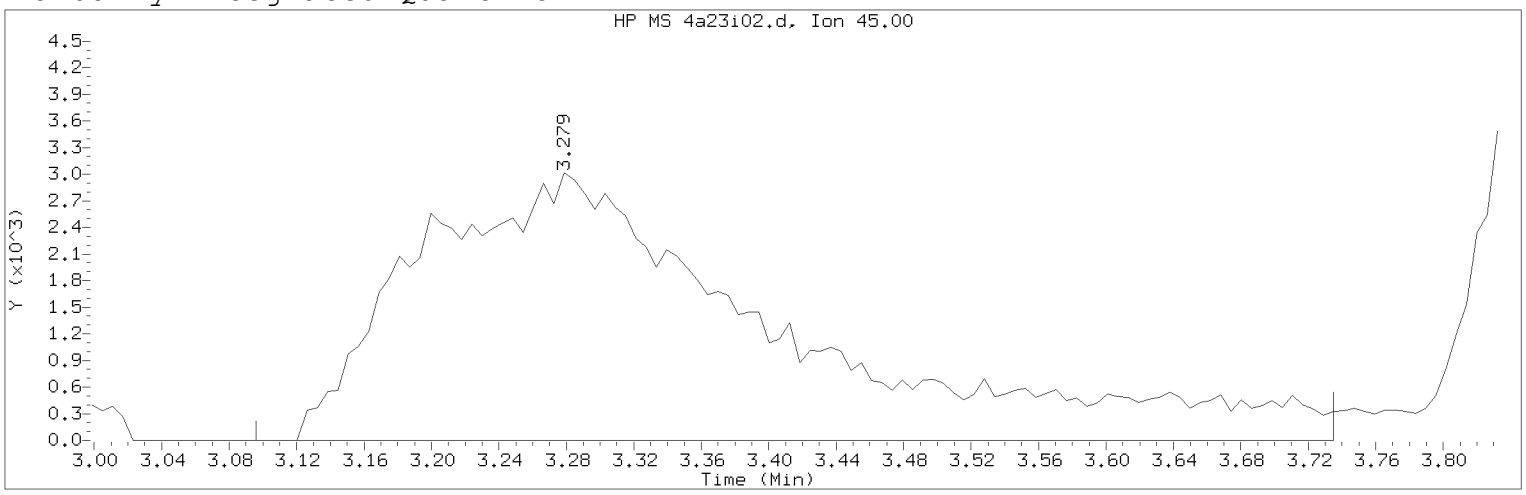
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 177
Retention Time (minutes): 2.658
Quant Ion : 94.00
Area : 30285
On-column Amount (ng) : 5.1764
Integration start scan : 147 Integration stop scan: 192
Y at integration start : 261 Y at integration end: 261

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlo1463

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

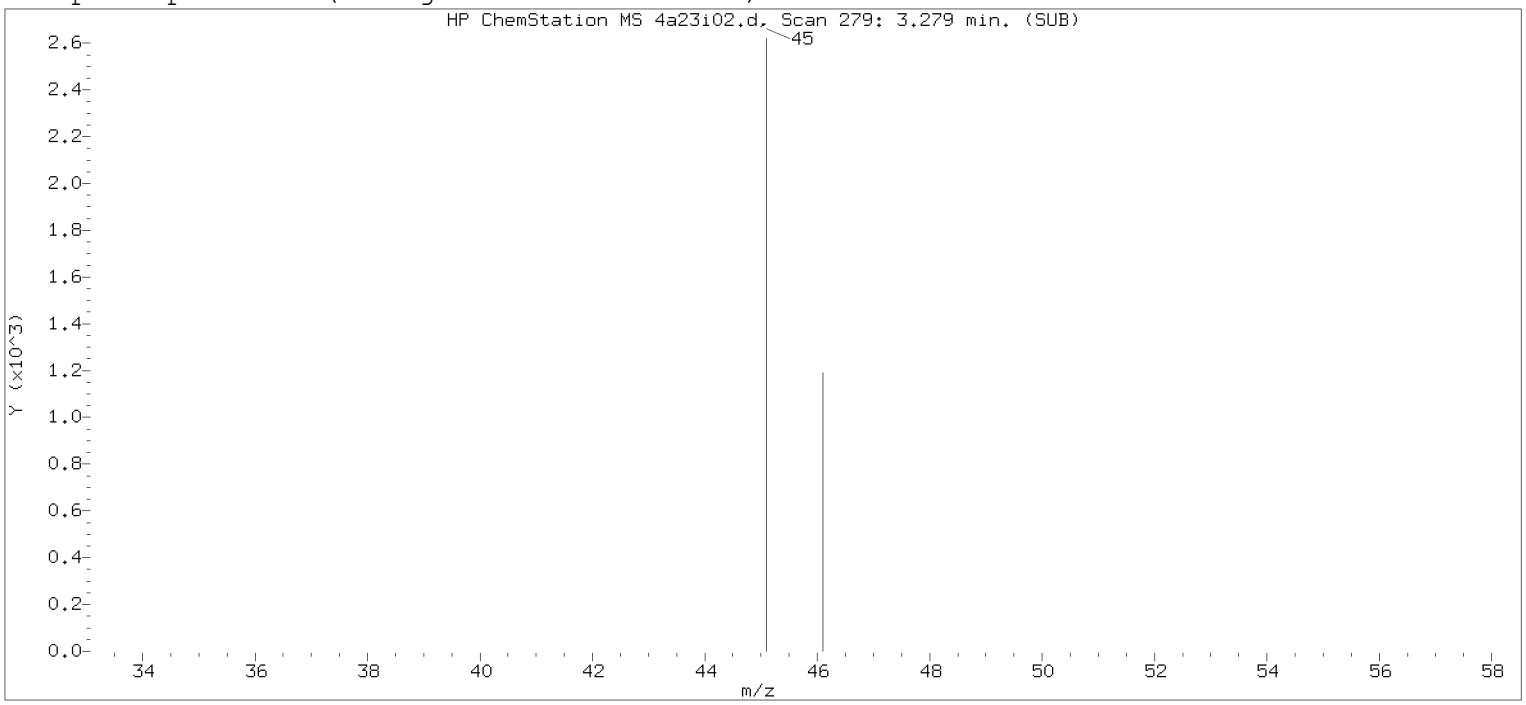
Compound Number : 13
Compound Name : Ethanol
Scan Number : 279
Retention Time (minutes): 3.279
Quant Ion : 45.00
Area (flag) : 44794M
On-Column Amount (ng) : 271.2645
Integration start scan : 248 Integration stop scan: 353
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

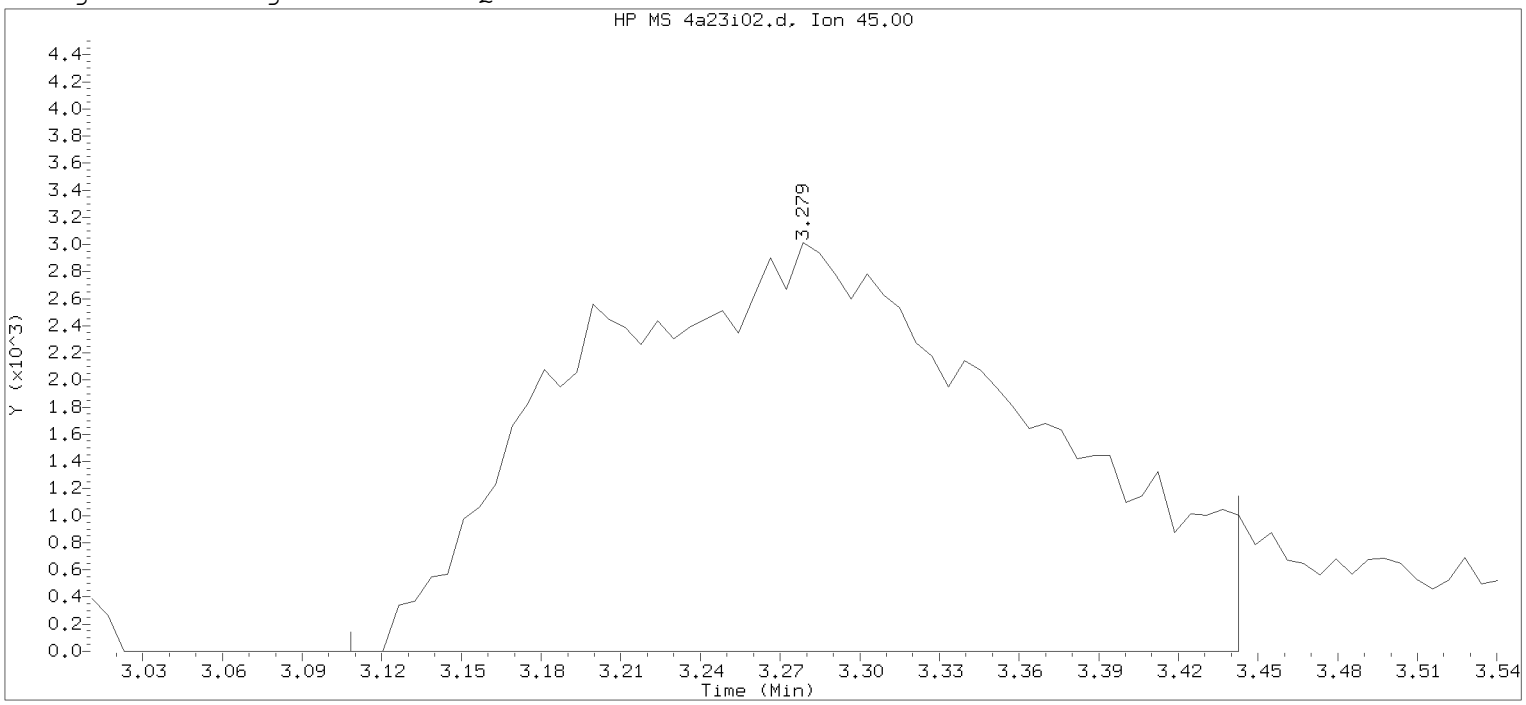
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

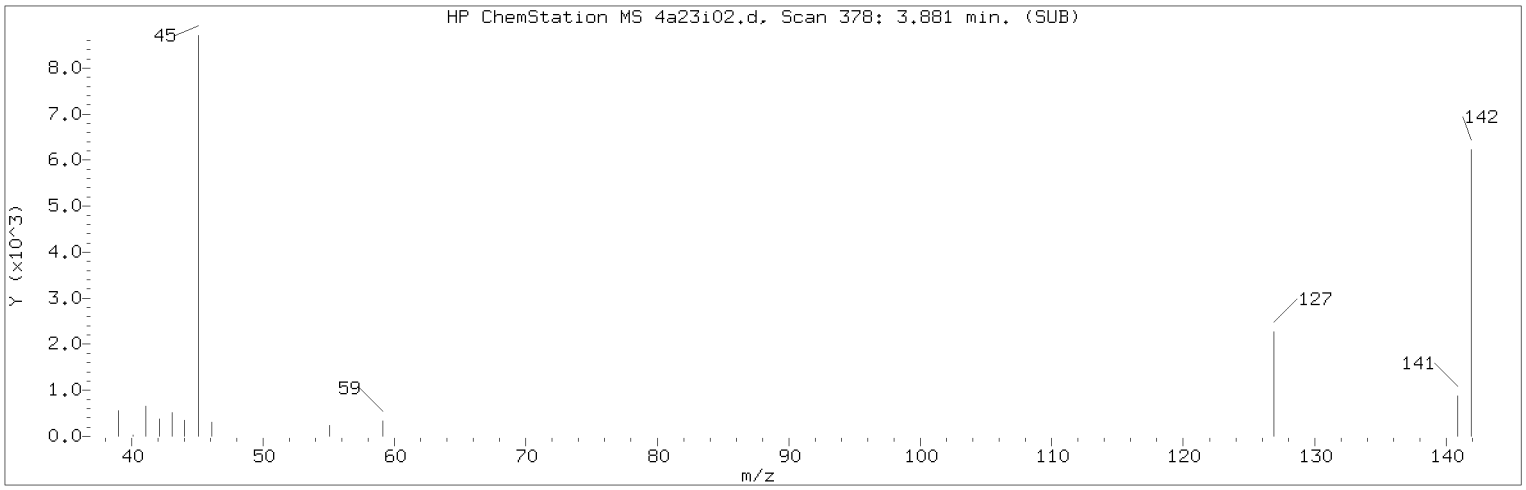
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 15:38
Date, time and analyst ID of latest file update: 23-Apr-2019 15:38 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

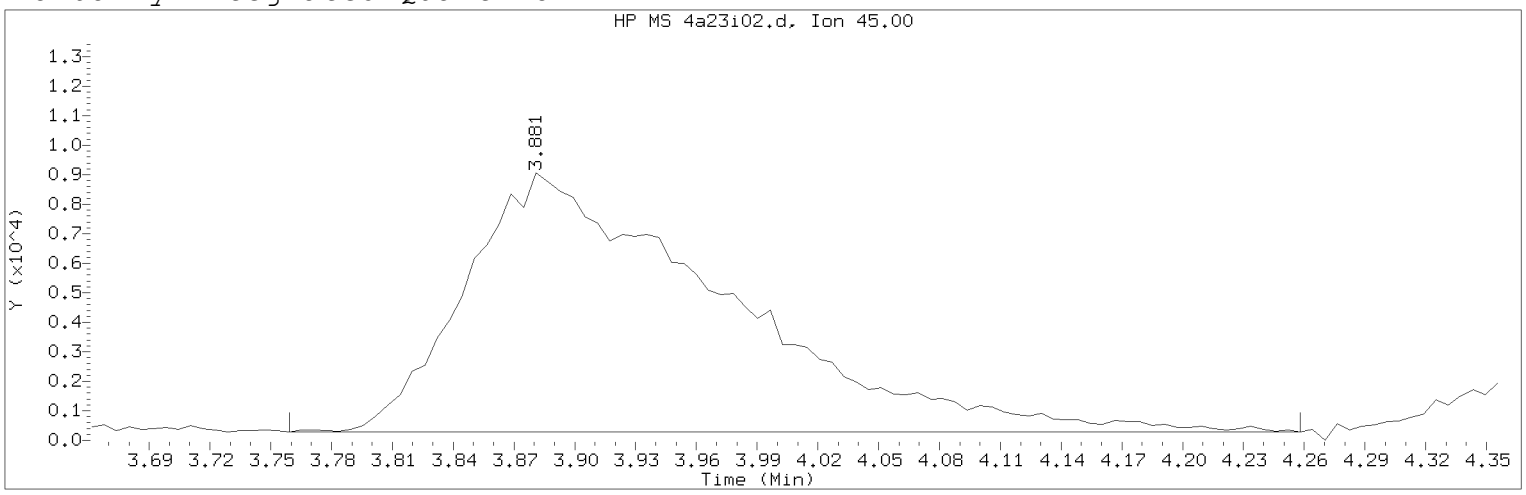
Compound Number	: 13		
Compound Name	: Ethanol		
Scan Number	: 279		
Retention Time (minutes)	: 3.279		
Quant Ion	: 45.00		
Area	: 35729		
On-column Amount (ng)	: 266.6786		
Integration start scan	: 250	Integration stop scan:	305
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user_id: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

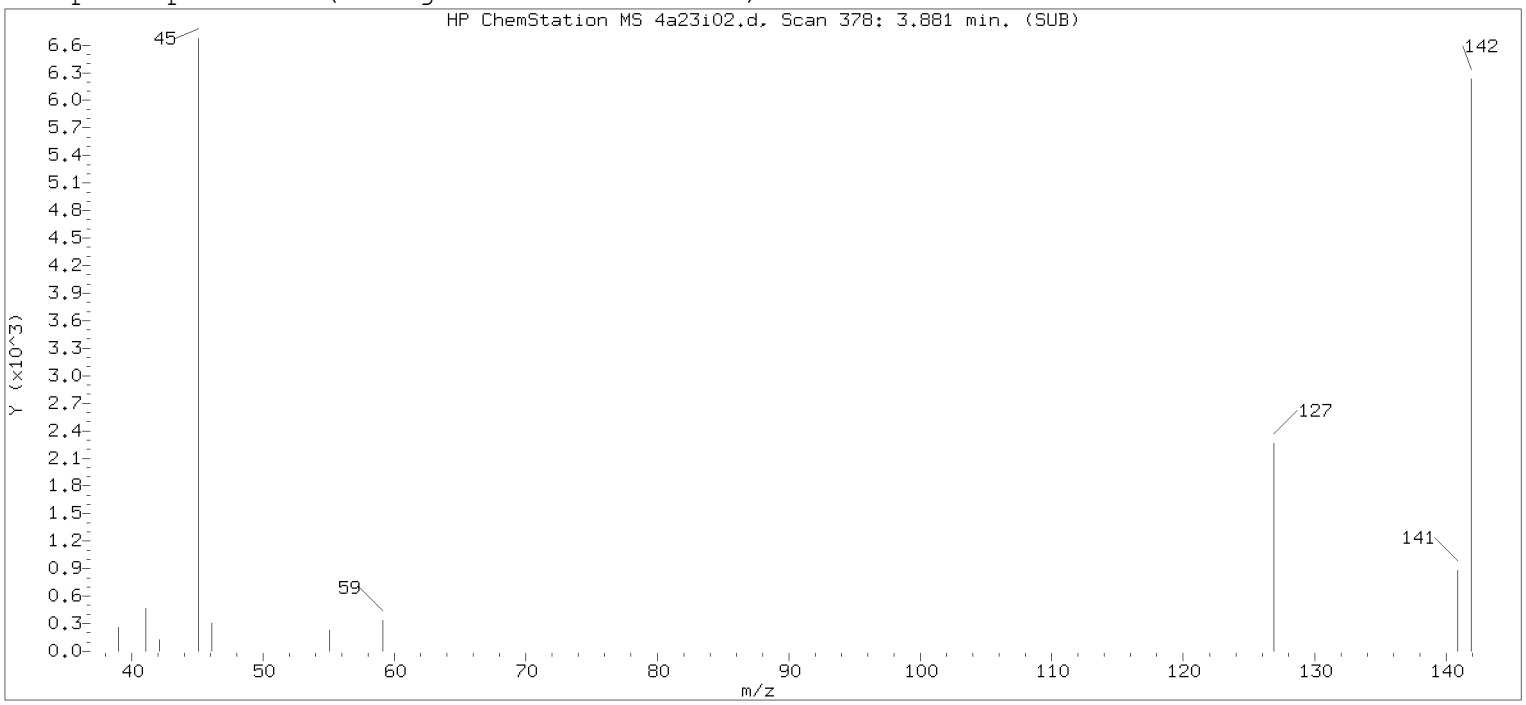
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 378
Retention Time (minutes): 3.881
Quant Ion : 45.00
Area (flag) : 78631M
On-Column Amount (ng) : 77.5298
Integration start scan : 357 Integration stop scan: 439
Y at integration start : 273 Y at integration end: 273

Reason for manual integration: improper integration

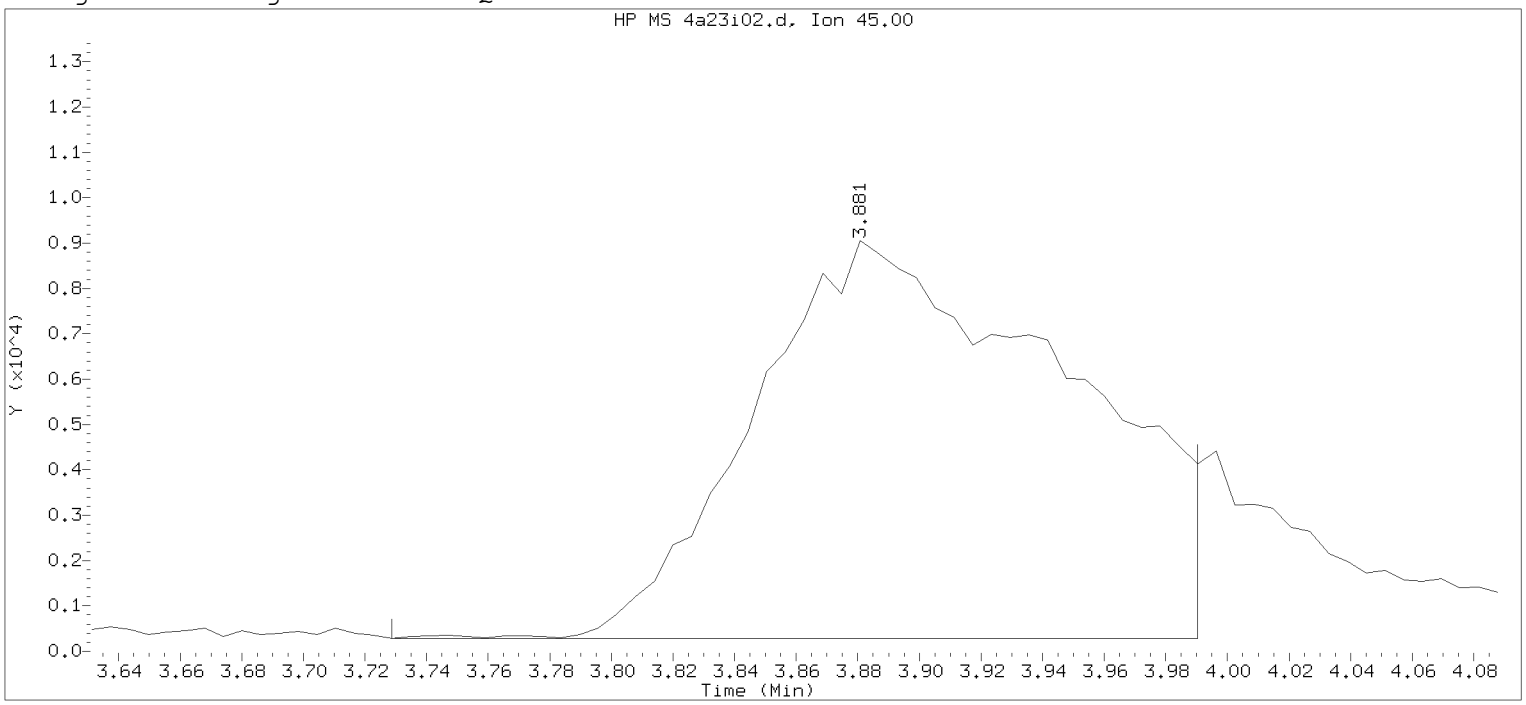
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

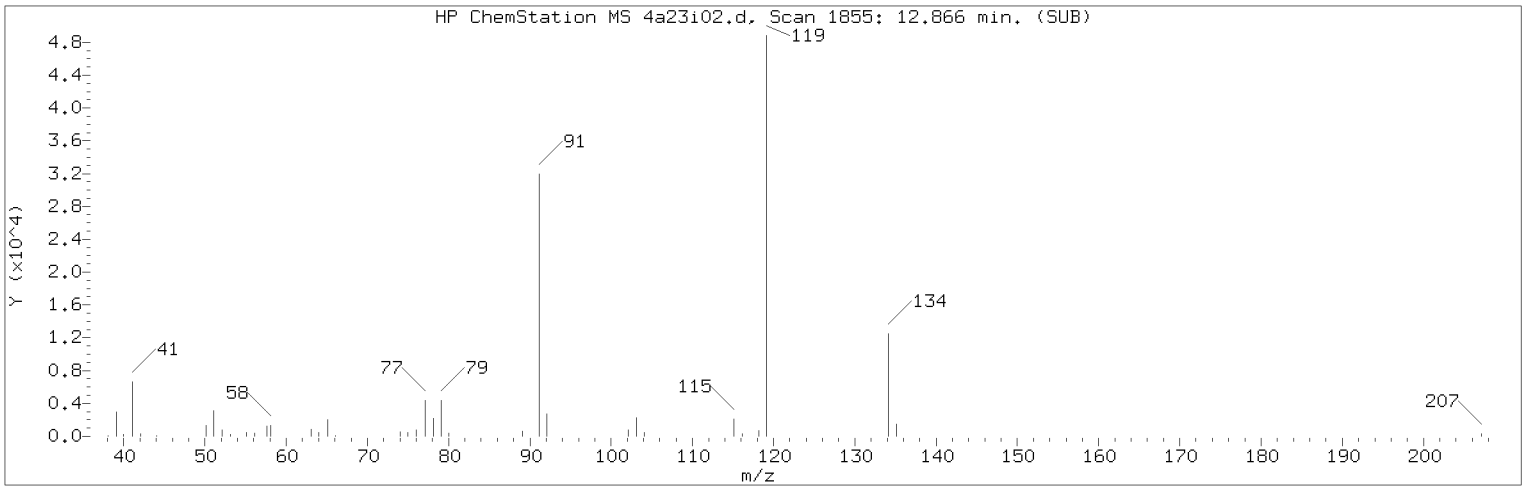
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 15:38
Date, time and analyst ID of latest file update: 23-Apr-2019 15:38 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

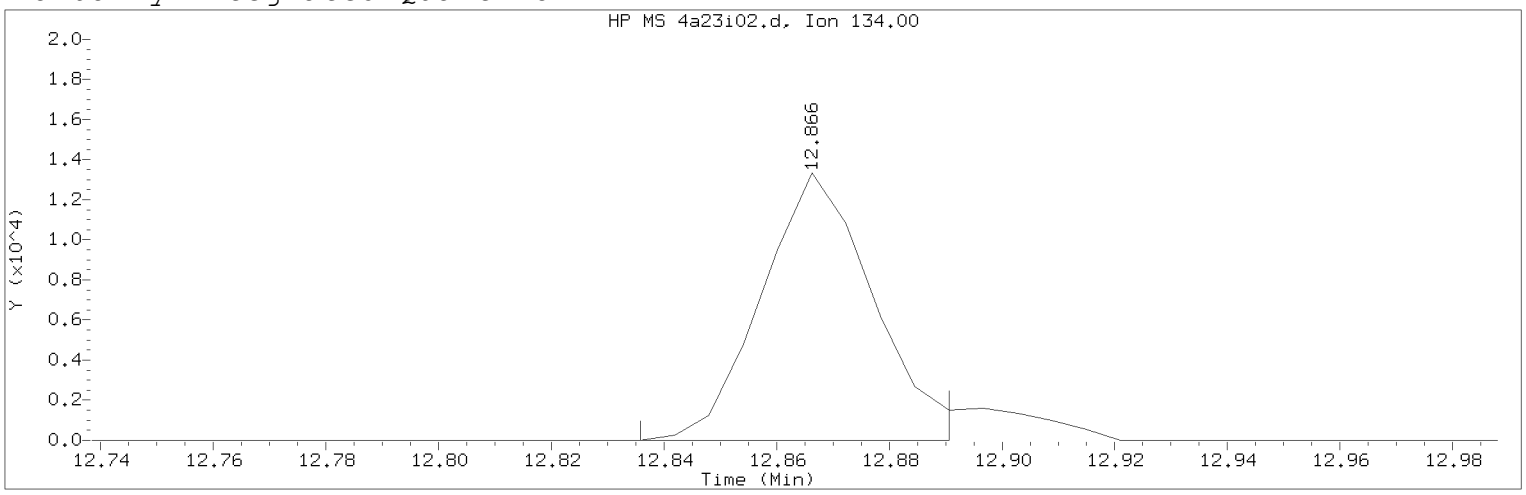
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 378
Retention Time (minutes): 3.881
Quant Ion : 45.00
Area : 62868
On-column Amount (ng) : 72.8356
Integration start scan : 352 Integration stop scan: 395
Y at integration start : 280 Y at integration end: 280

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlo1464

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

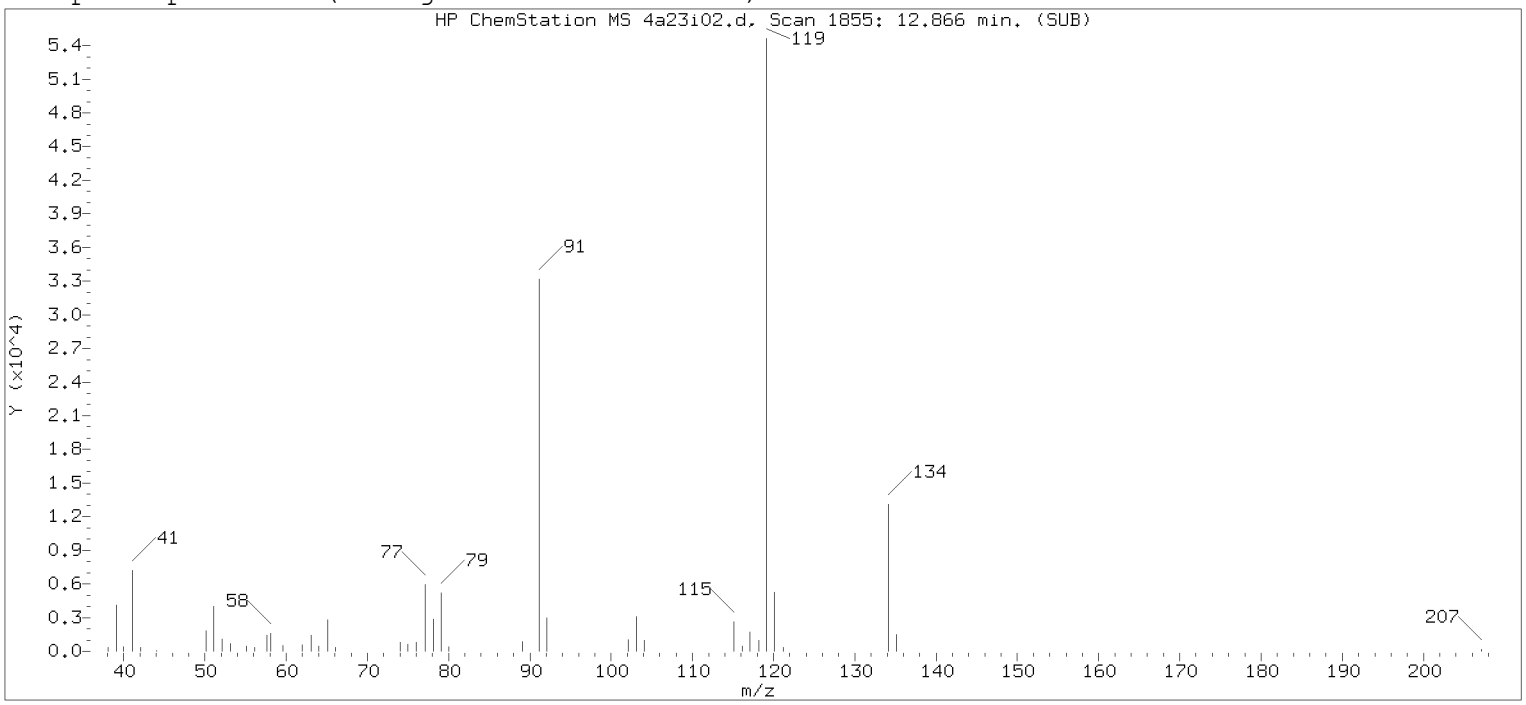
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area (flag) : 18384M
On-Column Amount (ng) : 4.2204
Integration start scan : 1849 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

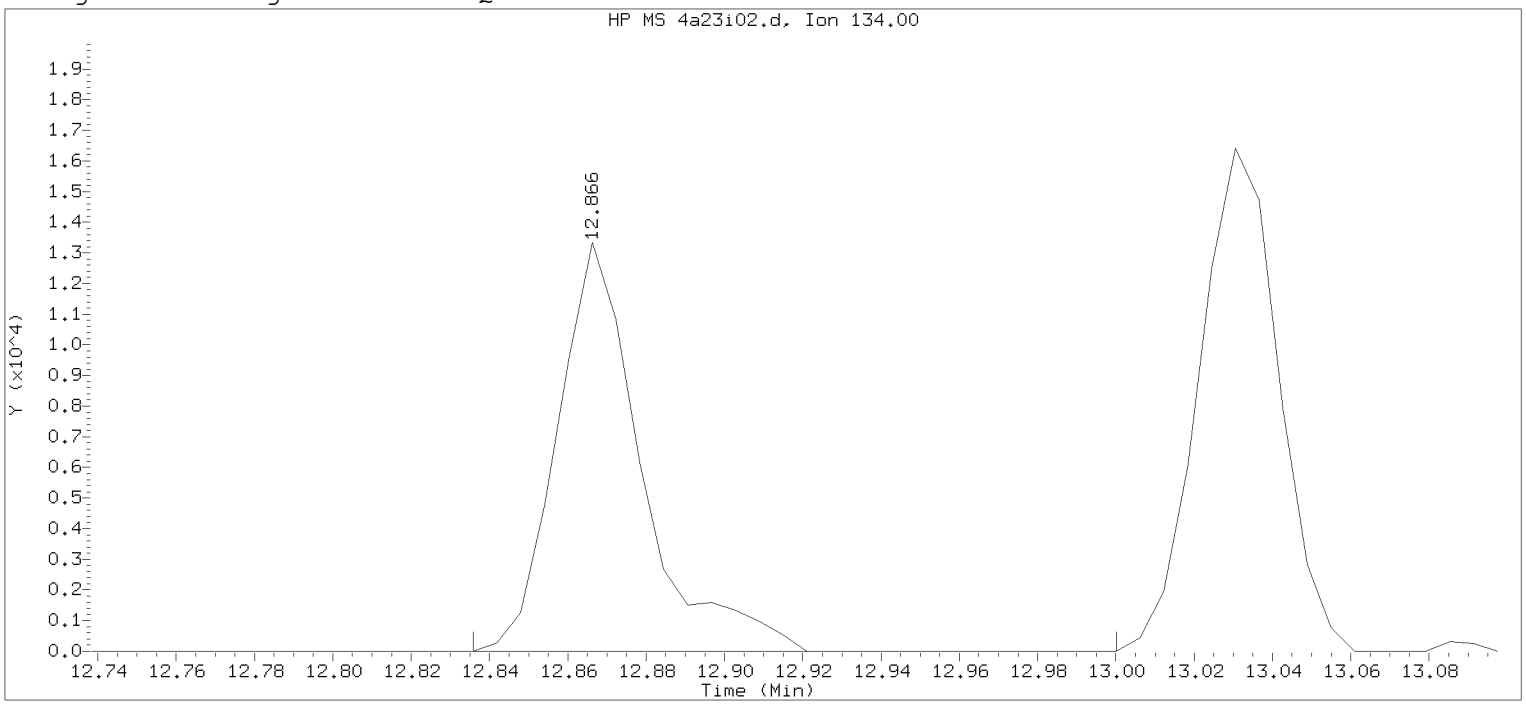
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

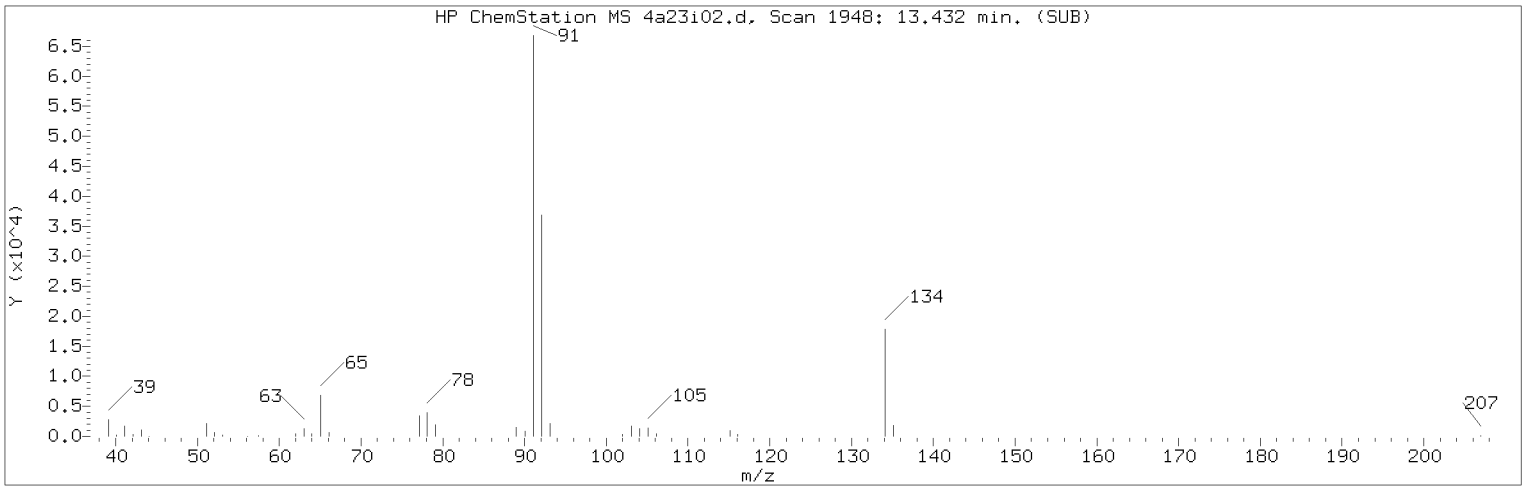
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 15:38
Date, time and analyst ID of latest file update: 23-Apr-2019 15:38 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

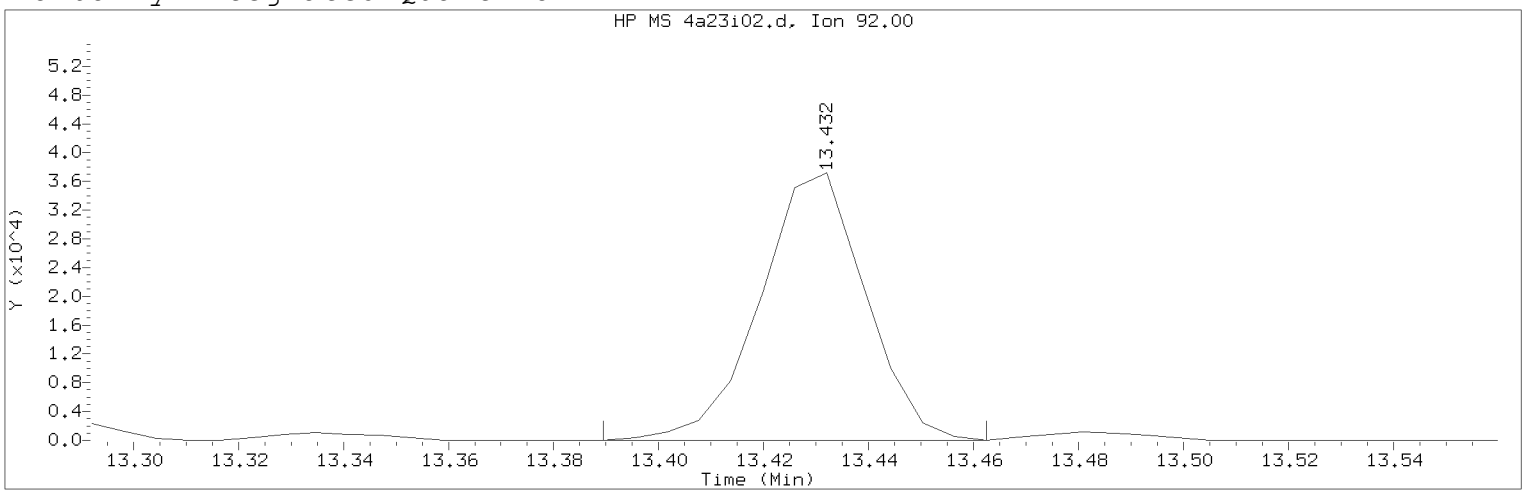
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area : 20017
On-column Amount (ng) : 4.3236
Integration start scan : 1849 Integration stop scan: 1876
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong466

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

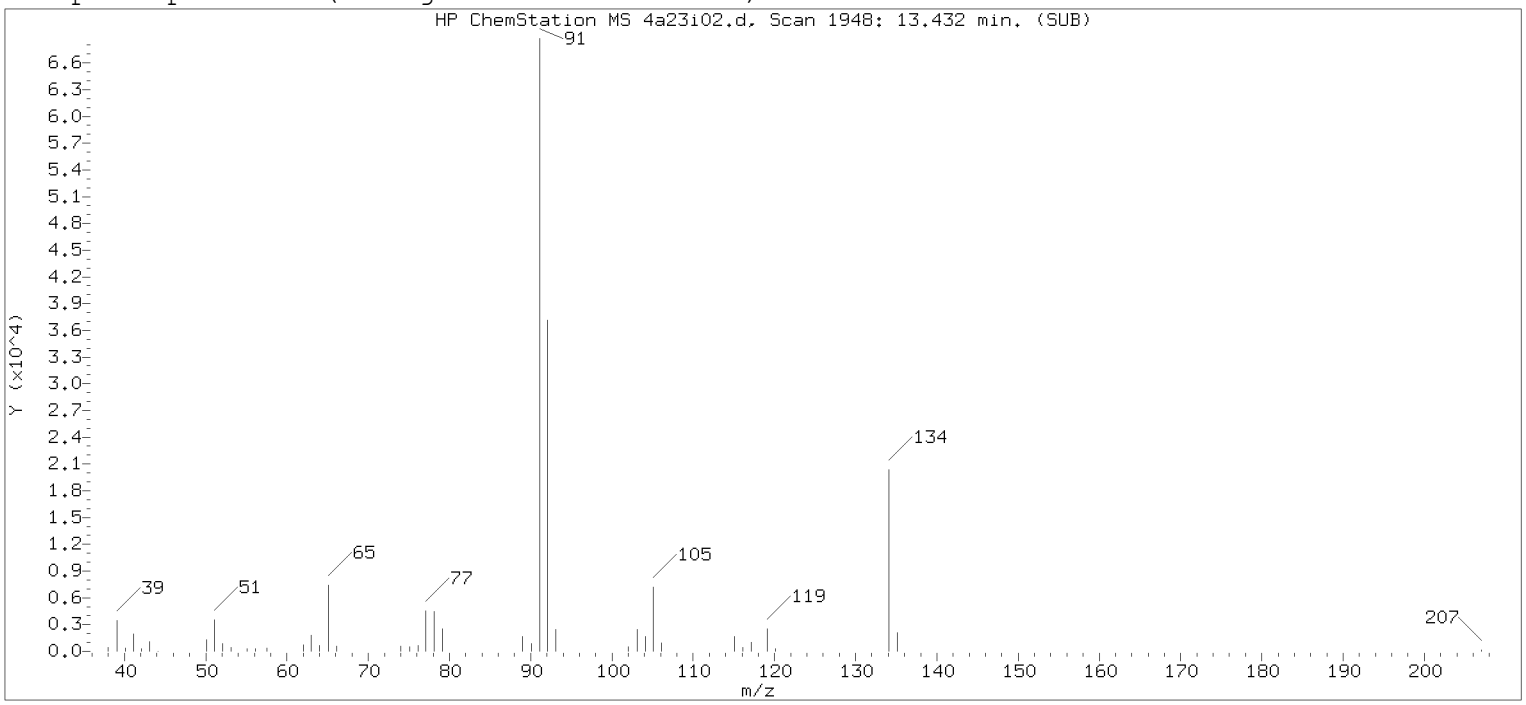
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1948
Retention Time (minutes): 13.432
Quant Ion : 92.00
Area (flag) : 51666M
On-Column Amount (ng) : 4.2680
Integration start scan : 1940 Integration stop scan: 1952
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

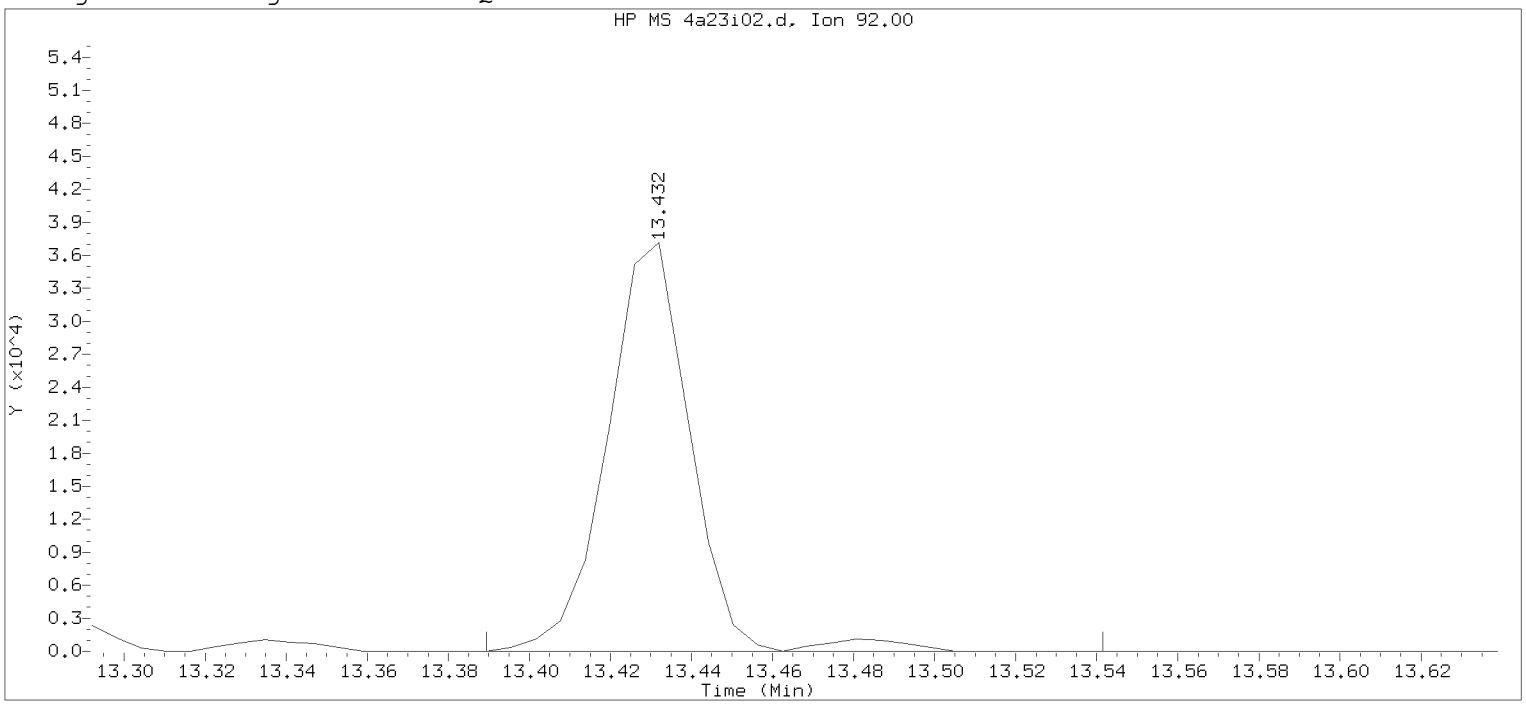
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



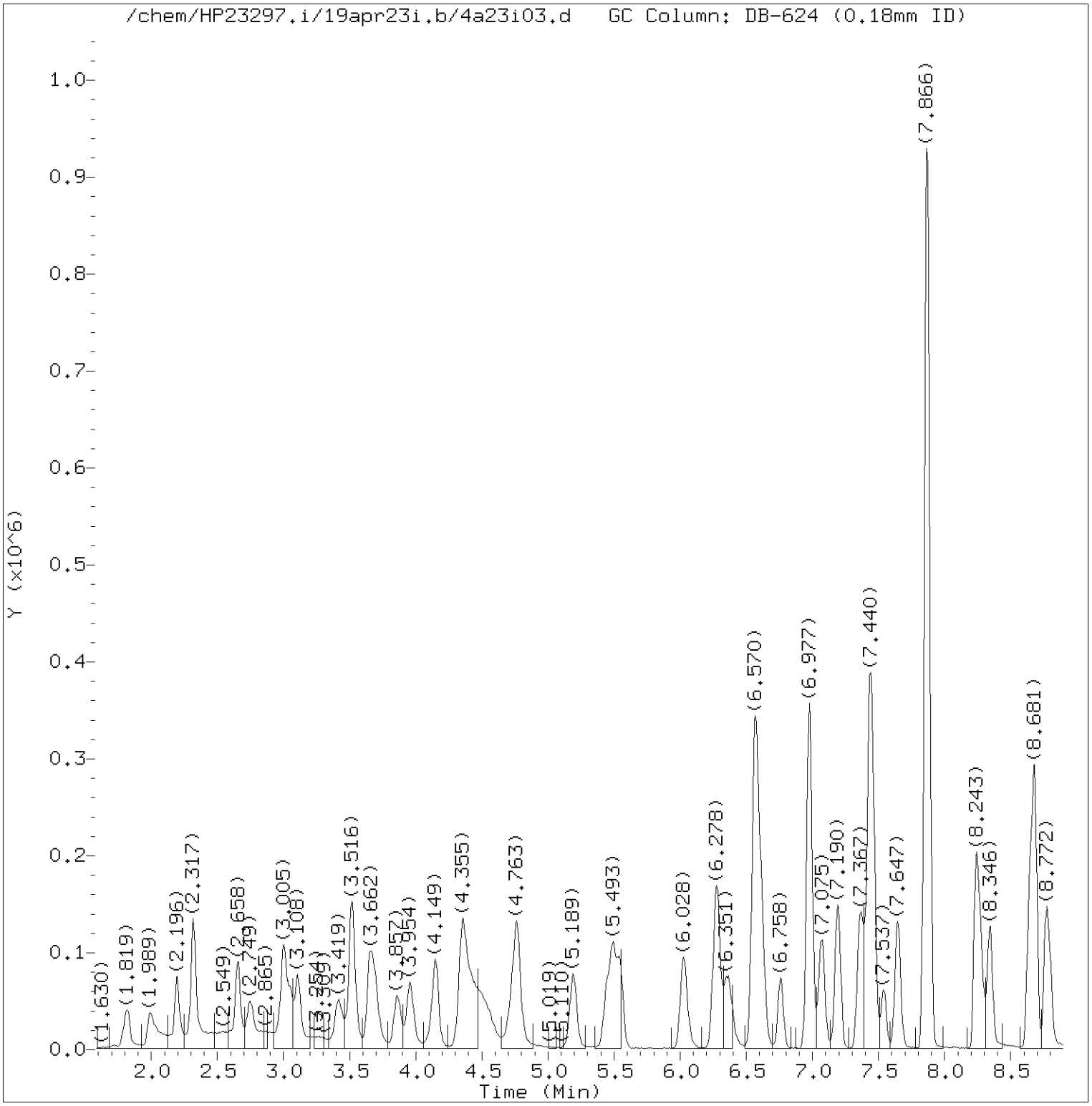
Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 15:38
Date, time and analyst ID of latest file update: 23-Apr-2019 15:38 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1948
Retention Time (minutes): 13.432
Quant Ion : 92.00
Area : 53267
On-column Amount (ng) : 4.4165
Integration start scan : 1940 Integration stop scan: 1965
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user: jmlong



Total Ion Chromatogram (TIC)

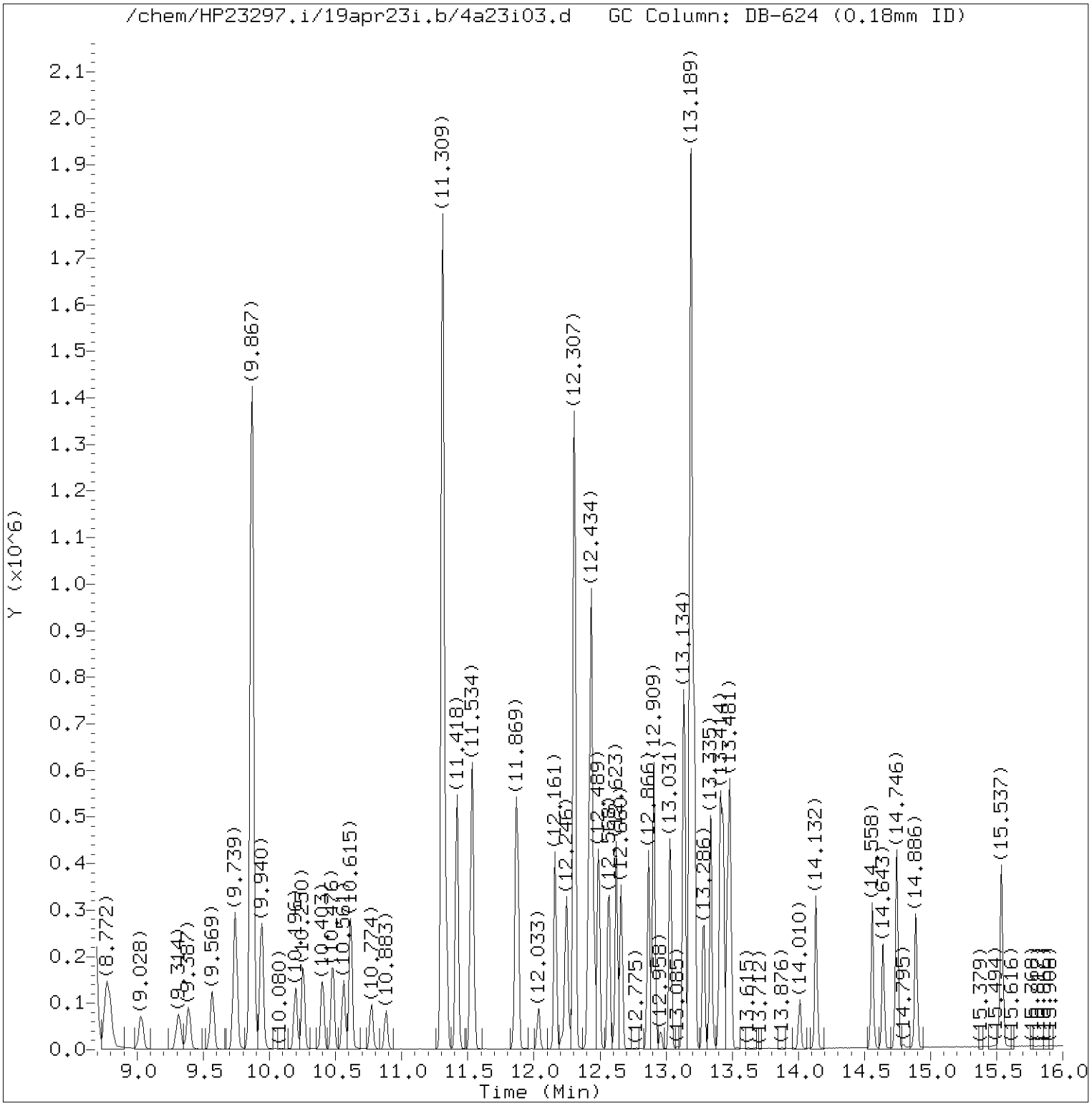
Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.989	85	89678	10.535
4) Chloromethane	(2)	2.196	50	89959	10.354
6) Vinyl Chloride	(2)	2.311	62	86618	10.355
5) 1,3-Butadiene	(2)	2.324	39	46705	9.949
8) Bromomethane	(2)	2.658	94	70686	10.055
9) Chloroethane	(2)	2.749	64	47039	9.924
10) Dichlorofluoromethane	(2)	2.999	67	109826	9.590
12) Trichlorofluoromethane	(2)	3.054	101	102748	10.587
11) n-Pentane	(2)	3.108	43	75485M	9.851
13) Ethanol	(1)	3.273	45	80898M	507.566
15) Freon 123a	(2)	3.419	67	57463	10.105
16) Acrolein	(1)	3.522	56	246043	103.206
17) 1,1-Dichloroethene	(2)	3.650	96	39942	10.617
17) 1,1-Dichloroethene	(2)	3.650	63	20743	9.995
19) Freon 113	(2)	3.674	101	43319	10.548
18) Acetone	(1)	3.711	58	24329	21.324
22) Methyl Iodide	(2)	3.857	142	80339	10.664
21) 2-Propanol	(1)	3.869	45	98546	100.953
23) Carbon Disulfide	(2)	3.954	76	141941	10.523
27) Methyl Acetate	(2)	4.130	43	79281	9.228
25) Allyl Chloride	(2)	4.149	41	86373	9.485
28) Methylene Chloride	(2)	4.355	84	49329	9.921
29)*t-Butyl alcohol-d10	(1)	4.374	65	425898	250.000
30) t-Butyl alcohol	(1)	4.520	59	177075	104.295
31) Acrylonitrile	(2)	4.714	53	44874	10.651
33) Methyl Tertiary Butyl Ether	(2)	4.757	73	144272	10.226
32) trans-1,2-Dichloroethene	(2)	4.769	96	47204	10.574
34) n-Hexane	(2)	5.189	57	76602	10.229
36) 1,1-Dichloroethane	(2)	5.438	63	88297	10.356
38) di-Isopropyl ether	(2)	5.493	45	174633	10.194
39) 2-Chloro-1,3-butadiene	(2)	5.548	53	80684	10.699
40) Ethyl t-butyl ether	(2)	6.028	59	154820	10.322
43) 1,2-Dichloroethene (Total)	(2)		96	101534	21.058
44) 2-Butanone	(2)	6.260	43	136834	20.085
42) cis-1,2-Dichloroethene	(2)	6.278	96	54330	10.484
45) 2,2-Dichloropropane	(2)	6.290	77	69112	10.466
47) Propionitrile	(1)	6.363	54	181319	105.782
48) Methacrylonitrile	(2)	6.570	67	201541	51.973

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.612	128	29947	10.643
50) Tetrahydrofuran	(1)	6.625	71	35519	20.862
51) Chloroform	(2)	6.758	83	87280	10.296
52)$Dibromofluoromethane	(2)	6.977	113	266635	49.659
52)$Dibromofluoromethane	(2)	6.977	111	273699	49.806
53) 1,1,1-Trichloroethane	(2)	6.984	97	72151	10.351
54) Cyclohexane	(2)	7.075	56	92350	10.193
54) Cyclohexane	(2)	7.069	84	75545	10.403
54) Cyclohexane	(2)	7.069	69	28435	10.737
56) Carbon Tetrachloride	(2)	7.190	117	62418	10.514
55) 1,1-Dichloropropene	(2)	7.196	75	67911	10.310
58) Isobutyl Alcohol	(1)	7.361	41	152866	258.155
57)$1,2-Dichloroethane-d4	(2)	7.434	102	64990	49.785
57)$1,2-Dichloroethane-d4	(2)	7.434	65	320439	49.772
57)$1,2-Dichloroethane-d4	(2)	7.434	104	41093	49.566
60) Benzene	(2)	7.464	78	208747	10.272
61) 1,2-Dichloroethane	(2)	7.537	62	69885	9.736
61) 1,2-Dichloroethane	(2)	7.531	98	6243	12.242
65) t-Amyl methyl ether	(2)	7.647	73	157953	10.303
67) n-Heptane	(2)	7.866	43	88938	9.847
66)*Fluorobenzene	(2)	7.866	96	1094665	50.000
69) n-Butanol	(1)	8.243	56	254670	543.947
71) Trichloroethene	(2)	8.346	95	52918	10.505
72) Methylcyclohexane	(2)	8.644	83	97837	10.553
72) Methylcyclohexane	(2)	8.644	98	41748	10.537
73) 1,2-Dichloropropane	(2)	8.687	63	53856	10.309
76) Methyl Methacrylate	(2)	8.766	69	60515	10.280
75) 1,4-Dioxane	(1)	8.784	88	37028M	286.624
74) Dibromomethane	(2)	8.796	93	35291	10.514
78) Bromodichloromethane	(2)	9.028	83	63363	10.463
79) 2-Nitropropane	(2)	9.314	41	63450M	20.405
80) 2-Chloroethyl Vinyl Ether	(2)	9.387	63	49018	10.318
81) cis-1,3-Dichloropropene	(2)	9.569	75	84237	10.582
82) 4-Methyl-2-pentanone	(2)	9.739	43	248251	20.864
83)$Toluene-d8	(3)	9.867	98	1123970	49.957
83)$Toluene-d8	(3)	9.867	100	732631	50.270
88) Toluene	(3)	9.940	92	134683	10.323
90) 1,3-Dichloropropene (total)	(3)		100	161585	21.310

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.196	75	77348	10.728
91) Ethyl Methacrylate	(3)	10.250	69	97537	10.388
92) 1,1,2-Trichloroethane	(3)	10.396	97	52105	10.329
93) Tetrachloroethene	(3)	10.476	166	58579	10.569
94) 1,3-Dichloropropane	(3)	10.561	76	86555	10.218
96) 2-Hexanone	(3)	10.615	43	201461	21.258
97) Dibromochloromethane	(3)	10.774	129	54113	10.721
99) 1,2-Dibromoethane	(3)	10.883	107	57141	10.384
100)*Chlorobenzene-d5	(3)	11.309	117	864912	50.000
102) Chlorobenzene	(3)	11.333	112	152513	10.447
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	50089	10.791
104) Ethylbenzene	(3)	11.418	91	259968	10.528
106) m+p-Xylene	(3)	11.534	106	206629	21.279
108) Xylene (Total)	(3)		106	307953	31.718
107) o-Xylene	(3)	11.863	106	101324	10.439
109) Styrene	(3)	11.875	104	167840	10.751
110) Bromoform	(3)	12.033	173	40978	10.856
111) Isopropylbenzene	(3)	12.161	105	257943	10.608
112) Cyclohexanone	(1)	12.246	55	143944M	280.439
114)$4-Bromofluorobenzene	(3)	12.307	95	428193	50.351
114)$4-Bromofluorobenzene	(3)	12.307	174	377783	50.484
116) 1,1,2,2-Tetrachloroethane	(4)	12.410	83	91861	10.296
115) Bromobenzene	(4)	12.422	156	69456	10.439
118) trans-1,4-Dichloro-2-butene	(4)	12.434	53	153910	52.900
117) 1,2,3-Trichloropropane	(4)	12.453	110	28609	10.381
119) n-Propylbenzene	(4)	12.489	91	308138	10.350
120) 2-Chlorotoluene	(4)	12.568	126	64291	10.545
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	220689	10.486
121) 4-Chlorotoluene	(4)	12.660	126	65324	10.290
124) tert-Butylbenzene	(4)	12.866	134	44873M	10.374
125) Pentachloroethane	(4)	12.903	167	39537	10.606
126) 1,2,4-Trimethylbenzene	(4)	12.909	105	229305	10.554
127) sec-Butylbenzene	(4)	13.031	105	282547	10.553
129) 1,3-Dichlorobenzene	(4)	13.134	146	129394	10.329
130) p-Isopropyltoluene	(4)	13.134	119	246097	10.663
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	484581	50.000
133) 1,4-Dichlorobenzene	(4)	13.201	146	134465	10.419
134) 1,2,3-Trimethylbenzene	(4)	13.213	105	247776	10.529

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

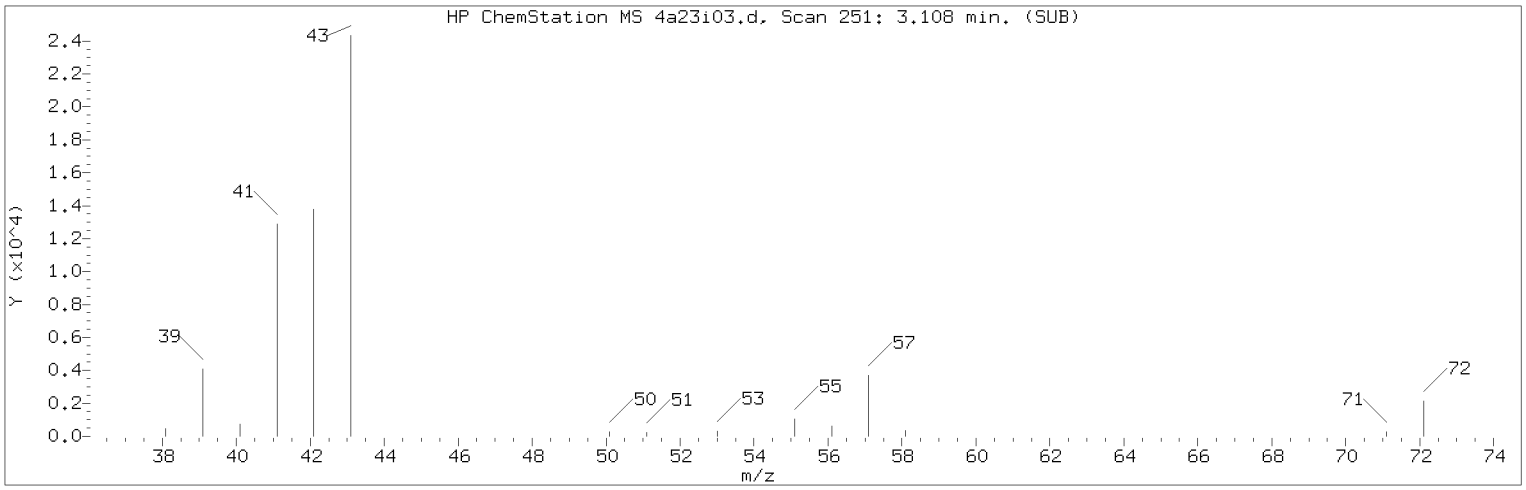
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.286	91	175119	10.806
136) 1,3-Diethylbenzene	(4)	13.341	119	155157	10.705
141) Diethylbenzene (total)	(4)		100	450267	32.077
137) 1,4-Diethylbenzene	(4)	13.408	119	164853	10.715
139) n-Butylbenzene	(4)	13.432	92	126058M	10.448
138) 1,2-Dichlorobenzene	(4)	13.469	146	126935	10.319
140) 1,2-Diethylbenzene	(4)	13.481	119	130257	10.657
142) 1,2-Dibromo-3-chloropropane	(4)	14.010	75	23588	9.953
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	94818	10.174
146) 1,2,4-Trichlorobenzene	(4)	14.558	180	89430	9.963
147) Hexachlorobutadiene	(4)	14.643	225	39528	9.323
148) Naphthalene	(4)	14.746	128	315046	10.277
149) 1,2,3-Trichlorobenzene	(4)	14.892	180	86526	10.141
150) 2-Methylnaphthalene	(4)	15.537	142	194616	10.586

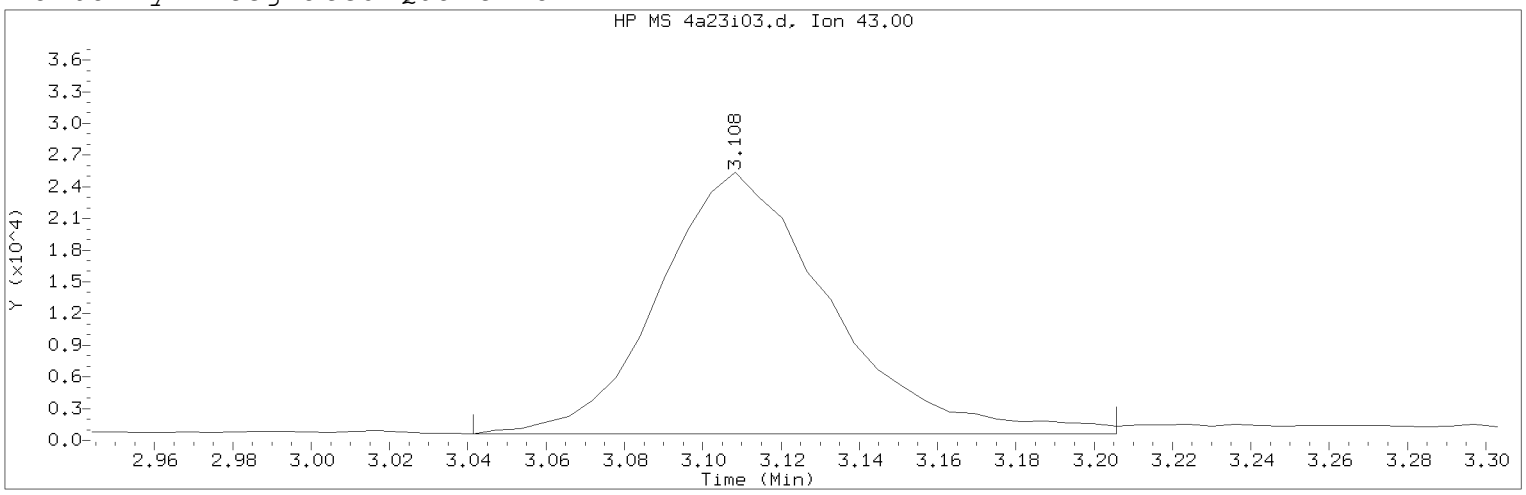
M = Compound was manually integrated.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

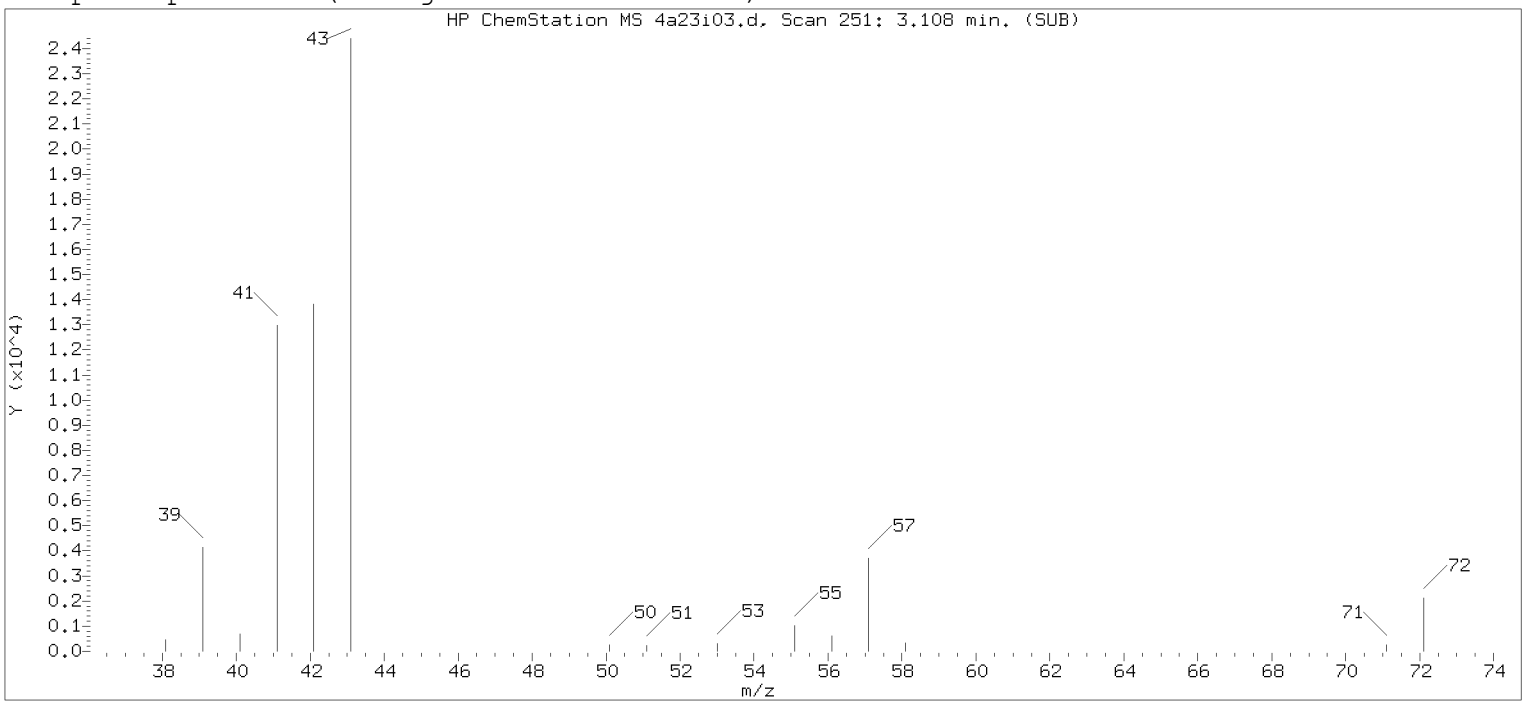
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 251
Retention Time (minutes): 3.108
Quant Ion : 43.00
Area (flag) : 75485M
On-Column Amount (ng) : 9.8514
Integration start scan : 239 Integration stop scan: 266
Y at integration start : 603 Y at integration end: 603

Reason for manual integration: improper integration

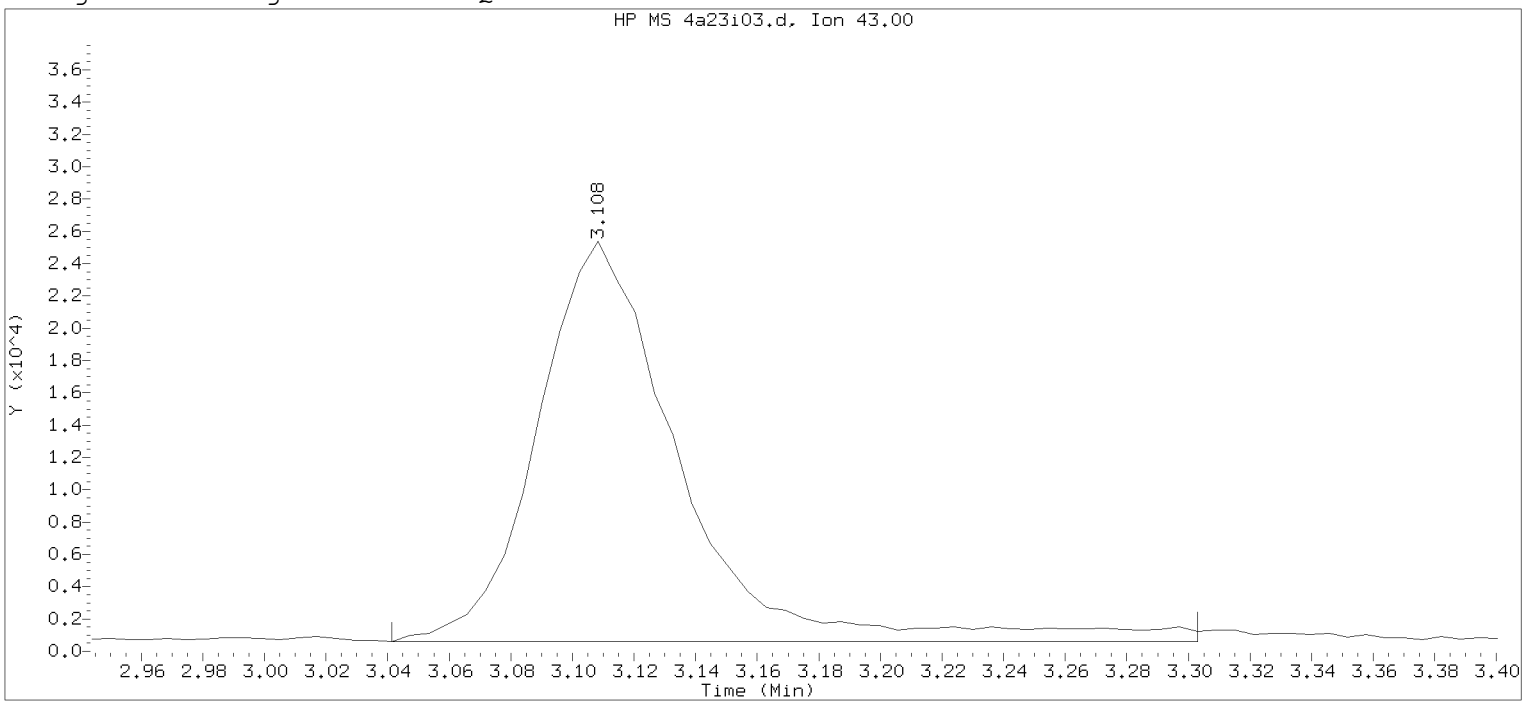
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

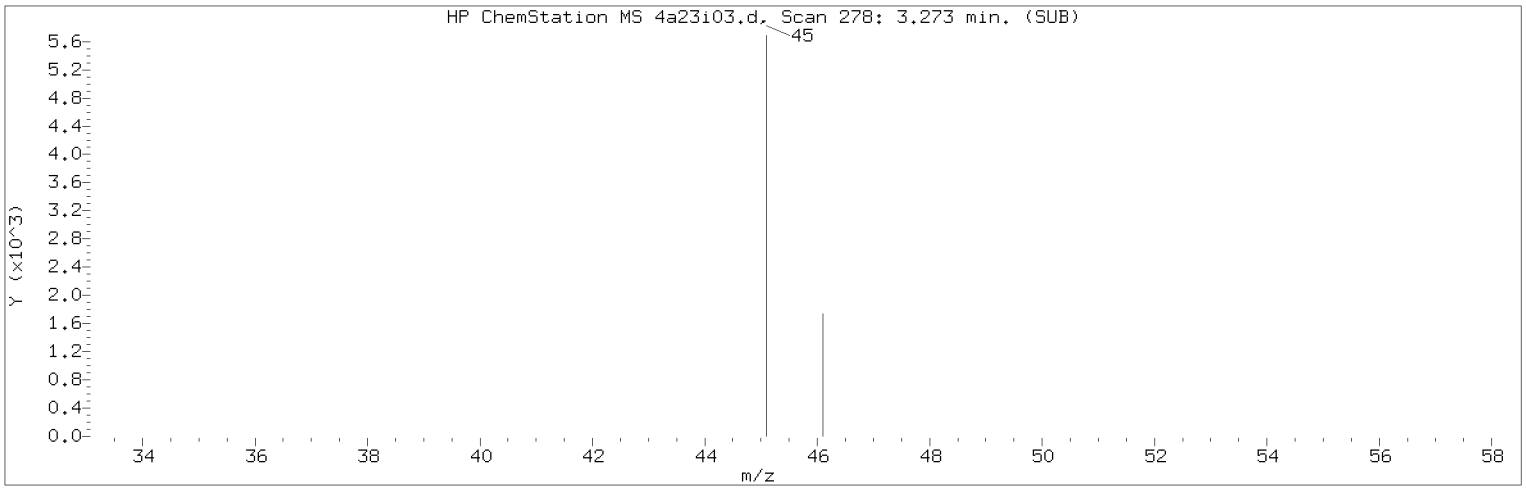
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:00
Date, time and analyst ID of latest file update: 23-Apr-2019 16:01 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

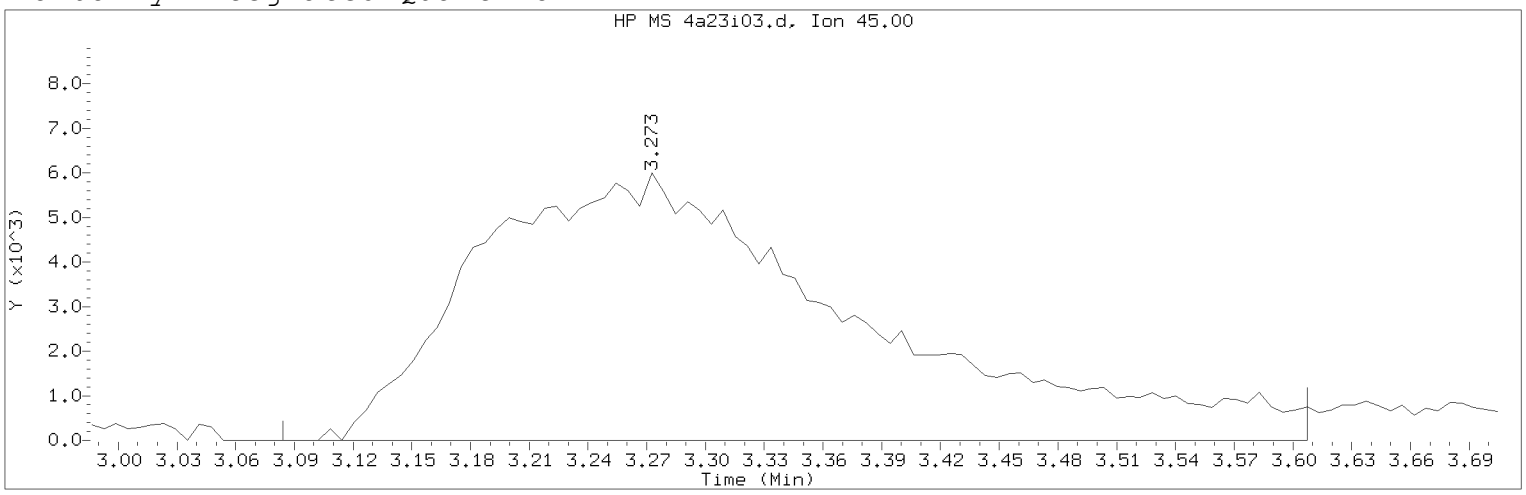
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 251
Retention Time (minutes): 3.108
Quant Ion : 43.00
Area : 79906
On-column Amount (ng) : 9.7109
Integration start scan : 239 Integration stop scan: 282
Y at integration start : 608 Y at integration end: 608

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

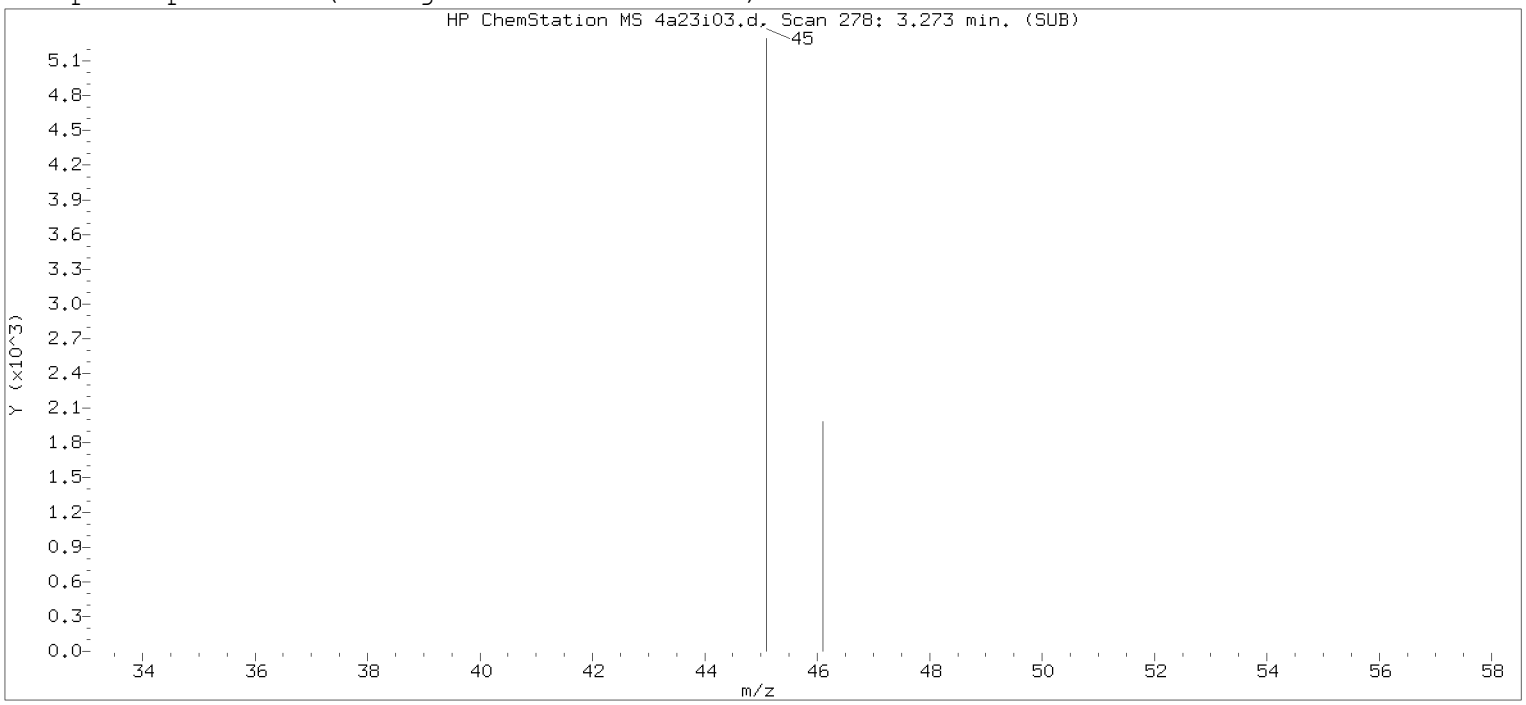
Compound Number : 13
Compound Name : Ethanol
Scan Number : 278
Retention Time (minutes): 3.273
Quant Ion : 45.00
Area (flag) : 80898M
On-Column Amount (ng) : 507.5656
Integration start scan : 246 Integration stop scan: 332
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

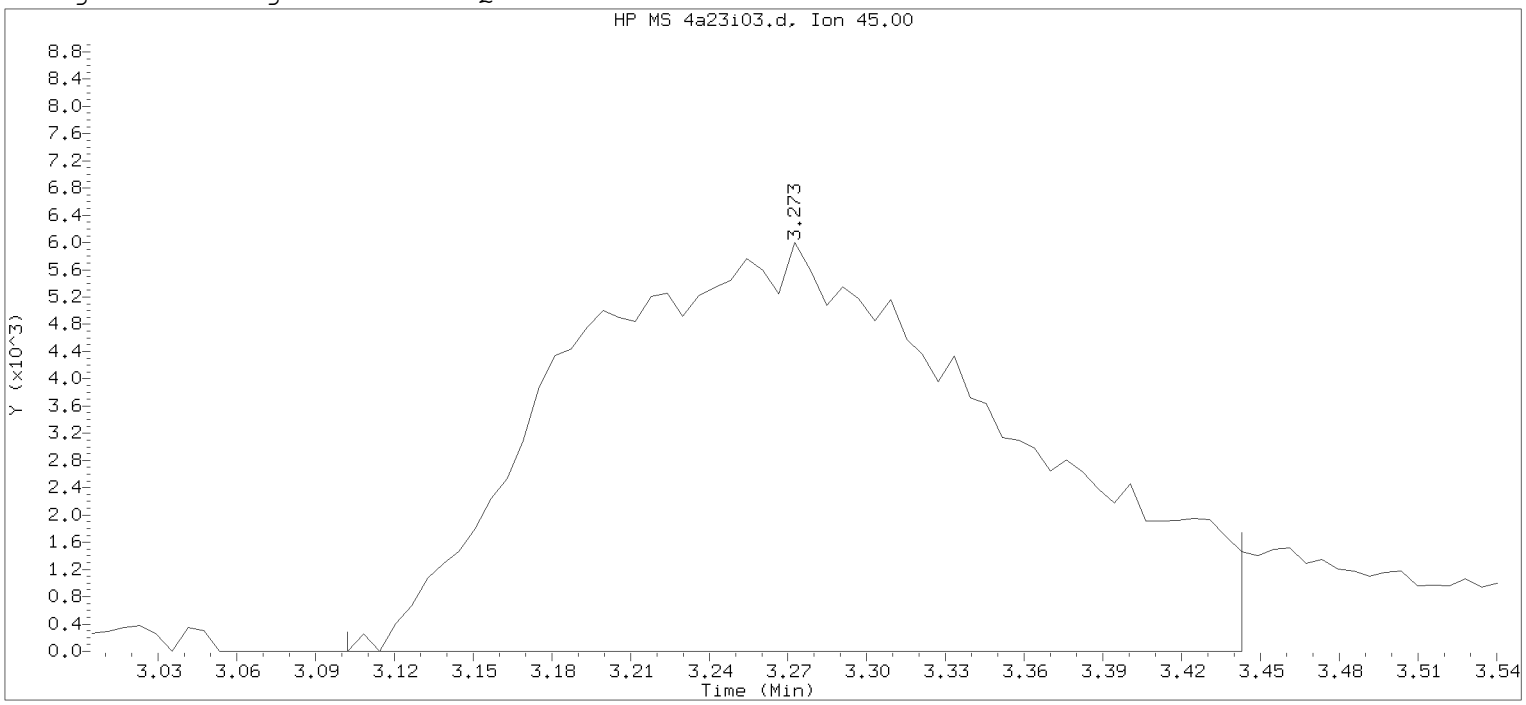
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

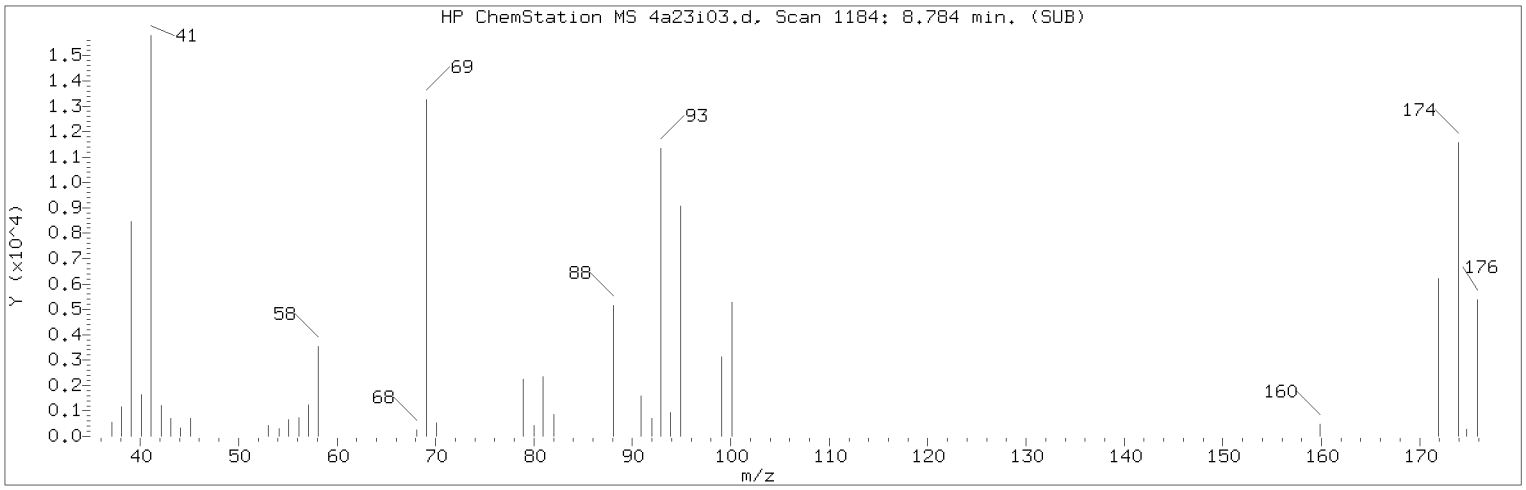
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:00
Date, time and analyst ID of latest file update: 23-Apr-2019 16:01 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

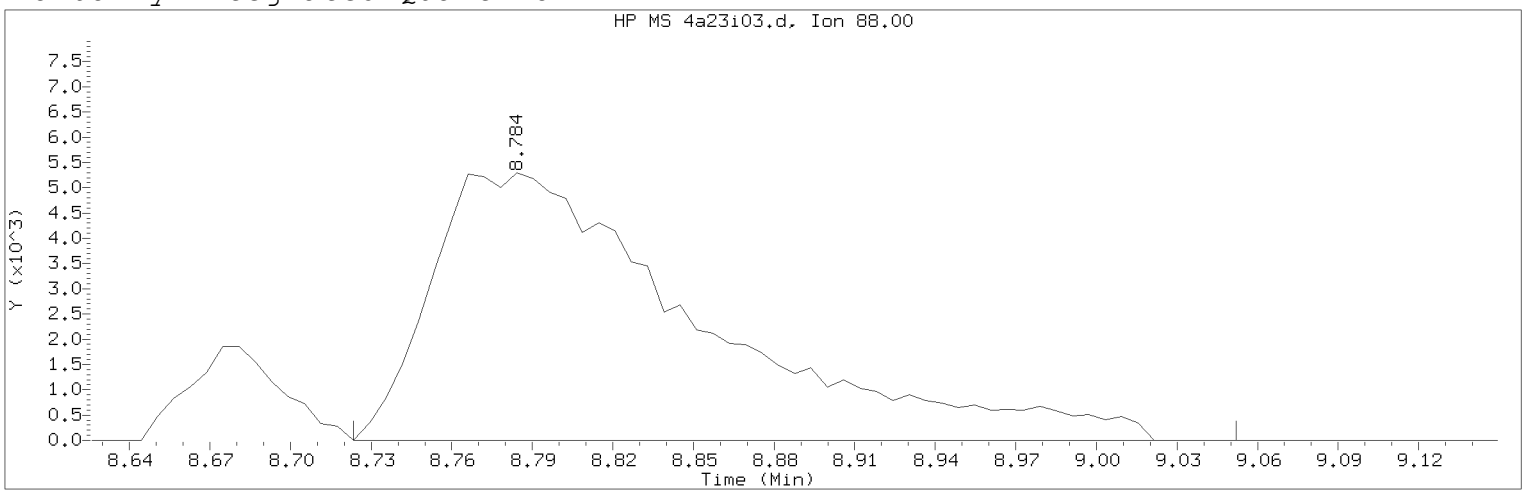
Compound Number	: 13		
Compound Name	: Ethanol		
Scan Number	: 278		
Retention Time (minutes)	: 3.273		
Quant Ion	: 45.00		
Area	: 70509		
On-column Amount (ng)	: 500.4875		
Integration start scan	: 249	Integration stop scan:	305
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

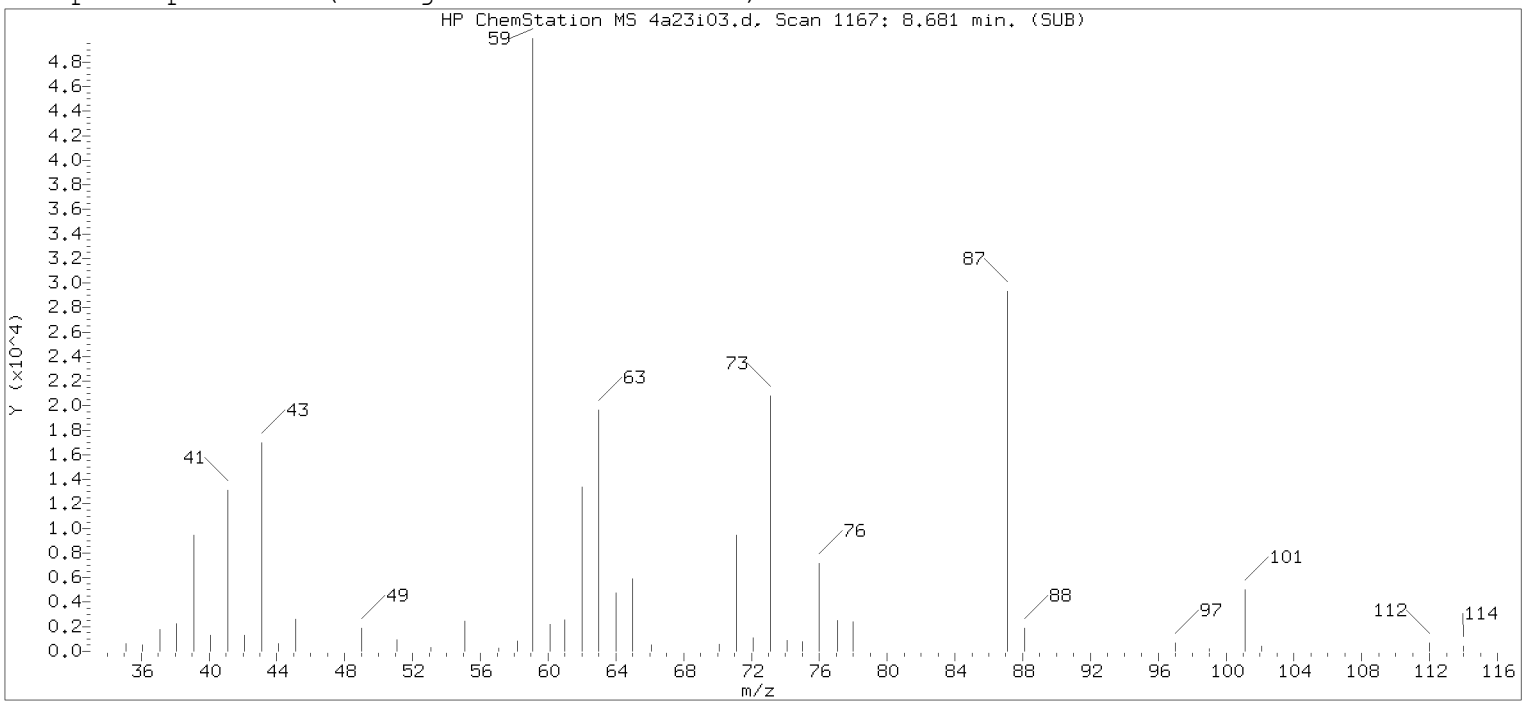
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1184
Retention Time (minutes): 8.784
Quant Ion : 88.00
Area (flag) : 37028M
On-Column Amount (ng) : 286.6236
Integration start scan : 1173 Integration stop scan: 1227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

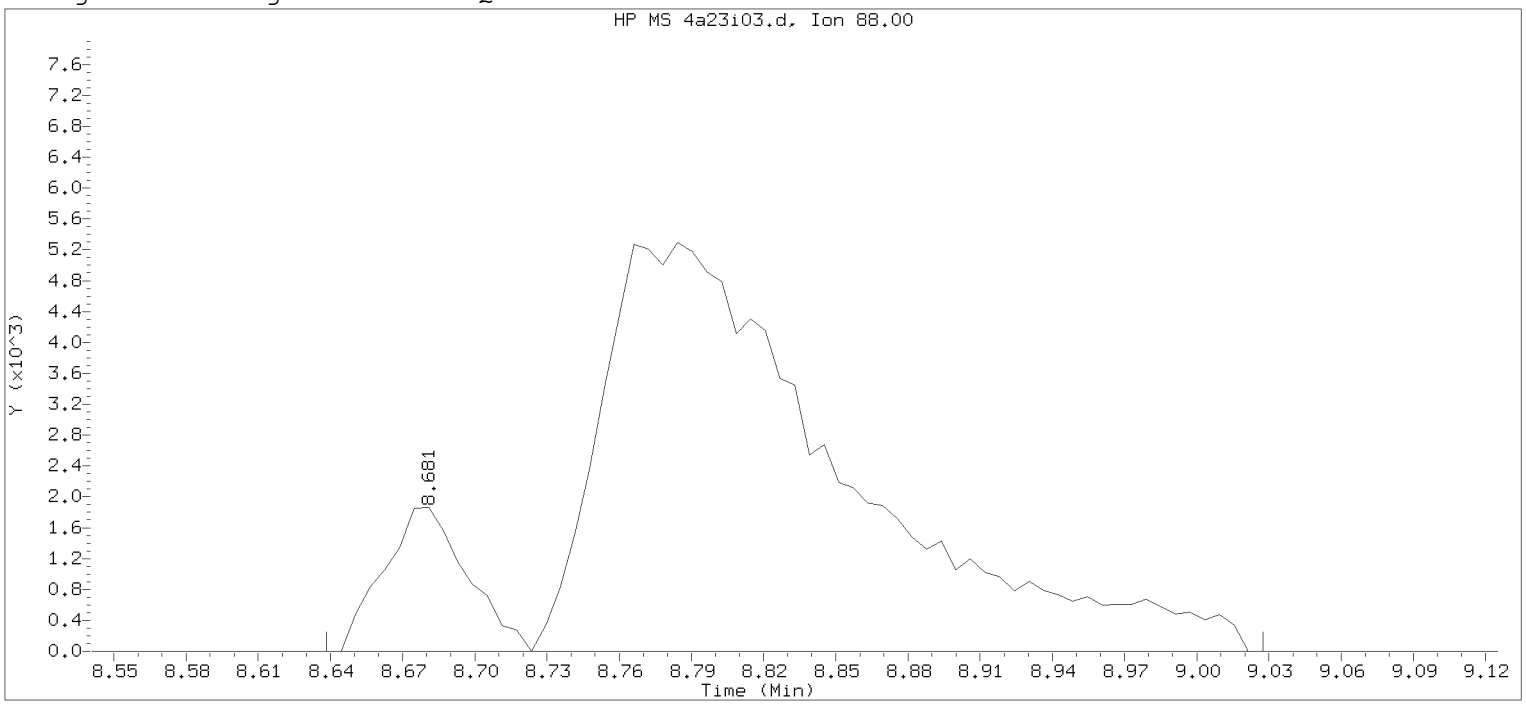
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

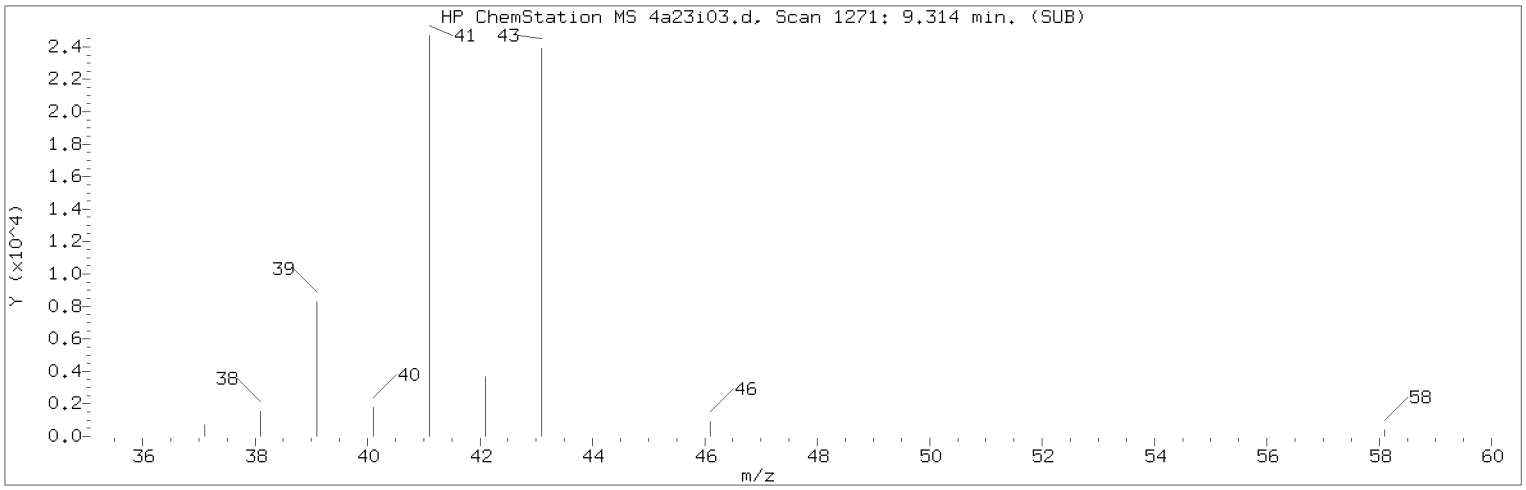
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:00
Date, time and analyst ID of latest file update: 23-Apr-2019 16:01 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

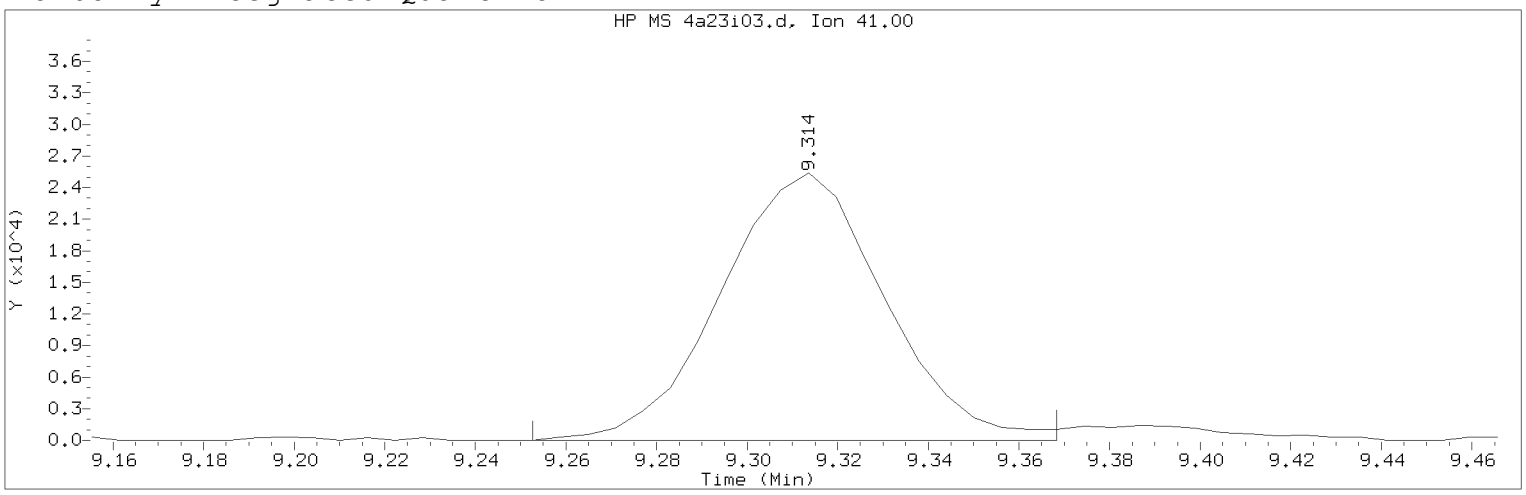
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1167
Retention Time (minutes): 8.681
Quant Ion : 88.00
Area : 41524
On-column Amount (ng) : 307.1725
Integration start scan : 1159 Integration stop scan: 1223
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user_id: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

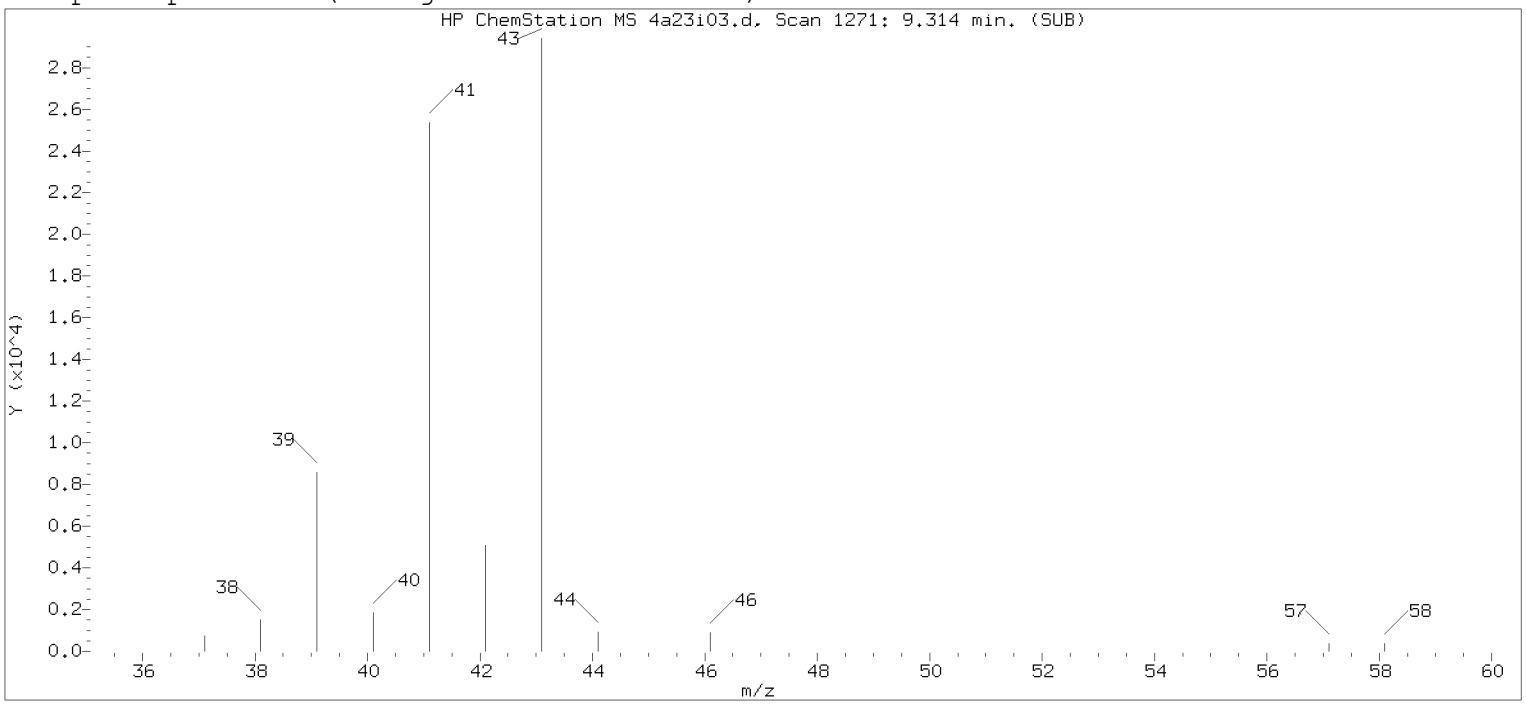
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 1271
Retention Time (minutes): 9.314
Quant Ion : 41.00
Area (flag) : 63450M
On-Column Amount (ng) : 20.4045
Integration start scan : 1260 Integration stop scan: 1279
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

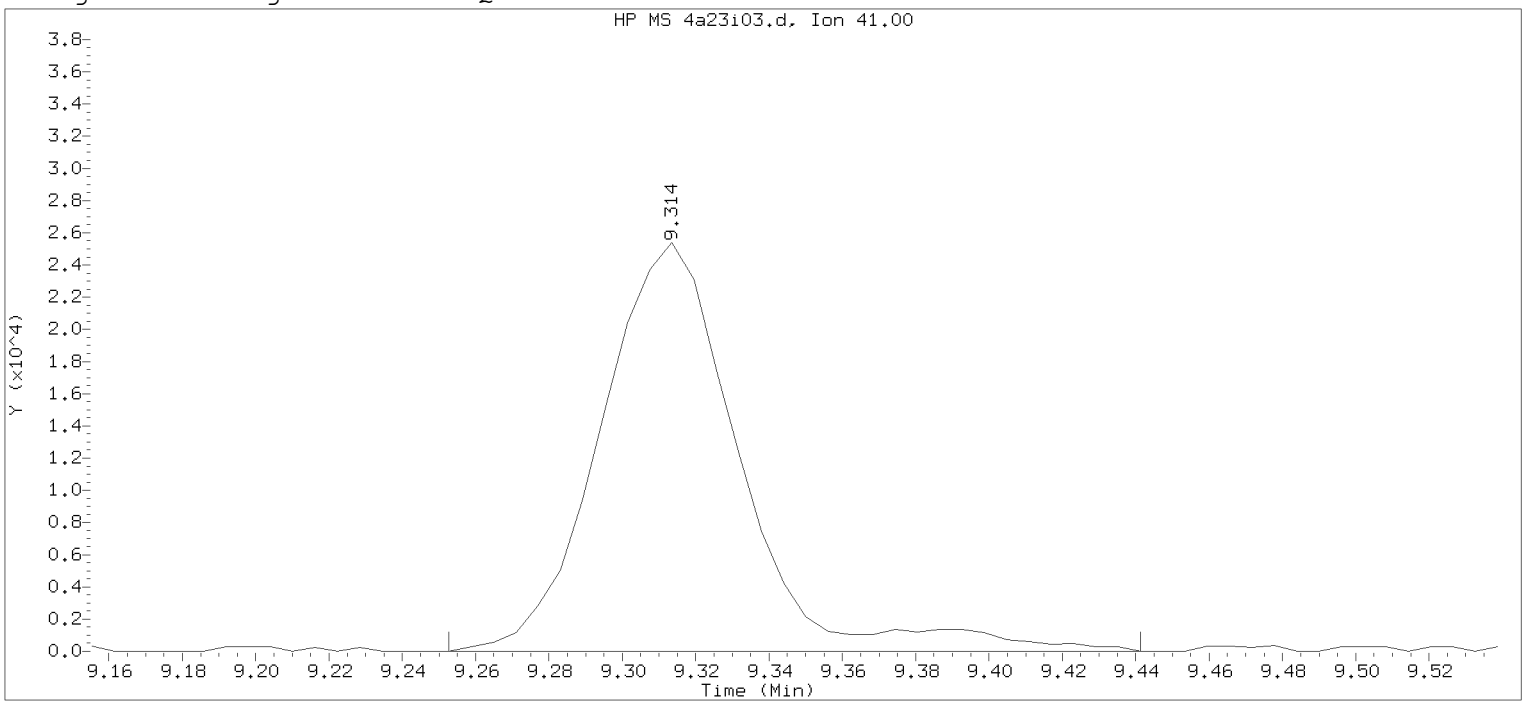
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

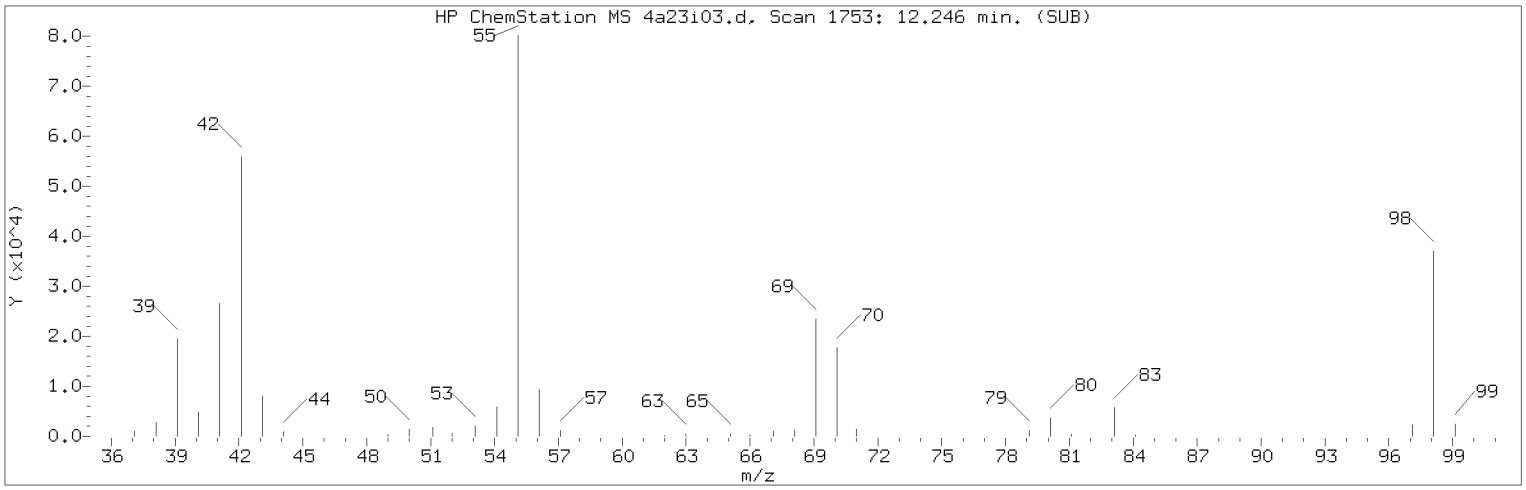
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:00
Date, time and analyst ID of latest file update: 23-Apr-2019 16:01 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

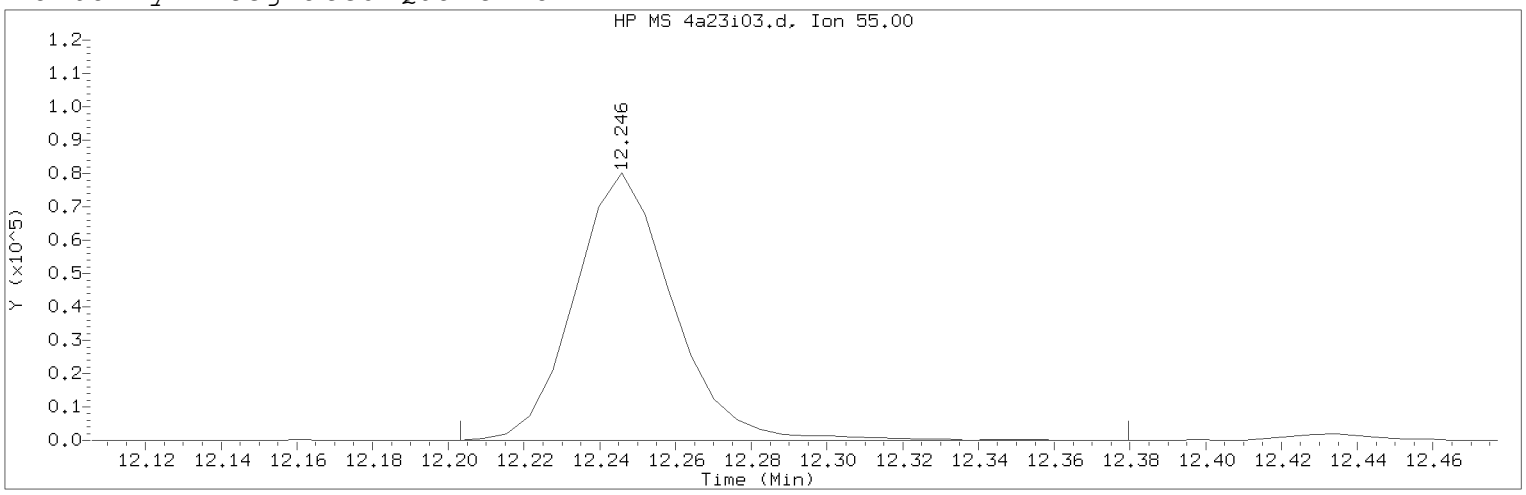
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 1271
Retention Time (minutes): 9.314
Quant Ion : 41.00
Area : 66816
On-column Amount (ng) : 21.1062
Integration start scan : 1260 Integration stop scan: 1291
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlo1482

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

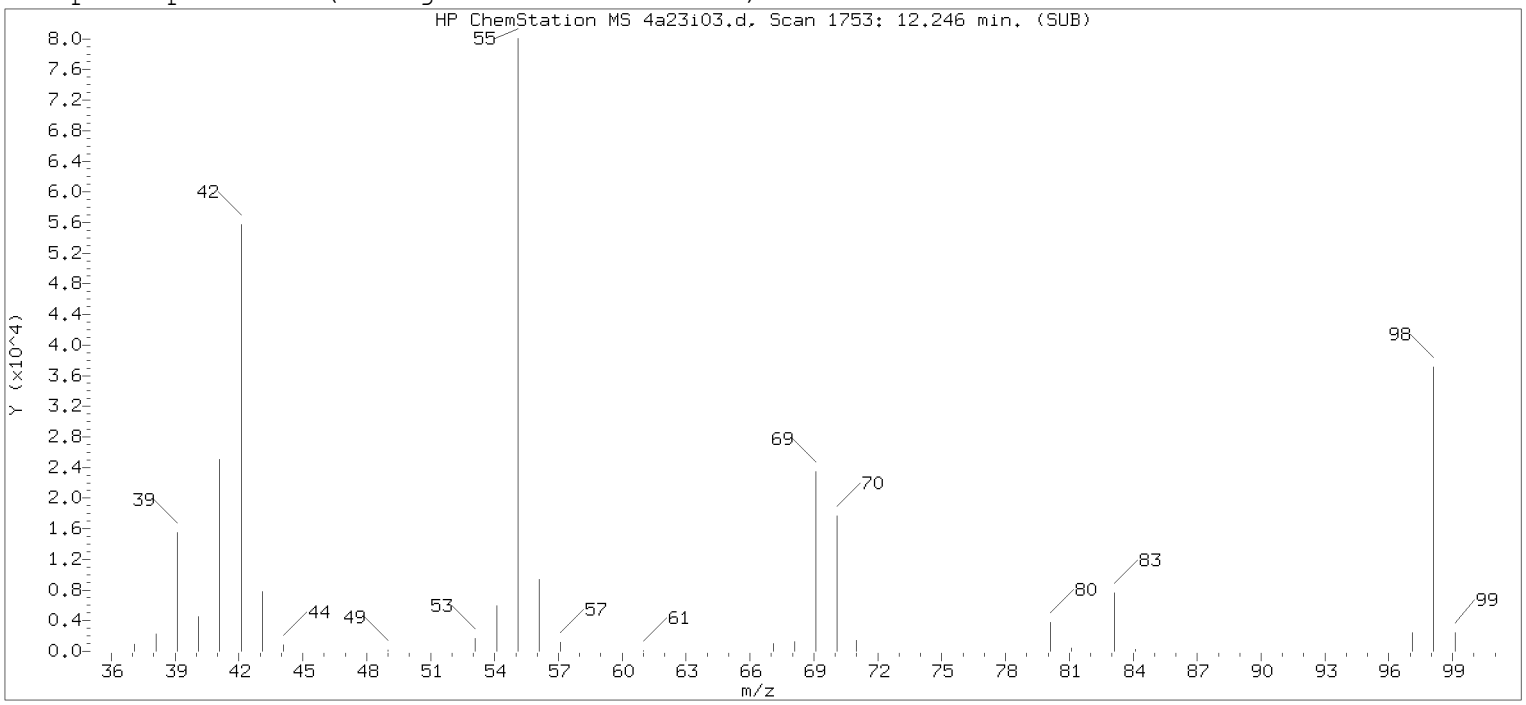
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1753
Retention Time (minutes): 12.246
Quant Ion : 55.00
Area (flag) : 143944M
On-Column Amount (ng) : 280.4388
Integration start scan : 1745 Integration stop scan: 1774
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

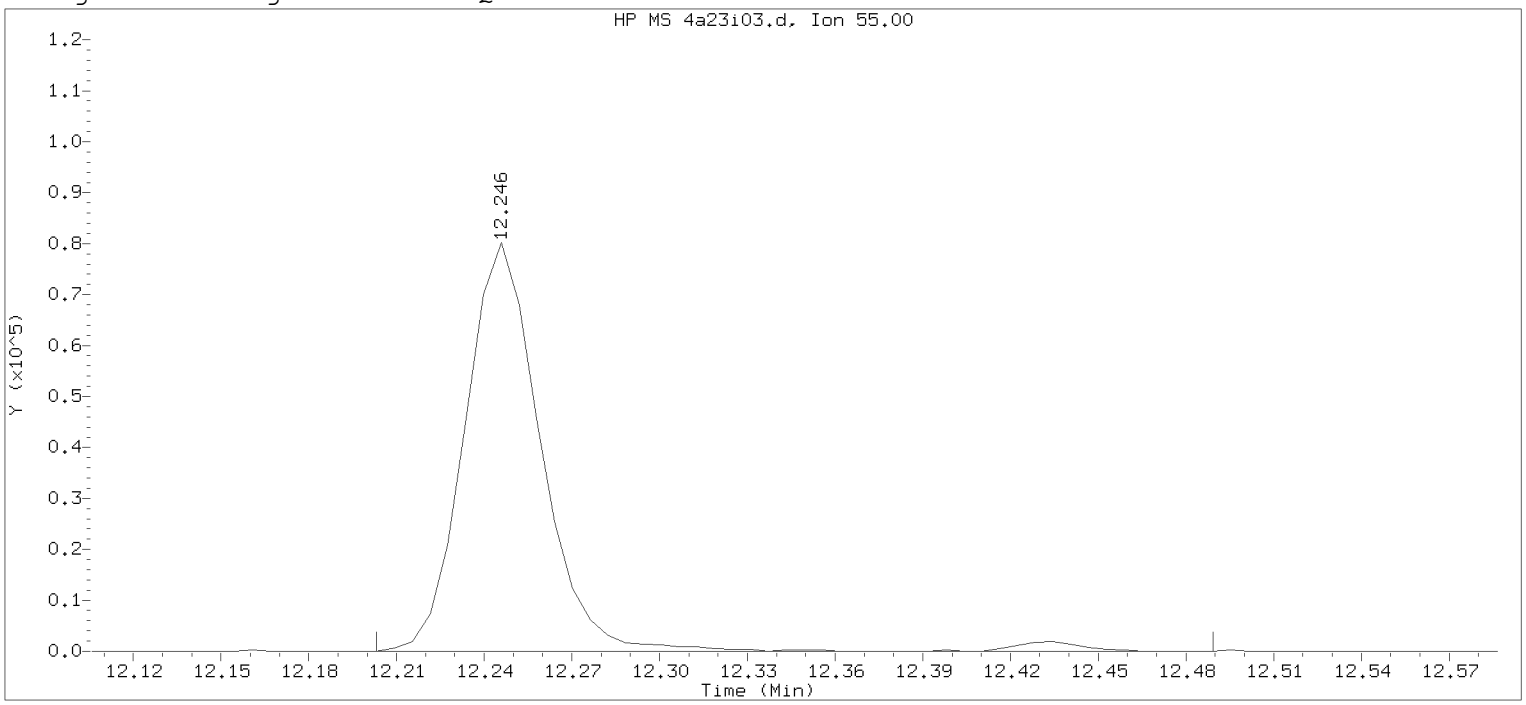
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

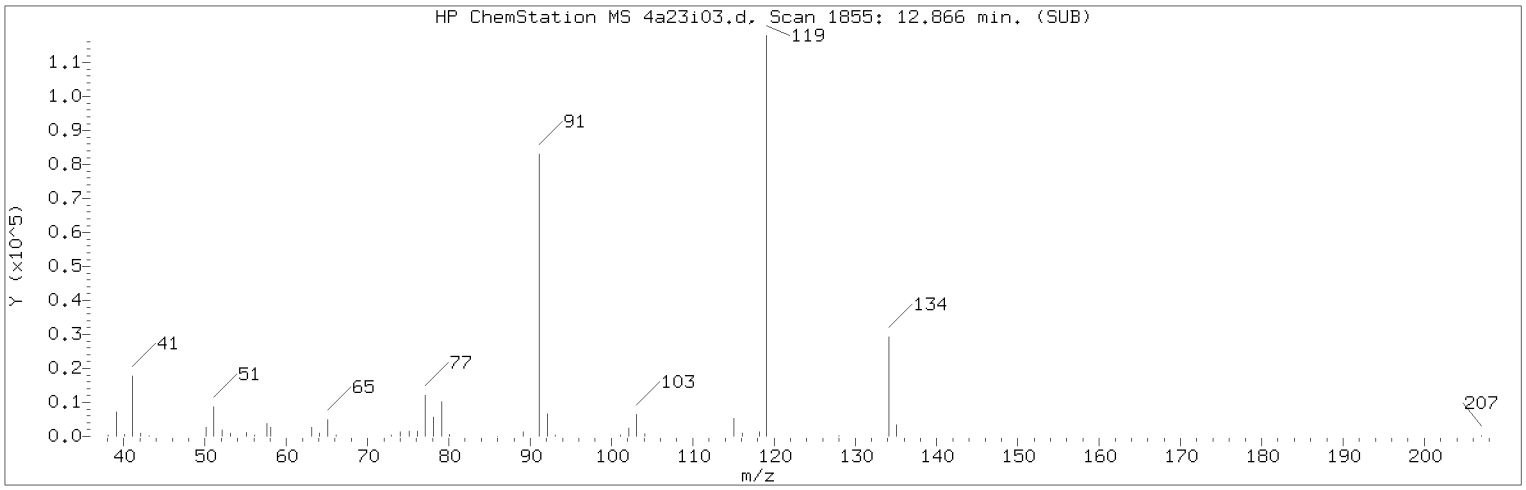
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:00
Date, time and analyst ID of latest file update: 23-Apr-2019 16:01 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

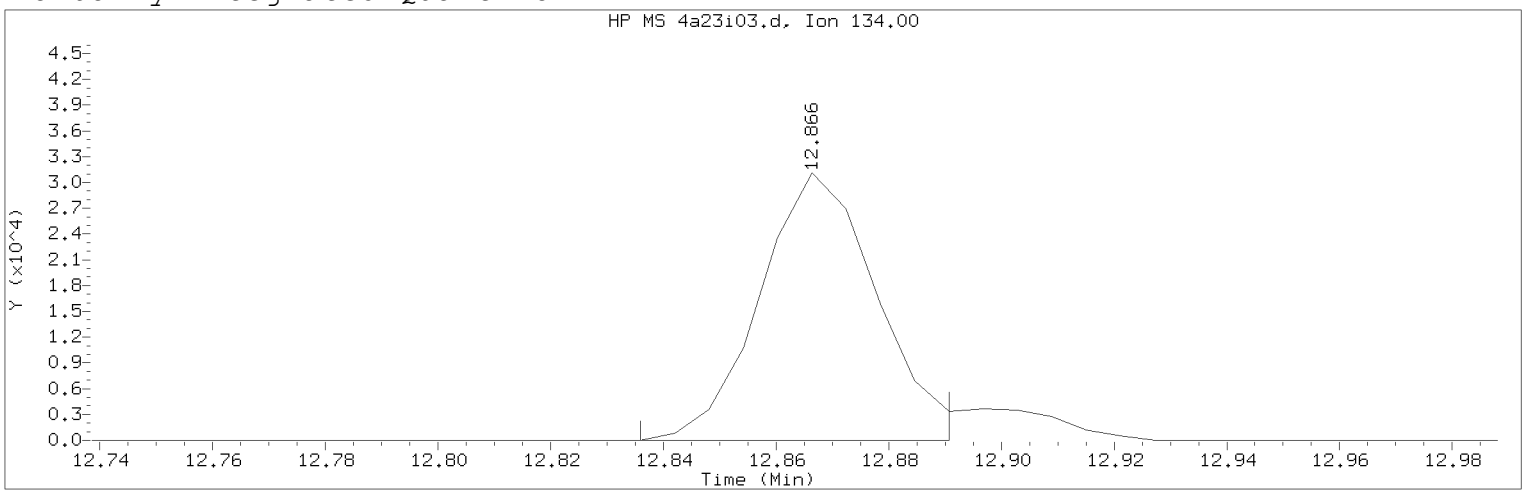
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1753
Retention Time (minutes): 12.246
Quant Ion : 55.00
Area : 146985
On-column Amount (ng) : 279.4708
Integration start scan : 1745 Integration stop scan: 1792
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlo1484

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

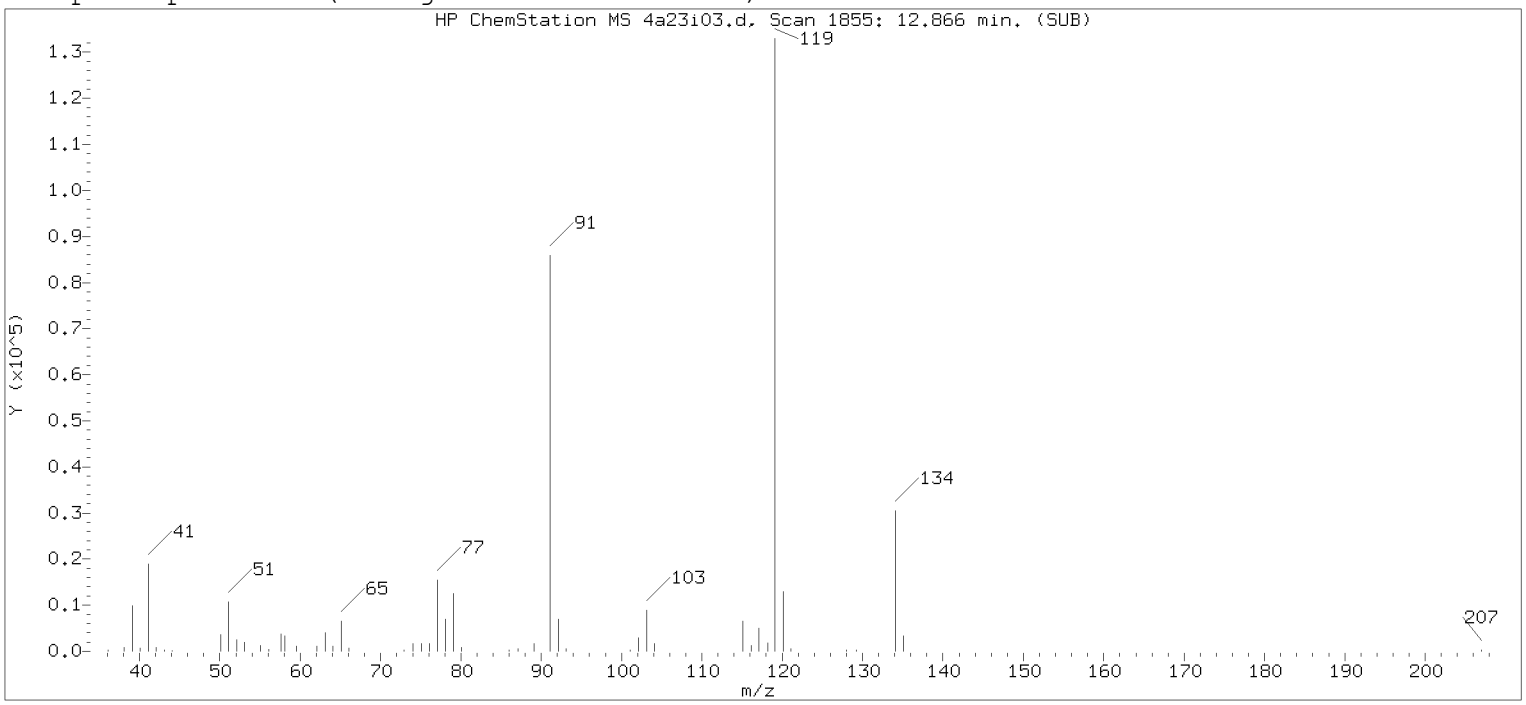
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area (flag) : 44873M
On-Column Amount (ng) : 10.3743
Integration start scan : 1849 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

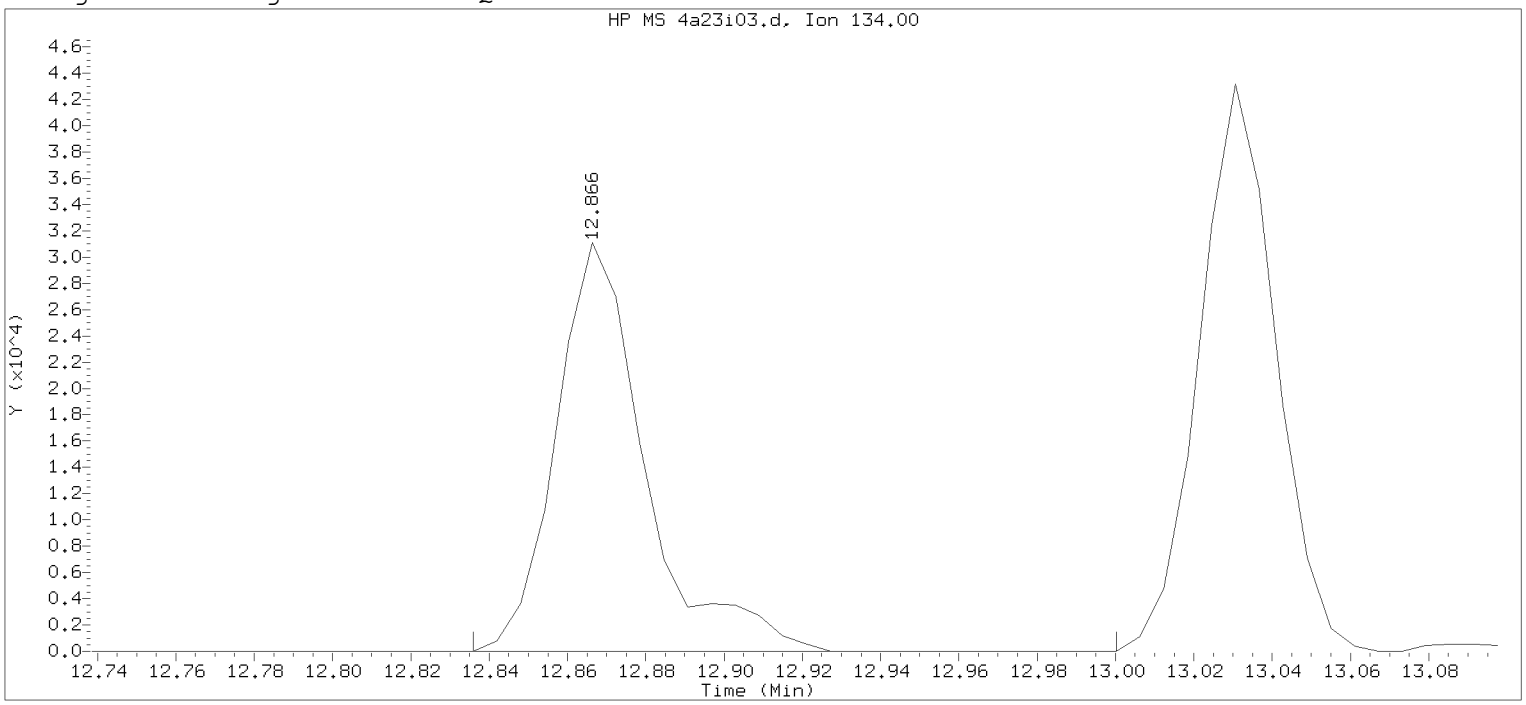
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

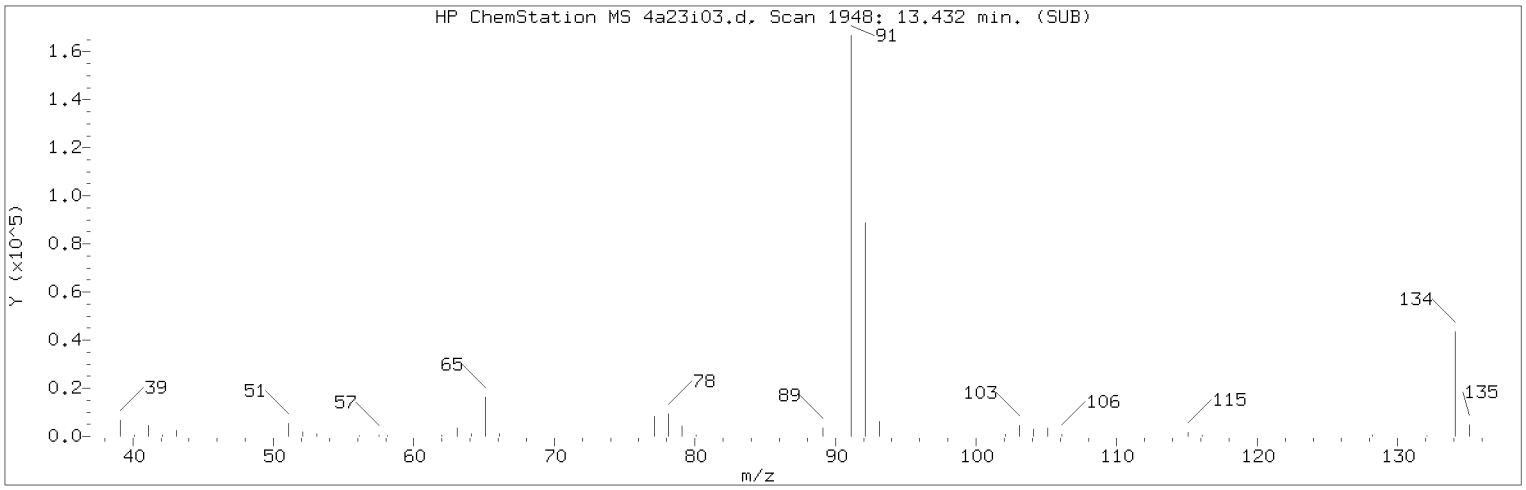
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:00
Date, time and analyst ID of latest file update: 23-Apr-2019 16:01 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

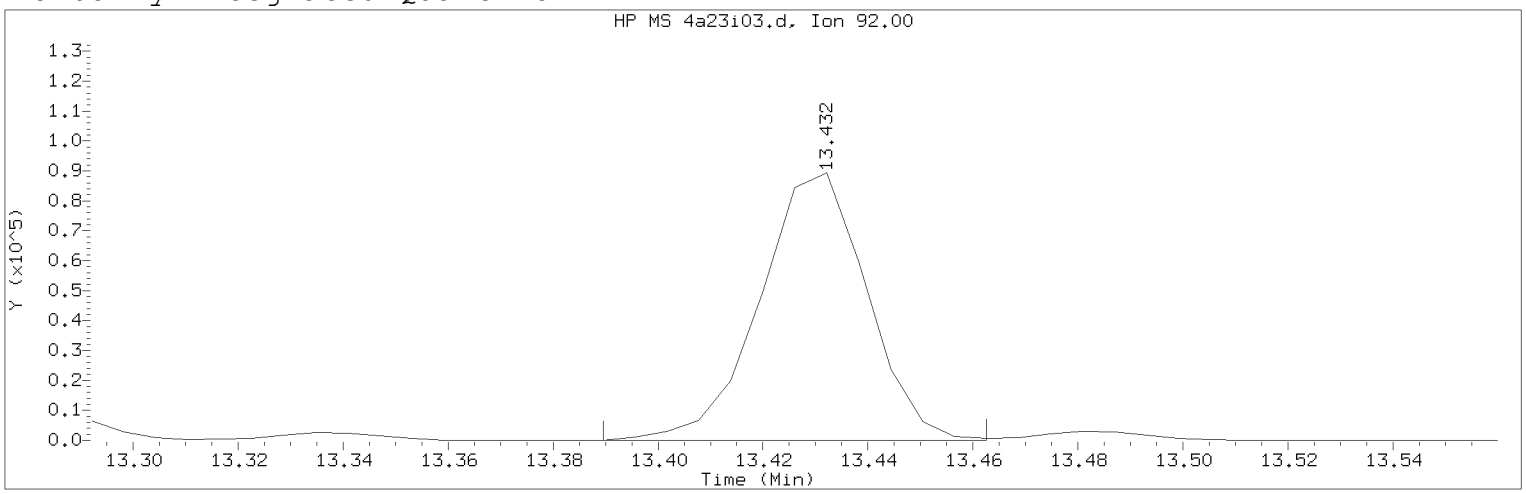
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area : 49113
On-column Amount (ng) : 10.4050
Integration start scan : 1849 Integration stop scan: 1876
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

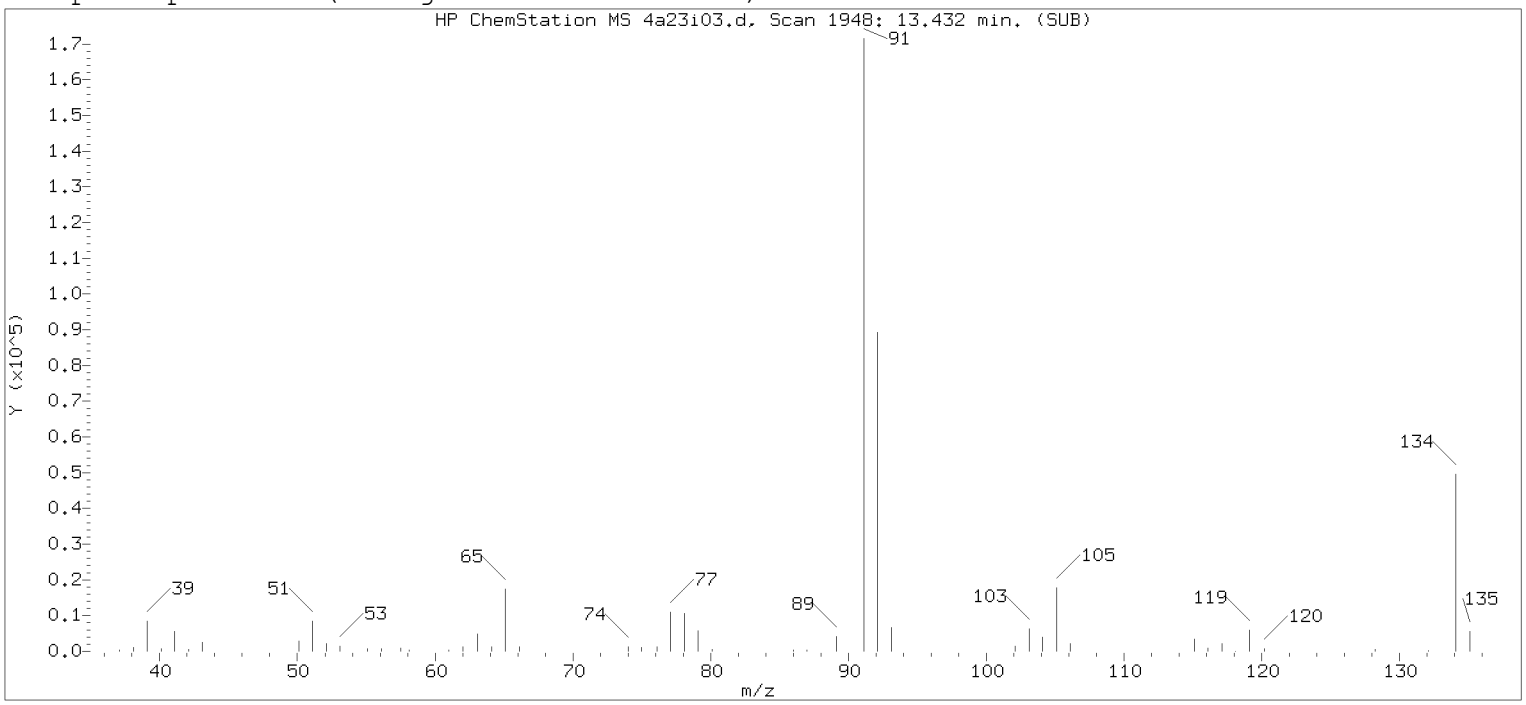
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1948
Retention Time (minutes): 13.432
Quant Ion : 92.00
Area (flag) : 126058M
On-Column Amount (ng) : 10.4477
Integration start scan : 1940 Integration stop scan: 1952
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

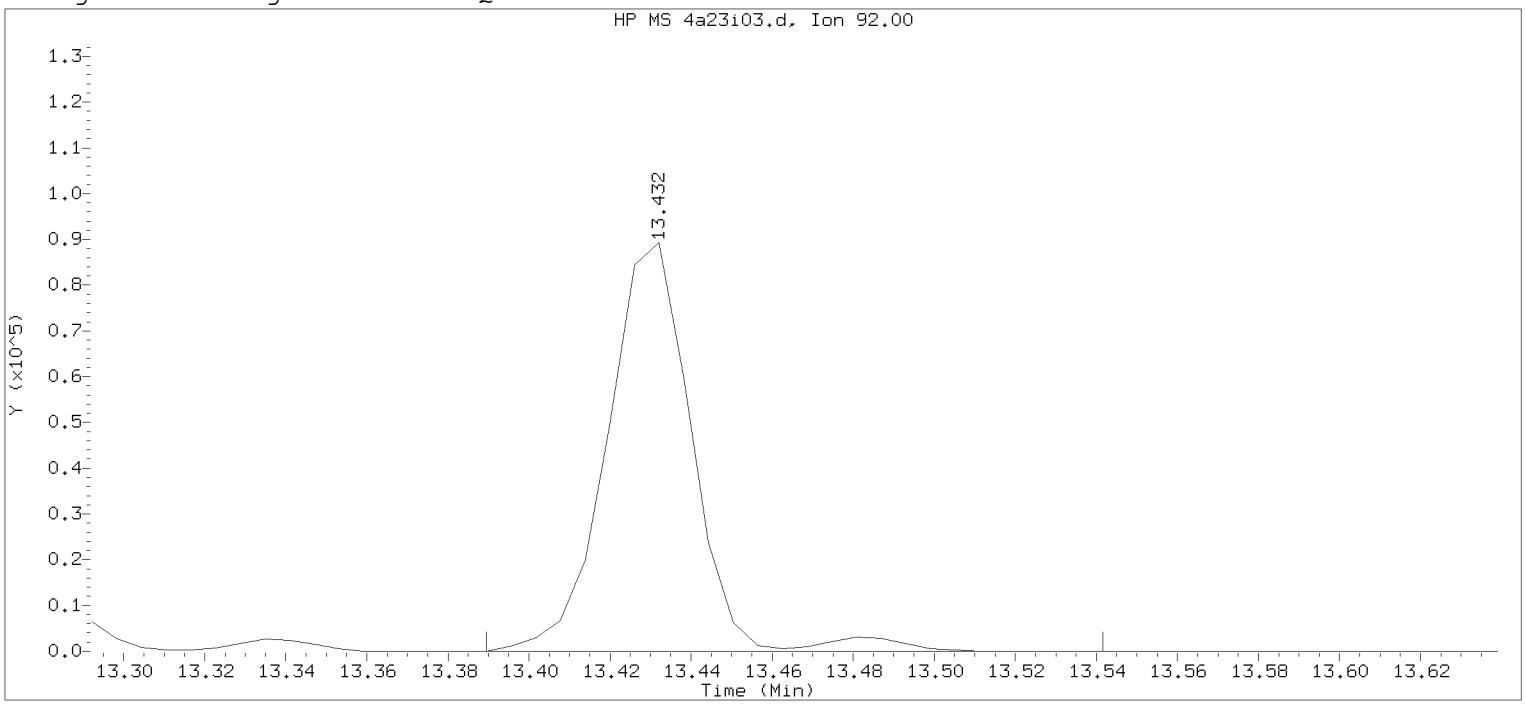
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



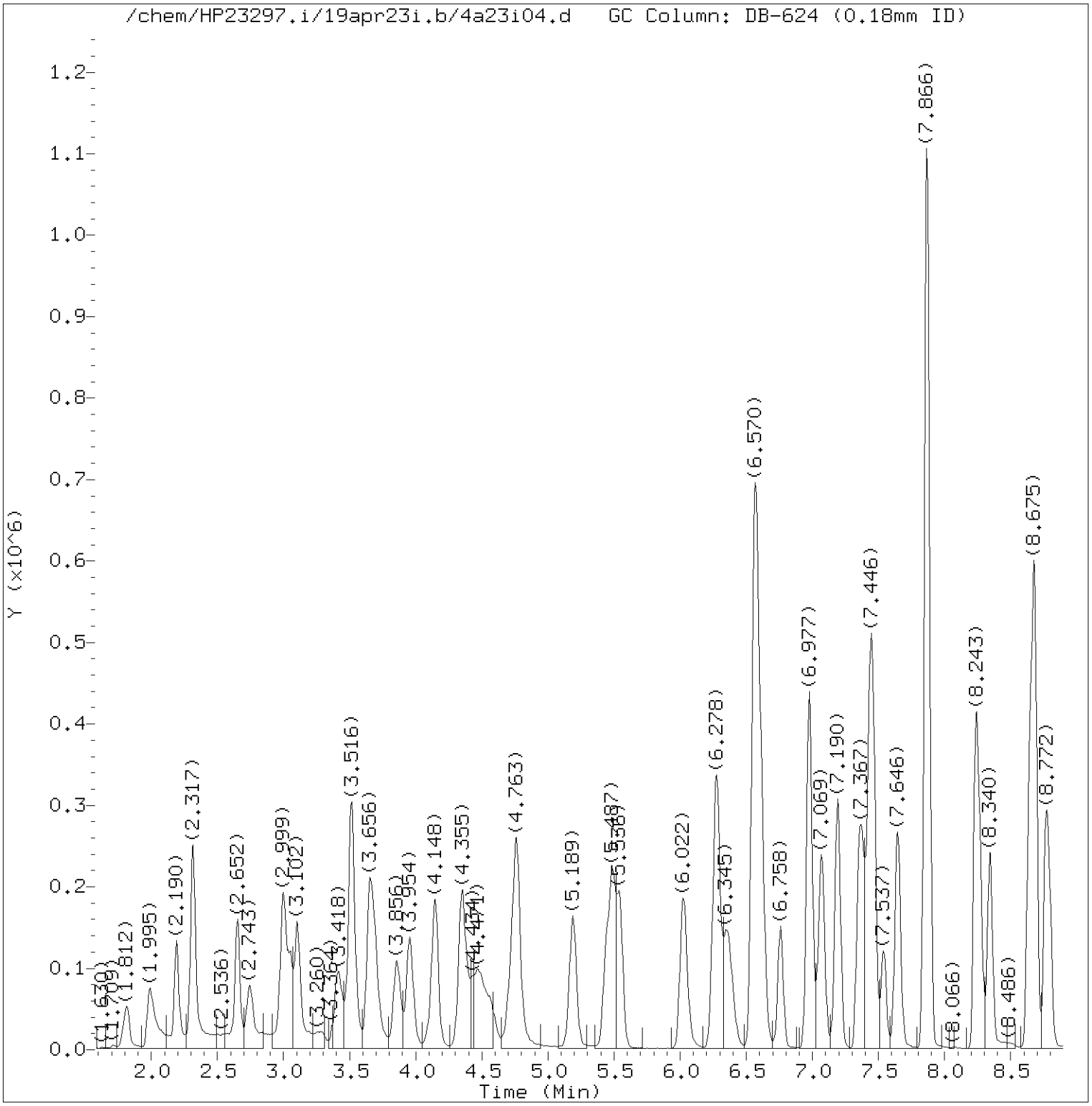
Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:00
Date, time and analyst ID of latest file update: 23-Apr-2019 16:01 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1948
Retention Time (minutes): 13.432
Quant Ion : 92.00
Area : 130281
On-column Amount (ng) : 10.5311
Integration start scan : 1940 Integration stop scan: 1965
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong



Total Ion Chromatogram (TIC)

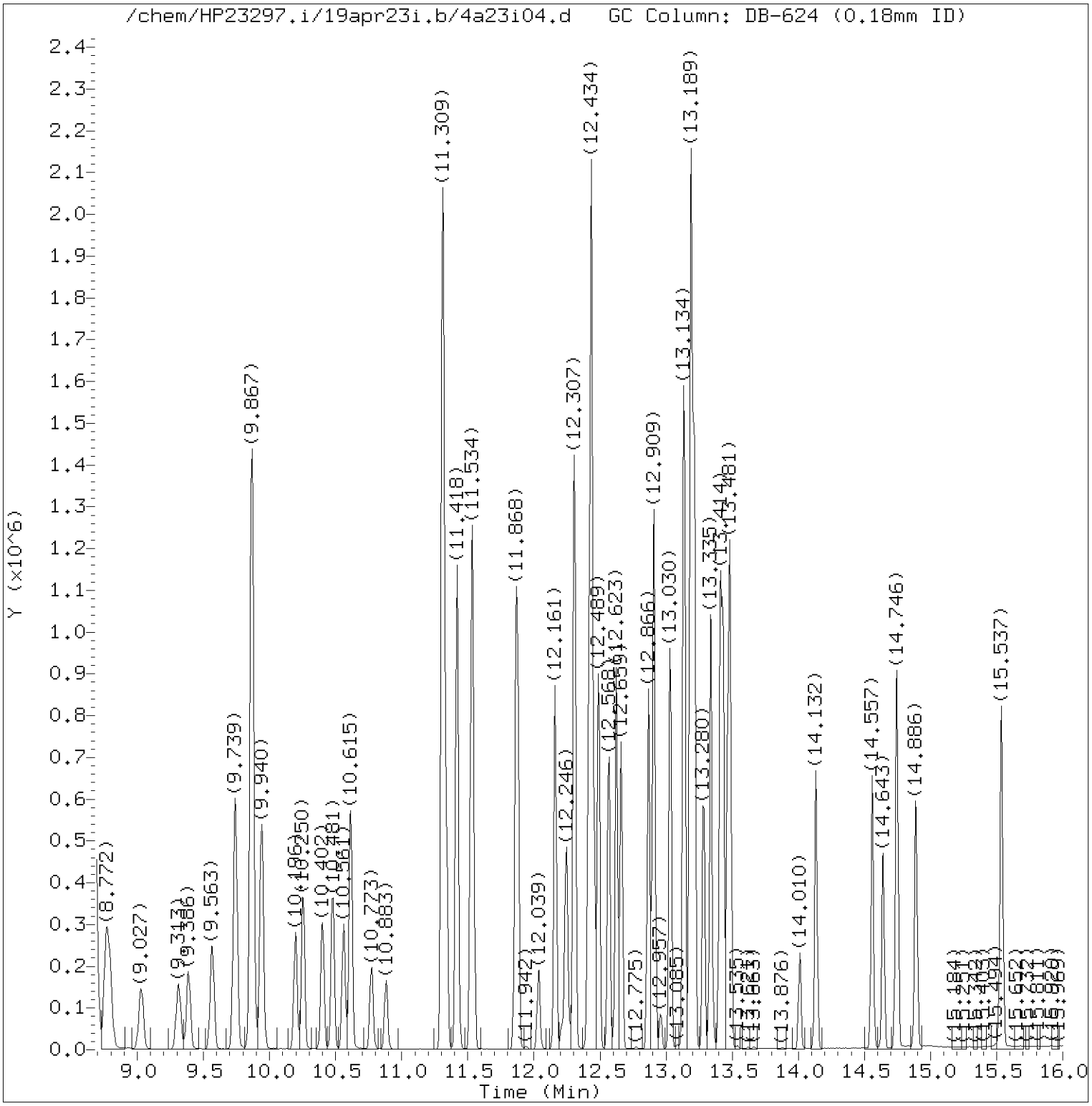
Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.989	85	184488	20.645
4) Chloromethane	(2)	2.190	50	175191	19.559
6) Vinyl Chloride	(2)	2.311	62	172847	19.923
5) 1,3-Butadiene	(2)	2.317	39	91973	19.137
8) Bromomethane	(2)	2.652	94	137928	19.157
9) Chloroethane	(2)	2.749	64	93761	19.277
10) Dichlorofluoromethane	(2)	2.993	67	215095	18.529
12) Trichlorofluoromethane	(2)	3.047	101	212165	20.778
11) n-Pentane	(2)	3.108	43	165482	20.591
13) Ethanol	(1)	3.279	45	115356M	779.313
15) Freon 123a	(2)	3.418	67	116906M	19.846
16) Acrolein	(1)	3.516	56	506382	209.624
17) 1,1-Dichloroethene	(2)	3.650	96	80364	20.425
17) 1,1-Dichloroethene	(2)	3.650	63	41997	19.612
19) Freon 113	(2)	3.668	101	89328	20.700
18) Acetone	(1)	3.698	58	50991	43.513
22) Methyl Iodide	(2)	3.856	142	161350	20.463
21) 2-Propanol	(1)	3.875	45	182473	190.465
23) Carbon Disulfide	(2)	3.954	76	287300	20.380
27) Methyl Acetate	(2)	4.124	43	159823	18.393
25) Allyl Chloride	(2)	4.148	41	168262	18.297
28) Methylene Chloride	(2)	4.349	84	100381	19.577
29)*t-Butyl alcohol-d10	(1)	4.367	65	424635	250.000
30) t-Butyl alcohol	(1)	4.507	59	340916	201.042
31) Acrylonitrile	(2)	4.714	53	91696	20.710
33) Methyl Tertiary Butyl Ether	(2)	4.751	73	291132	19.903
32) trans-1,2-Dichloroethene	(2)	4.769	96	97452	20.755
34) n-Hexane	(2)	5.189	57	159047	20.337
36) 1,1-Dichloroethane	(2)	5.438	63	179550	20.208
38) di-Isopropyl ether	(2)	5.487	45	360446	20.195
39) 2-Chloro-1,3-butadiene	(2)	5.548	53	164120	20.708
40) Ethyl t-butyl ether	(2)	6.028	59	314179	20.127
43) 1,2-Dichloroethene (Total)	(2)		96	208688	41.253
44) 2-Butanone	(2)	6.253	43	279717	39.650
42) cis-1,2-Dichloroethene	(2)	6.278	96	111236	20.498
45) 2,2-Dichloropropane	(2)	6.284	77	142148	20.541
47) Propionitrile	(1)	6.357	54	366070	210.465
48) Methacrylonitrile	(2)	6.564	67	421345	103.430

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.612	128	61300	20.724
50) Tetrahydrofuran	(1)	6.618	71	73788	42.546
51) Chloroform	(2)	6.758	83	175981	19.992
52)$Dibromofluoromethane	(2)	6.977	113	281150	50.314
52)$Dibromofluoromethane	(2)	6.977	111	288338	50.392
53) 1,1,1-Trichloroethane	(2)	6.977	97	148550	20.388
54) Cyclohexane	(2)	7.069	56	193876	20.450
54) Cyclohexane	(2)	7.069	84	160073	20.906
54) Cyclohexane	(2)	7.069	69	57555	20.686
56) Carbon Tetrachloride	(2)	7.184	117	128114	20.579
55) 1,1-Dichloropropene	(2)	7.196	75	139380	20.280
58) Isobutyl Alcohol	(1)	7.367	41	292185	496.165
57)$1,2-Dichloroethane-d4	(2)	7.434	102	71145	51.836
57)$1,2-Dichloroethane-d4	(2)	7.434	65	342285	50.890
57)$1,2-Dichloroethane-d4	(2)	7.434	104	44532	51.280
60) Benzene	(2)	7.464	78	426985	20.173
61) 1,2-Dichloroethane	(2)	7.537	62	140264	19.098
61) 1,2-Dichloroethane	(2)	7.537	98	12869	23.060
65) t-Amyl methyl ether	(2)	7.646	73	321081	20.125
67) n-Heptane	(2)	7.866	43	189010	20.113
66)*Fluorobenzene	(2)	7.866	96	1136829	50.000
69) n-Butanol	(1)	8.237	56	472861	1009.706
71) Trichloroethene	(2)	8.340	95	107901	20.465
72) Methylcyclohexane	(2)	8.644	83	205816	21.015
72) Methylcyclohexane	(2)	8.644	98	90177	21.404
73) 1,2-Dichloropropane	(2)	8.687	63	111831	20.456
76) Methyl Methacrylate	(2)	8.766	69	125817	20.432
75) 1,4-Dioxane	(1)	8.772	88	50746M	416.033
74) Dibromomethane	(2)	8.796	93	73058	20.710
78) Bromodichloromethane	(2)	9.027	83	132409	20.779
79) 2-Nitropropane	(2)	9.313	41	129961M	40.182
80) 2-Chloroethyl Vinyl Ether	(2)	9.386	63	102729	20.610
81) cis-1,3-Dichloropropene	(2)	9.569	75	174698	20.837
82) 4-Methyl-2-pentanone	(2)	9.739	43	511158	41.016
83)$Toluene-d8	(3)	9.867	98	1179083	49.869
83)$Toluene-d8	(3)	9.867	100	758711	49.621
88) Toluene	(3)	9.940	92	274209	19.986
90) 1,3-Dichloropropene (total)	(3)		100	338063	41.972

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Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.196	75	163365	21.135
91) Ethyl Methacrylate	(3)	10.256	69	205439	20.596
92) 1,1,2-Trichloroethane	(3)	10.396	97	108525	20.339
93) Tetrachloroethene	(3)	10.481	166	120754	20.530
94) 1,3-Dichloropropane	(3)	10.561	76	178716	20.043
96) 2-Hexanone	(3)	10.615	43	407424	40.652
97) Dibromochloromethane	(3)	10.773	129	114079	21.096
99) 1,2-Dibromoethane	(3)	10.883	107	119524	20.483
100)*Chlorobenzene-d5	(3)	11.309	117	909723	50.000
102) Chlorobenzene	(3)	11.333	112	312557	20.265
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	106192	21.284
104) Ethylbenzene	(3)	11.418	91	533748	20.410
106) m+p-Xylene	(3)	11.534	106	424190	41.138
108) Xylene (Total)	(3)		106	633901	61.542
107) o-Xylene	(3)	11.862	106	209711	20.404
109) Styrene	(3)	11.875	104	354982	21.189
110) Bromoform	(3)	12.039	173	89837	21.909
111) Isopropylbenzene	(3)	12.161	105	534444	20.665
112) Cyclohexanone	(1)	12.246	55	211775	432.453
114)$4-Bromofluorobenzene	(3)	12.307	95	451684	50.372
114)$4-Bromofluorobenzene	(3)	12.307	174	397323	50.359
116) 1,1,2,2-Tetrachloroethane	(4)	12.410	83	192466	20.413
115) Bromobenzene	(4)	12.422	156	143762	20.438
118) trans-1,4-Dichloro-2-butene	(4)	12.434	53	325814	104.943
117) 1,2,3-Trichloropropane	(4)	12.459	110	56397	19.621
119) n-Propylbenzene	(4)	12.489	91	635144	20.244
120) 2-Chlorotoluene	(4)	12.568	126	130732	20.321
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	458407M	20.559
121) 4-Chlorotoluene	(4)	12.659	126	135862	20.293
124) tert-Butylbenzene	(4)	12.866	134	93971M	20.521
125) Pentachloroethane	(4)	12.903	167	86007	21.452
126) 1,2,4-Trimethylbenzene	(4)	12.909	105	478774	20.739
127) sec-Butylbenzene	(4)	13.030	105	589304	20.720
129) 1,3-Dichlorobenzene	(4)	13.134	146	270245	20.413
130) p-Isopropyltoluene	(4)	13.140	119	518077	21.024
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	508580	50.000
133) 1,4-Dichlorobenzene	(4)	13.207	146	277767	20.377
134) 1,2,3-Trimethylbenzene	(4)	13.213	105	508068	20.425

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Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

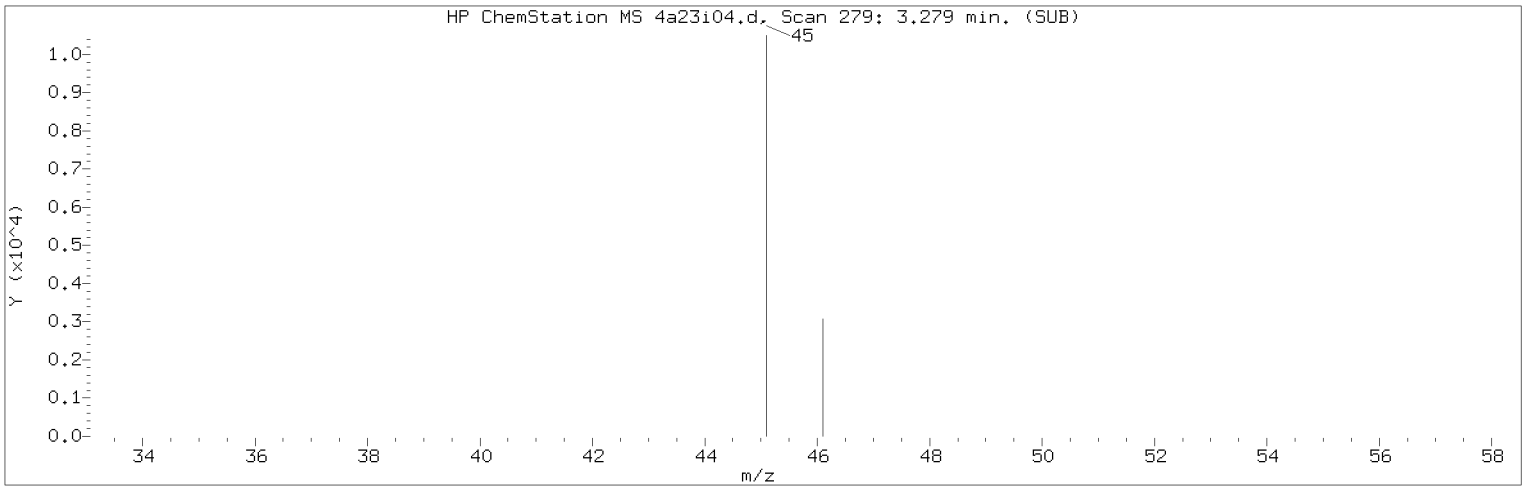
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

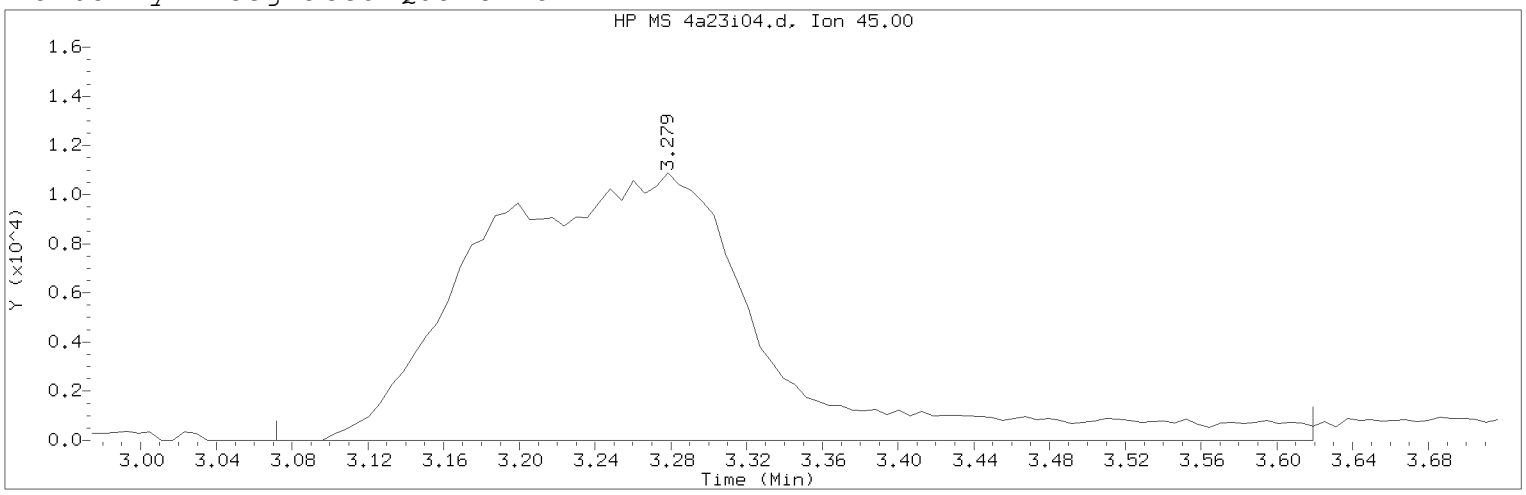
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.280	91	387360	22.012
136) 1,3-Diethylbenzene	(4)	13.341	119	321352	20.833
141) Diethylbenzene (total)	(4)		100	930635	62.338
137) 1,4-Diethylbenzene	(4)	13.408	119	340934	20.823
139) n-Butylbenzene	(4)	13.432	92	261520	20.485
138) 1,2-Dichlorobenzene	(4)	13.468	146	263193	20.289
140) 1,2-Diethylbenzene	(4)	13.487	119	268349	20.682
142) 1,2-Dibromo-3-chloropropane	(4)	14.010	75	51058	20.393
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	198932	20.253
146) 1,2,4-Trichlorobenzene	(4)	14.557	180	185764	19.789
147) Hexachlorobutadiene	(4)	14.643	225	83954	19.138
148) Naphthalene	(4)	14.746	128	673789	20.699
149) 1,2,3-Trichlorobenzene	(4)	14.892	180	179421	20.027
150) 2-Methylnaphthalene	(4)	15.537	142	412116	21.002

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

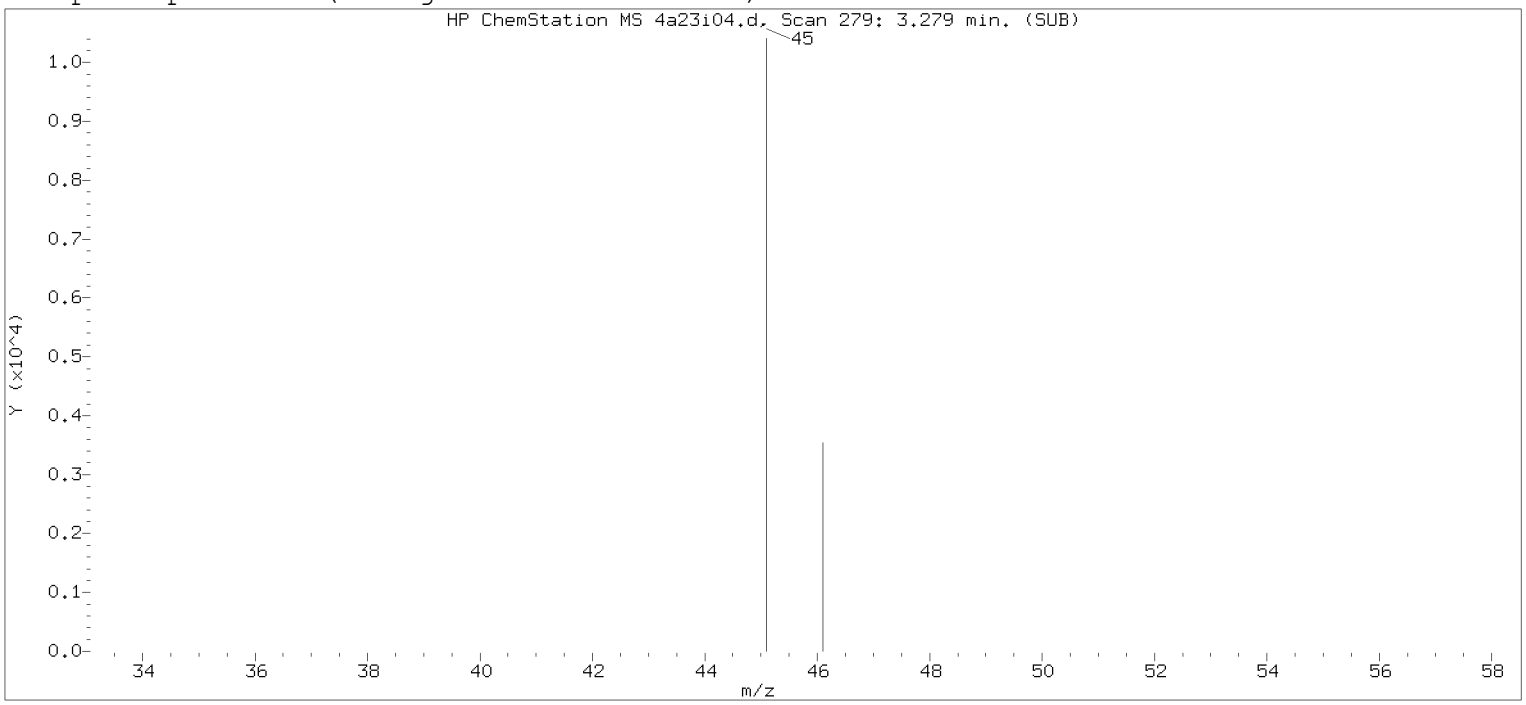
Compound Number : 13
Compound Name : Ethanol
Scan Number : 279
Retention Time (minutes): 3.279
Quant Ion : 45.00
Area (flag) : 115356M
On-Column Amount (ng) : 779.3126
Integration start scan : 244 Integration stop scan: 334
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

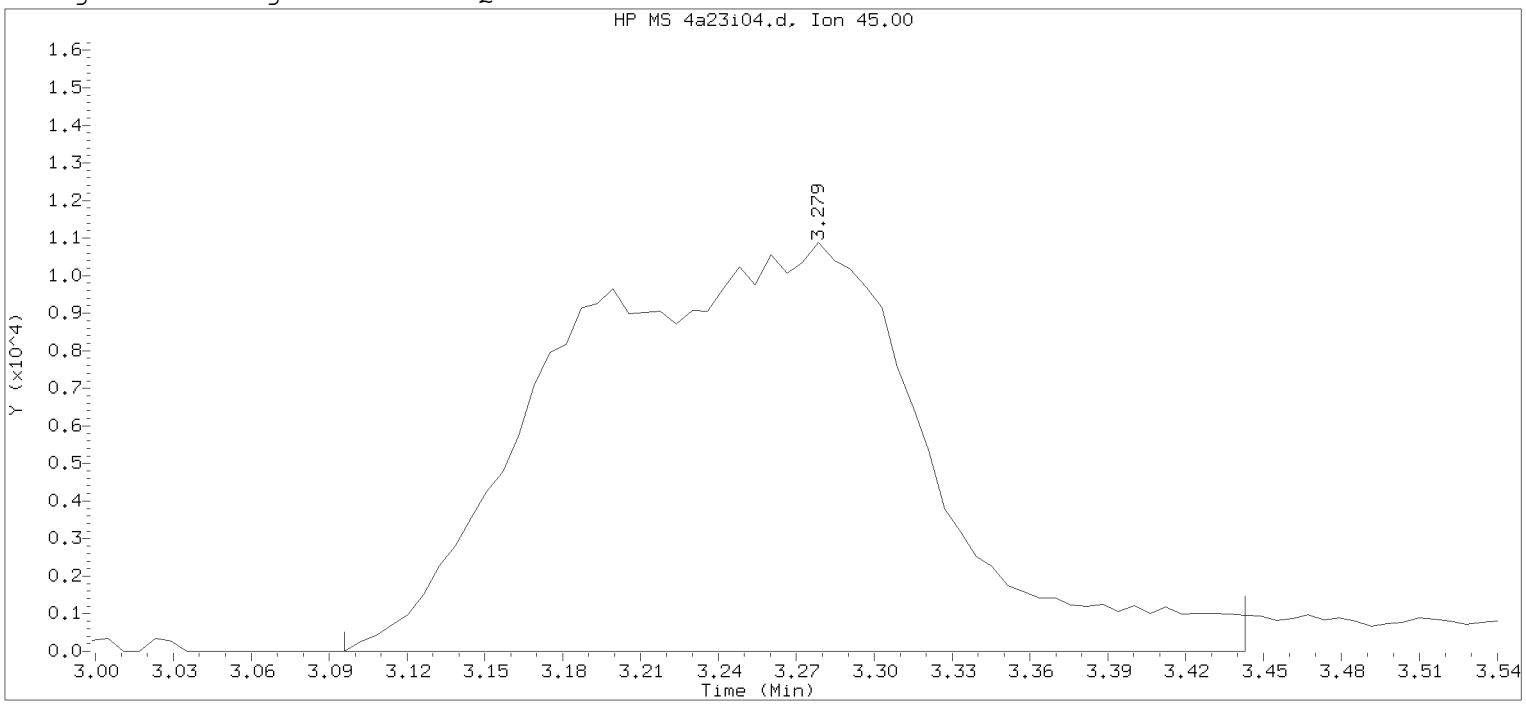
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

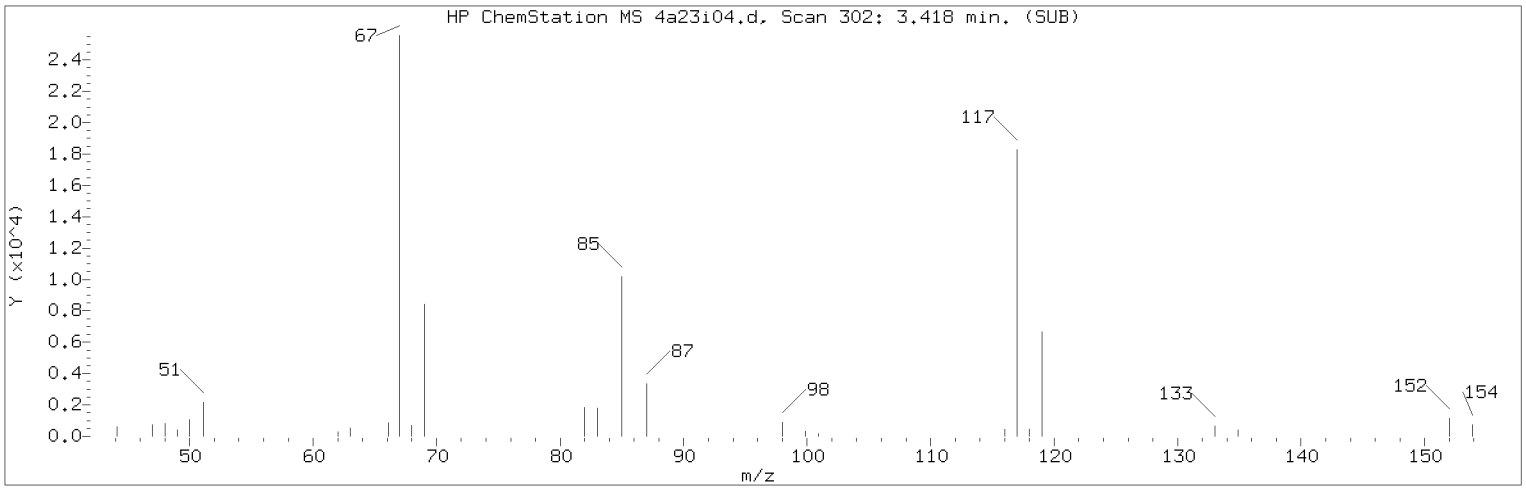
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:23
Date, time and analyst ID of latest file update: 23-Apr-2019 16:23 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

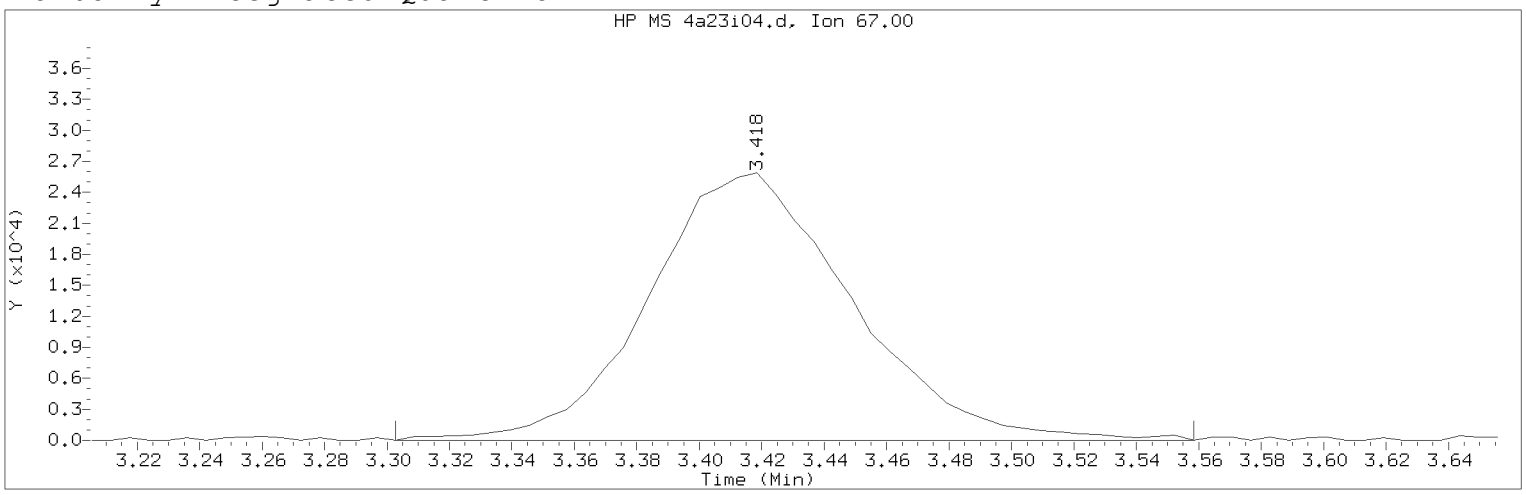
Compound Number	: 13		
Compound Name	: Ethanol		
Scan Number	: 279		
Retention Time (minutes)	: 3.279		
Quant Ion	: 45.00		
Area	: 107075		
On-column Amount (ng)	: 810.4674		
Integration start scan	: 248	Integration stop scan:	305
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

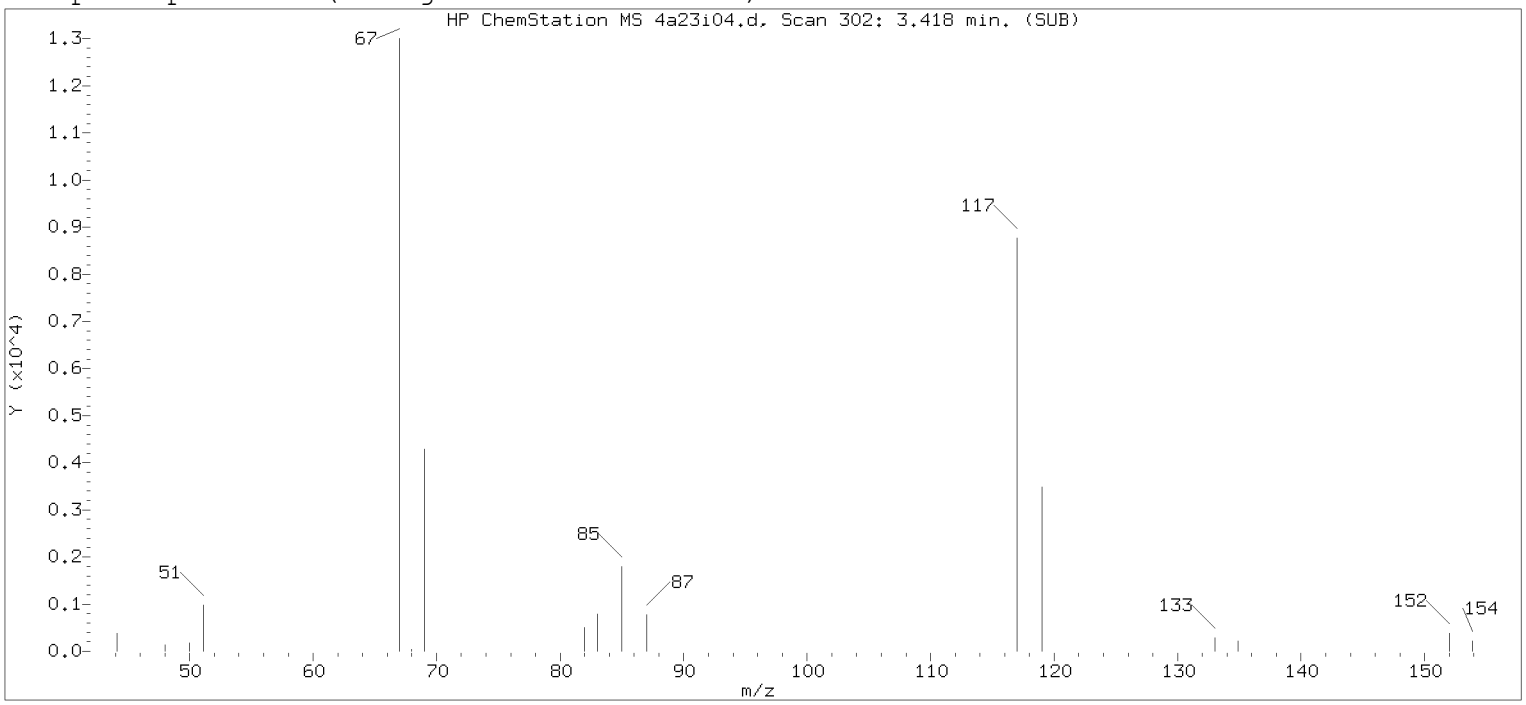
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 302
Retention Time (minutes): 3.418
Quant Ion : 67.00
Area (flag) : 116906M
On-Column Amount (ng) : 19.8459
Integration start scan : 282 Integration stop scan: 324
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

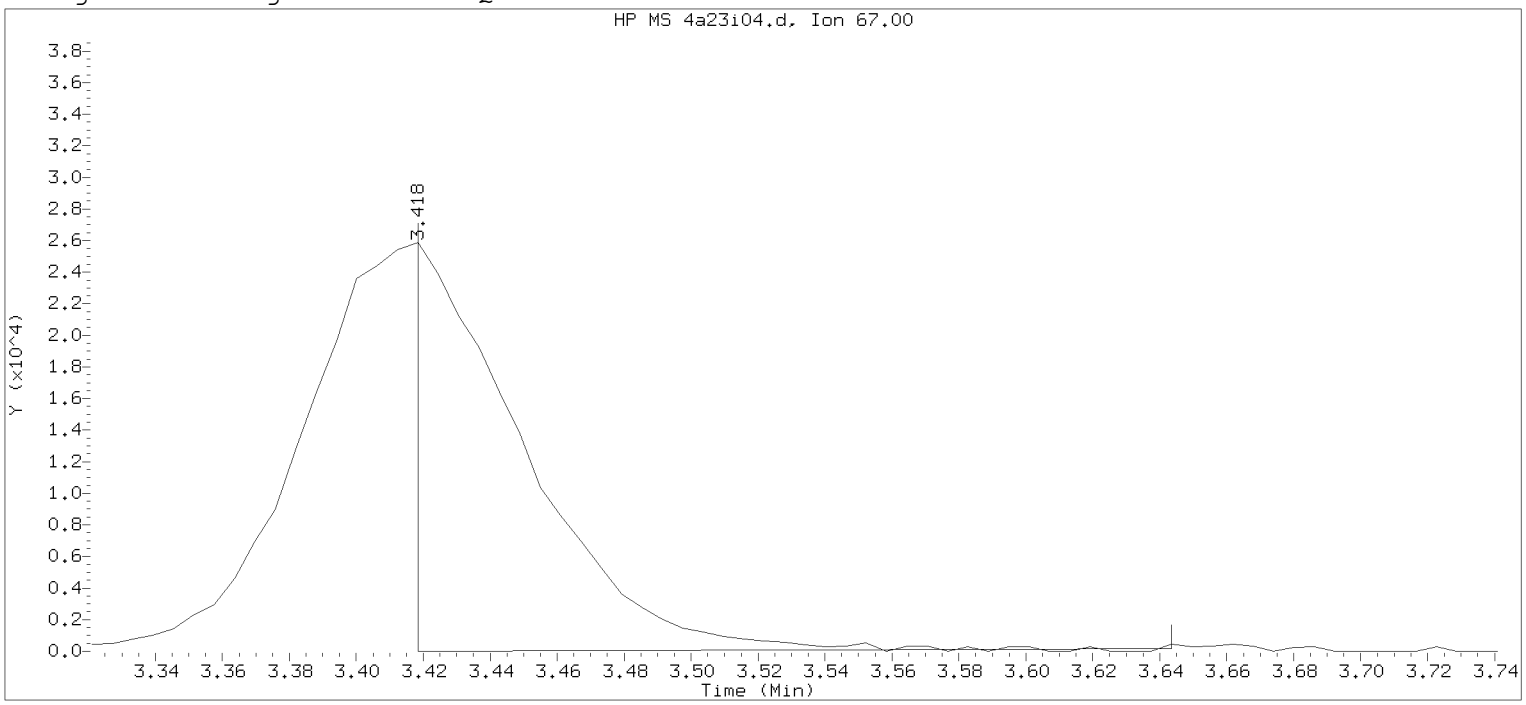
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

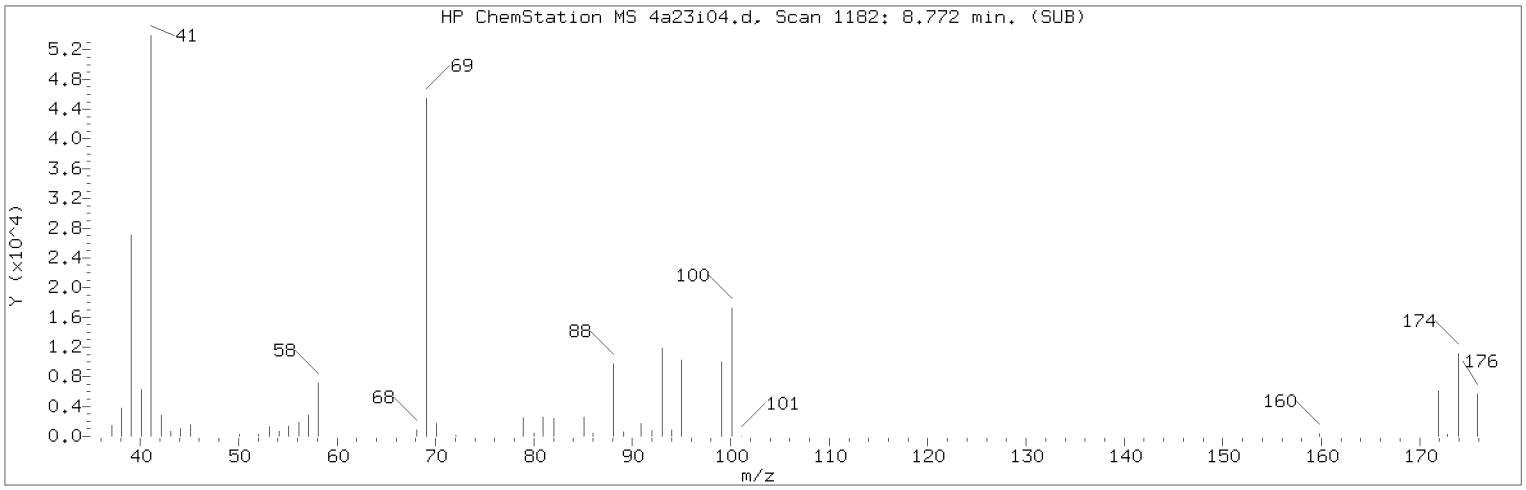
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:23
Date, time and analyst ID of latest file update: 23-Apr-2019 16:23 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

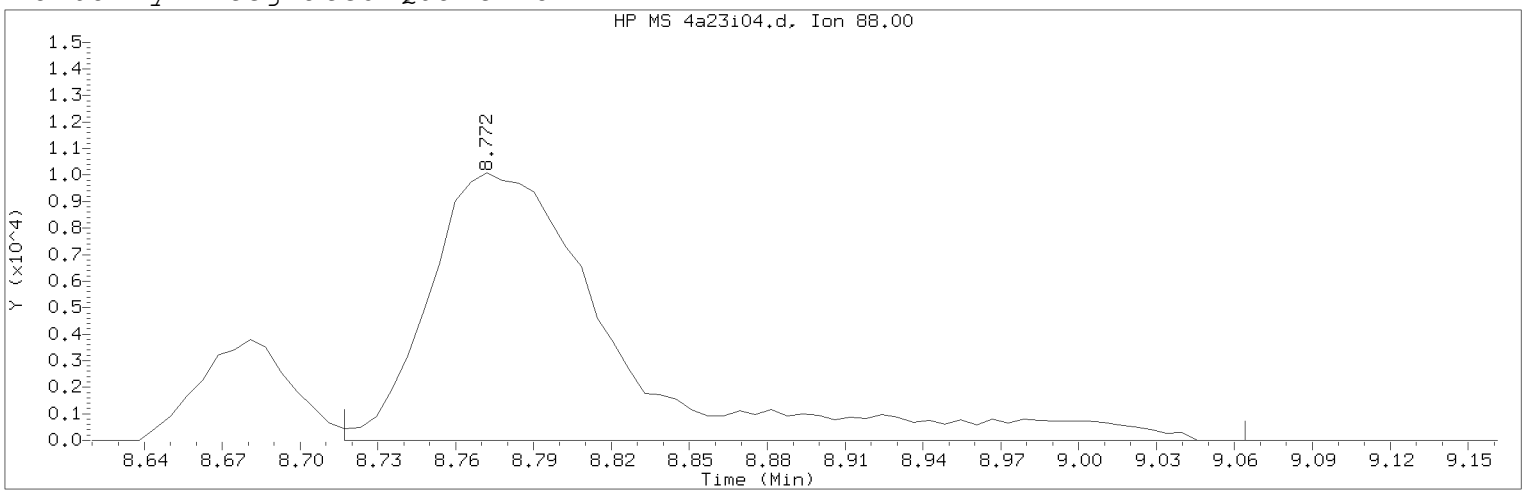
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 302
Retention Time (minutes): 3.418
Quant Ion : 67.00
Area : 55814
On-column Amount (ng) : 10.8863
Integration start scan : 301 Integration stop scan: 338
Y at integration start : 0 Y at integration end: 182

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

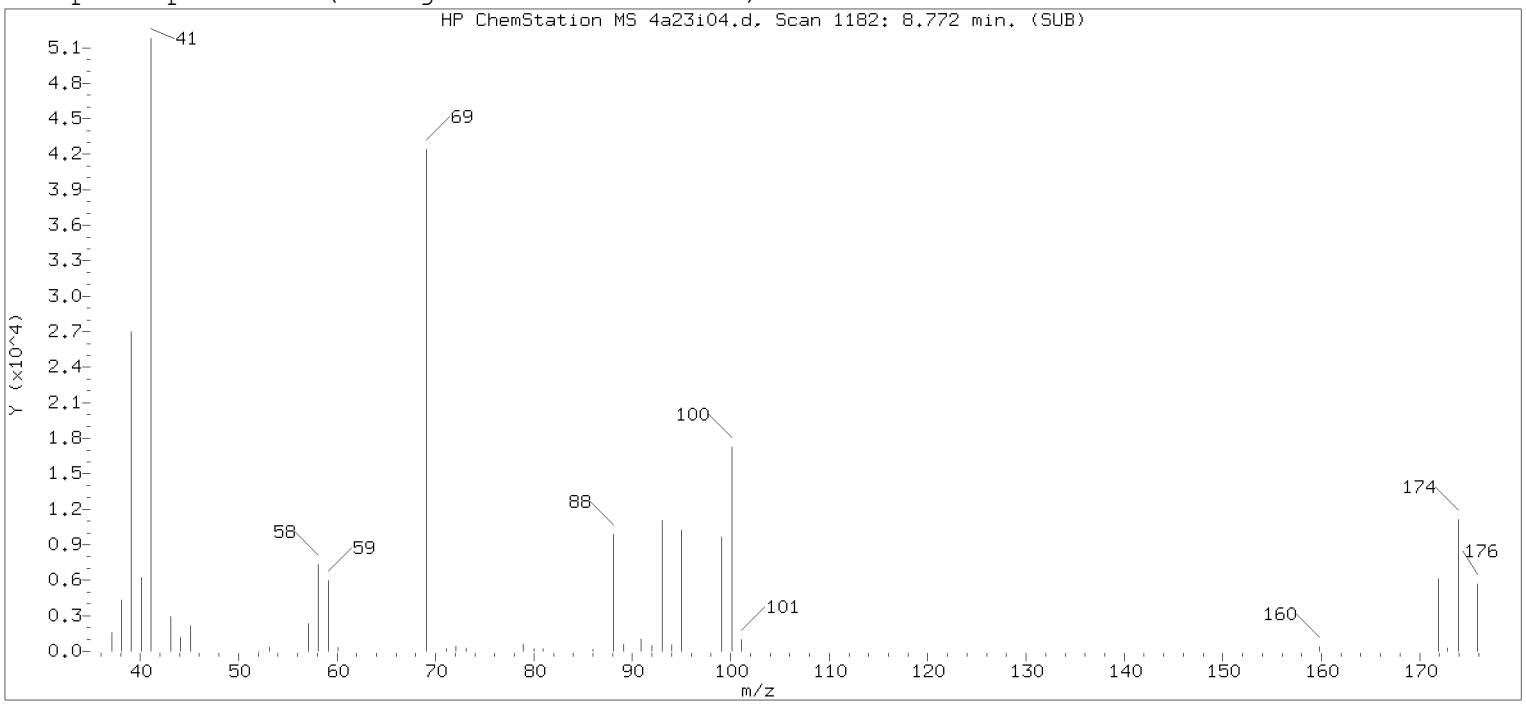
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1182
Retention Time (minutes): 8.772
Quant Ion : 88.00
Area (flag) : 50746M
On-Column Amount (ng) : 416.0333
Integration start scan : 1172 Integration stop scan: 1229
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

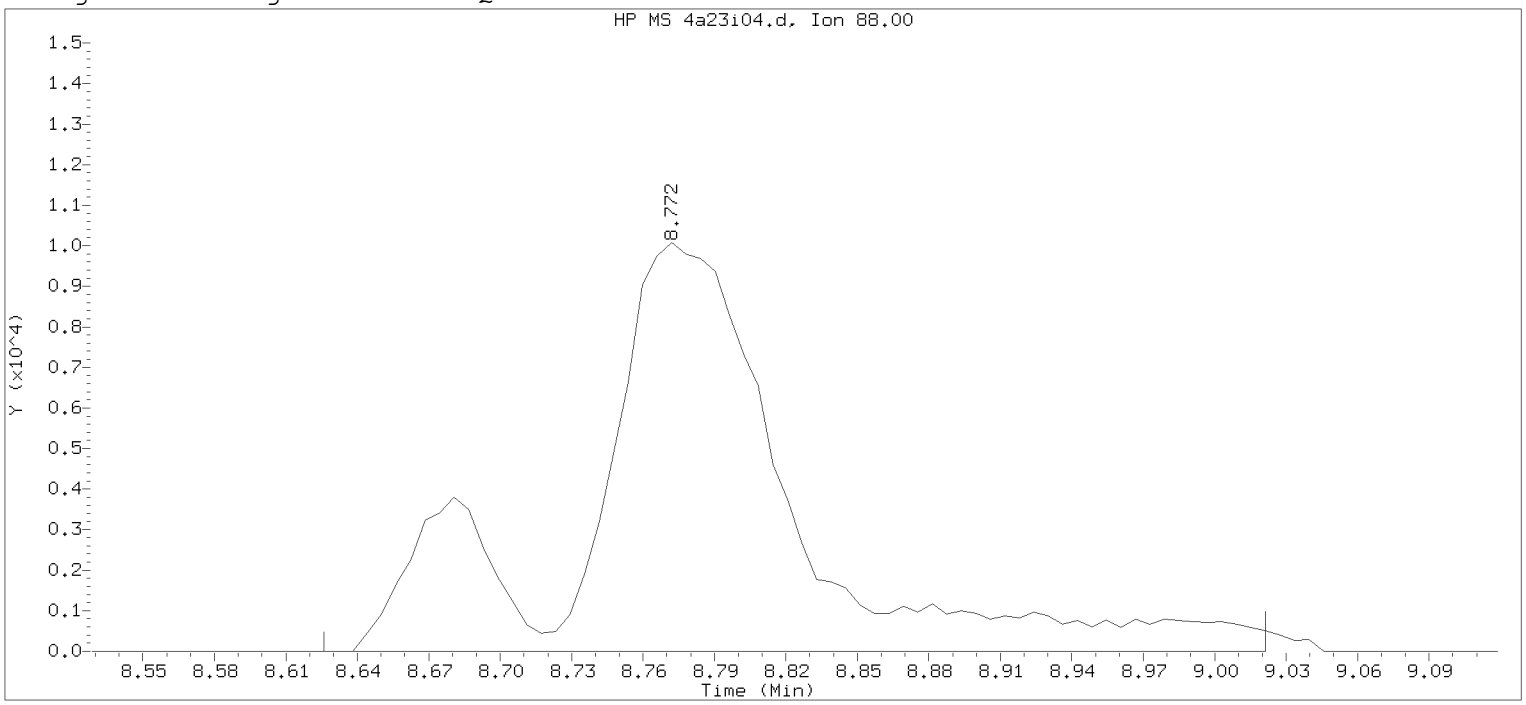
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

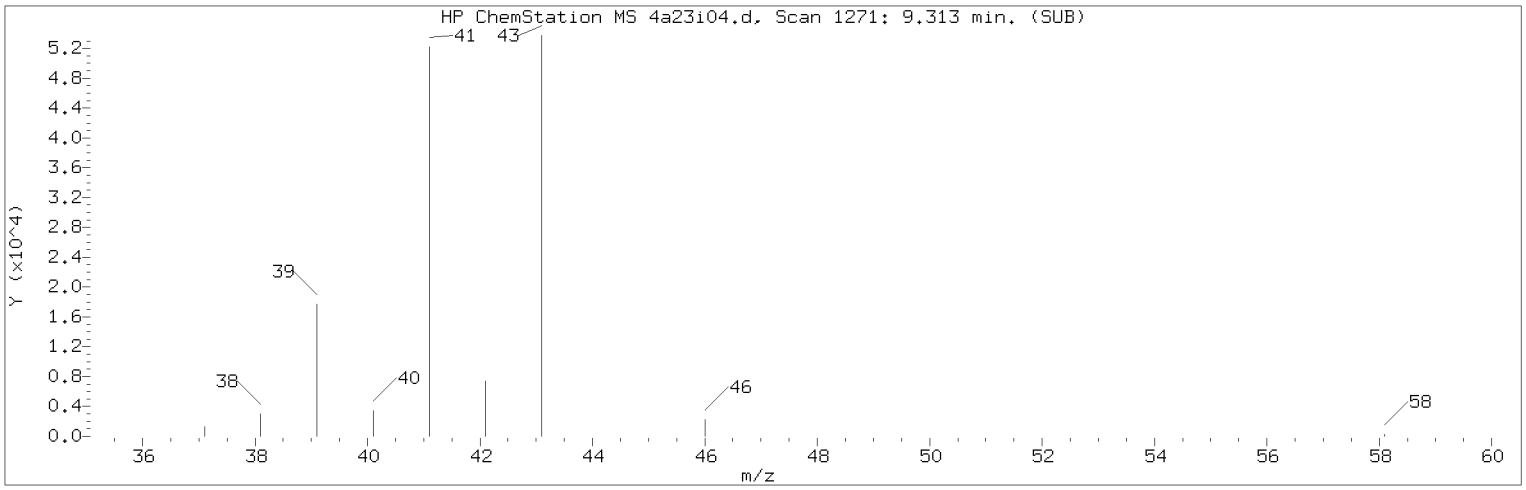
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:23
Date, time and analyst ID of latest file update: 23-Apr-2019 16:23 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

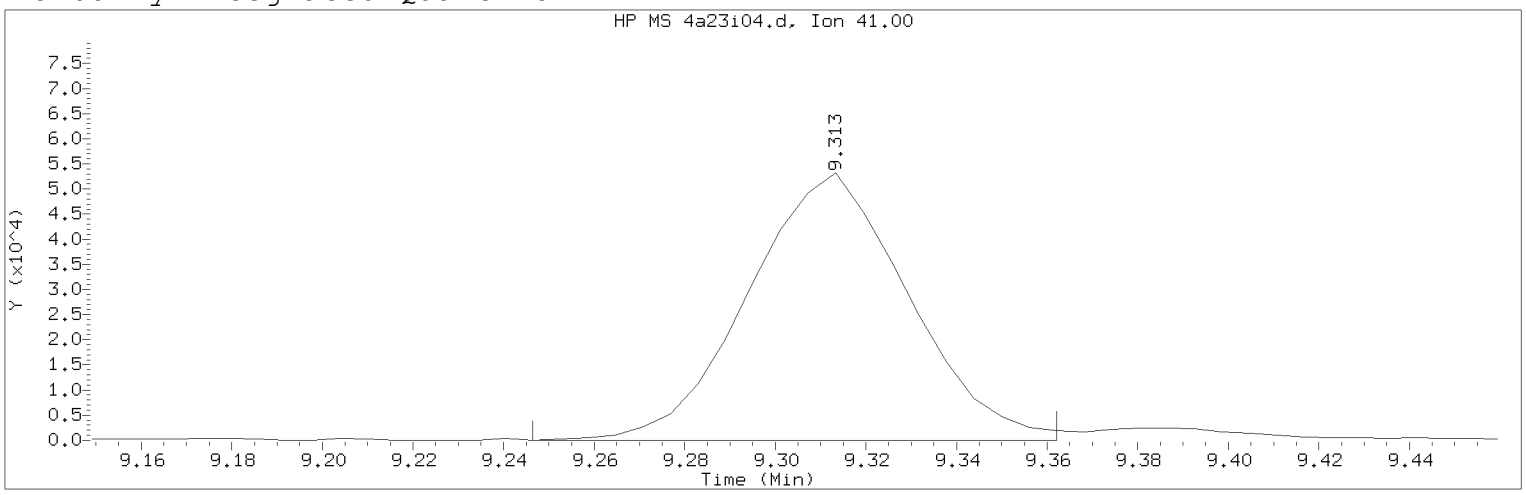
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1182		
Retention Time (minutes)	: 8.772		
Quant Ion	: 88.00		
Area	: 59618		
On-column Amount (ng)	: 455.4708		
Integration start scan	: 1157	Integration stop scan:	1222
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

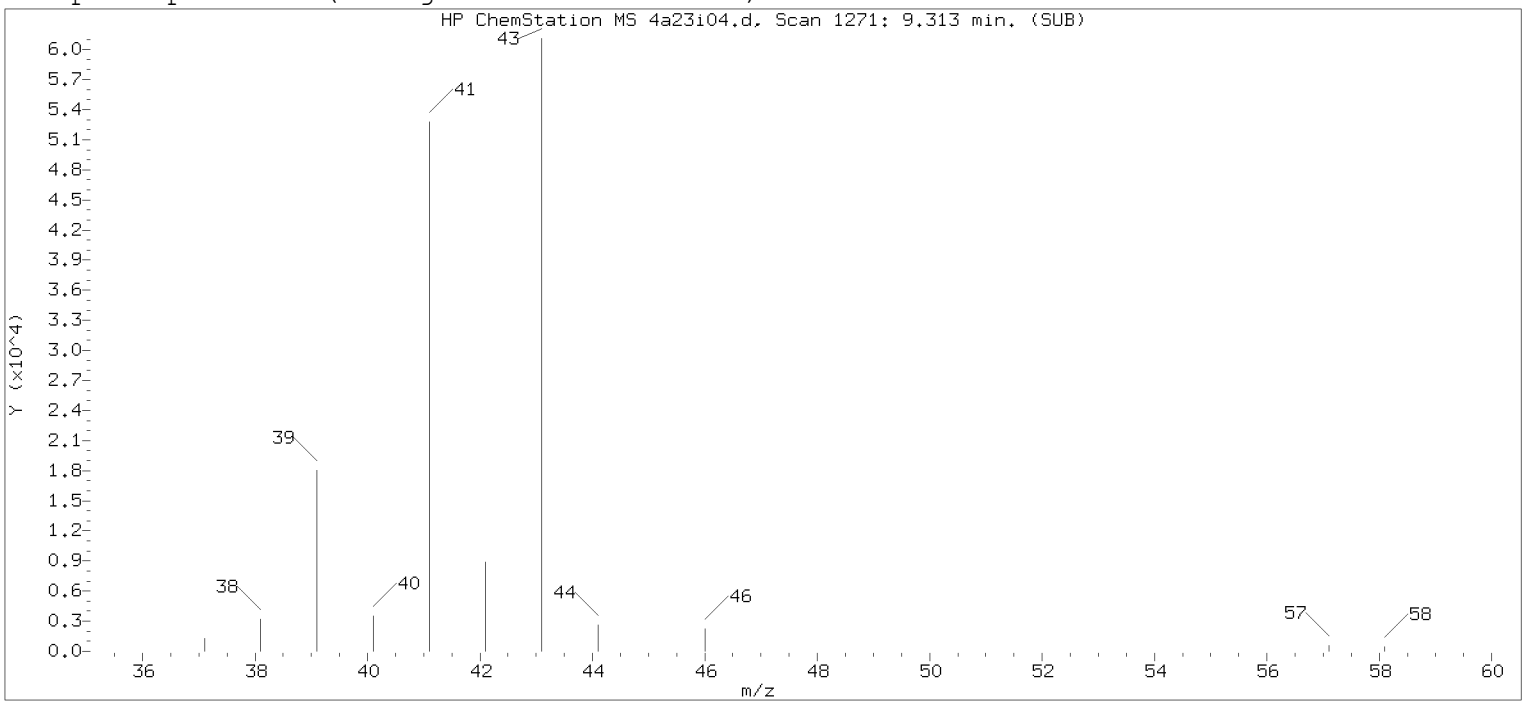
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 1271
Retention Time (minutes): 9.313
Quant Ion : 41.00
Area (flag) : 129961M
On-Column Amount (ng) : 40.1822
Integration start scan : 1259 Integration stop scan: 1278
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

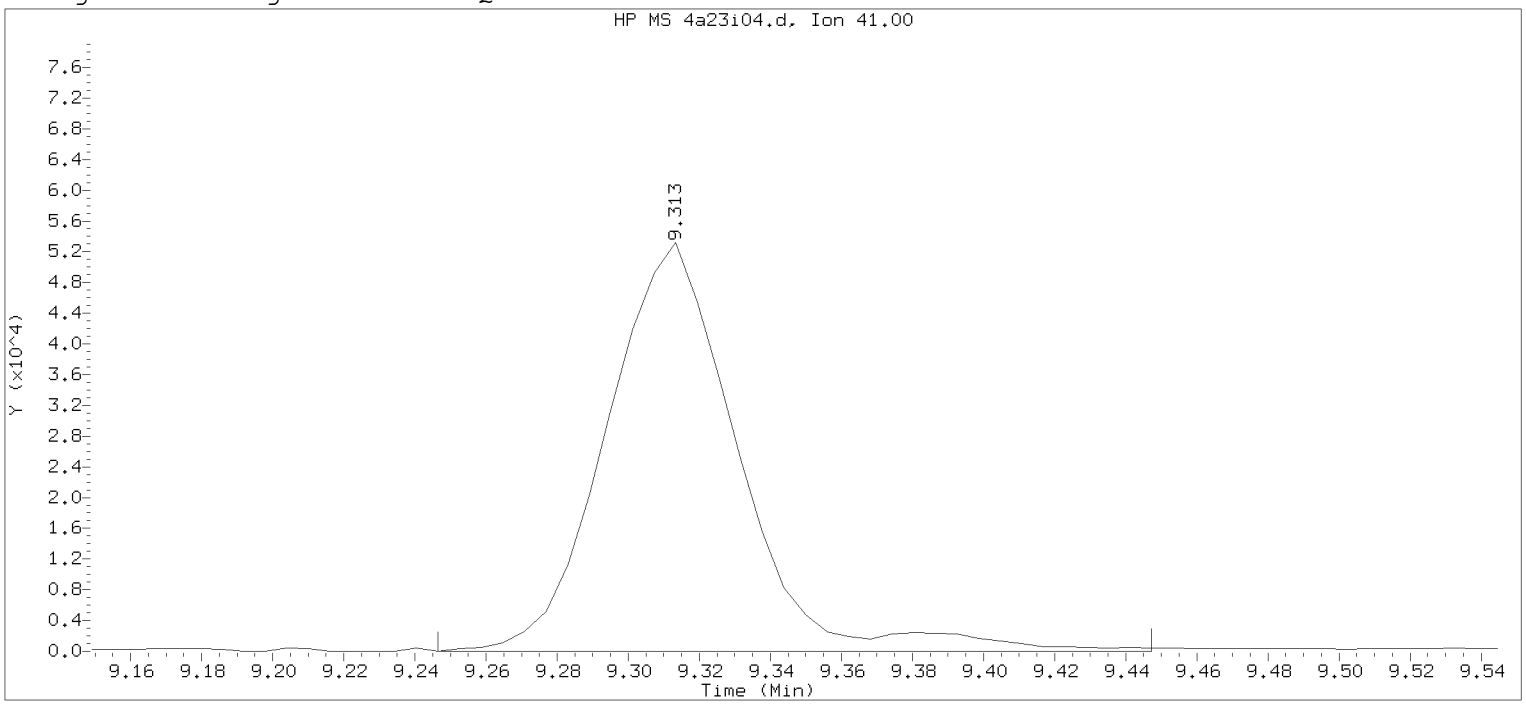
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

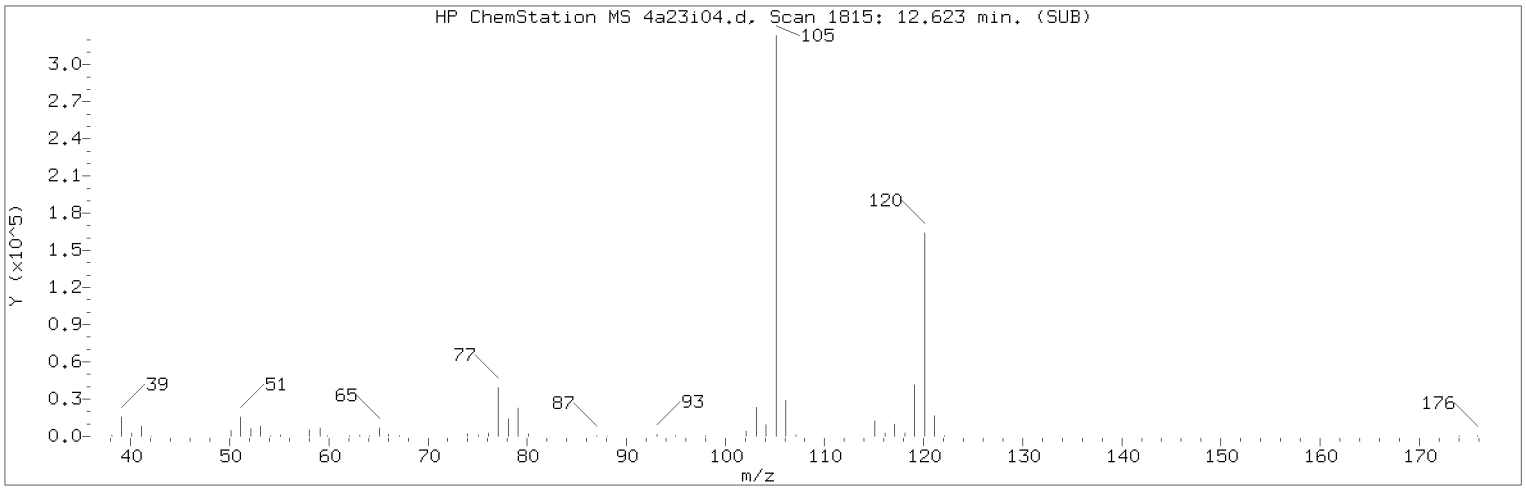
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:23
Date, time and analyst ID of latest file update: 23-Apr-2019 16:23 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

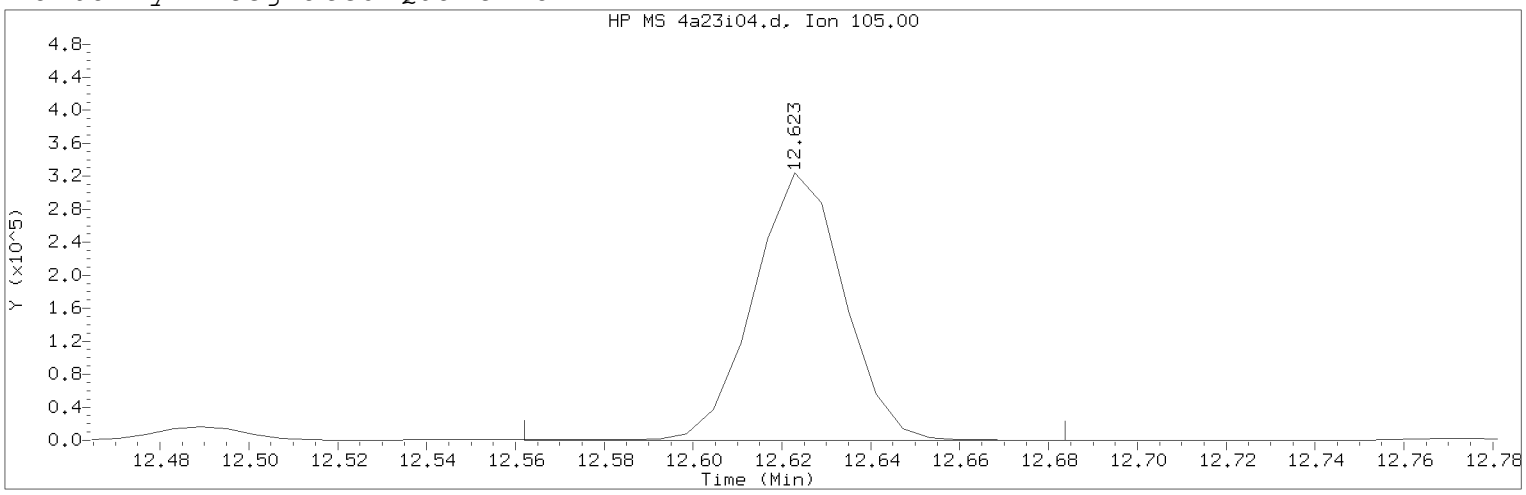
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 1271
Retention Time (minutes): 9.313
Quant Ion : 41.00
Area : 136454
On-column Amount (ng) : 41.1184
Integration start scan : 1259 Integration stop scan: 1292
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user_id: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

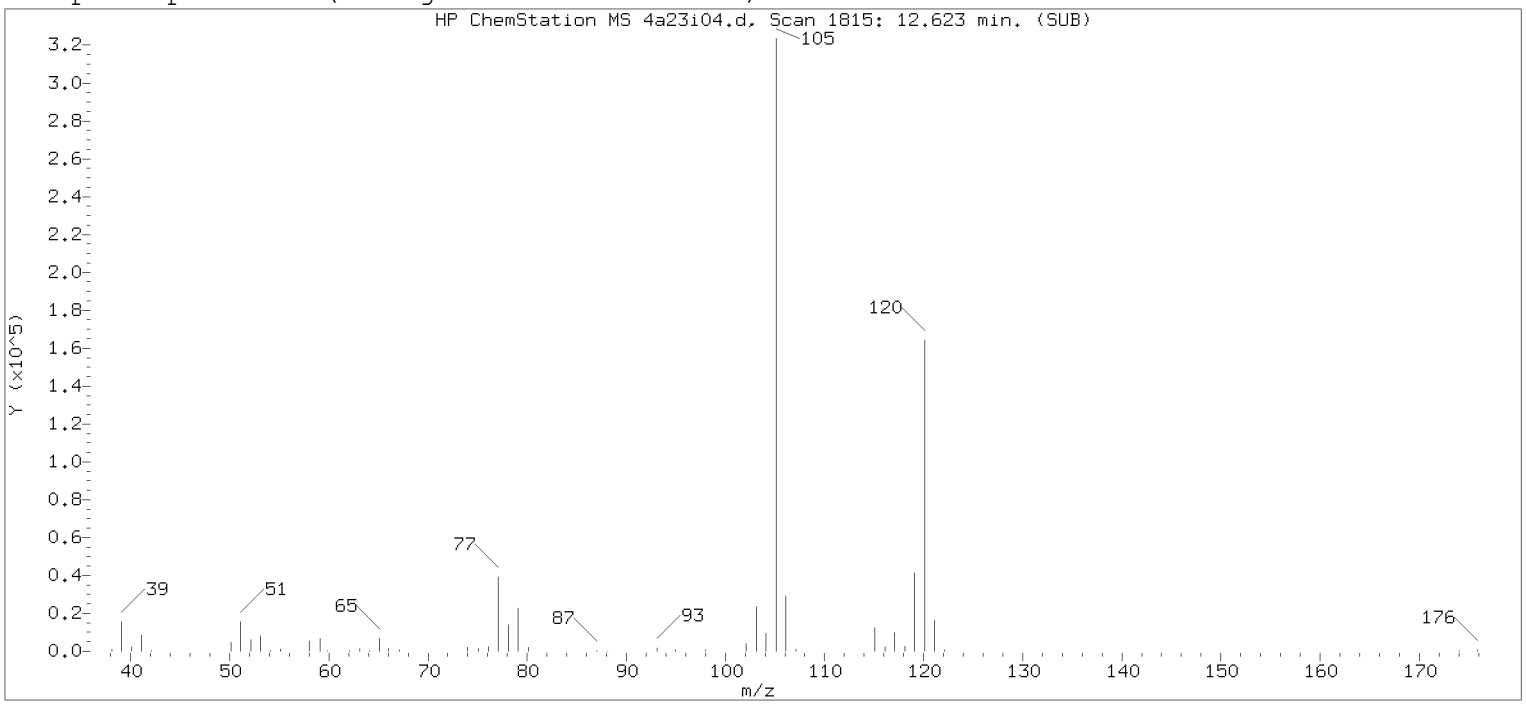
Compound Number : 122
Compound Name : 1,3,5-Trimethylbenzene
Scan Number : 1815
Retention Time (minutes): 12.623
Quant Ion : 105.00
Area (flag) : 458407M
On-Column Amount (ng) : 20.5590
Integration start scan : 1804 Integration stop scan: 1824
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

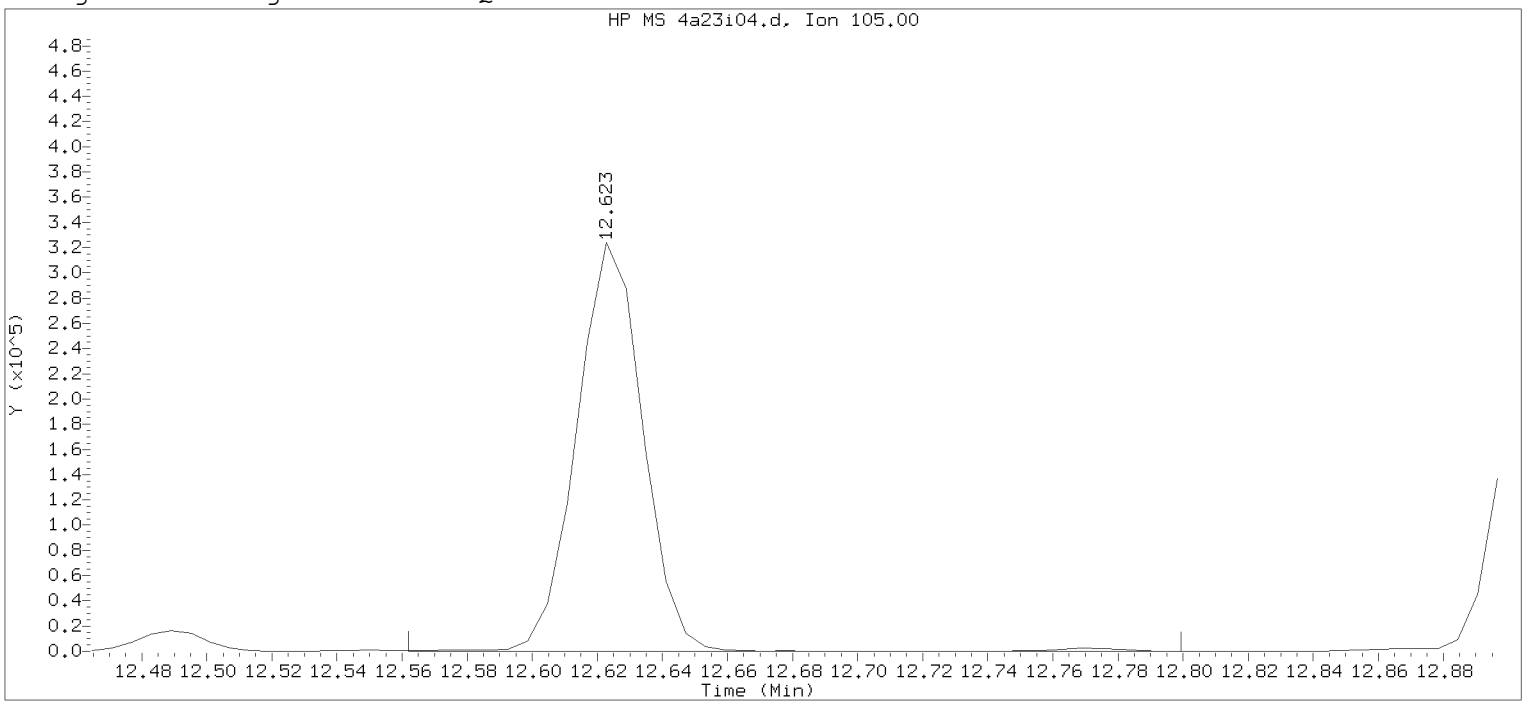
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

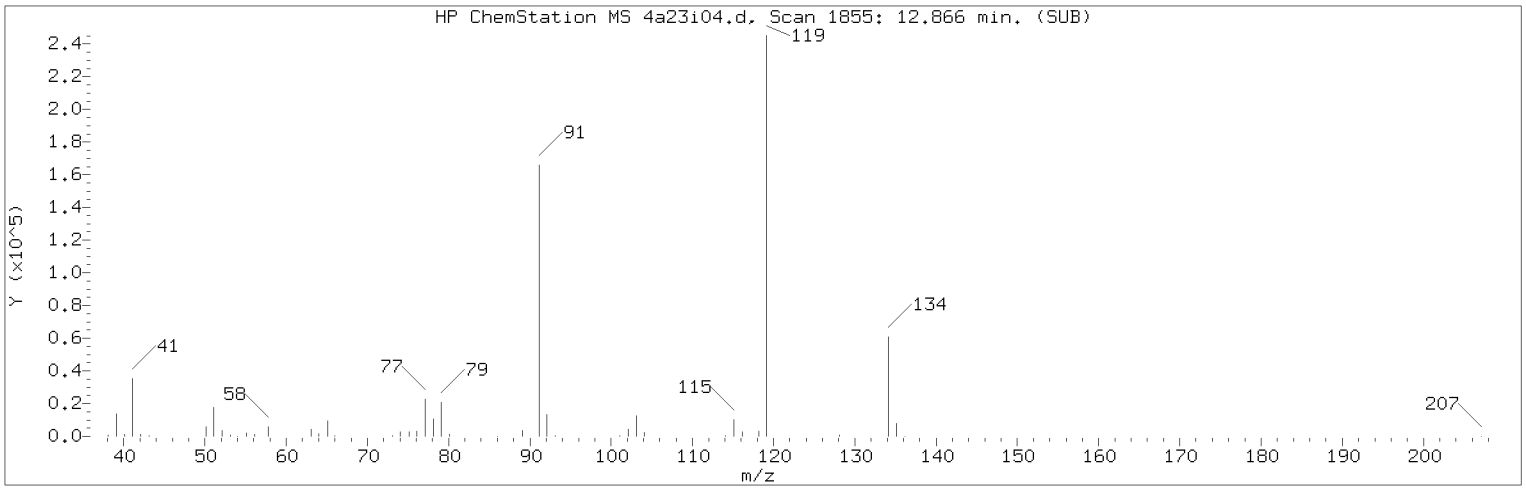
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:23
Date, time and analyst ID of latest file update: 23-Apr-2019 16:23 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

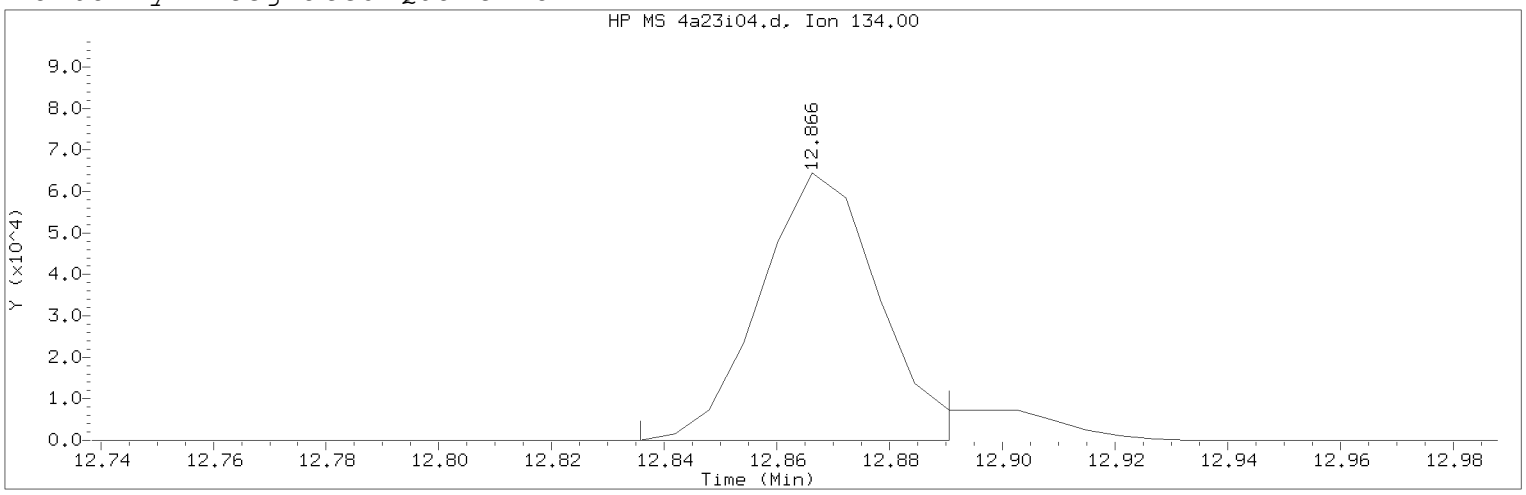
Compound Number : 122
Compound Name : 1,3,5-Trimethylbenzene
Scan Number : 1815
Retention Time (minutes): 12.623
Quant Ion : 105.00
Area : 461702
On-column Amount (ng) : 20.6686
Integration start scan : 1804 Integration stop scan: 1843
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong504

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

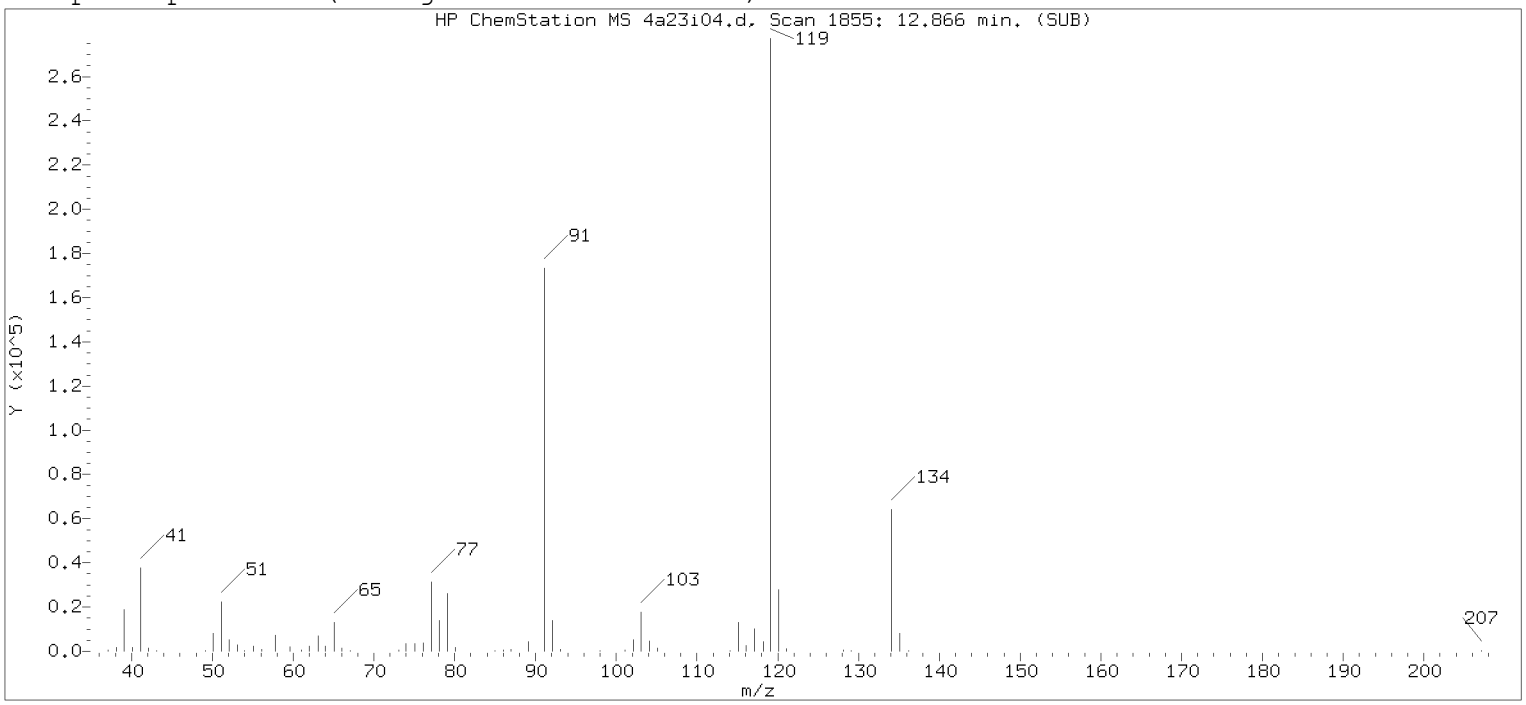
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area (flag) : 93971M
On-Column Amount (ng) : 20.5206
Integration start scan : 1849 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

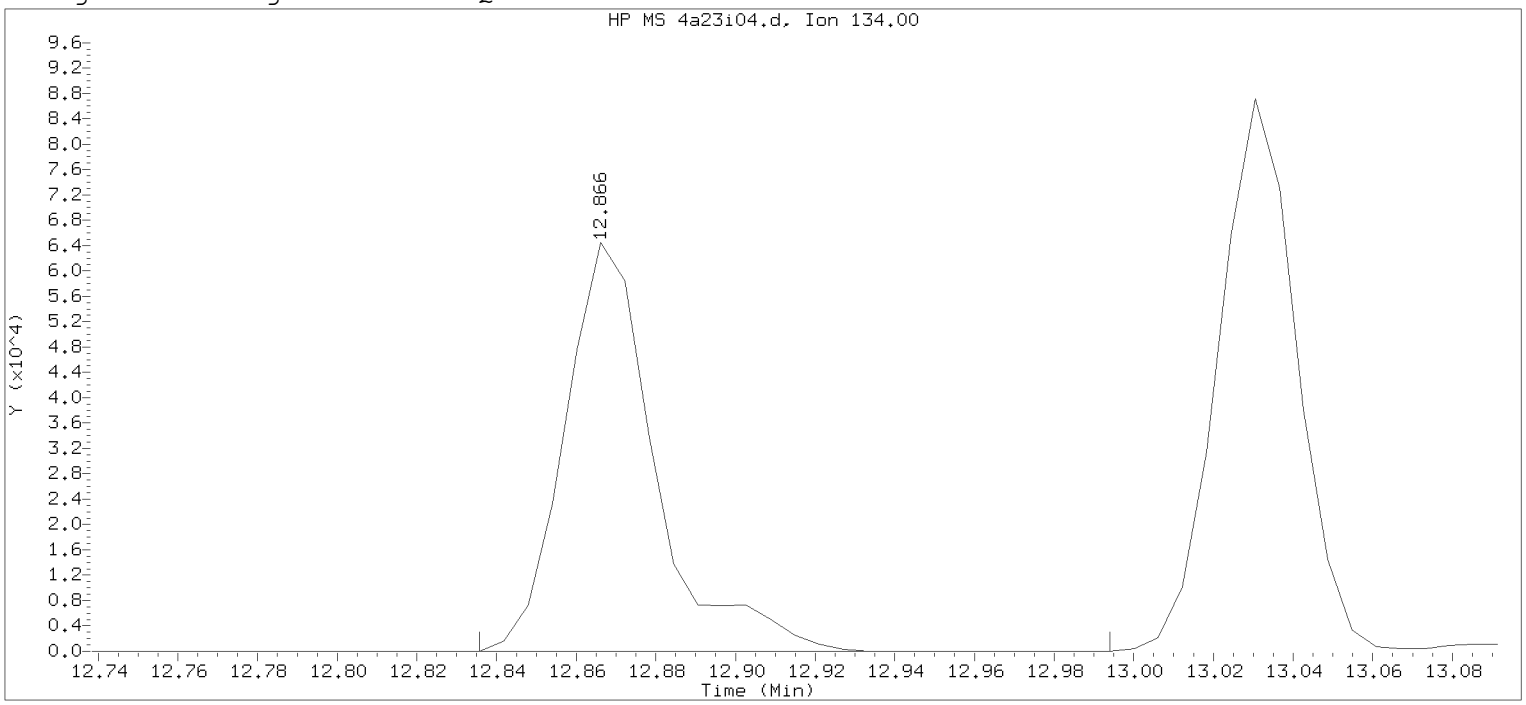
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



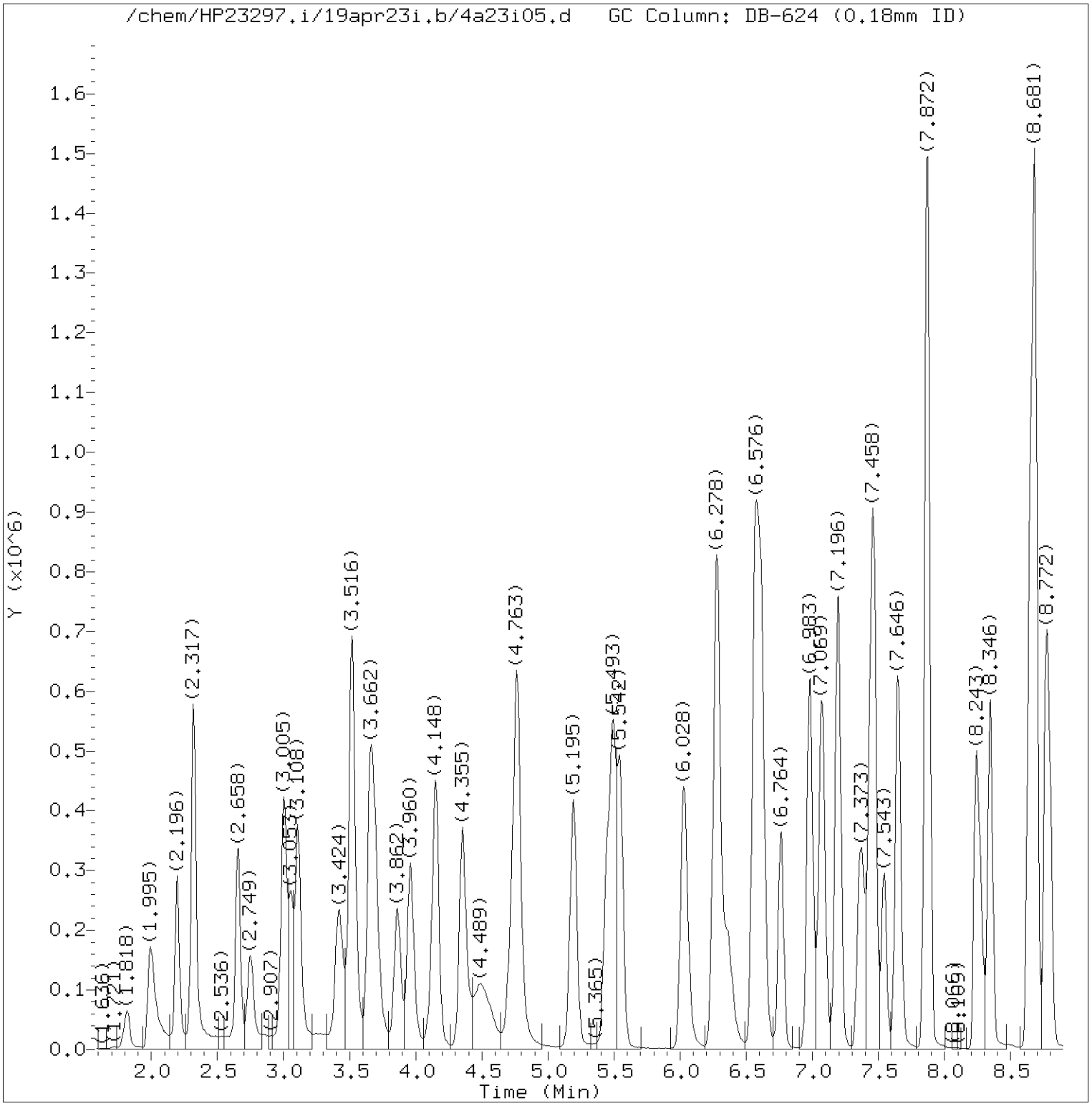
Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:23
Date, time and analyst ID of latest file update: 23-Apr-2019 16:23 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number	: 124		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1855		
Retention Time (minutes)	: 12.866		
Quant Ion	: 134.00		
Area	: 102552		
On-column Amount (ng)	: 20.5213		
Integration start scan	: 1849	Integration stop scan:	1875
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user id: jmlong



Total Ion Chromatogram (TIC)

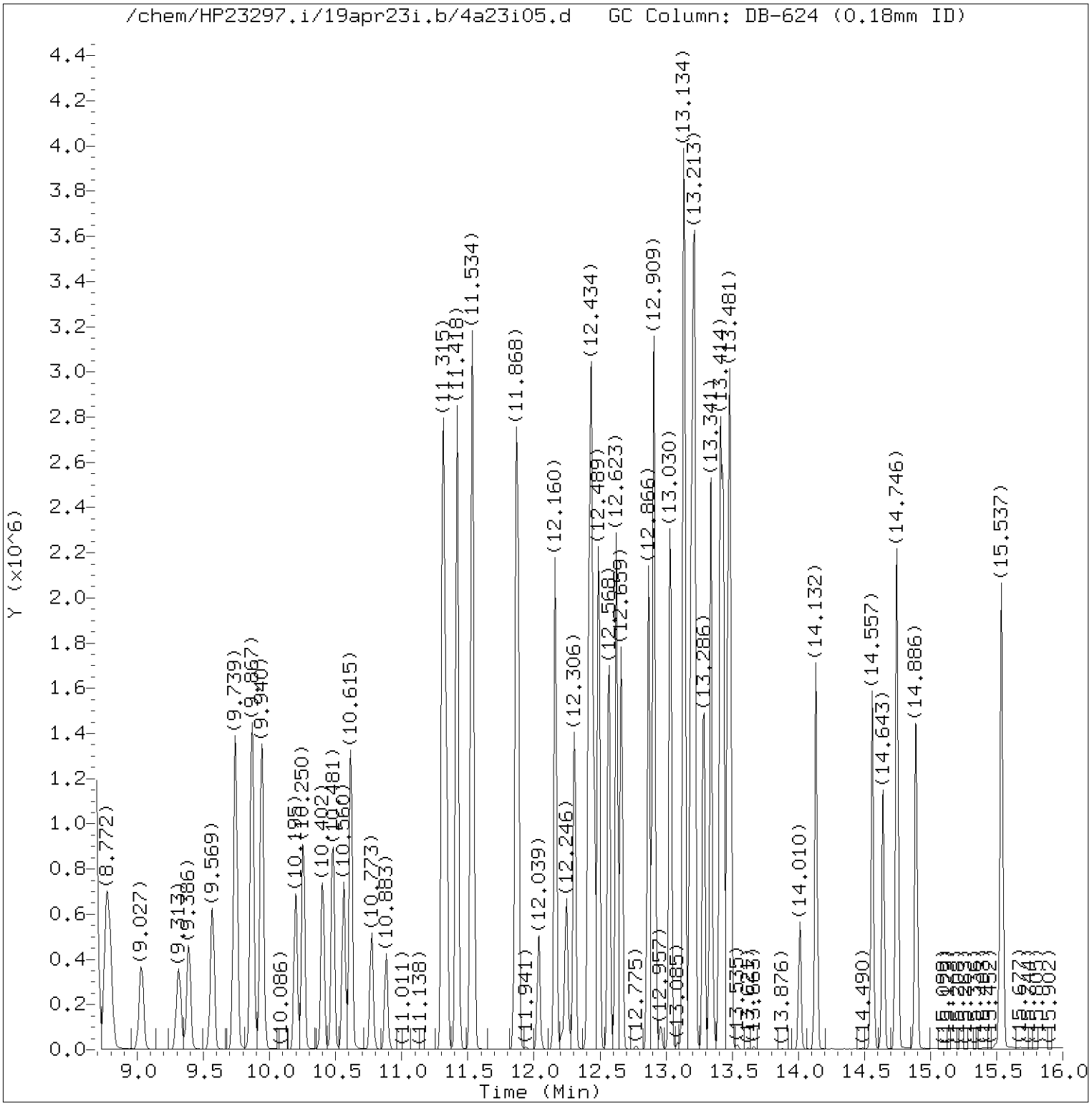
Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.995	85	422543	48.548
4) Chloromethane	(2)	2.196	50	399384	46.293
6) Vinyl Chloride	(2)	2.317	62	388406	46.447
5) 1,3-Butadiene	(2)	2.323	39	221643	47.579
8) Bromomethane	(2)	2.658	94	314370	45.508
9) Chloroethane	(2)	2.749	64	212494	45.530
10) Dichlorofluoromethane	(2)	2.999	67	492073	44.415
12) Trichlorofluoromethane	(2)	3.053	101	486554	48.850
11) n-Pentane	(2)	3.108	43	408169	51.407
13) Ethanol	(1)	3.278	45	152752M	1123.548
15) Freon 123a	(2)	3.412	67	278833	48.590
16) Acrolein	(1)	3.516	56	1146549	503.204
17) 1,1-Dichloroethene	(2)	3.656	96	202043	51.857
17) 1,1-Dichloroethene	(2)	3.650	63	103299	49.335
19) Freon 113	(2)	3.686	101	223274	52.167
18) Acetone	(1)	3.698	58	114990	103.332
22) Methyl Iodide	(2)	3.862	142	400742	51.435
21) 2-Propanol	(1)	3.869	45	228709	252.796
23) Carbon Disulfide	(2)	3.960	76	719650	51.615
27) Methyl Acetate	(2)	4.130	43	377651	45.336
25) Allyl Chloride	(2)	4.154	41	416279	46.865
28) Methylene Chloride	(2)	4.349	84	248892	49.583
29)*t-Butyl alcohol-d10	(1)	4.380	65	399880	250.000
30) t-Butyl alcohol	(1)	4.507	59	409820	255.281
31) Acrylonitrile	(2)	4.714	53	209749	48.622
33) Methyl Tertiary Butyl Ether	(2)	4.757	73	709128	49.532
32) trans-1,2-Dichloroethene	(2)	4.769	96	242526	52.100
34) n-Hexane	(2)	5.195	57	399360	51.628
36) 1,1-Dichloroethane	(2)	5.444	63	444914	50.830
38) di-Isopropyl ether	(2)	5.493	45	883931	50.385
39) 2-Chloro-1,3-butadiene	(2)	5.548	53	411983	52.363
40) Ethyl t-butyl ether	(2)	6.028	59	752871	49.329
43) 1,2-Dichloroethene (Total)	(2)		96	521250	103.966
44) 2-Butanone	(2)	6.253	43	623431	91.905
42) cis-1,2-Dichloroethene	(2)	6.278	96	278724	51.867
45) 2,2-Dichloropropane	(2)	6.290	77	351494	51.410
47) Propionitrile	(1)	6.363	54	442678	265.953
48) Methacrylonitrile	(2)	6.570	67	511631	127.406

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.612	128	152475	52.016
50) Tetrahydrofuran	(1)	6.618	71	168329	102.438
51) Chloroform	(2)	6.758	83	435986	50.390
52)$Dibromofluoromethane	(2)	6.977	113	275133	50.152
52)$Dibromofluoromethane	(2)	6.977	111	282412	50.249
53) 1,1,1-Trichloroethane	(2)	6.983	97	367602	51.137
54) Cyclohexane	(2)	7.069	56	477122	51.035
54) Cyclohexane	(2)	7.075	84	394832	52.030
54) Cyclohexane	(2)	7.075	69	146483	52.892
56) Carbon Tetrachloride	(2)	7.190	117	322577	52.228
55) 1,1-Dichloropropene	(2)	7.196	75	347518	51.226
58) Isobutyl Alcohol	(1)	7.373	41	353205	634.496
57)$1,2-Dichloroethane-d4	(2)	7.440	102	65849	49.121
57)$1,2-Dichloroethane-d4	(2)	7.440	65	320218	48.817
57)$1,2-Dichloroethane-d4	(2)	7.440	104	43090	50.463
60) Benzene	(2)	7.464	78	1049268	50.424
61) 1,2-Dichloroethane	(2)	7.543	62	346438	48.455
61) 1,2-Dichloroethane	(2)	7.537	98	31077	55.269
65) t-Amyl methyl ether	(2)	7.646	73	762980	48.993
67) n-Heptane	(2)	7.865	43	450122	49.056
66)*Fluorobenzene	(2)	7.872	96	1115257	50.000
69) n-Butanol	(1)	8.243	56	583632	1308.027
71) Trichloroethene	(2)	8.346	95	268477	51.513
72) Methylcyclohexane	(2)	8.644	83	501796	51.766
72) Methylcyclohexane	(2)	8.644	98	218099	52.190
73) 1,2-Dichloropropane	(2)	8.687	63	278588	51.543
76) Methyl Methacrylate	(2)	8.766	69	312291	51.347
75) 1,4-Dioxane	(1)	8.778	88	67814M	596.994
74) Dibromomethane	(2)	8.796	93	180647	51.744
78) Bromodichloromethane	(2)	9.027	83	330144	52.225
79) 2-Nitropropane	(2)	9.313	41	301290M	95.924
80) 2-Chloroethyl Vinyl Ether	(2)	9.386	63	253756	51.504
81) cis-1,3-Dichloropropene	(2)	9.569	75	441857	52.935
82) 4-Methyl-2-pentanone	(2)	9.739	43	1161159	95.939
83)$Toluene-d8	(3)	9.867	98	1156942	49.731
83)$Toluene-d8	(3)	9.867	100	752673	49.970
88) Toluene	(3)	9.940	92	682329	50.380
90) 1,3-Dichloropropene (total)	(3)		100	858309	106.612

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.195	75	416452	53.677
91) Ethyl Methacrylate	(3)	10.250	69	511131	51.594
92) 1,1,2-Trichloroethane	(3)	10.402	97	267210	50.659
93) Tetrachloroethene	(3)	10.481	166	301813	51.650
94) 1,3-Dichloropropane	(3)	10.560	76	440061	50.074
96) 2-Hexanone	(3)	10.615	43	930264	95.312
97) Dibromochloromethane	(3)	10.773	129	290322	53.530
99) 1,2-Dibromoethane	(3)	10.883	107	297688	51.414
100)*Chlorobenzene-d5	(3)	11.309	117	896314	50.000
102) Chlorobenzene	(3)	11.339	112	772592	50.671
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	269911	53.851
104) Ethylbenzene	(3)	11.418	91	1325409	51.145
106) m+p-Xylene	(3)	11.534	106	1060948	103.513
108) Xylene (Total)	(3)		106	1583776	154.809
107) o-Xylene	(3)	11.862	106	522828	51.295
109) Styrene	(3)	11.881	104	890830	53.126
110) Bromoform	(3)	12.039	173	235207	56.365
111) Isopropylbenzene	(3)	12.160	105	1328624	51.699
112) Cyclohexanone	(1)	12.246	55	282631	615.260
114)$4-Bromofluorobenzene	(3)	12.306	95	443023	50.116
114)$4-Bromofluorobenzene	(3)	12.306	174	393335	50.478
116) 1,1,2,2-Tetrachloroethane	(4)	12.410	83	474303	50.224
115) Bromobenzene	(4)	12.422	156	356423	50.516
118) trans-1,4-Dichloro-2-butene	(4)	12.434	53	394932	126.711
117) 1,2,3-Trichloropropane	(4)	12.459	110	140917	49.200
119) n-Propylbenzene	(4)	12.489	91	1560578	49.774
120) 2-Chlorotoluene	(4)	12.568	126	323014	50.148
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	1137588	50.793
121) 4-Chlorotoluene	(4)	12.659	126	335655	50.089
124) tert-Butylbenzene	(4)	12.866	134	235601M	51.133
125) Pentachloroethane	(4)	12.903	167	214970	52.834
126) 1,2,4-Trimethylbenzene	(4)	12.909	105	1193252	51.321
127) sec-Butylbenzene	(4)	13.030	105	1468344	51.274
129) 1,3-Dichlorobenzene	(4)	13.134	146	677034	50.888
130) p-Isopropyltoluene	(4)	13.140	119	1293400	51.951
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	508818	50.000
133) 1,4-Dichlorobenzene	(4)	13.207	146	690187	50.486
134) 1,2,3-Trimethylbenzene	(4)	13.213	105	1263672	50.620

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

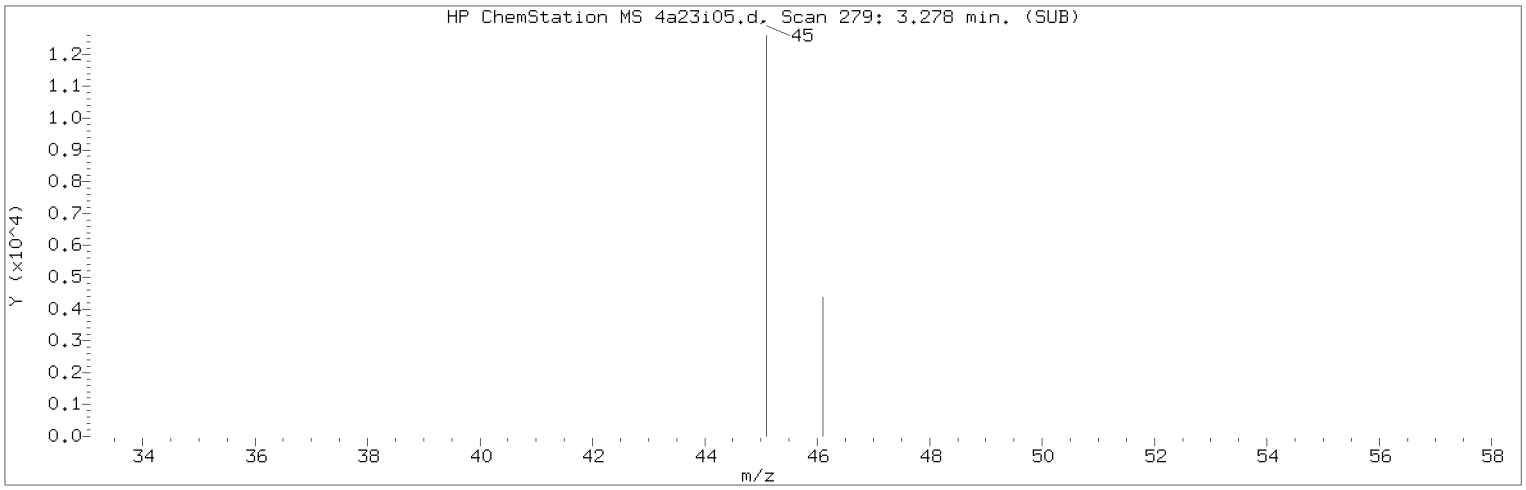
Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.286	91	1003985	55.466
136) 1,3-Diethylbenzene	(4)	13.341	119	792327	51.067
141) Diethylbenzene (total)	(4)		100	2302295	153.298
137) 1,4-Diethylbenzene	(4)	13.408	119	845488	51.285
139) n-Butylbenzene	(4)	13.432	92	656056M	51.086
138) 1,2-Dichlorobenzene	(4)	13.468	146	663331	50.885
140) 1,2-Diethylbenzene	(4)	13.487	119	664480	50.946
142) 1,2-Dibromo-3-chloropropane	(4)	14.010	75	123353	49.394
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	495932	50.372
146) 1,2,4-Trichlorobenzene	(4)	14.557	180	461562	49.314
147) Hexachlorobutadiene	(4)	14.643	225	207023	47.710
148) Naphthalene	(4)	14.746	128	1652399	50.589
149) 1,2,3-Trichlorobenzene	(4)	14.892	180	447560	49.947
150) 2-Methylnaphthalene	(4)	15.537	142	1036463	52.210

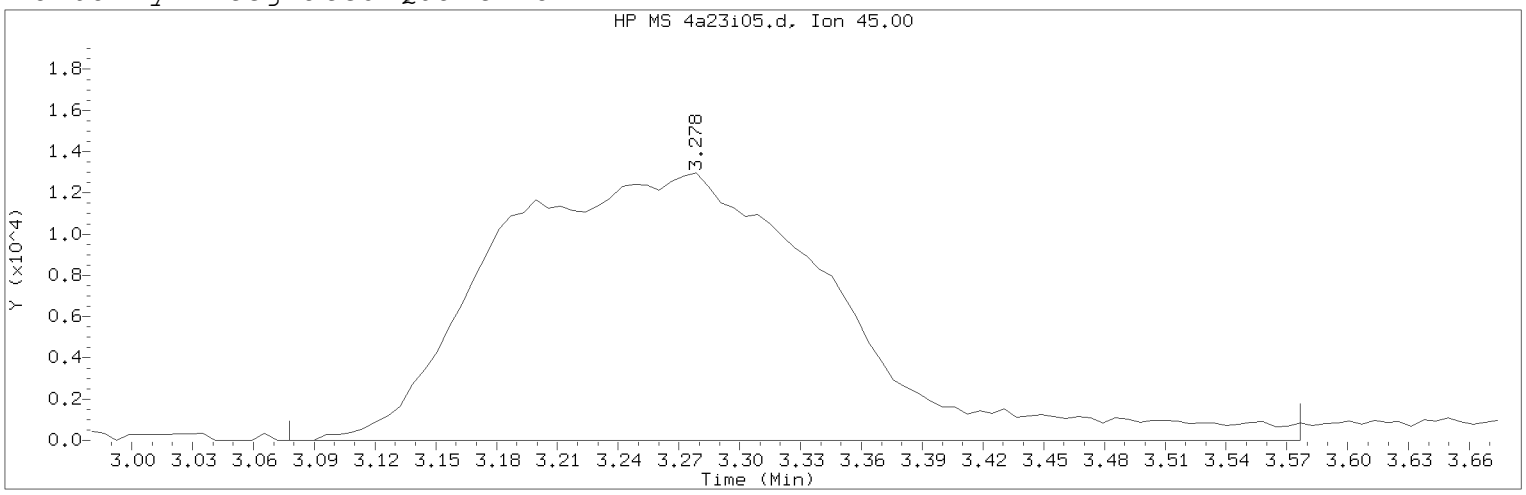
M = Compound was manually integrated.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

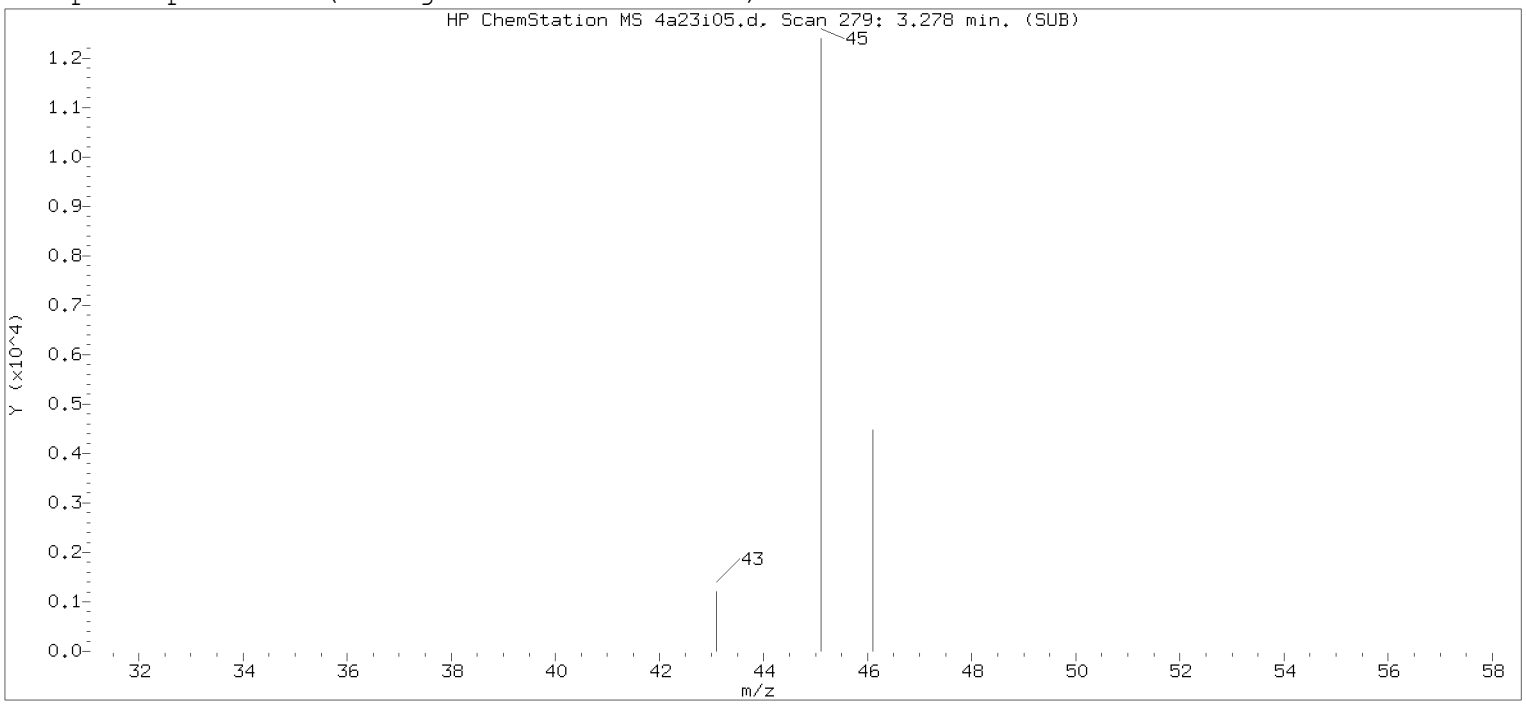
Compound Number : 13
Compound Name : Ethanol
Scan Number : 279
Retention Time (minutes): 3.278
Quant Ion : 45.00
Area (flag) : 152752M
On-Column Amount (ng) : 1123.5476
Integration start scan : 245 Integration stop scan: 327
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

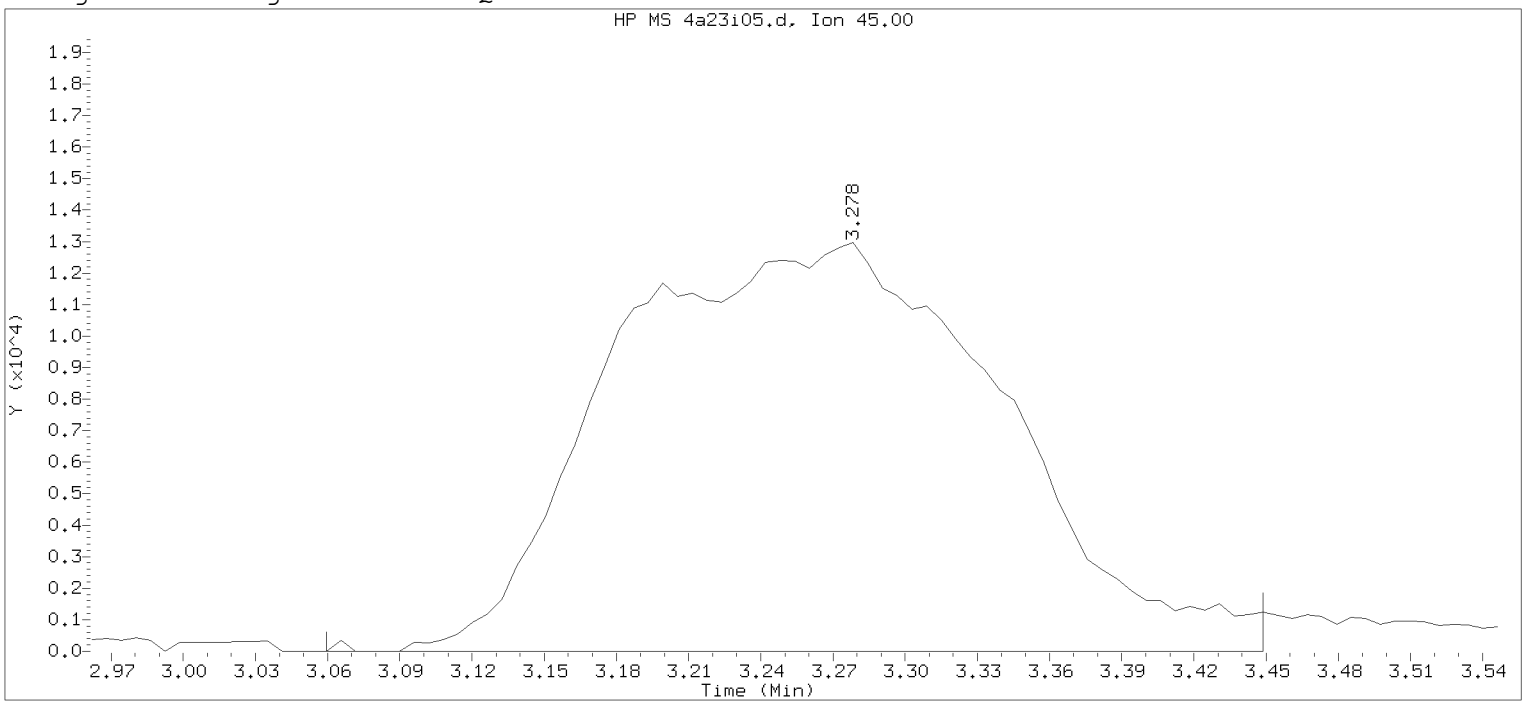
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

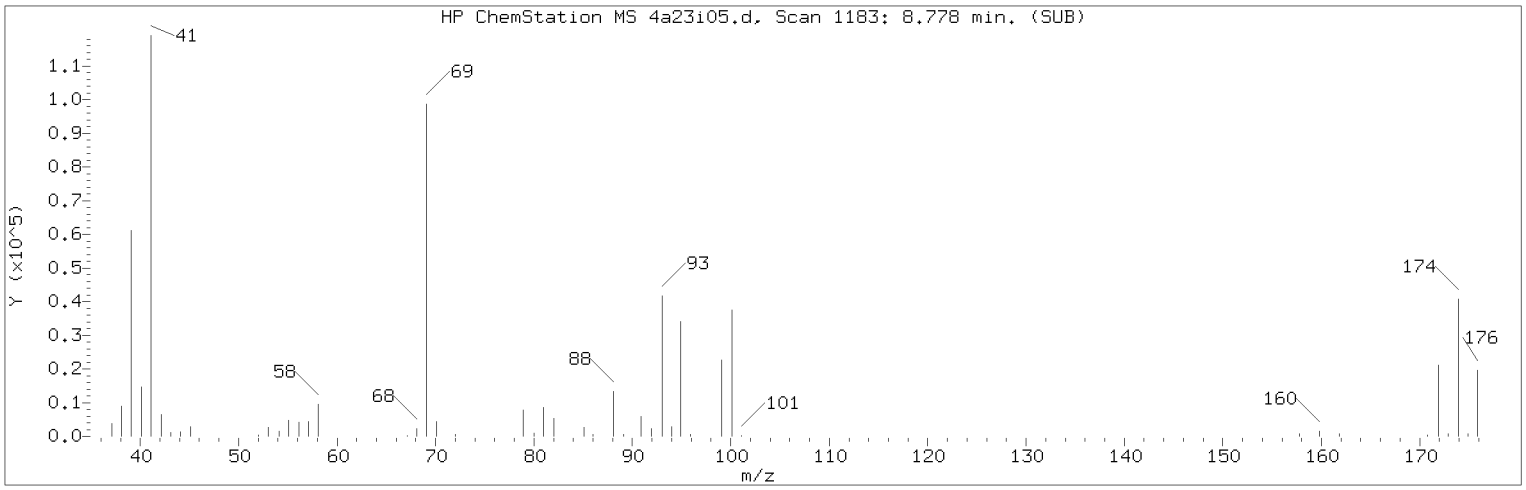
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:46
Date, time and analyst ID of latest file update: 23-Apr-2019 16:46 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

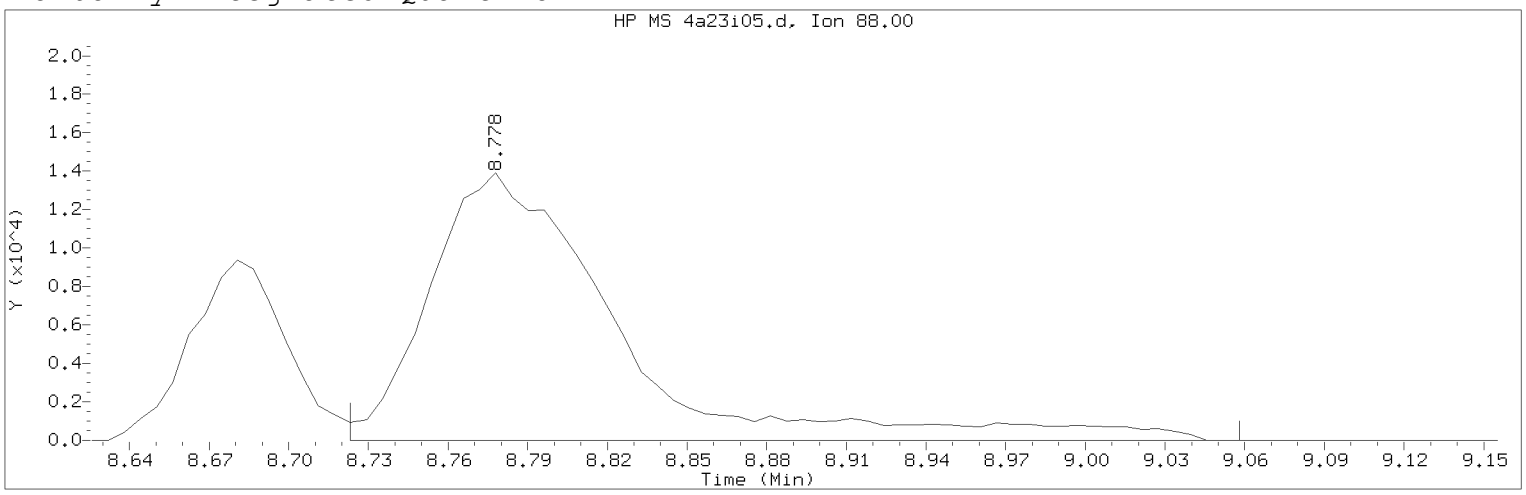
Compound Number : 13
Compound Name : Ethanol
Scan Number : 279
Retention Time (minutes): 3.278
Quant Ion : 45.00
Area : 145692
On-column Amount (ng) : 1186.0159
Integration start scan : 242 Integration stop scan: 306
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

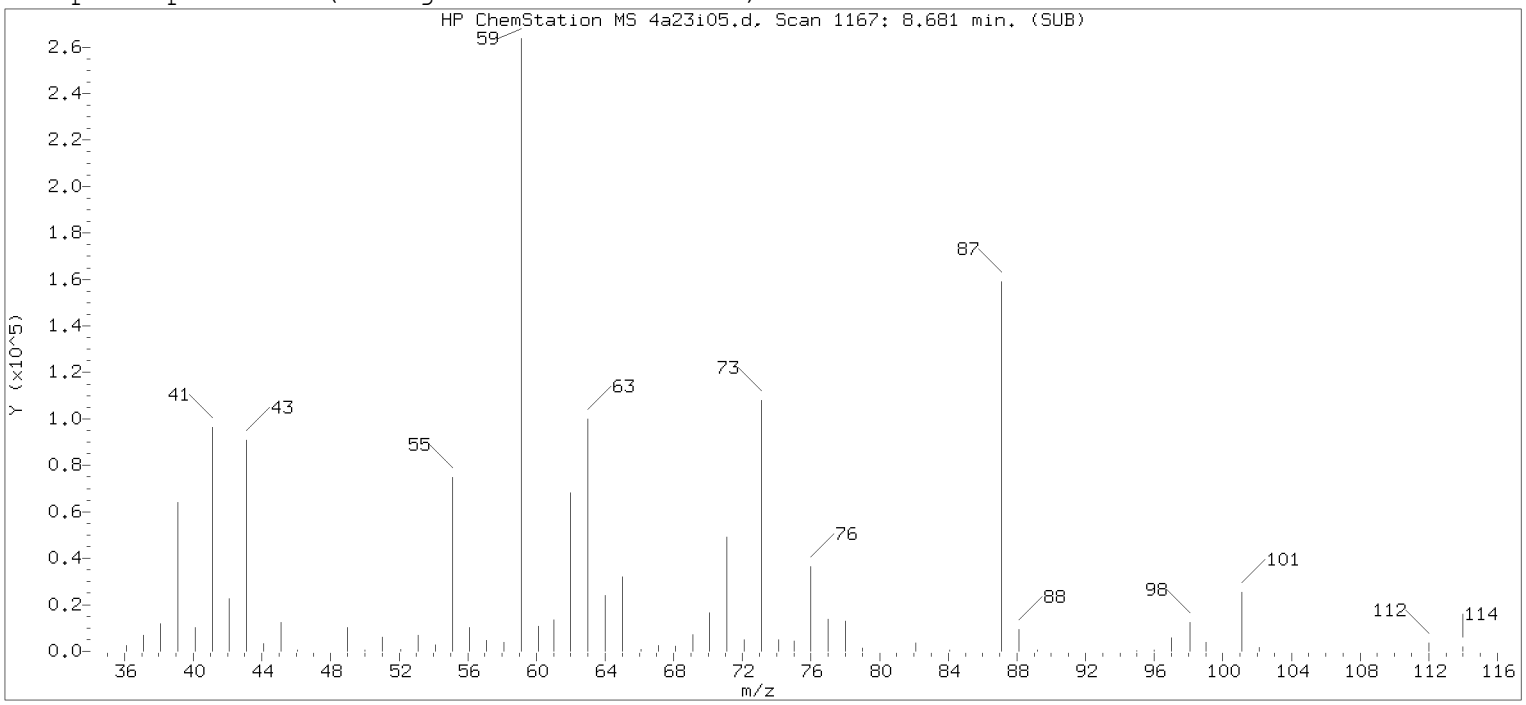
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1183
Retention Time (minutes): 8.778
Quant Ion : 88.00
Area (flag) : 67814M
On-Column Amount (ng) : 596.9939
Integration start scan : 1173 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

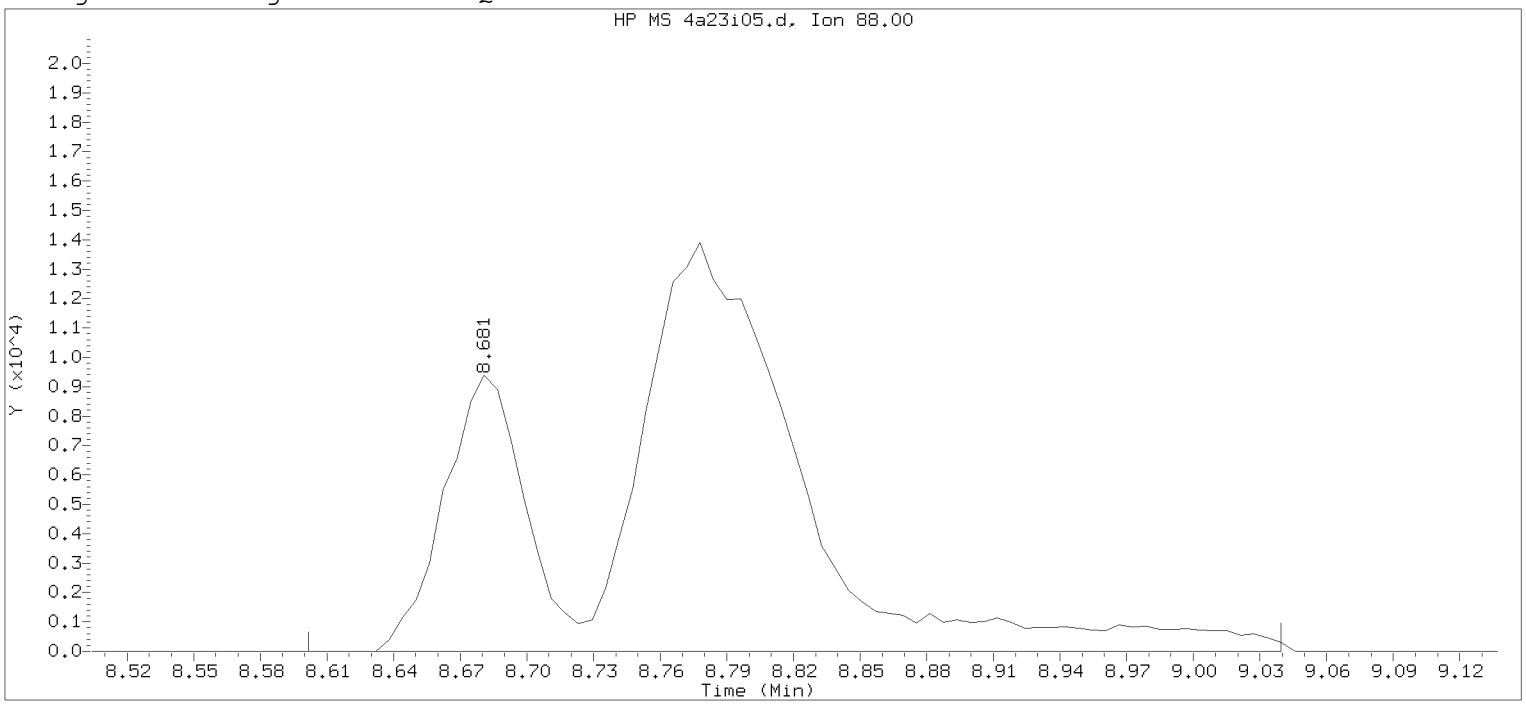
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:46
Date, time and analyst ID of latest file update: 23-Apr-2019 16:46 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1167		
Retention Time (minutes)	: 8.681		
Quant Ion	: 88.00		
Area	: 91095		
On-column Amount (ng)	: 713.0143		
Integration start scan	: 1153	Integration stop scan:	1225
Y at integration start	: 0	Y at integration end:	0

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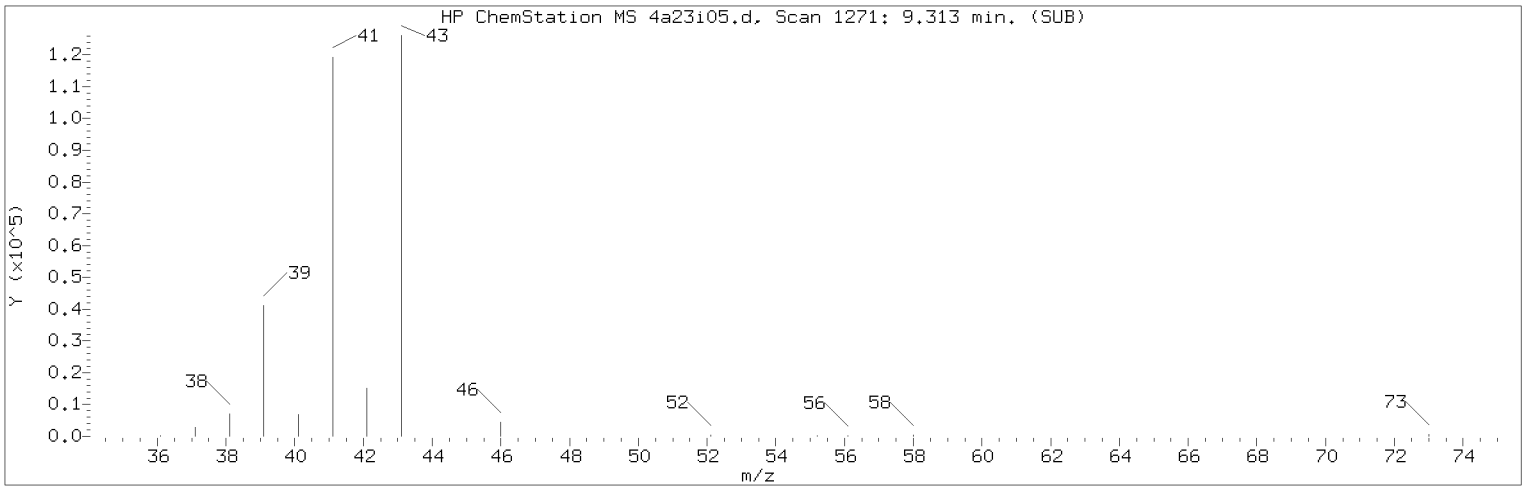
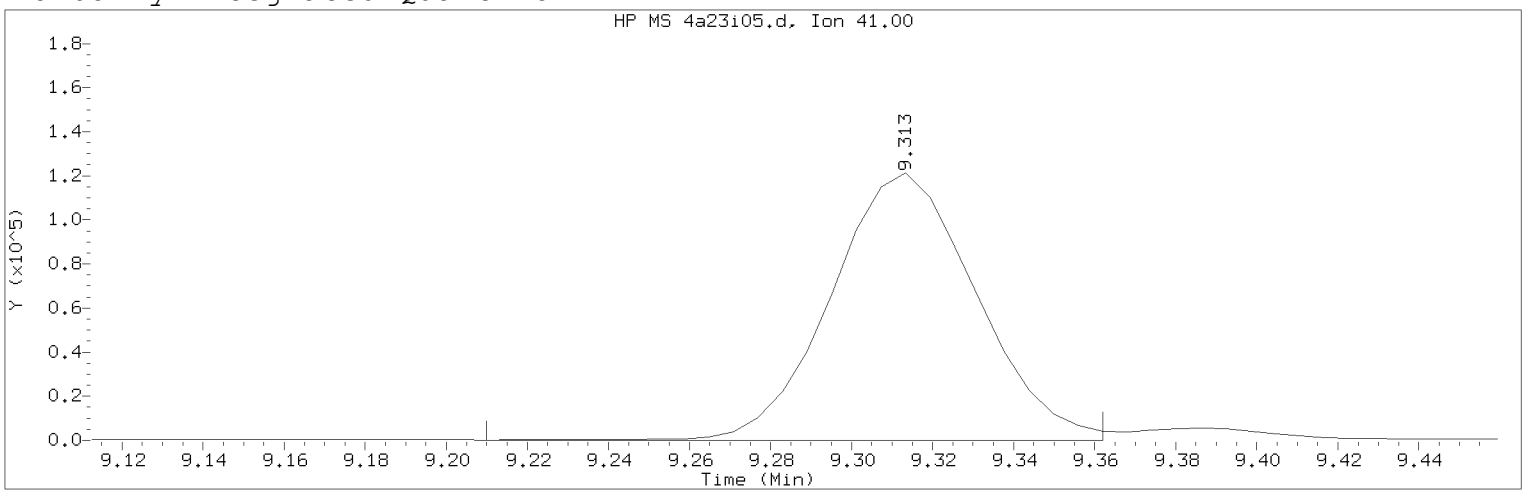
Target 3.5 esignature user ID: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

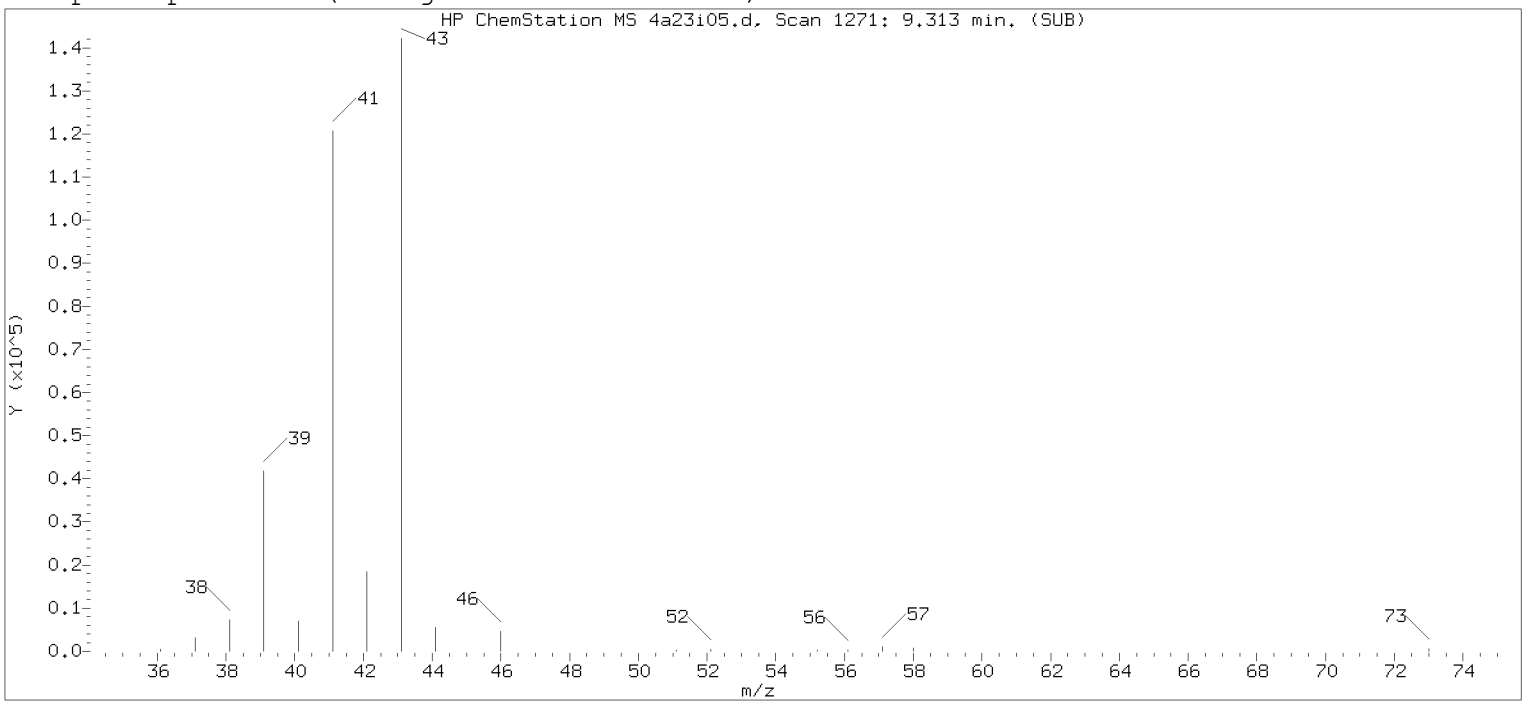
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 1271
Retention Time (minutes): 9.313
Quant Ion : 41.00
Area (flag) : 301290M
On-Column Amount (ng) : 95.9243
Integration start scan : 1253 Integration stop scan: 1278
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

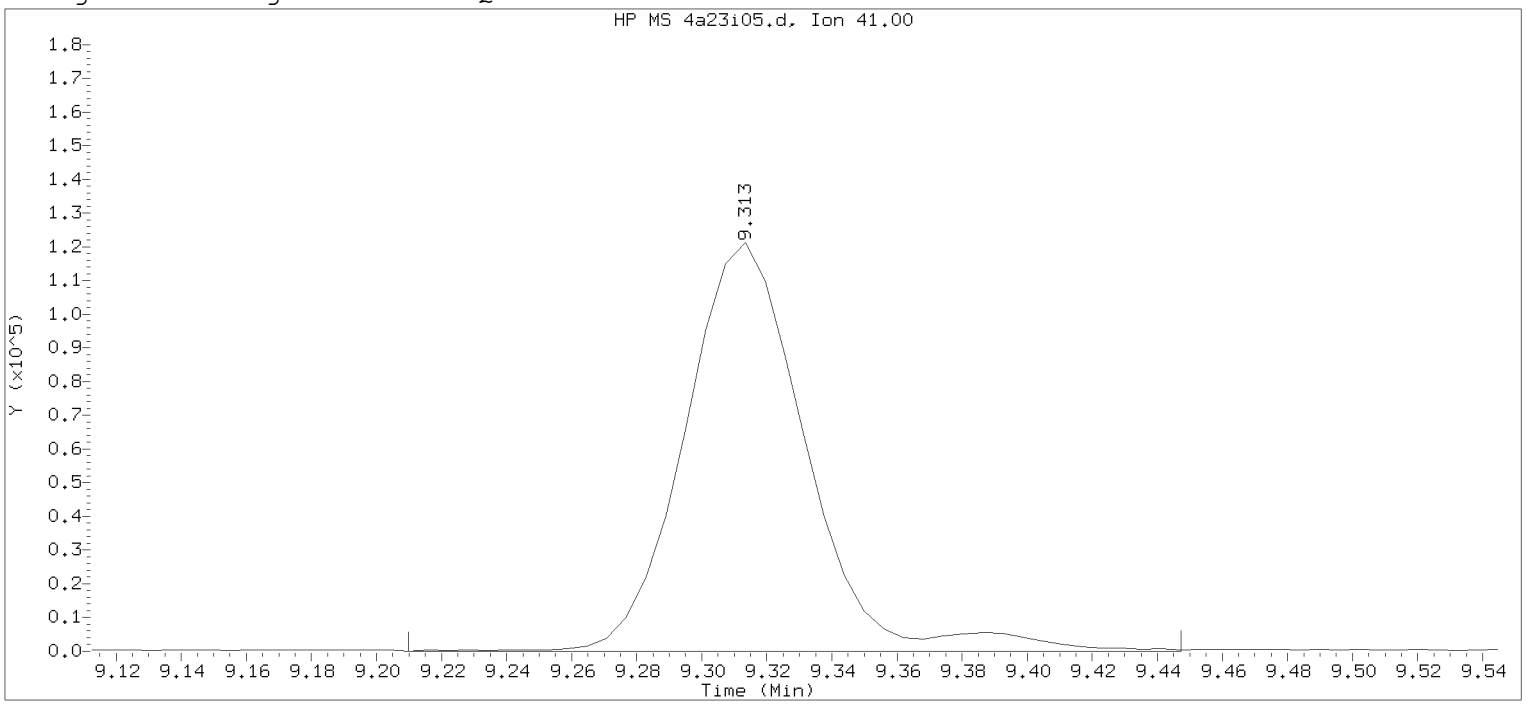
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:46
Date, time and analyst ID of latest file update: 23-Apr-2019 16:46 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 1271
Retention Time (minutes): 9.313
Quant Ion : 41.00
Area : 315199
On-column Amount (ng) : 97.4378
Integration start scan : 1253 Integration stop scan: 1292
Y at integration start : 0 Y at integration end: 0

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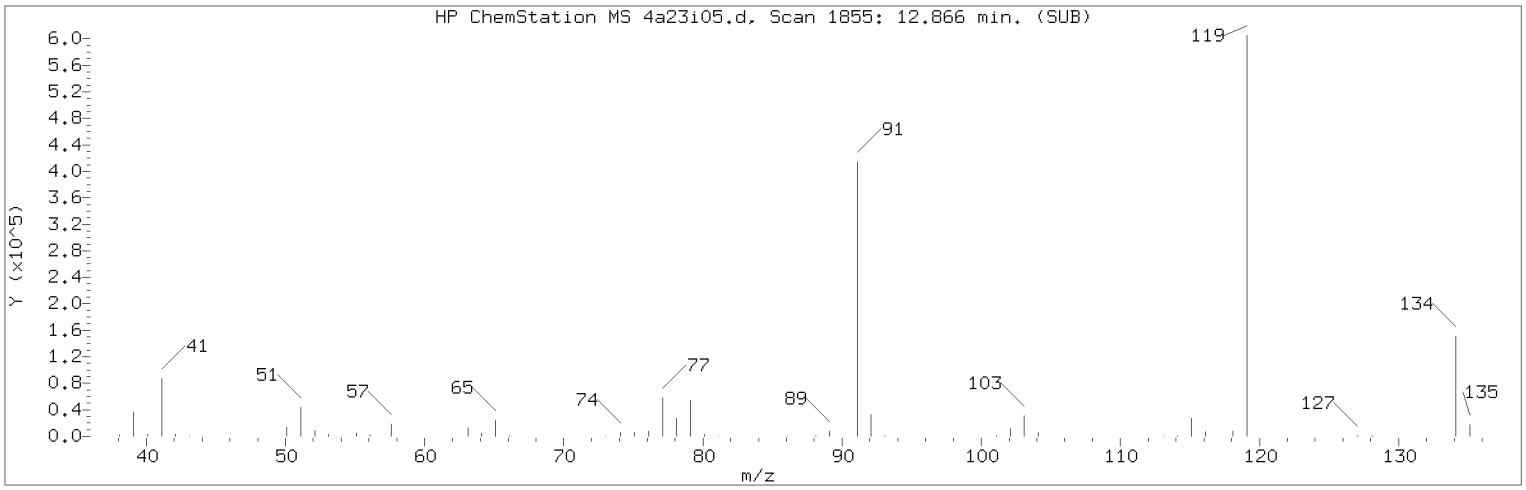
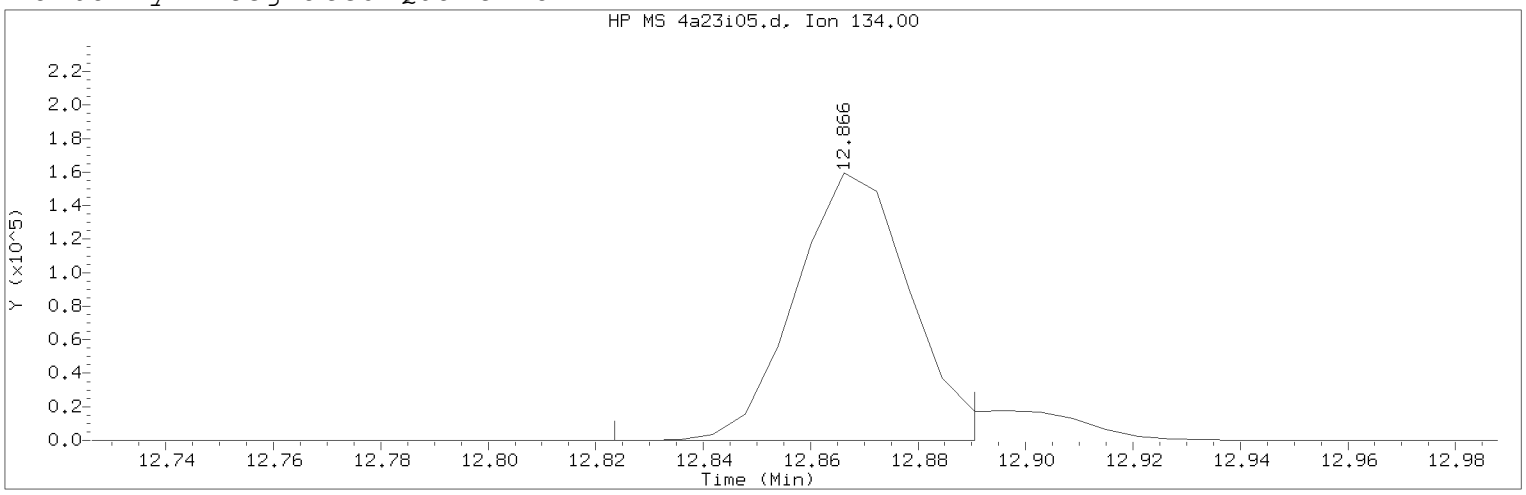
Target 3.5 esignature user ID: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

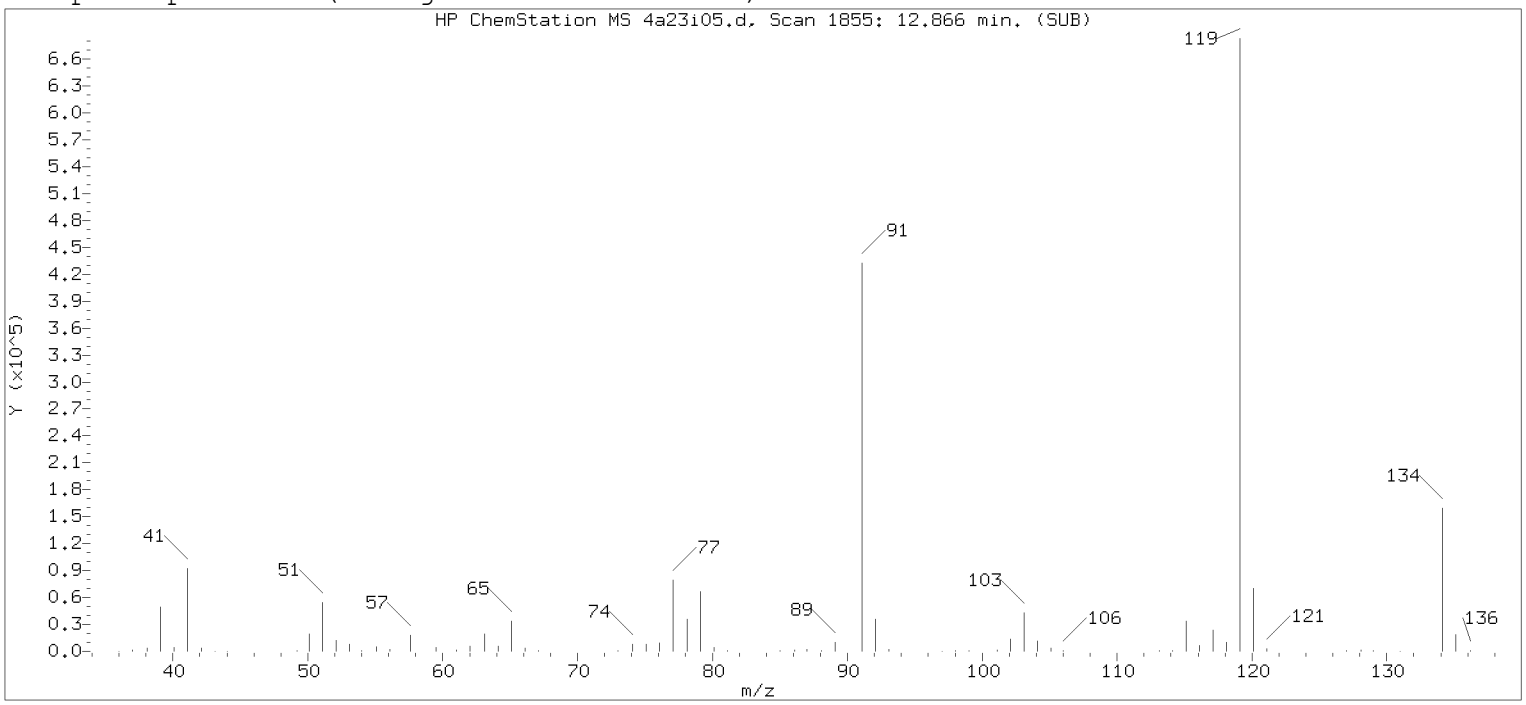
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area (flag) : 235601M
On-Column Amount (ng) : 51.1332
Integration start scan : 1847 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

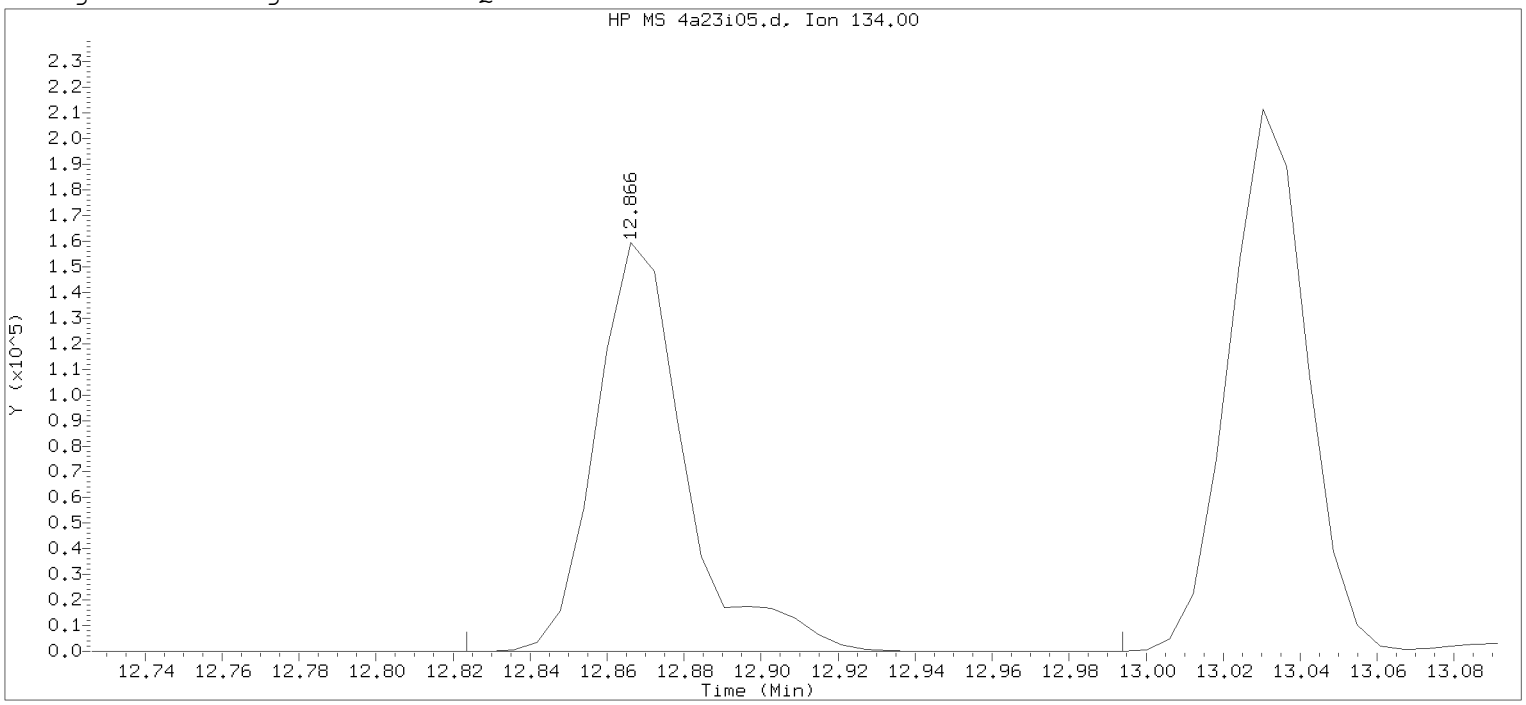
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

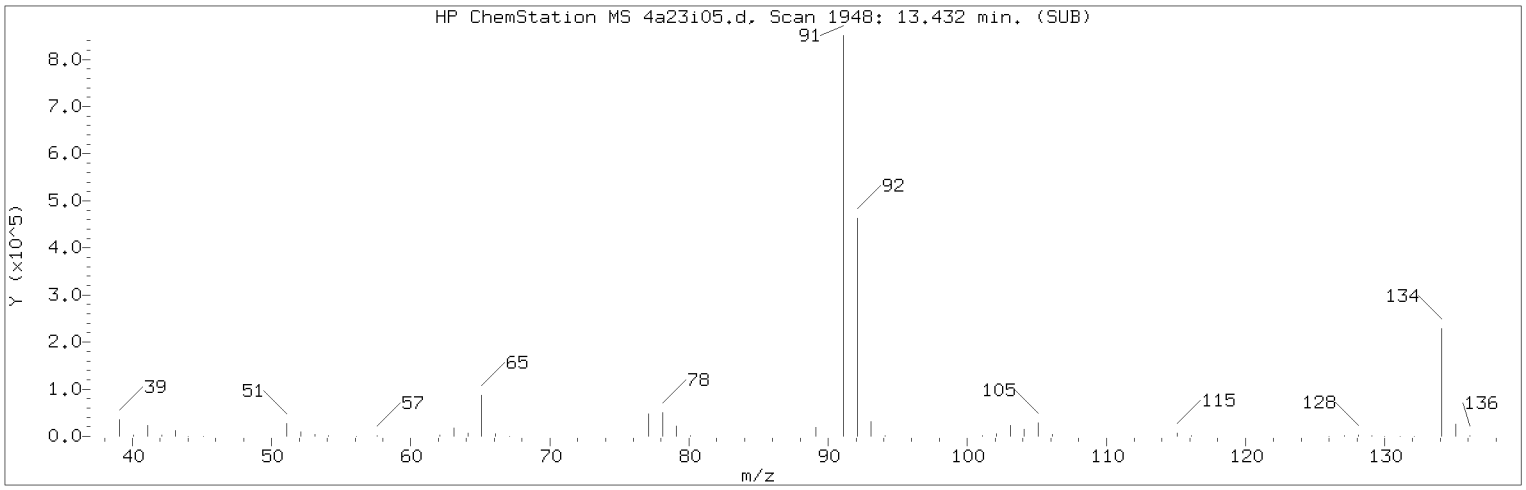
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:46
Date, time and analyst ID of latest file update: 23-Apr-2019 16:46 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

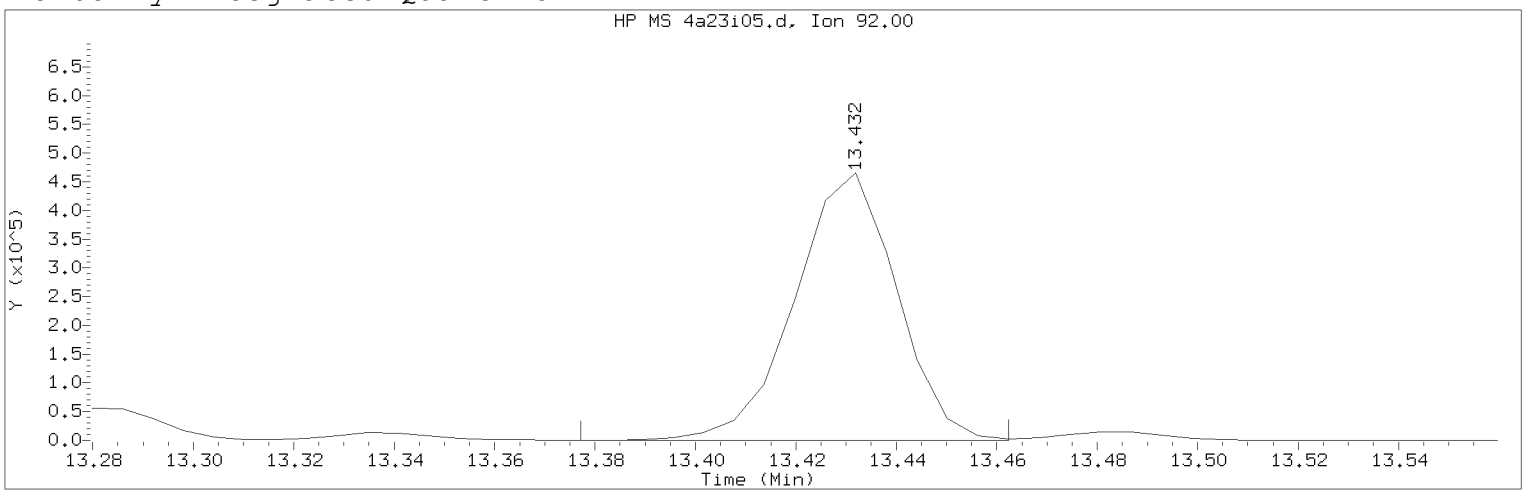
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area : 256607
On-column Amount (ng) : 51.0539
Integration start scan : 1847 Integration stop scan: 1875
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

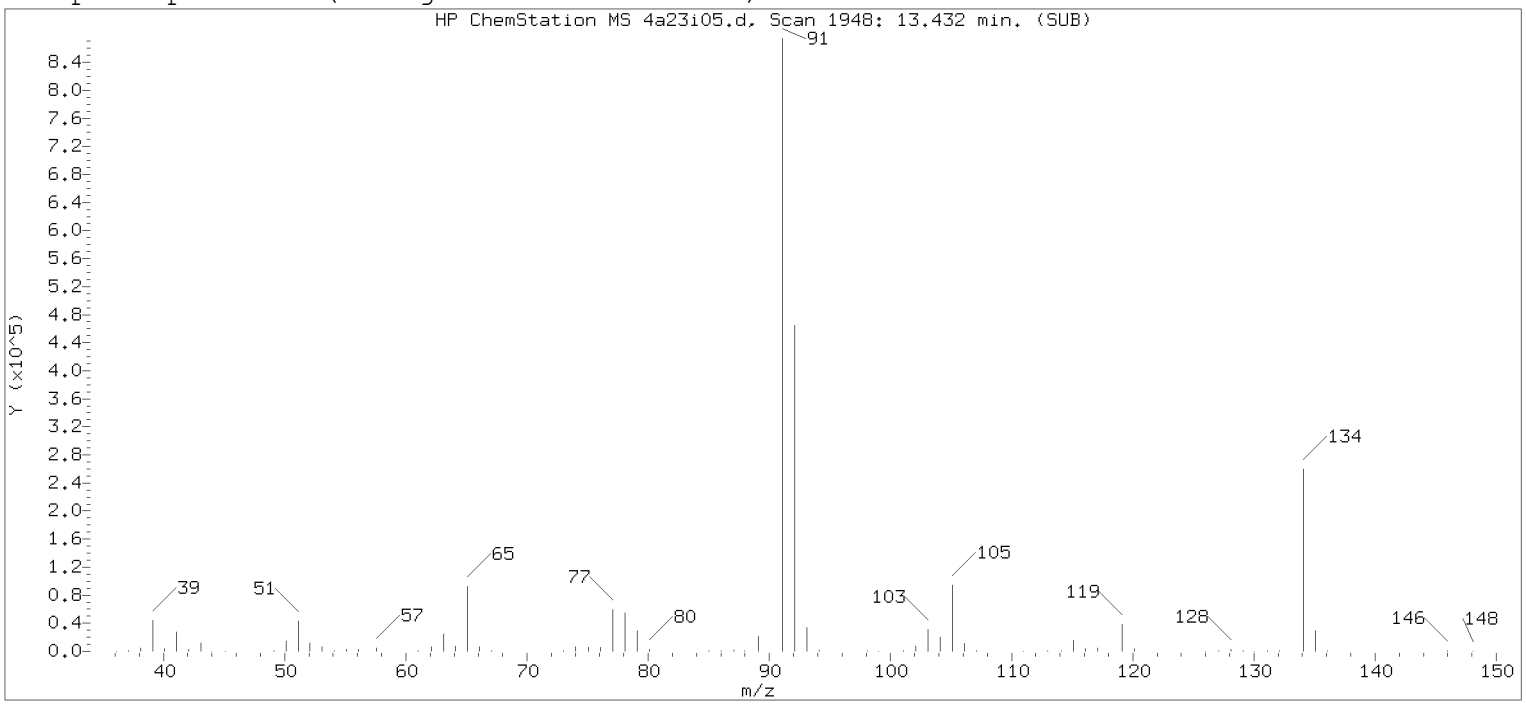
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1948
Retention Time (minutes): 13.432
Quant Ion : 92.00
Area (flag) : 656056M
On-Column Amount (ng) : 51.0863
Integration start scan : 1938 Integration stop scan: 1952
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

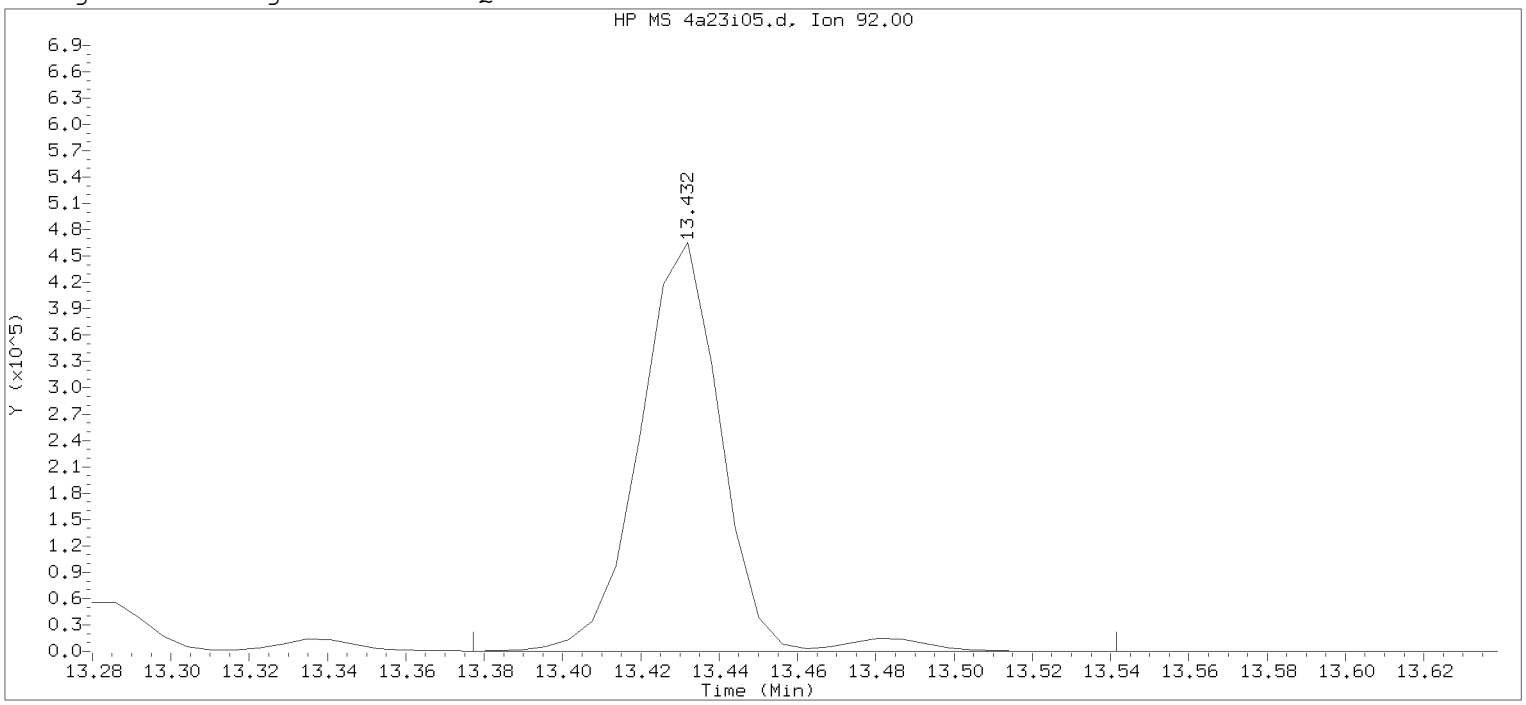
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



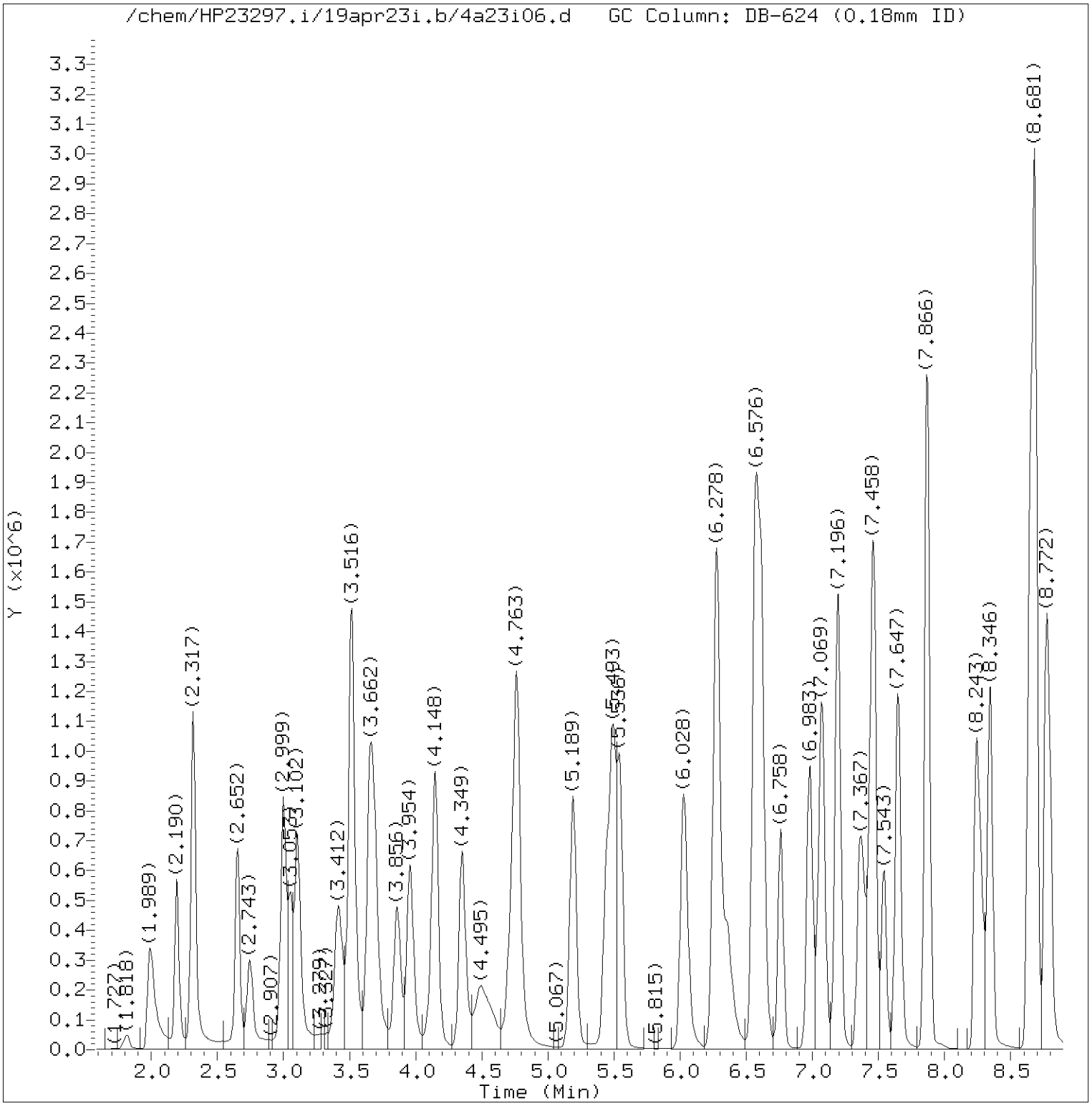
Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:46
Date, time and analyst ID of latest file update: 23-Apr-2019 16:46 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1948
Retention Time (minutes): 13.432
Quant Ion : 92.00
Area : 676997
On-column Amount (ng) : 51.6070
Integration start scan : 1938 Integration stop scan: 1965
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong



Total Ion Chromatogram (TIC)

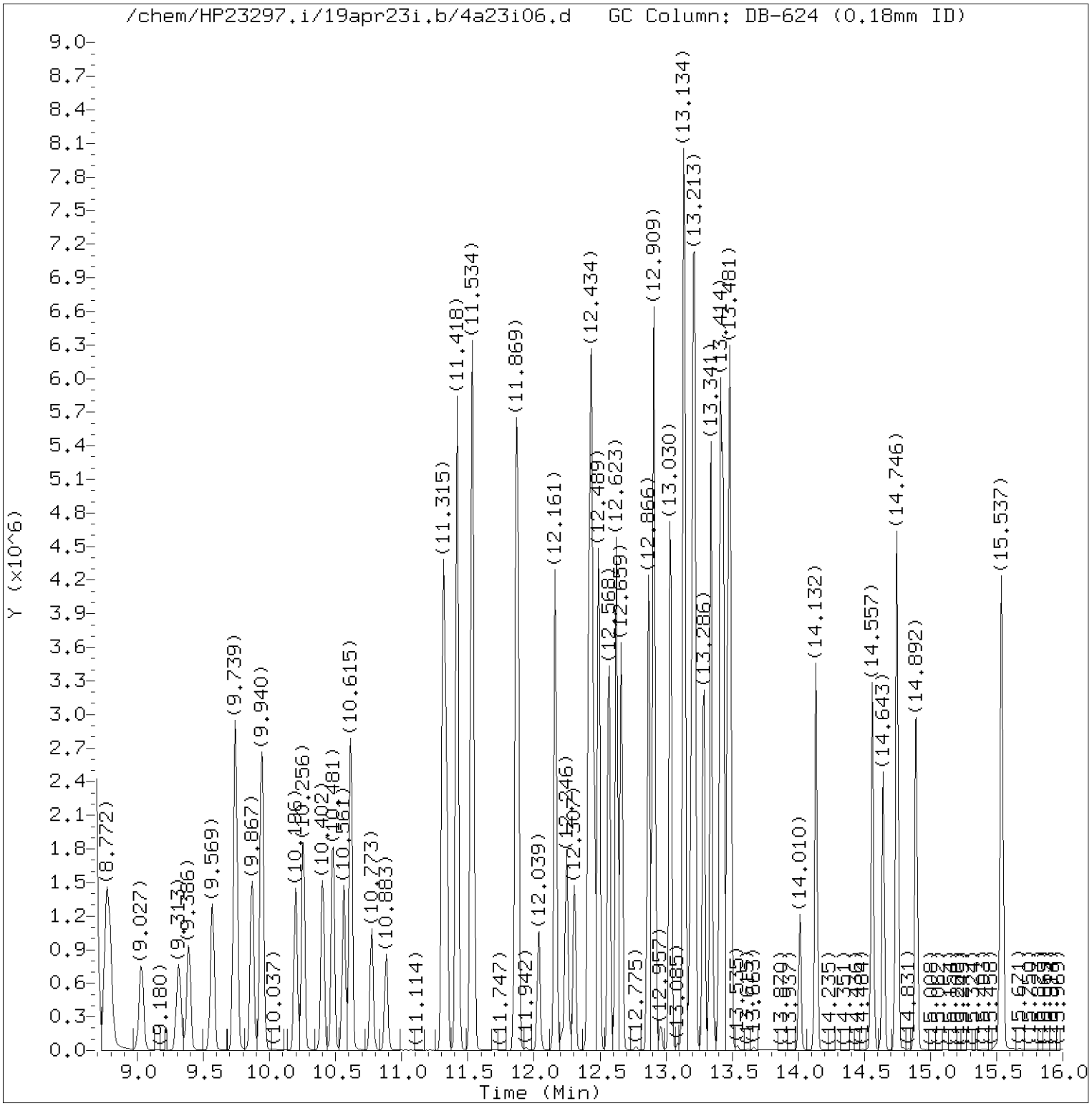
Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.989	85	856197	94.764
4) Chloromethane	(2)	2.196	50	778963	88.121
6) Vinyl Chloride	(2)	2.311	62	781652	90.757
5) 1,3-Butadiene	(2)	2.317	39	429104	89.635
8) Bromomethane	(2)	2.652	94	631155M	89.016
9) Chloroethane	(2)	2.743	64	421422	88.125
10) Dichlorofluoromethane	(2)	2.999	67	959500	85.034
12) Trichlorofluoromethane	(2)	3.053	101	988788	95.494
11) n-Pentane	(2)	3.108	43	826274	99.339
13) Ethanol	(1)	3.266	45	449372M	2714.581
15) Freon 123a	(2)	3.412	67	566404M	95.031
16) Acrolein	(1)	3.516	56	2437168	909.922
17) 1,1-Dichloroethene	(2)	3.650	96	405892	99.428
17) 1,1-Dichloroethene	(2)	3.650	63	206048	94.791
19) Freon 113	(2)	3.680	101	449666	100.133
18) Acetone	(1)	3.692	58	248523	188.723
22) Methyl Iodide	(2)	3.856	142	809687	99.226
21) 2-Propanol	(1)	3.875	45	560926M	514.984
23) Carbon Disulfide	(2)	3.960	76	1443285	98.902
27) Methyl Acetate	(2)	4.124	43	805972	93.447
25) Allyl Chloride	(2)	4.148	41	843587	91.990
28) Methylene Chloride	(2)	4.349	84	498069	95.452
29)*t-Butyl alcohol-d10	(1)	4.367	65	478539	250.000
30) t-Butyl alcohol	(1)	4.495	59	923610M	483.862
31) Acrylonitrile	(2)	4.714	53	438803	97.463
33) Methyl Tertiary Butyl Ether	(2)	4.757	73	1405033	94.575
32) trans-1,2-Dichloroethene	(2)	4.763	96	488979	100.117
34) n-Hexane	(2)	5.189	57	797738	98.593
36) 1,1-Dichloroethane	(2)	5.438	63	891494	97.569
38) di-Isopropyl ether	(2)	5.493	45	1749511	95.857
39) 2-Chloro-1,3-butadiene	(2)	5.548	53	819107	99.373
40) Ethyl t-butyl ether	(2)	6.028	59	1469725	93.074
43) 1,2-Dichloroethene (Total)	(2)		96	1050357	199.774
44) 2-Butanone	(2)	6.259	43	1335553	189.639
42) cis-1,2-Dichloroethene	(2)	6.278	96	561378	99.658
45) 2,2-Dichloropropane	(2)	6.290	77	703463	98.401
47) Propionitrile	(1)	6.363	54	942685	477.513
48) Methacrylonitrile	(2)	6.570	67	1059264	251.220

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.606	128	315011	102.033
50) Tetrahydrofuran	(1)	6.618	71	360785	186.032
51) Chloroform	(2)	6.758	83	868170	96.354
52)$Dibromofluoromethane	(2)	6.977	113	291262	50.511
52)$Dibromofluoromethane	(2)	6.977	111	296612	50.260
53) 1,1,1-Trichloroethane	(2)	6.983	97	736290	98.029
54) Cyclohexane	(2)	7.069	56	956235	97.915
54) Cyclohexane	(2)	7.075	84	790572	99.430
54) Cyclohexane	(2)	7.069	69	291603	100.314
56) Carbon Tetrachloride	(2)	7.184	117	653943	100.781
55) 1,1-Dichloropropene	(2)	7.196	75	696830	98.262
58) Isobutyl Alcohol	(1)	7.367	41	805417M	1215.666
57)$1,2-Dichloroethane-d4	(2)	7.434	102	71093	50.464
57)$1,2-Dichloroethane-d4	(2)	7.434	65	339197	49.413
57)$1,2-Dichloroethane-d4	(2)	7.434	104	45774	50.917
60) Benzene	(2)	7.464	78	2089040	96.397
61) 1,2-Dichloroethane	(2)	7.543	62	688919	93.122
61) 1,2-Dichloroethane	(2)	7.543	98	63130	105.793
65) t-Amyl methyl ether	(2)	7.647	73	1470024	91.516
67) n-Heptane	(2)	7.866	43	911489	95.546
66)*Fluorobenzene	(2)	7.872	96	1169857	50.000
69) n-Butanol	(1)	8.243	56	1394845	2592.853
71) Trichloroethene	(2)	8.346	95	542445	99.351
72) Methylcyclohexane	(2)	8.644	83	1037629	101.701
72) Methylcyclohexane	(2)	8.644	98	449921	102.189
73) 1,2-Dichloropropane	(2)	8.687	63	559067	98.837
76) Methyl Methacrylate	(2)	8.766	69	648672	101.393
75) 1,4-Dioxane	(1)	8.772	88	203900M	1451.583
74) Dibromomethane	(2)	8.796	93	368537	100.529
78) Bromodichloromethane	(2)	9.027	83	674216	101.392
79) 2-Nitropropane	(2)	9.313	41	643313	196.032
80) 2-Chloroethyl Vinyl Ether	(2)	9.386	63	515039	99.713
81) cis-1,3-Dichloropropene	(2)	9.569	75	892525	101.607
82) 4-Methyl-2-pentanone	(2)	9.739	43	2443324	193.671
83)$Toluene-d8	(3)	9.867	98	1198705	48.956
83)$Toluene-d8	(3)	9.867	100	781993	49.266
88) Toluene	(3)	9.940	92	1373082	96.581
90) 1,3-Dichloropropene (total)	(3)		100	1753973	205.785

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on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.196	75	861448	104.178
91) Ethyl Methacrylate	(3)	10.256	69	1052886	100.465
92) 1,1,2-Trichloroethane	(3)	10.402	97	538973	97.219
93) Tetrachloroethene	(3)	10.481	166	608023	98.706
94) 1,3-Dichloropropane	(3)	10.561	76	898708	97.283
96) 2-Hexanone	(3)	10.615	43	1955942	191.268
97) Dibromochloromethane	(3)	10.773	129	609734	105.254
99) 1,2-Dibromoethane	(3)	10.883	107	607123	99.342
100)*Chlorobenzene-d5	(3)	11.309	117	947309	50.000
102) Chlorobenzene	(3)	11.333	112	1565907	97.632
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	550242	103.206
104) Ethylbenzene	(3)	11.418	91	2674438	98.031
106) m+p-Xylene	(3)	11.534	106	2156238	199.210
108) Xylene (Total)	(3)		106	3218040	298.013
107) o-Xylene	(3)	11.862	106	1061802	98.803
109) Styrene	(3)	11.881	104	1833651	102.873
110) Bromoform	(3)	12.039	173	499671	110.840
111) Isopropylbenzene	(3)	12.161	105	2662972	98.364
112) Cyclohexanone	(1)	12.246	55	757278	1354.512
114)$4-Bromofluorobenzene	(3)	12.307	95	462772	49.609
114)$4-Bromofluorobenzene	(3)	12.307	174	408837	49.702
116) 1,1,2,2-Tetrachloroethane	(4)	12.410	83	979635	99.745
115) Bromobenzene	(4)	12.422	156	739678	100.626
118) trans-1,4-Dichloro-2-butene	(4)	12.434	53	814801	251.034
117) 1,2,3-Trichloropropane	(4)	12.459	110	291694	98.224
119) n-Propylbenzene	(4)	12.489	91	3118876	96.307
120) 2-Chlorotoluene	(4)	12.568	126	659589	98.675
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	2303481	99.036
121) 4-Chlorotoluene	(4)	12.659	126	689825	99.108
124) tert-Butylbenzene	(4)	12.866	134	494874M	102.670
125) Pentachloroethane	(4)	12.903	167	467801	108.596
126) 1,2,4-Trimethylbenzene	(4)	12.909	105	2423838	100.157
127) sec-Butylbenzene	(4)	13.030	105	2963684	99.550
129) 1,3-Dichlorobenzene	(4)	13.134	146	1398348	100.842
130) p-Isopropyltoluene	(4)	13.140	119	2644983	101.745
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	529436	50.000
133) 1,4-Dichlorobenzene	(4)	13.207	146	1419634	99.833
134) 1,2,3-Trimethylbenzene	(4)	13.213	105	2597696	100.005

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Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

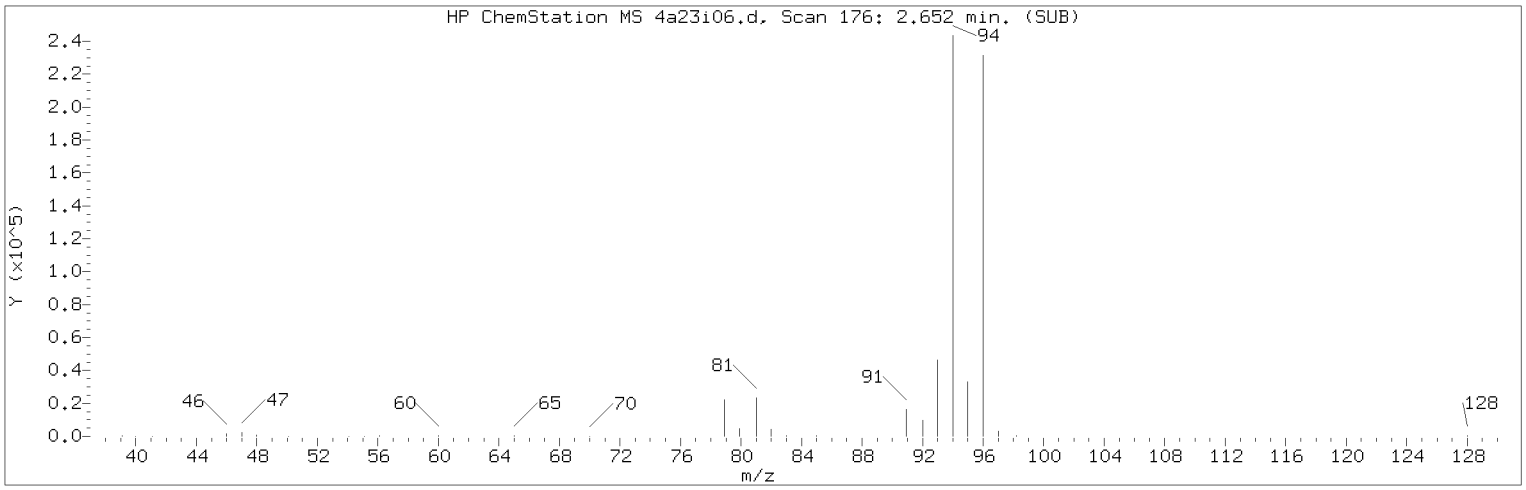
Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.286	91	2115626	110.066
136) 1,3-Diethylbenzene	(4)	13.341	119	1645588	101.604
141) Diethylbenzene (total)	(4)		100	4787931	305.314
137) 1,4-Diethylbenzene	(4)	13.408	119	1759160	102.116
139) n-Butylbenzene	(4)	13.432	92	1330962M	99.670
138) 1,2-Dichlorobenzene	(4)	13.469	146	1349803	99.593
140) 1,2-Diethylbenzene	(4)	13.487	119	1383183	101.594
142) 1,2-Dibromo-3-chloropropane	(4)	14.010	75	261035	100.380
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	1010981	98.904
146) 1,2,4-Trichlorobenzene	(4)	14.557	180	953741	98.270
147) Hexachlorobutadiene	(4)	14.643	225	430482	96.090
148) Naphthalene	(4)	14.746	128	3400393	100.043
149) 1,2,3-Trichlorobenzene	(4)	14.892	180	927242	99.540
150) 2-Methylnaphthalene	(4)	15.537	142	2214369	105.930

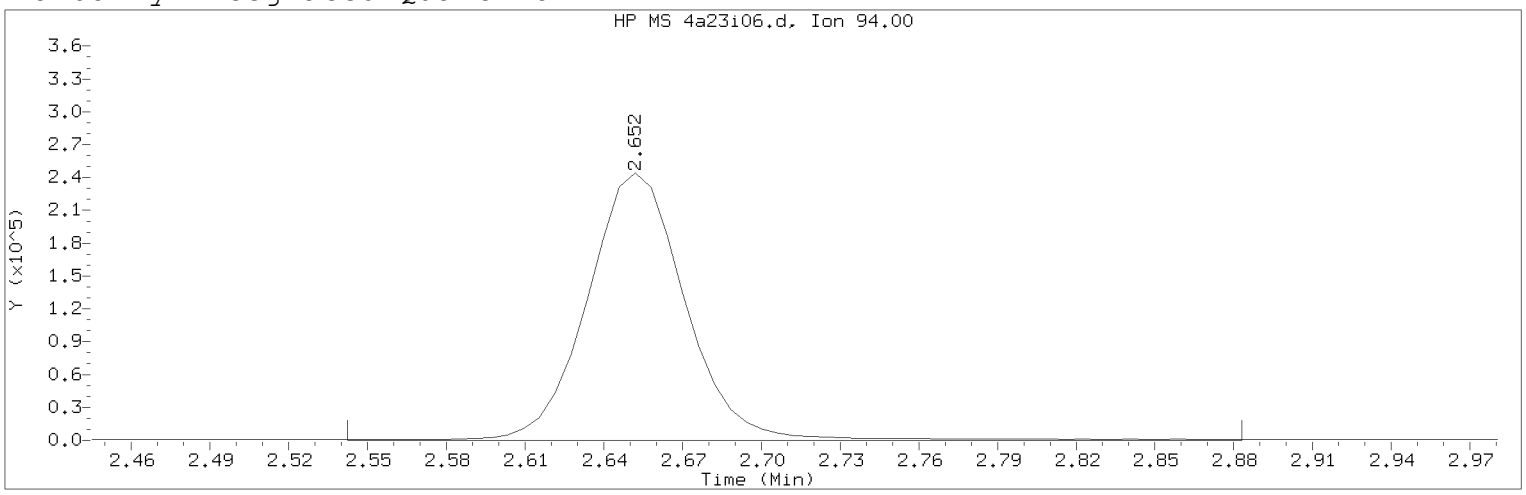
M = Compound was manually integrated.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

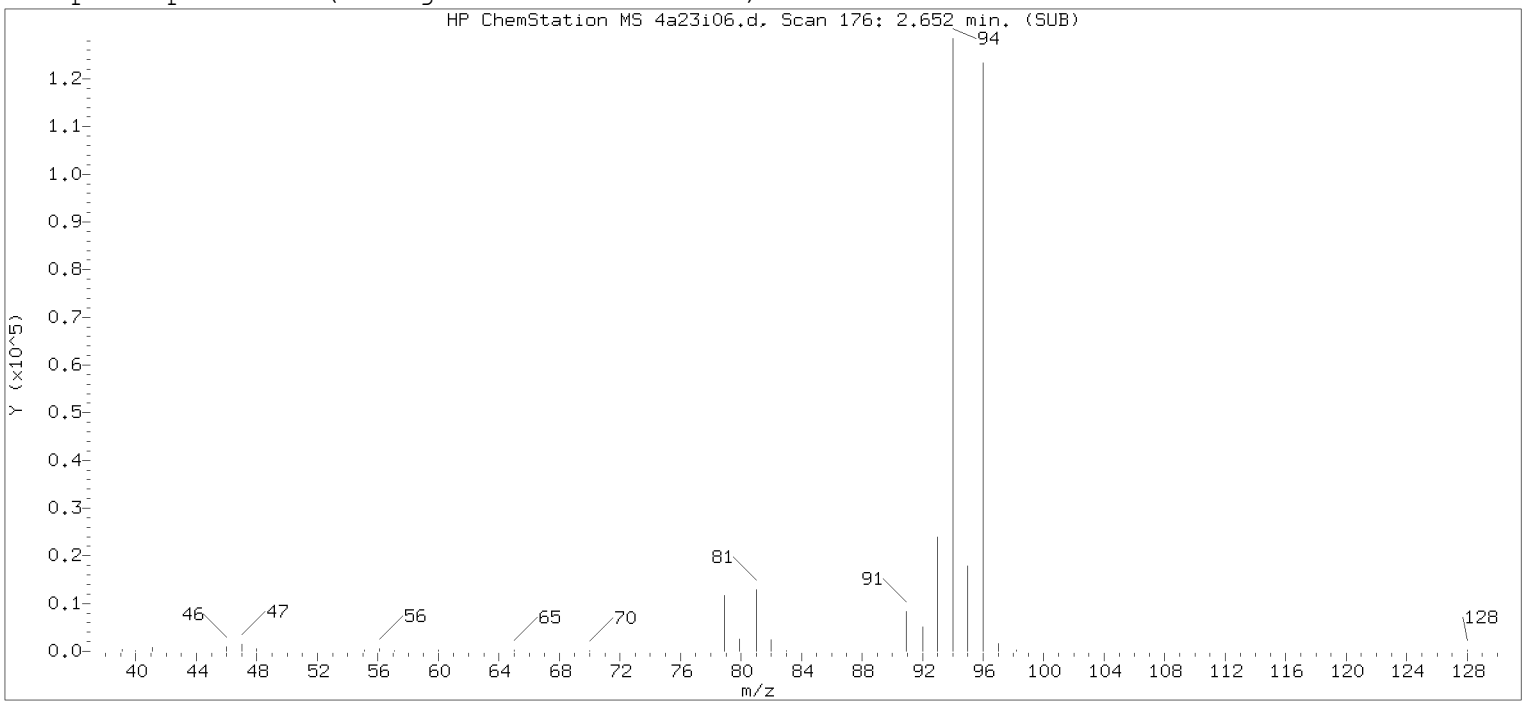
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 176
Retention Time (minutes): 2.652
Quant Ion : 94.00
Area (flag) : 631155M
On-Column Amount (ng) : 89.0156
Integration start scan : 157 Integration stop scan: 213
Y at integration start : 262 Y at integration end: 262

Reason for manual integration: improper integration

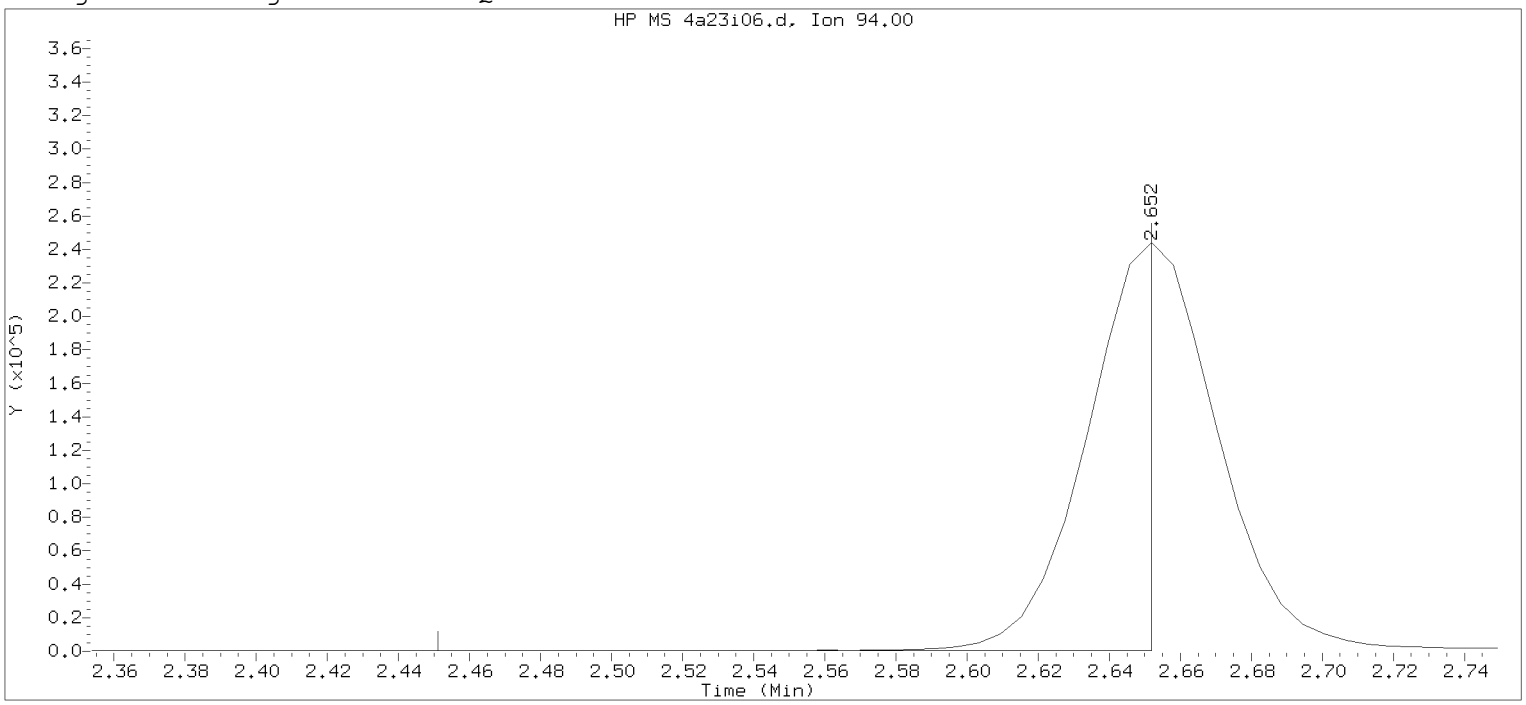
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

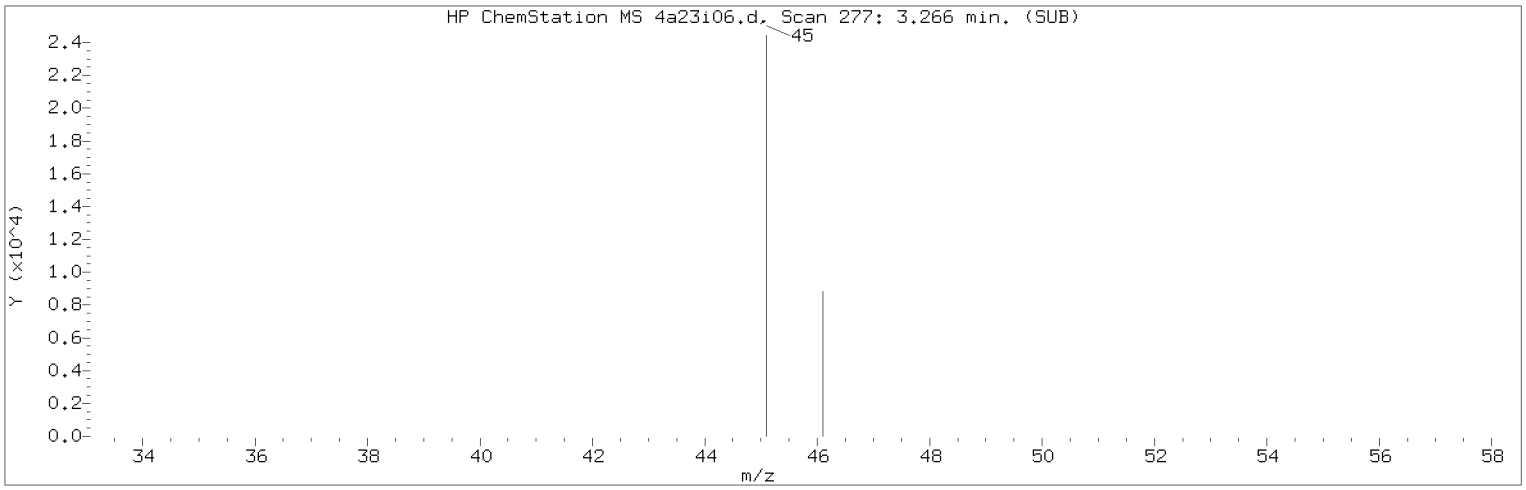
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:09
Date, time and analyst ID of latest file update: 23-Apr-2019 17:09 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

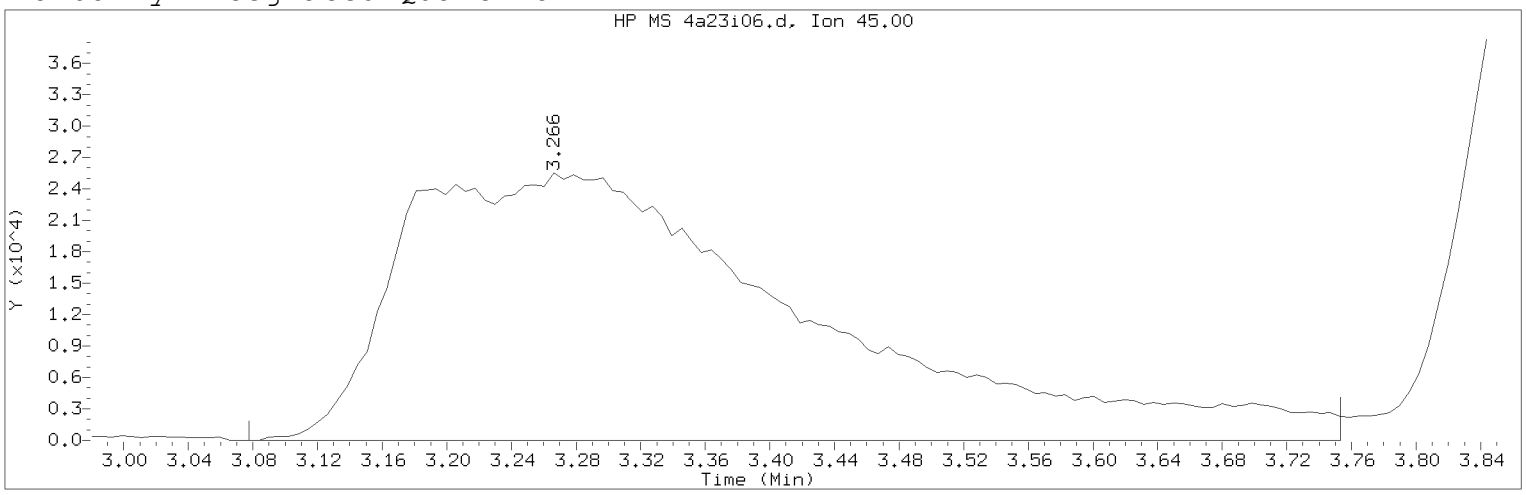
Compound Number	: 8		
Compound Name	: Bromomethane		
Scan Number	: 176		
Retention Time (minutes)	: 2.652		
Quant Ion	: 94.00		
Area	: 302085		
On-column Amount (ng)	: 44.2470		
Integration start scan	: 142	Integration stop scan:	175
Y at integration start	: 319	Y at integration end:	319

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user id: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

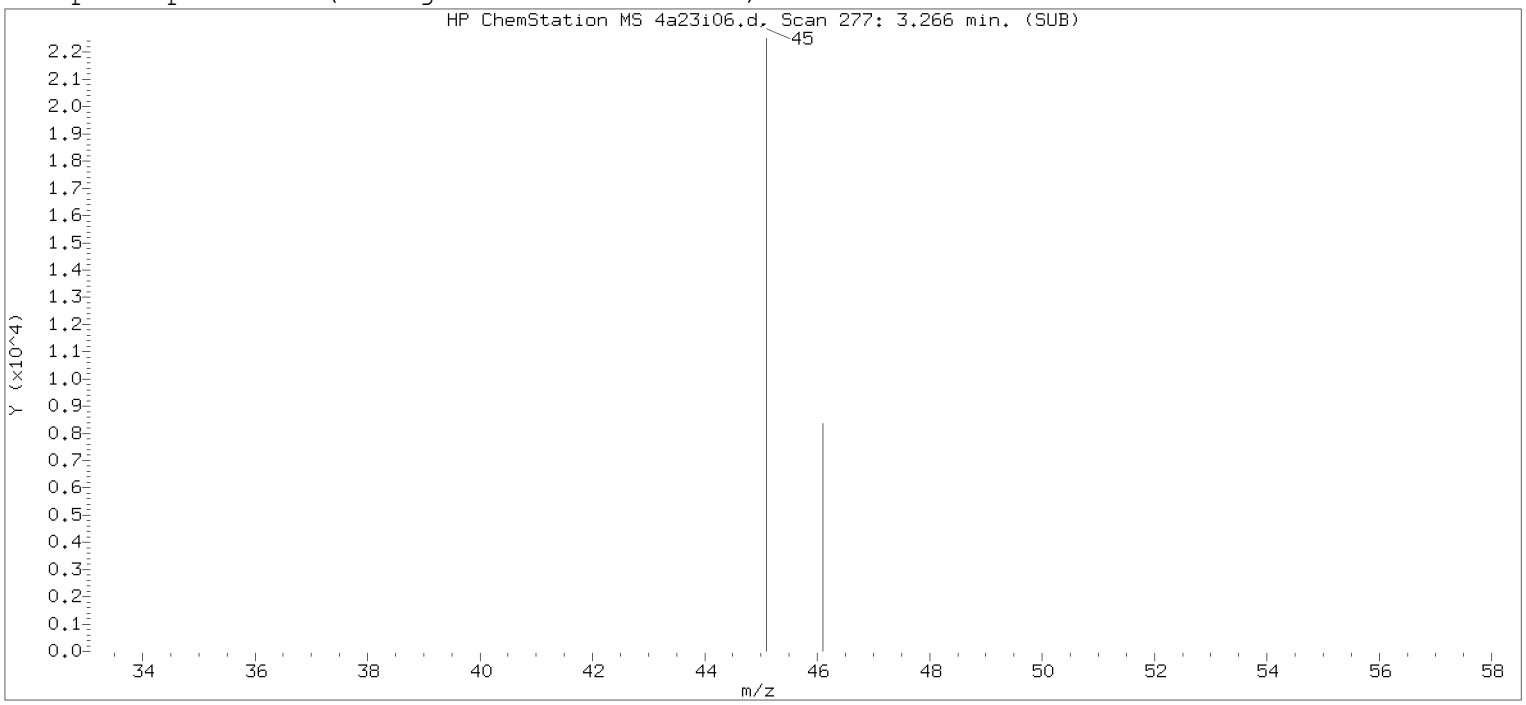
Compound Number : 13
Compound Name : Ethanol
Scan Number : 277
Retention Time (minutes): 3.266
Quant Ion : 45.00
Area (flag) : 449372M
On-Column Amount (ng) : 2714.5813
Integration start scan : 245 Integration stop scan: 356
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

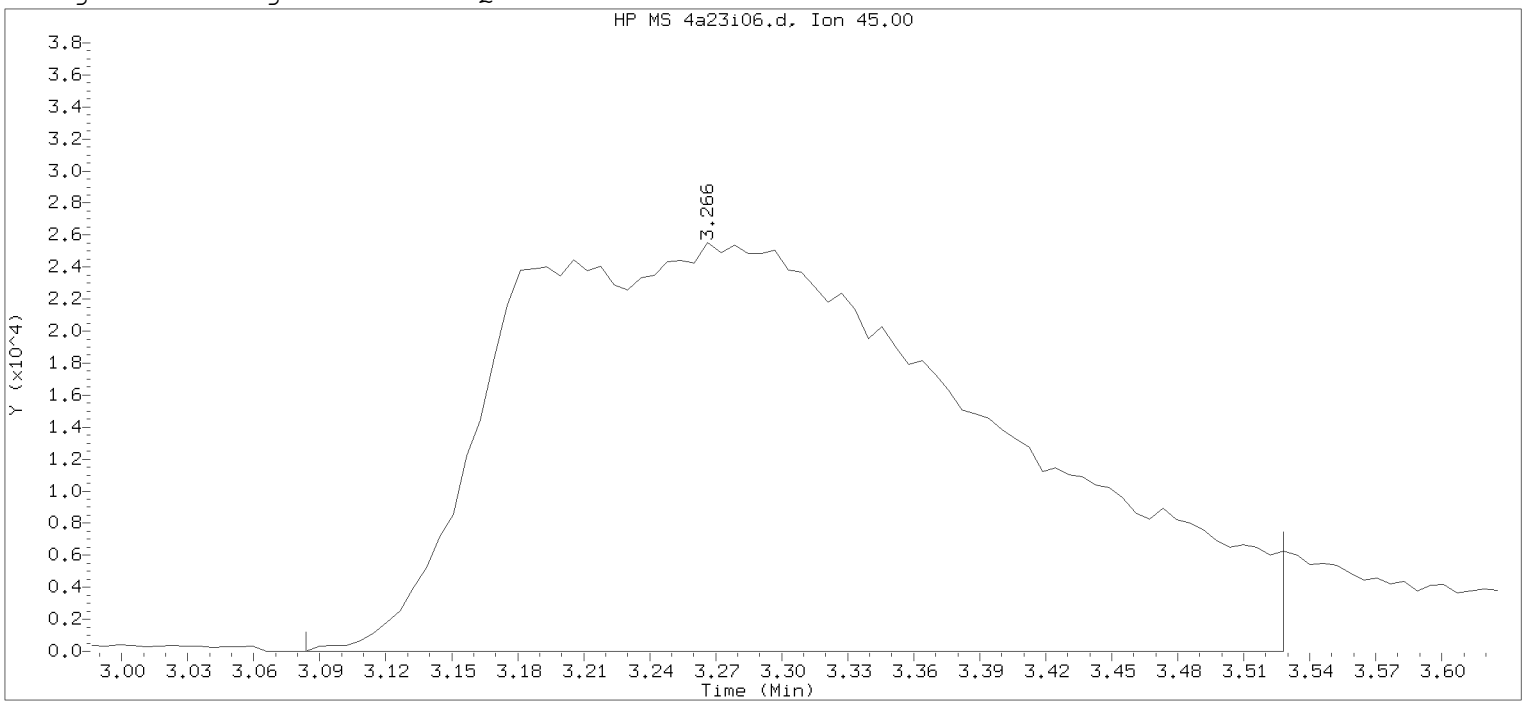
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

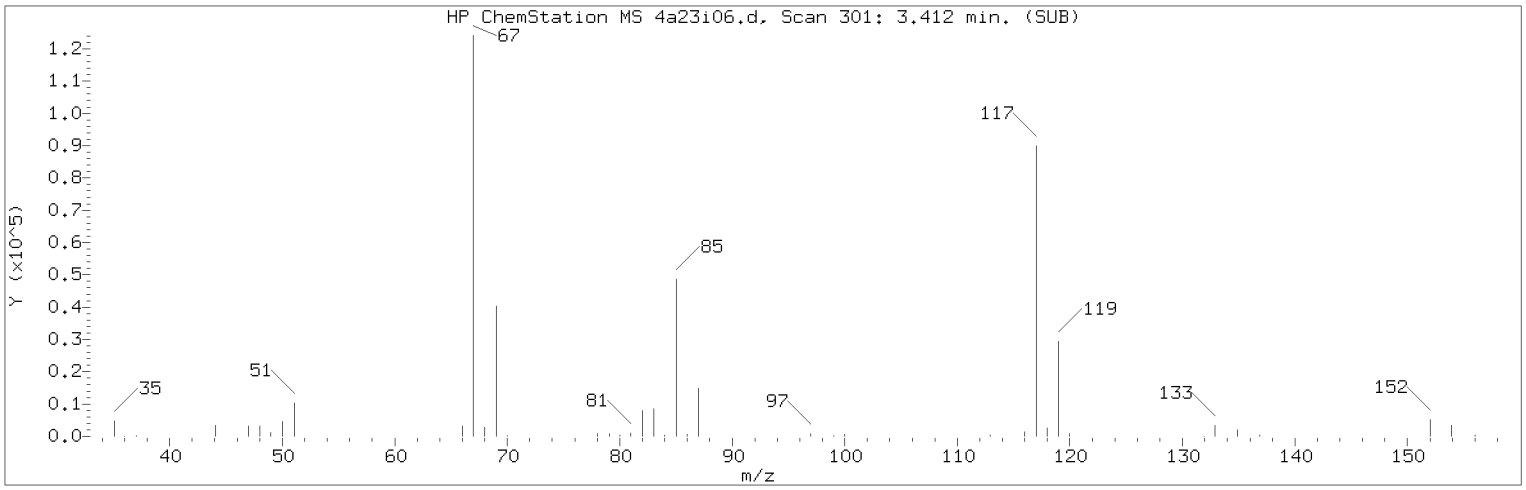
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:09
Date, time and analyst ID of latest file update: 23-Apr-2019 17:09 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

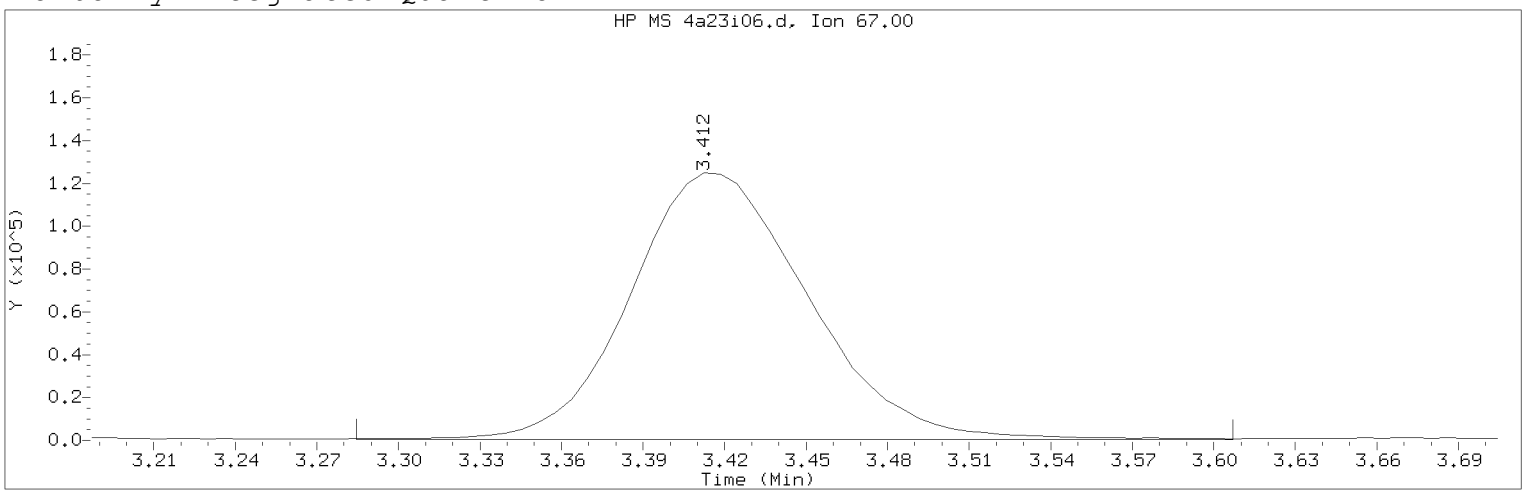
Compound Number	: 13		
Compound Name	: Ethanol		
Scan Number	: 277		
Retention Time (minutes)	: 3.266		
Quant Ion	: 45.00		
Area	: 398005		
On-column Amount (ng)	: 2670.4853		
Integration start scan	: 246	Integration stop scan:	319
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user: JMLONG

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

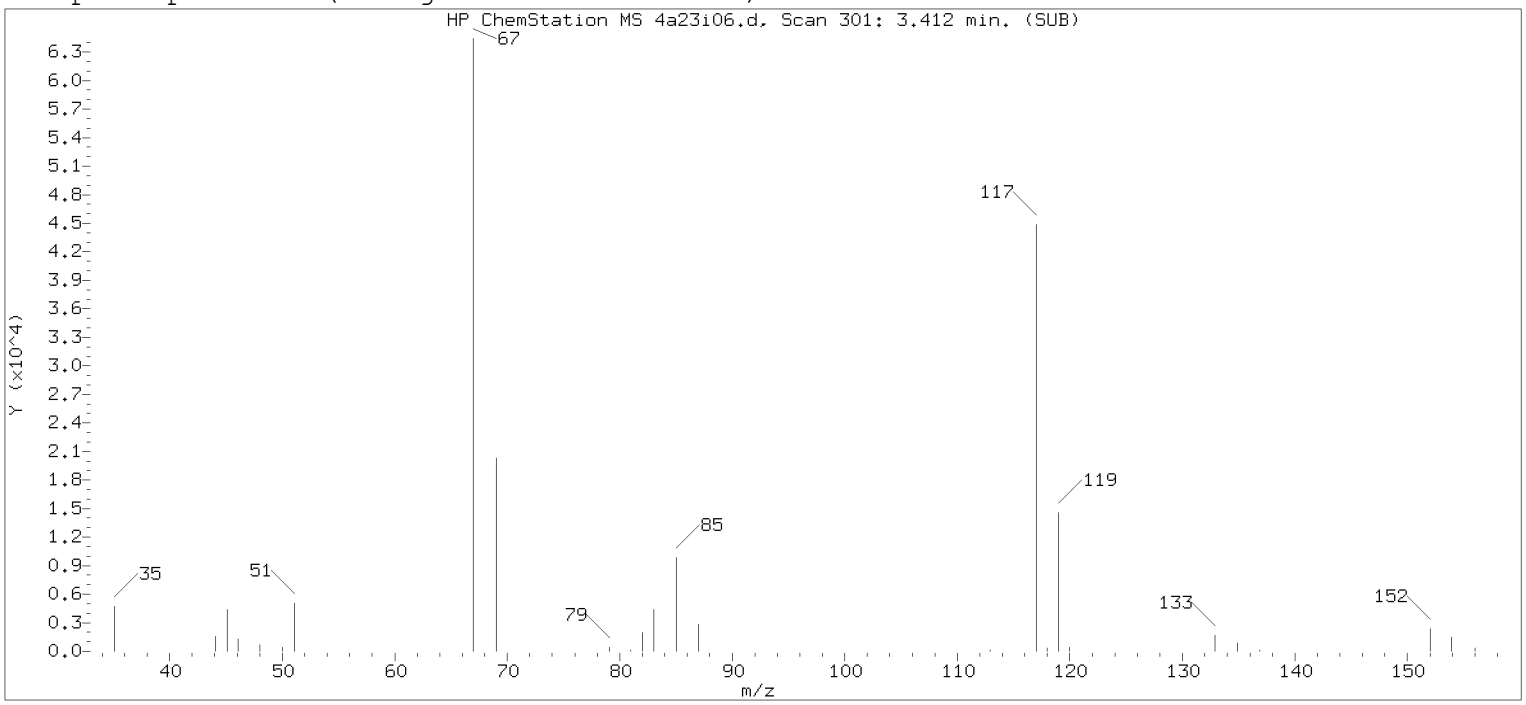
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 301
Retention Time (minutes): 3.412
Quant Ion : 67.00
Area (flag) : 566404M
On-Column Amount (ng) : 95.0315
Integration start scan : 279 Integration stop scan: 332
Y at integration start : 366 Y at integration end: 366

Reason for manual integration: improper integration

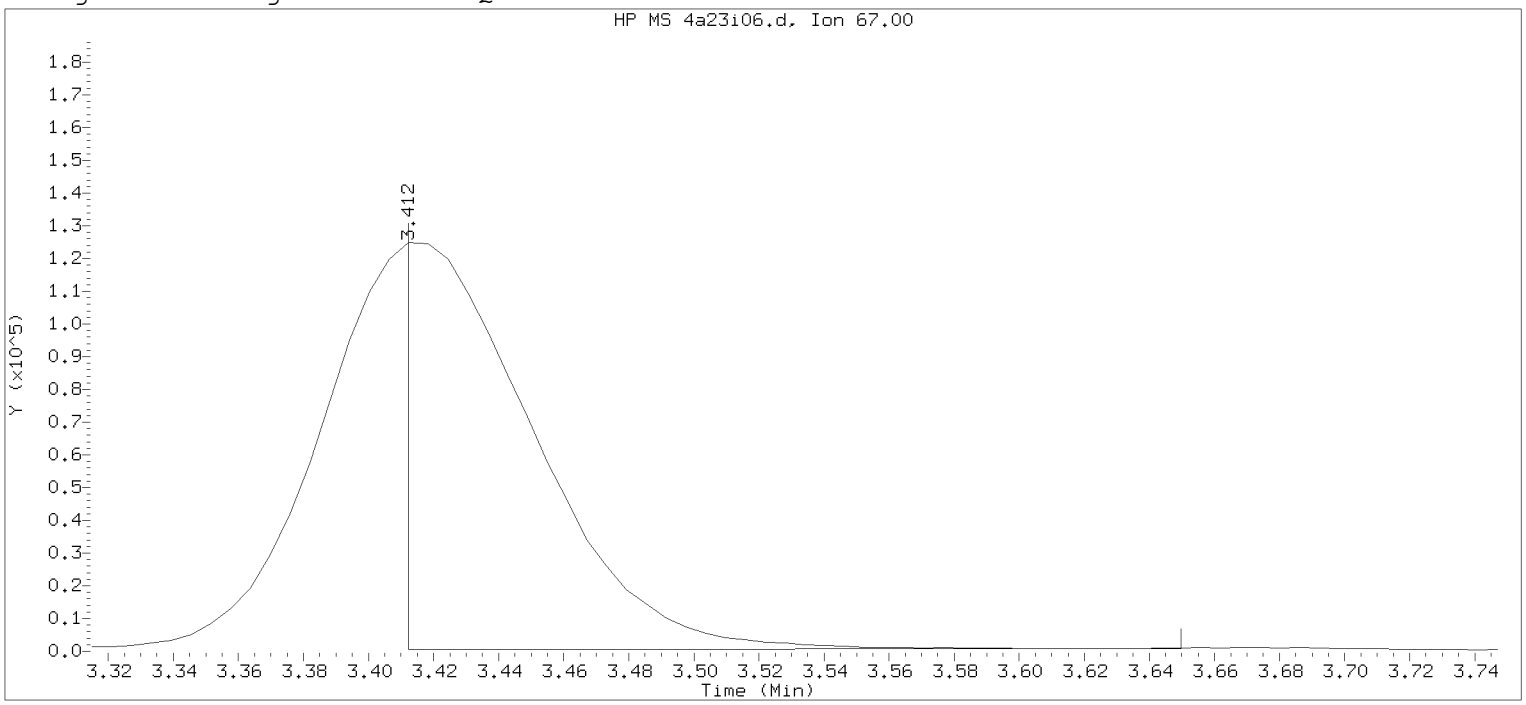
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

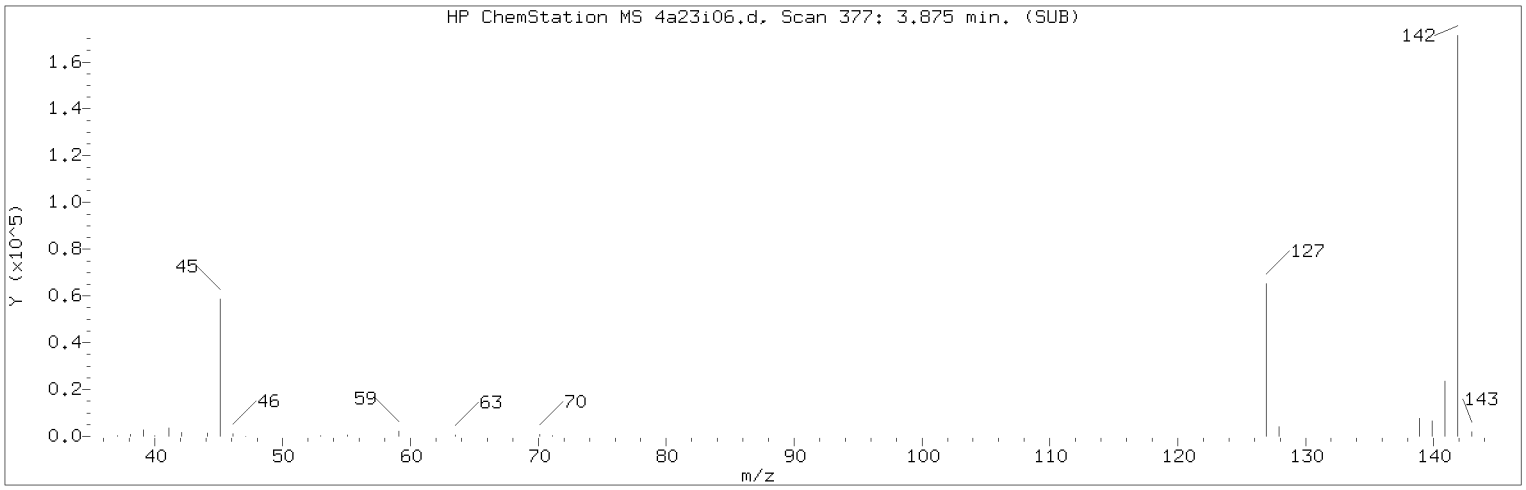
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:09
Date, time and analyst ID of latest file update: 23-Apr-2019 17:09 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

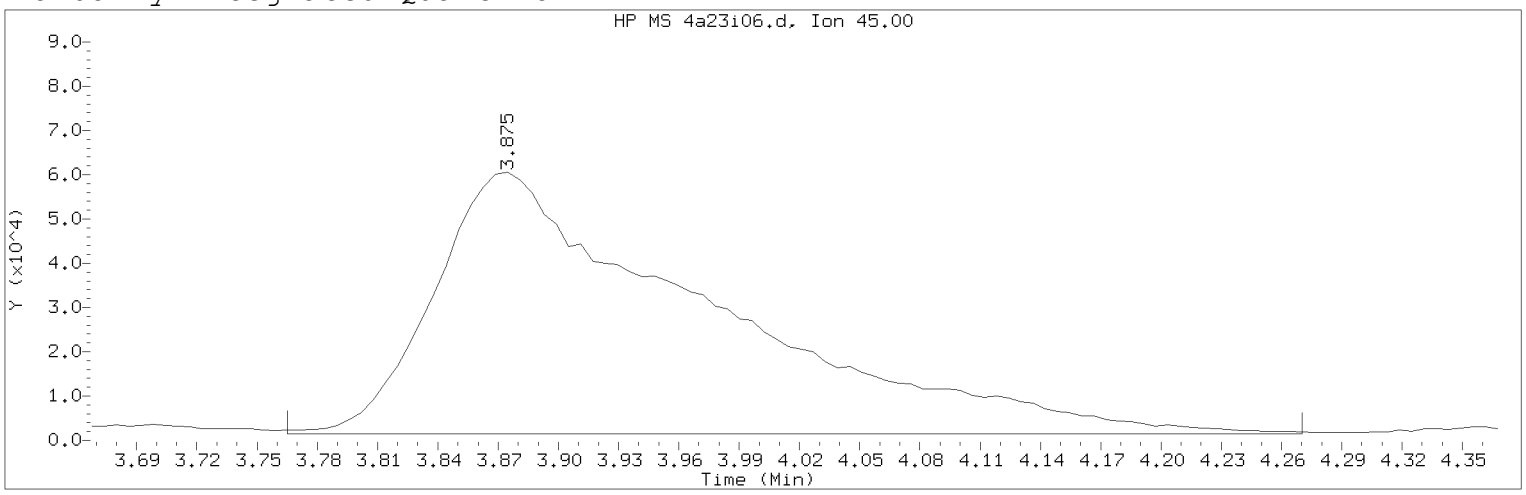
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 301
Retention Time (minutes): 3.412
Quant Ion : 67.00
Area : 327993
On-column Amount (ng) : 65.0918
Integration start scan : 300 Integration stop scan: 339
Y at integration start : 537 Y at integration end: 773

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlo1634

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

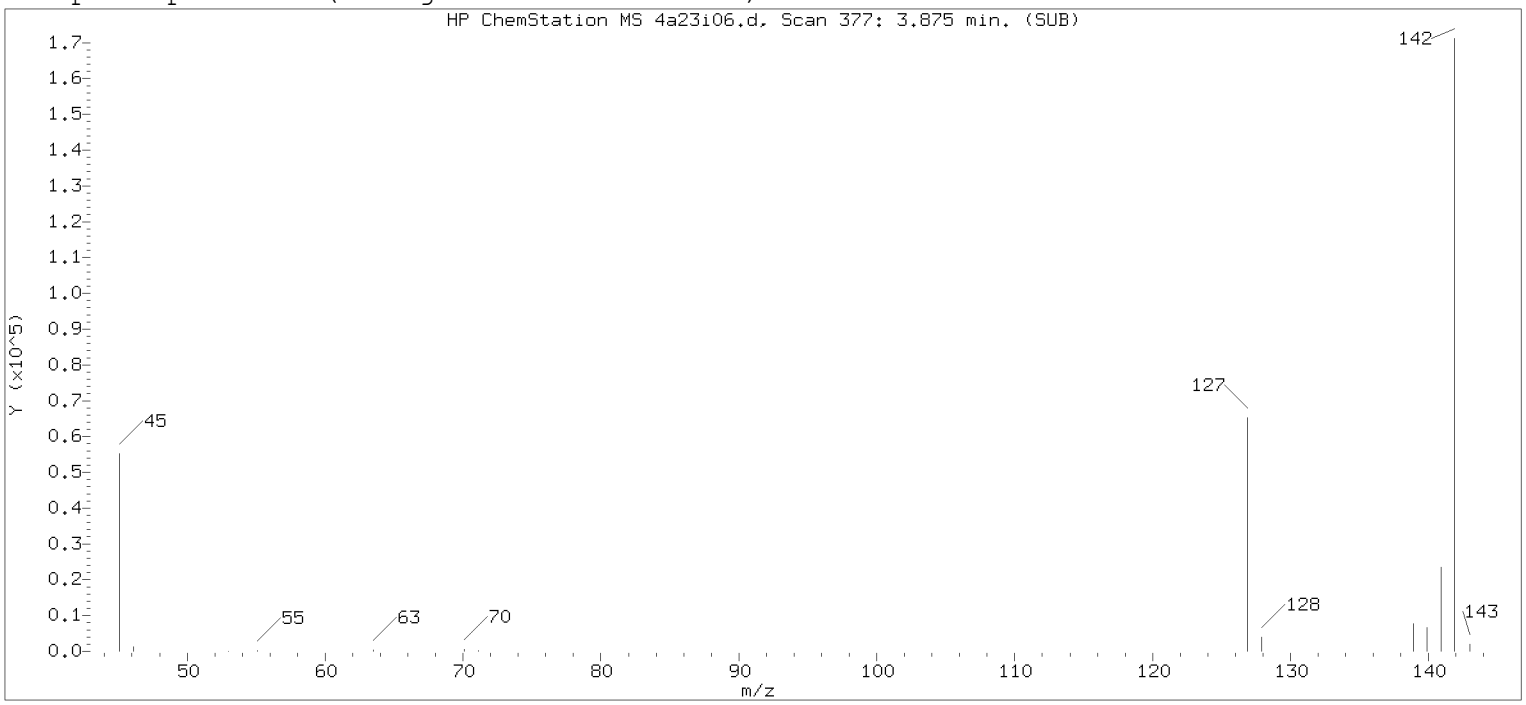
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 377
Retention Time (minutes): 3.875
Quant Ion : 45.00
Area (flag) : 560926M
On-Column Amount (ng) : 514.9845
Integration start scan : 358 Integration stop scan: 441
Y at integration start : 1501 Y at integration end: 1501

Reason for manual integration: improper integration

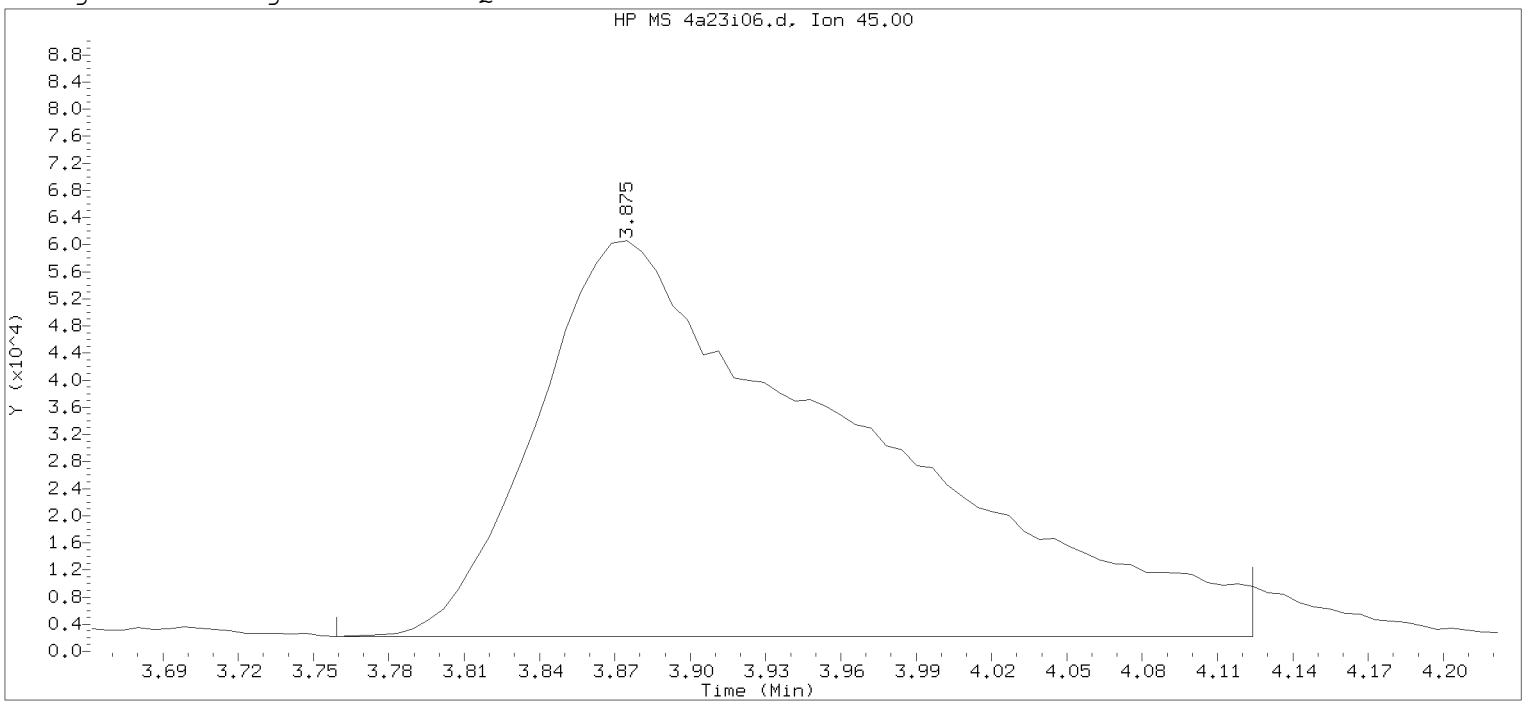
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

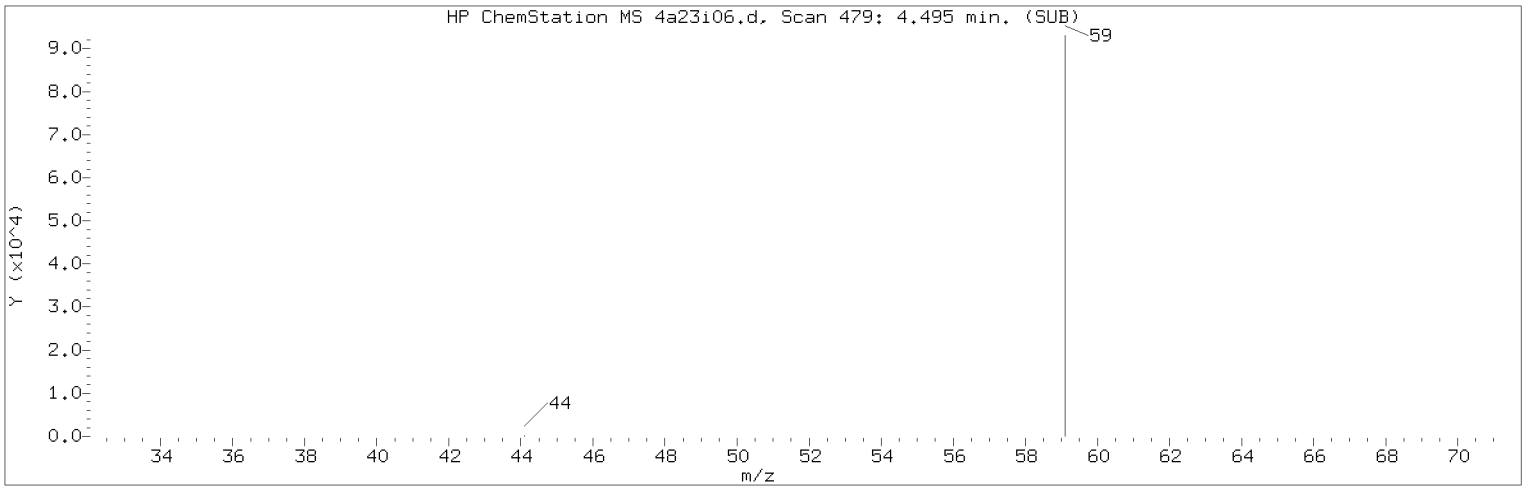
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:09
Date, time and analyst ID of latest file update: 23-Apr-2019 17:09 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

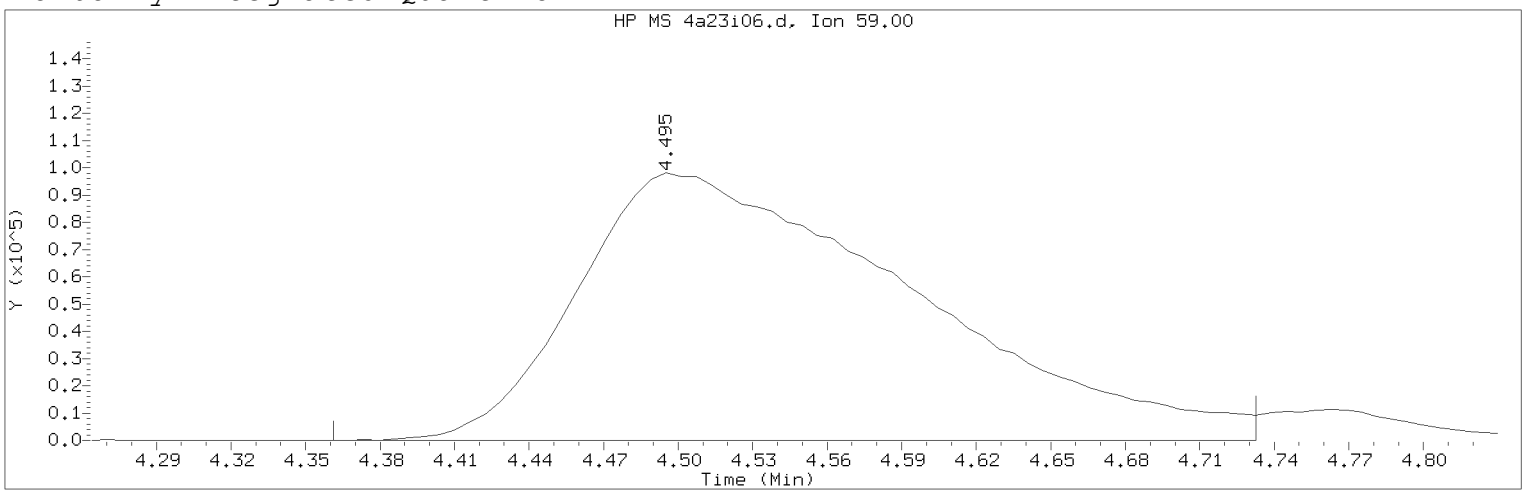
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 377
Retention Time (minutes): 3.875
Quant Ion : 45.00
Area : 522306
On-column Amount (ng) : 501.7389
Integration start scan : 357 Integration stop scan: 417
Y at integration start : 2175 Y at integration end: 2175

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

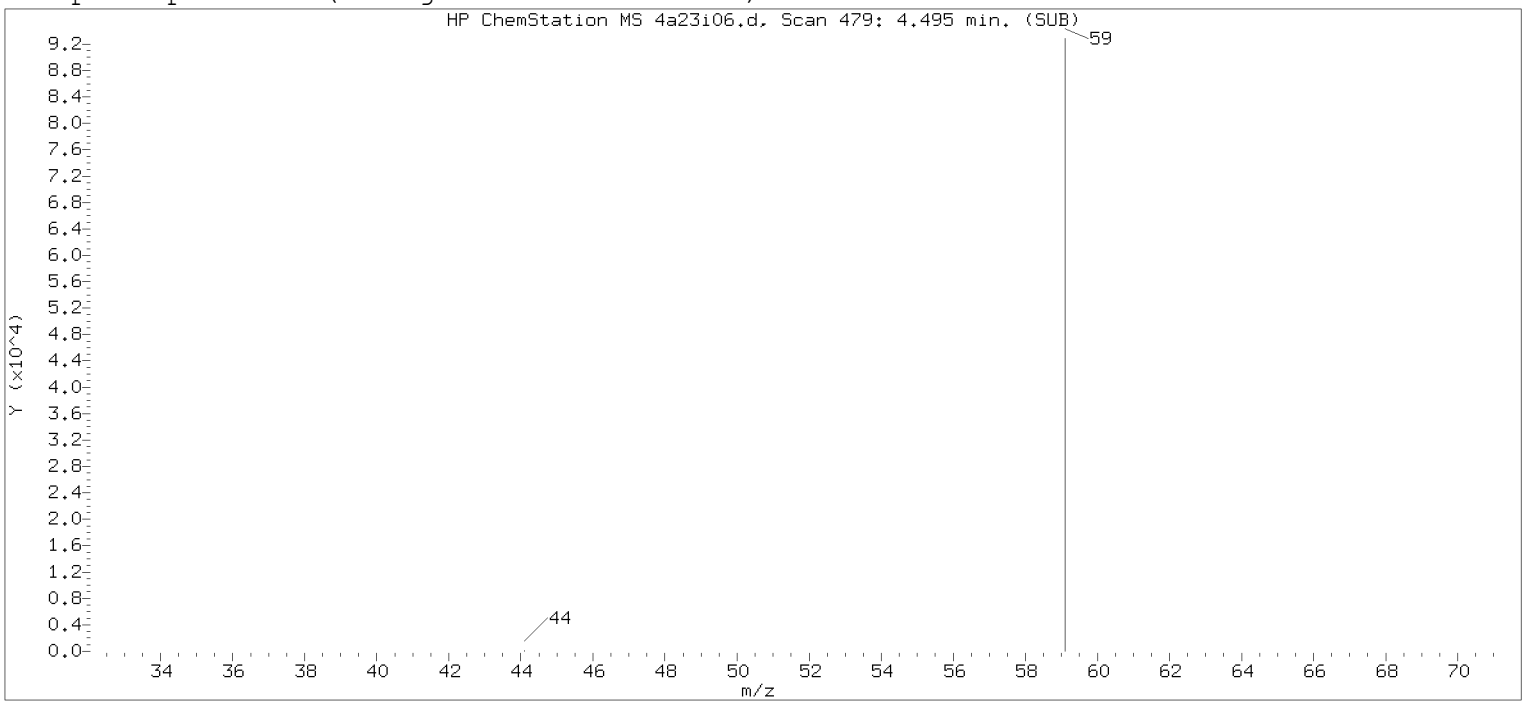
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 479
Retention Time (minutes): 4.495
Quant Ion : 59.00
Area (flag) : 923610M
On-Column Amount (ng) : 483.8616
Integration start scan : 456 Integration stop scan: 517
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

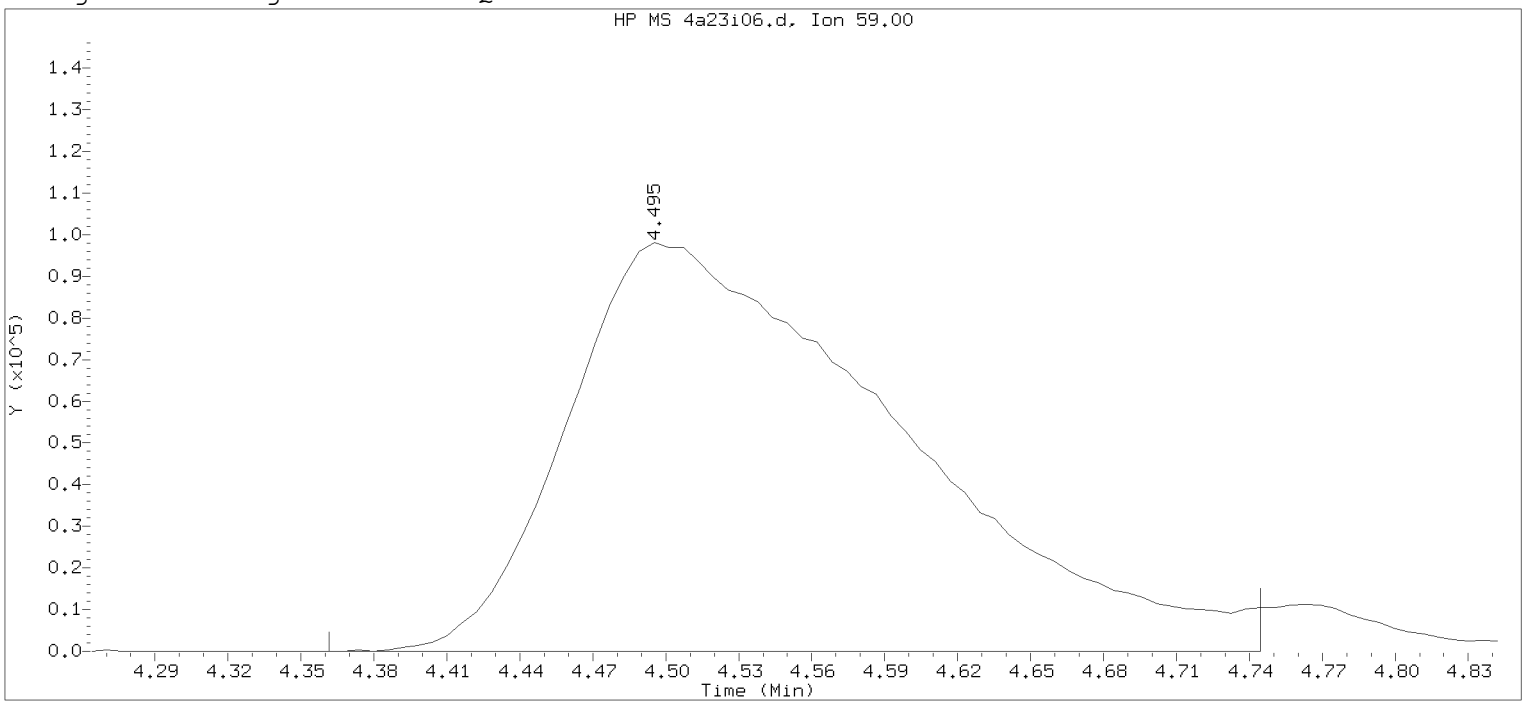
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

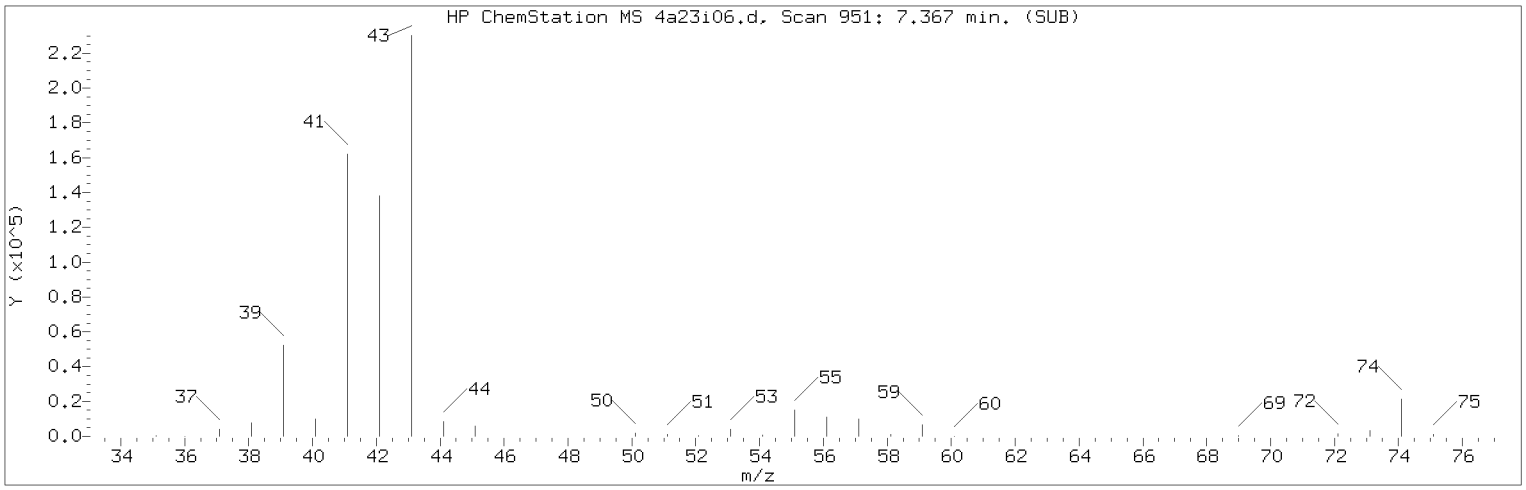
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:09
Date, time and analyst ID of latest file update: 23-Apr-2019 17:09 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

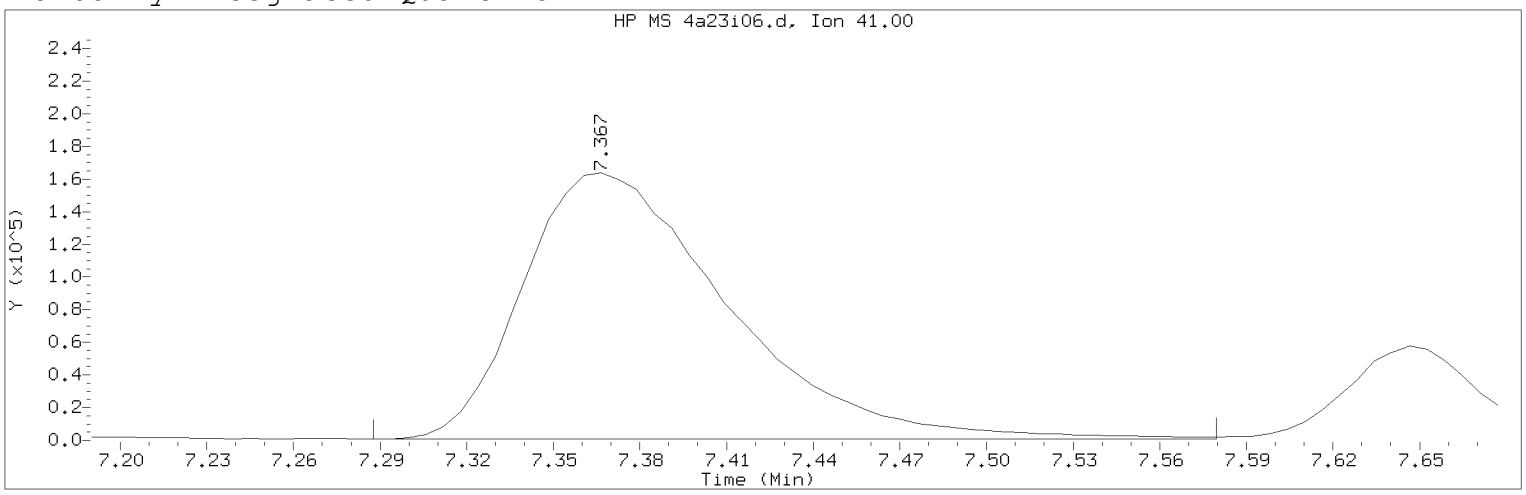
Compound Number	: 30		
Compound Name	: t-Butyl alcohol		
Scan Number	: 479		
Retention Time (minutes)	: 4.495		
Quant Ion	: 59.00		
Area	: 929191		
On-column Amount (ng)	: 500.0638		
Integration start scan	: 456	Integration stop scan:	519
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

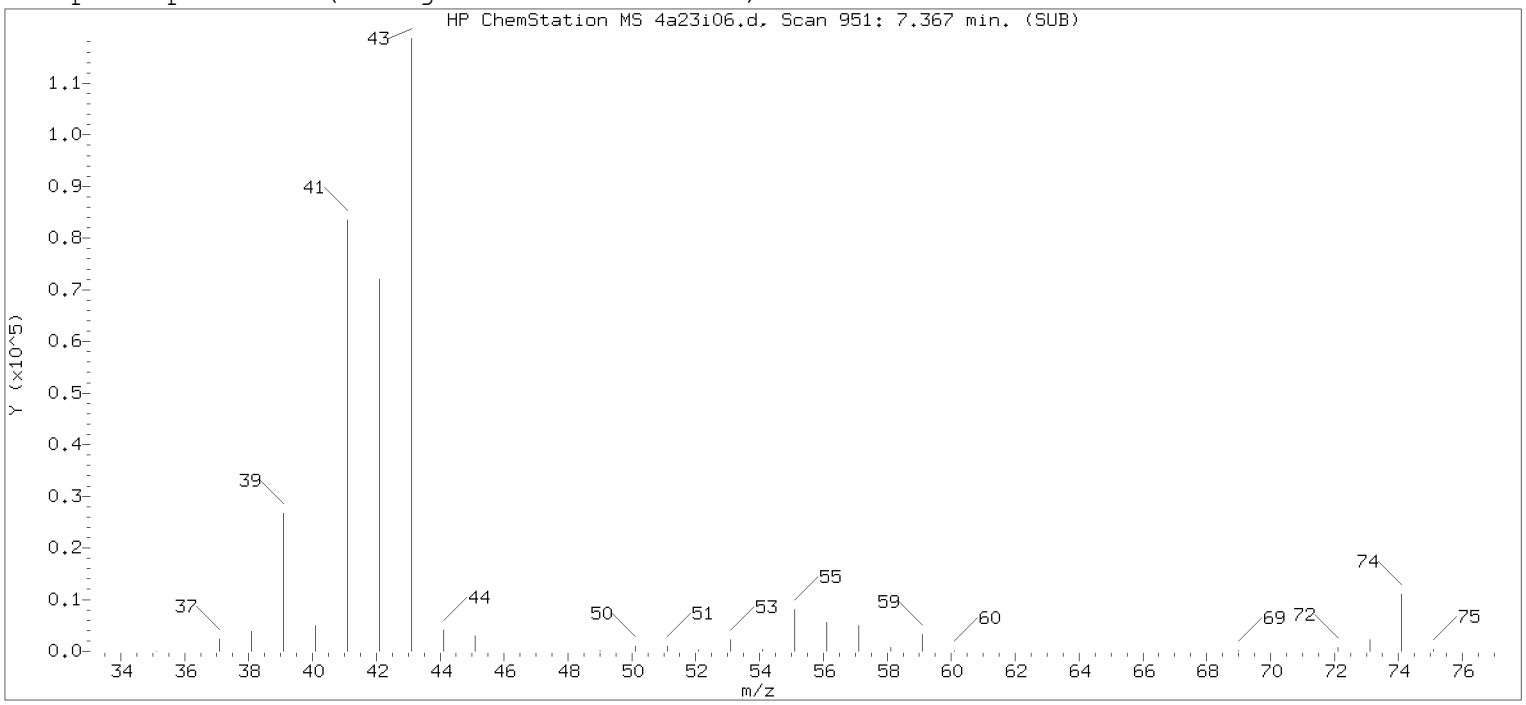
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 951
Retention Time (minutes): 7.367
Quant Ion : 41.00
Area (flag) : 805417M
On-Column Amount (ng) : 1215.6661
Integration start scan : 937 Integration stop scan: 985
Y at integration start : 610 Y at integration end: 610

Reason for manual integration: improper integration

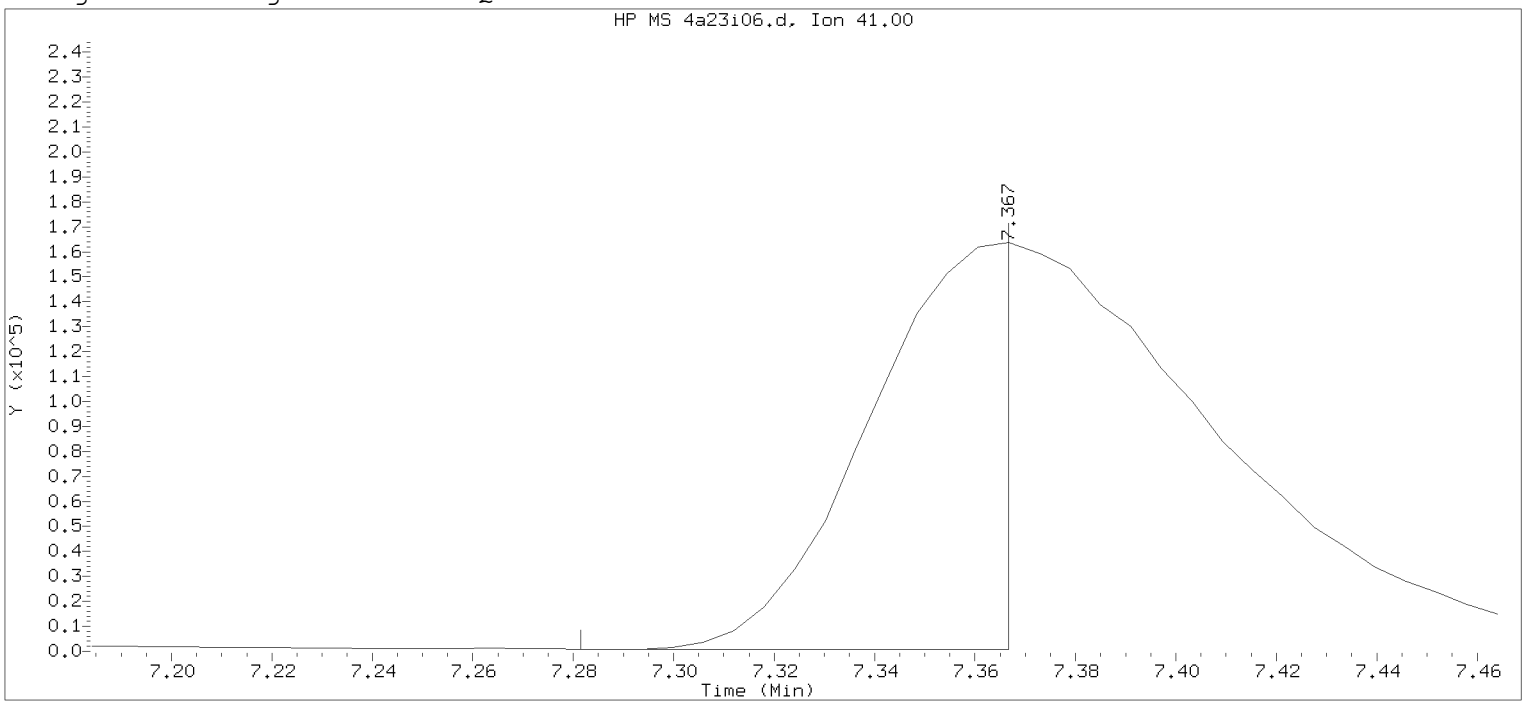
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

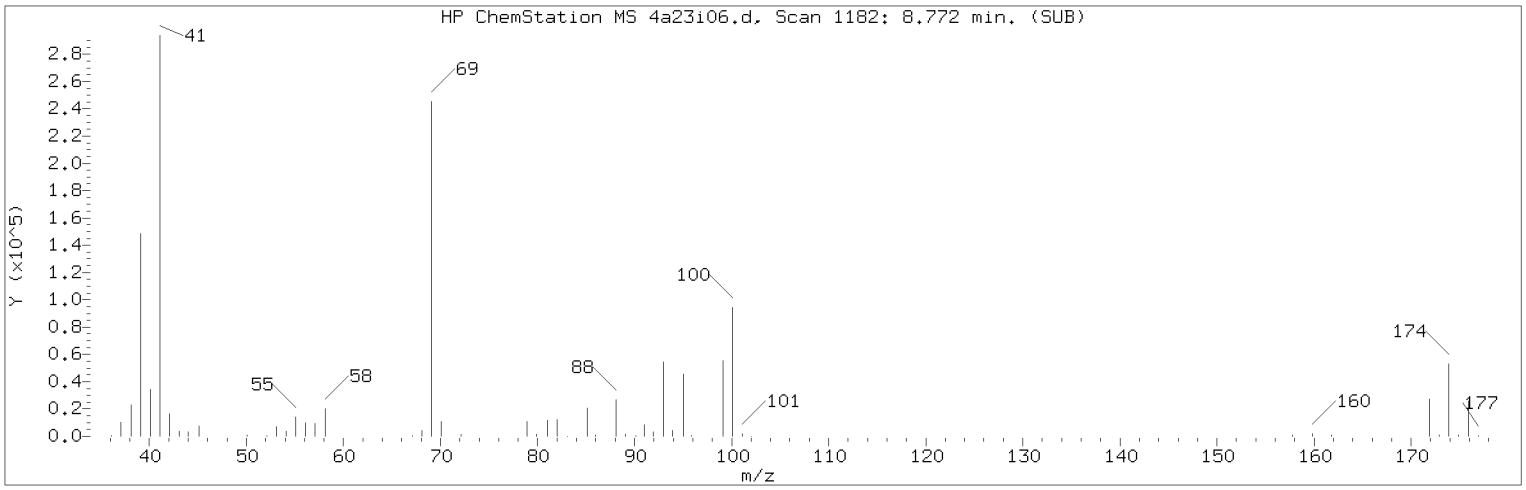
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:09
Date, time and analyst ID of latest file update: 23-Apr-2019 17:09 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

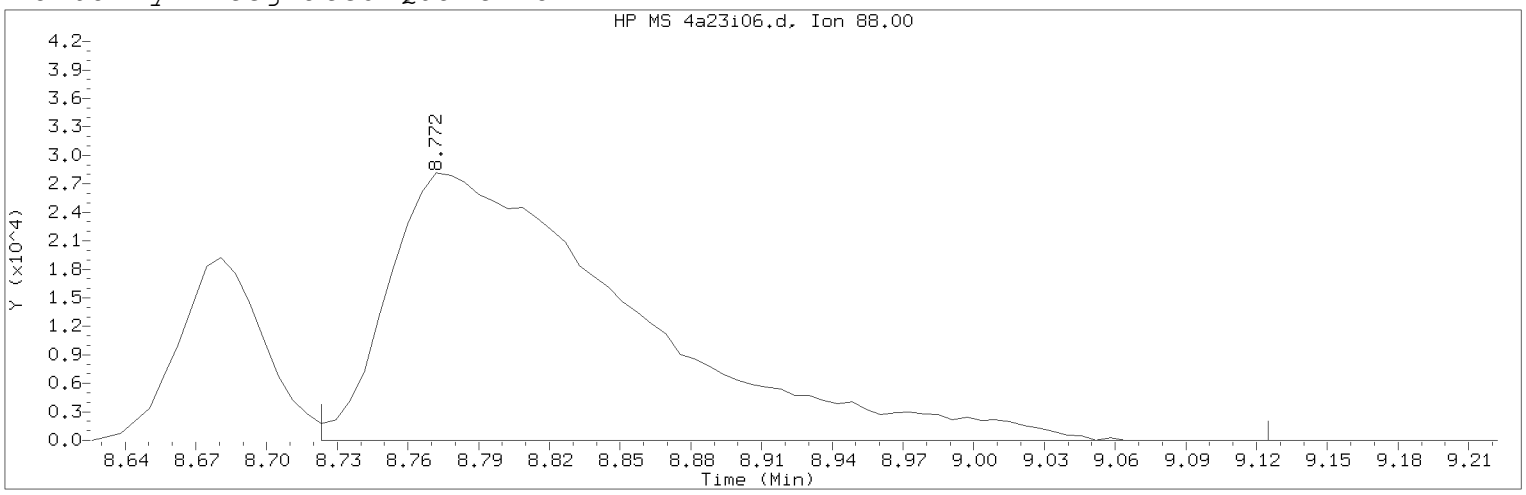
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 951
Retention Time (minutes): 7.367
Quant Ion : 41.00
Area : 301668
On-column Amount (ng) : 506.6950
Integration start scan : 936 Integration stop scan: 950
Y at integration start : 879 Y at integration end: 879

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

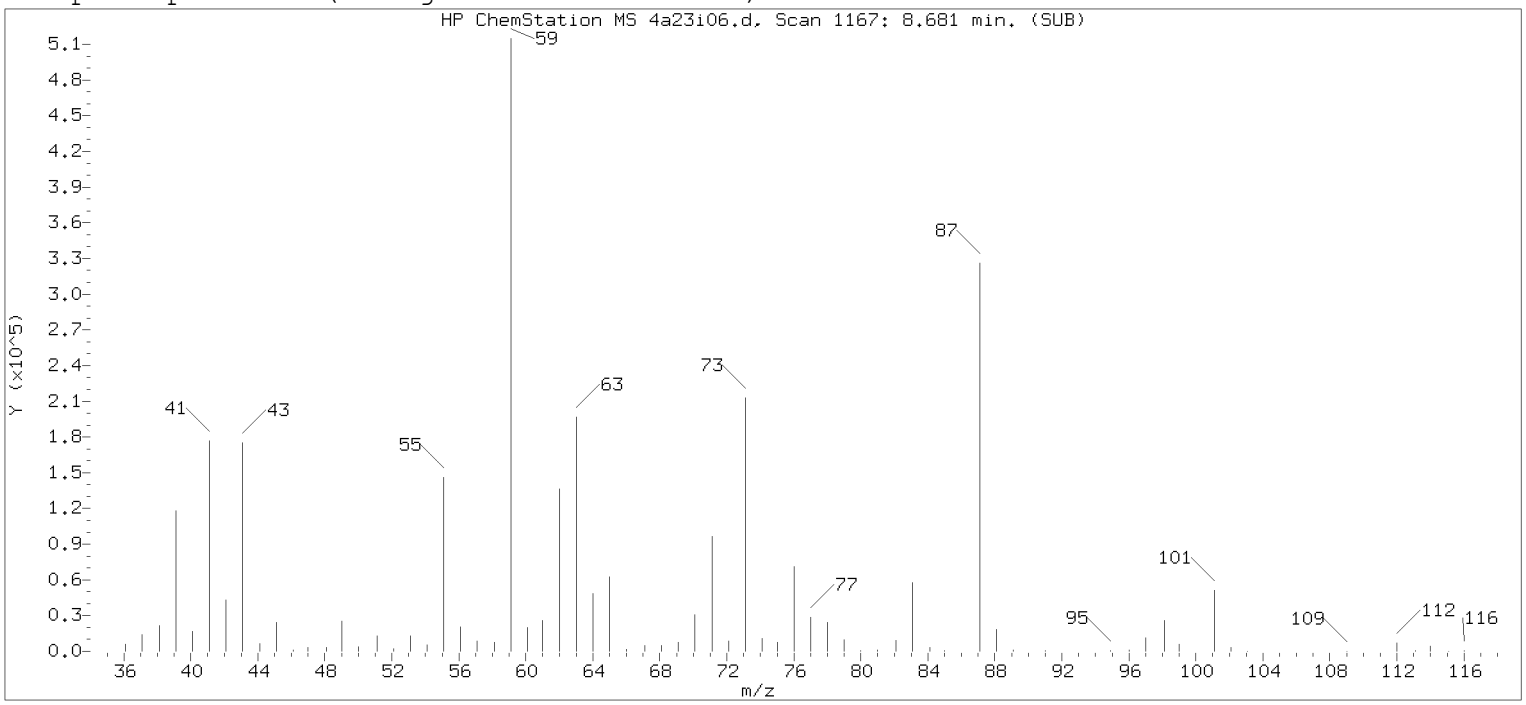
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1182
Retention Time (minutes): 8.772
Quant Ion : 88.00
Area (flag) : 203900M
On-Column Amount (ng) : 1451.5828
Integration start scan : 1173 Integration stop scan: 1239
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

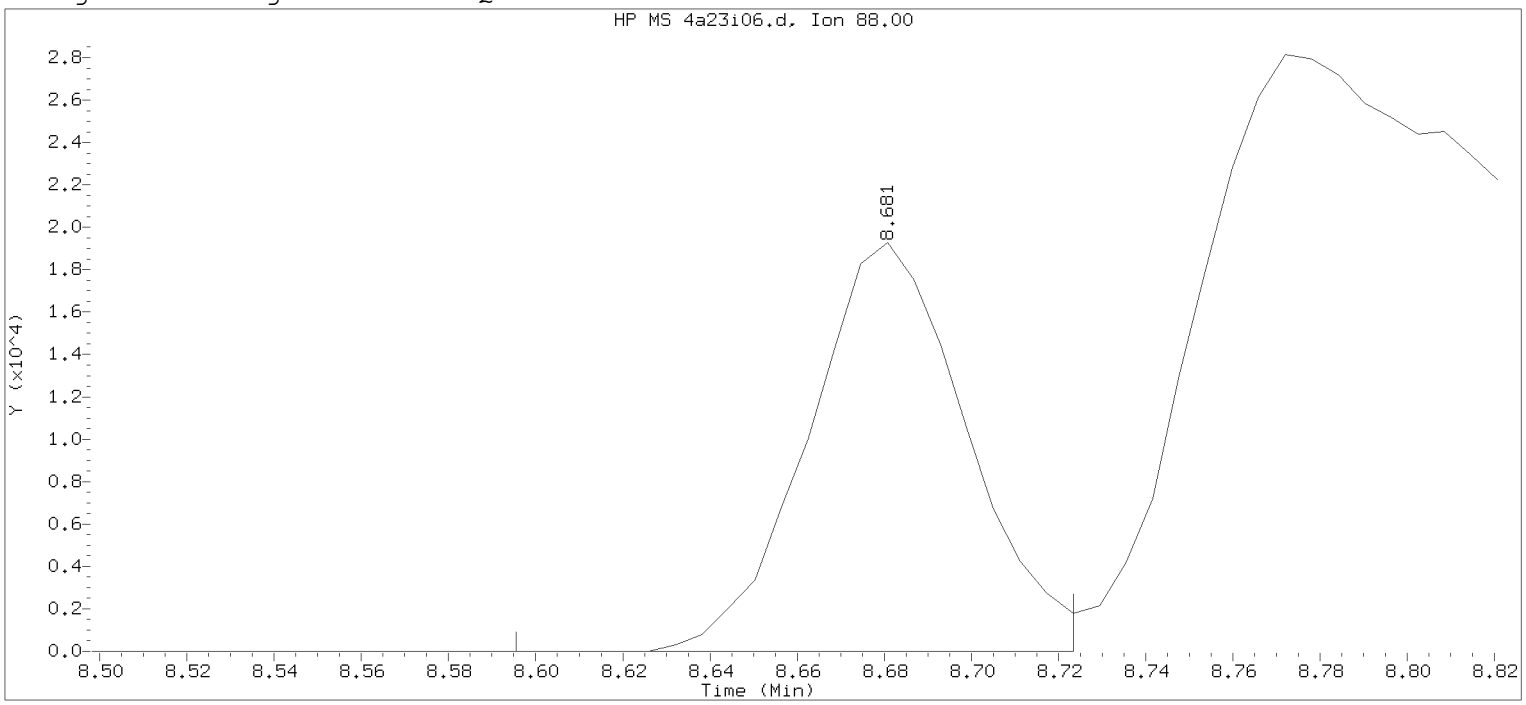
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

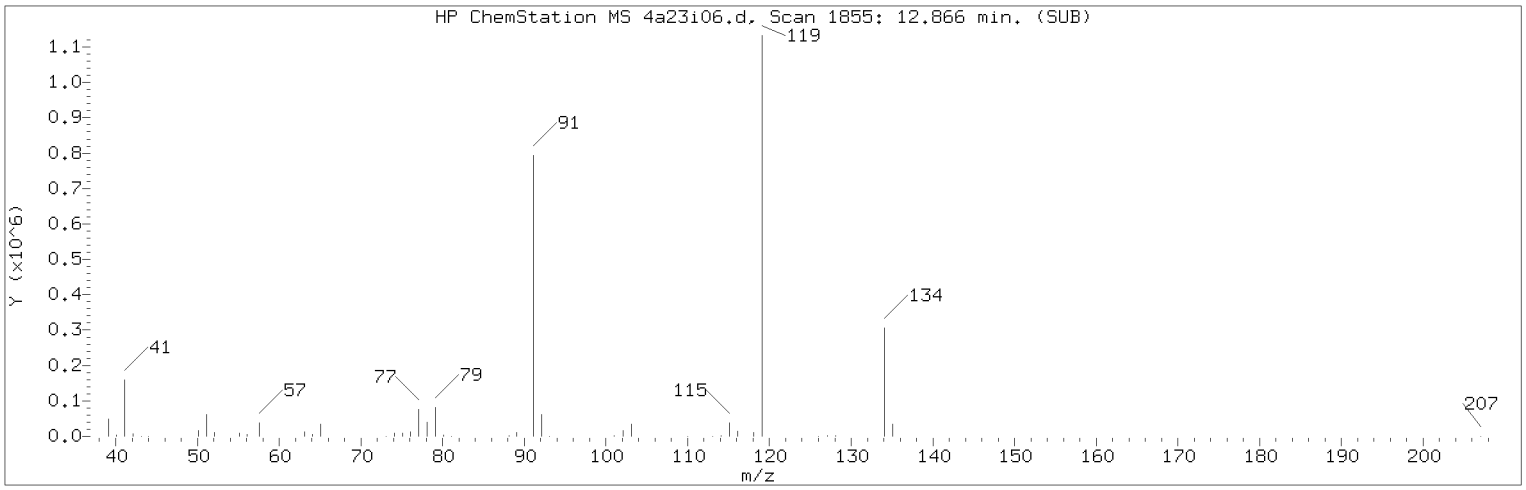
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:09
Date, time and analyst ID of latest file update: 23-Apr-2019 17:09 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

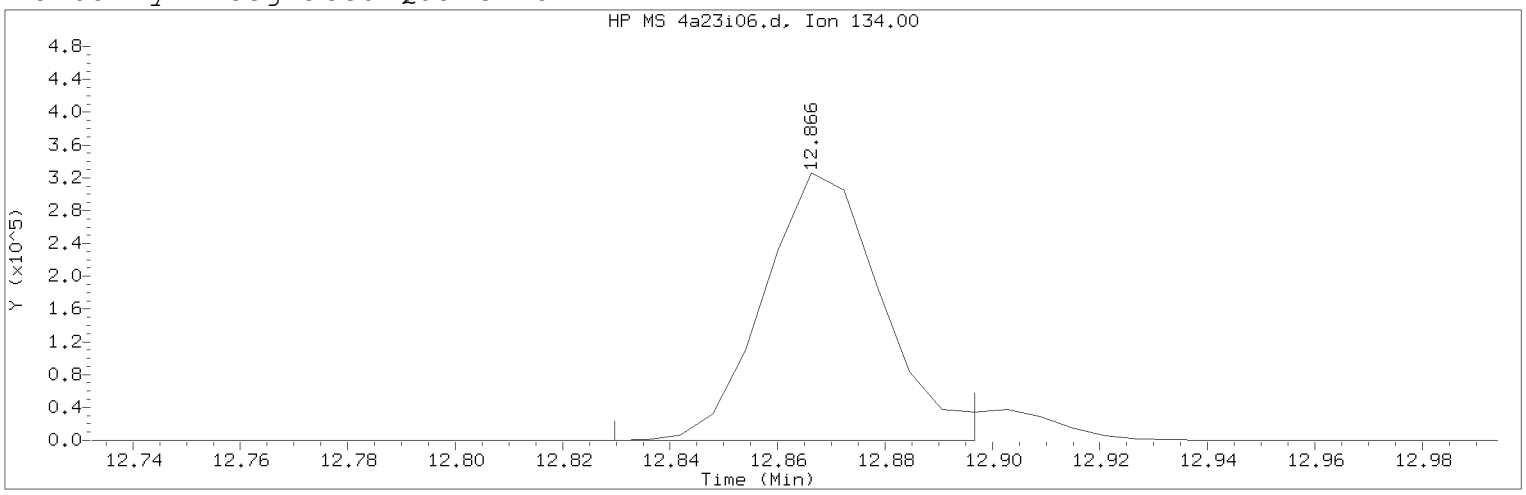
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1167		
Retention Time (minutes)	: 8.681		
Quant Ion	: 88.00		
Area	: 48238		
On-column Amount (ng)	: 360.4096		
Integration start scan	: 1152	Integration stop scan:	1173
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong542

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

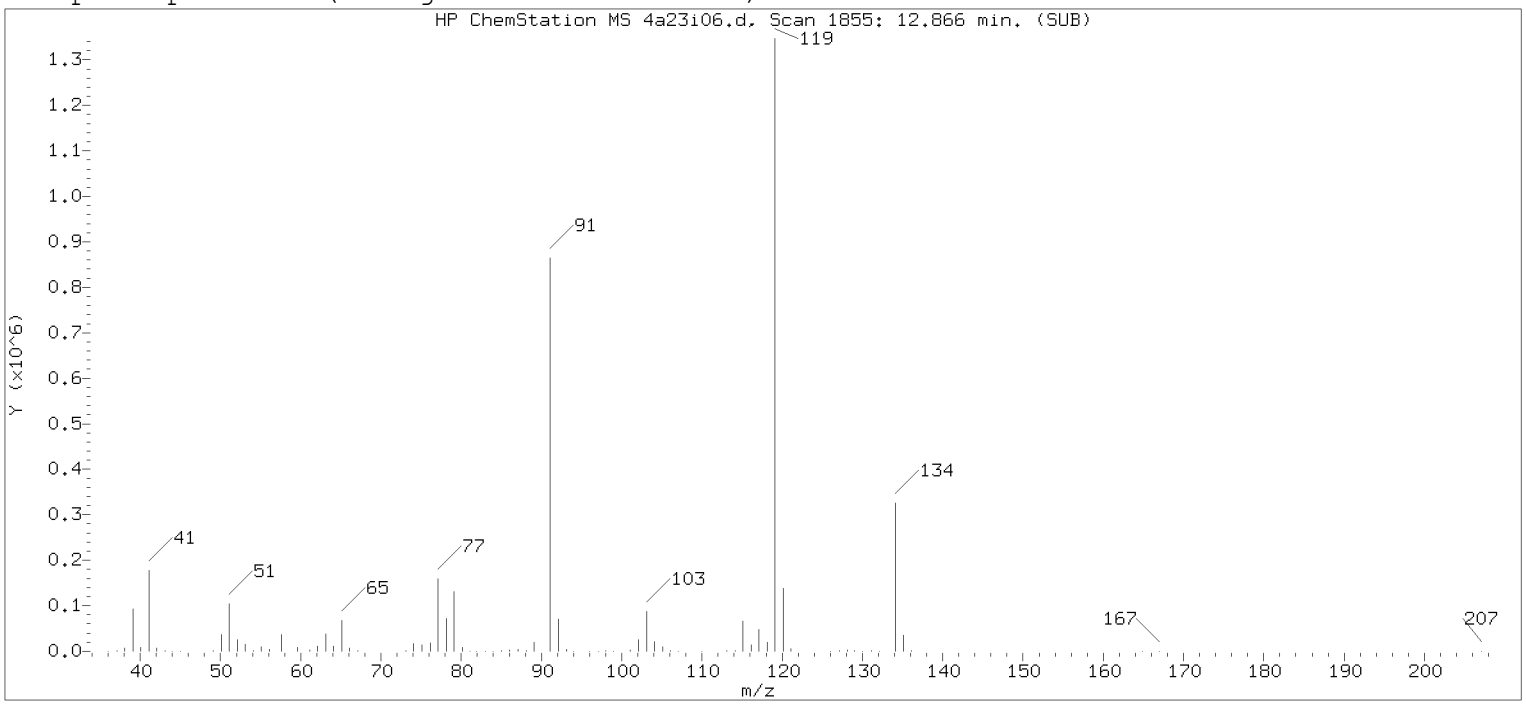
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area (flag) : 494874M
On-Column Amount (ng) : 102.6701
Integration start scan : 1848 Integration stop scan: 1859
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

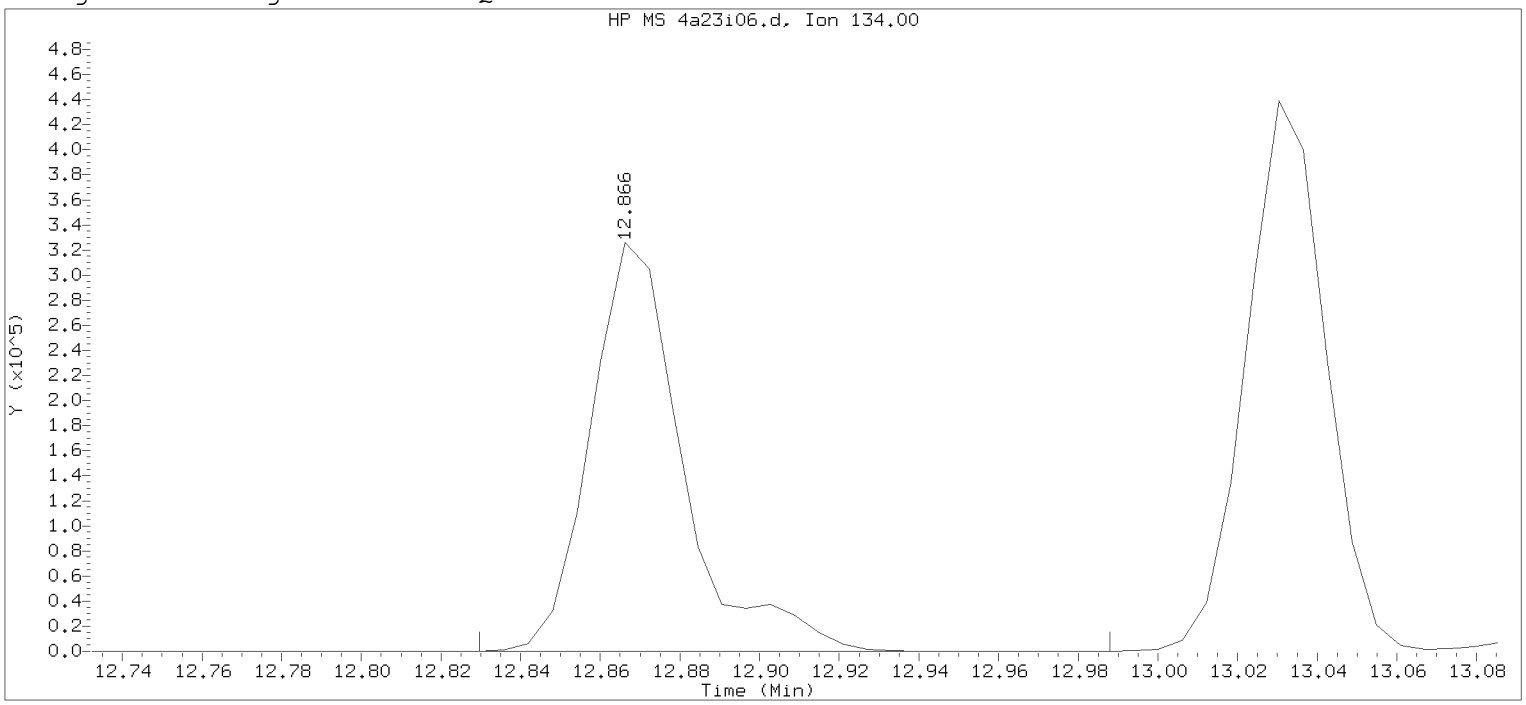
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

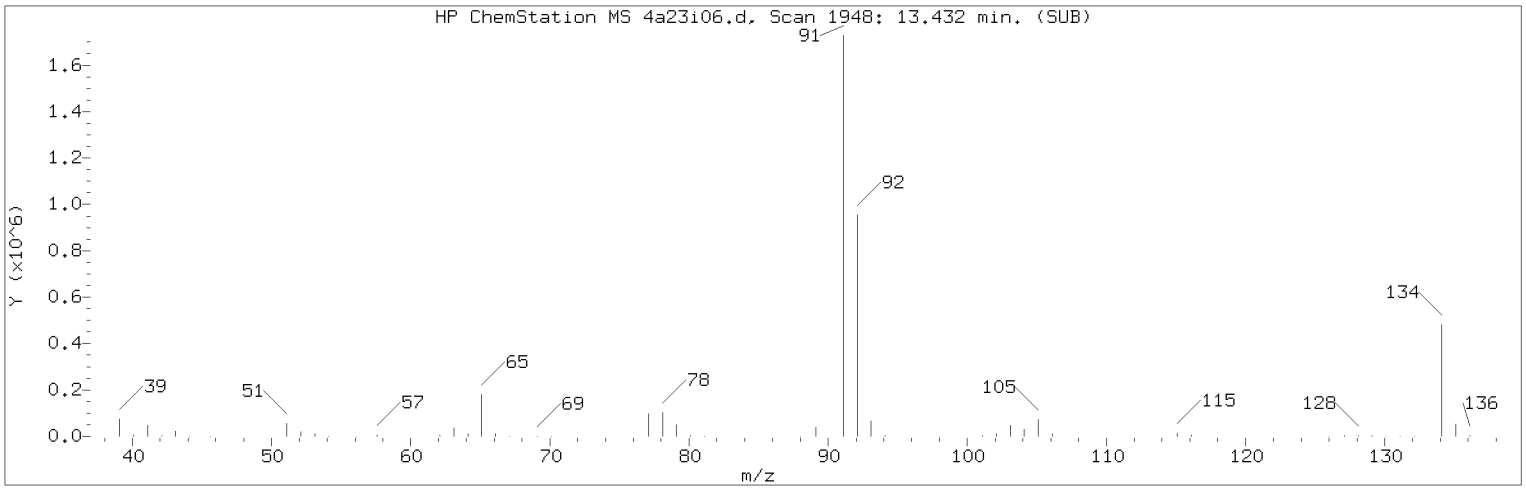
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:09
Date, time and analyst ID of latest file update: 23-Apr-2019 17:09 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

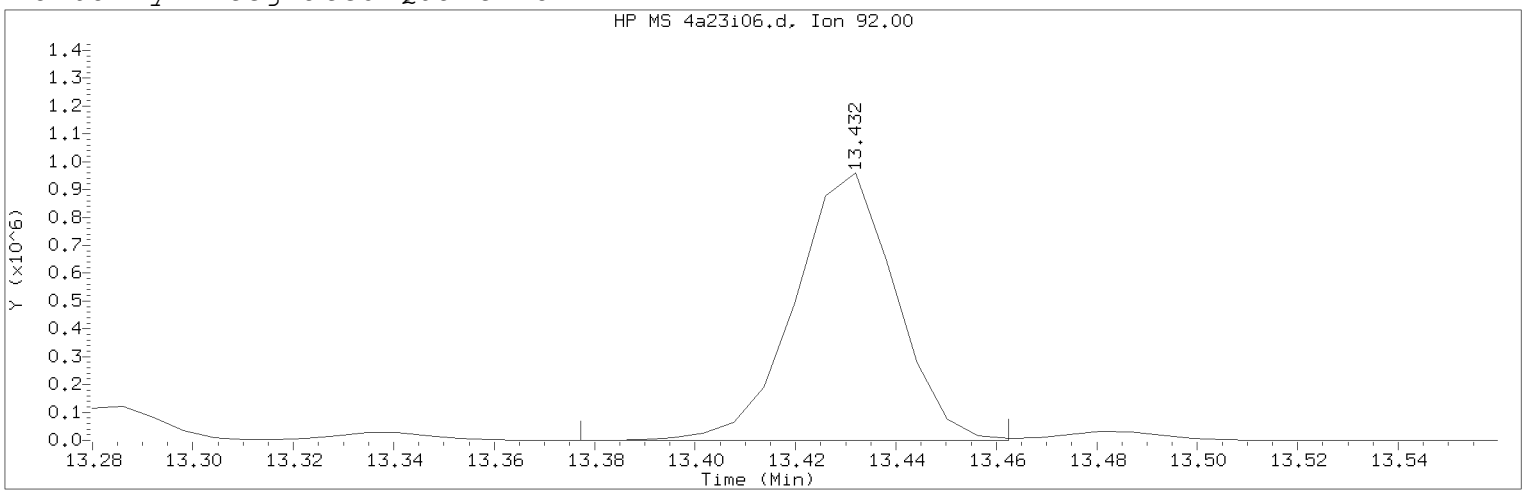
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area : 527130
On-column Amount (ng) : 100.6594
Integration start scan : 1848 Integration stop scan: 1874
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user: jmlong1544

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

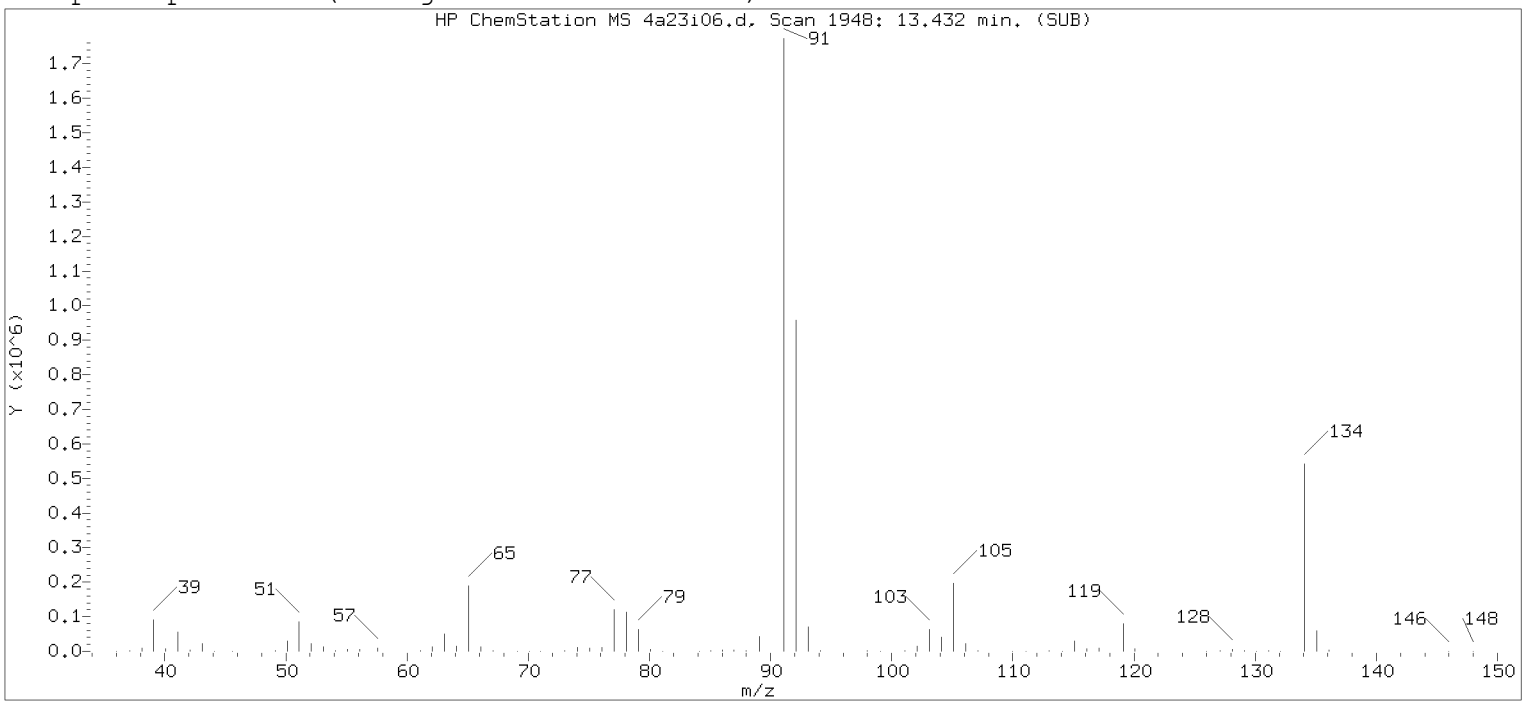
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1948
Retention Time (minutes): 13.432
Quant Ion : 92.00
Area (flag) : 1330962M
On-Column Amount (ng) : 99.6701
Integration start scan : 1938 Integration stop scan: 1952
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

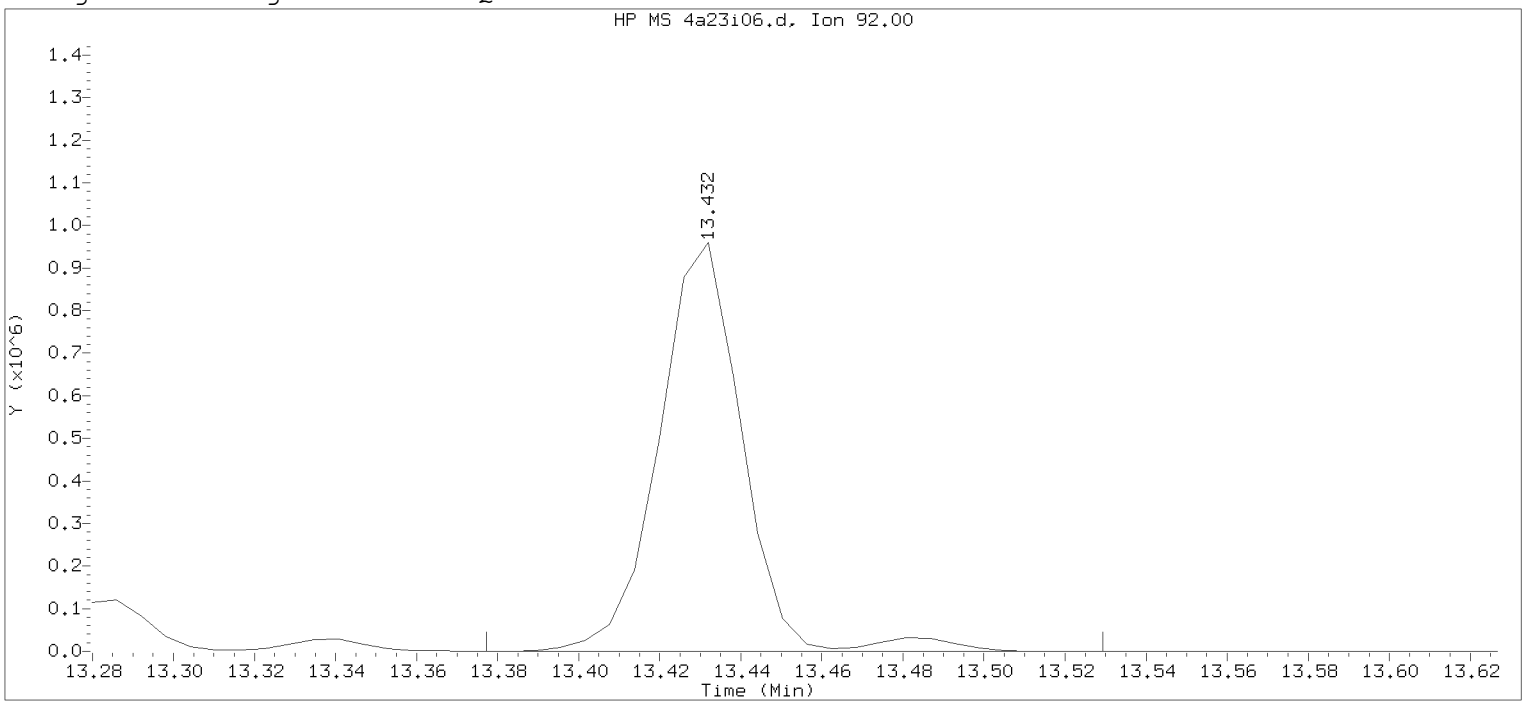
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



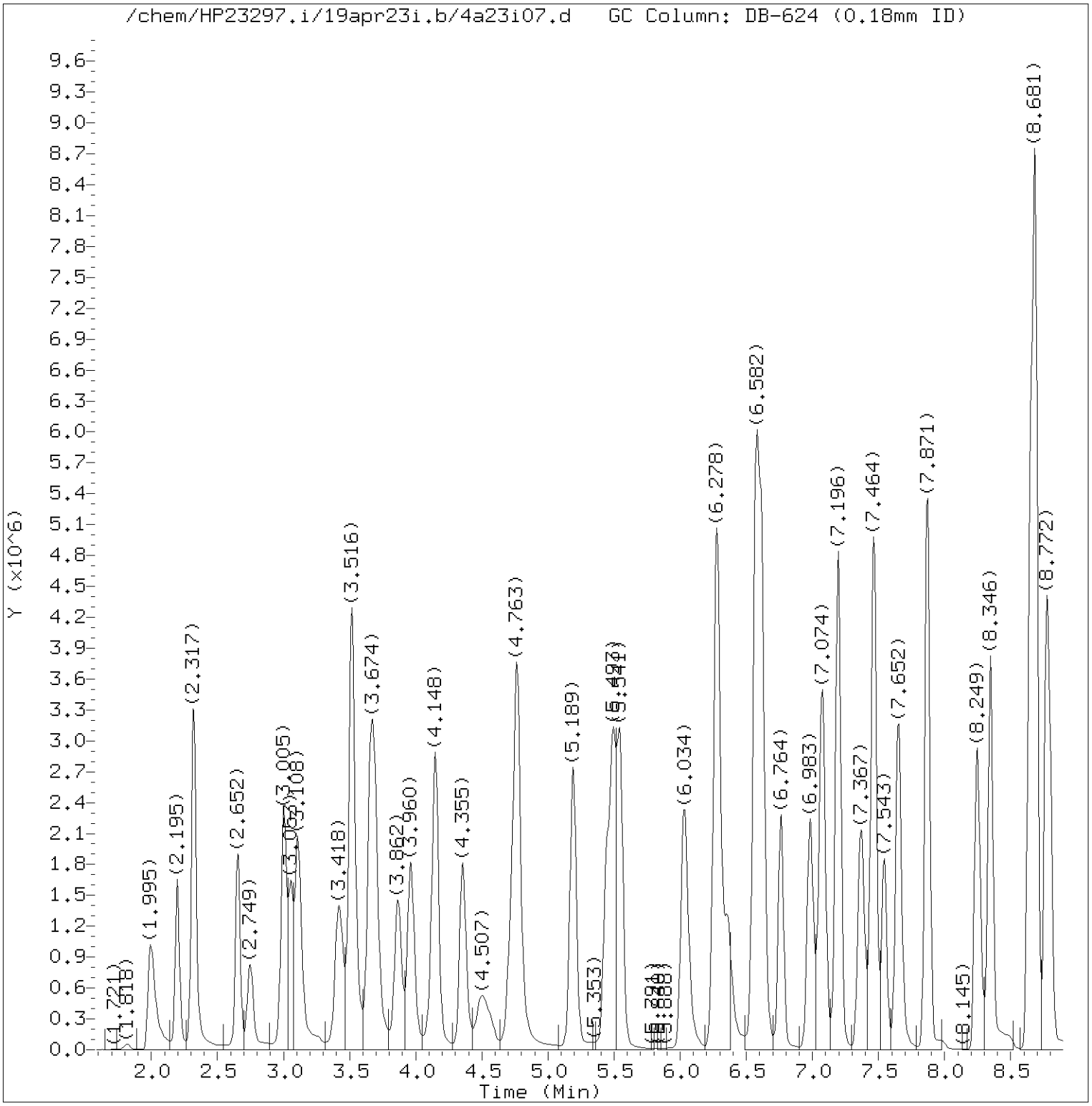
Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:09
Date, time and analyst ID of latest file update: 23-Apr-2019 17:09 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1948
Retention Time (minutes): 13.432
Quant Ion : 92.00
Area : 1375447
On-column Amount (ng) : 100.6377
Integration start scan : 1938 Integration stop scan: 1963
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong



Total Ion Chromatogram (TIC)

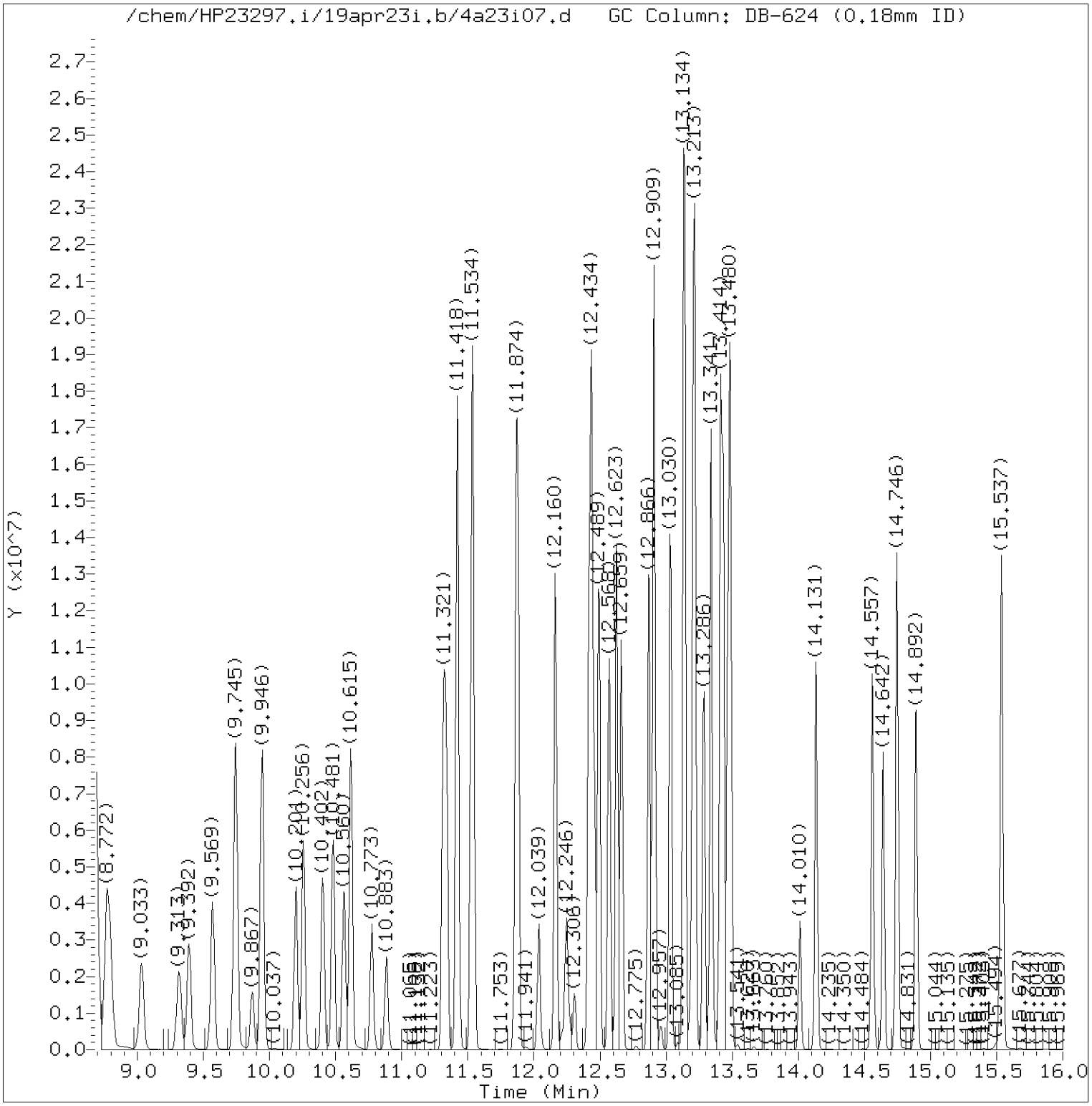
Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.995	85	2566751	276.912
4) Chloromethane	(2)	2.195	50	2319571	258.375
6) Vinyl Chloride	(2)	2.317	62	2323599	264.732
5) 1,3-Butadiene	(2)	2.323	39	1269509	260.774
8) Bromomethane	(2)	2.652	94	1863444	258.729
9) Chloroethane	(2)	2.749	64	1234439	254.686
10) Dichlorofluoromethane	(2)	2.998	67	2788717M	245.104
12) Trichlorofluoromethane	(2)	3.053	101	2985003	280.453
11) n-Pentane	(2)	3.108	43	2501599	290.908
13) Ethanol	(1)	3.193	45	816483M	6256.731
15) Freon 123a	(2)	3.418	67	1711914	279.563
16) Acrolein	(1)	3.516	56	7101938	3231.103
17) 1,1-Dichloroethene	(2)	3.656	96	1267493	298.981
17) 1,1-Dichloroethene	(2)	3.656	63	635170	283.755
19) Freon 113	(2)	3.680	101	1397534	299.575
18) Acetone	(1)	3.698	58	692885	641.945
22) Methyl Iodide	(2)	3.862	142	2477941	293.331
21) 2-Propanol	(1)	3.875	45	1165477	1343.794
23) Carbon Disulfide	(2)	3.960	76	4454036	294.616
27) Methyl Acetate	(2)	4.130	43	2411560	273.110
25) Allyl Chloride	(2)	4.154	41	2589610	275.471
28) Methylene Chloride	(2)	4.355	84	1517521	282.594
29)*t-Butyl alcohol-d10	(1)	4.373	65	387659	250.000
30) t-Butyl alcohol	(1)	4.507	59	2100774	1377.112
31) Acrylonitrile	(2)	4.714	53	1293819	279.685
33) Methyl Tertiary Butyl Ether	(2)	4.757	73	4016216	265.202
32) trans-1,2-Dichloroethene	(2)	4.769	96	1502367	296.596
34) n-Hexane	(2)	5.189	57	2435688	291.134
36) 1,1-Dichloroethane	(2)	5.438	63	2680570	284.734
38) di-Isopropyl ether	(2)	5.493	45	5046265	270.459
39) 2-Chloro-1,3-butadiene	(2)	5.548	53	2481639	291.170
40) Ethyl t-butyl ether	(2)	6.028	59	4122955	257.247
43) 1,2-Dichloroethene (Total)	(2)		96	3232725	592.840
44) 2-Butanone	(2)	6.265	43	3809472	530.611
42) cis-1,2-Dichloroethene	(2)	6.278	96	1730358	296.244
45) 2,2-Dichloropropane	(2)	6.290	77	2129444	288.499
47) Propionitrile	(1)	6.363	54	2620635	1617.313
48) Methacrylonitrile	(2)	6.576	67	3192984	731.742

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.612	128	998963	309.718
50) Tetrahydrofuran	(1)	6.624	71	1062072	664.004
51) Chloroform	(2)	6.764	83	2619405	282.503
52)$Dibromofluoromethane	(2)	6.977	113	299613	50.004
52)$Dibromofluoromethane	(2)	6.977	111	307731	50.157
53) 1,1,1-Trichloroethane	(2)	6.983	97	2251587	290.090
54) Cyclohexane	(2)	7.074	56	2932336	290.496
54) Cyclohexane	(2)	7.074	84	2440601	296.058
54) Cyclohexane	(2)	7.074	69	898662	297.873
56) Carbon Tetrachloride	(2)	7.190	117	2025785	300.392
55) 1,1-Dichloropropene	(2)	7.196	75	2136292	291.315
58) Isobutyl Alcohol	(1)	7.367	41	2024023	3768.133
57)$1,2-Dichloroethane-d4	(2)	7.439	102	73270	50.045
57)$1,2-Dichloroethane-d4	(2)	7.439	65	339637	47.943
57)$1,2-Dichloroethane-d4	(2)	7.433	104	46978	50.249
60) Benzene	(2)	7.464	78	6298659	282.443
61) 1,2-Dichloroethane	(2)	7.543	62	2036278	269.399
61) 1,2-Dichloroethane	(2)	7.543	98	194312	311.397
65) t-Amyl methyl ether	(2)	7.652	73	3987579	246.068
67) n-Heptane	(2)	7.871	43	2841067	288.450
66)*Fluorobenzene	(2)	7.871	96	1215570	50.000
69) n-Butanol	(1)	8.249	56	3546873M	8041.034
71) Trichloroethene	(2)	8.346	95	1667751	294.815
72) Methylcyclohexane	(2)	8.650	83	3289680	308.790
72) Methylcyclohexane	(2)	8.650	98	1449014M	314.230
73) 1,2-Dichloropropane	(2)	8.687	63	1723877	294.241
76) Methyl Methacrylate	(2)	8.772	69	1967185	296.501
75) 1,4-Dioxane	(1)	8.778	88	421920M	3713.813
74) Dibromomethane	(2)	8.796	93	1129011	296.899
78) Bromodichloromethane	(2)	9.033	83	2064777	299.000
79) 2-Nitropropane	(2)	9.313	41	1839910	547.455
80) 2-Chloroethyl Vinyl Ether	(2)	9.392	63	1596318	297.795
81) cis-1,3-Dichloropropene	(2)	9.569	75	2743334	300.481
82) 4-Methyl-2-pentanone	(2)	9.745	43	6916626	536.883
83)$Toluene-d8	(3)	9.867	98	1235354	47.874
83)$Toluene-d8	(3)	9.867	100	808483	48.268
88) Toluene	(3)	9.946	92	4184634	280.359
90) 1,3-Dichloropropene (total)	(3)		100	5389305	601.763

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on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.201	75	2645971	301.282
91) Ethyl Methacrylate	(3)	10.256	69	3156927	286.025
92) 1,1,2-Trichloroethane	(3)	10.402	97	1659703	284.502
93) Tetrachloroethene	(3)	10.481	166	1905016	292.588
94) 1,3-Dichloropropane	(3)	10.566	76	2687921	277.564
96) 2-Hexanone	(3)	10.615	43	5541717	521.702
97) Dibromochloromethane	(3)	10.773	129	1895951	307.147
99) 1,2-Dibromoethane	(3)	10.883	107	1849755	287.207
100)*Chlorobenzene-d5	(3)	11.309	117	1005411	50.000
102) Chlorobenzene	(3)	11.339	112	4784702	283.635
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	1773989	311.504
104) Ethylbenzene	(3)	11.418	91	8086322	282.057
106) m+p-Xylene	(3)	11.534	106	6654635	582.149
108) Xylene (Total)	(3)		106	9985313	875.280
107) o-Xylene	(3)	11.862	106	3330678	293.131
109) Styrene	(3)	11.880	104	5650480	298.874
110) Bromoform	(3)	12.039	173	1602304	329.418
111) Isopropylbenzene	(3)	12.160	105	7973543	280.508
112) Cyclohexanone	(1)	12.246	55	1723856	3798.100
114)$4-Bromofluorobenzene	(3)	12.306	95	472315	48.021
114)$4-Bromofluorobenzene	(3)	12.306	174	420328	48.403
116) 1,1,2,2-Tetrachloroethane	(4)	12.410	83	2993329	288.086
115) Bromobenzene	(4)	12.428	156	2477694	314.041
118) trans-1,4-Dichloro-2-butene	(4)	12.434	53	2377219	695.993
117) 1,2,3-Trichloropropane	(4)	12.458	110	905185	288.111
119) n-Propylbenzene	(4)	12.489	91	9178231	270.491
120) 2-Chlorotoluene	(4)	12.568	126	2068029	291.830
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	6983082	284.370
121) 4-Chlorotoluene	(4)	12.659	126	2169232	293.679
124) tert-Butylbenzene	(4)	12.872	134	1586274M	307.707
125) Pentachloroethane	(4)	12.903	167	1613349	343.237
126) 1,2,4-Trimethylbenzene	(4)	12.909	105	7451967	290.651
127) sec-Butylbenzene	(4)	13.030	105	8810484	280.852
129) 1,3-Dichlorobenzene	(4)	13.134	146	4473645	302.518
130) p-Isopropyltoluene	(4)	13.140	119	8120326	294.253
131)*1,4-Dichlorobenzene-d4	(4)	13.188	152	563820	50.000
133) 1,4-Dichlorobenzene	(4)	13.207	146	4556873	300.781
134) 1,2,3-Trimethylbenzene	(4)	13.213	105	8020954	291.350

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Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

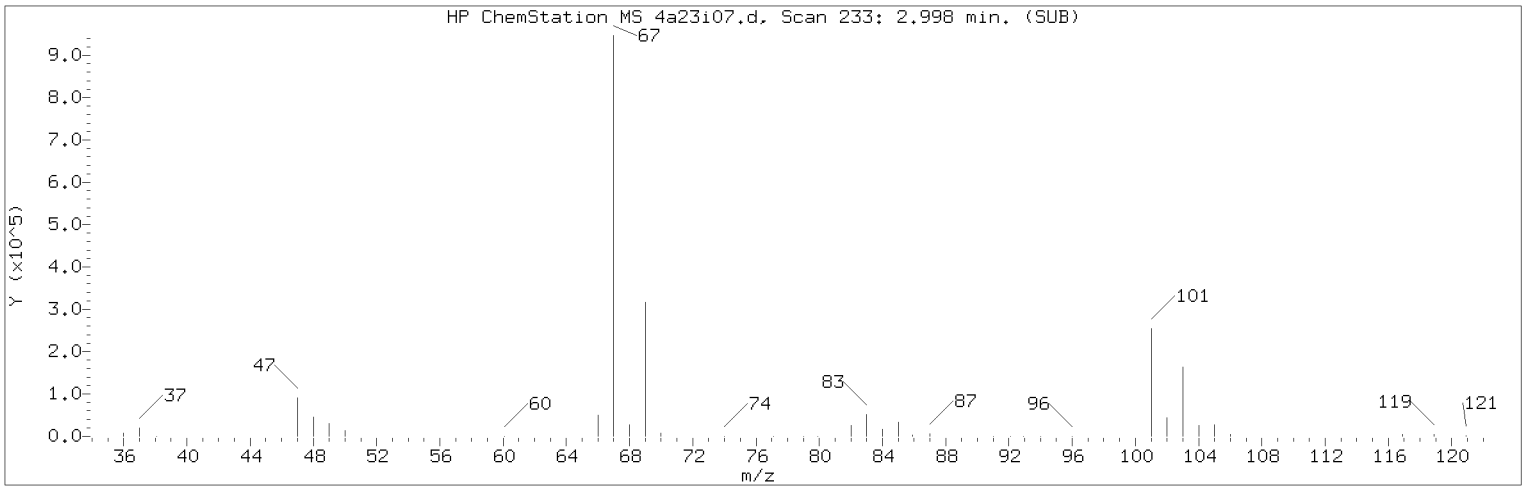
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

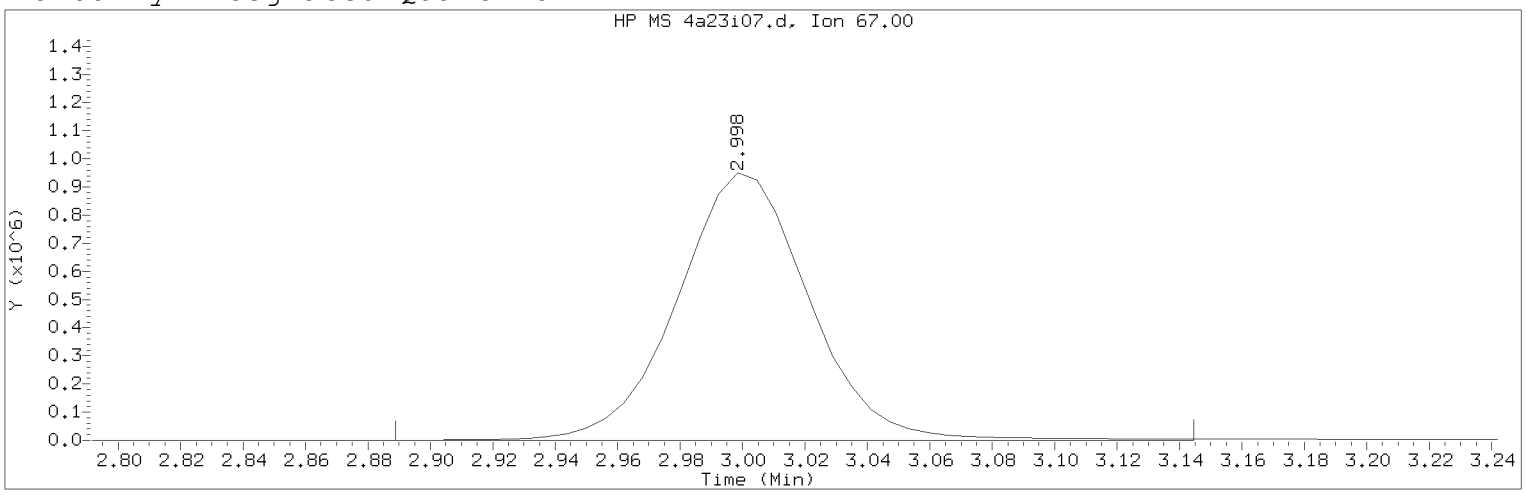
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.286	91	6428200	311.949
136) 1,3-Diethylbenzene	(4)	13.341	119	5177019	300.131
141) Diethylbenzene (total)	(4)		100	15173173	907.893
137) 1,4-Diethylbenzene	(4)	13.414	119	5556483	302.459
139) n-Butylbenzene	(4)	13.432	92	4089667	289.292
138) 1,2-Dichlorobenzene	(4)	13.468	146	4280571	297.059
140) 1,2-Diethylbenzene	(4)	13.487	119	4439671	305.303
142) 1,2-Dibromo-3-chloropropane	(4)	14.010	75	771193	281.357
144) 1,3,5-Trichlorobenzene	(4)	14.131	180	3220573	296.439
146) 1,2,4-Trichlorobenzene	(4)	14.557	180	3012360	292.646
147) Hexachlorobutadiene	(4)	14.642	225	1401908	294.708
148) Naphthalene	(4)	14.746	128	9738806	273.076
149) 1,2,3-Trichlorobenzene	(4)	14.892	180	2910144	294.285
150) 2-Methylnaphthalene	(4)	15.537	142	6769578	303.500

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

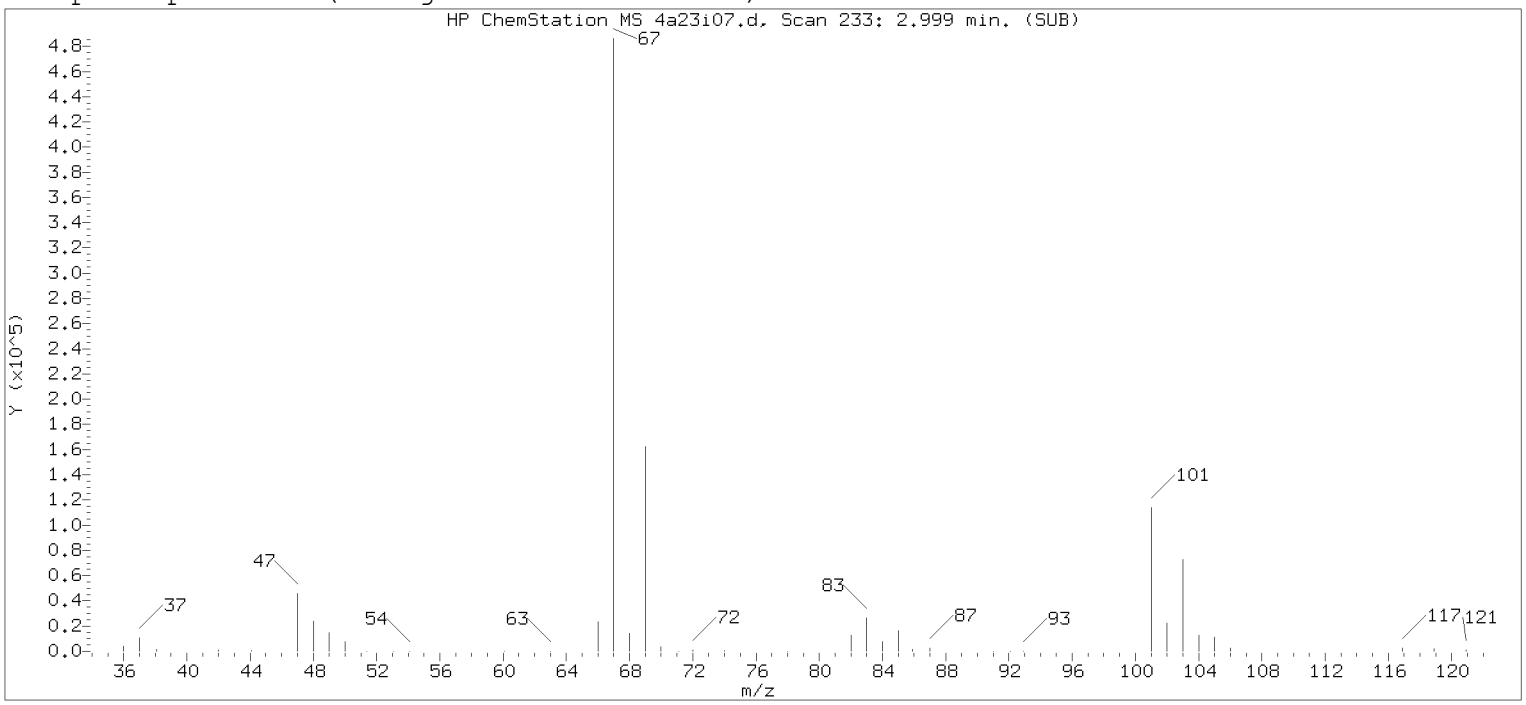
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 233
Retention Time (minutes): 2.998
Quant Ion : 67.00
Area (flag) : 2788717M
On-Column Amount (ng) : 245.1042
Integration start scan : 214 Integration stop scan: 256
Y at integration start : 190 Y at integration end: 190

Reason for manual integration: improper integration

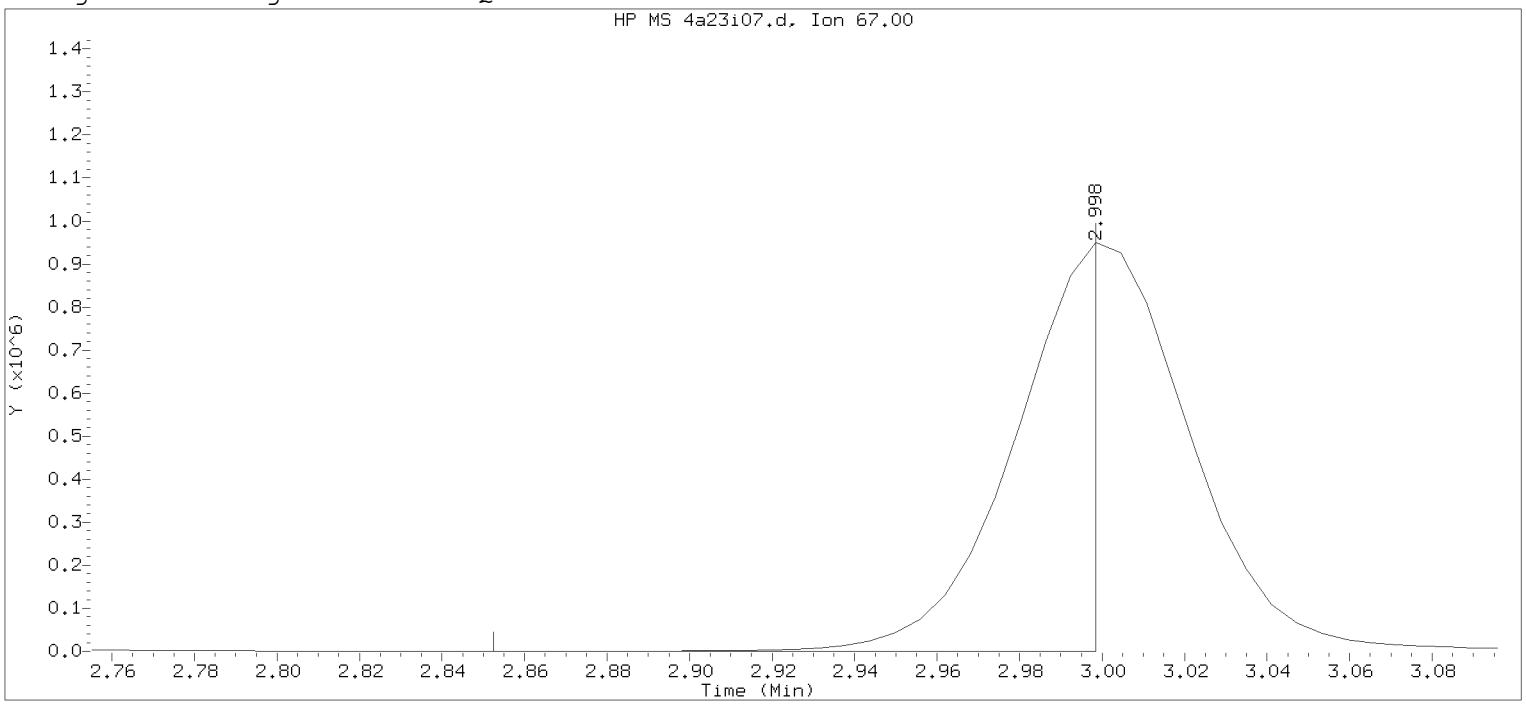
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

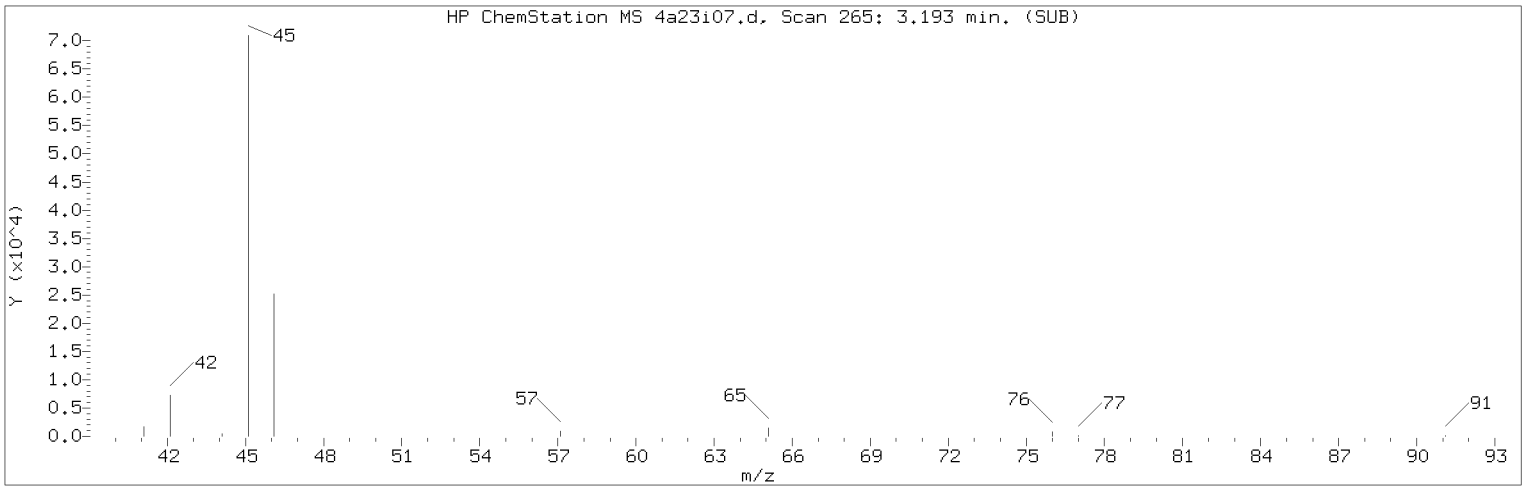
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:32
Date, time and analyst ID of latest file update: 23-Apr-2019 17:32 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

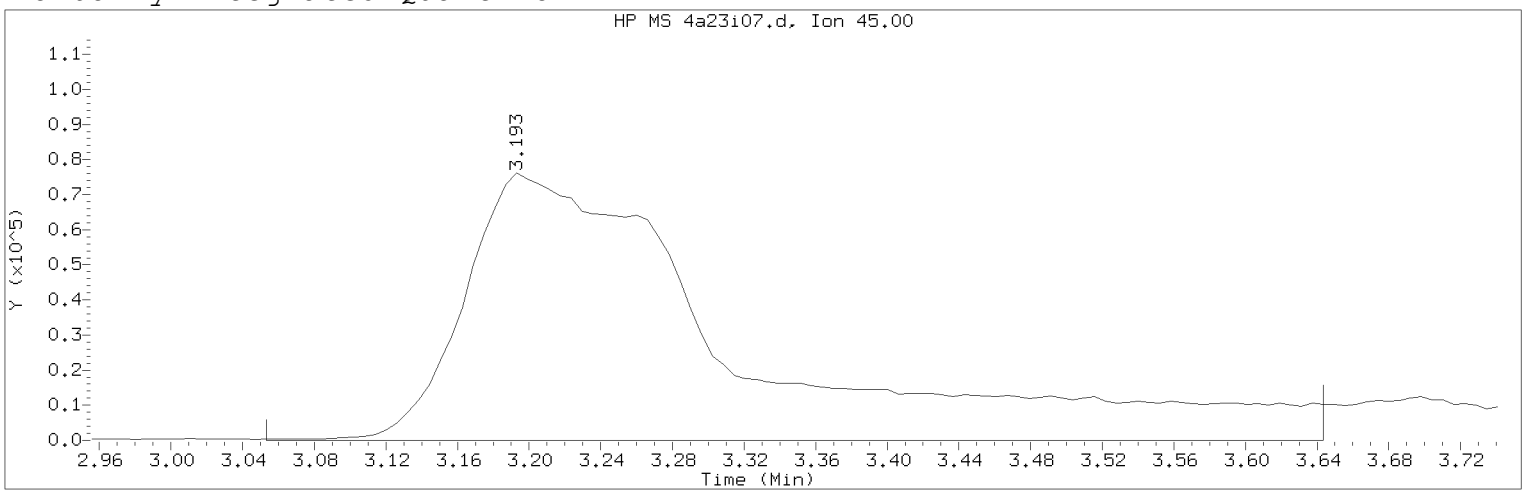
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 233
Retention Time (minutes): 2.998
Quant Ion : 67.00
Area : 1272833
On-column Amount (ng) : 119.4495
Integration start scan : 208 Integration stop scan: 232
Y at integration start : 310 Y at integration end: 310

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong554

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

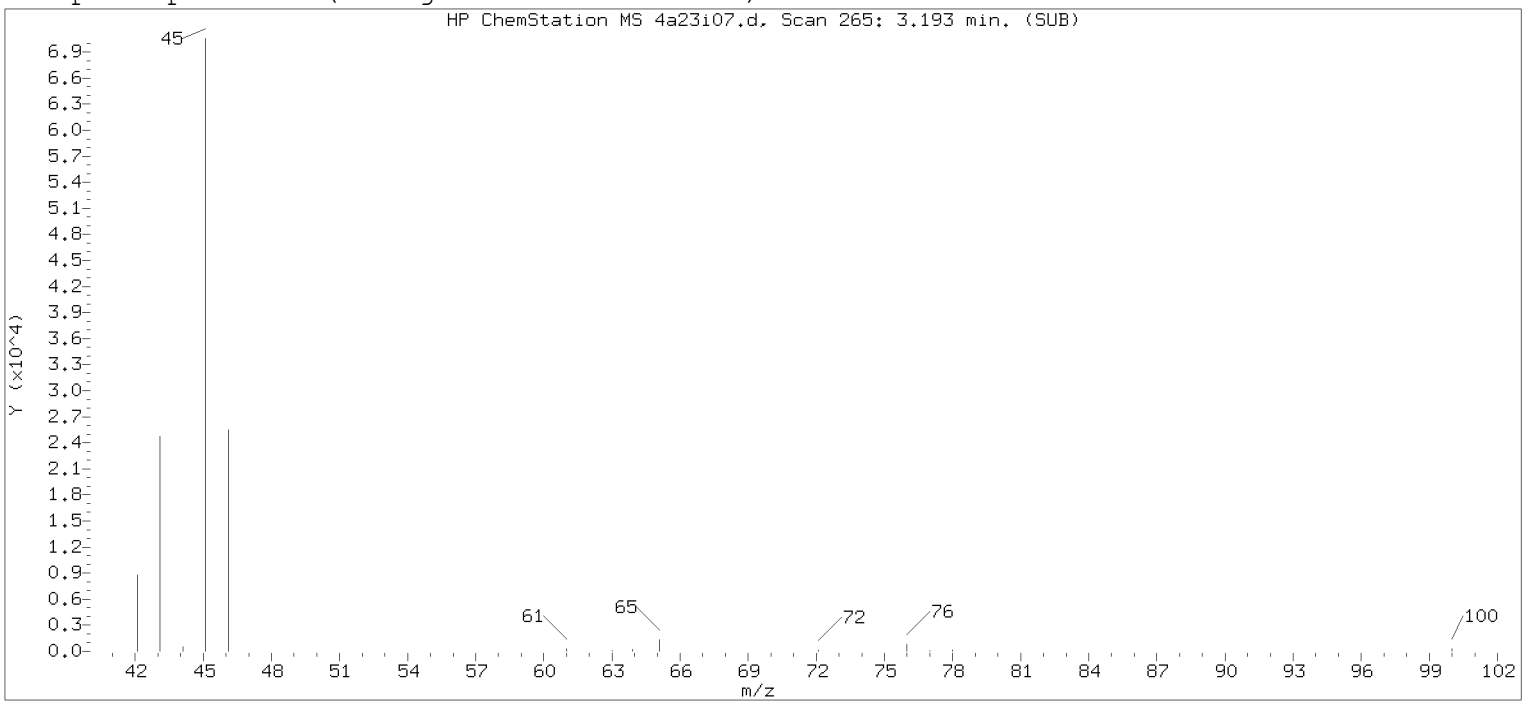
Compound Number : 13
Compound Name : Ethanol
Scan Number : 265
Retention Time (minutes): 3.193
Quant Ion : 45.00
Area (flag) : 816483M
On-Column Amount (ng) : 6256.7309
Integration start scan : 241 Integration stop scan: 338
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

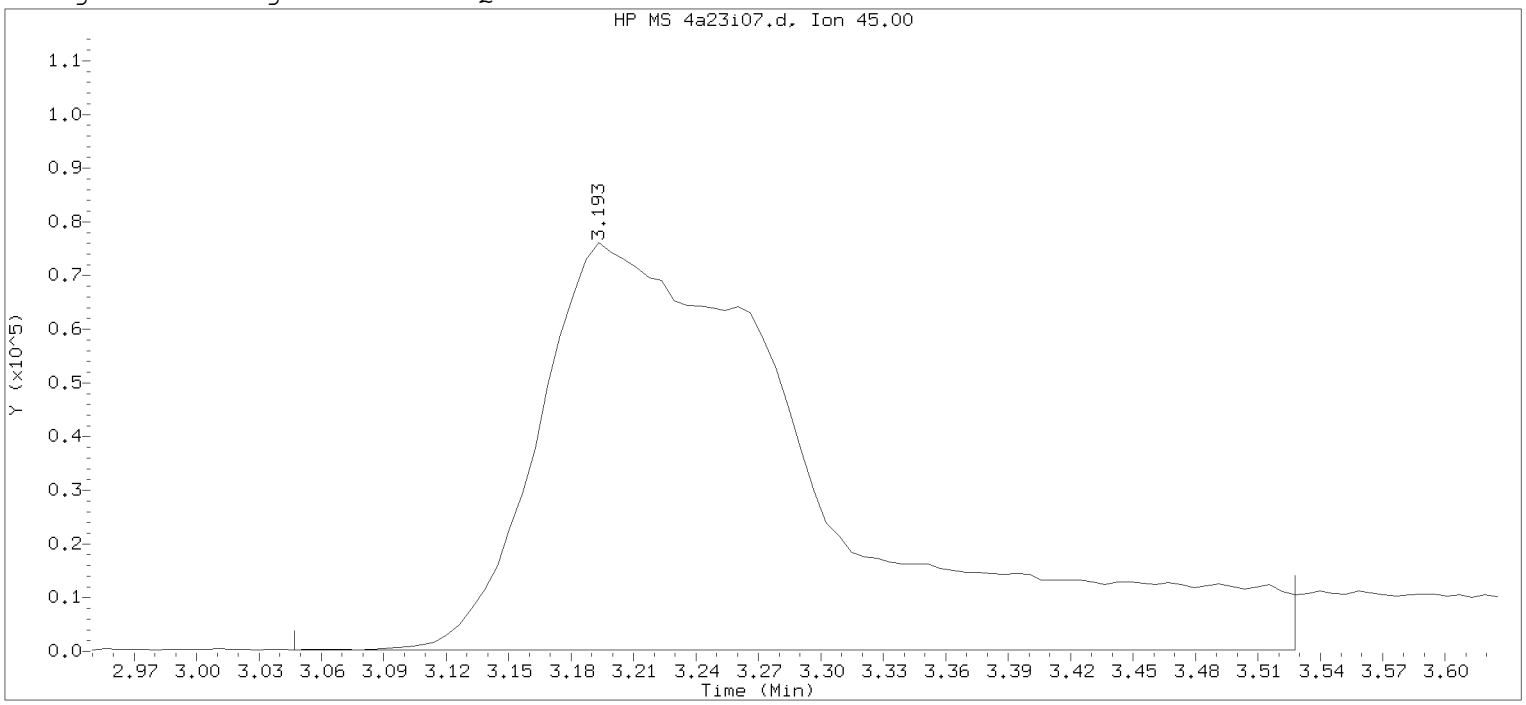
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

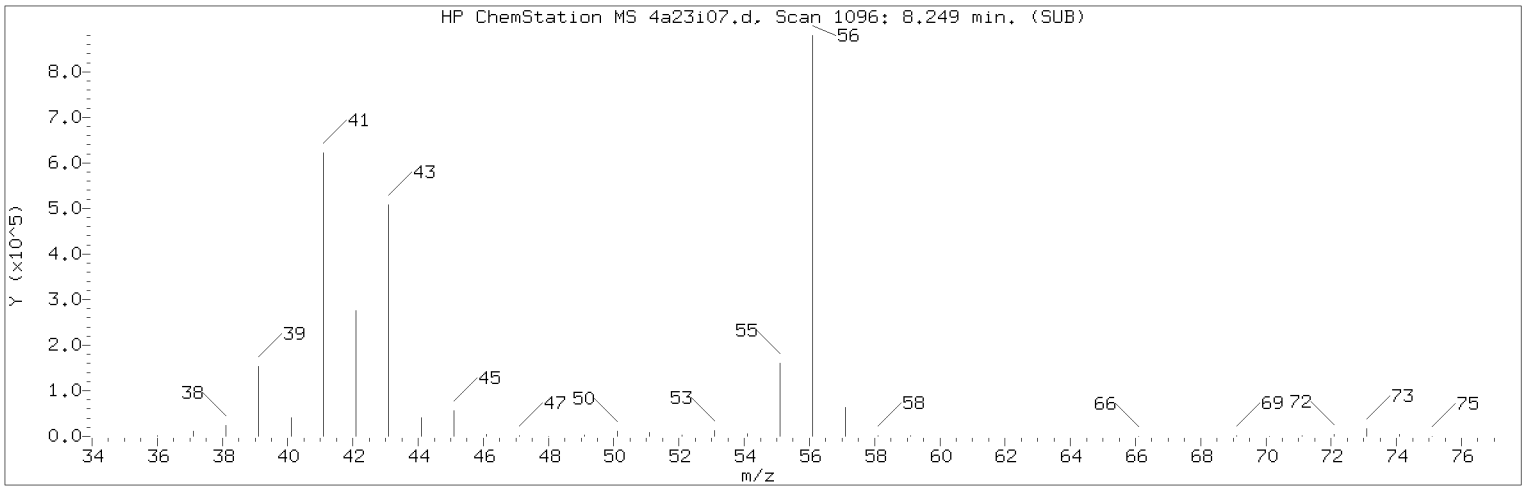
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:32
Date, time and analyst ID of latest file update: 23-Apr-2019 17:32 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

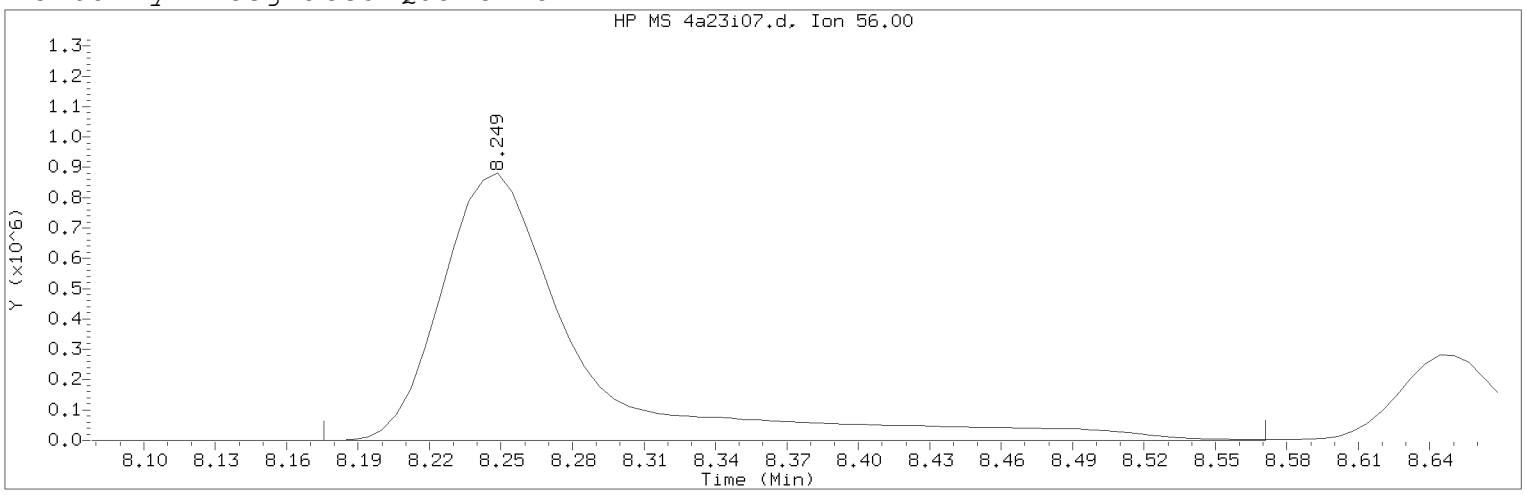
Compound Number : 13
Compound Name : Ethanol
Scan Number : 265
Retention Time (minutes): 3.193
Quant Ion : 45.00
Area : 733743
On-column Amount (ng) : 6246.6132
Integration start scan : 240 Integration stop scan: 319
Y at integration start : 272 Y at integration end: 272

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

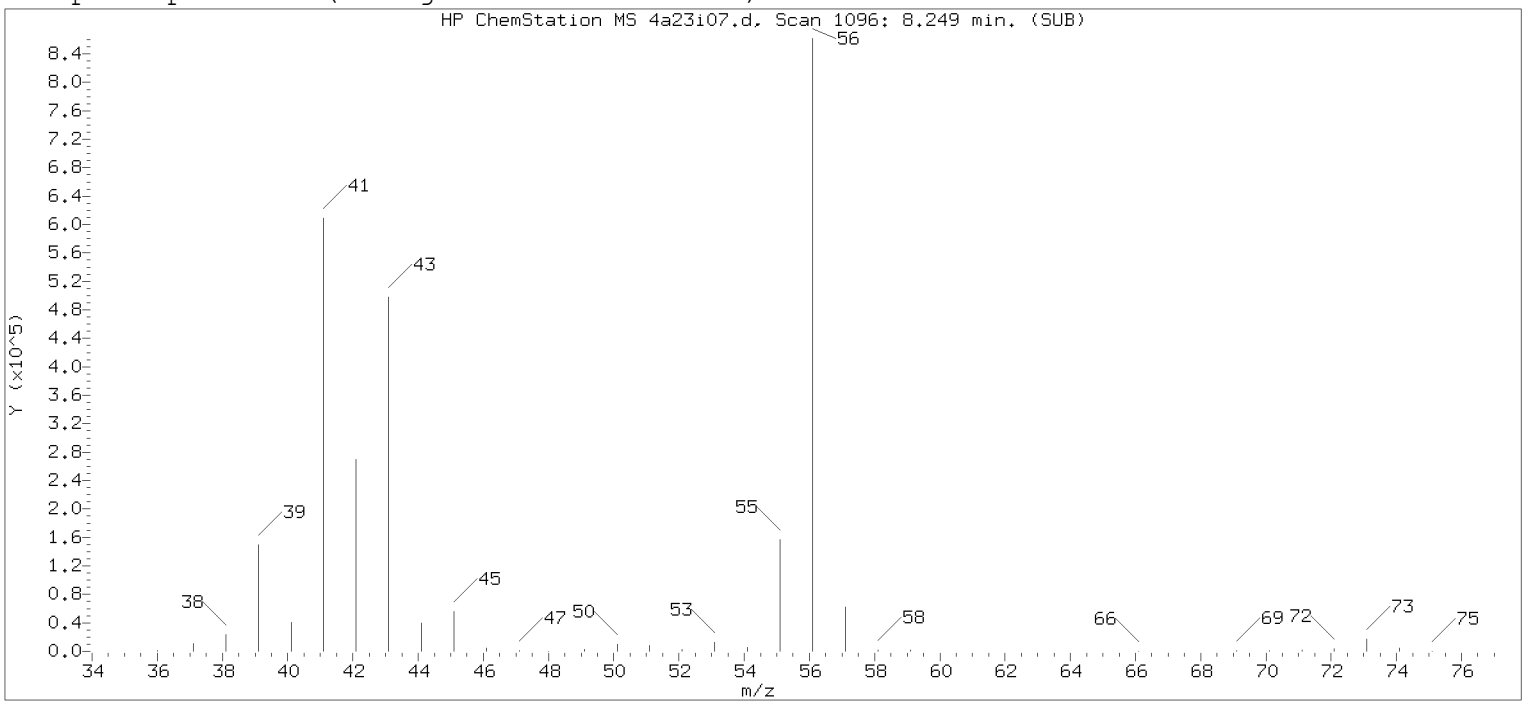
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 1096
Retention Time (minutes): 8.249
Quant Ion : 56.00
Area (flag) : 3546873M
On-Column Amount (ng) : 8041.0344
Integration start scan : 1083 Integration stop scan: 1148
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

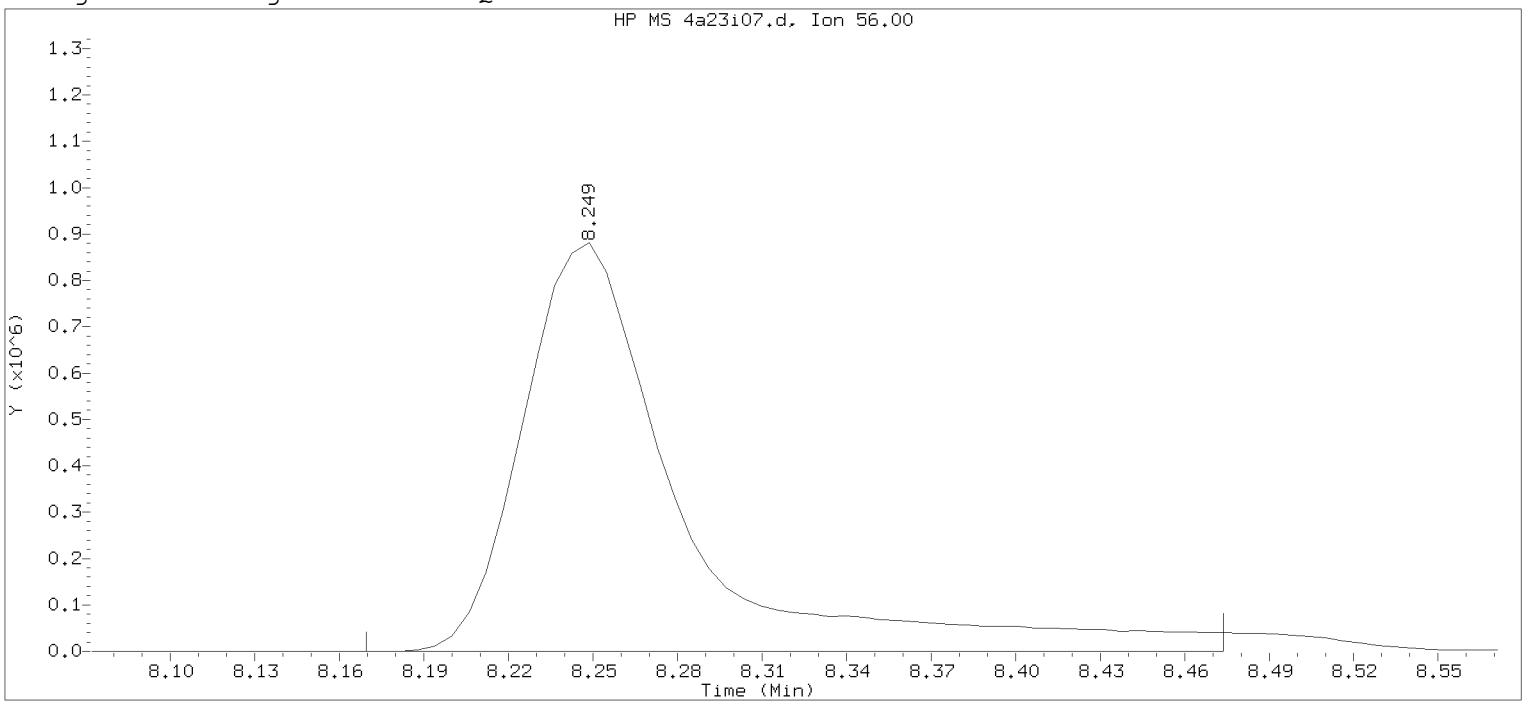
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

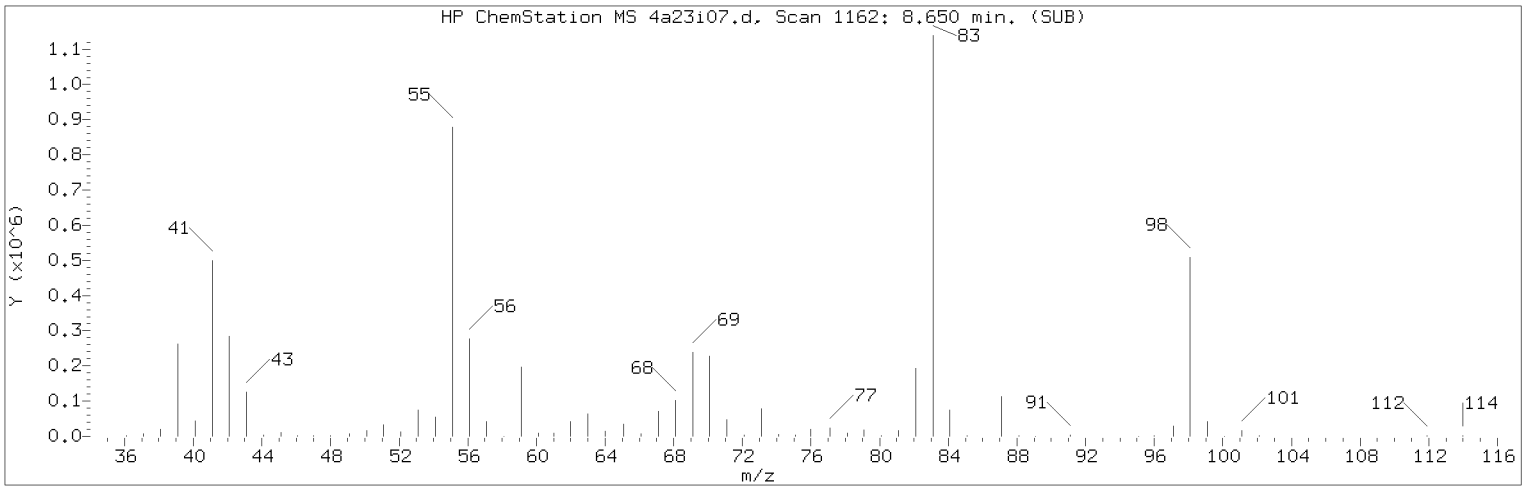
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:32
Date, time and analyst ID of latest file update: 23-Apr-2019 17:32 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

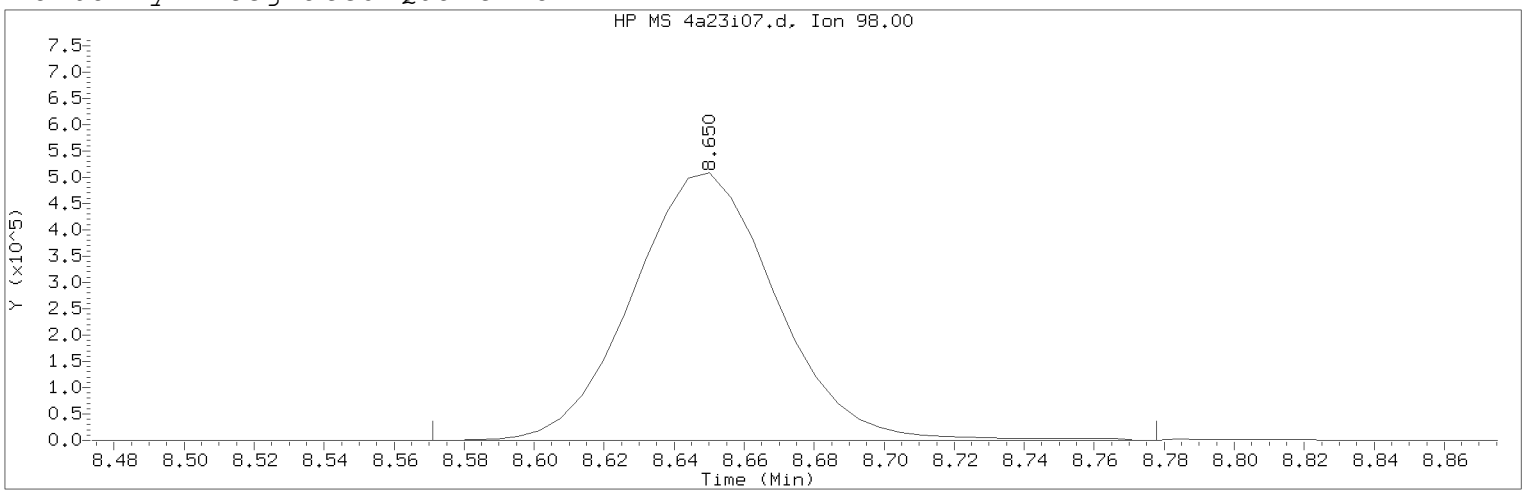
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 1096
Retention Time (minutes): 8.249
Quant Ion : 56.00
Area : 3431606
On-column Amount (ng) : 7818.6298
Integration start scan : 1082 Integration stop scan: 1132
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlo1693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

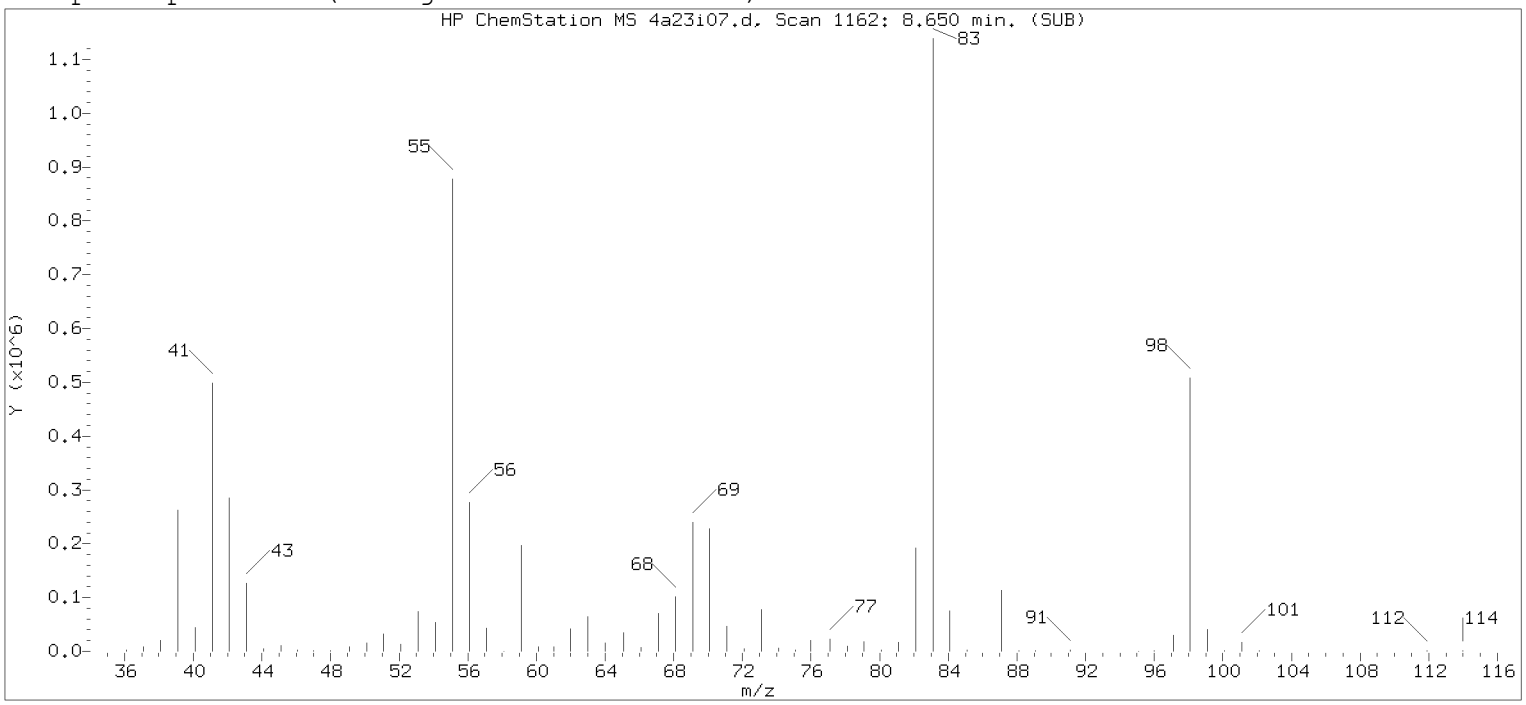
Compound Number : 72
Compound Name : Methylcyclohexane
Scan Number : 1162
Retention Time (minutes): 8.650
Quant Ion : 98.00
Area (flag) : 1449014M
On-Column Amount (ng) : 314.2297
Integration start scan : 1148 Integration stop scan: 1182
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

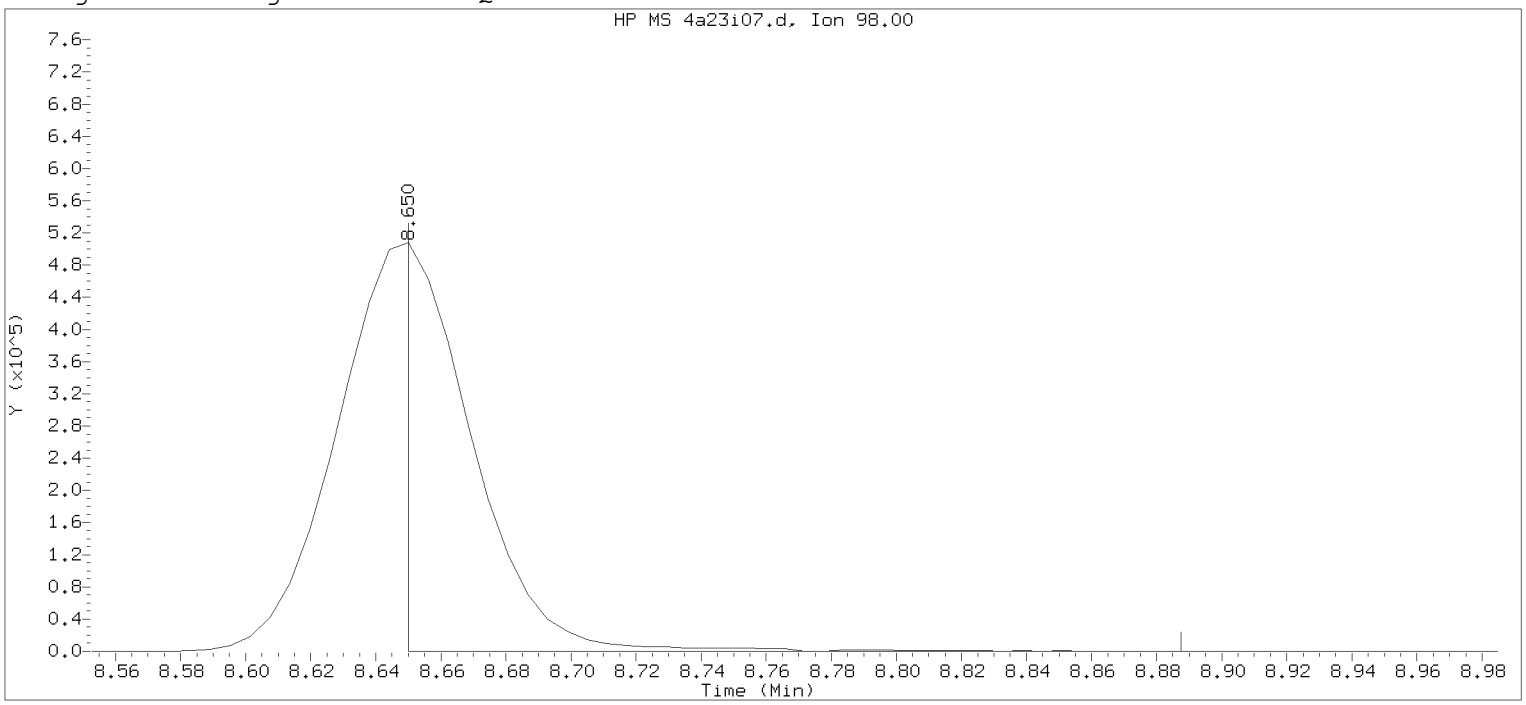
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

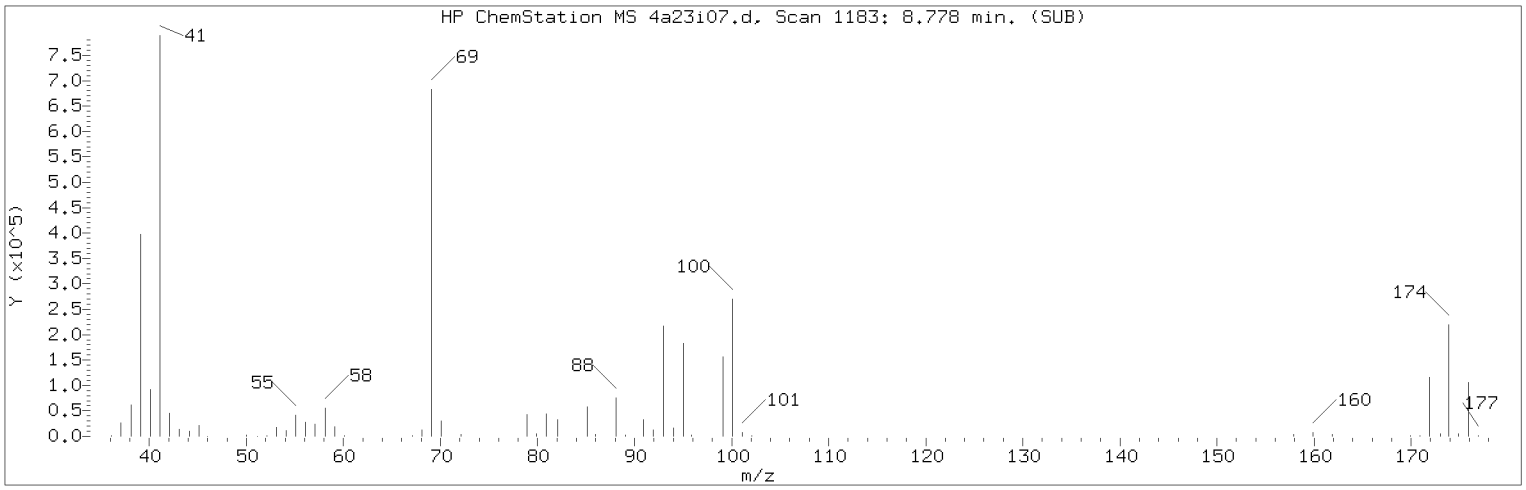
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:32
Date, time and analyst ID of latest file update: 23-Apr-2019 17:32 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

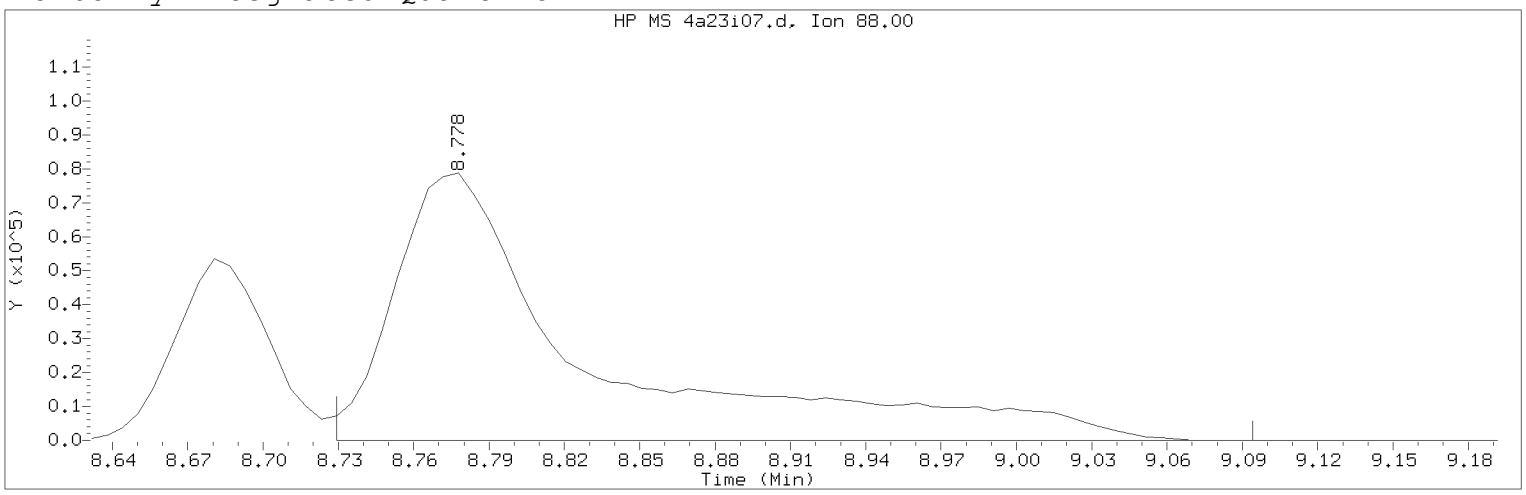
Compound Number : 72
Compound Name : Methylcyclohexane
Scan Number : 1162
Retention Time (minutes): 8.650
Quant Ion : 98.00
Area : 694283
On-column Amount (ng) : 163.2869
Integration start scan : 1161 Integration stop scan: 1200
Y at integration start : 0 Y at integration end: 191

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlo1693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

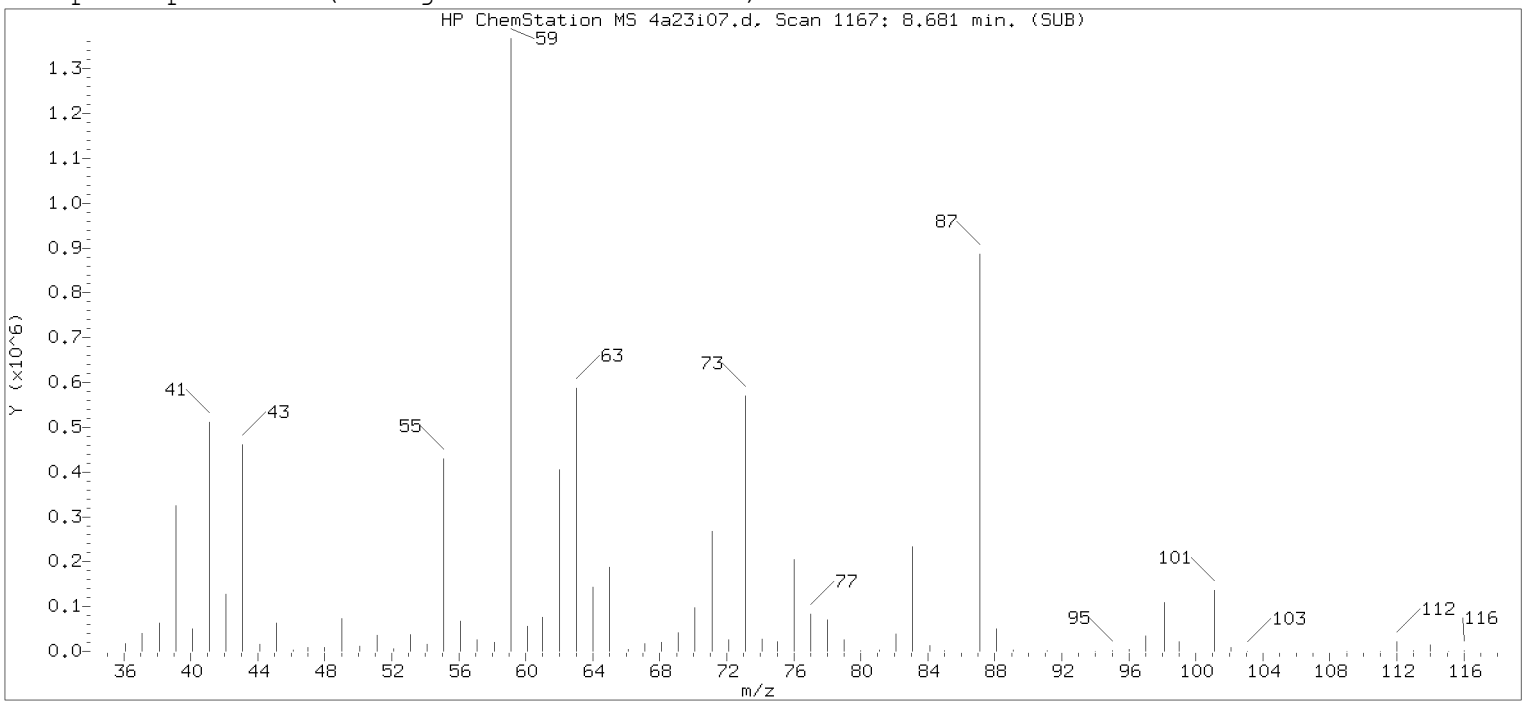
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1183
Retention Time (minutes): 8.778
Quant Ion : 88.00
Area (flag) : 421920M
On-Column Amount (ng) : 3713.8135
Integration start scan : 1174 Integration stop scan: 1234
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

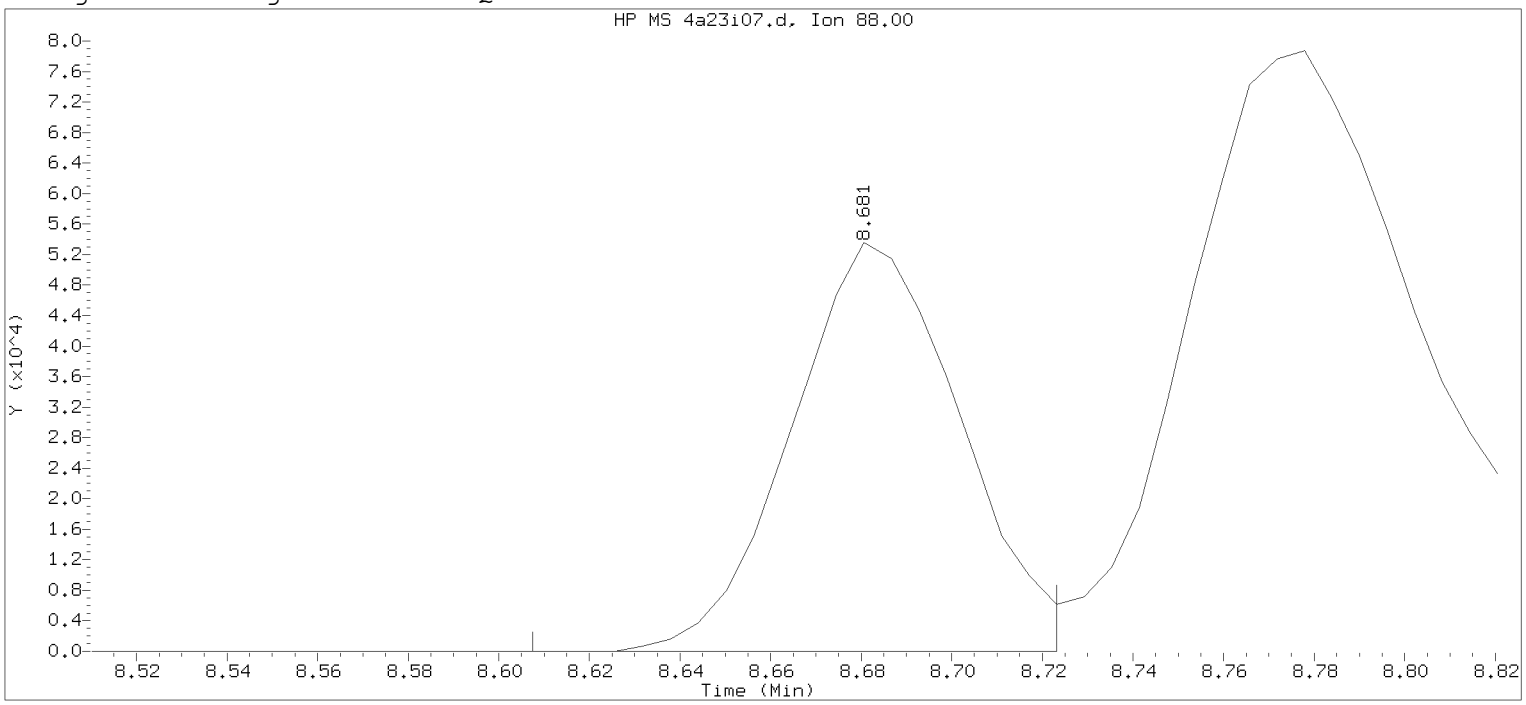
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

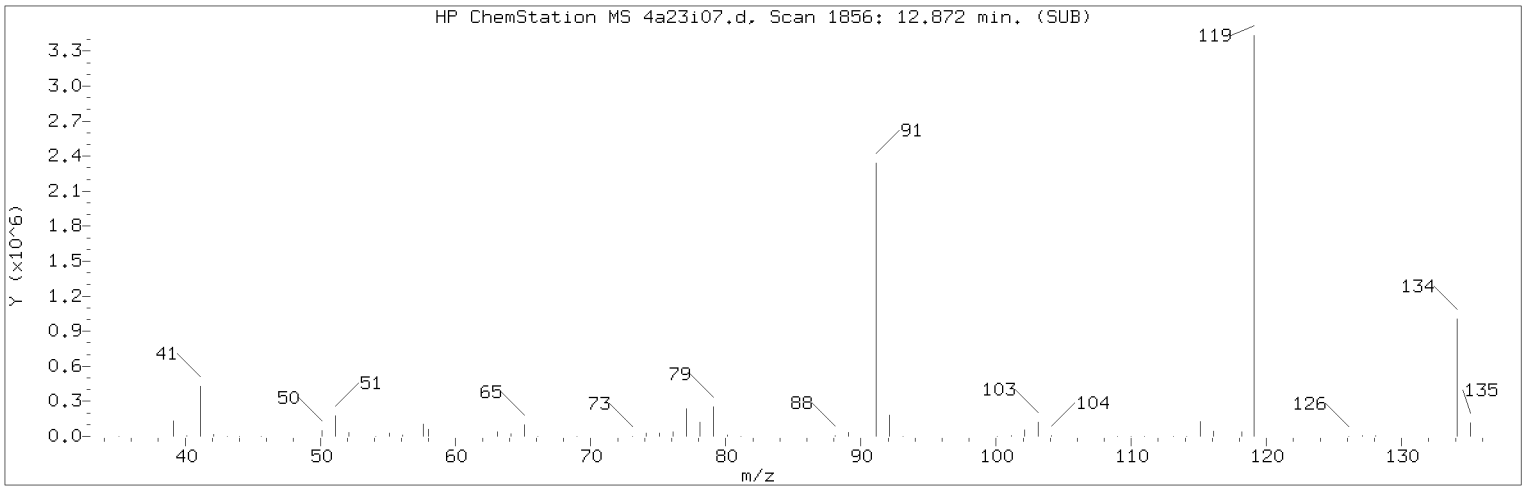
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:32
Date, time and analyst ID of latest file update: 23-Apr-2019 17:32 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

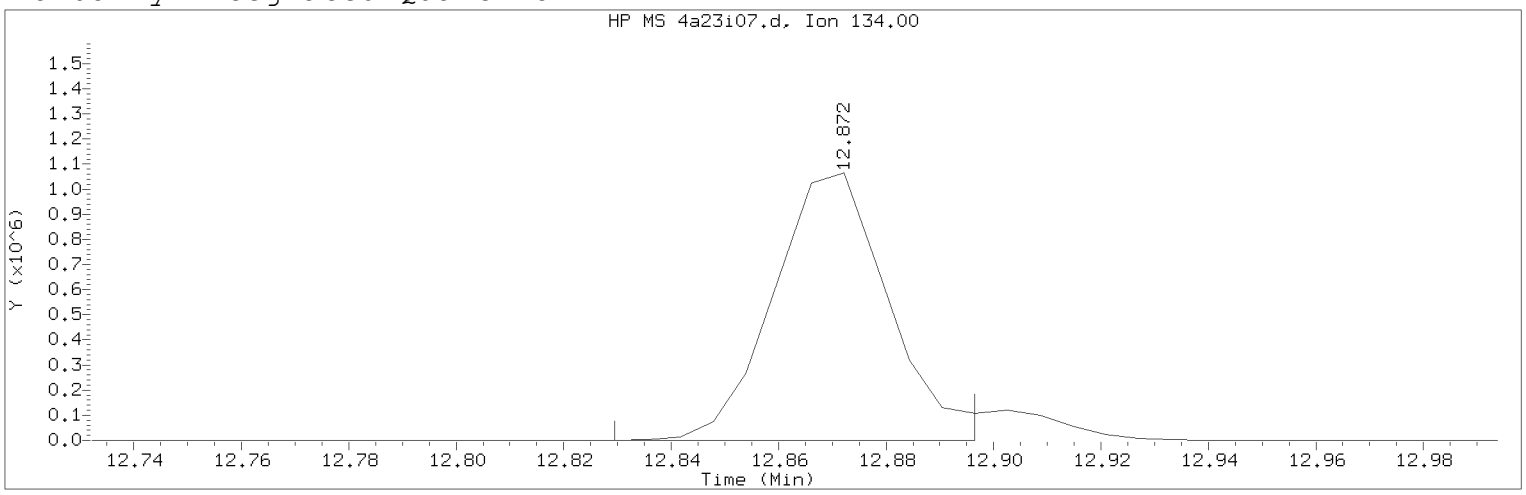
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1167		
Retention Time (minutes)	: 8.681		
Quant Ion	: 88.00		
Area	: 137510		
On-column Amount (ng)	: 1400.6888		
Integration start scan	: 1154	Integration stop scan:	1173
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong562

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

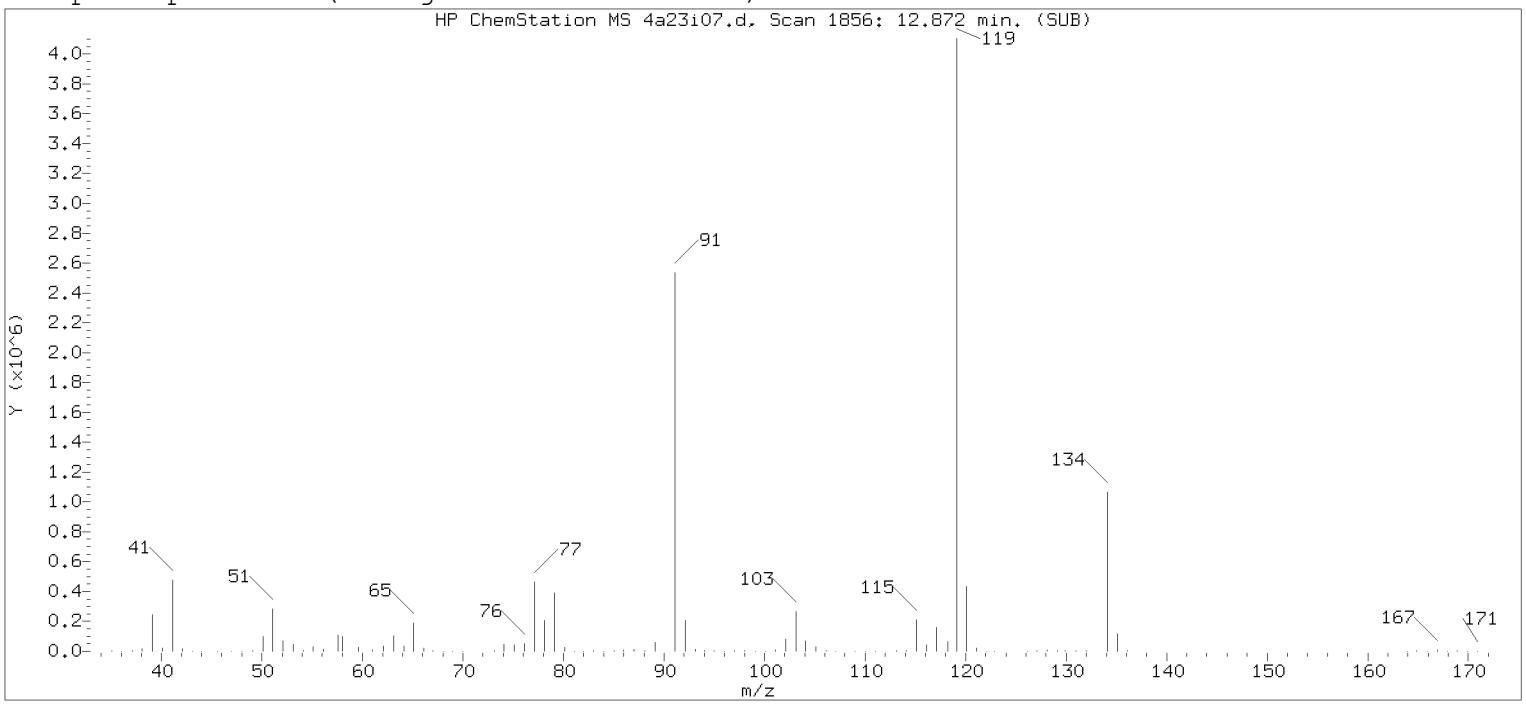
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1856
Retention Time (minutes): 12.872
Quant Ion : 134.00
Area (flag) : 1586274M
On-Column Amount (ng) : 307.7067
Integration start scan : 1848 Integration stop scan: 1859
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

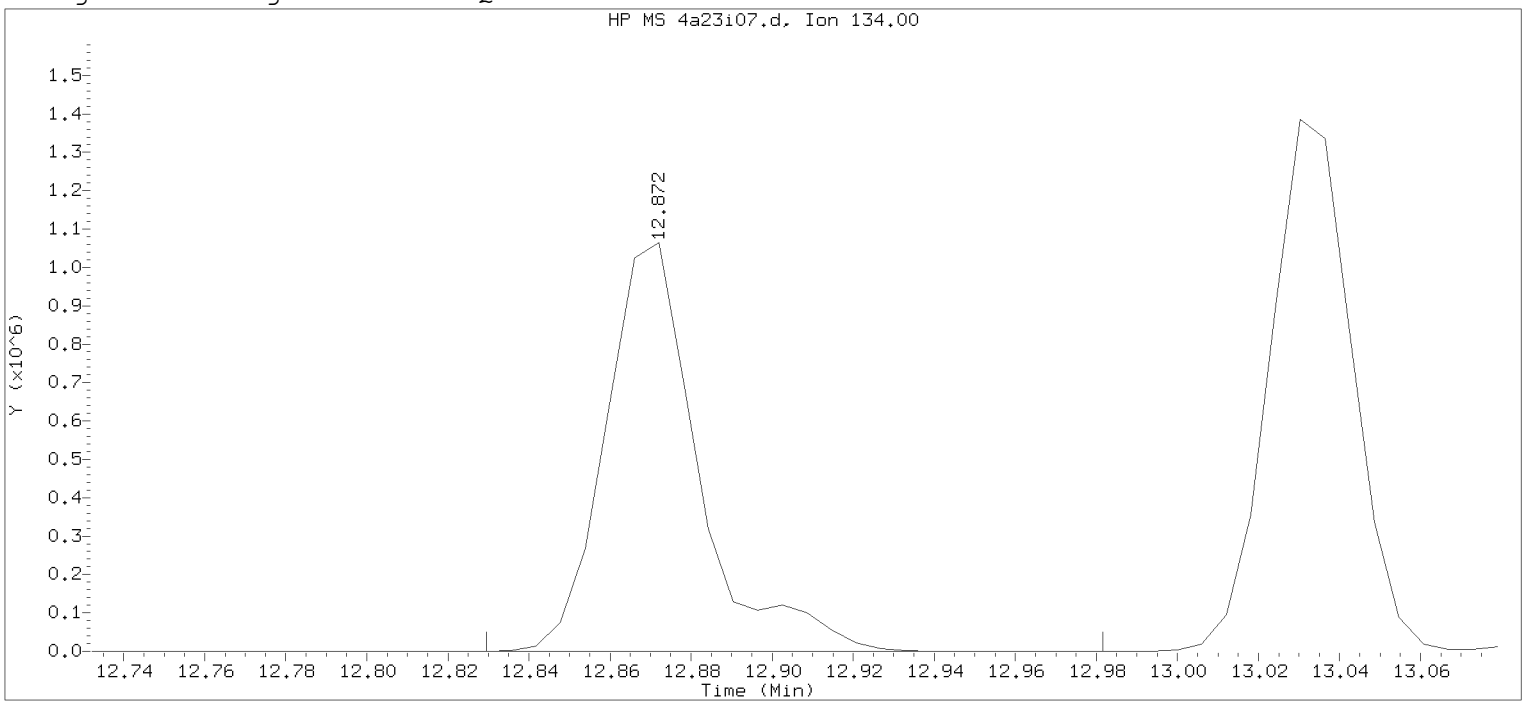
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



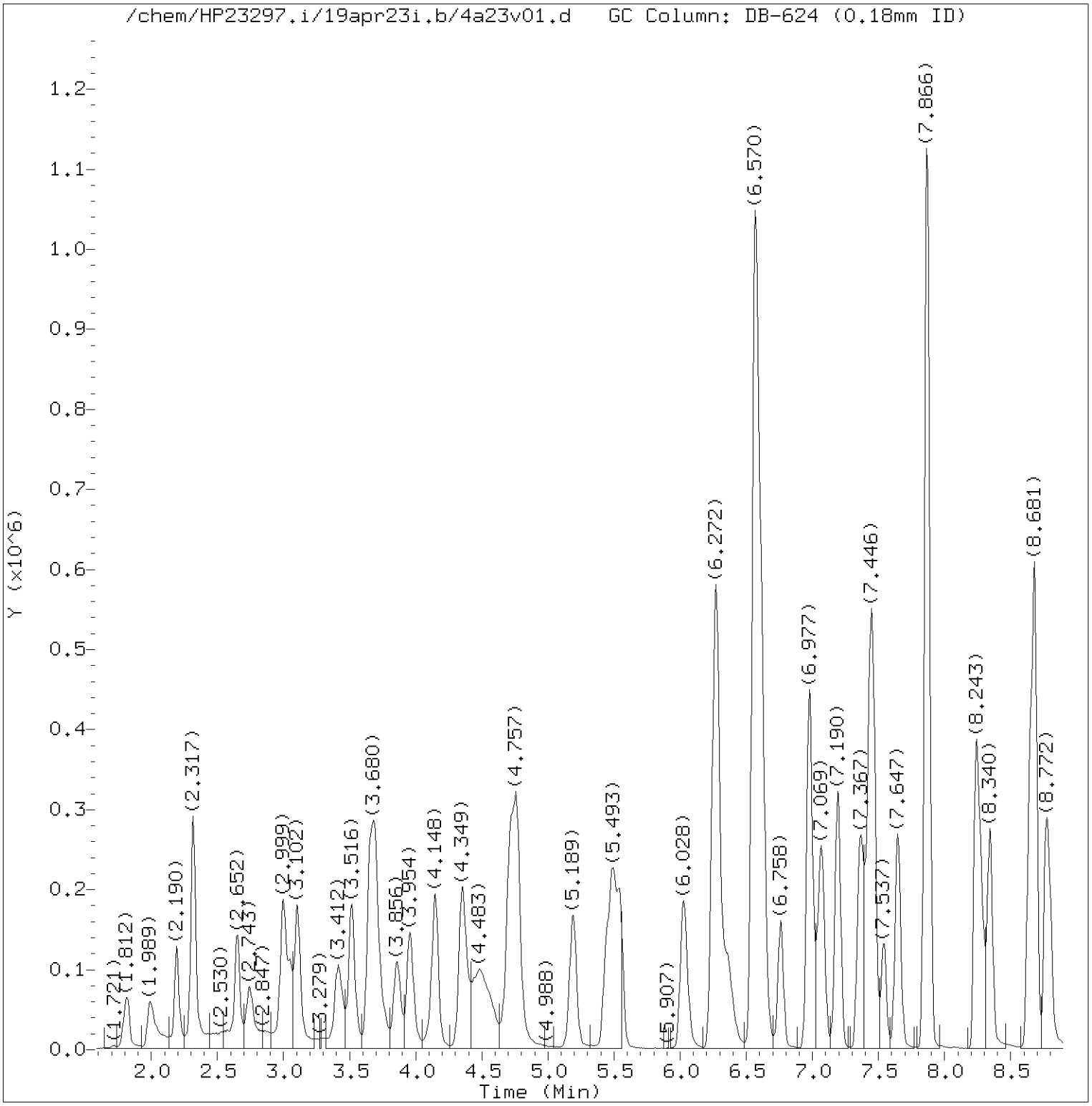
Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:32
Date, time and analyst ID of latest file update: 23-Apr-2019 17:32 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1856
Retention Time (minutes): 12.872
Quant Ion : 134.00
Area : 1698518
On-column Amount (ng) : 303.9041
Integration start scan : 1848 Integration stop scan: 1873
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user_id: jmlong564



Total Ion Chromatogram (TIC)

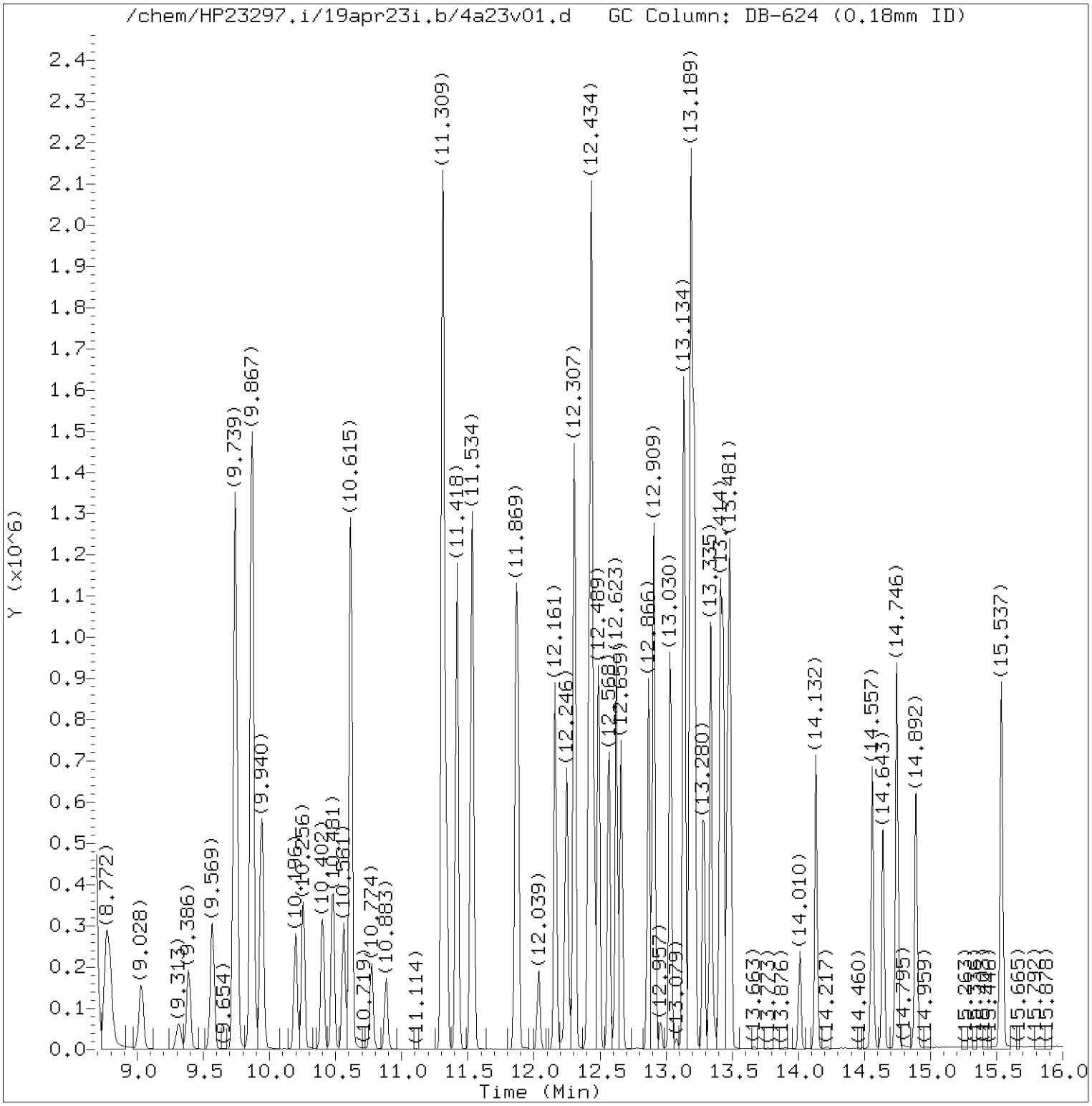
Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23v01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: ICV401 Lab Sample ID: ICV401

Digitally signed by Jason M. Long
on 04/24/2019 at 14:28.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23v01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: ICV401 Lab Sample ID: ICV401

Digitally signed by Jason M. Long
on 04/24/2019 at 14:28.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23v01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: ICV401 Lab Sample ID: ICV401

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.989	85	141487	16.038
4) Chloromethane	(2)	2.190	50	164863	19.295
6) Vinyl Chloride	(2)	2.311	62	163060	19.520
5) 1,3-Butadiene	(2)	2.317	39	116187	25.077
8) Bromomethane	(2)	2.652	94	119596	17.447
9) Chloroethane	(2)	2.743	64	85243	18.479
10) Dichlorofluoromethane	(2)	2.993	67	212505	19.624
12) Trichlorofluoromethane	(2)	3.047	101	183356	18.101
11) n-Pentane	(2)	3.102	43	189146	23.111
13) Ethanol	(1)	3.279	45	84925M	545.203
15) Freon 123a	(2)	3.412	67	119316	20.473
16) Acrolein	(1)	3.516	56	289296	110.265
17) 1,1-Dichloroethene	(2)	3.656	96	93534	23.182
19) Freon 113	(2)	3.680	101	94318	21.243
18) Acetone	(1)	3.698	58	163753	127.101
22) Methyl Iodide	(2)	3.863	142	175948	21.884
21) 2-Propanol	(1)	3.875	45	153156M	147.940
23) Carbon Disulfide	(2)	3.954	76	327916	22.790
27) Methyl Acetate	(2)	4.124	43	163194	19.419
25) Allyl Chloride	(2)	4.148	41	172129	19.239
28) Methylene Chloride	(2)	4.349	84	109977	21.518
29)*t-Butyl alcohol-d10	(1)	4.380	65	462730	250.000
30) t-Butyl alcohol	(1)	4.507	59	351768	193.183
31) Acrylonitrile	(2)	4.714	53	395805	89.900
33) Methyl Tertiary Butyl Ether	(2)	4.757	73	295171	20.479
32) trans-1,2-Dichloroethene	(2)	4.763	96	99389	20.616
34) n-Hexane	(2)	5.195	57	162102	20.358
36) 1,1-Dichloroethane	(2)	5.438	63	190030	21.209
38) di-Isopropyl ether	(2)	5.487	45	367329	20.686
39) 2-Chloro-1,3-butadiene	(2)	5.548	53	167505	20.650
40) Ethyl t-butyl ether	(2)	6.028	59	309335	20.279
43) 1,2-Dichloroethene (Total)	(2)		96	230279	44.161
44) 2-Butanone	(2)	6.259	43	911355	133.377
42) cis-1,2-Dichloroethene	(2)	6.278	96	130890	23.545
45) 2,2-Dichloropropane	(2)	6.290	77	151034	21.500
47) Propionitrile	(1)	6.357	54	275358	142.366
48) Methacrylonitrile	(2)	6.570	67	614873	148.056
49) Bromochloromethane	(2)	6.612	128	61020	19.878

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:28.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23v01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: ICV401 Lab Sample ID: ICV401

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.618	71	161460	84.568
51) Chloroform	(2)	6.758	83	184193	20.872
52)$Dibromofluoromethane	(2)	6.977	113	284634	49.913
53) 1,1,1-Trichloroethane	(2)	6.983	97	157859	21.369
54) Cyclohexane	(2)	7.069	56	191118	19.893
56) Carbon Tetrachloride	(2)	7.184	117	133854	20.855
55) 1,1-Dichloropropene	(2)	7.196	75	146633	21.009
58) Isobutyl Alcohol	(1)	7.367	41	304442	474.829
57)$1,2-Dichloroethane-d4	(2)	7.434	102	69900	50.164
60) Benzene	(2)	7.464	78	444969	20.965
61) 1,2-Dichloroethane	(2)	7.537	62	150462	20.915
65) t-Amyl methyl ether	(2)	7.647	73	319298	20.702
67) n-Heptane	(2)	7.866	43	183428	19.568
66)*Fluorobenzene	(2)	7.866	96	1156910	50.000
69) n-Butanol	(1)	8.243	56	513751	975.756
71) Trichloroethene	(2)	8.346	95	112447	20.886
72) Methylcyclohexane	(2)	8.644	83	200449	19.769
73) 1,2-Dichloropropane	(2)	8.687	63	118436	21.240
76) Methyl Methacrylate	(2)	8.766	69	121466	19.236
75) 1,4-Dioxane	(1)	8.778	88	75373M	555.812
74) Dibromomethane	(2)	8.796	93	75206	20.780
78) Bromodichloromethane	(2)	9.028	83	136616	20.786
79) 2-Nitropropane	(2)	9.313	41	53738	16.800
80) 2-Chloroethyl Vinyl Ether	(2)	9.386	63	107076	20.988
81) cis-1,3-Dichloropropene	(2)	9.569	75	182611	21.016
82) 4-Methyl-2-pentanone	(2)	9.739	43	1111722	90.670
83)$Toluene-d8	(3)	9.867	98	1199626	50.303
88) Toluene	(3)	9.940	92	286103	20.741
90) 1,3-Dichloropropene (total)	(3)		100	344682	40.984
89) trans-1,3-Dichloropropene	(3)	10.196	75	162071	19.968
91) Ethyl Methacrylate	(3)	10.256	69	196638	19.277
92) 1,1,2-Trichloroethane	(3)	10.402	97	114413	21.221
93) Tetrachloroethene	(3)	10.481	166	126494	21.022
94) 1,3-Dichloropropane	(3)	10.561	76	182254	20.364
96) 2-Hexanone	(3)	10.615	43	895634	91.232
97) Dibromochloromethane	(3)	10.774	129	118406	20.755
99) 1,2-Dibromoethane	(3)	10.883	107	122889	20.646
100)*Chlorobenzene-d5	(3)	11.309	117	929188	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:28.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23v01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: ICV401 Lab Sample ID: ICV401

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
102) Chlorobenzene	(3)	11.333	112	321425	20.617
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	108783	20.669
104) Ethylbenzene	(3)	11.418	91	546582	20.629
106) m+p-Xylene	(3)	11.534	106	440444	41.691
108) Xylene (Total)	(3)		106	654715	62.096
107) o-Xylene	(3)	11.862	106	214271	20.405
109) Styrene	(3)	11.881	104	366811	20.993
110) Bromoform	(3)	12.039	173	88822	19.759
111) Isopropylbenzene	(3)	12.161	105	549540	20.919
112) Cyclohexanone	(1)	12.246	55	296194	546.719
114)$4-Bromofluorobenzene	(3)	12.307	95	456228	50.191
116) 1,1,2,2-Tetrachloroethane	(4)	12.410	83	196465	20.462
115) Bromobenzene	(4)	12.422	156	147162	20.185
118) trans-1,4-Dichloro-2-butene	(4)	12.434	53	325173	103.024
117) 1,2,3-Trichloropropane	(4)	12.459	110	59874	20.623
119) n-Propylbenzene	(4)	12.489	91	660216	21.056
120) 2-Chlorotoluene	(4)	12.568	126	134196	20.493
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	471148	20.763
121) 4-Chlorotoluene	(4)	12.659	126	141509	20.732
124) tert-Butylbenzene	(4)	12.866	134	96515M	20.260
125) Pentachloroethane	(4)	12.903	167	84911	19.549
126) 1,2,4-Trimethylbenzene	(4)	12.909	105	486924	20.552
127) sec-Butylbenzene	(4)	13.030	105	609518	21.026
129) 1,3-Dichlorobenzene	(4)	13.134	146	274507	20.088
130) p-Isopropyltoluene	(4)	13.140	119	530998	20.822
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	521019	50.000
133) 1,4-Dichlorobenzene	(4)	13.207	146	287498	20.535
134) 1,2,3-Trimethylbenzene	(4)	13.213	105	524217	20.606
135) Benzyl Chloride	(4)	13.280	91	379152	19.911
136) 1,3-Diethylbenzene	(4)	13.341	119	323702	20.308
141) Diethylbenzene (total)	(4)		100	936869	60.705
137) 1,4-Diethylbenzene	(4)	13.408	119	337340	19.871
139) n-Butylbenzene	(4)	13.432	92	266994	20.438
138) 1,2-Dichlorobenzene	(4)	13.469	146	272704	20.480
140) 1,2-Diethylbenzene	(4)	13.487	119	275827	20.526
142) 1,2-Dibromo-3-chloropropane	(4)	14.010	75	51564	20.358
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	205765	20.496
146) 1,2,4-Trichlorobenzene	(4)	14.557	180	195092	20.510

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:28.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23v01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

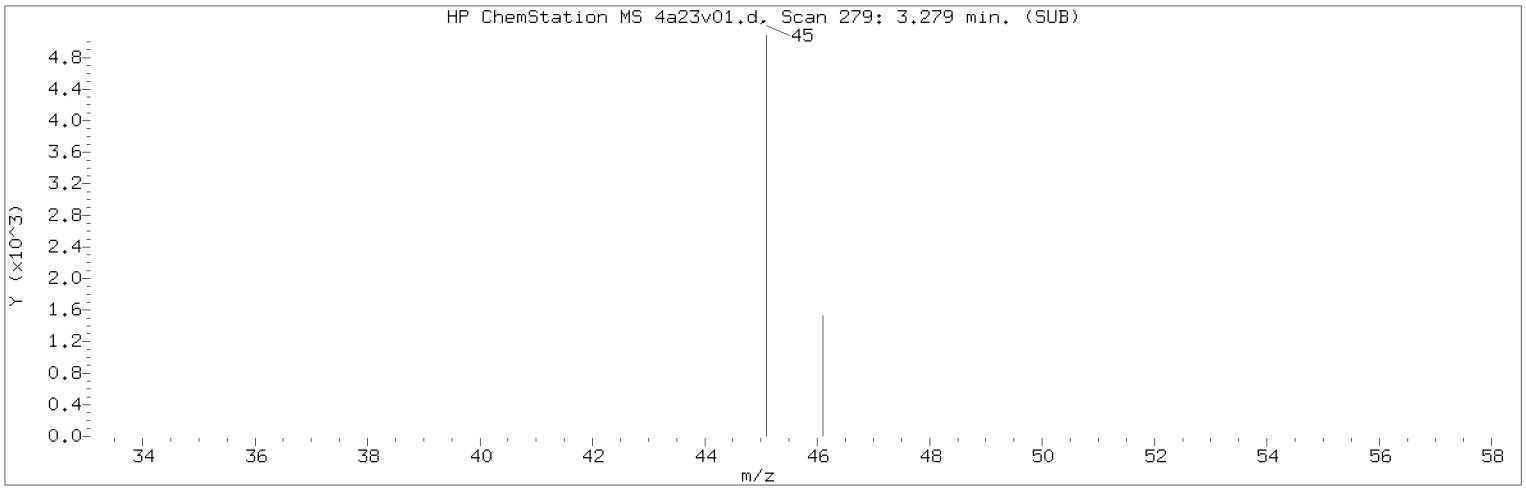
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: ICV401 Lab Sample ID: ICV401

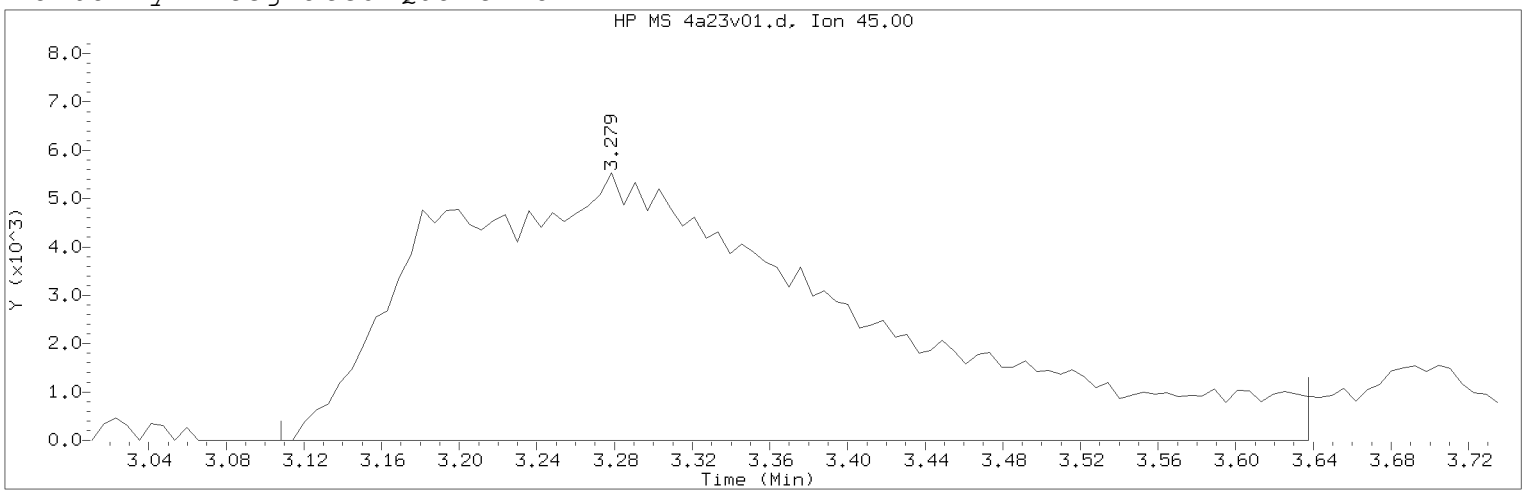
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Hexachlorobutadiene	(4)	14.643	225	95578	21.743
148) Naphthalene	(4)	14.746	128	683899	20.752
149) 1,2,3-Trichlorobenzene	(4)	14.892	180	188265	20.602
150) 2-Methylnaphthalene	(4)	15.537	142	444917	21.586

Digitally signed by Jason M. Long
on 04/24/2019 at 14:28.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23v01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: ICV401 Lab Sample ID: ICV401

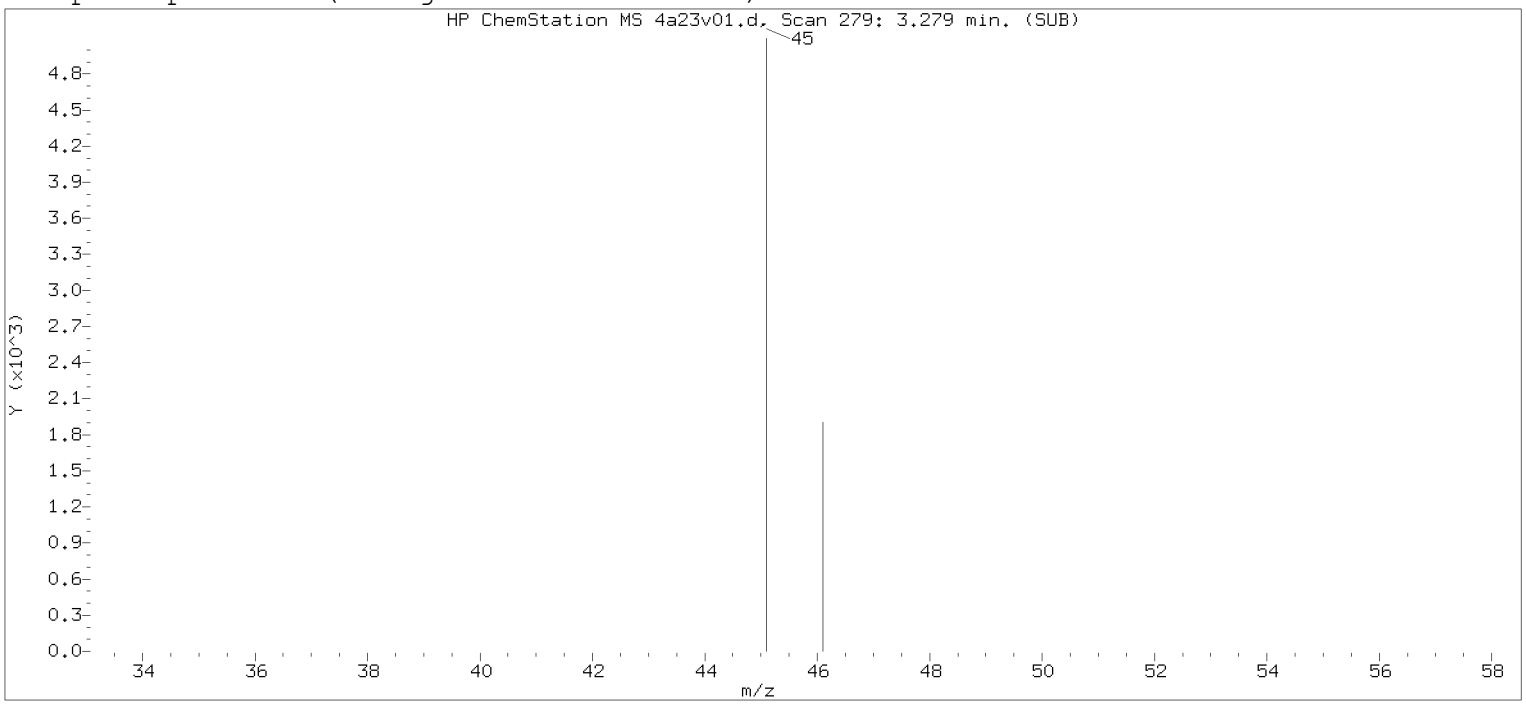
Compound Number : 13
Compound Name : Ethanol
Scan Number : 279
Retention Time (minutes): 3.279
Quant Ion : 45.00
Area (flag) : 84925M
On-Column Amount (ng) : 545.2028
Integration start scan : 250 Integration stop scan: 337
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

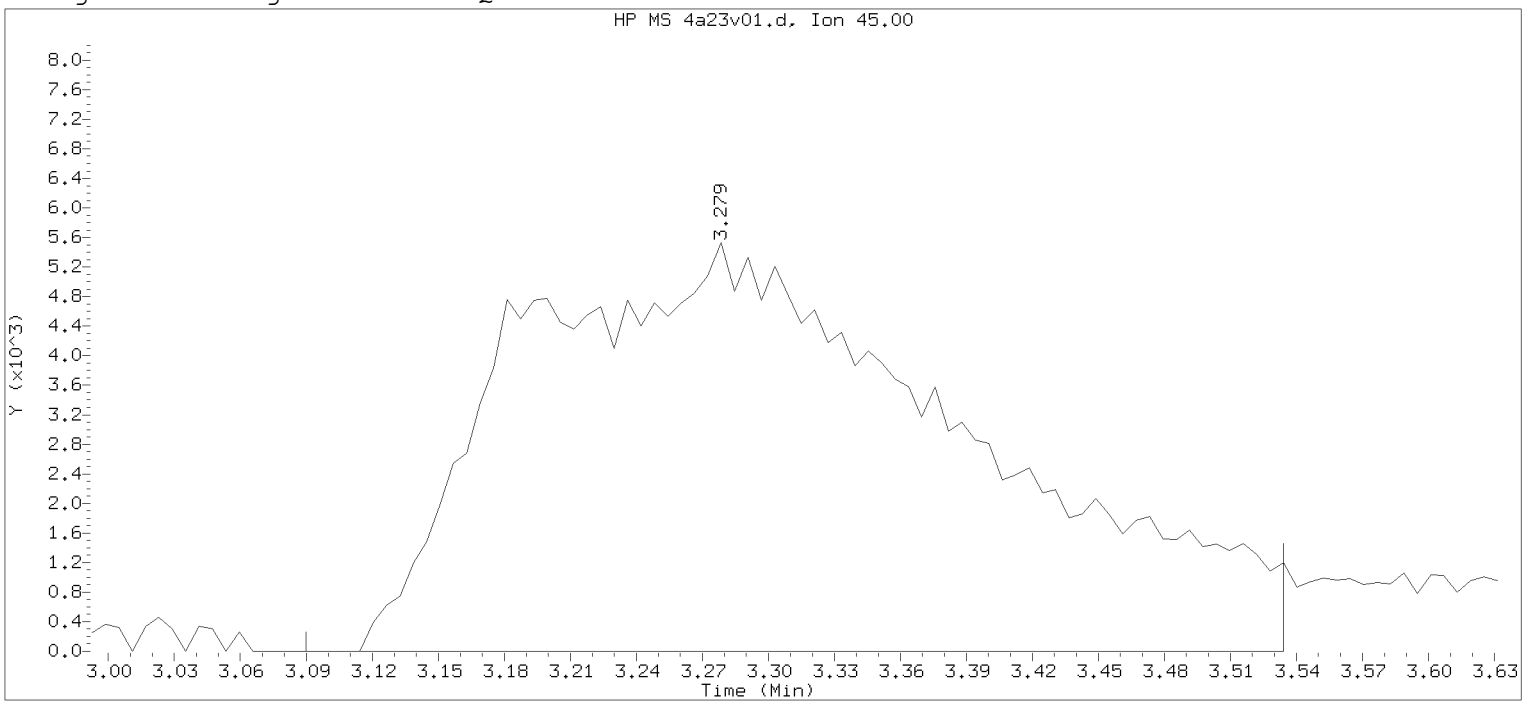
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:28.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23v01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

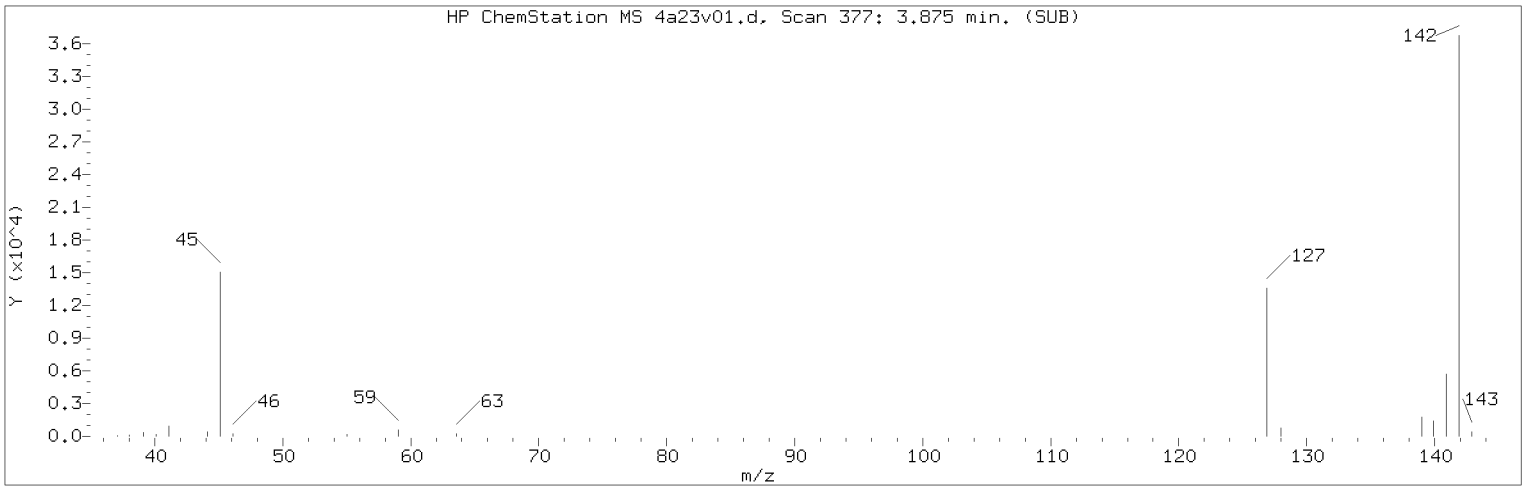
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:32
Date, time and analyst ID of latest file update: 23-Apr-2019 18:17 Automation

Sample Name: ICV401 Lab Sample ID: ICV401

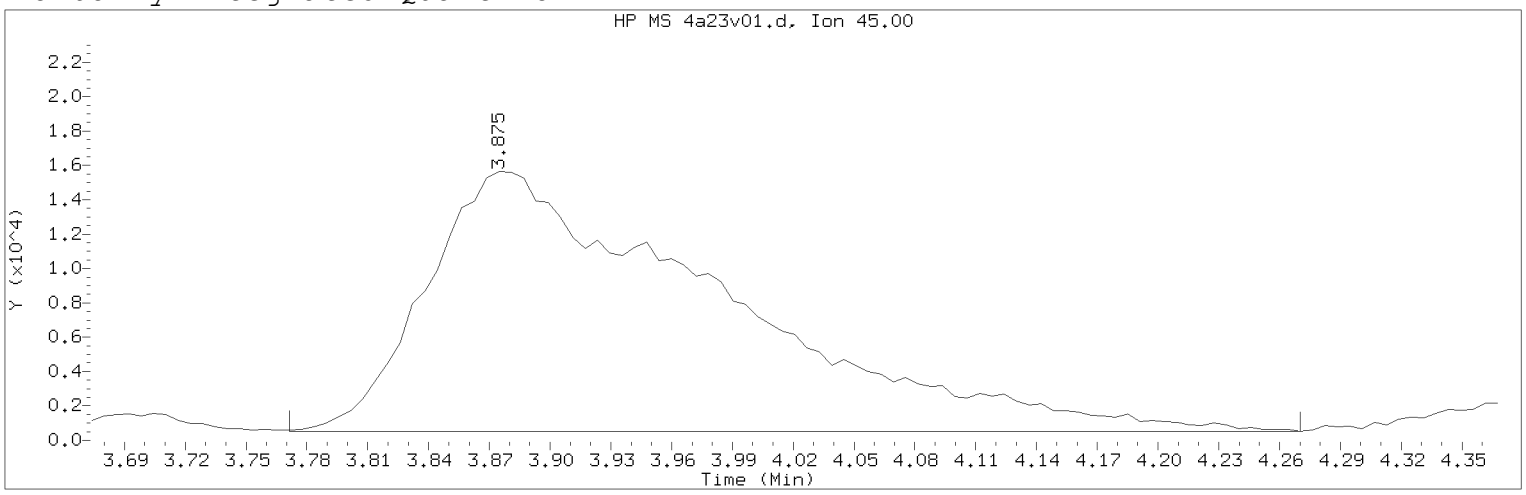
Compound Number	: 13		
Compound Name	: Ethanol		
Scan Number	: 279		
Retention Time (minutes)	: 3.279		
Quant Ion	: 45.00		
Area	: 78867		
On-column Amount (ng)	: 562.4958		
Integration start scan	: 247	Integration stop scan:	320
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jason M. Long on 04/24/2019 at 14:28.
Target 3.5 esignature user ID: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23v01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: ICV401 Lab Sample ID: ICV401

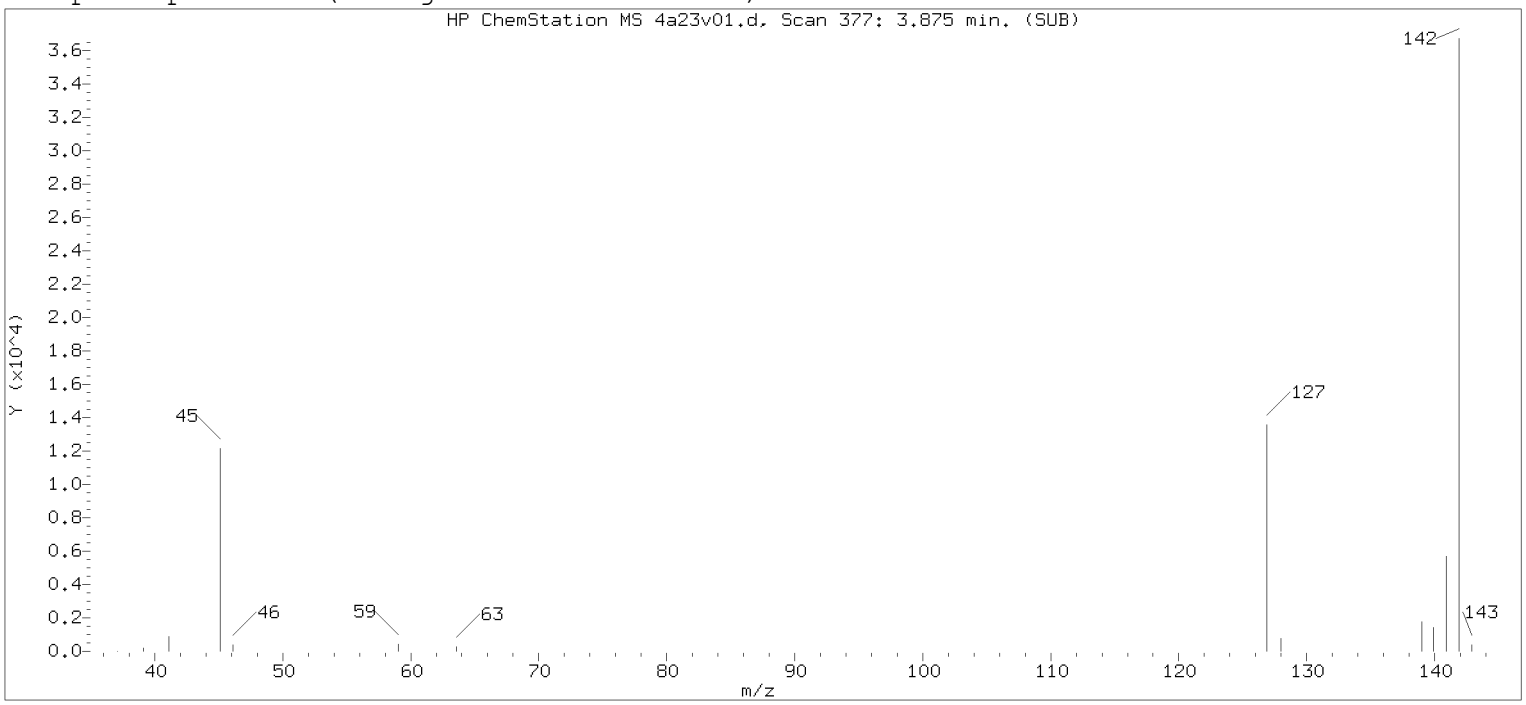
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 377
Retention Time (minutes): 3.875
Quant Ion : 45.00
Area (flag) : 153156M
On-Column Amount (ng) : 147.9399
Integration start scan : 359 Integration stop scan: 441
Y at integration start : 518 Y at integration end: 518

Reason for manual integration: improper integration

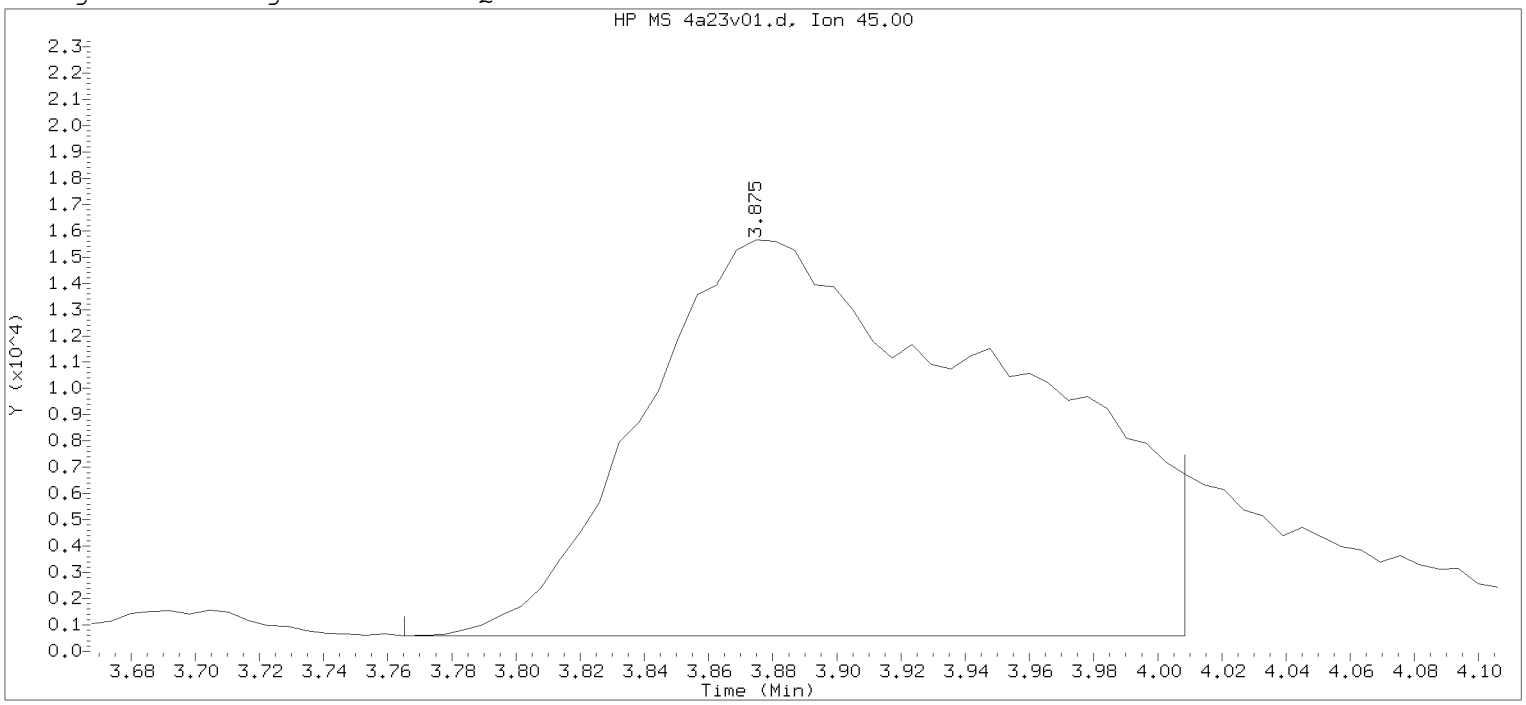
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:28.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23v01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

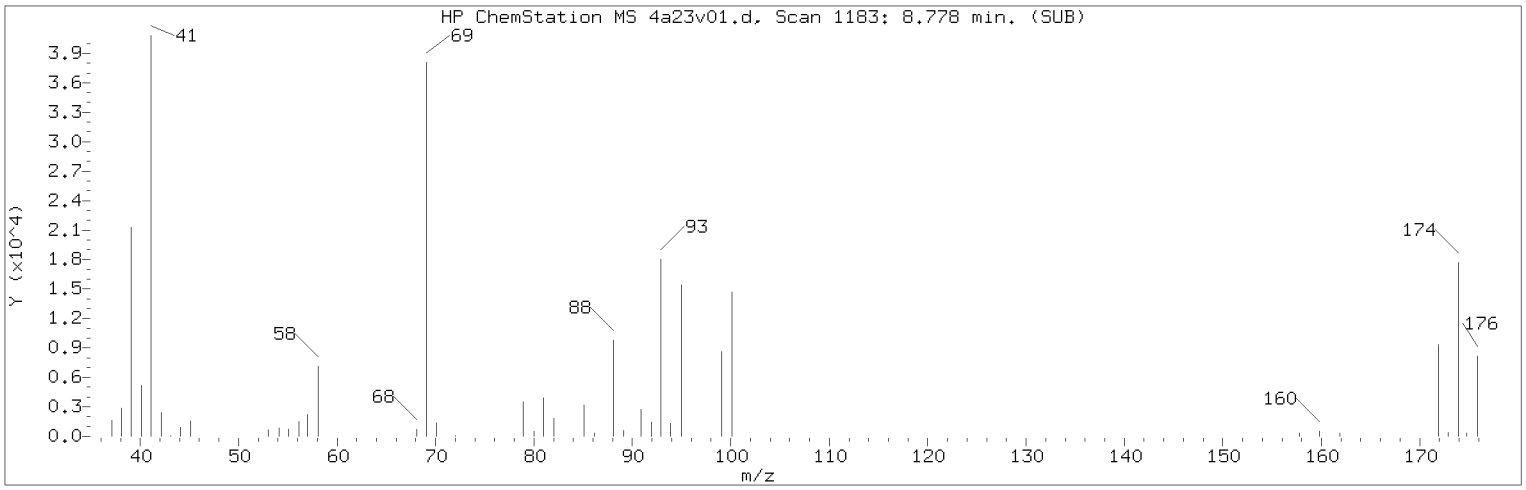
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:32
Date, time and analyst ID of latest file update: 23-Apr-2019 18:17 Automation

Sample Name: ICV401 Lab Sample ID: ICV401

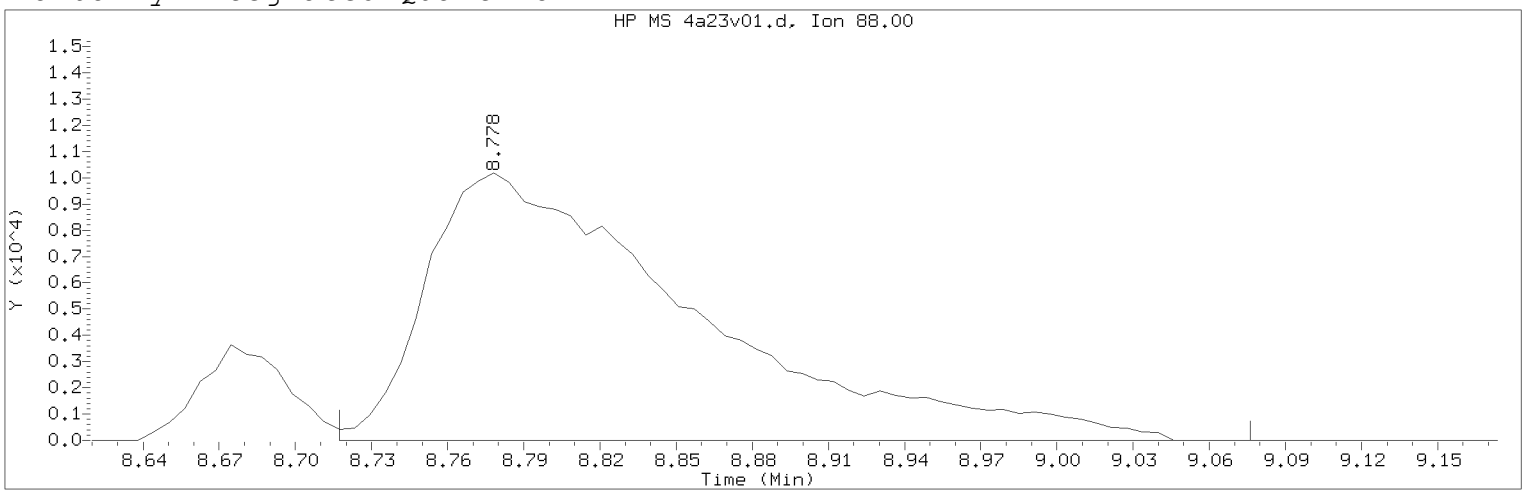
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 377
Retention Time (minutes): 3.875
Quant Ion : 45.00
Area : 121562
On-column Amount (ng) : 122.1369
Integration start scan : 358 Integration stop scan: 398
Y at integration start : 584 Y at integration end: 584

Digitally signed by Jason M. Long on 04/24/2019 at 14:28.
Target 3.5 esignature user ID: jmlong574

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23v01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: ICV401 Lab Sample ID: ICV401

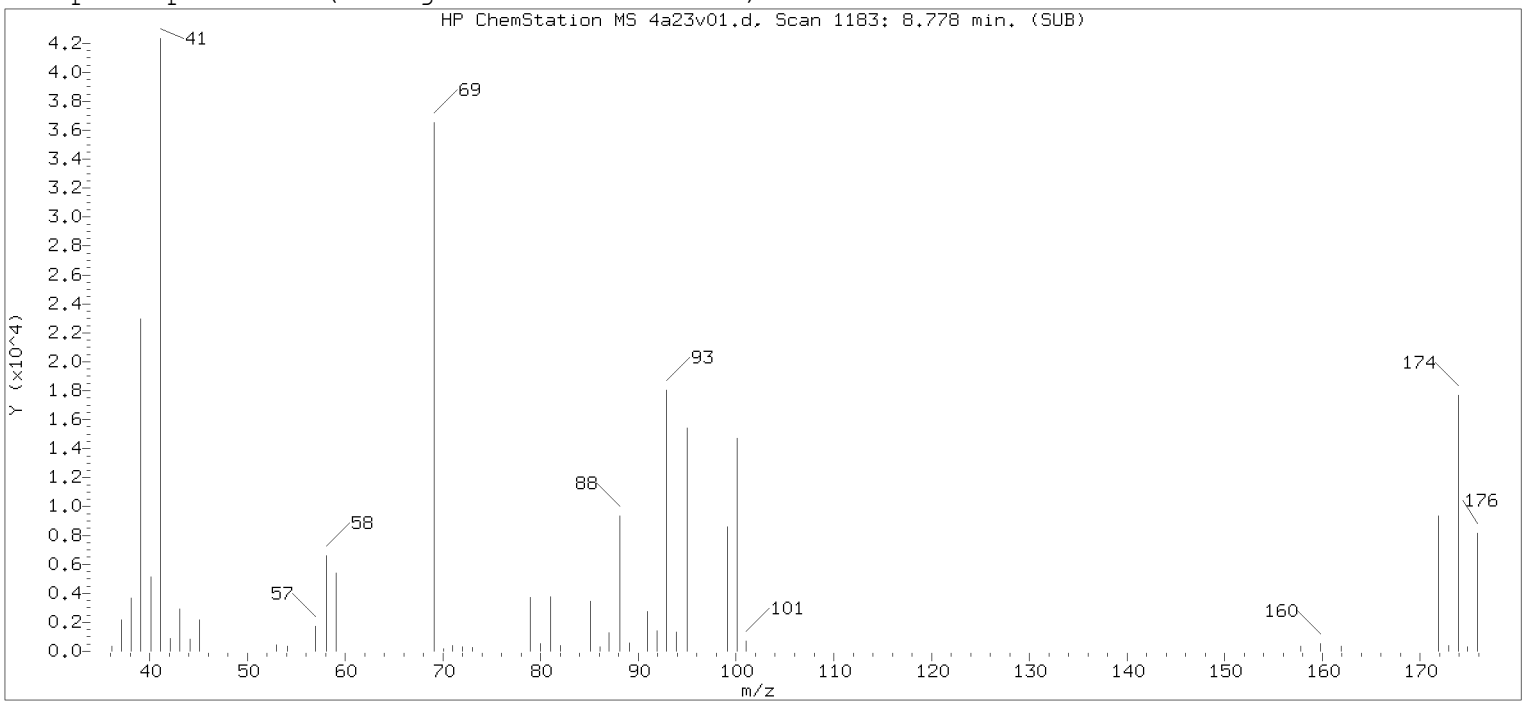
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1183
Retention Time (minutes): 8.778
Quant Ion : 88.00
Area (flag) : 75373M
On-Column Amount (ng) : 555.8121
Integration start scan : 1172 Integration stop scan: 1231
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

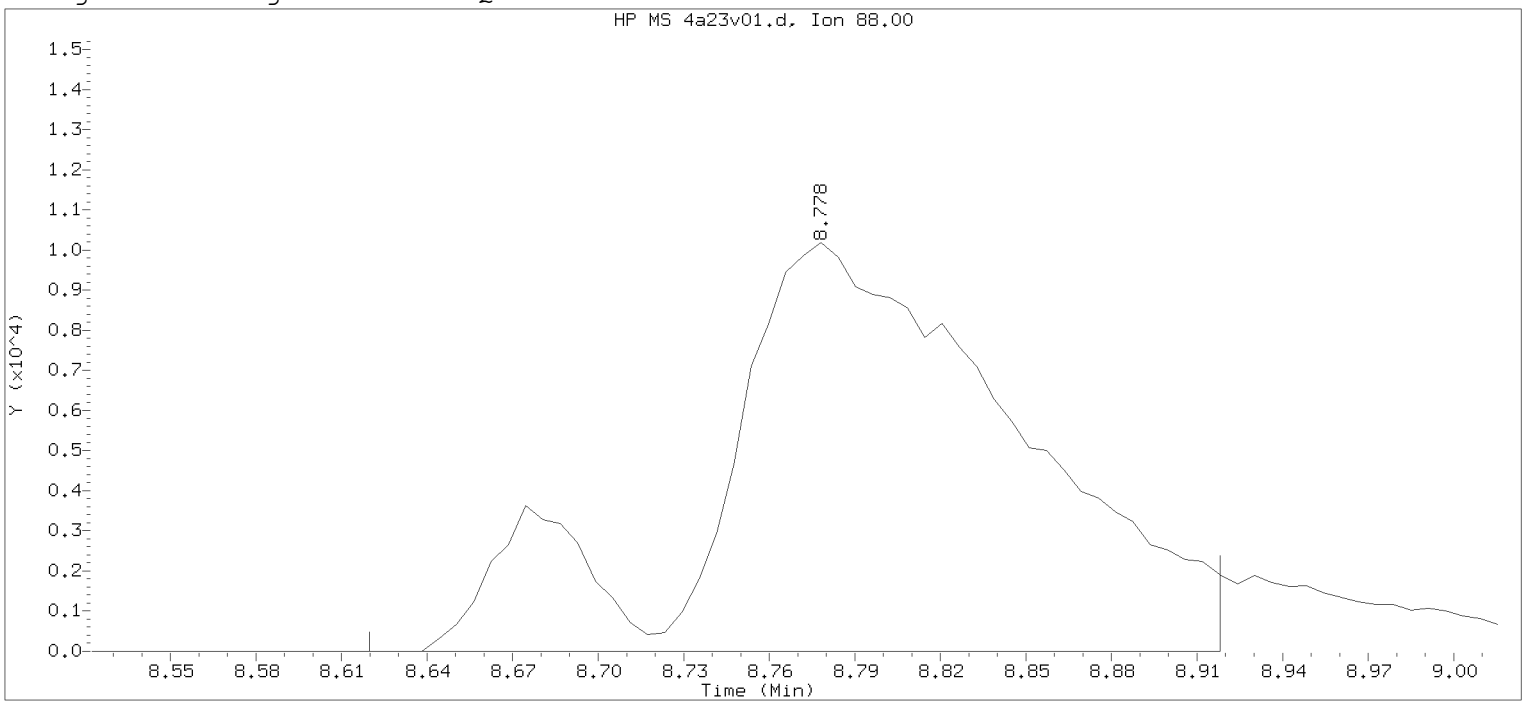
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:28.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23v01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

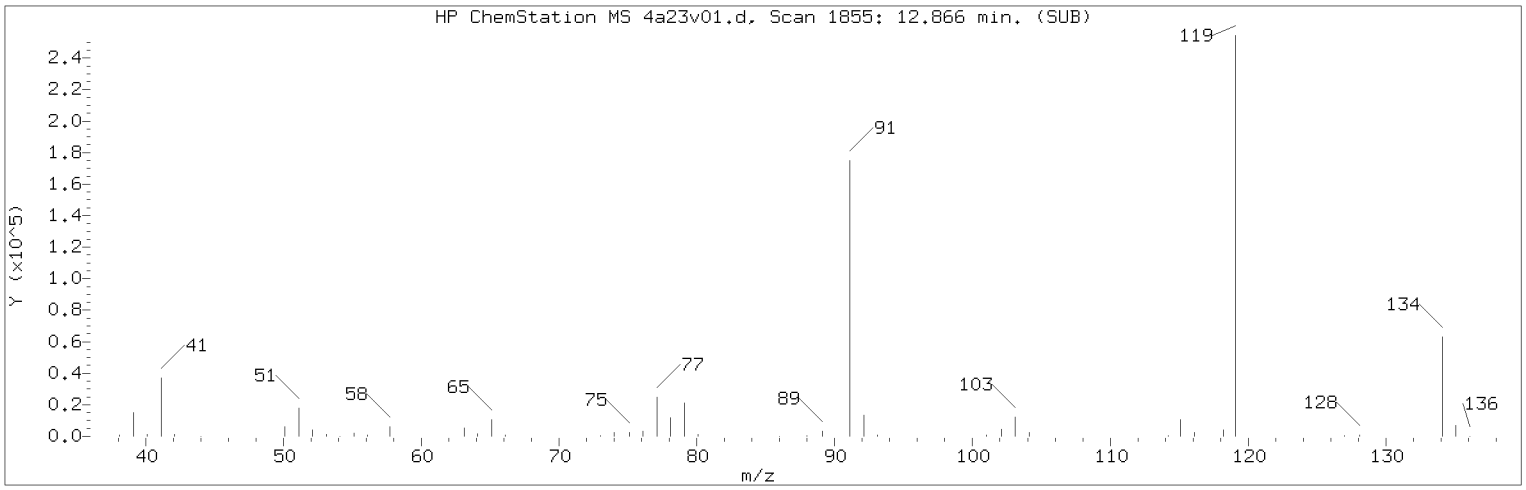
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:32
Date, time and analyst ID of latest file update: 23-Apr-2019 18:17 Automation

Sample Name: ICV401 Lab Sample ID: ICV401

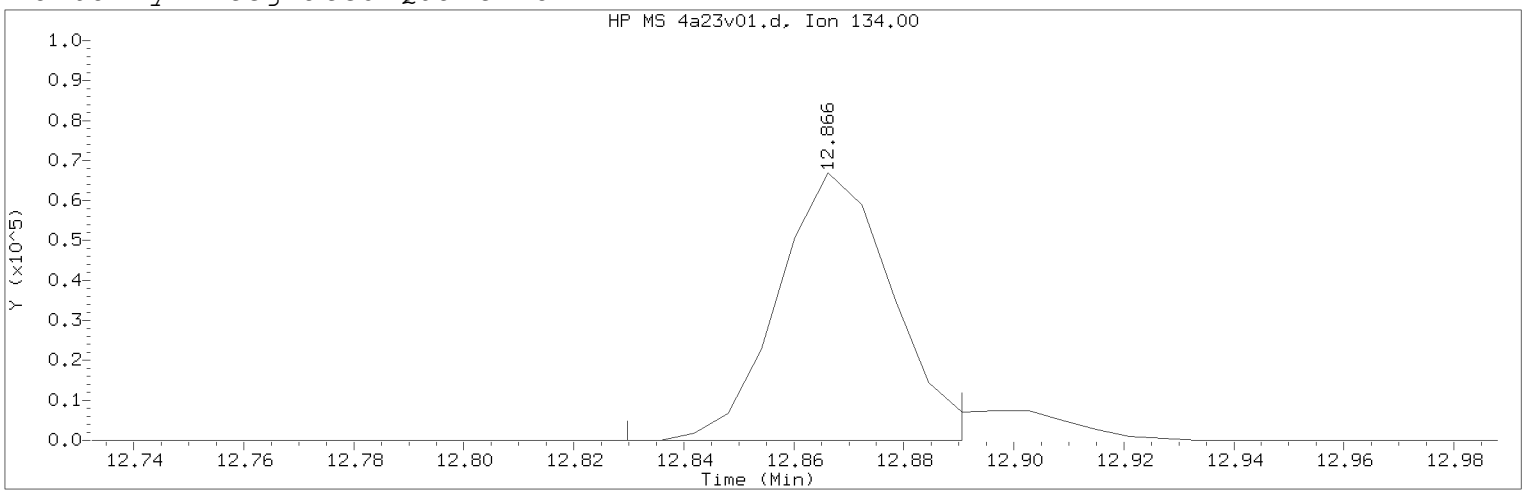
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1183		
Retention Time (minutes)	: 8.778		
Quant Ion	: 88.00		
Area	: 75677		
On-column Amount (ng)	: 645.7966		
Integration start scan	: 1156	Integration stop scan:	1205
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jason M. Long on 04/24/2019 at 14:28.
Target 3.5 esignature user: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23v01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: ICV401 Lab Sample ID: ICV401

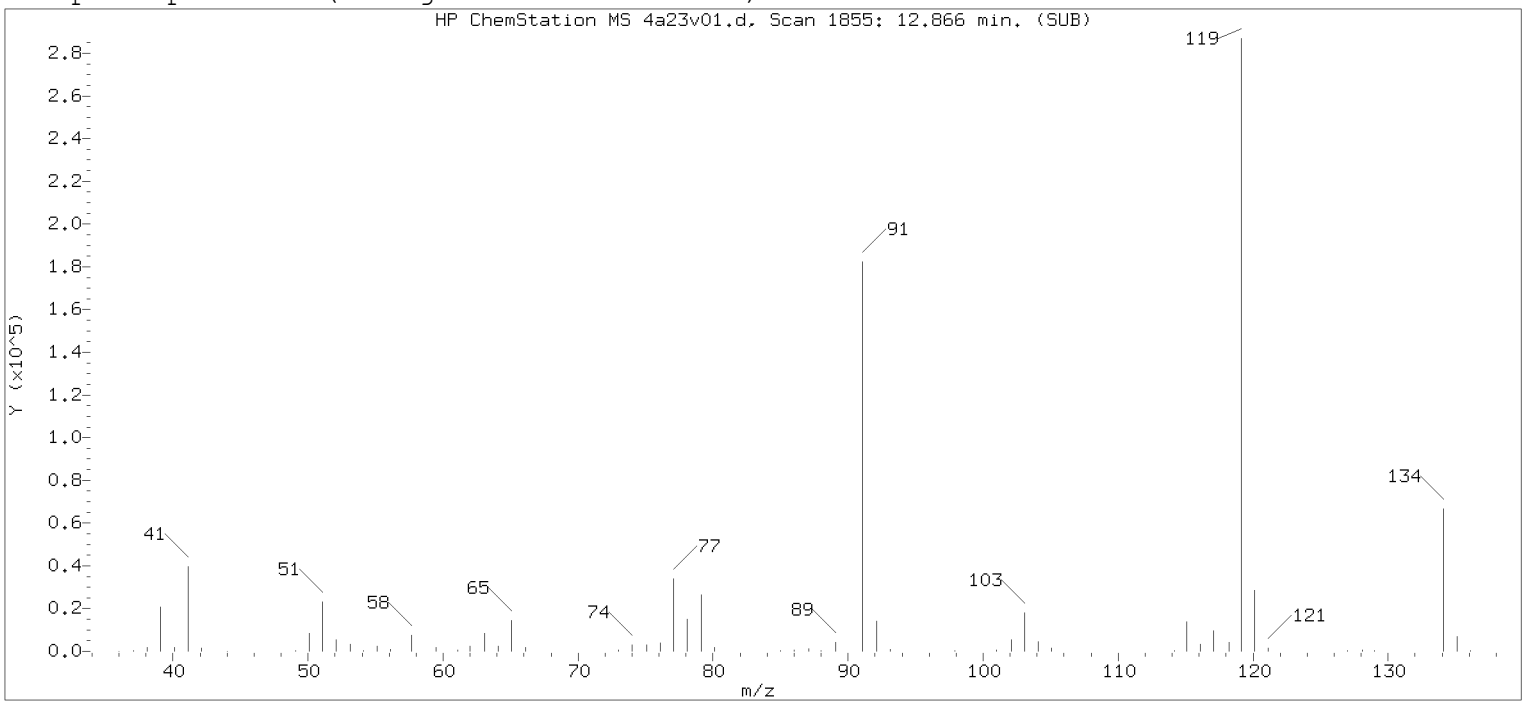
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area (flag) : 96515M
On-Column Amount (ng) : 20.2601
Integration start scan : 1848 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

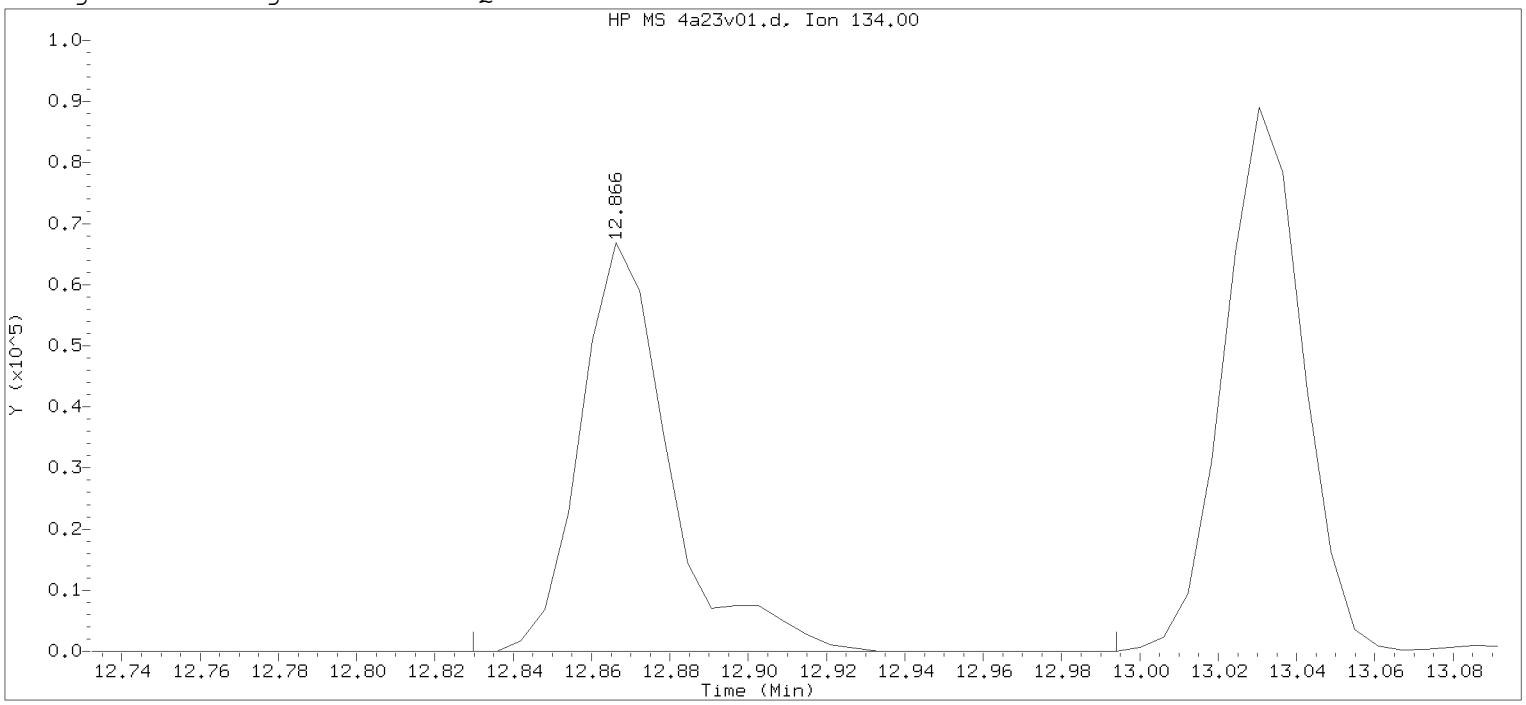
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:28.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23v01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:32
Date, time and analyst ID of latest file update: 23-Apr-2019 18:17 Automation

Sample Name: ICV401 Lab Sample ID: ICV401

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area : 105313
On-column Amount (ng) : 20.3910
Integration start scan : 1848 Integration stop scan: 1875
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:28.
Target 3.5 esignature user ID: jmlong

Data File: /chem/HP23297.i/19may21b.b/4y21t05.d

Date : 21-MAY-2019 19:58

Client ID: bfb FEB05-19

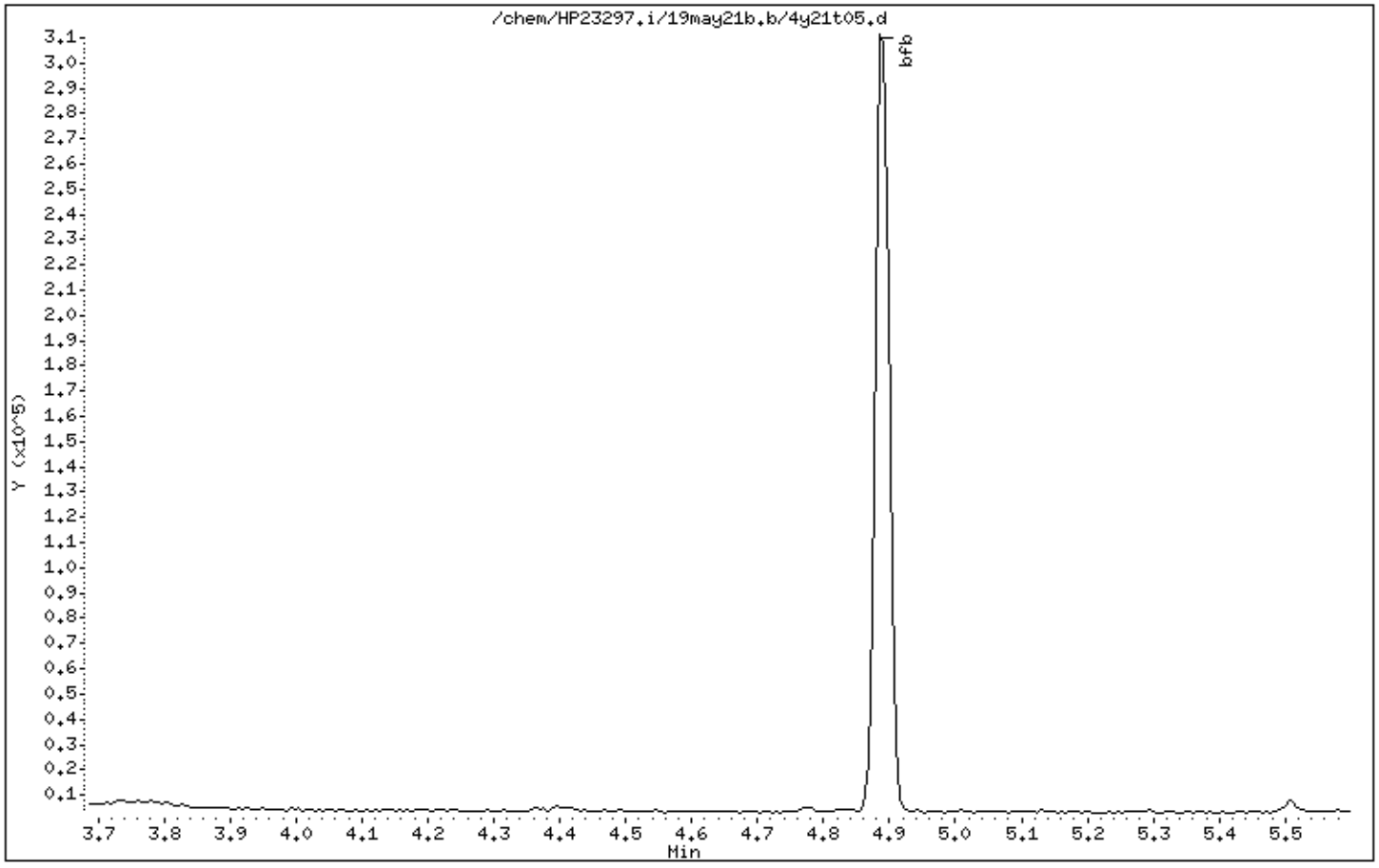
Instrument: HP23297.i

Sample Info: bfb FEB05-19;50NG BFB;1;3;;;;;;

Operator: DVV10203

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Don V. Viray on 05/21/2019 at 20:04.
Target 3.5 esignature user ID: dvv10203

Data File: /chem/HP23297.i/19may21b.b/4y21t05.d

Date : 21-MAY-2019 19:58

Client ID: bfb FEB05-19

Instrument: HP23297.i

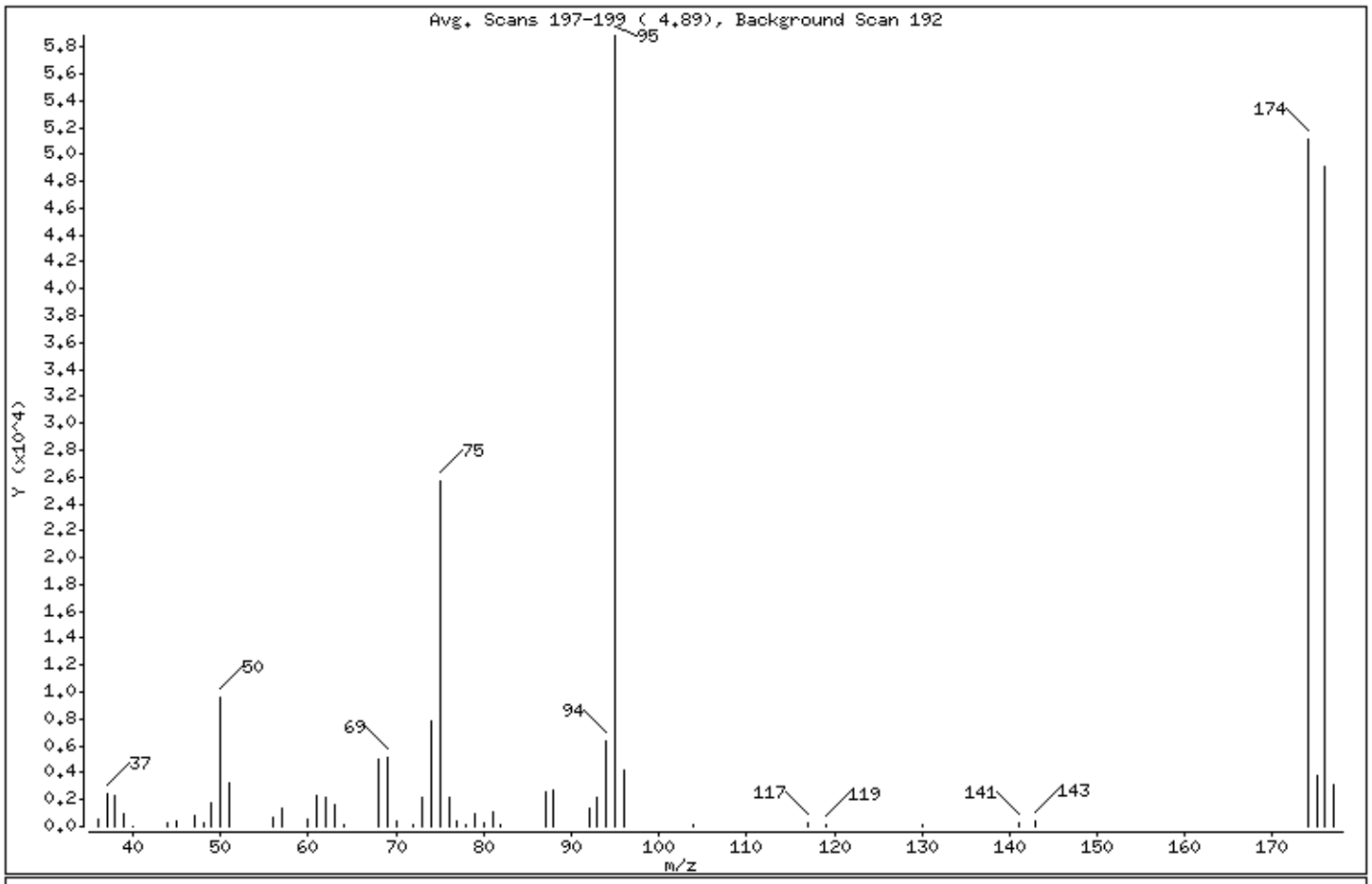
Sample Info: bfb FEB05-19;50NG BFB;1;3;;;;;;

Operator: DVV10203

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.25
75	30.00 - 60.00% of mass 95	43.76
96	5.00 - 9.00% of mass 95	7.11
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	86.78
175	5.00 - 9.00% of mass 174	6.49 (7.48)
176	95.00 - 101.00% of mass 174	83.43 (96.14)
177	5.00 - 9.00% of mass 176	5.32 (6.37)

Digitally signed by Don V. Viray on 05/21/2019 at 20:04.
Target 3.5 esignature user ID: dvv10203

Data File: /chem/HP23297.i/19may21b.b/4y21t05.d

Date : 21-MAY-2019 19:58

Client ID: bfb FEB05-19

Instrument: HP23297.i

Sample Info: bfb FEB05-19;50NG BFB;1;3;;;;;;

Operator: DVV10203

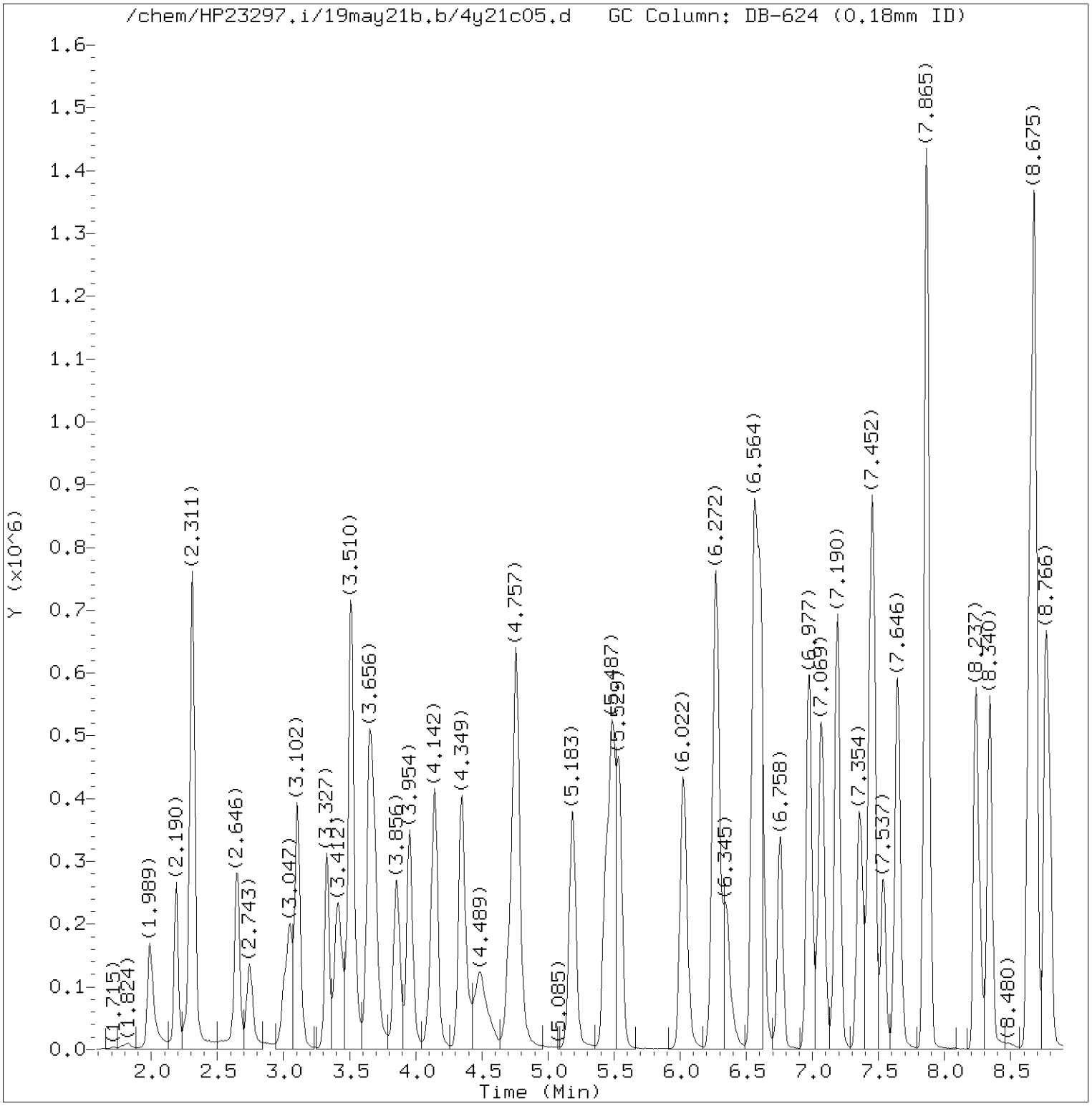
Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: 4y21t05.d
Spectrum: Avg. Scans 197-199 (4.89), Background Scan 192
Location of Maximum: 95.00
Number of points: 50

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	474	57.00	1368	76.00	2209	96.00	4186
37.00	2469	60.00	498	77.00	417	104.00	84
38.00	2269	61.00	2355	78.00	113	117.00	216
39.00	915	62.00	2122	79.00	967	119.00	199
40.00	52	63.00	1586	80.00	275	130.00	107
44.00	255	64.00	88	81.00	1048	141.00	330
45.00	470	68.00	4960	82.00	191	143.00	436
47.00	809	69.00	5095	87.00	2549	174.00	51064
48.00	239	70.00	438	88.00	2677	175.00	3818
49.00	1800	72.00	197	92.00	1379	176.00	49088
50.00	9562	73.00	2135	93.00	2192	177.00	3128
51.00	3231	74.00	7797	94.00	6316		
56.00	675	75.00	25752	95.00	58840		

Digitally signed by Don V. Viray on 05/21/2019 at 20:04.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

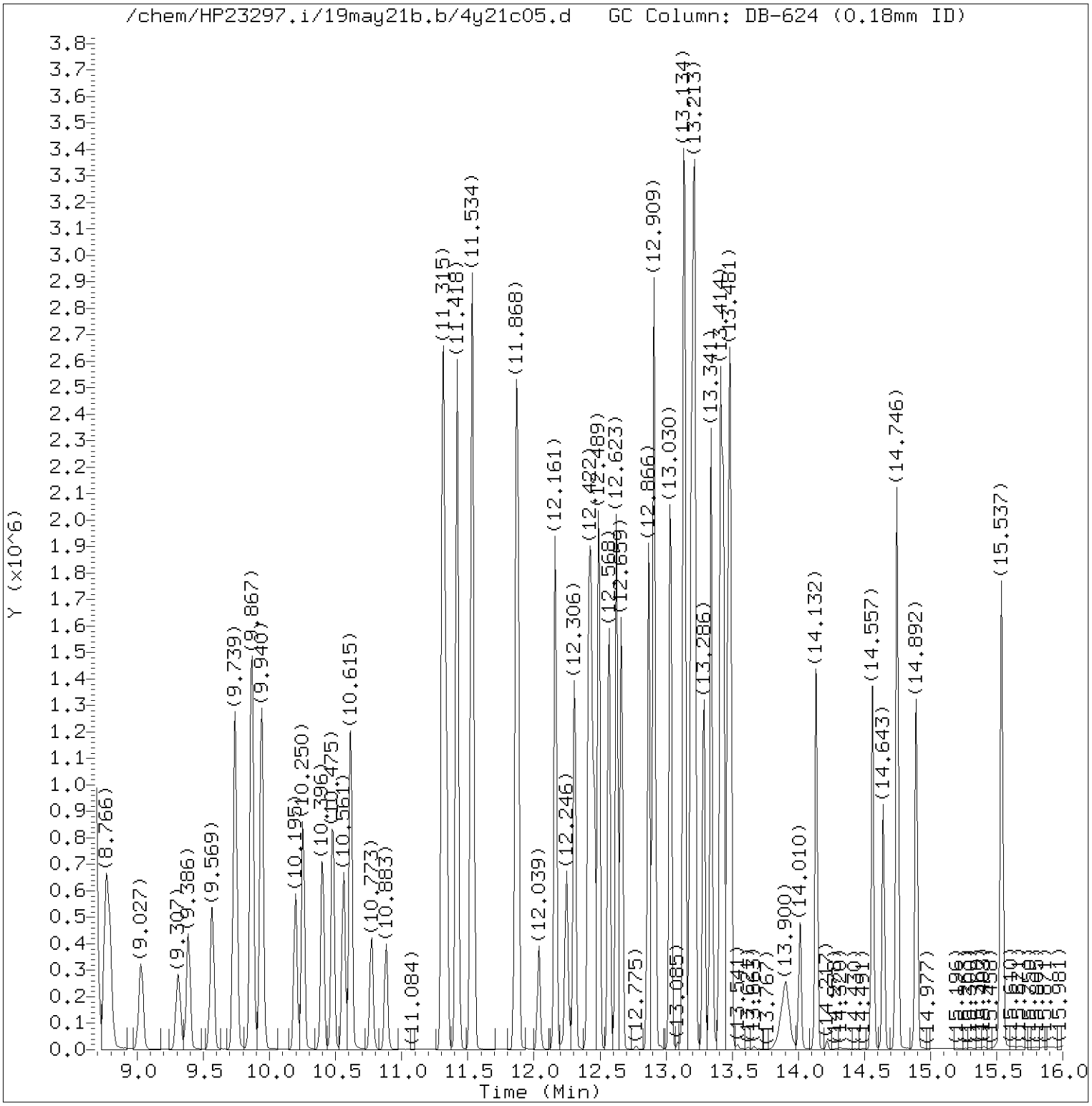
Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21c05.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 20:44 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 21:17 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Don V. Viray
on 05/21/2019 at 21:17.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21c05.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 20:44 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 21:17 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Don V. Viray
on 05/21/2019 at 21:17.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21c05.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 20:44 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 21:17 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.989	85	351166	38.351
4) Chloromethane	(2)	2.190	50	358782	40.456
5) 1,3-Butadiene	(2)	2.311	39	408932M	85.034
6) Vinyl Chloride	(2)	2.311	62	346588	39.973
8) Bromomethane	(2)	2.646	94	287800	40.451
9) Chloroethane	(2)	2.743	64	192508	40.206
12) Trichlorofluoromethane	(2)	3.047	101	395817	37.646
11) n-Pentane	(2)	3.102	43	401622	47.279
15) Freon 123a	(2)	3.412	67	278188	45.988
16) Acrolein	(1)	3.510	56	1093776	482.166
17) 1,1-Dichloroethene	(2)	3.650	96	209384	49.998
17) 1,1-Dichloroethene	(2)	3.650	63	101018	45.684
19) Freon 113	(2)	3.668	101	213940	46.424
18) Acetone	(1)	3.686	58	113357	101.761
22) Methyl Iodide	(2)	3.850	142	435069	52.136
21) 2-Propanol	(1)	3.862	45	220565	246.411
23) Carbon Disulfide	(2)	3.954	76	775188	51.906
27) Methyl Acetate	(2)	4.118	43	373838	42.858
25) Allyl Chloride	(2)	4.148	41	376788	40.574
28) Methylene Chloride	(2)	4.343	84	254602	47.995
29)*t-Butyl alcohol-d10	(1)	4.361	65	400087M	250.000
30) t-Butyl alcohol	(1)	4.489	59	370070	235.054
31) Acrylonitrile	(2)	4.708	53	204832	44.823
33) Methyl Tertiary Butyl Ether	(2)	4.751	73	667508	44.620
32) trans-1,2-Dichloroethene	(2)	4.763	96	244513	48.865
34) n-Hexane	(2)	5.183	57	368492	44.587
36) 1,1-Dichloroethane	(2)	5.432	63	429478	46.181
38) di-Isopropyl ether	(2)	5.487	45	848158	46.017
39) 2-Chloro-1,3-butadiene	(2)	5.542	53	369921	43.937
40) Ethyl t-butyl ether	(2)	6.022	59	691880	43.700
43) 1,2-Dichloroethene (Total)	(2)		96	519550	96.532
44) 2-Butanone	(2)	6.253	43	579517	81.712
42) cis-1,2-Dichloroethene	(2)	6.272	96	275037	47.667
45) 2,2-Dichloropropane	(2)	6.284	77	292130	40.065
47) Propionitrile	(1)	6.351	54	450253	269.240
48) Methacrylonitrile	(2)	6.564	67	511924	118.762
49) Bromochloromethane	(2)	6.606	128	149005	46.766
50) Tetrahydrofuran	(1)	6.612	71	161631	97.912

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 05/21/2019 at 21:17.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21c05.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 20:44 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 21:17 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	6.758	83	401639	43.850
52)$Dibromofluoromethane	(2)	6.971	113	287342	48.546
52)$Dibromofluoromethane	(2)	6.971	111	296957	48.996
53) 1,1,1-Trichloroethane	(2)	6.977	97	324419	42.312
54) Cyclohexane	(2)	7.062	56	428626	42.985
54) Cyclohexane	(2)	7.069	84	359216	44.111
54) Cyclohexane	(2)	7.069	69	130758	43.875
56) Carbon Tetrachloride	(2)	7.184	117	271934	40.820
55) 1,1-Dichloropropene	(2)	7.190	75	328799	45.388
58) Isobutyl Alcohol	(1)	7.354	41	343672	619.940
57)$1,2-Dichloroethane-d4	(2)	7.427	102	72372	50.040
57)$1,2-Dichloroethane-d4	(2)	7.434	65	308167	44.036
57)$1,2-Dichloroethane-d4	(2)	7.427	104	46247	50.076
60) Benzene	(2)	7.458	78	1027622	46.647
61) 1,2-Dichloroethane	(2)	7.537	62	302578	40.523
61) 1,2-Dichloroethane	(2)	7.543	98	31135	50.510
65) t-Amyl methyl ether	(2)	7.646	73	694030	43.355
66)*Fluorobenzene	(2)	7.865	96	1200798	50.000
67) n-Heptane	(2)	7.865	43	356805	36.672
69) n-Butanol	(1)	8.237	56	582260	1279.022
71) Trichloroethene	(2)	8.340	95	257245	46.034
72) Methylcyclohexane	(2)	8.638	83	454488	43.186
72) Methylcyclohexane	(2)	8.644	98	195660	42.952
73) 1,2-Dichloropropane	(2)	8.681	63	268608	46.412
75) 1,4-Dioxane	(1)	8.766	88	79621M	679.075
76) Methyl Methacrylate	(2)	8.766	69	299600	45.712
74) Dibromomethane	(2)	8.790	93	172393	45.892
78) Bromodichloromethane	(2)	9.027	83	288833	42.340
79) 2-Nitropropane	(2)	9.313	41	229542	69.139
80) 2-Chloroethyl Vinyl Ether	(2)	9.386	63	242617	45.817
81) cis-1,3-Dichloropropene	(2)	9.563	75	394709	43.765
82) 4-Methyl-2-pentanone	(2)	9.739	43	1051988	82.662
83)$Toluene-d8	(3)	9.867	98	1227648	50.114
83)$Toluene-d8	(3)	9.867	100	798458	50.213
88) Toluene	(3)	9.940	92	653716	46.134
90) 1,3-Dichloropropene (total)	(3)		100	751873	86.603
89) trans-1,3-Dichloropropene	(3)	10.195	75	357164	42.838
91) Ethyl Methacrylate	(3)	10.250	69	482070	46.007

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$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/21/2019 at 21:17.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21c05.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 20:44 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 21:17 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) 1,1,2-Trichloroethane	(3)	10.402	97	259164	46.796
93) Tetrachloroethene	(3)	10.481	166	287723	46.549
94) 1,3-Dichloropropane	(3)	10.561	76	428368	46.595
96) 2-Hexanone	(3)	10.615	43	847631	84.055
97) Dibromochloromethane	(3)	10.773	129	248181	42.351
99) 1,2-Dibromoethane	(3)	10.883	107	287610	47.039
100)*Chlorobenzene-d5	(3)	11.309	117	954478	50.000
102) Chlorobenzene	(3)	11.333	112	746152	46.592
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	245570	45.422
104) Ethylbenzene	(3)	11.418	91	1241804	45.626
106) m+p-Xylene	(3)	11.534	106	1002904	92.416
108) Xylene (Total)	(3)		106	1496975	138.219
107) o-Xylene	(3)	11.862	106	494071	45.803
109) Styrene	(3)	11.881	104	840646	46.837
110) Bromoform	(3)	12.039	173	183709	39.784
111) Isopropylbenzene	(3)	12.161	105	1230762	45.608
112) Cyclohexanone	(1)	12.246	55	300399	641.296
114)$4-Bromofluorobenzene	(3)	12.306	95	444269	47.580
114)$4-Bromofluorobenzene	(3)	12.306	174	405633	49.203
116) 1,1,2,2-Tetrachloroethane	(4)	12.410	83	465356	48.420
115) Bromobenzene	(4)	12.422	156	338019	46.318
118) trans-1,4-Dichloro-2-butene	(4)	12.434	53	158371	50.128
117) 1,2,3-Trichloropropane	(4)	12.459	110	133635	45.985
119) n-Propylbenzene	(4)	12.489	91	1455044	46.359
120) 2-Chlorotoluene	(4)	12.568	126	306573	46.771
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	1048330	46.153
121) 4-Chlorotoluene	(4)	12.659	126	321235	47.017
124) tert-Butylbenzene	(4)	12.866	134	220917M	46.330
125) Pentachloroethane	(4)	12.903	167	192288	44.227
126) 1,2,4-Trimethylbenzene	(4)	12.909	105	1092776	46.079
127) sec-Butylbenzene	(4)	13.030	105	1326785	45.724
129) 1,3-Dichlorobenzene	(4)	13.134	146	635293	46.444
130) p-Isopropyltoluene	(4)	13.140	119	1155929	45.284
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	521521	50.000
133) 1,4-Dichlorobenzene	(4)	13.207	146	648638	46.286
134) 1,2,3-Trimethylbenzene	(4)	13.213	105	1168167	45.874
135) Benzyl Chloride	(4)	13.286	91	861884	45.218
136) 1,3-Diethylbenzene	(4)	13.341	119	729925	45.749

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Digitally signed by Don V. Viray
on 05/21/2019 at 21:17.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21c05.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 20:44 Analyst ID: DVV10203

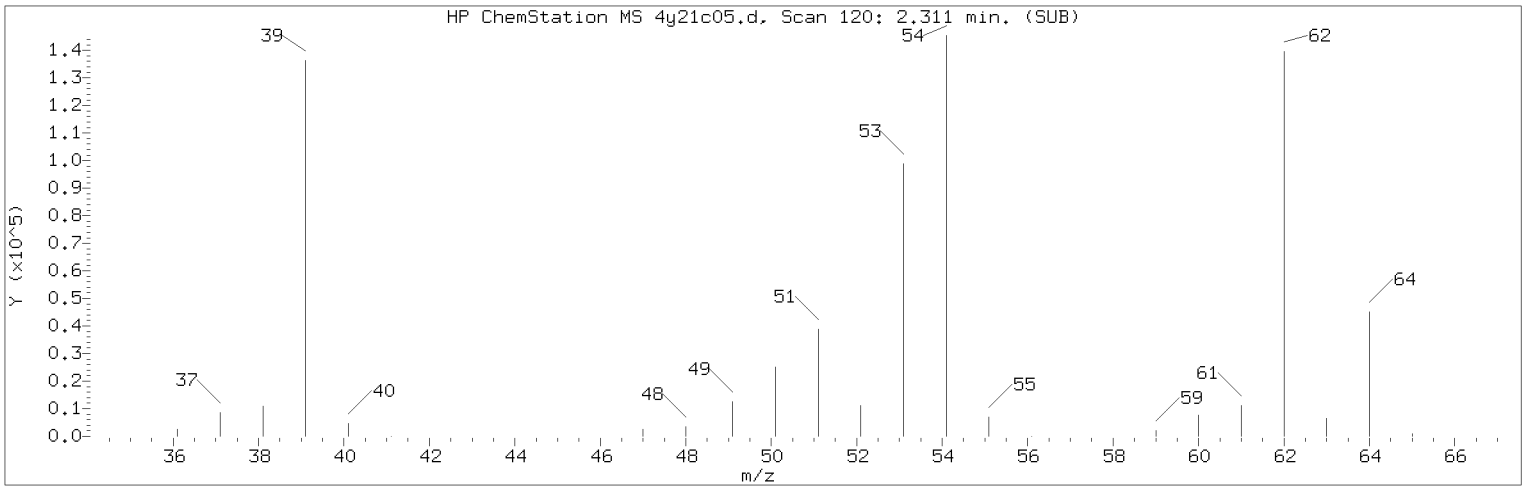
Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 21:17 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

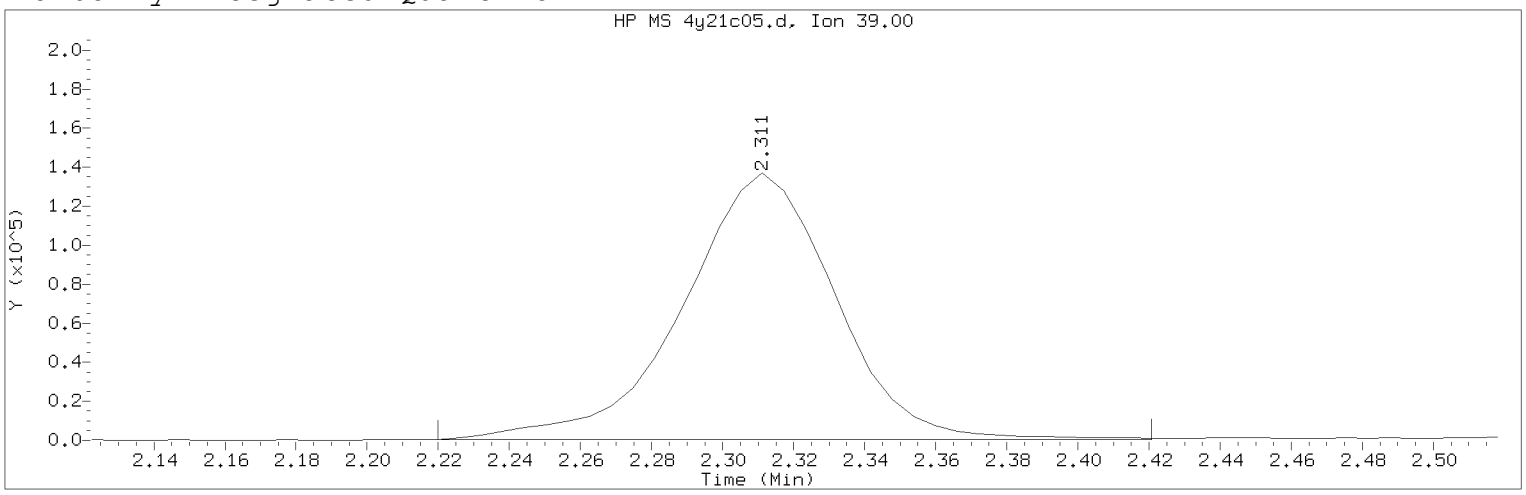
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
141) Diethylbenzene (total)	(4)		100	2106515	136.220
137) 1,4-Diethylbenzene	(4)	13.414	119	766031	45.080
139) n-Butylbenzene	(4)	13.432	92	569754	43.572
138) 1,2-Dichlorobenzene	(4)	13.468	146	618267	46.386
140) 1,2-Diethylbenzene	(4)	13.487	119	610559	45.392
142) 1,2-Dibromo-3-chloropropane	(4)	14.010	75	105114	41.459
144) 1,3,5-Trichlorobenzene	(4)	14.138	180	448858	44.666
146) 1,2,4-Trichlorobenzene	(4)	14.563	180	426236	44.767
147) Hexachlorobutadiene	(4)	14.643	225	165798	37.681
148) Naphthalene	(4)	14.746	128	1567683	47.523
149) 1,2,3-Trichlorobenzene	(4)	14.892	180	416271	45.509
150) 2-Methylnaphthalene	(4)	15.537	142	894927	43.376

Digitally signed by Don V. Viray
on 05/21/2019 at 21:17.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may21b.b/4y21c05.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 20:44 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 21:17 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

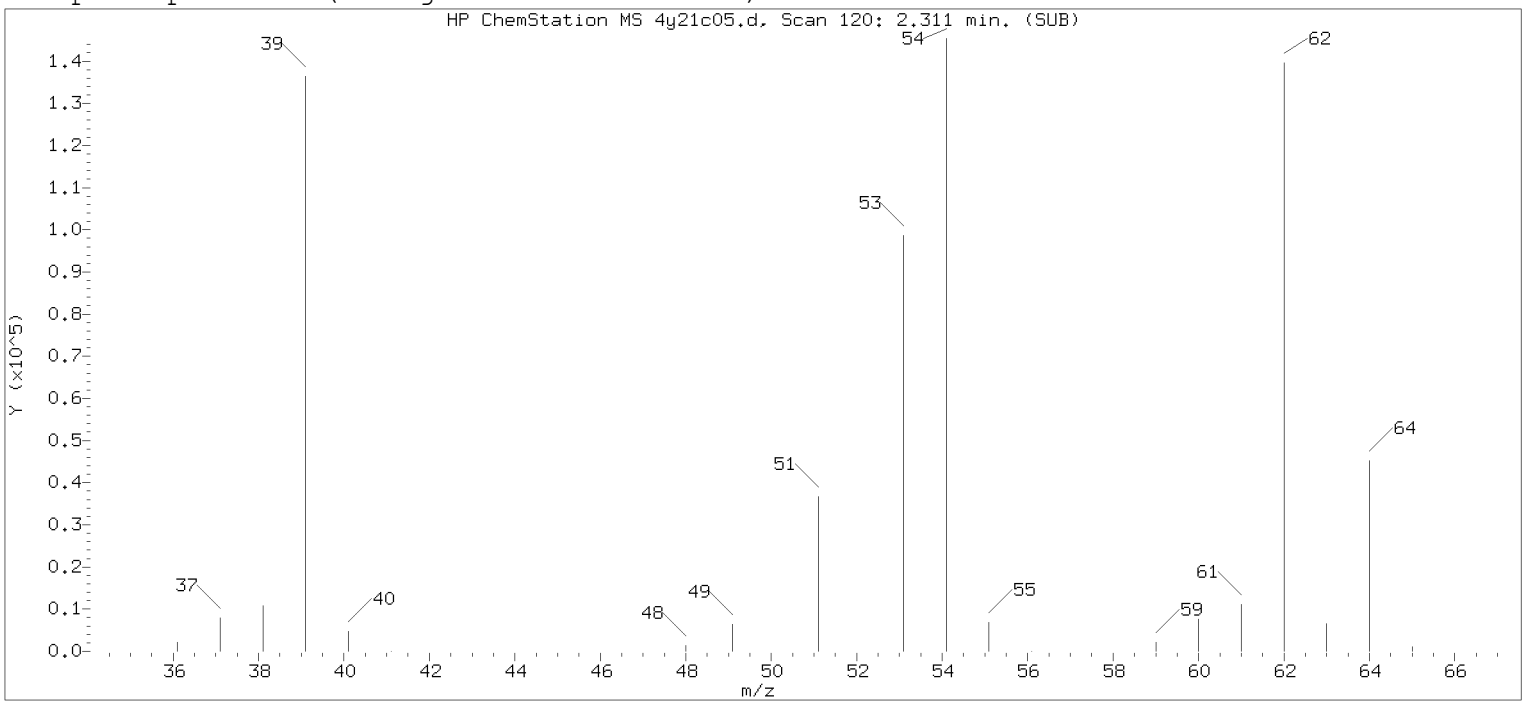
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 120
Retention Time (minutes): 2.311
Quant Ion : 39.00
Area (flag) : 408932M
On-Column Amount (ng) : 85.0337
Integration start scan : 104 Integration stop scan: 137
Y at integration start : 183 Y at integration end: 183

Reason for manual integration: improper integration

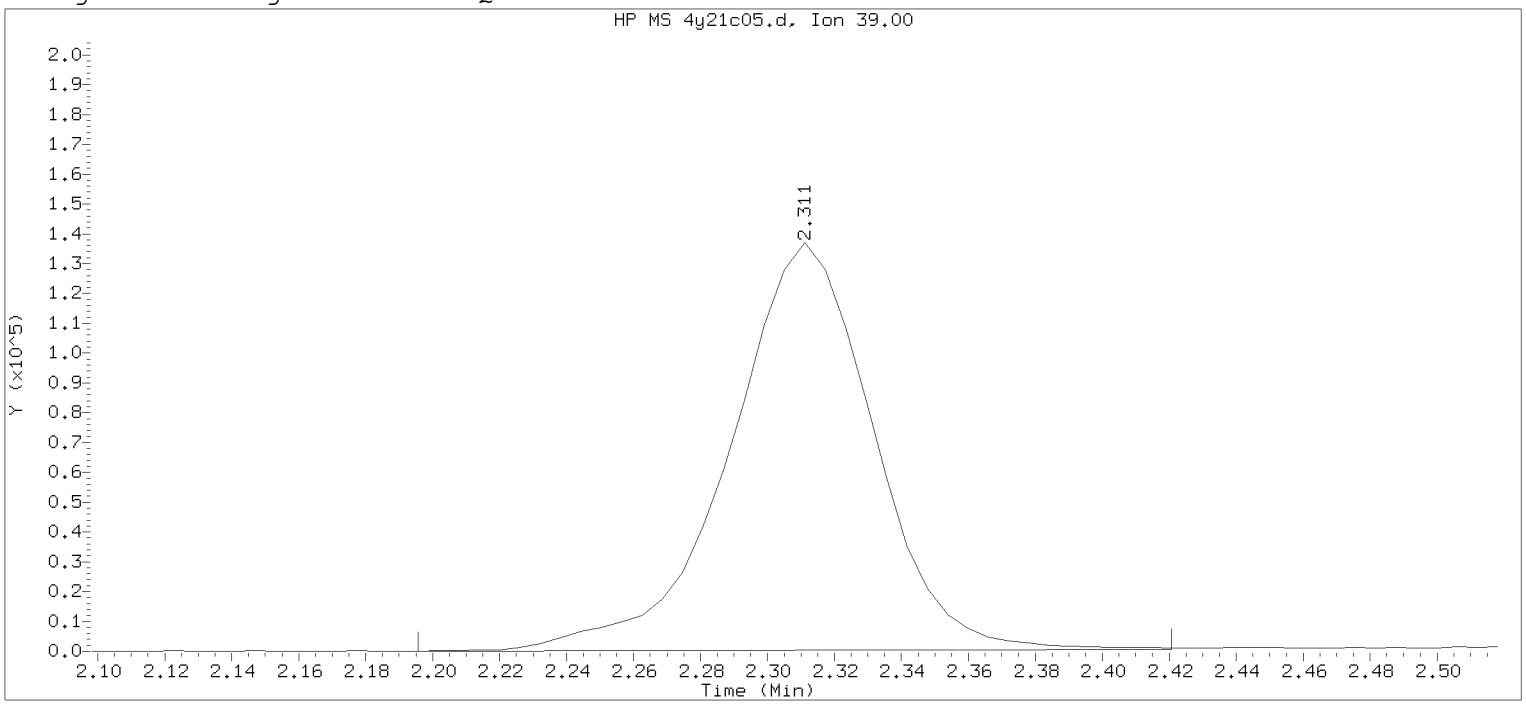
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/21/2019 at 21:17.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Marla S. Brewer on 05/22/2019 at 15:01.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may21b.b/4y21c05.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 20:44 Analyst ID: DVV10203

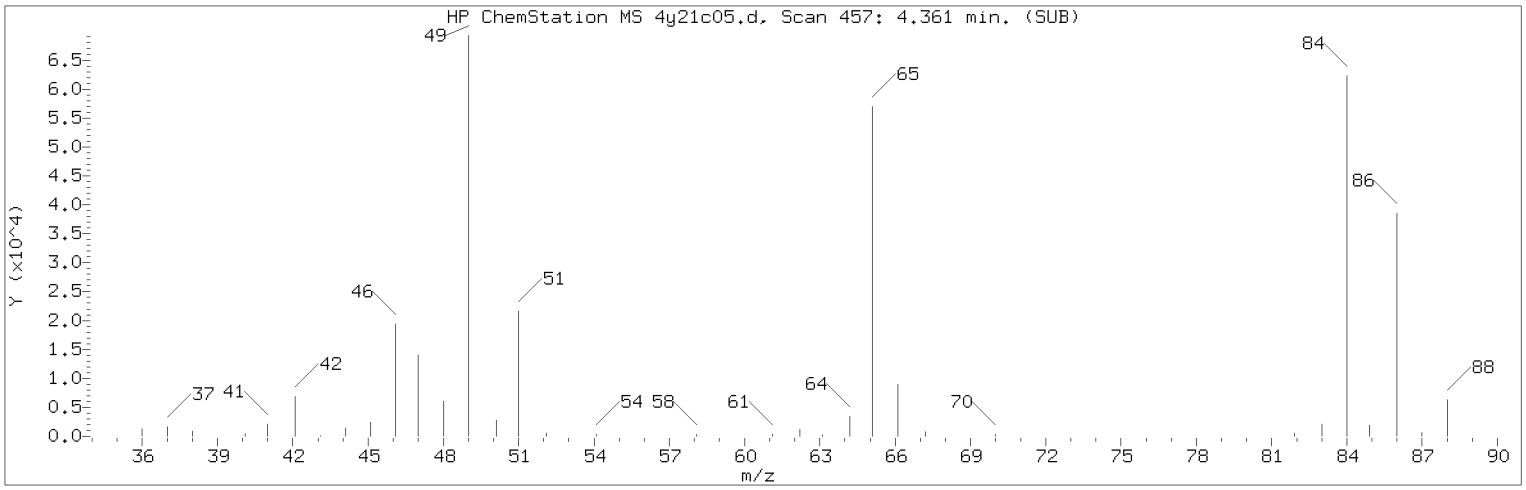
Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 21:02 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

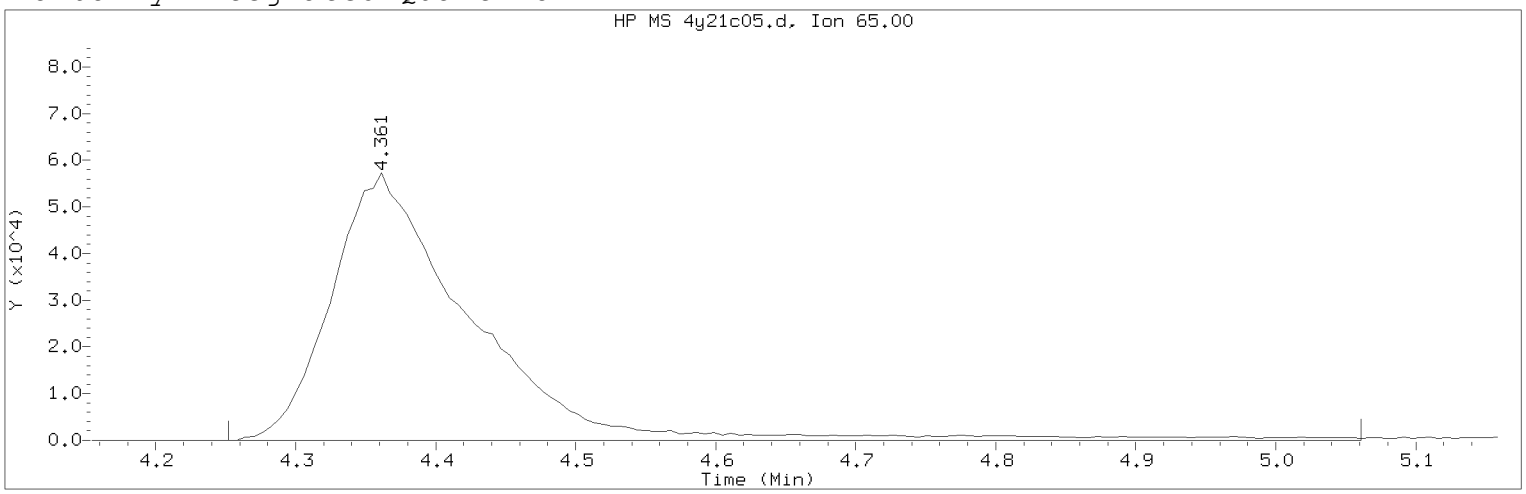
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 120
Retention Time (minutes): 2.311
Quant Ion : 39.00
Area : 407032
On-column Amount (ng) : 84.6386
Integration start scan : 100 Integration stop scan: 137
Y at integration start : 0 Y at integration end: 646

Digitally signed by Don V. Viray on 05/21/2019 at 21:17.
Target 3.5 esignature user id: dviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may21b.b/4y21c05.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 20:44 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 21:17 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

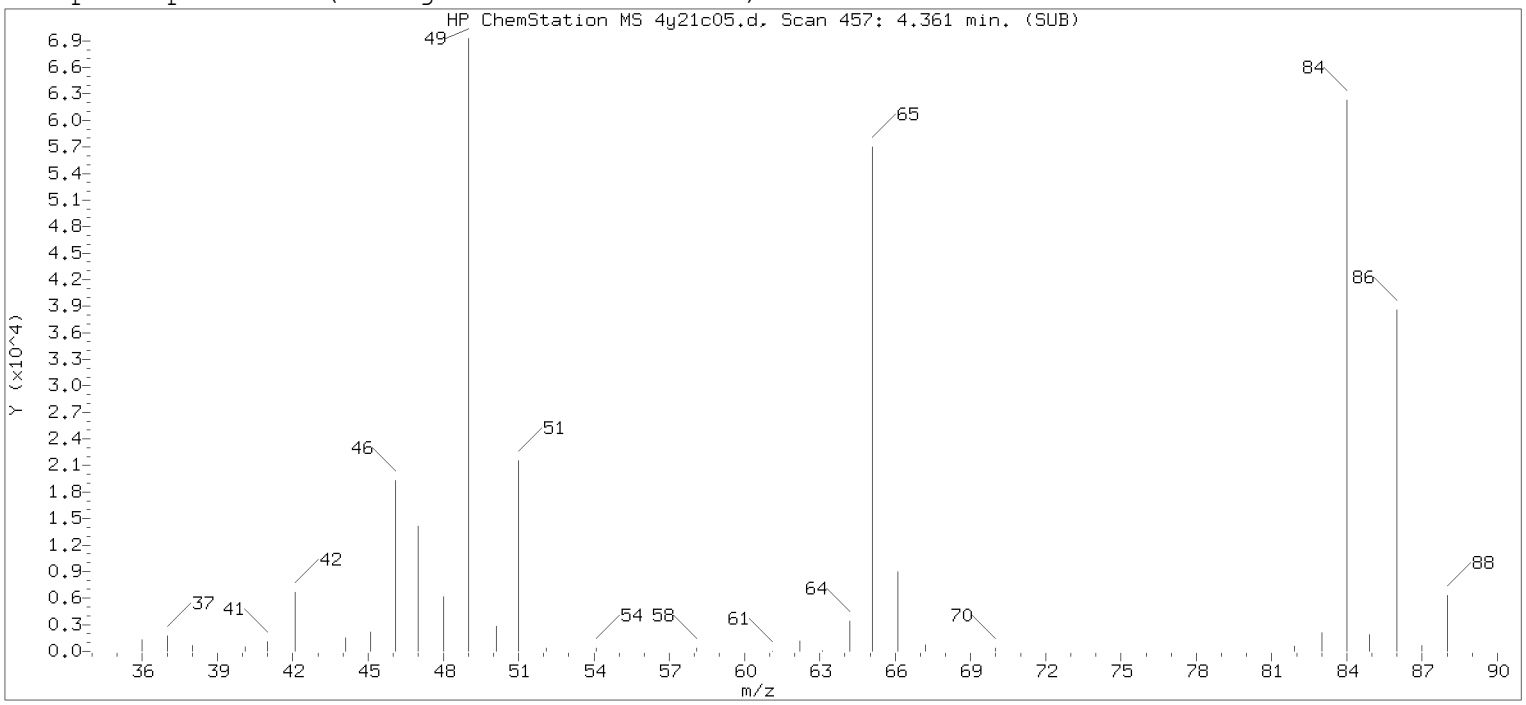
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 457
Retention Time (minutes): 4.361
Quant Ion : 65.00
Area (flag) : 400087M
On-Column Amount (ng) : 250.0000
Integration start scan : 438 Integration stop scan: 571
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

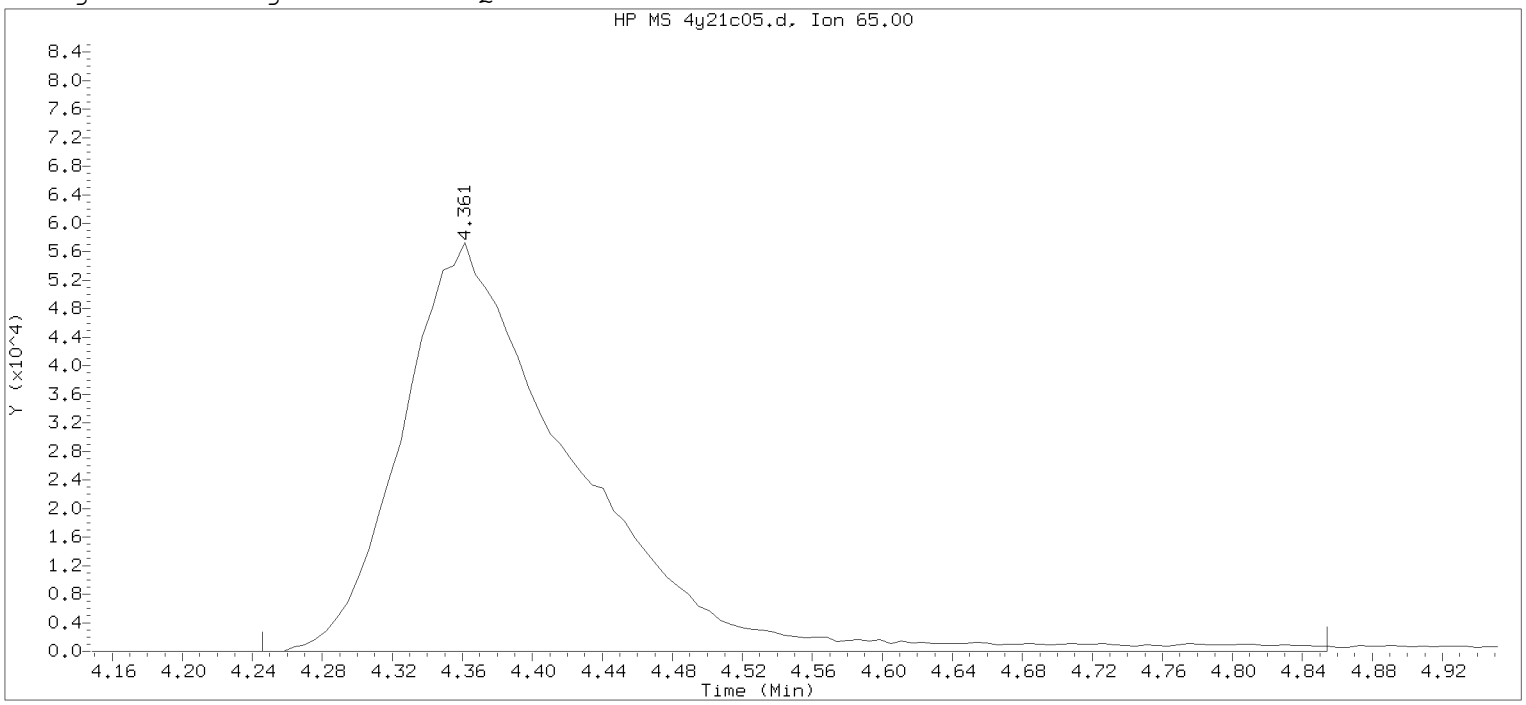
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/21/2019 at 21:17.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Marla S. Brewer on 05/22/2019 at 15:01.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may21b.b/4y21c05.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 20:44 Analyst ID: DVV10203

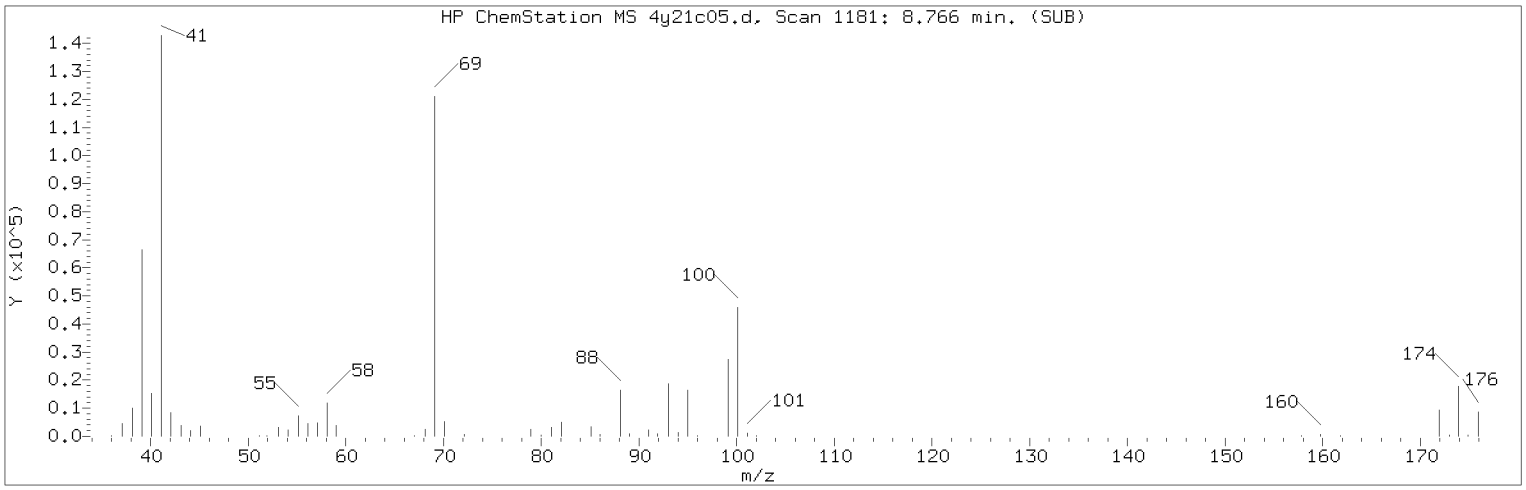
Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 21:02 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

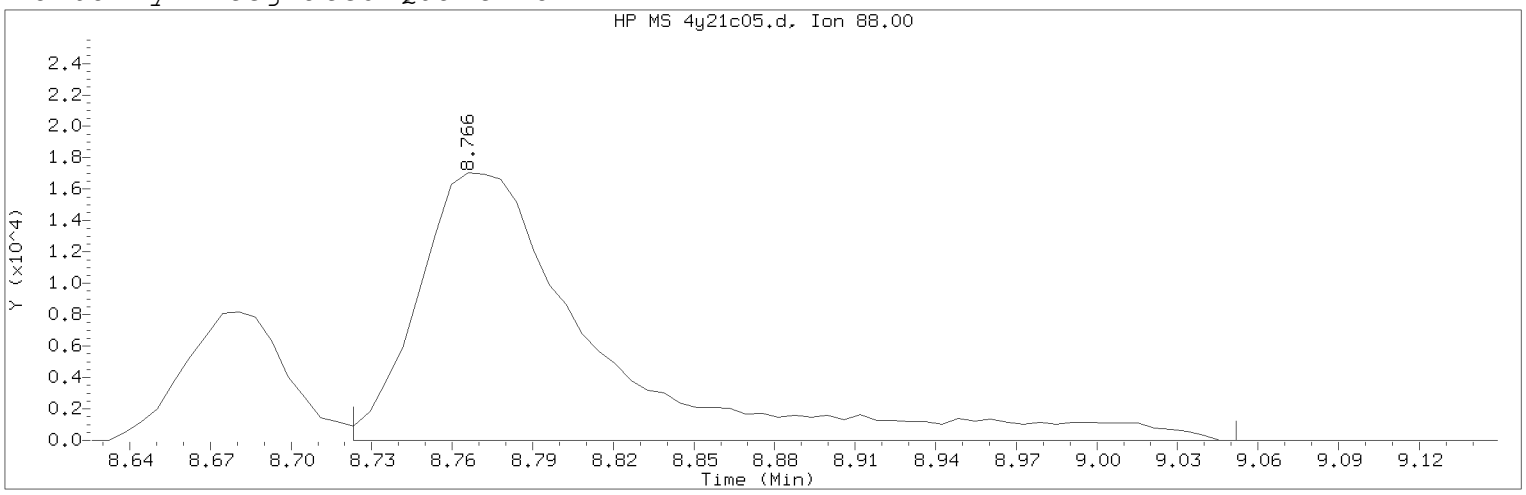
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 457
Retention Time (minutes): 4.361
Quant Ion : 65.00
Area : 392149
On-column Amount (ng) : 250.0000
Integration start scan : 437 Integration stop scan: 537
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/21/2019 at 21:17.
Target 3.5 esignature user id: dviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may21b.b/4y21c05.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 20:44 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 21:17 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

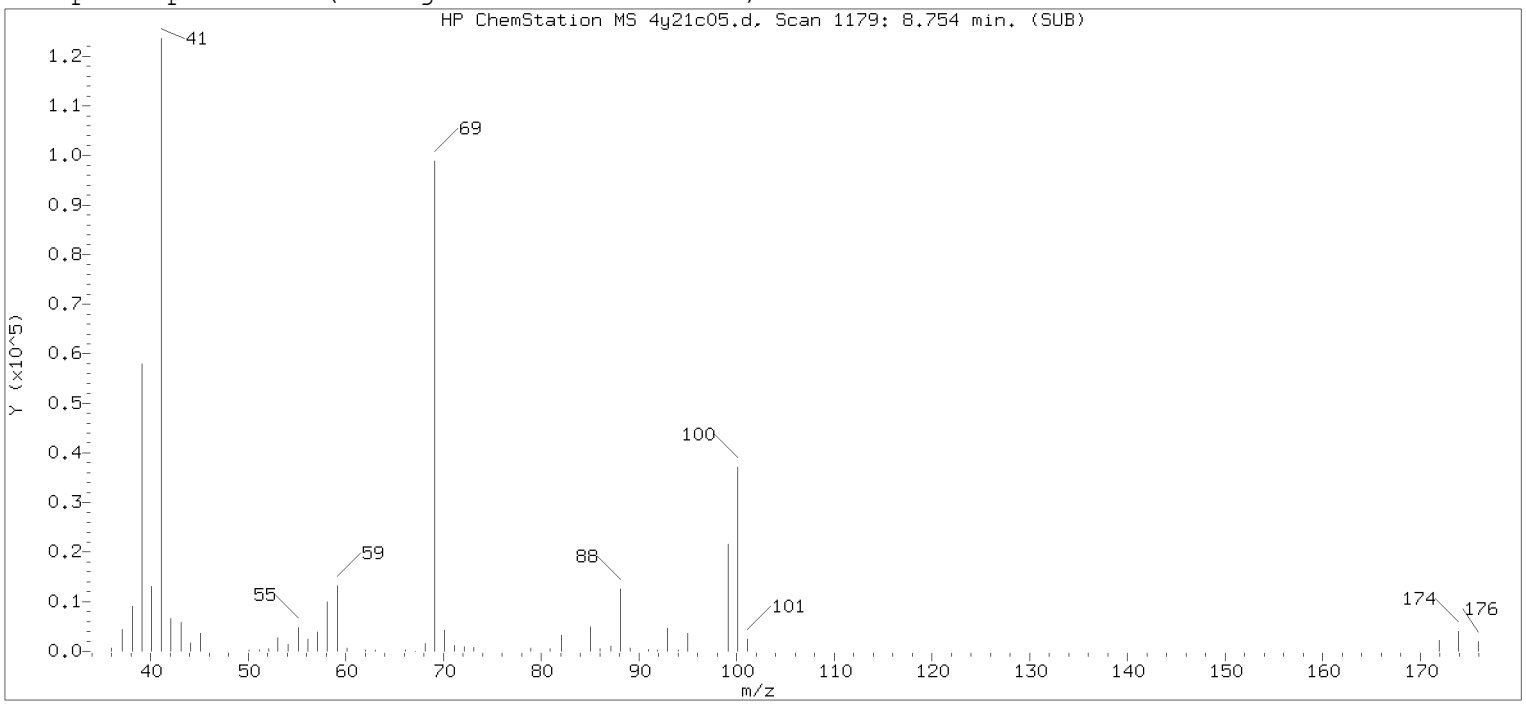
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1181
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area (flag) : 79621M
On-Column Amount (ng) : 679.0746
Integration start scan : 1173 Integration stop scan: 1227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

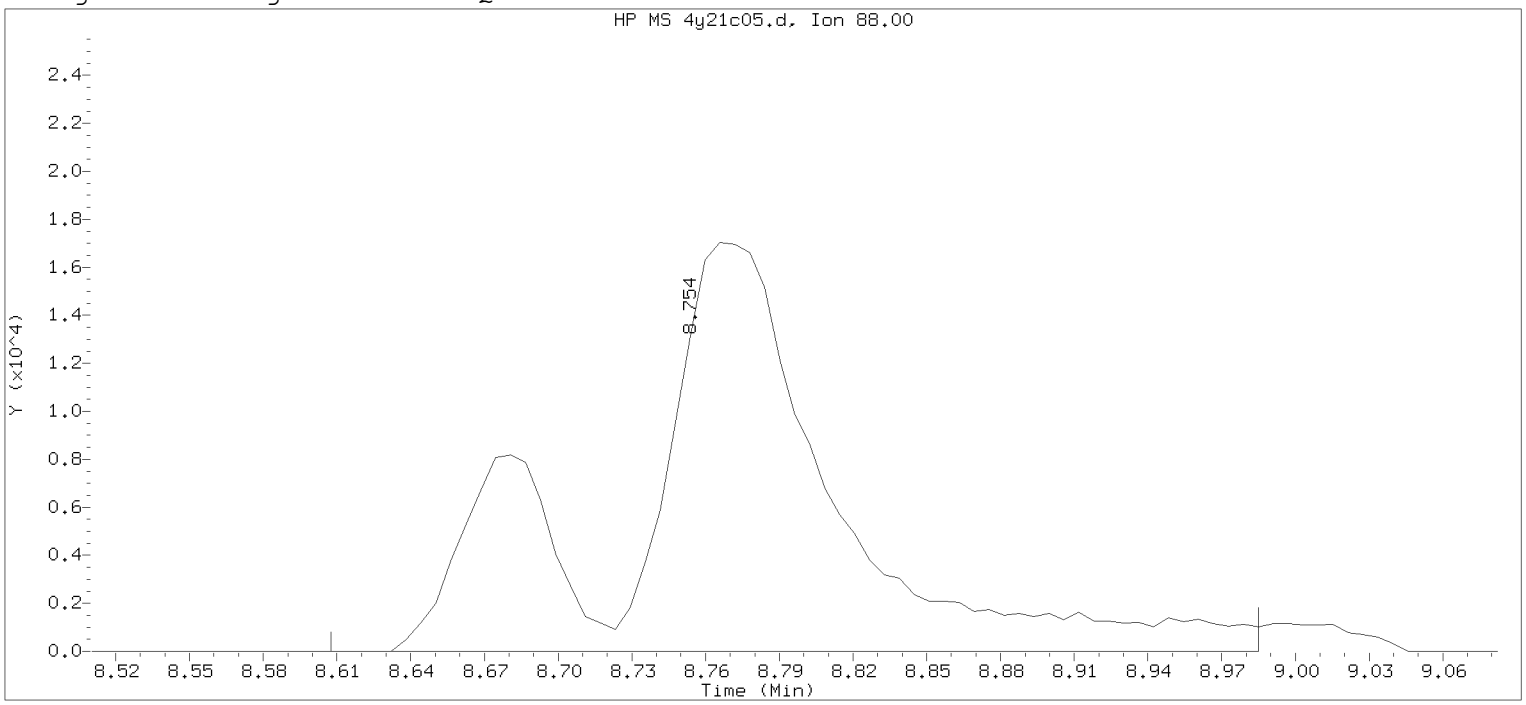
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/21/2019 at 21:17.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Marla S. Brewer on 05/22/2019 at 15:01.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may21b.b/4y21c05.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 20:44 Analyst ID: DVV10203

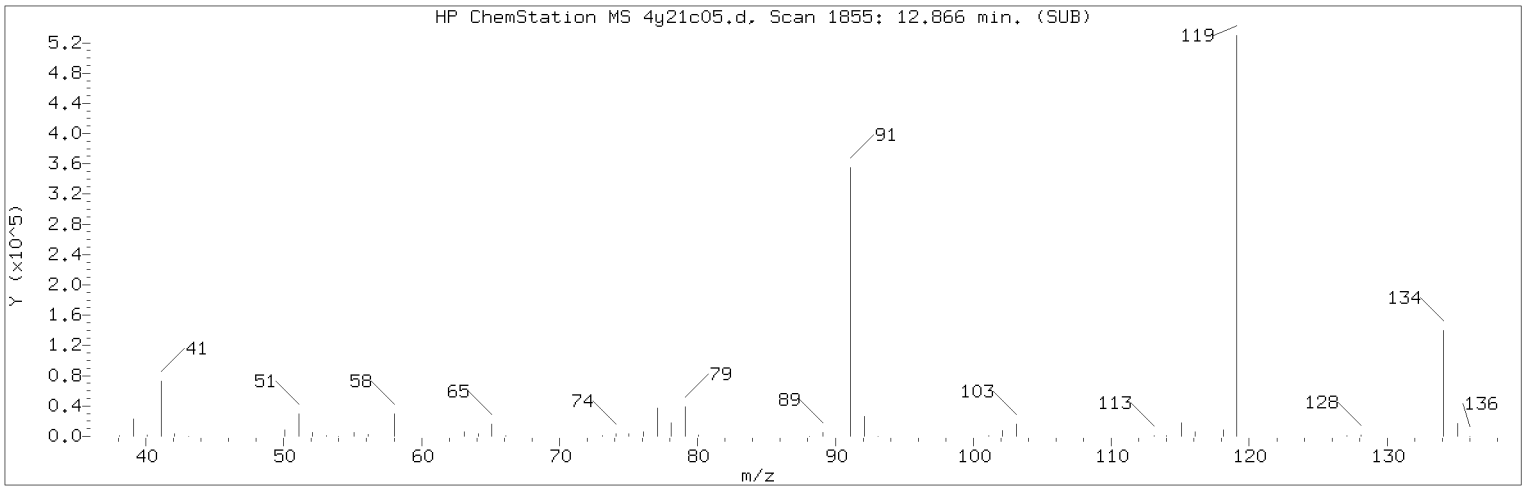
Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 21:02 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

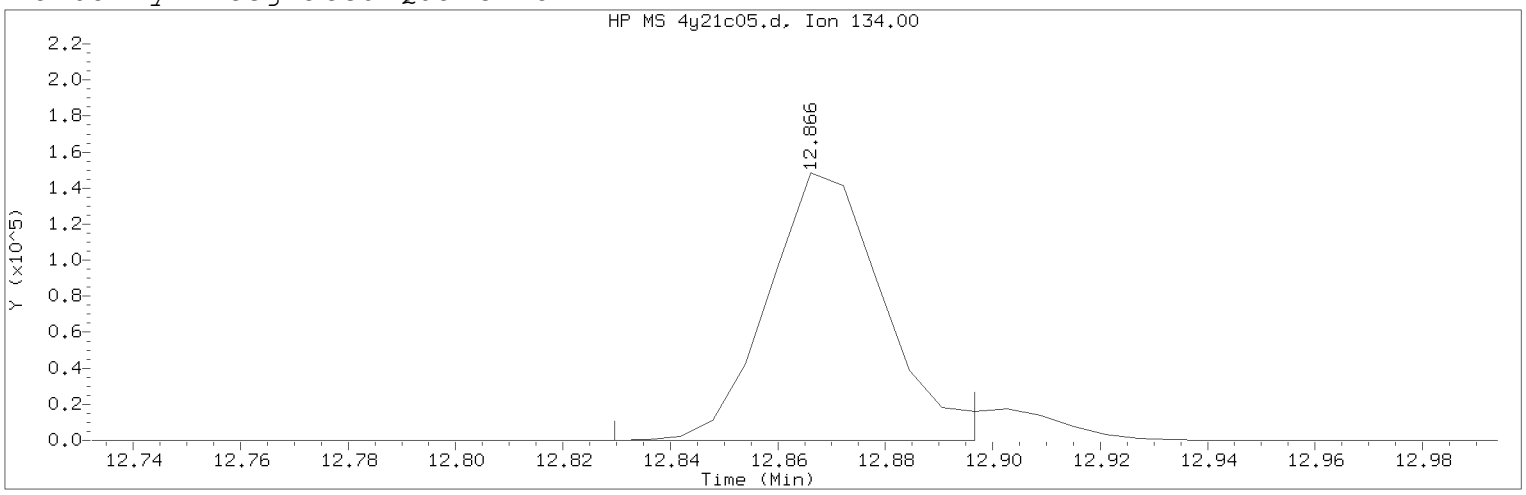
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1179
Retention Time (minutes): 8.754
Quant Ion : 88.00
Area : 98158
On-column Amount (ng) : 854.1119
Integration start scan : 1154 Integration stop scan: 1216
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/21/2019 at 21:17.
Target 3.5 esignature user id: dviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may21b.b/4y21c05.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 20:44 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 21:17 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

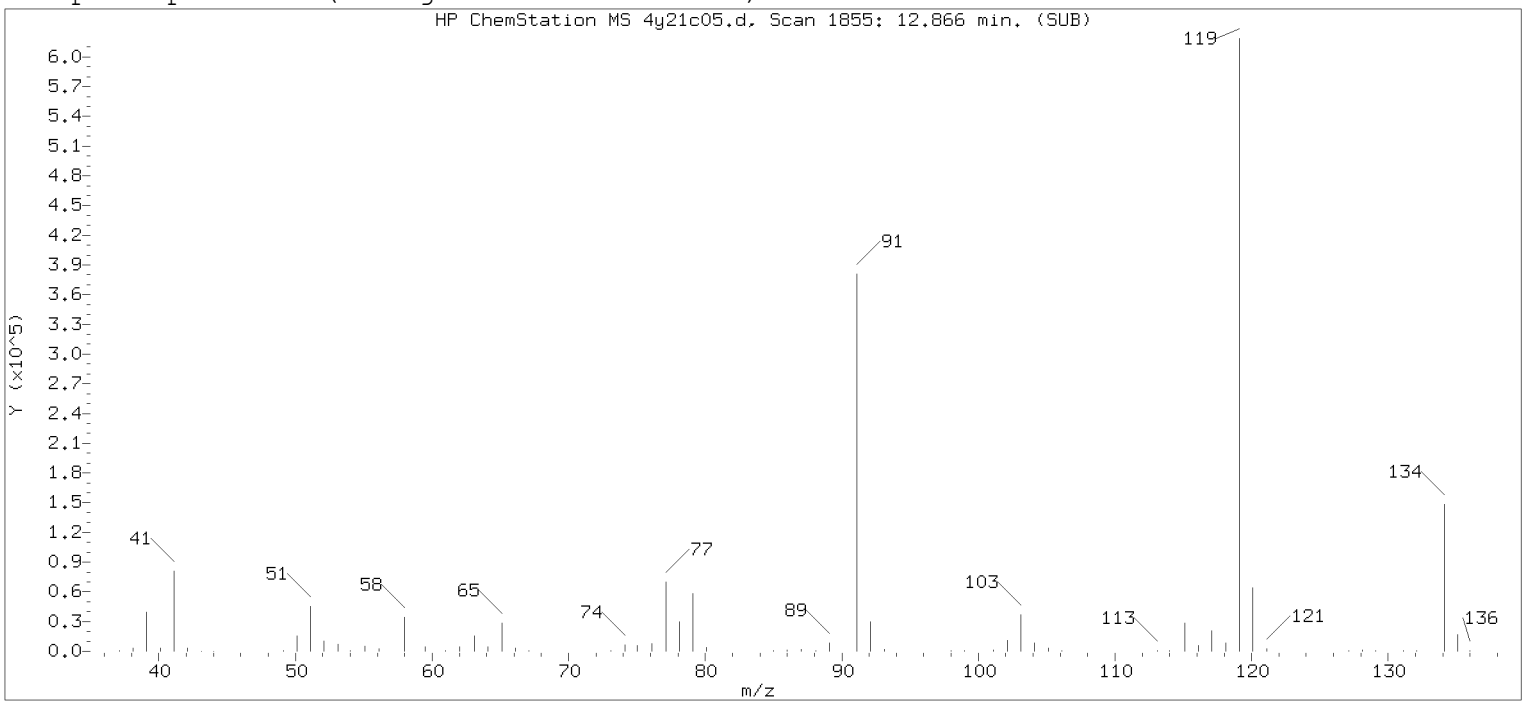
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area (flag) : 220917M
On-Column Amount (ng) : 46.3296
Integration start scan : 1848 Integration stop scan: 1859
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

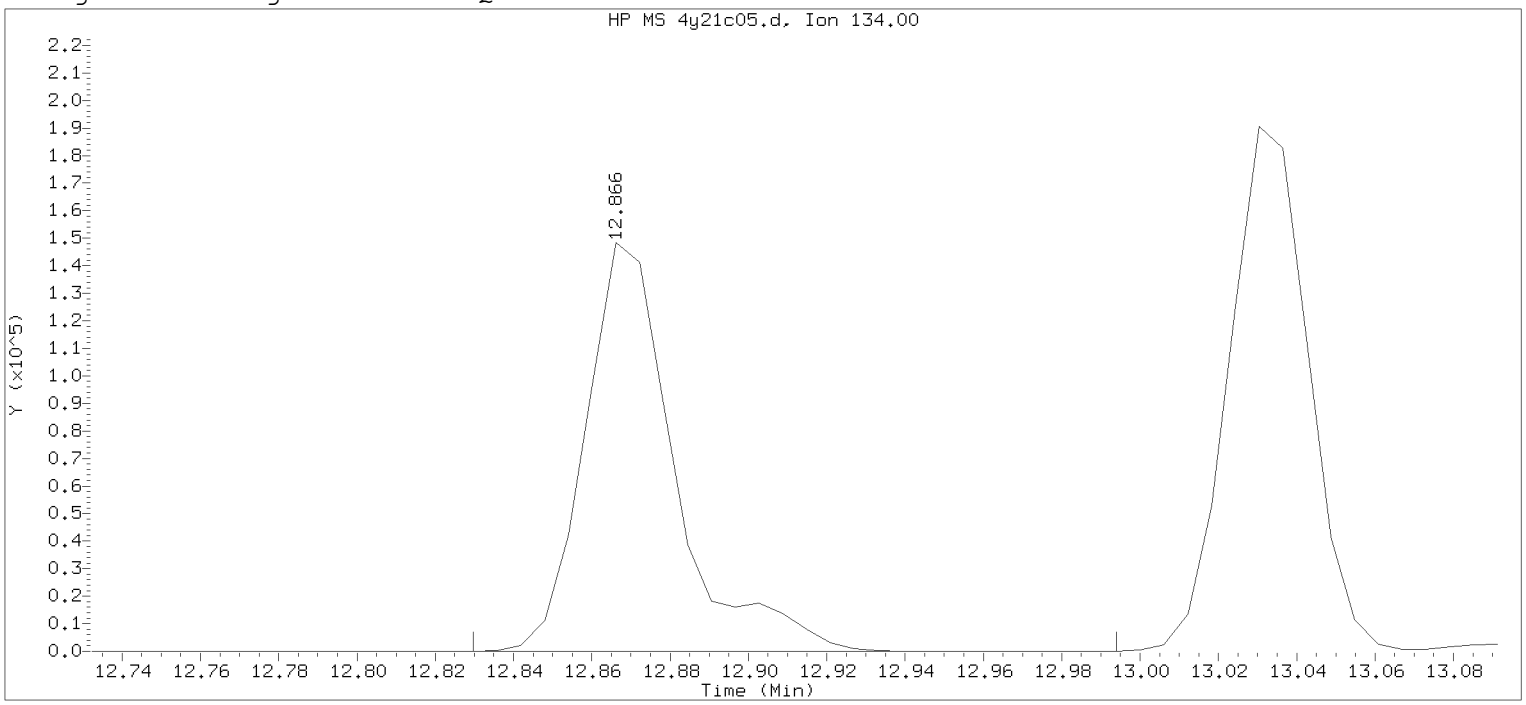
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/21/2019 at 21:17.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Marla S. Brewer on 05/22/2019 at 15:01.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may21b.b/4y21c05.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 20:44 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 21:02 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area : 236775
On-column Amount (ng) : 49.6551
Integration start scan : 1848 Integration stop scan: 1875
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/21/2019 at 21:17.
Target 3.5 esignature user id: dviray

Data File: /chem/HP23297.i/19may22b.b/4y22t10.d

Date : 22-MAY-2019 19:58

Client ID: bfb FEB05-19

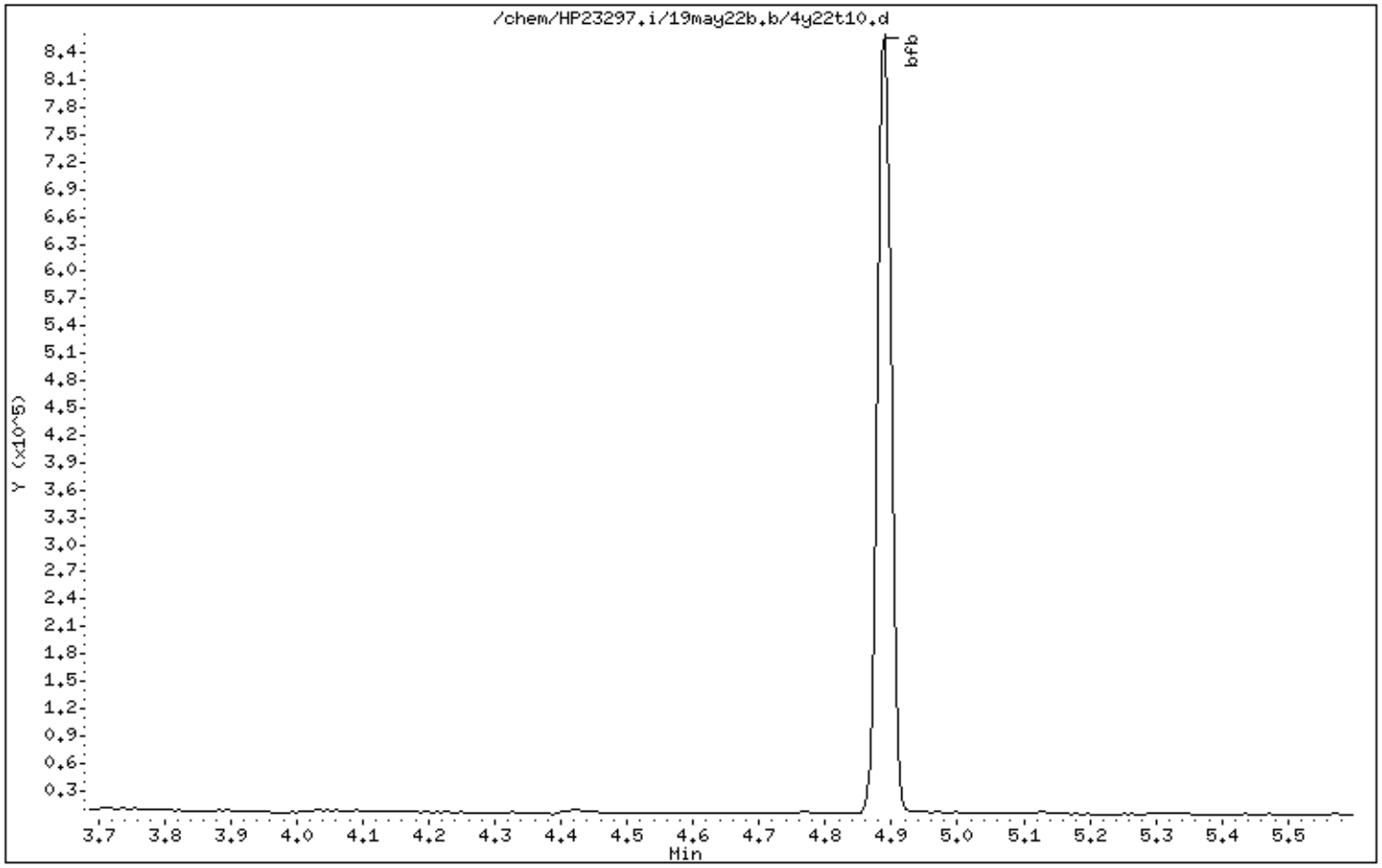
Instrument: HP23297.i

Sample Info: bfb FEB05-19;50NG BFB;1;3;;;;;;

Operator: pth10165

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Patrick T. Herres on 05/22/2019 at 21:17.
Target 3.5 esignature user ID: pth10165

Data File: /chem/HP23297.i/19may22b.b/4y22t10.d

Date : 22-MAY-2019 19:58

Client ID: bfb FEB05-19

Instrument: HP23297.i

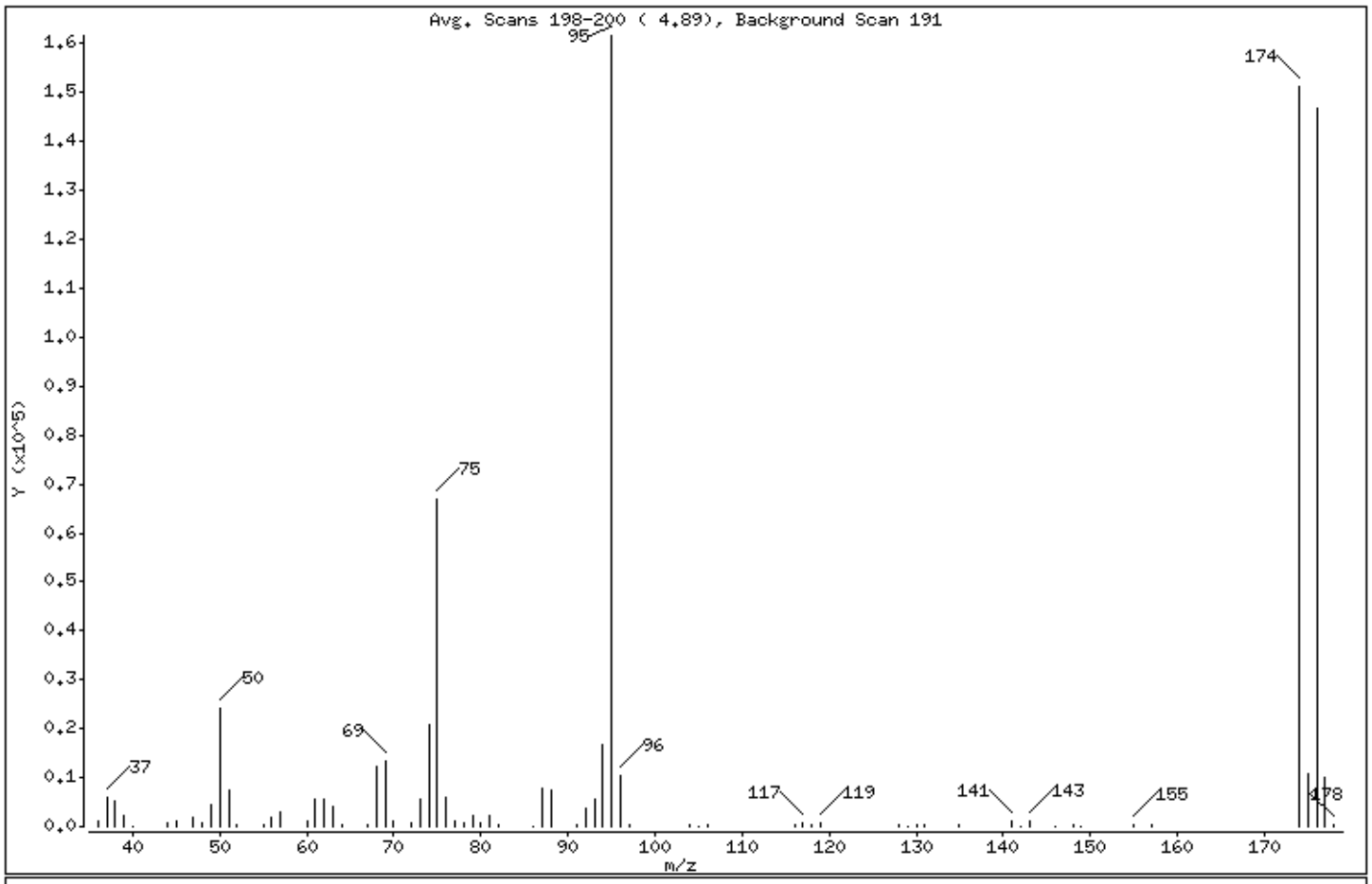
Sample Info: bfb FEB05-19;50NG BFB;1;3;;;;;;

Operator: pth10165

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.03
75	30.00 - 60.00% of mass 95	41.38
96	5.00 - 9.00% of mass 95	6.55
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	93.50
175	5.00 - 9.00% of mass 174	6.73 (7.20)
176	95.00 - 101.00% of mass 174	90.83 (97.14)
177	5.00 - 9.00% of mass 176	6.18 (6.81)

Digitally signed by Patrick T. Herres on 05/22/2019 at 21:17.
Target 3.5 esignature user ID: pth10165

Data File: /chem/HP23297.i/19may22b.b/4y22t10.d

Date : 22-MAY-2019 19:58

Client ID: bfb FEB05-19

Instrument: HP23297.i

Sample Info: bfb FEB05-19;50NG BFB;1;3;;;;;;

Operator: pth10165

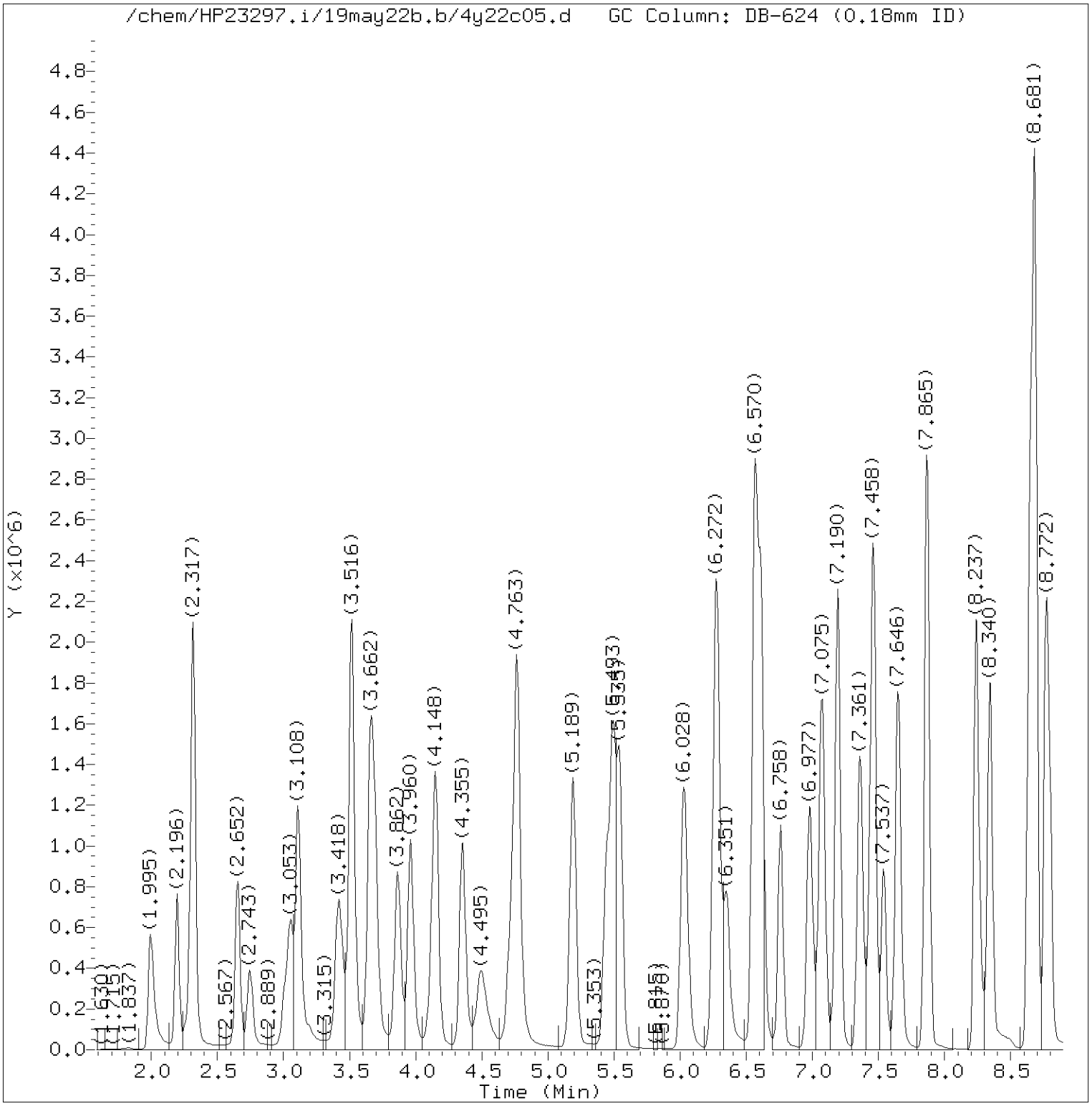
Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: 4y22t10.d
Spectrum: Avg. Scans 198-200 (4.89), Background Scan 191
Location of Maximum: 95.00
Number of points: 71

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1062	62.00	5529	86.00	103	129.00	100
37.00	6021	63.00	4091	87.00	7873	130.00	437
38.00	5273	64.00	277	88.00	7368	131.00	188
39.00	2175	67.00	327	91.00	525	135.00	188
40.00	95	68.00	12396	92.00	3628	141.00	1003
44.00	608	69.00	13279	93.00	5420	142.00	91
45.00	1057	70.00	1007	94.00	16600	143.00	1009
47.00	1928	72.00	688	95.00	161664	146.00	98
48.00	698	73.00	5690	96.00	10588	148.00	192
49.00	4589	74.00	20832	97.00	311	149.00	94
50.00	24296	75.00	66912	104.00	489	155.00	377
51.00	7558	76.00	5869	105.00	126	157.00	216
52.00	405	77.00	953	106.00	535	174.00	151168
55.00	269	78.00	663	116.00	371	175.00	10887
56.00	1760	79.00	2399	117.00	747	176.00	146816
57.00	3089	80.00	780	118.00	472	177.00	10001
60.00	1112	81.00	2305	119.00	613	178.00	222
61.00	5704	82.00	542	128.00	472		

Digitally signed by Patrick T. Herres on 05/22/2019 at 21:17.
Target 3.5 esignature user ID: pth10165



Total Ion Chromatogram (TIC)

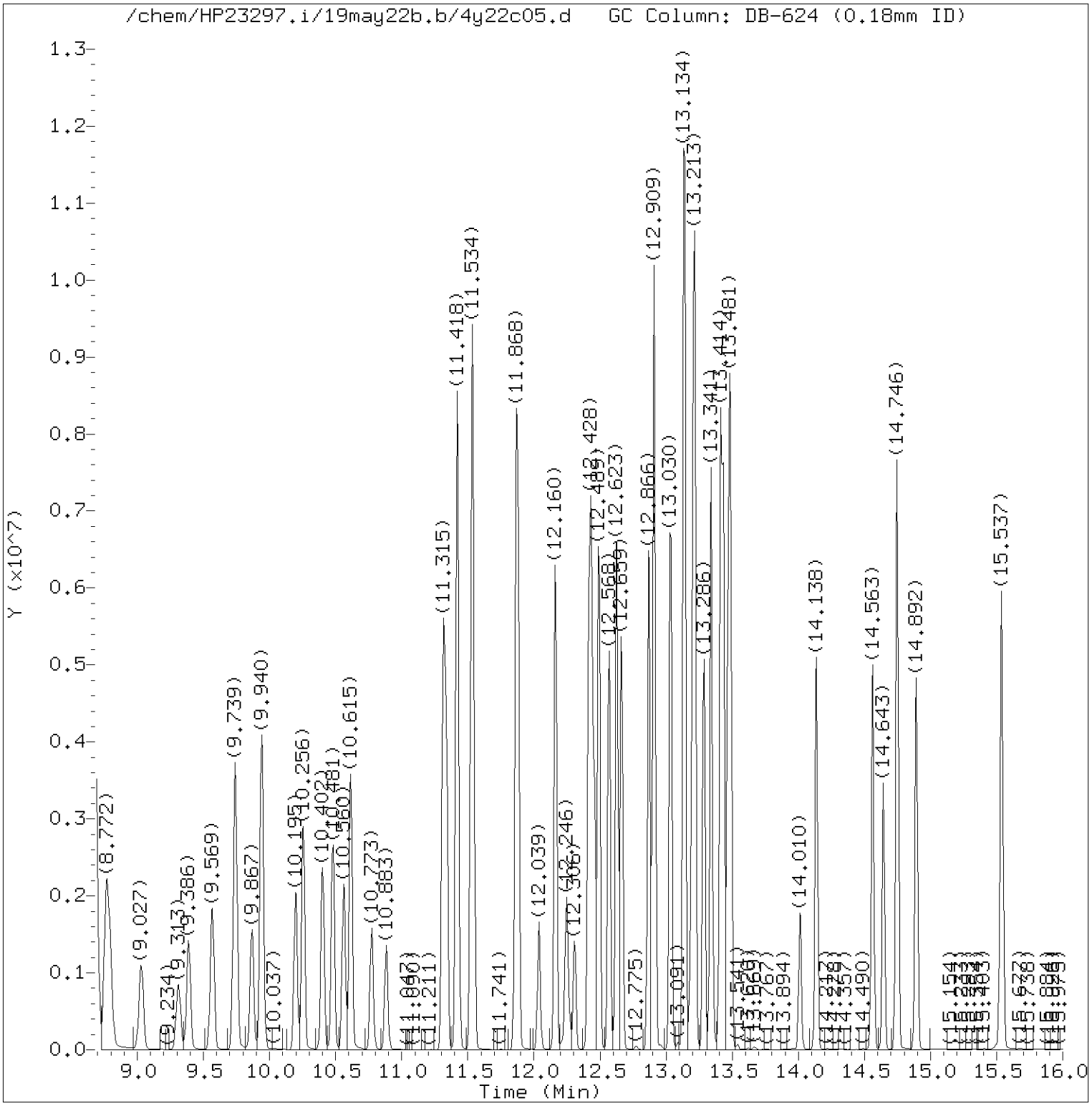
Target Revision 3.5

Data File: /chem/HP23297.i/19may22b.b/4y22c05.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 20:38 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 20:56
Date, time and analyst ID of latest file update: 22-May-2019 21:17 pth10165

Sample Name: VSTD150 Lab Sample ID: VSTD150

Digitally signed by Patrick T. Herres
on 05/22/2019 at 21:17.
Target 3.5 esignature user ID: pth10165



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may22b.b/4y22c05.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 20:38 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 20:56
Date, time and analyst ID of latest file update: 22-May-2019 21:17 pth10165

Sample Name: VSTD150 Lab Sample ID: VSTD150

Digitally signed by Patrick T. Herres
on 05/22/2019 at 21:17.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may22b.b/4y22c05.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 20:38 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 20:56
Date, time and analyst ID of latest file update: 22-May-2019 21:17 pth10165

Sample Name: VSTD150 Lab Sample ID: VSTD150

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.995	85	1201020	127.827
4) Chloromethane	(2)	2.196	50	1080704	118.759
6) Vinyl Chloride	(2)	2.311	62	1052856	118.340
5) 1,3-Butadiene	(2)	2.317	39	1086618	220.203
8) Bromomethane	(2)	2.652	94	848239	116.188
9) Chloroethane	(2)	2.743	64	565200	115.041
12) Trichlorofluoromethane	(2)	3.053	101	1274404	118.124
11) n-Pentane	(2)	3.108	43	1359179	155.930
13) Ethanol	(1)	3.199	45	420990	3281.804
15) Freon 123a	(2)	3.418	67	863938	139.186
16) Acrolein	(1)	3.516	56	3175524	1469.704
17) 1,1-Dichloroethene	(2)	3.656	96	640031	148.941
17) 1,1-Dichloroethene	(2)	3.656	63	302063	133.127
19) Freon 113	(2)	3.674	101	716136	151.445
18) Acetone	(1)	3.692	58	308474	290.734
22) Methyl Iodide	(2)	3.862	142	1315464	153.625
21) 2-Propanol	(1)	3.869	45	714055	837.532
23) Carbon Disulfide	(2)	3.960	76	2354473	153.643
27) Methyl Acetate	(2)	4.124	43	1175183	131.299
25) Allyl Chloride	(2)	4.154	41	1264108	132.661
28) Methylene Chloride	(2)	4.355	84	777225	142.788
29)*t-Butyl alcohol-d10	(1)	4.367	65	381074	250.000
30) t-Butyl alcohol	(1)	4.501	59	1230967	820.875
31) Acrylonitrile	(2)	4.708	53	585825	124.934
33) Methyl Tertiary Butyl Ether	(2)	4.757	73	2061850	134.318
32) trans-1,2-Dichloroethene	(2)	4.769	96	755688	147.180
34) n-Hexane	(2)	5.189	57	1256266	148.139
36) 1,1-Dichloroethane	(2)	5.438	63	1322899	138.630
38) di-Isopropyl ether	(2)	5.493	45	2608745	137.937
39) 2-Chloro-1,3-butadiene	(2)	5.548	53	1148507	132.941
40) Ethyl t-butyl ether	(2)	6.028	59	2125887	130.857
43) 1,2-Dichloroethene (Total)	(2)		96	1625030	294.012
44) 2-Butanone	(2)	6.253	43	1660957	228.237
42) cis-1,2-Dichloroethene	(2)	6.278	96	869342	146.832
45) 2,2-Dichloropropane	(2)	6.290	77	926112	123.782
47) Propionitrile	(1)	6.351	54	1417315	889.805
48) Methacrylonitrile	(2)	6.570	67	1640099	370.807
49) Bromochloromethane	(2)	6.606	128	489581	149.747

* = Compound is an internal standard.

Digitally signed by Patrick T. Herres
on 05/22/2019 at 21:17.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may22b.b/4y22c05.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 20:38 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 20:56
Date, time and analyst ID of latest file update: 22-May-2019 21:17 pth10165

Sample Name: VSTD150 Lab Sample ID: VSTD150

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.612	71	473510	301.153
51) Chloroform	(2)	6.758	83	1263267	134.410
52)$Dibromofluoromethane	(2)	6.977	113	293859	48.384
52)$Dibromofluoromethane	(2)	6.971	111	299983	48.236
53) 1,1,1-Trichloroethane	(2)	6.983	97	1016958	129.260
54) Cyclohexane	(2)	7.069	56	1456908	142.389
54) Cyclohexane	(2)	7.075	84	1219624	145.956
54) Cyclohexane	(2)	7.075	69	441528	144.381
56) Carbon Tetrachloride	(2)	7.184	117	891593	130.430
55) 1,1-Dichloropropene	(2)	7.196	75	1033748	139.070
58) Isobutyl Alcohol	(1)	7.361	41	1188916	2251.659
57)$1,2-Dichloroethane-d4	(2)	7.434	102	73300	49.392
57)$1,2-Dichloroethane-d4	(2)	7.434	65	304948	42.467
57)$1,2-Dichloroethane-d4	(2)	7.434	104	46985	49.580
60) Benzene	(2)	7.464	78	3190070	141.124
61) 1,2-Dichloroethane	(2)	7.537	62	927622	121.073
61) 1,2-Dichloroethane	(2)	7.537	98	100668	159.156
65) t-Amyl methyl ether	(2)	7.646	73	2126960	129.486
66)*Fluorobenzene	(2)	7.865	96	1232150	50.000
67) n-Heptane	(2)	7.865	43	1288053	129.015
69) n-Butanol	(1)	8.243	56	2226471	5134.804
71) Trichloroethene	(2)	8.340	95	809874	141.238
72) Methylcyclohexane	(2)	8.644	83	1651685	152.951
72) Methylcyclohexane	(2)	8.644	98	718875	153.796
73) 1,2-Dichloropropane	(2)	8.687	63	855436	144.046
75) 1,4-Dioxane	(1)	8.766	88	287789M	2576.944
76) Methyl Methacrylate	(2)	8.766	69	1006287	149.630
74) Dibromomethane	(2)	8.790	93	554366	143.821
78) Bromodichloromethane	(2)	9.027	83	972983	139.002
79) 2-Nitropropane	(2)	9.313	41	688240	202.026
80) 2-Chloroethyl Vinyl Ether	(2)	9.386	63	786594	144.765
81) cis-1,3-Dichloropropene	(2)	9.569	75	1345069	145.345
82) 4-Methyl-2-pentanone	(2)	9.739	43	3060850	234.392
83)$Toluene-d8	(3)	9.867	98	1243969	49.567
83)$Toluene-d8	(3)	9.867	100	816336	50.111
88) Toluene	(3)	9.940	92	2088155	143.844
90) 1,3-Dichloropropene (total)	(3)		100	2599240	292.175
89) trans-1,3-Dichloropropene	(3)	10.195	75	1254171	146.830

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Patrick T. Herres
on 05/22/2019 at 21:17.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may22b.b/4y22c05.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 20:38 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 20:56
Date, time and analyst ID of latest file update: 22-May-2019 21:17 pth10165

Sample Name: VSTD150 Lab Sample ID: VSTD150

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	10.256	69	1682424	156.728
92) 1,1,2-Trichloroethane	(3)	10.402	97	874405	154.113
93) Tetrachloroethene	(3)	10.481	166	925386	146.134
94) 1,3-Dichloropropane	(3)	10.560	76	1394463	148.055
96) 2-Hexanone	(3)	10.615	43	2428059	235.022
97) Dibromochloromethane	(3)	10.773	129	912818	152.046
99) 1,2-Dibromoethane	(3)	10.883	107	979955	156.444
100)*Chlorobenzene-d5	(3)	11.309	117	977851	50.000
102) Chlorobenzene	(3)	11.339	112	2445735	149.068
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	845067	152.572
104) Ethylbenzene	(3)	11.418	91	4045329	145.081
106) m+p-Xylene	(3)	11.534	106	3305509	297.317
108) Xylene (Total)	(3)		106	4946895	445.846
107) o-Xylene	(3)	11.862	106	1641386	148.529
109) Styrene	(3)	11.881	104	2833165	154.080
110) Bromoform	(3)	12.039	173	757991	160.228
111) Isopropylbenzene	(3)	12.160	105	4081897	147.648
112) Cyclohexanone	(1)	12.246	55	943620	2114.965
114)$4-Bromofluorobenzene	(3)	12.306	95	453256	47.382
114)$4-Bromofluorobenzene	(3)	12.306	174	416732	49.341
116) 1,1,2,2-Tetrachloroethane	(4)	12.410	83	1648909	165.756
115) Bromobenzene	(4)	12.428	156	1179522	156.153
118) trans-1,4-Dichloro-2-butene	(4)	12.434	53	697264	213.225
117) 1,2,3-Trichloropropane	(4)	12.459	110	471544	156.765
119) n-Propylbenzene	(4)	12.489	91	4790948	147.475
120) 2-Chlorotoluene	(4)	12.568	126	1044487	153.950
122) 1,3,5-Trimethylbenzene	(4)	12.629	105	3525052	149.936
121) 4-Chlorotoluene	(4)	12.659	126	1099077	155.417
124) tert-Butylbenzene	(4)	12.872	134	775524M	157.130
125) Pentachloroethane	(4)	12.903	167	686253	152.495
126) 1,2,4-Trimethylbenzene	(4)	12.909	105	3731462	152.014
127) sec-Butylbenzene	(4)	13.036	105	4535999	151.027
129) 1,3-Dichlorobenzene	(4)	13.134	146	2226602	157.267
130) p-Isopropyltoluene	(4)	13.140	119	4032179	152.613
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	539804	50.000
133) 1,4-Dichlorobenzene	(4)	13.207	146	2269962	156.497
134) 1,2,3-Trimethylbenzene	(4)	13.219	105	3752593	142.372
135) Benzyl Chloride	(4)	13.286	91	3344567	169.527

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Patrick T. Herres
on 05/22/2019 at 21:17.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may22b.b/4y22c05.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 20:38 Analyst ID: PTH10165

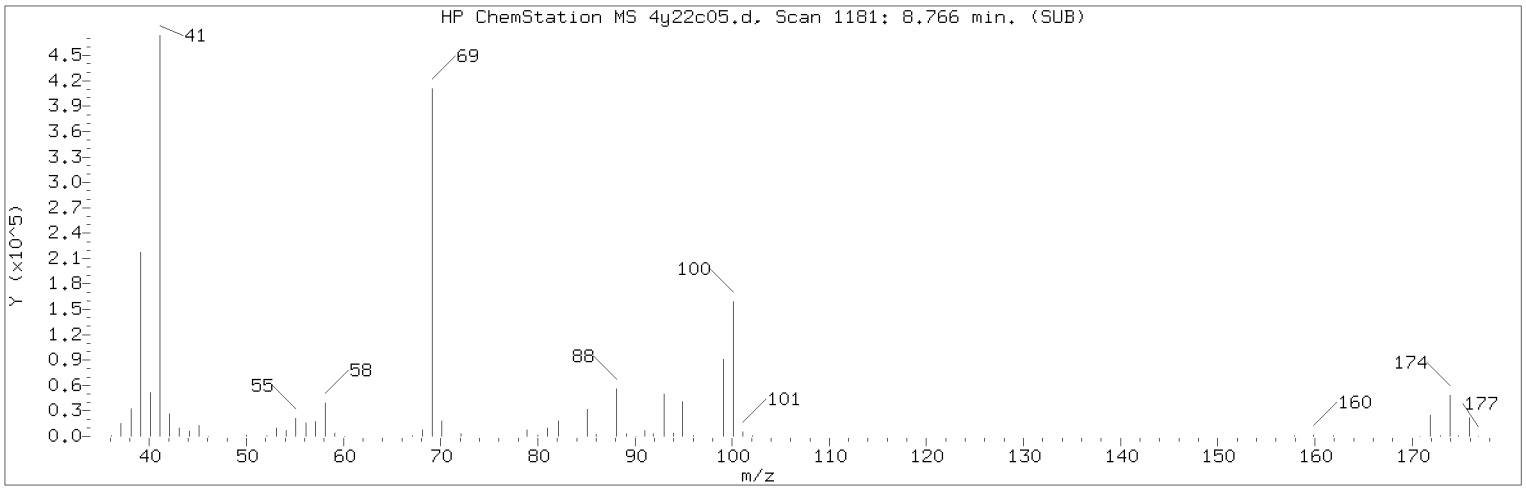
Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 20:56
Date, time and analyst ID of latest file update: 22-May-2019 21:17 pth10165

Sample Name: VSTD150 Lab Sample ID: VSTD150

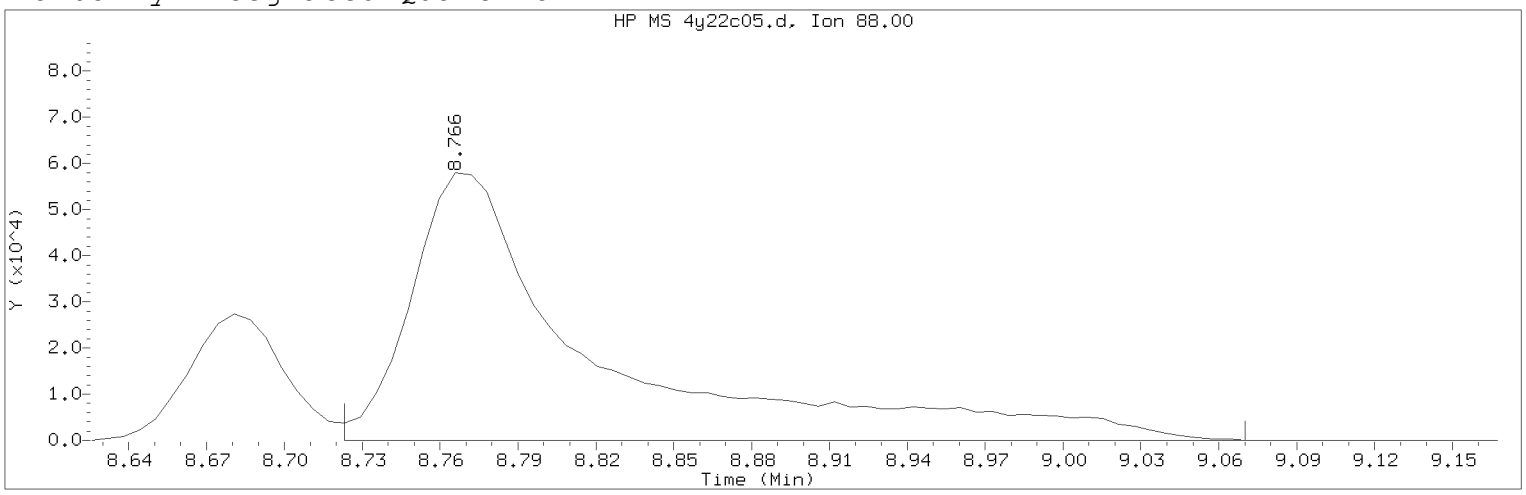
	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
136)	1,3-Diethylbenzene	(4)	13.341	119	2366832	143.319
141)	Diethylbenzene (total)	(4)		100	6880358	429.794
137)	1,4-Diethylbenzene	(4)	13.414	119	2519242	143.232
139)	n-Butylbenzene	(4)	13.432	92	1981513	146.403
138)	1,2-Dichlorobenzene	(4)	13.468	146	2159501	156.531
140)	1,2-Diethylbenzene	(4)	13.487	119	1994284	143.242
142)	1,2-Dibromo-3-chloropropane	(4)	14.010	75	394151	150.197
144)	1,3,5-Trichlorobenzene	(4)	14.138	180	1611375	154.918
146)	1,2,4-Trichlorobenzene	(4)	14.563	180	1556100	157.898
147)	Hexachlorobutadiene	(4)	14.643	225	621219	136.402
148)	Naphthalene	(4)	14.746	128	5569300	163.111
149)	1,2,3-Trichlorobenzene	(4)	14.892	180	1527780	161.368
150)	2-Methylnaphthalene	(4)	15.537	142	3078119	144.141

Digitally signed by Patrick T. Herres
on 05/22/2019 at 21:17.
Target 3.5 esignature user ID: pth10165

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may22b.b/4y22c05.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 20:38 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 20:56
Date, time and analyst ID of latest file update: 22-May-2019 21:17 pth10165

Sample Name: VSTD150 Lab Sample ID: VSTD150

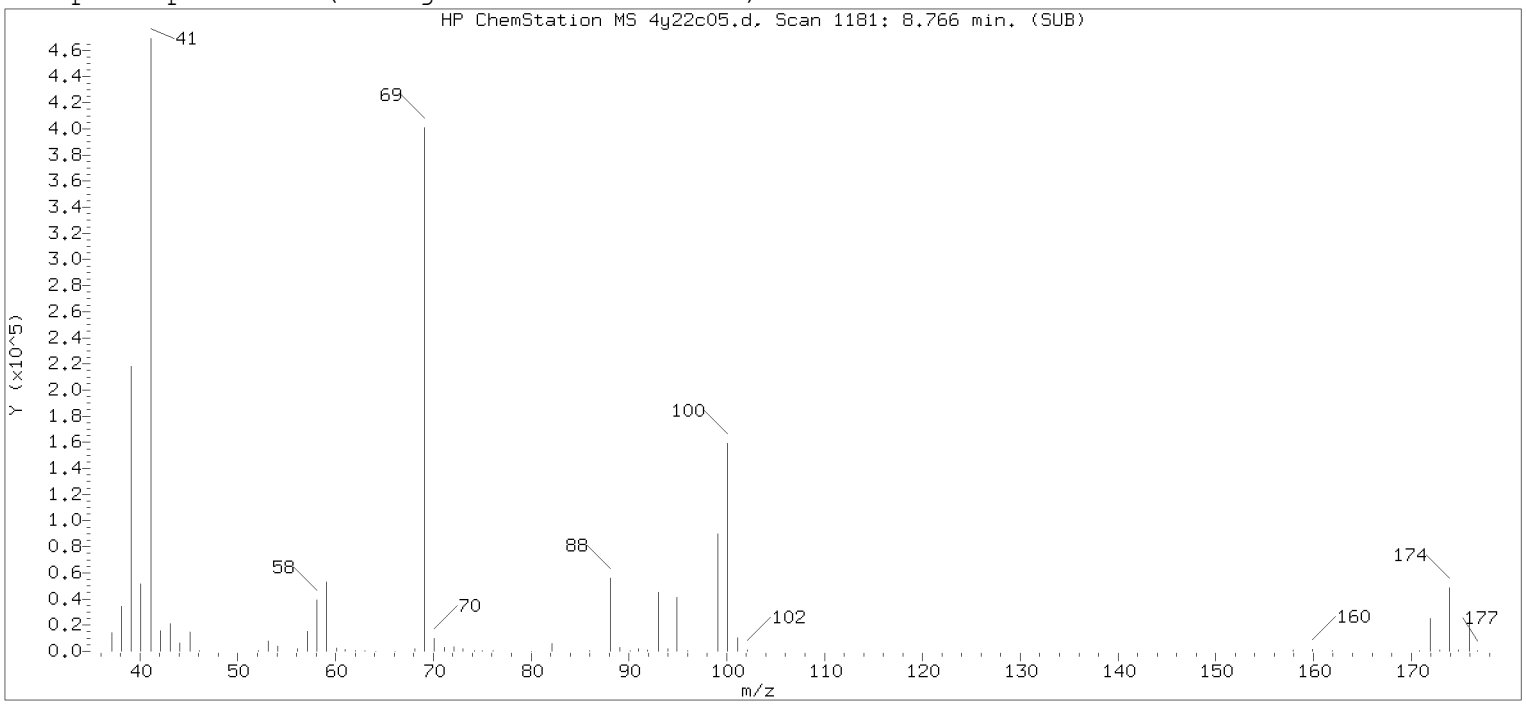
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1181
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area (flag) : 287789M
On-Column Amount (ng) : 2576.9440
Integration start scan : 1173 Integration stop scan: 1230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

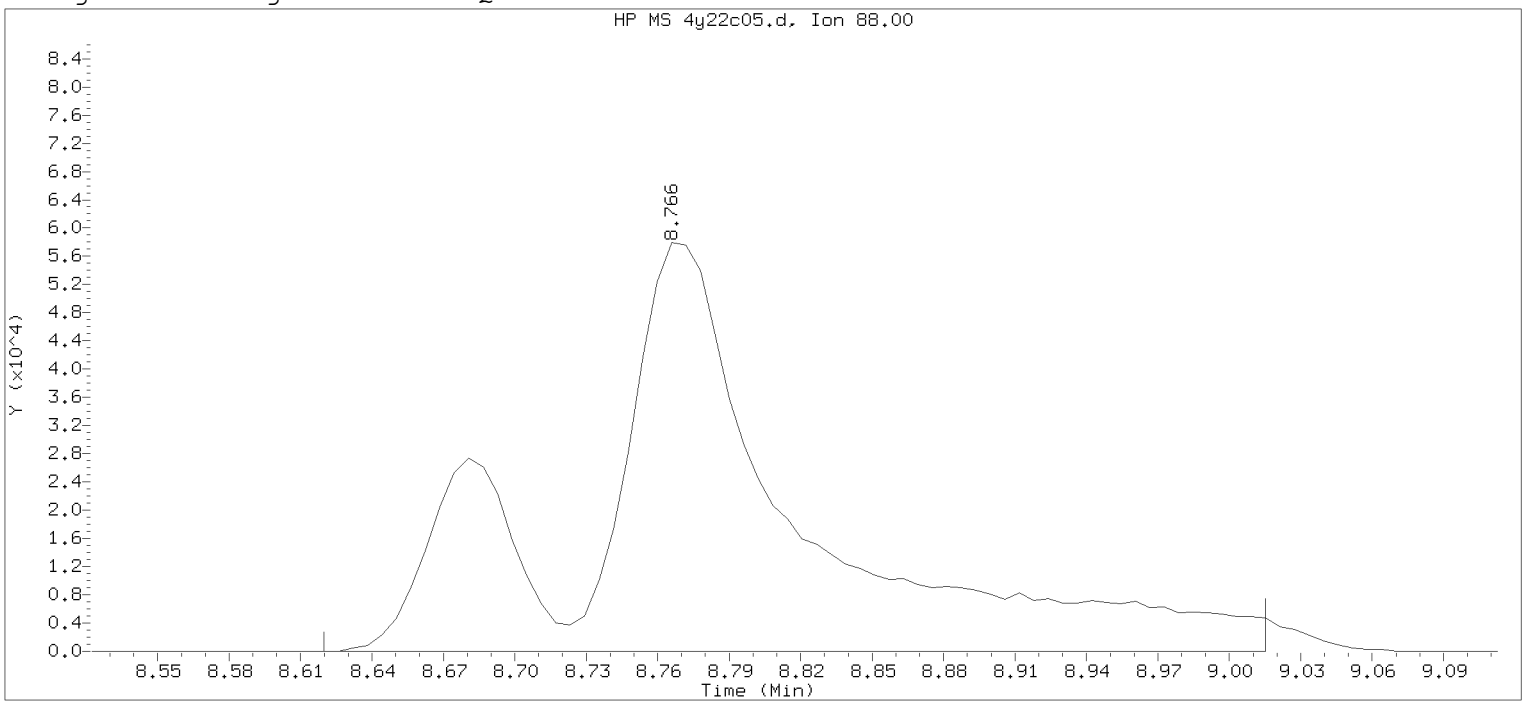
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 05/22/2019 at 21:17.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Kari Becker on 05/23/2019 at 15:42.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may22b.b/4y22c05.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 20:38 Analyst ID: PTH10165

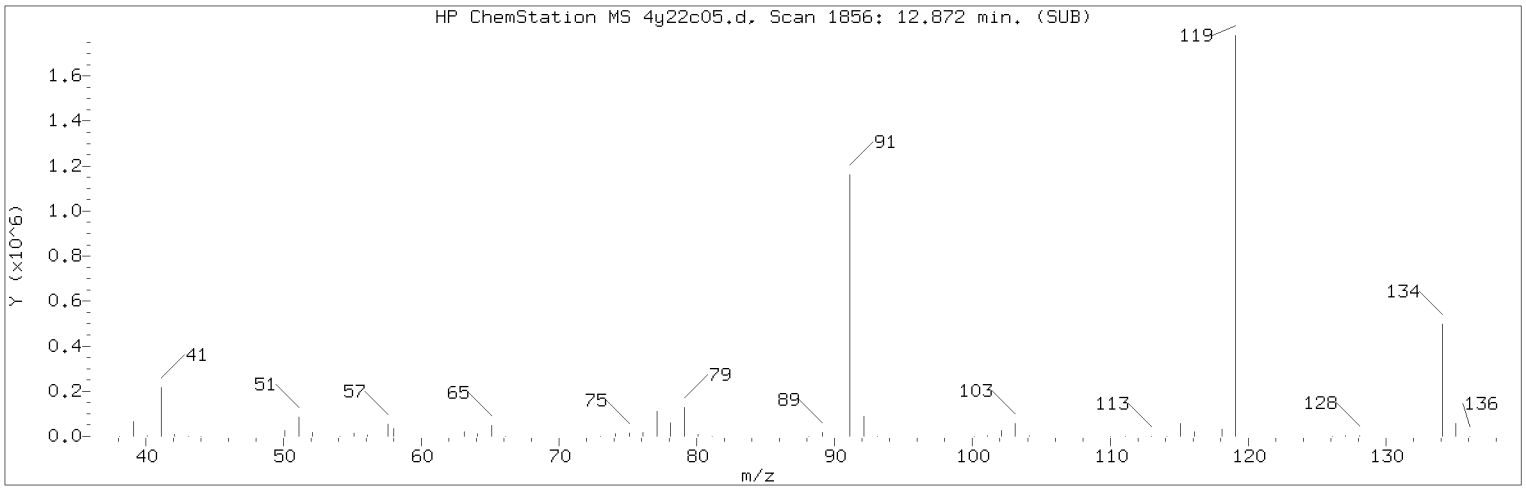
Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 20:56
Date, time and analyst ID of latest file update: 22-May-2019 20:56 Automation

Sample Name: VSTD150 Lab Sample ID: VSTD150

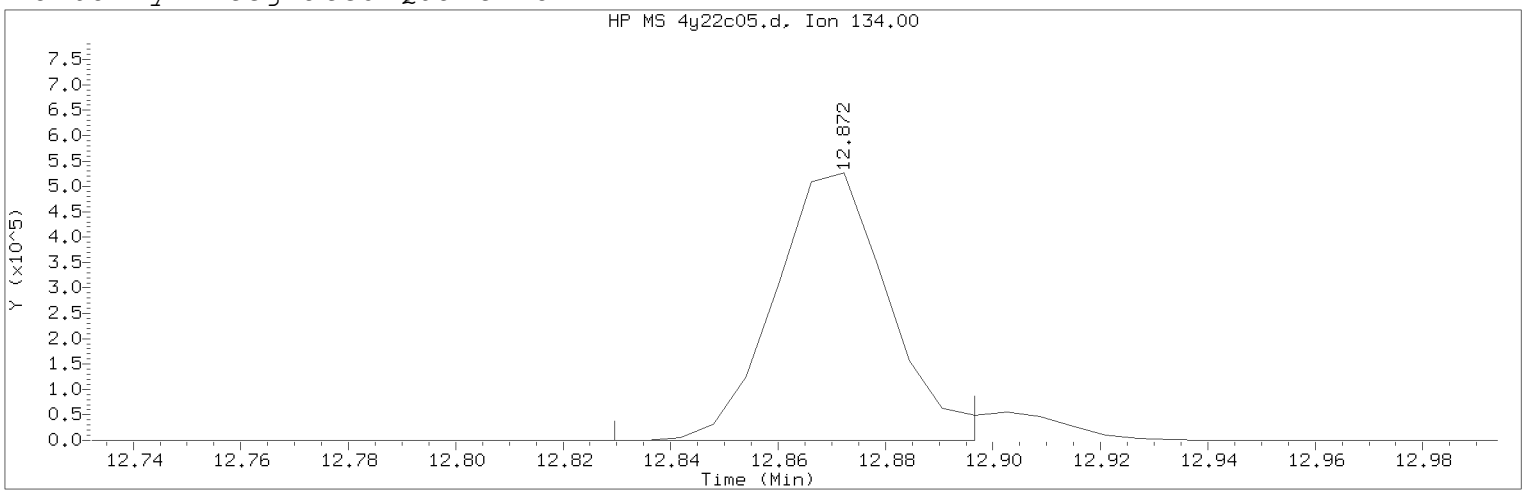
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1181
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area : 351950
On-column Amount (ng) : 3151.4608
Integration start scan : 1156 Integration stop scan: 1221
Y at integration start : 0 Y at integration end: 0

Digitally signed by Patrick T. Herres on 05/22/2019 at 21:17.
Target 3.5 esignature user approved.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may22b.b/4y22c05.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 20:38 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 20:56
Date, time and analyst ID of latest file update: 22-May-2019 21:17 pth10165

Sample Name: VSTD150 Lab Sample ID: VSTD150

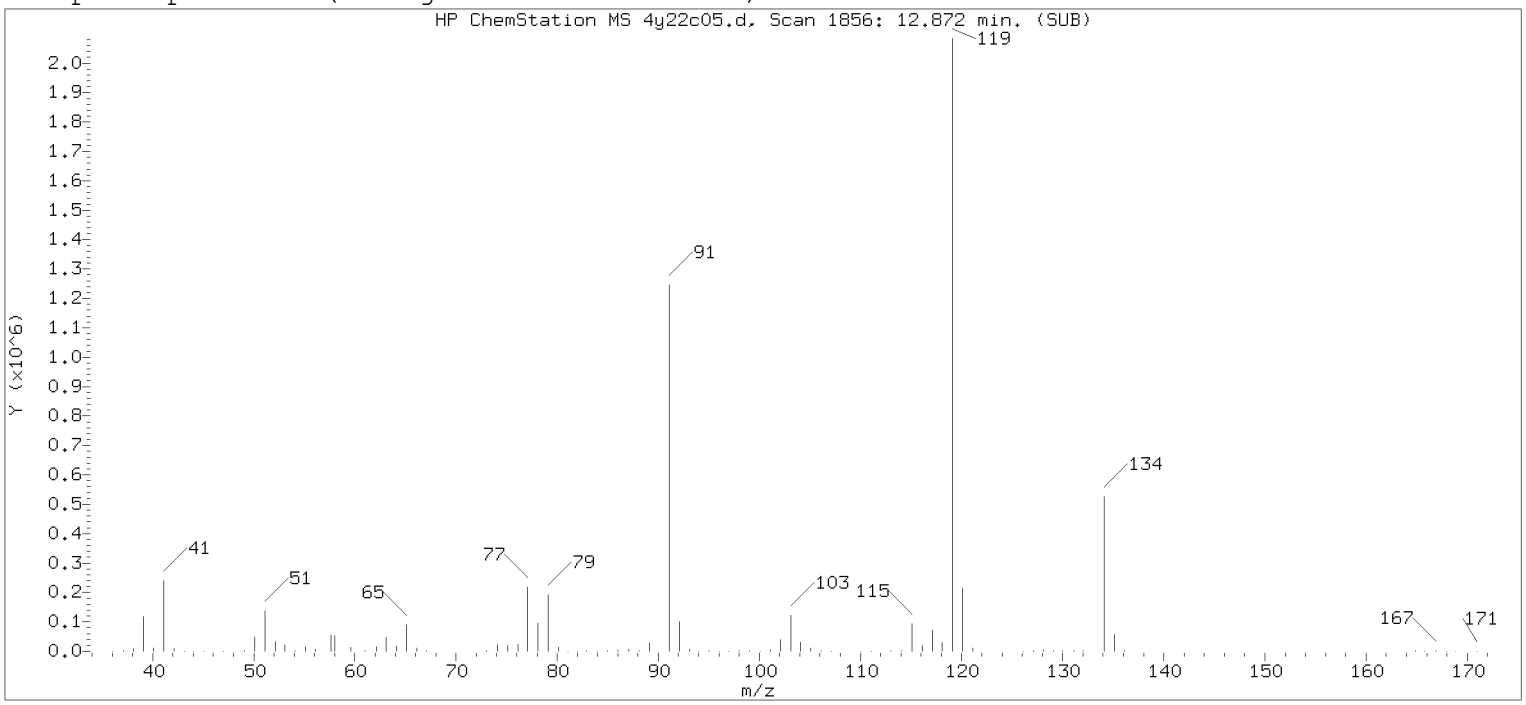
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1856
Retention Time (minutes): 12.872
Quant Ion : 134.00
Area (flag) : 775524M
On-Column Amount (ng) : 157.1298
Integration start scan : 1848 Integration stop scan: 1859
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

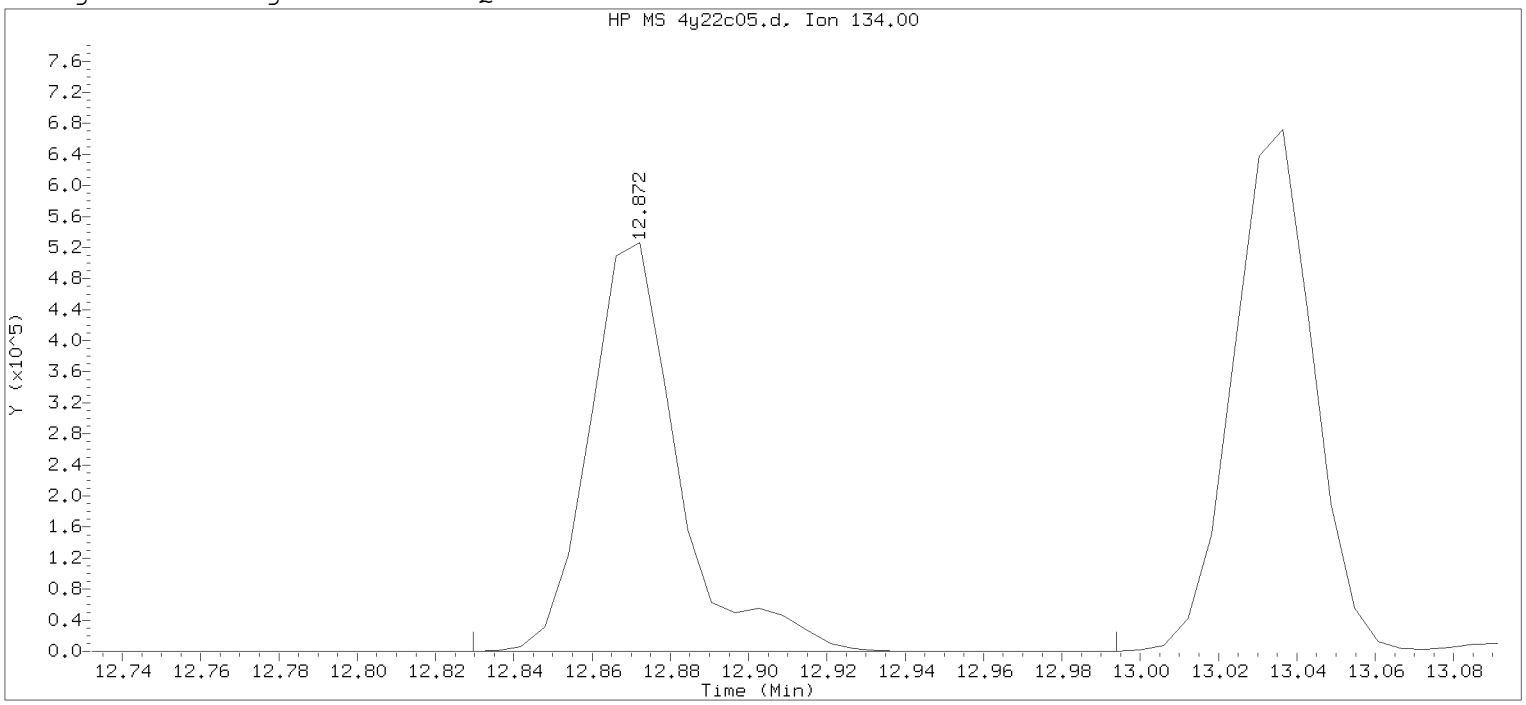
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 05/22/2019 at 21:17.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Kari Becker on 05/23/2019 at 15:42.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may22b.b/4y22c05.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 20:38 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 20:56
Date, time and analyst ID of latest file update: 22-May-2019 20:56 Automation

Sample Name: VSTD150 Lab Sample ID: VSTD150

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1856
Retention Time (minutes): 12.872
Quant Ion : 134.00
Area : 828237
On-column Amount (ng) : 167.8099
Integration start scan : 1848 Integration stop scan: 1875
Y at integration start : 0 Y at integration end: 0

Digitally signed by Patrick T. Herres on 05/22/2019 at 21:17.
Target 3.5 esignature user approved.

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

MDL424

Data file: /chem/HP23297.i/19may21b.b/4y21m71.d Injection date and time: **21-MAY-2019 21:29**
Data file Sample Info. Line: MDL424;MDL424;1;3;MDL/LOQ;;;;4y21b71; Instrument ID: **HP23297.i** Batch: **4191415AA**
Date, time and analyst ID of latest file update: 21-May-2019 22:19 dvv10203

Blank Data file reference: **/chem/HP23297.i/19may21b.b/4y21b71.d**

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: **MDL424**
Calibration date and time (Last Method Edit): 21-MAY-2019 21:01
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may21b.b/4y21c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.361	(0.000)	457	65	372565	(-7)	250.00	
66) Fluorobenzene	7.866	(0.000)	1033	96	1205030	(0)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	924390	(-3)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189	(0.000)	1908	152	490055	(-6)	50.00	

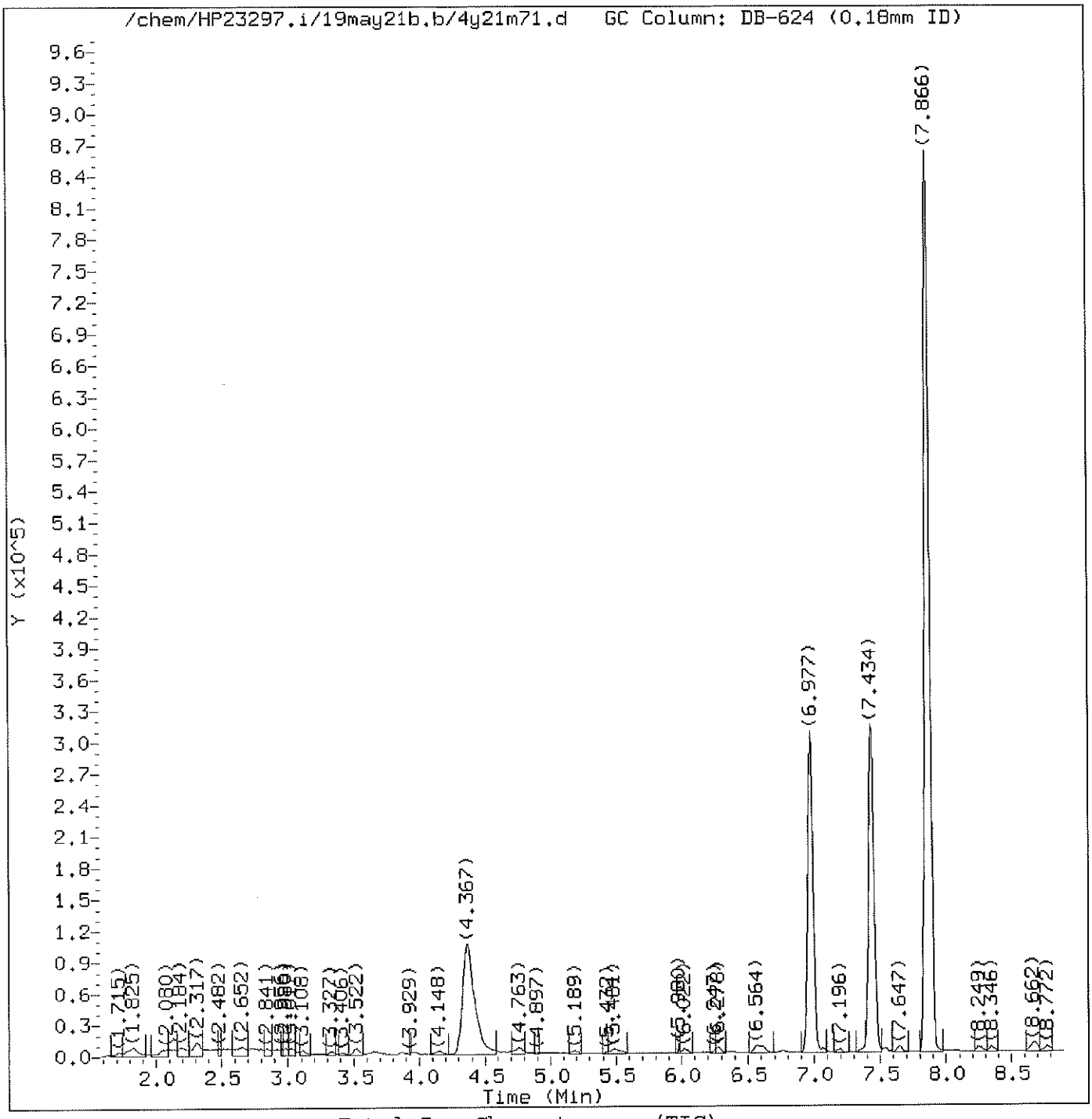
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977	(-0.001)	113	279963	47.133	94%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434	(-0.001)	102	71959	49.580	99%		80 - 120
83) Toluene-d8	(3)	9.867	(0.000)	98	1203722	50.737	101%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.307	(0.000)	95	427308	47.253	95%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	1.989	(-0.000)	85	1623	0.177	0.18		J	0.2	1
12) Trichlorofluoromethane	(2)	3.060	(-0.001)	101	2331	0.221	0.22		J	0.2	1

Total number of targets = 2

Digitally signed by Don V. Viray on 05/21/2019 at 22:24. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Marla S. Brewer on 05/22/2019 at 15:01. PARALLAX ID: ms101251



Total Ion Chromatogram (TIC)

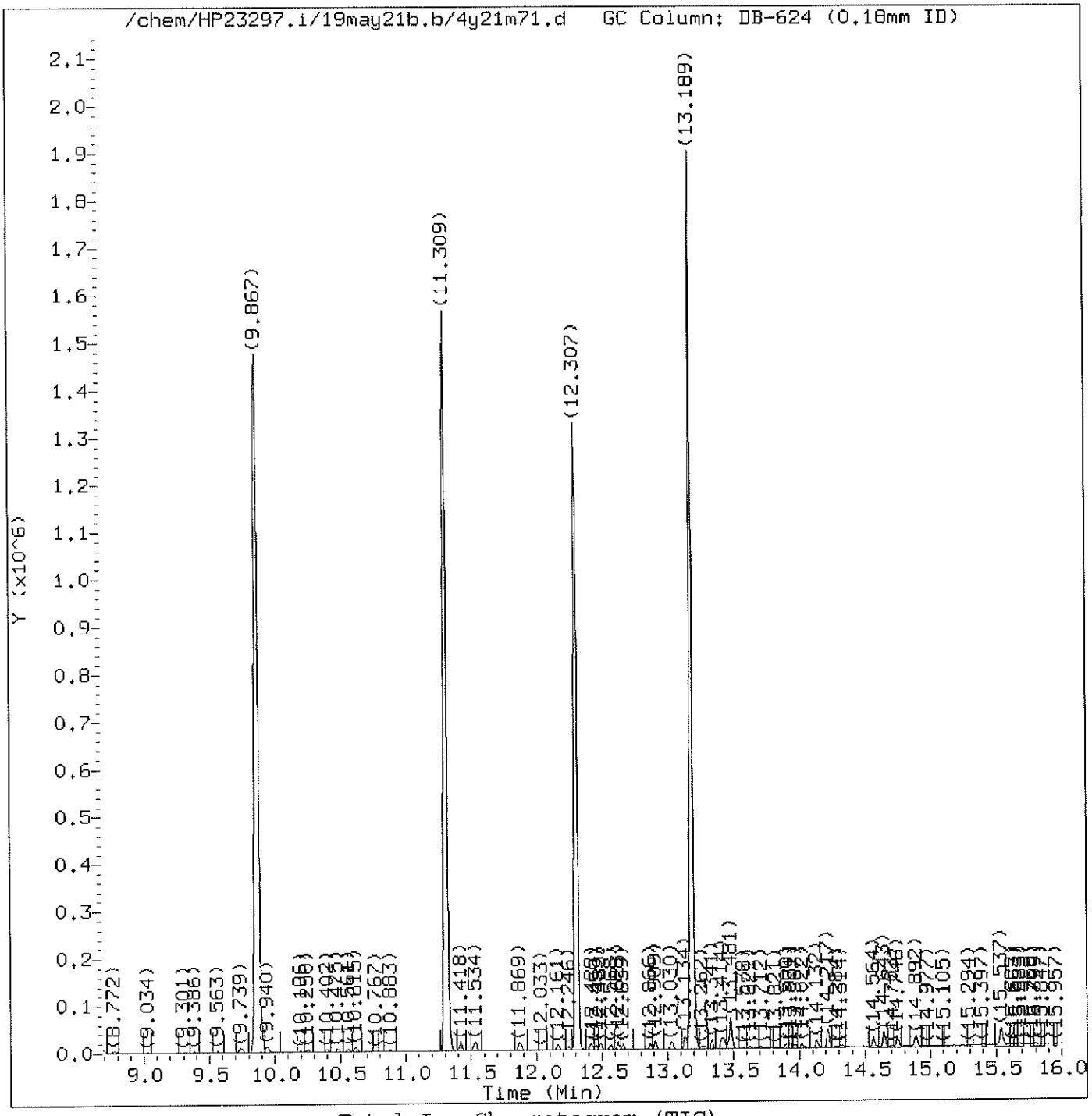
Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21m71.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 21:29 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: MDL424
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 22:19 dvv10203

Sample Name: MDL424 Lab Sample ID: MDL424

Digitally signed by Don V. Viray
on 05/21/2019 at 22:24.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21m71.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 21:29 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: MDL424
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 22:19 dvv10203

Sample Name: MDL424 Lab Sample ID: MDL424

Digitally signed by Don V. Viray
on 05/21/2019 at 22:24.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21m71.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 21:29 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: MDL424
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 22:19 dvv10203

Sample Name: MDL424 Lab Sample ID: MDL424

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.989	85	1623	0.177
12) Trichlorofluoromethane	(2)	3.060	101	2331	0.221
29)*t-Butyl alcohol-d10	(1)	4.361	65	372565	250.000
52)$Dibromofluoromethane	(2)	6.977	113	279963	47.133
57)$1,2-Dichloroethane-d4	(2)	7.434	102	71959	49.580
66)*Fluorobenzene	(2)	7.866	96	1205030	50.000
83)$Toluene-d8	(3)	9.867	98	1203722	50.737
100)*Chlorobenzene-d5	(3)	11.309	117	924390	50.000
114)$4-Bromofluorobenzene	(3)	12.307	95	427308	47.253
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	490055	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/21/2019 at 22:24.
Target 3.5 esignature user ID: dvv10203

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

MDL050

Data file: /chem/HP23297.i/19may22b.b/4y22m10.d Injection date and time: **22-MAY-2019 22:09**
Data file Sample Info. Line: MDL050;MDL050;1;3;MDL/LOQ;;;;4y22b05; Instrument ID: **HP23297.i** Batch: **4191422AA**
Date, time and analyst ID of latest file update: 23-May-2019 17:21 pth10165

Blank Data file reference: **/chem/HP23297.i/19may22b.b/4y22b05.d**

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: **MDL**
Calibration date and time (Last Method Edit): 23-MAY-2019 00:21
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may22b.b/4y22c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.368(0.000)	458	65	336448 (-12)	250.00	
66) Fluorobenzene	7.866(0.000)	1033	96	1225521 (-1)	50.00	
100) Chlorobenzene-d5	11.309(0.000)	1599	117	957017 (-2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189(0.000)	1908	152	505450 (-6)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977(0.000)	113	288498	47.758	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.440(-0.001)	102	74274	50.319	101%		80 - 120
83) Toluene-d8	(3)	9.867(0.000)	98	1231621	50.143	100%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.307(0.000)	95	441557	47.164	94%		80 - 120

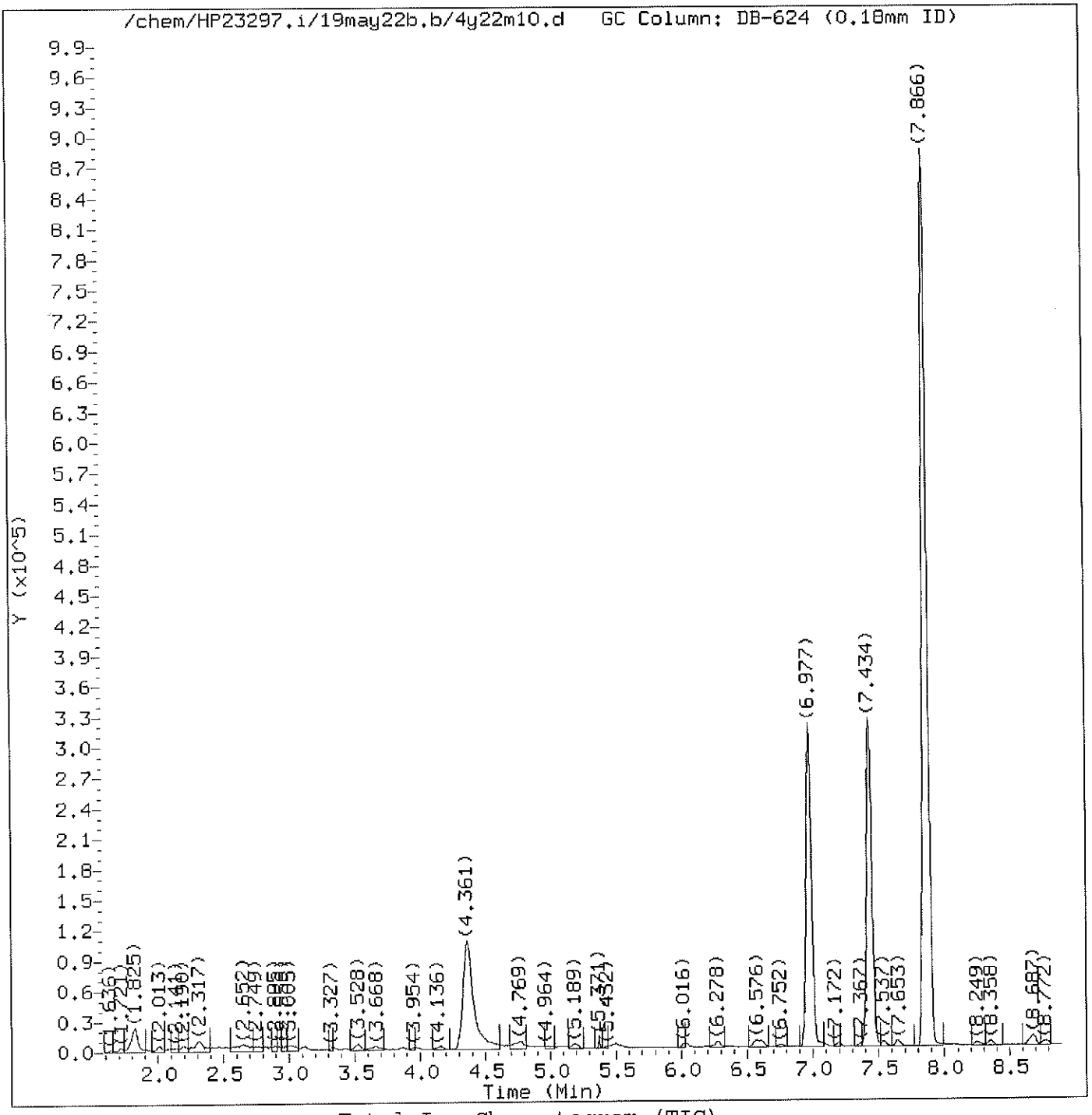
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
4) Chloromethane	(2)	2.196(-0.000)	50	2916	0.322	0.32		J	0.2	1
6) Vinyl Chloride	(2)	2.311(-0.000)	62	2381	0.269	0.27		J	0.2	1
8) Bromomethane	(2)	2.652(-0.000)	94	7252	0.999	1.00		J	0.3	1
9) Chloroethane	(2)	2.737(0.000)	64	1920	0.393	0.39		J	0.2	1
12) Trichlorofluoromethane	(2)	3.041(0.001)	101	2407	0.224	0.22		J	0.2	1
44) 2-Butanone	(2)	6.253(-0.000)	43	4905	0.678	0.68		J	0.3	10
82) 4-Methyl-2-pentanone	(2)	9.739(0.000)	43	8381	0.645	0.65	0.338	B J	0.5	10
96) 2-Hexanone	(3)	10.615(-0.000)	43	6145	0.608	0.61		J	0.3	10

B = Compound detected in referenced method blank.

Total number of targets = 8

Digitally signed by Patrick T. Herres on 05/23/2019 at 17:22. Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Kari Becker on 05/23/2019 at 17:31. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may22b.b/4y22m10.d
Injection date and time: 22-MAY-2019 22:09

Instrument ID: HP23297.i
Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m
Calibration date and time: 23-MAY-2019 00:21

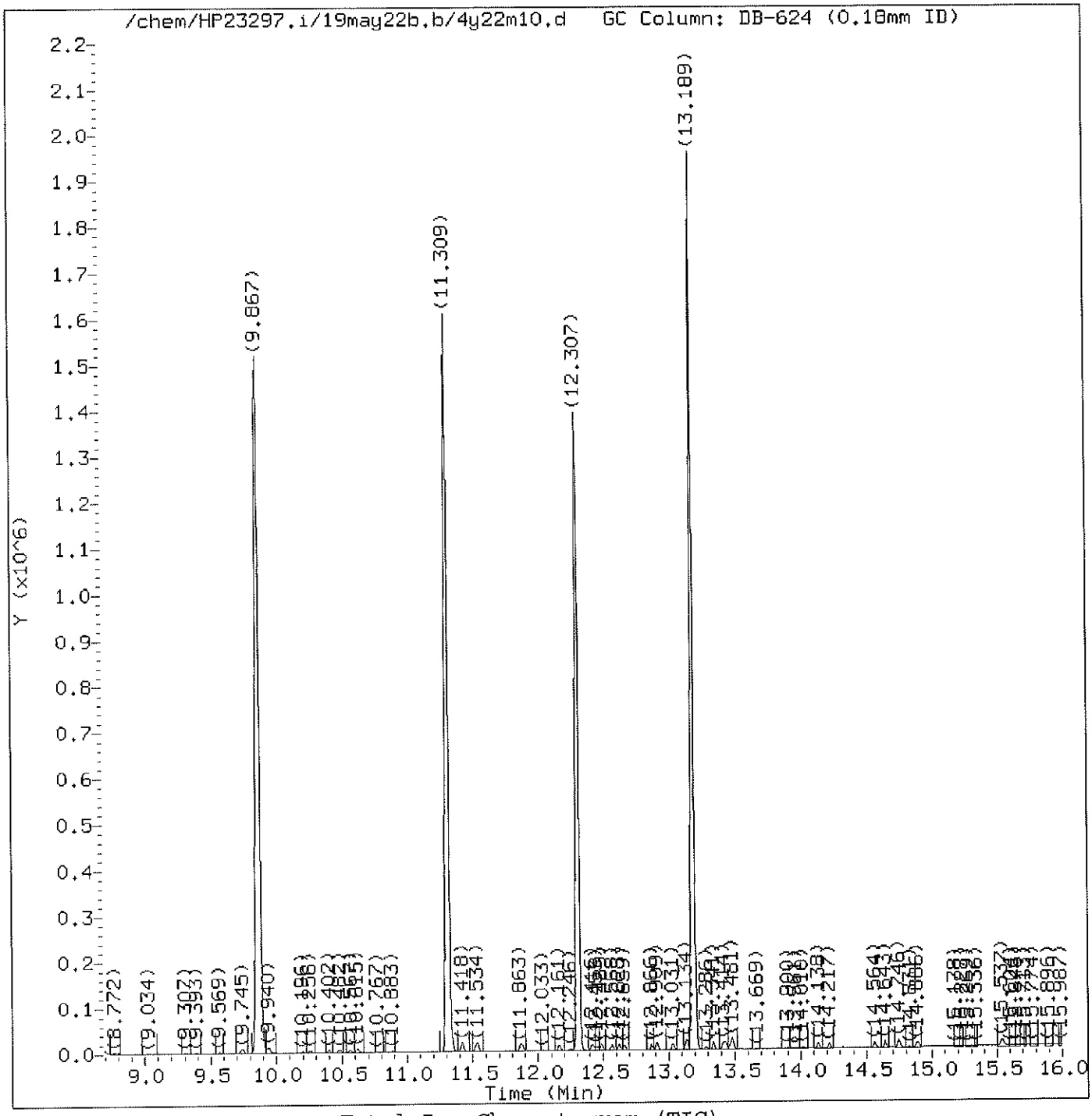
Sublist used: MDL

Date, time and analyst ID of latest file update: 23-May-2019 17:21 pth10165

Sample Name: MDL050

Lab Sample ID: MDL050

Digitally signed by Patrick T. Herres
on 05/23/2019 at 17:22.
Target 3.5 esignature user ID: pth10165



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may22b.b/4y22m10.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 22:09 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: MDL
Calibration date and time: 23-MAY-2019 00:21
Date, time and analyst ID of latest file update: 23-May-2019 17:21 pth10165

Sample Name: MDL050 Lab Sample ID: MDL050

Digitally signed by Patrick T. Herres
on 05/23/2019 at 17:22.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may22b.b/4y22m10.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 22:09 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: MDL
Calibration date and time: 23-MAY-2019 00:21
Date, time and analyst ID of latest file update: 23-May-2019 17:21 pth10165

Sample Name: MDL050 Lab Sample ID: MDL050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Chloromethane	(2)	2.196	50	2916	0.322
6) Vinyl Chloride	(2)	2.311	62	2381	0.269
8) Bromomethane	(2)	2.652	94	7252	0.999
9) Chloroethane	(2)	2.737	64	1920	0.393
12) Trichlorofluoromethane	(2)	3.041	101	2407	0.224
29)*t-Butyl alcohol-d10	(1)	4.368	65	336448	250.000
44) 2-Butanone	(2)	6.253	43	4905	0.678
52)$Dibromofluoromethane	(2)	6.977	113	288498	47.758
57)$1,2-Dichloroethane-d4	(2)	7.440	102	74274	50.319
66)*Fluorobenzene	(2)	7.866	96	1225521	50.000
82) 4-Methyl-2-pentanone	(2)	9.739	43	8381	0.645
83)$Toluene-d8	(3)	9.867	98	1231621	50.143
96) 2-Hexanone	(3)	10.615	43	6145	0.608
100)*Chlorobenzene-d5	(3)	11.309	117	957017	50.000
114)$4-Bromofluorobenzene	(3)	12.307	95	441557	47.164
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	505450	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Patrick T. Herres
on 05/23/2019 at 17:22.
Target 3.5 esignature user ID: pth10165

Raw QC Data

Volatiles by GC/MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLK424

Data file: /chem/HP23297.i/19may21b.b/4y21b71.d
Data file Sample Info. Line: VBLK424;VBLK424;1;3;;;;;;
Date, time and analyst ID of latest file update: 21-May-2019 22:18 dvv10203

Injection date and time: **21-MAY-2019 21:52**
Instrument ID: **HP23297.i** Batch: **4191415AA**

Blank Data file reference: **/chem/HP23297.i/19may21b.b/4y21b71.d**

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: **8260W-DE**
Calibration date and time (Last Method Edit): 21-MAY-2019 21:01
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may21b.b/4y21c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.362(0.000)	457	65	375542 (-6)	250.00	
66) Fluorobenzene	7.866(0.000)	1033	96	1193886 (-1)	50.00	
100) Chlorobenzene-d5	11.309(0.000)	1599	117	919102 (-4)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189(0.000)	1908	152	491037 (-6)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977(-0.001)	113	279814	47.548	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434(-0.001)	102	71097	49.444	99%		80 - 120
83) Toluene-d8	(3)	9.867(0.000)	98	1201349	50.928	102%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.307(0.000)	95	422355	46.974	94%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)			Not Detected					0.2	1
4) Chloromethane	(2)			Not Detected					0.2	1
5) 1,3-Butadiene	(2)			Not Detected					1	3
6) Vinyl Chloride	(2)			Not Detected					0.2	1
8) Bromomethane	(2)			Not Detected					0.3	1
9) Chloroethane	(2)			Not Detected					0.2	1
11) n-Pentane	(2)			Not Detected					0.4	10
12) Trichlorofluoromethane	(2)			Not Detected					0.2	1
15) Freon 123a	(2)			Not Detected					0.4	5
16) Acrolein	(1)			Not Detected					2	100
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
21) 2-Propanol	(1)			Not Detected					18	100
22) Methyl Iodide	(2)			Not Detected					0.2	1
23) Carbon Disulfide	(2)			Not Detected					0.2	5
25) Allyl Chloride	(2)			Not Detected					0.3	5
27) Methyl Acetate	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
30) t-Butyl alcohol	(1)			Not Detected					12	50
31) Acrylonitrile	(2)			Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)			Not Detected					0.2	1
34) n-Hexane	(2)			Not Detected					0.2	5
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
38) di-Isopropyl ether	(2)			Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)			Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)			Not Detected					0.2	2
44) 2-Butanone	(2)			Not Detected					0.3	10

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may21b.b/4y21b71.d Injection date and time: **21-MAY-2019 21:52**
Data file Sample Info. Line: VBLK424;VBLK424;1;3;;;;;; Instrument ID: **HP23297.i** Batch: **4191415AA**
Date, time and analyst ID of latest file update: 21-May-2019 22:18 dvv10203

Blank Data file reference: **/chem/HP23297.i/19may21b.b/4y21b71.d**

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: **8260W-DE**
Calibration date and time (Last Method Edit): 21-MAY-2019 21:01
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may21b.b/4y21c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					0.2	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					0.2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
72) Methylcyclohexane	(2)				Not Detected					0.2	5
73) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
74) Dibromomethane	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
76) Methyl Methacrylate	(2)				Not Detected					0.2	5
78) Bromodichloromethane	(2)				Not Detected					0.2	1
79) 2-Nitropropane	(2)				Not Detected					0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
81) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
82) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
88) Toluene	(3)				Not Detected					0.2	1
89) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
90) 1,3-Dichloropropene (total)	(3)				Not Detected					0.2	5
91) Ethyl Methacrylate	(3)				Not Detected					0.2	5
92) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
94) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
96) 2-Hexanone	(3)				Not Detected					0.3	10
97) Dibromochloromethane	(3)				Not Detected					0.2	1
99) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
102) Chlorobenzene	(3)				Not Detected					0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	5
109) Styrene	(3)				Not Detected					0.2	5
110) Bromoform	(3)				Not Detected					0.2	4
111) Isopropylbenzene	(3)				Not Detected					0.2	5
112) Cyclohexanone	(1)				Not Detected					25	100
115) Bromobenzene	(4)				Not Detected					0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
117) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
118) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50
119) n-Propylbenzene	(4)				Not Detected					0.2	5
120) 2-Chlorotoluene	(4)				Not Detected					0.2	5
121) 4-Chlorotoluene	(4)				Not Detected					0.2	5

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may21b.b/4y21b71.d Injection date and time: **21-MAY-2019 21:52**
Data file Sample Info. Line: VBLK424;VBLK424;1;3;;;;;; Instrument ID: **HP23297.i** Batch: **4191415AA**
Date, time and analyst ID of latest file update: 21-May-2019 22:18 dvv10203

Blank Data file reference: **/chem/HP23297.i/19may21b.b/4y21b71.d**

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: **8260W-DE**
Calibration date and time (Last Method Edit): 21-MAY-2019 21:01
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may21b.b/4y21c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

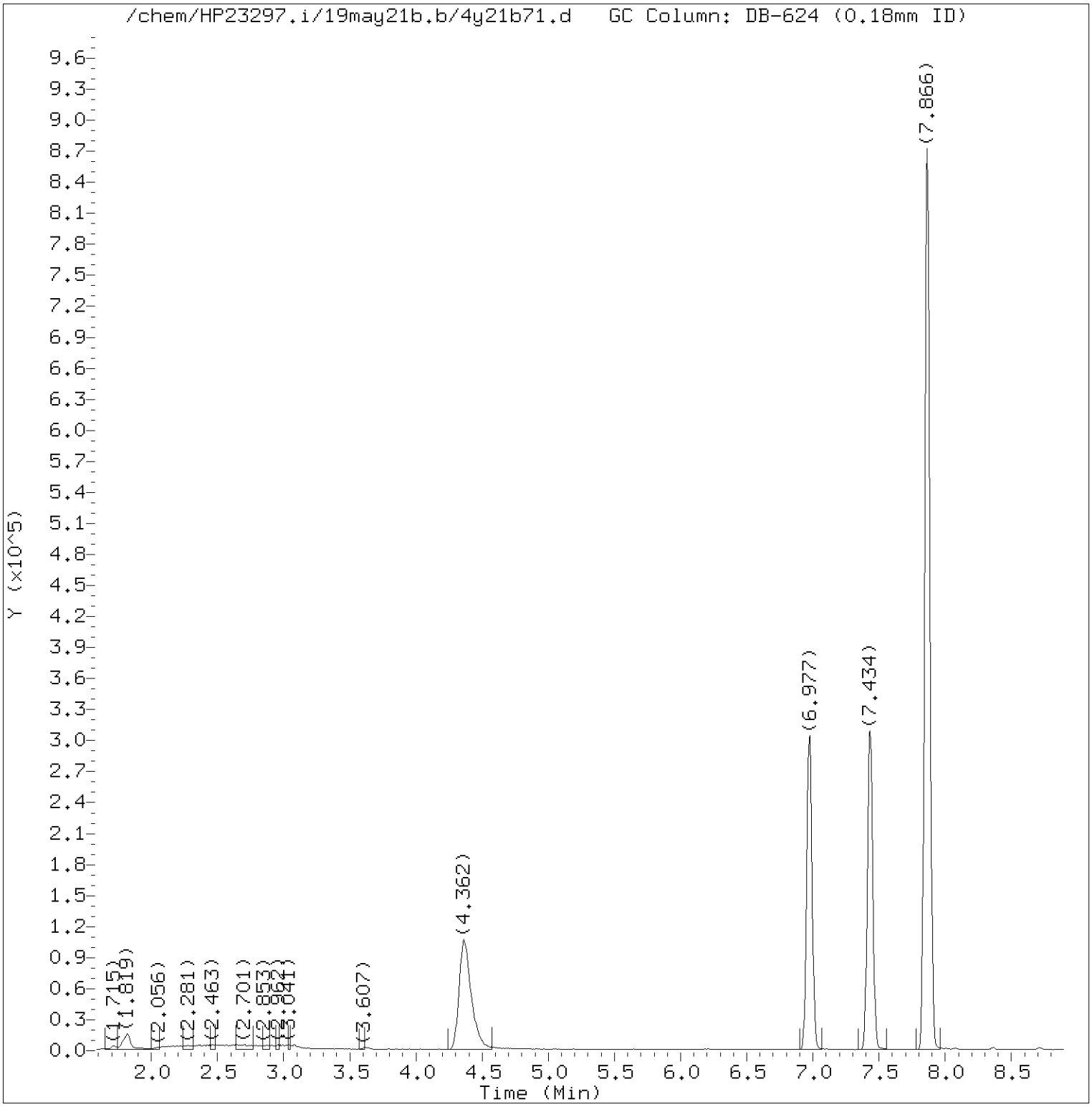
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
122) 1,3,5-Trimethylbenzene	(4)				Not Detected					0.3	5
124) tert-Butylbenzene	(4)				Not Detected					0.3	5
125) Pentachloroethane	(4)				Not Detected					0.2	5
126) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5
127) sec-Butylbenzene	(4)				Not Detected					0.2	5
129) 1,3-Dichlorobenzene	(4)				Not Detected					0.2	5
130) p-Isopropyltoluene	(4)				Not Detected					0.2	5
133) 1,4-Dichlorobenzene	(4)				Not Detected					0.2	5
134) 1,2,3-Trimethylbenzene	(4)				Not Detected					0.3	5
135) Benzyl Chloride	(4)				Not Detected					0.3	5
136) 1,3-Diethylbenzene	(4)				Not Detected					0.2	5
137) 1,4-Diethylbenzene	(4)				Not Detected					0.2	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
139) n-Butylbenzene	(4)				Not Detected					0.2	5
140) 1,2-Diethylbenzene	(4)				Not Detected					0.2	5
141) Diethylbenzene (total)	(4)				Not Detected					0.2	5
142) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.3	5
144) 1,3,5-Trichlorobenzene	(4)				Not Detected					0.2	5
146) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	5
147) Hexachlorobutadiene	(4)				Not Detected					0.7	5
148) Naphthalene	(4)				Not Detected					1	5
149) 1,2,3-Trichlorobenzene	(4)				Not Detected					0.4	5
150) 2-Methylnaphthalene	(4)				Not Detected					0.7	5

Total number of targets = 108

Digitally signed by Don V. Viray on 05/21/2019 at 22:24. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Marla S. Brewer on 05/22/2019 at 15:09. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21b71.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 21:52 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 22:18 dvv10203

Sample Name: VBLK424 Lab Sample ID: VBLK424

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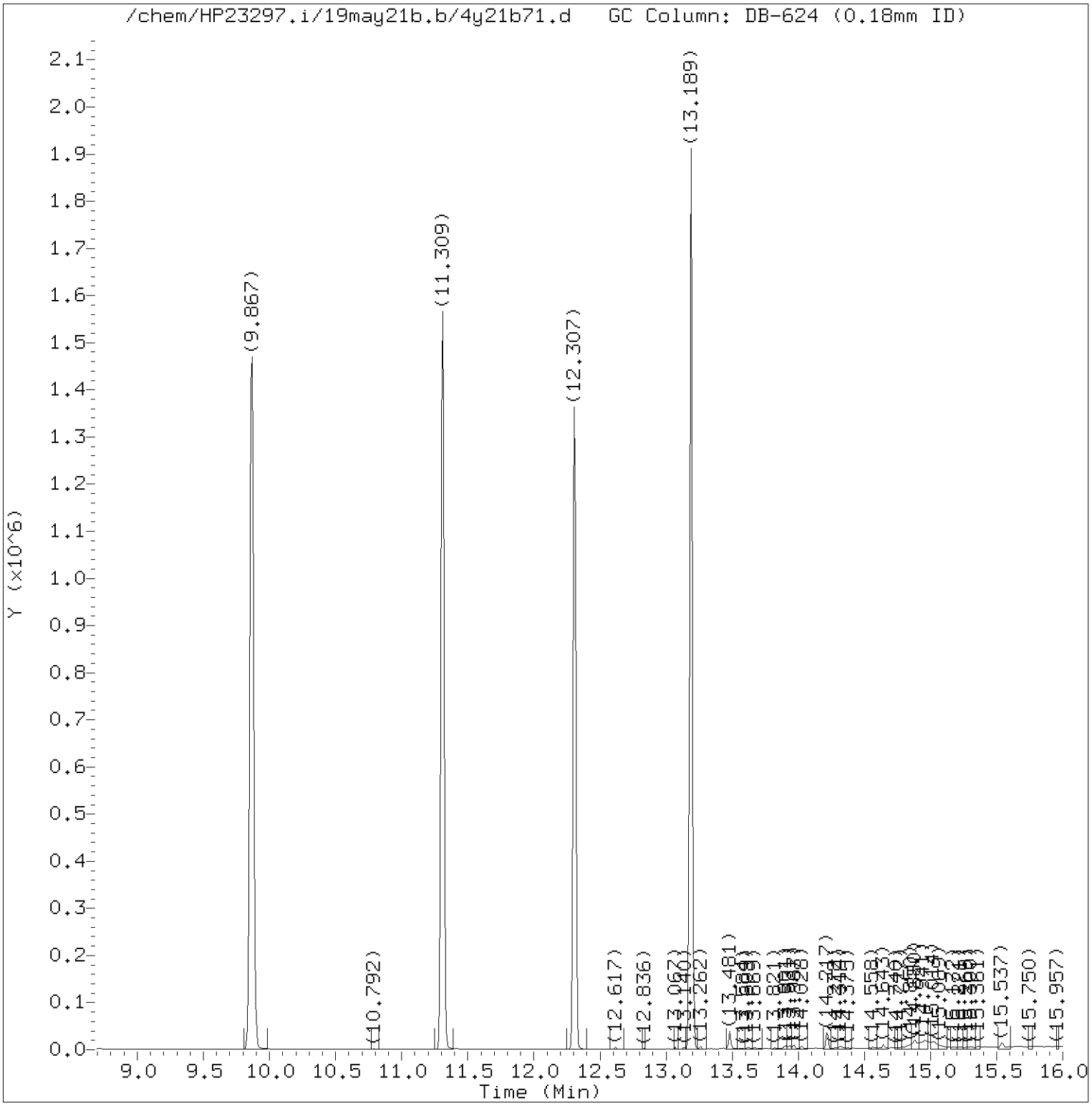
on 05/21/2019 at 22:24.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21b71.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 21:52 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 22:18 dvv10203

Sample Name: VBLK424 Lab Sample ID: VBLK424

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on 05/21/2019 at 22:24.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21b71.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 21:52 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 22:18 dvv10203

Sample Name: VBLK424 Lab Sample ID: VBLK424

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.362	65	375542	250.000
52)$Dibromofluoromethane	(2)	6.977	113	279814	47.548
57)$1,2-Dichloroethane-d4	(2)	7.434	102	71097	49.444
66)*Fluorobenzene	(2)	7.866	96	1193886	50.000
83)$Toluene-d8	(3)	9.867	98	1201349	50.928
100)*Chlorobenzene-d5	(3)	11.309	117	919102	50.000
114)$4-Bromofluorobenzene	(3)	12.307	95	422355	46.974
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	491037	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/21/2019 at 22:24.
Target 3.5 esignature user ID: dvv10203

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLK426

Data file: /chem/HP23297.i/19may22b.b/4y22b05.d
Data file Sample Info. Line: VBLK426;VBLK426;1;3;;;;;;
Date, time and analyst ID of latest file update: 22-May-2019 22:56 pth10165

Injection date and time: **22-MAY-2019 22:32**
Instrument ID: **HP23297.i** Batch: **4191422AA**

Blank Data file reference: **/chem/HP23297.i/19may22b.b/4y22b05.d**

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: **4191422**
Calibration date and time (Last Method Edit): 22-MAY-2019 22:43
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may22b.b/4y22c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.362(0.006)	457	65	361024 (-5)	250.00	
66) Fluorobenzene	7.866(0.000)	1033	96	1228587 (0)	50.00	
100) Chlorobenzene-d5	11.309(0.000)	1599	117	966530 (-1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189(0.000)	1908	152	521518 (-3)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977(0.000)	113	292877	48.362	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.440(-0.001)	102	76340	51.590	103%		80 - 120
83) Toluene-d8	(3)	9.867(0.000)	98	1235982	49.825	100%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.307(0.000)	95	449945	47.587	95%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)			Not Detected					0.2	1
4) Chloromethane	(2)			Not Detected					0.2	1
5) 1,3-Butadiene	(2)			Not Detected					1	3
6) Vinyl Chloride	(2)			Not Detected					0.2	1
8) Bromomethane	(2)			Not Detected					0.3	1
9) Chloroethane	(2)			Not Detected					0.2	1
11) n-Pentane	(2)			Not Detected					0.4	10
12) Trichlorofluoromethane	(2)			Not Detected					0.2	1
15) Freon 123a	(2)			Not Detected					0.4	5
16) Acrolein	(1)			Not Detected					2	100
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
21) 2-Propanol	(1)			Not Detected					18	100
22) Methyl Iodide	(2)			Not Detected					0.2	1
23) Carbon Disulfide	(2)			Not Detected					0.2	5
25) Allyl Chloride	(2)			Not Detected					0.3	5
27) Methyl Acetate	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
30) t-Butyl alcohol	(1)			Not Detected					12	50
31) Acrylonitrile	(2)			Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)			Not Detected					0.2	1
34) n-Hexane	(2)			Not Detected					0.2	5
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
38) di-Isopropyl ether	(2)			Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)			Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)			Not Detected					0.2	2
44) 2-Butanone	(2)			Not Detected					0.3	10

Digitally signed by Patrick T. Herres on 05/22/2019 at 22:56. Target 3.5 esignature user ID: pth10165

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may22b.b/4y22b05.d Injection date and time: **22-MAY-2019 22:32**
Data file Sample Info. Line: VBLK426;VBLK426;1;3;;;;;; Instrument ID: **HP23297.i** Batch: **4191422AA**
Date, time and analyst ID of latest file update: 22-May-2019 22:56 pth10165

Blank Data file reference: **/chem/HP23297.i/19may22b.b/4y22b05.d**

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: **4191422**
Calibration date and time (Last Method Edit): 22-MAY-2019 22:43
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may22b.b/4y22c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					0.2	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					0.2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
72) Methylcyclohexane	(2)				Not Detected					0.2	5
73) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
74) Dibromomethane	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
76) Methyl Methacrylate	(2)				Not Detected					0.2	5
78) Bromodichloromethane	(2)				Not Detected					0.2	1
79) 2-Nitropropane	(2)				Not Detected					0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
81) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
82) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
88) Toluene	(3)				Not Detected					0.2	1
89) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
90) 1,3-Dichloropropene (total)	(3)				Not Detected					0.2	5
91) Ethyl Methacrylate	(3)				Not Detected					0.2	5
92) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
94) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
96) 2-Hexanone	(3)				Not Detected					0.3	10
97) Dibromochloromethane	(3)				Not Detected					0.2	1
99) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
102) Chlorobenzene	(3)				Not Detected					0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	5
109) Styrene	(3)				Not Detected					0.2	5
110) Bromoform	(3)				Not Detected					0.2	4
111) Isopropylbenzene	(3)				Not Detected					0.2	5
112) Cyclohexanone	(1)				Not Detected					25	100
115) Bromobenzene	(4)				Not Detected					0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
117) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
118) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50
119) n-Propylbenzene	(4)				Not Detected					0.2	5
120) 2-Chlorotoluene	(4)				Not Detected					0.2	5
121) 4-Chlorotoluene	(4)				Not Detected					0.2	5

Digitally signed by Patrick T. Herres on 05/22/2019 at 22:56. Target 3.5 esignature user ID: pth10165

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may22b.b/4y22b05.d Injection date and time: **22-MAY-2019 22:32**
Data file Sample Info. Line: VBLK426;VBLK426;1;3;;;;;; Instrument ID: **HP23297.i** Batch: **4191422AA**
Date, time and analyst ID of latest file update: 22-May-2019 22:56 pth10165

Blank Data file reference: **/chem/HP23297.i/19may22b.b/4y22b05.d**

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: **4191422**
Calibration date and time (Last Method Edit): 22-MAY-2019 22:43
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may22b.b/4y22c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

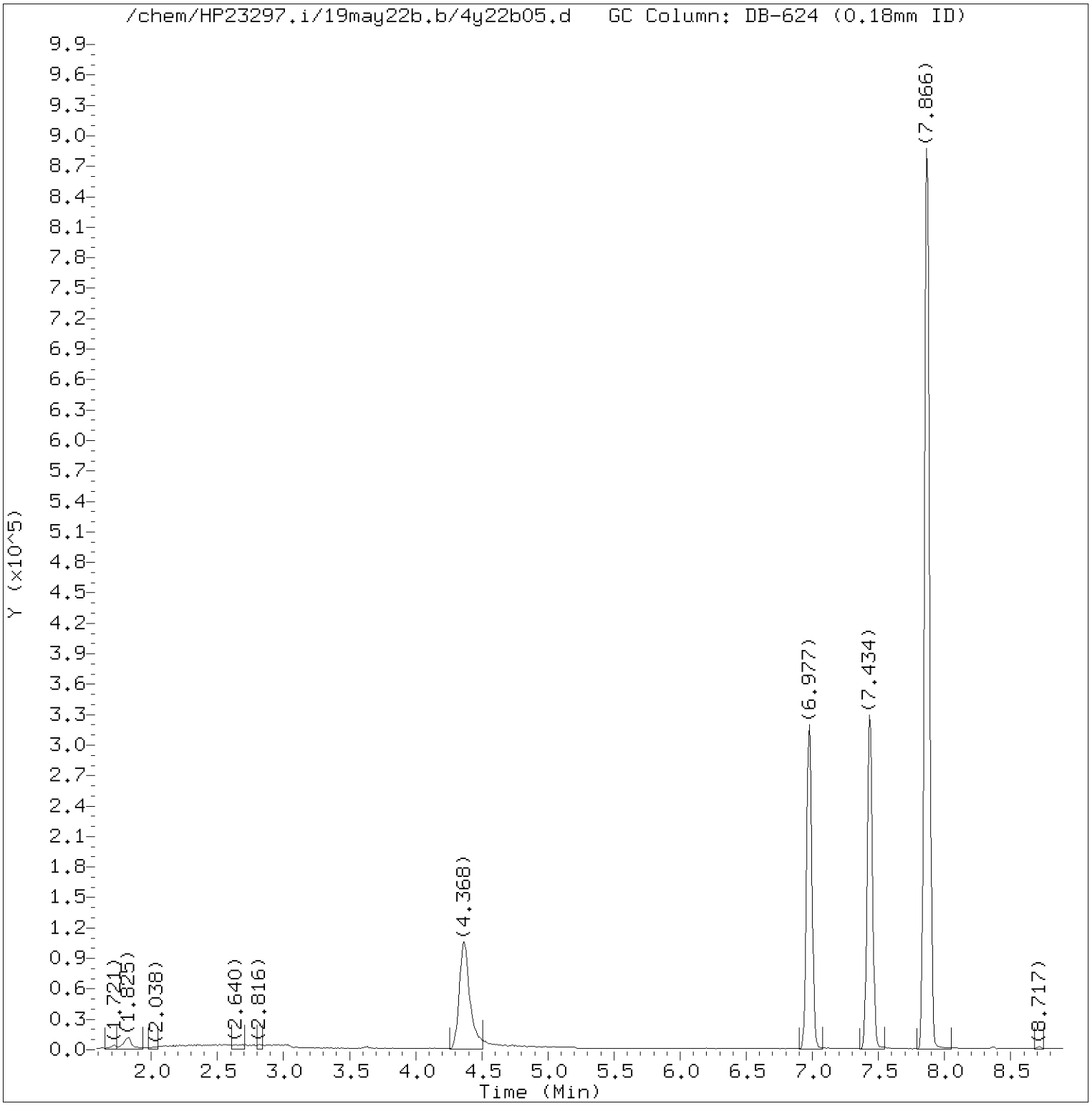
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
122) 1,3,5-Trimethylbenzene	(4)				Not Detected					0.3	5
124) tert-Butylbenzene	(4)				Not Detected					0.3	5
125) Pentachloroethane	(4)				Not Detected					0.2	5
126) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5
127) sec-Butylbenzene	(4)				Not Detected					0.2	5
129) 1,3-Dichlorobenzene	(4)				Not Detected					0.2	5
130) p-Isopropyltoluene	(4)				Not Detected					0.2	5
133) 1,4-Dichlorobenzene	(4)				Not Detected					0.2	5
134) 1,2,3-Trimethylbenzene	(4)				Not Detected					0.3	5
135) Benzyl Chloride	(4)				Not Detected					0.3	5
136) 1,3-Diethylbenzene	(4)				Not Detected					0.2	5
137) 1,4-Diethylbenzene	(4)				Not Detected					0.2	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
139) n-Butylbenzene	(4)				Not Detected					0.2	5
140) 1,2-Diethylbenzene	(4)				Not Detected					0.2	5
141) Diethylbenzene (total)	(4)				Not Detected					0.2	5
142) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.3	5
144) 1,3,5-Trichlorobenzene	(4)				Not Detected					0.2	5
146) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	5
147) Hexachlorobutadiene	(4)				Not Detected					0.7	5
148) Naphthalene	(4)				Not Detected					1	5
149) 1,2,3-Trichlorobenzene	(4)				Not Detected					0.4	5
150) 2-Methylnaphthalene	(4)				Not Detected					0.7	5

Total number of targets = 108

Digitally signed by Patrick T. Herres on 05/22/2019 at 22:56. Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Kari Becker on 05/23/2019 at 15:42. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

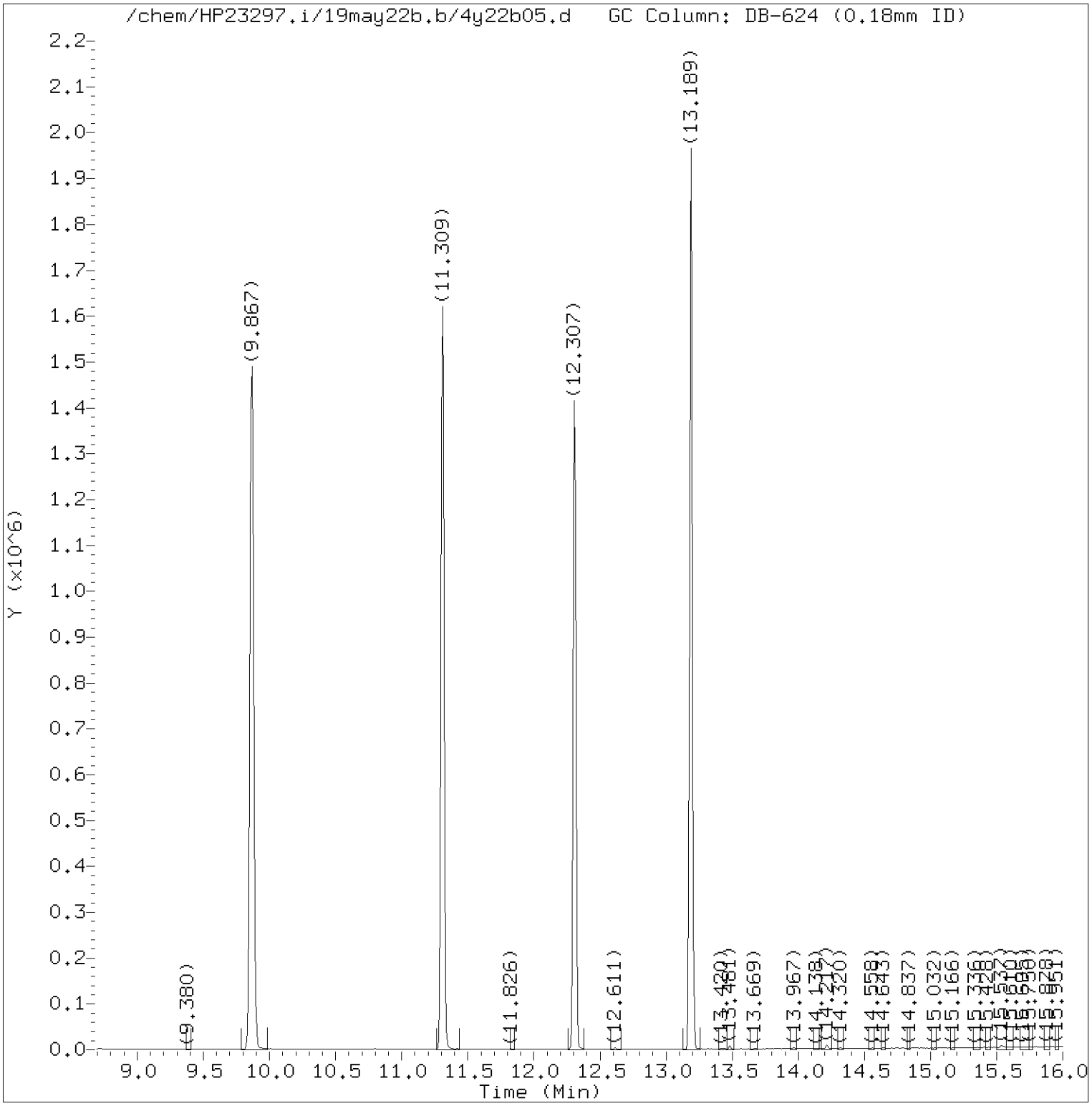
Target Revision 3.5

Data File: /chem/HP23297.i/19may22b.b/4y22b05.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 22:32 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 4191422
Calibration date and time: 22-MAY-2019 22:43
Date, time and analyst ID of latest file update: 22-May-2019 22:56 pth10165

Sample Name: VBLK426 Lab Sample ID: VBLK426

Digitally signed by Patrick T. Herres
on 05/22/2019 at 22:56.
Target 3.5 esignature user ID: pth10165



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may22b.b/4y22b05.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 22:32 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 4191422
Calibration date and time: 22-MAY-2019 22:43
Date, time and analyst ID of latest file update: 22-May-2019 22:56 pth10165

Sample Name: VBLK426 Lab Sample ID: VBLK426

Digitally signed by Patrick T. Herres
on 05/22/2019 at 22:56.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may22b.b/4y22b05.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 22:32 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 4191422
Calibration date and time: 22-MAY-2019 22:43
Date, time and analyst ID of latest file update: 22-May-2019 22:56 pth10165

Sample Name: VBLK426 Lab Sample ID: VBLK426

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.362	65	361024	250.000
52)$Dibromofluoromethane	(2)	6.977	113	292877	48.362
57)$1,2-Dichloroethane-d4	(2)	7.440	102	76340	51.590
66)*Fluorobenzene	(2)	7.866	96	1228587	50.000
83)$Toluene-d8	(3)	9.867	98	1235982	49.825
100)*Chlorobenzene-d5	(3)	11.309	117	966530	50.000
114)$4-Bromofluorobenzene	(3)	12.307	95	449945	47.587
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	521518	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Patrick T. Herres
on 05/22/2019 at 22:56.
Target 3.5 esignature user ID: pth10165

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may22a.b/ey22b01.d
Data file Sample Info. Line: VBLKE11;VBLKE11;1;3;;;;;;
Date, time and analyst ID of latest file update: 22-May-2019 11:02 jml01693

Injection date and time: **22-MAY-2019 10:39**
Instrument ID: **HP15648.i** Batch: **E191421AA**

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **8260W**
Calibration date and time (Last Method Edit): 22-MAY-2019 10:43
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.487(-0.012)	246	65	166453 (-3)	250.00	
66) Fluorobenzene	4.736(-0.006)	615	96	1119135 (3)	50.00	
101) Chlorobenzene-d5	7.894(0.000)	1133	117	836525 (3)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802(0.000)	1446	152	445154 (5)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.078(-0.001)	113	251176	48.288	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.395(0.000)	102	65657	50.019	100%		80 - 120
84) Toluene-d8	(3)	6.382(0.000)	98	1123179	49.437	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918(0.000)	95	427797	48.981	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)			Not Detected					0.2	1
4) Chloromethane	(2)			Not Detected					0.2	1
5) 1,3-Butadiene	(2)			Not Detected					1	3
6) Vinyl Chloride	(2)			Not Detected					0.2	1
8) Bromomethane	(2)			Not Detected					0.3	1
9) Chloroethane	(2)			Not Detected					0.2	1
10) Dichlorofluoromethane	(2)			Not Detected					0.9	3
11) n-Pentane	(2)			Not Detected					0.4	10
12) Trichlorofluoromethane	(2)			Not Detected					0.2	1
14) Ethyl ether	(2)			Not Detected					0.2	5
15) Freon 123a	(2)			Not Detected					0.4	5
16) Acrolein	(1)			Not Detected					2	100
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
21) 2-Propanol	(1)			Not Detected					18	100
22) Methyl Iodide	(2)			Not Detected					0.2	1
23) Carbon Disulfide	(2)			Not Detected					0.2	5
25) Allyl Chloride	(2)			Not Detected					0.3	5
27) Methyl Acetate	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
30) t-Butyl alcohol	(1)			Not Detected					12	50
31) Acrylonitrile	(2)			Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)			Not Detected					0.2	1
34) n-Hexane	(2)			Not Detected					0.2	5
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
38) di-Isopropyl ether	(2)			Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)			Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1

Digitally signed by Jason M. Long on 05/22/2019 at 14:16. Target 3.5 esignature user ID: jml01693

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may22a.b/ey22b01.d Injection date and time: **22-MAY-2019 10:39**
Data file Sample Info. Line: VBLKE11;VBLKE11;1;3;;;;;; Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 11:02 jml01693

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **8260W**
Calibration date and time (Last Method Edit): 22-MAY-2019 10:43
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
43) 1,2-Dichloroethene (Total)	(2)			Not Detected					0.2	2
44) 2-Butanone	(2)			Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)			Not Detected					0.3	1
47) Propionitrile	(1)			Not Detected					14	100
48) Methacrylonitrile	(2)			Not Detected					6	50
49) Bromochloromethane	(2)			Not Detected					0.2	5
50) Tetrahydrofuran	(1)			Not Detected					0.7	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
54) Cyclohexane	(2)			Not Detected					0.2	5
55) 1,1-Dichloropropene	(2)			Not Detected					0.2	5
56) Carbon Tetrachloride	(2)			Not Detected					0.2	1
58) Isobutyl Alcohol	(1)			Not Detected					36	250
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
65) t-Amyl methyl ether	(2)			Not Detected					0.8	5
67) n-Heptane	(2)			Not Detected					0.2	5
69) n-Butanol	(1)			Not Detected					61	250
71) Trichloroethene	(2)			Not Detected					0.2	1
73) Methylcyclohexane	(2)			Not Detected					0.2	5
74) 1,2-Dichloropropane	(2)			Not Detected					0.2	1
75) Dibromomethane	(2)			Not Detected					0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
77) Methyl Methacrylate	(2)			Not Detected					0.2	5
79) Bromodichloromethane	(2)			Not Detected					0.2	1
80) 2-Nitropropane	(2)			Not Detected					0.8	10
81) 2-Chloroethyl Vinyl Ether	(2)			Not Detected					0.2	10
82) cis-1,3-Dichloropropene	(2)			Not Detected					0.2	1
83) 4-Methyl-2-pentanone	(2)			Not Detected					0.5	10
89) Toluene	(3)			Not Detected					0.2	1
90) trans-1,3-Dichloropropene	(3)			Not Detected					0.2	1
91) 1,3-Dichloropropene (total)	(3)			Not Detected					0.2	5
92) Ethyl Methacrylate	(3)			Not Detected					0.2	5
93) 1,1,2-Trichloroethane	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
95) 1,3-Dichloropropane	(3)			Not Detected					0.2	1
97) 2-Hexanone	(3)			Not Detected					0.3	10
98) Dibromochloromethane	(3)			Not Detected					0.2	1
100) 1,2-Dibromoethane	(3)			Not Detected					0.2	1
102) 1-Chlorohexane	(3)			Not Detected					0.3	5
103) Chlorobenzene	(3)			Not Detected					0.2	1
104) 1,1,1,2-Tetrachloroethane	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
110) Styrene	(3)			Not Detected					0.2	5
111) Bromoform	(3)			Not Detected					0.2	4
112) Isopropylbenzene	(3)			Not Detected					0.2	5
113) Cyclohexanone	(1)			Not Detected					25	100
116) Bromobenzene	(4)			Not Detected					0.2	5
117) 1,1,2,2-Tetrachloroethane	(4)			Not Detected					0.2	1
118) 1,2,3-Trichloropropane	(4)			Not Detected					0.2	5
119) trans-1,4-Dichloro-2-butene	(4)			Not Detected					6	50

Digitally signed by Jason M. Long on 05/22/2019 at 14:16. Target 3.5 esignature user ID: jml01693

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may22a.b/ey22b01.d Injection date and time: **22-MAY-2019 10:39**
Data file Sample Info. Line: VBLKE11;VBLKE11;1;3;;;;;; Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 11:02 jml01693

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **8260W**
Calibration date and time (Last Method Edit): 22-MAY-2019 10:43
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

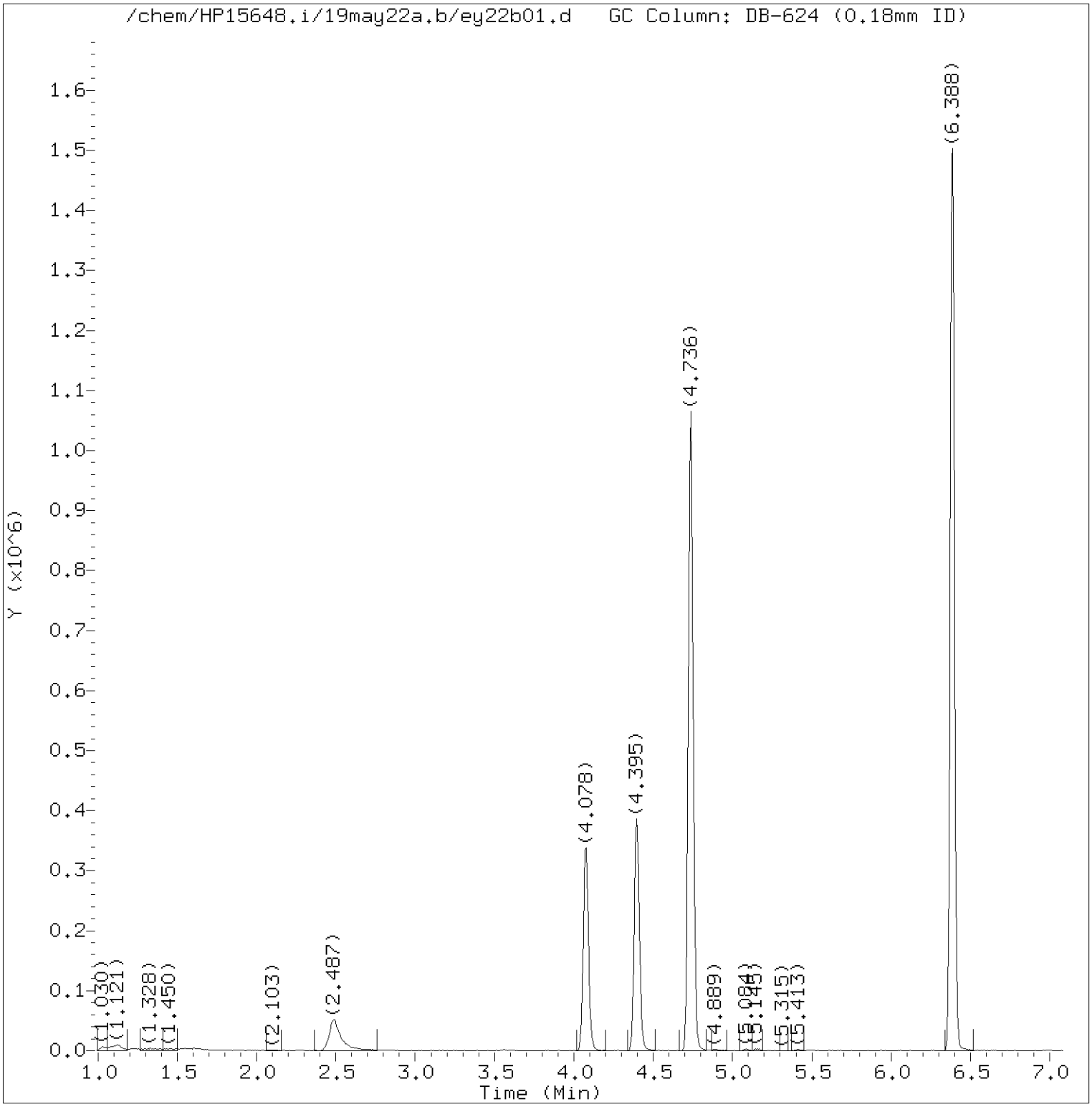
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) n-Propylbenzene	(4)			Not Detected					0.2	5
121) 2-Chlorotoluene	(4)			Not Detected					0.2	5
122) 4-Chlorotoluene	(4)			Not Detected					0.2	5
123) 1,3,5-Trimethylbenzene	(4)			Not Detected					0.3	5
125) tert-Butylbenzene	(4)			Not Detected					0.3	5
126) Pentachloroethane	(4)			Not Detected					0.2	5
127) 1,2,4-Trimethylbenzene	(4)			Not Detected					1	5
128) sec-Butylbenzene	(4)			Not Detected					0.2	5
130) 1,3-Dichlorobenzene	(4)			Not Detected					0.2	5
131) p-Isopropyltoluene	(4)			Not Detected					0.2	5
134) 1,4-Dichlorobenzene	(4)			Not Detected					0.2	5
135) 1,2,3-Trimethylbenzene	(4)			Not Detected					0.3	5
136) Benzyl Chloride	(4)			Not Detected					0.3	5
137) 1,3-Diethylbenzene	(4)			Not Detected					0.2	5
138) 1,4-Diethylbenzene	(4)			Not Detected					0.2	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
140) n-Butylbenzene	(4)			Not Detected					0.2	5
141) 1,2-Diethylbenzene	(4)			Not Detected					0.2	5
142) Diethylbenzene (total)	(4)			Not Detected					0.2	5
143) 1,2-Dibromo-3-chloropropane	(4)			Not Detected					0.3	5
145) 1,3,5-Trichlorobenzene	(4)			Not Detected					0.2	5
147) 1,2,4-Trichlorobenzene	(4)			Not Detected					0.3	5
148) Hexachlorobutadiene	(4)			Not Detected					0.7	5
149) Naphthalene	(4)			Not Detected					1	5
150) 1,2,3-Trichlorobenzene	(4)	11.497(-0.000)	180	2916	0.407	0.41		J	0.4	5
151) 2-Methylnaphthalene	(4)	12.052(0.000)	142	14474	0.915	0.91		J	0.7	5

Total number of targets = 111

Digitally signed by Jason M. Long on 05/22/2019 at 14:16. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/23/2019 at 13:38. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

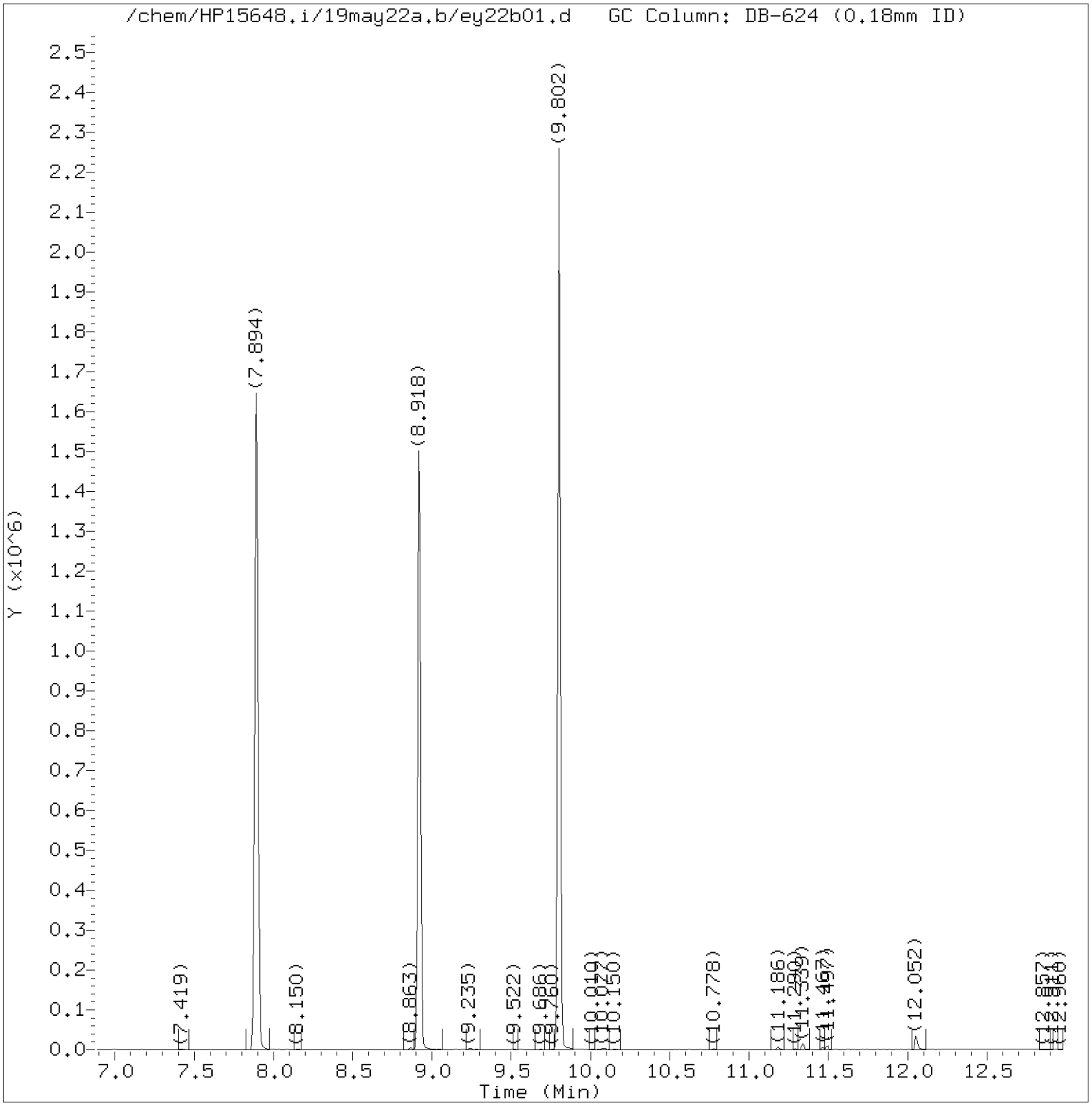
Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22b01.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 10:39 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 10:43
Date, time and analyst ID of latest file update: 22-May-2019 11:02 jml01693

Sample Name: VBLKE11 Lab Sample ID: VBLKE11

Digitally signed by Jason M. Long
on 05/22/2019 at 14:16.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22b01.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 10:39 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 10:43
Date, time and analyst ID of latest file update: 22-May-2019 11:02 jml01693

Sample Name: VBLKE11 Lab Sample ID: VBLKE11

Digitally signed by Jason M. Long
on 05/22/2019 at 14:16.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22b01.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 10:39 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 10:43
Date, time and analyst ID of latest file update: 22-May-2019 11:02 jml01693

Sample Name: VBLKE11 Lab Sample ID: VBLKE11

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.487	65	166453	250.000
52)$Dibromofluoromethane	(2)	4.078	113	251176	48.288
57)$1,2-Dichloroethane-d4	(2)	4.395	102	65657	50.019
66)*Fluorobenzene	(2)	4.736	96	1119135	50.000
84)$Toluene-d8	(3)	6.382	98	1123179	49.437
101)*Chlorobenzene-d5	(3)	7.894	117	836525	50.000
115)$4-Bromofluorobenzene	(3)	8.918	95	427797	48.981
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	445154	50.000
150) 1,2,3-Trichlorobenzene	(4)	11.497	180	2916	0.407
151) 2-Methylnaphthalene	(4)	12.052	142	14474	0.915

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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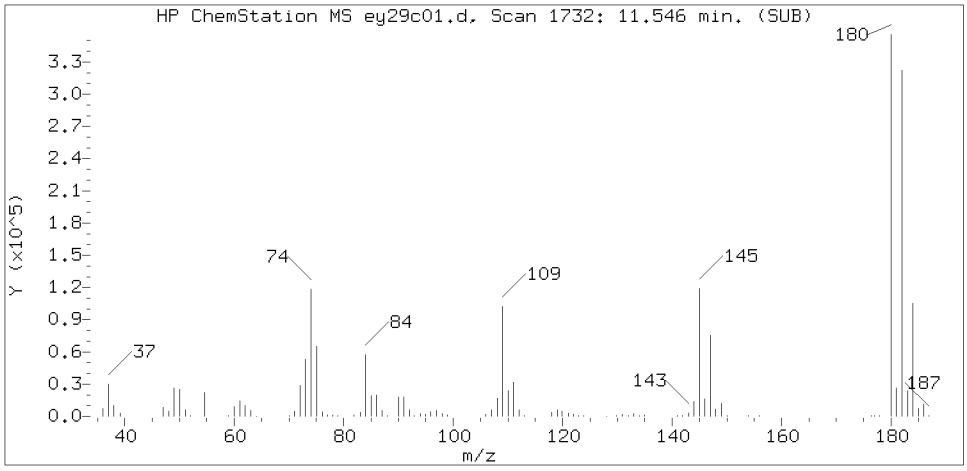
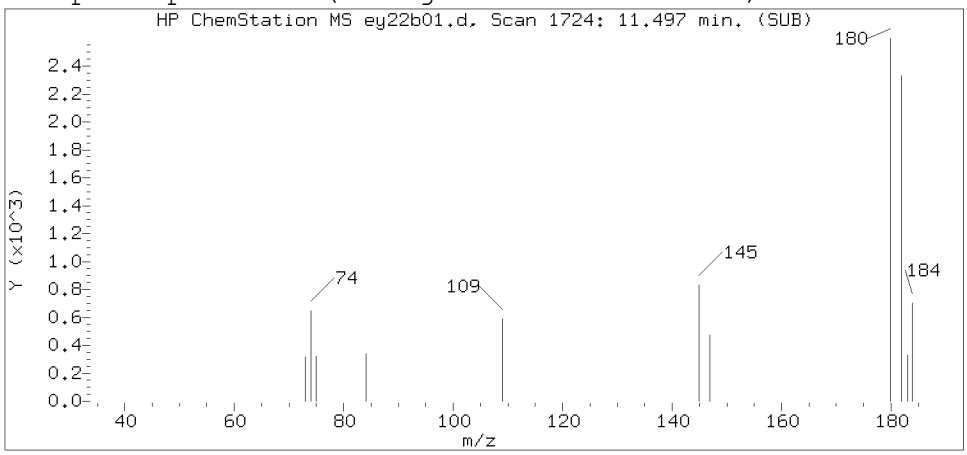
on 05/22/2019 at 14:16.
Target 3.5 esignature user ID: jml01693

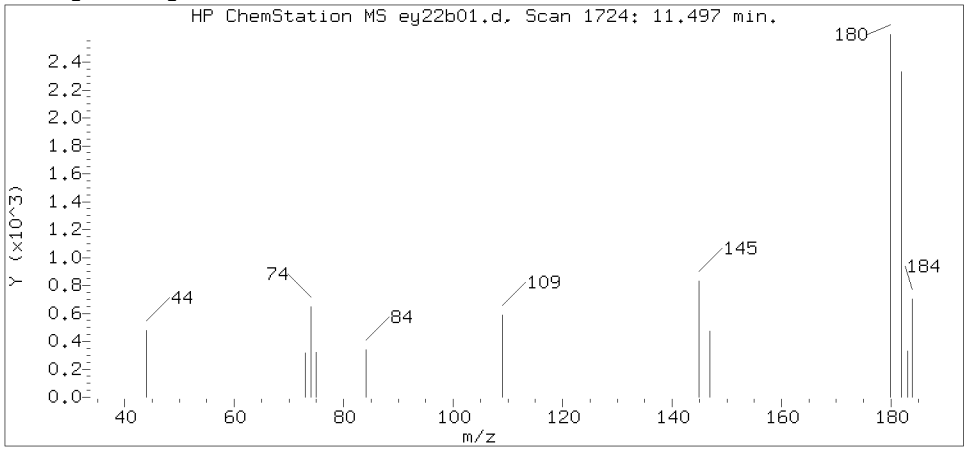
Reference Standard Spectrum for 1,2,3-Trichlorobenzene

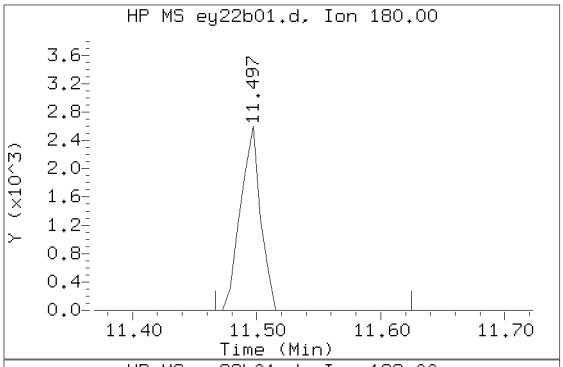


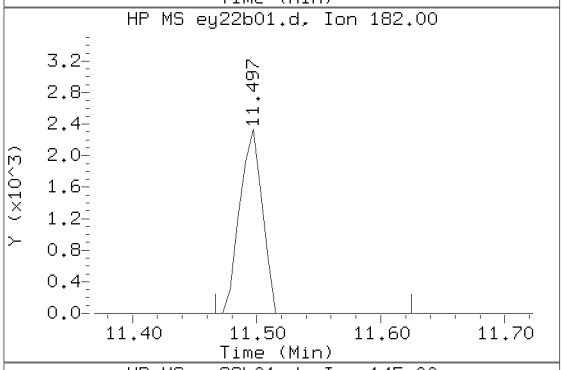
Sample Spectrum (Background Subtracted)

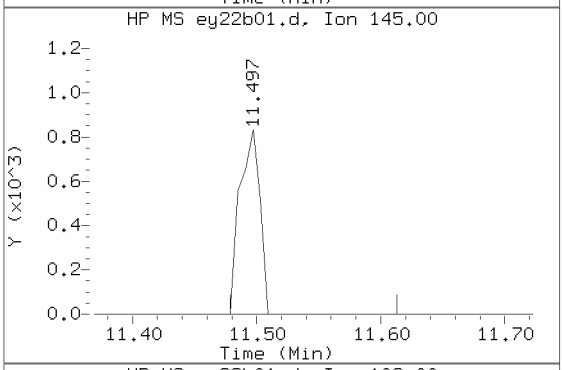


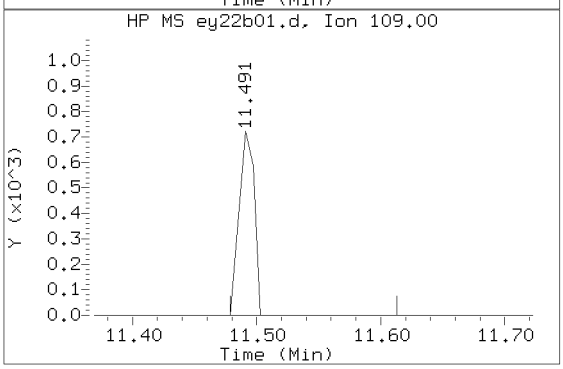
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22b01.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 10:39 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 10:43
Date, time and analyst ID of latest file update: 22-May-2019 11:02 jml01693

Sample Name: VBLKE11 Lab Sample ID: VBLKE11

Compound Number : 150
Compound Name : 1,2,3-Trichlorobenzene
Scan Number : 1724
Retention Time (minutes): 11.497
Relative Retention Time :-0.00062
Quant Ion : 180.00
Area (flag) : 2916
On-Column Amount (ng) : 0.4066

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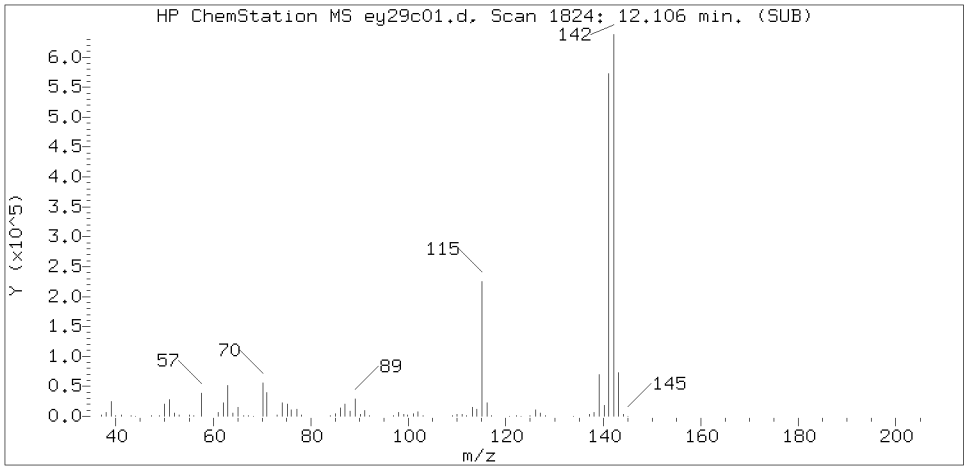
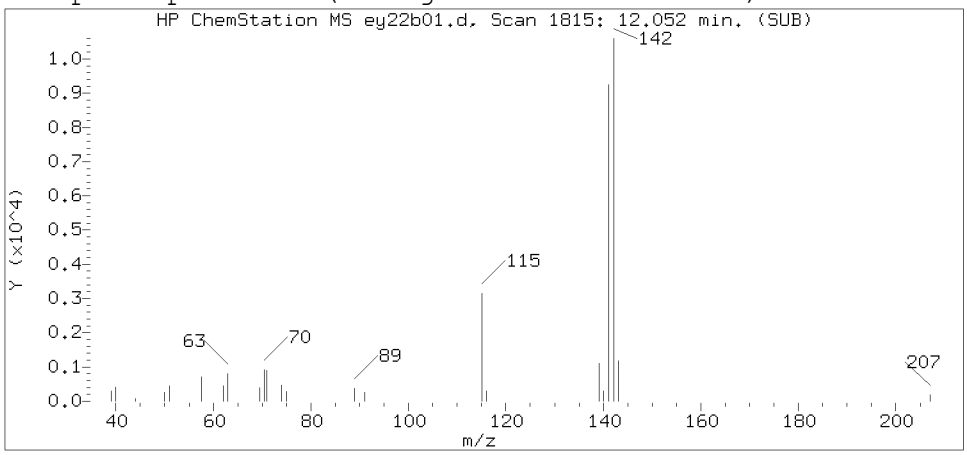
Target 3.5 esignature user ID: jml01693

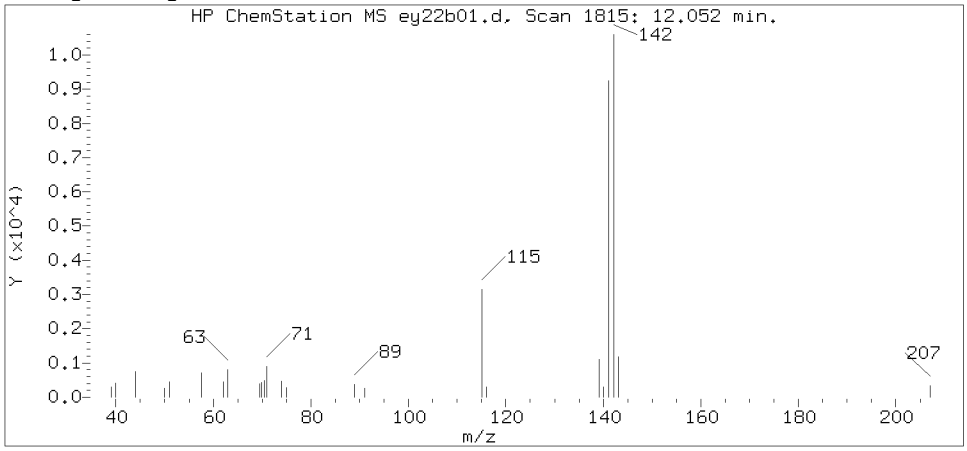
Reference Standard Spectrum for 2-Methylnaphthalene

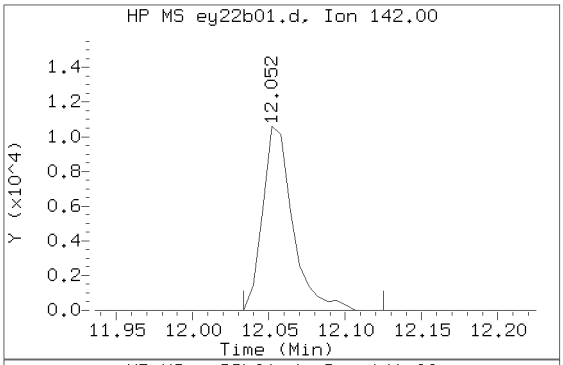


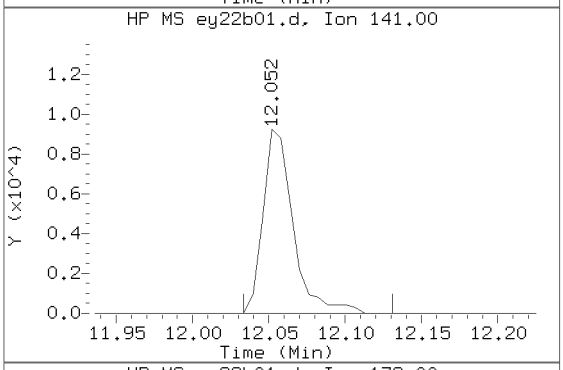
Sample Spectrum (Background Subtracted)

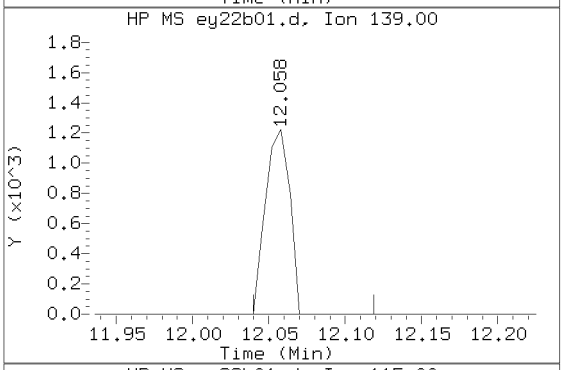


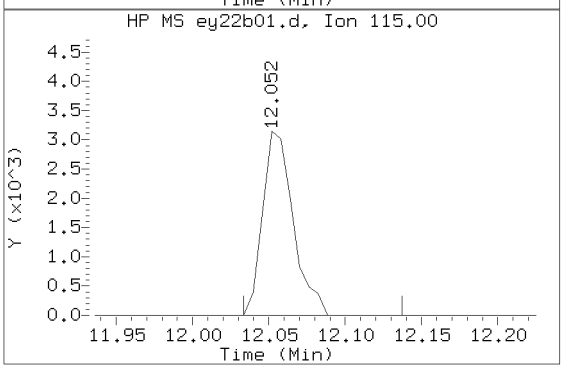
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19may22a.b/ey22b01.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 10:39 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 10:43
Date, time and analyst ID of latest file update: 22-May-2019 11:02 jml01693

Sample Name: VBLKE11 Lab Sample ID: VBLKE11

Compound Number : 151
Compound Name : 2-Methylnaphthalene
Scan Number : 1815
Retention Time (minutes): 12.052
Relative Retention Time : 0.00001
Quant Ion : 142.00
Area (flag) : 14474
On-Column Amount (ng) : 0.9146

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Target 3.5 esignature user ID: jml01693

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

92J03MS

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058217

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may21b.b/4y21s73.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	16	
75-35-4	1,1-Dichloroethene	25	
67-64-1	Acetone	150	
76-13-1	Freon 113	24	
75-15-0	Carbon Disulfide	23	
75-09-2	Methylene Chloride	22	
156-60-5	trans-1,2-Dichloroethene	23	
75-34-3	1,1-Dichloroethane	22	
156-59-2	cis-1,2-Dichloroethene	24	
78-93-3	2-Butanone	120	
67-66-3	Chloroform	21	
71-55-6	1,1,1-Trichloroethane	24	
71-43-2	Benzene	22	
107-06-2	1,2-Dichloroethane	19	
79-01-6	Trichloroethene	22	
123-91-1	1,4-Dioxane	570	
108-88-3	Toluene	22	
127-18-4	Tetrachloroethene	22	
100-41-4	Ethylbenzene	21	
1330-20-7	Xylene (Total)	64	
95-50-1	1,2-Dichlorobenzene	21	
91-20-3	Naphthalene	20	

FORM I VOA

^

92J03MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1058217MS

Data file: /chem/HP23297.i/19may21b.b/4y21s73.d Injection date and time: **22-MAY-2019 04:19**
Data file Sample Info. Line: 92J03MS;1058217MS;1;3;MS;JCV92;;;4y21b71; Instrument ID: **HP23297.i** Batch: **4191415AA**
Date, time and analyst ID of latest file update: 22-May-2019 11:48 kas02648

Blank Data file reference: **/chem/HP23297.i/19may21b.b/4y21b71.d**

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 08:03
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may21b.b/4y21c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.361(0.000)	457	65	381455	(-5)	250.00	
66) Fluorobenzene	7.865(0.000)	1033	96	1146345	(-5)	50.00	
100) Chlorobenzene-d5	11.309(0.000)	1599	117	899012	(-6)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189(0.000)	1908	152	490705	(-6)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977(-0.001)	113	273324	48.371	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434(-0.001)	102	68521	49.628	99%		80 - 120
83) Toluene-d8	(3)	9.867(0.000)	98	1161358	50.333	101%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.306(0.000)	95	421405	47.916	96%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)	2.311(0.000)	62	134140	16.206	16.21			0.2	1
17) 1,1-Dichloroethene	(2)	3.650(0.000)	96	99819	24.968	24.97			0.2	1
18) Acetone	(1)	3.686(0.000)	58	163015	153.487	153.49			0.7	20
19) Freon 113	(2)	3.674(-0.000)	101	106110	24.119	24.12			0.2	10
23) Carbon Disulfide	(2)	3.954(-0.000)	76	328791	23.061	23.06			0.2	5
28) Methylene Chloride	(2)	4.349(-0.000)	84	112773	22.269	22.27			0.3	1
32) trans-1,2-Dichloroethene	(2)	4.763(-0.000)	96	110793	23.194	23.19			0.2	1
36) 1,1-Dichloroethane	(2)	5.432(-0.000)	63	197003	22.190	22.19			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.272(-0.000)	96	130330	23.660	23.66			0.2	1
44) 2-Butanone	(2)	6.253(-0.000)	43	837761	123.736	123.74			0.3	10
51) Chloroform	(2)	6.758(-0.000)	83	180507	20.643	20.64			0.2	1
53) 1,1,1-Trichloroethane	(2)	6.977(0.000)	97	174219	23.801	23.80			0.3	1
60) Benzene	(2)	7.458(0.000)	78	457097	21.735	21.73			0.2	1
61) 1,2-Dichloroethane	(2)	7.537(-0.000)	62	134331	18.845	18.85			0.3	1
71) Trichloroethene	(2)	8.340(-0.000)	95	115699	21.688	21.69			0.2	1
75) 1,4-Dioxane	(1)	8.766(-0.000)	88	63527M	568.270	568.27			29	250
88) Toluene	(3)	9.940(0.000)	92	290667	21.779	21.78			0.2	1
93) Tetrachloroethene	(3)	10.481(0.000)	166	129857	22.305	22.30			0.2	1
104) Ethylbenzene	(3)	11.418(-0.000)	91	549061	21.418	21.42			0.4	1
106) m+p-Xylene	(3)	11.534(-0.000)	106	440852	43.130	43.13			1	5
107) o-Xylene	(3)	11.862(-0.000)	106	213923	21.055	21.06			0.4	1
108) Xylene (Total)	(3)		106	654775	64.186	64.19			1	5
138) 1,2-Dichlorobenzene	(4)	13.468(-0.000)	146	266883	21.281	21.28			0.2	5
148) Naphthalene	(4)	14.746(-0.000)	128	630847	20.325	20.32			1	5

M = Compound was manually integrated.

Digitally signed by Kevin A. Sposito on 05/22/2019 at 11:48. Target 3.5 esignature user ID: kas02648

Data file: /chem/HP23297.i/19may21b.b/4y21s73.d Injection date and time: **22-MAY-2019 04:19**
Data file Sample Info. Line: 92J03MS;1058217MS;1;3;MS;JCV92;;;4y21b71; Instrument ID: **HP23297.i** Batch: **4191415AA**
Date, time and analyst ID of latest file update: 22-May-2019 11:48 kas02648

Blank Data file reference: **/chem/HP23297.i/19may21b.b/4y21b71.d**

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 08:03
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may21b.b/4y21c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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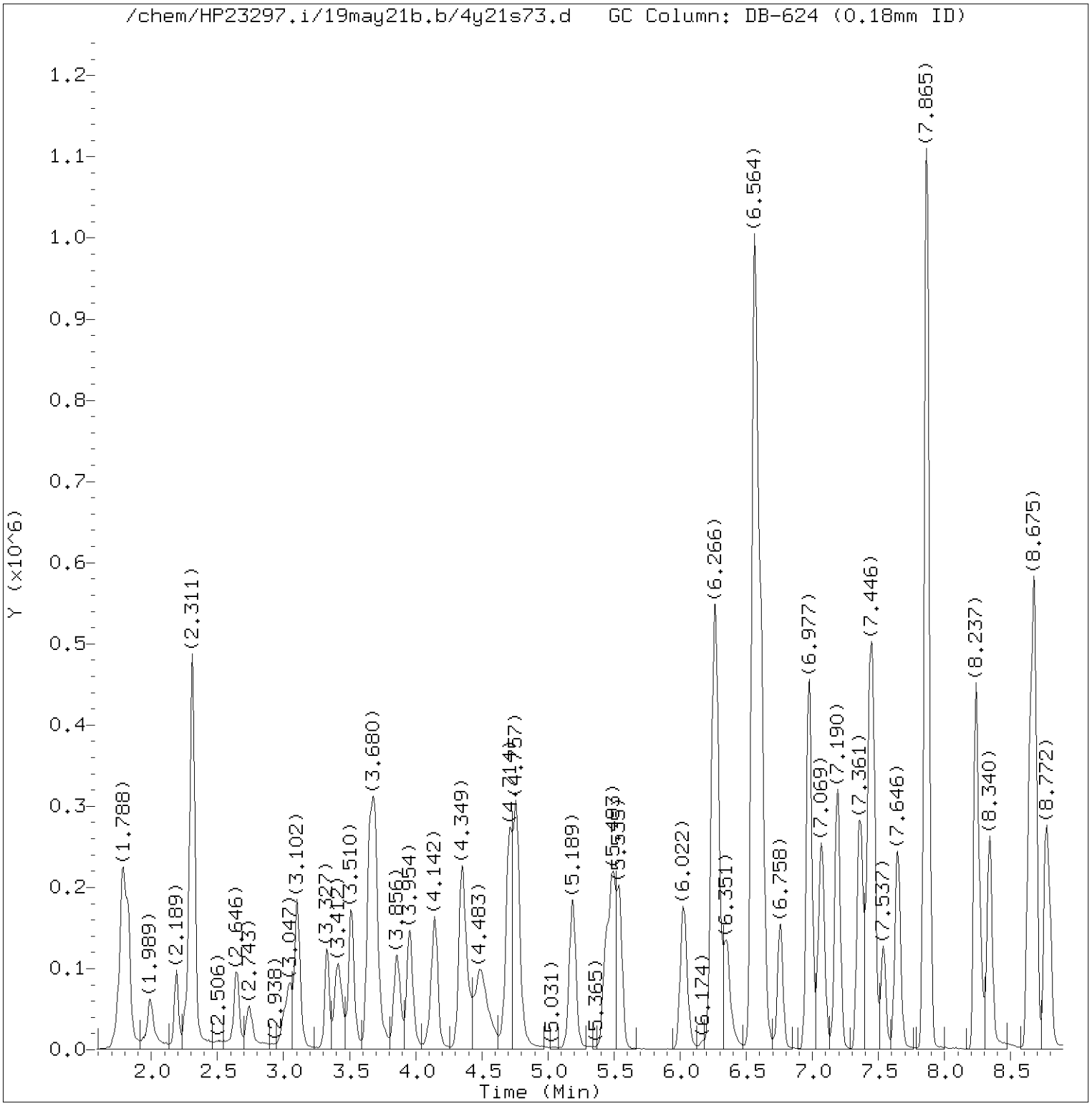
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Kevin A. Sposito on 05/22/2019 at 11:48. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Marla S. Brewer on 05/22/2019 at 15:09. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

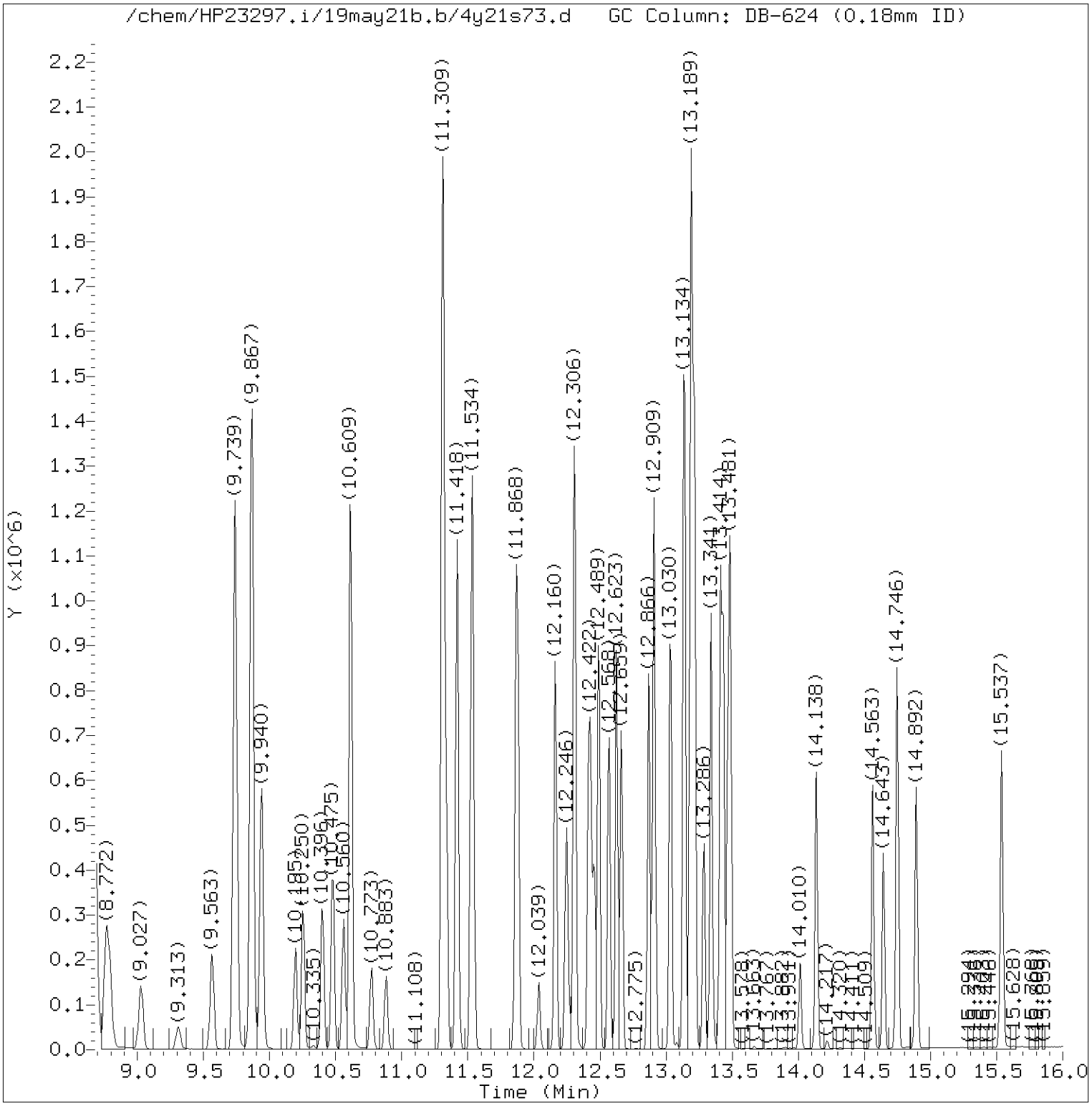
Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s73.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 04:19 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 08:03
Date, time and analyst ID of latest file update: 22-May-2019 11:48 kas02648

Sample Name: 92J03MS Lab Sample ID: 1058217MS

Digitally signed by Kevin A. Sposito
on 05/22/2019 at 11:48.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s73.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 04:19 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 08:03
Date, time and analyst ID of latest file update: 22-May-2019 11:48 kas02648

Sample Name: 92J03MS Lab Sample ID: 1058217MS

Digitally signed by Kevin A. Sposito
on 05/22/2019 at 11:48.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s73.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 04:19 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 08:03
Date, time and analyst ID of latest file update: 22-May-2019 11:48 kas02648

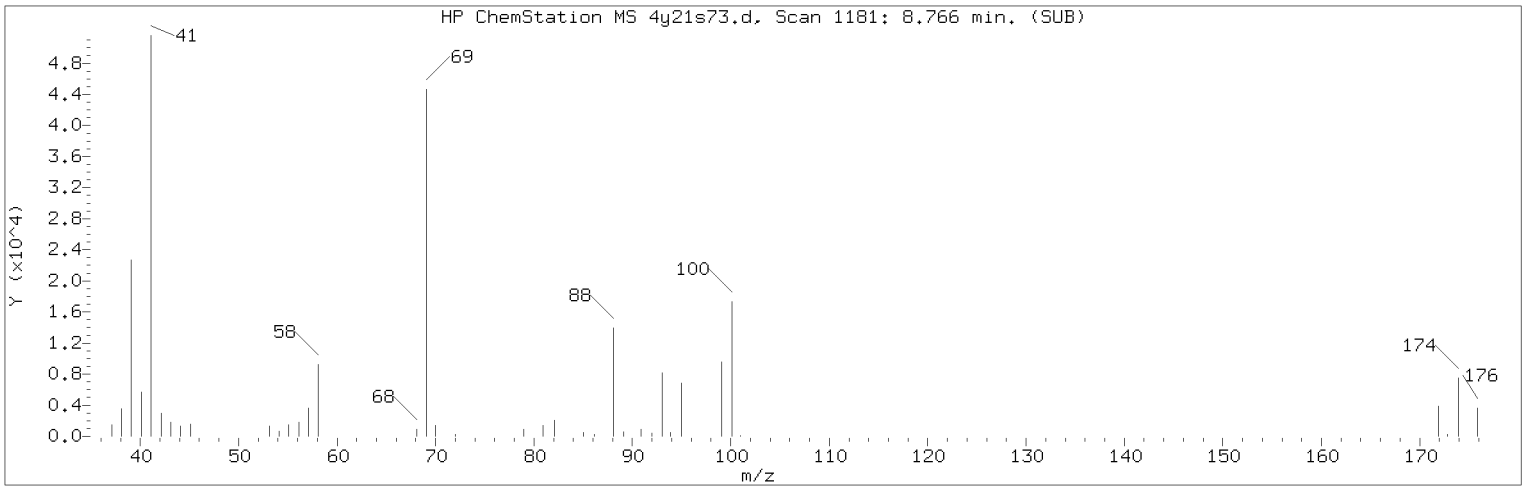
Sample Name: 92J03MS Lab Sample ID: 1058217MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	2.311	62	134140	16.206
17) 1,1-Dichloroethene	(2)	3.650	96	99819	24.968
19) Freon 113	(2)	3.674	101	106110	24.119
18) Acetone	(1)	3.686	58	163015	153.487
23) Carbon Disulfide	(2)	3.954	76	328791	23.061
28) Methylene Chloride	(2)	4.349	84	112773	22.269
29)*t-Butyl alcohol-d10	(1)	4.361	65	381455	250.000
32) trans-1,2-Dichloroethene	(2)	4.763	96	110793	23.194
36) 1,1-Dichloroethane	(2)	5.432	63	197003	22.190
44) 2-Butanone	(2)	6.253	43	837761	123.736
42) cis-1,2-Dichloroethene	(2)	6.272	96	130330	23.660
51) Chloroform	(2)	6.758	83	180507	20.643
53) 1,1,1-Trichloroethane	(2)	6.977	97	174219	23.801
52)$Dibromofluoromethane	(2)	6.977	113	273324	48.371
57)$1,2-Dichloroethane-d4	(2)	7.434	102	68521	49.628
60) Benzene	(2)	7.458	78	457097	21.735
61) 1,2-Dichloroethane	(2)	7.537	62	134331	18.845
66)*Fluorobenzene	(2)	7.865	96	1146345	50.000
71) Trichloroethene	(2)	8.340	95	115699	21.688
75) 1,4-Dioxane	(1)	8.766	88	63527M	568.270
83)$Toluene-d8	(3)	9.867	98	1161358	50.333
88) Toluene	(3)	9.940	92	290667	21.779
93) Tetrachloroethene	(3)	10.481	166	129857	22.305
100)*Chlorobenzene-d5	(3)	11.309	117	899012	50.000
104) Ethylbenzene	(3)	11.418	91	549061	21.418
106) m+p-Xylene	(3)	11.534	106	440852	43.130
108) Xylene (Total)	(3)		106	654775	64.186
107) o-Xylene	(3)	11.862	106	213923	21.055
114)$4-Bromofluorobenzene	(3)	12.306	95	421405	47.916
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	490705	50.000
138) 1,2-Dichlorobenzene	(4)	13.468	146	266883	21.281
148) Naphthalene	(4)	14.746	128	630847	20.325

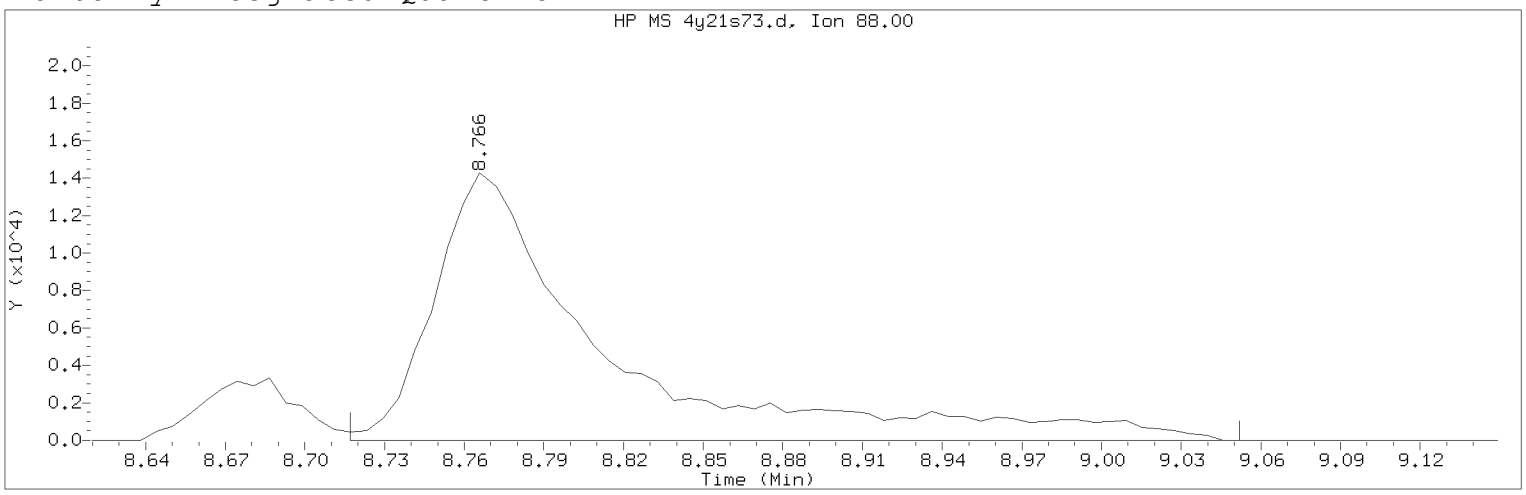
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/22/2019 at 11:48.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may21b.b/4y21s73.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 04:19 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 08:03
Date, time and analyst ID of latest file update: 22-May-2019 11:48 kas02648

Sample Name: 92J03MS Lab Sample ID: 1058217MS

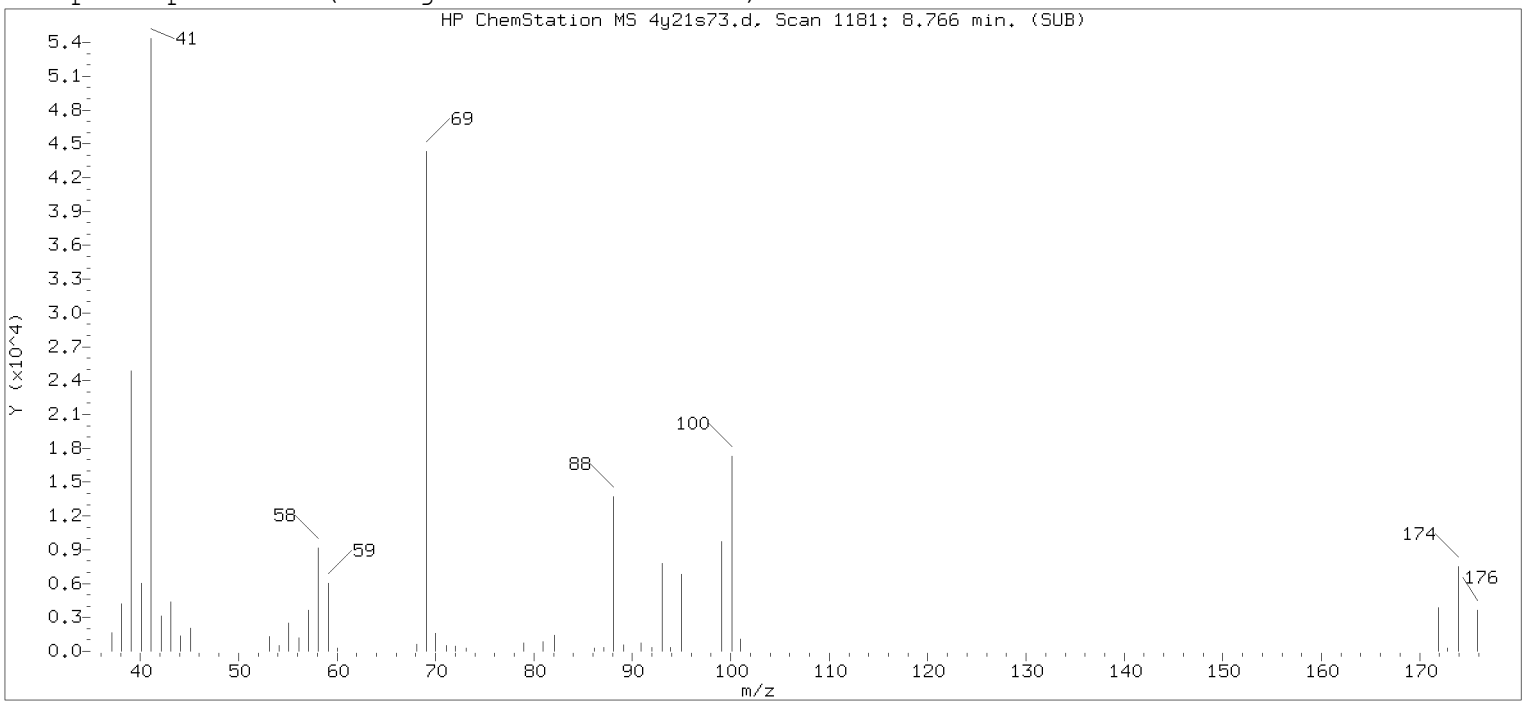
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1181
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area (flag) : 63527M
On-Column Amount (ng) : 568.2702
Integration start scan : 1172 Integration stop scan: 1227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

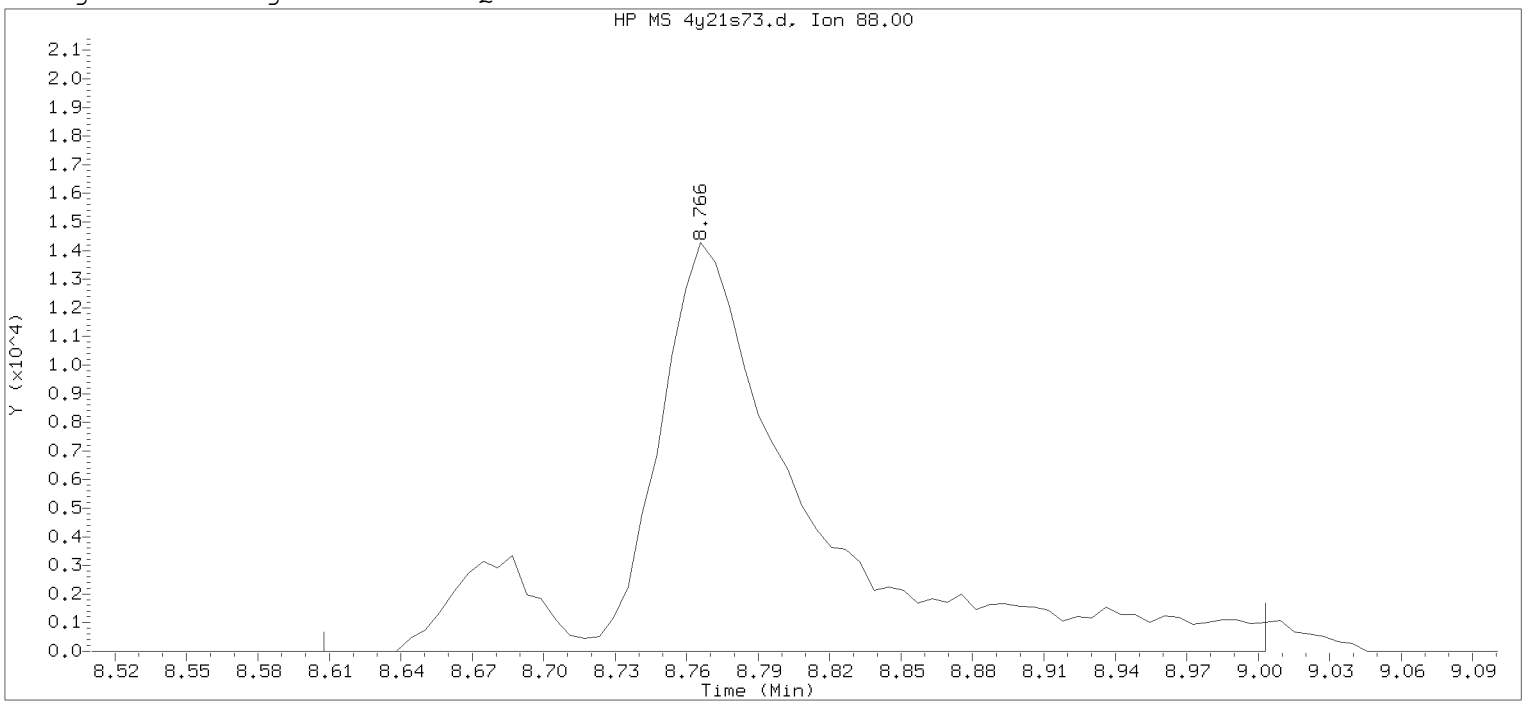
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/22/2019 at 11:48.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Marla S. Brewer on 05/22/2019 at 15:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may21b.b/4y21s73.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 04:19 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 04:37 Automation

Sample Name: 92J03MS Lab Sample ID: 1058217MS

Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1181		
Retention Time (minutes)	: 8.766		
Quant Ion	: 88.00		
Area	: 70204		
On-column Amount (ng)	: 628.0052		
Integration start scan	: 1154	Integration stop scan:	1219
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 05/22/2019 at 11:48.
Target 3.5 esignature user ID: kasposito

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

92J03MSD

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058218

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may21b.b/4y21s74.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	16	
75-35-4	1,1-Dichloroethene	24	
67-64-1	Acetone	150	
76-13-1	Freon 113	23	
75-15-0	Carbon Disulfide	22	
75-09-2	Methylene Chloride	22	
156-60-5	trans-1,2-Dichloroethene	22	
75-34-3	1,1-Dichloroethane	21	
156-59-2	cis-1,2-Dichloroethene	23	
78-93-3	2-Butanone	120	
67-66-3	Chloroform	20	
71-55-6	1,1,1-Trichloroethane	23	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	18	
79-01-6	Trichloroethene	21	
123-91-1	1,4-Dioxane	550	
108-88-3	Toluene	21	
127-18-4	Tetrachloroethene	21	
100-41-4	Ethylbenzene	20	
1330-20-7	Xylene (Total)	62	
95-50-1	1,2-Dichlorobenzene	20	
91-20-3	Naphthalene	20	

FORM I VOA

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92J03MSD

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1058218MSD

Data file: /chem/HP23297.i/19may21b.b/4y21s74.d Injection date and time: **22-MAY-2019 04:42**
Data file Sample Info. Line: 92J03MSD;1058218MSD;1;3;MSD;JCV92;;;4y21b71; Instrument ID: **HP23297.i** Batch: **4191415AA**
Date, time and analyst ID of latest file update: 22-May-2019 11:48 kas02648

Blank Data file reference: **/chem/HP23297.i/19may21b.b/4y21b71.d**

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 08:03
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may21b.b/4y21c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.367(-0.006)	458	65	395990 (-1)	250.00	
66) Fluorobenzene	7.865(0.000)	1033	96	1198976 (0)	50.00	
100) Chlorobenzene-d5	11.309(0.000)	1599	117	944927 (-1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189(0.000)	1908	152	514141 (-1)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.971(0.000)	113	288293	48.781	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434(-0.001)	102	74001	51.244	102%		80 - 120
83) Toluene-d8	(3)	9.867(0.000)	98	1209500	49.872	100%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.306(0.000)	95	442111	47.827	96%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)	2.311(0.000)	62	134947	15.588	15.59			0.2	1
17) 1,1-Dichloroethene	(2)	3.650(0.000)	96	101217	24.206	24.21			0.2	1
18) Acetone	(1)	3.692(-0.000)	58	164328	149.044	149.04			0.7	20
19) Freon 113	(2)	3.674(-0.000)	101	106471	23.139	23.14			0.2	10
23) Carbon Disulfide	(2)	3.954(0.000)	76	328320	22.018	22.02			0.2	5
28) Methylene Chloride	(2)	4.349(-0.000)	84	114505	21.618	21.62			0.3	1
32) trans-1,2-Dichloroethene	(2)	4.763(0.000)	96	112069	22.431	22.43			0.2	1
36) 1,1-Dichloroethane	(2)	5.432(0.000)	63	196657	21.178	21.18			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.272(0.000)	96	130183	22.596	22.60			0.2	1
44) 2-Butanone	(2)	6.253(0.000)	43	838853	118.459	118.46			0.3	10
51) Chloroform	(2)	6.758(0.000)	83	180040	19.686	19.69			0.2	1
53) 1,1,1-Trichloroethane	(2)	6.977(0.000)	97	174437	22.785	22.79			0.3	1
60) Benzene	(2)	7.458(0.000)	78	464016	21.095	21.10			0.2	1
61) 1,2-Dichloroethane	(2)	7.537(0.000)	62	135341	18.153	18.15			0.3	1
71) Trichloroethene	(2)	8.340(-0.000)	95	117326	21.027	21.03			0.2	1
75) 1,4-Dioxane	(1)	8.766(0.002)	88	63500M	547.179	547.18			29	250
88) Toluene	(3)	9.940(0.000)	92	293237	20.904	20.90			0.2	1
93) Tetrachloroethene	(3)	10.481(0.000)	166	130352	21.302	21.30			0.2	1
104) Ethylbenzene	(3)	11.418(-0.000)	91	551509	20.468	20.47			0.4	1
106) m+p-Xylene	(3)	11.534(-0.000)	106	448532	41.749	41.75			1	5
107) o-Xylene	(3)	11.862(-0.000)	106	214731	20.108	20.11			0.4	1
108) Xylene (Total)	(3)		106	663263	61.857	61.86			1	5
138) 1,2-Dichlorobenzene	(4)	13.468(-0.000)	146	267434	20.352	20.35			0.2	5
148) Naphthalene	(4)	14.746(-0.000)	128	635471	19.540	19.54			1	5

M = Compound was manually integrated.

Digitally signed by Kevin A. Sposito on 05/22/2019 at 11:49. Target 3.5 esignature user ID: kas02648

Data file: /chem/HP23297.i/19may21b.b/4y21s74.d Injection date and time: **22-MAY-2019 04:42**
Data file Sample Info. Line: 92J03MSD;1058218MSD;1;3;MSD;JCV92;;;4y21b71; Instrument ID: **HP23297.i** Batch: **4191415AA**
Date, time and analyst ID of latest file update: 22-May-2019 11:48 kas02648

Blank Data file reference: **/chem/HP23297.i/19may21b.b/4y21b71.d**

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 08:03
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may21b.b/4y21c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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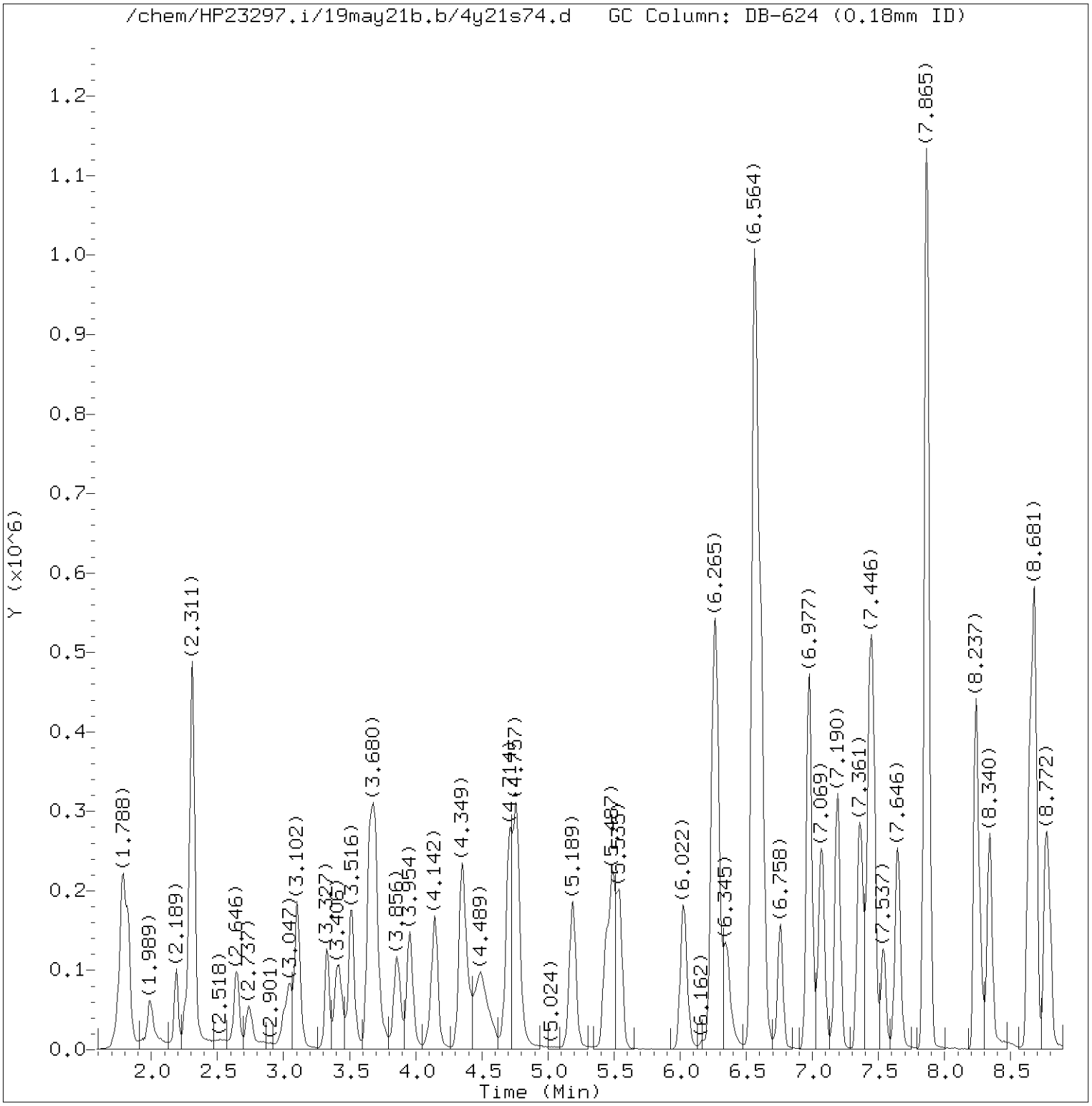
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Kevin A. Sposito on 05/22/2019 at 11:49. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Marla S. Brewer on 05/22/2019 at 15:09. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

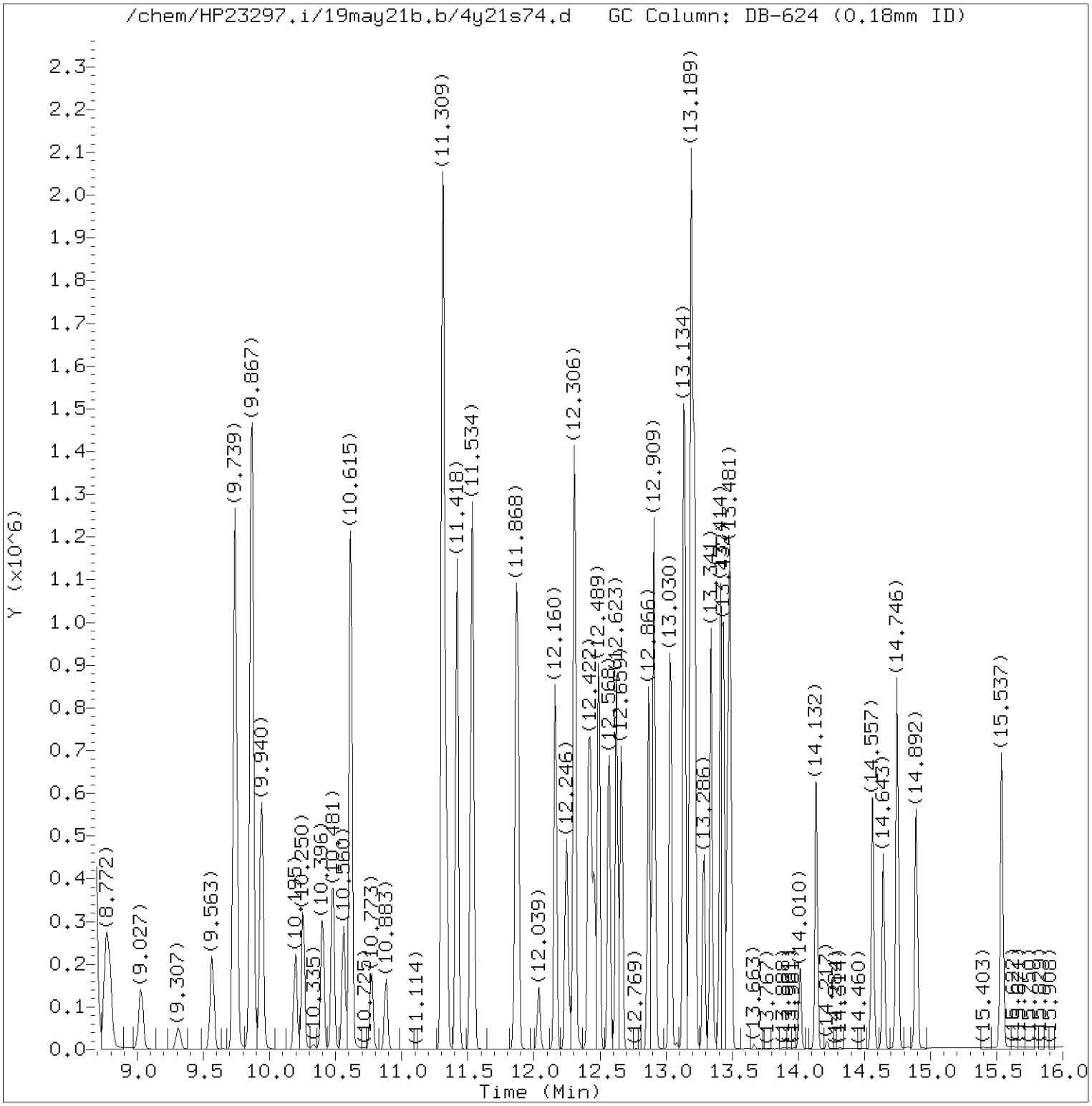
Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s74.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 04:42 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 08:03
Date, time and analyst ID of latest file update: 22-May-2019 11:48 kas02648

Sample Name: 92J03MSD Lab Sample ID: 1058218MSD

Digitally signed by Kevin A. Sposito
on 05/22/2019 at 11:49.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s74.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 04:42 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 08:03
Date, time and analyst ID of latest file update: 22-May-2019 11:48 kas02648

Sample Name: 92J03MSD Lab Sample ID: 1058218MSD

Digitally signed by Kevin A. Sposito
on 05/22/2019 at 11:49.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s74.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 04:42 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 08:03
Date, time and analyst ID of latest file update: 22-May-2019 11:48 kas02648

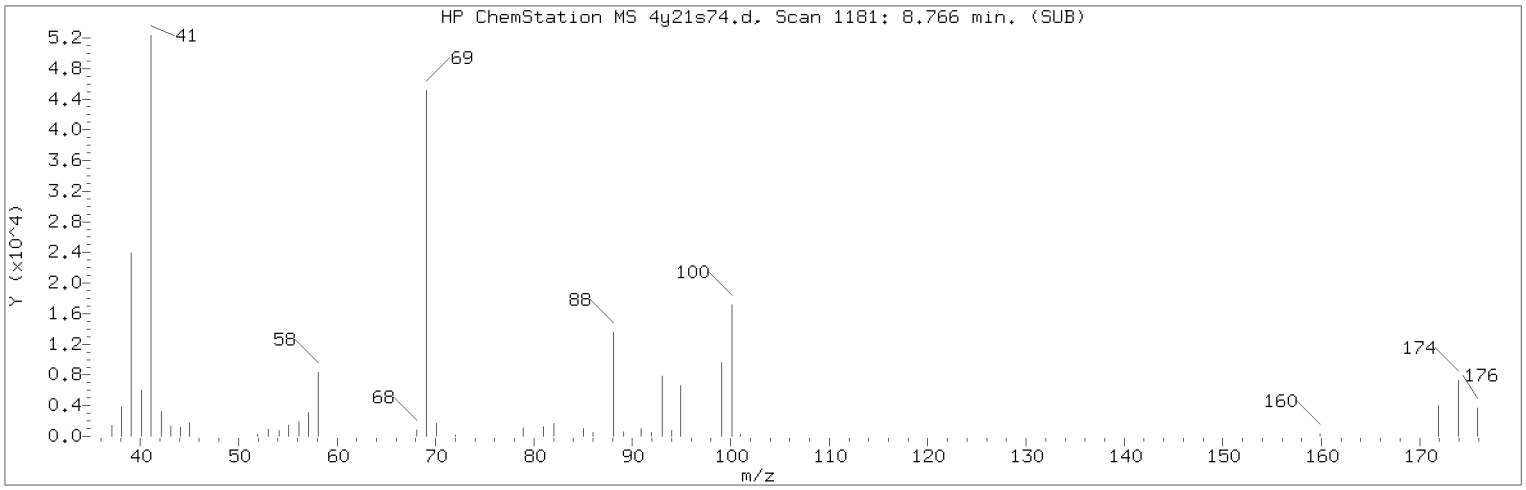
Sample Name: 92J03MSD Lab Sample ID: 1058218MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	2.311	62	134947	15.588
17) 1,1-Dichloroethene	(2)	3.650	96	101217	24.206
19) Freon 113	(2)	3.674	101	106471	23.139
18) Acetone	(1)	3.692	58	164328	149.044
23) Carbon Disulfide	(2)	3.954	76	328320	22.018
28) Methylene Chloride	(2)	4.349	84	114505	21.618
29)*t-Butyl alcohol-d10	(1)	4.367	65	395990	250.000
32) trans-1,2-Dichloroethene	(2)	4.763	96	112069	22.431
36) 1,1-Dichloroethane	(2)	5.432	63	196657	21.178
44) 2-Butanone	(2)	6.253	43	838853	118.459
42) cis-1,2-Dichloroethene	(2)	6.272	96	130183	22.596
51) Chloroform	(2)	6.758	83	180040	19.686
52)$Dibromofluoromethane	(2)	6.971	113	288293	48.781
53) 1,1,1-Trichloroethane	(2)	6.977	97	174437	22.785
57)$1,2-Dichloroethane-d4	(2)	7.434	102	74001	51.244
60) Benzene	(2)	7.458	78	464016	21.095
61) 1,2-Dichloroethane	(2)	7.537	62	135341	18.153
66)*Fluorobenzene	(2)	7.865	96	1198976	50.000
71) Trichloroethene	(2)	8.340	95	117326	21.027
75) 1,4-Dioxane	(1)	8.766	88	63500M	547.179
83)$Toluene-d8	(3)	9.867	98	1209500	49.872
88) Toluene	(3)	9.940	92	293237	20.904
93) Tetrachloroethene	(3)	10.481	166	130352	21.302
100)*Chlorobenzene-d5	(3)	11.309	117	944927	50.000
104) Ethylbenzene	(3)	11.418	91	551509	20.468
106) m+p-Xylene	(3)	11.534	106	448532	41.749
108) Xylene (Total)	(3)		106	663263	61.857
107) o-Xylene	(3)	11.862	106	214731	20.108
114)$4-Bromofluorobenzene	(3)	12.306	95	442111	47.827
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	514141	50.000
138) 1,2-Dichlorobenzene	(4)	13.468	146	267434	20.352
148) Naphthalene	(4)	14.746	128	635471	19.540

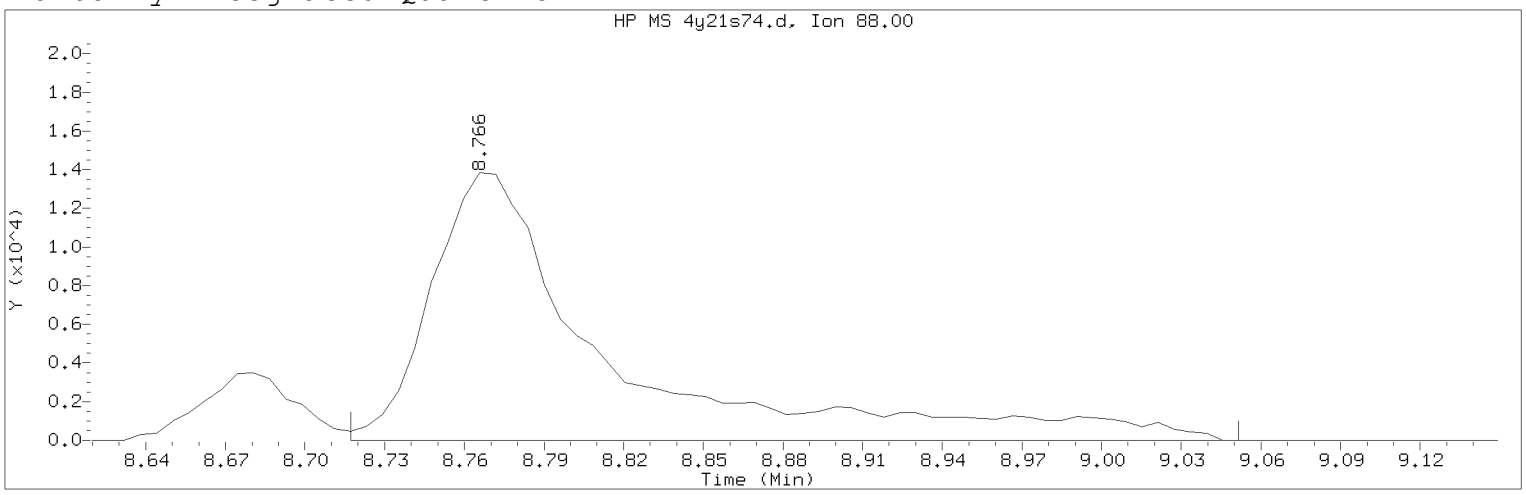
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/22/2019 at 11:49.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may21b.b/4y21s74.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 04:42 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 08:03
Date, time and analyst ID of latest file update: 22-May-2019 11:48 kas02648

Sample Name: 92J03MSD Lab Sample ID: 1058218MSD

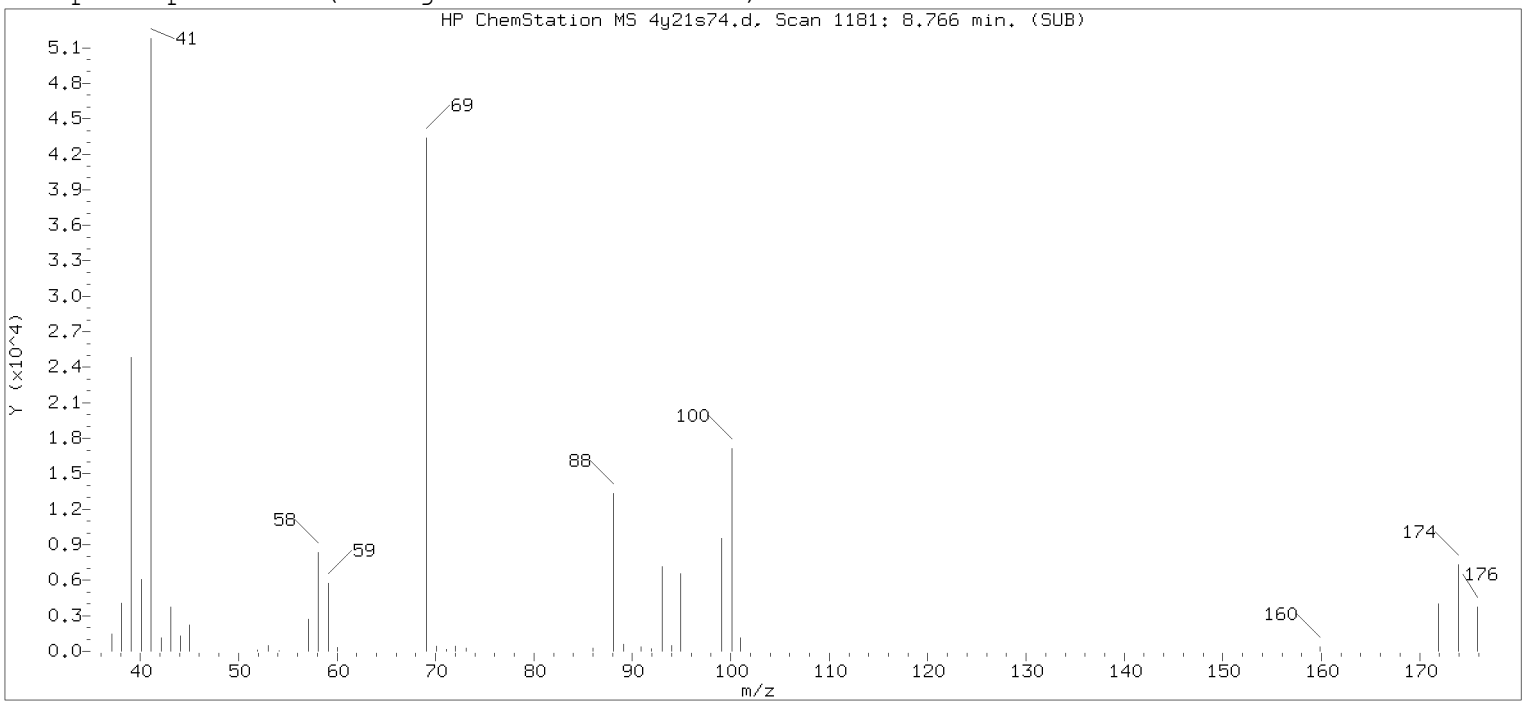
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1181
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area (flag) : 63500M
On-Column Amount (ng) : 547.1789
Integration start scan : 1172 Integration stop scan: 1227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

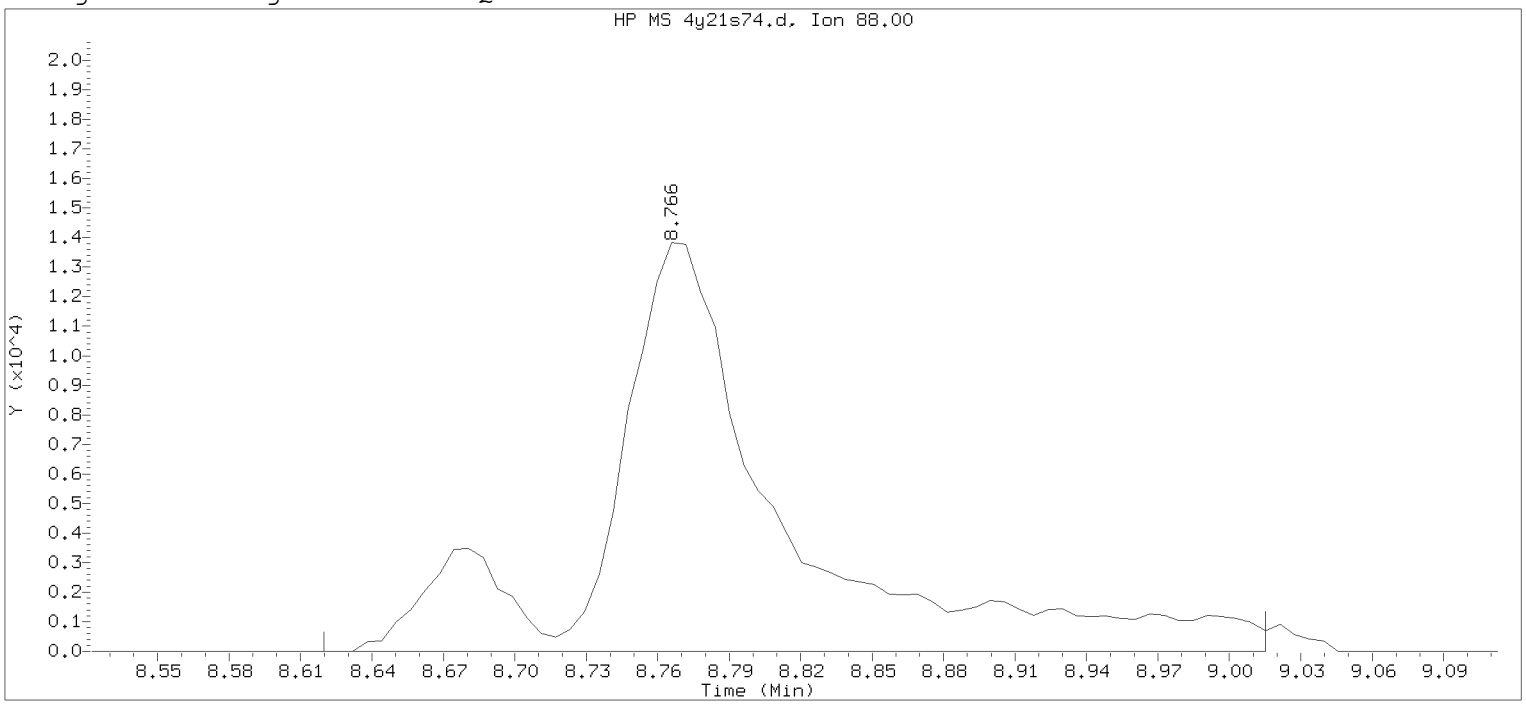
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/22/2019 at 11:49.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Marla S. Brewer on 05/22/2019 at 15:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may21b.b/4y21s74.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 04:42 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 21-MAY-2019 22:23
Date, time and analyst ID of latest file update: 22-May-2019 05:00 Automation

Sample Name: 92J03MSD Lab Sample ID: 1058218MSD

Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1181
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area : 71158
On-column Amount (ng) : 613.1706
Integration start scan : 1156 Integration stop scan: 1221
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/22/2019 at 11:49.
Target 3.5 esignature user ID: kasposito

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS424

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCS424

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may21b.b/4y21s71.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	12	
74-87-3	Chloromethane	15	
106-99-0	1,3-Butadiene	54	
75-01-4	Vinyl Chloride	15	
74-83-9	Bromomethane	15	
75-00-3	Chloroethane	15	
109-66-0	n-Pentane	20	
75-69-4	Trichlorofluoromethane	13	
354-23-4	Freon 123a	20	
107-02-8	Acrolein	140	
75-35-4	1,1-Dichloroethene	23	
67-64-1	Acetone	150	
76-13-1	Freon 113	20	
67-63-0	2-Propanol	150	
74-88-4	Methyl Iodide	21	
75-15-0	Carbon Disulfide	20	
107-05-1	Allyl Chloride	18	
79-20-9	Methyl Acetate	19	
75-09-2	Methylene Chloride	22	
75-65-0	t-Butyl alcohol	190	
107-13-1	Acrylonitrile	92	
156-60-5	trans-1,2-Dichloroethene	22	
1634-04-4	Methyl Tertiary Butyl Ether	19	
110-54-3	n-Hexane	19	
75-34-3	1,1-Dichloroethane	21	
108-20-3	di-Isopropyl ether	20	
126-99-8	2-Chloro-1,3-butadiene	19	
637-92-3	Ethyl t-butyl ether	18	
156-59-2	cis-1,2-Dichloroethene	23	
540-59-0	1,2-Dichloroethene (Total)	45	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS424

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCS424

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may21b.b/4y21s71.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
78-93-3	2-Butanone	130	
594-20-7	2,2-Dichloropropane	18	
107-12-0	Propionitrile	160	
126-98-7	Methacrylonitrile	150	
74-97-5	Bromochloromethane	19	
109-99-9	Tetrahydrofuran	98	
67-66-3	Chloroform	20	
71-55-6	1,1,1-Trichloroethane	19	
110-82-7	Cyclohexane	18	
563-58-6	1,1-Dichloropropene	20	
56-23-5	Carbon Tetrachloride	18	
78-83-1	Isobutyl Alcohol	490	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	19	
994-05-8	t-Amyl methyl ether	19	
142-82-5	n-Heptane	16	
71-36-3	n-Butanol	1000	
79-01-6	Trichloroethene	21	
108-87-2	Methylcyclohexane	18	
78-87-5	1,2-Dichloropropane	21	
74-95-3	Dibromomethane	20	
123-91-1	1,4-Dioxane	530	
80-62-6	Methyl Methacrylate	19	
75-27-4	Bromodichloromethane	18	
79-46-9	2-Nitropropane	12	
110-75-8	2-Chloroethyl Vinyl Ether	18	
10061-01-5	cis-1,3-Dichloropropene	19	
108-10-1	4-Methyl-2-pentanone	86	
108-88-3	Toluene	21	
10061-02-6	trans-1,3-Dichloropropene	17	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS424

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCS424

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may21b.b/4y21s71.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
542-75-6	1,3-Dichloropropene (total)	36	
97-63-2	Ethyl Methacrylate	18	
79-00-5	1,1,2-Trichloroethane	22	
127-18-4	Tetrachloroethene	21	
142-28-9	1,3-Dichloropropane	21	
591-78-6	2-Hexanone	90	
124-48-1	Dibromochloromethane	18	
106-93-4	1,2-Dibromoethane	21	
108-90-7	Chlorobenzene	21	
630-20-6	1,1,1,2-Tetrachloroethane	19	
100-41-4	Ethylbenzene	21	
179601-23-1	m+p-Xylene	42	
95-47-6	o-Xylene	20	
1330-20-7	Xylene (Total)	63	
100-42-5	Styrene	21	
75-25-2	Bromoform	15	
98-82-8	Isopropylbenzene	21	
108-94-1	Cyclohexanone	480	
108-86-1	Bromobenzene	21	
79-34-5	1,1,2,2-Tetrachloroethane	22	
96-18-4	1,2,3-Trichloropropane	21	
110-57-6	trans-1,4-Dichloro-2-butene	39	J
103-65-1	n-Propylbenzene	22	
95-49-8	2-Chlorotoluene	22	
106-43-4	4-Chlorotoluene	21	
108-67-8	1,3,5-Trimethylbenzene	21	
98-06-6	tert-Butylbenzene	21	
76-01-7	Pentachloroethane	19	
95-63-6	1,2,4-Trimethylbenzene	21	
135-98-8	sec-Butylbenzene	21	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS424

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCS424

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may21b.b/4y21s71.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
541-73-1	1,3-Dichlorobenzene	21	
99-87-6	p-Isopropyltoluene	21	
106-46-7	1,4-Dichlorobenzene	22	
526-73-8	1,2,3-Trimethylbenzene	20	
100-44-7	Benzyl Chloride	17	
141-93-5	1,3-Diethylbenzene	20	
105-05-5	1,4-Diethylbenzene	20	
95-50-1	1,2-Dichlorobenzene	21	
104-51-8	n-Butylbenzene	21	
135-01-3	1,2-Diethylbenzene	20	
25340-17-4	Diethylbenzene (total)	61	
96-12-8	1,2-Dibromo-3-chloropropane	18	
108-70-3	1,3,5-Trichlorobenzene	21	
120-82-1	1,2,4-Trichlorobenzene	21	
87-68-3	Hexachlorobutadiene	20	
91-20-3	Naphthalene	21	
87-61-6	1,2,3-Trichlorobenzene	21	
91-57-6	2-Methylnaphthalene	19	

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may21b.b/4y21s71.d Injection date and time: **21-MAY-2019 21:07**
Data file Sample Info. Line: LCS424;LCS424;1;3;LCS;;;;4y21b71; Instrument ID: **HP23297.i** Batch: **4191415AA**
Date, time and analyst ID of latest file update: 21-May-2019 22:20 dvv10203

Blank Data file reference: **/chem/HP23297.i/19may21b.b/4y21b71.d**

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: **8260W-DE**
Calibration date and time (Last Method Edit): 21-MAY-2019 21:01
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may21b.b/4y21c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.374	(-0.012)	459	65	405363M	(1)	250.00	
66) Fluorobenzene	7.872	(-0.006)	1034	96	1182920	(-1)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	929063	(-3)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189	(0.000)	1908	152	500311	(-4)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977	(0.000)	113	280645	48.131	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.440	(-0.001)	102	71541	50.213	100%		80 - 120
83) Toluene-d8	(3)	9.867	(0.000)	98	1204876	50.530	101%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.307	(0.000)	95	432905	47.631	95%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	1.995	(-0.000)	85	105014	11.642	11.64			0.2	1
4) Chloromethane	(2)	2.196	(-0.000)	50	129053	14.772	14.77			0.2	1
5) 1,3-Butadiene	(2)	2.317	(-0.000)	39	255076	53.842	53.84			1	3
6) Vinyl Chloride	(2)	2.317	(-0.000)	62	129808	15.197	15.20			0.2	1
8) Bromomethane	(2)	2.652	(-0.000)	94	103452	14.760	14.76			0.3	1
9) Chloroethane	(2)	2.743	(0.000)	64	69288	14.690	14.69			0.2	1
11) n-Pentane	(2)	3.108	(-0.000)	43	167102	19.968	19.97			0.4	10
12) Trichlorofluoromethane	(2)	3.047	(0.000)	101	139673	13.485	13.49			0.2	1
15) Freon 123a	(2)	3.412	(0.000)	67	119388	20.035	20.03			0.4	5
16) Acrolein	(1)	3.522	(-0.000)	56	317683	138.221	138.22			2	100
17) 1,1-Dichloroethene	(2)	3.656	(-0.000)	96	95802	23.222	23.22			0.2	1
18) Acetone	(1)	3.698	(-0.000)	58	171582	152.025	152.02			0.7	20
19) Freon 113	(2)	3.680	(-0.001)	101	91040	20.054	20.05			0.2	10
21) 2-Propanol	(1)	3.881	(-0.001)	45	136107	150.077	150.08			18	100
22) Methyl Iodide	(2)	3.862	(-0.001)	142	173381	21.091	21.09			0.2	1
23) Carbon Disulfide	(2)	3.966	(-0.001)	76	299806	20.378	20.38			0.2	5
25) Allyl Chloride	(2)	4.154	(-0.000)	41	160254	17.518	17.52			0.3	5
27) Methyl Acetate	(2)	4.130	(-0.001)	43	161733	18.822	18.82			0.2	5
28) Methylene Chloride	(2)	4.355	(-0.001)	84	114818	21.972	21.97			0.3	1
30) t-Butyl alcohol	(1)	4.501	(0.000)	59	304530	190.909	190.91			12	50
31) Acrylonitrile	(2)	4.714	(-0.000)	53	413204	91.788	91.79			0.3	20
32) trans-1,2-Dichloroethene	(2)	4.769	(-0.000)	96	109671	22.249	22.25			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	4.763	(-0.001)	73	275796	18.714	18.71			0.2	1
34) n-Hexane	(2)	5.195	(-0.001)	57	153727	18.882	18.88			0.2	5
36) 1,1-Dichloroethane	(2)	5.444	(-0.001)	63	188188	20.541	20.54			0.2	1
38) di-Isopropyl ether	(2)	5.493	(-0.000)	45	360332	19.845	19.85			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	5.548	(-0.000)	53	154890	18.675	18.67			0.2	5
40) Ethyl t-butyl ether	(2)	6.028	(-0.000)	59	284646	18.250	18.25			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.278	(-0.000)	96	128557	22.617	22.62			0.2	1
43) 1,2-Dichloroethene (Total)	(2)			96	238228	44.866	44.87			0.2	2

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may21b.b/4y21s71.d Injection date and time: **21-MAY-2019 21:07**
Data file Sample Info. Line: LCS424;LCS424;1;3;LCS;;;;4y21b71; Instrument ID: **HP23297.i** Batch: **4191415AA**
Date, time and analyst ID of latest file update: 21-May-2019 22:20 dvv10203

Blank Data file reference: **/chem/HP23297.i/19may21b.b/4y21b71.d**

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: **8260W-DE**
Calibration date and time (Last Method Edit): 21-MAY-2019 21:01
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may21b.b/4y21c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	6.259(-0.000)	43	889473	127.312	127.31			0.3	10
45) 2,2-Dichloropropane	(2)	6.284(0.000)	77	131341	18.285	18.29			0.3	1
47) Propionitrile	(1)	6.357(0.002)	54	278104	164.135	164.13			14	100
48) Methacrylonitrile	(2)	6.570(-0.000)	67	632880	149.042	149.04			6	50
49) Bromochloromethane	(2)	6.612(-0.000)	128	60726	19.347	19.35			0.2	5
50) Tetrahydrofuran	(1)	6.618(0.002)	71	163780	97.923	97.92			0.7	10
51) Chloroform	(2)	6.764(-0.000)	83	178147	19.743	19.74			0.2	1
53) 1,1,1-Trichloroethane	(2)	6.983(-0.000)	97	142768M	18.902	18.90			0.3	1
54) Cyclohexane	(2)	7.075(-0.000)	56	181471	18.474	18.47			0.2	5
55) 1,1-Dichloropropene	(2)	7.196(-0.000)	75	146190	20.485	20.49			0.2	5
56) Carbon Tetrachloride	(2)	7.190(-0.000)	117	118156	18.004	18.00			0.2	1
58) Isobutyl Alcohol	(1)	7.361(0.003)	41	277411	493.901	493.90			36	250
60) Benzene	(2)	7.464(-0.000)	78	460354	21.213	21.21			0.2	1
61) 1,2-Dichloroethane	(2)	7.537(0.000)	62	136213	18.518	18.52			0.3	1
65) t-Amyl methyl ether	(2)	7.646(0.000)	73	297051	18.837	18.84			0.8	5
67) n-Heptane	(2)	7.866(0.000)	43	156176	16.294	16.29			0.2	5
69) n-Butanol	(1)	8.243(0.003)	56	469874	1018.717	1018.72			61	250
71) Trichloroethene	(2)	8.340(0.000)	95	114657	20.828	20.83			0.2	1
72) Methylcyclohexane	(2)	8.644(0.000)	83	185837	17.925	17.93			0.2	5
73) 1,2-Dichloropropane	(2)	8.687(0.000)	63	121092	21.239	21.24			0.2	1
74) Dibromomethane	(2)	8.796(0.000)	93	73879	19.964	19.96			0.2	1
75) 1,4-Dioxane	(1)	8.766(0.005)	88	63545M	534.906	534.91			29	250
76) Methyl Methacrylate	(2)	8.766(0.000)	69	119598	18.524	18.52			0.2	5
78) Bromodichloromethane	(2)	9.028(0.000)	83	121449	18.072	18.07			0.2	1
79) 2-Nitropropane	(2)	9.313(0.000)	41	39773	12.161	12.16			0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)	9.386(0.000)	63	92617M	17.755	17.75			0.2	10
81) cis-1,3-Dichloropropene	(2)	9.569(0.000)	75	165857	18.668	18.67			0.2	1
82) 4-Methyl-2-pentanone	(2)	9.739(0.000)	43	1073555	85.632	85.63			0.5	10
88) Toluene	(3)	9.940(-0.000)	92	291563	21.139	21.14			0.2	1
89) trans-1,3-Dichloropropene	(3)	10.196(-0.000)	75	141525	17.439	17.44			0.2	1
90) 1,3-Dichloropropene (total)	(3)		100	307382	36.107	36.11			0.2	5
91) Ethyl Methacrylate	(3)	10.256(-0.000)	69	186192	18.256	18.26			0.2	5
92) 1,1,2-Trichloroethane	(3)	10.402(-0.000)	97	117490	21.795	21.79			0.2	1
93) Tetrachloroethene	(3)	10.481(-0.000)	166	128063	21.285	21.29			0.2	1
94) 1,3-Dichloropropane	(3)	10.560(-0.000)	76	184807	20.652	20.65			0.2	1
96) 2-Hexanone	(3)	10.615(-0.000)	43	878730	89.523	89.52			0.3	10
97) Dibromochloromethane	(3)	10.773(-0.000)	129	100832	17.677	17.68			0.2	1
99) 1,2-Dibromoethane	(3)	10.883(-0.000)	107	123603	20.769	20.77			0.2	1
102) Chlorobenzene	(3)	11.339(-0.000)	112	331834	21.287	21.29			0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)	11.418(0.000)	131	101737	19.333	19.33			0.2	1
104) Ethylbenzene	(3)	11.418(0.000)	91	550212	20.769	20.77			0.4	1
106) m+p-Xylene	(3)	11.534(0.000)	106	446552	42.275	42.27			1	5
107) o-Xylene	(3)	11.862(0.000)	106	214810	20.459	20.46			0.4	1
108) Xylene (Total)	(3)		106	661362	62.734	62.73			1	5
109) Styrene	(3)	11.881(0.000)	104	358957	20.547	20.55			0.2	5
110) Bromoform	(3)	12.039(-0.000)	173	68197	15.173	15.17			0.2	4
111) Isopropylbenzene	(3)	12.160(0.000)	105	549219	20.909	20.91			0.2	5
112) Cyclohexanone	(1)	12.246(0.007)	55	227579	479.516	479.52			25	100
115) Bromobenzene	(4)	12.428(-0.000)	156	148632	21.230	21.23			0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	12.410(-0.000)	83	199078	21.592	21.59			0.2	1
117) 1,2,3-Trichloropropane	(4)	12.459(-0.000)	110	59180	21.227	21.23			0.2	5
118) trans-1,4-Dichloro-2-butene	(4)	12.434(-0.000)	53	117032	38.614	38.61		J	6	50
119) n-Propylbenzene	(4)	12.489(-0.000)	91	660986	21.953	21.95			0.2	5
120) 2-Chlorotoluene	(4)	12.568(-0.000)	126	135638	21.570	21.57			0.2	5

M = Compound was manually integrated.

Digitally signed by Don V. Viray on 05/21/2019 at 22:25. Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may21b.b/4y21s71.d Injection date and time: **21-MAY-2019 21:07**
Data file Sample Info. Line: LCS424;LCS424;1;3;LCS;;;;4y21b71; Instrument ID: **HP23297.i** Batch: **4191415AA**
Date, time and analyst ID of latest file update: 21-May-2019 22:20 dvv10203

Blank Data file reference: **/chem/HP23297.i/19may21b.b/4y21b71.d**

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: **8260W-DE**
Calibration date and time (Last Method Edit): 21-MAY-2019 21:01
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may21b.b/4y21c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

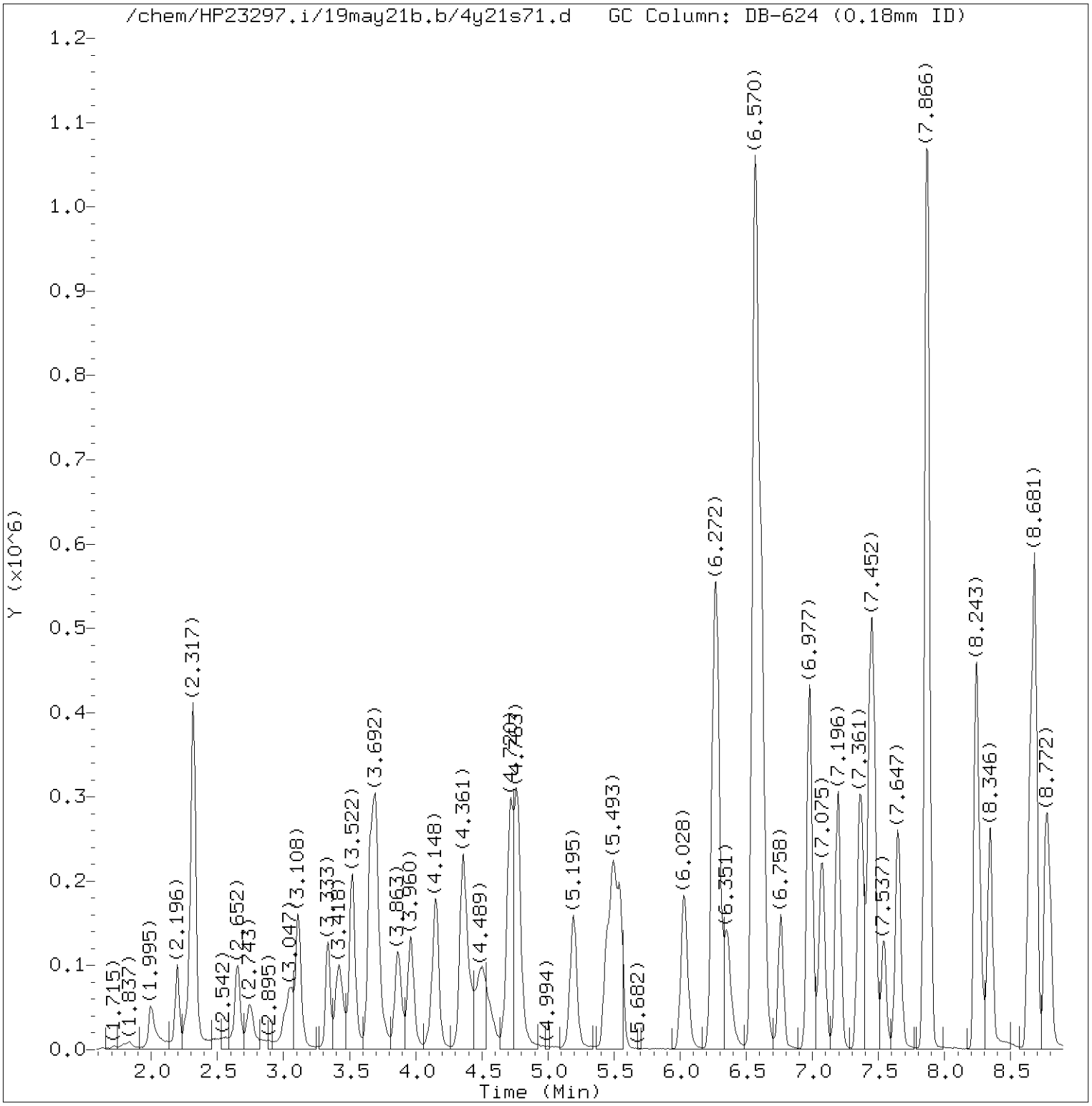
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
121) 4-Chlorotoluene	(4)	12.659(-0.000)	126	140370	21.416	21.42			0.2	5
122) 1,3,5-Trimethylbenzene	(4)	12.623(-0.000)	105	461453	21.177	21.18			0.3	5
124) tert-Butylbenzene	(4)	12.872(-0.000)	134	94829M	20.730	20.73			0.3	5
125) Pentachloroethane	(4)	12.903(-0.000)	167	77197	18.508	18.51			0.2	5
126) 1,2,4-Trimethylbenzene	(4)	12.909(-0.000)	105	478365	21.026	21.03			1	5
127) sec-Butylbenzene	(4)	13.030(-0.000)	105	596760	21.438	21.44			0.2	5
129) 1,3-Dichlorobenzene	(4)	13.134(-0.000)	146	282005	21.491	21.49			0.2	5
130) p-Isopropyltoluene	(4)	13.140(-0.000)	119	507802	20.737	20.74			0.2	5
133) 1,4-Dichlorobenzene	(4)	13.207(0.000)	146	292663	21.770	21.77			0.2	5
134) 1,2,3-Trimethylbenzene	(4)	13.219(-0.000)	105	496118	20.308	20.31			0.3	5
135) Benzyl Chloride	(4)	13.286(-0.000)	91	315570	17.258	17.26			0.3	5
136) 1,3-Diethylbenzene	(4)	13.341(0.000)	119	307906	20.116	20.12			0.2	5
137) 1,4-Diethylbenzene	(4)	13.414(0.000)	119	326647	20.038	20.04			0.2	5
138) 1,2-Dichlorobenzene	(4)	13.468(0.000)	146	274027	21.431	21.43			0.2	5
139) n-Butylbenzene	(4)	13.432(0.000)	92	258150	20.579	20.58			0.2	5
140) 1,2-Diethylbenzene	(4)	13.487(0.000)	119	263144	20.393	20.39			0.2	5
141) Diethylbenzene (total)	(4)		100	897697	60.547	60.55			0.2	5
142) 1,2-Dibromo-3-chloropropane	(4)	14.010(0.000)	75	42946	17.657	17.66			0.3	5
144) 1,3,5-Trichlorobenzene	(4)	14.138(-0.000)	180	202999	21.057	21.06			0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.564(-0.000)	180	194047	21.244	21.24			0.3	5
147) Hexachlorobutadiene	(4)	14.643(0.000)	225	82653	19.581	19.58			0.7	5
148) Naphthalene	(4)	14.746(0.000)	128	666399	21.058	21.06			1	5
149) 1,2,3-Trichlorobenzene	(4)	14.892(0.000)	180	186677	21.274	21.27			0.4	5
150) 2-Methylnaphthalene	(4)	15.537(0.000)	142	380308	19.215	19.21			0.7	5

M = Compound was manually integrated.

Total number of targets = 108

Digitally signed by Don V. Viray on 05/21/2019 at 22:25. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Marla S. Brewer on 05/22/2019 at 15:01. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

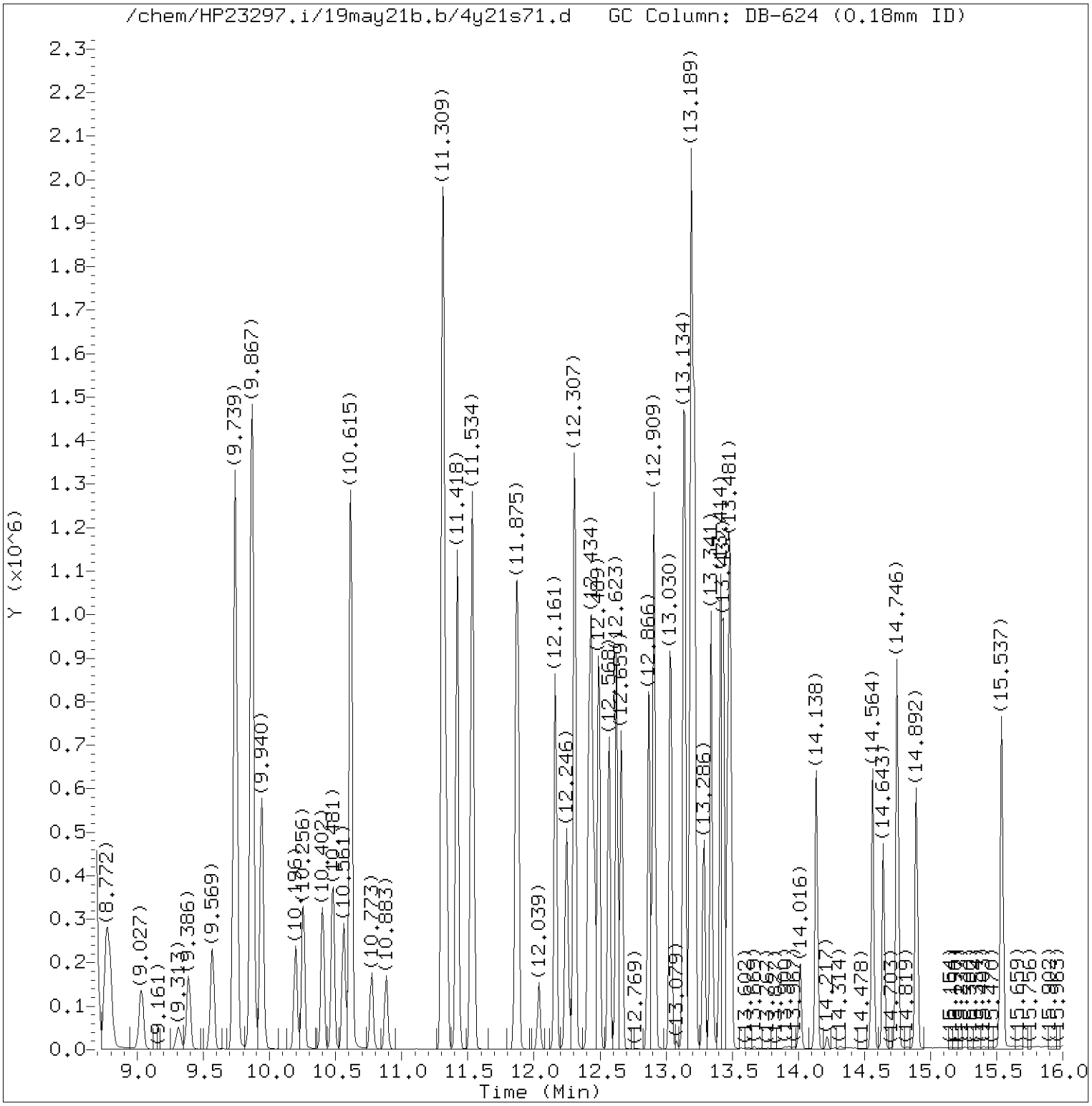
Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s71.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 21:07 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 22:20 dvv10203

Sample Name: LCS424 Lab Sample ID: LCS424

Digitally signed by Don V. Viray
on 05/21/2019 at 22:25.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s71.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 21:07 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 22:20 dvv10203

Sample Name: LCS424 Lab Sample ID: LCS424

Digitally signed by Don V. Viray
on 05/21/2019 at 22:25.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s71.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 21:07 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 22:20 dvv10203

Sample Name: LCS424 Lab Sample ID: LCS424

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.995	85	105014	11.642
4) Chloromethane	(2)	2.196	50	129053	14.772
5) 1,3-Butadiene	(2)	2.317	39	255076	53.842
6) Vinyl Chloride	(2)	2.317	62	129808	15.197
8) Bromomethane	(2)	2.652	94	103452	14.760
9) Chloroethane	(2)	2.743	64	69288	14.690
12) Trichlorofluoromethane	(2)	3.047	101	139673	13.485
11) n-Pentane	(2)	3.108	43	167102	19.968
15) Freon 123a	(2)	3.412	67	119388	20.035
16) Acrolein	(1)	3.522	56	317683	138.221
17) 1,1-Dichloroethene	(2)	3.656	96	95802	23.222
19) Freon 113	(2)	3.680	101	91040	20.054
18) Acetone	(1)	3.698	58	171582	152.025
22) Methyl Iodide	(2)	3.863	142	173381	21.091
21) 2-Propanol	(1)	3.881	45	136107	150.077
23) Carbon Disulfide	(2)	3.966	76	299806	20.378
27) Methyl Acetate	(2)	4.130	43	161733	18.822
25) Allyl Chloride	(2)	4.155	41	160254	17.518
28) Methylene Chloride	(2)	4.355	84	114818	21.972
29)*t-Butyl alcohol-d10	(1)	4.374	65	405363M	250.000
30) t-Butyl alcohol	(1)	4.501	59	304530	190.909
31) Acrylonitrile	(2)	4.714	53	413204	91.788
33) Methyl Tertiary Butyl Ether	(2)	4.763	73	275796	18.714
32) trans-1,2-Dichloroethene	(2)	4.769	96	109671	22.249
34) n-Hexane	(2)	5.195	57	153727	18.882
36) 1,1-Dichloroethane	(2)	5.444	63	188188	20.541
38) di-Isopropyl ether	(2)	5.493	45	360332	19.845
39) 2-Chloro-1,3-butadiene	(2)	5.548	53	154890	18.675
40) Ethyl t-butyl ether	(2)	6.028	59	284646	18.250
43) 1,2-Dichloroethene (Total)	(2)		96	238228	44.866
44) 2-Butanone	(2)	6.259	43	889473	127.312
42) cis-1,2-Dichloroethene	(2)	6.278	96	128557	22.617
45) 2,2-Dichloropropane	(2)	6.284	77	131341	18.285
47) Propionitrile	(1)	6.357	54	278104	164.135
48) Methacrylonitrile	(2)	6.570	67	632880	149.042
49) Bromochloromethane	(2)	6.612	128	60726	19.347
50) Tetrahydrofuran	(1)	6.618	71	163780	97.923
51) Chloroform	(2)	6.764	83	178147	19.743

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 05/21/2019 at 22:25.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s71.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 21:07 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 22:20 dvv10203

Sample Name: LCS424 Lab Sample ID: LCS424

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
52)$Dibromofluoromethane	(2)	6.977	113	280645	48.131
53) 1,1,1-Trichloroethane	(2)	6.983	97	142768M	18.902
54) Cyclohexane	(2)	7.075	56	181471	18.474
56) Carbon Tetrachloride	(2)	7.190	117	118156	18.004
55) 1,1-Dichloropropene	(2)	7.196	75	146190	20.485
58) Isobutyl Alcohol	(1)	7.361	41	277411	493.901
57)$1,2-Dichloroethane-d4	(2)	7.440	102	71541	50.213
60) Benzene	(2)	7.464	78	460354	21.213
61) 1,2-Dichloroethane	(2)	7.537	62	136213	18.518
65) t-Amyl methyl ether	(2)	7.647	73	297051	18.837
67) n-Heptane	(2)	7.866	43	156176	16.294
66)*Fluorobenzene	(2)	7.872	96	1182920	50.000
69) n-Butanol	(1)	8.243	56	469874	1018.717
71) Trichloroethene	(2)	8.340	95	114657	20.828
72) Methylcyclohexane	(2)	8.644	83	185837	17.925
73) 1,2-Dichloropropane	(2)	8.687	63	121092	21.239
76) Methyl Methacrylate	(2)	8.766	69	119598	18.524
75) 1,4-Dioxane	(1)	8.766	88	63545M	534.906
74) Dibromomethane	(2)	8.796	93	73879	19.964
78) Bromodichloromethane	(2)	9.027	83	121449	18.072
79) 2-Nitropropane	(2)	9.313	41	39773	12.161
80) 2-Chloroethyl Vinyl Ether	(2)	9.386	63	92617M	17.755
81) cis-1,3-Dichloropropene	(2)	9.569	75	165857	18.668
82) 4-Methyl-2-pentanone	(2)	9.739	43	1073555	85.632
83)$Toluene-d8	(3)	9.867	98	1204876	50.530
88) Toluene	(3)	9.940	92	291563	21.139
90) 1,3-Dichloropropene (total)	(3)		100	307382	36.107
89) trans-1,3-Dichloropropene	(3)	10.196	75	141525	17.439
91) Ethyl Methacrylate	(3)	10.256	69	186192	18.256
92) 1,1,2-Trichloroethane	(3)	10.402	97	117490	21.795
93) Tetrachloroethene	(3)	10.481	166	128063	21.285
94) 1,3-Dichloropropane	(3)	10.561	76	184807	20.652
96) 2-Hexanone	(3)	10.615	43	878730	89.523
97) Dibromochloromethane	(3)	10.773	129	100832	17.677
99) 1,2-Dibromoethane	(3)	10.883	107	123603	20.769
100)*Chlorobenzene-d5	(3)	11.309	117	929063	50.000
102) Chlorobenzene	(3)	11.339	112	331834	21.287
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	101737	19.333

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/21/2019 at 22:25.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s71.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 21:07 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 22:20 dvv10203

Sample Name: LCS424 Lab Sample ID: LCS424

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
104) Ethylbenzene	(3)	11.418	91	550212	20.769
106) m+p-Xylene	(3)	11.534	106	446552	42.275
108) Xylene (Total)	(3)		106	661362	62.734
107) o-Xylene	(3)	11.862	106	214810	20.459
109) Styrene	(3)	11.881	104	358957	20.547
110) Bromoform	(3)	12.039	173	68197	15.173
111) Isopropylbenzene	(3)	12.161	105	549219	20.909
112) Cyclohexanone	(1)	12.246	55	227579	479.516
114)$4-Bromofluorobenzene	(3)	12.307	95	432905	47.631
116) 1,1,2,2-Tetrachloroethane	(4)	12.410	83	199078	21.592
115) Bromobenzene	(4)	12.428	156	148632	21.230
118) trans-1,4-Dichloro-2-butene	(4)	12.434	53	117032	38.614
117) 1,2,3-Trichloropropane	(4)	12.459	110	59180	21.227
119) n-Propylbenzene	(4)	12.489	91	660986	21.953
120) 2-Chlorotoluene	(4)	12.568	126	135638	21.570
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	461453	21.177
121) 4-Chlorotoluene	(4)	12.659	126	140370	21.416
124) tert-Butylbenzene	(4)	12.872	134	94829M	20.730
125) Pentachloroethane	(4)	12.903	167	77197	18.508
126) 1,2,4-Trimethylbenzene	(4)	12.909	105	478365	21.026
127) sec-Butylbenzene	(4)	13.030	105	596760	21.438
129) 1,3-Dichlorobenzene	(4)	13.134	146	282005	21.491
130) p-Isopropyltoluene	(4)	13.140	119	507802	20.737
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	500311	50.000
133) 1,4-Dichlorobenzene	(4)	13.207	146	292663	21.770
134) 1,2,3-Trimethylbenzene	(4)	13.219	105	496118	20.308
135) Benzyl Chloride	(4)	13.286	91	315570	17.258
136) 1,3-Diethylbenzene	(4)	13.341	119	307906	20.116
141) Diethylbenzene (total)	(4)		100	897697	60.547
137) 1,4-Diethylbenzene	(4)	13.414	119	326647	20.038
139) n-Butylbenzene	(4)	13.432	92	258150	20.579
138) 1,2-Dichlorobenzene	(4)	13.469	146	274027	21.431
140) 1,2-Diethylbenzene	(4)	13.487	119	263144	20.393
142) 1,2-Dibromo-3-chloropropane	(4)	14.010	75	42946	17.657
144) 1,3,5-Trichlorobenzene	(4)	14.138	180	202999	21.057
146) 1,2,4-Trichlorobenzene	(4)	14.564	180	194047	21.244
147) Hexachlorobutadiene	(4)	14.643	225	82653	19.581
148) Naphthalene	(4)	14.746	128	666399	21.058

M = Compound was manually integrated.
* = Compound is an internal standard.
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Digitally signed by Don V. Viray
on 05/21/2019 at 22:25.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may21b.b/4y21s71.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 21:07 Analyst ID: DVV10203

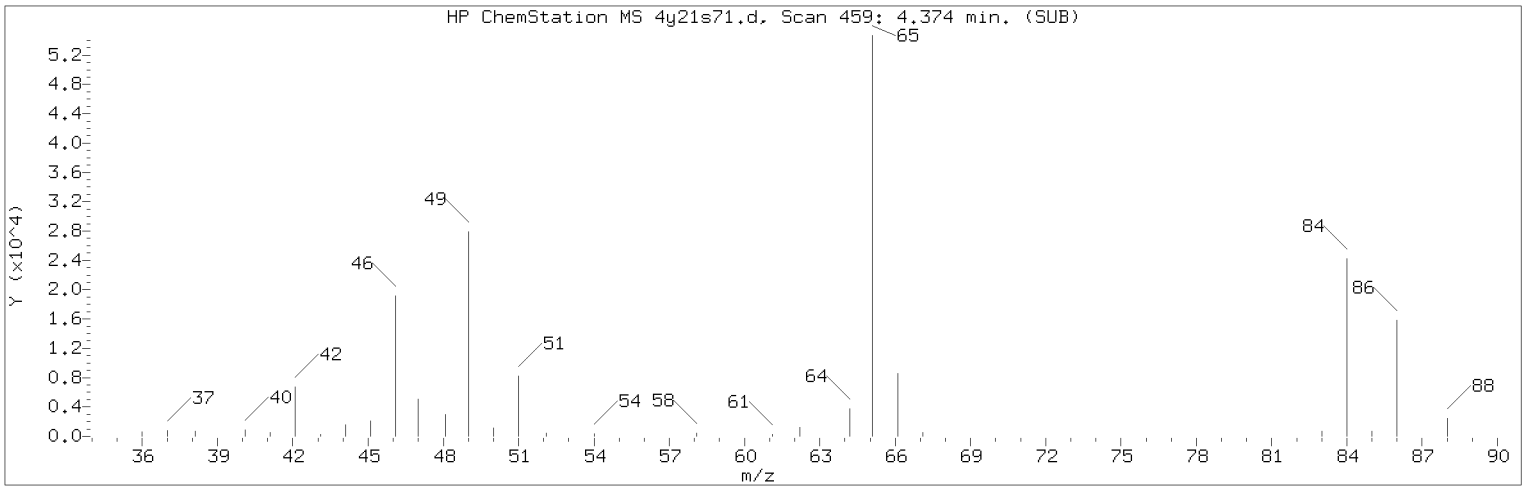
Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 22:20 dvv10203

Sample Name: LCS424 Lab Sample ID: LCS424

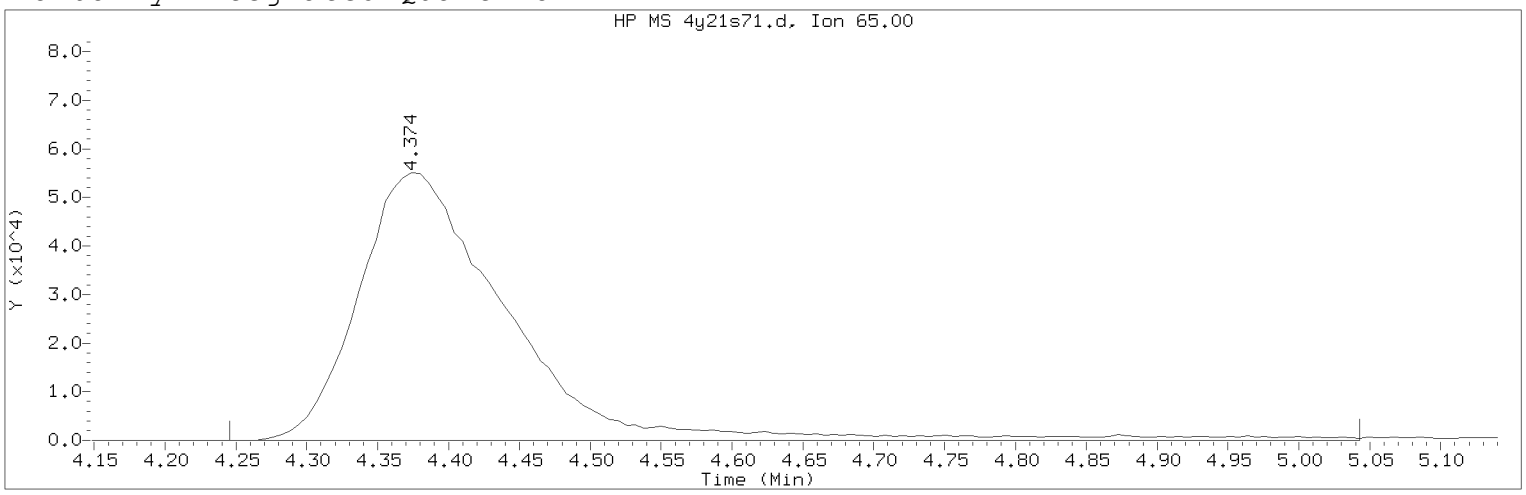
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
149) 1,2,3-Trichlorobenzene	(4)	14.892	180	186677	21.274
150) 2-Methylnaphthalene	(4)	15.537	142	380308	19.215

Digitally signed by Don V. Viray
on 05/21/2019 at 22:25.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may21b.b/4y21s71.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 21:07 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 22:20 dvv10203

Sample Name: LCS424 Lab Sample ID: LCS424

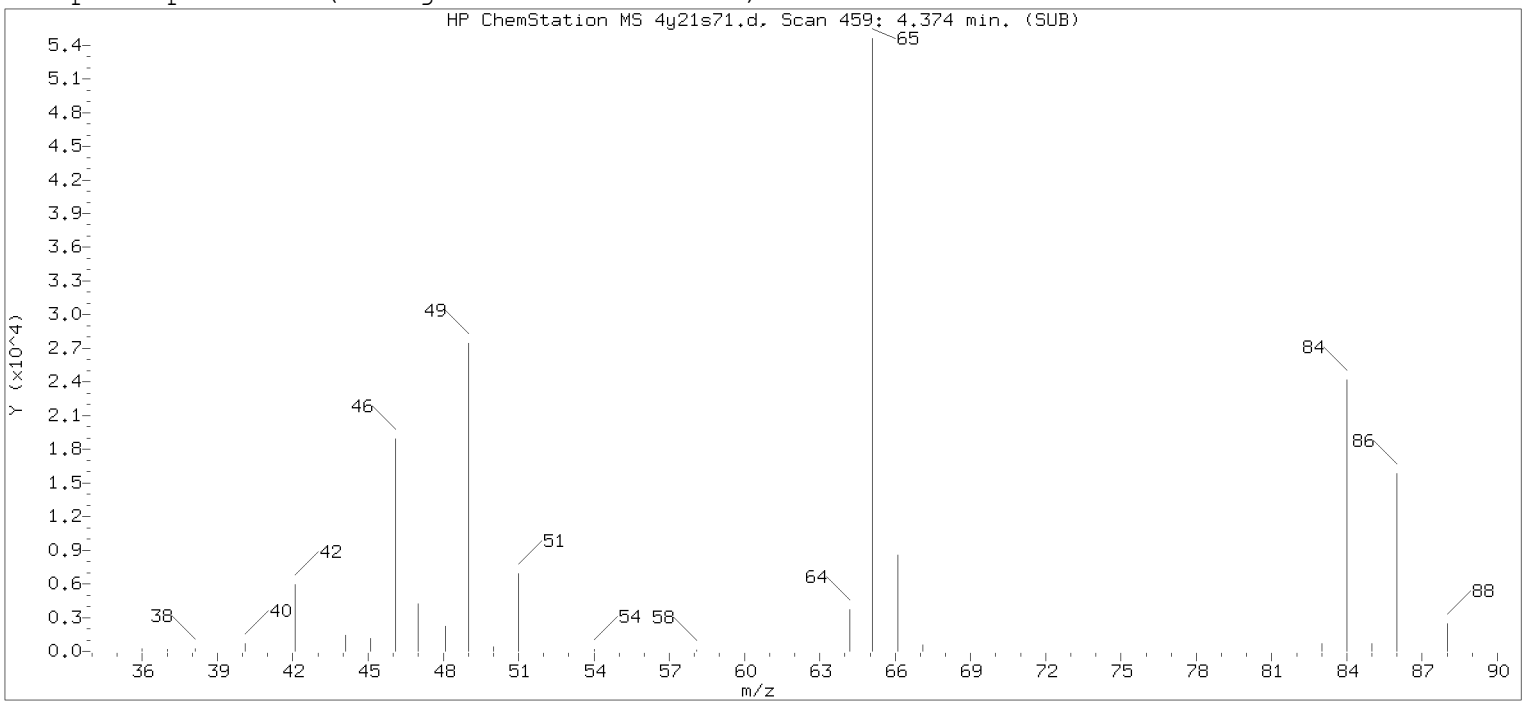
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 459
Retention Time (minutes): 4.374
Quant Ion : 65.00
Area (flag) : 405363M
On-Column Amount (ng) : 250.0000
Integration start scan : 437 Integration stop scan: 568
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

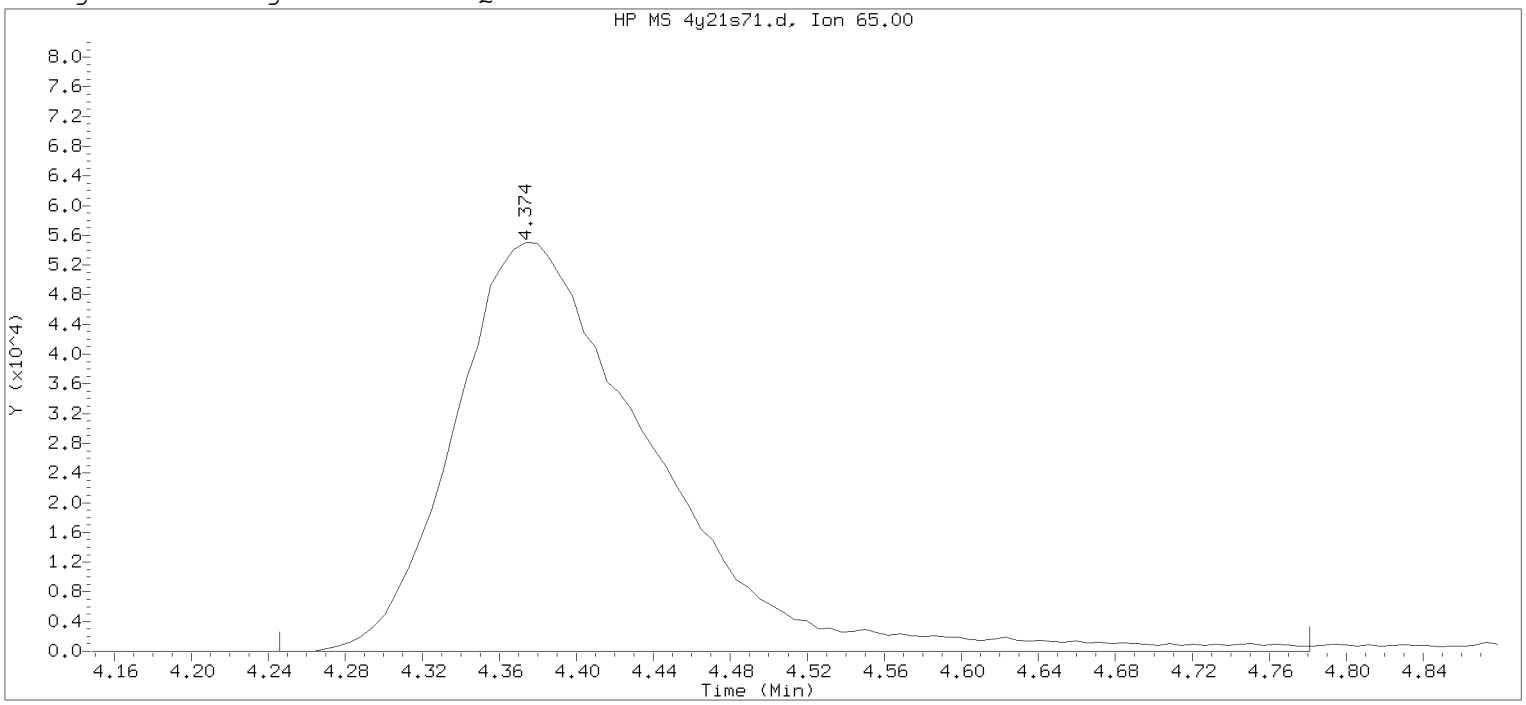
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/21/2019 at 22:25.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Marla S. Brewer on 05/22/2019 at 15:01.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may21b.b/4y21s71.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 21:07 Analyst ID: DVV10203

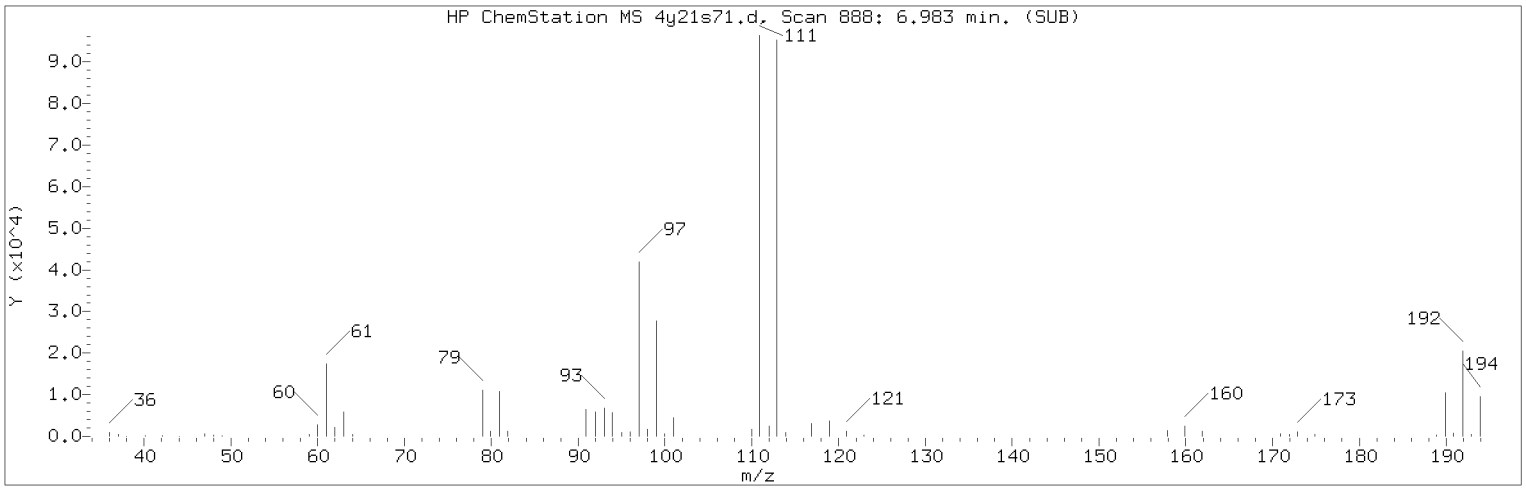
Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 21:30 dvv10203

Sample Name: LCS424 Lab Sample ID: LCS424

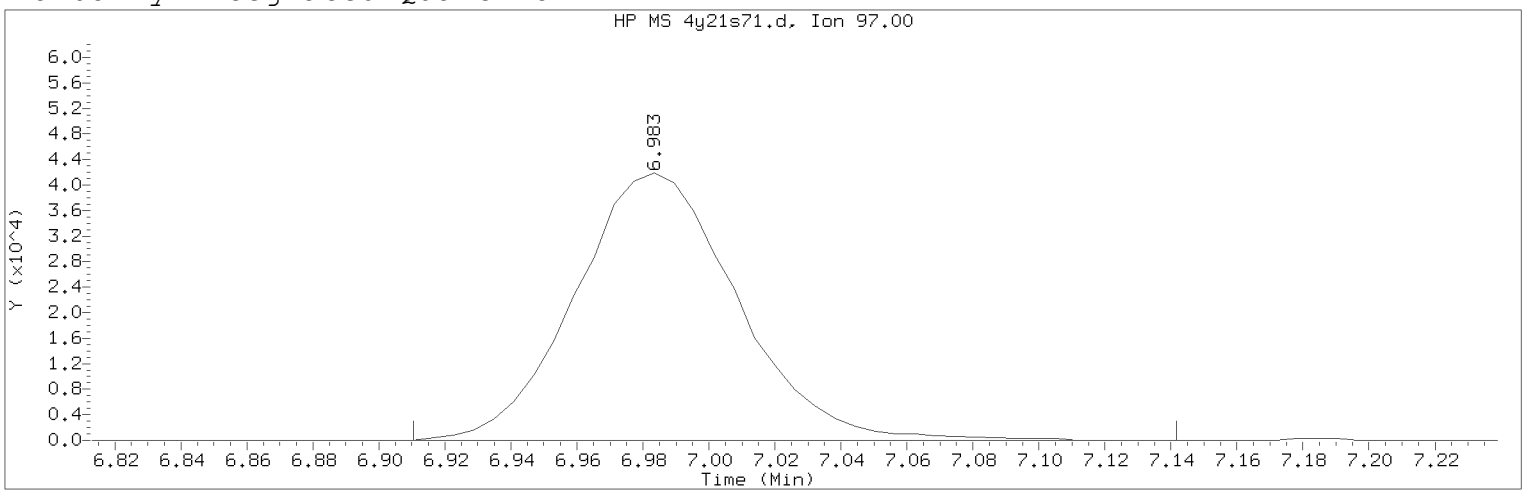
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 459
Retention Time (minutes): 4.374
Quant Ion : 65.00
Area : 393875
On-column Amount (ng) : 250.0000
Integration start scan : 437 Integration stop scan: 525
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/21/2019 at 22:25.
Target 3.5 esignature user id: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may21b.b/4y21s71.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 21:07 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 22:20 dvv10203

Sample Name: LCS424 Lab Sample ID: LCS424

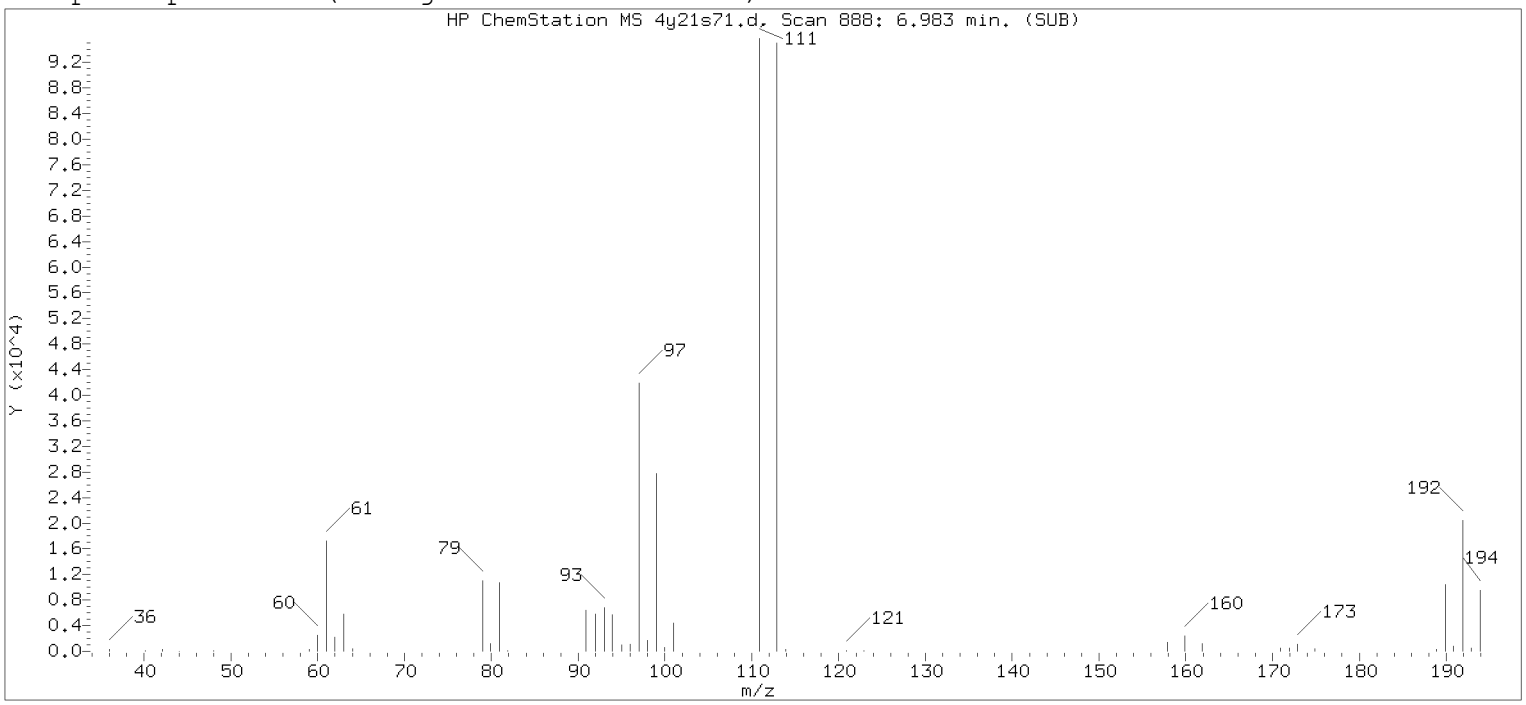
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 888
Retention Time (minutes): 6.983
Quant Ion : 97.00
Area (flag) : 142768M
On-Column Amount (ng) : 18.9016
Integration start scan : 875 Integration stop scan: 913
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

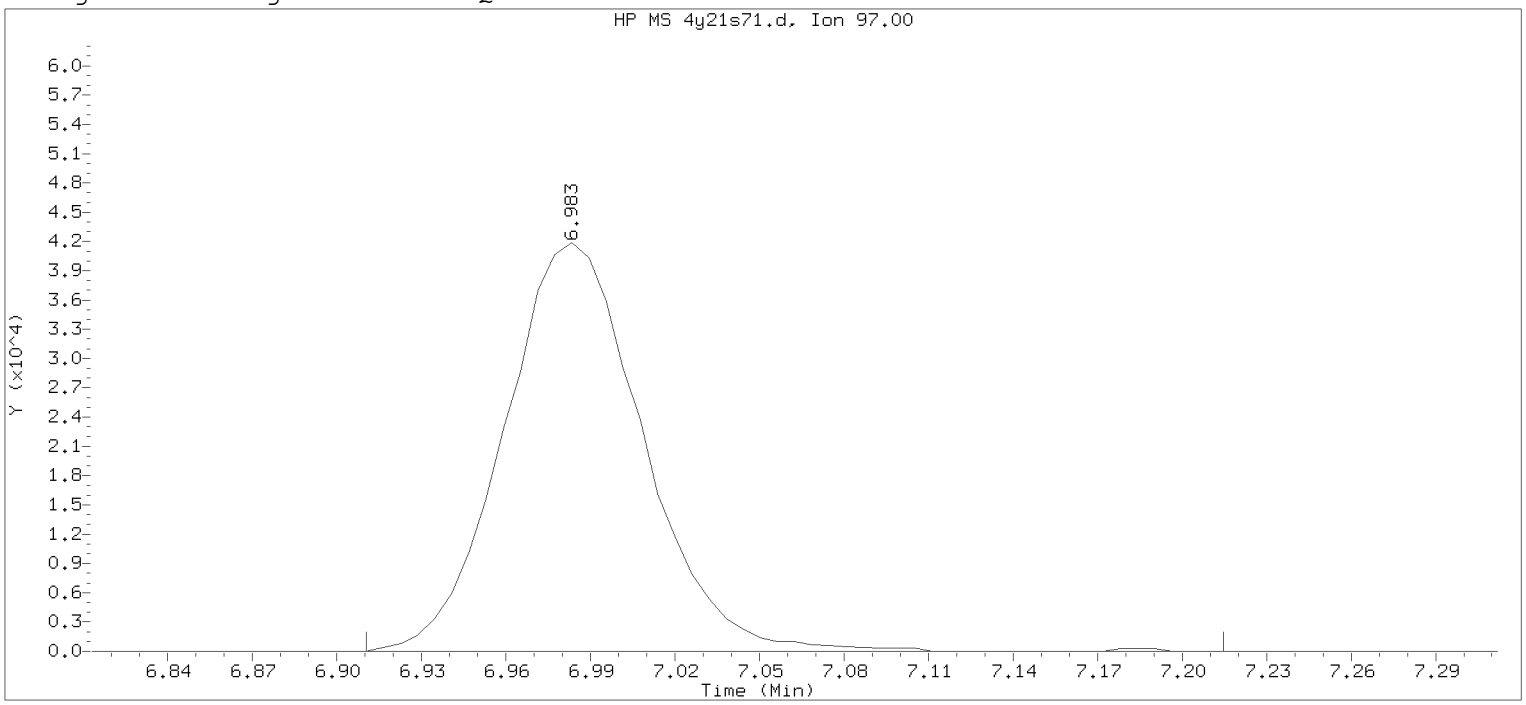
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/21/2019 at 22:25.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Marla S. Brewer on 05/22/2019 at 15:01.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may21b.b/4y21s71.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 21:07 Analyst ID: DVV10203

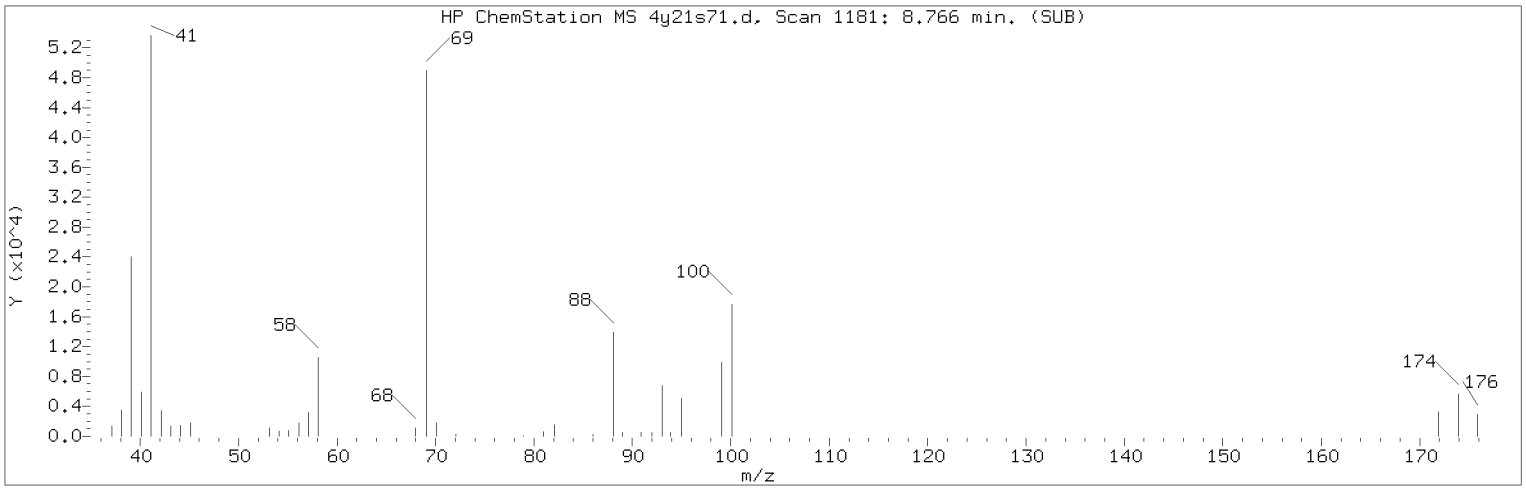
Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 21:30 dvv10203

Sample Name: LCS424 Lab Sample ID: LCS424

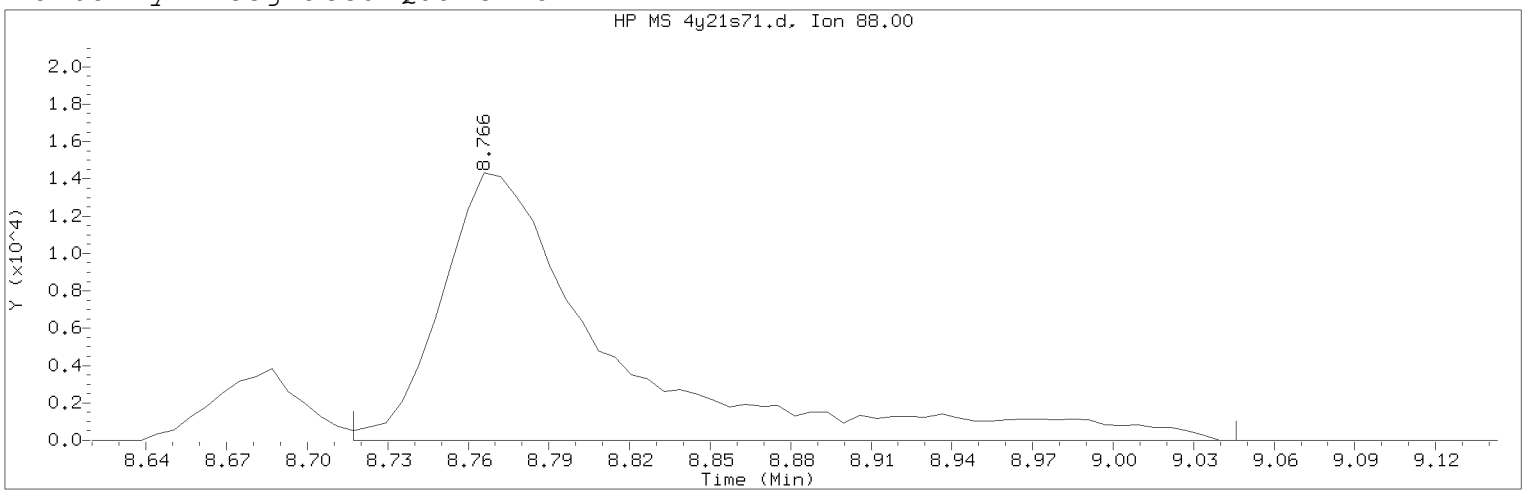
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 888
Retention Time (minutes): 6.983
Quant Ion : 97.00
Area : 143061
On-column Amount (ng) : 18.9405
Integration start scan : 875 Integration stop scan: 925
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/21/2019 at 22:25.
Target 3.5 esignature user id: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may21b.b/4y21s71.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 21:07 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 22:20 dvv10203

Sample Name: LCS424 Lab Sample ID: LCS424

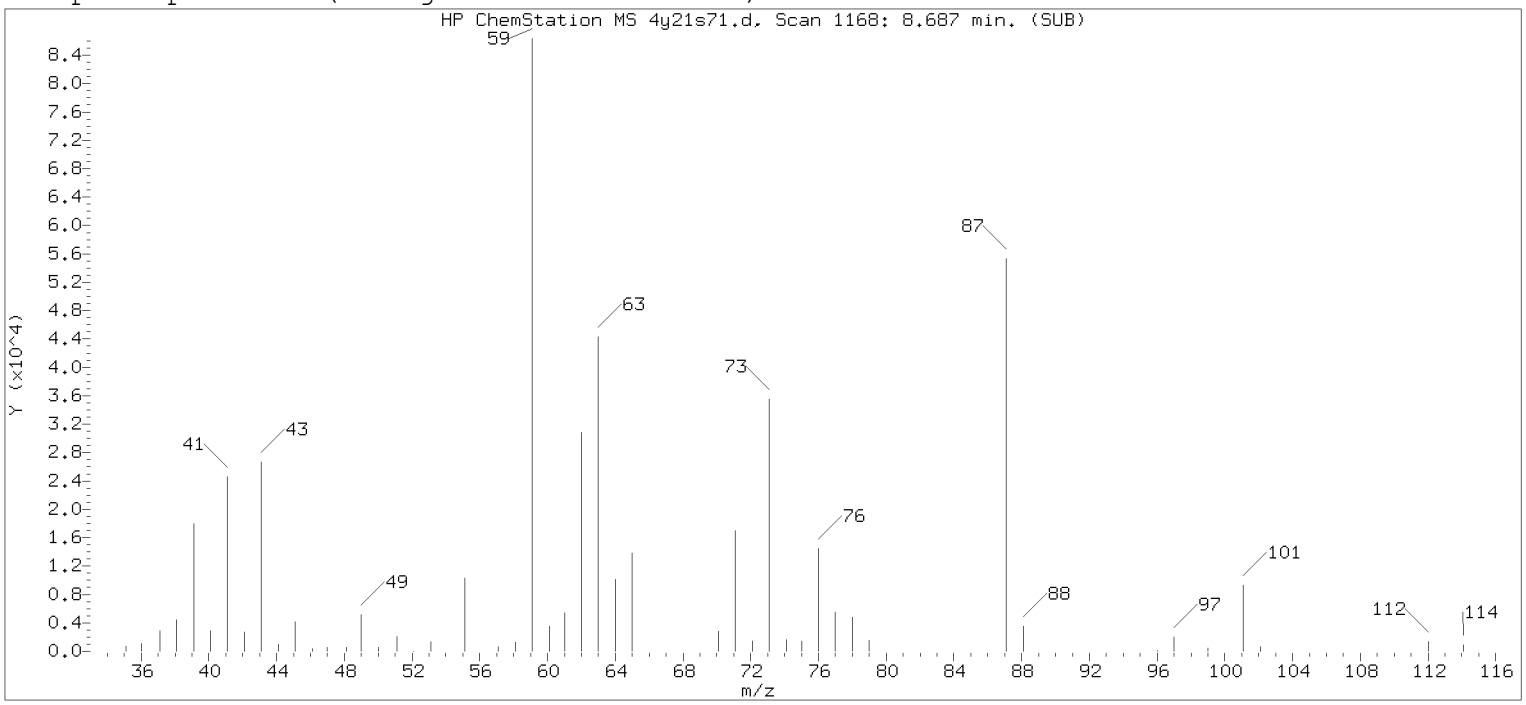
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1181
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area (flag) : 63545M
On-Column Amount (ng) : 534.9056
Integration start scan : 1172 Integration stop scan: 1226
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

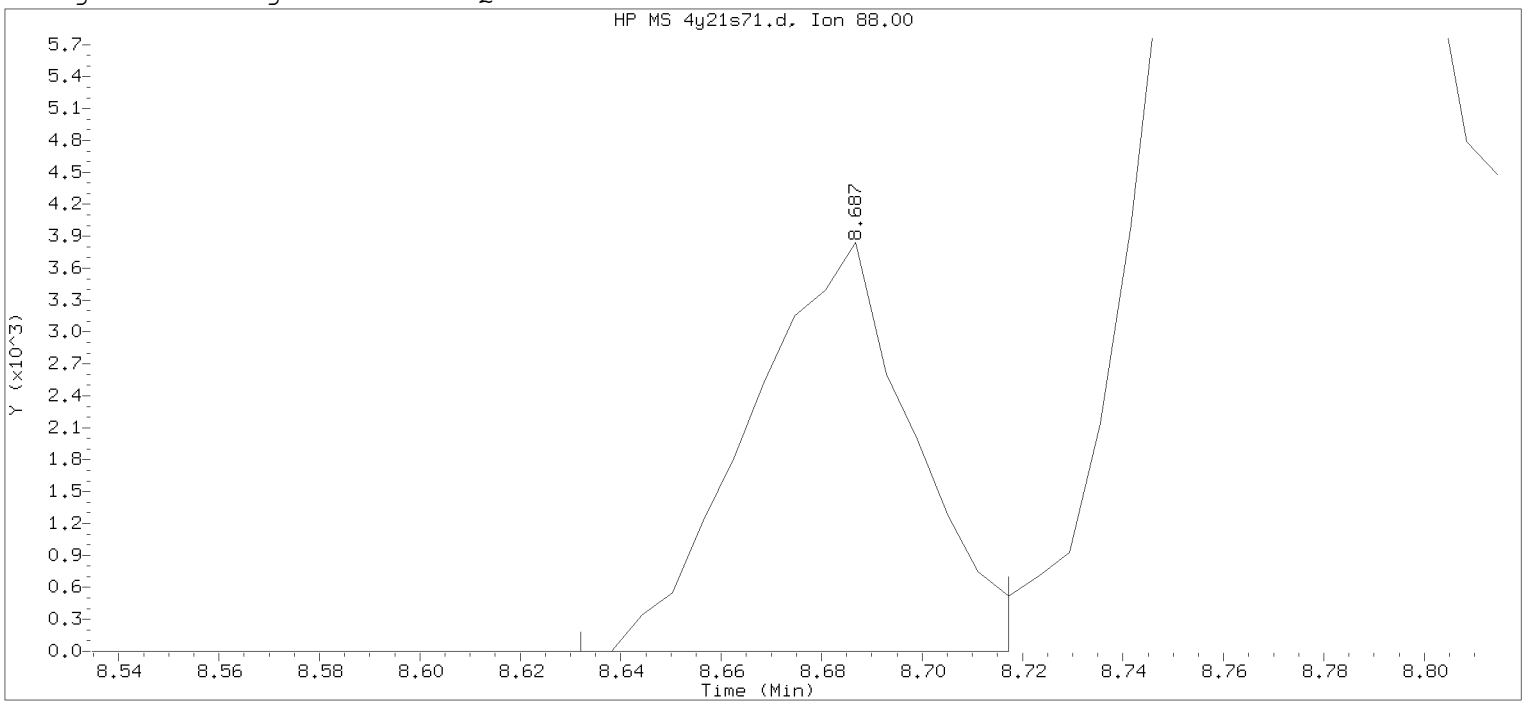
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/21/2019 at 22:25.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Marla S. Brewer on 05/22/2019 at 15:01.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may21b.b/4y21s71.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 21:07 Analyst ID: DVV10203

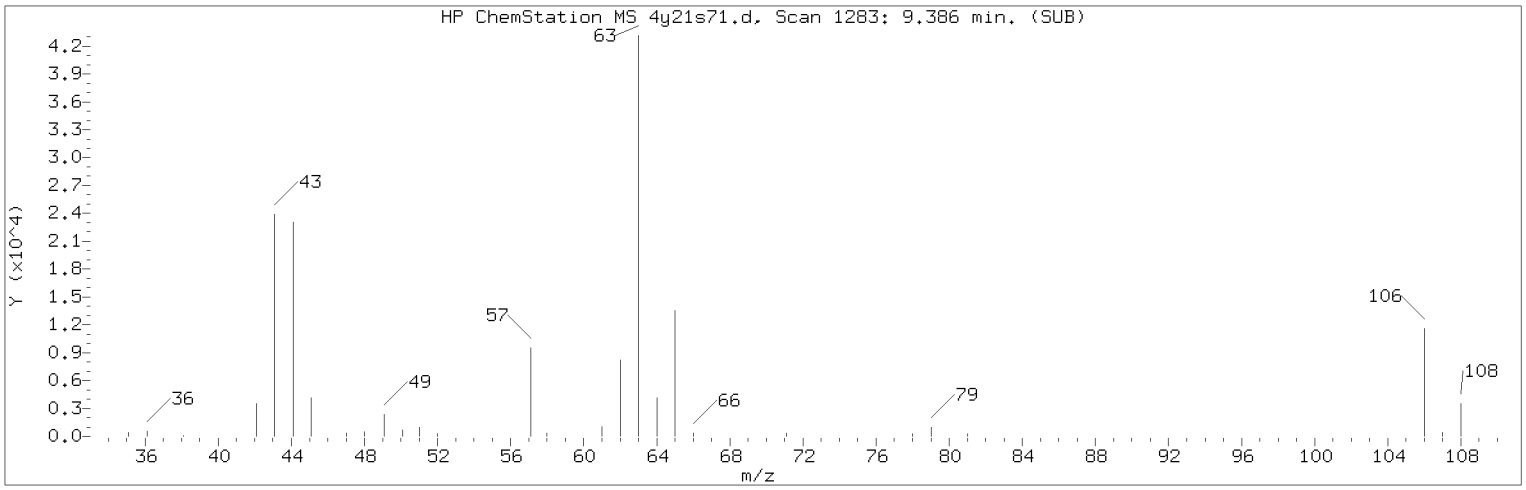
Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 21:30 dvv10203

Sample Name: LCS424 Lab Sample ID: LCS424

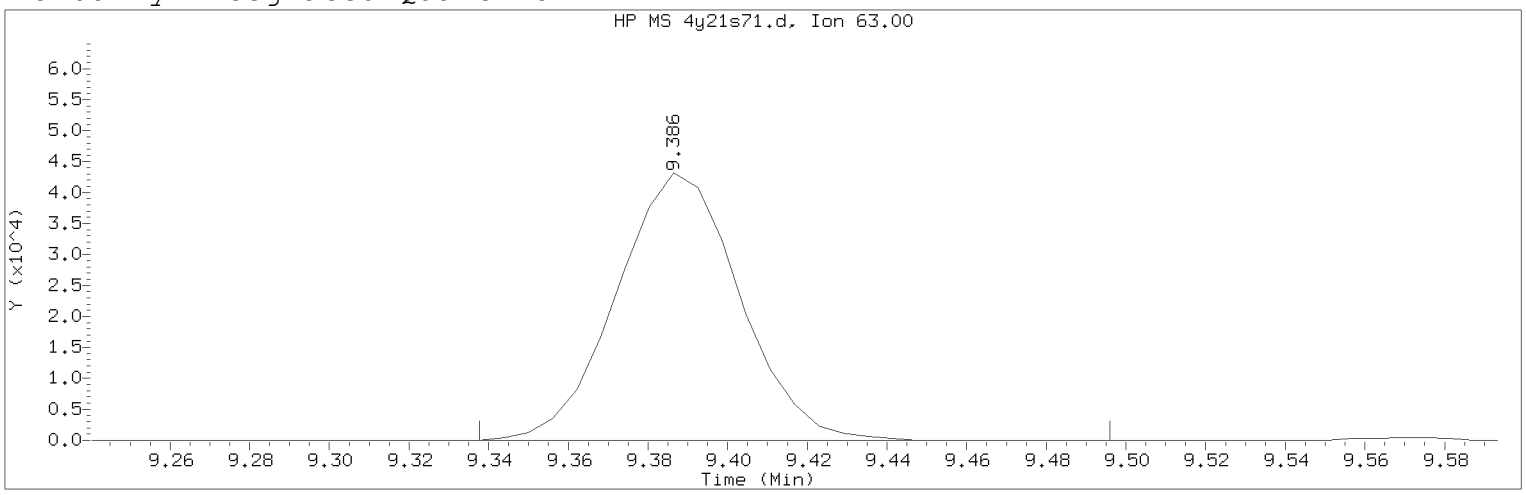
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1168
Retention Time (minutes): 8.687
Quant Ion : 88.00
Area : 8659
On-column Amount (ng) : 75.0176
Integration start scan : 1158 Integration stop scan: 1172
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/21/2019 at 22:25.
Target 3.5 esignature user id: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may21b.b/4y21s71.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 21:07 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 22:20 dvv10203

Sample Name: LCS424 Lab Sample ID: LCS424

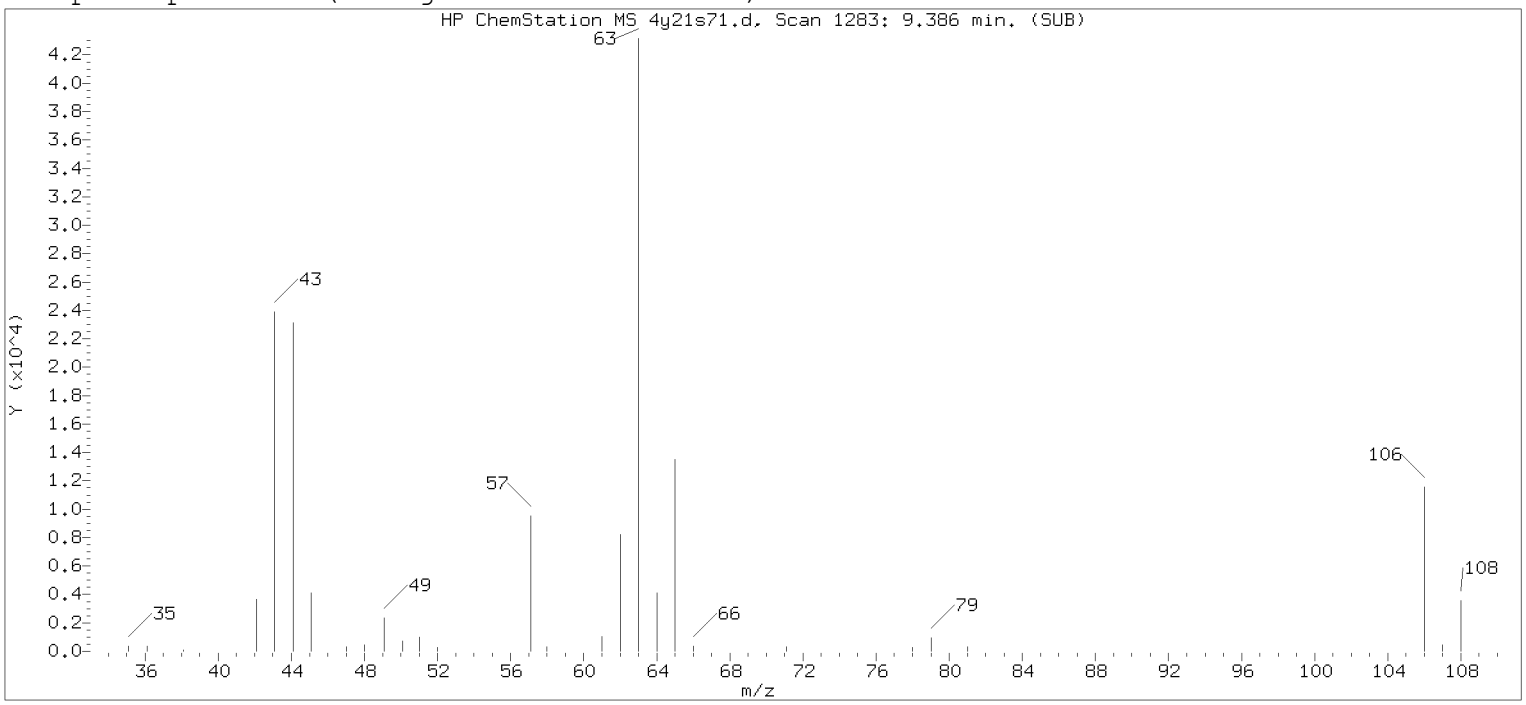
Compound Number : 80
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1283
Retention Time (minutes): 9.386
Quant Ion : 63.00
Area (flag) : 92617M
On-Column Amount (ng) : 17.7547
Integration start scan : 1274 Integration stop scan: 1300
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

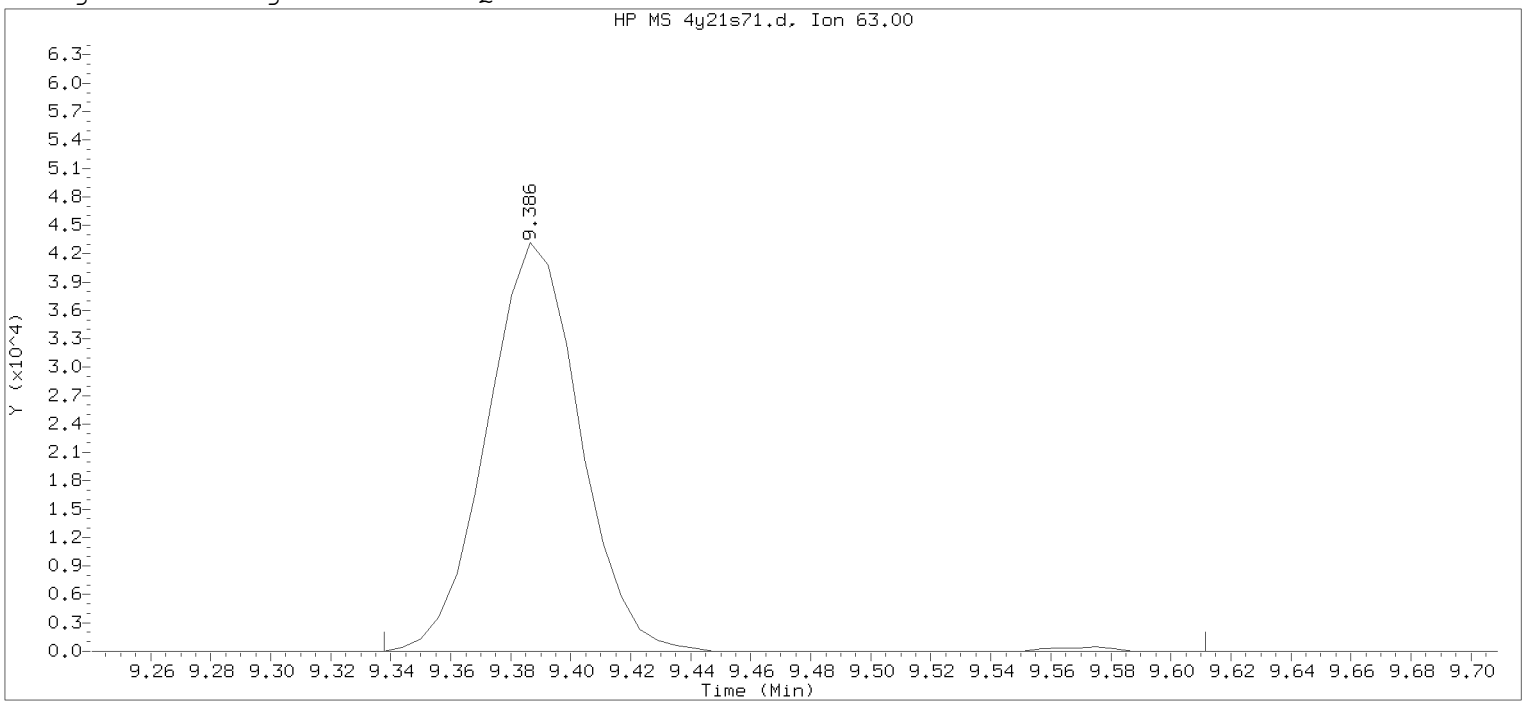
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/21/2019 at 22:25.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Marla S. Brewer on 05/22/2019 at 15:01.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may21b.b/4y21s71.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 21:07 Analyst ID: DVV10203

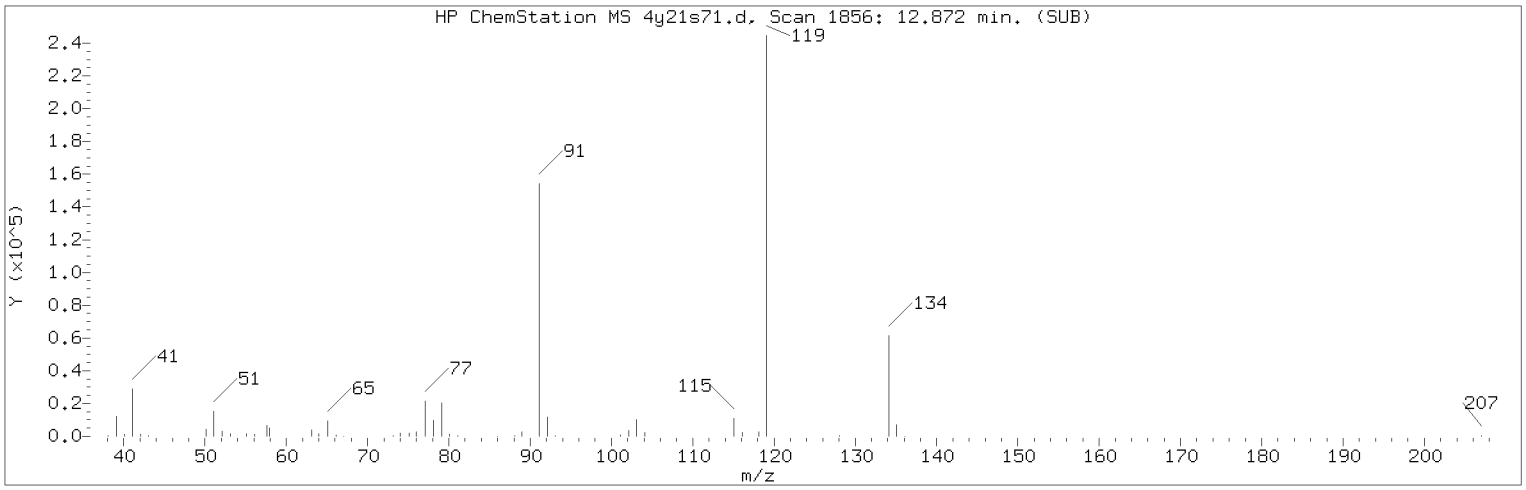
Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 21:30 dvv10203

Sample Name: LCS424 Lab Sample ID: LCS424

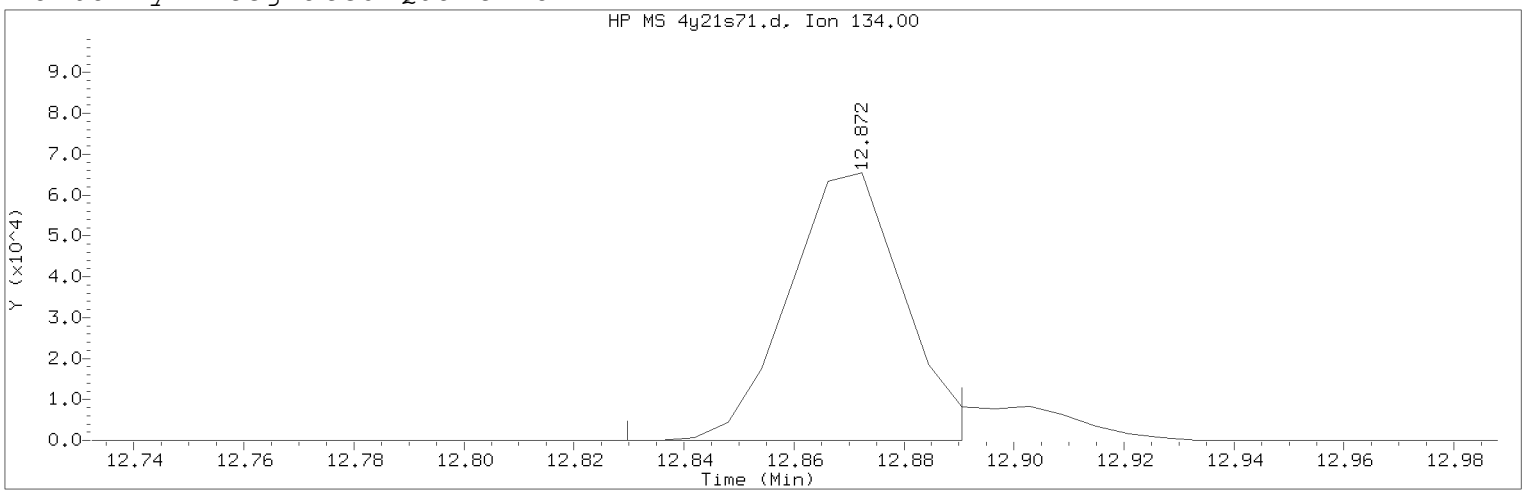
Compound Number : 80
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1283
Retention Time (minutes): 9.386
Quant Ion : 63.00
Area : 93253
On-column Amount (ng) : 17.8767
Integration start scan : 1274 Integration stop scan: 1319
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/21/2019 at 22:25.
Target 3.5 esignature user id: dvv10674

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may21b.b/4y21s71.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 21:07 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 22:20 dvv10203

Sample Name: LCS424 Lab Sample ID: LCS424

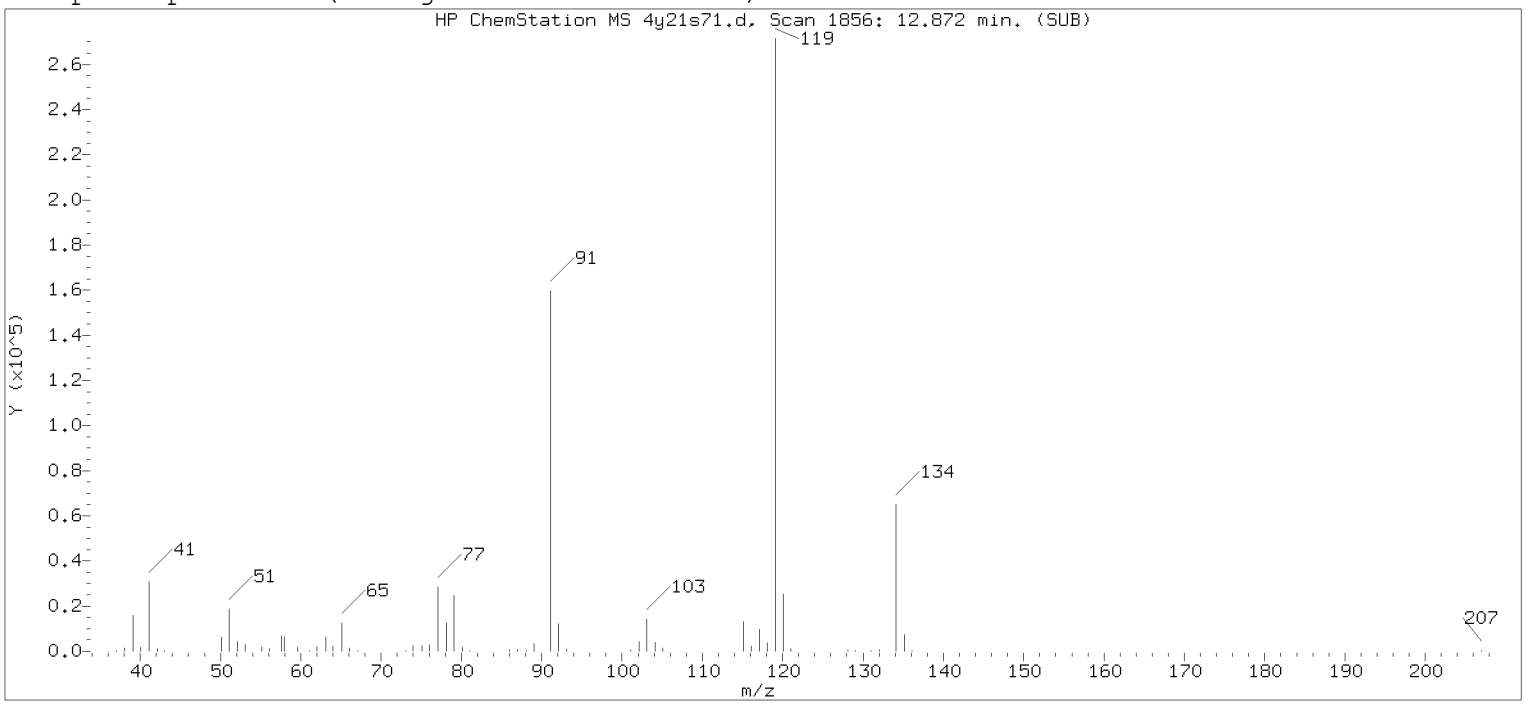
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1856
Retention Time (minutes): 12.872
Quant Ion : 134.00
Area (flag) : 94829M
On-Column Amount (ng) : 20.7301
Integration start scan : 1848 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

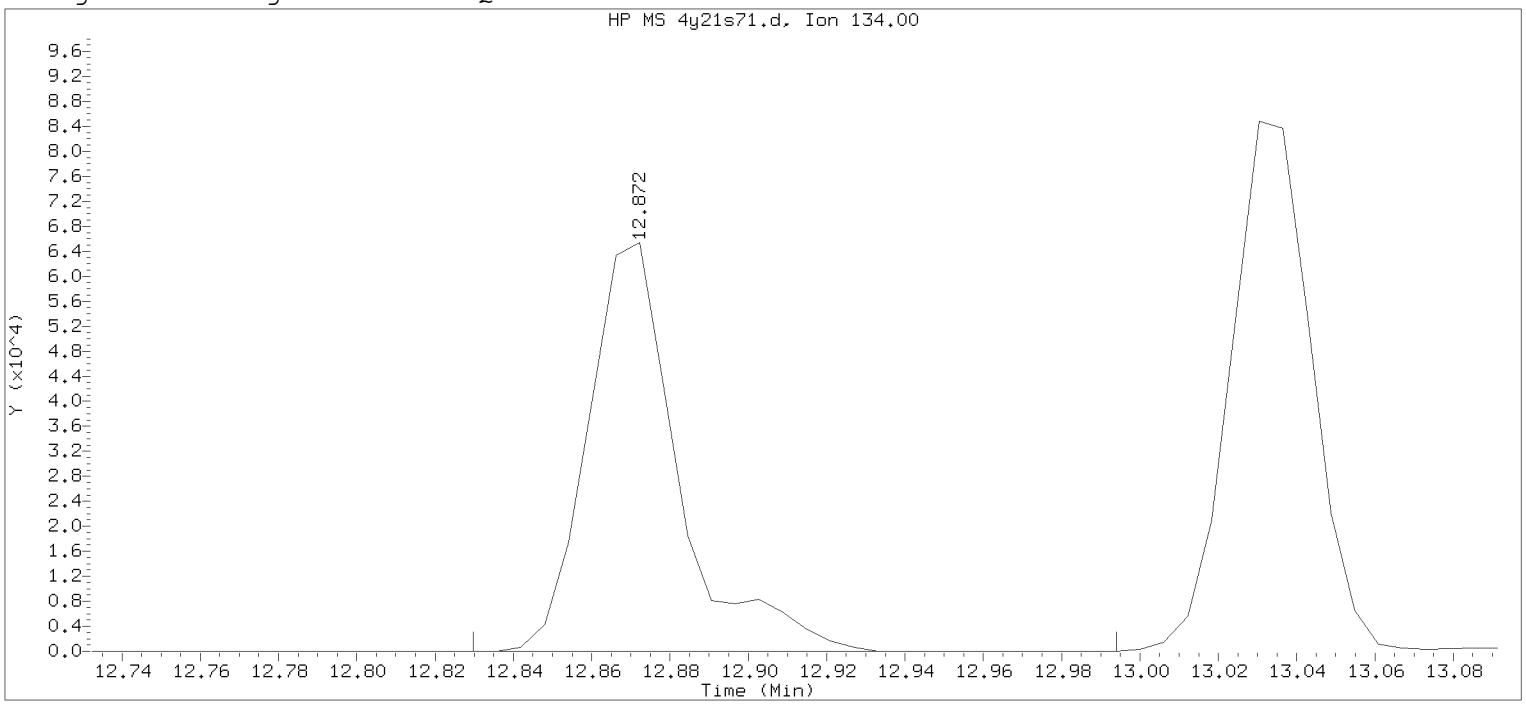
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/21/2019 at 22:25.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Marla S. Brewer on 05/22/2019 at 15:01.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may21b.b/4y21s71.d Instrument ID: HP23297.i
Injection date and time: 21-MAY-2019 21:07 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may21b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 21-MAY-2019 21:01
Date, time and analyst ID of latest file update: 21-May-2019 21:30 dvv10203

Sample Name: LCS424 Lab Sample ID: LCS424

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1856
Retention Time (minutes): 12.872
Quant Ion : 134.00
Area : 104982
On-column Amount (ng) : 22.9496
Integration start scan : 1848 Integration stop scan: 1875
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/21/2019 at 22:25.
Target 3.5 esignature user id: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS426

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCS426

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may22b.b/4y22s41.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	13	
74-87-3	Chloromethane	15	
106-99-0	1,3-Butadiene	55	
75-01-4	Vinyl Chloride	15	
74-83-9	Bromomethane	13	
75-00-3	Chloroethane	14	
109-66-0	n-Pentane	22	
75-69-4	Trichlorofluoromethane	14	
354-23-4	Freon 123a	20	
107-02-8	Acrolein	140	
75-35-4	1,1-Dichloroethene	23	
67-64-1	Acetone	140	
76-13-1	Freon 113	22	
67-63-0	2-Propanol	130	
74-88-4	Methyl Iodide	21	
75-15-0	Carbon Disulfide	21	
107-05-1	Allyl Chloride	16	
79-20-9	Methyl Acetate	17	
75-09-2	Methylene Chloride	21	
75-65-0	t-Butyl alcohol	180	
107-13-1	Acrylonitrile	87	
156-60-5	trans-1,2-Dichloroethene	21	
1634-04-4	Methyl Tertiary Butyl Ether	19	
110-54-3	n-Hexane	21	
75-34-3	1,1-Dichloroethane	20	
108-20-3	di-Isopropyl ether	19	
126-99-8	2-Chloro-1,3-butadiene	18	
637-92-3	Ethyl t-butyl ether	18	
156-59-2	cis-1,2-Dichloroethene	22	
540-59-0	1,2-Dichloroethene (Total)	43	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS426

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCS426

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may22b.b/4y22s41.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
78-93-3	2-Butanone	120	
594-20-7	2,2-Dichloropropane	17	
107-12-0	Propionitrile	160	
126-98-7	Methacrylonitrile	140	
74-97-5	Bromochloromethane	18	
109-99-9	Tetrahydrofuran	99	
67-66-3	Chloroform	19	
71-55-6	1,1,1-Trichloroethane	18	
110-82-7	Cyclohexane	20	
563-58-6	1,1-Dichloropropene	20	
56-23-5	Carbon Tetrachloride	17	
78-83-1	Isobutyl Alcohol	500	
71-43-2	Benzene	20	
107-06-2	1,2-Dichloroethane	18	
994-05-8	t-Amyl methyl ether	18	
142-82-5	n-Heptane	18	
71-36-3	n-Butanol	1100	
79-01-6	Trichloroethene	20	
108-87-2	Methylcyclohexane	19	
78-87-5	1,2-Dichloropropane	20	
74-95-3	Dibromomethane	19	
123-91-1	1,4-Dioxane	620	
80-62-6	Methyl Methacrylate	18	
75-27-4	Bromodichloromethane	18	
79-46-9	2-Nitropropane	12	
110-75-8	2-Chloroethyl Vinyl Ether	18	
10061-01-5	cis-1,3-Dichloropropene	18	
108-10-1	4-Methyl-2-pentanone	82	
108-88-3	Toluene	20	
10061-02-6	trans-1,3-Dichloropropene	17	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS426

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCS426

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may22b.b/4y22s41.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
542-75-6	1,3-Dichloropropene (total)	35	
97-63-2	Ethyl Methacrylate	18	
79-00-5	1,1,2-Trichloroethane	21	
127-18-4	Tetrachloroethene	20	
142-28-9	1,3-Dichloropropane	20	
591-78-6	2-Hexanone	84	
124-48-1	Dibromochloromethane	18	
106-93-4	1,2-Dibromoethane	20	
108-90-7	Chlorobenzene	20	
630-20-6	1,1,1,2-Tetrachloroethane	19	
100-41-4	Ethylbenzene	20	
179601-23-1	m+p-Xylene	40	
95-47-6	o-Xylene	20	
1330-20-7	Xylene (Total)	60	
100-42-5	Styrene	20	
75-25-2	Bromoform	16	
98-82-8	Isopropylbenzene	20	
108-94-1	Cyclohexanone	540	
108-86-1	Bromobenzene	20	
79-34-5	1,1,2,2-Tetrachloroethane	21	
96-18-4	1,2,3-Trichloropropane	20	
110-57-6	trans-1,4-Dichloro-2-butene	29	J
103-65-1	n-Propylbenzene	21	
95-49-8	2-Chlorotoluene	21	
106-43-4	4-Chlorotoluene	21	
108-67-8	1,3,5-Trimethylbenzene	20	
98-06-6	tert-Butylbenzene	21	
76-01-7	Pentachloroethane	18	
95-63-6	1,2,4-Trimethylbenzene	20	
135-98-8	sec-Butylbenzene	21	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS426

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCS426

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may22b.b/4y22s41.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
541-73-1	1,3-Dichlorobenzene	20	
99-87-6	p-Isopropyltoluene	20	
106-46-7	1,4-Dichlorobenzene	21	
526-73-8	1,2,3-Trimethylbenzene	19	
100-44-7	Benzyl Chloride	17	
141-93-5	1,3-Diethylbenzene	19	
105-05-5	1,4-Diethylbenzene	19	
95-50-1	1,2-Dichlorobenzene	20	
104-51-8	n-Butylbenzene	20	
135-01-3	1,2-Diethylbenzene	19	
25340-17-4	Diethylbenzene (total)	58	
96-12-8	1,2-Dibromo-3-chloropropane	17	
108-70-3	1,3,5-Trichlorobenzene	21	
120-82-1	1,2,4-Trichlorobenzene	21	
87-68-3	Hexachlorobutadiene	22	
91-20-3	Naphthalene	21	
87-61-6	1,2,3-Trichlorobenzene	22	
91-57-6	2-Methylnaphthalene	21	

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may22b.b/4y22s41.d Injection date and time: **22-MAY-2019 21:01**
Data file Sample Info. Line: LCS426;LCS426;1;3;LCS;;;;4y22b05; Instrument ID: **HP23297.i** Batch: **4191422AA**
Date, time and analyst ID of latest file update: 23-May-2019 00:22 pth10165

Blank Data file reference: **/chem/HP23297.i/19may22b.b/4y22b05.d**

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: **4191422**
Calibration date and time (Last Method Edit): 23-MAY-2019 00:21
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may22b.b/4y22c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.367(0.000)	458	65	410070 (8)	250.00	
66) Fluorobenzene	7.865(0.000)	1033	96	1242595 (1)	50.00	
100) Chlorobenzene-d5	11.309(0.000)	1599	117	976873 (0)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189(0.000)	1908	152	530533 (-2)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977(0.000)	113	289112	47.202	94%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434(0.000)	102	75471	50.428	101%		80 - 120
83) Toluene-d8	(3)	9.867(0.000)	98	1259278	50.227	100%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.306(0.000)	95	455884	47.705	95%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
3) Dichlorodifluoromethane	(2)	1.995(-0.000)	85	122218	12.899	12.90			0.2	1
4) Chloromethane	(2)	2.189(0.000)	50	136643	14.890	14.89			0.2	1
5) 1,3-Butadiene	(2)	2.311(0.000)	39	273978	55.055	55.05			1	3
6) Vinyl Chloride	(2)	2.311(0.000)	62	136382	15.200	15.20			0.2	1
8) Bromomethane	(2)	2.646(0.000)	94	98870	13.429	13.43			0.3	1
9) Chloroethane	(2)	2.743(0.000)	64	70214	14.171	14.17			0.2	1
11) n-Pentane	(2)	3.102(0.000)	43	189042	21.505	21.51			0.4	10
12) Trichlorofluoromethane	(2)	3.047(0.000)	101	148618	13.660	13.66			0.2	1
15) Freon 123a	(2)	3.406(0.001)	67	124667	19.916	19.92			0.4	5
16) Acrolein	(1)	3.516(0.000)	56	317457	136.537	136.54			2	100
17) 1,1-Dichloroethene	(2)	3.656(-0.000)	96	97859	22.581	22.58			0.2	1
18) Acetone	(1)	3.686(0.001)	58	157299	137.770	137.77			0.7	20
19) Freon 113	(2)	3.668(0.000)	101	102967	21.592	21.59			0.2	10
21) 2-Propanol	(1)	3.875(-0.001)	45	123149	134.231	134.23			18	100
22) Methyl Iodide	(2)	3.856(0.000)	142	180613	20.915	20.92			0.2	1
23) Carbon Disulfide	(2)	3.960(0.000)	76	320209	20.720	20.72			0.2	5
25) Allyl Chloride	(2)	4.148(0.000)	41	155447	16.176	16.18			0.3	5
27) Methyl Acetate	(2)	4.124(-0.000)	43	155215	17.196	17.20			0.2	5
28) Methylene Chloride	(2)	4.349(0.000)	84	115096	20.967	20.97			0.3	1
30) t-Butyl alcohol	(1)	4.495(0.001)	59	284525	176.320	176.32			12	50
31) Acrylonitrile	(2)	4.708(-0.000)	53	412162	87.159	87.16			0.3	20
32) trans-1,2-Dichloroethene	(2)	4.763(0.000)	96	110070	21.257	21.26			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	4.751(0.000)	73	286991	18.539	18.54			0.2	1
34) n-Hexane	(2)	5.189(0.000)	57	177812	20.791	20.79			0.2	5
36) 1,1-Dichloroethane	(2)	5.438(-0.000)	63	190962	19.843	19.84			0.2	1
38) di-Isopropyl ether	(2)	5.493(-0.000)	45	363562	19.062	19.06			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	5.542(0.000)	53	155371	17.833	17.83			0.2	5
40) Ethyl t-butyl ether	(2)	6.028(0.000)	59	293773	17.931	17.93			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.272(0.000)	96	130159	21.799	21.80			0.2	1
43) 1,2-Dichloroethene (Total)	(2)		96	240229	43.056	43.06			0.2	2
44) 2-Butanone	(2)	6.253(-0.000)	43	884369	120.502	120.50			0.3	10

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may22b.b/4y22s41.d Injection date and time: **22-MAY-2019 21:01**
Data file Sample Info. Line: LCS426;LCS426;1;3;LCS;;;;4y22b05; Instrument ID: **HP23297.i** Batch: **4191422AA**
Date, time and analyst ID of latest file update: 23-May-2019 00:22 pth10165

Blank Data file reference: **/chem/HP23297.i/19may22b.b/4y22b05.d**

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: **4191422**
Calibration date and time (Last Method Edit): 23-MAY-2019 00:21
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may22b.b/4y22c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
45) 2,2-Dichloropropane	(2)	6.290(-0.000)	77	130156	17.250	17.25			0.3	1
47) Propionitrile	(1)	6.351(-0.000)	54	281675	164.334	164.33			14	100
48) Methacrylonitrile	(2)	6.564(0.000)	67	637687	142.962	142.96			6	50
49) Bromochloromethane	(2)	6.606(-0.000)	128	60929	18.480	18.48			0.2	5
50) Tetrahydrofuran	(1)	6.612(-0.000)	71	167156	98.794	98.79			0.7	10
51) Chloroform	(2)	6.758(-0.000)	83	177195	18.695	18.69			0.2	1
53) 1,1,1-Trichloroethane	(2)	6.983(0.000)	97	142228	17.926	17.93			0.3	1
54) Cyclohexane	(2)	7.068(-0.000)	56	202848	19.658	19.66			0.2	5
55) 1,1-Dichloropropene	(2)	7.190(0.000)	75	148555	19.817	19.82			0.2	5
56) Carbon Tetrachloride	(2)	7.190(-0.000)	117	119901	17.393	17.39			0.2	1
58) Isobutyl Alcohol	(1)	7.354(0.001)	41	283158	498.347	498.35			36	250
60) Benzene	(2)	7.464(-0.000)	78	460900	20.218	20.22			0.2	1
61) 1,2-Dichloroethane	(2)	7.537(-0.000)	62	136319	17.643	17.64			0.3	1
65) t-Amyl methyl ether	(2)	7.646(-0.000)	73	304018	18.353	18.35			0.8	5
67) n-Heptane	(2)	7.865(0.000)	43	182622	18.138	18.14			0.2	5
69) n-Butanol	(1)	8.236(0.001)	56	492226	1054.928	1054.93			61	250
71) Trichloroethene	(2)	8.340(0.000)	95	114071	19.726	19.73			0.2	1
72) Methylcyclohexane	(2)	8.644(0.000)	83	205769	18.895	18.89			0.2	5
73) 1,2-Dichloropropane	(2)	8.687(0.000)	63	121773	20.333	20.33			0.2	1
74) Dibromomethane	(2)	8.790(0.000)	93	74980	19.289	19.29			0.2	1
75) 1,4-Dioxane	(1)	8.766(-0.000)	88	75105M	624.958	624.96			29	250
76) Methyl Methacrylate	(2)	8.766(0.000)	69	122064	17.998	18.00			0.2	5
78) Bromodichloromethane	(2)	9.027(0.000)	83	125105	17.722	17.72			0.2	1
79) 2-Nitropropane	(2)	9.307(0.000)	41	41595	12.107	12.11			0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)	9.386(0.000)	63	97775M	17.843	17.84			0.2	10
81) cis-1,3-Dichloropropene	(2)	9.563(0.000)	75	169537	18.166	18.17			0.2	1
82) 4-Methyl-2-pentanone	(2)	9.739(0.000)	43	1078153	81.868	81.87			0.5	10
88) Toluene	(3)	9.940(0.000)	92	295124	20.350	20.35			0.2	1
89) trans-1,3-Dichloropropene	(3)	10.195(-0.000)	75	147672	17.306	17.31			0.2	1
90) 1,3-Dichloropropene (total)	(3)		100	317209	35.472	35.47			0.2	5
91) Ethyl Methacrylate	(3)	10.256(-0.000)	69	189763	17.695	17.70			0.2	5
92) 1,1,2-Trichloroethane	(3)	10.402(0.000)	97	119479	21.079	21.08			0.2	1
93) Tetrachloroethene	(3)	10.475(0.000)	166	129505	20.471	20.47			0.2	1
94) 1,3-Dichloropropane	(3)	10.560(-0.000)	76	186008	19.769	19.77			0.2	1
96) 2-Hexanone	(3)	10.615(-0.000)	43	869045	84.203	84.20			0.3	10
97) Dibromochloromethane	(3)	10.773(0.000)	129	107286	17.888	17.89			0.2	1
99) 1,2-Dibromoethane	(3)	10.883(-0.000)	107	126640	20.238	20.24			0.2	1
102) Chlorobenzene	(3)	11.339(0.000)	112	333479	20.346	20.35			0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)	11.418(0.000)	131	103864	18.771	18.77			0.2	1
104) Ethylbenzene	(3)	11.418(0.000)	91	550046	19.747	19.75			0.4	1
106) m+p-Xylene	(3)	11.534(0.000)	106	445499	40.111	40.11			1	5
107) o-Xylene	(3)	11.862(0.000)	106	215574	19.527	19.53			0.4	1
108) Xylene (Total)	(3)		106	661073	59.638	59.64			1	5
109) Styrene	(3)	11.881(0.000)	104	363237	19.774	19.77			0.2	5
110) Bromoform	(3)	12.039(0.000)	173	75119	15.895	15.89			0.2	4
111) Isopropylbenzene	(3)	12.160(0.000)	105	554723	20.085	20.09			0.2	5
112) Cyclohexanone	(1)	12.246(-0.000)	55	261104M	543.840	543.84			25	100
115) Bromobenzene	(4)	12.428(0.000)	156	149046	20.076	20.08			0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	12.410(-0.000)	83	200719	20.530	20.53			0.2	1
117) 1,2,3-Trichloropropane	(4)	12.458(0.000)	110	58678	19.848	19.85			0.2	5
118) trans-1,4-Dichloro-2-butene	(4)	12.434(0.000)	53	93844	29.199	29.20		J	6	50
119) n-Propylbenzene	(4)	12.489(0.000)	91	666814	20.885	20.88			0.2	5
120) 2-Chlorotoluene	(4)	12.568(-0.000)	126	137998	20.695	20.70			0.2	5
121) 4-Chlorotoluene	(4)	12.659(-0.000)	126	142514	20.505	20.50			0.2	5

M = Compound was manually integrated.

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may22b.b/4y22s41.d Injection date and time: **22-MAY-2019 21:01**
Data file Sample Info. Line: LCS426;LCS426;1;3;LCS;;;;4y22b05; Instrument ID: **HP23297.i** Batch: **4191422AA**
Date, time and analyst ID of latest file update: 23-May-2019 00:22 pth10165

Blank Data file reference: **/chem/HP23297.i/19may22b.b/4y22b05.d**

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: **4191422**
Calibration date and time (Last Method Edit): 23-MAY-2019 00:21
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may22b.b/4y22c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
122) 1,3,5-Trimethylbenzene	(4)	12.623(0.000)	105	466275	20.179	20.18			0.3	5
124) tert-Butylbenzene	(4)	12.872(0.000)	134	99609M	20.535	20.53			0.3	5
125) Pentachloroethane	(4)	12.903(0.000)	167	77662	17.559	17.56			0.2	5
126) 1,2,4-Trimethylbenzene	(4)	12.909(0.000)	105	481406	19.954	19.95			1	5
127) sec-Butylbenzene	(4)	13.030(0.000)	105	611559	20.718	20.72			0.2	5
129) 1,3-Dichlorobenzene	(4)	13.134(-0.000)	146	281282	20.214	20.21			0.2	5
130) p-Isopropyltoluene	(4)	13.140(-0.000)	119	522714	20.130	20.13			0.2	5
133) 1,4-Dichlorobenzene	(4)	13.207(0.000)	146	294113	20.631	20.63			0.2	5
134) 1,2,3-Trimethylbenzene	(4)	13.219(0.000)	105	491785	18.984	18.98			0.3	5
135) Benzyl Chloride	(4)	13.286(0.000)	91	327442	16.887	16.89			0.3	5
136) 1,3-Diethylbenzene	(4)	13.341(0.000)	119	312893	19.278	19.28			0.2	5
137) 1,4-Diethylbenzene	(4)	13.414(0.000)	119	335249	19.394	19.39			0.2	5
138) 1,2-Dichlorobenzene	(4)	13.468(0.000)	146	274325	20.232	20.23			0.2	5
139) n-Butylbenzene	(4)	13.432(0.000)	92	269844M	20.286	20.29			0.2	5
140) 1,2-Diethylbenzene	(4)	13.487(0.000)	119	266234	19.457	19.46			0.2	5
141) Diethylbenzene (total)	(4)		100	914376	58.128	58.13			0.2	5
142) 1,2-Dibromo-3-chloropropane	(4)	14.010(0.000)	75	44491	17.250	17.25			0.3	5
144) 1,3,5-Trichlorobenzene	(4)	14.138(0.000)	180	213350	20.870	20.87			0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.563(0.000)	180	207333	21.406	21.41			0.3	5
147) Hexachlorobutadiene	(4)	14.642(0.000)	225	100373	22.424	22.42			0.7	5
148) Naphthalene	(4)	14.746(0.000)	128	701542	20.905	20.91			1	5
149) 1,2,3-Trichlorobenzene	(4)	14.892(0.000)	180	206052	22.144	22.14			0.4	5
150) 2-Methylnaphthalene	(4)	15.537(0.000)	142	449794	21.431	21.43			0.7	5

M = Compound was manually integrated.

Total number of targets = 108

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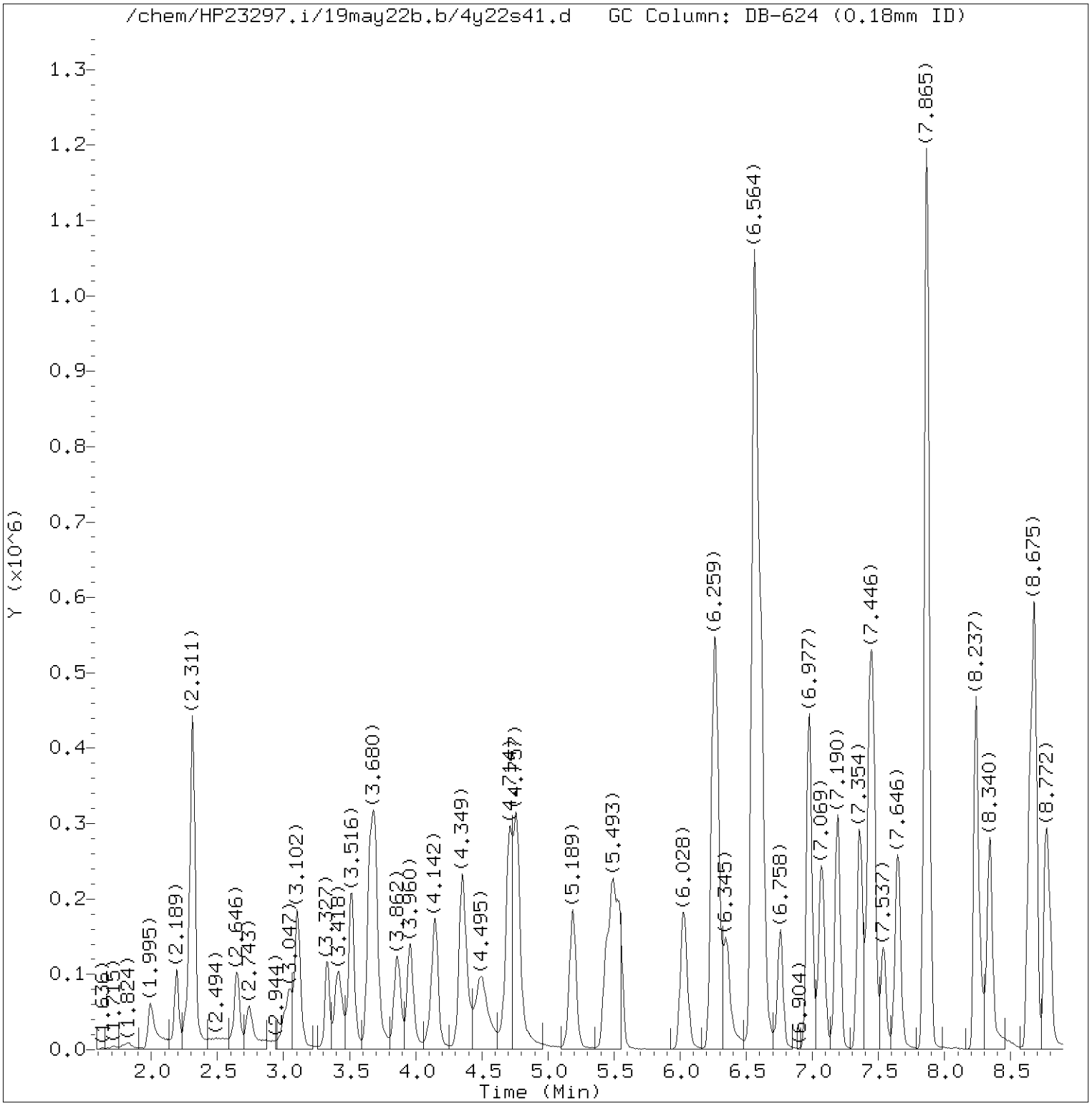
Secondary review performed and digitally signed by Kari Becker on 05/23/2019 at 15:42. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may22b.b/4y22s41.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 21:01 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 4191422
Calibration date and time: 23-MAY-2019 00:21
Date, time and analyst ID of latest file update: 23-May-2019 00:22 pth10165

Sample Name: LCS426 Lab Sample ID: LCS426

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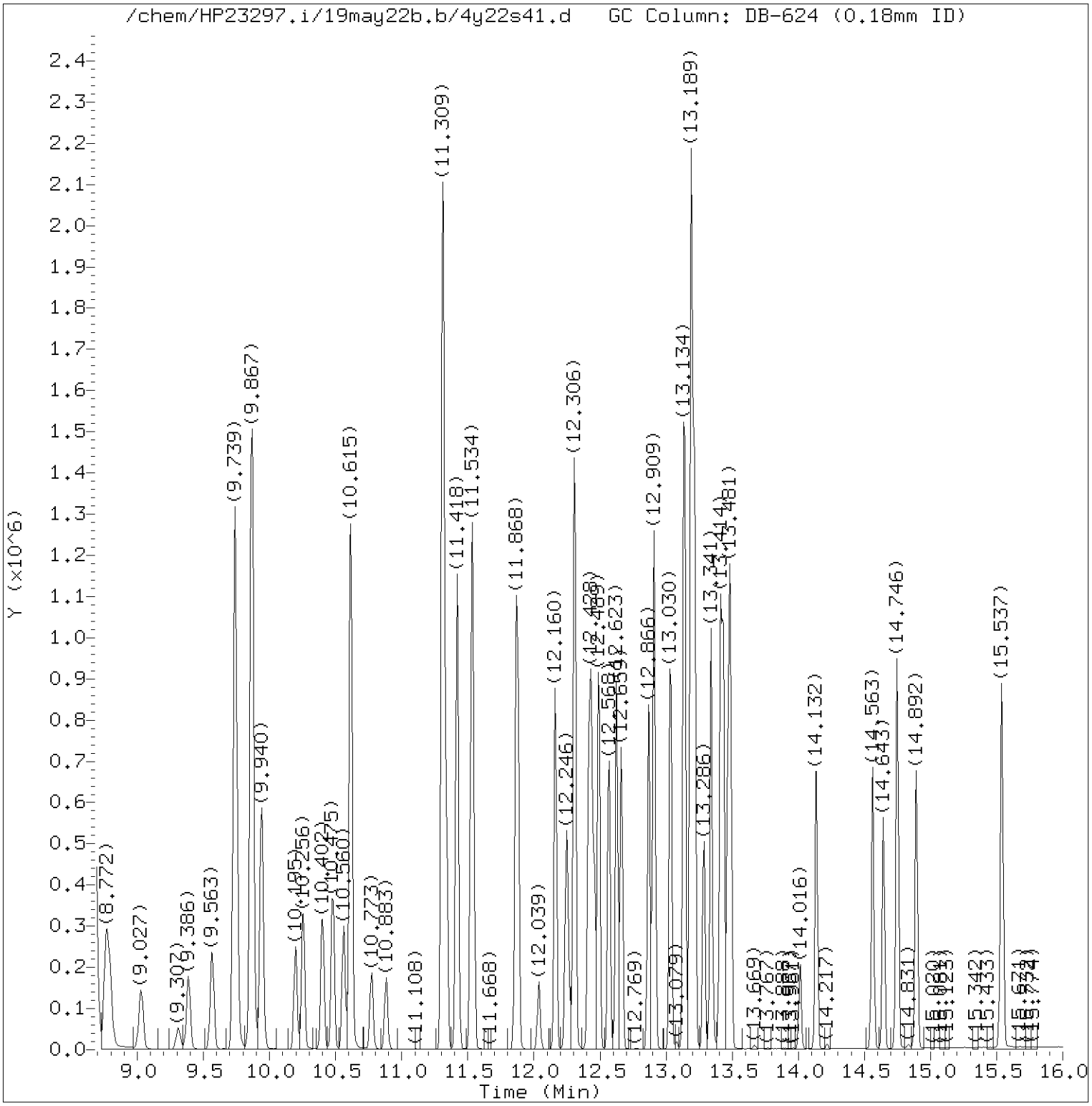
on 05/23/2019 at 00:32.
Target 3.5 esignature user ID: pth10165



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may22b.b/4y22s41.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 21:01 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 4191422
Calibration date and time: 23-MAY-2019 00:21
Date, time and analyst ID of latest file update: 23-May-2019 00:22 pth10165

Sample Name: LCS426 Lab Sample ID: LCS426

Digitally signed by Patrick T. Herres
on 05/23/2019 at 00:32.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may22b.b/4y22s41.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 21:01 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 4191422
Calibration date and time: 23-MAY-2019 00:21
Date, time and analyst ID of latest file update: 23-May-2019 00:22 pth10165

Sample Name: LCS426 Lab Sample ID: LCS426

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.995	85	122218	12.899
4) Chloromethane	(2)	2.189	50	136643	14.890
5) 1,3-Butadiene	(2)	2.311	39	273978	55.055
6) Vinyl Chloride	(2)	2.311	62	136382	15.200
8) Bromomethane	(2)	2.646	94	98870	13.429
9) Chloroethane	(2)	2.743	64	70214	14.171
12) Trichlorofluoromethane	(2)	3.047	101	148618	13.660
11) n-Pentane	(2)	3.102	43	189042	21.505
15) Freon 123a	(2)	3.406	67	124667	19.916
16) Acrolein	(1)	3.516	56	317457	136.537
17) 1,1-Dichloroethene	(2)	3.656	96	97859	22.581
19) Freon 113	(2)	3.668	101	102967	21.592
18) Acetone	(1)	3.686	58	157299	137.770
22) Methyl Iodide	(2)	3.856	142	180613	20.915
21) 2-Propanol	(1)	3.875	45	123149	134.231
23) Carbon Disulfide	(2)	3.960	76	320209	20.720
27) Methyl Acetate	(2)	4.124	43	155215	17.196
25) Allyl Chloride	(2)	4.148	41	155447	16.176
28) Methylene Chloride	(2)	4.349	84	115096	20.967
29)*t-Butyl alcohol-d10	(1)	4.367	65	410070	250.000
30) t-Butyl alcohol	(1)	4.495	59	284525	176.320
31) Acrylonitrile	(2)	4.708	53	412162	87.159
33) Methyl Tertiary Butyl Ether	(2)	4.751	73	286991	18.539
32) trans-1,2-Dichloroethene	(2)	4.763	96	110070	21.257
34) n-Hexane	(2)	5.189	57	177812	20.791
36) 1,1-Dichloroethane	(2)	5.438	63	190962	19.843
38) di-Isopropyl ether	(2)	5.493	45	363562	19.062
39) 2-Chloro-1,3-butadiene	(2)	5.542	53	155371	17.833
40) Ethyl t-butyl ether	(2)	6.028	59	293773	17.931
43) 1,2-Dichloroethene (Total)	(2)		96	240229	43.056
44) 2-Butanone	(2)	6.253	43	884369	120.502
42) cis-1,2-Dichloroethene	(2)	6.272	96	130159	21.799
45) 2,2-Dichloropropane	(2)	6.290	77	130156	17.250
47) Propionitrile	(1)	6.351	54	281675	164.334
48) Methacrylonitrile	(2)	6.564	67	637687	142.962
49) Bromochloromethane	(2)	6.606	128	60929	18.480
50) Tetrahydrofuran	(1)	6.612	71	167156	98.794
51) Chloroform	(2)	6.758	83	177195	18.695

* = Compound is an internal standard.

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on 05/23/2019 at 00:32.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may22b.b/4y22s41.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 21:01 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 4191422
Calibration date and time: 23-MAY-2019 00:21
Date, time and analyst ID of latest file update: 23-May-2019 00:22 pth10165

Sample Name: LCS426 Lab Sample ID: LCS426

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
52)$Dibromofluoromethane	(2)	6.977	113	289112	47.202
53) 1,1,1-Trichloroethane	(2)	6.983	97	142228	17.926
54) Cyclohexane	(2)	7.069	56	202848	19.658
56) Carbon Tetrachloride	(2)	7.190	117	119901	17.393
55) 1,1-Dichloropropene	(2)	7.190	75	148555	19.817
58) Isobutyl Alcohol	(1)	7.354	41	283158	498.347
57)$1,2-Dichloroethane-d4	(2)	7.434	102	75471	50.428
60) Benzene	(2)	7.464	78	460900	20.218
61) 1,2-Dichloroethane	(2)	7.537	62	136319	17.643
65) t-Amyl methyl ether	(2)	7.646	73	304018	18.353
66)*Fluorobenzene	(2)	7.865	96	1242595	50.000
67) n-Heptane	(2)	7.865	43	182622	18.138
69) n-Butanol	(1)	8.237	56	492226	1054.928
71) Trichloroethene	(2)	8.340	95	114071	19.726
72) Methylcyclohexane	(2)	8.644	83	205769	18.895
73) 1,2-Dichloropropane	(2)	8.687	63	121773	20.333
76) Methyl Methacrylate	(2)	8.766	69	122064	17.998
75) 1,4-Dioxane	(1)	8.766	88	75105M	624.958
74) Dibromomethane	(2)	8.790	93	74980	19.289
78) Bromodichloromethane	(2)	9.027	83	125105	17.722
79) 2-Nitropropane	(2)	9.307	41	41595	12.107
80) 2-Chloroethyl Vinyl Ether	(2)	9.386	63	97775M	17.843
81) cis-1,3-Dichloropropene	(2)	9.563	75	169537	18.166
82) 4-Methyl-2-pentanone	(2)	9.739	43	1078153	81.868
83)$Toluene-d8	(3)	9.867	98	1259278	50.227
88) Toluene	(3)	9.940	92	295124	20.350
90) 1,3-Dichloropropene (total)	(3)		100	317209	35.472
89) trans-1,3-Dichloropropene	(3)	10.195	75	147672	17.306
91) Ethyl Methacrylate	(3)	10.256	69	189763	17.695
92) 1,1,2-Trichloroethane	(3)	10.402	97	119479	21.079
93) Tetrachloroethene	(3)	10.475	166	129505	20.471
94) 1,3-Dichloropropane	(3)	10.560	76	186008	19.769
96) 2-Hexanone	(3)	10.615	43	869045	84.203
97) Dibromochloromethane	(3)	10.773	129	107286	17.888
99) 1,2-Dibromoethane	(3)	10.883	107	126640	20.238
100)*Chlorobenzene-d5	(3)	11.309	117	976873	50.000
102) Chlorobenzene	(3)	11.339	112	333479	20.346
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	103864	18.771

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Patrick T. Herres
on 05/23/2019 at 00:32.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may22b.b/4y22s41.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 21:01 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 4191422
Calibration date and time: 23-MAY-2019 00:21
Date, time and analyst ID of latest file update: 23-May-2019 00:22 pth10165

Sample Name: LCS426 Lab Sample ID: LCS426

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
104) Ethylbenzene	(3)	11.418	91	550046	19.747
106) m+p-Xylene	(3)	11.534	106	445499	40.111
108) Xylene (Total)	(3)		106	661073	59.638
107) o-Xylene	(3)	11.862	106	215574	19.527
109) Styrene	(3)	11.881	104	363237	19.774
110) Bromoform	(3)	12.039	173	75119	15.895
111) Isopropylbenzene	(3)	12.160	105	554723	20.085
112) Cyclohexanone	(1)	12.246	55	261104M	543.840
114)$4-Bromofluorobenzene	(3)	12.306	95	455884	47.705
116) 1,1,2,2-Tetrachloroethane	(4)	12.410	83	200719	20.530
115) Bromobenzene	(4)	12.428	156	149046	20.076
118) trans-1,4-Dichloro-2-butene	(4)	12.434	53	93844	29.199
117) 1,2,3-Trichloropropane	(4)	12.459	110	58678	19.848
119) n-Propylbenzene	(4)	12.489	91	666814	20.885
120) 2-Chlorotoluene	(4)	12.568	126	137998	20.695
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	466275	20.179
121) 4-Chlorotoluene	(4)	12.659	126	142514	20.505
124) tert-Butylbenzene	(4)	12.872	134	99609M	20.535
125) Pentachloroethane	(4)	12.903	167	77662	17.559
126) 1,2,4-Trimethylbenzene	(4)	12.909	105	481406	19.954
127) sec-Butylbenzene	(4)	13.030	105	611559	20.718
129) 1,3-Dichlorobenzene	(4)	13.134	146	281282	20.214
130) p-Isopropyltoluene	(4)	13.140	119	522714	20.130
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	530533	50.000
133) 1,4-Dichlorobenzene	(4)	13.207	146	294113	20.631
134) 1,2,3-Trimethylbenzene	(4)	13.219	105	491785	18.984
135) Benzyl Chloride	(4)	13.286	91	327442	16.887
136) 1,3-Diethylbenzene	(4)	13.341	119	312893	19.278
141) Diethylbenzene (total)	(4)		100	914376	58.128
137) 1,4-Diethylbenzene	(4)	13.414	119	335249	19.394
139) n-Butylbenzene	(4)	13.432	92	269844M	20.286
138) 1,2-Dichlorobenzene	(4)	13.468	146	274325	20.232
140) 1,2-Diethylbenzene	(4)	13.487	119	266234	19.457
142) 1,2-Dibromo-3-chloropropane	(4)	14.010	75	44491	17.250
144) 1,3,5-Trichlorobenzene	(4)	14.138	180	213350	20.870
146) 1,2,4-Trichlorobenzene	(4)	14.563	180	207333	21.406
147) Hexachlorobutadiene	(4)	14.643	225	100373	22.424
148) Naphthalene	(4)	14.746	128	701542	20.905

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Patrick T. Herres
on 05/23/2019 at 00:32.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may22b.b/4y22s41.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 21:01 Analyst ID: PTH10165

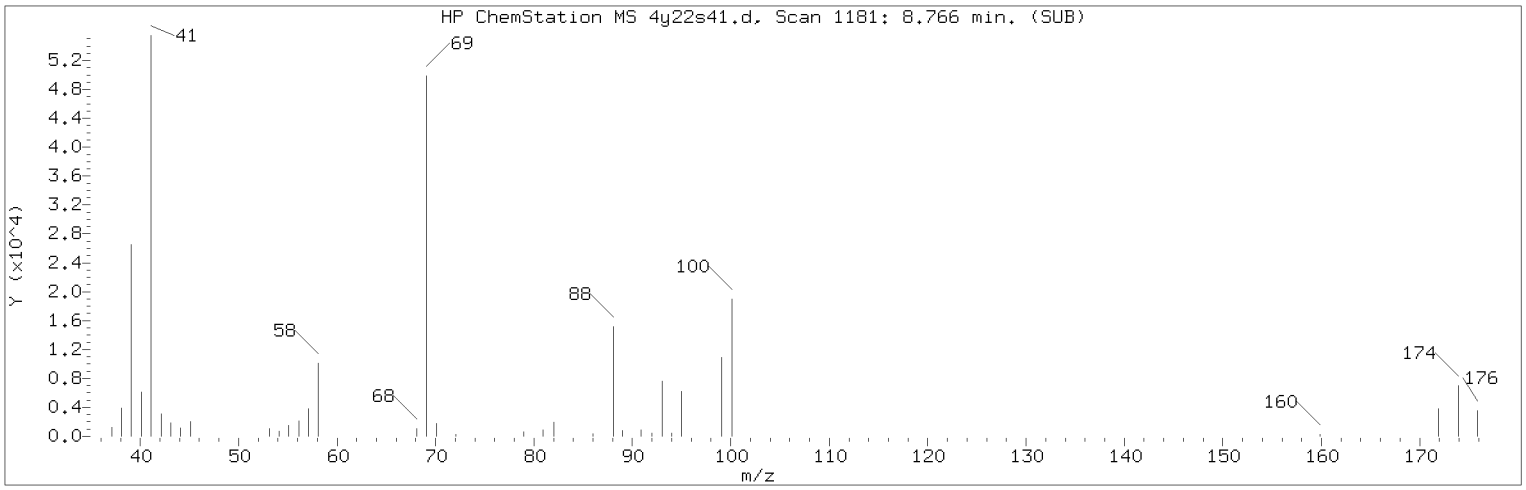
Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 4191422
Calibration date and time: 23-MAY-2019 00:21
Date, time and analyst ID of latest file update: 23-May-2019 00:22 pth10165

Sample Name: LCS426 Lab Sample ID: LCS426

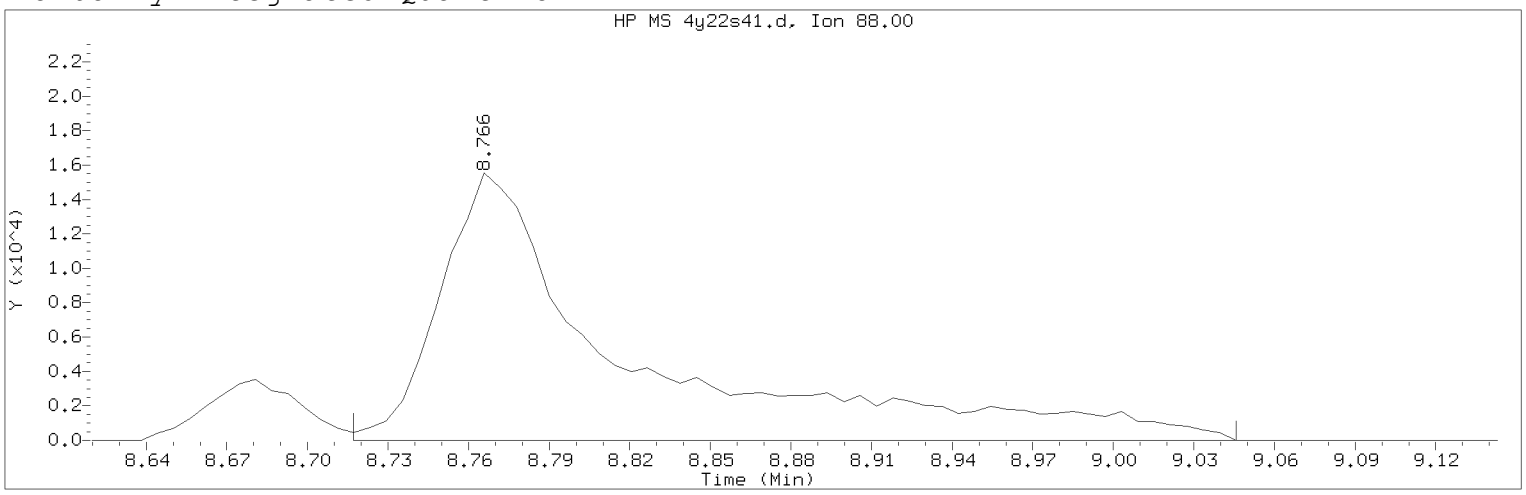
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
149) 1,2,3-Trichlorobenzene	(4)	14.892	180	206052	22.144
150) 2-Methylnaphthalene	(4)	15.537	142	449794	21.431

Digitally signed by Patrick T. Herres
on 05/23/2019 at 00:32.
Target 3.5 esignature user ID: pth10165

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may22b.b/4y22s41.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 21:01 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 4191422
Calibration date and time: 23-MAY-2019 00:21
Date, time and analyst ID of latest file update: 23-May-2019 00:22 pth10165

Sample Name: LCS426 Lab Sample ID: LCS426

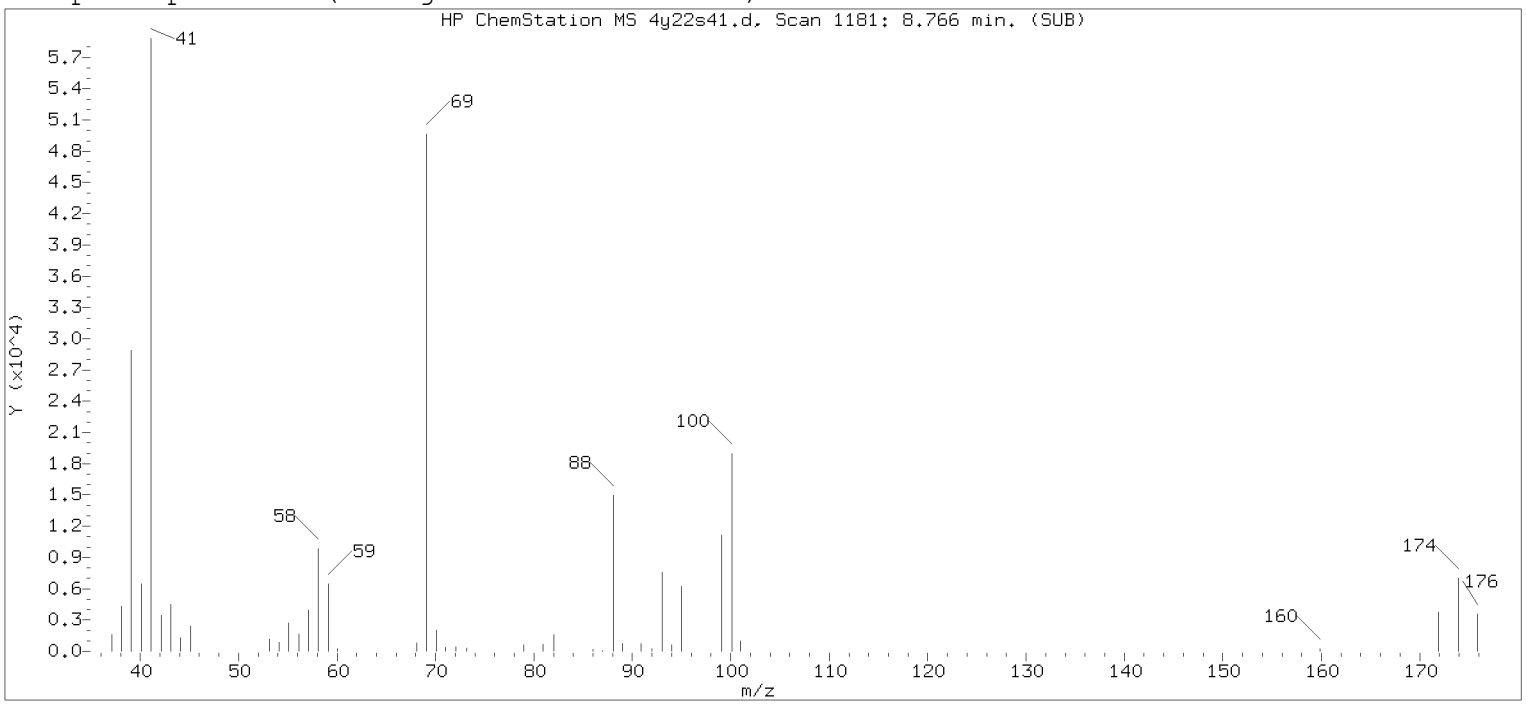
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1181
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area (flag) : 75105M
On-Column Amount (ng) : 624.9578
Integration start scan : 1172 Integration stop scan: 1226
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

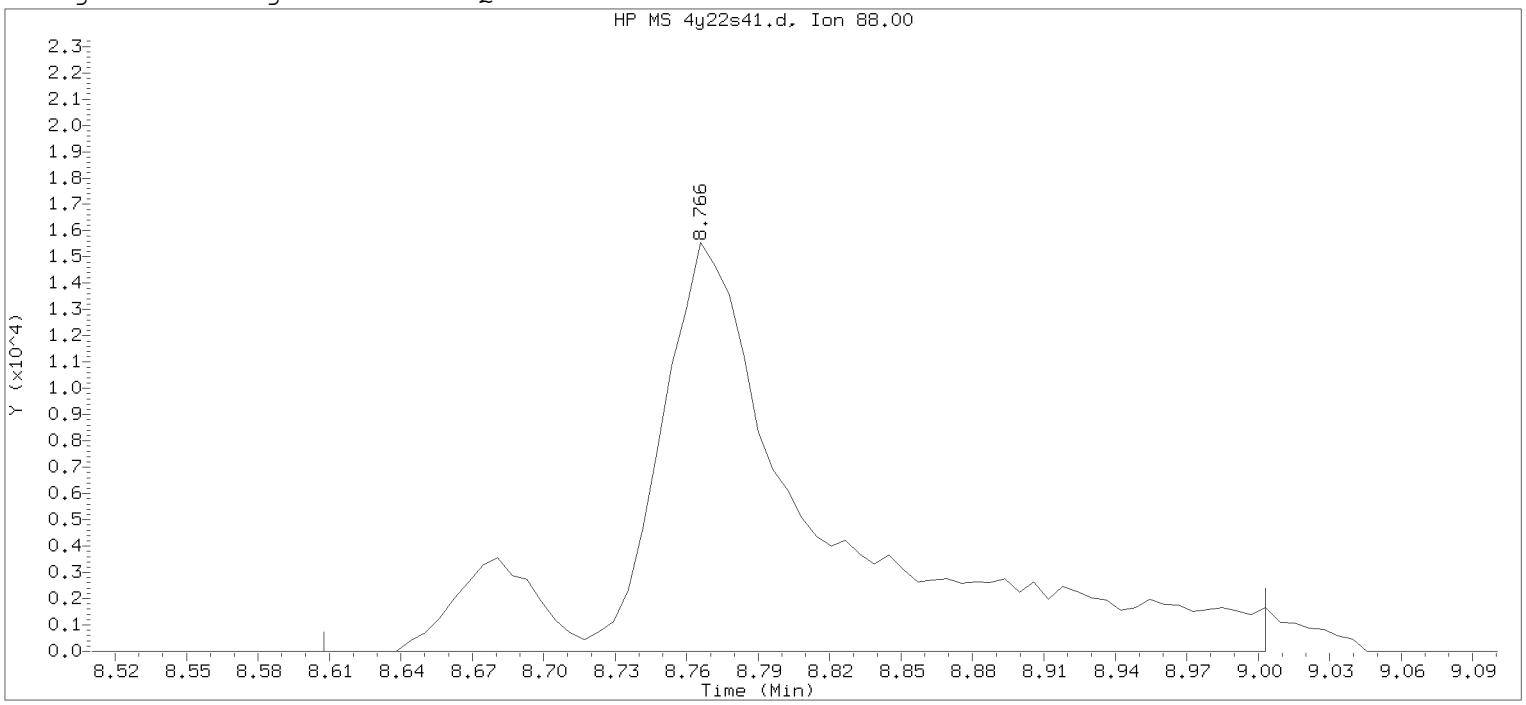
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 05/23/2019 at 00:32.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Kari Becker on 05/23/2019 at 15:42.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may22b.b/4y22s41.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 21:01 Analyst ID: PTH10165

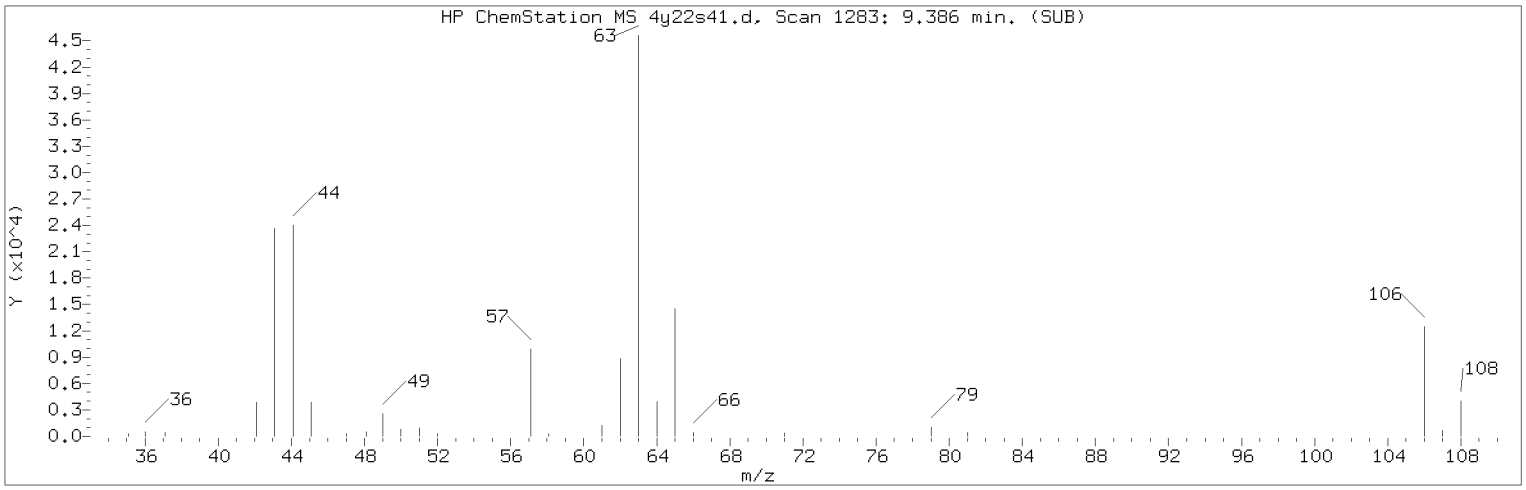
Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 4191422
Calibration date and time: 22-MAY-2019 21:49
Date, time and analyst ID of latest file update: 22-May-2019 21:49 pth10165

Sample Name: LCS426 Lab Sample ID: LCS426

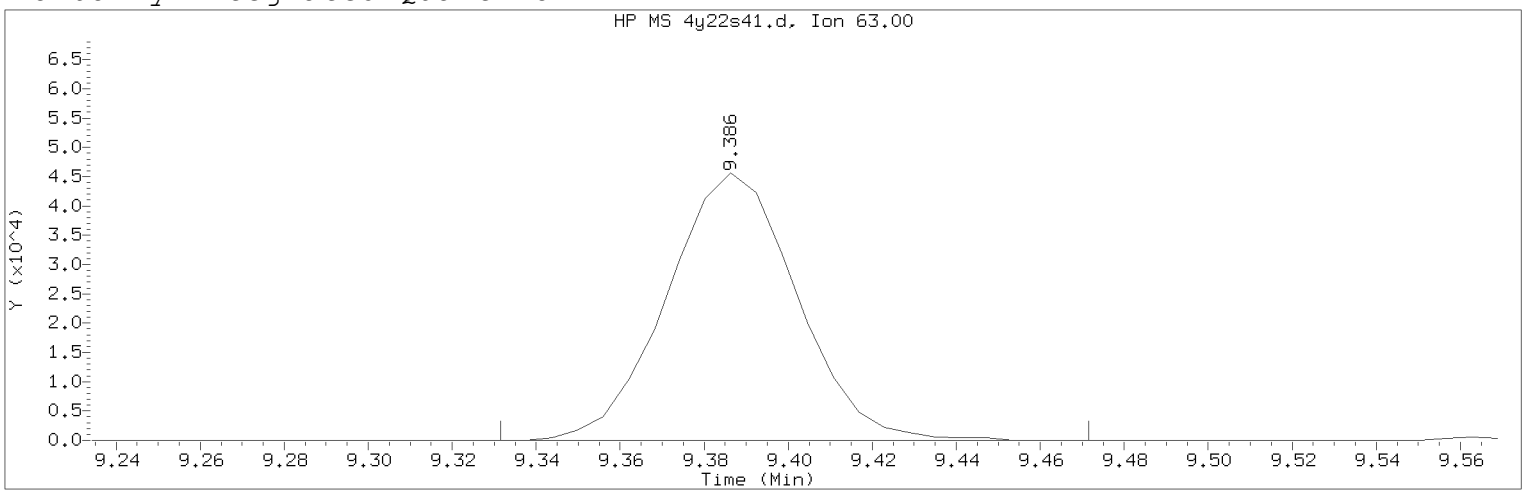
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1181
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area : 81507
On-column Amount (ng) : 678.2314
Integration start scan : 1154 Integration stop scan: 1219
Y at integration start : 0 Y at integration end: 0

Digitally signed by Patrick T. Herres on 05/23/2019 at 00:32.
Target 3.5 esignature user approved.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may22b.b/4y22s41.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 21:01 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 4191422
Calibration date and time: 23-MAY-2019 00:21
Date, time and analyst ID of latest file update: 23-May-2019 00:22 pth10165

Sample Name: LCS426 Lab Sample ID: LCS426

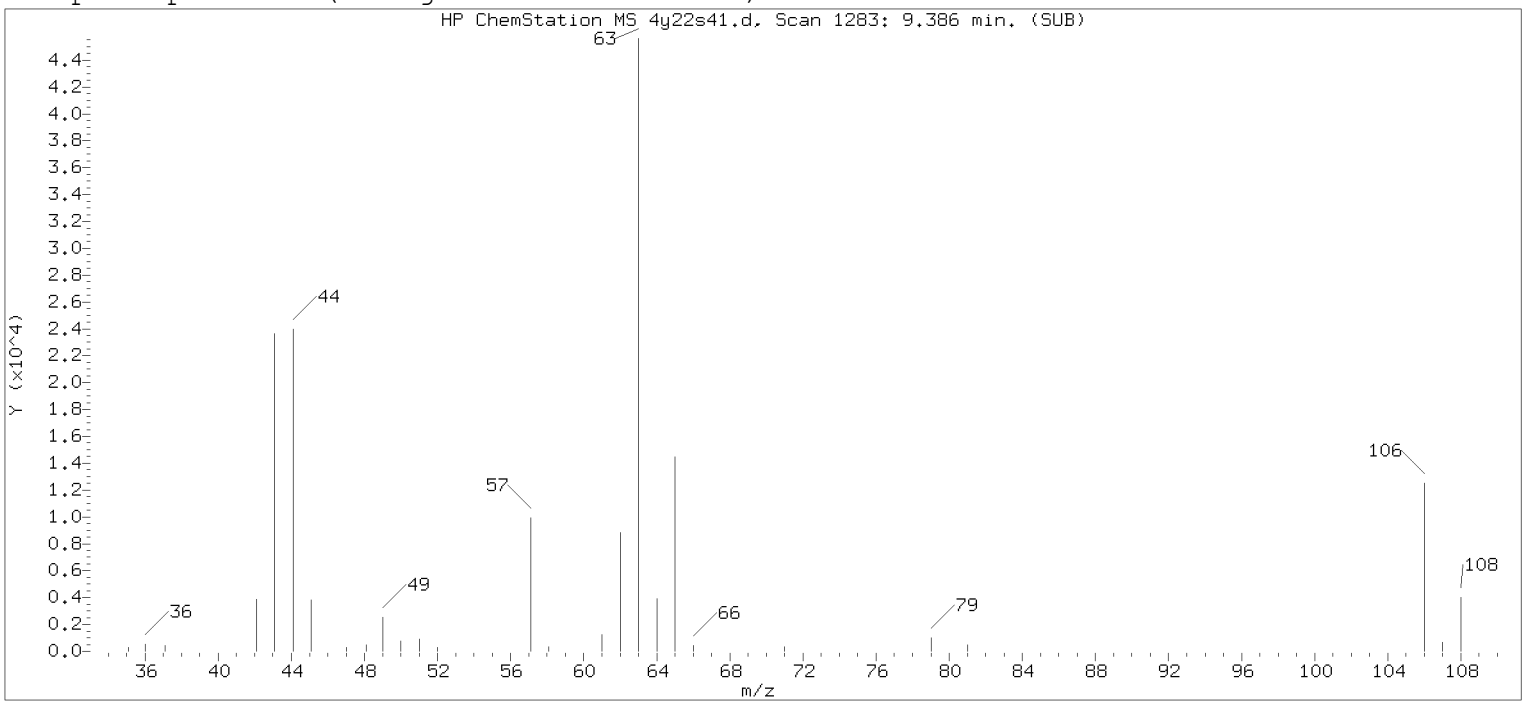
Compound Number : 80
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1283
Retention Time (minutes): 9.386
Quant Ion : 63.00
Area (flag) : 97775M
On-Column Amount (ng) : 17.8433
Integration start scan : 1273 Integration stop scan: 1296
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

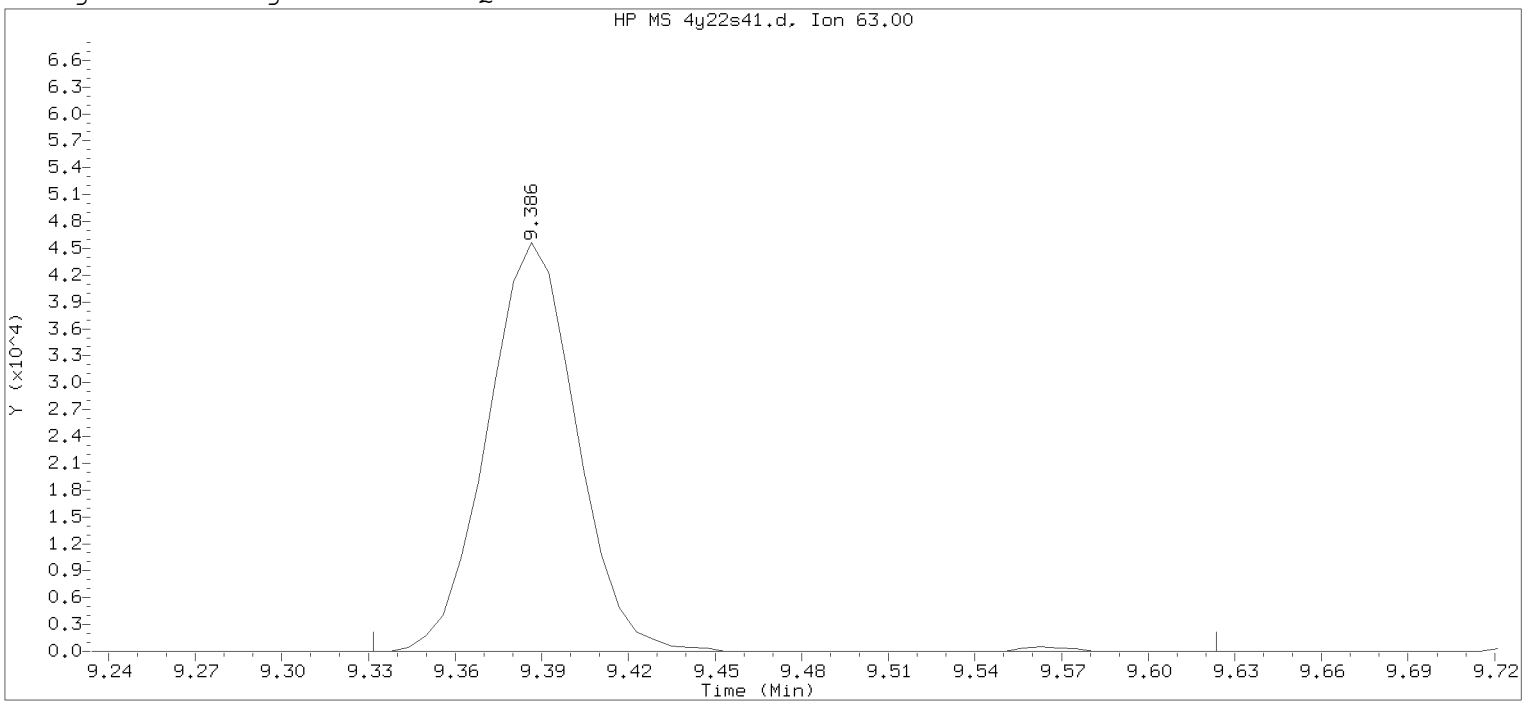
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 05/23/2019 at 00:32.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Kari Becker on 05/23/2019 at 15:42.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may22b.b/4y22s41.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 21:01 Analyst ID: PTH10165

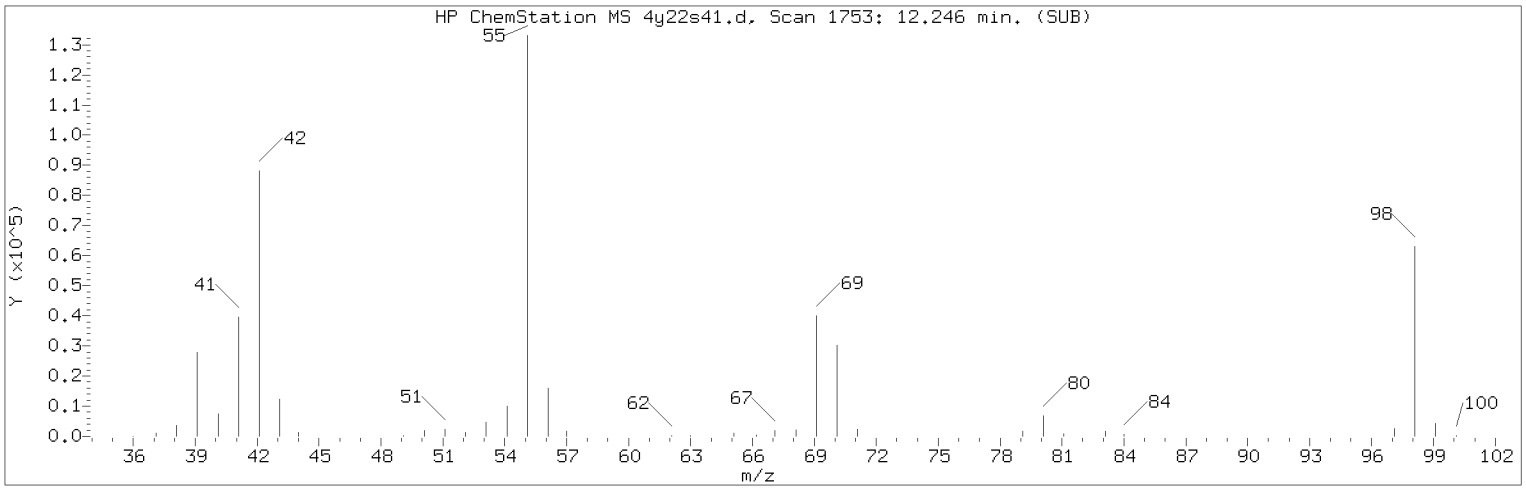
Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 4191422
Calibration date and time: 22-MAY-2019 21:49
Date, time and analyst ID of latest file update: 22-May-2019 21:49 pth10165

Sample Name: LCS426 Lab Sample ID: LCS426

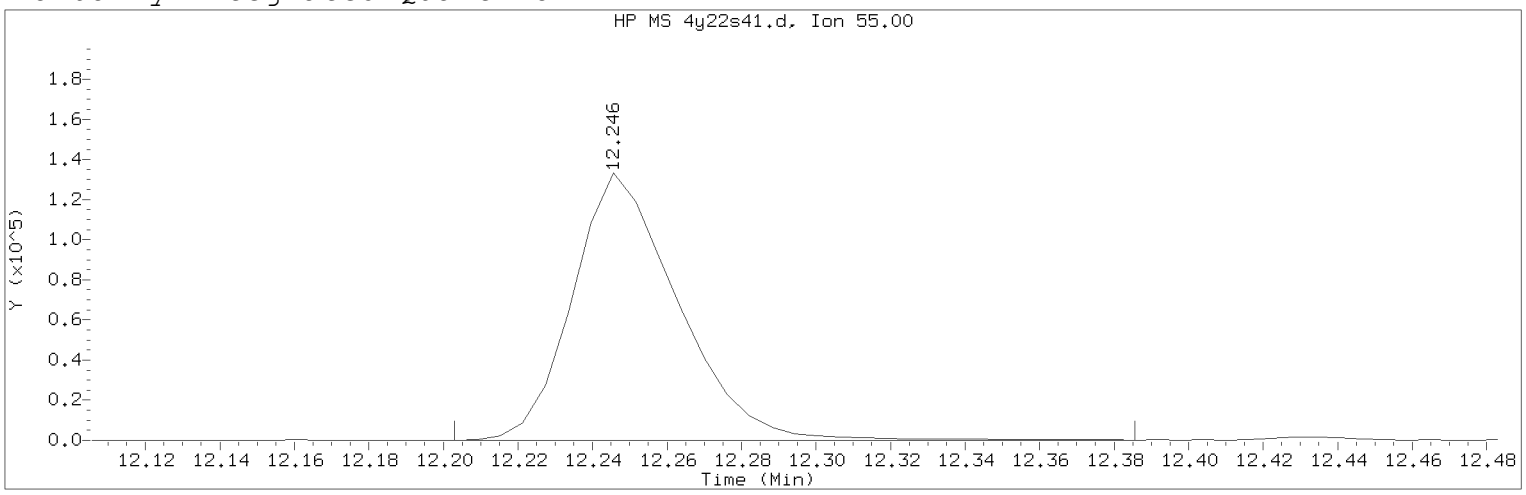
Compound Number : 80
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1283
Retention Time (minutes): 9.386
Quant Ion : 63.00
Area : 98315
On-column Amount (ng) : 17.9420
Integration start scan : 1273 Integration stop scan: 1321
Y at integration start : 0 Y at integration end: 0

Digitally signed by Patrick T. Herres on 05/23/2019 at 00:32.
Target 3.5 esignature user approved.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may22b.b/4y22s41.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 21:01 Analyst ID: PTH10165

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Calibration date and time: 23-MAY-2019 00:21
Date, time and analyst ID of latest file update: 23-May-2019 00:22 pth10165

Sample Name: LCS426 Lab Sample ID: LCS426

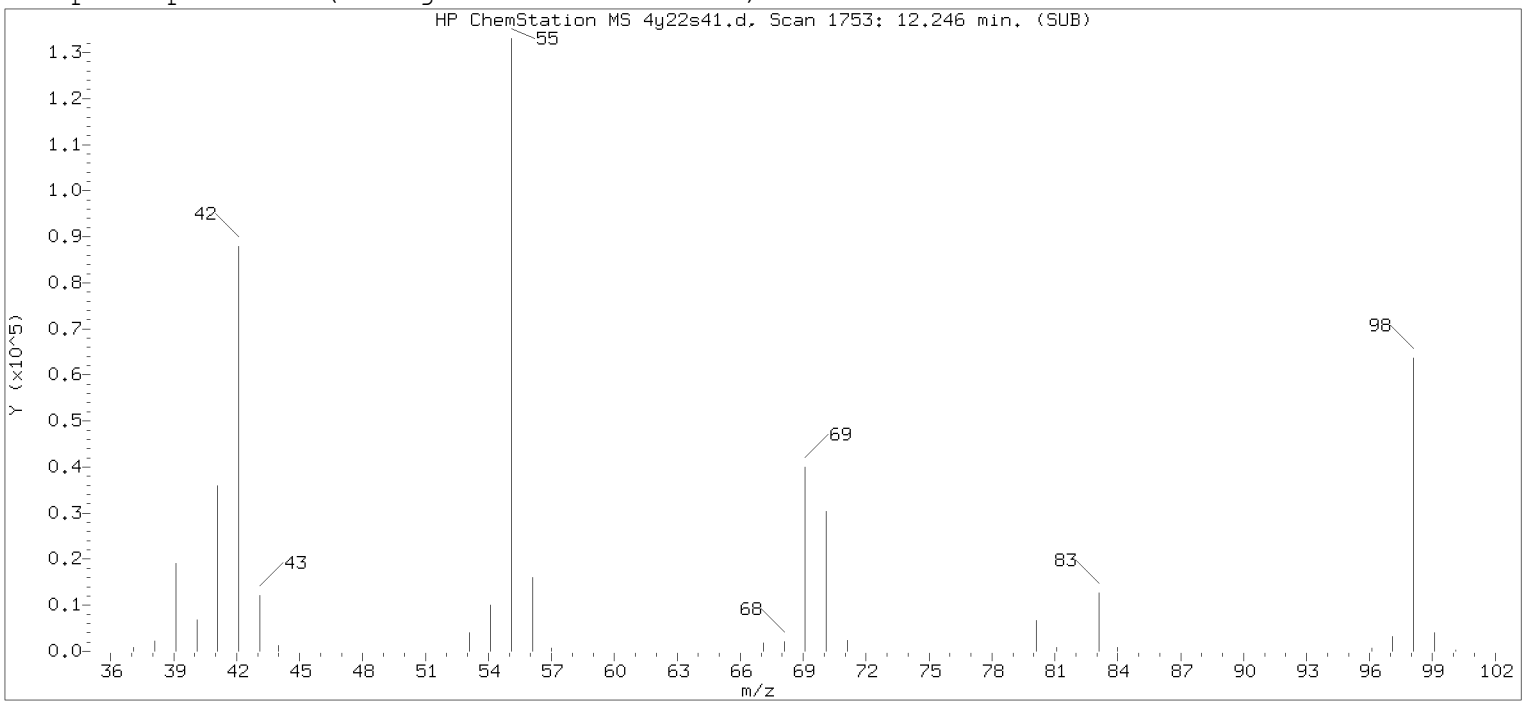
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1753
Retention Time (minutes): 12.246
Quant Ion : 55.00
Area (flag) : 261104M
On-Column Amount (ng) : 543.8396
Integration start scan : 1745 Integration stop scan: 1775
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

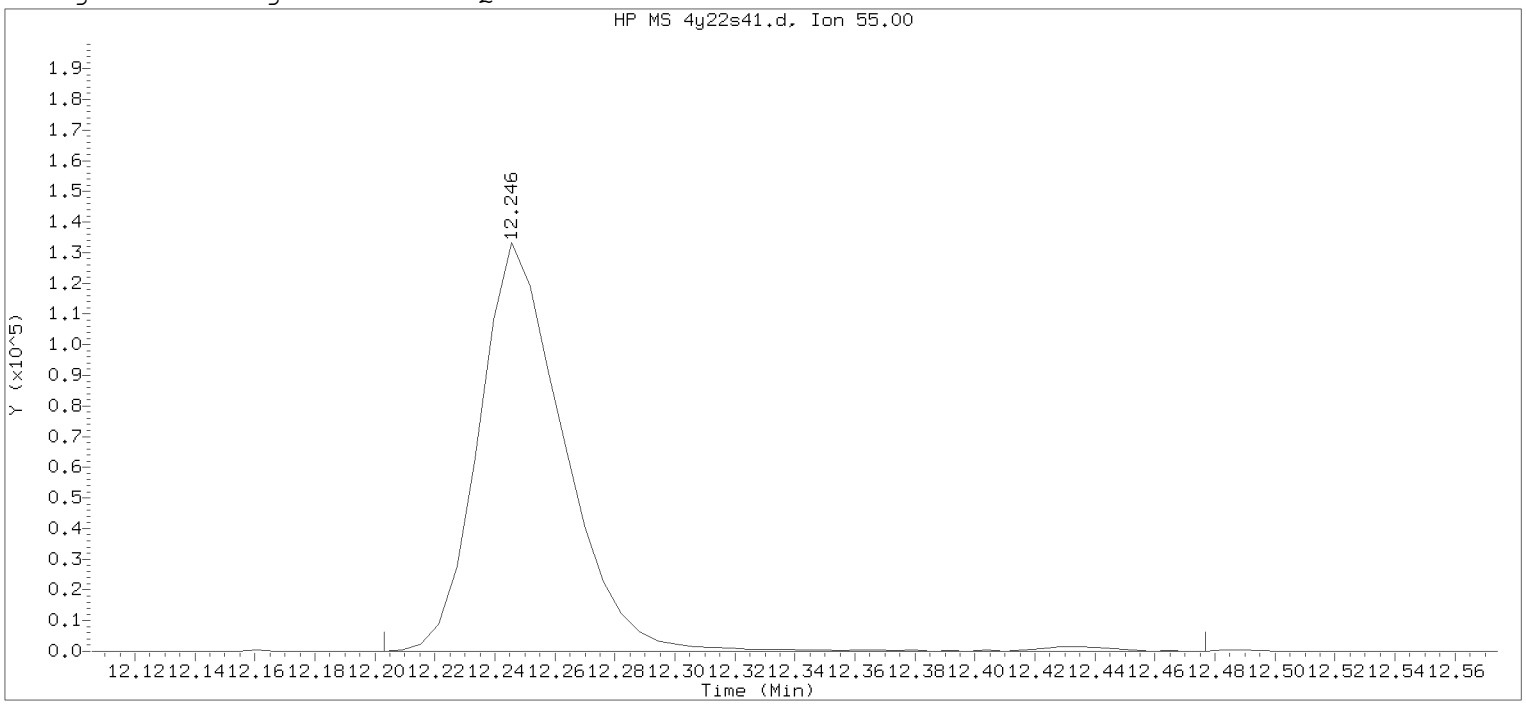
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 05/23/2019 at 00:32.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Kari Becker on 05/23/2019 at 15:42.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may22b.b/4y22s41.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 21:01 Analyst ID: PTH10165

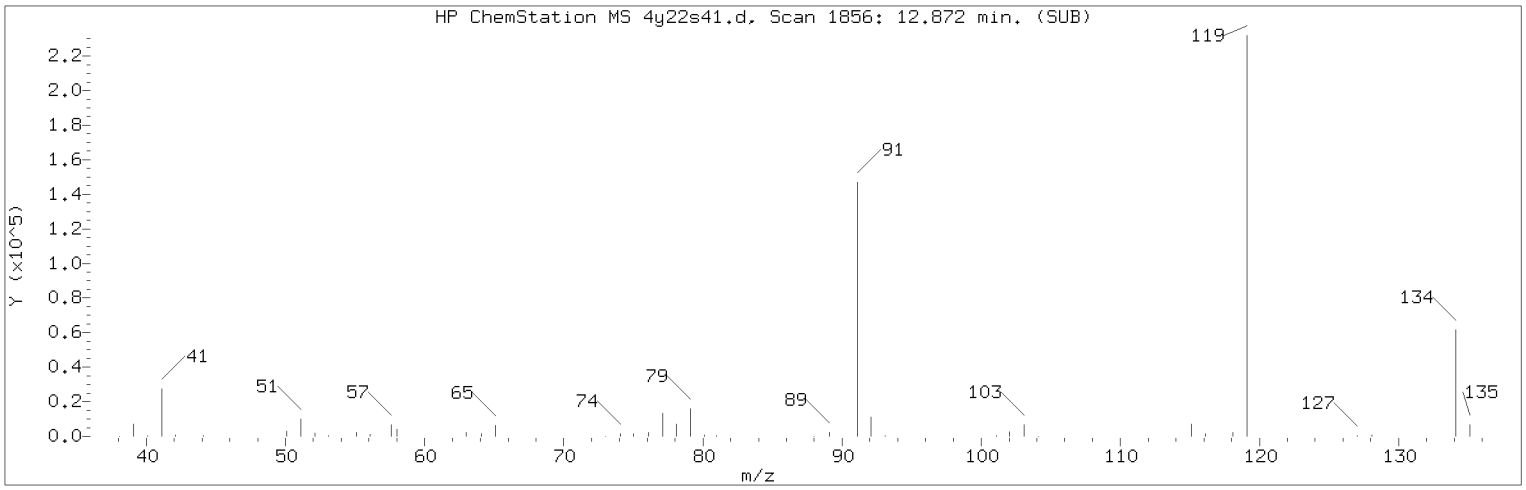
Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 4191422
Calibration date and time: 22-MAY-2019 21:49
Date, time and analyst ID of latest file update: 22-May-2019 21:49 pth10165

Sample Name: LCS426 Lab Sample ID: LCS426

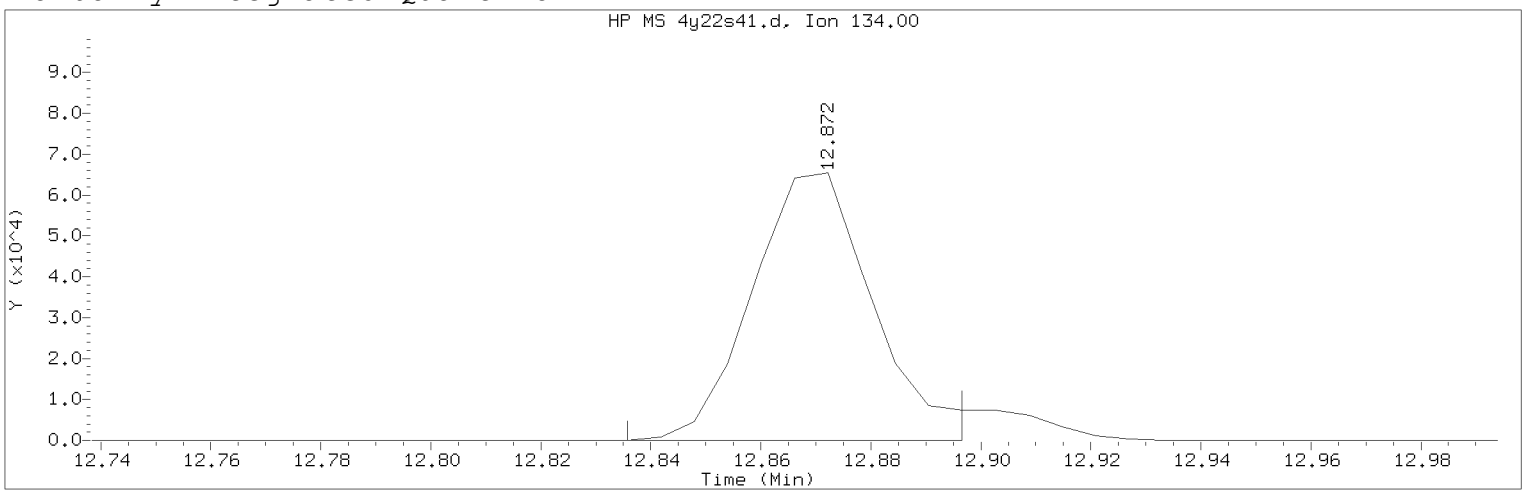
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1753
Retention Time (minutes): 12.246
Quant Ion : 55.00
Area : 263878
On-column Amount (ng) : 549.6182
Integration start scan : 1745 Integration stop scan: 1790
Y at integration start : 0 Y at integration end: 0

Digitally signed by Patrick T. Herres on 05/23/2019 at 00:32.
Target 3.5 esignature user approved.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may22b.b/4y22s41.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 21:01 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 4191422
Calibration date and time: 23-MAY-2019 00:21
Date, time and analyst ID of latest file update: 23-May-2019 00:22 pth10165

Sample Name: LCS426 Lab Sample ID: LCS426

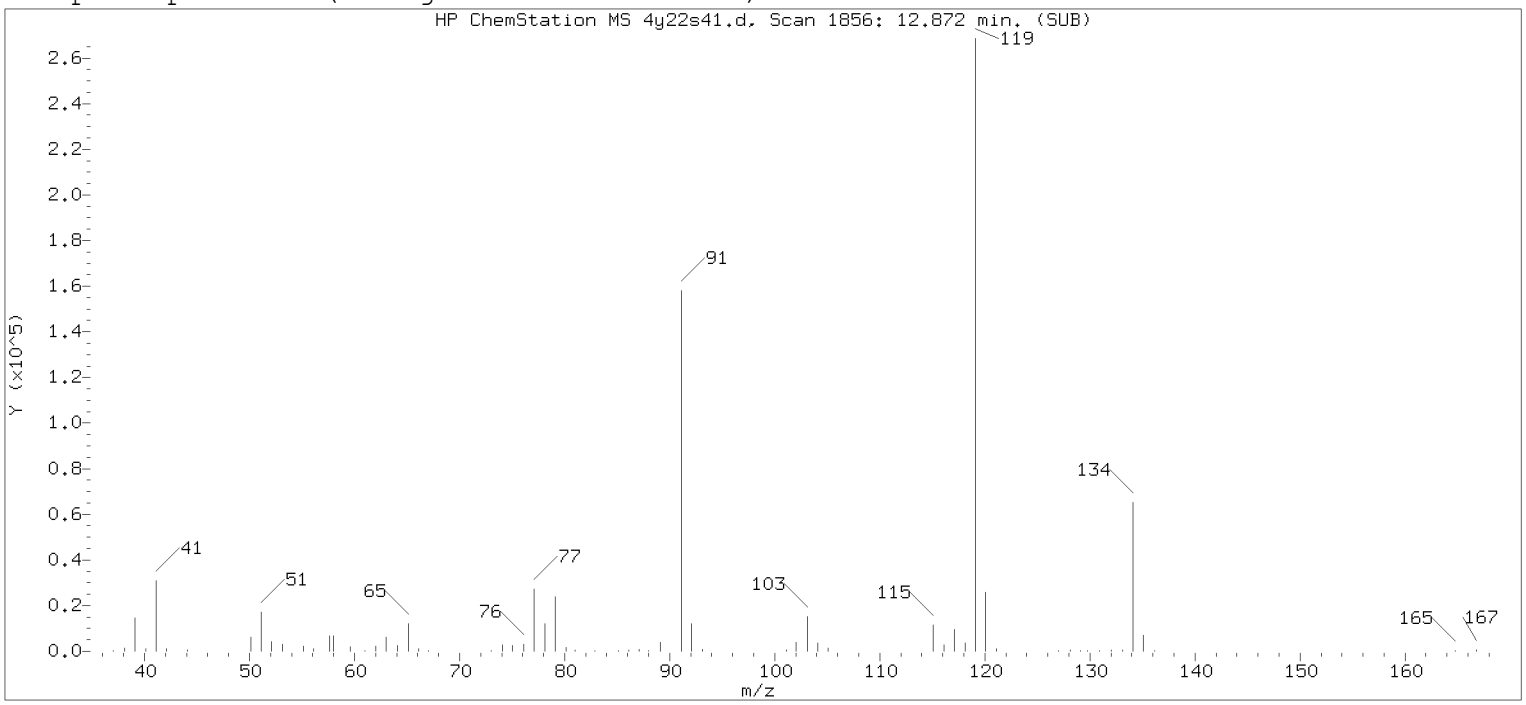
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1856
Retention Time (minutes): 12.872
Quant Ion : 134.00
Area (flag) : 99609M
On-Column Amount (ng) : 20.5346
Integration start scan : 1849 Integration stop scan: 1859
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

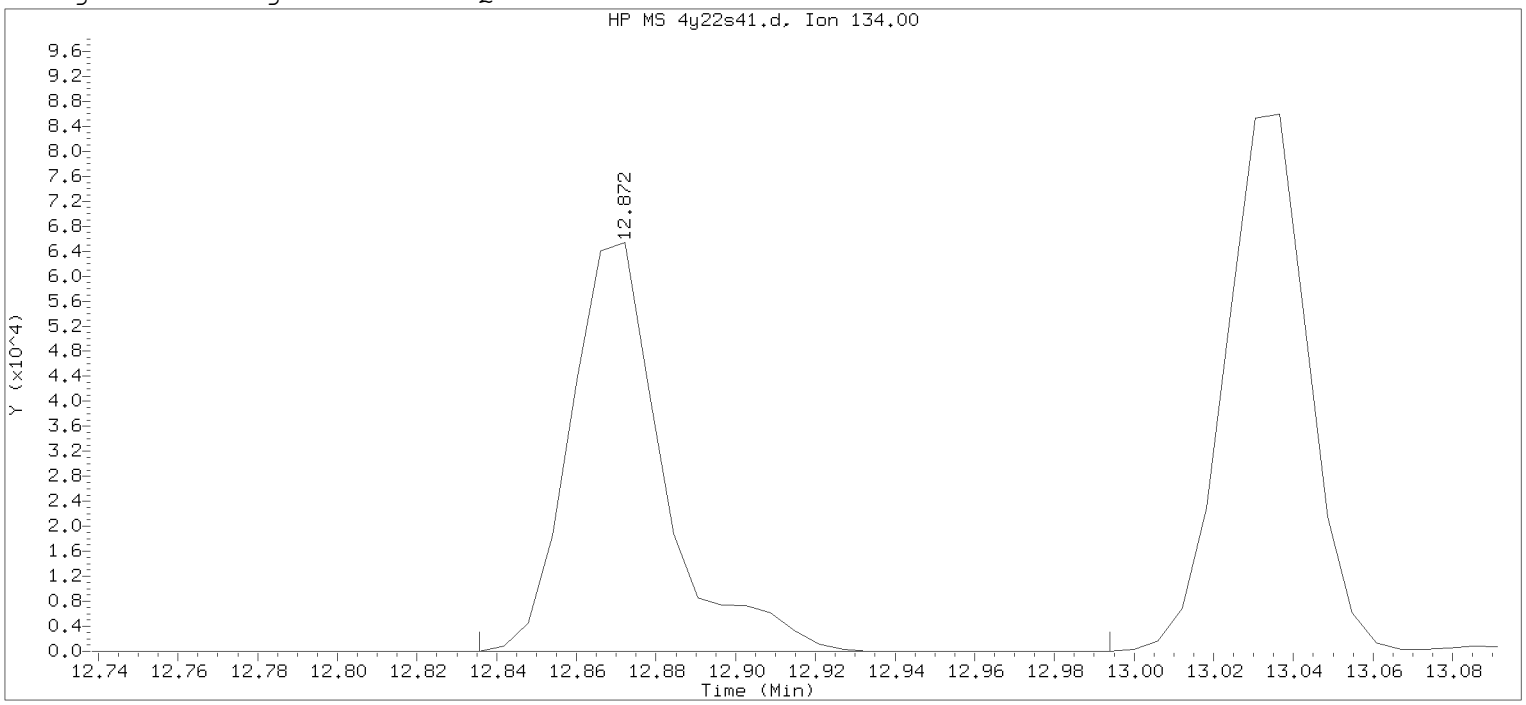
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 05/23/2019 at 00:32.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Kari Becker on 05/23/2019 at 15:42.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may22b.b/4y22s41.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 21:01 Analyst ID: PTH10165

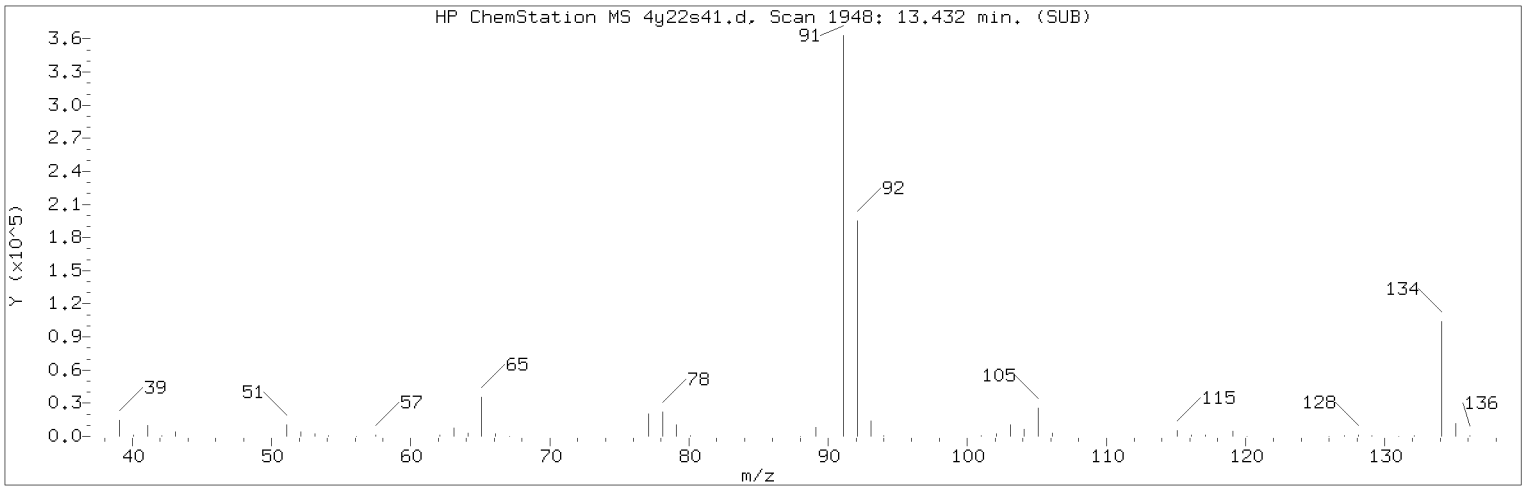
Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 4191422
Calibration date and time: 22-MAY-2019 21:49
Date, time and analyst ID of latest file update: 22-May-2019 21:49 pth10165

Sample Name: LCS426 Lab Sample ID: LCS426

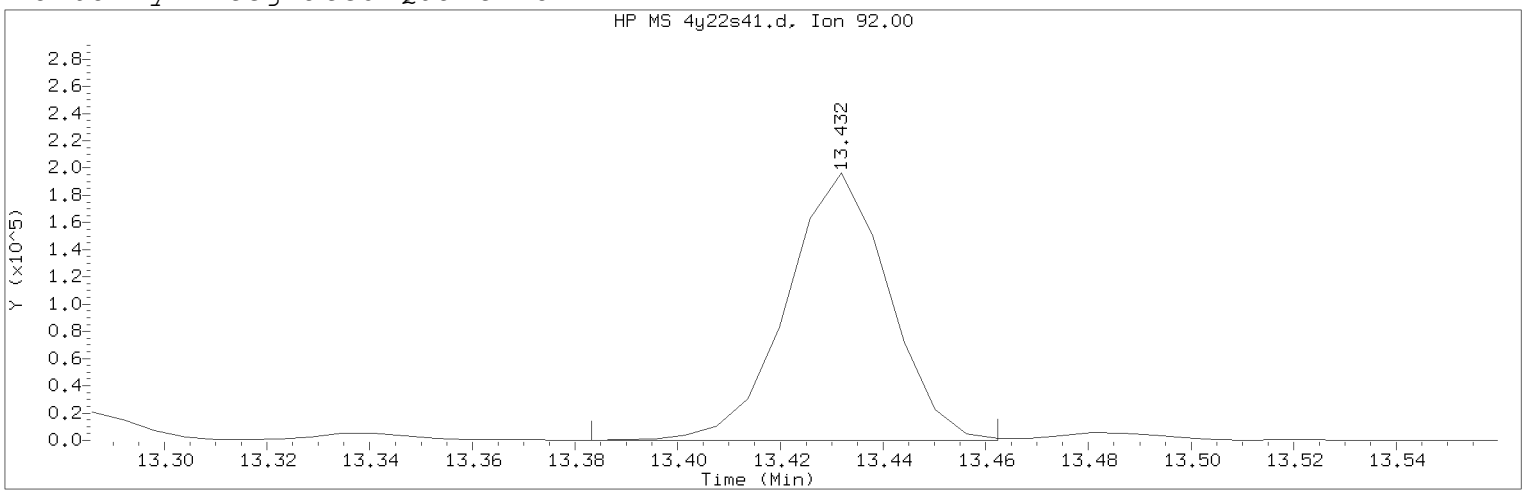
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1856
Retention Time (minutes): 12.872
Quant Ion : 134.00
Area : 106258
On-column Amount (ng) : 21.9053
Integration start scan : 1849 Integration stop scan: 1875
Y at integration start : 0 Y at integration end: 0

Digitally signed by Patrick T. Herres on 05/23/2019 at 00:32.
Target 3.5 esignature user approved.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may22b.b/4y22s41.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 21:01 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 4191422
Calibration date and time: 23-MAY-2019 00:21
Date, time and analyst ID of latest file update: 23-May-2019 00:22 pth10165

Sample Name: LCS426 Lab Sample ID: LCS426

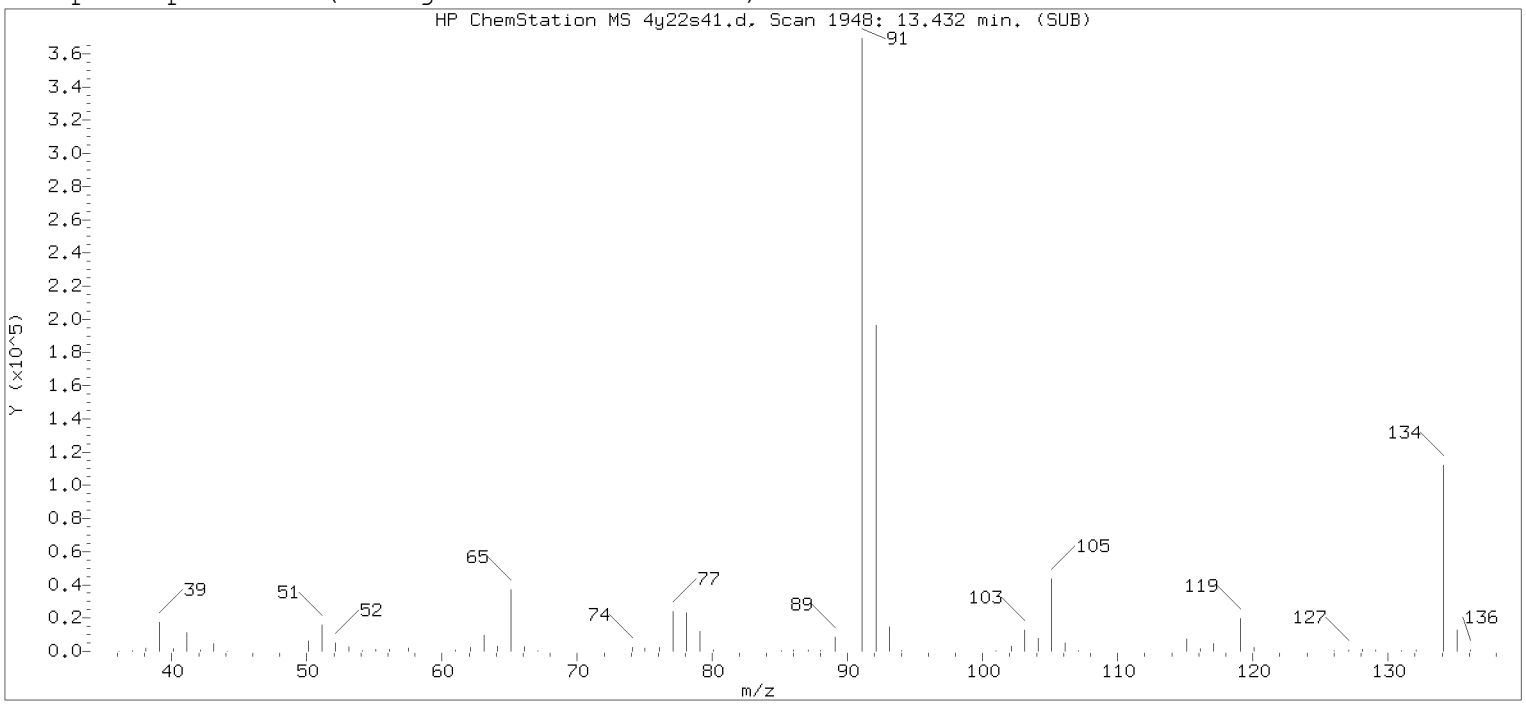
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1948
Retention Time (minutes): 13.432
Quant Ion : 92.00
Area (flag) : 269844M
On-Column Amount (ng) : 20.2857
Integration start scan : 1939 Integration stop scan: 1952
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

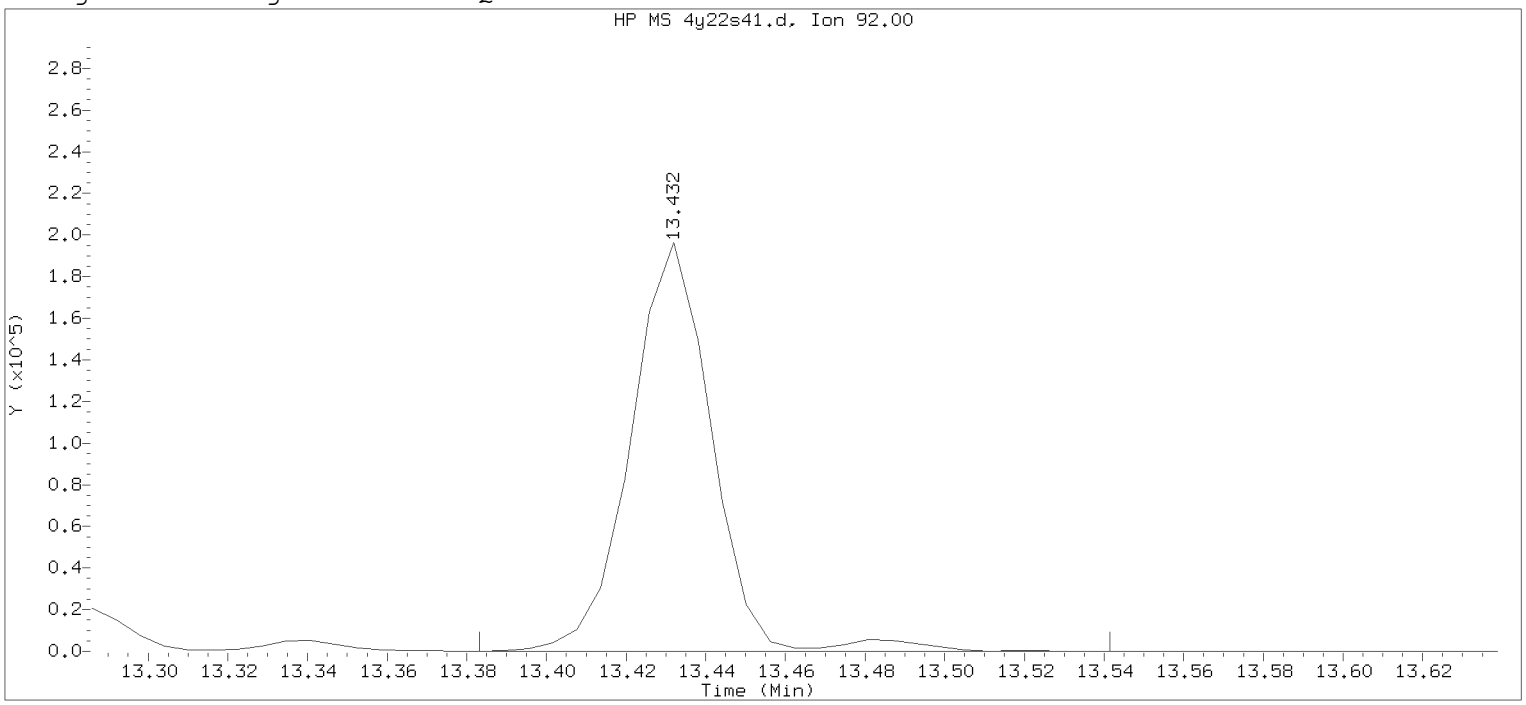
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 05/23/2019 at 00:32.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Kari Becker on 05/23/2019 at 15:42.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may22b.b/4y22s41.d Instrument ID: HP23297.i
Injection date and time: 22-MAY-2019 21:01 Analyst ID: PTH10165

Method used: /chem/HP23297.i/19may22b.b/m8260c5.m Sublist used: 4191422
Calibration date and time: 22-MAY-2019 21:49
Date, time and analyst ID of latest file update: 22-May-2019 21:49 pth10165

Sample Name: LCS426 Lab Sample ID: LCS426

Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1948
Retention Time (minutes): 13.432
Quant Ion : 92.00
Area : 277929
On-column Amount (ng) : 20.8934
Integration start scan : 1939 Integration stop scan: 1965
Y at integration start : 0 Y at integration end: 0

Digitally signed by Patrick T. Herres on 05/23/2019 at 00:32.
Target 3.5 esignature user approved.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSE11

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSE11

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may22a.b/ey22s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	15	
74-87-3	Chloromethane	23	
106-99-0	1,3-Butadiene	28	
75-01-4	Vinyl Chloride	22	
74-83-9	Bromomethane	18	
75-00-3	Chloroethane	21	
75-43-4	Dichlorofluoromethane	21	
109-66-0	n-Pentane	21	
75-69-4	Trichlorofluoromethane	19	
60-29-7	Ethyl ether	22	
354-23-4	Freon 123a	21	
107-02-8	Acrolein	150	
75-35-4	1,1-Dichloroethene	22	
67-64-1	Acetone	170	
76-13-1	Freon 113	21	
67-63-0	2-Propanol	160	
74-88-4	Methyl Iodide	20	
75-15-0	Carbon Disulfide	20	
107-05-1	Allyl Chloride	21	
79-20-9	Methyl Acetate	22	
75-09-2	Methylene Chloride	22	
75-65-0	t-Butyl alcohol	200	
107-13-1	Acrylonitrile	98	
156-60-5	trans-1,2-Dichloroethene	22	
1634-04-4	Methyl Tertiary Butyl Ether	21	
110-54-3	n-Hexane	21	
75-34-3	1,1-Dichloroethane	22	
108-20-3	di-Isopropyl ether	23	
126-99-8	2-Chloro-1,3-butadiene	21	
637-92-3	Ethyl t-butyl ether	21	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSE11

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSE11

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may22a.b/ey22s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
156-59-2	cis-1,2-Dichloroethene	23	
540-59-0	1,2-Dichloroethene (Total)	44	
78-93-3	2-Butanone	140	
594-20-7	2,2-Dichloropropane	21	
107-12-0	Propionitrile	170	
126-98-7	Methacrylonitrile	160	
74-97-5	Bromochloromethane	20	
109-99-9	Tetrahydrofuran	96	
67-66-3	Chloroform	22	
71-55-6	1,1,1-Trichloroethane	21	
110-82-7	Cyclohexane	22	
563-58-6	1,1-Dichloropropene	22	
56-23-5	Carbon Tetrachloride	21	
78-83-1	Isobutyl Alcohol	510	
71-43-2	Benzene	22	
107-06-2	1,2-Dichloroethane	20	
994-05-8	t-Amyl methyl ether	21	
142-82-5	n-Heptane	20	
71-36-3	n-Butanol	960	
79-01-6	Trichloroethene	22	
108-87-2	Methylcyclohexane	20	
78-87-5	1,2-Dichloropropane	23	
74-95-3	Dibromomethane	21	
123-91-1	1,4-Dioxane	490	
80-62-6	Methyl Methacrylate	19	
75-27-4	Bromodichloromethane	20	
79-46-9	2-Nitropropane	14	
110-75-8	2-Chloroethyl Vinyl Ether	20	
10061-01-5	cis-1,3-Dichloropropene	21	
108-10-1	4-Methyl-2-pentanone	93	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSE11

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSE11

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may22a.b/ey22s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-88-3	Toluene	22	
10061-02-6	trans-1,3-Dichloropropene	19	
542-75-6	1,3-Dichloropropene (total)	39	
97-63-2	Ethyl Methacrylate	19	
79-00-5	1,1,2-Trichloroethane	22	
127-18-4	Tetrachloroethene	22	
142-28-9	1,3-Dichloropropane	21	
591-78-6	2-Hexanone	87	
124-48-1	Dibromochloromethane	19	
106-93-4	1,2-Dibromoethane	20	
544-10-5	1-Chlorohexane	17	
108-90-7	Chlorobenzene	22	
630-20-6	1,1,1,2-Tetrachloroethane	20	
100-41-4	Ethylbenzene	22	
179601-23-1	m+p-Xylene	44	
95-47-6	o-Xylene	22	
1330-20-7	Xylene (Total)	65	
100-42-5	Styrene	21	
75-25-2	Bromoform	18	
98-82-8	Isopropylbenzene	22	
108-94-1	Cyclohexanone	500	
108-86-1	Bromobenzene	21	
79-34-5	1,1,2,2-Tetrachloroethane	21	
96-18-4	1,2,3-Trichloropropane	20	
110-57-6	trans-1,4-Dichloro-2-butene	78	
103-65-1	n-Propylbenzene	22	
95-49-8	2-Chlorotoluene	22	
106-43-4	4-Chlorotoluene	21	
108-67-8	1,3,5-Trimethylbenzene	22	
98-06-6	tert-Butylbenzene	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSE11

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSE11

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19may22a.b/ey22s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
76-01-7	Pentachloroethane	19	
95-63-6	1,2,4-Trimethylbenzene	21	
135-98-8	sec-Butylbenzene	22	
541-73-1	1,3-Dichlorobenzene	22	
99-87-6	p-Isopropyltoluene	21	
106-46-7	1,4-Dichlorobenzene	22	
526-73-8	1,2,3-Trimethylbenzene	20	
100-44-7	Benzyl Chloride	18	
141-93-5	1,3-Diethylbenzene	20	
105-05-5	1,4-Diethylbenzene	20	
95-50-1	1,2-Dichlorobenzene	21	
104-51-8	n-Butylbenzene	22	
135-01-3	1,2-Diethylbenzene	20	
25340-17-4	Diethylbenzene (total)	60	
96-12-8	1,2-Dibromo-3-chloropropane	18	
108-70-3	1,3,5-Trichlorobenzene	21	
120-82-1	1,2,4-Trichlorobenzene	22	
87-68-3	Hexachlorobutadiene	21	
91-20-3	Naphthalene	20	
87-61-6	1,2,3-Trichlorobenzene	21	B
91-57-6	2-Methylnaphthalene	17	B

Data file: /chem/HP15648.i/19may22a.b/ey22s01.d Injection date and time: **22-MAY-2019 10:18**
Data file Sample Info. Line: LCSE11;LCSE11;1;3;LCS;;;;ey22b01; Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 14:07 jml01693

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **8260W**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:52
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.493 (-0.018)	247	65	167897 (-2)	250.00	
66) Fluorobenzene	4.736 (-0.006)	615	96	1079053 (0)	50.00	
101) Chlorobenzene-d5	7.894 (0.000)	1133	117	804171 (-1)	50.00	
132) 1,4-Dichlorobenzene-d4	9.802 (0.000)	1446	152	427528 (1)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.078 (-0.001)	113	245297	48.909	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.401 (-0.001)	102	62872	49.677	99%		80 - 120
84) Toluene-d8	(3)	6.388 (-0.001)	98	1082184	49.549	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.918 (0.000)	95	413020	49.192	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	1.206 (-0.002)	85	143986	15.131	15.13			0.2	1
4) Chloromethane	(2)	1.316 (-0.000)	50	175304	22.637	22.64			0.2	1
5) 1,3-Butadiene	(2)	1.365 (-0.000)	39	163373	28.062	28.06			1	3
6) Vinyl Chloride	(2)	1.383 (-0.000)	62	165471	22.355	22.35			0.2	1
8) Bromomethane	(2)	1.566 (-0.000)	94	97573	17.506	17.51			0.3	1
9) Chloroethane	(2)	1.603 (-0.000)	64	90345	21.437	21.44			0.2	1
10) Dichlorofluoromethane	(2)	1.737 (-0.000)	67	227483	21.095	21.10			0.9	3
11) n-Pentane	(2)	1.798 (-0.002)	43	185385	21.445	21.44			0.4	10
12) Trichlorofluoromethane	(2)	1.792 (-0.000)	101	199104	18.921	18.92			0.2	1
14) Ethyl ether	(2)	1.932 (-0.002)	59	96761	22.069	22.07			0.2	5
15) Freon 123a	(2)	1.938 (-0.002)	67	127513	20.579	20.58			0.4	5
16) Acrolein	(1)	2.023 (0.001)	56	208362	150.410	150.41			2	100
17) 1,1-Dichloroethene	(2)	2.109 (-0.002)	96	93214	21.512	21.51			0.2	1
18) Acetone	(1)	2.127 (0.003)	58	96373	167.143	167.14			0.7	20
19) Freon 113	(2)	2.133 (-0.003)	101	102453	21.353	21.35			0.2	10
21) 2-Propanol	(1)	2.218 (0.001)	45	54531	158.298	158.30			18	100
22) Methyl Iodide	(2)	2.224 (-0.001)	142	160210	19.731	19.73			0.2	1
23) Carbon Disulfide	(2)	2.285 (-0.001)	76	299351	20.367	20.37			0.2	5
25) Allyl Chloride	(2)	2.377 (-0.001)	41	174880	20.766	20.77			0.3	5
27) Methyl Acetate	(2)	2.383 (-0.001)	43	91293	22.078	22.08			0.2	5
28) Methylene Chloride	(2)	2.480 (-0.001)	84	108669	22.014	22.01			0.3	1
30) t-Butyl alcohol	(1)	2.566 (0.000)	59	124274	198.007	198.01	N.I.B.		12	50
31) Acrylonitrile	(2)	2.676 (-0.001)	53	246568	98.066	98.07			0.3	20
32) trans-1,2-Dichloroethene	(2)	2.712 (-0.000)	96	105761	21.685	21.68			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	2.712 (-0.000)	73	299278	20.581	20.58			0.2	1
34) n-Hexane	(2)	2.962 (-0.001)	57	179124	20.959	20.96			0.2	5
36) 1,1-Dichloroethane	(2)	3.084 (-0.001)	63	203767	22.301	22.30			0.2	1
38) di-Isopropyl ether	(2)	3.157 (-0.001)	45	372176	23.146	23.15			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	3.169 (-0.001)	53	179836	20.611	20.61			0.2	5
40) Ethyl t-butyl ether	(2)	3.492 (-0.001)	59	336833	21.236	21.24			0.2	1
42) cis-1,2-Dichloroethene	(2)	3.620 (-0.001)	96	125022	22.815	22.81			0.2	1

NIB = Compound not in referenced method blank sublist.

Digitally signed by Jason M. Long on 05/22/2019 at 14:17. Target 3.5 esignature user ID: jml01693

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may22a.b/ey22s01.d Injection date and time: **22-MAY-2019 10:18**
Data file Sample Info. Line: LCSE11;LCSE11;1;3;LCS;;;;ey22b01; Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 14:07 jml01693

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **8260W**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:52
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
43) 1,2-Dichloroethene (Total)	(2)		96	230783	44.500	44.50			0.2	2
44) 2-Butanone	(2)	3.620(-0.001)	43	475815	140.460	140.46			0.3	10
45) 2,2-Dichloropropane	(2)	3.627(-0.000)	77	171030	21.215	21.21			0.3	1
47) Propionitrile	(1)	3.675(0.006)	54	145821	171.986	171.99			14	100
48) Methacrylonitrile	(2)	3.822(-0.000)	67	426312	157.907	157.91			6	50
49) Bromochloromethane	(2)	3.840(-0.000)	128	53940	19.818	19.82			0.2	5
50) Tetrahydrofuran	(1)	3.883(0.006)	71	85075	95.741	95.74			0.7	10
51) Chloroform	(2)	3.925(-0.001)	83	187145	21.533	21.53			0.2	1
53) 1,1,1-Trichloroethane	(2)	4.108(-0.000)	97	167790	20.864	20.86			0.3	1
54) Cyclohexane	(2)	4.169(-0.001)	56	217355	22.006	22.01			0.2	5
55) 1,1-Dichloropropene	(2)	4.261(-0.000)	75	159124	22.316	22.32			0.2	5
56) Carbon Tetrachloride	(2)	4.273(-0.001)	117	140266	20.506	20.51			0.2	1
58) Isobutyl Alcohol	(1)	4.389(0.008)	41	108210	507.824	507.82			36	250
60) Benzene	(2)	4.462(-0.001)	78	464905	22.204	22.20			0.2	1
61) 1,2-Dichloroethane	(2)	4.474(-0.001)	62	143576	20.417	20.42			0.3	1
65) t-Amyl methyl ether	(2)	4.590(-0.000)	73	330746	21.028	21.03			0.8	5
67) n-Heptane	(2)	4.748(0.000)	43	186381	20.346	20.35			0.2	5
69) n-Butanol	(1)	5.053(0.012)	56	176993	960.319	960.32			61	250
71) Trichloroethene	(2)	5.108(0.000)	95	114920	21.759	21.76			0.2	1
73) Methylcyclohexane	(2)	5.315(0.000)	83	218746	19.891	19.89			0.2	5
74) 1,2-Dichloropropane	(2)	5.328(0.001)	63	119828	23.003	23.00			0.2	1
75) Dibromomethane	(2)	5.443(0.001)	93	64670	20.738	20.74			0.2	1
76) 1,4-Dioxane	(1)	5.474(0.016)	88	25524M	492.108	492.11			29	250
77) Methyl Methacrylate	(2)	5.474(0.001)	69	90426	19.039	19.04			0.2	5
79) Bromodichloromethane	(2)	5.620(0.000)	83	131202	20.223	20.22			0.2	1
80) 2-Nitropropane	(2)	5.858(0.000)	41	30316	14.100	14.10			0.8	10
81) 2-Chloroethyl Vinyl Ether	(2)	5.955(0.001)	63	81300M	20.254	20.25			0.2	10
82) cis-1,3-Dichloropropene	(2)	6.102(0.000)	75	174335	20.631	20.63			0.2	1
83) 4-Methyl-2-pentanone	(2)	6.278(0.000)	43	674313	92.689	92.69			0.5	10
89) Toluene	(3)	6.455(-0.000)	92	297351	22.244	22.24			0.2	1
90) trans-1,3-Dichloropropene	(3)	6.705(-0.000)	75	150558	18.846	18.85			0.2	1
91) 1,3-Dichloropropene (total)	(3)		100	324893	39.476	39.48			0.2	5
92) Ethyl Methacrylate	(3)	6.833(-0.000)	69	162910	19.129	19.13			0.2	5
93) 1,1,2-Trichloroethane	(3)	6.894(-0.000)	97	99573	21.886	21.89			0.2	1
94) Tetrachloroethene	(3)	7.053(-0.000)	166	119064	21.907	21.91			0.2	1
95) 1,3-Dichloropropane	(3)	7.077(-0.000)	76	170806	21.361	21.36			0.2	1
97) 2-Hexanone	(3)	7.193(-0.000)	43	494154	87.030	87.03			0.3	10
98) Dibromochloromethane	(3)	7.315(-0.000)	129	95515	19.447	19.45			0.2	1
100) 1,2-Dibromoethane	(3)	7.425(-0.000)	107	98309	20.309	20.31			0.2	1
102) 1-Chlorohexane	(3)	7.321(-0.000)	91	8012	17.344	17.34			0.3	5
103) Chlorobenzene	(3)	7.918(0.000)	112	318193	21.527	21.53			0.2	1
104) 1,1,1,2-Tetrachloroethane	(3)	8.004(0.000)	131	102583	20.435	20.43			0.2	1
105) Ethylbenzene	(3)	8.034(0.000)	91	575409	21.759	21.76			0.4	1
107) m+p-Xylene	(3)	8.144(0.000)	106	450569	43.768	43.77			1	5
108) o-Xylene	(3)	8.492(0.000)	106	217980	21.697	21.70			0.4	1
109) Xylene (Total)	(3)		106	668549	65.465	65.46			1	5
110) Styrene	(3)	8.504(0.000)	104	352308	21.231	21.23			0.2	5
111) Bromoform	(3)	8.644(0.000)	173	58641	17.910	17.91			0.2	4
112) Isopropylbenzene	(3)	8.802(0.000)	105	591365	22.124	22.12			0.2	5
113) Cyclohexanone	(1)	8.857(0.026)	55	97789M	500.488	500.49			25	100
116) Bromobenzene	(4)	9.034(-0.000)	156	126847	21.293	21.29			0.2	5
117) 1,1,2,2-Tetrachloroethane	(4)	9.040(-0.000)	83	145081	20.984	20.98			0.2	1
118) 1,2,3-Trichloropropane	(4)	9.071(-0.000)	110	42615	20.338	20.34			0.2	5
119) trans-1,4-Dichloro-2-butene	(4)	9.089(-0.000)	53	176513	77.691	77.69			6	50

M = Compound was manually integrated.

Digitally signed by Jason M. Long on 05/22/2019 at 14:17. Target 3.5 esignature user ID: jml01693

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19may22a.b/ey22s01.d Injection date and time: **22-MAY-2019 10:18**
Data file Sample Info. Line: LCSE11;LCSE11;1;3;LCS;;;;ey22b01; Instrument ID: **HP15648.i** Batch: **E191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 14:07 jml01693

Blank Data file reference: **/chem/HP15648.i/19may22a.b/ey22b01.d**

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: **8260W**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:52
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19may22a.b/ey22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

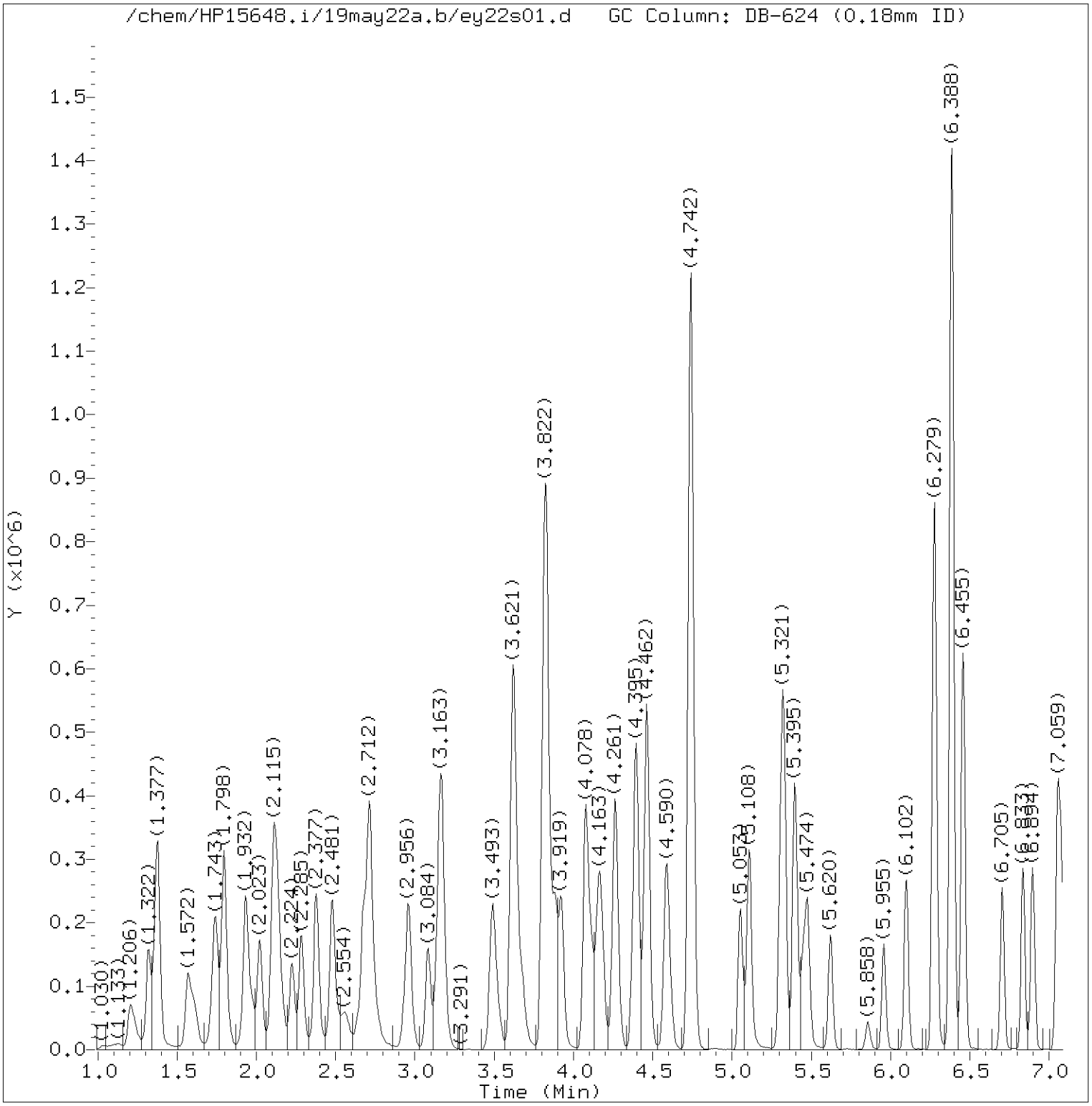
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) n-Propylbenzene	(4)	9.132(-0.000)	91	704169	22.421	22.42			0.2	5
121) 2-Chlorotoluene	(4)	9.193(-0.000)	126	133444	21.581	21.58			0.2	5
122) 4-Chlorotoluene	(4)	9.278(-0.000)	126	135409	21.363	21.36			0.2	5
123) 1,3,5-Trimethylbenzene	(4)	9.278(-0.000)	105	494414	21.700	21.70			0.3	5
125) tert-Butylbenzene	(4)	9.522(-0.000)	134	109252	21.572	21.57			0.3	5
126) Pentachloroethane	(4)	9.528(-0.000)	167	70869	18.796	18.80			0.2	5
127) 1,2,4-Trimethylbenzene	(4)	9.558(-0.000)	105	499743	21.302	21.30			1	5
128) sec-Butylbenzene	(4)	9.680(-0.000)	105	646309	22.361	22.36			0.2	5
130) 1,3-Dichlorobenzene	(4)	9.754(-0.000)	146	249791	21.516	21.52			0.2	5
131) p-Isopropyltoluene	(4)	9.790(-0.000)	119	545065	21.437	21.44			0.2	5
134) 1,4-Dichlorobenzene	(4)	9.820(0.000)	146	255504	21.515	21.51			0.2	5
135) 1,2,3-Trimethylbenzene	(4)	9.863(0.000)	105	500849	20.049	20.05			0.3	5
136) Benzyl Chloride	(4)	9.918(0.000)	91	290660	18.020	18.02			0.3	5
137) 1,3-Diethylbenzene	(4)	10.010(0.000)	119	320572	20.023	20.02			0.2	5
138) 1,4-Diethylbenzene	(4)	10.064(0.000)	119	333479	19.548	19.55			0.2	5
139) 1,2-Dichlorobenzene	(4)	10.083(0.000)	146	237957	21.411	21.41			0.2	5
140) n-Butylbenzene	(4)	10.083(0.000)	92	272578	21.828	21.83			0.2	5
141) 1,2-Diethylbenzene	(4)	10.150(0.000)	119	265666	20.269	20.27			0.2	5
142) Diethylbenzene (total)	(4)		100	919717	59.840	59.84			0.2	5
143) 1,2-Dibromo-3-chloropropane	(4)	10.619(0.000)	75	28346	17.894	17.89			0.3	5
145) 1,3,5-Trichlorobenzene	(4)	10.772(-0.000)	180	173518	21.231	21.23			0.2	5
147) 1,2,4-Trichlorobenzene	(4)	11.174(0.000)	180	157875	21.640	21.64			0.3	5
148) Hexachlorobutadiene	(4)	11.290(0.000)	225	65151	20.834	20.83			0.7	5
149) Naphthalene	(4)	11.332(0.000)	128	484867	20.160	20.16			1	5
150) 1,2,3-Trichlorobenzene	(4)	11.491(0.000)	180	145233	21.084	21.08	0.406	B	0.4	5
151) 2-Methylnaphthalene	(4)	12.052(0.000)	142	259147	17.051	17.05	0.915	B	0.7	5

B = Compound detected in referenced method blank.

Total number of targets = 111

Digitally signed by Jason M. Long on 05/22/2019 at 14:17. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/23/2019 at 13:38. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

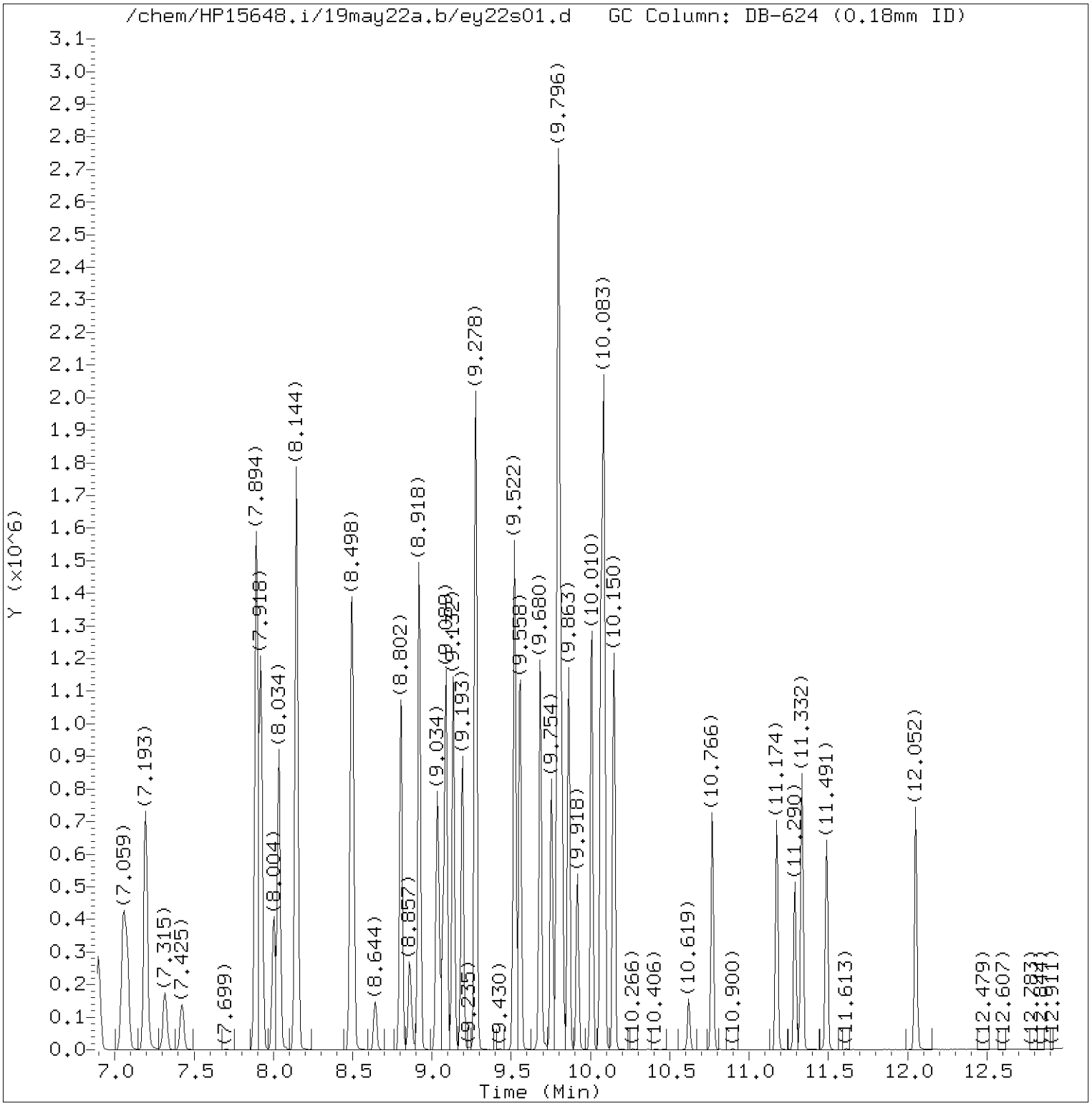
Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s01.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 10:18 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:07 jml01693

Sample Name: LCSE11 Lab Sample ID: LCSE11

Digitally signed by Jason M. Long
on 05/22/2019 at 14:17.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s01.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 10:18 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:07 jml01693

Sample Name: LCSE11 Lab Sample ID: LCSE11

Digitally signed by Jason M. Long
on 05/22/2019 at 14:17.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s01.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 10:18 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:07 jml01693

Sample Name: LCSE11 Lab Sample ID: LCSE11

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.206	85	143986	15.131
4) Chloromethane	(2)	1.316	50	175304	22.637
5) 1,3-Butadiene	(2)	1.365	39	163373	28.062
6) Vinyl Chloride	(2)	1.383	62	165471	22.355
8) Bromomethane	(2)	1.566	94	97573	17.506
9) Chloroethane	(2)	1.603	64	90345	21.437
10) Dichlorofluoromethane	(2)	1.737	67	227483	21.095
12) Trichlorofluoromethane	(2)	1.792	101	199104	18.921
11) n-Pentane	(2)	1.798	43	185385	21.445
14) Ethyl ether	(2)	1.932	59	96761	22.069
15) Freon 123a	(2)	1.938	67	127513	20.579
16) Acrolein	(1)	2.023	56	208362	150.410
17) 1,1-Dichloroethene	(2)	2.109	96	93214	21.512
18) Acetone	(1)	2.127	58	96373	167.143
19) Freon 113	(2)	2.133	101	102453	21.353
21) 2-Propanol	(1)	2.218	45	54531	158.298
22) Methyl Iodide	(2)	2.224	142	160210	19.731
23) Carbon Disulfide	(2)	2.285	76	299351	20.367
25) Allyl Chloride	(2)	2.377	41	174880	20.766
27) Methyl Acetate	(2)	2.383	43	91293	22.078
28) Methylene Chloride	(2)	2.481	84	108669	22.014
29)*t-Butyl alcohol-d10	(1)	2.493	65	167897	250.000
30) t-Butyl alcohol	(1)	2.566	59	124274	198.007
31) Acrylonitrile	(2)	2.676	53	246568	98.066
32) trans-1,2-Dichloroethene	(2)	2.712	96	105761	21.685
33) Methyl Tertiary Butyl Ether	(2)	2.712	73	299278	20.581
34) n-Hexane	(2)	2.962	57	179124	20.959
36) 1,1-Dichloroethane	(2)	3.084	63	203767	22.301
38) di-Isopropyl ether	(2)	3.157	45	372176	23.146
39) 2-Chloro-1,3-butadiene	(2)	3.169	53	179836	20.611
40) Ethyl t-butyl ether	(2)	3.493	59	336833	21.236
44) 2-Butanone	(2)	3.621	43	475815	140.460
42) cis-1,2-Dichloroethene	(2)	3.621	96	125022	22.815
43) 1,2-Dichloroethene (Total)	(2)		96	230783	44.500
45) 2,2-Dichloropropane	(2)	3.627	77	171030	21.215
47) Propionitrile	(1)	3.675	54	145821	171.986
48) Methacrylonitrile	(2)	3.822	67	426312	157.907
49) Bromochloromethane	(2)	3.840	128	53940	19.818

* = Compound is an internal standard.

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on 05/22/2019 at 14:17.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s01.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 10:18 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:07 jml01693

Sample Name: LCSE11 Lab Sample ID: LCSE11

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	3.883	71	85075	95.741
51) Chloroform	(2)	3.925	83	187145	21.533
52)$Dibromofluoromethane	(2)	4.078	113	245297	48.909
53) 1,1,1-Trichloroethane	(2)	4.108	97	167790	20.864
54) Cyclohexane	(2)	4.169	56	217355	22.006
55) 1,1-Dichloropropene	(2)	4.261	75	159124	22.316
56) Carbon Tetrachloride	(2)	4.273	117	140266	20.506
58) Isobutyl Alcohol	(1)	4.389	41	108210	507.824
57)$1,2-Dichloroethane-d4	(2)	4.401	102	62872	49.677
60) Benzene	(2)	4.462	78	464905	22.204
61) 1,2-Dichloroethane	(2)	4.474	62	143576	20.417
65) t-Amyl methyl ether	(2)	4.590	73	330746	21.028
66)*Fluorobenzene	(2)	4.736	96	1079053	50.000
67) n-Heptane	(2)	4.748	43	186381	20.346
69) n-Butanol	(1)	5.053	56	176993	960.319
71) Trichloroethene	(2)	5.108	95	114920	21.759
73) Methylcyclohexane	(2)	5.315	83	218746	19.891
74) 1,2-Dichloropropane	(2)	5.328	63	119828	23.003
75) Dibromomethane	(2)	5.443	93	64670	20.738
77) Methyl Methacrylate	(2)	5.474	69	90426	19.039
76) 1,4-Dioxane	(1)	5.474	88	25524M	492.108
79) Bromodichloromethane	(2)	5.620	83	131202	20.223
80) 2-Nitropropane	(2)	5.858	41	30316	14.100
81) 2-Chloroethyl Vinyl Ether	(2)	5.955	63	81300M	20.254
82) cis-1,3-Dichloropropene	(2)	6.102	75	174335	20.631
83) 4-Methyl-2-pentanone	(2)	6.279	43	674313	92.689
84)$Toluene-d8	(3)	6.388	98	1082184	49.549
89) Toluene	(3)	6.455	92	297351	22.244
90) trans-1,3-Dichloropropene	(3)	6.705	75	150558	18.846
91) 1,3-Dichloropropene (total)	(3)		100	324893	39.476
92) Ethyl Methacrylate	(3)	6.833	69	162910	19.129
93) 1,1,2-Trichloroethane	(3)	6.894	97	99573	21.886
94) Tetrachloroethene	(3)	7.053	166	119064	21.907
95) 1,3-Dichloropropane	(3)	7.077	76	170806	21.361
97) 2-Hexanone	(3)	7.193	43	494154	87.030
98) Dibromochloromethane	(3)	7.315	129	95515	19.447
102) 1-Chlorohexane	(3)	7.321	91	8012	17.344
100) 1,2-Dibromoethane	(3)	7.425	107	98309	20.309

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/22/2019 at 14:17.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s01.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 10:18 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:07 jml01693

Sample Name: LCSE11 Lab Sample ID: LCSE11

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101)*Chlorobenzene-d5	(3)	7.894	117	804171	50.000
103) Chlorobenzene	(3)	7.918	112	318193	21.527
104) 1,1,1,2-Tetrachloroethane	(3)	8.004	131	102583	20.435
105) Ethylbenzene	(3)	8.034	91	575409	21.759
107) m+p-Xylene	(3)	8.144	106	450569	43.768
109) Xylene (Total)	(3)		106	668549	65.465
108) o-Xylene	(3)	8.492	106	217980	21.697
110) Styrene	(3)	8.504	104	352308	21.231
111) Bromoform	(3)	8.644	173	58641	17.910
112) Isopropylbenzene	(3)	8.802	105	591365	22.124
113) Cyclohexanone	(1)	8.857	55	97789M	500.488
115)$4-Bromofluorobenzene	(3)	8.918	95	413020	49.192
116) Bromobenzene	(4)	9.034	156	126847	21.293
117) 1,1,2,2-Tetrachloroethane	(4)	9.040	83	145081	20.984
118) 1,2,3-Trichloropropane	(4)	9.071	110	42615	20.338
119) trans-1,4-Dichloro-2-butene	(4)	9.089	53	176513	77.691
120) n-Propylbenzene	(4)	9.132	91	704169	22.421
121) 2-Chlorotoluene	(4)	9.193	126	133444	21.581
123) 1,3,5-Trimethylbenzene	(4)	9.278	105	494414	21.700
122) 4-Chlorotoluene	(4)	9.278	126	135409	21.363
125) tert-Butylbenzene	(4)	9.522	134	109252	21.572
126) Pentachloroethane	(4)	9.528	167	70869	18.796
127) 1,2,4-Trimethylbenzene	(4)	9.558	105	499743	21.302
128) sec-Butylbenzene	(4)	9.680	105	646309	22.361
130) 1,3-Dichlorobenzene	(4)	9.754	146	249791	21.516
131) p-Isopropyltoluene	(4)	9.790	119	545065	21.437
132)*1,4-Dichlorobenzene-d4	(4)	9.802	152	427528	50.000
134) 1,4-Dichlorobenzene	(4)	9.821	146	255504	21.515
135) 1,2,3-Trimethylbenzene	(4)	9.863	105	500849	20.049
136) Benzyl Chloride	(4)	9.918	91	290660	18.020
137) 1,3-Diethylbenzene	(4)	10.010	119	320572	20.023
138) 1,4-Diethylbenzene	(4)	10.064	119	333479	19.548
140) n-Butylbenzene	(4)	10.083	92	272578	21.828
139) 1,2-Dichlorobenzene	(4)	10.083	146	237957	21.411
142) Diethylbenzene (total)	(4)		100	919717	59.840
141) 1,2-Diethylbenzene	(4)	10.150	119	265666	20.269
143) 1,2-Dibromo-3-chloropropane	(4)	10.619	75	28346	17.894
145) 1,3,5-Trichlorobenzene	(4)	10.772	180	173518	21.231

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 05/22/2019 at 14:17.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19may22a.b/ey22s01.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 10:18 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:07 jml01693

Sample Name: LCSE11 Lab Sample ID: LCSE11

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) 1,2,4-Trichlorobenzene	(4)	11.174	180	157875	21.640
148) Hexachlorobutadiene	(4)	11.290	225	65151	20.834
149) Naphthalene	(4)	11.332	128	484867	20.160
150) 1,2,3-Trichlorobenzene	(4)	11.491	180	145233	21.084
151) 2-Methylnaphthalene	(4)	12.052	142	259147	17.051

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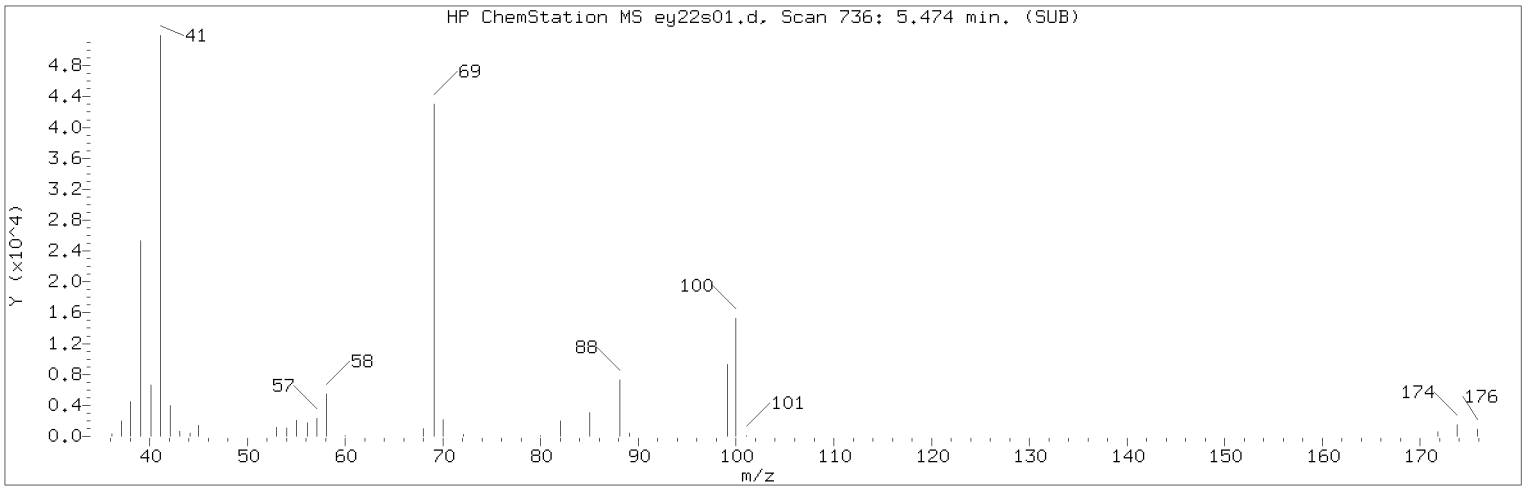
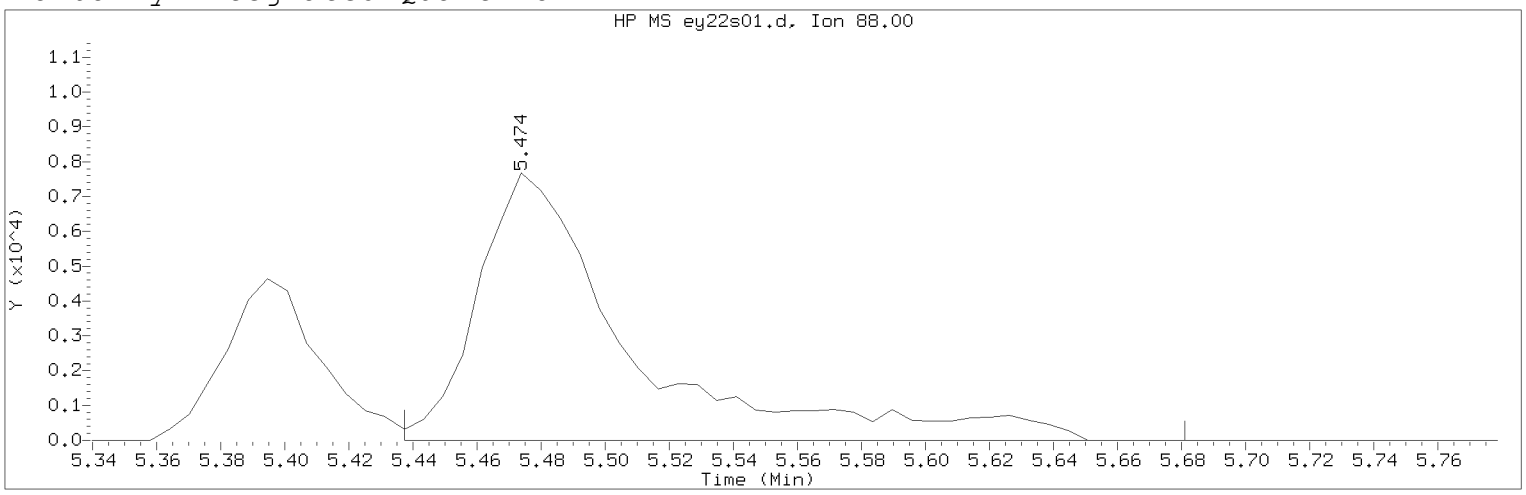
on 05/22/2019 at 14:17.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 22-MAY-2019 10:18 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:07 jml01693

Sample Name: LCSE11 Lab Sample ID: LCSE11

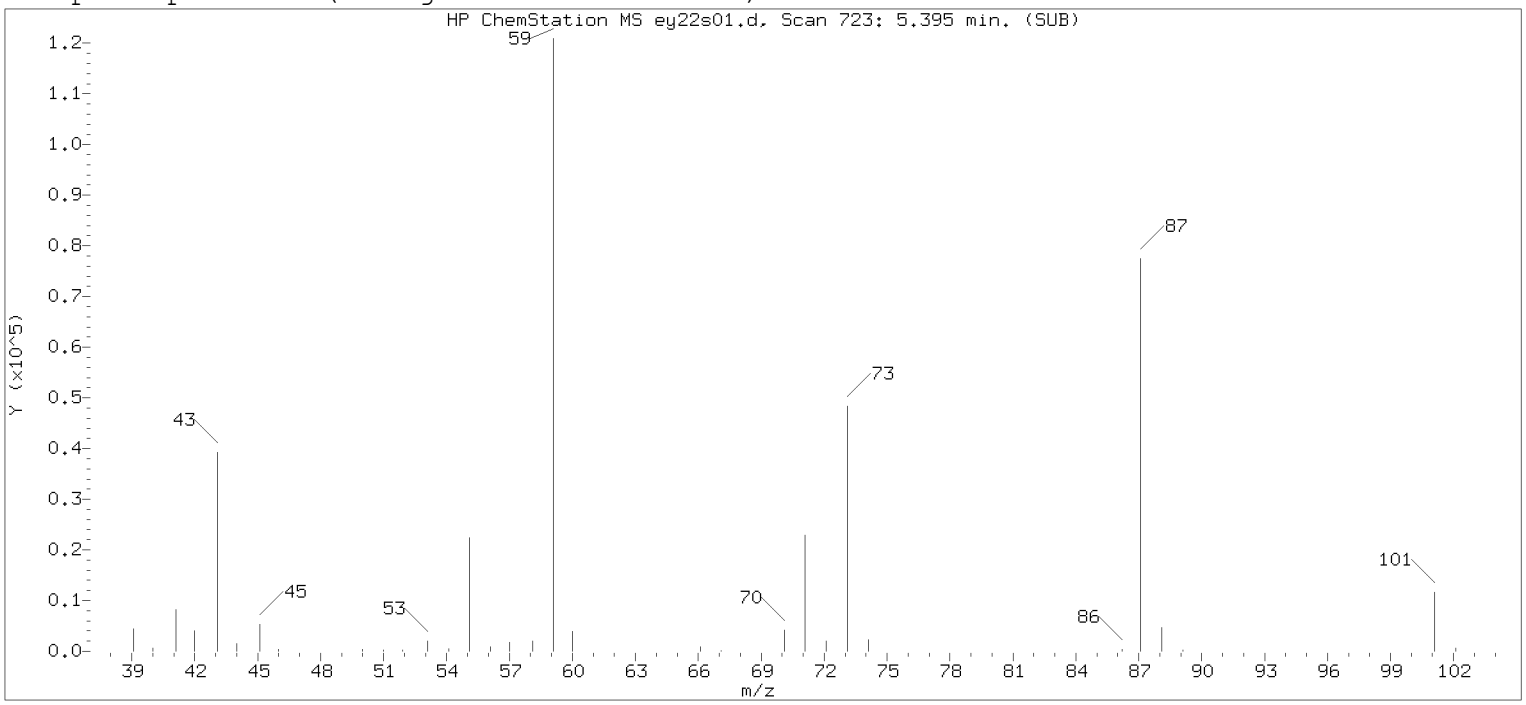
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 736
Retention Time (minutes): 5.474
Quant Ion : 88.00
Area (flag) : 25524M
On-Column Amount (ng) : 492.1078
Integration start scan : 729 Integration stop scan: 769
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

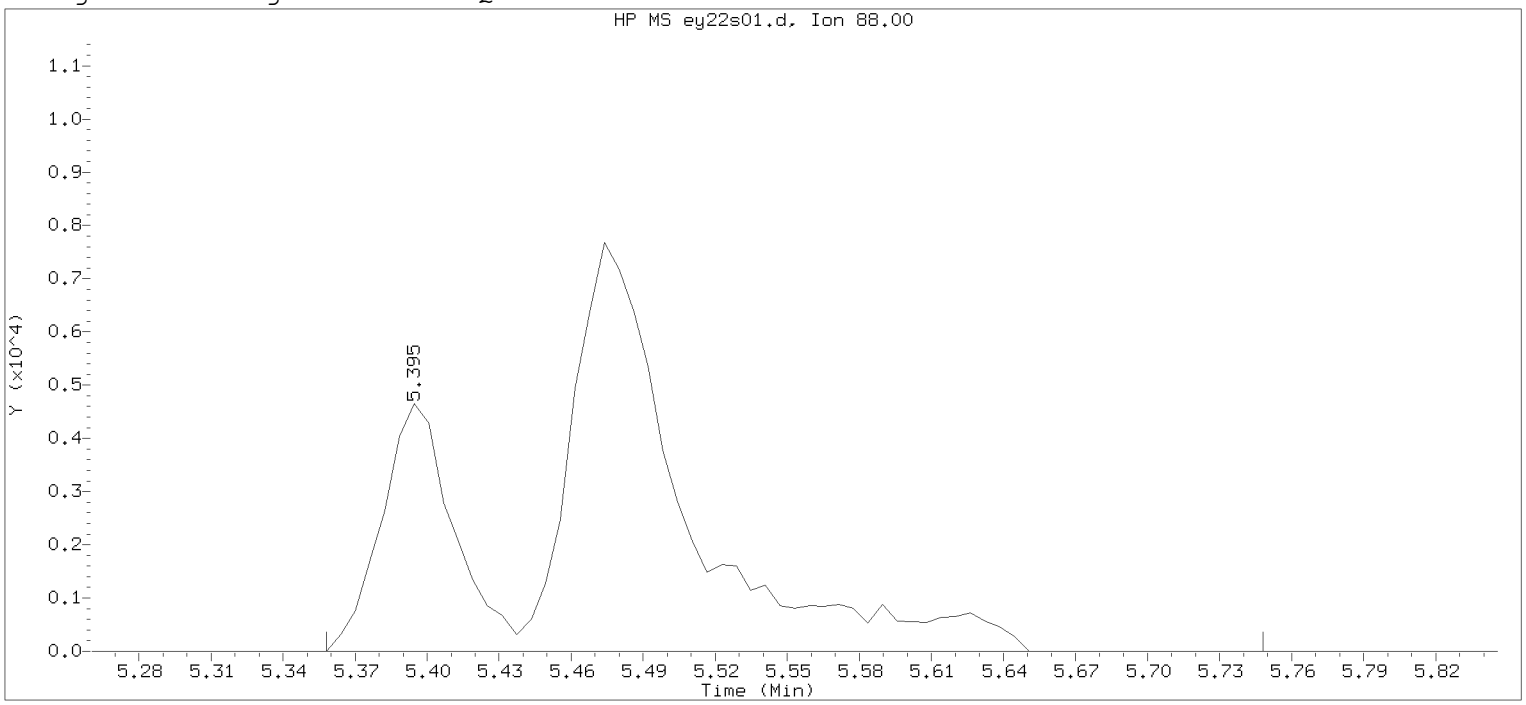
Analyst responsible for change: Digitally signed by Jason M. Long
on 05/22/2019 at 14:17.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/23/2019 at 13:38.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may22a.b/ey22s01.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 10:18 Analyst ID: JML01693

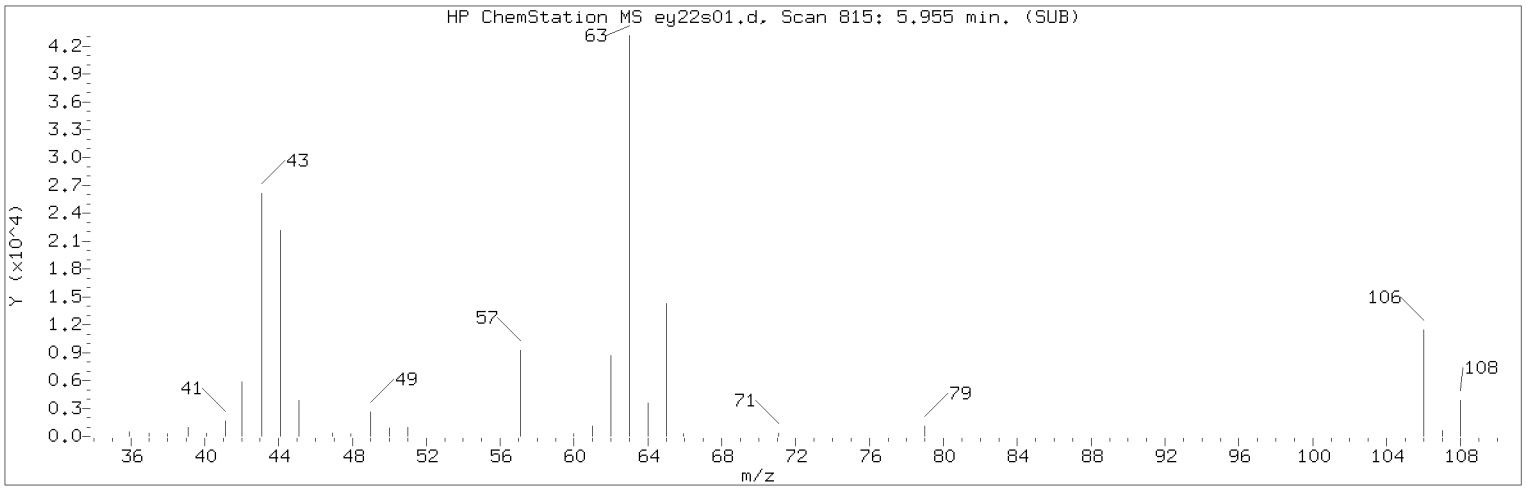
Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 10:29
Date, time and analyst ID of latest file update: 22-May-2019 10:34 Automation

Sample Name: LCSE11 Lab Sample ID: LCSE11

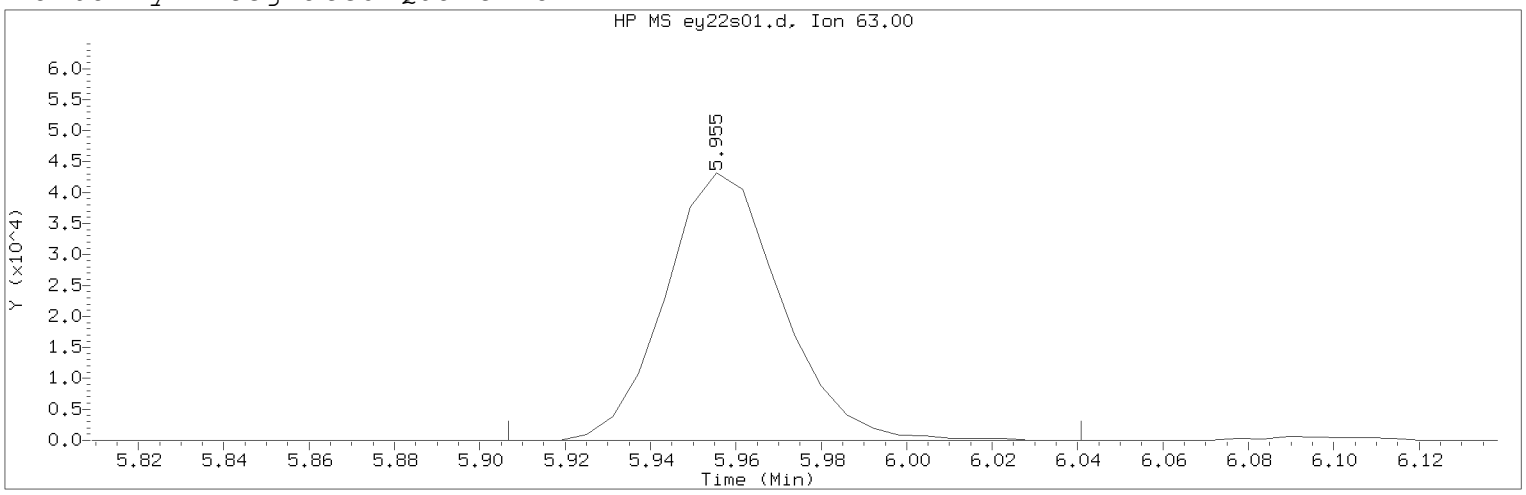
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 723
Retention Time (minutes): 5.395
Quant Ion : 88.00
Area : 35094
On-column Amount (ng) : 676.6168
Integration start scan : 716 Integration stop scan: 780
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 05/22/2019 at 14:17.
Target 3.5 esignature user ID: jmlong1714

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may22a.b/ey22s01.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 10:18 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:07 jml01693

Sample Name: LCSE11 Lab Sample ID: LCSE11

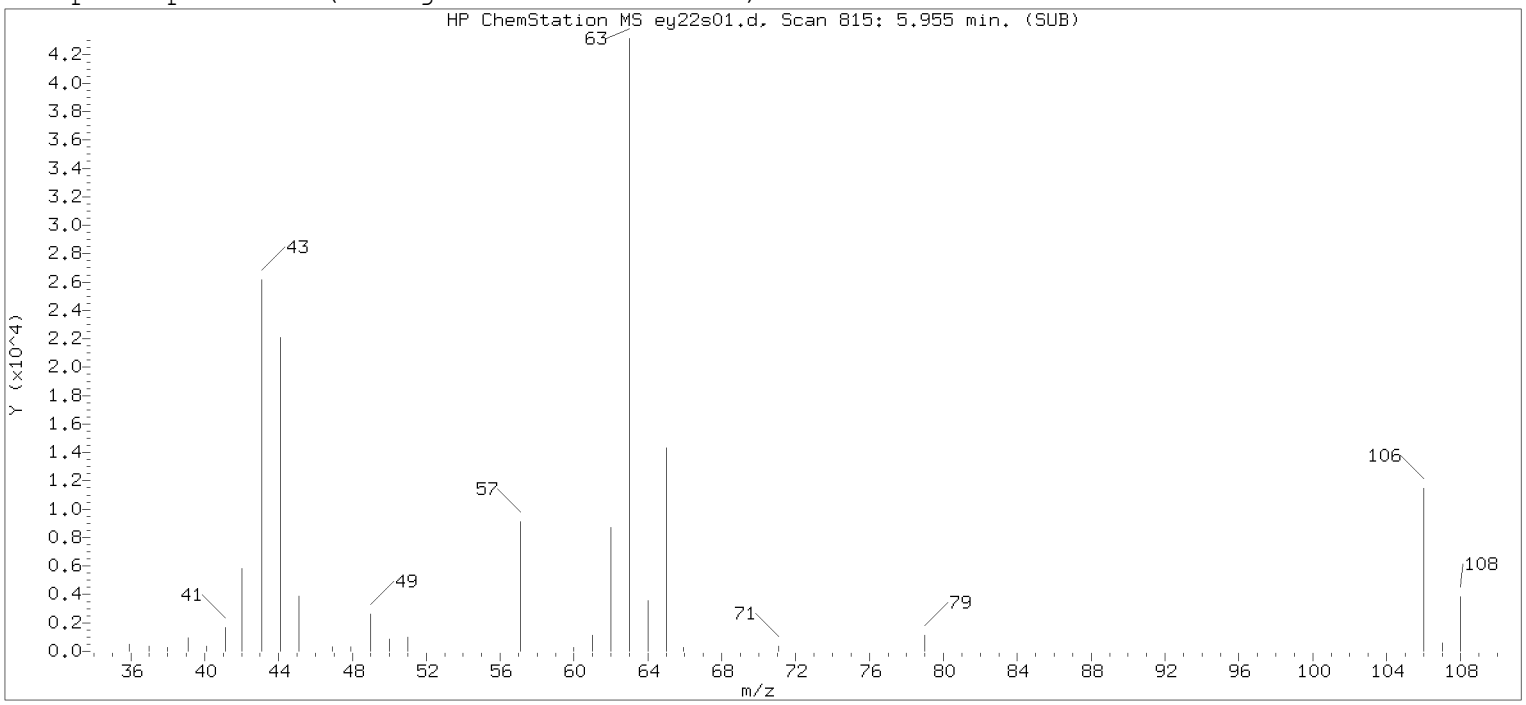
Compound Number : 81
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 815
Retention Time (minutes): 5.955
Quant Ion : 63.00
Area (flag) : 81300M
On-Column Amount (ng) : 20.2540
Integration start scan : 806 Integration stop scan: 828
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

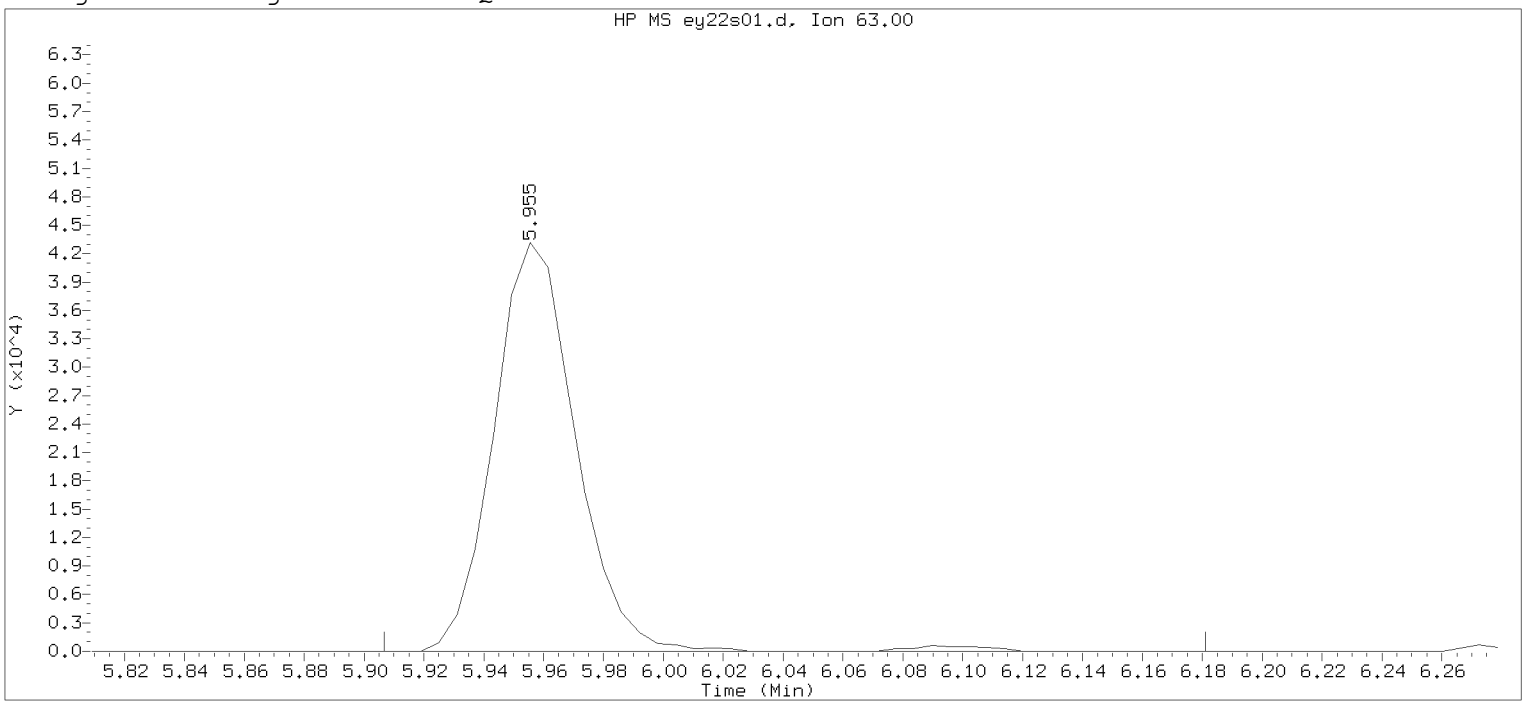
Analyst responsible for change: Digitally signed by Jason M. Long
on 05/22/2019 at 14:17.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/23/2019 at 13:38.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may22a.b/ey22s01.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 10:18 Analyst ID: JML01693

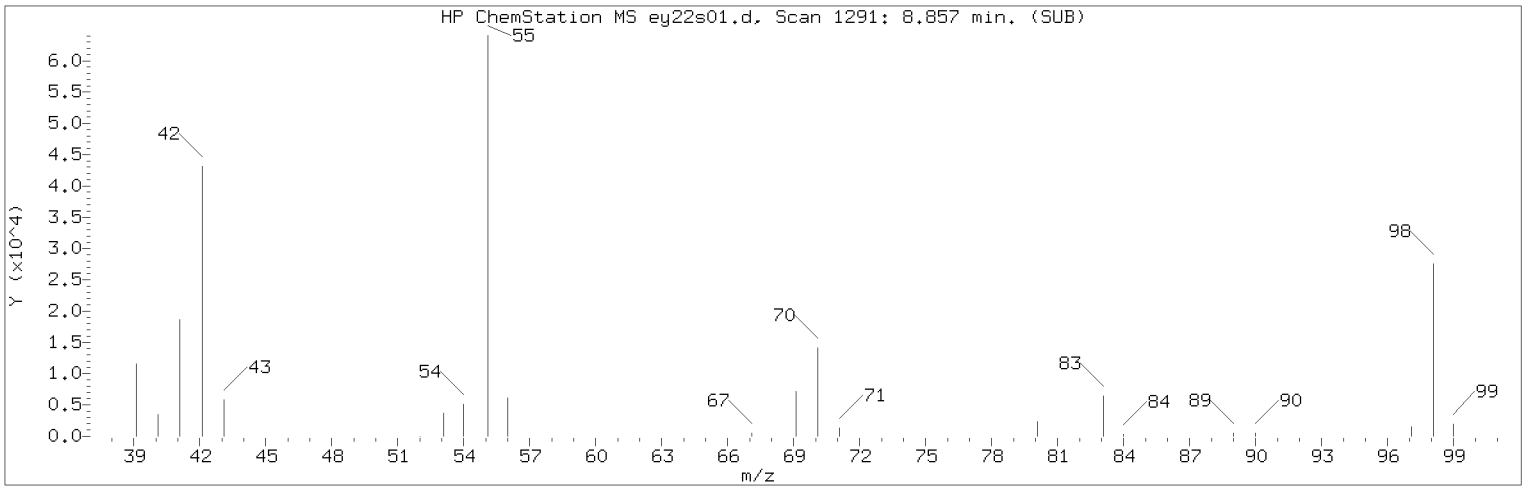
Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 10:29
Date, time and analyst ID of latest file update: 22-May-2019 10:34 Automation

Sample Name: LCSE11 Lab Sample ID: LCSE11

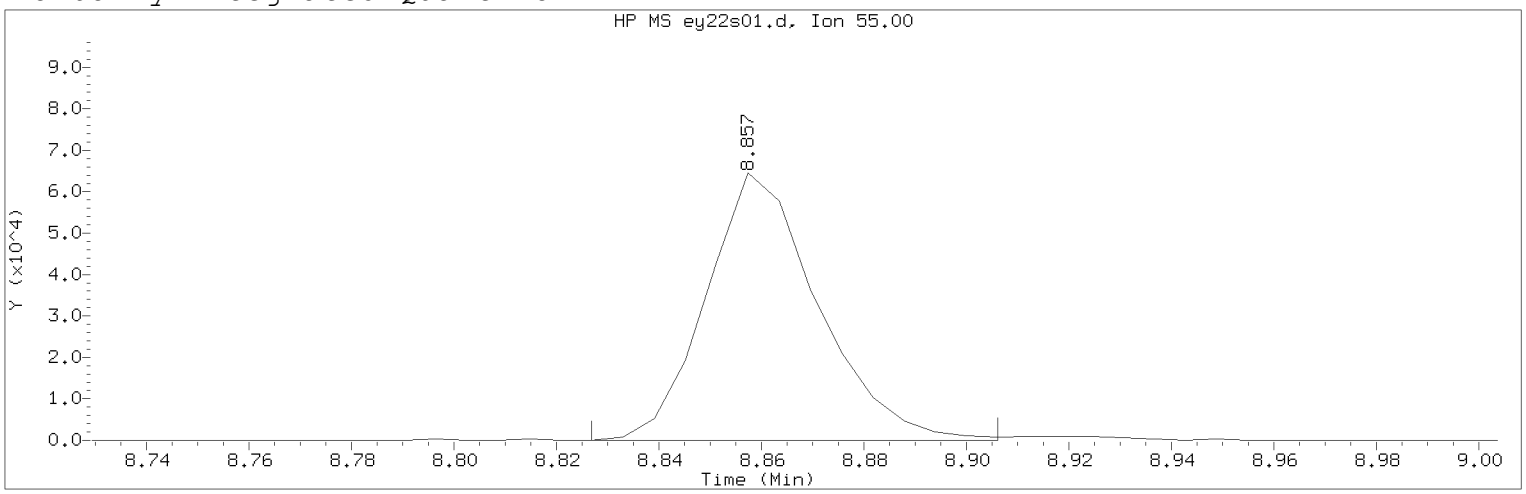
Compound Number : 81
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 815
Retention Time (minutes): 5.955
Quant Ion : 63.00
Area : 82304
On-column Amount (ng) : 20.5043
Integration start scan : 806 Integration stop scan: 851
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 05/22/2019 at 14:17.
Target 3.5 esignature user ID: jmlong1716

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19may22a.b/ey22s01.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 10:18 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 12:52
Date, time and analyst ID of latest file update: 22-May-2019 14:07 jml01693

Sample Name: LCSE11 Lab Sample ID: LCSE11

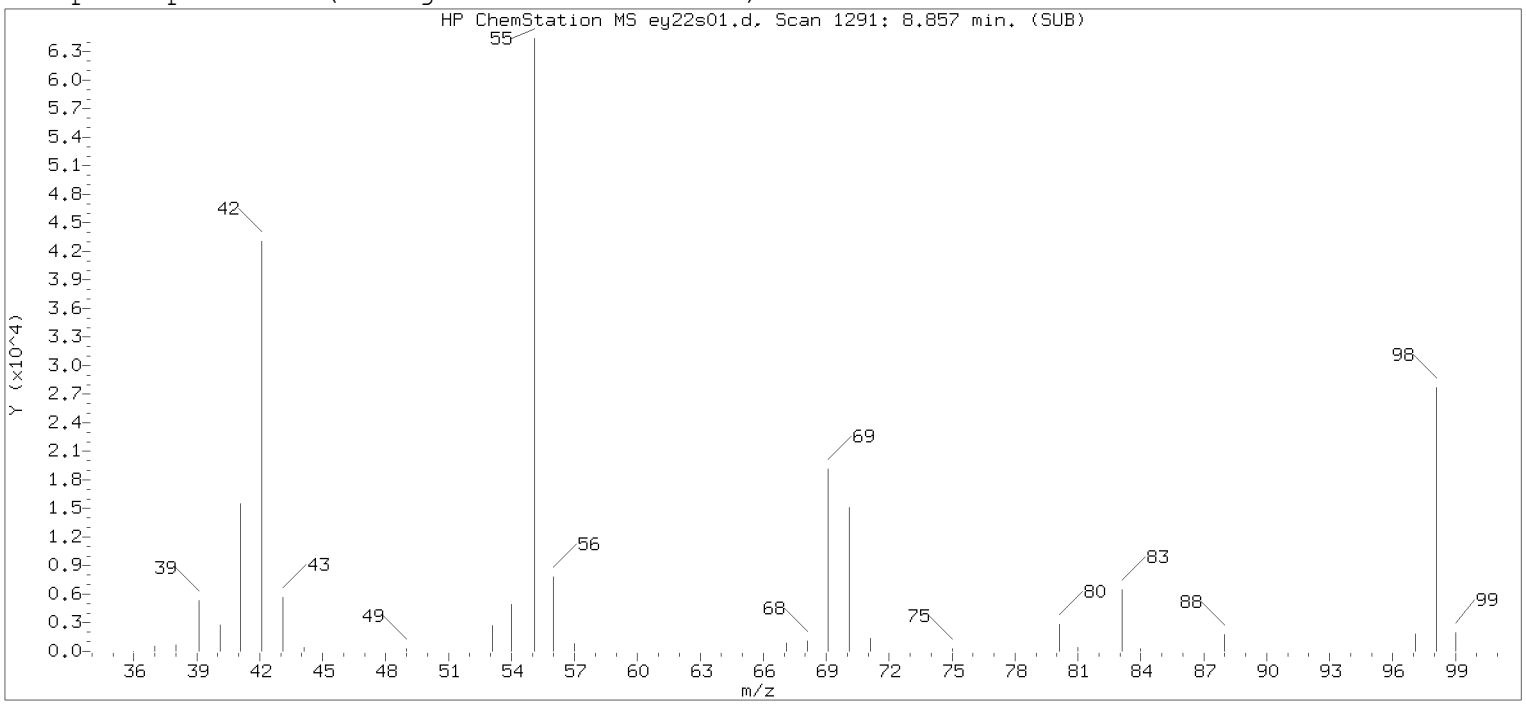
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1291
Retention Time (minutes): 8.857
Quant Ion : 55.00
Area (flag) : 97789M
On-Column Amount (ng) : 500.4881
Integration start scan : 1285 Integration stop scan: 1298
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

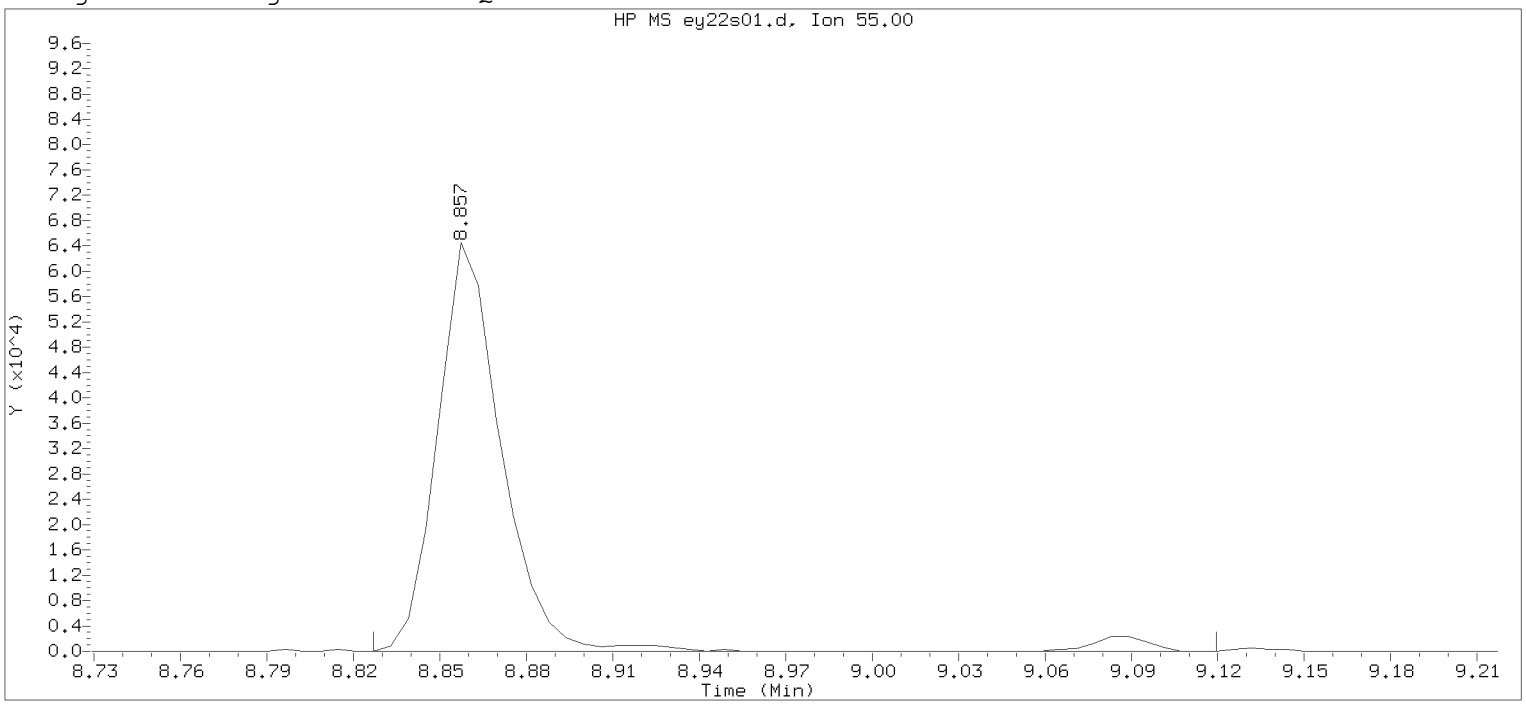
Analyst responsible for change: Digitally signed by Jason M. Long
on 05/22/2019 at 14:17.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/23/2019 at 13:38.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19may22a.b/ey22s01.d Instrument ID: HP15648.i
Injection date and time: 22-MAY-2019 10:18 Analyst ID: JML01693

Method used: /chem/HP15648.i/19may22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-MAY-2019 10:29
Date, time and analyst ID of latest file update: 22-May-2019 10:34 Automation

Sample Name: LCSE11 Lab Sample ID: LCSE11

Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1291
Retention Time (minutes): 8.857
Quant Ion : 55.00
Area : 102411
On-column Amount (ng) : 524.1417
Integration start scan : 1285 Integration stop scan: 1333
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 05/22/2019 at 14:17.
Target 3.5 esignature user ID: jmlong1791

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NYSDEC ASP Category B Data Package

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Project: AD-New Windsor, NY
Groundwater and Water Samples
Collected on 05/08/19-05/10/19

SDG# JCV93-V.2

GROUP	SAMPLE NUMBERS
2044093	1058234-1058248

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-18-27
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman **Date:** **08/05/2019**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Katherine Klinefelter at (717) 556-7256.

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Sample Reference List for SDG Number JCV93
with a Data Package Type of NYSDEC B

06556 - The Johnson Company, Inc.
Project: AD-New Windsor, NY

Lab Sample Number	Client Sample ID	Collection Date	Date Received	Lab Sample Code
1058234	J18-UC02	05/08/2019 15:20	05/14/2019 10:25	93J01
1058235	J18-UC02 MS	05/08/2019 15:20	05/14/2019 10:25	93J01
1058236	J18-UC02 MSD	05/08/2019 15:20	05/14/2019 10:25	93J01
1058237	J19-UC01	05/08/2019 16:38	05/14/2019 10:25	93J02
1058238	J13-BR02	05/09/2019 09:13	05/14/2019 10:25	93J03
1058239	J13-BR01	05/09/2019 10:37	05/14/2019 10:25	93J04
1058240	J13-UC03	05/09/2019 12:04	05/14/2019 10:25	93J05
1058241	J13-UC02	05/09/2019 13:01	05/14/2019 10:25	93J06
1058242	J12-BR02	05/09/2019 14:44	05/14/2019 10:25	93J07
1058243	J12-BR01	05/09/2019 16:27	05/14/2019 10:25	93J08
1058244	TB050819	05/08/2019 00:00	05/14/2019 10:25	93J09
1058245	J22-BR02	05/10/2019 12:15	05/14/2019 10:25	93J10
1058246	J22-BR01	05/10/2019 13:35	05/14/2019 10:25	93J11
1058247	J17-UC01	05/10/2019 15:30	05/14/2019 10:25	93J12
1058248	J07-UC02	05/10/2019 16:50	05/14/2019 10:25	93J13

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Sample pH Log

SDG: JCV93

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
1058234	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/21/2019 10:52:05AM	27445
1058235	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/21/2019 10:52:06AM	27445
1058236	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/21/2019 10:52:06AM	27445
1058237	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/21/2019 10:52:06AM	27445
1058238	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/23/2019 7:17:10AM	492
1058238	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/23/2019 10:51:48AM	1027
1058239	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/23/2019 7:17:10AM	492
1058240	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/23/2019 7:17:10AM	492
1058241	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/23/2019 7:17:10AM	492
1058242	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/23/2019 7:17:10AM	492
1058243	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/23/2019 7:17:10AM	492
1058244	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/21/2019 10:52:06AM	27445
1058245	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/23/2019 9:43:59PM	10203
1058246	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/23/2019 9:43:59PM	10203
1058247	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/23/2019 9:43:59PM	10203
1058248	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/23/2019 9:44:00PM	10203

*pH Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

**Chlorine Present Code Key
NA = Chlorine Not Checked
Y = Chlorine Present
N = Chlorine Not Present

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11997 VOCs- 5ml Water by 8260C/D

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Report Date: May 24, 2019 14:29

Project: AD-New Windsor, NY

Account #: 06556
Group Number: 2044093
SDG: JCV93
PO Number: 1-0145-05
State of Sample Origin: NY

Electronic Copy To	The Johnson Company, Inc.	Attn: Tristan Hardy
Electronic Copy To	The Johnson Company, Inc.	Attn: George Lester

Respectfully Submitted,

Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
J18-UC02 Grab Groundwater	05/08/2019 15:20	1058234
J18-UC02 MS Grab Groundwater	05/08/2019 15:20	1058235
J18-UC02 MSD Grab Groundwater	05/08/2019 15:20	1058236
J19-UC01 Grab Groundwater	05/08/2019 16:38	1058237
J13-BR02 Grab Groundwater	05/09/2019 09:13	1058238
J13-BR01 Grab Groundwater	05/09/2019 10:37	1058239
J13-UC03 Grab Groundwater	05/09/2019 12:04	1058240
J13-UC02 Grab Groundwater	05/09/2019 13:01	1058241
J12-BR02 Grab Groundwater	05/09/2019 14:44	1058242
J12-BR01 Grab Groundwater	05/09/2019 16:27	1058243
TB050819 Water	05/08/2019	1058244
J22-BR02 Grab Groundwater	05/10/2019 12:15	1058245
J22-BR01 Grab Groundwater	05/10/2019 13:35	1058246
J17-UC01 Grab Groundwater	05/10/2019 15:30	1058247
J07-UC02 Grab Groundwater	05/10/2019 16:50	1058248

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **J18-UC02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/08/2019 15:20
SDG#: JCV93-01BKG

The Johnson Company, Inc.
ELLE Sample #: GW 1058234
ELLE Group #: 2044093
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	0.9 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.3 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	0.9 J	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	15	0.3	1	1
11997	Trichloroethene	79-01-6	36	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L191402AA	05/20/2019 22:54	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L191402AA	05/20/2019 22:53	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **J18-UC02 MS Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/08/2019 15:20
SDG#: JCV93-01MS

The Johnson Company, Inc.
ELLE Sample #: GW 1058235
ELLE Group #: 2044093
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	160	0.7	20	1
11997	Benzene	71-43-2	23	0.2	1	1
11997	2-Butanone	78-93-3	160	0.3	10	1
11997	Carbon Disulfide	75-15-0	24	0.2	5	1
11997	Chloroform	67-66-3	23	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	21	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	23	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	21	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	26	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	23	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	23	0.2	1	1
11997	1,4-Dioxane	123-91-1	670	29	250	1
11997	Ethylbenzene	100-41-4	22	0.4	1	1
11997	Freon 113	76-13-1	26	0.2	10	1
11997	Methylene Chloride	75-09-2	23	0.3	1	1
11997	Naphthalene	91-20-3	19	1	5	1
11997	Tetrachloroethene	127-18-4	22	0.2	1	1
11997	Toluene	108-88-3	23	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	37	0.3	1	1
11997	Trichloroethene	79-01-6	59	0.2	1	1
11997	Vinyl Chloride	75-01-4	21	0.2	1	1
11997	Xylene (Total)	1330-20-7	65	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L191402AA	05/20/2019 23:16	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L191402AA	05/20/2019 23:15	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **J18-UC02 MSD Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/08/2019 15:20
SDG#: JCV93-01MSD

The Johnson Company, Inc.
ELLE Sample #: GW 1058236
ELLE Group #: 2044093
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	150	0.7	20	1
11997	Benzene	71-43-2	23	0.2	1	1
11997	2-Butanone	78-93-3	150	0.3	10	1
11997	Carbon Disulfide	75-15-0	24	0.2	5	1
11997	Chloroform	67-66-3	23	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	21	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	23	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	21	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	25	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	23	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	22	0.2	1	1
11997	1,4-Dioxane	123-91-1	670	29	250	1
11997	Ethylbenzene	100-41-4	22	0.4	1	1
11997	Freon 113	76-13-1	26	0.2	10	1
11997	Methylene Chloride	75-09-2	23	0.3	1	1
11997	Naphthalene	91-20-3	19	1	5	1
11997	Tetrachloroethene	127-18-4	22	0.2	1	1
11997	Toluene	108-88-3	23	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	37	0.3	1	1
11997	Trichloroethene	79-01-6	58	0.2	1	1
11997	Vinyl Chloride	75-01-4	22	0.2	1	1
11997	Xylene (Total)	1330-20-7	64	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L191402AA	05/20/2019 23:38	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L191402AA	05/20/2019 23:37	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **J19-UC01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/08/2019 16:38
SDG#: JCV93-02

The Johnson Company, Inc.
ELLE Sample #: GW 1058237
ELLE Group #: 2044093
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L191402AA	05/20/2019 22:32	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L191402AA	05/20/2019 22:31	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **J13-BR02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/09/2019 09:13
SDG#: JCV93-03

The Johnson Company, Inc.
ELLE Sample #: GW 1058238
ELLE Group #: 2044093
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191421AA	05/22/2019 15:05	Chelsea B Riehl	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191421AA	05/22/2019 15:04	Chelsea B Riehl	1

*=This limit was used in the evaluation of the final result

Sample Description: **J13-BR01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/09/2019 10:37
SDG#: JCV93-04

The Johnson Company, Inc.
ELLE Sample #: GW 1058239
ELLE Group #: 2044093
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	4	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	0.9 J	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	1	0.3	1	1
11997	Trichloroethene	79-01-6	5	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191421AA	05/22/2019 15:53	Chelsea B Riehl	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191421AA	05/22/2019 15:52	Chelsea B Riehl	1

*=This limit was used in the evaluation of the final result

Sample Description: **J13-UC03 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/09/2019 12:04
SDG#: JCV93-05

The Johnson Company, Inc.
ELLE Sample #: GW 1058240
ELLE Group #: 2044093
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	3	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	0.8 J	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	6	0.3	1	1
11997	Trichloroethene	79-01-6	1	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191421AA	05/22/2019 16:17	Chelsea B Riehl	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191421AA	05/22/2019 16:16	Chelsea B Riehl	1

*=This limit was used in the evaluation of the final result

Sample Description: **J13-UC02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/09/2019 13:01
SDG#: JCV93-06

The Johnson Company, Inc.
ELLE Sample #: GW 1058241
ELLE Group #: 2044093
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	2	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	2	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	1	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	2	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	13	0.3	1	1
11997	Trichloroethene	79-01-6	140	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191421AA	05/22/2019 16:41	Chelsea B Riehl	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191421AA	05/22/2019 16:40	Chelsea B Riehl	1

*=This limit was used in the evaluation of the final result

Sample Description: **J12-BR02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/09/2019 14:44
SDG#: JCV93-07

The Johnson Company, Inc.
ELLE Sample #: GW 1058242
ELLE Group #: 2044093
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191421AA	05/22/2019 17:05	Chelsea B Riehl	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191421AA	05/22/2019 17:04	Chelsea B Riehl	1

*=This limit was used in the evaluation of the final result

Sample Description: **J12-BR01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/09/2019 16:27
SDG#: JCV93-08

The Johnson Company, Inc.
ELLE Sample #: GW 1058243
ELLE Group #: 2044093
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191421AA	05/22/2019 17:28	Chelsea B Riehl	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191421AA	05/22/2019 17:27	Chelsea B Riehl	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB050819 Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/08/2019
SDG#: JCV93-09TB

The Johnson Company, Inc.
ELLE Sample #: GW 1058244
ELLE Group #: 2044093
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

The container used for this analysis was submitted with headspace.

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L191402AA	05/20/2019 22:10	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L191402AA	05/20/2019 22:09	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **J22-BR02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/10/2019 12:15
SDG#: JCV93-10

The Johnson Company, Inc.
ELLE Sample #: GW 1058245
ELLE Group #: 2044093
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191431AA	05/23/2019 15:40	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191431AA	05/23/2019 15:39	Anita M Dale	1

*=This limit was used in the evaluation of the final result

Sample Description: **J22-BR01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/10/2019 13:35
SDG#: JCV93-11

The Johnson Company, Inc.
ELLE Sample #: GW 1058246
ELLE Group #: 2044093
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191431AA	05/23/2019 16:04	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191431AA	05/23/2019 16:03	Anita M Dale	1

*=This limit was used in the evaluation of the final result

Sample Description: **J17-UC01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/10/2019 15:30
SDG#: JCV93-12

The Johnson Company, Inc.
ELLE Sample #: GW 1058247
ELLE Group #: 2044093
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191431AA	05/23/2019 16:28	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191431AA	05/23/2019 16:27	Anita M Dale	1

*=This limit was used in the evaluation of the final result

Sample Description: **J07-UC02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/14/2019 10:25
Collection Date/Time: 05/10/2019 16:50
SDG#: JCV93-13

The Johnson Company, Inc.
ELLE Sample #: GW 1058248
ELLE Group #: 2044093
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	1 J	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	W191431AA	05/23/2019 16:52	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W191431AA	05/23/2019 16:51	Anita M Dale	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2044093
Reported: 05/24/2019 14:29

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: L191402AA	Sample number(s): 1058234-1058237,1058244		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: W191421AA	Sample number(s): 1058238-1058243		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2044093
Reported: 05/24/2019 14:29

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: W191431AA	Sample number(s): 1058245-1058248		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: L191402AA	Sample number(s): 1058234-1058237,1058244								
Acetone	150	153.8			103		54-157		
Benzene	20	22.52			113		80-120		
2-Butanone	150	156.55			104		59-135		
Carbon Disulfide	20	22.78			114		65-128		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2044093
Reported: 05/24/2019 14:29

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Chloroform	20	21.21			106		80-120		
1,2-Dichlorobenzene	20	21.1			106		80-120		
1,1-Dichloroethane	20	22.08			110		80-120		
1,2-Dichloroethane	20	20.8			104		73-124		
1,1-Dichloroethene	20	23.05			115		80-131		
cis-1,2-Dichloroethene	20	22.16			111		80-125		
trans-1,2-Dichloroethene	20	21.56			108		80-126		
1,4-Dioxane	500	802.99			161*		63-146		
Ethylbenzene	20	21.65			108		80-120		
Freon 113	20	22.45			112		73-139		
Methylene Chloride	20	22.46			112		80-120		
Naphthalene	20	20.34			102		53-124		
Tetrachloroethene	20	21			105		80-120		
Toluene	20	22.23			111		80-120		
1,1,1-Trichloroethane	20	20.05			100		67-126		
Trichloroethene	20	24.04			120		80-120		
Vinyl Chloride	20	20.64			103		56-120		
Xylene (Total)	60	62.84			105		80-120		
Batch number: W191421AA	Sample number(s): 1058238-1058243								
Acetone	150	154.55	150	202.3	103	135	54-157	27	30
Benzene	20	20.58	20	21.84	103	109	80-120	6	30
2-Butanone	150	126.48	150	136.72	84	91	59-135	8	30
Carbon Disulfide	20	15.04	20	16.53	75	83	65-128	9	30
Chloroform	20	20.81	20	21.36	104	107	80-120	3	30
1,2-Dichlorobenzene	20	22.07	20	22.42	110	112	80-120	2	30
1,1-Dichloroethane	20	20.27	20	20.94	101	105	80-120	3	30
1,2-Dichloroethane	20	20.89	20	21.38	104	107	73-124	2	30
1,1-Dichloroethene	20	21.84	20	23.25	109	116	80-131	6	30
cis-1,2-Dichloroethene	20	21.87	20	22.98	109	115	80-125	5	30
trans-1,2-Dichloroethene	20	20.92	20	21.79	105	109	80-126	4	30
1,4-Dioxane	500	519.05	500	513.1	104	103	63-146	1	30
Ethylbenzene	20	21.76	20	22.55	109	113	80-120	4	30
Freon 113	20	19.91	20	18.21	100	91	73-139	9	30
Methylene Chloride	20	20.85	20	21.57	104	108	80-120	3	30
Naphthalene	20	18.27	20	18.84	91	94	53-124	3	30
Tetrachloroethene	20	22.55	20	23.69	113	118	80-120	5	30
Toluene	20	22.48	20	23.43	112	117	80-120	4	30
1,1,1-Trichloroethane	20	20.07	20	20.91	100	105	67-126	4	30
Trichloroethene	20	20.77	20	21.33	104	107	80-120	3	30
Vinyl Chloride	20	16.61	20	17.52	83	88	56-120	5	30
Xylene (Total)	60	65.69	60	68.56	109	114	80-120	4	30
Batch number: W191431AA	Sample number(s): 1058245-1058248								
Acetone	150	157.44	150	168.62	105	112	54-157	7	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2044093
Reported: 05/24/2019 14:29

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Benzene	20	21.21	20	21.25	106	106	80-120	0	30
2-Butanone	150	125.87	150	125.17	84	83	59-135	1	30
Carbon Disulfide	20	16.05	20	17.44	80	87	65-128	8	30
Chloroform	20	21.63	20	21.89	108	109	80-120	1	30
1,2-Dichlorobenzene	20	22.65	20	22.78	113	114	80-120	1	30
1,1-Dichloroethane	20	20.77	20	21.67	104	108	80-120	4	30
1,2-Dichloroethane	20	21.84	20	22.54	109	113	73-124	3	30
1,1-Dichloroethene	20	21.2	20	21.96	106	110	80-131	4	30
cis-1,2-Dichloroethene	20	22.42	20	22.7	112	113	80-125	1	30
trans-1,2-Dichloroethene	20	21.23	20	21.84	106	109	80-126	3	30
1,4-Dioxane	500	532.67	500	520.13	107	104	63-146	2	30
Ethylbenzene	20	22.2	20	23.14	111	116	80-120	4	30
Freon 113	20	18.37	20	18.55	92	93	73-139	1	30
Methylene Chloride	20	20.88	20	21.49	104	107	80-120	3	30
Naphthalene	20	18.33	20	18.04	92	90	53-124	2	30
Tetrachloroethene	20	23.09	20	23.88	115	119	80-120	3	30
Toluene	20	22.84	20	24.04	114	120	80-120	5	30
1,1,1-Trichloroethane	20	21.36	20	21.87	107	109	67-126	2	30
Trichloroethene	20	20.79	20	21.74	104	109	80-120	4	30
Vinyl Chloride	20	17	20	18.22	85	91	56-120	7	30
Xylene (Total)	60	66.9	60	69.84	111	116	80-120	4	30

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: L191402AA	Sample number(s): 1058234-1058237,1058244 UNSPK: 1058234									
Acetone	N.D.	150	161.75	150	147.38	108	98	54-157	9	30
Benzene	N.D.	20	23.47	20	23.06	117	115	80-120	2	30
2-Butanone	N.D.	150	156.27	150	154.31	104	103	59-135	1	30
Carbon Disulfide	N.D.	20	23.98	20	23.75	120	119	65-128	1	30
Chloroform	0.915	20	23.13	20	22.68	111	109	80-120	2	30
1,2-Dichlorobenzene	N.D.	20	20.75	20	20.57	104	103	80-120	1	30
1,1-Dichloroethane	0.348	20	23.24	20	22.95	114	113	80-120	1	30
1,2-Dichloroethane	N.D.	20	21.14	20	20.8	106	104	73-124	2	30
1,1-Dichloroethene	0.871	20	25.7	20	25.27	124	122	80-131	2	30
cis-1,2-Dichloroethene	N.D.	20	23.24	20	23.04	116	115	80-120	1	30
trans-1,2-Dichloroethene	N.D.	20	22.82	20	22.44	114	112	80-120	2	30
1,4-Dioxane	N.D.	500	670.85	500	668.67	134	134	63-146	0	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2044093
Reported: 05/24/2019 14:29

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Ethylbenzene	N.D.	20	22.44	20	22.05	112	110	80-120	2	30
Freon 113	N.D.	20	26.02	20	25.86	130	129	73-139	1	30
Methylene Chloride	N.D.	20	22.83	20	22.55	114	113	80-120	1	30
Naphthalene	N.D.	20	18.9	20	18.86	95	94	53-124	0	30
Tetrachloroethene	N.D.	20	21.8	20	21.69	109	108	80-120	1	30
Toluene	N.D.	20	22.76	20	22.59	114	113	80-120	1	30
1,1,1-Trichloroethane	15.05	20	37.48	20	37.02	112	110	67-126	1	30
Trichloroethene	36.04	20	58.87	20	57.81	114	109	80-120	2	30
Vinyl Chloride	N.D.	20	20.94	20	21.87	105	109	56-120	4	30
Xylene (Total)	N.D.	60	65.2	60	63.54	109	106	80-120	3	30

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: W191421AA	Sample number(s): 1058238-1058243 BKG: 1058238			
Acetone	N.D.	N.D.	0 (1)	30
Benzene	N.D.	N.D.	0 (1)	30
2-Butanone	N.D.	N.D.	0 (1)	30
Carbon Disulfide	N.D.	N.D.	0 (1)	30
Chloroform	N.D.	N.D.	0 (1)	30
1,1-Dichloroethane	N.D.	N.D.	0 (1)	30
1,2-Dichloroethane	N.D.	N.D.	0 (1)	30
1,1-Dichloroethene	N.D.	N.D.	0 (1)	30
cis-1,2-Dichloroethene	N.D.	N.D.	0 (1)	30
trans-1,2-Dichloroethene	N.D.	N.D.	0 (1)	30
Ethylbenzene	N.D.	N.D.	0 (1)	30
Methylene Chloride	N.D.	N.D.	0 (1)	30
Tetrachloroethene	N.D.	N.D.	0 (1)	30
Toluene	N.D.	N.D.	0 (1)	30
1,1,1-Trichloroethane	N.D.	N.D.	0 (1)	30
Trichloroethene	N.D.	N.D.	0 (1)	30
Vinyl Chloride	N.D.	N.D.	0 (1)	30
Xylene (Total)	N.D.	N.D.	0 (1)	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2044093
Reported: 05/24/2019 14:29

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: L191402AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1058234	93	99	101	92
1058235	97	99	102	100
1058236	97	100	102	100
1058237	96	100	100	96
1058244	96	100	102	95
Blank	93	100	102	97
LCS	95	100	103	100
MS	97	99	102	100
MSD	97	100	102	100
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: W191421AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1058238	96	102	102	90
1058239	95	101	103	89
1058240	94	102	102	89
1058241	94	102	102	88
1058242	95	101	100	88
1058243	95	102	102	87
Blank	95	97	103	90
DUP	94	100	103	89
LCS	95	97	105	95
LCSD	95	99	104	95
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: W191431AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1058245	100	102	101	87
1058246	99	105	101	87
1058247	101	101	101	86
1058248	100	103	99	86
Blank	95	101	102	88
LCS	96	103	104	95
LCSD	97	103	106	97
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 6556 Group # 2044093 Sample # 1058234-48

COC #583007

Client Information

Client: The Johnson Company/VHB	Acct. #: 06556
Project Name/#: AB-New Windsor/1-0145-05/58300	PWSID #:
Project Manager: George Lester	P.O. #:
Sampler: Adam Rodtoy	Quote #:
State where samples were collected: NY	For Compliance: Yes ☐ No ☒

Sample Identification	Collected Date	Collected Time	Grab	Composite	Matrix: Soil	Sediment	Tissue	Water: Potable	Ground	NPDES	Surface	Other:	Total # of Containers	Analysis Requested: 8260-VOCs (H)	Remarks
J18-UC02	5/8/19	1520	X					X					9	X	MS/MSD
J19-UC01	5/8/19	1638	X					X					3	X	
J13-BR02	5/9/19	913	X					X					3	X	
J13-BR01	5/9/19	1037	X					X					3	X	
J13-UC03	5/9/19	1204	X					X					3	X	
J13-UC02	5/9/19	1301	X					X					3	X	
J12-BR02	5/9/19	1444	X					X					3	X	
J12-BR01	5/9/19	1627	X					X					3	X	
TB050819	—	—	—					DI					2		TRIP BLANK

Preservation and Filtration Codes: H

Preservation Codes: H=HCl, T=Thiosulfate, N=HNO_3, B=NaOH, S=H_2SO_4, P=H_3PO_4, F=Field Filtered, O=Other

For Lab Use Only: FSC: _____ SCR#: _____

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: _____

E-mail address: Glester@vhb.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)

Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13

NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	5/13/19	1500			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	5/14/19	1025

EDD Required? (Yes) No

If yes, format: Excel

Site-Specific QC (MS/MSD/Dup)? (Yes) No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS _____ FedEx X Other _____

Temperature upon receipt 6.2 °C

Environmental Analysis Request/Chain of Custody

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Acct. # 6556 Group # 2044093 Sample # 1058234-48

COC #583011

Client Information

Client: The Johnson Company/VHB	Acct. #: 06556
Project Name/#: AD-NewWindsor/1-0145-05/58300	PWSID #:
Project Manager: George Lester	P.O. #:
Sampler: Adam Rostan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☐ No ☒

Sample Identification	Collected Date	Collected Time	Grab	Composite	Matrix: Soil	Sediment	Tissue	Potable	Ground	Water	NPDES	Surface	Other:	Total # of Containers	Analysis Requested: 8260 - VOCs	Preservation and Filtration Codes: H
J22-BR02	5/10/19	1215	X							X				3	X	
J22-BR01	5/10/19	1335	X							X				3	X	
J17-VC01	5/10/19	1530	X							X				3	X	
J07-VC02	5/10/19	1650	X							X				3	X	

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: _____

E-mail address: Glester@vhb.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	5/13/19	1500			
				5/14/19	1025

EDD Required? Yes No

If yes, format: Excel

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS _____ FedEx X Other _____

Temperature upon receipt 1.2-1.7 °C

For Lab Use Only

FSC: _____

SCR#: _____

Preservation Codes

H=HCl T=Thiosulfate

N=HNO_3 B=NaOH

S=H_2SO_4 P=H_3PO_4

F=Field Filtered O=Other

Remarks

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Sample Administration Receipt Documentation Log

Doc Log ID: 248904

Group Number(s): 2044093

Client: The Johnson Company

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	05/14/2019 10:25
Number of Packages:	2	Number of Projects:	2
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Simon Nies (25112) at 15:36 on 05/14/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	1.2	DT	Wet	Y	Bagged	N
2	DT146	1.7	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T 717-656-2300
F 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCV93

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
1058234	J18-UC02	X		1	Unspiked
1058235	J18-UC02 MS	X		1	Matrix Spike
1058236	J18-UC02 MSD	X		1	Matrix Spike Duplicate
1058237	J19-UC01	X		1	
1058238	J13-BR02	X		1	
1058239	J13-BR01	X		1	
1058240	J13-UC03	X		1	
1058241	J13-UC02	X		1	
1058242	J12-BR02	X		1	
1058243	J12-BR01	X		1	
1058244	TB050819	X		1	Trip Blank
1058245	J22-BR02	X		1	
1058246	J22-BR01	X		1	
1058247	J17-UC01	X		1	
1058248	J07-UC02	X		1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCV93

GC/MS Volatiles

Fraction: Volatiles by GC/MS

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

LCS/LCSD

(Sample number(s): 1058234, 1058237, 1058244: Analysis: 11997)
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

Batch#: L191402AA (Sample number(s): 1058234-1058237, 1058244, UNSPK: 1058234)
The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: 1,4-Dioxane

SAMPLE ANALYSIS:

(Sample number(s): 1058244: Analysis: 11997)
The container used for this analysis was submitted with headspace.

No additional problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

1. Relative Response Factor (RRF)

$$RRF = \frac{AX}{Ais} \times \frac{Cis}{Cx}$$

Where:

Ax = Area of the characteristic ion for the compound to be measured
Ais = Area of the characteristic ion for the specific internal standard to be measured
Cis = Concentration of the internal standard
Cx = Concentration of the compound to be measured

2. % Relative Standard Deviation (%RSD)

$$\%RSD = \frac{standard\ deviation}{Mean} \times 100$$

3. % Difference

$$\%D = \frac{RRFc - RRFi}{RRFi} \times 100$$

Where:

RRFc = Relative response factor from the continuing calibration standard
RRFi = Mean relative response factor from the initial calibration

4. Concentration

$$Concentration\ (\mu g/L) = \frac{(Ax)(Is)(Df)}{(Ais)(RRF)}$$

Where:

Ax, Ais, and RRF are as given in 1. above
Is = Amount of internal standard added in parts per billion (µg/L)
Df = Dilution factor

5. % Recovery (% Rec)

$$\%Rec = \frac{SSR - SR}{SA} \times 100$$

Where:

SSR = Spiked sample result
SR = Sample result
SA = Spike added

6. Relative Percent Difference (RPD)

$$RPD = \frac{(MSR - MSRD)}{(1/2)(MSR + MSRD)} \times 100$$

Where:

MSR = Matrix spike recovery
MSRD = Matrix spike recovery duplicate

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: The Johnson Company, Inc.
SDG: JCV93

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
VOCs- 5ml Water by 8260C/D	L191402AA	VBLKL97	05/20/2019 20:53
		LCSL97	05/20/2019 20:09
		1058234 UNSPK	05/20/2019 22:54
		1058235 MS	05/20/2019 23:16
		1058236 MSD	05/20/2019 23:38
		1058237	05/20/2019 22:32
		1058244	05/20/2019 22:10
VOCs- 5ml Water by 8260C/D	W191421AA	VBLKW34	05/22/2019 12:52
		LCSW34	05/22/2019 13:16
		LCDW34	05/22/2019 13:40
		1058238 BKG	05/22/2019 15:05
		1058238 DUP	05/22/2019 15:29
		1058239	05/22/2019 15:53
		1058240	05/22/2019 16:17
		1058241	05/22/2019 16:41
		1058242	05/22/2019 17:05
		1058243	05/22/2019 17:28
VOCs- 5ml Water by 8260C/D	W191431AA	VBLKW35	05/23/2019 07:22
		LCSW35	05/23/2019 06:10
		LCDW35	05/23/2019 06:34
		1058245	05/23/2019 15:40
		1058246	05/23/2019 16:04
		1058247	05/23/2019 16:28
		1058248	05/23/2019 16:52

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: JCV93
Matrix: LIQUID

Fraction: Volatiles by GC/MS

L191402AA / VBLKL97 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	05/20/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	05/20/19	N.D.	ug/l	0.2	1
Acetone	05/20/19	N.D.	ug/l	0.7	20
Freon 113	05/20/19	N.D.	ug/l	0.2	10
Carbon Disulfide	05/20/19	N.D.	ug/l	0.2	5
Methylene Chloride	05/20/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	05/20/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	05/20/19	N.D.	ug/l	0.2	1
2-Butanone	05/20/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	05/20/19	N.D.	ug/l	0.2	1
Chloroform	05/20/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	05/20/19	N.D.	ug/l	0.3	1
Benzene	05/20/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	05/20/19	N.D.	ug/l	0.3	1
Trichloroethene	05/20/19	N.D.	ug/l	0.2	1
1,4-Dioxane	05/20/19	N.D.	ug/l	29	250
Toluene	05/20/19	N.D.	ug/l	0.2	1
Tetrachloroethene	05/20/19	N.D.	ug/l	0.2	1
Ethylbenzene	05/20/19	N.D.	ug/l	0.4	1
Xylene (Total)	05/20/19	N.D.	ug/l	1	5
1,2-Dichlorobenzene	05/20/19	N.D.	ug/l	0.2	5
Naphthalene	05/20/19	N.D.	ug/l	1	5

W191421AA / VBLKW34 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	05/22/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	05/22/19	N.D.	ug/l	0.2	1
Acetone	05/22/19	N.D.	ug/l	0.7	20
Freon 113	05/22/19	N.D.	ug/l	0.2	10
Carbon Disulfide	05/22/19	N.D.	ug/l	0.2	5
Methylene Chloride	05/22/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	05/22/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	05/22/19	N.D.	ug/l	0.2	1
2-Butanone	05/22/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	05/22/19	N.D.	ug/l	0.2	1
Chloroform	05/22/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	05/22/19	N.D.	ug/l	0.3	1
Benzene	05/22/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	05/22/19	N.D.	ug/l	0.3	1
Trichloroethene	05/22/19	N.D.	ug/l	0.2	1
1,4-Dioxane	05/22/19	N.D.	ug/l	29	250
Toluene	05/22/19	N.D.	ug/l	0.2	1
Tetrachloroethene	05/22/19	N.D.	ug/l	0.2	1
Ethylbenzene	05/22/19	N.D.	ug/l	0.4	1
Xylene (Total)	05/22/19	N.D.	ug/l	1	5

Fraction: Volatiles by GC/MS

W191421AA / VBLKW34 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
1,2-Dichlorobenzene	05/22/19	N.D.	ug/l	0.2	5
Naphthalene	05/22/19	N.D.	ug/l	1	5

W191431AA / VBLKW35 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	05/23/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	05/23/19	N.D.	ug/l	0.2	1
Acetone	05/23/19	N.D.	ug/l	0.7	20
Freon 113	05/23/19	N.D.	ug/l	0.2	10
Carbon Disulfide	05/23/19	N.D.	ug/l	0.2	5
Methylene Chloride	05/23/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	05/23/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	05/23/19	N.D.	ug/l	0.2	1
2-Butanone	05/23/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	05/23/19	N.D.	ug/l	0.2	1
Chloroform	05/23/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	05/23/19	N.D.	ug/l	0.3	1
Benzene	05/23/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	05/23/19	N.D.	ug/l	0.3	1
Trichloroethene	05/23/19	N.D.	ug/l	0.2	1
1,4-Dioxane	05/23/19	N.D.	ug/l	29	250
Toluene	05/23/19	N.D.	ug/l	0.2	1
Tetrachloroethene	05/23/19	N.D.	ug/l	0.2	1
Ethylbenzene	05/23/19	N.D.	ug/l	0.4	1
Xylene (Total)	05/23/19	N.D.	ug/l	1	5
1,2-Dichlorobenzene	05/23/19	N.D.	ug/l	0.2	5
Naphthalene	05/23/19	N.D.	ug/l	1	5

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Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: JCV93
Matrix: LIQUID

Fraction: Volatiles by GC/MS

L191402AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKL97	100	80 - 120	97	80 - 120	93	80 - 120	102	80 - 120
LCSL97	100	80 - 120	100	80 - 120	95	80 - 120	103	80 - 120
1058234 UNSPK	99	80 - 120	92	80 - 120	93	80 - 120	101	80 - 120
1058235 MS	99	80 - 120	100	80 - 120	97	80 - 120	102	80 - 120
1058236 MSD	100	80 - 120	100	80 - 120	97	80 - 120	102	80 - 120
1058237	100	80 - 120	96	80 - 120	96	80 - 120	100	80 - 120
1058244	100	80 - 120	95	80 - 120	96	80 - 120	102	80 - 120

W191421AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKW34	97	80 - 120	90	80 - 120	95	80 - 120	103	80 - 120
LCSW34	97	80 - 120	95	80 - 120	95	80 - 120	105	80 - 120
LCDW34	99	80 - 120	95	80 - 120	95	80 - 120	104	80 - 120
1058238 BKG	102	80 - 120	90	80 - 120	96	80 - 120	102	80 - 120
1058238 DUP	100	80 - 120	89	80 - 120	94	80 - 120	103	80 - 120
1058239	101	80 - 120	89	80 - 120	95	80 - 120	103	80 - 120
1058240	102	80 - 120	89	80 - 120	94	80 - 120	102	80 - 120
1058241	102	80 - 120	88	80 - 120	94	80 - 120	102	80 - 120
1058242	101	80 - 120	88	80 - 120	95	80 - 120	100	80 - 120
1058243	102	80 - 120	87	80 - 120	95	80 - 120	102	80 - 120

W191431AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKW35	101	80 - 120	88	80 - 120	95	80 - 120	102	80 - 120
LCSW35	103	80 - 120	95	80 - 120	96	80 - 120	104	80 - 120
LCDW35	103	80 - 120	97	80 - 120	97	80 - 120	106	80 - 120
1058245	102	80 - 120	87	80 - 120	100	80 - 120	101	80 - 120
1058246	105	80 - 120	87	80 - 120	99	80 - 120	101	80 - 120
1058247	101	80 - 120	86	80 - 120	101	80 - 120	101	80 - 120
1058248	103	80 - 120	86	80 - 120	100	80 - 120	99	80 - 120

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 1058234 MS: 1058235 MSD: 1058236 **Analyte**	Batch: **L191402AA** (Sample number(s): 1058234-1058237, 1058244)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	N.D.	20.94	21.87	105	109	56-120	4	30
1,1-Dichloroethene	20	0.871 J	25.7	25.27	124	122	80-131	2	30
Acetone	150	N.D.	161.75	147.38	108	98	54-157	9	30
Freon 113	20	N.D.	26.02	25.86	130	129	73-139	1	30
Carbon Disulfide	20	N.D.	23.98	23.75	120	119	65-128	1	30
Methylene Chloride	20	N.D.	22.83	22.55	114	113	80-120	1	30
trans-1,2-Dichloroethene	20	N.D.	22.82	22.44	114	112	80-120	2	30
1,1-Dichloroethane	20	0.348 J	23.24	22.95	114	113	80-120	1	30
2-Butanone	150	N.D.	156.27	154.31	104	103	59-135	1	30
cis-1,2-Dichloroethene	20	N.D.	23.24	23.04	116	115	80-120	1	30
1,1,1-Trichloroethane	20	15.04	37.48	37.02	112	110	67-126	1	30
Chloroform	20	0.915 J	23.13	22.68	111	109	80-120	2	30
1,2-Dichloroethane	20	N.D.	21.14	20.8	106	104	73-124	2	30
Benzene	20	N.D.	23.47	23.06	117	115	80-120	2	30
Trichloroethene	20	36.04	58.87	57.81	114	109	80-120	2	30
1,4-Dioxane	500	N.D.	670.85	668.67	134	134	63-146	0	30
Toluene	20	N.D.	22.76	22.59	114	113	80-120	1	30
Tetrachloroethene	20	N.D.	21.8	21.69	109	108	80-120	1	30
Ethylbenzene	20	N.D.	22.44	22.05	112	110	80-120	2	30
Xylene (Total)	60	N.D.	65.2	63.54	109	106	80-120	3	30
1,2-Dichlorobenzene	20	N.D.	20.75	20.57	104	103	80-120	1	30
Naphthalene	20	N.D.	18.9	18.86	95	94	53-124	0	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSL97	Batch: **L191402AA** (Sample number(s): 1058234-1058237, 1058244)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	20.64	NA	103	NA	56-120	NA	NA
1,1-Dichloroethene	20	23.05	NA	115	NA	80-131	NA	NA
Acetone	150	153.8	NA	103	NA	54-157	NA	NA
Freon 113	20	22.45	NA	112	NA	73-139	NA	NA
Carbon Disulfide	20	22.78	NA	114	NA	65-128	NA	NA
Methylene Chloride	20	22.46	NA	112	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	21.56	NA	108	NA	80-126	NA	NA
1,1-Dichloroethane	20	22.08	NA	110	NA	80-120	NA	NA
2-Butanone	150	156.55	NA	104	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	22.16	NA	111	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	20.05	NA	100	NA	67-126	NA	NA
Chloroform	20	21.21	NA	106	NA	80-120	NA	NA
1,2-Dichloroethane	20	20.8	NA	104	NA	73-124	NA	NA
Benzene	20	22.52	NA	113	NA	80-120	NA	NA
Trichloroethene	20	24.04	NA	120	NA	80-120	NA	NA
1,4-Dioxane	500	802.99	NA	161 *	NA	63-146	NA	NA
Toluene	20	22.23	NA	111	NA	80-120	NA	NA
Tetrachloroethene	20	21	NA	105	NA	80-120	NA	NA
Ethylbenzene	20	21.65	NA	108	NA	80-120	NA	NA
Xylene (Total)	60	62.84	NA	105	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	21.1	NA	106	NA	80-120	NA	NA
Naphthalene	20	20.34	NA	102	NA	53-124	NA	NA

LCS: LCSW34 LCSD: LCDW34	Batch: **W191421AA** (Sample number(s): 1058238-1058243)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	16.61	17.52	83	88	56-120	5	30
1,1-Dichloroethene	20	21.84	23.25	109	116	80-131	6	30
Acetone	150	154.55	202.3	103	135	54-157	27	30
Freon 113	20	19.91	18.21	100	91	73-139	9	30
Carbon Disulfide	20	15.04	16.53	75	83	65-128	9	30
Methylene Chloride	20	20.85	21.57	104	108	80-120	3	30
trans-1,2-Dichloroethene	20	20.92	21.79	105	109	80-126	4	30
1,1-Dichloroethane	20	20.27	20.94	101	105	80-120	3	30
2-Butanone	150	126.48	136.72	84	91	59-135	8	30
cis-1,2-Dichloroethene	20	21.87	22.98	109	115	80-125	5	30
1,1,1-Trichloroethane	20	20.07	20.91	100	105	67-126	4	30
Chloroform	20	20.81	21.36	104	107	80-120	3	30
1,2-Dichloroethane	20	20.89	21.38	104	107	73-124	2	30
Benzene	20	20.58	21.84	103	109	80-120	6	30
Trichloroethene	20	20.77	21.33	104	107	80-120	3	30

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSW34 LCSD: LCDW34 **Analyte**	Batch: **W191421AA** (Sample number(s): 1058238-1058243) **Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
1,4-Dioxane	500	519.05	513.1	104	103	63-146	1	30
Toluene	20	22.48	23.43	112	117	80-120	4	30
Tetrachloroethene	20	22.55	23.69	113	118	80-120	5	30
Ethylbenzene	20	21.76	22.55	109	113	80-120	4	30
Xylene (Total)	60	65.69	68.56	109	114	80-120	4	30
1,2-Dichlorobenzene	20	22.07	22.42	110	112	80-120	2	30
Naphthalene	20	18.27	18.84	91	94	53-124	3	30

LCS: LCSW35 LCSD: LCDW35 **Analyte**	Batch: **W191431AA** (Sample number(s): 1058245-1058248) **Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	17	18.22	85	91	56-120	7	30
1,1-Dichloroethene	20	21.2	21.96	106	110	80-131	4	30
Acetone	150	157.44	168.62	105	112	54-157	7	30
Freon 113	20	18.37	18.55	92	93	73-139	1	30
Carbon Disulfide	20	16.05	17.44	80	87	65-128	8	30
Methylene Chloride	20	20.88	21.49	104	107	80-120	3	30
trans-1,2-Dichloroethene	20	21.23	21.84	106	109	80-126	3	30
1,1-Dichloroethane	20	20.77	21.67	104	108	80-120	4	30
2-Butanone	150	125.87	125.17	84	83	59-135	1	30
cis-1,2-Dichloroethene	20	22.42	22.7	112	113	80-125	1	30
1,1,1-Trichloroethane	20	21.36	21.87	107	109	67-126	2	30
Chloroform	20	21.63	21.89	108	109	80-120	1	30
1,2-Dichloroethane	20	21.84	22.54	109	113	73-124	3	30
Benzene	20	21.21	21.25	106	106	80-120	0	30
Trichloroethene	20	20.79	21.74	104	109	80-120	4	30
1,4-Dioxane	500	532.67	520.13	107	104	63-146	2	30
Toluene	20	22.84	24.04	114	120	80-120	5	30
Tetrachloroethene	20	23.09	23.88	115	119	80-120	3	30
Ethylbenzene	20	22.2	23.14	111	116	80-120	4	30
Xylene (Total)	60	66.9	69.84	111	116	80-120	4	30
1,2-Dichlorobenzene	20	22.65	22.78	113	114	80-120	1	30
Naphthalene	20	18.33	18.04	92	90	53-124	2	30

Fraction: Volatiles by GC/MS

11997: VOCs- 5ml Water by 8260C/D Analyte Name	Default MDL	Default LOQ	Units
Vinyl Chloride	0.2	1	ug/l
1,1-Dichloroethene	0.2	1	ug/l
Acetone	0.7	20	ug/l
Freon 113	0.2	10	ug/l
Carbon Disulfide	0.2	5	ug/l
Methylene Chloride	0.3	1	ug/l
trans-1,2-Dichloroethene	0.2	1	ug/l
1,1-Dichloroethane	0.2	1	ug/l
2-Butanone	0.3	10	ug/l
cis-1,2-Dichloroethene	0.2	1	ug/l
Chloroform	0.2	1	ug/l
1,1,1-Trichloroethane	0.3	1	ug/l
Benzene	0.2	1	ug/l
1,2-Dichloroethane	0.3	1	ug/l
Trichloroethene	0.2	1	ug/l
1,4-Dioxane	29	250	ug/l
Toluene	0.2	1	ug/l
Tetrachloroethene	0.2	1	ug/l
Ethylbenzene	0.4	1	ug/l
Xylene (Total)	1	5	ug/l
1,2-Dichlorobenzene	0.2	5	ug/l
Naphthalene	1	5	ug/l

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: wf19t01.d BFB Injection Date: 02/19/19

Instrument ID: HP09137 BFB Injection Time: 11:32

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.42
75	30.0 - 60.0% of mass 95	45.48
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.75
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	82.25
175	5.0 - 9.0% of mass 174	5.88 (7.14)1
176	Greater than 95.0%, but less than 101.0% of mass 174	79.33 (96.46)1
177	5.0 - 9.0% of mass 176	5.24 (6.60)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	wf19i01.d	02/19/19	12:21
02	VSTD100	wf19i02.d	02/19/19	12:45
03	VSTD50	wf19i03.d	02/19/19	13:09
04	VSTD20	wf19i04.d	02/19/19	13:33
05	VSTD10	wf19i05.d	02/19/19	13:57
06	VSTD4	wf19i06.d	02/19/19	14:21
07	VSTD1	wf19i07.d	02/19/19	14:44

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: wf20t01.d BFB Injection Date: 02/20/19

Instrument ID: HP09137 BFB Injection Time: 08:47

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.92
75	30.0 - 60.0% of mass 95	44.90
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.65
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	88.14
175	5.0 - 9.0% of mass 174	6.26 (7.10)1
176	Greater than 95.0%, but less than 101.0% of mass 174	84.40 (95.75)1
177	5.0 - 9.0% of mass 176	5.69 (6.75)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	wf20c02.d	02/20/19	10:55
02	LCSW62	wf20l01.d	02/20/19	12:07

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: wy22t01.d BFB Injection Date: 05/22/19

Instrument ID: HP09137 BFB Injection Time: 11:37

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.12
75	30.0 - 60.0% of mass 95	44.48
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.78
173	Less than 2.0% of mass 174	0.16 (0.18)1
174	Greater than 50.0% of mass 95	87.49
175	5.0 - 9.0% of mass 174	6.26 (7.15)1
176	Greater than 95.0%, but less than 101.0% of mass 174	85.15 (97.32)1
177	5.0 - 9.0% of mass 176	5.59 (6.57)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD150	wy22c01.d	05/22/19	12:04
02	VBLKW34	wy22b02.d	05/22/19	12:52
03	LCSW34	wy22l01.d	05/22/19	13:16
04	LCDW34	wy22l02.d	05/22/19	13:40
05	1054613	wy22s01.d	05/22/19	14:18
06	1054604	wy22s02.d	05/22/19	14:42
07	1058238	wy22s03.d	05/22/19	15:05
08	1058238DUP	wy22s04.d	05/22/19	15:29
09	1058239	wy22s05.d	05/22/19	15:53
10	1058240	wy22s06.d	05/22/19	16:17
11	1058241	wy22s07.d	05/22/19	16:41
12	1058242	wy22s08.d	05/22/19	17:05
13	1058243	wy22s09.d	05/22/19	17:28
14	1056511	wy22s10.d	05/22/19	17:52
15	1056512	wy22s11.d	05/22/19	18:16
16	1056513	wy22s12.d	05/22/19	18:40
17	1056514	wy22s13.d	05/22/19	19:04
18	1056515	wy22s14.d	05/22/19	19:27
19	1056516	wy22s15.d	05/22/19	19:52
20	1056517	wy22s16.d	05/22/19	20:16
21	1056518	wy22s17.d	05/22/19	20:39
22	1056500	wy22s18.d	05/22/19	21:03

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: wy22t01.d BFB Injection Date: 05/22/19

Instrument ID: HP09137 BFB Injection Time: 11:37

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.12
75	30.0 - 60.0% of mass 95	44.48
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.78
173	Less than 2.0% of mass 174	0.16 (0.18)1
174	Greater than 50.0% of mass 95	87.49
175	5.0 - 9.0% of mass 174	6.26 (7.15)1
176	Greater than 95.0%, but less than 101.0% of mass 174	85.15 (97.32)1
177	5.0 - 9.0% of mass 176	5.59 (6.57)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1056501DL	wy22s19.d	05/22/19	21:27
24	1056502	wy22s20.d	05/22/19	21:51
25	1056503	wy22s21.d	05/22/19	22:15

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: wy23t01.d BFB Injection Date: 05/23/19

Instrument ID: HP09137 BFB Injection Time: 05:16

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.43
75	30.0 - 60.0% of mass 95	45.77
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.27
173	Less than 2.0% of mass 174	0.41 (0.47)1
174	Greater than 50.0% of mass 95	86.87
175	5.0 - 9.0% of mass 174	6.53 (7.52)1
176	Greater than 95.0%, but less than 101.0% of mass 174	84.18 (96.91)1
177	5.0 - 9.0% of mass 176	5.73 (6.81)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	wy23c01.d	05/23/19	05:46
02	LCSW35	wy23l01.d	05/23/19	06:10
03	LCDW35	wy23l02.d	05/23/19	06:34
04	MDL0.5 - MDL0.5	wy23m01.d	05/23/19	06:58
05	VBLKW35	wy23b01.d	05/23/19	07:22
06	1054642	wy23s01.d	05/23/19	07:45
07	1054636	wy23s02.d	05/23/19	08:09
08	1054639	wy23s03.d	05/23/19	08:33
09	1054640	wy23s04.d	05/23/19	08:57
10	1056096	wy23s05.d	05/23/19	09:21
11	1056099	wy23s06.d	05/23/19	09:44
12	1056100	wy23s07.d	05/23/19	10:08
13	1056102	wy23s08.d	05/23/19	10:32
14	1056221	wy23s09.d	05/23/19	10:56
15	1056222	wy23s10.d	05/23/19	11:20
16	1056225	wy23s11.d	05/23/19	11:44
17	1056226	wy23s12.d	05/23/19	12:08
18	1056754	wy23s13.d	05/23/19	12:32
19	1056755	wy23s14.d	05/23/19	12:56
20	MDL4.0 - MDL4.0	wy23m02.d	05/23/19	13:17
21	1056758	wy23s15.d	05/23/19	13:41
22	1056759	wy23s16.d	05/23/19	14:04

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: wy23t01.d BFB Injection Date: 05/23/19

Instrument ID: HP09137 BFB Injection Time: 05:16

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.43
75	30.0 - 60.0% of mass 95	45.77
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.27
173	Less than 2.0% of mass 174	0.41 (0.47)1
174	Greater than 50.0% of mass 95	86.87
175	5.0 - 9.0% of mass 174	6.53 (7.52)1
176	Greater than 95.0%, but less than 101.0% of mass 174	84.18 (96.91)1
177	5.0 - 9.0% of mass 176	5.73 (6.81)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1057343	wy23s17.d	05/23/19	14:28
24	1057344	wy23s18.d	05/23/19	14:52
25	1057345	wy23s19.d	05/23/19	15:16
26	1058245	wy23s20.d	05/23/19	15:40
27	1058246	wy23s21.d	05/23/19	16:04
28	1058247	wy23s22.d	05/23/19	16:28
29	1058248	wy23s23.d	05/23/19	16:52

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: lm18t01.d BFB Injection Date: 03/18/19

Instrument ID: HP09915 BFB Injection Time: 10:33

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.40
75	30.0 - 60.0% of mass 95	50.76
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.71
173	Less than 2.0% of mass 174	0.42 (0.52)1
174	Greater than 50.0% of mass 95	81.93
175	5.0 - 9.0% of mass 174	5.68 (6.93)1
176	Greater than 95.0%, but less than 101.0% of mass 174	79.36 (96.86)1
177	5.0 - 9.0% of mass 176	5.34 (6.73)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	lm18i01.d	03/18/19	11:37
02	VSTD100	lm18i02.d	03/18/19	11:59
03	VSTD50	lm18i03.d	03/18/19	12:21
04	VSTD20	lm18i04.d	03/18/19	12:42
05	VSTD10	lm18i06.d	03/18/19	13:04
06	VSTD4	lm18i07.d	03/18/19	13:27
07	VSTD1	lm18i08.d	03/18/19	13:50
08	VSTD300	lm18i10.d	03/18/19	15:18
09	VSTD100	lm18i11.d	03/18/19	15:40
10	VSTD50	lm18i12.d	03/18/19	16:01
11	VSTD20	lm18i13.d	03/18/19	16:23
12	VSTD10	lm18i14.d	03/18/19	16:45
13	VSTD4	lm18i15.d	03/18/19	17:07
14	VSTD1	lm18i16.d	03/18/19	17:29
15	LCSL72	lm18v05.d	03/18/19	18:12
16	LGCICV	lm18v02.d	03/18/19	21:45

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ly20t05.d BFB Injection Date: 05/20/19

Instrument ID: HP09915 BFB Injection Time: 19:10

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.06
75	30.0 - 60.0% of mass 95	51.28
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.93
173	Less than 2.0% of mass 174	0.57 (0.70)1
174	Greater than 50.0% of mass 95	80.86
175	5.0 - 9.0% of mass 174	6.06 (7.49)1
176	Greater than 95.0%, but less than 101.0% of mass 174	79.20 (97.94)1
177	5.0 - 9.0% of mass 176	4.84 (6.11)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	ly20c05.d	05/20/19	19:47
02	LCSL97	ly20s31.d	05/20/19	20:09
03	VBLKL97	ly20b31.d	05/20/19	20:53
04	1053482	ly20s32.d	05/20/19	21:26
05	1053483	ly20s33.d	05/20/19	21:48
06	1058244	ly20s34.d	05/20/19	22:10
07	1058237	ly20s35.d	05/20/19	22:32
08	1058234	ly20s36.d	05/20/19	22:54
09	1058235MS	ly20s37.d	05/20/19	23:16
10	1058236MSD	ly20s38.d	05/20/19	23:38
11	1054121	ly20s39.d	05/21/19	00:21
12	1054115	ly20s40.d	05/21/19	00:43
13	1054118	ly20s41.d	05/21/19	01:05
14	1054119	ly20s42.d	05/21/19	01:27
15	1054120	ly20s43.d	05/21/19	01:49
16	1054109	ly20s44.d	05/21/19	02:11
17	1054110	ly20s45.d	05/21/19	02:33
18	1054111	ly20s46.d	05/21/19	02:54
19	1054112	ly20s47.d	05/21/19	03:16
20	1054113	ly20s48.d	05/21/19	03:38
21	1054114	ly20s49.d	05/21/19	04:00
22	1054116	ly20s50.d	05/21/19	04:22

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ly20t05.d BFB Injection Date: 05/20/19

Instrument ID: HP09915 BFB Injection Time: 19:10

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.06
75	30.0 - 60.0% of mass 95	51.28
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.93
173	Less than 2.0% of mass 174	0.57 (0.70)1
174	Greater than 50.0% of mass 95	80.86
175	5.0 - 9.0% of mass 174	6.06 (7.49)1
176	Greater than 95.0%, but less than 101.0% of mass 174	79.20 (97.94)1
177	5.0 - 9.0% of mass 176	4.84 (6.11)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1054116DL	ly20s51.d	05/21/19	04:44
24	1054117	ly20s52.d	05/21/19	05:06
25	1054117DL	ly20s53.d	05/21/19	05:27
26	1054108	ly20s54.d	05/21/19	05:49
27	1054108DL	ly20s55.d	05/21/19	06:11

FORM V VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 03/18/19 03/18/19

Heated Purge: (Y/N) Y Calibration Times: 11:37 13:50

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = lm18i08.d RRF 4 = lm18i07.d RRF 10= lm18i06.d
RRF 20= lm18i04.d RRF 50= lm18i03.d RRF100= lm18i02.d RRF300= lm18i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
Dichlorodifluoromethane	#0.3585	0.4558	0.4771	0.4972	0.4136	0.4216	0.4181	0.4346	11	AVG	#
Chloromethane	#0.3999	0.4300	0.4223	0.4146	0.3755	0.3982	0.3764	0.4024	5	AVG	#
1,3-Butadiene	0.2229	0.2421	0.2141	0.2084	0.2002	0.2004	0.1920	0.2114	8	AVG	
Vinyl Chloride	#0.3753	0.4199	0.4160	0.4103	0.3724	0.3907	0.3752	0.3942	5	AVG	#
Bromomethane	#0.3487	0.3621	0.3617	0.3516	0.3170	0.3423	0.3175	0.3430	6	AVG	#
Chloroethane	#0.2405	0.2463	0.2378	0.2322	0.2099	0.2255	0.2122	0.2292	6	AVG	#
Dichlorofluoromethane	0.5409	0.5664	0.5718	0.5594	0.5243	0.5433	0.5138	0.5457	4	AVG	
n-Pentane	0.2980	0.3244	0.3424	0.3336	0.3148	0.3089	0.2990	0.3173	5	AVG	
Trichlorofluoromethane	#0.4647	0.5746	0.5430	0.5478	0.4800	0.4996	0.4924	0.5146	8	AVG	#
Ethyl ether	0.2443	0.2553	0.2536	0.2327	0.2326	0.2382	0.2264	0.2404	5	AVG	
Freon 123a	0.3072	0.3164	0.2916	0.2749	0.2774	0.2791	0.2757	0.2889	6	AVG	
Acrolein	1.8212	1.7444	2.1832	1.8390	1.8175	2.1060	2.1432	1.9506	9	AVG	
1,1-Dichloroethene	#0.1465	0.1743	0.1710	0.1684	0.1722	0.1787	0.1840	0.1707	7	AVG	#
1,1-Dichloroethene(2)	#0.0947	0.0983	0.0933	0.0913	0.0917	0.0947	0.0947	0.0941	2	AVG	#<-
Acetone	#0.9465	0.8223	0.9064	0.7950	0.7461	0.8027	0.8189	0.8340	8	AVG	#
Freon 113	#0.1374	0.1808	0.1934	0.1924	0.1870	0.1868	0.1921	0.1814	11	AVG	#
2-Propanol	0.6215	0.5766	0.5535	0.5233	0.5247	0.5524	0.5506	0.5575	6	AVG	
Methyl Iodide	0.3188	0.3618	0.3624	0.3584	0.3660	0.3845	0.3816	0.3619	6	AVG	
Carbon Disulfide	#0.5052	0.5628	0.5736	0.5751	0.5935	0.6195	0.6161	0.5780	7	AVG	#
Allyl Chloride	0.3752	0.3739	0.3639	0.3589	0.3485	0.3791	0.3581	0.3654	3	AVG	
Methyl Acetate	#0.2853	0.2499	0.2533	0.2460	0.2416	0.2652	0.2529	0.2563	6	AVG	#
Methylene Chloride	#0.2136	0.2156	0.2141	0.2040	0.2095	0.2177	0.2139	0.2126	2	AVG	#
t-Butyl alcohol	1.0921	1.0318	1.0379	0.9973	1.0044	1.0498	1.0147	1.0325	3	AVG	
Acrylonitrile	0.1268	0.1354	0.1486	0.1309	0.1293	0.1398	0.1278	0.1341	6	AVG	
trans-1,2-Dichloroethene	#0.1834	0.2017	0.2066	0.1995	0.2068	0.2154	0.2188	0.2046	6	AVG	#
Methyl Tertiary Butyl Ether	#0.6638	0.6685	0.7093	0.6648	0.6789	0.6901	0.6552	0.6758	3	AVG	#
n-Hexane	0.2295	0.2680	0.3035	0.2925	0.2810	0.2788	0.2777	0.2758	8	AVG	
1,1-Dichloroethane	#0.3543	0.3845	0.3888	0.3837	0.3900	0.4050	0.3989	0.3864	4	AVG	#
di-Isopropyl ether	0.6966	0.7260	0.7538	0.7218	0.7385	0.7591	0.7188	0.7307	3	AVG	
2-Chloro-1,3-butadiene	0.3131	0.3706	0.3676	0.3604	0.3700	0.3790	0.3746	0.3622	6	AVG	
Ethyl t-butyl ether	0.6983	0.7086	0.7501	0.6994	0.7037	0.7059	0.6489	0.7021	4	AVG	
cis-1,2-Dichloroethene	#0.2138	0.2279	0.2403	0.2281	0.2363	0.2500	0.2569	0.2362	6	AVG	#
2-Butanone	#0.1832	0.1877	0.1997	0.1772	0.1766	0.1951	0.1772	0.1852	5	AVG	#
2,2-Dichloropropane	0.2710	0.3291	0.3282	0.3261	0.3409	0.3539	0.3544	0.3291	9	AVG	
Propionitrile	1.1444	1.1845	1.1865	1.1918	1.1886	1.2392	1.3177	1.2075	5	AVG	
Methacrylonitrile	0.1277	0.1351	0.1391	0.1360	0.1378	0.1458	0.1478	0.1384	5	AVG	
Bromochloromethane	0.1222	0.1308	0.1350	0.1350	0.1309	0.1454	0.1476	0.1353	7	AVG	
Tetrahydrofuran	1.0413	1.1280	1.2483	1.1390	1.0880	1.1970	1.2447	1.1552	7	AVG	
Chloroform	#0.3560	0.3829	0.3922	0.3861	0.3921	0.4065	0.4028	0.3884	4	AVG	#
1,1,1-Trichloroethane	#0.2964	0.3329	0.3344	0.3307	0.3379	0.3502	0.3492	0.3331	5	AVG	#
Cyclohexane	#0.3265	0.3780	0.3739	0.3674	0.3611	0.3556	0.3572	0.3600	5	AVG	#
Cyclohexane(2)	#0.2634	0.3180	0.3155	0.3135	0.3117	0.3072	0.3112	0.3058	6	AVG	#
Cyclohexane(3)	#0.0977	0.1128	0.1141	0.1132	0.1104	0.1091	0.1107	0.1097	5	AVG	#
1,1-Dichloropropene	0.2539	0.3051	0.2982	0.2972	0.3033	0.3108	0.3186	0.2982	7	AVG	
Carbon Tetrachloride	#0.2108	0.2586	0.2681	0.2733	0.2874	0.3023	0.3142	0.2735	12	AVG	#
Isobutyl Alcohol	0.3536	0.3462	0.3513	0.3281	0.3251	0.3381	0.3428	0.3408	3	AVG	
Benzene	#0.7748	0.8633	0.8717	0.8457	0.8607	0.8958	0.8963	0.8583	5	AVG	#
1,2-Dichloroethane	#0.3621	0.3485	0.3448	0.3325	0.3331	0.3491	0.3401	0.3443	3	AVG	#
1,2-Dichloroethane(2)	#0.0170	0.0074	0.0145	0.0262	0.0268	0.0276	0.0280	0.0211	39	AVG	#<-
t-Amyl methyl ether	0.6670	0.7019	0.7428	0.7093	0.7090	0.7115	0.6431	0.6978	5	AVG	
n-Heptane	0.2686	0.3007	0.3406	0.3317	0.3105	0.3049	0.3162	0.3104	8	AVG	
n-Butanol	0.2138	0.2462	0.2456	0.2405	0.2452	0.2666	0.2683	0.2466	7	AVG	

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 03/18/19 03/18/19

Heated Purge: (Y/N) Y Calibration Times: 11:37 13:50

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = lm18i08.d RRF 4 = lm18i07.d RRF 10= lm18i06.d
RRF 20= lm18i04.d RRF 50= lm18i03.d RRF100= lm18i02.d RRF300= lm18i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Trichloroethene	#0.2061	0.2305	0.2320	0.2267	0.2332	0.2420	0.2484	0.2313	6	AVG #
Methylcyclohexane	#0.3143	0.3950	0.4082	0.4293	0.3934	0.4118	0.4356	0.3982	10	AVG #
Methylcyclohexane(2)	#0.1446	0.1877	0.1913	0.1967	0.1821	0.1909	0.2041	0.1853	10	AVG #
1,2-Dichloropropane	#0.2152	0.2269	0.2294	0.2235	0.2338	0.2475	0.2587	0.2336	6	AVG #
Dibromomethane	0.1399	0.1525	0.1636	0.1570	0.1639	0.1736	0.1803	0.1615	8	AVG
1,4-Dioxane	0.0537	0.0663	0.0656	0.0630	0.0652	0.0693	0.0715	0.0649	9	AVG
Methyl Methacrylate	0.1923	0.2097	0.2283	0.2195	0.2296	0.2434	0.2551	0.2254	9	AVG
Bromodichloromethane	#0.2205	0.2571	0.2744	0.2738	0.2932	0.3137	0.3185	0.2787	12	AVG #
2-Nitropropane	0.0750	0.0806	0.0967	0.0916	0.1006	0.1196	0.1126	0.0967	17	AVG
2-Chloroethyl Vinyl Ether	0.1584	0.1782	0.1922	0.1880	0.1910	0.2031	0.2033	0.1877	8	AVG
cis-1,3-Dichloropropene	#0.2664	0.3149	0.3477	0.3520	0.3715	0.3980	0.4090	0.3514	14	AVG #
4-Methyl-2-pentanone	#0.3568	0.3780	0.4374	0.3851	0.3769	0.4254	0.3759	0.3908	7	AVG #
Toluene	#0.6538	0.7026	0.7046	0.6935	0.7186	0.7482	0.7688	0.7129	5	AVG #
trans-1,3-Dichloropropene	#0.3124	0.3669	0.4134	0.4202	0.4620	0.4949	0.5069	0.4252	16	AVG #
Ethyl Methacrylate	0.4052	0.4607	0.5124	0.4976	0.5215	0.5485	0.5509	0.4995	10	AVG
1,1,2-Trichloroethane	#0.2425	0.2583	0.2733	0.2624	0.2744	0.2853	0.2904	0.2695	6	AVG #
Tetrachloroethene	#0.2792	0.3158	0.3011	0.3022	0.3148	0.3211	0.3361	0.3100	6	AVG #
1,3-Dichloropropane	0.4364	0.4636	0.4843	0.4618	0.4810	0.4981	0.5008	0.4751	5	AVG
2-Hexanone	#0.3369	0.3512	0.4102	0.3578	0.3552	0.4123	0.3432	0.3667	9	AVG #
Dibromochloromethane	#0.1938	0.2336	0.2615	0.2677	0.3047	0.3328	0.3532	0.2782	20	AVG #
1,2-Dibromoethane	#0.2578	0.2923	0.3113	0.3019	0.3159	0.3304	0.3353	0.3064	9	AVG #
1-Chlorohexane	0.4456	0.4217	0.4097	0.4005	0.4087	0.4289	0.4618	0.4253	5	AVG
Chlorobenzene	#0.7595	0.8217	0.8406	0.8149	0.8597	0.9177	0.9888	0.8575	9	AVG #
1,1,1,2-Tetrachloroethane	0.2174	0.2423	0.2706	0.2755	0.3033	0.3366	0.3662	0.2874	18	AVG
Ethylbenzene	#1.2439	1.4062	1.4272	1.4074	1.4612	1.5591	1.6034	1.4440	8	AVG #
m+p-Xylene	#0.4799	0.5363	0.5572	0.5470	0.5774	0.6215	0.6560	0.5679	10	AVG #
o-Xylene	#0.4807	0.5255	0.5435	0.5394	0.5675	0.6138	0.6605	0.5616	11	AVG #
Styrene	#0.7513	0.8605	0.9204	0.9110	0.9682	1.0524	1.1278	0.9417	13	AVG #
Bromoform	#	0.1452	0.1763	0.1846	0.2194	0.2475	0.2707	0.2073	23	2NDDEG #
Isopropylbenzene	#1.2199	1.3989	1.4282	1.4008	1.4670	1.5489	1.5950	1.4369	8	AVG #
Cyclohexanone	0.2469	0.2598	0.2644	0.2587	0.2495	0.2652	0.2646	0.2584	3	AVG
Bromobenzene	0.6064	0.6517	0.6807	0.6555	0.6817	0.7337	0.8025	0.6875	9	AVG
1,1,2,2-Tetrachloroethane	#0.7724	0.8253	0.9091	0.8357	0.8643	0.8963	0.9081	0.8587	6	AVG #
1,2,3-Trichloropropane	0.2465	0.2578	0.2689	0.2494	0.2607	0.2705	0.2761	0.2614	4	AVG
trans-1,4-Dichloro-2-butene	0.2314	0.2714	0.2813	0.2790	0.2904	0.3046	0.2712	0.2756	8	AVG
n-Propylbenzene	2.7416	3.1415	3.0876	3.0470	3.0962	3.1548	2.9782	3.0353	5	AVG
2-Chlorotoluene	0.5616	0.6375	0.6441	0.6299	0.6490	0.6756	0.6992	0.6424	7	AVG
4-Chlorotoluene	0.5948	0.6663	0.6687	0.6478	0.6811	0.7171	0.7537	0.6756	7	AVG
1,3,5-Trimethylbenzene	1.9678	2.2099	2.2675	2.2191	2.3246	2.4468	2.4719	2.2725	7	AVG
tert-Butylbenzene	0.4425	0.5407	0.5280	0.5176	0.5381	0.5705	0.5954	0.5333	9	AVG
Pentachloroethane		0.3178	0.3727	0.3786	0.3951	0.4961	0.5175	0.4130	19	AVG
1,2,4-Trimethylbenzene	2.0859	2.3015	2.3580	2.3051	2.4274	2.5866	2.5643	2.3755	7	AVG
sec-Butylbenzene	2.4678	2.8784	2.8821	2.8016	2.9019	2.9970	2.8735	2.8289	6	AVG
1,3-Dichlorobenzene	#1.1930	1.2641	1.3017	1.2481	1.3011	1.3905	1.4555	1.3077	7	AVG #
p-Isopropyltoluene	2.1958	2.5083	2.5660	2.5132	2.6415	2.7954	2.7207	2.5630	8	AVG
1,4-Dichlorobenzene	#1.2992	1.3546	1.3830	1.3068	1.3848	1.4989	1.4943	1.3888	6	AVG #
1,2,3-Trimethylbenzene	2.3379	2.5524	2.5823	2.5959	2.5726	2.9620	2.7204	2.6176	7	AVG
Benzyl Chloride		1.2833	1.6327	1.6174	1.8228	2.0004	2.0160	1.7287	16	AVG
1,3-Diethylbenzene	1.4169	1.5870	1.5999	1.6153	1.5847	1.7981	1.7215	1.6176	7	AVG
1,4-Diethylbenzene	1.6014	1.7100	1.7133	1.7281	1.7047	1.9430	1.8444	1.7493	6	AVG
1,2-Dichlorobenzene	#1.1854	1.2323	1.3156	1.2415	1.3041	1.3953	1.4604	1.3049	7	AVG #
n-Butylbenzene	1.2351	1.2979	1.2760	1.2615	1.3106	1.3725	1.3533	1.3010	4	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 03/18/19 03/18/19

Heated Purge: (Y/N) Y Calibration Times: 11:37 13:50

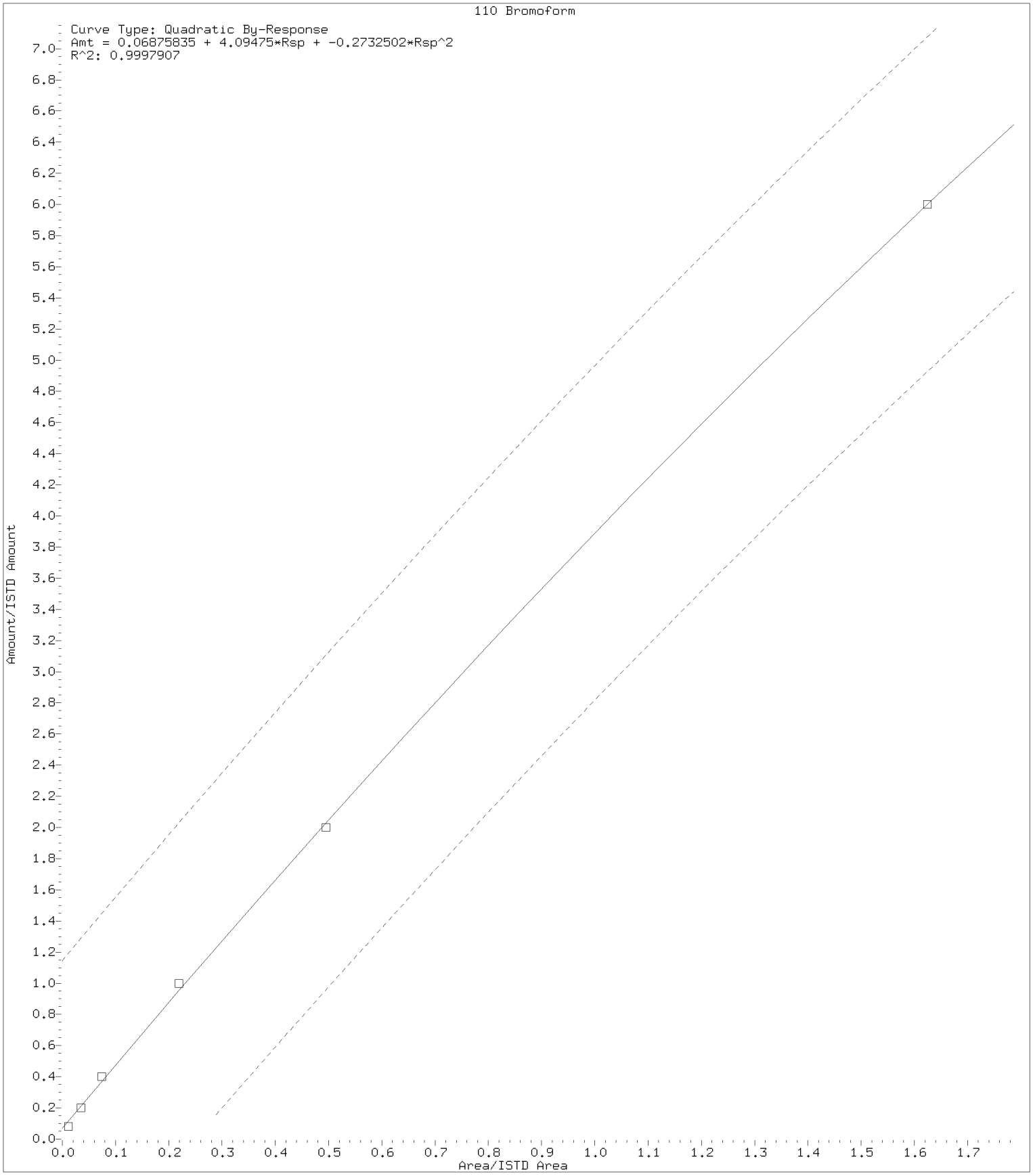
Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = lm18i08.d RRF 4 = lm18i07.d RRF 10= lm18i06.d
RRF 20= lm18i04.d RRF 50= lm18i03.d RRF100= lm18i02.d RRF300= lm18i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
1,2-Diethylbenzene	1.2208	1.3523	1.3570	1.3499	1.3345	1.5145	1.4517	1.3687	7	AVG	
1,2-Dibromo-3-chloropropane	#0.1464	0.1770	0.2098	0.1872	0.2052	0.2196	0.2074	0.1932	13	AVG	#
1,3,5-Trichlorobenzene	0.9955	1.0000	1.0177	0.9696	0.9904	1.0354	1.0176	1.0037	2	AVG	
1,2,4-Trichlorobenzene	#0.9914	0.9604	0.9884	0.9205	0.9401	0.9751	0.9333	0.9585	3	AVG	#
Hexachlorobutadiene	0.4110	0.4119	0.3782	0.3829	0.3792	0.3695	0.3546	0.3839	5	AVG	
Naphthalene	3.0025	3.0030	3.2822	2.9535	3.0350	3.1761	2.8462	3.0426	5	AVG	
1,2,3-Trichlorobenzene	0.9502	0.9241	0.9564	0.8782	0.8990	0.9349	0.8542	0.9139	4	AVG	
2-Methylnaphthalene	1.8258	1.7916	1.9413	1.8323	1.8058	2.0992	1.6783	1.8535	7	AVG	
Dibromofluoromethane	0.2533	0.2548	0.2603	0.2590	0.2598	0.2566	0.2555	0.2570	1	AVG	
Dibromofluoromethane(2)	0.2606	0.2609	0.2659	0.2656	0.2643	0.2645	0.2616	0.2634	1	AVG	
1,2-Dichloroethane-d4	0.0598	0.0598	0.0606	0.0605	0.0600	0.0605	0.0604	0.0602	1	AVG	
1,2-Dichloroethane-d4(2)	0.3355	0.3417	0.3412	0.3381	0.3362	0.3381	0.3298	0.3372	1	AVG	
1,2-Dichloroethane-d4(3)	0.0381	0.0382	0.0393	0.0383	0.0382	0.0383	0.0391	0.0385	1	AVG	
Toluene-d8	1.3001	1.3096	1.2970	1.2968	1.2959	1.2817	1.2262	1.2867	2	AVG	
Toluene-d8(2)	0.8372	0.8415	0.8378	0.8384	0.8386	0.8297	0.7950	0.8312	2	AVG	
4-Bromofluorobenzene	0.4973	0.4997	0.5062	0.5036	0.4999	0.4951	0.4838	0.4979	1	AVG	
4-Bromofluorobenzene(2)	0.4045	0.4066	0.4099	0.4093	0.4056	0.4015	0.3934	0.4044	1	AVG	

Average %RSD 7

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.



Digitally signed by Kevin Kelly on 03/18/2019 at 22:37.
Target 3.5 esignature user ID: kk10002

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP09915.i/19mar18a.b/lm18i01.d	VSTD300
/chem/HP09915.i/19mar18a.b/lm18i02.d	VSTD100
/chem/HP09915.i/19mar18a.b/lm18i03.d	VSTD050
/chem/HP09915.i/19mar18a.b/lm18i04.d	VSTD020
/chem/HP09915.i/19mar18a.b/lm18i06.d	VSTD010
/chem/HP09915.i/19mar18a.b/lm18i07.d	VSTD004
/chem/HP09915.i/19mar18a.b/lm18i08.d	VSTD001

Area Summary

File ID:

Internal Standard Name	lm18i01.d	lm18i02.d	lm18i03.d	lm18i04.d	lm18i06.d	lm18i07.d	lm18i08.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	270115	288089	285580	268588	275478	285217	274426	278213	3	Yes
Fluorobenzene	1387654	1346157	1339388	1287539	1264272	1308395	1265954	1314194	3	Yes
Chlorobenzene-d5	1112746	1062913	1047647	1010955	998534	1008231	988239	1032752	4	Yes
1,4-Dichlorobenzene-d4	656226	599985	580718	554778	553832	543594	535864	575000	7	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	lm18i01.d	lm18i02.d	lm18i03.d	lm18i04.d	lm18i06.d	lm18i07.d	lm18i08.d	Avg. RT
t-Butyl alcohol-d10	3.555	3.571	3.555	3.574	3.558	3.568	3.555	3.563
Fluorobenzene	7.044	7.044	7.041	7.044	7.037	7.040	7.041	7.041
Chlorobenzene-d5	10.706	10.703	10.703	10.703	10.703	10.703	10.703	10.703
1,4-Dichlorobenzene-d4	12.638	12.635	12.635	12.635	12.635	12.635	12.635	12.636

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 03/18/2019 at 20:44.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 03/18/19 Time: 21:45

Lab File ID: lm18v02.d Init. Calib. Date(s): 03/18/19 03/18/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Dichlorodifluoromethane	0.4346	0.3433	15.80	20	-21	#
#	Chloromethane	0.4024	0.3964	19.70	20	-1	#
	1,3-Butadiene	0.2114	0.2843	26.89	20	34	<-
#	Vinyl Chloride	0.3942	0.4037	20.48	20	2	#
#	Bromomethane	0.3430	0.3135	18.28	20	-9	#
#	Chloroethane	0.2292	0.2269	19.80	20	-1	#
	Dichlorofluoromethane	0.5457	0.5589	20.48	20	2	
	n-Pentane	0.3173	0.3957	24.94	20	25	
#	Trichlorofluoromethane	0.5146	0.4795	18.64	20	-7	#
	Ethyl ether	0.2404	0.2586	21.51	20	8	
	Freon 123a	0.2889	0.3033	21.00	20	5	
	Acrolein	1.9506	2.1695	166.83	150	11	
#	1,1-Dichloroethene	0.1707	0.2148	25.16	20	26	#
#	Acetone	0.8340	0.7861	141.38	150	-6	#
#	Freon 113	0.1814	0.2023	22.31	20	12	#
	2-Propanol	0.5575	0.5113	137.56	150	-8	
	Methyl Iodide	0.3619	0.3998	22.09	20	10	
#	Carbon Disulfide	0.5780	0.6555	22.68	20	13	#
	Allyl Chloride	0.3654	0.3500	19.16	20	-4	
#	Methyl Acetate	0.2563	0.2562	19.99	20	0	#
#	Methylene Chloride	0.2126	0.2409	22.67	20	13	#
	t-Butyl alcohol	1.0325	0.9941	192.55	200	-4	
	Acrylonitrile	0.1341	0.1234	92.03	100	-8	
#	trans-1,2-Dichloroethene	0.2046	0.2421	23.66	20	18	#
#	Methyl Tertiary Butyl Ether	0.6758	0.6894	20.40	20	2	#
	n-Hexane	0.2758	0.2945	21.36	20	7	
#	1,1-Dichloroethane	0.3864	0.4358	22.55	20	13	#
	di-Isopropyl ether	0.7307	0.7734	21.17	20	6	
	2-Chloro-1,3-butadiene	0.3622	0.3841	21.21	20	6	
	Ethyl t-butyl ether	0.7021	0.7091	20.20	20	1	
#	cis-1,2-Dichloroethene	0.2362	0.2703	22.89	20	14	#
#	2-Butanone	0.1852	0.1752	141.86	150	-5	#
	2,2-Dichloropropane	0.3291	0.3619	21.99	20	10	
	Propionitrile	1.2075	1.2979	161.23	150	7	
	Methacrylonitrile	0.1384	0.1380	149.55	150	0	
	Bromochloromethane	0.1353	0.1302	19.25	20	-4	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 03/18/19 Time: 21:45

Lab File ID: lm18v02.d Init. Calib. Date(s): 03/18/19 03/18/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Tetrahydrofuran	1.1552	1.2142	105.11	100	5	
#	Chloroform	0.3884	0.4312	22.21	20	11	#
#	1,1,1-Trichloroethane	0.3331	0.3689	22.15	20	11	#
#	Cyclohexane	0.3600	0.3622	20.13	20	1	#
	1,1-Dichloropropene	0.2982	0.3358	22.52	20	13	
#	Carbon Tetrachloride	0.2735	0.2951	21.58	20	8	#
	Isobutyl Alcohol	0.3408	0.3410	500.30	500	0	
#	Benzene	0.8583	0.9594	22.36	20	12	#
#	1,2-Dichloroethane	0.3443	0.3840	22.31	20	12	#
	t-Amyl methyl ether	0.6978	0.7272	20.84	20	4	
	n-Heptane	0.3104	0.3228	20.80	20	4	
	n-Butanol	0.2466	0.2526	1024.41	1000	2	
#	Trichloroethene	0.2313	0.2550	22.05	20	10	#
#	Methylcyclohexane	0.3982	0.3800	19.09	20	-5	#
#	1,2-Dichloropropane	0.2336	0.2572	22.02	20	10	#
	Dibromomethane	0.1615	0.1750	21.66	20	8	
	1,4-Dioxane	0.0649	0.0699	538.18	500	8	
	Methyl Methacrylate	0.2254	0.2226	19.75	20	-1	
#	Bromodichloromethane	0.2787	0.3061	21.96	20	10	#
	2-Nitropropane	0.0967	0.0754	15.60	20	-22	
	2-Chloroethyl Vinyl Ether	0.1877	0.1903	20.27	20	1	
#	cis-1,3-Dichloropropene	0.3514	0.3842	21.87	20	9	#
#	4-Methyl-2-pentanone	0.3908	0.3728	95.41	100	-5	#
#	Toluene	0.7129	0.7861	22.05	20	10	#
#	trans-1,3-Dichloropropene	0.4252	0.4510	21.21	20	6	#
	Ethyl Methacrylate	0.4995	0.4915	19.68	20	-2	
#	1,1,2-Trichloroethane	0.2695	0.3102	23.02	20	15	#
#	Tetrachloroethene	0.3100	0.3405	21.97	20	10	#
	1,3-Dichloropropane	0.4751	0.5193	21.86	20	9	
#	2-Hexanone	0.3667	0.3552	96.86	100	-3	#
#	Dibromochloromethane	0.2782	0.3000	21.57	20	8	#
#	1,2-Dibromoethane	0.3064	0.3398	22.18	20	11	#
	1-Chlorohexane	0.4253	0.4474	21.04	20	5	
#	Chlorobenzene	0.8575	0.9284	21.65	20	8	#
	1,1,1,2-Tetrachloroethane	0.2874	0.3035	21.12	20	6	
#	Ethylbenzene	1.4440	1.5741	21.80	20	9	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 03/18/19 Time: 21:45

Lab File ID: lm18v02.d Init. Calib. Date(s): 03/18/19 03/18/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	m+p-Xylene	0.5679	0.6225	43.85	40	10	#
#	o-Xylene	0.5616	0.6098	21.72	20	9	#
#	Styrene	0.9417	1.0338	21.96	20	10	#
#	Bromoform	0.2073	0.1948	19.31	20	-3	#
#	Isopropylbenzene	1.4369	1.6064	22.36	20	12	#
	Cyclohexanone	0.2584	0.2784	538.56	500	8	
	Bromobenzene	0.6875	0.7392	21.50	20	8	
#	1,1,2,2-Tetrachloroethane	0.8587	0.9186	21.39	20	7	#
	1,2,3-Trichloropropane	0.2614	0.2850	21.81	20	9	
	trans-1,4-Dichloro-2-butene	0.2756	0.3031	109.96	100	10	
	n-Propylbenzene	3.0353	3.4058	22.44	20	12	
	2-Chlorotoluene	0.6424	0.6971	21.70	20	9	
	4-Chlorotoluene	0.6756	0.7277	21.54	20	8	
	1,3,5-Trimethylbenzene	2.2725	2.4664	21.71	20	9	
	tert-Butylbenzene	0.5333	0.5722	21.46	20	7	
	Pentachloroethane	0.4130	0.3692	17.88	20	-11	
	1,2,4-Trimethylbenzene	2.3755	2.5289	21.29	20	6	
	sec-Butylbenzene	2.8289	3.1199	22.06	20	10	
#	1,3-Dichlorobenzene	1.3077	1.3839	21.16	20	6	#
	p-Isopropyltoluene	2.5630	2.7942	21.80	20	9	
#	1,4-Dichlorobenzene	1.3888	1.4960	21.54	20	8	#
	1,2,3-Trimethylbenzene	2.6176	2.6124	19.96	20	0	
	Benzyl Chloride	1.7287	1.5506	17.94	20	-10	
	1,3-Diethylbenzene	1.6176	1.5964	19.74	20	-1	
	1,4-Diethylbenzene	1.7493	1.6739	19.14	20	-4	
#	1,2-Dichlorobenzene	1.3049	1.3768	21.10	20	6	#
	n-Butylbenzene	1.3010	1.3707	21.07	20	5	
	1,2-Diethylbenzene	1.3687	1.3432	19.63	20	-2	
#	1,2-Dibromo-3-chloropropane	0.1932	0.2025	20.96	20	5	#
	1,3,5-Trichlorobenzene	1.0037	1.0465	20.85	20	4	
#	1,2,4-Trichlorobenzene	0.9585	0.9816	20.48	20	2	#
	Hexachlorobutadiene	0.3839	0.3803	19.81	20	-1	
	Naphthalene	3.0426	3.1202	20.51	20	3	
	1,2,3-Trichlorobenzene	0.9139	0.9348	20.46	20	2	
	2-Methylnaphthalene	1.8535	1.6250	17.53	20	-12	

Average %Drift 8

Compounds with required minimum RRF.
Maximum % Drift = 30 %

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6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date(s): 02/19/19 02/19/19

Heated Purge: (Y/N) Y Calibration Times: 12:21 14:44

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = wf19i07.d RRF 4 = wf19i06.d RRF 10= wf19i05.d
RRF 20= wf19i04.d RRF 50= wf19i03.d RRF100= wf19i02.d RRF300= wf19i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
Dichlorodifluoromethane	#0.2226	0.3389	0.3578	0.3419	0.3457	0.3161	0.3402	0.3233	14	AVG	#
Chloromethane	#0.3772	0.4124	0.4406	0.3916	0.4019	0.3931	0.4012	0.4026	5	AVG	#
1,3-Butadiene	0.2727	0.2671	0.2452	0.2384	0.2307	0.2227	0.2406	0.2453	7	AVG	
Vinyl Chloride	#0.3158	0.3797	0.4161	0.3707	0.3685	0.3608	0.3718	0.3690	8	AVG	#
Bromomethane	#0.2607	0.2971	0.3208	0.2821	0.2891	0.2884	0.2992	0.2911	6	AVG	#
Chloroethane	#0.2701	0.2583	0.2600	0.2307	0.2292	0.2238	0.2277	0.2429	8	AVG	#
Dichlorofluoromethane	0.4886	0.5016	0.4813	0.4622	0.4591	0.4389	0.4590	0.4701	5	AVG	
n-Pentane	0.4044	0.3731	0.3987	0.3753	0.3549	0.3420	0.3610	0.3728	6	AVG	
Trichlorofluoromethane	#0.2951	0.4078	0.4333	0.4060	0.4031	0.3866	0.4118	0.3920	11	AVG	#
Ethanol	0.1591	0.1102	0.1024	0.1020	0.1116	0.1084	0.1044	0.1140	18	AVG	
Freon 123a	0.3053	0.3155	0.3061	0.2927	0.2780	0.2657	0.2870	0.2929	6	AVG	
Acrolein	1.7818	1.7469	1.6939	1.8036	1.8632	1.8293	1.8801	1.7998	4	AVG	
1,1-Dichloroethene	#0.1644	0.2297	0.2356	0.2240	0.2253	0.2188	0.2454	0.2204	12	AVG	#
1,1-Dichloroethene(2)	#0.0944	0.1178	0.1203	0.1102	0.1113	0.1062	0.1183	0.1112	8	AVG	#
Acetone	#0.8713	0.8881	0.8570	0.9075	0.8853	0.8327	0.8818	0.8748	3	AVG	#
Freon 113	#0.1356	0.1900	0.2095	0.2086	0.2085	0.1927	0.2102	0.1936	14	AVG	#
2-Propanol	0.7040	0.6397	0.6307	0.6112	0.6739	0.6989	0.5915	0.6500	7	AVG	
Methyl Iodide	0.3680	0.4205	0.4432	0.4290	0.4261	0.4180	0.4524	0.4225	6	AVG	
Carbon Disulfide	#0.6814	0.7916	0.8333	0.7816	0.7719	0.7616	0.8153	0.7767	6	AVG	#
Allyl Chloride	0.3347	0.3590	0.3960	0.3881	0.4091	0.3892	0.4123	0.3841	7	AVG	
Methyl Acetate	#0.3825	0.3415	0.3321	0.3193	0.3250	0.3177	0.3090	0.3324	7	AVG	#
Methylene Chloride	#0.2739	0.2658	0.2838	0.2674	0.2651	0.2543	0.2761	0.2695	4	AVG	#
t-Butyl alcohol	1.1942	1.1621	1.1416	1.1288	1.2188	1.1948	1.0760	1.1595	4	AVG	
Acrylonitrile	0.1426	0.1746	0.1772	0.1870	0.1886	0.1805	0.1736	0.1749	9	AVG	
trans-1,2-Dichloroethene	#0.2033	0.2451	0.2573	0.2362	0.2397	0.2387	0.2541	0.2392	7	AVG	#
Methyl Tertiary Butyl Ether	#0.5358	0.5943	0.6552	0.6031	0.5822	0.5615	0.5446	0.5824	7	AVG	#
n-Hexane	0.2562	0.3096	0.3453	0.3150	0.3433	0.3197	0.3512	0.3200	10	AVG	
1,1-Dichloroethane	#0.3763	0.4330	0.4590	0.4370	0.4397	0.4346	0.4543	0.4334	6	AVG	#
di-Isopropyl ether	0.7905	0.8289	0.8791	0.8509	0.8427	0.8291	0.8074	0.8327	3	AVG	
2-Chloro-1,3-butadiene	0.3177	0.3681	0.3999	0.3841	0.3837	0.3754	0.3986	0.3754	7	AVG	
Ethyl t-butyl ether	0.5811	0.5848	0.6785	0.6482	0.6049	0.5702	0.5810	0.6069	7	AVG	
cis-1,2-Dichloroethene	#0.2366	0.2640	0.2849	0.2696	0.2719	0.2682	0.2847	0.2686	6	AVG	#
2-Butanone	#0.2598	0.2409	0.2472	0.2574	0.2591	0.2553	0.2390	0.2512	3	AVG	#
2,2-Dichloropropane	0.1716	0.2099	0.2086	0.2054	0.1988	0.1927	0.1756	0.1946	8	AVG	
Propionitrile	1.4394	1.4853	1.4411	1.3773	1.4094	1.3838	1.5509	1.4410	4	AVG	
Methacrylonitrile	0.1810	0.1879	0.1975	0.1843	0.1904	0.1848	0.1904	0.1880	3	AVG	
Bromochloromethane	0.1236	0.1333	0.1440	0.1403	0.1442	0.1406	0.1514	0.1396	6	AVG	
Tetrahydrofuran	1.2918	1.3520	1.1750	1.3657	1.3933	1.3069	1.4514	1.3337	7	AVG	
Chloroform	#0.3716	0.3946	0.4295	0.4104	0.4082	0.4049	0.4274	0.4067	5	AVG	#
1,1,1-Trichloroethane	#0.2496	0.3108	0.3281	0.3146	0.3147	0.3057	0.3184	0.3060	8	AVG	#
Cyclohexane	#0.3194	0.4199	0.4353	0.4172	0.4175	0.3935	0.4317	0.4049	10	AVG	#
Cyclohexane(2)	#0.2653	0.3458	0.3537	0.3442	0.3514	0.3279	0.3581	0.3352	10	AVG	#
Cyclohexane(3)	#0.0938	0.1266	0.1303	0.1244	0.1260	0.1188	0.1320	0.1217	11	AVG	#
1,1-Dichloropropene	0.2874	0.3392	0.3424	0.3250	0.3270	0.3193	0.3419	0.3260	6	AVG	
Carbon Tetrachloride	#0.2066	0.2621	0.2761	0.2668	0.2666	0.2671	0.2928	0.2626	10	AVG	#
Isobutyl Alcohol	0.4146	0.4172	0.4158	0.3919	0.4443	0.4523	0.4228	0.4227	5	AVG	
Benzene	#0.9632	1.0571	1.1117	1.0433	1.0439	1.0366	1.0801	1.0480	4	AVG	#
1,2-Dichloroethane	#0.3396	0.3176	0.3369	0.3145	0.3171	0.3133	0.3272	0.3237	3	AVG	#
1,2-Dichloroethane(2)	#0.0185	0.0303	0.0336	0.0330	0.0327	0.0326	0.0348	0.0308	18	AVG	#<-
t-Amyl methyl ether	0.6040	0.6173	0.7089	0.6493	0.6388	0.5916	0.5427	0.6218	8	AVG	
n-Heptane	0.2708	0.2864	0.3261	0.3135	0.3165	0.2938	0.3340	0.3059	7	AVG	
n-Butanol	0.3330	0.3444	0.3646	0.3552	0.4049	0.4250	0.4001	0.3753	9	AVG	

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date(s): 02/19/19 02/19/19

Heated Purge: (Y/N) Y Calibration Times: 12:21 14:44

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = wf19i07.d RRF 4 = wf19i06.d RRF 10= wf19i05.d
RRF 20= wf19i04.d RRF 50= wf19i03.d RRF100= wf19i02.d RRF300= wf19i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Trichloroethene	#0.2217	0.2561	0.2709	0.2546	0.2538	0.2533	0.2660	0.2538	6	AVG #
Methylcyclohexane	#0.2734	0.3769	0.3629	0.3936	0.4025	0.3619	0.4078	0.3684	12	AVG #
Methylcyclohexane(2)	#0.1290	0.1756	0.1682	0.1800	0.1871	0.1689	0.1904	0.1713	12	AVG #
1,2-Dichloropropane	#0.2298	0.2619	0.2854	0.2709	0.2752	0.2733	0.2870	0.2691	7	AVG #
Dibromomethane	0.1380	0.1607	0.1745	0.1685	0.1713	0.1705	0.1789	0.1661	8	AVG
1,4-Dioxane	0.1038	0.0985	0.1109	0.1097	0.1200	0.1211	0.1215	0.1122	8	AVG
Methyl Methacrylate	0.2548	0.2784	0.3021	0.2936	0.3109	0.3104	0.3196	0.2957	8	AVG
Bromodichloromethane	#0.2631	0.2827	0.3141	0.3042	0.3169	0.3198	0.3347	0.3051	8	AVG #
2-Nitropropane	0.0916	0.0888	0.0937	0.1060	0.1128	0.1166	0.1131	0.1032	11	AVG
2-Chloroethyl Vinyl Ether	0.1654	0.1740	0.2247	0.1981	0.2236	0.2230	0.2271	0.2051	13	AVG
cis-1,3-Dichloropropene	#0.3499	0.3892	0.4347	0.4211	0.4364	0.4412	0.4640	0.4195	9	AVG #
4-Methyl-2-pentanone	#0.4637	0.4627	0.4651	0.5077	0.5203	0.5569	0.4904	0.4953	7	AVG #
Toluene	#0.7057	0.7979	0.8800	0.8143	0.8160	0.7998	0.8359	0.8071	7	AVG #
trans-1,3-Dichloropropene	#0.4104	0.4287	0.5014	0.4799	0.5079	0.5047	0.5303	0.4805	9	AVG #
Ethyl Methacrylate	0.4511	0.5199	0.6156	0.6074	0.6469	0.6374	0.6547	0.5904	13	AVG
1,1,2-Trichloroethane	#0.2754	0.2925	0.3295	0.3107	0.3229	0.3186	0.3248	0.3106	6	AVG #
Tetrachloroethene	#0.2816	0.3316	0.3587	0.3284	0.3286	0.3219	0.3417	0.3275	7	AVG #
1,3-Dichloropropane	0.4849	0.4956	0.5806	0.5425	0.5594	0.5482	0.5658	0.5396	7	AVG
2-Hexanone	#0.4121	0.4279	0.4482	0.4830	0.5015	0.5532	0.4643	0.4700	10	AVG #
Dibromochloromethane	#0.2298	0.2541	0.3136	0.3074	0.3296	0.3340	0.3552	0.3034	15	AVG #
1,2-Dibromoethane	#0.2827	0.3112	0.3677	0.3476	0.3597	0.3529	0.3672	0.3413	9	AVG #
Chlorobenzene	#0.8240	0.8700	0.9551	0.8867	0.9011	0.8865	0.9441	0.8953	5	AVG #
1,1,1,2-Tetrachloroethane	0.2351	0.2578	0.3031	0.2863	0.3021	0.3027	0.3270	0.2877	11	AVG
Ethylbenzene	#1.3787	1.5070	1.6572	1.5278	1.5471	1.5272	1.5927	1.5340	6	AVG #
m+p-Xylene	#0.5272	0.5947	0.6616	0.6035	0.6158	0.6113	0.6551	0.6099	7	AVG #
o-Xylene	#0.5222	0.5852	0.6352	0.5944	0.6073	0.6020	0.6538	0.6000	7	AVG #
Styrene	#0.8130	0.9226	1.0653	1.0097	1.0480	1.0521	1.1351	1.0065	11	AVG #
Bromoform	#0.1670	0.1865	0.2373	0.2340	0.2615	0.2709	0.2958	0.2361	19	AVG #
Isopropylbenzene	#1.2646	1.4512	1.6012	1.4685	1.5055	1.4811	1.5487	1.4744	7	AVG #
Cyclohexanone	0.4871	0.4705	0.4632	0.4991	0.5298	0.5229	0.5703	0.5061	7	AVG
Bromobenzene	0.6884	0.7016	0.7569	0.7144	0.7206	0.7135	0.7459	0.7202	3	AVG
1,1,2,2-Tetrachloroethane	#0.8529	0.9108	1.0222	0.9763	1.0290	1.0105	0.9966	0.9712	7	AVG #
1,2,3-Trichloropropane	0.2565	0.2870	0.3041	0.2966	0.3075	0.3006	0.2955	0.2925	6	AVG
trans-1,4-Dichloro-2-butene	0.2803	0.2931	0.3278	0.3106	0.3327	0.3236	0.3120	0.3114	6	AVG
n-Propylbenzene	3.0849	3.2193	3.4353	3.1761	3.1834	3.0968	3.0275	3.1748	4	AVG
2-Chlorotoluene	0.5675	0.6619	0.7096	0.6632	0.6587	0.6474	0.6756	0.6548	7	AVG
4-Chlorotoluene	0.6413	0.6892	0.7427	0.6924	0.7052	0.6961	0.7401	0.7010	5	AVG
1,3,5-Trimethylbenzene	2.0444	2.2573	2.4632	2.2970	2.3331	2.2914	2.3411	2.2896	6	AVG
tert-Butylbenzene	0.4703	0.5351	0.5407	0.5160	0.5213	0.5108	0.5473	0.5202	5	AVG
Pentachloroethane	0.3257	0.3550	0.4283	0.4067	0.4432	0.4300	0.4897	0.4112	13	AVG
1,2,4-Trimethylbenzene	2.2643	2.3364	2.5982	2.4027	2.4540	2.4060	2.4275	2.4127	4	AVG
sec-Butylbenzene	2.5679	2.8763	3.0392	2.8375	2.8520	2.7620	2.7387	2.8105	5	AVG
1,3-Dichlorobenzene	#1.3306	1.3313	1.4637	1.3552	1.3825	1.3548	1.3951	1.3733	3	AVG #
p-Isopropyltoluene	2.2653	2.4890	2.6827	2.4932	2.5293	2.4796	2.4764	2.4879	5	AVG
1,4-Dichlorobenzene	#1.4127	1.3985	1.4925	1.4162	1.4209	1.4000	1.4251	1.4237	2	AVG #
1,2,3-Trimethylbenzene	2.4036	2.5068	2.7437	2.6464	2.7318	2.5569	2.5827	2.5960	5	AVG
Benzyl Chloride	1.4522	1.6615	2.0559	2.0662	2.2489	2.2481	2.2162	1.9927	16	AVG
1,3-Diethylbenzene	1.4093	1.4939	1.6403	1.5871	1.6504	1.5517	1.6100	1.5632	6	AVG
1,4-Diethylbenzene	1.5014	1.6231	1.7666	1.7078	1.7631	1.6440	1.7181	1.6748	6	AVG
1,2-Dichlorobenzene	#1.2870	1.3049	1.4555	1.3483	1.3827	1.3600	1.3989	1.3625	4	AVG #
n-Butylbenzene	1.1573	1.2337	1.3627	1.2429	1.2674	1.2393	1.2867	1.2557	5	AVG
1,2-Diethylbenzene	1.1418	1.3161	1.4034	1.3496	1.3840	1.2953	1.3485	1.3198	7	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date(s): 02/19/19 02/19/19

Heated Purge: (Y/N) Y Calibration Times: 12:21 14:44

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = wf19i07.d RRF 4 = wf19i06.d RRF 10= wf19i05.d
RRF 20= wf19i04.d RRF 50= wf19i03.d RRF100= wf19i02.d RRF300= wf19i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
1,2-Dibromo-3-chloropropane#	0.1739	0.2010	0.2236	0.2274	0.2466	0.2404	0.2321	0.2207	11	AVG #
1,3,5-Trichlorobenzene	1.0015	1.0168	1.1029	1.0404	1.0698	1.0395	1.0425	1.0448	3	AVG
1,2,4-Trichlorobenzene #	0.9276	0.9375	1.0673	1.0091	1.0550	1.0242	1.0006	1.0030	5	AVG #
Hexachlorobutadiene	0.3772	0.3543	0.3867	0.3591	0.3537	0.3359	0.3340	0.3573	5	AVG
Naphthalene	3.0094	3.0778	3.6431	3.5139	3.7449	3.5758	3.1927	3.3939	9	AVG
1,2,3-Trichlorobenzene	0.9349	0.9398	1.0277	0.9764	1.0247	0.9888	0.9609	0.9790	4	AVG
2-Methylnaphthalene	1.6516	1.5794	2.0834	1.9918	2.1930	2.1016	1.9535	1.9363	12	AVG
Dibromofluoromethane	0.2302	0.2343	0.2297	0.2314	0.2334	0.2302	0.2322	0.2316	1	AVG
Dibromofluoromethane(2)	0.2350	0.2399	0.2348	0.2383	0.2371	0.2401	0.2394	0.2378	1	AVG
1,2-Dichloroethane-d4	0.0612	0.0633	0.0610	0.0634	0.0611	0.0615	0.0597	0.0616	2	AVG
1,2-Dichloroethane-d4(2)	0.2724	0.2724	0.2690	0.2741	0.2626	0.2666	0.2602	0.2682	2	AVG
1,2-Dichloroethane-d4(3)	0.0393	0.0399	0.0398	0.0385	0.0385	0.0391	0.0395	0.0392	1	AVG
Toluene-d8	1.2422	1.2652	1.2667	1.2556	1.2661	1.2478	1.2267	1.2529	1	AVG
Toluene-d8(2)	0.8164	0.8263	0.8295	0.8323	0.8287	0.8363	0.8467	0.8309	1	AVG
4-Bromofluorobenzene	0.4965	0.4997	0.5047	0.4992	0.4989	0.5008	0.5088	0.5012	1	AVG
4-Bromofluorobenzene(2)	0.4175	0.4231	0.4261	0.4206	0.4231	0.4215	0.4287	0.4229	1	AVG

Average %RSD 7

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP09137.i/19feb19i.b/wf19i01.d	VSTD300
/chem2/HP09137.i/19feb19i.b/wf19i02.d	VSTD100
/chem2/HP09137.i/19feb19i.b/wf19i03.d	VSTD050
/chem2/HP09137.i/19feb19i.b/wf19i04.d	VSTD020
/chem2/HP09137.i/19feb19i.b/wf19i05.d	VSTD010
/chem2/HP09137.i/19feb19i.b/wf19i06.d	VSTD004
/chem2/HP09137.i/19feb19i.b/wf19i07.d	VSTD001

Area Summary

File ID:

Internal Standard Name	wf19i01.d	wf19i02.d	wf19i03.d	wf19i04.d	wf19i05.d	wf19i06.d	wf19i07.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	208793	220310	221988	226145	235698	216574	213467	220425	4	Yes
Fluorobenzene	896646	842063	858650	878585	872867	867920	823064	862828	3	Yes
Chlorobenzene-d5	750584	700579	703812	722592	709147	717501	683121	712477	3	Yes
1,4-Dichlorobenzene-d4	447340	397731	393177	398717	394276	394254	368100	399085	6	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	wf19i01.d	wf19i02.d	wf19i03.d	wf19i04.d	wf19i05.d	wf19i06.d	wf19i07.d	Avg. RT
t-Butyl alcohol-d10	2.735	2.732	2.728	2.732	2.725	2.728	2.732	2.730
Fluorobenzene	5.029	5.029	5.029	5.029	5.029	5.029	5.029	5.029
Chlorobenzene-d5	8.161	8.161	8.161	8.161	8.161	8.161	8.161	8.161
1,4-Dichlorobenzene-d4	10.041	10.041	10.038	10.038	10.041	10.038	10.038	10.040

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 02/20/2019 at 10:32.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 ICV Date: 02/20/19 Time: 12:07

Lab File ID: wf20l01.d Init. Calib. Date(s): 02/20/19 02/20/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3233	0.2795	17.29	20	-14	#
# Chloromethane	0.4026	0.3901	19.38	20	-3	#
1,3-Butadiene	0.2453	0.2559	20.86	20	4	
# Vinyl Chloride	0.3690	0.3679	19.94	20	0	#
# Bromomethane	0.2911	0.2538	17.44	20	-13	#
# Chloroethane	0.2429	0.2141	17.63	20	-12	#
Dichlorofluoromethane	0.4701	0.4241	18.04	20	-10	
n-Pentane	0.3728	0.3323	17.83	20	-11	
# Trichlorofluoromethane	0.3920	0.3507	17.89	20	-11	#
Ethanol	0.1140	0.1305	572.10	500	14	
Freon 123a	0.2929	0.2989	20.41	20	2	
Acrolein	1.7998	1.6198	135.00	150	-10	
# 1,1-Dichloroethene	0.2204	0.2572	23.34	20	17	#
# Acetone	0.8748	0.8401	144.04	150	-4	#
# Freon 113	0.1936	0.2153	22.24	20	11	#
2-Propanol	0.6500	0.6597	152.24	150	1	
Methyl Iodide	0.4225	0.4552	21.55	20	8	
# Carbon Disulfide	0.7767	0.8165	21.03	20	5	#
Allyl Chloride	0.3841	0.3808	19.83	20	-1	
# Methyl Acetate	0.3324	0.3222	19.38	20	-3	#
# Methylene Chloride	0.2695	0.2912	21.61	20	8	#
t-Butyl alcohol	1.1595	1.1387	196.42	200	-2	
Acrylonitrile	0.1749	0.1762	100.78	100	1	
# trans-1,2-Dichloroethene	0.2392	0.2692	22.51	20	13	#
# Methyl Tertiary Butyl Ether	0.5824	0.6000	20.61	20	3	#
n-Hexane	0.3200	0.3383	21.14	20	6	
# 1,1-Dichloroethane	0.4334	0.4754	21.94	20	10	#
di-Isopropyl ether	0.8327	0.9095	21.85	20	9	
2-Chloro-1,3-butadiene	0.3754	0.4010	21.36	20	7	
Ethyl t-butyl ether	0.6069	0.6397	21.08	20	5	
# cis-1,2-Dichloroethene	0.2686	0.3060	22.79	20	14	#
# 2-Butanone	0.2512	0.2467	147.26	150	-2	#
2,2-Dichloropropane	0.1946	0.2191	22.51	20	13	
Propionitrile	1.4410	1.4646	152.45	150	2	
Methacrylonitrile	0.1880	0.1915	152.73	150	2	
Bromochloromethane	0.1396	0.1402	20.08	20	0	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 ICV Date: 02/20/19 Time: 12:07

Lab File ID: wf20l01.d Init. Calib. Date(s): 02/20/19 02/20/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Tetrahydrofuran	1.3337	1.2743	95.54	100	-4	
#	Chloroform	0.4067	0.4516	22.21	20	11	#
#	1,1,1-Trichloroethane	0.3060	0.3471	22.69	20	13	#
#	Cyclohexane	0.4049	0.4112	20.31	20	2	#
	1,1-Dichloropropene	0.3260	0.3579	21.96	20	10	
#	Carbon Tetrachloride	0.2626	0.2742	20.89	20	4	#
	Isobutyl Alcohol	0.4227	0.4079	482.47	500	-4	
#	Benzene	1.0480	1.1347	21.66	20	8	#
#	1,2-Dichloroethane	0.3237	0.3597	22.22	20	11	#
	t-Amyl methyl ether	0.6218	0.6386	20.54	20	3	
	n-Heptane	0.3059	0.3099	20.26	20	1	
	n-Butanol	0.3753	0.3610	961.94	1000	-4	
#	Trichloroethene	0.2538	0.2812	22.16	20	11	#
#	Methylcyclohexane	0.3684	0.3776	20.50	20	2	#
#	1,2-Dichloropropane	0.2691	0.3032	22.54	20	13	#
	Dibromomethane	0.1661	0.1822	21.94	20	10	
	1,4-Dioxane	0.1122	0.1124	501.07	500	0	
	Methyl Methacrylate	0.2957	0.2953	19.97	20	0	
#	Bromodichloromethane	0.3051	0.3279	21.49	20	7	#
	2-Nitropropane	0.1032	0.0871	16.88	20	-16	
	2-Chloroethyl Vinyl Ether	0.2051	0.1921	18.73	20	-6	
#	cis-1,3-Dichloropropene	0.4195	0.4588	21.87	20	9	#
#	4-Methyl-2-pentanone	0.4953	0.4880	98.53	100	-1	#
#	Toluene	0.8071	0.8843	21.91	20	10	#
#	trans-1,3-Dichloropropene	0.4805	0.4960	20.65	20	3	#
	Ethyl Methacrylate	0.5904	0.6116	20.72	20	4	
#	1,1,2-Trichloroethane	0.3106	0.3563	22.94	20	15	#
#	Tetrachloroethene	0.3275	0.3603	22.00	20	10	#
	1,3-Dichloropropane	0.5396	0.5927	21.97	20	10	
#	2-Hexanone	0.4700	0.4573	97.29	100	-3	#
#	Dibromochloromethane	0.3034	0.3279	21.62	20	8	#
#	1,2-Dibromoethane	0.3413	0.3744	21.94	20	10	#
#	Chlorobenzene	0.8953	0.9820	21.94	20	10	#
	1,1,1,2-Tetrachloroethane	0.2877	0.3058	21.25	20	6	
#	Ethylbenzene	1.5340	1.6678	21.74	20	9	#
#	m+p-Xylene	0.6099	0.6667	43.72	40	9	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 ICV Date: 02/20/19 Time: 12:07

Lab File ID: wf20l01.d Init. Calib. Date(s): 02/20/19 02/20/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	o-Xylene	0.6000	0.6435	21.45	20	7	#
#	Styrene	1.0065	1.1147	22.15	20	11	#
#	Bromoform	0.2361	0.2357	19.96	20	0	#
#	Isopropylbenzene	1.4744	1.6362	22.19	20	11	#
	Cyclohexanone	0.5061	0.3977	392.85	500	-21	
	Bromobenzene	0.7202	0.7749	21.52	20	8	
#	1,1,2,2-Tetrachloroethane	0.9712	1.0477	21.58	20	8	#
	1,2,3-Trichloropropane	0.2925	0.3208	21.93	20	10	
	trans-1,4-Dichloro-2-butene	0.3114	0.3263	104.76	100	5	
	n-Propylbenzene	3.1748	3.5193	22.17	20	11	
	2-Chlorotoluene	0.6548	0.7224	22.06	20	10	
	4-Chlorotoluene	0.7010	0.7635	21.78	20	9	
	1,3,5-Trimethylbenzene	2.2896	2.4970	21.81	20	9	
	tert-Butylbenzene	0.5202	0.5611	21.57	20	8	
	Pentachloroethane	0.4112	0.4164	20.25	20	1	
	1,2,4-Trimethylbenzene	2.4127	2.5891	21.46	20	7	
	sec-Butylbenzene	2.8105	3.0779	21.90	20	10	
#	1,3-Dichlorobenzene	1.3733	1.4796	21.55	20	8	#
	p-Isopropyltoluene	2.4879	2.7111	21.79	20	9	
#	1,4-Dichlorobenzene	1.4237	1.5451	21.71	20	9	#
	1,2,3-Trimethylbenzene	2.5960	2.7701	21.34	20	7	
	Benzyl Chloride	1.9927	1.9670	19.74	20	-1	
	1,3-Diethylbenzene	1.5632	1.6430	21.02	20	5	
	1,4-Diethylbenzene	1.6748	1.7017	20.32	20	2	
#	1,2-Dichlorobenzene	1.3625	1.4843	21.79	20	9	#
	n-Butylbenzene	1.2557	1.3468	21.45	20	7	
	1,2-Diethylbenzene	1.3198	1.4051	21.29	20	6	
#	1,2-Dibromo-3-chloropropane	0.2207	0.2278	20.64	20	3	#
	1,3,5-Trichlorobenzene	1.0448	1.0980	21.02	20	5	
#	1,2,4-Trichlorobenzene	1.0030	1.0774	21.48	20	7	#
	Hexachlorobutadiene	0.3573	0.3703	20.73	20	4	
	Naphthalene	3.3939	3.6416	21.46	20	7	
	1,2,3-Trichlorobenzene	0.9790	1.0505	21.46	20	7	
	2-Methylnaphthalene	1.9363	1.9106	19.73	20	-1	
				Average %Drift		7	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

^

Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem/HP09915.i/19mar18a.b/lm18i08.d
/chem/HP09915.i/19mar18a.b/lm18i07.d
/chem/HP09915.i/19mar18a.b/lm18i06.d
/chem/HP09915.i/19mar18a.b/lm18i04.d
/chem/HP09915.i/19mar18a.b/lm18i03.d
/chem/HP09915.i/19mar18a.b/lm18i02.d
/chem/HP09915.i/19mar18a.b/lm18i01.d

File /chem/HP09915.i/19mar18a.b/lm18i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem/HP09915.i/19may20b.b/ly20c05.d

RT Summary

Internal Standard Name	File ID: ly20c05.d	ICAL RT	In Spec
t-Butyl alcohol-d10	3.568	3.555	Yes
Fluorobenzene	7.041	7.041	Yes
Chlorobenzene-d5	10.703	10.703	Yes
1,4-Dichlorobenzene-d4	12.635	12.635	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: ly20c05.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	279941	285580	142790	571160	Yes
Fluorobenzene	1396207	1339388	669694	2678776	Yes
Chlorobenzene-d5	900033	1047647	523824	2095294	Yes
1,4-Dichlorobenzene-d4	500499	580718	290359	1161436	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 05/20/2019 at 20:12

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 05/20/19 Time: 19:47

Lab File ID: ly20c05.d Init. Calib. Date(s): 03/18/19 03/18/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.4346	0.3875	44.58	50	-11	#
# Chloromethane	0.4024	0.4067	50.53	50	1	#
1,3-Butadiene	0.2114	0.3125	73.90	50	48	<-
# Vinyl Chloride	0.3942	0.3758	47.66	50	-5	#
# Bromomethane	0.3430	0.3024	44.09	50	-12	#
# Chloroethane	0.2292	0.2165	47.22	50	-6	#
n-Pentane	0.3173	0.4242	66.85	50	34	<-
# Trichlorofluoromethane	0.5146	0.4489	43.62	50	-13	#
Freon 123a	0.2889	0.2518	43.58	50	-13	
Acrolein	1.9506	1.9694	504.80	500	1	
# 1,1-Dichloroethene	0.1707	0.1763	51.62	50	3	#
# 1,1-Dichloroethene(2)	0.0941	0.0953	50.63	50	1	#<-
# Acetone	0.8340	0.9160	109.83	100	10	#
# Freon 113	0.1814	0.1856	51.17	50	2	#
2-Propanol	0.5575	0.6192	277.67	250	11	
Methyl Iodide	0.3619	0.3556	49.12	50	-2	
# Carbon Disulfide	0.5780	0.6880	59.52	50	19	#
Allyl Chloride	0.3654	0.3937	53.88	50	8	
# Methyl Acetate	0.2563	0.2799	54.59	50	9	#
# Methylene Chloride	0.2126	0.2187	51.43	50	3	#
t-Butyl alcohol	1.0325	0.9926	240.32	250	-4	
Acrylonitrile	0.1341	0.1470	54.82	50	10	
# trans-1,2-Dichloroethene	0.2046	0.2062	50.39	50	1	#
# Methyl Tertiary Butyl Ether	0.6758	0.6296	46.58	50	-7	#
n-Hexane	0.2758	0.3266	59.20	50	18	
# 1,1-Dichloroethane	0.3864	0.3988	51.59	50	3	#
di-Isopropyl ether	0.7307	0.8177	55.96	50	12	
2-Chloro-1,3-butadiene	0.3622	0.3739	51.61	50	3	
Ethyl t-butyl ether	0.7021	0.6543	46.59	50	-7	
# cis-1,2-Dichloroethene	0.2362	0.2328	49.28	50	-1	#
# 2-Butanone	0.1852	0.1989	107.39	100	7	#
2,2-Dichloropropane	0.3291	0.2678	40.69	50	-19	
Propionitrile	1.2075	1.4834	307.12	250	23	<-
Methacrylonitrile	0.1384	0.1494	134.89	125	8	
Bromochloromethane	0.1353	0.1269	46.91	50	-6	
Tetrahydrofuran	1.1552	1.2084	104.60	100	5	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 05/20/19 Time: 19:47

Lab File ID: ly20c05.d Init. Calib. Date(s): 03/18/19 03/18/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Chloroform	0.3884	0.3732	48.05	50	-4	#
# 1,1,1-Trichloroethane	0.3331	0.2944	44.19	50	-12	#
# Cyclohexane	0.3600	0.3898	54.15	50	8	#
# Cyclohexane(2)	0.3058	0.3024	49.45	50	-1	#
# Cyclohexane(3)	0.1097	0.1103	50.29	50	1	#
1,1-Dichloropropene	0.2982	0.2974	49.88	50	0	
# Carbon Tetrachloride	0.2735	0.2434	44.50	50	-11	#
Isobutyl Alcohol	0.3408	0.3946	723.81	625	16	
# Benzene	0.8583	0.8953	52.15	50	4	#
# 1,2-Dichloroethane	0.3443	0.3121	45.32	50	-9	#
# 1,2-Dichloroethane(2)	0.0211	0.0263	62.53	50	25	#<-
t-Amyl methyl ether	0.6978	0.6321	45.29	50	-9	
n-Heptane	0.3104	0.3844	61.90	50	24	<-
n-Butanol	0.2466	0.2906	1472.79	1250	18	
# Trichloroethene	0.2313	0.2210	47.77	50	-4	#
# Methylcyclohexane	0.3982	0.4194	52.66	50	5	#
# Methylcyclohexane(2)	0.1853	0.1877	50.65	50	1	#
# 1,2-Dichloropropane	0.2336	0.2460	52.67	50	5	#
Dibromomethane	0.1615	0.1544	47.80	50	-4	
1,4-Dioxane	0.0649	0.0909	875.00	625	40	<-
Methyl Methacrylate	0.2254	0.2320	51.46	50	3	
# Bromodichloromethane	0.2787	0.2729	48.95	50	-2	#
2-Nitropropane	0.0967	0.0877	90.73	100	-9	
2-Chloroethyl Vinyl Ether	0.1877	0.1991	53.03	50	6	
# cis-1,3-Dichloropropene	0.3514	0.3538	50.34	50	1	#
# 4-Methyl-2-pentanone	0.3908	0.4199	107.46	100	7	#
# Toluene	0.7129	0.8387	58.83	50	18	#
# trans-1,3-Dichloropropene	0.4252	0.5078	59.71	50	19	#
Ethyl Methacrylate	0.4995	0.6323	63.29	50	27	<-
# 1,1,2-Trichloroethane	0.2695	0.3299	61.20	50	22	#<-
# Tetrachloroethene	0.3100	0.3505	56.53	50	13	#
1,3-Dichloropropane	0.4751	0.5829	61.33	50	23	<-
# 2-Hexanone	0.3667	0.4751	129.55	100	30	#<-
# Dibromochloromethane	0.2782	0.3106	55.84	50	12	#
# 1,2-Dibromoethane	0.3064	0.3404	55.54	50	11	#
1-Chlorohexane	0.4253	0.4052	47.64	50	-5	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 05/20/19 Time: 19:47

Lab File ID: ly20c05.d Init. Calib. Date(s): 03/18/19 03/18/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Chlorobenzene	0.8575	0.8164	47.60	50	-5	#
	1,1,1,2-Tetrachloroethane	0.2874	0.2791	48.55	50	-3	
#	Ethylbenzene	1.4440	1.4738	51.03	50	2	#
#	m+p-Xylene	0.5679	0.5625	99.05	100	-1	#
#	o-Xylene	0.5616	0.5495	48.92	50	-2	#
#	Styrene	0.9417	0.9375	49.78	50	0	#
#	Bromoform	0.2073	0.1975	43.34	50	-13	#
#	Isopropylbenzene	1.4369	1.4179	49.34	50	-1	#
	Cyclohexanone	0.2584	0.2959	715.49	625	14	
	Bromobenzene	0.6875	0.6547	47.62	50	-5	
#	1,1,2,2-Tetrachloroethane	0.8587	0.9113	53.06	50	6	#
	1,2,3-Trichloropropane	0.2614	0.2548	48.73	50	-3	
	trans-1,4-Dichloro-2-butene	0.2756	0.2820	127.88	125	2	
	n-Propylbenzene	3.0353	3.0873	50.86	50	2	
	2-Chlorotoluene	0.6424	0.5980	46.54	50	-7	
	4-Chlorotoluene	0.6756	0.6289	46.54	50	-7	
	1,3,5-Trimethylbenzene	2.2725	2.2246	48.95	50	-2	
	tert-Butylbenzene	0.5333	0.4537	42.54	50	-15	
	Pentachloroethane	0.4130	0.3958	47.93	50	-4	
	1,2,4-Trimethylbenzene	2.3755	2.3280	49.00	50	-2	
	sec-Butylbenzene	2.8289	2.8159	49.77	50	0	
#	1,3-Dichlorobenzene	1.3077	1.2447	47.59	50	-5	#
	p-Isopropyltoluene	2.5630	2.4744	48.27	50	-3	
#	1,4-Dichlorobenzene	1.3888	1.3370	48.13	50	-4	#
	1,2,3-Trimethylbenzene	2.6176	2.7123	51.81	50	4	
	Benzyl Chloride	1.7287	1.6154	46.72	50	-7	
	1,3-Diethylbenzene	1.6176	1.6229	50.16	50	0	
	1,4-Diethylbenzene	1.7493	1.7407	49.75	50	0	
#	1,2-Dichlorobenzene	1.3049	1.2489	47.85	50	-4	#
	n-Butylbenzene	1.3010	1.3069	50.23	50	0	
	1,2-Diethylbenzene	1.3687	1.3660	49.90	50	0	
#	1,2-Dibromo-3-chloropropane	0.1932	0.1897	49.08	50	-2	#
	1,3,5-Trichlorobenzene	1.0037	0.8998	44.82	50	-10	
#	1,2,4-Trichlorobenzene	0.9585	0.8483	44.26	50	-11	#
	Hexachlorobutadiene	0.3839	0.3425	44.61	50	-11	
	Naphthalene	3.0426	2.8941	47.56	50	-5	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 05/20/19 Time: 19:47

Lab File ID: ly20c05.d Init. Calib. Date(s): 03/18/19 03/18/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,2,3-Trichlorobenzene	0.9139	0.8373	45.81	50	-8
2-Methylnaphthalene	1.8535	1.8583	50.13	50	0
Dibromofluoromethane	0.2570	0.2459	47.83	50	-4
Dibromofluoromethane(2)	0.2634	0.2514	47.73	50	-5
1,2-Dichloroethane-d4	0.0602	0.0613	50.86	50	2
1,2-Dichloroethane-d4(2)	0.3372	0.3198	47.42	50	-5
1,2-Dichloroethane-d4(3)	0.0385	0.0384	49.92	50	0
Toluene-d8	1.2867	1.5245	59.24	50	18
Toluene-d8(2)	0.8312	0.9905	59.59	50	19
4-Bromofluorobenzene	0.4979	0.4893	49.13	50	-2
4-Bromofluorobenzene(2)	0.4044	0.4095	50.63	50	1

Average %Drift 8

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP09137.i/19feb19i.b/wf19i07.d
/chem2/HP09137.i/19feb19i.b/wf19i06.d
/chem2/HP09137.i/19feb19i.b/wf19i05.d
/chem2/HP09137.i/19feb19i.b/wf19i04.d
/chem2/HP09137.i/19feb19i.b/wf19i03.d
/chem2/HP09137.i/19feb19i.b/wf19i02.d
/chem2/HP09137.i/19feb19i.b/wf19i01.d

File /chem2/HP09137.i/19feb19i.b/wf19i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP09137.i/19may22a.b/wy22c01.d

RT Summary

Internal Standard Name	File ID: wy22c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	2.738	2.728	Yes
Fluorobenzene	5.032	5.029	Yes
Chlorobenzene-d5	8.164	8.161	Yes
1,4-Dichlorobenzene-d4	10.042	10.038	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: wy22c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	259360	221988	110994	443976	Yes
Fluorobenzene	1148568	858650	429325	1717300	Yes
Chlorobenzene-d5	875014	703812	351906	1407624	Yes
1,4-Dichlorobenzene-d4	489071	393177	196588	786354	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/22/19 Time: 12:04

Lab File ID: wy22c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	$\overline{RRF}$	RRF150	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Dichlorodifluoromethane	0.3233	0.3679	170.68	150	14	#
#	Chloromethane	0.4026	0.3640	135.61	150	-10	#
	1,3-Butadiene	0.2453	0.2367	144.70	150	-4	
#	Vinyl Chloride	0.3690	0.3448	140.15	150	-7	#
#	Bromomethane	0.2911	0.2666	137.39	150	-8	#
#	Chloroethane	0.2429	0.2092	129.20	150	-14	#
	n-Pentane	0.3728	0.3951	158.99	150	6	
#	Trichlorofluoromethane	0.3920	0.3979	152.26	150	2	#
	Ethanol	0.1140	0.0964	3171.76	3750	-15	
	Freon 123a	0.2929	0.2880	147.50	150	-2	
	Acrolein	1.7998	1.6758	1396.67	1500	-7	
#	1,1-Dichloroethene	0.2204	0.2457	167.16	150	11	#
#	1,1-Dichloroethene(2)	0.1112	0.1148	154.81	150	3	#
#	Acetone	0.8748	0.9154	313.91	300	5	#
#	Freon 113	0.1936	0.1952	151.28	150	1	#
	2-Propanol	0.6500	0.7882	909.49	750	21	<-
	Methyl Iodide	0.4225	0.4471	158.75	150	6	
#	Carbon Disulfide	0.7767	0.7163	138.33	150	-8	#
	Allyl Chloride	0.3841	0.4080	159.34	150	6	
#	Methyl Acetate	0.3324	0.3078	138.88	150	-7	#
#	Methylene Chloride	0.2695	0.2684	149.43	150	0	#
	t-Butyl alcohol	1.1595	1.2295	795.27	750	6	
	Acrylonitrile	0.1749	0.1605	137.71	150	-8	
#	trans-1,2-Dichloroethene	0.2392	0.2541	159.36	150	6	#
#	Methyl Tertiary Butyl Ether	0.5824	0.6997	180.22	150	20	#
	n-Hexane	0.3200	0.3738	175.21	150	17	
#	1,1-Dichloroethane	0.4334	0.4437	153.55	150	2	#
	di-Isopropyl ether	0.8327	0.8480	152.76	150	2	
	2-Chloro-1,3-butadiene	0.3754	0.4109	164.21	150	9	
	Ethyl t-butyl ether	0.6069	0.6363	157.25	150	5	
#	cis-1,2-Dichloroethene	0.2686	0.2817	157.36	150	5	#
#	2-Butanone	0.2512	0.2259	269.73	300	-10	#
	2,2-Dichloropropane	0.1946	0.1573	121.22	150	-19	
	Propionitrile	1.4410	1.5211	791.69	750	6	
	Methacrylonitrile	0.1880	0.1787	356.47	375	-5	
	Bromochloromethane	0.1396	0.1462	157.07	150	5	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/22/19 Time: 12:04

Lab File ID: wy22c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	RRF	RRF150	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Tetrahydrofuran	1.3337	1.3517	304.05	300	1	
#	Chloroform	0.4067	0.4190	154.55	150	3	#
#	1,1,1-Trichloroethane	0.3060	0.3146	154.23	150	3	#
#	Cyclohexane	0.4049	0.4334	160.54	150	7	#
#	Cyclohexane(2)	0.3352	0.3141	140.56	150	-6	#
#	Cyclohexane(3)	0.1217	0.1321	162.78	150	9	#
	1,1-Dichloropropene	0.3260	0.3397	156.27	150	4	
#	Carbon Tetrachloride	0.2626	0.2745	156.81	150	5	#
	Isobutyl Alcohol	0.4227	0.4449	1973.46	1875	5	
#	Benzene	1.0480	1.0682	152.90	150	2	#
#	1,2-Dichloroethane	0.3237	0.3169	146.83	150	-2	#
#	1,2-Dichloroethane(2)	0.0308	0.0333	161.97	150	8	#<-
	t-Amyl methyl ether	0.6218	0.6300	151.97	150	1	
	n-Heptane	0.3059	0.3305	162.06	150	8	
	n-Butanol	0.3753	0.4024	4020.69	3750	7	
#	Trichloroethene	0.2538	0.2600	153.69	150	2	#
#	Methylcyclohexane	0.3684	0.4230	172.20	150	15	#
#	Methylcyclohexane(2)	0.1713	0.1966	172.14	150	15	#
#	1,2-Dichloropropane	0.2691	0.2778	154.87	150	3	#
	Dibromomethane	0.1661	0.1724	155.70	150	4	
	1,4-Dioxane	0.1122	0.1265	2113.99	1875	13	
	Methyl Methacrylate	0.2957	0.2973	150.84	150	1	
#	Bromodichloromethane	0.3051	0.3188	156.74	150	4	#
	2-Nitropropane	0.1032	0.1038	301.81	300	1	
	2-Chloroethyl Vinyl Ether	0.2051	0.2000	146.29	150	-2	
#	cis-1,3-Dichloropropene	0.4195	0.4417	157.94	150	5	#
#	4-Methyl-2-pentanone	0.4953	0.4846	293.52	300	-2	#
#	Toluene	0.8071	0.9016	167.56	150	12	#
#	trans-1,3-Dichloropropene	0.4805	0.5412	168.96	150	13	#
	Ethyl Methacrylate	0.5904	0.6868	174.48	150	16	
#	1,1,2-Trichloroethane	0.3106	0.3464	167.26	150	12	#
#	Tetrachloroethene	0.3275	0.3717	170.22	150	13	#
	1,3-Dichloropropane	0.5396	0.5983	166.33	150	11	
#	2-Hexanone	0.4700	0.4951	315.98	300	5	#
#	Dibromochloromethane	0.3034	0.3596	177.76	150	19	#
#	1,2-Dibromoethane	0.3413	0.3827	168.18	150	12	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/22/19 Time: 12:04

Lab File ID: wy22c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	RRF	RRF150	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Chlorobenzene	0.8953	0.9861	165.21	150	10	#
	1,1,1,2-Tetrachloroethane	0.2877	0.3291	171.59	150	14	
#	Ethylbenzene	1.5340	1.6723	163.53	150	9	#
#	m+p-Xylene	0.6099	0.6750	332.04	300	11	#
#	o-Xylene	0.6000	0.6663	166.57	150	11	#
#	Styrene	1.0065	1.1601	172.88	150	15	#
#	Bromoform	0.2361	0.2776	176.37	150	18	#
#	Isopropylbenzene	1.4744	1.6159	164.39	150	10	#
	Cyclohexanone	0.5061	0.4638	1718.29	1875	-8	
	Bromobenzene	0.7202	0.7939	165.35	150	10	
#	1,1,2,2-Tetrachloroethane	0.9712	1.0408	160.76	150	7	#
	1,2,3-Trichloropropane	0.2925	0.3043	156.02	150	4	
	trans-1,4-Dichloro-2-butene	0.3114	0.3134	377.34	375	1	
	n-Propylbenzene	3.1748	3.3581	158.66	150	6	
	2-Chlorotoluene	0.6548	0.7239	165.81	150	11	
	4-Chlorotoluene	0.7010	0.7721	165.22	150	10	
	1,3,5-Trimethylbenzene	2.2896	2.4686	161.72	150	8	
	tert-Butylbenzene	0.5202	0.5676	163.67	150	9	
	Pentachloroethane	0.4112	0.4767	173.89	150	16	
	1,2,4-Trimethylbenzene	2.4127	2.5648	159.45	150	6	
	sec-Butylbenzene	2.8105	2.9627	158.13	150	5	
#	1,3-Dichlorobenzene	1.3733	1.4776	161.39	150	8	#
	p-Isopropyltoluene	2.4879	2.6120	157.48	150	5	
#	1,4-Dichlorobenzene	1.4237	1.5126	159.37	150	6	#
	1,2,3-Trimethylbenzene	2.5960	2.7192	157.12	150	5	
	Benzyl Chloride	1.9927	2.2512	169.46	150	13	
	1,3-Diethylbenzene	1.5632	1.6208	155.52	150	4	
	1,4-Diethylbenzene	1.6748	1.6969	151.98	150	1	
#	1,2-Dichlorobenzene	1.3625	1.4629	161.05	150	7	#
	n-Butylbenzene	1.2557	1.2869	153.72	150	2	
	1,2-Diethylbenzene	1.3198	1.3652	155.15	150	3	
#	1,2-Dibromo-3-chloropropane	0.2207	0.2234	151.82	150	1	#
	1,3,5-Trichlorobenzene	1.0448	1.0253	147.20	150	-2	
#	1,2,4-Trichlorobenzene	1.0030	0.9844	147.22	150	-2	#
	Hexachlorobutadiene	0.3573	0.3681	154.54	150	3	
	Naphthalene	3.3939	3.3774	149.27	150	0	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

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7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/22/19 Time: 12:04

Lab File ID: wy22c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

COMPOUND	$\overline{RRF}$	RRF150	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,2,3-Trichlorobenzene	0.9790	0.9440	144.63	150	-4
2-Methylnaphthalene	1.9363	1.7016	131.82	150	-12
Dibromofluoromethane	0.2316	0.2193	47.33	50	-5
Dibromofluoromethane(2)	0.2378	0.2240	47.10	50	-6
1,2-Dichloroethane-d4	0.0616	0.0604	49.05	50	-2
1,2-Dichloroethane-d4(2)	0.2682	0.2547	47.49	50	-5
1,2-Dichloroethane-d4(3)	0.0392	0.0395	50.30	50	1
Toluene-d8	1.2529	1.3016	51.94	50	4
Toluene-d8(2)	0.8309	0.8536	51.37	50	3
4-Bromofluorobenzene	0.5012	0.4806	47.94	50	-4
4-Bromofluorobenzene(2)	0.4229	0.4151	49.07	50	-2

Average %Drift 7

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

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Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP09137.i/19feb19i.b/wf19i07.d
/chem2/HP09137.i/19feb19i.b/wf19i06.d
/chem2/HP09137.i/19feb19i.b/wf19i05.d
/chem2/HP09137.i/19feb19i.b/wf19i04.d
/chem2/HP09137.i/19feb19i.b/wf19i03.d
/chem2/HP09137.i/19feb19i.b/wf19i02.d
/chem2/HP09137.i/19feb19i.b/wf19i01.d

File /chem2/HP09137.i/19feb19i.b/wf19i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP09137.i/19may23a.b/wy23c01.d

RT Summary

Internal Standard Name	File ID: wy23c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	2.735	2.728	Yes
Fluorobenzene	5.029	5.029	Yes
Chlorobenzene-d5	8.161	8.161	Yes
1,4-Dichlorobenzene-d4	10.041	10.038	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: wy23c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	200586	221988	110994	443976	Yes
Fluorobenzene	1013024	858650	429325	1717300	Yes
Chlorobenzene-d5	773452	703812	351906	1407624	Yes
1,4-Dichlorobenzene-d4	436881	393177	196588	786354	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/23/19 Time: 05:46

Lab File ID: wy23c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3233	0.4030	62.33	50	25	#<-
# Chloromethane	0.4026	0.3992	49.58	50	-1	#
1,3-Butadiene	0.2453	0.2271	46.28	50	-7	
# Vinyl Chloride	0.3690	0.3678	49.83	50	0	#
# Bromomethane	0.2911	0.2953	50.73	50	1	#
# Chloroethane	0.2429	0.2205	45.39	50	-9	#
n-Pentane	0.3728	0.2790	37.42	50	-25	<-
# Trichlorofluoromethane	0.3920	0.4222	53.86	50	8	#
Ethanol	0.1140	0.0824	903.24	1250	-28	<-
Freon 123a	0.2929	0.2896	49.43	50	-1	
Acrolein	1.7998	1.8108	503.05	500	1	
# 1,1-Dichloroethene	0.2204	0.2311	52.41	50	5	#
# 1,1-Dichloroethene(2)	0.1112	0.1147	51.58	50	3	#
# Acetone	0.8748	1.0709	122.41	100	22	#<-
# Freon 113	0.1936	0.1698	43.85	50	-12	#
2-Propanol	0.6500	0.6486	249.46	250	0	
Methyl Iodide	0.4225	0.4417	52.27	50	5	
# Carbon Disulfide	0.7767	0.6863	44.18	50	-12	#
Allyl Chloride	0.3841	0.4206	54.76	50	10	
# Methyl Acetate	0.3324	0.3187	47.94	50	-4	#
# Methylene Chloride	0.2695	0.2765	51.31	50	3	#
t-Butyl alcohol	1.1595	1.1817	254.79	250	2	
Acrylonitrile	0.1749	0.1671	47.79	50	-4	
# trans-1,2-Dichloroethene	0.2392	0.2506	52.39	50	5	#
# Methyl Tertiary Butyl Ether	0.5824	0.6849	58.80	50	18	#
n-Hexane	0.3200	0.2944	46.00	50	-8	
# 1,1-Dichloroethane	0.4334	0.4569	52.71	50	5	#
di-Isopropyl ether	0.8327	0.8776	52.70	50	5	
2-Chloro-1,3-butadiene	0.3754	0.4123	54.92	50	10	
Ethyl t-butyl ether	0.6069	0.6613	54.48	50	9	
# cis-1,2-Dichloroethene	0.2686	0.2772	51.61	50	3	#
# 2-Butanone	0.2512	0.2234	88.91	100	-11	#
2,2-Dichloropropane	0.1946	0.1844	47.37	50	-5	
Propionitrile	1.4410	1.6603	288.04	250	15	
Methacrylonitrile	0.1880	0.1763	117.21	125	-6	
Bromochloromethane	0.1396	0.1581	56.62	50	13	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/23/19 Time: 05:46

Lab File ID: wy23c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
Tetrahydrofuran	1.3337	1.5858	118.90	100	19	
# Chloroform	0.4067	0.4361	53.62	50	7	#
# 1,1,1-Trichloroethane	0.3060	0.3228	52.74	50	5	#
# Cyclohexane	0.4049	0.3781	46.68	50	-7	#
# Cyclohexane(2)	0.3352	0.2929	43.69	50	-13	#
# Cyclohexane(3)	0.1217	0.1135	46.65	50	-7	#
1,1-Dichloropropene	0.3260	0.3432	52.64	50	5	
# Carbon Tetrachloride	0.2626	0.2737	52.12	50	4	#
Isobutyl Alcohol	0.4227	0.4621	683.26	625	9	
# Benzene	1.0480	1.0839	51.71	50	3	#
# 1,2-Dichloroethane	0.3237	0.3418	52.79	50	6	#
# 1,2-Dichloroethane(2)	0.0308	0.0342	55.58	50	11	#<-
t-Amyl methyl ether	0.6218	0.6399	51.45	50	3	
n-Heptane	0.3059	0.2884	47.14	50	-6	
n-Butanol	0.3753	0.3756	1251.04	1250	0	
# Trichloroethene	0.2538	0.2664	52.49	50	5	#
# Methylcyclohexane	0.3684	0.4080	55.37	50	11	#
# Methylcyclohexane(2)	0.1713	0.1950	56.91	50	14	#
# 1,2-Dichloropropane	0.2691	0.2811	52.24	50	4	#
Dibromomethane	0.1661	0.1745	52.53	50	5	
1,4-Dioxane	0.1122	0.1129	628.99	625	1	
Methyl Methacrylate	0.2957	0.2820	47.68	50	-5	
# Bromodichloromethane	0.3051	0.3211	52.62	50	5	#
2-Nitropropane	0.1032	0.1008	97.65	100	-2	
2-Chloroethyl Vinyl Ether	0.2051	0.1753	42.74	50	-15	
# cis-1,3-Dichloropropene	0.4195	0.4314	51.42	50	3	#
# 4-Methyl-2-pentanone	0.4953	0.4667	94.22	100	-6	#
# Toluene	0.8071	0.9222	57.13	50	14	#
# trans-1,3-Dichloropropene	0.4805	0.5120	53.28	50	7	#
Ethyl Methacrylate	0.5904	0.6565	55.60	50	11	
# 1,1,2-Trichloroethane	0.3106	0.3507	56.46	50	13	#
# Tetrachloroethene	0.3275	0.3691	56.35	50	13	#
1,3-Dichloropropane	0.5396	0.6082	56.36	50	13	
# 2-Hexanone	0.4700	0.4640	98.72	100	-1	#
# Dibromochloromethane	0.3034	0.3447	56.81	50	14	#
# 1,2-Dibromoethane	0.3413	0.3835	56.18	50	12	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/23/19 Time: 05:46

Lab File ID: wy23c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Chlorobenzene	0.8953	1.0107	56.44	50	13	#
	1,1,1,2-Tetrachloroethane	0.2877	0.3250	56.48	50	13	
#	Ethylbenzene	1.5340	1.7112	55.78	50	12	#
#	m+p-Xylene	0.6099	0.6854	112.38	100	12	#
#	o-Xylene	0.6000	0.6692	55.76	50	12	#
#	Styrene	1.0065	1.1462	56.94	50	14	#
#	Bromoform	0.2361	0.2529	53.55	50	7	#
#	Isopropylbenzene	1.4744	1.6359	55.48	50	11	#
	Cyclohexanone	0.5061	0.4844	598.19	625	-4	
	Bromobenzene	0.7202	0.7953	55.22	50	10	
#	1,1,2,2-Tetrachloroethane	0.9712	1.0380	53.44	50	7	#
	1,2,3-Trichloropropane	0.2925	0.3112	53.20	50	6	
	trans-1,4-Dichloro-2-butene	0.3114	0.2717	109.05	125	-13	
	n-Propylbenzene	3.1748	3.3841	53.30	50	7	
	2-Chlorotoluene	0.6548	0.7139	54.51	50	9	
	4-Chlorotoluene	0.7010	0.7663	54.66	50	9	
	1,3,5-Trimethylbenzene	2.2896	2.4351	53.18	50	6	
	tert-Butylbenzene	0.5202	0.5475	52.63	50	5	
	Pentachloroethane	0.4112	0.4826	58.68	50	17	
	1,2,4-Trimethylbenzene	2.4127	2.5773	53.41	50	7	
	sec-Butylbenzene	2.8105	2.8735	51.12	50	2	
#	1,3-Dichlorobenzene	1.3733	1.4683	53.46	50	7	#
	p-Isopropyltoluene	2.4879	2.5550	51.35	50	3	
#	1,4-Dichlorobenzene	1.4237	1.5143	53.18	50	6	#
	1,2,3-Trimethylbenzene	2.5960	2.9033	55.92	50	12	
	Benzyl Chloride	1.9927	2.0000	50.18	50	0	
	1,3-Diethylbenzene	1.5632	1.6649	53.25	50	6	
	1,4-Diethylbenzene	1.6748	1.7445	52.08	50	4	
#	1,2-Dichlorobenzene	1.3625	1.4790	54.28	50	9	#
	n-Butylbenzene	1.2557	1.2544	49.95	50	0	
	1,2-Diethylbenzene	1.3198	1.4113	53.47	50	7	
#	1,2-Dibromo-3-chloropropane	0.2207	0.2130	48.25	50	-4	#
	1,3,5-Trichlorobenzene	1.0448	0.9957	47.65	50	-5	
#	1,2,4-Trichlorobenzene	1.0030	0.9409	46.90	50	-6	#
	Hexachlorobutadiene	0.3573	0.3591	50.26	50	1	
	Naphthalene	3.3939	3.2577	47.99	50	-4	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09137 Calibration Date: 05/23/19 Time: 05:46

Lab File ID: wy23c01.d Init. Calib. Date(s): 02/19/19 02/19/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
1,2,3-Trichlorobenzene	0.9790	0.9102	46.49	50	-7	
2-Methylnaphthalene	1.9363	1.4597	37.69	50	-25	<-
Dibromofluoromethane	0.2316	0.2222	47.96	50	-4	
Dibromofluoromethane(2)	0.2378	0.2296	48.28	50	-3	
1,2-Dichloroethane-d4	0.0616	0.0610	49.51	50	-1	
1,2-Dichloroethane-d4(2)	0.2682	0.2656	49.52	50	-1	
1,2-Dichloroethane-d4(3)	0.0392	0.0386	49.20	50	-2	
Toluene-d8	1.2529	1.3067	52.15	50	4	
Toluene-d8(2)	0.8309	0.8545	51.42	50	3	
4-Bromofluorobenzene	0.5012	0.4818	48.06	50	-4	
4-Bromofluorobenzene(2)	0.4229	0.4224	49.93	50	0	

Average %Drift 8

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): wy22c01.d Date Analyzed: 05/22/19

Instrument ID: HP09137 Time Analyzed: 12:04

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	259360	2.738	1148568	5.032	875014	8.164	489071	10.042
UPPER LIMIT	518720	3.238	2297136	5.532	1750028	8.664	978142	10.542
LOWER LIMIT	129680	2.238	574284	4.532	437507	7.664	244536	9.542
LAB SAMPLE ID								
01 VBLKW34	198972	2.738	1092021	5.032	838828	8.161	428583	10.041
02 LCSW34	228875	2.735	1122353	5.029	864605	8.161	466115	10.038
03 LCDW34	234361	2.735	1132675	5.029	859132	8.161	469994	10.038
04 1054613	219469	2.741	1097811	5.032	835585	8.164	421137	10.041
05 1054604	167723	2.738	1087152	5.029	826840	8.161	419512	10.042
06 1058238	188455	2.744	1066624	5.029	809289	8.161	408058	10.041
07 1058238DUP	188369	2.741	1068437	5.029	803238	8.161	408690	10.042
08 1058239	173807	2.741	1038033	5.032	790680	8.161	402424	10.042
09 1058240	203284	2.741	1033925	5.032	782205	8.161	394781	10.042
10 1058241	182145	2.744	1006098	5.029	780711	8.161	396508	10.041
11 1058242	191235	2.741	1006705	5.029	773446	8.161	387722	10.041
12 1058243	181568	2.741	998831	5.029	768284	8.161	387126	10.041
13 1056511	163458	2.741	988460	5.032	760015	8.161	383621	10.041
14 1056512	190005	2.738	989655	5.032	754630	8.161	383858	10.041
15 1056513	209320	2.741	996579	5.029	762018	8.161	384446	10.042
16 1056514	203015	2.735	1015009	5.029	779292	8.161	420034	10.042
17 1056515	211481	2.738	1008504	5.032	774351	8.161	390283	10.041
18 1056516	189339	2.741	1002472	5.029	767398	8.161	389162	10.041
19 1056517	182790	2.741	1001509	5.029	757720	8.161	388666	10.042
20 1056518	166838	2.738	971165	5.029	747097	8.161	377996	10.041
21 1056500	191803	2.738	975997	5.032	748424	8.161	386884	10.041
22 1056501DL	198997	2.738	989732	5.032	749132	8.161	400063	10.042

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): wy22c01.d Date Analyzed: 05/22/19

Instrument ID: HP09137 Time Analyzed: 12:04

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA) AREA #	RT #	IS2(FBZ) AREA #	RT #	IS3(CBZ) AREA #	RT #	IS4(DCB) AREA #	RT #
12 HOUR STD	259360	2.738	1148568	5.032	875014	8.164	489071	10.042
UPPER LIMIT	518720	3.238	2297136	5.532	1750028	8.664	978142	10.542
LOWER LIMIT	129680	2.238	574284	4.532	437507	7.664	244536	9.542
LAB SAMPLE ID								
23 1056502	199104	2.738	957458	5.032	741369	8.161	374424	10.042
24 1056503	187663	2.738	946149	5.032	731417	8.161	367282	10.041

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

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FORM VIII VOA

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8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): wy23c01.d Date Analyzed: 05/23/19

Instrument ID: HP09137 Time Analyzed: 05:46

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	200586	2.735	1013024	5.029	773452	8.161	436881	10.041
UPPER LIMIT	401172	3.235	2026048	5.529	1546904	8.661	873762	10.541
LOWER LIMIT	100293	2.235	506512	4.529	386726	7.661	218440	9.541
LAB SAMPLE ID								
01 LCSW35	207297	2.732	1050294	5.032	803460	8.161	441907	10.042
02 LCDW35	203070	2.735	1044450	5.032	793557	8.161	442150	10.042
03 MDL0.5 - MD	204837	2.741	1034038	5.032	791747	8.161	404183	10.041
04 VBLKW35	161401	2.738	1005435	5.029	771537	8.161	386125	10.041
05 1054642	137582	2.738	980940	5.032	764014	8.161	386148	10.041
06 1054636	118230	2.738	966781	5.032	733117	8.161	372356	10.042
07 1054639	185746	2.738	971679	5.032	745203	8.161	377778	10.041
08 1054640	170551	2.741	953259	5.029	741263	8.161	377198	10.042
09 1056096	178248	2.738	953147	5.032	740120	8.161	373057	10.041
10 1056099	210199	2.738	972618	5.032	744474	8.161	383173	10.042
11 1056100	164086	2.741	962197	5.032	748659	8.161	373271	10.041
12 1056102	162128	2.744	948949	5.032	725981	8.161	366051	10.041
13 1056221	207497	2.748	943824	5.032	721472	8.161	371733	10.042
14 1056222	163048	2.741	935615	5.032	722367	8.161	367399	10.042
15 1056225	200459	2.744	930988	5.032	722586	8.161	362651	10.041
16 1056226	183924	2.741	925706	5.029	714702	8.161	363010	10.041
17 1056754	196676	2.732	938727	5.029	724728	8.161	379305	10.042
18 1056755	184007	2.741	936675	5.029	718405	8.161	362313	10.041
19 MDL4.0 - MD	167232	2.741	896156	5.029	699594	8.161	356978	10.041
20 1056758	157106	2.741	895699	5.032	693638	8.161	348020	10.041
21 1056759	179776	2.741	896110	5.032	686260	8.161	350329	10.041
22 1057343	175036	2.741	885219	5.032	686942	8.161	350753	10.041

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): wy23c01.d Date Analyzed: 05/23/19

Instrument ID: HP09137 Time Analyzed: 05:46

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	200586	2.735	1013024	5.029	773452	8.161	436881	10.041
UPPER LIMIT	401172	3.235	2026048	5.529	1546904	8.661	873762	10.541
LOWER LIMIT	100293	2.235	506512	4.529	386726	7.661	218440	9.541
LAB SAMPLE ID								
23 1057344	140612	2.741	874757	5.029	682731	8.161	341213	10.041
24 1057345	162208	2.738	877012	5.029	676809	8.161	342225	10.041
25 1058245	181227	2.741	876421	5.032	680839	8.161	348555	10.041
26 1058246	141150	2.744	878710	5.029	676321	8.161	348676	10.041
27 1058247	172397	2.741	854717	5.032	669888	8.161	338989	10.042
28 1058248	166599	2.738	855515	5.029	666589	8.161	332495	10.041

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

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8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ly20c05.d Date Analyzed: 05/20/19

Instrument ID: HP09915 Time Analyzed: 19:47

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	279941	3.568	1396207	7.041	900033	10.703	500499	12.635
UPPER LIMIT	559882	4.068	2792414	7.541	1800066	11.203	1000998	13.135
LOWER LIMIT	139970	3.068	698104	6.541	450016	10.203	250250	12.135
LAB SAMPLE ID								
01 LCSL97	245300	3.568	1208471	7.041	1051553	10.703	564940	12.635
02 VBLKL97	261303	3.578	1375678	7.044	1015566	10.703	532031	12.635
03 1053482	279182	3.578	1407483	7.044	1039254	10.703	549877	12.635
04 1053483	262571	3.568	1328994	7.044	982938	10.703	515464	12.635
05 1058244	199635	3.587	1083607	7.047	815632	10.703	439141	12.635
06 1058237	203823	3.584	1083605	7.047	829595	10.706	443681	12.635
07 1058234	213502	3.568	1175942	7.044	895602	10.703	490252	12.635
08 1058235MS	219336	3.584	1139431	7.047	870772	10.703	485413	12.635
09 1058236MSD	241704	3.574	1198471	7.041	906119	10.703	502915	12.635
10 1054121	204394	3.581	1093490	7.044	824729	10.703	437377	12.635
11 1054115	199924	3.581	1080394	7.044	820009	10.706	438081	12.635
12 1054118	199206	3.584	1082546	7.050	823068	10.703	440851	12.635
13 1054119	207091	3.581	1094081	7.044	840971	10.703	449084	12.635
14 1054120	205089	3.568	1085326	7.044	826166	10.703	440913	12.635
15 1054109	200569	3.578	1059316	7.047	804862	10.706	429377	12.635
16 1054110	334009	3.581	1187402	7.044	910741	10.703	491567	12.635
17 1054111	232910	3.581	1148473	7.044	856526	10.703	452237	12.635
18 1054112	231286	3.587	1136046	7.047	883998	10.703	472597	12.635
19 1054113	220796	3.584	1146800	7.044	869940	10.703	459467	12.635
20 1054114	213308	3.587	1121177	7.047	848732	10.706	454380	12.635
21 1054116	209912	3.574	1111140	7.047	843986	10.706	447198	12.635
22 1054116DL	203101	3.581	1097983	7.044	837141	10.703	443469	12.635

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ly20c05.d Date Analyzed: 05/20/19

Instrument ID: HP09915 Time Analyzed: 19:47

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	279941	3.568	1396207	7.041	900033	10.703	500499	12.635
UPPER LIMIT	559882	4.068	2792414	7.541	1800066	11.203	1000998	13.135
LOWER LIMIT	139970	3.068	698104	6.541	450016	10.203	250250	12.135
LAB SAMPLE ID								
23 1054117	204008	3.574	1114430	7.047	850209	10.703	449595	12.635
24 1054117DL	203229	3.578	1095575	7.041	833912	10.703	444610	12.635
25 1054108	251945	3.578	1180173	7.050	929821	10.706	519274	12.635
26 1054108DL	246891	3.581	1219713	7.047	925003	10.703	498059	12.635

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

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Sample Data

Volatiles by GC/MS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

93J01

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058234

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19may20b.b/ly20s36.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	0.9	J
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.3	J
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	0.9	J
71-55-6	1,1,1-Trichloroethane	15	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	36	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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93J01 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1058234

Data file: /chem/HP09915.i/19may20b.b/ly20s36.d Injection date and time: **20-MAY-2019 22:54**
Data file Sample Info. Line: 93J01;1058234;1;0;;JCV93;;;ly20b31; Instrument ID: **HP09915.i** Batch: **L191402AA**
Date, time and analyst ID of latest file update: 20-May-2019 23:44 dvv10203

Blank Data file reference: **/chem/HP09915.i/19may20b.b/ly20b31.d**

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-MAY-2019 21:23
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19may20b.b/ly20c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.568	(0.000)	649	65	213502	(-24)	250.00	
66) Fluorobenzene	7.044	(-0.003)	1730	96	1175942	(-16)	50.00	
100) Chlorobenzene-d5	10.703	(0.000)	2868	117	895602	(0)	50.00	
131) 1,4-Dichlorobenzene-d4	12.635	(0.000)	3469	152	490252	(-2)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.134	(0.000)	113	282523	46.733	93%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.597	(0.000)	102	70132	49.495	99%		80 - 120
83) Toluene-d8	(3)	9.134	(0.000)	98	1161980	50.415	101%		80 - 120
114) 4-Bromofluorobenzene	(3)	11.745	(0.000)	95	409177	45.876	92%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	3.018	(0.000)	96	3496	0.871	0.87		J	0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	4.565	(-0.001)	63	3163	0.348	0.35		J	0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)	5.922	(-0.000)	83	8361	0.915	0.92		J	0.2	1
53) 1,1,1-Trichloroethane	(2)	6.137	(0.000)	97	117864	15.045	15.05			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	7.536	(0.000)	95	196067	36.044	36.04			0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 05/20/2019 at 23:44. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19may20b.b/ly20s36.d Injection date and time: **20-MAY-2019 22:54**
Data file Sample Info. Line: 93J01;1058234;1;0;;JCV93;;;ly20b31; Instrument ID: **HP09915.i** Batch: **L191402AA**
Date, time and analyst ID of latest file update: 20-May-2019 23:44 dvv10203

Blank Data file reference: **/chem/HP09915.i/19may20b.b/ly20b31.d**

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-MAY-2019 21:23
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19may20b.b/ly20c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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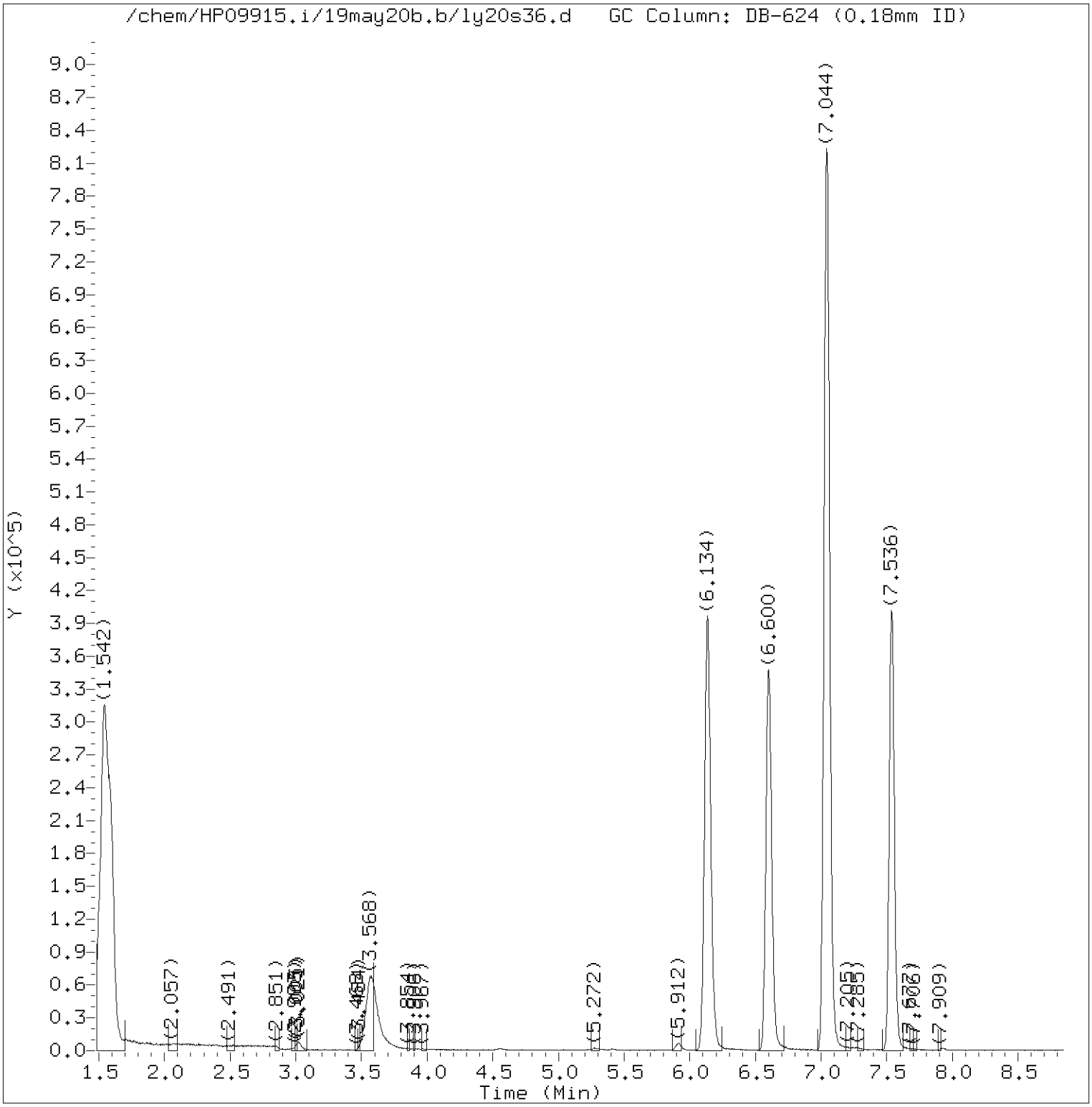
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 05/20/2019 at 23:44. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/21/2019 at 11:36. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

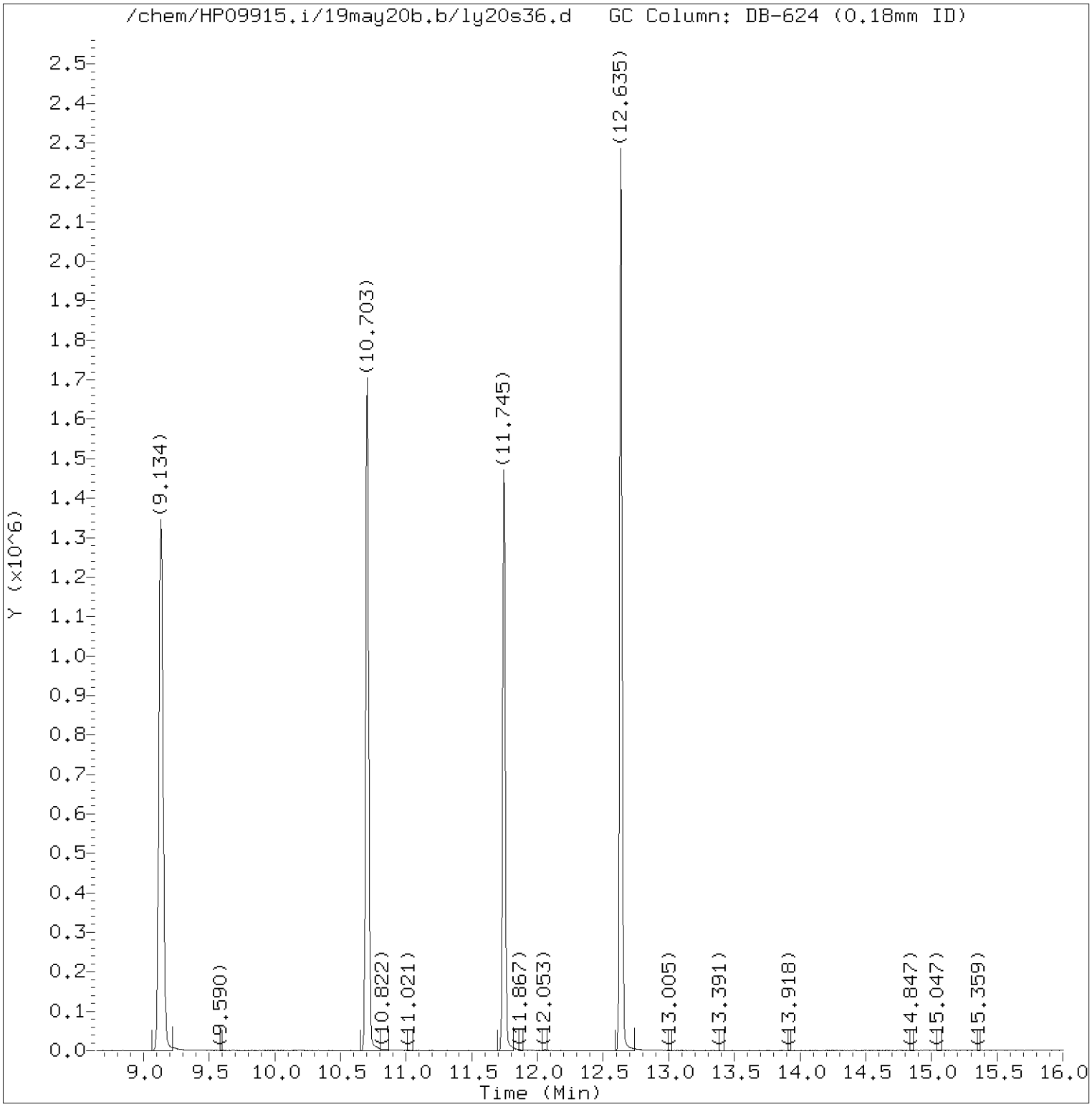
Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20s36.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 22:54 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-MAY-2019 21:23
Date, time and analyst ID of latest file update: 20-May-2019 23:44 dvv10203

Sample Name: 93J01 Lab Sample ID: 1058234

Digitally signed by Don V. Viray
on 05/20/2019 at 23:44.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20s36.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 22:54 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-MAY-2019 21:23
Date, time and analyst ID of latest file update: 20-May-2019 23:44 dvv10203

Sample Name: 93J01 Lab Sample ID: 1058234

Digitally signed by Don V. Viray
on 05/20/2019 at 23:44.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20s36.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 22:54 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-MAY-2019 21:23
Date, time and analyst ID of latest file update: 20-May-2019 23:44 dvv10203

Sample Name: 93J01 Lab Sample ID: 1058234

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	3.018	96	3496	0.871
29)*t-Butyl alcohol-d10	(1)	3.568	65	213502	250.000
36) 1,1-Dichloroethane	(2)	4.565	63	3163	0.348
51) Chloroform	(2)	5.922	83	8361	0.915
52)$Dibromofluoromethane	(2)	6.134	113	282523	46.733
53) 1,1,1-Trichloroethane	(2)	6.137	97	117864	15.045
57)$1,2-Dichloroethane-d4	(2)	6.597	102	70132	49.495
66)*Fluorobenzene	(2)	7.044	96	1175942	50.000
71) Trichloroethene	(2)	7.536	95	196067	36.044
83)$Toluene-d8	(3)	9.134	98	1161980	50.415
100)*Chlorobenzene-d5	(3)	10.703	117	895602	50.000
114)$4-Bromofluorobenzene	(3)	11.745	95	409177	45.876
131)*1,4-Dichlorobenzene-d4	(4)	12.635	152	490252	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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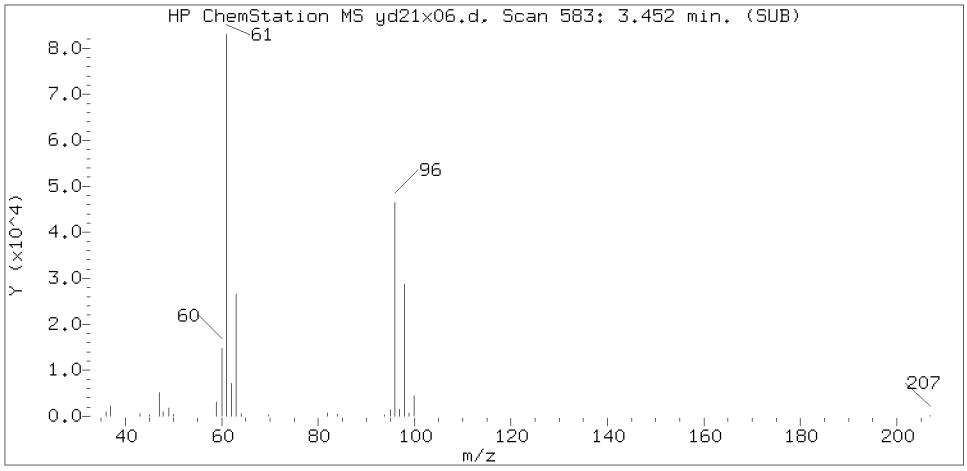
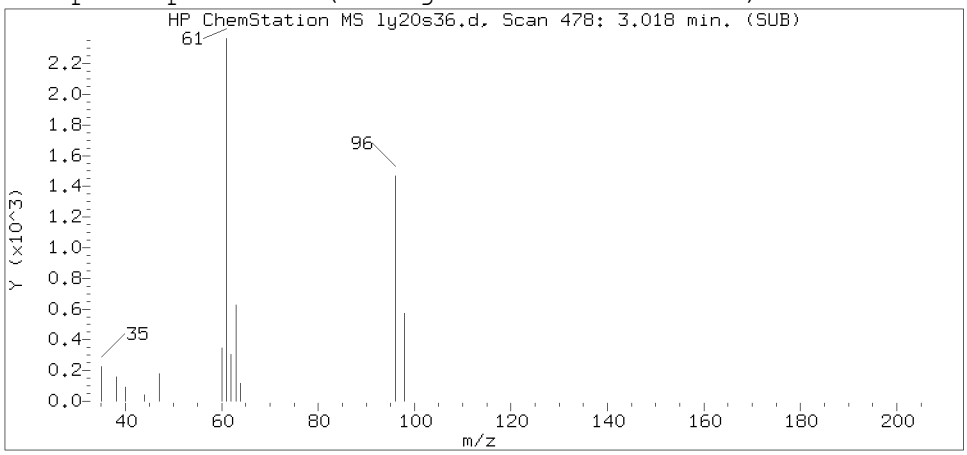
on 05/20/2019 at 23:44.
Target 3.5 esignature user ID: dvv10203

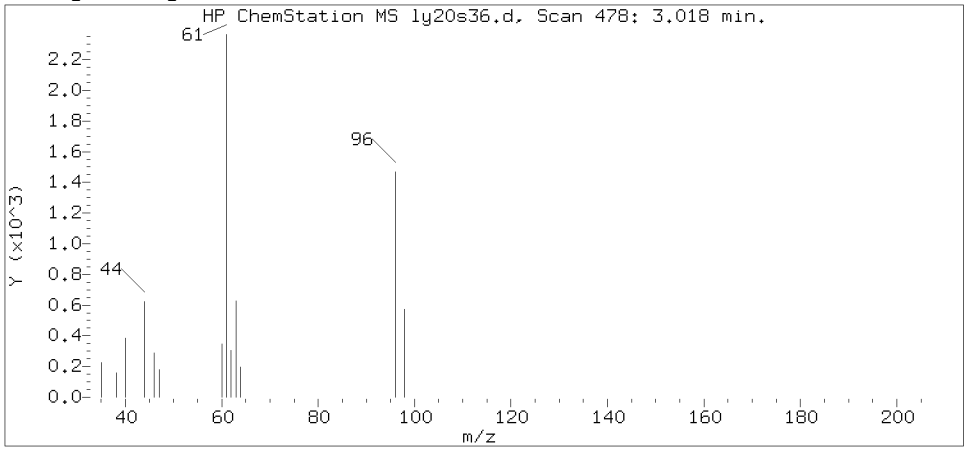
Reference Standard Spectrum for 1,1-Dichloroethene

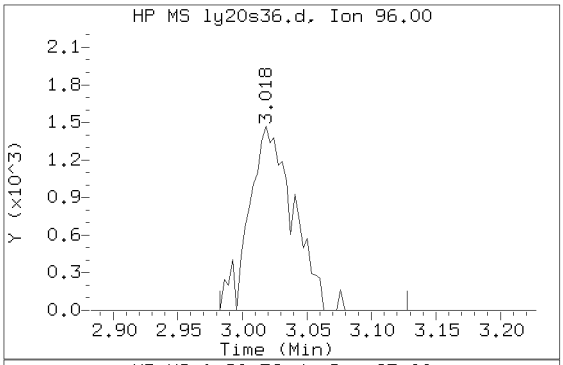


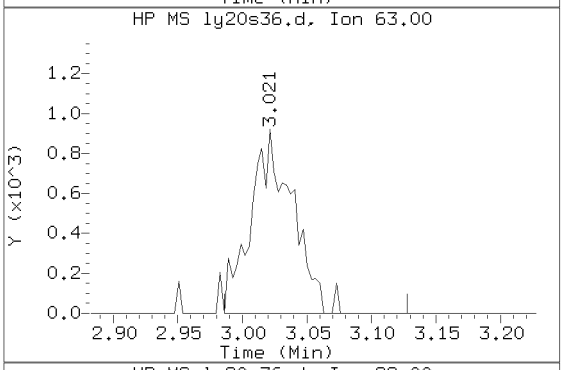
Sample Spectrum (Background Subtracted)

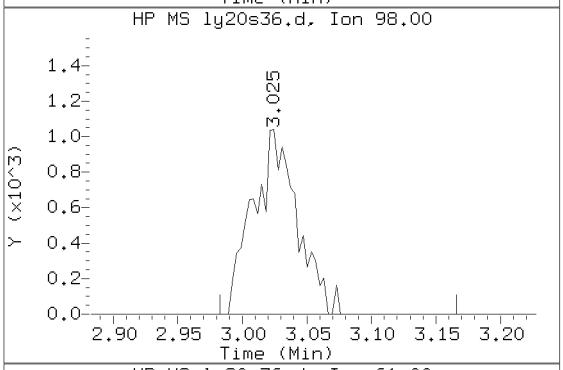


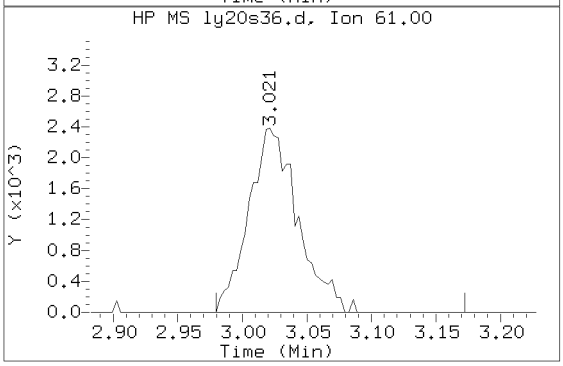
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19may20b.b/ly20s36.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 22:54 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-MAY-2019 21:23
Date, time and analyst ID of latest file update: 20-May-2019 23:44 dvv10203

Sample Name: 93J01 Lab Sample ID: 1058234

Compound Number	: 17
Compound Name	: 1,1-Dichloroethene
Scan Number	: 478
Retention Time (minutes)	: 3.018
Relative Retention Time	: 0.00066
Quant Ion	: 96.00
Area (flag)	: 3496
On-Column Amount (ng)	: 0.8706

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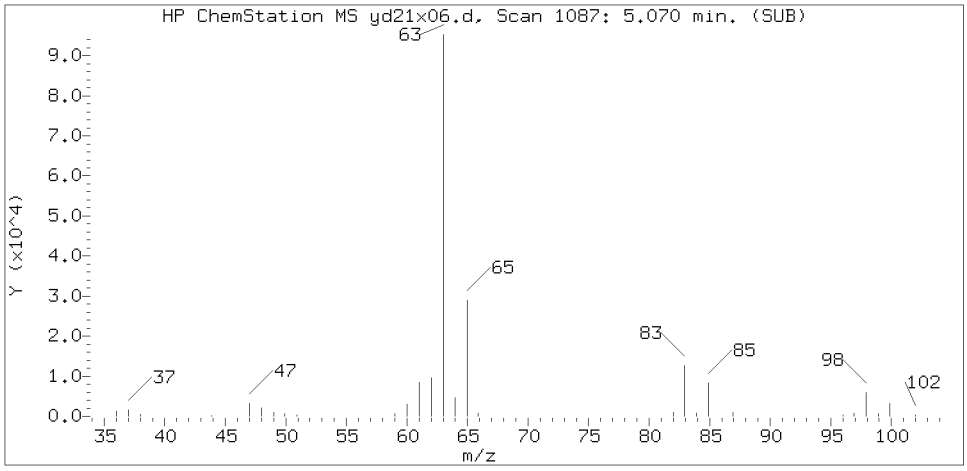
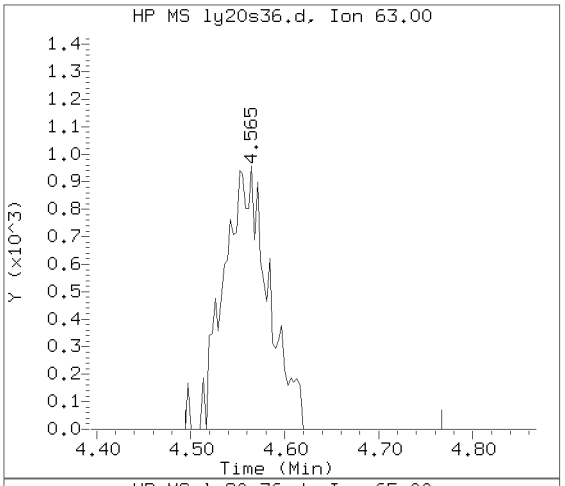
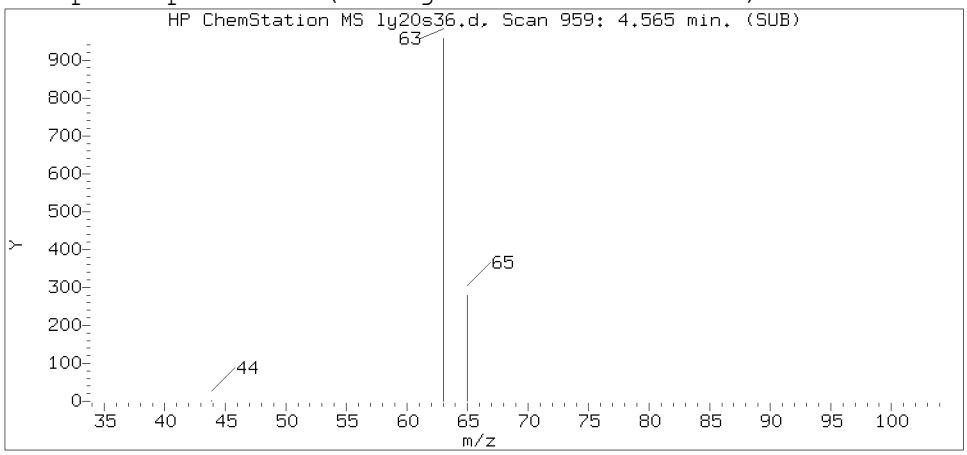
Target 3.5 esignature user ID: dvv10203

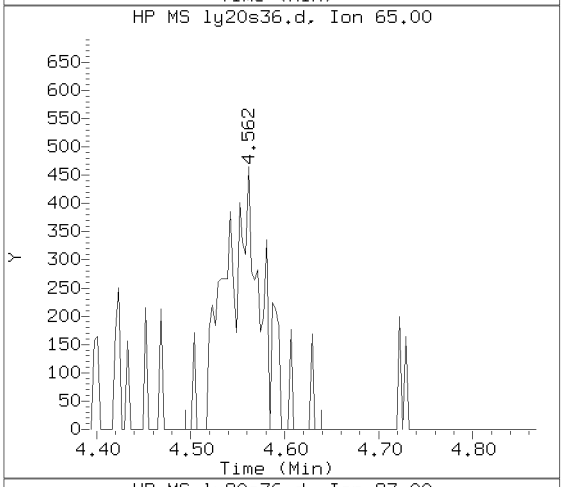
Reference Standard Spectrum for 1,1-Dichloroethane



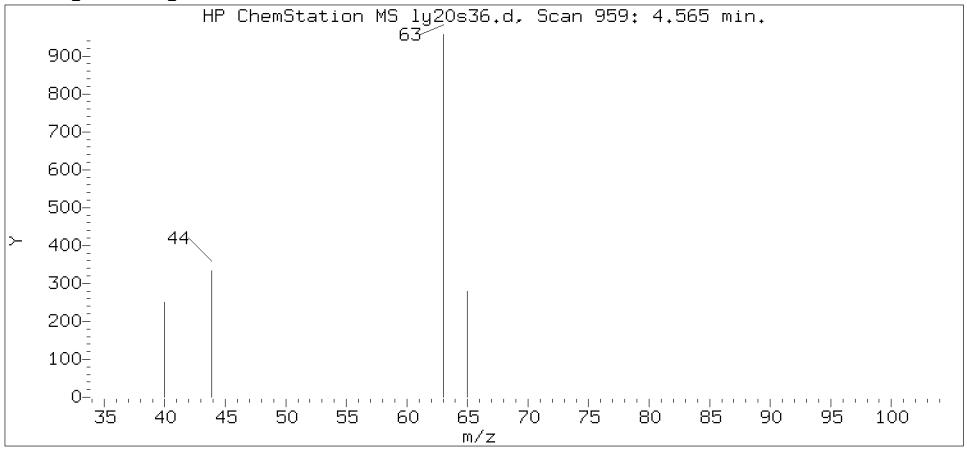


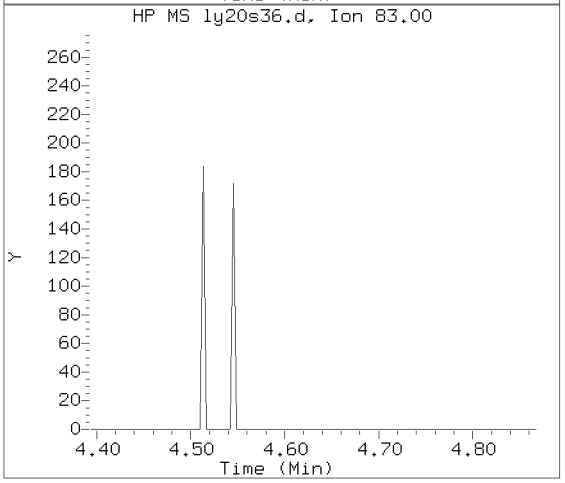
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19may20b.b/ly20s36.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 22:54 Analyst ID: DVV10203

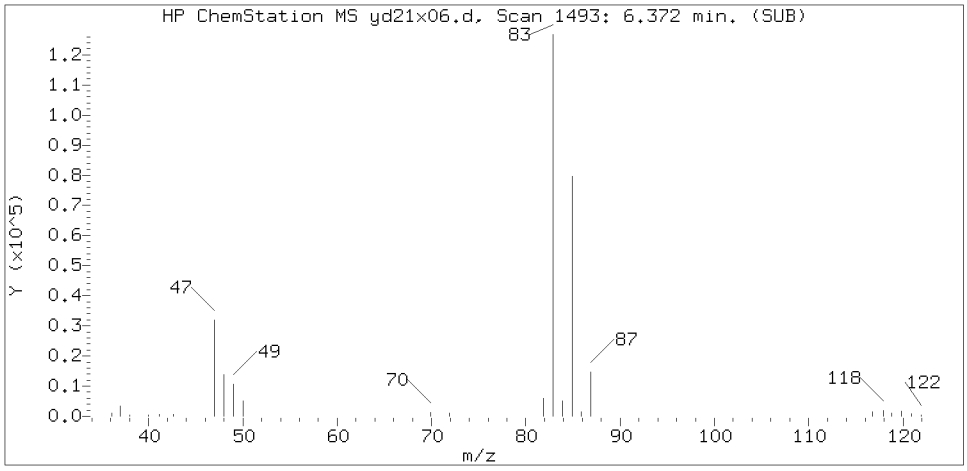
Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-MAY-2019 21:23
Date, time and analyst ID of latest file update: 20-May-2019 23:44 dvv10203

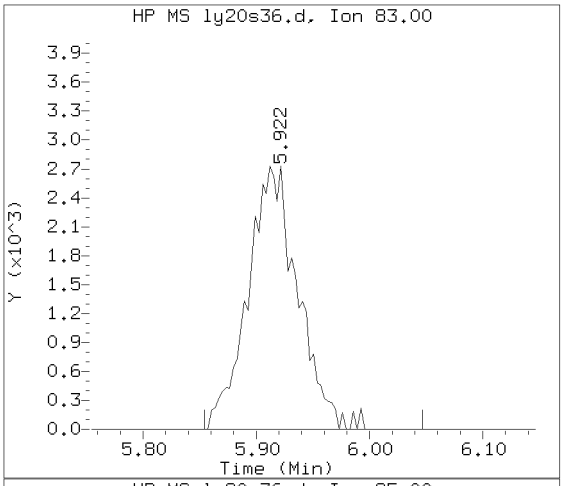
Sample Name: 93J01 Lab Sample ID: 1058234

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 959
Retention Time (minutes): 4.565
Relative Retention Time :-0.00152
Quant Ion : 63.00
Area (flag) : 3163
On-Column Amount (ng) : 0.3480

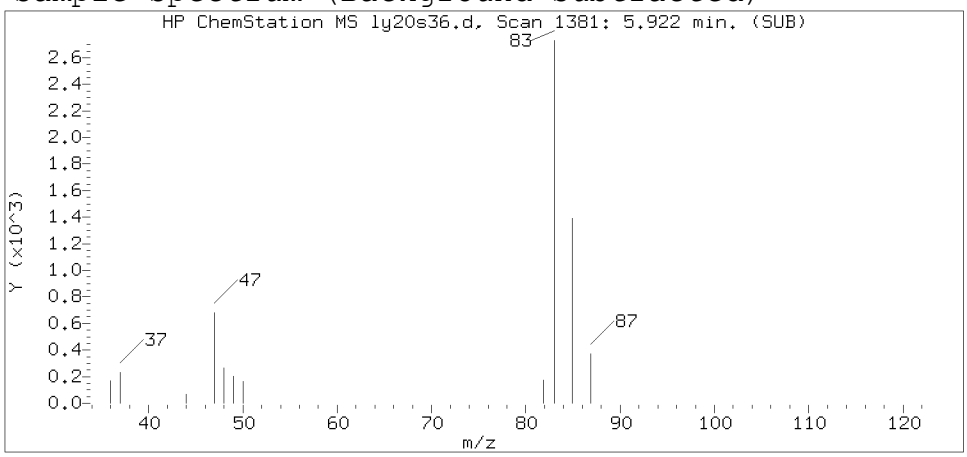
Digitally signed by Don V. Viray on 05/20/2019 at 23:44.
Target 3.5 esignature user ID: dvv10203

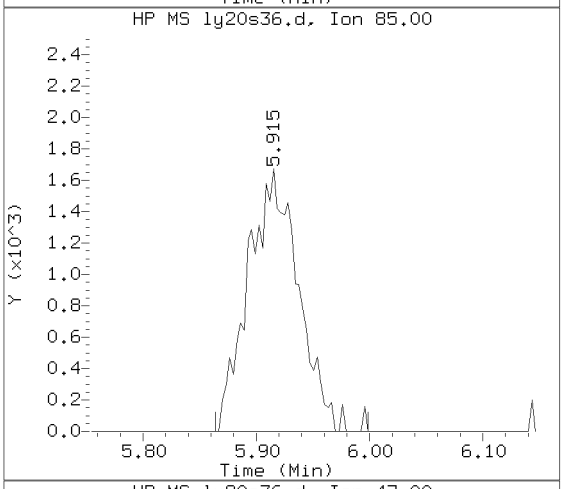
Reference Standard Spectrum for Chloroform



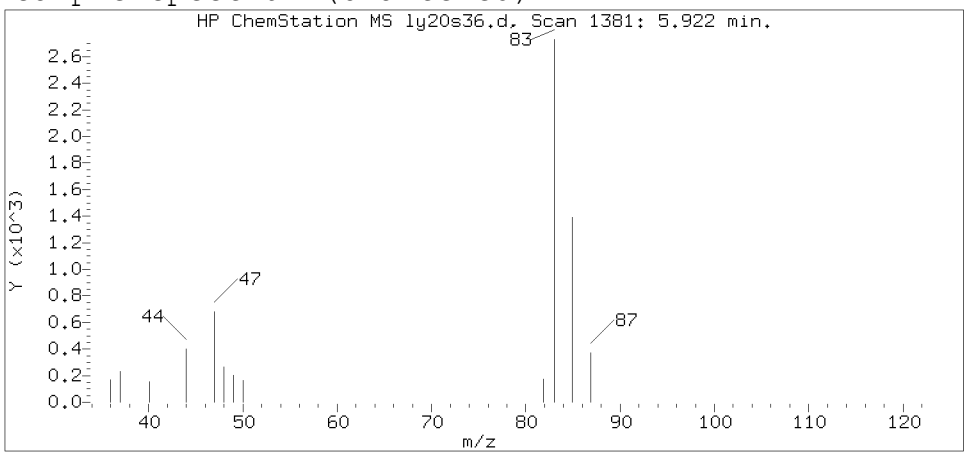


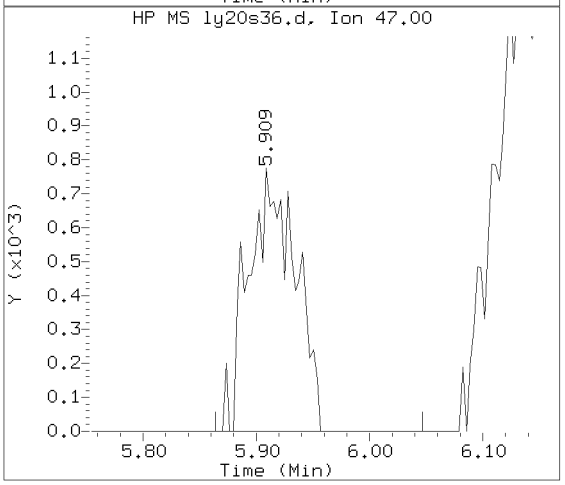
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19may20b.b/ly20s36.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 22:54 Analyst ID: DVV10203

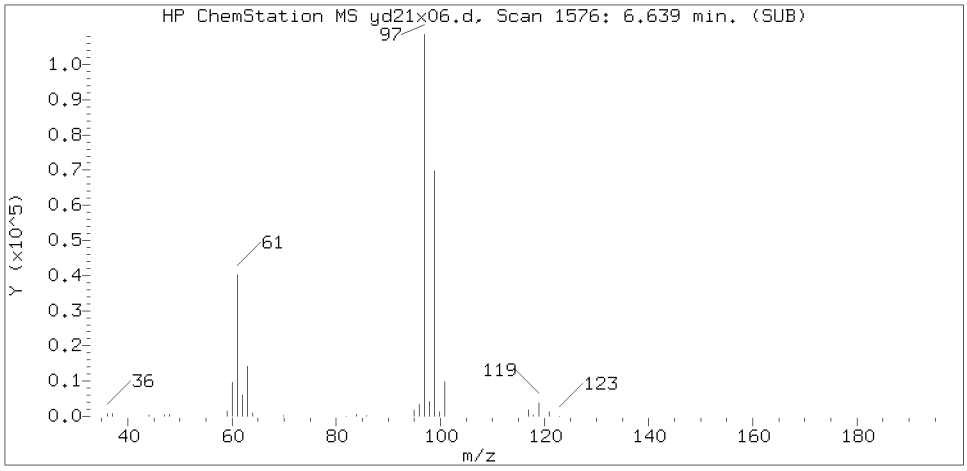
Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-MAY-2019 21:23
Date, time and analyst ID of latest file update: 20-May-2019 23:44 dvv10203

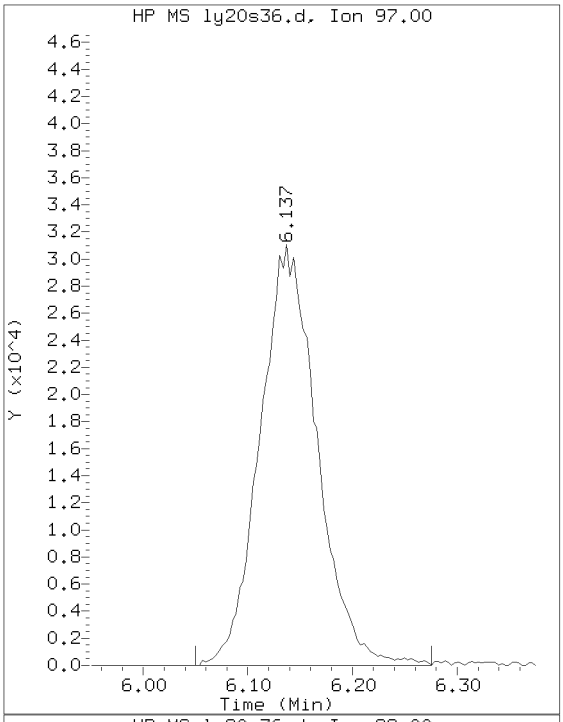
Sample Name: 93J01 Lab Sample ID: 1058234

Compound Number : 51
Compound Name : Chloroform
Scan Number : 1381
Retention Time (minutes): 5.922
Relative Retention Time :-0.00098
Quant Ion : 83.00
Area (flag) : 8361
On-Column Amount (ng) : 0.9154

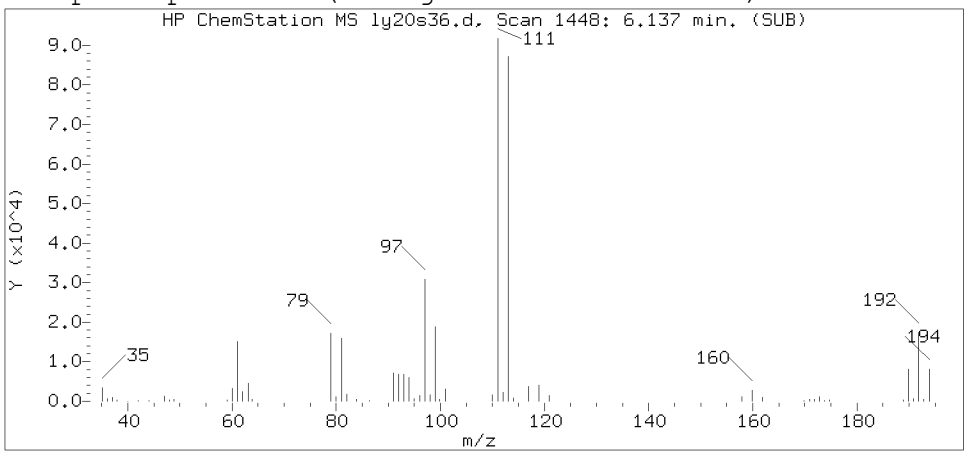
Digitally signed by Don V. Viray on 05/20/2019 at 23:44.
Target 3.5 esignature user ID: dvv10203

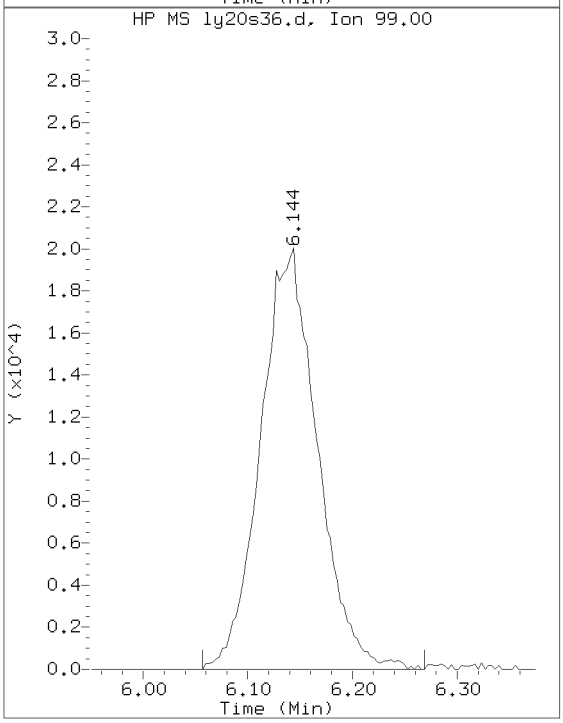
Reference Standard Spectrum for 1,1,1-Trichloroethane



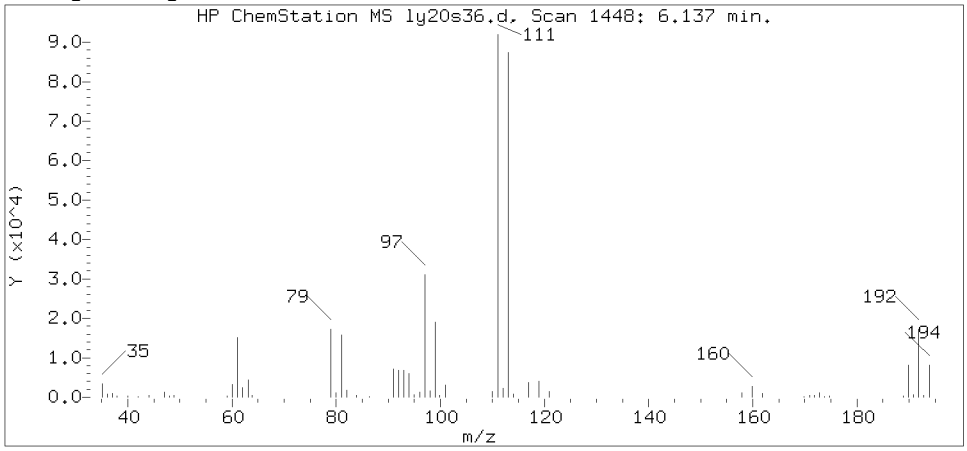


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19may20b.b/ly20s36.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 22:54 Analyst ID: DVV10203

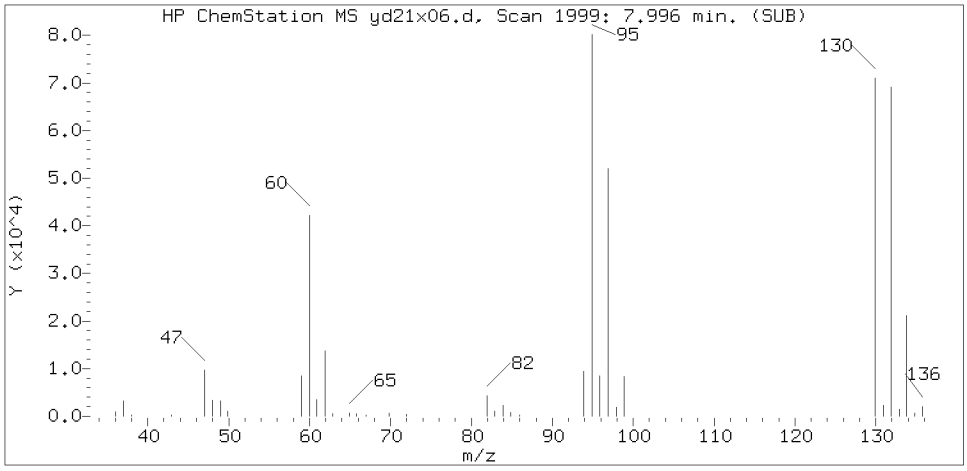
Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-MAY-2019 21:23
Date, time and analyst ID of latest file update: 20-May-2019 23:44 dvv10203

Sample Name: 93J01 Lab Sample ID: 1058234

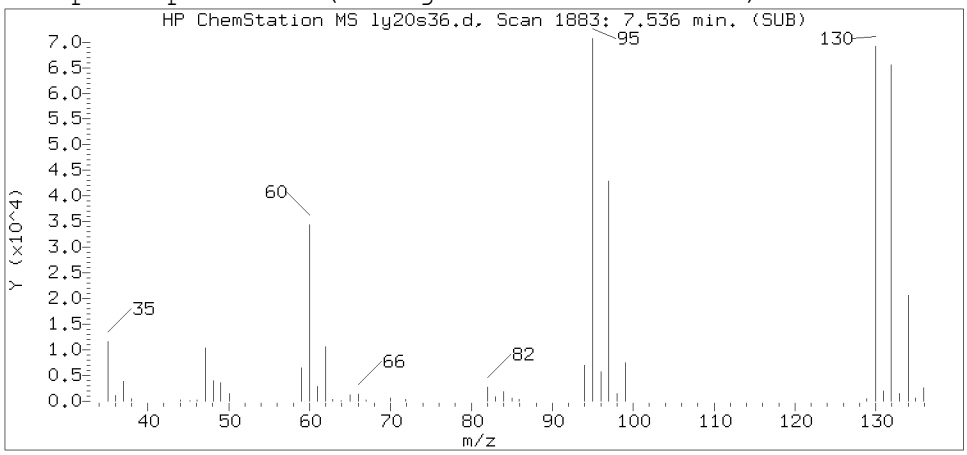
Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1448
Retention Time (minutes)	: 6.137
Relative Retention Time	: 0.00086
Quant Ion	: 97.00
Area (flag)	: 117864
On-Column Amount (ng)	: 15.0453

Digitally signed by Don V. Viray on 05/20/2019 at 23:44.
Target 3.5 esignature user ID: dvv10203

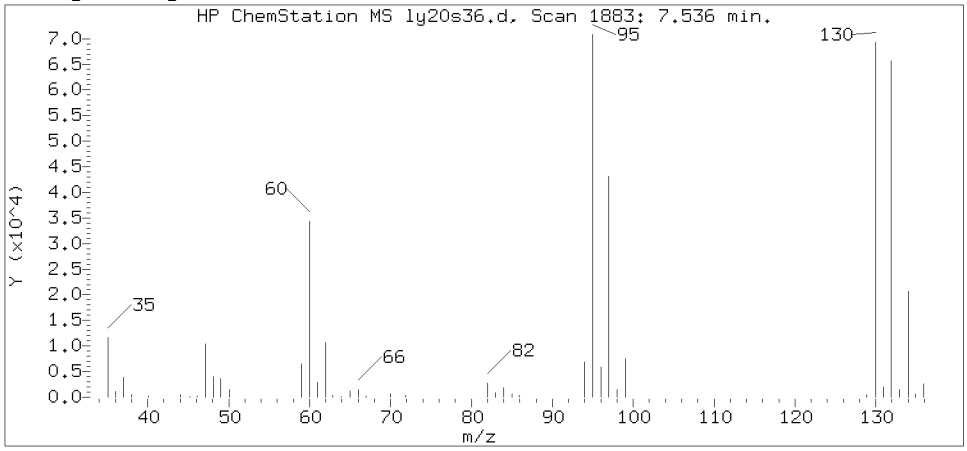
Reference Standard Spectrum for Trichloroethene

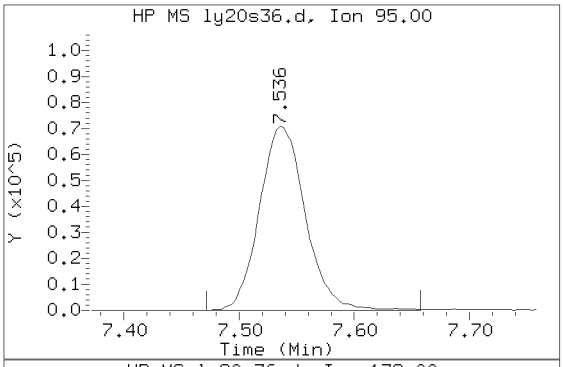


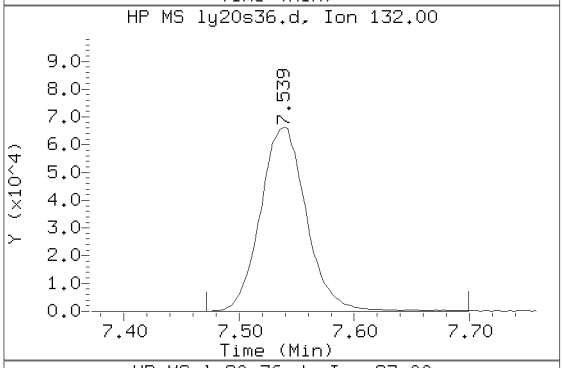
Sample Spectrum (Background Subtracted)

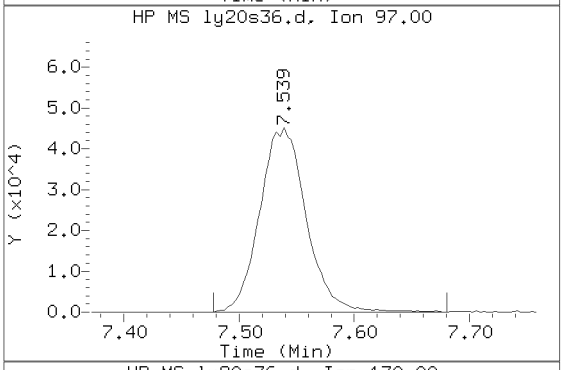


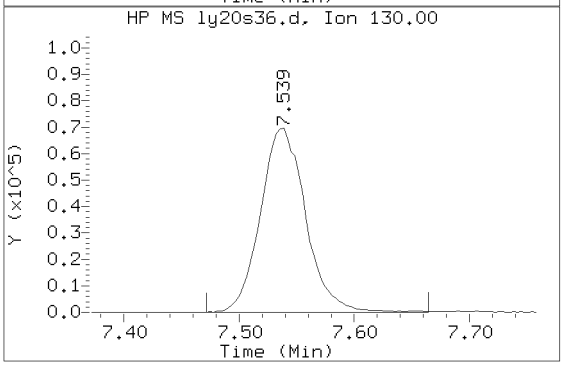
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19may20b.b/ly20s36.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 22:54 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-MAY-2019 21:23
Date, time and analyst ID of latest file update: 20-May-2019 23:44 dvv10203

Sample Name: 93J01 Lab Sample ID: 1058234

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 1883
Retention Time (minutes)	: 7.536
Relative Retention Time	: 0.00049
Quant Ion	: 95.00
Area (flag)	: 196067
On-Column Amount (ng)	: 36.0445

Digitally signed by Don V. Viray on 05/20/2019 at 23:44.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

93J02

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058237

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19may20b.b/ly20s35.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19may20b.b/ly20s35.d
Injection date and time: **20-MAY-2019 22:32**
Data file Sample Info. Line: 93J02;1058237;1;0;;JCV93;;;ly20b31;
Instrument ID: **HP09915.i** Batch: **L191402AA**
Date, time and analyst ID of latest file update: 20-May-2019 23:41 dvv10203

Blank Data file reference: **/chem/HP09915.i/19may20b.b/ly20b31.d**

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-MAY-2019 21:23
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19may20b.b/ly20c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.584	(-0.016)	654	65	203823	(-27)	250.00	
66) Fluorobenzene	7.047	(-0.006)	1731	96	1083605	(-22)	50.00	
100) Chlorobenzene-d5	10.706	(-0.003)	2869	117	829595	(-8)	50.00	
131) 1,4-Dichlorobenzene-d4	12.635	(0.000)	3469	152	443681	(-11)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.140	(0.000)	113	267433	48.006	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.610	(-0.001)	102	65476	50.146	100%		80 - 120
83) Toluene-d8	(3)	9.137	(0.000)	98	1069723	50.105	100%		80 - 120
114) 4-Bromofluorobenzene	(3)	11.745	(0.000)	95	394716	47.776	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 05/20/2019 at 23:42. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19may20b.b/ly20s35.d Injection date and time: **20-MAY-2019 22:32**
Data file Sample Info. Line: 93J02;1058237;1;0;;JCV93;;;ly20b31; Instrument ID: **HP09915.i** Batch: **L191402AA**
Date, time and analyst ID of latest file update: 20-May-2019 23:41 dvv10203

Blank Data file reference: **/chem/HP09915.i/19may20b.b/ly20b31.d**

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-MAY-2019 21:23
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19may20b.b/ly20c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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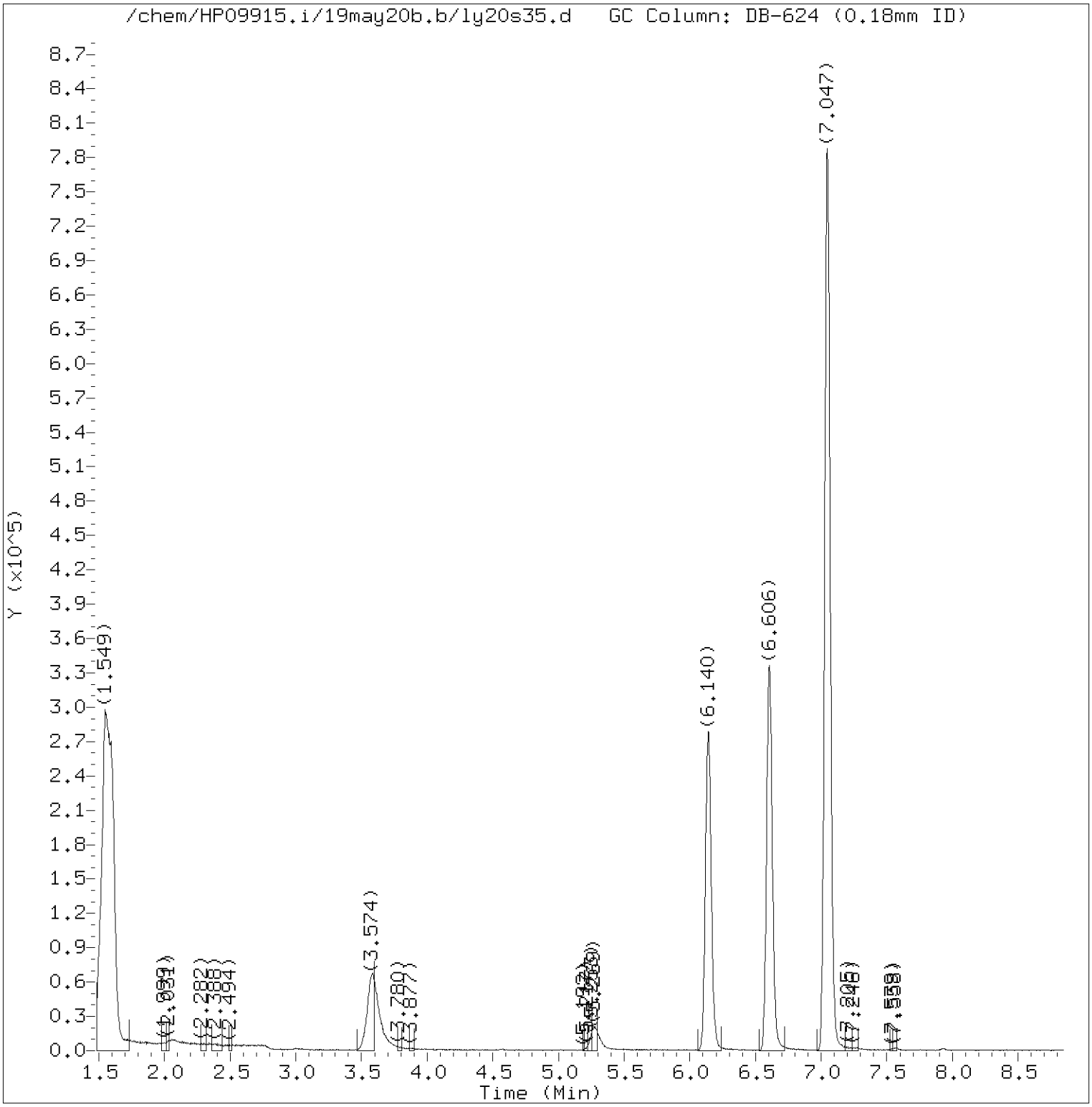
Total number of targets = 24

Digitally signed by Don V. Viray on 05/20/2019 at 23:42. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/21/2019 at 11:36. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

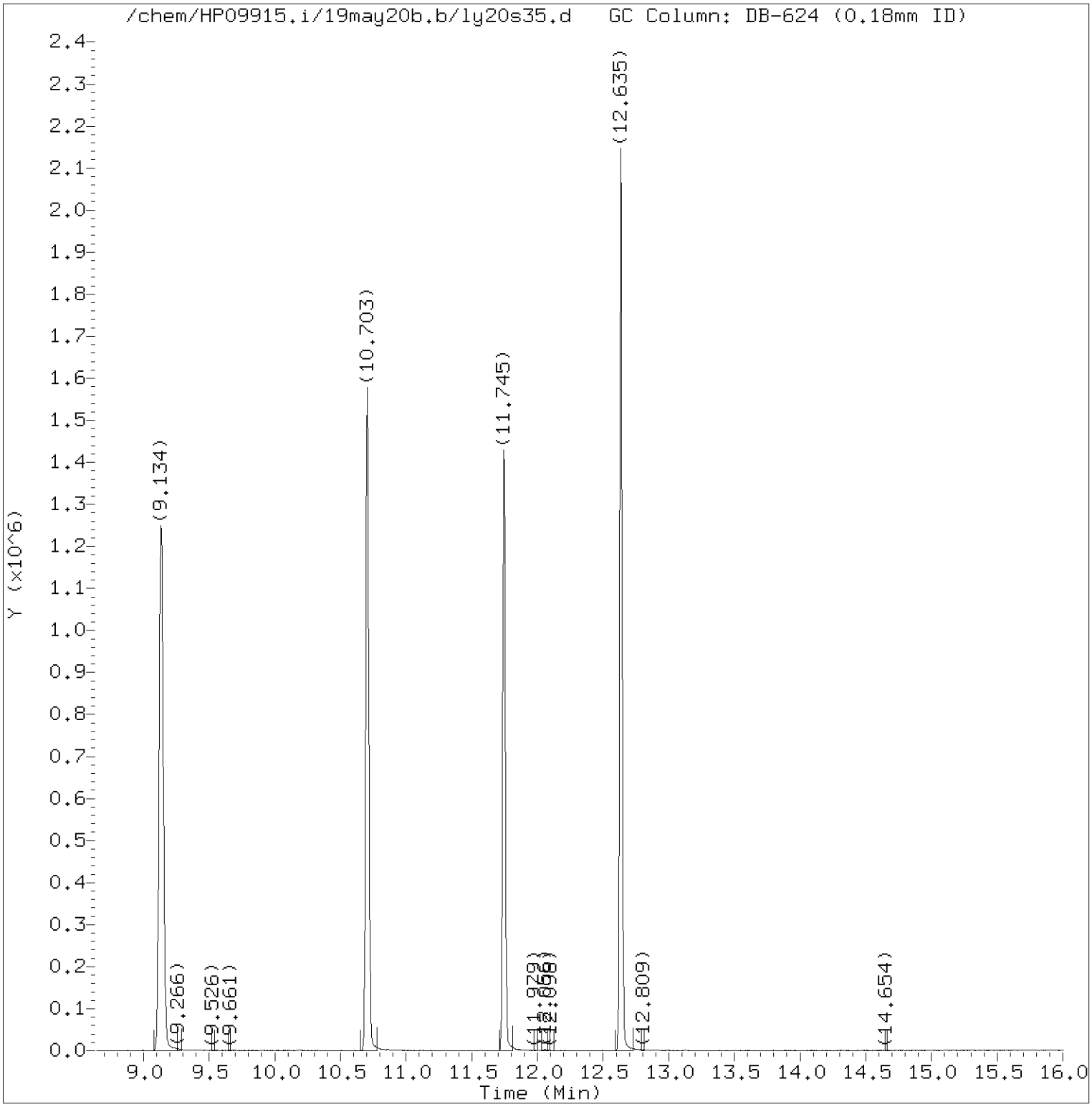
Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20s35.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 22:32 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-MAY-2019 21:23
Date, time and analyst ID of latest file update: 20-May-2019 23:41 dvv10203

Sample Name: 93J02 Lab Sample ID: 1058237

Digitally signed by Don V. Viray
on 05/20/2019 at 23:42.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20s35.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 22:32 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-MAY-2019 21:23
Date, time and analyst ID of latest file update: 20-May-2019 23:41 dvv10203

Sample Name: 93J02 Lab Sample ID: 1058237

Digitally signed by Don V. Viray
on 05/20/2019 at 23:42.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20s35.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 22:32 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-MAY-2019 21:23
Date, time and analyst ID of latest file update: 20-May-2019 23:41 dvv10203

Sample Name: 93J02 Lab Sample ID: 1058237

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.584	65	203823	250.000
52)$Dibromofluoromethane	(2)	6.140	113	267433	48.006
57)$1,2-Dichloroethane-d4	(2)	6.610	102	65476	50.146
66)*Fluorobenzene	(2)	7.047	96	1083605	50.000
83)$Toluene-d8	(3)	9.137	98	1069723	50.105
100)*Chlorobenzene-d5	(3)	10.706	117	829595	50.000
114)$4-Bromofluorobenzene	(3)	11.745	95	394716	47.776
131)*1,4-Dichlorobenzene-d4	(4)	12.635	152	443681	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/20/2019 at 23:42.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

93J03

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058238

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may22a.b/wy22s03.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U

FORM I VOA

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93J03 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1058238

Data file: /chem2/HP09137.i/19may22a.b/wy22s03.d Injection date and time: **22-MAY-2019 15:05**
Data file Sample Info. Line: 93J03;1058238;1;0;;JCV93;;;wy22b02; Instrument ID: **HP09137.i** Batch: **W191421AA**
Date, time and analyst ID of latest file update: 23-May-2019 11:35 clm27445

Blank Data file reference: **/chem2/HP09137.i/19may22a.b/wy22b02.d**

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may22a.b/wy22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.744	(-0.006)	596	65	188455	(-27)	250.00	
66) Fluorobenzene	5.029	(0.004)	1308	96	1066624	(-7)	50.00	
101) Chlorobenzene-d5	8.161	(0.004)	2284	117	809289	(-8)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041	(0.000)	2870	152	408058	(-17)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.358	(-0.001)	113	236086	47.777	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.689	(0.000)	102	67290	51.202	102%		80 - 120
84) Toluene-d8	(3)	6.698	(0.000)	98	1030173	50.799	102%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.000)	95	363587	44.816	90%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Corie L. Mellinger on 05/23/2019 at 11:35. Target 3.5 esignature user ID: clm27445

Data file: /chem2/HP09137.i/19may22a.b/wy22s03.d Injection date and time: **22-MAY-2019 15:05**
Data file Sample Info. Line: 93J03;1058238;1;0;;JCV93;;;wy22b02; Instrument ID: **HP09137.i** Batch: **W191421AA**
Date, time and analyst ID of latest file update: 23-May-2019 11:35 clm27445

Blank Data file reference: **/chem2/HP09137.i/19may22a.b/wy22b02.d**

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may22a.b/wy22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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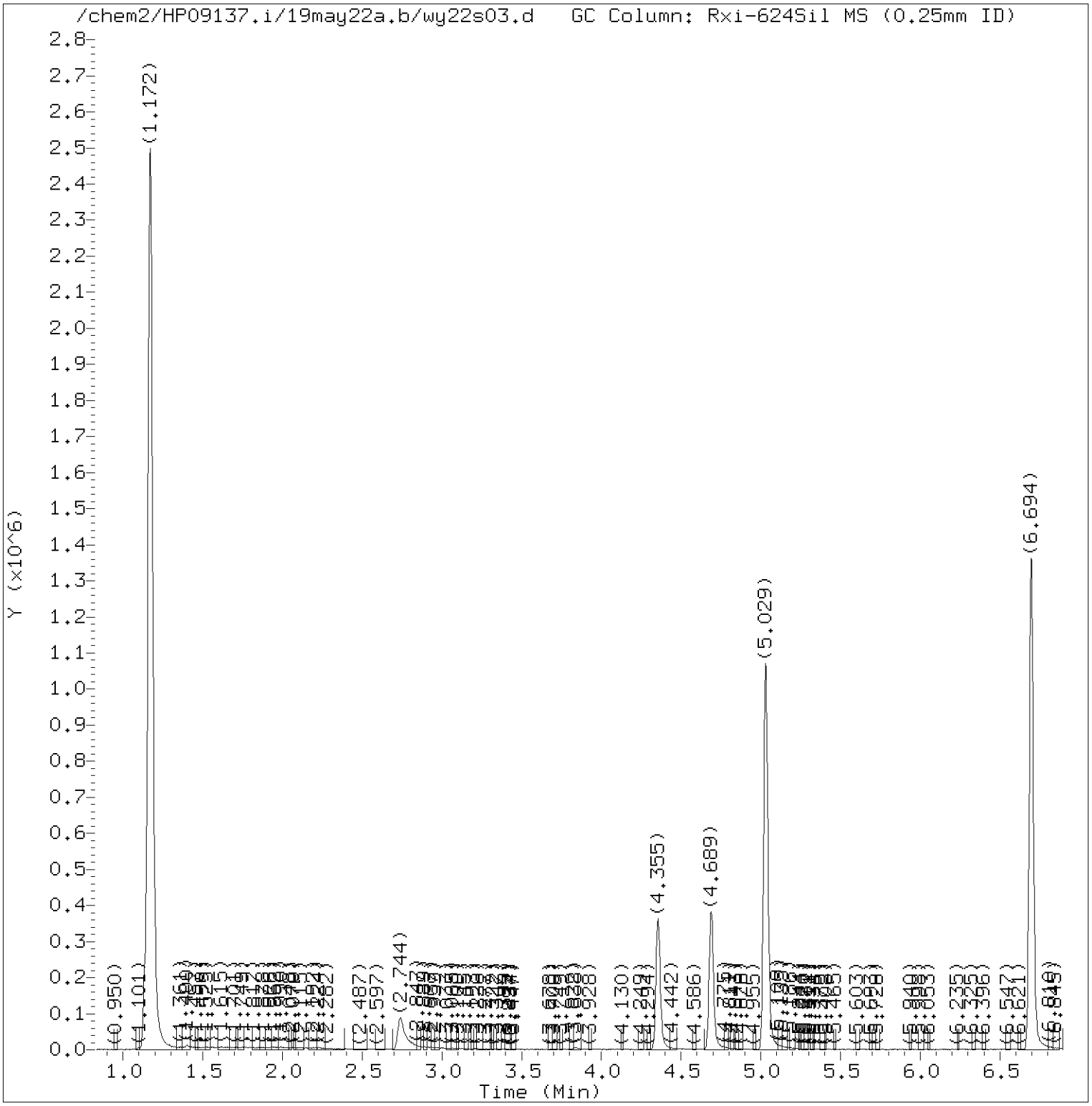
Total number of targets = 24

Digitally signed by Corie L. Mellinger on 05/23/2019 at 11:35. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:38. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

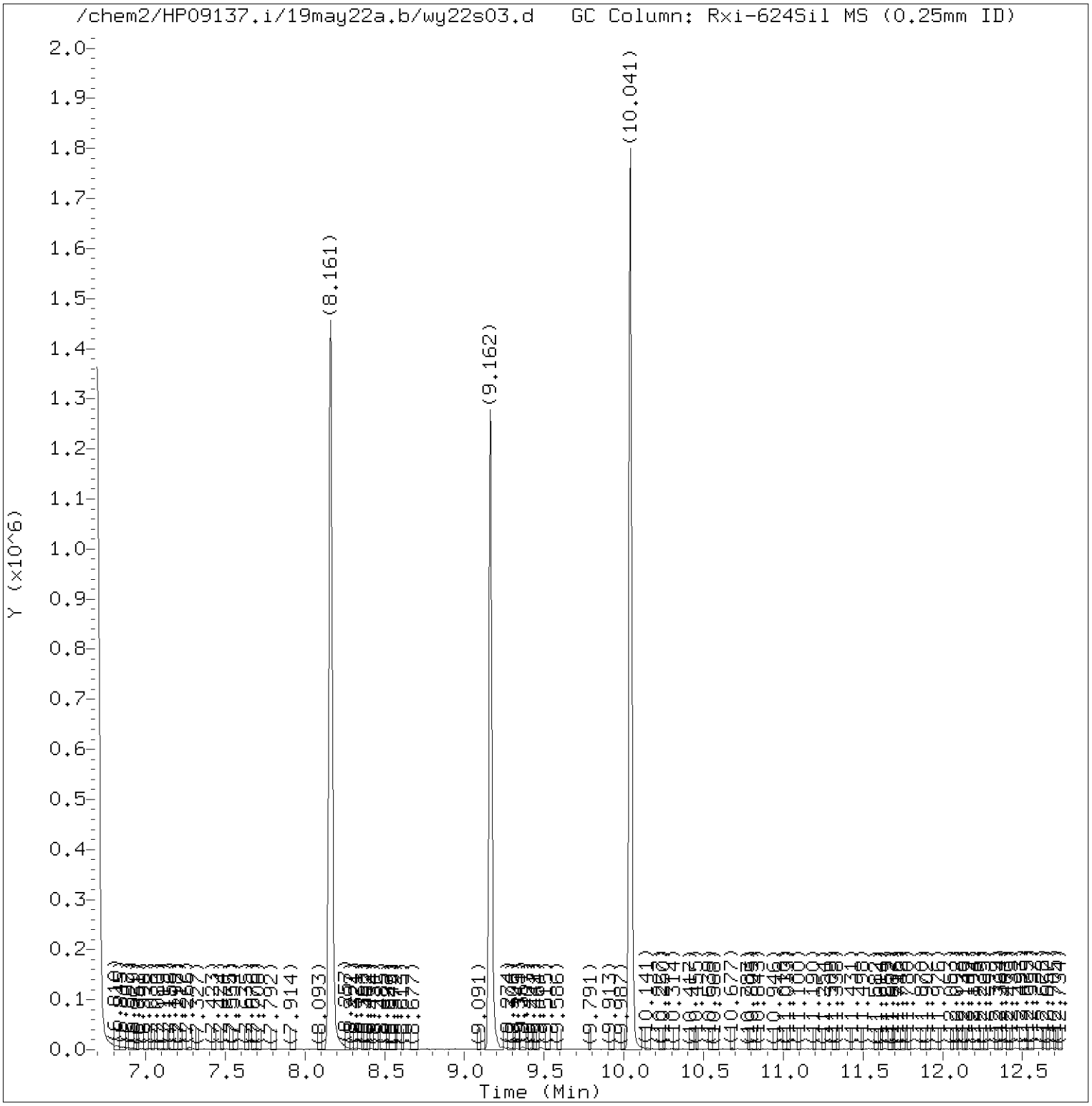
Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22s03.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 15:05 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 23-May-2019 11:35 clm27445

Sample Name: 93J03 Lab Sample ID: 1058238

Digitally signed by Corie L. Mellinger
on 05/23/2019 at 11:35.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22s03.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 15:05 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 23-May-2019 11:35 clm27445

Sample Name: 93J03 Lab Sample ID: 1058238

Digitally signed by Corie L. Mellinger
on 05/23/2019 at 11:35.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22s03.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 15:05 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 23-May-2019 11:35 clm27445

Sample Name: 93J03 Lab Sample ID: 1058238

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.744	65	188455	250.000
52)$Dibromofluoromethane	(2)	4.358	113	236086	47.777
57)$1,2-Dichloroethane-d4	(2)	4.689	102	67290	51.202
66)*Fluorobenzene	(2)	5.029	96	1066624	50.000
84)$Toluene-d8	(3)	6.698	98	1030173	50.799
101)*Chlorobenzene-d5	(3)	8.161	117	809289	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	363587	44.816
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	408058	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/23/2019 at 11:35.
Target 3.5 esignature user ID: clm27445

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

93J04

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058239

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may22a.b/wy22s05.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	0.9	J
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	4	
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	5	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

^

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may22a.b/wy22s05.d Injection date and time: **22-MAY-2019 15:53**
Data file Sample Info. Line: 93J04;1058239;1;0;;JCV93;;;wy22b02; Instrument ID: **HP09137.i** Batch: **W191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 16:08 Automation

Blank Data file reference: **/chem2/HP09137.i/19may22a.b/wy22b02.d**

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may22a.b/wy22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.741	(-0.003)	595	65	173807	(-33)	250.00	
66) Fluorobenzene	5.032	(0.000)	1309	96	1038033	(-10)	50.00	
101) Chlorobenzene-d5	8.161	(0.003)	2284	117	790680	(-10)	50.00	
132) 1,4-Dichlorobenzene-d4	10.042	(0.000)	2870	152	402424	(-18)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.352	(0.001)	113	228122	47.436	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.689	(0.001)	102	64728	50.609	101%		80 - 120
84) Toluene-d8	(3)	6.695	(0.000)	98	1019254	51.444	103%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.000)	95	352660	44.492	89%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	2.302	(0.000)	96	4294	0.938	0.94		J	0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	3.341	(-0.000)	63	33640	3.739	3.74			0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	4.384	(0.000)	97	9243	1.455	1.46			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	5.408	(-0.000)	95	24590	4.667	4.67			0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

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Data file: /chem2/HP09137.i/19may22a.b/wy22s05.d Injection date and time: **22-MAY-2019 15:53**
Data file Sample Info. Line: 93J04;1058239;1;0;;JCV93;;;wy22b02; Instrument ID: **HP09137.i** Batch: **W191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 16:08 Automation

Blank Data file reference: **/chem2/HP09137.i/19may22a.b/wy22b02.d**

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may22a.b/wy22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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BLANK INTENTIONALLY

Total number of targets = 24

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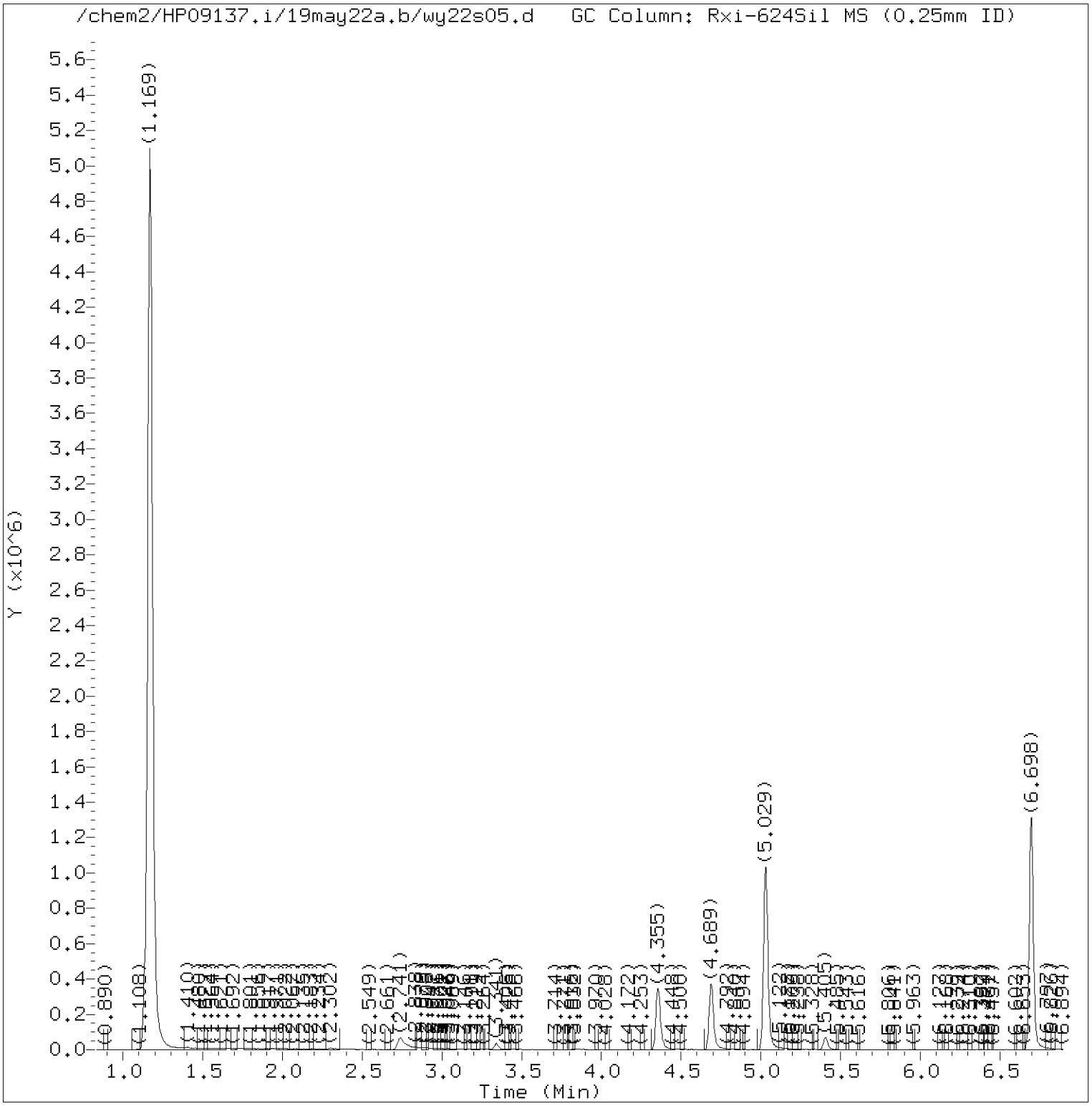
Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

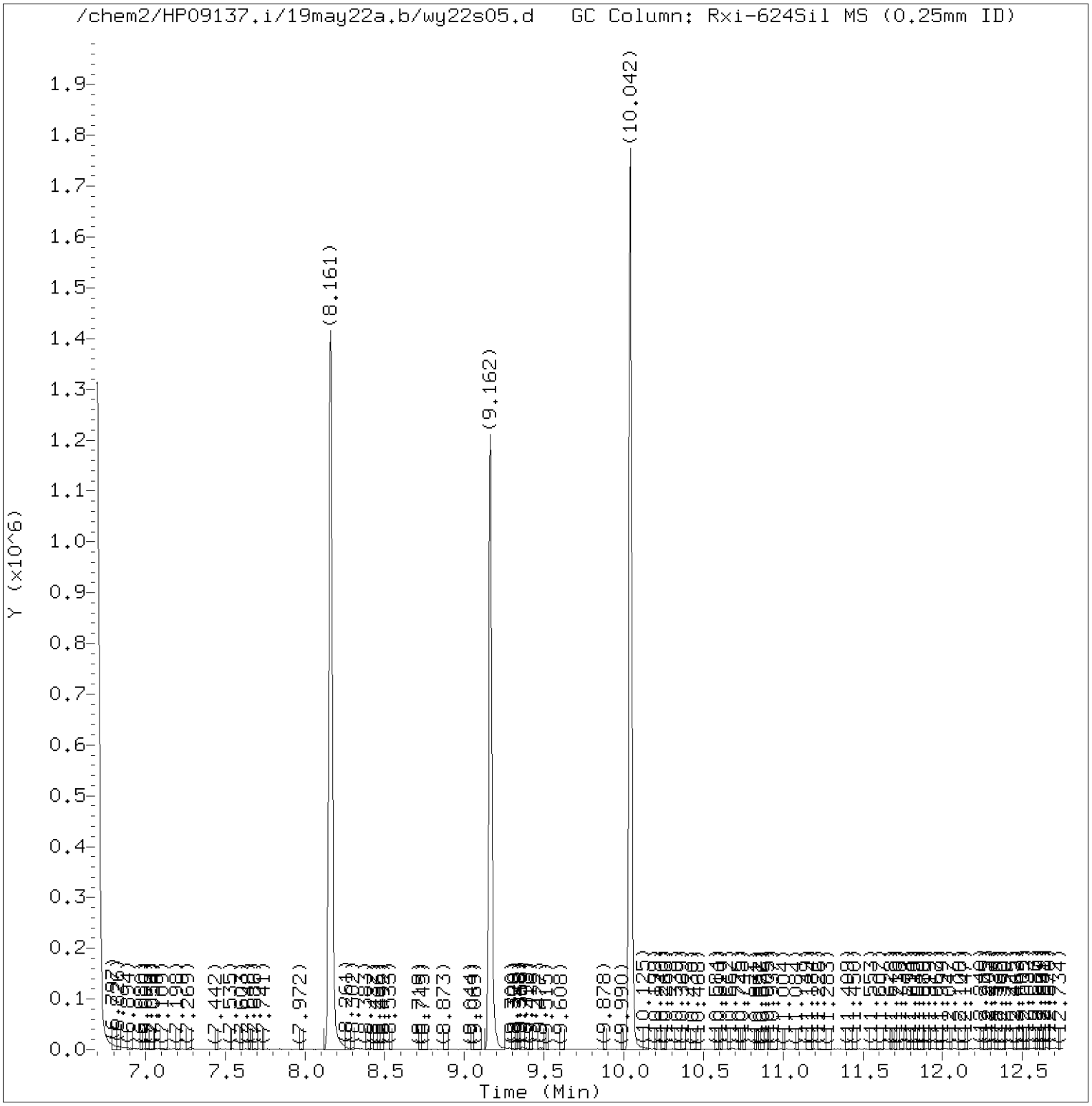
Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22s05.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 15:53 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 16:08 Automation

Sample Name: 93J04 Lab Sample ID: 1058239

Digitally signed by Kevin A. Sposito
on 05/23/2019 at 10:12.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22s05.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 15:53 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 16:08 Automation

Sample Name: 93J04 Lab Sample ID: 1058239

Digitally signed by Kevin A. Sposito
on 05/23/2019 at 10:12.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22s05.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 15:53 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 16:08 Automation

Sample Name: 93J04 Lab Sample ID: 1058239

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	2.302	96	4294	0.938
29)*t-Butyl alcohol-d10	(1)	2.741	65	173807	250.000
36) 1,1-Dichloroethane	(2)	3.341	63	33640	3.739
52)$Dibromofluoromethane	(2)	4.352	113	228122	47.436
53) 1,1,1-Trichloroethane	(2)	4.384	97	9243	1.455
57)$1,2-Dichloroethane-d4	(2)	4.689	102	64728	50.609
66)*Fluorobenzene	(2)	5.032	96	1038033	50.000
71) Trichloroethene	(2)	5.408	95	24590	4.667
84)$Toluene-d8	(3)	6.695	98	1019254	51.444
101)*Chlorobenzene-d5	(3)	8.161	117	790680	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	352660	44.492
132)*1,4-Dichlorobenzene-d4	(4)	10.042	152	402424	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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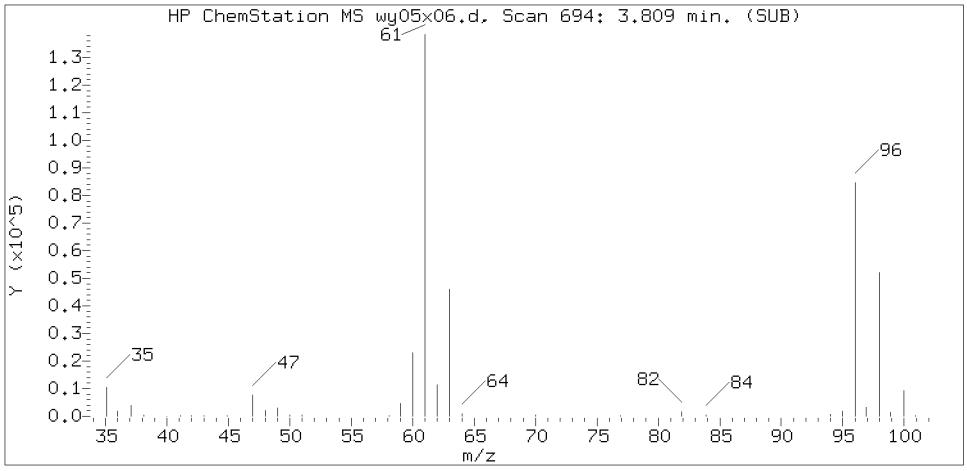
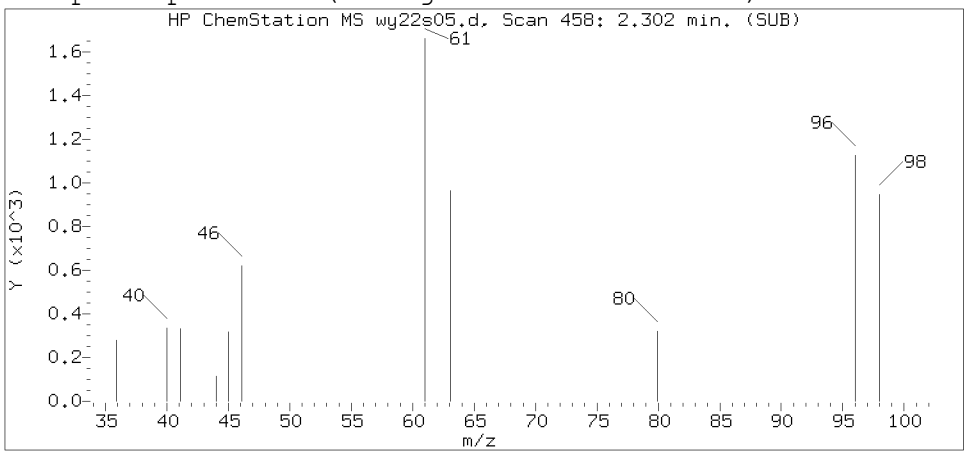
on 05/23/2019 at 10:12.
Target 3.5 esignature user ID: kas02648

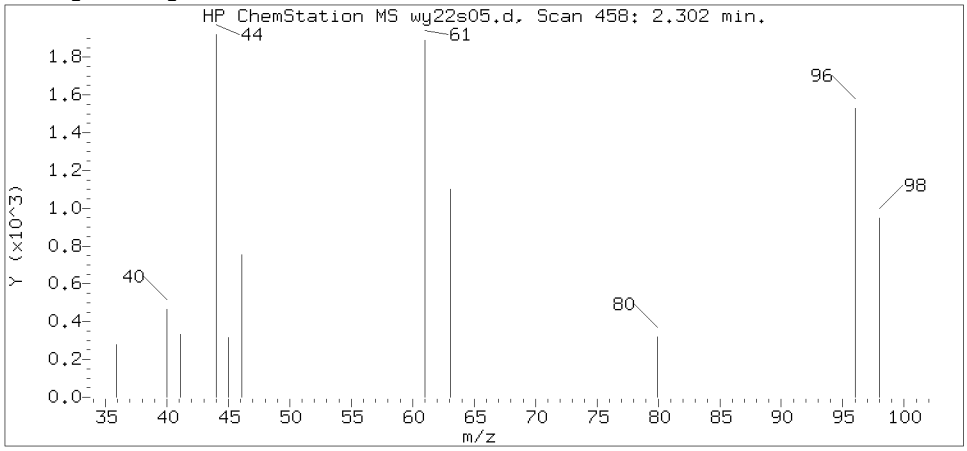
Reference Standard Spectrum for 1,1-Dichloroethene

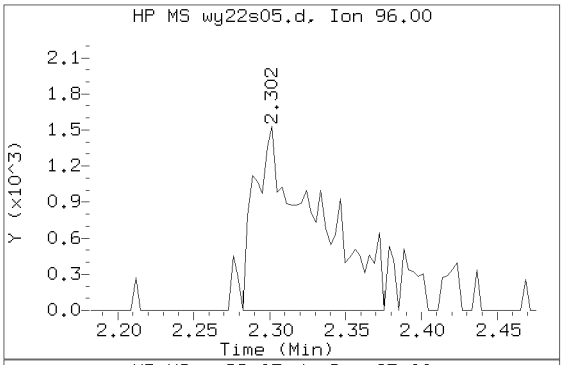


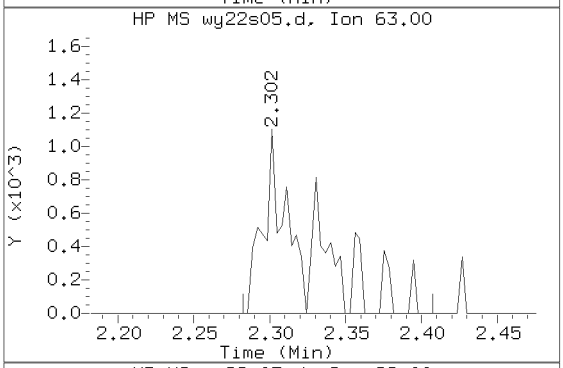
Sample Spectrum (Background Subtracted)

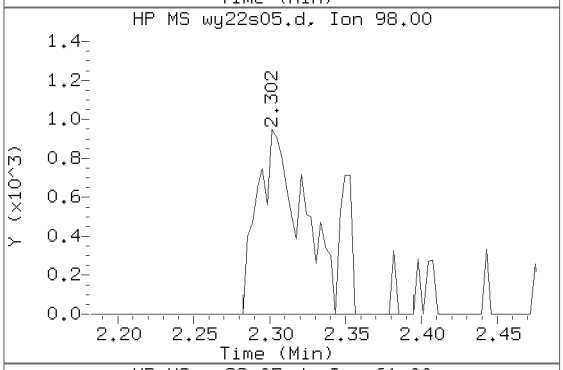


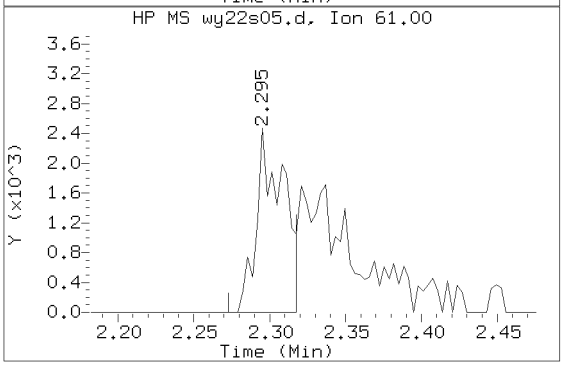
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/19may22a.b/wy22s05.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 15:53 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 16:08 Automation

Sample Name: 93J04 Lab Sample ID: 1058239

Compound Number	: 17
Compound Name	: 1,1-Dichloroethene
Scan Number	: 458
Retention Time (minutes)	: 2.302
Relative Retention Time	: 0.00064
Quant Ion	: 96.00
Area (flag)	: 4294
On-Column Amount (ng)	: 0.9383

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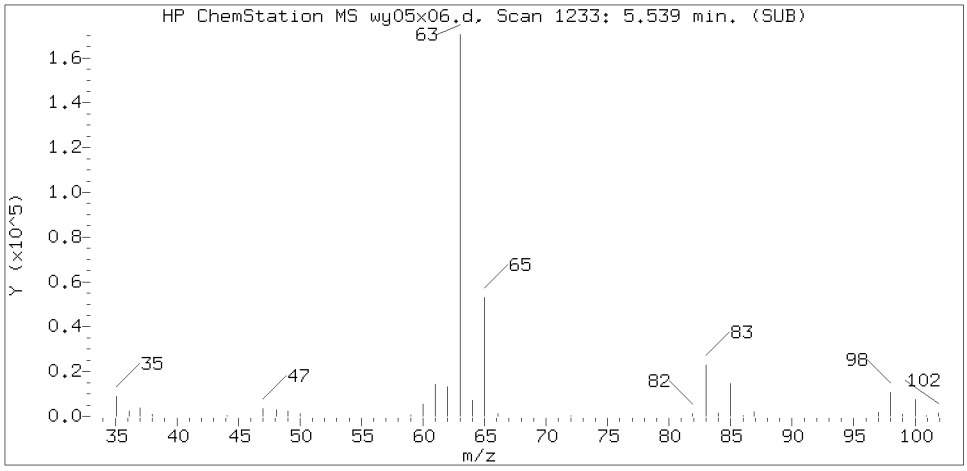
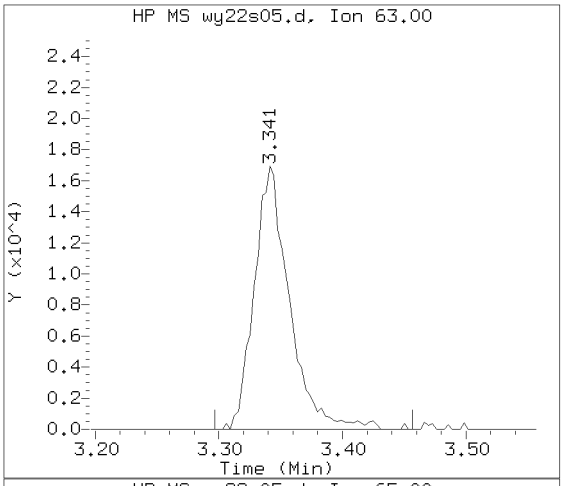
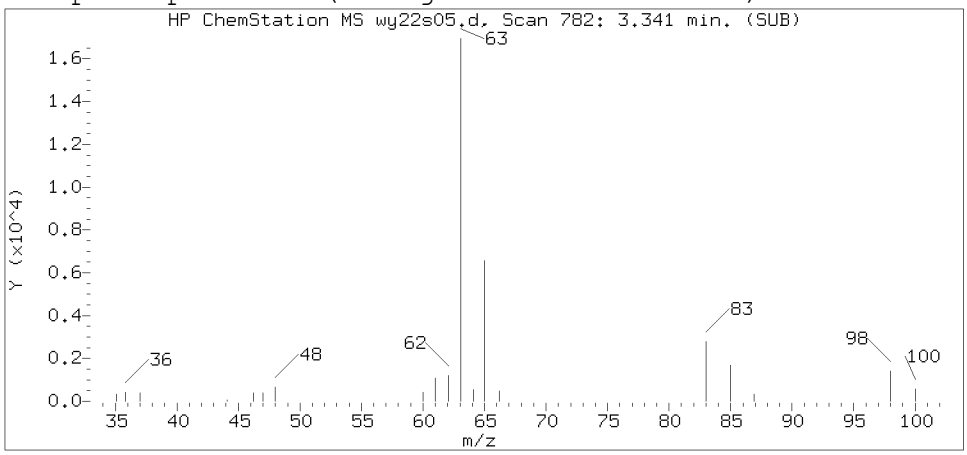
Target 3.5 esignature user ID: kas02648

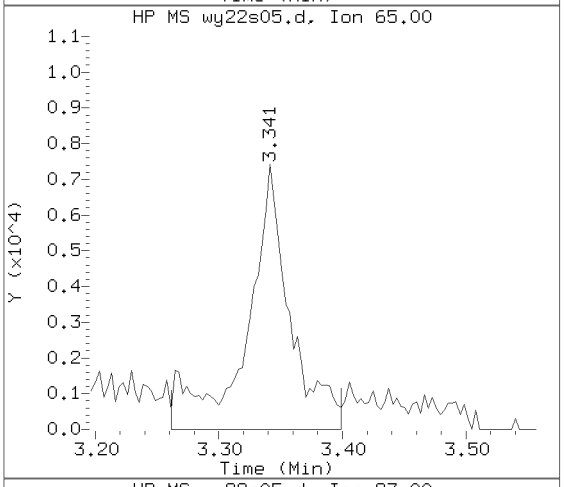
Reference Standard Spectrum for 1,1-Dichloroethane



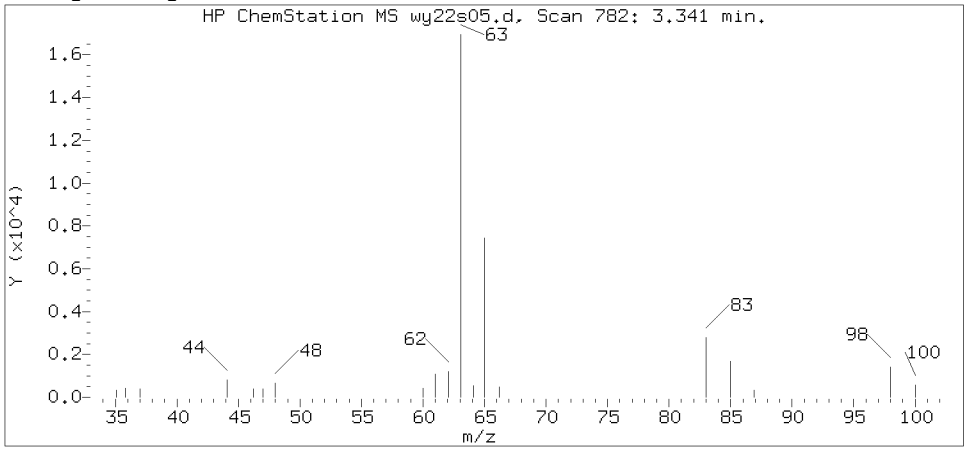


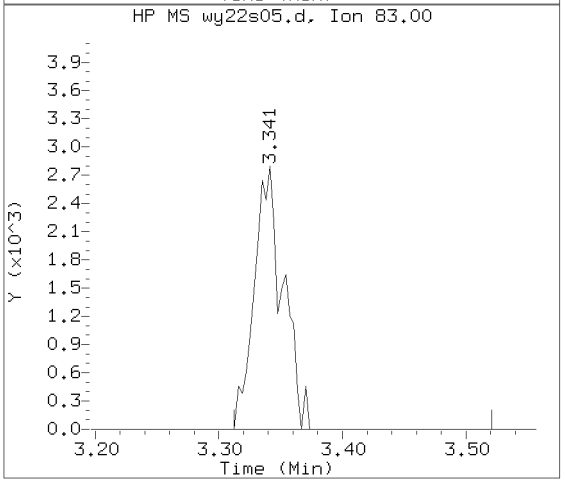
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP09137.i/19may22a.b/wy22s05.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 15:53 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 16:08 Automation

Sample Name: 93J04 Lab Sample ID: 1058239

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 782
Retention Time (minutes): 3.341
Relative Retention Time :-0.00000
Quant Ion : 63.00
Area (flag) : 33640
On-Column Amount (ng) : 3.7387

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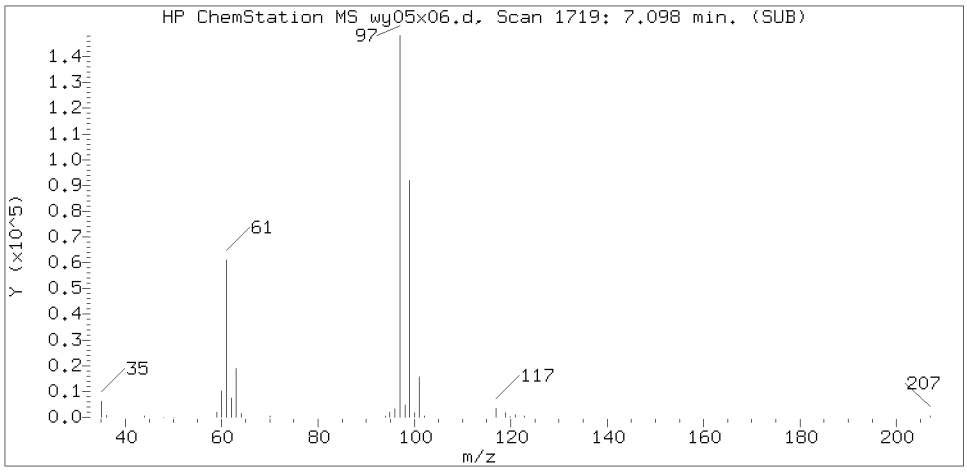
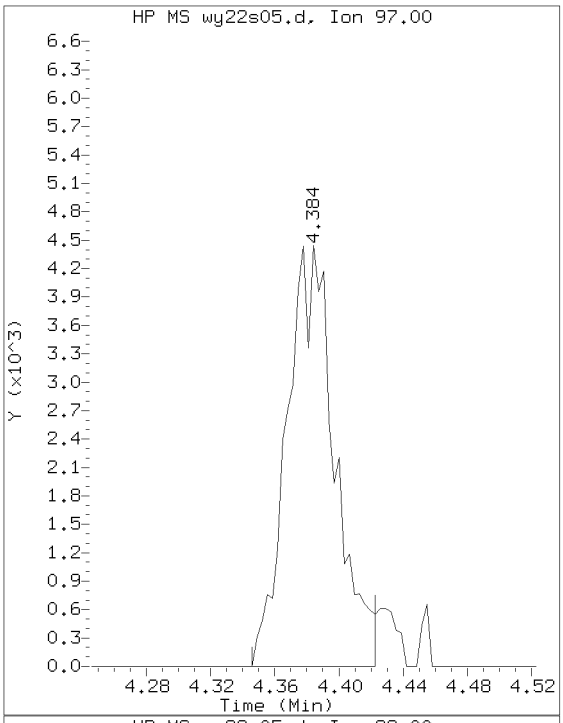
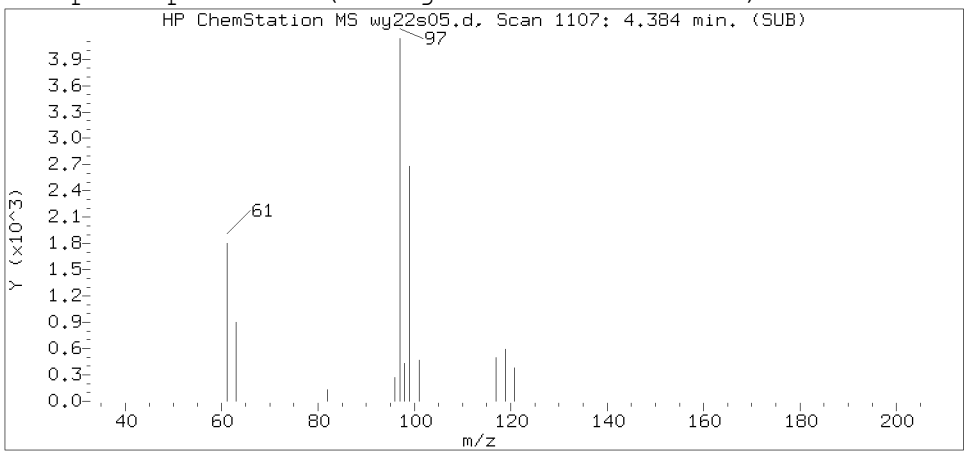
Target 3.5 esignature user ID: kas02648

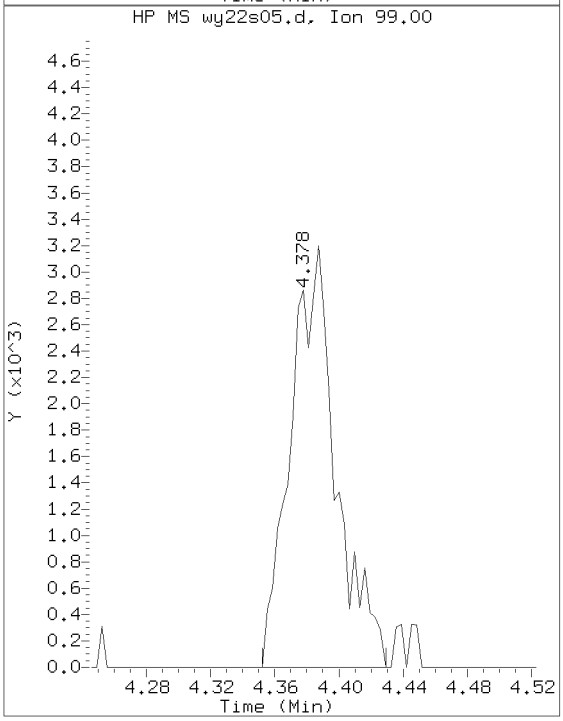
Reference Standard Spectrum for 1,1,1-Trichloroethane



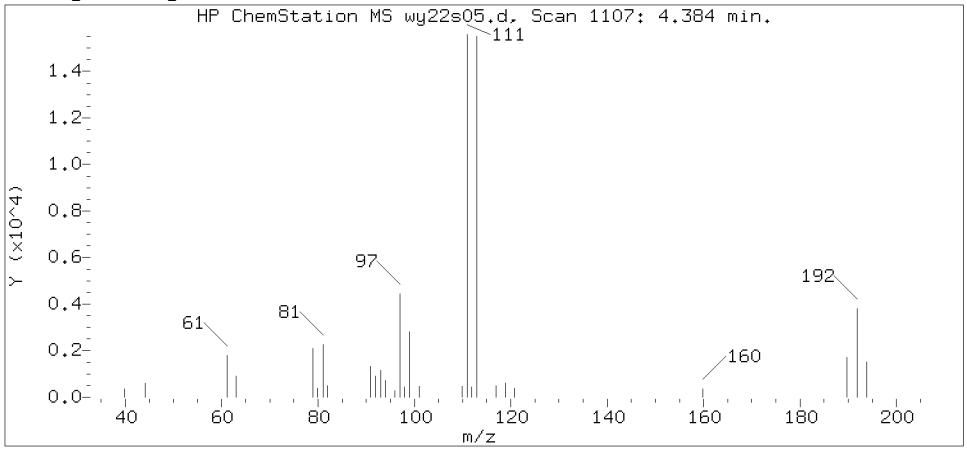


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09137.i/19may22a.b/wy22s05.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 15:53 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 16:08 Automation

Sample Name: 93J04 Lab Sample ID: 1058239

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1107
Retention Time (minutes)	: 4.384
Relative Retention Time	: 0.00000
Quant Ion	: 97.00
Area (flag)	: 9243
On-Column Amount (ng)	: 1.4551

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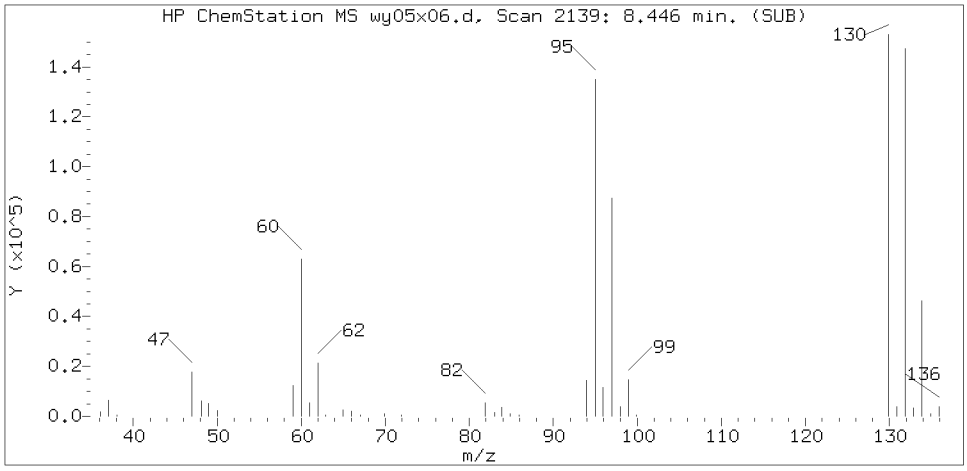
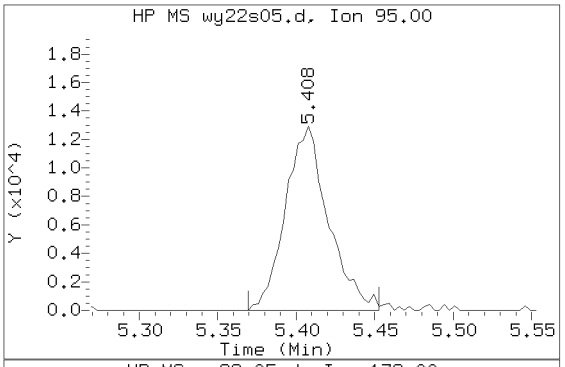
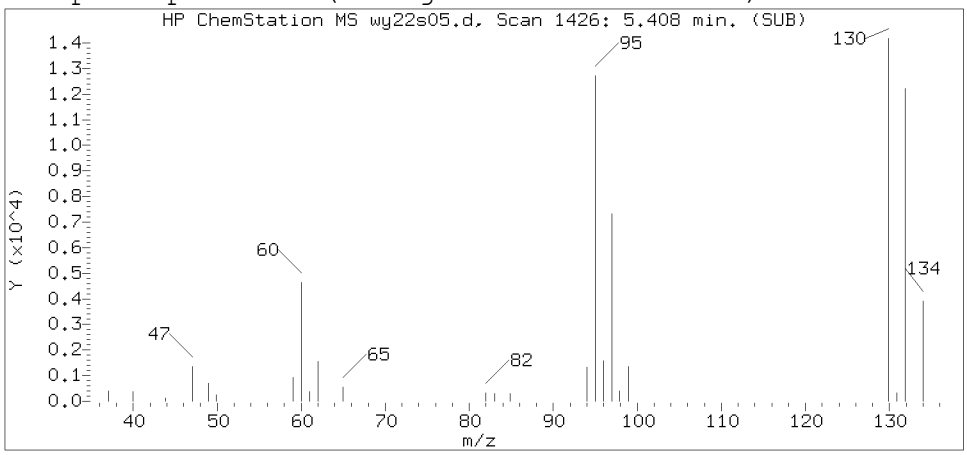
Target 3.5 esignature user ID: kas02648

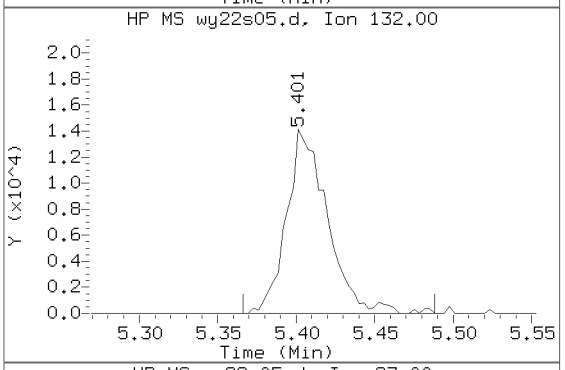
Reference Standard Spectrum for Trichloroethene

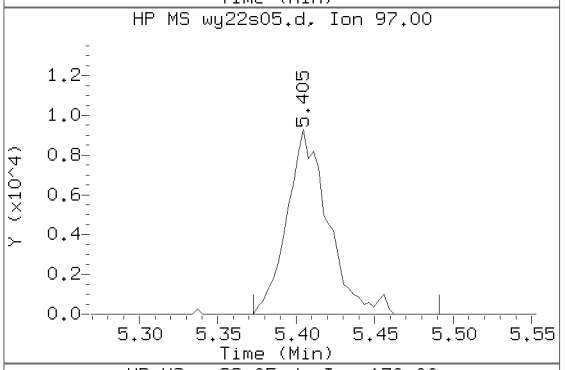




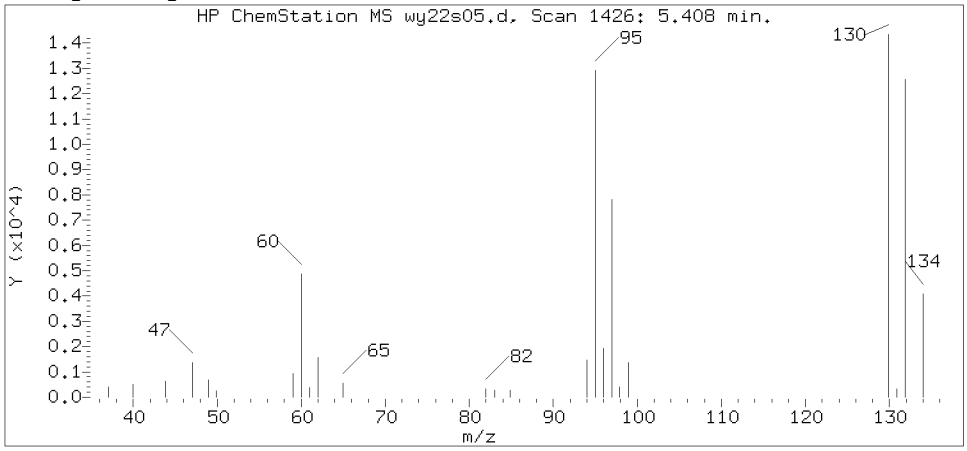
Sample Spectrum (Background Subtracted)

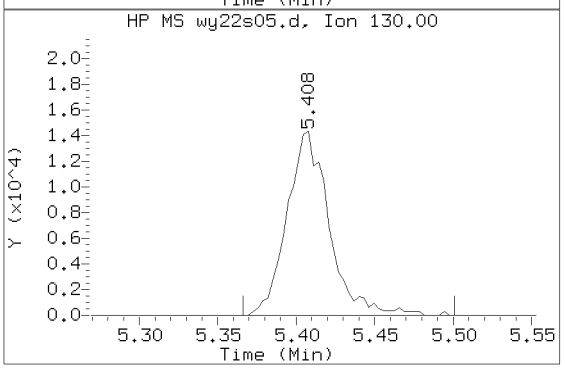






Sample Spectrum (Unaltered)





Data File: /chem2/HP09137.i/19may22a.b/wy22s05.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 15:53 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 16:08 Automation

Sample Name: 93J04 Lab Sample ID: 1058239

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 1426
Retention Time (minutes)	: 5.408
Relative Retention Time	:-0.00000
Quant Ion	: 95.00
Area (flag)	: 24590
On-Column Amount (ng)	: 4.6672

Digitally signed by Kevin A. Sposito on 05/23/2019 at 10:12.
Target 3.5 esignature user ID: kas02648

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

93J05

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058240

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may22a.b/wy22s06.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	0.8	J
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	3	
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	6	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

^

93J05 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1058240

Data file: /chem2/HP09137.i/19may22a.b/wy22s06.d Injection date and time: **22-MAY-2019 16:17**
Data file Sample Info. Line: 93J05;1058240;1;0;;JCV93;;;wy22b02; Instrument ID: **HP09137.i** Batch: **W191421AA**
Date, time and analyst ID of latest file update: 23-May-2019 04:24 amd00492

Blank Data file reference: **/chem2/HP09137.i/19may22a.b/wy22b02.d**

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may22a.b/wy22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.741(-0.003)	595	65	203284 (-22)	250.00	
66) Fluorobenzene	5.032(0.000)	1309	96	1033925 (-10)	50.00	
101) Chlorobenzene-d5	8.161(0.003)	2284	117	782205 (-11)	50.00	
132) 1,4-Dichlorobenzene-d4	10.042(0.000)	2870	152	394781 (-19)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.355(0.001)	113	225713	47.122	94%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.689(0.001)	102	65284	51.246	102%		80 - 120
84) Toluene-d8	(3)	6.698(0.000)	98	1003837	51.215	102%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162(0.000)	95	346996	44.252	89%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	2.308(-0.000)	96	3759M	0.825	0.82		J	0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	3.344(-0.000)	63	27071	3.021	3.02			0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	4.381(0.000)	97	35326	5.583	5.58			0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	5.405(0.000)	95	6882	1.311	1.31			0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

M = Compound was manually integrated.

Digitally signed by Kevin A. Sposito on 05/23/2019 at 10:12. Target 3.5 esignature user ID: kas02648

Data file: /chem2/HP09137.i/19may22a.b/wy22s06.d Injection date and time: **22-MAY-2019 16:17**
Data file Sample Info. Line: 93J05;1058240;1;0;;JCV93;;;wy22b02; Instrument ID: **HP09137.i** Batch: **W191421AA**
Date, time and analyst ID of latest file update: 23-May-2019 04:24 amd00492

Blank Data file reference: **/chem2/HP09137.i/19may22a.b/wy22b02.d**

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may22a.b/wy22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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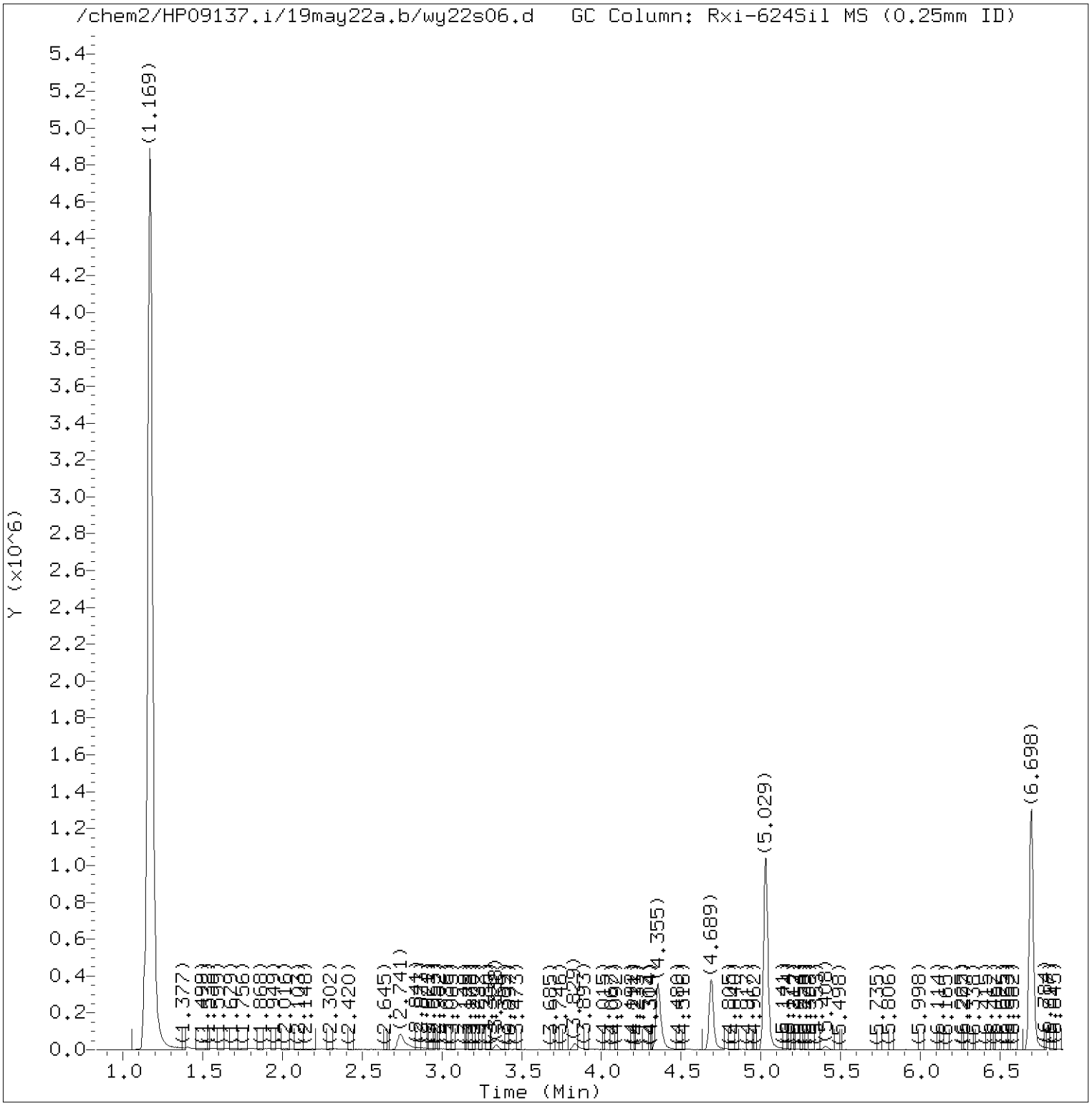
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Kevin A. Sposito on 05/23/2019 at 10:12. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

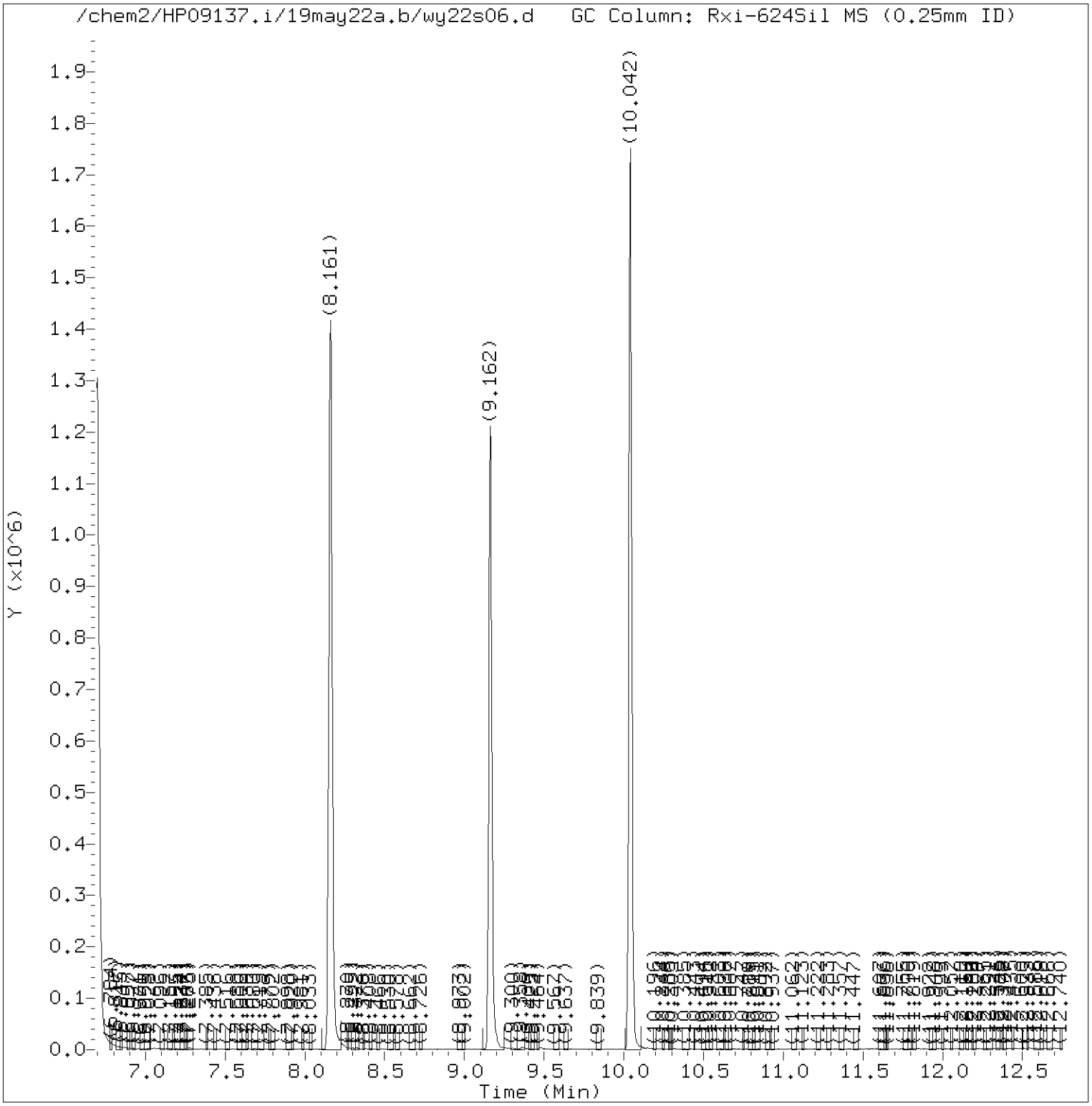
Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22s06.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 16:17 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 23-May-2019 04:24 amd00492

Sample Name: 93J05 Lab Sample ID: 1058240

Digitally signed by Kevin A. Sposito
on 05/23/2019 at 10:12.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22s06.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 16:17 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 23-May-2019 04:24 amd00492

Sample Name: 93J05 Lab Sample ID: 1058240

Digitally signed by Kevin A. Sposito
on 05/23/2019 at 10:12.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22s06.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 16:17 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 23-May-2019 04:24 amd00492

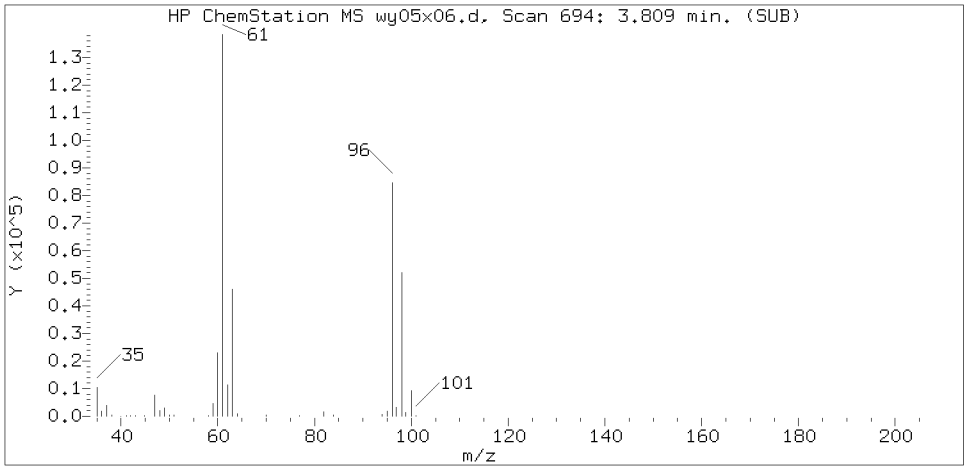
Sample Name: 93J05 Lab Sample ID: 1058240

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	2.308	96	3759M	0.825
29)*t-Butyl alcohol-d10	(1)	2.741	65	203284	250.000
36) 1,1-Dichloroethane	(2)	3.345	63	27071	3.021
52)$Dibromofluoromethane	(2)	4.355	113	225713	47.122
53) 1,1,1-Trichloroethane	(2)	4.381	97	35326	5.583
57)$1,2-Dichloroethane-d4	(2)	4.689	102	65284	51.246
66)*Fluorobenzene	(2)	5.032	96	1033925	50.000
71) Trichloroethene	(2)	5.405	95	6882	1.311
84)$Toluene-d8	(3)	6.698	98	1003837	51.215
101)*Chlorobenzene-d5	(3)	8.161	117	782205	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	346996	44.252
132)*1,4-Dichlorobenzene-d4	(4)	10.042	152	394781	50.000

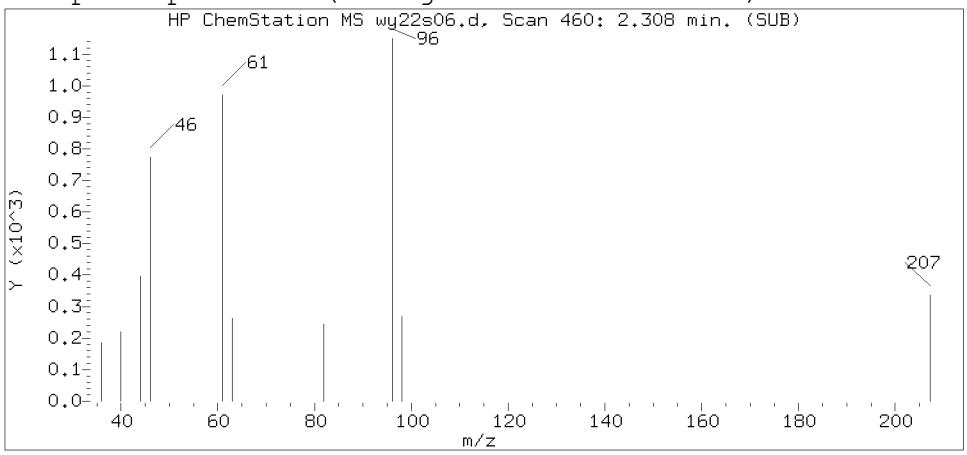
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/23/2019 at 10:12.
Target 3.5 esignature user ID: kas02648

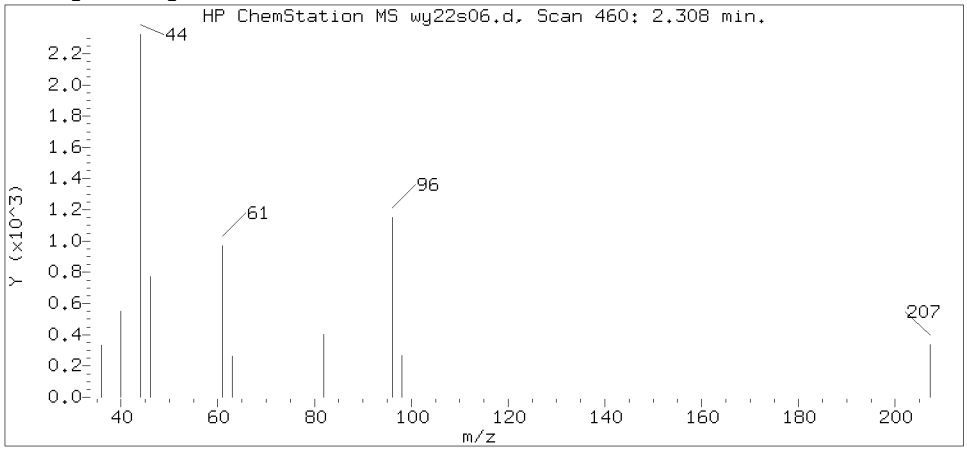
Reference Standard Spectrum for 1,1-Dichloroethene

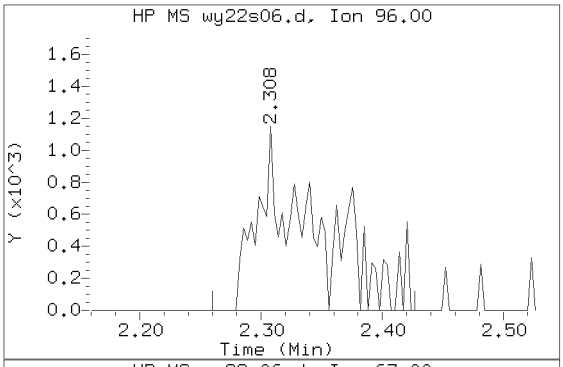


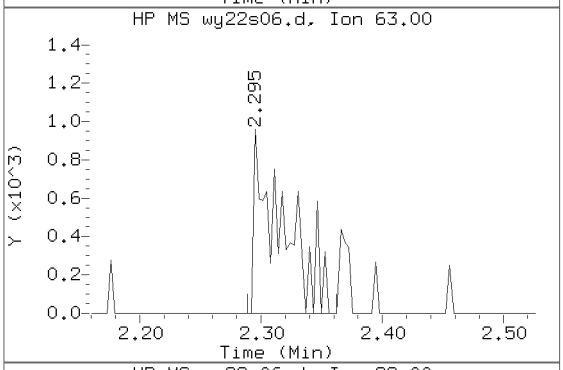
Sample Spectrum (Background Subtracted)

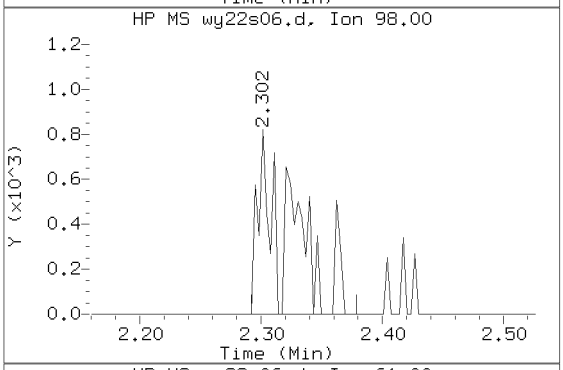


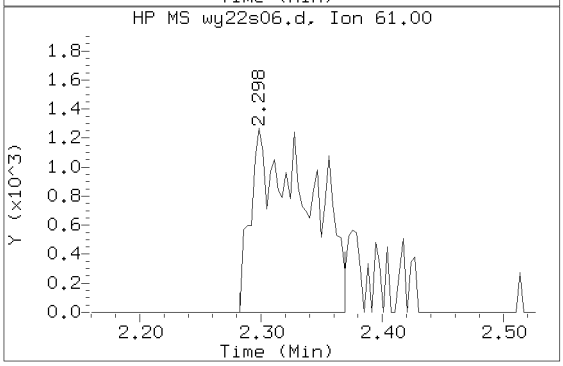
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/19may22a.b/wy22s06.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 16:17 Analyst ID: CBR01947

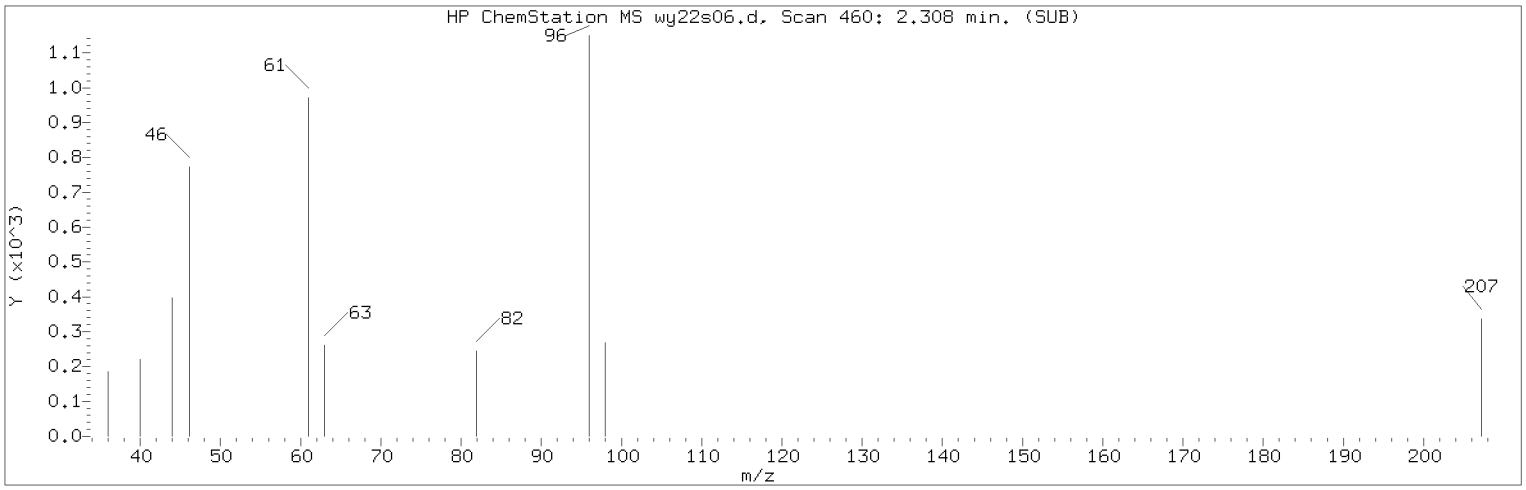
Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 23-May-2019 04:24 amd00492

Sample Name: 93J05 Lab Sample ID: 1058240

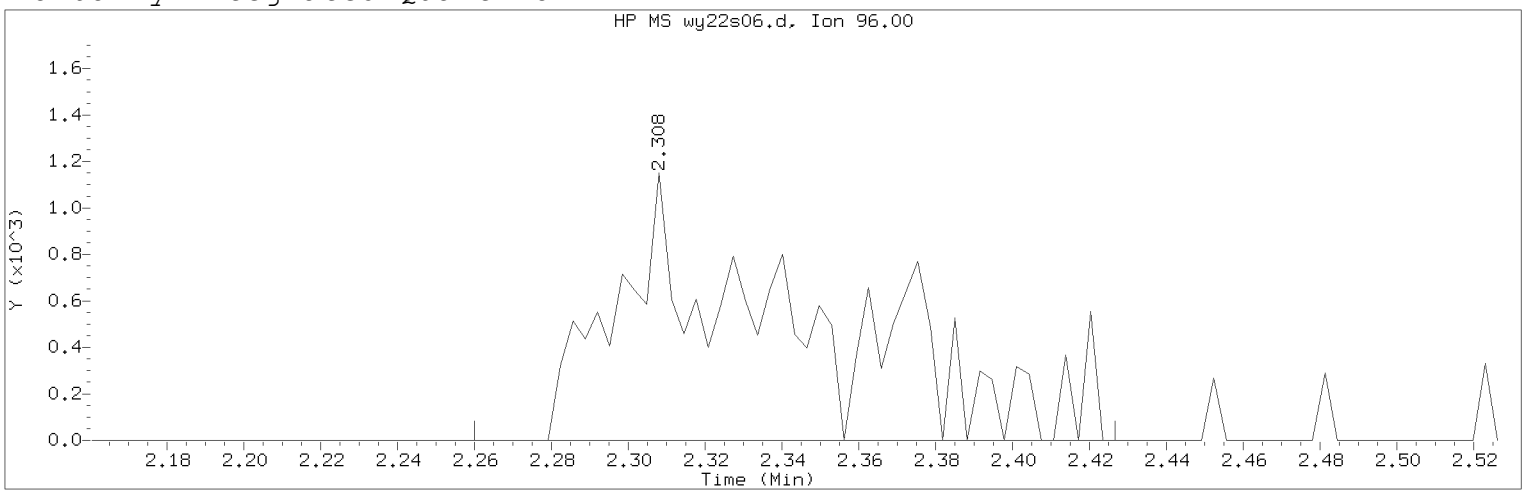
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 460
Retention Time (minutes): 2.308
Relative Retention Time :-0.00063
Quant Ion : 96.00
Area (flag) : 3759M
On-Column Amount (ng) : 0.8248

Digitally signed by Kevin A. Sposito on 05/23/2019 at 10:12.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22s06.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 16:17 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 23-May-2019 04:24 amd00492

Sample Name: 93J05 Lab Sample ID: 1058240

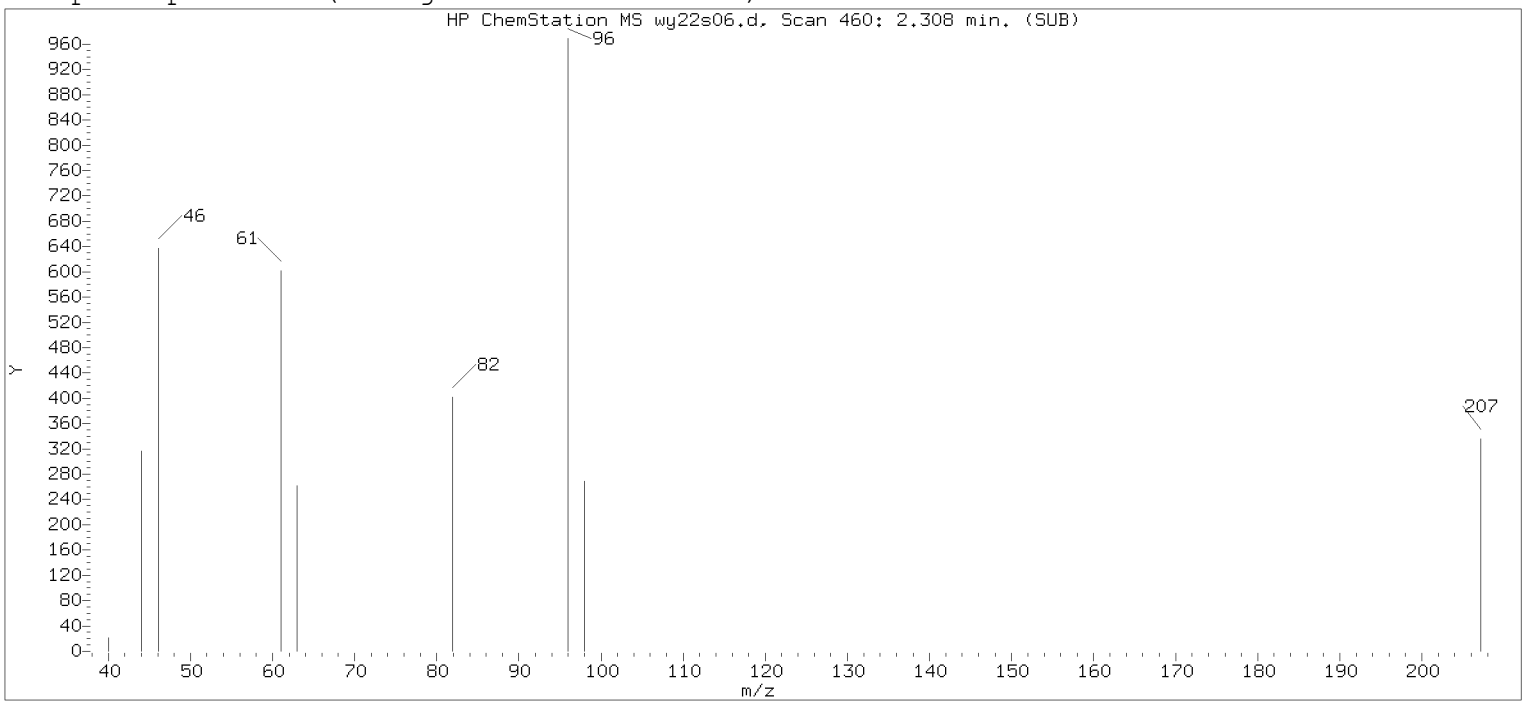
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 460
Retention Time (minutes): 2.308
Quant Ion : 96.00
Area (flag) : 3759M
On-Column Amount (ng) : 0.8248
Integration start scan : 444 Integration stop scan: 496
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

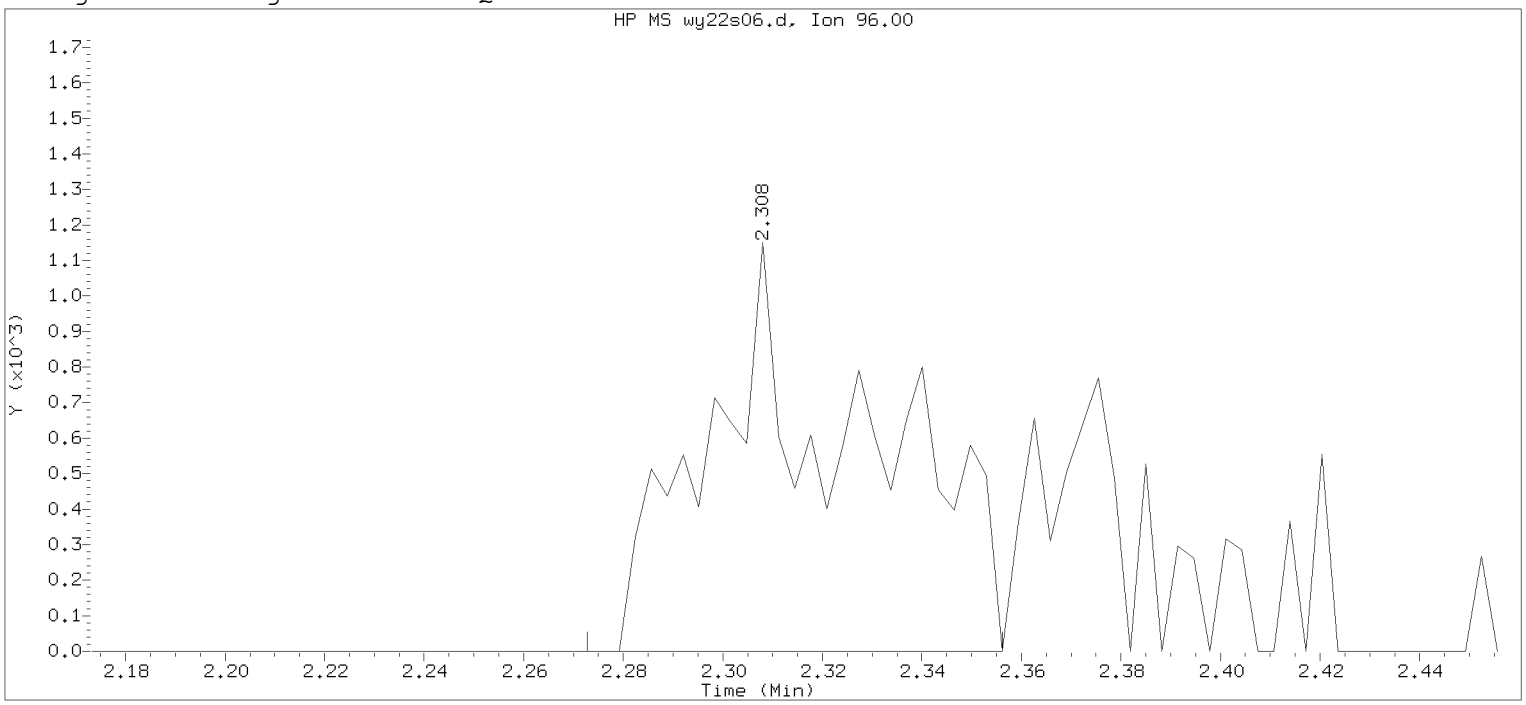
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/23/2019 at 10:12.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



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Injection date and time: 22-MAY-2019 16:17 Analyst ID: CBR01947

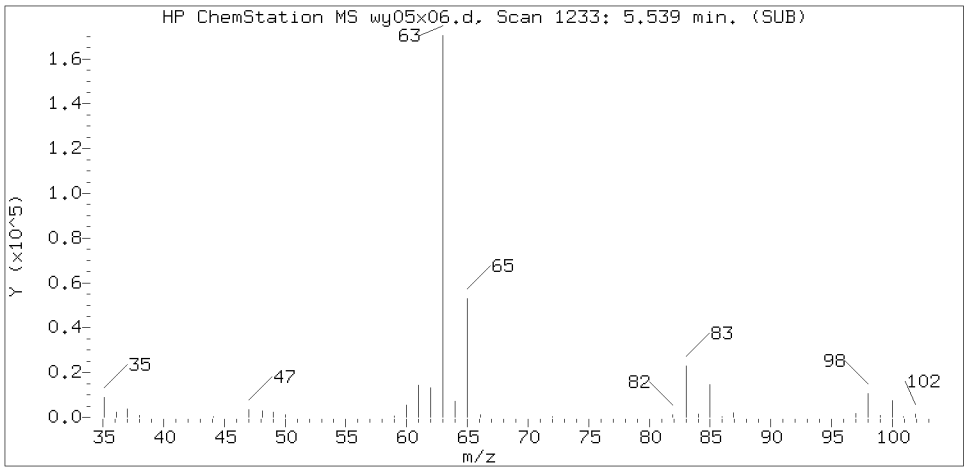
Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 16:32 Automation

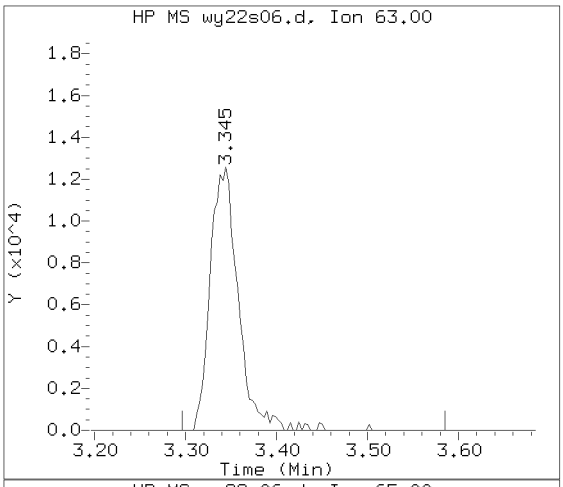
Sample Name: 93J05 Lab Sample ID: 1058240

Compound Number	: 17		
Compound Name	: 1,1-Dichloroethene		
Scan Number	: 460		
Retention Time (minutes)	: 2.308		
Quant Ion	: 96.00		
Area	: 2540		
On-column Amount (ng)	: 0.5574		
Integration start scan	: 448	Integration stop scan:	474
Y at integration start	: 0	Y at integration end:	0

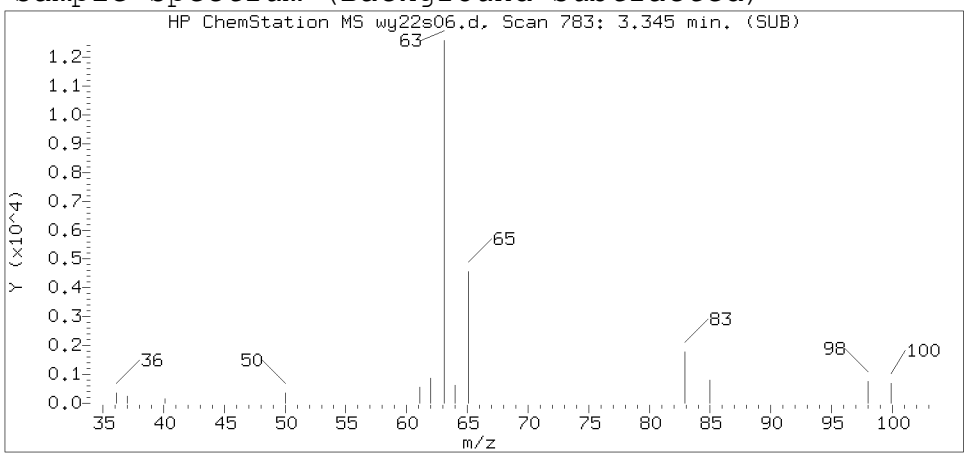
Digitally signed by Kevin A. Sposito on 05/23/2019 at 10:12.
Target 3.5 esignature user: kasposito

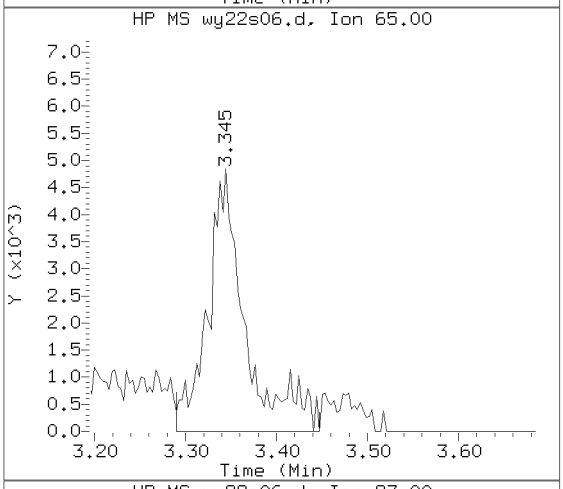
Reference Standard Spectrum for 1,1-Dichloroethane



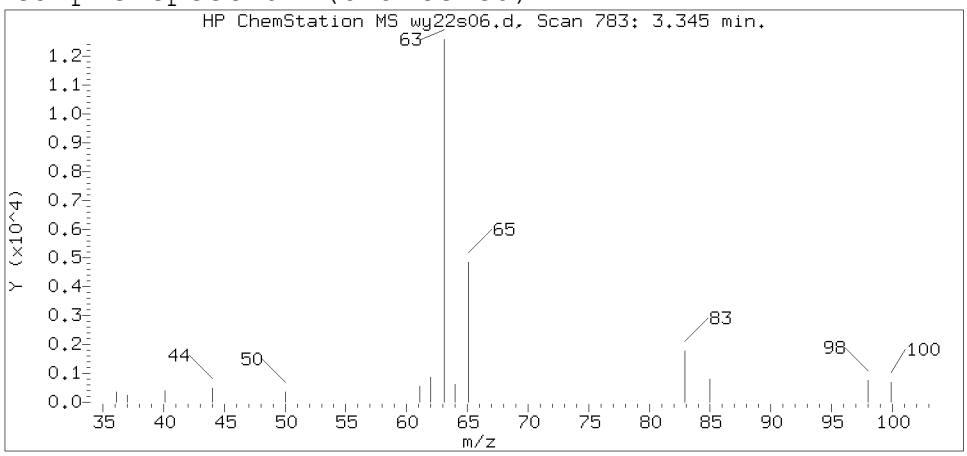


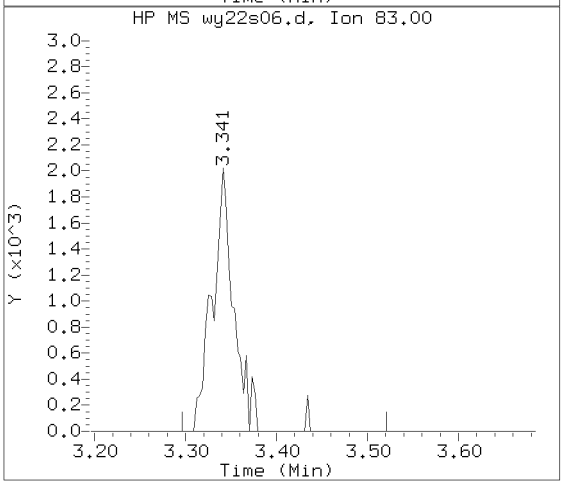
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP09137.i/19may22a.b/wy22s06.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 16:17 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 23-May-2019 04:24 amd00492

Sample Name: 93J05 Lab Sample ID: 1058240

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 783
Retention Time (minutes): 3.345
Relative Retention Time :-0.00064
Quant Ion : 63.00
Area (flag) : 27071
On-Column Amount (ng) : 3.0205

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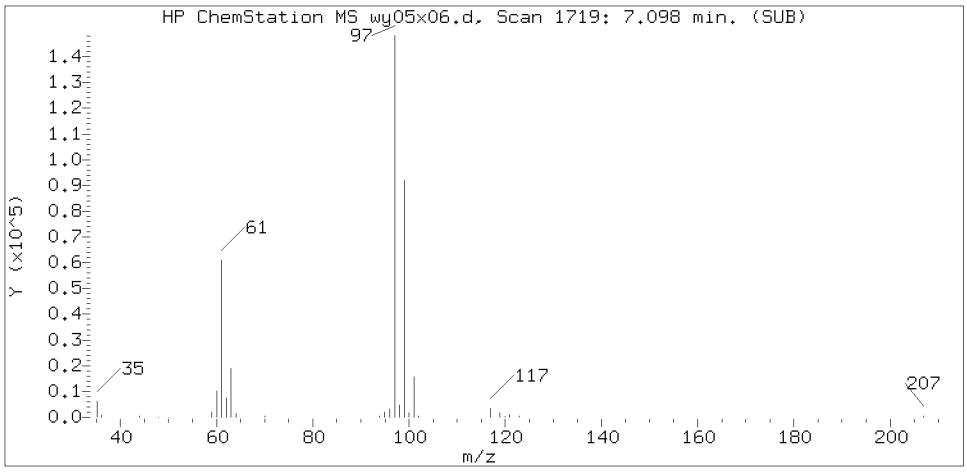
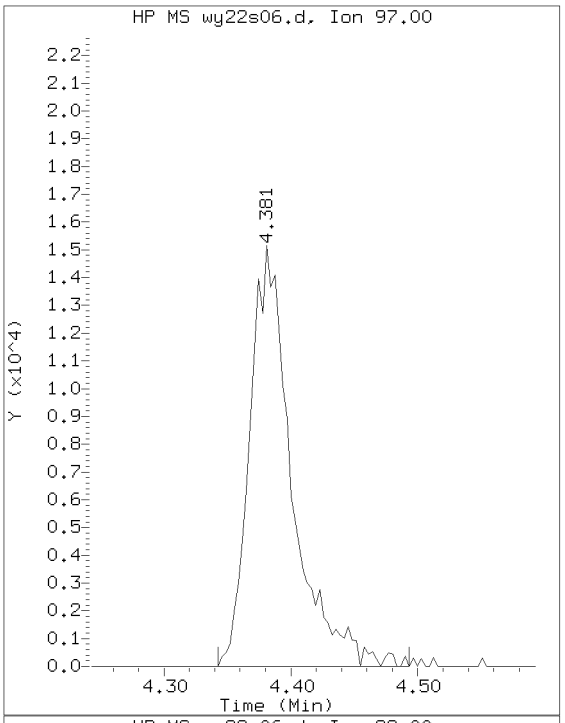
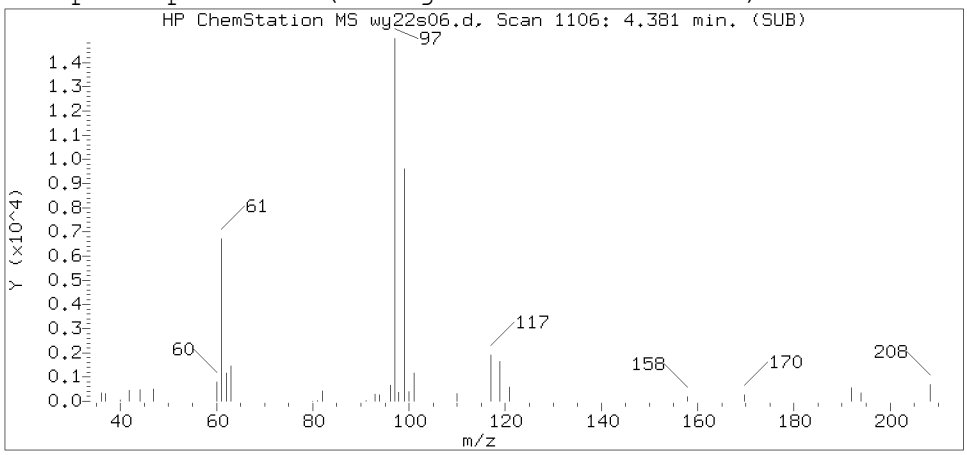
Target 3.5 esignature user ID: kas02648

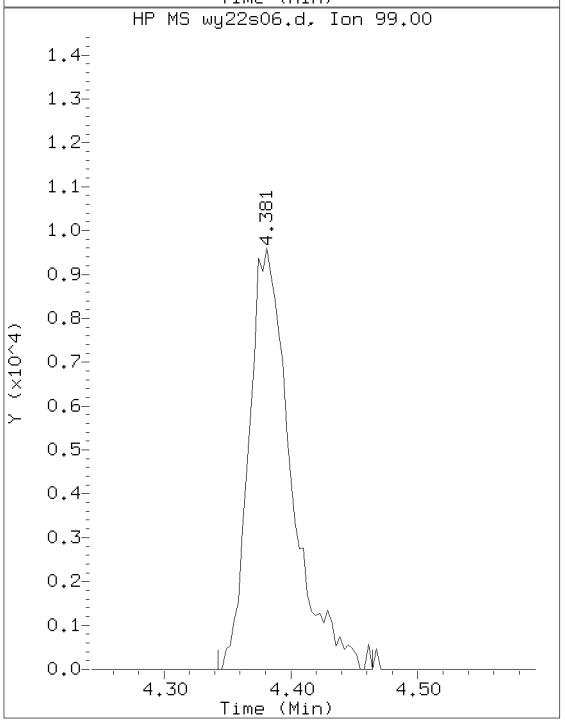
Reference Standard Spectrum for 1,1,1-Trichloroethane



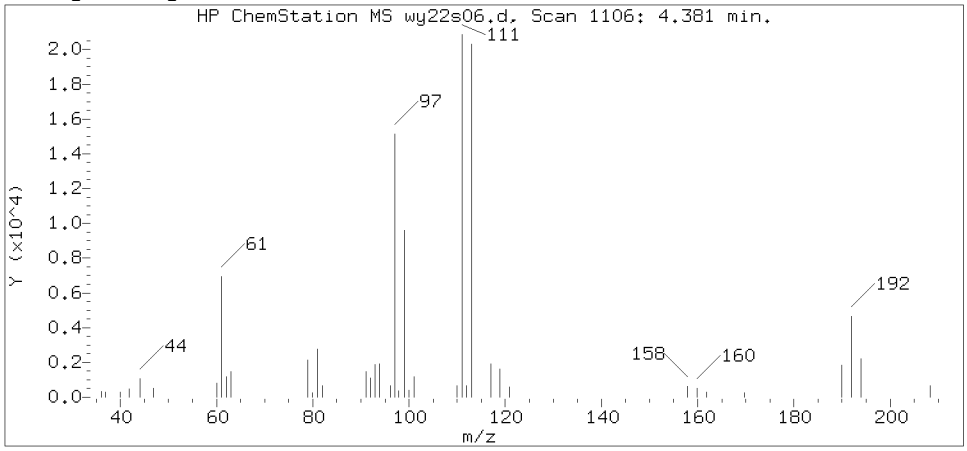


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09137.i/19may22a.b/wy22s06.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 16:17 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 23-May-2019 04:24 amd00492

Sample Name: 93J05 Lab Sample ID: 1058240

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1106
Retention Time (minutes)	: 4.381
Relative Retention Time	: 0.00064
Quant Ion	: 97.00
Area (flag)	: 35326
On-Column Amount (ng)	: 5.5832

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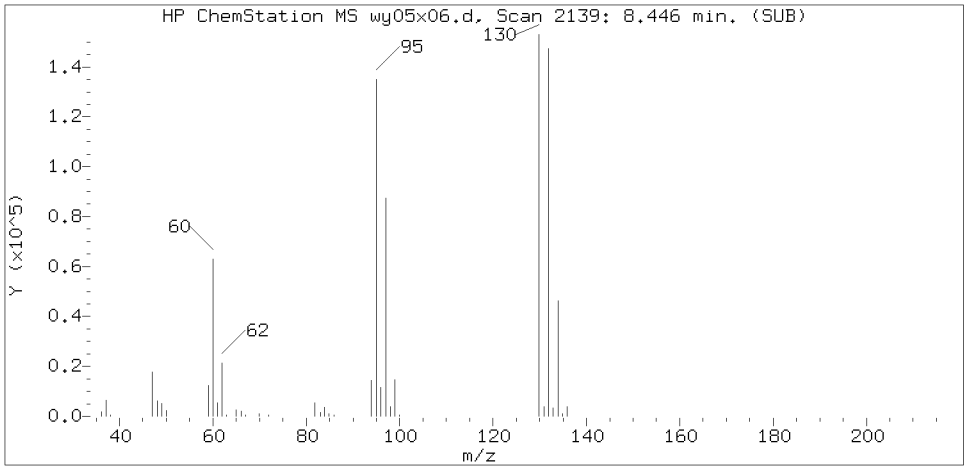
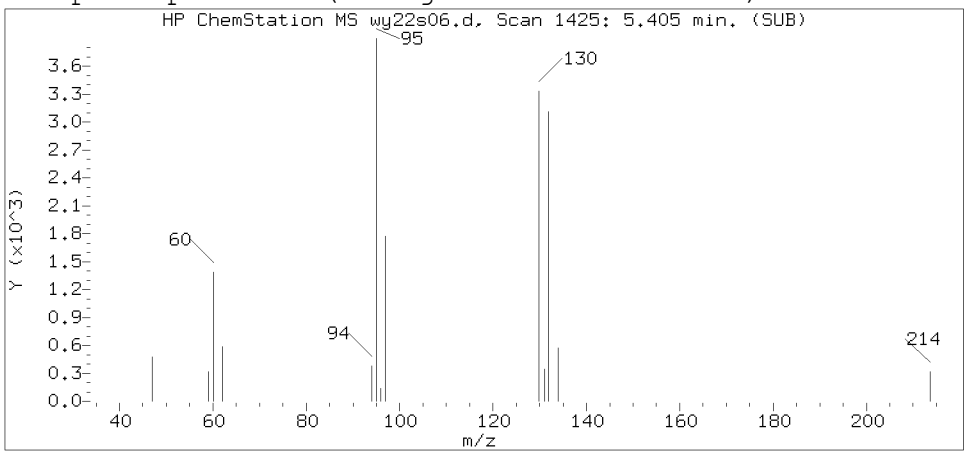
Target 3.5 esignature user ID: kas02648

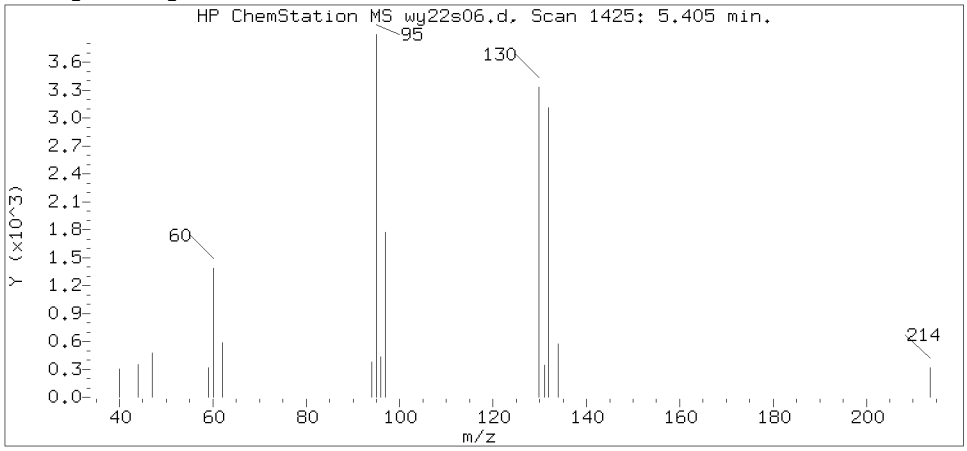
Reference Standard Spectrum for Trichloroethene

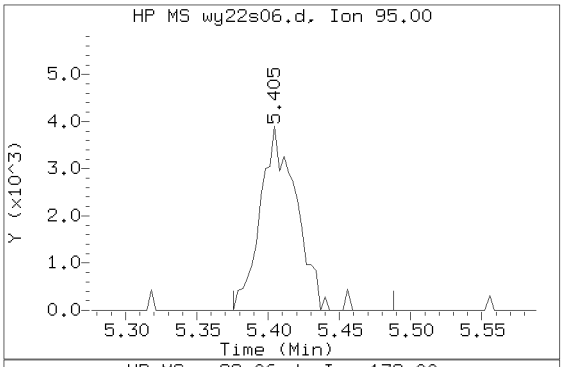


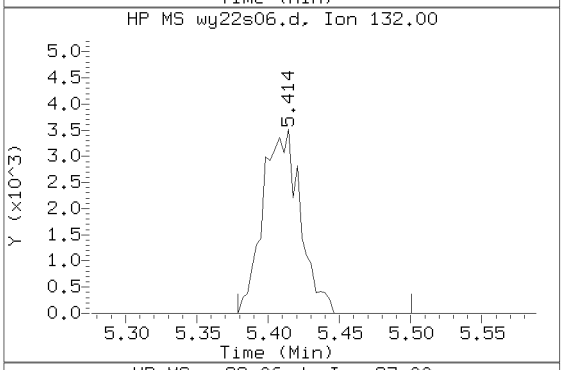
Sample Spectrum (Background Subtracted)

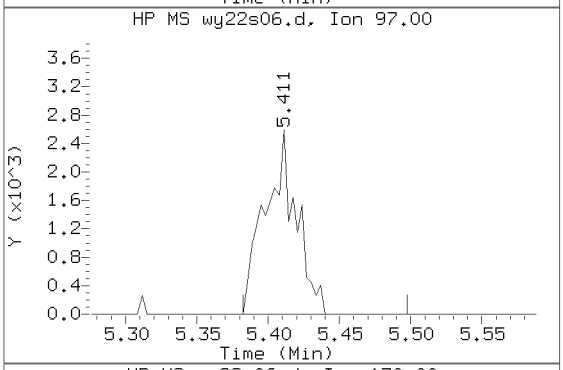


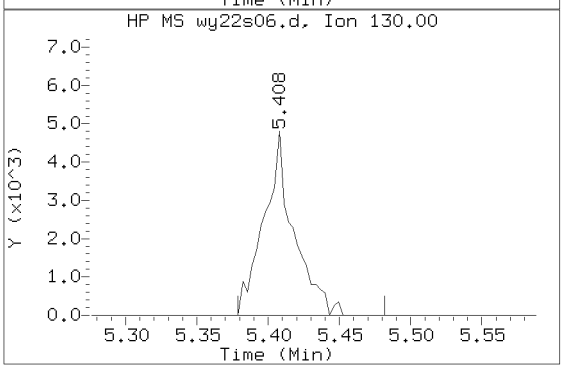
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/19may22a.b/wy22s06.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 16:17 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 23-May-2019 04:24 amd00492

Sample Name: 93J05 Lab Sample ID: 1058240

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 1425
Retention Time (minutes)	: 5.405
Relative Retention Time	: 0.00064
Quant Ion	: 95.00
Area (flag)	: 6882
On-Column Amount (ng)	: 1.3114

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Target 3.5 esignature user ID: kas02648

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
93J06

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058241

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may22a.b/wy22s07.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	2	
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	2	
156-59-2	cis-1,2-Dichloroethene	1	
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	13	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	140	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	2	
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may22a.b/wy22s07.d
Injection date and time: **22-MAY-2019 16:41**
Data file Sample Info. Line: 93J06;1058241;1;0;;JCV93;;;wy22b02;
Instrument ID: **HP09137.i** Batch: **W191421AA**
Date, time and analyst ID of latest file update: 23-May-2019 04:24 amd00492

Blank Data file reference: **/chem2/HP09137.i/19may22a.b/wy22b02.d**

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may22a.b/wy22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.744(-0.006)	596	65	182145 (-30)	250.00	
66) Fluorobenzene	5.029(0.004)	1308	96	1006098 (-12)	50.00	
101) Chlorobenzene-d5	8.161(0.004)	2284	117	780711 (-11)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041(0.000)	2870	152	396508 (-19)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.355(0.000)	113	219829	47.163	94%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692(-0.001)	102	63166	50.955	102%		80 - 120
84) Toluene-d8	(3)	6.697(0.000)	98	996492	50.937	102%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162(0.000)	95	345813	44.185	88%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	2.333(-0.005)	96	8008M	1.805	1.81			0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	3.338(0.000)	63	13126	1.505	1.51			0.2	1
42) cis-1,2-Dichloroethene	(2)	3.896(-0.001)	96	6828	1.264	1.26			0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	4.384(-0.000)	97	81572	13.249	13.25			0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	5.407(-0.000)	95	735609	144.047	144.05			0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)	7.358(0.000)	166	10276	2.010	2.01			0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

M = Compound was manually integrated.

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Data file: /chem2/HP09137.i/19may22a.b/wy22s07.d Injection date and time: **22-MAY-2019 16:41**
Data file Sample Info. Line: 93J06;1058241;1;0;;JCV93;;;wy22b02; Instrument ID: **HP09137.i** Batch: **W191421AA**
Date, time and analyst ID of latest file update: 23-May-2019 04:24 amd00492

Blank Data file reference: **/chem2/HP09137.i/19may22a.b/wy22b02.d**

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may22a.b/wy22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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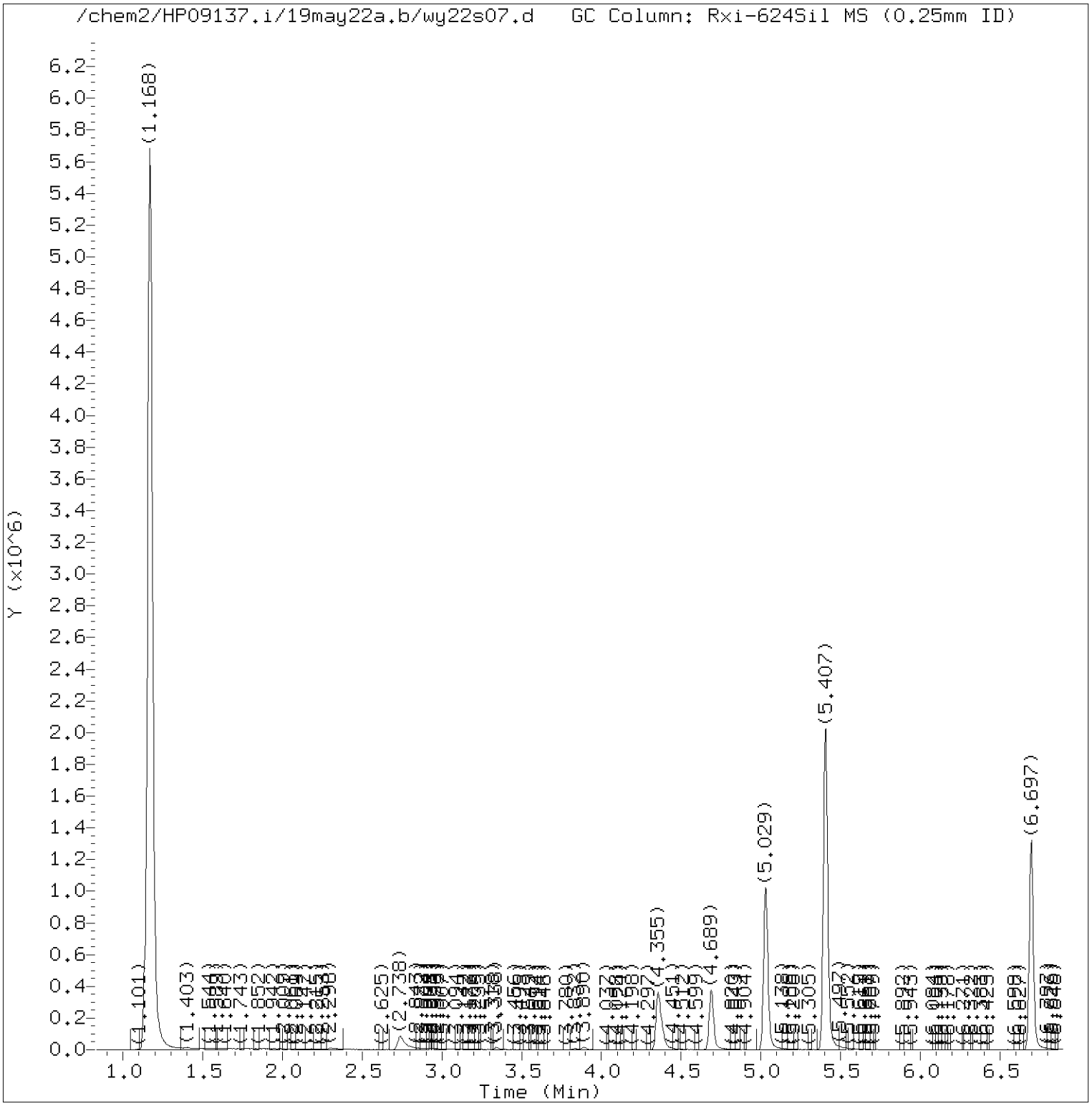
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Kevin A. Sposito on 05/23/2019 at 10:12. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

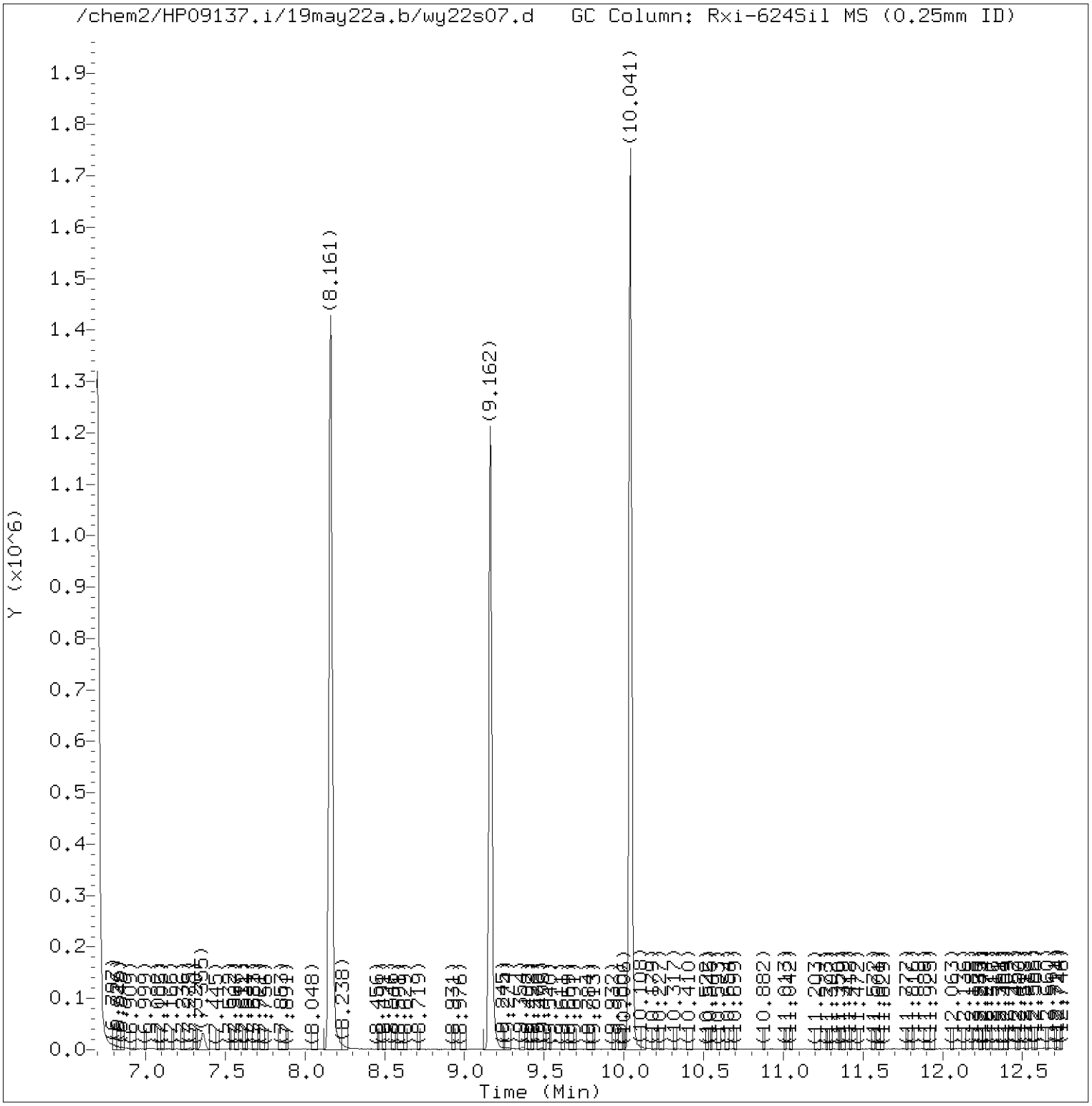
Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22s07.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 16:41 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 23-May-2019 04:24 amd00492

Sample Name: 93J06 Lab Sample ID: 1058241

Digitally signed by Kevin A. Sposito
on 05/23/2019 at 10:12.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22s07.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 16:41 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 23-May-2019 04:24 amd00492

Sample Name: 93J06 Lab Sample ID: 1058241

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on 05/23/2019 at 10:12.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22s07.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 16:41 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 23-May-2019 04:24 amd00492

Sample Name: 93J06 Lab Sample ID: 1058241

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	2.333	96	8008M	1.805
29)*t-Butyl alcohol-d10	(1)	2.744	65	182145	250.000
36) 1,1-Dichloroethane	(2)	3.338	63	13126	1.505
42) cis-1,2-Dichloroethene	(2)	3.896	96	6828	1.264
52)$Dibromofluoromethane	(2)	4.355	113	219829	47.163
53) 1,1,1-Trichloroethane	(2)	4.384	97	81572	13.249
57)$1,2-Dichloroethane-d4	(2)	4.692	102	63166	50.955
66)*Fluorobenzene	(2)	5.029	96	1006098	50.000
71) Trichloroethene	(2)	5.407	95	735609	144.047
84)$Toluene-d8	(3)	6.697	98	996492	50.937
94) Tetrachloroethene	(3)	7.358	166	10276	2.010
101)*Chlorobenzene-d5	(3)	8.161	117	780711	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	345813	44.185
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	396508	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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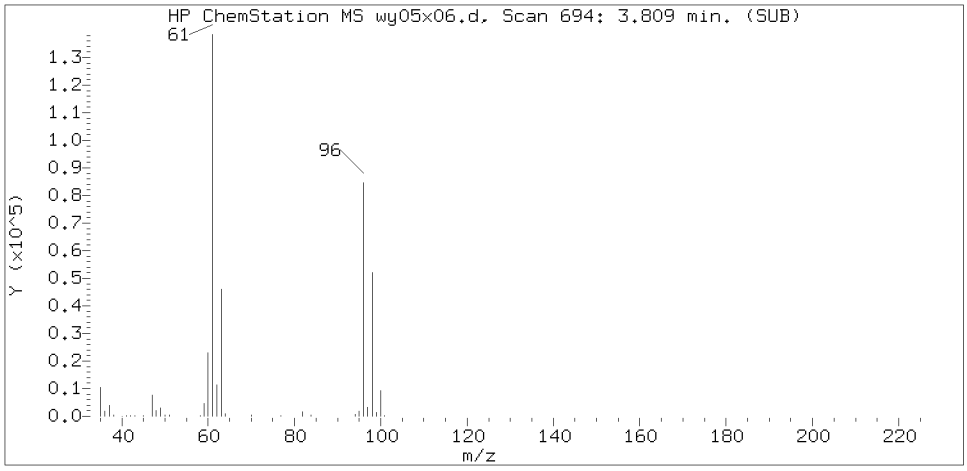
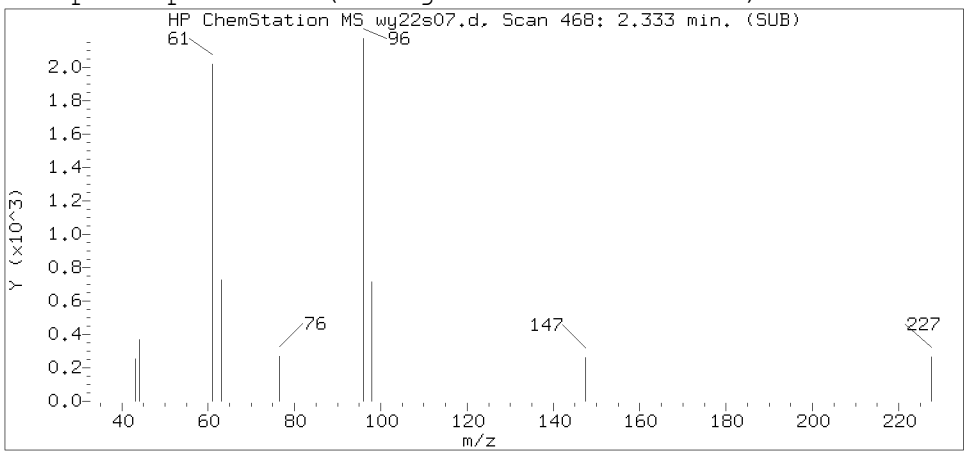
on 05/23/2019 at 10:12.
Target 3.5 esignature user ID: kas02648

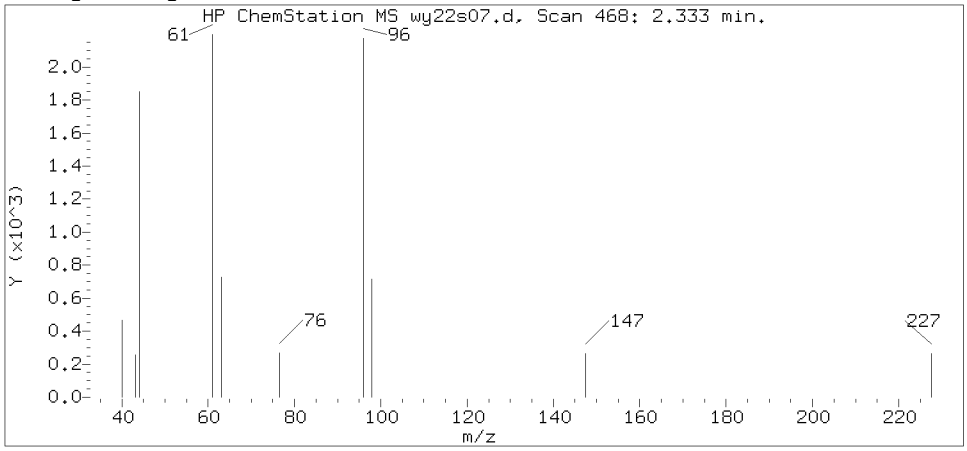
Reference Standard Spectrum for 1,1-Dichloroethene

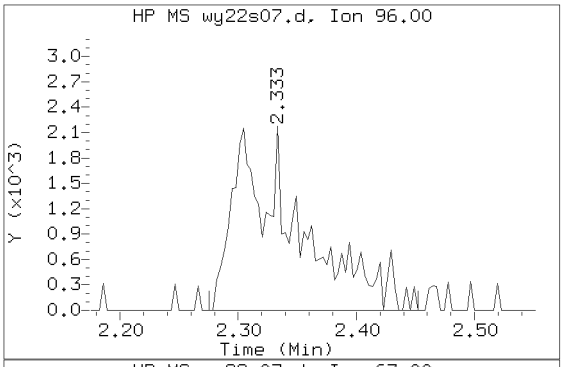


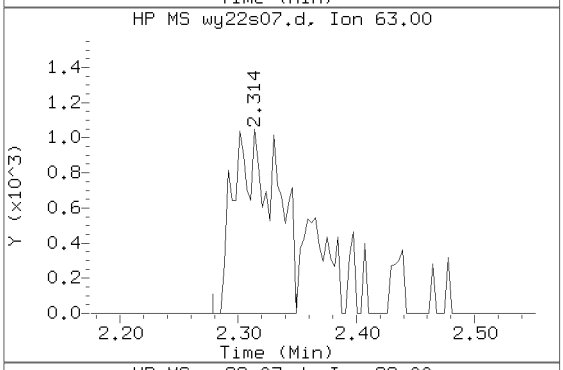
Sample Spectrum (Background Subtracted)

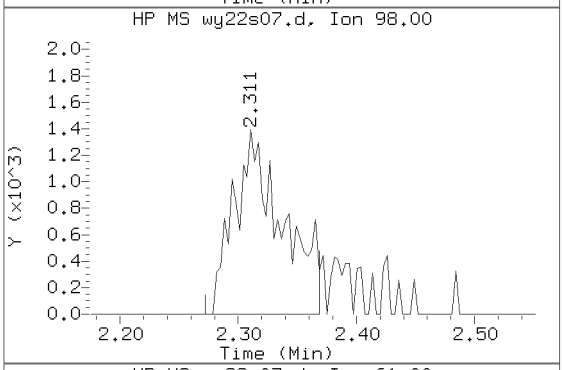


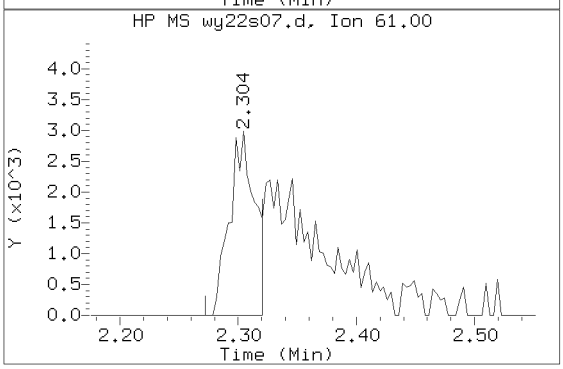
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/19may22a.b/wy22s07.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 16:41 Analyst ID: CBR01947

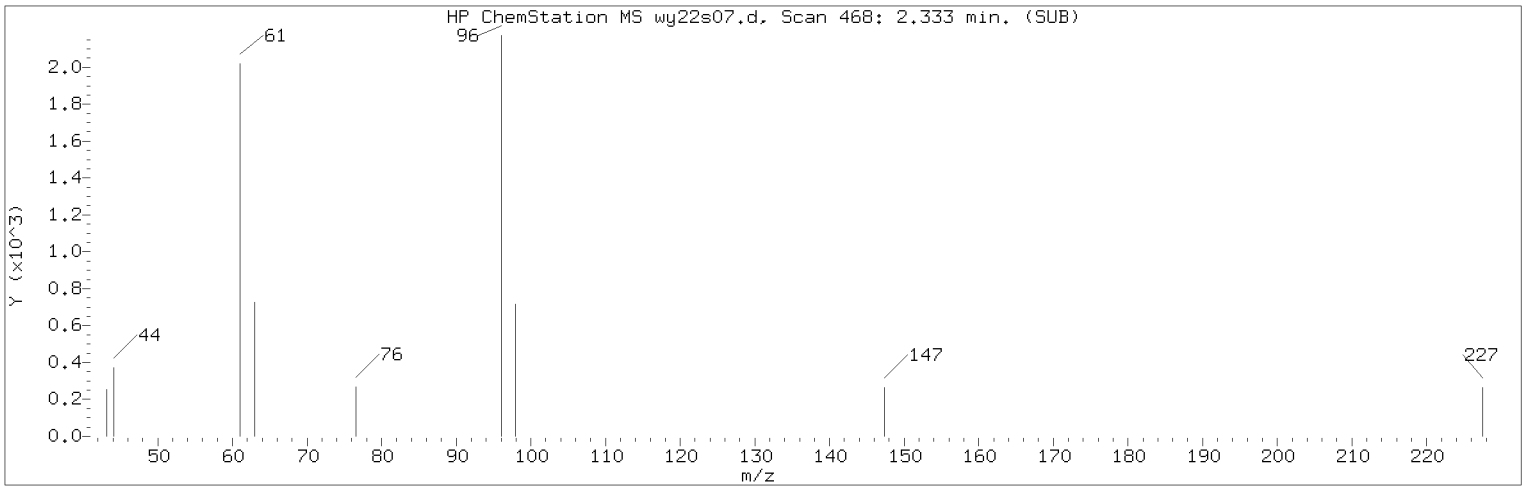
Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 23-May-2019 04:24 amd00492

Sample Name: 93J06 Lab Sample ID: 1058241

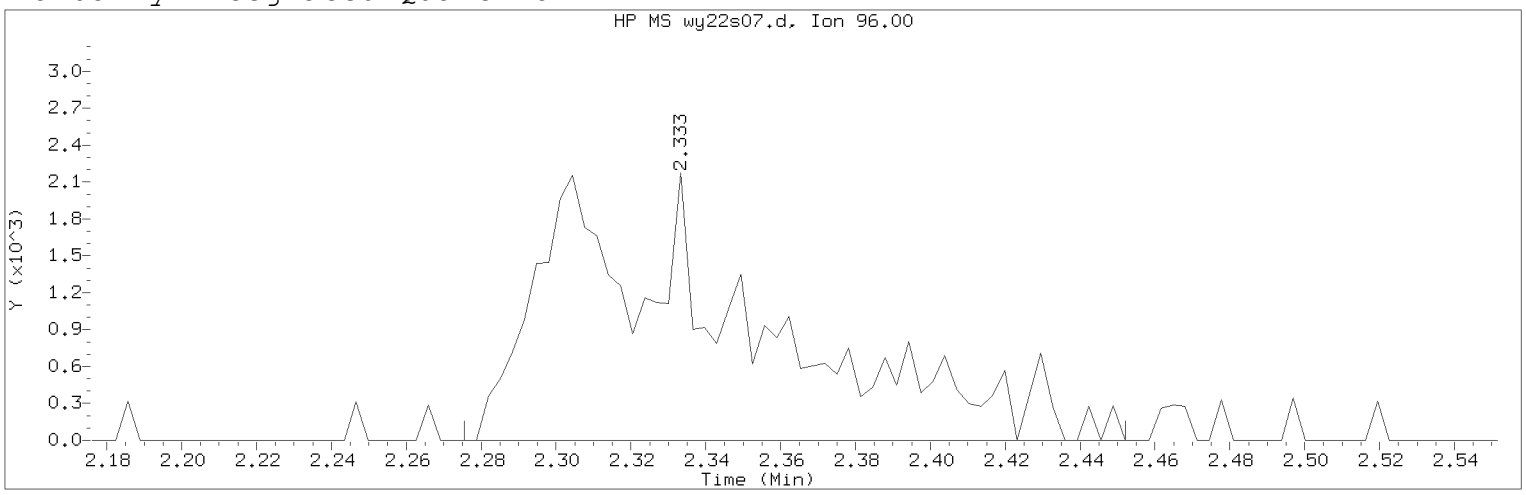
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 468
Retention Time (minutes): 2.333
Relative Retention Time :-0.00598
Quant Ion : 96.00
Area (flag) : 8008M
On-Column Amount (ng) : 1.8054

Digitally signed by Kevin A. Sposito on 05/23/2019 at 10:12.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22s07.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 16:41 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 23-May-2019 04:24 amd00492

Sample Name: 93J06 Lab Sample ID: 1058241

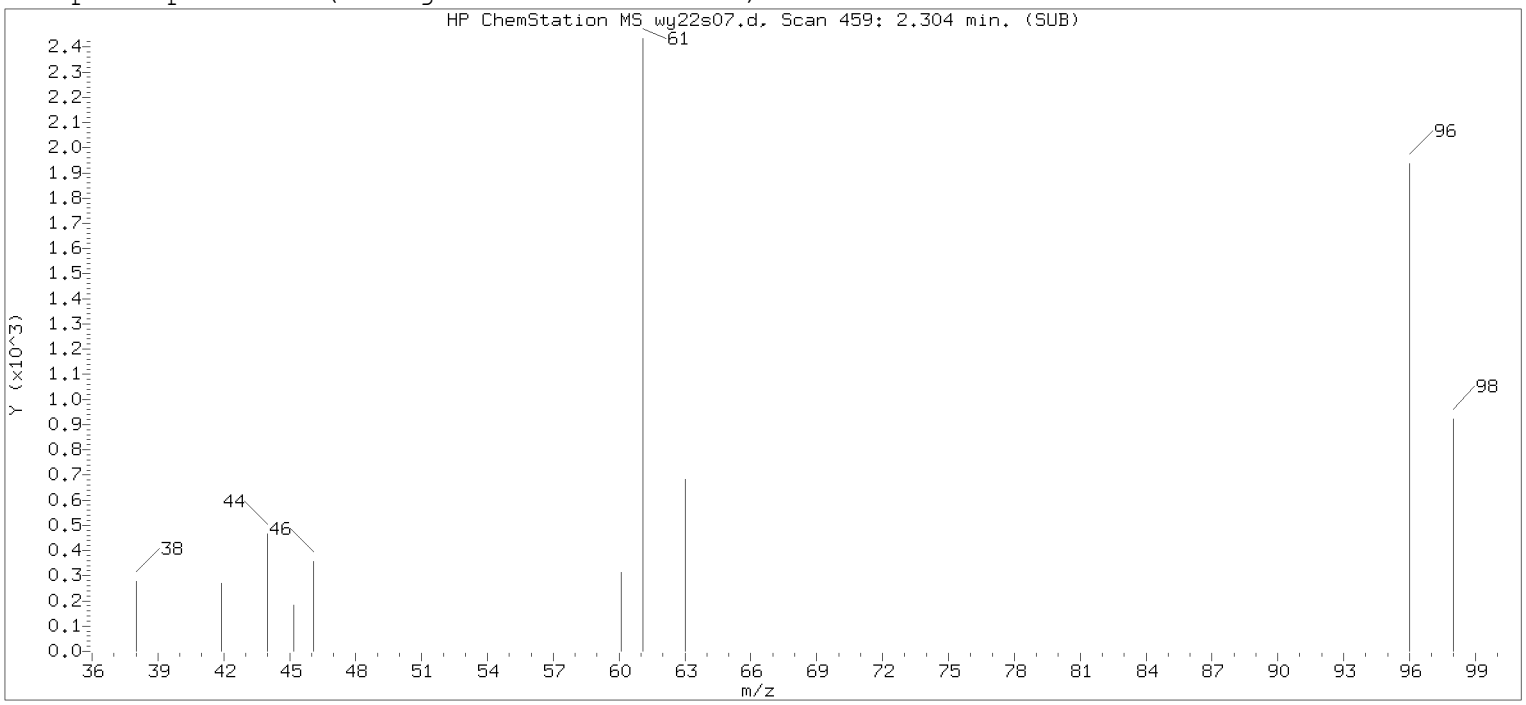
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 468
Retention Time (minutes): 2.333
Quant Ion : 96.00
Area (flag) : 8008M
On-Column Amount (ng) : 1.8054
Integration start scan : 449 Integration stop scan: 504
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

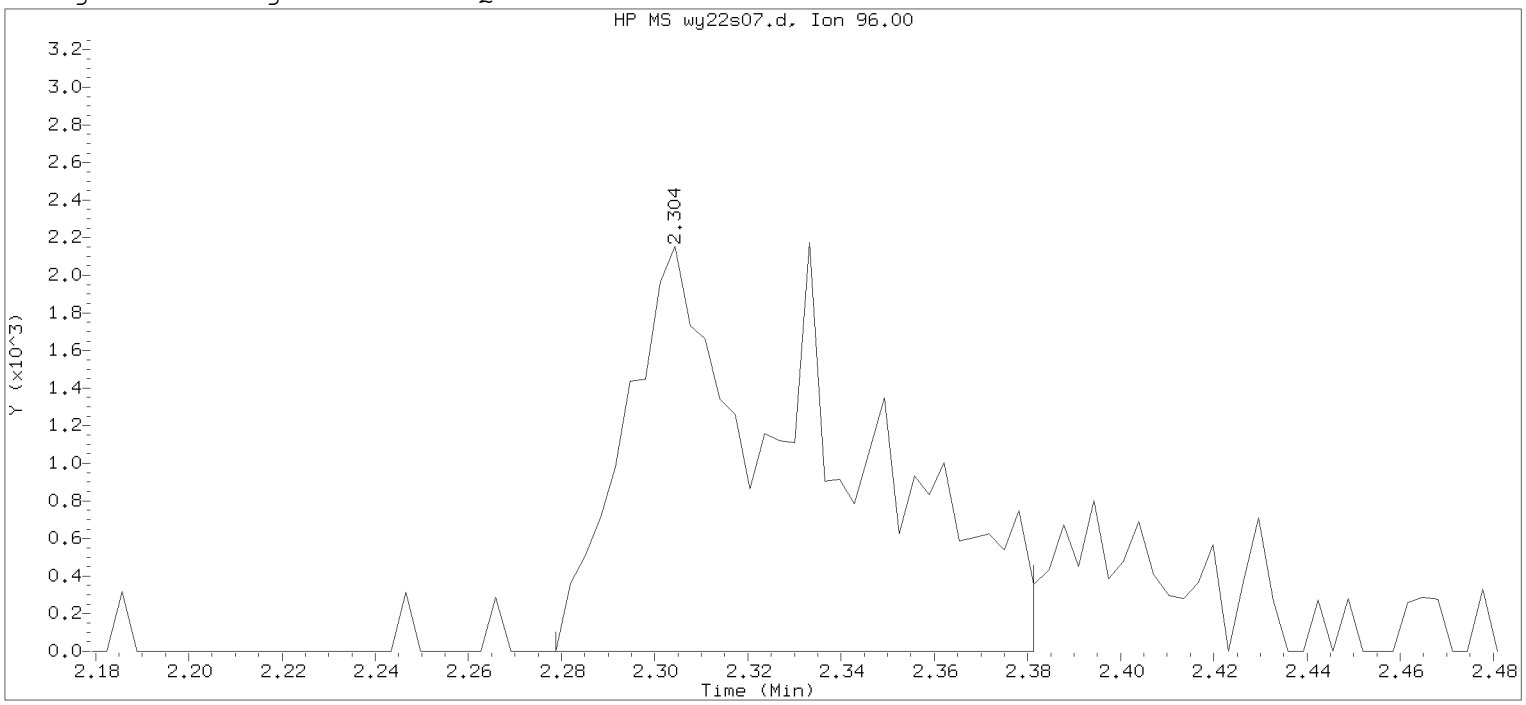
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/23/2019 at 10:12.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22s07.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 16:41 Analyst ID: CBR01947

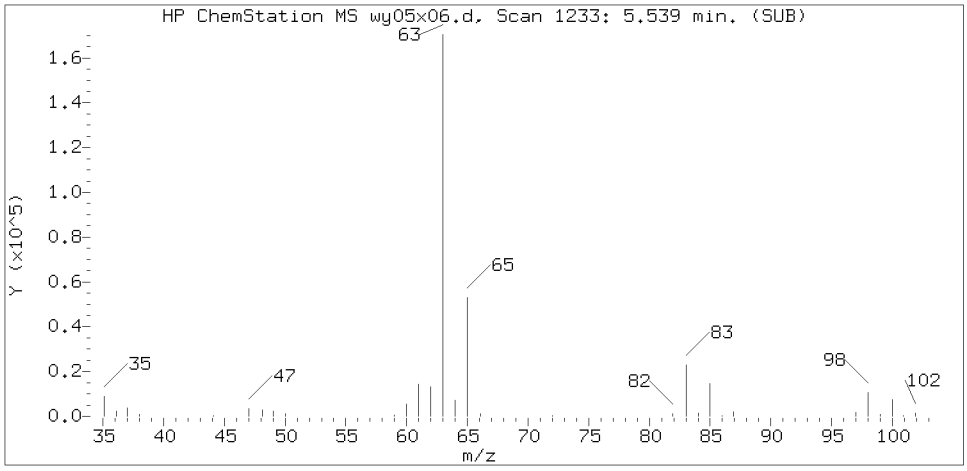
Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 16:56 Automation

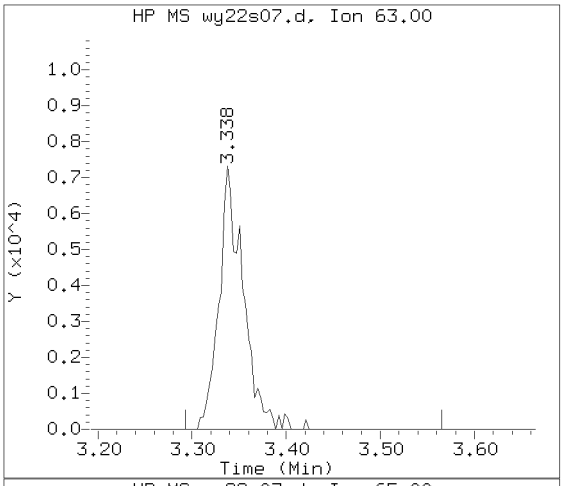
Sample Name: 93J06 Lab Sample ID: 1058241

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 459
Retention Time (minutes): 2.304
Quant Ion : 96.00
Area : 6485
On-column Amount (ng) : 1.4621
Integration start scan : 450 Integration stop scan: 482
Y at integration start : 0 Y at integration end: 0

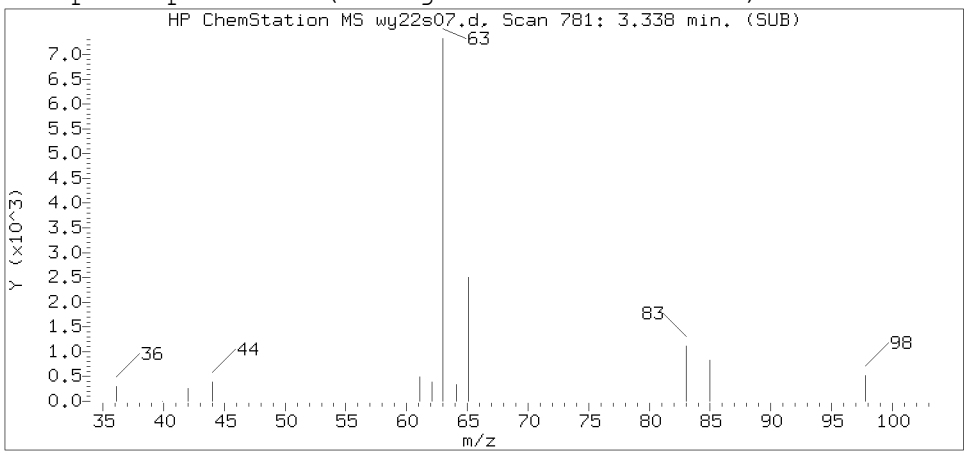
Digitally signed by Kevin A. Sposito on 05/23/2019 at 10:12.
Target 3.5 esignature user: kevin.sposito

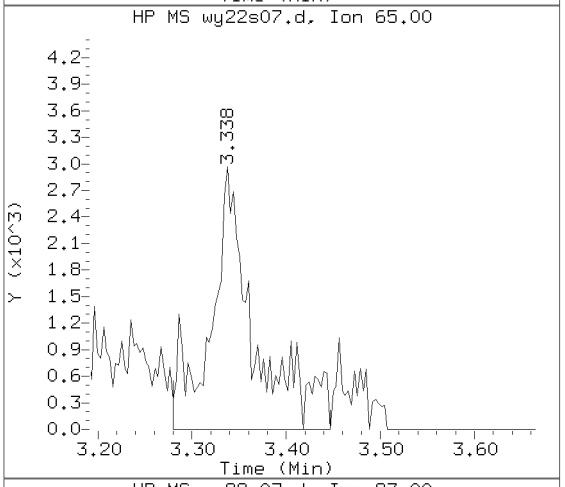
Reference Standard Spectrum for 1,1-Dichloroethane



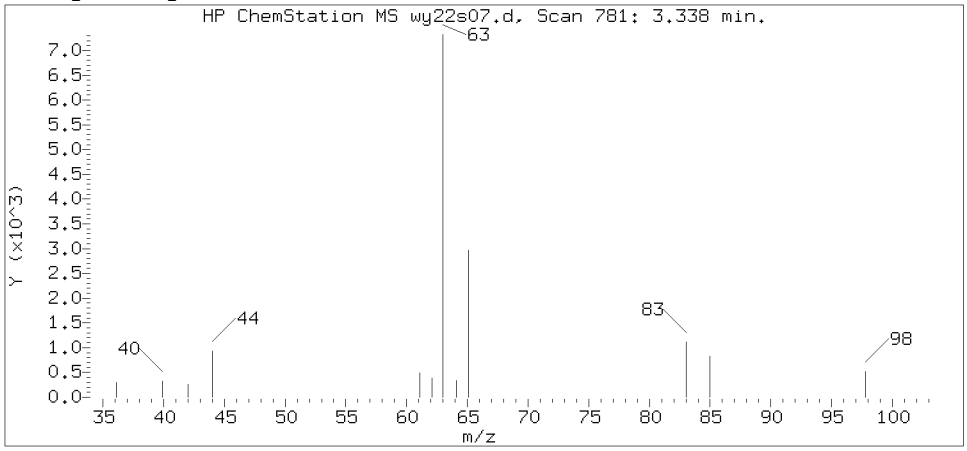


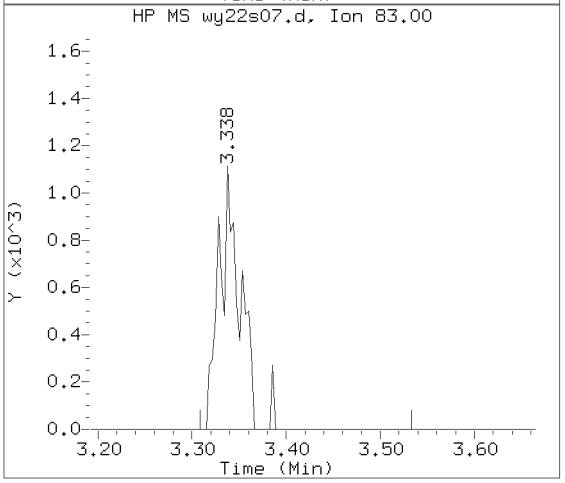
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP09137.i/19may22a.b/wy22s07.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 16:41 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 23-May-2019 04:24 amd00492

Sample Name: 93J06 Lab Sample ID: 1058241

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 781
Retention Time (minutes): 3.338
Relative Retention Time : 0.00025
Quant Ion : 63.00
Area (flag) : 13126
On-Column Amount (ng) : 1.5051

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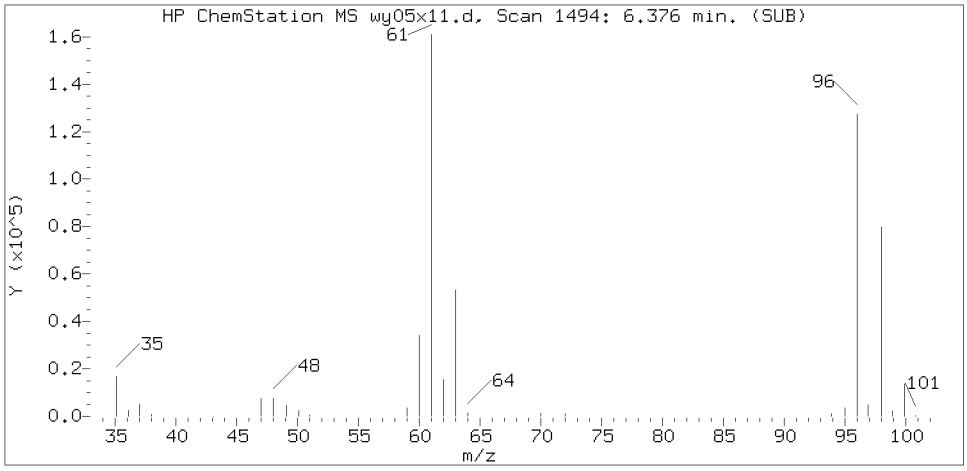
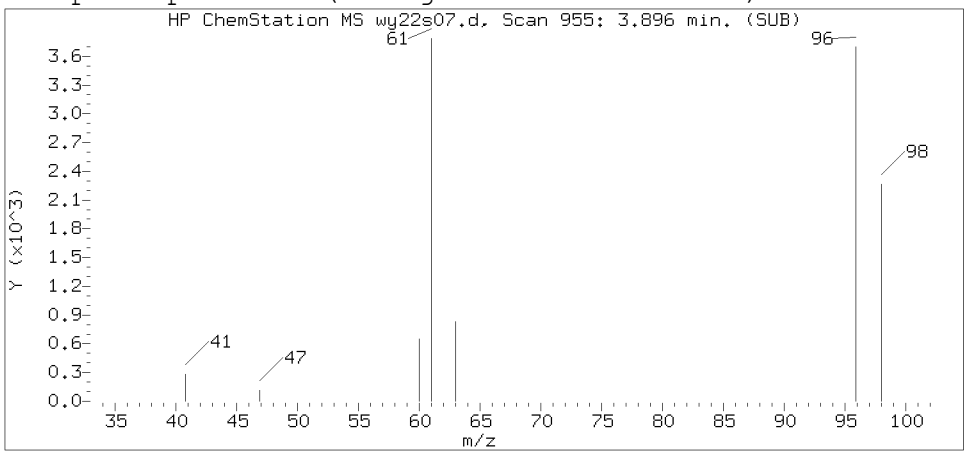
Target 3.5 esignature user ID: kas02648

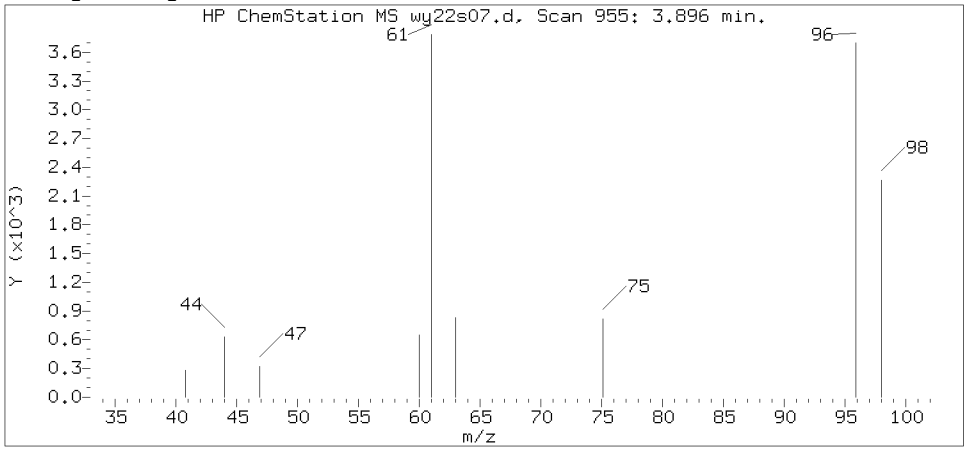
Reference Standard Spectrum for cis-1,2-Dichloroethene

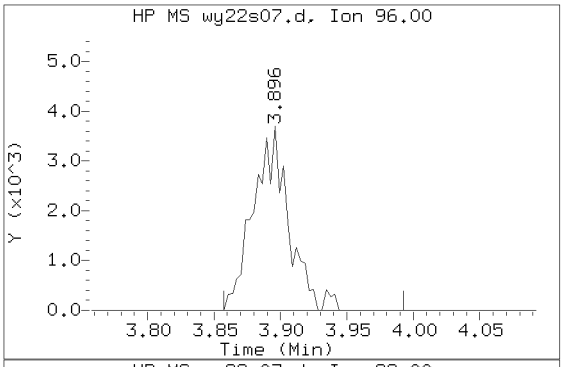


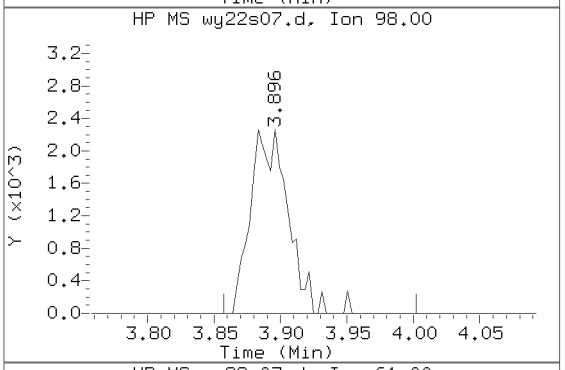
Sample Spectrum (Background Subtracted)

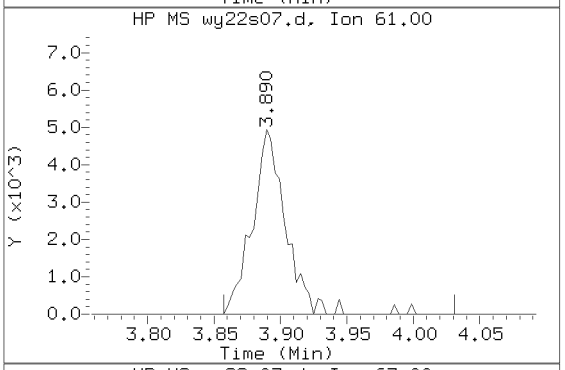


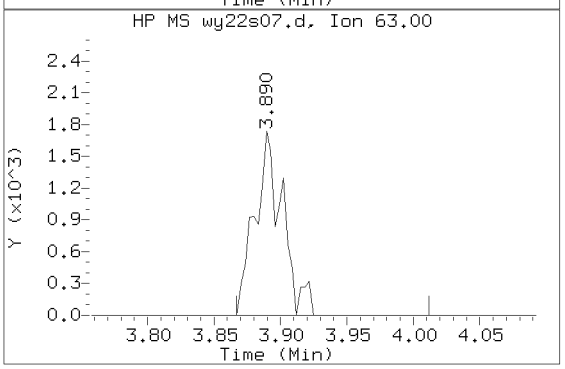
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/19may22a.b/wy22s07.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 16:41 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 23-May-2019 04:24 amd00492

Sample Name: 93J06 Lab Sample ID: 1058241

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 955
Retention Time (minutes): 3.896
Relative Retention Time :-0.00111
Quant Ion : 96.00
Area (flag) : 6828
On-Column Amount (ng) : 1.2635

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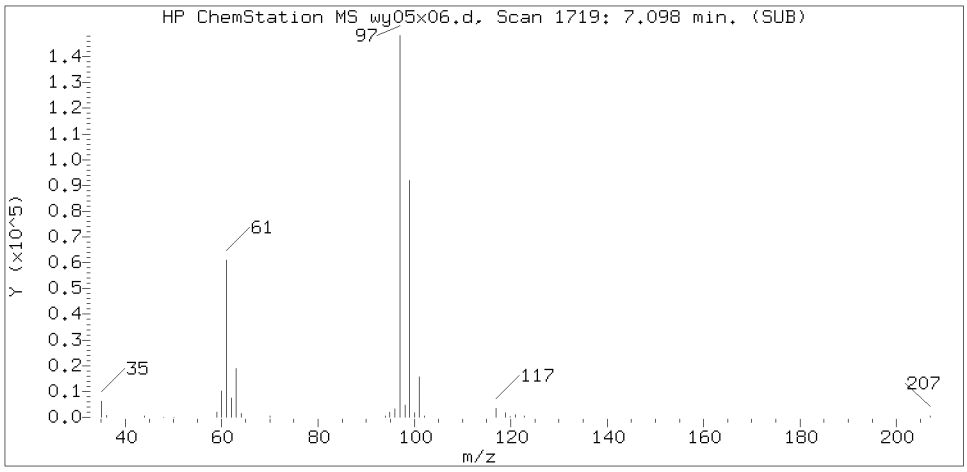
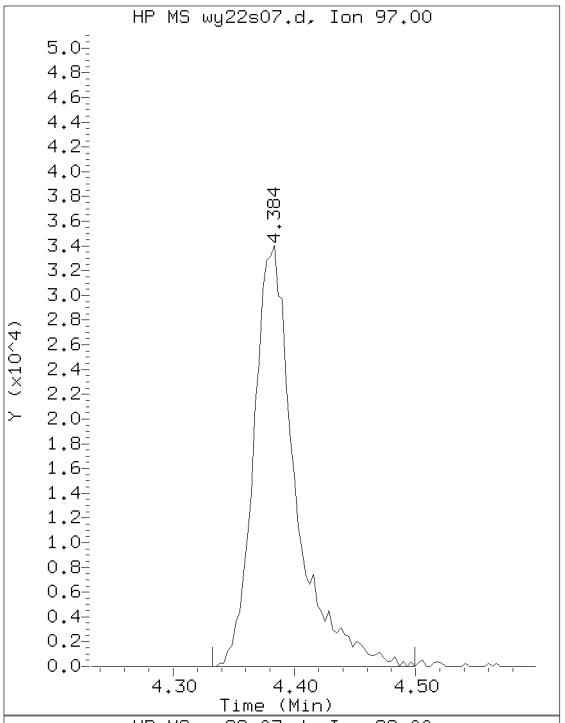
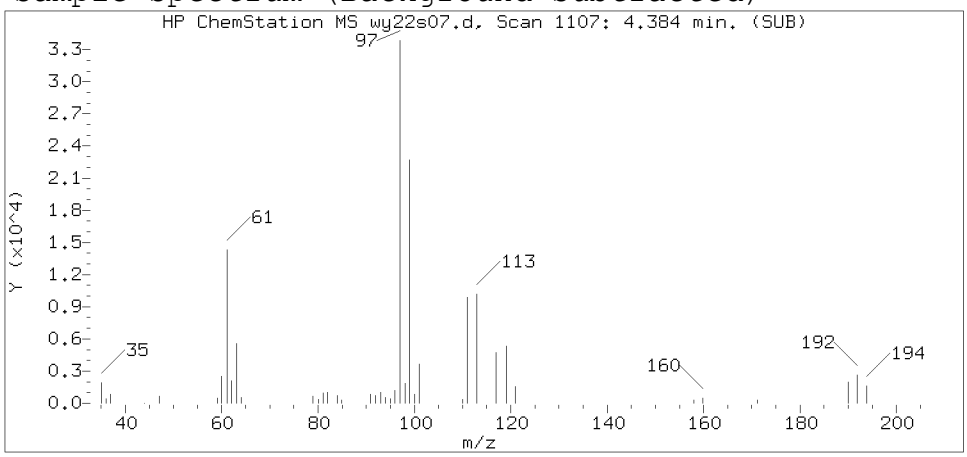
Target 3.5 esignature user ID: kas02648

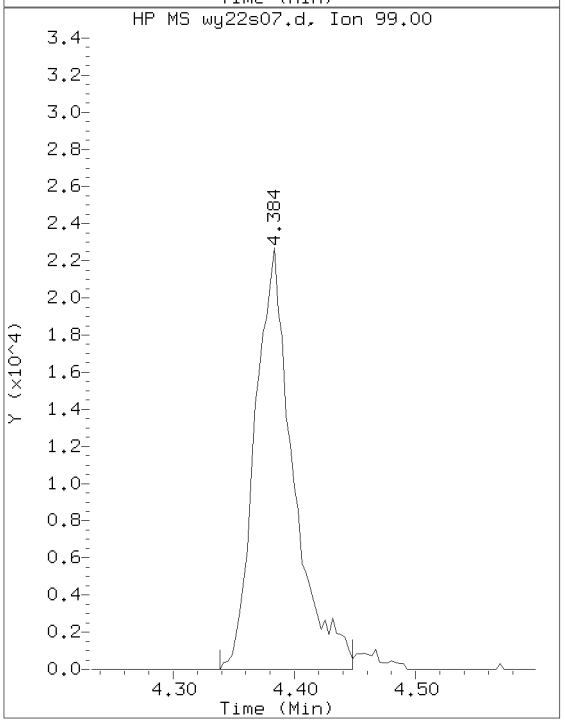
Reference Standard Spectrum for 1,1,1-Trichloroethane



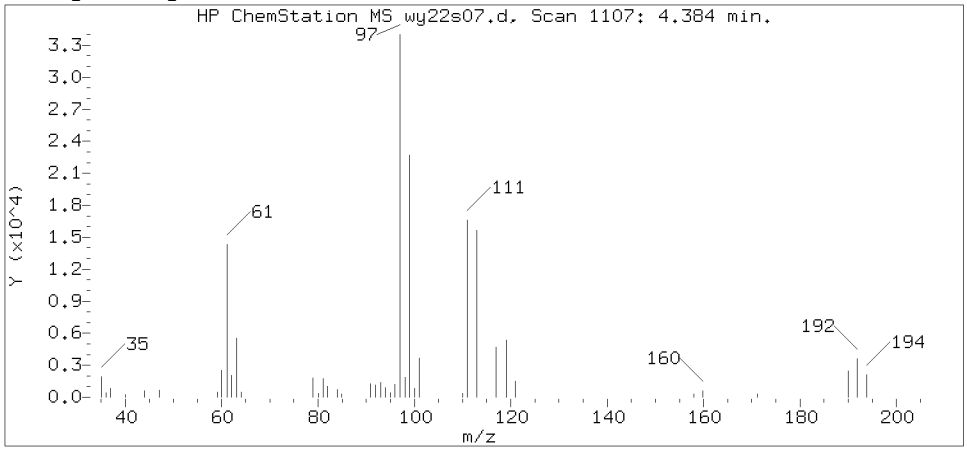


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09137.i/19may22a.b/wy22s07.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 16:41 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 23-May-2019 04:24 amd00492

Sample Name: 93J06 Lab Sample ID: 1058241

Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 1107
Retention Time (minutes): 4.384
Relative Retention Time :-0.00054
Quant Ion : 97.00
Area (flag) : 81572
On-Column Amount (ng) : 13.2488

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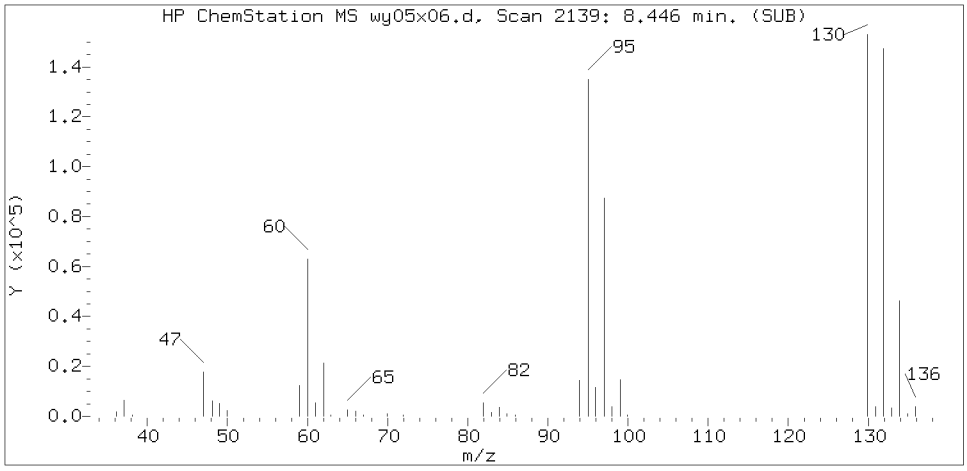
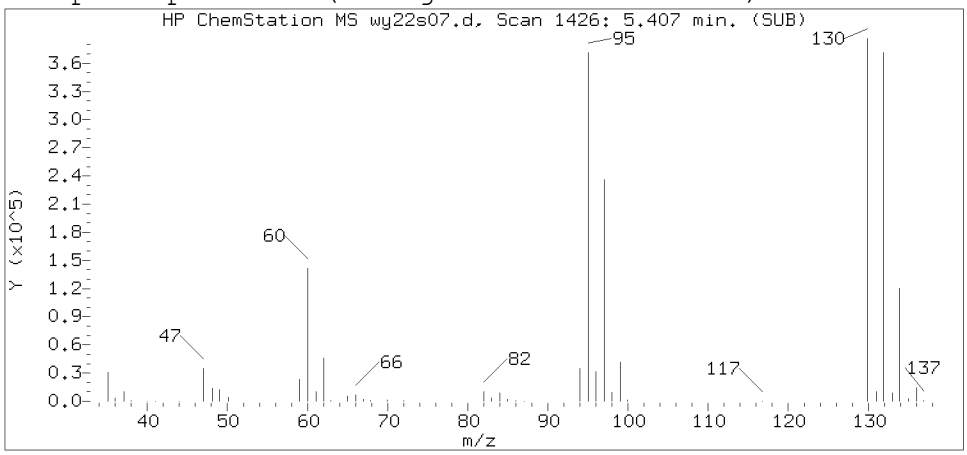
Target 3.5 esignature user ID: kas02648

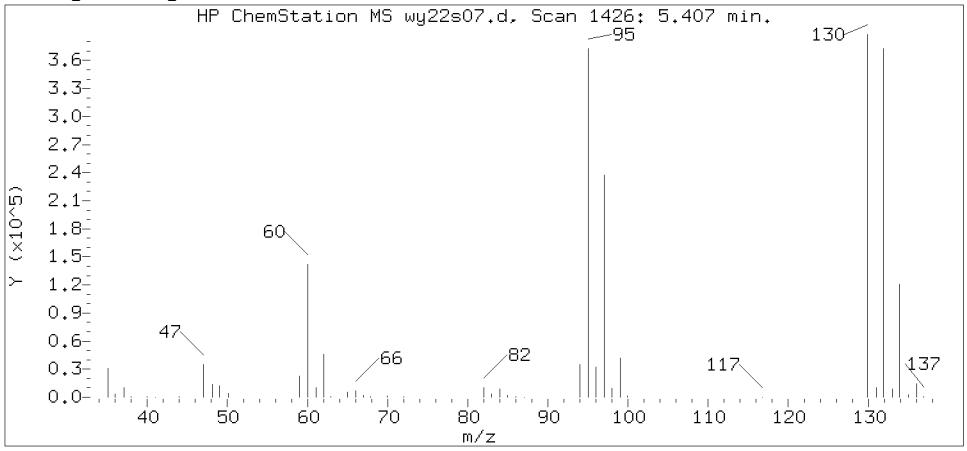
Reference Standard Spectrum for Trichloroethene

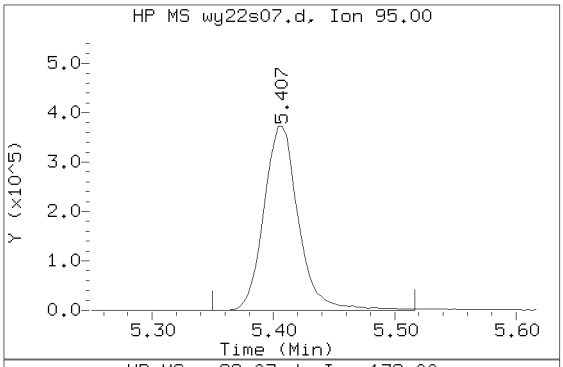


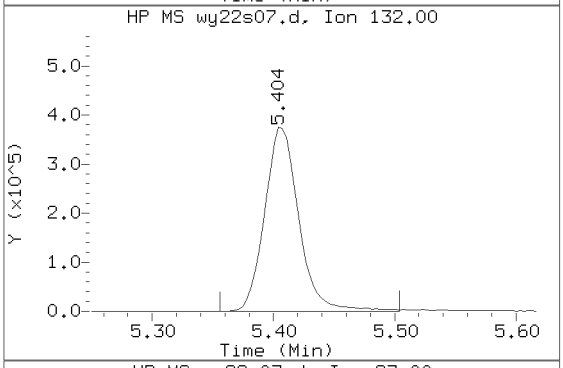
Sample Spectrum (Background Subtracted)

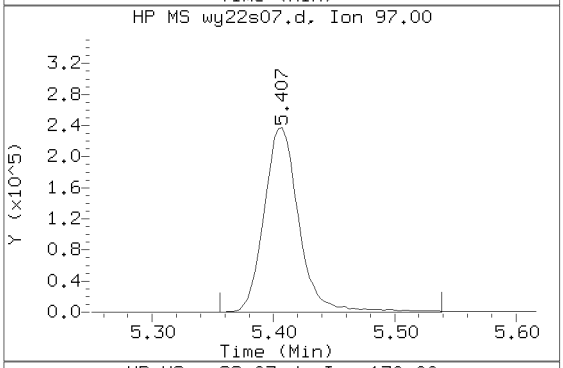


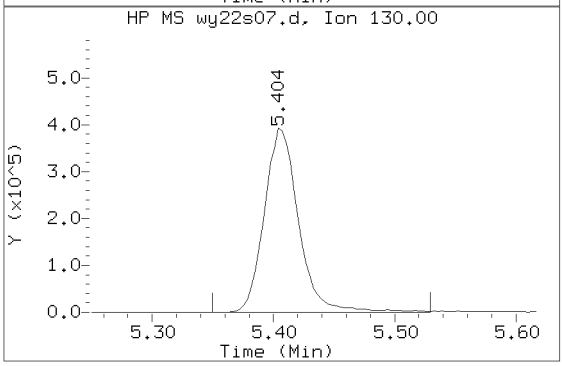
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/19may22a.b/wy22s07.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 16:41 Analyst ID: CBR01947

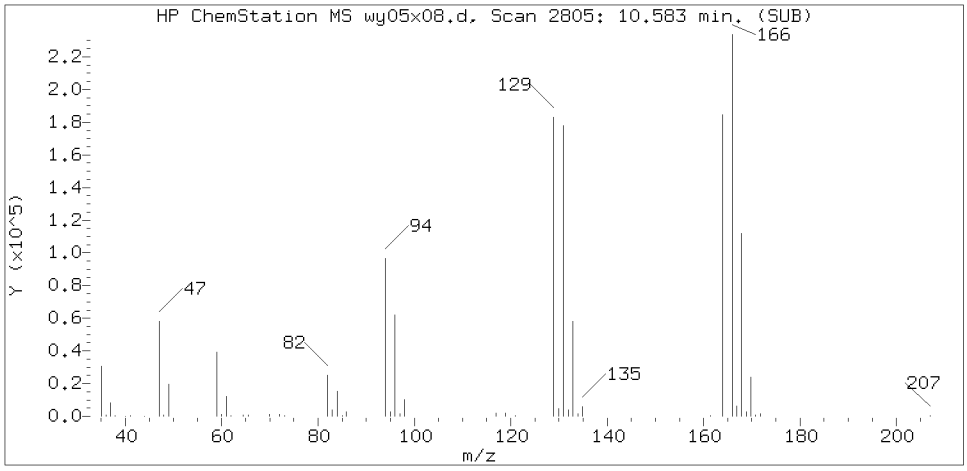
Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 23-May-2019 04:24 amd00492

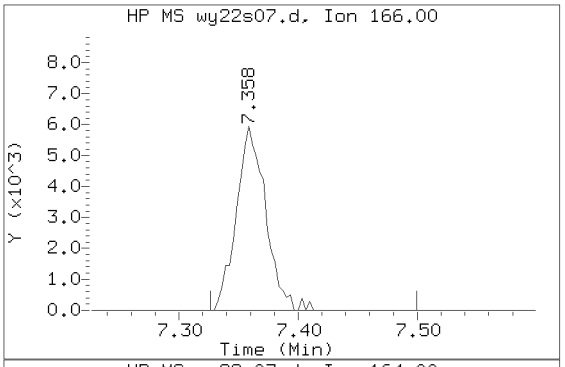
Sample Name: 93J06 Lab Sample ID: 1058241

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 1426
Retention Time (minutes): 5.407
Relative Retention Time :-0.00069
Quant Ion : 95.00
Area (flag) : 735609
On-Column Amount (ng) : 144.0470

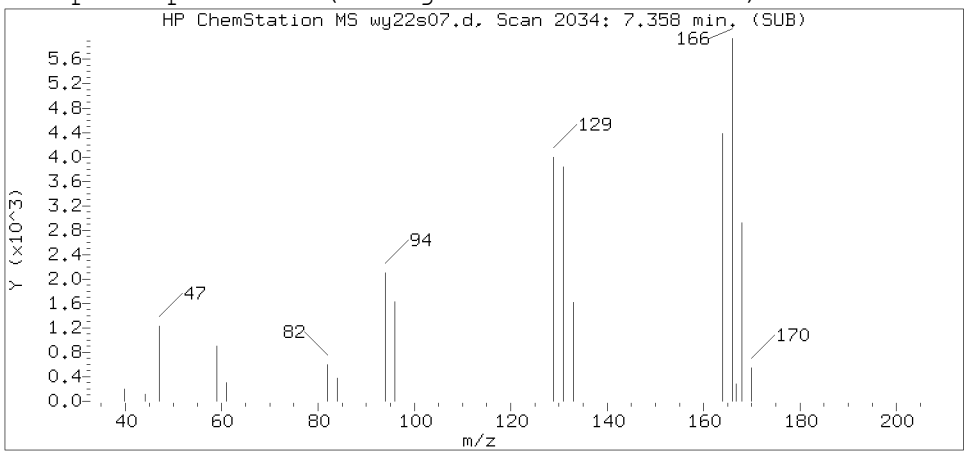
Digitally signed by Kevin A. Sposito on 05/23/2019 at 10:12.
Target 3.5 esignature user ID: kas02648

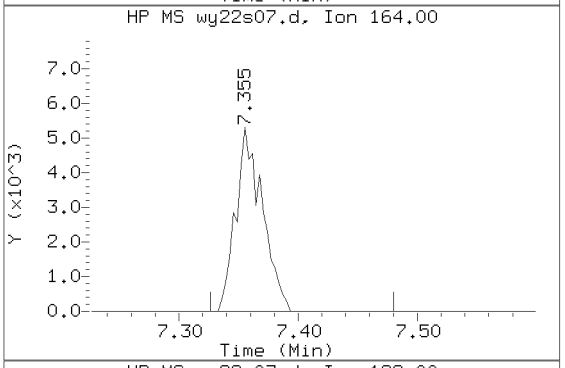
Reference Standard Spectrum for Tetrachloroethene

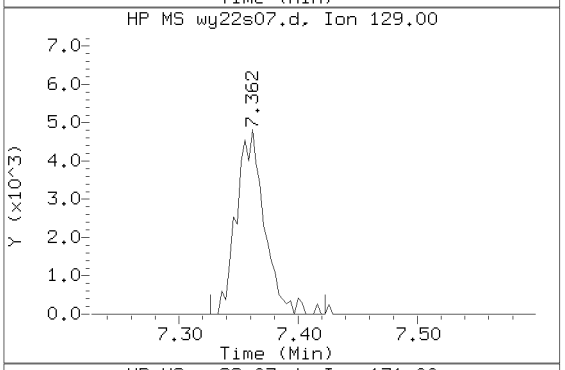




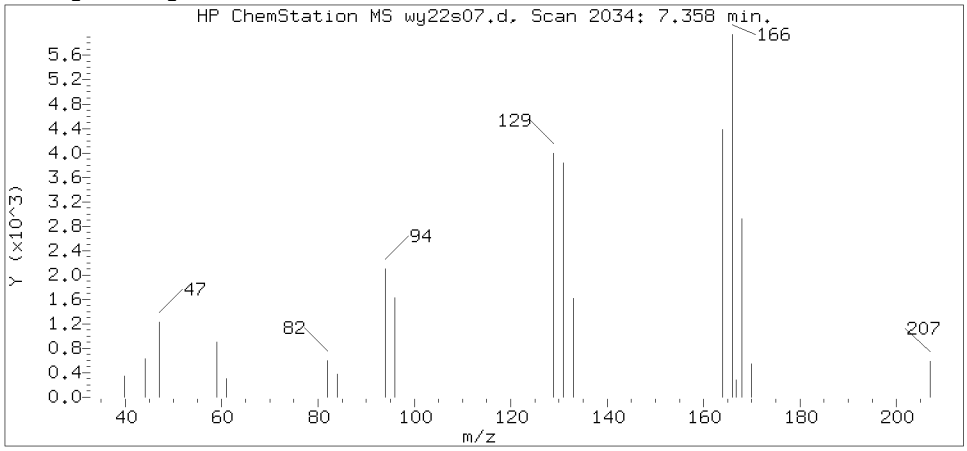
Sample Spectrum (Background Subtracted)

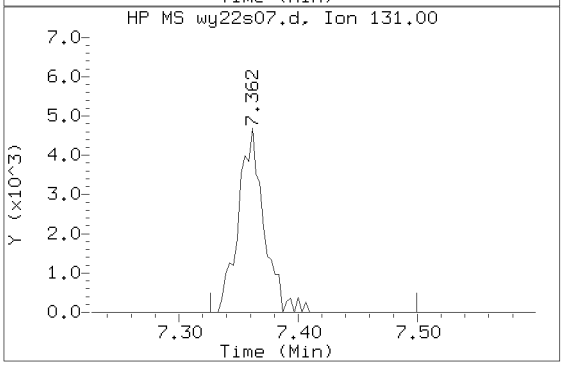






Sample Spectrum (Unaltered)





Data File: /chem2/HP09137.i/19may22a.b/wy22s07.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 16:41 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 23-May-2019 04:24 amd00492

Sample Name: 93J06 Lab Sample ID: 1058241

Compound Number : 94
Compound Name : Tetrachloroethene
Scan Number : 2034
Retention Time (minutes): 7.358
Relative Retention Time : 0.00004
Quant Ion : 166.00
Area (flag) : 10276
On-Column Amount (ng) : 2.0095

Digitally signed by Kevin A. Sposito on 05/23/2019 at 10:12.
Target 3.5 esignature user ID: kas02648

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

93J07

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058242

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may22a.b/wy22s08.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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93J07 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1058242

Data file: /chem2/HP09137.i/19may22a.b/wy22s08.d Injection date and time: **22-MAY-2019 17:05**
Data file Sample Info. Line: 93J07;1058242;1;0;;JCV93;;;wy22b02; Instrument ID: **HP09137.i** Batch: **W191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 17:20 Automation

Blank Data file reference: **/chem2/HP09137.i/19may22a.b/wy22b02.d**

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may22a.b/wy22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.741	(-0.003)	595	65	191235	(-26)	250.00	
66) Fluorobenzene	5.029	(0.004)	1308	96	1006705	(-12)	50.00	
101) Chlorobenzene-d5	8.161	(0.004)	2284	117	773446	(-12)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041	(0.001)	2870	152	387722	(-21)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.358	(-0.001)	113	220421	47.261	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692	(-0.001)	102	62765	50.601	101%		80 - 120
84) Toluene-d8	(3)	6.697	(0.000)	98	973294	50.219	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.000)	95	342780	44.209	88%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Kevin A. Sposito on 05/23/2019 at 10:13. Target 3.5 esignature user ID: kas02648

Data file: /chem2/HP09137.i/19may22a.b/wy22s08.d Injection date and time: **22-MAY-2019 17:05**
Data file Sample Info. Line: 93J07;1058242;1;0;;JCV93;;;wy22b02; Instrument ID: **HP09137.i** Batch: **W191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 17:20 Automation

Blank Data file reference: **/chem2/HP09137.i/19may22a.b/wy22b02.d**

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may22a.b/wy22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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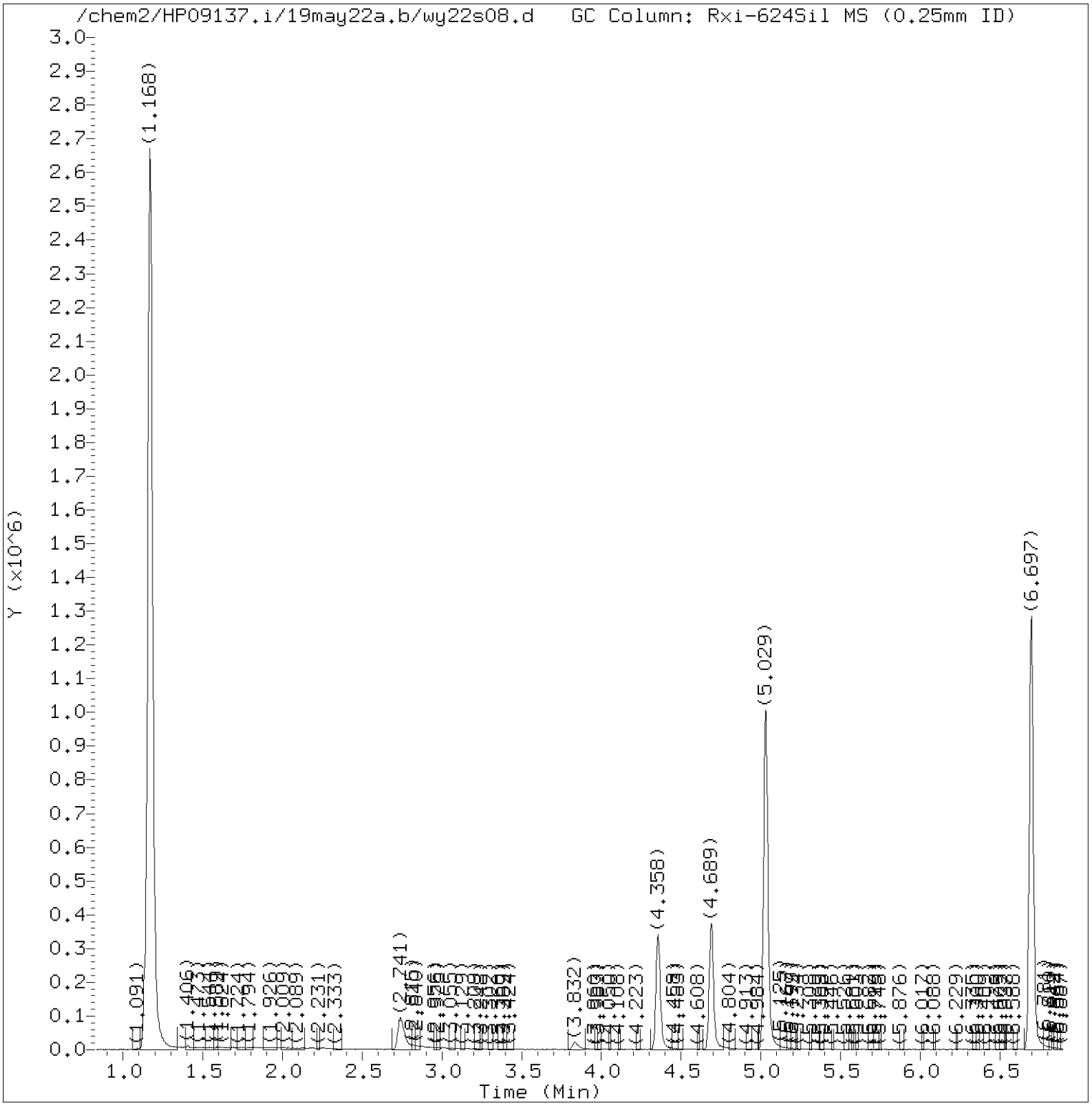
Total number of targets = 24

Digitally signed by Kevin A. Sposito on 05/23/2019 at 10:13. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

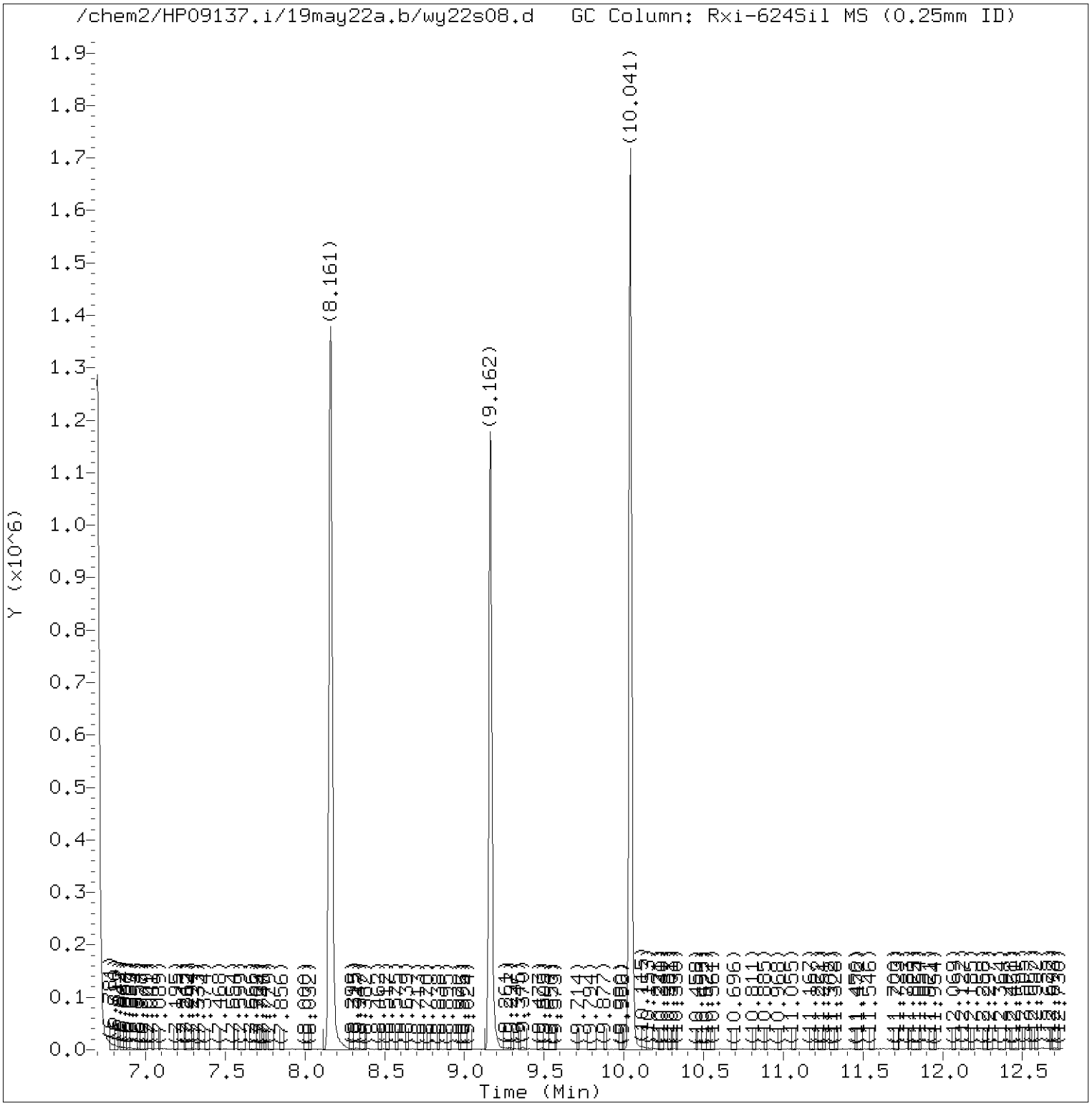
Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22s08.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 17:05 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 17:20 Automation

Sample Name: 93J07 Lab Sample ID: 1058242

Digitally signed by Kevin A. Sposito
on 05/23/2019 at 10:13.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22s08.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 17:05 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 17:20 Automation

Sample Name: 93J07 Lab Sample ID: 1058242

Digitally signed by Kevin A. Sposito
on 05/23/2019 at 10:13.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22s08.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 17:05 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 17:20 Automation

Sample Name: 93J07 Lab Sample ID: 1058242

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.741	65	191235	250.000
52)$Dibromofluoromethane	(2)	4.358	113	220421	47.261
57)$1,2-Dichloroethane-d4	(2)	4.692	102	62765	50.601
66)*Fluorobenzene	(2)	5.029	96	1006705	50.000
84)$Toluene-d8	(3)	6.697	98	973294	50.219
101)*Chlorobenzene-d5	(3)	8.161	117	773446	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	342780	44.209
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	387722	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/23/2019 at 10:13.
Target 3.5 esignature user ID: kas02648

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

93J08

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058243

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may22a.b/wy22s09.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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93J08 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1058243

Data file: /chem2/HP09137.i/19may22a.b/wy22s09.d Injection date and time: **22-MAY-2019 17:28**
Data file Sample Info. Line: 93J08;1058243;1;0;;JCV93;;;wy22b02; Instrument ID: **HP09137.i** Batch: **W191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 17:44 Automation

Blank Data file reference: **/chem2/HP09137.i/19may22a.b/wy22b02.d**

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may22a.b/wy22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.741	(-0.003)	595	65	181568	(-30)	250.00	
66) Fluorobenzene	5.029	(0.003)	1308	96	998831	(-13)	50.00	
101) Chlorobenzene-d5	8.161	(0.003)	2284	117	768284	(-12)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041	(0.000)	2870	152	387126	(-21)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.355	(0.000)	113	220231	47.593	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692	(-0.001)	102	62697	50.945	102%		80 - 120
84) Toluene-d8	(3)	6.698	(0.000)	98	984897	51.159	102%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.000)	95	336469	43.687	87%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Kevin A. Sposito on 05/23/2019 at 10:13. Target 3.5 esignature user ID: kas02648

Data file: /chem2/HP09137.i/19may22a.b/wy22s09.d Injection date and time: **22-MAY-2019 17:28**
Data file Sample Info. Line: 93J08;1058243;1;0;;JCV93;;;wy22b02; Instrument ID: **HP09137.i** Batch: **W191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 17:44 Automation

Blank Data file reference: **/chem2/HP09137.i/19may22a.b/wy22b02.d**

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may22a.b/wy22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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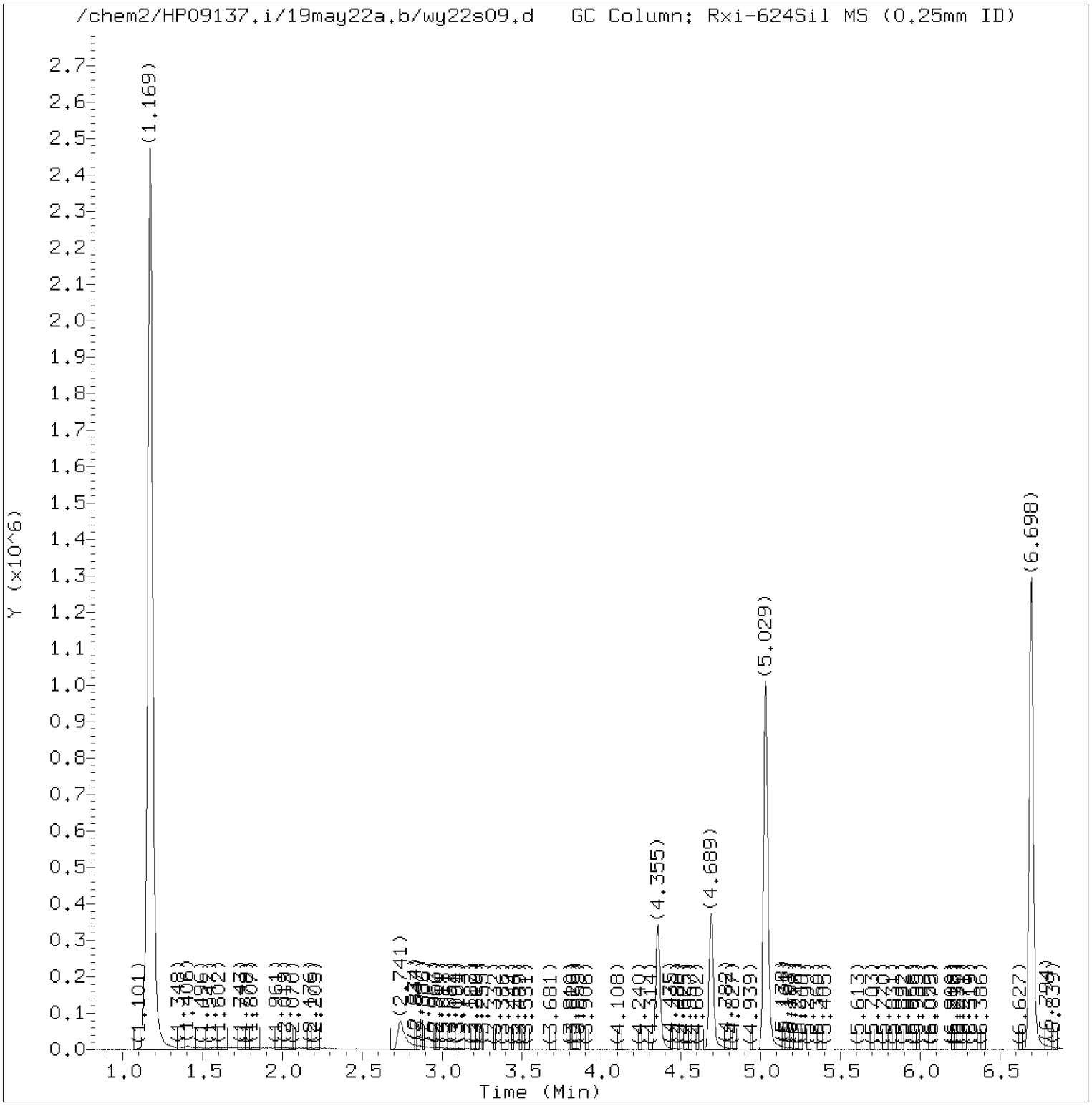
Total number of targets = 24

Digitally signed by Kevin A. Sposito on 05/23/2019 at 10:13. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

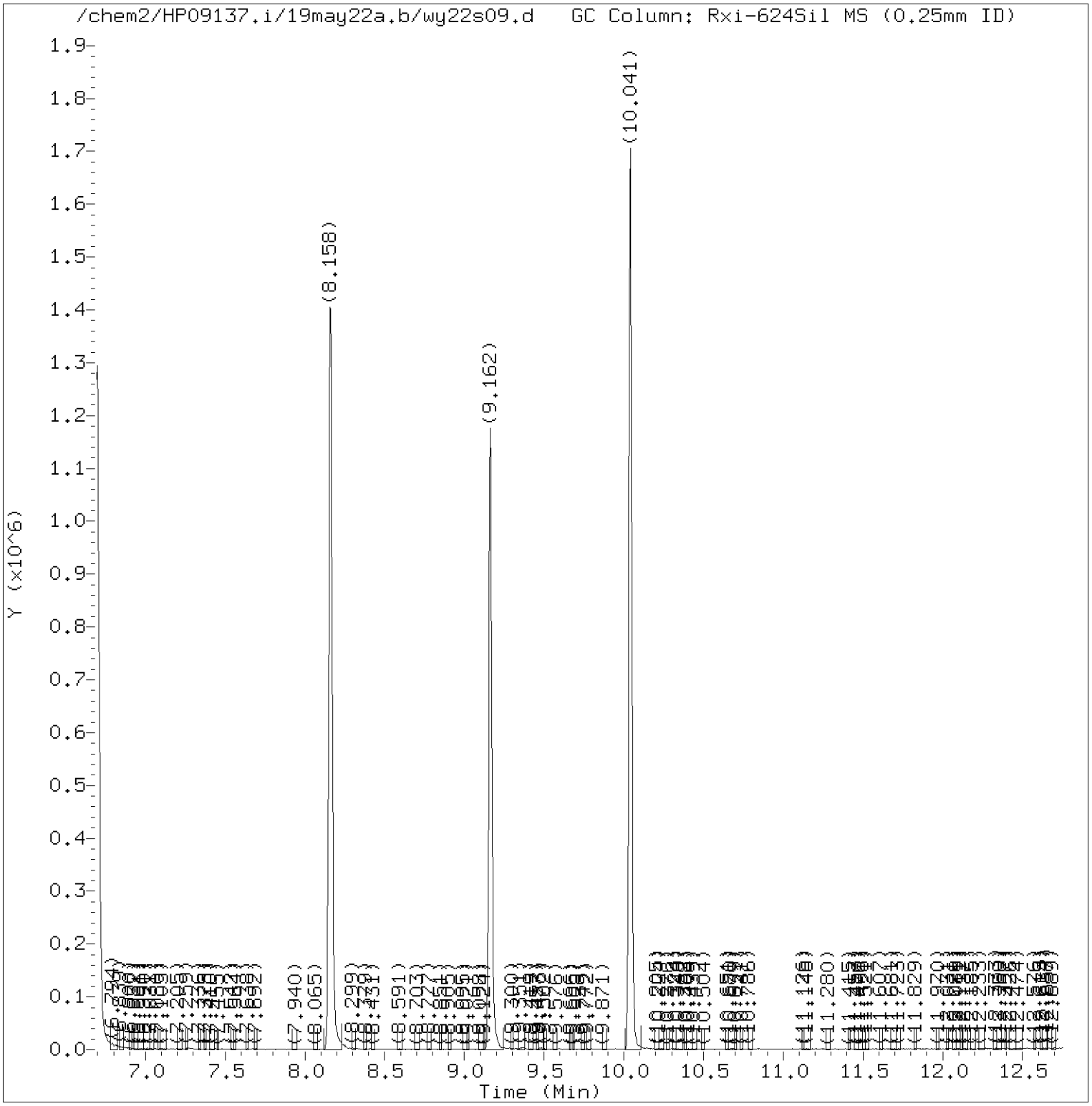
Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22s09.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 17:28 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 17:44 Automation

Sample Name: 93J08 Lab Sample ID: 1058243

Digitally signed by Kevin A. Sposito
on 05/23/2019 at 10:13.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22s09.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 17:28 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 17:44 Automation

Sample Name: 93J08 Lab Sample ID: 1058243

Digitally signed by Kevin A. Sposito
on 05/23/2019 at 10:13.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22s09.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 17:28 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 17:44 Automation

Sample Name: 93J08 Lab Sample ID: 1058243

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.741	65	181568	250.000
52)$Dibromofluoromethane	(2)	4.355	113	220231	47.593
57)$1,2-Dichloroethane-d4	(2)	4.692	102	62697	50.945
66)*Fluorobenzene	(2)	5.029	96	998831	50.000
84)$Toluene-d8	(3)	6.698	98	984897	51.159
101)*Chlorobenzene-d5	(3)	8.161	117	768284	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	336469	43.687
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	387126	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/23/2019 at 10:13.
Target 3.5 esignature user ID: kas02648

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

93J09

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058244

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19may20b.b/ly20s34.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Data file: /chem/HP09915.i/19may20b.b/ly20s34.d Injection date and time: **20-MAY-2019 22:10**
Data file Sample Info. Line: 93J09;1058244;1;0;;JCV93;;;ly20b31; Instrument ID: **HP09915.i** Batch: **L191402AA**
Date, time and analyst ID of latest file update: 20-May-2019 23:40 dvv10203

Blank Data file reference: **/chem/HP09915.i/19may20b.b/ly20b31.d**

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-MAY-2019 21:23
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19may20b.b/ly20c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:193

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.587	(-0.019)	655	65	199635	(-29)	250.00	
66) Fluorobenzene	7.047	(-0.006)	1731	96	1083607	(-22)	50.00	
100) Chlorobenzene-d5	10.703	(0.000)	2868	117	815632	(-9)	50.00	
131) 1,4-Dichlorobenzene-d4	12.635	(0.000)	3469	152	439141	(-12)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.137	(0.000)	113	266020	47.752	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.607	(-0.001)	102	65163	49.907	100%		80 - 120
83) Toluene-d8	(3)	9.134	(0.000)	98	1067876	50.875	102%		80 - 120
114) 4-Bromofluorobenzene	(3)	11.745	(0.000)	95	386062	47.528	95%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 05/20/2019 at 23:43. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19may20b.b/ly20s34.d Injection date and time: **20-MAY-2019 22:10**
Data file Sample Info. Line: 93J09;1058244;1;0;;JCV93;;;ly20b31; Instrument ID: **HP09915.i** Batch: **L191402AA**
Date, time and analyst ID of latest file update: 20-May-2019 23:40 dvv10203

Blank Data file reference: **/chem/HP09915.i/19may20b.b/ly20b31.d**

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-MAY-2019 21:23
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19may20b.b/ly20c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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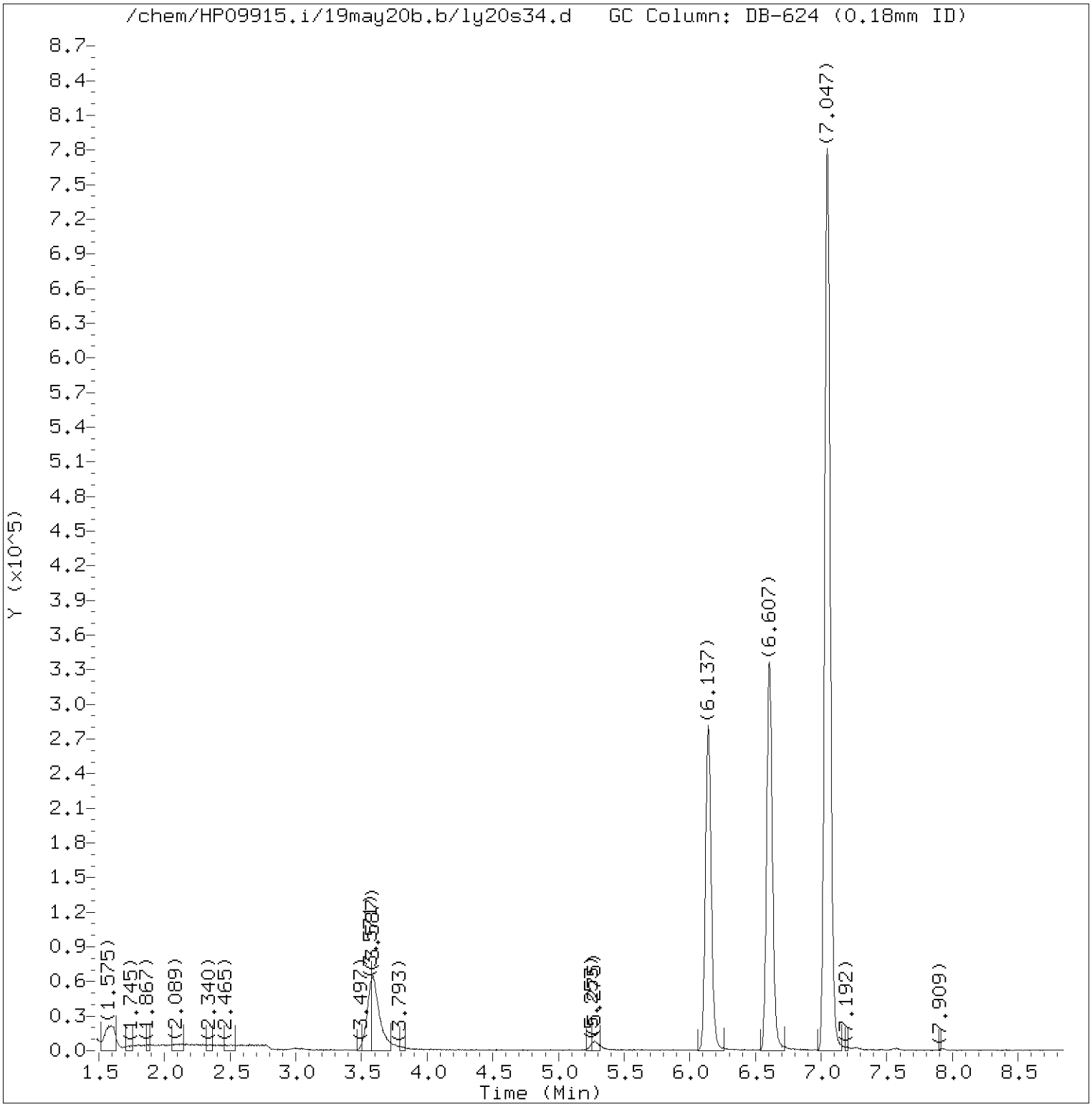
Total number of targets = 24

Digitally signed by Don V. Viray on 05/20/2019 at 23:43. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/21/2019 at 11:36. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

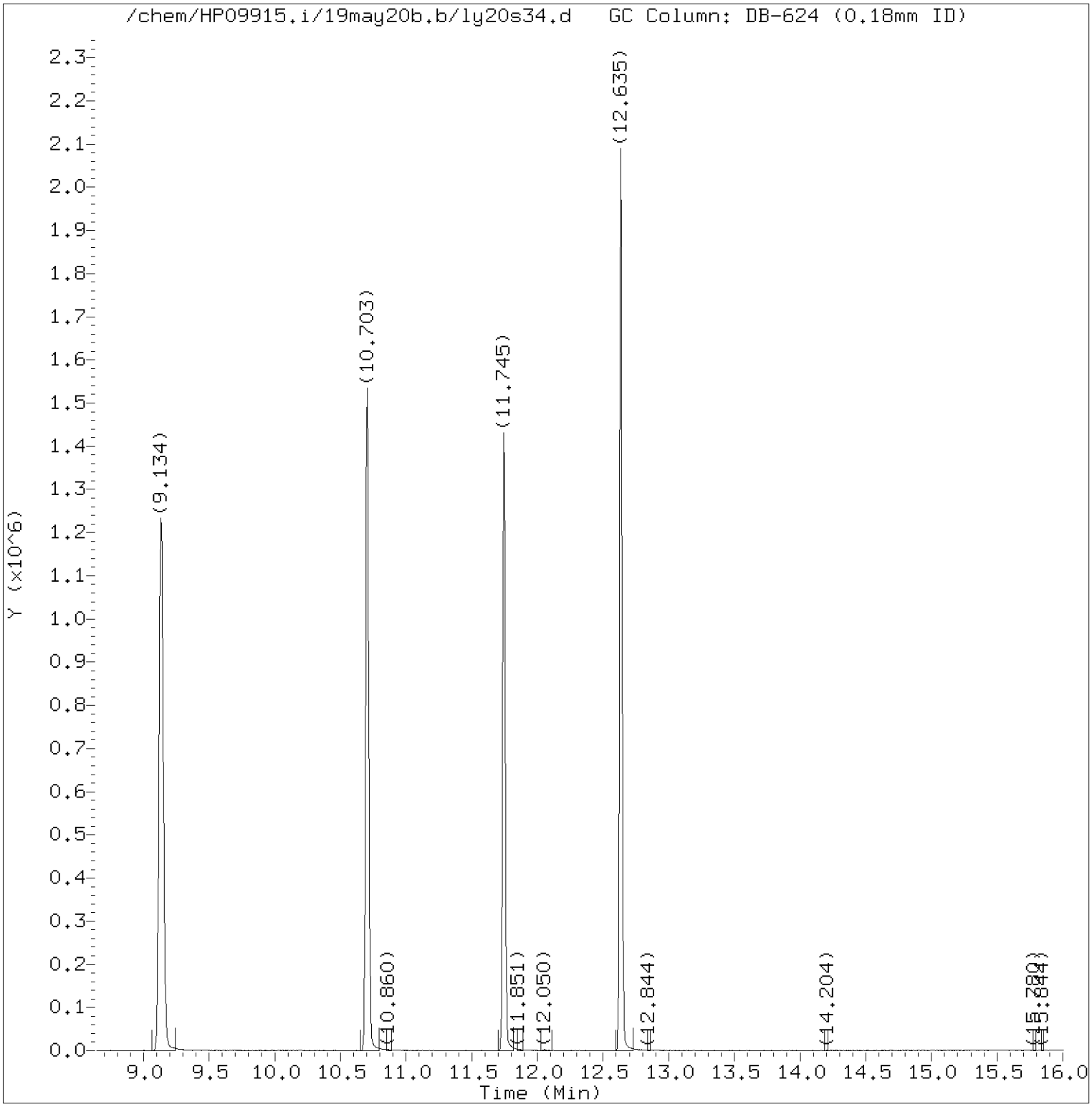
Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20s34.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 22:10 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-MAY-2019 21:23
Date, time and analyst ID of latest file update: 20-May-2019 23:40 dvv10203

Sample Name: 93J09 Lab Sample ID: 1058244

Digitally signed by Don V. Viray
on 05/20/2019 at 23:43.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20s34.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 22:10 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-MAY-2019 21:23
Date, time and analyst ID of latest file update: 20-May-2019 23:40 dvv10203

Sample Name: 93J09 Lab Sample ID: 1058244

Digitally signed by Don V. Viray
on 05/20/2019 at 23:43.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20s34.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 22:10 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-MAY-2019 21:23
Date, time and analyst ID of latest file update: 20-May-2019 23:40 dvv10203

Sample Name: 93J09 Lab Sample ID: 1058244

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.587	65	199635	250.000
52)$Dibromofluoromethane	(2)	6.137	113	266020	47.752
57)$1,2-Dichloroethane-d4	(2)	6.607	102	65163	49.907
66)*Fluorobenzene	(2)	7.047	96	1083607	50.000
83)$Toluene-d8	(3)	9.134	98	1067876	50.875
100)*Chlorobenzene-d5	(3)	10.703	117	815632	50.000
114)$4-Bromofluorobenzene	(3)	11.745	95	386062	47.528
131)*1,4-Dichlorobenzene-d4	(4)	12.635	152	439141	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/20/2019 at 23:43.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

93J10

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058245

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may23a.b/wy23s20.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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93J10 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1058245

Data file: /chem2/HP09137.i/19may23a.b/wy23s20.d Injection date and time: **23-MAY-2019 15:40**
Data file Sample Info. Line: 93J10;1058245;1;0;;JCV93;;;wy23b01; Instrument ID: **HP09137.i** Batch: **W191431AA**
Date, time and analyst ID of latest file update: 23-May-2019 20:22 dvv10203

Blank Data file reference: **/chem2/HP09137.i/19may23a.b/wy23b01.d**

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 12:42
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may23a.b/wy23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.741	(-0.006)	595	65	181227	(-10)	250.00	
66) Fluorobenzene	5.032	(-0.003)	1309	96	876421	(-13)	50.00	
101) Chlorobenzene-d5	8.161	(0.000)	2284	117	680839	(-12)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041	(0.000)	2870	152	348555	(-20)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.358	(0.000)	113	202789	49.944	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.692	(0.001)	102	55228	51.144	102%		80 - 120
84) Toluene-d8	(3)	6.698	(0.000)	98	859364	50.372	101%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.000)	95	297715	43.620	87%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 05/23/2019 at 20:27. Target 3.5 esignature user ID: dvv10203

Data file: /chem2/HP09137.i/19may23a.b/wy23s20.d Injection date and time: **23-MAY-2019 15:40**
Data file Sample Info. Line: 93J10;1058245;1;0;;JCV93;;;wy23b01; Instrument ID: **HP09137.i** Batch: **W191431AA**
Date, time and analyst ID of latest file update: 23-May-2019 20:22 dvv10203

Blank Data file reference: **/chem2/HP09137.i/19may23a.b/wy23b01.d**

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 12:42
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may23a.b/wy23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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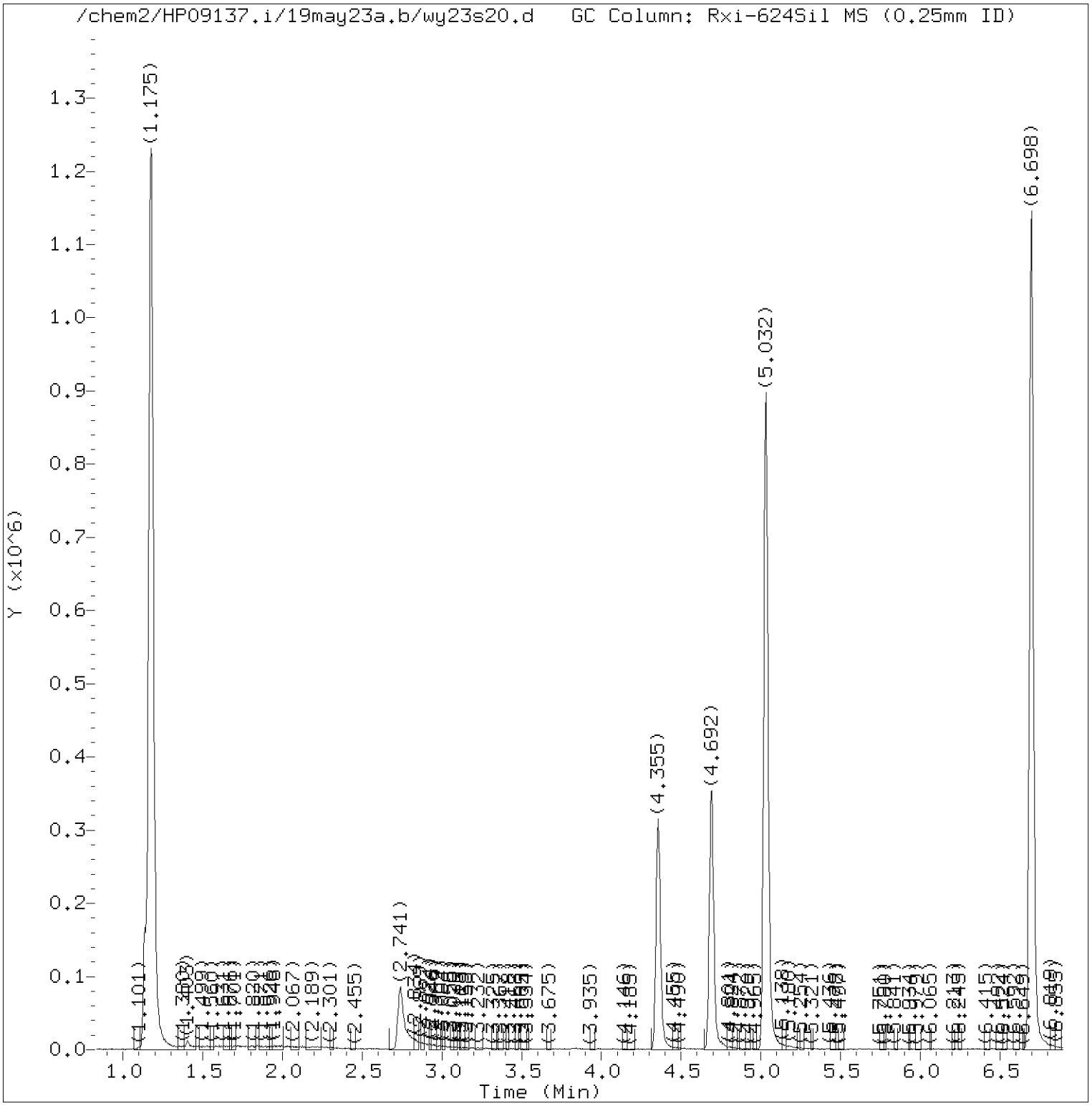
Total number of targets = 24

Digitally signed by Don V. Viray on 05/23/2019 at 20:27. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:46. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

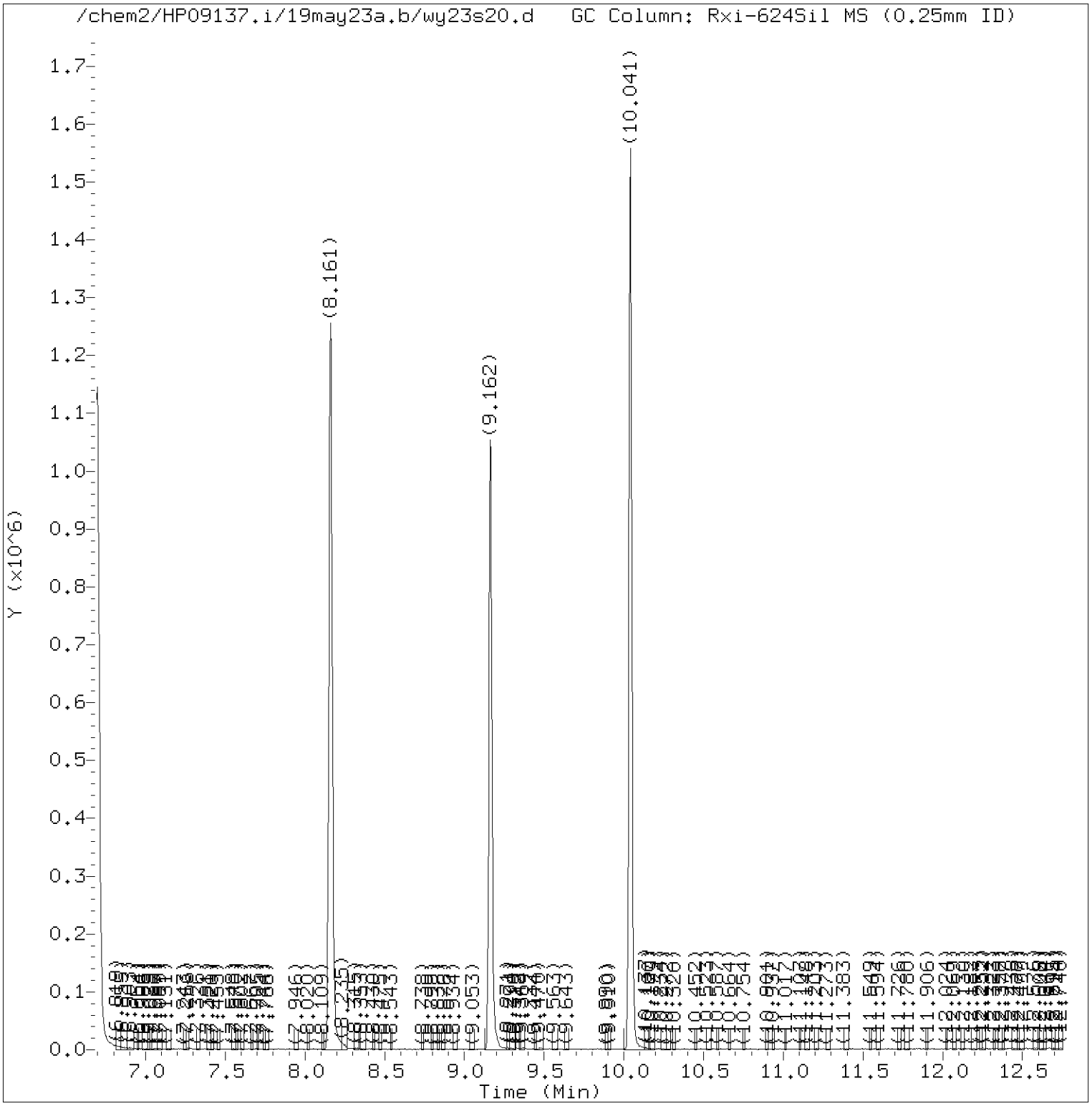
Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23s20.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 15:40 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 12:42
Date, time and analyst ID of latest file update: 23-May-2019 20:22 dvv10203

Sample Name: 93J10 Lab Sample ID: 1058245

Digitally signed by Don V. Viray
on 05/23/2019 at 20:27.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23s20.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 15:40 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 12:42
Date, time and analyst ID of latest file update: 23-May-2019 20:22 dvv10203

Sample Name: 93J10 Lab Sample ID: 1058245

Digitally signed by Don V. Viray
on 05/23/2019 at 20:27.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23s20.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 15:40 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 12:42
Date, time and analyst ID of latest file update: 23-May-2019 20:22 dvv10203

Sample Name: 93J10 Lab Sample ID: 1058245

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.741	65	181227	250.000
52)$Dibromofluoromethane	(2)	4.358	113	202789	49.944
57)$1,2-Dichloroethane-d4	(2)	4.692	102	55228	51.144
66)*Fluorobenzene	(2)	5.032	96	876421	50.000
84)$Toluene-d8	(3)	6.698	98	859364	50.372
101)*Chlorobenzene-d5	(3)	8.161	117	680839	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	297715	43.620
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	348555	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/23/2019 at 20:27.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

93J11

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058246

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may23a.b/wy23s21.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may23a.b/wy23s21.d Injection date and time: **23-MAY-2019 16:04**
Data file Sample Info. Line: 93J11;1058246;1;0;;JCV93;;;wy23b01; Instrument ID: **HP09137.i** Batch: **W191431AA**
Date, time and analyst ID of latest file update: 23-May-2019 20:23 dvv10203

Blank Data file reference: **/chem2/HP09137.i/19may23a.b/wy23b01.d**

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 12:42
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may23a.b/wy23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.744	(-0.010)	596	65	141150	(-30)	250.00	
66) Fluorobenzene	5.029	(0.000)	1308	96	878710	(-13)	50.00	
101) Chlorobenzene-d5	8.161	(0.000)	2284	117	676321	(-13)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041	(0.000)	2870	152	348676	(-20)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.352	(0.001)	113	201731	49.554	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.689	(0.001)	102	56723	52.391	105%		80 - 120
84) Toluene-d8	(3)	6.695	(0.000)	98	856629	50.547	101%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.165	(0.000)	95	294078	43.375	87%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 05/23/2019 at 20:27. Target 3.5 esignature user ID: dvv10203

Data file: /chem2/HP09137.i/19may23a.b/wy23s21.d Injection date and time: **23-MAY-2019 16:04**
Data file Sample Info. Line: 93J11;1058246;1;0;;JCV93;;;wy23b01; Instrument ID: **HP09137.i** Batch: **W191431AA**
Date, time and analyst ID of latest file update: 23-May-2019 20:23 dvv10203

Blank Data file reference: **/chem2/HP09137.i/19may23a.b/wy23b01.d**

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 12:42
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may23a.b/wy23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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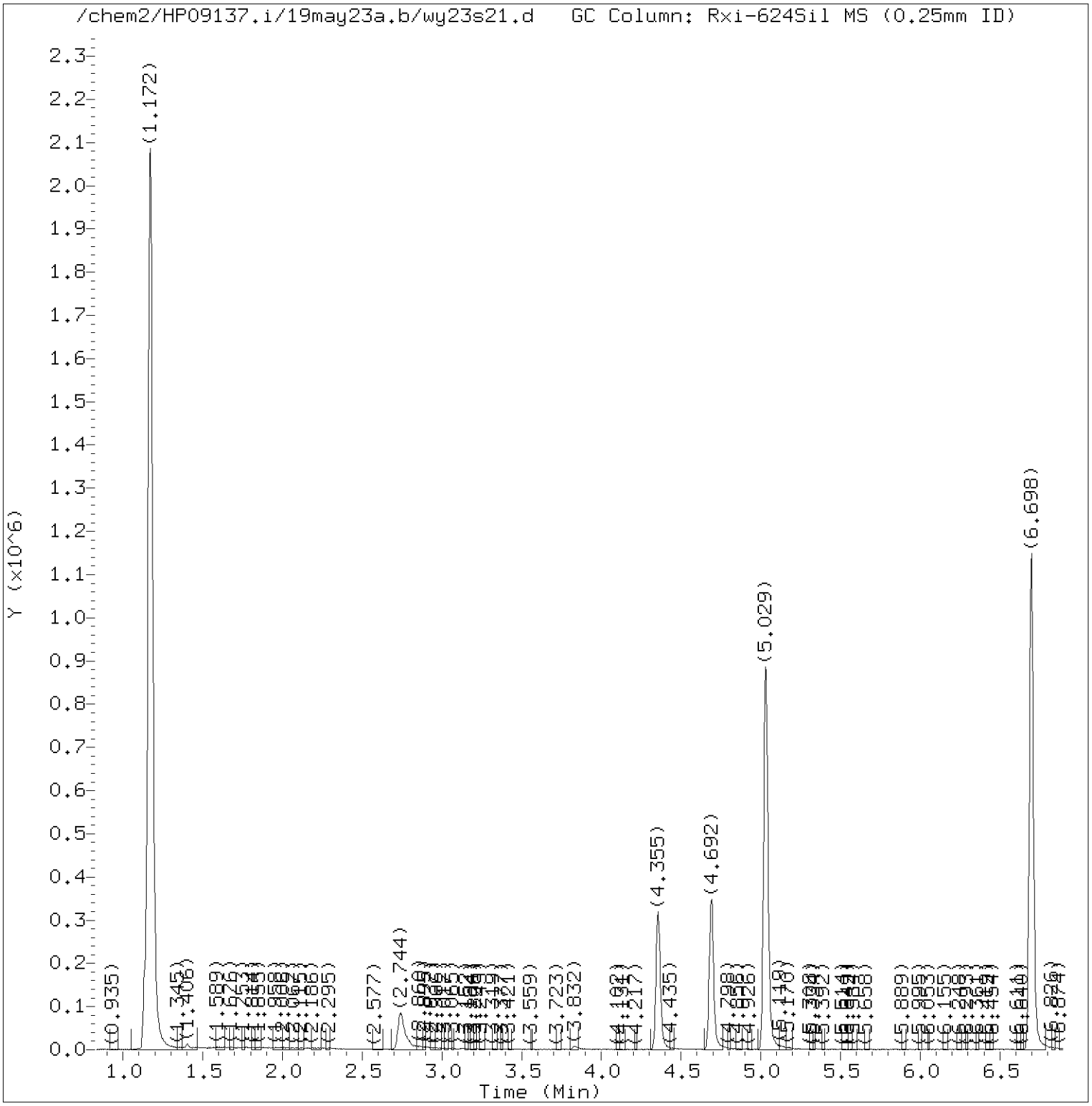
Total number of targets = 24

Digitally signed by Don V. Viray on 05/23/2019 at 20:27. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:46. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

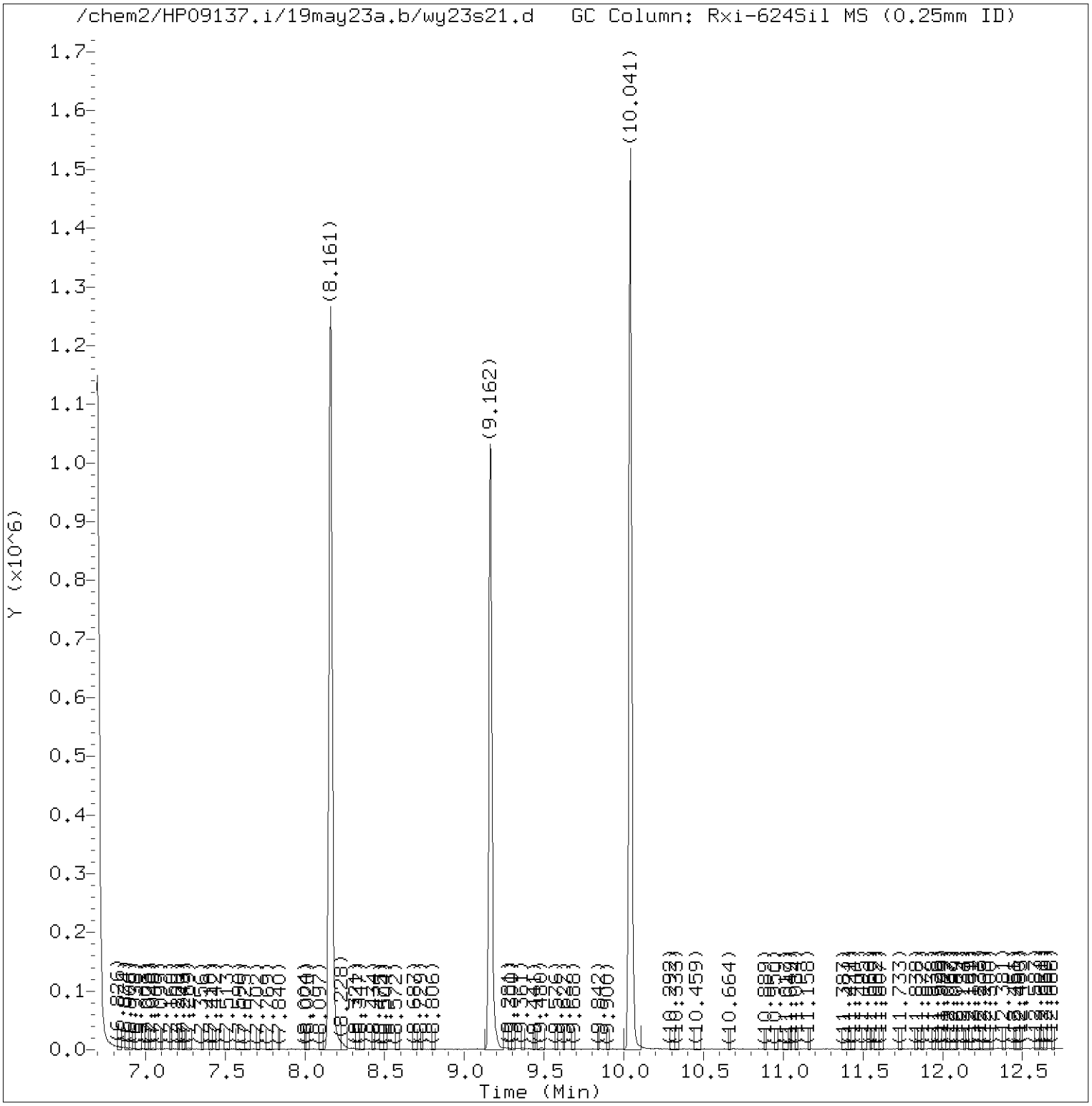
Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23s21.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 16:04 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 12:42
Date, time and analyst ID of latest file update: 23-May-2019 20:23 dvv10203

Sample Name: 93J11 Lab Sample ID: 1058246

Digitally signed by Don V. Viray
on 05/23/2019 at 20:27.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23s21.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 16:04 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 12:42
Date, time and analyst ID of latest file update: 23-May-2019 20:23 dvv10203

Sample Name: 93J11 Lab Sample ID: 1058246

Digitally signed by Don V. Viray
on 05/23/2019 at 20:27.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23s21.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 16:04 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 12:42
Date, time and analyst ID of latest file update: 23-May-2019 20:23 dvv10203

Sample Name: 93J11 Lab Sample ID: 1058246

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.744	65	141150	250.000
52)$Dibromofluoromethane	(2)	4.352	113	201731	49.554
57)$1,2-Dichloroethane-d4	(2)	4.689	102	56723	52.391
66)*Fluorobenzene	(2)	5.029	96	878710	50.000
84)$Toluene-d8	(3)	6.695	98	856629	50.547
101)*Chlorobenzene-d5	(3)	8.161	117	676321	50.000
115)$4-Bromofluorobenzene	(3)	9.165	95	294078	43.375
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	348676	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/23/2019 at 20:27.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

93J12

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058247

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may23a.b/wy23s22.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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93J12 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1058247

Data file: /chem2/HP09137.i/19may23a.b/wy23s22.d Injection date and time: **23-MAY-2019 16:28**
Data file Sample Info. Line: 93J12;1058247;1;0;;JCV93;;;wy23b01; Instrument ID: **HP09137.i** Batch: **W191431AA**
Date, time and analyst ID of latest file update: 23-May-2019 20:24 dvv10203

Blank Data file reference: **/chem2/HP09137.i/19may23a.b/wy23b01.d**

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 12:42
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may23a.b/wy23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.741	(-0.007)	595	65	172397	(-14)	250.00	
66) Fluorobenzene	5.032	(-0.003)	1309	96	854717	(-16)	50.00	
101) Chlorobenzene-d5	8.161	(0.000)	2284	117	669888	(-13)	50.00	
132) 1,4-Dichlorobenzene-d4	10.042	(0.000)	2870	152	338989	(-22)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.355	(0.001)	113	199652	50.420	101%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.689	(0.001)	102	53006	50.332	101%		80 - 120
84) Toluene-d8	(3)	6.698	(0.000)	98	844714	50.322	101%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.000)	95	289303	43.080	86%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 05/23/2019 at 20:28. Target 3.5 esignature user ID: dvv10203

Data file: /chem2/HP09137.i/19may23a.b/wy23s22.d Injection date and time: **23-MAY-2019 16:28**
Data file Sample Info. Line: 93J12;1058247;1;0;;JCV93;;;wy23b01; Instrument ID: **HP09137.i** Batch: **W191431AA**
Date, time and analyst ID of latest file update: 23-May-2019 20:24 dvv10203

Blank Data file reference: **/chem2/HP09137.i/19may23a.b/wy23b01.d**

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 12:42
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may23a.b/wy23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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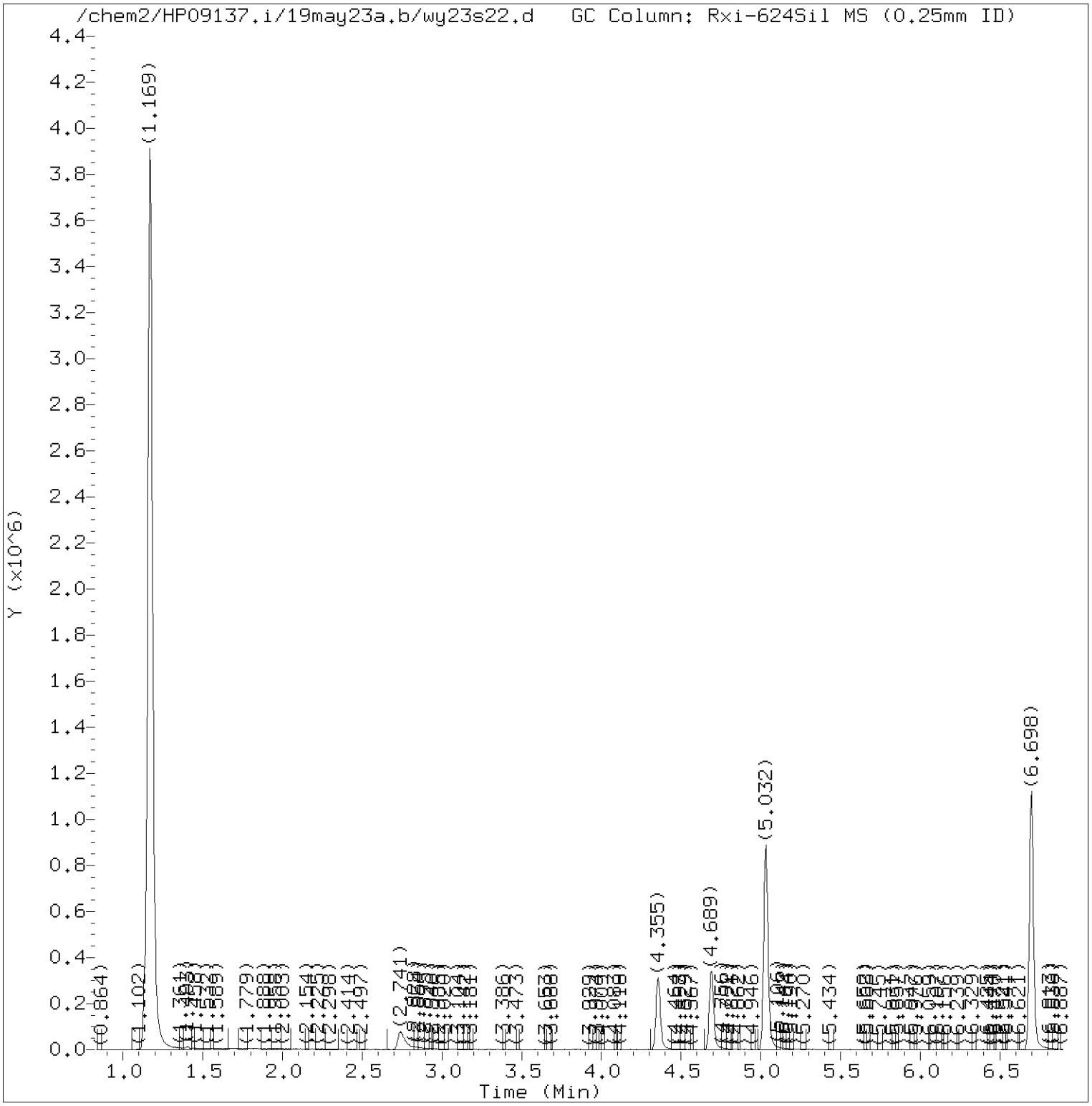
Total number of targets = 24

Digitally signed by Don V. Viray on 05/23/2019 at 20:28. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:46. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

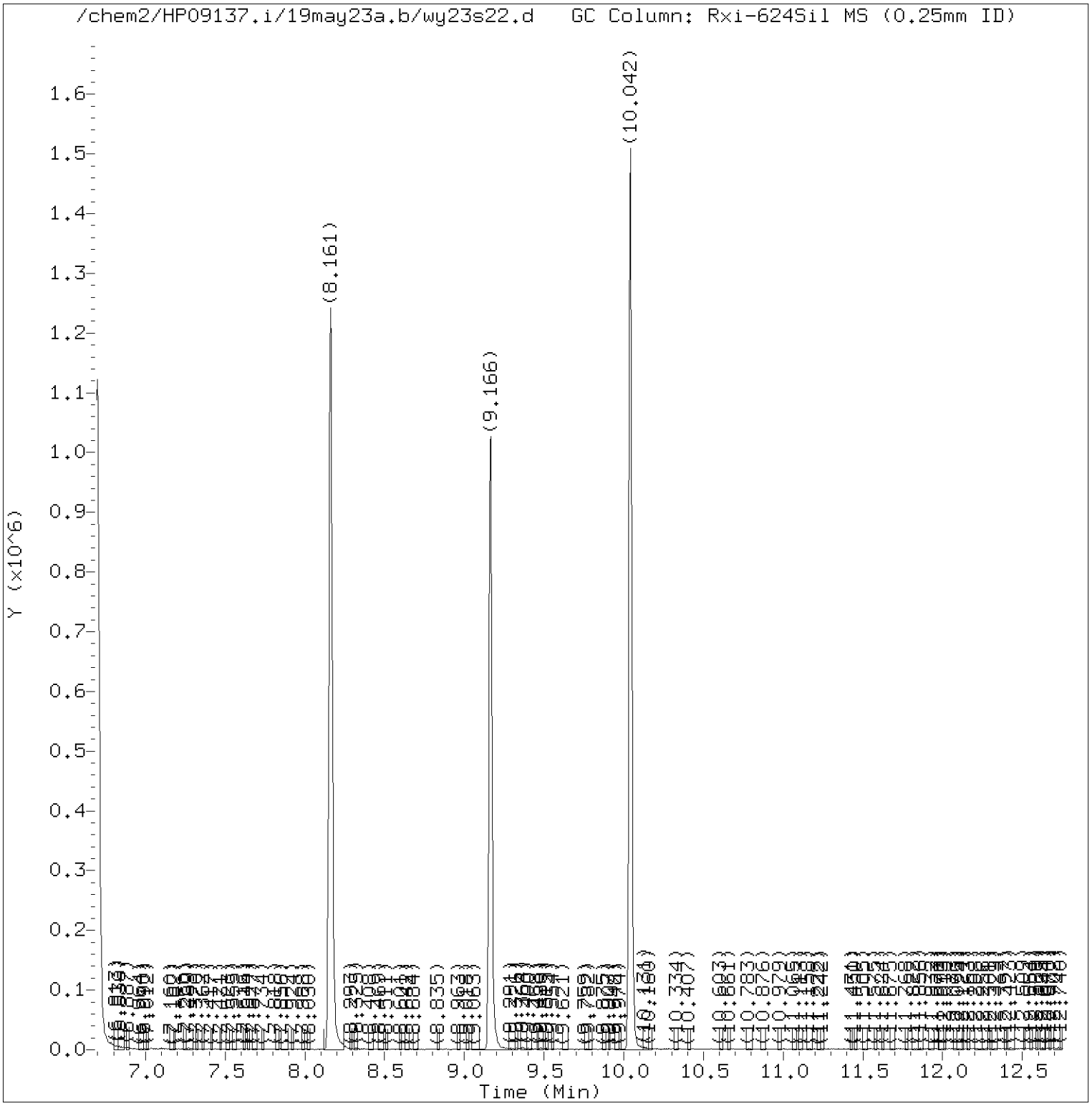
Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23s22.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 16:28 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 12:42
Date, time and analyst ID of latest file update: 23-May-2019 20:24 dvv10203

Sample Name: 93J12 Lab Sample ID: 1058247

Digitally signed by Don V. Viray
on 05/23/2019 at 20:28.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23s22.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 16:28 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 12:42
Date, time and analyst ID of latest file update: 23-May-2019 20:24 dvv10203

Sample Name: 93J12 Lab Sample ID: 1058247

Digitally signed by Don V. Viray
on 05/23/2019 at 20:28.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23s22.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 16:28 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 12:42
Date, time and analyst ID of latest file update: 23-May-2019 20:24 dvv10203

Sample Name: 93J12 Lab Sample ID: 1058247

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.741	65	172397	250.000
52)$Dibromofluoromethane	(2)	4.355	113	199652	50.420
57)$1,2-Dichloroethane-d4	(2)	4.689	102	53006	50.332
66)*Fluorobenzene	(2)	5.032	96	854717	50.000
84)$Toluene-d8	(3)	6.698	98	844714	50.322
101)*Chlorobenzene-d5	(3)	8.161	117	669888	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	289303	43.080
132)*1,4-Dichlorobenzene-d4	(4)	10.042	152	338989	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/23/2019 at 20:28.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

93J13

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058248

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may23a.b/wy23s23.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	J
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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93J13 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1058248

Data file: /chem2/HP09137.i/19may23a.b/wy23s23.d Injection date and time: **23-MAY-2019 16:52**
Data file Sample Info. Line: 93J13;1058248;1;0;;JCV93;;;wy23b01; Instrument ID: **HP09137.i** Batch: **W191431AA**
Date, time and analyst ID of latest file update: 23-May-2019 20:24 dvv10203

Blank Data file reference: **/chem2/HP09137.i/19may23a.b/wy23b01.d**

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 12:42
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may23a.b/wy23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.738(-0.003)	594	65	166599 (-17)	250.00	
66) Fluorobenzene	5.029(0.000)	1308	96	855515 (-16)	50.00	
101) Chlorobenzene-d5	8.161(0.000)	2284	117	666589 (-14)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041(0.000)	2870	152	332495 (-24)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.355(0.000)	113	198796	50.157	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.686(0.001)	102	54288	51.502	103%		80 - 120
84) Toluene-d8	(3)	6.698(0.000)	98	828539	49.603	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.165(0.000)	95	287898	43.083	86%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	5.408(-0.000)	95	4155	0.957	0.96		J	0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Don V. Viray on 05/23/2019 at 20:28. Target 3.5 esignature user ID: dvv10203

Data file: /chem2/HP09137.i/19may23a.b/wy23s23.d Injection date and time: **23-MAY-2019 16:52**
Data file Sample Info. Line: 93J13;1058248;1;0;;JCV93;;;wy23b01; Instrument ID: **HP09137.i** Batch: **W191431AA**
Date, time and analyst ID of latest file update: 23-May-2019 20:24 dvv10203

Blank Data file reference: **/chem2/HP09137.i/19may23a.b/wy23b01.d**

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-MAY-2019 12:42
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may23a.b/wy23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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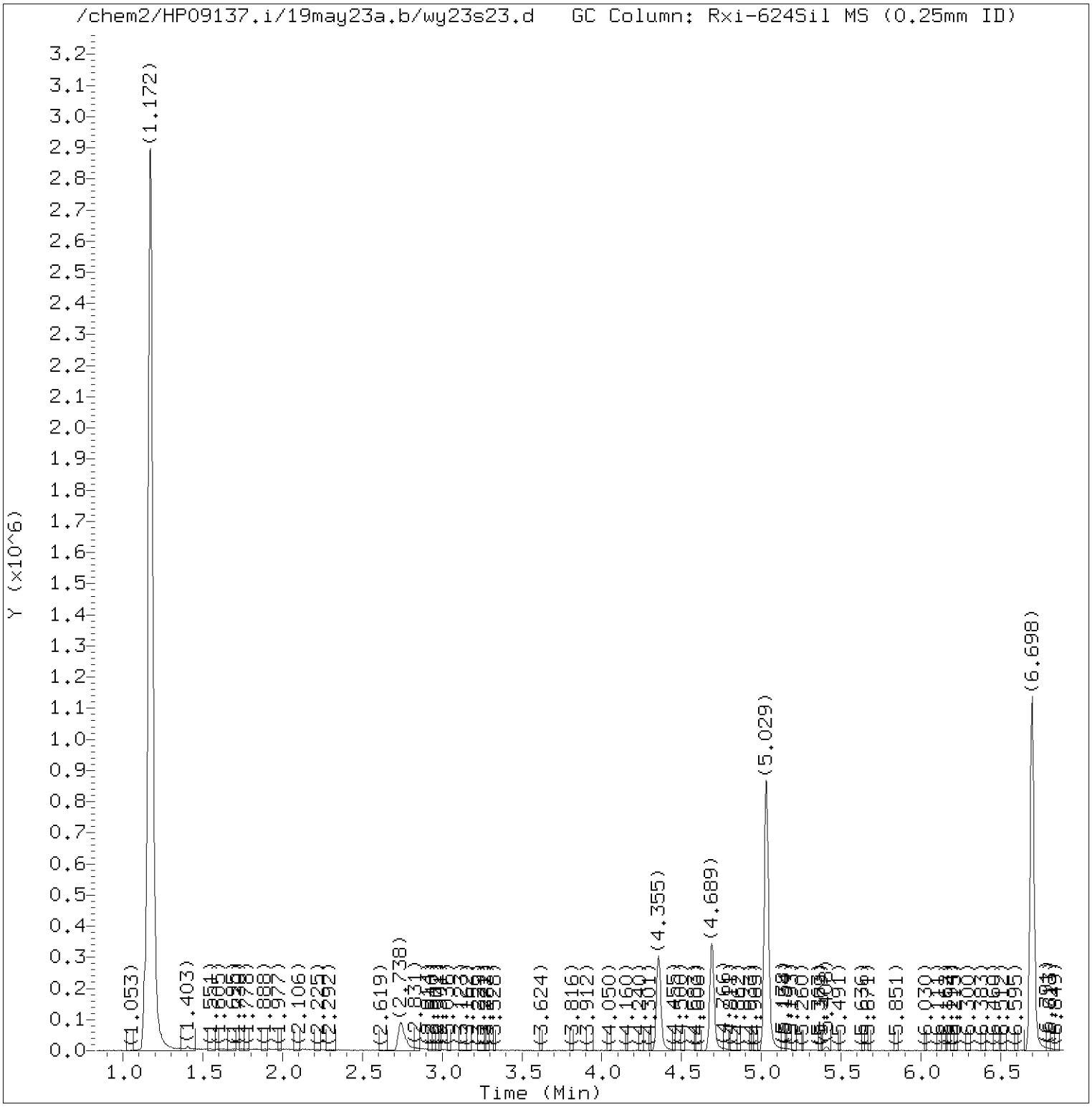
Total number of targets = 24

Digitally signed by Don V. Viray on 05/23/2019 at 20:28. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:46. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

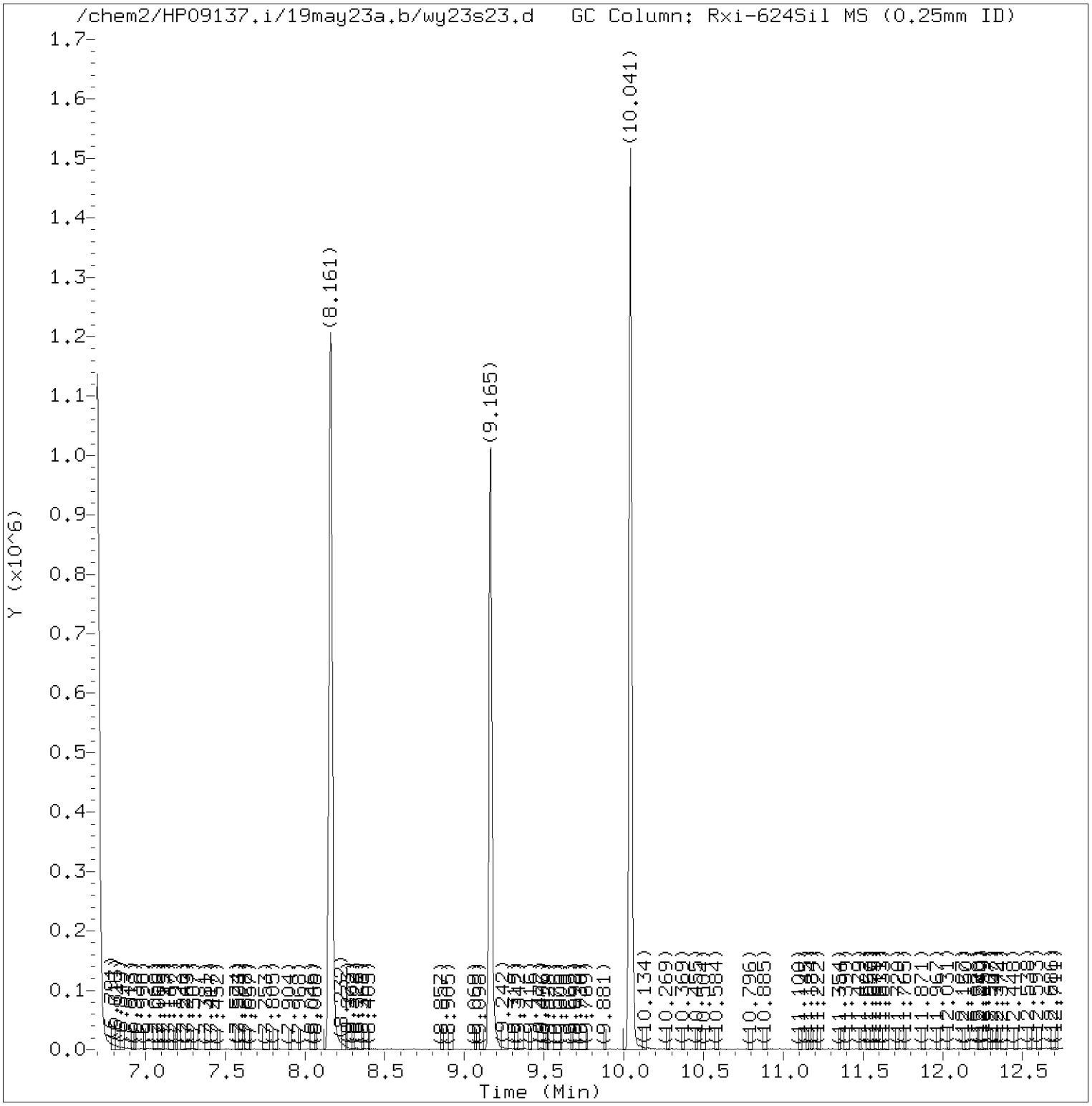
Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23s23.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 16:52 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 12:42
Date, time and analyst ID of latest file update: 23-May-2019 20:24 dvv10203

Sample Name: 93J13 Lab Sample ID: 1058248

Digitally signed by Don V. Viray
on 05/23/2019 at 20:28.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23s23.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 16:52 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 12:42
Date, time and analyst ID of latest file update: 23-May-2019 20:24 dvv10203

Sample Name: 93J13 Lab Sample ID: 1058248

Digitally signed by Don V. Viray
on 05/23/2019 at 20:28.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23s23.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 16:52 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 12:42
Date, time and analyst ID of latest file update: 23-May-2019 20:24 dvv10203

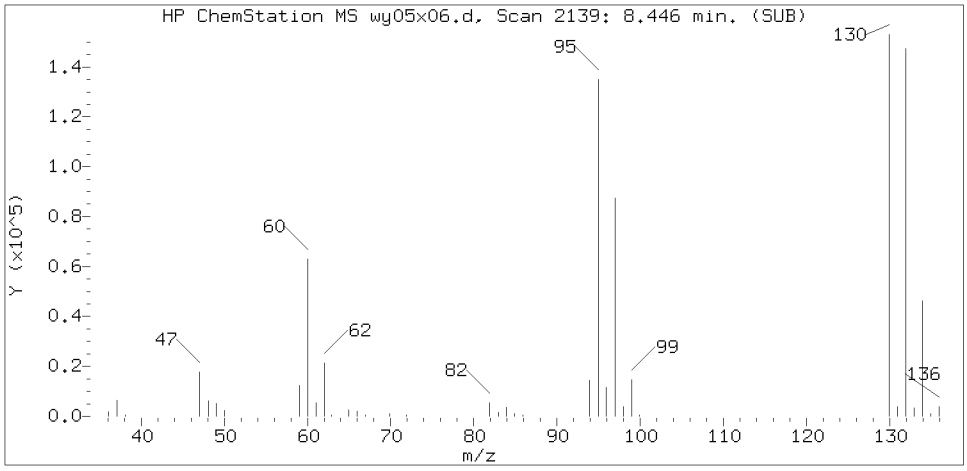
Sample Name: 93J13 Lab Sample ID: 1058248

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.738	65	166599	250.000
52)$Dibromofluoromethane	(2)	4.355	113	198796	50.157
57)$1,2-Dichloroethane-d4	(2)	4.686	102	54288	51.502
66)*Fluorobenzene	(2)	5.029	96	855515	50.000
71) Trichloroethene	(2)	5.408	95	4155	0.957
84)$Toluene-d8	(3)	6.698	98	828539	49.603
101)*Chlorobenzene-d5	(3)	8.161	117	666589	50.000
115)$4-Bromofluorobenzene	(3)	9.165	95	287898	43.083
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	332495	50.000

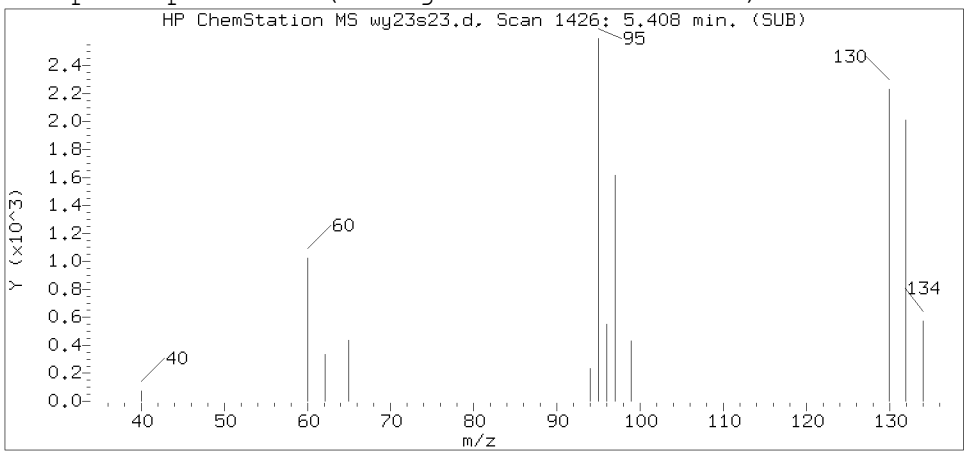
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/23/2019 at 20:28.
Target 3.5 esignature user ID: dvv10203

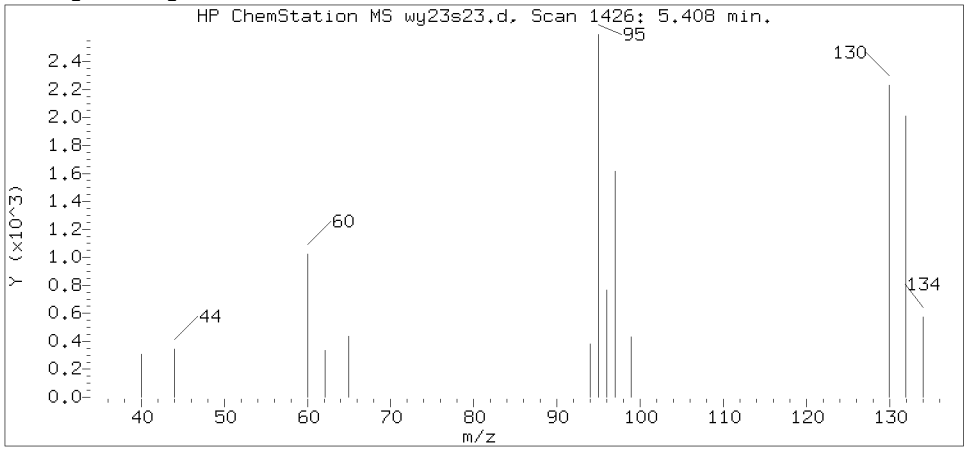
Reference Standard Spectrum for Trichloroethene

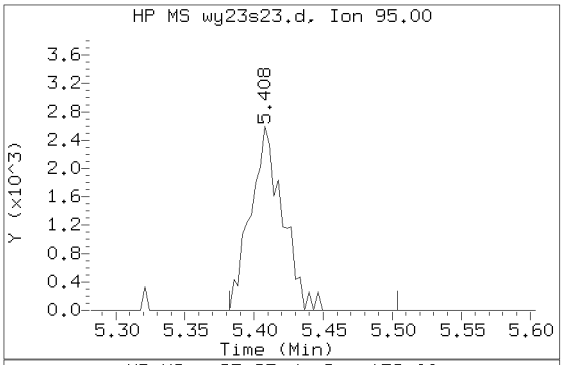


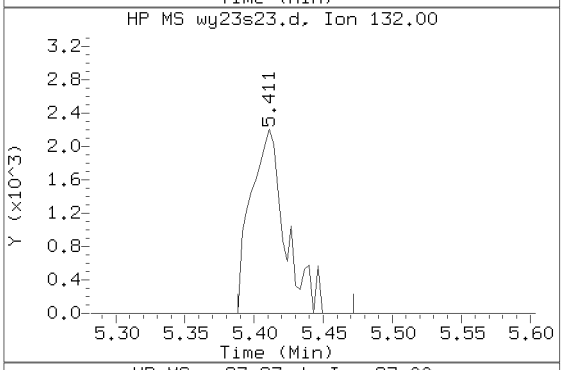
Sample Spectrum (Background Subtracted)

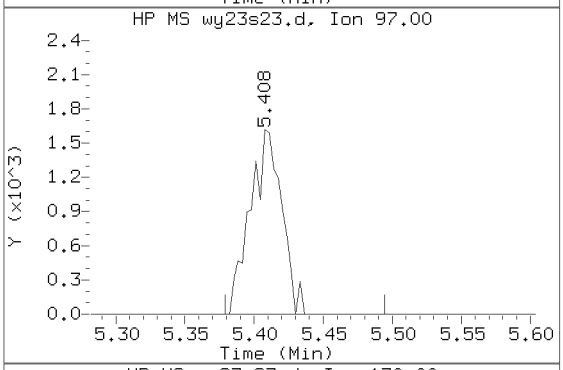


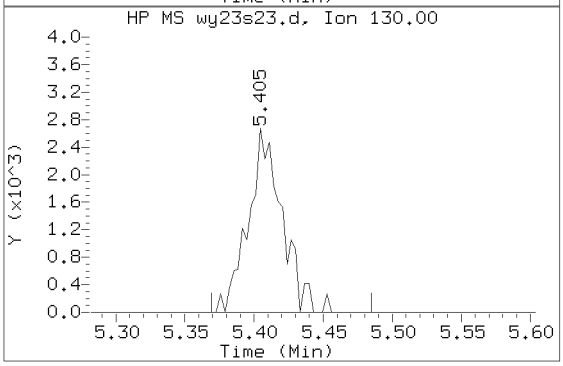
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/19may23a.b/wy23s23.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 16:52 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-MAY-2019 12:42
Date, time and analyst ID of latest file update: 23-May-2019 20:24 dvv10203

Sample Name: 93J13 Lab Sample ID: 1058248

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 1426
Retention Time (minutes)	: 5.408
Relative Retention Time	:-0.00064
Quant Ion	: 95.00
Area (flag)	: 4155
On-Column Amount (ng)	: 0.9568

Digitally signed by Don V. Viray on 05/23/2019 at 20:28.
Target 3.5 esignature user ID: dvv10203

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\19MAR18a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
apr27582	LM18T01.D	50NGBFB	03/18/2019	10:33		
APR27582	LC30X00.D	BLK	03/18/2019	11:16		
APR27582	LM18I01.D	VSTD300	03/18/2019	11:37		
APR27582	LM18I02.D	VSTD100	03/18/2019	11:59		
APR27582	LM18I03.D	VSTD050	03/18/2019	12:21		
APR27582	LM18I04.D	VSTD020	03/18/2019	12:42		
APR27582	LM18I06.D	VSTD010	03/18/2019	13:04		
APR27582	LM18I07.D	VSTD004	03/18/2019	13:27		
APR27582	LM18I08.D	VSTD001	03/18/2019	13:50		
APR27582	LC30X01.D	BLK	03/18/2019	14:12		
APR27582	LM18V01.D	LGCICV	03/18/2019	14:34		
APR27582	LC30X03.D	BLK	03/18/2019	14:56		
APR27582	LM18I10.D	VSTD300	03/18/2019	15:18		
APR27582	LM18I11.D	VSTD100	03/18/2019	15:40		
APR27582	LM18I12.D	VSTD050	03/18/2019	16:01		
APR27582	LM18I13.D	VSTD020	03/18/2019	16:23		
APR27582	LM18I14.D	VSTD010	03/18/2019	16:45		
APR27582	LM18I15.D	VSTD004	03/18/2019	17:07		
APR27582	LM18I16.D	VSTD001	03/18/2019	17:29		
APR27582	LC30X04.D	BLK	03/18/2019	17:50		
APR27582	LM18V05.D	LCSL72	03/18/2019	18:12		
APR27582	LM18X10.D	BLK	03/18/2019	21:23		
APR27582	LM18V02.D	LGCICV	03/18/2019	21:45		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09137 **HP #18**

Data Directory Path is - D:\DATA\19FEB19I\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
apr27582	WF19T01.D	50NGBFB	02/19/2019	11:32	W183623AA	
APR27582	WF19I01.D	VSTD300	02/19/2019	12:21		
APR27582	WF19I02.D	VSTD100	02/19/2019	12:45		
APR27582	WF19I03.D	VSTD050	02/19/2019	13:09		
APR27582	WF19I04.D	VSTD020	02/19/2019	13:33		
APR27582	WF19I05.D	VSTD010	02/19/2019	13:57		
APR27582	WF19I06.D	VSTD004	02/19/2019	14:21		
APR27582	WF19I07.D	VSTD001	02/19/2019	14:44		
APR27582	WF19X02.D	CLNBLK	02/19/2019	15:08		
APR27582	WF19V01.D	LCSWICV	02/19/2019	15:32		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09137 **HP #18**

Data Directory Path is - D:\DATA\19FEB20A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
apr27582	WF20T01.D	50NGBFB	02/20/2019	08:47	W183623AA	
APR27582	WF20X01.D	VBLKW62	02/20/2019	09:13	W190511AA	
APR27582	WF20C01.D	VSTD050	02/20/2019	09:37	W190511AA	
APR27582	WF20X02.D	VBLKW62	02/20/2019	10:01	W190511AA	
APR27582	WF20X03.D	VBLKW62	02/20/2019	10:31	W190511AA	
APR27582	WF20C02.D	VSTD050	02/20/2019	10:55	W190511AA	
APR27582	WF20X04.D	VBLKW62	02/20/2019	11:19	W190511AA	
APR27582	WF20B01.D	VBLKW62	02/20/2019	11:43	W190511AA	
APR27582	WF20L01.D	LCSW62	02/20/2019	12:07	W190511AA	
APR27582	WF20B02.D	VBLKW62	02/20/2019	12:30	W190511AA	
APR27582	WF20S02.D	9979095	02/20/2019	12:57	W190511AA	
APR27582	WF20S03.D	9979096	02/20/2019	13:21	W190511AA	
APR27582	WF20S04.D	9979097	02/20/2019	13:45	W190511AA	
APR27582	WF20S05.D	9979099	02/20/2019	14:09	W190511AA	
APR27582	WF20S06.D	9979107	02/20/2019	14:32	W190511AA	
APR27582	WF20S07.D	9979108	02/20/2019	14:56	W190511AA	
APR27582	WF20S08.D	9979109	02/20/2019	15:20	W190511AA	
APR27582	WF20S09.D	9979090	02/20/2019	15:44	W190511AA	
APR27582	WF20S10.D	9979091	02/20/2019	16:08	W190511AA	
APR27582	WF20S17.D	9985342	02/20/2019	16:32	W190511AA	
APR27582	WF20S18.D	9985343MS	02/20/2019	16:56	W190511AA	
APR27582	WF20S19.D	9985344MSD	02/20/2019	17:20	W190511AA	
APR27582	WF20S11.D	9979112	02/20/2019	17:43	W190511AA	
APR27582	WF20S12.D	9987236	02/20/2019	18:07	W190511AA	
APR27582	WF20S13.D	9986162	02/20/2019	18:31	W190511AA	
APR27582	WF20S20.D	9987235	02/20/2019	18:55	W190511AA	
APR27582	WF20S21.D	9985346	02/20/2019	19:19	W190511AA	

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Volatiles
Runlog for Agilent GC/MS System HP09137 **HP #18**

Data Directory Path is - d:\data\19MAY22A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
CBR01947	WY22X05.D	CLNBLK	05/22/2019	09:42		
CBR01947	WY22X06.D	CLNBLK	05/22/2019	10:06		
CBR01947	WY22T01.D	BFB 50NG	05/22/2019	11:37		
CBR01947	WY22C01.D	VSTD150	05/22/2019	12:04	W191421AA	
CBR01947	WY22B01.D	VBLKW34	05/22/2019	12:28	W191421AA	
CBR01947	WY22B02.D	VBLKW34	05/22/2019	12:52	W191421AA	
CBR01947	WY22L01.D	LCSW34	05/22/2019	13:16	W191421AA	
CBR01947	WY22L02.D	LCDW34	05/22/2019	13:40	W191421AA	
CBR01947	WY22S01.D	1054613	05/22/2019	14:18	W191421AA	
CBR01947	WY22S02.D	1054604	05/22/2019	14:42	W191421AA	
CBR01947	WY22S03.D	1058238	05/22/2019	15:05	W191421AA	
CBR01947	WY22S04.D	1058238DUP	05/22/2019	15:29	W191421AA	
CBR01947	WY22S05.D	1058239	05/22/2019	15:53	W191421AA	
CBR01947	WY22S06.D	1058240	05/22/2019	16:17	W191421AA	
CBR01947	WY22S07.D	1058241	05/22/2019	16:41	W191421AA	
CBR01947	WY22S08.D	1058242	05/22/2019	17:05	W191421AA	
CBR01947	WY22S09.D	1058243	05/22/2019	17:28	W191421AA	
CBR01947	WY22S10.D	1056511	05/22/2019	17:52	W191421AA	
CBR01947	WY22S11.D	1056512	05/22/2019	18:16	W191421AA	
CBR01947	WY22S12.D	1056513	05/22/2019	18:40	W191421AA	
CBR01947	WY22S13.D	1056514	05/22/2019	19:04	W191421AA	
CBR01947	WY22S14.D	1056515	05/22/2019	19:27	W191421AA	
CBR01947	WY22S15.D	1056516	05/22/2019	19:52	W191421AA	
CBR01947	WY22S16.D	1056517	05/22/2019	20:16	W191421AA	
CBR01947	WY22S17.D	1056518	05/22/2019	20:39	W191421AA	
CBR01947	WY22S18.D	1056500	05/22/2019	21:03	W191421AA	
CBR01947	WY22S19.D	1056501DL	05/22/2019	21:27	W191421AA	100
CBR01947	WY22S20.D	1056502	05/22/2019	21:51	W191421AA	
CBR01947	WY22S21.D	1056503	05/22/2019	22:15	W191421AA	

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09137 **HP #18**

Data Directory Path is - d:\data\19may23a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
and00492	WY23T01.D	50NGBFB	05/23/2019	05:16	W191431AA	
and00492	WY23XX1.D	blk	05/23/2019	05:24		
and00492	WY23C01.D	VSTD050	05/23/2019	05:46	W191431AA	
and00492	WY23L01.D	LCSW35	05/23/2019	06:10	W191431AA	
and00492	WY23L02.D	LCDW35	05/23/2019	06:34	W191431AA	
and00492	WY23M01.D	MDL0.5	05/23/2019	06:58	W191431AA	
and00492	WY23B01.D	VBLKW35	05/23/2019	07:22	W191431AA	
and00492	WY23S01.D	1054642	05/23/2019	07:45	W191431AA	
and00492	WY23S02.D	1054636	05/23/2019	08:09	W191431AA	
and00492	WY23S03.D	1054639	05/23/2019	08:33	W191431AA	
and00492	WY23S04.D	1054640	05/23/2019	08:57	W191431AA	
and00492	WY23S05.D	1056096	05/23/2019	09:21	W191431AA	
and00492	WY23S06.D	1056099	05/23/2019	09:44	W191431AA	
and00492	WY23S07.D	1056100	05/23/2019	10:08	W191431AA	
and00492	WY23S08.D	1056102	05/23/2019	10:32	W191431AA	
and00492	WY23S09.D	1056221	05/23/2019	10:56	W191431AA	
and00492	WY23S10.D	1056222	05/23/2019	11:20	W191431AA	
and00492	WY23S11.D	1056225	05/23/2019	11:44	W191431AA	
and00492	WY23S12.D	1056226	05/23/2019	12:08	W191431AA	
and00492	WY23S13.D	1056754	05/23/2019	12:32	W191431AA	
and00492	WY23S14.D	1056755	05/23/2019	12:56	W191431AA	
and00492	WY23M02.D	MDL4.0	05/23/2019	13:17	W191431AA	
and00492	WY23S15.D	1056758	05/23/2019	13:41	W191431AA	
and00492	WY23S16.D	1056759	05/23/2019	14:04	W191431AA	
and00492	WY23S17.D	1057343	05/23/2019	14:28	W191431AA	
and00492	WY23S18.D	1057344	05/23/2019	14:52	W191431AA	
and00492	WY23S19.D	1057345	05/23/2019	15:16	W191431AA	
and00492	WY23S20.D	1058245	05/23/2019	15:40	W191431AA	
and00492	WY23S21.D	1058246	05/23/2019	16:04	W191431AA	
and00492	WY23S22.D	1058247	05/23/2019	16:28	W191431AA	
and00492	WY23S23.D	1058248	05/23/2019	16:52	W191431AA	

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\19MAY20B\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
DVV10203	LY20T05.D	50NGBFB	05/20/2019	19:10	L191161AA	
DVV10203	LY20X31.D	BLK	05/20/2019	19:25	L191402AA	
DVV10203	LY20C05.D	VSTD050	05/20/2019	19:47	L191402AA	
DVV10203	LY20S31.D	LCSL97	05/20/2019	20:09	L191402AA	
DVV10203	LY20M31.D	MDLL97	05/20/2019	20:31	L191402AA	
DVV10203	LY20B31.D	VBLKL97	05/20/2019	20:53	L191402AA	
DVV10203	LY20S32.D	1053482	05/20/2019	21:26	L191402AA	
DVV10203	LY20S33.D	1053483	05/20/2019	21:48	L191402AA	
DVV10203	LY20S34.D	1058244	05/20/2019	22:10	L191402AA	
DVV10203	LY20S35.D	1058237	05/20/2019	22:32	L191402AA	
DVV10203	LY20S36.D	1058234	05/20/2019	22:54	L191402AA	
DVV10203	LY20S37.D	1058235MS	05/20/2019	23:16	L191402AA	
DVV10203	LY20S38.D	1058236MSD	05/20/2019	23:38	L191402AA	
DVV10203	LY20X32.D	BLK	05/20/2019	23:59	L191402AA	
DVV10203	LY20S39.D	1054121	05/21/2019	00:21	L191402AA	
DVV10203	LY20S40.D	1054115	05/21/2019	00:43	L191402AA	
DVV10203	LY20S41.D	1054118	05/21/2019	01:05	L191402AA	
DVV10203	LY20S42.D	1054119	05/21/2019	01:27	L191402AA	
DVV10203	LY20S43.D	1054120	05/21/2019	01:49	L191402AA	
DVV10203	LY20S44.D	1054109	05/21/2019	02:11	L191402AA	
DVV10203	LY20S45.D	1054110	05/21/2019	02:33	L191402AA	
DVV10203	LY20S46.D	1054111	05/21/2019	02:54	L191402AA	
DVV10203	LY20S47.D	1054112	05/21/2019	03:16	L191402AA	
DVV10203	LY20S48.D	1054113	05/21/2019	03:38	L191402AA	
DVV10203	LY20S49.D	1054114	05/21/2019	04:00	L191402AA	
DVV10203	LY20S50.D	1054116	05/21/2019	04:22	L191402AA	
DVV10203	LY20S51.D	1054116DL	05/21/2019	04:44	L191402AA	10
DVV10203	LY20S52.D	1054117	05/21/2019	05:06	L191402AA	
DVV10203	LY20S53.D	1054117DL	05/21/2019	05:27	L191402AA	10
DVV10203	LY20S54.D	1054108	05/21/2019	05:49	L191402AA	5
DVV10203	LY20S55.D	1054108DL	05/21/2019	06:11	L191402AA	50

Data File: /chem/HP09915.i/19mar18a.b/lm18t01.d

Date : 18-MAR-2019 10:33

Client ID: BFBFEB05-19

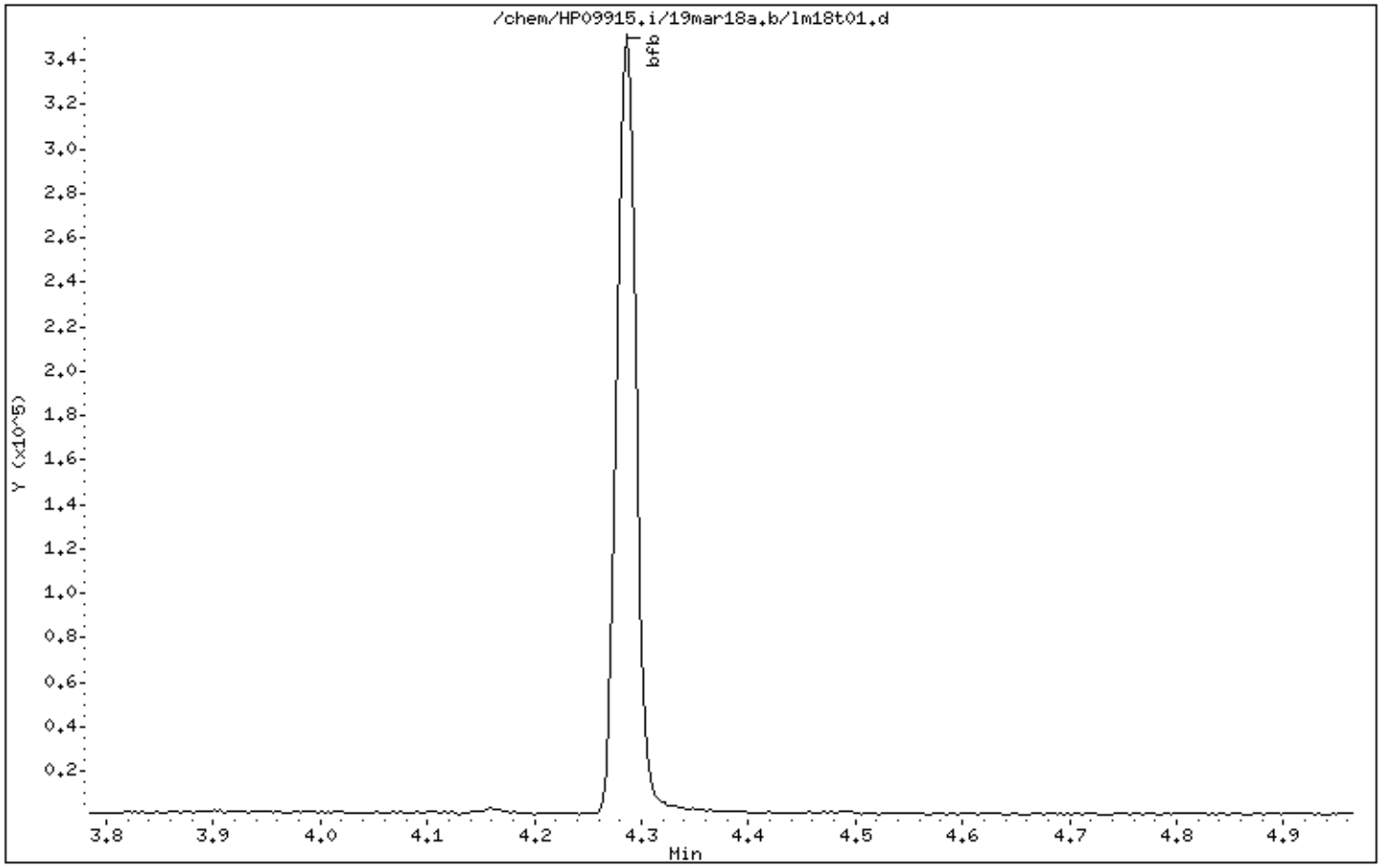
Instrument: HP09915.i

Sample Info: BFBFEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Kevin Kelly on 03/18/2019 at 20:44.
Target 3.5 esignature user ID: kk10002

Data File: /chem/HP09915.i/19mar18a.b/lm18t01.d

Date : 18-MAR-2019 10:33

Client ID: BFBFEB05-19

Instrument: HP09915.i

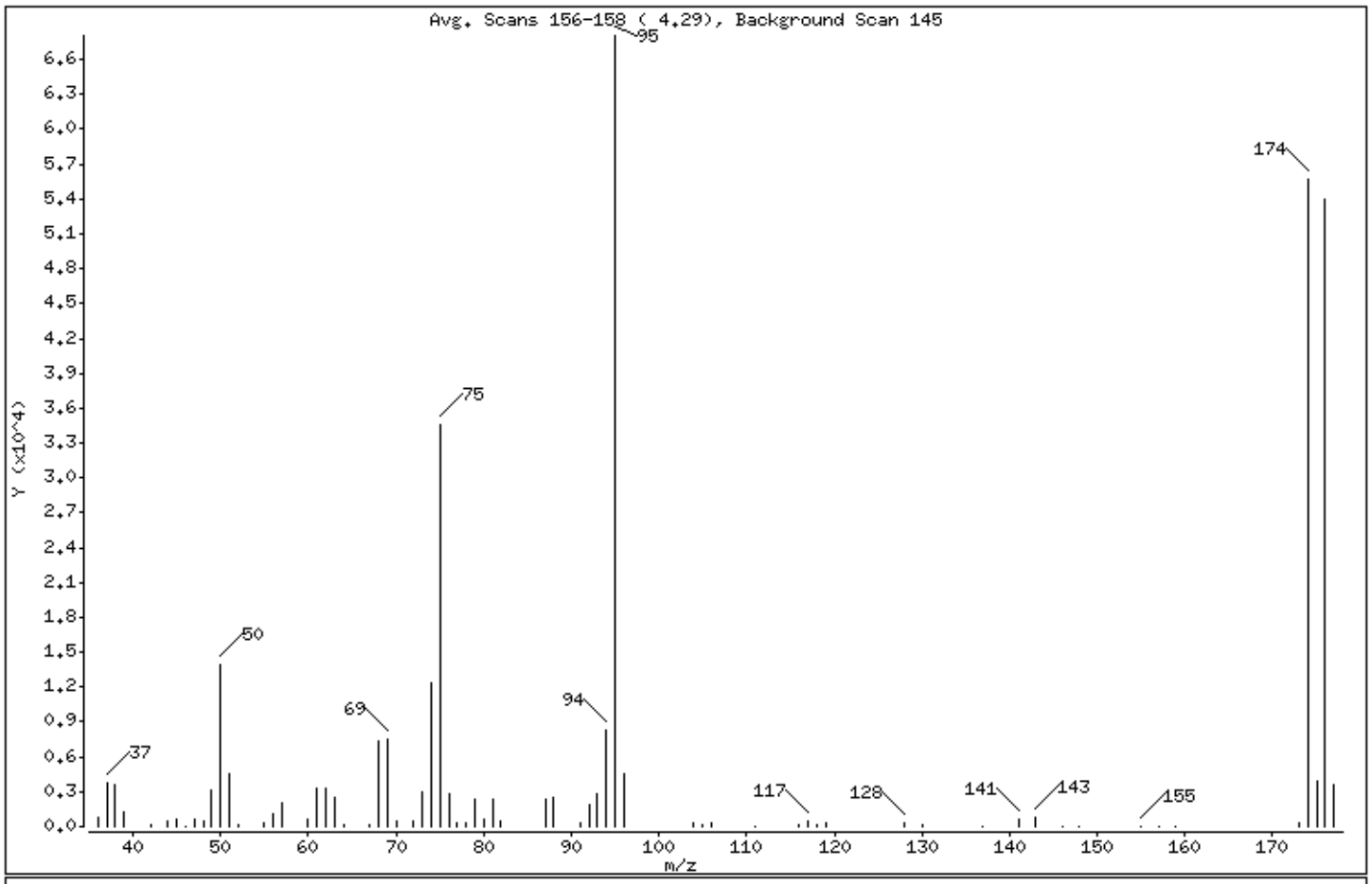
Sample Info: BFBFEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	20.40
75	30.00 - 60.00% of mass 95	50.76
96	5.00 - 9.00% of mass 95	6.71
173	Less than 2.00% of mass 174	0.42 (0.52)
174	50.00 - 100.00% of mass 95	81.93
175	5.00 - 9.00% of mass 174	5.68 (6.93)
176	95.00 - 101.00% of mass 174	79.36 (96.86)
177	5.00 - 9.00% of mass 176	5.34 (6.73)

Digitally signed by Kevin Kelly on 03/18/2019 at 20:44.
Target 3.5 esignature user ID: kk10002

Data File: /chem/HP09915.i/19mar18a.b/lm18t01.d

Date : 18-MAR-2019 10:33

Client ID: BFBFEB05-19 Instrument: HP09915.i

Sample Info: BFBFEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: lm18t01.d
Spectrum: Avg. Scans 156-158 (4.29), Background Scan 145
Location of Maximum: 95.00
Number of points: 68

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	738	61.00	3302	82.00	517	130.00	217
37.00	3748	62.00	3327	87.00	2353	137.00	56
38.00	3551	63.00	2580	88.00	2458	141.00	670
39.00	1176	64.00	223	91.00	286	143.00	763
42.00	114	67.00	175	92.00	1871	146.00	66
44.00	484	68.00	7292	93.00	2748	148.00	70
45.00	694	69.00	7557	94.00	8336	155.00	59
46.00	58	70.00	545	95.00	68048	157.00	50
47.00	621	72.00	511	96.00	4565	159.00	52
48.00	424	73.00	2967	104.00	367	173.00	288
49.00	3096	74.00	12340	105.00	132	174.00	55744
50.00	13880	75.00	34536	106.00	306	175.00	3864
51.00	4528	76.00	2761	111.00	53	176.00	54000
52.00	215	77.00	336	116.00	221	177.00	3634
55.00	261	78.00	250	117.00	451		
56.00	1098	79.00	2336	118.00	214		
57.00	2074	80.00	605	119.00	266		
60.00	589	81.00	2352	128.00	279		

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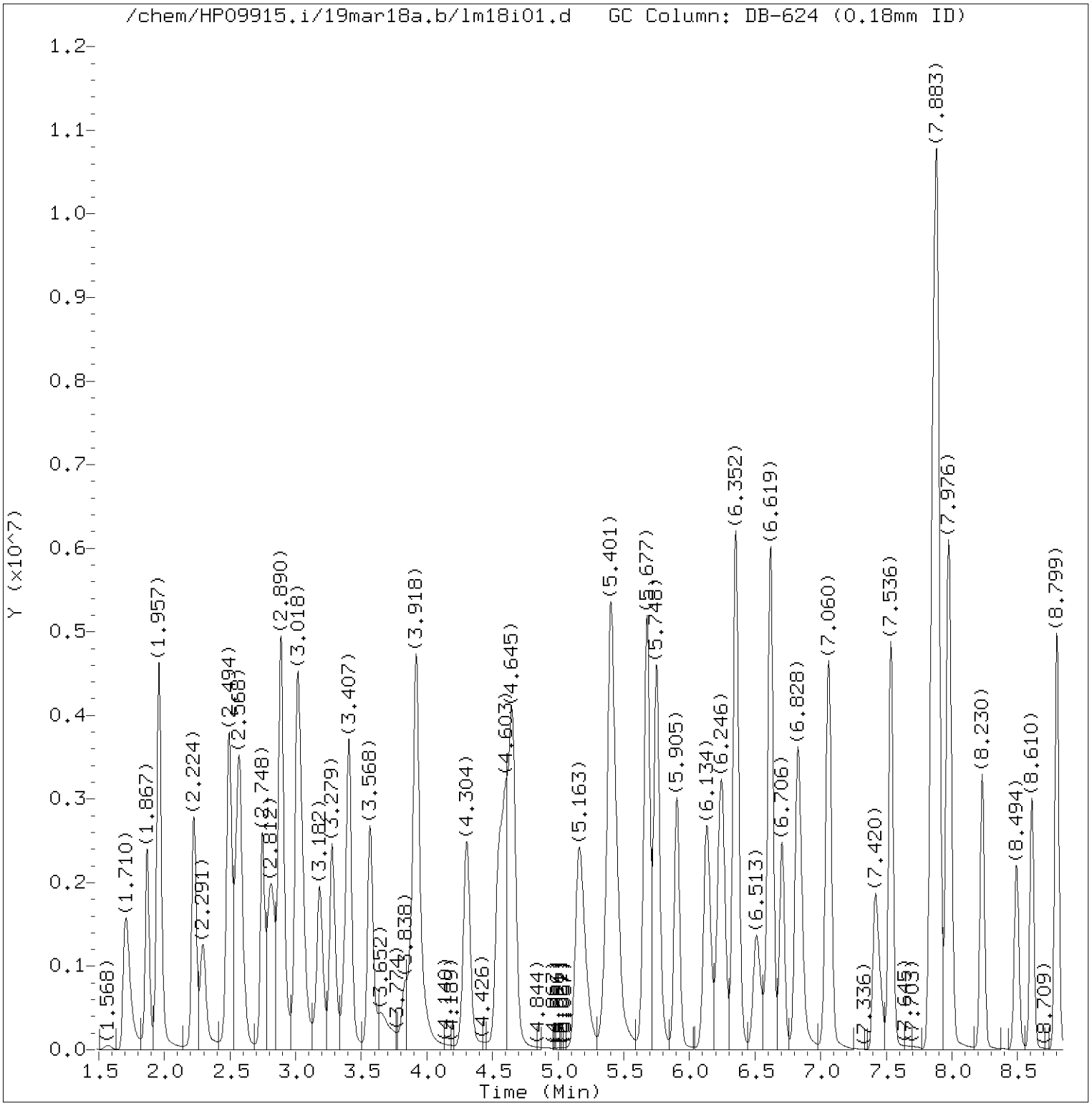
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

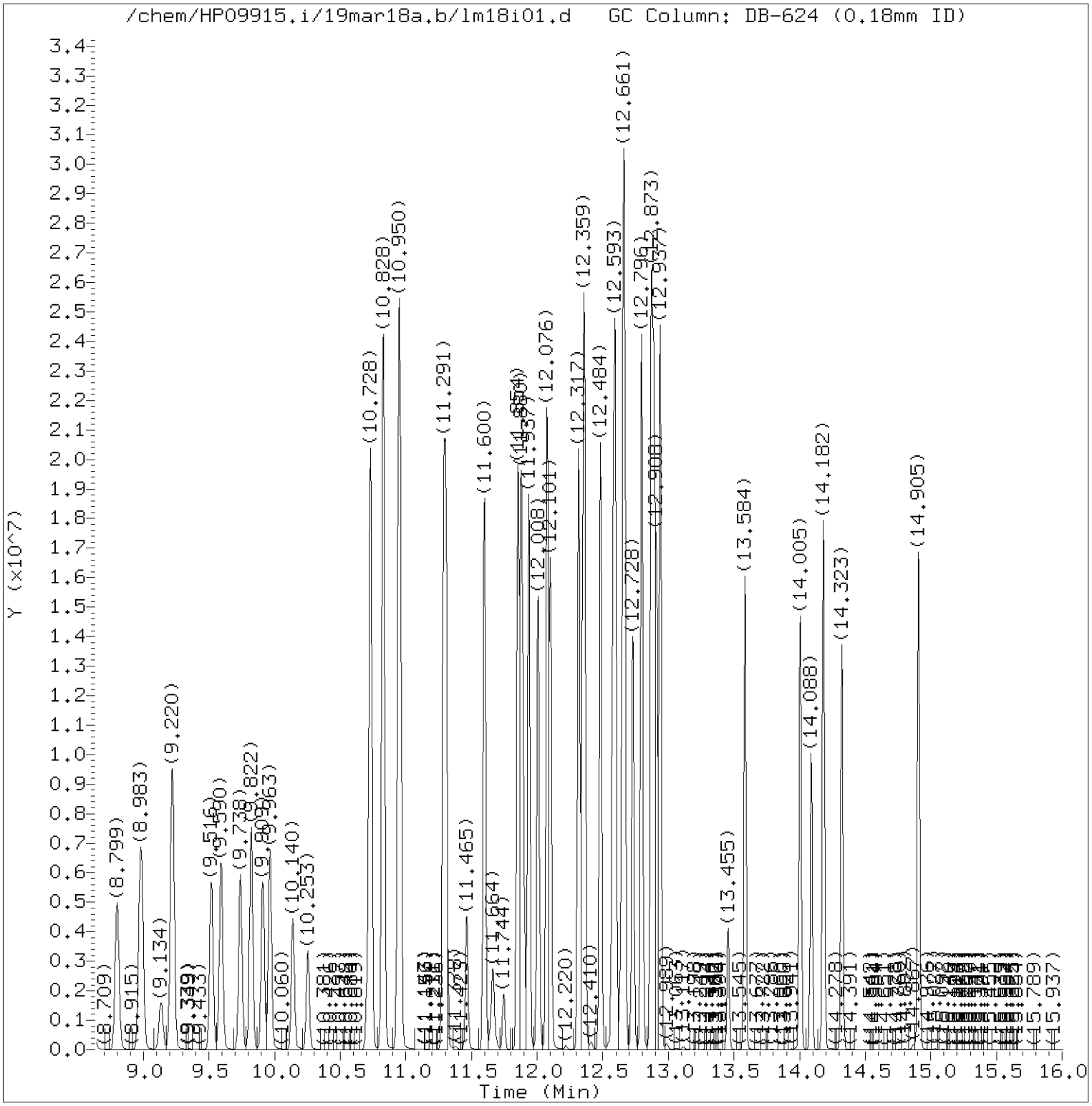
Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i01.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:37 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 20:59
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:01.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i01.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:37 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 20:59
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:01.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i01.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:37 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 20:59
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.706	85	3481246	288.643
4) Chloromethane	(2)	1.867	50	3133984	280.600
5) 1,3-Butadiene	(2)	1.954	39	1598951	272.480
6) Vinyl Chloride	(2)	1.964	62	3123679	285.490
8) Bromomethane	(2)	2.224	94	2643414	277.693
9) Chloroethane	(2)	2.295	64	1766810	277.744
10) Dichlorofluoromethane	(2)	2.491	67	4277461	282.442
12) Trichlorofluoromethane	(2)	2.549	101	4099743	287.064
11) n-Pentane	(2)	2.578	43	2489270	282.691
14) Ethyl ether	(2)	2.745	59	1885141	282.505
15) Freon 123a	(2)	2.809	67	2295125	286.242
16) Acrolein	(1)	2.890	56	6946994	3296.174
17) 1,1-Dichloroethene	(2)	3.012	96	1532235	323.346
17) 1,1-Dichloroethene	(2)	3.012	63	788759	301.982
18) Acetone	(1)	3.021	58	530848	589.129
19) Freon 113	(2)	3.041	101	1599394	317.682
21) 2-Propanol	(1)	3.160	45	892273M	1481.311
22) Methyl Iodide	(2)	3.182	142	3177106	316.298
23) Carbon Disulfide	(2)	3.279	76	5129201	319.773
27) Methyl Acetate	(2)	3.375	43	2105838	296.006
25) Allyl Chloride	(2)	3.407	41	2981364	294.015
29)*t-Butyl alcohol-d10	(1)	3.555	65	270115M	250.000
28) Methylene Chloride	(2)	3.568	84	1780705	301.778
30) t-Butyl alcohol	(1)	3.664	59	1644472	1474.019
31) Acrylonitrile	(2)	3.828	53	1063792	285.876
33) Methyl Tertiary Butyl Ether	(2)	3.902	73	5454872	290.838
32) trans-1,2-Dichloroethene	(2)	3.922	96	1821831	320.847
34) n-Hexane	(2)	4.304	57	2311834	301.987
36) 1,1-Dichloroethane	(2)	4.545	63	3321158	309.654
38) di-Isopropyl ether	(2)	4.603	45	5984544	295.124
39) 2-Chloro-1,3-butadiene	(2)	4.658	53	3118882	310.273
40) Ethyl t-butyl ether	(2)	5.163	59	5402803	277.265
44) 2-Butanone	(2)	5.365	43	2950926	574.014
42) cis-1,2-Dichloroethene	(2)	5.401	96	2138544	326.235
45) 2,2-Dichloropropane	(2)	5.420	77	2950631	323.059
47) Propionitrile	(1)	5.449	54	2135630	1636.871
48) Methacrylonitrile	(2)	5.677	67	3076196	800.571
49) Bromochloromethane	(2)	5.748	128	1228604	327.310

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:01.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i01.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:37 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 20:59
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.754	71	806916	646.496
51) Chloroform	(2)	5.905	83	3353459	311.128
52)$Dibromofluoromethane	(2)	6.127	113	354611	49.708
52)$Dibromofluoromethane	(2)	6.131	111	363053	49.672
53) 1,1,1-Trichloroethane	(2)	6.134	97	2907219	314.487
43) 1,2-Dichloroethene (Total)	(2)		96	3960375	647.082
54) Cyclohexane	(2)	6.246	56	2973771	297.680
54) Cyclohexane	(2)	6.246	84	2590982	305.324
54) Cyclohexane	(2)	6.243	69	921850	302.780
55) 1,1-Dichloropropene	(2)	6.352	75	2652684	320.575
56) Carbon Tetrachloride	(2)	6.356	117	2616083	344.639
58) Isobutyl Alcohol	(1)	6.513	41	1388929	3772.504
57)$1,2-Dichloroethane-d4	(2)	6.603	102	83838	50.141
57)$1,2-Dichloroethane-d4	(2)	6.600	65	457646	48.898
57)$1,2-Dichloroethane-d4	(2)	6.597	104	54296	50.843
60) Benzene	(2)	6.619	78	7462624	313.274
61) 1,2-Dichloroethane	(2)	6.706	62	2831320	296.287
61) 1,2-Dichloroethane	(2)	6.706	98	232928	398.366
65) t-Amyl methyl ether	(2)	6.828	73	5354533	276.488
66)*Fluorobenzene	(2)	7.044	96	1387654	50.000
67) n-Heptane	(2)	7.066	43	2632618	305.552
69) n-Butanol	(1)	7.420	56	2173792	8158.442
71) Trichloroethene	(2)	7.536	95	2068538	322.257
72) Methylcyclohexane	(2)	7.854	83	3627040	328.174
72) Methylcyclohexane	(2)	7.854	98	1699082	330.354
73) 1,2-Dichloropropane	(2)	7.876	63	2153905	332.252
75) 1,4-Dioxane	(1)	7.966	88	289536M	4126.317
76) Methyl Methacrylate	(2)	7.970	69	2124012	339.530
74) Dibromomethane	(2)	7.986	93	1501100	334.841
78) Bromodichloromethane	(2)	8.230	83	2651554	342.763
79) 2-Nitropropane	(2)	8.491	41	1874291	698.632
80) 2-Chloroethyl Vinyl Ether	(2)	8.610	63	1692966	324.901
81) cis-1,3-Dichloropropene	(2)	8.799	75	3405502	349.228
82) 4-Methyl-2-pentanone	(2)	8.983	43	6259296	577.141
83)$Toluene-d8	(3)	9.134	98	1364393	47.645
83)$Toluene-d8	(3)	9.137	100	884580	47.820
88) Toluene	(3)	9.220	92	5132555	323.513
89) trans-1,3-Dichloropropene	(3)	9.516	75	3384082	357.585

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:01.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i01.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:37 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 20:59
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	9.593	69	3677931	330.834
92) 1,1,2-Trichloroethane	(3)	9.738	97	1938696	323.207
93) Tetrachloroethene	(3)	9.822	166	2243785	325.187
94) 1,3-Dichloropropane	(3)	9.909	76	3343603	316.193
96) 2-Hexanone	(3)	9.963	43	4583339	561.644
90) 1,3-Dichloropropene (total)	(3)		100	6789584	706.813
97) Dibromochloromethane	(3)	10.140	129	2357956	380.894
99) 1,2-Dibromoethane	(3)	10.253	107	2238707	328.273
100)*Chlorobenzene-d5	(3)	10.706	117	1112746	50.000
101) 1-Chlorohexane	(3)	10.728	91	3083500	325.793
102) Chlorobenzene	(3)	10.732	112	6601505	345.910
103) 1,1,1,2-Tetrachloroethane	(3)	10.825	131	2445069	382.254
104) Ethylbenzene	(3)	10.828	91	10704923	333.104
106) m+p-Xylene	(3)	10.950	106	8759599	693.080
107) o-Xylene	(3)	11.288	106	4409815	352.853
109) Styrene	(3)	11.304	104	7529655	359.295
110) Bromoform	(3)	11.465	173	1807178	299.910
111) Isopropylbenzene	(3)	11.600	105	10649146	333.000
112) Cyclohexanone	(1)	11.664	55	1071903A	3838.811
114)$4-Bromofluorobenzene	(3)	11.744	95	538331	48.578
114)$4-Bromofluorobenzene	(3)	11.748	174	437794	48.643
108) Xylene (Total)	(3)		106	13169414	1045.932
116) 1,1,2,2-Tetrachloroethane	(4)	11.851	83	3575610	317.254
115) Bromobenzene	(4)	11.857	156	3159788	350.206
118) trans-1,4-Dichloro-2-butene	(4)	11.880	53	2669189	737.882
117) 1,2,3-Trichloropropane	(4)	11.896	110	1087008	316.826
119) n-Propylbenzene	(4)	11.937	91	11726239	294.360
120) 2-Chlorotoluene	(4)	12.008	126	2752963	326.517
122) 1,3,5-Trimethylbenzene	(4)	12.076	105	9732839	326.325
121) 4-Chlorotoluene	(4)	12.101	126	2967391	334.637
124) tert-Butylbenzene	(4)	12.317	134	2344399	334.970
125) Pentachloroethane	(4)	12.349	167	2037555	375.941
126) 1,2,4-Trimethylbenzene	(4)	12.362	105	10096394	323.833
127) sec-Butylbenzene	(4)	12.484	105	11313981	304.729
129) 1,3-Dichlorobenzene	(4)	12.577	146	5730966	333.909
130) p-Isopropyltoluene	(4)	12.597	119	10712552	318.466
131)*1,4-Dichlorobenzene-d4	(4)	12.638	152	656226	50.000
133) 1,4-Dichlorobenzene	(4)	12.654	146	5883764	322.798

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:01.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i01.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:37 Analyst ID: APR27582

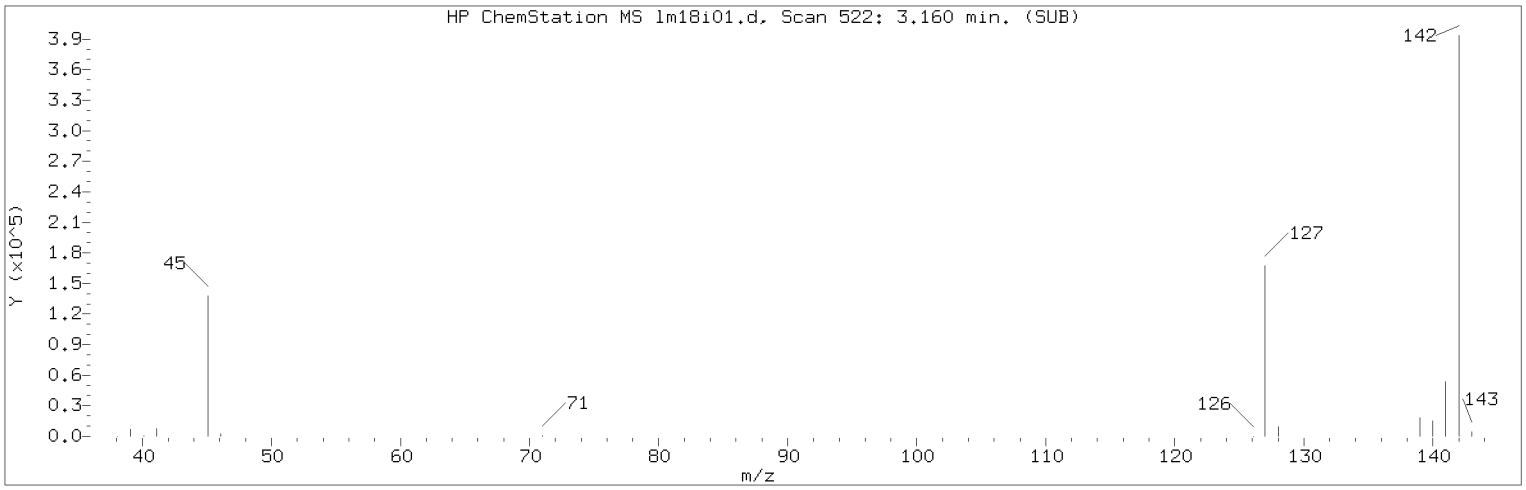
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 20:59
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

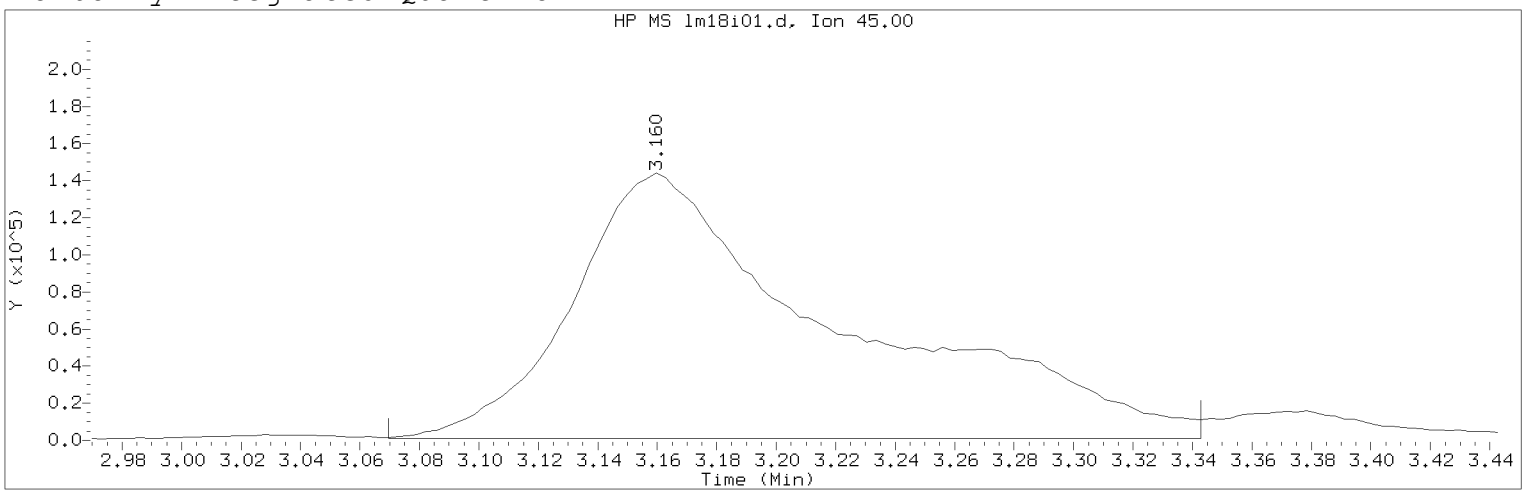
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	12.667	105	10711234	311.778
135) Benzyl Chloride	(4)	12.728	91	7937520	349.838
136) 1,3-Diethylbenzene	(4)	12.796	119	6778180	319.267
137) 1,4-Diethylbenzene	(4)	12.870	119	7262248	316.318
139) n-Butylbenzene	(4)	12.889	92	5328394	312.062
138) 1,2-Dichlorobenzene	(4)	12.908	146	5750047	335.732
140) 1,2-Diethylbenzene	(4)	12.937	119	5716047	318.205
141) Diethylbenzene (total)	(4)		100	19756475	953.790
142) 1,2-Dibromo-3-chloropropane	(4)	13.455	75	816731	322.046
144) 1,3,5-Trichlorobenzene	(4)	13.584	180	4006827	304.151
146) 1,2,4-Trichlorobenzene	(4)	14.005	180	3674563	292.106
147) Hexachlorobutadiene	(4)	14.088	225	1396169	277.089
148) Naphthalene	(4)	14.182	128	11206508	280.630
149) 1,2,3-Trichlorobenzene	(4)	14.323	180	3363410	280.423
150) 2-Methylnaphthalene	(4)	14.905	142	6608260	271.651

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:01.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i01.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:37 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 20:59
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

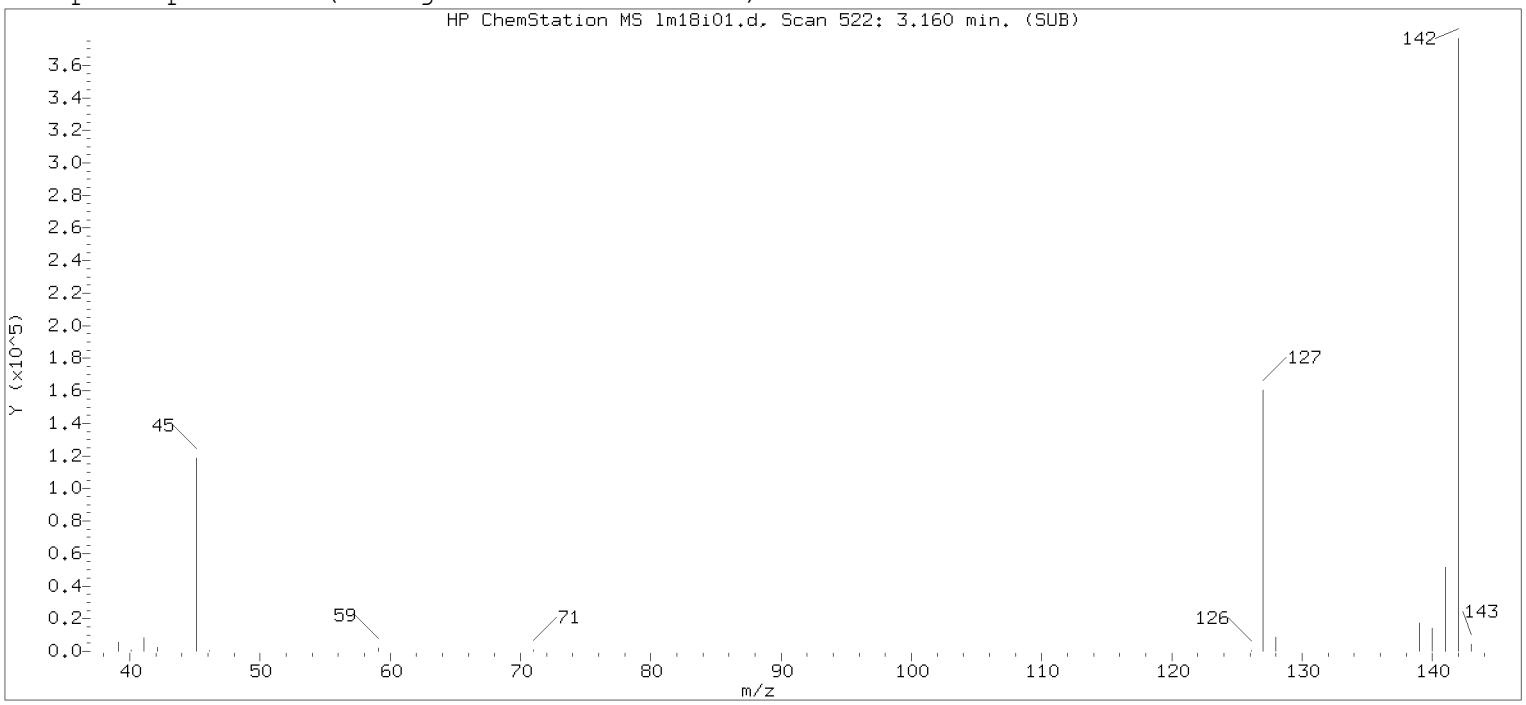
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 522
Retention Time (minutes): 3.160
Quant Ion : 45.00
Area (flag) : 892273M
On-Column Amount (ng) : 1481.3106
Integration start scan : 493 Integration stop scan: 578
Y at integration start : 871 Y at integration end: 871

Reason for manual integration: improper integration

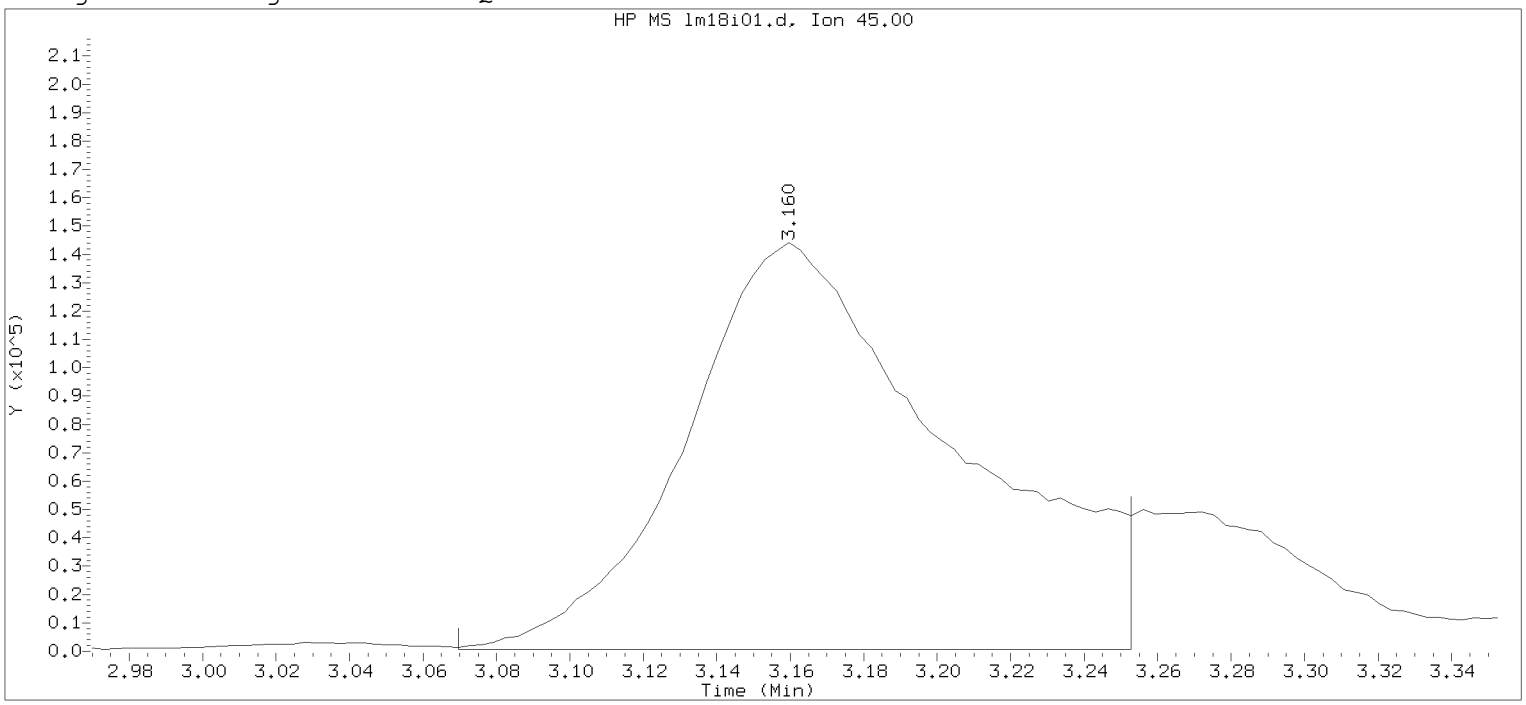
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:01.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i01.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:37 Analyst ID: APR27582

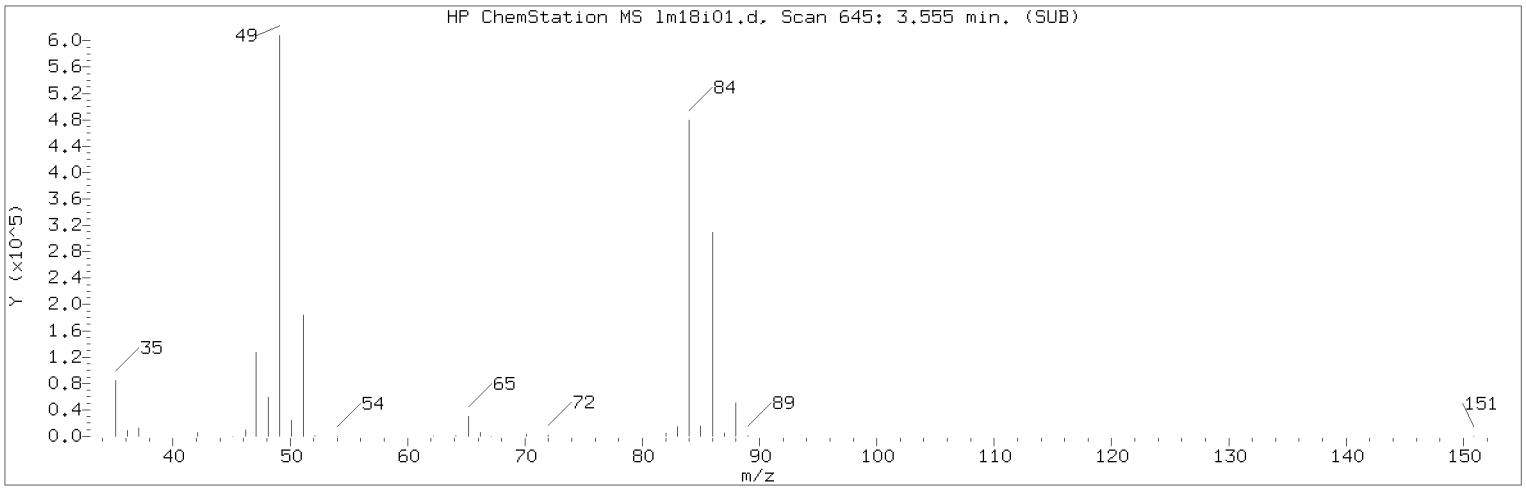
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:13
Date, time and analyst ID of latest file update: 18-Mar-2019 14:14 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

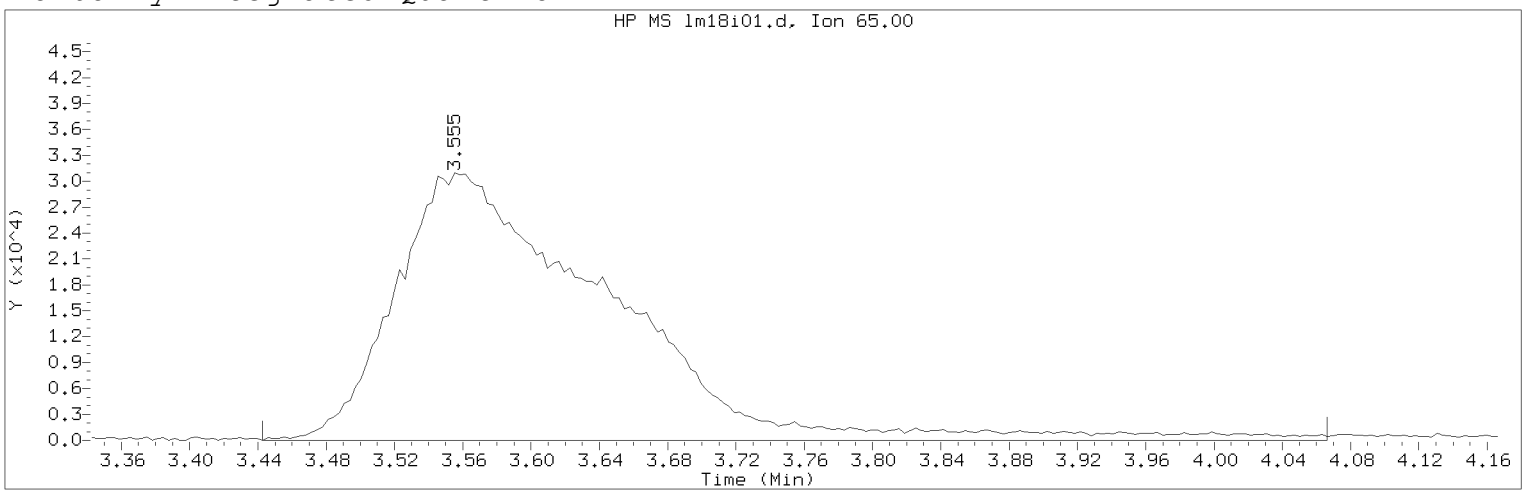
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 522
Retention Time (minutes): 3.160
Quant Ion : 45.00
Area : 725580
On-column Amount (ng) : 1500.0000
Integration start scan : 493 Integration stop scan: 550
Y at integration start : 713 Y at integration end: 713

Digitally signed by Kevin Kelly on 03/18/2019 at 21:01.
Target 3.5 esignature user ID: kk10022

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i01.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:37 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 20:59
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

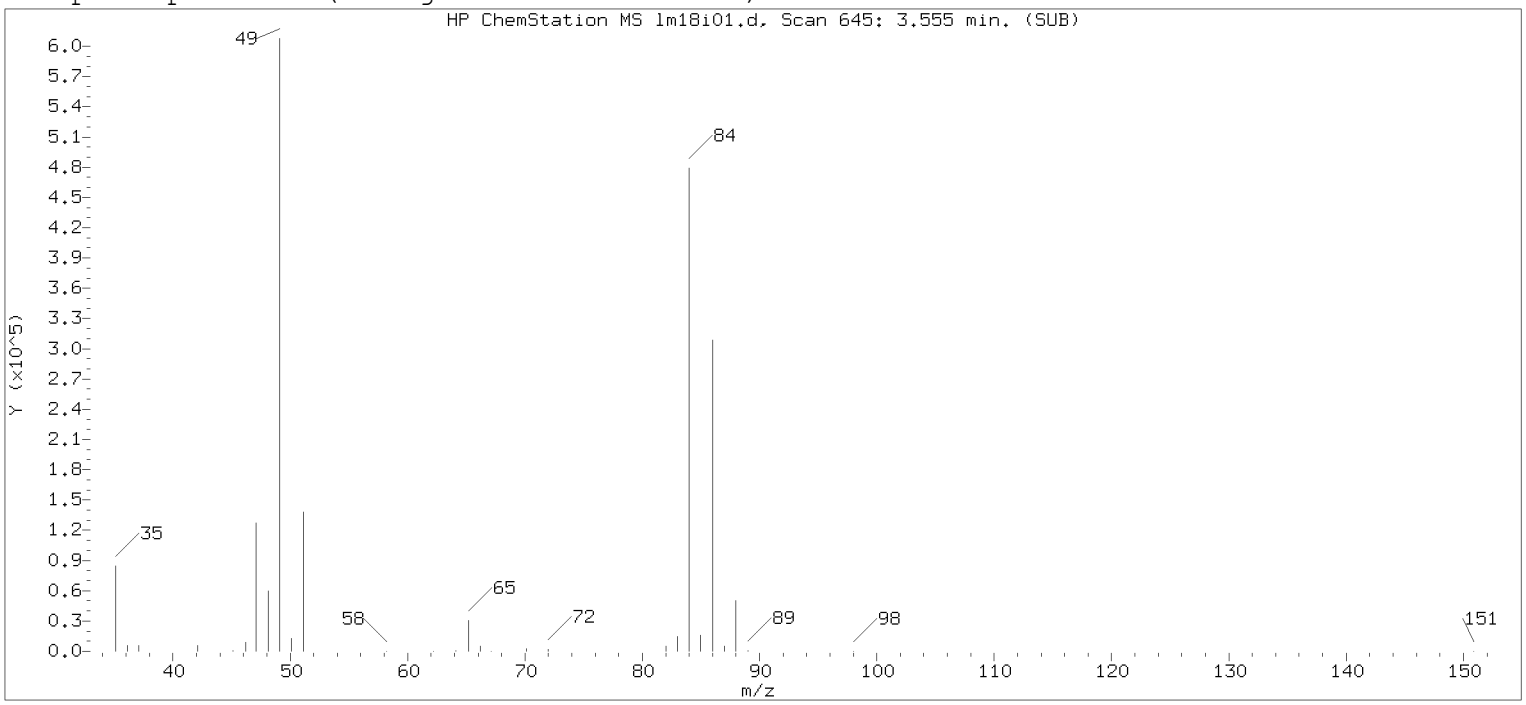
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 645
Retention Time (minutes): 3.555
Quant Ion : 65.00
Area (flag) : 270115M
On-Column Amount (ng) : 250.0000
Integration start scan : 609 Integration stop scan: 803
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

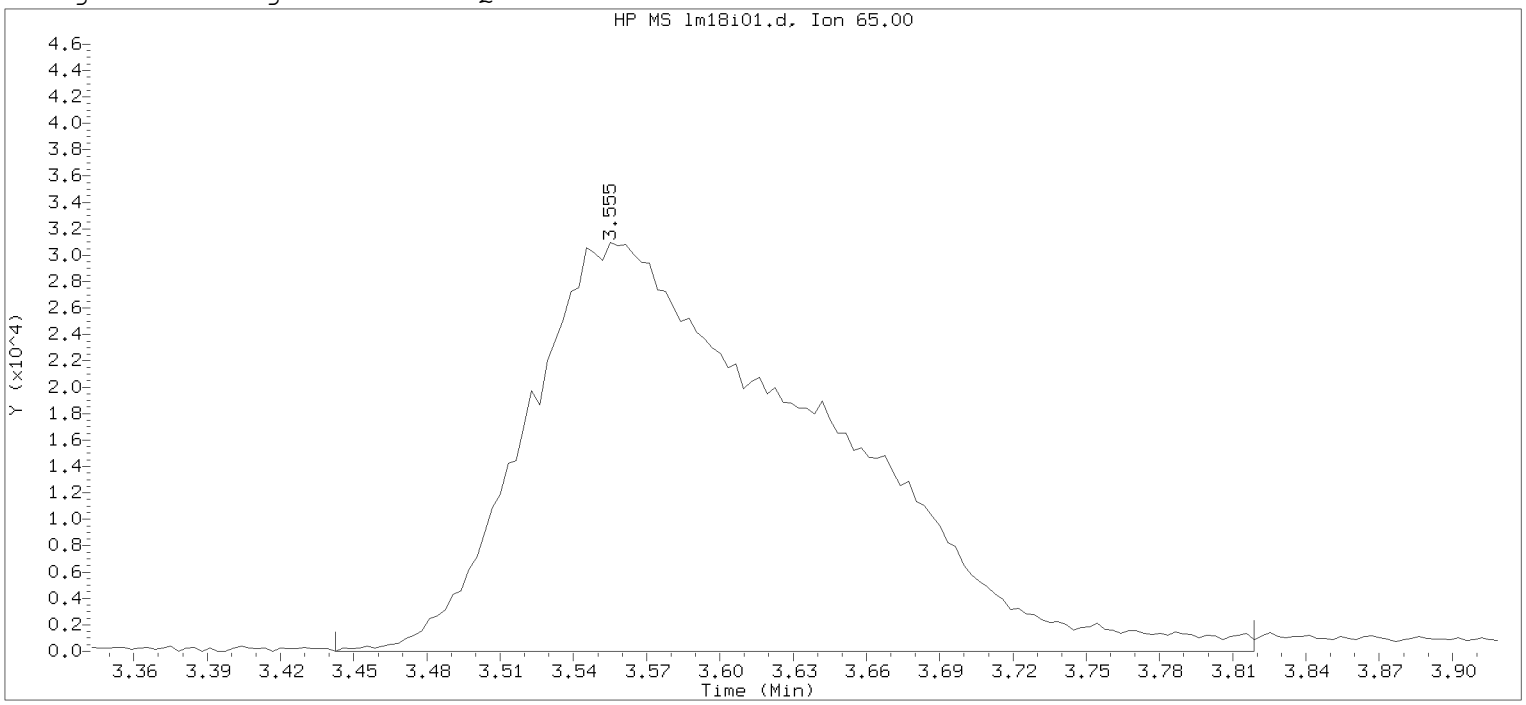
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:01.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i01.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:37 Analyst ID: APR27582

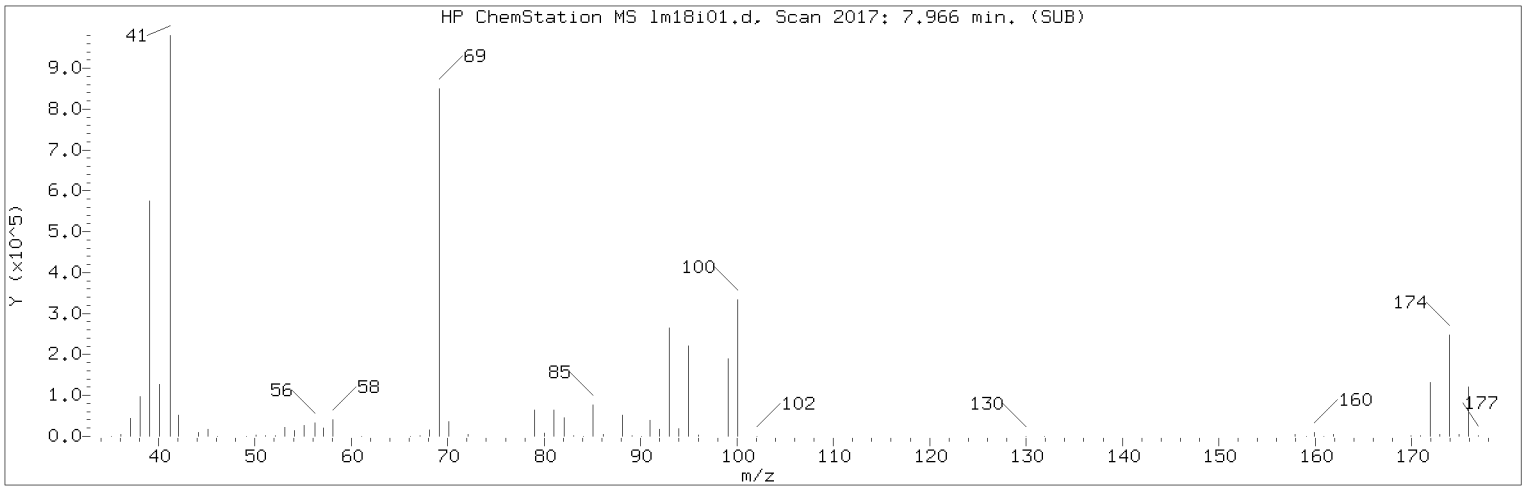
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:13
Date, time and analyst ID of latest file update: 18-Mar-2019 14:14 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

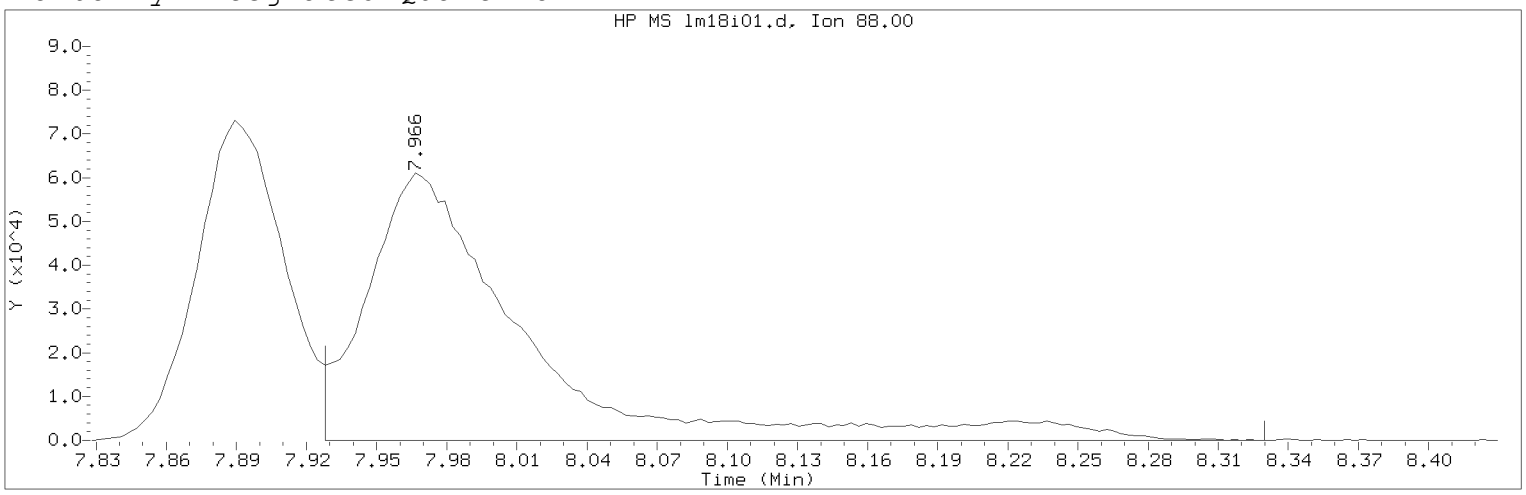
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 645
Retention Time (minutes): 3.555
Quant Ion : 65.00
Area : 257853
On-column Amount (ng) : 250.0000
Integration start scan : 609 Integration stop scan: 726
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:01.
Target 3.5 esignature user: KKELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i01.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:37 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 20:59
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

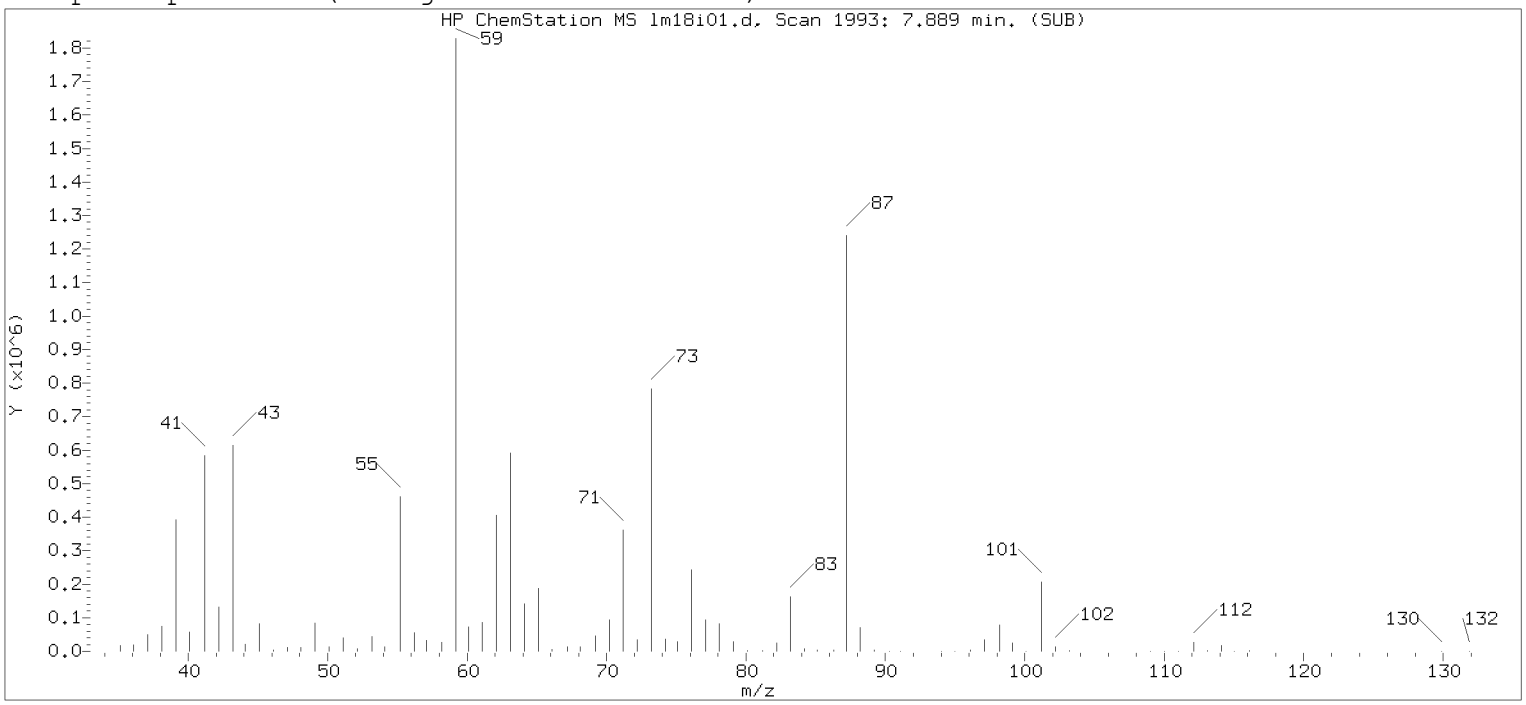
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2017
Retention Time (minutes): 7.966
Quant Ion : 88.00
Area (flag) : 289536M
On-Column Amount (ng) : 4126.3174
Integration start scan : 2004 Integration stop scan: 2129
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

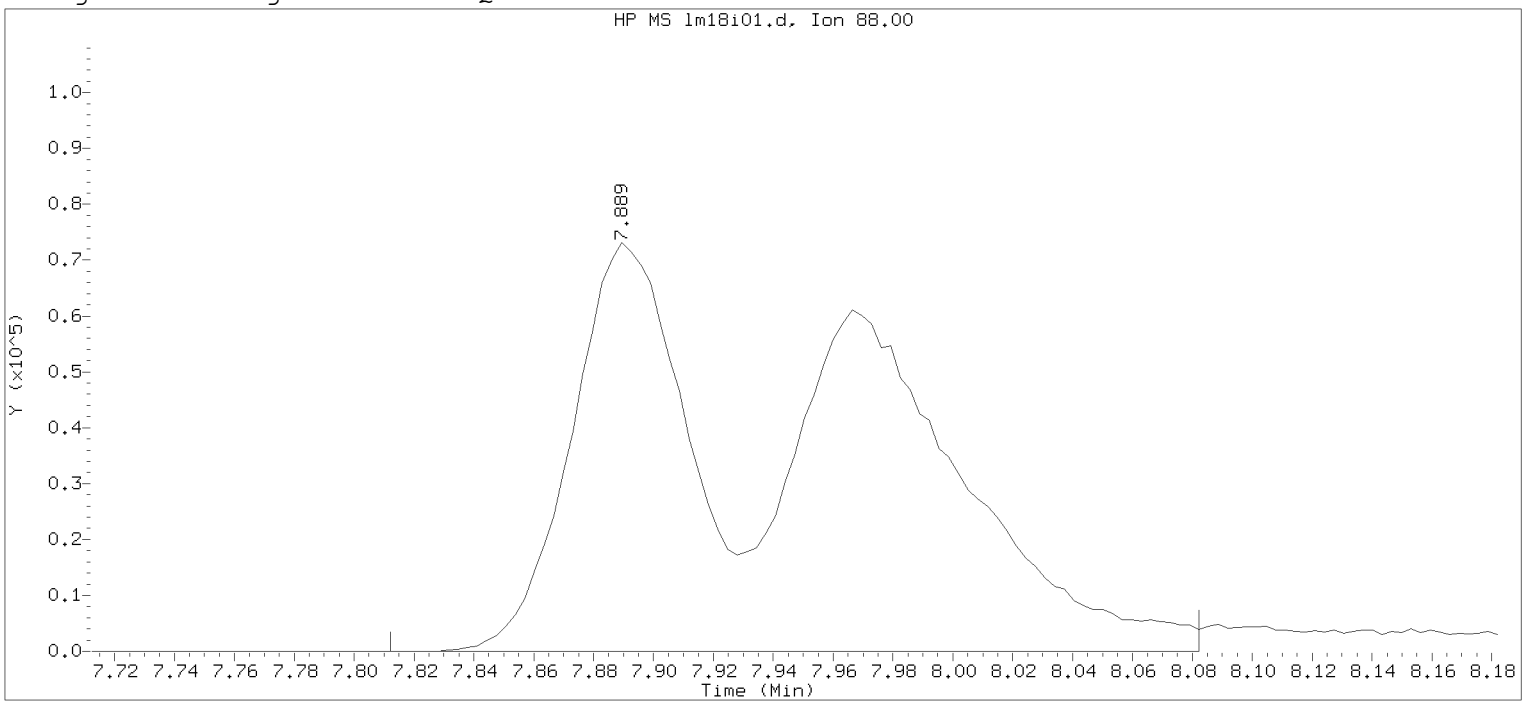
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:01.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i01.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:37 Analyst ID: APR27582

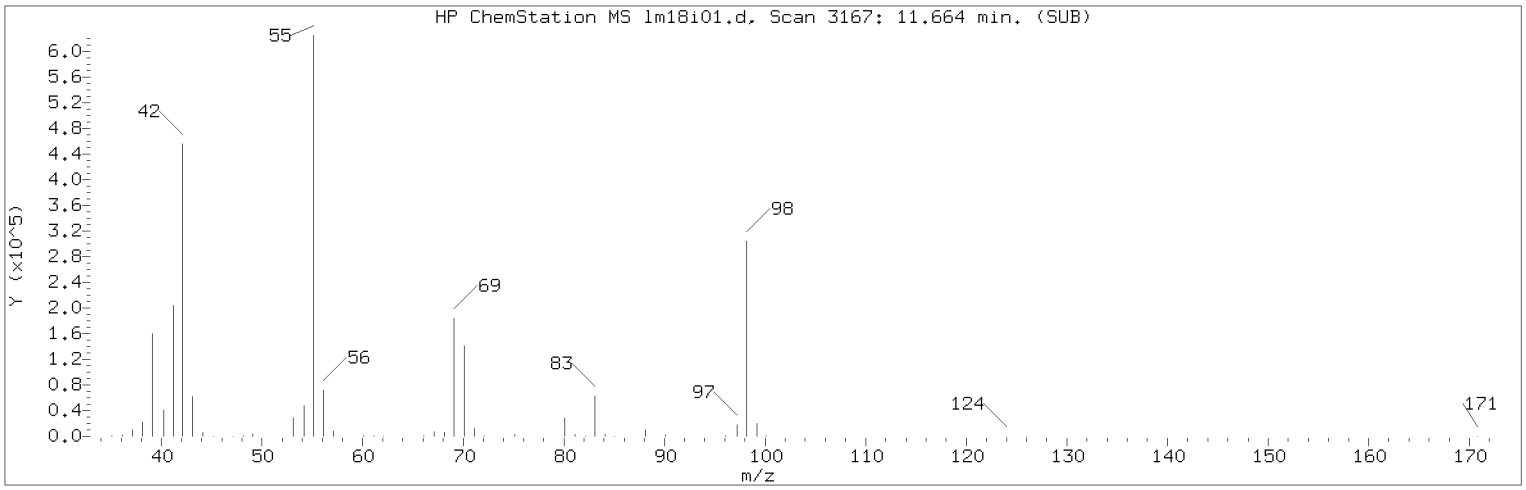
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:13
Date, time and analyst ID of latest file update: 18-Mar-2019 14:14 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

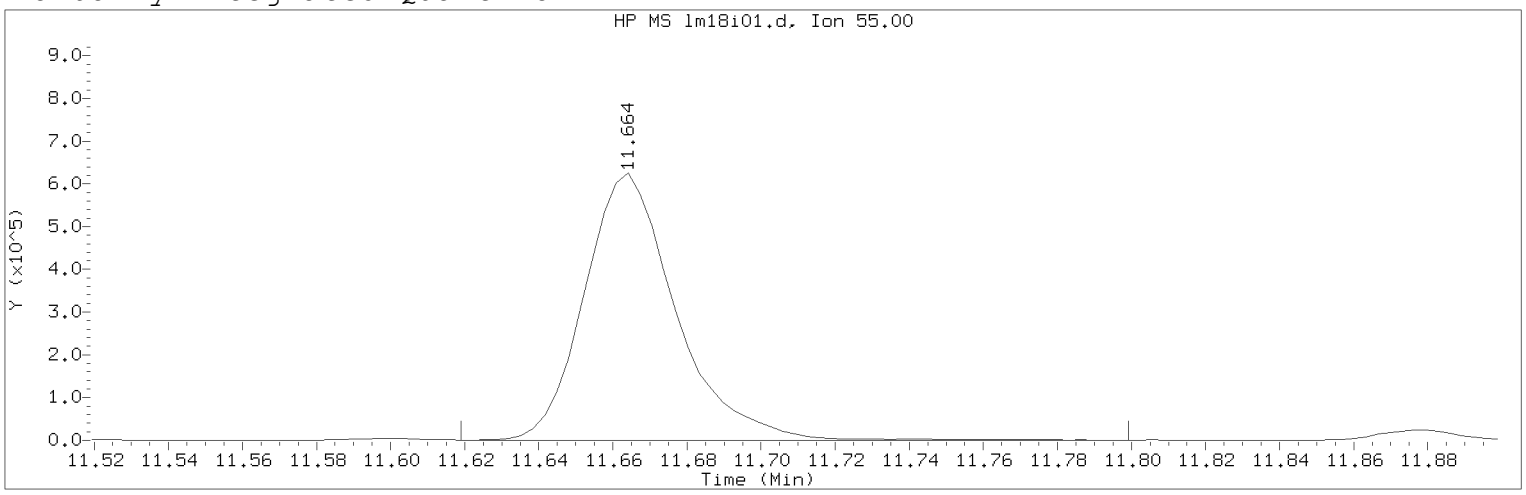
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1993
Retention Time (minutes): 7.889
Quant Ion : 88.00
Area : 435818
On-column Amount (ng) : 3750.0000
Integration start scan : 1968 Integration stop scan: 2052
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:01.
Target 3.5 esignature user ID: kkelly100

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i01.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:37 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 20:59
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

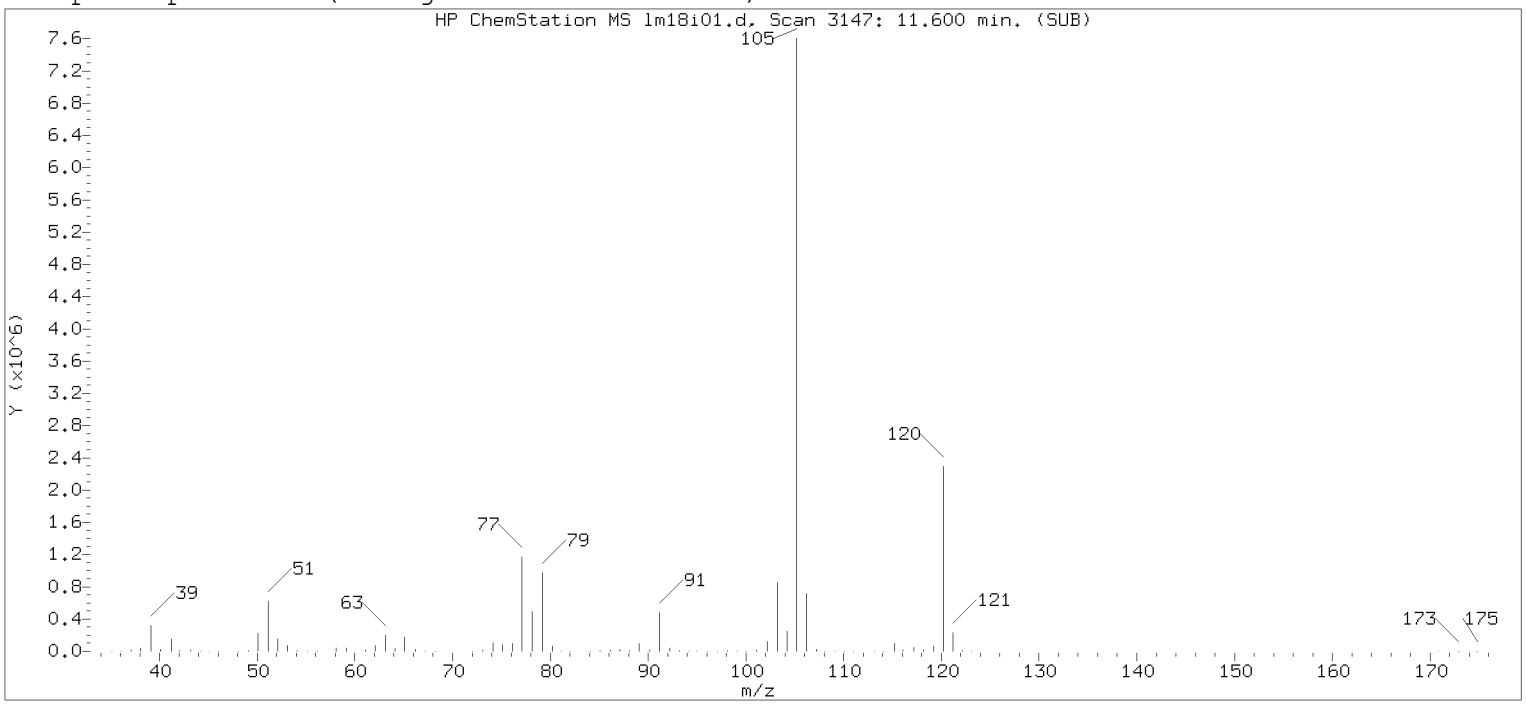
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 3167
Retention Time (minutes): 11.664
Quant Ion : 55.00
Area (flag) : 1071903A
On-Column Amount (ng) : 3838.8115
Integration start scan : 3152 Integration stop scan: 3208
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

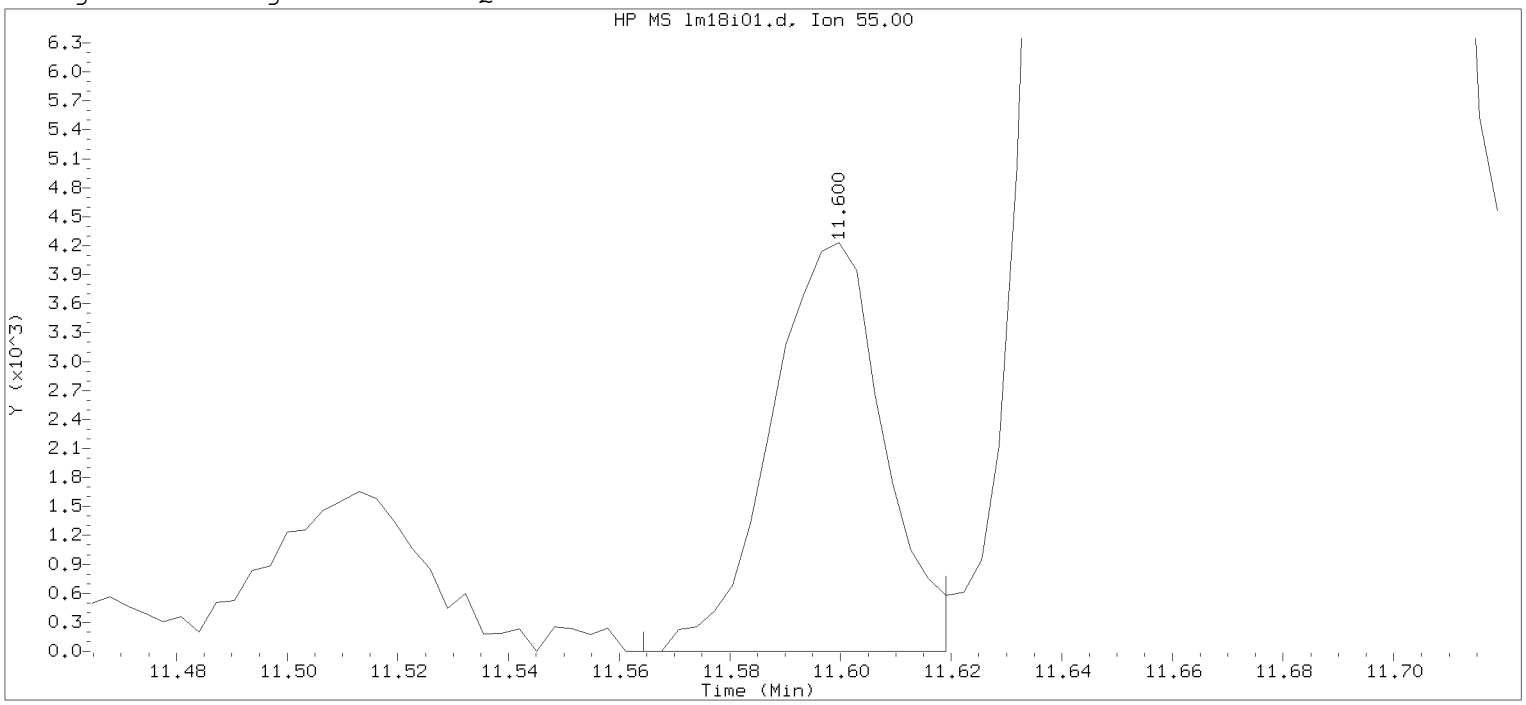
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:01.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



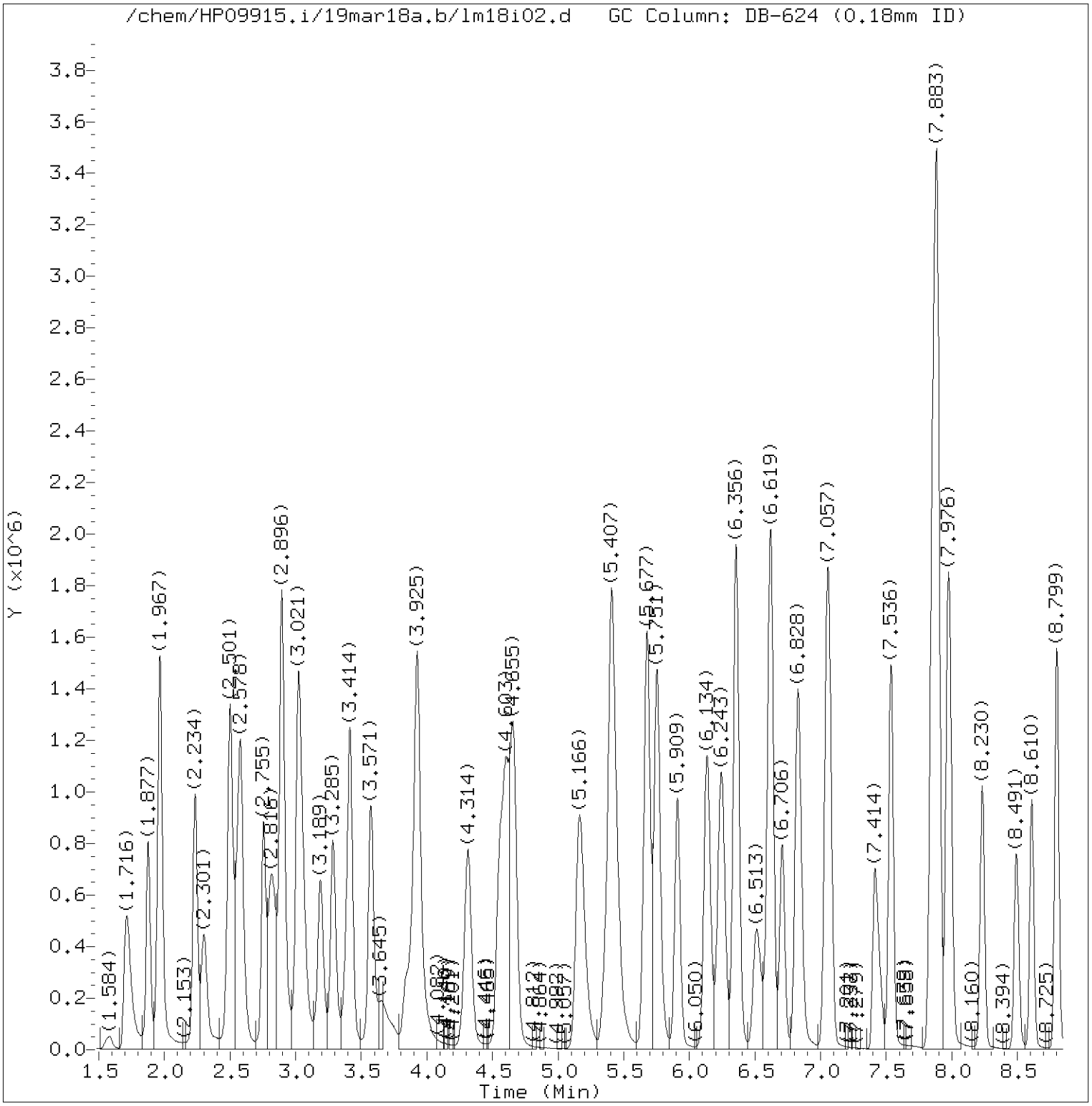
Data File: /chem/HP09915.i/19mar18a.b/lm18i01.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:37 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:13
Date, time and analyst ID of latest file update: 18-Mar-2019 14:14 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 3147
Retention Time (minutes): 11.600
Quant Ion : 55.00
Area : 5940
On-column Amount (ng) : 3750.0000
Integration start scan : 3135 Integration stop scan: 3152
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:01.
Target 3.5 esignature user ID: KKELLY



Total Ion Chromatogram (TIC)

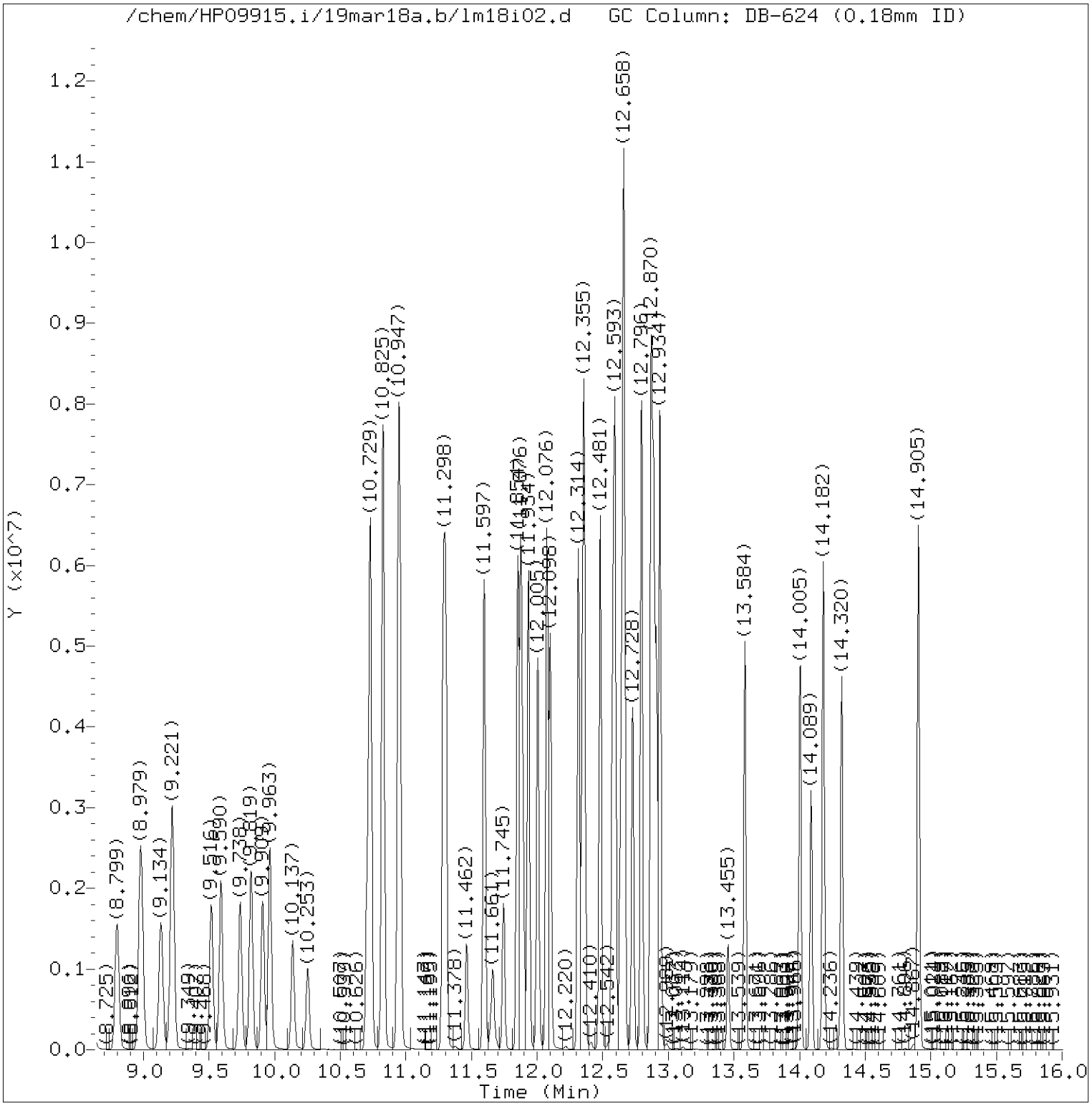
Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:59 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:01.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:59 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:01.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:59 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.713	85	1134956	97.004
4) Chloromethane	(2)	1.877	50	1072160	98.955
5) 1,3-Butadiene	(2)	1.960	39	539536	94.778
6) Vinyl Chloride	(2)	1.970	62	1052022	99.114
8) Bromomethane	(2)	2.234	94	921649	99.805
9) Chloroethane	(2)	2.304	64	607121	98.382
10) Dichlorofluoromethane	(2)	2.501	67	1462708	99.560
12) Trichlorofluoromethane	(2)	2.558	101	1345113	97.088
11) n-Pentane	(2)	2.584	43	831757	97.369
14) Ethyl ether	(2)	2.755	59	641248	99.059
15) Freon 123a	(2)	2.816	67	751436	96.606
16) Acrolein	(1)	2.896	56	2426909	1079.664
17) 1,1-Dichloroethene	(2)	3.021	96	481200	104.677
17) 1,1-Dichloroethene	(2)	3.018	63	254959	100.622
18) Acetone	(1)	3.031	58	184991	192.492
19) Freon 113	(2)	3.047	101	502846M	102.957
21) 2-Propanol	(1)	3.166	45	318278M	495.424
22) Methyl Iodide	(2)	3.189	142	1035316	106.249
23) Carbon Disulfide	(2)	3.285	76	1667916	107.189
27) Methyl Acetate	(2)	3.382	43	713991	103.456
25) Allyl Chloride	(2)	3.417	41	1020624	103.754
28) Methylene Chloride	(2)	3.571	84	586052	102.381
29)*t-Butyl alcohol-d10	(1)	3.571	65	288089M	250.000
30) t-Butyl alcohol	(1)	3.668	59	604857	508.337
31) Acrylonitrile	(2)	3.841	53	376284	104.237
33) Methyl Tertiary Butyl Ether	(2)	3.909	73	1858059	102.120
32) trans-1,2-Dichloroethene	(2)	3.928	96	579875	105.271
34) n-Hexane	(2)	4.311	57	750556	101.065
36) 1,1-Dichloroethane	(2)	4.552	63	1090271	104.787
38) di-Isopropyl ether	(2)	4.603	45	2043777	103.895
39) 2-Chloro-1,3-butadiene	(2)	4.664	53	1020518	104.653
40) Ethyl t-butyl ether	(2)	5.166	59	1900380	100.531
44) 2-Butanone	(2)	5.372	43	1050641	210.671
42) cis-1,2-Dichloroethene	(2)	5.404	96	673068	105.842
45) 2,2-Dichloropropane	(2)	5.420	77	952851	107.542
47) Propionitrile	(1)	5.449	54	714015	513.119
48) Methacrylonitrile	(2)	5.677	67	981232	263.235
49) Bromochloromethane	(2)	5.751	128	391426	107.494

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:01.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:59 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.758	71	275883	207.245
51) Chloroform	(2)	5.909	83	1094357	104.662
52)$Dibromofluoromethane	(2)	6.131	113	345417	49.911
52)$Dibromofluoromethane	(2)	6.131	111	356100	50.223
53) 1,1,1-Trichloroethane	(2)	6.134	97	942961	105.149
43) 1,2-Dichloroethene (Total)	(2)		96	1252943	211.113
54) Cyclohexane	(2)	6.240	56	957339	98.785
54) Cyclohexane	(2)	6.243	84	826967	100.455
54) Cyclohexane	(2)	6.243	69	293602	99.406
56) Carbon Tetrachloride	(2)	6.356	117	813856	110.521
55) 1,1-Dichloropropene	(2)	6.356	75	836705	104.232
58) Isobutyl Alcohol	(1)	6.516	41	487083	1240.437
57)$1,2-Dichloroethane-d4	(2)	6.600	102	81487	50.237
57)$1,2-Dichloroethane-d4	(2)	6.600	65	455137	50.129
57)$1,2-Dichloroethane-d4	(2)	6.600	104	51510	49.721
60) Benzene	(2)	6.623	78	2411781	104.365
61) 1,2-Dichloroethane	(2)	6.709	62	939808	101.379
61) 1,2-Dichloroethane	(2)	6.709	98	74341	131.061
65) t-Amyl methyl ether	(2)	6.828	73	1915595	101.963
66)*Fluorobenzene	(2)	7.044	96	1346157	50.000
67) n-Heptane	(2)	7.066	43	820936	98.218
69) n-Butanol	(1)	7.414	56	768143	2703.045
71) Trichloroethene	(2)	7.539	95	651543	104.633
72) Methylcyclohexane	(2)	7.851	83	1108607	103.399
72) Methylcyclohexane	(2)	7.854	98	514020	103.022
73) 1,2-Dichloropropane	(2)	7.877	63	666241	105.940
76) Methyl Methacrylate	(2)	7.970	69	655273	107.976
75) 1,4-Dioxane	(1)	7.973	88	99864M	1334.415
74) Dibromomethane	(2)	7.989	93	467394	107.472
78) Bromodichloromethane	(2)	8.230	83	844459	112.527
79) 2-Nitropropane	(2)	8.494	41	644074	247.476
80) 2-Chloroethyl Vinyl Ether	(2)	8.606	63	546927	108.198
81) cis-1,3-Dichloropropene	(2)	8.799	75	1071662	113.285
82) 4-Methyl-2-pentanone	(2)	8.979	43	2290379	217.695
83)$Toluene-d8	(3)	9.134	98	1362296	49.802
83)$Toluene-d8	(3)	9.134	100	881897	49.911
88) Toluene	(3)	9.221	92	1590510	104.953
89) trans-1,3-Dichloropropene	(3)	9.516	75	1052148	116.389

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:01.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:59 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	9.590	69	1166002	109.800
92) 1,1,2-Trichloroethane	(3)	9.738	97	606493	105.851
93) Tetrachloroethene	(3)	9.822	166	682538	103.557
94) 1,3-Dichloropropane	(3)	9.909	76	1058777	104.819
96) 2-Hexanone	(3)	9.963	43	1752862	224.867
90) 1,3-Dichloropropene (total)	(3)		100	2123810	229.674
97) Dibromochloromethane	(3)	10.137	129	707492	119.643
99) 1,2-Dibromoethane	(3)	10.253	107	702414	107.827
100)*Chlorobenzene-d5	(3)	10.703	117	1062913	50.000
101) 1-Chlorohexane	(3)	10.725	91	911749	100.849
102) Chlorobenzene	(3)	10.732	112	1950893	107.017
103) 1,1,1,2-Tetrachloroethane	(3)	10.825	131	715521	117.107
104) Ethylbenzene	(3)	10.828	91	3314309	107.966
106) m+p-Xylene	(3)	10.947	106	2642390	218.874
107) o-Xylene	(3)	11.285	106	1304822	109.301
109) Styrene	(3)	11.304	104	2237308	111.763
110) Bromoform	(3)	11.462	173	526229	101.451
111) Isopropylbenzene	(3)	11.597	105	3292592	107.787
112) Cyclohexanone	(1)	11.661	55	382003	1282.715
114)$4-Bromofluorobenzene	(3)	11.745	95	526285	49.718
114)$4-Bromofluorobenzene	(3)	11.745	174	426813	49.646
108) Xylene (Total)	(3)		106	3947212	328.175
116) 1,1,2,2-Tetrachloroethane	(4)	11.851	83	1075542	104.375
115) Bromobenzene	(4)	11.854	156	880438	106.728
118) trans-1,4-Dichloro-2-butene	(4)	11.876	53	913731	276.273
117) 1,2,3-Trichloropropane	(4)	11.892	110	324560	103.466
119) n-Propylbenzene	(4)	11.934	91	3785625	103.937
120) 2-Chlorotoluene	(4)	12.005	126	810736	105.172
122) 1,3,5-Trimethylbenzene	(4)	12.076	105	2936084	107.669
121) 4-Chlorotoluene	(4)	12.101	126	860524	106.139
124) tert-Butylbenzene	(4)	12.317	134	684632	106.990
125) Pentachloroethane	(4)	12.346	167	595285	120.129
126) 1,2,4-Trimethylbenzene	(4)	12.359	105	3103853	108.885
127) sec-Butylbenzene	(4)	12.481	105	3596299	105.942
129) 1,3-Dichlorobenzene	(4)	12.577	146	1668511	106.327
130) p-Isopropyltoluene	(4)	12.593	119	3354360	109.067
131)*1,4-Dichlorobenzene-d4	(4)	12.635	152	599985	50.000
133) 1,4-Dichlorobenzene	(4)	12.655	146	1798585	107.924

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:01.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:59 Analyst ID: APR27582

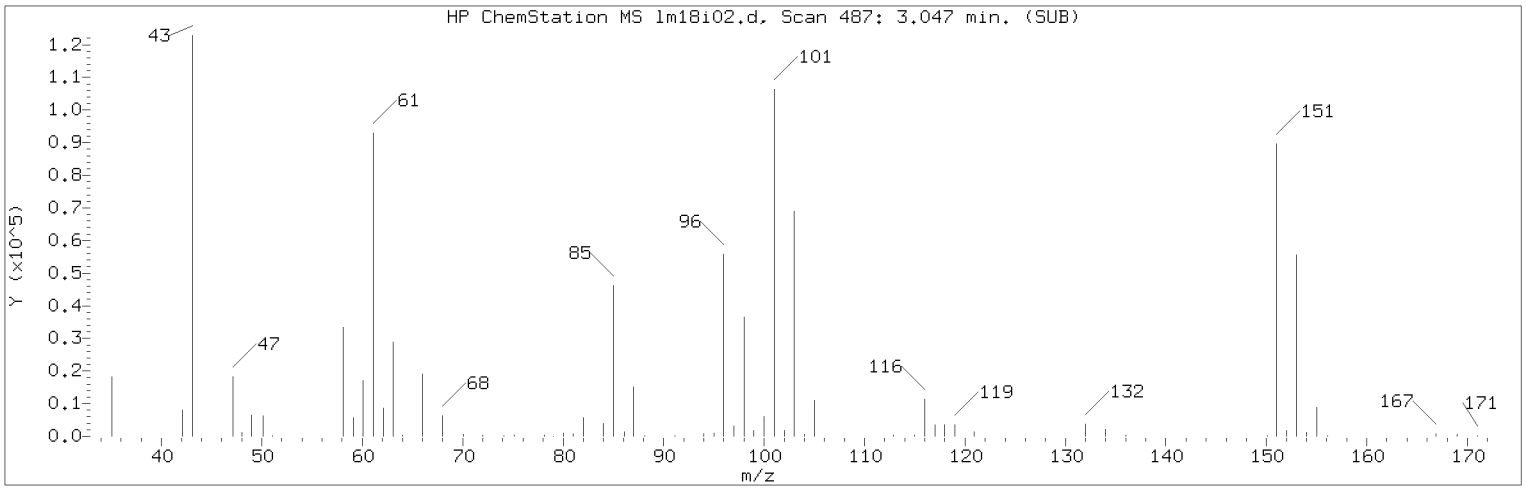
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

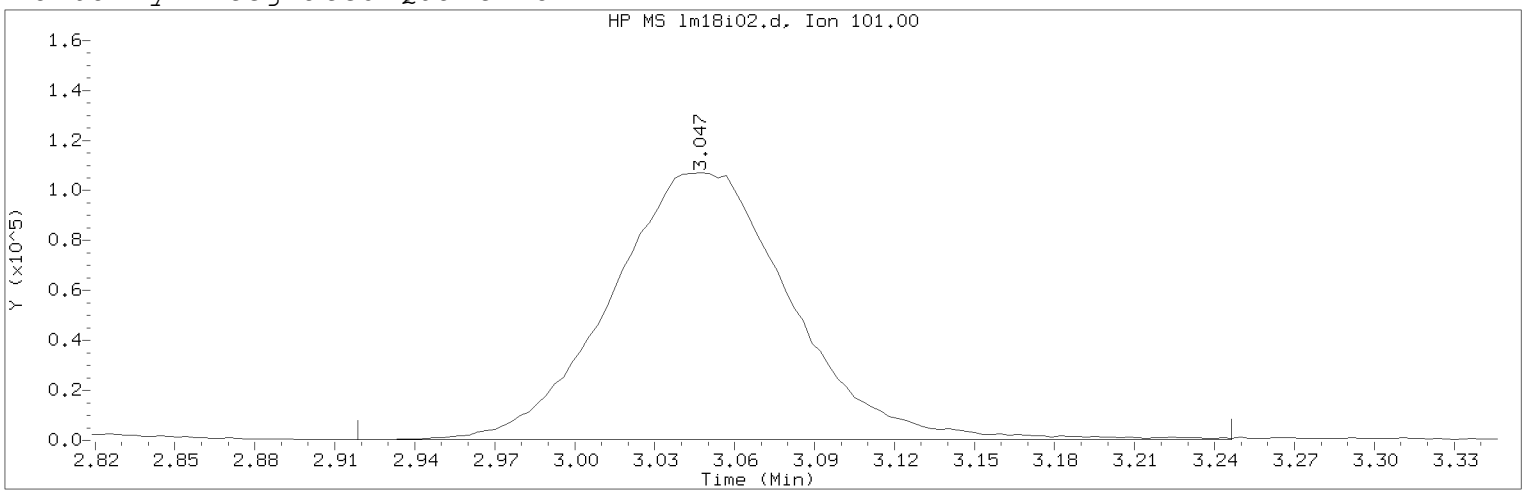
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	12.661	105	3554297	113.155
135) Benzyl Chloride	(4)	12.728	91	2400429	115.714
136) 1,3-Diethylbenzene	(4)	12.796	119	2157610	111.155
137) 1,4-Diethylbenzene	(4)	12.870	119	2331537	111.073
139) n-Butylbenzene	(4)	12.886	92	1646974	105.498
138) 1,2-Dichlorobenzene	(4)	12.909	146	1674358	106.926
140) 1,2-Diethylbenzene	(4)	12.937	119	1817404	110.656
141) Diethylbenzene (total)	(4)		100	6306551	332.884
142) 1,2-Dibromo-3-chloropropane	(4)	13.455	75	263541	113.658
144) 1,3,5-Trichlorobenzene	(4)	13.584	180	1242483	103.156
146) 1,2,4-Trichlorobenzene	(4)	14.005	180	1170149	101.739
147) Hexachlorobutadiene	(4)	14.089	225	443393	96.246
148) Naphthalene	(4)	14.182	128	3811271	104.387
149) 1,2,3-Trichlorobenzene	(4)	14.323	180	1121837	102.300
150) 2-Methylnaphthalene	(4)	14.905	142	2518988	113.256

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:01.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:59 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

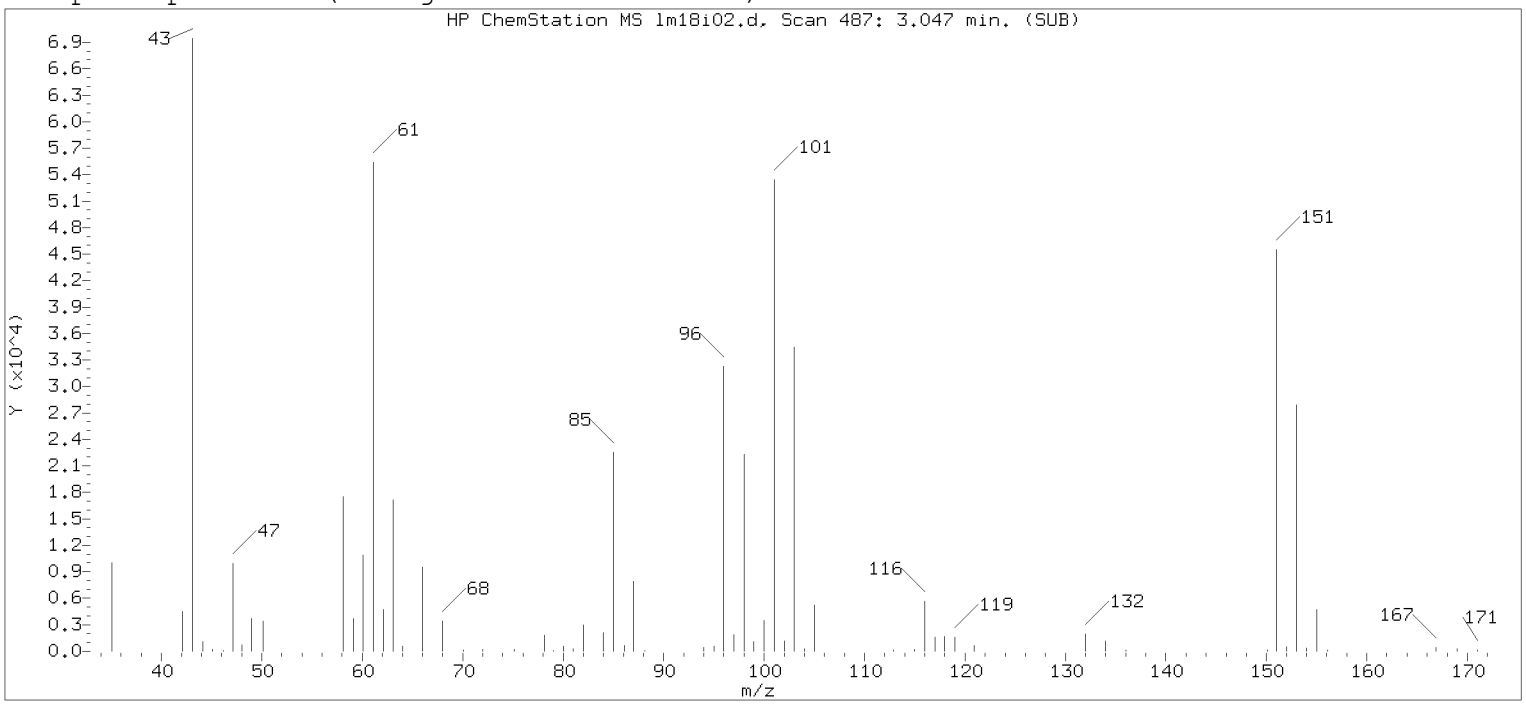
Compound Number : 19
Compound Name : Freon 113
Scan Number : 487
Retention Time (minutes): 3.047
Quant Ion : 101.00
Area (flag) : 502846M
On-Column Amount (ng) : 102.9574
Integration start scan : 446 Integration stop scan: 548
Y at integration start : 234 Y at integration end: 234

Reason for manual integration: improper integration

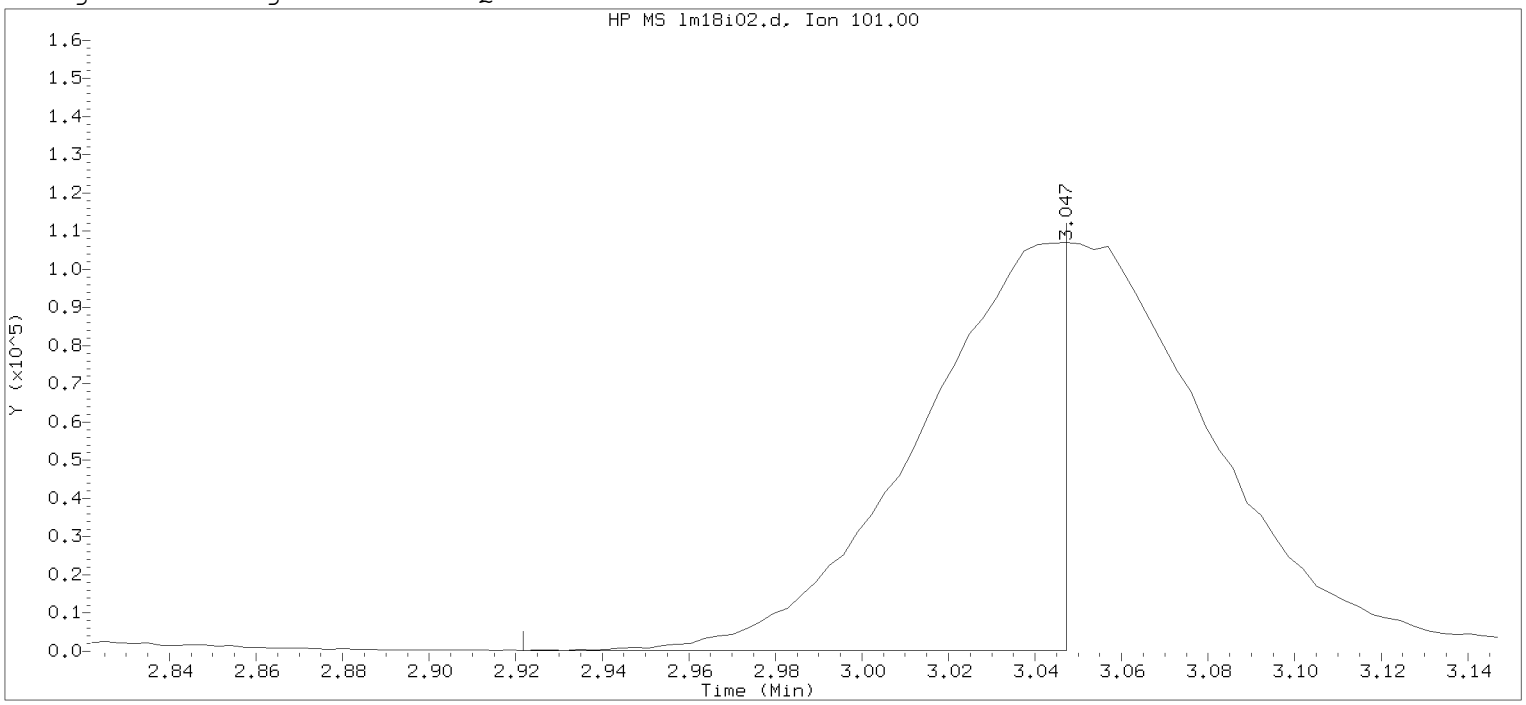
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:01.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:59 Analyst ID: APR27582

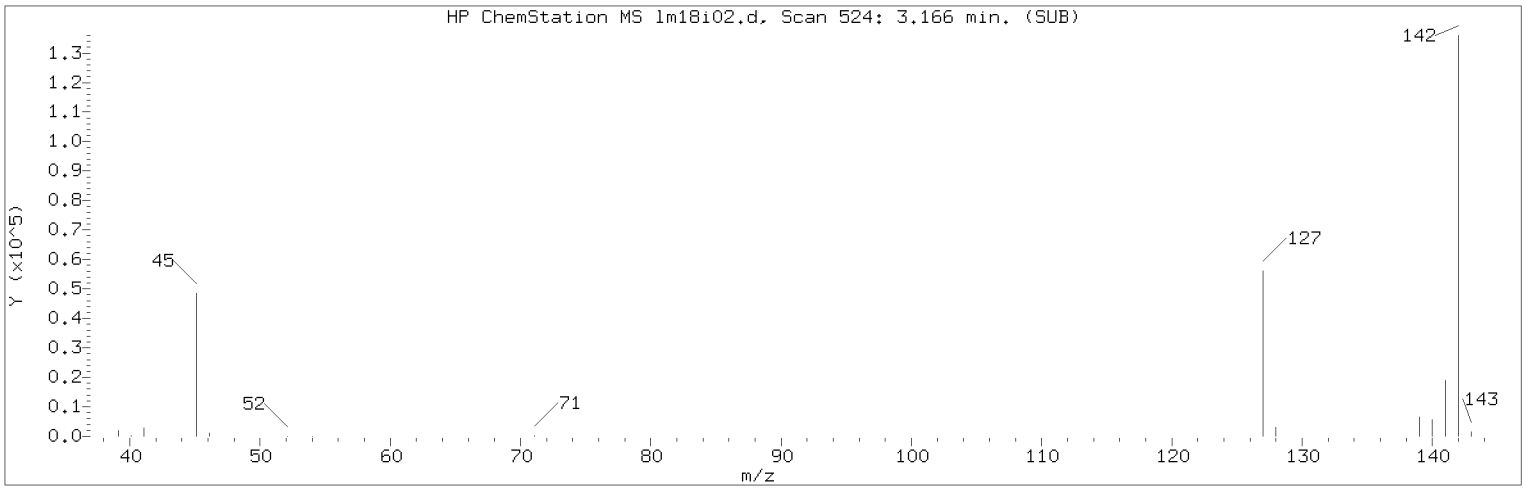
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:14
Date, time and analyst ID of latest file update: 18-Mar-2019 14:14 apr27582

Sample Name: VSTD100 Lab Sample ID: VSTD100

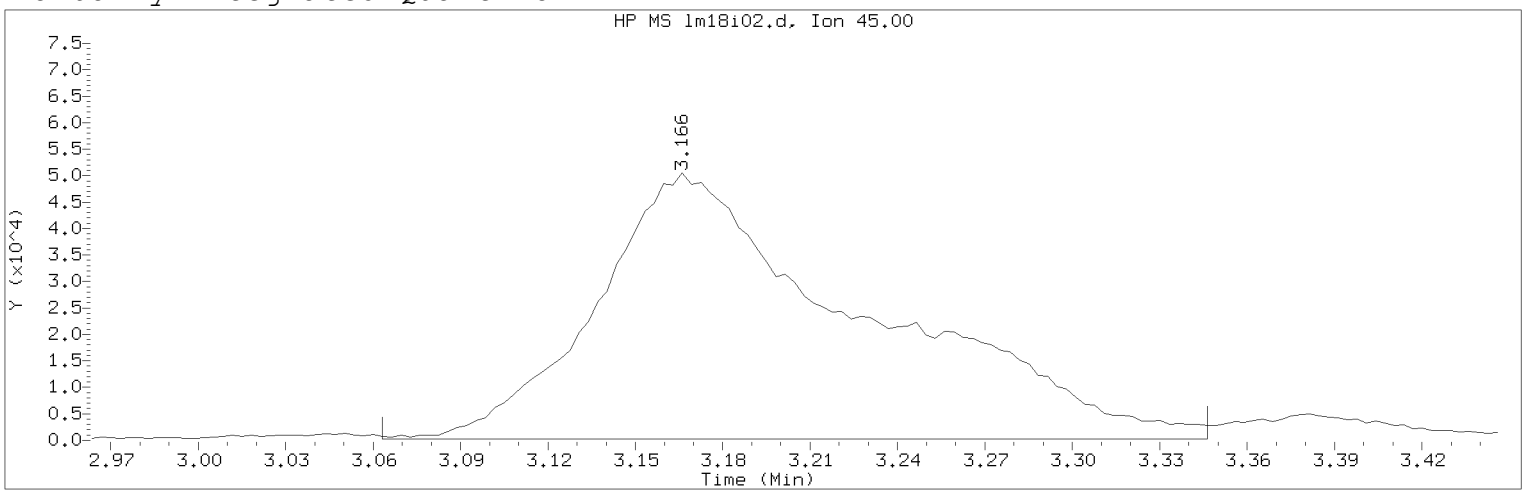
Compound Number	: 19		
Compound Name	: Freon 113		
Scan Number	: 487		
Retention Time (minutes)	: 3.047		
Quant Ion	: 101.00		
Area	: 245802		
On-column Amount (ng)	: 64.4313		
Integration start scan	: 447	Integration stop scan:	486
Y at integration start	: 240	Y at integration end:	240

Digitally signed by Kevin Kelly on 03/18/2019 at 21:01.
Target 3.5 esignature user: KKELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:59 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

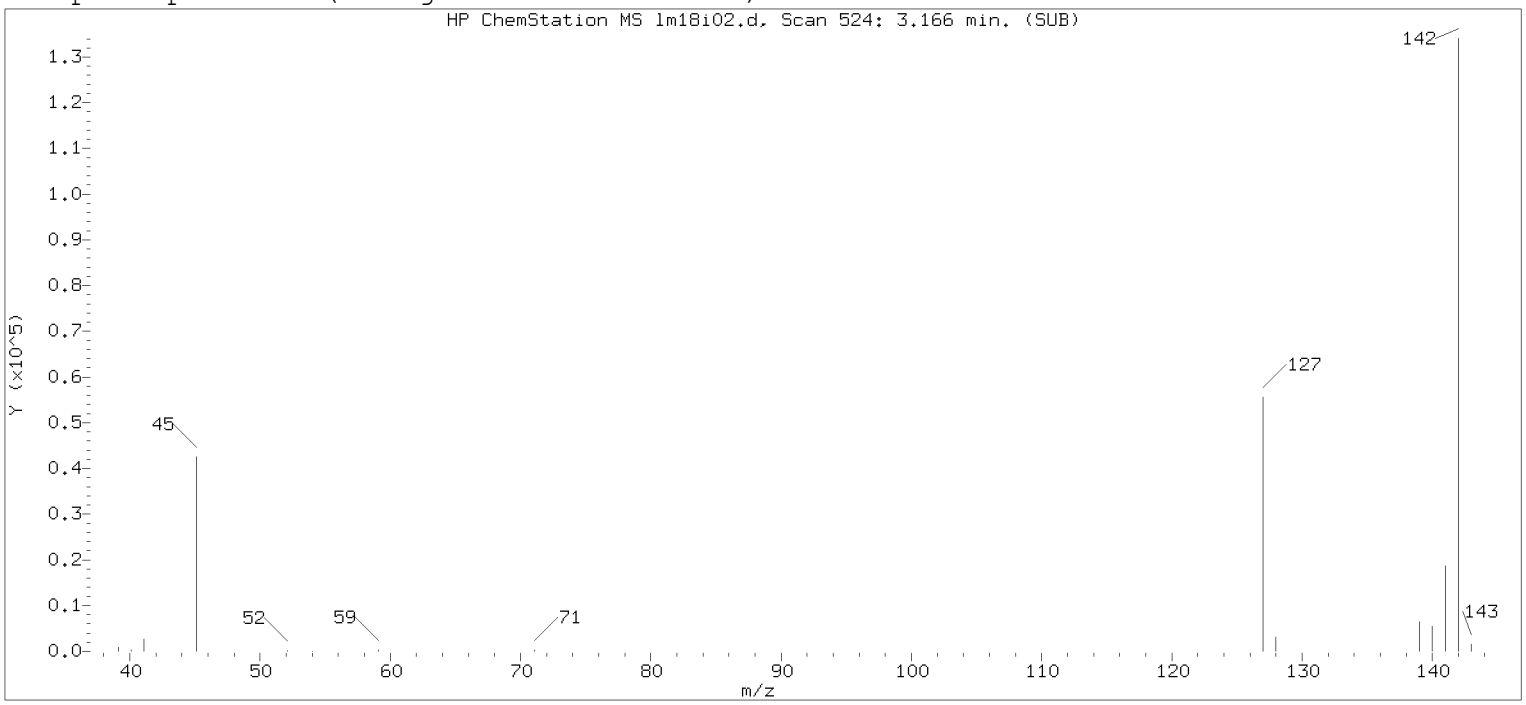
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 524
Retention Time (minutes): 3.166
Quant Ion : 45.00
Area (flag) : 318278M
On-Column Amount (ng) : 495.4240
Integration start scan : 491 Integration stop scan: 579
Y at integration start : 268 Y at integration end: 268

Reason for manual integration: improper integration

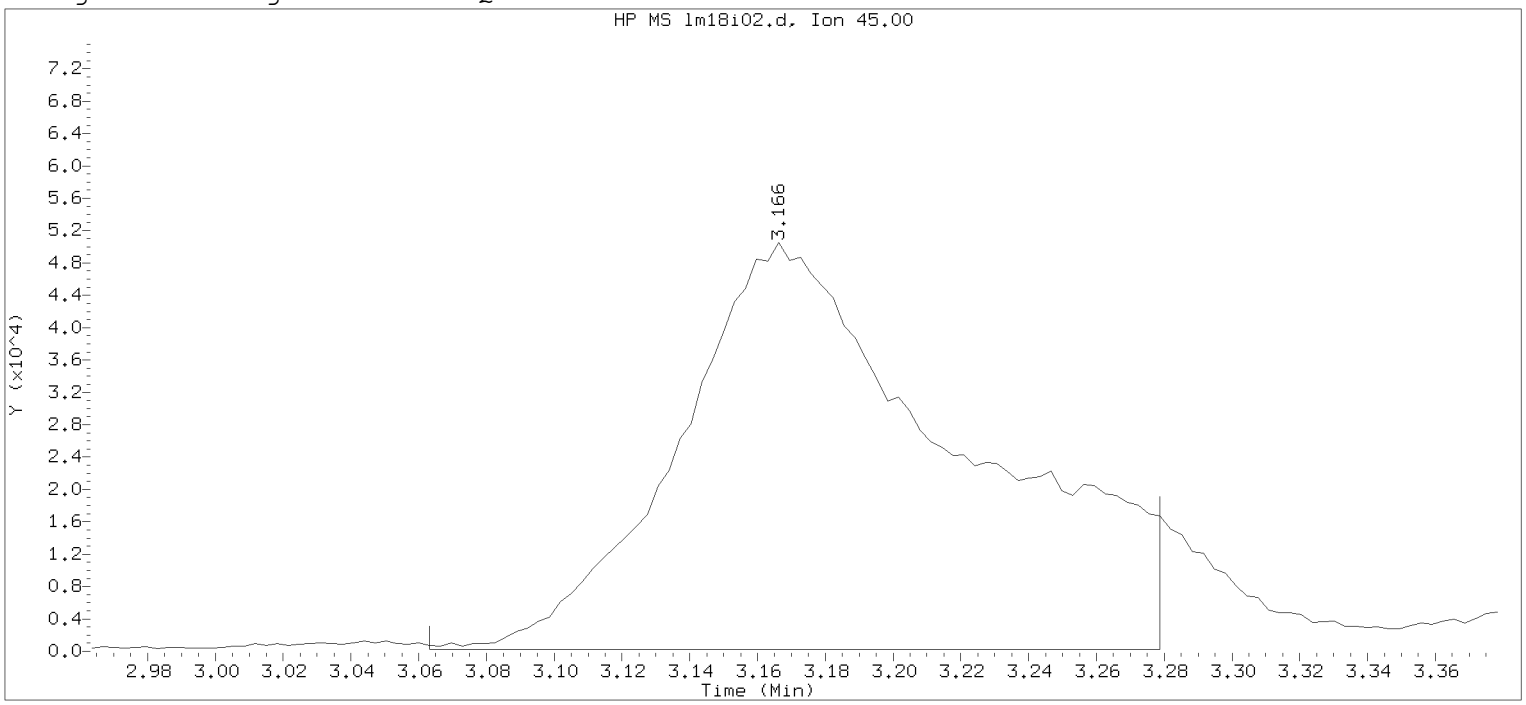
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:01.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:59 Analyst ID: APR27582

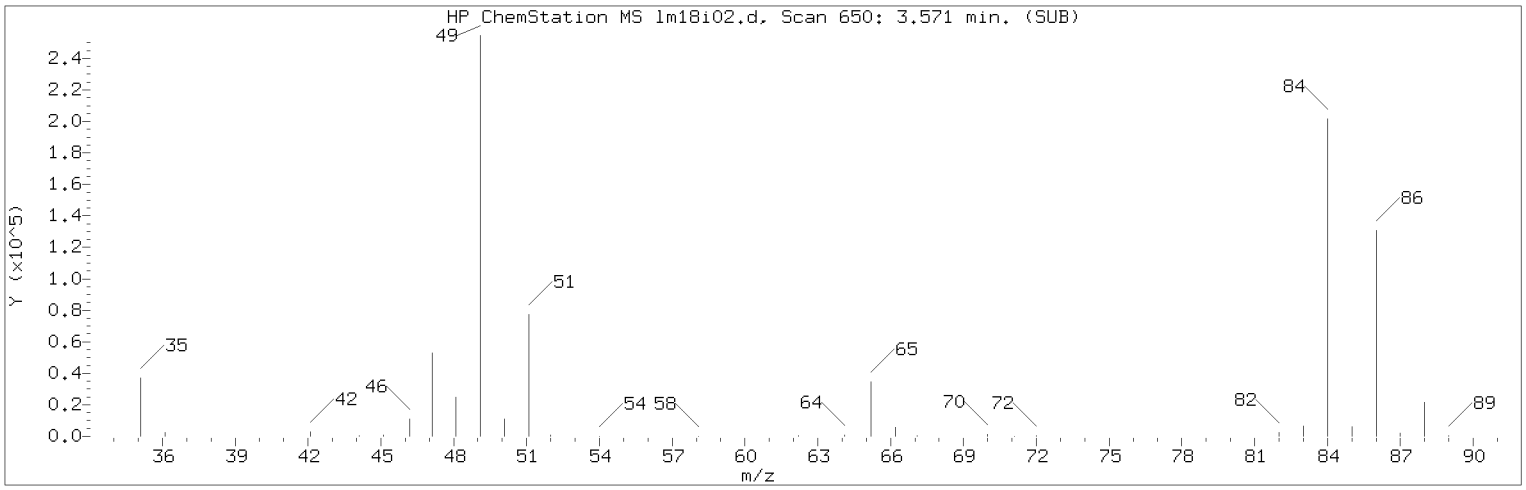
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:14
Date, time and analyst ID of latest file update: 18-Mar-2019 14:14 apr27582

Sample Name: VSTD100 Lab Sample ID: VSTD100

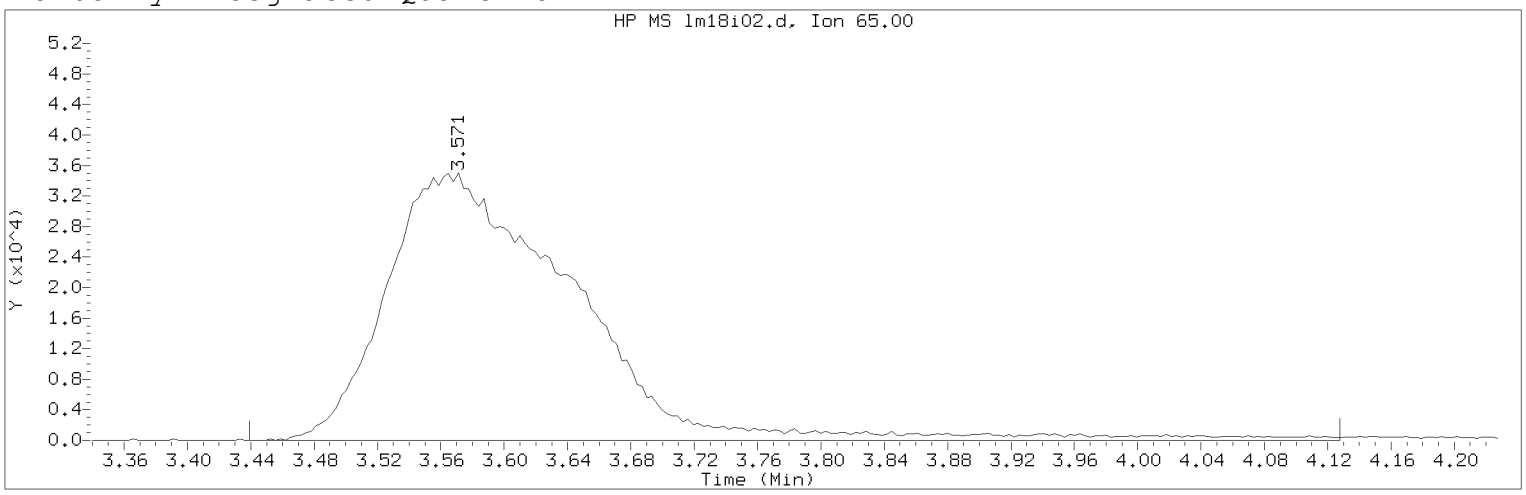
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 524
Retention Time (minutes): 3.166
Quant Ion : 45.00
Area : 290837
On-column Amount (ng) : 524.2709
Integration start scan : 491 Integration stop scan: 558
Y at integration start : 255 Y at integration end: 255

Digitally signed by Kevin Kelly on 03/18/2019 at 21:01.
Target 3.5 esignature user ID: kkelly100

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:59 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

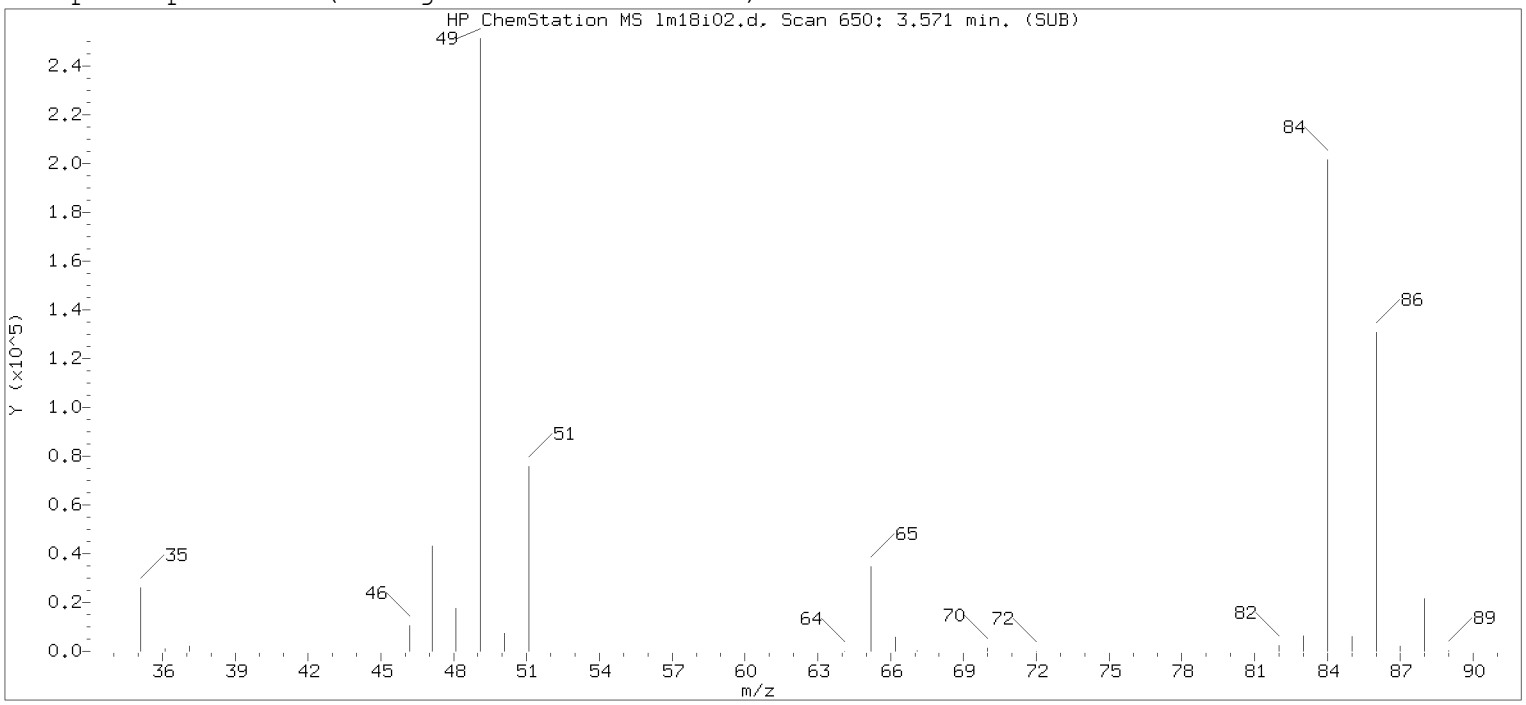
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 650
Retention Time (minutes): 3.571
Quant Ion : 65.00
Area (flag) : 288089M
On-Column Amount (ng) : 250.0000
Integration start scan : 608 Integration stop scan: 822
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

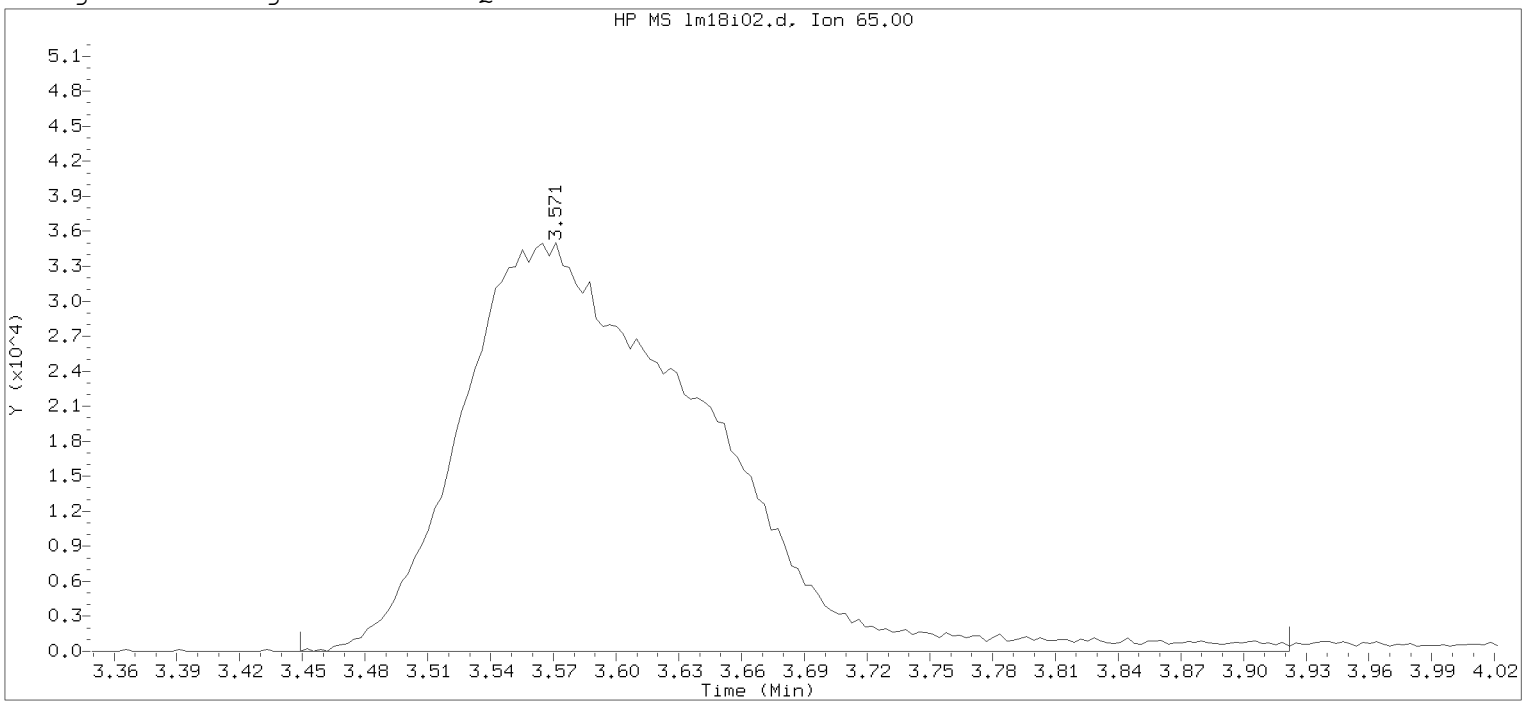
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:01.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:59 Analyst ID: APR27582

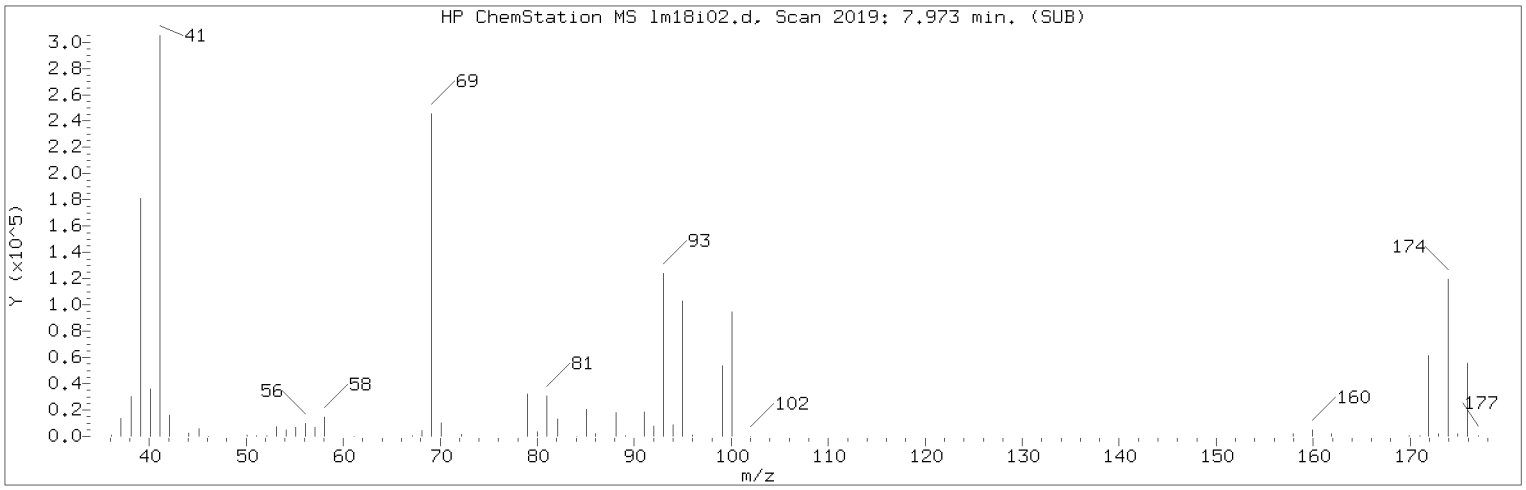
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:14
Date, time and analyst ID of latest file update: 18-Mar-2019 14:14 apr27582

Sample Name: VSTD100 Lab Sample ID: VSTD100

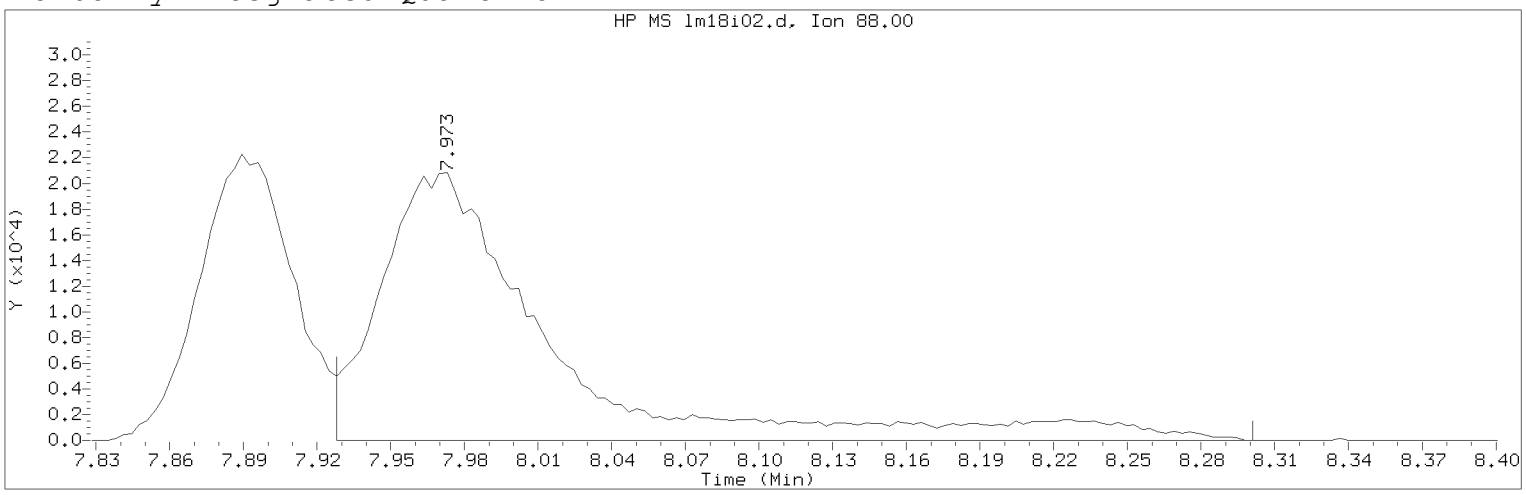
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 650
Retention Time (minutes): 3.571
Quant Ion : 65.00
Area : 281360
On-column Amount (ng) : 250.0000
Integration start scan : 611 Integration stop scan: 758
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:01.
Target 3.5 esignature user ID: kkelly

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:59 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

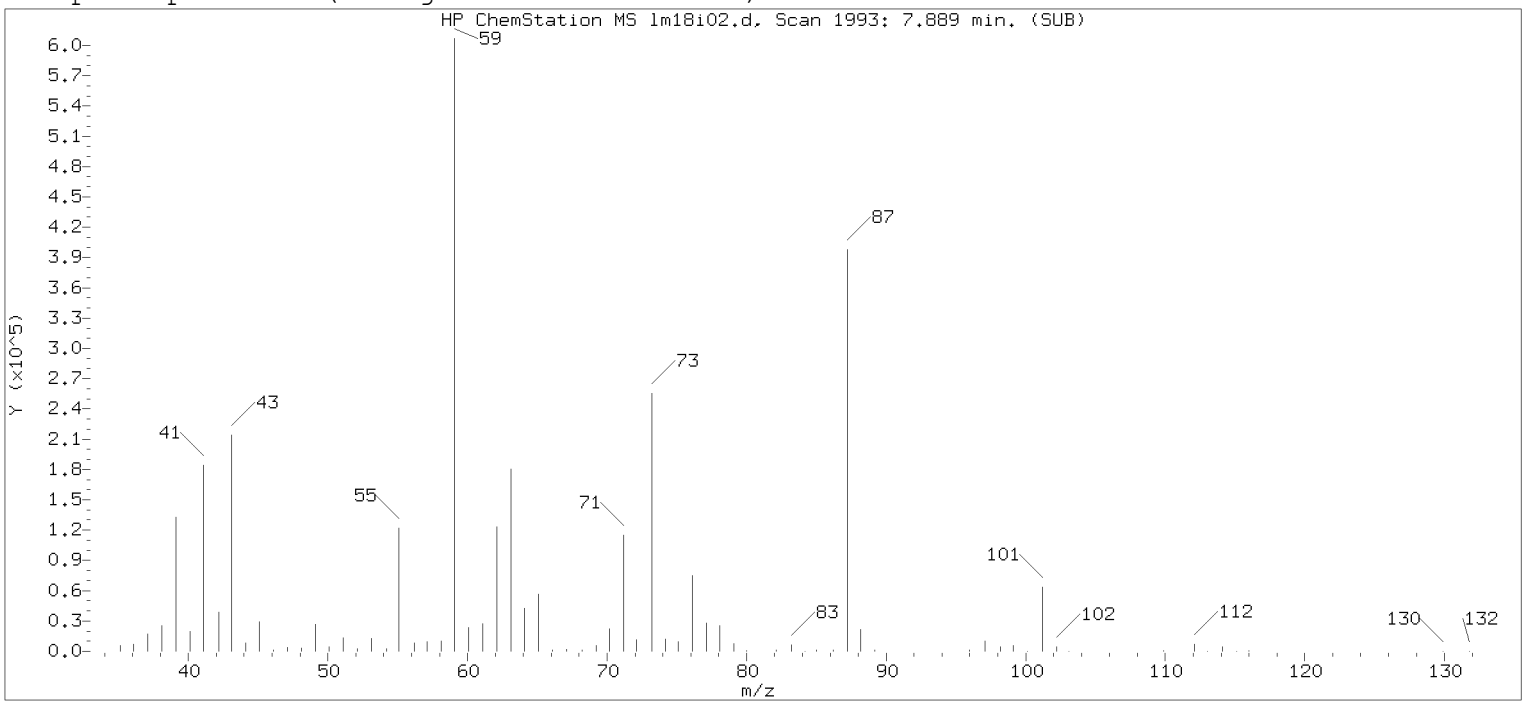
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2019
Retention Time (minutes): 7.973
Quant Ion : 88.00
Area (flag) : 99864M
On-Column Amount (ng) : 1334.4154
Integration start scan : 2004 Integration stop scan: 2120
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

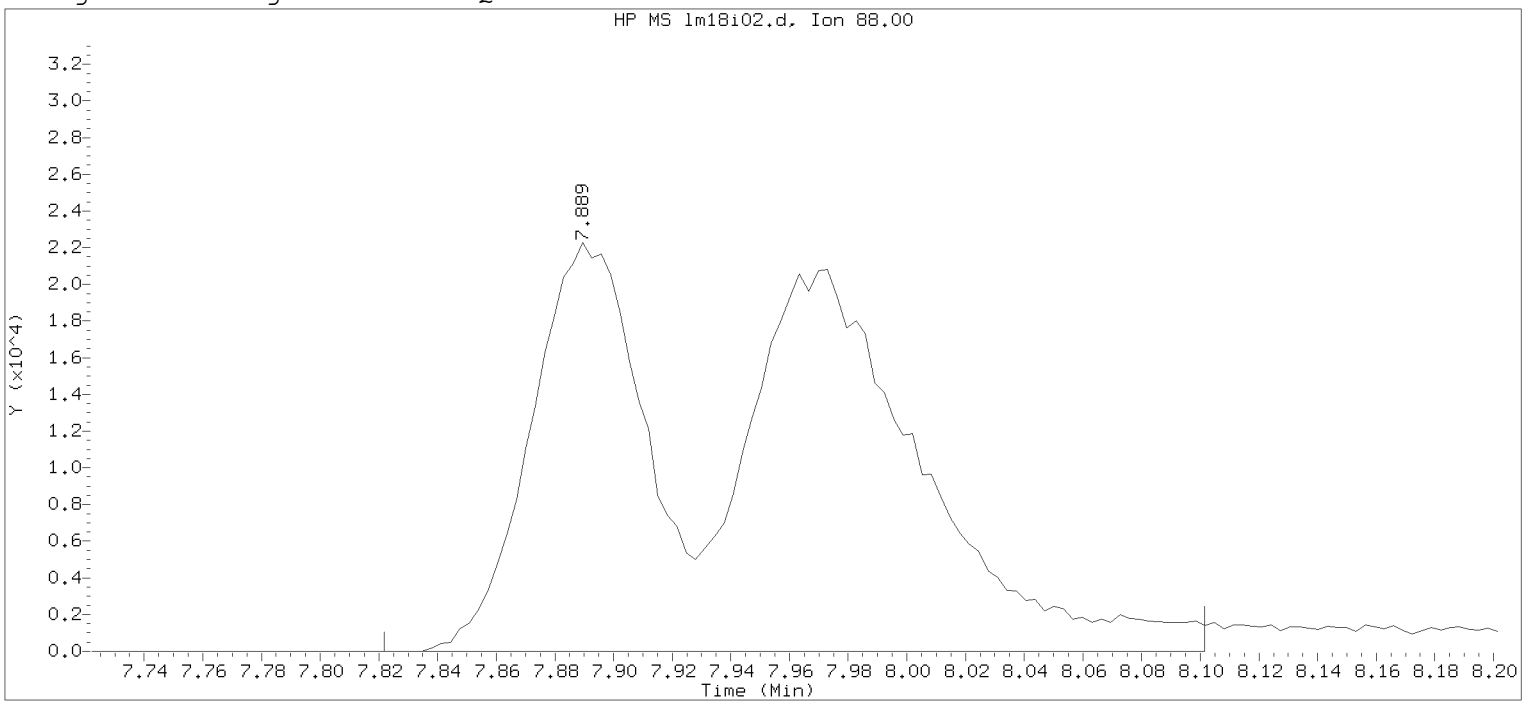
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:01.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



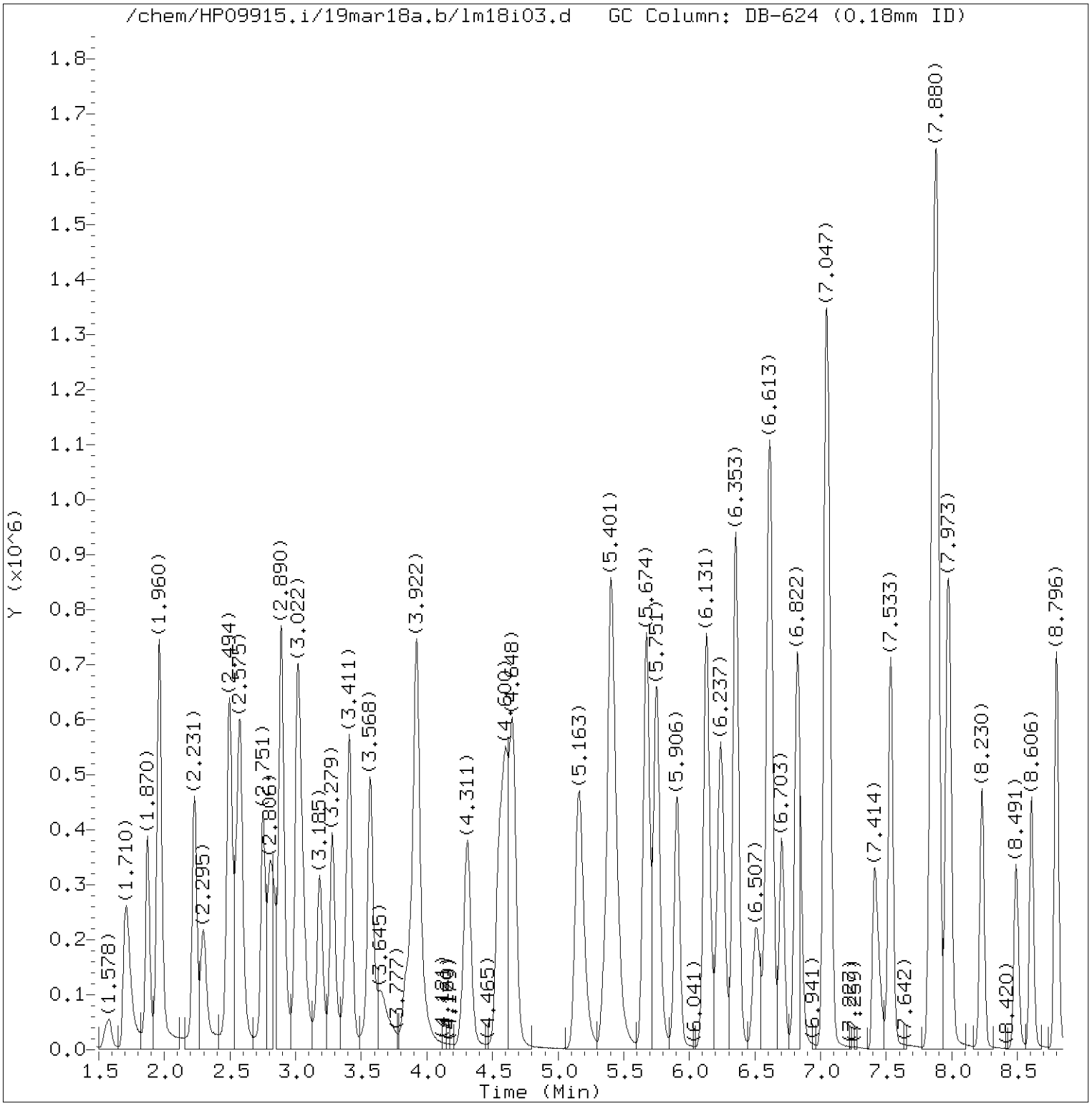
Data File: /chem/HP09915.i/19mar18a.b/lm18i02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 11:59 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:14
Date, time and analyst ID of latest file update: 18-Mar-2019 14:14 apr27582

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1993
Retention Time (minutes): 7.889
Quant Ion : 88.00
Area : 145025
On-column Amount (ng) : 1194.4409
Integration start scan : 1971 Integration stop scan: 2058
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:01.
Target 3.5 esignature user ID: kkelly100



Total Ion Chromatogram (TIC)

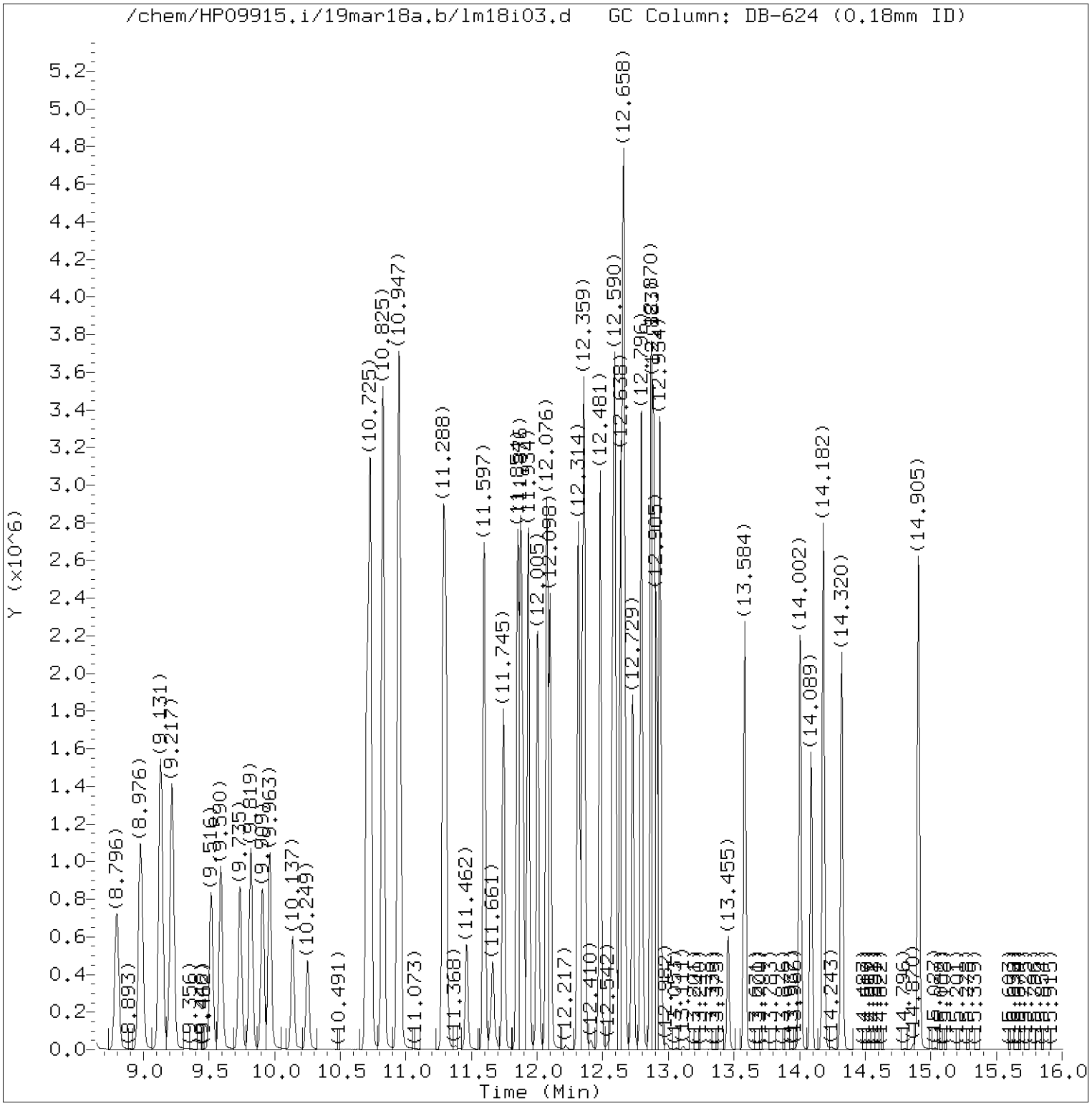
Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i03.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 12:21 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i03.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 12:21 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i03.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 12:21 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.710	85	554012	47.590
4) Chloromethane	(2)	1.870	50	502930	46.652
5) 1,3-Butadiene	(2)	1.957	39	268156	47.344
6) Vinyl Chloride	(2)	1.967	62	498721	47.223
8) Bromomethane	(2)	2.231	94	424581	46.210
9) Chloroethane	(2)	2.295	64	281175	45.794
10) Dichlorofluoromethane	(2)	2.494	67	702184	48.036
12) Trichlorofluoromethane	(2)	2.552	101	642842	46.634
11) n-Pentane	(2)	2.578	43	421597	49.604
14) Ethyl ether	(2)	2.751	59	311506	48.364
15) Freon 123a	(2)	2.812	67	371594	48.014
16) Acrolein	(1)	2.890	56	1038105	465.881
17) 1,1-Dichloroethene	(2)	3.012	96	230706	50.440
17) 1,1-Dichloroethene	(2)	3.012	63	122868	48.736
18) Acetone	(1)	3.028	58	85225	89.460
19) Freon 113	(2)	3.044	101	250457	51.540
21) 2-Propanol	(1)	3.166	45	149843	235.291
22) Methyl Iodide	(2)	3.185	142	490217	50.562
23) Carbon Disulfide	(2)	3.279	76	794899	51.343
27) Methyl Acetate	(2)	3.382	43	323625	47.129
25) Allyl Chloride	(2)	3.411	41	466830	47.697
29)*t-Butyl alcohol-d10	(1)	3.555	65	285580M	250.000
28) Methylene Chloride	(2)	3.568	84	280641	49.274
30) t-Butyl alcohol	(1)	3.661	59	286842	243.187
31) Acrylonitrile	(2)	3.838	53	173245	48.234
33) Methyl Tertiary Butyl Ether	(2)	3.909	73	909338	50.230
32) trans-1,2-Dichloroethene	(2)	3.925	96	277003	50.542
34) n-Hexane	(2)	4.311	57	376405	50.940
36) 1,1-Dichloroethane	(2)	4.552	63	522349	50.457
38) di-Isopropyl ether	(2)	4.600	45	989141	50.537
39) 2-Chloro-1,3-butadiene	(2)	4.658	53	495610	51.081
40) Ethyl t-butyl ether	(2)	5.163	59	942541	50.113
44) 2-Butanone	(2)	5.362	43	473150	95.354
42) cis-1,2-Dichloroethene	(2)	5.401	96	316542	50.029
45) 2,2-Dichloropropane	(2)	5.414	77	456616	51.796
47) Propionitrile	(1)	5.449	54	339440	246.078
48) Methacrylonitrile	(2)	5.671	67	461339	124.389
49) Bromochloromethane	(2)	5.748	128	175269	48.376

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i03.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 12:21 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.758	71	124282	94.182
51) Chloroform	(2)	5.906	83	525188	50.482
52)$Dibromofluoromethane	(2)	6.127	113	347917	50.527
52)$Dibromofluoromethane	(2)	6.127	111	354010	50.180
53) 1,1,1-Trichloroethane	(2)	6.131	97	452542	50.718
43) 1,2-Dichloroethene (Total)	(2)		96	593545	100.570
54) Cyclohexane	(2)	6.237	56	483685	50.162
54) Cyclohexane	(2)	6.240	84	417423	50.962
54) Cyclohexane	(2)	6.240	69	147858	50.314
55) 1,1-Dichloropropene	(2)	6.353	75	406293	50.870
56) Carbon Tetrachloride	(2)	6.356	117	384904	52.534
58) Isobutyl Alcohol	(1)	6.513	41	232111	596.302
57)$1,2-Dichloroethane-d4	(2)	6.597	102	80396	49.815
57)$1,2-Dichloroethane-d4	(2)	6.597	65	450261	49.843
57)$1,2-Dichloroethane-d4	(2)	6.594	104	51149	49.622
60) Benzene	(2)	6.619	78	1152772	50.136
61) 1,2-Dichloroethane	(2)	6.703	62	446133	48.369
61) 1,2-Dichloroethane	(2)	6.706	98	35861	63.542
65) t-Amyl methyl ether	(2)	6.822	73	949631	50.802
66)*Fluorobenzene	(2)	7.041	96	1339388	50.000
67) n-Heptane	(2)	7.063	43	415849	50.004
69) n-Butanol	(1)	7.417	56	350141	1242.948
71) Trichloroethene	(2)	7.536	95	312278	50.403
72) Methylcyclohexane	(2)	7.848	83	526893	49.391
72) Methylcyclohexane	(2)	7.848	98	243862	49.123
73) 1,2-Dichloropropane	(2)	7.873	63	313199	50.054
75) 1,4-Dioxane	(1)	7.967	88	46515M	627.009
76) Methyl Methacrylate	(2)	7.967	69	307523	50.930
74) Dibromomethane	(2)	7.986	93	219516	50.731
78) Bromodichloromethane	(2)	8.230	83	392720	52.596
79) 2-Nitropropane	(2)	8.491	41	269537	104.089
80) 2-Chloroethyl Vinyl Ether	(2)	8.606	63	255861	50.872
81) cis-1,3-Dichloropropene	(2)	8.796	75	497587	52.865
82) 4-Methyl-2-pentanone	(2)	8.976	43	1009599	96.445
83)$Toluene-d8	(3)	9.131	98	1357675	50.357
83)$Toluene-d8	(3)	9.131	100	878600	50.449
88) Toluene	(3)	9.217	92	752875	50.404
89) trans-1,3-Dichloropropene	(3)	9.516	75	484025	54.323

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i03.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 12:21 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	9.590	69	546337	52.197
92) 1,1,2-Trichloroethane	(3)	9.735	97	287500	50.908
93) Tetrachloroethene	(3)	9.819	166	329787	50.765
94) 1,3-Dichloropropane	(3)	9.909	76	503964	50.620
96) 2-Hexanone	(3)	9.963	43	744287	96.873
90) 1,3-Dichloropropene (total)	(3)		100	981612	107.189
97) Dibromochloromethane	(3)	10.137	129	319191	54.765
99) 1,2-Dibromoethane	(3)	10.249	107	330955	51.545
100)*Chlorobenzene-d5	(3)	10.703	117	1047647	50.000
101) 1-Chlorohexane	(3)	10.725	91	428182	48.052
102) Chlorobenzene	(3)	10.732	112	900638	50.125
103) 1,1,1,2-Tetrachloroethane	(3)	10.822	131	317781	52.768
104) Ethylbenzene	(3)	10.825	91	1530774	50.593
106) m+p-Xylene	(3)	10.947	106	1209797	101.670
107) o-Xylene	(3)	11.285	106	594572	50.531
109) Styrene	(3)	11.304	104	1014373	51.411
110) Bromoform	(3)	11.465	173	229895	47.707
111) Isopropylbenzene	(3)	11.597	105	1536854	51.044
112) Cyclohexanone	(1)	11.661	55	178105A	603.307
114)$4-Bromofluorobenzene	(3)	11.745	95	523707	50.195
114)$4-Bromofluorobenzene	(3)	11.745	174	424952	50.150
108) Xylene (Total)	(3)		106	1804369	152.201
116) 1,1,2,2-Tetrachloroethane	(4)	11.848	83	501921	50.325
115) Bromobenzene	(4)	11.854	156	395884	49.582
118) trans-1,4-Dichloro-2-butene	(4)	11.876	53	421571	131.694
117) 1,2,3-Trichloropropane	(4)	11.893	110	151397	49.865
119) n-Propylbenzene	(4)	11.934	91	1798028	51.004
120) 2-Chlorotoluene	(4)	12.005	126	376862	50.510
122) 1,3,5-Trimethylbenzene	(4)	12.076	105	1349914	51.145
121) 4-Chlorotoluene	(4)	12.098	126	395516	50.402
124) tert-Butylbenzene	(4)	12.314	134	312488	50.454
125) Pentachloroethane	(4)	12.346	167	229435	47.836
126) 1,2,4-Trimethylbenzene	(4)	12.359	105	1409639	51.092
127) sec-Butylbenzene	(4)	12.481	105	1685213	51.291
129) 1,3-Dichlorobenzene	(4)	12.577	146	755584	49.747
130) p-Isopropyltoluene	(4)	12.593	119	1533947	51.531
131)*1,4-Dichlorobenzene-d4	(4)	12.635	152	580718	50.000
133) 1,4-Dichlorobenzene	(4)	12.655	146	804178	49.856

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i03.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 12:21 Analyst ID: APR27582

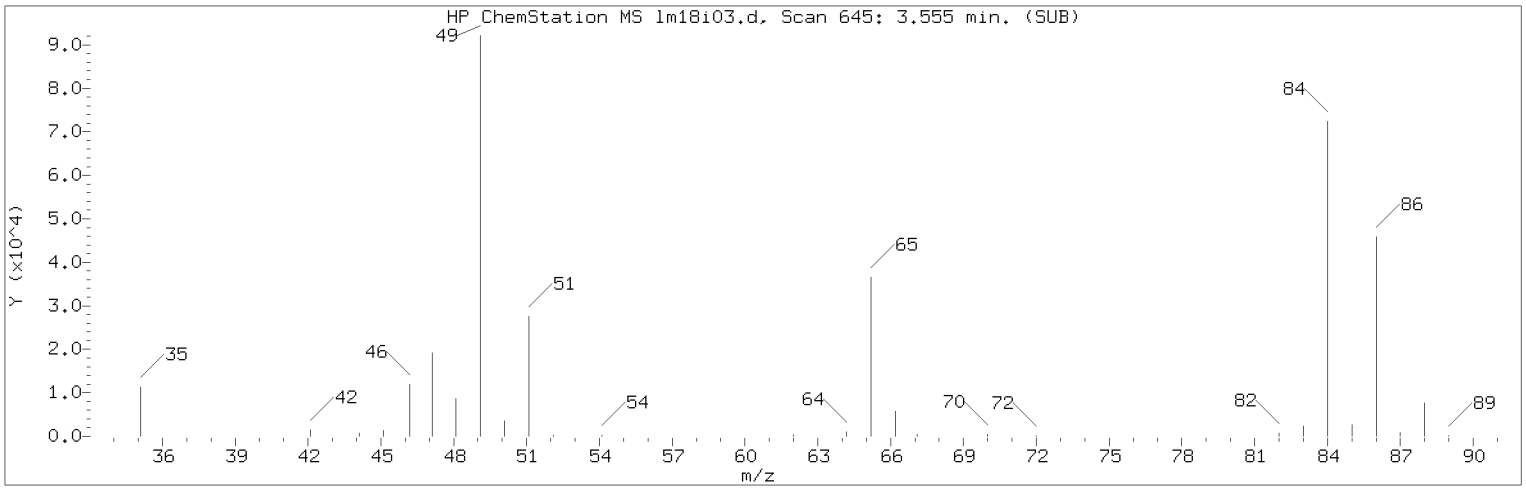
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

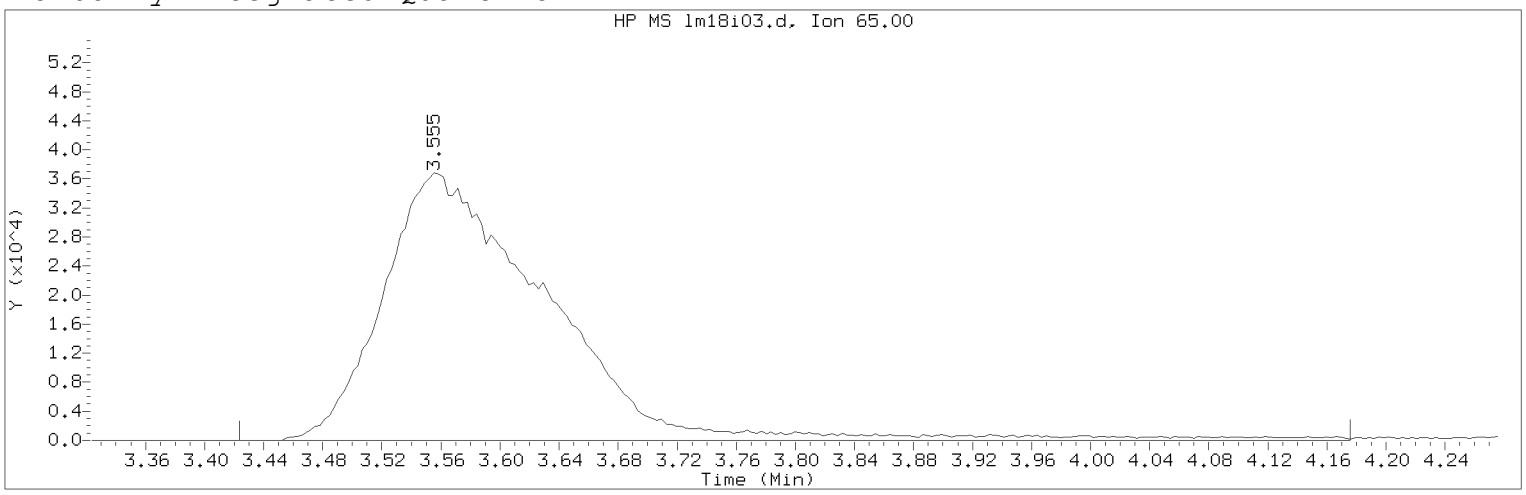
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	12.661	105	1493939	49.139
135) Benzyl Chloride	(4)	12.729	91	1058526	52.720
136) 1,3-Diethylbenzene	(4)	12.796	119	920272	48.983
137) 1,4-Diethylbenzene	(4)	12.867	119	989953	48.725
139) n-Butylbenzene	(4)	12.886	92	761067	50.368
138) 1,2-Dichlorobenzene	(4)	12.909	146	757334	49.969
140) 1,2-Diethylbenzene	(4)	12.934	119	774959	48.750
141) Diethylbenzene (total)	(4)		100	2685184	146.459
142) 1,2-Dibromo-3-chloropropane	(4)	13.455	75	119156	53.094
144) 1,3,5-Trichlorobenzene	(4)	13.584	180	575148	49.335
146) 1,2,4-Trichlorobenzene	(4)	14.005	180	545950	49.043
147) Hexachlorobutadiene	(4)	14.089	225	220212	49.387
148) Naphthalene	(4)	14.182	128	1762464	49.874
149) 1,2,3-Trichlorobenzene	(4)	14.320	180	522040	49.184
150) 2-Methylnaphthalene	(4)	14.905	142	1048681	48.714

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i03.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 12:21 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

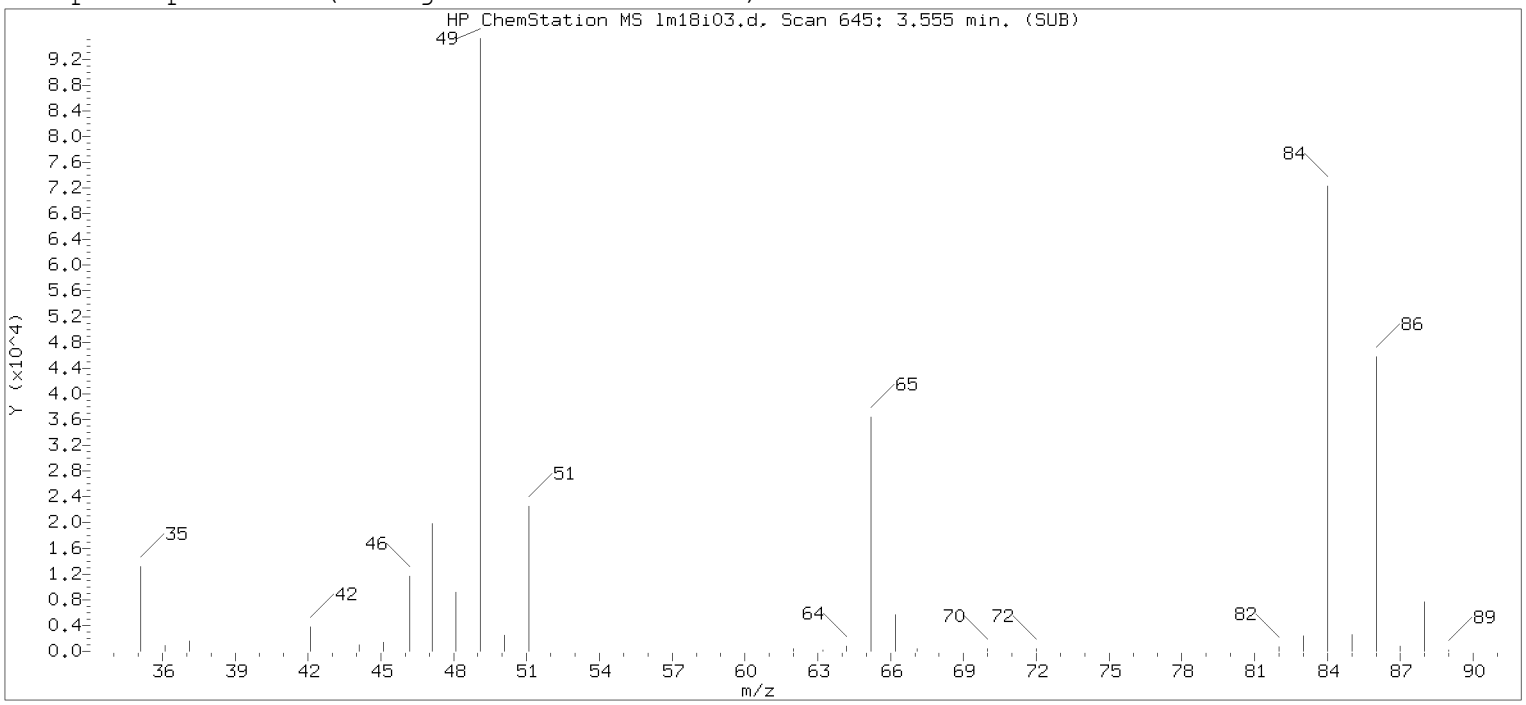
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 645
Retention Time (minutes): 3.555
Quant Ion : 65.00
Area (flag) : 285580M
On-Column Amount (ng) : 250.0000
Integration start scan : 603 Integration stop scan: 837
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

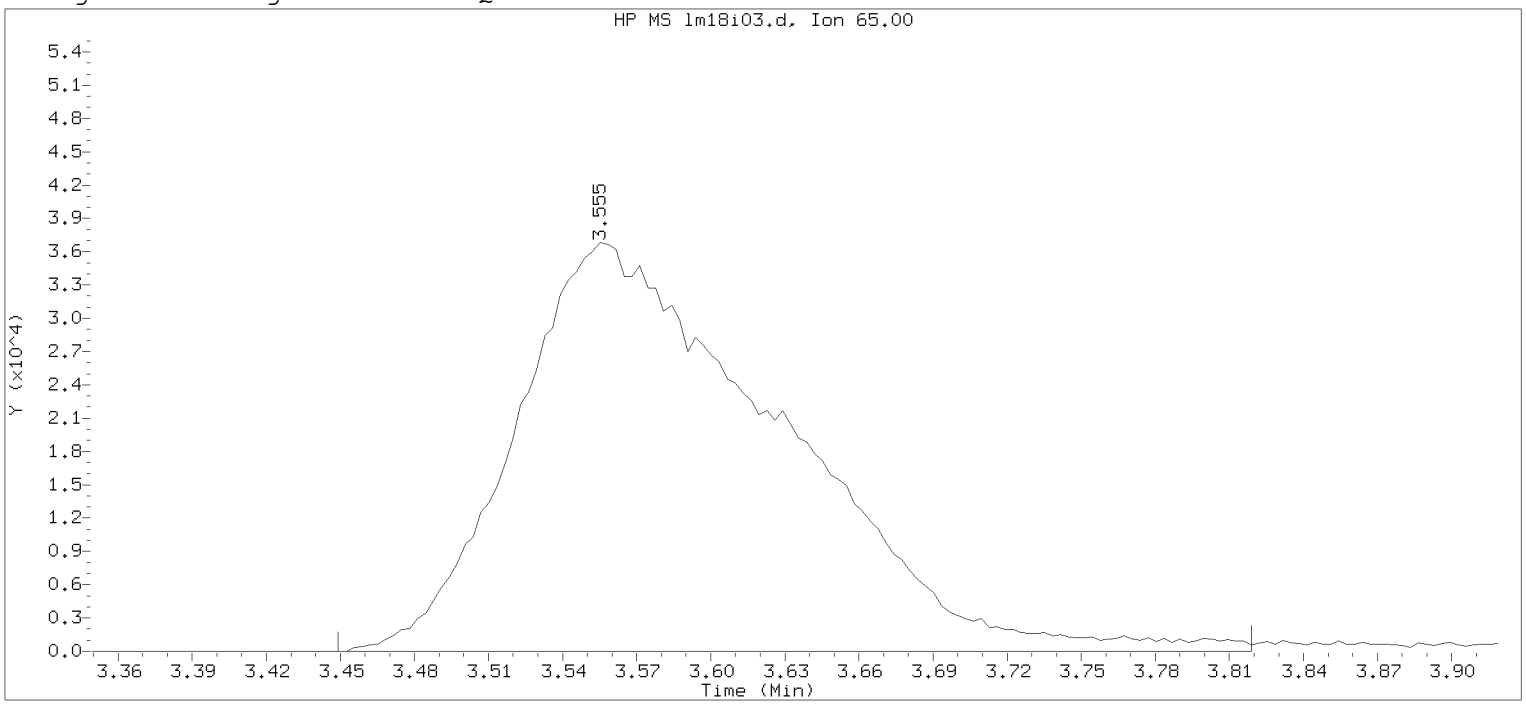
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i03.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 12:21 Analyst ID: APR27582

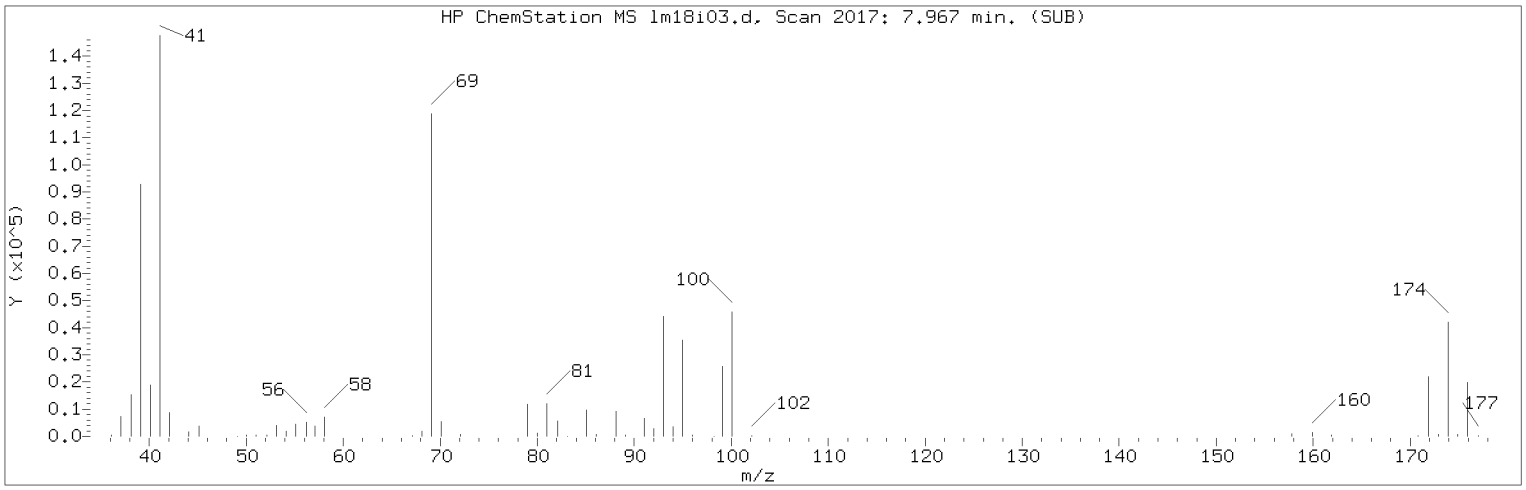
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:14
Date, time and analyst ID of latest file update: 18-Mar-2019 14:14 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

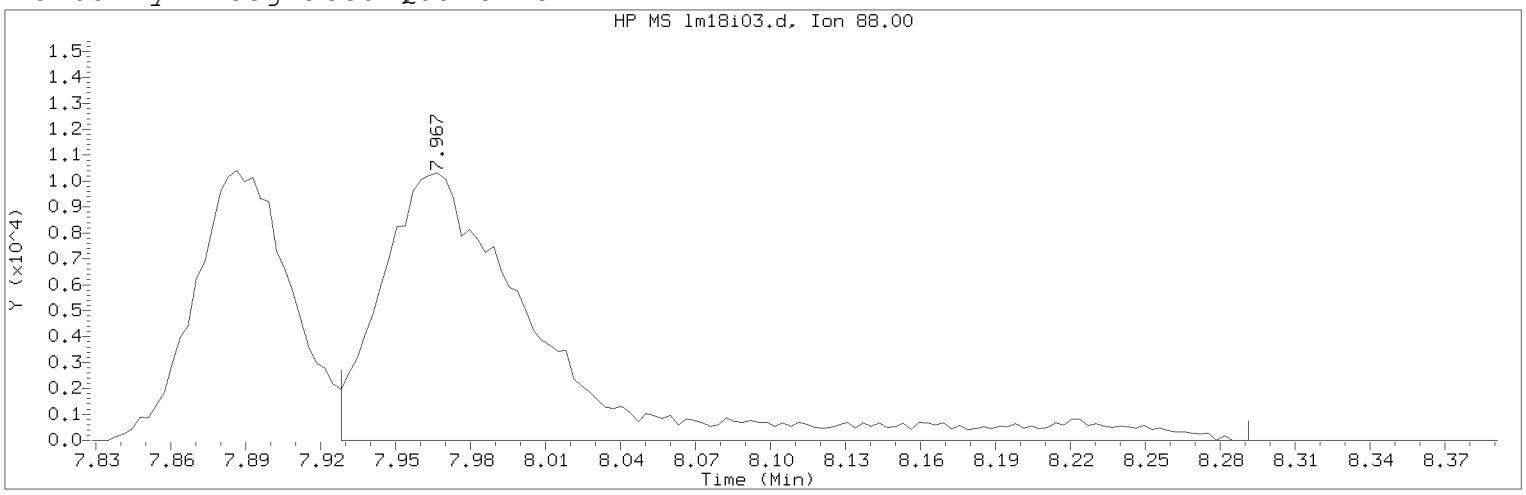
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 645
Retention Time (minutes): 3.555
Quant Ion : 65.00
Area : 274520
On-column Amount (ng) : 250.0000
Integration start scan : 611 Integration stop scan: 726
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10024

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i03.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 12:21 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

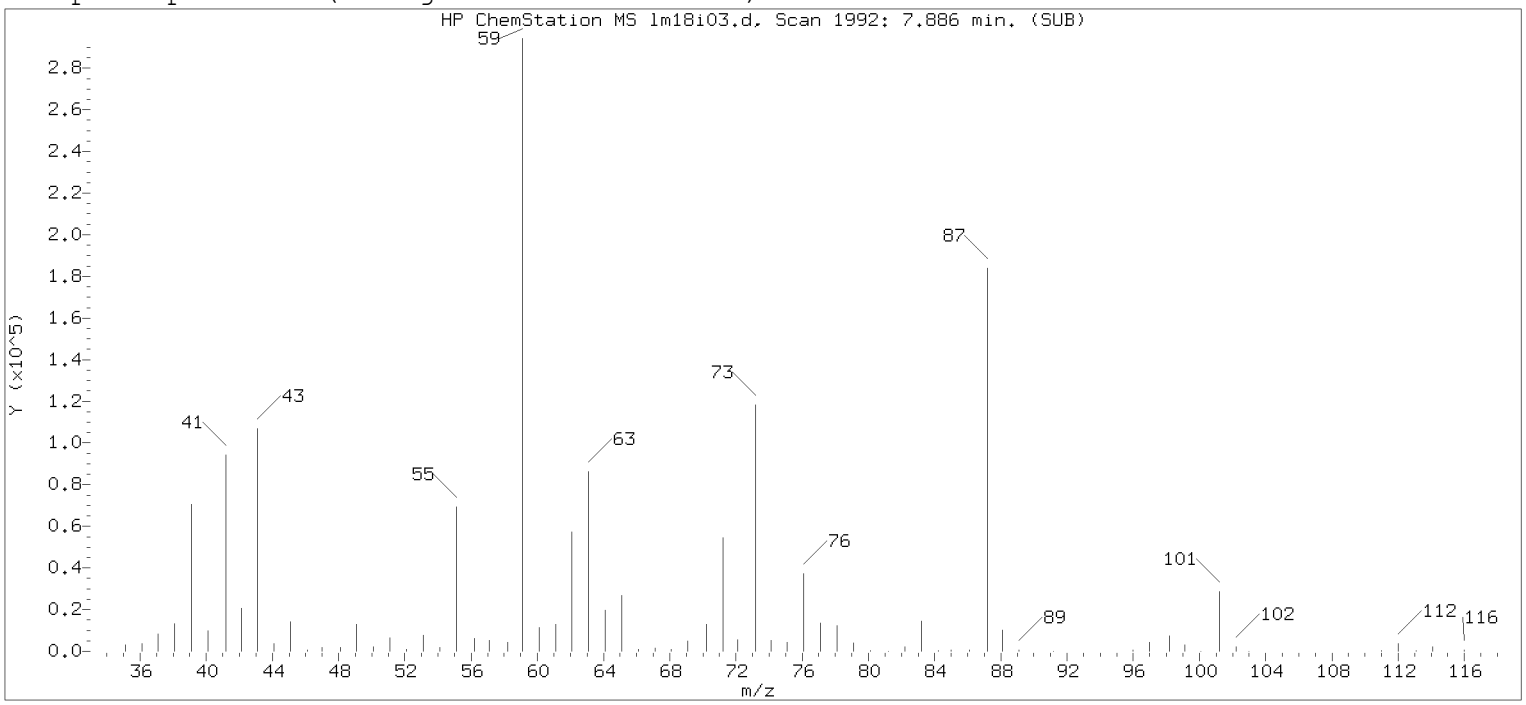
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2017
Retention Time (minutes): 7.967
Quant Ion : 88.00
Area (flag) : 46515M
On-Column Amount (ng) : 627.0093
Integration start scan : 2004 Integration stop scan: 2117
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

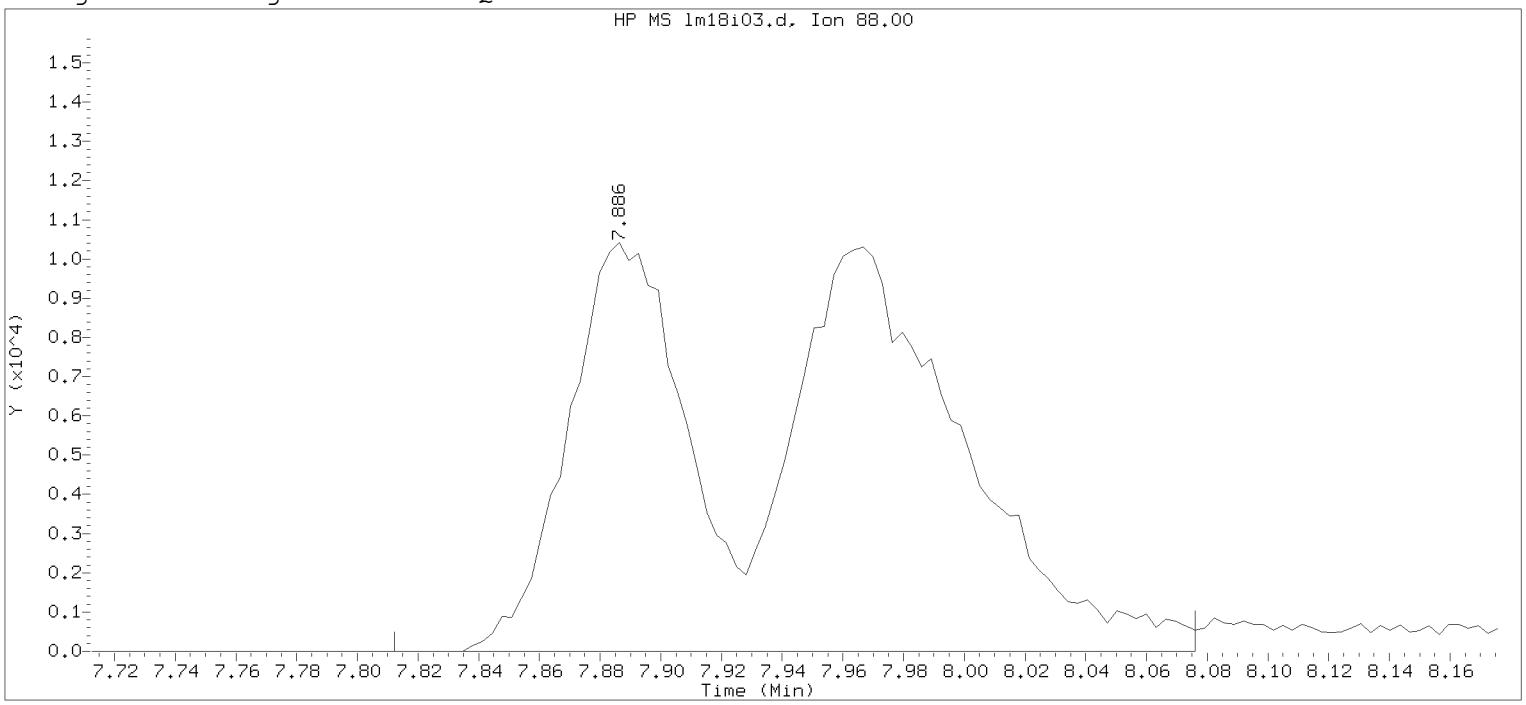
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i03.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 12:21 Analyst ID: APR27582

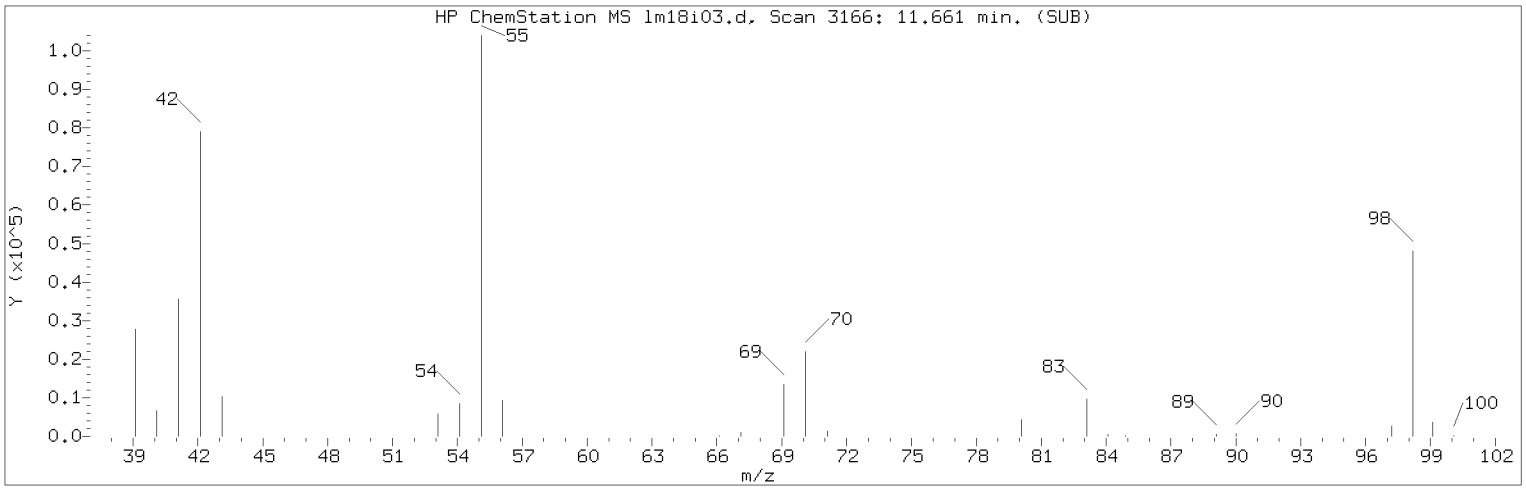
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:14
Date, time and analyst ID of latest file update: 18-Mar-2019 14:14 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

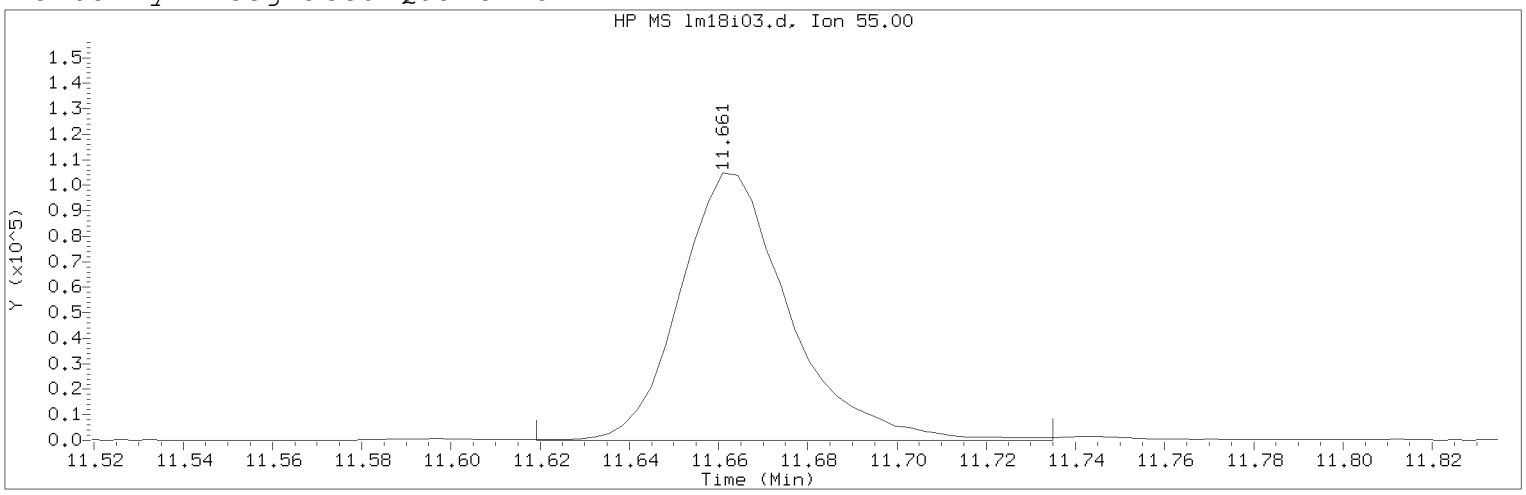
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1992
Retention Time (minutes): 7.886
Quant Ion : 88.00
Area : 67439
On-column Amount (ng) : 586.7153
Integration start scan : 1968 Integration stop scan: 2050
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10024

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i03.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 12:21 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

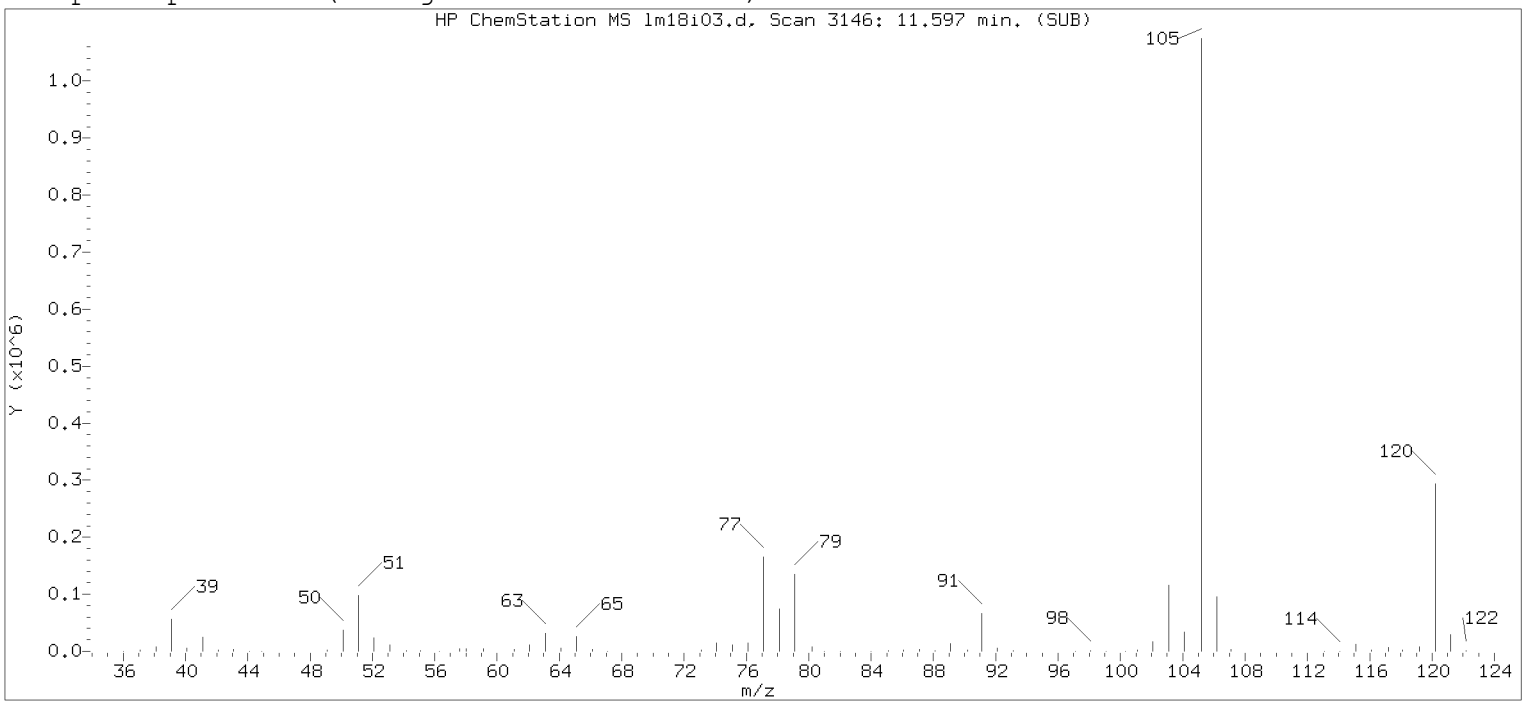
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 3166
Retention Time (minutes): 11.661
Quant Ion : 55.00
Area (flag) : 178105A
On-Column Amount (ng) : 603.3069
Integration start scan : 3152 Integration stop scan: 3188
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

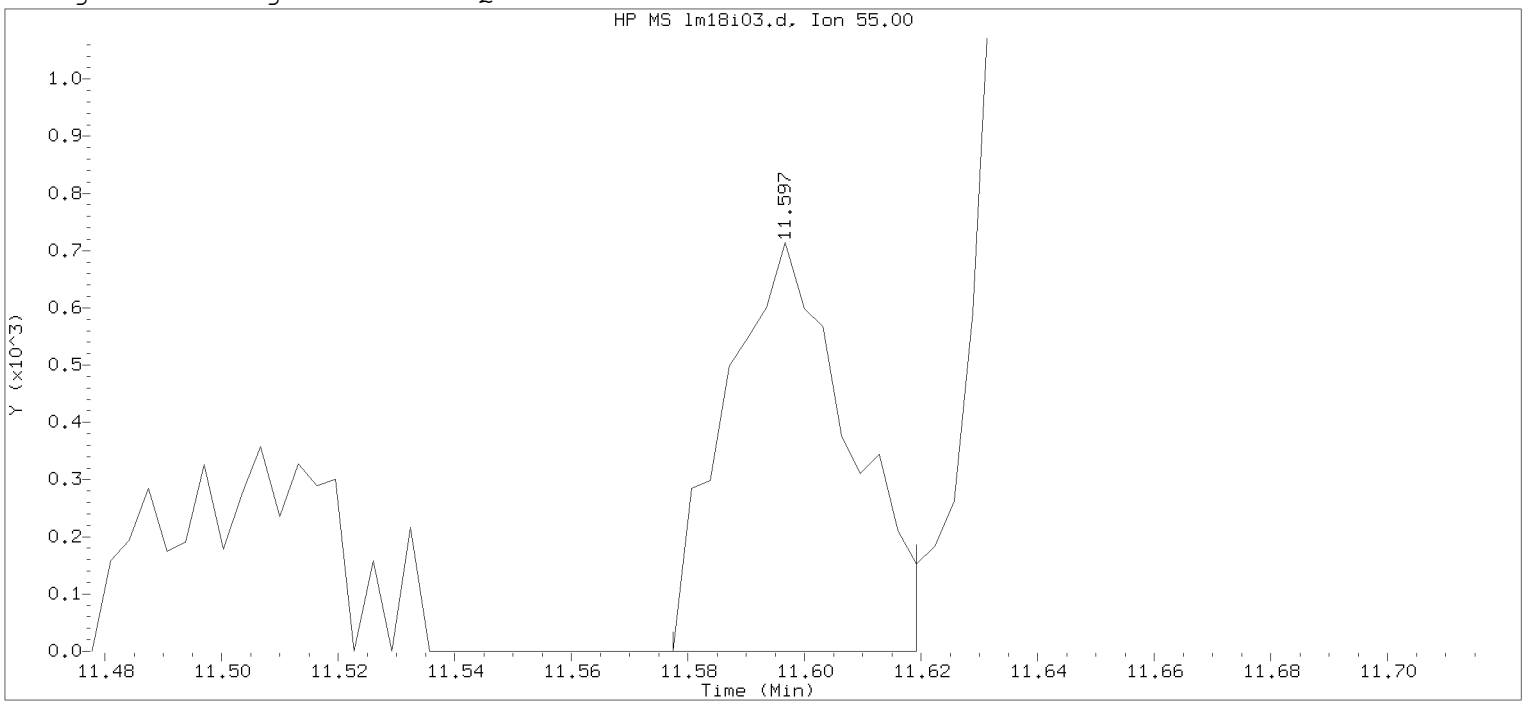
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



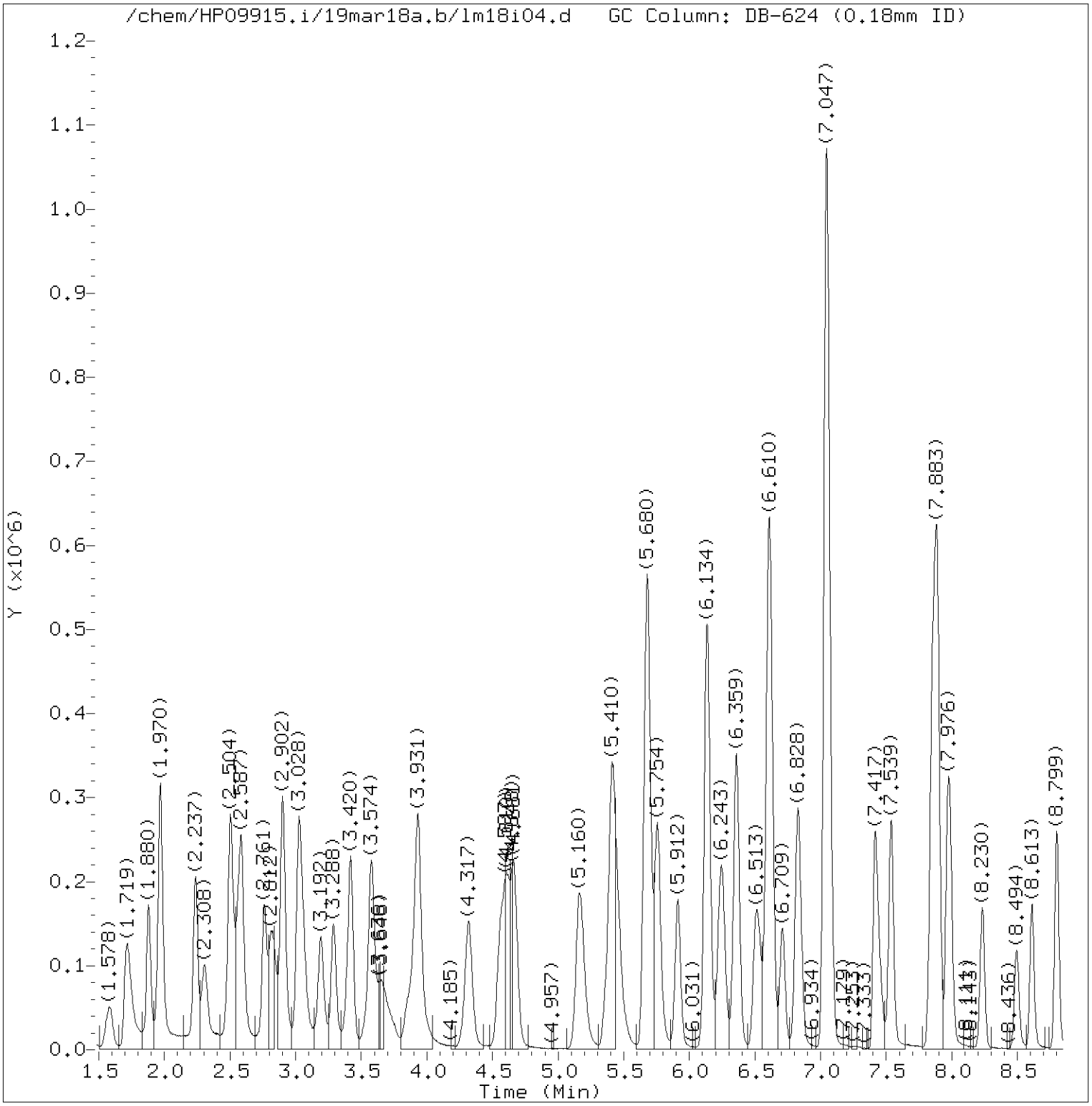
Data File: /chem/HP09915.i/19mar18a.b/lm18i03.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 12:21 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:14
Date, time and analyst ID of latest file update: 18-Mar-2019 14:14 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 3146
Retention Time (minutes): 11.597
Quant Ion : 55.00
Area : 1047
On-column Amount (ng) : 10.4220
Integration start scan : 3139 Integration stop scan: 3152
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kkelly100125



Total Ion Chromatogram (TIC)

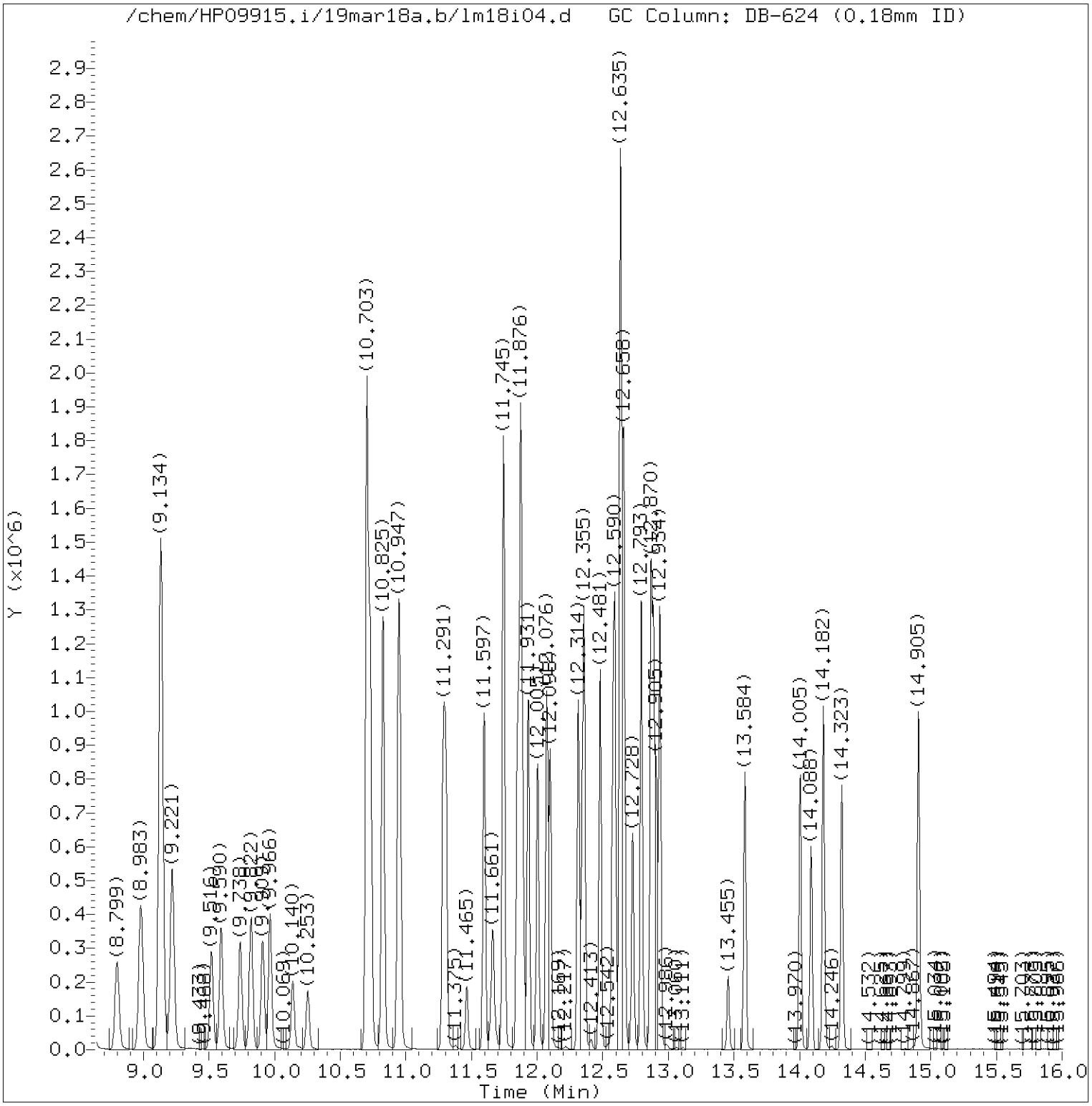
Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i04.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 12:42 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i04.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 12:42 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i04.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 12:42 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.719	85	256082	22.884
4) Chloromethane	(2)	1.880	50	213544	20.606
5) 1,3-Butadiene	(2)	1.964	39	107321	19.711
6) Vinyl Chloride	(2)	1.973	62	211292	20.813
8) Bromomethane	(2)	2.240	94	181057	20.499
9) Chloroethane	(2)	2.304	64	119601	20.263
10) Dichlorofluoromethane	(2)	2.504	67	288078	20.501
12) Trichlorofluoromethane	(2)	2.558	101	282114	21.290
11) n-Pentane	(2)	2.587	43	171812	21.029
14) Ethyl ether	(2)	2.758	59	119836	19.355
15) Freon 123a	(2)	2.825	67	141569	19.029
16) Acrolein	(1)	2.902	56	395138	188.549
17) 1,1-Dichloroethene	(2)	3.025	96	86744	19.729
17) 1,1-Dichloroethene	(2)	3.021	63	47035	19.408
18) Acetone	(1)	3.044	58	34163	38.129
19) Freon 113	(2)	3.050	101	99065	21.207
21) 2-Propanol	(1)	3.173	45	112433	187.717
22) Methyl Iodide	(2)	3.192	142	184576	19.804
23) Carbon Disulfide	(2)	3.288	76	296191	19.901
27) Methyl Acetate	(2)	3.391	43	126718	19.197
25) Allyl Chloride	(2)	3.420	41	184838	19.646
29)*t-Butyl alcohol-d10	(1)	3.574	65	268588M	250.000
28) Methylene Chloride	(2)	3.578	84	105039	19.185
30) t-Butyl alcohol	(1)	3.664	59	214294	193.174
31) Acrylonitrile	(2)	3.851	53	67398	19.520
33) Methyl Tertiary Butyl Ether	(2)	3.915	73	342366	19.673
32) trans-1,2-Dichloroethene	(2)	3.938	96	102725	19.498
34) n-Hexane	(2)	4.320	57	150654	21.210
36) 1,1-Dichloroethane	(2)	4.558	63	197614	19.858
38) di-Isopropyl ether	(2)	4.610	45	371728	19.757
39) 2-Chloro-1,3-butadiene	(2)	4.668	53	185609	19.901
40) Ethyl t-butyl ether	(2)	5.160	59	360186	19.922
44) 2-Butanone	(2)	5.375	43	182472	38.254
42) cis-1,2-Dichloroethene	(2)	5.407	96	117500	19.318
45) 2,2-Dichloropropane	(2)	5.420	77	167960	19.820
47) Propionitrile	(1)	5.459	54	256080	197.391
48) Methacrylonitrile	(2)	5.677	67	350212	98.229
49) Bromochloromethane	(2)	5.754	128	69504	19.956

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i04.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 12:42 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.767	71	48949	39.441
51) Chloroform	(2)	5.912	83	198852	19.884
52)$Dibromofluoromethane	(2)	6.131	113	333455	50.377
52)$Dibromofluoromethane	(2)	6.134	111	341919	50.418
53) 1,1,1-Trichloroethane	(2)	6.137	97	170304	19.855
43) 1,2-Dichloroethene (Total)	(2)		96	220225	38.816
54) Cyclohexane	(2)	6.246	56	189215	20.414
54) Cyclohexane	(2)	6.243	84	161457	20.506
54) Cyclohexane	(2)	6.246	69	58278	20.630
56) Carbon Tetrachloride	(2)	6.359	117	140752	19.984
55) 1,1-Dichloropropene	(2)	6.362	75	153051	19.934
58) Isobutyl Alcohol	(1)	6.520	41	176269	481.490
57)$1,2-Dichloroethane-d4	(2)	6.600	102	77899	50.211
57)$1,2-Dichloroethane-d4	(2)	6.600	65	435266	50.123
57)$1,2-Dichloroethane-d4	(2)	6.600	104	49279	49.733
60) Benzene	(2)	6.623	78	435541	19.705
61) 1,2-Dichloroethane	(2)	6.709	62	171266	19.316
61) 1,2-Dichloroethane	(2)	6.706	98	13512	24.906
65) t-Amyl methyl ether	(2)	6.828	73	365286	20.329
66)*Fluorobenzene	(2)	7.044	96	1287539	50.000
67) n-Heptane	(2)	7.069	43	170824	21.368
69) n-Butanol	(1)	7.417	56	258397	975.301
71) Trichloroethene	(2)	7.536	95	116775	19.607
72) Methylcyclohexane	(2)	7.848	83	221095	21.560
72) Methylcyclohexane	(2)	7.848	98	101306	21.229
73) 1,2-Dichloropropane	(2)	7.877	63	115111	19.137
76) Methyl Methacrylate	(2)	7.967	69	113023M	19.472
75) 1,4-Dioxane	(1)	7.970	88	33829M	484.854
74) Dibromomethane	(2)	7.989	93	80849	19.437
78) Bromodichloromethane	(2)	8.230	83	141022	19.647
79) 2-Nitropropane	(2)	8.494	41	94337	37.898
80) 2-Chloroethyl Vinyl Ether	(2)	8.613	63	96806	20.023
81) cis-1,3-Dichloropropene	(2)	8.799	75	181292	20.037
82) 4-Methyl-2-pentanone	(2)	8.983	43	396699	39.422
83)$Toluene-d8	(3)	9.134	98	1311023	50.391
83)$Toluene-d8	(3)	9.134	100	847634	50.437
88) Toluene	(3)	9.221	92	280443	19.457
89) trans-1,3-Dichloropropene	(3)	9.516	75	169918	19.763

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i04.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 12:42 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	9.590	69	201233	19.924
92) 1,1,2-Trichloroethane	(3)	9.738	97	106129	19.475
93) Tetrachloroethene	(3)	9.822	166	122211	19.495
94) 1,3-Dichloropropane	(3)	9.909	76	186763	19.440
96) 2-Hexanone	(3)	9.966	43	289339	39.026
90) 1,3-Dichloropropene (total)	(3)		100	351210	39.799
97) Dibromochloromethane	(3)	10.137	129	108251	19.247
99) 1,2-Dibromoethane	(3)	10.253	107	122087	19.705
100)*Chlorobenzene-d5	(3)	10.703	117	1010955	50.000
101) 1-Chlorohexane	(3)	10.725	91	161946	18.834
102) Chlorobenzene	(3)	10.732	112	329528	19.005
103) 1,1,1,2-Tetrachloroethane	(3)	10.822	131	111390	19.168
104) Ethylbenzene	(3)	10.828	91	569127	19.493
106) m+p-Xylene	(3)	10.947	106	442361	38.525
107) o-Xylene	(3)	11.285	106	218123	19.210
109) Styrene	(3)	11.304	104	368392	19.349
110) Bromoform	(3)	11.465	173	74629	18.477
111) Isopropylbenzene	(3)	11.597	105	566462	19.497
112) Cyclohexanone	(1)	11.664	55	138949	500.448
114)$4-Bromofluorobenzene	(3)	11.745	95	509108	50.567
114)$4-Bromofluorobenzene	(3)	11.745	174	413784	50.604
108) Xylene (Total)	(3)		106	660484	57.735
116) 1,1,2,2-Tetrachloroethane	(4)	11.847	83	185445	19.463
115) Bromobenzene	(4)	11.854	156	145463	19.070
118) trans-1,4-Dichloro-2-butene	(4)	11.876	53	309533	101.216
117) 1,2,3-Trichloropropane	(4)	11.892	110	55350	19.083
119) n-Propylbenzene	(4)	11.934	91	676172	20.078
120) 2-Chlorotoluene	(4)	12.005	126	139774	19.610
122) 1,3,5-Trimethylbenzene	(4)	12.076	105	492440	19.530
121) 4-Chlorotoluene	(4)	12.098	126	143759	19.176
124) tert-Butylbenzene	(4)	12.314	134	114856	19.412
125) Pentachloroethane	(4)	12.346	167	84017	18.336
126) 1,2,4-Trimethylbenzene	(4)	12.359	105	511534	19.407
127) sec-Butylbenzene	(4)	12.481	105	621696	19.807
129) 1,3-Dichlorobenzene	(4)	12.577	146	276975	19.089
130) p-Isopropyltoluene	(4)	12.593	119	557713	19.612
131)*1,4-Dichlorobenzene-d4	(4)	12.635	152	554778	50.000
133) 1,4-Dichlorobenzene	(4)	12.651	146	289995	18.819

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i04.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 12:42 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	12.664	105	576068	19.834
135) Benzyl Chloride	(4)	12.728	91	358913	18.711
136) 1,3-Diethylbenzene	(4)	12.796	119	358447	19.971
137) 1,4-Diethylbenzene	(4)	12.867	119	383493	19.758
139) n-Butylbenzene	(4)	12.886	92	279952	19.394
138) 1,2-Dichlorobenzene	(4)	12.908	146	275513	19.028
140) 1,2-Diethylbenzene	(4)	12.934	119	299563	19.726
141) Diethylbenzene (total)	(4)		100	1041503	59.455
142) 1,2-Dibromo-3-chloropropane	(4)	13.455	75	41534	19.372
144) 1,3,5-Trichlorobenzene	(4)	13.584	180	215158	19.319
146) 1,2,4-Trichlorobenzene	(4)	14.005	180	204276	19.208
147) Hexachlorobutadiene	(4)	14.088	225	84975	19.948
148) Naphthalene	(4)	14.182	128	655417	19.414
149) 1,2,3-Trichlorobenzene	(4)	14.323	180	194885	19.220
150) 2-Methylnaphthalene	(4)	14.905	142	406617	19.772

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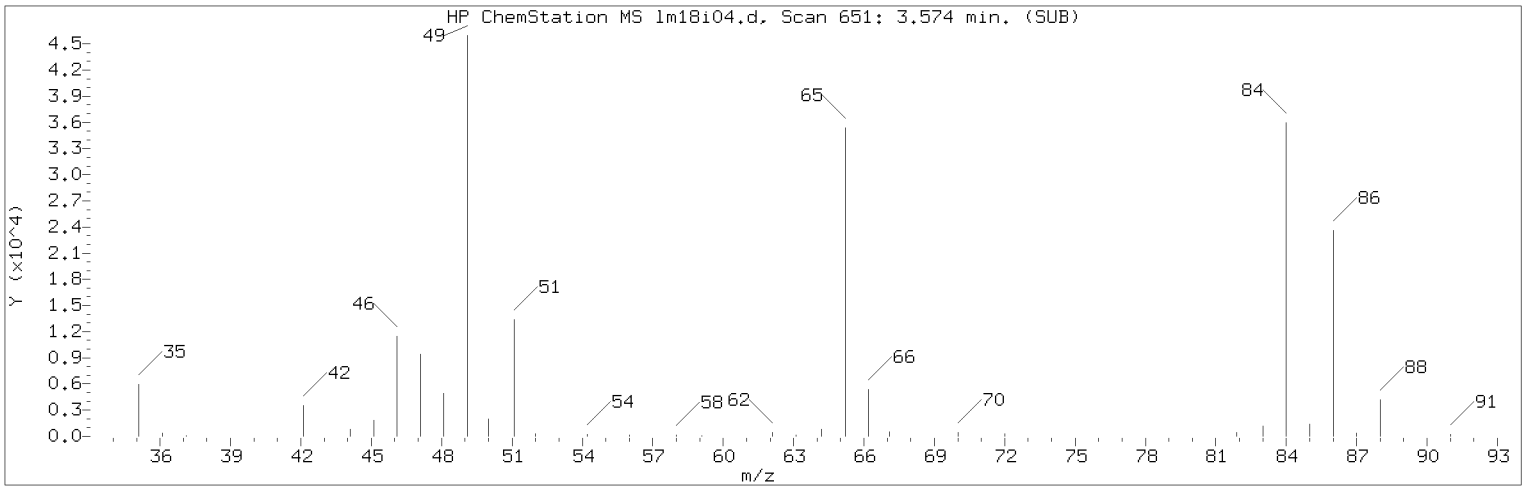
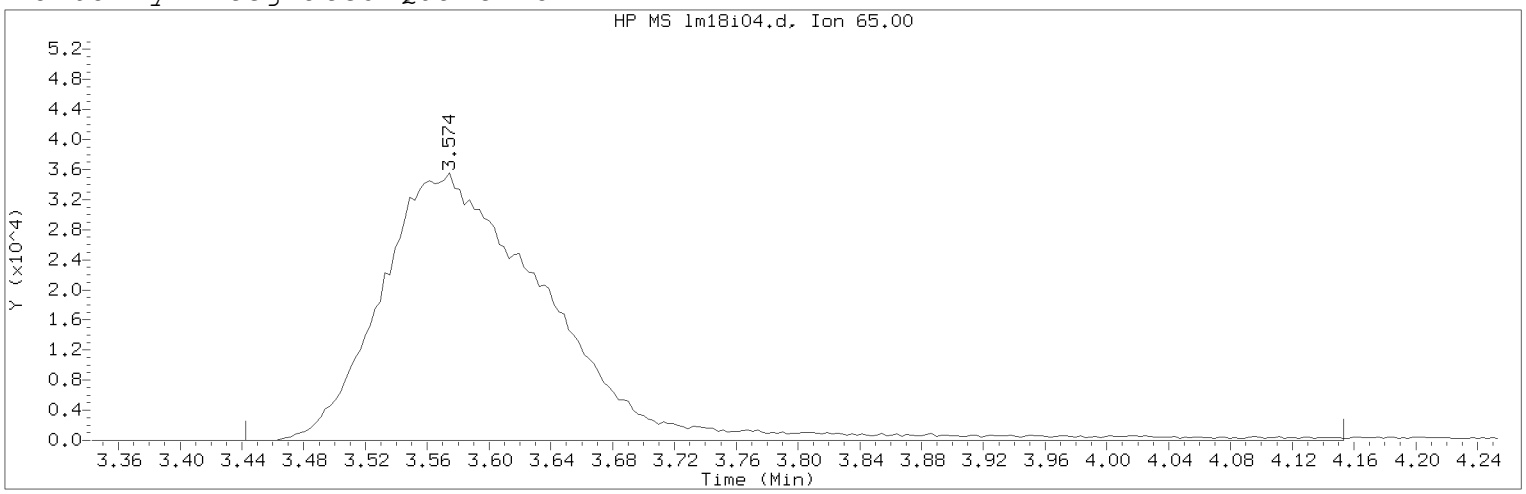
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i04.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 12:42 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

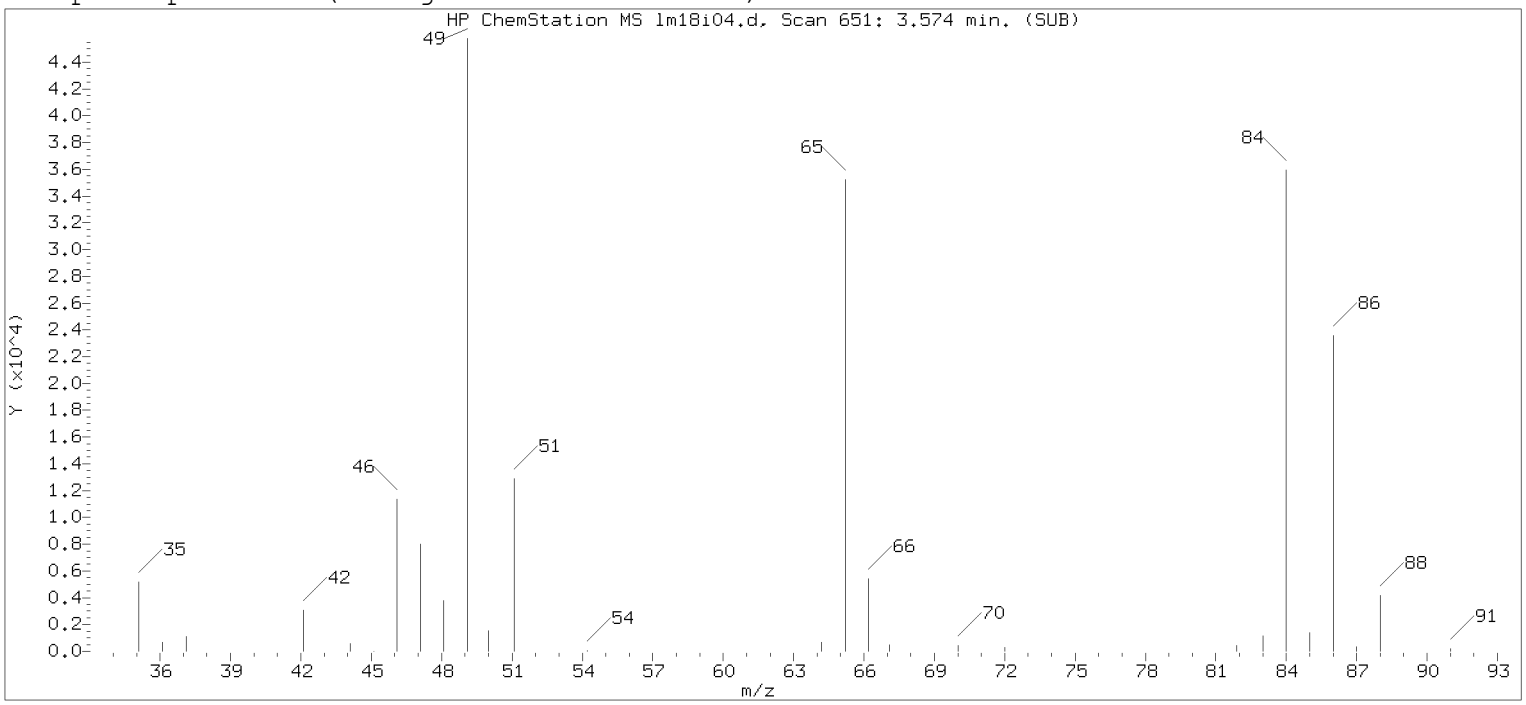
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 651
Retention Time (minutes): 3.574
Quant Ion : 65.00
Area (flag) : 268588M
On-Column Amount (ng) : 250.0000
Integration start scan : 609 Integration stop scan: 830
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

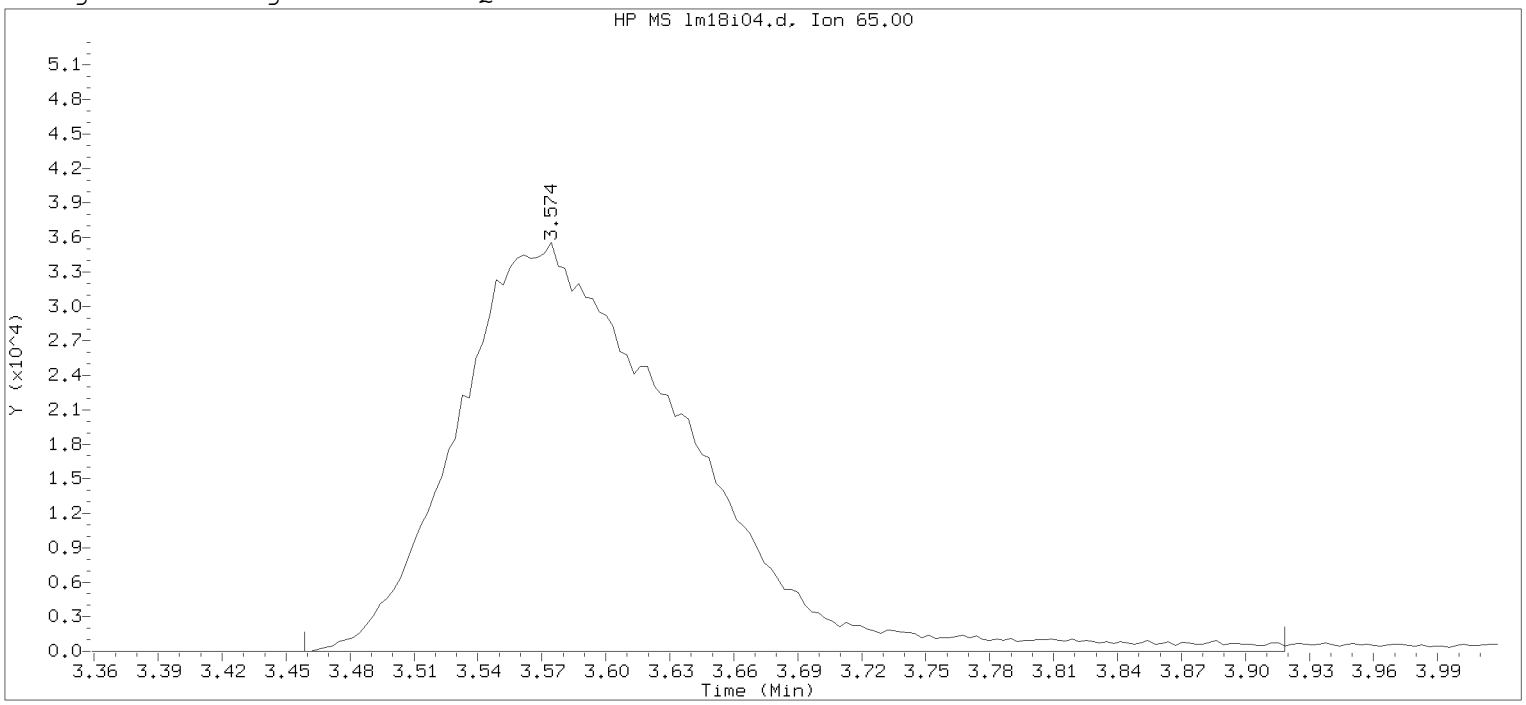
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i04.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 12:42 Analyst ID: APR27582

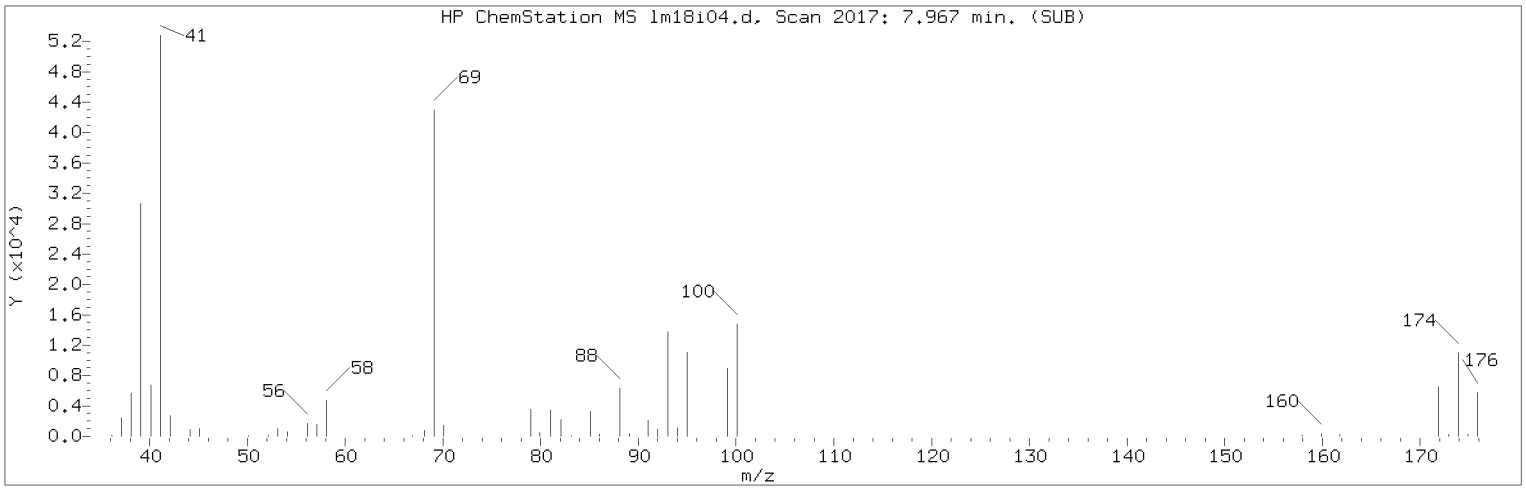
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:14
Date, time and analyst ID of latest file update: 18-Mar-2019 14:14 apr27582

Sample Name: VSTD020 Lab Sample ID: VSTD020

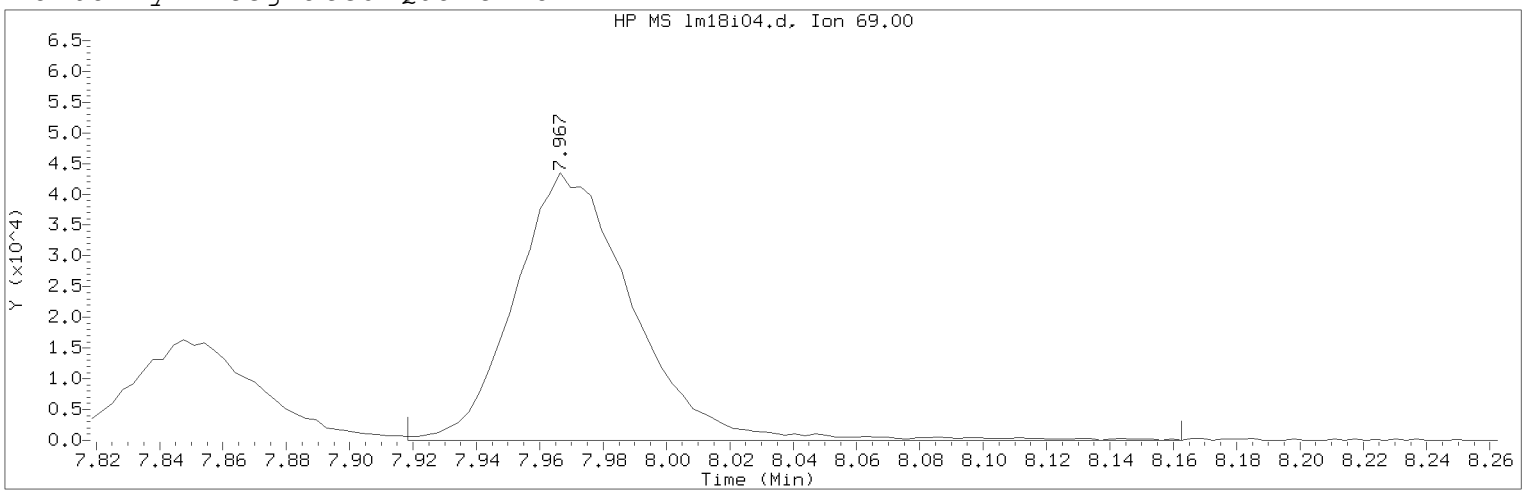
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 651
Retention Time (minutes): 3.574
Quant Ion : 65.00
Area : 262202
On-column Amount (ng) : 250.0000
Integration start scan : 614 Integration stop scan: 757
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10025

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i04.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 12:42 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

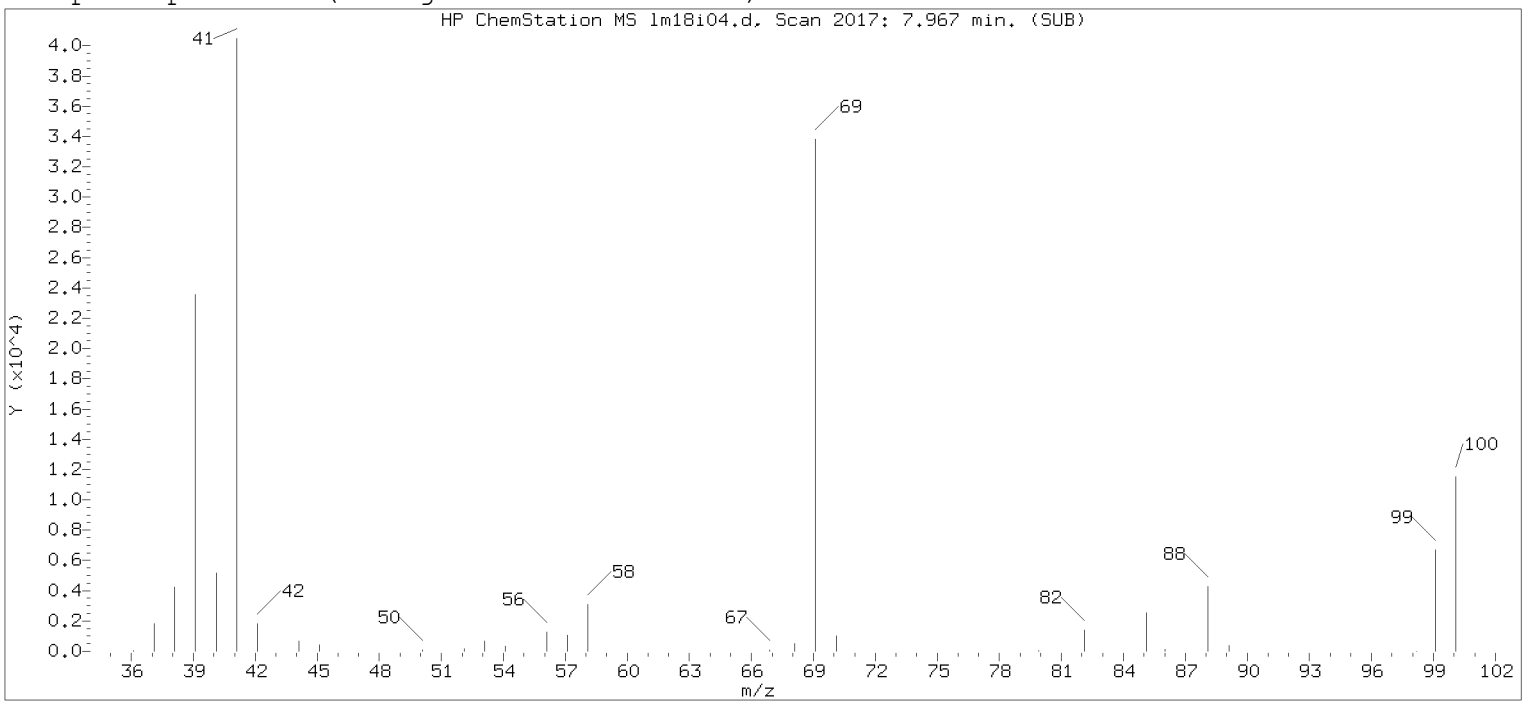
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2017
Retention Time (minutes): 7.967
Quant Ion : 69.00
Area (flag) : 113023M
On-Column Amount (ng) : 19.4719
Integration start scan : 2001 Integration stop scan: 2077
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

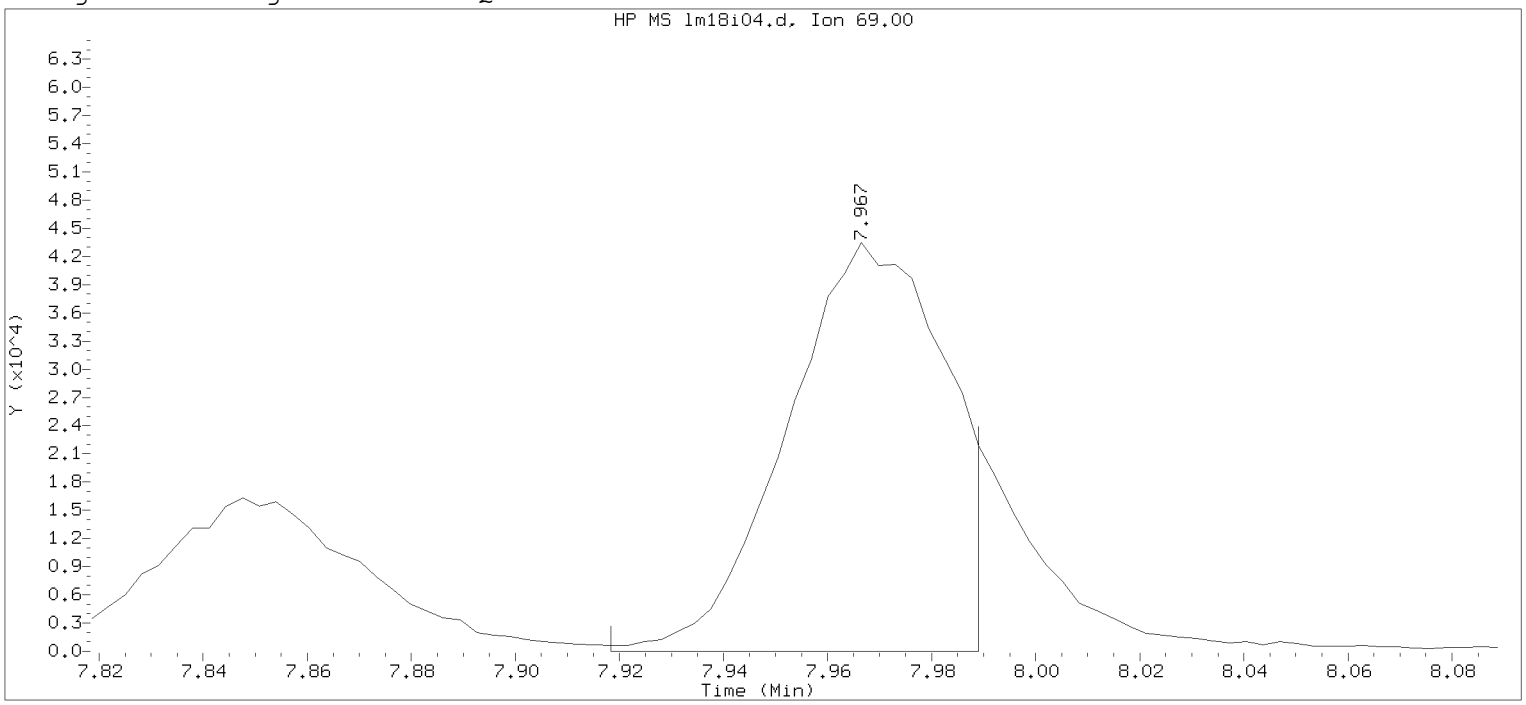
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i04.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 12:42 Analyst ID: APR27582

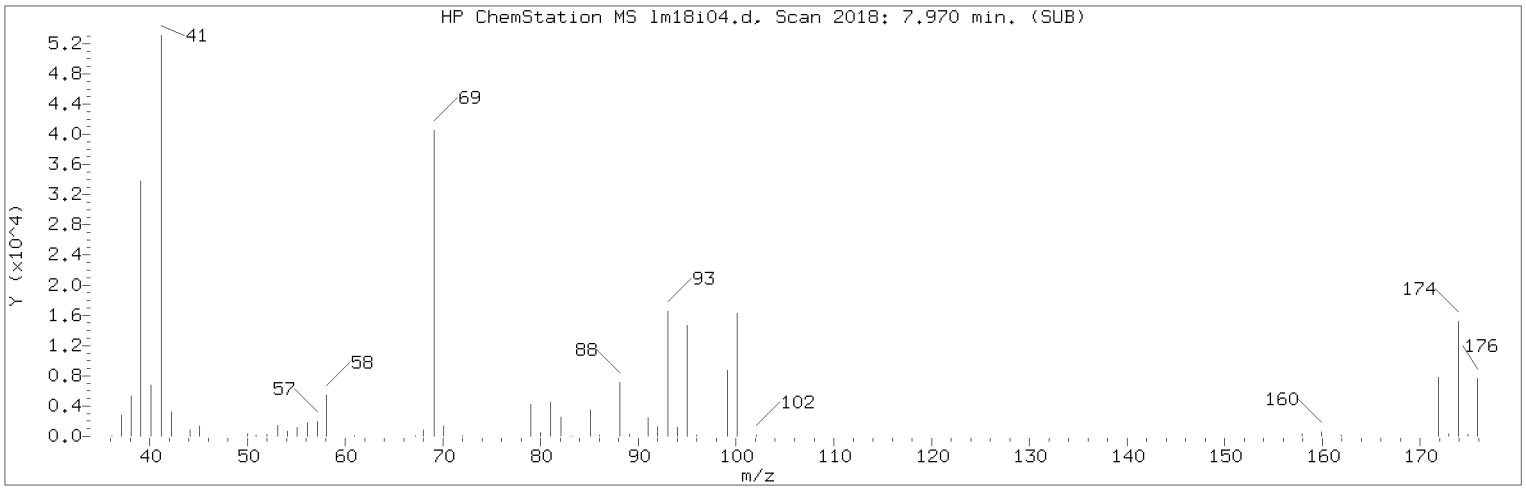
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:14
Date, time and analyst ID of latest file update: 18-Mar-2019 14:14 apr27582

Sample Name: VSTD020 Lab Sample ID: VSTD020

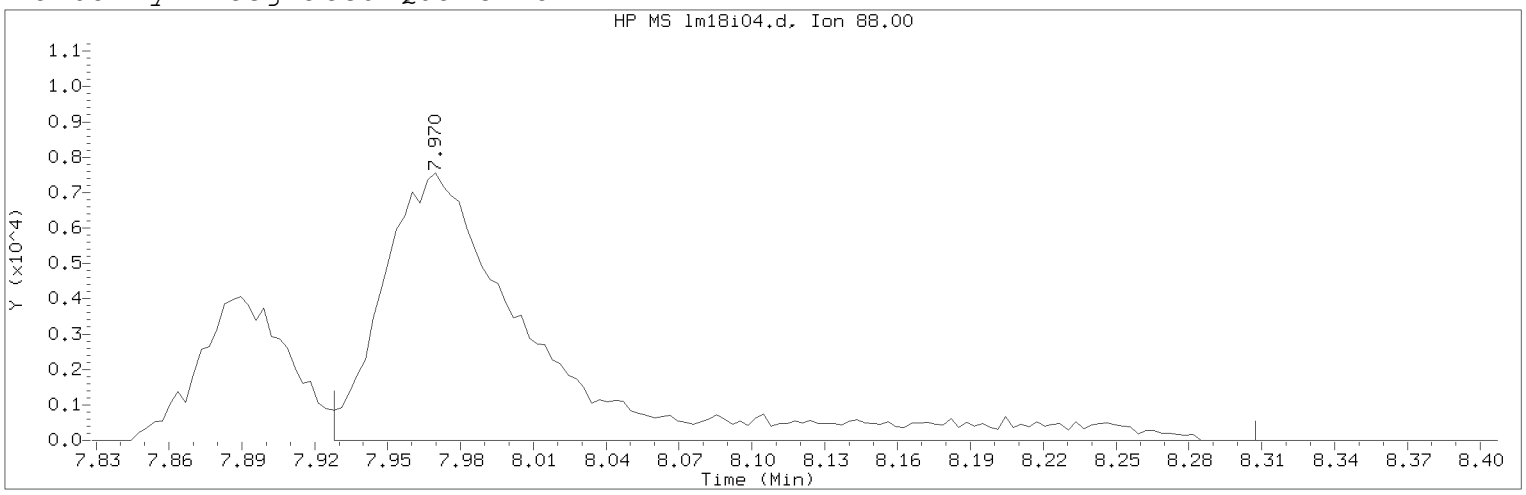
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2017
Retention Time (minutes): 7.967
Quant Ion : 69.00
Area : 91385
On-column Amount (ng) : 15.6762
Integration start scan : 2001 Integration stop scan: 2023
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kkelly100126

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i04.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 12:42 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

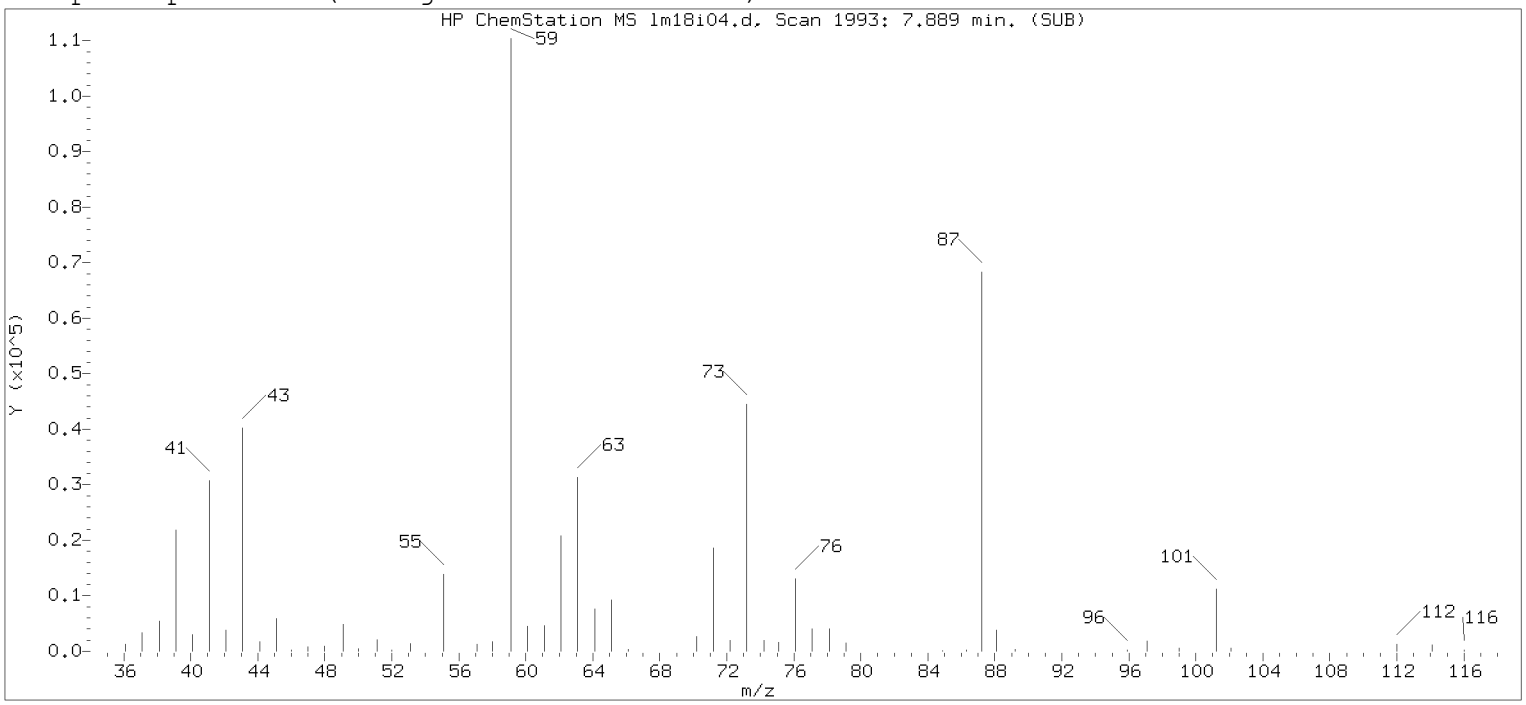
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2018
Retention Time (minutes): 7.970
Quant Ion : 88.00
Area (flag) : 33829M
On-Column Amount (ng) : 484.8544
Integration start scan : 2004 Integration stop scan: 2122
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

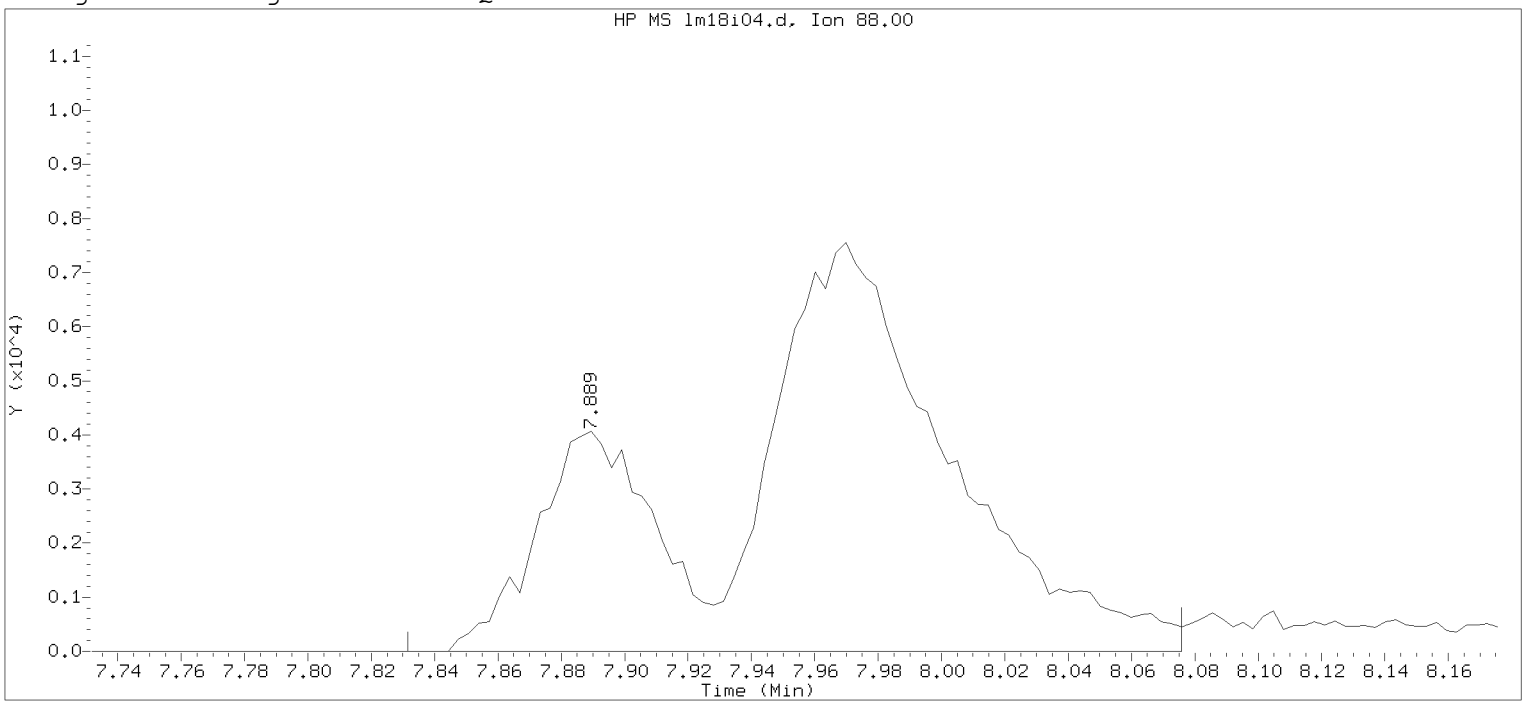
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



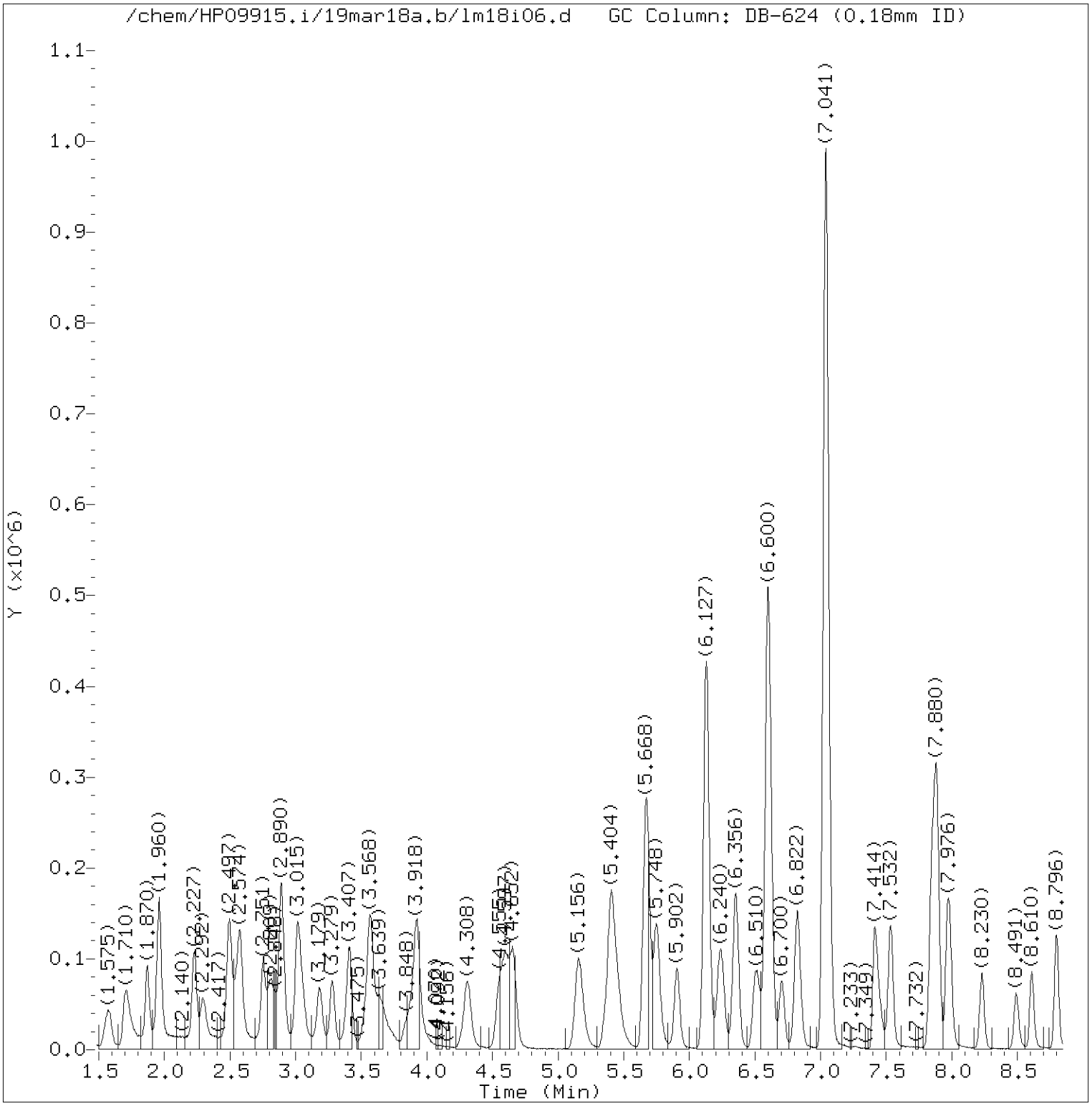
Data File: /chem/HP09915.i/19mar18a.b/lm18i04.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 12:42 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:14
Date, time and analyst ID of latest file update: 18-Mar-2019 14:14 apr27582

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1993		
Retention Time (minutes)	: 7.889		
Quant Ion	: 88.00		
Area	: 38709		
On-column Amount (ng)	: 380.6438		
Integration start scan	: 1974	Integration stop scan:	2050
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: KKELLY



Total Ion Chromatogram (TIC)

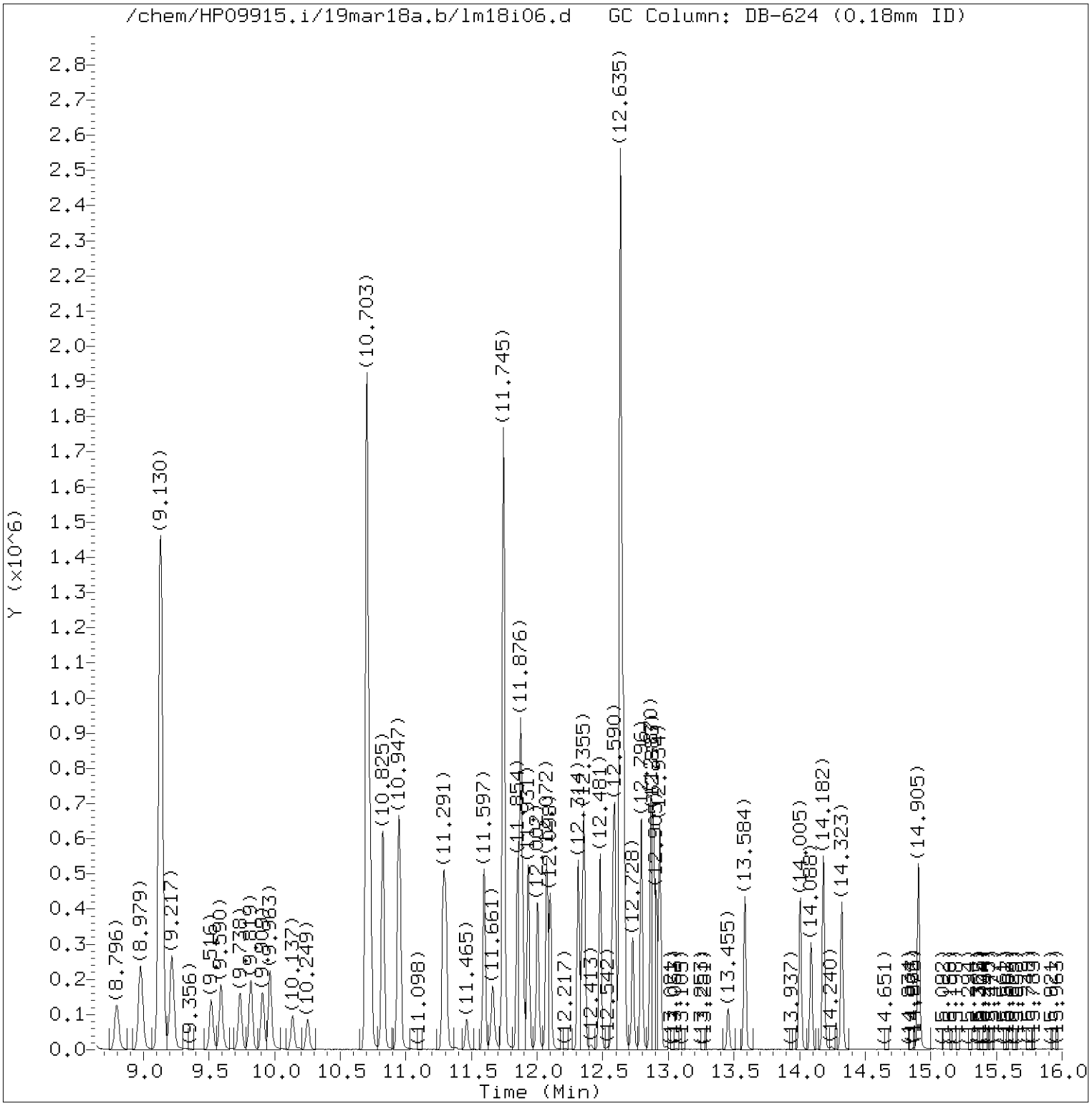
Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i06.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:04 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i06.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:04 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i06.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:04 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.703	85	120635	10.978
4) Chloromethane	(2)	1.867	50	106785	10.494
5) 1,3-Butadiene	(2)	1.954	39	54125	10.124
6) Vinyl Chloride	(2)	1.967	62	105182	10.551
8) Bromomethane	(2)	2.230	94	91469	10.547
9) Chloroethane	(2)	2.298	64	60138	10.376
10) Dichlorofluoromethane	(2)	2.497	67	144594	10.479
12) Trichlorofluoromethane	(2)	2.555	101	137309	10.553
11) n-Pentane	(2)	2.581	43	86571	10.791
14) Ethyl ether	(2)	2.751	59	64134	10.549
15) Freon 123a	(2)	2.816	67	73744	10.095
16) Acrolein	(1)	2.890	56	240571	111.923
17) 1,1-Dichloroethene	(2)	3.015	96	43239	10.015
17) 1,1-Dichloroethene	(2)	3.012	63	23579	9.908
18) Acetone	(1)	3.028	58	19976M	21.738
19) Freon 113	(2)	3.041	101	48899	10.661
21) 2-Propanol	(1)	3.166	45	60992M	99.285
22) Methyl Iodide	(2)	3.179	142	91622	10.012
23) Carbon Disulfide	(2)	3.279	76	145047	9.925
27) Methyl Acetate	(2)	3.385	43	64059	9.883
25) Allyl Chloride	(2)	3.414	41	92016	9.960
29)*t-Butyl alcohol-d10	(1)	3.558	65	275478M	250.000
28) Methylene Chloride	(2)	3.571	84	54130	10.069
30) t-Butyl alcohol	(1)	3.661	59	114363	100.513
31) Acrylonitrile	(2)	3.848	53	37584	11.086
33) Methyl Tertiary Butyl Ether	(2)	3.906	73	179357	10.496
32) trans-1,2-Dichloroethene	(2)	3.928	96	52238	10.098
34) n-Hexane	(2)	4.314	57	76729	11.001
36) 1,1-Dichloroethane	(2)	4.555	63	98316	10.061
38) di-Isopropyl ether	(2)	4.597	45	190604	10.317
39) 2-Chloro-1,3-butadiene	(2)	4.658	53	92949	10.149
40) Ethyl t-butyl ether	(2)	5.156	59	189668	10.683
44) 2-Butanone	(2)	5.372	43	100989	21.561
42) cis-1,2-Dichloroethene	(2)	5.404	96	60757	10.173
45) 2,2-Dichloropropane	(2)	5.417	77	82981	9.972
47) Propionitrile	(1)	5.449	54	130746	98.260
48) Methacrylonitrile	(2)	5.668	67	175818	50.222
49) Bromochloromethane	(2)	5.751	128	34142	9.983

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i06.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:04 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.761	71	27511	21.613
51) Chloroform	(2)	5.906	83	99175	10.099
52)$Dibromofluoromethane	(2)	6.127	113	329143	50.640
52)$Dibromofluoromethane	(2)	6.131	111	336164	50.482
53) 1,1,1-Trichloroethane	(2)	6.140	97	84552	10.039
43) 1,2-Dichloroethene (Total)	(2)		96	112995	20.271
54) Cyclohexane	(2)	6.240	56	94538	10.387
54) Cyclohexane	(2)	6.240	84	79768	10.317
54) Cyclohexane	(2)	6.234	69	28851	10.401
56) Carbon Tetrachloride	(2)	6.346	117	67783	9.801
55) 1,1-Dichloropropene	(2)	6.352	75	75401	10.001
58) Isobutyl Alcohol	(1)	6.510	41	96772	257.728
57)$1,2-Dichloroethane-d4	(2)	6.597	102	76665	50.325
57)$1,2-Dichloroethane-d4	(2)	6.597	65	431412	50.594
57)$1,2-Dichloroethane-d4	(2)	6.594	104	49659	51.039
60) Benzene	(2)	6.619	78	220410	10.156
61) 1,2-Dichloroethane	(2)	6.706	62	87195	10.015
61) 1,2-Dichloroethane	(2)	6.700	98	3657	6.865
65) t-Amyl methyl ether	(2)	6.822	73	187814	10.644
66)*Fluorobenzene	(2)	7.037	96	1264272	50.000
67) n-Heptane	(2)	7.063	43	86111	10.970
69) n-Butanol	(1)	7.414	56	135321	497.985
71) Trichloroethene	(2)	7.532	95	58674	10.033
72) Methylcyclohexane	(2)	7.848	83	103219	10.251
72) Methylcyclohexane	(2)	7.851	98	48363	10.321
73) 1,2-Dichloropropane	(2)	7.873	63	58014	9.822
76) Methyl Methacrylate	(2)	7.963	69	57737M	10.130
75) 1,4-Dioxane	(1)	7.970	88	18075M	252.581
74) Dibromomethane	(2)	7.986	93	41378	10.131
78) Bromodichloromethane	(2)	8.230	83	69374	9.843
79) 2-Nitropropane	(2)	8.494	41	48901	20.006
80) 2-Chloroethyl Vinyl Ether	(2)	8.606	63	48591	10.235
81) cis-1,3-Dichloropropene	(2)	8.793	75	87909	9.895
82) 4-Methyl-2-pentanone	(2)	8.976	43	221176	22.384
83)$Toluene-d8	(3)	9.130	98	1295108	50.399
83)$Toluene-d8	(3)	9.130	100	836592	50.399
88) Toluene	(3)	9.221	92	140714	9.884
89) trans-1,3-Dichloropropene	(3)	9.516	75	82557	9.721

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$ = Compound is a surrogate standard.

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on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i06.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:04 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	9.590	69	102325	10.257
92) 1,1,2-Trichloroethane	(3)	9.735	97	54584	10.141
93) Tetrachloroethene	(3)	9.819	166	60130	9.711
94) 1,3-Dichloropropane	(3)	9.909	76	96723	10.193
96) 2-Hexanone	(3)	9.963	43	163859	22.376
90) 1,3-Dichloropropene (total)	(3)		100	170466	19.616
97) Dibromochloromethane	(3)	10.137	129	52218	9.400
99) 1,2-Dibromoethane	(3)	10.253	107	62174	10.160
100)*Chlorobenzene-d5	(3)	10.703	117	998534	50.000
101) 1-Chlorohexane	(3)	10.725	91	81827	9.634
102) Chlorobenzene	(3)	10.729	112	167873	9.802
103) 1,1,1,2-Tetrachloroethane	(3)	10.822	131	54047	9.416
104) Ethylbenzene	(3)	10.825	91	285014	9.883
106) m+p-Xylene	(3)	10.947	106	222571	19.625
107) o-Xylene	(3)	11.285	106	108548	9.679
109) Styrene	(3)	11.304	104	183804	9.774
110) Bromoform	(3)	11.465	173	35213	10.641
111) Isopropylbenzene	(3)	11.597	105	285220	9.939
112) Cyclohexanone	(1)	11.661	55	72845	255.801
114)$4-Bromofluorobenzene	(3)	11.745	95	505411	50.824
114)$4-Bromofluorobenzene	(3)	11.745	174	409295	50.678
108) Xylene (Total)	(3)		106	331119	29.304
116) 1,1,2,2-Tetrachloroethane	(4)	11.847	83	100694	10.586
115) Bromobenzene	(4)	11.854	156	75396	9.901
118) trans-1,4-Dichloro-2-butene	(4)	11.876	53	155815	51.038
117) 1,2,3-Trichloropropane	(4)	11.896	110	29780	10.285
119) n-Propylbenzene	(4)	11.931	91	341997	10.172
120) 2-Chlorotoluene	(4)	12.005	126	71347	10.027
122) 1,3,5-Trimethylbenzene	(4)	12.072	105	251162	9.978
121) 4-Chlorotoluene	(4)	12.101	126	74073	9.898
124) tert-Butylbenzene	(4)	12.314	134	58488	9.902
125) Pentachloroethane	(4)	12.346	167	41281	9.025
126) 1,2,4-Trimethylbenzene	(4)	12.359	105	261189	9.926
127) sec-Butylbenzene	(4)	12.481	105	319240	10.188
129) 1,3-Dichlorobenzene	(4)	12.577	146	144189	9.954
130) p-Isopropyltoluene	(4)	12.593	119	284228	10.012
131)*1,4-Dichlorobenzene-d4	(4)	12.635	152	553832	50.000
133) 1,4-Dichlorobenzene	(4)	12.651	146	153192	9.958

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$ = Compound is a surrogate standard.

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on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i06.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:04 Analyst ID: APR27582

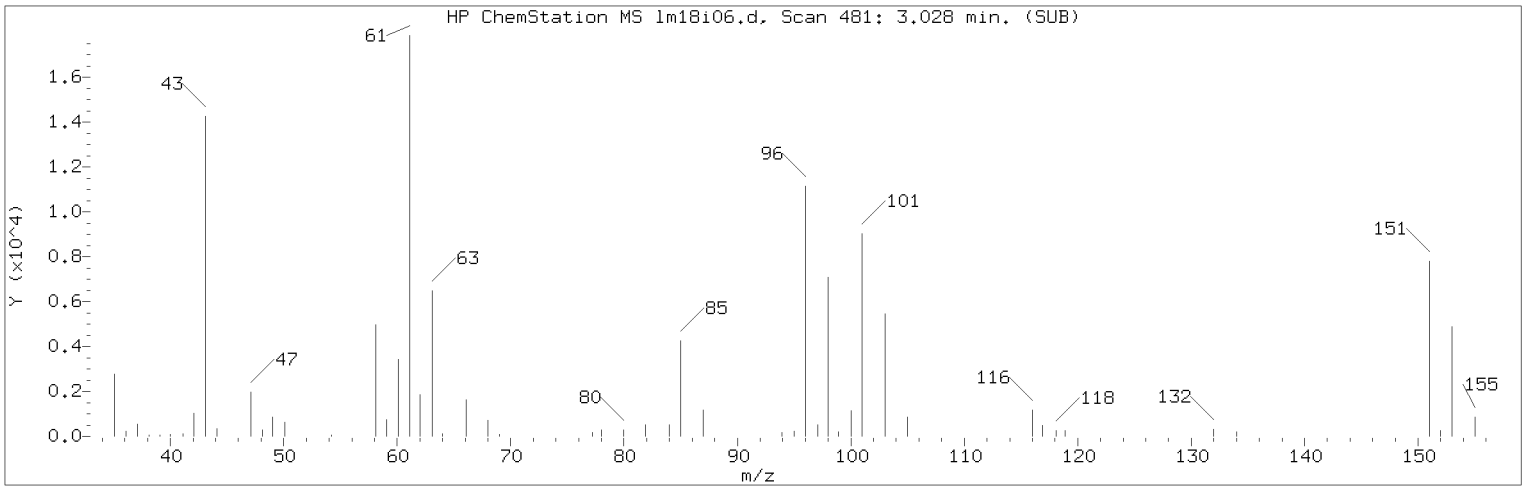
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

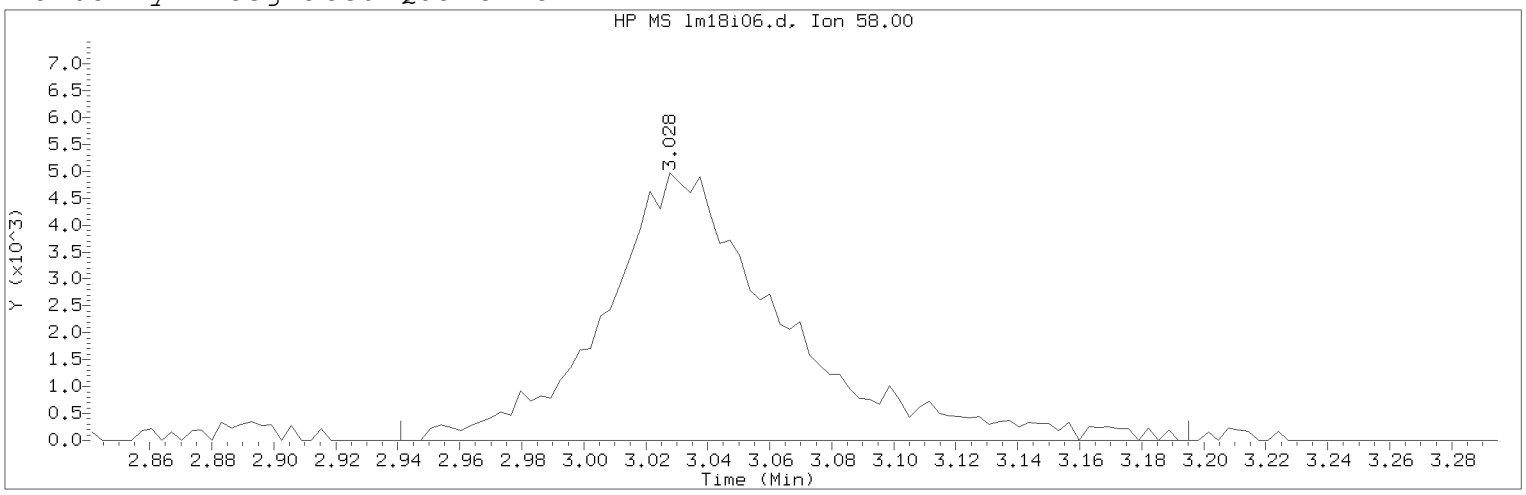
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	12.661	105	286034	9.865
135) Benzyl Chloride	(4)	12.728	91	180847	9.444
136) 1,3-Diethylbenzene	(4)	12.793	119	177211	9.890
137) 1,4-Diethylbenzene	(4)	12.867	119	189779	9.794
139) n-Butylbenzene	(4)	12.886	92	141337	9.808
138) 1,2-Dichlorobenzene	(4)	12.908	146	145721	10.081
140) 1,2-Diethylbenzene	(4)	12.934	119	150315	9.915
141) Diethylbenzene (total)	(4)		100	517305	29.600
142) 1,2-Dibromo-3-chloropropane	(4)	13.455	75	23241	10.858
144) 1,3,5-Trichlorobenzene	(4)	13.584	180	112732	10.139
146) 1,2,4-Trichlorobenzene	(4)	14.005	180	109486	10.313
147) Hexachlorobutadiene	(4)	14.088	225	41897	9.852
148) Naphthalene	(4)	14.182	128	363556	10.787
149) 1,2,3-Trichlorobenzene	(4)	14.323	180	105935	10.465
150) 2-Methylnaphthalene	(4)	14.905	142	215032	10.474

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i06.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:04 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

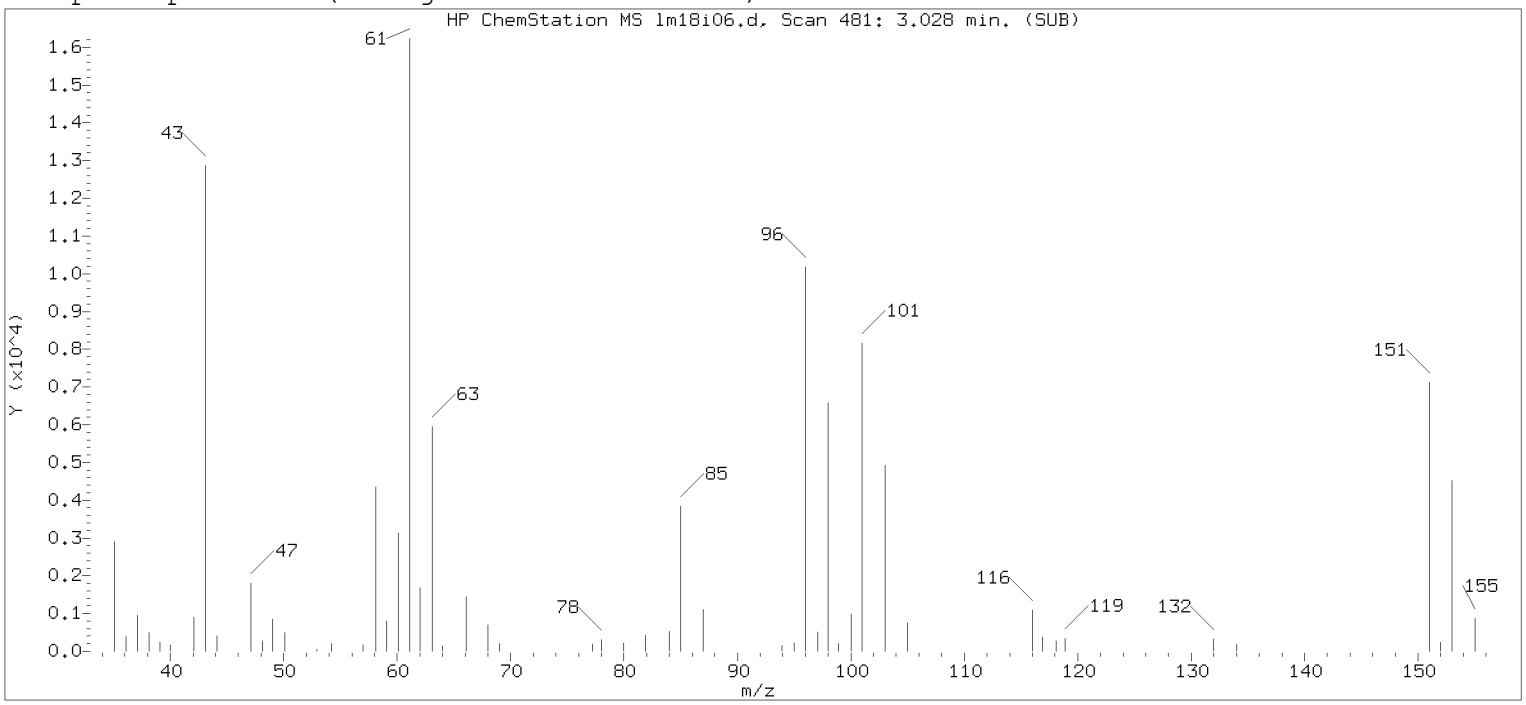
Compound Number : 18
Compound Name : Acetone
Scan Number : 481
Retention Time (minutes): 3.028
Quant Ion : 58.00
Area (flag) : 19976M
On-Column Amount (ng) : 21.7375
Integration start scan : 453 Integration stop scan: 532
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

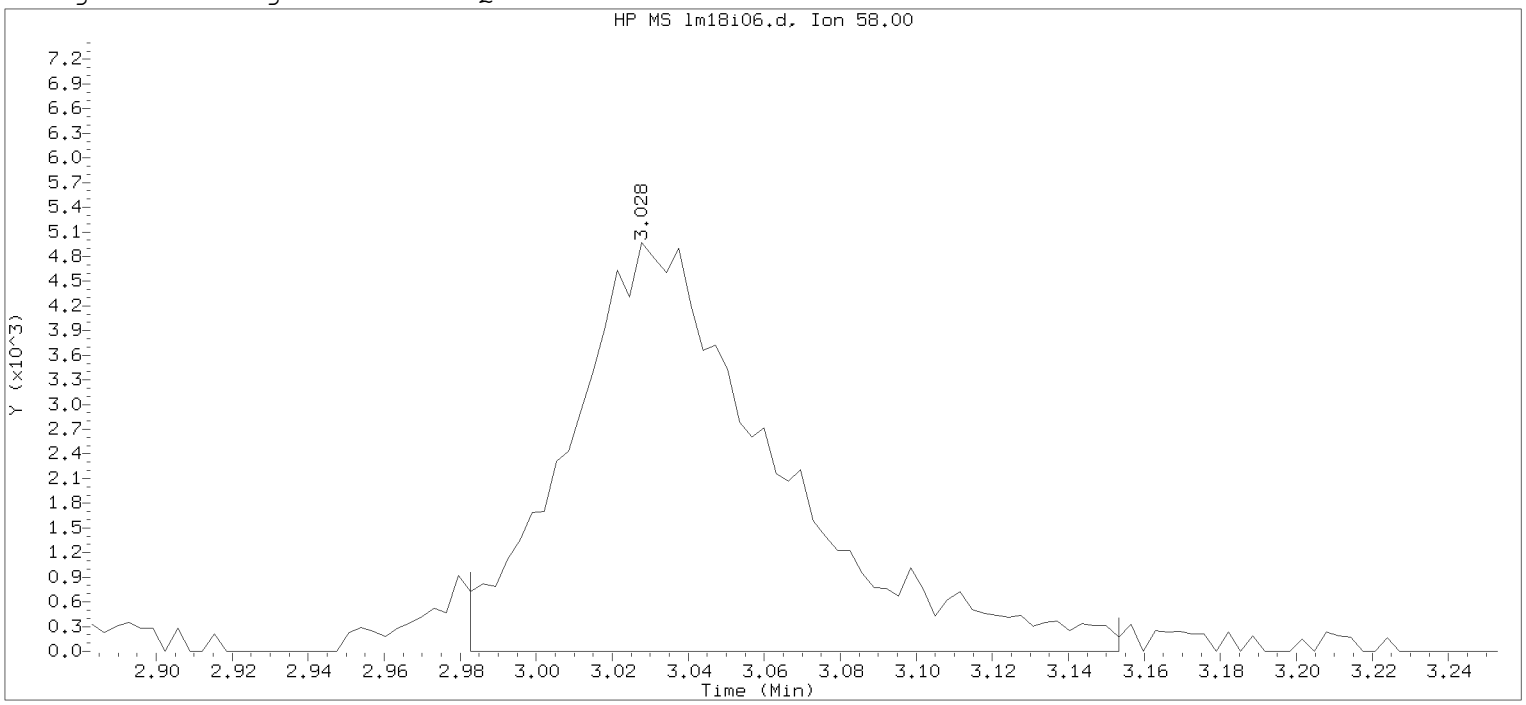
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i06.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:04 Analyst ID: APR27582

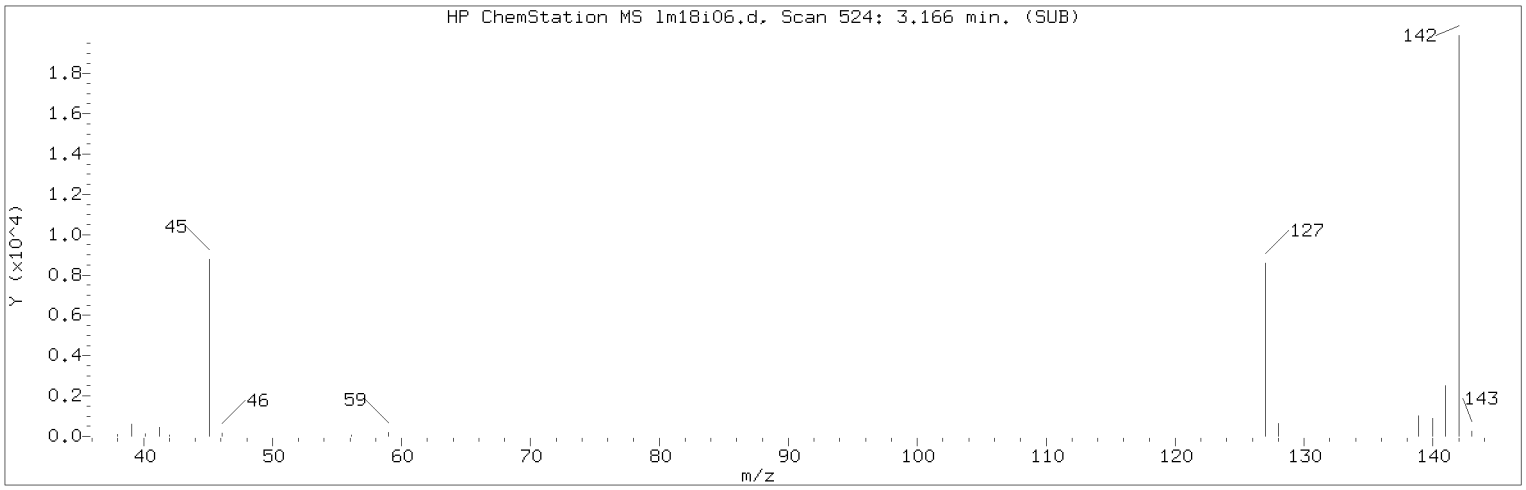
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:17
Date, time and analyst ID of latest file update: 18-Mar-2019 14:17 apr27582

Sample Name: VSTD010 Lab Sample ID: VSTD010

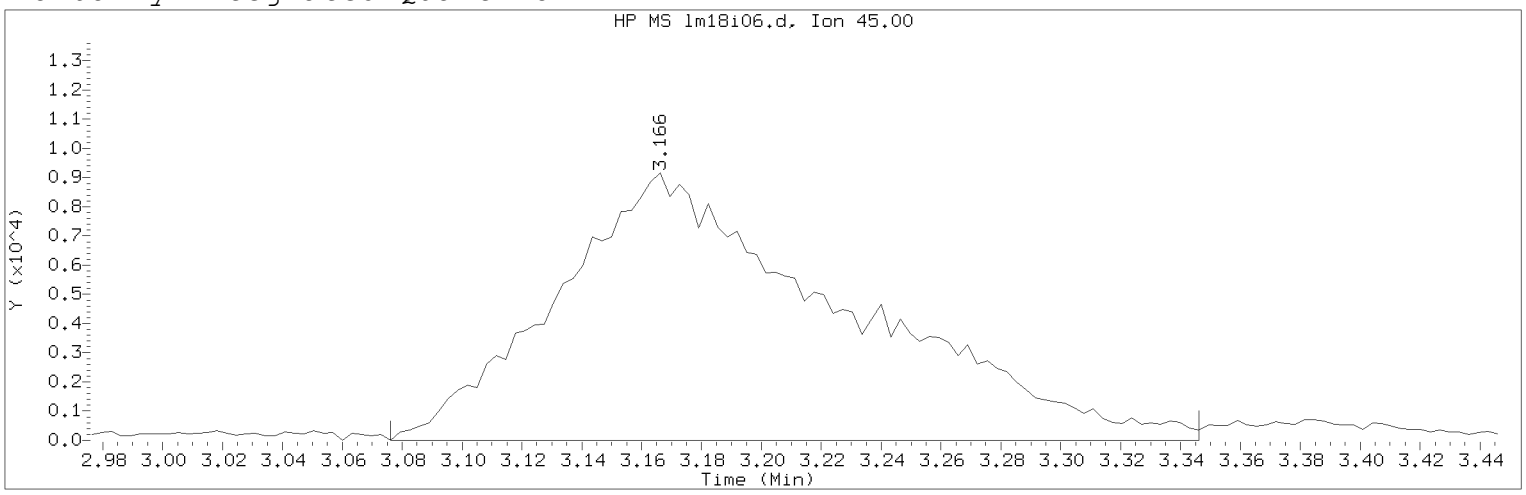
Compound Number	: 18		
Compound Name	: Acetone		
Scan Number	: 481		
Retention Time (minutes)	: 3.028		
Quant Ion	: 58.00		
Area	: 18771		
On-column Amount (ng)	: 18.3432		
Integration start scan	: 466	Integration stop scan:	519
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kkelly

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i06.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:04 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

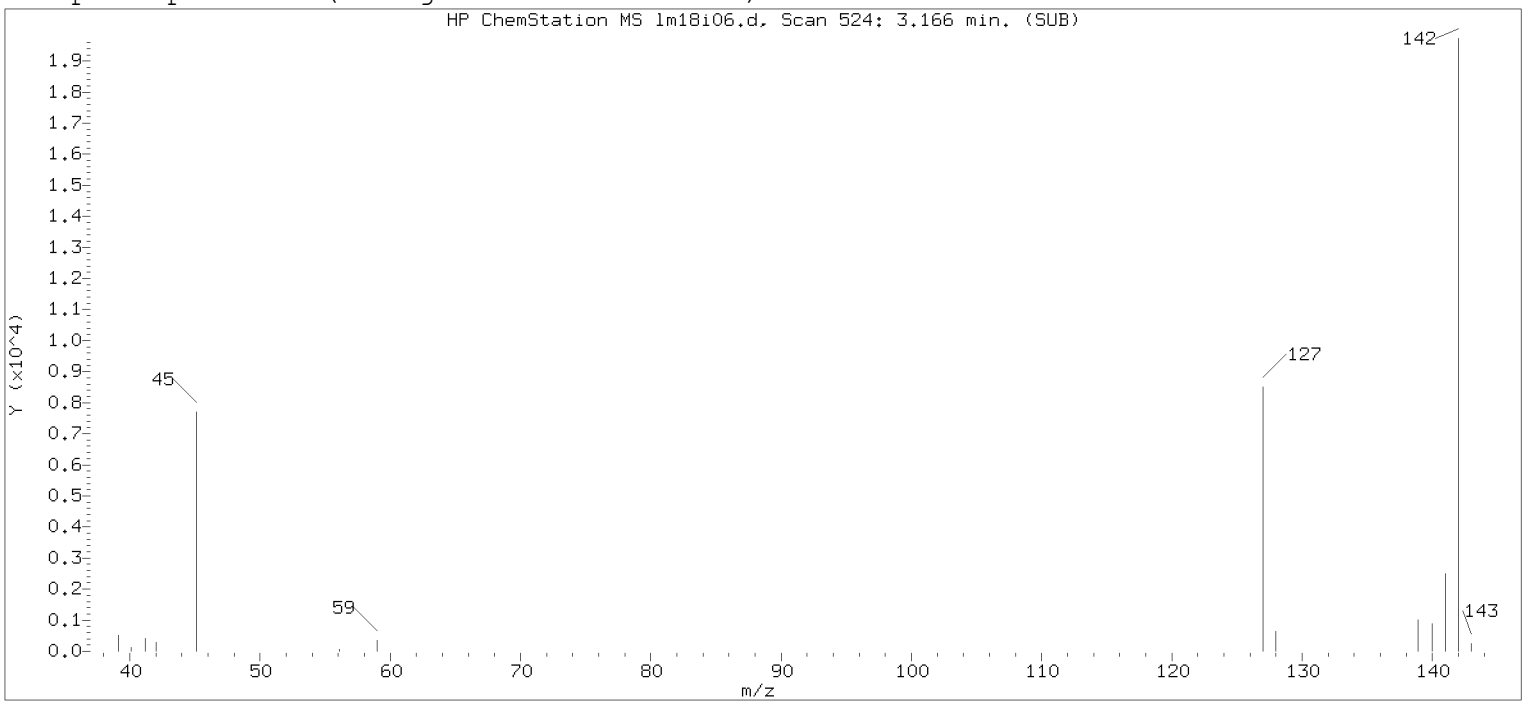
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 524
Retention Time (minutes): 3.166
Quant Ion : 45.00
Area (flag) : 60992M
On-Column Amount (ng) : 99.2849
Integration start scan : 495 Integration stop scan: 579
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

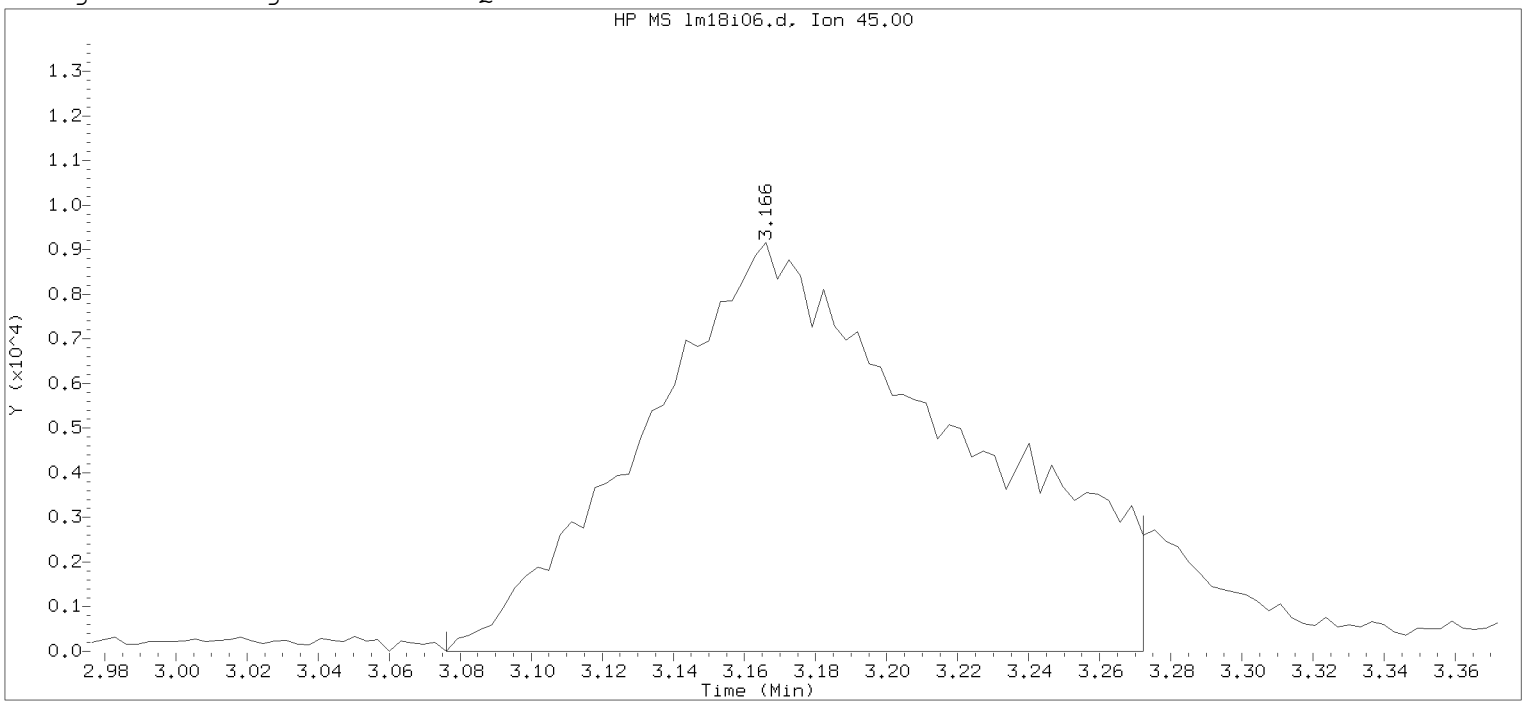
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i06.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:04 Analyst ID: APR27582

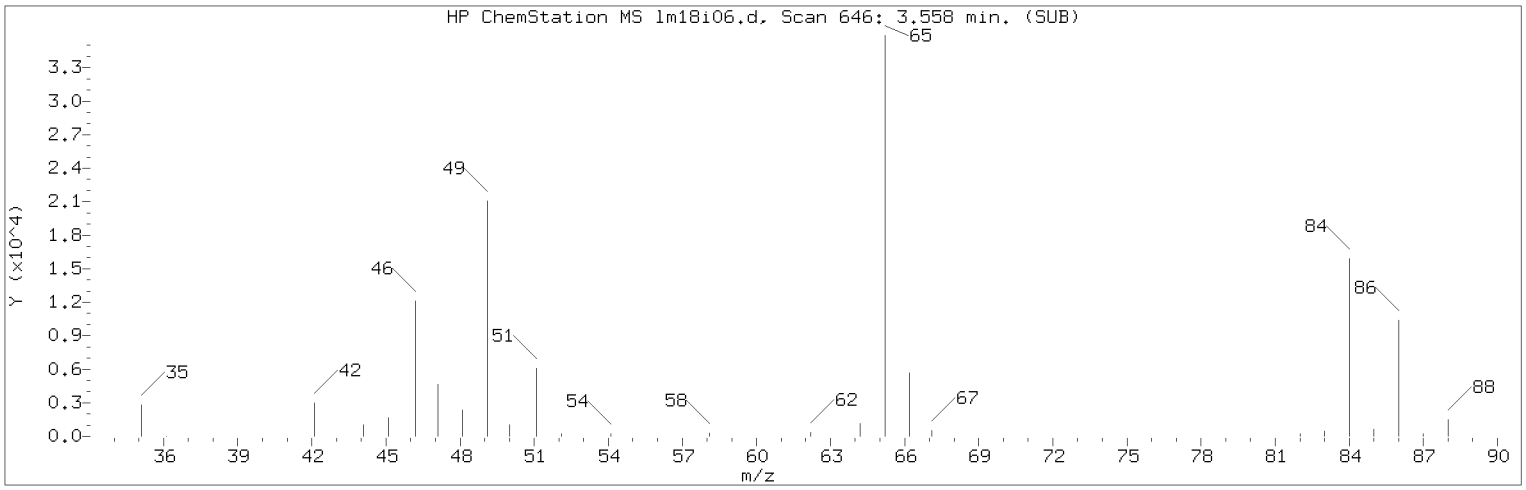
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:17
Date, time and analyst ID of latest file update: 18-Mar-2019 14:17 apr27582

Sample Name: VSTD010 Lab Sample ID: VSTD010

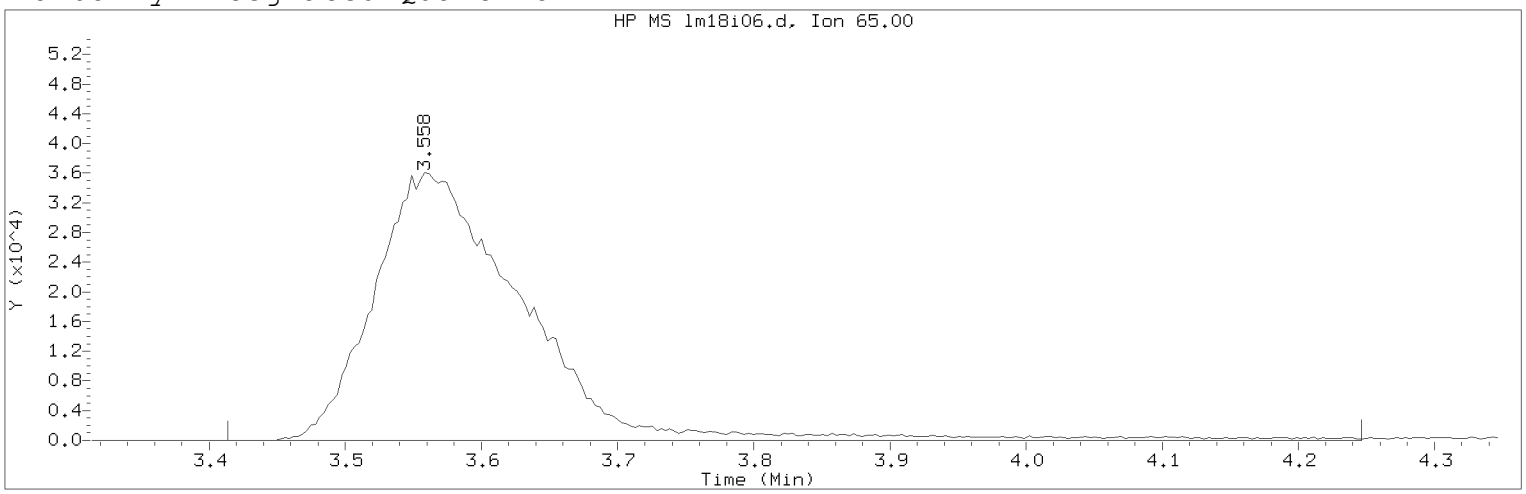
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 524
Retention Time (minutes): 3.166
Quant Ion : 45.00
Area : 55677
On-column Amount (ng) : 105.0801
Integration start scan : 495 Integration stop scan: 556
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: KKELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i06.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:04 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

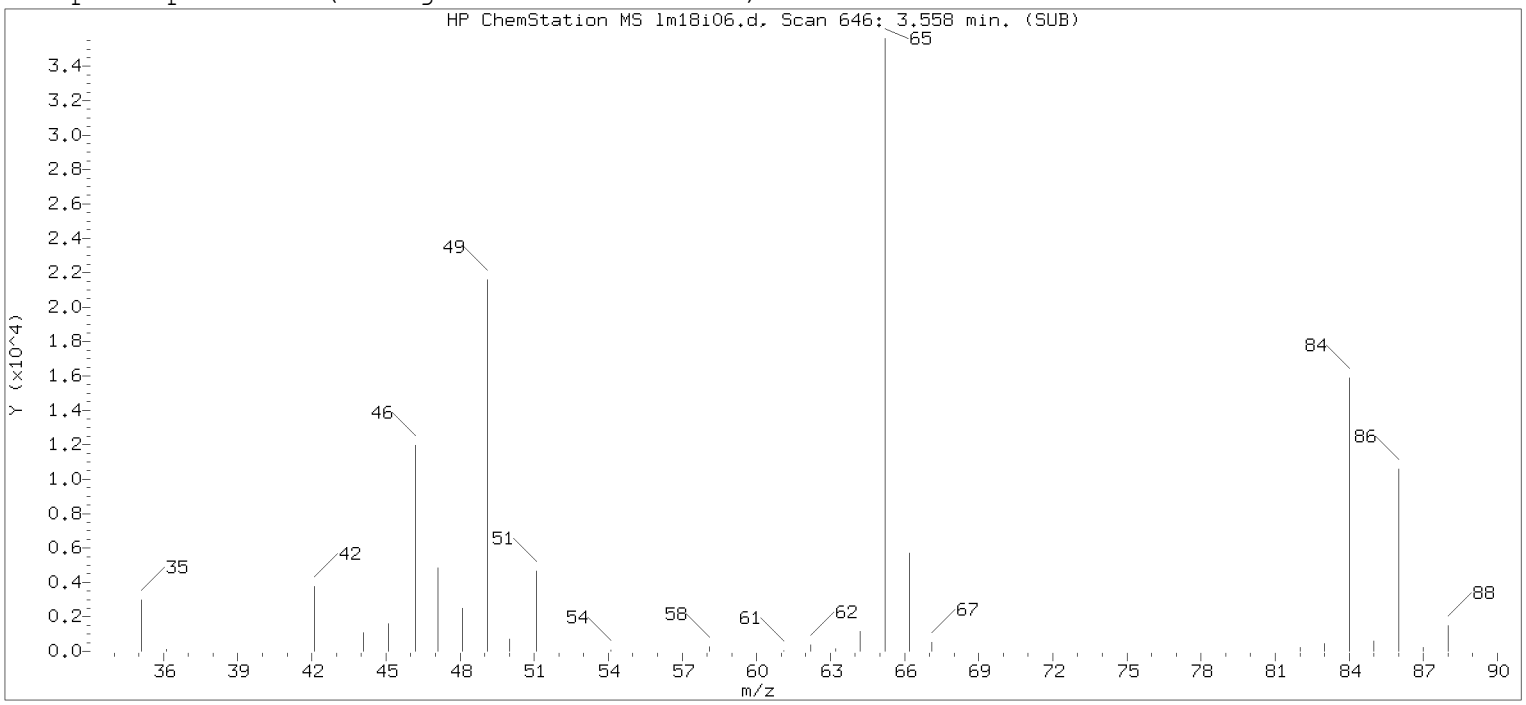
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 646
Retention Time (minutes): 3.558
Quant Ion : 65.00
Area (flag) : 275478M
On-Column Amount (ng) : 250.0000
Integration start scan : 600 Integration stop scan: 859
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

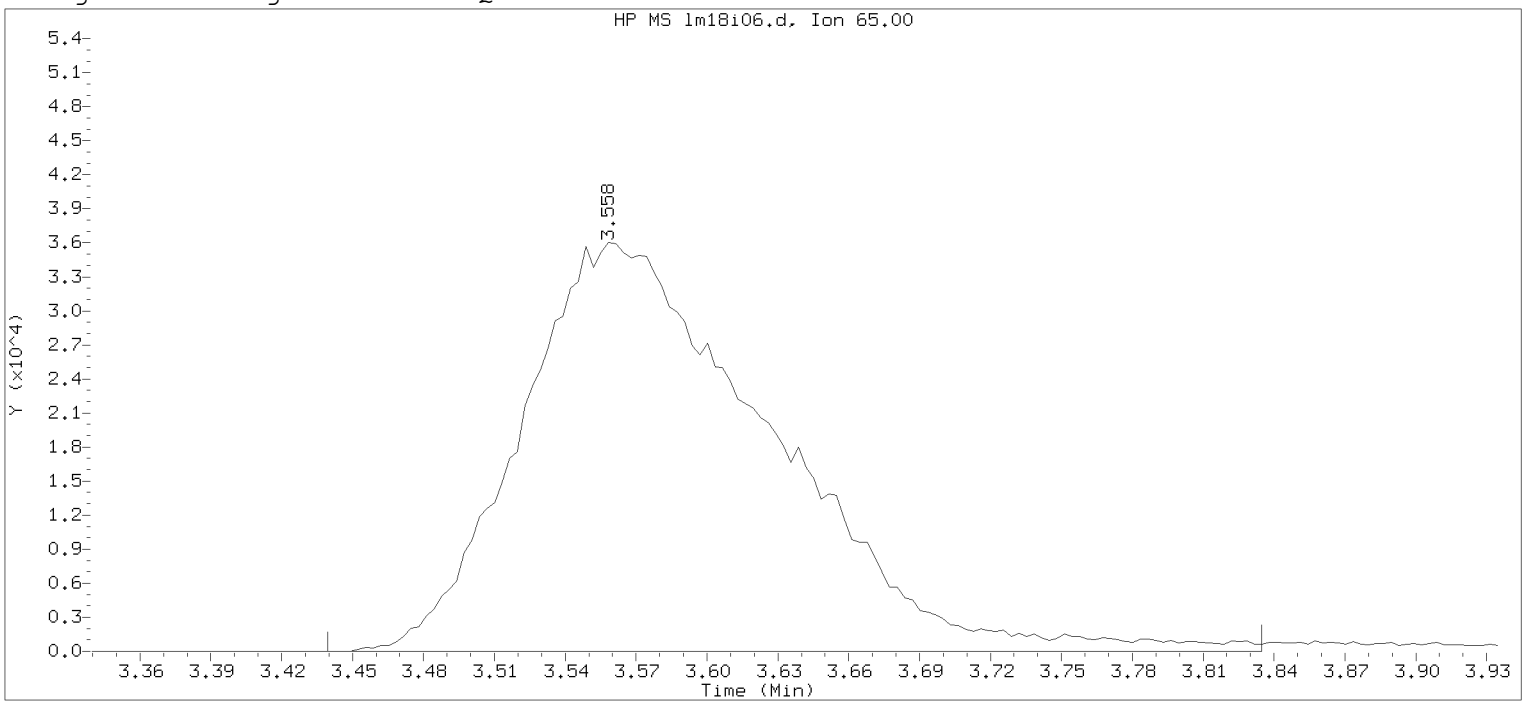
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i06.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:04 Analyst ID: APR27582

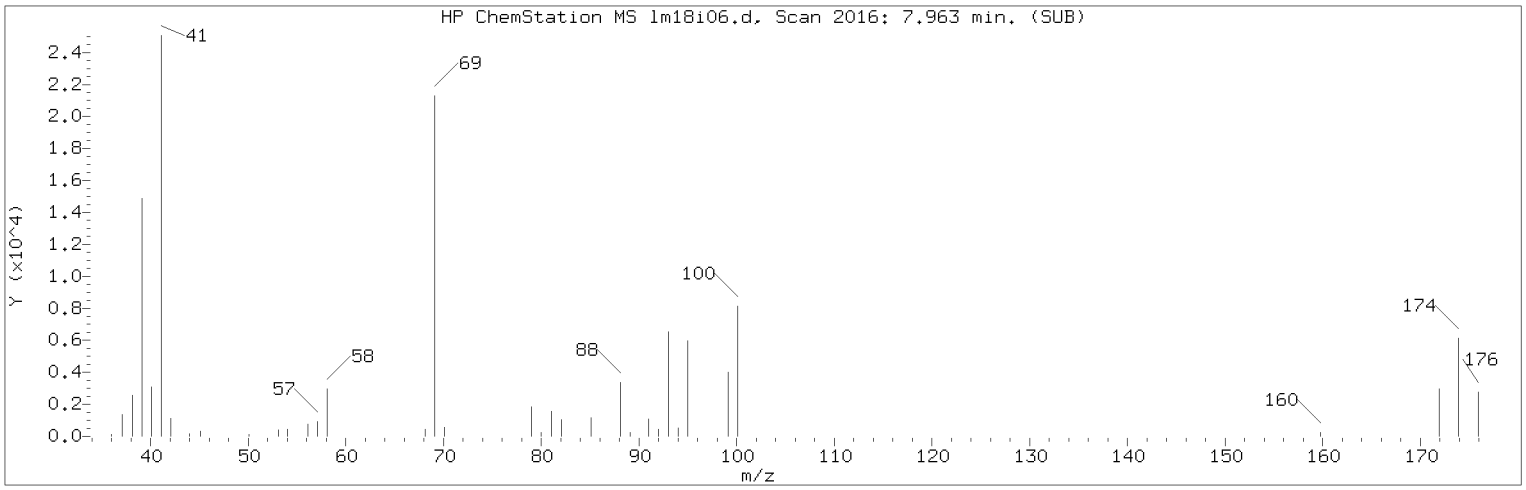
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:17
Date, time and analyst ID of latest file update: 18-Mar-2019 14:17 apr27582

Sample Name: VSTD010 Lab Sample ID: VSTD010

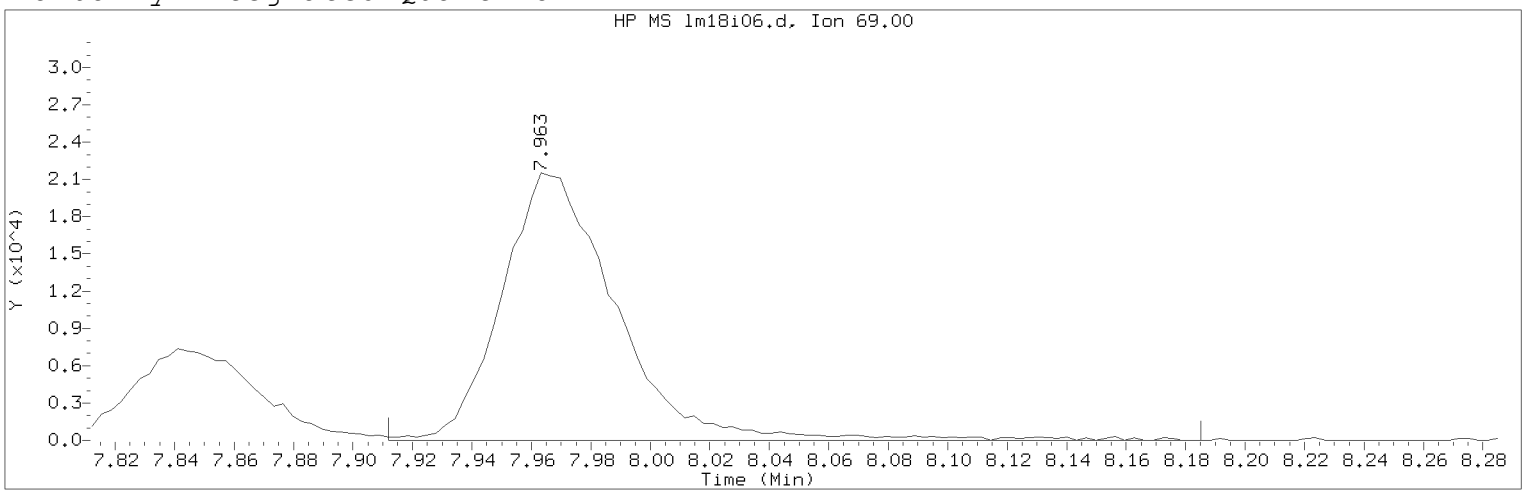
Compound Number	: 29		
Compound Name	: t-Butyl alcohol-d10		
Scan Number	: 646		
Retention Time (minutes)	: 3.558		
Quant Ion	: 65.00		
Area	: 264660		
On-column Amount (ng)	: 250.0000		
Integration start scan	: 608	Integration stop scan:	731
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user: KKELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i06.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:04 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

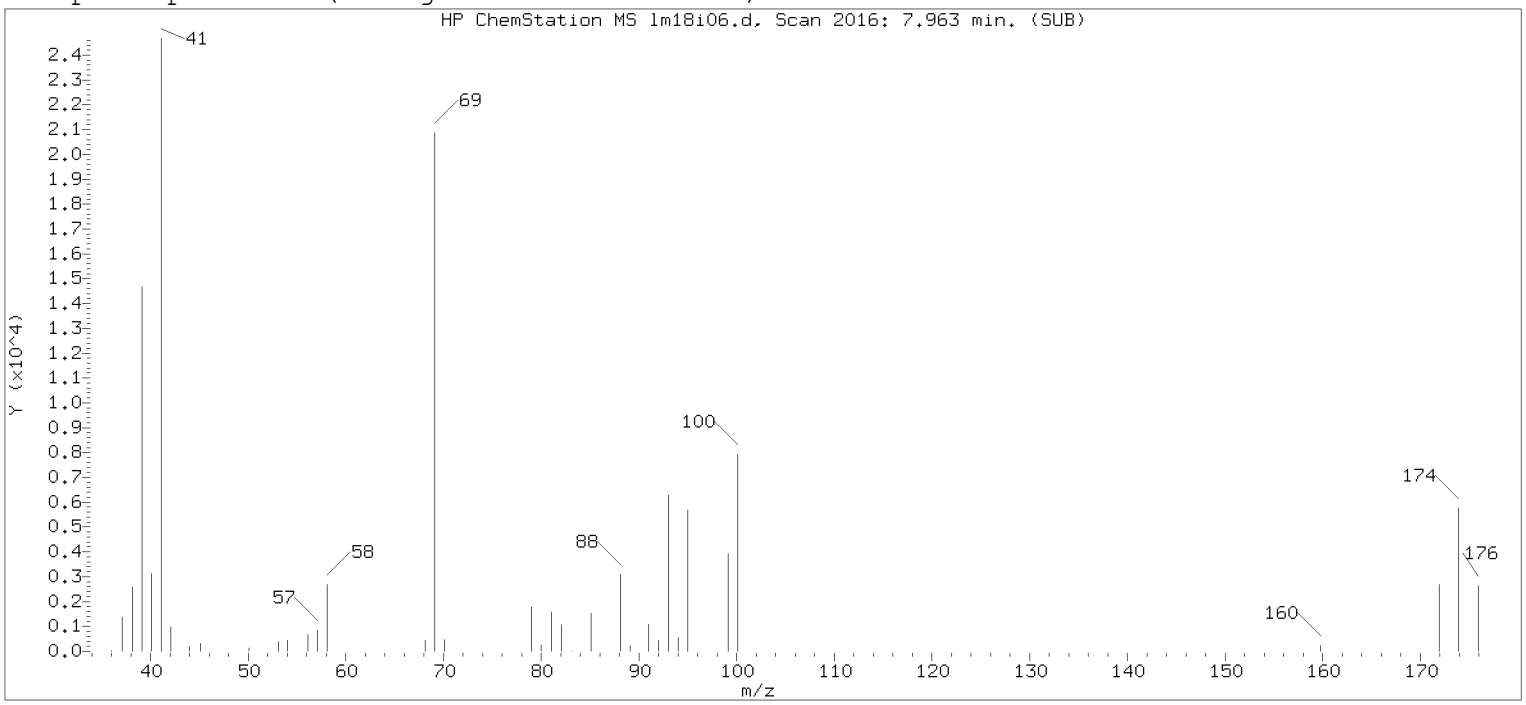
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2016
Retention Time (minutes): 7.963
Quant Ion : 69.00
Area (flag) : 57737M
On-Column Amount (ng) : 10.1301
Integration start scan : 1999 Integration stop scan: 2084
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

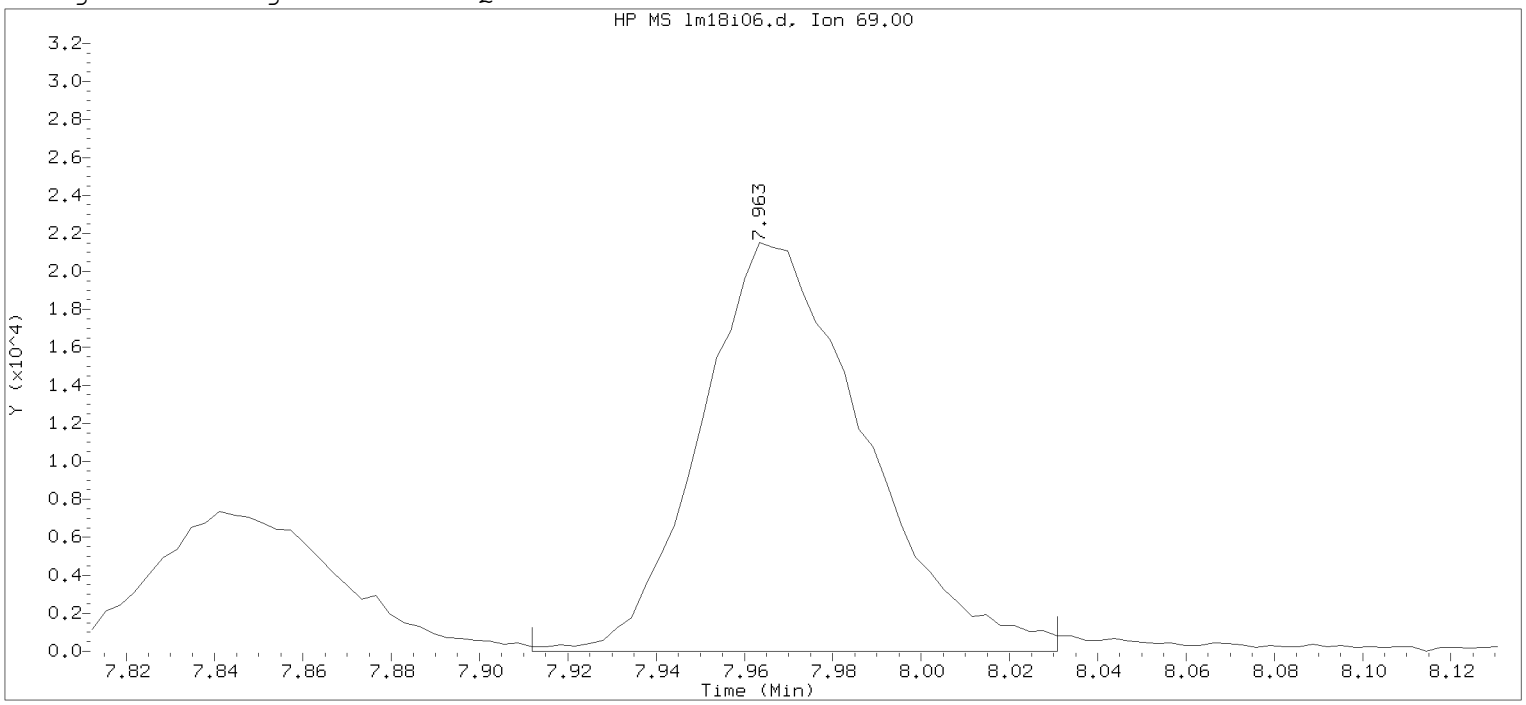
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i06.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:04 Analyst ID: APR27582

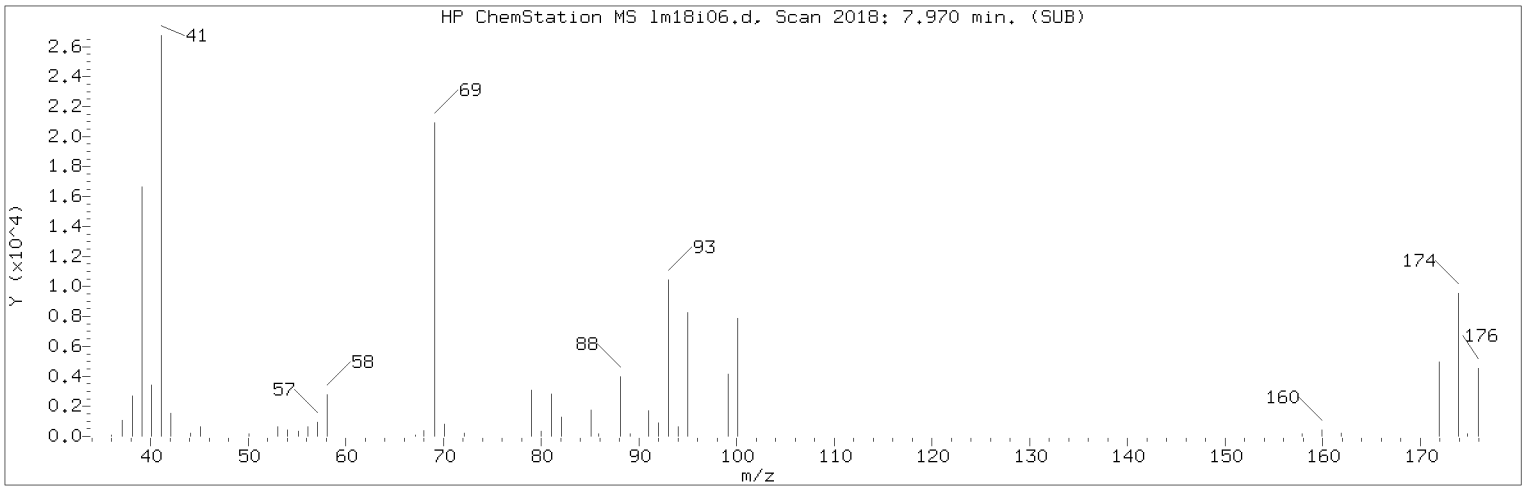
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:17
Date, time and analyst ID of latest file update: 18-Mar-2019 14:17 apr27582

Sample Name: VSTD010 Lab Sample ID: VSTD010

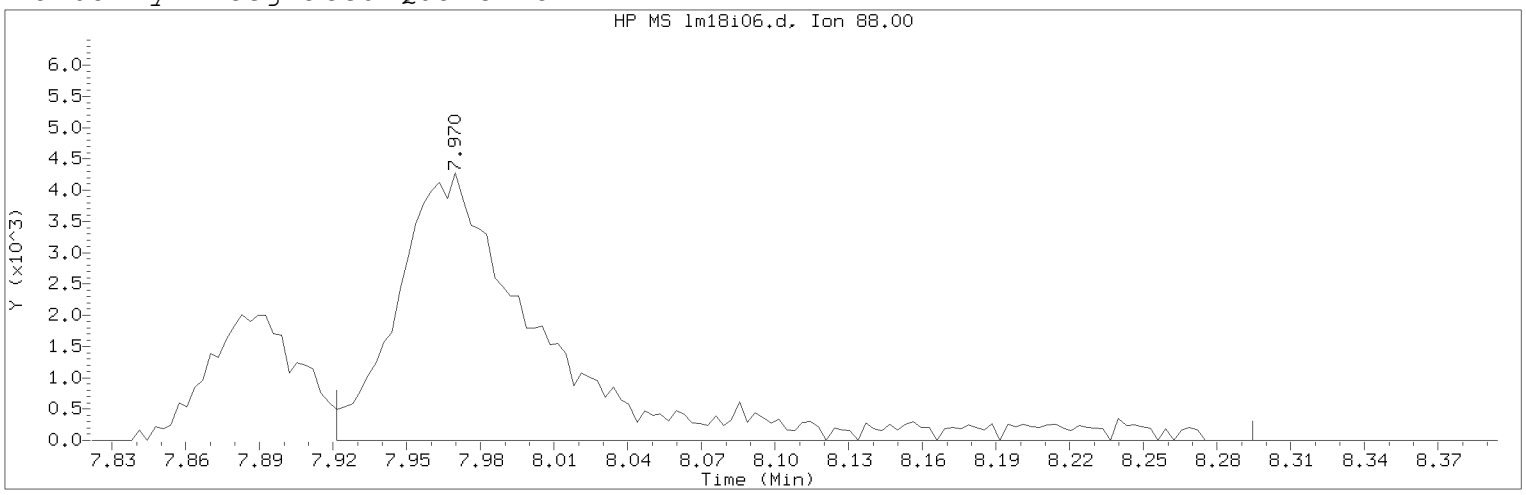
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2016
Retention Time (minutes): 7.963
Quant Ion : 69.00
Area : 55277
On-column Amount (ng) : 8.9289
Integration start scan : 1999 Integration stop scan: 2036
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk100276

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i06.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:04 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

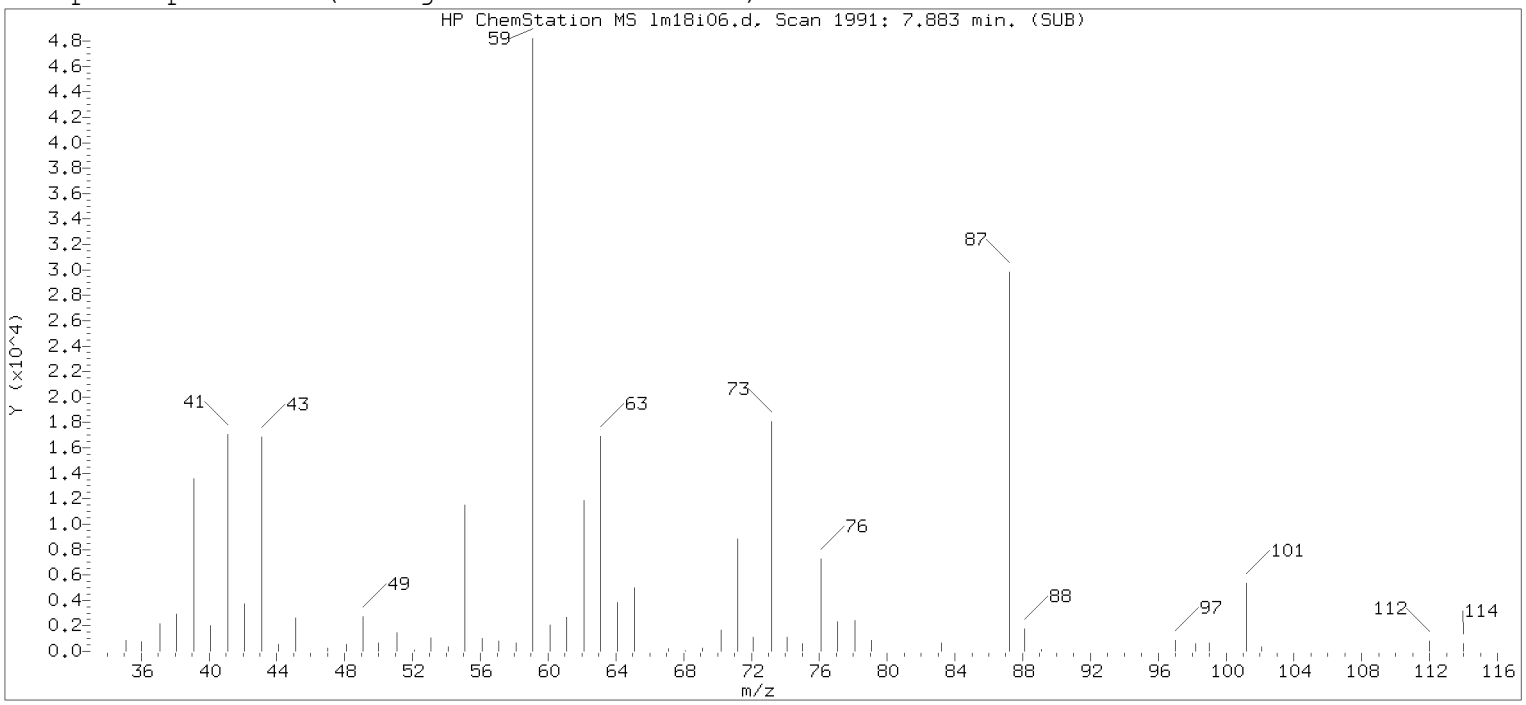
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2018
Retention Time (minutes): 7.970
Quant Ion : 88.00
Area (flag) : 18075M
On-Column Amount (ng) : 252.5807
Integration start scan : 2002 Integration stop scan: 2118
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

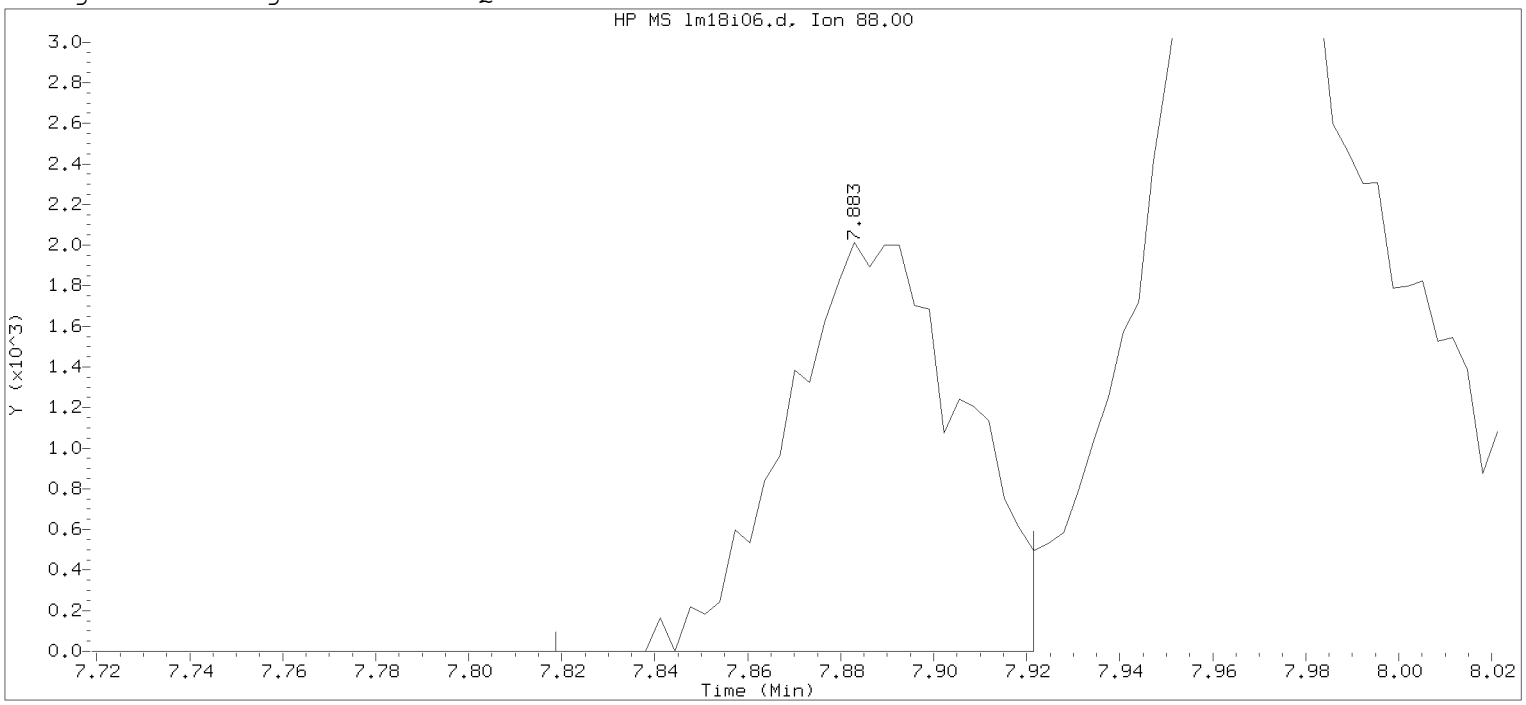
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



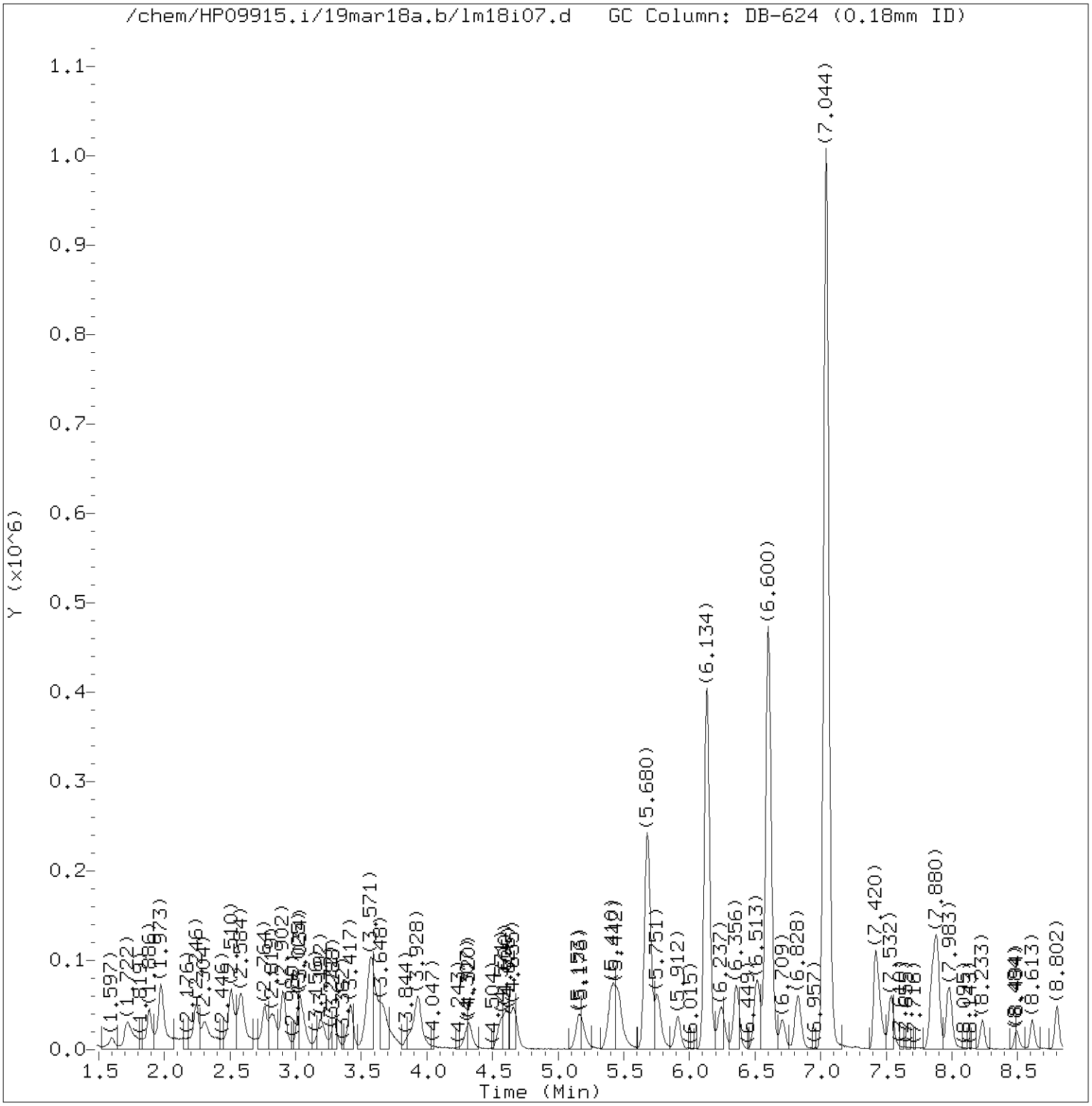
Data File: /chem/HP09915.i/19mar18a.b/lm18i06.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:04 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:17
Date, time and analyst ID of latest file update: 18-Mar-2019 14:17 apr27582

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1991
Retention Time (minutes): 7.883
Quant Ion : 88.00
Area : 5296
On-column Amount (ng) : 79.6502
Integration start scan : 1970 Integration stop scan: 2002
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: KKELLY



Total Ion Chromatogram (TIC)

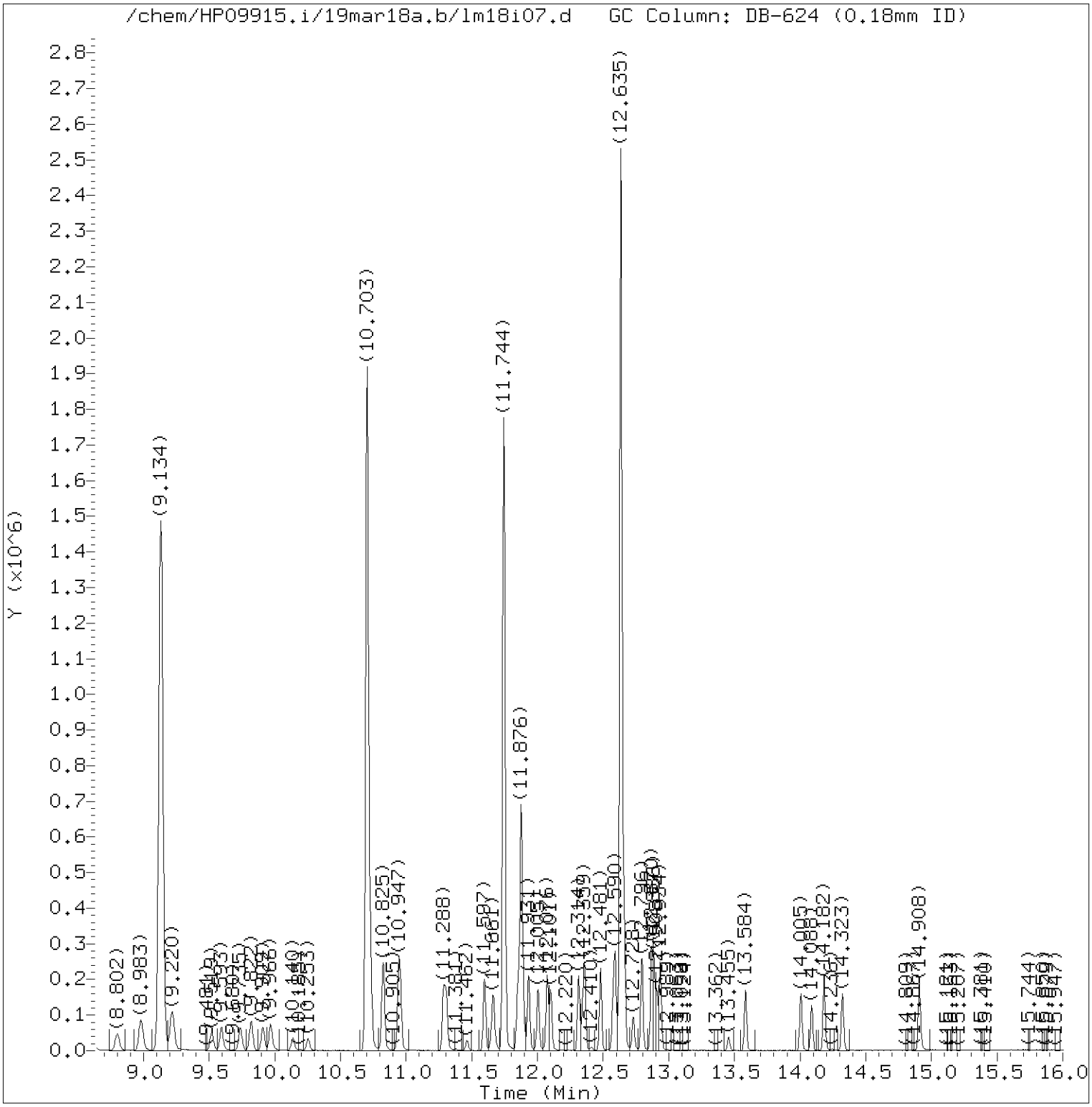
Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i07.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:27 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i07.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:27 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i07.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:27 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.713	85	47713	4.196
4) Chloromethane	(2)	1.886	50	45012	4.274
5) 1,3-Butadiene	(2)	1.967	39	25339M	4.580
6) Vinyl Chloride	(2)	1.980	62	43947	4.260
8) Bromomethane	(2)	2.246	94	37906	4.223
9) Chloroethane	(2)	2.304	64	25783	4.299
10) Dichlorofluoromethane	(2)	2.510	67	59285	4.152
12) Trichlorofluoromethane	(2)	2.571	101	60148	4.467
11) n-Pentane	(2)	2.594	43	33952	4.089
14) Ethyl ether	(2)	2.764	59	26723	4.247
15) Freon 123a	(2)	2.825	67	33122	4.381
16) Acrolein	(1)	2.909	56	79604	35.770
17) 1,1-Dichloroethene	(2)	3.025	96	18242	4.083
17) 1,1-Dichloroethene	(2)	3.021	63	10293	4.179
18) Acetone	(1)	3.047	58	7505M	7.888
19) Freon 113	(2)	3.060	101	18928	3.987
21) 2-Propanol	(1)	3.176	45	52625	82.740
22) Methyl Iodide	(2)	3.198	142	37872	3.999
23) Carbon Disulfide	(2)	3.295	76	58906	3.895
27) Methyl Acetate	(2)	3.398	43	26159M	3.900
25) Allyl Chloride	(2)	3.417	41	39134	4.093
29)*t-Butyl alcohol-d10	(1)	3.568	65	285217M	250.000
28) Methylene Chloride	(2)	3.584	84	22567	4.056
30) t-Butyl alcohol	(1)	3.677	59	94173M	79.942
31) Acrylonitrile	(2)	3.864	53	14169	4.038
33) Methyl Tertiary Butyl Ether	(2)	3.909	73	69978	3.957
32) trans-1,2-Dichloroethene	(2)	3.941	96	21116	3.944
34) n-Hexane	(2)	4.314	57	28048	3.886
36) 1,1-Dichloroethane	(2)	4.558	63	40248	3.980
38) di-Isopropyl ether	(2)	4.616	45	75991	3.974
39) 2-Chloro-1,3-butadiene	(2)	4.661	53	38789	4.093
40) Ethyl t-butyl ether	(2)	5.160	59	74168	4.037
44) 2-Butanone	(2)	5.381	43	39289	8.105
42) cis-1,2-Dichloroethene	(2)	5.407	96	23859	3.860
45) 2,2-Dichloropropane	(2)	5.423	77	34450	4.000
47) Propionitrile	(1)	5.462	54	108112	78.476
48) Methacrylonitrile	(2)	5.680	67	141365	39.018
50) Tetrahydrofuran	(1)	5.758	71	10295	7.812

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i07.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:27 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	5.758	128	13692	3.869
51) Chloroform	(2)	5.918	83	40075	3.943
53) 1,1,1-Trichloroethane	(2)	6.131	97	34846	3.998
52)$Dibromofluoromethane	(2)	6.134	113	333351	49.558
52)$Dibromofluoromethane	(2)	6.134	111	341408	49.540
43) 1,2-Dichloroethene (Total)	(2)		96	44975	7.804
54) Cyclohexane	(2)	6.240	56	39567	4.201
54) Cyclohexane	(2)	6.243	84	33286	4.160
54) Cyclohexane	(2)	6.237	69	11810	4.114
56) Carbon Tetrachloride	(2)	6.349	117	27063	3.781
55) 1,1-Dichloropropene	(2)	6.362	75	31937	4.093
58) Isobutyl Alcohol	(1)	6.520	41	78991	203.189
57)$1,2-Dichloroethane-d4	(2)	6.603	102	78203	49.604
57)$1,2-Dichloroethane-d4	(2)	6.597	65	447126	50.668
57)$1,2-Dichloroethane-d4	(2)	6.603	104	49940	49.597
60) Benzene	(2)	6.619	78	90367	4.023
61) 1,2-Dichloroethane	(2)	6.709	62	36483	4.049
61) 1,2-Dichloroethane	(2)	6.696	98	778	1.411
65) t-Amyl methyl ether	(2)	6.825	73	73470	4.024
66)*Fluorobenzene	(2)	7.040	96	1308395	50.000
67) n-Heptane	(2)	7.069	43	31475	3.874
69) n-Butanol	(1)	7.420	56	112339	399.294
71) Trichloroethene	(2)	7.539	95	24130	3.987
72) Methylcyclohexane	(2)	7.851	83	41344	3.967
72) Methylcyclohexane	(2)	7.848	98	19642	4.050
73) 1,2-Dichloropropane	(2)	7.876	63	23755	3.886
75) 1,4-Dioxane	(1)	7.966	88	15133M	204.248
76) Methyl Methacrylate	(2)	7.966	69	21945M	3.720
74) Dibromomethane	(2)	7.989	93	15958	3.775
78) Bromodichloromethane	(2)	8.233	83	26911	3.689
79) 2-Nitropropane	(2)	8.494	41	16871	6.670
80) 2-Chloroethyl Vinyl Ether	(2)	8.610	63	18657	3.797
81) cis-1,3-Dichloropropene	(2)	8.802	75	32959	3.585
82) 4-Methyl-2-pentanone	(2)	8.983	43	79142	7.739
83)$Toluene-d8	(3)	9.134	98	1320351	50.887
83)$Toluene-d8	(3)	9.134	100	848456	50.622
88) Toluene	(3)	9.214	92	56673	3.942
89) trans-1,3-Dichloropropene	(3)	9.519	75	29591	3.451

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i07.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:27 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	9.590	69	37157	3.689
92) 1,1,2-Trichloroethane	(3)	9.738	97	20836	3.834
93) Tetrachloroethene	(3)	9.822	166	25474	4.075
94) 1,3-Dichloropropane	(3)	9.909	76	37396	3.903
96) 2-Hexanone	(3)	9.966	43	56650	7.662
90) 1,3-Dichloropropene (total)	(3)		100	62550	7.036
97) Dibromochloromethane	(3)	10.140	129	18839	3.359
99) 1,2-Dibromoethane	(3)	10.253	107	23579	3.816
100)*Chlorobenzene-d5	(3)	10.703	117	1008231	50.000
101) 1-Chlorohexane	(3)	10.728	91	34015	3.966
102) Chlorobenzene	(3)	10.732	112	66273	3.833
103) 1,1,1,2-Tetrachloroethane	(3)	10.822	131	19543	3.372
104) Ethylbenzene	(3)	10.828	91	113423	3.895
106) m+p-Xylene	(3)	10.947	106	86521	7.555
107) o-Xylene	(3)	11.285	106	42390	3.743
109) Styrene	(3)	11.304	104	69407	3.655
110) Bromoform	(3)	11.465	173	11708	5.814
111) Isopropylbenzene	(3)	11.597	105	112835	3.894
112) Cyclohexanone	(1)	11.664	55	59286	201.079
114)$4-Bromofluorobenzene	(3)	11.744	95	503862	50.181
114)$4-Bromofluorobenzene	(3)	11.744	174	409903	50.265
108) Xylene (Total)	(3)		106	128911	11.299
116) 1,1,2,2-Tetrachloroethane	(4)	11.851	83	35889	3.844
115) Bromobenzene	(4)	11.857	156	28342	3.792
118) trans-1,4-Dichloro-2-butene	(4)	11.876	53	118044	39.394
117) 1,2,3-Trichloropropane	(4)	11.892	110	11213	3.945
119) n-Propylbenzene	(4)	11.931	91	136618	4.140
120) 2-Chlorotoluene	(4)	12.005	126	27722	3.969
122) 1,3,5-Trimethylbenzene	(4)	12.076	105	96105	3.890
121) 4-Chlorotoluene	(4)	12.101	126	28974	3.944
124) tert-Butylbenzene	(4)	12.314	134	23514	4.056
125) Pentachloroethane	(4)	12.346	167	13820	3.078
126) 1,2,4-Trimethylbenzene	(4)	12.359	105	100085	3.875
127) sec-Butylbenzene	(4)	12.481	105	125176	4.070
129) 1,3-Dichlorobenzene	(4)	12.577	146	54971	3.866
130) p-Isopropyltoluene	(4)	12.593	119	109079	3.915
131)*1,4-Dichlorobenzene-d4	(4)	12.635	152	543594	50.000
133) 1,4-Dichlorobenzene	(4)	12.654	146	58908	3.901

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i07.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:27 Analyst ID: APR27582

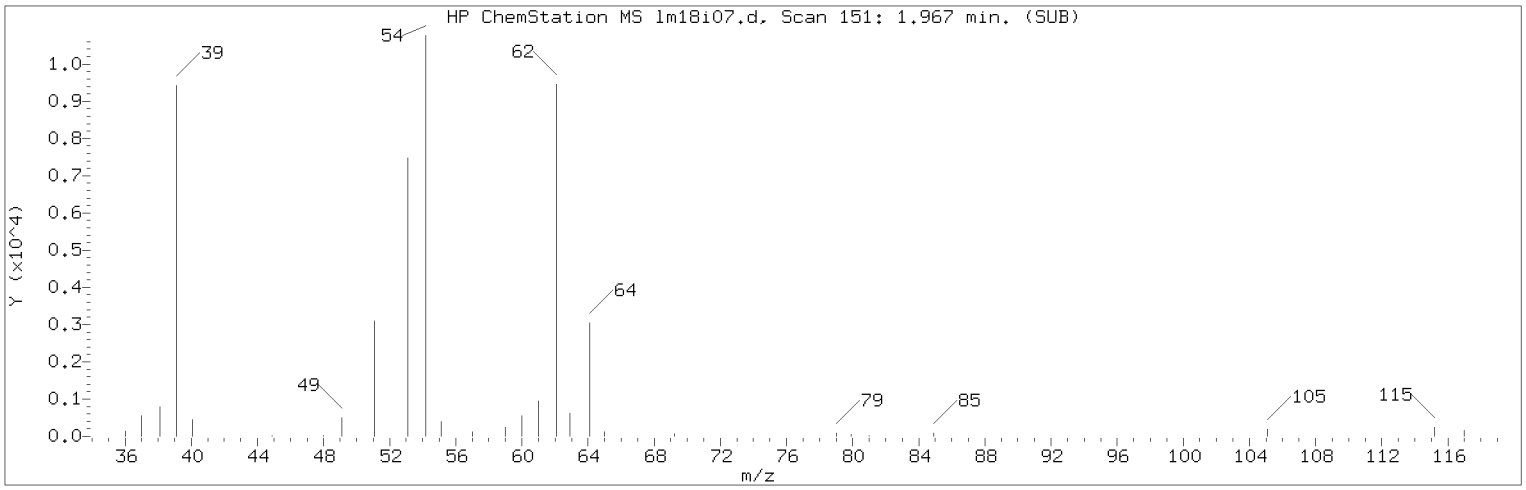
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

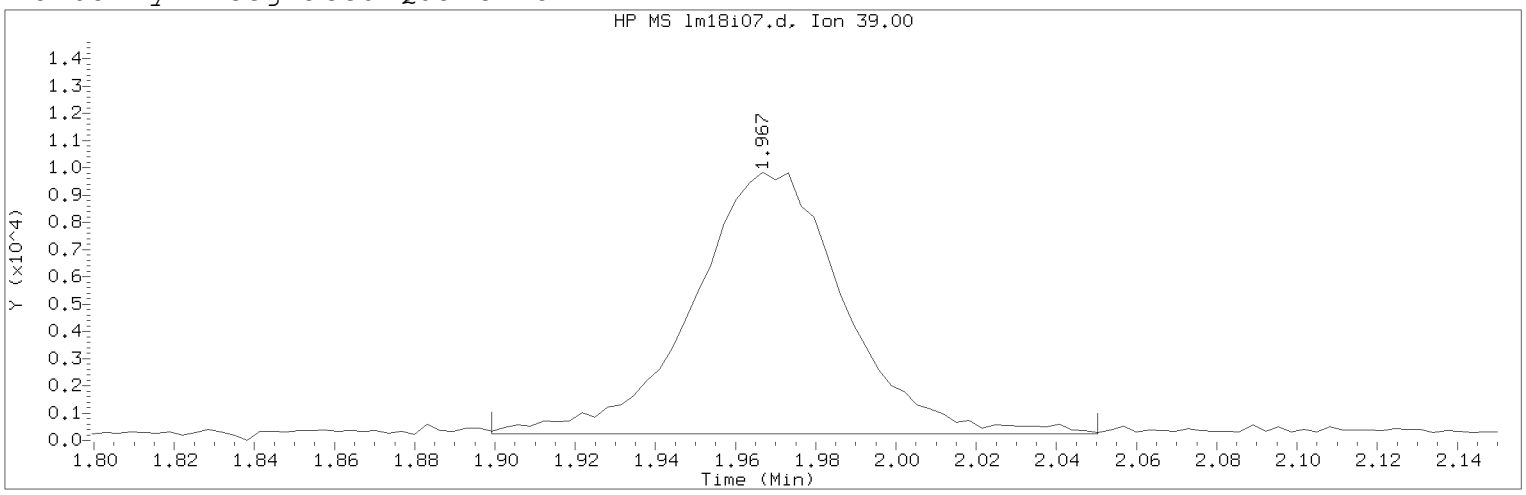
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	12.661	105	110997	3.900
135) Benzyl Chloride	(4)	12.728	91	55809	2.969
136) 1,3-Diethylbenzene	(4)	12.793	119	69016	3.924
137) 1,4-Diethylbenzene	(4)	12.867	119	74365	3.910
139) n-Butylbenzene	(4)	12.886	92	56441	3.990
138) 1,2-Dichlorobenzene	(4)	12.908	146	53591	3.777
140) 1,2-Diethylbenzene	(4)	12.934	119	58807	3.952
141) Diethylbenzene (total)	(4)		100	202188	11.787
142) 1,2-Dibromo-3-chloropropane	(4)	13.455	75	7697	3.664
144) 1,3,5-Trichlorobenzene	(4)	13.584	180	43487	3.985
146) 1,2,4-Trichlorobenzene	(4)	14.008	180	41767	4.008
147) Hexachlorobutadiene	(4)	14.088	225	17913	4.292
148) Naphthalene	(4)	14.182	128	130594	3.948
149) 1,2,3-Trichlorobenzene	(4)	14.323	180	40189	4.045
150) 2-Methylnaphthalene	(4)	14.908	142	77913	3.866

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i07.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:27 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

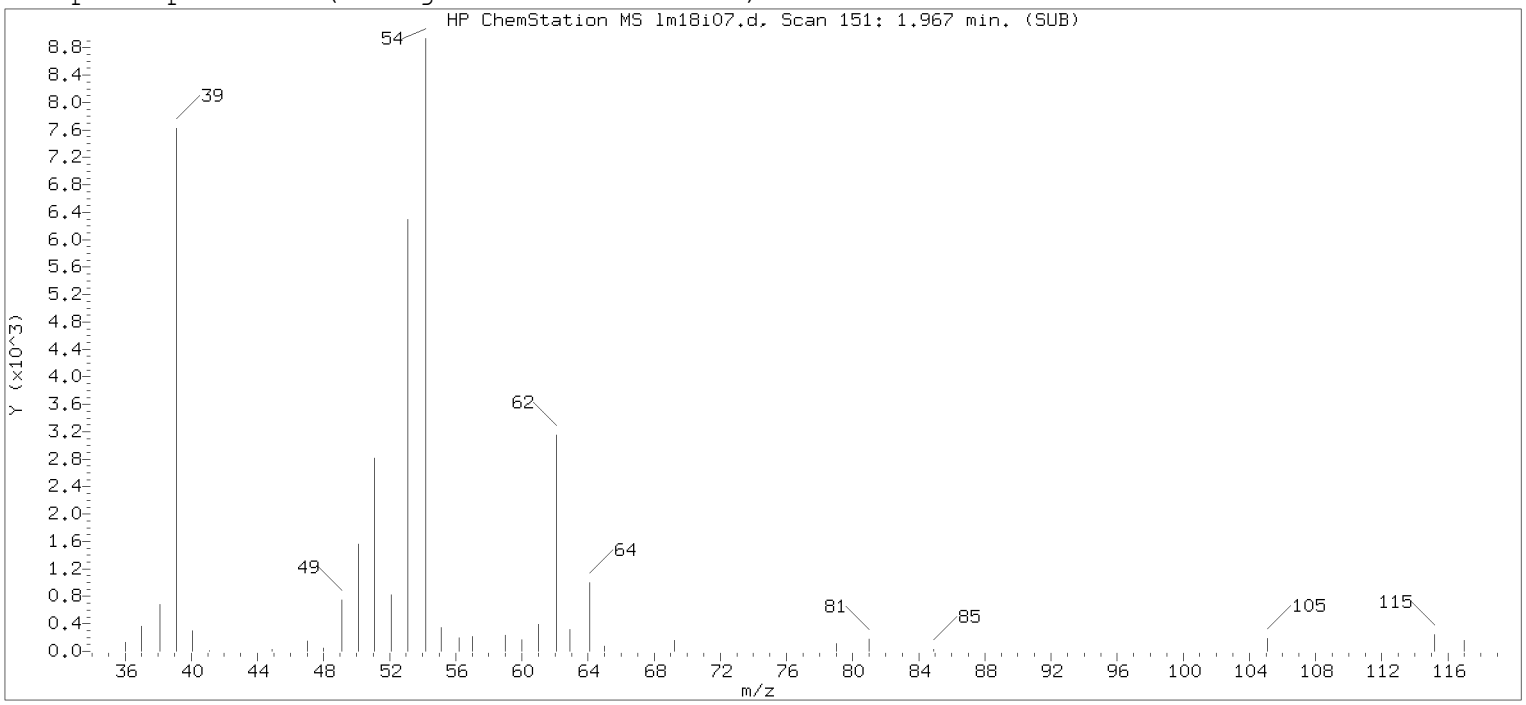
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 151
Retention Time (minutes): 1.967
Quant Ion : 39.00
Area (flag) : 25339M
On-Column Amount (ng) : 4.5796
Integration start scan : 129 Integration stop scan: 176
Y at integration start : 231 Y at integration end: 231

Reason for manual integration: improper integration

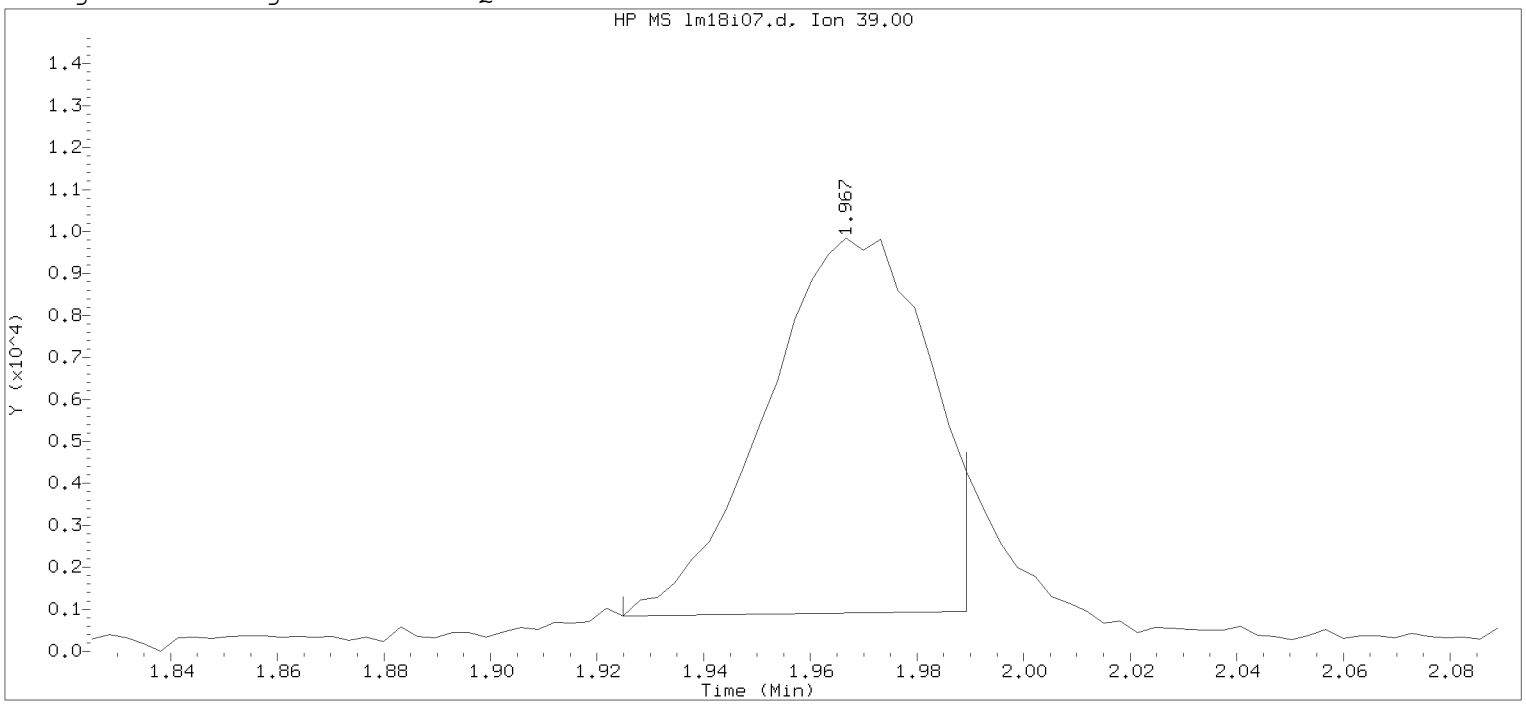
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i07.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:27 Analyst ID: APR27582

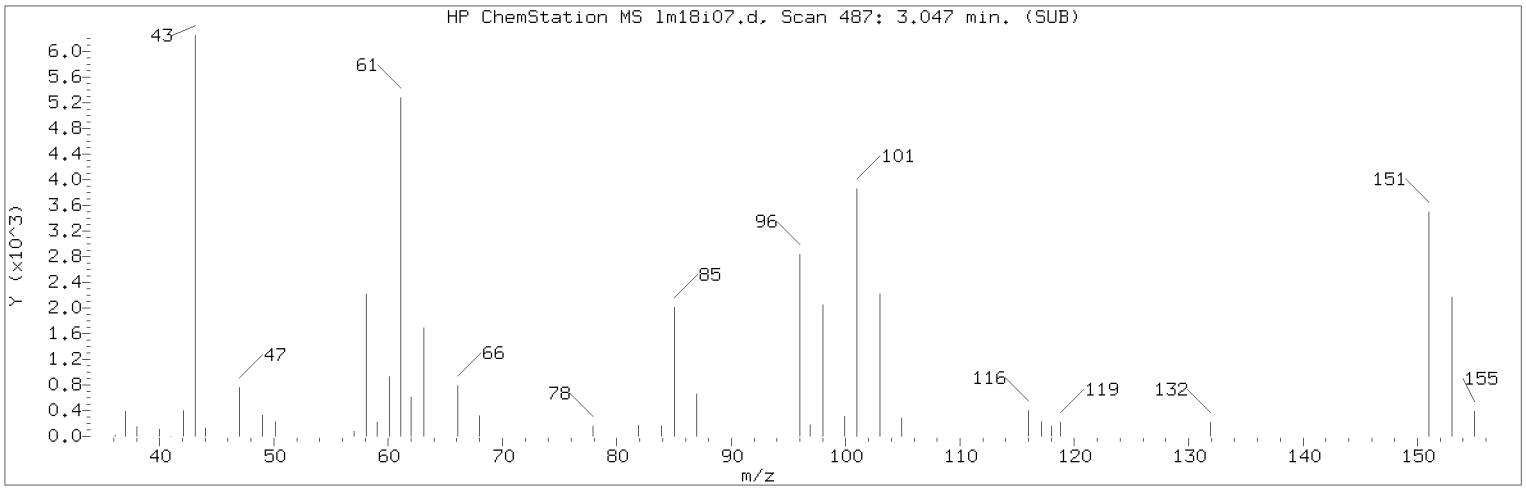
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:18
Date, time and analyst ID of latest file update: 18-Mar-2019 14:18 apr27582

Sample Name: VSTD004 Lab Sample ID: VSTD004

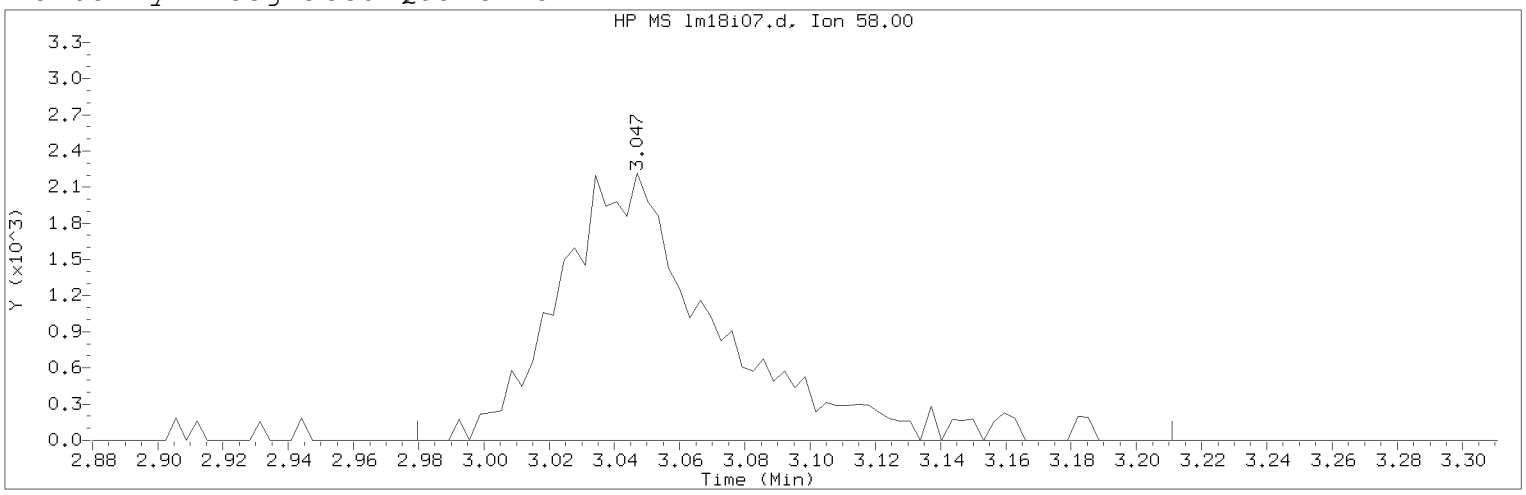
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 151
Retention Time (minutes): 1.967
Quant Ion : 39.00
Area : 18847
On-column Amount (ng) : 3.8407
Integration start scan : 137 Integration stop scan: 157
Y at integration start : 838 Y at integration end: 953

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user: kkelly100

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i07.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:27 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

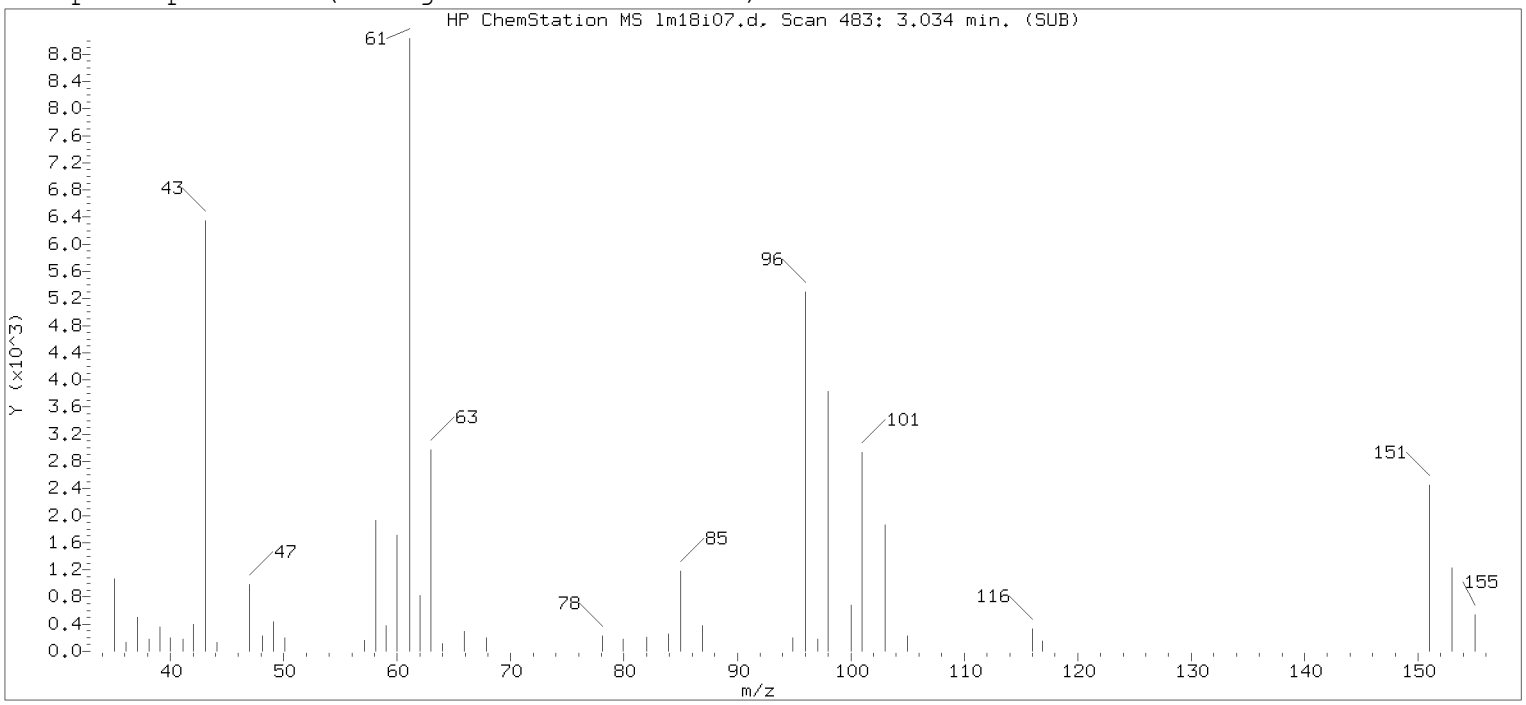
Compound Number : 18
Compound Name : Acetone
Scan Number : 487
Retention Time (minutes): 3.047
Quant Ion : 58.00
Area (flag) : 7505M
On-Column Amount (ng) : 7.8880
Integration start scan : 465 Integration stop scan: 537
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

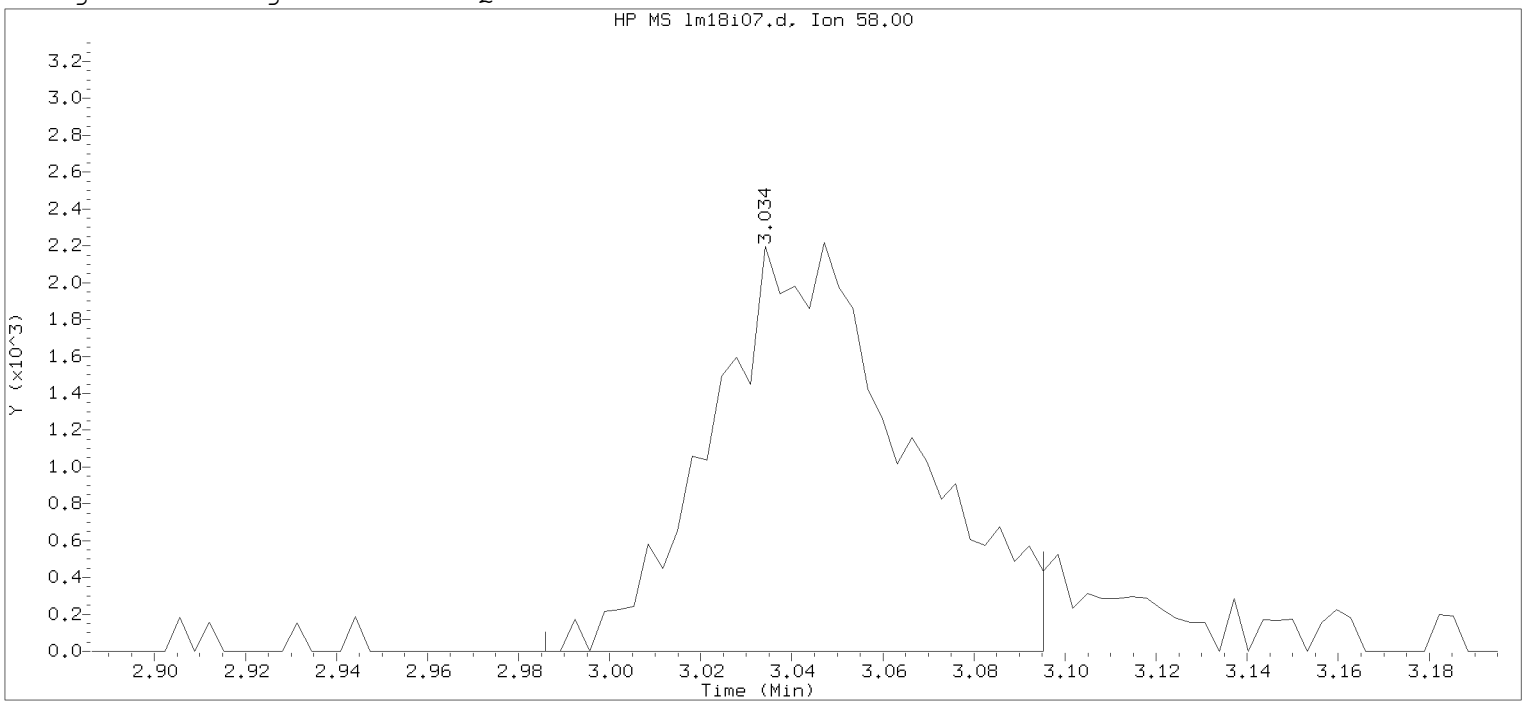
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i07.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:27 Analyst ID: APR27582

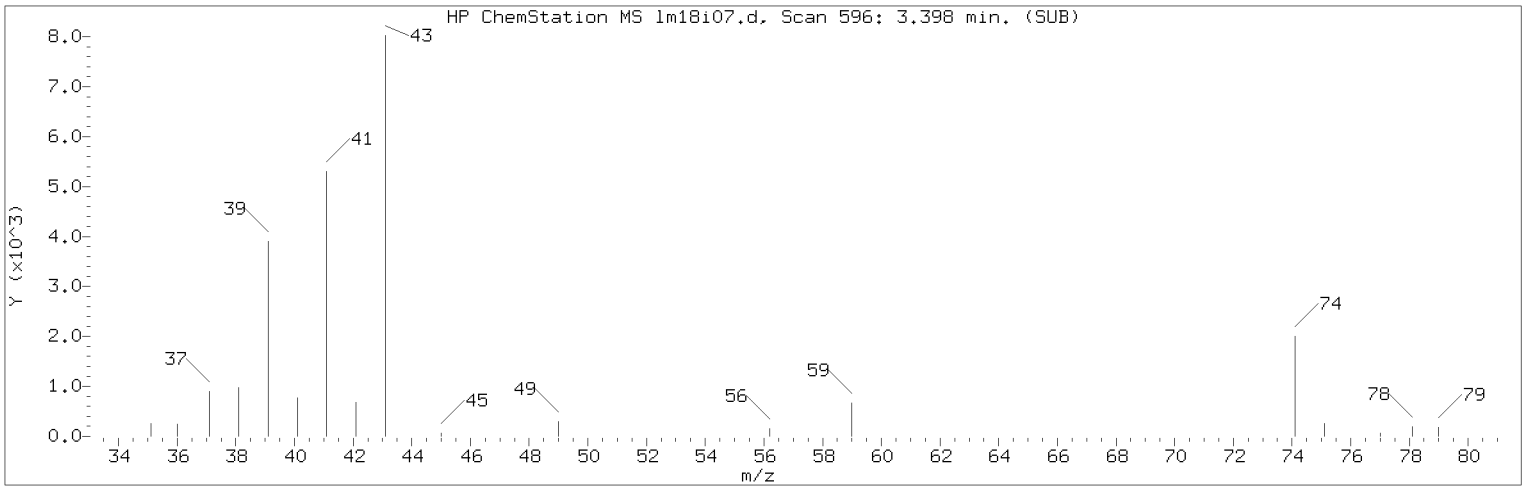
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:18
Date, time and analyst ID of latest file update: 18-Mar-2019 14:18 apr27582

Sample Name: VSTD004 Lab Sample ID: VSTD004

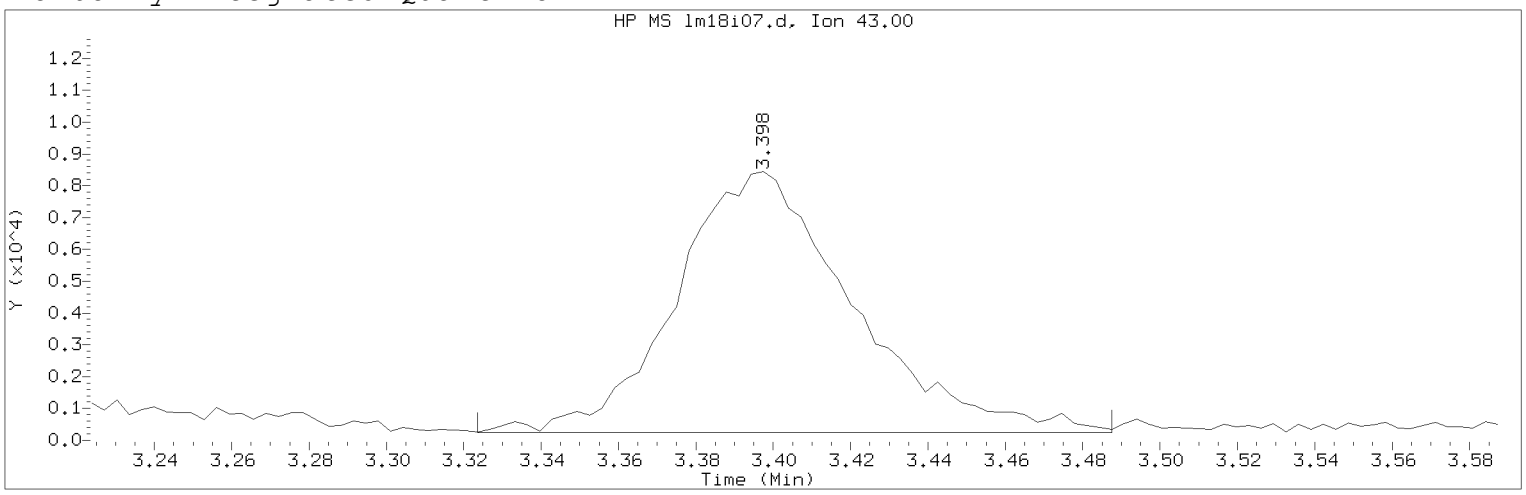
Compound Number : 18
Compound Name : Acetone
Scan Number : 483
Retention Time (minutes): 3.034
Quant Ion : 58.00
Area : 6554
On-column Amount (ng) : 7.8186
Integration start scan : 467 Integration stop scan: 501
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kkelly1000

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i07.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:27 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

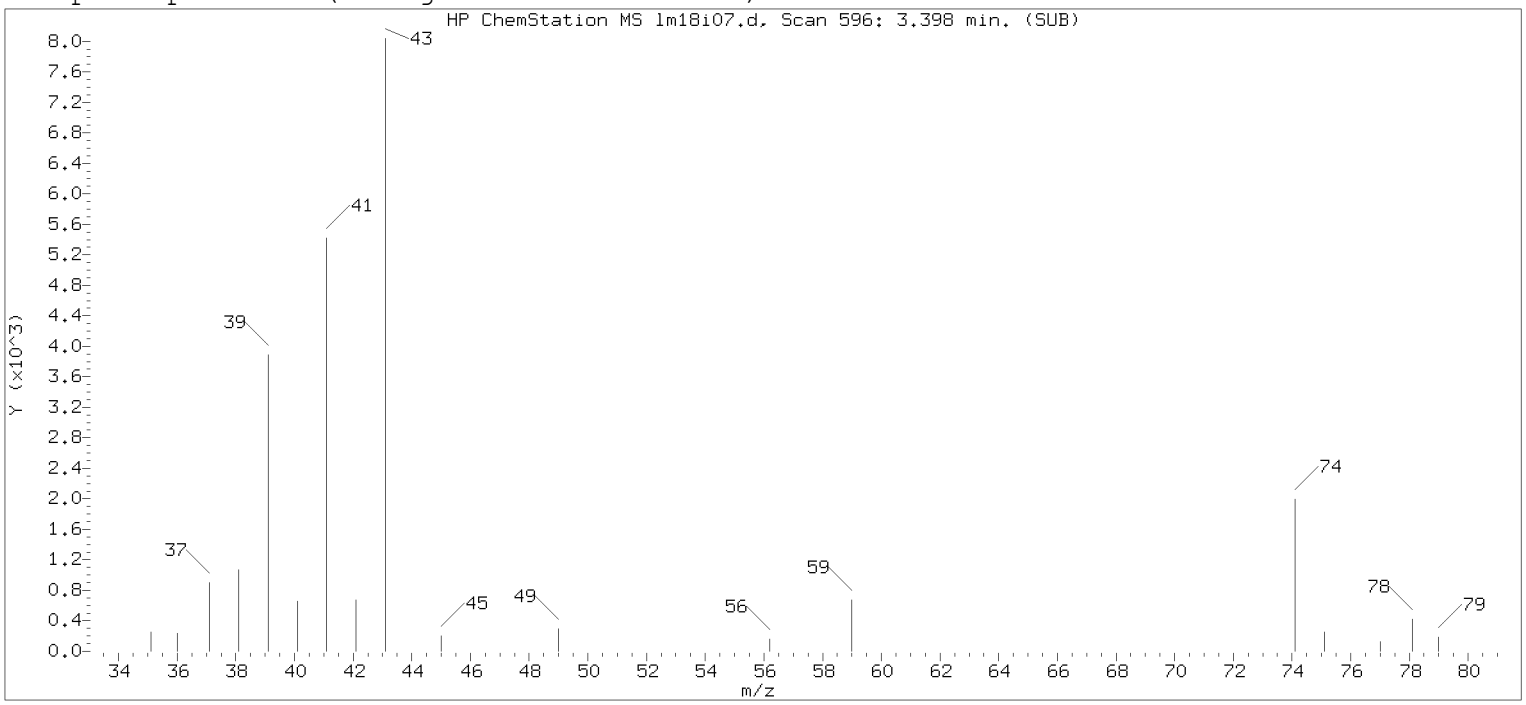
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 596
Retention Time (minutes): 3.398
Quant Ion : 43.00
Area (flag) : 26159M
On-Column Amount (ng) : 3.8998
Integration start scan : 572 Integration stop scan: 623
Y at integration start : 235 Y at integration end: 235

Reason for manual integration: improper integration

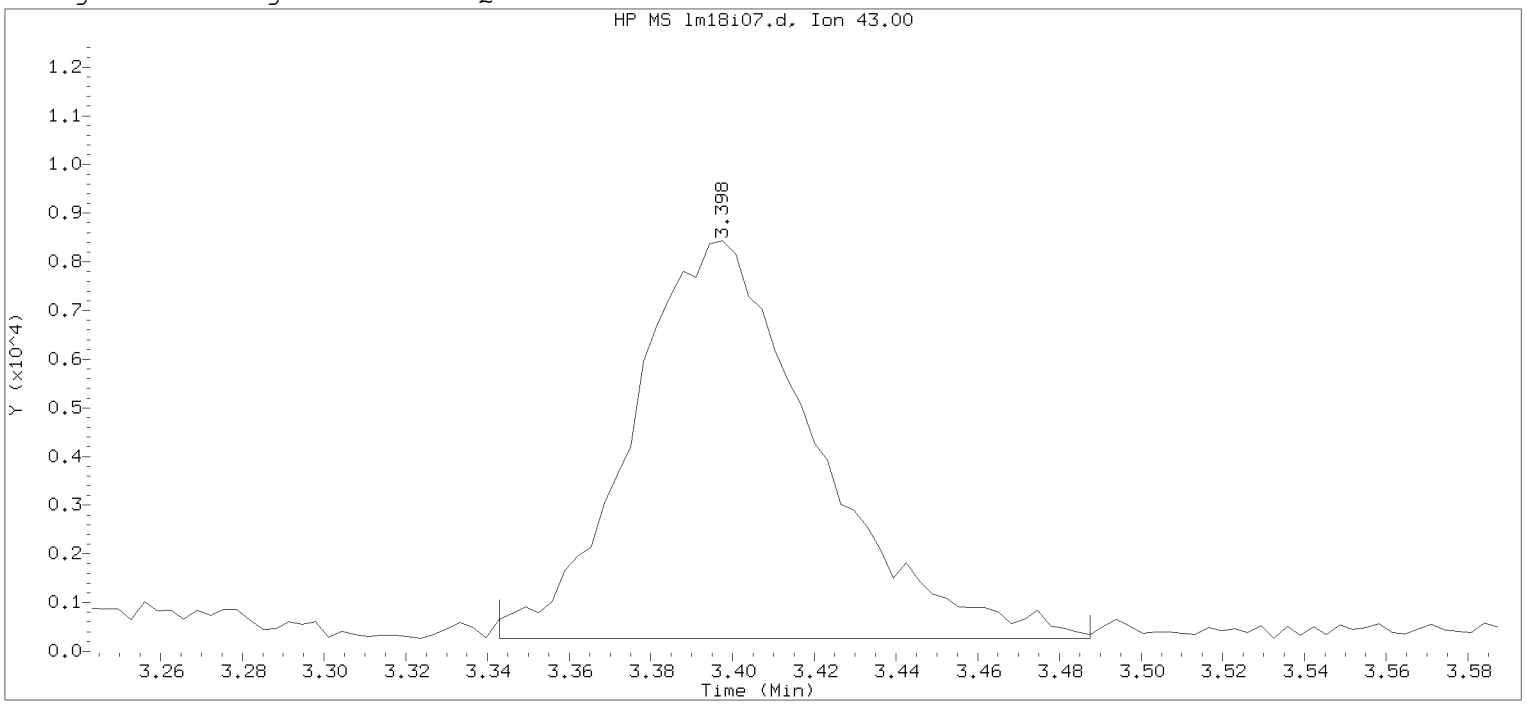
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i07.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:27 Analyst ID: APR27582

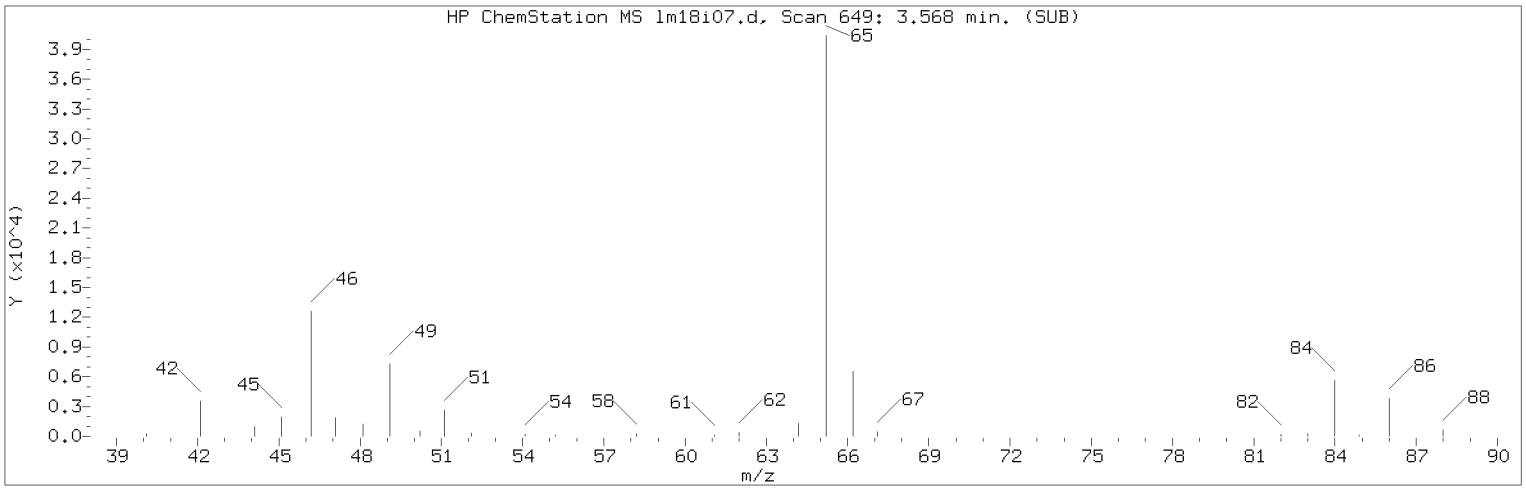
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:18
Date, time and analyst ID of latest file update: 18-Mar-2019 14:18 apr27582

Sample Name: VSTD004 Lab Sample ID: VSTD004

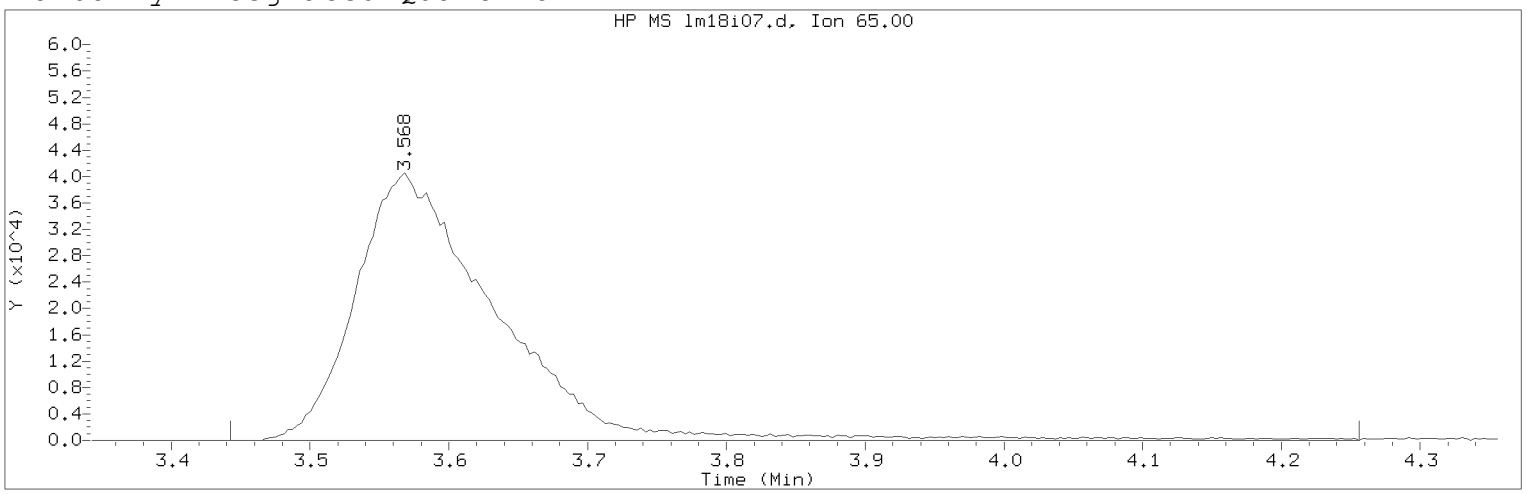
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 596
Retention Time (minutes): 3.398
Quant Ion : 43.00
Area : 25634
On-column Amount (ng) : 3.8809
Integration start scan : 578 Integration stop scan: 623
Y at integration start : 267 Y at integration end: 267

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kkelly100

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i07.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:27 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

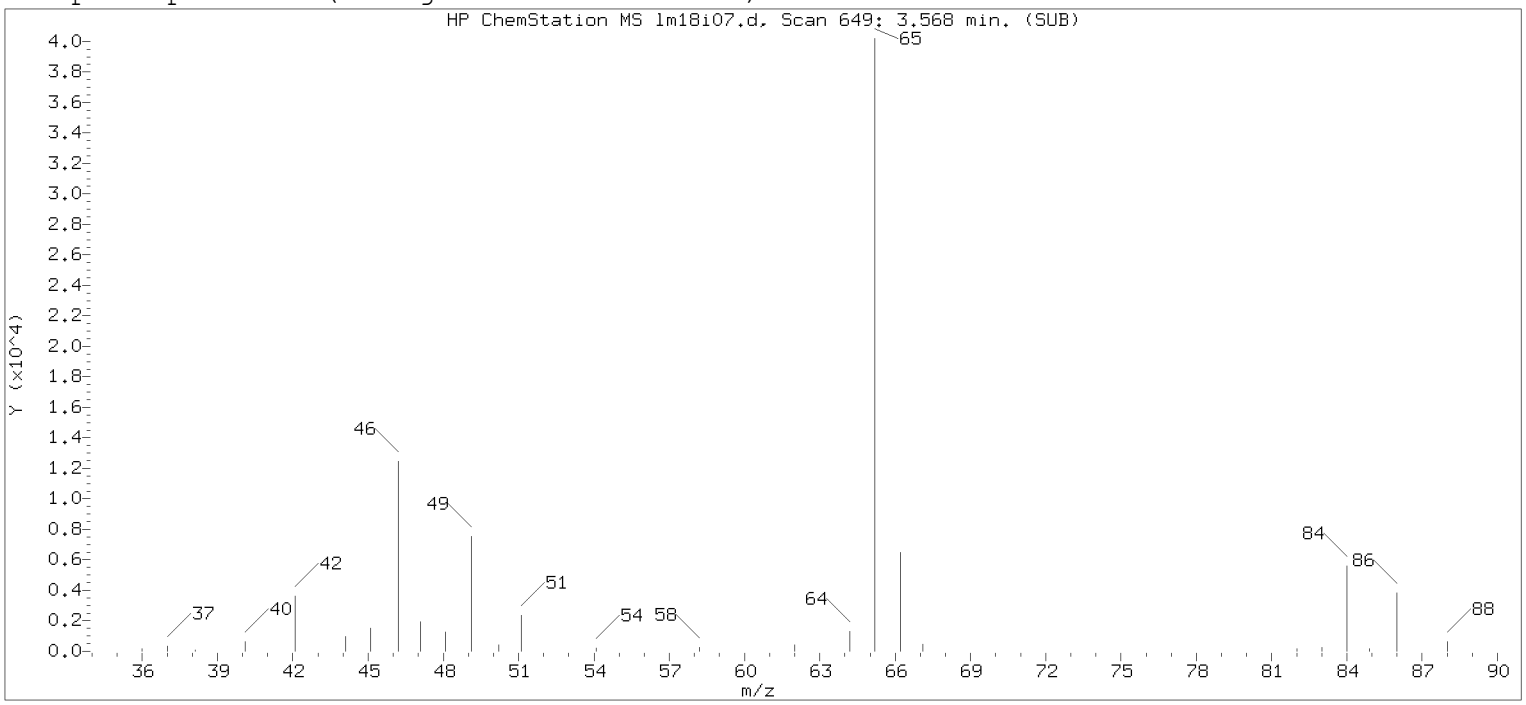
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 649
Retention Time (minutes): 3.568
Quant Ion : 65.00
Area (flag) : 285217M
On-Column Amount (ng) : 250.0000
Integration start scan : 609 Integration stop scan: 862
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

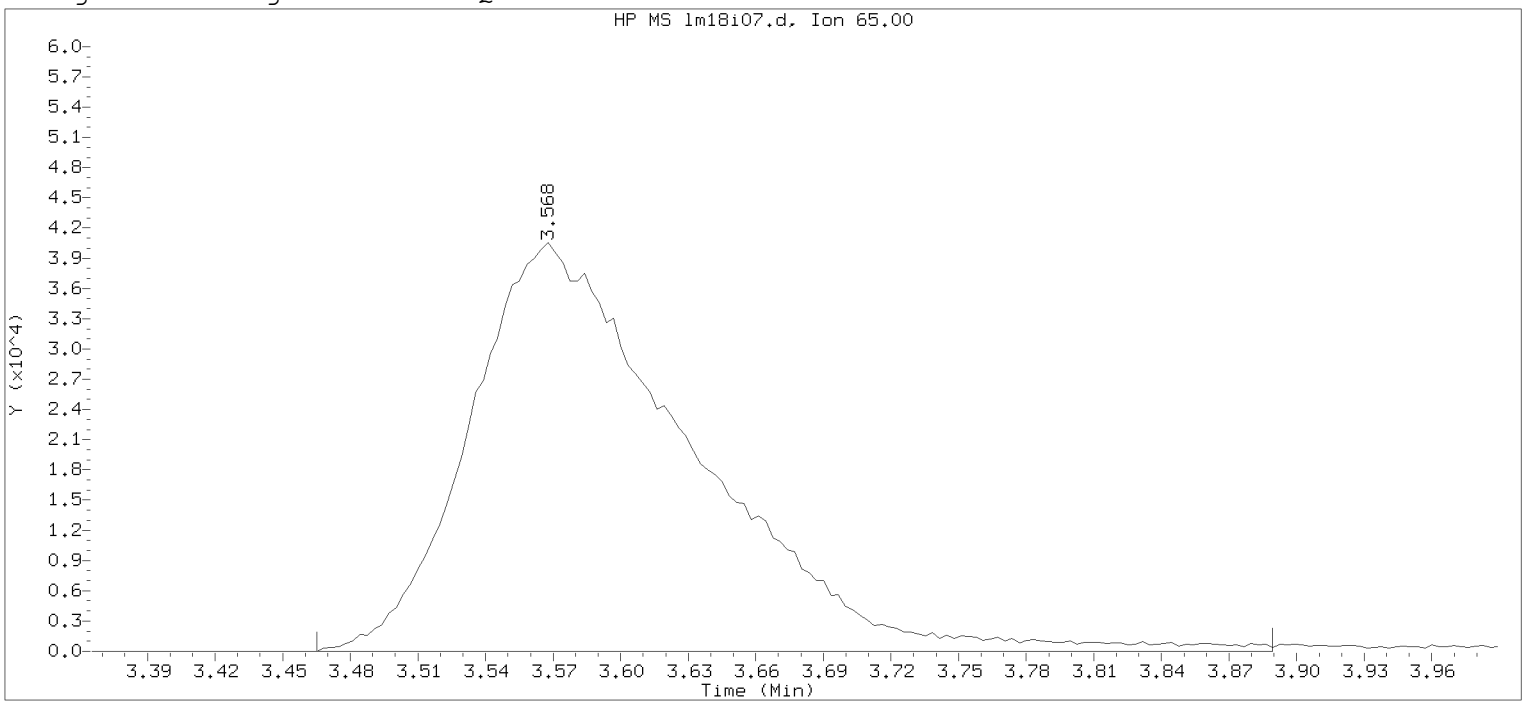
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i07.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:27 Analyst ID: APR27582

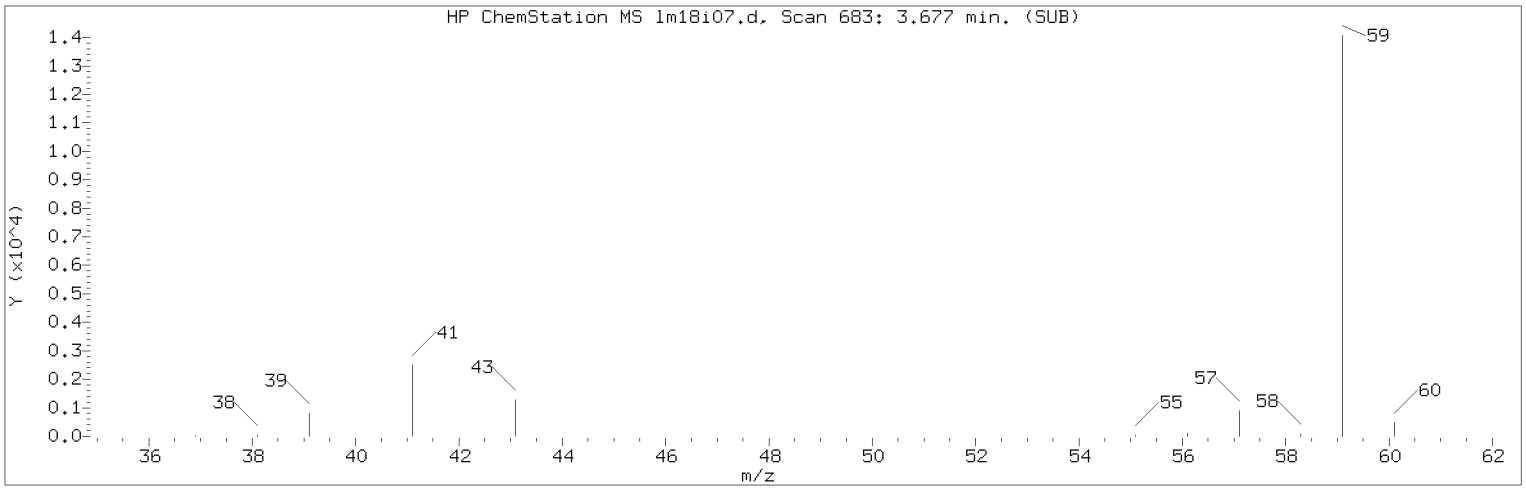
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:18
Date, time and analyst ID of latest file update: 18-Mar-2019 14:18 apr27582

Sample Name: VSTD004 Lab Sample ID: VSTD004

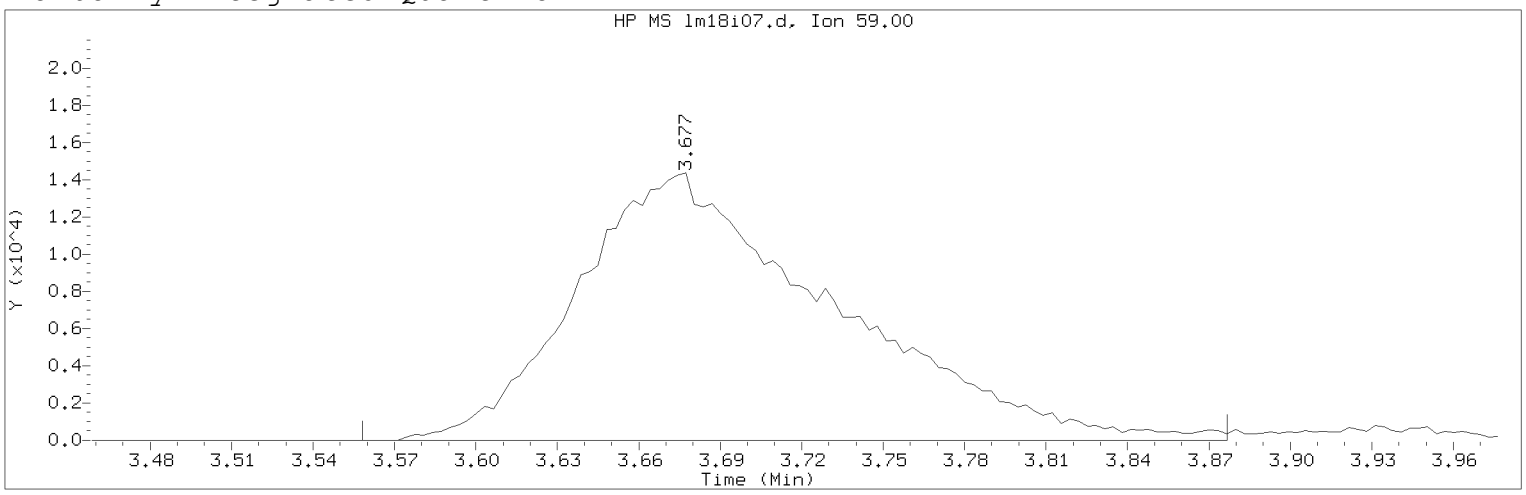
Compound Number	: 29		
Compound Name	: t-Butyl alcohol-d10		
Scan Number	: 649		
Retention Time (minutes)	: 3.568		
Quant Ion	: 65.00		
Area	: 277406		
On-column Amount (ng)	: 250.0000		
Integration start scan	: 616	Integration stop scan:	748
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kkelly100

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i07.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:27 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

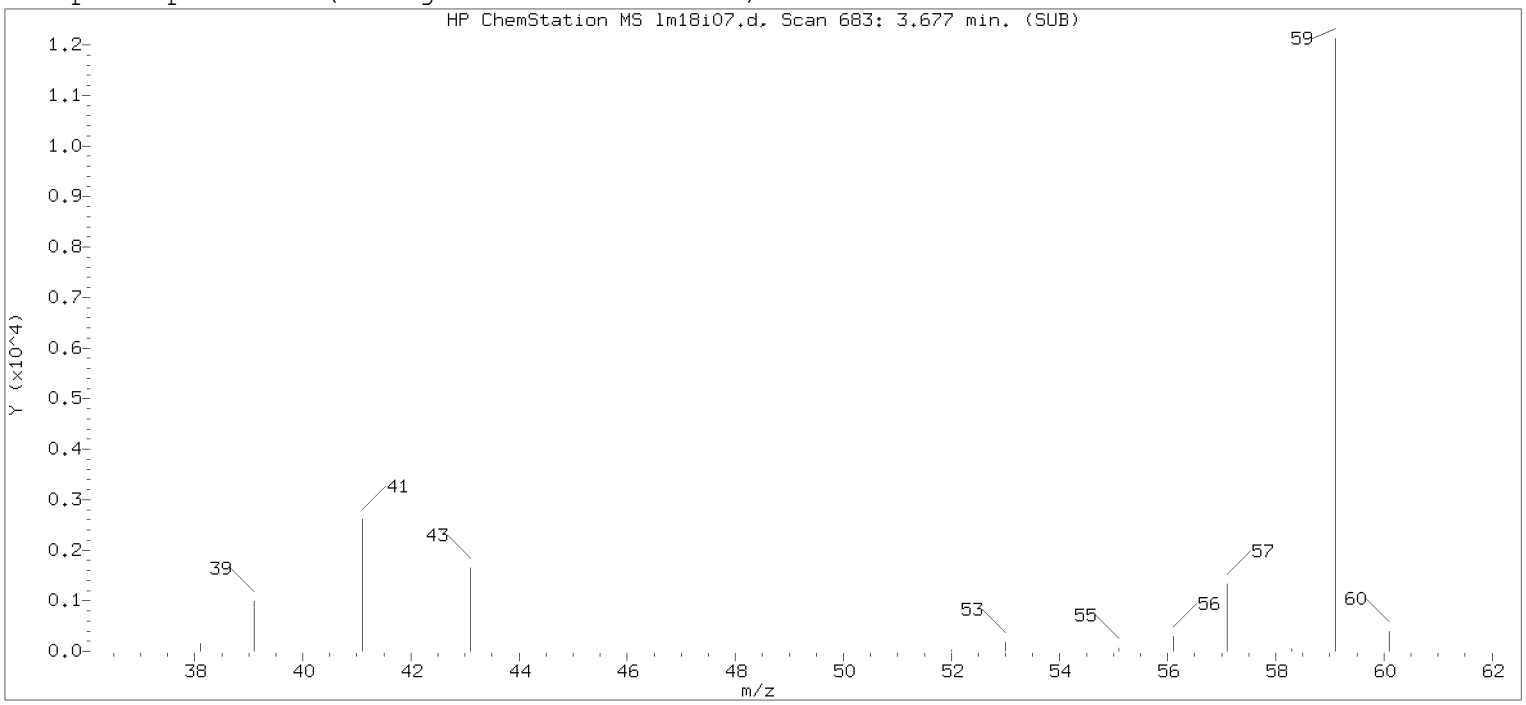
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 683
Retention Time (minutes): 3.677
Quant Ion : 59.00
Area (flag) : 94173M
On-Column Amount (ng) : 79.9422
Integration start scan : 645 Integration stop scan: 744
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

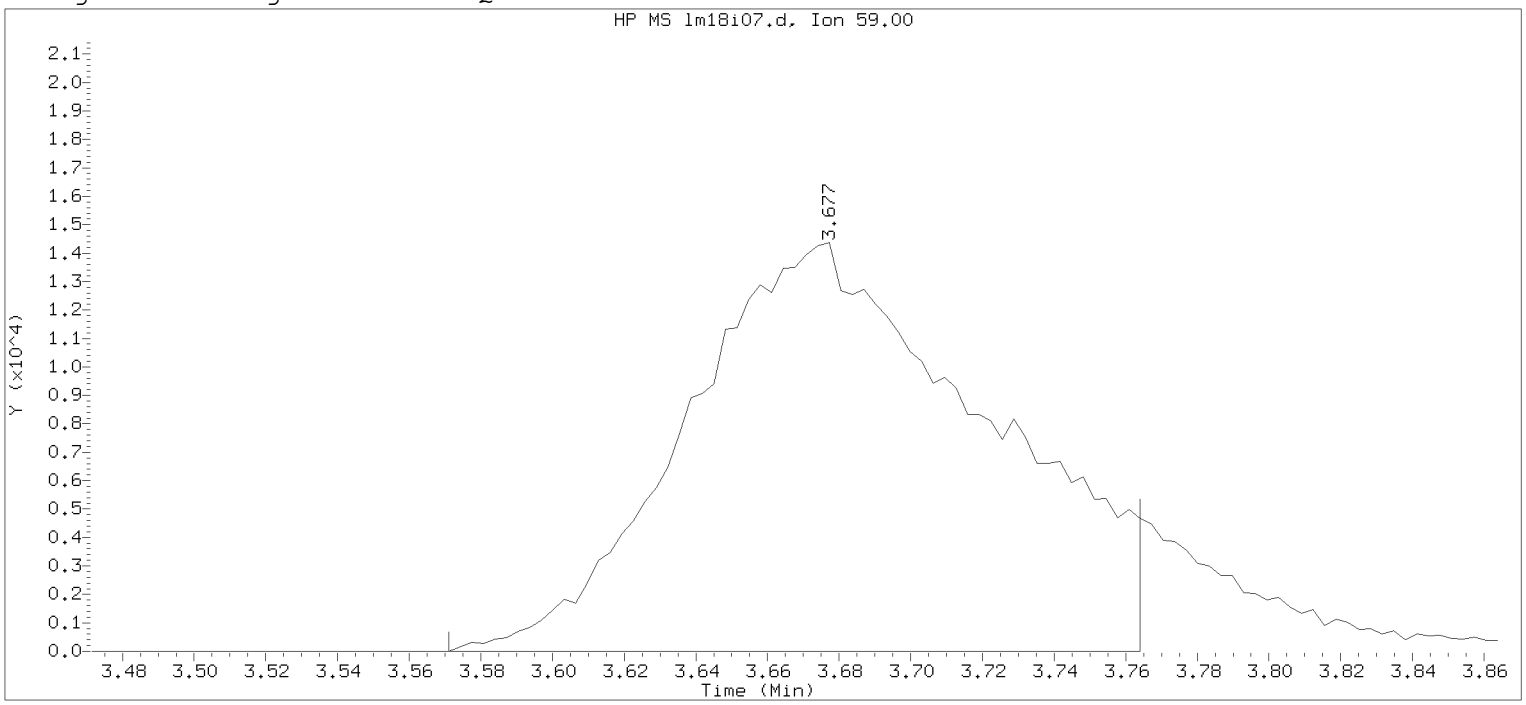
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i07.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:27 Analyst ID: APR27582

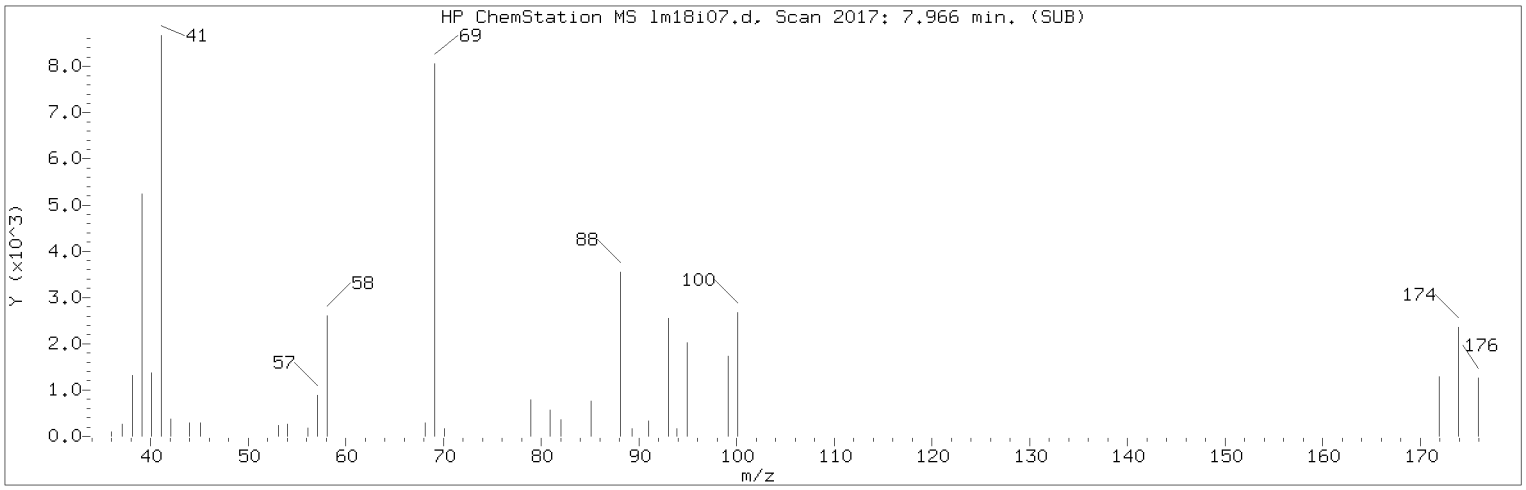
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:18
Date, time and analyst ID of latest file update: 18-Mar-2019 14:18 apr27582

Sample Name: VSTD004 Lab Sample ID: VSTD004

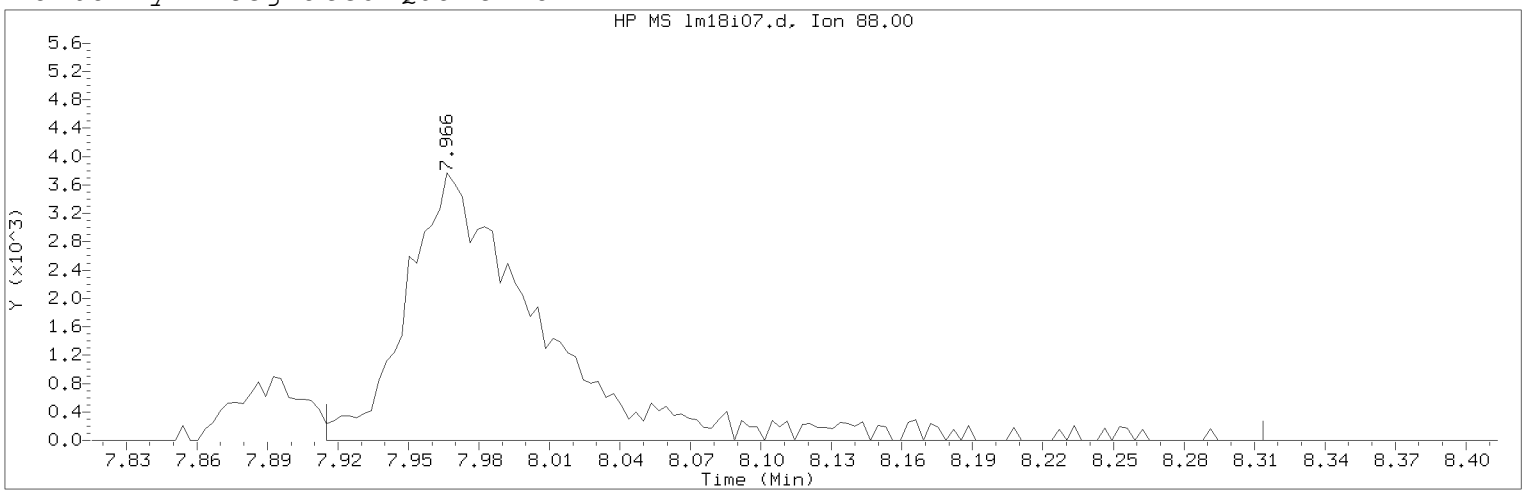
Compound Number	: 30		
Compound Name	: t-Butyl alcohol		
Scan Number	: 683		
Retention Time (minutes)	: 3.677		
Quant Ion	: 59.00		
Area	: 83799		
On-column Amount (ng)	: 76.9419		
Integration start scan	: 649	Integration stop scan:	709
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kkelly100

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i07.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:27 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

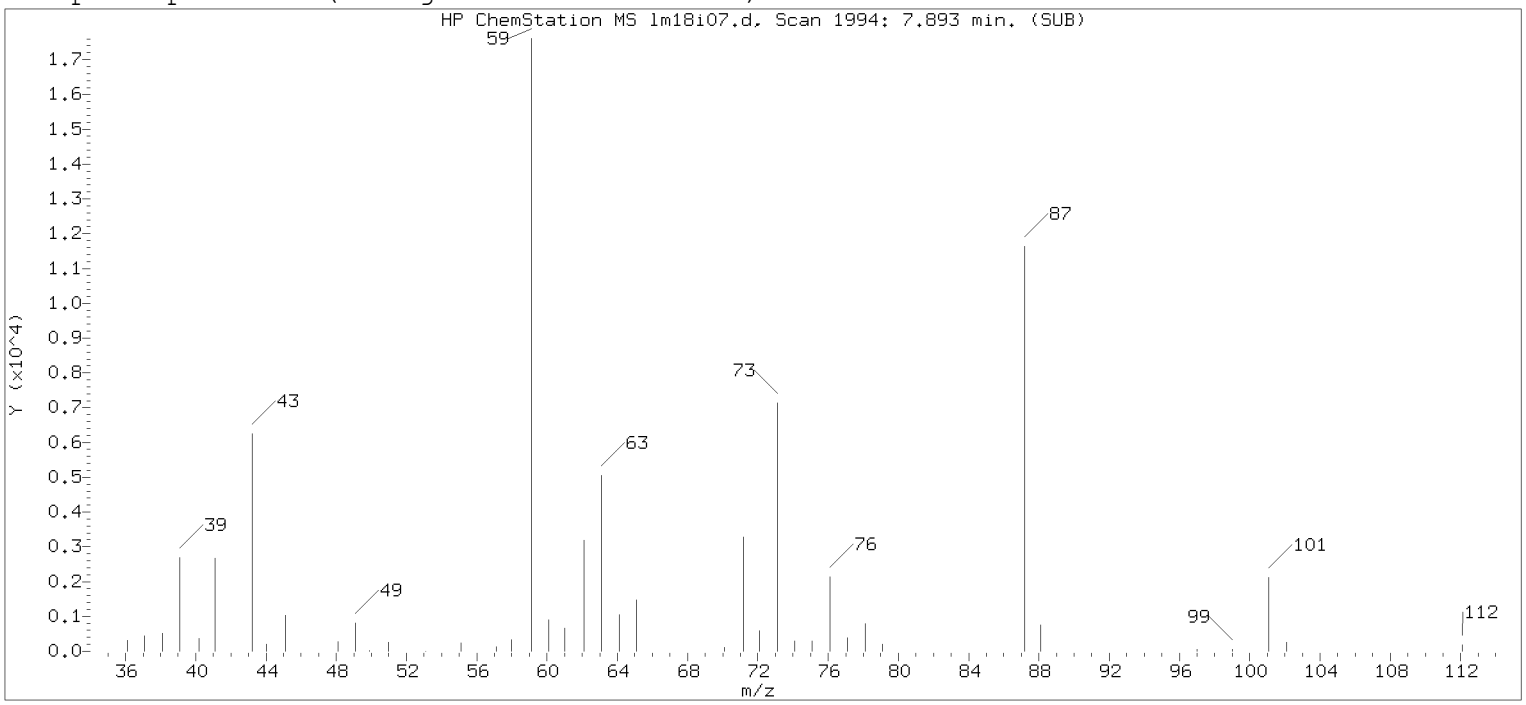
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2017
Retention Time (minutes): 7.966
Quant Ion : 88.00
Area (flag) : 15133M
On-Column Amount (ng) : 204.2483
Integration start scan : 2000 Integration stop scan: 2124
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

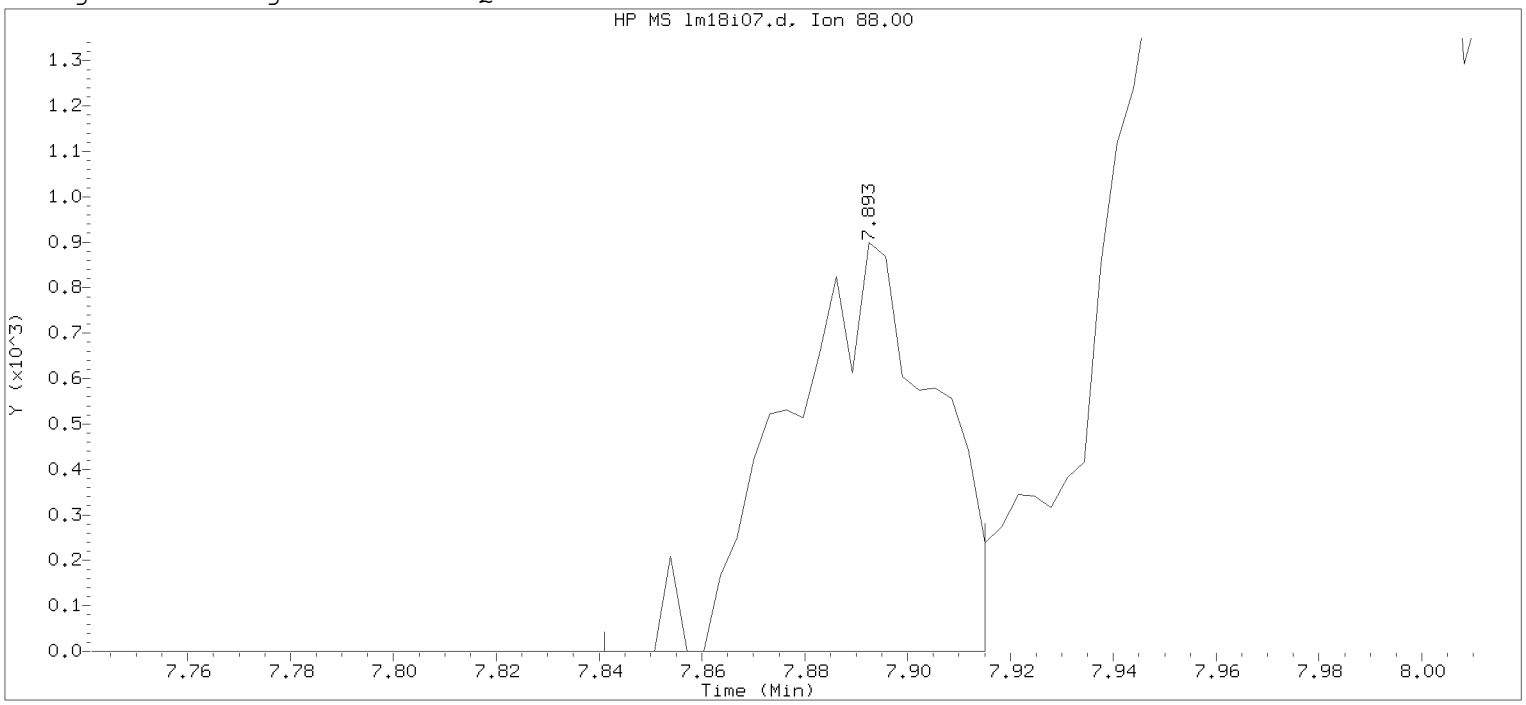
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i07.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:27 Analyst ID: APR27582

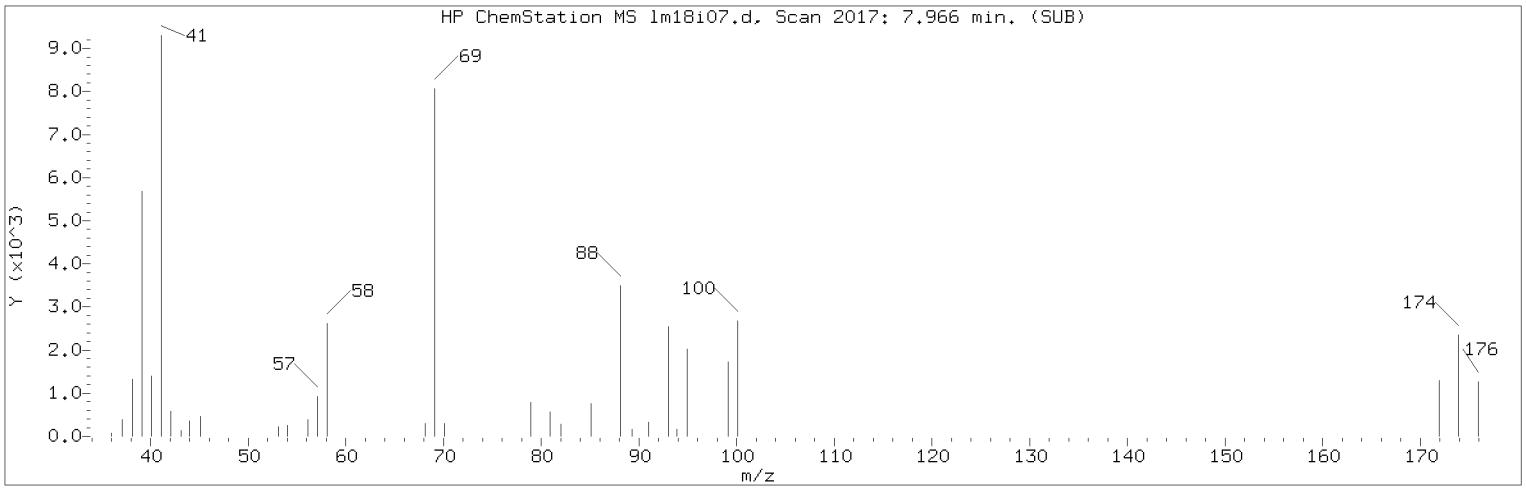
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:18
Date, time and analyst ID of latest file update: 18-Mar-2019 14:18 apr27582

Sample Name: VSTD004 Lab Sample ID: VSTD004

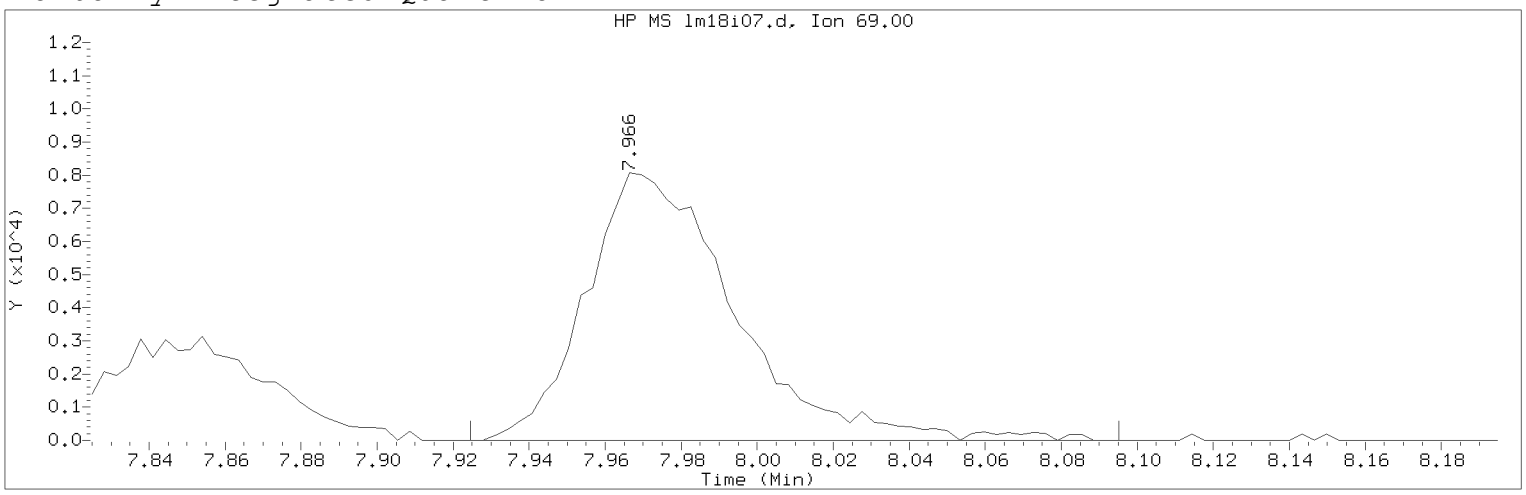
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1994
Retention Time (minutes): 7.893
Quant Ion : 88.00
Area : 1804
On-column Amount (ng) : 26.9241
Integration start scan : 1977 Integration stop scan: 2000
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kkelly100

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i07.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:27 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

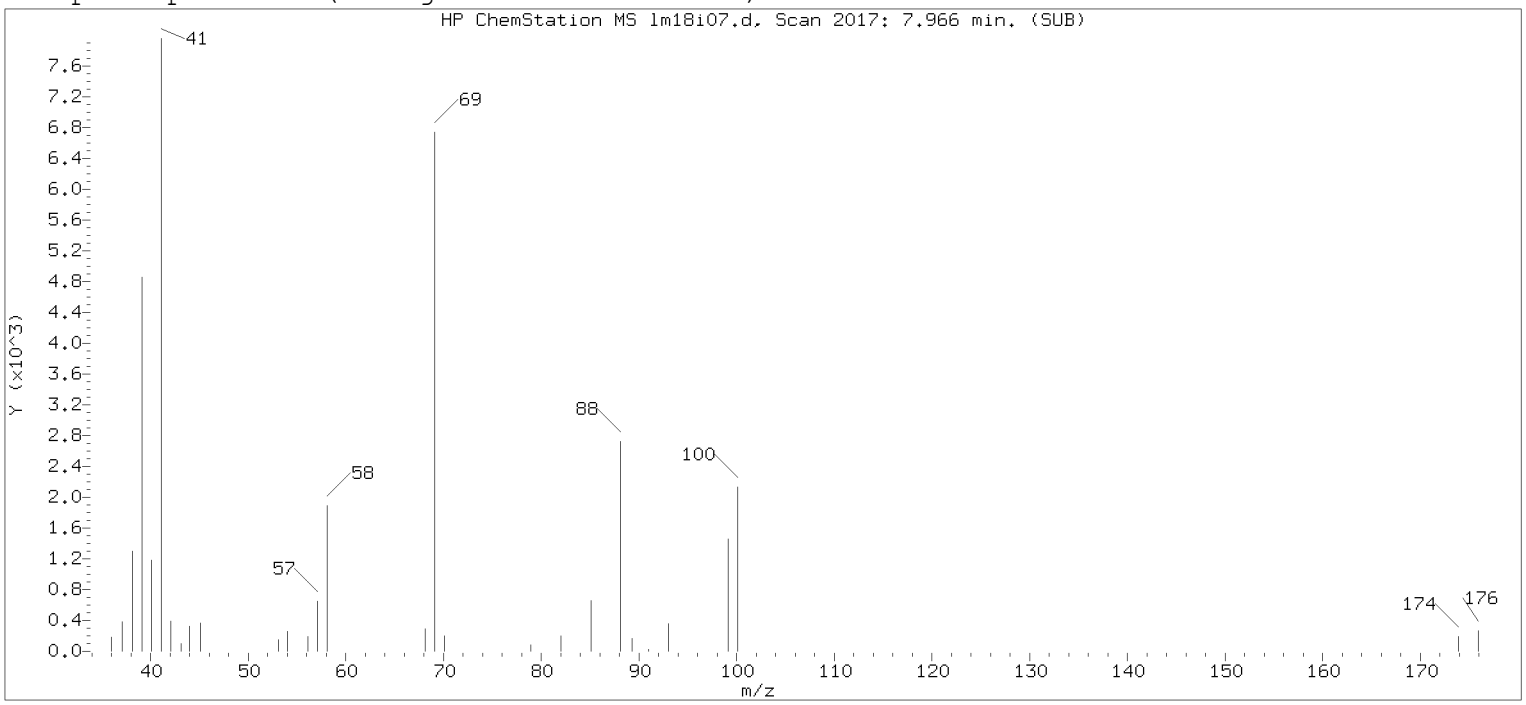
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2017
Retention Time (minutes): 7.966
Quant Ion : 69.00
Area (flag) : 21945M
On-Column Amount (ng) : 3.7205
Integration start scan : 2003 Integration stop scan: 2056
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

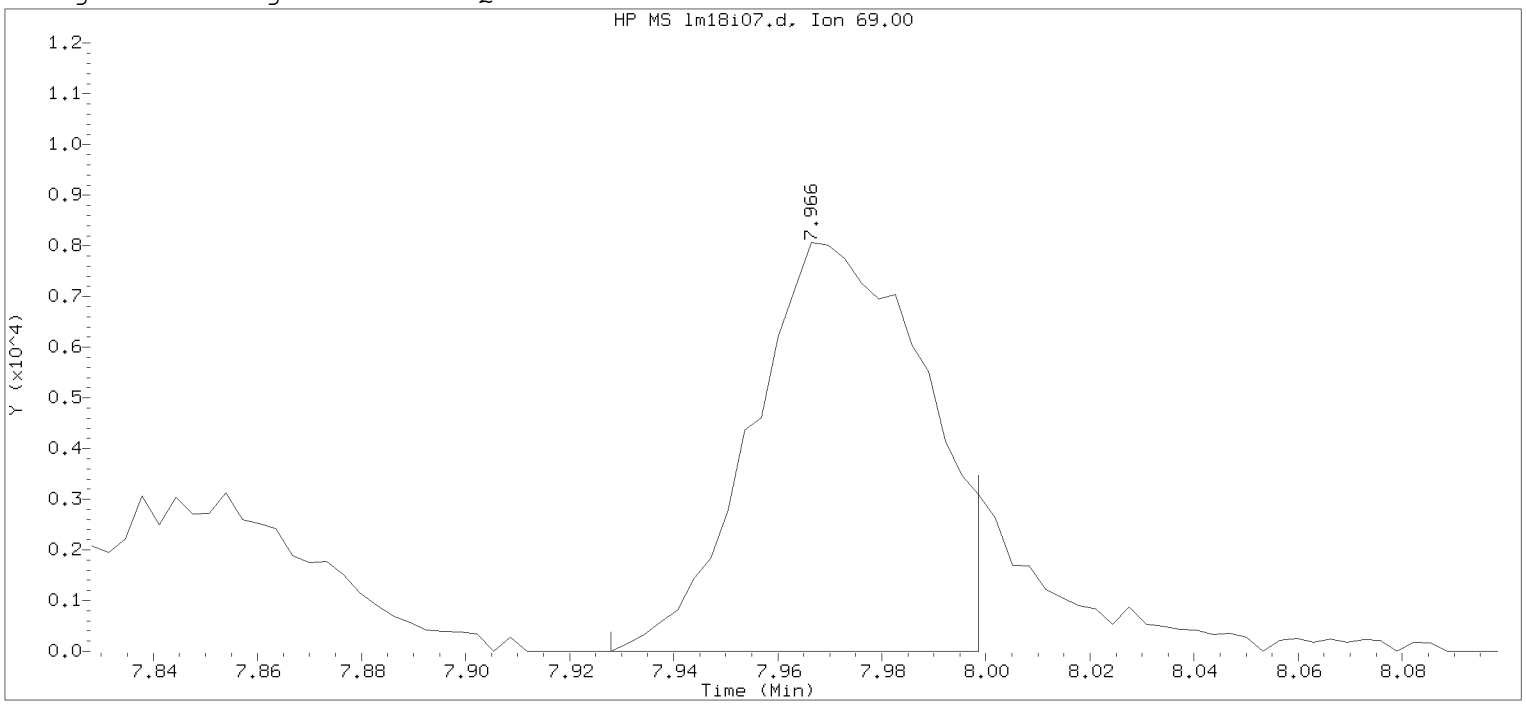
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



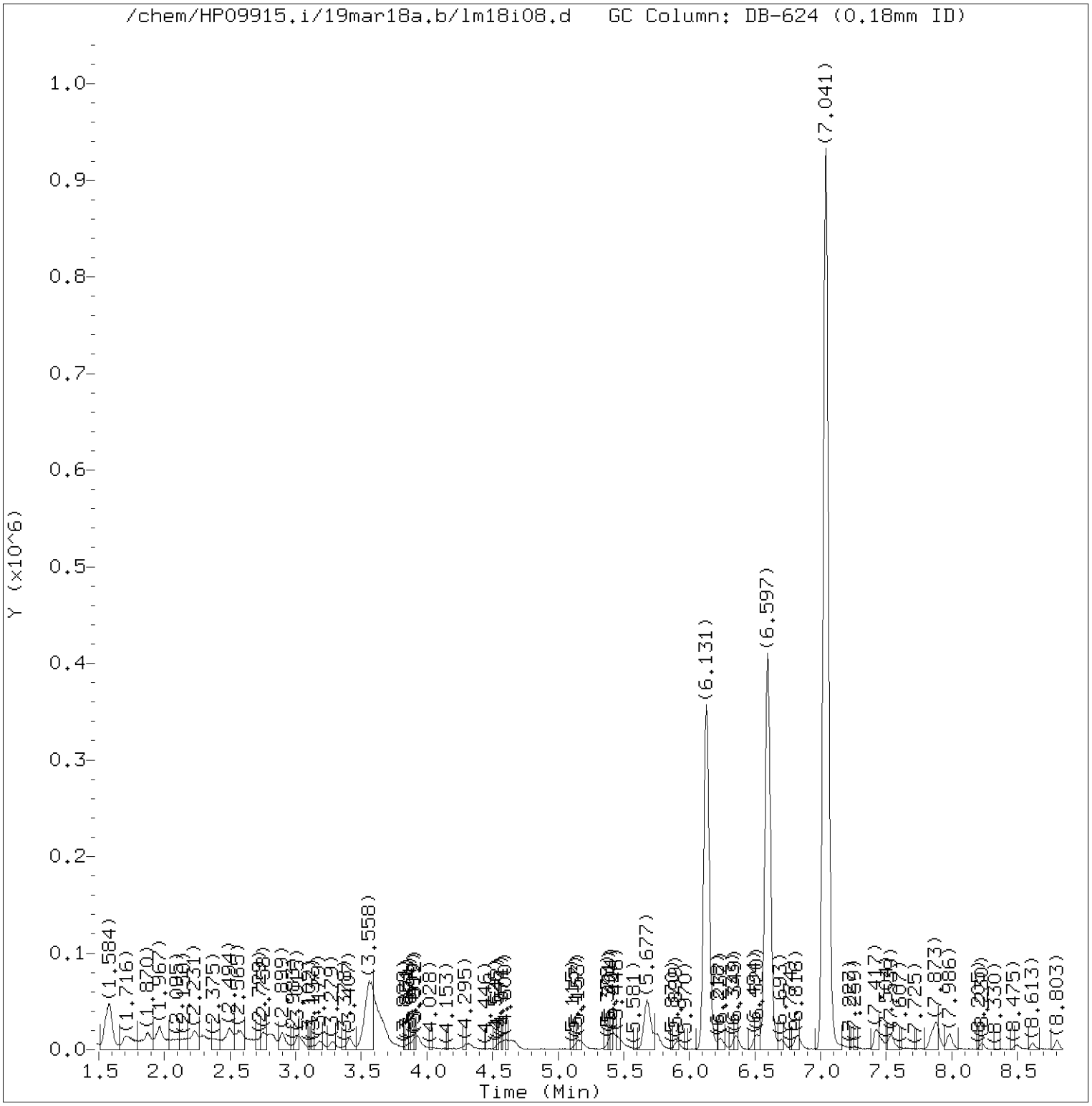
Data File: /chem/HP09915.i/19mar18a.b/lm18i07.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:27 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:18
Date, time and analyst ID of latest file update: 18-Mar-2019 14:18 apr27582

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2017
Retention Time (minutes): 7.966
Quant Ion : 69.00
Area : 18542
On-column Amount (ng) : 3.6892
Integration start scan : 2004 Integration stop scan: 2026
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kkelly100



Total Ion Chromatogram (TIC)

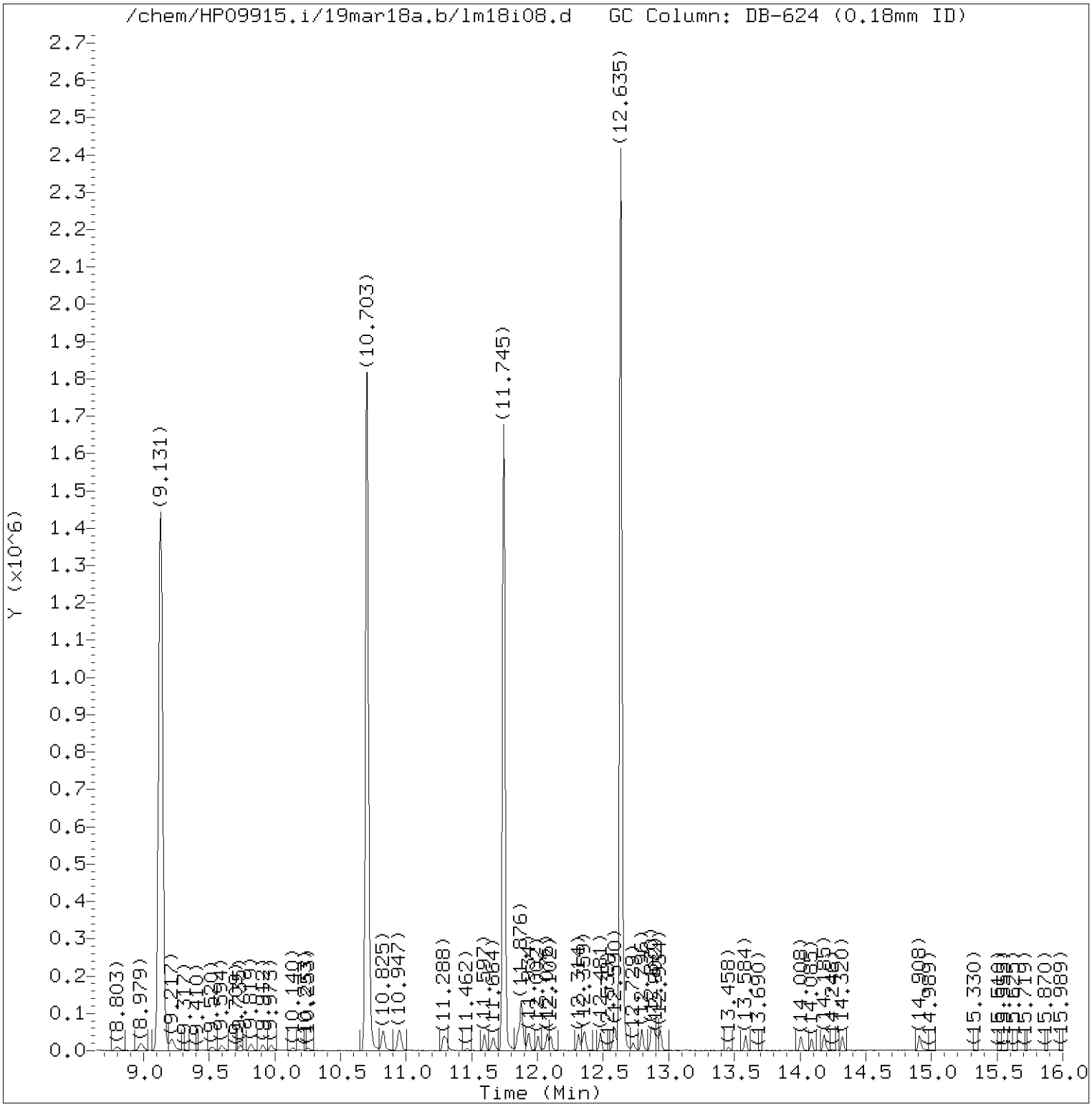
Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.703	85	9078	0.825
4) Chloromethane	(2)	1.874	50	10126	0.994
5) 1,3-Butadiene	(2)	1.951	39	5644M	1.054
6) Vinyl Chloride	(2)	1.964	62	9503	0.952
8) Bromomethane	(2)	2.231	94	8829	1.017
9) Chloroethane	(2)	2.308	64	6088M	1.049
10) Dichlorofluoromethane	(2)	2.497	67	13696	0.991
12) Trichlorofluoromethane	(2)	2.552	101	11767	0.903
11) n-Pentane	(2)	2.587	43	7544	0.939
14) Ethyl ether	(2)	2.761	59	6185	1.016
15) Freon 123a	(2)	2.825	67	7778	1.063
16) Acrolein	(1)	2.896	56	19991	9.336
17) 1,1-Dichloroethene	(2)	3.015	96	3709	0.858
17) 1,1-Dichloroethene	(2)	3.018	63	2398	1.006
19) Freon 113	(2)	3.018	101	3479	0.757
18) Acetone	(1)	3.054	58	2078M	2.270
21) 2-Propanol	(1)	3.166	45	13644M	22.295
22) Methyl Iodide	(2)	3.185	142	8072	0.881
23) Carbon Disulfide	(2)	3.276	76	12790	0.874
27) Methyl Acetate	(2)	3.398	43	7224M	1.113
25) Allyl Chloride	(2)	3.417	41	9500	1.027
29)*t-Butyl alcohol-d10	(1)	3.555	65	274426M	250.000
28) Methylene Chloride	(2)	3.571	84	5408	1.005
30) t-Butyl alcohol	(1)	3.674	59	23975M	21.152
31) Acrylonitrile	(2)	3.857	53	3211	0.946
33) Methyl Tertiary Butyl Ether	(2)	3.896	73	16806	0.982
32) trans-1,2-Dichloroethene	(2)	3.928	96	4643	0.896
34) n-Hexane	(2)	4.311	57	5810M	0.832
36) 1,1-Dichloroethane	(2)	4.552	63	8971	0.917
38) di-Isopropyl ether	(2)	4.600	45	17638	0.953
39) 2-Chloro-1,3-butadiene	(2)	4.668	53	7928	0.865
40) Ethyl t-butyl ether	(2)	5.153	59	17681	0.995
44) 2-Butanone	(2)	5.388	43	9275	1.978
42) cis-1,2-Dichloroethene	(2)	5.407	96	5414	0.905
45) 2,2-Dichloropropane	(2)	5.417	77	6862	0.824
47) Propionitrile	(1)	5.465	54	25124	18.954
48) Methacrylonitrile	(2)	5.681	67	32333	9.223
49) Bromochloromethane	(2)	5.755	128	3093	0.903

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.774	71	2286	1.803
51) Chloroform	(2)	5.912	83	9014	0.917
52)$Dibromofluoromethane	(2)	6.131	113	320723	49.279
52)$Dibromofluoromethane	(2)	6.131	111	329968	49.485
53) 1,1,1-Trichloroethane	(2)	6.131	97	7504M	0.890
43) 1,2-Dichloroethene (Total)	(2)		96	10057	1.802
54) Cyclohexane	(2)	6.237	56	8267	0.907
54) Cyclohexane	(2)	6.240	84	6669	0.861
54) Cyclohexane	(2)	6.237	69	2473	0.890
55) 1,1-Dichloropropene	(2)	6.359	75	6428	0.851
56) Carbon Tetrachloride	(2)	6.362	117	5337	0.771
58) Isobutyl Alcohol	(1)	6.520	41	19408	51.886
57)$1,2-Dichloroethane-d4	(2)	6.597	102	75764	49.668
57)$1,2-Dichloroethane-d4	(2)	6.597	65	424741	49.745
57)$1,2-Dichloroethane-d4	(2)	6.597	104	48171	49.444
60) Benzene	(2)	6.623	78	19618	0.903
61) 1,2-Dichloroethane	(2)	6.709	62	9168	1.052
61) 1,2-Dichloroethane	(2)	6.706	98	430	0.806
65) t-Amyl methyl ether	(2)	6.828	73	16889	0.956
66)*Fluorobenzene	(2)	7.041	96	1265954	50.000
67) n-Heptane	(2)	7.070	43	6801	0.865
69) n-Butanol	(1)	7.426	56	23473	86.712
71) Trichloroethene	(2)	7.539	95	5218M	0.891
72) Methylcyclohexane	(2)	7.844	83	7959	0.789
72) Methylcyclohexane	(2)	7.844	98	3660	0.780
73) 1,2-Dichloropropane	(2)	7.870	63	5449	0.921
75) 1,4-Dioxane	(1)	7.970	88	2950M	41.381
74) Dibromomethane	(2)	7.983	93	3541	0.866
76) Methyl Methacrylate	(2)	7.986	69	4869M	0.853
78) Bromodichloromethane	(2)	8.230	83	5584	0.791
79) 2-Nitropropane	(2)	8.494	41	3798	1.552
80) 2-Chloroethyl Vinyl Ether	(2)	8.616	63	4010	0.844
81) cis-1,3-Dichloropropene	(2)	8.803	75	6746	0.758
82) 4-Methyl-2-pentanone	(2)	8.983	43	18067	1.826
83)$Toluene-d8	(3)	9.131	98	1284835	50.520
83)$Toluene-d8	(3)	9.131	100	827355	50.362
88) Toluene	(3)	9.211	92	12923	0.917
89) trans-1,3-Dichloropropene	(3)	9.520	75	6175	0.735

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$ = Compound is a surrogate standard.

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on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	9.600	69	8009	0.811
92) 1,1,2-Trichloroethane	(3)	9.735	97	4793	0.900
93) Tetrachloroethene	(3)	9.819	166	5519	0.901
94) 1,3-Dichloropropane	(3)	9.912	76	8625	0.918
96) 2-Hexanone	(3)	9.973	43	13317	1.837
90) 1,3-Dichloropropene (total)	(3)		100	12921	1.493
97) Dibromochloromethane	(3)	10.137	129	3830	0.697
99) 1,2-Dibromoethane	(3)	10.253	107	5096	0.841
100)*Chlorobenzene-d5	(3)	10.703	117	988239	50.000
101) 1-Chlorohexane	(3)	10.722	91	8807	1.048
102) Chlorobenzene	(3)	10.729	112	15011	0.886
103) 1,1,1,2-Tetrachloroethane	(3)	10.819	131	4297	0.756
104) Ethylbenzene	(3)	10.828	91	24585	0.861
106) m+p-Xylene	(3)	10.947	106	18970	1.690
107) o-Xylene	(3)	11.285	106	9500	0.856
109) Styrene	(3)	11.311	104	14850	0.798
110) Bromoform	(3)	11.465	173	2337	3.922
111) Isopropylbenzene	(3)	11.597	105	24112	0.849
112) Cyclohexanone	(1)	11.664	55	13551	47.768
114)$4-Bromofluorobenzene	(3)	11.745	95	491474	49.937
114)$4-Bromofluorobenzene	(3)	11.745	174	399769	50.014
108) Xylene (Total)	(3)		106	28470	2.546
116) 1,1,2,2-Tetrachloroethane	(4)	11.848	83	8278	0.899
115) Bromobenzene	(4)	11.857	156	6499	0.882
118) trans-1,4-Dichloro-2-butene	(4)	11.876	53	24805	8.397
117) 1,2,3-Trichloropropane	(4)	11.896	110	2642	0.943
119) n-Propylbenzene	(4)	11.934	91	29382	0.903
120) 2-Chlorotoluene	(4)	12.005	126	6019	0.874
122) 1,3,5-Trimethylbenzene	(4)	12.076	105	21089	0.866
121) 4-Chlorotoluene	(4)	12.105	126	6375	0.880
124) tert-Butylbenzene	(4)	12.317	134	4742	0.830
125) Pentachloroethane	(4)	12.346	167	2677	0.605
126) 1,2,4-Trimethylbenzene	(4)	12.362	105	22355	0.878
127) sec-Butylbenzene	(4)	12.481	105	26448	0.872
129) 1,3-Dichlorobenzene	(4)	12.577	146	12786	0.912
130) p-Isopropyltoluene	(4)	12.593	119	23533	0.857
131)*1,4-Dichlorobenzene-d4	(4)	12.635	152	535864	50.000
133) 1,4-Dichlorobenzene	(4)	12.651	146	13924	0.935

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$ = Compound is a surrogate standard.

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on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	12.661	105	25056	0.893
135) Benzyl Chloride	(4)	12.732	91	10770	0.581
136) 1,3-Diethylbenzene	(4)	12.796	119	15185	0.876
137) 1,4-Diethylbenzene	(4)	12.867	119	17163	0.915
139) n-Butylbenzene	(4)	12.886	92	13237	0.949
138) 1,2-Dichlorobenzene	(4)	12.912	146	12704	0.908
140) 1,2-Diethylbenzene	(4)	12.934	119	13084	0.892
141) Diethylbenzene (total)	(4)		100	45432	2.683
142) 1,2-Dibromo-3-chloropropane	(4)	13.458	75	1569	0.758
144) 1,3,5-Trichlorobenzene	(4)	13.587	180	10669	0.992
146) 1,2,4-Trichlorobenzene	(4)	14.008	180	10625	1.034
147) Hexachlorobutadiene	(4)	14.085	225	4405	1.071
148) Naphthalene	(4)	14.185	128	32179	0.987
149) 1,2,3-Trichlorobenzene	(4)	14.323	180	10184	1.040
150) 2-Methylnaphthalene	(4)	14.908	142	19568	0.985

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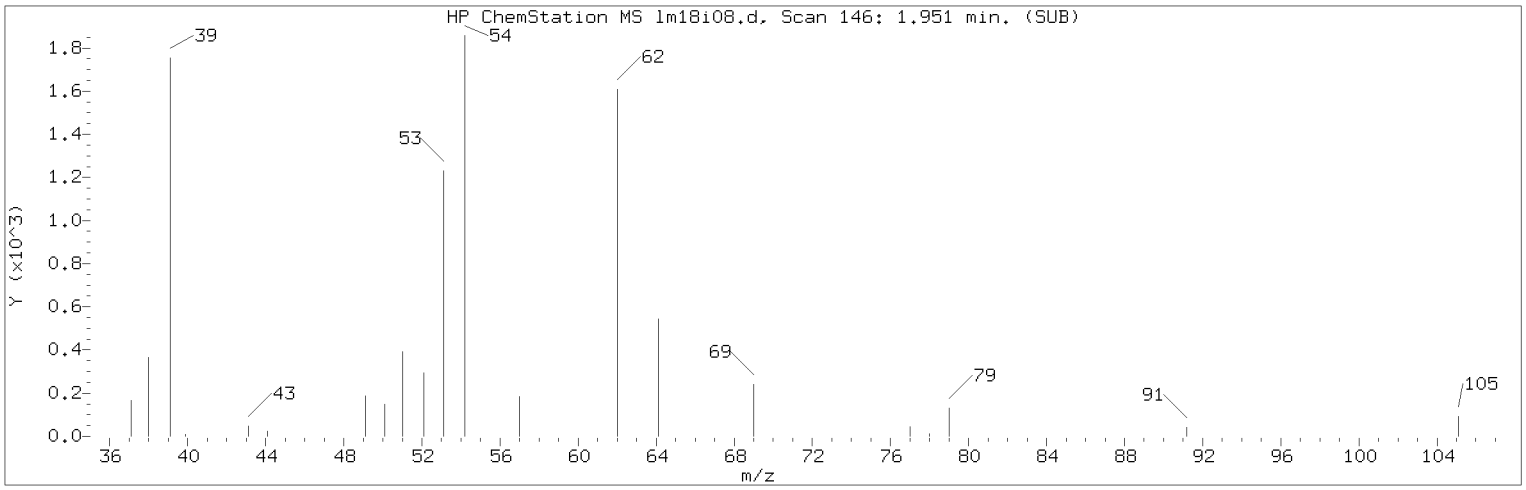
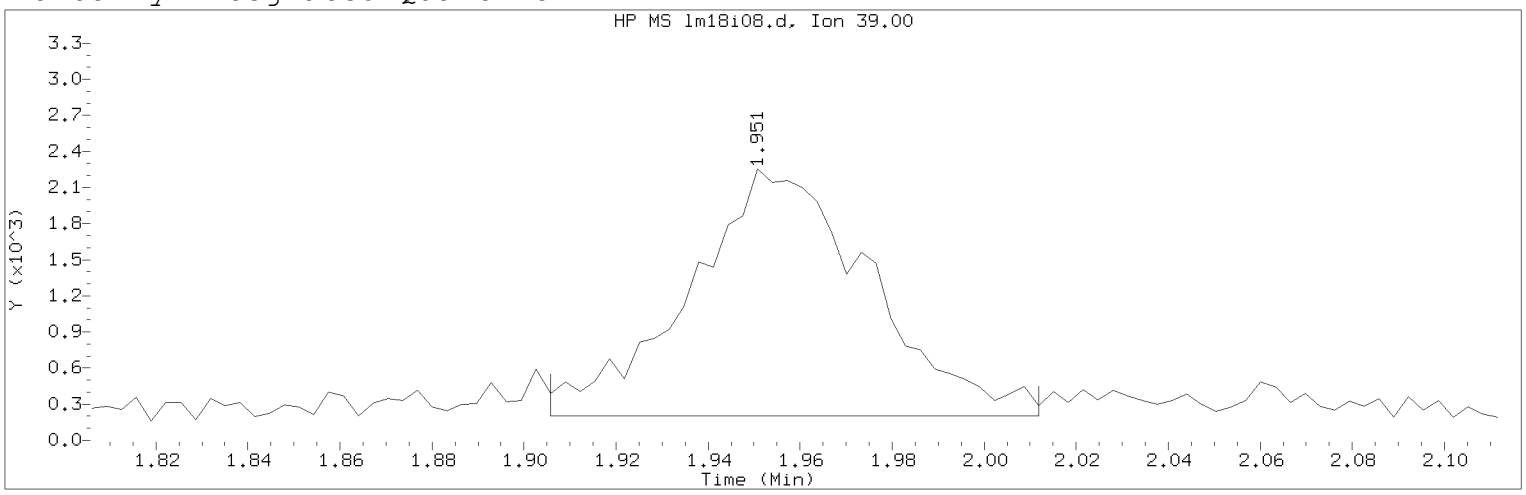
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

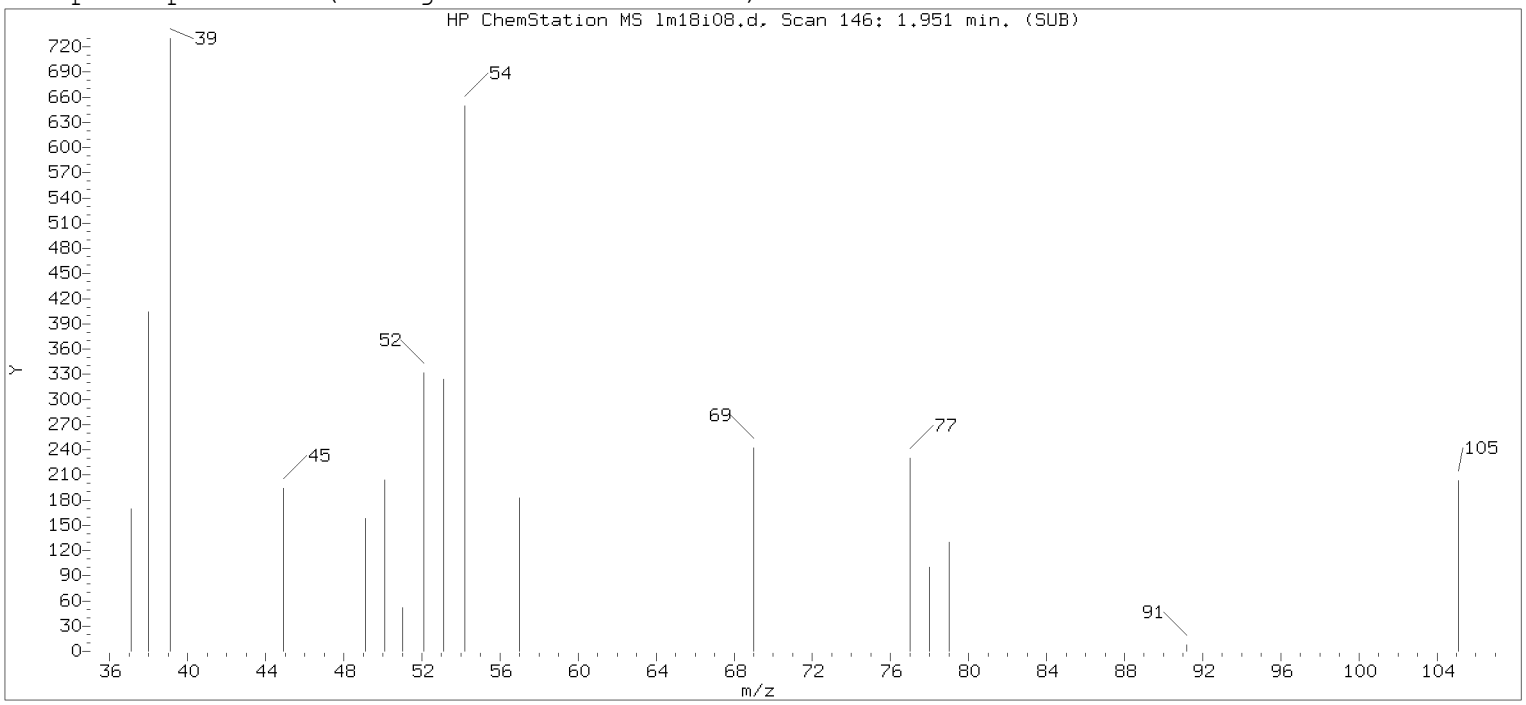
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 146
Retention Time (minutes): 1.951
Quant Ion : 39.00
Area (flag) : 5644M
On-Column Amount (ng) : 1.0543
Integration start scan : 131 Integration stop scan: 164
Y at integration start : 201 Y at integration end: 201

Reason for manual integration: improper integration

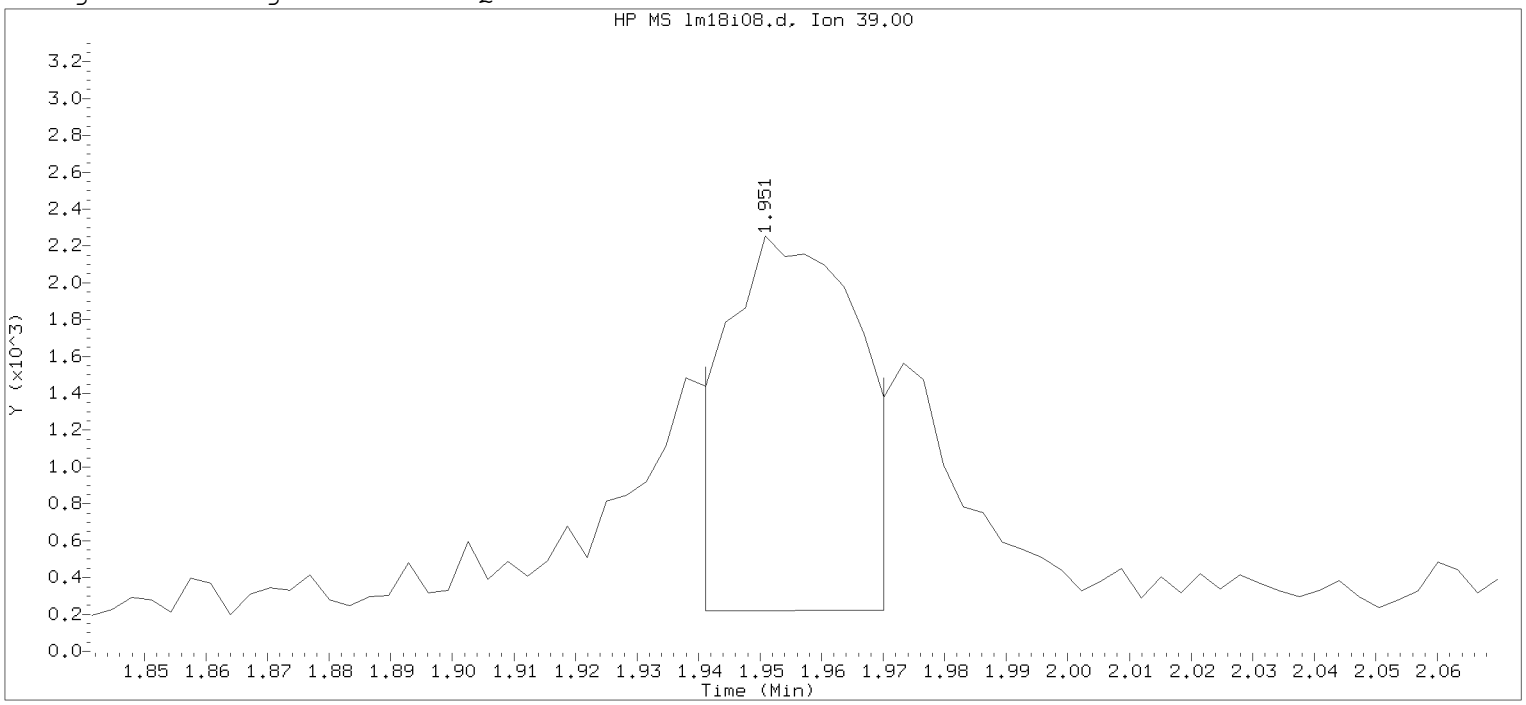
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

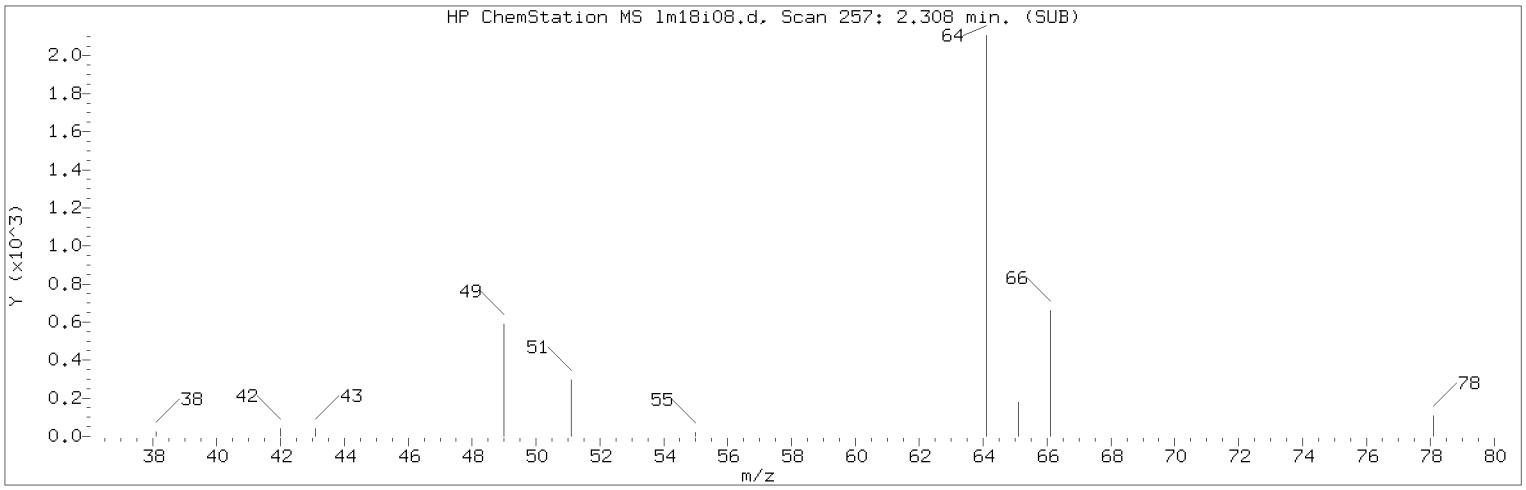
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:14
Date, time and analyst ID of latest file update: 18-Mar-2019 14:14 apr27582

Sample Name: VSTD001 Lab Sample ID: VSTD001

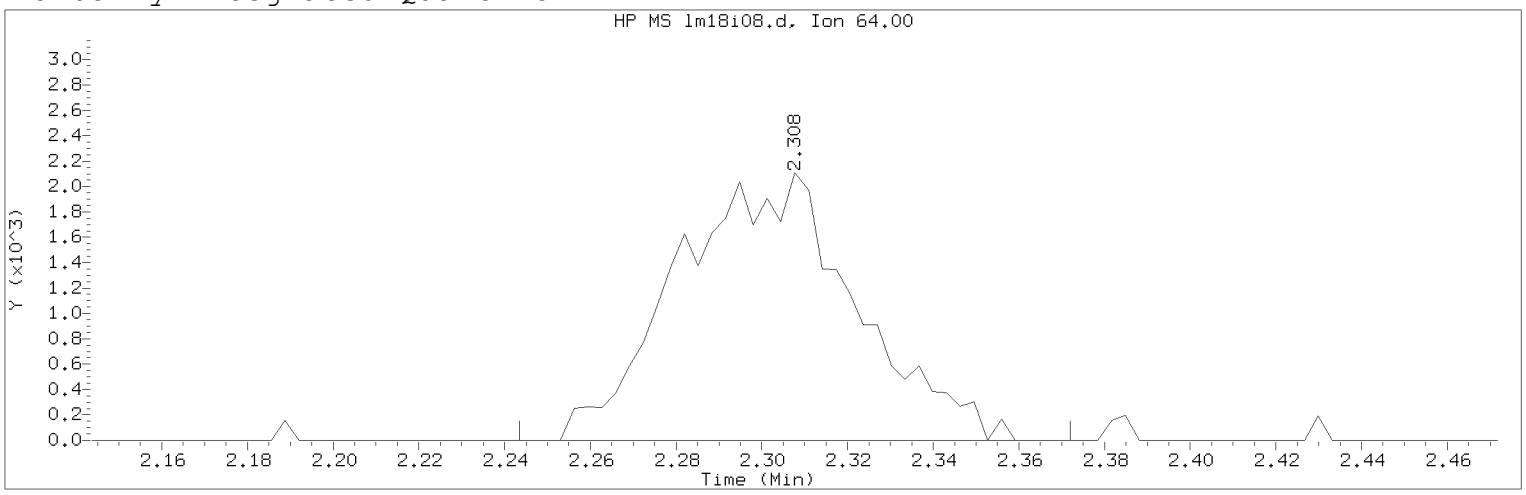
Compound Number	: 5		
Compound Name	: 1,3-Butadiene		
Scan Number	: 146		
Retention Time (minutes)	: 1.951		
Quant Ion	: 39.00		
Area	: 2977		
On-column Amount (ng)	: 0.5395		
Integration start scan	: 142	Integration stop scan:	151
Y at integration start	: 218	Y at integration end:	222

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: KKELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

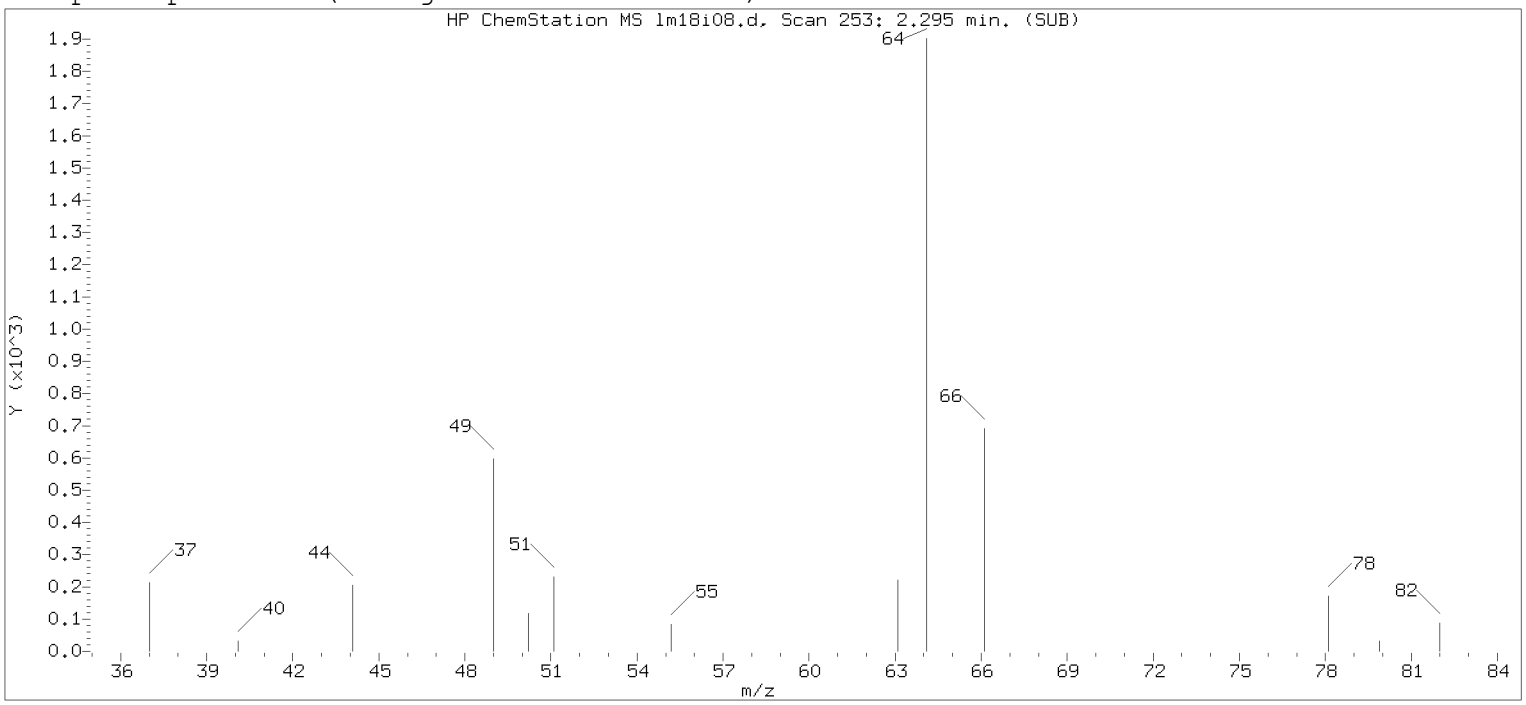
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 257
Retention Time (minutes): 2.308
Quant Ion : 64.00
Area (flag) : 6088M
On-Column Amount (ng) : 1.0490
Integration start scan : 236 Integration stop scan: 276
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

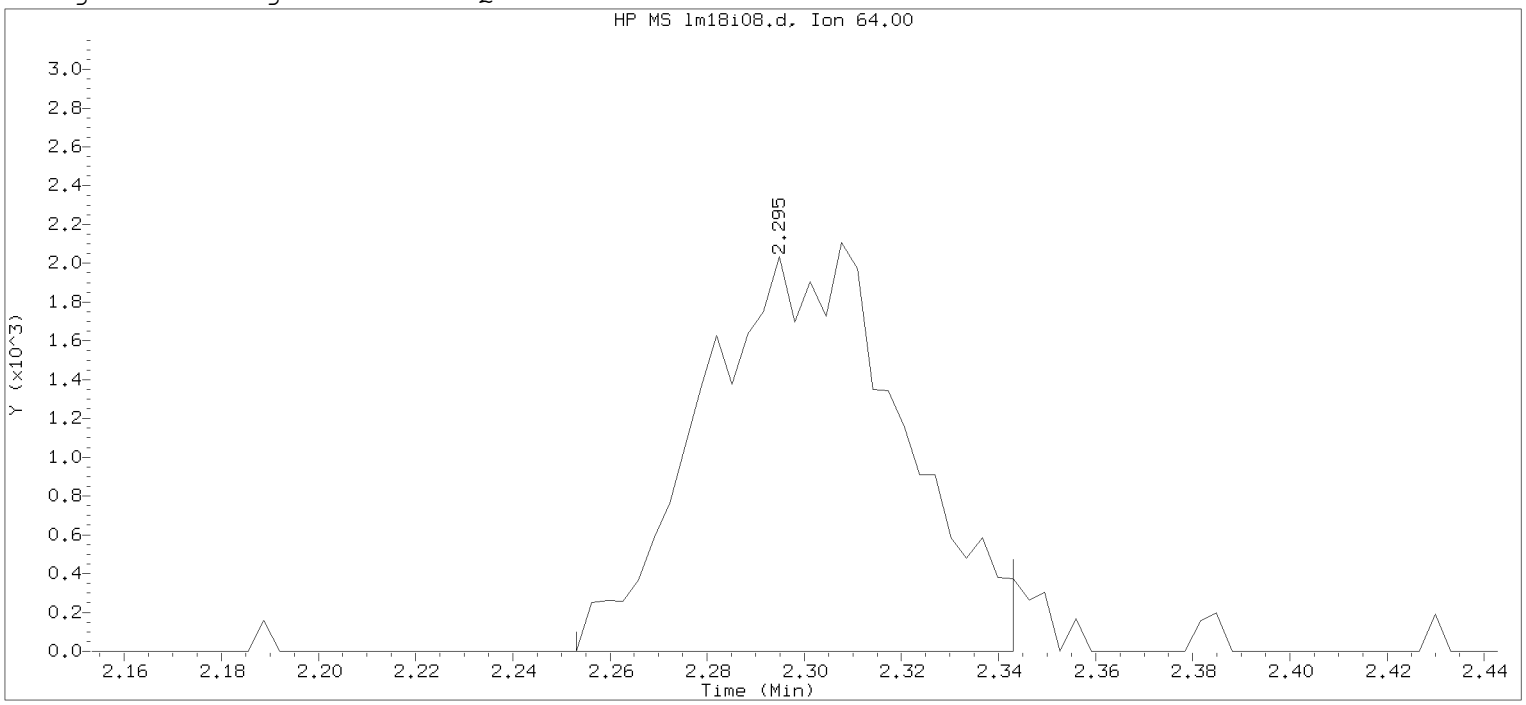
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:14
Date, time and analyst ID of latest file update: 18-Mar-2019 14:14 apr27582

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 9
Compound Name : Chloroethane
Scan Number : 253
Retention Time (minutes): 2.295
Quant Ion : 64.00
Area : 5909
On-column Amount (ng) : 0.9045
Integration start scan : 239 Integration stop scan: 267
Y at integration start : 0 Y at integration end: 0

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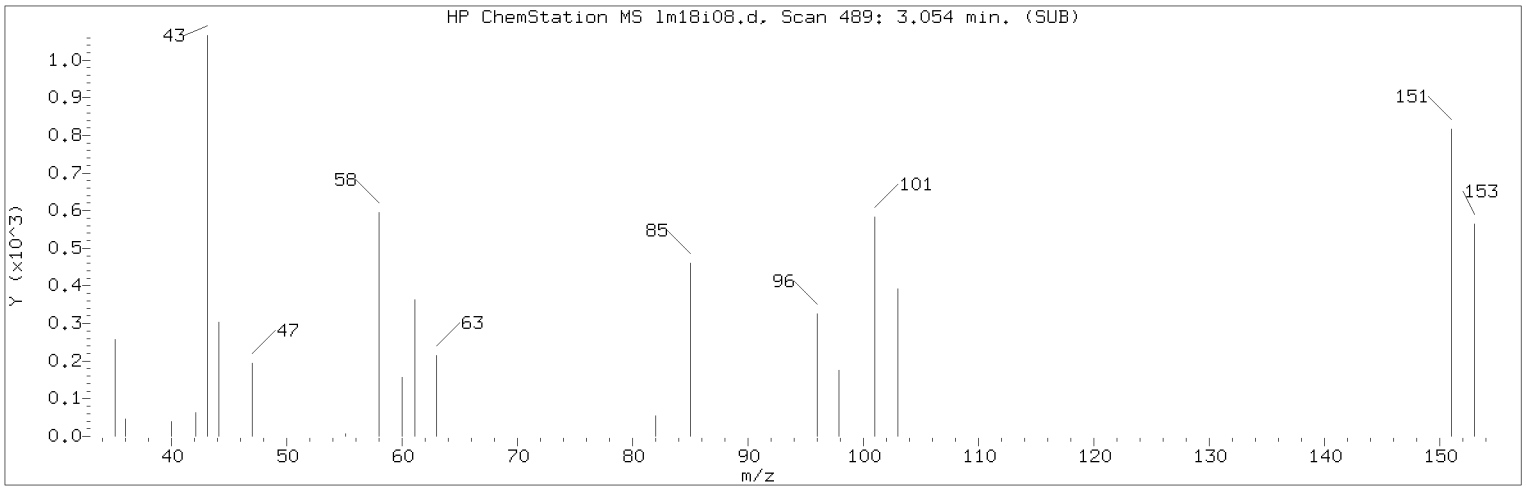
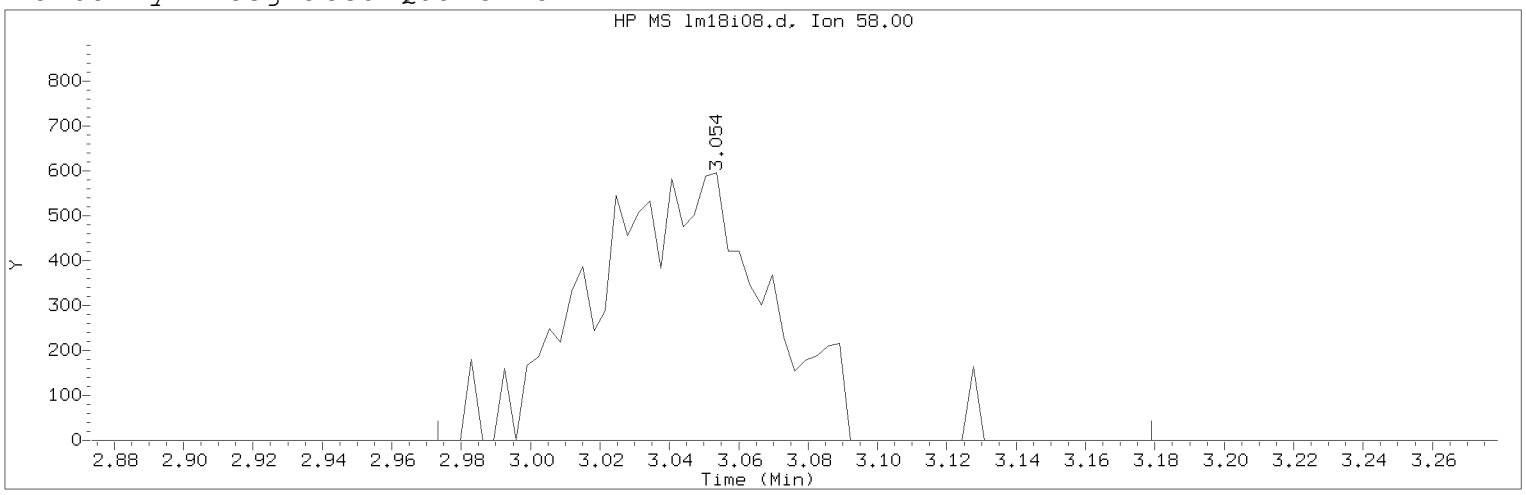
Target 3.5 esignature user ID: kk10032

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

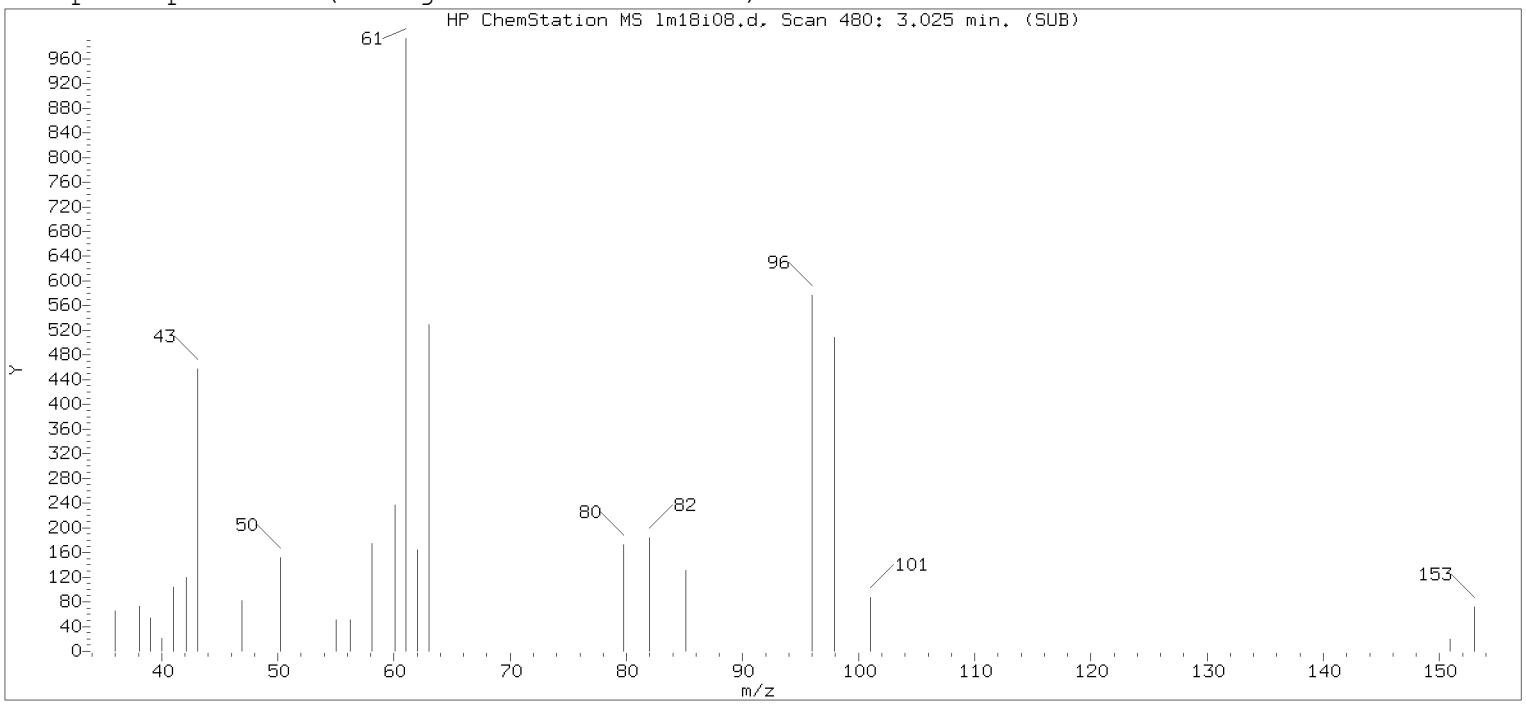
Compound Number : 18
Compound Name : Acetone
Scan Number : 489
Retention Time (minutes): 3.054
Quant Ion : 58.00
Area (flag) : 2078M
On-Column Amount (ng) : 2.2699
Integration start scan : 463 Integration stop scan: 527
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

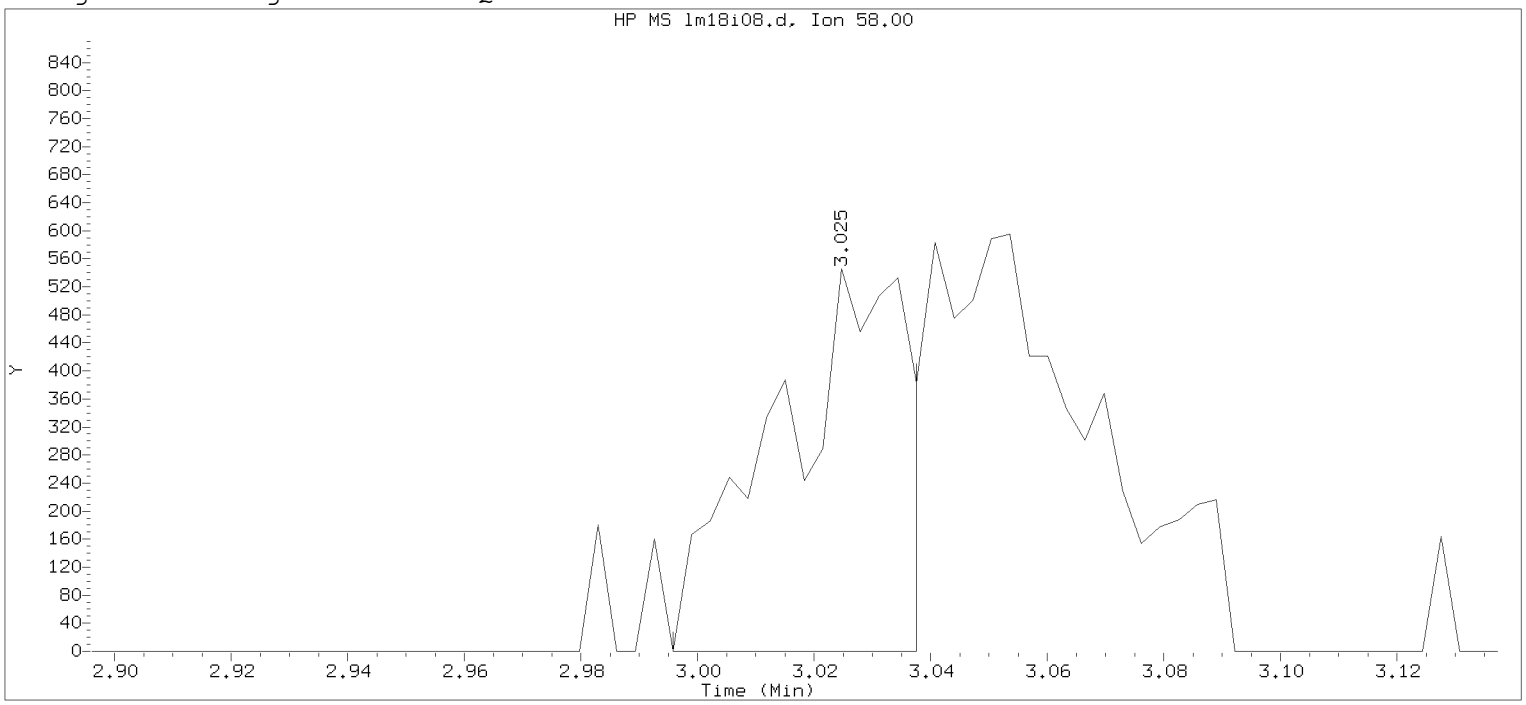
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

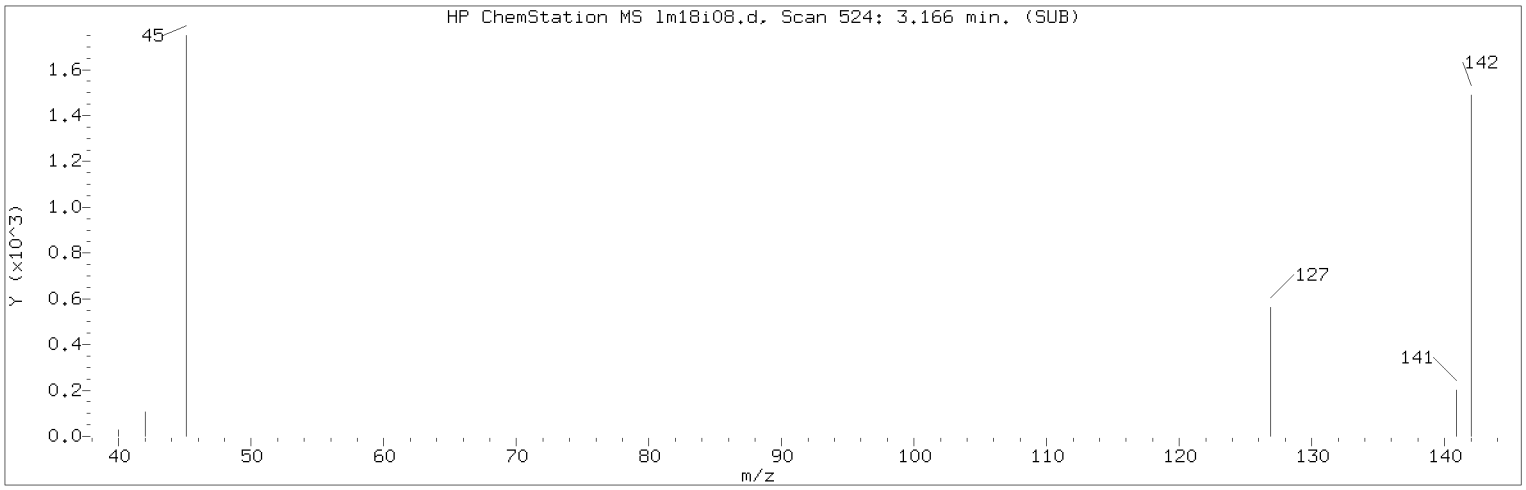
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:14
Date, time and analyst ID of latest file update: 18-Mar-2019 14:14 apr27582

Sample Name: VSTD001 Lab Sample ID: VSTD001

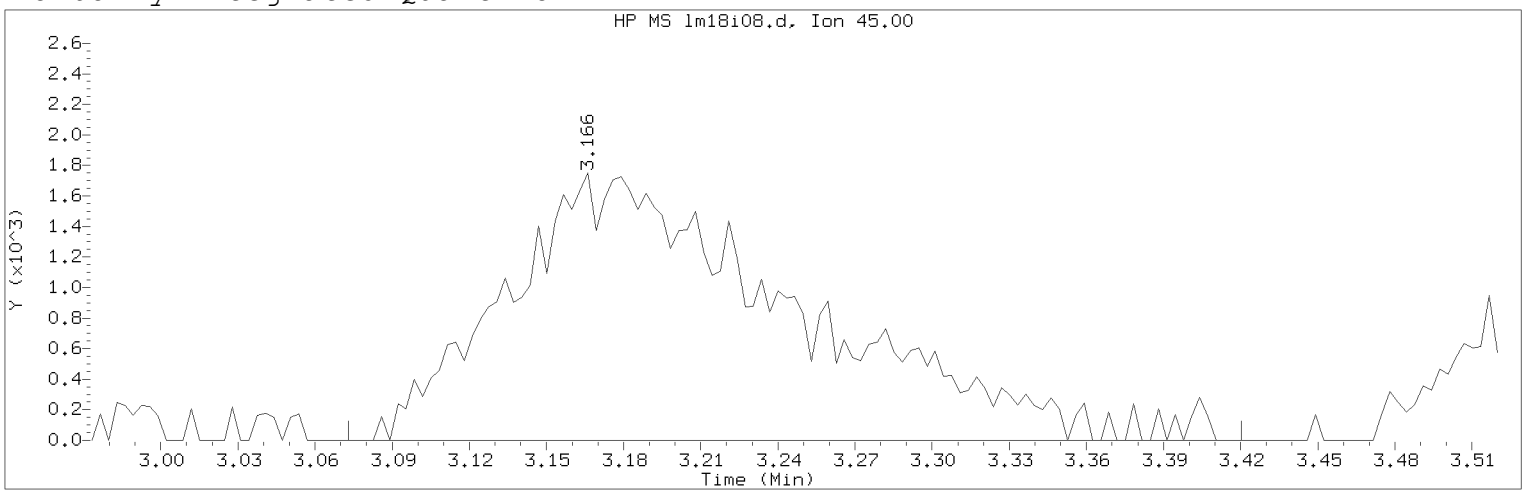
Compound Number	: 18		
Compound Name	: Acetone		
Scan Number	: 480		
Retention Time (minutes)	: 3.025		
Quant Ion	: 58.00		
Area	: 830		
On-column Amount (ng)	: 0.8927		
Integration start scan	: 470	Integration stop scan:	483
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user: KEVIN KELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

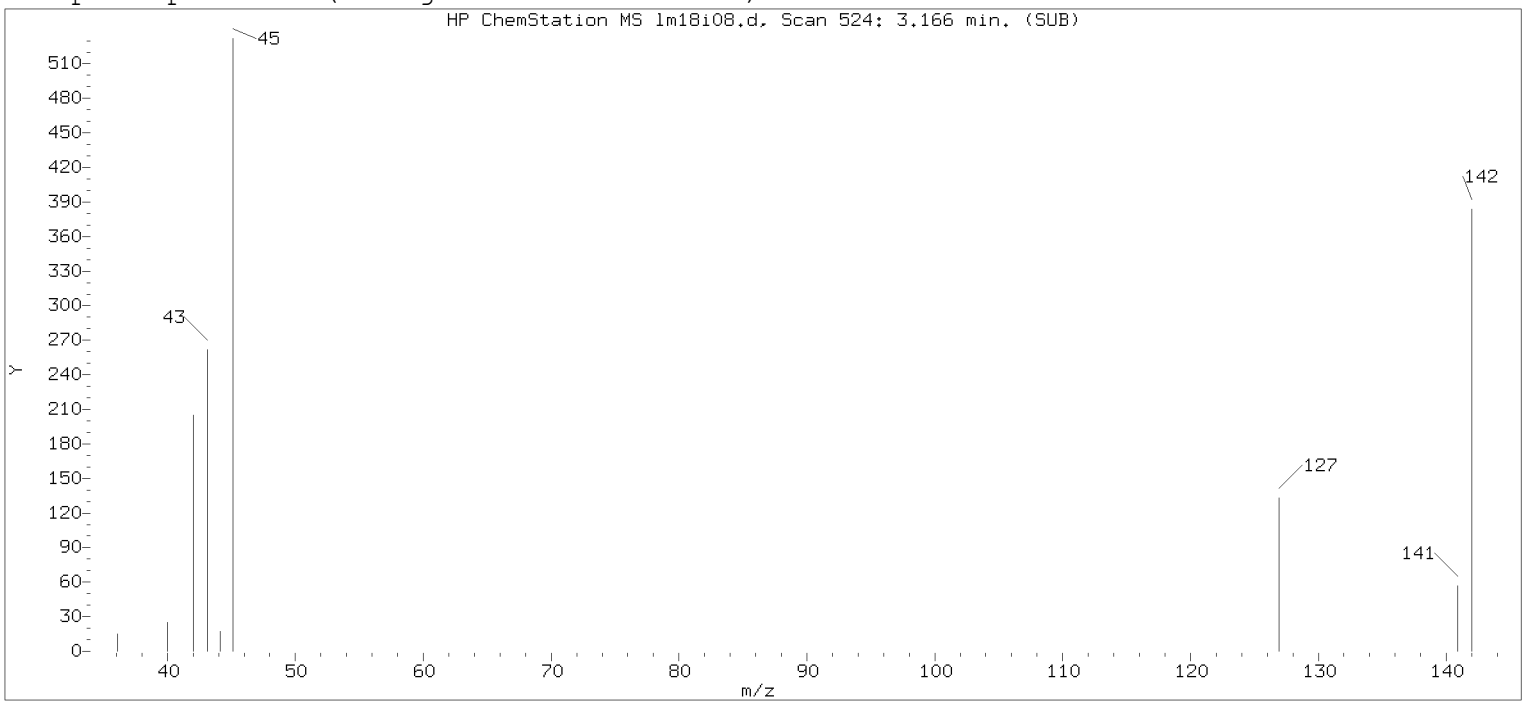
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 524
Retention Time (minutes): 3.166
Quant Ion : 45.00
Area (flag) : 13644M
On-Column Amount (ng) : 22.2953
Integration start scan : 494 Integration stop scan: 602
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

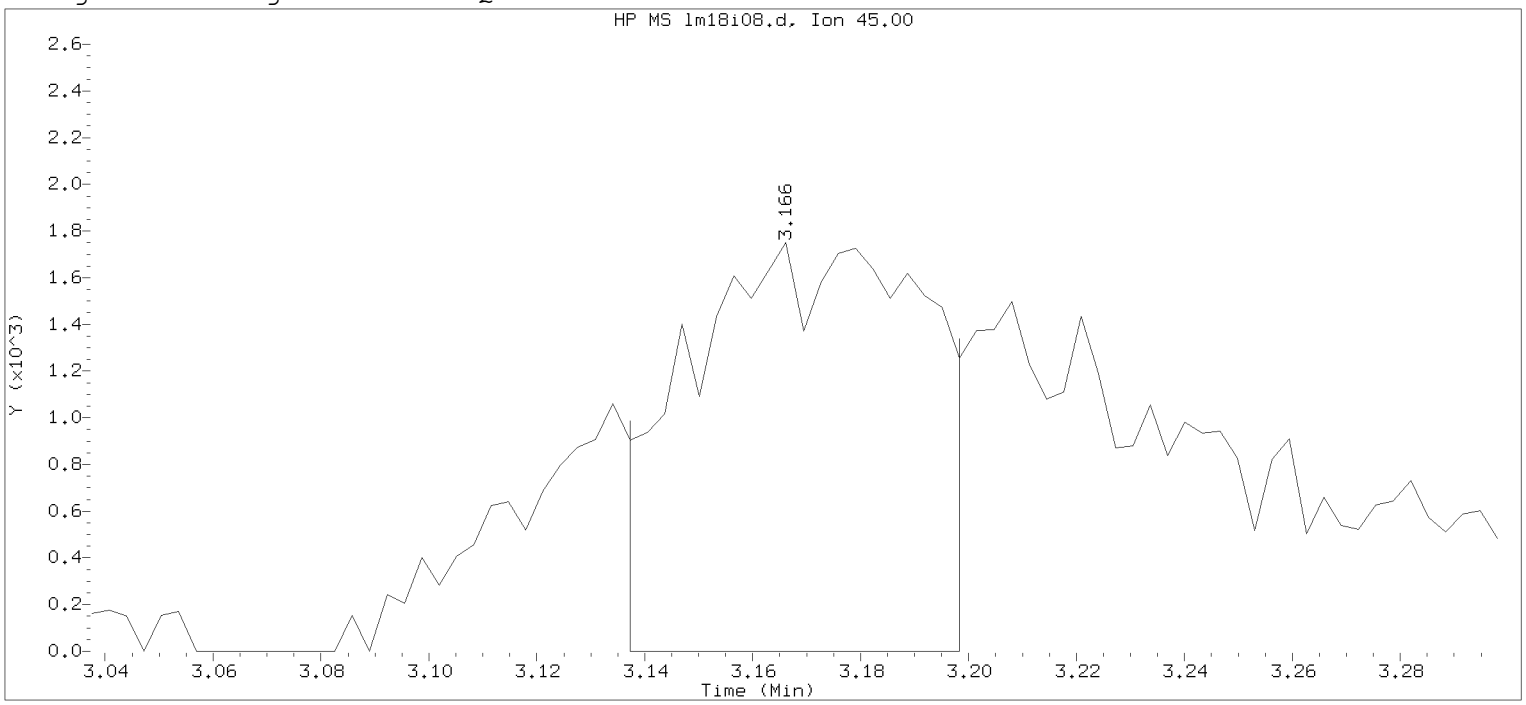
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

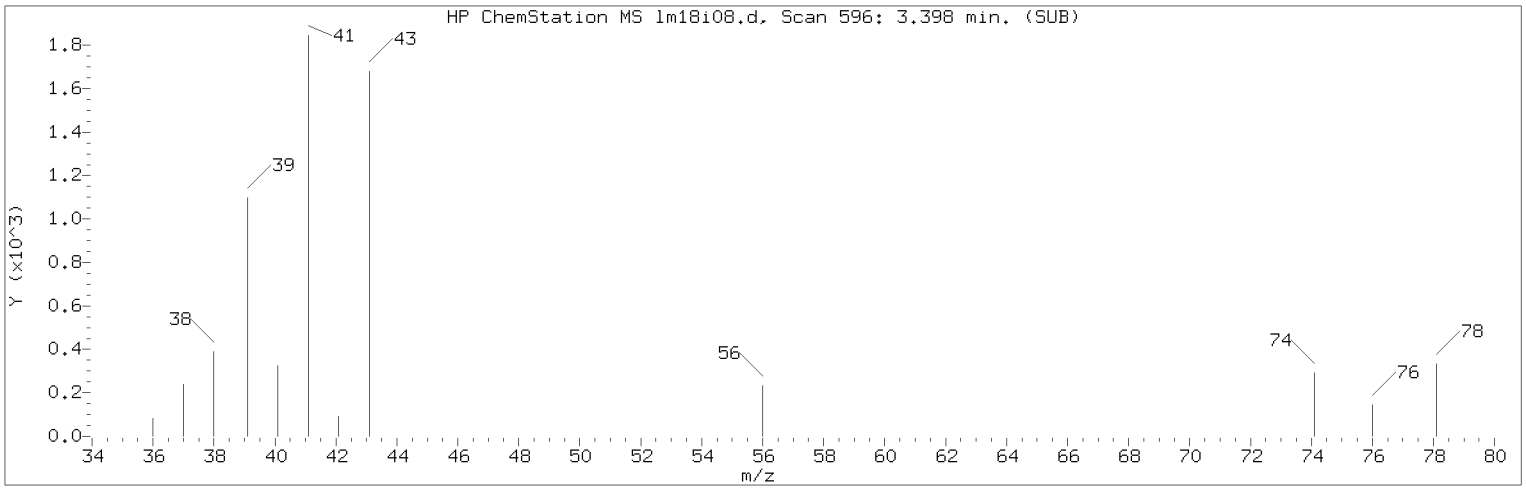
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:14
Date, time and analyst ID of latest file update: 18-Mar-2019 14:14 apr27582

Sample Name: VSTD001 Lab Sample ID: VSTD001

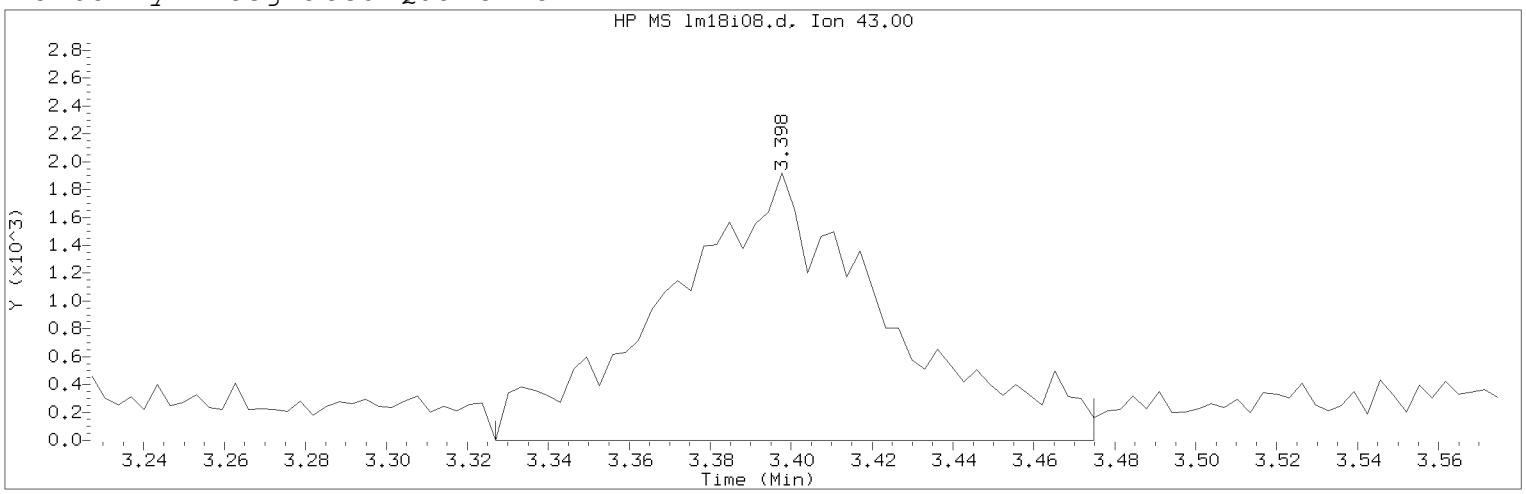
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 524
Retention Time (minutes): 3.166
Quant Ion : 45.00
Area : 5326
On-column Amount (ng) : 10.2423
Integration start scan : 514 Integration stop scan: 533
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kkelly1001

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

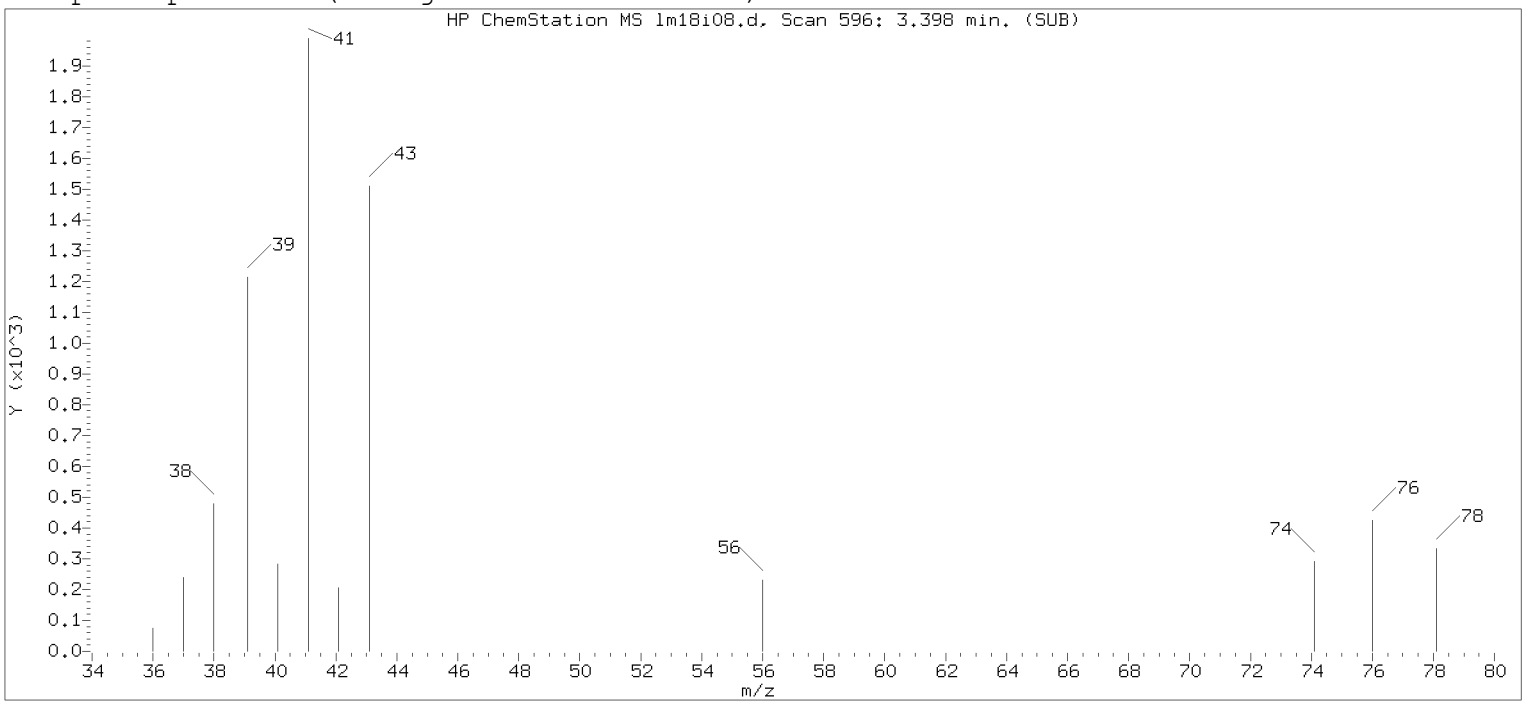
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 596
Retention Time (minutes): 3.398
Quant Ion : 43.00
Area (flag) : 7224M
On-Column Amount (ng) : 1.1131
Integration start scan : 573 Integration stop scan: 619
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

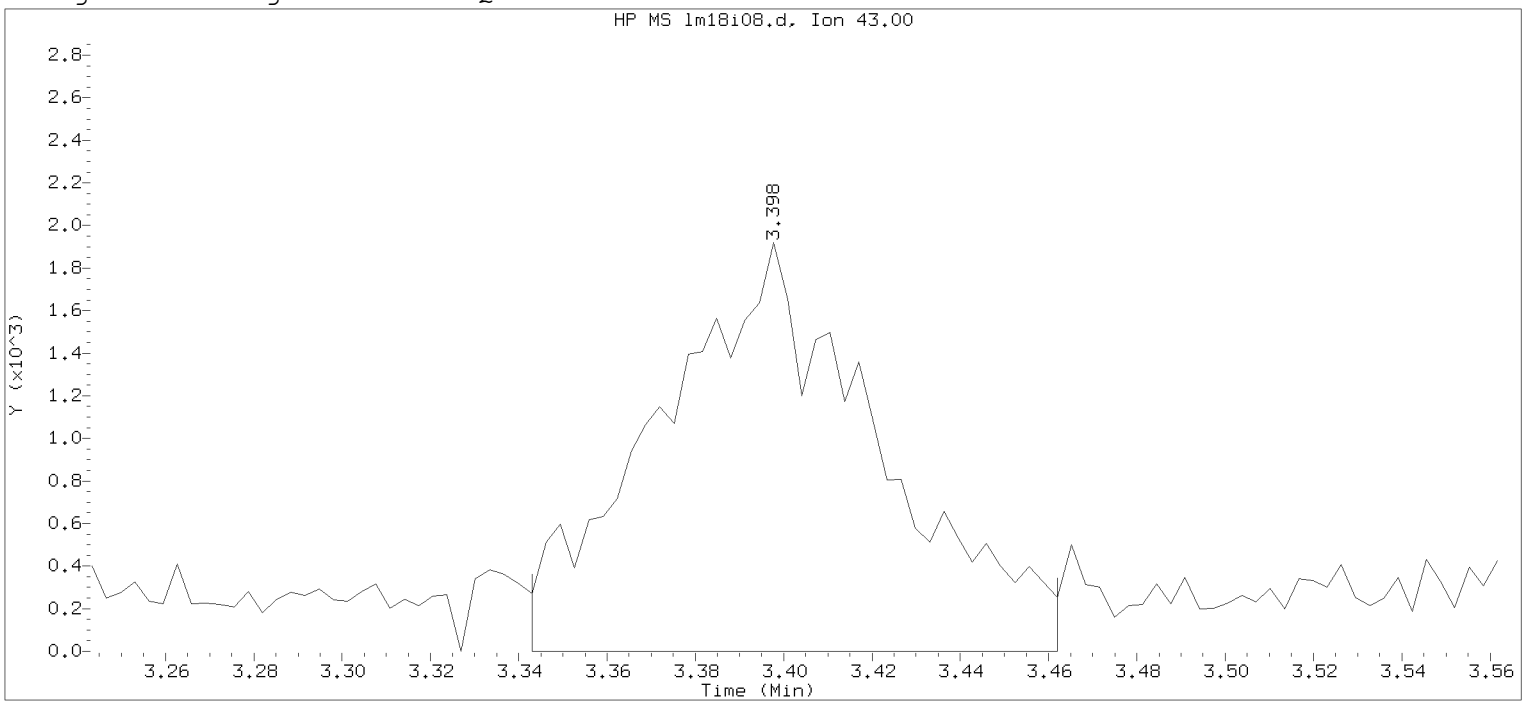
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

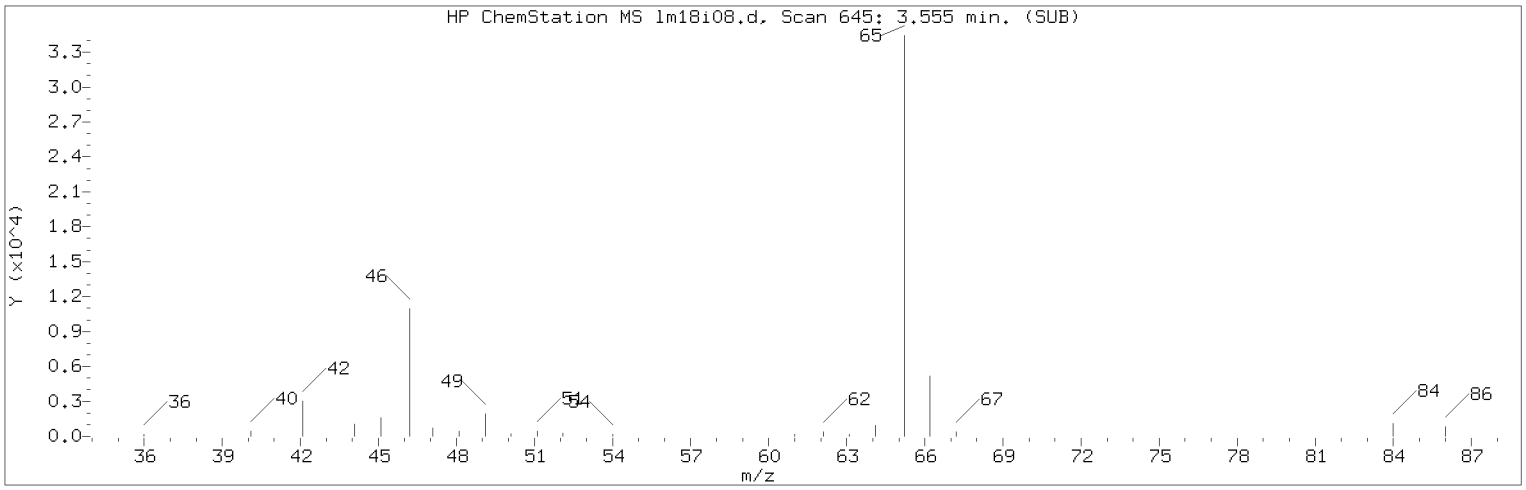
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:14
Date, time and analyst ID of latest file update: 18-Mar-2019 14:14 apr27582

Sample Name: VSTD001 Lab Sample ID: VSTD001

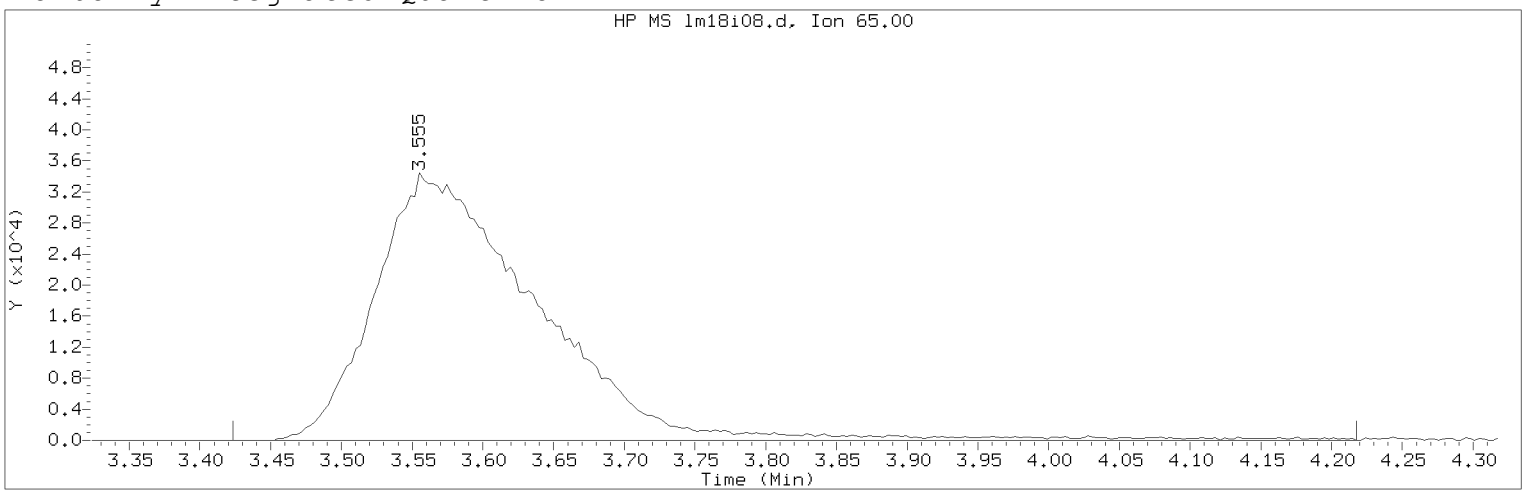
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 596
Retention Time (minutes): 3.398
Quant Ion : 43.00
Area : 6656
On-column Amount (ng) : 0.9202
Integration start scan : 578 Integration stop scan: 615
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kkelly

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

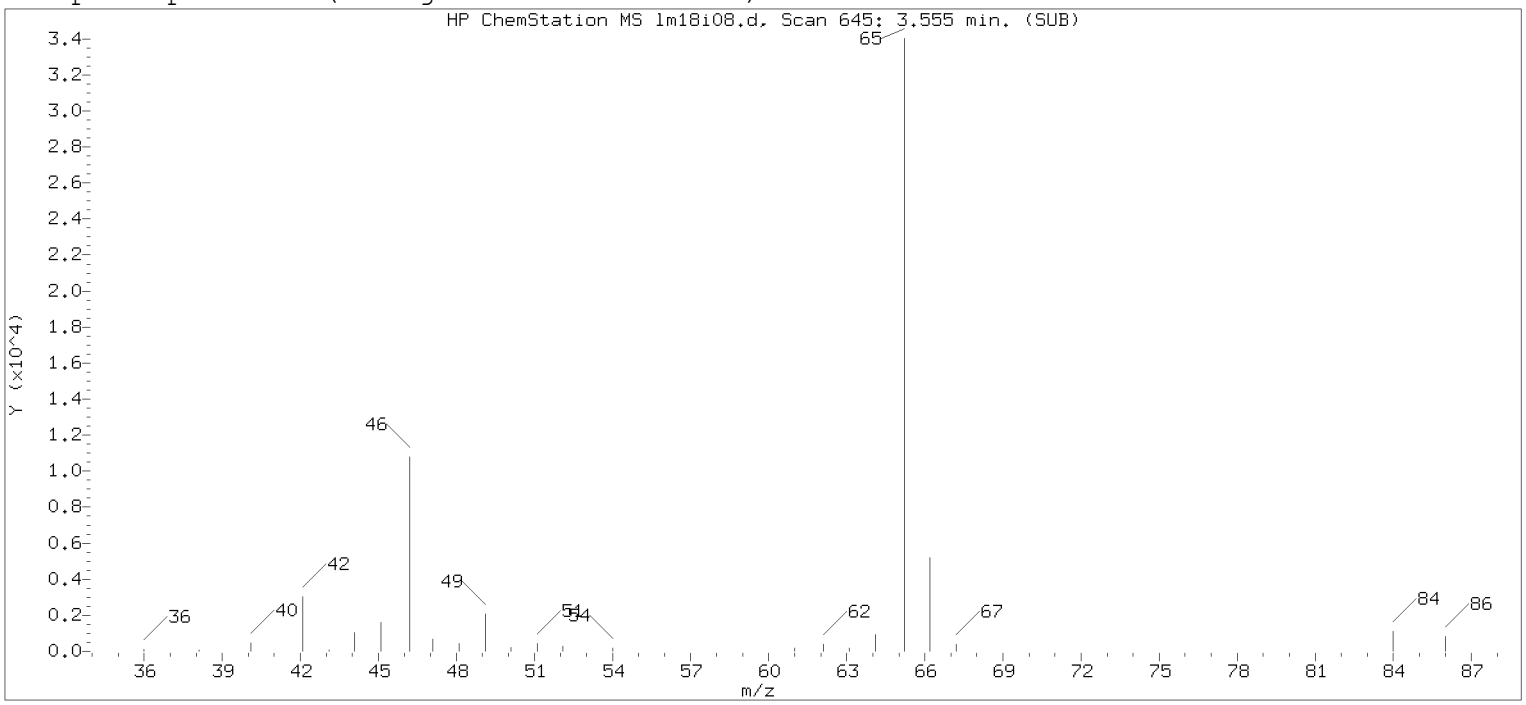
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 645
Retention Time (minutes): 3.555
Quant Ion : 65.00
Area (flag) : 274426M
On-Column Amount (ng) : 250.0000
Integration start scan : 603 Integration stop scan: 850
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

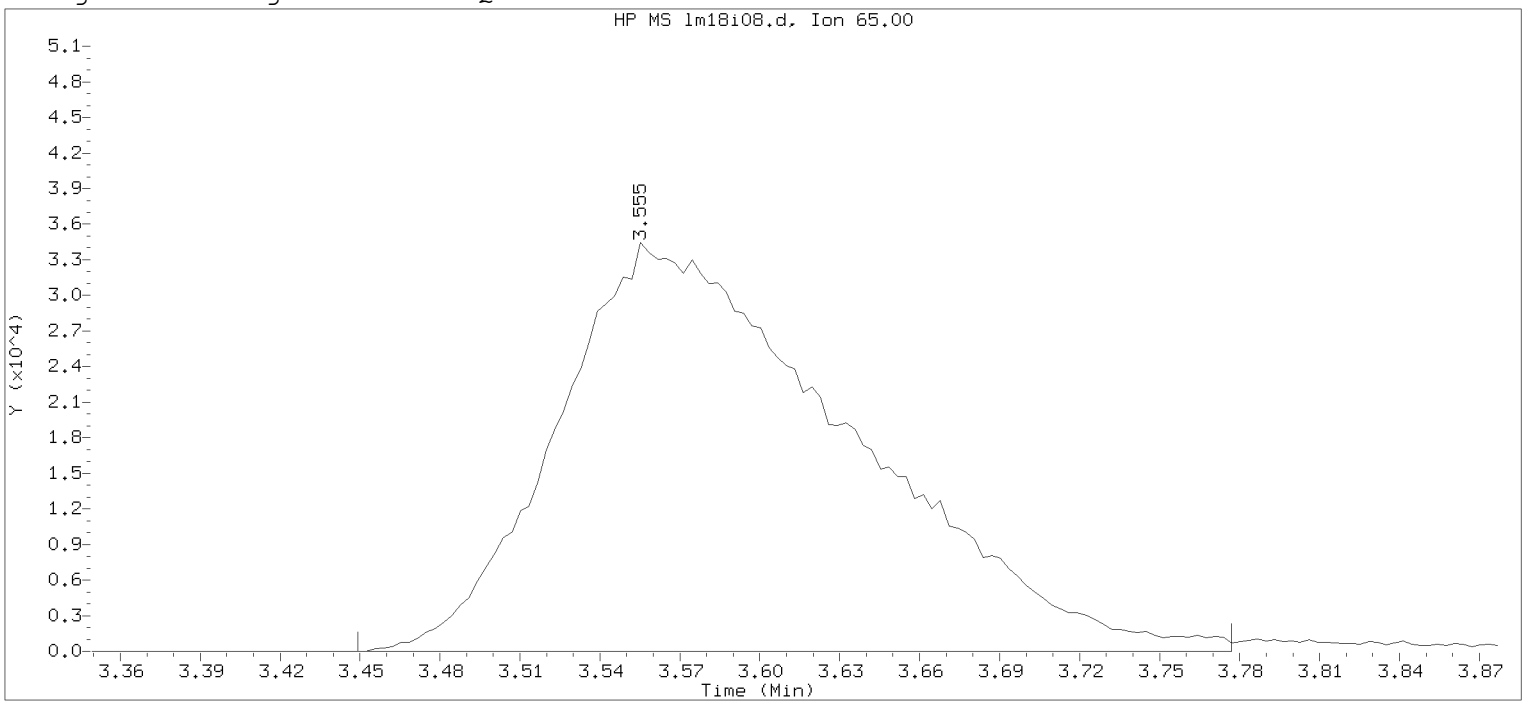
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

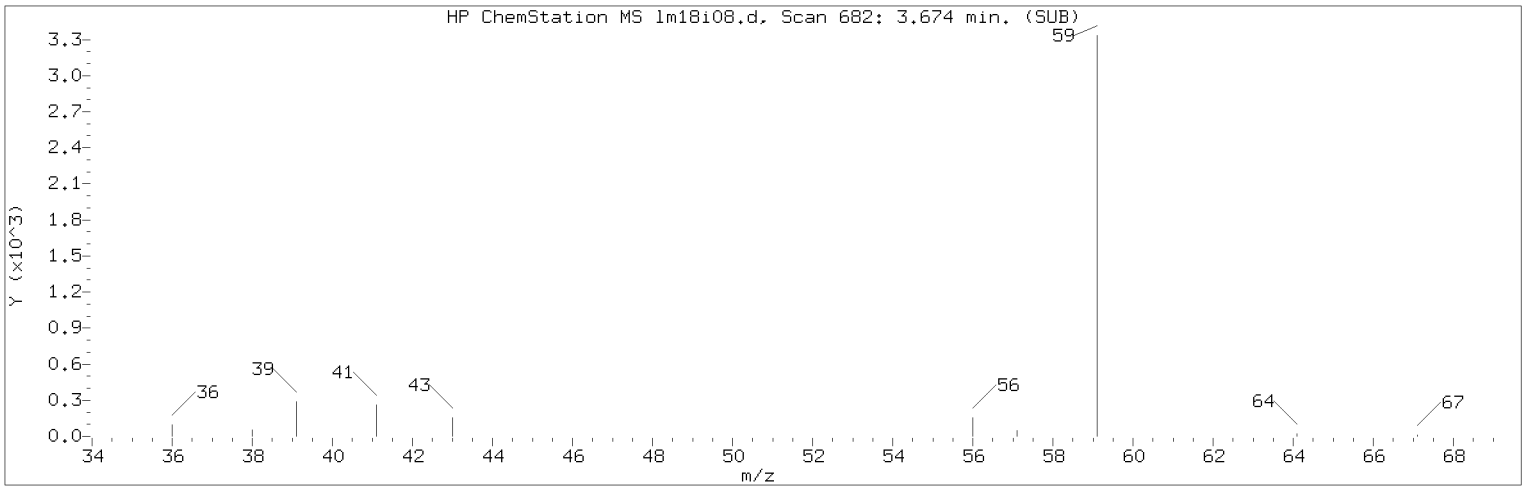
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:14
Date, time and analyst ID of latest file update: 18-Mar-2019 14:14 apr27582

Sample Name: VSTD001 Lab Sample ID: VSTD001

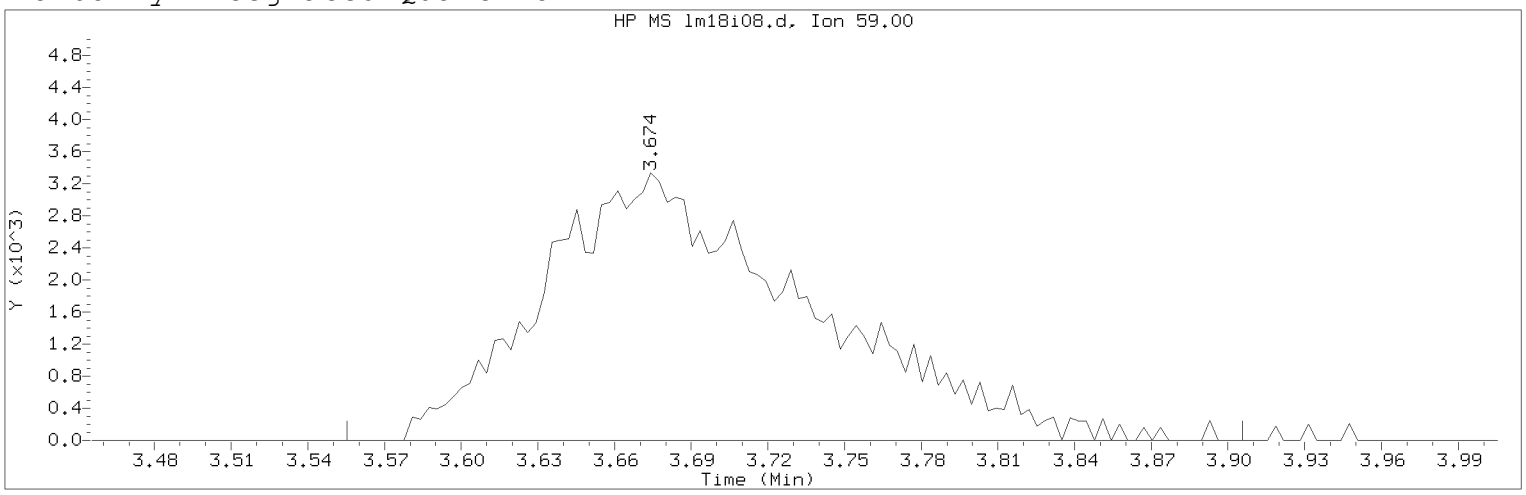
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 645
Retention Time (minutes): 3.555
Quant Ion : 65.00
Area : 263644
On-column Amount (ng) : 250.0000
Integration start scan : 611 Integration stop scan: 713
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user: KEVIN KELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

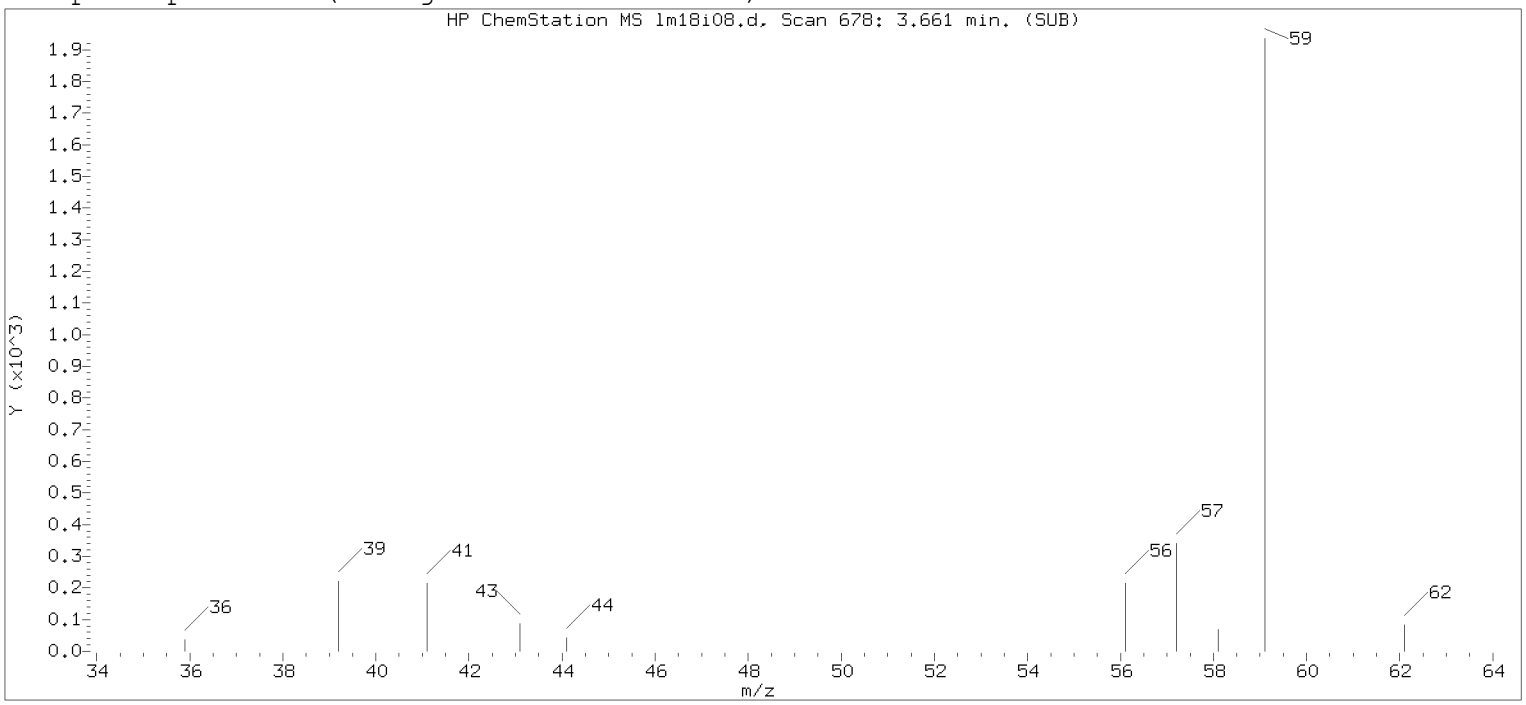
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 682
Retention Time (minutes): 3.674
Quant Ion : 59.00
Area (flag) : 23975M
On-Column Amount (ng) : 21.1524
Integration start scan : 644 Integration stop scan: 753
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

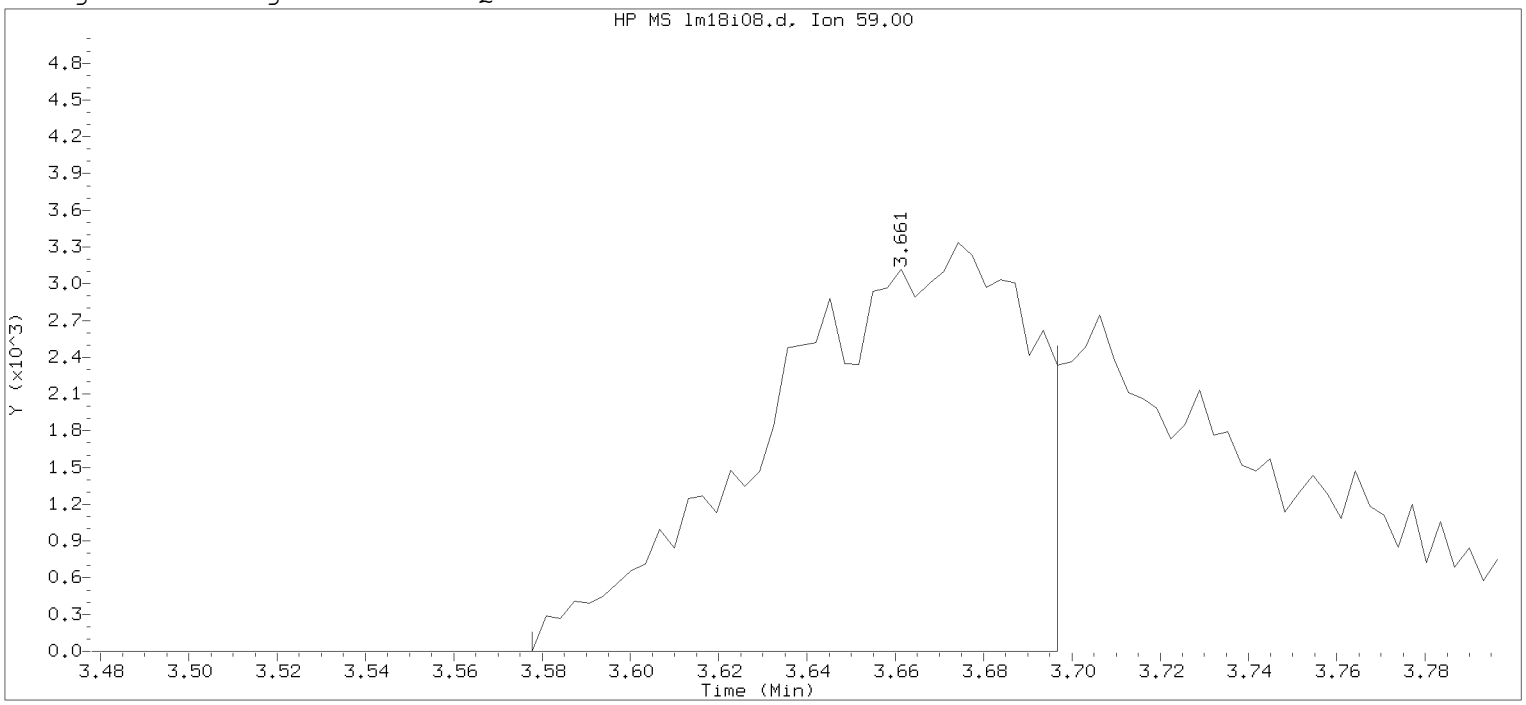
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

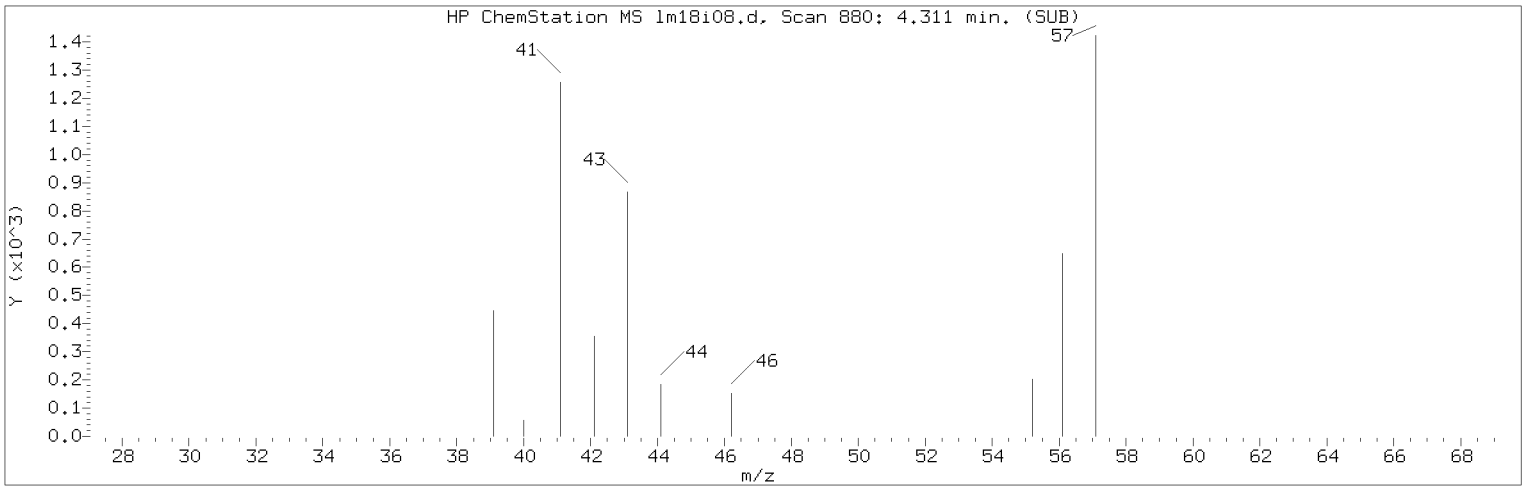
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:14
Date, time and analyst ID of latest file update: 18-Mar-2019 14:14 apr27582

Sample Name: VSTD001 Lab Sample ID: VSTD001

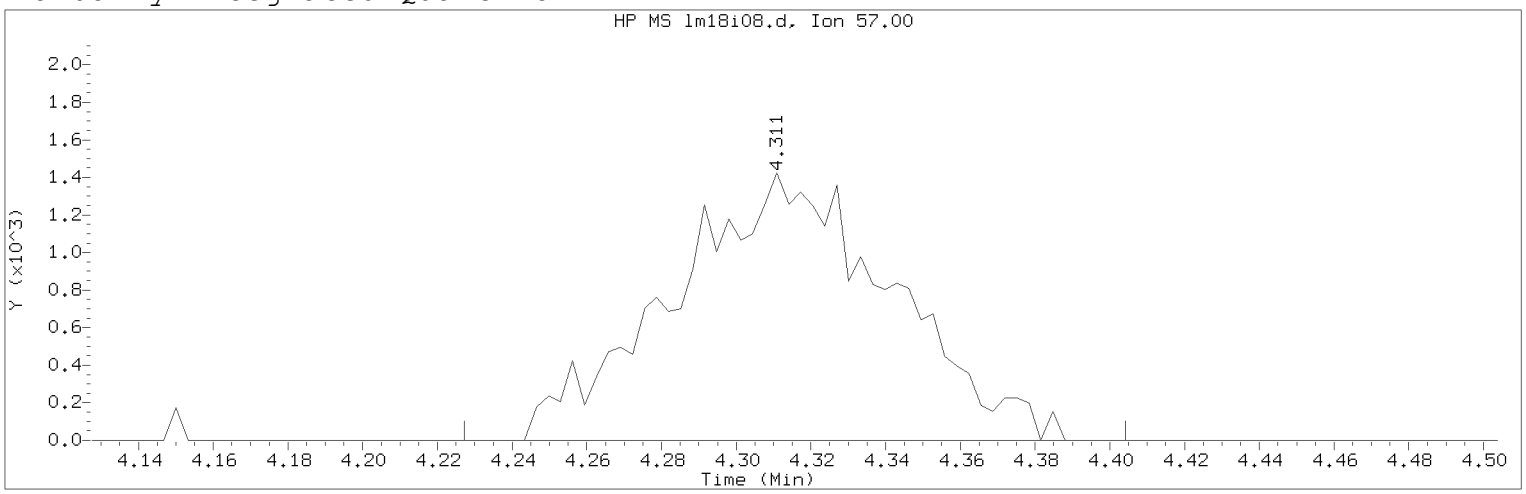
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 678
Retention Time (minutes): 3.661
Quant Ion : 59.00
Area : 13543
On-column Amount (ng) : 12.9316
Integration start scan : 651 Integration stop scan: 688
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10032

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

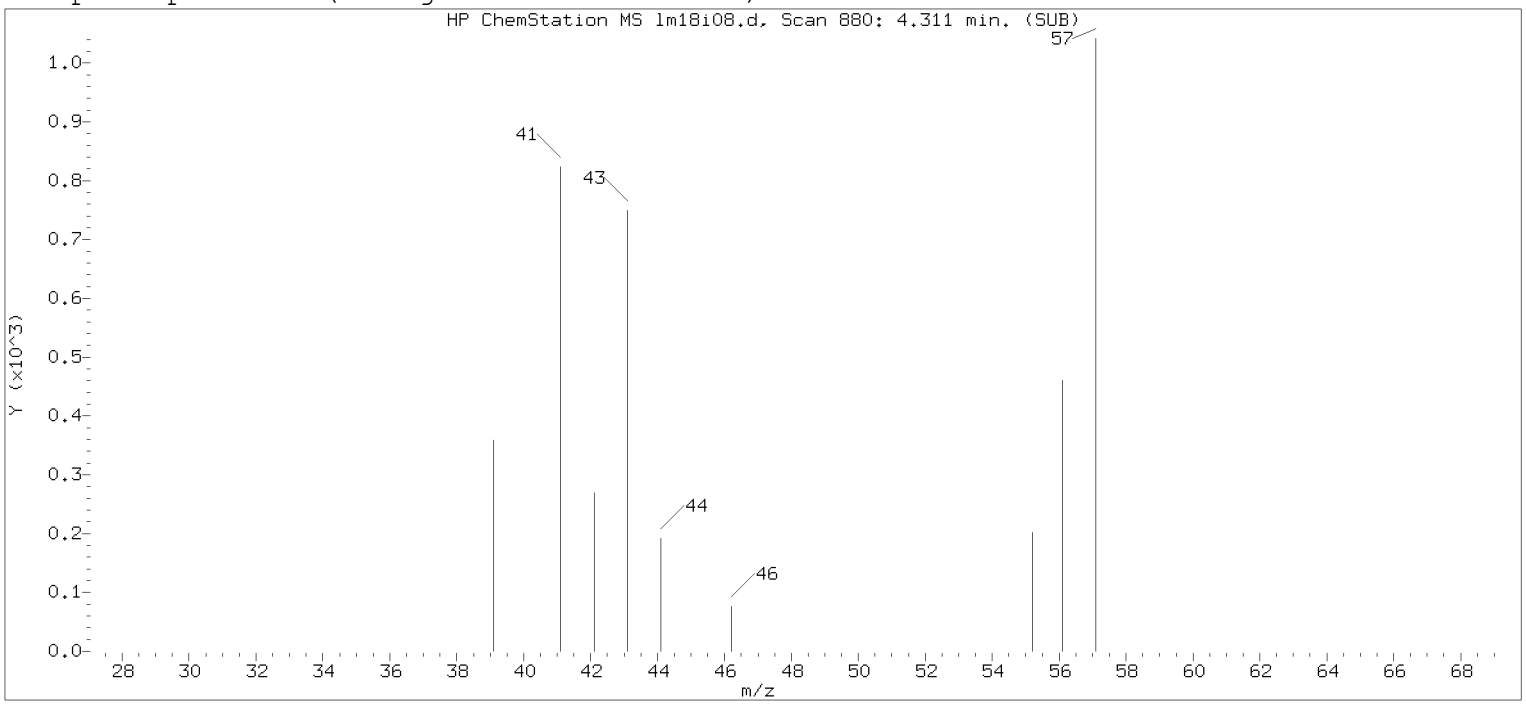
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 880
Retention Time (minutes): 4.311
Quant Ion : 57.00
Area (flag) : 5810M
On-Column Amount (ng) : 0.8319
Integration start scan : 853 Integration stop scan: 908
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

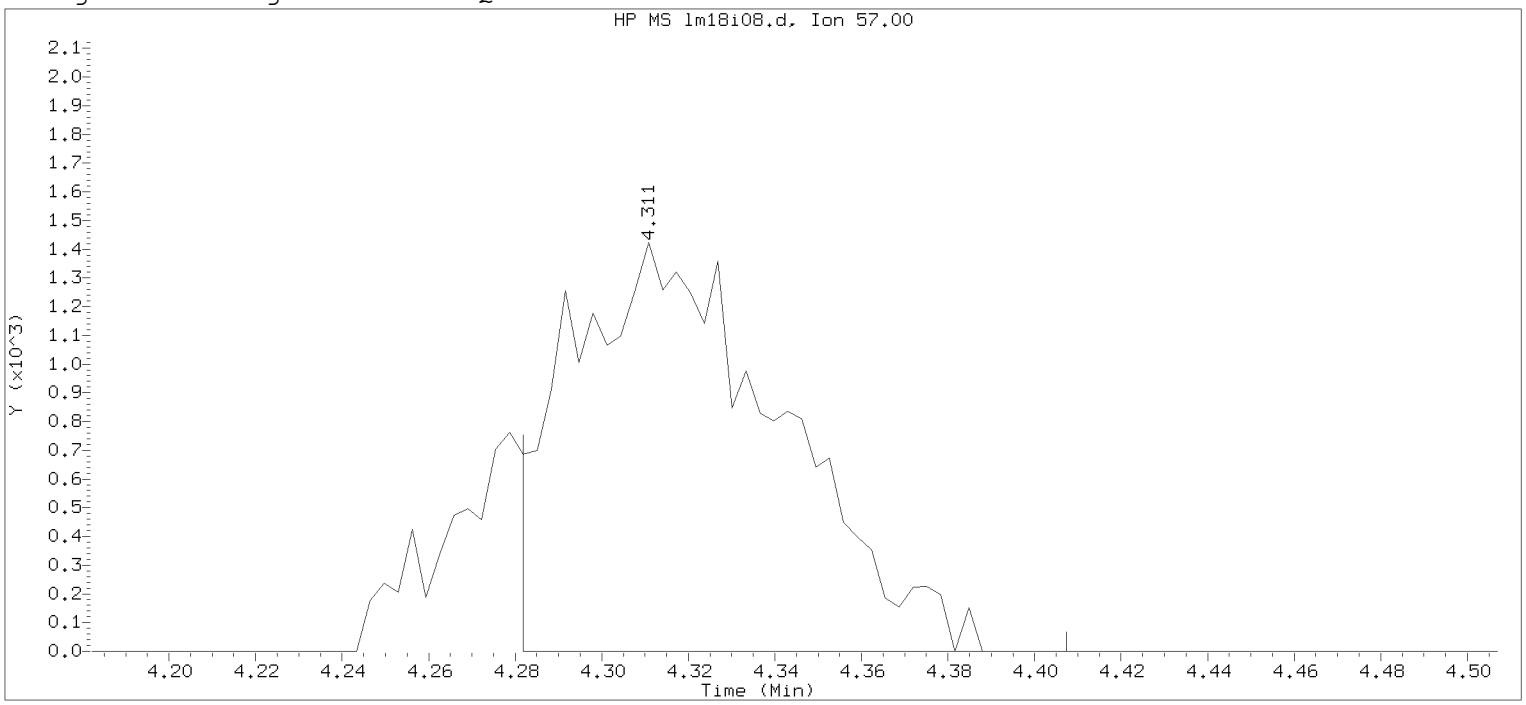
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

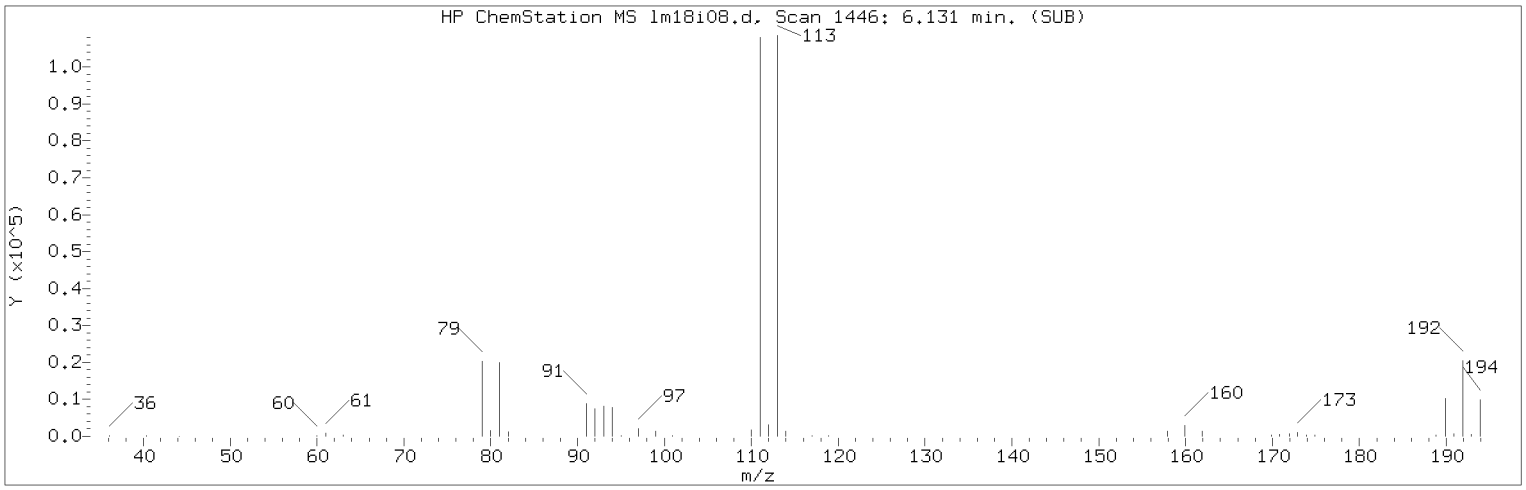
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:14
Date, time and analyst ID of latest file update: 18-Mar-2019 14:14 apr27582

Sample Name: VSTD001 Lab Sample ID: VSTD001

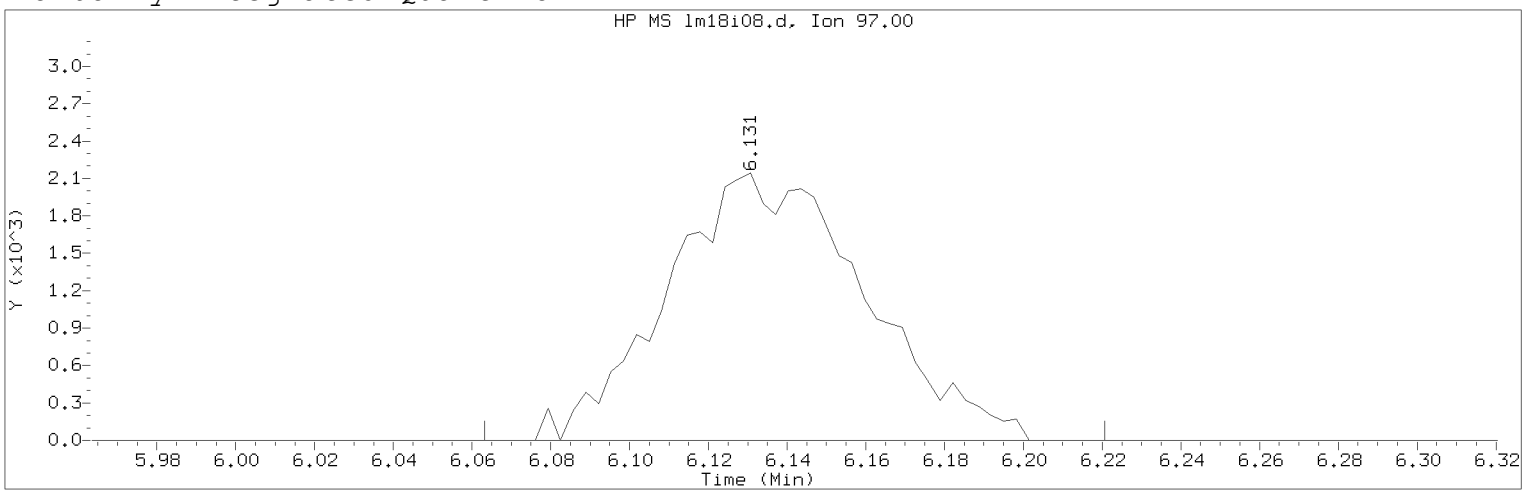
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 880		
Retention Time (minutes)	: 4.311		
Quant Ion	: 57.00		
Area	: 4883		
On-column Amount (ng)	: 0.6169		
Integration start scan	: 870	Integration stop scan:	909
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kkelly

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

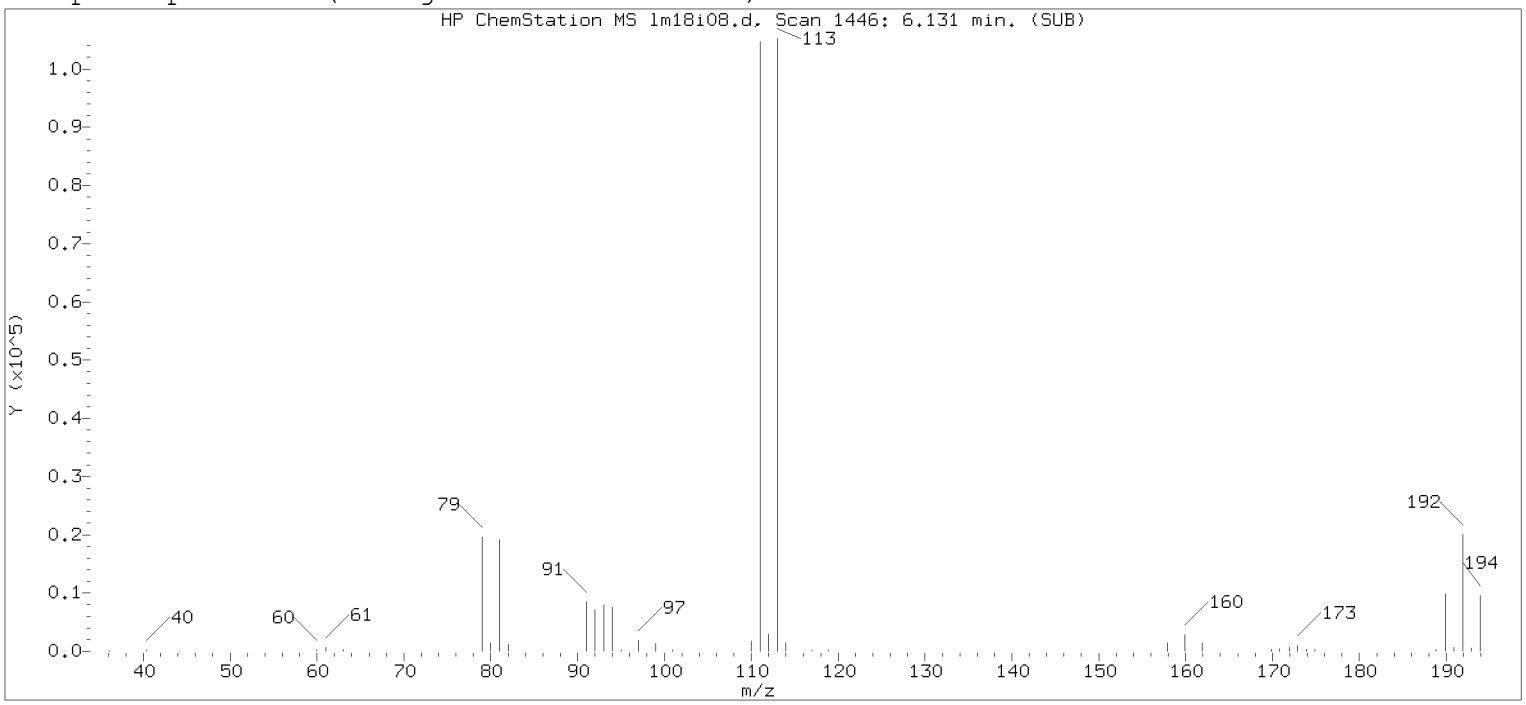
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 1446
Retention Time (minutes): 6.131
Quant Ion : 97.00
Area (flag) : 7504M
On-Column Amount (ng) : 0.8898
Integration start scan : 1424 Integration stop scan: 1473
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

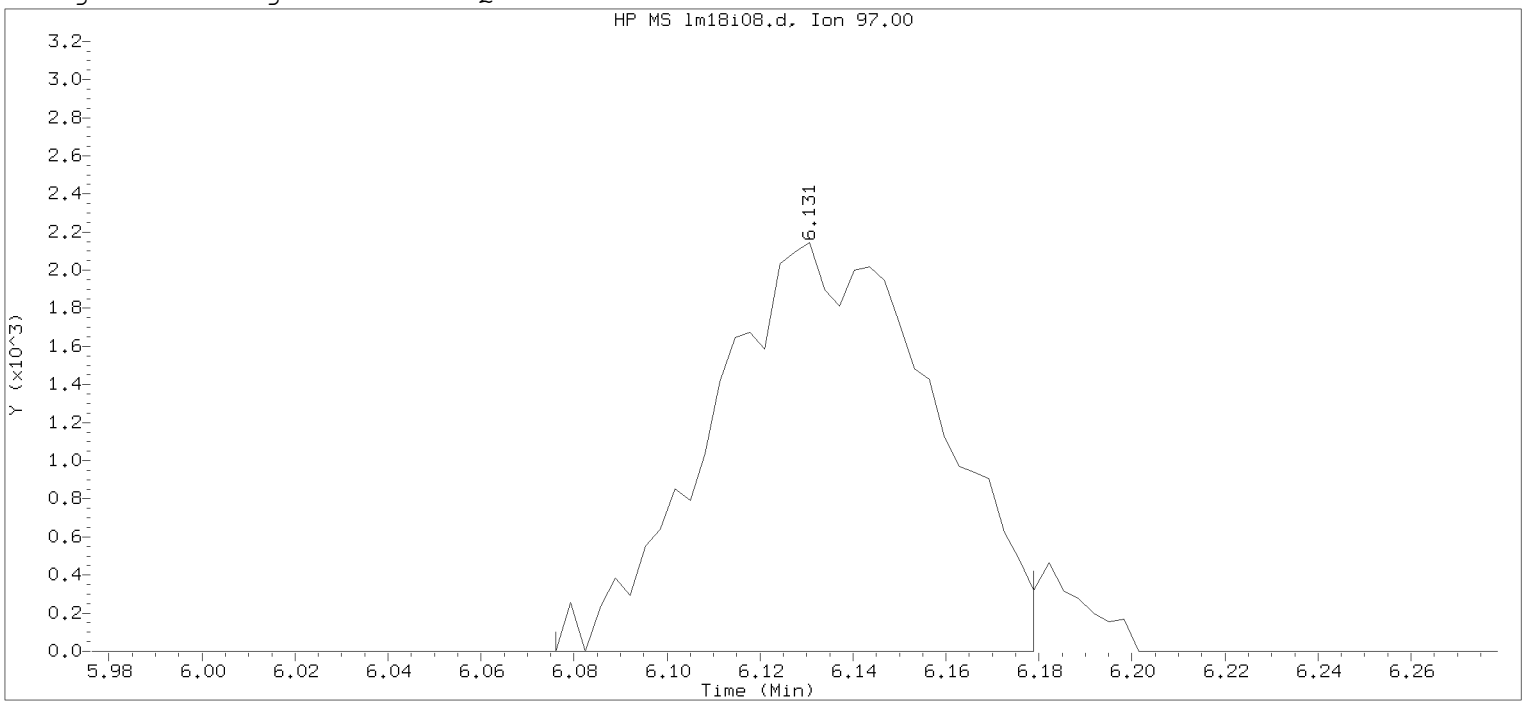
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

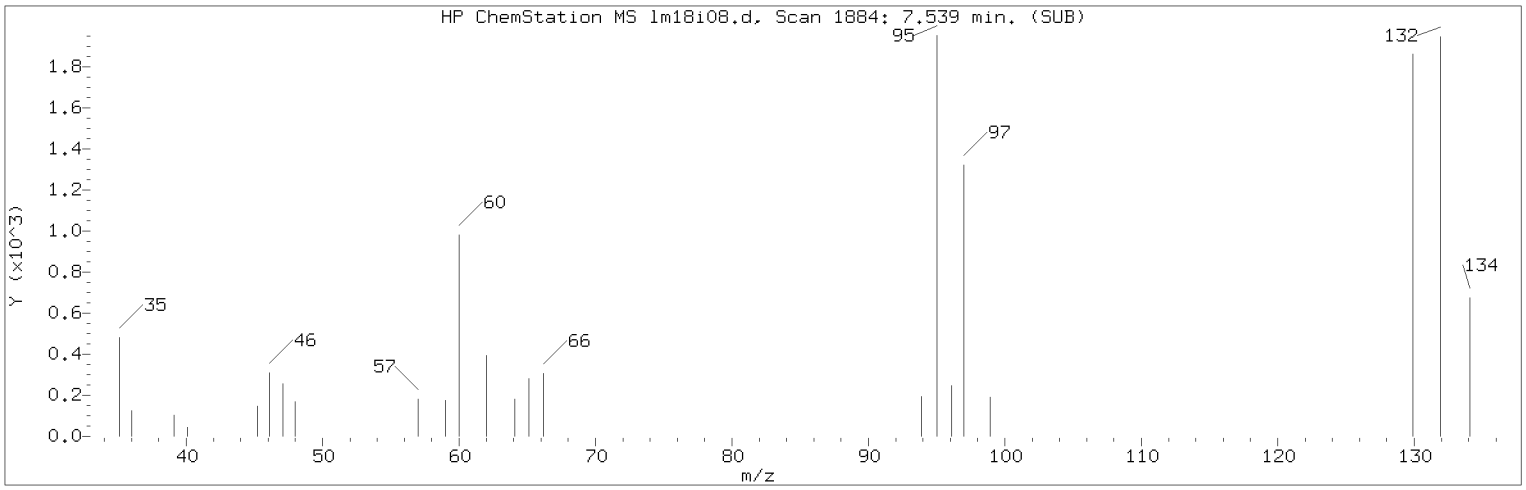
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:14
Date, time and analyst ID of latest file update: 18-Mar-2019 14:14 apr27582

Sample Name: VSTD001 Lab Sample ID: VSTD001

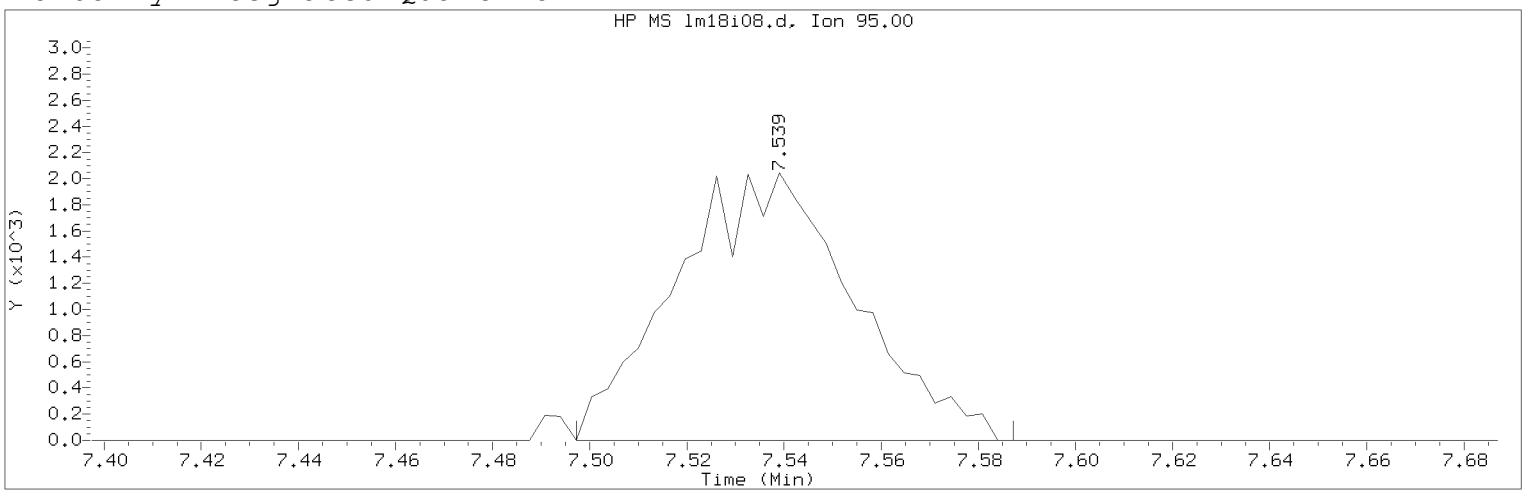
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 1446
Retention Time (minutes): 6.131
Quant Ion : 97.00
Area : 7168
On-column Amount (ng) : 0.7564
Integration start scan : 1428 Integration stop scan: 1460
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user: Kevin Kelly

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

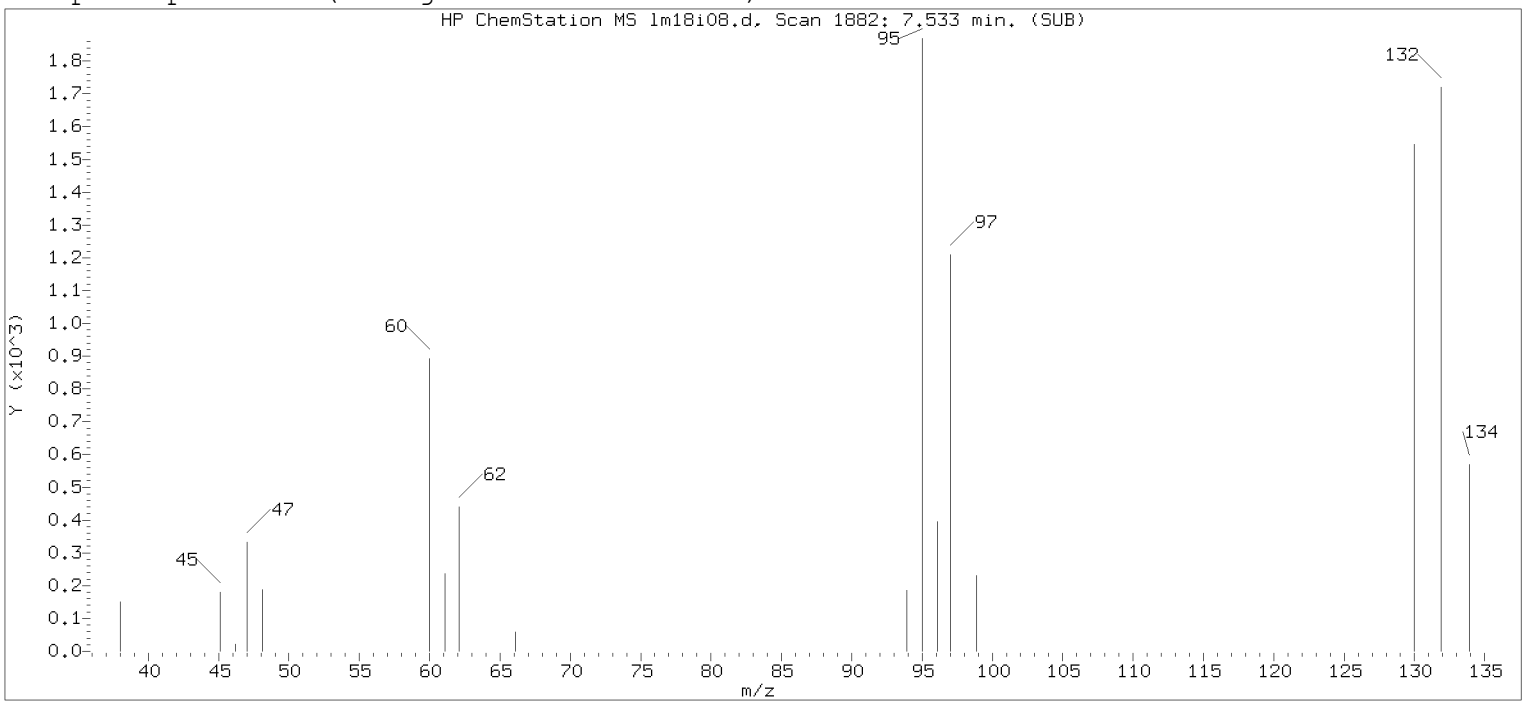
Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 1884
Retention Time (minutes): 7.539
Quant Ion : 95.00
Area (flag) : 5218M
On-Column Amount (ng) : 0.8911
Integration start scan : 1870 Integration stop scan: 1898
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

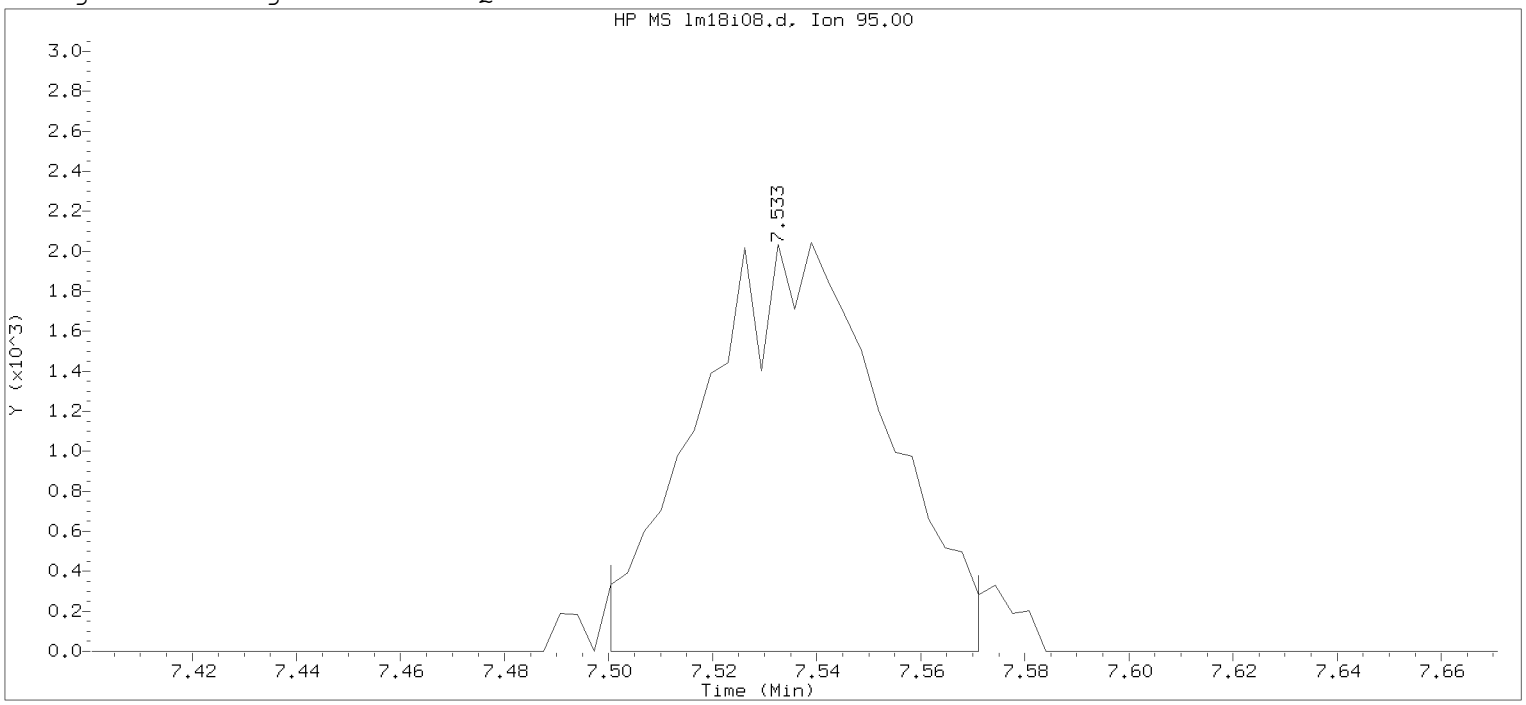
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

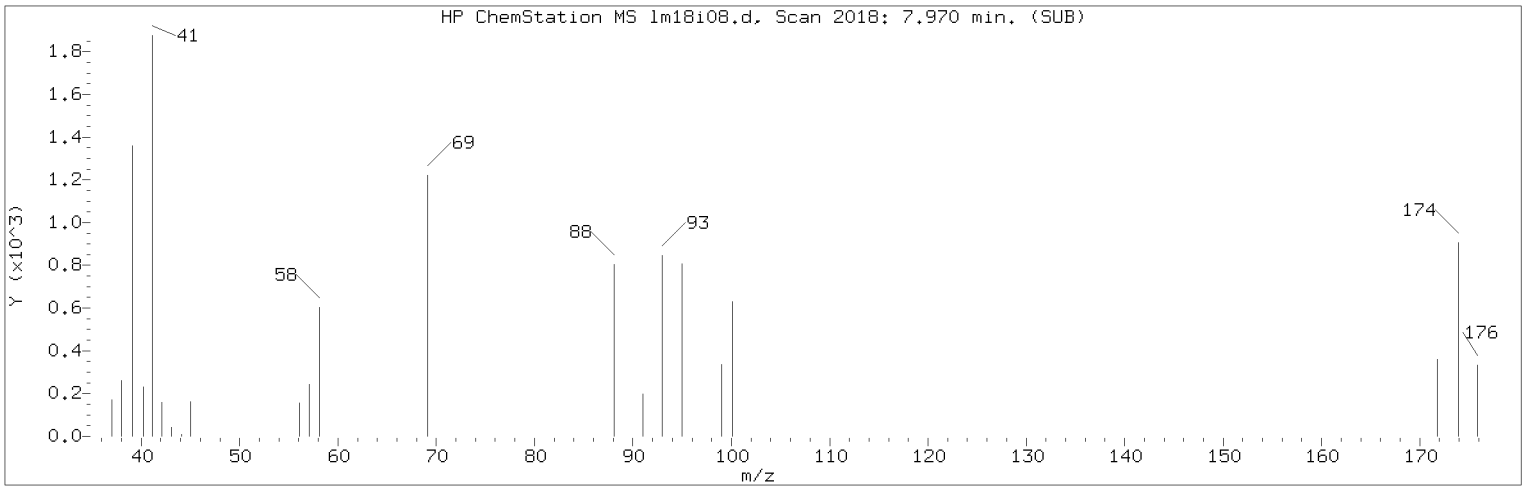
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:14
Date, time and analyst ID of latest file update: 18-Mar-2019 14:14 apr27582

Sample Name: VSTD001 Lab Sample ID: VSTD001

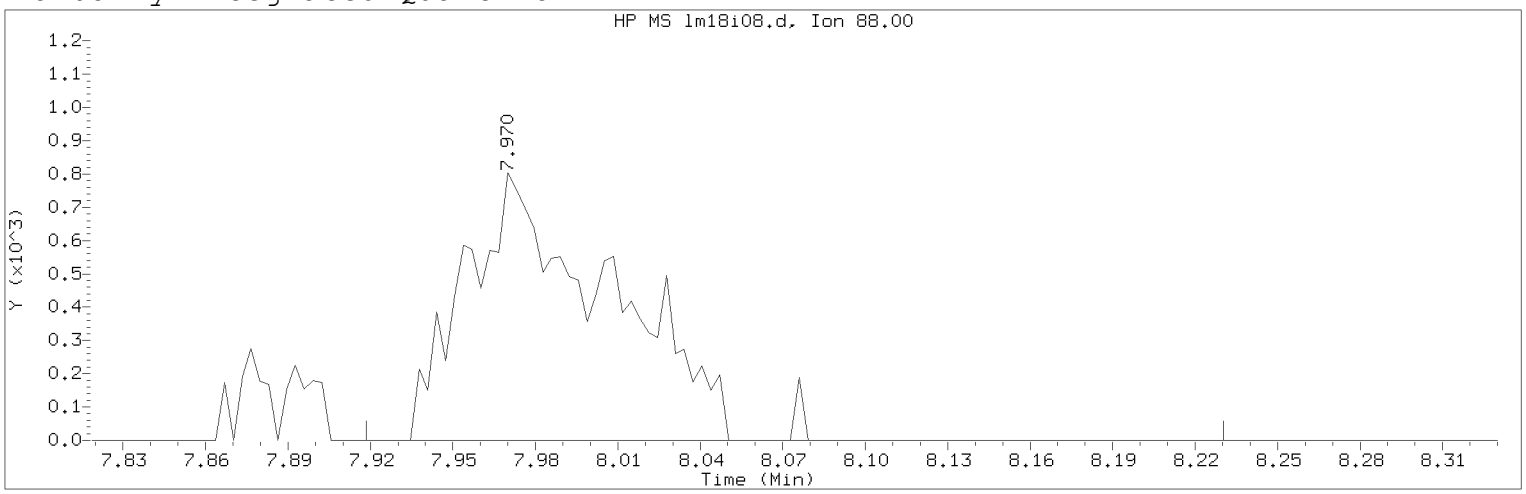
Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 1882
Retention Time (minutes): 7.533
Quant Ion : 95.00
Area : 5020
On-column Amount (ng) : 0.7622
Integration start scan : 1871 Integration stop scan: 1893
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kkelly100

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

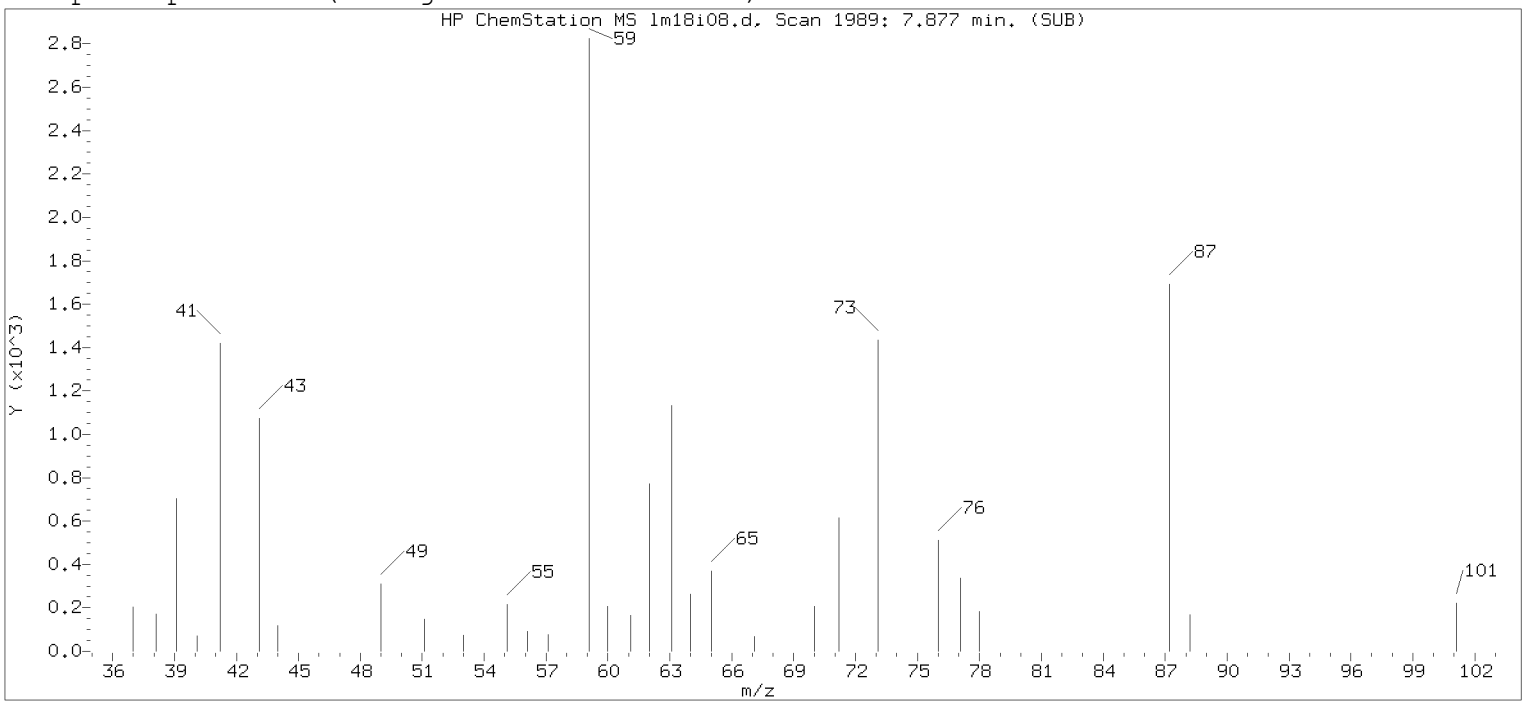
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2018
Retention Time (minutes): 7.970
Quant Ion : 88.00
Area (flag) : 2950M
On-Column Amount (ng) : 41.3814
Integration start scan : 2001 Integration stop scan: 2098
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

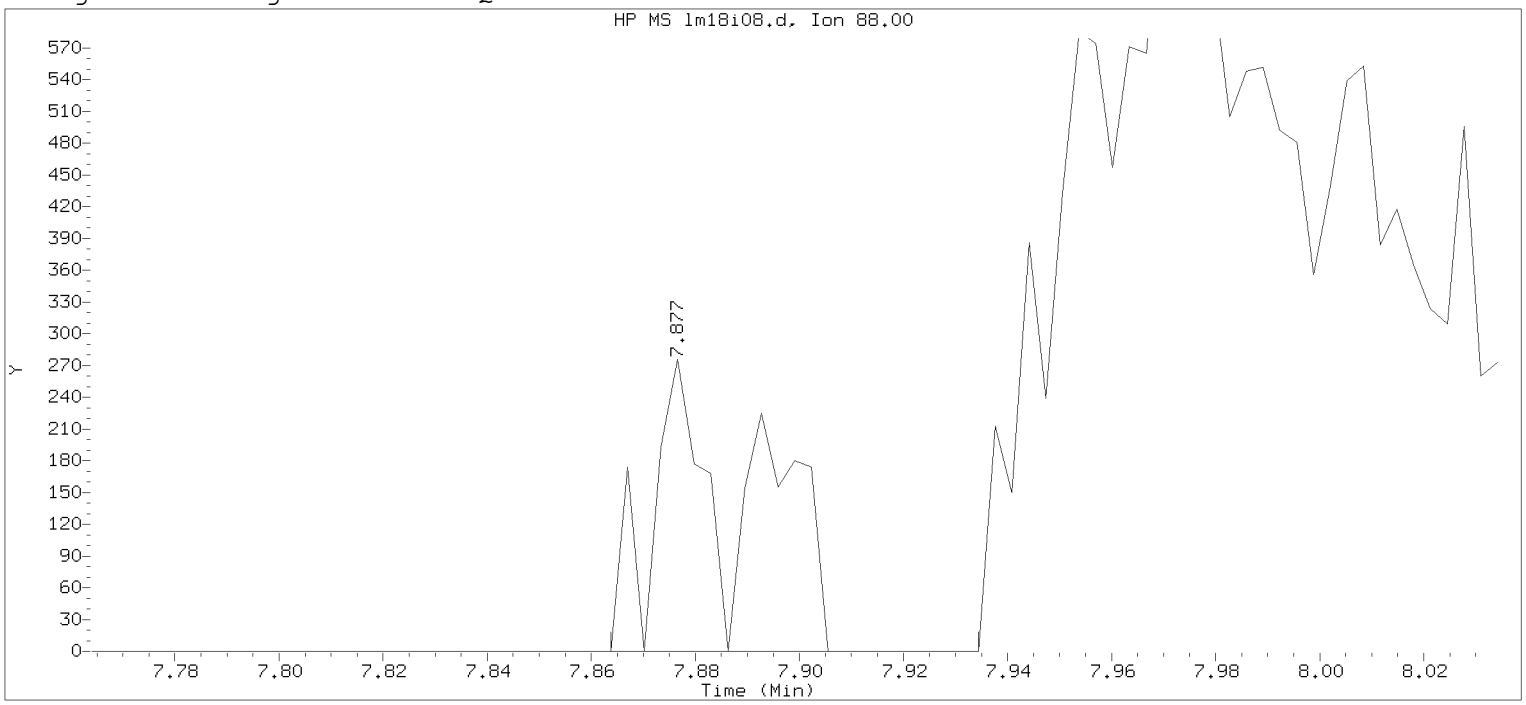
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

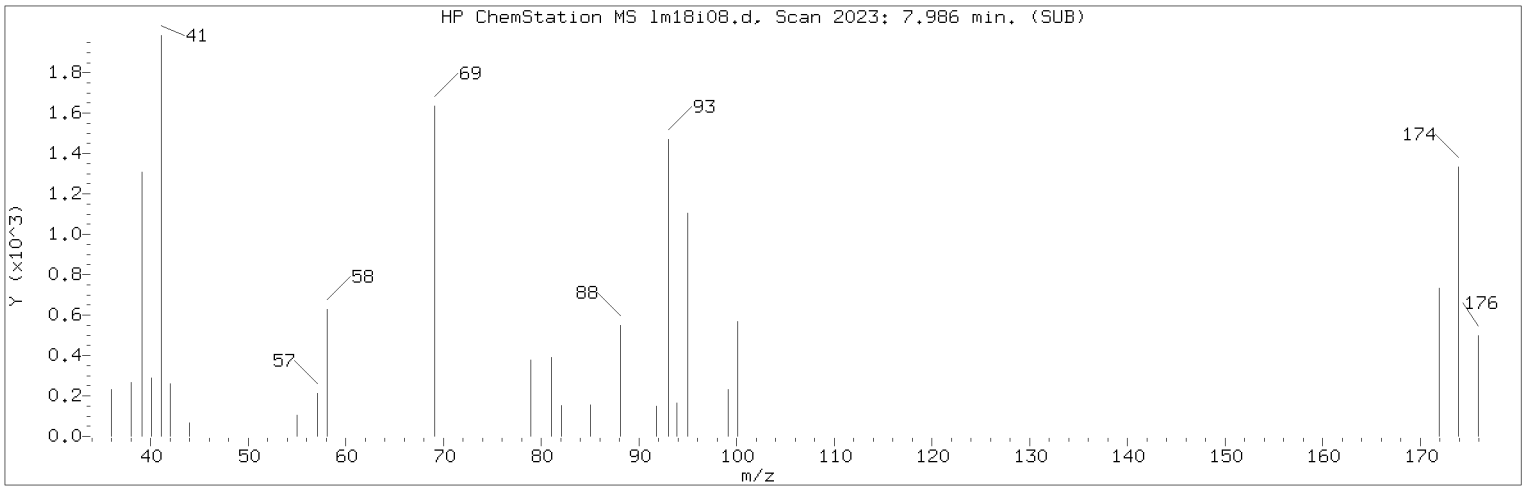
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:14
Date, time and analyst ID of latest file update: 18-Mar-2019 14:14 apr27582

Sample Name: VSTD001 Lab Sample ID: VSTD001

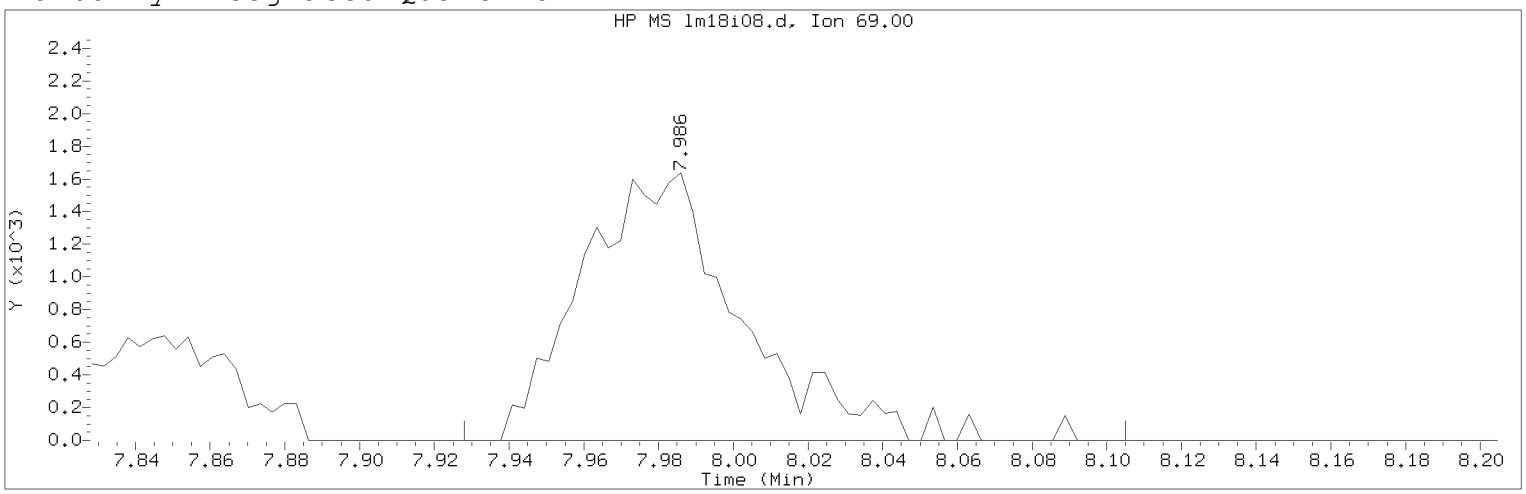
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1989		
Retention Time (minutes)	: 7.877		
Quant Ion	: 88.00		
Area	: 361		
On-column Amount (ng)	: 5.6361		
Integration start scan	: 1984	Integration stop scan	: 2006
Y at integration start	: 0	Y at integration end	: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kkelly100

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:00
Date, time and analyst ID of latest file update: 18-Mar-2019 21:00 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

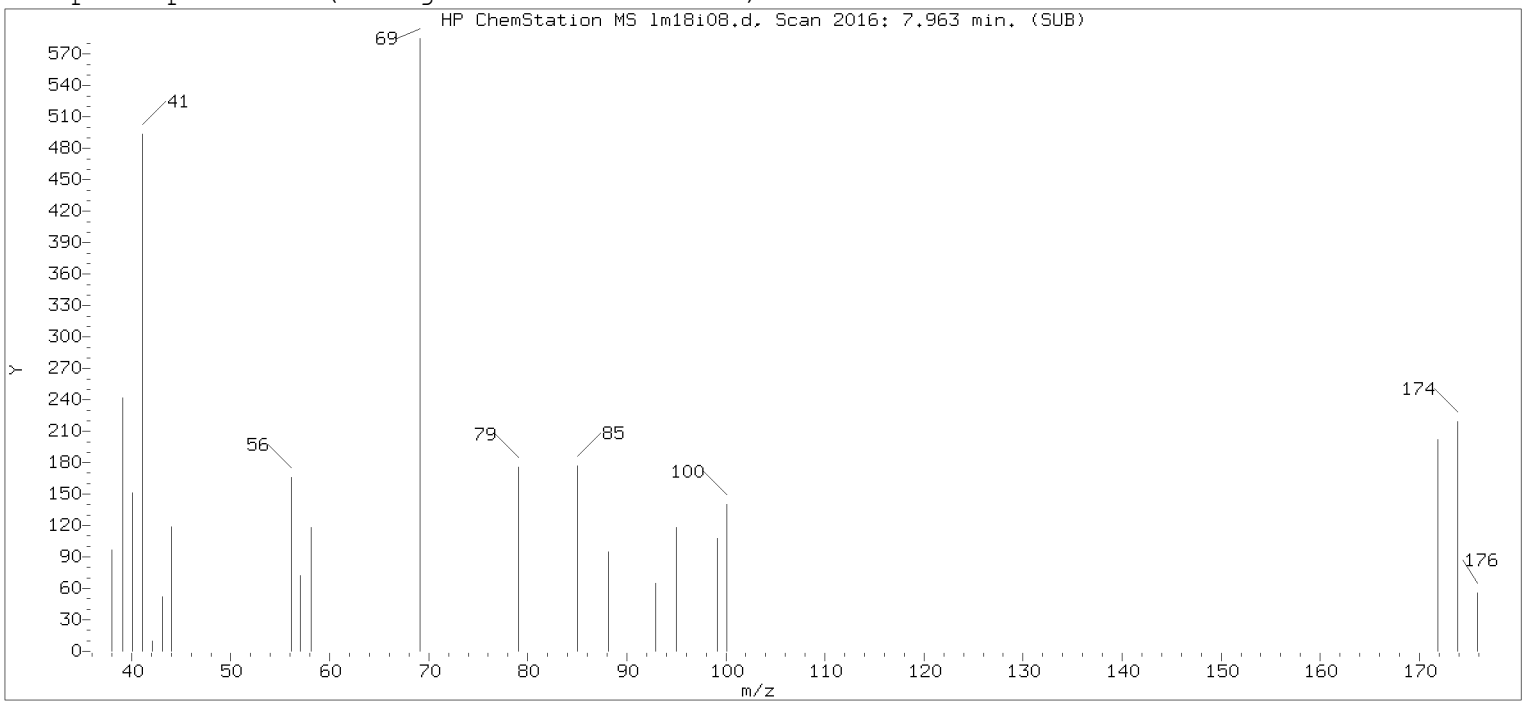
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2023
Retention Time (minutes): 7.986
Quant Ion : 69.00
Area (flag) : 4869M
On-Column Amount (ng) : 0.8531
Integration start scan : 2004 Integration stop scan: 2059
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

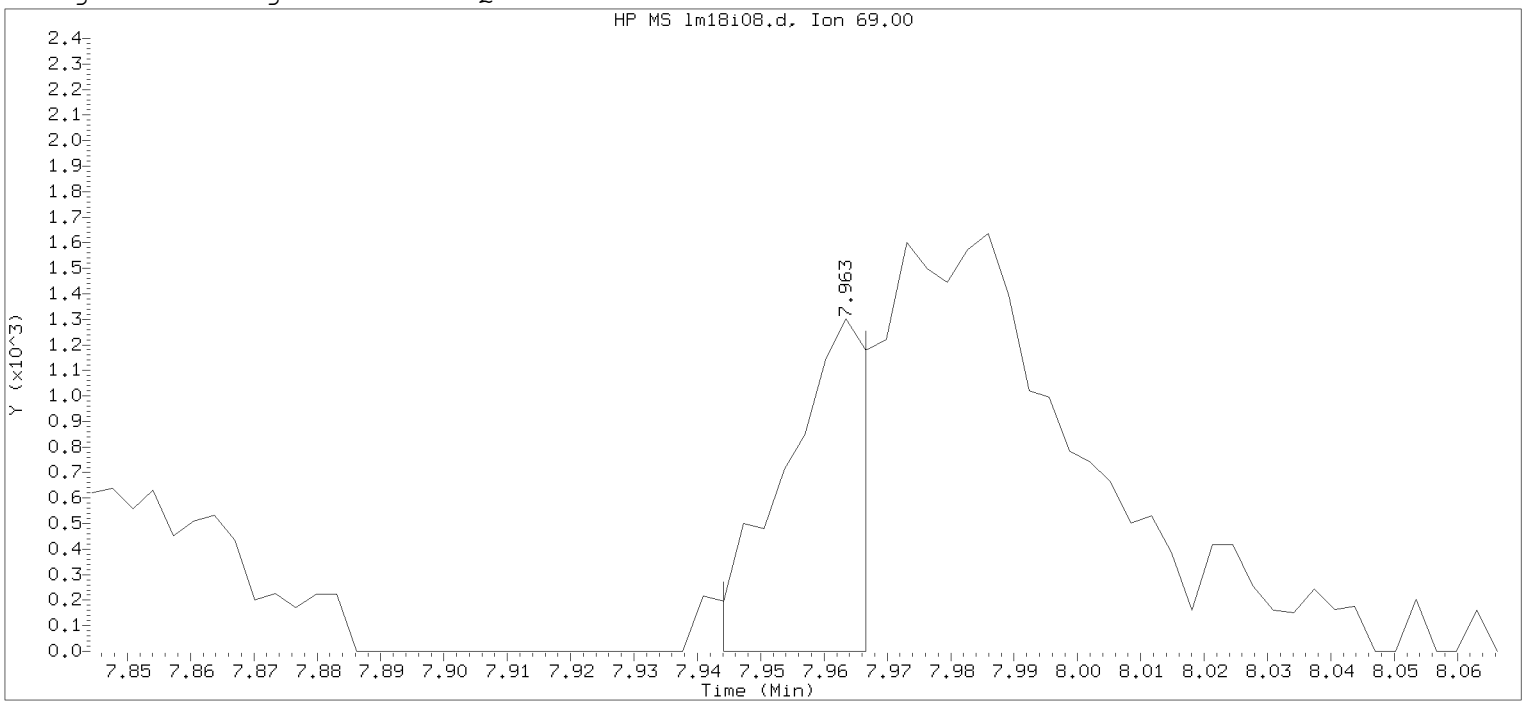
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 21:02.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



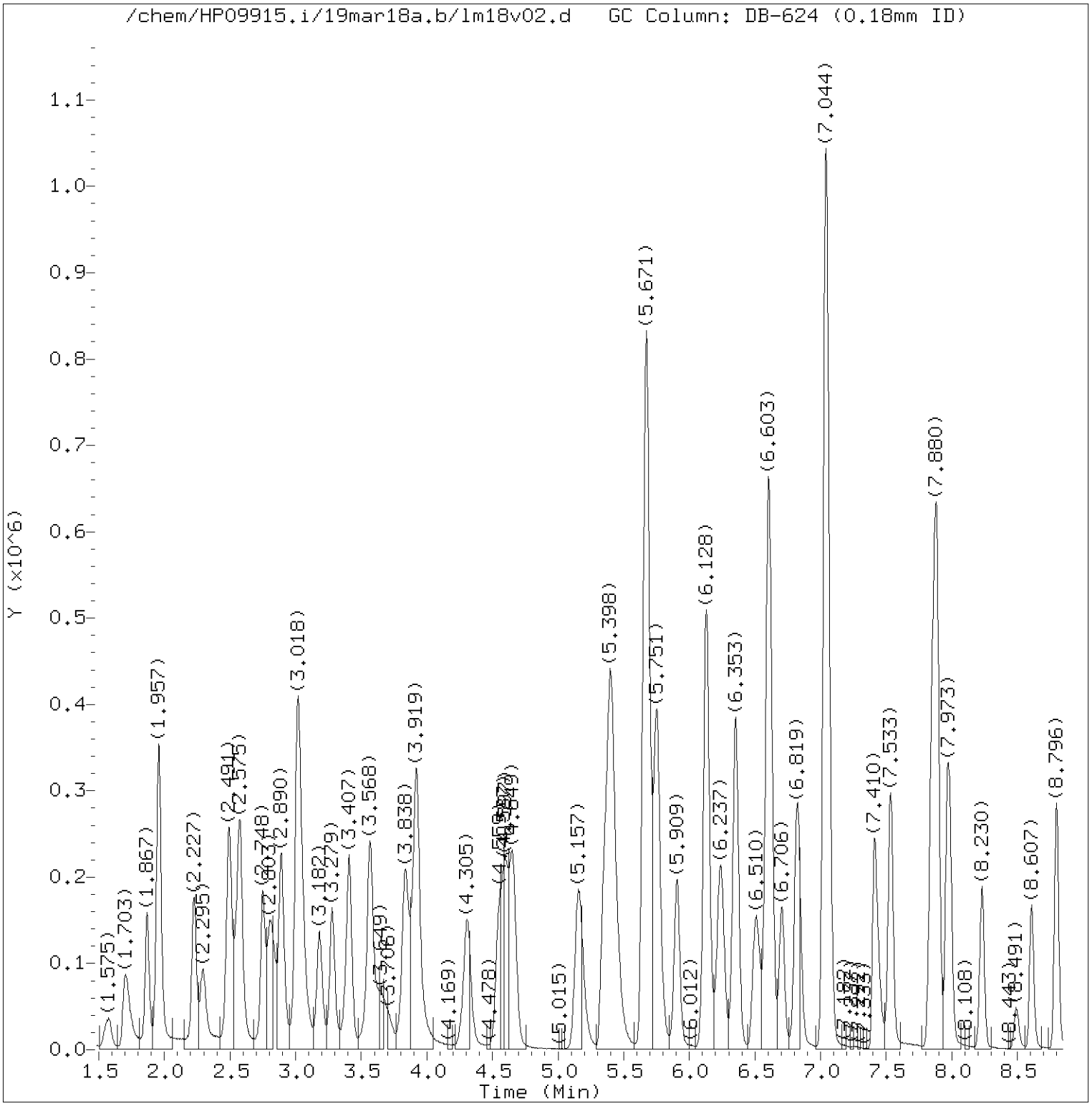
Data File: /chem/HP09915.i/19mar18a.b/lm18i08.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 13:50 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 14:14
Date, time and analyst ID of latest file update: 18-Mar-2019 14:14 apr27582

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2016
Retention Time (minutes): 7.963
Quant Ion : 69.00
Area : 1094
On-column Amount (ng) : 0.1933
Integration start scan : 2009 Integration stop scan: 2016
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 21:02.
Target 3.5 esignature user: kkelly100



Total Ion Chromatogram (TIC)

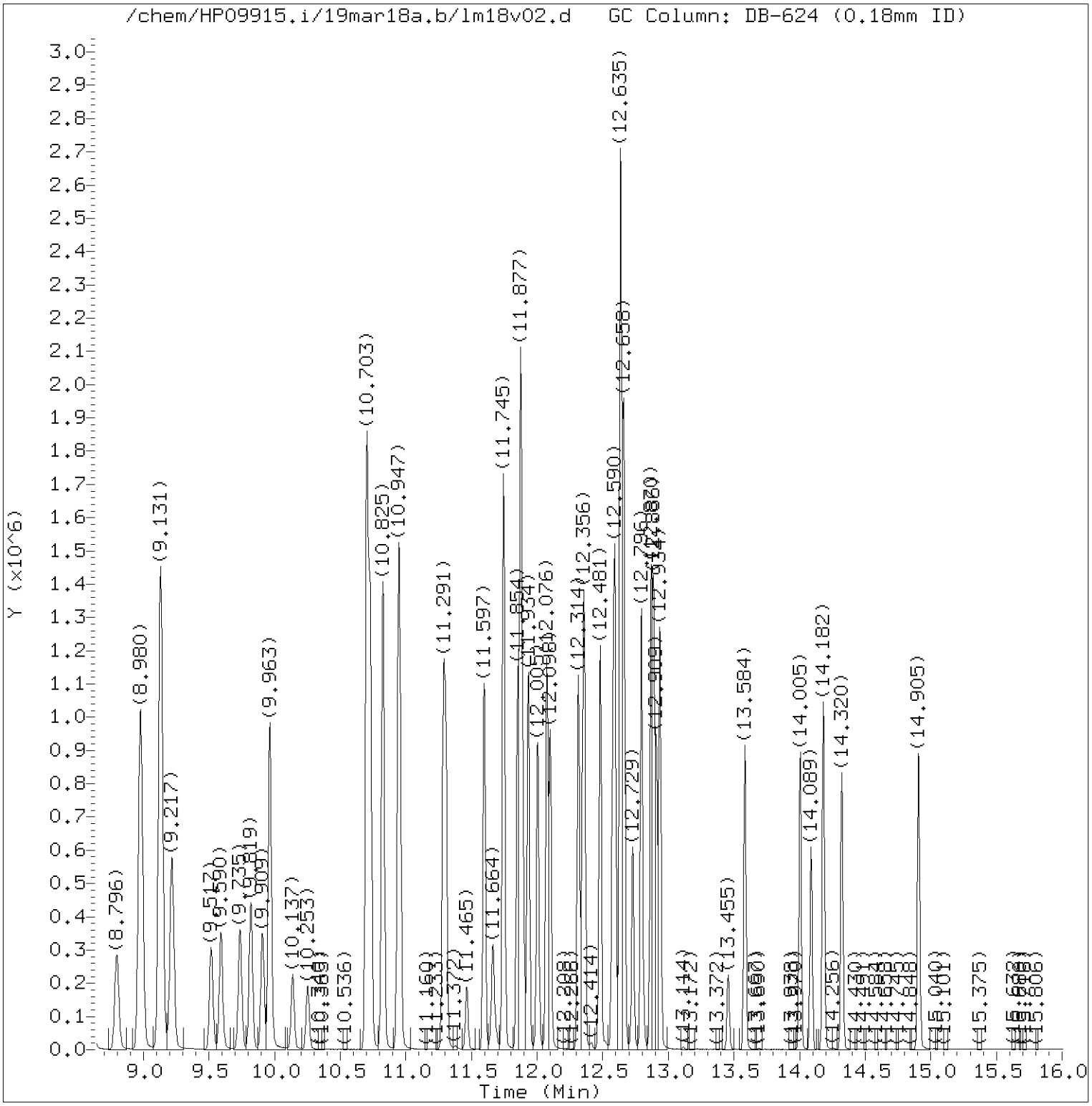
Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18v02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 21:45 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 22:28
Date, time and analyst ID of latest file update: 18-Mar-2019 22:30 kk10002

Sample Name: LGCICV Lab Sample ID: LGCICV

Digitally signed by Kevin Kelly
on 03/18/2019 at 22:30.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18v02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 21:45 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
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Date, time and analyst ID of latest file update: 18-Mar-2019 22:30 kk10002

Sample Name: LGCICV Lab Sample ID: LGCICV

Digitally signed by Kevin Kelly
on 03/18/2019 at 22:30.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18v02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 21:45 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 22:28
Date, time and analyst ID of latest file update: 18-Mar-2019 22:30 kk10002

Sample Name: LGCICV Lab Sample ID: LGCICV

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.703	85	173429	15.801
4) Chloromethane	(2)	1.867	50	200256	19.702
5) 1,3-Butadiene	(2)	1.954	39	143614	26.893
6) Vinyl Chloride	(2)	1.964	62	203932	20.481
8) Bromomethane	(2)	2.227	94	158356	18.280
9) Chloroethane	(2)	2.295	64	114622	19.800
10) Dichlorofluoromethane	(2)	2.491	67	282301	20.483
12) Trichlorofluoromethane	(2)	2.543	101	242219	18.637
11) n-Pentane	(2)	2.581	43	199872	24.942
14) Ethyl ether	(2)	2.752	59	130618	21.509
15) Freon 123a	(2)	2.813	67	153203	20.996
16) Acrolein	(1)	2.893	56	308214	166.832
17) 1,1-Dichloroethene	(2)	3.009	96	108501	25.160
18) Acetone	(1)	3.031	58	111671	141.382
19) Freon 113	(2)	3.041	101	102203	22.307
21) 2-Propanol	(1)	3.153	45	72632M	137.559
22) Methyl Iodide	(2)	3.182	142	201944	22.092
23) Carbon Disulfide	(2)	3.279	76	331092	22.682
27) Methyl Acetate	(2)	3.385	43	129395	19.986
25) Allyl Chloride	(2)	3.407	41	176783	19.157
29)*t-Butyl alcohol-d10	(1)	3.562	65	236775M	250.000
28) Methylene Chloride	(2)	3.565	84	121708	22.665
30) t-Butyl alcohol	(1)	3.661	59	188304M	192.552
31) Acrylonitrile	(2)	3.832	53	311665	92.035
33) Methyl Tertiary Butyl Ether	(2)	3.903	73	348236	20.403
32) trans-1,2-Dichloroethene	(2)	3.919	96	122269	23.662
34) n-Hexane	(2)	4.305	57	148781	21.356
36) 1,1-Dichloroethane	(2)	4.549	63	220121	22.552
38) di-Isopropyl ether	(2)	4.600	45	390653	21.169
39) 2-Chloro-1,3-butadiene	(2)	4.655	53	194006	21.208
40) Ethyl t-butyl ether	(2)	5.153	59	358164	20.198
44) 2-Butanone	(2)	5.359	43	663677	141.861
42) cis-1,2-Dichloroethene	(2)	5.398	96	136542	22.889
45) 2,2-Dichloropropane	(2)	5.417	77	182799	21.993
47) Propionitrile	(1)	5.449	54	184393	161.230
48) Methacrylonitrile	(2)	5.674	67	522952	149.551
49) Bromochloromethane	(2)	5.748	128	65772	19.254
50) Tetrahydrofuran	(1)	5.761	71	114998	105.109

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin Kelly
on 03/18/2019 at 22:30.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18v02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 21:45 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 22:28
Date, time and analyst ID of latest file update: 18-Mar-2019 22:30 kk10002

Sample Name: LGCICV Lab Sample ID: LGCICV

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	5.906	83	217833	22.208
52)$Dibromofluoromethane	(2)	6.128	113	318159	49.007
53) 1,1,1-Trichloroethane	(2)	6.131	97	186322	22.148
43) 1,2-Dichloroethene (Total)	(2)		96	258811	46.551
54) Cyclohexane	(2)	6.243	56	182974	20.127
55) 1,1-Dichloropropene	(2)	6.349	75	169619	22.525
56) Carbon Tetrachloride	(2)	6.353	117	149054	21.577
58) Isobutyl Alcohol	(1)	6.507	41	161460	500.296
57)$1,2-Dichloroethane-d4	(2)	6.597	102	76618	50.353
60) Benzene	(2)	6.616	78	484624	22.355
61) 1,2-Dichloroethane	(2)	6.706	62	193983	22.306
65) t-Amyl methyl ether	(2)	6.825	73	367309	20.842
66)*Fluorobenzene	(2)	7.038	96	1262810	50.000
67) n-Heptane	(2)	7.063	43	163071	20.798
69) n-Butanol	(1)	7.414	56	239261	1024.410
71) Trichloroethene	(2)	7.533	95	128797	22.049
72) Methylcyclohexane	(2)	7.848	83	191970	19.087
73) 1,2-Dichloropropane	(2)	7.874	63	129925	22.023
75) 1,4-Dioxane	(1)	7.960	88	33102M	538.179
76) Methyl Methacrylate	(2)	7.967	69	112444M	19.751
74) Dibromomethane	(2)	7.986	93	88372	21.661
78) Bromodichloromethane	(2)	8.230	83	154614	21.963
79) 2-Nitropropane	(2)	8.491	41	38087	15.600
80) 2-Chloroethyl Vinyl Ether	(2)	8.607	63	96133	20.273
81) cis-1,3-Dichloropropene	(2)	8.800	75	194071	21.869
82) 4-Methyl-2-pentanone	(2)	8.980	43	941630	95.407
83)$Toluene-d8	(3)	9.131	98	1280235	50.489
88) Toluene	(3)	9.221	92	309810	22.054
89) trans-1,3-Dichloropropene	(3)	9.517	75	177742	21.211
91) Ethyl Methacrylate	(3)	9.590	69	193697	19.677
92) 1,1,2-Trichloroethane	(3)	9.735	97	122243	23.016
93) Tetrachloroethene	(3)	9.819	166	134212	21.967
94) 1,3-Dichloropropane	(3)	9.909	76	204676	21.859
96) 2-Hexanone	(3)	9.963	43	699889	96.859
90) 1,3-Dichloropropene (total)	(3)		100	371813	43.080
97) Dibromochloromethane	(3)	10.137	129	118235	21.570
99) 1,2-Dibromoethane	(3)	10.253	107	133925	22.178
100)*Chlorobenzene-d5	(3)	10.703	117	985293	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 03/18/2019 at 22:30.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18v02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 21:45 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 22:28
Date, time and analyst ID of latest file update: 18-Mar-2019 22:30 kk10002

Sample Name: LGCICV Lab Sample ID: LGCICV

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) 1-Chlorohexane	(3)	10.725	91	176322	21.039
102) Chlorobenzene	(3)	10.732	112	365911	21.653
103) 1,1,1,2-Tetrachloroethane	(3)	10.822	131	119610	21.118
104) Ethylbenzene	(3)	10.825	91	620398	21.802
106) m+p-Xylene	(3)	10.947	106	490686	43.846
107) o-Xylene	(3)	11.285	106	240314	21.716
109) Styrene	(3)	11.304	104	407441	21.957
110) Bromoform	(3)	11.465	173	76785	19.310
111) Isopropylbenzene	(3)	11.597	105	633102	22.358
112) Cyclohexanone	(1)	11.664	55	131819	538.558
114)$4-Bromofluorobenzene	(3)	11.745	95	492294	50.170
108) Xylene (Total)	(3)		106	731000	65.562
116) 1,1,2,2-Tetrachloroethane	(4)	11.851	83	202745	21.395
115) Bromobenzene	(4)	11.854	156	163142	21.504
118) trans-1,4-Dichloro-2-butene	(4)	11.877	53	334442	109.957
117) 1,2,3-Trichloropropane	(4)	11.893	110	62906	21.806
119) n-Propylbenzene	(4)	11.934	91	751681	22.441
120) 2-Chlorotoluene	(4)	12.005	126	153866	21.704
122) 1,3,5-Trimethylbenzene	(4)	12.076	105	544352	21.706
121) 4-Chlorotoluene	(4)	12.102	126	160615	21.542
124) tert-Butylbenzene	(4)	12.317	134	126281	21.459
125) Pentachloroethane	(4)	12.346	167	81486	17.881
126) 1,2,4-Trimethylbenzene	(4)	12.359	105	558149	21.291
127) sec-Butylbenzene	(4)	12.481	105	688580	22.057
129) 1,3-Dichlorobenzene	(4)	12.577	146	305428	21.164
130) p-Isopropyltoluene	(4)	12.594	119	616703	21.804
131)*1,4-Dichlorobenzene-d4	(4)	12.635	152	551769	50.000
133) 1,4-Dichlorobenzene	(4)	12.655	146	330176	21.544
134) 1,2,3-Trimethylbenzene	(4)	12.661	105	576566	19.960
135) Benzyl Chloride	(4)	12.729	91	342238	17.939
136) 1,3-Diethylbenzene	(4)	12.796	119	352339	19.738
137) 1,4-Diethylbenzene	(4)	12.870	119	369442	19.138
139) n-Butylbenzene	(4)	12.886	92	302514	21.071
138) 1,2-Dichlorobenzene	(4)	12.909	146	303869	21.101
140) 1,2-Diethylbenzene	(4)	12.938	119	296460	19.628
141) Diethylbenzene (total)	(4)		100	1018241	58.504
142) 1,2-Dibromo-3-chloropropane	(4)	13.455	75	44688	20.957
144) 1,3,5-Trichlorobenzene	(4)	13.584	180	230979	20.852

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 03/18/2019 at 22:30.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19mar18a.b/lm18v02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 21:45 Analyst ID: APR27582

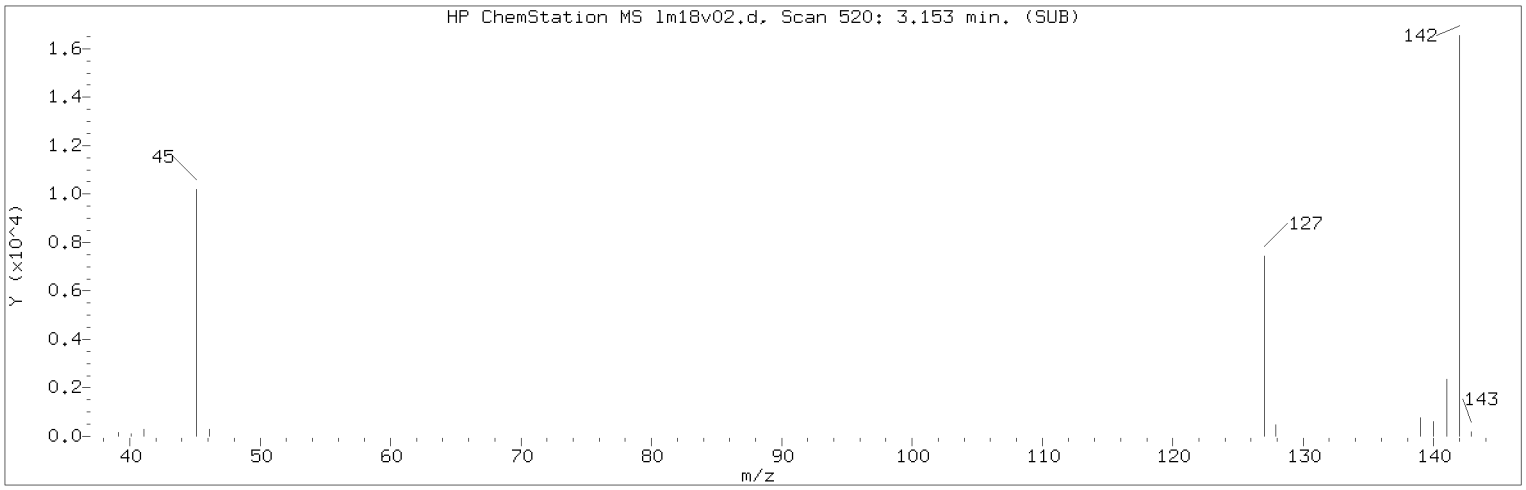
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 22:28
Date, time and analyst ID of latest file update: 18-Mar-2019 22:30 kk10002

Sample Name: LGCICV Lab Sample ID: LGCICV

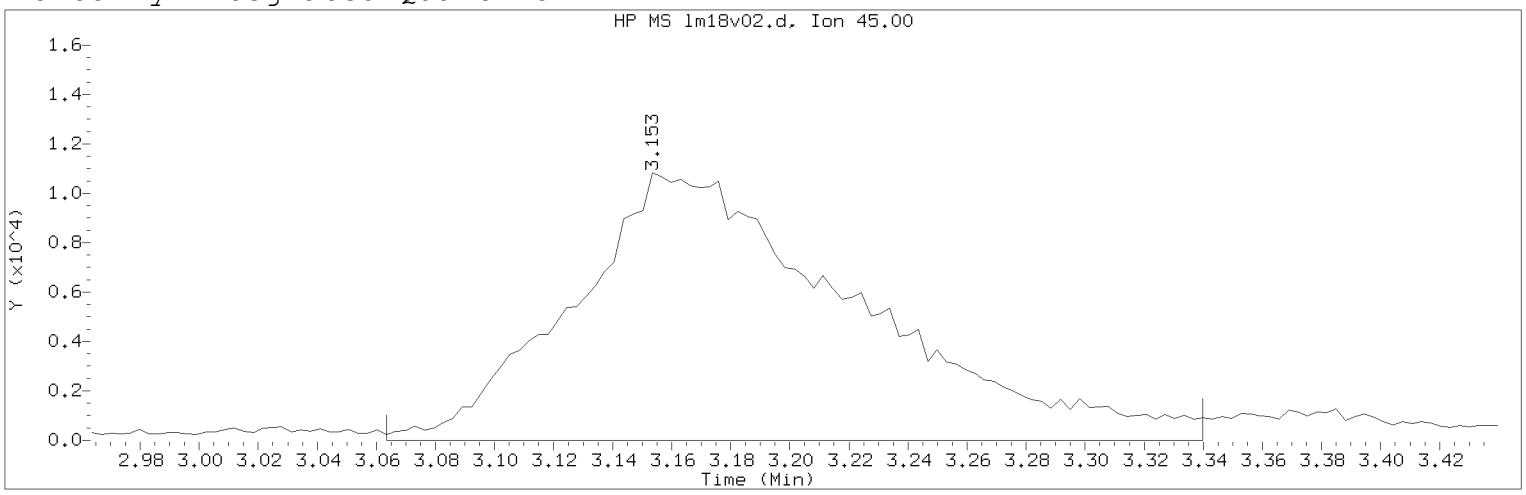
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) 1,2,4-Trichlorobenzene	(4)	14.005	180	216649	20.483
147) Hexachlorobutadiene	(4)	14.089	225	83939	19.813
148) Naphthalene	(4)	14.182	128	688654	20.510
149) 1,2,3-Trichlorobenzene	(4)	14.323	180	206327	20.459
150) 2-Methylnaphthalene	(4)	14.905	142	358641	17.534

Digitally signed by Kevin Kelly
on 03/18/2019 at 22:30.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18v02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 21:45 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 22:28
Date, time and analyst ID of latest file update: 18-Mar-2019 22:30 kk10002

Sample Name: LGCICV Lab Sample ID: LGCICV

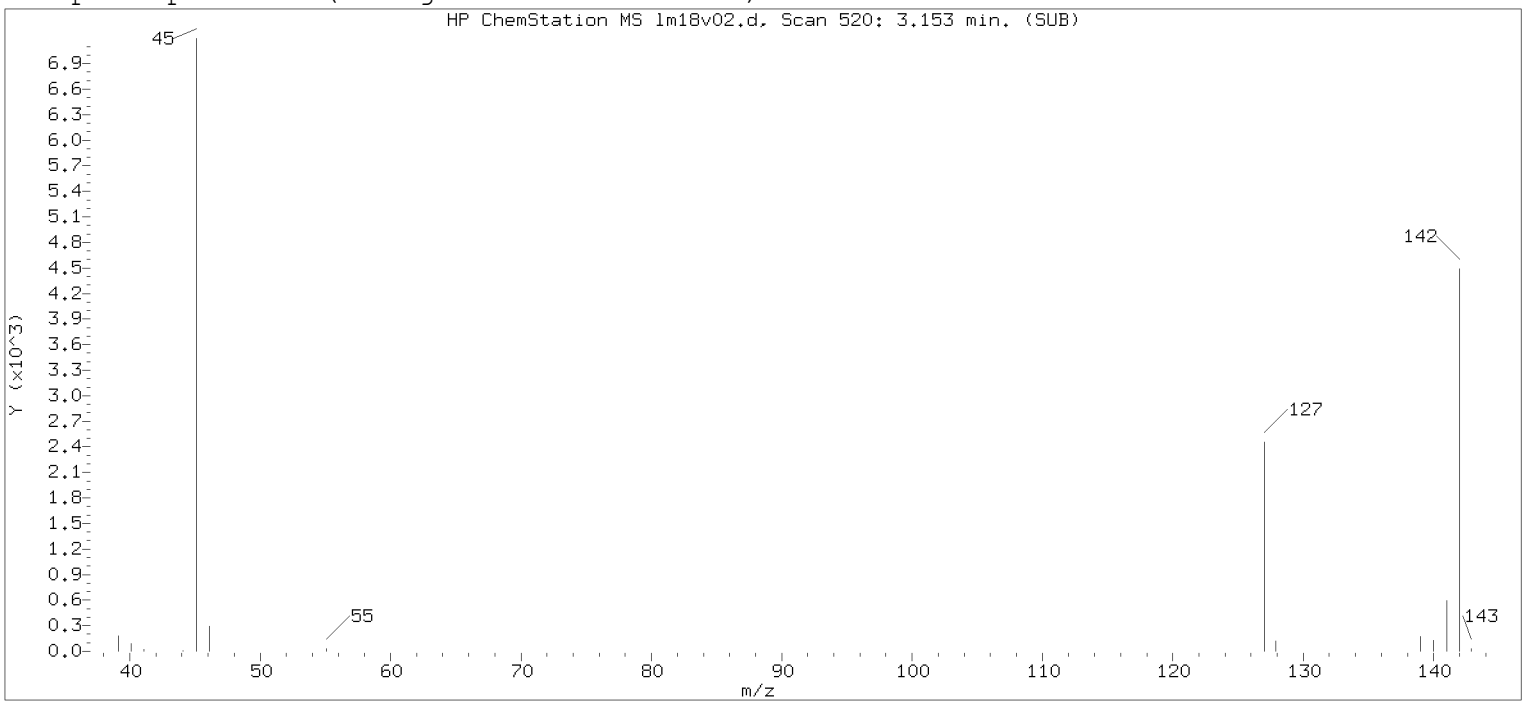
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 520
Retention Time (minutes): 3.153
Quant Ion : 45.00
Area (flag) : 72632M
On-Column Amount (ng) : 137.5591
Integration start scan : 491 Integration stop scan: 577
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

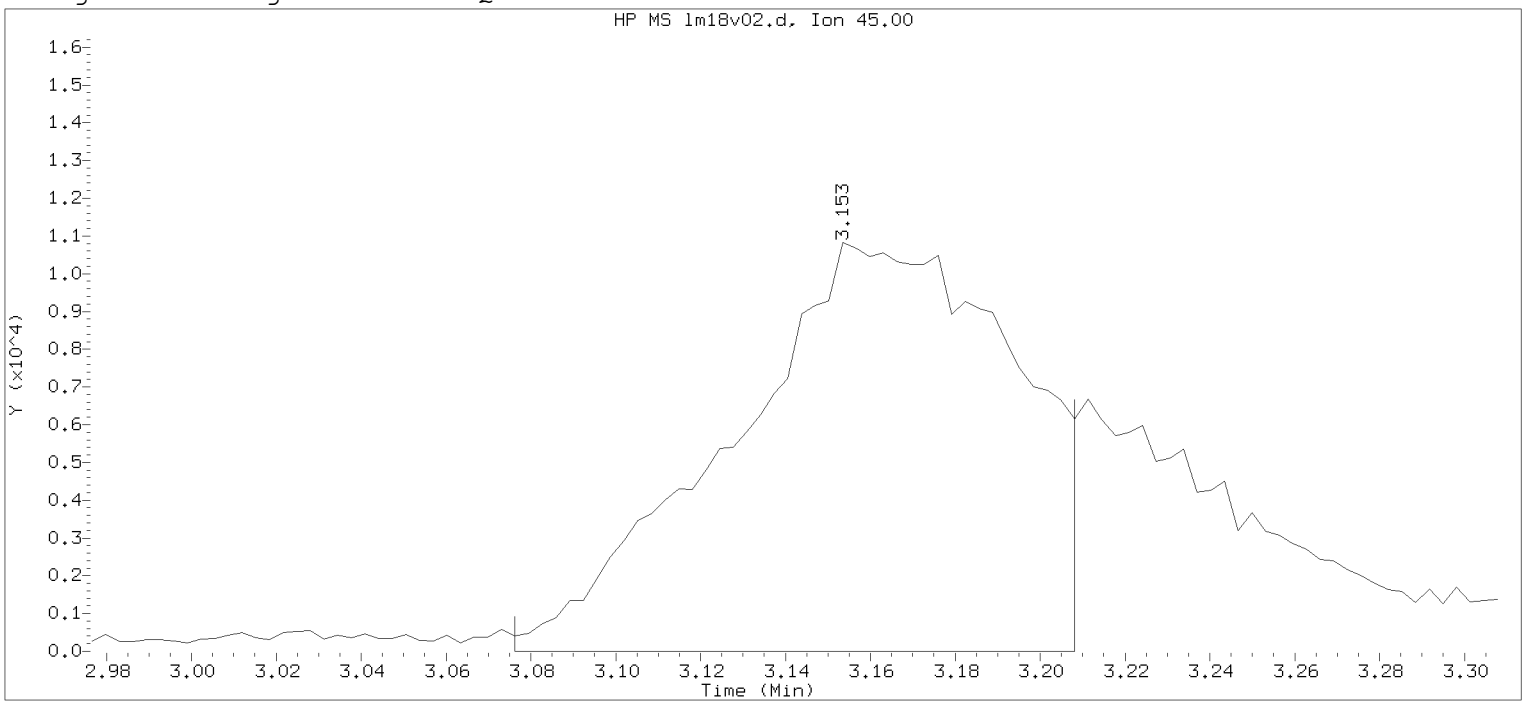
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 22:30.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18v02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 21:45 Analyst ID: APR27582

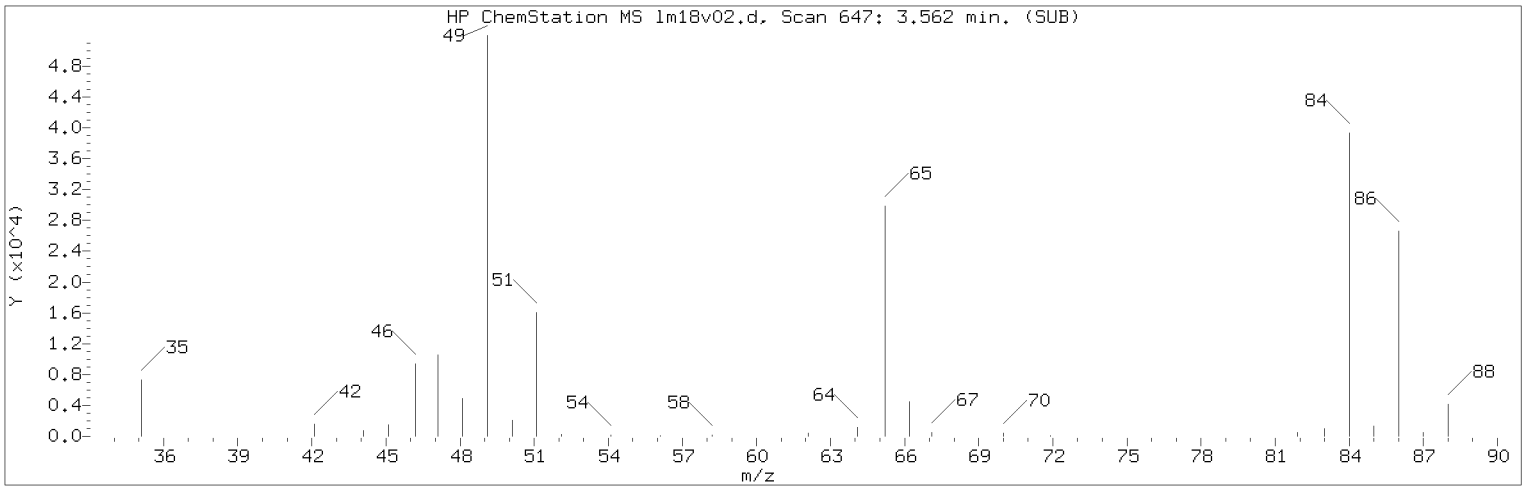
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:29
Date, time and analyst ID of latest file update: 18-Mar-2019 22:02 Automation

Sample Name: LGCICV Lab Sample ID: LGCICV

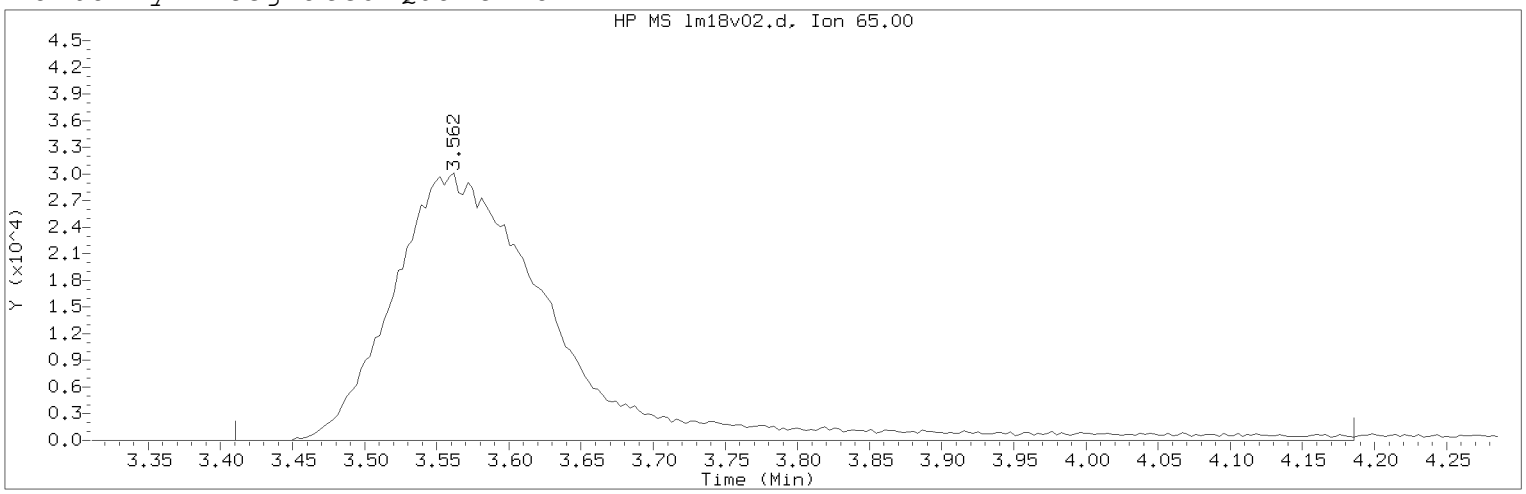
Compound Number	: 21		
Compound Name	: 2-Propanol		
Scan Number	: 520		
Retention Time (minutes)	: 3.153		
Quant Ion	: 45.00		
Area	: 50267		
On-column Amount (ng)	: 99.2687		
Integration start scan	: 495	Integration stop scan:	536
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin Kelly on 03/18/2019 at 22:30.
Target 3.5 esignature user ID: kkelly100

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18v02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 21:45 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 22:28
Date, time and analyst ID of latest file update: 18-Mar-2019 22:30 kk10002

Sample Name: LGCICV Lab Sample ID: LGCICV

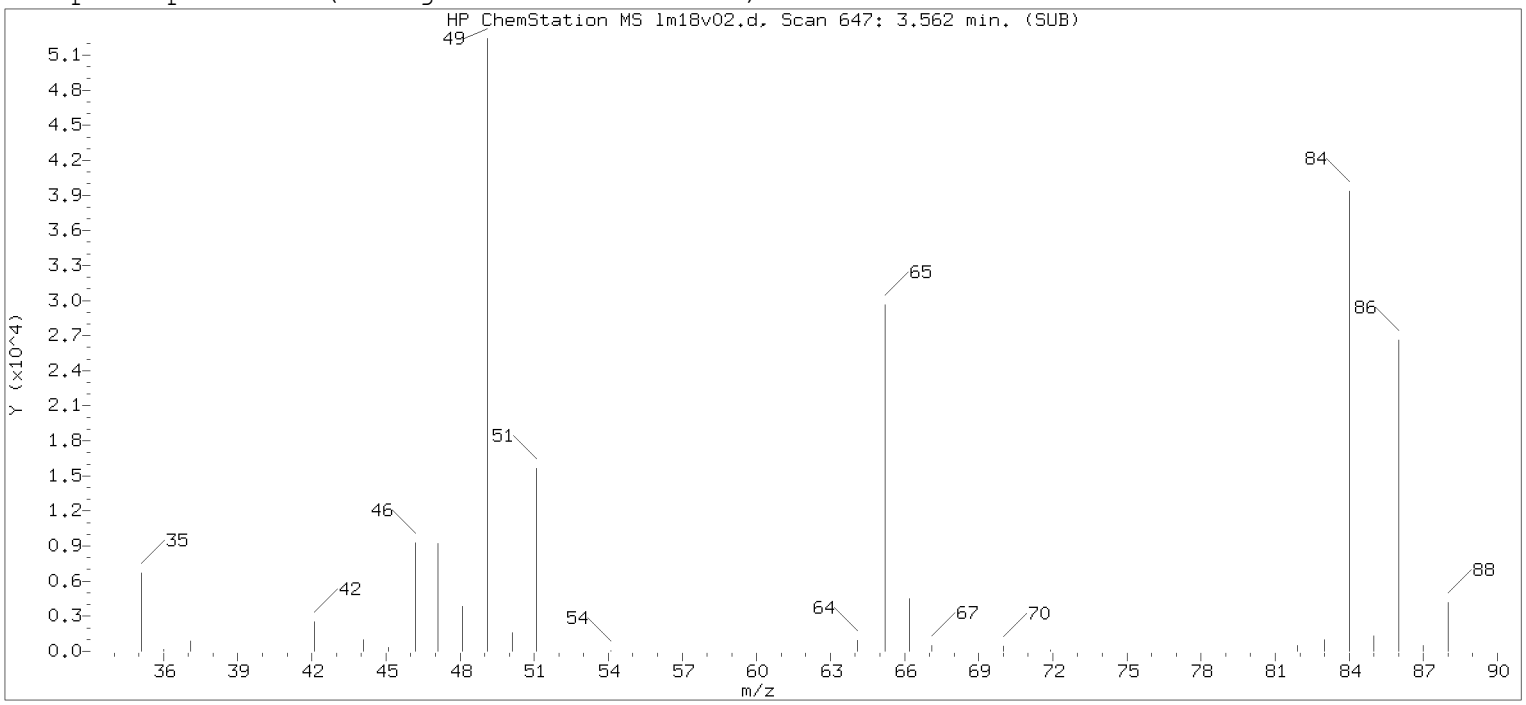
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 647
Retention Time (minutes): 3.562
Quant Ion : 65.00
Area (flag) : 236775M
On-Column Amount (ng) : 250.0000
Integration start scan : 599 Integration stop scan: 840
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

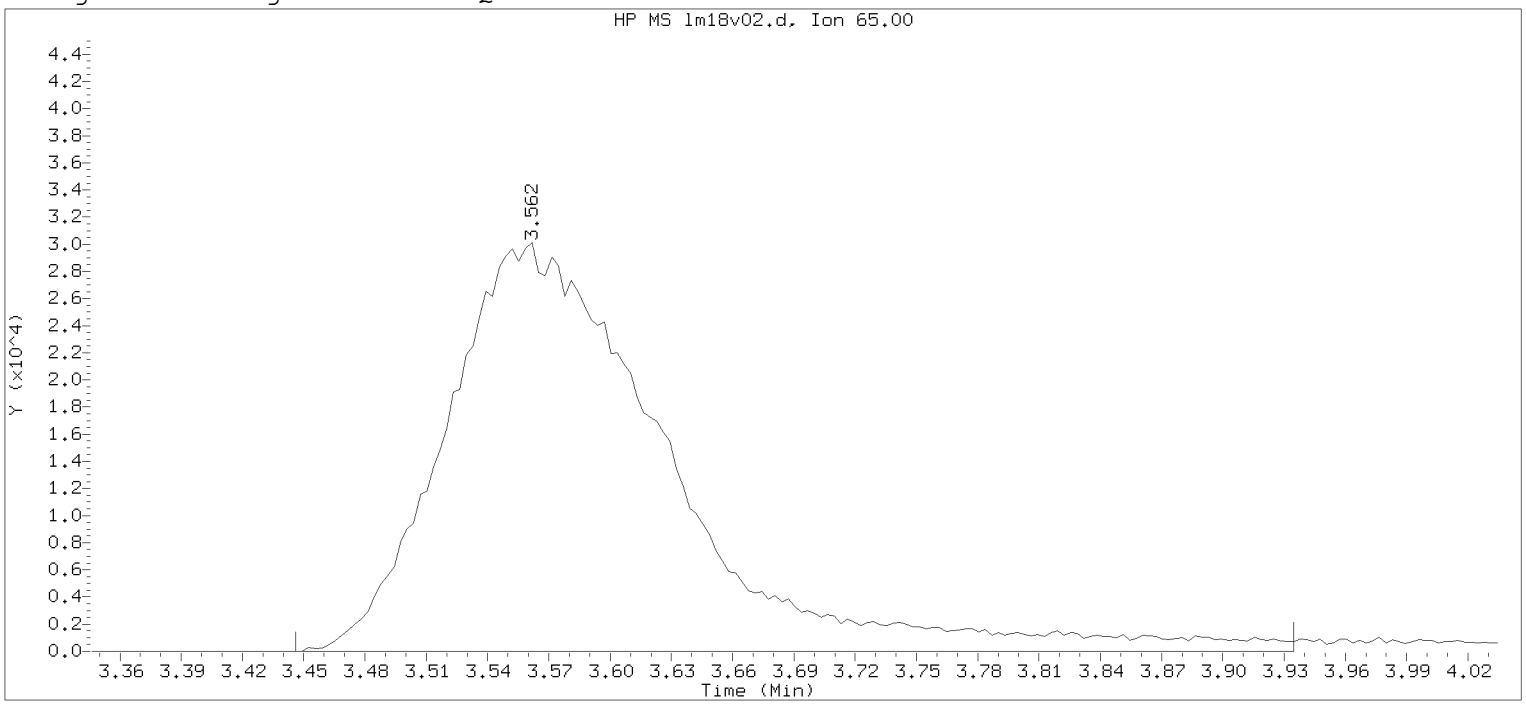
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 22:30.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18v02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 21:45 Analyst ID: APR27582

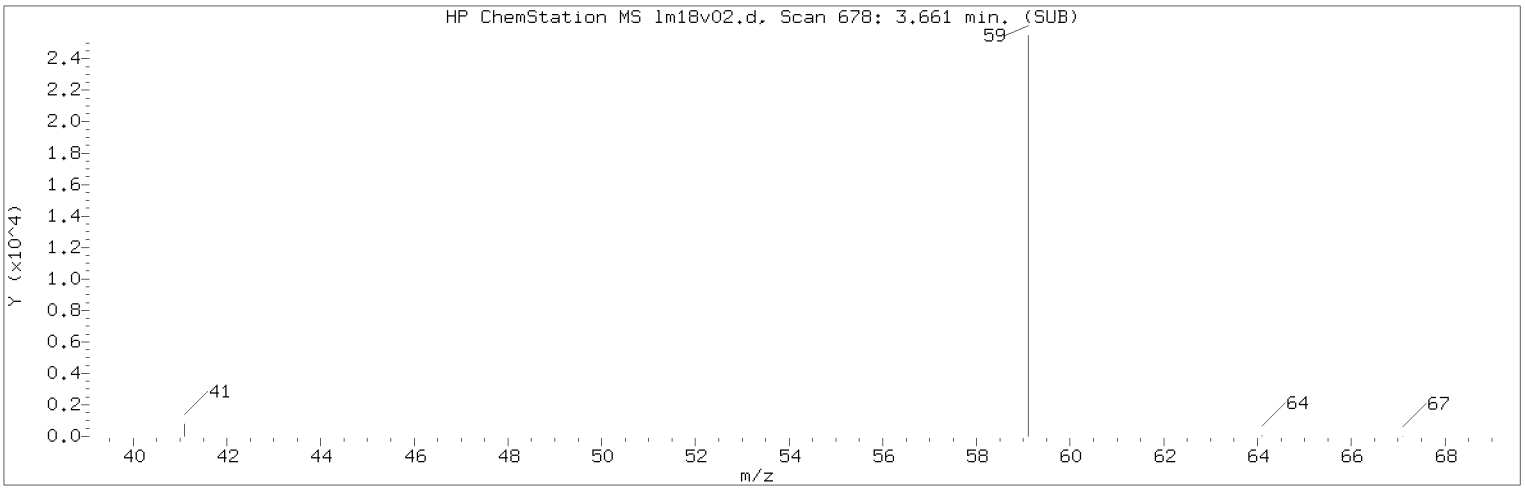
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:29
Date, time and analyst ID of latest file update: 18-Mar-2019 22:02 Automation

Sample Name: LGCICV Lab Sample ID: LGCICV

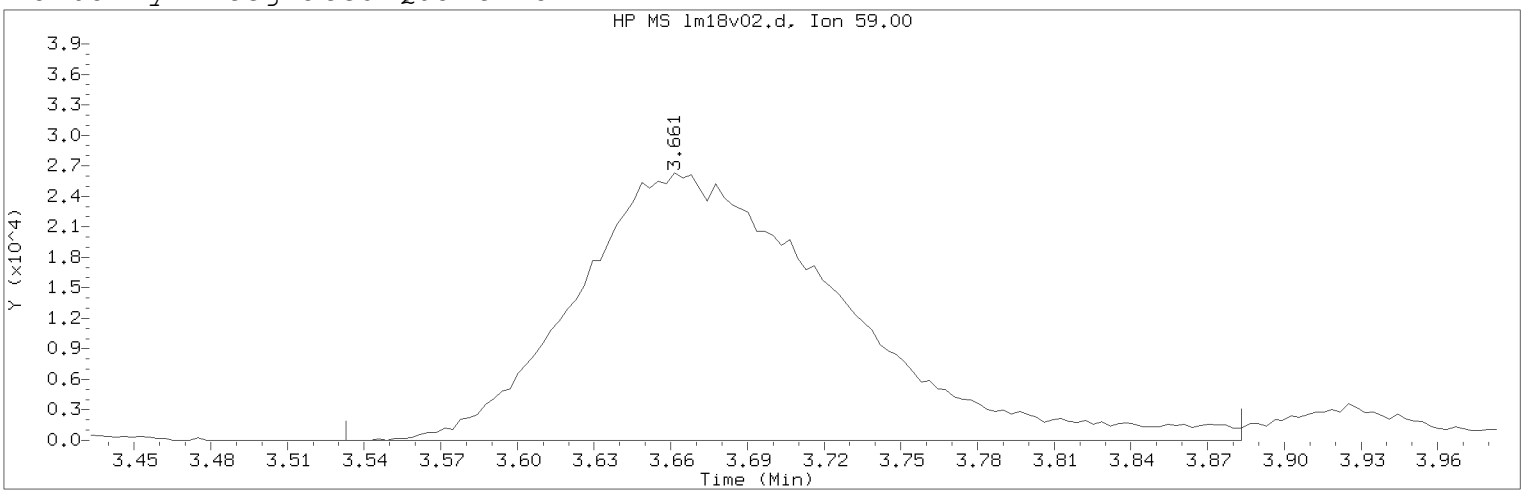
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 647
Retention Time (minutes): 3.562
Quant Ion : 65.00
Area : 227076
On-column Amount (ng) : 250.0000
Integration start scan : 610 Integration stop scan: 762
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 22:30.
Target 3.5 esignature user ID: kkelly100

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18v02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 21:45 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 22:28
Date, time and analyst ID of latest file update: 18-Mar-2019 22:30 kk10002

Sample Name: LGCICV Lab Sample ID: LGCICV

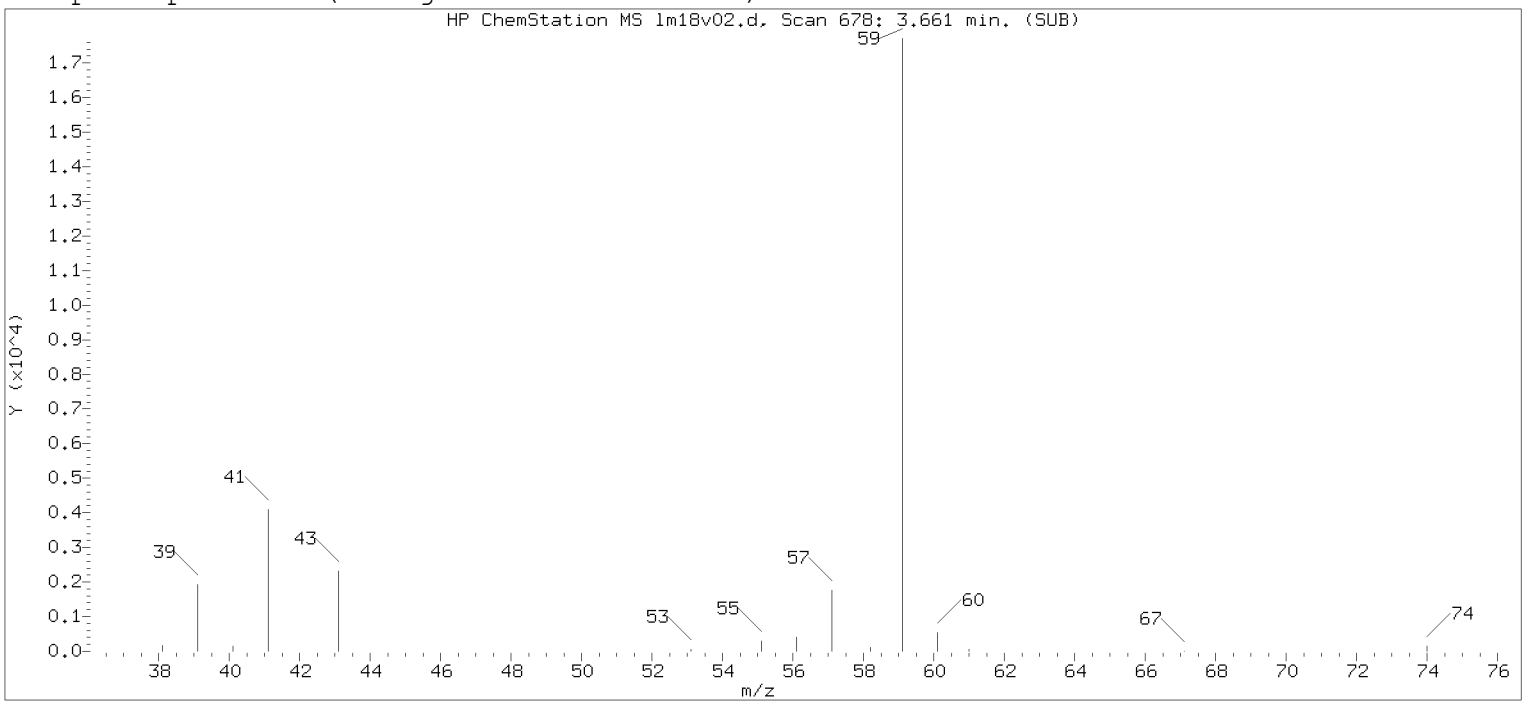
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 678
Retention Time (minutes): 3.661
Quant Ion : 59.00
Area (flag) : 188304M
On-Column Amount (ng) : 192.5524
Integration start scan : 637 Integration stop scan: 746
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

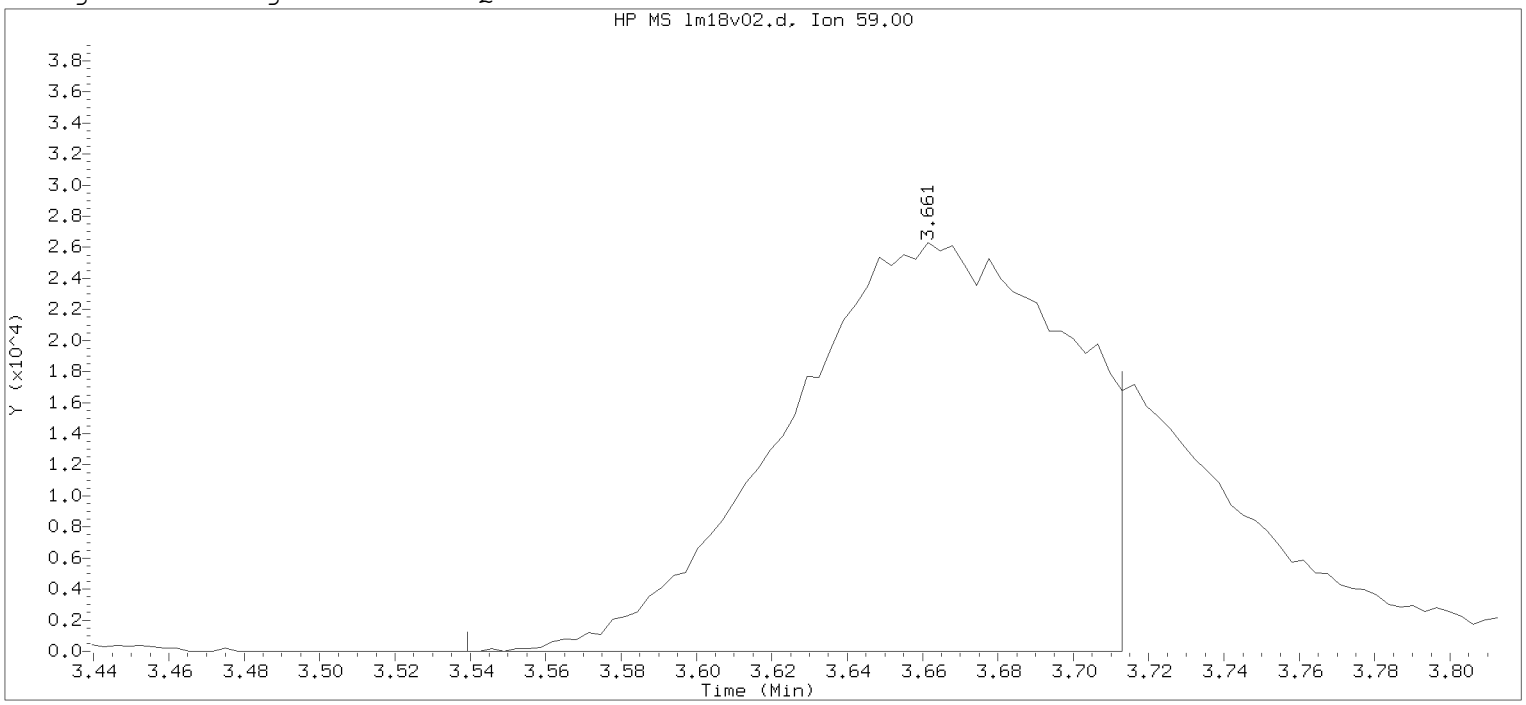
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 22:30.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18v02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 21:45 Analyst ID: APR27582

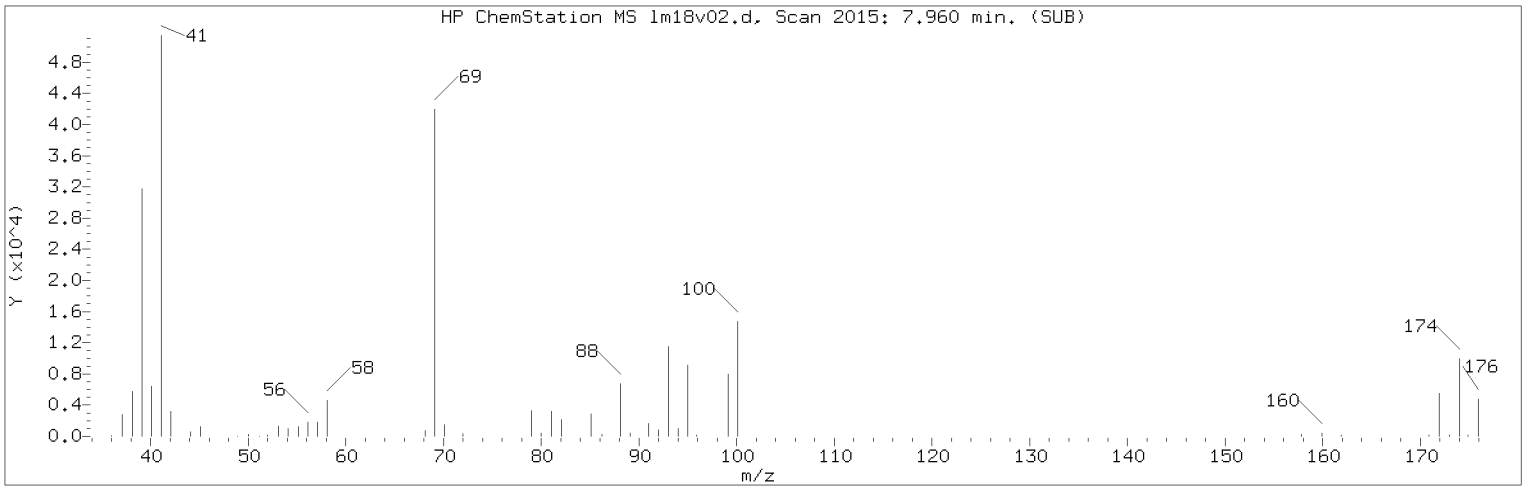
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:29
Date, time and analyst ID of latest file update: 18-Mar-2019 22:02 Automation

Sample Name: LGCICV Lab Sample ID: LGCICV

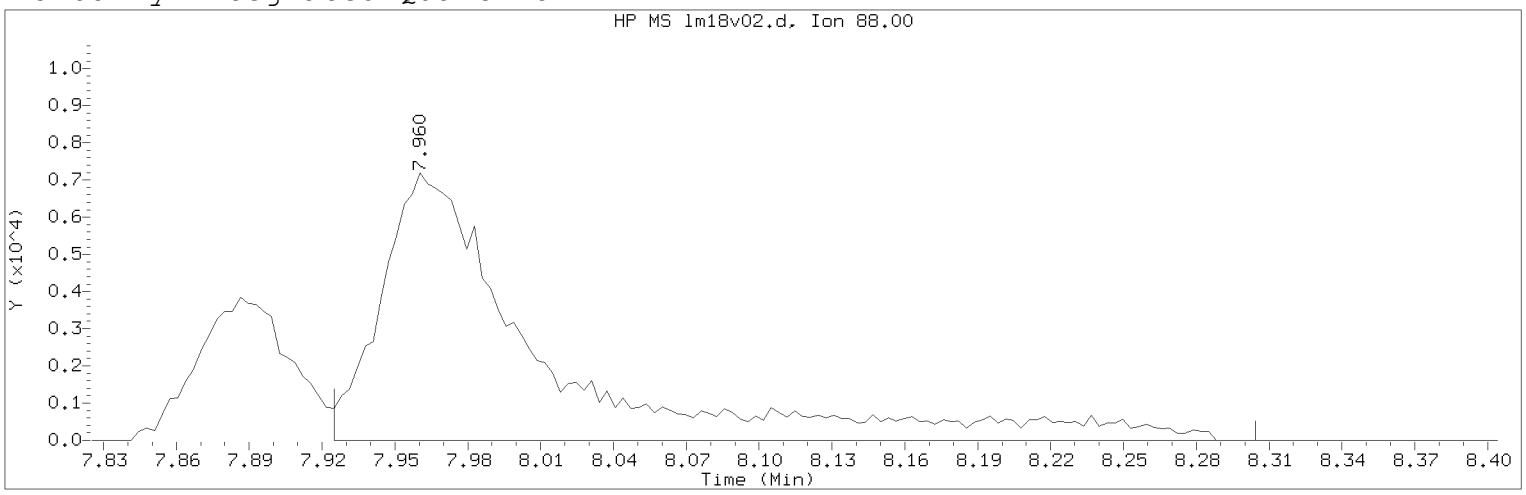
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 678
Retention Time (minutes): 3.661
Quant Ion : 59.00
Area : 138892
On-column Amount (ng) : 148.0919
Integration start scan : 639 Integration stop scan: 693
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 22:30.
Target 3.5 esignature user: KKELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18v02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 21:45 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 22:28
Date, time and analyst ID of latest file update: 18-Mar-2019 22:30 kk10002

Sample Name: LGCICV Lab Sample ID: LGCICV

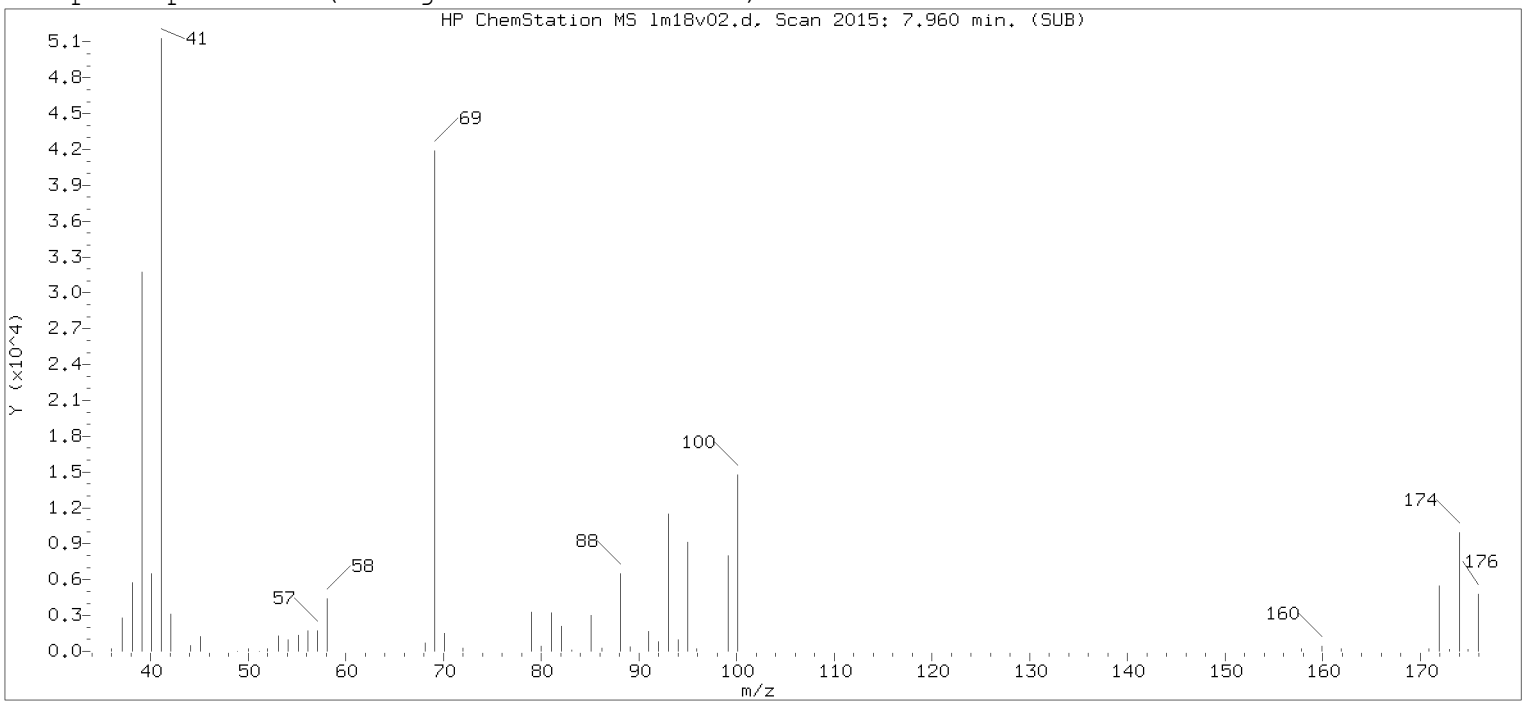
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2015
Retention Time (minutes): 7.960
Quant Ion : 88.00
Area (flag) : 33102M
On-Column Amount (ng) : 538.1795
Integration start scan : 2003 Integration stop scan: 2121
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

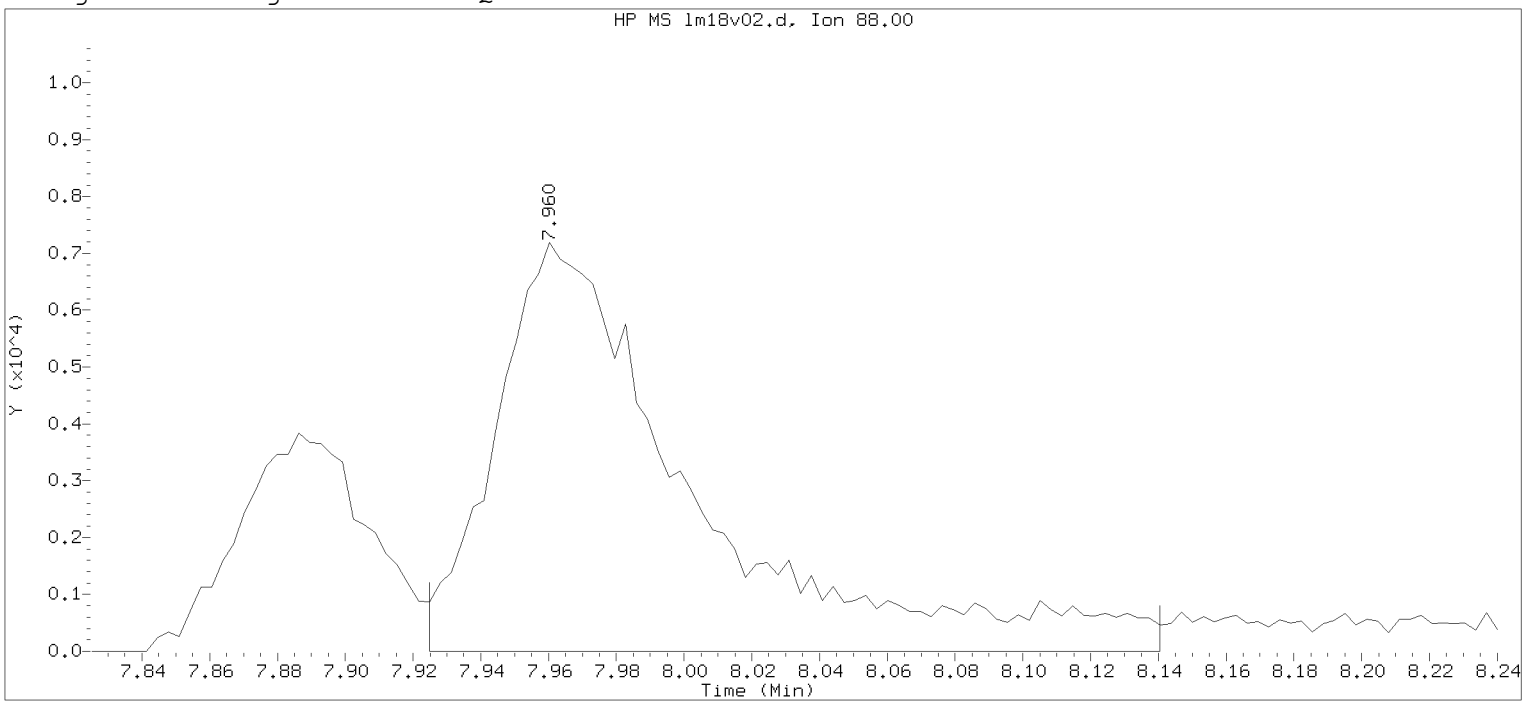
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 22:30.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18v02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 21:45 Analyst ID: APR27582

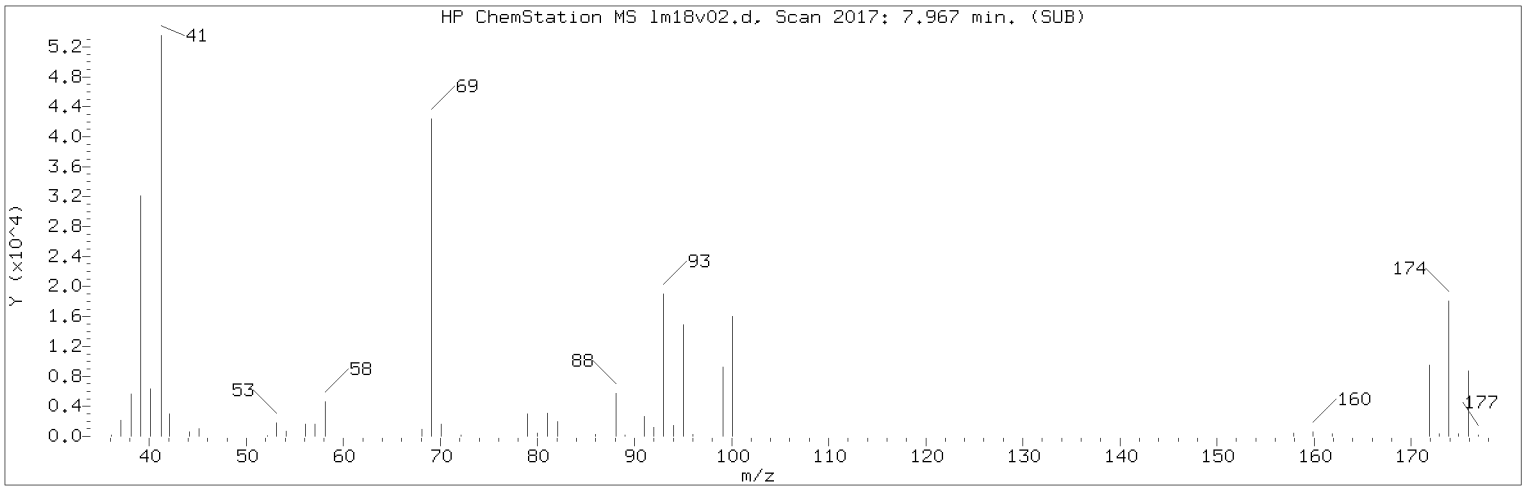
Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:29
Date, time and analyst ID of latest file update: 18-Mar-2019 22:02 Automation

Sample Name: LGCICV Lab Sample ID: LGCICV

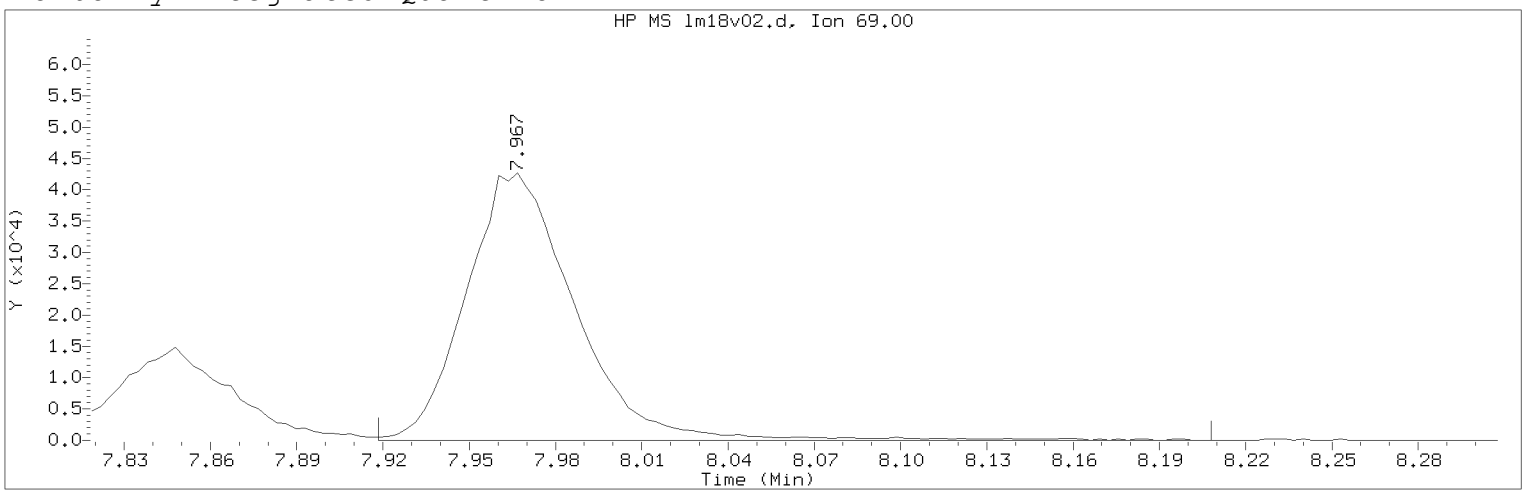
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2015
Retention Time (minutes): 7.960
Quant Ion : 88.00
Area : 28943
On-column Amount (ng) : 490.6629
Integration start scan : 2003 Integration stop scan: 2070
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 22:30.
Target 3.5 esignature user ID: KKELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18v02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 21:45 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 22:28
Date, time and analyst ID of latest file update: 18-Mar-2019 22:30 kk10002

Sample Name: LGCICV Lab Sample ID: LGCICV

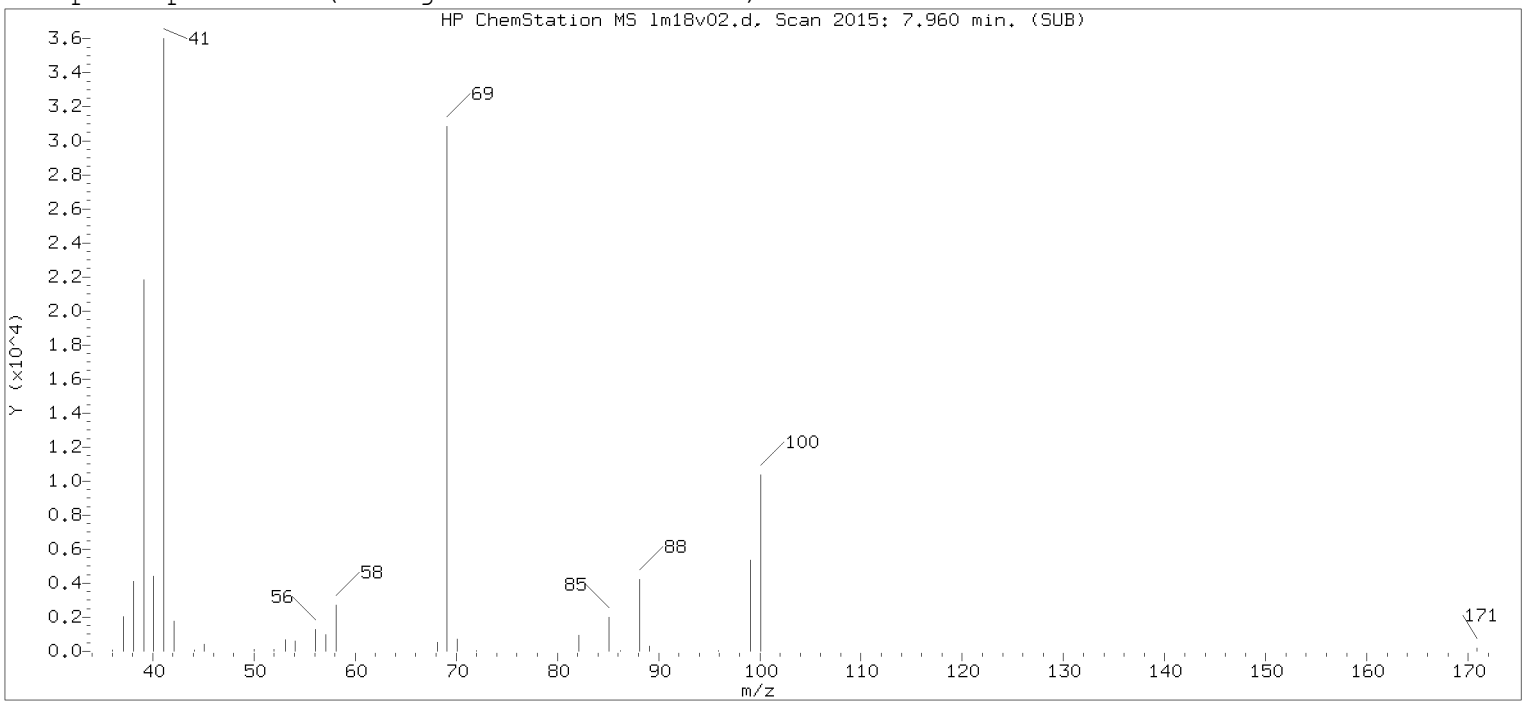
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2017
Retention Time (minutes): 7.967
Quant Ion : 69.00
Area (flag) : 112444M
On-Column Amount (ng) : 19.7515
Integration start scan : 2001 Integration stop scan: 2091
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

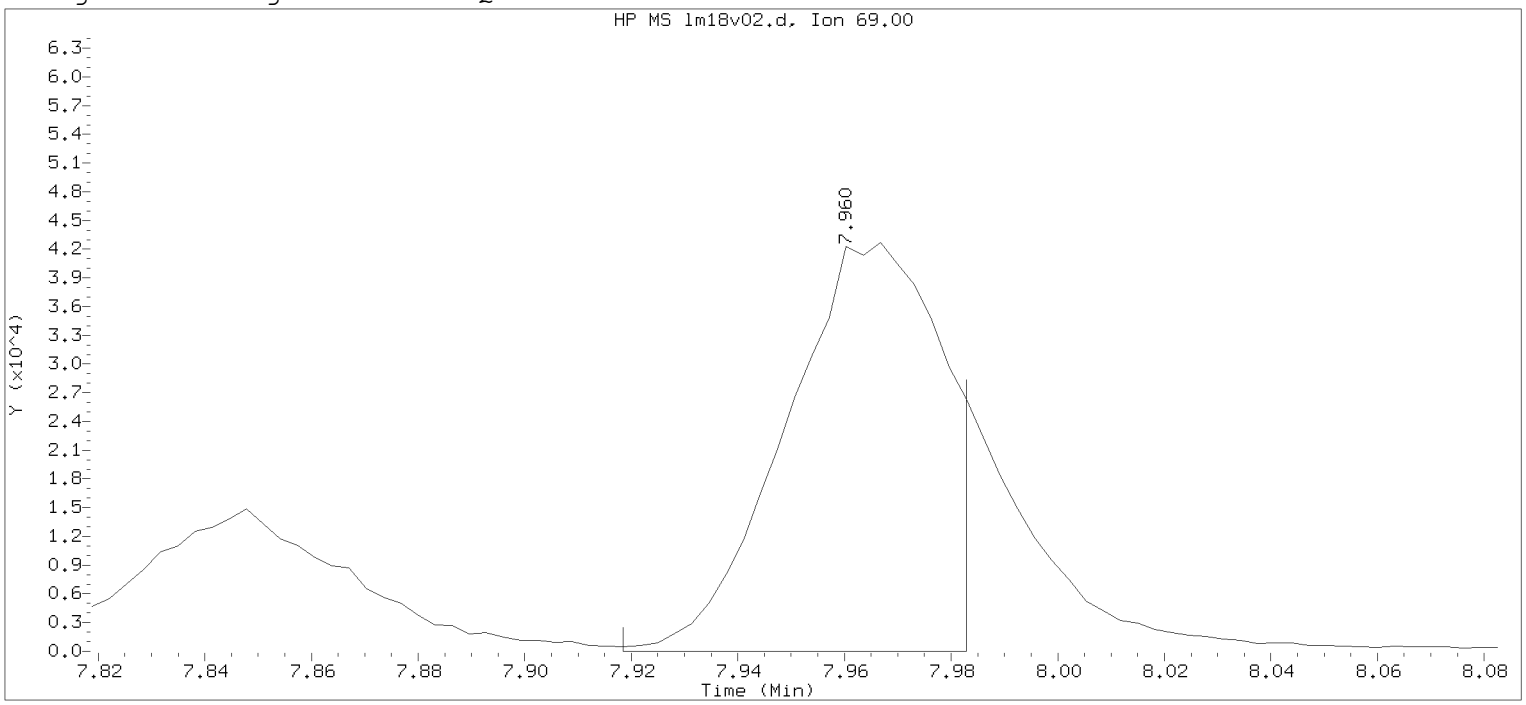
Analyst responsible for change: Digitally signed by Kevin Kelly
on 03/18/2019 at 22:30.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Chelsea B. Riehl on 03/19/2019 at 12:27.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19mar18a.b/lm18v02.d Instrument ID: HP09915.i
Injection date and time: 18-MAR-2019 21:45 Analyst ID: APR27582

Method used: /chem/HP09915.i/19mar18a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 18-MAR-2019 21:29
Date, time and analyst ID of latest file update: 18-Mar-2019 22:02 Automation

Sample Name: LGCICV Lab Sample ID: LGCICV

Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2015
Retention Time (minutes): 7.960
Quant Ion : 69.00
Area : 85566
On-column Amount (ng) : 15.0303
Integration start scan : 2001 Integration stop scan: 2021
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 03/18/2019 at 22:30.
Target 3.5 esignature user ID: kkelly100134

SW-846 Method 8260X** Calibration Verification Report

Instrument ID: HP09915.i

File ID: /chem/HP09915.i/19mar18a.b/lm18i01.d

Injection date and time: 18-MAR-2019 11:37

Last file update (date, time, and analyst ID): 18-Mar-2019 22:28 kk10002

Calibration Level: 7

Client ID: VSTD300 Lab ID: VSTD300

Target processing method: /chem/HP09915.i/19mar18a.b/m8260c5.m

Last method update (date, time, and analyst ID): 18-Mar-2019 22:44 kk10002

Curve Type Legend: 1 = Linear Equation 2 = Weighted Linear Equation
3 = Quadratic Equation 4 = Power Equation

Compound Name(Curve Type)	Theoretical Concentration	Calculated Concentration	Percent Drift	Drift Limit
Bromoform(3)(0)	300.000	299.90977	0.0	30

**B/C/D

Report generated on 03/19/2019 at 12:28

SW-846 Method 8260X** Calibration Verification Report

Instrument ID: HP09915.i

File ID: /chem/HP09915.i/19mar18a.b/lm18i02.d

Injection date and time: 18-MAR-2019 11:59

Last file update (date, time, and analyst ID): 18-Mar-2019 22:28 kk10002

Calibration Level: 6

Client ID: VSTD100 Lab ID: VSTD100

Target processing method: /chem/HP09915.i/19mar18a.b/m8260c5.m

Last method update (date, time, and analyst ID): 18-Mar-2019 22:44 kk10002

Curve Type Legend: 1 = Linear Equation 2 = Weighted Linear Equation
3 = Quadratic Equation 4 = Power Equation

Compound Name(Curve Type)	Theoretical Concentration	Calculated Concentration	Percent Drift	Drift Limit
Bromoform(3)(0)	100.000	101.45099	-1.5	30

**B/C/D

Report generated on 03/19/2019 at 12:28

SW-846 Method 8260X** Calibration Verification Report

Instrument ID: HP09915.i

File ID: /chem/HP09915.i/19mar18a.b/lm18i03.d

Injection date and time: 18-MAR-2019 12:21

Last file update (date, time, and analyst ID): 18-Mar-2019 22:28 kk10002

Calibration Level: 5

Client ID: VSTD050 Lab ID: VSTD050

Target processing method: /chem/HP09915.i/19mar18a.b/m8260c5.m

Last method update (date, time, and analyst ID): 18-Mar-2019 22:44 kk10002

Curve Type Legend: 1 = Linear Equation 2 = Weighted Linear Equation
3 = Quadratic Equation 4 = Power Equation

Compound Name(Curve Type)	Theoretical Concentration	Calculated Concentration	Percent Drift	Drift Limit
Bromoform(3)(0)	50.000	47.70749	4.6	30

**B/C/D

Report generated on 03/19/2019 at 12:28

SW-846 Method 8260X** Calibration Verification Report

Instrument ID: HP09915.i

File ID: /chem/HP09915.i/19mar18a.b/lm18i04.d

Injection date and time: 18-MAR-2019 12:42

Last file update (date, time, and analyst ID): 18-Mar-2019 22:28 kk10002

Calibration Level: 4

Client ID: VSTD020 Lab ID: VSTD020

Target processing method: /chem/HP09915.i/19mar18a.b/m8260c5.m

Last method update (date, time, and analyst ID): 18-Mar-2019 22:44 kk10002

Curve Type Legend: 1 = Linear Equation 2 = Weighted Linear Equation
3 = Quadratic Equation 4 = Power Equation

Compound Name(Curve Type)	Theoretical Concentration	Calculated Concentration	Percent Drift	Drift Limit
Bromoform(3)(0)	20.000	18.47725	7.6	30

**B/C/D

Report generated on 03/19/2019 at 12:28

SW-846 Method 8260X** Calibration Verification Report

Instrument ID: HP09915.i

File ID: /chem/HP09915.i/19mar18a.b/1m18i06.d

Injection date and time: 18-MAR-2019 13:04

Last file update (date, time, and analyst ID): 18-Mar-2019 22:28 kk10002

Calibration Level: 3

Client ID: VSTD010 Lab ID: VSTD010

Target processing method: /chem/HP09915.i/19mar18a.b/m8260c5.m

Last method update (date, time, and analyst ID): 18-Mar-2019 22:44 kk10002

Curve Type Legend: 1 = Linear Equation 2 = Weighted Linear Equation
3 = Quadratic Equation 4 = Power Equation

Compound Name(Curve Type)	Theoretical Concentration	Calculated Concentration	Percent Drift	Drift Limit
Bromoform(3)(0)	10.000	10.64093	-6.4	30

**B/C/D

Report generated on 03/19/2019 at 12:28

SW-846 Method 8260X** Calibration Verification Report

Instrument ID: HP09915.i

File ID: /chem/HP09915.i/19mar18a.b/lm18i07.d

Injection date and time: 18-MAR-2019 13:27

Last file update (date, time, and analyst ID): 18-Mar-2019 22:28 kk10002

Calibration Level: 2

Client ID: VSTD004 Lab ID: VSTD004

Target processing method: /chem/HP09915.i/19mar18a.b/m8260c5.m

Last method update (date, time, and analyst ID): 18-Mar-2019 22:44 kk10002

Curve Type Legend: 1 = Linear Equation 2 = Weighted Linear Equation
3 = Quadratic Equation 4 = Power Equation

Compound Name(Curve Type)	Theoretical Concentration	Calculated Concentration	Percent Drift	Drift Limit
Bromoform(3)(0)	4.000	5.81357	-45.3	50

OK, lowest point passes ≤50%.

CBL 9/17
3/28/19

**B/C/D

Report generated on 03/19/2019 at 12:28

Data File: /chem/HP09915.i/19may20b.b/ly20t05.d

Date : 20-MAY-2019 19:10

Client ID: feb05-19

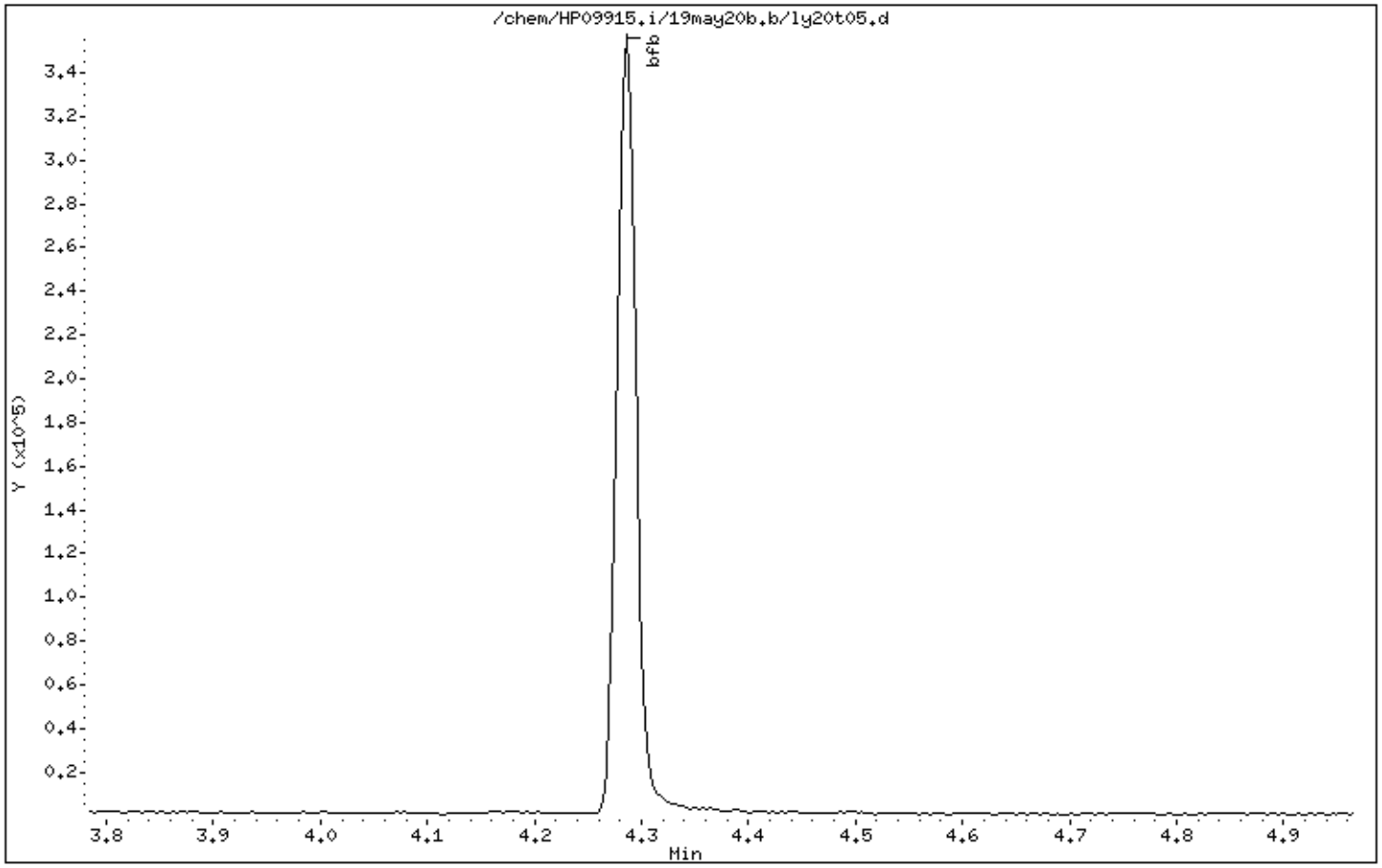
Instrument: HP09915.i

Sample Info: feb05-19;50NGBFB;1;3;;;;;;

Operator: DVV10203

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Don V. Viray on 05/20/2019 at 19:15.
Target 3.5 esignature user ID: dvv10203

Data File: /chem/HP09915.i/19may20b.b/ly20t05.d

Date : 20-MAY-2019 19:10

Client ID: feb05-19

Instrument: HP09915.i

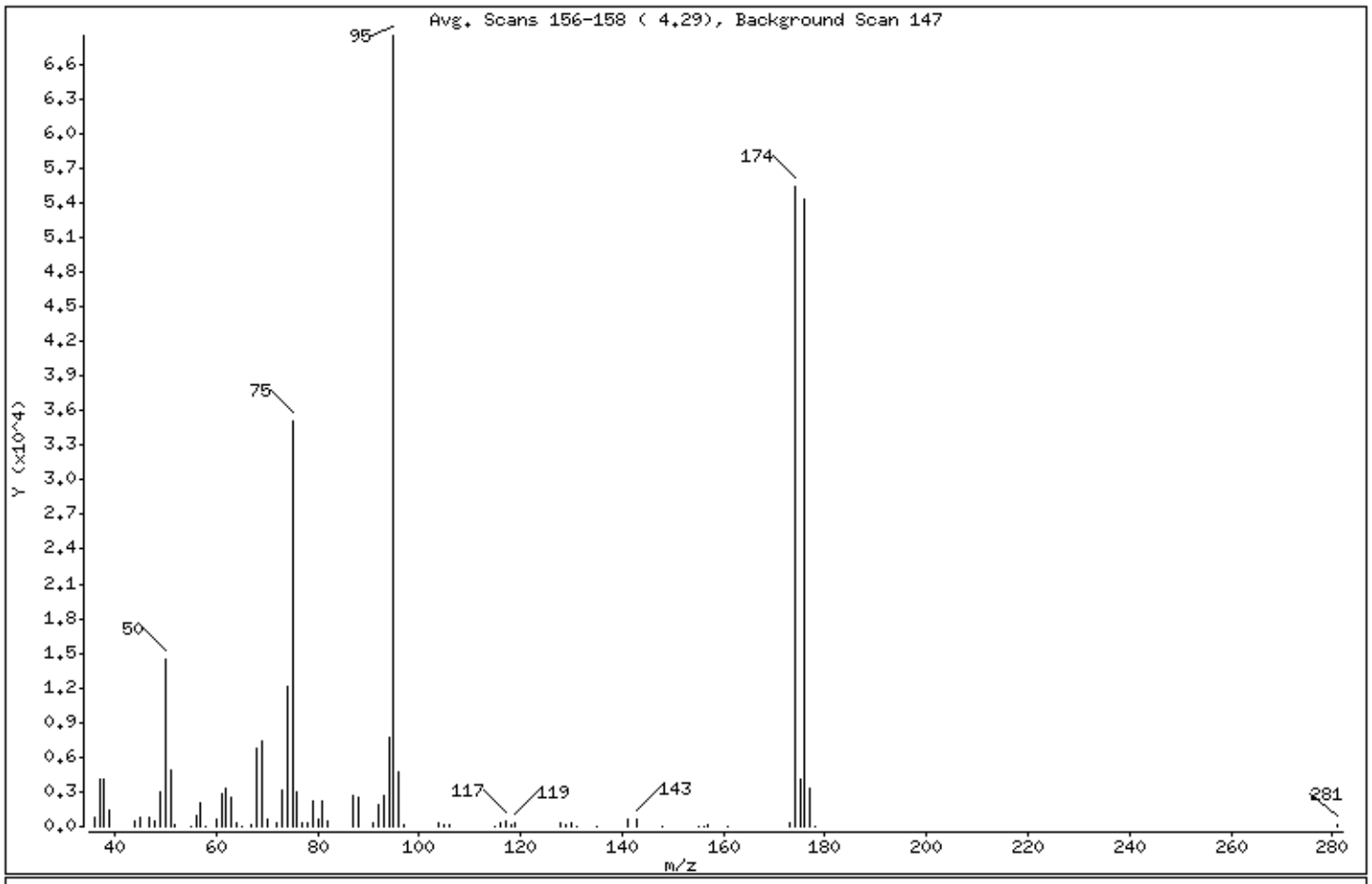
Sample Info: feb05-19;50NGBFB;1;3;;;;;;

Operator: DVV10203

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	21.06
75	30.00 - 60.00% of mass 95	51.28
96	5.00 - 9.00% of mass 95	6.93
173	Less than 2.00% of mass 174	0.57 (0.70)
174	50.00 - 100.00% of mass 95	80.86
175	5.00 - 9.00% of mass 174	6.06 (7.49)
176	95.00 - 101.00% of mass 174	79.20 (97.94)
177	5.00 - 9.00% of mass 176	4.84 (6.11)

Digitally signed by Don V. Viray on 05/20/2019 at 19:15.
Target 3.5 esignature user ID: dvv10203

Data File: /chem/HP09915.i/19may20b.b/ly20t05.d

Date : 20-MAY-2019 19:10

Client ID: feb05-19

Instrument: HP09915.i

Sample Info: feb05-19;50NGBFB;1;3;;;;;;

Operator: DVV10203

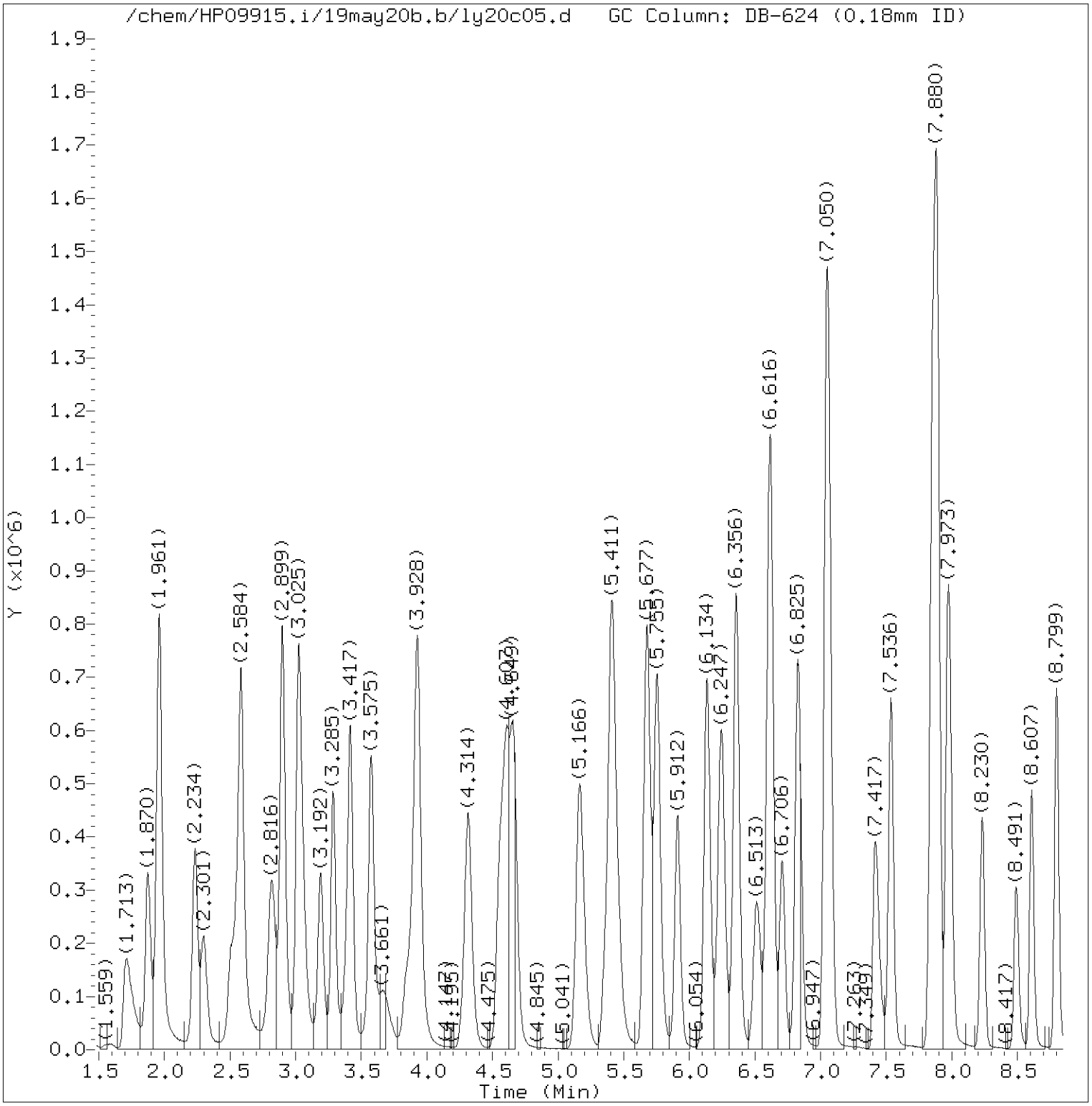
Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: ly20t05.d
Spectrum: Avg. Scans 156-158 (4.29), Background Scan 147
Location of Maximum: 95.00
Number of points: 73

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	728	63.00	2584	88.00	2453	131.00	57
37.00	4148	64.00	271	91.00	237	135.00	56
38.00	4020	65.00	58	92.00	1912	141.00	585
39.00	1426	67.00	138	93.00	2710	143.00	597
44.00	457	68.00	6821	94.00	7663	148.00	78
45.00	850	69.00	7336	95.00	68456	155.00	77
47.00	853	70.00	665	96.00	4744	156.00	59
48.00	418	72.00	311	97.00	128	157.00	115
49.00	3067	73.00	3208	104.00	262	161.00	52
50.00	14417	74.00	12164	105.00	225	173.00	388
51.00	4910	75.00	35104	106.00	215	174.00	55360
52.00	134	76.00	3028	115.00	56	175.00	4147
55.00	68	77.00	359	116.00	241	176.00	54216
56.00	990	78.00	306	117.00	454	177.00	3312
57.00	2124	79.00	2130	118.00	229	178.00	61
58.00	72	80.00	640	119.00	286	281.00	123
60.00	594	81.00	2198	128.00	263		
61.00	2909	82.00	435	129.00	120		
62.00	3371	87.00	2633	130.00	242		

Digitally signed by Don V. Viray on 05/20/2019 at 19:15.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

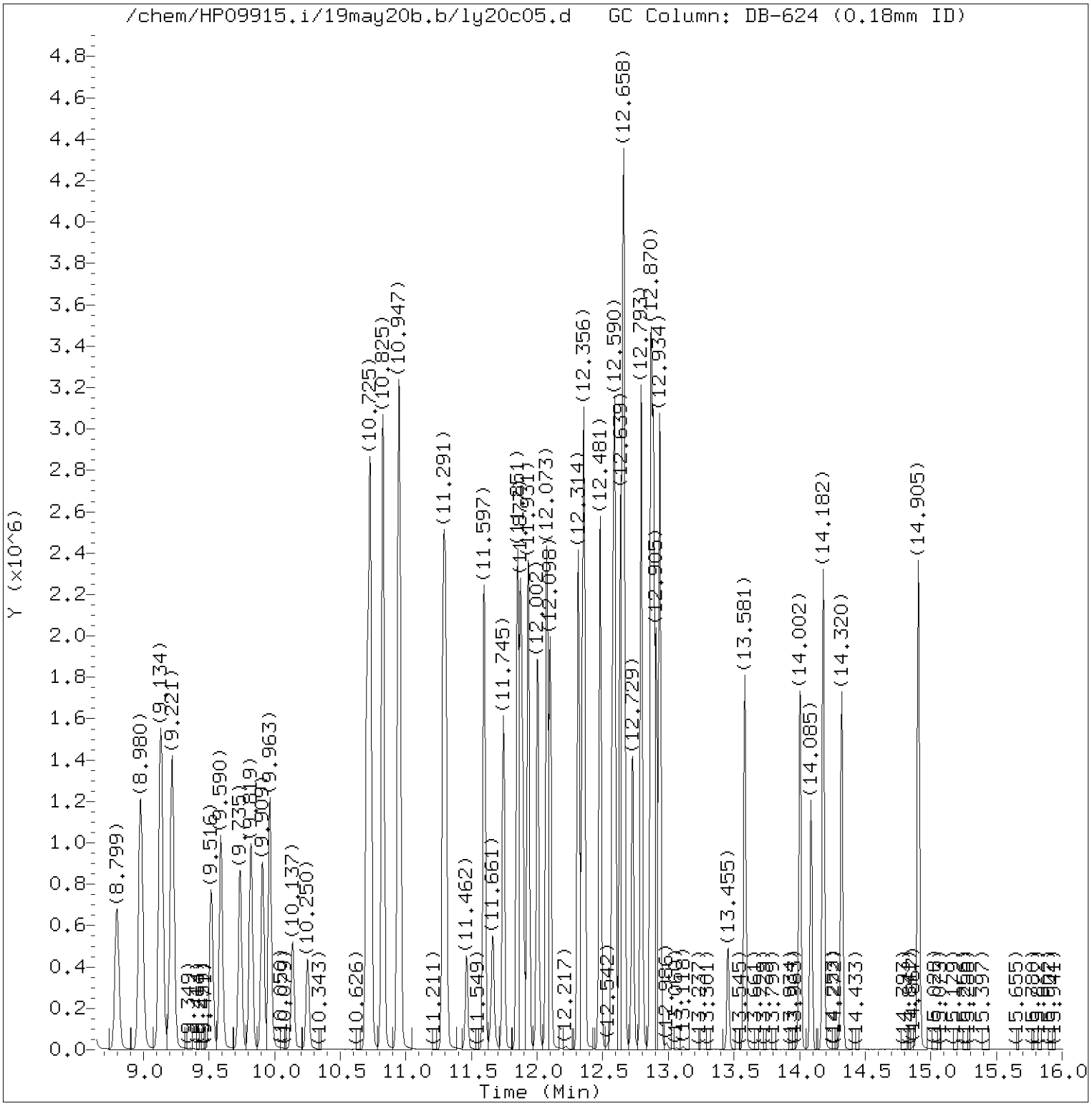
Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20c05.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 19:47 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 20:11 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Don V. Viray
on 05/20/2019 at 20:12.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20c05.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 19:47 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 20:11 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Don V. Viray
on 05/20/2019 at 20:12.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20c05.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 19:47 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 20:11 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.713	85	540989	44.581
4) Chloromethane	(2)	1.870	50	567791	50.526
5) 1,3-Butadiene	(2)	1.961	39	436344	73.903
6) Vinyl Chloride	(2)	1.967	62	524695	47.661
8) Bromomethane	(2)	2.234	94	422247	44.086
9) Chloroethane	(2)	2.301	64	302226	47.219
12) Trichlorofluoromethane	(2)	2.555	101	626792	43.619
11) n-Pentane	(2)	2.588	43	592278	66.849
15) Freon 123a	(2)	2.816	67	351588	43.581
16) Acrolein	(1)	2.899	56	1102620	504.800
17) 1,1-Dichloroethene	(2)	3.022	96	246131	51.623
17) 1,1-Dichloroethene	(2)	3.022	63	133070	50.635
18) Acetone	(1)	3.034	58	102569	109.834
19) Freon 113	(2)	3.047	101	259185	51.166
21) 2-Propanol	(1)	3.169	45	173339	277.668
22) Methyl Iodide	(2)	3.192	142	496442	49.121
23) Carbon Disulfide	(2)	3.288	76	960565	59.518
27) Methyl Acetate	(2)	3.388	43	390736	54.587
25) Allyl Chloride	(2)	3.420	41	549687	53.877
29)*t-Butyl alcohol-d10	(1)	3.568	65	279941M	250.000
28) Methylene Chloride	(2)	3.575	84	305357	51.432
30) t-Butyl alcohol	(1)	3.681	59	277864	240.320
31) Acrylonitrile	(2)	3.841	53	205265	54.823
33) Methyl Tertiary Butyl Ether	(2)	3.909	73	879017	46.580
32) trans-1,2-Dichloroethene	(2)	3.932	96	287903	50.393
34) n-Hexane	(2)	4.311	57	456013	59.203
36) 1,1-Dichloroethane	(2)	4.552	63	556752	51.592
38) di-Isopropyl ether	(2)	4.607	45	1141722	55.958
39) 2-Chloro-1,3-butadiene	(2)	4.665	53	521988	51.610
40) Ethyl t-butyl ether	(2)	5.166	59	913473	46.591
44) 2-Butanone	(2)	5.369	43	555458	107.386
42) cis-1,2-Dichloroethene	(2)	5.407	96	325058	49.284
45) 2,2-Dichloropropane	(2)	5.423	77	373887	40.685
47) Propionitrile	(1)	5.452	54	415273	307.116
48) Methacrylonitrile	(2)	5.674	67	521520	134.893
50) Tetrahydrofuran	(1)	5.755	71	135308	104.602
49) Bromochloromethane	(2)	5.755	128	177178	46.912
51) Chloroform	(2)	5.912	83	521091	48.050

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 05/20/2019 at 20:12.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20c05.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 19:47 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 20:11 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
52)$Dibromofluoromethane	(2)	6.134	113	343290	47.826
52)$Dibromofluoromethane	(2)	6.131	111	350993	47.728
53) 1,1,1-Trichloroethane	(2)	6.140	97	411010	44.188
43) 1,2-Dichloroethene (Total)	(2)		96	612961	99.677
54) Cyclohexane	(2)	6.247	56	544311	54.153
54) Cyclohexane	(2)	6.243	84	422225	49.451
54) Cyclohexane	(2)	6.247	69	154055	50.289
55) 1,1-Dichloropropene	(2)	6.356	75	415269	49.878
56) Carbon Tetrachloride	(2)	6.359	117	339841	44.496
58) Isobutyl Alcohol	(1)	6.510	41	276182	723.812
57)$1,2-Dichloroethane-d4	(2)	6.597	102	85570	50.863
57)$1,2-Dichloroethane-d4	(2)	6.597	65	446515	47.417
57)$1,2-Dichloroethane-d4	(2)	6.600	104	53639	49.920
60) Benzene	(2)	6.620	78	1250054	52.155
61) 1,2-Dichloroethane	(2)	6.710	62	435705	45.316
61) 1,2-Dichloroethane	(2)	6.710	98	36789	62.533
65) t-Amyl methyl ether	(2)	6.825	73	882516	45.291
66)*Fluorobenzene	(2)	7.041	96	1396207	50.000
67) n-Heptane	(2)	7.063	43	536648	61.904
69) n-Butanol	(1)	7.420	56	406696	1472.787
71) Trichloroethene	(2)	7.536	95	308517	47.769
72) Methylcyclohexane	(2)	7.851	83	585552	52.656
72) Methylcyclohexane	(2)	7.851	98	262134	50.655
73) 1,2-Dichloropropane	(2)	7.877	63	343527	52.666
75) 1,4-Dioxane	(1)	7.967	88	63630M	875.002
76) Methyl Methacrylate	(2)	7.967	69	323908	51.460
74) Dibromomethane	(2)	7.986	93	215603	47.799
78) Bromodichloromethane	(2)	8.230	83	381014	48.951
79) 2-Nitropropane	(2)	8.491	41	244910	90.730
80) 2-Chloroethyl Vinyl Ether	(2)	8.607	63	278024	53.029
81) cis-1,3-Dichloropropene	(2)	8.799	75	493940	50.342
82) 4-Methyl-2-pentanone	(2)	8.980	43	1172571	107.455
83)$Toluene-d8	(3)	9.134	98	1372077	59.237
83)$Toluene-d8	(3)	9.134	100	891521	59.586
88) Toluene	(3)	9.221	92	754881	58.827
89) trans-1,3-Dichloropropene	(3)	9.516	75	457031	59.707
91) Ethyl Methacrylate	(3)	9.590	69	569084	63.288
92) 1,1,2-Trichloroethane	(3)	9.735	97	296908	61.197

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/20/2019 at 20:12.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20c05.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 19:47 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 20:11 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Tetrachloroethene	(3)	9.822	166	315486	56.529
94) 1,3-Dichloropropane	(3)	9.909	76	524587	61.333
96) 2-Hexanone	(3)	9.963	43	855128	129.553
90) 1,3-Dichloropropene (total)	(3)		100	950971	110.049
97) Dibromochloromethane	(3)	10.137	129	279579	55.836
99) 1,2-Dibromoethane	(3)	10.250	107	306347	55.538
100)*Chlorobenzene-d5	(3)	10.703	117	900033	50.000
101) 1-Chlorohexane	(3)	10.725	91	364717	47.642
102) Chlorobenzene	(3)	10.732	112	734782	47.601
103) 1,1,1,2-Tetrachloroethane	(3)	10.822	131	251200	48.553
104) Ethylbenzene	(3)	10.825	91	1326484	51.031
106) m+p-Xylene	(3)	10.947	106	1012557	99.050
107) o-Xylene	(3)	11.285	106	494549	48.924
109) Styrene	(3)	11.304	104	843765	49.778
110) Bromoform	(3)	11.462	173	177739	43.337
111) Isopropylbenzene	(3)	11.597	105	1276112	49.335
112) Cyclohexanone	(1)	11.661	55	207052	715.486
114)$4-Bromofluorobenzene	(3)	11.745	95	440396	49.133
114)$4-Bromofluorobenzene	(3)	11.745	174	368555	50.628
108) Xylene (Total)	(3)		106	1507106	147.974
116) 1,1,2,2-Tetrachloroethane	(4)	11.848	83	456117	53.062
115) Bromobenzene	(4)	11.854	156	327694	47.619
118) trans-1,4-Dichloro-2-butene	(4)	11.873	53	352825	127.884
117) 1,2,3-Trichloropropane	(4)	11.889	110	127502	48.725
119) n-Propylbenzene	(4)	11.931	91	1545199	50.857
120) 2-Chlorotoluene	(4)	12.005	126	299282	46.541
122) 1,3,5-Trimethylbenzene	(4)	12.073	105	1113403	48.946
121) 4-Chlorotoluene	(4)	12.102	126	314760	46.540
124) tert-Butylbenzene	(4)	12.314	134	227100M	42.544
125) Pentachloroethane	(4)	12.346	167	198116	47.927
126) 1,2,4-Trimethylbenzene	(4)	12.359	105	1165172	49.000
127) sec-Butylbenzene	(4)	12.481	105	1409342	49.770
129) 1,3-Dichlorobenzene	(4)	12.577	146	622985	47.591
130) p-Isopropyltoluene	(4)	12.594	119	1238459	48.273
131)*1,4-Dichlorobenzene-d4	(4)	12.635	152	500499	50.000
133) 1,4-Dichlorobenzene	(4)	12.651	146	669166	48.135
134) 1,2,3-Trimethylbenzene	(4)	12.661	105	1357502	51.808
135) Benzyl Chloride	(4)	12.729	91	808516	46.722

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/20/2019 at 20:12.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20c05.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 19:47 Analyst ID: DVV10203

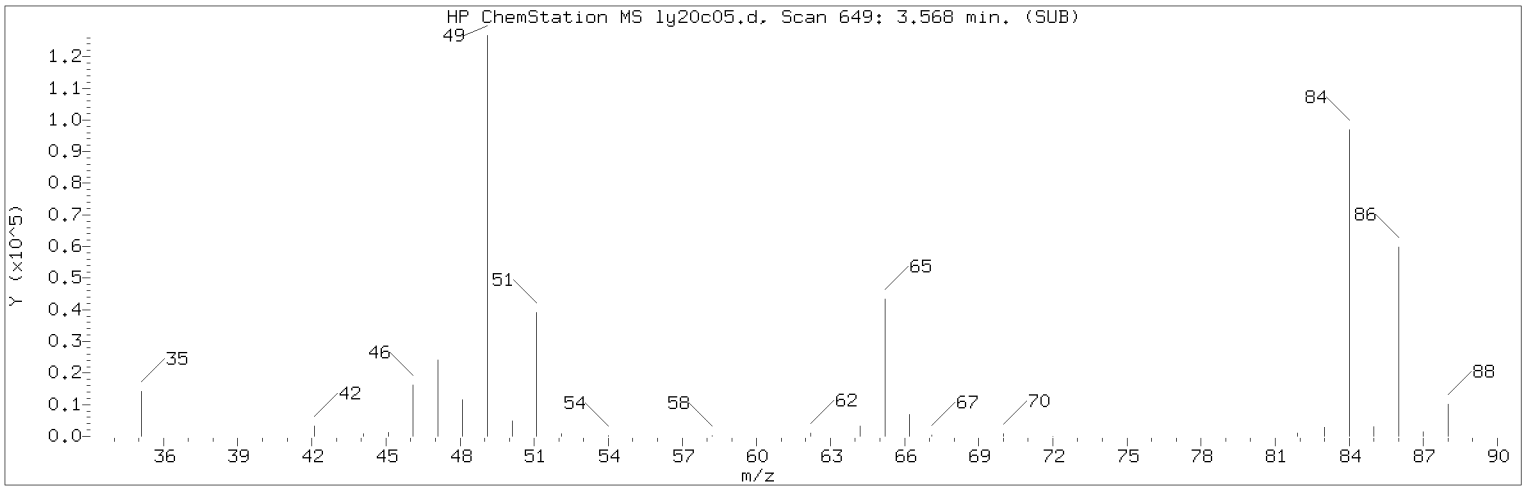
Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 20:11 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

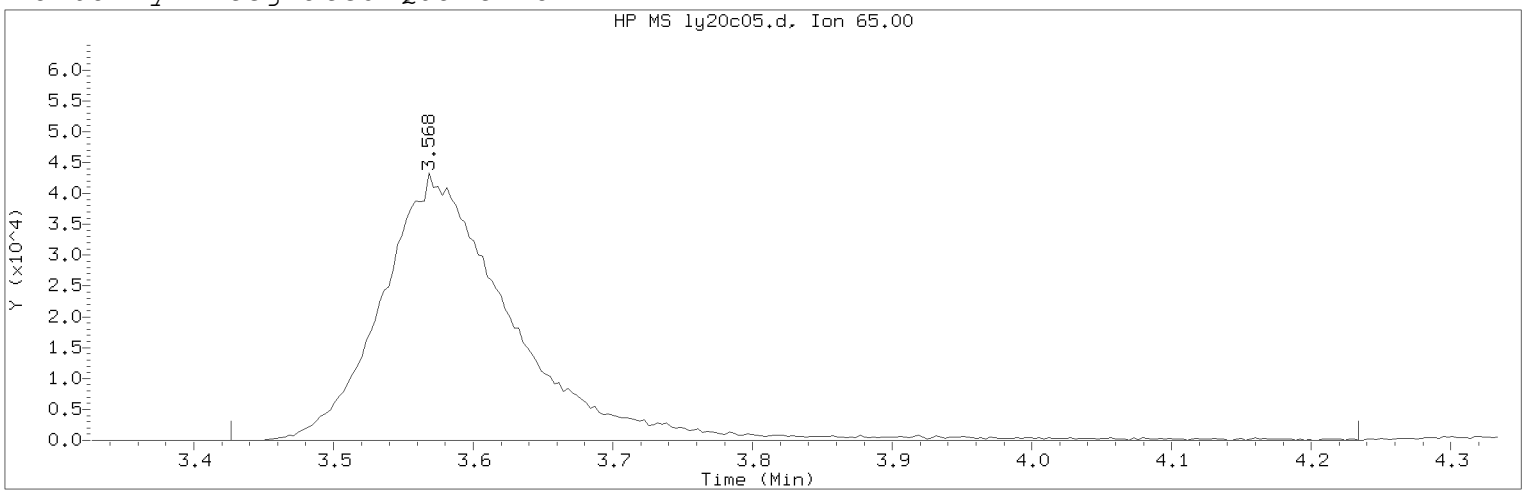
	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
136)	1,3-Diethylbenzene	(4)	12.793	119	812248	50.163
137)	1,4-Diethylbenzene	(4)	12.867	119	871209	49.754
139)	n-Butylbenzene	(4)	12.886	92	654126	50.229
138)	1,2-Dichlorobenzene	(4)	12.909	146	625074	47.852
140)	1,2-Diethylbenzene	(4)	12.934	119	683665	49.900
141)	Diethylbenzene (total)	(4)		100	2367122	149.817
142)	1,2-Dibromo-3-chloropropane	(4)	13.452	75	94924	49.076
144)	1,3,5-Trichlorobenzene	(4)	13.584	180	450344	44.821
146)	1,2,4-Trichlorobenzene	(4)	14.002	180	424598	44.255
147)	Hexachlorobutadiene	(4)	14.089	225	171419	44.606
148)	Naphthalene	(4)	14.182	128	1448479	47.558
149)	1,2,3-Trichlorobenzene	(4)	14.323	180	419082	45.812
150)	2-Methylnaphthalene	(4)	14.905	142	930095	50.130

Digitally signed by Don V. Viray
on 05/20/2019 at 20:12.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19may20b.b/ly20c05.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 19:47 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 20:11 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

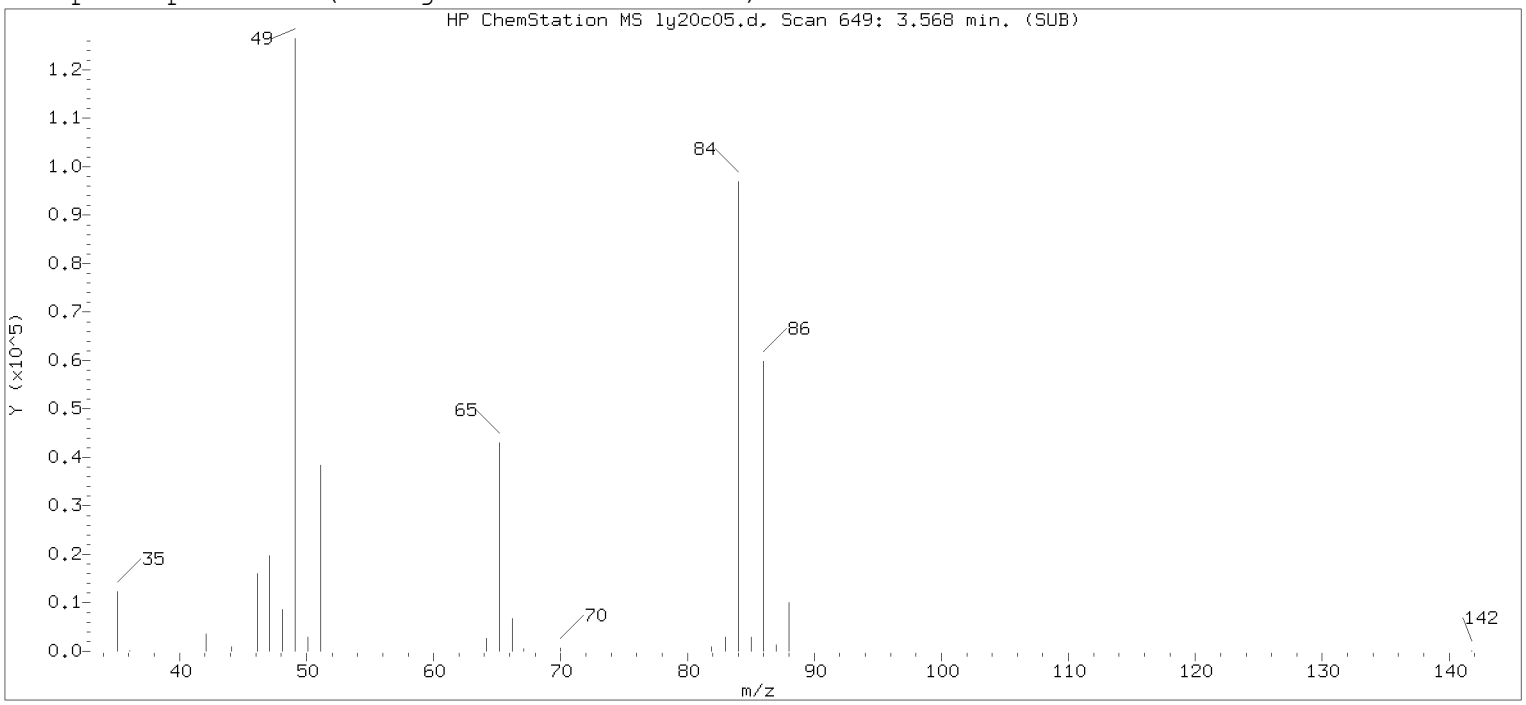
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 649
Retention Time (minutes): 3.568
Quant Ion : 65.00
Area (flag) : 279941M
On-Column Amount (ng) : 250.0000
Integration start scan : 604 Integration stop scan: 855
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

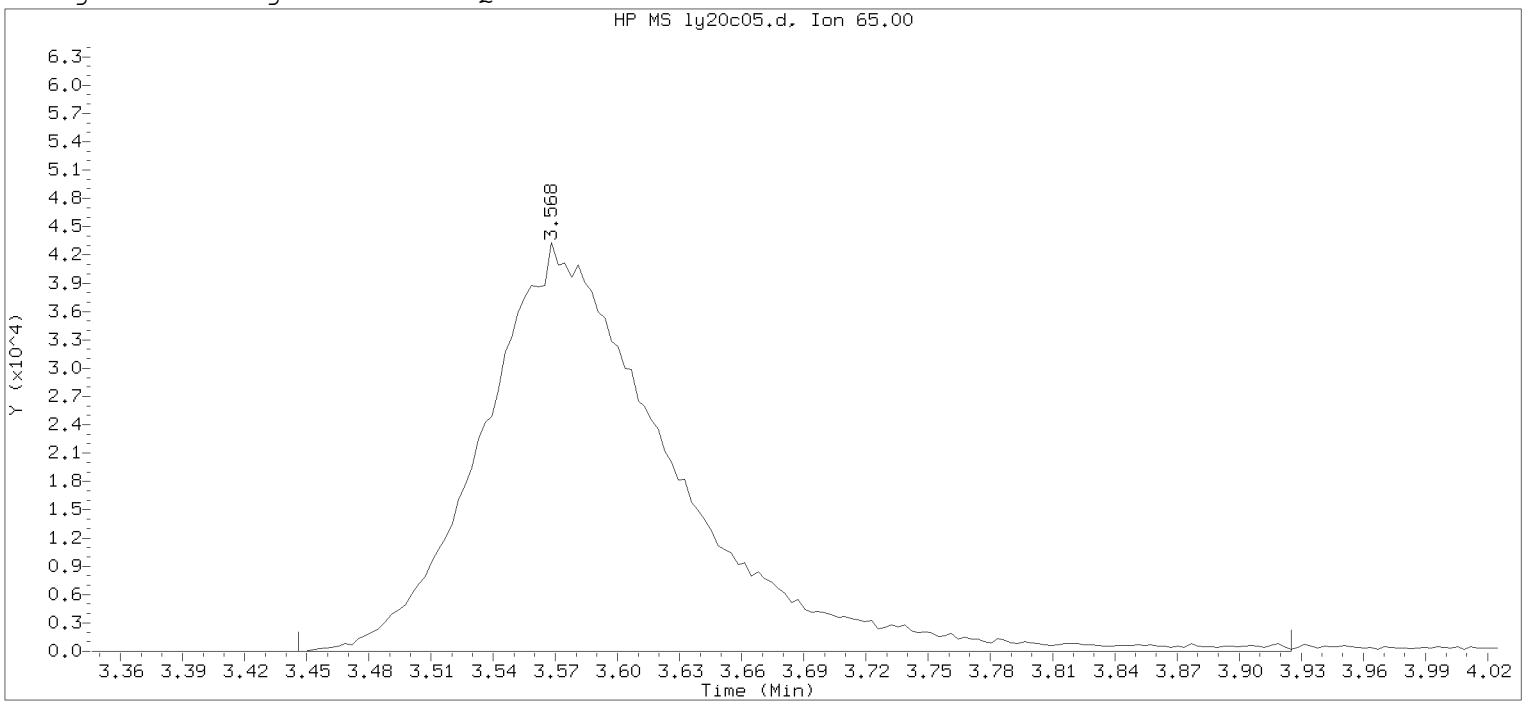
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/20/2019 at 20:12.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/21/2019 at 11:36.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19may20b.b/ly20c05.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 19:47 Analyst ID: DVV10203

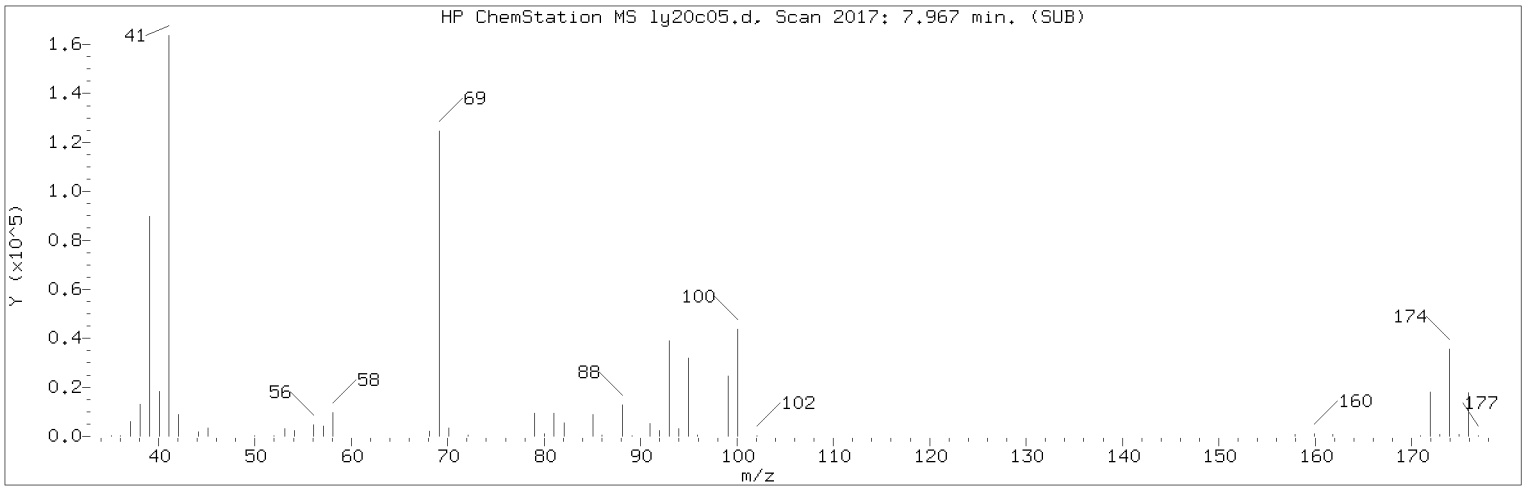
Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 20:05 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

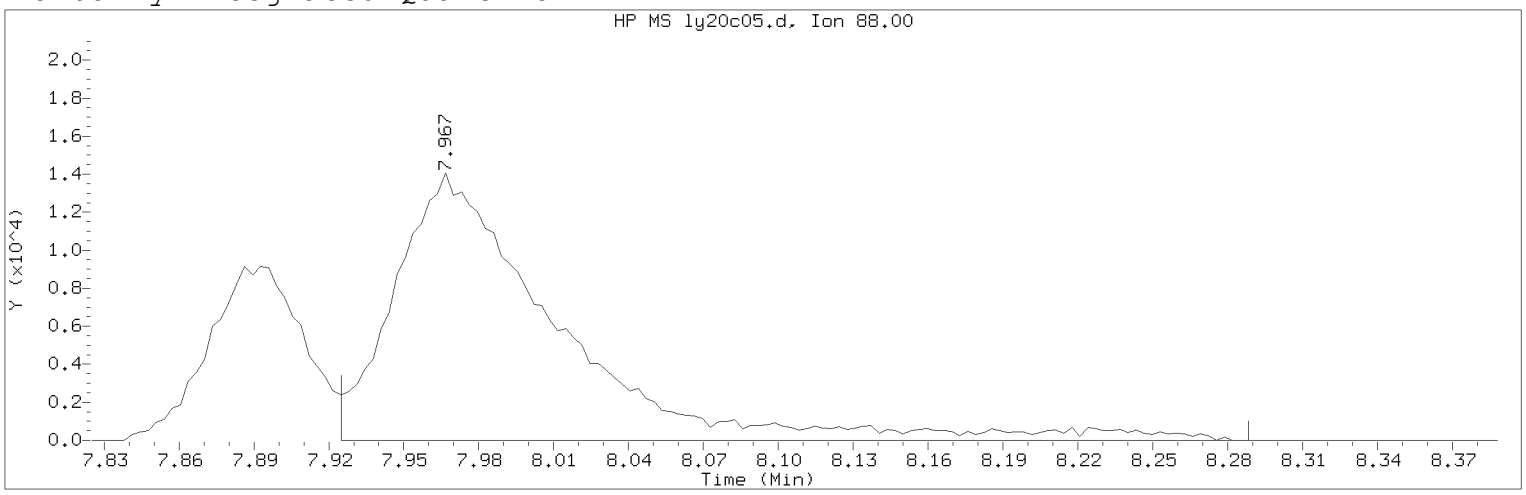
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 649
Retention Time (minutes): 3.568
Quant Ion : 65.00
Area : 274955
On-column Amount (ng) : 250.0000
Integration start scan : 610 Integration stop scan: 759
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/20/2019 at 20:12.
Target 3.5 esignature user id: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19may20b.b/ly20c05.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 19:47 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 20:11 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

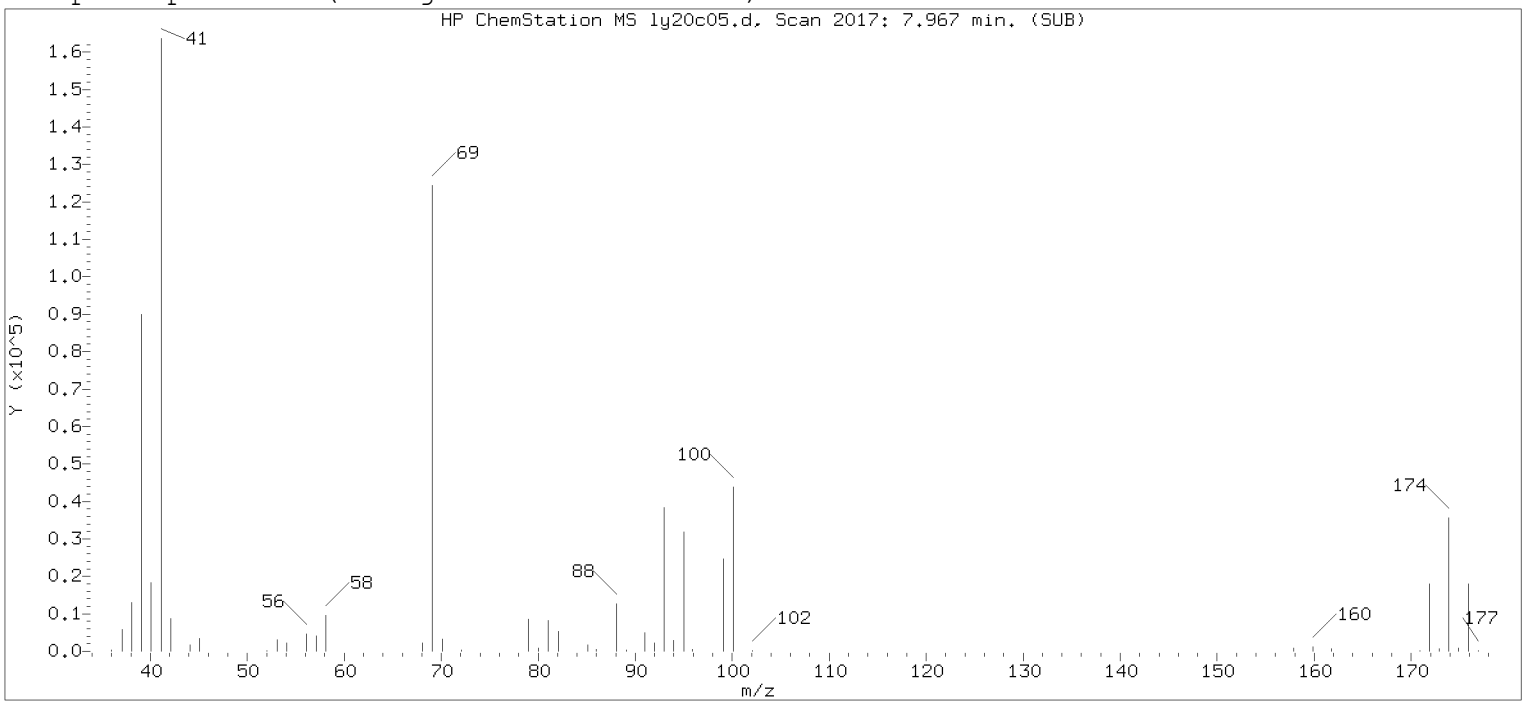
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2017
Retention Time (minutes): 7.967
Quant Ion : 88.00
Area (flag) : 63630M
On-Column Amount (ng) : 875.0024
Integration start scan : 2003 Integration stop scan: 2116
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

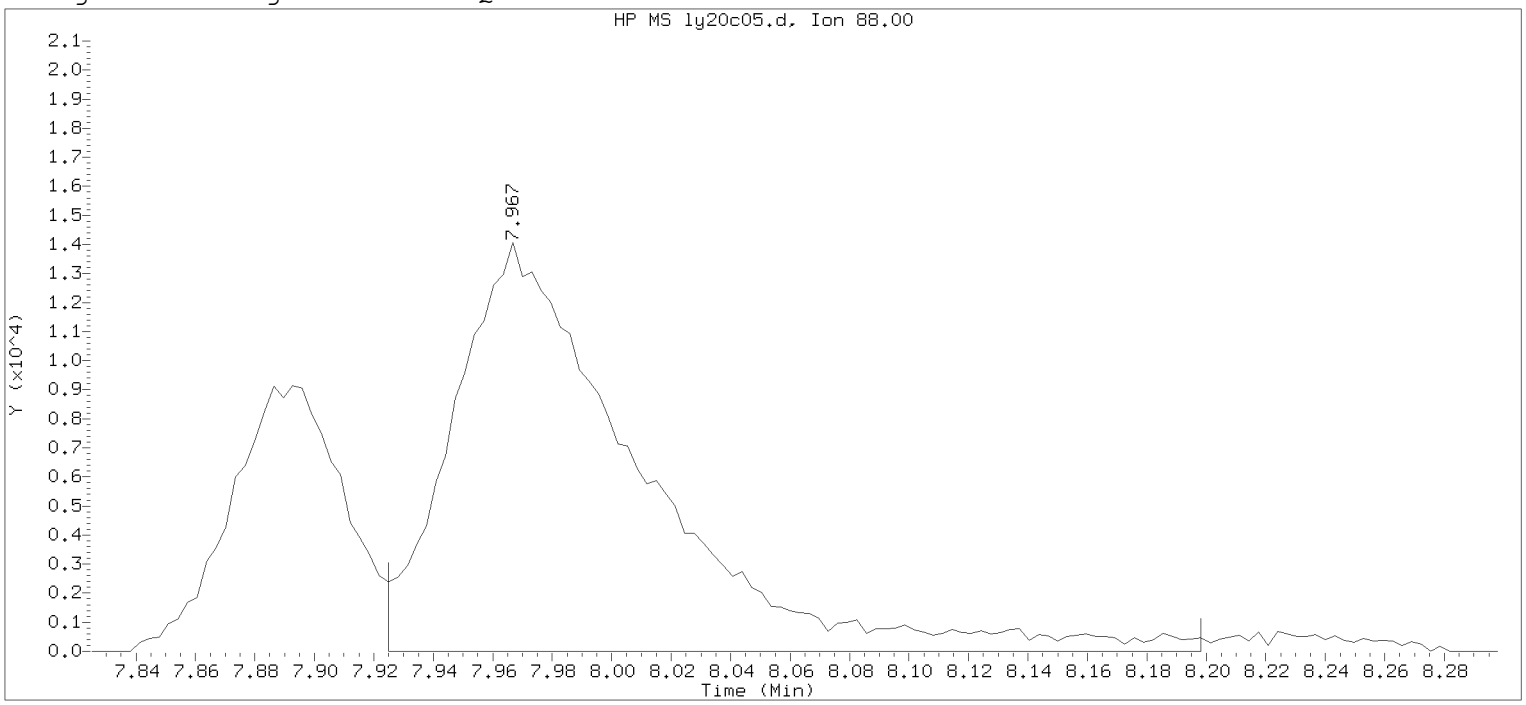
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/20/2019 at 20:12.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/21/2019 at 11:36.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19may20b.b/ly20c05.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 19:47 Analyst ID: DVV10203

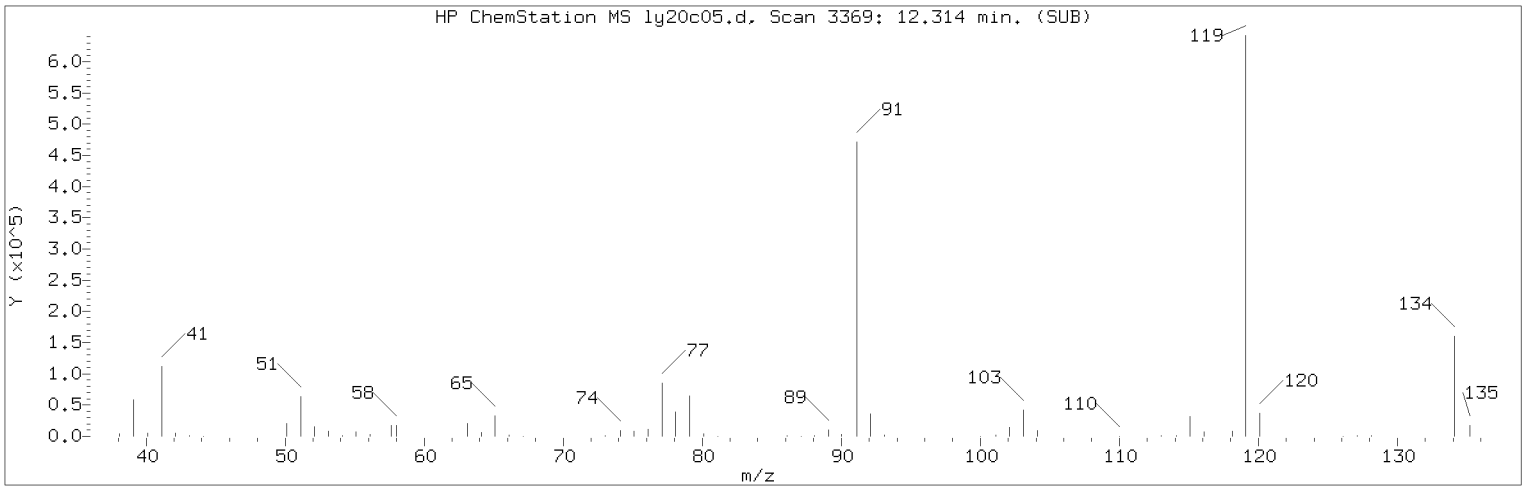
Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 20:05 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

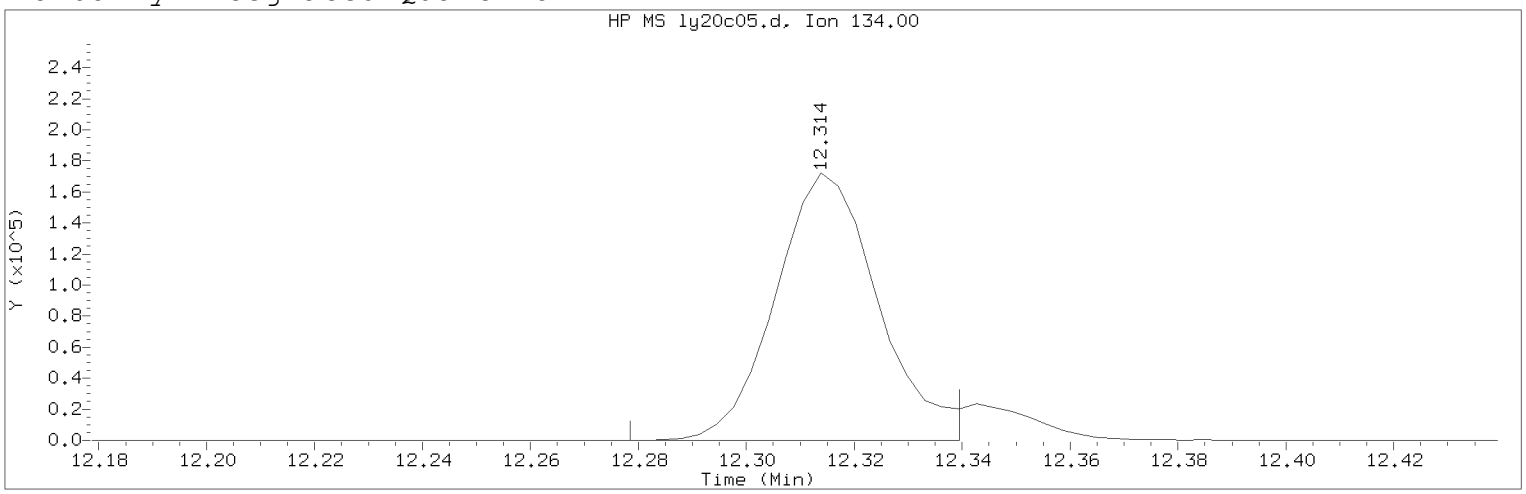
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2017
Retention Time (minutes): 7.967
Quant Ion : 88.00
Area : 61441
On-column Amount (ng) : 860.2090
Integration start scan : 2003 Integration stop scan: 2088
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/20/2019 at 20:12.
Target 3.5 esignature user id: dvviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19may20b.b/ly20c05.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 19:47 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 20:11 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

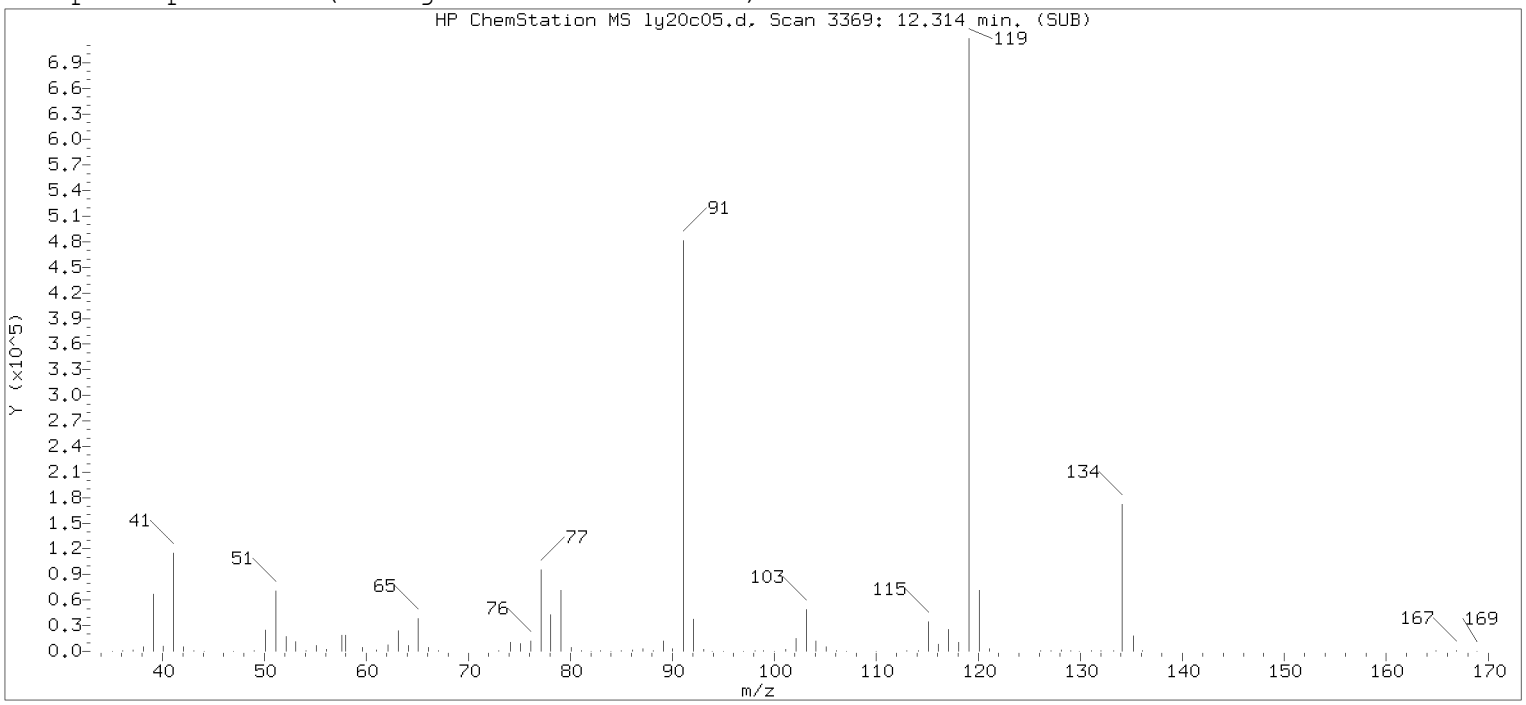
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3369
Retention Time (minutes): 12.314
Quant Ion : 134.00
Area (flag) : 227100M
On-Column Amount (ng) : 42.5445
Integration start scan : 3357 Integration stop scan: 3376
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

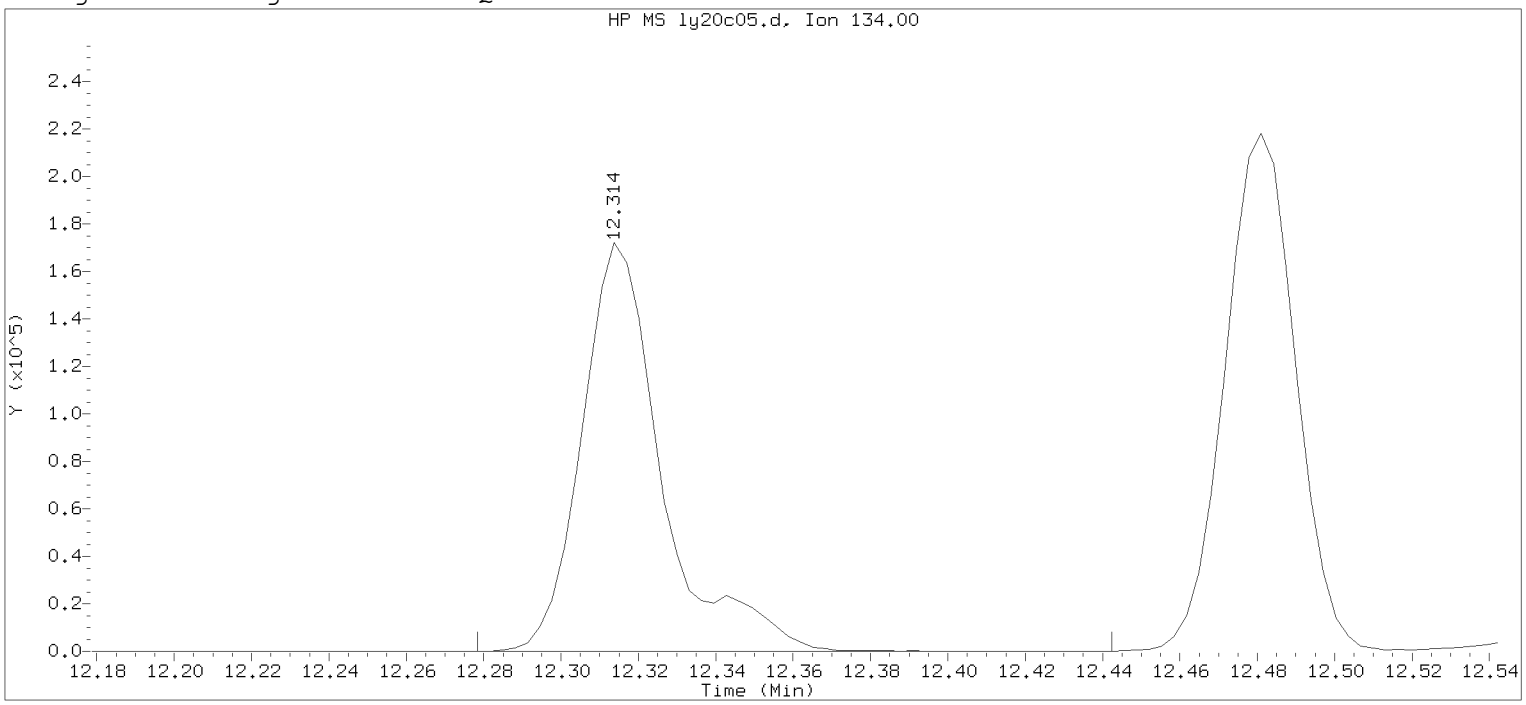
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/20/2019 at 20:12.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/21/2019 at 11:36.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19may20b.b/ly20c05.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 19:47 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 20:05 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3369
Retention Time (minutes): 12.314
Quant Ion : 134.00
Area : 246897
On-column Amount (ng) : 46.2530
Integration start scan : 3357 Integration stop scan: 3408
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/20/2019 at 20:12.
Target 3.5 esignature user id: dviray

Data File: /chem2/HP09137.i/19feb19i.b/wf19t01.d

Date : 19-FEB-2019 11:32

Client ID: FEB05-19

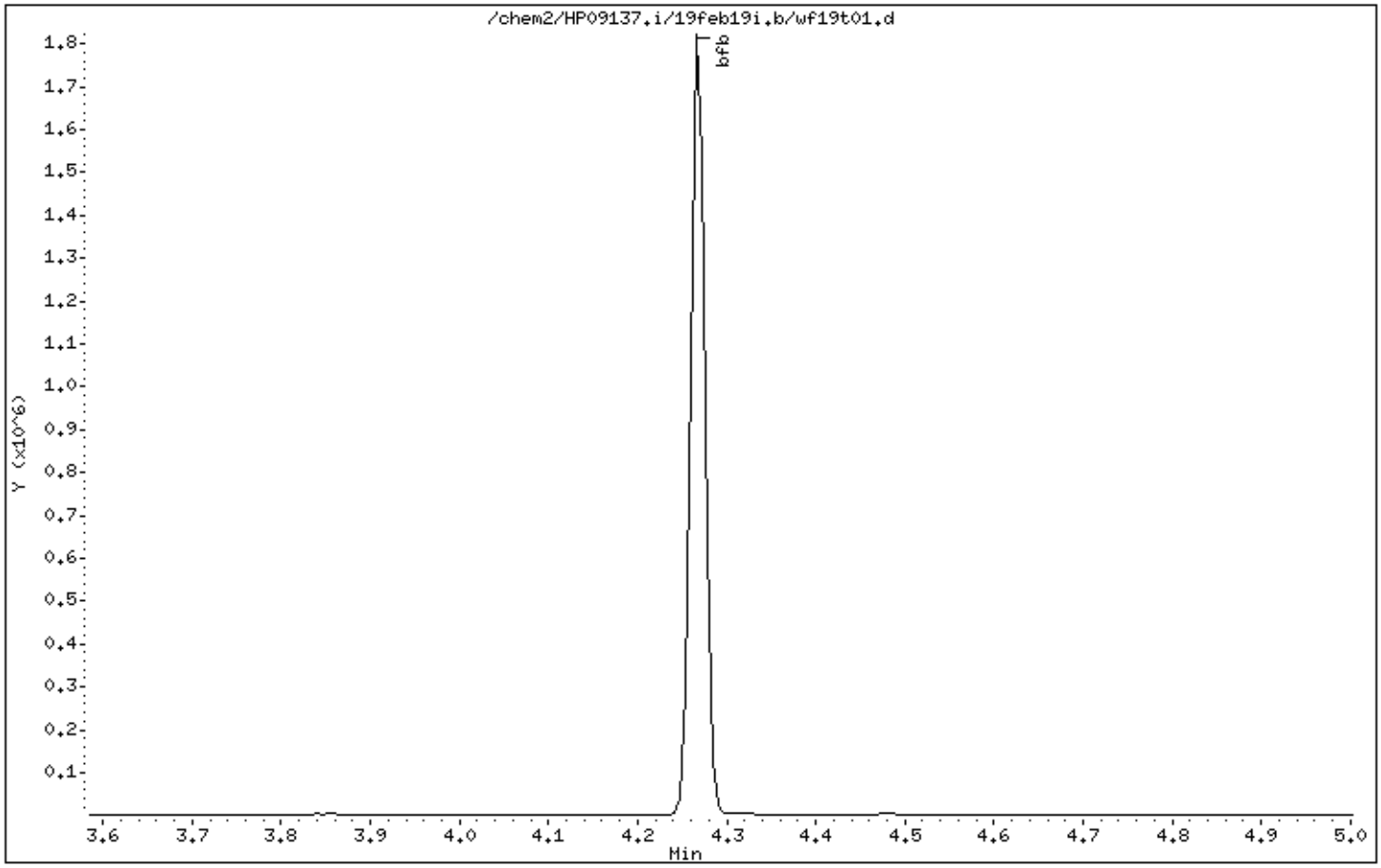
Instrument: HP09137.i

Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: DB-624

Column diameter: 0.18



Digitally signed by Abigail P. Roselli on 02/20/2019 at 07:15.
Target 3.5 esignature user ID: apr27582

Data File: /chem2/HP09137.i/19feb19i.b/wf19t01.d

Date : 19-FEB-2019 11:32

Client ID: FEB05-19

Instrument: HP09137.i

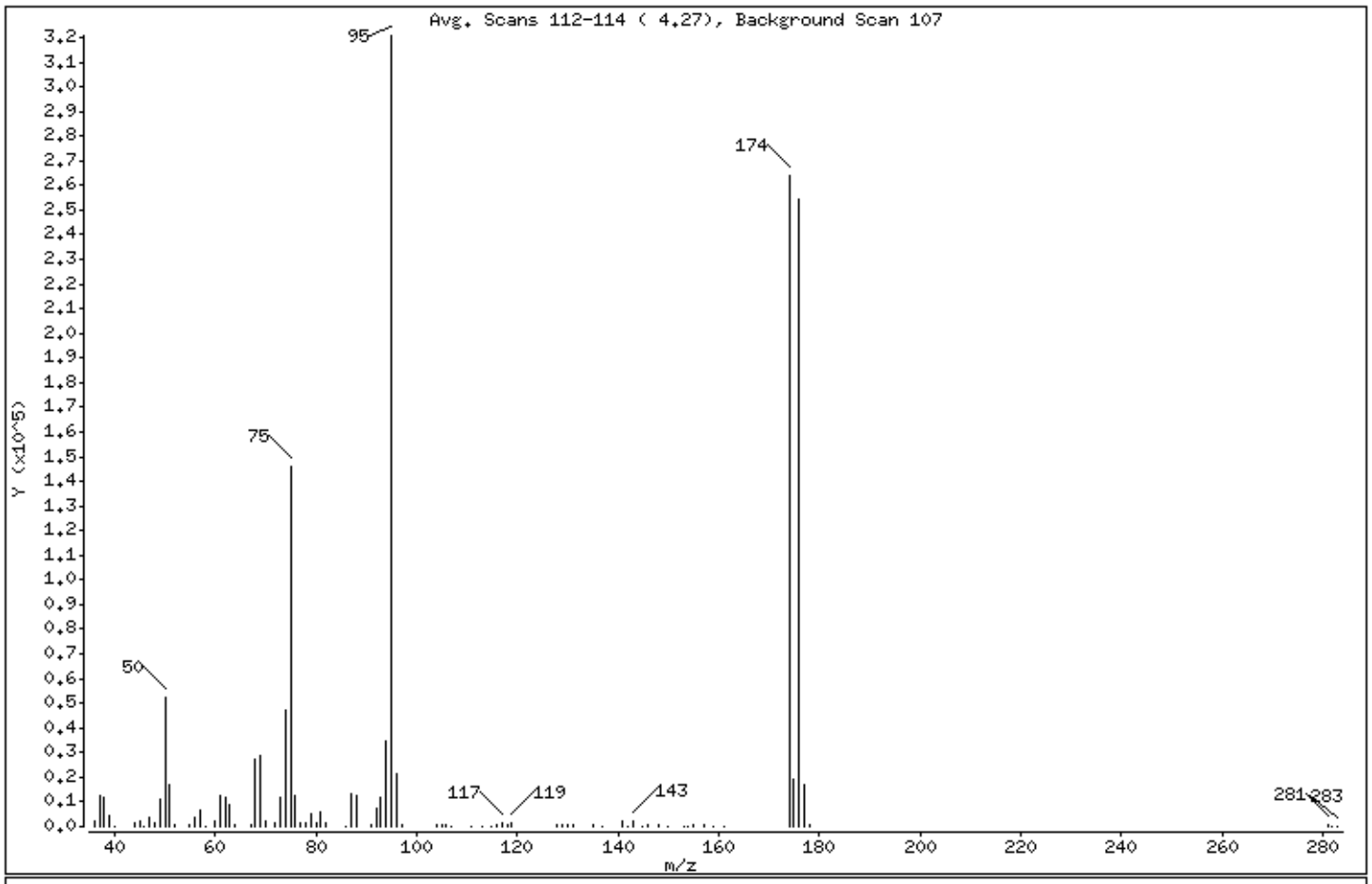
Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.42
75	30.00 - 60.00% of mass 95	45.48
96	5.00 - 9.00% of mass 95	6.75
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	82.25
175	5.00 - 9.00% of mass 174	5.88 (7.14)
176	95.00 - 101.00% of mass 174	79.33 (96.46)
177	5.00 - 9.00% of mass 176	5.24 (6.60)

Digitally signed by Abigail P. Roselli on 02/20/2019 at 07:15.
Target 3.5 esignature user ID: apr27582

Data File: /chem2/HP09137.i/19feb19i.b/wf19t01.d

Date : 19-FEB-2019 11:32

Client ID: FEB05-19 Instrument: HP09137.i

Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: DB-624 Column diameter: 0.18

Data File: wf19t01.d
Spectrum: Avg. Scans 112-114 (4.27), Background Scan 107
Location of Maximum: 95.00
Number of points: 86

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2356	64.00	874	94.00	34376	142.00	237
37.00	12838	67.00	749	95.00	320704	143.00	2536
38.00	11819	68.00	27600	96.00	21656	145.00	91
39.00	4563	69.00	28600	97.00	523	146.00	422
40.00	251	70.00	2130	104.00	986	148.00	700
44.00	1477	72.00	1518	105.00	386	150.00	200
45.00	2478	73.00	11806	106.00	927	153.00	196
46.00	111	74.00	47328	107.00	206	154.00	192
47.00	3965	75.00	145792	111.00	83	155.00	738
48.00	1623	76.00	12750	113.00	91	157.00	589
49.00	11149	77.00	1800	115.00	323	159.00	135
50.00	52656	78.00	1254	116.00	863	161.00	111
51.00	16816	79.00	5441	117.00	1520	174.00	263744
52.00	769	80.00	1674	118.00	967	175.00	18840
55.00	679	81.00	5606	119.00	1205	176.00	254400
56.00	3605	82.00	1114	128.00	1016	177.00	16800
57.00	6852	86.00	238	129.00	498	178.00	482
58.00	344	87.00	13069	130.00	1029	281.00	452
60.00	2409	88.00	12389	131.00	439	282.00	187
61.00	12379	91.00	929	135.00	476	283.00	87
62.00	12164	92.00	7681	137.00	303		
63.00	9186	93.00	11661	141.00	2259		

Digitally signed by Abigail P. Roselli on 02/20/2019 at 07:15.
Target 3.5 esignature user ID: apr27582

Data File: /chem2/HP09137.i/19feb20a.b/wf20t01.d

Page 1

Date : 20-FEB-2019 08:47

Client ID: FEB05-19

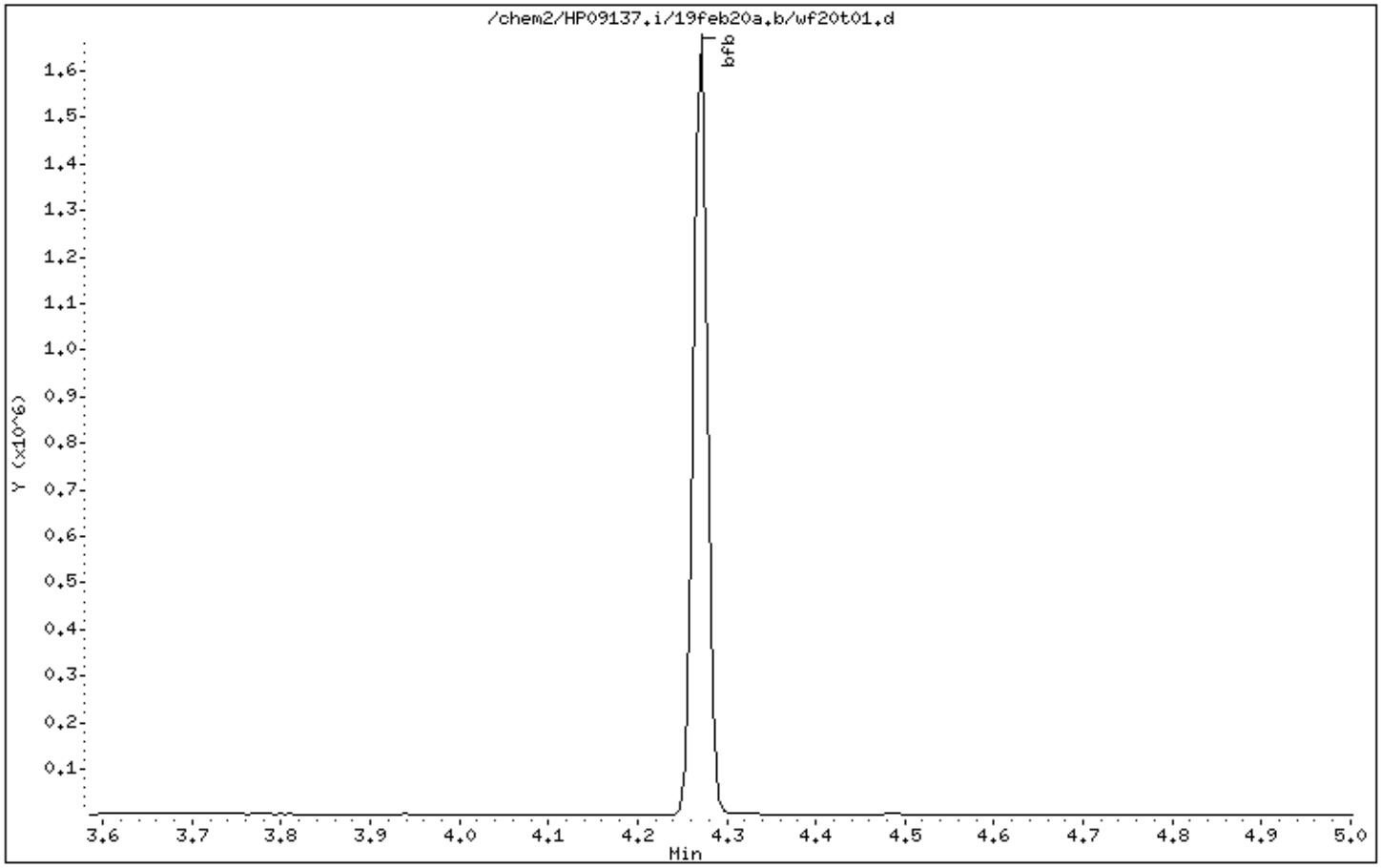
Instrument: HP09137.i

Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: DB-624

Column diameter: 0.18



Digitally signed by Abigail P. Roselli on 02/20/2019 at 08:52.
Target 3.5 esignature user ID: apr27582

Data File: /chem2/HP09137.i/19feb20a.b/wf20t01.d

Date : 20-FEB-2019 08:47

Client ID: FEB05-19

Instrument: HP09137.i

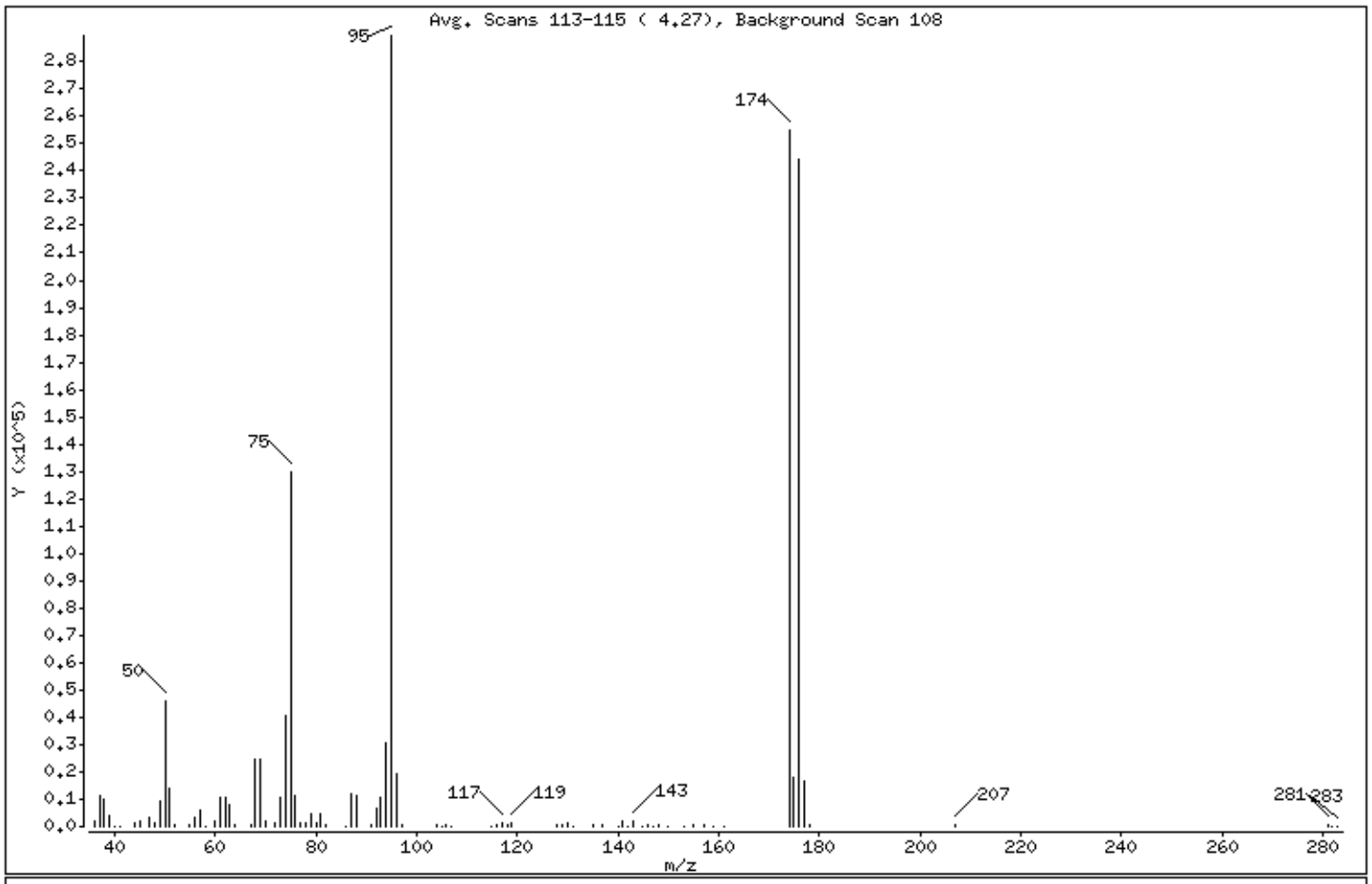
Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

Operator: apr27582

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.92
75	30.00 - 60.00% of mass 95	44.90
96	5.00 - 9.00% of mass 95	6.65
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	88.14
175	5.00 - 9.00% of mass 174	6.26 (7.10)
176	95.00 - 101.00% of mass 174	84.40 (95.75)
177	5.00 - 9.00% of mass 176	5.69 (6.75)

Digitally signed by Abigail P. Roselli on 02/20/2019 at 08:52.
Target 3.5 esignature user ID: apr27582

Date : 20-FEB-2019 08:47

Client ID: FEB05-19 Instrument: HP09137.i

Sample Info: FEB05-19;50NGBFB;1;3;;;;;;

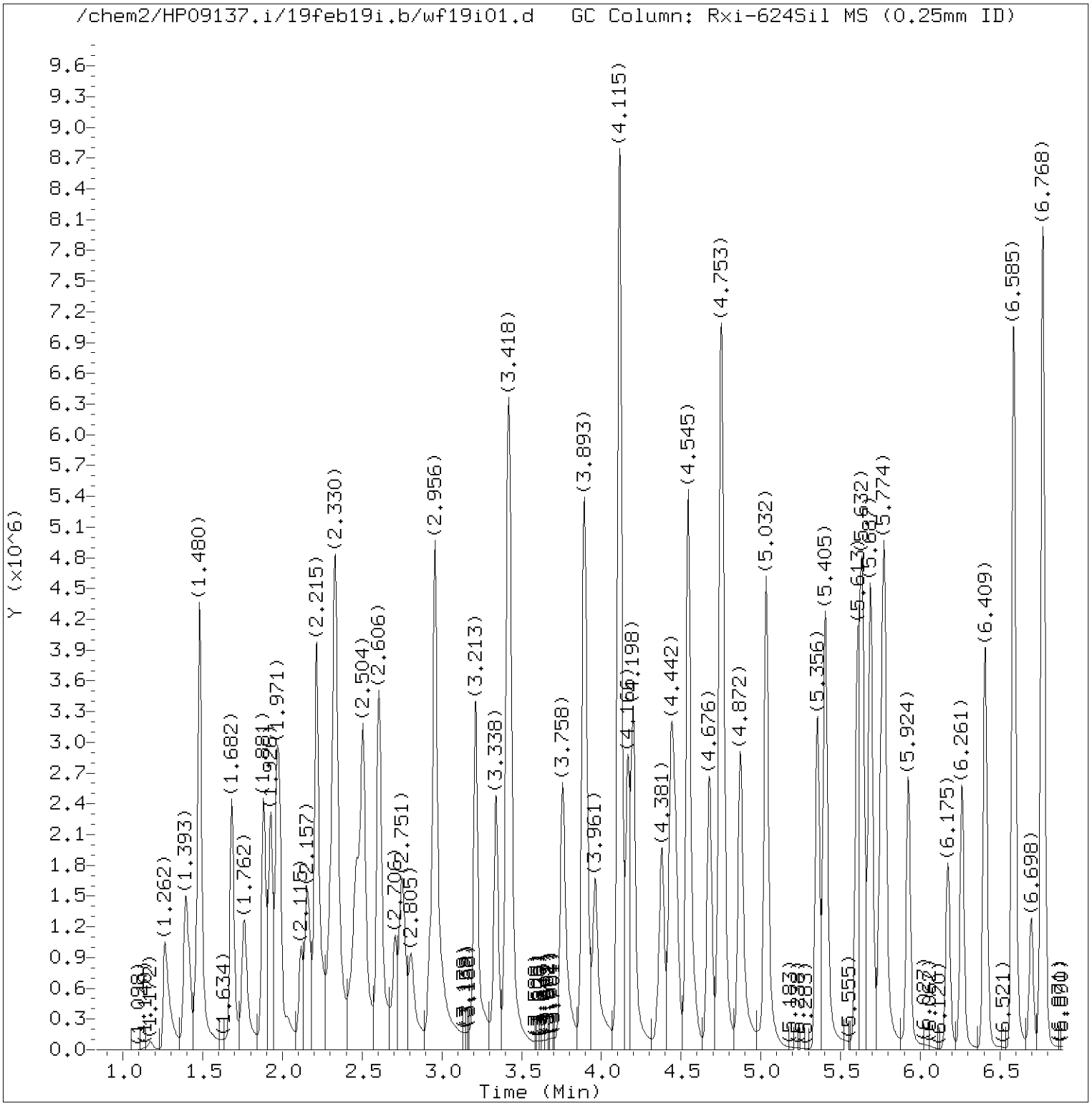
Operator: apr27582

Column phase: DB-624 Column diameter: 0.18

Data File: wf20t01.d
Spectrum: Avg. Scans 113-115 (4.27), Background Scan 108
Location of Maximum: 95.00
Number of points: 86

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2292	64.00	695	94.00	30424	143.00	2131
37.00	11519	67.00	726	95.00	289536	145.00	94
38.00	9778	68.00	24528	96.00	19248	146.00	357
39.00	4147	69.00	24696	97.00	419	147.00	91
40.00	149	70.00	1808	104.00	965	148.00	663
41.00	87	72.00	1344	105.00	326	150.00	173
44.00	1189	73.00	10669	106.00	967	153.00	101
45.00	1920	74.00	40824	107.00	84	155.00	589
47.00	3364	75.00	130008	115.00	92	157.00	513
48.00	1406	76.00	11448	116.00	835	159.00	90
49.00	9232	77.00	1437	117.00	1540	161.00	91
50.00	46088	78.00	1188	118.00	791	174.00	255168
51.00	14176	79.00	4689	119.00	1240	175.00	18112
52.00	576	80.00	1560	128.00	847	176.00	244352
55.00	691	81.00	4855	129.00	488	177.00	16480
56.00	3214	82.00	958	130.00	1039	178.00	430
57.00	5972	86.00	111	131.00	293	207.00	456
58.00	199	87.00	11697	135.00	469	281.00	512
60.00	2132	88.00	11140	137.00	365	282.00	331
61.00	10802	91.00	846	140.00	85	283.00	115
62.00	10922	92.00	6597	141.00	1968		
63.00	8073	93.00	10620	142.00	274		

Digitally signed by Abigail P. Roselli on 02/20/2019 at 08:52.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

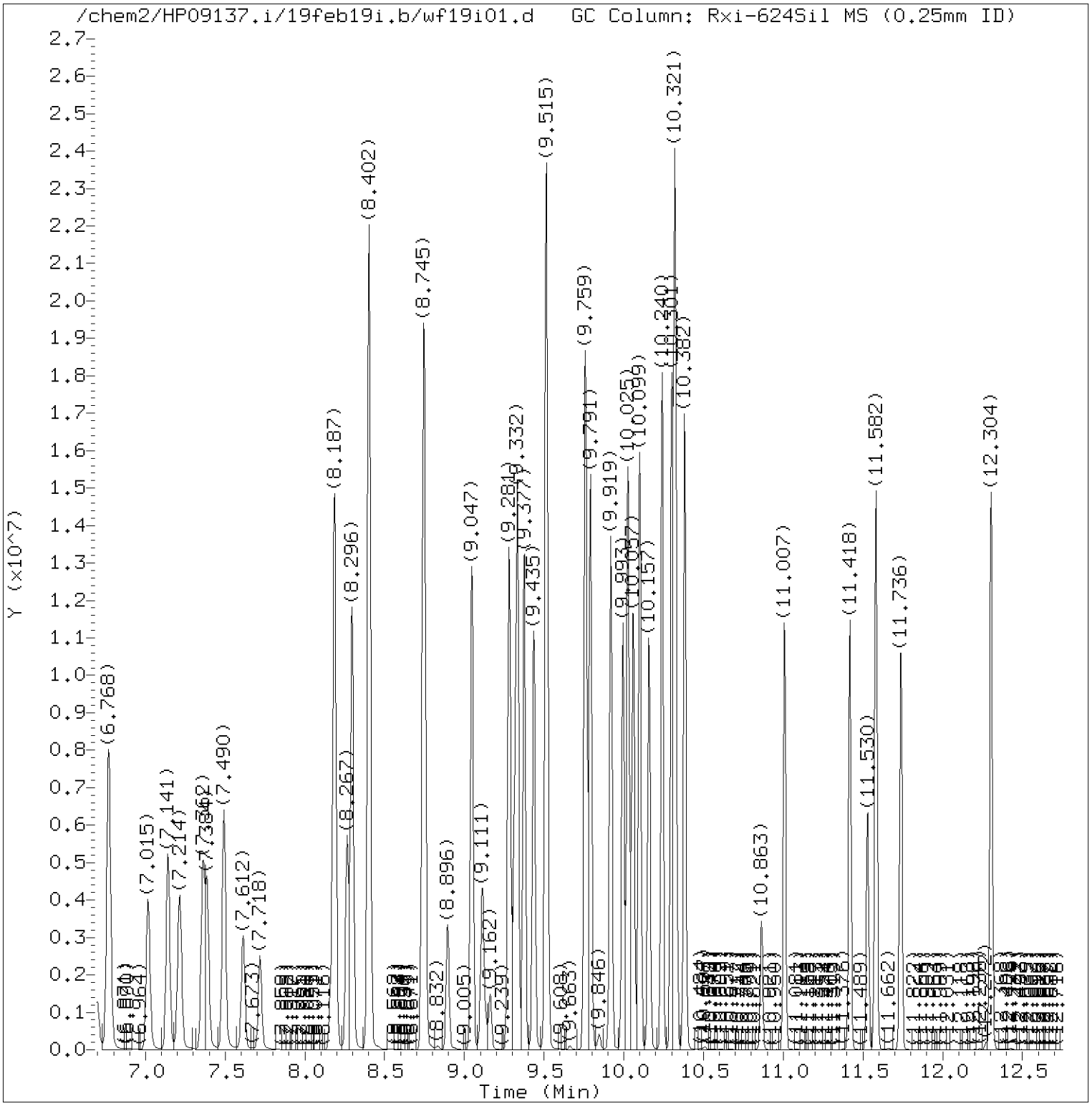
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.262	85	1830028	315.641
4) Chloromethane	(2)	1.397	50	2158390	298.969
6) Vinyl Chloride	(2)	1.467	62	2000231	302.231
5) 1,3-Butadiene	(2)	1.480	39	1294624	294.252
8) Bromomethane	(2)	1.682	94	1609891	308.431
9) Chloroethane	(2)	1.762	64	1225210	281.328
10) Dichlorofluoromethane	(2)	1.881	67	2469513	292.949
12) Trichlorofluoromethane	(2)	1.926	101	2215418	315.186
11) n-Pentane	(2)	1.981	43	1941951	290.504
13) Ethanol	(1)	2.032	45	654026	6868.269
15) Freon 123a	(2)	2.154	67	1544263M	294.005
16) Acrolein	(1)	2.215	56	4710694	3133.863
17) 1,1-Dichloroethene	(2)	2.324	96	1320043	333.906
17) 1,1-Dichloroethene	(2)	2.327	63	636364	319.054
19) Freon 113	(2)	2.330	101	1130965	325.785
18) Acetone	(1)	2.334	58	441895	604.809
21) 2-Propanol	(1)	2.449	45	740976	1364.990
22) Methyl Iodide	(2)	2.465	142	2433926	321.275
23) Carbon Disulfide	(2)	2.504	76	4385958	314.909
25) Allyl Chloride	(2)	2.600	41	2218296M	322.090
27) Methyl Acetate	(2)	2.616	43	1662446	278.873
29)*t-Butyl alcohol-d10	(1)	2.735	65	208793	250.000
28) Methylene Chloride	(2)	2.751	84	1485309M	307.373
30) t-Butyl alcohol	(1)	2.809	59	1347926	1391.981
31) Acrylonitrile	(2)	2.924	53	933874	297.783
32) trans-1,2-Dichloroethene	(2)	2.956	96	1367169	318.737
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	2930120	280.555
34) n-Hexane	(2)	3.213	57	1889144	329.160
36) 1,1-Dichloroethane	(2)	3.338	63	2443808	314.424
38) di-Isopropyl ether	(2)	3.412	45	4343522	290.888
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	2144637	318.591
40) Ethyl t-butyl ether	(2)	3.758	59	3125600	287.165
42) cis-1,2-Dichloroethene	(2)	3.890	96	1531613	318.027
45) 2,2-Dichloropropane	(2)	3.890	77	944483	270.575
44) 2-Butanone	(2)	3.906	43	2571903	570.822
47) Propionitrile	(1)	3.964	54	1942887	1614.356
48) Methacrylonitrile	(2)	4.115	67	2560168	759.258
49) Bromochloromethane	(2)	4.121	128	814405	325.314

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.166	71	727306	652.948
51) Chloroform	(2)	4.201	83	2299180	315.278
52)$Dibromofluoromethane	(2)	4.355	113	208205	50.122
52)$Dibromofluoromethane	(2)	4.355	111	214672	50.342
53) 1,1,1-Trichloroethane	(2)	4.381	97	1712874	312.162
54) Cyclohexane	(2)	4.442	56	2322517	319.833
54) Cyclohexane	(2)	4.445	84	1926454	320.494
54) Cyclohexane	(2)	4.442	69	709917	325.297
55) 1,1-Dichloropropene	(2)	4.545	75	1839194	314.568
56) Carbon Tetrachloride	(2)	4.545	117	1575192	334.514
58) Isobutyl Alcohol	(1)	4.673	41	1324103	3750.712
57)$1,2-Dichloroethane-d4	(2)	4.689	102	53519	48.443
57)$1,2-Dichloroethane-d4	(2)	4.692	65	233334	48.518
57)$1,2-Dichloroethane-d4	(2)	4.689	104	35388	50.297
60) Benzene	(2)	4.750	78	5810714	309.188
61) 1,2-Dichloroethane	(2)	4.766	62	1760449	303.238
61) 1,2-Dichloroethane	(2)	4.766	98	187445	339.366
65) t-Amyl methyl ether	(2)	4.872	73	2919577	261.832
66)*Fluorobenzene	(2)	5.029	96	896646	50.000
67) n-Heptane	(2)	5.036	43	1797080	327.627
69) n-Butanol	(1)	5.356	56	2506205	7995.614
71) Trichloroethene	(2)	5.405	95	1430931	314.409
73) Methylcyclohexane	(2)	5.607	83	2193871	332.036
73) Methylcyclohexane	(2)	5.607	98	1024331	333.422
74) 1,2-Dichloropropane	(2)	5.636	63	1543836	319.971
75) Dibromomethane	(2)	5.754	93	962248	323.143
77) Methyl Methacrylate	(2)	5.774	69	1719359	324.268
76) 1,4-Dioxane	(1)	5.783	88	380560M	4061.259
79) Bromodichloromethane	(2)	5.924	83	1800616	329.105
43) 1,2-Dichloroethene (Total)	(2)		96	2898782	636.764
80) 2-Nitropropane	(2)	6.175	41	1216565	657.181
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	1221742	332.128
82) cis-1,3-Dichloropropene	(2)	6.406	75	2496178	331.820
83) 4-Methyl-2-pentanone	(2)	6.585	43	5276419	594.089
84)$Toluene-d8	(3)	6.698	98	920754	48.955
84)$Toluene-d8	(3)	6.698	100	635513	50.952
89) Toluene	(3)	6.768	92	3764381	310.699
90) trans-1,3-Dichloropropene	(3)	7.015	75	2388350	331.125

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.141	69	2948418	332.666
93) 1,1,2-Trichloroethane	(3)	7.214	97	1462902	313.709
94) Tetrachloroethene	(3)	7.359	166	1538643	312.966
95) 1,3-Dichloropropane	(3)	7.384	76	2548018	314.585
97) 2-Hexanone	(3)	7.490	43	4182184	592.716
98) Dibromochloromethane	(3)	7.612	129	1599809	351.250
100) 1,2-Dibromoethane	(3)	7.718	107	1653551	322.750
101)*Chlorobenzene-d5	(3)	8.161	117	750584	50.000
103) Chlorobenzene	(3)	8.187	112	4251585	316.321
104) 1,1,1,2-Tetrachloroethane	(3)	8.267	131	1472432	340.894
105) Ethylbenzene	(3)	8.296	91	7172946	311.494
107) m+p-Xylene	(3)	8.402	106	5900396	644.458
108) o-Xylene	(3)	8.742	106	2944288	326.885
110) Styrene	(3)	8.751	104	5111867	338.315
111) Bromoform	(3)	8.896	173	1332048	375.784
112) Isopropylbenzene	(3)	9.047	105	6974372	315.109
113) Cyclohexanone	(1)	9.114	55	1785966	4225.220
115)$4-Bromofluorobenzene	(3)	9.162	95	381876	50.752
115)$4-Bromofluorobenzene	(3)	9.165	174	321796	50.682
116) Bromobenzene	(4)	9.278	156	2001950	310.704
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	2675009	307.862
118) 1,2,3-Trichloropropane	(4)	9.313	110	793023	303.003
119) trans-1,4-Dichloro-2-butene	(4)	9.332	53	2093586	751.374
120) n-Propylbenzene	(4)	9.377	91	8126022	286.087
121) 2-Chlorotoluene	(4)	9.435	126	1813407	309.524
123) 1,3,5-Trimethylbenzene	(4)	9.512	105	6283549	306.739
122) 4-Chlorotoluene	(4)	9.518	126	1986374	316.718
125) tert-Butylbenzene	(4)	9.756	134	1469098	315.656
126) Pentachloroethane	(4)	9.765	167	1314293	357.228
127) 1,2,4-Trimethylbenzene	(4)	9.791	105	6515518	301.836
128) sec-Butylbenzene	(4)	9.919	105	7350716	292.333
130) 1,3-Dichlorobenzene	(4)	9.993	146	3744438	304.756
131) p-Isopropyltoluene	(4)	10.025	119	6646629	298.604
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	447340	50.000
134) 1,4-Dichlorobenzene	(4)	10.061	146	3824950	300.290
91) 1,3-Dichloropropene (total)	(3)		100	4884528	662.945
135) 1,2,3-Trimethylbenzene	(4)	10.099	105	6932082	298.464
136) Benzyl Chloride	(4)	10.157	91	5948413	333.650

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.240	119	4321366	308.975
138) 1,4-Diethylbenzene	(4)	10.301	119	4611431	307.745
140) n-Butylbenzene	(4)	10.317	92	3453634	307.409
139) 1,2-Dichlorobenzene	(4)	10.324	146	3754829	308.029
141) 1,2-Diethylbenzene	(4)	10.382	119	3619472	306.525
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	622910	315.447
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	2798024	299.339
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	2685608	299.261
148) Hexachlorobutadiene	(4)	11.530	225	896485	280.479
149) Naphthalene	(4)	11.582	128	8569412	282.213
150) 1,2,3-Trichlorobenzene	(4)	11.739	180	2579036	294.437
109) Xylene (Total)	(3)		106	8844684	971.343
151) 2-Methylnaphthalene	(4)	12.304	142	5243189	302.657
142) Diethylbenzene (total)	(4)		100	12552269	923.245

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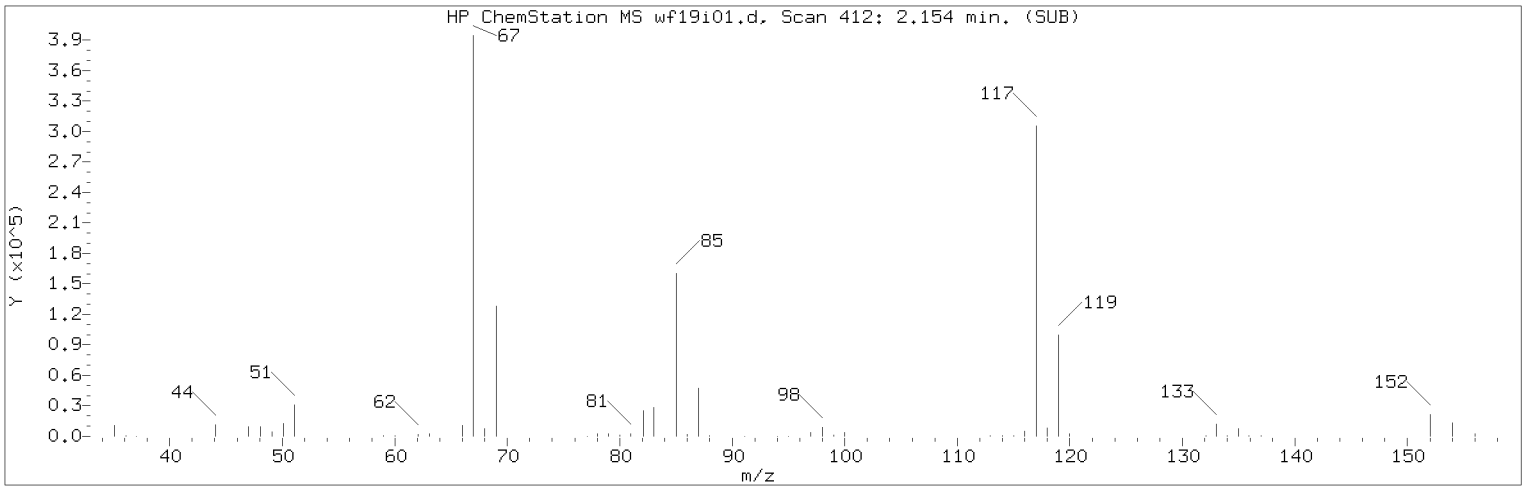
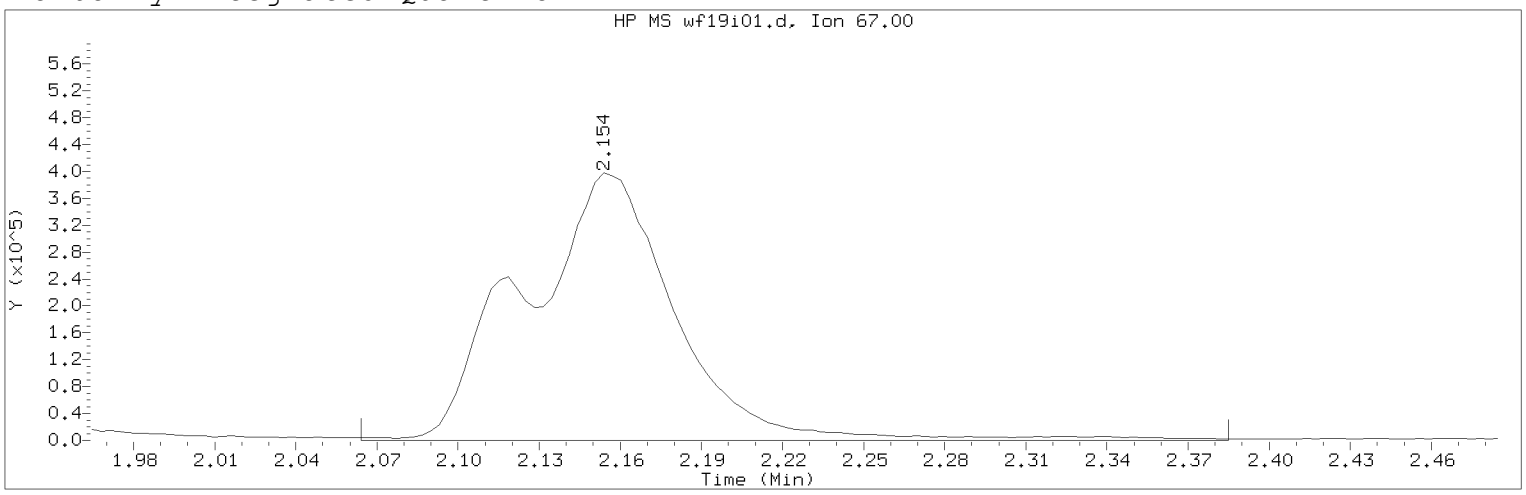
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

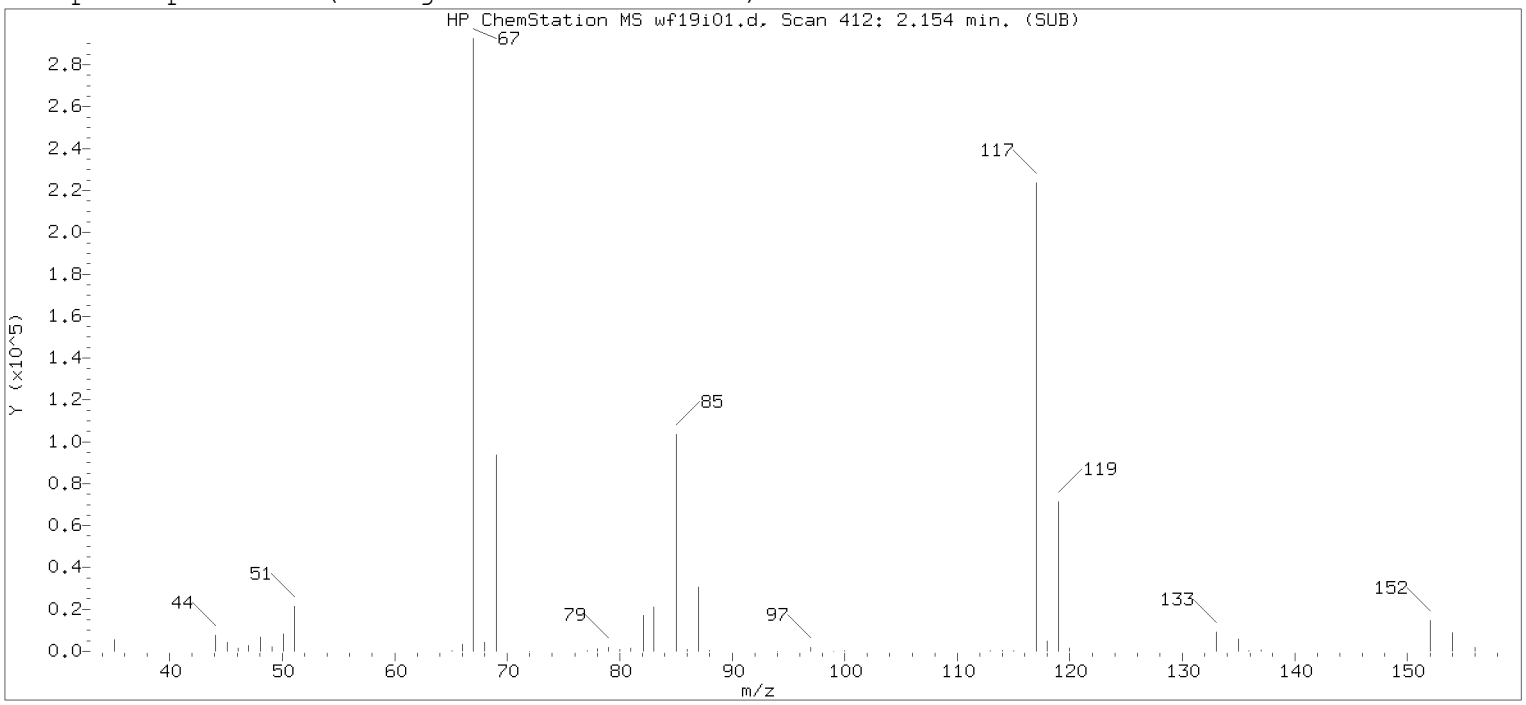
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 412
Retention Time (minutes): 2.154
Quant Ion : 67.00
Area (flag) : 1544263M
On-Column Amount (ng) : 294.0053
Integration start scan : 383 Integration stop scan: 483
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

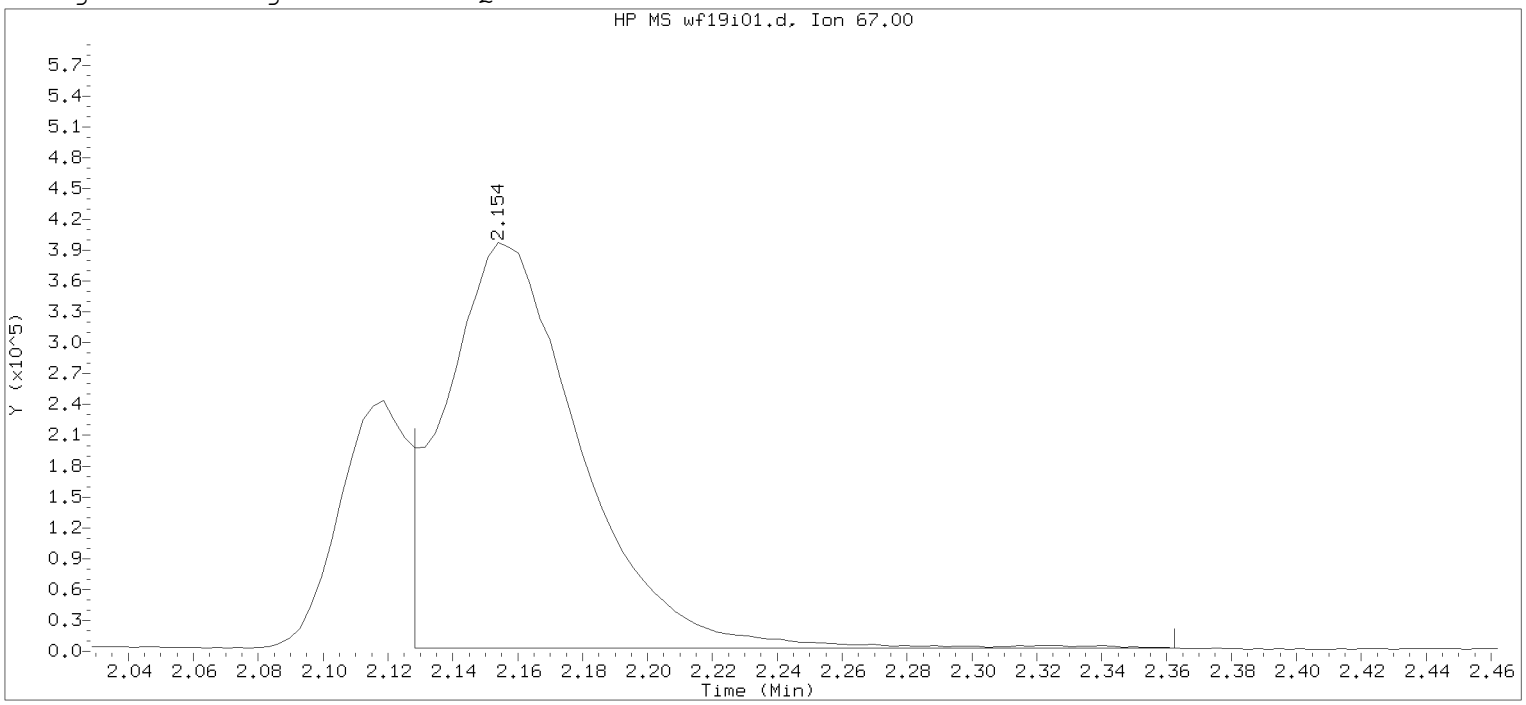
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 15
Compound Name : Freon 123a
Scan Number : 412
Retention Time (minutes): 2.154
Quant Ion : 67.00
Area : 1136730
On-column Amount (ng) : 300.0000
Integration start scan : 403 Integration stop scan: 476
Y at integration start : 3233 Y at integration end: 2941

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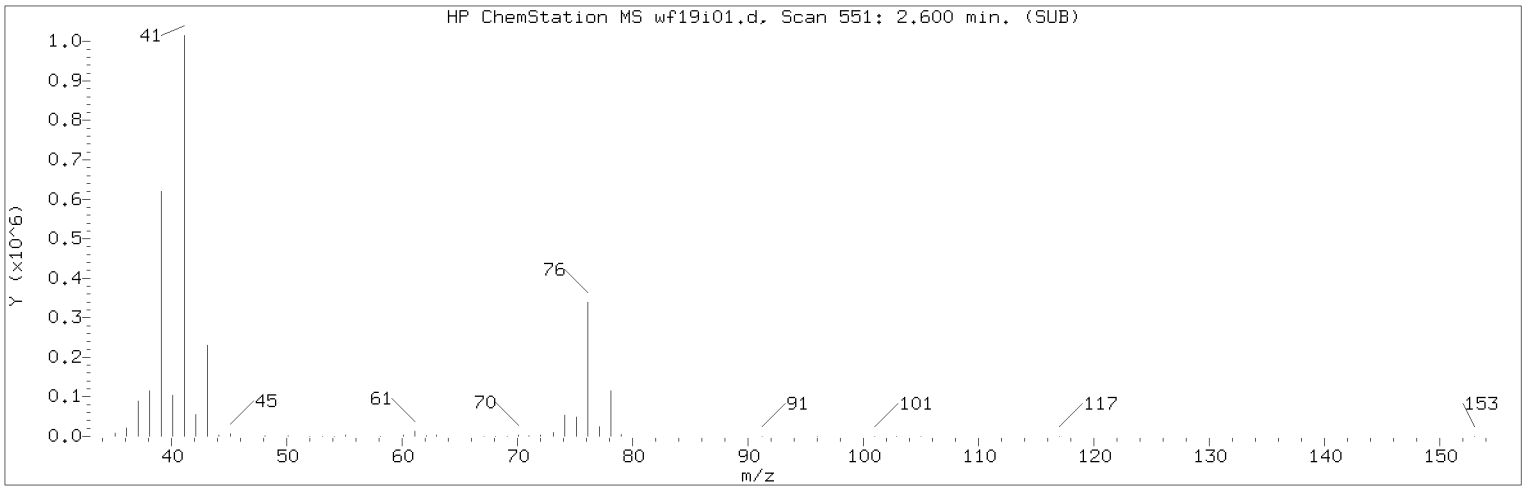
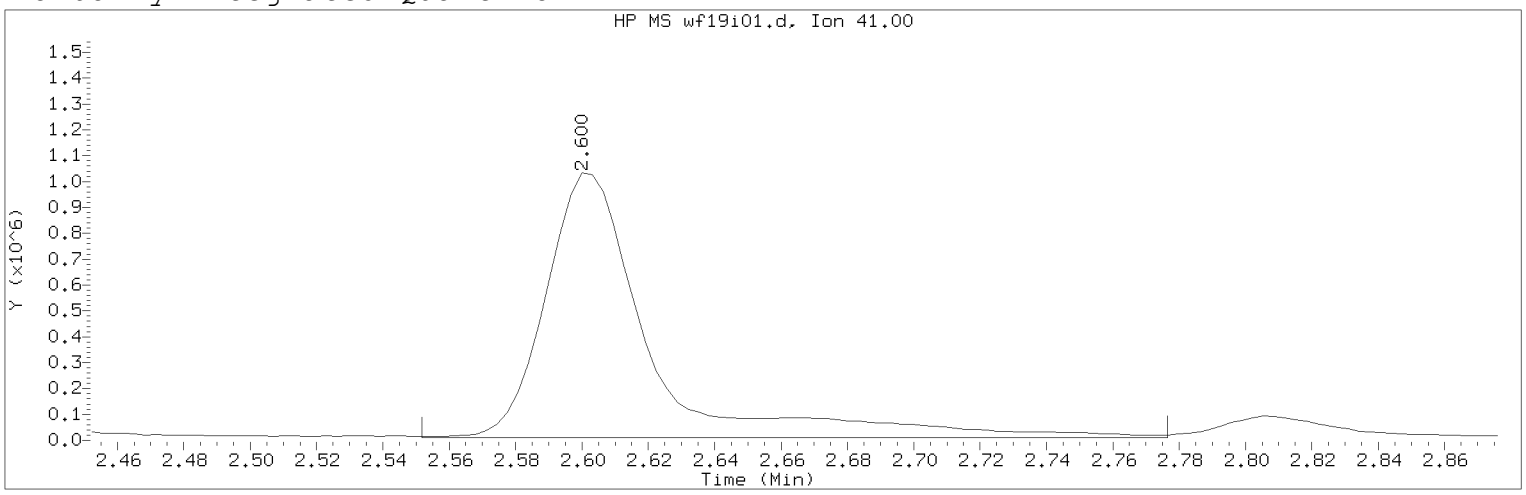
Target 3.5 esignature user Abigail P. Roselli

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

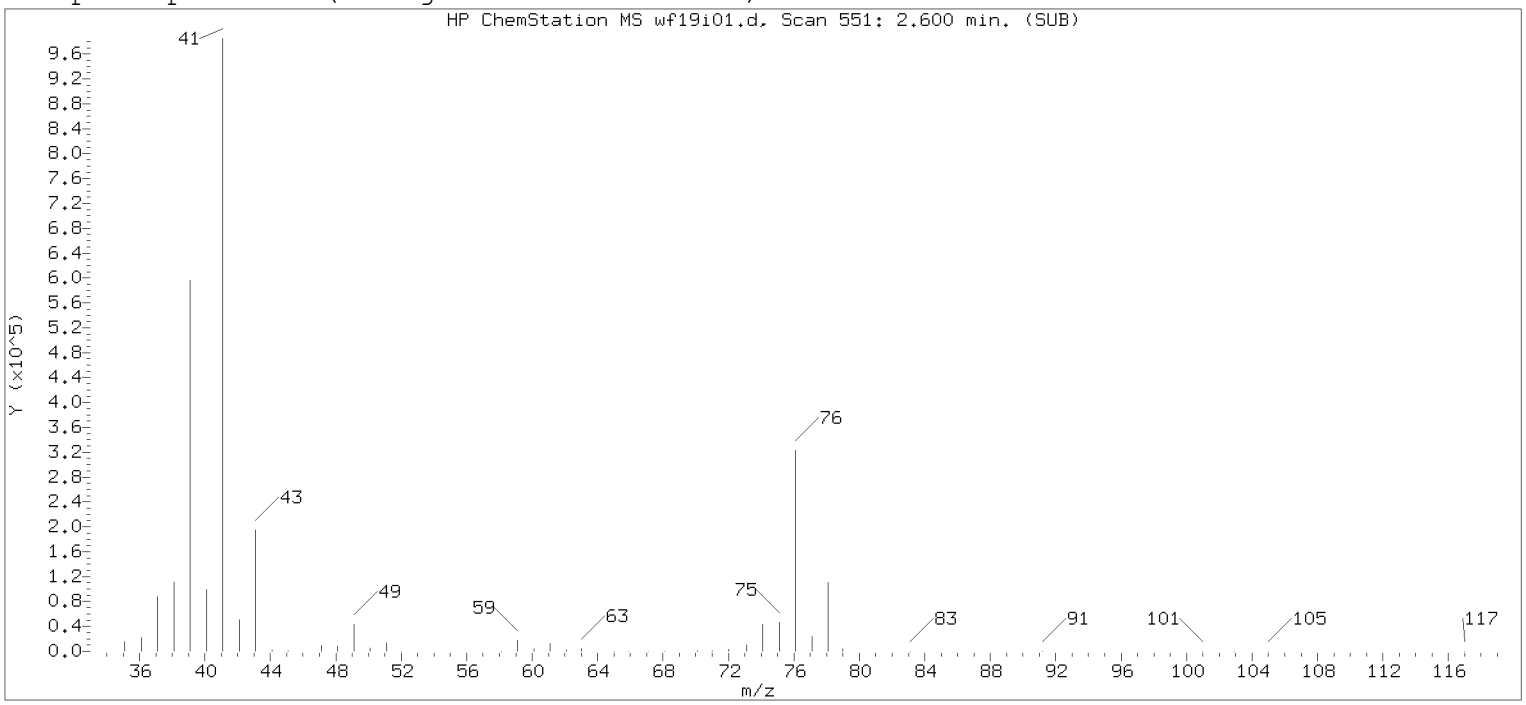
Compound Number : 25
Compound Name : Allyl Chloride
Scan Number : 551
Retention Time (minutes): 2.600
Quant Ion : 41.00
Area (flag) : 2218296M
On-Column Amount (ng) : 322.0900
Integration start scan : 535 Integration stop scan: 605
Y at integration start : 10829 Y at integration end: 10829

Reason for manual integration: improper integration

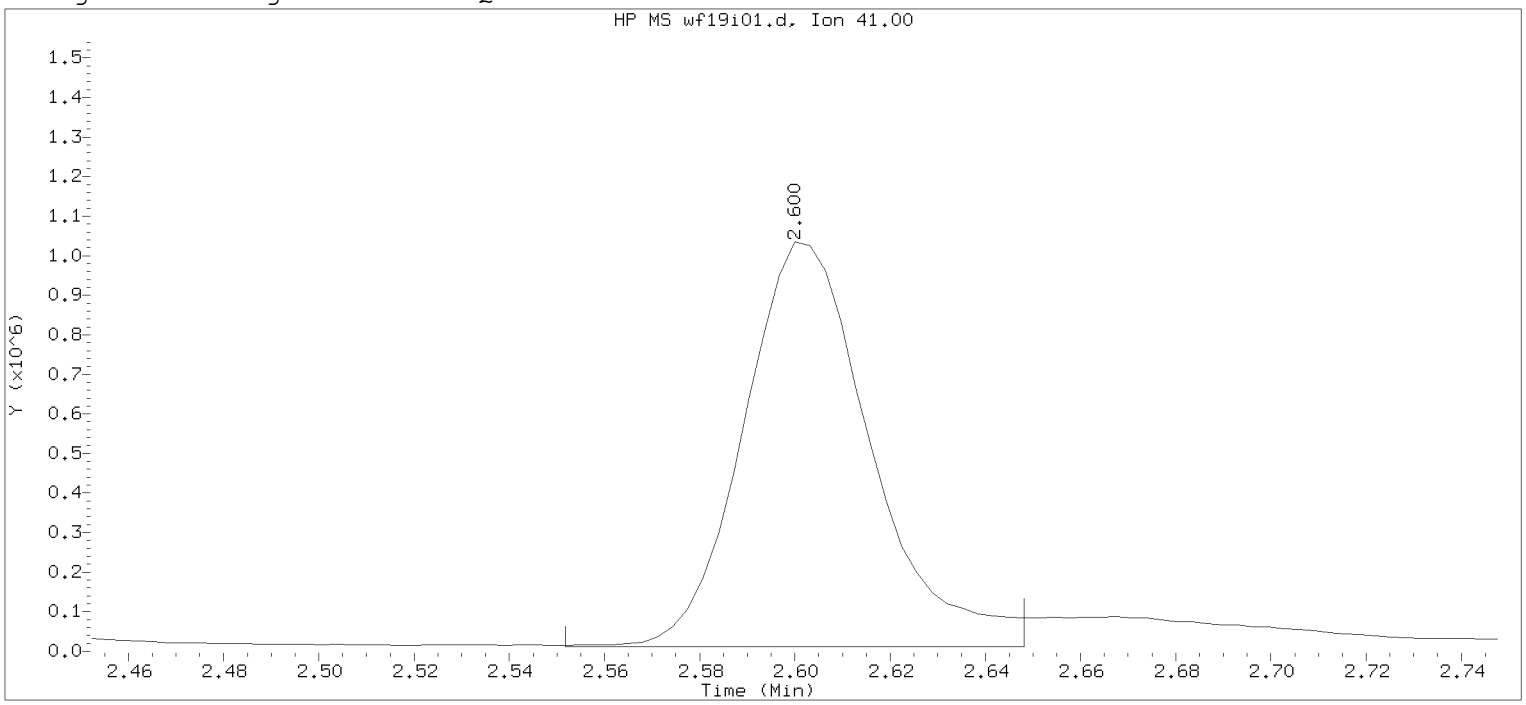
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 25
Compound Name : Allyl Chloride
Scan Number : 551
Retention Time (minutes): 2.600
Quant Ion : 41.00
Area : 1896643
On-column Amount (ng) : 300.0000
Integration start scan : 535 Integration stop scan: 565
Y at integration start : 11574 Y at integration end: 11574

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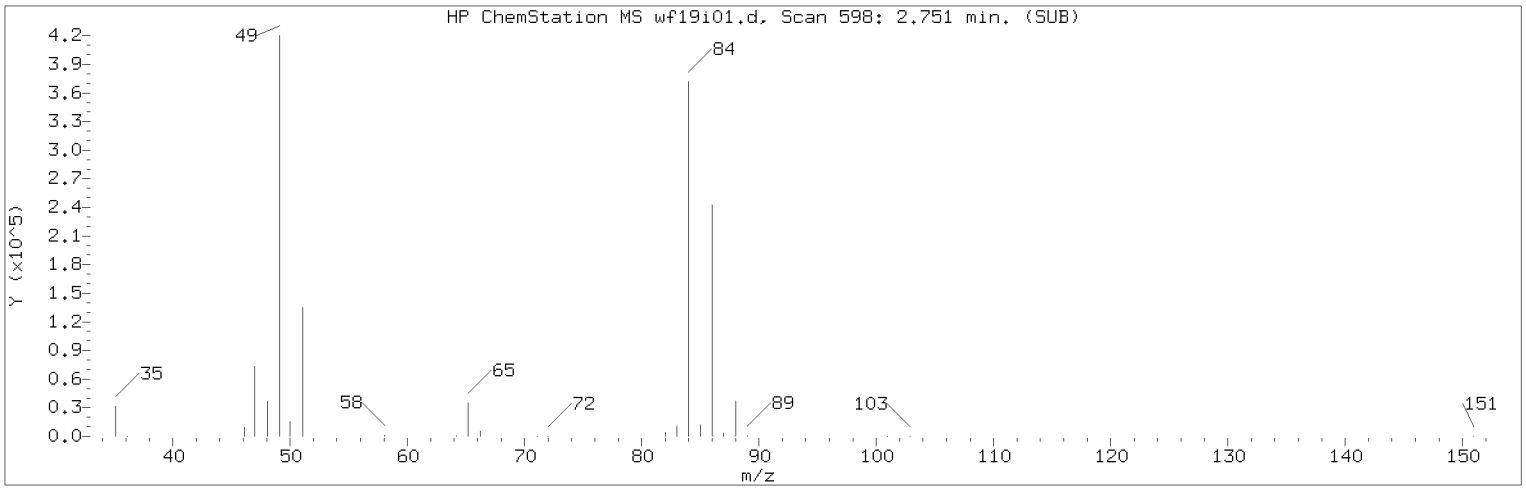
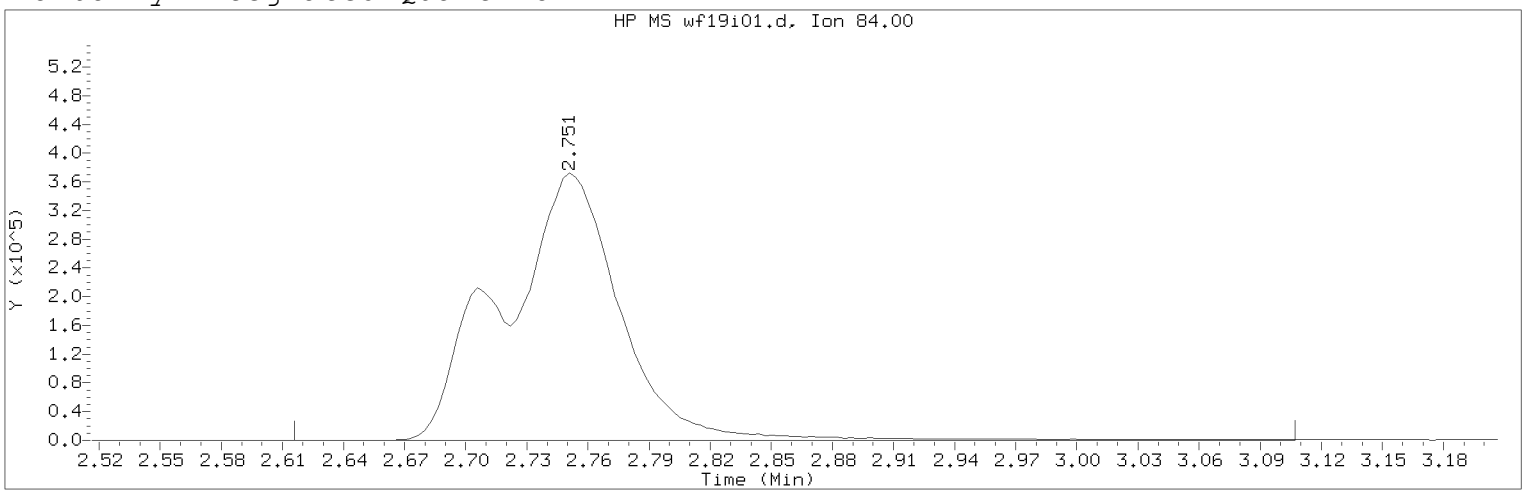
Target 3.5 esignature user apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

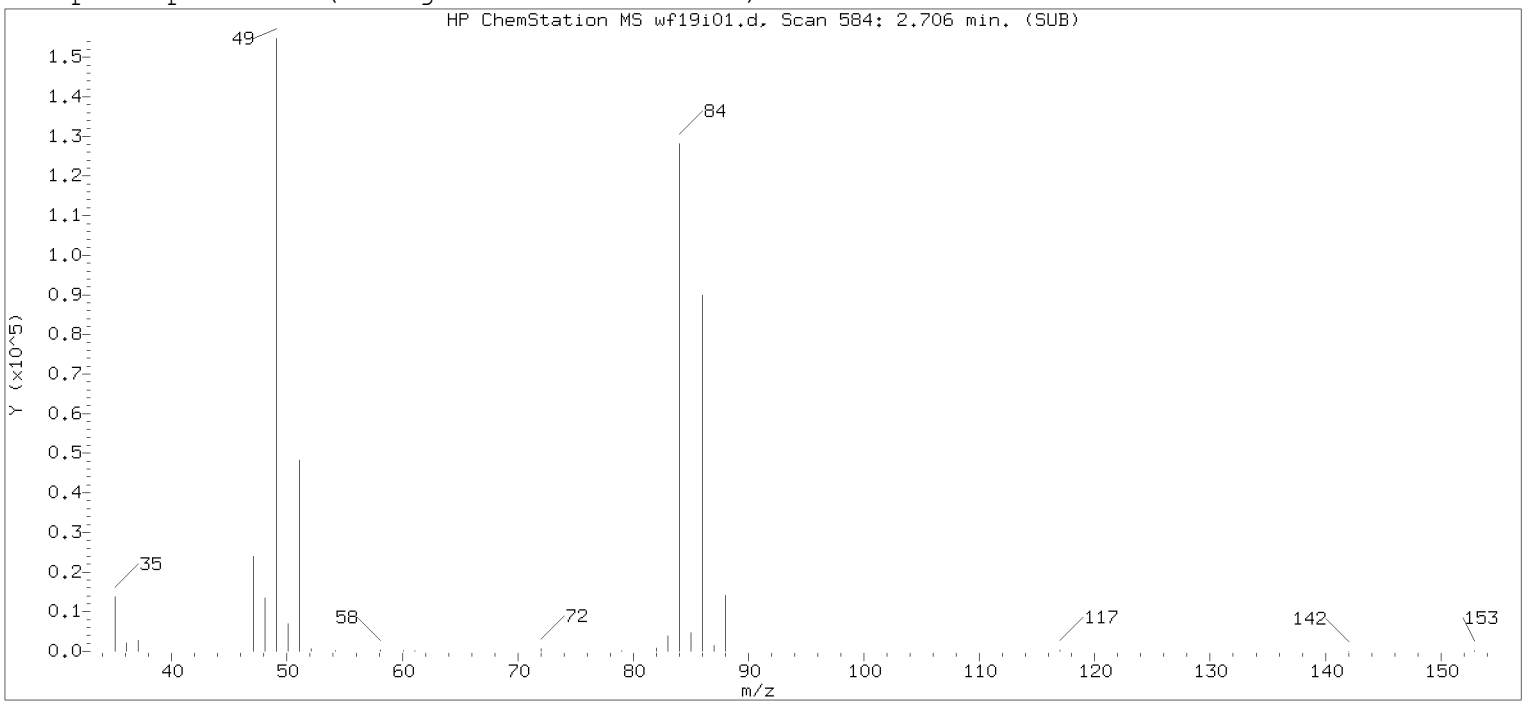
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 598
Retention Time (minutes): 2.751
Quant Ion : 84.00
Area (flag) : 1485309M
On-Column Amount (ng) : 307.3734
Integration start scan : 555 Integration stop scan: 708
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

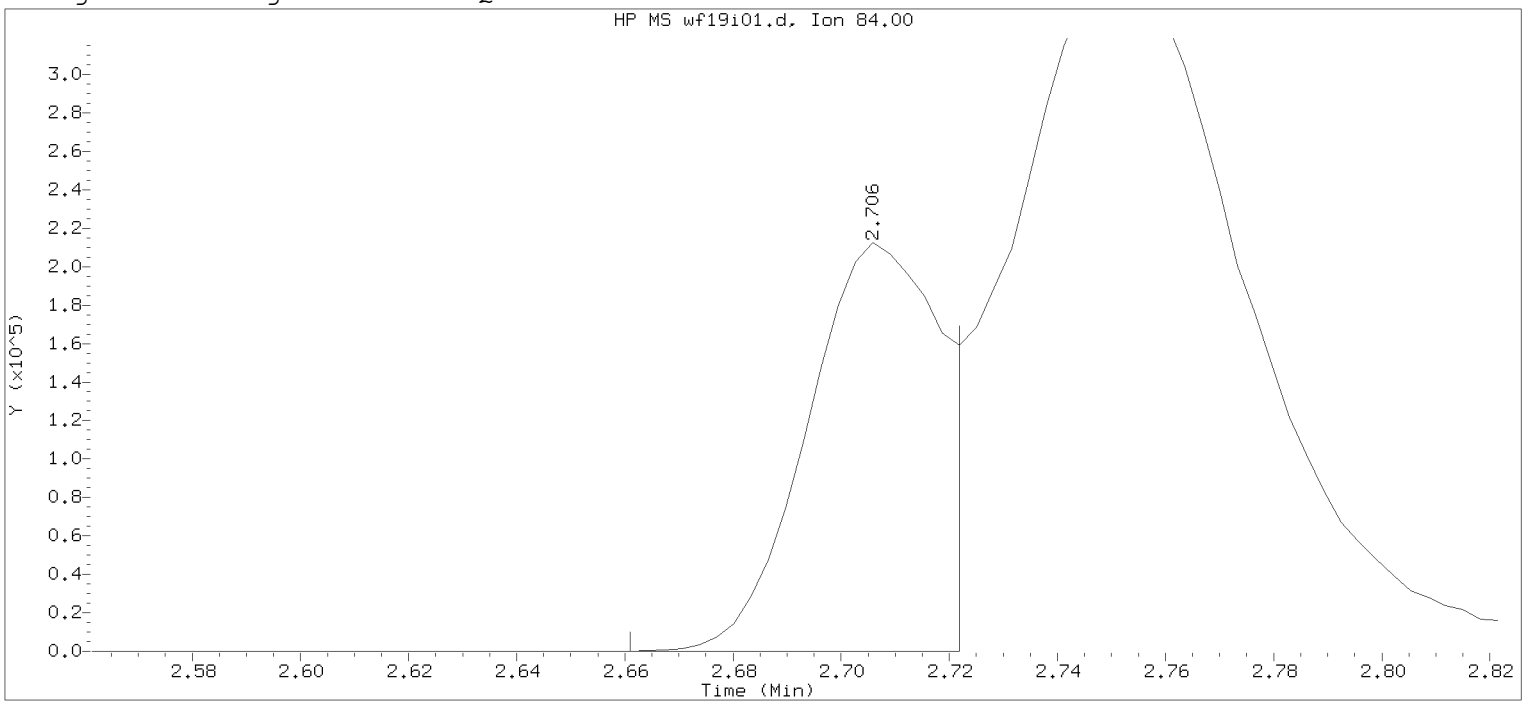
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

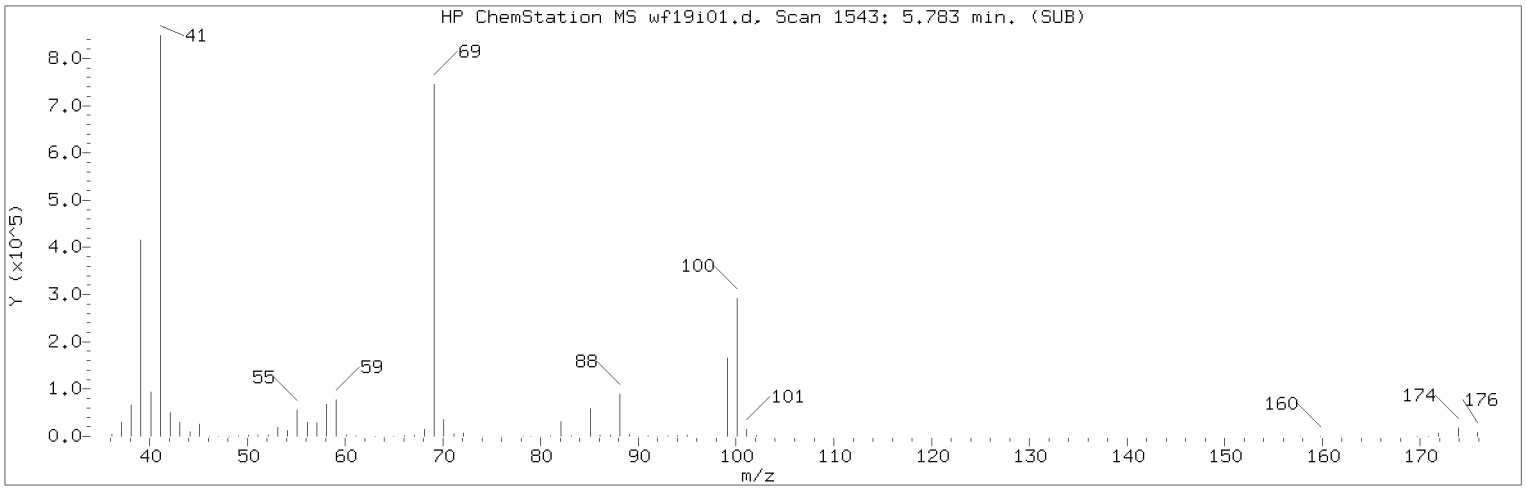
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

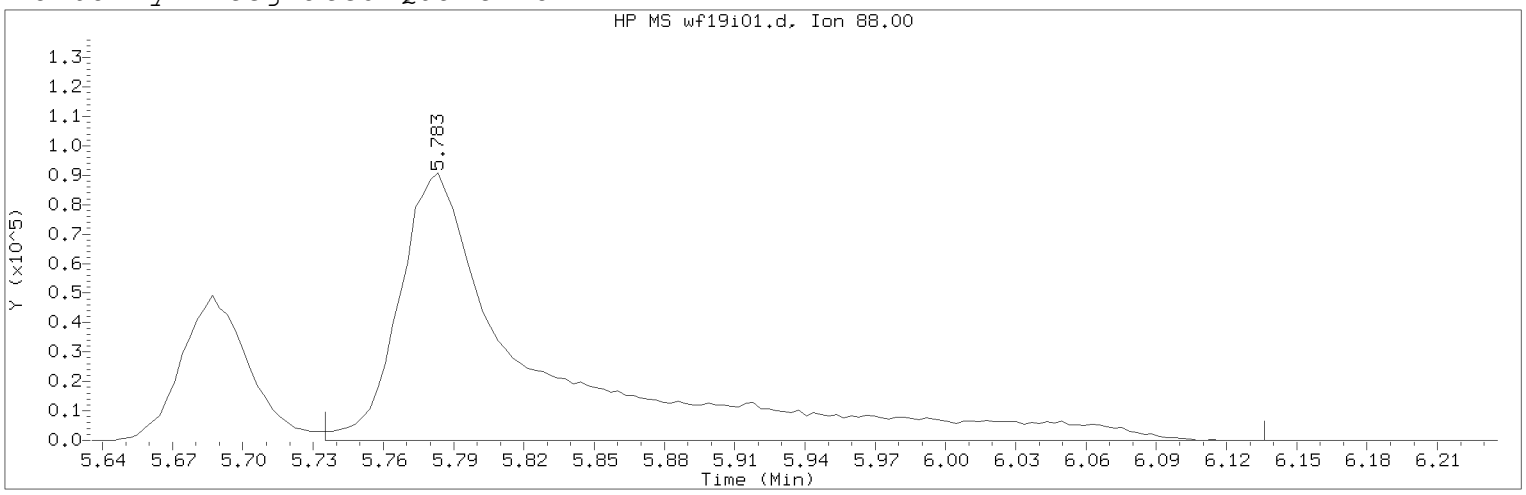
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 584
Retention Time (minutes): 2.706
Quant Ion : 84.00
Area : 358731
On-column Amount (ng) : 300.0000
Integration start scan : 569 Integration stop scan: 588
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user Abigail P. Roselli

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD300 Lab Sample ID: VSTD300

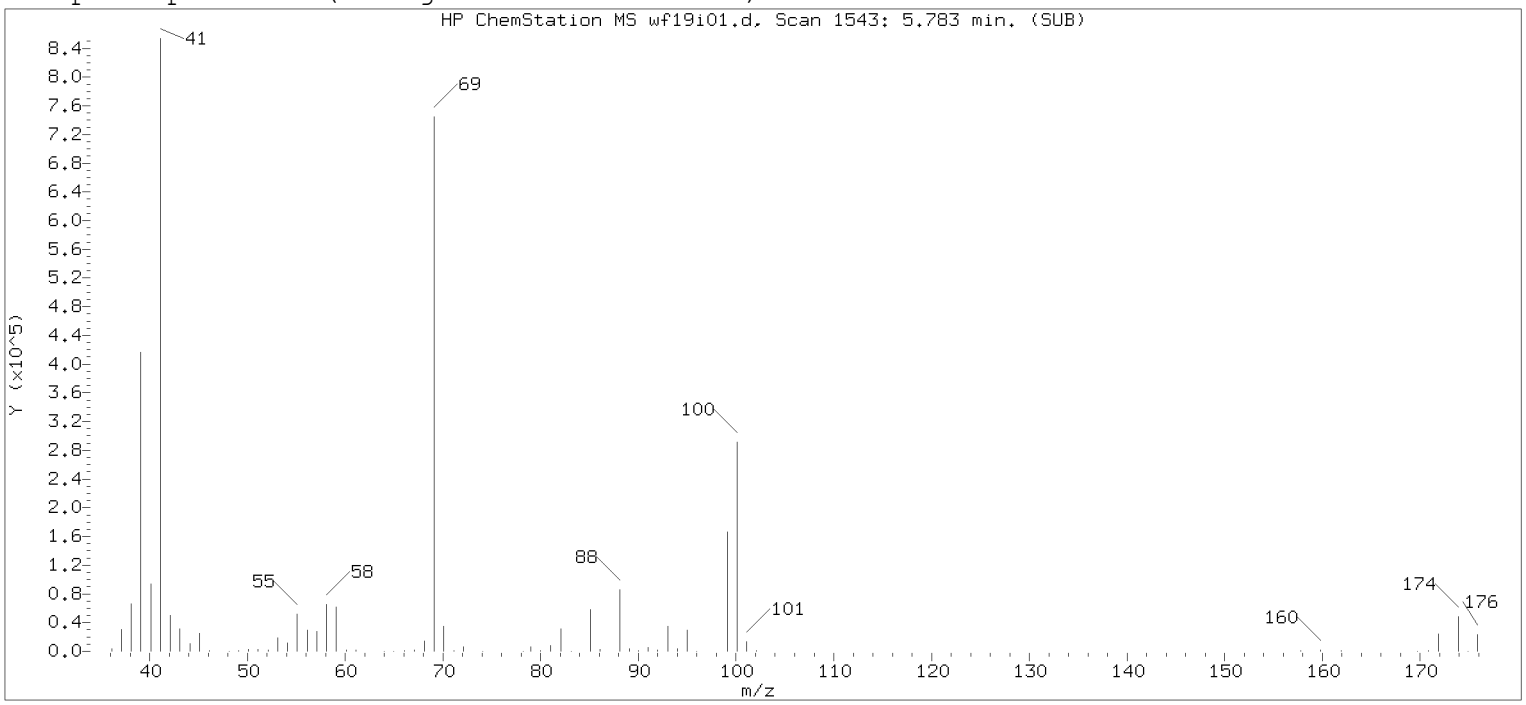
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1543
Retention Time (minutes): 5.783
Quant Ion : 88.00
Area (flag) : 380560M
On-Column Amount (ng) : 4061.2594
Integration start scan : 1527 Integration stop scan: 1652
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

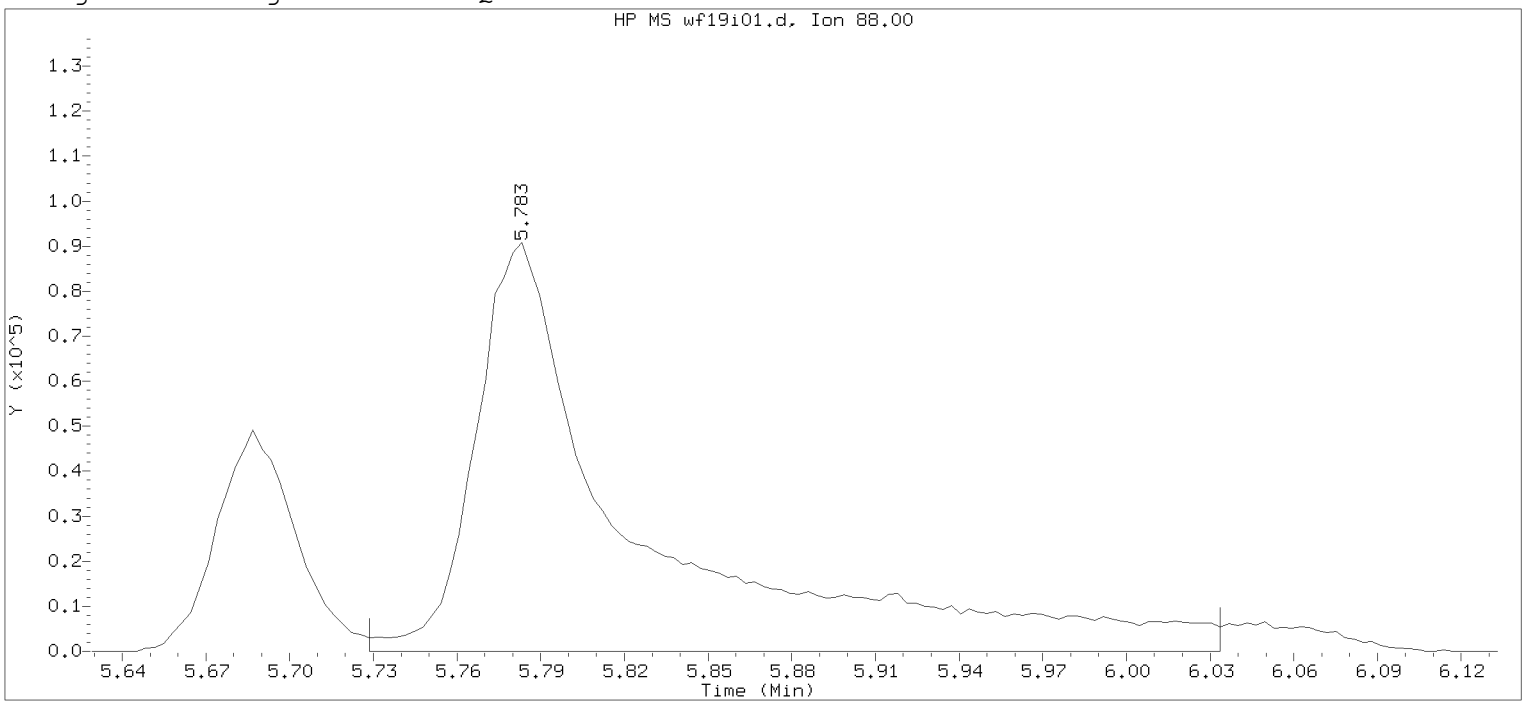
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



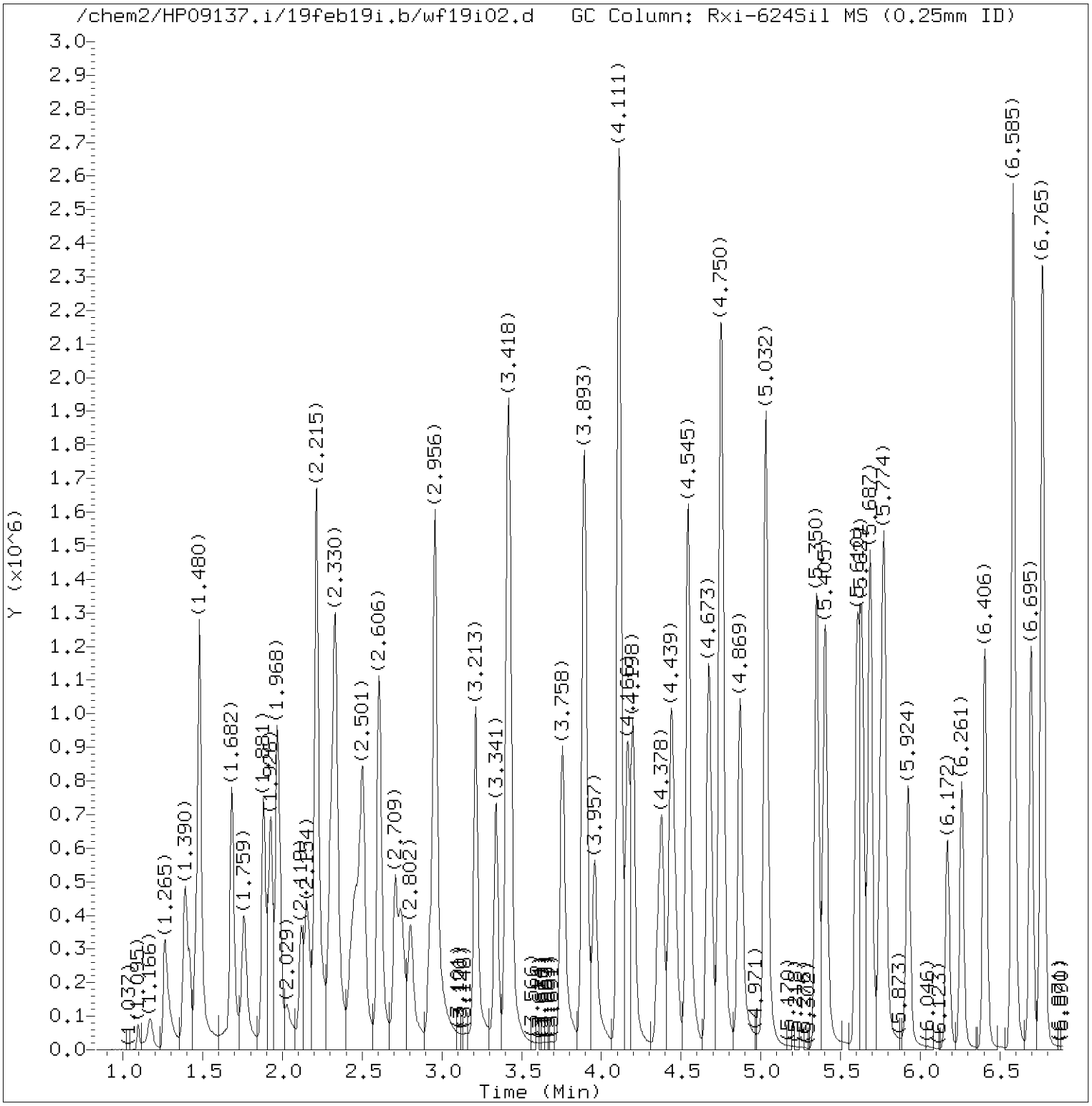
Data File: /chem2/HP09137.i/19feb19i.b/wf19i01.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1543		
Retention Time (minutes)	: 5.783		
Quant Ion	: 88.00		
Area	: 364823		
On-column Amount (ng)	: 3750.0000		
Integration start scan	: 1525	Integration stop scan:	1620
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

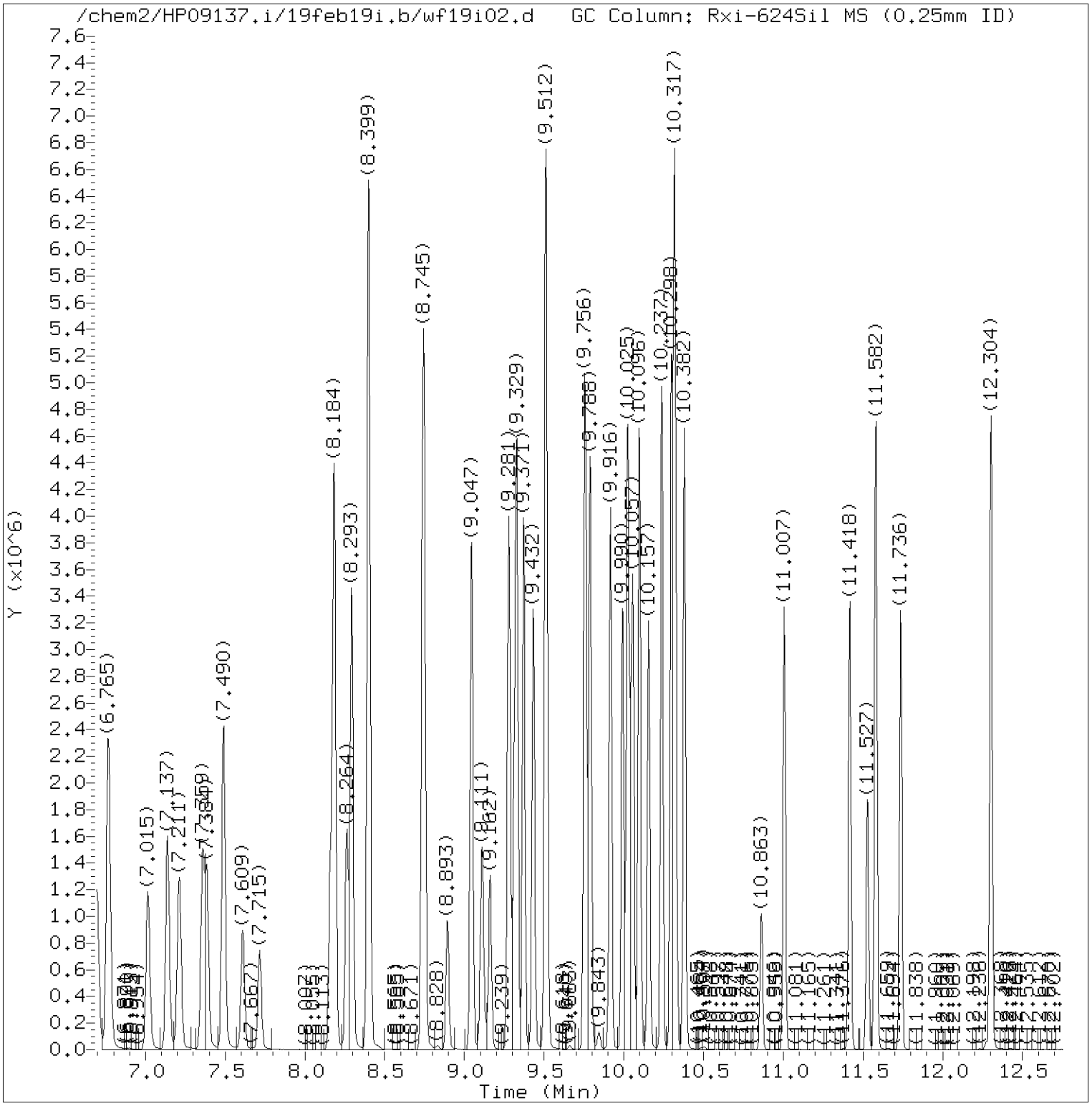
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.265	85	532286	97.759
4) Chloromethane	(2)	1.390	50	662027	97.645
6) Vinyl Chloride	(2)	1.461	62	607652	97.766
5) 1,3-Butadiene	(2)	1.480	39	375111	90.785
8) Bromomethane	(2)	1.682	94	485723	99.089
9) Chloroethane	(2)	1.756	64	376986	92.173
10) Dichlorofluoromethane	(2)	1.881	67	739116	93.362
12) Trichlorofluoromethane	(2)	1.926	101	651101	98.636
11) n-Pentane	(2)	1.968	43	576023	91.755
13) Ethanol	(1)	2.032	45	238813	2376.796
15) Freon 123a	(2)	2.154	67	447423M	90.704
16) Acrolein	(1)	2.215	56	1612064	1016.387
17) 1,1-Dichloroethene	(2)	2.321	96	368528	99.262
17) 1,1-Dichloroethene	(2)	2.324	63	178834	95.474
19) Freon 113	(2)	2.327	101	324542	99.547
18) Acetone	(1)	2.334	58	146760	190.366
21) 2-Propanol	(1)	2.446	45	307931	537.602
22) Methyl Iodide	(2)	2.462	142	704010M	98.952
23) Carbon Disulfide	(2)	2.504	76	1282599	98.059
25) Allyl Chloride	(2)	2.603	41	655452	101.339
27) Methyl Acetate	(2)	2.619	43	535082	95.578
28) Methylene Chloride	(2)	2.709	84	428209	94.359
29)*t-Butyl alcohol-d10	(1)	2.732	65	220310	250.000
30) t-Butyl alcohol	(1)	2.805	59	526469	515.255
31) Acrylonitrile	(2)	2.924	53	304031	103.230
32) trans-1,2-Dichloroethene	(2)	2.956	96	402067	99.813
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	945603	96.409
34) n-Hexane	(2)	3.213	57	538355	99.882
36) 1,1-Dichloroethane	(2)	3.341	63	732003	100.285
38) di-Isopropyl ether	(2)	3.412	45	1396389	99.579
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	632191	100.001
40) Ethyl t-butyl ether	(2)	3.758	59	960285	93.945
42) cis-1,2-Dichloroethene	(2)	3.890	96	451707	99.873
45) 2,2-Dichloropropane	(2)	3.890	77	324555	99.005
44) 2-Butanone	(2)	3.903	43	860004	203.247
47) Propionitrile	(1)	3.961	54	609727	480.141
48) Methacrylonitrile	(2)	4.108	67	777971	245.675
49) Bromochloromethane	(2)	4.118	128	236720	100.687

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.166	71	230330	195.972
51) Chloroform	(2)	4.198	83	681837	99.558
52)$Dibromofluoromethane	(2)	4.352	113	193818	49.683
52)$Dibromofluoromethane	(2)	4.355	111	202190	50.488
53) 1,1,1-Trichloroethane	(2)	4.378	97	514779	99.897
54) Cyclohexane	(2)	4.442	56	662674	97.172
54) Cyclohexane	(2)	4.439	84	552208	97.823
54) Cyclohexane	(2)	4.442	69	200038	97.603
55) 1,1-Dichloropropene	(2)	4.545	75	537698	97.927
56) Carbon Tetrachloride	(2)	4.545	117	449800	101.713
58) Isobutyl Alcohol	(1)	4.670	41	498266	1337.627
57)$1,2-Dichloroethane-d4	(2)	4.689	102	51772	49.899
57)$1,2-Dichloroethane-d4	(2)	4.689	65	224469	49.700
57)$1,2-Dichloroethane-d4	(2)	4.689	104	32929	49.836
60) Benzene	(2)	4.747	78	1745793	98.915
61) 1,2-Dichloroethane	(2)	4.766	62	527693	96.787
61) 1,2-Dichloroethane	(2)	4.763	98	54900	105.839
65) t-Amyl methyl ether	(2)	4.869	73	996307	95.142
66)*Fluorobenzene	(2)	5.029	96	842063	50.000
67) n-Heptane	(2)	5.036	43	494804	96.055
69) n-Butanol	(1)	5.353	56	936370	2831.160
71) Trichloroethene	(2)	5.405	95	426587	99.807
73) Methylcyclohexane	(2)	5.607	83	609561	98.235
73) Methylcyclohexane	(2)	5.604	98	284401	98.574
74) 1,2-Dichloropropane	(2)	5.632	63	460305	101.585
75) Dibromomethane	(2)	5.754	93	287206	102.702
77) Methyl Methacrylate	(2)	5.774	69	522673	104.965
76) 1,4-Dioxane	(1)	5.780	88	133422M	1349.419
79) Bromodichloromethane	(2)	5.924	83	538662	104.835
43) 1,2-Dichloroethene (Total)	(2)		96	853774	199.686
80) 2-Nitropropane	(2)	6.172	41	392793	225.938
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	375619	108.730
82) cis-1,3-Dichloropropene	(2)	6.406	75	742975	105.167
83) 4-Methyl-2-pentanone	(2)	6.582	43	1875717	224.883
84)$Toluene-d8	(3)	6.695	98	874156	49.795
84)$Toluene-d8	(3)	6.695	100	585880	50.326
89) Toluene	(3)	6.765	92	1120657	99.097
90) trans-1,3-Dichloropropene	(3)	7.015	75	707175	105.042

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.137	69	893065	107.955
93) 1,1,2-Trichloroethane	(3)	7.211	97	446415	102.563
94) Tetrachloroethene	(3)	7.359	166	451061	98.296
95) 1,3-Dichloropropane	(3)	7.388	76	768151	101.607
97) 2-Hexanone	(3)	7.490	43	1550240	235.388
98) Dibromochloromethane	(3)	7.609	129	468005	110.088
100) 1,2-Dibromoethane	(3)	7.715	107	494533	103.416
101)*Chlorobenzene-d5	(3)	8.161	117	700579	50.000
103) Chlorobenzene	(3)	8.187	112	1242086	99.008
104) 1,1,1,2-Tetrachloroethane	(3)	8.264	131	424147	105.206
105) Ethylbenzene	(3)	8.293	91	2139903	99.561
107) m+p-Xylene	(3)	8.399	106	1713085	200.463
108) o-Xylene	(3)	8.739	106	843483	100.330
110) Styrene	(3)	8.748	104	1474099	104.523
111) Bromoform	(3)	8.893	173	379562	114.721
112) Isopropylbenzene	(3)	9.047	105	2075316	100.458
113) Cyclohexanone	(1)	9.111	55	575999	1291.456
115)$4-Bromofluorobenzene	(3)	9.162	95	350858	49.958
115)$4-Bromofluorobenzene	(3)	9.162	174	295274	49.824
116) Bromobenzene	(4)	9.278	156	567523	99.066
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	803775	104.043
118) 1,2,3-Trichloropropane	(4)	9.313	110	239124	102.762
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	643492	259.751
120) n-Propylbenzene	(4)	9.371	91	2463393	97.544
121) 2-Chlorotoluene	(4)	9.432	126	515018	98.871
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	1822759	100.079
122) 4-Chlorotoluene	(4)	9.515	126	553747	99.305
125) tert-Butylbenzene	(4)	9.756	134	406285	98.184
126) Pentachloroethane	(4)	9.765	167	342023	104.558
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	1913889	99.721
128) sec-Butylbenzene	(4)	9.916	105	2197034	98.273
130) 1,3-Dichlorobenzene	(4)	9.993	146	1077708	98.654
131) p-Isopropyltoluene	(4)	10.022	119	1972426	99.665
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	397731	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	1113649	98.336
91) 1,3-Dichloropropene (total)	(3)		100	1450150	210.209
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	2033938	98.495
136) Benzyl Chloride	(4)	10.157	91	1788288	112.817

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.237	119	1234343	99.263
138) 1,4-Diethylbenzene	(4)	10.298	119	1307716	98.156
140) n-Butylbenzene	(4)	10.314	92	985822	98.693
139) 1,2-Dichlorobenzene	(4)	10.324	146	1081811	99.816
141) 1,2-Diethylbenzene	(4)	10.382	119	1030347	98.141
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	191235	108.922
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	826857	99.492
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	814746	102.112
148) Hexachlorobutadiene	(4)	11.530	225	267172	94.015
149) Naphthalene	(4)	11.582	128	2844431	105.359
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	786584	101.001
109) Xylene (Total)	(3)		106	2556568	300.794
151) 2-Methylnaphthalene	(4)	12.304	142	1671753	108.536
142) Diethylbenzene (total)	(4)		100	3572406	295.560

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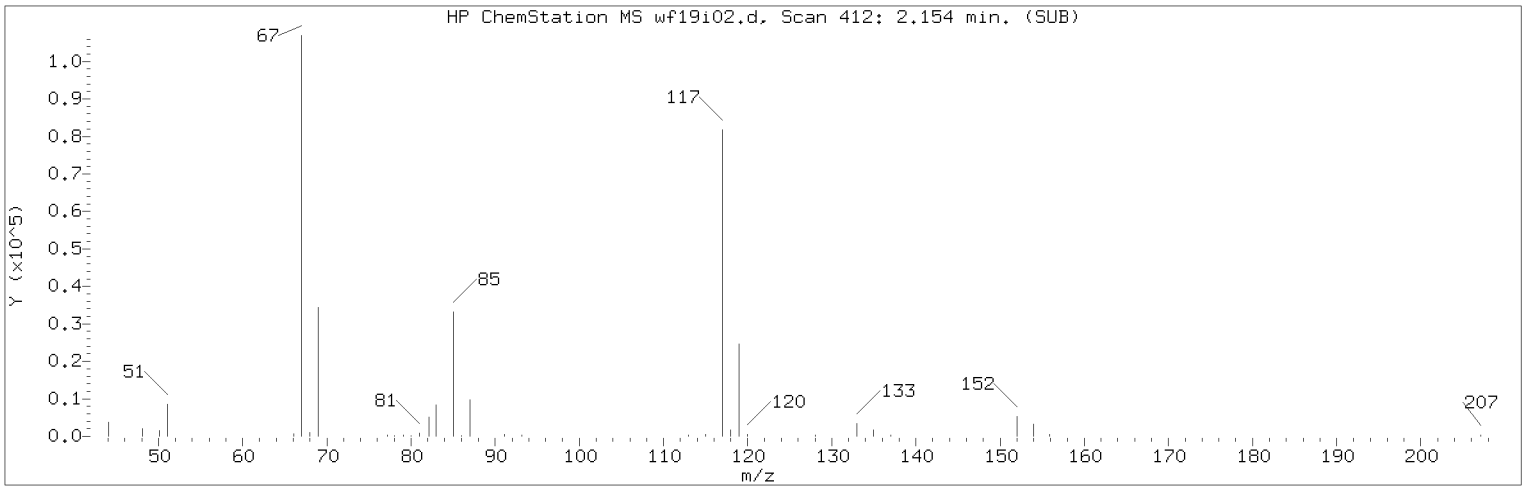
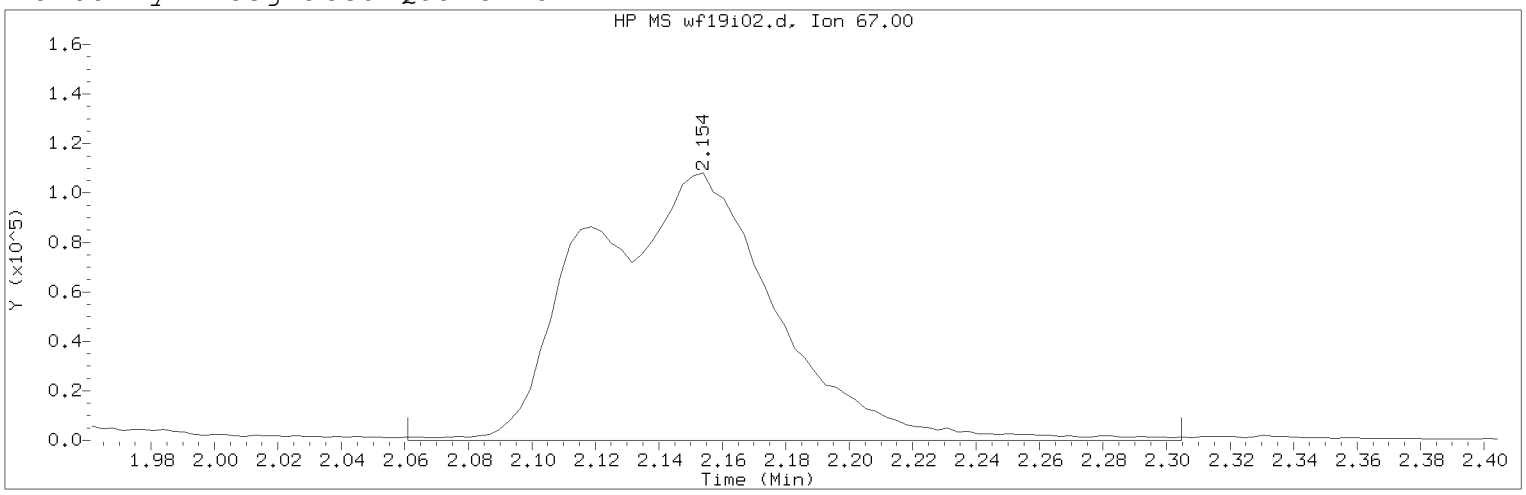
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

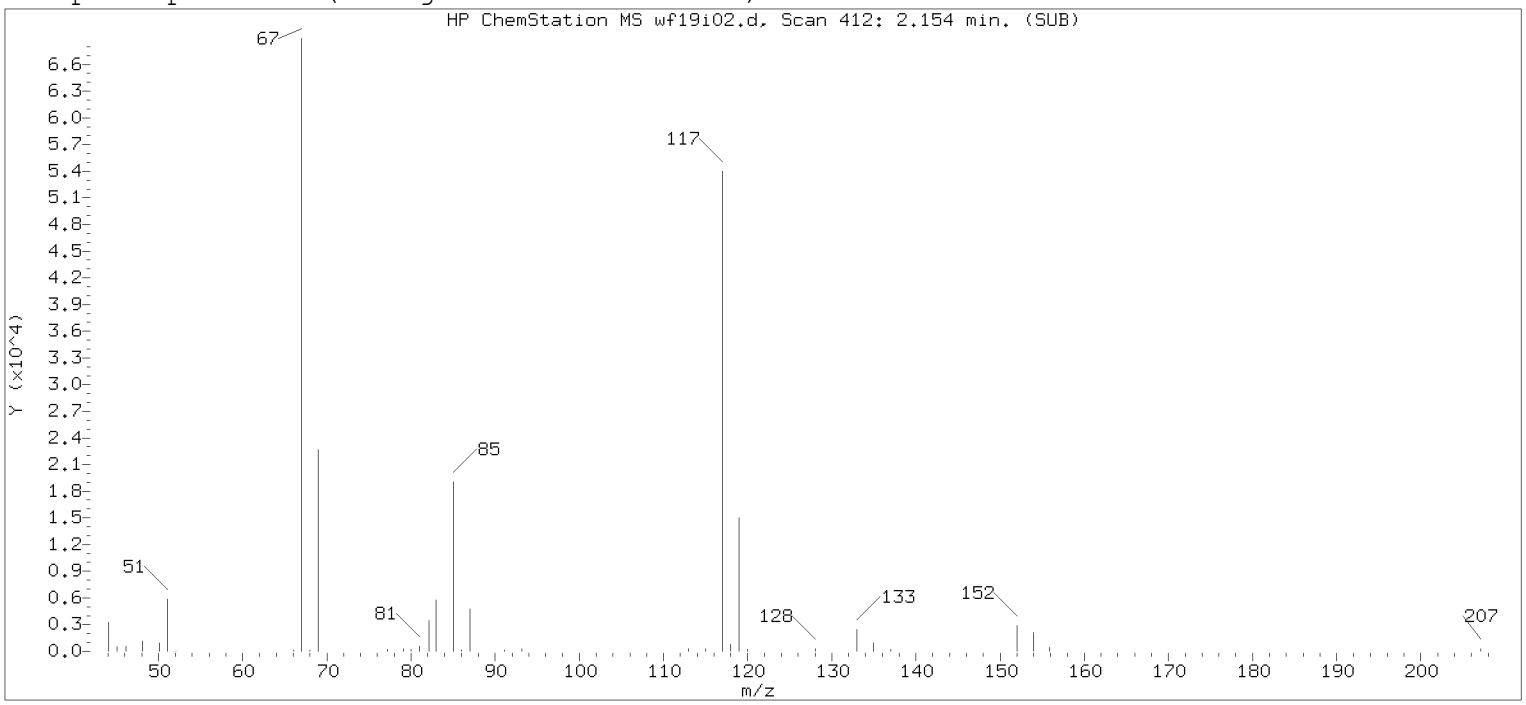
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 412
Retention Time (minutes): 2.154
Quant Ion : 67.00
Area (flag) : 447423M
On-Column Amount (ng) : 90.7045
Integration start scan : 382 Integration stop scan: 458
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

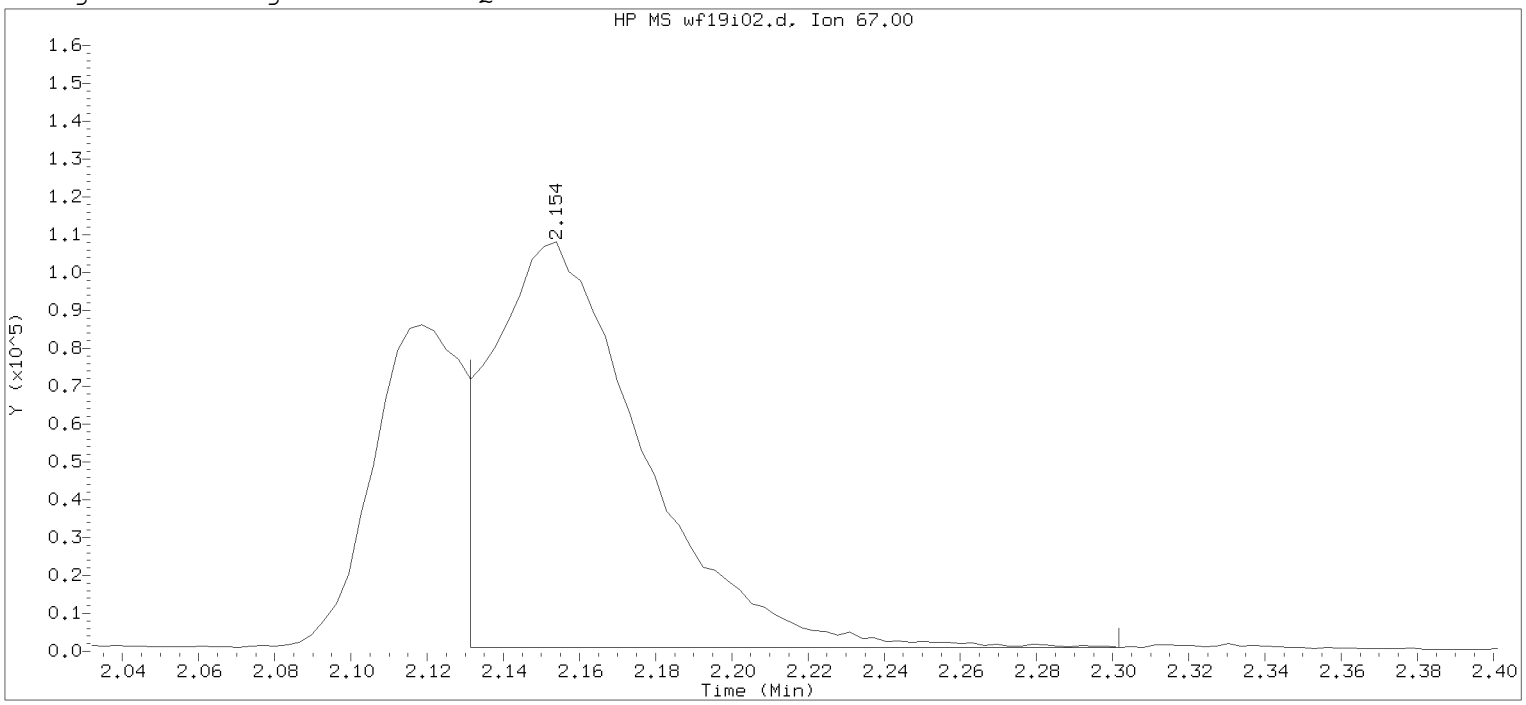
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

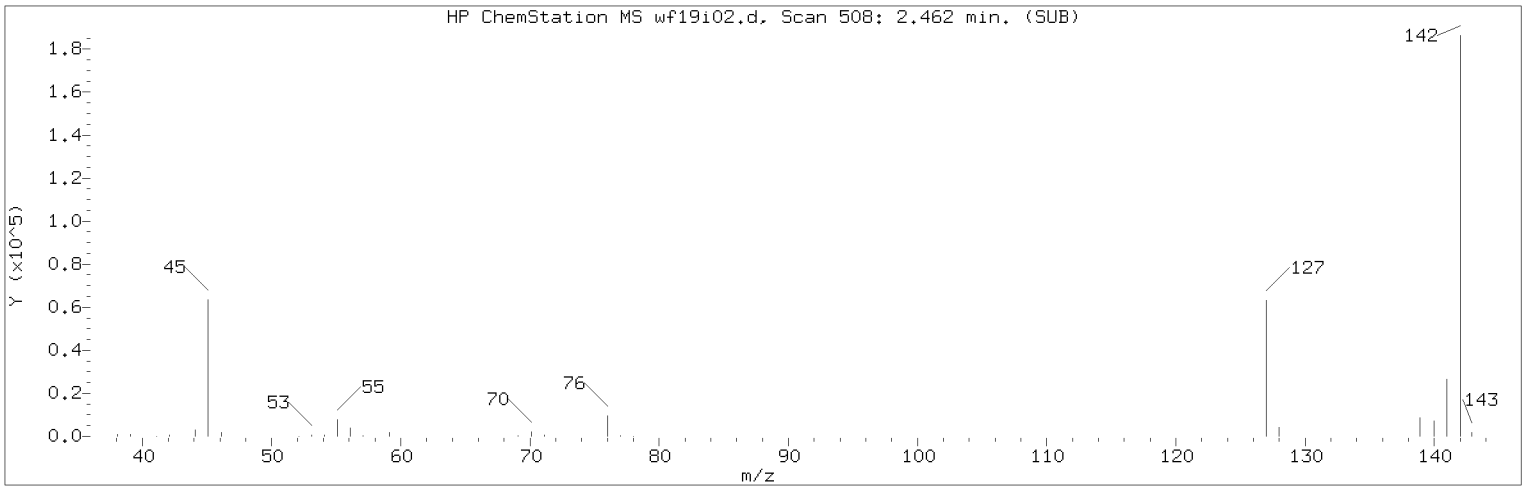
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD100 Lab Sample ID: VSTD100

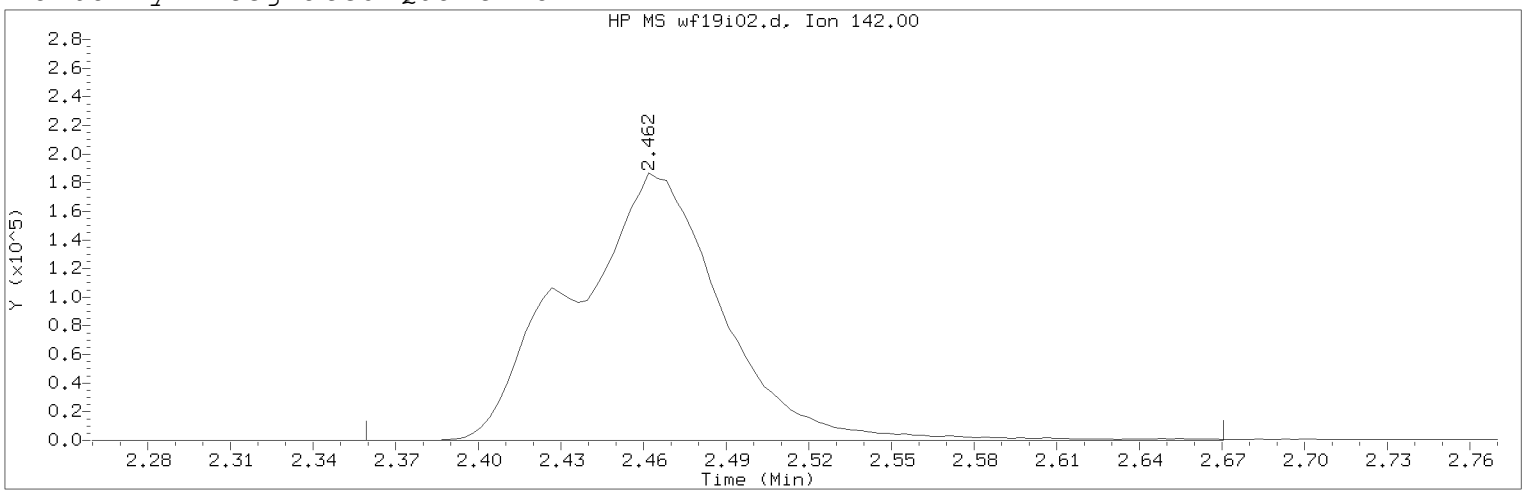
Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 412		
Retention Time (minutes)	: 2.154		
Quant Ion	: 67.00		
Area	: 294632		
On-column Amount (ng)	: 90.5897		
Integration start scan	: 404	Integration stop scan:	457
Y at integration start	: 1032	Y at integration end:	981

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

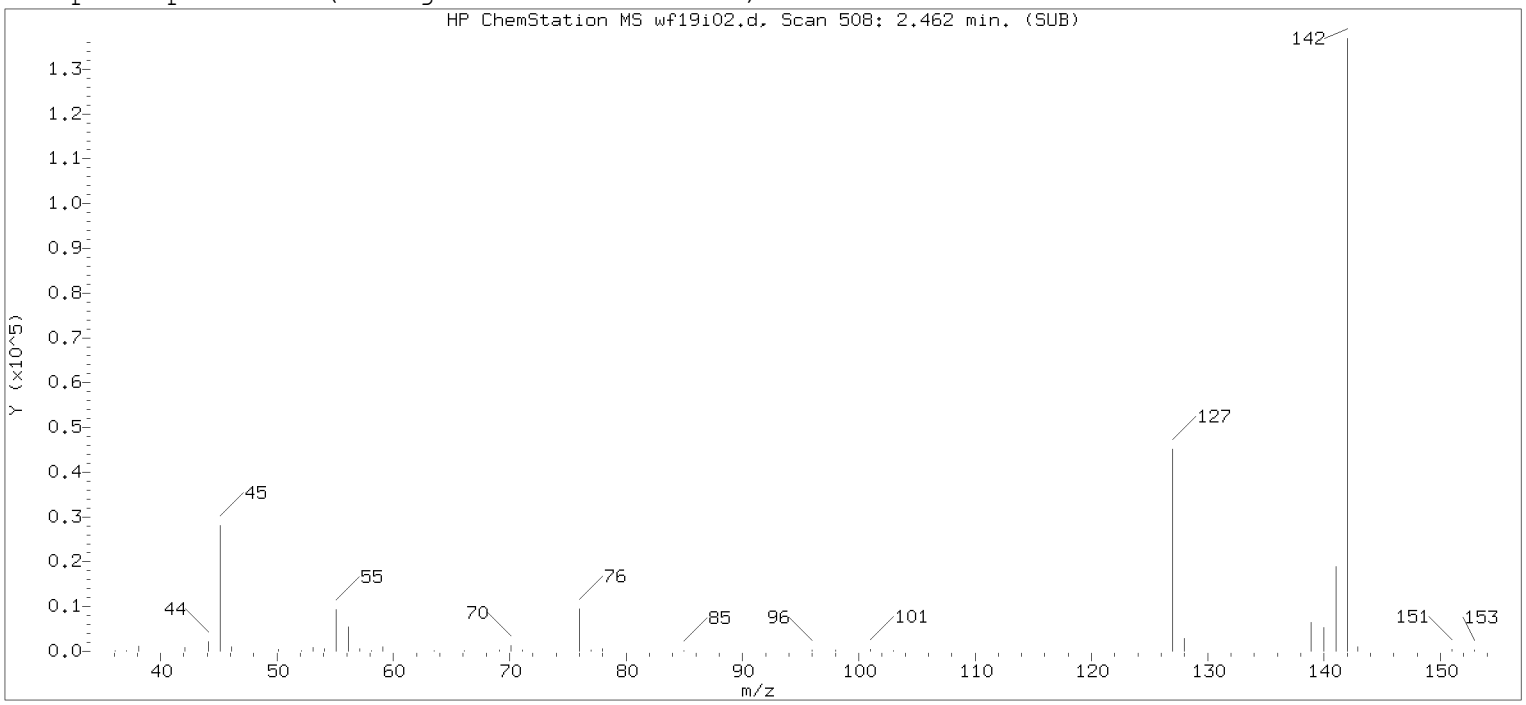
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 508
Retention Time (minutes): 2.462
Quant Ion : 142.00
Area (flag) : 704010M
On-Column Amount (ng) : 98.9520
Integration start scan : 475 Integration stop scan: 572
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

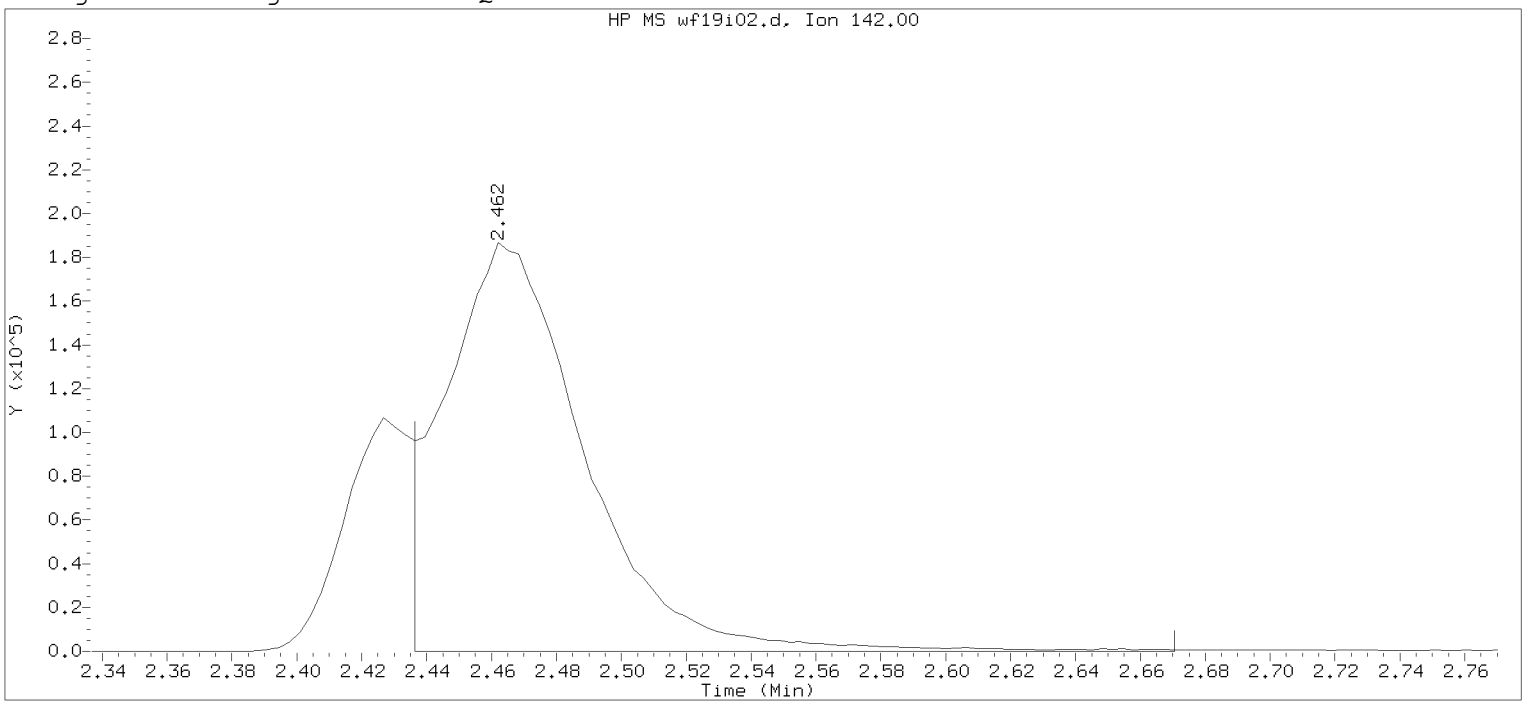
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

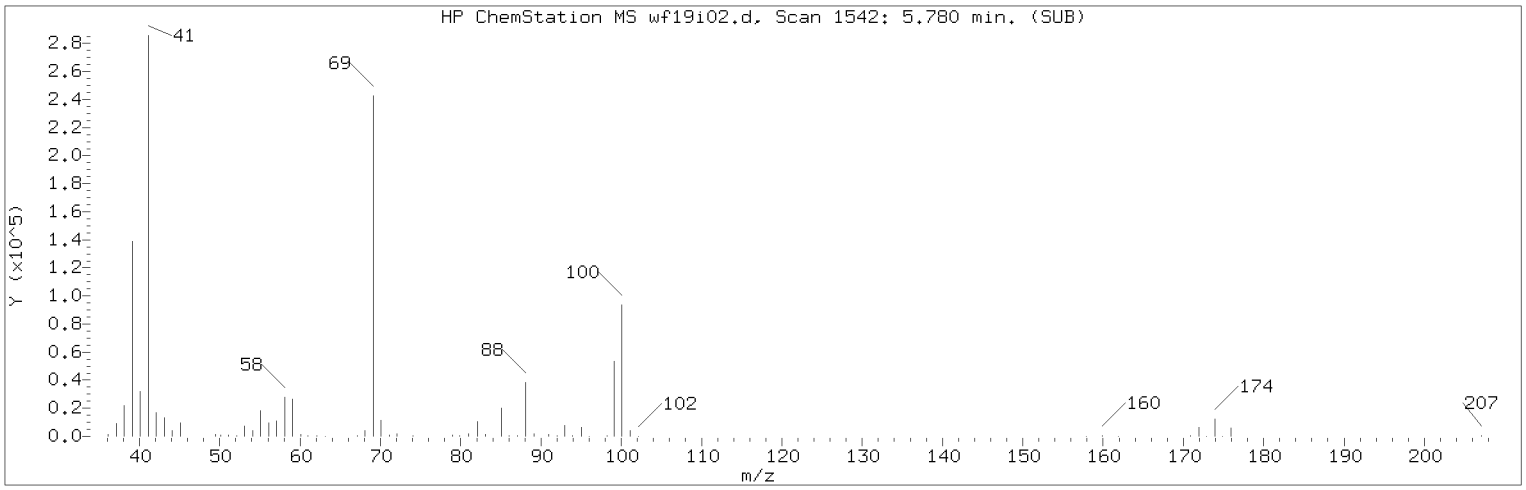
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD100 Lab Sample ID: VSTD100

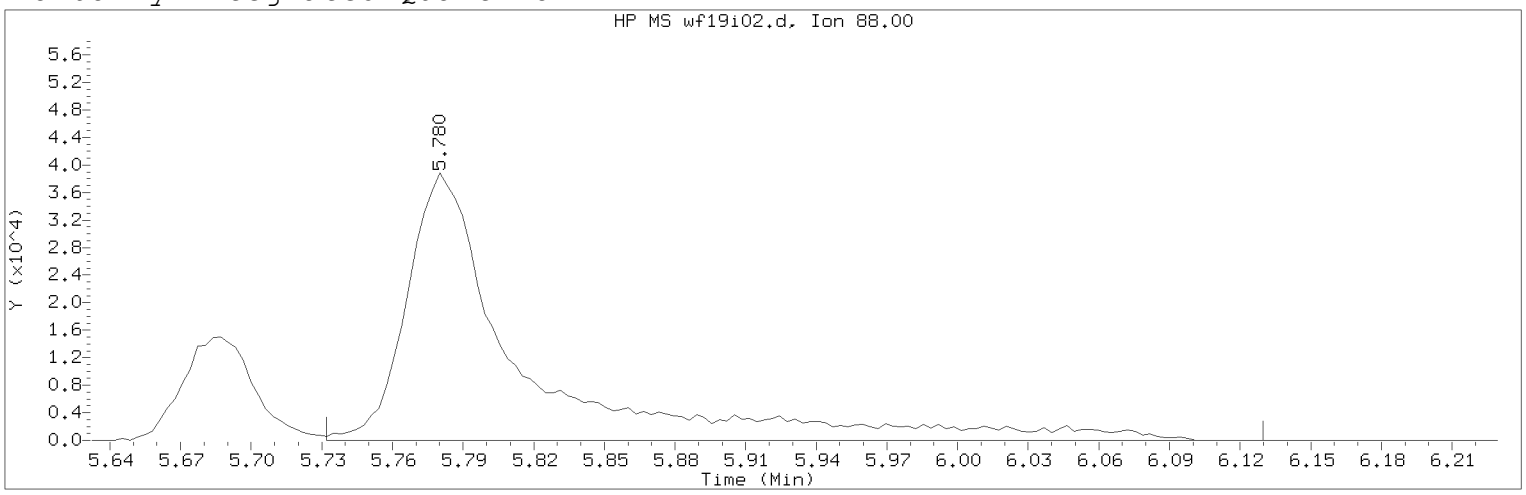
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 508
Retention Time (minutes): 2.462
Quant Ion : 142.00
Area : 554735
On-column Amount (ng) : 84.2643
Integration start scan : 499 Integration stop scan: 572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD100 Lab Sample ID: VSTD100

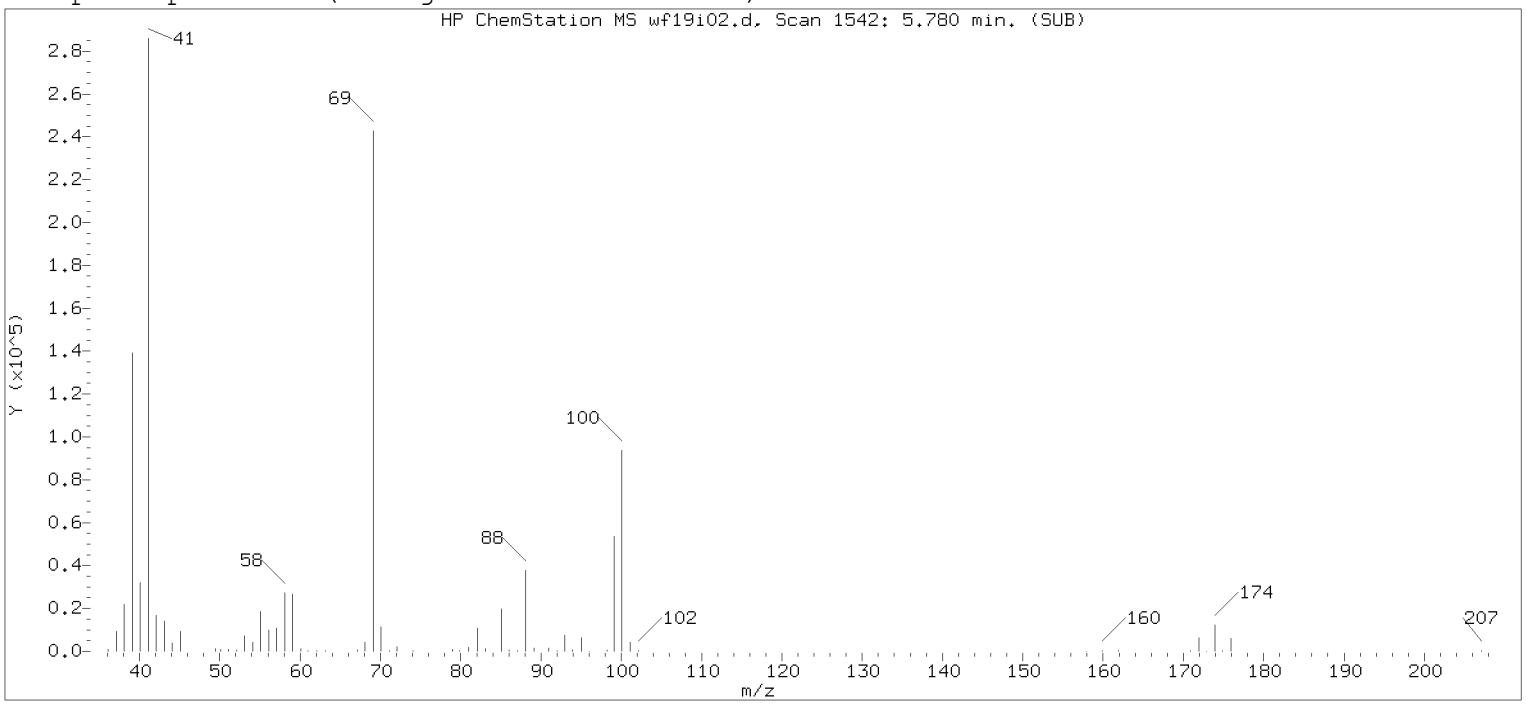
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area (flag) : 133422M
On-Column Amount (ng) : 1349.4188
Integration start scan : 1526 Integration stop scan: 1650
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

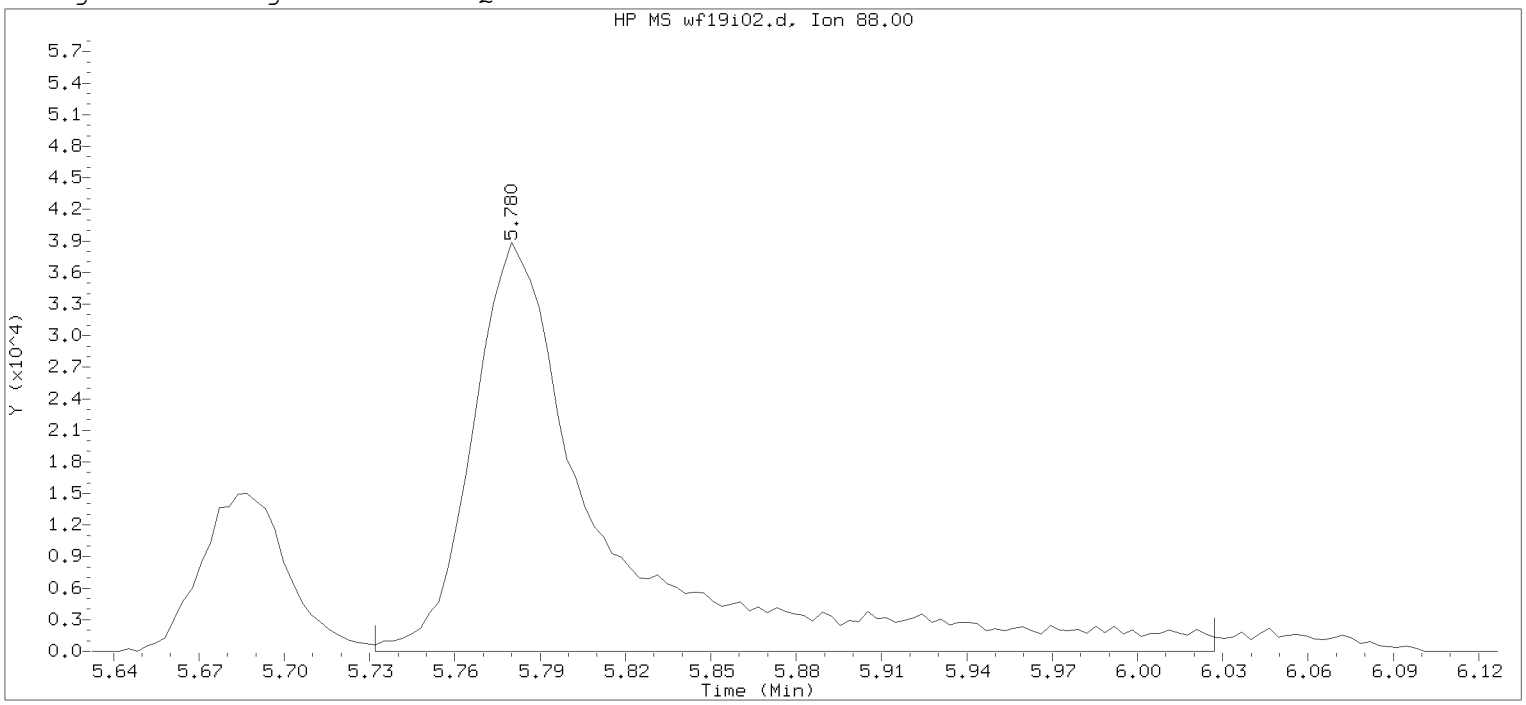
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



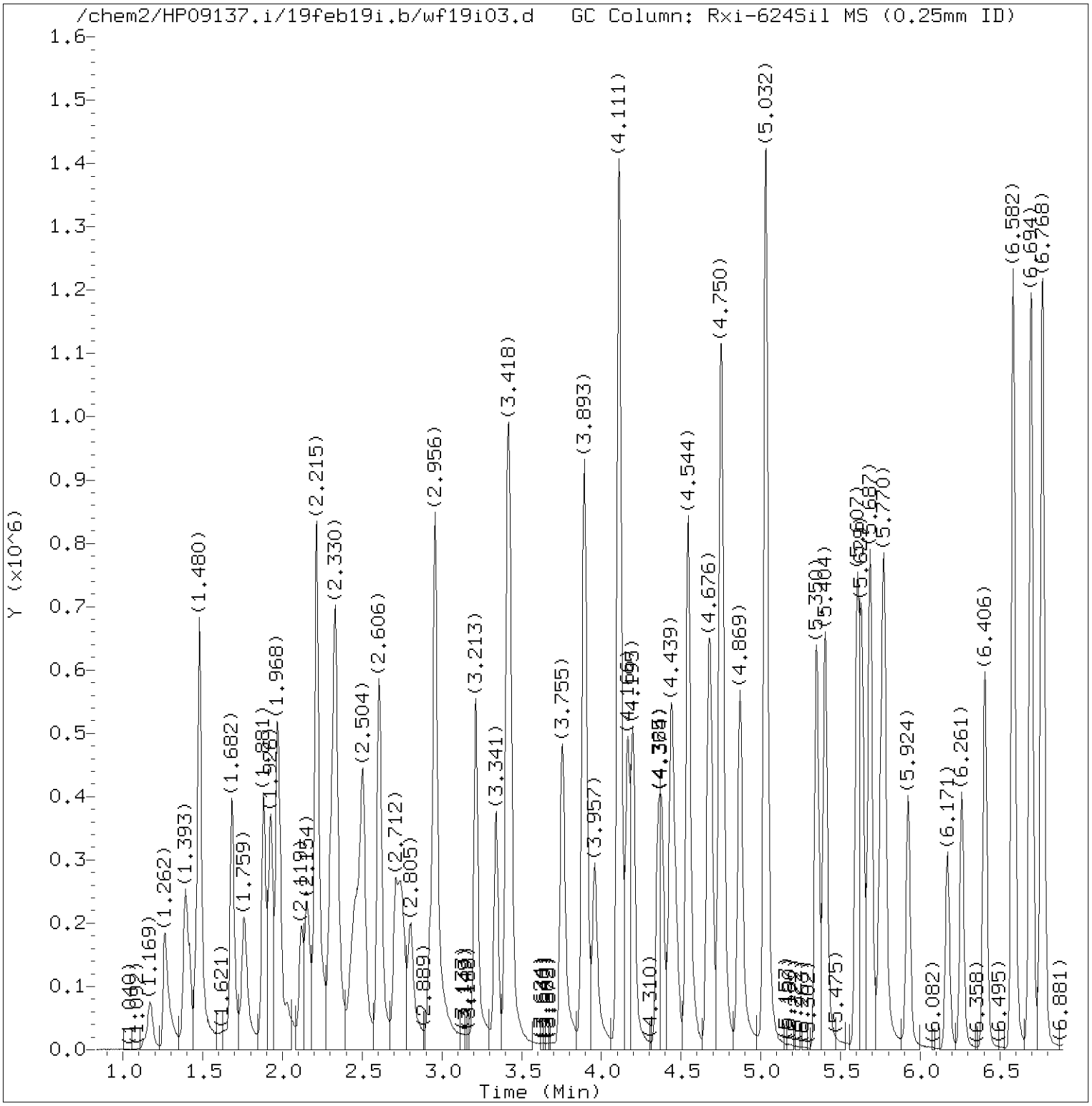
Data File: /chem2/HP09137.i/19feb19i.b/wf19i02.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 12:45 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1542		
Retention Time (minutes)	: 5.780		
Quant Ion	: 88.00		
Area	: 128356		
On-column Amount (ng)	: 1250.1973		
Integration start scan	: 1526	Integration stop scan:	1618
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user Capacity



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

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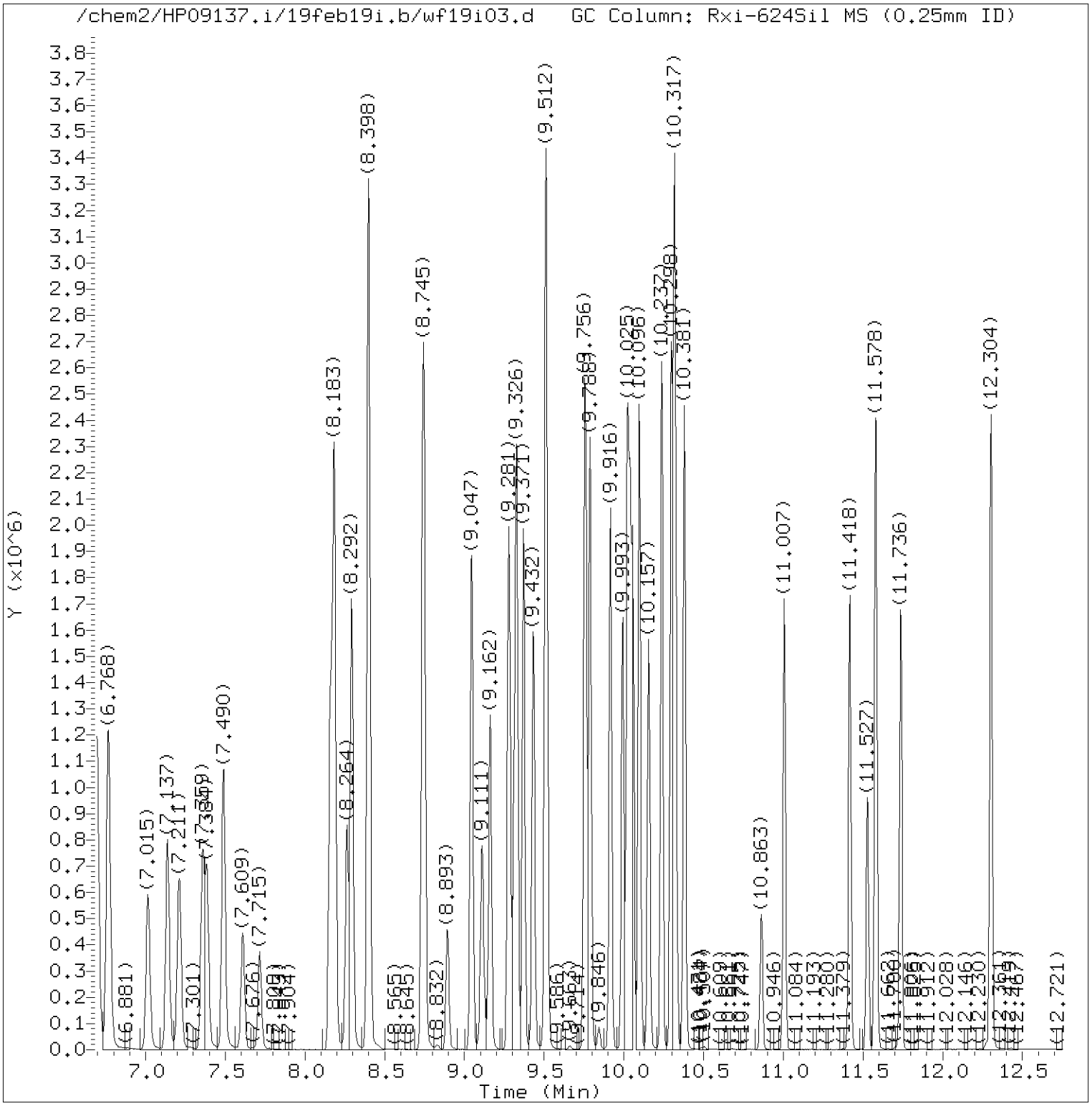
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.262	85	296826	53.462
4) Chloromethane	(2)	1.393	50	345066	49.912
6) Vinyl Chloride	(2)	1.467	62	316392	49.922
5) 1,3-Butadiene	(2)	1.480	39	198055	47.007
8) Bromomethane	(2)	1.682	94	248203	49.656
9) Chloroethane	(2)	1.759	64	196842	47.198
10) Dichlorofluoromethane	(2)	1.881	67	394164	48.827
12) Trichlorofluoromethane	(2)	1.926	101	346119	51.421
11) n-Pentane	(2)	1.971	43	304724	47.602
13) Ethanol	(1)	2.029	45	123880	1223.601
15) Freon 123a	(2)	2.154	67	238678M	47.452
16) Acrolein	(1)	2.215	56	827202	517.599
17) 1,1-Dichloroethene	(2)	2.324	96	193424	51.092
17) 1,1-Dichloroethene	(2)	2.321	63	95600	50.052
19) Freon 113	(2)	2.330	101	179017	53.849
18) Acetone	(1)	2.334	58	78612	101.199
21) 2-Propanol	(1)	2.443	45	149590	259.188
22) Methyl Iodide	(2)	2.465	142	365873	50.432
23) Carbon Disulfide	(2)	2.507	76	662769	49.692
25) Allyl Chloride	(2)	2.600	41	351245	53.257
27) Methyl Acetate	(2)	2.619	43	279026	48.878
28) Methylene Chloride	(2)	2.706	84	227605M	49.185
29)*t-Butyl alcohol-d10	(1)	2.728	65	221988	250.000
30) t-Butyl alcohol	(1)	2.805	59	270559	262.794
31) Acrylonitrile	(2)	2.924	53	161927	53.918
32) trans-1,2-Dichloroethene	(2)	2.956	96	205818	50.107
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	499906	49.983
34) n-Hexane	(2)	3.213	57	294788	53.636
36) 1,1-Dichloroethane	(2)	3.341	63	377579	50.730
38) di-Isopropyl ether	(2)	3.412	45	723571	50.602
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	329496	51.113
40) Ethyl t-butyl ether	(2)	3.755	59	519380	49.830
42) cis-1,2-Dichloroethene	(2)	3.890	96	233468	50.623
45) 2,2-Dichloropropane	(2)	3.893	77	170659	51.054
44) 2-Butanone	(2)	3.906	43	444981	103.132
47) Propionitrile	(1)	3.960	54	312875	244.517
48) Methacrylonitrile	(2)	4.111	67	408760	126.588
49) Bromochloromethane	(2)	4.118	128	123779	51.631

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.166	71	123715	104.465
51) Chloroform	(2)	4.198	83	350541	50.195
52)$Dibromofluoromethane	(2)	4.352	113	200440	50.388
52)$Dibromofluoromethane	(2)	4.352	111	203587	49.855
53) 1,1,1-Trichloroethane	(2)	4.378	97	270255	51.432
54) Cyclohexane	(2)	4.442	56	358513	51.555
54) Cyclohexane	(2)	4.439	84	301750	52.422
54) Cyclohexane	(2)	4.442	69	108191	51.769
55) 1,1-Dichloropropene	(2)	4.544	75	280799	50.152
56) Carbon Tetrachloride	(2)	4.544	117	228944	50.771
58) Isobutyl Alcohol	(1)	4.670	41	246561	656.905
57)$1,2-Dichloroethane-d4	(2)	4.689	102	52492	49.616
57)$1,2-Dichloroethane-d4	(2)	4.686	65	225475	48.958
57)$1,2-Dichloroethane-d4	(2)	4.689	104	33040	49.038
60) Benzene	(2)	4.750	78	896329	49.804
61) 1,2-Dichloroethane	(2)	4.763	62	272237	48.968
61) 1,2-Dichloroethane	(2)	4.766	98	28104	53.133
65) t-Amyl methyl ether	(2)	4.869	73	548486	51.366
66)*Fluorobenzene	(2)	5.029	96	858650	50.000
67) n-Heptane	(2)	5.035	43	271771	51.739
69) n-Butanol	(1)	5.350	56	449377	1348.443
71) Trichloroethene	(2)	5.404	95	217955	50.009
73) Methylcyclohexane	(2)	5.603	83	345616	54.623
73) Methylcyclohexane	(2)	5.607	98	160647	54.605
74) 1,2-Dichloropropane	(2)	5.636	63	236274	51.136
75) Dibromomethane	(2)	5.751	93	147111	51.589
77) Methyl Methacrylate	(2)	5.773	69	266970	52.578
76) 1,4-Dioxane	(1)	5.780	88	66583M	668.325
79) Bromodichloromethane	(2)	5.924	83	272148	51.943
43) 1,2-Dichloroethene (Total)	(2)		96	439286	100.730
80) 2-Nitropropane	(2)	6.171	41	193740	109.288
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	192007	54.506
82) cis-1,3-Dichloropropene	(2)	6.406	75	374689	52.012
83) 4-Methyl-2-pentanone	(2)	6.582	43	893533	105.058
84)$Toluene-d8	(3)	6.694	98	891117	50.528
84)$Toluene-d8	(3)	6.694	100	583239	49.869
89) Toluene	(3)	6.765	92	574331	50.554
90) trans-1,3-Dichloropropene	(3)	7.015	75	357488	52.857

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.137	69	455291	54.784
93) 1,1,2-Trichloroethane	(3)	7.211	97	227274	51.976
94) Tetrachloroethene	(3)	7.359	166	231262	50.166
95) 1,3-Dichloropropane	(3)	7.384	76	393691	51.836
97) 2-Hexanone	(3)	7.490	43	705936	106.697
98) Dibromochloromethane	(3)	7.609	129	231994	54.321
100) 1,2-Dibromoethane	(3)	7.715	107	253132	52.691
101)*Chlorobenzene-d5	(3)	8.161	117	703812	50.000
103) Chlorobenzene	(3)	8.187	112	634213	50.322
104) 1,1,1,2-Tetrachloroethane	(3)	8.264	131	212636	52.500
105) Ethylbenzene	(3)	8.292	91	1088867	50.428
107) m+p-Xylene	(3)	8.398	106	866772	100.963
108) o-Xylene	(3)	8.739	106	427426	50.608
110) Styrene	(3)	8.751	104	737561	52.057
111) Bromoform	(3)	8.893	173	184052	55.373
112) Isopropylbenzene	(3)	9.047	105	1059585	51.055
113) Cyclohexanone	(1)	9.111	55	294000	654.199
115)$4-Bromofluorobenzene	(3)	9.162	95	351157	49.771
115)$4-Bromofluorobenzene	(3)	9.162	174	297817	50.023
116) Bromobenzene	(4)	9.278	156	283326	50.030
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	404581	52.977
118) 1,2,3-Trichloropropane	(4)	9.313	110	120905	52.560
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	326983	133.518
120) n-Propylbenzene	(4)	9.371	91	1251632	50.136
121) 2-Chlorotoluene	(4)	9.435	126	258976	50.293
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	917303	50.948
122) 4-Chlorotoluene	(4)	9.518	126	277283	50.302
125) tert-Butylbenzene	(4)	9.756	134	204946	50.102
126) Pentachloroethane	(4)	9.765	167	174259	53.889
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	964859	50.855
128) sec-Butylbenzene	(4)	9.916	105	1121349	50.739
130) 1,3-Dichlorobenzene	(4)	9.993	146	543558	50.334
131) p-Isopropyltoluene	(4)	10.022	119	994480	50.832
132)*1,4-Dichlorobenzene-d4	(4)	10.038	152	393177	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	558679	49.903
91) 1,3-Dichloropropene (total)	(3)		100	732177	104.868
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	1074098	52.617
136) Benzyl Chloride	(4)	10.157	91	884205	56.428

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

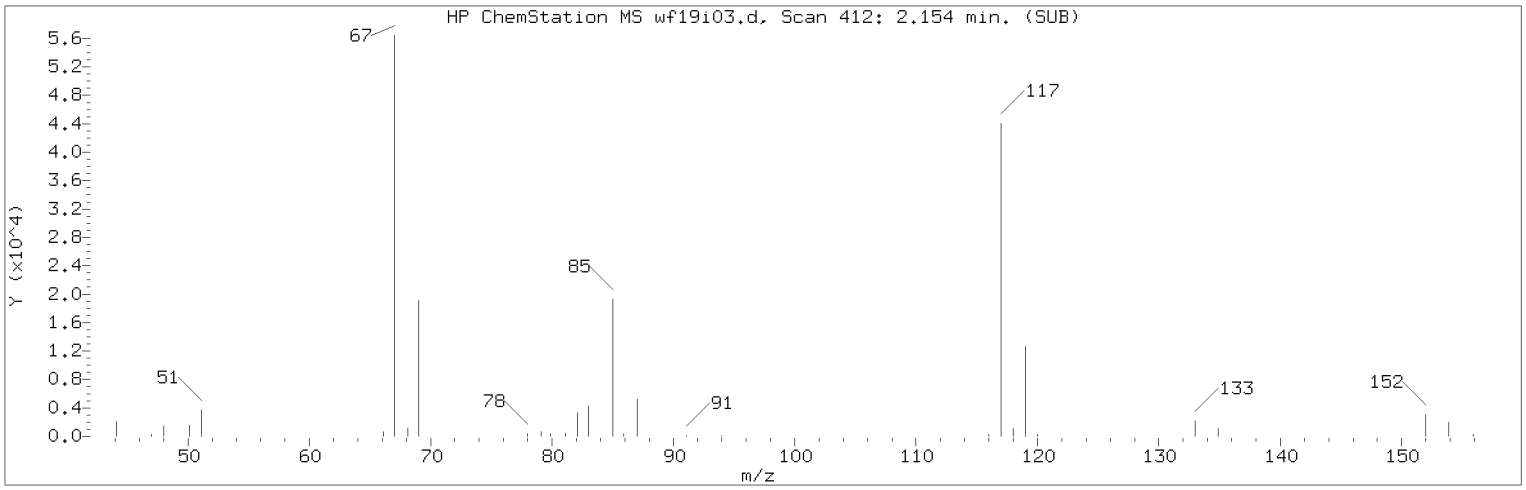
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

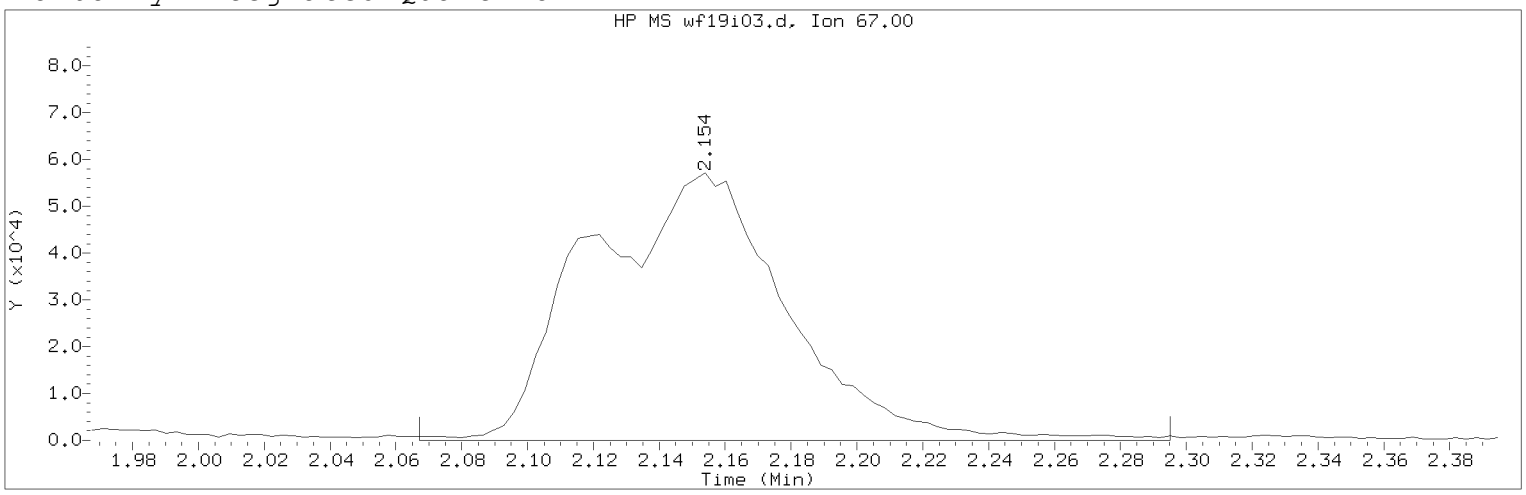
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.237	119	648916	52.789
138) 1,4-Diethylbenzene	(4)	10.298	119	693198	52.634
140) n-Butylbenzene	(4)	10.314	92	498295	50.463
139) 1,2-Dichlorobenzene	(4)	10.324	146	543650	50.742
141) 1,2-Diethylbenzene	(4)	10.381	119	544138	52.430
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	96961	55.866
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	420610	51.197
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	414796	52.589
148) Hexachlorobutadiene	(4)	11.527	225	139053	49.498
149) Naphthalene	(4)	11.582	128	1472414	55.170
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	402903	52.334
109) Xylene (Total)	(3)		106	1294198	151.571
151) 2-Methylnaphthalene	(4)	12.304	142	862234	56.628
142) Diethylbenzene (total)	(4)		100	1886252	157.852

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

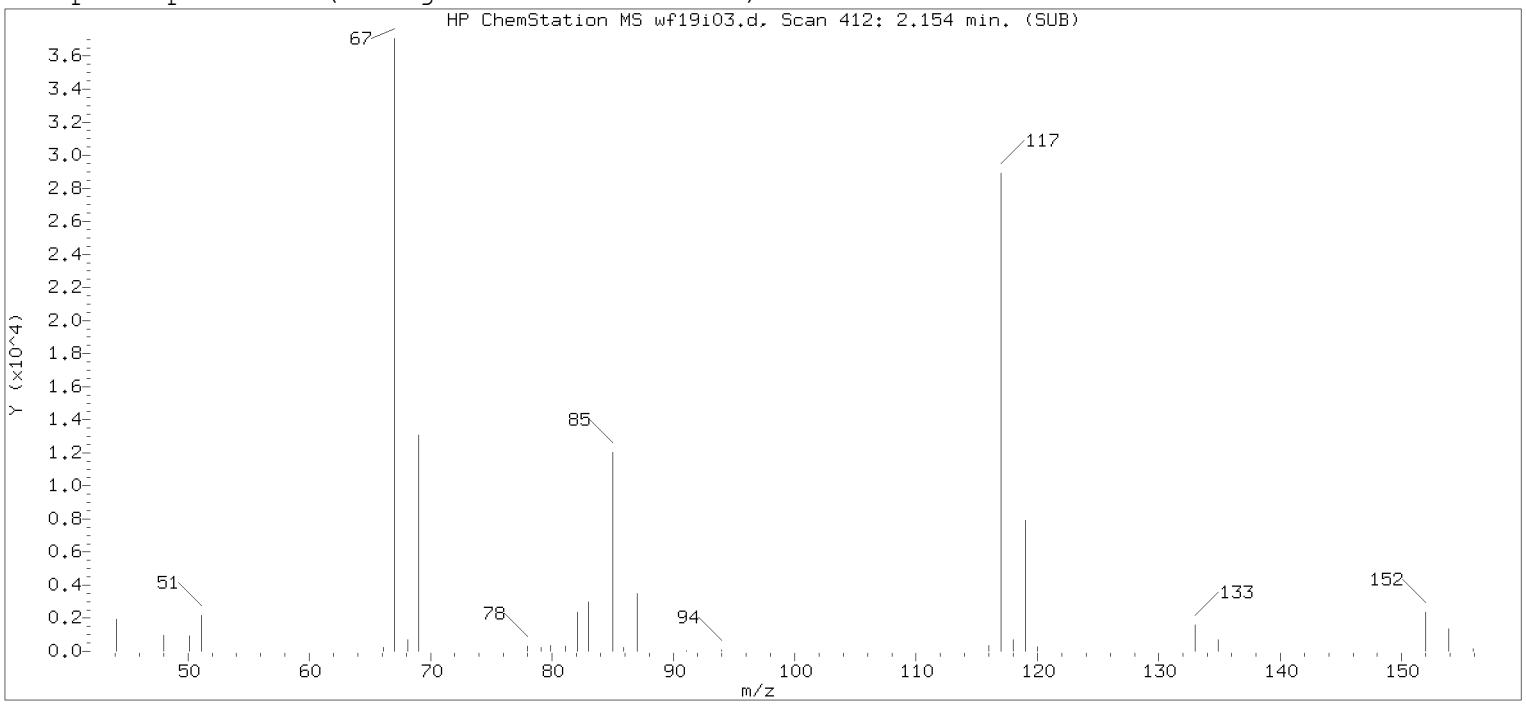
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 412
Retention Time (minutes): 2.154
Quant Ion : 67.00
Area (flag) : 238678M
On-Column Amount (ng) : 47.4516
Integration start scan : 384 Integration stop scan: 455
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

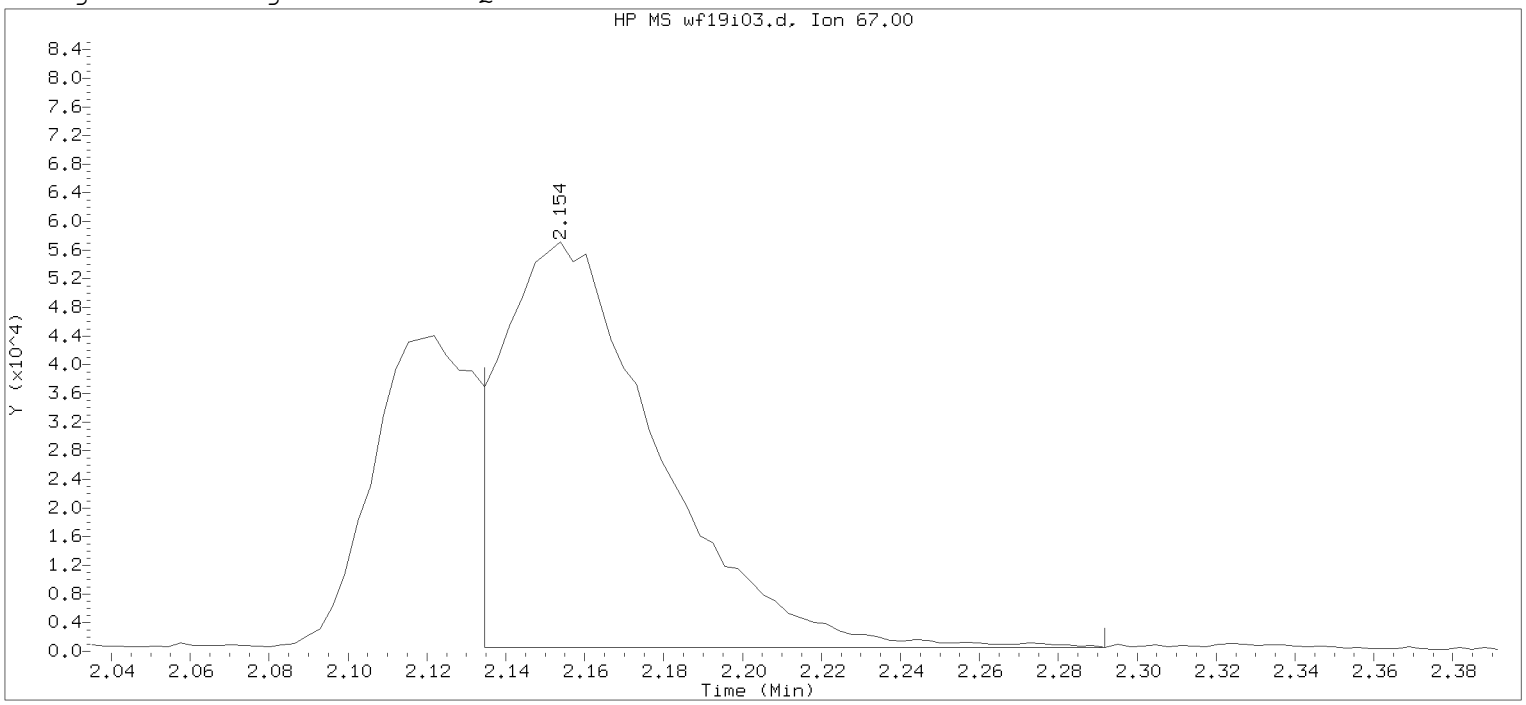
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

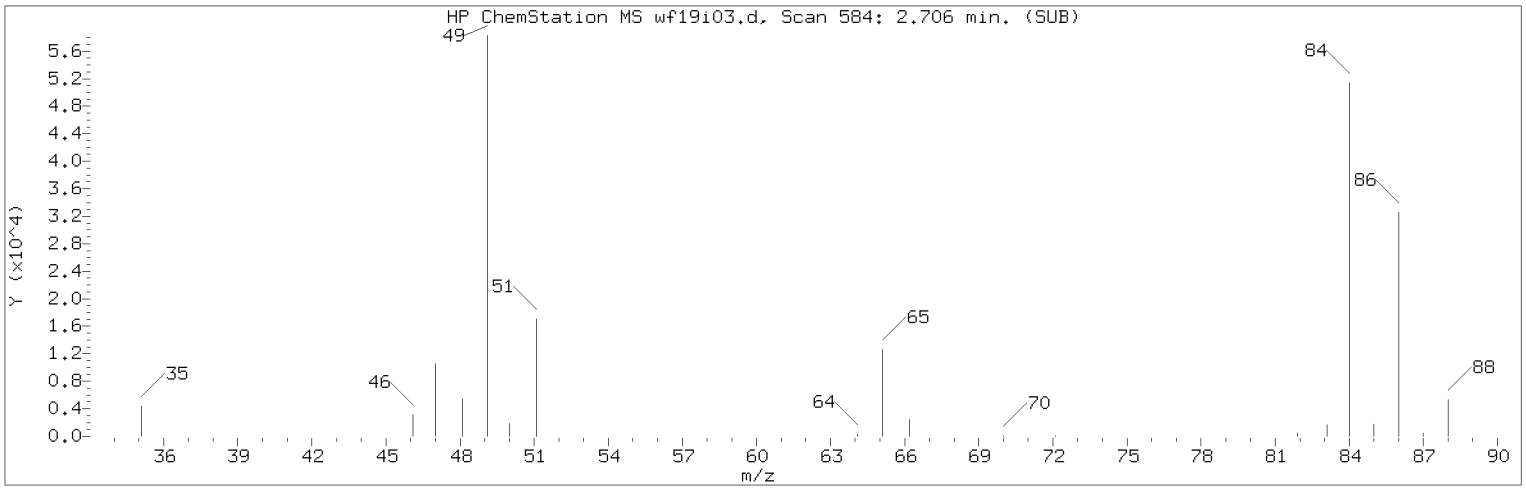
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

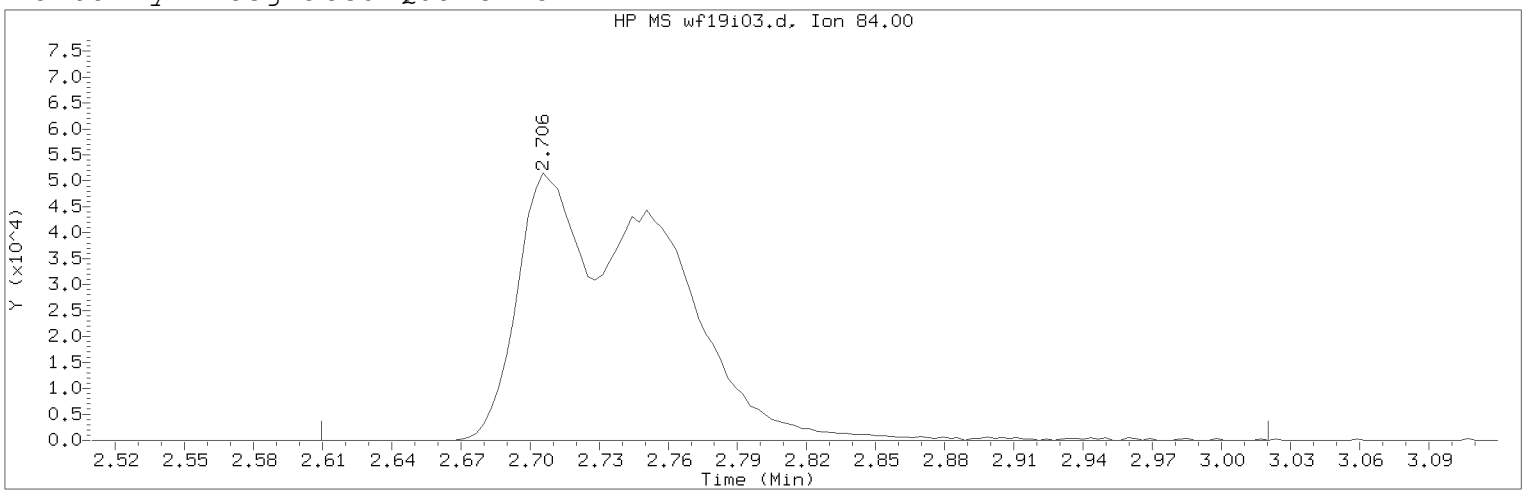
Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 412		
Retention Time (minutes)	: 2.154		
Quant Ion	: 67.00		
Area	: 154008		
On-column Amount (ng)	: 47.5673		
Integration start scan	: 405	Integration stop scan:	454
Y at integration start	: 574	Y at integration end:	555

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

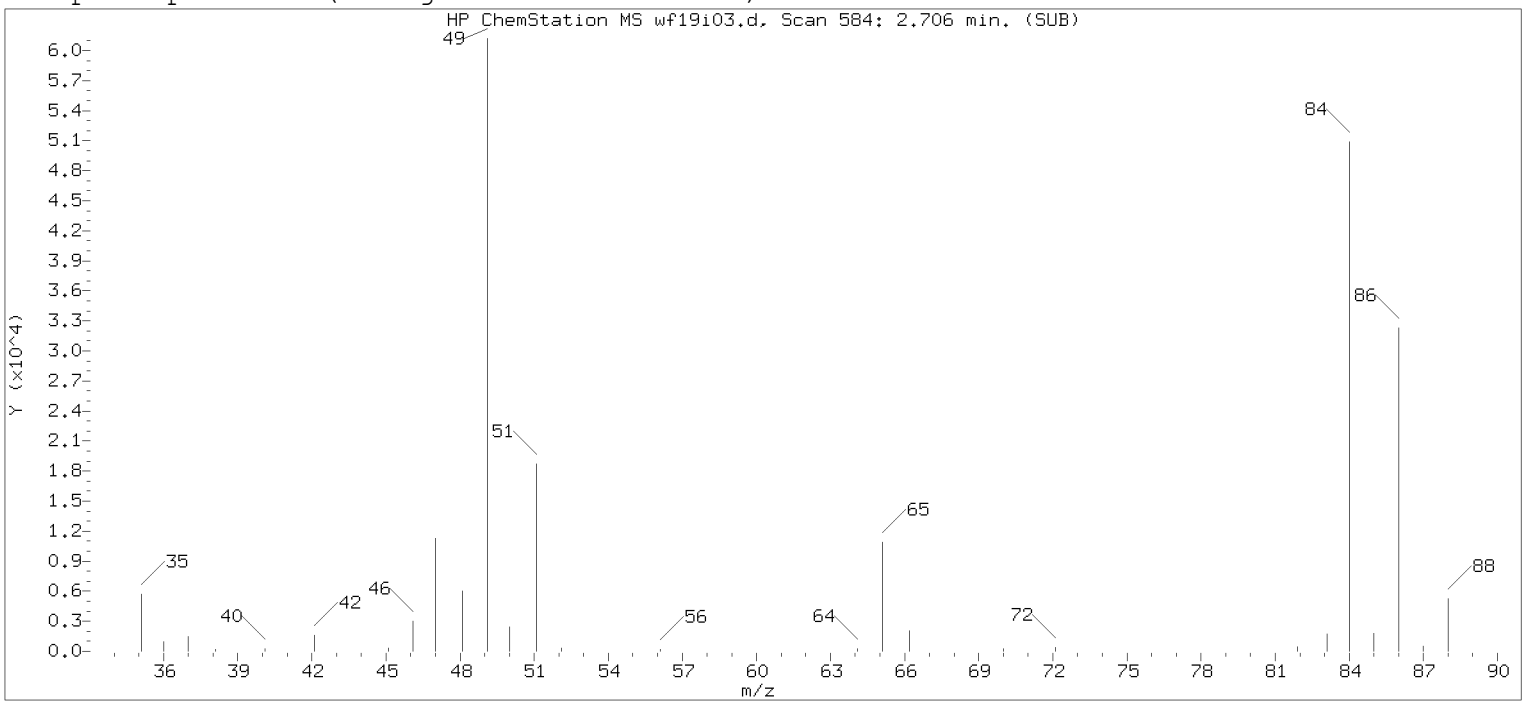
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 584
Retention Time (minutes): 2.706
Quant Ion : 84.00
Area (flag) : 227605M
On-Column Amount (ng) : 49.1854
Integration start scan : 553 Integration stop scan: 681
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

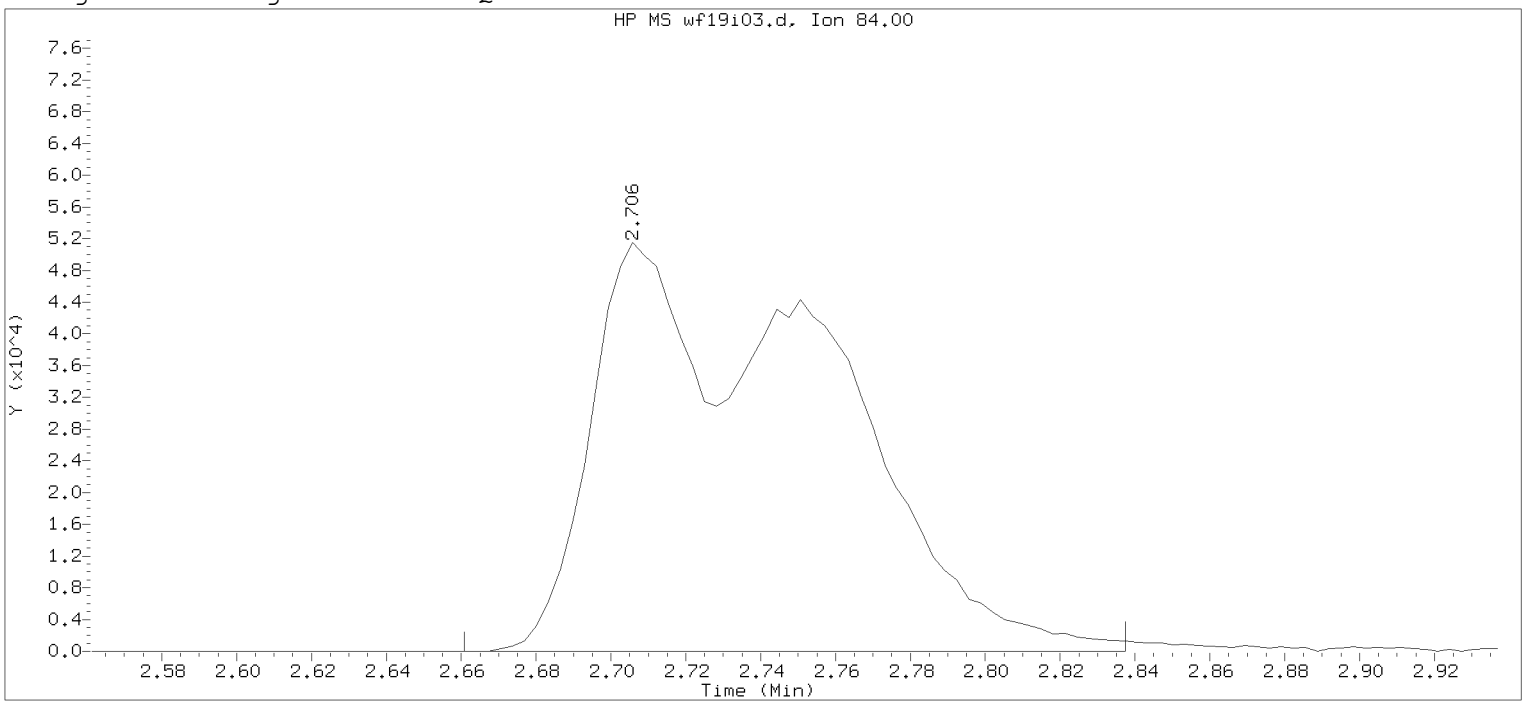
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

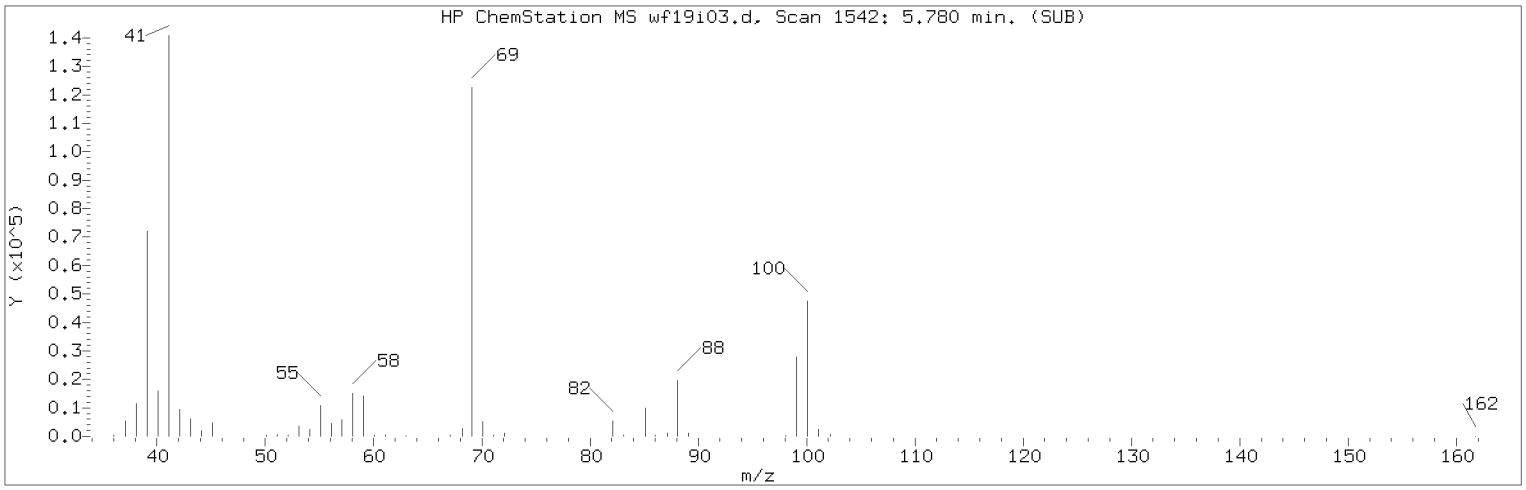
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

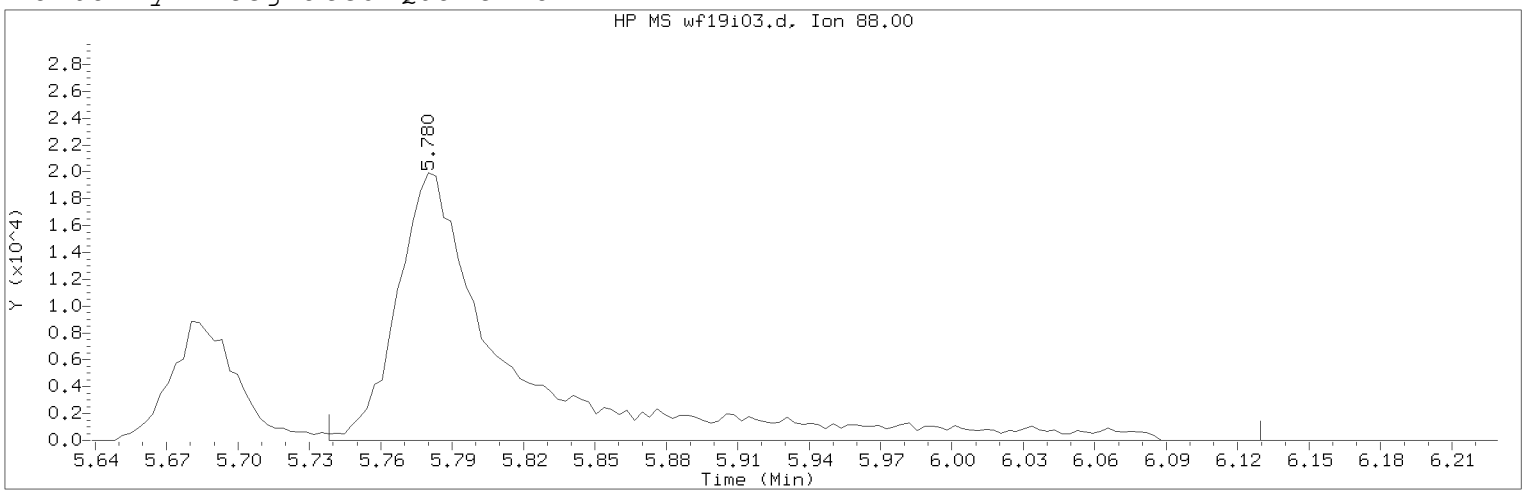
Compound Number	: 28		
Compound Name	: Methylene Chloride		
Scan Number	: 584		
Retention Time (minutes)	: 2.706		
Quant Ion	: 84.00		
Area	: 223774		
On-column Amount (ng)	: 67.2195		
Integration start scan	: 569	Integration stop scan:	624
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD050 Lab Sample ID: VSTD050

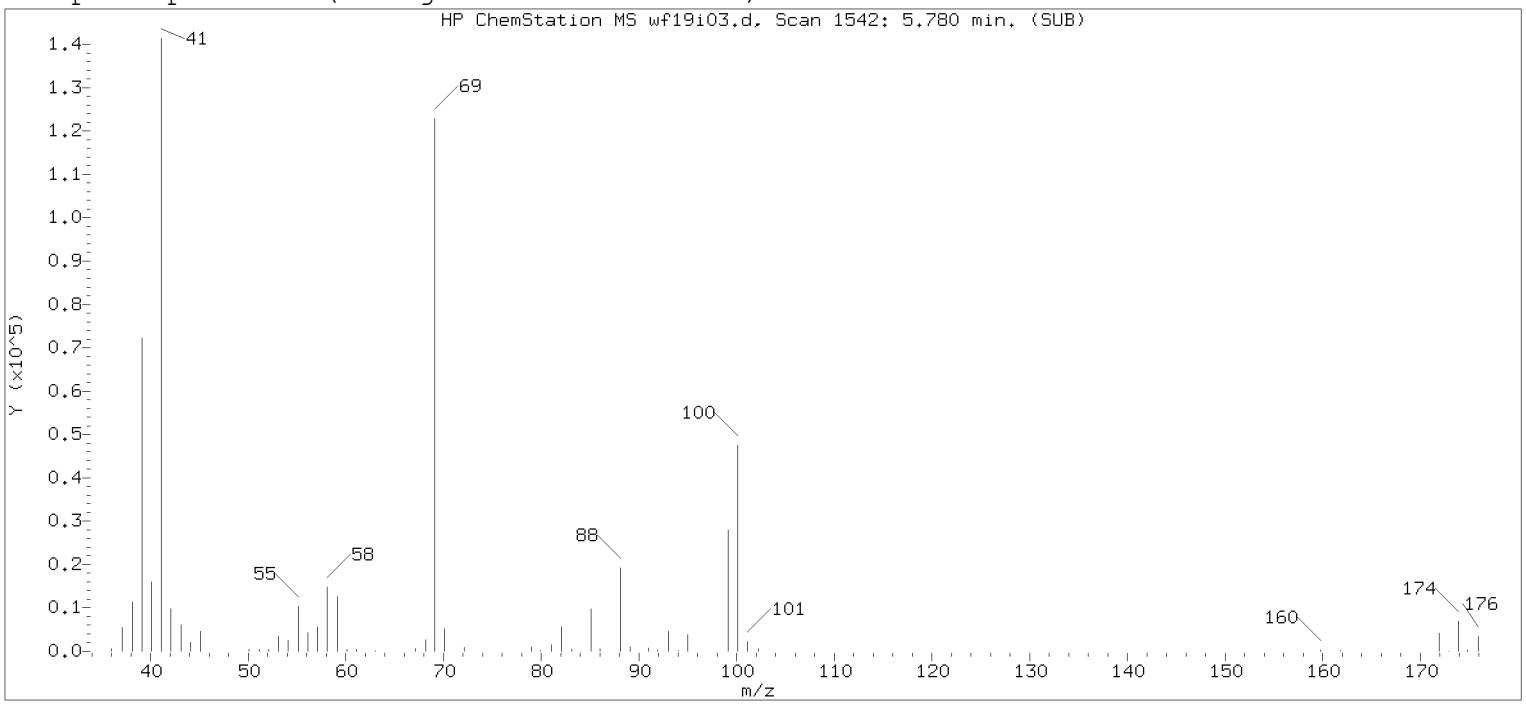
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area (flag) : 66583M
On-Column Amount (ng) : 668.3245
Integration start scan : 1528 Integration stop scan: 1650
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

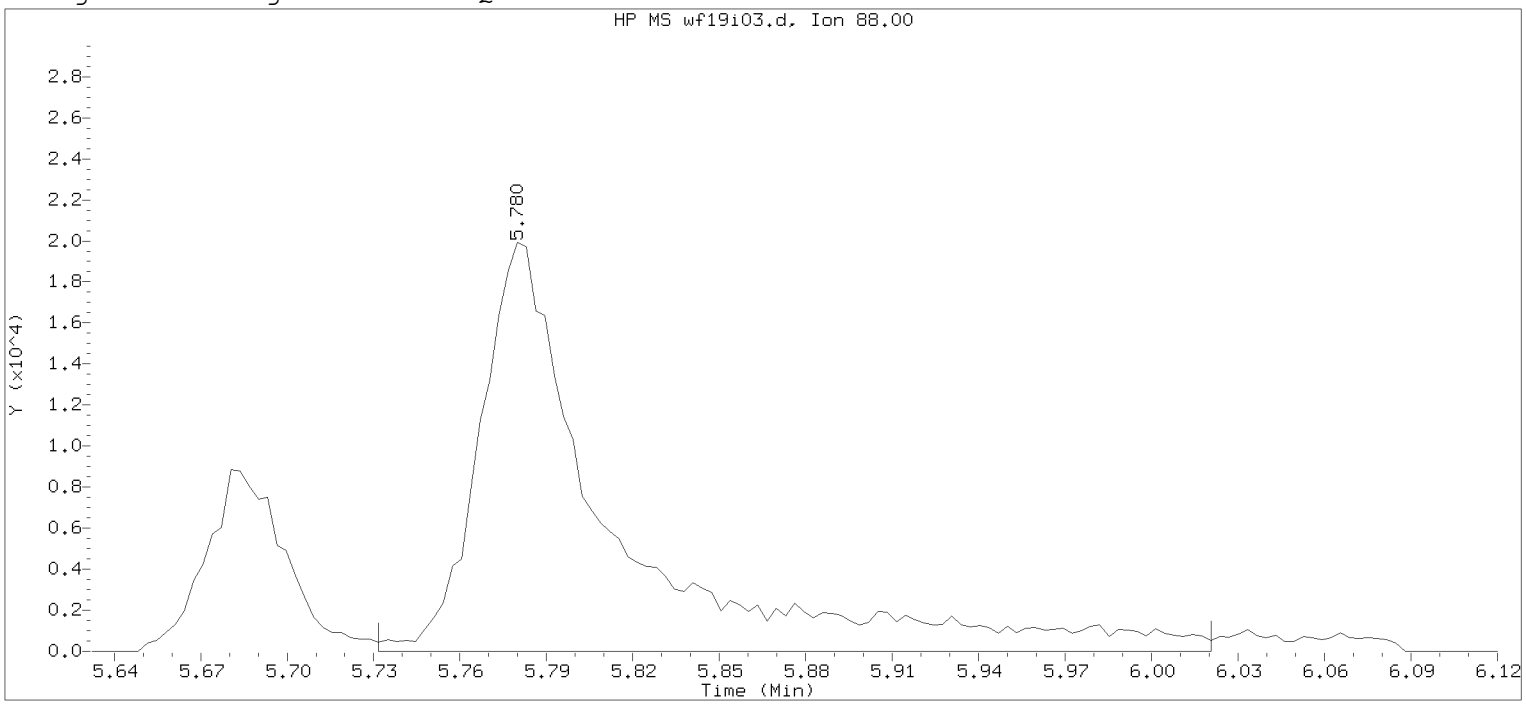
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



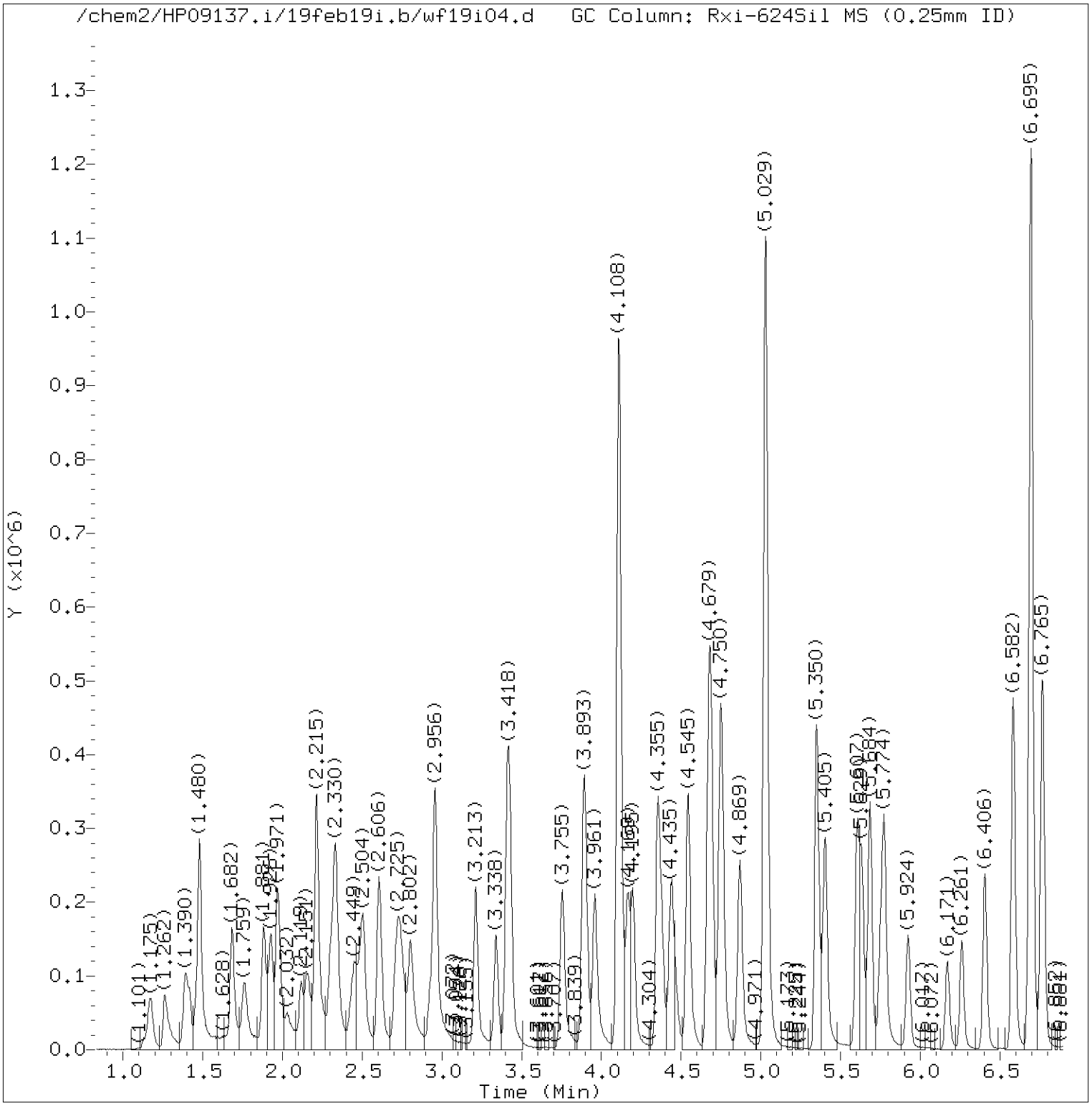
Data File: /chem2/HP09137.i/19feb19i.b/wf19i03.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:09 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:27
Date, time and analyst ID of latest file update: 19-Feb-2019 13:27 apr27582

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1542		
Retention Time (minutes)	: 5.780		
Quant Ion	: 88.00		
Area	: 64091		
On-column Amount (ng)	: 621.3434		
Integration start scan	: 1526	Integration stop scan:	1616
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

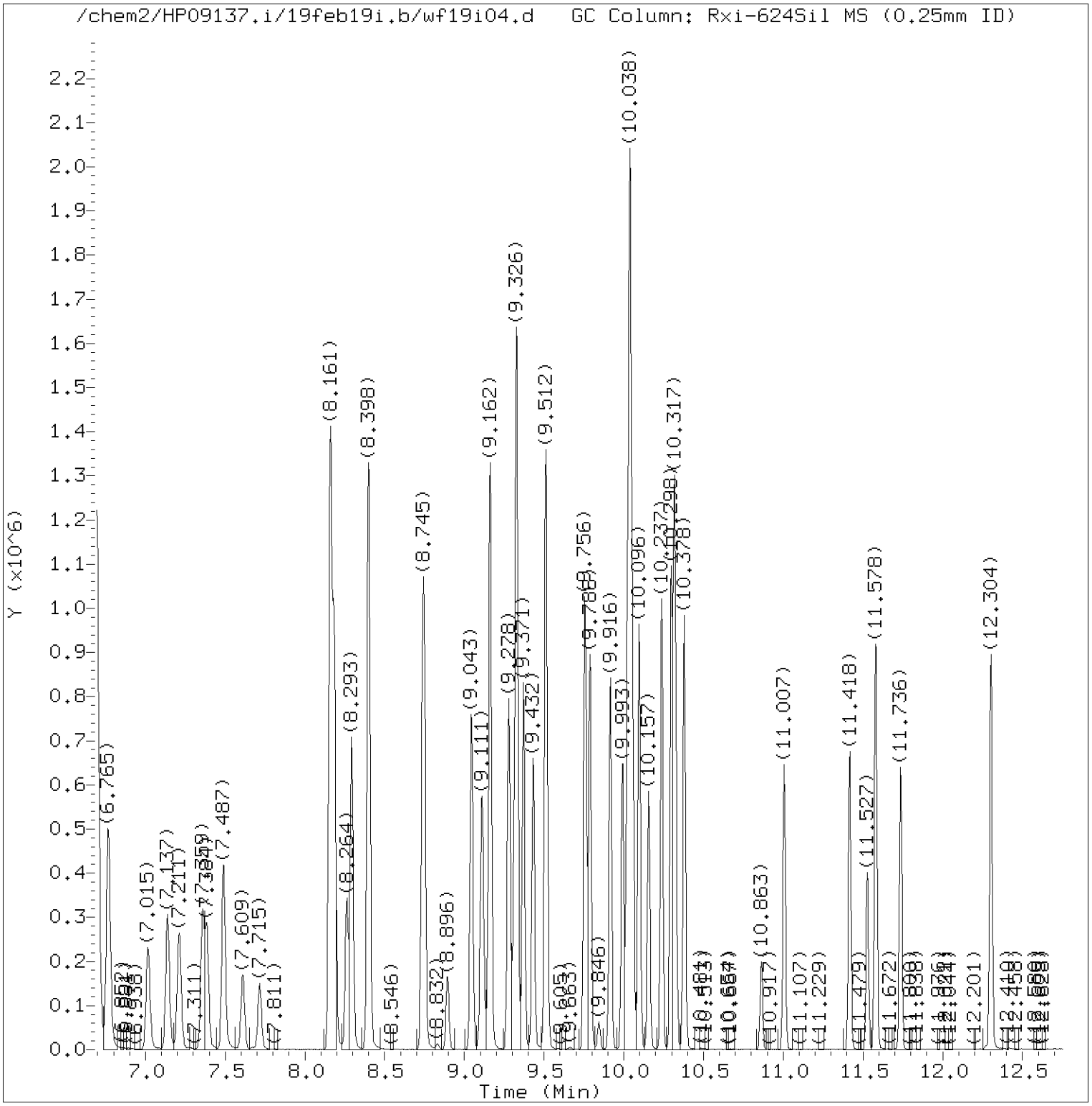
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.262	85	120158	21.151
4) Chloromethane	(2)	1.393	50	137638	19.457
6) Vinyl Chloride	(2)	1.467	62	130261	20.087
5) 1,3-Butadiene	(2)	1.480	39	83783	19.434
8) Bromomethane	(2)	1.682	94	99153	19.387
9) Chloroethane	(2)	1.762	64	81090	19.002
10) Dichlorofluoromethane	(2)	1.881	67	162421	19.663
12) Trichlorofluoromethane	(2)	1.926	101	142691	20.718
11) n-Pentane	(2)	1.971	43	131885	20.135
13) Ethanol	(1)	2.032	45	92307	894.985
15) Freon 123a	(2)	2.160	67	102866M	19.987
16) Acrolein	(1)	2.215	56	326307	200.424
17) 1,1-Dichloroethene	(2)	2.324	96	78708	20.319
17) 1,1-Dichloroethene	(2)	2.324	63	38728	19.816
18) Acetone	(1)	2.334	58	32836	41.493
19) Freon 113	(2)	2.334	101	73317	21.554
21) 2-Propanol	(1)	2.446	45	110569	188.056
22) Methyl Iodide	(2)	2.465	142	150767M	20.310
23) Carbon Disulfide	(2)	2.507	76	274687	20.128
25) Allyl Chloride	(2)	2.603	41	136398	20.212
27) Methyl Acetate	(2)	2.616	43	112197	19.208
28) Methylene Chloride	(2)	2.709	84	93973M	19.847
29)*t-Butyl alcohol-d10	(1)	2.732	65	226145	250.000
30) t-Butyl alcohol	(1)	2.802	59	204216	194.709
31) Acrylonitrile	(2)	2.927	53	65725	21.388
32) trans-1,2-Dichloroethene	(2)	2.956	96	83001	19.748
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	211952	20.711
34) n-Hexane	(2)	3.213	57	110706	19.686
36) 1,1-Dichloroethane	(2)	3.341	63	153564	20.164
38) di-Isopropyl ether	(2)	3.409	45	299035	20.438
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	134999	20.467
40) Ethyl t-butyl ether	(2)	3.755	59	227792	21.359
42) cis-1,2-Dichloroethene	(2)	3.890	96	94743	20.077
45) 2,2-Dichloropropane	(2)	3.890	77	72171	21.101
44) 2-Butanone	(2)	3.903	43	180906	40.977
47) Propionitrile	(1)	3.961	54	249181	191.159
48) Methacrylonitrile	(2)	4.108	67	323877	98.025
49) Bromochloromethane	(2)	4.118	128	49307	20.101

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.169	71	49416	40.960
51) Chloroform	(2)	4.198	83	144225	20.184
52)$Dibromofluoromethane	(2)	4.355	113	203311	49.950
52)$Dibromofluoromethane	(2)	4.355	111	209328	50.098
53) 1,1,1-Trichloroethane	(2)	4.381	97	110547	20.561
54) Cyclohexane	(2)	4.442	56	146608	20.604
54) Cyclohexane	(2)	4.442	84	120950	20.535
54) Cyclohexane	(2)	4.442	69	43702	20.437
55) 1,1-Dichloropropene	(2)	4.545	75	114224	19.938
56) Carbon Tetrachloride	(2)	4.545	117	93746	20.318
58) Isobutyl Alcohol	(1)	4.670	41	177235	463.522
57)$1,2-Dichloroethane-d4	(2)	4.689	102	55712	51.465
57)$1,2-Dichloroethane-d4	(2)	4.689	65	240858	51.112
57)$1,2-Dichloroethane-d4	(2)	4.689	104	33860	49.115
60) Benzene	(2)	4.747	78	366659	19.911
61) 1,2-Dichloroethane	(2)	4.763	62	110518	19.428
61) 1,2-Dichloroethane	(2)	4.760	98	11609	21.450
65) t-Amyl methyl ether	(2)	4.869	73	228200	20.886
66)*Fluorobenzene	(2)	5.029	96	878585	50.000
67) n-Heptane	(2)	5.036	43	110175	20.499
69) n-Butanol	(1)	5.350	56	321265	946.297
71) Trichloroethene	(2)	5.405	95	89487	20.067
73) Methylcyclohexane	(2)	5.604	83	138339	21.368
73) Methylcyclohexane	(2)	5.607	98	63264	21.016
74) 1,2-Dichloropropane	(2)	5.636	63	95210	20.139
75) Dibromomethane	(2)	5.748	93	59218	20.295
77) Methyl Methacrylate	(2)	5.774	69	103170	19.858
76) 1,4-Dioxane	(1)	5.780	88	49606M	488.766
79) Bromodichloromethane	(2)	5.924	83	106910	19.942
43) 1,2-Dichloroethene (Total)	(2)		96	177744	39.825
80) 2-Nitropropane	(2)	6.171	41	74529	41.088
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	69606	19.311
82) cis-1,3-Dichloropropene	(2)	6.406	75	147991	20.077
83) 4-Methyl-2-pentanone	(2)	6.582	43	356841	41.004
84)$Toluene-d8	(3)	6.695	98	907310	50.109
84)$Toluene-d8	(3)	6.695	100	601432	50.088
89) Toluene	(3)	6.765	92	235354	20.178
90) trans-1,3-Dichloropropene	(3)	7.015	75	138713	19.976

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.137	69	175549	20.574
93) 1,1,2-Trichloroethane	(3)	7.208	97	89810	20.005
94) Tetrachloroethene	(3)	7.359	166	94924	20.056
95) 1,3-Dichloropropane	(3)	7.384	76	156793	20.108
97) 2-Hexanone	(3)	7.490	43	279190	41.101
98) Dibromochloromethane	(3)	7.612	129	88860	20.266
100) 1,2-Dibromoethane	(3)	7.715	107	100482	20.372
101)*Chlorobenzene-d5	(3)	8.161	117	722592	50.000
103) Chlorobenzene	(3)	8.183	112	256275	19.806
104) 1,1,1,2-Tetrachloroethane	(3)	8.264	131	82744	19.899
105) Ethylbenzene	(3)	8.293	91	441592	19.920
107) m+p-Xylene	(3)	8.398	106	348881	39.582
108) o-Xylene	(3)	8.735	106	171798	19.812
110) Styrene	(3)	8.748	104	291848	20.063
111) Bromoform	(3)	8.896	173	67627	19.817
112) Isopropylbenzene	(3)	9.043	105	424442	19.920
113) Cyclohexanone	(1)	9.111	55	225728	493.049
115)$4-Bromofluorobenzene	(3)	9.162	95	360726	49.798
115)$4-Bromofluorobenzene	(3)	9.162	174	303950	49.726
116) Bromobenzene	(4)	9.278	156	113938	19.840
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	155706	20.105
118) 1,2,3-Trichloropropane	(4)	9.313	110	47306	20.279
119) trans-1,4-Dichloro-2-butene	(4)	9.326	53	247692	99.736
120) n-Propylbenzene	(4)	9.371	91	506549	20.009
121) 2-Chlorotoluene	(4)	9.432	126	105764	20.254
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	366349	20.065
122) 4-Chlorotoluene	(4)	9.515	126	110429	19.755
125) tert-Butylbenzene	(4)	9.756	134	82290	19.837
126) Pentachloroethane	(4)	9.765	167	64856	19.778
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	383195	19.917
128) sec-Butylbenzene	(4)	9.916	105	452546	20.192
130) 1,3-Dichlorobenzene	(4)	9.993	146	216134	19.736
131) p-Isopropyltoluene	(4)	10.022	119	397632	20.042
132)*1,4-Dichlorobenzene-d4	(4)	10.038	152	398717	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	225862	19.894
91) 1,3-Dichloropropene (total)	(3)		100	286704	40.053
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	422072	20.389
136) Benzyl Chloride	(4)	10.157	91	329533	20.738

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

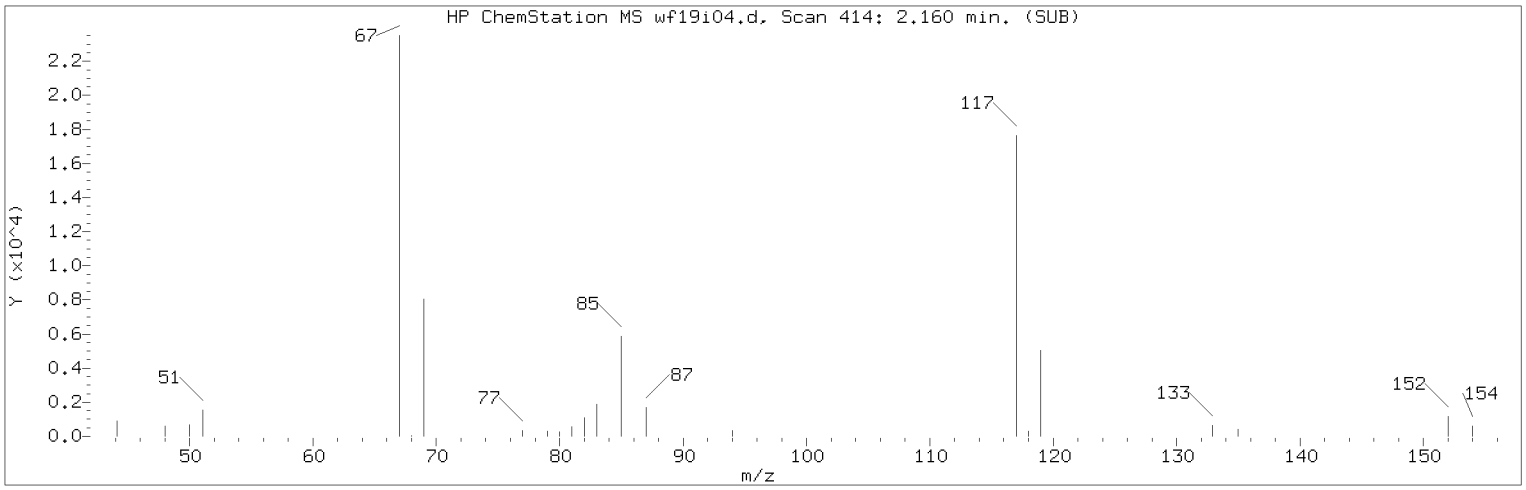
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

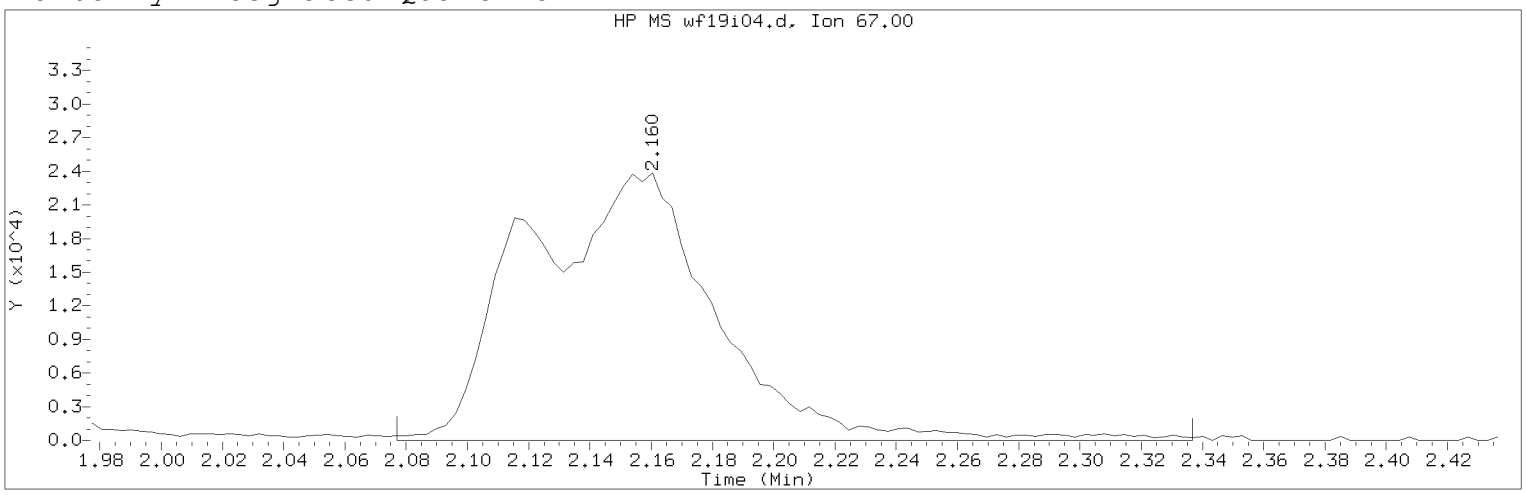
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.237	119	253126	20.305
138) 1,4-Diethylbenzene	(4)	10.298	119	272367	20.393
140) n-Butylbenzene	(4)	10.314	92	198233	19.797
139) 1,2-Dichlorobenzene	(4)	10.324	146	215032	19.791
141) 1,2-Diethylbenzene	(4)	10.378	119	215245	20.452
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	36271	20.608
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	165935	19.917
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	160946	20.121
148) Hexachlorobutadiene	(4)	11.527	225	57264	20.101
149) Naphthalene	(4)	11.582	128	560423	20.707
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	155725	19.946
109) Xylene (Total)	(3)		106	520679	59.394
151) 2-Methylnaphthalene	(4)	12.304	142	317668	20.573
142) Diethylbenzene (total)	(4)		100	740738	61.150

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

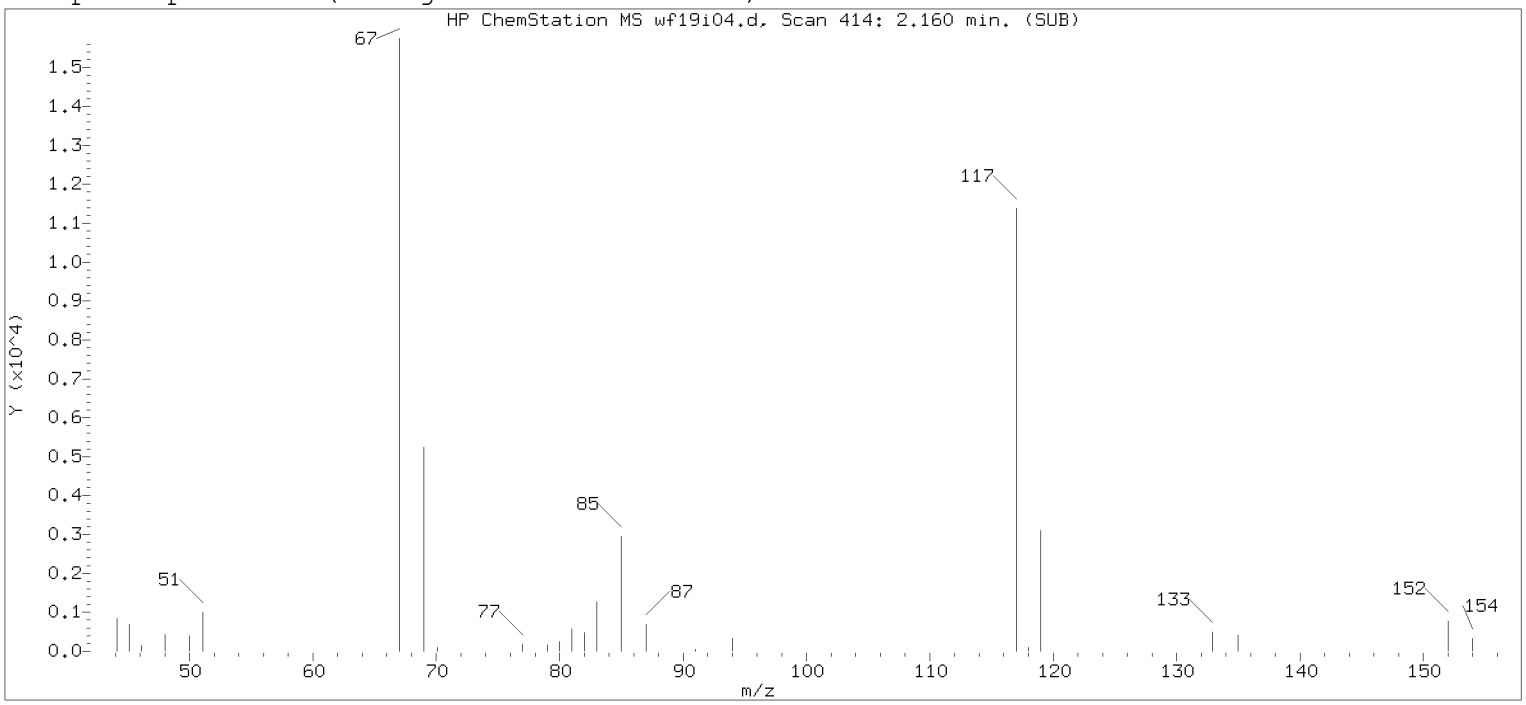
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 414
Retention Time (minutes): 2.160
Quant Ion : 67.00
Area (flag) : 102866M
On-Column Amount (ng) : 19.9868
Integration start scan : 387 Integration stop scan: 468
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

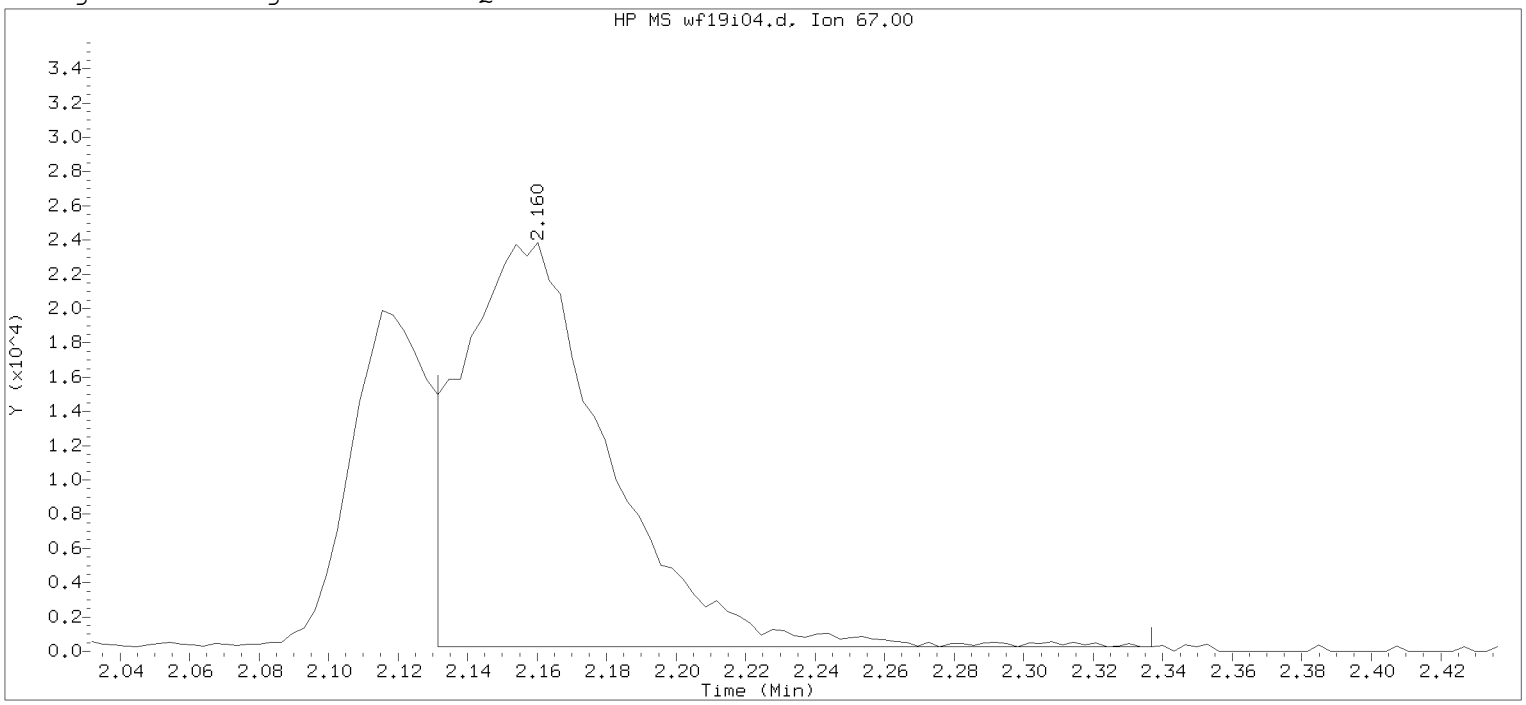
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

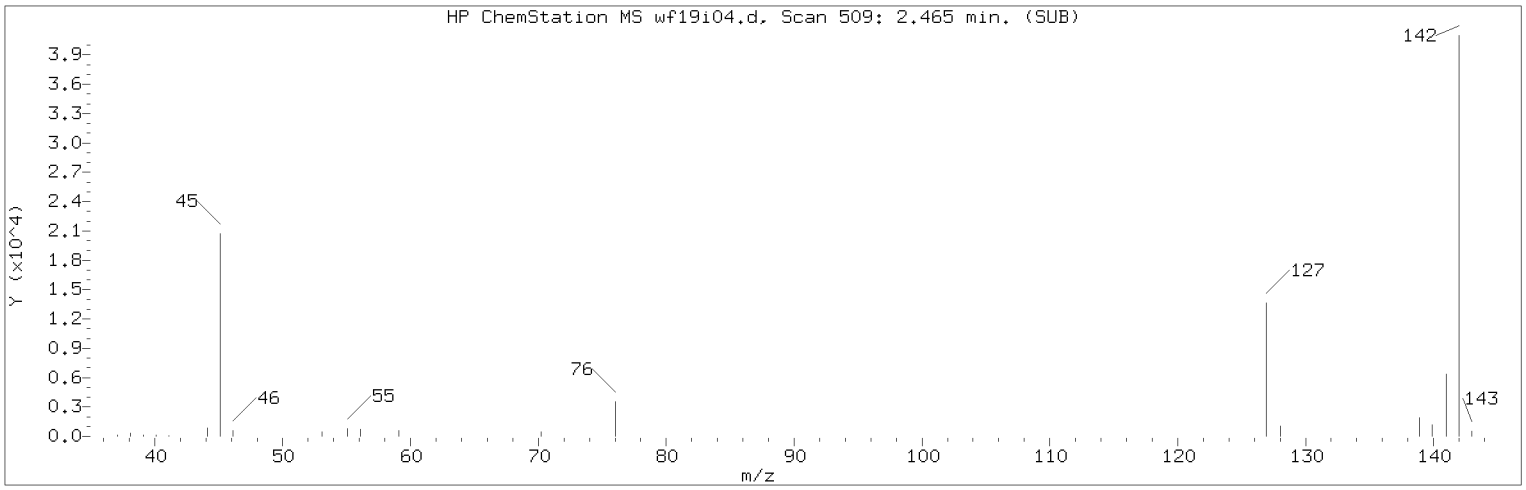
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:48
Date, time and analyst ID of latest file update: 19-Feb-2019 13:48 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

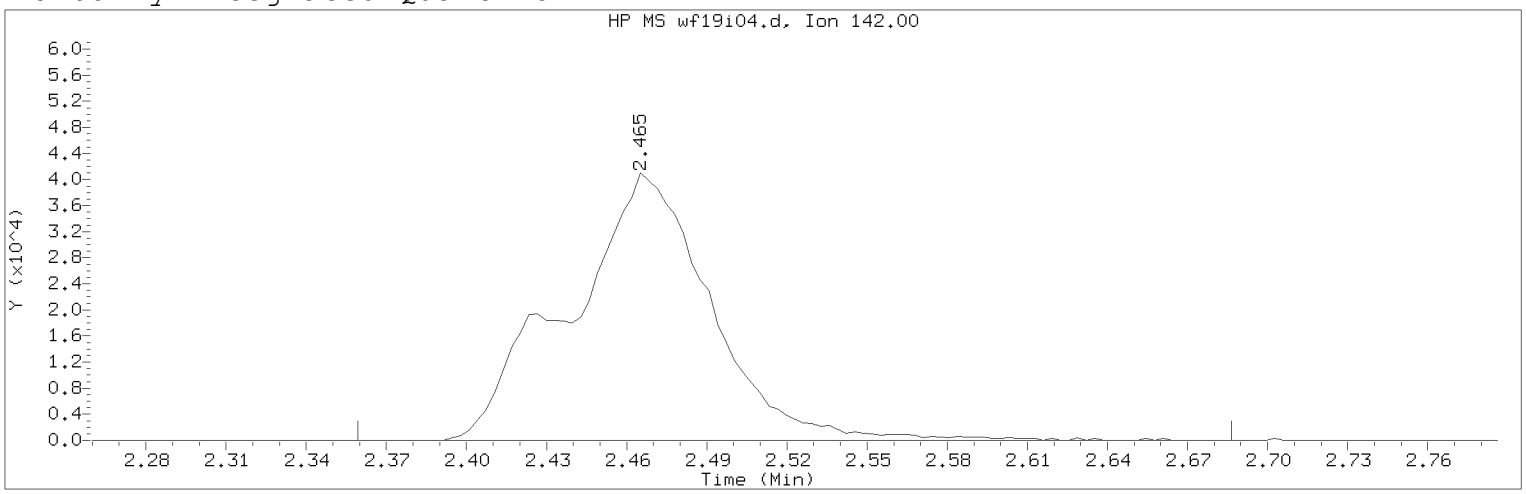
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 414
Retention Time (minutes): 2.160
Quant Ion : 67.00
Area : 68962
On-column Amount (ng) : 20.6064
Integration start scan : 404 Integration stop scan: 468
Y at integration start : 260 Y at integration end: 253

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

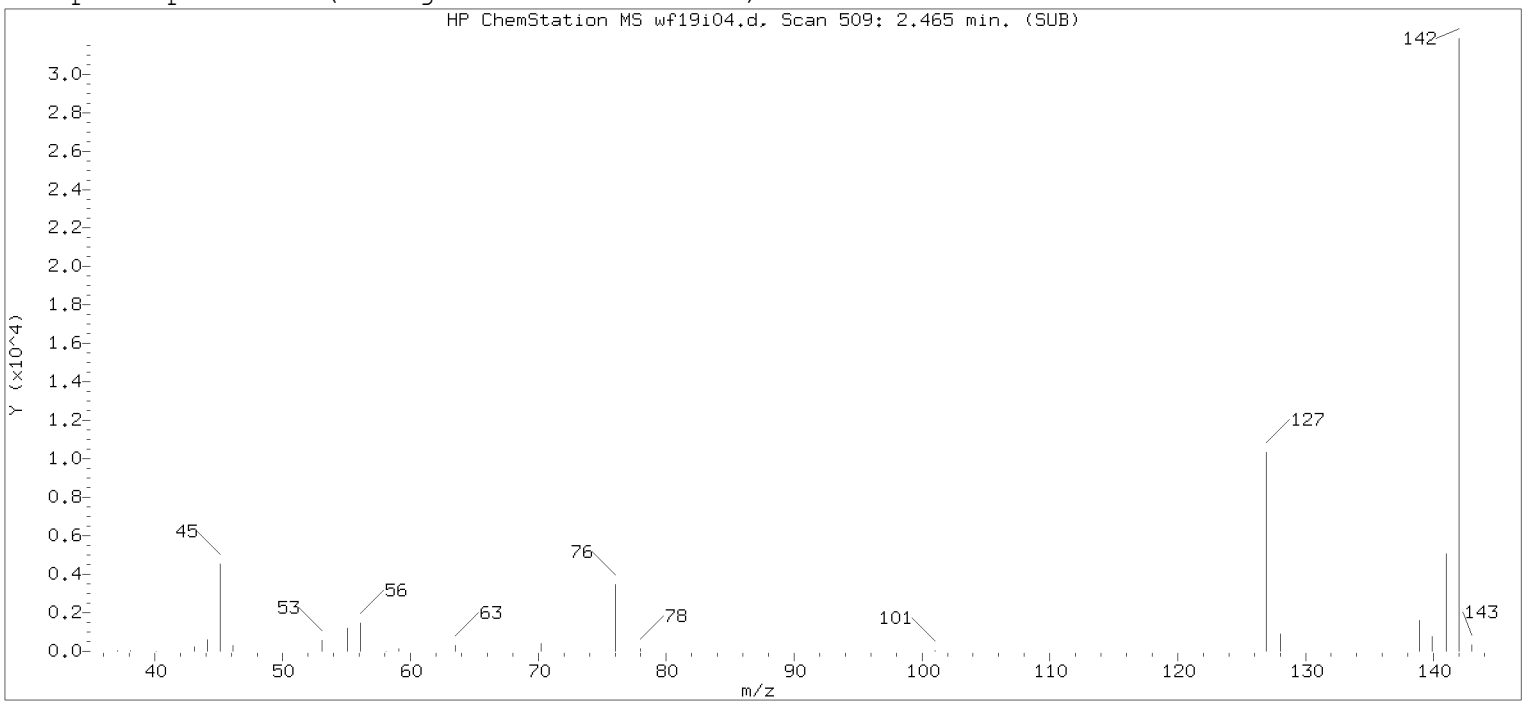
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area (flag) : 150767M
On-Column Amount (ng) : 20.3101
Integration start scan : 475 Integration stop scan: 577
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

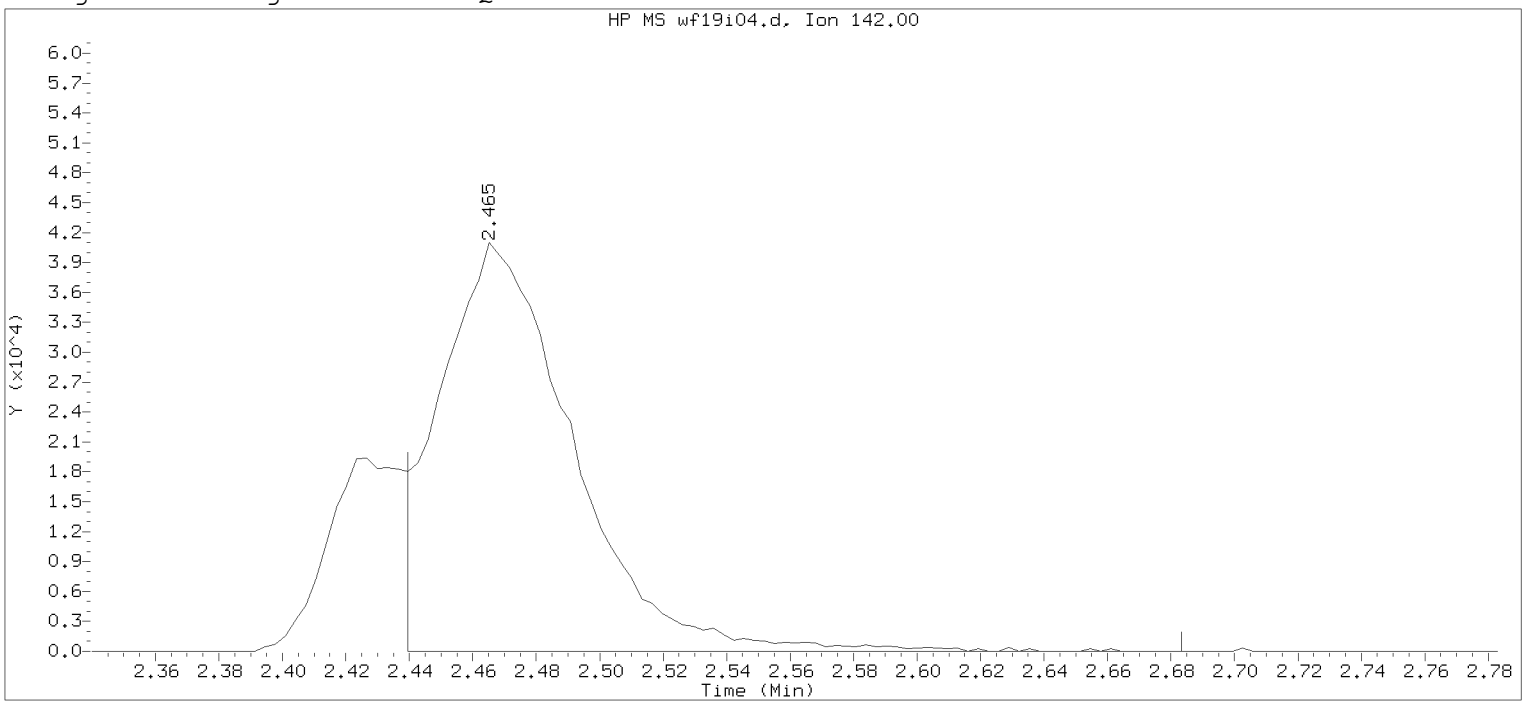
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:48
Date, time and analyst ID of latest file update: 19-Feb-2019 13:48 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number	: 22		
Compound Name	: Methyl Iodide		
Scan Number	: 509		
Retention Time (minutes)	: 2.465		
Quant Ion	: 142.00		
Area	: 119508		
On-column Amount (ng)	: 17.5745		
Integration start scan	: 500	Integration stop scan:	576
Y at integration start	: 0	Y at integration end:	0

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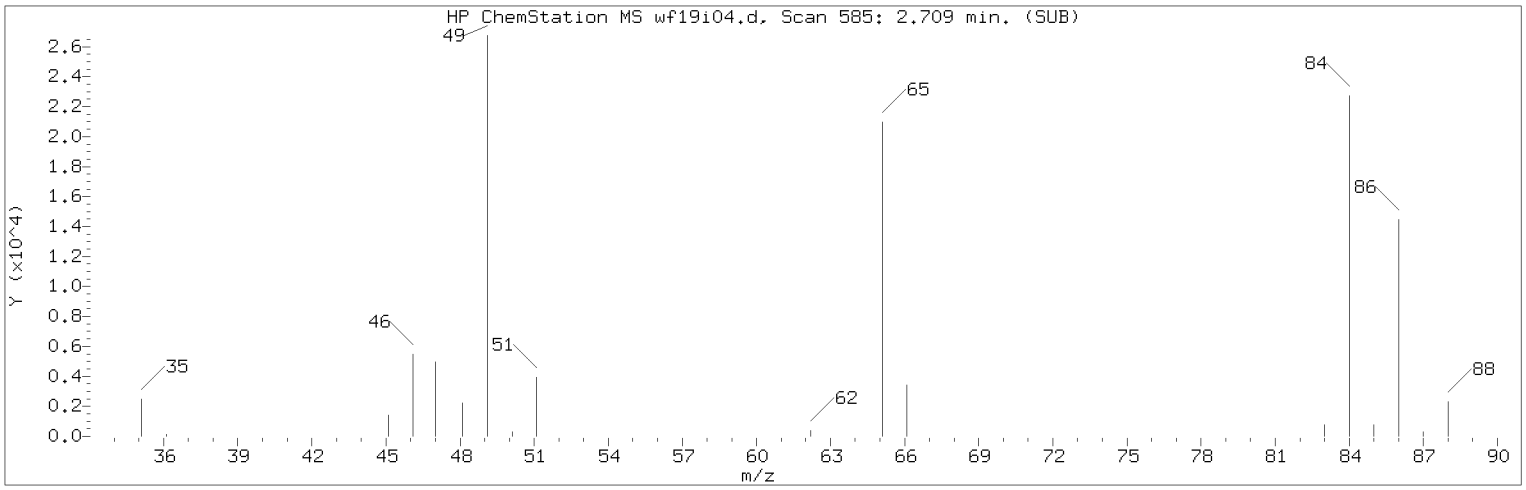
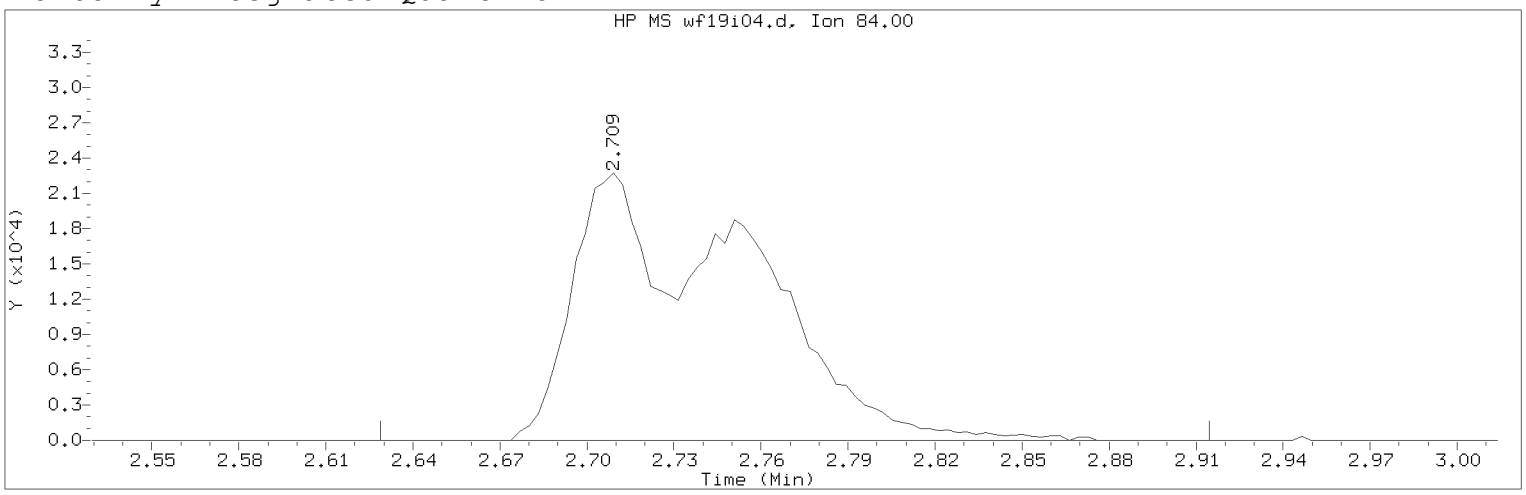
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

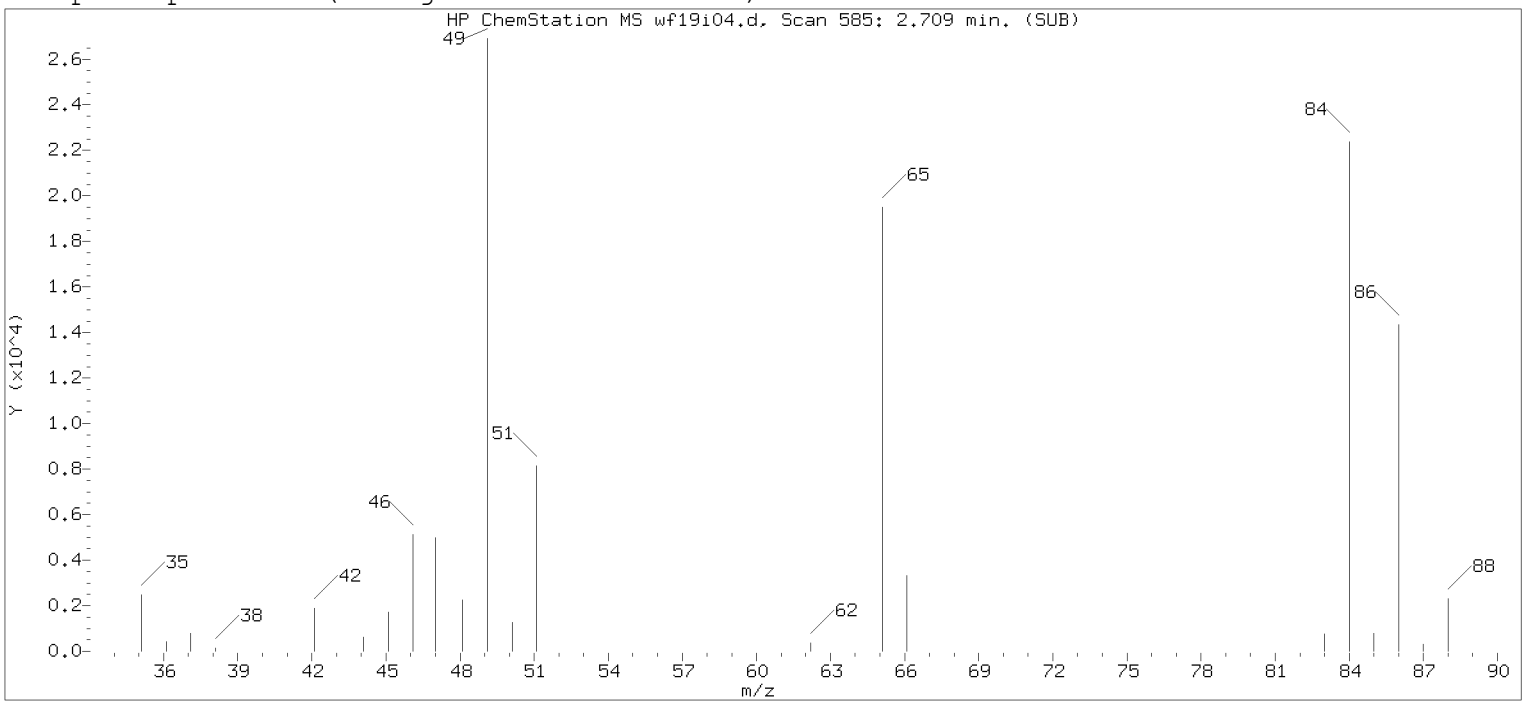
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area (flag) : 93973M
On-Column Amount (ng) : 19.8468
Integration start scan : 559 Integration stop scan: 648
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

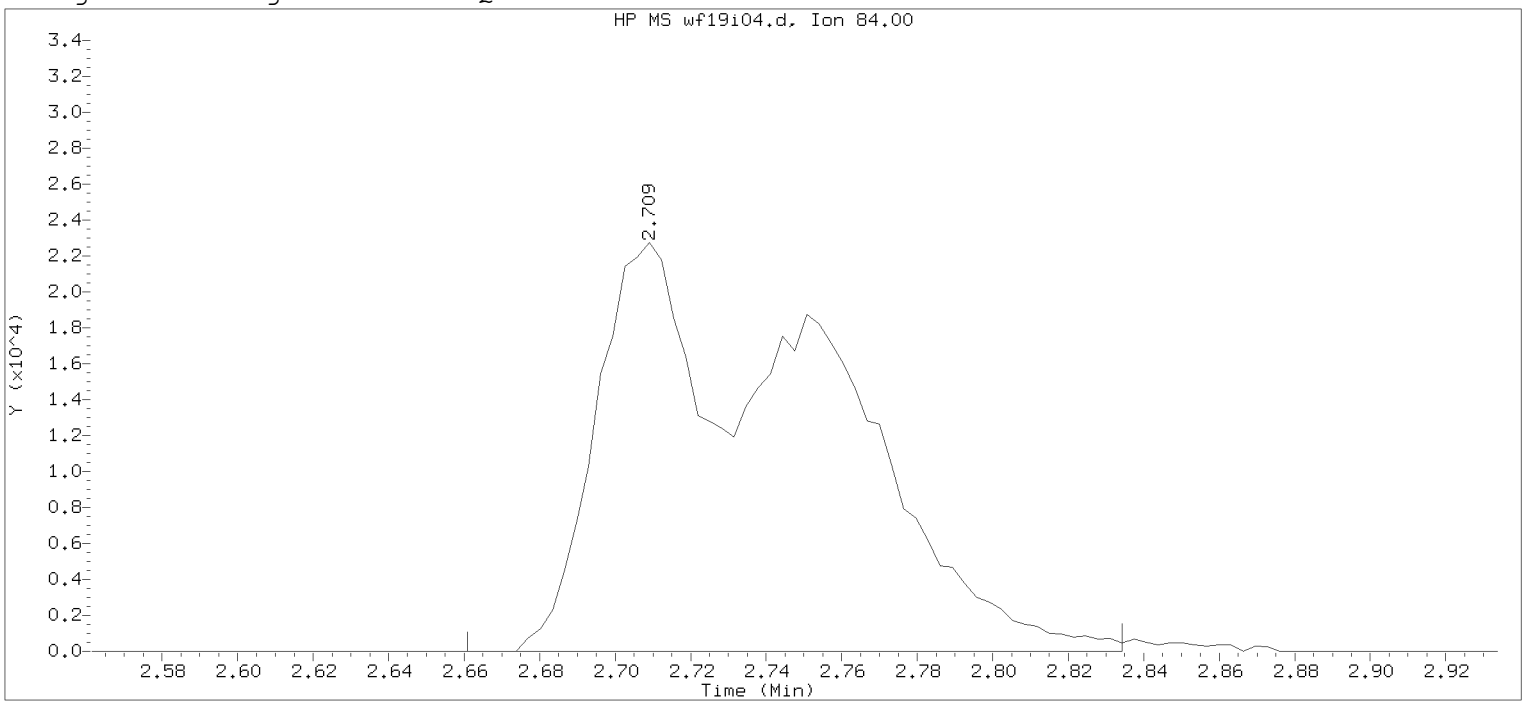
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:48
Date, time and analyst ID of latest file update: 19-Feb-2019 13:48 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area : 93088
On-column Amount (ng) : 25.0351
Integration start scan : 569 Integration stop scan: 623
Y at integration start : 0 Y at integration end: 0

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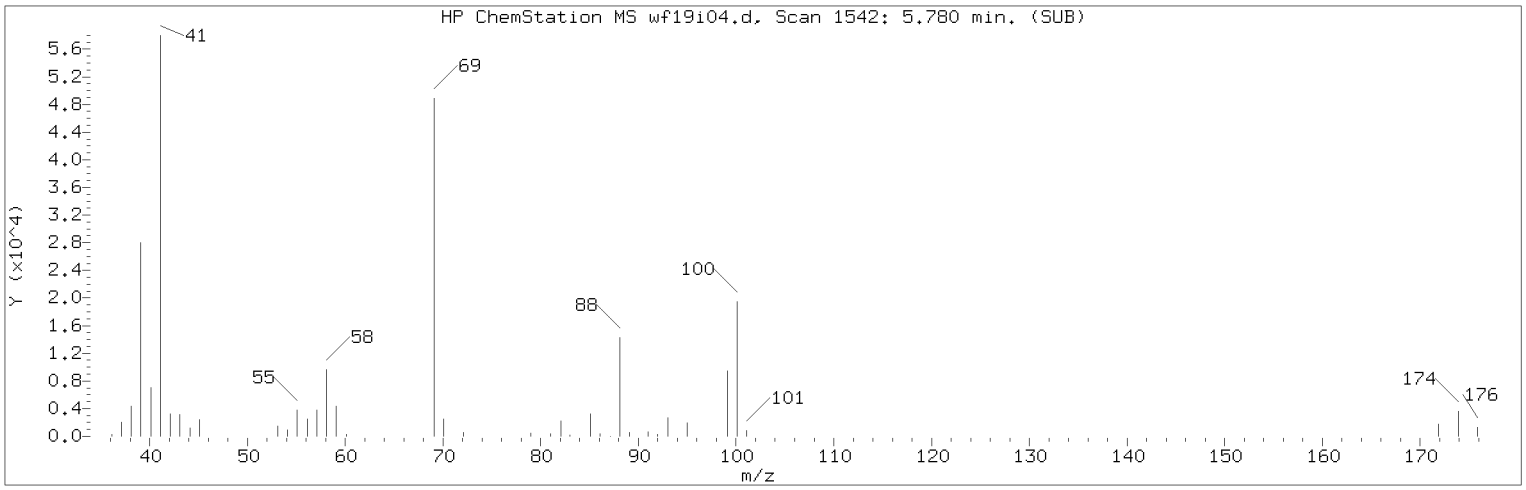
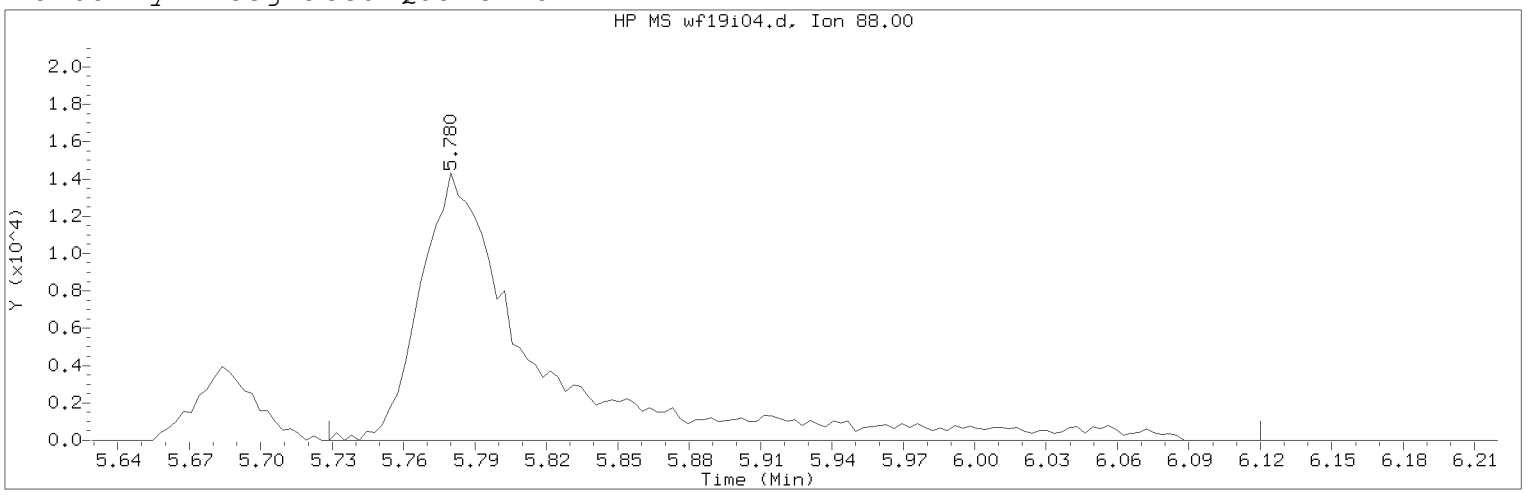
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD020 Lab Sample ID: VSTD020

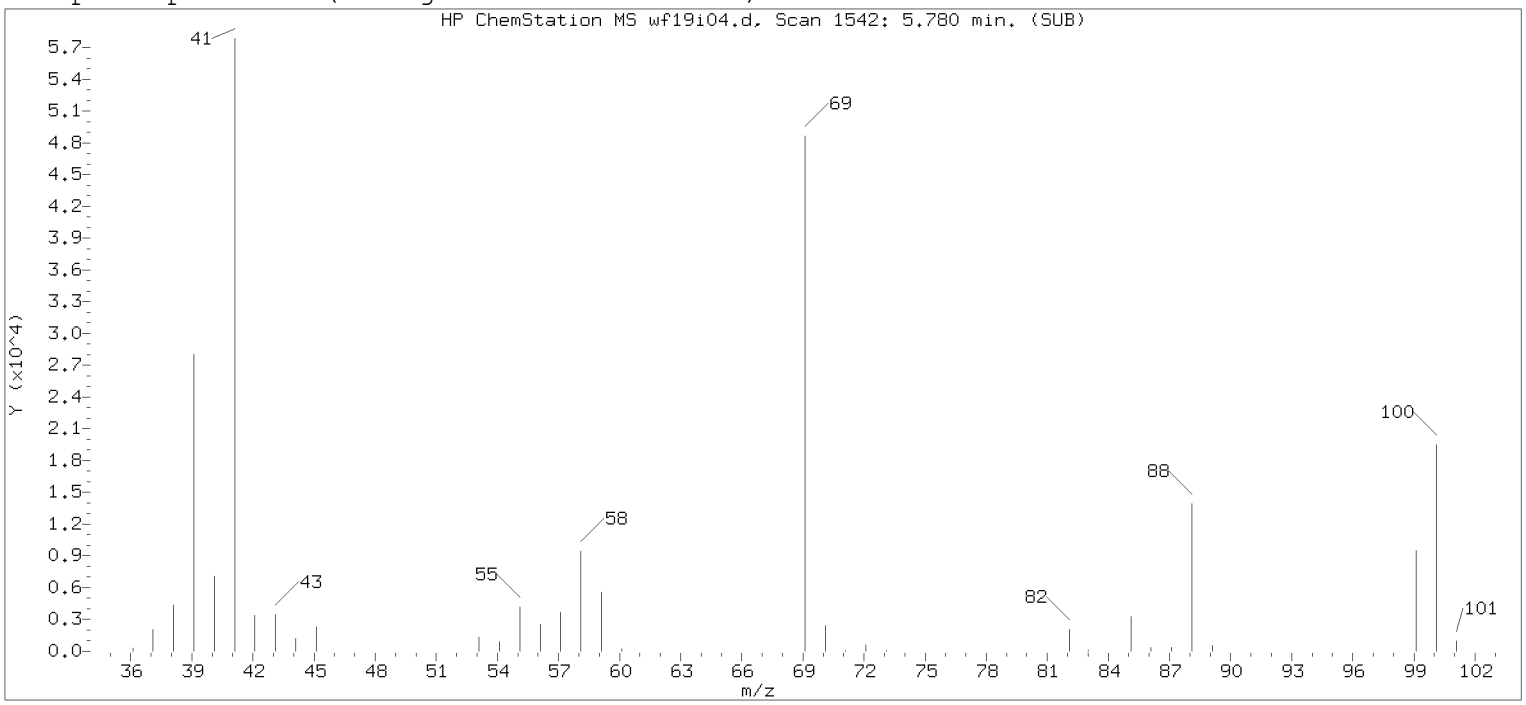
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area (flag) : 49606M
On-Column Amount (ng) : 488.7657
Integration start scan : 1525 Integration stop scan: 1647
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

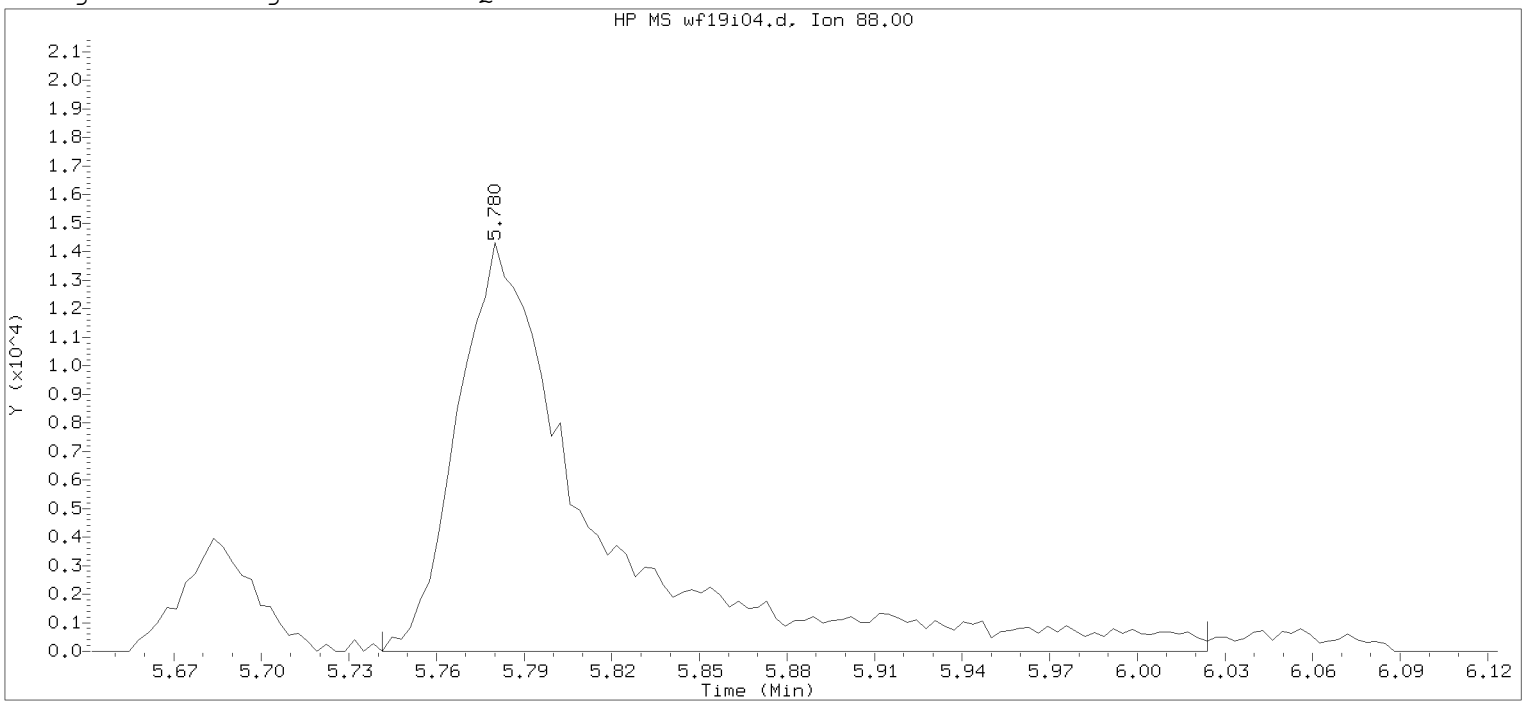
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i04.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:33 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 13:48
Date, time and analyst ID of latest file update: 19-Feb-2019 13:48 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1542		
Retention Time (minutes)	: 5.780		
Quant Ion	: 88.00		
Area	: 47644		
On-column Amount (ng)	: 464.2245		
Integration start scan	: 1529	Integration stop scan:	1617
Y at integration start	: 0	Y at integration end:	0

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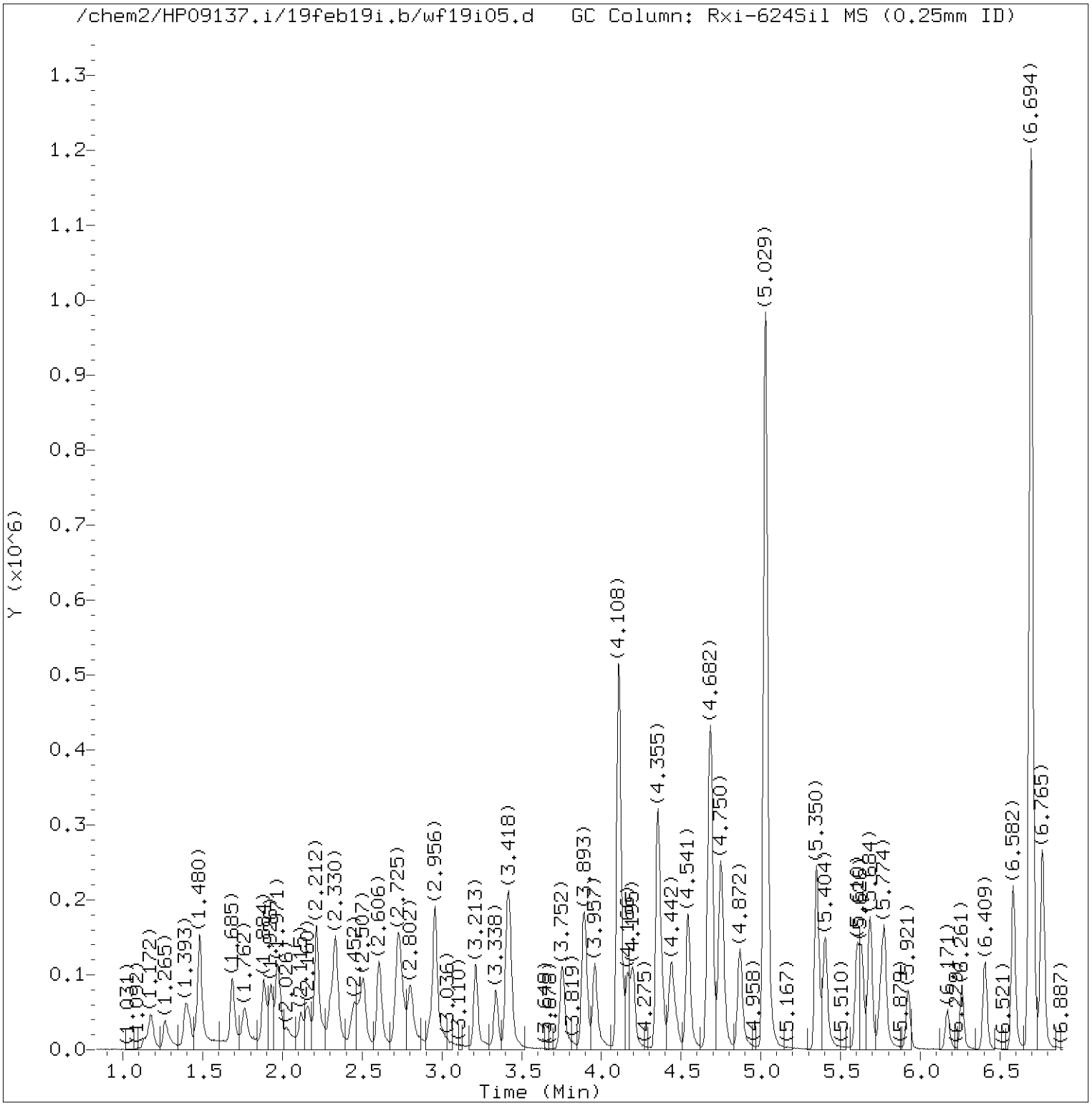
Target 3.5 esignature user ID: APR27582



Total Ion Chromatogram (TIC)

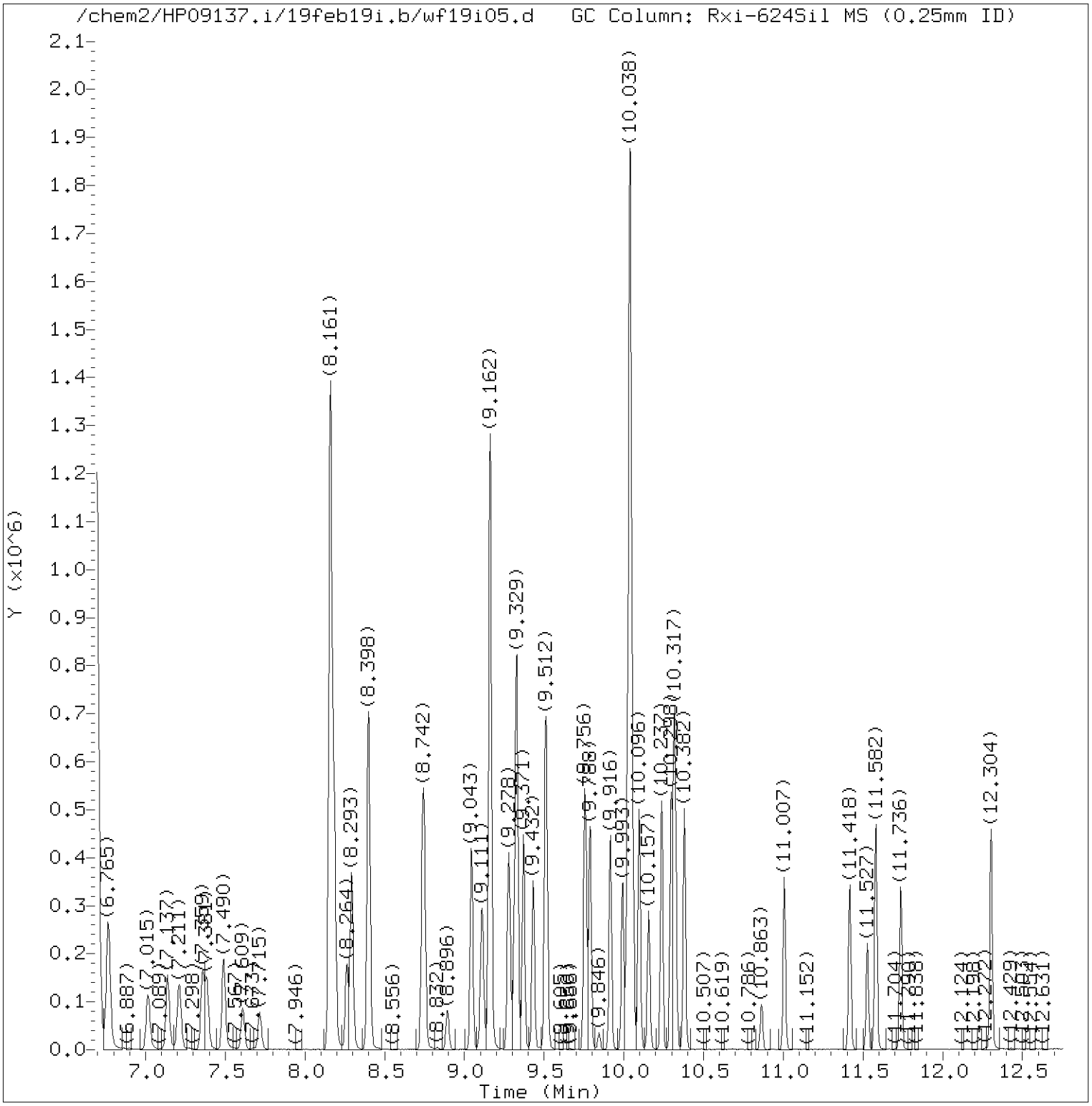
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.262	85	62458	11.066
4) Chloromethane	(2)	1.393	50	76916	10.944
6) Vinyl Chloride	(2)	1.470	62	72647	11.276
5) 1,3-Butadiene	(2)	1.480	39	42800	9.993
8) Bromomethane	(2)	1.682	94	56000	11.021
9) Chloroethane	(2)	1.762	64	45389	10.706
10) Dichlorofluoromethane	(2)	1.884	67	84015	10.238
12) Trichlorofluoromethane	(2)	1.929	101	75649	11.056
11) n-Pentane	(2)	1.971	43	69602	10.696
13) Ethanol	(1)	2.029	45	48262	448.970
15) Freon 123a	(2)	2.160	67	53443M	10.452
16) Acrolein	(1)	2.212	56	159695	94.112
17) 1,1-Dichloroethene	(2)	2.330	96	41128	10.687
17) 1,1-Dichloroethene	(2)	2.330	63	21001	10.816
18) Acetone	(1)	2.334	58	16160M	19.593
19) Freon 113	(2)	2.334	101	36566	10.820
21) 2-Propanol	(1)	2.443	45	59465	97.039
22) Methyl Iodide	(2)	2.468	142	77364	10.490
23) Carbon Disulfide	(2)	2.507	76	145480	10.730
25) Allyl Chloride	(2)	2.600	41	69127	10.310
27) Methyl Acetate	(2)	2.616	43	57968	9.989
29)*t-Butyl alcohol-d10	(1)	2.725	65	235698	250.000
28) Methylene Chloride	(2)	2.744	84	49542M	10.532
30) t-Butyl alcohol	(1)	2.802	59	107632	98.462
31) Acrylonitrile	(2)	2.930	53	30932	10.132
32) trans-1,2-Dichloroethene	(2)	2.956	96	44909	10.755
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	114387	11.251
34) n-Hexane	(2)	3.210	57	60284	10.790
36) 1,1-Dichloroethane	(2)	3.338	63	80127	10.590
38) di-Isopropyl ether	(2)	3.412	45	153463	10.557
39) 2-Chloro-1,3-butadiene	(2)	3.431	53	69810	10.653
40) Ethyl t-butyl ether	(2)	3.758	59	118447	11.179
42) cis-1,2-Dichloroethene	(2)	3.887	96	49735	10.608
45) 2,2-Dichloropropane	(2)	3.887	77	36418	10.717
44) 2-Butanone	(2)	3.903	43	86295	19.675
47) Propionitrile	(1)	3.957	54	135864	100.004
48) Methacrylonitrile	(2)	4.111	67	172352	52.506
49) Bromochloromethane	(2)	4.114	128	25130	10.312

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.166	71	22155	17.619
51) Chloroform	(2)	4.198	83	74987	10.563
52)$Dibromofluoromethane	(2)	4.355	113	200531	49.589
52)$Dibromofluoromethane	(2)	4.355	111	204921	49.364
53) 1,1,1-Trichloroethane	(2)	4.381	97	57282	10.724
54) Cyclohexane	(2)	4.442	56	75994	10.750
54) Cyclohexane	(2)	4.442	84	61745	10.552
54) Cyclohexane	(2)	4.442	69	22755	10.711
55) 1,1-Dichloropropene	(2)	4.541	75	59776	10.502
56) Carbon Tetrachloride	(2)	4.545	117	48197	10.514
58) Isobutyl Alcohol	(1)	4.670	41	97996	245.901
57)$1,2-Dichloroethane-d4	(2)	4.686	102	53213	49.478
57)$1,2-Dichloroethane-d4	(2)	4.686	65	234803	50.153
57)$1,2-Dichloroethane-d4	(2)	4.689	104	34768	50.762
60) Benzene	(2)	4.747	78	194070	10.608
61) 1,2-Dichloroethane	(2)	4.766	62	58810	10.406
61) 1,2-Dichloroethane	(2)	4.760	98	5873	10.923
65) t-Amyl methyl ether	(2)	4.872	73	123749	11.400
66)*Fluorobenzene	(2)	5.029	96	872867	50.000
67) n-Heptane	(2)	5.035	43	56932	10.662
69) n-Butanol	(1)	5.350	56	171859	485.699
71) Trichloroethene	(2)	5.404	95	47297	10.675
73) Methylcyclohexane	(2)	5.610	83	63355	9.850
73) Methylcyclohexane	(2)	5.603	98	29361	9.817
74) 1,2-Dichloropropane	(2)	5.632	63	49822	10.607
75) Dibromomethane	(2)	5.754	93	30462	10.508
77) Methyl Methacrylate	(2)	5.774	69	52747	10.219
76) 1,4-Dioxane	(1)	5.780	88	26130M	247.023
79) Bromodichloromethane	(2)	5.921	83	54837	10.296
43) 1,2-Dichloroethene (Total)	(2)		96	94644	21.364
80) 2-Nitropropane	(2)	6.171	41	32706	18.149
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	39229	10.955
82) cis-1,3-Dichloropropene	(2)	6.409	75	75893	10.363
83) 4-Methyl-2-pentanone	(2)	6.585	43	162394	18.783
84)$Toluene-d8	(3)	6.694	98	898296	50.552
84)$Toluene-d8	(3)	6.694	100	588219	49.916
89) Toluene	(3)	6.765	92	124809	10.903
90) trans-1,3-Dichloropropene	(3)	7.015	75	71110	10.435

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.137	69	87307	10.426
93) 1,1,2-Trichloroethane	(3)	7.211	97	46734	10.607
94) Tetrachloroethene	(3)	7.359	166	50876	10.953
95) 1,3-Dichloropropane	(3)	7.384	76	82341	10.760
97) 2-Hexanone	(3)	7.490	43	127140	19.072
98) Dibromochloromethane	(3)	7.609	129	44473	10.335
100) 1,2-Dibromoethane	(3)	7.715	107	52152	10.774
101)*Chlorobenzene-d5	(3)	8.161	117	709147	50.000
103) Chlorobenzene	(3)	8.187	112	135467	10.668
104) 1,1,1,2-Tetrachloroethane	(3)	8.260	131	42994	10.535
105) Ethylbenzene	(3)	8.293	91	235037	10.803
107) m+p-Xylene	(3)	8.398	106	187670	21.696
108) o-Xylene	(3)	8.735	106	90084	10.586
110) Styrene	(3)	8.751	104	151094	10.584
111) Bromoform	(3)	8.893	173	33660	10.051
112) Isopropylbenzene	(3)	9.043	105	227103	10.860
113) Cyclohexanone	(1)	9.111	55	109179	228.810
115)$4-Bromofluorobenzene	(3)	9.162	95	357932	50.349
115)$4-Bromofluorobenzene	(3)	9.162	174	302192	50.376
116) Bromobenzene	(4)	9.278	156	59684	10.510
117) 1,1,2,2-Tetrachloroethane	(4)	9.281	83	80608	10.526
118) 1,2,3-Trichloropropane	(4)	9.310	110	23980	10.396
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	129246	52.628
120) n-Propylbenzene	(4)	9.371	91	270892	10.821
121) 2-Chlorotoluene	(4)	9.432	126	55953	10.836
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	194234	10.758
122) 4-Chlorotoluene	(4)	9.515	126	58566	10.595
125) tert-Butylbenzene	(4)	9.756	134	42636	10.394
126) Pentachloroethane	(4)	9.765	167	33777	10.416
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	204882	10.769
128) sec-Butylbenzene	(4)	9.916	105	239653	10.814
130) 1,3-Dichlorobenzene	(4)	9.993	146	115418	10.658
131) p-Isopropyltoluene	(4)	10.022	119	211548	10.783
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	394276	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	117695	10.484
91) 1,3-Dichloropropene (total)	(3)		100	147003	20.798
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	216354	10.569
136) Benzyl Chloride	(4)	10.157	91	162115	10.317

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.237	119	129345	10.493
138) 1,4-Diethylbenzene	(4)	10.295	119	139309	10.548
140) n-Butylbenzene	(4)	10.314	92	107453	10.852
139) 1,2-Dichlorobenzene	(4)	10.324	146	114774	10.683
141) 1,2-Diethylbenzene	(4)	10.382	119	110669	10.634
143) 1,2-Dibromo-3-chloropropane	(4)	10.866	75	17630	10.130
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	86972	10.557
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	84162	10.640
148) Hexachlorobutadiene	(4)	11.527	225	30490	10.823
149) Naphthalene	(4)	11.582	128	287278	10.734
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	81036	10.497
109) Xylene (Total)	(3)		106	277754	32.281
151) 2-Methylnaphthalene	(4)	12.304	142	164287	10.760
142) Diethylbenzene (total)	(4)		100	379323	31.674

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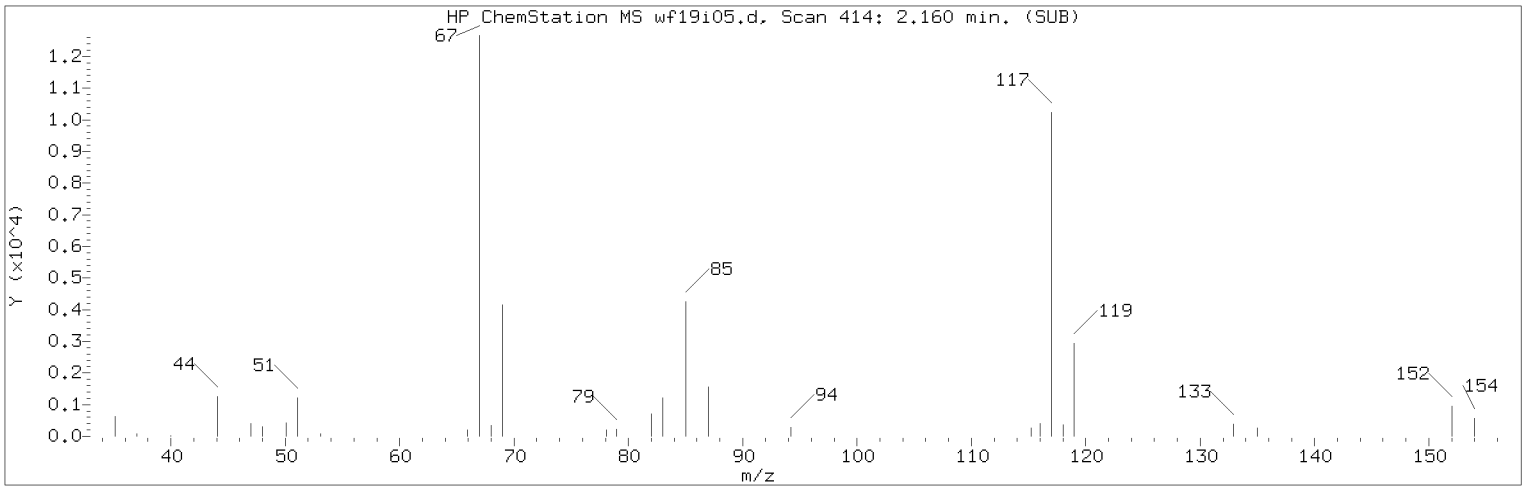
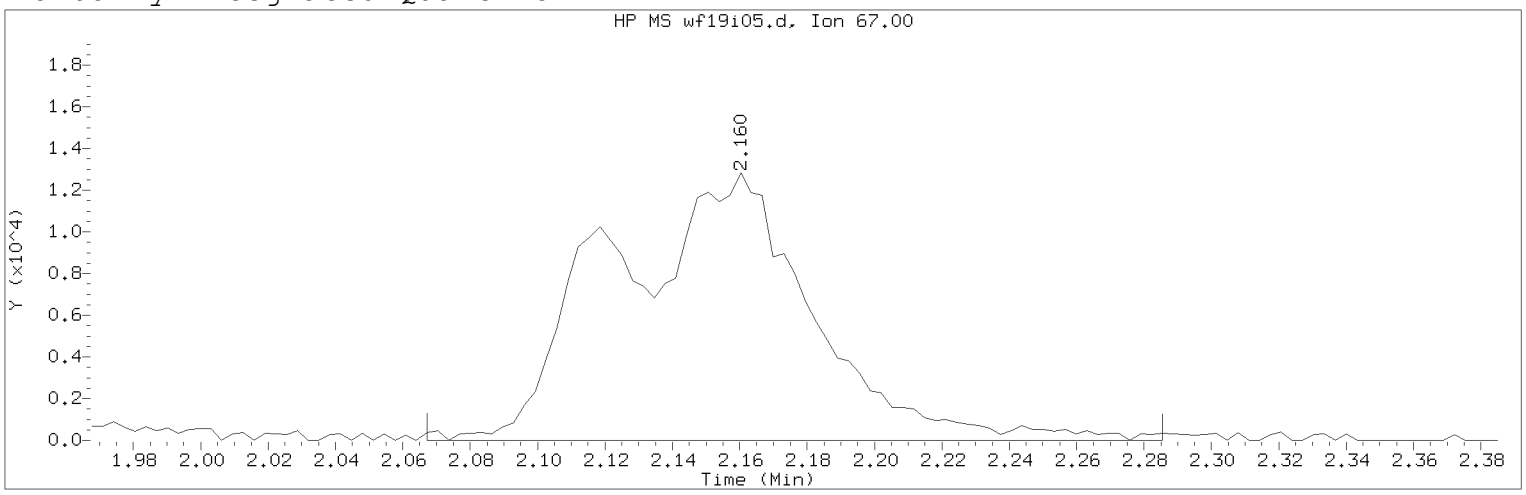
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

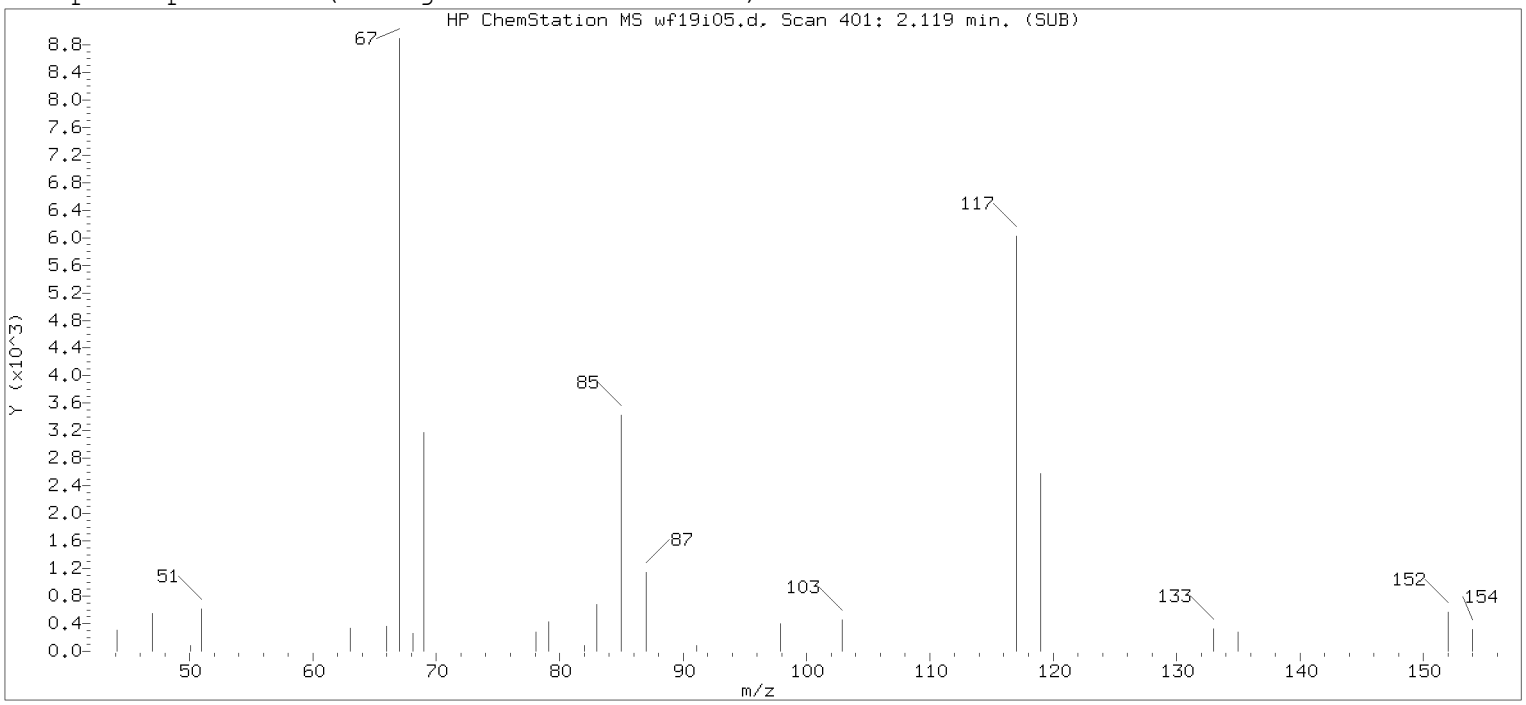
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 414
Retention Time (minutes): 2.160
Quant Ion : 67.00
Area (flag) : 53443M
On-Column Amount (ng) : 10.4520
Integration start scan : 384 Integration stop scan: 452
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

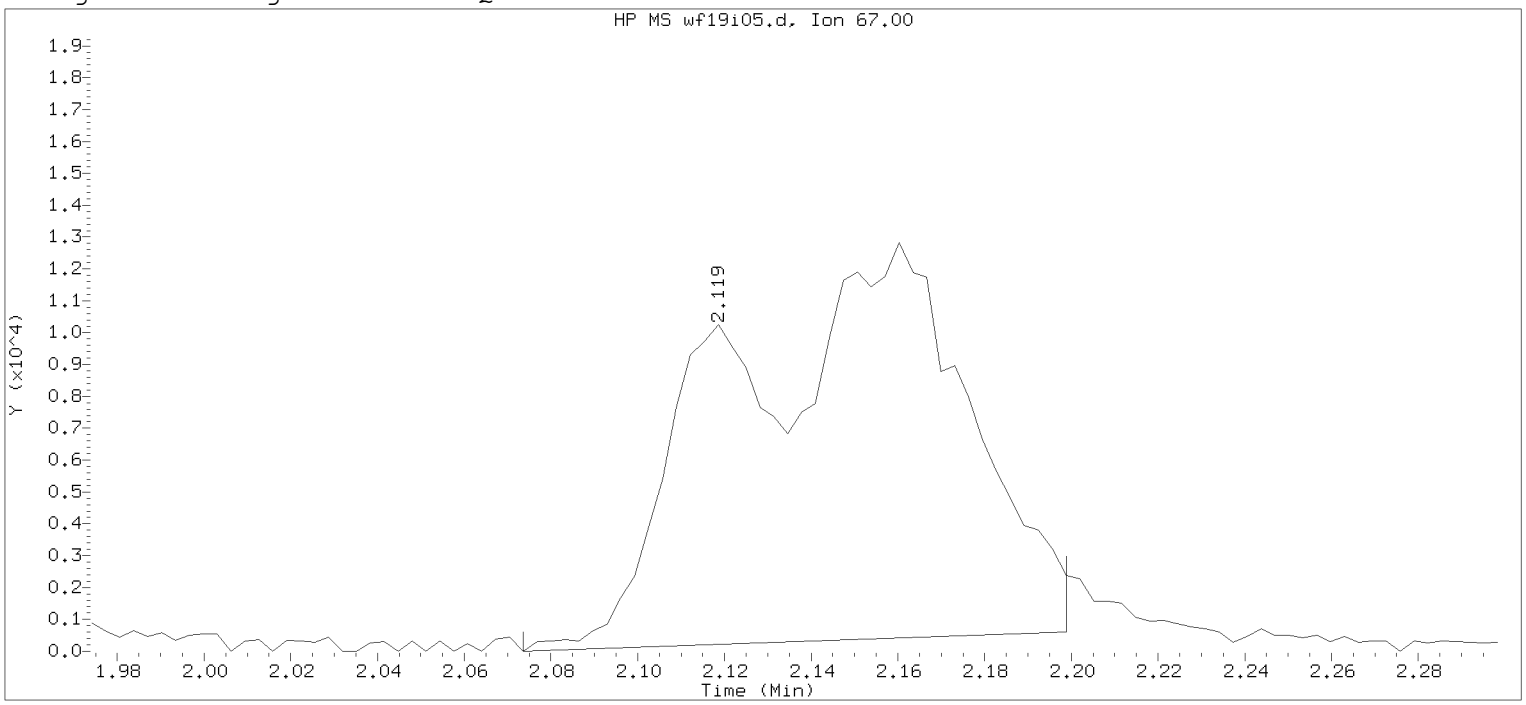
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:12
Date, time and analyst ID of latest file update: 19-Feb-2019 14:12 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 15
Compound Name : Freon 123a
Scan Number : 401
Retention Time (minutes): 2.119
Quant Ion : 67.00
Area : 47122
On-column Amount (ng) : 13.0811
Integration start scan : 386 Integration stop scan: 425
Y at integration start : 0 Y at integration end: 613

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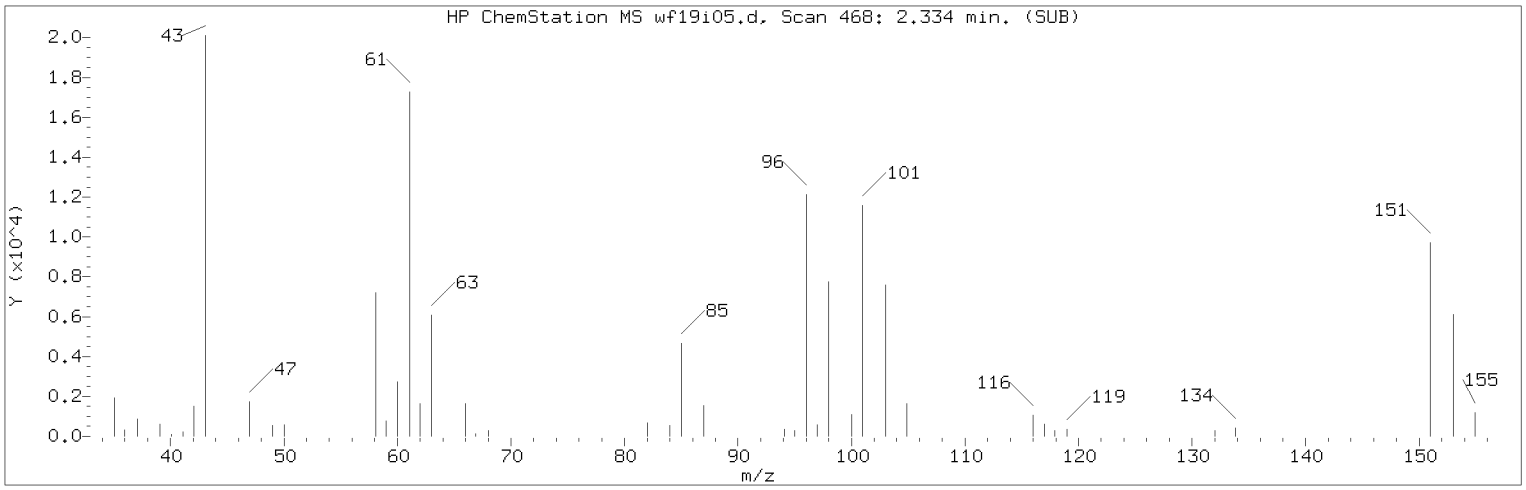
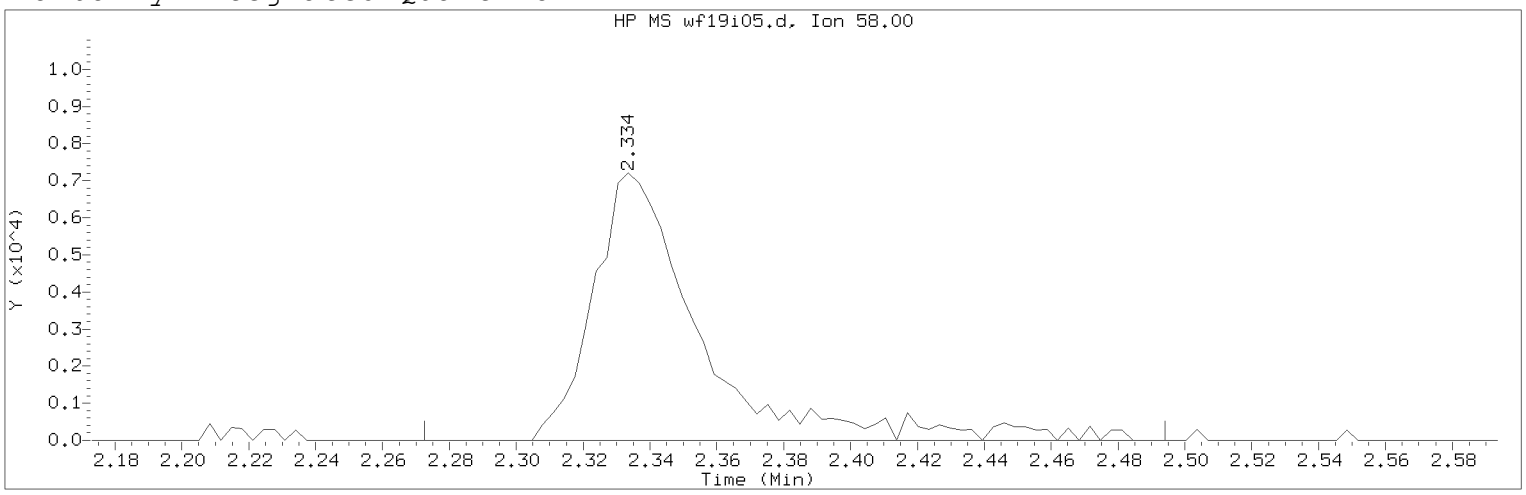
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

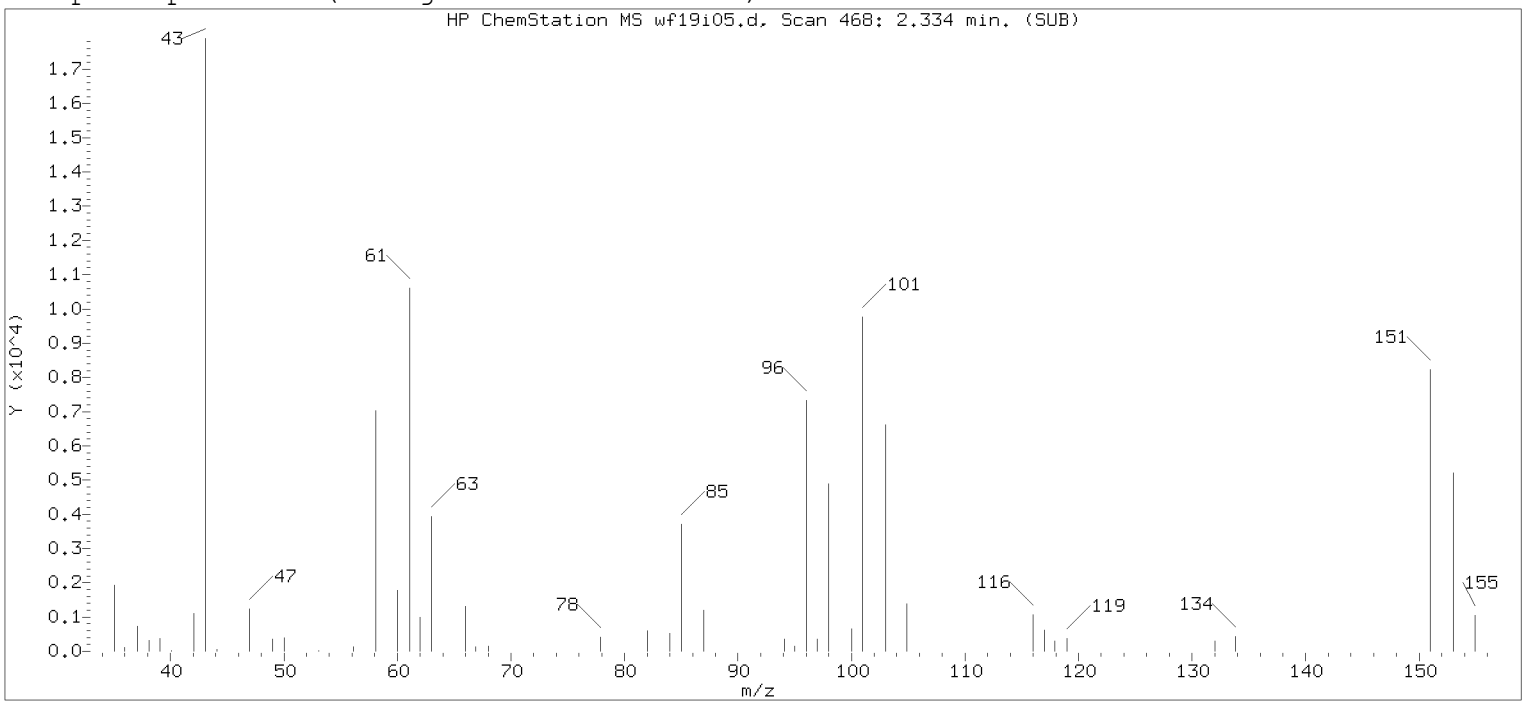
Compound Number : 18
Compound Name : Acetone
Scan Number : 468
Retention Time (minutes): 2.334
Quant Ion : 58.00
Area (flag) : 16160M
On-Column Amount (ng) : 19.5930
Integration start scan : 448 Integration stop scan: 517
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

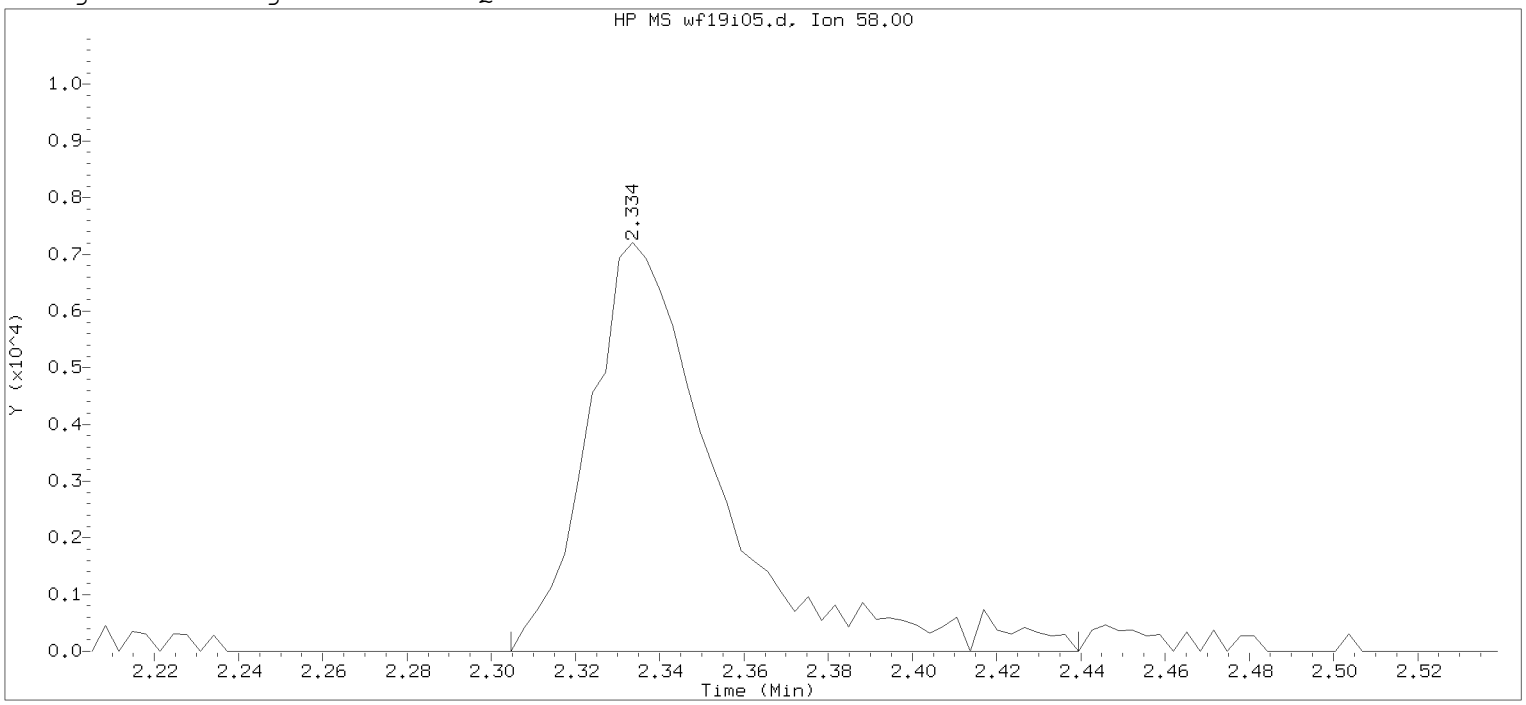
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:12
Date, time and analyst ID of latest file update: 19-Feb-2019 14:12 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 18		
Compound Name	: Acetone		
Scan Number	: 468		
Retention Time (minutes)	: 2.334		
Quant Ion	: 58.00		
Area	: 15508		
On-column Amount (ng)	: 18.9951		
Integration start scan	: 458	Integration stop scan:	500
Y at integration start	: 0	Y at integration end:	0

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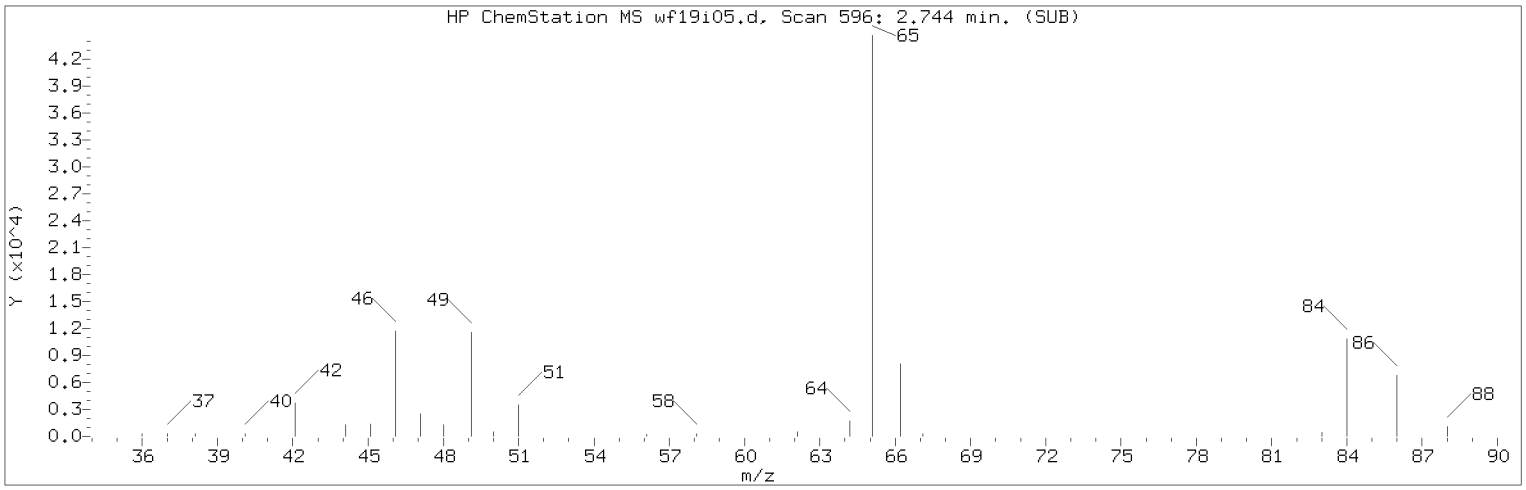
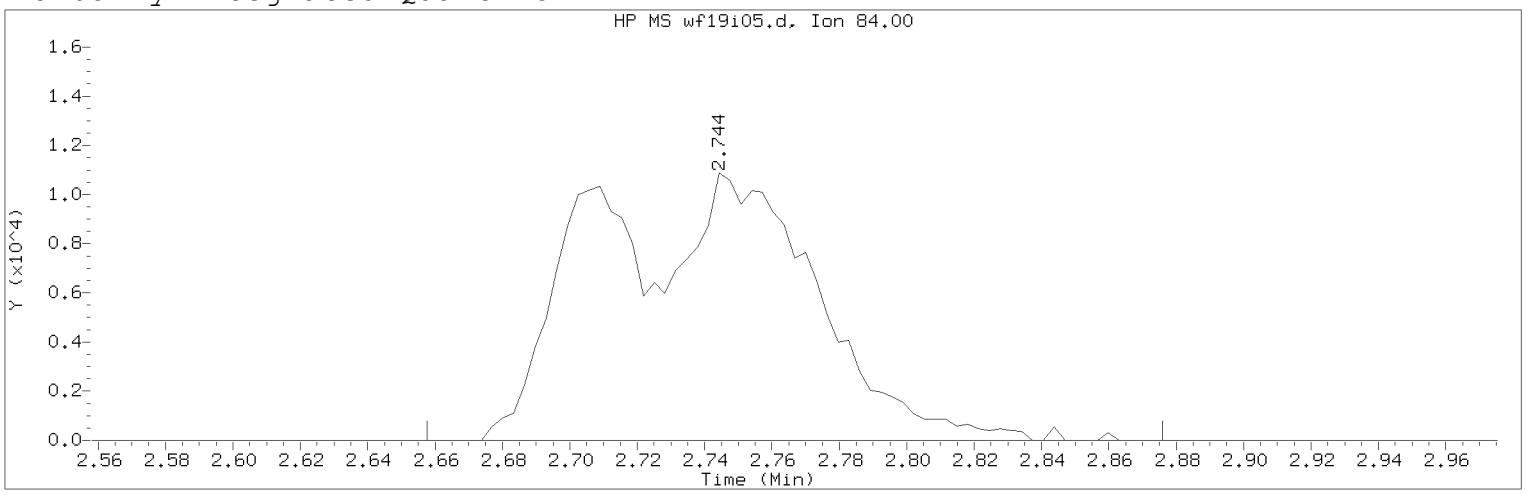
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

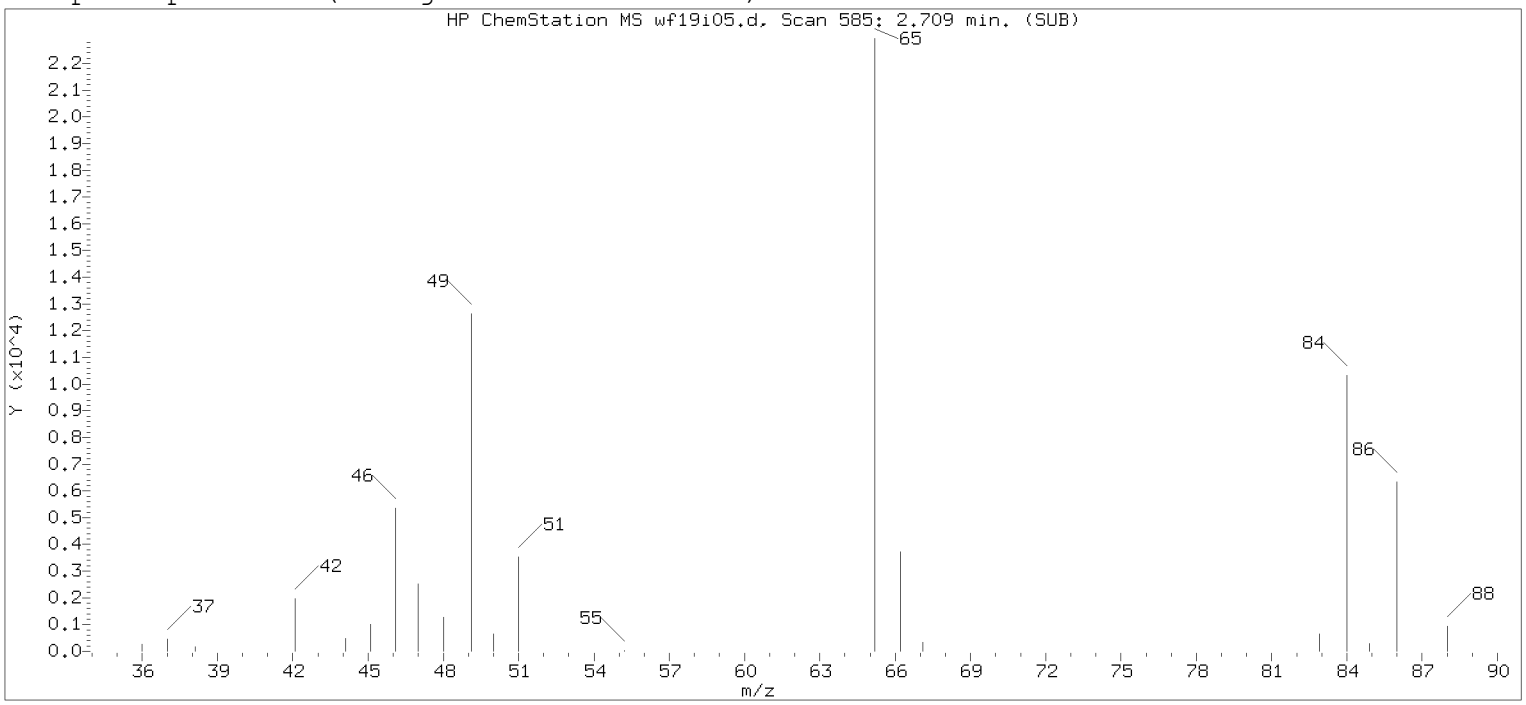
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 596
Retention Time (minutes): 2.744
Quant Ion : 84.00
Area (flag) : 49542M
On-Column Amount (ng) : 10.5316
Integration start scan : 568 Integration stop scan: 636
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

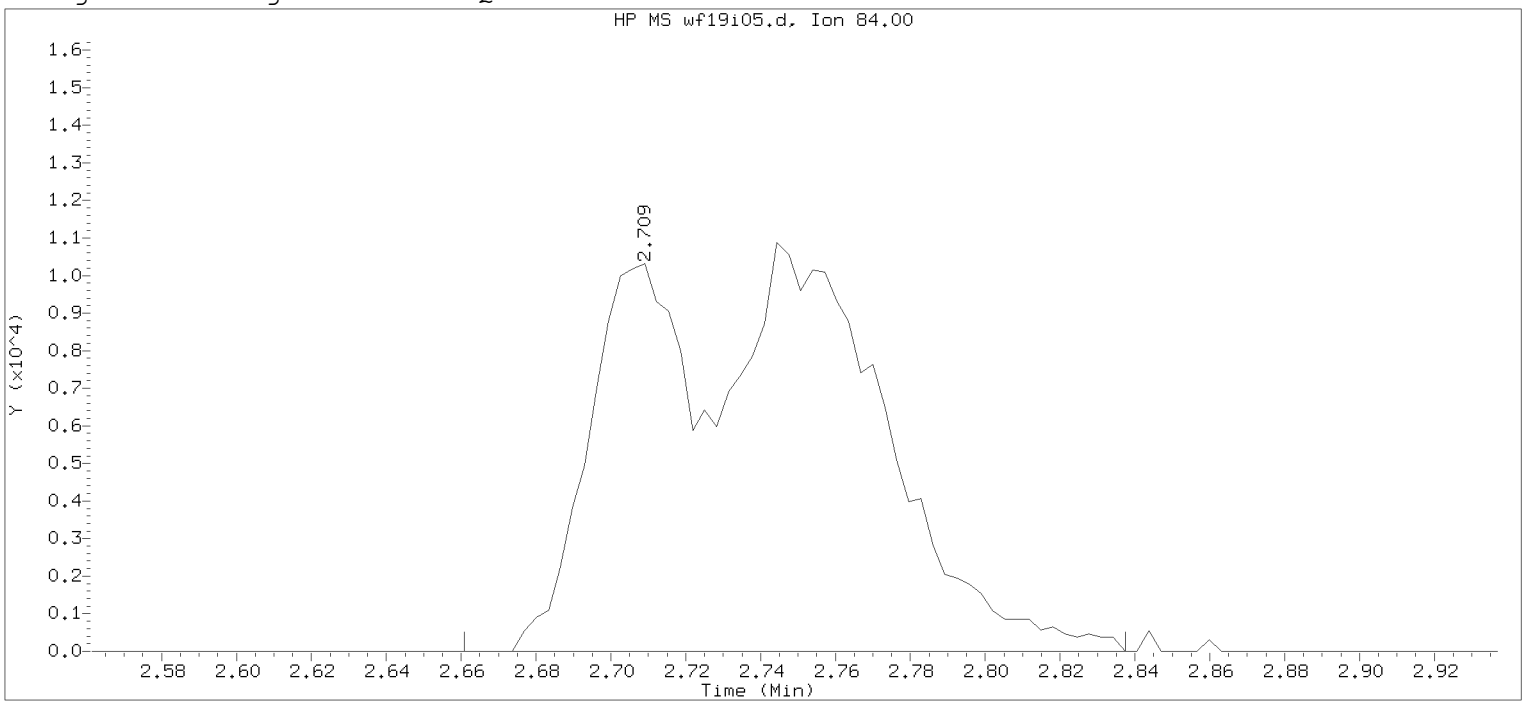
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:12
Date, time and analyst ID of latest file update: 19-Feb-2019 14:12 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area : 49378
On-column Amount (ng) : 12.5234
Integration start scan : 569 Integration stop scan: 624
Y at integration start : 0 Y at integration end: 0

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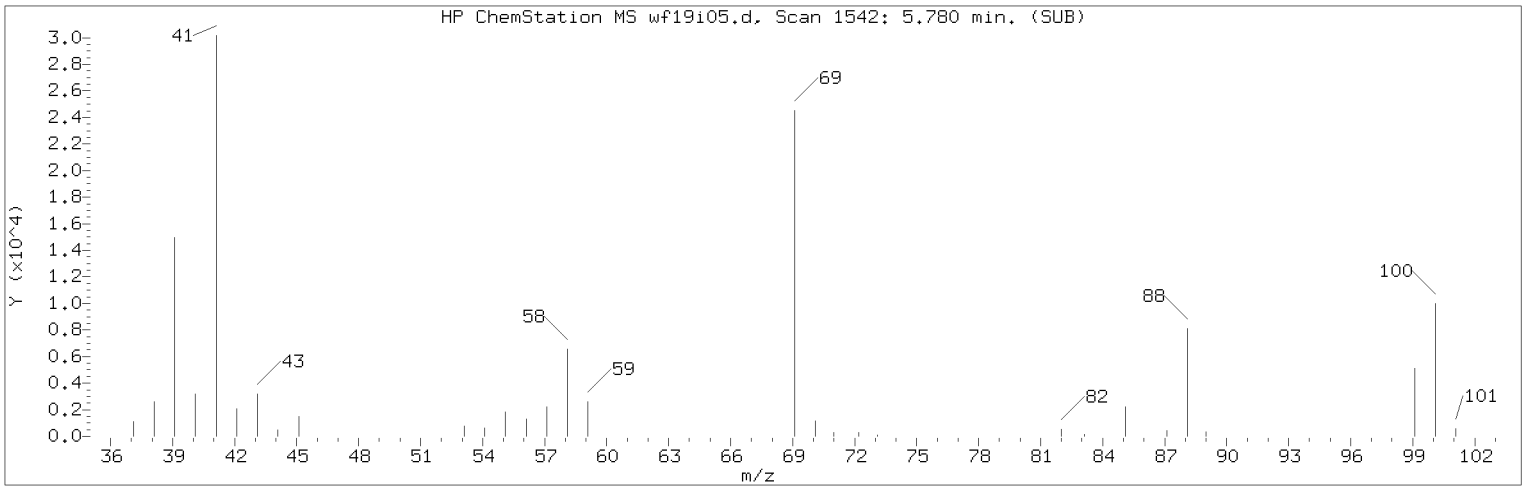
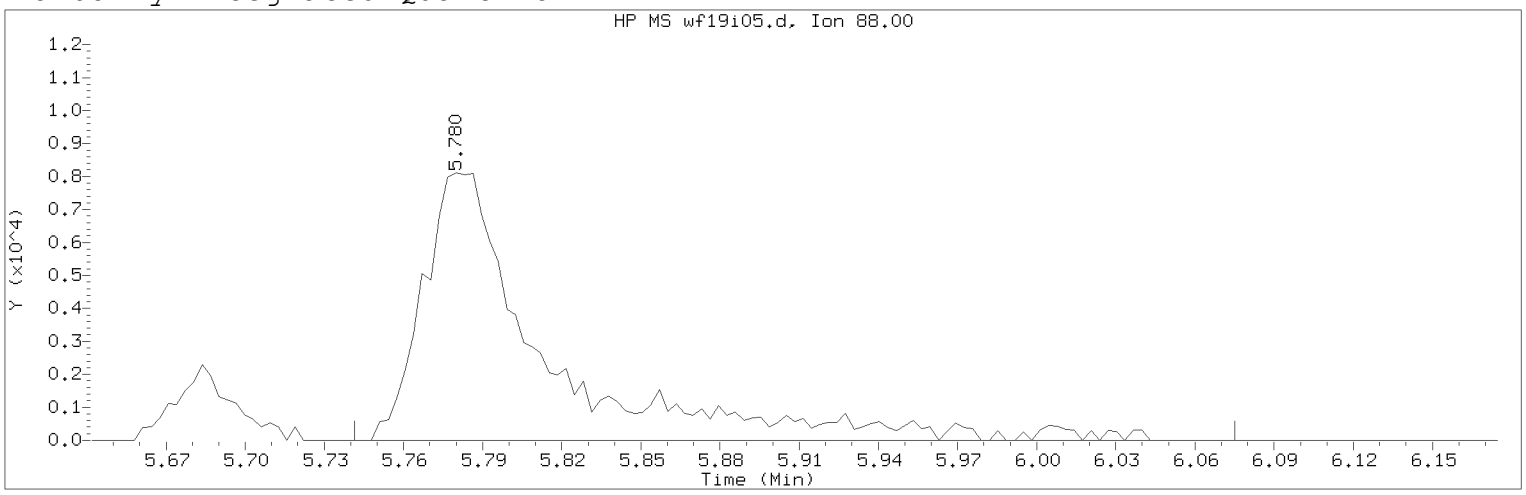
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD010 Lab Sample ID: VSTD010

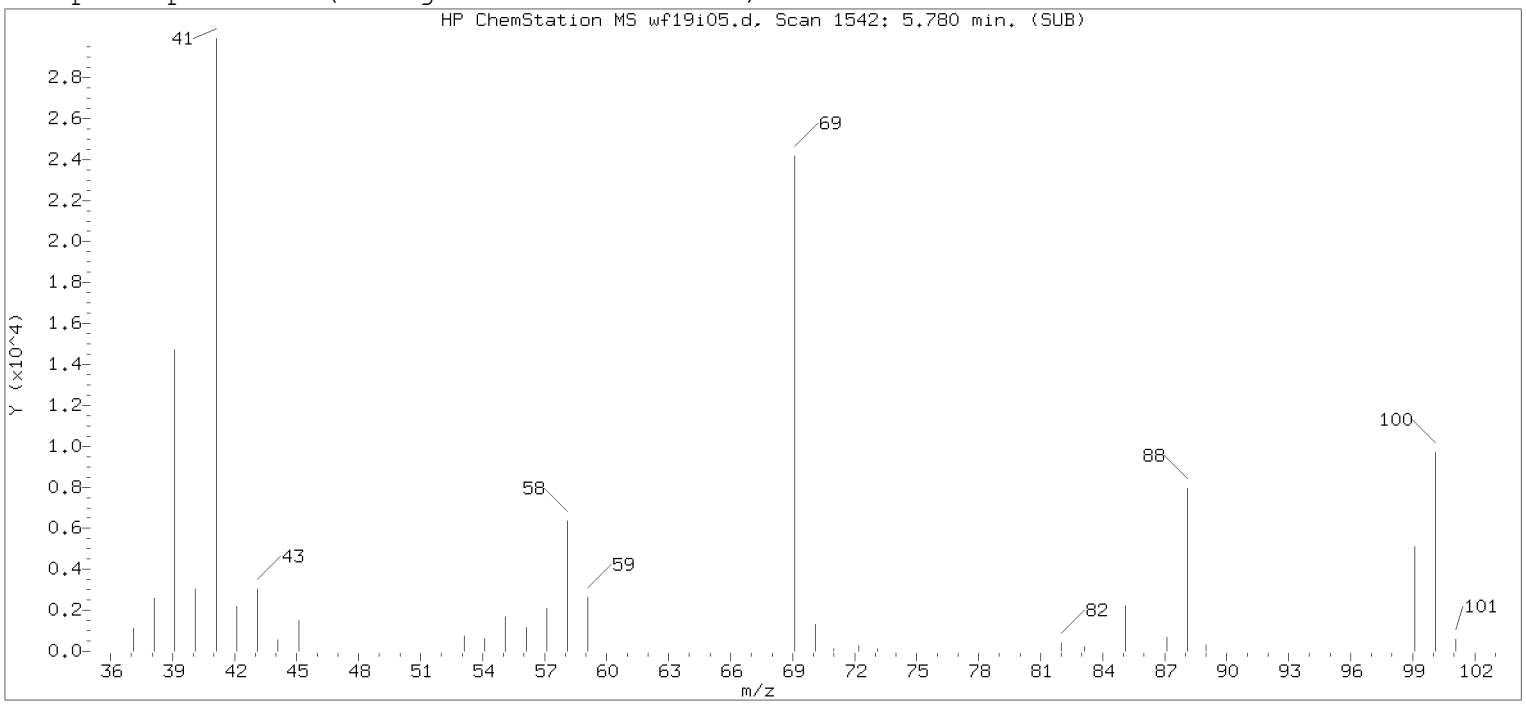
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area (flag) : 26130M
On-Column Amount (ng) : 247.0228
Integration start scan : 1529 Integration stop scan: 1633
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

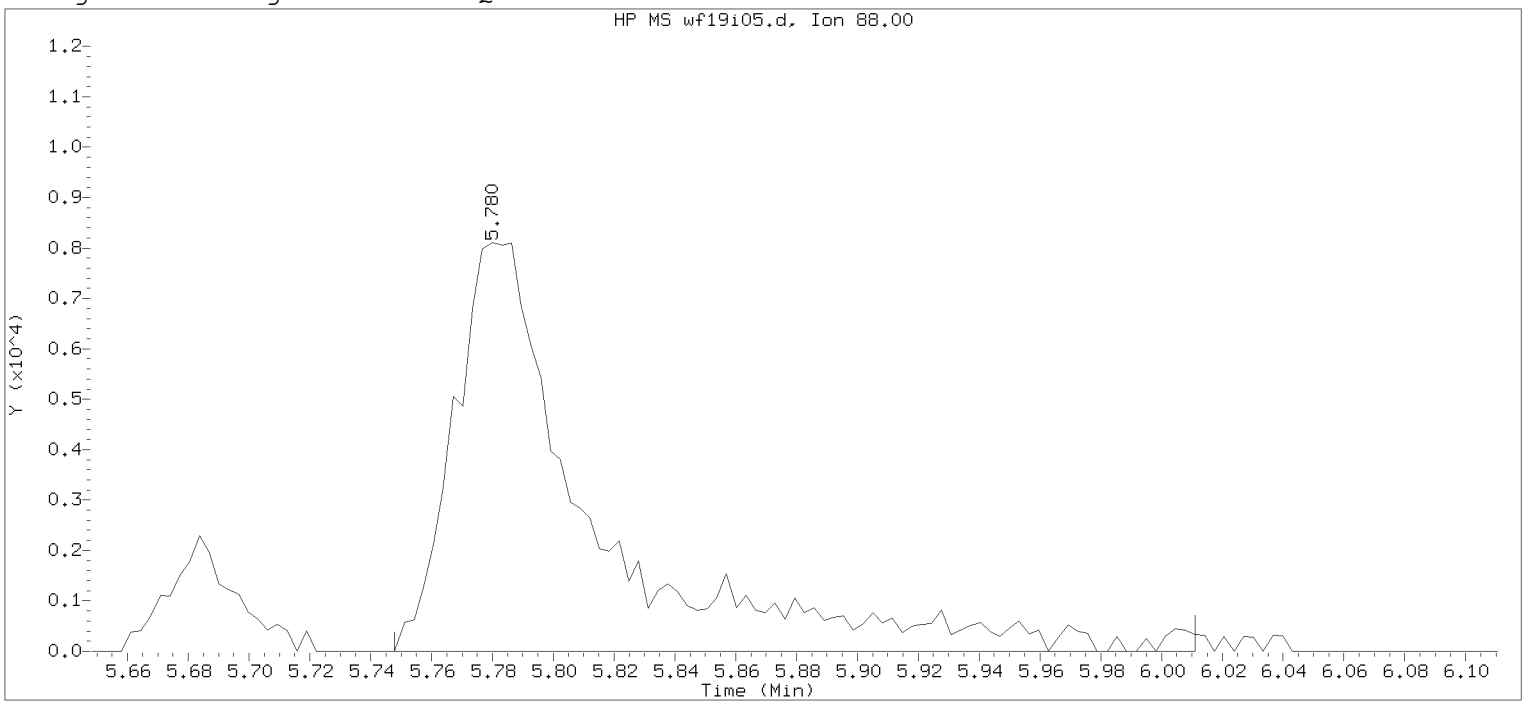
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



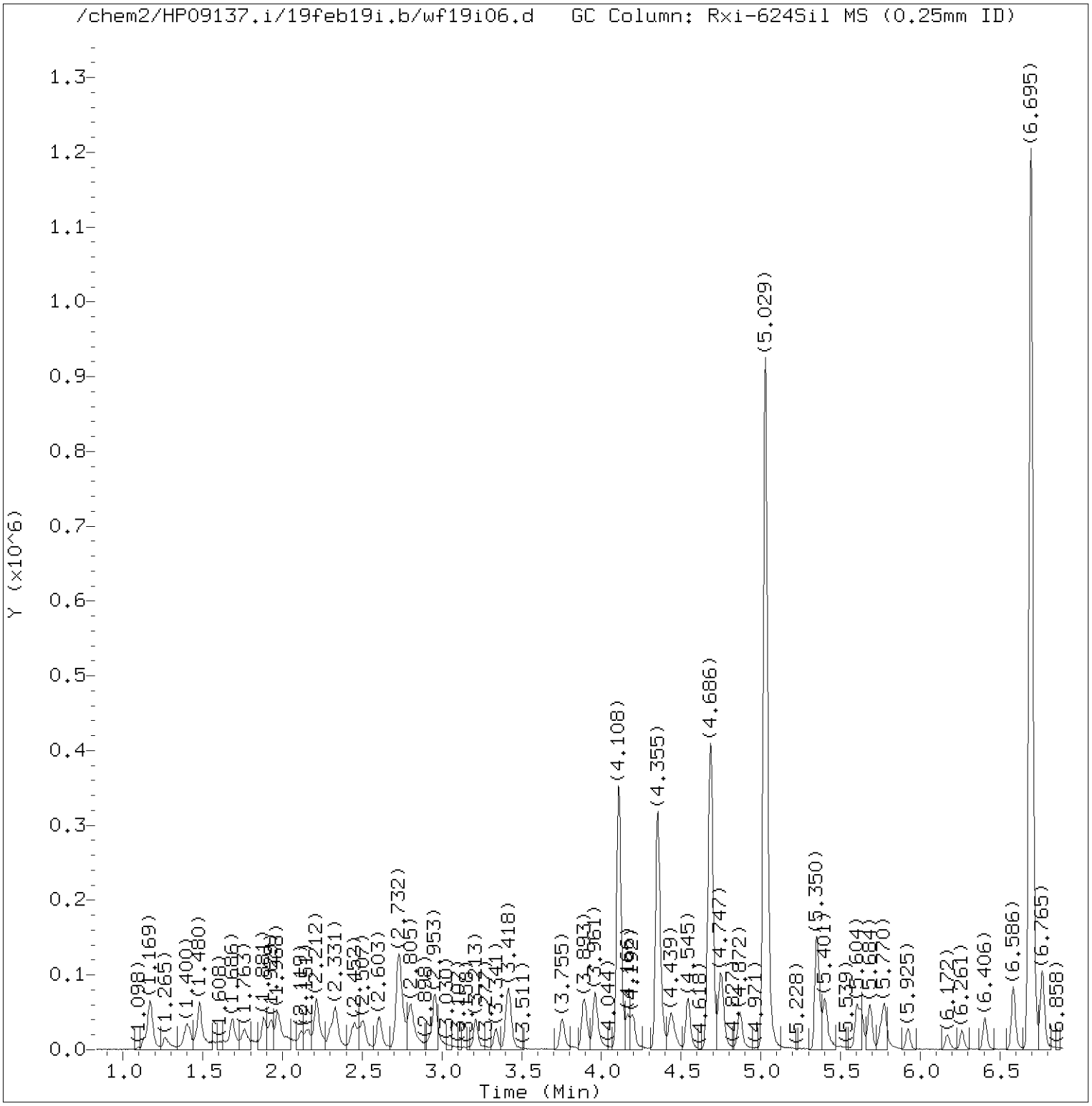
Data File: /chem2/HP09137.i/19feb19i.b/wf19i05.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 13:57 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:12
Date, time and analyst ID of latest file update: 19-Feb-2019 14:12 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area : 25752
On-column Amount (ng) : 242.5421
Integration start scan : 1531 Integration stop scan: 1613
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:32.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

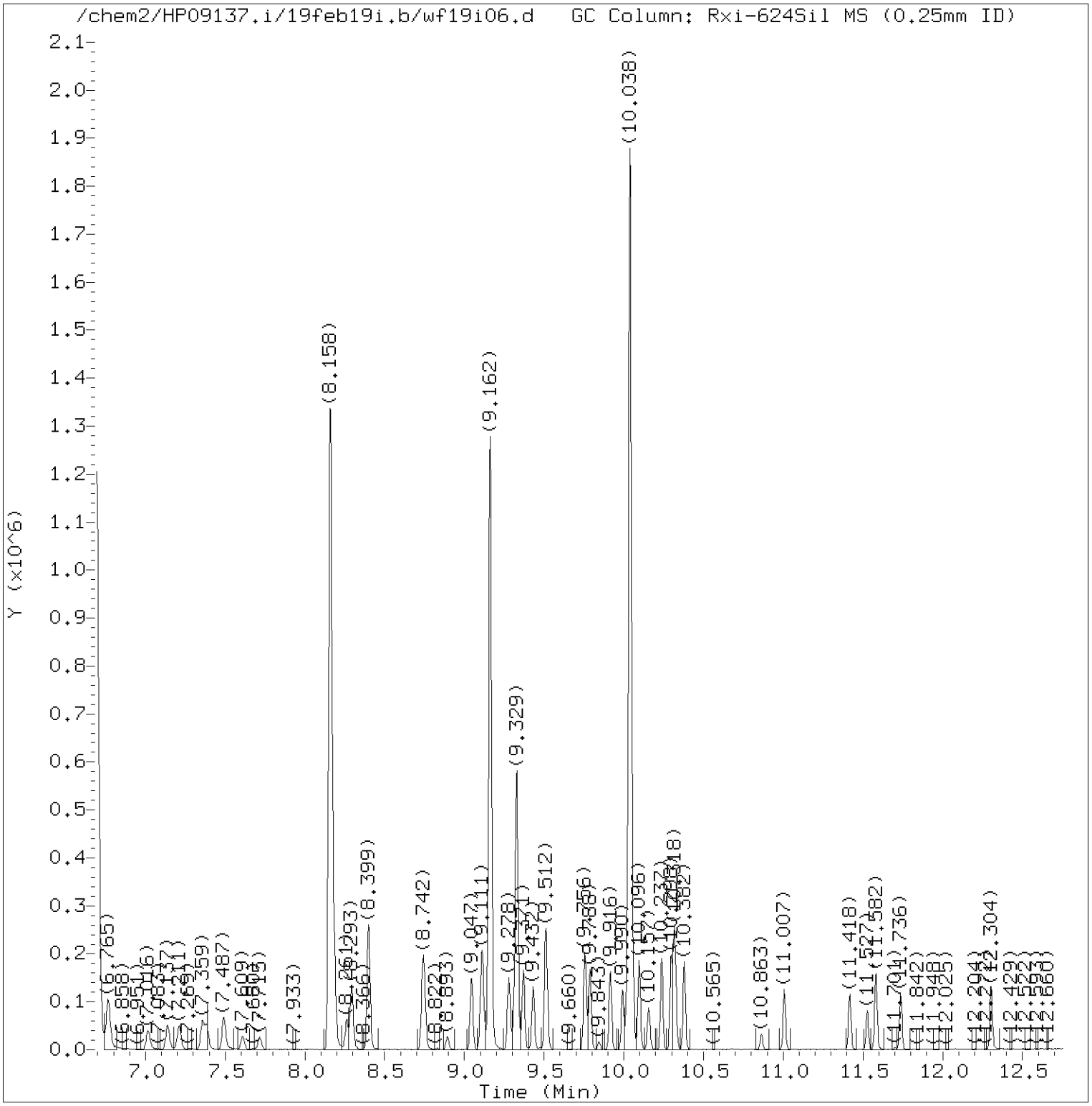
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.259	85	23531	4.193
4) Chloromethane	(2)	1.394	50	28635	4.098
6) Vinyl Chloride	(2)	1.471	62	26366	4.116
5) 1,3-Butadiene	(2)	1.483	39	18545	4.355
8) Bromomethane	(2)	1.686	94	20627	4.083
9) Chloroethane	(2)	1.763	64	17932	4.254
10) Dichlorofluoromethane	(2)	1.881	67	34825	4.268
12) Trichlorofluoromethane	(2)	1.929	101	28313	4.161
11) n-Pentane	(2)	1.968	43	25905	4.003
13) Ethanol	(1)	2.032	45	23872	241.686
15) Freon 123a	(2)	2.160	67	21906M	4.309
16) Acrolein	(1)	2.215	56	60532	38.823
17) 1,1-Dichloroethene	(2)	2.321	96	15949	4.168
17) 1,1-Dichloroethene	(2)	2.331	63	8182	4.238
19) Freon 113	(2)	2.331	101	13192	3.926
18) Acetone	(1)	2.343	58	6155	8.122
21) 2-Propanol	(1)	2.452	45	44335	78.738
22) Methyl Iodide	(2)	2.465	142	29198M	3.982
23) Carbon Disulfide	(2)	2.510	76	54961	4.077
25) Allyl Chloride	(2)	2.600	41	24928	3.739
27) Methyl Acetate	(2)	2.623	43	23710	4.109
28) Methylene Chloride	(2)	2.709	84	18454	3.945
29)*t-Butyl alcohol-d10	(1)	2.728	65	216574	250.000
30) t-Butyl alcohol	(1)	2.802	59	80535	80.179
31) Acrylonitrile	(2)	2.924	53	12124	3.994
32) trans-1,2-Dichloroethene	(2)	2.956	96	17015	4.098
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	41263	4.082
34) n-Hexane	(2)	3.213	57	21496	3.869
36) 1,1-Dichloroethane	(2)	3.341	63	30062	3.996
38) di-Isopropyl ether	(2)	3.412	45	57557	3.982
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	25562	3.923
40) Ethyl t-butyl ether	(2)	3.758	59	40603	3.854
42) cis-1,2-Dichloroethene	(2)	3.890	96	18329	3.932
45) 2,2-Dichloropropane	(2)	3.893	77	14577	4.314
44) 2-Butanone	(2)	3.906	43	33453	7.670
47) Propionitrile	(1)	3.961	54	102936	82.457
48) Methacrylonitrile	(2)	4.111	67	130439	39.964
49) Bromochloromethane	(2)	4.118	128	9255	3.819

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.166	71	9370	8.110
51) Chloroform	(2)	4.195	83	27398	3.881
52)$Dibromofluoromethane	(2)	4.355	113	203360	50.576
52)$Dibromofluoromethane	(2)	4.352	111	208230	50.447
53) 1,1,1-Trichloroethane	(2)	4.378	97	21578	4.063
54) Cyclohexane	(2)	4.436	56	29157	4.148
54) Cyclohexane	(2)	4.439	84	24008	4.126
54) Cyclohexane	(2)	4.439	69	8793	4.162
55) 1,1-Dichloropropene	(2)	4.541	75	23554	4.162
56) Carbon Tetrachloride	(2)	4.545	117	18201	3.993
58) Isobutyl Alcohol	(1)	4.670	41	72292	197.420
57)$1,2-Dichloroethane-d4	(2)	4.686	102	54956	51.390
57)$1,2-Dichloroethane-d4	(2)	4.689	65	236381	50.778
57)$1,2-Dichloroethane-d4	(2)	4.689	104	34670	50.908
60) Benzene	(2)	4.747	78	73397	4.035
61) 1,2-Dichloroethane	(2)	4.766	62	22051	3.924
61) 1,2-Dichloroethane	(2)	4.756	98	2103	3.933
65) t-Amyl methyl ether	(2)	4.872	73	42864	3.971
66)*Fluorobenzene	(2)	5.029	96	867920	50.000
67) n-Heptane	(2)	5.032	43	19883	3.745
69) n-Butanol	(1)	5.353	56	119356	367.104
71) Trichloroethene	(2)	5.408	95	17783	4.037
73) Methylcyclohexane	(2)	5.604	83	26169	4.092
73) Methylcyclohexane	(2)	5.607	98	12193	4.100
74) 1,2-Dichloropropane	(2)	5.632	63	18182	3.893
75) Dibromomethane	(2)	5.751	93	11156	3.870
77) Methyl Methacrylate	(2)	5.777	69	19327M	3.766
76) 1,4-Dioxane	(1)	5.777	88	17062M	175.540
79) Bromodichloromethane	(2)	5.928	83	19632	3.707
43) 1,2-Dichloroethene (Total)	(2)		96	35344	8.030
80) 2-Nitropropane	(2)	6.172	41	12333M	6.883
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	12078	3.392
82) cis-1,3-Dichloropropene	(2)	6.409	75	27021	3.711
83) 4-Methyl-2-pentanone	(2)	6.586	43	64259	7.475
84)$Toluene-d8	(3)	6.695	98	907781	50.491
84)$Toluene-d8	(3)	6.695	100	592851	49.723
89) Toluene	(3)	6.768	92	45802	3.955
90) trans-1,3-Dichloropropene	(3)	7.012	75	24608	3.569

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.141	69	29840	3.522
93) 1,1,2-Trichloroethane	(3)	7.211	97	16788	3.766
94) Tetrachloroethene	(3)	7.359	166	19036	4.051
95) 1,3-Dichloropropane	(3)	7.388	76	28445	3.674
97) 2-Hexanone	(3)	7.490	43	49126	7.283
98) Dibromochloromethane	(3)	7.612	129	14587	3.350
100) 1,2-Dibromoethane	(3)	7.718	107	17864	3.648
101)*Chlorobenzene-d5	(3)	8.161	117	717501	50.000
103) Chlorobenzene	(3)	8.187	112	49939	3.887
104) 1,1,1,2-Tetrachloroethane	(3)	8.264	131	14799	3.584
105) Ethylbenzene	(3)	8.296	91	86503	3.930
107) m+p-Xylene	(3)	8.399	106	68276	7.801
108) o-Xylene	(3)	8.736	106	33591	3.901
110) Styrene	(3)	8.752	104	52960	3.667
111) Bromoform	(3)	8.893	173	10704	3.159
112) Isopropylbenzene	(3)	9.047	105	83300	3.937
113) Cyclohexanone	(1)	9.111	55	81513	185.914
115)$4-Bromofluorobenzene	(3)	9.162	95	358508	49.843
115)$4-Bromofluorobenzene	(3)	9.162	174	303553	50.013
116) Bromobenzene	(4)	9.278	156	22129	3.897
117) 1,1,2,2-Tetrachloroethane	(4)	9.281	83	28726	3.751
118) 1,2,3-Trichloropropane	(4)	9.316	110	9051	3.924
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	92446	37.646
120) n-Propylbenzene	(4)	9.371	91	101539	4.056
121) 2-Chlorotoluene	(4)	9.432	126	20876	4.043
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	71196	3.943
122) 4-Chlorotoluene	(4)	9.518	126	21738	3.933
125) tert-Butylbenzene	(4)	9.756	134	16878	4.115
126) Pentachloroethane	(4)	9.766	167	11197	3.453
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	73692	3.874
128) sec-Butylbenzene	(4)	9.916	105	90719	4.094
130) 1,3-Dichlorobenzene	(4)	9.993	146	41989	3.878
131) p-Isopropyltoluene	(4)	10.022	119	78503	4.002
132)*1,4-Dichlorobenzene-d4	(4)	10.038	152	394254	50.000
134) 1,4-Dichlorobenzene	(4)	10.058	146	44108	3.929
91) 1,3-Dichloropropene (total)	(3)		100	51629	7.280
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	79065	3.863
136) Benzyl Chloride	(4)	10.157	91	52403	3.335

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.237	119	47119	3.823
138) 1,4-Diethylbenzene	(4)	10.295	119	51192	3.876
140) n-Butylbenzene	(4)	10.314	92	38912	3.930
139) 1,2-Dichlorobenzene	(4)	10.321	146	41158	3.831
141) 1,2-Diethylbenzene	(4)	10.382	119	41509	3.989
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	6341	3.644
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	32071	3.893
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	29570	3.739
148) Hexachlorobutadiene	(4)	11.527	225	11175	3.967
149) Naphthalene	(4)	11.582	128	97075	3.627
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	29641	3.840
109) Xylene (Total)	(3)		106	101867	11.702
151) 2-Methylnaphthalene	(4)	12.304	142	49814	3.263
142) Diethylbenzene (total)	(4)		100	139820	11.688

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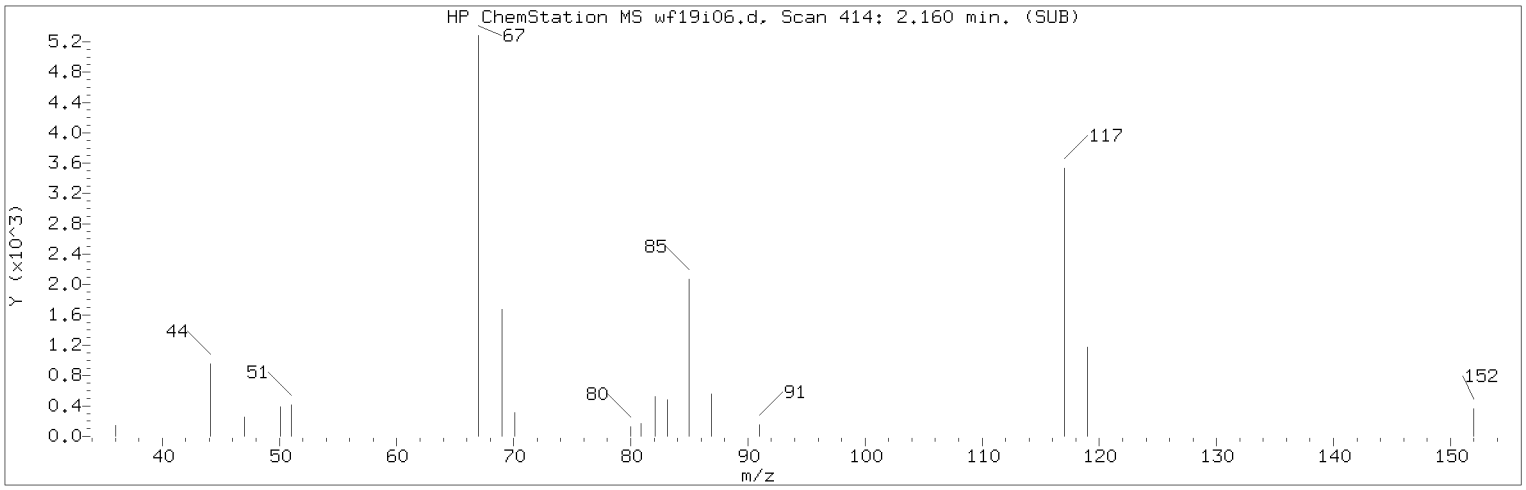
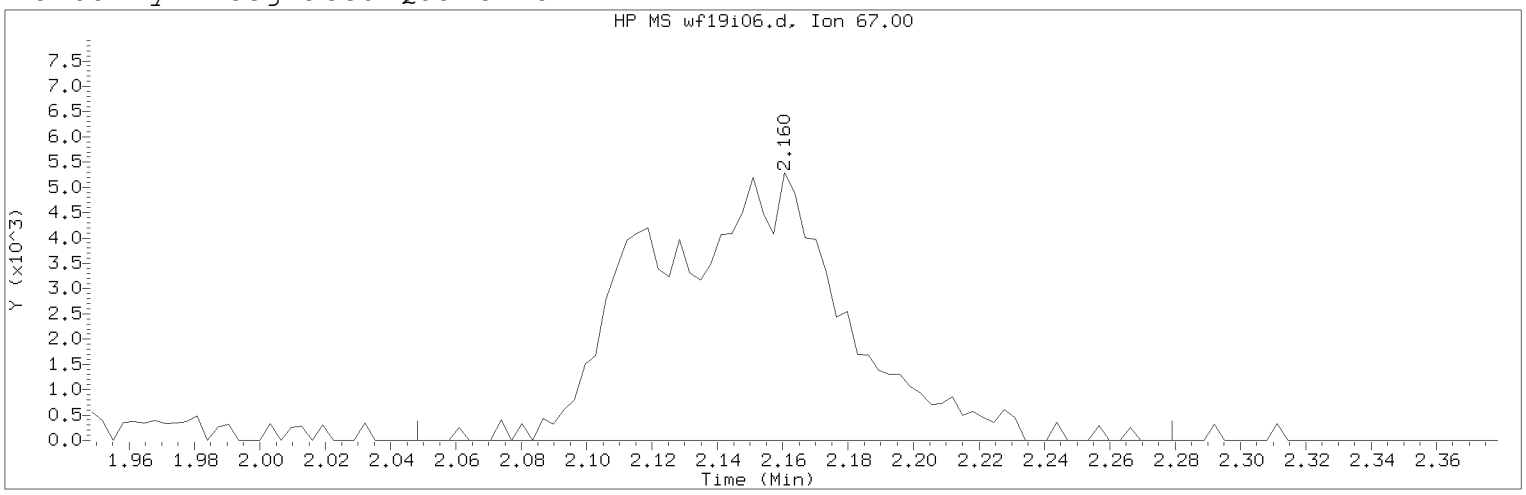
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

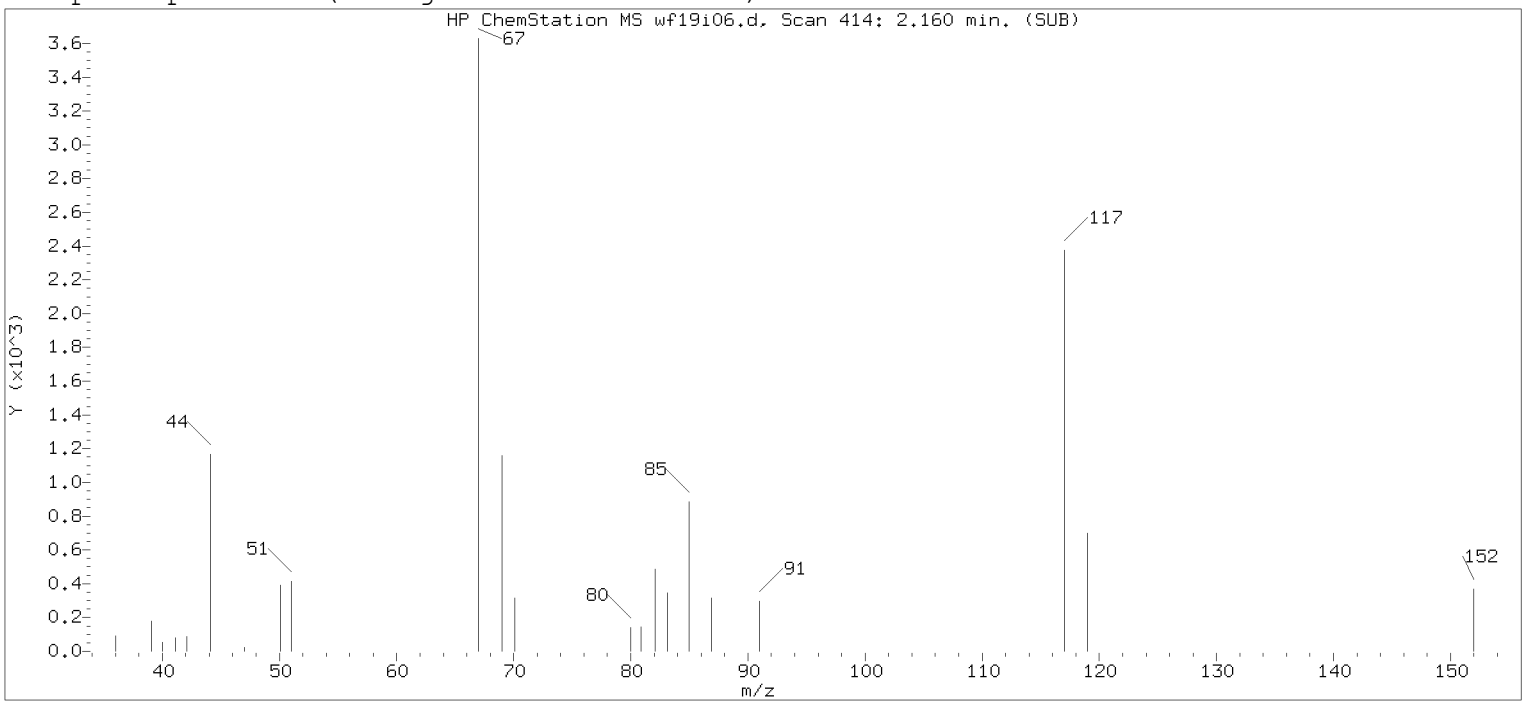
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 414
Retention Time (minutes): 2.160
Quant Ion : 67.00
Area (flag) : 21906M
On-Column Amount (ng) : 4.3086
Integration start scan : 378 Integration stop scan: 450
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

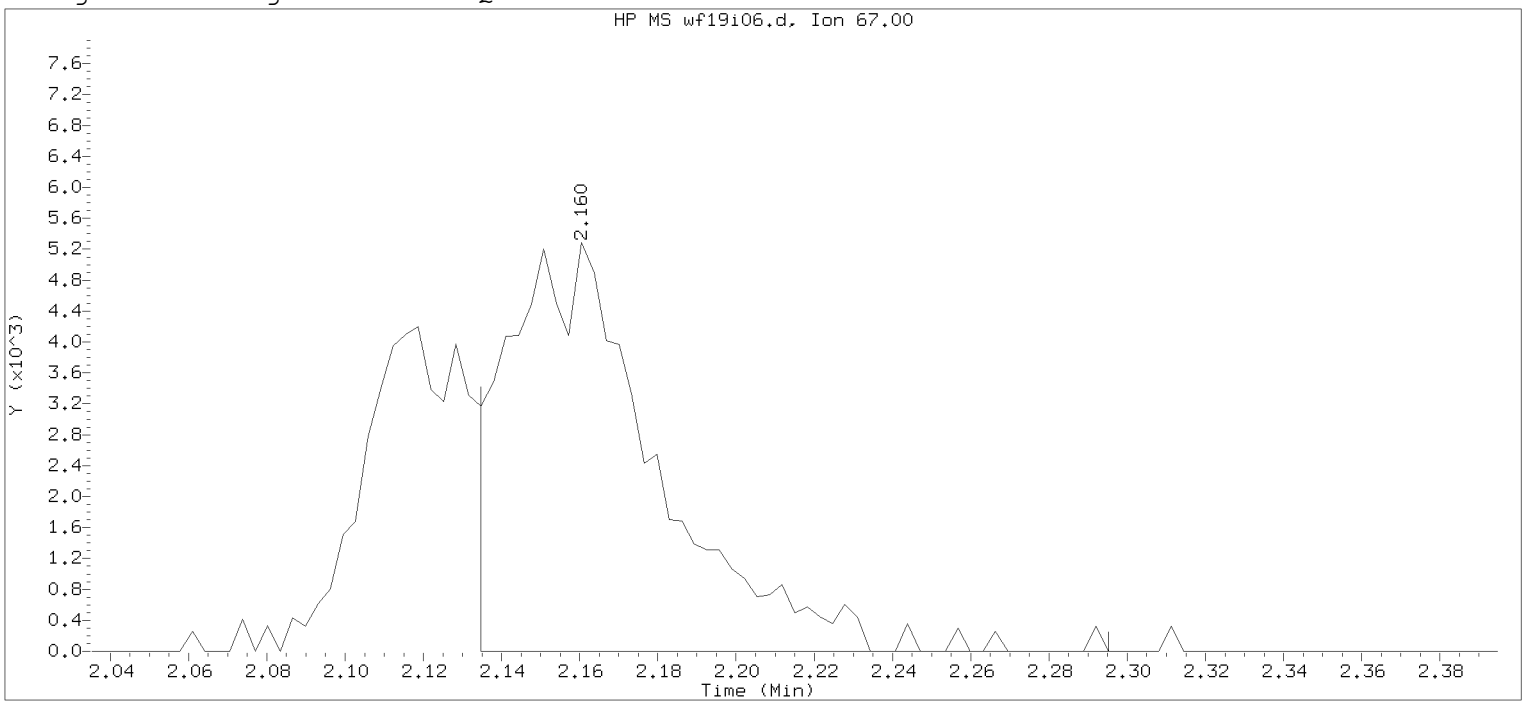
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:36
Date, time and analyst ID of latest file update: 19-Feb-2019 14:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 414		
Retention Time (minutes)	: 2.160		
Quant Ion	: 67.00		
Area	: 14214		
On-column Amount (ng)	: 3.9735		
Integration start scan	: 405	Integration stop scan:	455
Y at integration start	: 0	Y at integration end:	0

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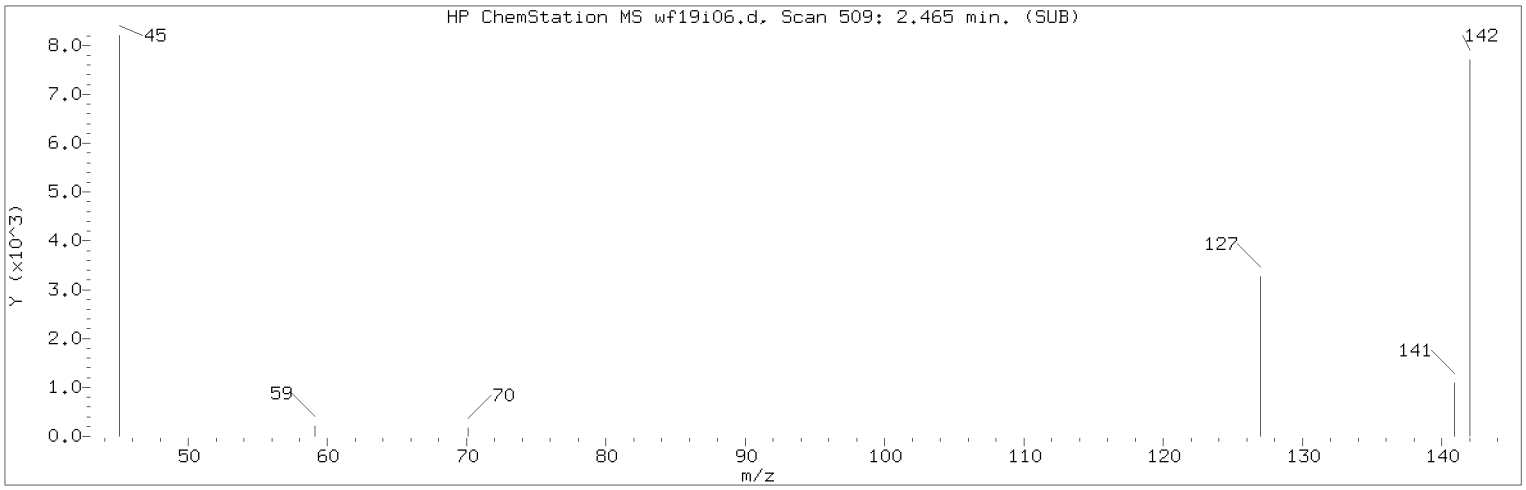
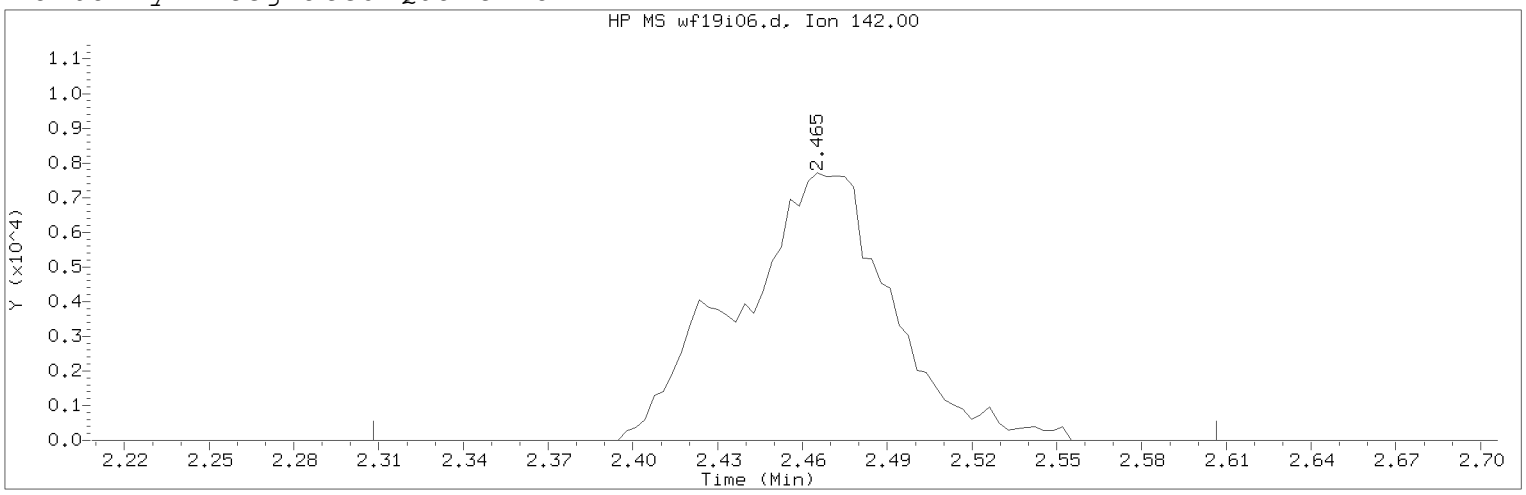
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

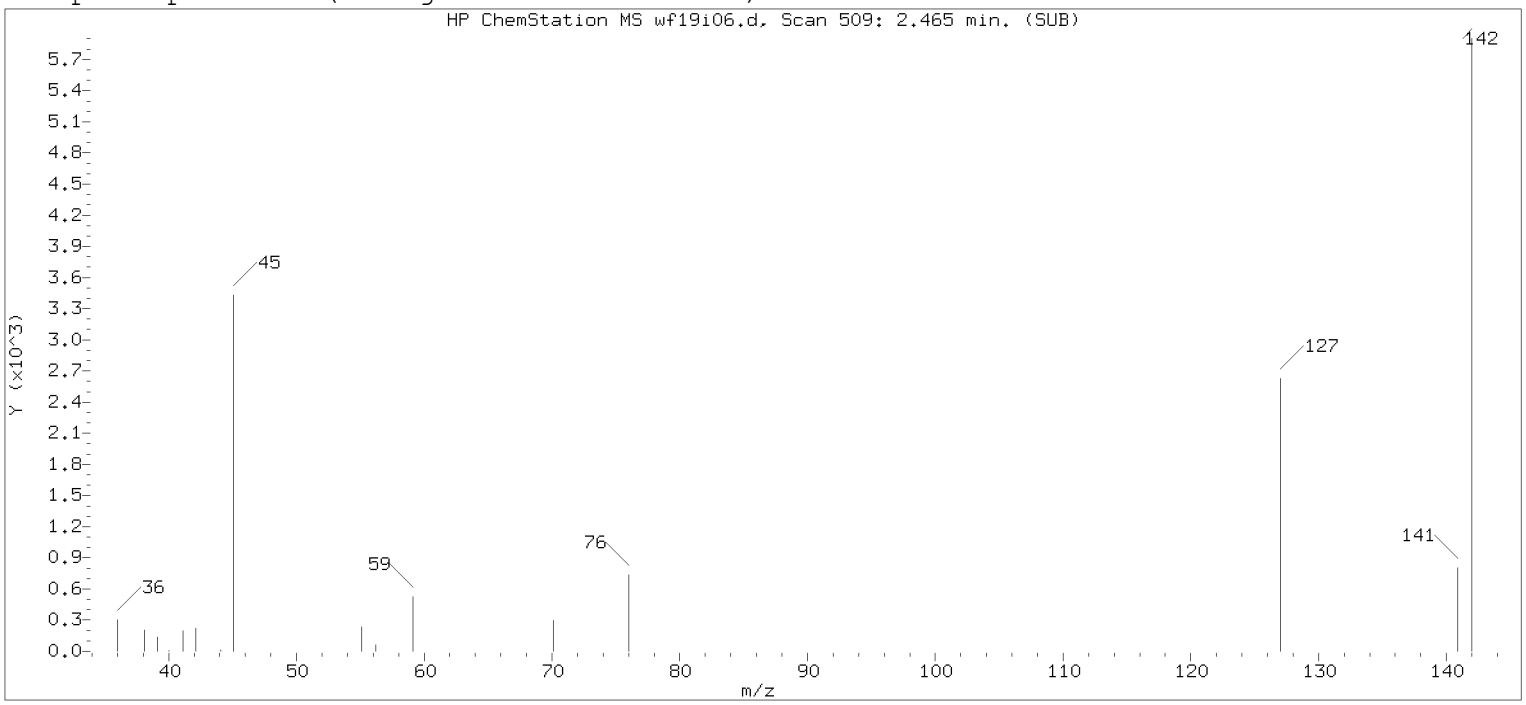
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area (flag) : 29198M
On-Column Amount (ng) : 3.9817
Integration start scan : 459 Integration stop scan: 552
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

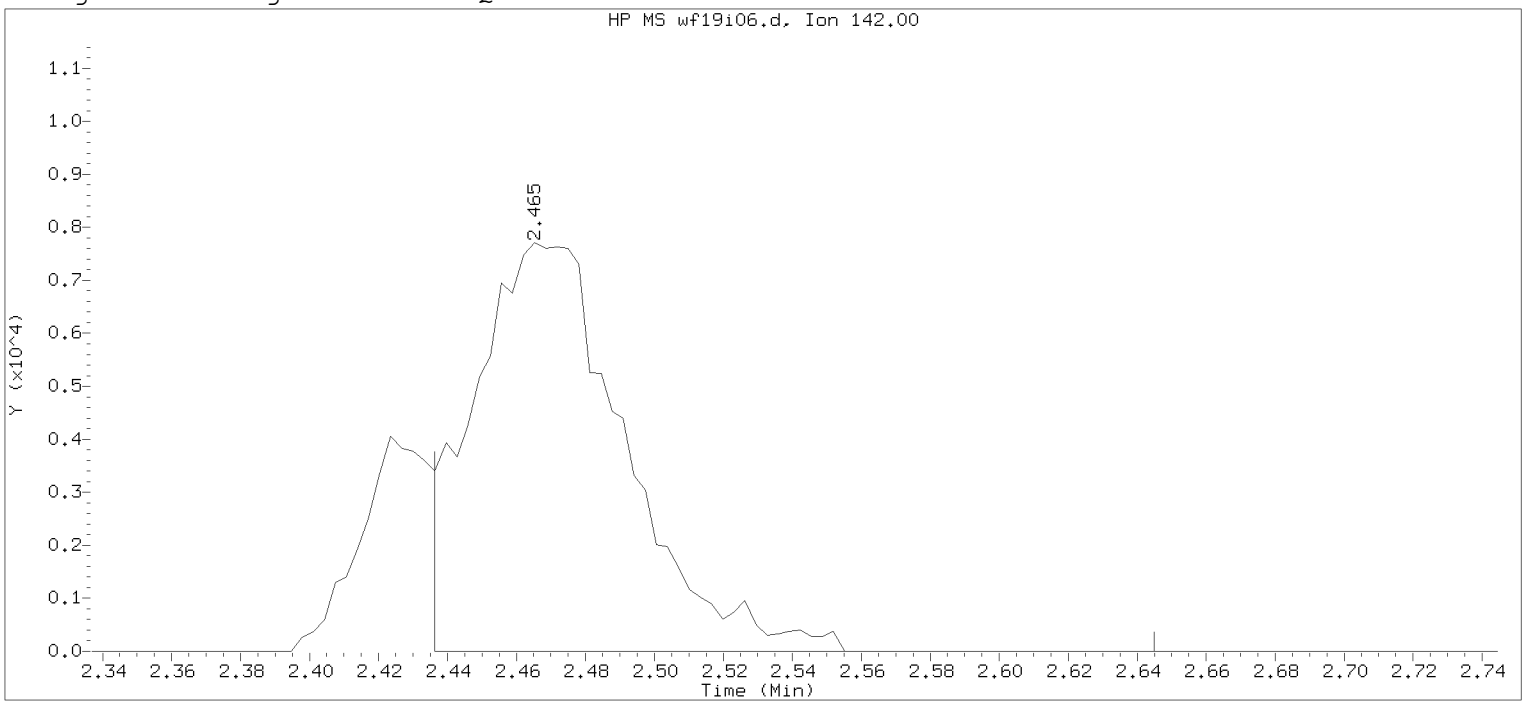
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:36
Date, time and analyst ID of latest file update: 19-Feb-2019 14:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area : 23663
On-column Amount (ng) : 3.5076
Integration start scan : 499 Integration stop scan: 564
Y at integration start : 0 Y at integration end: 0

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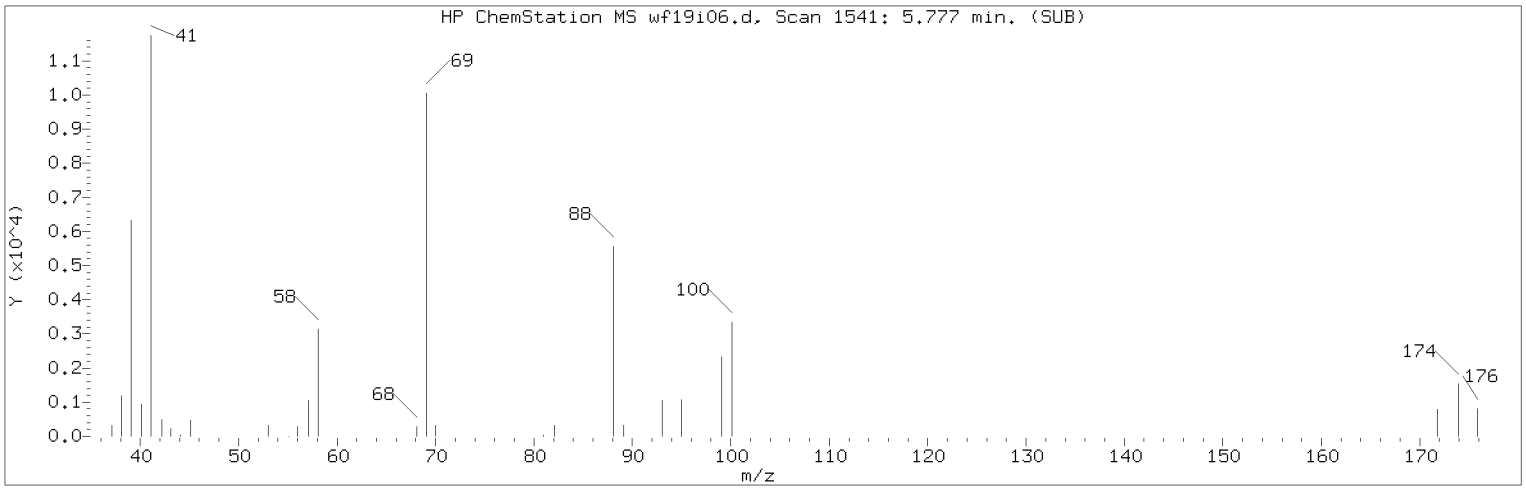
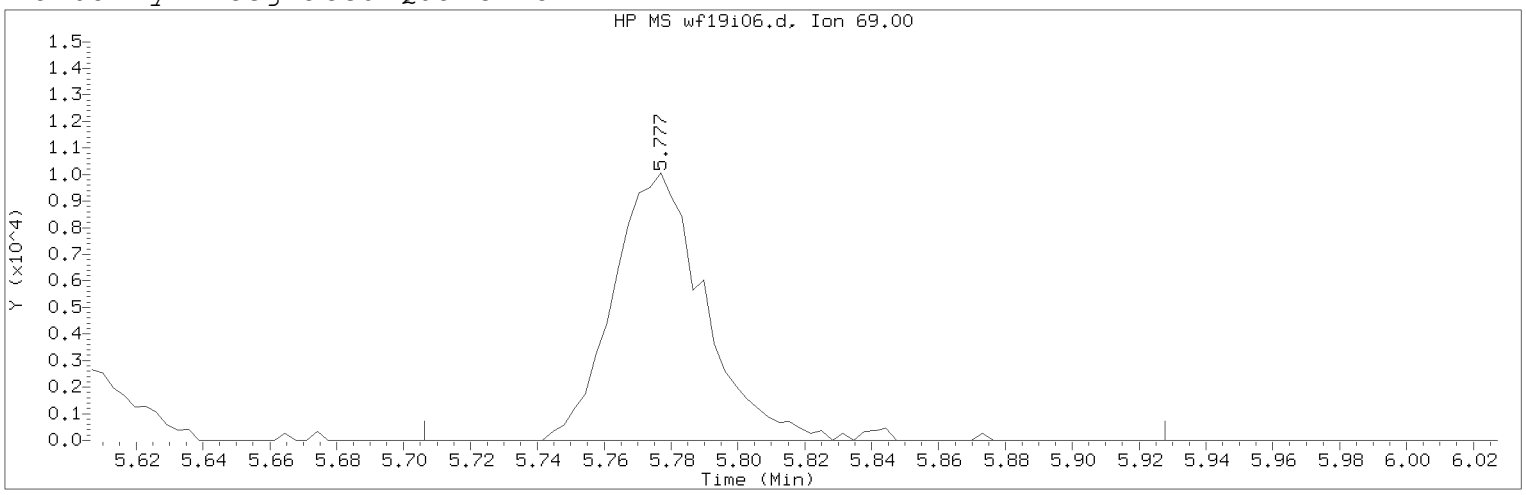
Target 3.5 esignature user ap 27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

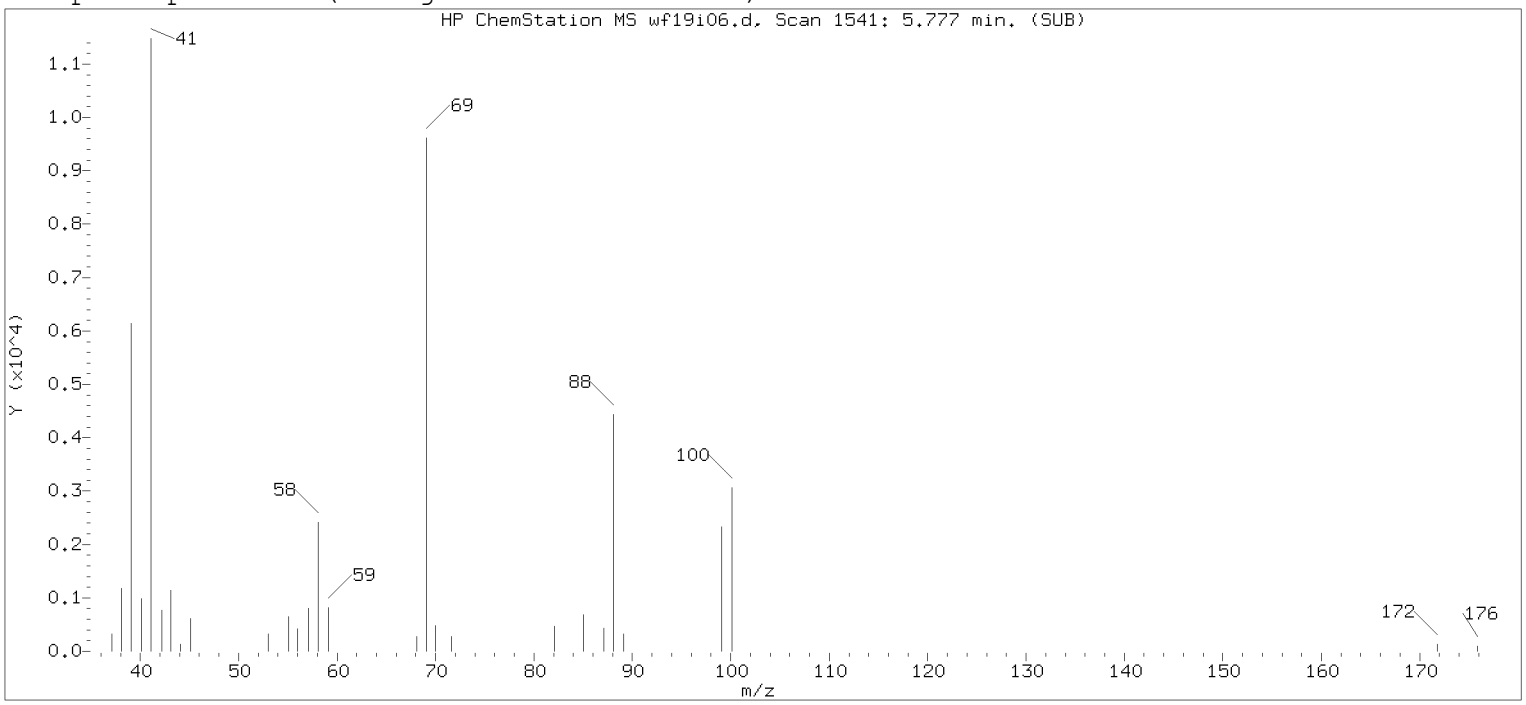
Compound Number : 77
Compound Name : Methyl Methacrylate
Scan Number : 1541
Retention Time (minutes): 5.777
Quant Ion : 69.00
Area (flag) : 19327M
On-Column Amount (ng) : 3.7657
Integration start scan : 1518 Integration stop scan: 1587
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

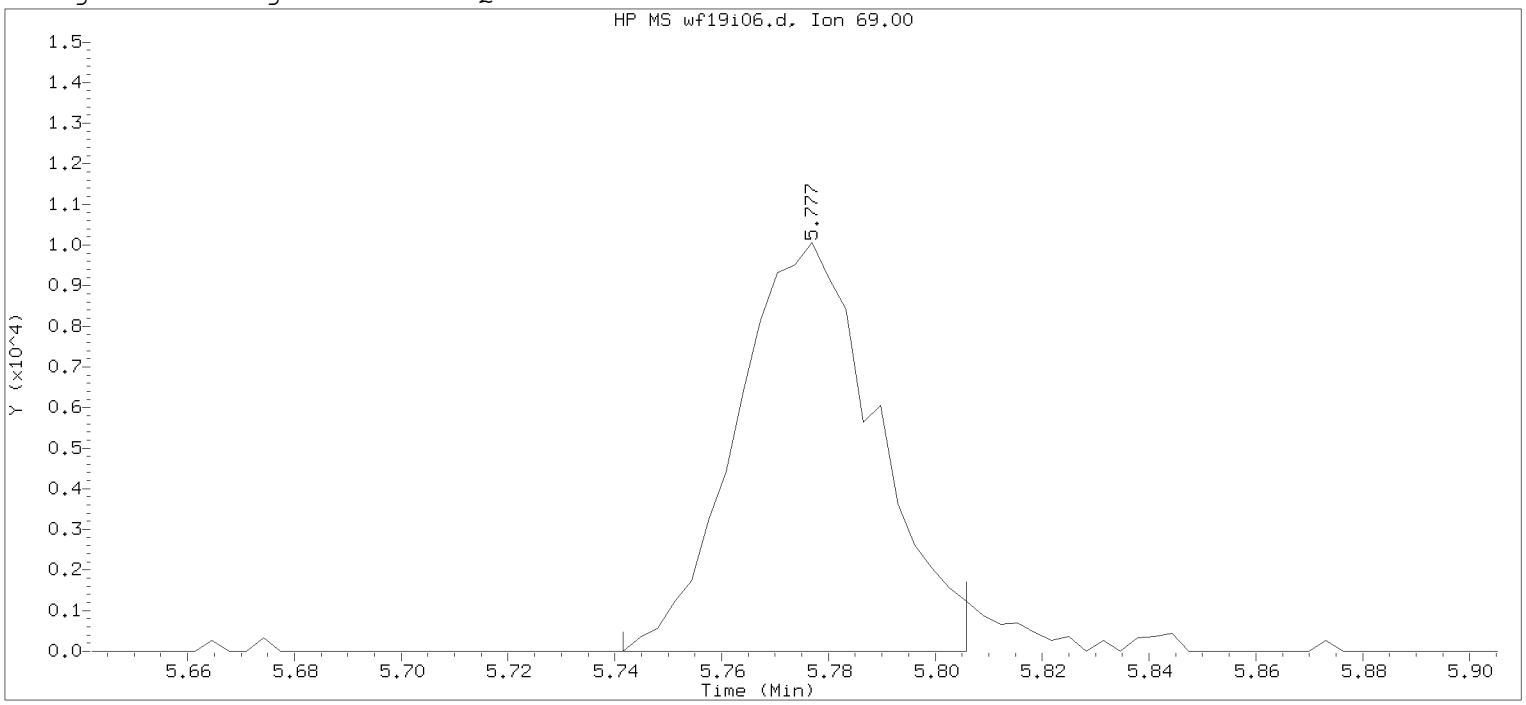
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

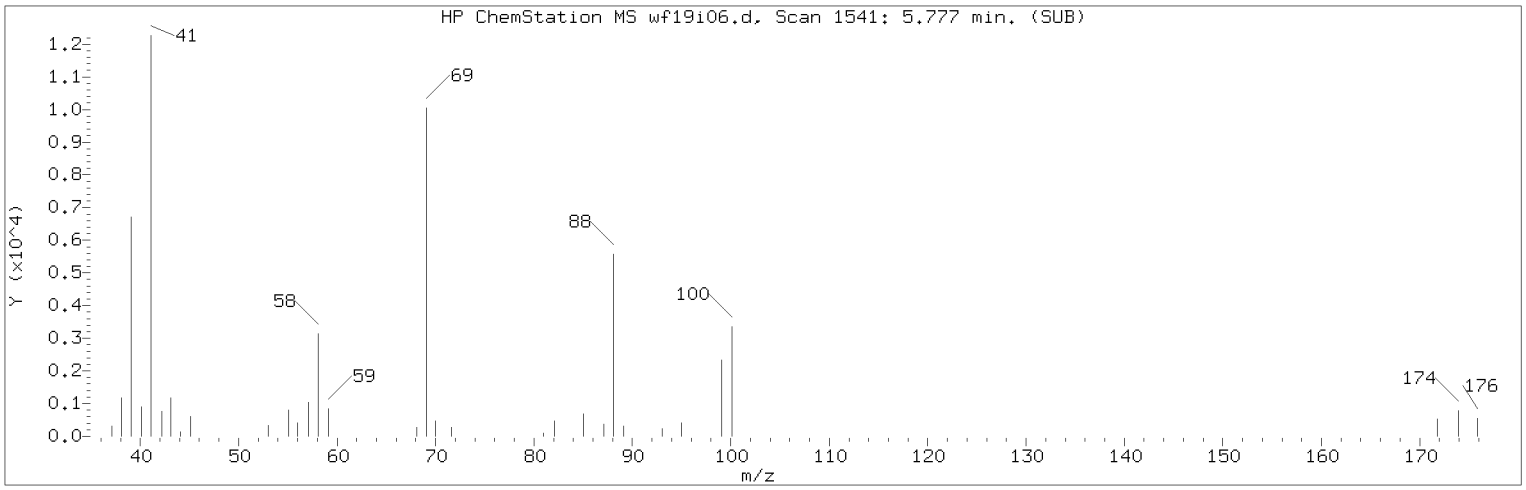
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:36
Date, time and analyst ID of latest file update: 19-Feb-2019 14:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

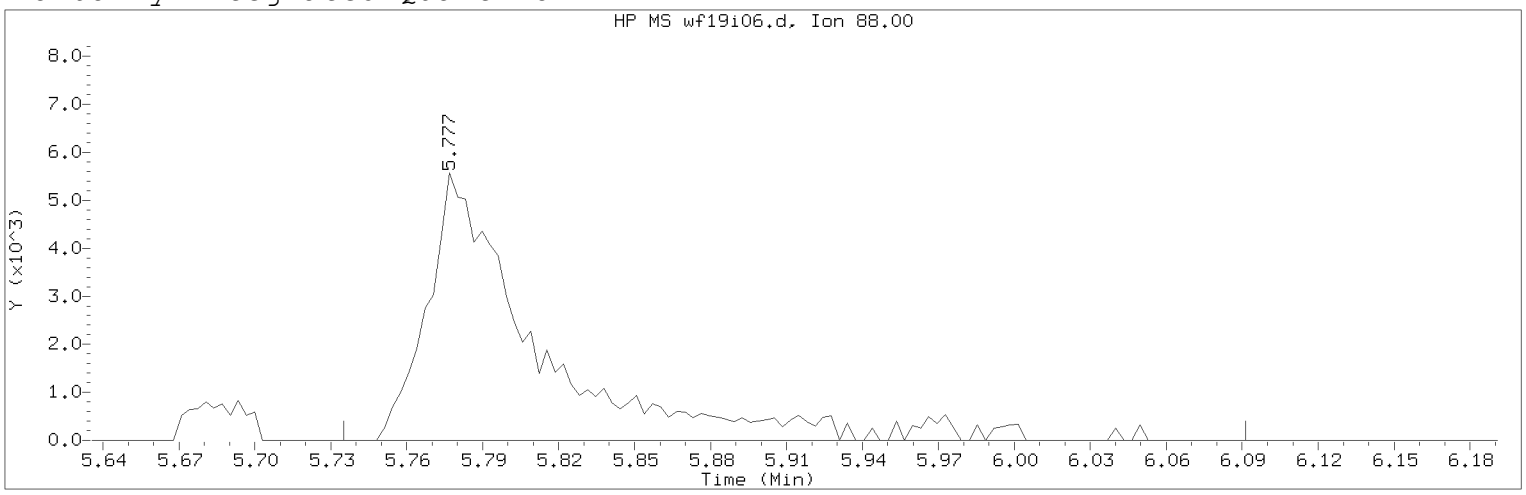
Compound Number : 77
Compound Name : Methyl Methacrylate
Scan Number : 1541
Retention Time (minutes): 5.777
Quant Ion : 69.00
Area : 18238
On-column Amount (ng) : 3.5038
Integration start scan : 1529 Integration stop scan: 1549
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

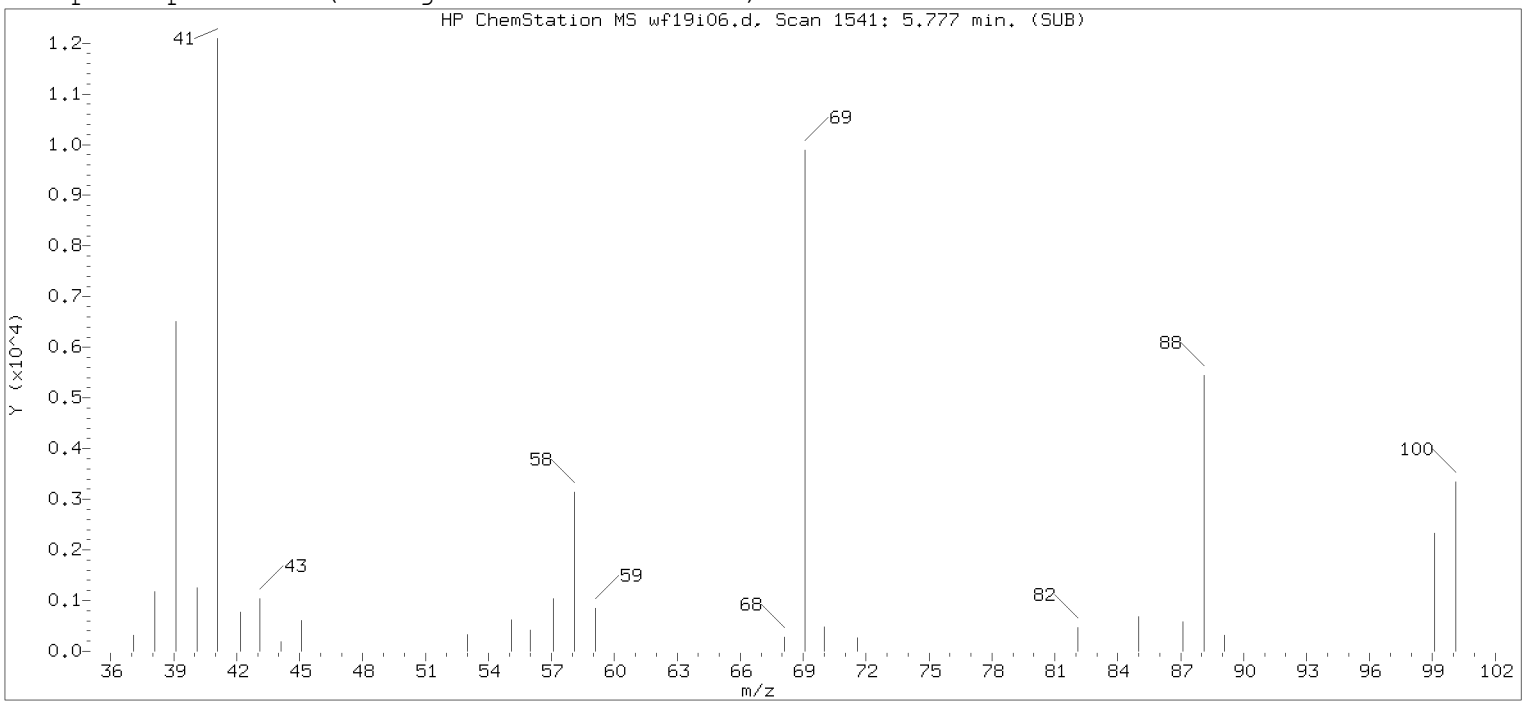
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1541
Retention Time (minutes): 5.777
Quant Ion : 88.00
Area (flag) : 17062M
On-Column Amount (ng) : 175.5404
Integration start scan : 1527 Integration stop scan: 1638
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

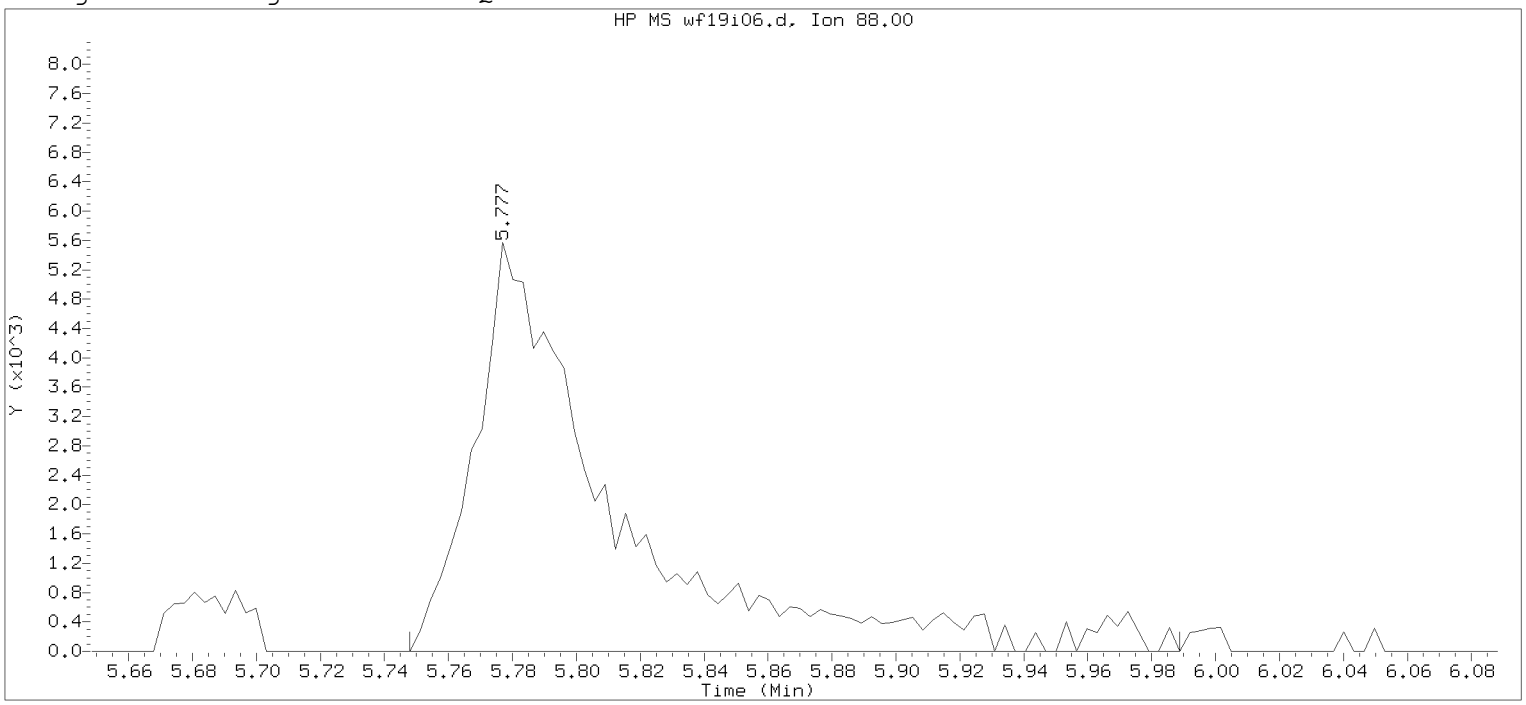
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

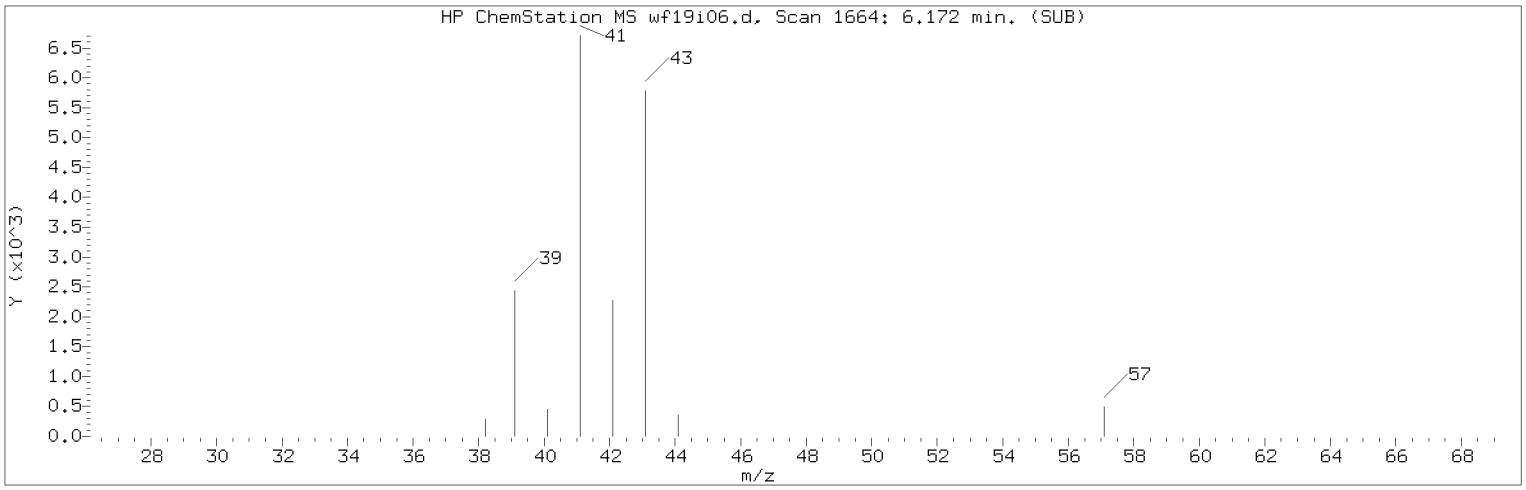
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:36
Date, time and analyst ID of latest file update: 19-Feb-2019 14:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

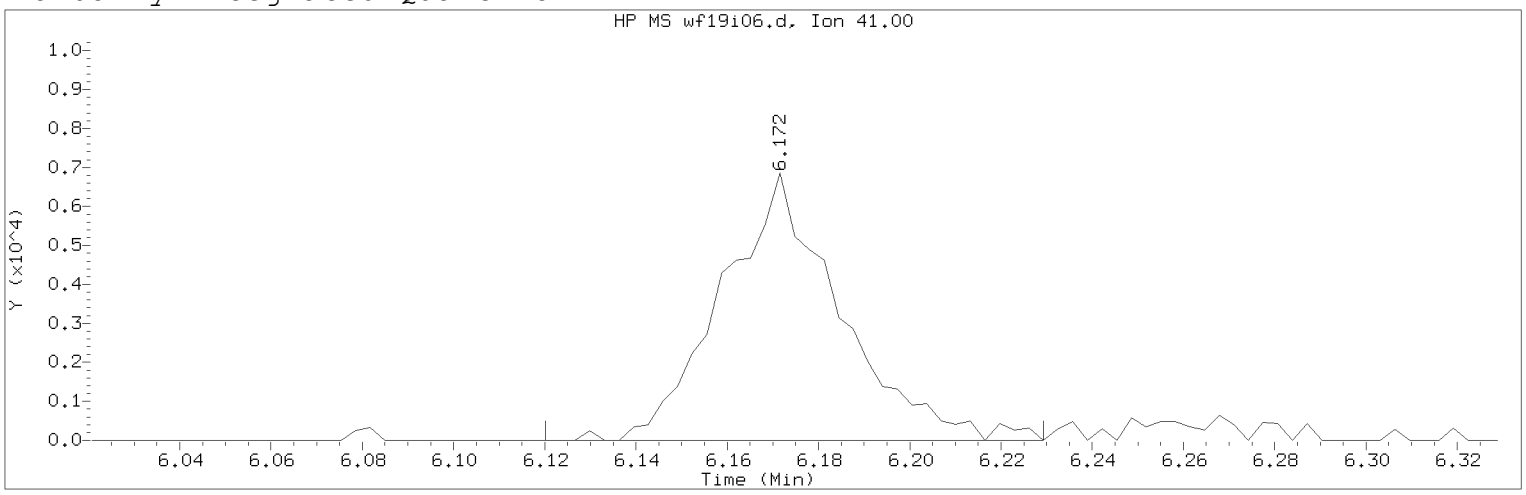
Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1541		
Retention Time (minutes)	: 5.777		
Quant Ion	: 88.00		
Area	: 16725		
On-column Amount (ng)	: 175.6192		
Integration start scan	: 1531	Integration stop scan:	1606
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD004 Lab Sample ID: VSTD004

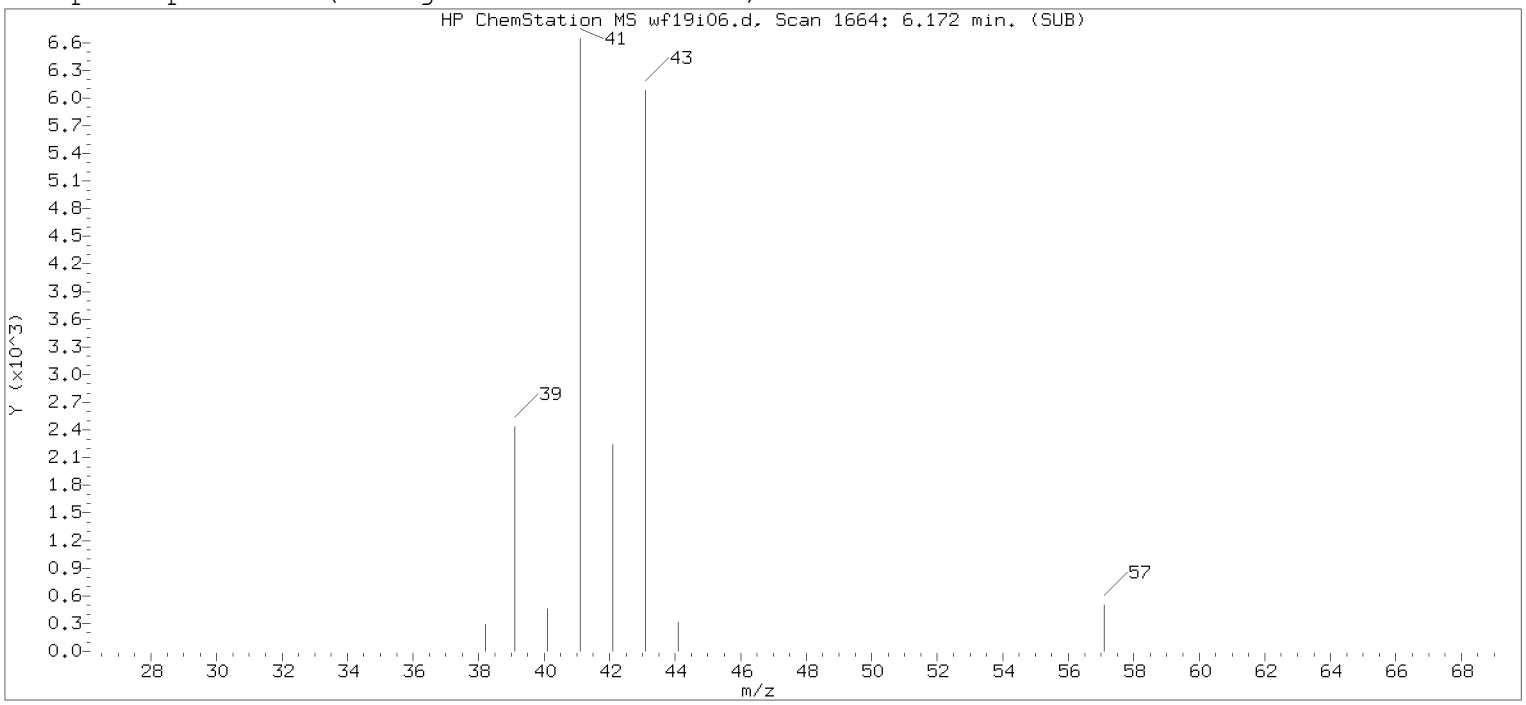
Compound Number : 80
Compound Name : 2-Nitropropane
Scan Number : 1664
Retention Time (minutes): 6.172
Quant Ion : 41.00
Area (flag) : 12333M
On-Column Amount (ng) : 6.8827
Integration start scan : 1647 Integration stop scan: 1681
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

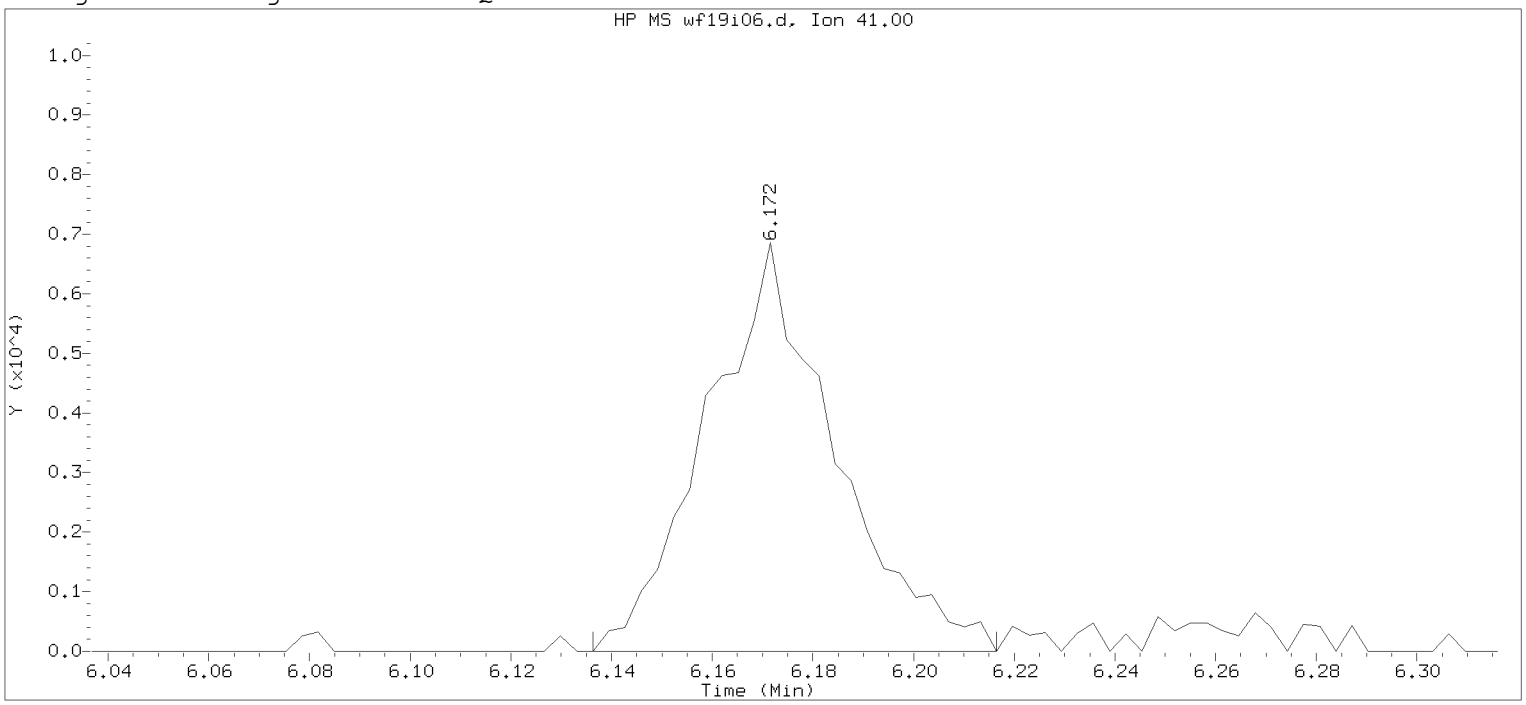
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



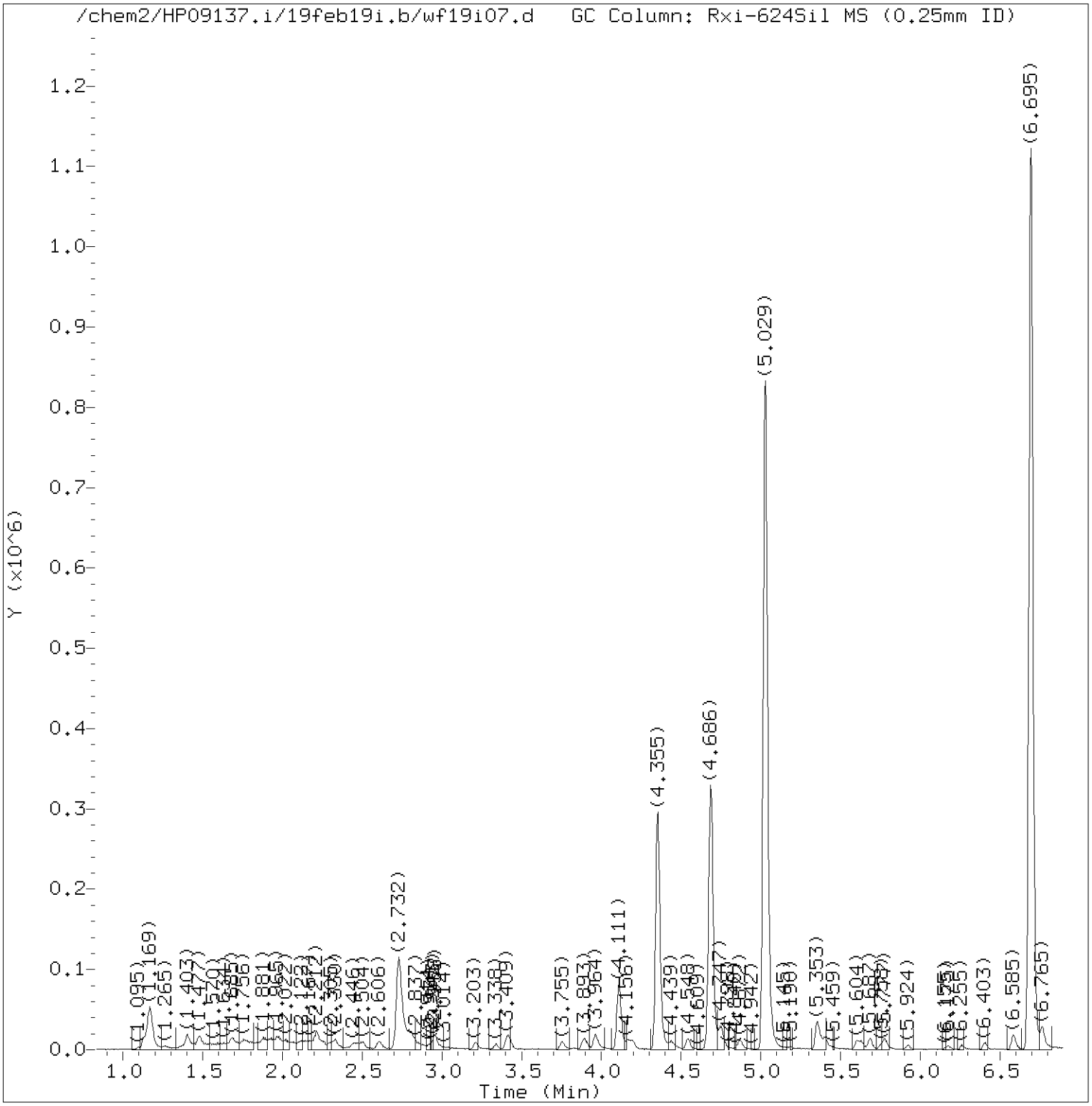
Data File: /chem2/HP09137.i/19feb19i.b/wf19i06.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:21 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 14:36
Date, time and analyst ID of latest file update: 19-Feb-2019 14:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 80
Compound Name : 2-Nitropropane
Scan Number : 1664
Retention Time (minutes): 6.172
Quant Ion : 41.00
Area : 12090
On-column Amount (ng) : 6.6411
Integration start scan : 1652 Integration stop scan: 1677
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: APR27582



Total Ion Chromatogram (TIC)

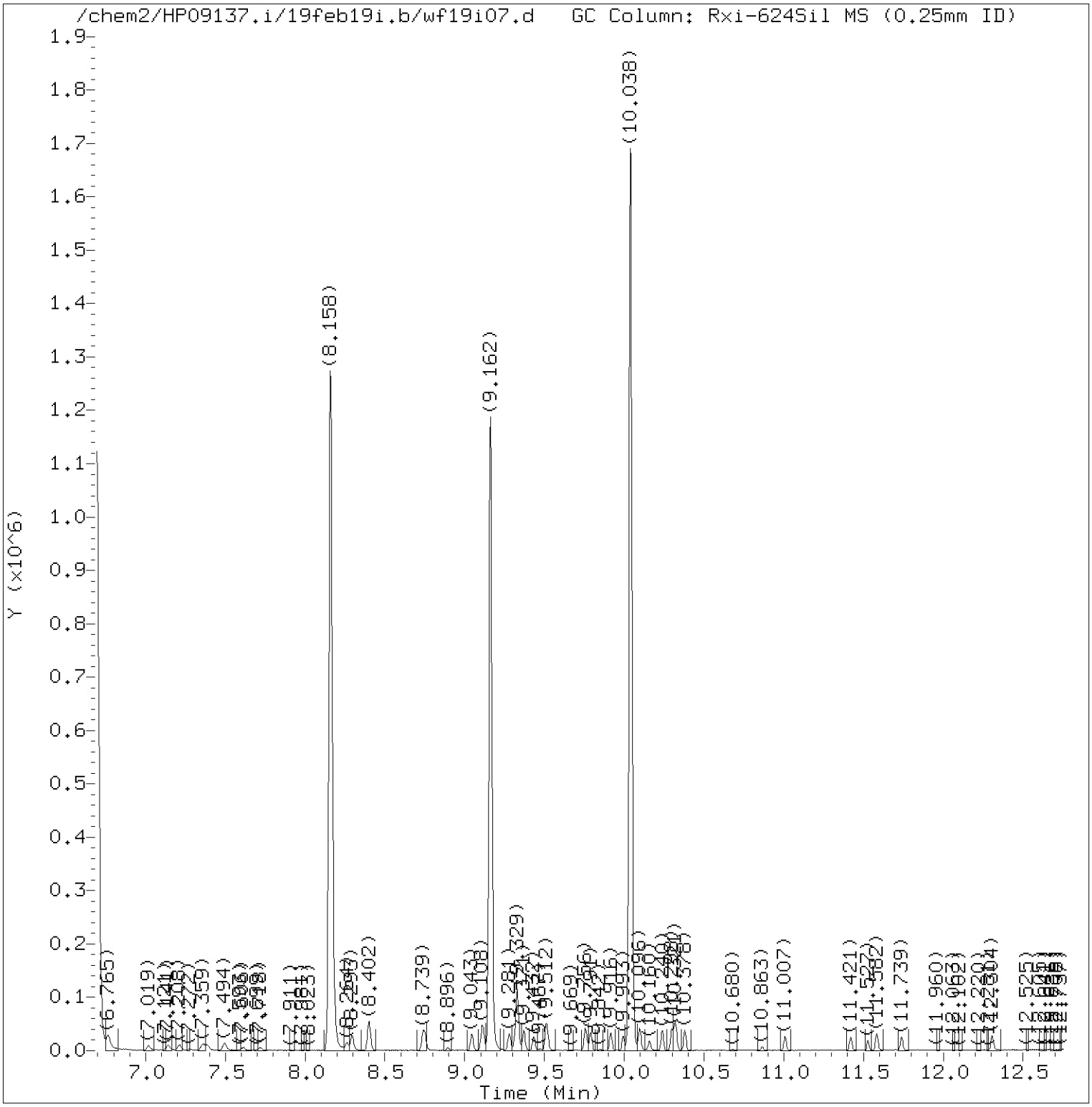
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.262	85	3665	0.689
4) Chloromethane	(2)	1.400	50	6210	0.937
6) Vinyl Chloride	(2)	1.470	62	5198	0.856
5) 1,3-Butadiene	(2)	1.477	39	4489M	1.112
8) Bromomethane	(2)	1.682	94	4292	0.896
9) Chloroethane	(2)	1.762	64	4447	1.112
10) Dichlorofluoromethane	(2)	1.888	67	8043	1.039
12) Trichlorofluoromethane	(2)	1.923	101	4857	0.753
11) n-Pentane	(2)	1.968	43	6657	1.085
13) Ethanol	(1)	2.051	45	8488	87.185
15) Freon 123a	(2)	2.141	67	5025M	1.042
16) Acrolein	(1)	2.218	56	15214	9.900
17) 1,1-Dichloroethene	(2)	2.321	96	2707	0.746
17) 1,1-Dichloroethene	(2)	2.314	63	1554	0.849
18) Acetone	(1)	2.334	58	1488	1.992
19) Freon 113	(2)	2.334	101	2232	0.700
21) 2-Propanol	(1)	2.446	45	12023	21.663
22) Methyl Iodide	(2)	2.472	142	6057M	0.871
23) Carbon Disulfide	(2)	2.504	76	11216	0.877
25) Allyl Chloride	(2)	2.603	41	5509	0.871
27) Methyl Acetate	(2)	2.619	43	6296	1.151
28) Methylene Chloride	(2)	2.709	84	4508M	1.016
29)*t-Butyl alcohol-d10	(1)	2.732	65	213467	250.000
30) t-Butyl alcohol	(1)	2.805	59	20393M	20.598
31) Acrylonitrile	(2)	2.918	53	2348	0.816
33) Methyl Tertiary Butyl Ether	(2)	2.956	73	8820	0.920
32) trans-1,2-Dichloroethene	(2)	2.959	96	3346	0.850
34) n-Hexane	(2)	3.213	57	4218	0.801
36) 1,1-Dichloroethane	(2)	3.338	63	6195	0.868
38) di-Isopropyl ether	(2)	3.409	45	13012	0.949
39) 2-Chloro-1,3-butadiene	(2)	3.425	53	5230	0.846
40) Ethyl t-butyl ether	(2)	3.752	59	9566	0.957
42) cis-1,2-Dichloroethene	(2)	3.890	96	3895	0.881
45) 2,2-Dichloropropane	(2)	3.890	77	2825	0.882
44) 2-Butanone	(2)	3.909	43	8554	2.068
47) Propionitrile	(1)	3.964	54	24581	19.977
48) Methacrylonitrile	(2)	4.108	67	29800	9.628
49) Bromochloromethane	(2)	4.111	128	2034	0.885

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.172	71	2206	1.937
51) Chloroform	(2)	4.195	83	6117	0.914
52)$Dibromofluoromethane	(2)	4.355	113	189485	49.693
52)$Dibromofluoromethane	(2)	4.355	111	193391	49.406
53) 1,1,1-Trichloroethane	(2)	4.378	97	4109	0.816
54) Cyclohexane	(2)	4.439	56	5258	0.789
54) Cyclohexane	(2)	4.439	84	4367	0.791
54) Cyclohexane	(2)	4.429	69	1544	0.771
55) 1,1-Dichloropropene	(2)	4.541	75	4731	0.882
56) Carbon Tetrachloride	(2)	4.545	117	3401	0.787
58) Isobutyl Alcohol	(1)	4.676	41	17702	49.046
57)$1,2-Dichloroethane-d4	(2)	4.686	102	50410	49.708
57)$1,2-Dichloroethane-d4	(2)	4.689	65	224184	50.782
57)$1,2-Dichloroethane-d4	(2)	4.689	104	32320	50.043
60) Benzene	(2)	4.750	78	15856	0.919
61) 1,2-Dichloroethane	(2)	4.769	62	5590	1.049
61) 1,2-Dichloroethane	(2)	4.763	98	304	0.600
65) t-Amyl methyl ether	(2)	4.869	73	9942	0.971
66)*Fluorobenzene	(2)	5.029	96	823064	50.000
67) n-Heptane	(2)	5.032	43	4457	0.885
69) n-Butanol	(1)	5.353	56	28433	88.724
71) Trichloroethene	(2)	5.405	95	3650	0.874
73) Methylcyclohexane	(2)	5.604	83	4501	0.742
73) Methylcyclohexane	(2)	5.600	98	2124	0.753
74) 1,2-Dichloropropane	(2)	5.632	63	3782	0.854
75) Dibromomethane	(2)	5.748	93	2271	0.831
77) Methyl Methacrylate	(2)	5.780	69	4194M	0.862
76) 1,4-Dioxane	(1)	5.783	88	4430	46.241
79) Bromodichloromethane	(2)	5.924	83	4331	0.862
43) 1,2-Dichloroethene (Total)	(2)		96	7241	1.731
80) 2-Nitropropane	(2)	6.162	41	3015	1.774
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	2723	0.806
82) cis-1,3-Dichloropropene	(2)	6.409	75	5760	0.834
83) 4-Methyl-2-pentanone	(2)	6.585	43	15267	1.873
84)$Toluene-d8	(3)	6.695	98	848544	49.571
84)$Toluene-d8	(3)	6.695	100	557676	49.127
89) Toluene	(3)	6.762	92	9642	0.874
90) trans-1,3-Dichloropropene	(3)	7.019	75	5607	0.854

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	7.137	69	6163	0.764
93) 1,1,2-Trichloroethane	(3)	7.214	97	3763	0.887
94) Tetrachloroethene	(3)	7.359	166	3847	0.860
95) 1,3-Dichloropropane	(3)	7.384	76	6625	0.899
97) 2-Hexanone	(3)	7.494	43	11260M	1.753
98) Dibromochloromethane	(3)	7.612	129	3140	0.757
100) 1,2-Dibromoethane	(3)	7.715	107	3862	0.828
101)*Chlorobenzene-d5	(3)	8.161	117	683121	50.000
103) Chlorobenzene	(3)	8.183	112	11258	0.920
104) 1,1,1,2-Tetrachloroethane	(3)	8.267	131	3212	0.817
105) Ethylbenzene	(3)	8.293	91	18837	0.899
107) m+p-Xylene	(3)	8.405	106	14407	1.729
108) o-Xylene	(3)	8.739	106	7135	0.870
110) Styrene	(3)	8.751	104	11107	0.808
111) Bromoform	(3)	8.896	173	2281	0.707
112) Isopropylbenzene	(3)	9.047	105	17277	0.858
113) Cyclohexanone	(1)	9.111	55	20797	48.124
115)$4-Bromofluorobenzene	(3)	9.162	95	339181	49.529
115)$4-Bromofluorobenzene	(3)	9.162	174	285212	49.356
116) Bromobenzene	(4)	9.278	156	5068	0.956
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	6279	0.878
118) 1,2,3-Trichloropropane	(4)	9.313	110	1888	0.877
119) trans-1,4-Dichloro-2-butene	(4)	9.332	53	20634	9.000
120) n-Propylbenzene	(4)	9.371	91	22711	0.972
121) 2-Chlorotoluene	(4)	9.432	126	4178	0.867
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	15051	0.893
122) 4-Chlorotoluene	(4)	9.515	126	4721	0.915
125) tert-Butylbenzene	(4)	9.753	134	3462	0.904
126) Pentachloroethane	(4)	9.765	167	2398	0.792
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	16670	0.938
128) sec-Butylbenzene	(4)	9.916	105	18905	0.914
130) 1,3-Dichlorobenzene	(4)	9.993	146	9796	0.969
131) p-Isopropyltoluene	(4)	10.022	119	16677	0.911
132)*1,4-Dichlorobenzene-d4	(4)	10.038	152	368100	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	10400	0.992
91) 1,3-Dichloropropene (total)	(3)		100	11367	1.688
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	17695	0.926
136) Benzyl Chloride	(4)	10.160	91	10691	0.729

M = Compound was manually integrated.
* = Compound is an internal standard.
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Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

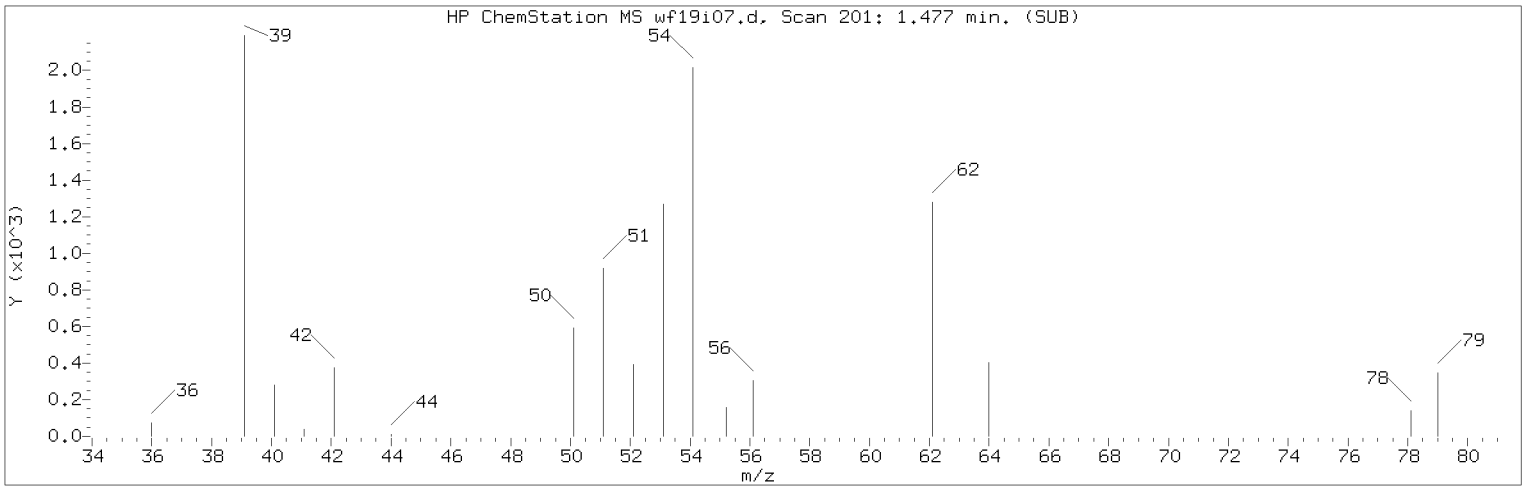
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

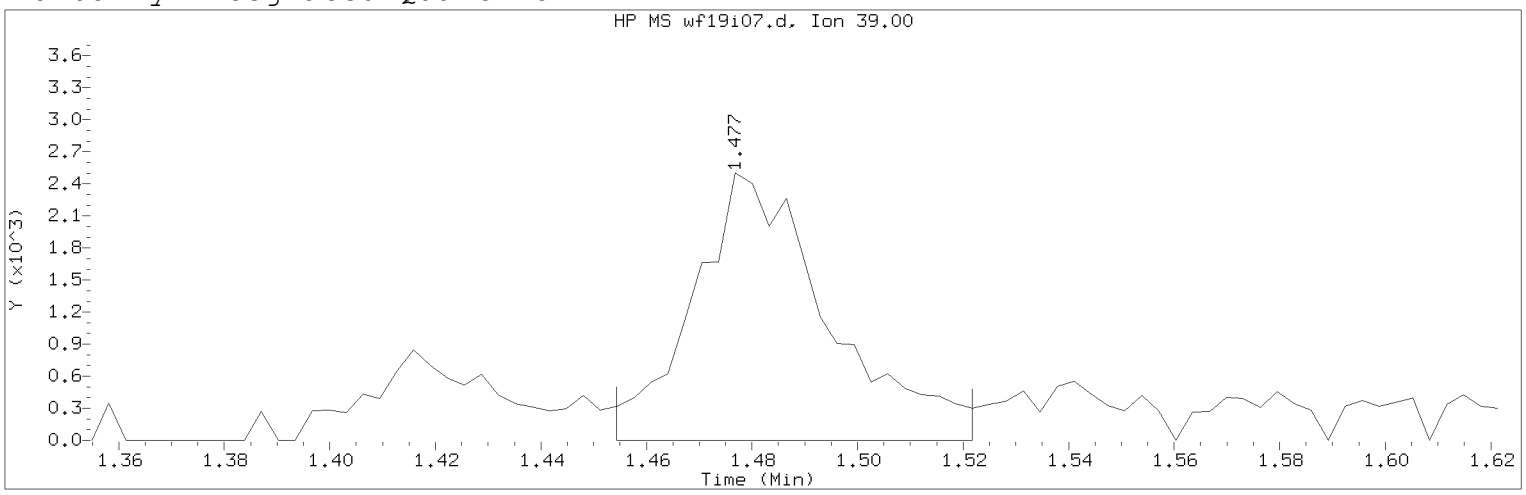
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,3-Diethylbenzene	(4)	10.240	119	10375	0.901
138) 1,4-Diethylbenzene	(4)	10.298	119	11053	0.896
140) n-Butylbenzene	(4)	10.314	92	8520	0.922
139) 1,2-Dichlorobenzene	(4)	10.324	146	9475	0.945
141) 1,2-Diethylbenzene	(4)	10.378	119	8406	0.865
143) 1,2-Dibromo-3-chloropropane	(4)	10.866	75	1280	0.788
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	7373	0.959
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	6829	0.925
148) Hexachlorobutadiene	(4)	11.527	225	2777	1.056
149) Naphthalene	(4)	11.582	128	22155	0.887
150) 1,2,3-Trichlorobenzene	(4)	11.739	180	6883	0.955
109) Xylene (Total)	(3)		106	21542	2.599
151) 2-Methylnaphthalene	(4)	12.304	142	12159	0.853
142) Diethylbenzene (total)	(4)		100	29834	2.663

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

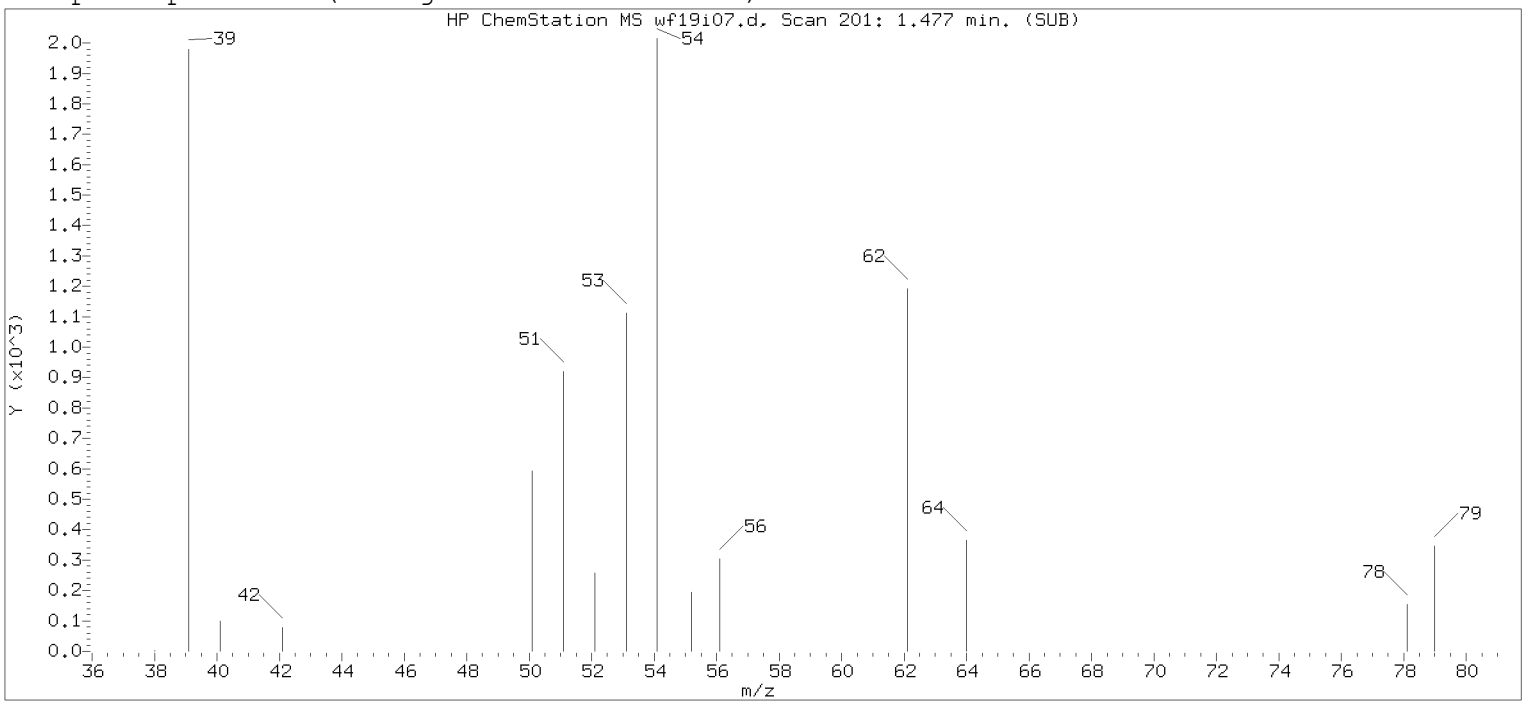
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 201
Retention Time (minutes): 1.477
Quant Ion : 39.00
Area (flag) : 4489M
On-Column Amount (ng) : 1.1115
Integration start scan : 193 Integration stop scan: 214
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

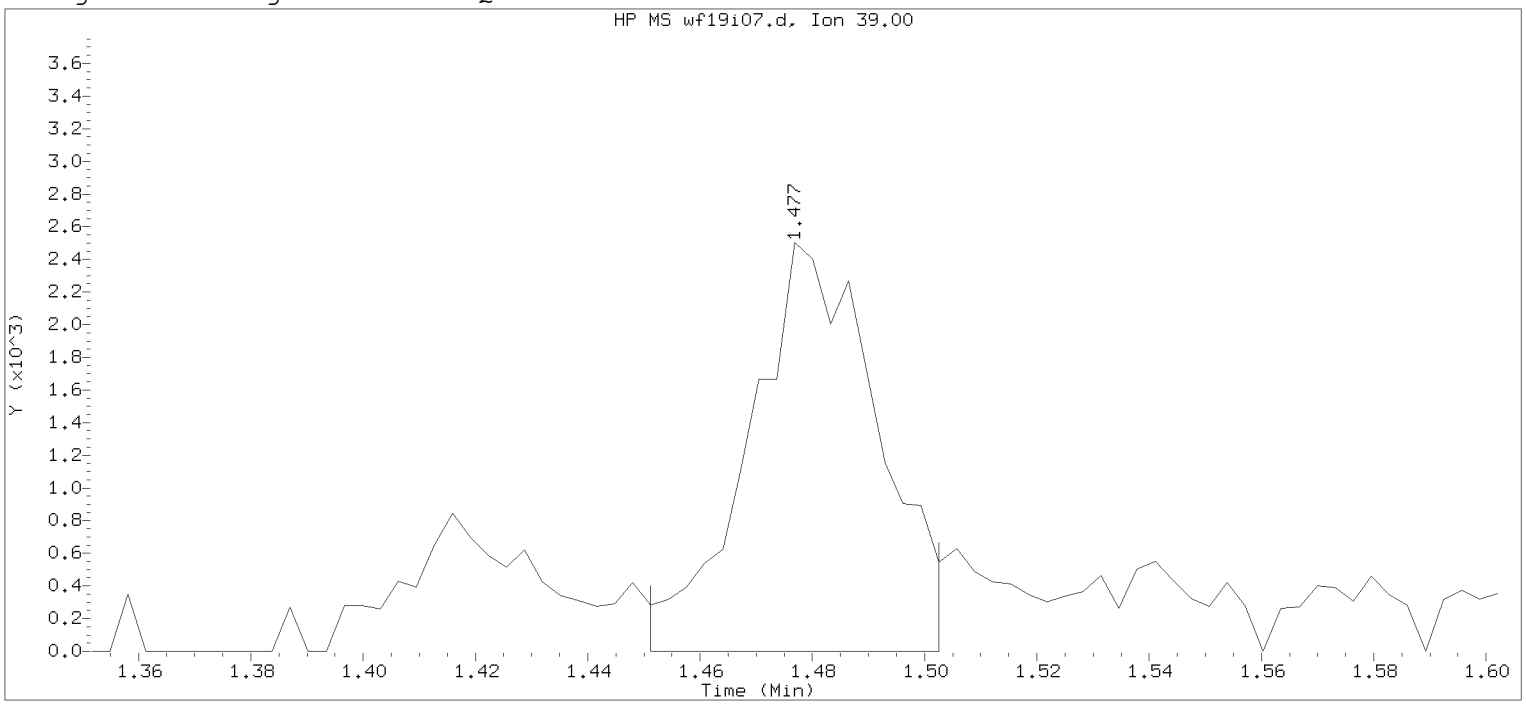
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

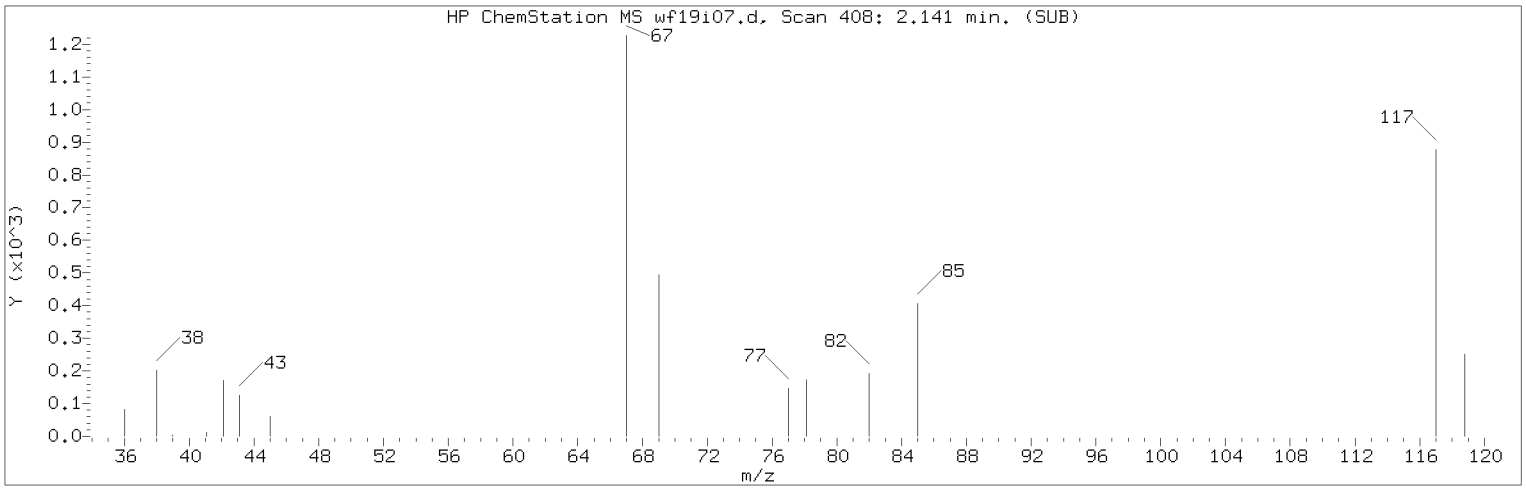
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

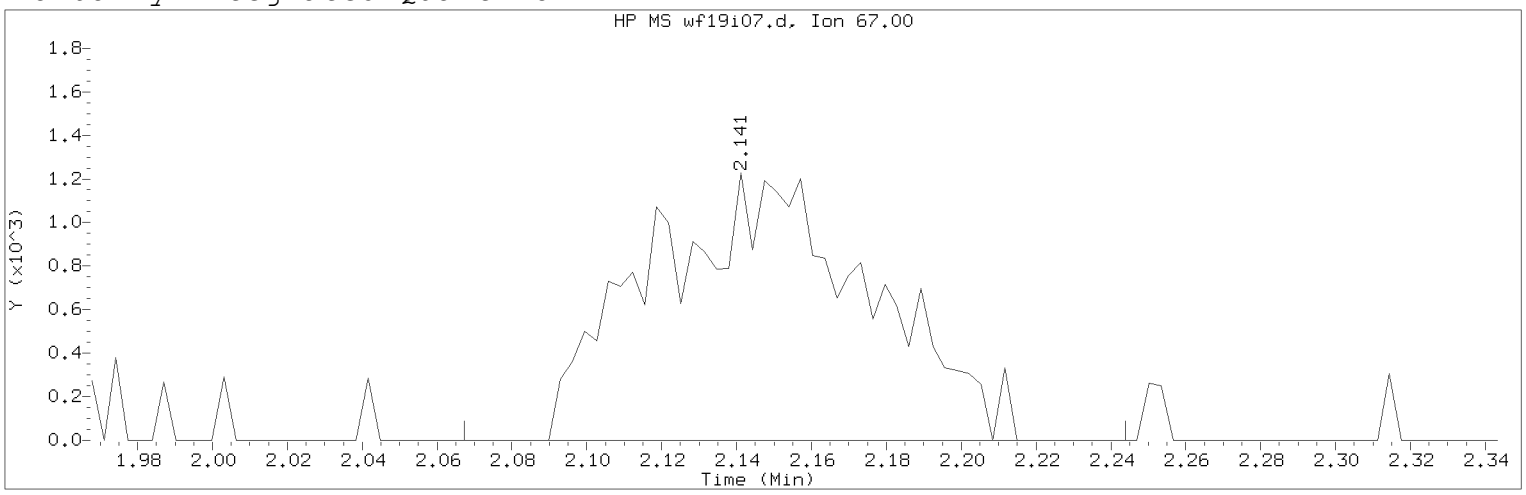
Compound Number	: 5		
Compound Name	: 1,3-Butadiene		
Scan Number	: 201		
Retention Time (minutes)	: 1.477		
Quant Ion	: 39.00		
Area	: 3964		
On-column Amount (ng)	: 1.0001		
Integration start scan	: 192	Integration stop scan:	208
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

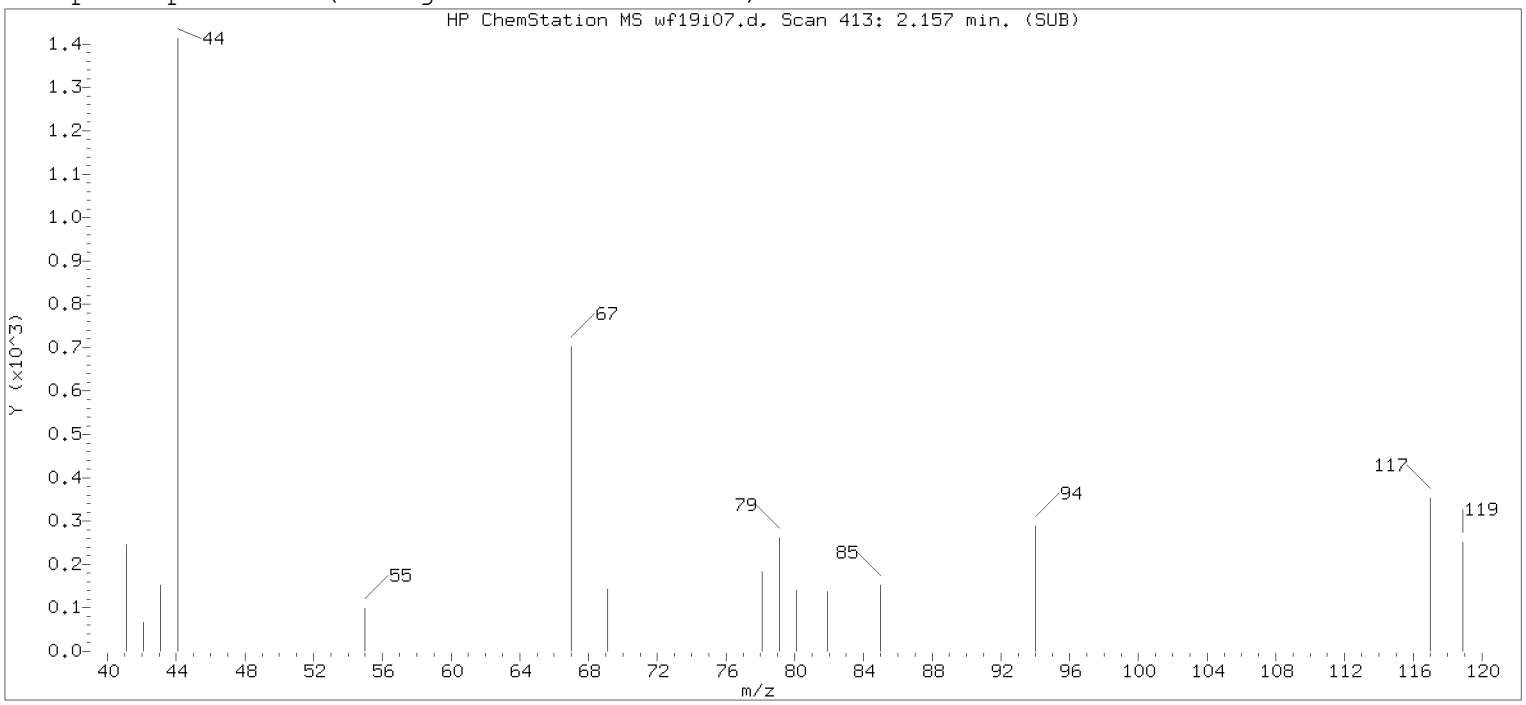
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 408
Retention Time (minutes): 2.141
Quant Ion : 67.00
Area (flag) : 5025M
On-Column Amount (ng) : 1.0422
Integration start scan : 384 Integration stop scan: 439
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

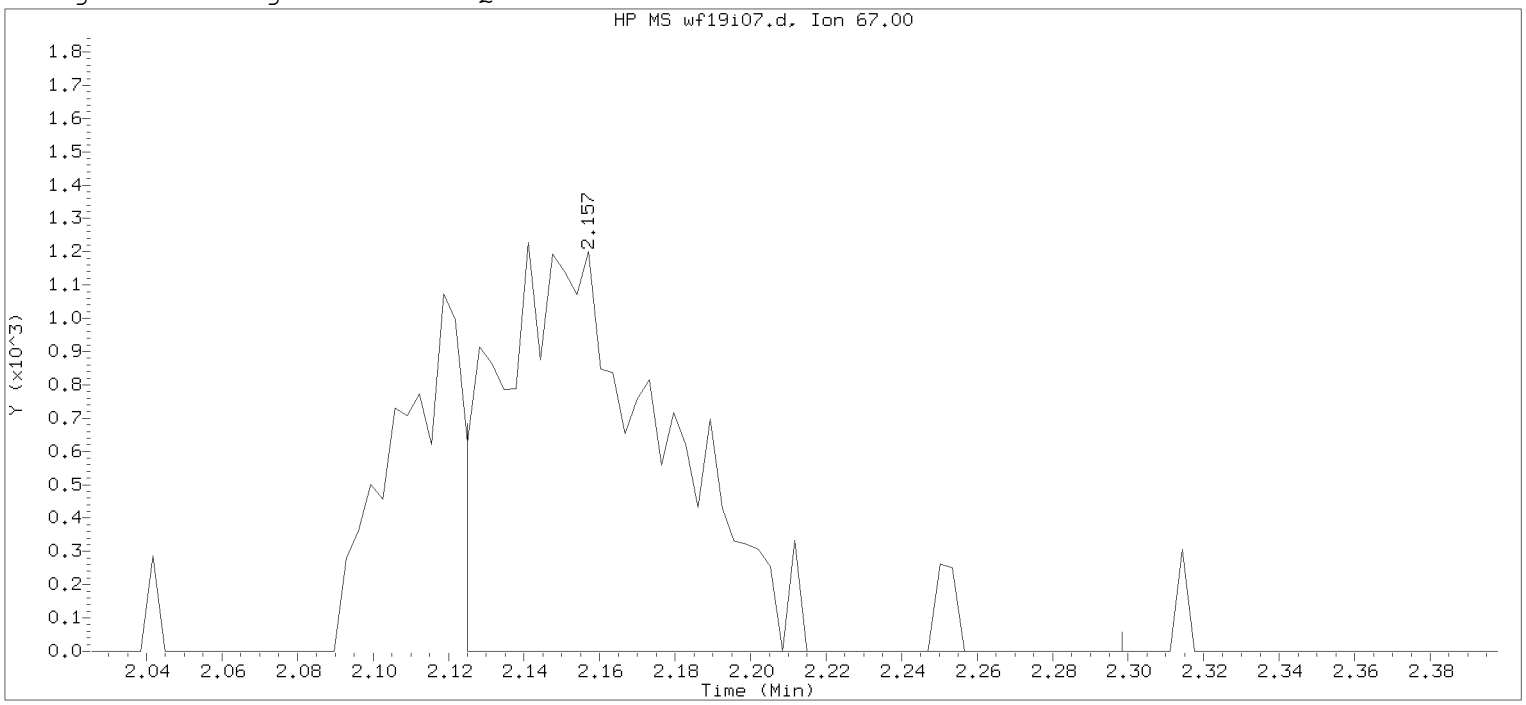
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

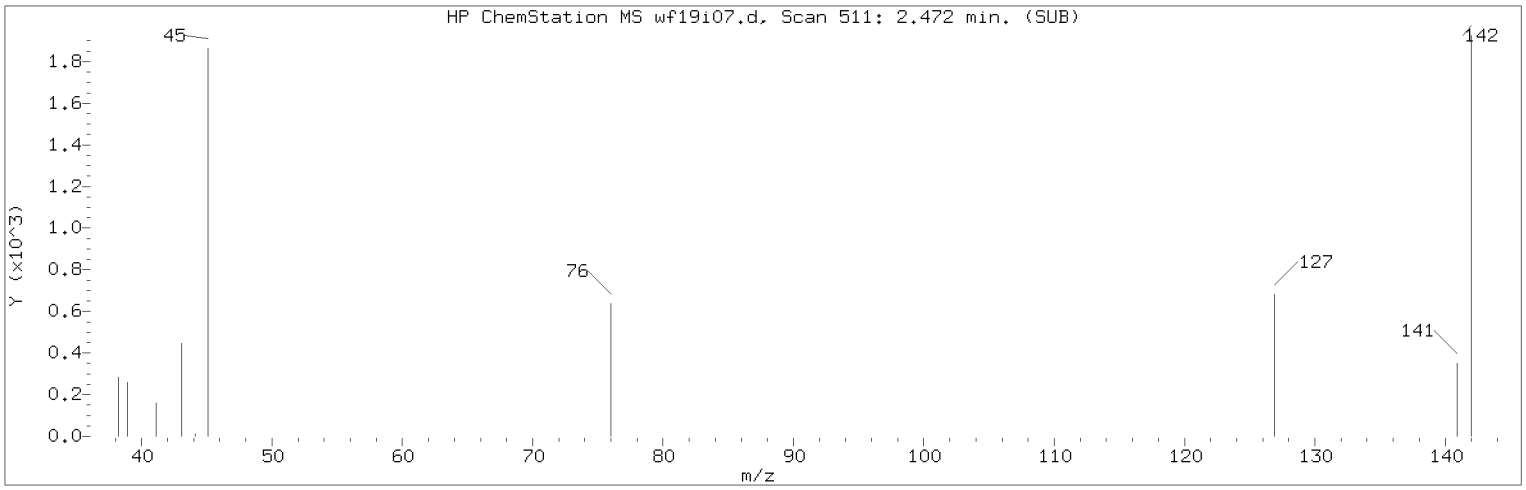
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

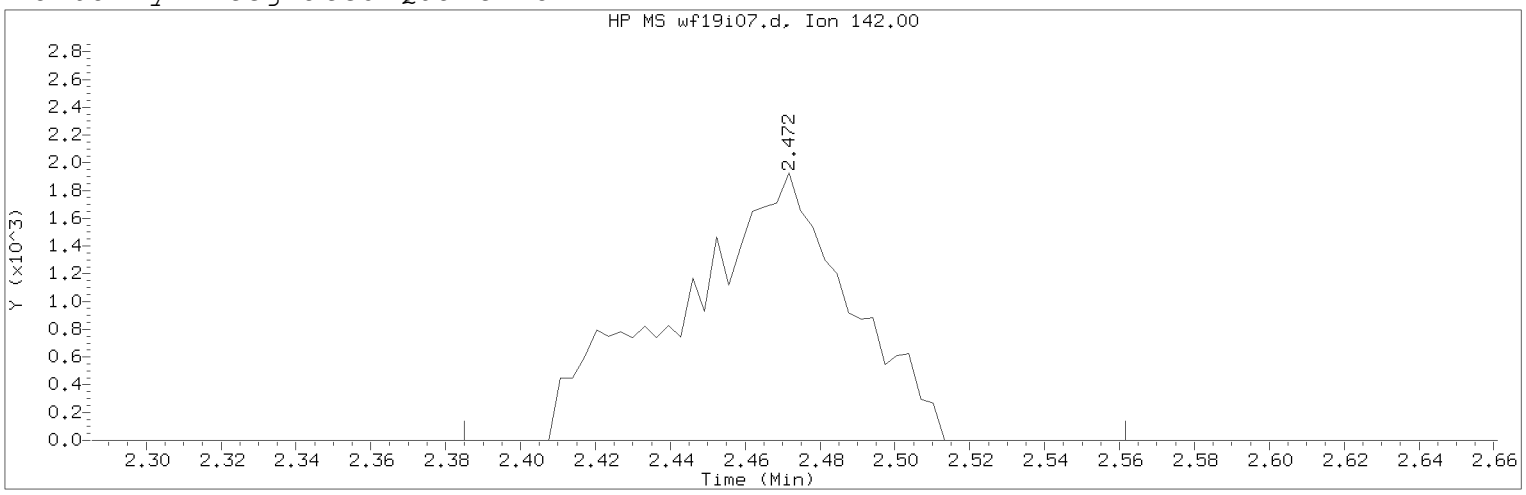
Compound Number	: 15
Compound Name	: Freon 123a
Scan Number	: 413
Retention Time (minutes)	: 2.157
Quant Ion	: 67.00
Area	: 3812
On-column Amount (ng)	: 1.1043
Integration start scan	: 402 Integration stop scan: 456
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user Abigail P. Roselli

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

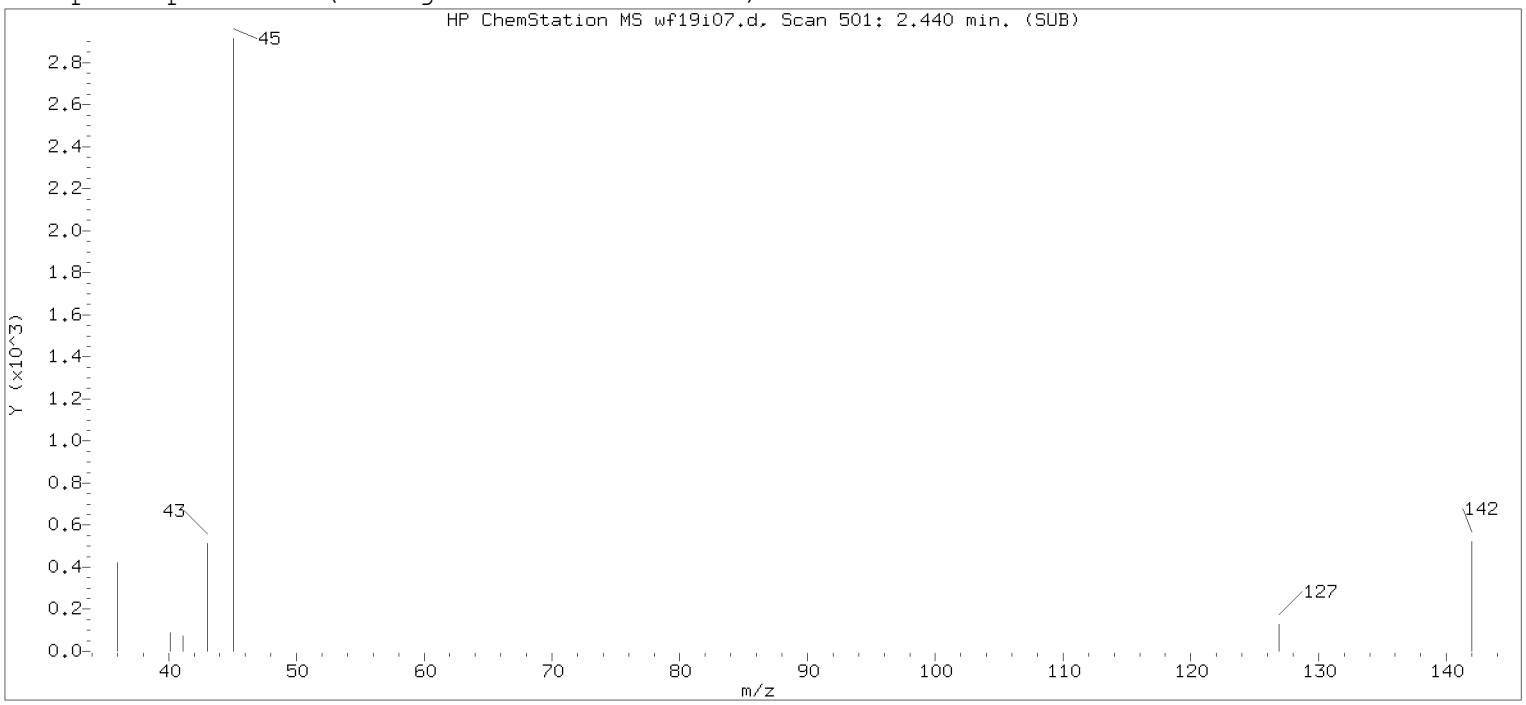
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 511
Retention Time (minutes): 2.472
Quant Ion : 142.00
Area (flag) : 6057M
On-Column Amount (ng) : 0.8710
Integration start scan : 483 Integration stop scan: 538
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

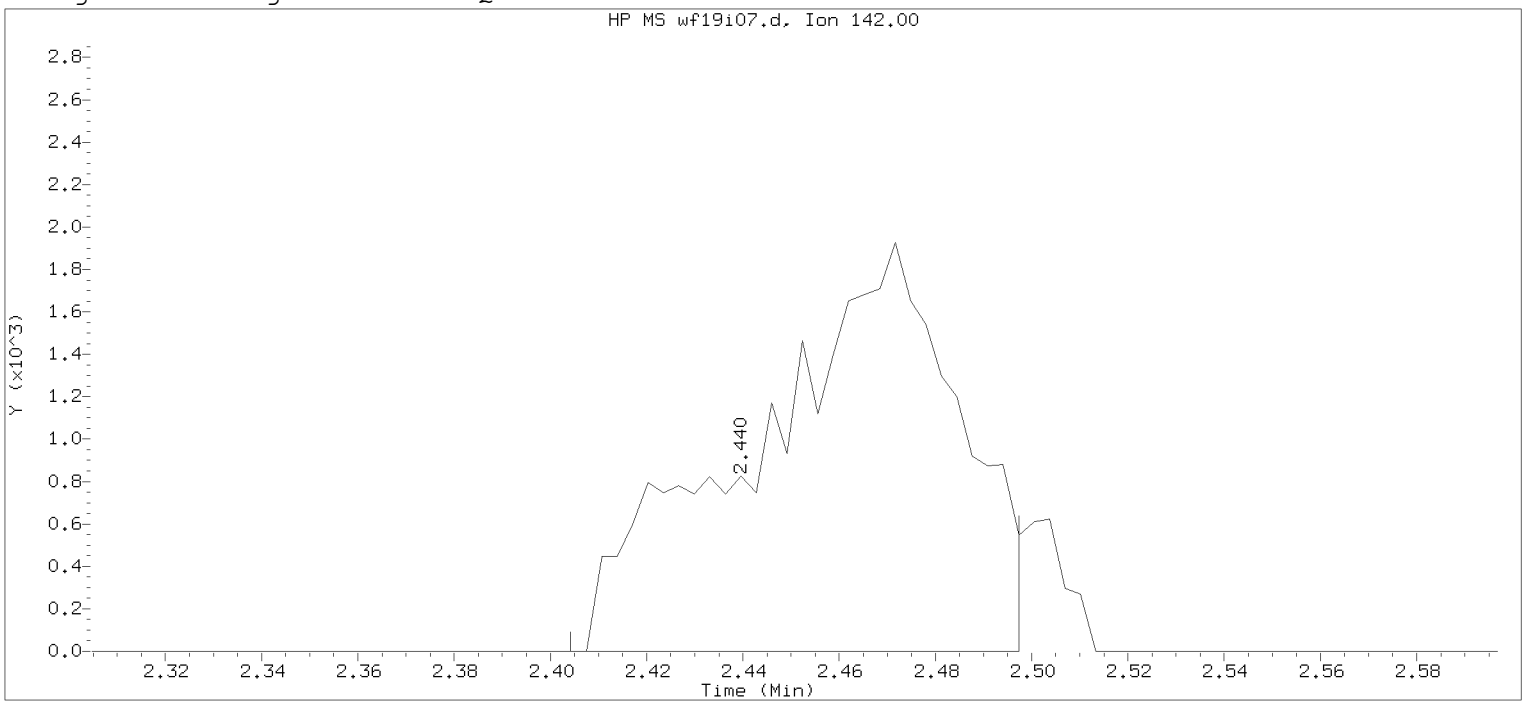
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

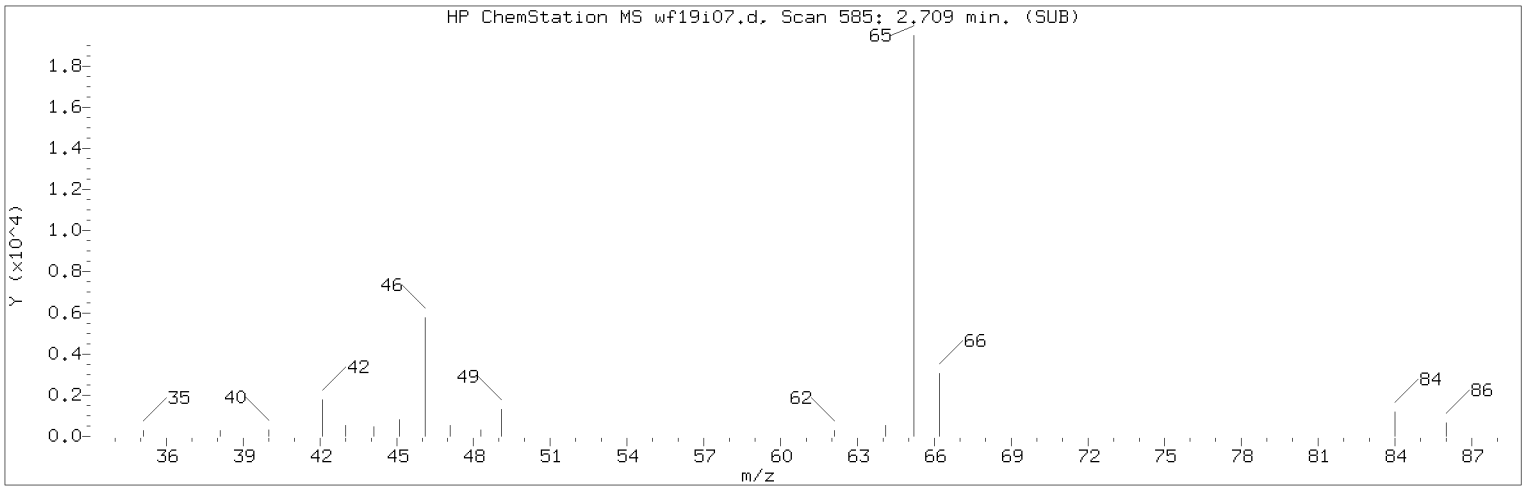
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

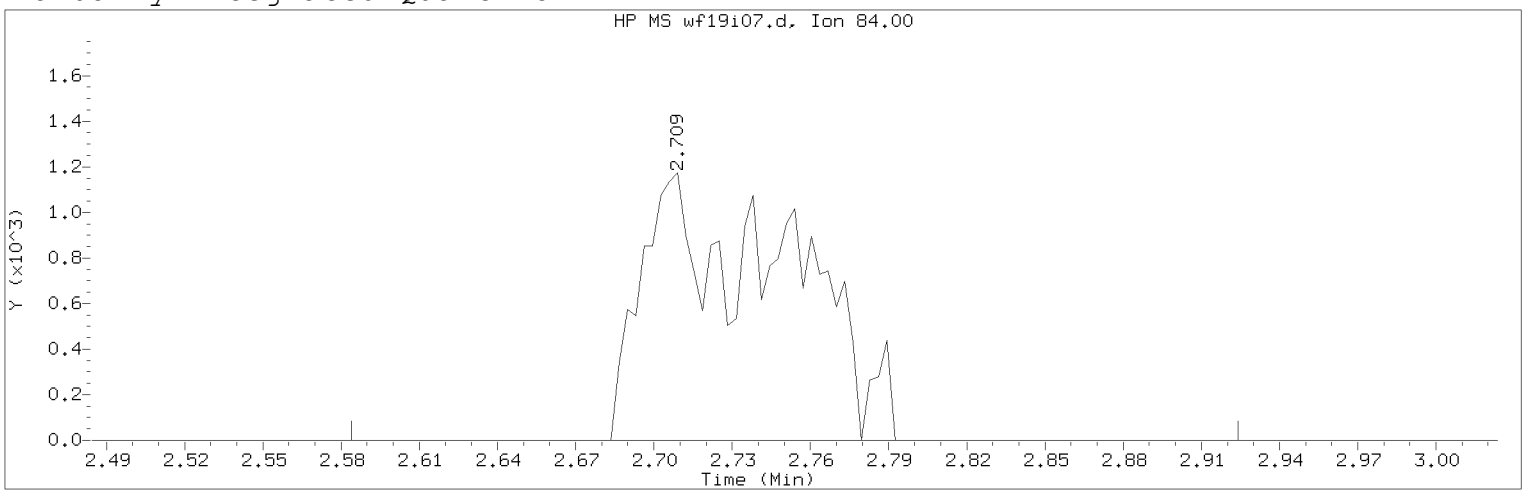
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 501
Retention Time (minutes): 2.440
Quant Ion : 142.00
Area : 5658
On-column Amount (ng) : 0.8993
Integration start scan : 489 Integration stop scan: 518
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

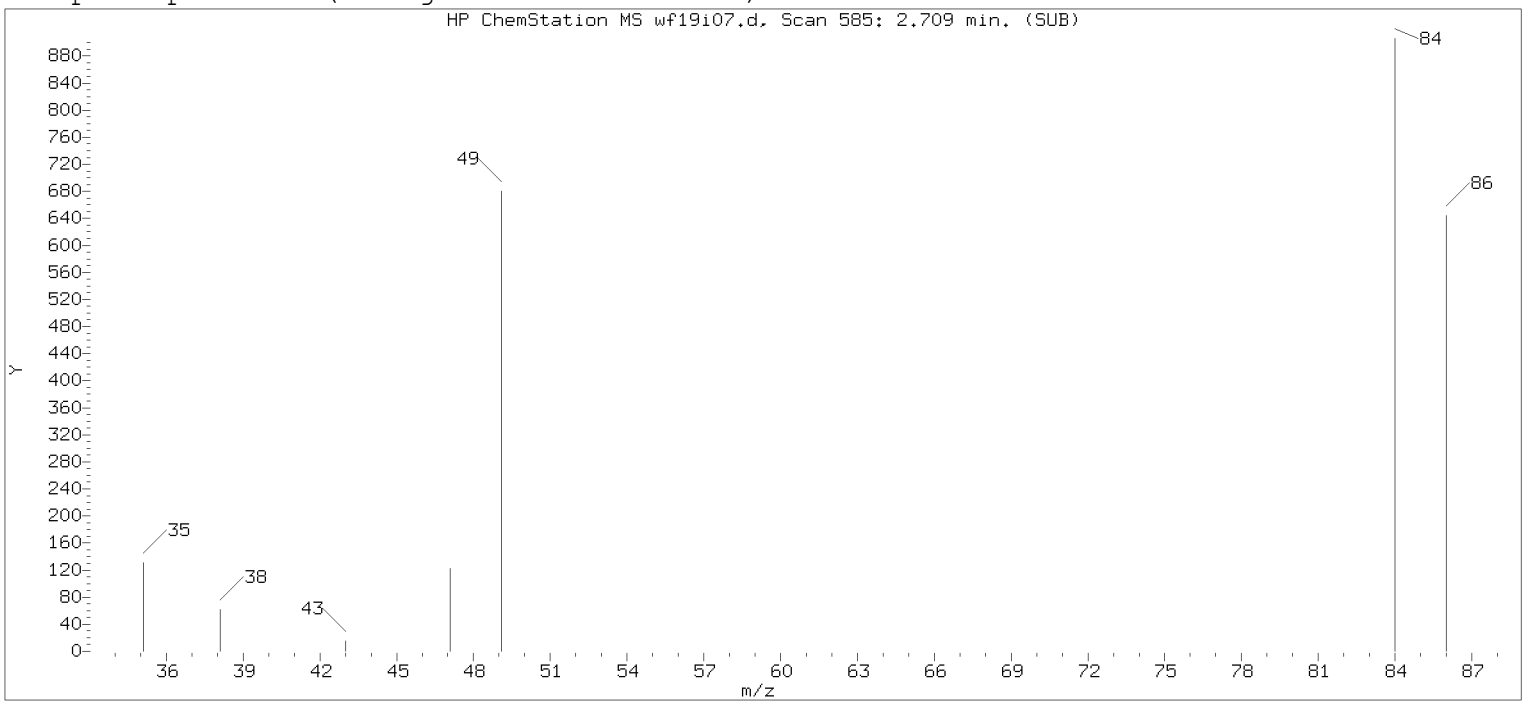
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area (flag) : 4508M
On-Column Amount (ng) : 1.0163
Integration start scan : 545 Integration stop scan: 651
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

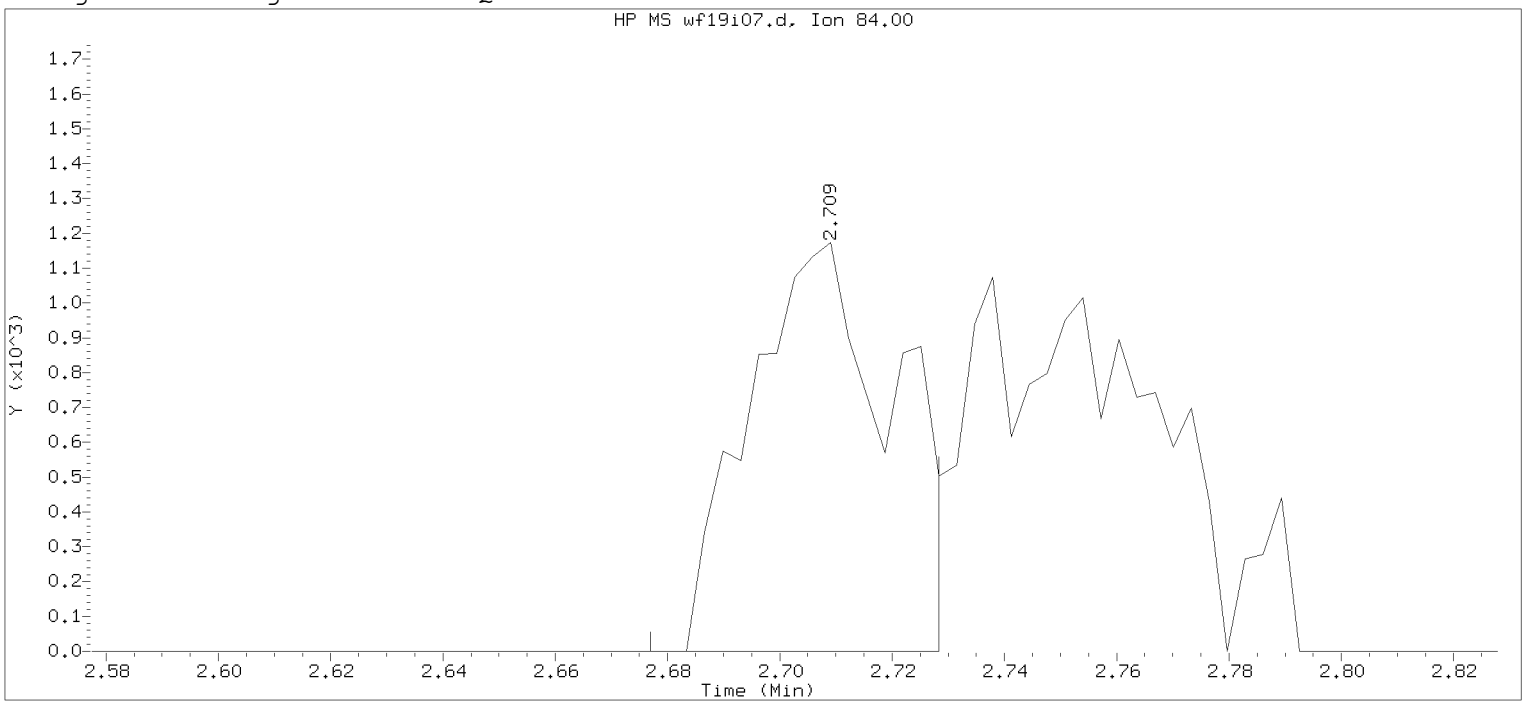
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

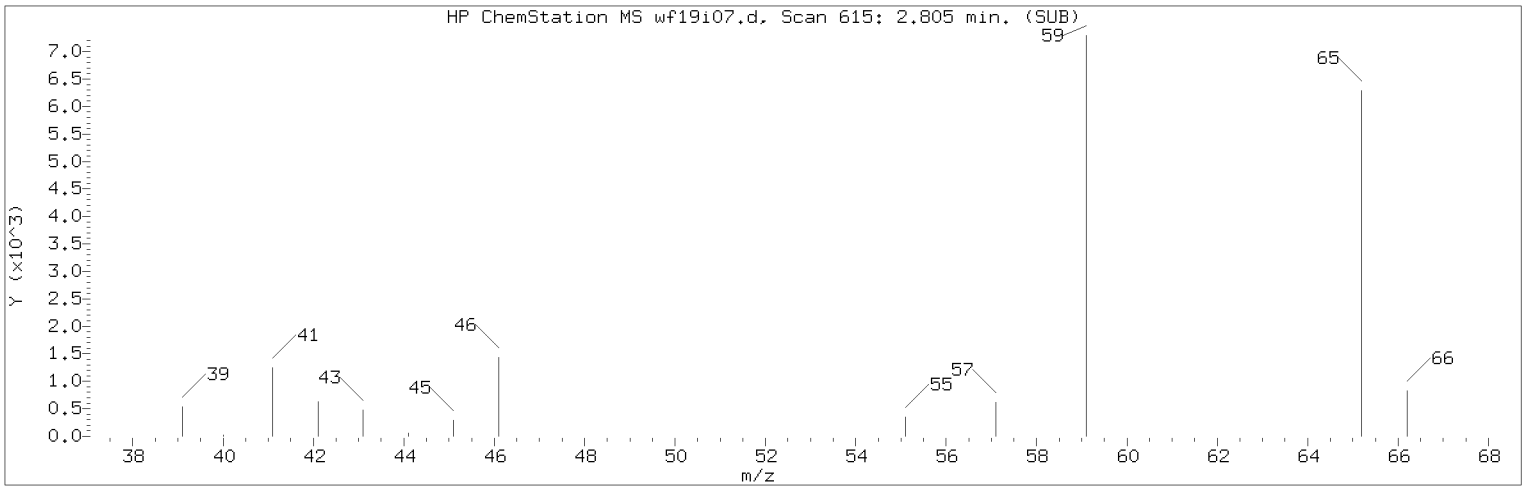
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

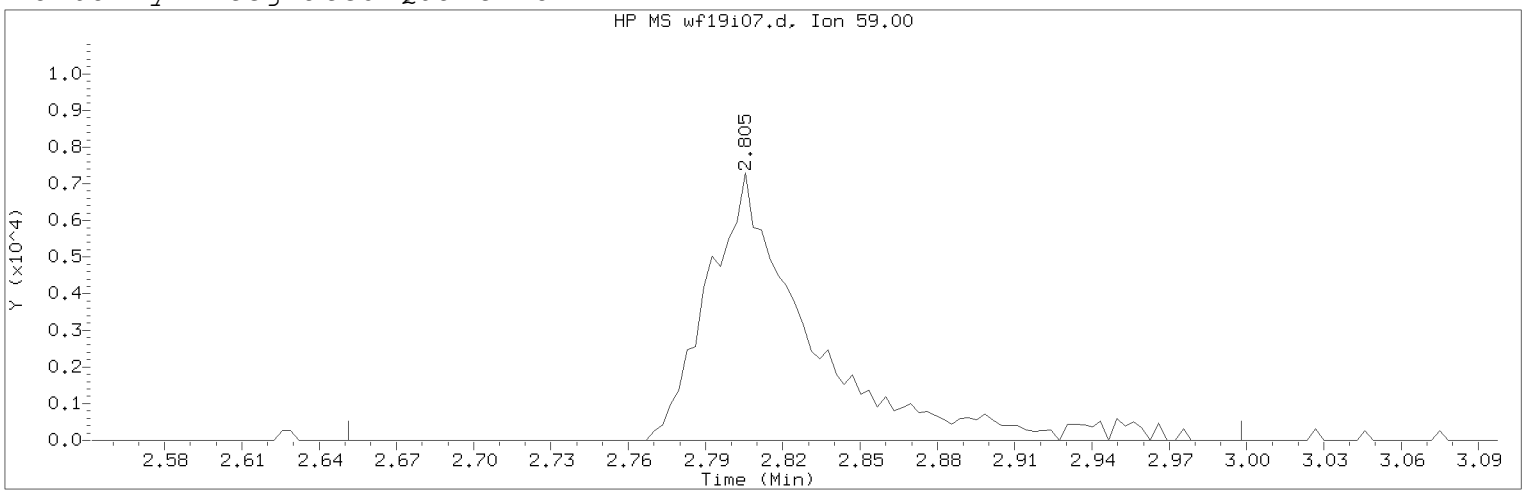
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area : 2067
On-column Amount (ng) : 0.5781
Integration start scan : 574 Integration stop scan: 590
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

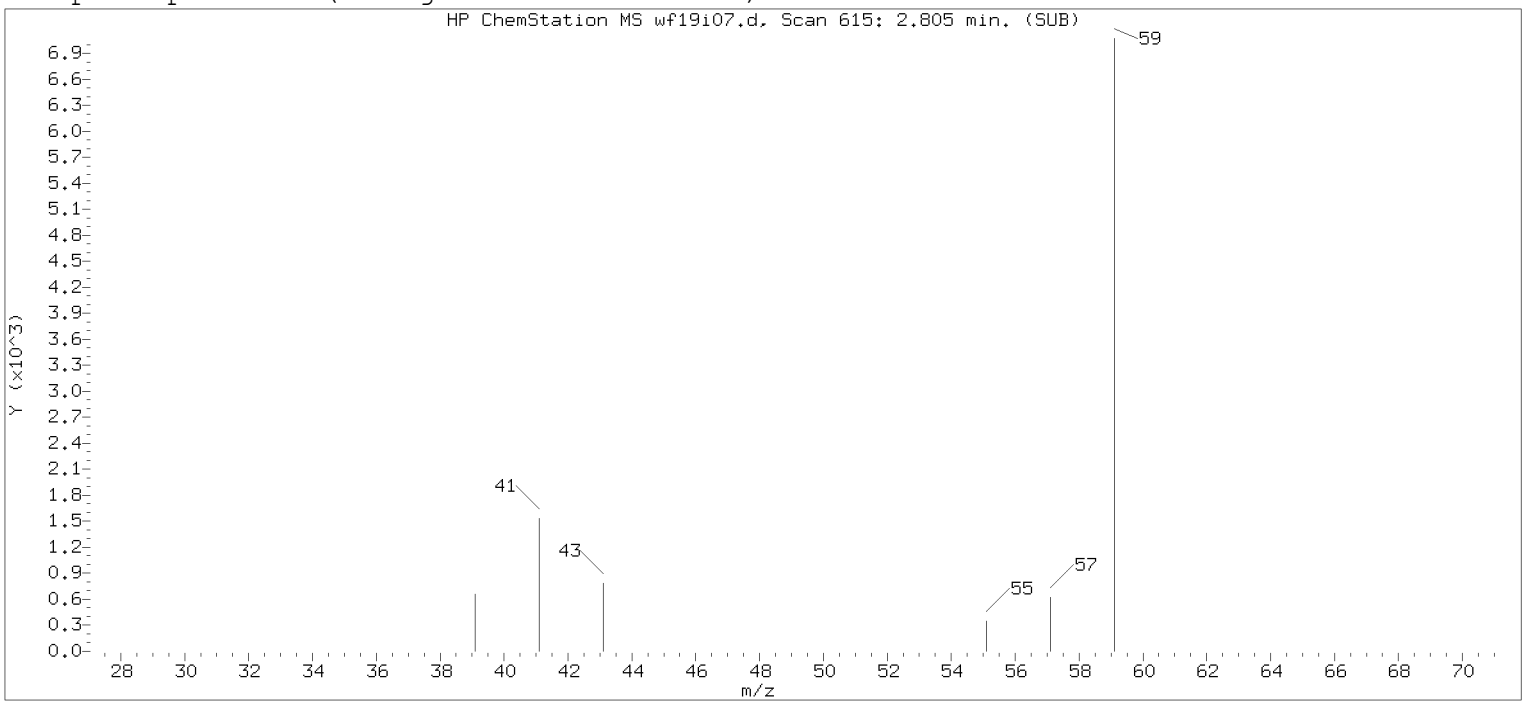
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 615
Retention Time (minutes): 2.805
Quant Ion : 59.00
Area (flag) : 20393M
On-Column Amount (ng) : 20.5984
Integration start scan : 566 Integration stop scan: 674
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

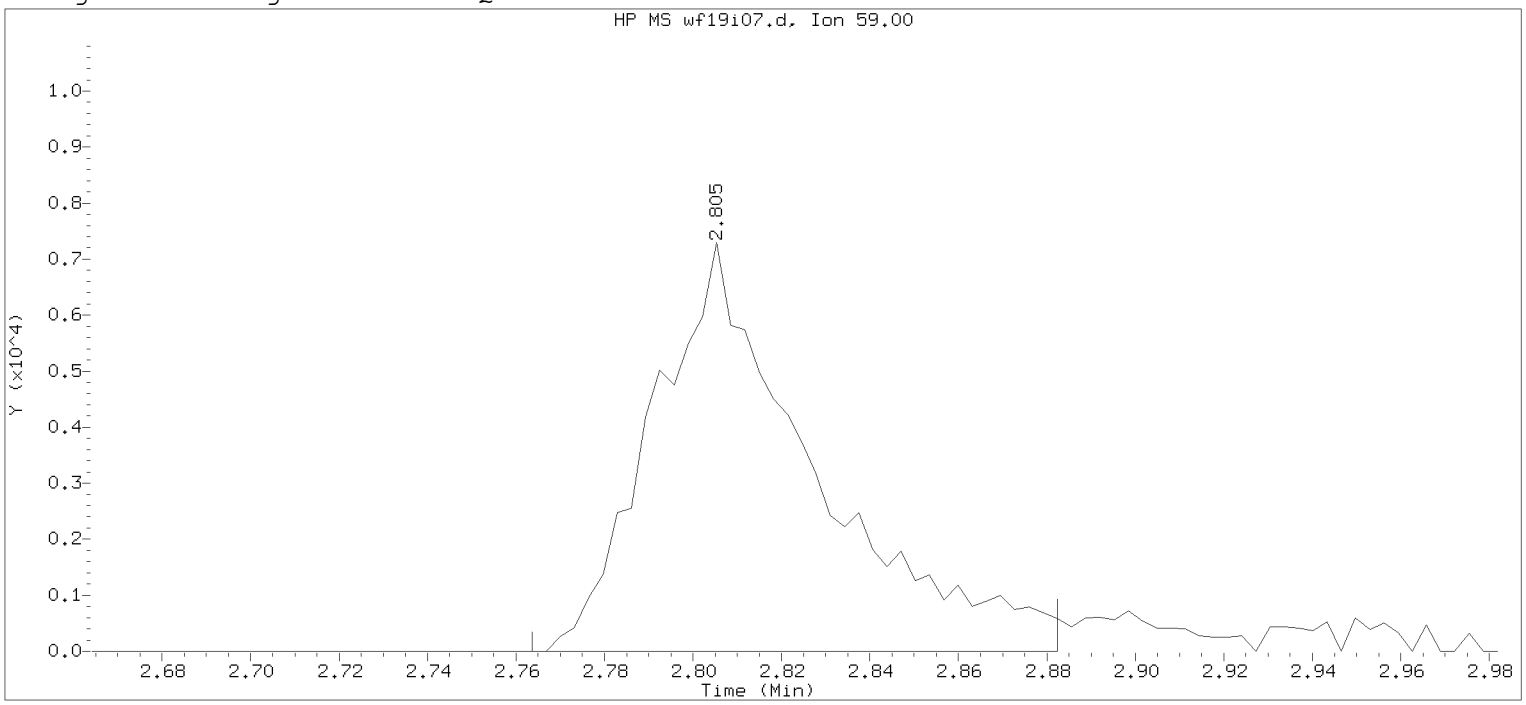
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

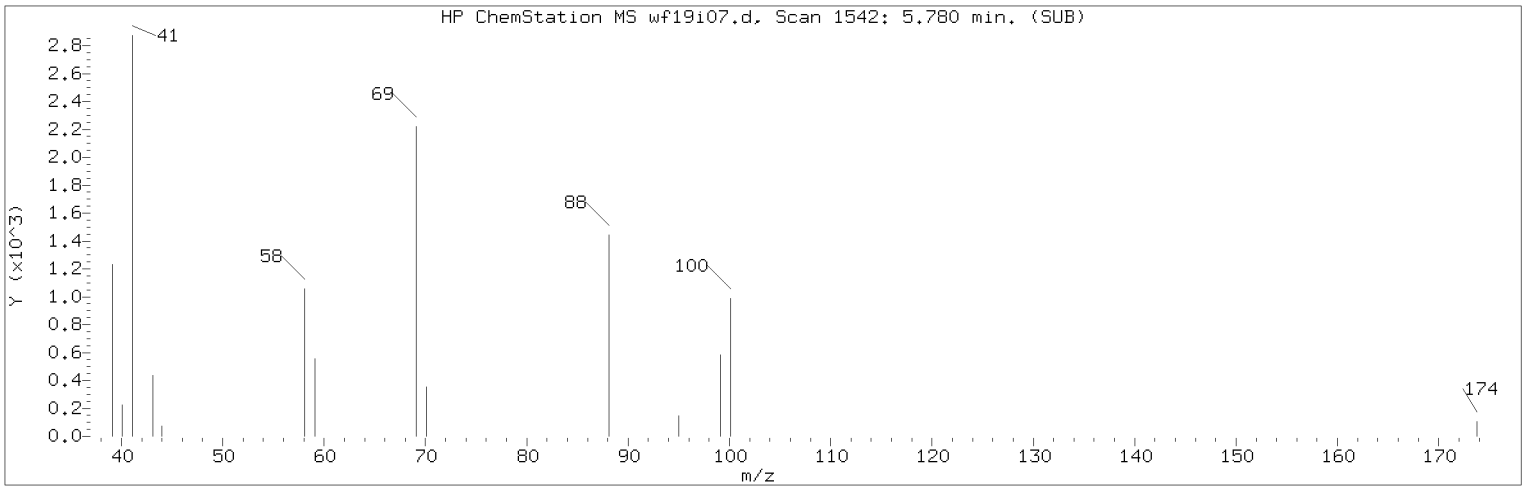
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

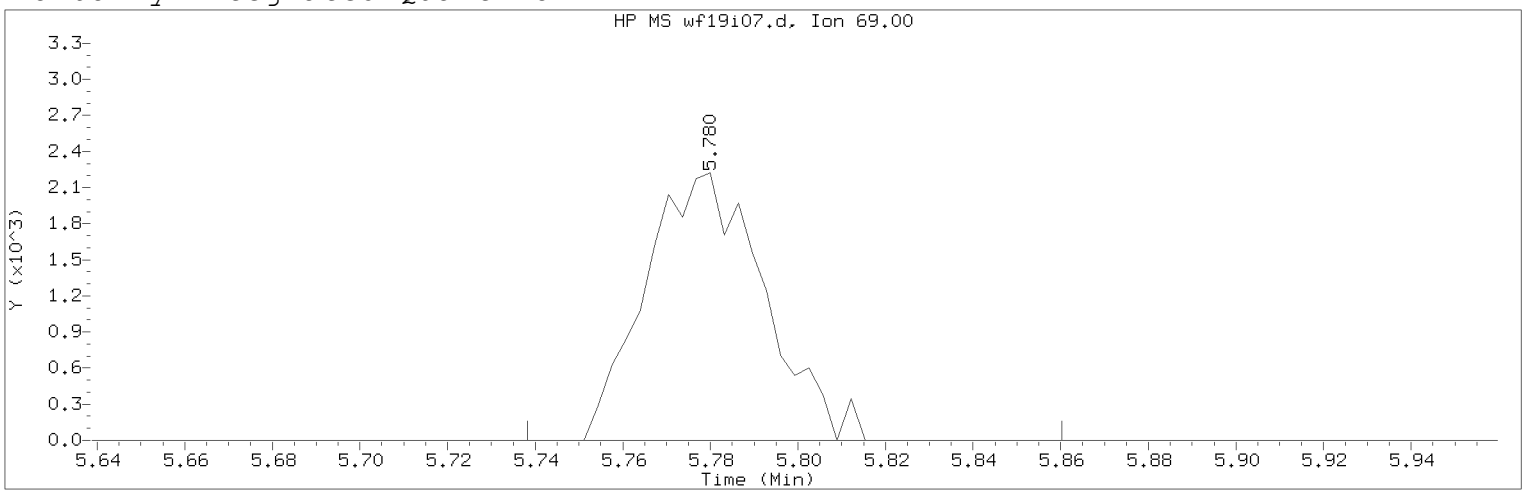
Compound Number	: 30		
Compound Name	: t-Butyl alcohol		
Scan Number	: 615		
Retention Time (minutes)	: 2.805		
Quant Ion	: 59.00		
Area	: 18308		
On-column Amount (ng)	: 18.7752		
Integration start scan	: 601	Integration stop scan:	638
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

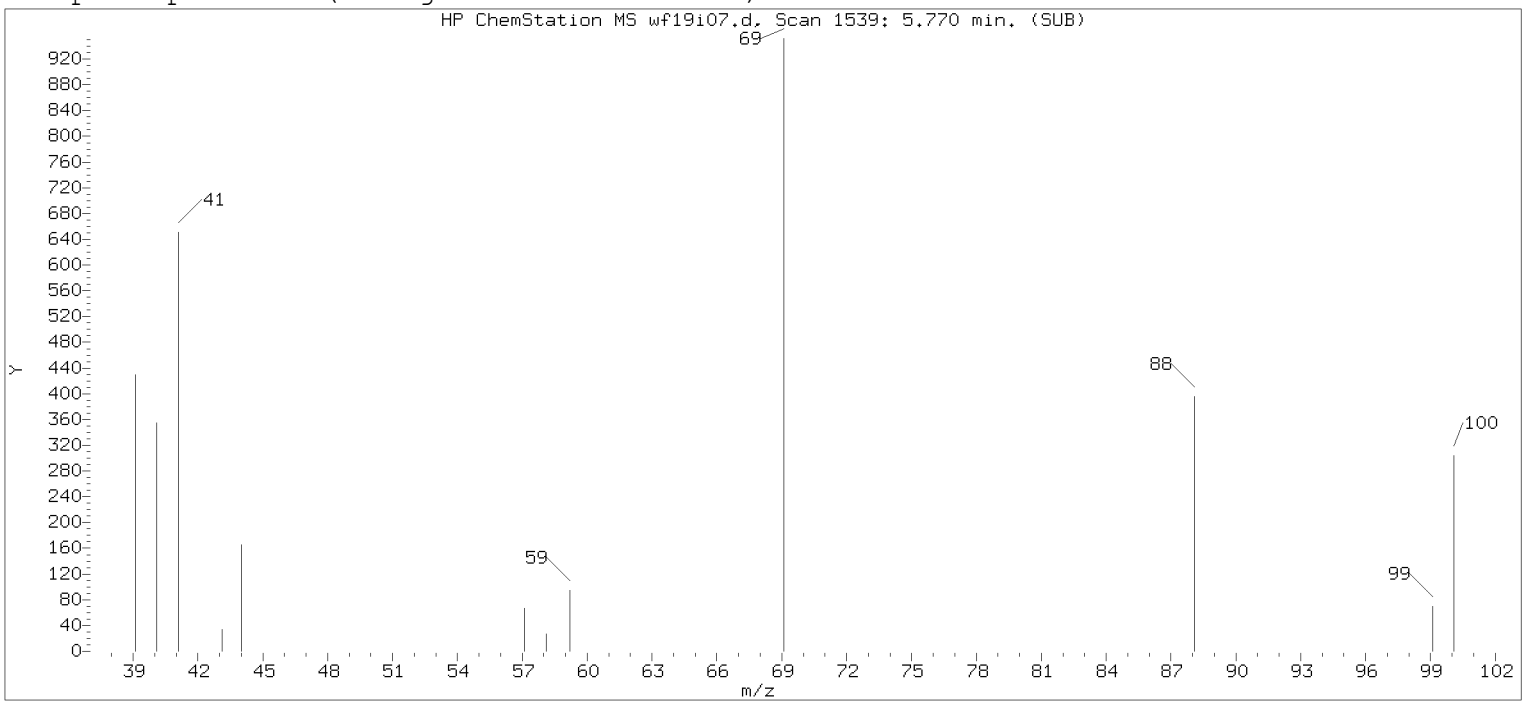
Compound Number : 77
Compound Name : Methyl Methacrylate
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 69.00
Area (flag) : 4194M
On-Column Amount (ng) : 0.8617
Integration start scan : 1528 Integration stop scan: 1566
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

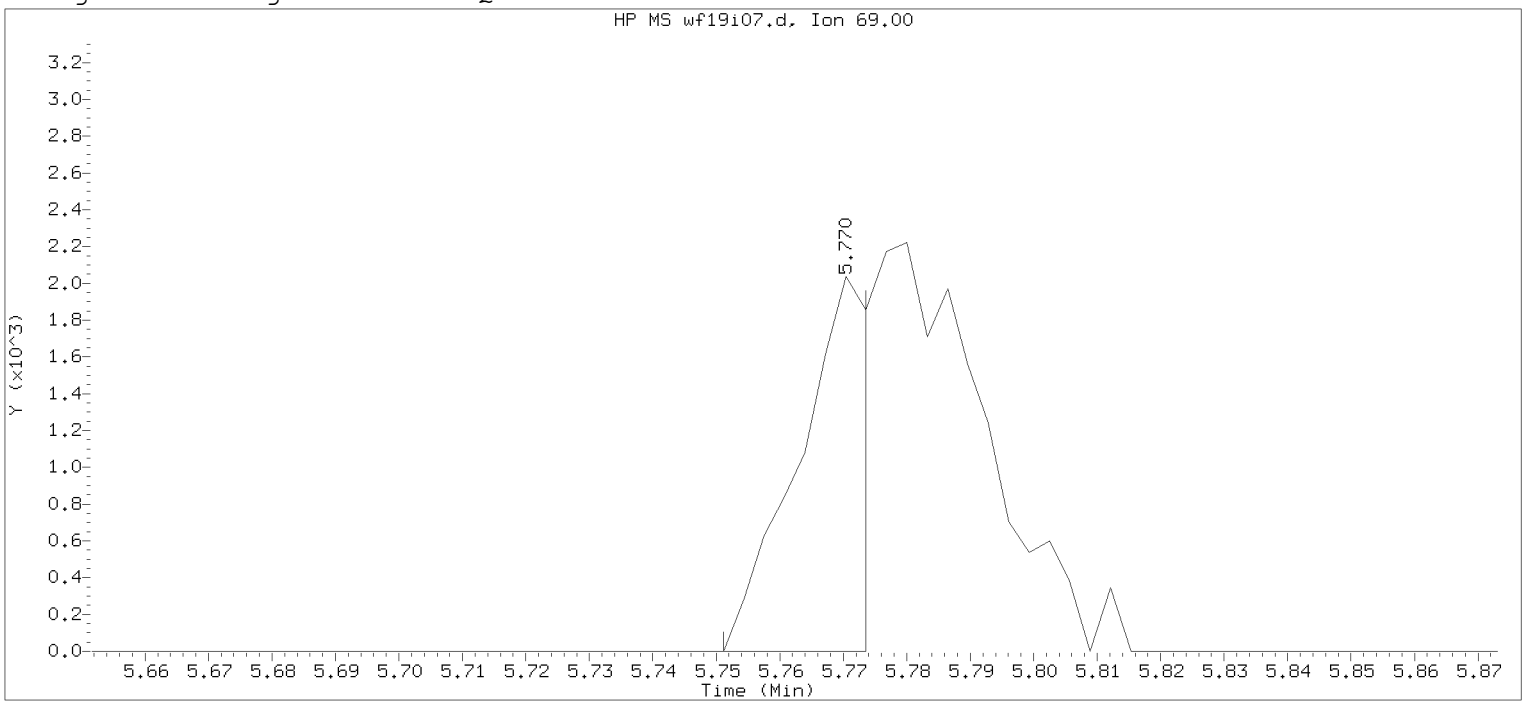
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

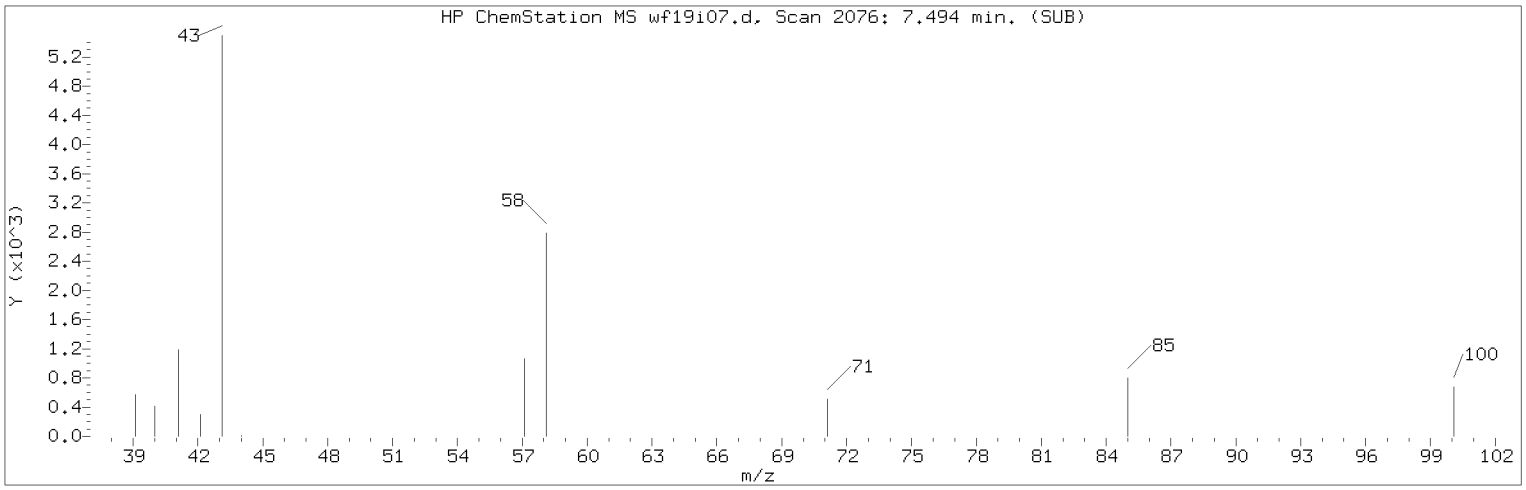
Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

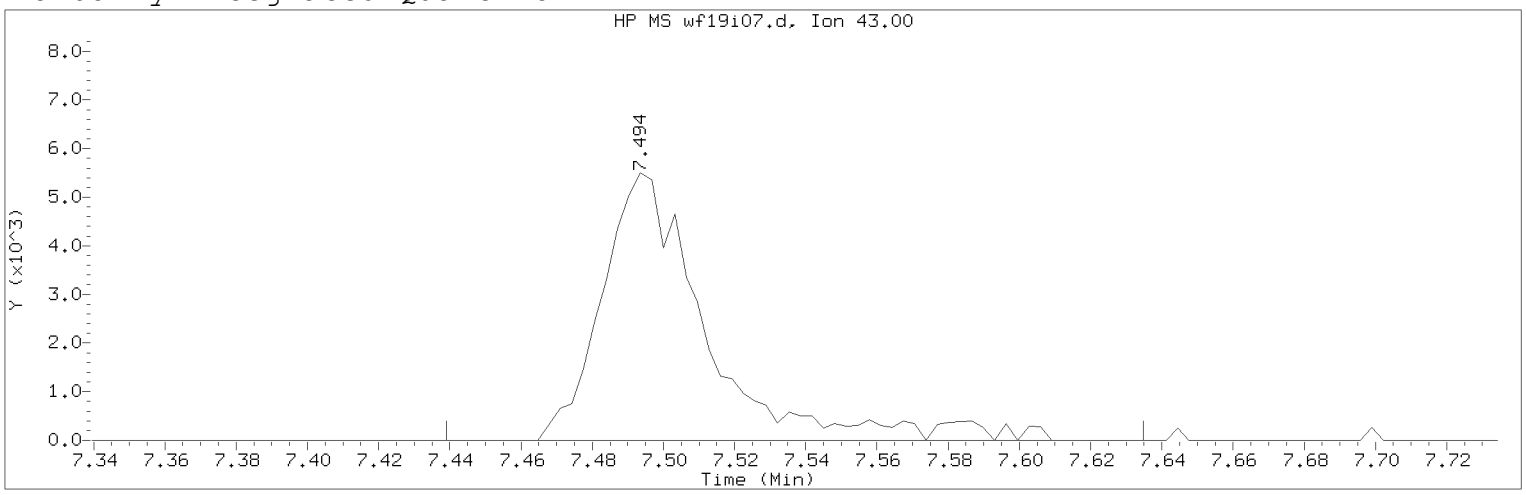
Compound Number : 77
Compound Name : Methyl Methacrylate
Scan Number : 1539
Retention Time (minutes): 5.770
Quant Ion : 69.00
Area : 1428
On-column Amount (ng) : 0.3220
Integration start scan : 1532 Integration stop scan: 1539
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:23
Date, time and analyst ID of latest file update: 21-Feb-2019 08:23 kek01027

Sample Name: VSTD001 Lab Sample ID: VSTD001

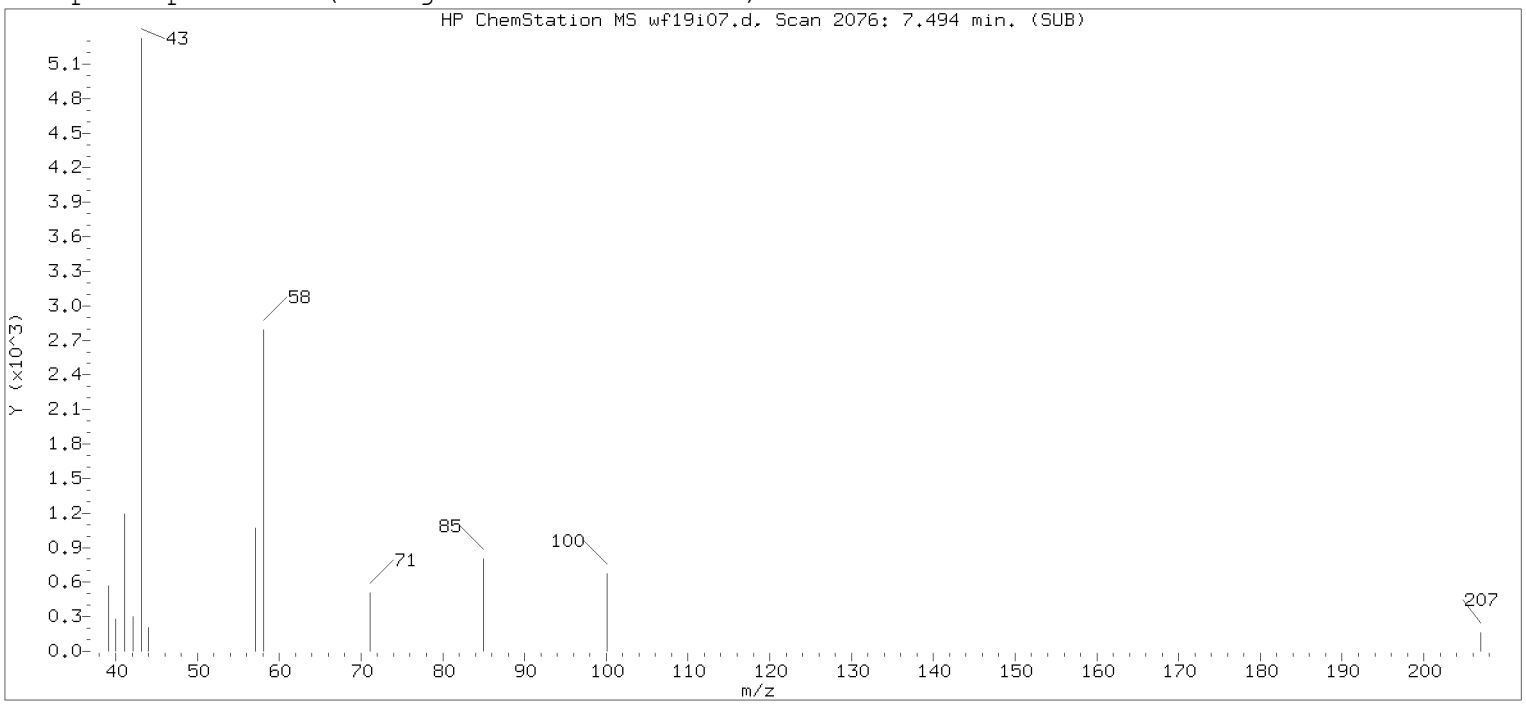
Compound Number : 97
Compound Name : 2-Hexanone
Scan Number : 2076
Retention Time (minutes): 7.494
Quant Ion : 43.00
Area (flag) : 11260M
On-Column Amount (ng) : 1.7534
Integration start scan : 2058 Integration stop scan: 2119
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

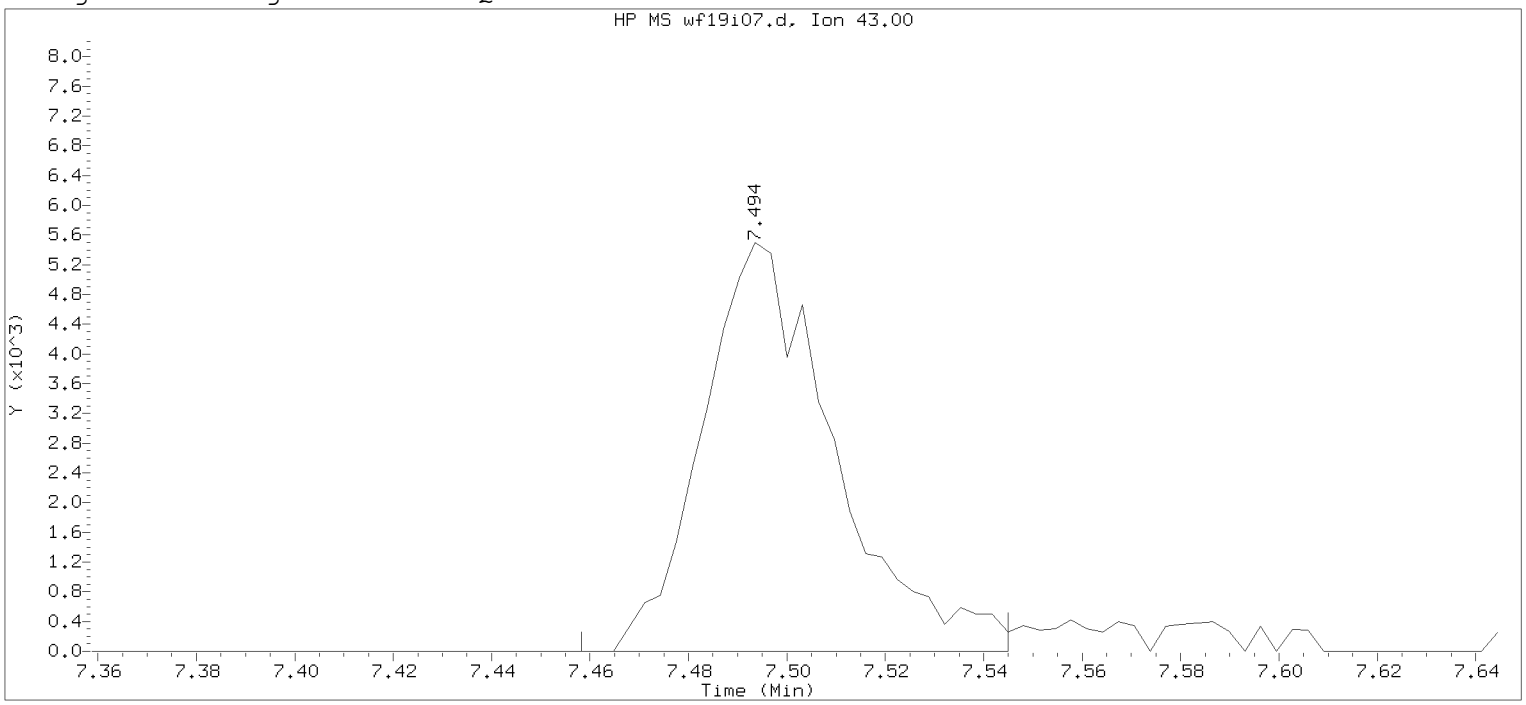
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:06.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



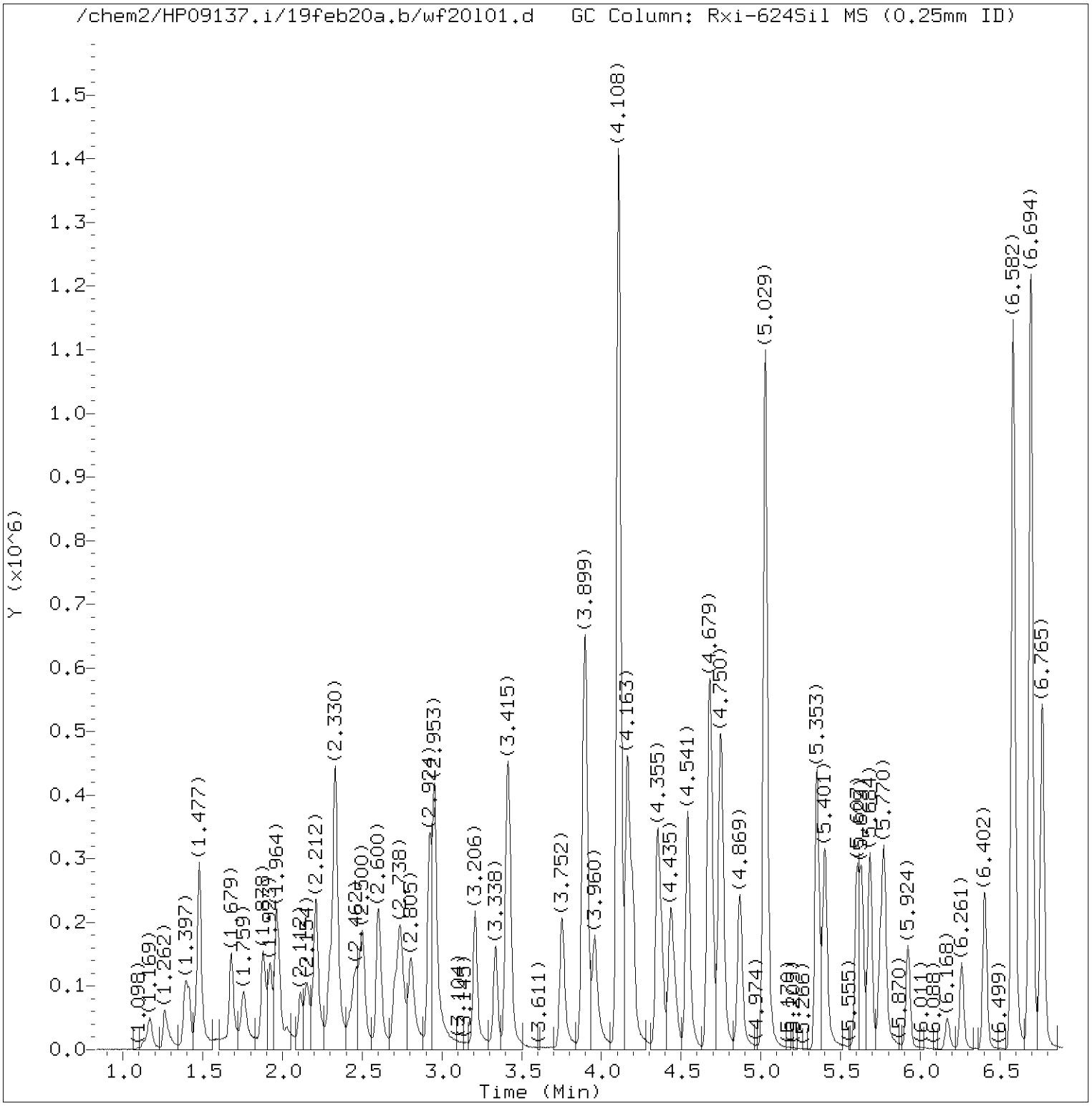
Data File: /chem2/HP09137.i/19feb19i.b/wf19i07.d Instrument ID: HP09137.i
Injection date and time: 19-FEB-2019 14:44 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb19i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 19-FEB-2019 15:00
Date, time and analyst ID of latest file update: 19-Feb-2019 15:00 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 97
Compound Name : 2-Hexanone
Scan Number : 2076
Retention Time (minutes): 7.494
Quant Ion : 43.00
Area : 10210
On-column Amount (ng) : 1.6088
Integration start scan : 2064 Integration stop scan: 2091
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:33.
Target 3.5 esignature user ID: APR27582



Total Ion Chromatogram (TIC)

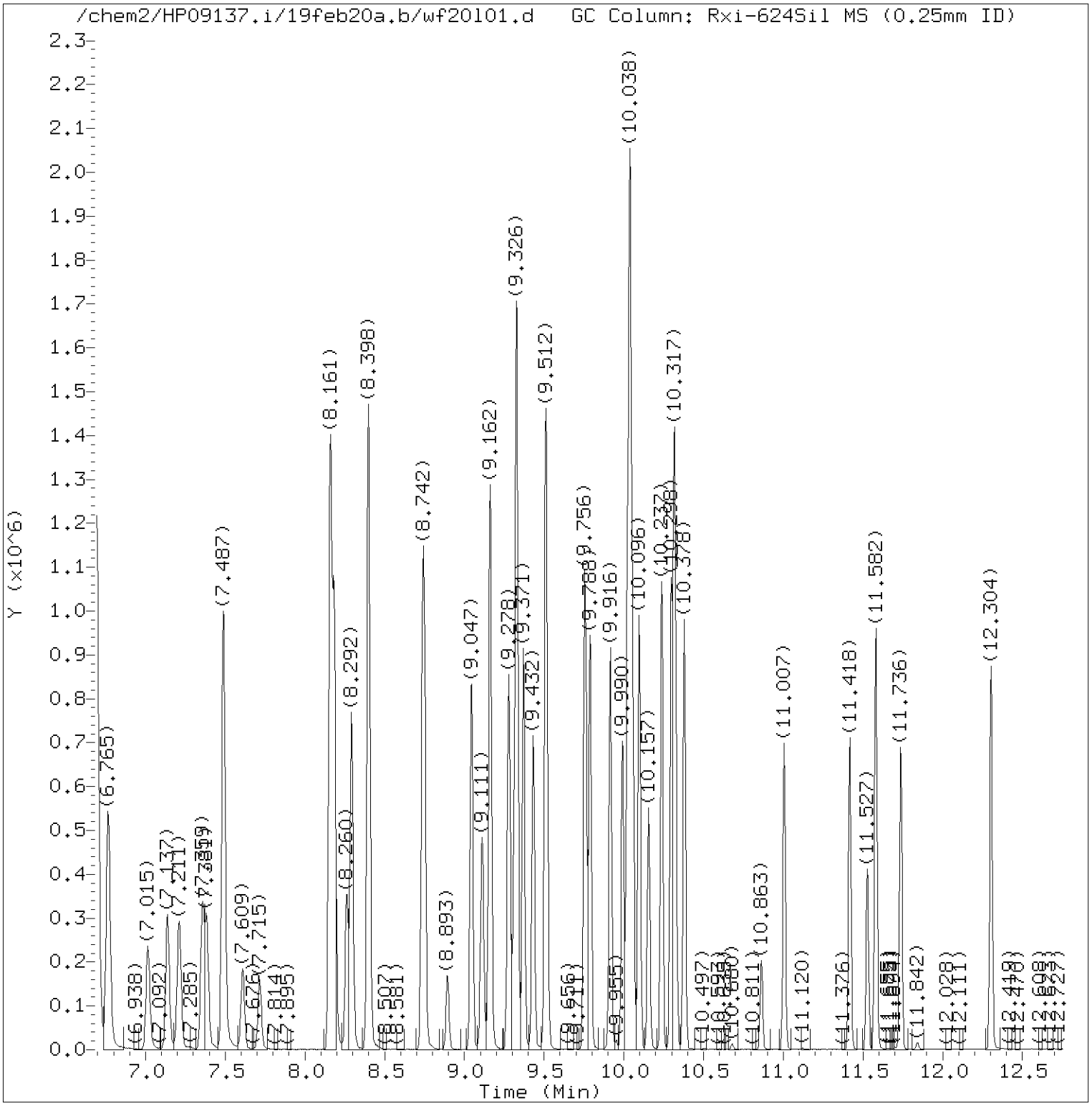
Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.259	85	96568	17.290
4) Chloromethane	(2)	1.390	50	134773	19.379
6) Vinyl Chloride	(2)	1.467	62	127103	19.936
5) 1,3-Butadiene	(2)	1.480	39	88405	20.858
8) Bromomethane	(2)	1.679	94	87704	17.442
9) Chloroethane	(2)	1.756	64	73983	17.634
10) Dichlorofluoromethane	(2)	1.878	67	146532	18.044
12) Trichlorofluoromethane	(2)	1.923	101	121162	17.894
11) n-Pentane	(2)	1.961	43	114802	17.828
13) Ethanol	(1)	2.035	45	59325	572.099
15) Freon 123a	(2)	2.147	67	103271M	20.410
16) Acrolein	(1)	2.212	56	220979	134.998
17) 1,1-Dichloroethene	(2)	2.324	96	88878	23.338
19) Freon 113	(2)	2.327	101	74386	22.243
18) Acetone	(1)	2.337	58	114607	144.043
21) 2-Propanol	(1)	2.446	45	89998	152.244
22) Methyl Iodide	(2)	2.465	142	157275M	21.550
23) Carbon Disulfide	(2)	2.504	76	282096	21.025
25) Allyl Chloride	(2)	2.600	41	131552	19.828
27) Methyl Acetate	(2)	2.616	43	111319	19.385
28) Methylene Chloride	(2)	2.703	84	100603M	21.612
29)*t-Butyl alcohol-d10	(1)	2.731	65	227371	250.000
30) t-Butyl alcohol	(1)	2.805	59	207128	196.421
31) Acrylonitrile	(2)	2.921	53	304471	100.782
32) trans-1,2-Dichloroethene	(2)	2.953	96	92997	22.506
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	207314	20.606
34) n-Hexane	(2)	3.206	57	116893	21.143
36) 1,1-Dichloroethane	(2)	3.338	63	164243	21.936
38) di-Isopropyl ether	(2)	3.409	45	314239	21.846
39) 2-Chloro-1,3-butadiene	(2)	3.425	53	138541	21.364
40) Ethyl t-butyl ether	(2)	3.752	59	221032	21.080
45) 2,2-Dichloropropane	(2)	3.883	77	75689	22.509
42) cis-1,2-Dichloroethene	(2)	3.887	96	105718	22.787
44) 2-Butanone	(2)	3.899	43	639144	147.256
47) Propionitrile	(1)	3.960	54	199803	152.452
48) Methacrylonitrile	(2)	4.108	67	496119	152.733
49) Bromochloromethane	(2)	4.114	128	48427	20.081
50) Tetrahydrofuran	(1)	4.169	71	115894	95.544

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	4.195	83	156016	22.208
52)$Dibromofluoromethane	(2)	4.352	113	198099	49.504
53) 1,1,1-Trichloroethane	(2)	4.378	97	119941	22.691
54) Cyclohexane	(2)	4.439	56	142075	20.310
55) 1,1-Dichloropropene	(2)	4.541	75	123671	21.957
56) Carbon Tetrachloride	(2)	4.541	117	94740	20.885
58) Isobutyl Alcohol	(1)	4.673	41	185481	482.472
57)$1,2-Dichloroethane-d4	(2)	4.686	102	52871	49.678
60) Benzene	(2)	4.747	78	392054	21.655
61) 1,2-Dichloroethane	(2)	4.763	62	124290	22.224
65) t-Amyl methyl ether	(2)	4.869	73	220654	20.542
66)*Fluorobenzene	(2)	5.029	96	863762	50.000
67) n-Heptane	(2)	5.032	43	107071	20.263
69) n-Butanol	(1)	5.353	56	328345	961.937
71) Trichloroethene	(2)	5.404	95	97160	22.161
73) Methylcyclohexane	(2)	5.607	83	130478	20.499
74) 1,2-Dichloropropane	(2)	5.632	63	104752	22.537
75) Dibromomethane	(2)	5.751	93	62949	21.944
77) Methyl Methacrylate	(2)	5.773	69	102016	19.973
76) 1,4-Dioxane	(1)	5.783	88	51130M	501.065
79) Bromodichloromethane	(2)	5.924	83	113283	21.493
43) 1,2-Dichloroethene (Total)	(2)		96	198715	45.294
80) 2-Nitropropane	(2)	6.171	41	30099	16.878
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	66371	18.730
82) cis-1,3-Dichloropropene	(2)	6.406	75	158517	21.874
83) 4-Methyl-2-pentanone	(2)	6.582	43	843026	98.533
84)$Toluene-d8	(3)	6.694	98	904644	50.573
89) Toluene	(3)	6.765	92	252495	21.912
90) trans-1,3-Dichloropropene	(3)	7.012	75	141627	20.646
92) Ethyl Methacrylate	(3)	7.137	69	174648	20.719
93) 1,1,2-Trichloroethane	(3)	7.208	97	101734	22.938
94) Tetrachloroethene	(3)	7.359	166	102889	22.005
95) 1,3-Dichloropropane	(3)	7.388	76	169229	21.968
97) 2-Hexanone	(3)	7.487	43	652921	97.295
98) Dibromochloromethane	(3)	7.609	129	93639	21.617
100) 1,2-Dibromoethane	(3)	7.715	107	106921	21.943
101)*Chlorobenzene-d5	(3)	8.161	117	713862	50.000
103) Chlorobenzene	(3)	8.183	112	280419	21.937

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Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
104) 1,1,1,2-Tetrachloroethane	(3)	8.260	131	87309	21.253
105) Ethylbenzene	(3)	8.292	91	476224	21.744
107) m+p-Xylene	(3)	8.398	106	380724	43.723
108) o-Xylene	(3)	8.735	106	183750	21.450
110) Styrene	(3)	8.748	104	318309	22.150
111) Bromoform	(3)	8.896	173	67300	19.963
112) Isopropylbenzene	(3)	9.047	105	467195	22.194
113) Cyclohexanone	(1)	9.111	55	180831	392.853
115)$4-Bromofluorobenzene	(3)	9.162	95	356184	49.772
116) Bromobenzene	(4)	9.278	156	123084	21.520
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	166416	21.576
118) 1,2,3-Trichloropropane	(4)	9.310	110	50955	21.933
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	259117	104.764
120) n-Propylbenzene	(4)	9.371	91	558993	22.171
121) 2-Chlorotoluene	(4)	9.432	126	114743	22.064
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	396619	21.812
122) 4-Chlorotoluene	(4)	9.518	126	121267	21.782
125) tert-Butylbenzene	(4)	9.753	134	89119	21.572
126) Pentachloroethane	(4)	9.765	167	66140	20.252
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	411236	21.462
128) sec-Butylbenzene	(4)	9.916	105	488887	21.903
130) 1,3-Dichlorobenzene	(4)	9.990	146	235017	21.548
131) p-Isopropyltoluene	(4)	10.022	119	430620	21.794
132)*1,4-Dichlorobenzene-d4	(4)	10.038	152	397089	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	245420	21.706
91) 1,3-Dichloropropene (total)	(3)		100	300144	42.520
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	439986	21.341
136) Benzyl Chloride	(4)	10.157	91	312431	19.742
137) 1,3-Diethylbenzene	(4)	10.237	119	260974	21.021
138) 1,4-Diethylbenzene	(4)	10.298	119	270284	20.320
140) n-Butylbenzene	(4)	10.314	92	213919	21.451
139) 1,2-Dichlorobenzene	(4)	10.324	146	235762	21.788
141) 1,2-Diethylbenzene	(4)	10.381	119	223186	21.293
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	36179	20.640
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	174405	21.019
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	171135	21.483
148) Hexachlorobutadiene	(4)	11.530	225	58819	20.731
149) Naphthalene	(4)	11.582	128	578423	21.460

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on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19feb20a.b/wf20l01.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	166855	21.460
109) Xylene (Total)	(3)		106	564474	65.173
151) 2-Methylnaphthalene	(4)	12.304	142	303477	19.735
142) Diethylbenzene (total)	(4)		100	754444	62.634

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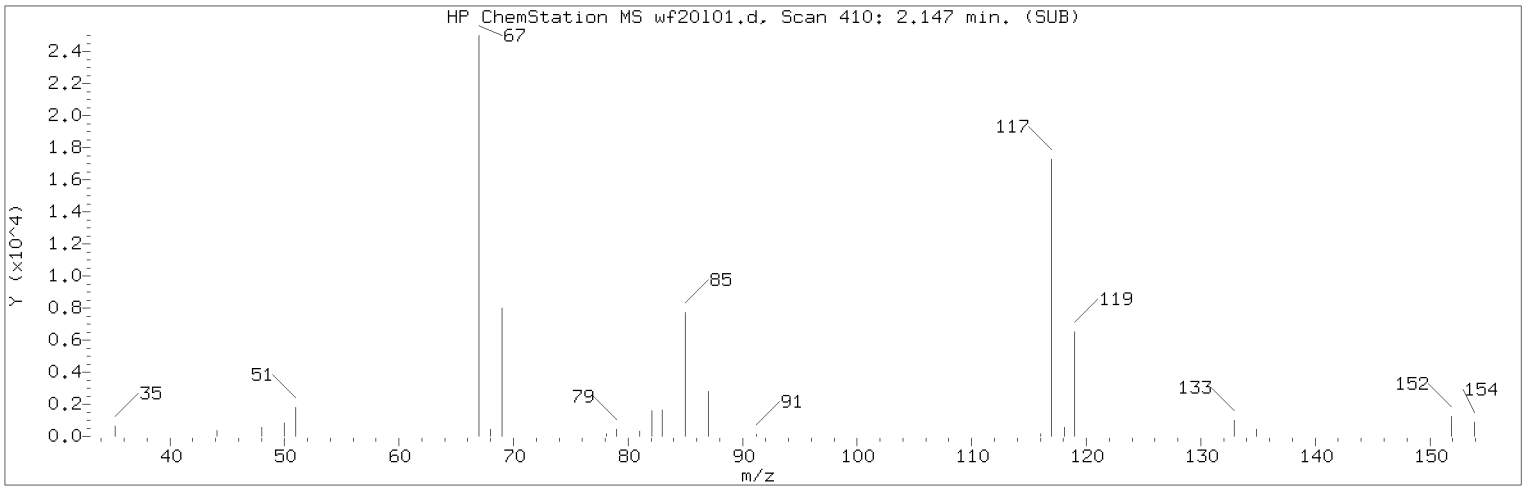
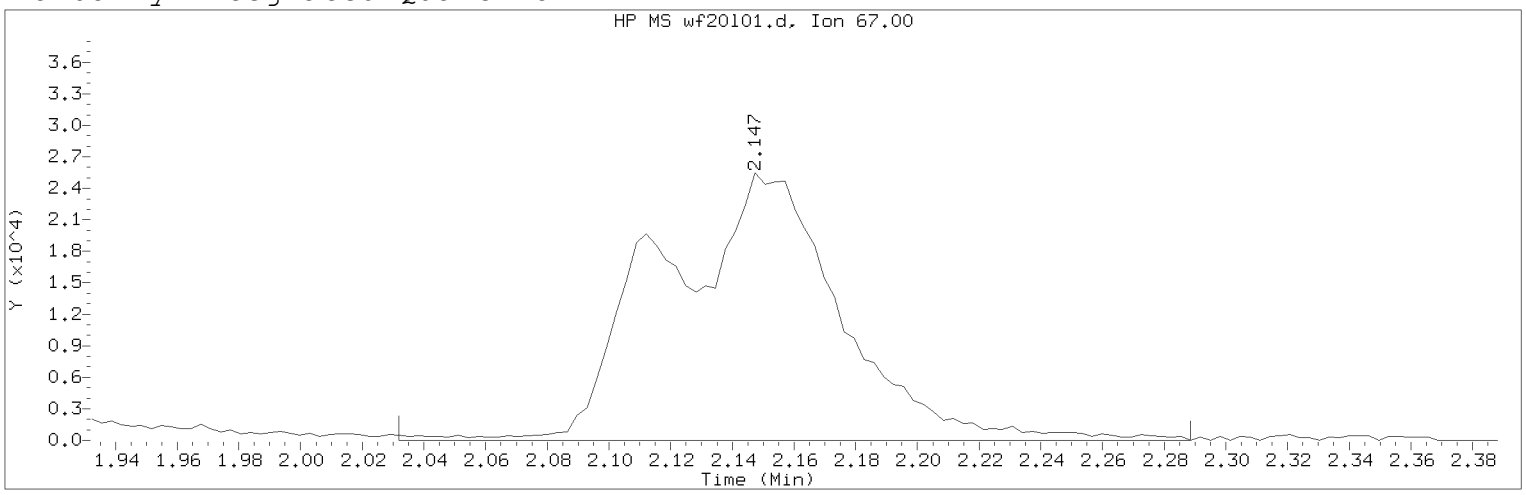
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

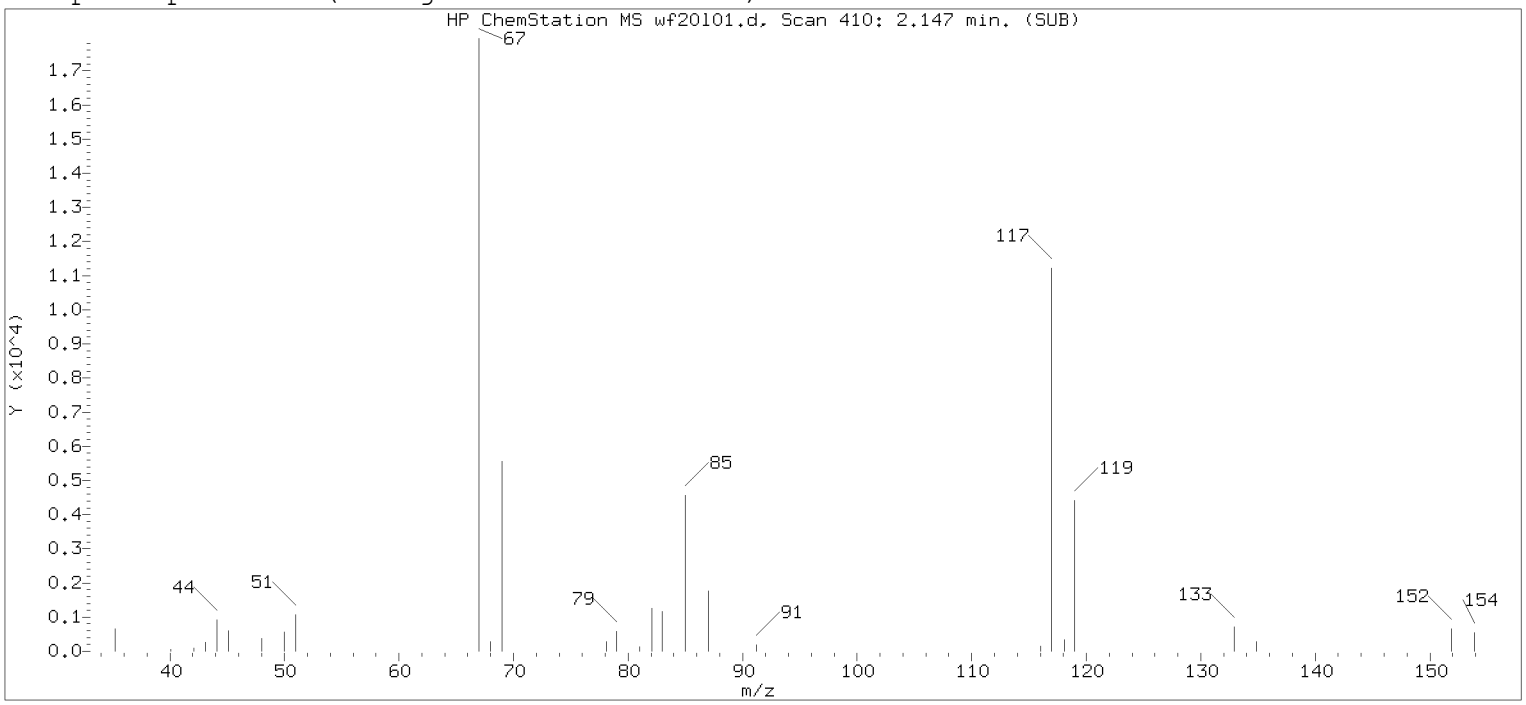
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 410
Retention Time (minutes): 2.147
Quant Ion : 67.00
Area (flag) : 103271M
On-Column Amount (ng) : 20.4098
Integration start scan : 373 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

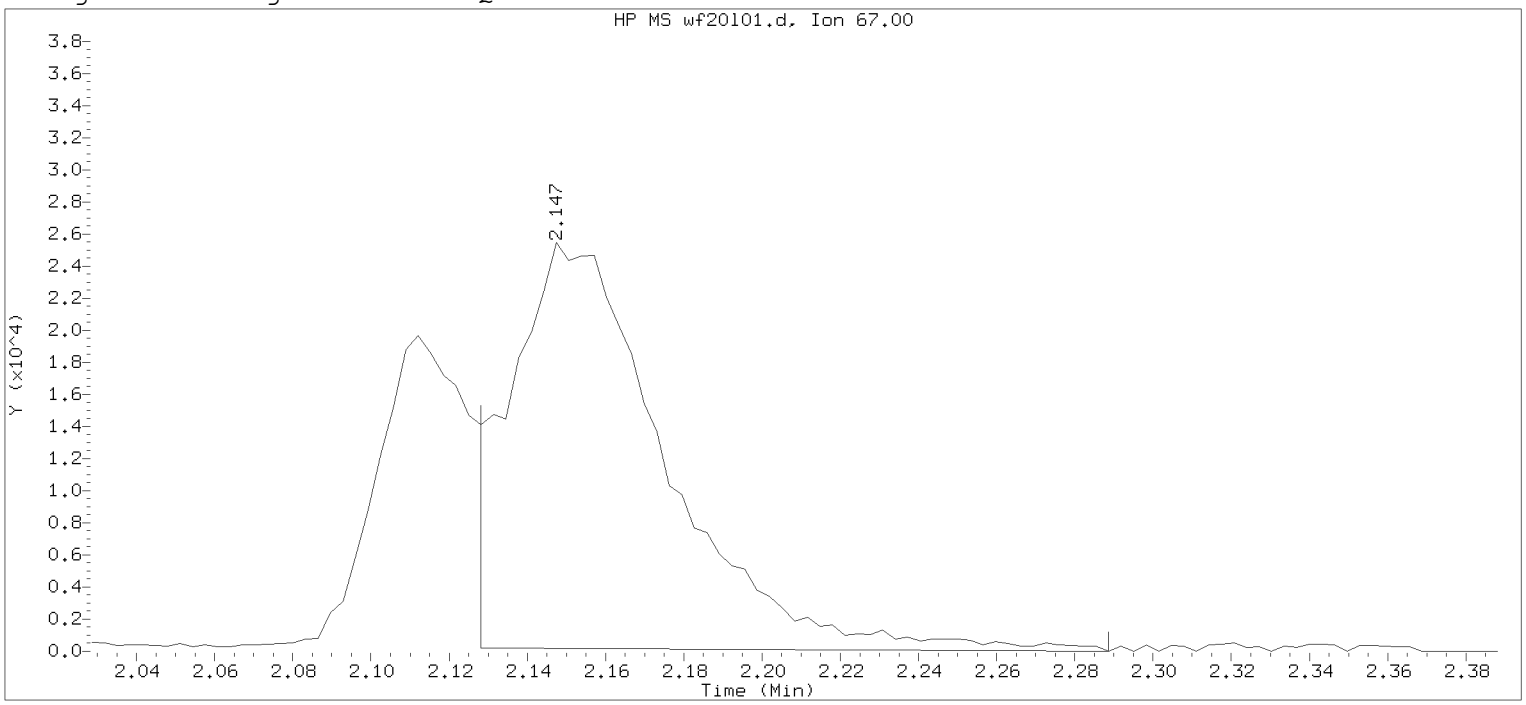
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:55.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20101.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

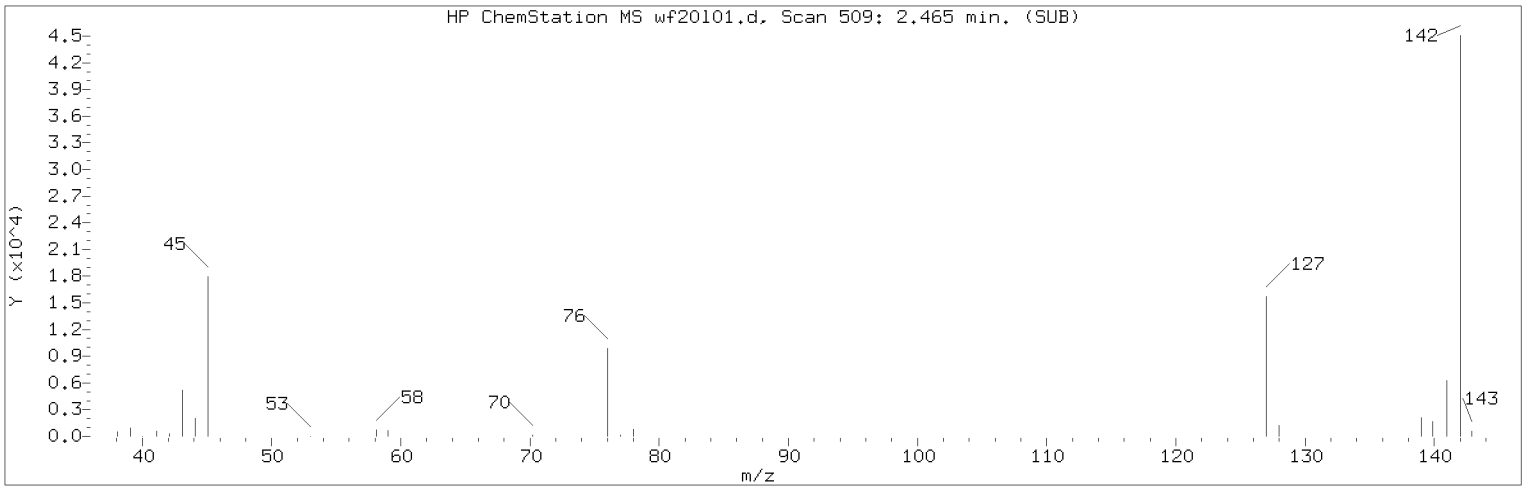
Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-FEB-2019 11:23
Date, time and analyst ID of latest file update: 20-Feb-2019 12:22 Automation

Sample Name: LCSW62 Lab Sample ID: LCSW62

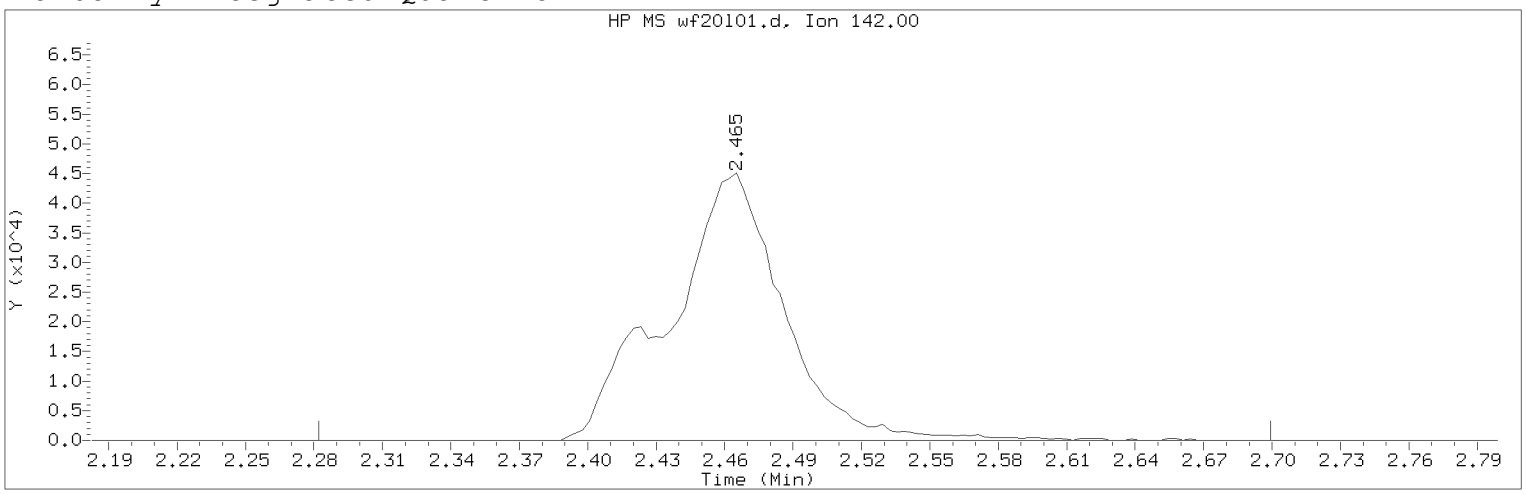
Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 410		
Retention Time (minutes)	: 2.147		
Quant Ion	: 67.00		
Area	: 69986		
On-column Amount (ng)	: 13.8316		
Integration start scan	: 403	Integration stop scan:	453
Y at integration start	: 195	Y at integration end:	0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

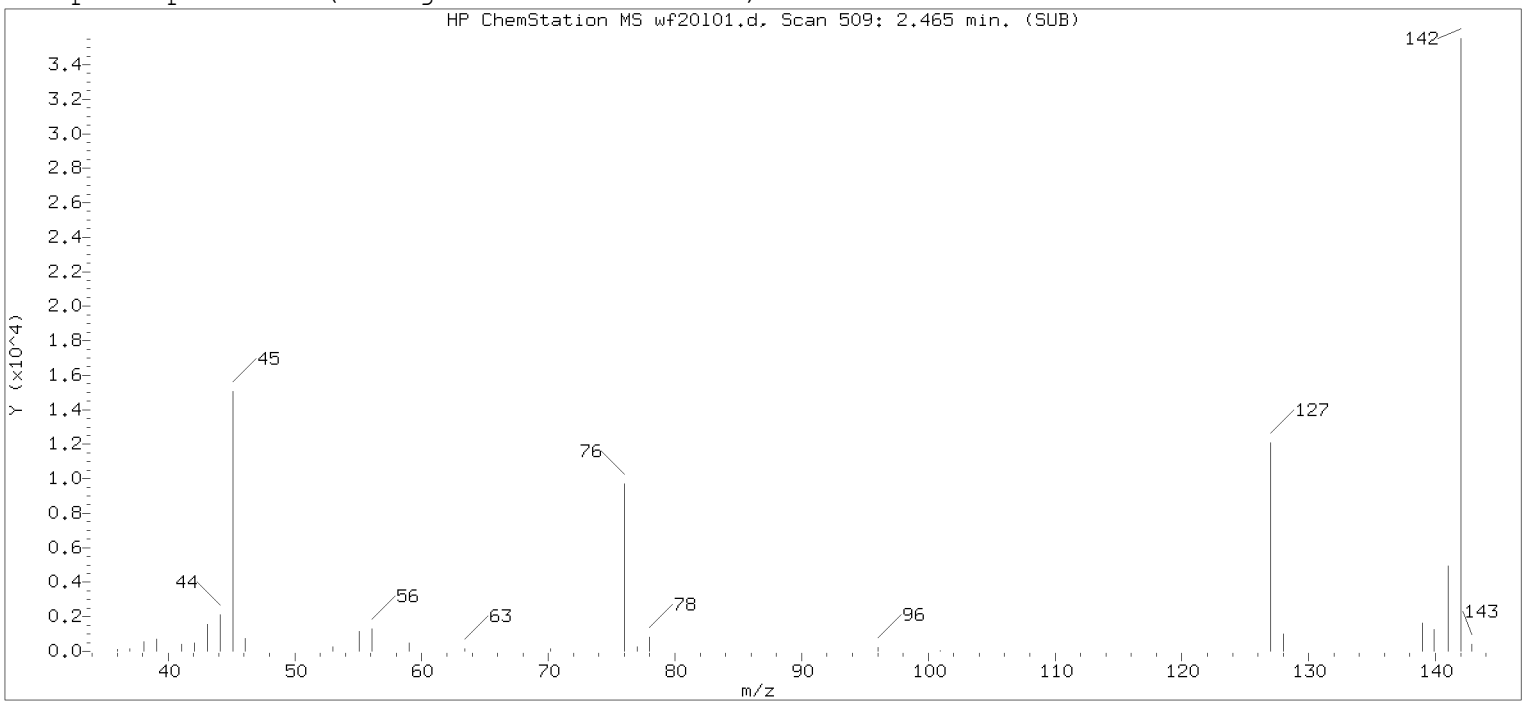
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area (flag) : 157275M
On-Column Amount (ng) : 21.5504
Integration start scan : 451 Integration stop scan: 581
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

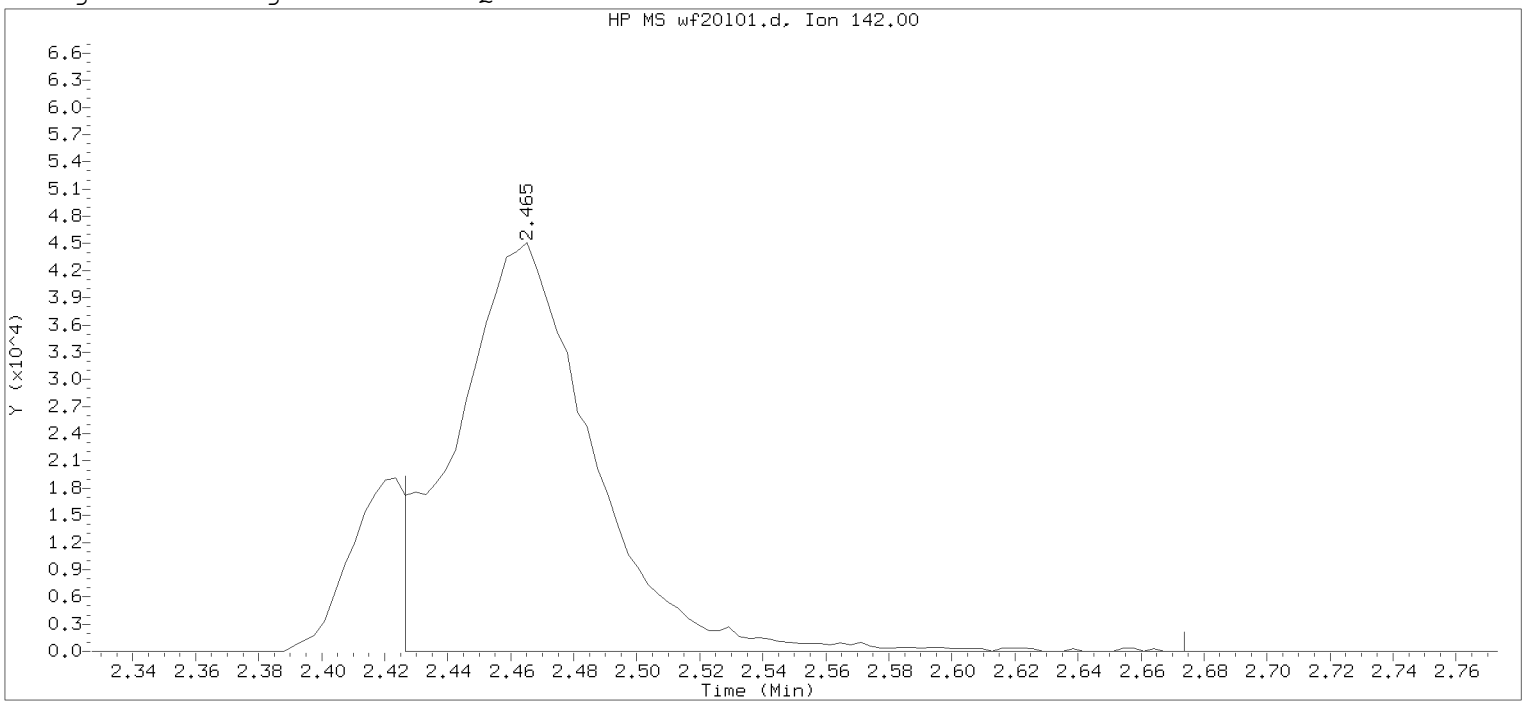
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:55.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



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Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

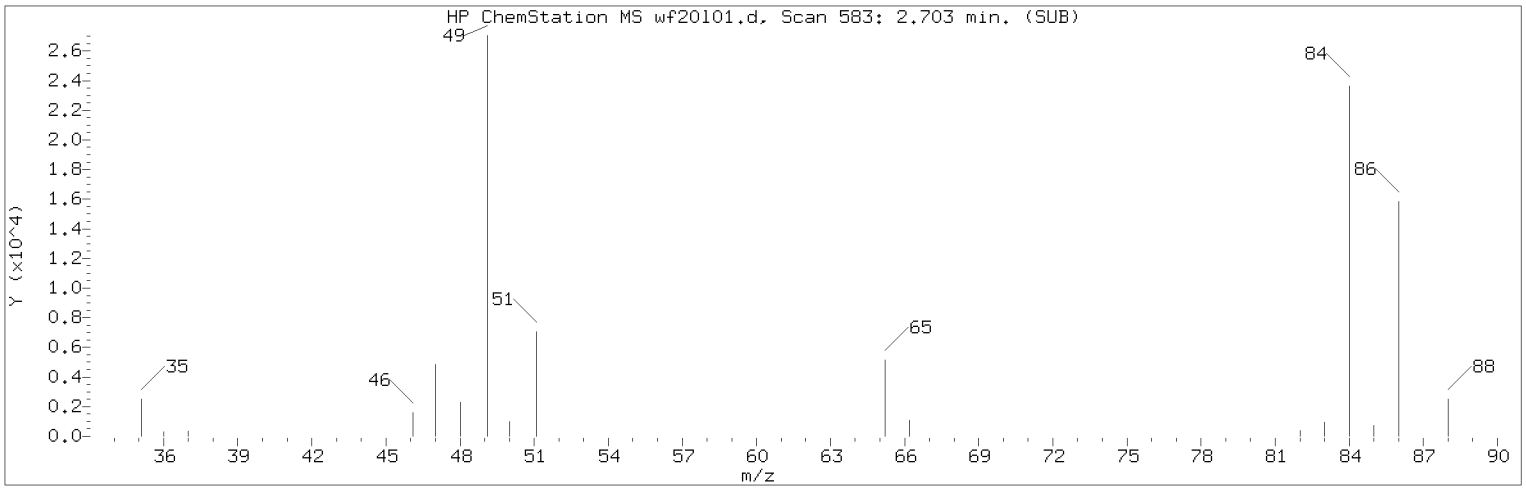
Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-FEB-2019 11:23
Date, time and analyst ID of latest file update: 20-Feb-2019 12:22 Automation

Sample Name: LCSW62 Lab Sample ID: LCSW62

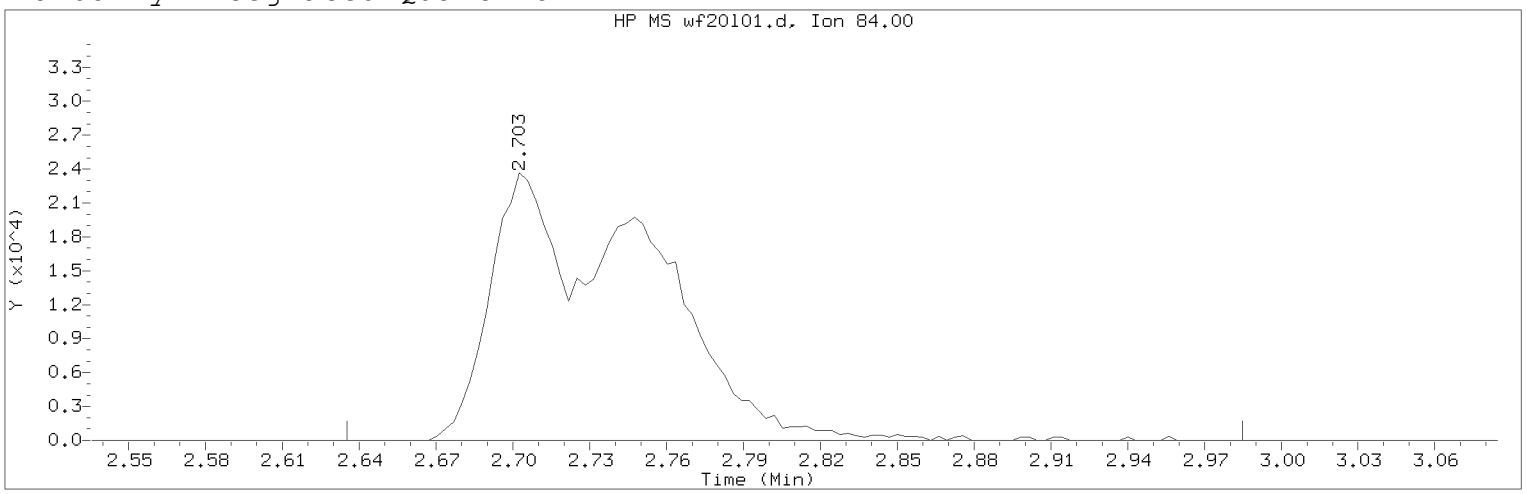
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 509
Retention Time (minutes): 2.465
Quant Ion : 142.00
Area : 135289
On-column Amount (ng) : 18.5378
Integration start scan : 496 Integration stop scan: 573
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20101.d Instrument ID: HP09137.i
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Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

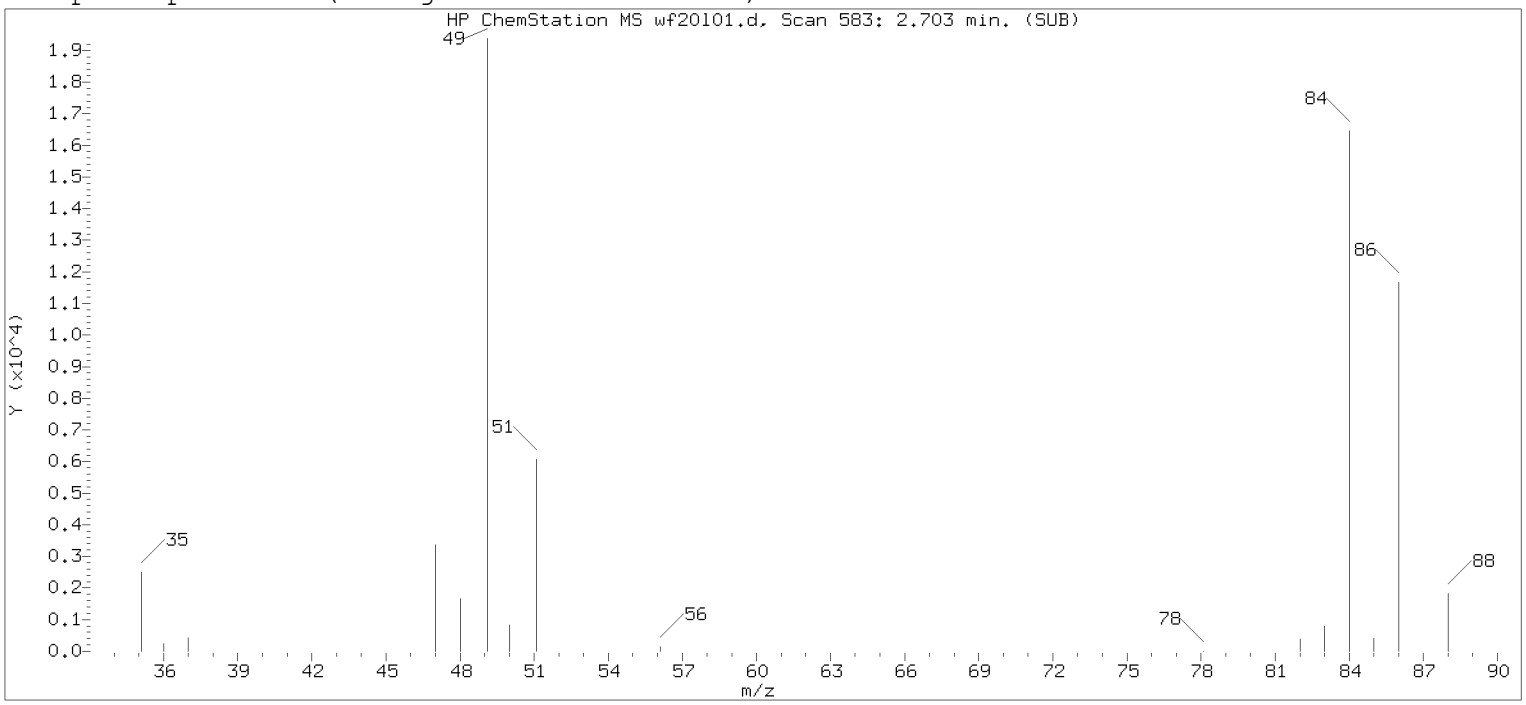
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 583
Retention Time (minutes): 2.703
Quant Ion : 84.00
Area (flag) : 100603M
On-Column Amount (ng) : 21.6116
Integration start scan : 561 Integration stop scan: 670
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

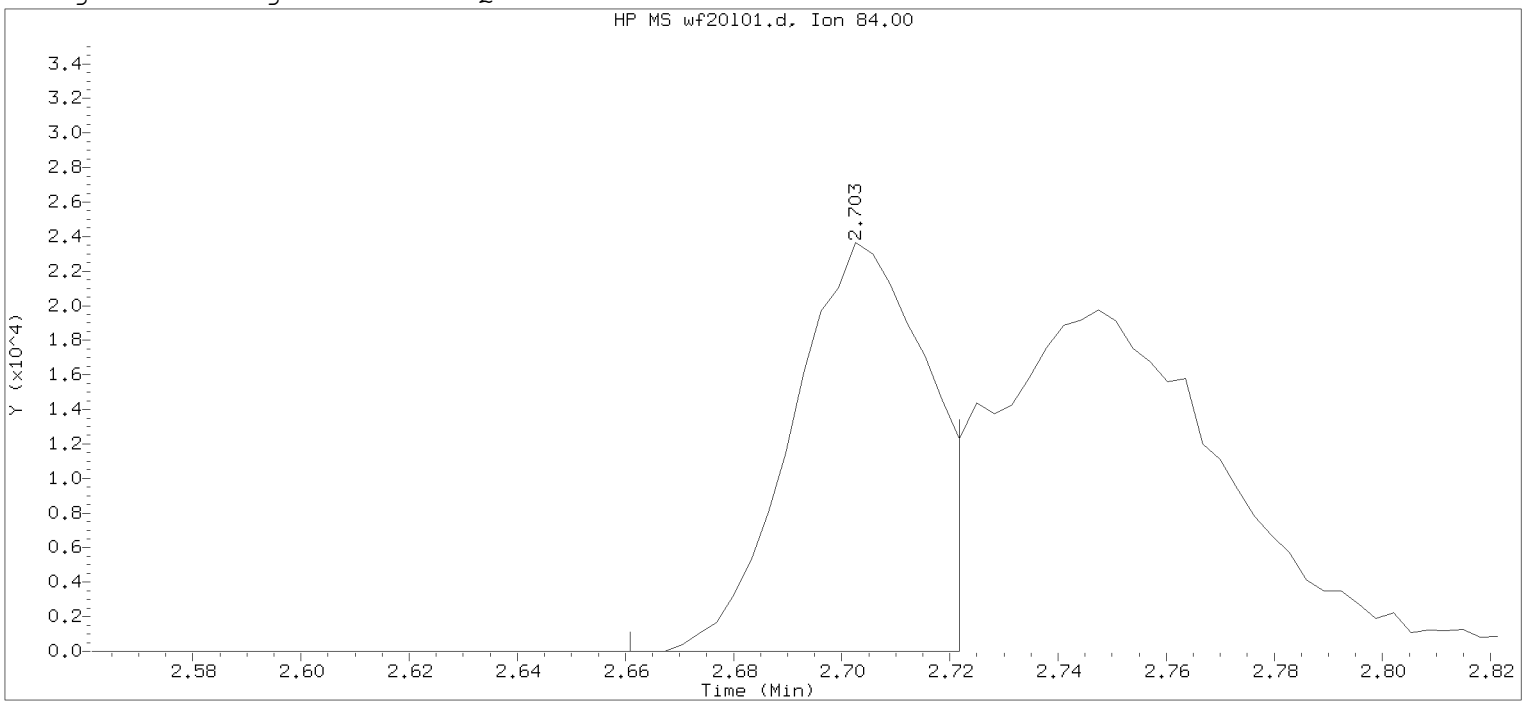
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:55.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20101.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

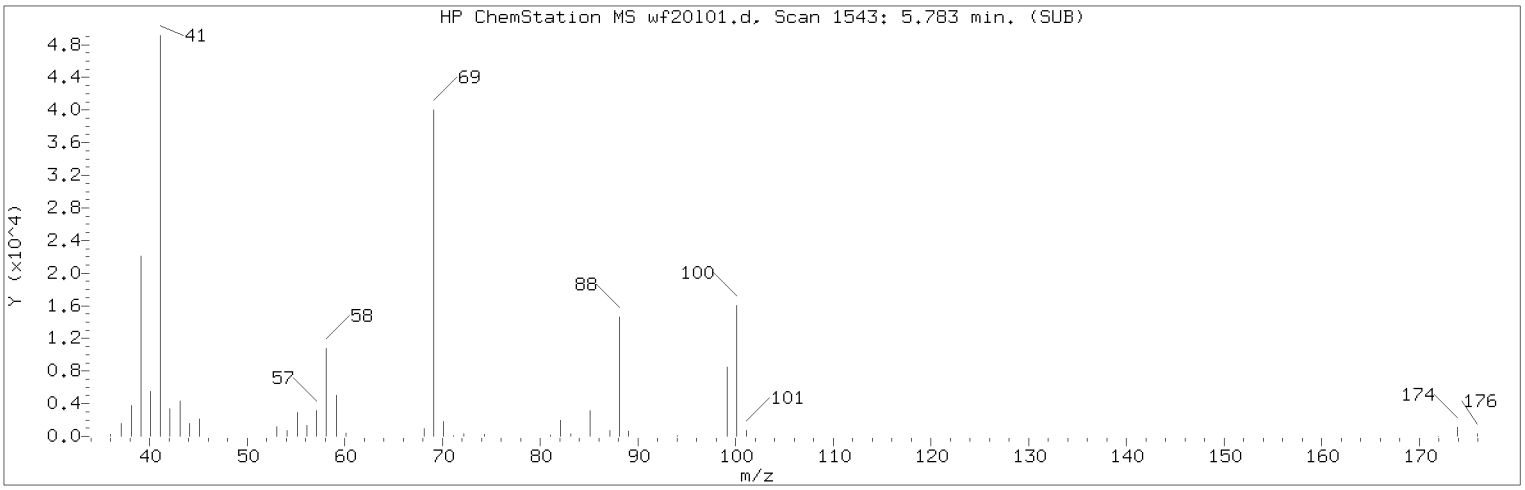
Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-FEB-2019 11:23
Date, time and analyst ID of latest file update: 20-Feb-2019 12:22 Automation

Sample Name: LCSW62 Lab Sample ID: LCSW62

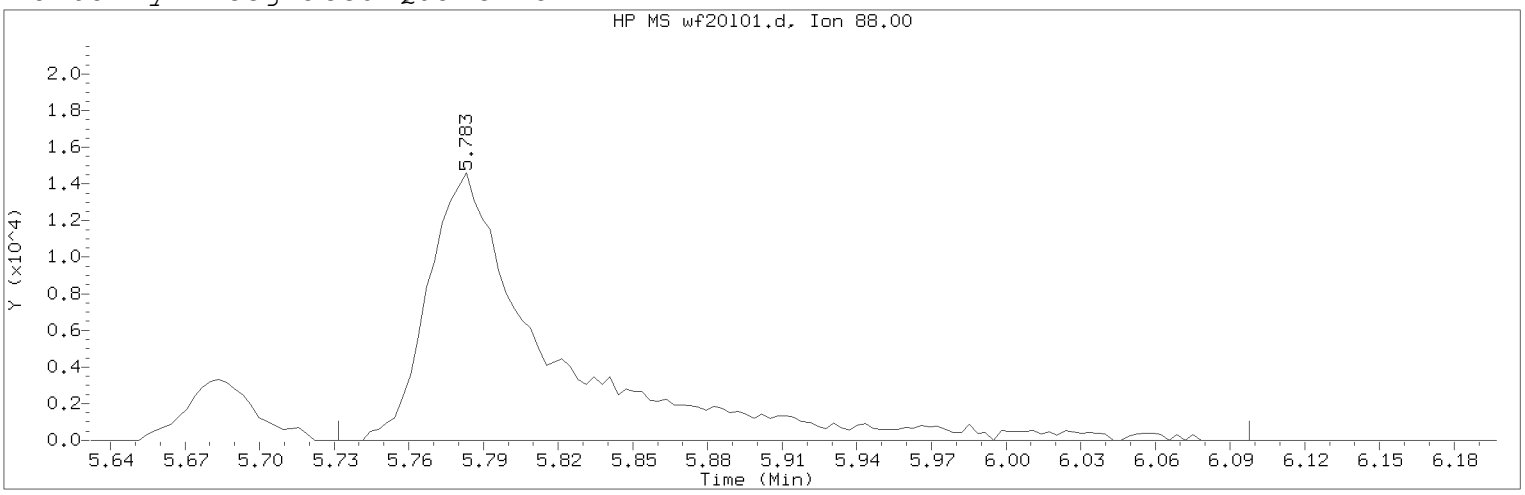
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 583
Retention Time (minutes): 2.703
Quant Ion : 84.00
Area : 40948
On-column Amount (ng) : 8.7967
Integration start scan : 569 Integration stop scan: 588
Y at integration start : 0 Y at integration end: 0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: APR27582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20101.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

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Calibration date and time: 21-FEB-2019 08:34
Date, time and analyst ID of latest file update: 21-Feb-2019 08:34 apr27582

Sample Name: LCSW62 Lab Sample ID: LCSW62

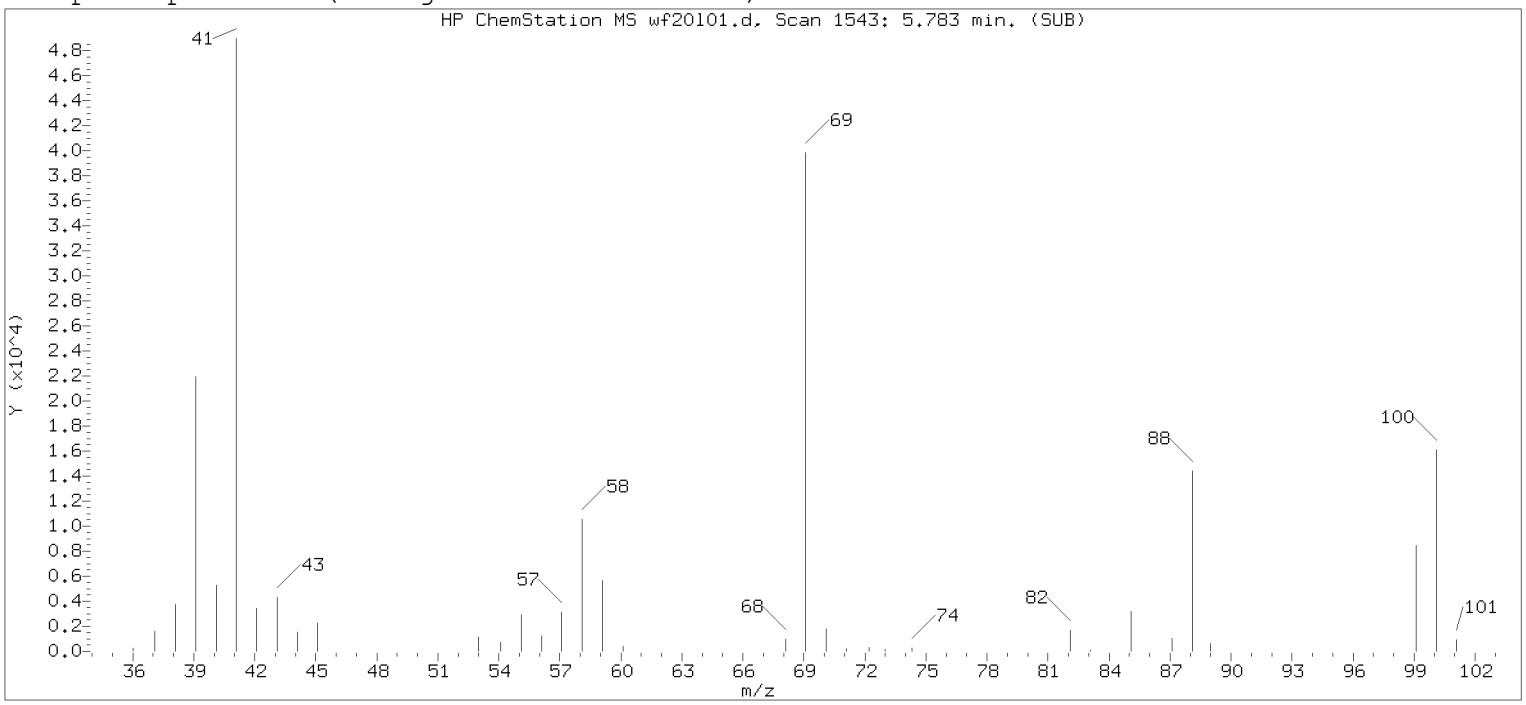
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1543
Retention Time (minutes): 5.783
Quant Ion : 88.00
Area (flag) : 51130M
On-Column Amount (ng) : 501.0652
Integration start scan : 1526 Integration stop scan: 1640
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

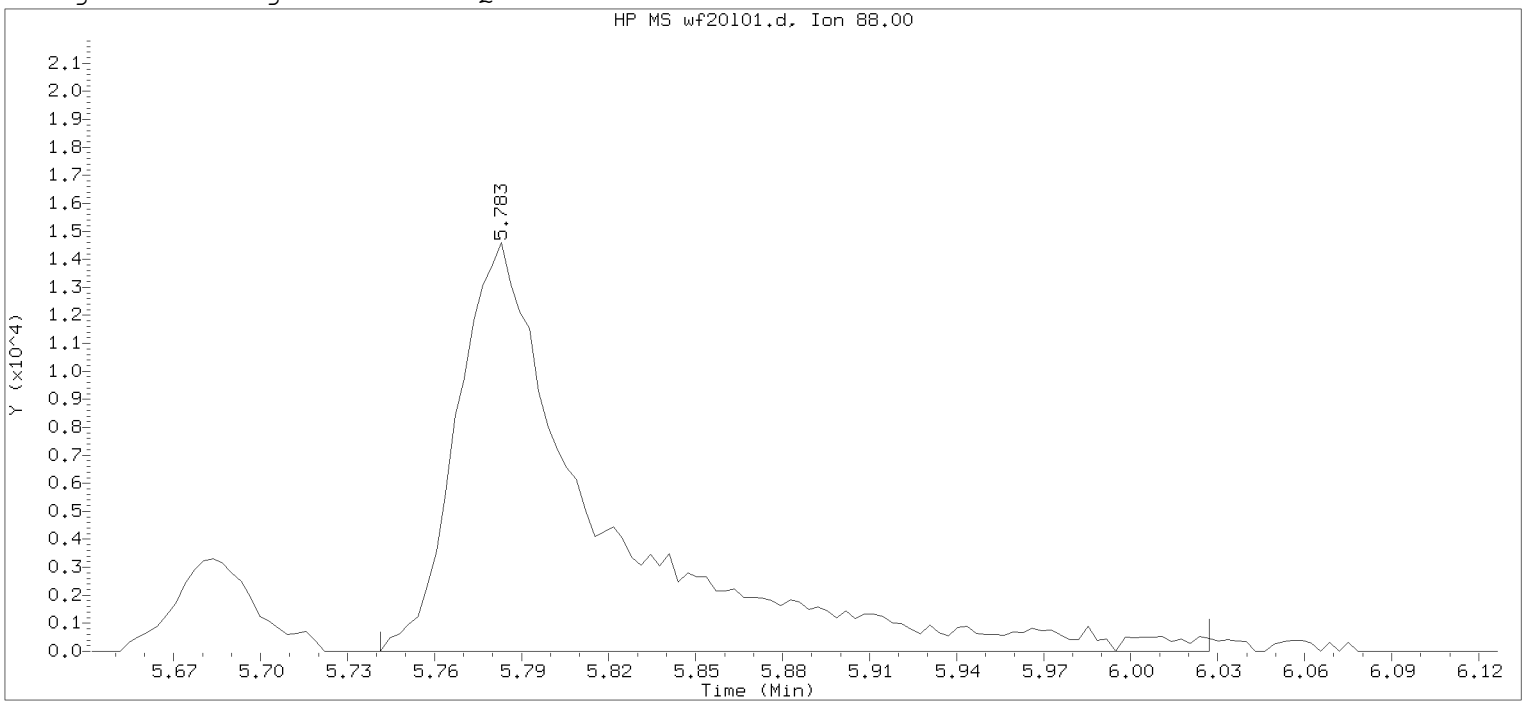
Analyst responsible for change: Digitally signed by Abigail P. Roselli
on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: apr27582

Secondary review performed and digitally signed by Kelly E. Keller on 02/21/2019 at 09:55.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19feb20a.b/wf20101.d Instrument ID: HP09137.i
Injection date and time: 20-FEB-2019 12:07 Analyst ID: APR27582

Method used: /chem2/HP09137.i/19feb20a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 20-FEB-2019 11:23
Date, time and analyst ID of latest file update: 20-Feb-2019 12:22 Automation

Sample Name: LCSW62 Lab Sample ID: LCSW62

Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1543		
Retention Time (minutes)	: 5.783		
Quant Ion	: 88.00		
Area	: 50345		
On-column Amount (ng)	: 493.3796		
Integration start scan	: 1529	Integration stop scan:	1618
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Abigail P. Roselli on 02/21/2019 at 08:38.
Target 3.5 esignature user ID: APR27582

Data File: /chem2/HP09137.i/19may22a.b/wy22t01.d

Date : 22-MAY-2019 11:37

Client ID: BFB FEB05-19

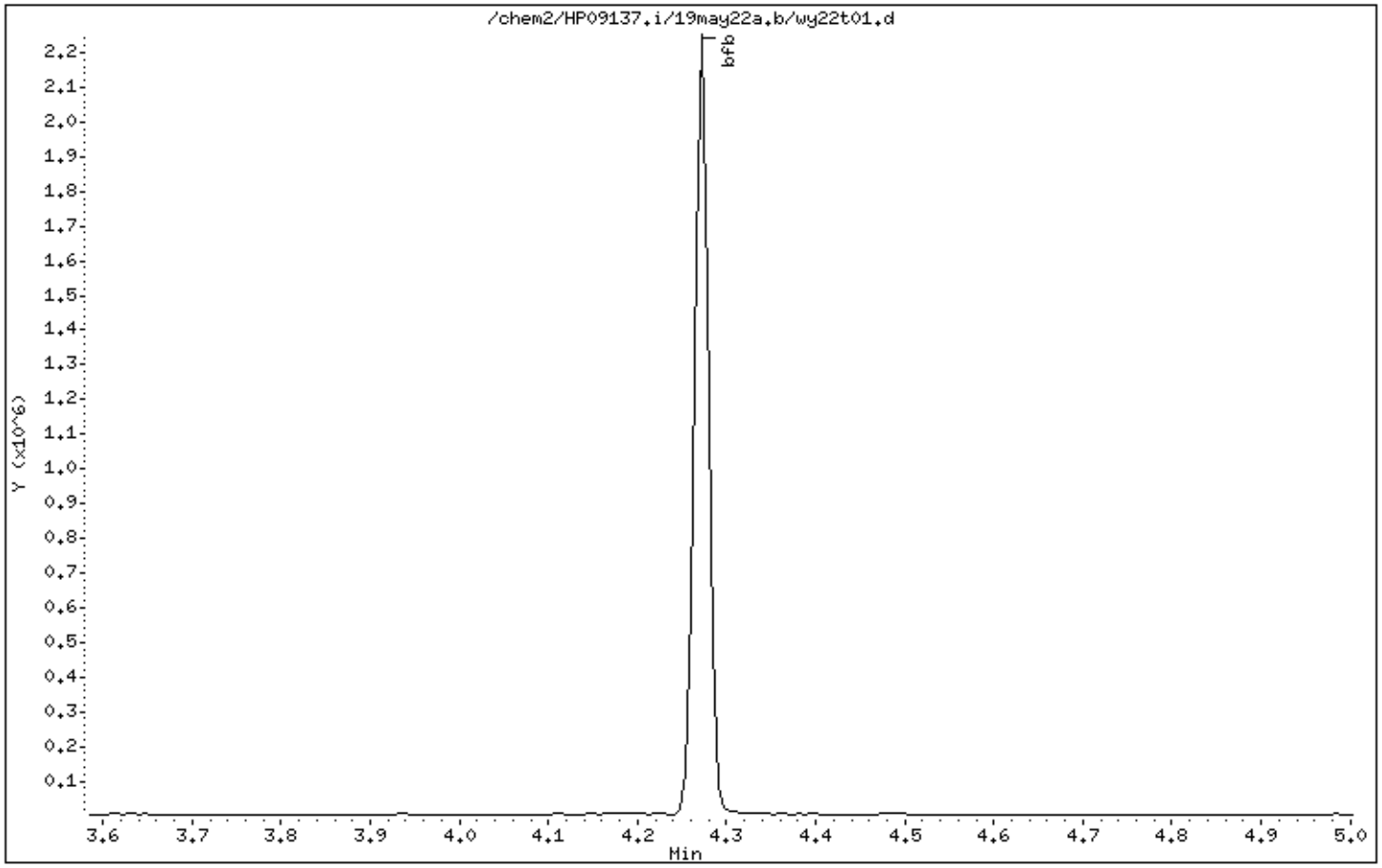
Instrument: HP09137.i

Sample Info: BFB FEB05-19;BFB 50NG;1;3;;;;;;

Operator: CBR01947

Column phase: DB-624

Column diameter: 0.18



Digitally signed by on 05/22/2019 at 11:42.
Target 3.5 esignature user ID: cbr01947

Data File: /chem2/HP09137.i/19may22a.b/wy22t01.d

Date : 22-MAY-2019 11:37

Client ID: BFB FEB05-19

Instrument: HP09137.i

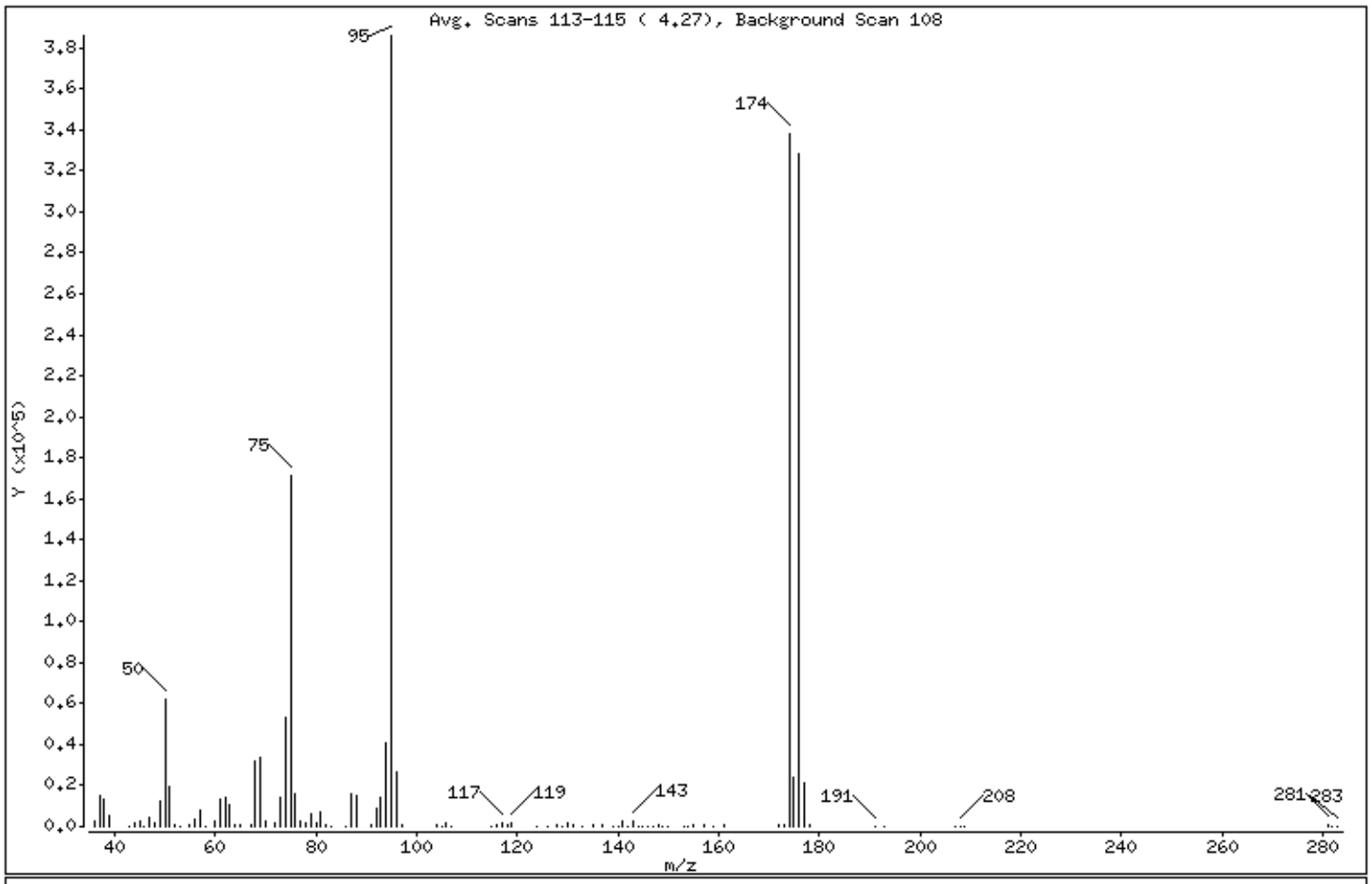
Sample Info: BFB FEB05-19;BFB 50NG;1;3;;;;;;

Operator: CBR01947

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.12
75	30.00 - 60.00% of mass 95	44.48
96	5.00 - 9.00% of mass 95	6.78
173	Less than 2.00% of mass 174	0.16 (0.18)
174	50.00 - 100.00% of mass 95	87.49
175	5.00 - 9.00% of mass 174	6.26 (7.15)
176	95.00 - 101.00% of mass 174	85.15 (97.32)
177	5.00 - 9.00% of mass 176	5.59 (6.57)

Digitally signed by on 05/22/2019 at 11:42.
Target 3.5 esignature user ID: cbr01947

Data File: /chem2/HP09137.i/19may22a.b/wy22t01.d

Date : 22-MAY-2019 11:37

Client ID: BFB FEB05-19

Instrument: HP09137.i

Sample Info: BFB FEB05-19;BFB 50NG;1;3;;;;;;

Operator: CBR01947

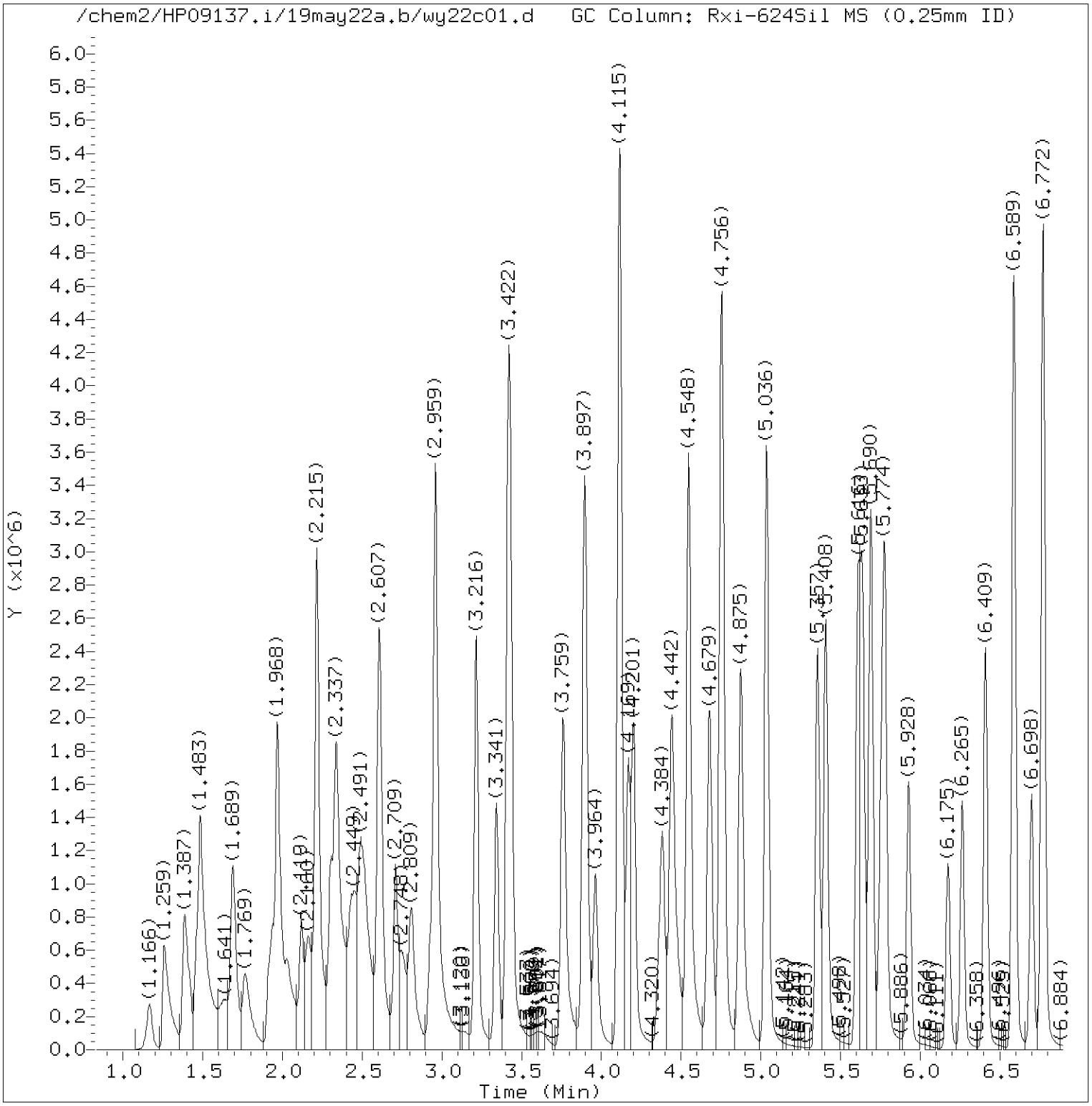
Column phase: DB-624

Column diameter: 0.18

Data File: wy22t01.d
Spectrum: Avg. Scans 113-115 (4.27), Background Scan 108
Location of Maximum: 95.00
Number of points: 102

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2673	68.00	31904	105.00	420	148.00	693
37.00	15447	69.00	33944	106.00	1417	149.00	324
38.00	13549	70.00	2477	107.00	272	150.00	240
39.00	5481	72.00	1827	115.00	391	153.00	305
43.00	145	73.00	14202	116.00	921	154.00	86
44.00	1594	74.00	53456	117.00	1825	155.00	807
45.00	2967	75.00	171712	118.00	1145	157.00	588
46.00	92	76.00	15736	119.00	1631	159.00	318
47.00	4267	77.00	2380	124.00	254	161.00	459
48.00	1866	78.00	1552	126.00	85	172.00	683
49.00	12451	79.00	6327	128.00	1152	173.00	604
50.00	62216	80.00	1690	129.00	420	174.00	337728
51.00	19312	81.00	6703	130.00	1387	175.00	24160
52.00	984	82.00	1235	131.00	602	176.00	328704
53.00	110	83.00	93	133.00	217	177.00	21592
55.00	926	86.00	428	135.00	459	178.00	551
56.00	3779	87.00	16026	137.00	504	191.00	357
57.00	7791	88.00	15078	139.00	115	193.00	113
58.00	294	91.00	994	140.00	84	207.00	281
60.00	2613	92.00	9317	141.00	2915	208.00	301
61.00	13698	93.00	14060	142.00	327	209.00	19
62.00	14589	94.00	41056	143.00	2922	281.00	754
63.00	10785	95.00	386048	144.00	120	282.00	47
64.00	1192	96.00	26184	145.00	233	283.00	221
65.00	450	97.00	801	146.00	382		
67.00	846	104.00	1100	147.00	123		

Digitally signed by on 05/22/2019 at 11:42.
Target 3.5 esignature user ID: cbr01947



Total Ion Chromatogram (TIC)

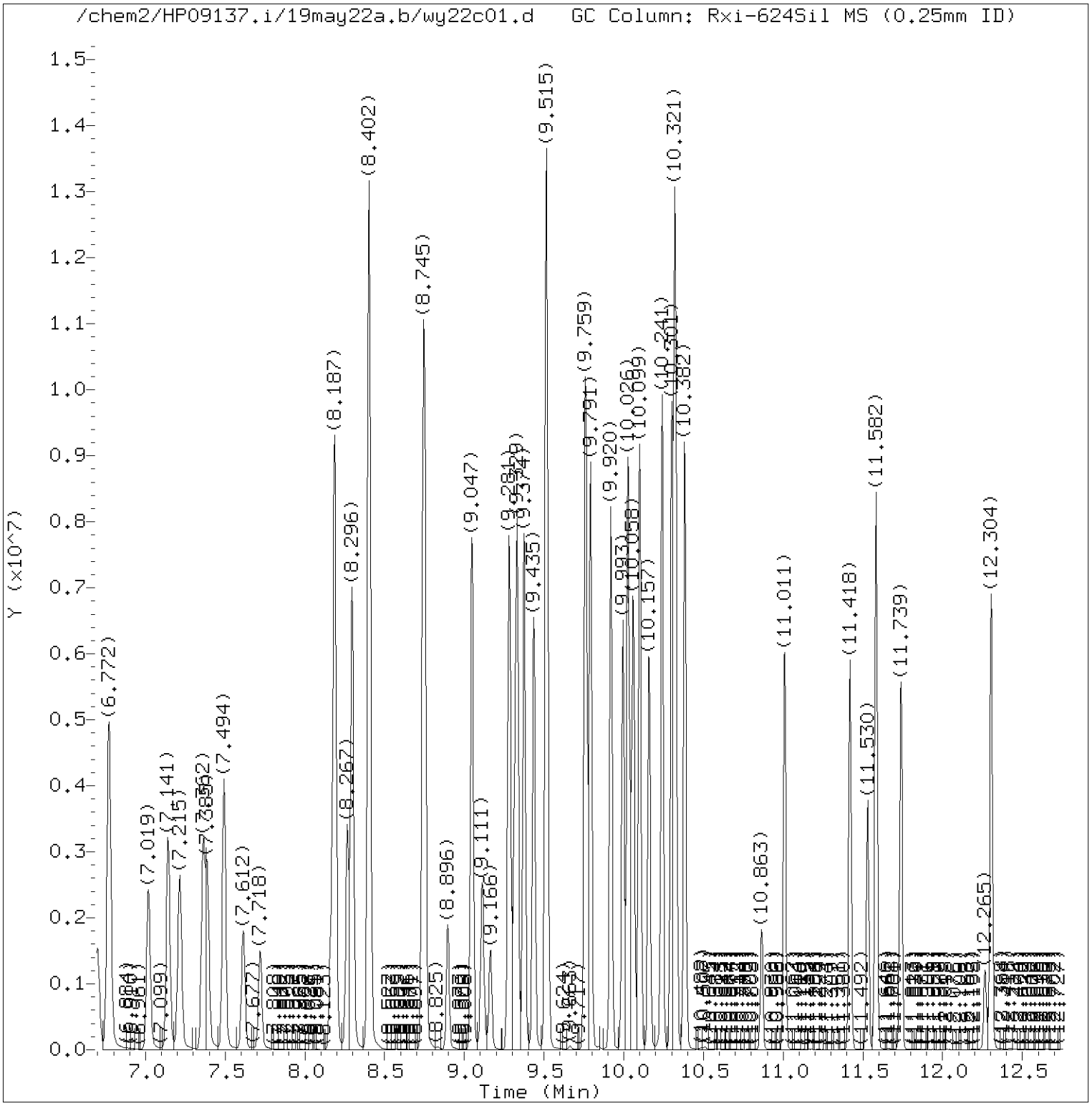
Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22c01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 12:04 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 12:34 cbs01947

Sample Name: VSTD150 Lab Sample ID: VSTD150

Digitally signed by Chelsea B. Stong
on 05/22/2019 at 12:38.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22c01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 12:04 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 12:34 cbs01947

Sample Name: VSTD150 Lab Sample ID: VSTD150

Digitally signed by Chelsea B. Stong
on 05/22/2019 at 12:38.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22c01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 12:04 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 12:34 cbs01947

Sample Name: VSTD150 Lab Sample ID: VSTD150

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.259	85	1267629	170.684
4) Chloromethane	(2)	1.387	50	1254099	135.610
6) Vinyl Chloride	(2)	1.461	62	1188113	140.146
5) 1,3-Butadiene	(2)	1.487	39	815520M	144.702
8) Bromomethane	(2)	1.689	94	918610	137.390
9) Chloroethane	(2)	1.769	64	720743	129.196
12) Trichlorofluoromethane	(2)	1.933	101	1370889	152.257
11) n-Pentane	(2)	1.968	43	1361388	158.987
13) Ethanol	(1)	2.035	45	375176	3171.760
15) Freon 123a	(2)	2.119	67	992442M	147.504
16) Acrolein	(1)	2.218	56	2607865	1396.668
17) 1,1-Dichloroethene	(2)	2.305	96	846512M	167.161
17) 1,1-Dichloroethene	(2)	2.308	63	395516	154.806
18) Acetone	(1)	2.340	58	284898	313.908
19) Freon 113	(2)	2.343	101	672709	151.277
21) 2-Propanol	(1)	2.449	45	613281	909.490
22) Methyl Iodide	(2)	2.478	142	1540597M	158.753
23) Carbon Disulfide	(2)	2.510	76	2468004	138.335
25) Allyl Chloride	(2)	2.603	41	1405716	159.338
27) Methyl Acetate	(2)	2.619	43	1060529	138.882
28) Methylene Chloride	(2)	2.709	84	924960M	149.430
29)*t-Butyl alcohol-d10	(1)	2.738	65	259360	250.000
30) t-Butyl alcohol	(1)	2.812	59	956613	795.274
31) Acrylonitrile	(2)	2.924	53	553192	137.706
32) trans-1,2-Dichloroethene	(2)	2.959	96	875620	159.364
33) Methyl Tertiary Butyl Ether	(2)	2.963	73	2411070	180.222
34) n-Hexane	(2)	3.213	57	1288106	175.210
36) 1,1-Dichloroethane	(2)	3.341	63	1528723	153.547
38) di-Isopropyl ether	(2)	3.415	45	2921941	152.764
39) 2-Chloro-1,3-butadiene	(2)	3.431	53	1415972	164.209
40) Ethyl t-butyl ether	(2)	3.759	59	2192422	157.249
42) cis-1,2-Dichloroethene	(2)	3.893	96	970774	157.361
45) 2,2-Dichloropropane	(2)	3.893	77	542035	121.223
44) 2-Butanone	(2)	3.906	43	1556759	269.732
47) Propionitrile	(1)	3.964	54	1183566	791.694
48) Methacrylonitrile	(2)	4.115	67	1539718	356.473
49) Bromochloromethane	(2)	4.121	128	503688	157.068
50) Tetrahydrofuran	(1)	4.169	71	420695	304.048

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Chelsea B. Stong
on 05/22/2019 at 12:38.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22c01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 12:04 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 12:34 cbs01947

Sample Name: VSTD150 Lab Sample ID: VSTD150

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	4.201	83	1443709	154.548
52)$Dibromofluoromethane	(2)	4.359	113	251830	47.327
52)$Dibromofluoromethane	(2)	4.359	111	257294	47.103
53) 1,1,1-Trichloroethane	(2)	4.384	97	1084020	154.225
54) Cyclohexane	(2)	4.442	56	1493304	160.537
54) Cyclohexane	(2)	4.445	84	1082296	140.563
54) Cyclohexane	(2)	4.439	69	455047	162.777
55) 1,1-Dichloropropene	(2)	4.548	75	1170356	156.268
56) Carbon Tetrachloride	(2)	4.548	117	945880	156.813
58) Isobutyl Alcohol	(1)	4.676	41	865413	1973.460
57)$1,2-Dichloroethane-d4	(2)	4.692	102	69412	49.048
57)$1,2-Dichloroethane-d4	(2)	4.692	65	292540	47.487
57)$1,2-Dichloroethane-d4	(2)	4.696	104	45332	50.299
60) Benzene	(2)	4.753	78	3680820	152.898
61) 1,2-Dichloroethane	(2)	4.769	62	1091917	146.830
61) 1,2-Dichloroethane	(2)	4.766	98	114596	161.968
65) t-Amyl methyl ether	(2)	4.875	73	2170632	151.968
66)*Fluorobenzene	(2)	5.032	96	1148568	50.000
67) n-Heptane	(2)	5.039	43	1138656	162.057
69) n-Butanol	(1)	5.357	56	1565499	4020.693
71) Trichloroethene	(2)	5.408	95	896016	153.694
73) Methylcyclohexane	(2)	5.610	83	1457426	172.197
73) Methylcyclohexane	(2)	5.610	98	677418	172.137
74) 1,2-Dichloropropane	(2)	5.639	63	957174	154.869
75) Dibromomethane	(2)	5.754	93	593916	155.703
77) Methyl Methacrylate	(2)	5.777	69	1024514	150.841
76) 1,4-Dioxane	(1)	5.783	88	246066M	2113.990
79) Bromodichloromethane	(2)	5.928	83	1098475	156.736
43) 1,2-Dichloroethene (Total)	(2)		96	1846394	316.725
80) 2-Nitropropane	(2)	6.175	41	715672	301.806
81) 2-Chloroethyl Vinyl Ether	(2)	6.265	63	689305	146.286
82) cis-1,3-Dichloropropene	(2)	6.409	75	1521911	157.936
83) 4-Methyl-2-pentanone	(2)	6.589	43	3339326	293.518
84)$Toluene-d8	(3)	6.698	98	1138910	51.943
84)$Toluene-d8	(3)	6.698	100	746879	51.366
89) Toluene	(3)	6.772	92	2366640	167.557
90) trans-1,3-Dichloropropene	(3)	7.019	75	1420710	168.960
92) Ethyl Methacrylate	(3)	7.141	69	1802813	174.483

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Chelsea B. Stong
on 05/22/2019 at 12:38.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22c01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 12:04 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 12:34 cbs01947

Sample Name: VSTD150 Lab Sample ID: VSTD150

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) 1,1,2-Trichloroethane	(3)	7.215	97	909297	167.264
94) Tetrachloroethene	(3)	7.362	166	975616	170.225
95) 1,3-Dichloropropane	(3)	7.388	76	1570583	166.334
97) 2-Hexanone	(3)	7.490	43	2599134	315.978
98) Dibromochloromethane	(3)	7.612	129	943847	177.760
100) 1,2-Dibromoethane	(3)	7.718	107	1004495	168.183
101)*Chlorobenzene-d5	(3)	8.164	117	875014	50.000
103) Chlorobenzene	(3)	8.187	112	2588590	165.205
104) 1,1,1,2-Tetrachloroethane	(3)	8.267	131	864021	171.590
105) Ethylbenzene	(3)	8.296	91	4389853	163.526
107) m+p-Xylene	(3)	8.402	106	3544027	332.043
108) o-Xylene	(3)	8.739	106	1749072	166.574
110) Styrene	(3)	8.752	104	3045255	172.882
111) Bromoform	(3)	8.896	173	728814	176.368
112) Isopropylbenzene	(3)	9.047	105	4241707	164.392
113) Cyclohexanone	(1)	9.114	55	902211	1718.293
115)$4-Bromofluorobenzene	(3)	9.166	95	420539	47.942
115)$4-Bromofluorobenzene	(3)	9.166	174	363201	49.069
116) Bromobenzene	(4)	9.278	156	1164750	165.346
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	1527115	160.757
118) 1,2,3-Trichloropropane	(4)	9.313	110	446435	156.022
119) trans-1,4-Dichloro-2-butene	(4)	9.332	53	1149483	377.341
120) n-Propylbenzene	(4)	9.374	91	4927086	158.663
121) 2-Chlorotoluene	(4)	9.435	126	1062062	165.812
123) 1,3,5-Trimethylbenzene	(4)	9.512	105	3621953	161.723
122) 4-Chlorotoluene	(4)	9.518	126	1132892	165.222
125) tert-Butylbenzene	(4)	9.759	134	832800	163.670
126) Pentachloroethane	(4)	9.769	167	699448	173.890
127) 1,2,4-Trimethylbenzene	(4)	9.791	105	3763127	159.454
128) sec-Butylbenzene	(4)	9.920	105	4346980	158.125
130) 1,3-Dichlorobenzene	(4)	9.993	146	2167963	161.393
131) p-Isopropyltoluene	(4)	10.026	119	3832352	157.480
132)*1,4-Dichlorobenzene-d4	(4)	10.042	152	489071	50.000
134) 1,4-Dichlorobenzene	(4)	10.061	146	2219317	159.368
91) 1,3-Dichloropropene (total)	(3)		100	2942621	326.896
135) 1,2,3-Trimethylbenzene	(4)	10.099	105	3989584	157.117
136) Benzyl Chloride	(4)	10.157	91	3303056	169.462
137) 1,3-Diethylbenzene	(4)	10.241	119	2378048	155.521

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Chelsea B. Stong
on 05/22/2019 at 12:38.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22c01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 12:04 Analyst ID: CBR01947

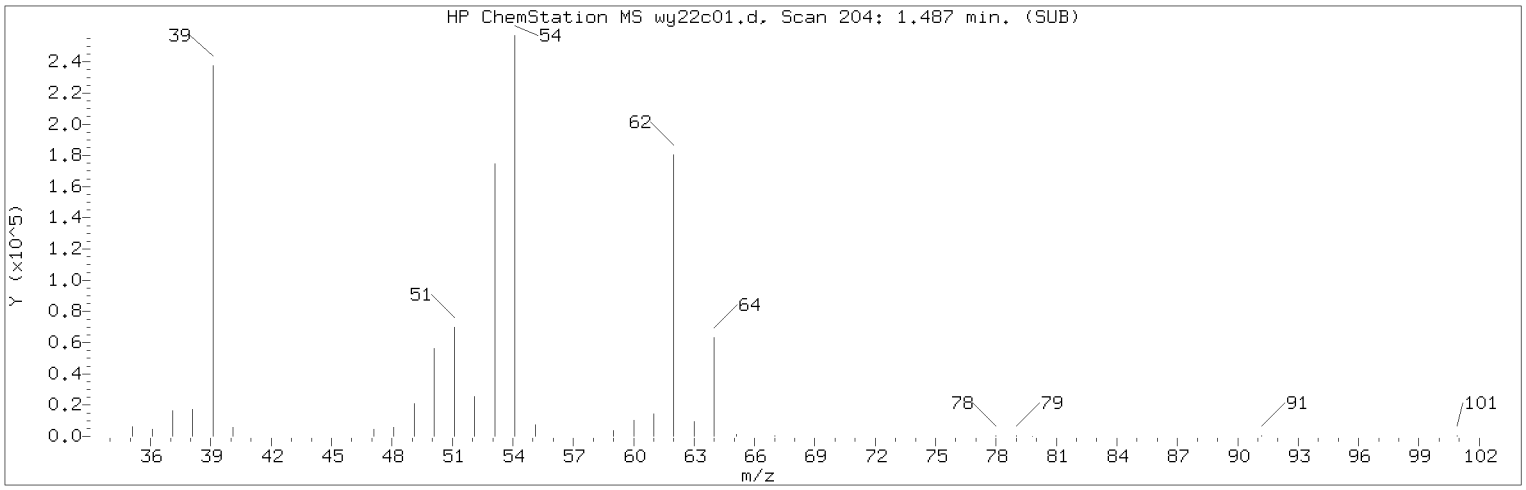
Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 12:34 cbs01947

Sample Name: VSTD150 Lab Sample ID: VSTD150

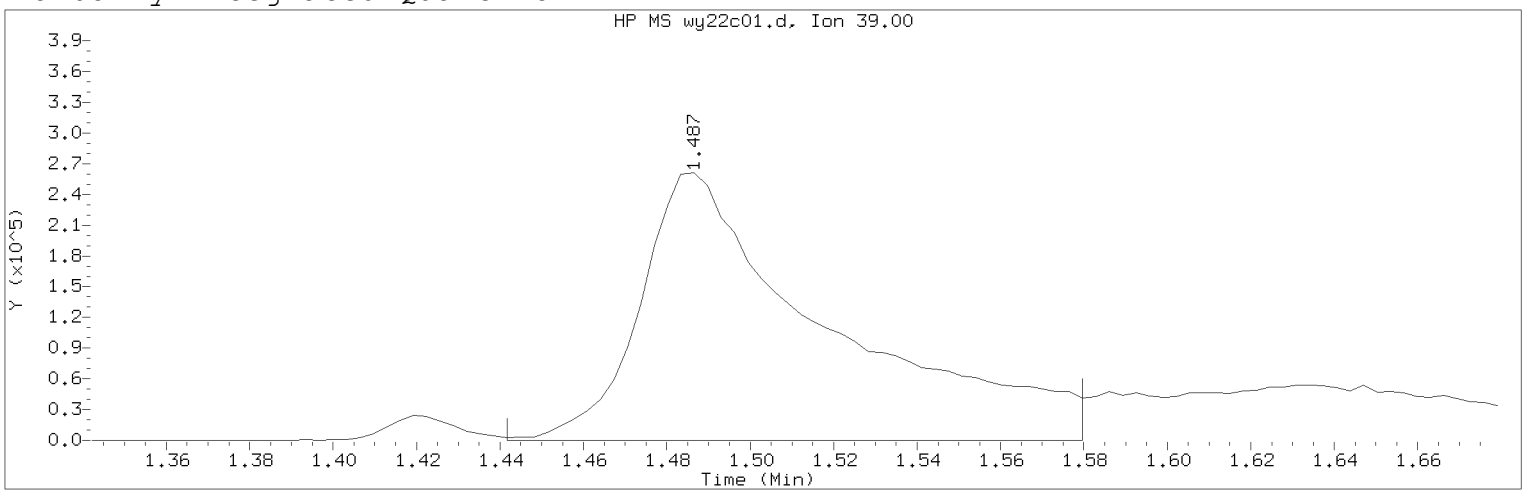
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
138) 1,4-Diethylbenzene	(4)	10.301	119	2489757	151.977
140) n-Butylbenzene	(4)	10.318	92	1888116	153.722
139) 1,2-Dichlorobenzene	(4)	10.327	146	2146316	161.050
141) 1,2-Diethylbenzene	(4)	10.382	119	2002984	155.154
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	327765	151.820
145) 1,3,5-Trichlorobenzene	(4)	11.011	180	1504270	147.198
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	1444396	147.217
148) Hexachlorobutadiene	(4)	11.530	225	540030	154.540
149) Naphthalene	(4)	11.582	128	4955342	149.268
150) 1,2,3-Trichlorobenzene	(4)	11.739	180	1385036	144.631
109) Xylene (Total)	(3)		106	5293099	498.617
151) 2-Methylnaphthalene	(4)	12.304	142	2496625	131.818
142) Diethylbenzene (total)	(4)		100	6870789	462.652

Digitally signed by Chelsea B. Stong
on 05/22/2019 at 12:38.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22c01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 12:04 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 12:34 cbs01947

Sample Name: VSTD150 Lab Sample ID: VSTD150

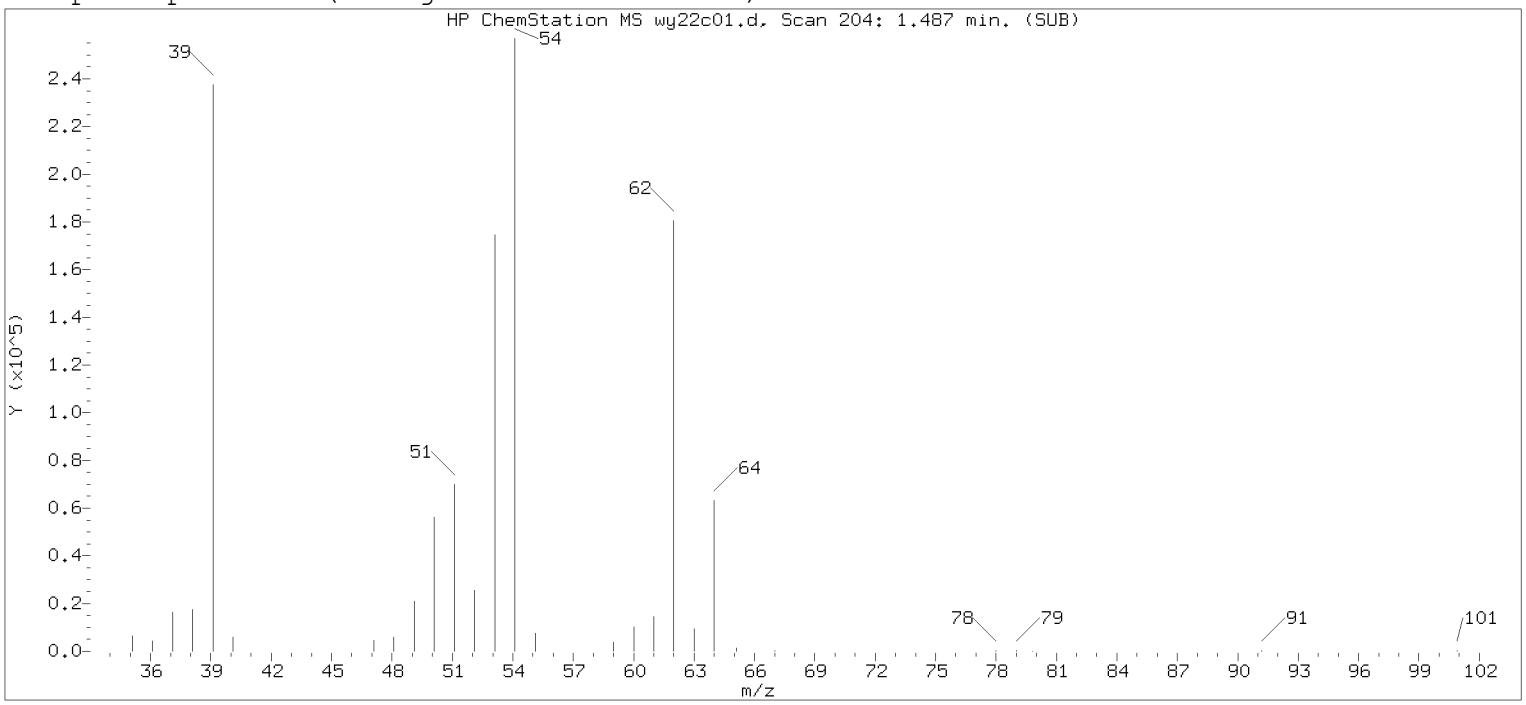
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 204
Retention Time (minutes): 1.487
Quant Ion : 39.00
Area (flag) : 815520M
On-Column Amount (ng) : 144.7024
Integration start scan : 189 Integration stop scan: 232
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

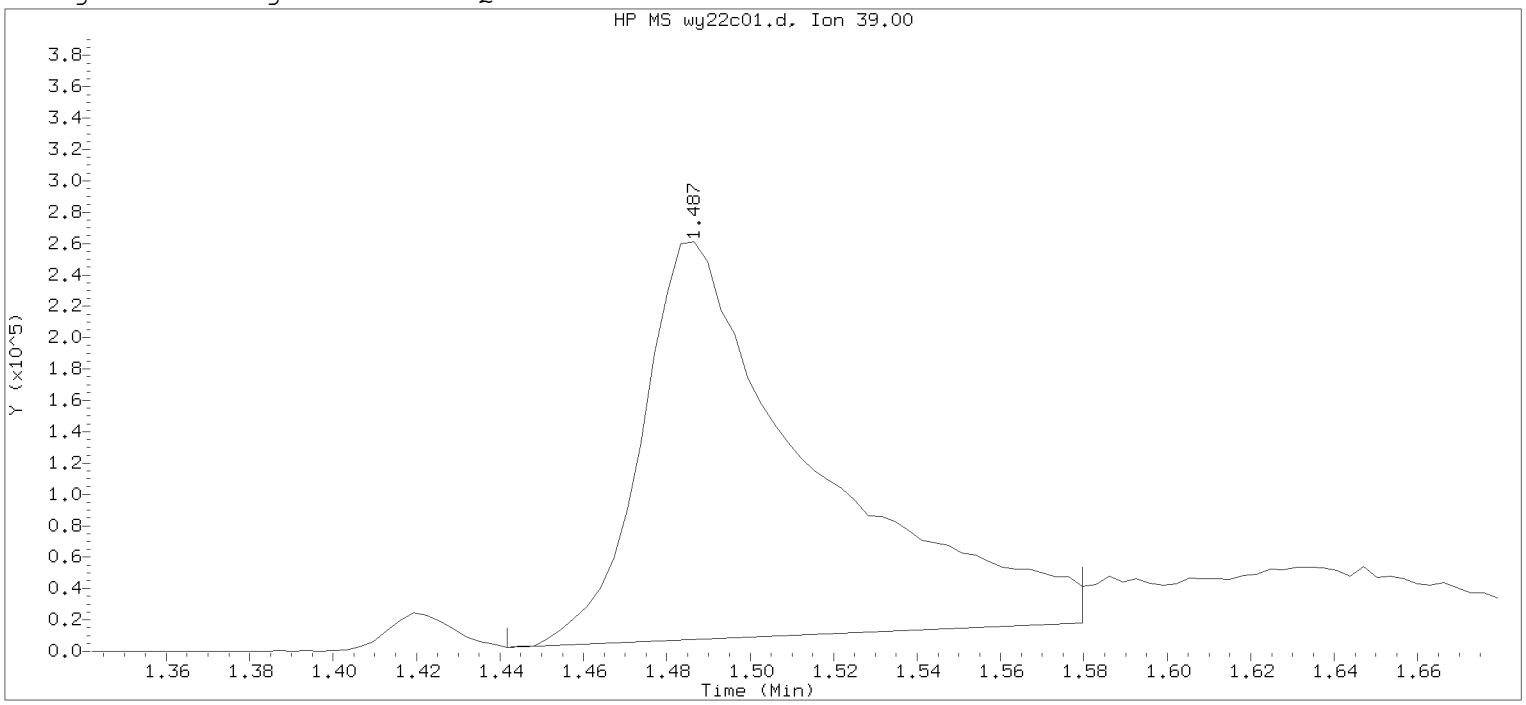
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/22/2019 at 12:38.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22c01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 12:04 Analyst ID: CBR01947

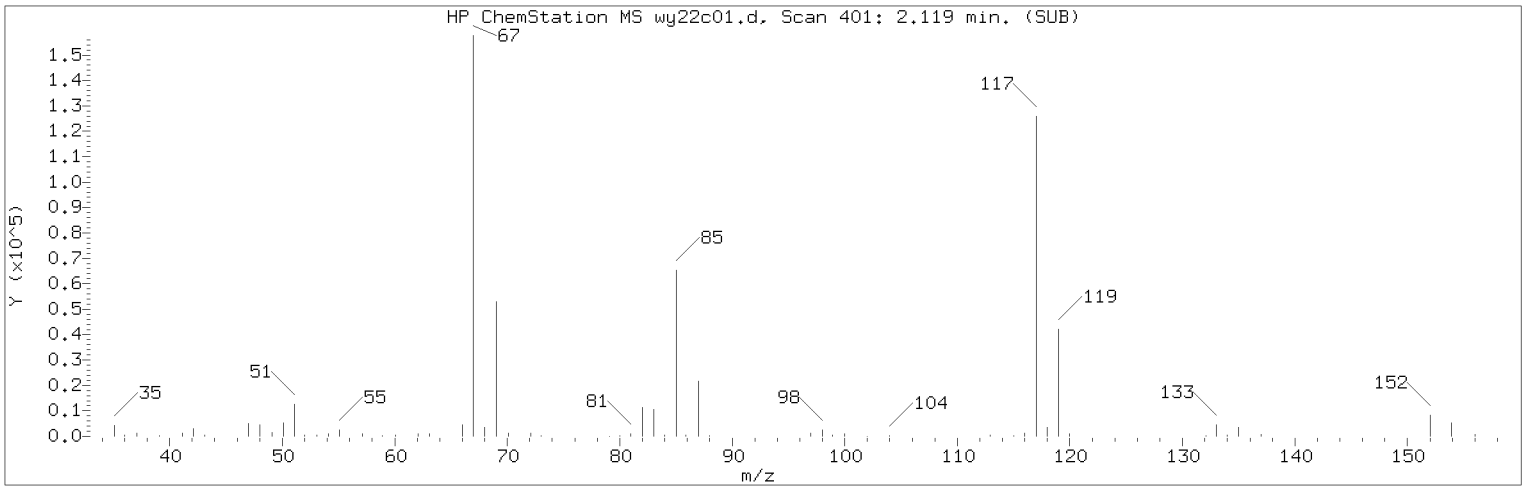
Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 12:20 Automation

Sample Name: VSTD150 Lab Sample ID: VSTD150

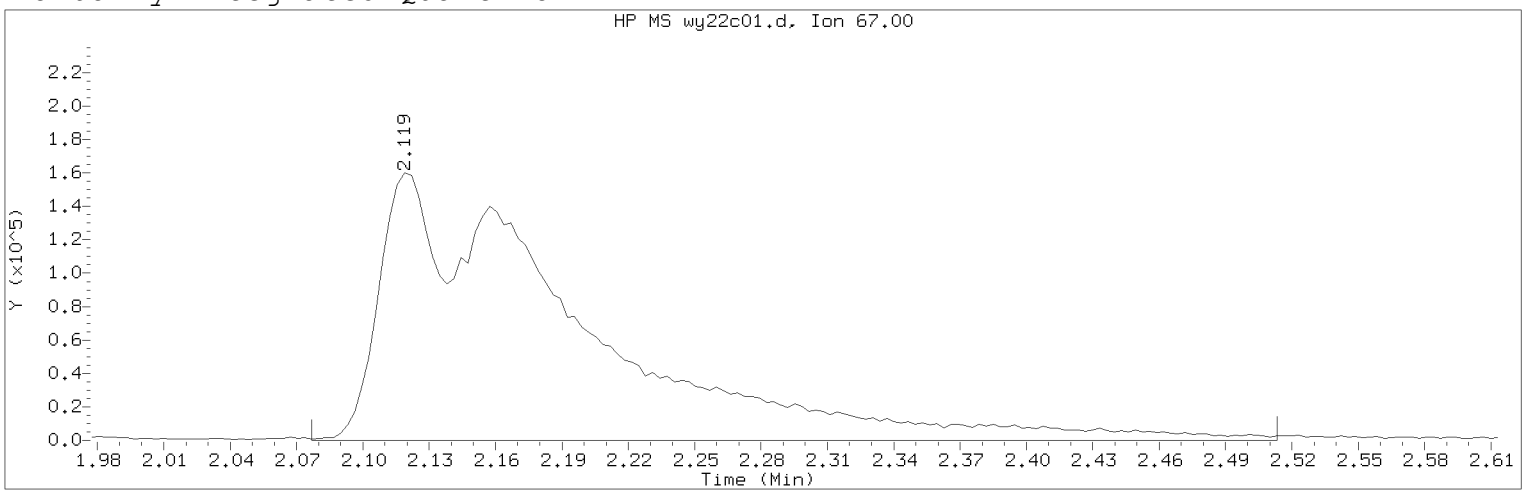
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 204
Retention Time (minutes): 1.487
Quant Ion : 39.00
Area : 727611
On-column Amount (ng) : 129.1041
Integration start scan : 189 Integration stop scan: 232
Y at integration start : 2326 Y at integration end: 17895

Digitally signed by Chelsea B. Stong on 05/22/2019 at 12:38.
Target 3.5 esignature user ID: CBR01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22c01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 12:04 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 12:34 cbs01947

Sample Name: VSTD150 Lab Sample ID: VSTD150

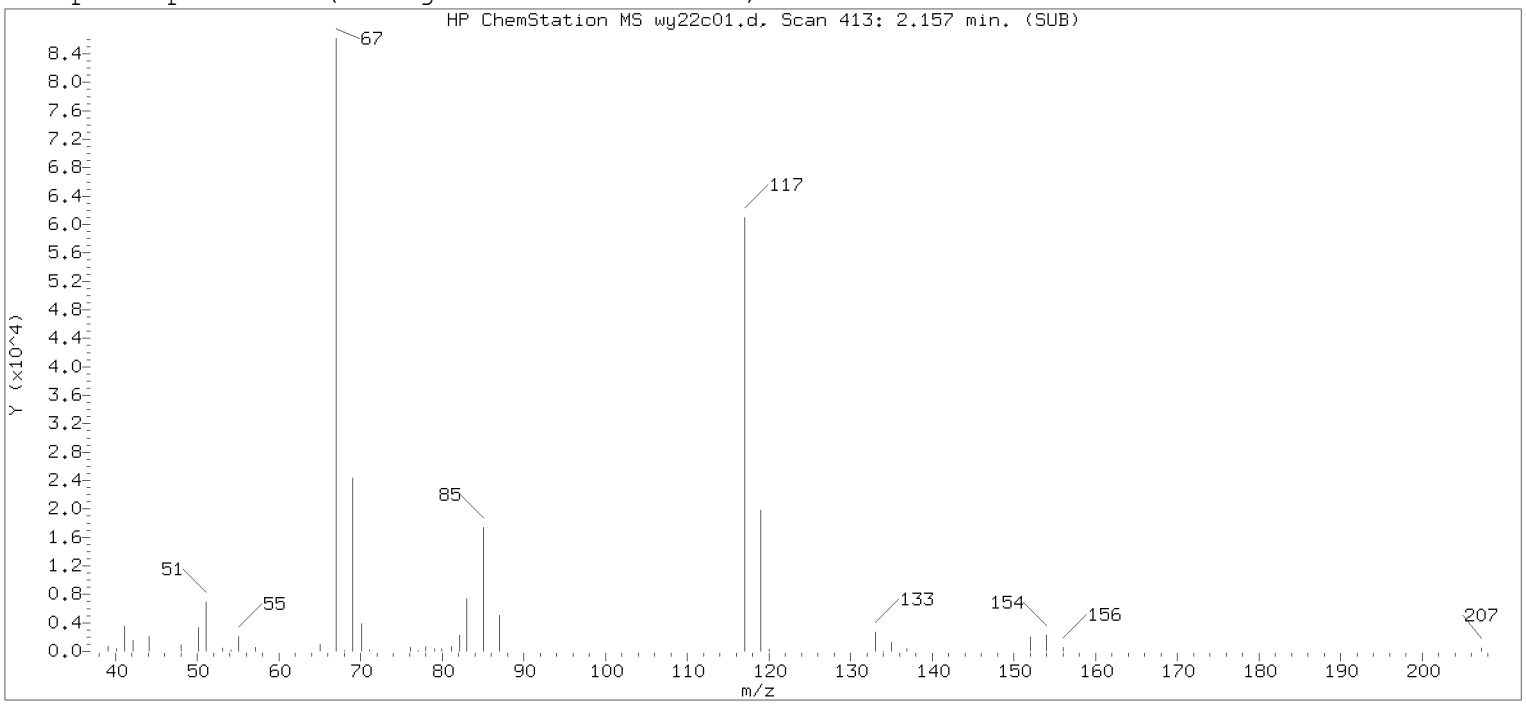
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 401
Retention Time (minutes): 2.119
Quant Ion : 67.00
Area (flag) : 992442M
On-Column Amount (ng) : 147.5039
Integration start scan : 387 Integration stop scan: 523
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

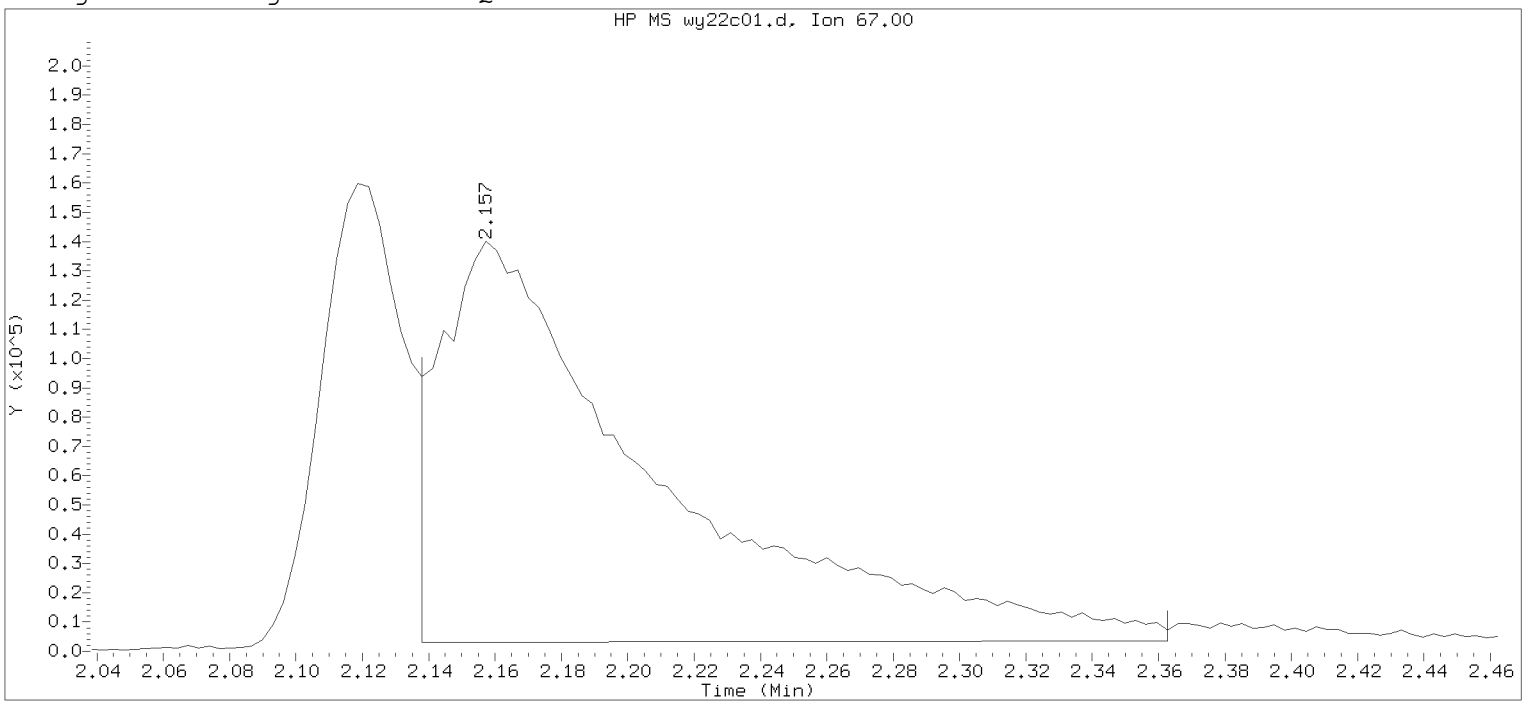
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/22/2019 at 12:38.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22c01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 12:04 Analyst ID: CBR01947

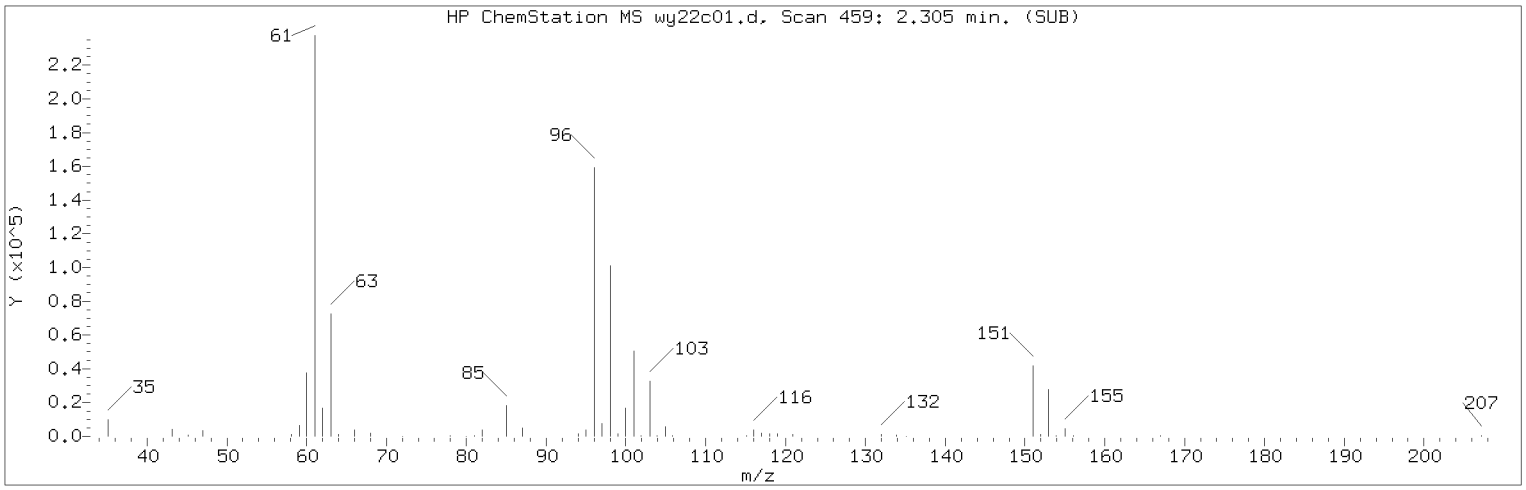
Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 12:20 Automation

Sample Name: VSTD150 Lab Sample ID: VSTD150

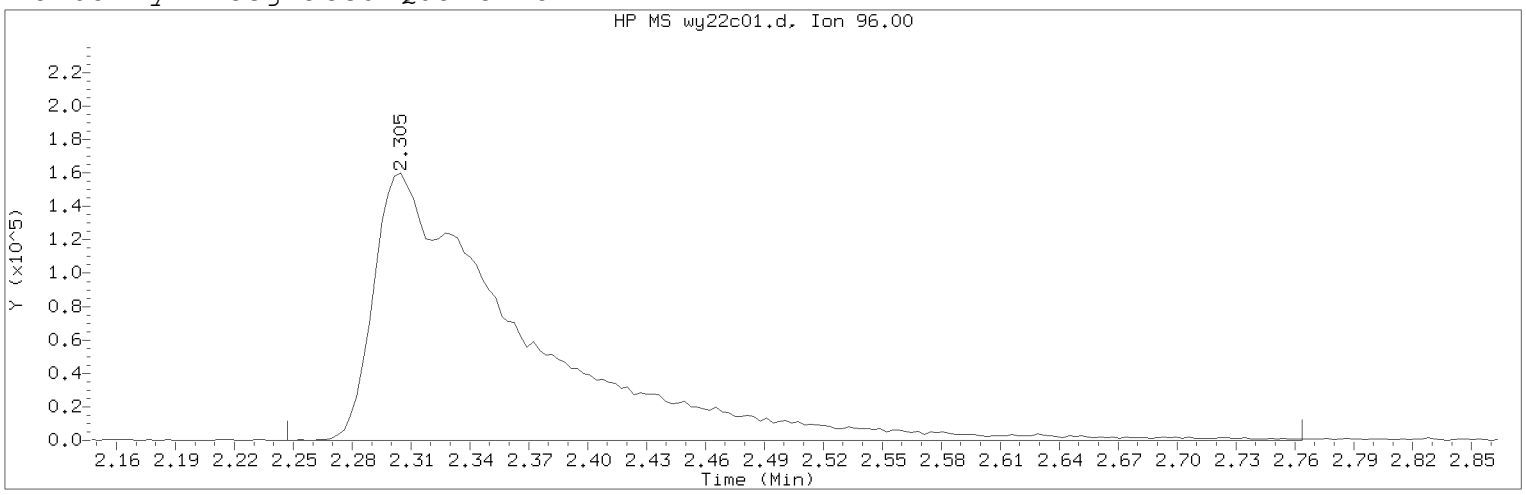
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 413
Retention Time (minutes): 2.157
Quant Ion : 67.00
Area : 620440
On-column Amount (ng) : 92.2142
Integration start scan : 406 Integration stop scan: 476
Y at integration start : 2987 Y at integration end: 3411

Digitally signed by Chelsea B. Stong on 05/22/2019 at 12:38.
Target 3.5 esignature user check passed

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22c01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 12:04 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 12:34 cbs01947

Sample Name: VSTD150 Lab Sample ID: VSTD150

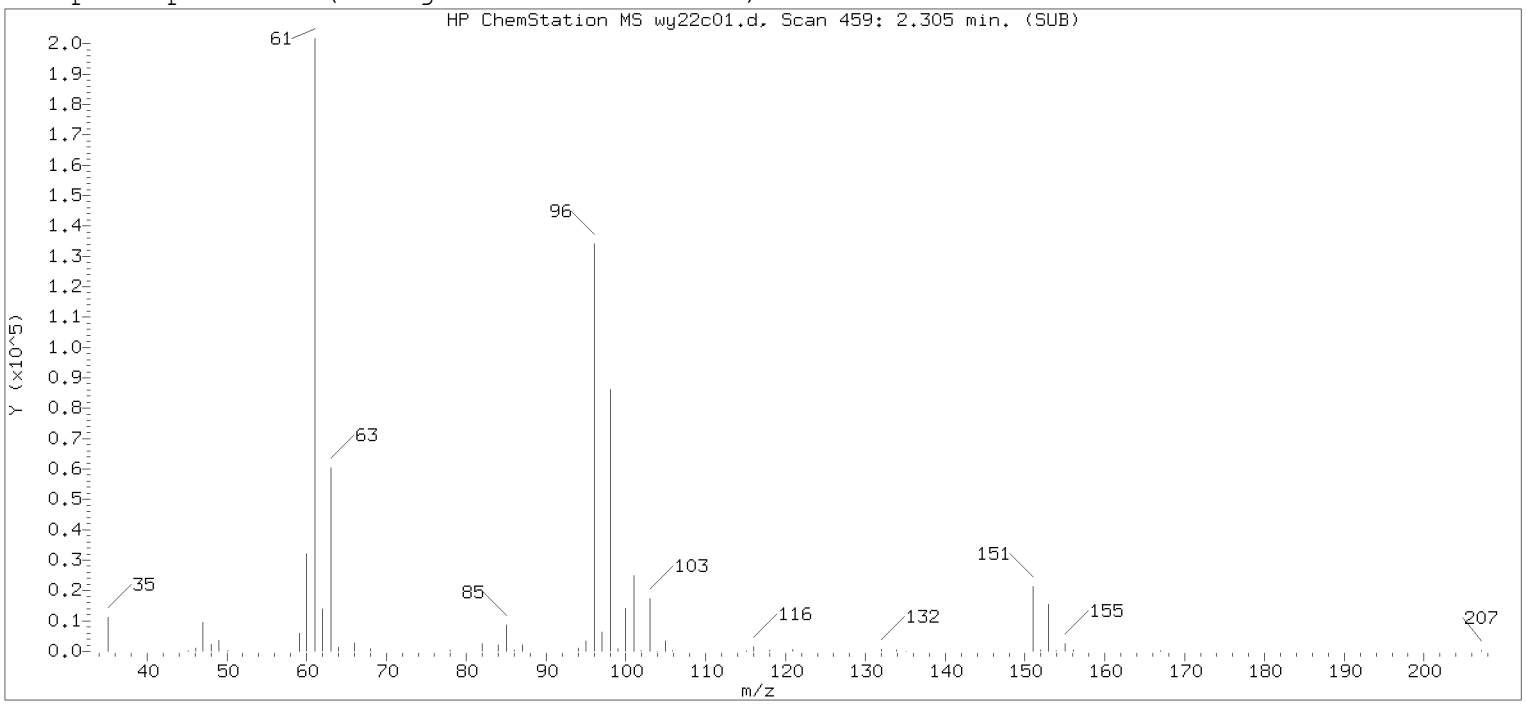
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 459
Retention Time (minutes): 2.305
Quant Ion : 96.00
Area (flag) : 846512M
On-Column Amount (ng) : 167.1607
Integration start scan : 440 Integration stop scan: 601
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

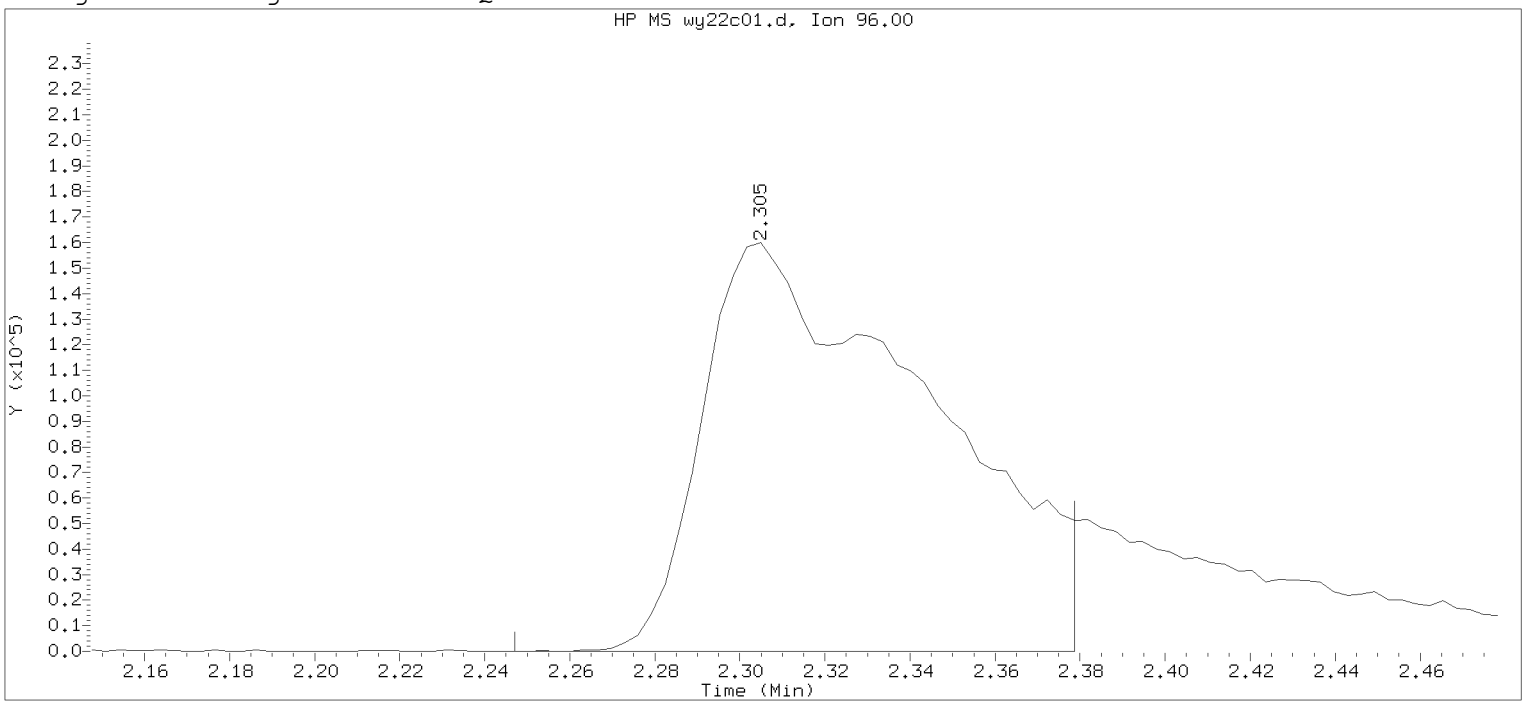
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/22/2019 at 12:38.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22c01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 12:04 Analyst ID: CBR01947

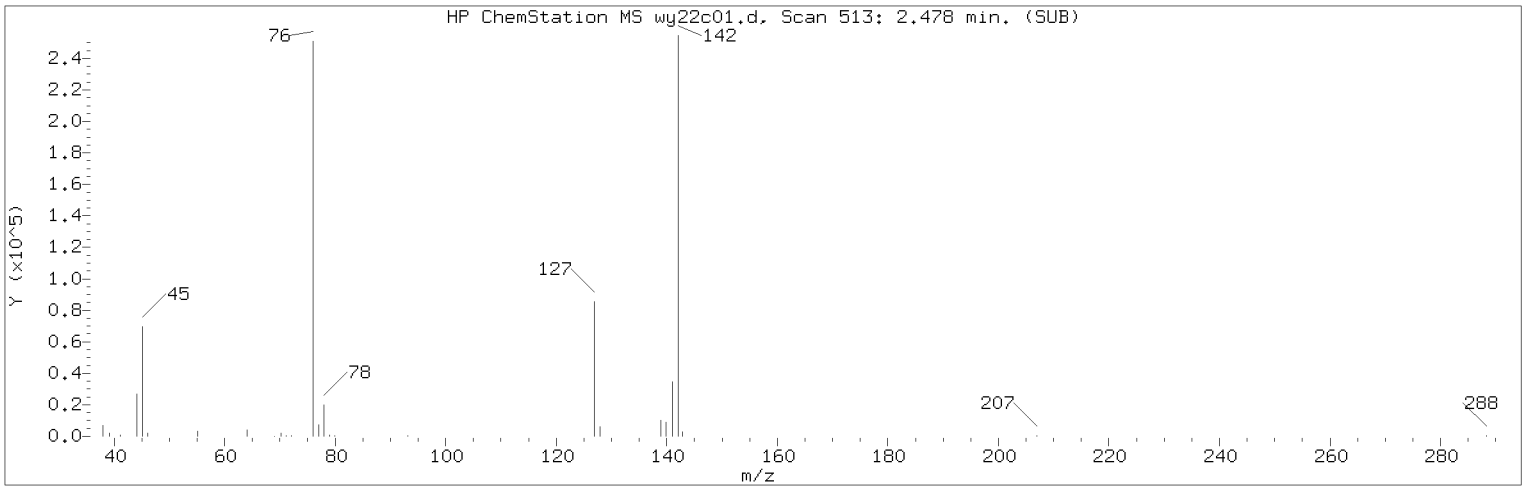
Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 12:20 Automation

Sample Name: VSTD150 Lab Sample ID: VSTD150

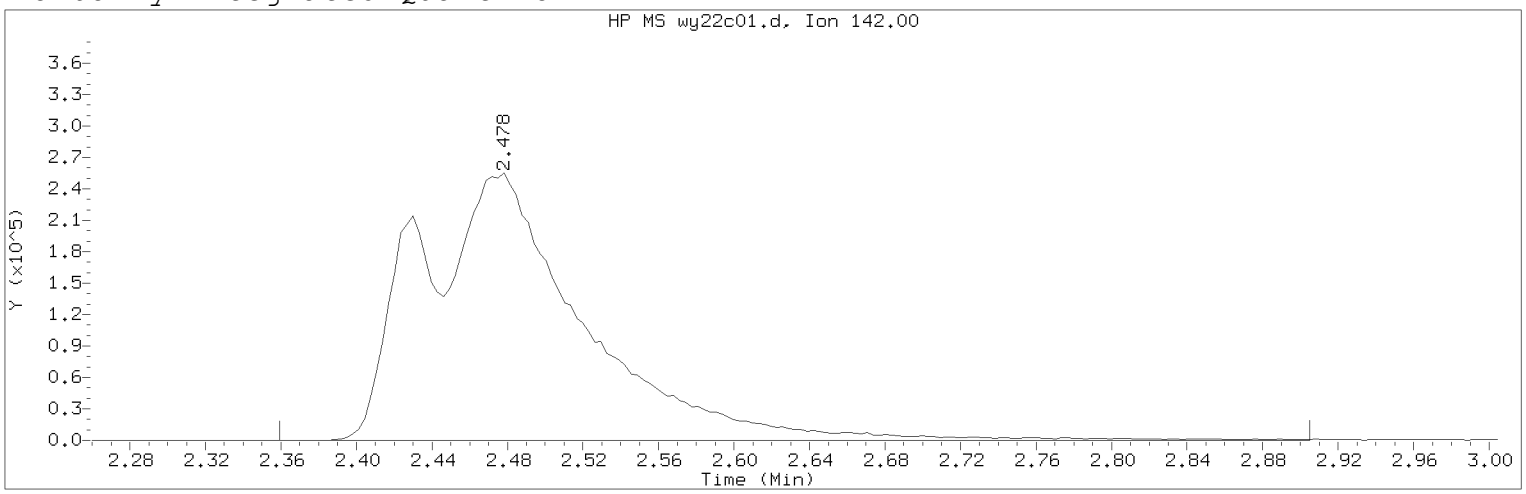
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 459
Retention Time (minutes): 2.305
Quant Ion : 96.00
Area : 595993
On-column Amount (ng) : 117.6907
Integration start scan : 440 Integration stop scan: 481
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 05/22/2019 at 12:38.
Target 3.5 esignature user ID: CBR01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22c01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 12:04 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 12:34 cbs01947

Sample Name: VSTD150 Lab Sample ID: VSTD150

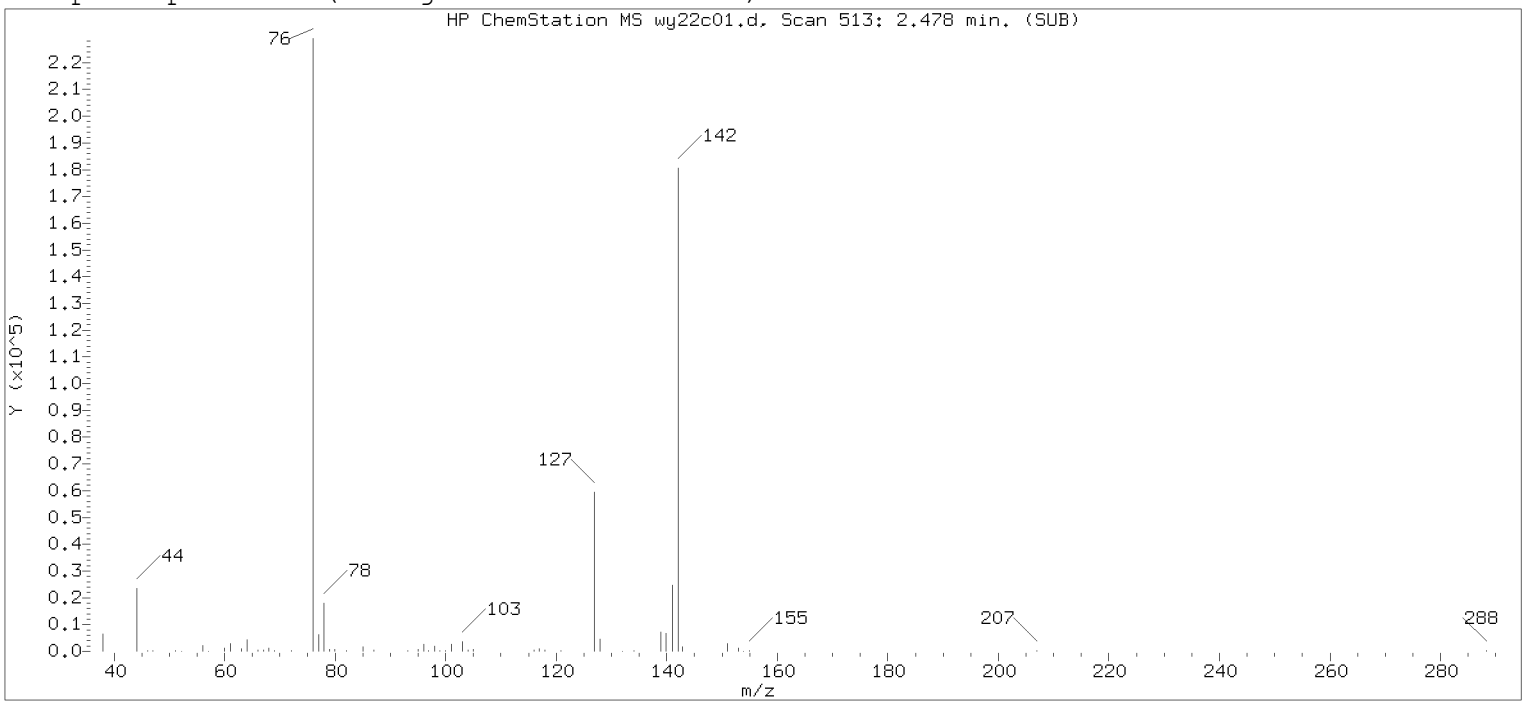
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 513
Retention Time (minutes): 2.478
Quant Ion : 142.00
Area (flag) : 1540597M
On-Column Amount (ng) : 158.7533
Integration start scan : 475 Integration stop scan: 645
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

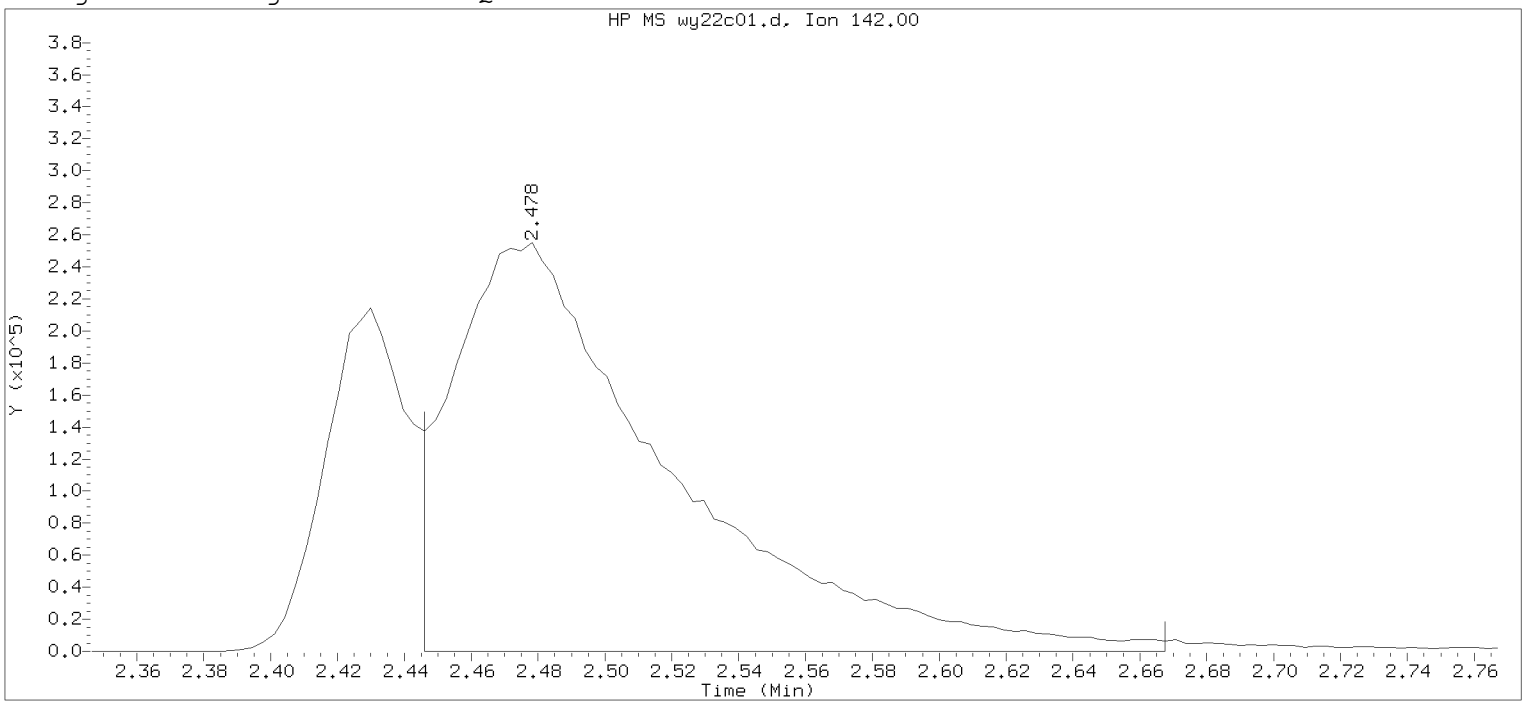
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/22/2019 at 12:38.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22c01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 12:04 Analyst ID: CBR01947

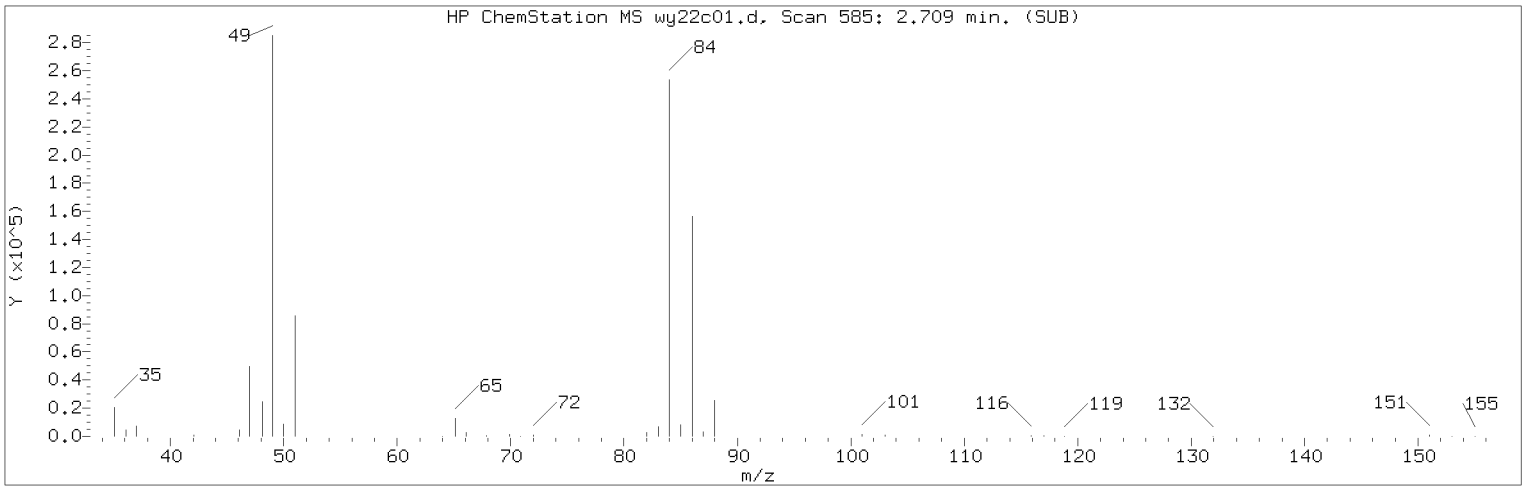
Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 12:20 Automation

Sample Name: VSTD150 Lab Sample ID: VSTD150

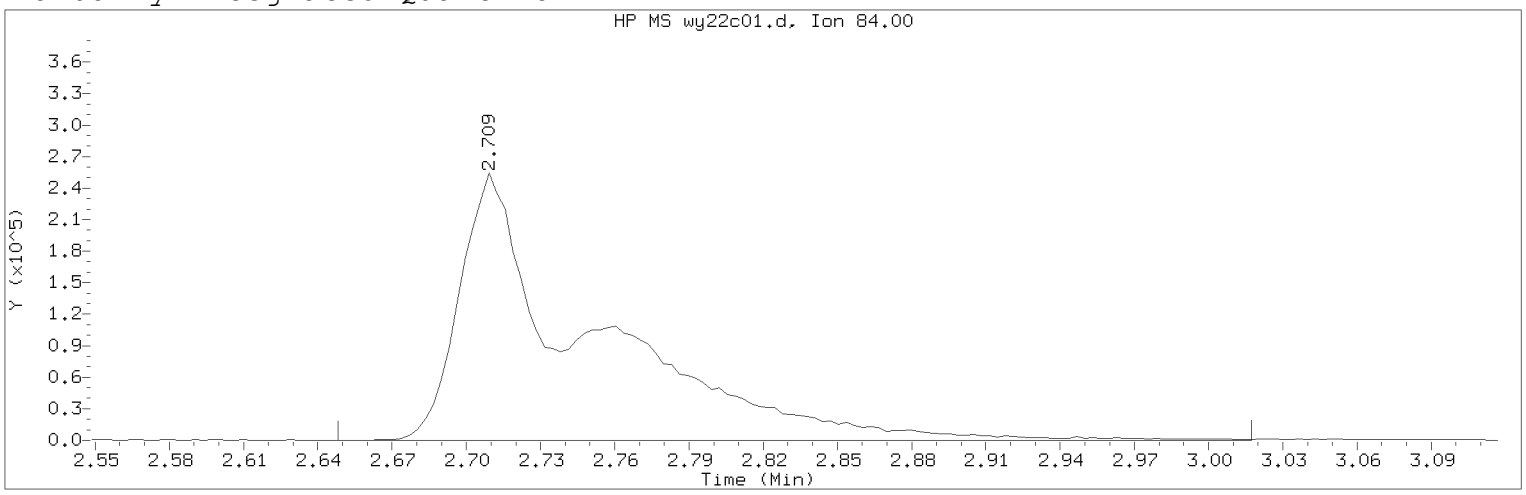
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 513
Retention Time (minutes): 2.478
Quant Ion : 142.00
Area : 1147562
On-column Amount (ng) : 118.2524
Integration start scan : 502 Integration stop scan: 571
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 05/22/2019 at 12:38.
Target 3.5 esignature user ID: CBR01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22c01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 12:04 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 12:34 cbs01947

Sample Name: VSTD150 Lab Sample ID: VSTD150

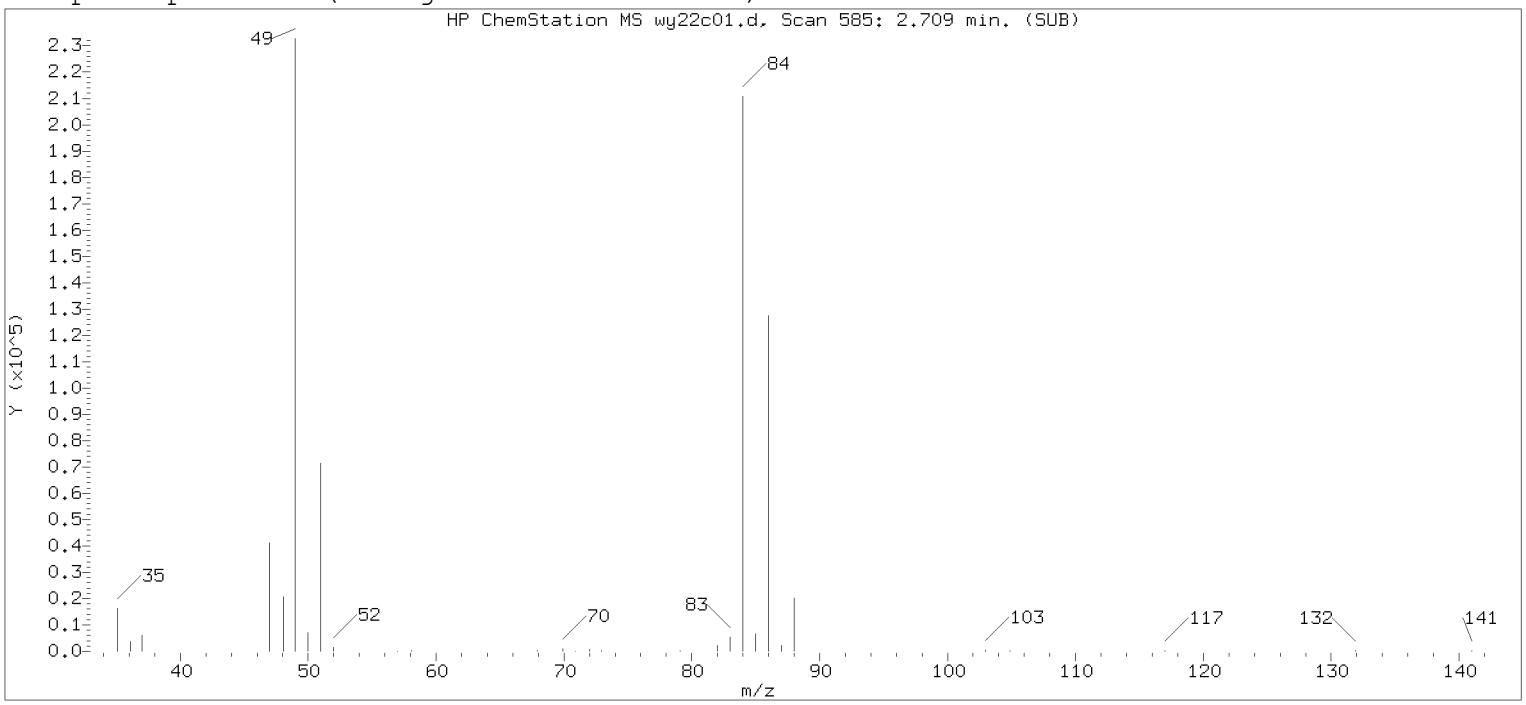
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area (flag) : 924960M
On-Column Amount (ng) : 149.4298
Integration start scan : 565 Integration stop scan: 680
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

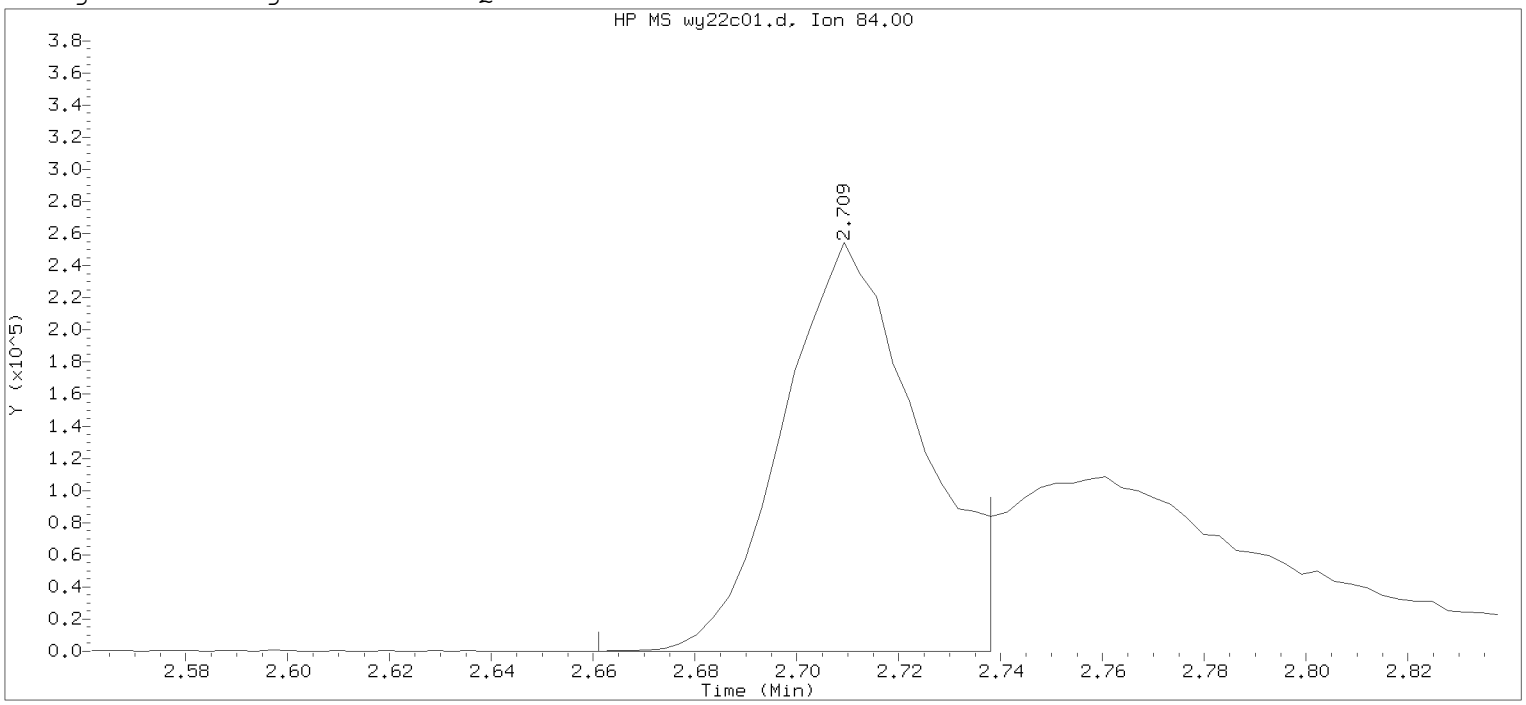
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/22/2019 at 12:38.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22c01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 12:04 Analyst ID: CBR01947

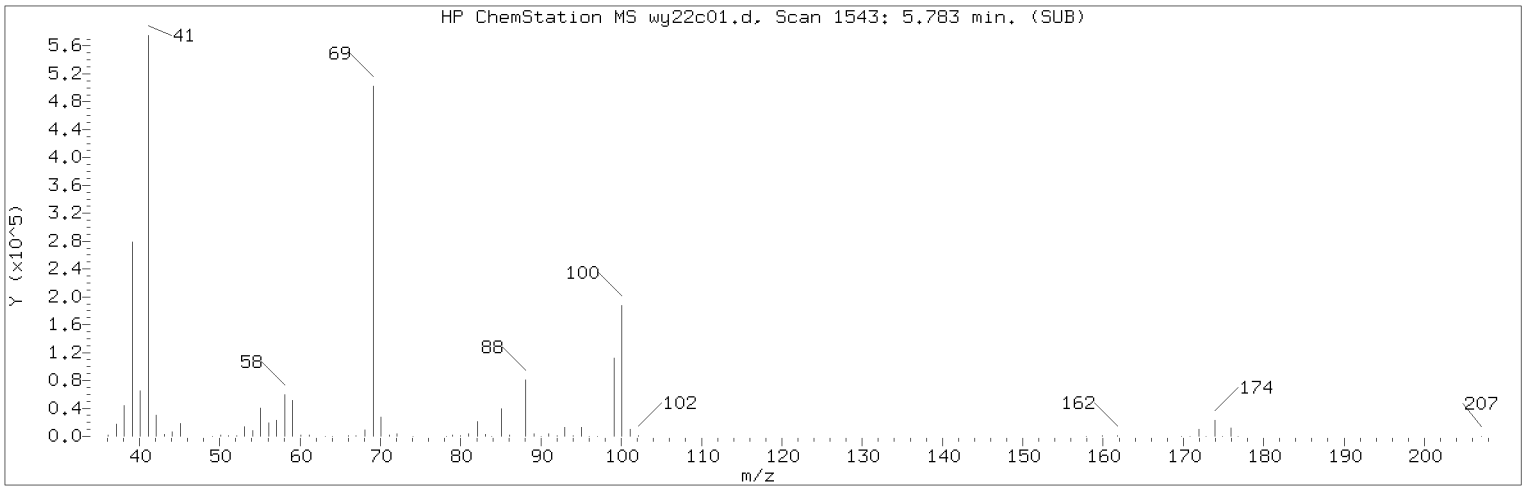
Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 12:20 Automation

Sample Name: VSTD150 Lab Sample ID: VSTD150

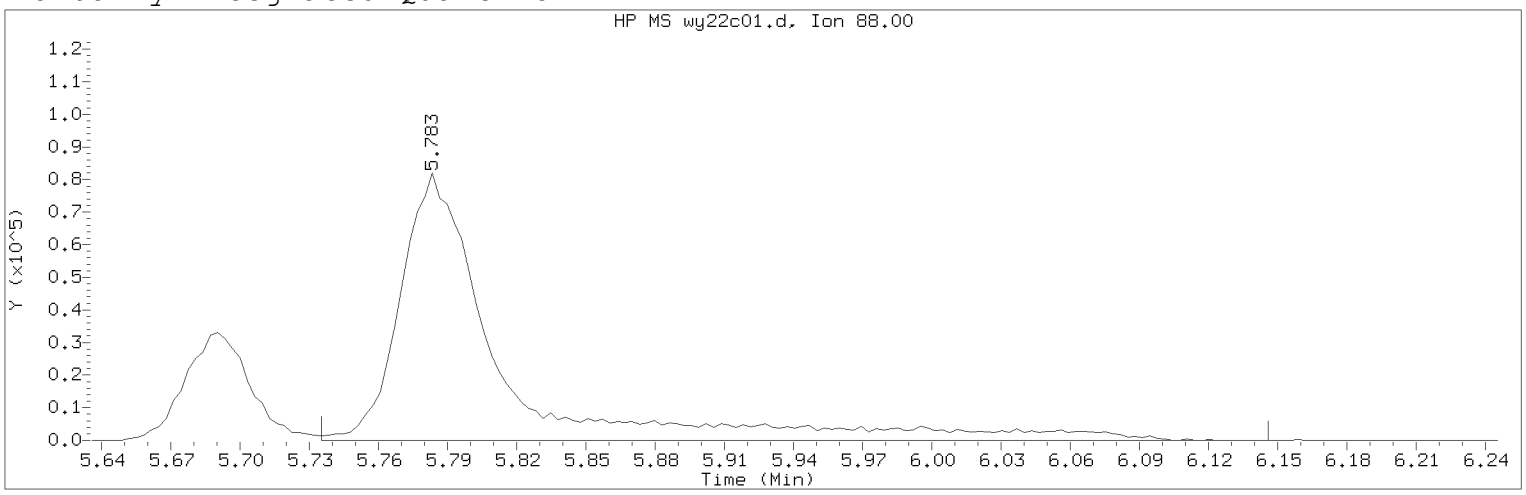
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area : 471587
On-column Amount (ng) : 76.1861
Integration start scan : 569 Integration stop scan: 593
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 05/22/2019 at 12:38.
Target 3.5 esignature user ID: cbr01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22c01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 12:04 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 12:34 cbs01947

Sample Name: VSTD150 Lab Sample ID: VSTD150

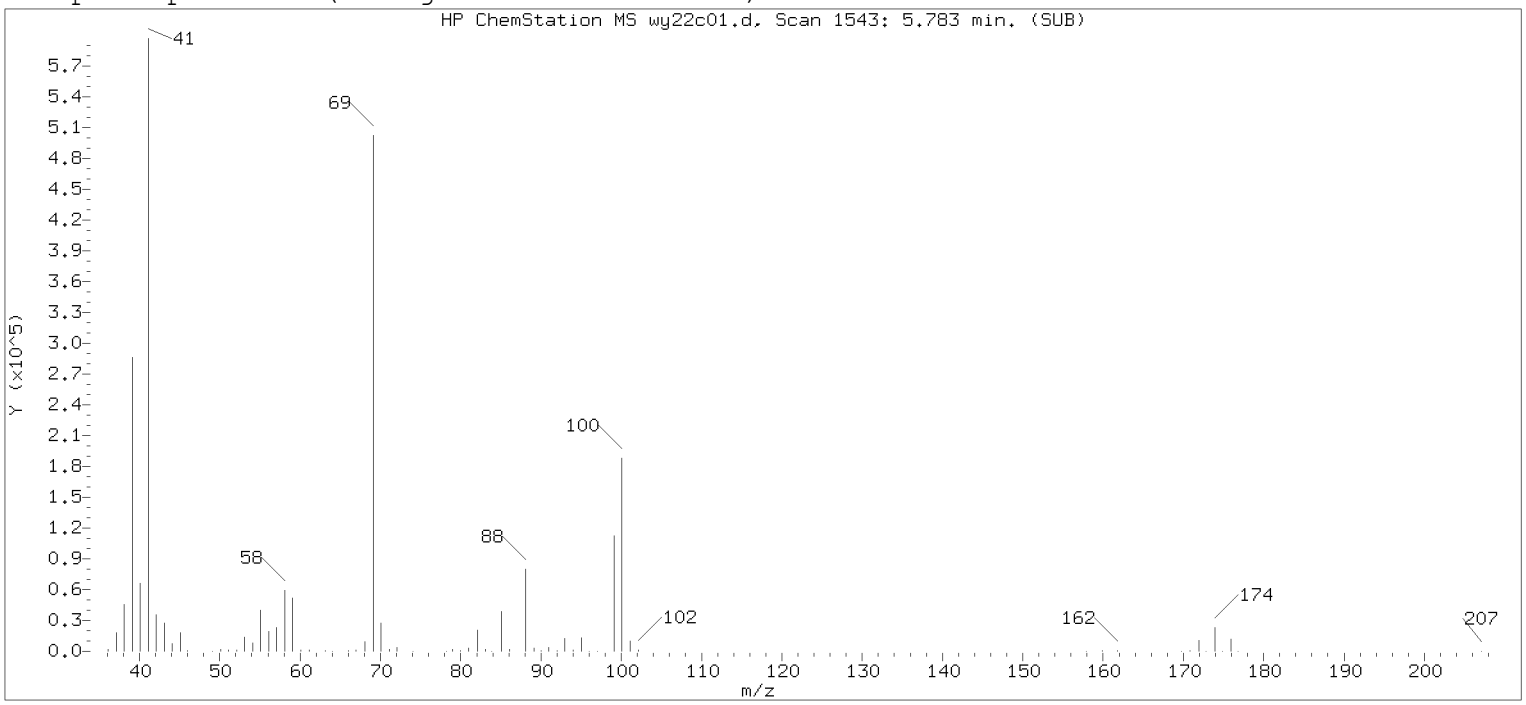
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1543
Retention Time (minutes): 5.783
Quant Ion : 88.00
Area (flag) : 246066M
On-Column Amount (ng) : 2113.9904
Integration start scan : 1527 Integration stop scan: 1655
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

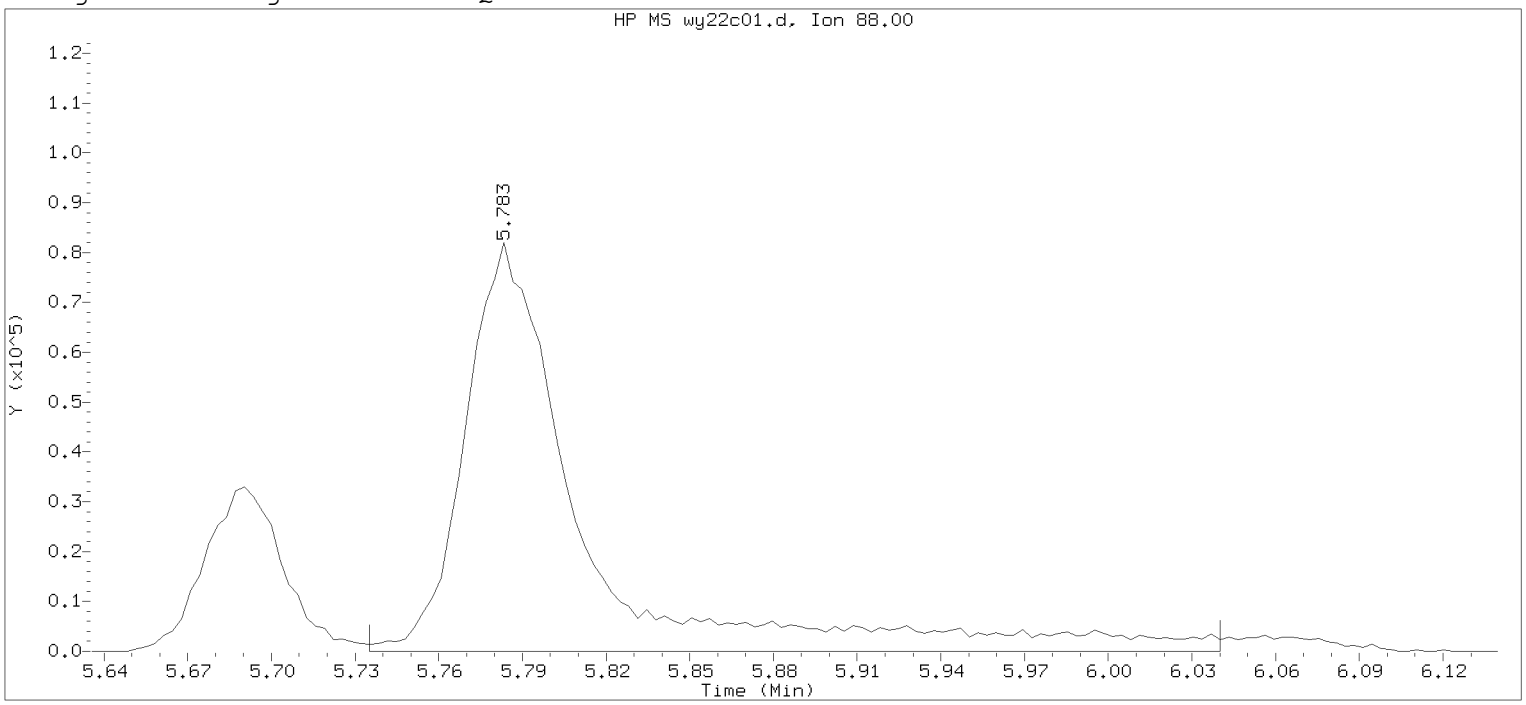
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/22/2019 at 12:38.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22c01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 12:04 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 12:20 Automation

Sample Name: VSTD150 Lab Sample ID: VSTD150

Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1543		
Retention Time (minutes)	: 5.783		
Quant Ion	: 88.00		
Area	: 238230		
On-column Amount (ng)	: 2046.6722		
Integration start scan	: 1527	Integration stop scan:	1622
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Chelsea B. Stong on 05/22/2019 at 12:38.
Target 3.5 esignature user ID: CBR01947

Data File: /chem2/HP09137.i/19may23a.b/wy23t01.d

Page 1

Date : 23-MAY-2019 05:16

Client ID: bfbfeb0519

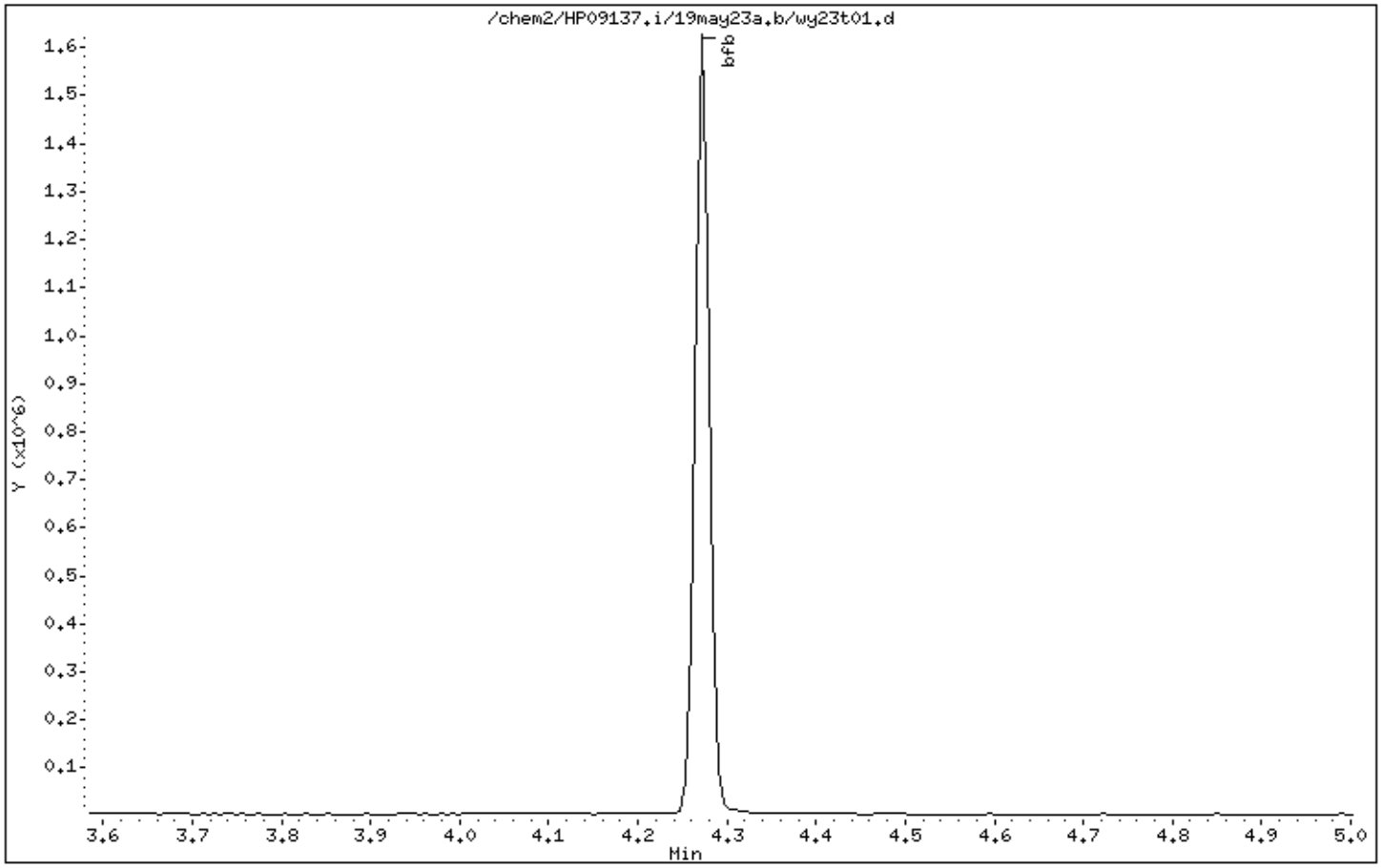
Instrument: HP09137.i

Sample Info: bfbfeb0519;50NGBFB;1;3;;;;;;

Operator: and00492

Column phase: DB-624

Column diameter: 0.18



Digitally signed by Kevin A. Sposito on 05/23/2019 at 13:27.
Target 3.5 esignature user ID: kas02648

Data File: /chem2/HP09137.i/19may23a.b/wy23t01.d

Date : 23-MAY-2019 05:16

Client ID: bfbfeb0519

Instrument: HP09137.i

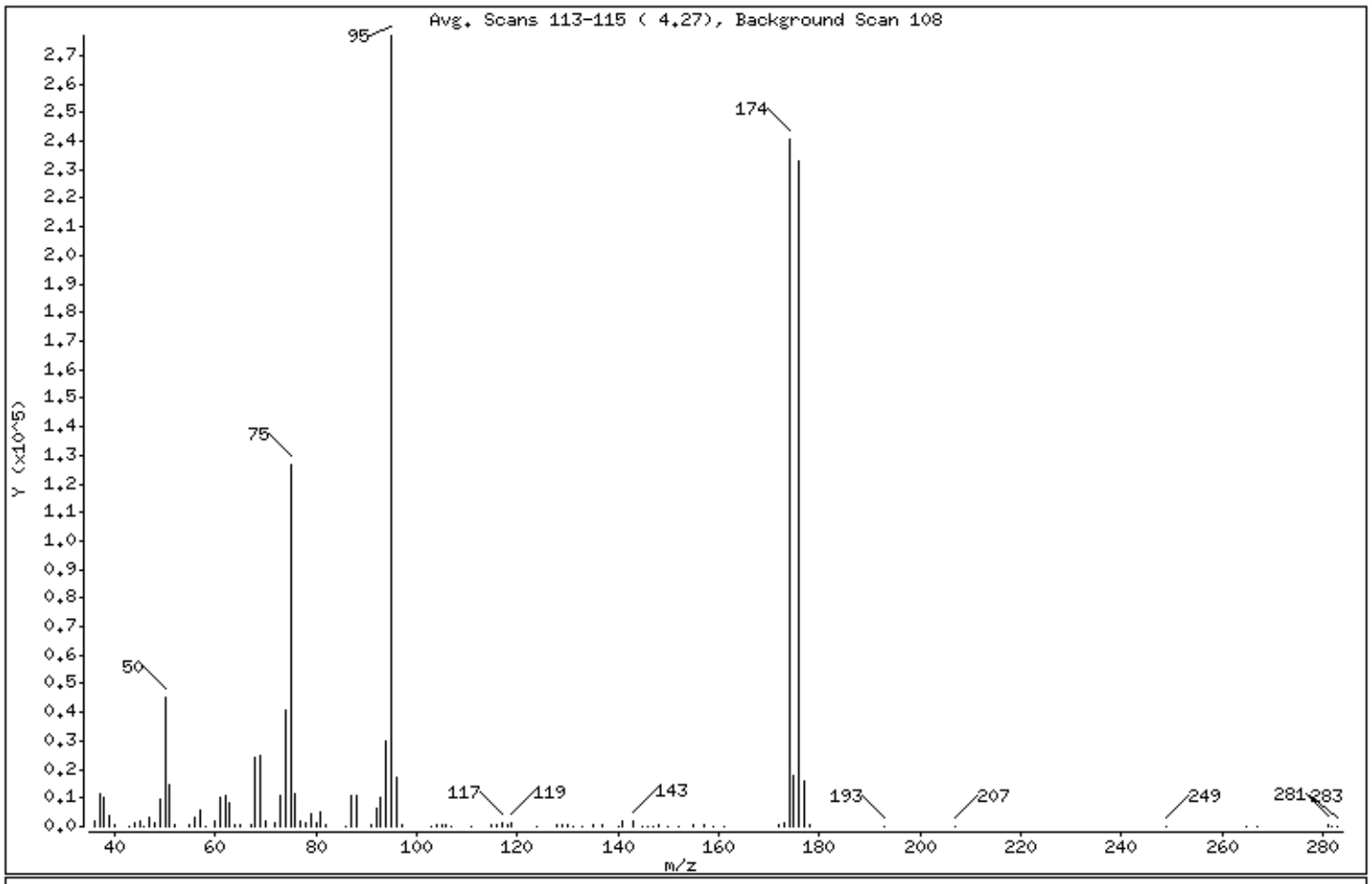
Sample Info: bfbfeb0519;50NGBFB;1;3;;;;;;

Operator: and00492

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.43
75	30.00 - 60.00% of mass 95	45.77
96	5.00 - 9.00% of mass 95	6.27
173	Less than 2.00% of mass 174	0.41 (0.47)
174	50.00 - 100.00% of mass 95	86.87
175	5.00 - 9.00% of mass 174	6.53 (7.52)
176	95.00 - 101.00% of mass 174	84.18 (96.91)
177	5.00 - 9.00% of mass 176	5.73 (6.81)

Digitally signed by Kevin A. Sposito on 05/23/2019 at 13:27.
Target 3.5 esignature user ID: kas02648

Date : 23-MAY-2019 05:16

Client ID: bfbfeb0519 Instrument: HP09137.i

Sample Info: bfbfeb0519;50NGBFB;1;3;;;;;;

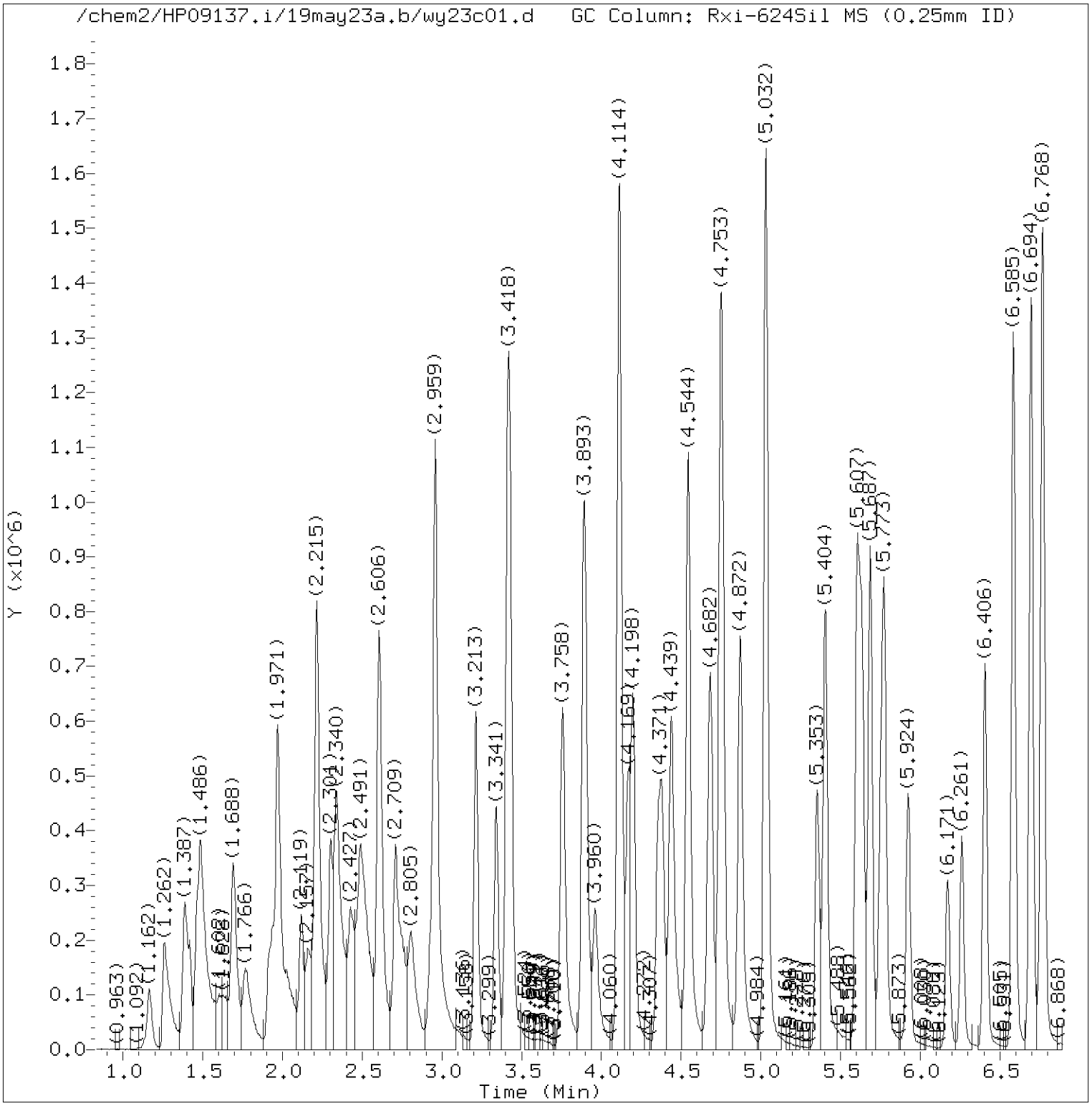
Operator: and00492

Column phase: DB-624 Column diameter: 0.18

Data File: wy23t01.d
Spectrum: Avg. Scans 113-115 (4.27), Background Scan 108
Location of Maximum: 95.00
Number of points: 97

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2216	67.00	561	103.00	107	148.00	460
37.00	11286	68.00	24488	104.00	816	150.00	131
38.00	9899	69.00	24600	105.00	367	152.00	120
39.00	4079	70.00	1712	106.00	945	155.00	616
40.00	347	72.00	1154	107.00	301	157.00	471
43.00	83	73.00	10514	111.00	182	159.00	275
44.00	1295	74.00	41048	115.00	338	161.00	115
45.00	1883	75.00	126744	116.00	693	172.00	554
46.00	111	76.00	11224	117.00	1435	173.00	1122
47.00	3089	77.00	1629	118.00	799	174.00	240512
48.00	1323	78.00	1350	119.00	1056	175.00	18088
49.00	9244	79.00	4592	124.00	106	176.00	233088
50.00	45496	80.00	1366	128.00	828	177.00	15875
51.00	14593	81.00	5263	129.00	326	178.00	535
52.00	573	82.00	809	130.00	871	193.00	79
55.00	552	86.00	90	131.00	208	207.00	214
56.00	3269	87.00	11108	133.00	39	249.00	83
57.00	5770	88.00	10830	135.00	539	265.00	87
58.00	110	91.00	699	137.00	359	267.00	97
60.00	2014	92.00	6356	140.00	105	281.00	947
61.00	10457	93.00	9883	141.00	2049	282.00	292
62.00	10676	94.00	29976	143.00	2172	283.00	136
63.00	8380	95.00	276928	145.00	157		
64.00	909	96.00	17368	146.00	240		
65.00	320	97.00	608	147.00	89		

Digitally signed by Kevin A. Sposito on 05/23/2019 at 13:27.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

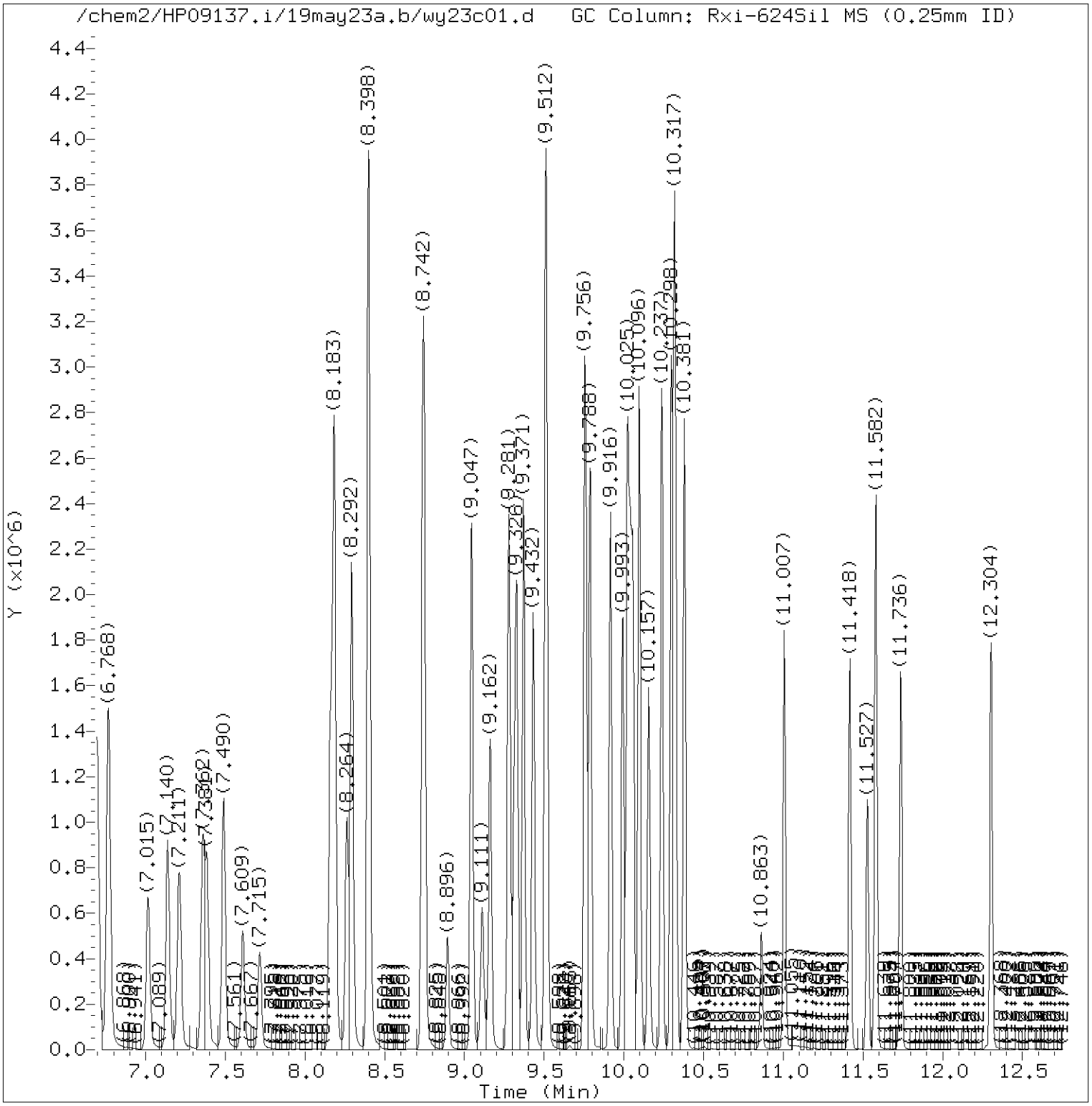
Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23c01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 05:46 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-MAY-2019 06:12
Date, time and analyst ID of latest file update: 23-May-2019 06:12 amd00492

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Don V. Viray
on 05/23/2019 at 20:18.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23c01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 05:46 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-MAY-2019 06:12
Date, time and analyst ID of latest file update: 23-May-2019 06:12 amd00492

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Don V. Viray
on 05/23/2019 at 20:18.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23c01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 05:46 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-MAY-2019 06:12
Date, time and analyst ID of latest file update: 23-May-2019 06:12 amd00492

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.258	85	408252	62.325
4) Chloromethane	(2)	1.387	50	404403	49.581
6) Vinyl Chloride	(2)	1.461	62	372617	49.834
5) 1,3-Butadiene	(2)	1.486	39	230071	46.285
8) Bromomethane	(2)	1.692	94	299163	50.731
9) Chloroethane	(2)	1.775	64	223355	45.394
12) Trichlorofluoromethane	(2)	1.936	101	427703	53.859
11) n-Pentane	(2)	1.968	43	282594	37.418
13) Ethanol	(1)	2.029	45	82630	903.245
15) Freon 123a	(2)	2.119	67	293325M	49.429
16) Acrolein	(1)	2.218	56	726443	503.051
17) 1,1-Dichloroethene	(2)	2.301	96	234086	52.410
17) 1,1-Dichloroethene	(2)	2.301	63	116221	51.576
18) Acetone	(1)	2.340	58	85919	122.406
19) Freon 113	(2)	2.343	101	171988	43.851
22) Methyl Iodide	(2)	2.427	142	447402M	52.272
21) 2-Propanol	(1)	2.446	45	130093	249.456
23) Carbon Disulfide	(2)	2.497	76	695240	44.183
25) Allyl Chloride	(2)	2.603	41	426105	54.762
27) Methyl Acetate	(2)	2.619	43	322870	47.939
28) Methylene Chloride	(2)	2.712	84	280138M	51.312
29)*t-Butyl alcohol-d10	(1)	2.735	65	200586	250.000
30) t-Butyl alcohol	(1)	2.808	59	237027	254.789
31) Acrylonitrile	(2)	2.924	53	169324	47.789
32) trans-1,2-Dichloroethene	(2)	2.959	96	253898	52.393
33) Methyl Tertiary Butyl Ether	(2)	2.962	73	693858	58.804
34) n-Hexane	(2)	3.216	57	298253	45.997
36) 1,1-Dichloroethane	(2)	3.341	63	462818	52.706
38) di-Isopropyl ether	(2)	3.412	45	889013	52.698
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	417681	54.919
40) Ethyl t-butyl ether	(2)	3.755	59	669940	54.480
42) cis-1,2-Dichloroethene	(2)	3.890	96	280830	51.613
45) 2,2-Dichloropropane	(2)	3.890	77	186801	47.367
44) 2-Butanone	(2)	3.906	43	452593	88.911
47) Propionitrile	(1)	3.964	54	333035	288.043
48) Methacrylonitrile	(2)	4.111	67	446511	117.207
49) Bromochloromethane	(2)	4.121	128	160144	56.621
50) Tetrahydrofuran	(1)	4.166	71	127239	118.904

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 05/23/2019 at 20:18.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23c01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 05:46 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-MAY-2019 06:12
Date, time and analyst ID of latest file update: 23-May-2019 06:12 amd00492

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	4.198	83	441815	53.624
52)$Dibromofluoromethane	(2)	4.355	113	225076	47.958
52)$Dibromofluoromethane	(2)	4.355	111	232613	48.282
53) 1,1,1-Trichloroethane	(2)	4.378	97	326963	52.742
54) Cyclohexane	(2)	4.439	56	382984	46.682
54) Cyclohexane	(2)	4.442	84	296721	43.693
54) Cyclohexane	(2)	4.439	69	115012	46.646
55) 1,1-Dichloropropene	(2)	4.544	75	347703	52.638
56) Carbon Tetrachloride	(2)	4.544	117	277304	52.124
58) Isobutyl Alcohol	(1)	4.676	41	231727	683.257
57)$1,2-Dichloroethane-d4	(2)	4.692	102	61800	49.512
57)$1,2-Dichloroethane-d4	(2)	4.686	65	269075	49.522
57)$1,2-Dichloroethane-d4	(2)	4.689	104	39111	49.203
60) Benzene	(2)	4.750	78	1097981	51.712
61) 1,2-Dichloroethane	(2)	4.766	62	346262	52.792
61) 1,2-Dichloroethane	(2)	4.766	98	34681	55.576
65) t-Amyl methyl ether	(2)	4.872	73	648207	51.454
66)*Fluorobenzene	(2)	5.029	96	1013024	50.000
67) n-Heptane	(2)	5.032	43	292139	47.141
69) n-Butanol	(1)	5.353	56	376721	1251.038
71) Trichloroethene	(2)	5.404	95	269897	52.490
73) Methylcyclohexane	(2)	5.607	83	413361	55.374
73) Methylcyclohexane	(2)	5.607	98	197537	56.912
74) 1,2-Dichloropropane	(2)	5.635	63	284754	52.237
75) Dibromomethane	(2)	5.751	93	176730	52.531
77) Methyl Methacrylate	(2)	5.773	69	285640	47.682
76) 1,4-Dioxane	(1)	5.780	88	56623MA	628.993
79) Bromodichloromethane	(2)	5.924	83	325236	52.615
43) 1,2-Dichloroethene (Total)	(2)		96	534728	104.006
80) 2-Nitropropane	(2)	6.175	41	204230	97.650
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	177617	42.738
82) cis-1,3-Dichloropropene	(2)	6.406	75	437056	51.424
83) 4-Methyl-2-pentanone	(2)	6.585	43	945465	94.223
84)$Toluene-d8	(3)	6.694	98	1010705	52.149
84)$Toluene-d8	(3)	6.694	100	660918	51.422
89) Toluene	(3)	6.765	92	713283	57.131
90) trans-1,3-Dichloropropene	(3)	7.015	75	395998	53.279
92) Ethyl Methacrylate	(3)	7.140	69	507766	55.597

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/23/2019 at 20:18.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23c01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 05:46 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-MAY-2019 06:12
Date, time and analyst ID of latest file update: 23-May-2019 06:12 amd00492

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) 1,1,2-Trichloroethane	(3)	7.211	97	271288	56.456
94) Tetrachloroethene	(3)	7.359	166	285472	56.349
95) 1,3-Dichloropropane	(3)	7.384	76	470412	56.361
97) 2-Hexanone	(3)	7.490	43	717762	98.717
98) Dibromochloromethane	(3)	7.609	129	266629	56.810
100) 1,2-Dibromoethane	(3)	7.715	107	296588	56.178
101)*Chlorobenzene-d5	(3)	8.161	117	773452	50.000
103) Chlorobenzene	(3)	8.187	112	781720	56.441
104) 1,1,1,2-Tetrachloroethane	(3)	8.264	131	251387	56.480
105) Ethylbenzene	(3)	8.292	91	1323506	55.776
107) m+p-Xylene	(3)	8.398	106	1060255	112.380
108) o-Xylene	(3)	8.738	106	517567	55.763
110) Styrene	(3)	8.748	104	886557	56.940
111) Bromoform	(3)	8.896	173	195596	53.548
112) Isopropylbenzene	(3)	9.047	105	1265311	55.478
113) Cyclohexanone	(1)	9.111	55	242912	598.192
115)$4-Bromofluorobenzene	(3)	9.162	95	372655	48.062
115)$4-Bromofluorobenzene	(3)	9.162	174	326685	49.931
116) Bromobenzene	(4)	9.278	156	347457	55.217
117) 1,1,2,2-Tetrachloroethane	(4)	9.281	83	453479	53.440
118) 1,2,3-Trichloropropane	(4)	9.313	110	135972	53.197
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	296738	109.047
120) n-Propylbenzene	(4)	9.371	91	1478433	53.296
121) 2-Chlorotoluene	(4)	9.432	126	311902	54.512
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	1063854	53.177
122) 4-Chlorotoluene	(4)	9.518	126	334768	54.655
125) tert-Butylbenzene	(4)	9.756	134	239213	52.629
126) Pentachloroethane	(4)	9.765	167	210844	58.680
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	1125977	53.410
128) sec-Butylbenzene	(4)	9.916	105	1255388	51.121
130) 1,3-Dichlorobenzene	(4)	9.993	146	641459	53.458
131) p-Isopropyltoluene	(4)	10.022	119	1116233	51.348
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	436881	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	661562	53.182
91) 1,3-Dichloropropene (total)	(3)		100	833054	104.703
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	1268379	55.918
136) Benzyl Chloride	(4)	10.157	91	873777	50.184
137) 1,3-Diethylbenzene	(4)	10.237	119	727347	53.250

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/23/2019 at 20:18.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23c01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 05:46 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-MAY-2019 06:12
Date, time and analyst ID of latest file update: 23-May-2019 06:12 amd00492

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
138) 1,4-Diethylbenzene	(4)	10.298	119	762143	52.079
140) n-Butylbenzene	(4)	10.314	92	548013	49.947
139) 1,2-Dichlorobenzene	(4)	10.324	146	646166	54.278
141) 1,2-Diethylbenzene	(4)	10.381	119	616590	53.468
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	93050	48.249
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	434998	47.651
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	411048	46.900
148) Hexachlorobutadiene	(4)	11.527	225	156895	50.262
149) Naphthalene	(4)	11.582	128	1423207	47.992
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	397661	46.486
109) Xylene (Total)	(3)		106	1577822	168.143
151) 2-Methylnaphthalene	(4)	12.304	142	637717	37.693
142) Diethylbenzene (total)	(4)		100	2106080	158.797

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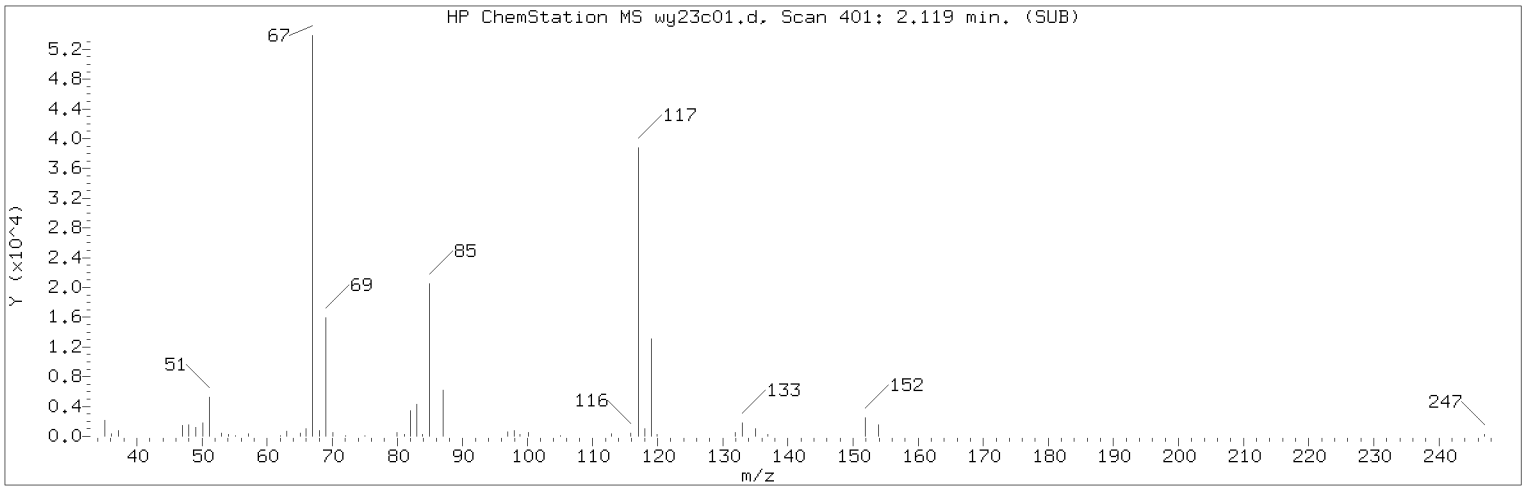
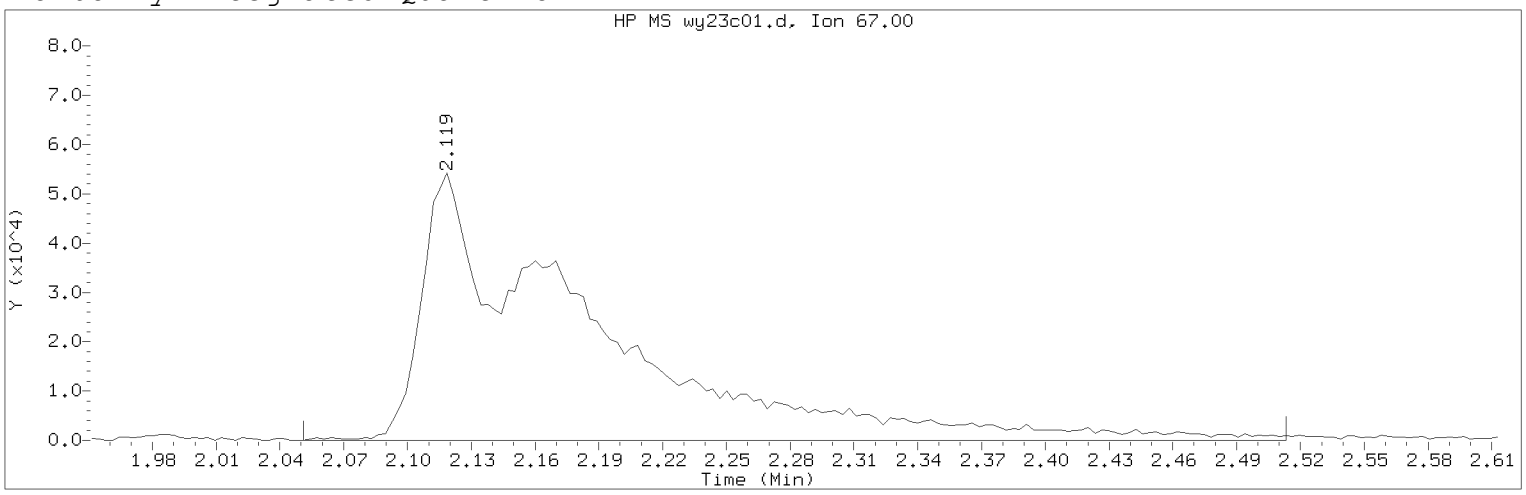
on 05/23/2019 at 20:18.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23c01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 05:46 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-MAY-2019 06:12
Date, time and analyst ID of latest file update: 23-May-2019 06:12 amd00492

Sample Name: VSTD050 Lab Sample ID: VSTD050

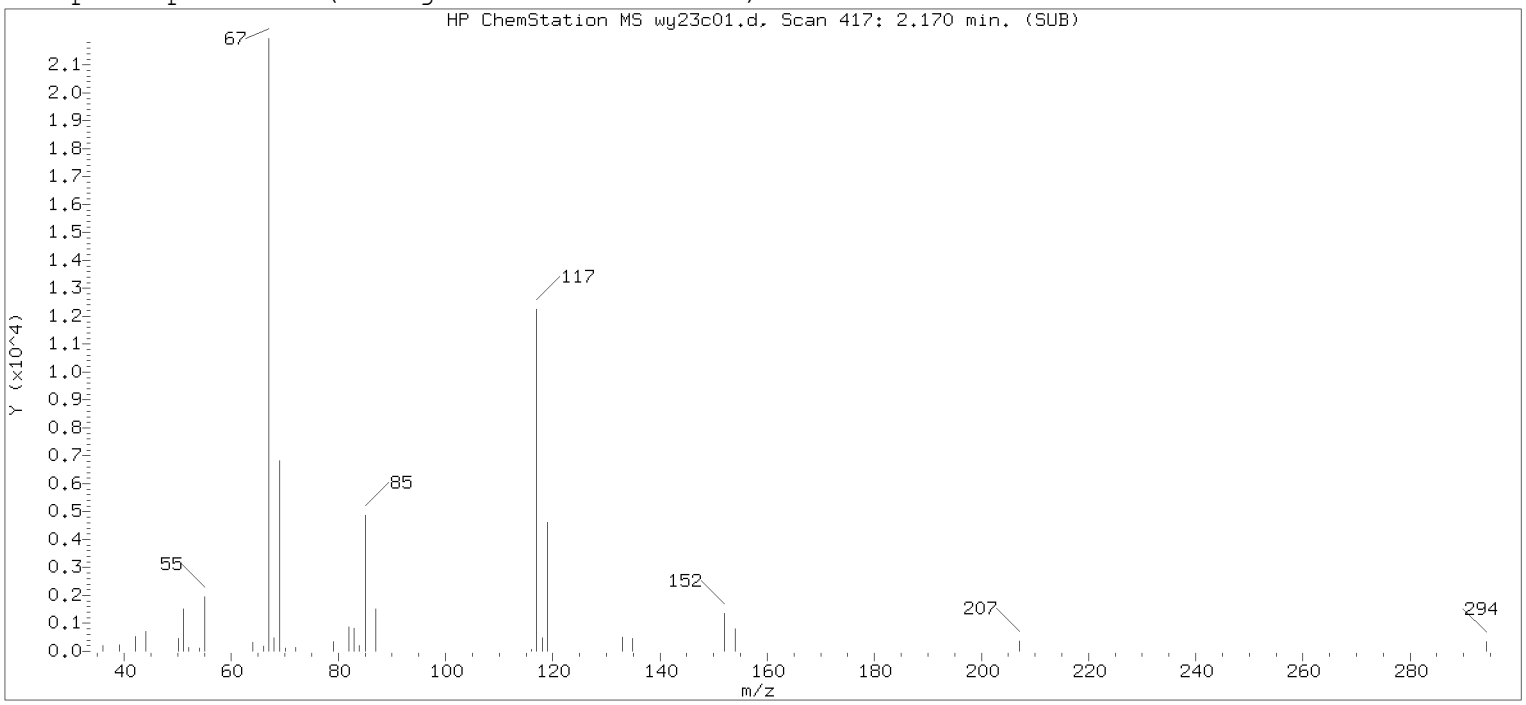
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 401
Retention Time (minutes): 2.119
Quant Ion : 67.00
Area (flag) : 293325M
On-Column Amount (ng) : 49.4293
Integration start scan : 379 Integration stop scan: 523
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

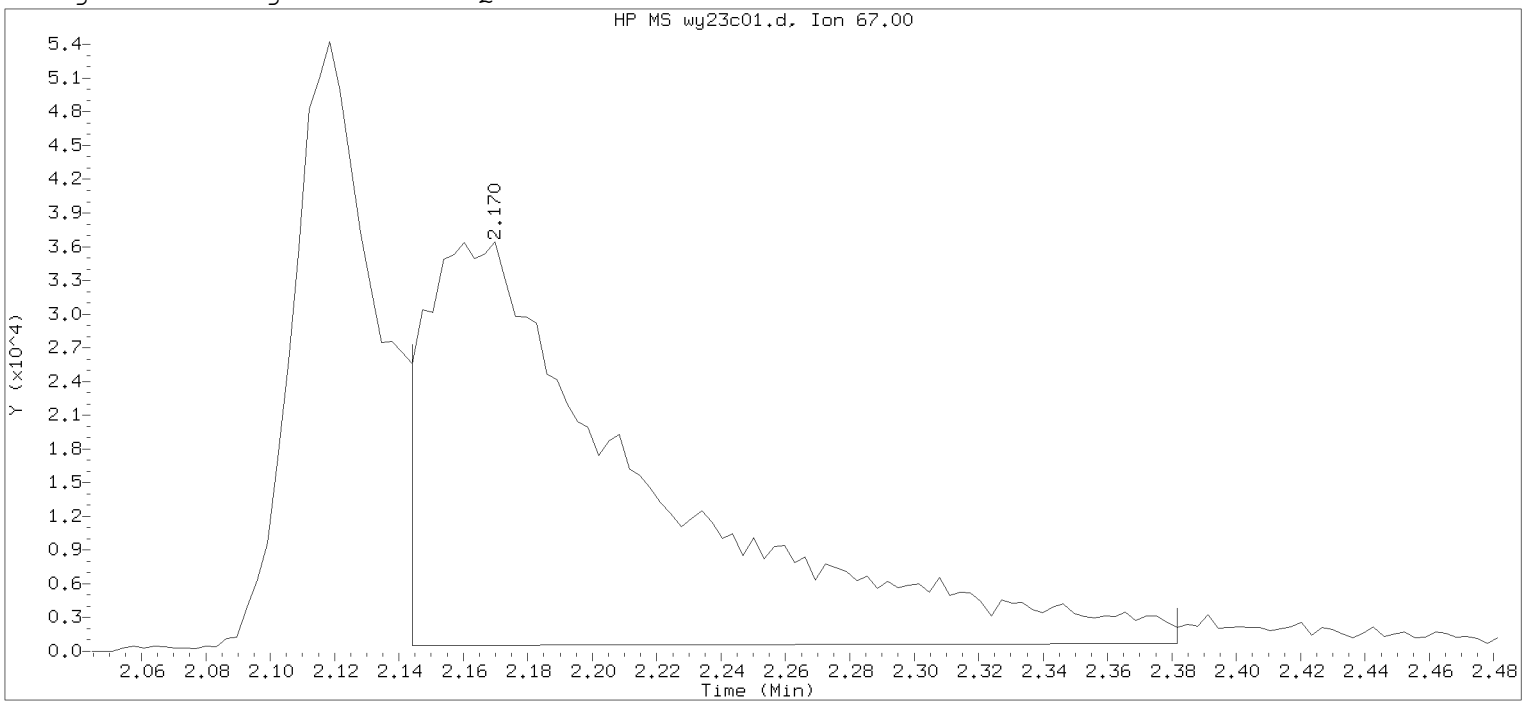
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:18.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:39.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23c01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 05:46 Analyst ID: and00492

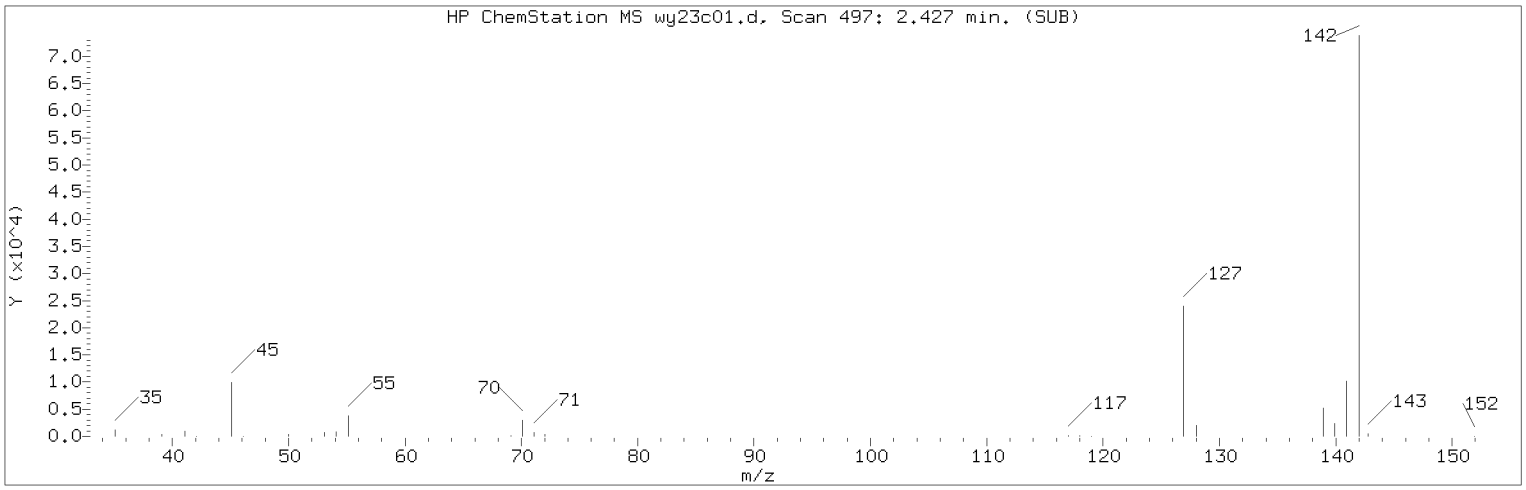
Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-MAY-2019 06:01
Date, time and analyst ID of latest file update: 23-May-2019 06:01 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

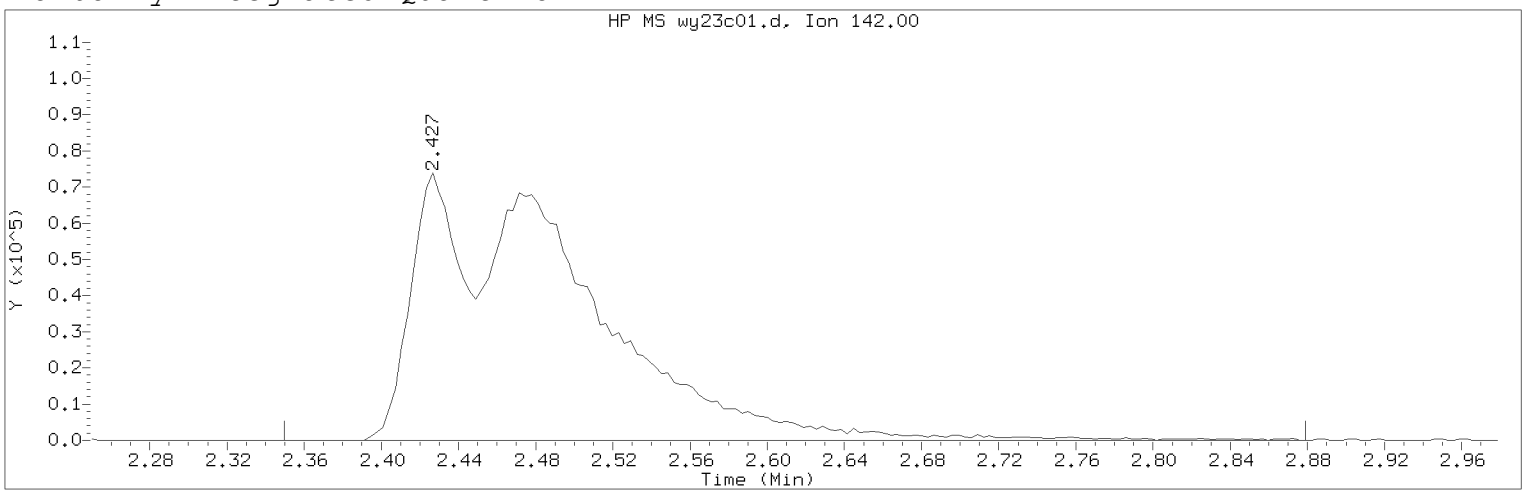
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 417
Retention Time (minutes): 2.170
Quant Ion : 67.00
Area : 172781
On-column Amount (ng) : 29.1160
Integration start scan : 408 Integration stop scan: 482
Y at integration start : 507 Y at integration end: 706

Digitally signed by Don V. Viray on 05/23/2019 at 20:18.
Target 3.5 esignature user id: dviray01

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23c01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 05:46 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-MAY-2019 06:12
Date, time and analyst ID of latest file update: 23-May-2019 06:12 amd00492

Sample Name: VSTD050 Lab Sample ID: VSTD050

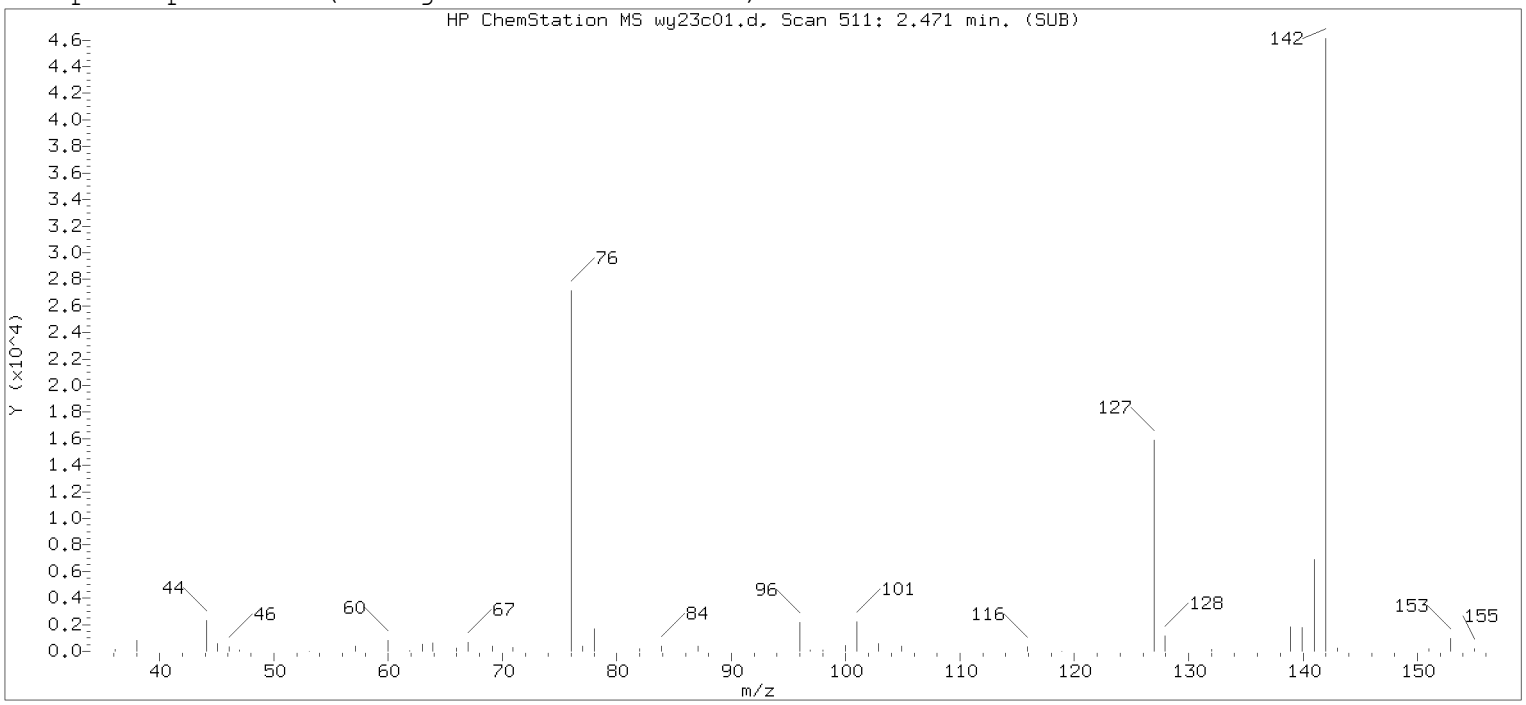
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 497
Retention Time (minutes): 2.427
Quant Ion : 142.00
Area (flag) : 447402M
On-Column Amount (ng) : 52.2719
Integration start scan : 472 Integration stop scan: 637
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

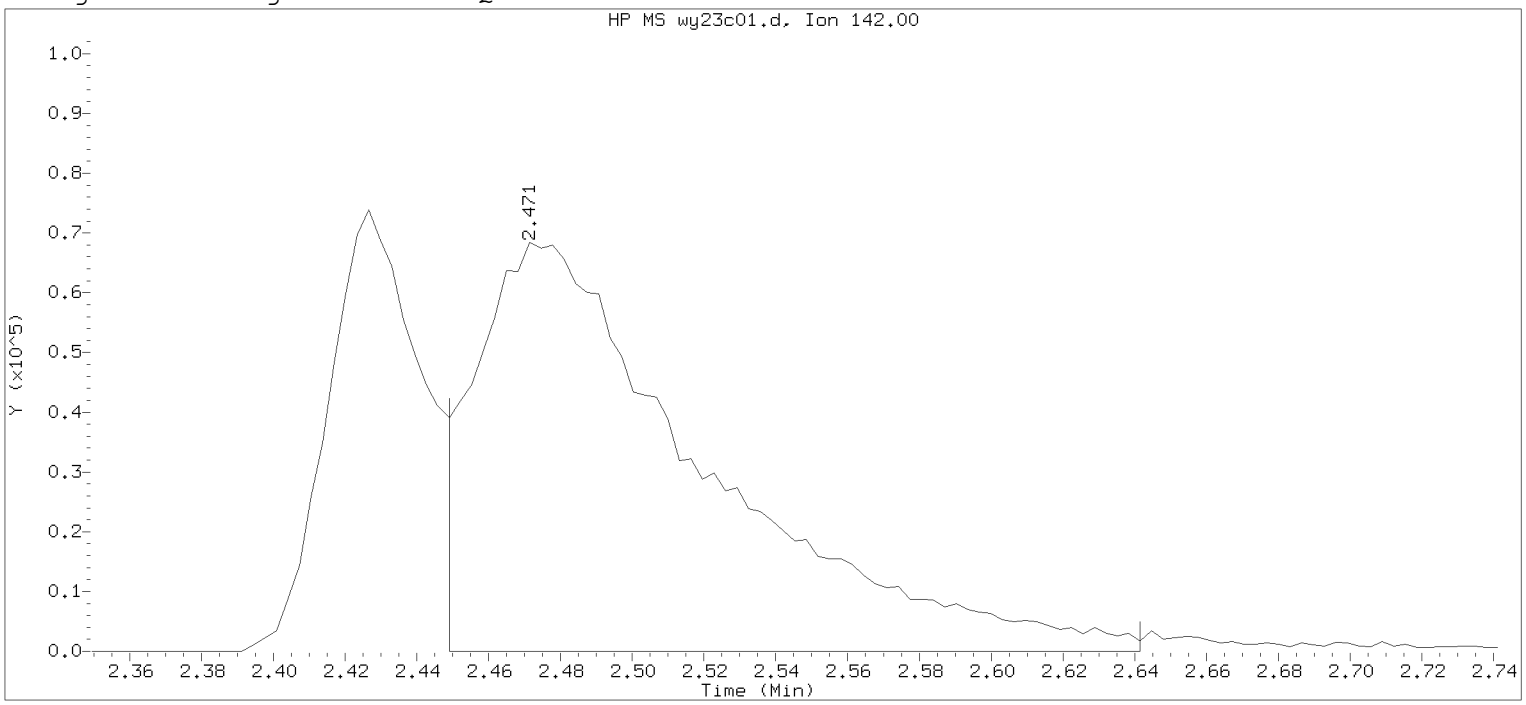
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:18.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:39.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23c01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 05:46 Analyst ID: and00492

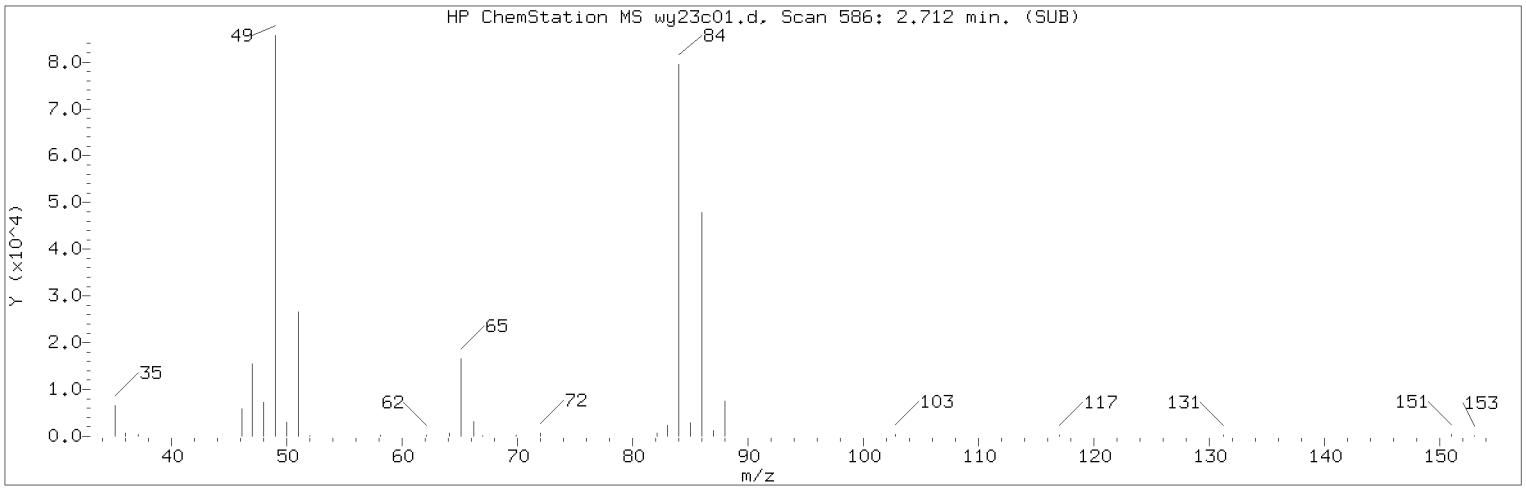
Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-MAY-2019 06:01
Date, time and analyst ID of latest file update: 23-May-2019 06:01 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

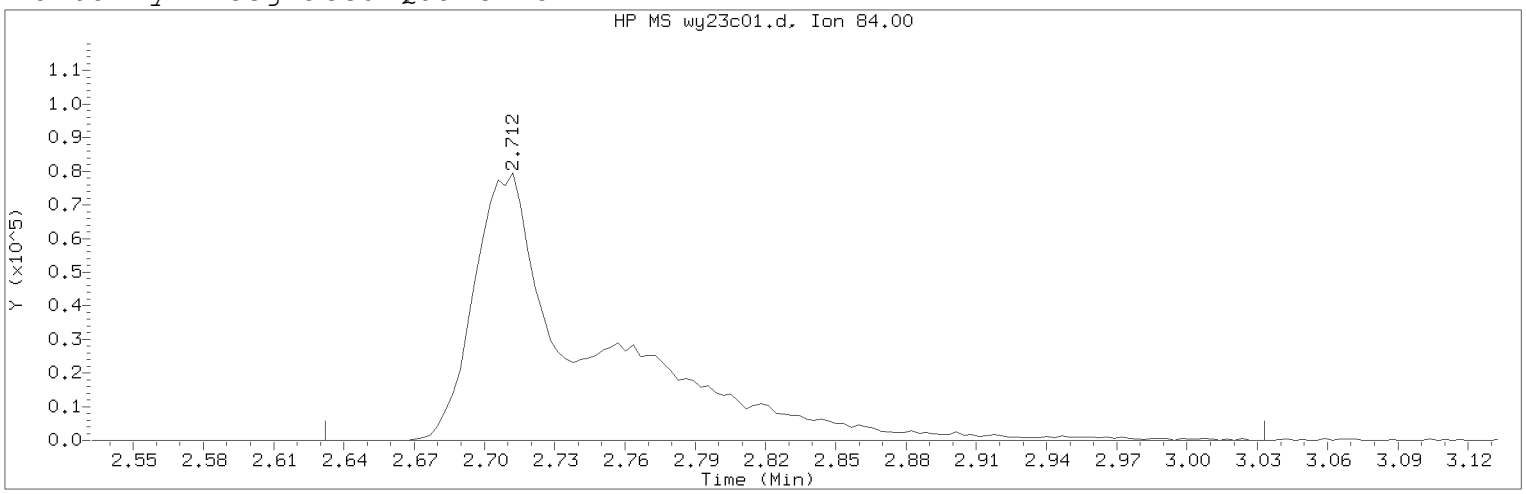
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 511
Retention Time (minutes): 2.471
Quant Ion : 142.00
Area : 304166
On-column Amount (ng) : 35.5371
Integration start scan : 503 Integration stop scan: 563
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/23/2019 at 20:18.
Target 3.5 esignature user id: dviray0521

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23c01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 05:46 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-MAY-2019 06:12
Date, time and analyst ID of latest file update: 23-May-2019 06:12 amd00492

Sample Name: VSTD050 Lab Sample ID: VSTD050

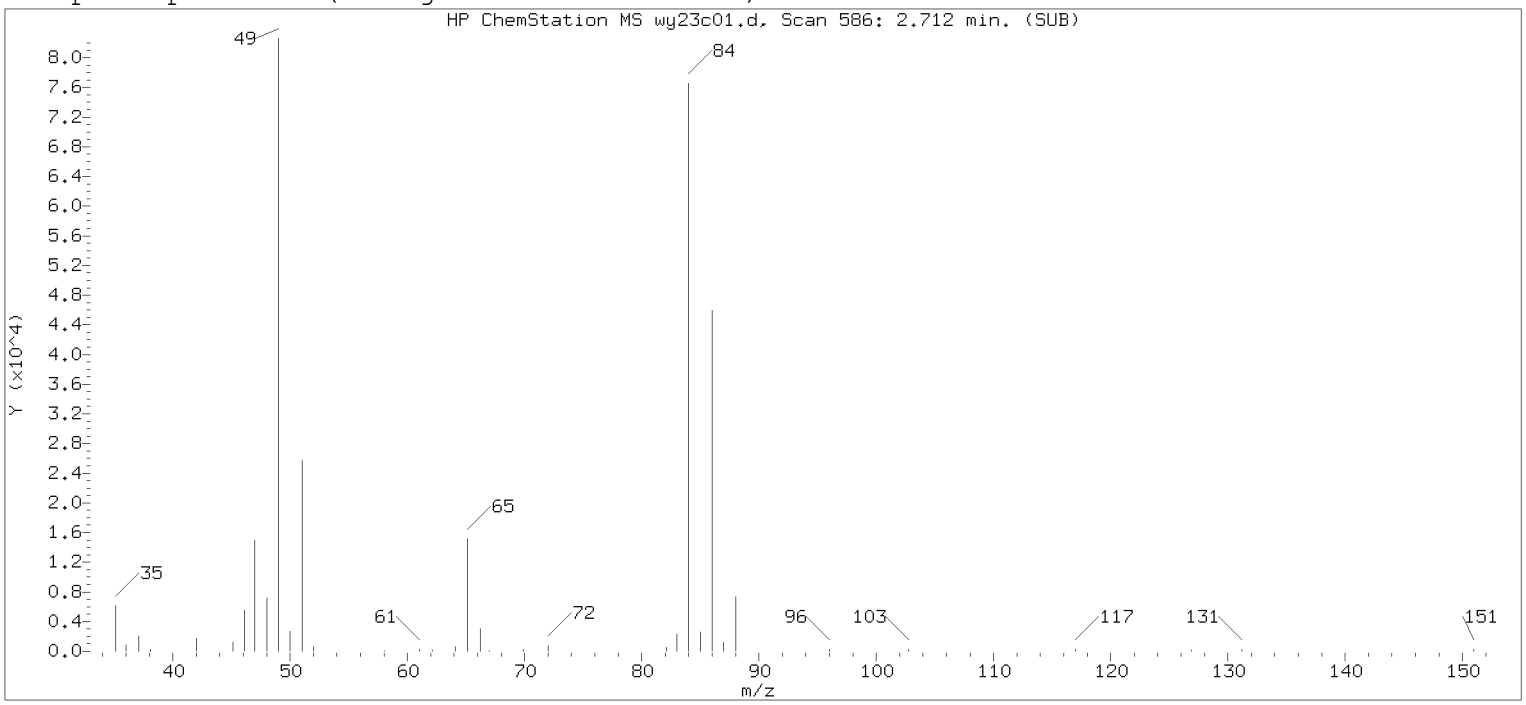
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 586
Retention Time (minutes): 2.712
Quant Ion : 84.00
Area (flag) : 280138M
On-Column Amount (ng) : 51.3125
Integration start scan : 560 Integration stop scan: 685
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

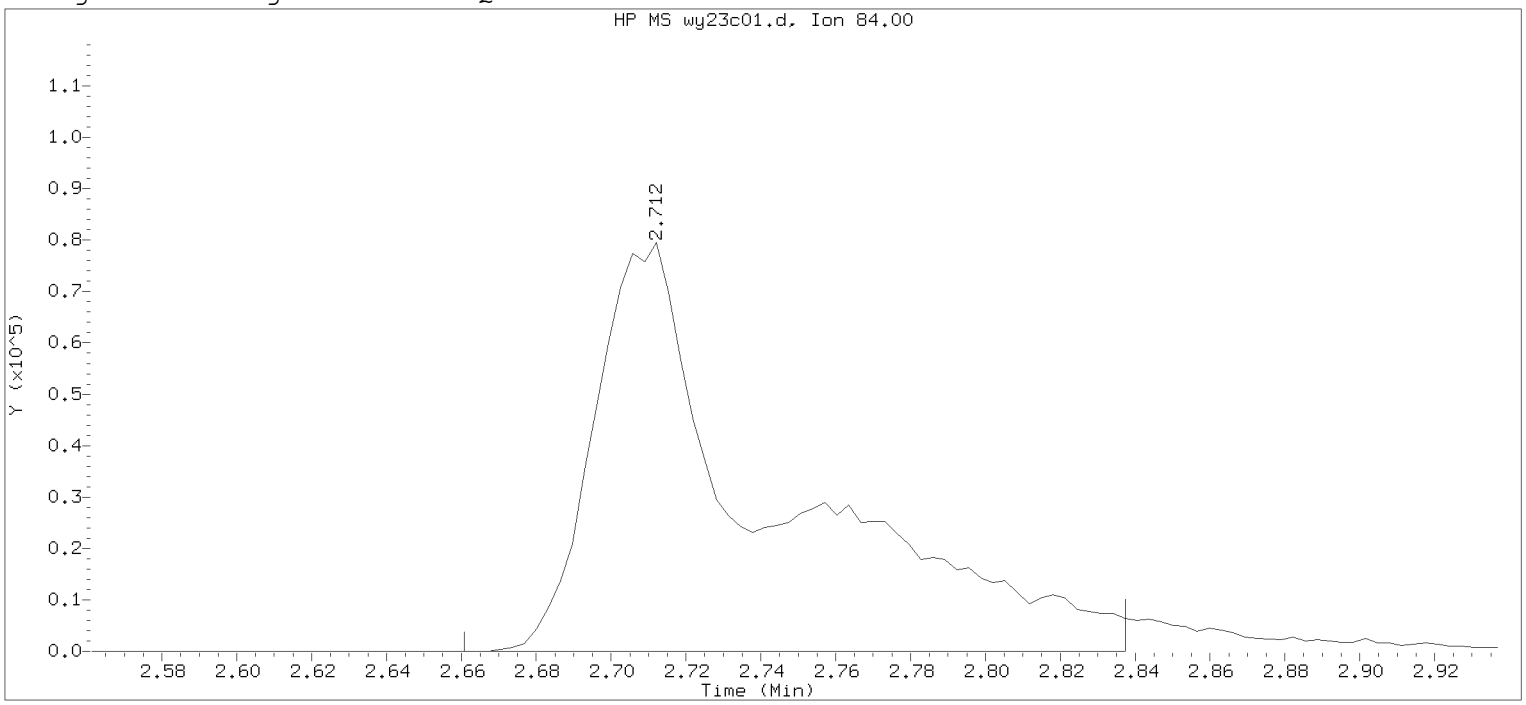
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:18.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:39.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23c01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 05:46 Analyst ID: and00492

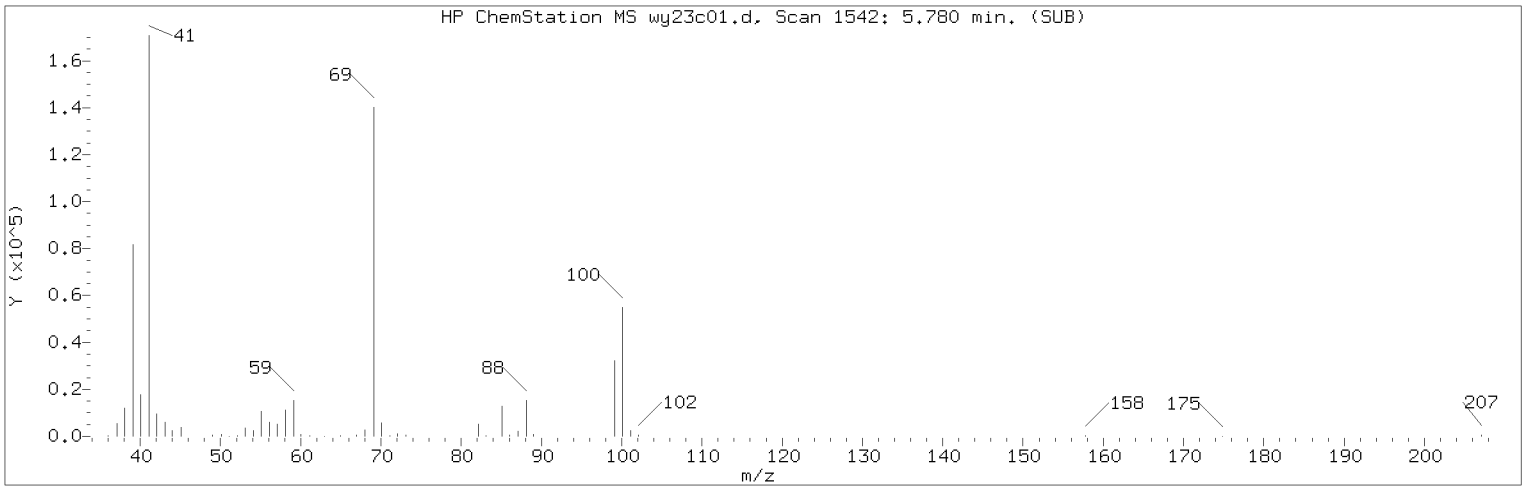
Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-MAY-2019 06:01
Date, time and analyst ID of latest file update: 23-May-2019 06:01 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

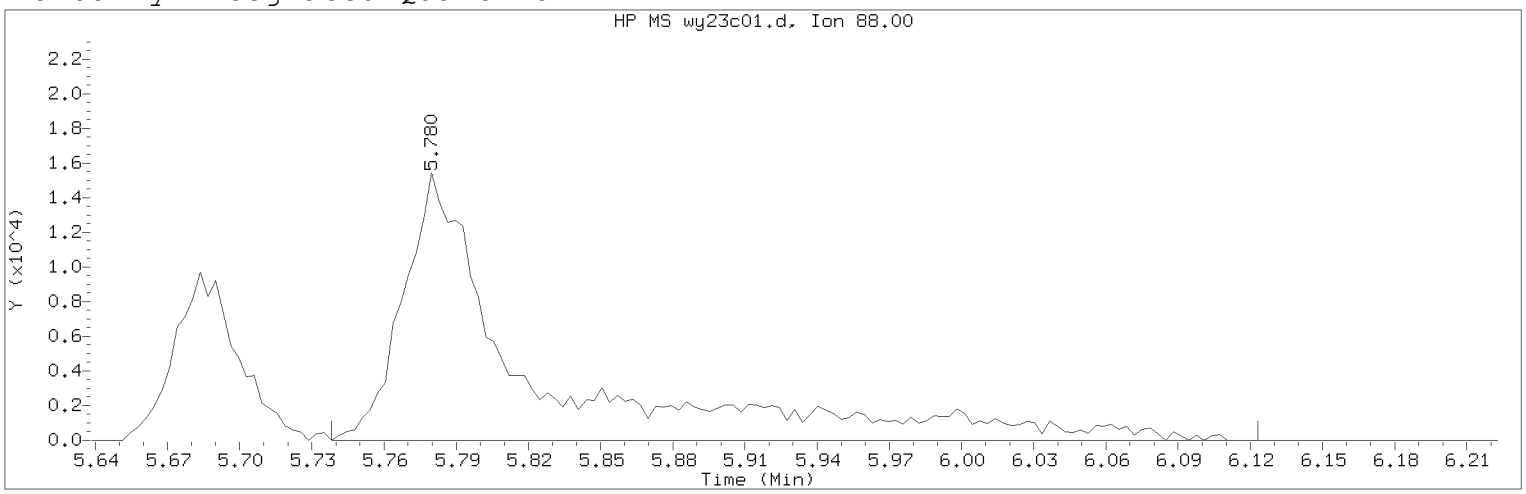
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 586
Retention Time (minutes): 2.712
Quant Ion : 84.00
Area : 260737
On-column Amount (ng) : 47.7589
Integration start scan : 569 Integration stop scan: 624
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/23/2019 at 20:18.
Target 3.5 esignature user id: dviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23c01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 05:46 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-MAY-2019 06:12
Date, time and analyst ID of latest file update: 23-May-2019 06:12 amd00492

Sample Name: VSTD050 Lab Sample ID: VSTD050

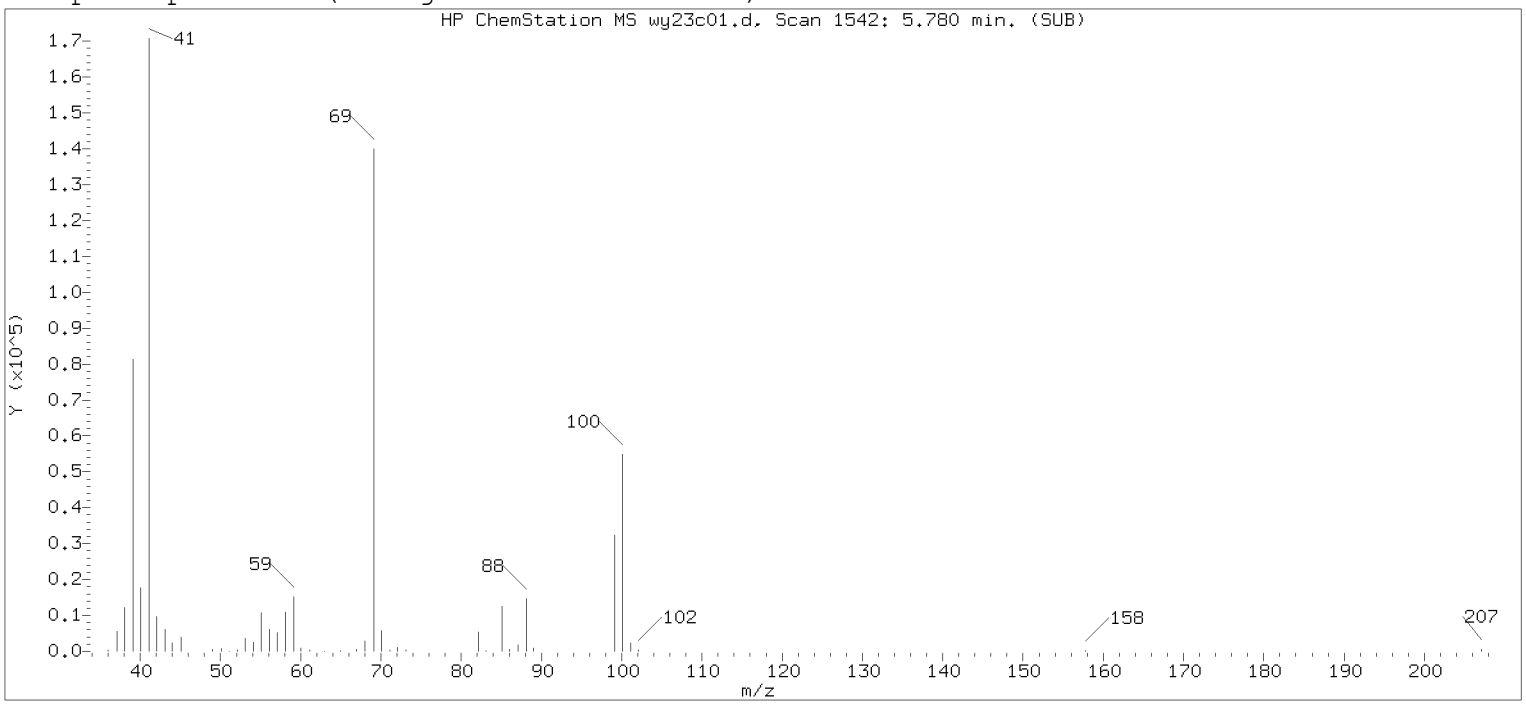
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area (flag) : 56623MA
On-Column Amount (ng) : 628.9930
Integration start scan : 1528 Integration stop scan: 1648
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

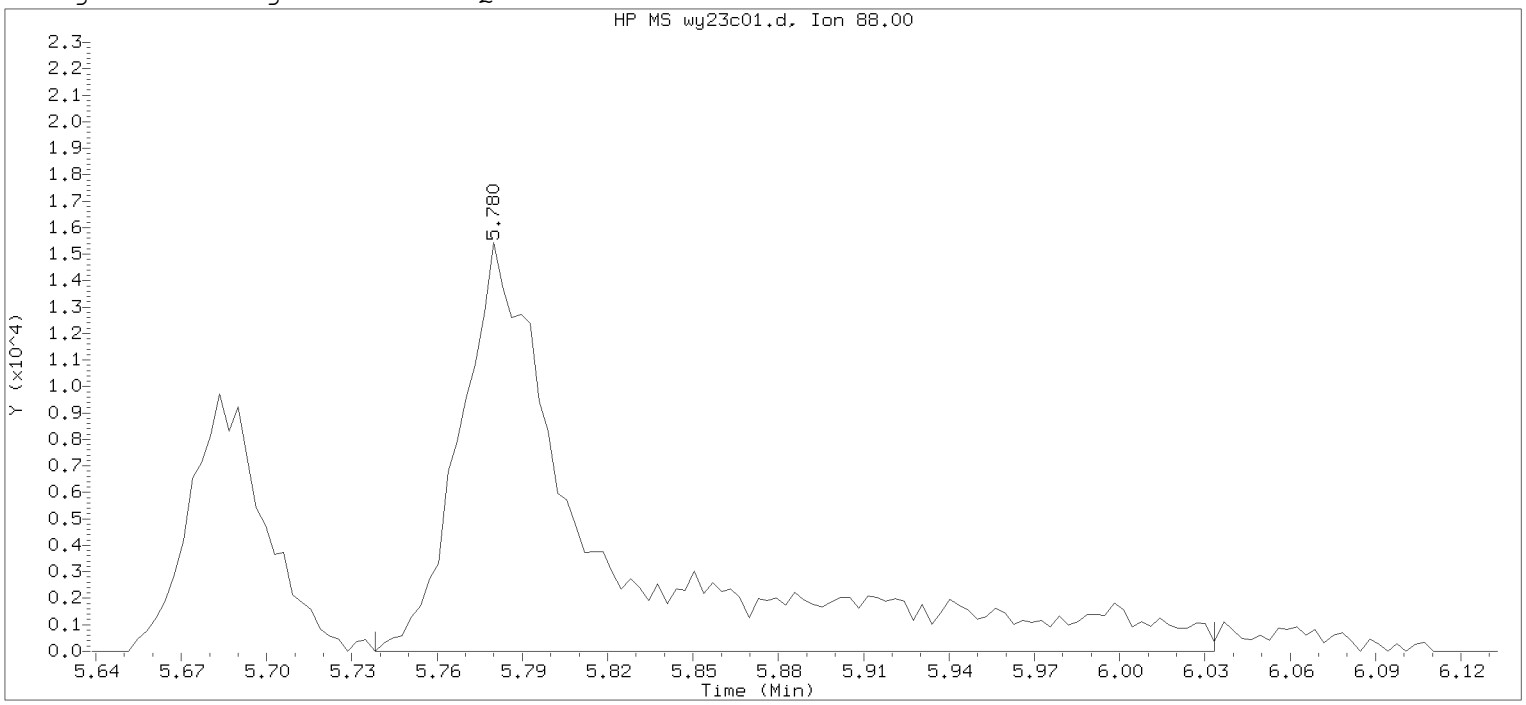
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:18.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:39.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23c01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 05:46 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-MAY-2019 06:01
Date, time and analyst ID of latest file update: 23-May-2019 06:01 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1542		
Retention Time (minutes)	: 5.780		
Quant Ion	: 88.00		
Area	: 54370		
On-column Amount (ng)	: 576.7399		
Integration start scan	: 1528	Integration stop scan:	1620
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 05/23/2019 at 20:18.
Target 3.5 esignature user id: dviray

MDL0.5 Lancaster Laboratories MDL0.5
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may23a.b/wy23m01.d Injection date and time: **23-MAY-2019 06:58**
Data file Sample Info. Line: MDL0.5;MDL0.5;1;3;MDL/LOQ;;;;wy23b01; Instrument ID: **HP09137.i** Batch: **W191431AA**
Date, time and analyst ID of latest file update: 23-May-2019 12:43 amd00492

Blank Data file reference: **/chem2/HP09137.i/19may23a.b/wy23b01.d**

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: **MDL**
Calibration date and time (Last Method Edit): 23-MAY-2019 12:42
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may23a.b/wy23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.741(-0.007)	595	65	204837 (2)	250.00	
66) Fluorobenzene	5.032(-0.003)	1309	96	1034038 (2)	50.00	
101) Chlorobenzene-d5	8.161(0.000)	2284	117	791747 (2)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041(0.000)	2870	152	404183 (-7)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.355(0.001)	113	226822	47.348	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.689(0.001)	102	64547	50.662	101%		80 - 120
84) Toluene-d8	(3)	6.698(0.000)	98	1010706	50.944	102%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162(0.000)	95	359068	45.240	90%		80 - 120

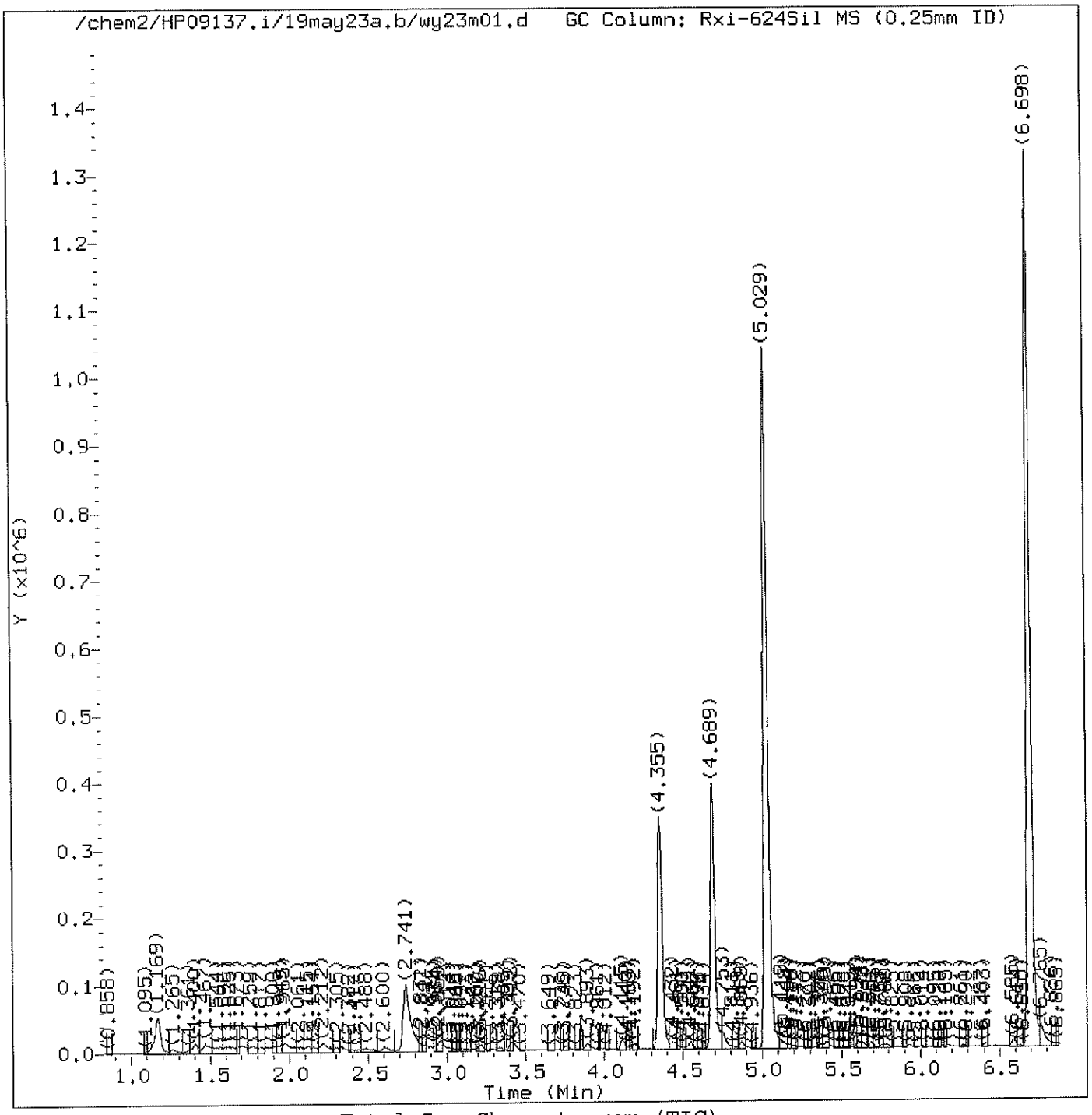
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (misample)	Blank Conc.	Qual.	Reporting Lim LOQ (in sample)
11) n-Pentane	(2)	1.971(-0.000)	43	3925	0.509	0.51	0.036	B J	0.4 10
13) Ethanol	(1)	2.093(-0.021)	45	2056M	22.013	22.01	4.266	B J	280 750
151) 2-Methylnaphthalene	(4)	12.307(-0.000)	142	5100	0.326	0.33	0.042	B J	0.7 5

B = Compound detected in referenced method blank. M = Compound was manually integrated.

Total number of targets = 3

Digitally signed by Kevin A. Sposito on 05/23/2019 at 13:31. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:39. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

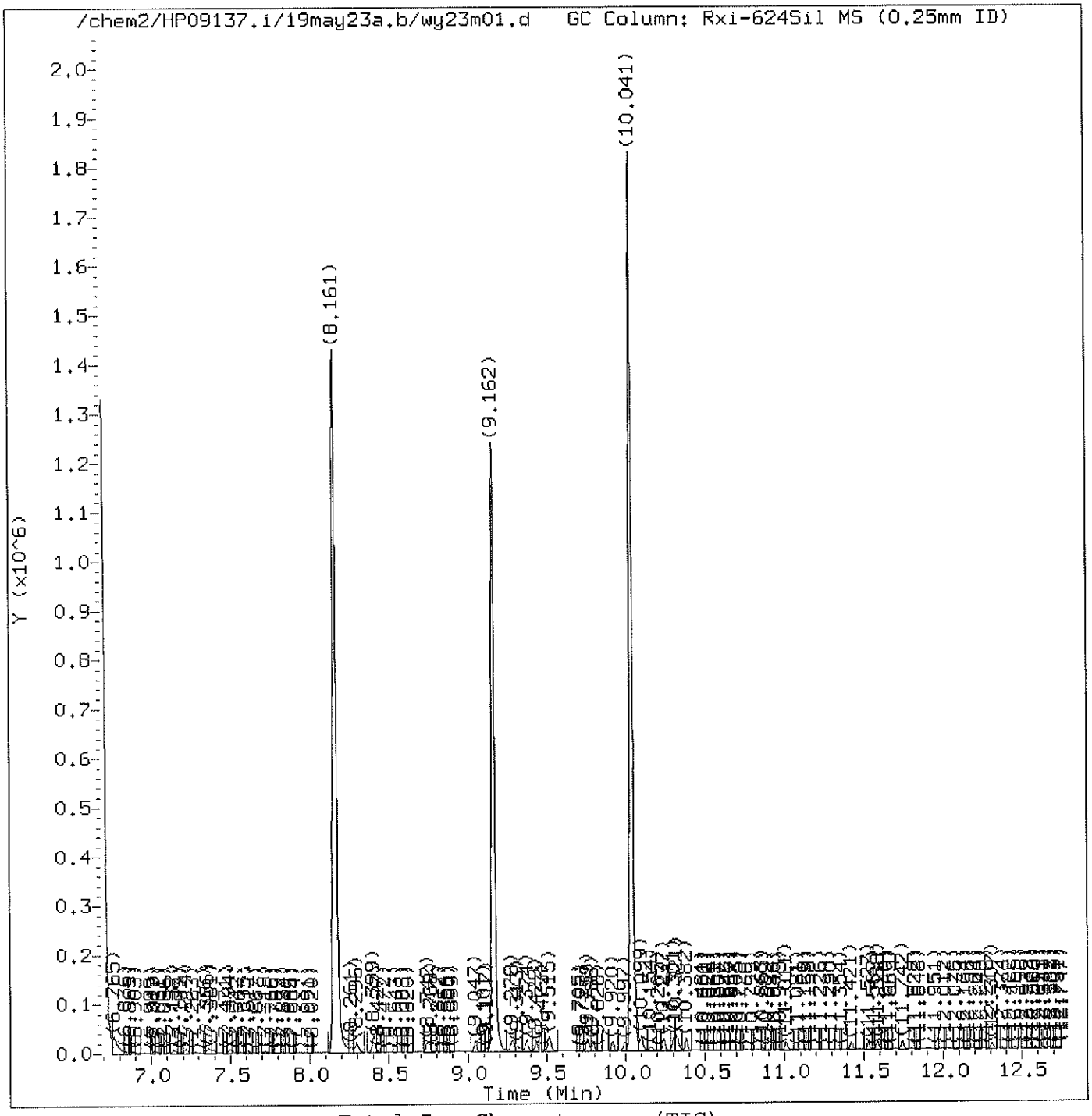
Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23m01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:58 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: MDL
Calibration date and time: 23-MAY-2019 12:42
Date, time and analyst ID of latest file update: 23-May-2019 12:43 amd00492

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Digitally signed by Kevin A. Sposito
on 05/23/2019 at 13:31.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23m01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:58 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: MDL
Calibration date and time: 23-MAY-2019 12:42
Date, time and analyst ID of latest file update: 23-May-2019 12:43 amd00492

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Digitally signed by Kevin A. Sposito
on 05/23/2019 at 13:31.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23m01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:58 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: MDL
Calibration date and time: 23-MAY-2019 12:42
Date, time and analyst ID of latest file update: 23-May-2019 12:43 amd00492

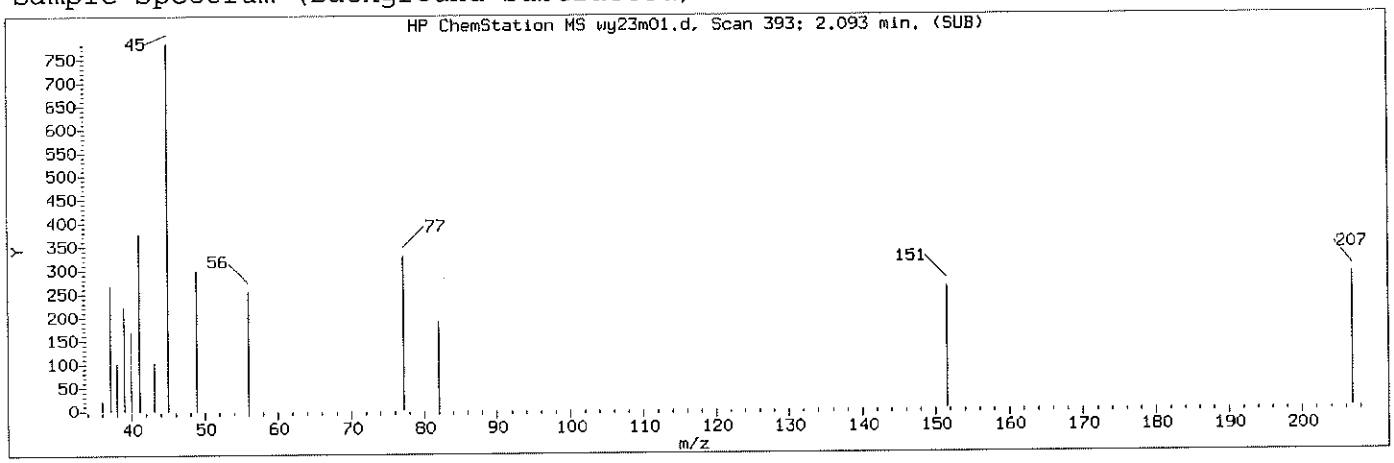
Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
11) n-Pentane	(2)	1.971	43	3925	0.509
13) Ethanol	(1)	2.093	45	2056M	22.013
29)*t-Butyl alcohol-d10	(1)	2.741	65	204837	250.000
52)$Dibromofluoromethane	(2)	4.355	113	226822	47.348
57)$1,2-Dichloroethane-d4	(2)	4.689	102	64547	50.662
66)*Fluorobenzene	(2)	5.032	96	1034038	50.000
84)$Toluene-d8	(3)	6.698	98	1010706	50.944
101)*Chlorobenzene-d5	(3)	8.161	117	791747	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	359068	45.240
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	404183	50.000
151) 2-Methylnaphthalene	(4)	12.307	142	5100	0.326

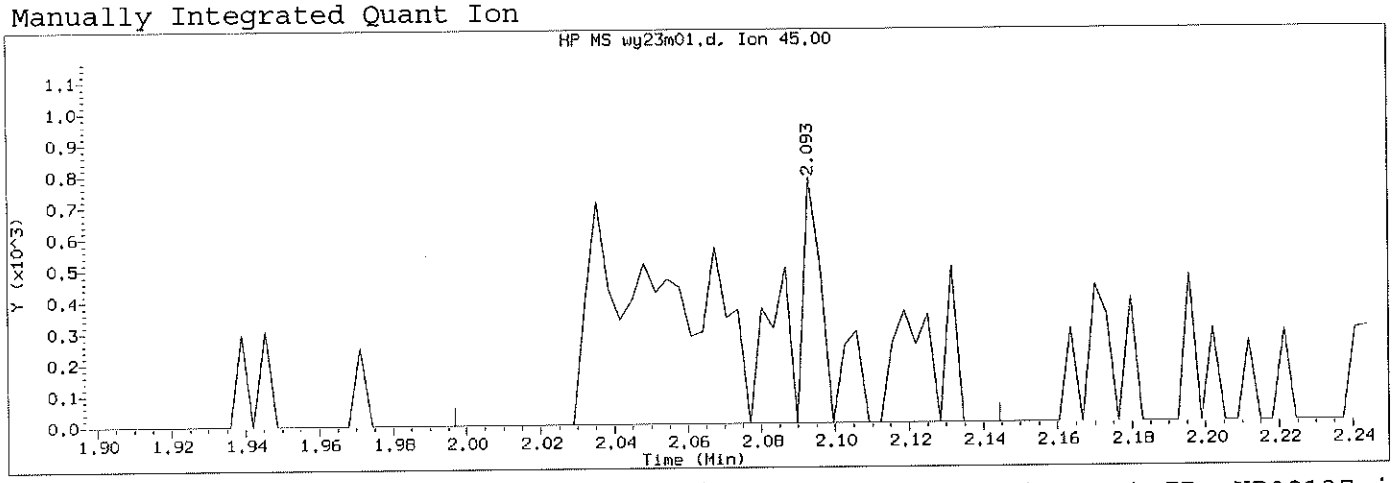
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/23/2019 at 13:31.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23m01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:58 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: MDL
Calibration date and time: 23-MAY-2019 12:42
Date, time and analyst ID of latest file update: 23-May-2019 12:43 amd00492

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

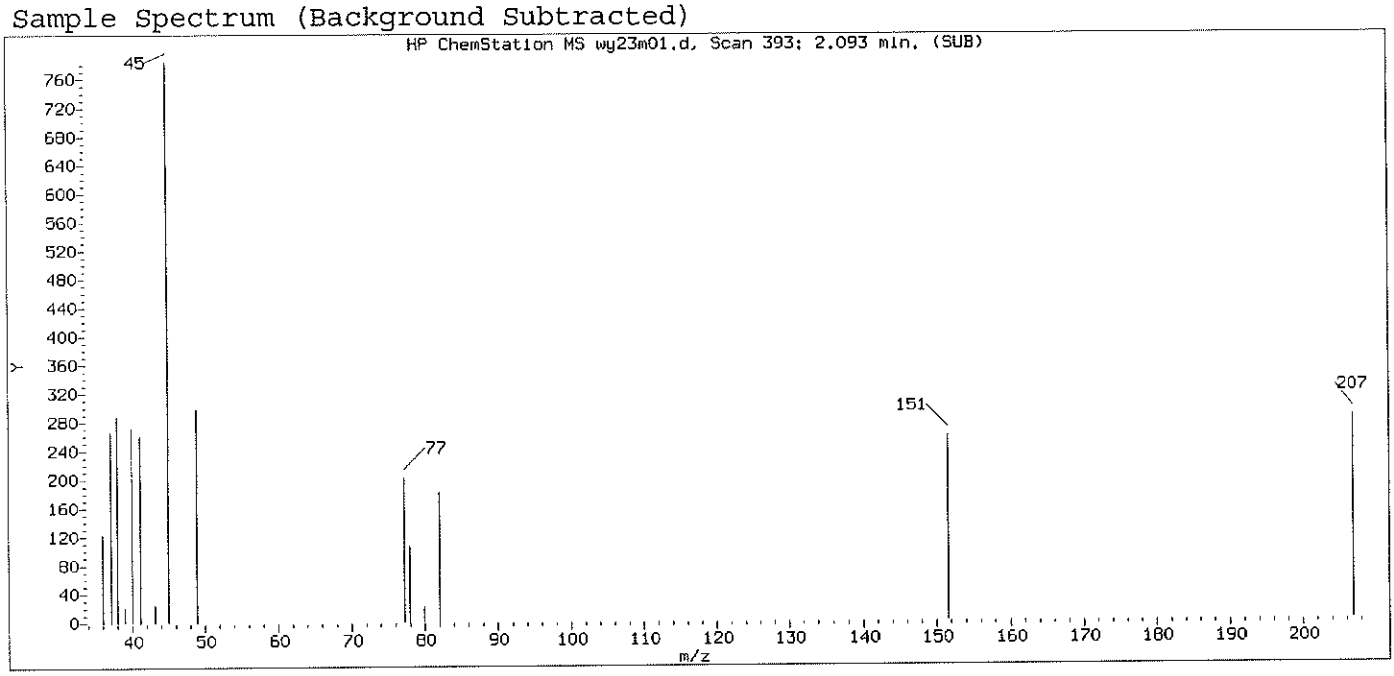
Compound Number	: 13		
Compound Name	: Ethanol		
Scan Number	: 393		
Retention Time (minutes)	: 2.093		
Quant Ion	: 45.00		
Area (flag)	: 2056M		
On-Column Amount (ng)	: 22.0133		
Integration start scan	: 362	Integration stop scan:	408
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

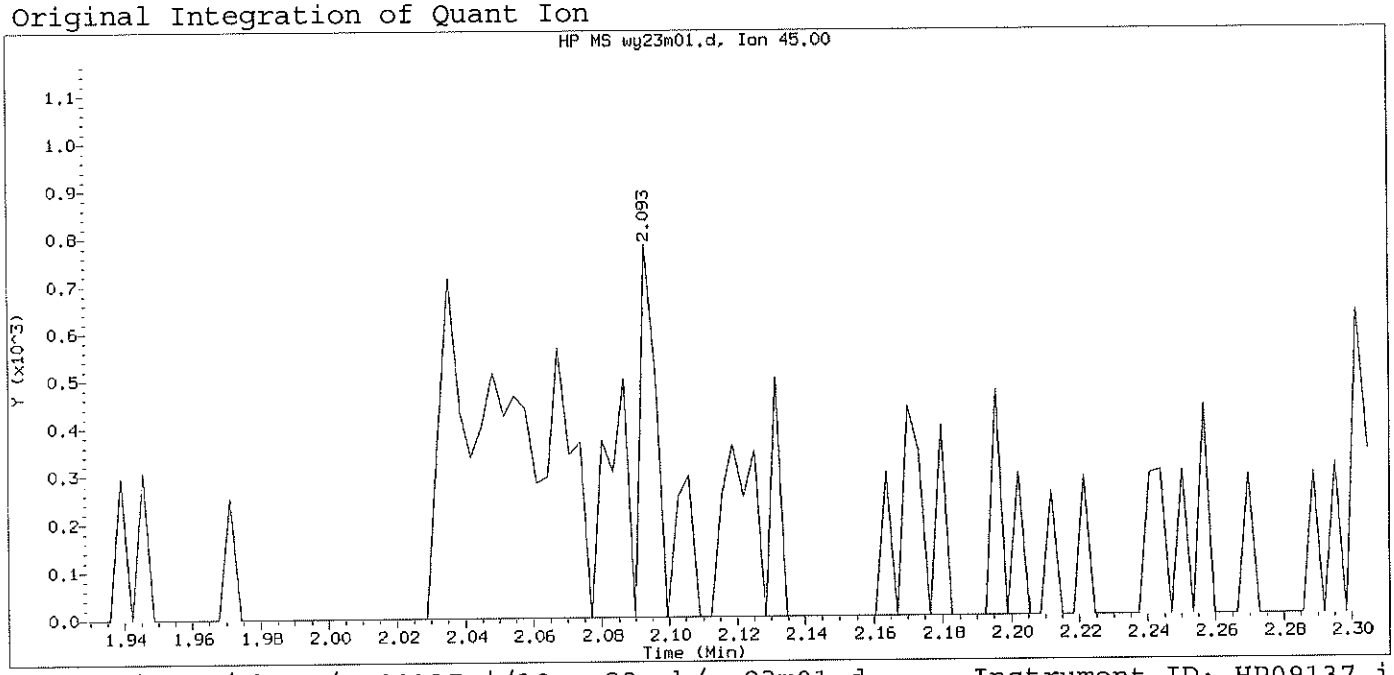
Analyst responsible for change: Digitally signed by Kevin A. Sposito on 05/23/2019 at 13:31. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:39.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23m01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:58 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:13 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Compound Number	: 13		
Compound Name	: Ethanol		
Scan Number	: 393		
Retention Time (minutes)	: 2.093		
Quant Ion	: 45.00		
Area	: 2490		
On-column Amount (ng)	: 26.6544		
Integration start scan	: 372	Integration stop scan:	427
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 05/23/2019 at 13:31.
Target 3.5 esignature user ID: kas02648

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may23a.b/wy23m02.d Injection date and time: **23-MAY-2019 13:17**
Data file Sample Info. Line: MDL4.0;MDL4.0;1;3;MDL/LOQ;;;;wy23b01; Instrument ID: **HP09137.i** Batch: **W191431AA**
Date, time and analyst ID of latest file update: 23-May-2019 20:35 dvv10203

Blank Data file reference: **/chem2/HP09137.i/19may23a.b/wy23b01.d**

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: **17366**
Calibration date and time (Last Method Edit): 23-MAY-2019 12:42
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may23a.b/wy23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.741(-0.007)	595	65	167232 (-17)	250.00	
66) Fluorobenzene	5.029(0.000)	1308	96	896156 (-12)	50.00	
101) Chlorobenzene-d5	8.161(0.000)	2284	117	699594 (-10)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041(0.000)	2870	152	356978 (-18)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.355(0.000)	113	203472	49.009	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.686(0.001)	102	56137	50.841	102%		80 - 120
84) Toluene-d8	(3)	6.694(0.000)	98	882845	50.361	101%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162(0.000)	95	308469	43.984	88%		80 - 120

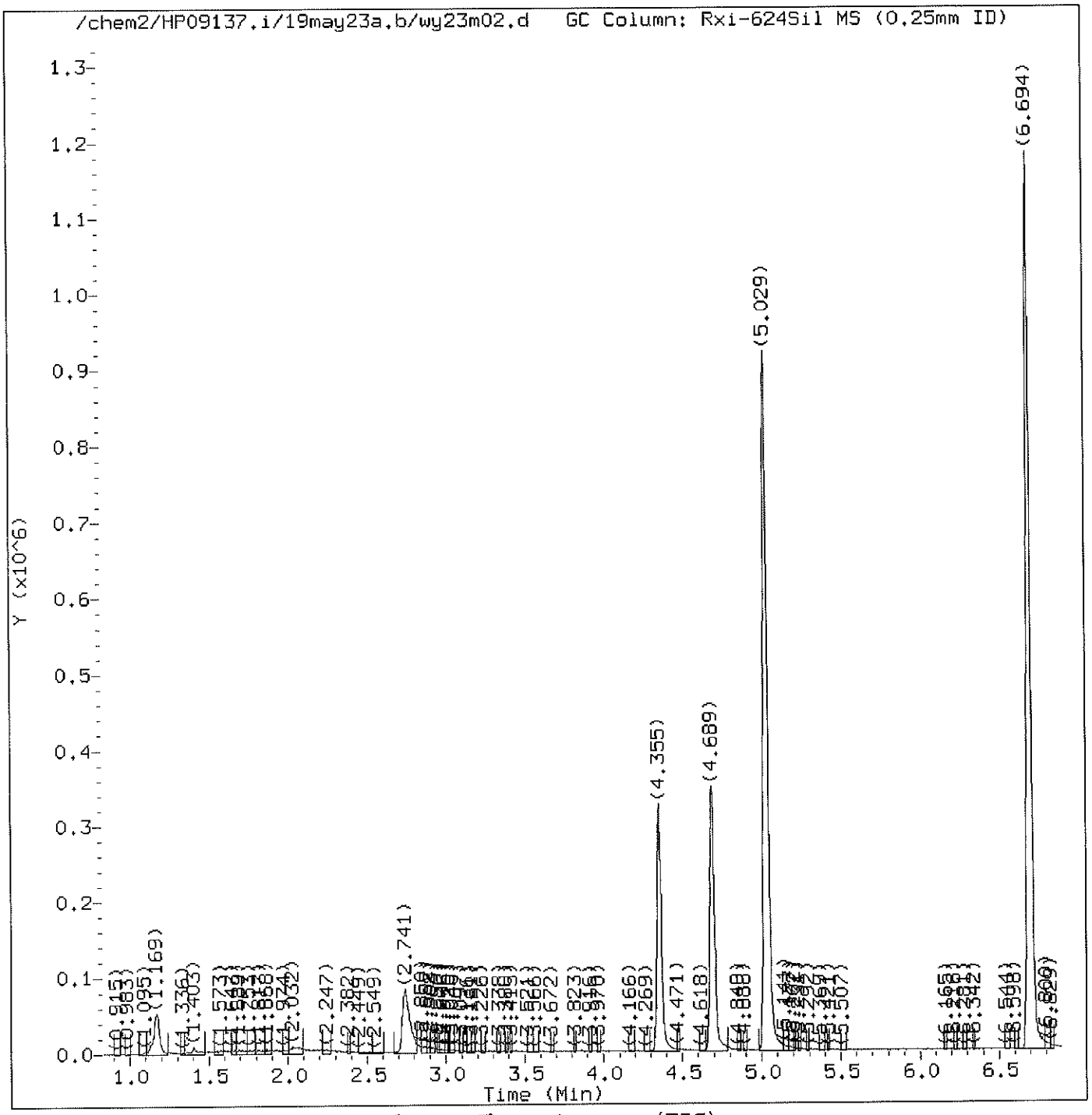
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit LOQ (in sample)
13) Ethanol	(1)	2.064(-0.011)	45	12060	158.123	158.12	4.266	B J	280 750

B = Compound detected in referenced method blank.

Total number of targets = 1

Digitally signed by Don V. Viray on 05/23/2019 at 20:36. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:46. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

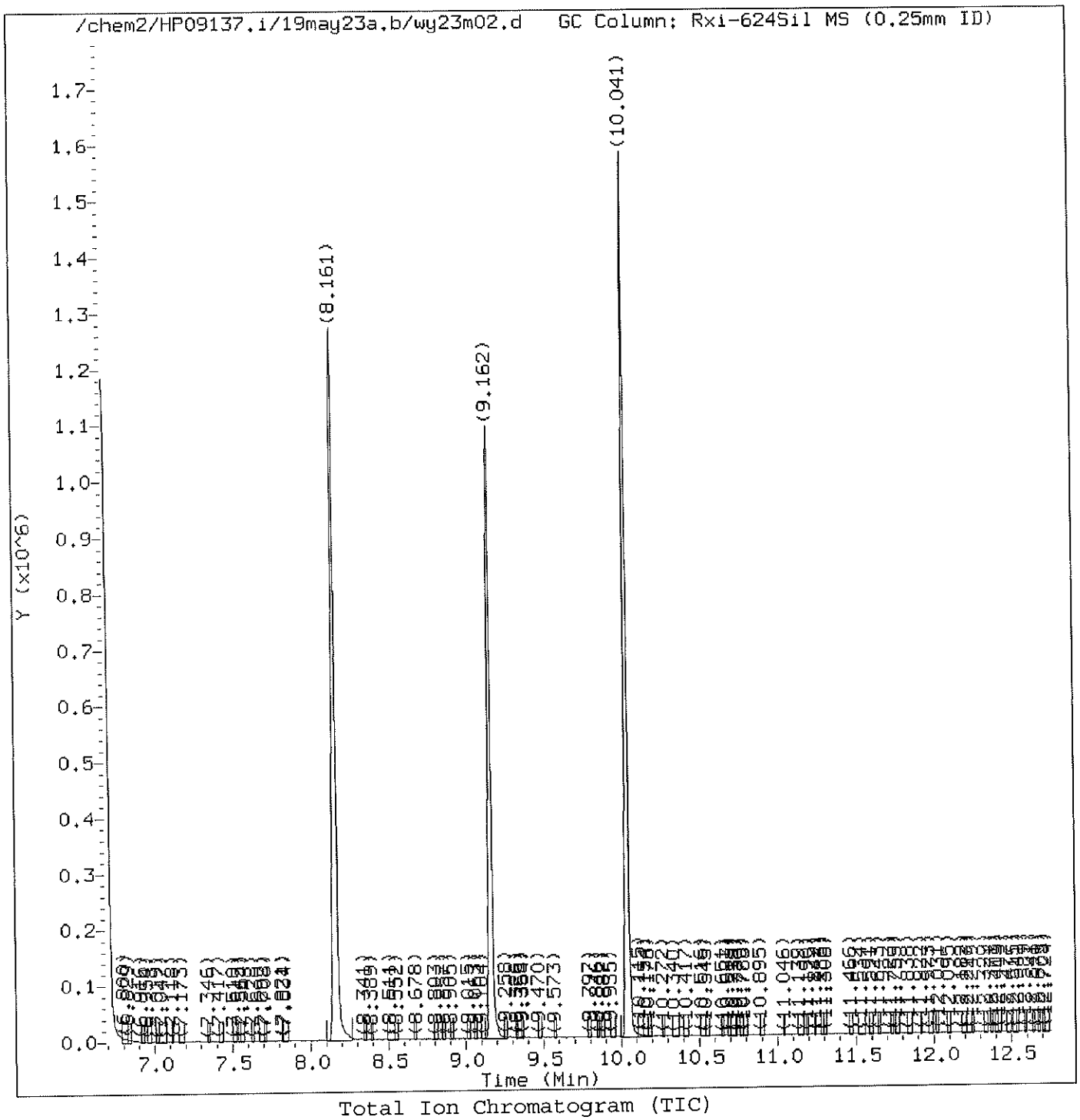
Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23m02.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 13:17 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 17366
Calibration date and time: 23-MAY-2019 12:42
Date, time and analyst ID of latest file update: 23-May-2019 20:35 dvv10203

Sample Name: MDL4.0 Lab Sample ID: MDL4.0

Digitally signed by Don V. Viray
on 05/23/2019 at 20:36.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23m02.d
Injection date and time: 23-MAY-2019 13:17

Instrument ID: HP09137.i
Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m
Calibration date and time: 23-MAY-2019 12:42

Sublist used: 17366

Date, time and analyst ID of latest file update: 23-May-2019 20:35 dvv10203

Sample Name: MDL4.0

Lab Sample ID: MDL4.0

Digitally signed by Don V. Viray
on 05/23/2019 at 20:36.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23m02.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 13:17 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 17366
Calibration date and time: 23-MAY-2019 12:42
Date, time and analyst ID of latest file update: 23-May-2019 20:35 dvv10203

Sample Name: MDL4.0 Lab Sample ID: MDL4.0

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
13) Ethanol	(1)	2.064	45	12060	158.123
29)*t-Butyl alcohol-d10	(1)	2.741	65	167232	250.000
52)$Dibromofluoromethane	(2)	4.355	113	203472	49.009
57)$1,2-Dichloroethane-d4	(2)	4.686	102	56137	50.841
66)*Fluorobenzene	(2)	5.029	96	896156	50.000
84)$Toluene-d8	(3)	6.694	98	882845	50.361
101)*Chlorobenzene-d5	(3)	8.161	117	699594	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	308469	43.984
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	356978	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/23/2019 at 20:36.
Target 3.5 esignature user ID: dvv10203

Raw QC Data

Volatiles by GC/MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKL97

Data file: /chem/HP09915.i/19may20b.b/ly20b31.d
Data file Sample Info. Line: VBLKL97;VBLKL97;1;3;;;;;;
Date, time and analyst ID of latest file update: 20-May-2019 21:23 dvv10203

Injection date and time: **20-MAY-2019 20:53**
Instrument ID: **HP09915.i** Batch: **L191402AA**

Blank Data file reference: **/chem/HP09915.i/19may20b.b/ly20b31.d**

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: **8260W-DE**
Calibration date and time (Last Method Edit): 20-MAY-2019 20:05
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19may20b.b/ly20c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.578	(-0.010)	652	65	261303	(-7)	250.00	
66) Fluorobenzene	7.044	(-0.003)	1730	96	1375678	(-1)	50.00	
100) Chlorobenzene-d5	10.703	(0.000)	2868	117	1015566	(13)	50.00	
131) 1,4-Dichlorobenzene-d4	12.635	(0.000)	3469	152	532031	(6)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.134	(0.000)	113	330564	46.740	93%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.600	(0.000)	102	82686	49.882	100%		80 - 120
83) Toluene-d8	(3)	9.131	(0.000)	98	1331261	50.937	102%		80 - 120
114) 4-Bromofluorobenzene	(3)	11.745	(0.000)	95	488320	48.282	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)				Not Detected					0.2	1
4) Chloromethane	(2)				Not Detected					0.2	1
5) 1,3-Butadiene	(2)				Not Detected					1	3
6) Vinyl Chloride	(2)				Not Detected					0.2	1
8) Bromomethane	(2)				Not Detected					0.3	1
9) Chloroethane	(2)				Not Detected					0.2	1
11) n-Pentane	(2)				Not Detected					0.4	10
12) Trichlorofluoromethane	(2)				Not Detected					0.2	1
15) Freon 123a	(2)				Not Detected					0.4	5
16) Acrolein	(1)				Not Detected					2	100
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
21) 2-Propanol	(1)				Not Detected					18	100
22) Methyl Iodide	(2)				Not Detected					0.2	1
23) Carbon Disulfide	(2)				Not Detected					0.2	5
25) Allyl Chloride	(2)				Not Detected					0.3	5
27) Methyl Acetate	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
30) t-Butyl alcohol	(1)				Not Detected					12	50
31) Acrylonitrile	(2)				Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.2	1
34) n-Hexane	(2)				Not Detected					0.2	5
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
38) di-Isopropyl ether	(2)				Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)				Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)				Not Detected					0.2	2
44) 2-Butanone	(2)				Not Detected					0.3	10

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19may20b.b/ly20b31.d Injection date and time: **20-MAY-2019 20:53**
Data file Sample Info. Line: VBLKL97;VBLKL97;1;3;;;;;; Instrument ID: **HP09915.i** Batch: **L191402AA**
Date, time and analyst ID of latest file update: 20-May-2019 21:23 dvv10203

Blank Data file reference: **/chem/HP09915.i/19may20b.b/ly20b31.d**

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: **8260W-DE**
Calibration date and time (Last Method Edit): 20-MAY-2019 20:05
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19may20b.b/ly20c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					0.2	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					0.2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
72) Methylcyclohexane	(2)				Not Detected					0.2	5
73) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
74) Dibromomethane	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
76) Methyl Methacrylate	(2)				Not Detected					0.2	5
78) Bromodichloromethane	(2)				Not Detected					0.2	1
79) 2-Nitropropane	(2)				Not Detected					0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
81) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
82) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
88) Toluene	(3)				Not Detected					0.2	1
89) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
90) 1,3-Dichloropropene (total)	(3)				Not Detected					0.2	5
91) Ethyl Methacrylate	(3)				Not Detected					0.2	5
92) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
94) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
96) 2-Hexanone	(3)				Not Detected					0.3	10
97) Dibromochloromethane	(3)				Not Detected					0.2	1
99) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
101) 1-Chlorohexane	(3)				Not Detected					0.3	5
102) Chlorobenzene	(3)				Not Detected					0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	5
109) Styrene	(3)				Not Detected					0.2	5
110) Bromoform	(3)				Not Detected					0.2	4
111) Isopropylbenzene	(3)				Not Detected					0.2	5
112) Cyclohexanone	(1)				Not Detected					25	100
115) Bromobenzene	(4)				Not Detected					0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
117) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
118) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50
119) n-Propylbenzene	(4)				Not Detected					0.2	5
120) 2-Chlorotoluene	(4)				Not Detected					0.2	5

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19may20b.b/ly20b31.d Injection date and time: **20-MAY-2019 20:53**
Data file Sample Info. Line: VBLKL97;VBLKL97;1;3;;;;;; Instrument ID: **HP09915.i** Batch: **L191402AA**
Date, time and analyst ID of latest file update: 20-May-2019 21:23 dvv10203

Blank Data file reference: **/chem/HP09915.i/19may20b.b/ly20b31.d**

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: **8260W-DE**
Calibration date and time (Last Method Edit): 20-MAY-2019 20:05
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19may20b.b/ly20c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

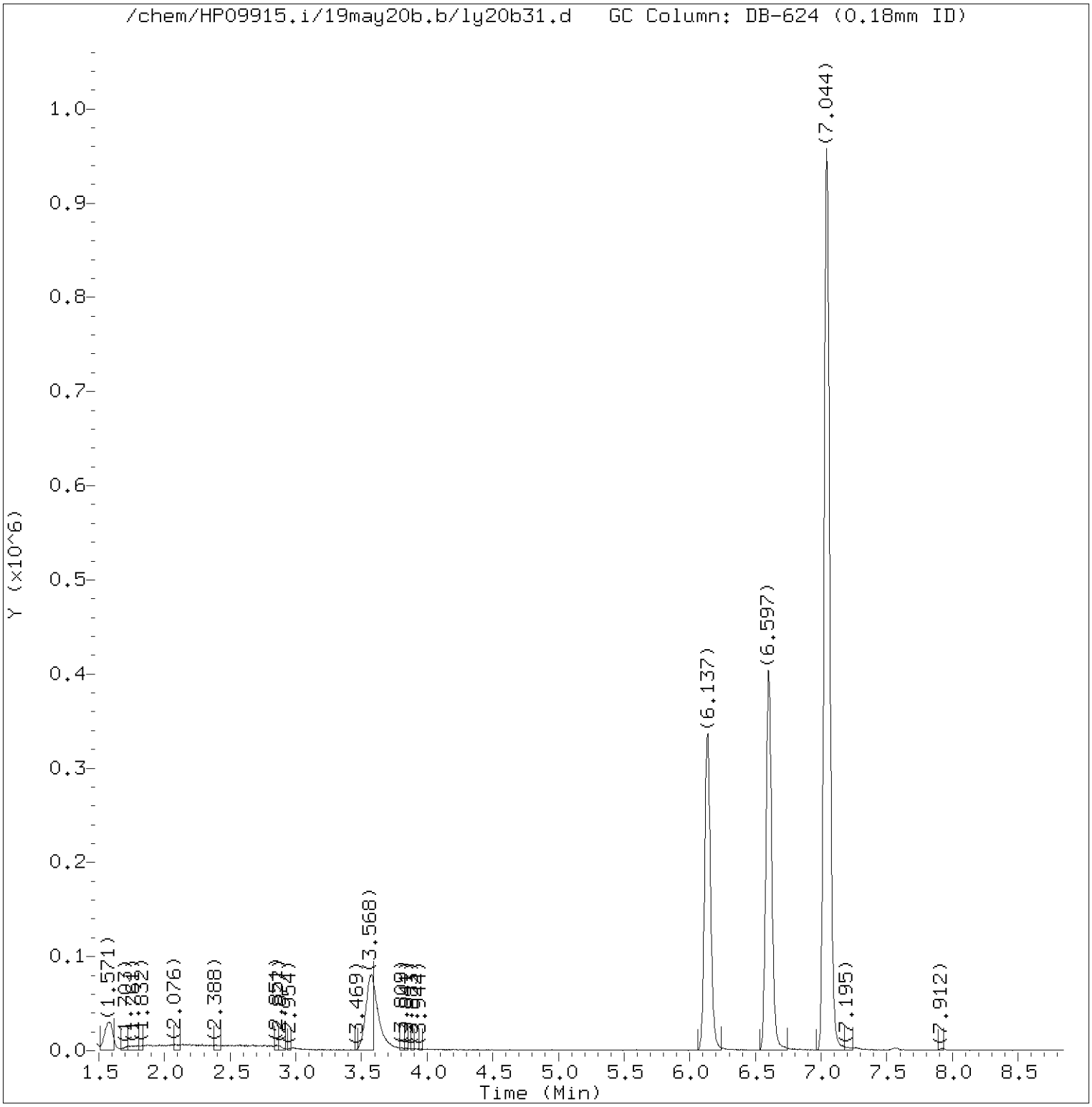
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
121) 4-Chlorotoluene	(4)				Not Detected					0.2	5
122) 1,3,5-Trimethylbenzene	(4)				Not Detected					0.3	5
124) tert-Butylbenzene	(4)				Not Detected					0.3	5
125) Pentachloroethane	(4)				Not Detected					0.2	5
126) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5
127) sec-Butylbenzene	(4)				Not Detected					0.2	5
129) 1,3-Dichlorobenzene	(4)				Not Detected					0.2	5
130) p-Isopropyltoluene	(4)				Not Detected					0.2	5
133) 1,4-Dichlorobenzene	(4)				Not Detected					0.2	5
134) 1,2,3-Trimethylbenzene	(4)				Not Detected					0.3	5
135) Benzyl Chloride	(4)				Not Detected					0.3	5
136) 1,3-Diethylbenzene	(4)				Not Detected					0.2	5
137) 1,4-Diethylbenzene	(4)				Not Detected					0.2	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
139) n-Butylbenzene	(4)				Not Detected					0.2	5
140) 1,2-Diethylbenzene	(4)				Not Detected					0.2	5
141) Diethylbenzene (total)	(4)				Not Detected					0.2	5
142) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.3	5
144) 1,3,5-Trichlorobenzene	(4)				Not Detected					0.2	5
146) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	5
147) Hexachlorobutadiene	(4)				Not Detected					0.7	5
148) Naphthalene	(4)				Not Detected					1	5
149) 1,2,3-Trichlorobenzene	(4)				Not Detected					0.4	5
150) 2-Methylnaphthalene	(4)				Not Detected					0.7	5

Total number of targets = 109

Digitally signed by Don V. Viray on 05/20/2019 at 21:24. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/21/2019 at 11:36. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

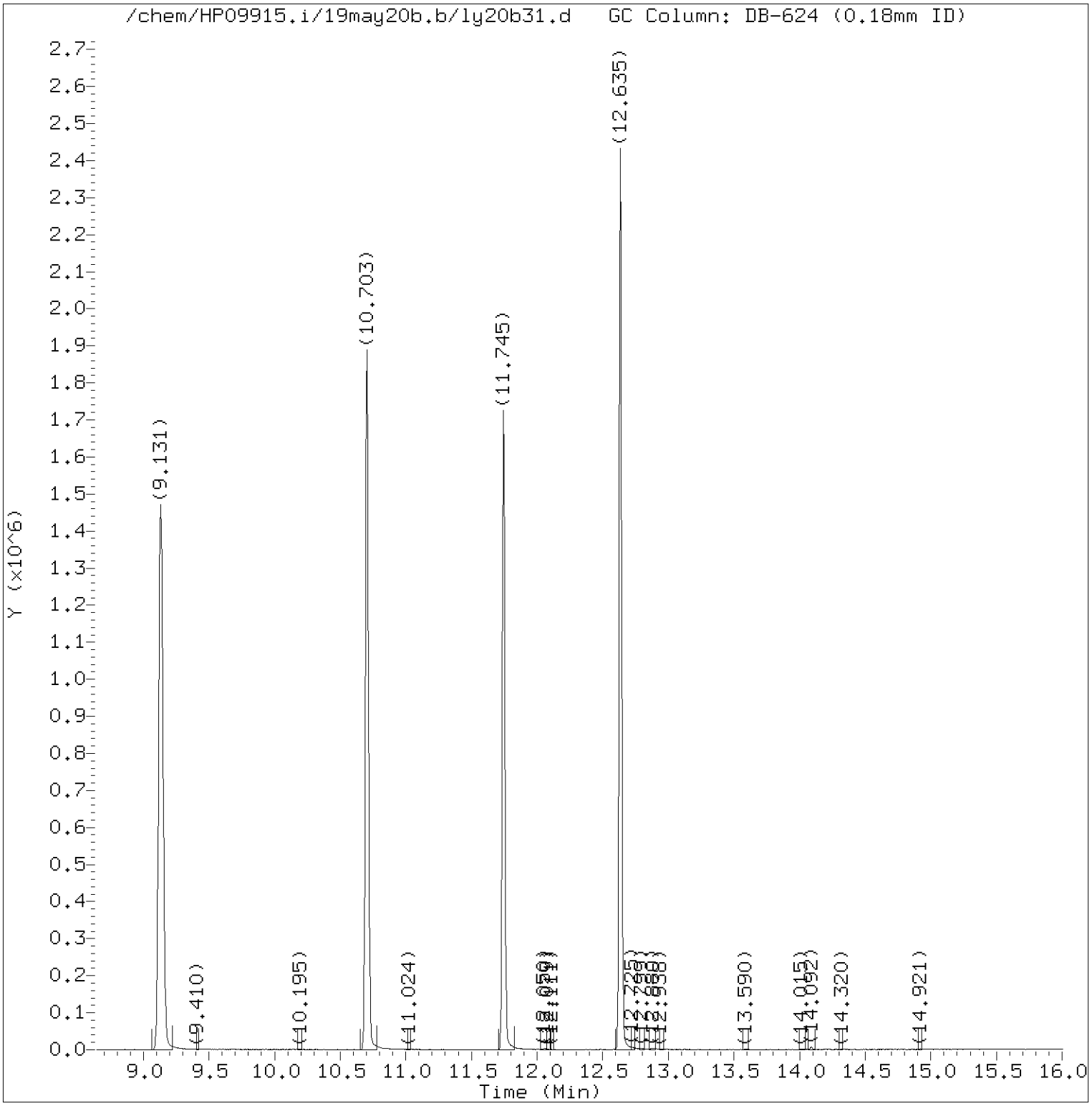
Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20b31.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 20:53 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 21:23 dvv10203

Sample Name: VBLKL97 Lab Sample ID: VBLKL97

Digitally signed by Don V. Viray
on 05/20/2019 at 21:24.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20b31.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 20:53 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 21:23 dvv10203

Sample Name: VBLKL97 Lab Sample ID: VBLKL97

Digitally signed by Don V. Viray
on 05/20/2019 at 21:24.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20b31.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 20:53 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 21:23 dvv10203

Sample Name: VBLKL97 Lab Sample ID: VBLKL97

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.578	65	261303	250.000
52)$Dibromofluoromethane	(2)	6.134	113	330564	46.740
57)$1,2-Dichloroethane-d4	(2)	6.600	102	82686	49.882
66)*Fluorobenzene	(2)	7.044	96	1375678	50.000
83)$Toluene-d8	(3)	9.131	98	1331261	50.937
100)*Chlorobenzene-d5	(3)	10.703	117	1015566	50.000
114)$4-Bromofluorobenzene	(3)	11.745	95	488320	48.282
131)*1,4-Dichlorobenzene-d4	(4)	12.635	152	532031	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/20/2019 at 21:24.
Target 3.5 esignature user ID: dvv10203

Data file: /chem2/HP09137.i/19may22a.b/wy22b02.d Injection date and time: **22-MAY-2019 12:52**
Data file Sample Info. Line: VBLKW34;VBLKW34;1;3;;;;;; Instrument ID: **HP09137.i** Batch: **W191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 13:40 cbs01947

Blank Data file reference: **/chem2/HP09137.i/19may22a.b/wy22b02.d**

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may22a.b/wy22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.738	(0.000)	594	65	198972	(-23)	250.00	
66) Fluorobenzene	5.032	(0.000)	1309	96	1092021	(-5)	50.00	
101) Chlorobenzene-d5	8.161	(0.003)	2284	117	838828	(-4)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041	(0.000)	2870	152	428583	(-12)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.358	(0.000)	113	239992	47.437	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.689	(0.001)	102	65497	48.678	97%		80 - 120
84) Toluene-d8	(3)	6.698	(0.000)	98	1078516	51.310	103%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.000)	95	377944	44.945	90%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)				Not Detected					0.2	1
4) Chloromethane	(2)				Not Detected					0.2	1
5) 1,3-Butadiene	(2)				Not Detected					1	3
6) Vinyl Chloride	(2)				Not Detected					0.2	1
8) Bromomethane	(2)				Not Detected					0.3	1
9) Chloroethane	(2)				Not Detected					0.2	1
11) n-Pentane	(2)				Not Detected					0.4	10
12) Trichlorofluoromethane	(2)				Not Detected					0.2	1
13) Ethanol	(1)				Not Detected					280	750
15) Freon 123a	(2)				Not Detected					0.4	5
16) Acrolein	(1)				Not Detected					2	100
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
21) 2-Propanol	(1)				Not Detected					18	100
22) Methyl Iodide	(2)				Not Detected					0.2	1
23) Carbon Disulfide	(2)				Not Detected					0.2	5
25) Allyl Chloride	(2)				Not Detected					0.3	5
27) Methyl Acetate	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
30) t-Butyl alcohol	(1)				Not Detected					12	50
31) Acrylonitrile	(2)				Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.2	1
34) n-Hexane	(2)				Not Detected					0.2	5
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
38) di-Isopropyl ether	(2)				Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)				Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)				Not Detected					0.2	2

Digitally signed by Chelsea B. Stong on 05/22/2019 at 13:41. Target 3.5 esignature user ID: cbs01947

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may22a.b/wy22b02.d Injection date and time: **22-MAY-2019 12:52**
Data file Sample Info. Line: VBLKW34;VBLKW34;1;3;;;;;; Instrument ID: **HP09137.i** Batch: **W191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 13:40 cbs01947

Blank Data file reference: **/chem2/HP09137.i/19may22a.b/wy22b02.d**

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may22a.b/wy22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)				Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					0.2	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					0.2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
73) Methylcyclohexane	(2)				Not Detected					0.2	5
74) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
75) Dibromomethane	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
77) Methyl Methacrylate	(2)				Not Detected					0.2	5
79) Bromodichloromethane	(2)				Not Detected					0.2	1
80) 2-Nitropropane	(2)				Not Detected					0.8	10
81) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
82) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
83) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
89) Toluene	(3)				Not Detected					0.2	1
90) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
91) 1,3-Dichloropropene (total)	(3)				Not Detected					0.2	5
92) Ethyl Methacrylate	(3)				Not Detected					0.2	5
93) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
95) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
97) 2-Hexanone	(3)				Not Detected					0.3	10
98) Dibromochloromethane	(3)				Not Detected					0.2	1
100) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
103) Chlorobenzene	(3)				Not Detected					0.2	1
104) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
110) Styrene	(3)				Not Detected					0.2	5
111) Bromoform	(3)				Not Detected					0.2	4
112) Isopropylbenzene	(3)				Not Detected					0.2	5
113) Cyclohexanone	(1)				Not Detected					25	100
116) Bromobenzene	(4)				Not Detected					0.2	5
117) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
118) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
119) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50
120) n-Propylbenzene	(4)				Not Detected					0.2	5
121) 2-Chlorotoluene	(4)				Not Detected					0.2	5

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKW34

Data file: /chem2/HP09137.i/19may22a.b/wy22b02.d Injection date and time: **22-MAY-2019 12:52**
Data file Sample Info. Line: VBLKW34;VBLKW34;1;3;;;;;; Instrument ID: **HP09137.i** Batch: **W191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 13:40 cbs01947

Blank Data file reference: **/chem2/HP09137.i/19may22a.b/wy22b02.d**

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may22a.b/wy22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
122) 4-Chlorotoluene	(4)				Not Detected					0.2	5
123) 1,3,5-Trimethylbenzene	(4)				Not Detected					0.3	5
125) tert-Butylbenzene	(4)				Not Detected					0.3	5
126) Pentachloroethane	(4)				Not Detected					0.2	5
127) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5
128) sec-Butylbenzene	(4)				Not Detected					0.2	5
130) 1,3-Dichlorobenzene	(4)				Not Detected					0.2	5
131) p-Isopropyltoluene	(4)				Not Detected					0.2	5
134) 1,4-Dichlorobenzene	(4)				Not Detected					0.2	5
135) 1,2,3-Trimethylbenzene	(4)				Not Detected					0.3	5
136) Benzyl Chloride	(4)				Not Detected					0.3	5
137) 1,3-Diethylbenzene	(4)				Not Detected					0.2	5
138) 1,4-Diethylbenzene	(4)				Not Detected					0.2	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
140) n-Butylbenzene	(4)				Not Detected					0.2	5
141) 1,2-Diethylbenzene	(4)				Not Detected					0.2	5
142) Diethylbenzene (total)	(4)				Not Detected					0.2	5
143) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.3	5
145) 1,3,5-Trichlorobenzene	(4)				Not Detected					0.2	5
147) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	5
148) Hexachlorobutadiene	(4)				Not Detected					0.7	5
149) Naphthalene	(4)				Not Detected					1	5
150) 1,2,3-Trichlorobenzene	(4)				Not Detected					0.4	5
151) 2-Methylnaphthalene	(4)				Not Detected					0.7	5

Total number of targets = 109

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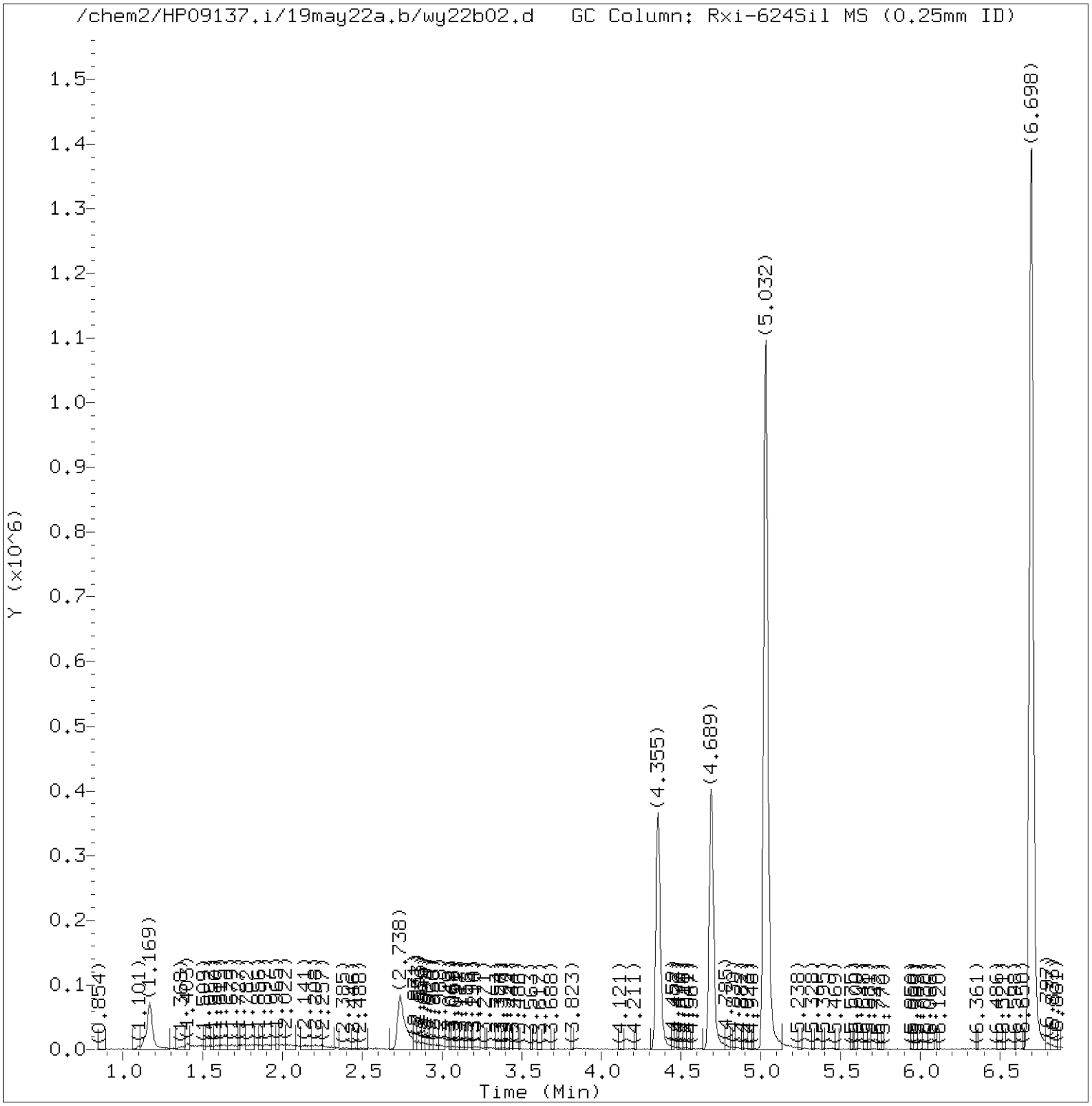
Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22b02.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 12:52 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:40 cbs01947

Sample Name: VBLKW34 Lab Sample ID: VBLKW34

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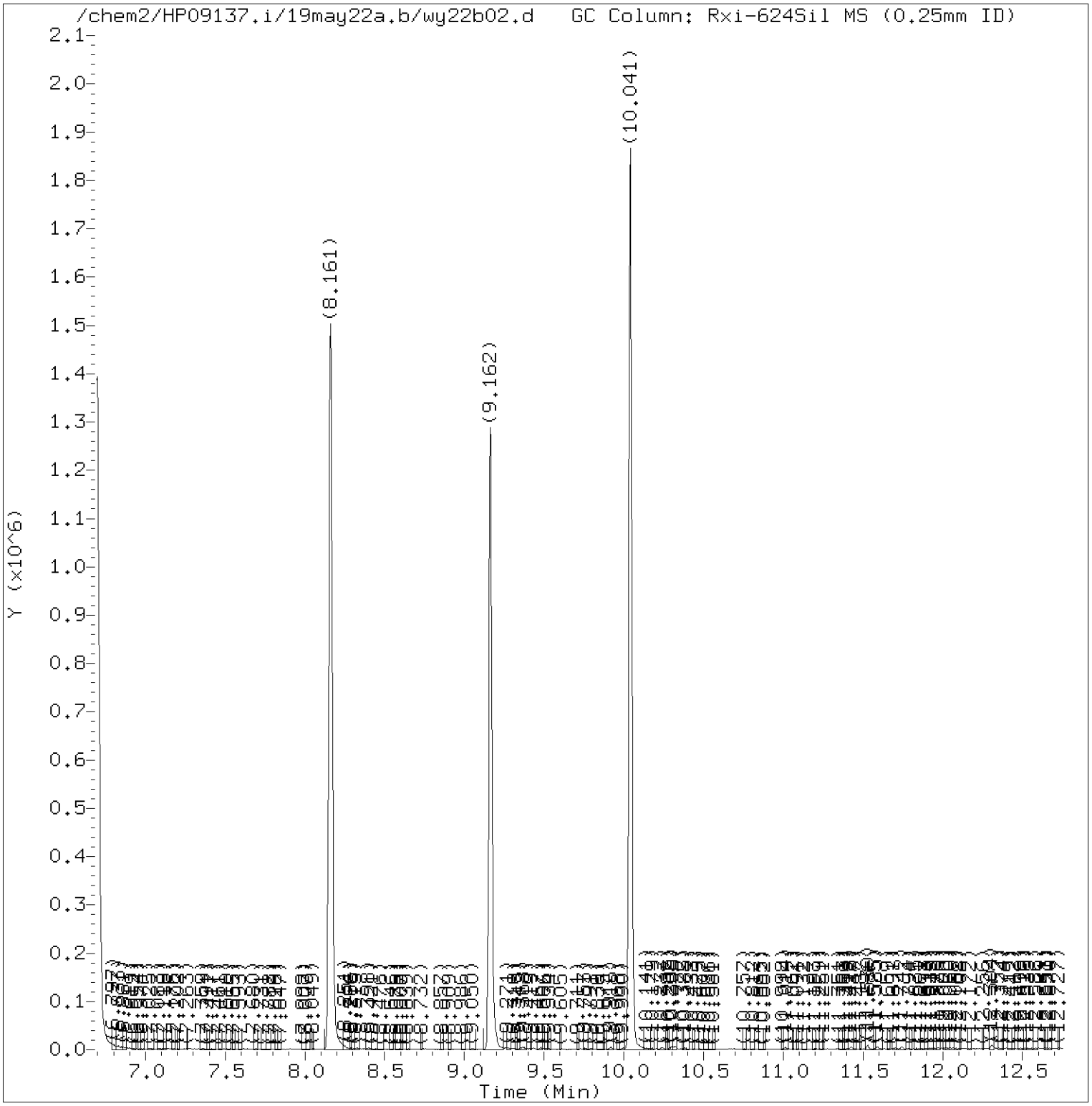
on 05/22/2019 at 13:41.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22b02.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 12:52 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:40 cbs01947

Sample Name: VBLKW34 Lab Sample ID: VBLKW34

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on 05/22/2019 at 13:41.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22b02.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 12:52 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:40 cbs01947

Sample Name: VBLKW34 Lab Sample ID: VBLKW34

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.738	65	198972	250.000
52)$Dibromofluoromethane	(2)	4.358	113	239992	47.437
57)$1,2-Dichloroethane-d4	(2)	4.689	102	65497	48.678
66)*Fluorobenzene	(2)	5.032	96	1092021	50.000
84)$Toluene-d8	(3)	6.698	98	1078516	51.310
101)*Chlorobenzene-d5	(3)	8.161	117	838828	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	377944	44.945
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	428583	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/22/2019 at 13:41.
Target 3.5 esignature user ID: cbs01947

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may23a.b/wy23b01.d
Data file Sample Info. Line: VBLKW35;VBLKW35;1;3;;;;;;
Date, time and analyst ID of latest file update: 23-May-2019 07:48 amd00492

Injection date and time: **23-MAY-2019 07:22**
Instrument ID: **HP09137.i** Batch: **W191431AA**

Blank Data file reference: **/chem2/HP09137.i/19may23a.b/wy23b01.d**

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-MAY-2019 06:56
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may23a.b/wy23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.738 (-0.003)	594	65	161401 (-20)	250.00	
66) Fluorobenzene	5.029 (0.000)	1308	96	1005435 (-1)	50.00	
101) Chlorobenzene-d5	8.161 (0.000)	2284	117	771537 (0)	50.00	
132) 1,4-Dichlorobenzene-d4	10.041 (0.000)	2870	152	386125 (-12)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.358 (-0.001)	113	220230	47.280	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.695 (-0.001)	102	62603	50.534	101%		80 - 120
84) Toluene-d8	(3)	6.695 (0.000)	98	989927	51.203	102%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162 (0.000)	95	341889	44.204	88%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)			Not Detected					0.2	1
4) Chloromethane	(2)			Not Detected					0.2	1
5) 1,3-Butadiene	(2)			Not Detected					1	3
6) Vinyl Chloride	(2)			Not Detected					0.2	1
8) Bromomethane	(2)			Not Detected					0.3	1
9) Chloroethane	(2)			Not Detected					0.2	1
11) n-Pentane	(2)			Not Detected					0.4	10
12) Trichlorofluoromethane	(2)			Not Detected					0.2	1
13) Ethanol	(1)			Not Detected					280	750
15) Freon 123a	(2)			Not Detected					0.4	5
16) Acrolein	(1)			Not Detected					2	100
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
21) 2-Propanol	(1)			Not Detected					18	100
22) Methyl Iodide	(2)			Not Detected					0.2	1
23) Carbon Disulfide	(2)			Not Detected					0.2	5
25) Allyl Chloride	(2)			Not Detected					0.3	5
27) Methyl Acetate	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
30) t-Butyl alcohol	(1)			Not Detected					12	50
31) Acrylonitrile	(2)			Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)			Not Detected					0.2	1
34) n-Hexane	(2)			Not Detected					0.2	5
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
38) di-Isopropyl ether	(2)			Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)			Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)			Not Detected					0.2	2

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may23a.b/wy23b01.d Injection date and time: **23-MAY-2019 07:22**
Data file Sample Info. Line: VBLKW35;VBLKW35;1;3;;;;;; Instrument ID: **HP09137.i** Batch: **W191431AA**
Date, time and analyst ID of latest file update: 23-May-2019 07:48 amd00492

Blank Data file reference: **/chem2/HP09137.i/19may23a.b/wy23b01.d**

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-MAY-2019 06:56
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may23a.b/wy23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)				Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					0.2	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					0.2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
73) Methylcyclohexane	(2)				Not Detected					0.2	5
74) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
75) Dibromomethane	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
77) Methyl Methacrylate	(2)				Not Detected					0.2	5
79) Bromodichloromethane	(2)				Not Detected					0.2	1
80) 2-Nitropropane	(2)				Not Detected					0.8	10
81) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
82) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
83) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
89) Toluene	(3)				Not Detected					0.2	1
90) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
91) 1,3-Dichloropropene (total)	(3)				Not Detected					0.2	5
92) Ethyl Methacrylate	(3)				Not Detected					0.2	5
93) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
95) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
97) 2-Hexanone	(3)				Not Detected					0.3	10
98) Dibromochloromethane	(3)				Not Detected					0.2	1
100) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
103) Chlorobenzene	(3)				Not Detected					0.2	1
104) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
110) Styrene	(3)				Not Detected					0.2	5
111) Bromoform	(3)				Not Detected					0.2	4
112) Isopropylbenzene	(3)				Not Detected					0.2	5
113) Cyclohexanone	(1)				Not Detected					25	100
116) Bromobenzene	(4)				Not Detected					0.2	5
117) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
118) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
119) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50
120) n-Propylbenzene	(4)				Not Detected					0.2	5
121) 2-Chlorotoluene	(4)				Not Detected					0.2	5

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may23a.b/wy23b01.d Injection date and time: **23-MAY-2019 07:22**
Data file Sample Info. Line: VBLKW35;VBLKW35;1;3;;;;;; Instrument ID: **HP09137.i** Batch: **W191431AA**
Date, time and analyst ID of latest file update: 23-May-2019 07:48 amd00492

Blank Data file reference: **/chem2/HP09137.i/19may23a.b/wy23b01.d**

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-MAY-2019 06:56
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may23a.b/wy23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

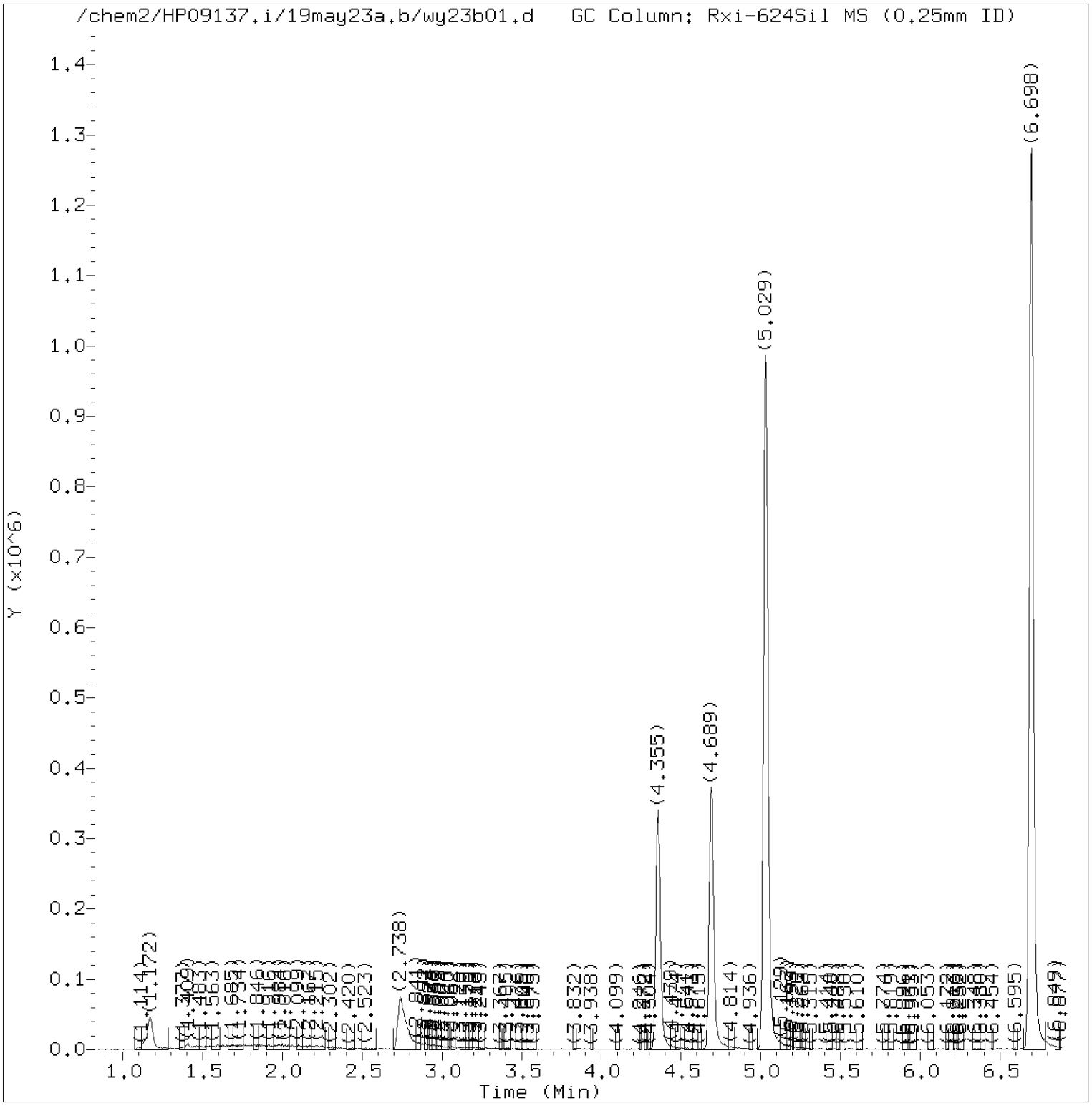
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
122) 4-Chlorotoluene	(4)				Not Detected					0.2	5
123) 1,3,5-Trimethylbenzene	(4)				Not Detected					0.3	5
125) tert-Butylbenzene	(4)				Not Detected					0.3	5
126) Pentachloroethane	(4)				Not Detected					0.2	5
127) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5
128) sec-Butylbenzene	(4)				Not Detected					0.2	5
130) 1,3-Dichlorobenzene	(4)				Not Detected					0.2	5
131) p-Isopropyltoluene	(4)				Not Detected					0.2	5
134) 1,4-Dichlorobenzene	(4)				Not Detected					0.2	5
135) 1,2,3-Trimethylbenzene	(4)				Not Detected					0.3	5
136) Benzyl Chloride	(4)				Not Detected					0.3	5
137) 1,3-Diethylbenzene	(4)				Not Detected					0.2	5
138) 1,4-Diethylbenzene	(4)				Not Detected					0.2	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
140) n-Butylbenzene	(4)				Not Detected					0.2	5
141) 1,2-Diethylbenzene	(4)				Not Detected					0.2	5
142) Diethylbenzene (total)	(4)				Not Detected					0.2	5
143) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.3	5
145) 1,3,5-Trichlorobenzene	(4)				Not Detected					0.2	5
147) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	5
148) Hexachlorobutadiene	(4)				Not Detected					0.7	5
149) Naphthalene	(4)				Not Detected					1	5
150) 1,2,3-Trichlorobenzene	(4)				Not Detected					0.4	5
151) 2-Methylnaphthalene	(4)				Not Detected					0.7	5

Total number of targets = 109

Digitally signed by Don V. Viray on 05/23/2019 at 20:18. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:39. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

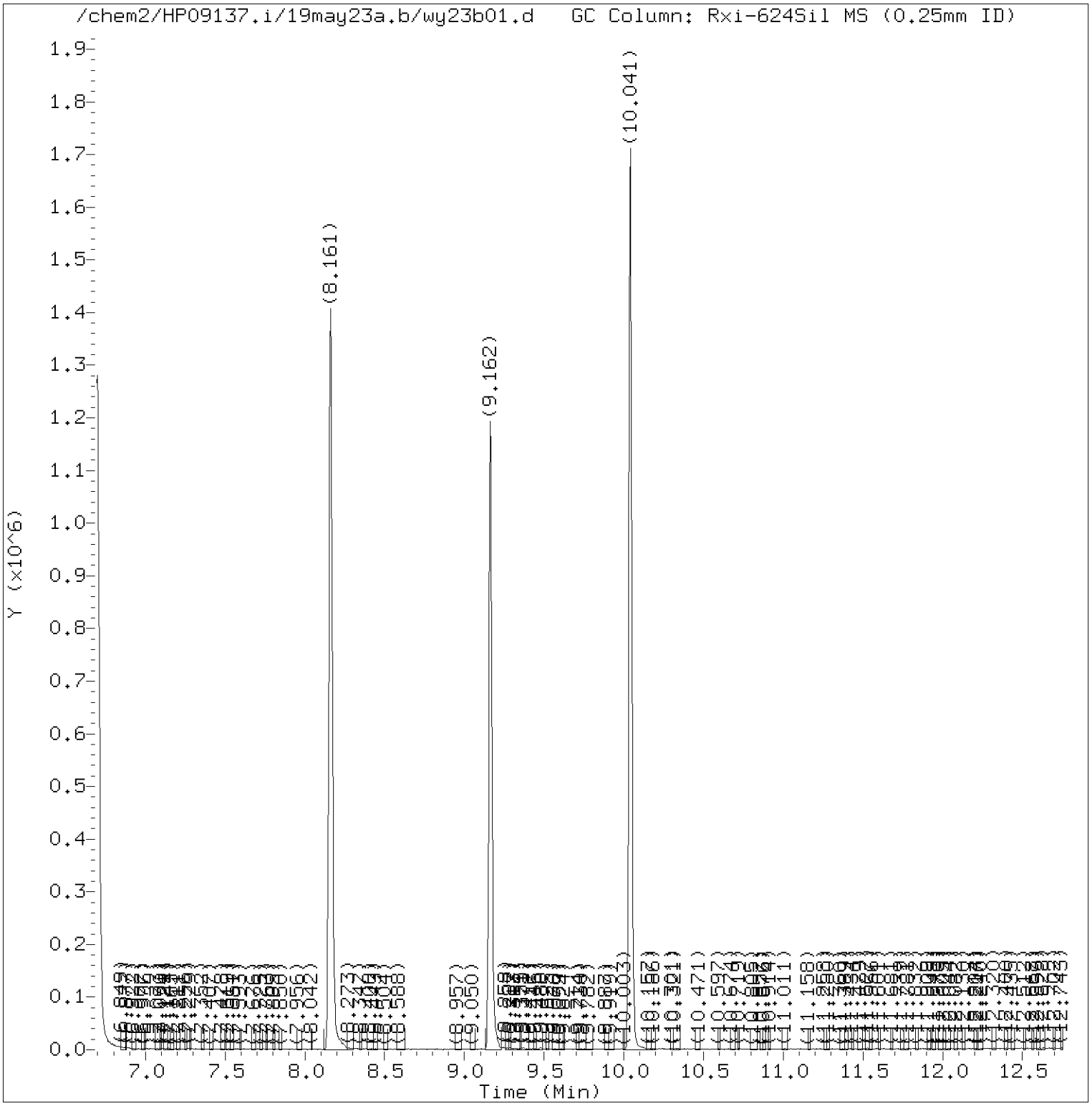
Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23b01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 07:22 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:48 amd00492

Sample Name: VBLKW35 Lab Sample ID: VBLKW35

Digitally signed by Don V. Viray
on 05/23/2019 at 20:18.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23b01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 07:22 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:48 amd00492

Sample Name: VBLKW35 Lab Sample ID: VBLKW35

Digitally signed by Don V. Viray
on 05/23/2019 at 20:18.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23b01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 07:22 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:48 amd00492

Sample Name: VBLKW35 Lab Sample ID: VBLKW35

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.738	65	161401	250.000
52)$Dibromofluoromethane	(2)	4.358	113	220230	47.280
57)$1,2-Dichloroethane-d4	(2)	4.695	102	62603	50.534
66)*Fluorobenzene	(2)	5.029	96	1005435	50.000
84)$Toluene-d8	(3)	6.695	98	989927	51.203
101)*Chlorobenzene-d5	(3)	8.161	117	771537	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	341889	44.204
132)*1,4-Dichlorobenzene-d4	(4)	10.041	152	386125	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/23/2019 at 20:18.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

93J01MS

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058235

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19may20b.b/ly20s37.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	21	
75-35-4	1,1-Dichloroethene	26	
67-64-1	Acetone	160	
76-13-1	Freon 113	26	
75-15-0	Carbon Disulfide	24	
75-09-2	Methylene Chloride	23	
156-60-5	trans-1,2-Dichloroethene	23	
75-34-3	1,1-Dichloroethane	23	
156-59-2	cis-1,2-Dichloroethene	23	
78-93-3	2-Butanone	160	
67-66-3	Chloroform	23	
71-55-6	1,1,1-Trichloroethane	37	
71-43-2	Benzene	23	
107-06-2	1,2-Dichloroethane	21	
79-01-6	Trichloroethene	59	
123-91-1	1,4-Dioxane	670	
108-88-3	Toluene	23	
127-18-4	Tetrachloroethene	22	
100-41-4	Ethylbenzene	22	
1330-20-7	Xylene (Total)	65	
95-50-1	1,2-Dichlorobenzene	21	
91-20-3	Naphthalene	19	

FORM I VOA

^

93J01MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1058235MS

Data file: /chem/HP09915.i/19may20b.b/ly20s37.d Injection date and time: **20-MAY-2019 23:16**
Data file Sample Info. Line: 93J01MS;1058235MS;1;3;MS;JCV93;;;ly20b31; Instrument ID: **HP09915.i** Batch: **L191402AA**
Date, time and analyst ID of latest file update: 21-May-2019 09:29 clm27445

Blank Data file reference: **/chem/HP09915.i/19may20b.b/ly20b31.d**

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-MAY-2019 21:23
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19may20b.b/ly20c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.584	(-0.016)	654	65	219336	(-22)	250.00	
66) Fluorobenzene	7.047	(-0.006)	1731	96	1139431	(-18)	50.00	
100) Chlorobenzene-d5	10.703	(0.000)	2868	117	870772	(-3)	50.00	
131) 1,4-Dichlorobenzene-d4	12.635	(0.000)	3469	152	485413	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.140	(0.000)	113	283403	48.380	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.603	(0.000)	102	68236	49.700	99%		80 - 120
83) Toluene-d8	(3)	9.134	(0.000)	98	1142910	51.001	102%		80 - 120
114) 4-Bromofluorobenzene	(3)	11.745	(0.000)	95	434703	50.127	100%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)	1.973	(-0.000)	62	188086	20.935	20.94			0.2	1
17) 1,1-Dichloroethene	(2)	3.028	(-0.000)	96	99986	25.697	25.70			0.2	1
18) Acetone	(1)	3.041	(0.002)	58	118347	161.747	161.75			0.7	20
19) Freon 113	(2)	3.057	(-0.000)	101	107569	26.021	26.02			0.2	10
23) Carbon Disulfide	(2)	3.295	(-0.000)	76	315857	23.981	23.98			0.2	5
28) Methylene Chloride	(2)	3.587	(-0.001)	84	110592	22.825	22.83			0.3	1
32) trans-1,2-Dichloroethene	(2)	3.941	(-0.000)	96	106393	22.819	22.82			0.2	1
36) 1,1-Dichloroethane	(2)	4.562	(-0.000)	63	204661	23.239	23.24			0.2	1
42) cis-1,2-Dichloroethene	(2)	5.414	(-0.000)	96	125098	23.241	23.24			0.2	1
44) 2-Butanone	(2)	5.378	(-0.000)	43	659646	156.267	156.27			0.3	10
51) Chloroform	(2)	5.918	(-0.000)	83	204679	23.127	23.13			0.2	1
53) 1,1,1-Trichloroethane	(2)	6.147	(-0.000)	97	284487	37.478	37.48			0.3	1
60) Benzene	(2)	6.626	(-0.000)	78	459004	23.466	23.47			0.2	1
61) 1,2-Dichloroethane	(2)	6.709	(0.000)	62	165868	21.139	21.14			0.3	1
71) Trichloroethene	(2)	7.542	(0.000)	95	310290	58.871	58.87			0.2	1
75) 1,4-Dioxane	(1)	7.967	(0.009)	88	38223M	670.847	670.85			29	250
88) Toluene	(3)	9.221	(0.000)	92	282535	22.757	22.76			0.2	1
93) Tetrachloroethene	(3)	9.822	(0.000)	166	117711	21.800	21.80			0.2	1
104) Ethylbenzene	(3)	10.828	(-0.000)	91	564237	22.436	22.44			0.4	1
106) m+p-Xylene	(3)	10.950	(-0.000)	106	436653	44.150	44.15			1	5
107) o-Xylene	(3)	11.285	(-0.000)	106	205873	21.051	21.05			0.4	1
108) Xylene (Total)	(3)			106	642526	65.200	65.20			1	5
138) 1,2-Dichlorobenzene	(4)	12.908	(-0.000)	146	262919	20.753	20.75			0.2	5
148) Naphthalene	(4)	14.182	(0.000)	128	558399	18.904	18.90			1	5

M = Compound was manually integrated.

Digitally signed by Corie L. Mellinger on 05/21/2019 at 09:30. Target 3.5 esignature user ID: clm27445

Data file: /chem/HP09915.i/19may20b.b/ly20s37.d Injection date and time: **20-MAY-2019 23:16**
Data file Sample Info. Line: 93J01MS;1058235MS;1;3;MS;JCV93;;;ly20b31; Instrument ID: **HP09915.i** Batch: **L191402AA**
Date, time and analyst ID of latest file update: 21-May-2019 09:29 clm27445

Blank Data file reference: **/chem/HP09915.i/19may20b.b/ly20b31.d**

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-MAY-2019 21:23
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19may20b.b/ly20c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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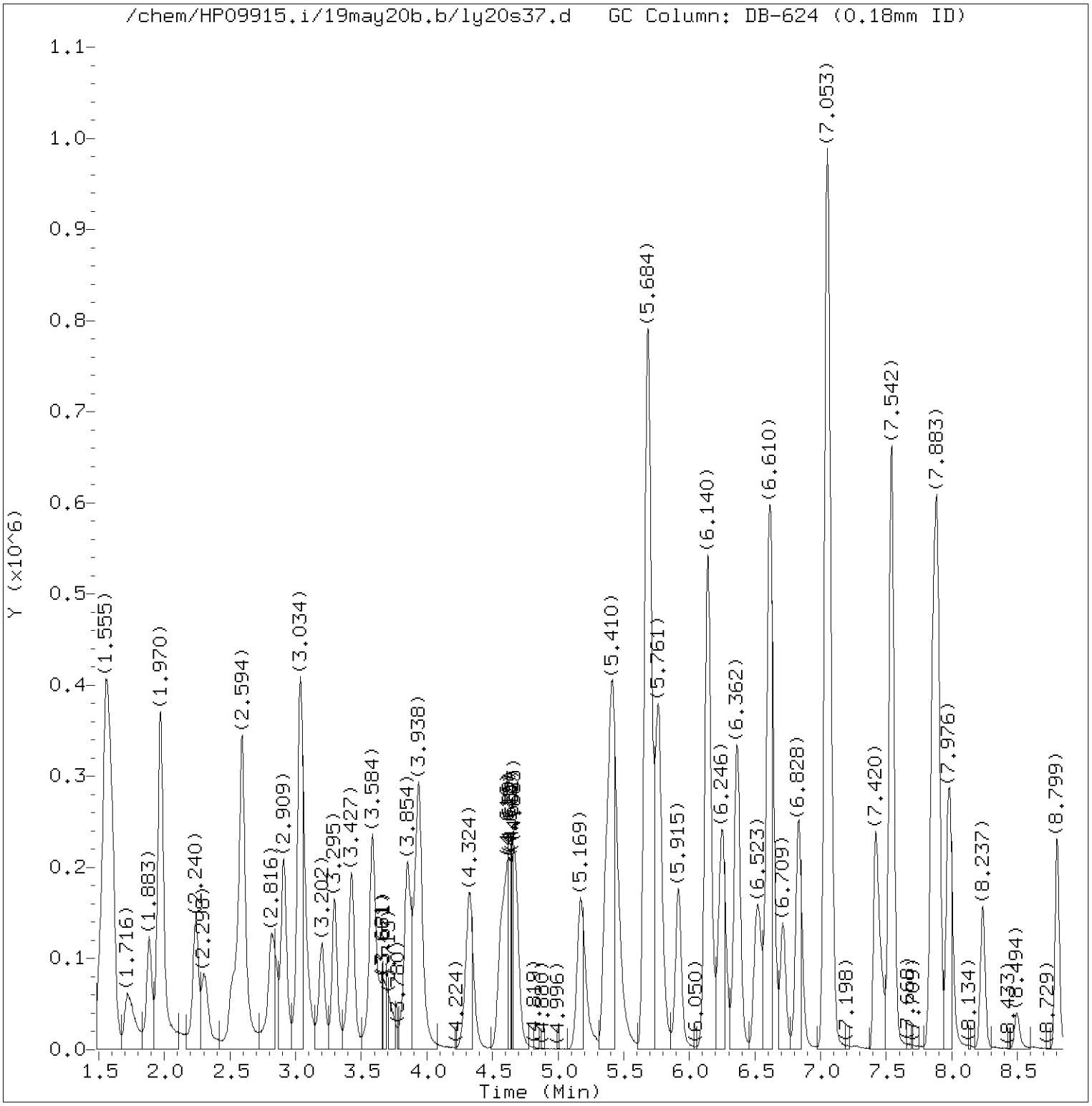
Total number of targets = 24

Digitally signed by Corie L. Mellinger on 05/21/2019 at 09:30. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kelly E. Keller on 05/21/2019 at 11:36. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

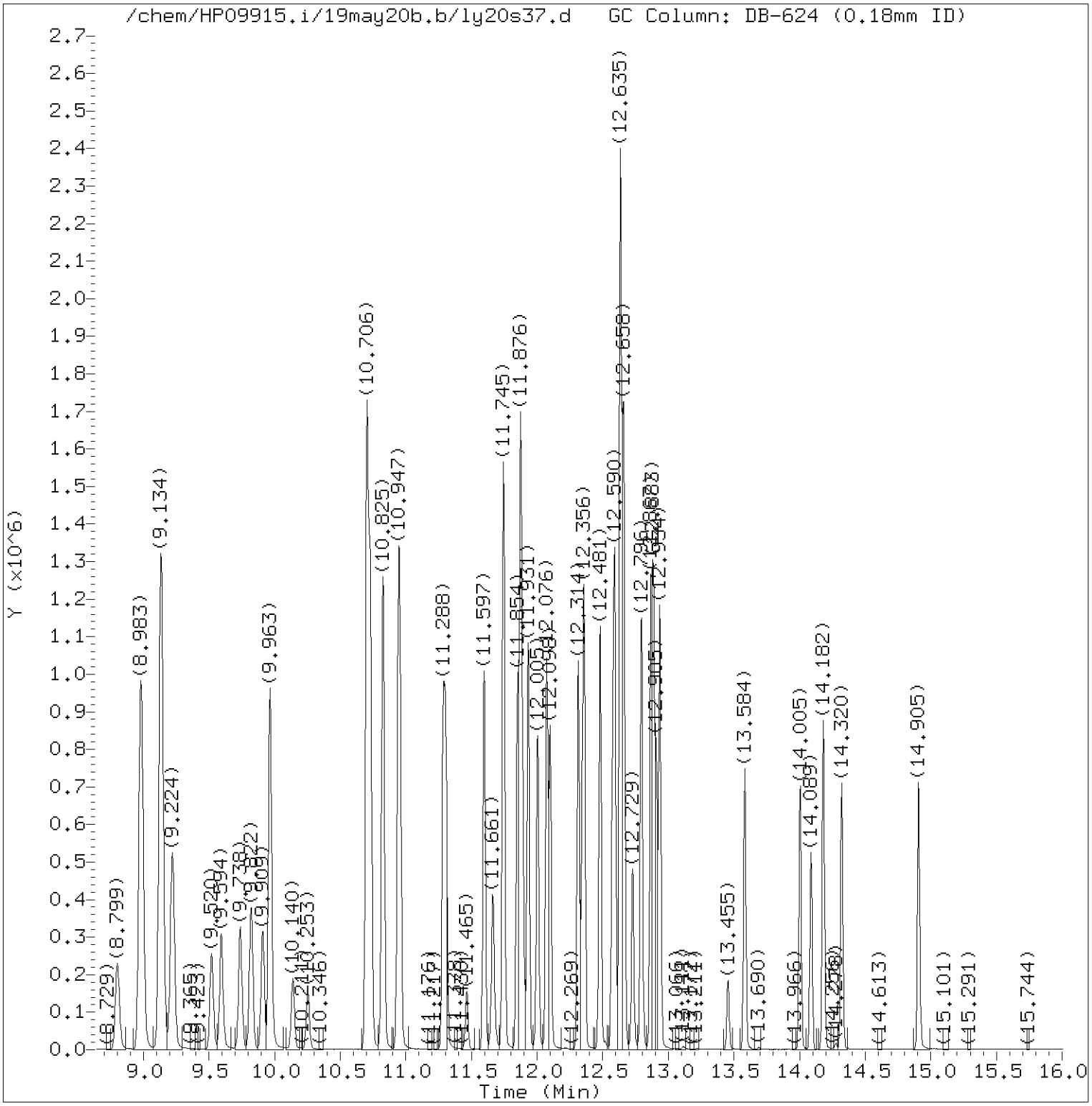
Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20s37.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 23:16 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-MAY-2019 21:23
Date, time and analyst ID of latest file update: 21-May-2019 09:29 clm27445

Sample Name: 93J01MS Lab Sample ID: 1058235MS

Digitally signed by Corie L. Mellinger
on 05/21/2019 at 09:30.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20s37.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 23:16 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-MAY-2019 21:23
Date, time and analyst ID of latest file update: 21-May-2019 09:29 clm27445

Sample Name: 93J01MS Lab Sample ID: 1058235MS

Digitally signed by Corie L. Mellinger
on 05/21/2019 at 09:30.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20s37.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 23:16 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-MAY-2019 21:23
Date, time and analyst ID of latest file update: 21-May-2019 09:29 clm27445

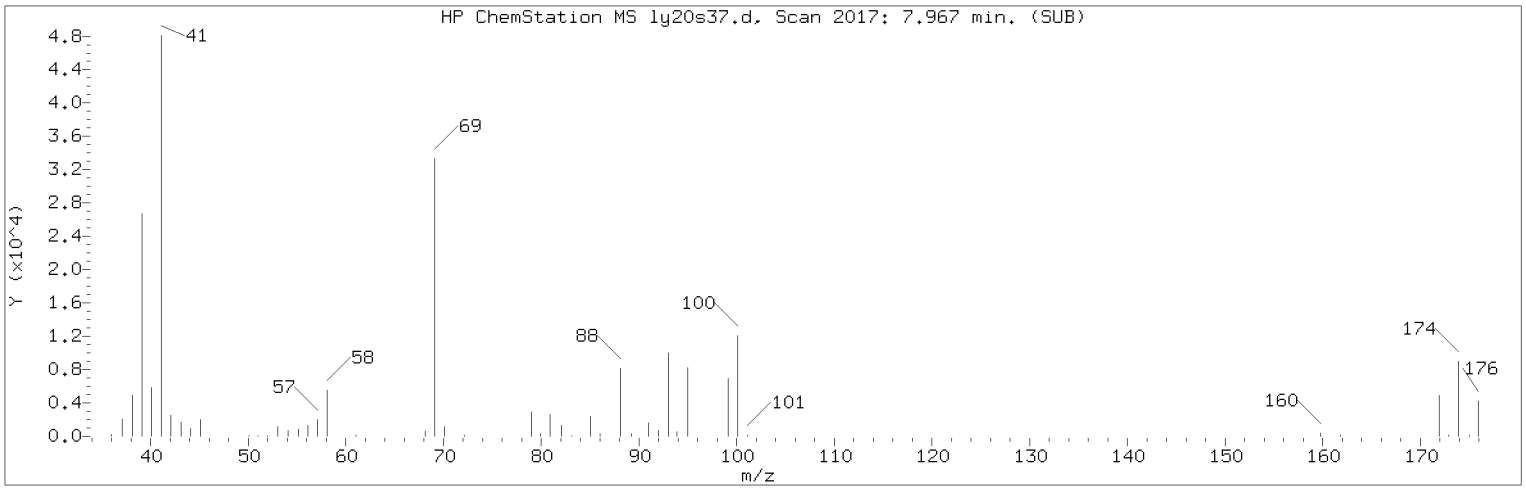
Sample Name: 93J01MS Lab Sample ID: 1058235MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	1.973	62	188086	20.935
17) 1,1-Dichloroethene	(2)	3.028	96	99986	25.697
18) Acetone	(1)	3.041	58	118347	161.747
19) Freon 113	(2)	3.057	101	107569	26.021
23) Carbon Disulfide	(2)	3.295	76	315857	23.981
29)*t-Butyl alcohol-d10	(1)	3.584	65	219336	250.000
28) Methylene Chloride	(2)	3.587	84	110592	22.825
32) trans-1,2-Dichloroethene	(2)	3.941	96	106393	22.819
36) 1,1-Dichloroethane	(2)	4.562	63	204661	23.239
44) 2-Butanone	(2)	5.378	43	659646	156.267
42) cis-1,2-Dichloroethene	(2)	5.414	96	125098	23.241
51) Chloroform	(2)	5.918	83	204679	23.127
52)$Dibromofluoromethane	(2)	6.140	113	283403	48.380
53) 1,1,1-Trichloroethane	(2)	6.147	97	284487	37.478
57)$1,2-Dichloroethane-d4	(2)	6.603	102	68236	49.700
60) Benzene	(2)	6.626	78	459004	23.466
61) 1,2-Dichloroethane	(2)	6.709	62	165868	21.139
66)*Fluorobenzene	(2)	7.047	96	1139431	50.000
71) Trichloroethene	(2)	7.542	95	310290	58.871
75) 1,4-Dioxane	(1)	7.967	88	38223M	670.847
83)$Toluene-d8	(3)	9.134	98	1142910	51.001
88) Toluene	(3)	9.221	92	282535	22.757
93) Tetrachloroethene	(3)	9.822	166	117711	21.800
100)*Chlorobenzene-d5	(3)	10.703	117	870772	50.000
104) Ethylbenzene	(3)	10.828	91	564237	22.436
106) m+p-Xylene	(3)	10.950	106	436653	44.150
107) o-Xylene	(3)	11.285	106	205873	21.051
114)$4-Bromofluorobenzene	(3)	11.745	95	434703	50.127
108) Xylene (Total)	(3)		106	642526	65.200
131)*1,4-Dichlorobenzene-d4	(4)	12.635	152	485413	50.000
138) 1,2-Dichlorobenzene	(4)	12.909	146	262919	20.753
148) Naphthalene	(4)	14.182	128	558399	18.904

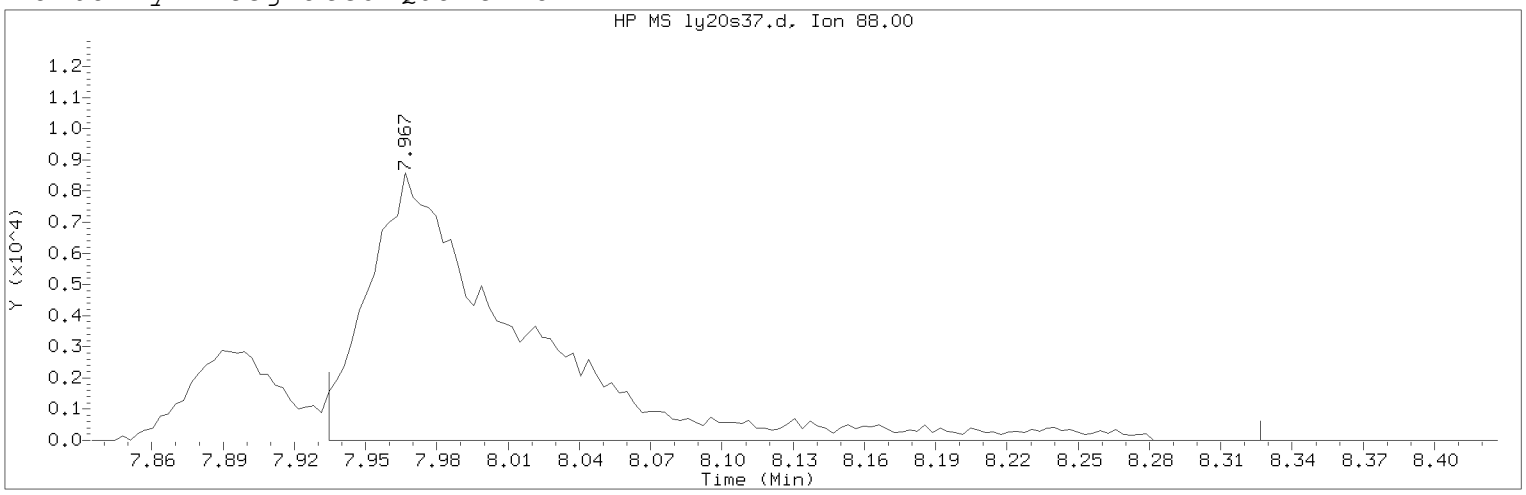
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 05/21/2019 at 09:30.
Target 3.5 esignature user ID: clm27445

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19may20b.b/ly20s37.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 23:16 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-MAY-2019 21:23
Date, time and analyst ID of latest file update: 21-May-2019 09:29 clm27445

Sample Name: 93J01MS Lab Sample ID: 1058235MS

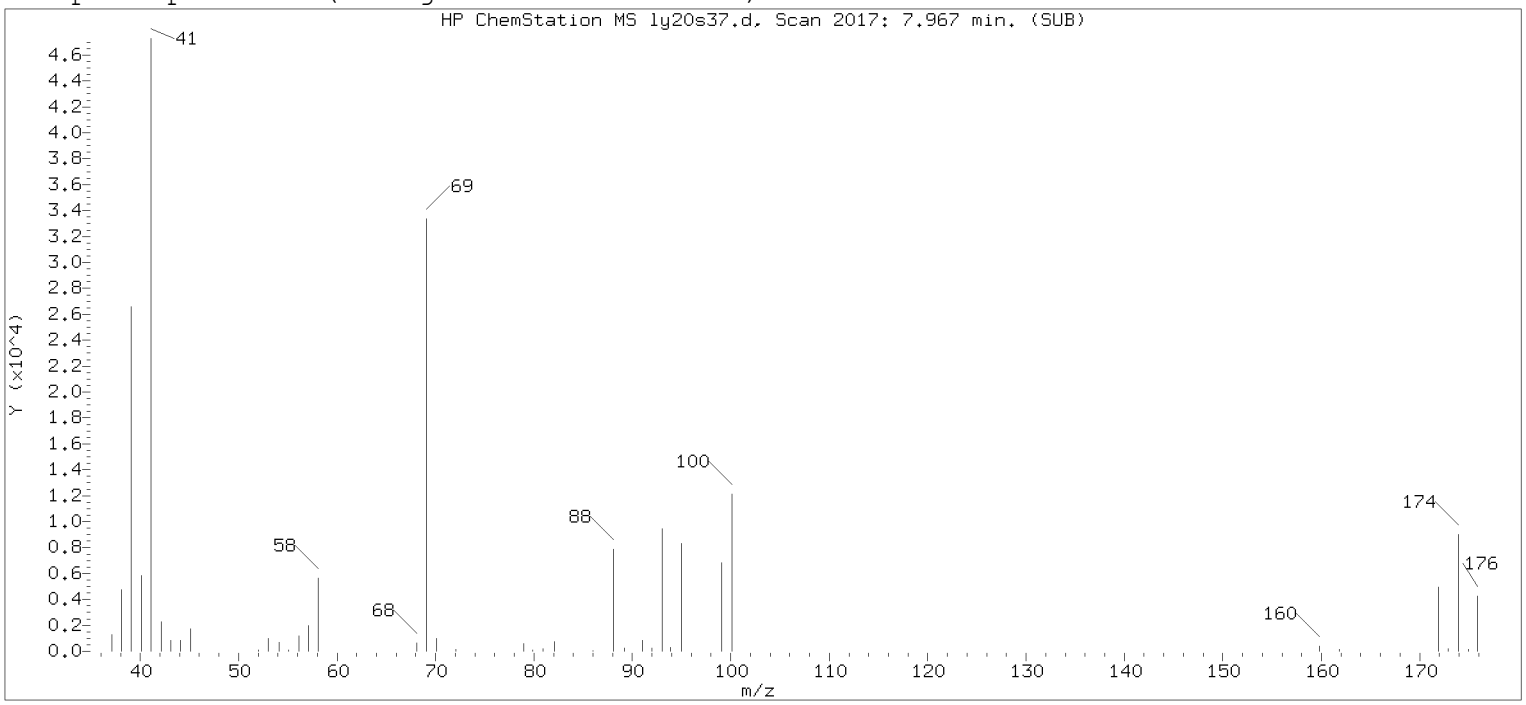
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2017
Retention Time (minutes): 7.967
Quant Ion : 88.00
Area (flag) : 38223M
On-Column Amount (ng) : 670.8472
Integration start scan : 2006 Integration stop scan: 2128
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

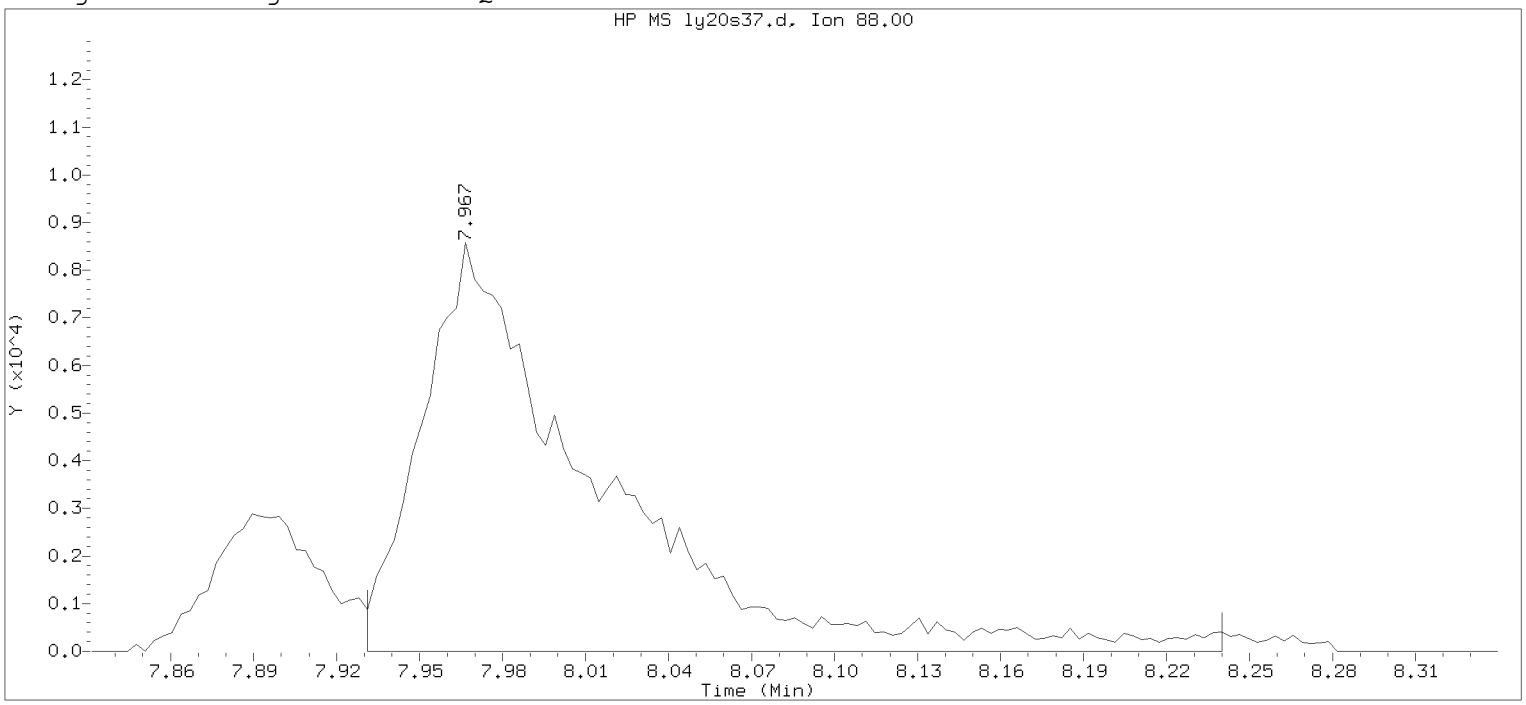
Analyst responsible for change: Digitally signed by Corie L. Mellinger on 05/21/2019 at 09:30.
Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kelly E. Keller on 05/21/2019 at 11:36.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19may20b.b/ly20s37.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 23:16 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 20-MAY-2019 21:23
Date, time and analyst ID of latest file update: 20-May-2019 23:33 Automation

Sample Name: 93J01MS Lab Sample ID: 1058235MS

Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2017		
Retention Time (minutes)	: 7.967		
Quant Ion	: 88.00		
Area	: 37697		
On-column Amount (ng)	: 661.6251		
Integration start scan	: 2005	Integration stop scan:	2101
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Corie L. Mellinger on 05/21/2019 at 09:30.
Target 3.5 esignature user: CLMellinger

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

93J01MSD

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058236

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19may20b.b/ly20s38.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	22	
75-35-4	1,1-Dichloroethene	25	
67-64-1	Acetone	150	
76-13-1	Freon 113	26	
75-15-0	Carbon Disulfide	24	
75-09-2	Methylene Chloride	23	
156-60-5	trans-1,2-Dichloroethene	22	
75-34-3	1,1-Dichloroethane	23	
156-59-2	cis-1,2-Dichloroethene	23	
78-93-3	2-Butanone	150	
67-66-3	Chloroform	23	
71-55-6	1,1,1-Trichloroethane	37	
71-43-2	Benzene	23	
107-06-2	1,2-Dichloroethane	21	
79-01-6	Trichloroethene	58	
123-91-1	1,4-Dioxane	670	
108-88-3	Toluene	23	
127-18-4	Tetrachloroethene	22	
100-41-4	Ethylbenzene	22	
1330-20-7	Xylene (Total)	64	
95-50-1	1,2-Dichlorobenzene	21	
91-20-3	Naphthalene	19	

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19may20b.b/ly20s38.d Injection date and time: **20-MAY-2019 23:38**
Data file Sample Info. Line: 93J01MSD;1058236MSD;1;3;MSD;JCV93;;;ly20b31; Instrument ID: **HP09915.i** Batch: **L191402AA**
Date, time and analyst ID of latest file update: 21-May-2019 09:29 clm27445

Blank Data file reference: **/chem/HP09915.i/19may20b.b/ly20b31.d**

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-MAY-2019 21:23
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19may20b.b/ly20c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.575(-0.006)	651	65	241704 (-14)	250.00	
66) Fluorobenzene	7.041(0.000)	1729	96	1198471 (-14)	50.00	
100) Chlorobenzene-d5	10.703(0.000)	2868	117	906119 (1)	50.00	
131) 1,4-Dichlorobenzene-d4	12.635(0.000)	3469	152	502915 (0)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.131(0.000)	113	297449	48.277	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.597(0.000)	102	71890	49.782	100%		80 - 120
83) Toluene-d8	(3)	9.134(0.000)	98	1194041	51.205	102%		80 - 120
114) 4-Bromofluorobenzene	(3)	11.745(0.000)	95	450721	49.947	100%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)	1.967(0.000)	62	206667	21.870	21.87			0.2	1
17) 1,1-Dichloroethene	(2)	3.018(0.000)	96	103439	25.274	25.27			0.2	1
18) Acetone	(1)	3.034(0.001)	58	118835	147.384	147.38			0.7	20
19) Freon 113	(2)	3.047(0.000)	101	112460	25.864	25.86			0.2	10
23) Carbon Disulfide	(2)	3.282(0.000)	76	329074	23.754	23.75			0.2	5
28) Methylene Chloride	(2)	3.578(-0.000)	84	114927	22.551	22.55			0.3	1
32) trans-1,2-Dichloroethene	(2)	3.931(0.000)	96	110023	22.435	22.44			0.2	1
36) 1,1-Dichloroethane	(2)	4.552(0.000)	63	212622	22.953	22.95			0.2	1
42) cis-1,2-Dichloroethene	(2)	5.404(0.000)	96	130435	23.039	23.04			0.2	1
44) 2-Butanone	(2)	5.369(0.000)	43	685143	154.312	154.31			0.3	10
51) Chloroform	(2)	5.906(0.000)	83	211083	22.675	22.68			0.2	1
53) 1,1,1-Trichloroethane	(2)	6.134(0.000)	97	295564	37.019	37.02			0.3	1
60) Benzene	(2)	6.623(-0.000)	78	474347	23.056	23.06			0.2	1
61) 1,2-Dichloroethane	(2)	6.706(0.000)	62	171629	20.795	20.80			0.3	1
71) Trichloroethene	(2)	7.536(0.000)	95	320490	57.811	57.81			0.2	1
75) 1,4-Dioxane	(1)	7.967(0.003)	88	41984M	668.665	668.67			29	250
88) Toluene	(3)	9.217(0.000)	92	291899	22.594	22.59			0.2	1
93) Tetrachloroethene	(3)	9.819(0.000)	166	121870	21.690	21.69			0.2	1
104) Ethylbenzene	(3)	10.825(-0.000)	91	577122	22.053	22.05			0.4	1
106) m+p-Xylene	(3)	10.950(-0.000)	106	441612	42.909	42.91			1	5
107) o-Xylene	(3)	11.285(-0.000)	106	209941	20.629	20.63			0.4	1
108) Xylene (Total)	(3)		106	651553	63.538	63.54			1	5
138) 1,2-Dichlorobenzene	(4)	12.908(-0.000)	146	269999	20.570	20.57			0.2	5
148) Naphthalene	(4)	14.182(-0.000)	128	577166	18.859	18.86			1	5

M = Compound was manually integrated.

Digitally signed by Corie L. Mellinger on 05/21/2019 at 09:30. Target 3.5 esignature user ID: clm27445

Data file: /chem/HP09915.i/19may20b.b/ly20s38.d Injection date and time: **20-MAY-2019 23:38**
Data file Sample Info. Line: 93J01MSD;1058236MSD;1;3;MSD;JCV93;;;ly20b31; Instrument ID: **HP09915.i** Batch: **L191402AA**
Date, time and analyst ID of latest file update: 21-May-2019 09:29 clm27445

Blank Data file reference: **/chem/HP09915.i/19may20b.b/ly20b31.d**

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-MAY-2019 21:23
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19may20b.b/ly20c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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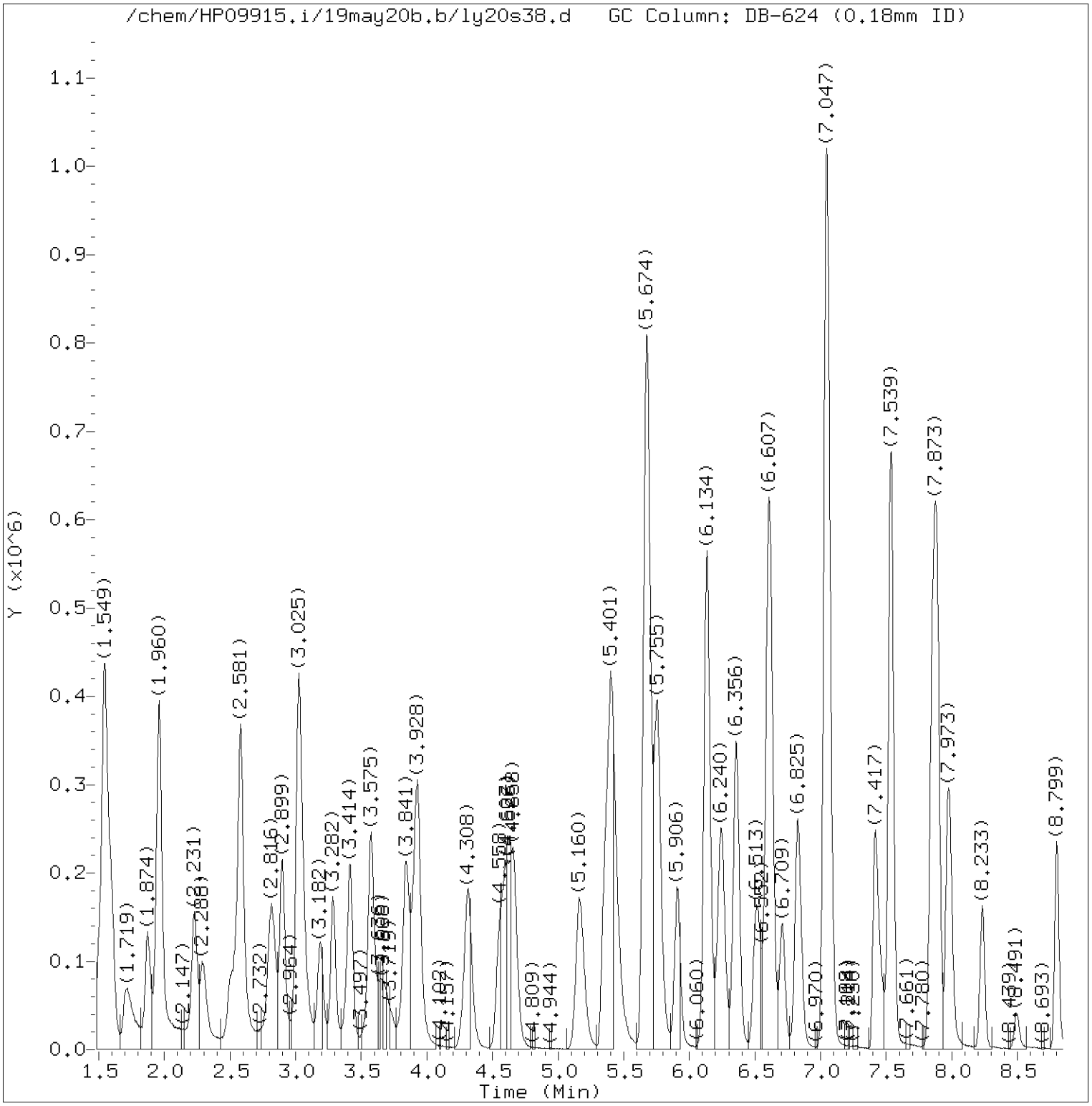
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Corie L. Mellinger on 05/21/2019 at 09:30. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kelly E. Keller on 05/21/2019 at 11:36. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

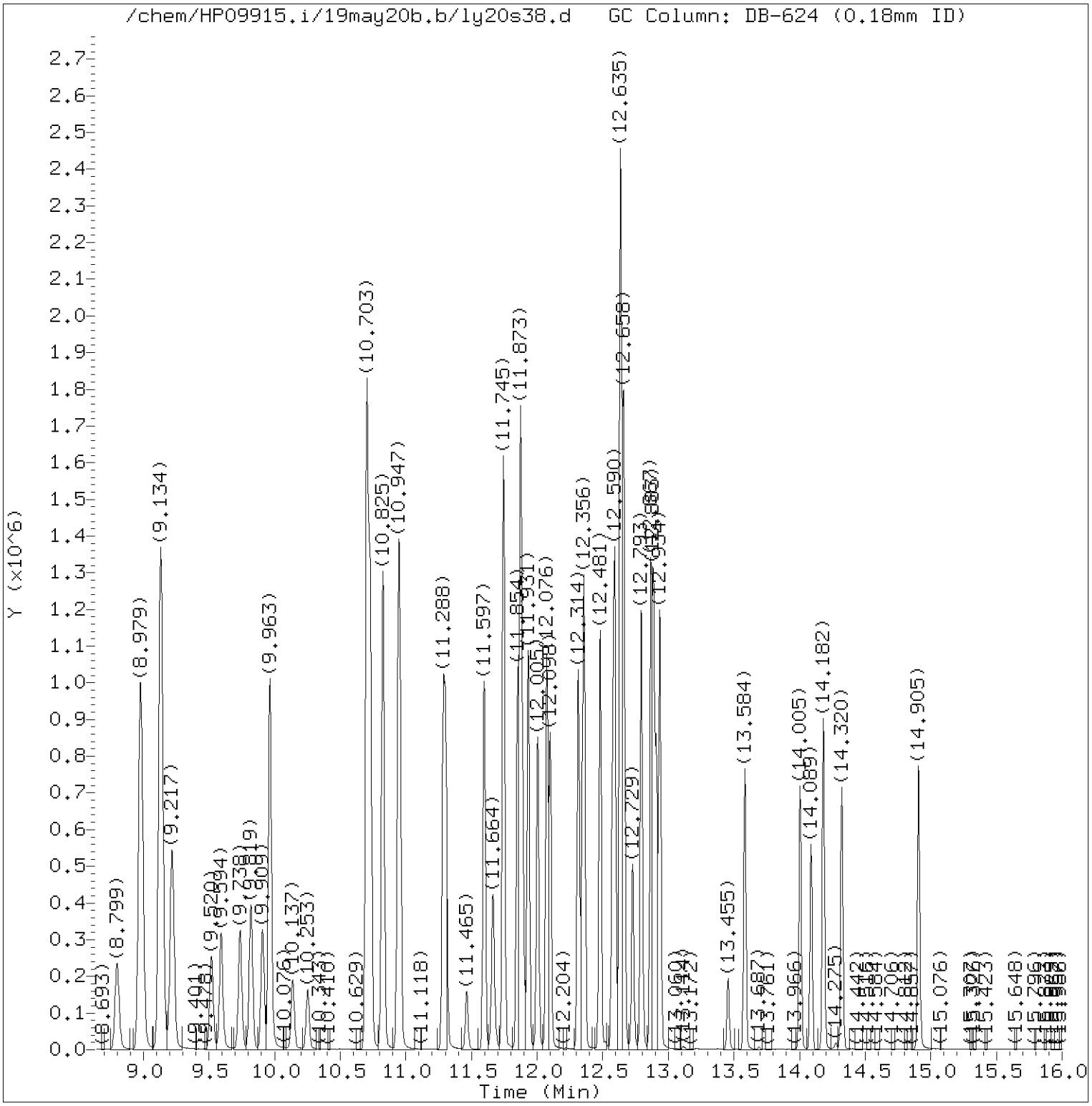
Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20s38.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 23:38 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-MAY-2019 21:23
Date, time and analyst ID of latest file update: 21-May-2019 09:29 clm27445

Sample Name: 93J01MSD Lab Sample ID: 1058236MSD

Digitally signed by Corie L. Mellinger
on 05/21/2019 at 09:30.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20s38.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 23:38 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-MAY-2019 21:23
Date, time and analyst ID of latest file update: 21-May-2019 09:29 clm27445

Sample Name: 93J01MSD Lab Sample ID: 1058236MSD

Digitally signed by Corie L. Mellinger
on 05/21/2019 at 09:30.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20s38.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 23:38 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-MAY-2019 21:23
Date, time and analyst ID of latest file update: 21-May-2019 09:29 clm27445

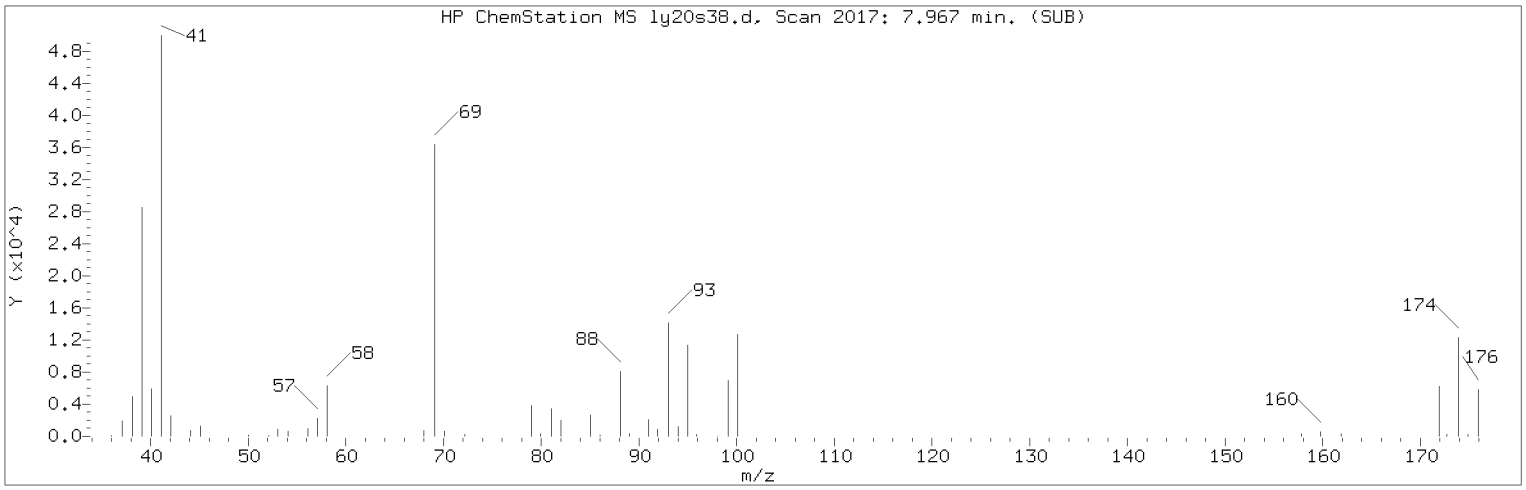
Sample Name: 93J01MSD Lab Sample ID: 1058236MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	1.967	62	206667	21.870
17) 1,1-Dichloroethene	(2)	3.018	96	103439	25.274
18) Acetone	(1)	3.034	58	118835	147.384
19) Freon 113	(2)	3.047	101	112460	25.864
23) Carbon Disulfide	(2)	3.282	76	329074	23.754
29)*t-Butyl alcohol-d10	(1)	3.575	65	241704	250.000
28) Methylene Chloride	(2)	3.578	84	114927	22.551
32) trans-1,2-Dichloroethene	(2)	3.931	96	110023	22.435
36) 1,1-Dichloroethane	(2)	4.552	63	212622	22.953
44) 2-Butanone	(2)	5.369	43	685143	154.312
42) cis-1,2-Dichloroethene	(2)	5.404	96	130435	23.039
51) Chloroform	(2)	5.906	83	211083	22.675
52)$Dibromofluoromethane	(2)	6.131	113	297449	48.277
53) 1,1,1-Trichloroethane	(2)	6.134	97	295564	37.019
57)$1,2-Dichloroethane-d4	(2)	6.597	102	71890	49.782
60) Benzene	(2)	6.623	78	474347	23.056
61) 1,2-Dichloroethane	(2)	6.706	62	171629	20.795
66)*Fluorobenzene	(2)	7.041	96	1198471	50.000
71) Trichloroethene	(2)	7.536	95	320490	57.811
75) 1,4-Dioxane	(1)	7.967	88	41984M	668.665
83)$Toluene-d8	(3)	9.134	98	1194041	51.205
88) Toluene	(3)	9.217	92	291899	22.594
93) Tetrachloroethene	(3)	9.819	166	121870	21.690
100)*Chlorobenzene-d5	(3)	10.703	117	906119	50.000
104) Ethylbenzene	(3)	10.825	91	577122	22.053
106) m+p-Xylene	(3)	10.950	106	441612	42.909
107) o-Xylene	(3)	11.285	106	209941	20.629
114)$4-Bromofluorobenzene	(3)	11.745	95	450721	49.947
108) Xylene (Total)	(3)		106	651553	63.538
131)*1,4-Dichlorobenzene-d4	(4)	12.635	152	502915	50.000
138) 1,2-Dichlorobenzene	(4)	12.909	146	269999	20.570
148) Naphthalene	(4)	14.182	128	577166	18.859

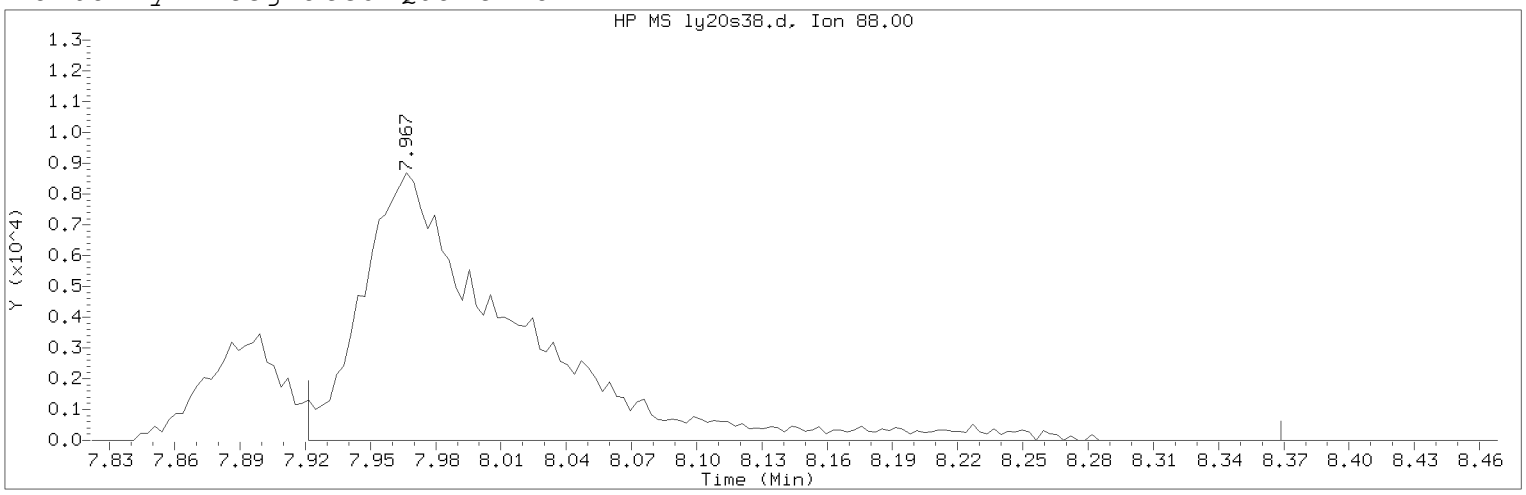
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 05/21/2019 at 09:30.
Target 3.5 esignature user ID: clm27445

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19may20b.b/ly20s38.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 23:38 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-MAY-2019 21:23
Date, time and analyst ID of latest file update: 21-May-2019 09:29 clm27445

Sample Name: 93J01MSD Lab Sample ID: 1058236MSD

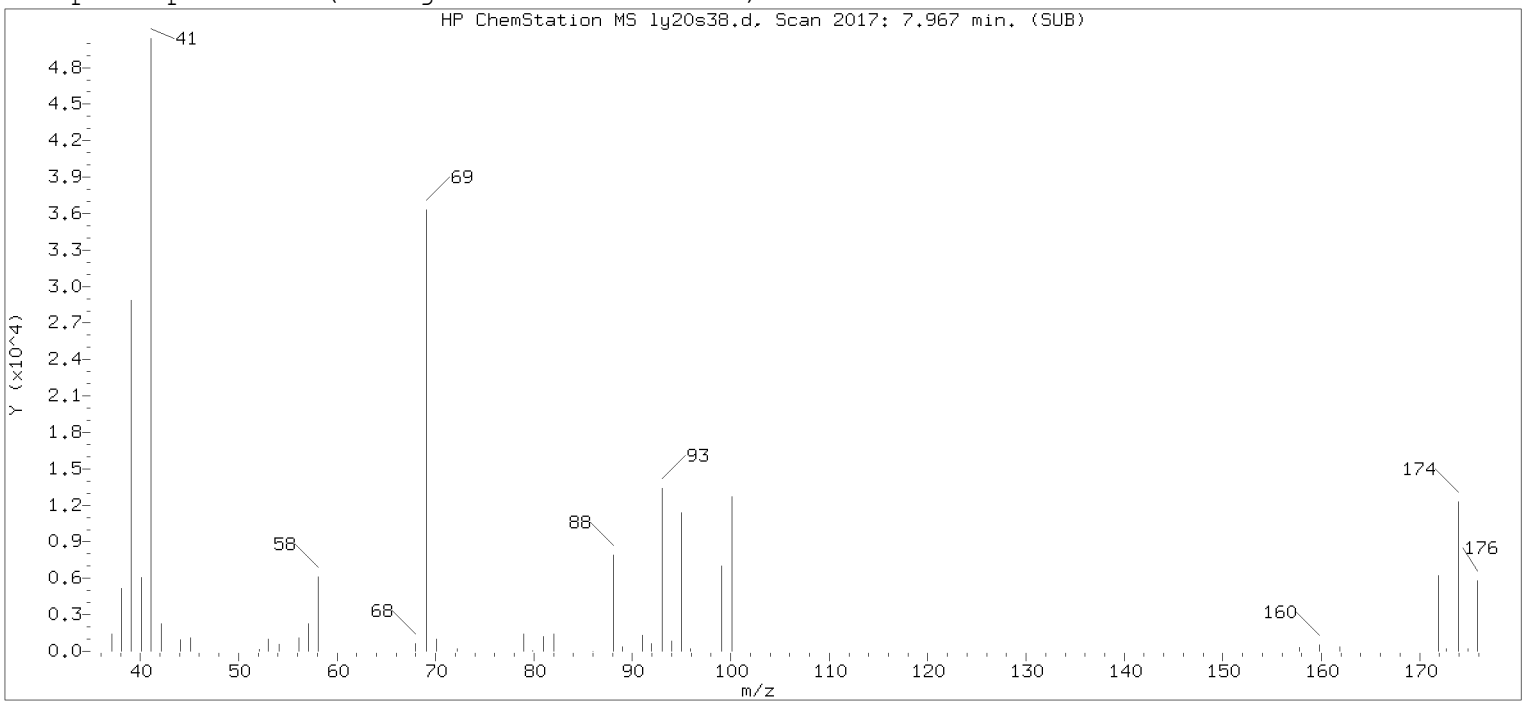
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2017
Retention Time (minutes): 7.967
Quant Ion : 88.00
Area (flag) : 41984M
On-Column Amount (ng) : 668.6652
Integration start scan : 2002 Integration stop scan: 2141
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

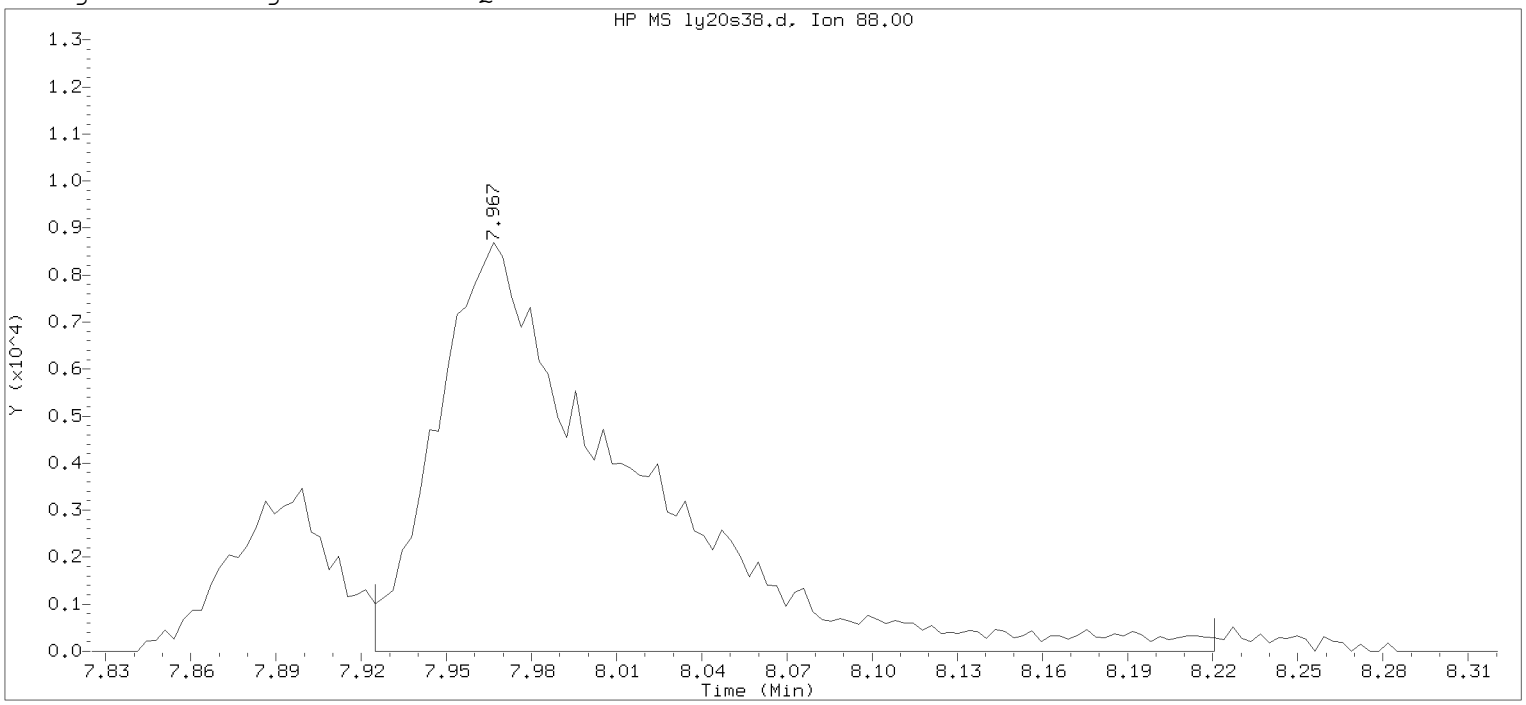
Analyst responsible for change: Digitally signed by Corie L. Mellinger
on 05/21/2019 at 09:30.
Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kelly E. Keller on 05/21/2019 at 11:36.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19may20b.b/ly20s38.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 23:38 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 20-MAY-2019 21:23
Date, time and analyst ID of latest file update: 20-May-2019 23:55 Automation

Sample Name: 93J01MSD Lab Sample ID: 1058236MSD

Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2017
Retention Time (minutes): 7.967
Quant Ion : 88.00
Area : 40836
On-column Amount (ng) : 650.3840
Integration start scan : 2003 Integration stop scan: 2095
Y at integration start : 0 Y at integration end: 0

Digitally signed by Corie L. Mellinger on 05/21/2019 at 09:30.
Target 3.5 esignature user: Corie L. Mellinger

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

93J03DUP

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1058238

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may22a.b/wy22s04.d

Level: (low/med) LOW Date Received: 05/14/19

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U

FORM I VOA

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Data file: /chem2/HP09137.i/19may22a.b/wy22s04.d Injection date and time: **22-MAY-2019 15:29**
Data file Sample Info. Line: 93J03DUP;1058238;1;;;JCV93;;;wy22b02; Instrument ID: **HP09137.i** Batch: **W191421AA**
Date, time and analyst ID of latest file update: 23-May-2019 10:20 kas02648

Blank Data file reference: **/chem2/HP09137.i/19may22a.b/wy22b02.d**

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: **12863**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may22a.b/wy22c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.741(-0.003)	595	65	188369 (-27)	250.00	
66) Fluorobenzene	5.029(0.003)	1308	96	1068437 (-7)	50.00	
101) Chlorobenzene-d5	8.161(0.003)	2284	117	803238 (-8)	50.00	
132) 1,4-Dichlorobenzene-d4	10.042(0.000)	2870	152	408690 (-16)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.355(0.000)	113	231684	46.806	94%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.689(0.000)	102	65916	50.071	100%		80 - 120
84) Toluene-d8	(3)	6.695(0.000)	98	1038409	51.591	103%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162(0.000)	95	359697	44.671	89%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Chloromethane	(2)			Not Detected					0.2	1
6) Vinyl Chloride	(2)			Not Detected					0.2	1
8) Bromomethane	(2)			Not Detected					0.3	1
9) Chloroethane	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
56) Carbon Tetrachloride	(2)			Not Detected					0.2	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)			Not Detected					0.2	1
74) 1,2-Dichloropropane	(2)			Not Detected					0.2	1
79) Bromodichloromethane	(2)			Not Detected					0.2	1
82) cis-1,3-Dichloropropene	(2)			Not Detected					0.2	1
83) 4-Methyl-2-pentanone	(2)			Not Detected					0.5	10
89) Toluene	(3)			Not Detected					0.2	1
90) trans-1,3-Dichloropropene	(3)			Not Detected					0.2	1
93) 1,1,2-Trichloroethane	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)			Not Detected					0.2	1
97) 2-Hexanone	(3)			Not Detected					0.3	10
98) Dibromochloromethane	(3)			Not Detected					0.2	1
103) Chlorobenzene	(3)			Not Detected					0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5

Digitally signed by Kevin A. Sposito on 05/23/2019 at 10:20. Target 3.5 esignature user ID: kas02648

Data file: /chem2/HP09137.i/19may22a.b/wy22s04.d Injection date and time: **22-MAY-2019 15:29**
Data file Sample Info. Line: 93J03DUP;1058238;1;;;JCV93;;;wy22b02; Instrument ID: **HP09137.i** Batch: **W191421AA**
Date, time and analyst ID of latest file update: 23-May-2019 10:20 kas02648

Blank Data file reference: **/chem2/HP09137.i/19may22a.b/wy22b02.d**

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: **12863**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may22a.b/wy22c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

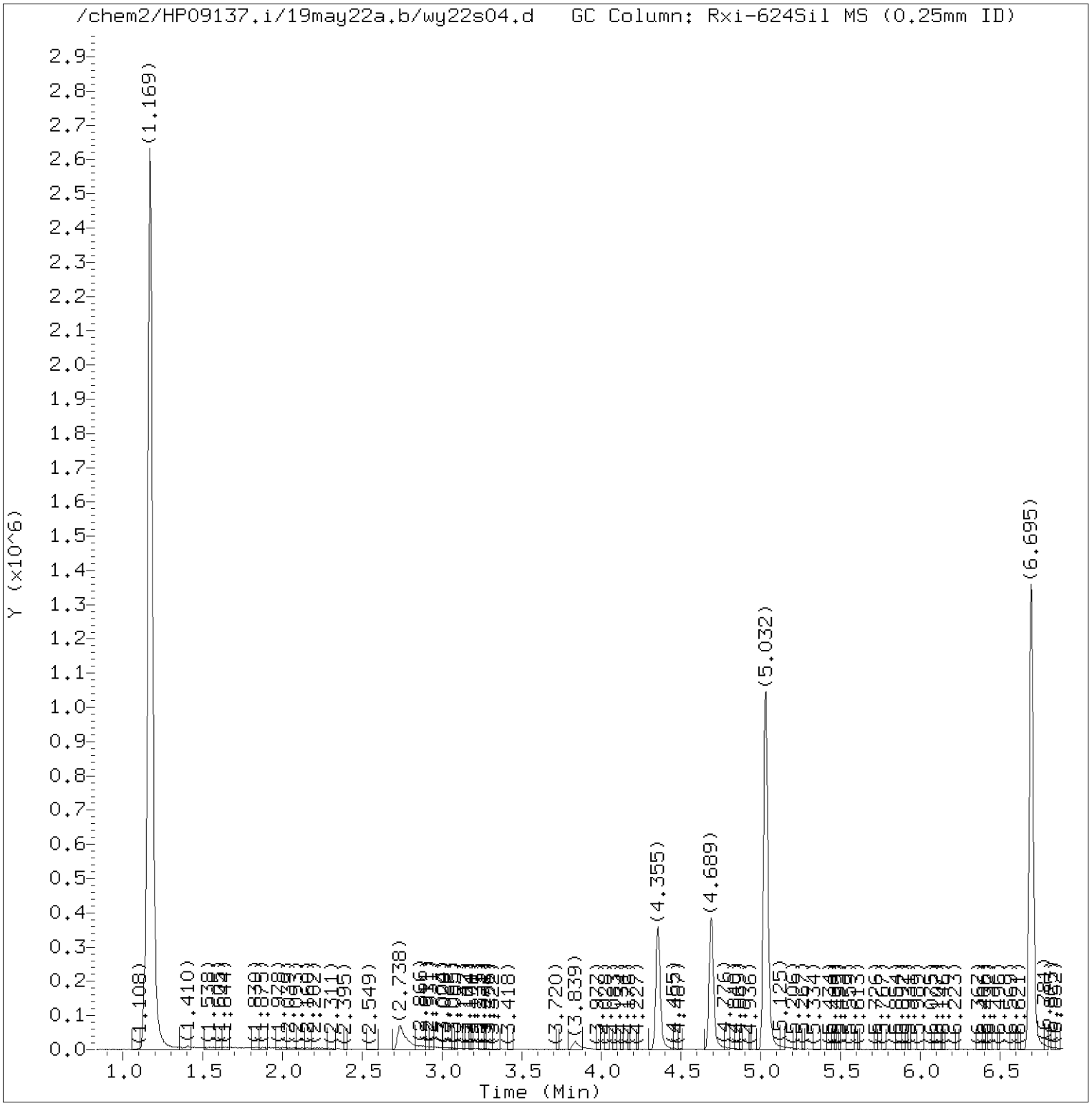
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	5
110) Styrene	(3)				Not Detected					0.2	5
111) Bromoform	(3)				Not Detected					0.2	4
117) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1

Total number of targets = 36

Digitally signed by Kevin A. Sposito on 05/23/2019 at 10:20. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

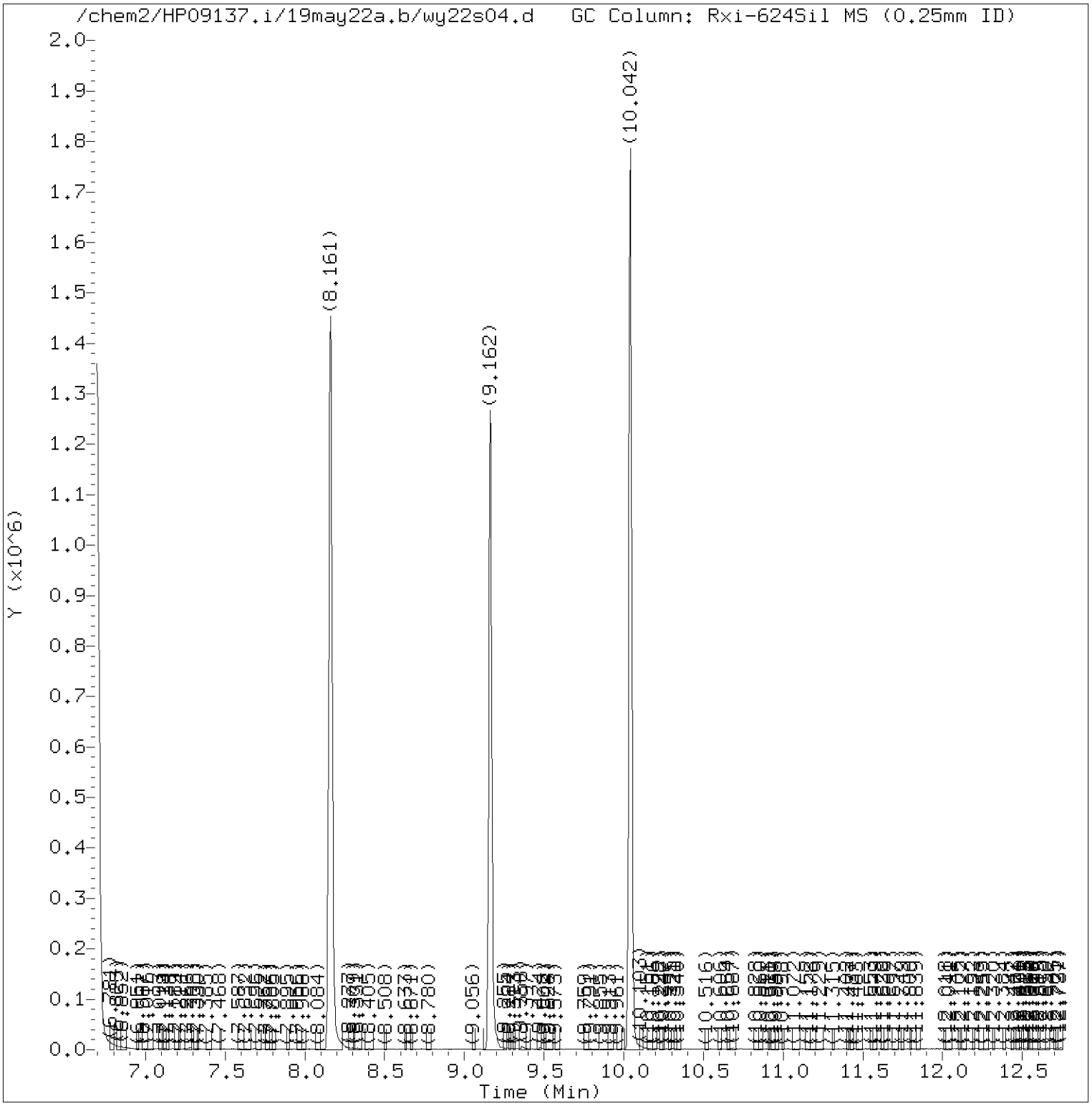
Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22s04.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 15:29 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 12863
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 23-May-2019 10:20 kas02648

Sample Name: 93J03DUP Lab Sample ID: 1058238

Digitally signed by Kevin A. Sposito
on 05/23/2019 at 10:20.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22s04.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 15:29 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 12863
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 23-May-2019 10:20 kas02648

Sample Name: 93J03DUP Lab Sample ID: 1058238

Digitally signed by Kevin A. Sposito
on 05/23/2019 at 10:20.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22s04.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 15:29 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 12863
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 23-May-2019 10:20 kas02648

Sample Name: 93J03DUP Lab Sample ID: 1058238

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.741	65	188369	250.000
52)$Dibromofluoromethane	(2)	4.355	113	231684	46.806
57)$1,2-Dichloroethane-d4	(2)	4.689	102	65916	50.071
66)*Fluorobenzene	(2)	5.029	96	1068437	50.000
84)$Toluene-d8	(3)	6.695	98	1038409	51.591
101)*Chlorobenzene-d5	(3)	8.161	117	803238	50.000
115)$4-Bromofluorobenzene	(3)	9.162	95	359697	44.671
132)*1,4-Dichlorobenzene-d4	(4)	10.042	152	408690	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/23/2019 at 10:20.
Target 3.5 esignature user ID: kas02648

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL97

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL97

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19may20b.b/ly20s31.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	15	
74-87-3	Chloromethane	21	
106-99-0	1,3-Butadiene	40	
75-01-4	Vinyl Chloride	21	
74-83-9	Bromomethane	19	
75-00-3	Chloroethane	22	
109-66-0	n-Pentane	35	
75-69-4	Trichlorofluoromethane	19	
354-23-4	Freon 123a	23	
107-02-8	Acrolein	160	
75-35-4	1,1-Dichloroethene	23	
67-64-1	Acetone	150	
76-13-1	Freon 113	22	
67-63-0	2-Propanol	170	
74-88-4	Methyl Iodide	20	
75-15-0	Carbon Disulfide	23	
107-05-1	Allyl Chloride	20	
79-20-9	Methyl Acetate	22	
75-09-2	Methylene Chloride	22	
75-65-0	t-Butyl alcohol	190	
107-13-1	Acrylonitrile	100	
156-60-5	trans-1,2-Dichloroethene	22	
1634-04-4	Methyl Tertiary Butyl Ether	19	
110-54-3	n-Hexane	23	
75-34-3	1,1-Dichloroethane	22	
108-20-3	di-Isopropyl ether	22	
126-99-8	2-Chloro-1,3-butadiene	21	
637-92-3	Ethyl t-butyl ether	19	
156-59-2	cis-1,2-Dichloroethene	22	
540-59-0	1,2-Dichloroethene (Total)	44	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL97

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL97

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19may20b.b/ly20s31.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
78-93-3	2-Butanone	160	
594-20-7	2,2-Dichloropropane	18	
107-12-0	Propionitrile	180	
126-98-7	Methacrylonitrile	160	
74-97-5	Bromochloromethane	18	
109-99-9	Tetrahydrofuran	100	
67-66-3	Chloroform	21	
71-55-6	1,1,1-Trichloroethane	20	
110-82-7	Cyclohexane	22	
563-58-6	1,1-Dichloropropene	21	
56-23-5	Carbon Tetrachloride	19	
78-83-1	Isobutyl Alcohol	580	
71-43-2	Benzene	23	
107-06-2	1,2-Dichloroethane	21	
994-05-8	t-Amyl methyl ether	18	
142-82-5	n-Heptane	25	
71-36-3	n-Butanol	1400	
79-01-6	Trichloroethene	24	
108-87-2	Methylcyclohexane	24	
78-87-5	1,2-Dichloropropane	27	
74-95-3	Dibromomethane	24	
123-91-1	1,4-Dioxane	800	
80-62-6	Methyl Methacrylate	23	
75-27-4	Bromodichloromethane	24	
79-46-9	2-Nitropropane	16	
110-75-8	2-Chloroethyl Vinyl Ether	23	
10061-01-5	cis-1,3-Dichloropropene	24	
108-10-1	4-Methyl-2-pentanone	120	
108-88-3	Toluene	22	
10061-02-6	trans-1,3-Dichloropropene	20	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL97

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL97

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19may20b.b/ly20s31.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
542-75-6	1,3-Dichloropropene (total)	44	
97-63-2	Ethyl Methacrylate	20	
79-00-5	1,1,2-Trichloroethane	23	
127-18-4	Tetrachloroethene	21	
142-28-9	1,3-Dichloropropane	22	
591-78-6	2-Hexanone	110	
124-48-1	Dibromochloromethane	20	
106-93-4	1,2-Dibromoethane	21	
544-10-5	1-Chlorohexane	20	
108-90-7	Chlorobenzene	21	
630-20-6	1,1,1,2-Tetrachloroethane	20	
100-41-4	Ethylbenzene	22	
179601-23-1	m+p-Xylene	42	
95-47-6	o-Xylene	21	
1330-20-7	Xylene (Total)	63	
100-42-5	Styrene	21	
75-25-2	Bromoform	18	
98-82-8	Isopropylbenzene	21	
108-94-1	Cyclohexanone	800	
108-86-1	Bromobenzene	21	
79-34-5	1,1,2,2-Tetrachloroethane	23	
96-18-4	1,2,3-Trichloropropane	22	
110-57-6	trans-1,4-Dichloro-2-butene	110	
103-65-1	n-Propylbenzene	23	
95-49-8	2-Chlorotoluene	21	
106-43-4	4-Chlorotoluene	21	
108-67-8	1,3,5-Trimethylbenzene	22	
98-06-6	tert-Butylbenzene	18	
76-01-7	Pentachloroethane	19	
95-63-6	1,2,4-Trimethylbenzene	21	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL97

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL97

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19may20b.b/ly20s31.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
135-98-8	sec-Butylbenzene	22	
541-73-1	1,3-Dichlorobenzene	21	
99-87-6	p-Isopropyltoluene	21	
106-46-7	1,4-Dichlorobenzene	21	
526-73-8	1,2,3-Trimethylbenzene	21	
100-44-7	Benzyl Chloride	17	
141-93-5	1,3-Diethylbenzene	20	
105-05-5	1,4-Diethylbenzene	20	
95-50-1	1,2-Dichlorobenzene	21	
104-51-8	n-Butylbenzene	22	
135-01-3	1,2-Diethylbenzene	20	
25340-17-4	Diethylbenzene (total)	60	
96-12-8	1,2-Dibromo-3-chloropropane	20	
108-70-3	1,3,5-Trichlorobenzene	20	
120-82-1	1,2,4-Trichlorobenzene	20	
87-68-3	Hexachlorobutadiene	21	
91-20-3	Naphthalene	20	
87-61-6	1,2,3-Trichlorobenzene	20	
91-57-6	2-Methylnaphthalene	18	

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19may20b.b/ly20s31.d Injection date and time: **20-MAY-2019 20:09**
Data file Sample Info. Line: LCSL97;LCSL97;1;3;LCS;;;;ly20b31; Instrument ID: **HP09915.i** Batch: **L191402AA**
Date, time and analyst ID of latest file update: 20-May-2019 21:21 dvv10203

Blank Data file reference: **/chem/HP09915.i/19may20b.b/ly20b31.d**

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: **8260W-DE**
Calibration date and time (Last Method Edit): 20-MAY-2019 20:05
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19may20b.b/ly20c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.568(0.000)	649	65	245300M (-12)	250.00	
66) Fluorobenzene	7.041(0.000)	1729	96	1208471 (-13)	50.00	
100) Chlorobenzene-d5	10.703(0.000)	2868	117	1051553 (17)	50.00	
131) 1,4-Dichlorobenzene-d4	12.635(0.000)	3469	152	564940 (13)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.131(0.000)	113	293789	47.288	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.600(0.000)	102	72481	49.776	100%		80 - 120
83) Toluene-d8	(3)	9.131(0.000)	98	1388196	51.297	103%		80 - 120
114) 4-Bromofluorobenzene	(3)	11.745(0.000)	95	522127	49.858	100%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	1.710(0.000)	85	161698	15.395	15.39			0.2	1
4) Chloromethane	(2)	1.870(0.000)	50	205045	21.081	21.08			0.2	1
5) 1,3-Butadiene	(2)	1.957(0.000)	39	204425	40.002	40.00			1	3
6) Vinyl Chloride	(2)	1.967(0.000)	62	196667	20.640	20.64			0.2	1
8) Bromomethane	(2)	2.224(0.001)	94	158123	19.074	19.07			0.3	1
9) Chloroethane	(2)	2.292(0.001)	64	122491	22.111	22.11			0.2	1
11) n-Pentane	(2)	2.581(0.000)	43	264659	34.512	34.51			0.4	10
12) Trichlorofluoromethane	(2)	2.555(0.000)	101	231280	18.595	18.60			0.2	1
15) Freon 123a	(2)	2.809(0.000)	67	162653	23.293	23.29			0.4	5
16) Acrolein	(1)	2.896(0.000)	56	304946	159.326	159.33			2	100
17) 1,1-Dichloroethene	(2)	3.018(0.000)	96	95135	23.053	23.05			0.2	1
18) Acetone	(1)	3.028(0.001)	58	125857	153.804	153.80			0.7	20
19) Freon 113	(2)	3.050(-0.000)	101	98410	22.445	22.45			0.2	10
21) 2-Propanol	(1)	3.169(0.000)	45	91428M	167.139	167.14			18	100
22) Methyl Iodide	(2)	3.186(0.000)	142	171429	19.597	19.60			0.2	1
23) Carbon Disulfide	(2)	3.285(0.000)	76	318152	22.776	22.78			0.2	5
25) Allyl Chloride	(2)	3.417(0.000)	41	180327	20.420	20.42			0.3	5
27) Methyl Acetate	(2)	3.382(0.000)	43	135200	21.822	21.82			0.2	5
28) Methylene Chloride	(2)	3.574(0.000)	84	115418	22.460	22.46			0.3	1
30) t-Butyl alcohol	(1)	3.671(0.002)	59	197520M	194.957	194.96			12	50
31) Acrylonitrile	(2)	3.838(0.000)	53	335995	103.681	103.68			0.3	20
32) trans-1,2-Dichloroethene	(2)	3.925(0.000)	96	106604	21.558	21.56			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	3.906(0.000)	73	310427	19.005	19.01			0.2	1
34) n-Hexane	(2)	4.317(-0.000)	57	155143	23.271	23.27			0.2	5
36) 1,1-Dichloroethane	(2)	4.552(0.000)	63	206276	22.084	22.08			0.2	1
38) di-Isopropyl ether	(2)	4.610(-0.000)	45	394857	22.359	22.36			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	4.661(0.000)	53	185102	21.145	21.14			0.2	5
40) Ethyl t-butyl ether	(2)	5.160(0.000)	59	315217	18.575	18.58			0.2	1
42) cis-1,2-Dichloroethene	(2)	5.407(0.000)	96	126531	22.164	22.16			0.2	1
43) 1,2-Dichloroethene (Total)	(2)		96	233135	43.722	43.72			0.2	2

M = Compound was manually integrated.

Digitally signed by Don V. Viray on 05/20/2019 at 21:24. Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19may20b.b/ly20s31.d Injection date and time: **20-MAY-2019 20:09**
Data file Sample Info. Line: LCSL97;LCSL97;1;3;LCS;;;;ly20b31; Instrument ID: **HP09915.i** Batch: **L191402AA**
Date, time and analyst ID of latest file update: 20-May-2019 21:21 dvv10203

Blank Data file reference: **/chem/HP09915.i/19may20b.b/ly20b31.d**

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: **8260W-DE**
Calibration date and time (Last Method Edit): 20-MAY-2019 20:05
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19may20b.b/ly20c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	5.372(-0.000)	43	700880	156.550	156.55			0.3	10
45) 2,2-Dichloropropane	(2)	5.420(0.000)	77	144709	18.193	18.19			0.3	1
47) Propionitrile	(1)	5.452(-0.000)	54	210797	177.912	177.91			14	100
48) Methacrylonitrile	(2)	5.677(-0.000)	67	538736	160.993	160.99			6	50
49) Bromochloromethane	(2)	5.754(0.000)	128	60161	18.404	18.40			0.2	5
50) Tetrahydrofuran	(1)	5.758(-0.000)	71	115040	101.493	101.49			0.7	10
51) Chloroform	(2)	5.909(0.000)	83	199121	21.213	21.21			0.2	1
53) 1,1,1-Trichloroethane	(2)	6.137(0.000)	97	161379	20.045	20.05			0.3	1
54) Cyclohexane	(2)	6.237(0.001)	56	190343	21.879	21.88			0.2	5
55) 1,1-Dichloropropene	(2)	6.359(-0.000)	75	153772	21.339	21.34			0.2	5
56) Carbon Tetrachloride	(2)	6.359(0.000)	117	127391	19.271	19.27			0.2	1
58) Isobutyl Alcohol	(1)	6.516(-0.001)	41	192521	575.810	575.81			36	250
60) Benzene	(2)	6.623(-0.000)	78	467130	22.517	22.52			0.2	1
61) 1,2-Dichloroethane	(2)	6.710(0.000)	62	173139	20.805	20.80			0.3	1
65) t-Amyl methyl ether	(2)	6.825(0.000)	73	311058	18.443	18.44			0.8	5
67) n-Heptane	(2)	7.070(-0.000)	43	186338	24.834	24.83			0.2	5
69) n-Butanol	(1)	7.417(0.000)	56	327864	1354.984	1354.98			61	250
71) Trichloroethene	(2)	7.536(0.000)	95	134375	24.038	24.04			0.2	1
72) Methylcyclohexane	(2)	7.851(0.000)	83	227057	23.590	23.59			0.2	5
73) 1,2-Dichloropropane	(2)	7.877(-0.000)	63	151287	26.797	26.80			0.2	1
74) Dibromomethane	(2)	7.986(-0.000)	93	92383	23.663	23.66			0.2	1
75) 1,4-Dioxane	(1)	7.967(-0.000)	88	51168M	802.989	802.99			29	250
76) Methyl Methacrylate	(2)	7.967(0.000)	69	123249	22.623	22.62			0.2	5
78) Bromodichloromethane	(2)	8.230(-0.000)	83	159833	23.725	23.72			0.2	1
79) 2-Nitropropane	(2)	8.488(0.000)	41	36593	15.662	15.66			0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)	8.606(0.000)	63	105162	23.174	23.17			0.2	10
81) cis-1,3-Dichloropropene	(2)	8.796(0.000)	75	202651	23.863	23.86			0.2	1
82) 4-Methyl-2-pentanone	(2)	8.980(0.000)	43	1176601	124.575	124.57			0.5	10
88) Toluene	(3)	9.221(0.000)	92	333231	22.226	22.23			0.2	1
89) trans-1,3-Dichloropropene	(3)	9.516(0.000)	75	180437	20.176	20.18			0.2	1
90) 1,3-Dichloropropene (total)	(3)		100	383088	44.039	44.04			0.2	5
91) Ethyl Methacrylate	(3)	9.590(0.000)	69	211966	20.176	20.18			0.2	5
92) 1,1,2-Trichloroethane	(3)	9.735(0.000)	97	131444	23.189	23.19			0.2	1
93) Tetrachloroethene	(3)	9.819(0.000)	166	136911	20.997	21.00			0.2	1
94) 1,3-Dichloropropane	(3)	9.909(0.000)	76	223152	22.331	22.33			0.2	1
96) 2-Hexanone	(3)	9.963(0.000)	43	871401	112.996	113.00			0.3	10
97) Dibromochloromethane	(3)	10.140(-0.000)	129	117620	20.105	20.11			0.2	1
99) 1,2-Dibromoethane	(3)	10.250(0.000)	107	137096	21.273	21.27			0.2	1
101) 1-Chlorohexane	(3)	10.725(0.000)	91	181908	20.338	20.34			0.3	5
102) Chlorobenzene	(3)	10.732(-0.000)	112	372226	20.639	20.64			0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)	10.822(-0.000)	131	118733	19.642	19.64			0.2	1
104) Ethylbenzene	(3)	10.825(0.000)	91	657641	21.655	21.65			0.4	1
106) m+p-Xylene	(3)	10.947(0.000)	106	505129	42.293	42.29			1	5
107) o-Xylene	(3)	11.285(-0.000)	106	242677	20.548	20.55			0.4	1
108) Xylene (Total)	(3)		106	747806	62.841	62.84			1	5
109) Styrene	(3)	11.304(0.000)	104	410694	20.738	20.74			0.2	5
110) Bromoform	(3)	11.465(-0.000)	173	76581	18.276	18.28			0.2	4
111) Isopropylbenzene	(3)	11.597(-0.000)	105	642015	21.244	21.24			0.2	5
112) Cyclohexanone	(1)	11.664(-0.000)	55	202210	797.435	797.43			25	100
115) Bromobenzene	(4)	11.854(0.000)	156	162719	20.949	20.95			0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	11.848(0.000)	83	221331	22.811	22.81			0.2	1
117) 1,2,3-Trichloropropane	(4)	11.892(-0.000)	110	63679	21.559	21.56			0.2	5
118) trans-1,4-Dichloro-2-butene	(4)	11.873(-0.000)	53	329607	105.841	105.84			6	50
119) n-Propylbenzene	(4)	11.931(0.000)	91	800871	23.352	23.35			0.2	5

M = Compound was manually integrated.

Digitally signed by Don V. Viray on 05/20/2019 at 21:24. Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19may20b.b/ly20s31.d Injection date and time: **20-MAY-2019 20:09**
Data file Sample Info. Line: LCSL97;LCSL97;1;3;LCS;;;;ly20b31; Instrument ID: **HP09915.i** Batch: **L191402AA**
Date, time and analyst ID of latest file update: 20-May-2019 21:21 dvv10203

Blank Data file reference: **/chem/HP09915.i/19may20b.b/ly20b31.d**

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: **8260W-DE**
Calibration date and time (Last Method Edit): 20-MAY-2019 20:05
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19may20b.b/ly20c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)	12.005(0.000)	126	153691	21.174	21.17			0.2	5
121) 4-Chlorotoluene	(4)	12.098(0.000)	126	157511	20.633	20.63			0.2	5
122) 1,3,5-Trimethylbenzene	(4)	12.076(-0.000)	105	554277	21.587	21.59			0.3	5
124) tert-Butylbenzene	(4)	12.314(-0.000)	134	110772M	18.385	18.38			0.3	5
125) Pentachloroethane	(4)	12.346(-0.000)	167	87924	18.844	18.84			0.2	5
126) 1,2,4-Trimethylbenzene	(4)	12.359(0.000)	105	569858	21.231	21.23			1	5
127) sec-Butylbenzene	(4)	12.481(0.000)	105	714171	22.344	22.34			0.2	5
129) 1,3-Dichlorobenzene	(4)	12.577(-0.000)	146	308477	20.877	20.88			0.2	5
130) p-Isopropyltoluene	(4)	12.594(0.000)	119	602781	20.815	20.82			0.2	5
133) 1,4-Dichlorobenzene	(4)	12.651(-0.000)	146	329087	20.972	20.97			0.2	5
134) 1,2,3-Trimethylbenzene	(4)	12.661(-0.000)	105	607402	20.537	20.54			0.3	5
135) Benzyl Chloride	(4)	12.728(-0.000)	91	330051	16.897	16.90			0.3	5
136) 1,3-Diethylbenzene	(4)	12.793(-0.000)	119	369046	20.192	20.19			0.2	5
137) 1,4-Diethylbenzene	(4)	12.867(-0.000)	119	389937	19.729	19.73			0.2	5
138) 1,2-Dichlorobenzene	(4)	12.909(-0.000)	146	311165	21.104	21.10			0.2	5
139) n-Butylbenzene	(4)	12.886(-0.000)	92	317113	21.573	21.57			0.2	5
140) 1,2-Diethylbenzene	(4)	12.934(-0.000)	119	314231	20.319	20.32			0.2	5
141) Diethylbenzene (total)	(4)		100	1073214	60.240	60.24			0.2	5
142) 1,2-Dibromo-3-chloropropane	(4)	13.455(-0.000)	75	43654	19.995	19.99			0.3	5
144) 1,3,5-Trichlorobenzene	(4)	13.584(-0.000)	180	227628	20.071	20.07			0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.002(-0.000)	180	215166	19.868	19.87			0.3	5
147) Hexachlorobutadiene	(4)	14.089(-0.000)	225	91337	21.056	21.06			0.7	5
148) Naphthalene	(4)	14.182(-0.000)	128	699261	20.340	20.34			1	5
149) 1,2,3-Trichlorobenzene	(4)	14.320(0.000)	180	211122	20.446	20.45			0.4	5
150) 2-Methylnaphthalene	(4)	14.905(-0.000)	142	386556	18.458	18.46			0.7	5

M = Compound was manually integrated.

Total number of targets = 109

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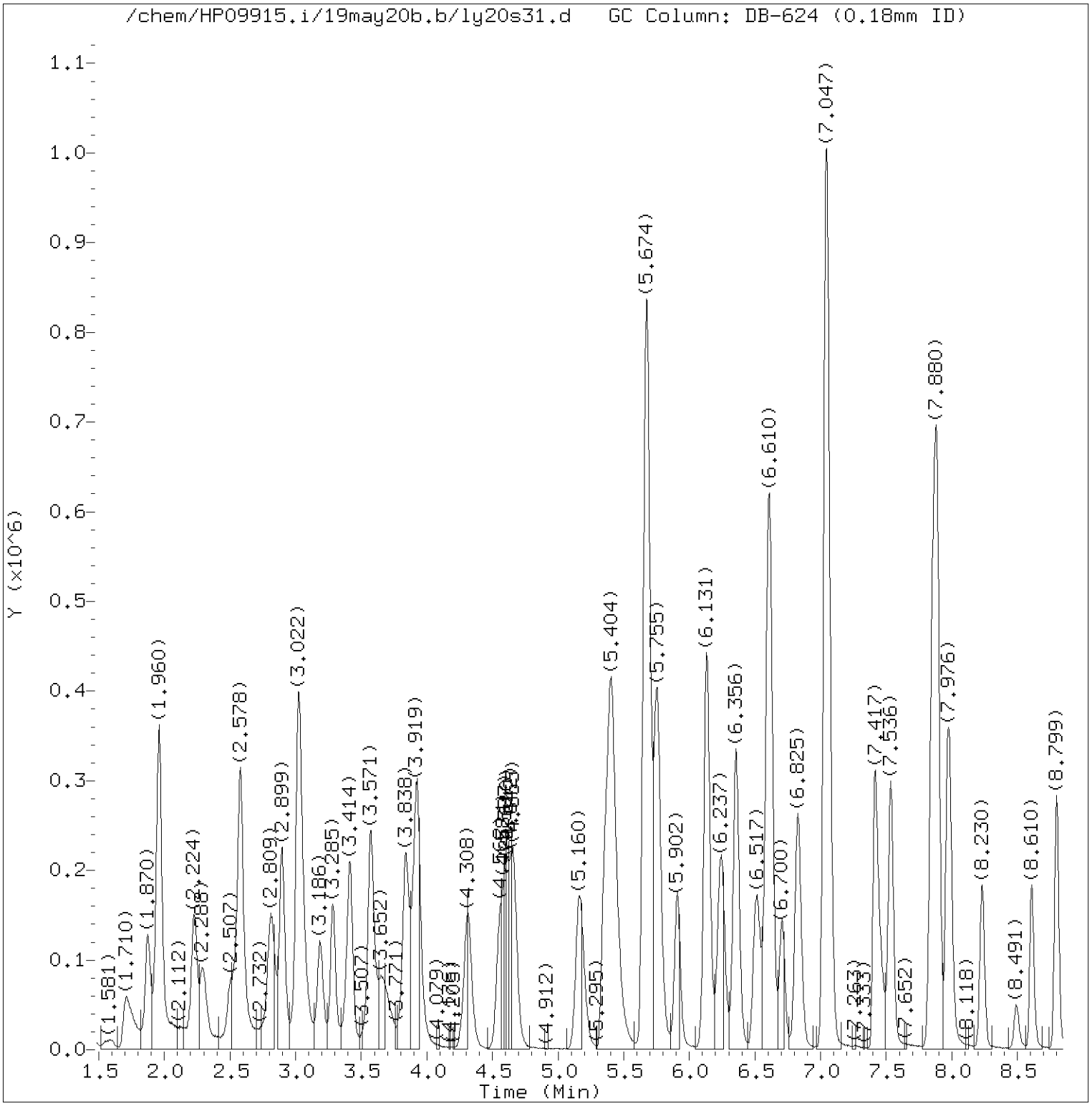
Secondary review performed and digitally signed by Kelly E. Keller on 05/21/2019 at 11:36. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

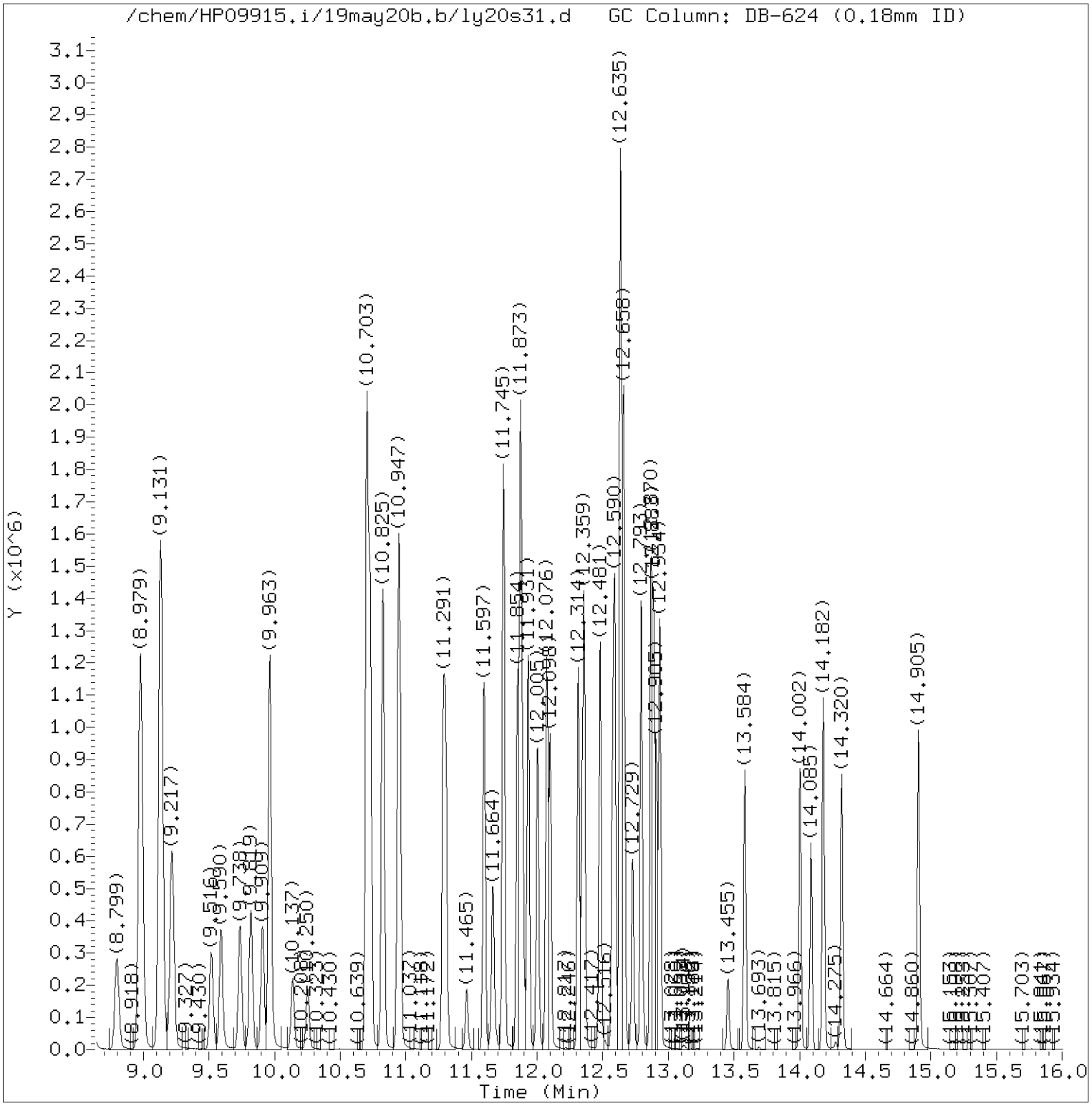
Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20s31.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 20:09 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 21:21 dvv10203

Sample Name: LCSL97 Lab Sample ID: LCSL97

Digitally signed by Don V. Viray
on 05/20/2019 at 21:24.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20s31.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 20:09 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 21:21 dvv10203

Sample Name: LCSL97 Lab Sample ID: LCSL97

Digitally signed by Don V. Viray
on 05/20/2019 at 21:24.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20s31.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 20:09 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 21:21 dvv10203

Sample Name: LCSL97 Lab Sample ID: LCSL97

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.710	85	161698	15.395
4) Chloromethane	(2)	1.870	50	205045	21.081
5) 1,3-Butadiene	(2)	1.957	39	204425	40.002
6) Vinyl Chloride	(2)	1.967	62	196667	20.640
8) Bromomethane	(2)	2.224	94	158123	19.074
9) Chloroethane	(2)	2.292	64	122491	22.111
12) Trichlorofluoromethane	(2)	2.555	101	231280	18.595
11) n-Pentane	(2)	2.581	43	264659	34.512
15) Freon 123a	(2)	2.809	67	162653	23.293
16) Acrolein	(1)	2.896	56	304946	159.326
17) 1,1-Dichloroethene	(2)	3.018	96	95135	23.053
18) Acetone	(1)	3.028	58	125857	153.804
19) Freon 113	(2)	3.050	101	98410	22.445
21) 2-Propanol	(1)	3.169	45	91428M	167.139
22) Methyl Iodide	(2)	3.186	142	171429	19.597
23) Carbon Disulfide	(2)	3.285	76	318152	22.776
27) Methyl Acetate	(2)	3.382	43	135200	21.822
25) Allyl Chloride	(2)	3.417	41	180327	20.420
29)*t-Butyl alcohol-d10	(1)	3.568	65	245300M	250.000
28) Methylene Chloride	(2)	3.575	84	115418	22.460
30) t-Butyl alcohol	(1)	3.671	59	197520M	194.957
31) Acrylonitrile	(2)	3.838	53	335995	103.681
33) Methyl Tertiary Butyl Ether	(2)	3.906	73	310427	19.005
32) trans-1,2-Dichloroethene	(2)	3.925	96	106604	21.558
34) n-Hexane	(2)	4.317	57	155143	23.271
36) 1,1-Dichloroethane	(2)	4.552	63	206276	22.084
38) di-Isopropyl ether	(2)	4.610	45	394857	22.359
39) 2-Chloro-1,3-butadiene	(2)	4.661	53	185102	21.145
40) Ethyl t-butyl ether	(2)	5.160	59	315217	18.575
44) 2-Butanone	(2)	5.372	43	700880	156.550
42) cis-1,2-Dichloroethene	(2)	5.407	96	126531	22.164
45) 2,2-Dichloropropane	(2)	5.420	77	144709	18.193
47) Propionitrile	(1)	5.452	54	210797	177.912
48) Methacrylonitrile	(2)	5.677	67	538736	160.993
49) Bromochloromethane	(2)	5.755	128	60161	18.404
50) Tetrahydrofuran	(1)	5.758	71	115040	101.493
51) Chloroform	(2)	5.909	83	199121	21.213
52)$Dibromofluoromethane	(2)	6.131	113	293789	47.288

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/20/2019 at 21:24.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20s31.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 20:09 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 21:21 dvv10203

Sample Name: LCSL97 Lab Sample ID: LCSL97

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
53) 1,1,1-Trichloroethane	(2)	6.137	97	161379	20.045
43) 1,2-Dichloroethene (Total)	(2)		96	233135	43.722
54) Cyclohexane	(2)	6.237	56	190343	21.879
56) Carbon Tetrachloride	(2)	6.359	117	127391	19.271
55) 1,1-Dichloropropene	(2)	6.359	75	153772	21.339
58) Isobutyl Alcohol	(1)	6.517	41	192521	575.810
57)$1,2-Dichloroethane-d4	(2)	6.600	102	72481	49.776
60) Benzene	(2)	6.623	78	467130	22.517
61) 1,2-Dichloroethane	(2)	6.710	62	173139	20.805
65) t-Amyl methyl ether	(2)	6.825	73	311058	18.443
66)*Fluorobenzene	(2)	7.041	96	1208471	50.000
67) n-Heptane	(2)	7.070	43	186338	24.834
69) n-Butanol	(1)	7.417	56	327864	1354.984
71) Trichloroethene	(2)	7.536	95	134375	24.038
72) Methylcyclohexane	(2)	7.851	83	227057	23.590
73) 1,2-Dichloropropane	(2)	7.877	63	151287	26.797
76) Methyl Methacrylate	(2)	7.967	69	123249	22.623
75) 1,4-Dioxane	(1)	7.967	88	51168M	802.989
74) Dibromomethane	(2)	7.986	93	92383	23.663
78) Bromodichloromethane	(2)	8.230	83	159833	23.725
79) 2-Nitropropane	(2)	8.488	41	36593	15.662
80) 2-Chloroethyl Vinyl Ether	(2)	8.607	63	105162	23.174
81) cis-1,3-Dichloropropene	(2)	8.796	75	202651	23.863
82) 4-Methyl-2-pentanone	(2)	8.979	43	1176601	124.575
83)$Toluene-d8	(3)	9.131	98	1388196	51.297
88) Toluene	(3)	9.221	92	333231	22.226
89) trans-1,3-Dichloropropene	(3)	9.516	75	180437	20.176
91) Ethyl Methacrylate	(3)	9.590	69	211966	20.176
92) 1,1,2-Trichloroethane	(3)	9.735	97	131444	23.189
93) Tetrachloroethene	(3)	9.819	166	136911	20.997
94) 1,3-Dichloropropane	(3)	9.909	76	223152	22.331
96) 2-Hexanone	(3)	9.963	43	871401	112.996
90) 1,3-Dichloropropene (total)	(3)		100	383088	44.039
97) Dibromochloromethane	(3)	10.140	129	117620	20.105
99) 1,2-Dibromoethane	(3)	10.250	107	137096	21.273
100)*Chlorobenzene-d5	(3)	10.703	117	1051553	50.000
101) 1-Chlorohexane	(3)	10.725	91	181908	20.338
102) Chlorobenzene	(3)	10.732	112	372226	20.639

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/20/2019 at 21:24.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20s31.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 20:09 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 21:21 dvv10203

Sample Name: LCSL97 Lab Sample ID: LCSL97

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
103) 1,1,1,2-Tetrachloroethane	(3)	10.822	131	118733	19.642
104) Ethylbenzene	(3)	10.825	91	657641	21.655
106) m+p-Xylene	(3)	10.947	106	505129	42.293
107) o-Xylene	(3)	11.285	106	242677	20.548
109) Styrene	(3)	11.304	104	410694	20.738
110) Bromoform	(3)	11.465	173	76581	18.276
111) Isopropylbenzene	(3)	11.597	105	642015	21.244
112) Cyclohexanone	(1)	11.664	55	202210	797.435
114)$4-Bromofluorobenzene	(3)	11.745	95	522127	49.858
108) Xylene (Total)	(3)		106	747806	62.841
116) 1,1,2,2-Tetrachloroethane	(4)	11.848	83	221331	22.811
115) Bromobenzene	(4)	11.854	156	162719	20.949
118) trans-1,4-Dichloro-2-butene	(4)	11.873	53	329607	105.841
117) 1,2,3-Trichloropropane	(4)	11.893	110	63679	21.559
119) n-Propylbenzene	(4)	11.931	91	800871	23.352
120) 2-Chlorotoluene	(4)	12.005	126	153691	21.174
122) 1,3,5-Trimethylbenzene	(4)	12.076	105	554277	21.587
121) 4-Chlorotoluene	(4)	12.098	126	157511	20.633
124) tert-Butylbenzene	(4)	12.314	134	110772M	18.385
125) Pentachloroethane	(4)	12.346	167	87924	18.844
126) 1,2,4-Trimethylbenzene	(4)	12.359	105	569858	21.231
127) sec-Butylbenzene	(4)	12.481	105	714171	22.344
129) 1,3-Dichlorobenzene	(4)	12.577	146	308477	20.877
130) p-Isopropyltoluene	(4)	12.594	119	602781	20.815
131)*1,4-Dichlorobenzene-d4	(4)	12.635	152	564940	50.000
133) 1,4-Dichlorobenzene	(4)	12.651	146	329087	20.972
134) 1,2,3-Trimethylbenzene	(4)	12.661	105	607402	20.537
135) Benzyl Chloride	(4)	12.729	91	330051	16.897
136) 1,3-Diethylbenzene	(4)	12.793	119	369046	20.192
137) 1,4-Diethylbenzene	(4)	12.867	119	389937	19.729
139) n-Butylbenzene	(4)	12.886	92	317113	21.573
138) 1,2-Dichlorobenzene	(4)	12.909	146	311165	21.104
140) 1,2-Diethylbenzene	(4)	12.934	119	314231	20.319
141) Diethylbenzene (total)	(4)		100	1073214	60.240
142) 1,2-Dibromo-3-chloropropane	(4)	13.455	75	43654	19.995
144) 1,3,5-Trichlorobenzene	(4)	13.584	180	227628	20.071
146) 1,2,4-Trichlorobenzene	(4)	14.002	180	215166	19.868
147) Hexachlorobutadiene	(4)	14.089	225	91337	21.056

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/20/2019 at 21:24.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19may20b.b/ly20s31.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 20:09 Analyst ID: DVV10203

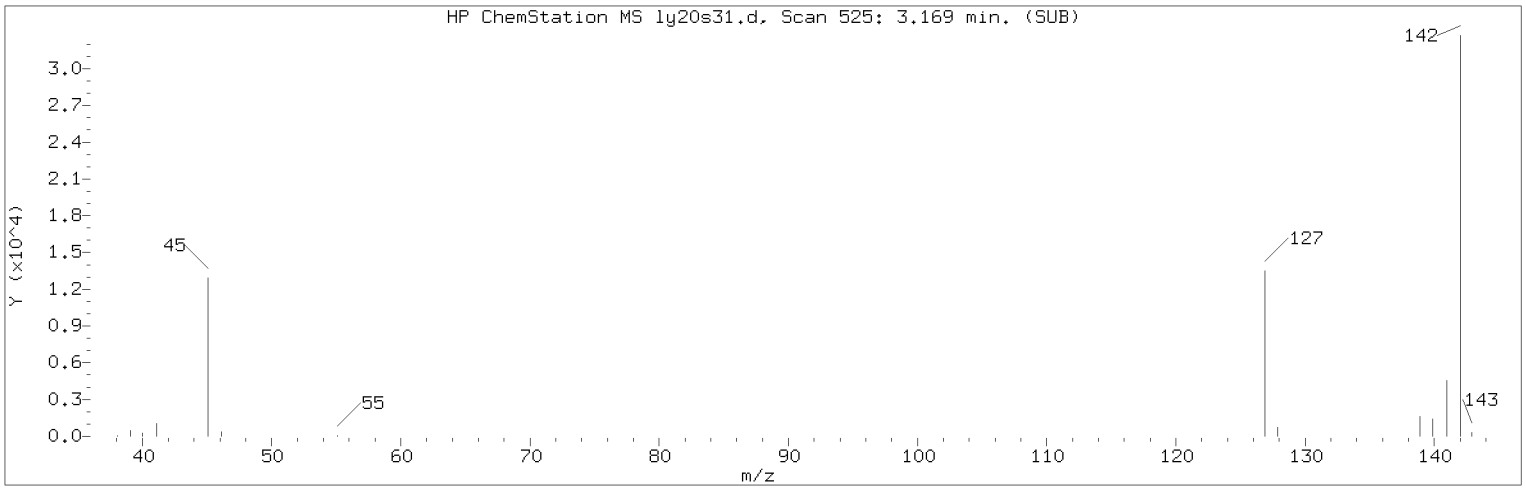
Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 21:21 dvv10203

Sample Name: LCSL97 Lab Sample ID: LCSL97

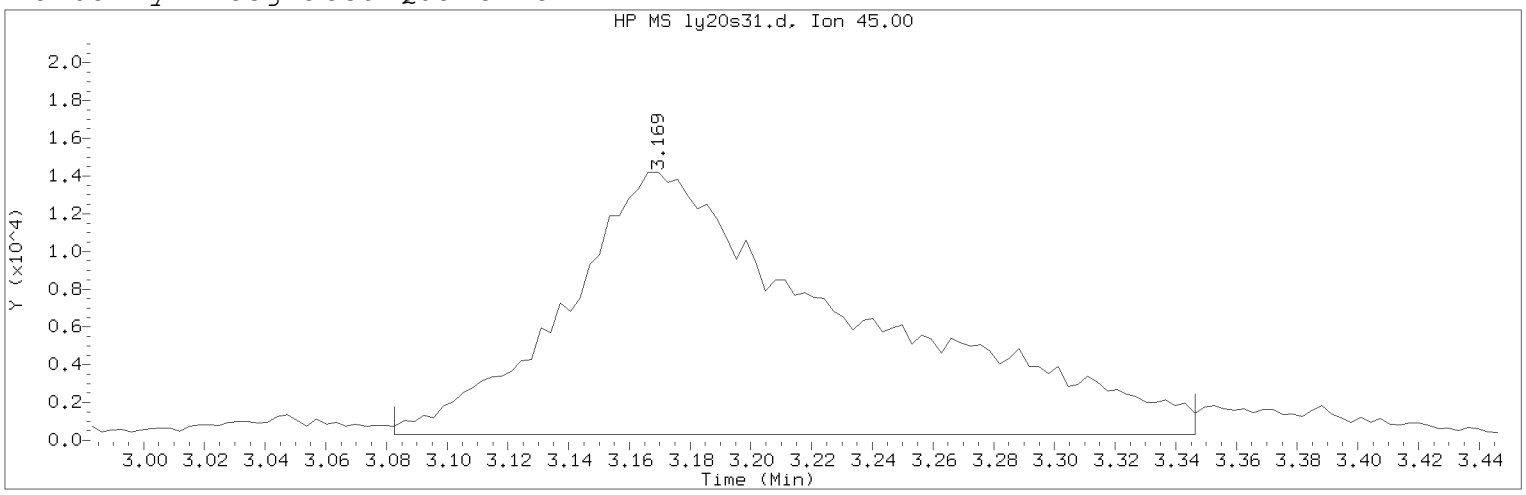
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) Naphthalene	(4)	14.182	128	699261	20.340
149) 1,2,3-Trichlorobenzene	(4)	14.320	180	211122	20.446
150) 2-Methylnaphthalene	(4)	14.905	142	386556	18.458

Digitally signed by Don V. Viray
on 05/20/2019 at 21:24.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19may20b.b/ly20s31.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 20:09 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 21:21 dvv10203

Sample Name: LCSL97 Lab Sample ID: LCSL97

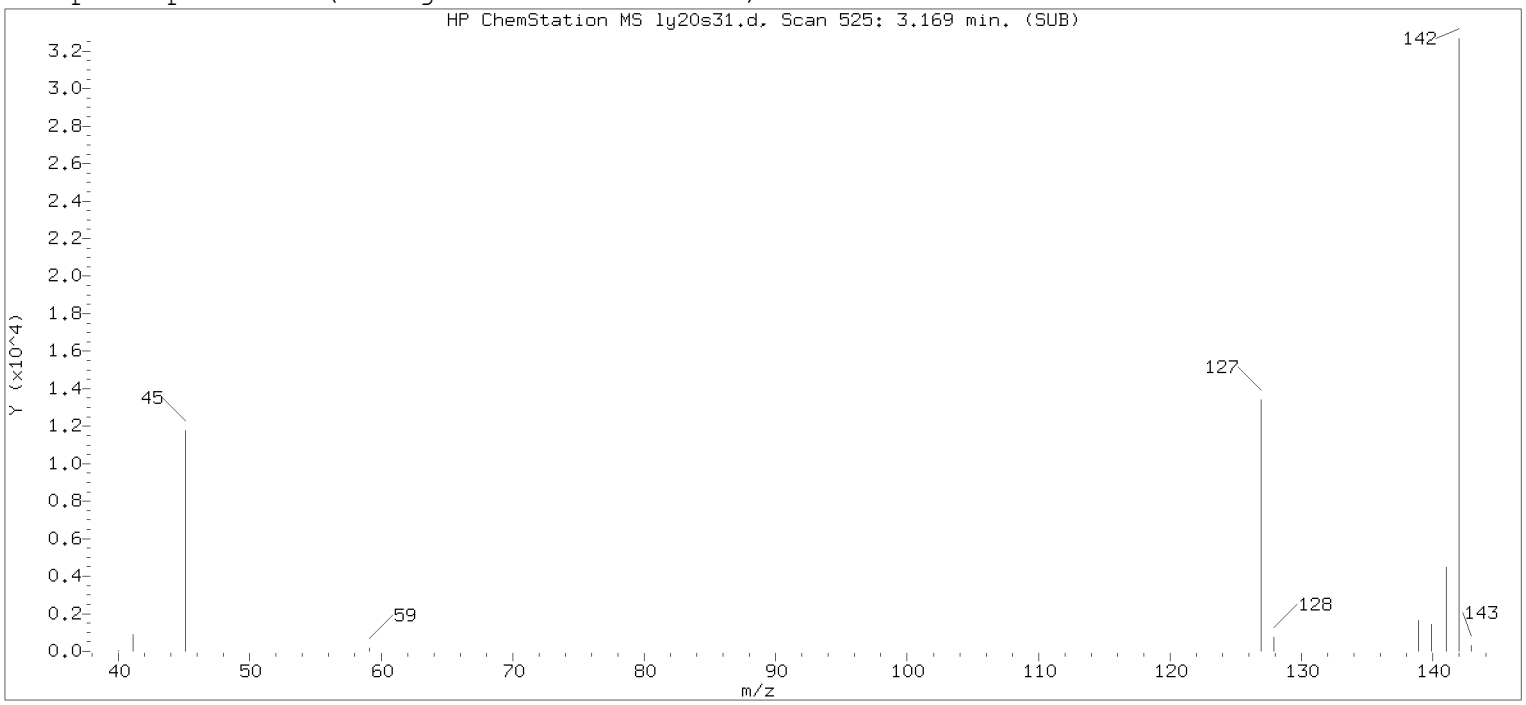
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 525
Retention Time (minutes): 3.169
Quant Ion : 45.00
Area (flag) : 91428M
On-Column Amount (ng) : 167.1394
Integration start scan : 497 Integration stop scan: 579
Y at integration start : 293 Y at integration end: 293

Reason for manual integration: improper integration

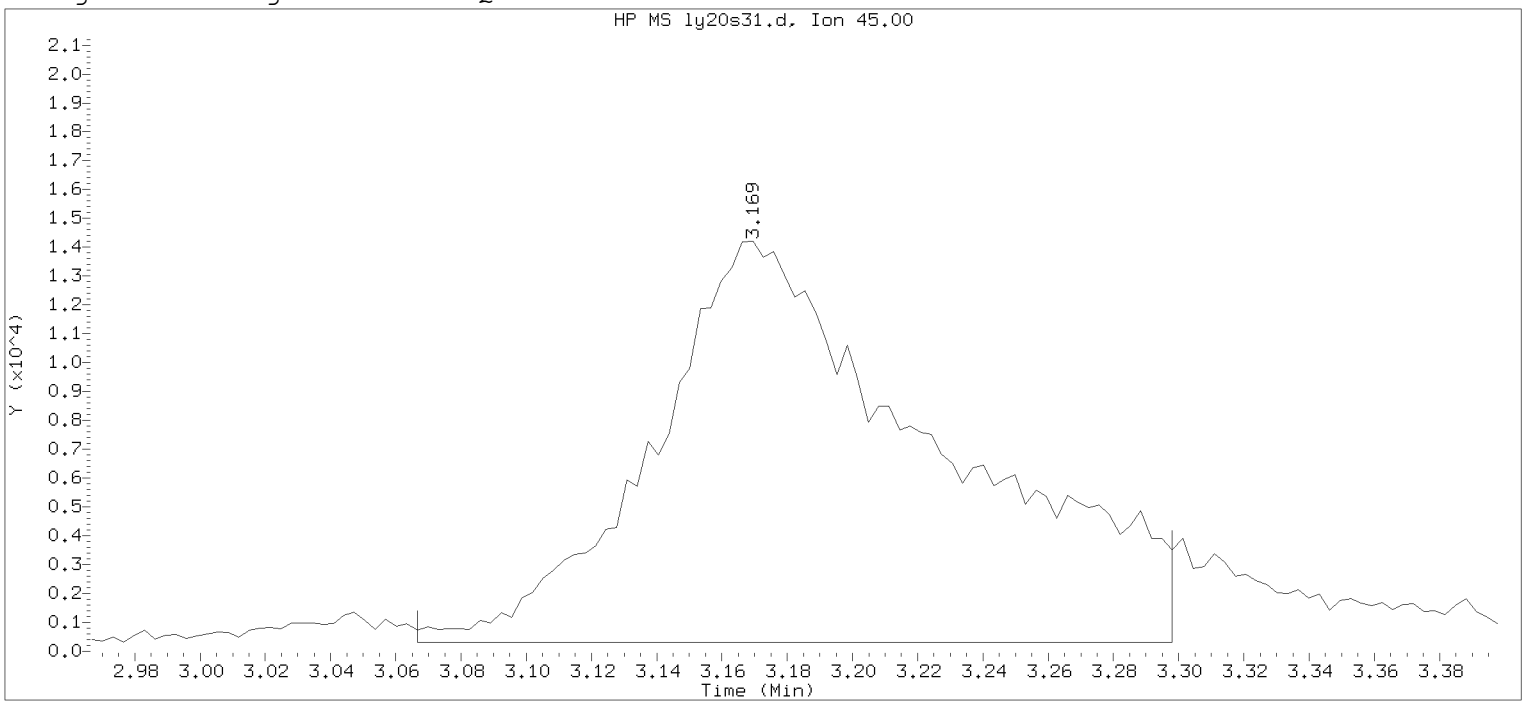
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/20/2019 at 21:24.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/21/2019 at 11:36.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19may20b.b/ly20s31.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 20:09 Analyst ID: DVV10203

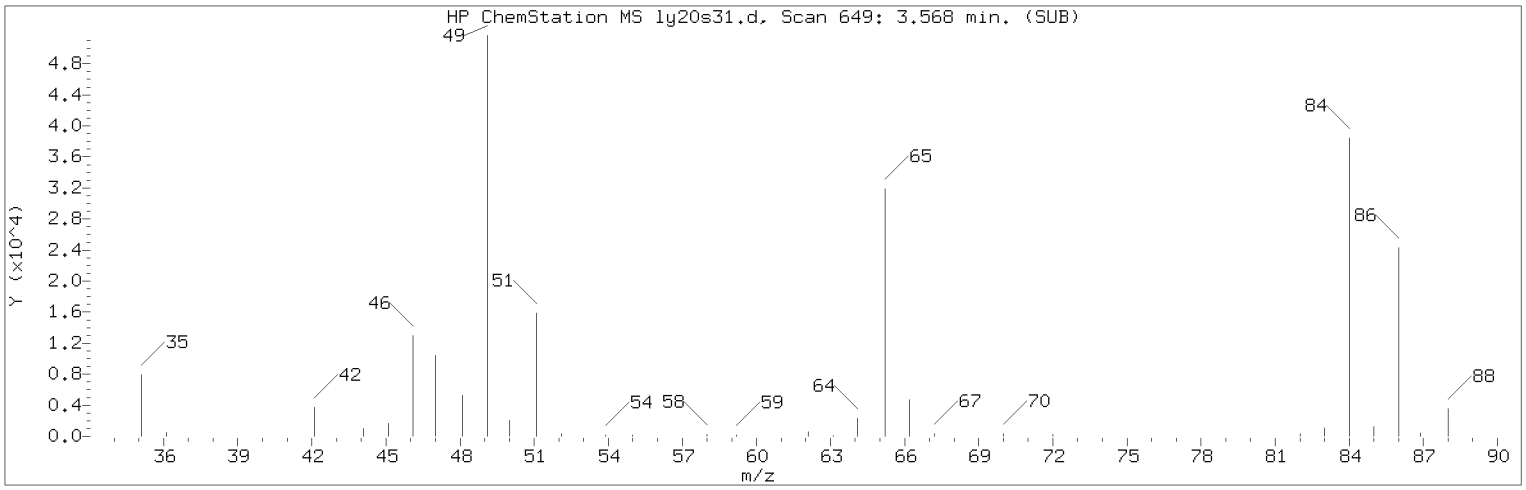
Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 20:27 Automation

Sample Name: LCSL97 Lab Sample ID: LCSL97

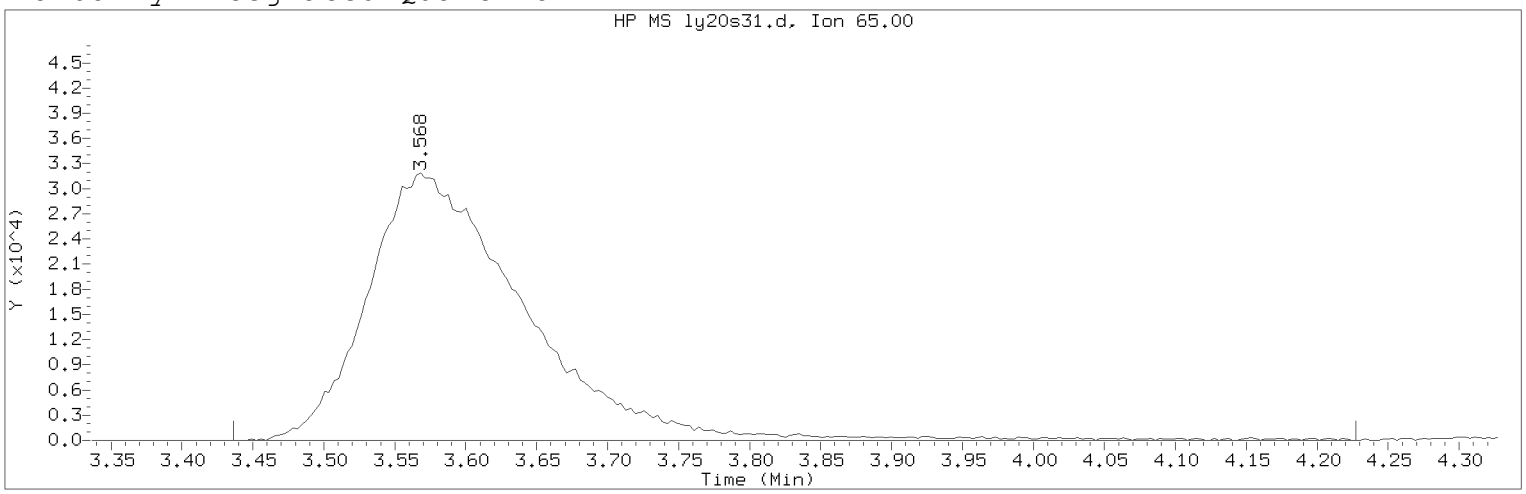
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 525
Retention Time (minutes): 3.169
Quant Ion : 45.00
Area : 84836
On-column Amount (ng) : 157.6608
Integration start scan : 492 Integration stop scan: 564
Y at integration start : 314 Y at integration end: 314

Digitally signed by Don V. Viray on 05/20/2019 at 21:24.
Target 3.5 esignature user id: dviray01

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19may20b.b/ly20s31.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 20:09 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 21:21 dvv10203

Sample Name: LCSL97 Lab Sample ID: LCSL97

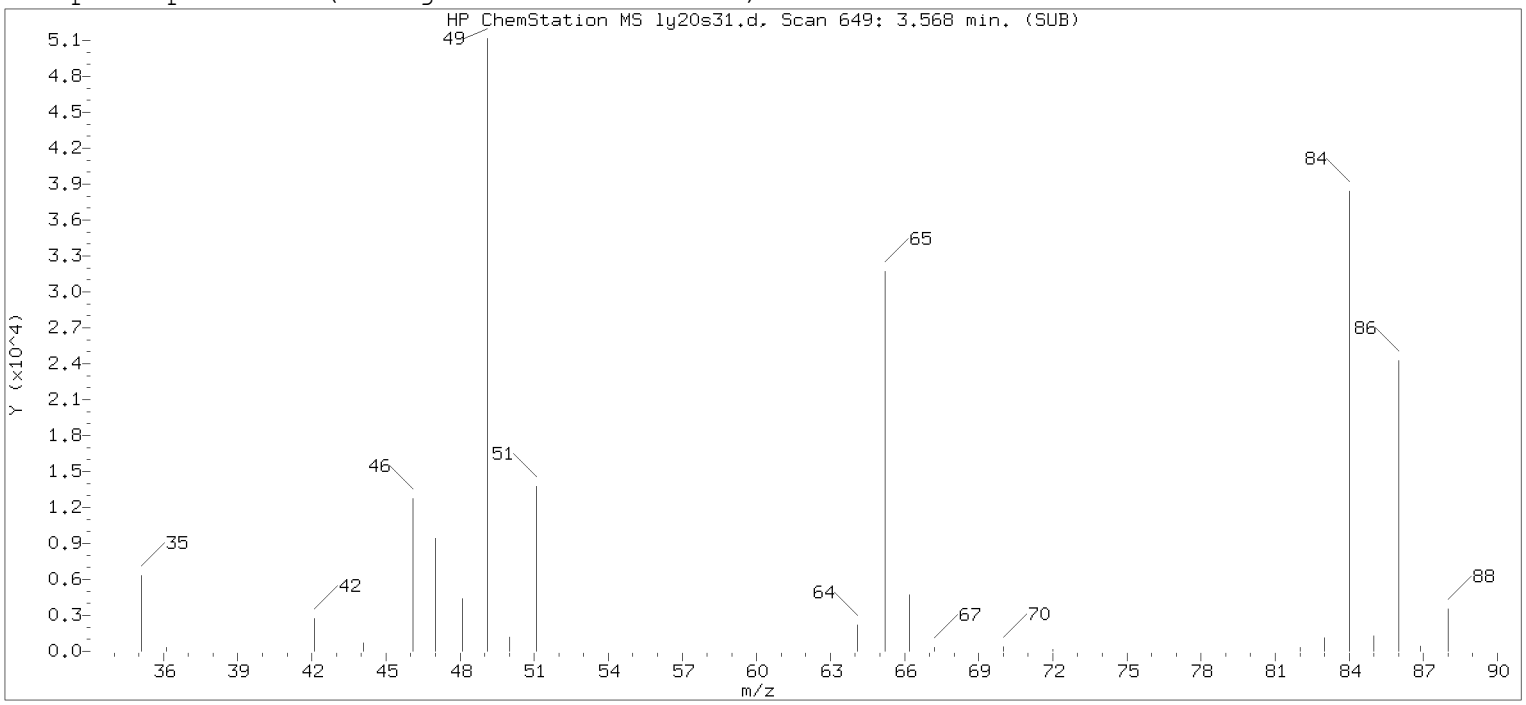
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 649
Retention Time (minutes): 3.568
Quant Ion : 65.00
Area (flag) : 245300M
On-Column Amount (ng) : 250.0000
Integration start scan : 607 Integration stop scan: 853
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

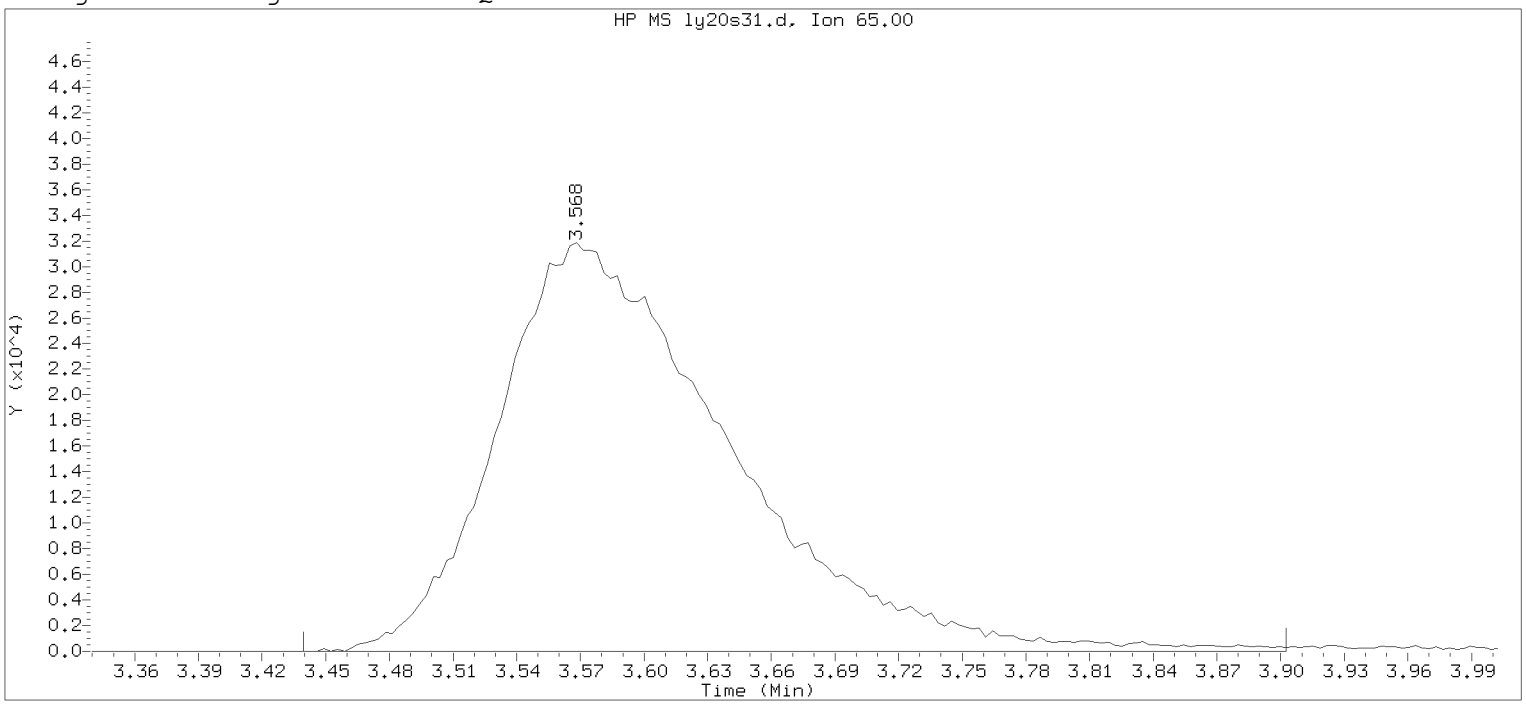
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/20/2019 at 21:24.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/21/2019 at 11:36.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19may20b.b/ly20s31.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 20:09 Analyst ID: DVV10203

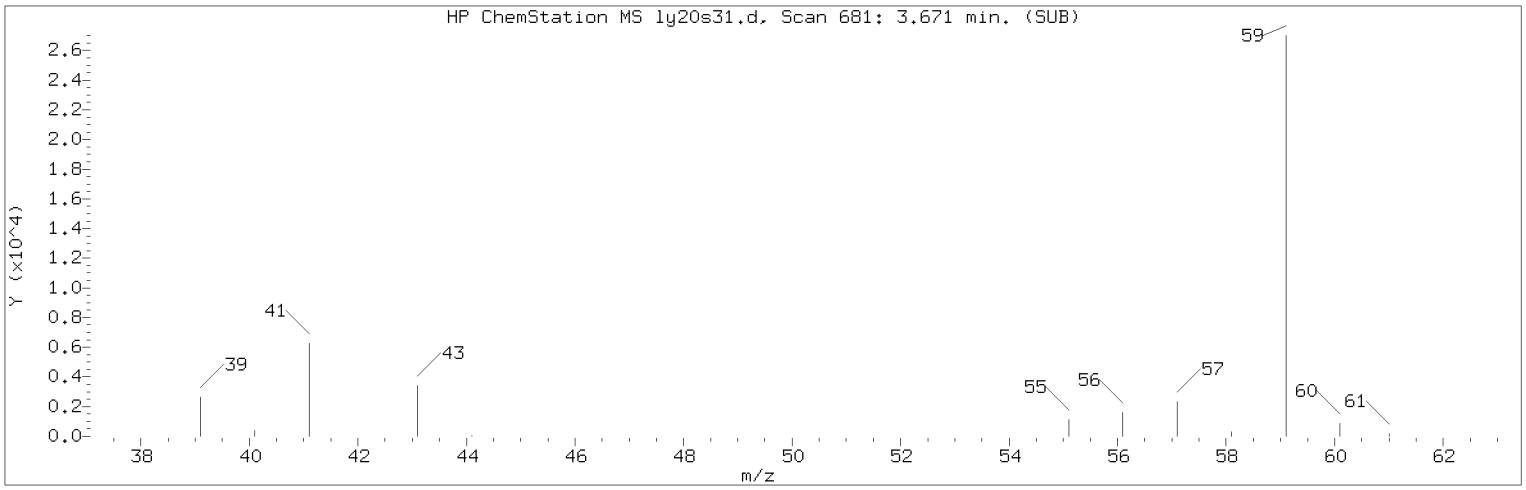
Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 20:27 Automation

Sample Name: LCSL97 Lab Sample ID: LCSL97

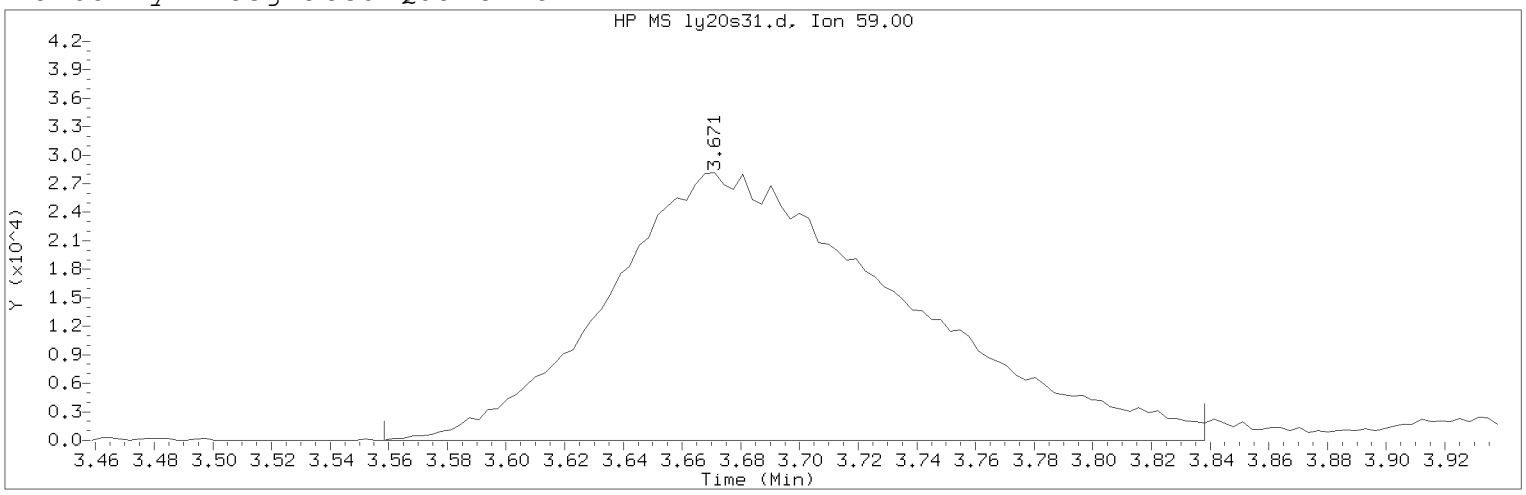
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 649
Retention Time (minutes): 3.568
Quant Ion : 65.00
Area : 241299
On-column Amount (ng) : 250.0000
Integration start scan : 608 Integration stop scan: 752
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/20/2019 at 21:24.
Target 3.5 esignature user id: dvviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19may20b.b/ly20s31.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 20:09 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 21:21 dvv10203

Sample Name: LCSL97 Lab Sample ID: LCSL97

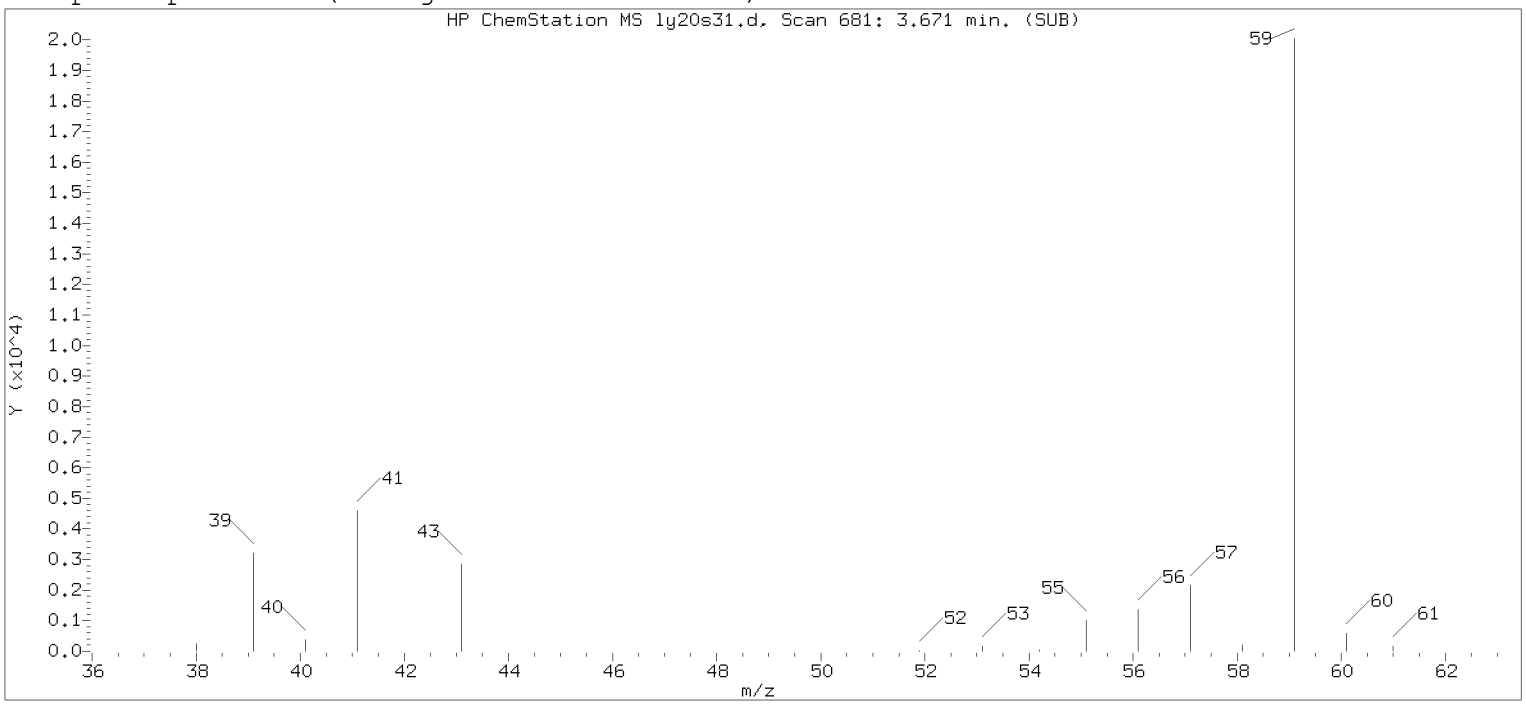
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 681
Retention Time (minutes): 3.671
Quant Ion : 59.00
Area (flag) : 197520M
On-Column Amount (ng) : 194.9570
Integration start scan : 645 Integration stop scan: 732
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

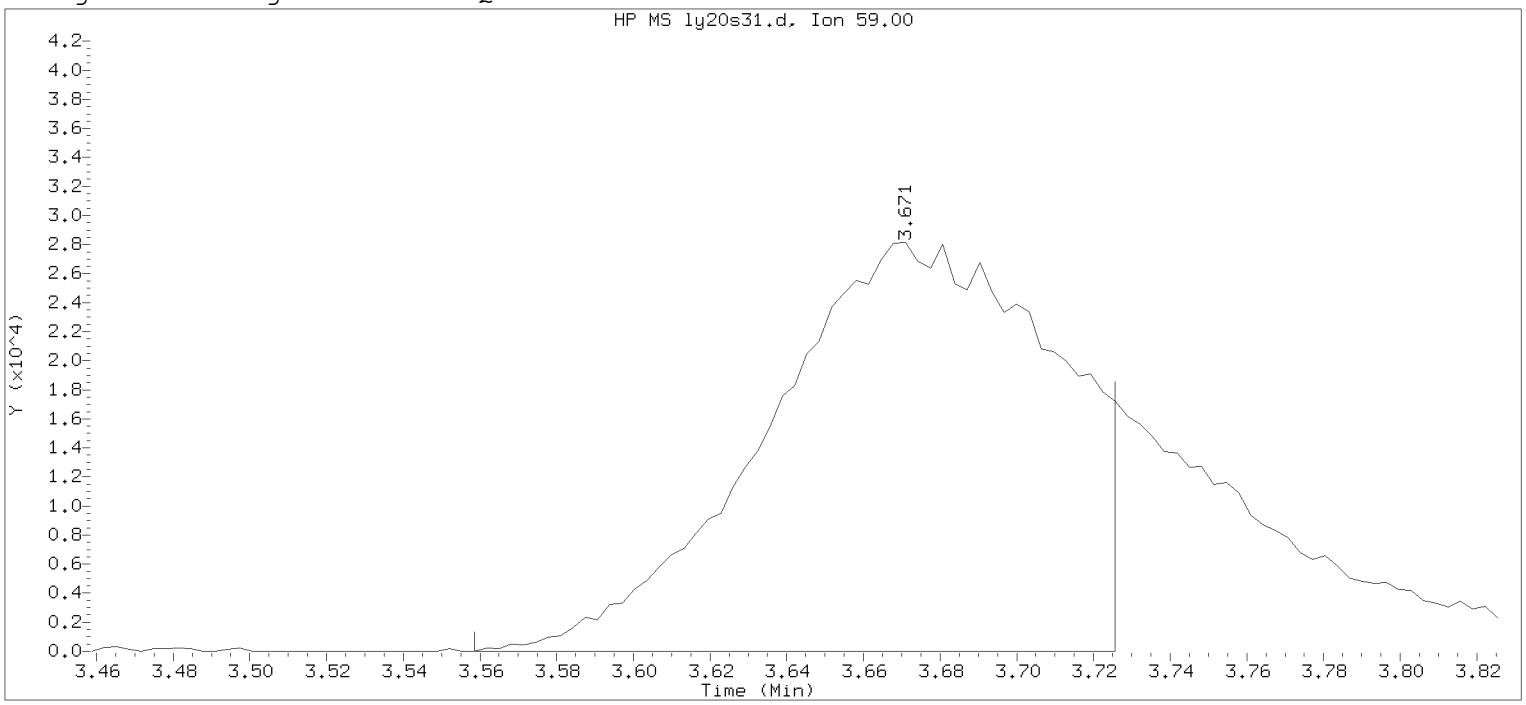
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/20/2019 at 21:24.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/21/2019 at 11:36.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19may20b.b/ly20s31.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 20:09 Analyst ID: DVV10203

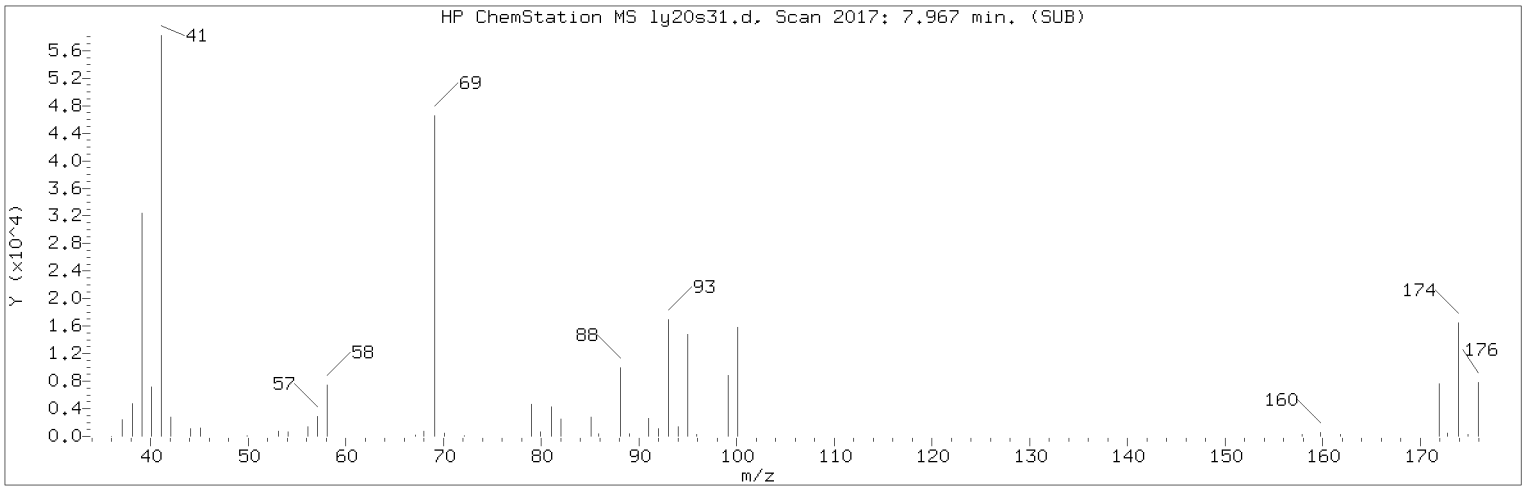
Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 20:27 Automation

Sample Name: LCSL97 Lab Sample ID: LCSL97

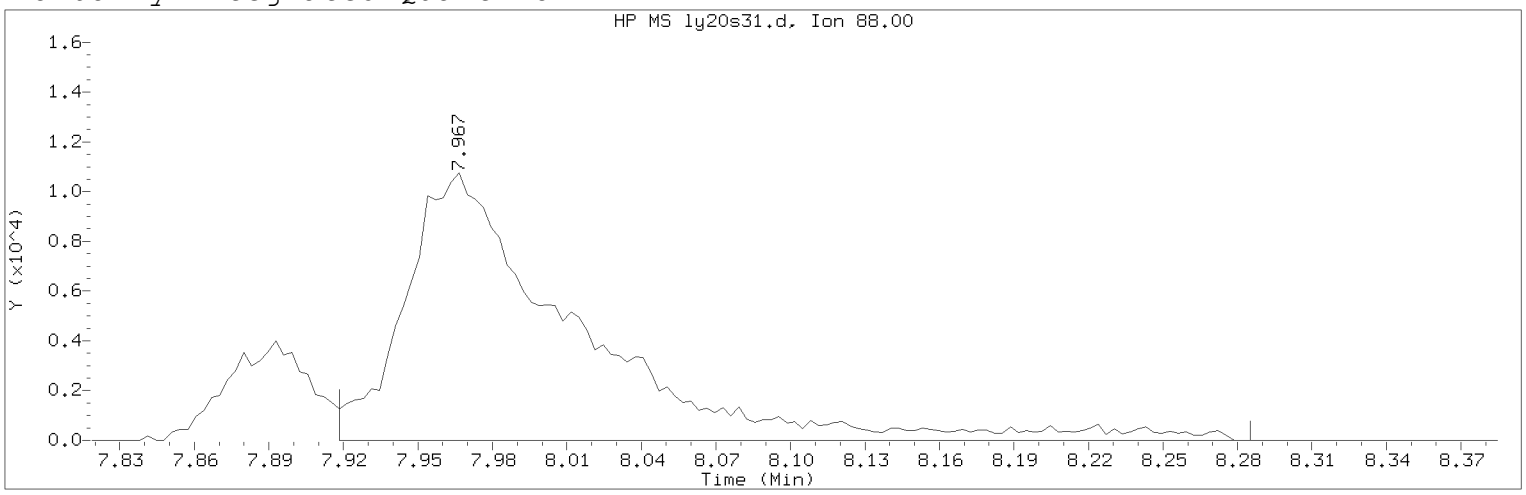
Compound Number	: 30		
Compound Name	: t-Butyl alcohol		
Scan Number	: 681		
Retention Time (minutes)	: 3.671		
Quant Ion	: 59.00		
Area	: 147536		
On-column Amount (ng)	: 148.0361		
Integration start scan	: 645	Integration stop scan:	697
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 05/20/2019 at 21:24.
Target 3.5 esignature user id: dvviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19may20b.b/ly20s31.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 20:09 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 21:21 dvv10203

Sample Name: LCSL97 Lab Sample ID: LCSL97

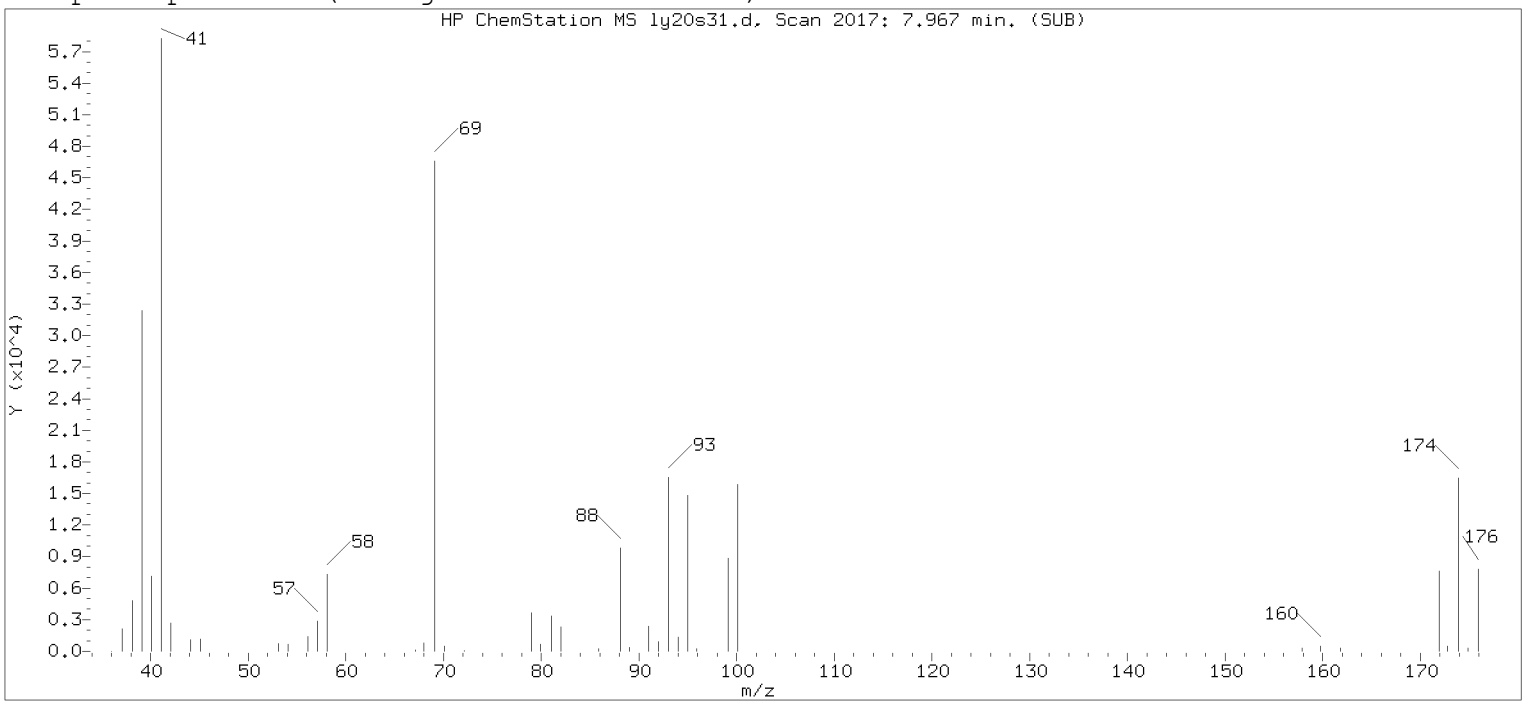
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2017
Retention Time (minutes): 7.967
Quant Ion : 88.00
Area (flag) : 51168M
On-Column Amount (ng) : 802.9891
Integration start scan : 2001 Integration stop scan: 2115
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

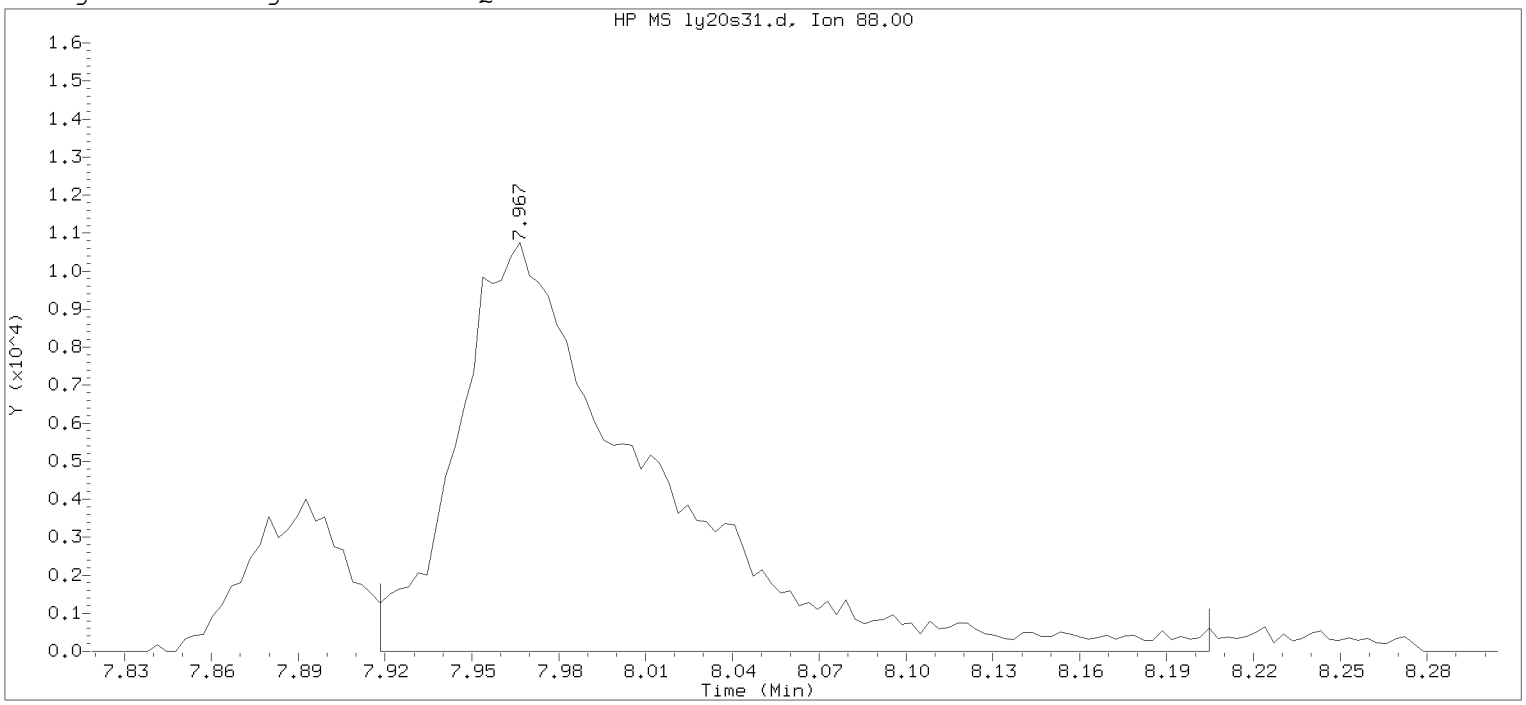
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/20/2019 at 21:24.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/21/2019 at 11:36.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19may20b.b/ly20s31.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 20:09 Analyst ID: DVV10203

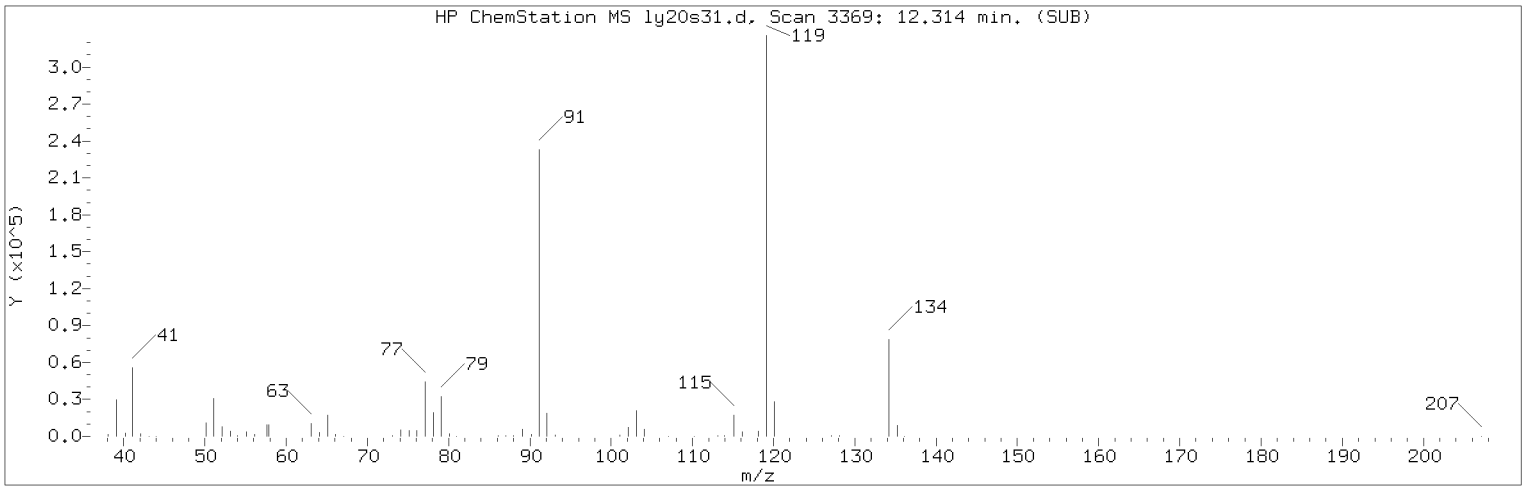
Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 20:27 Automation

Sample Name: LCSL97 Lab Sample ID: LCSL97

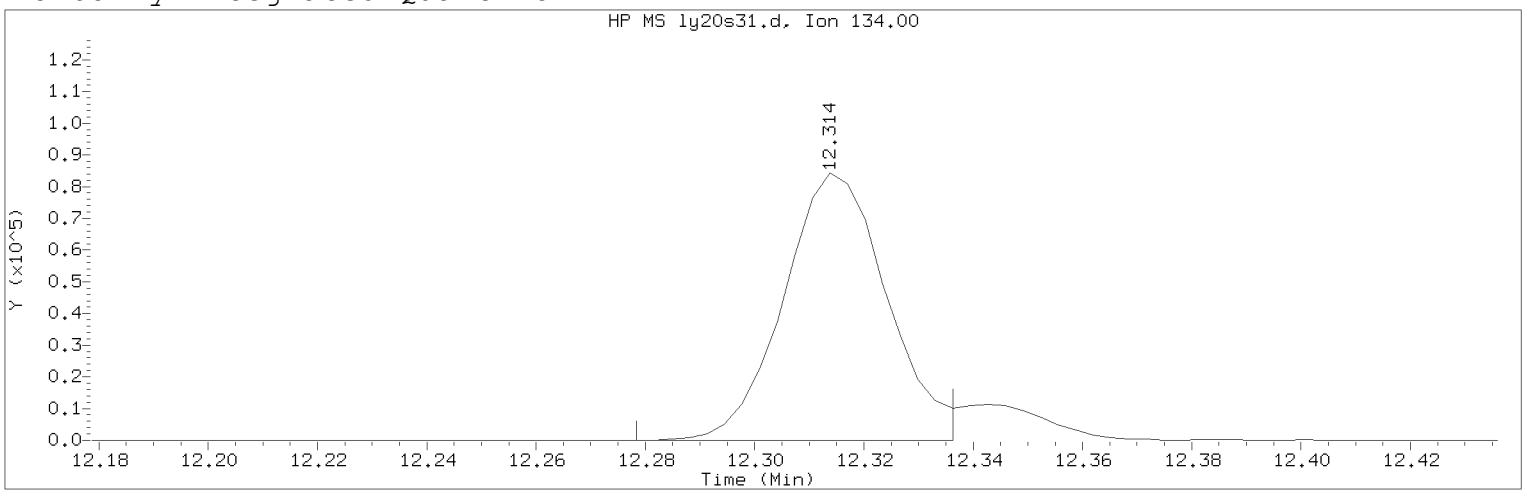
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2017
Retention Time (minutes): 7.967
Quant Ion : 88.00
Area : 49482
On-column Amount (ng) : 789.4186
Integration start scan : 2001 Integration stop scan: 2090
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/20/2019 at 21:24.
Target 3.5 esignature user id: dviray0203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19may20b.b/ly20s31.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 20:09 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 21:21 dvv10203

Sample Name: LCSL97 Lab Sample ID: LCSL97

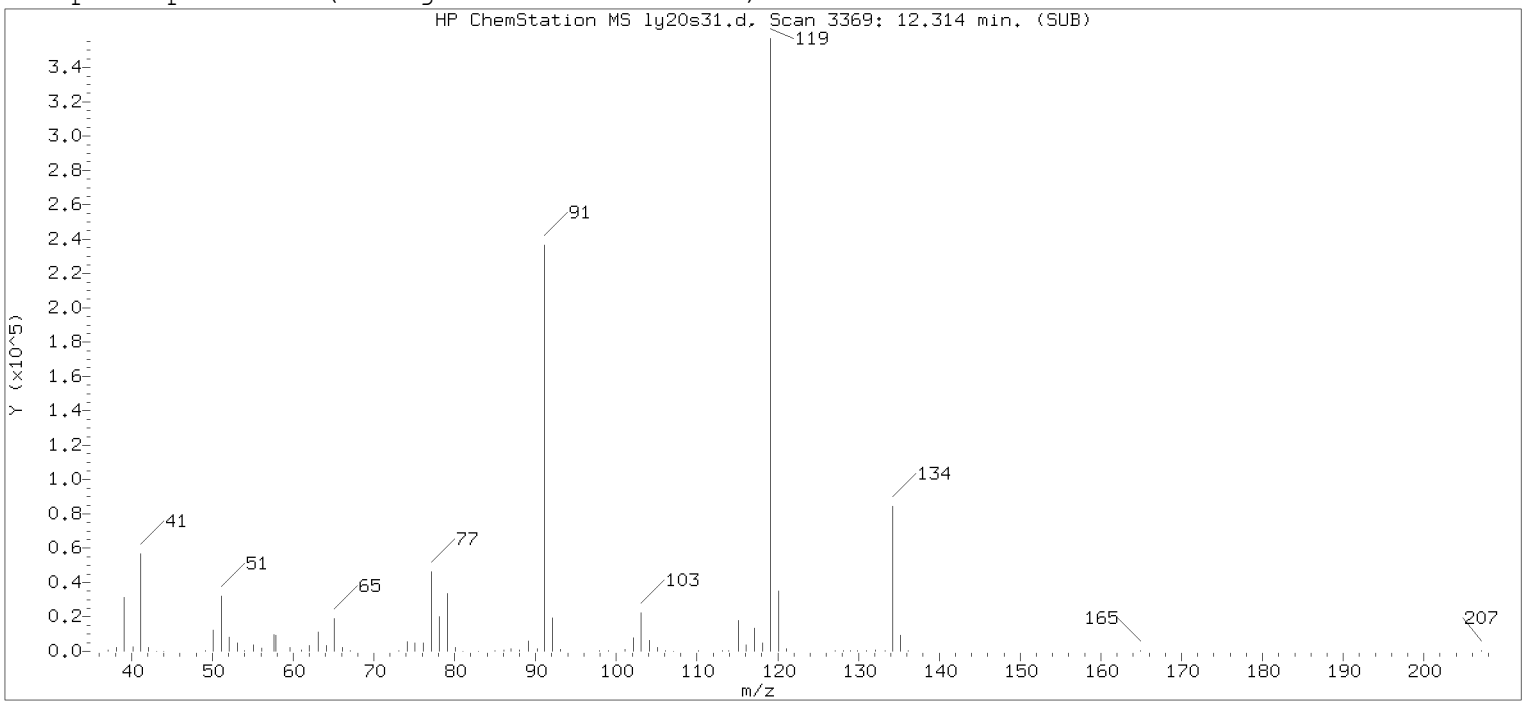
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3369
Retention Time (minutes): 12.314
Quant Ion : 134.00
Area (flag) : 110772M
On-Column Amount (ng) : 18.3847
Integration start scan : 3357 Integration stop scan: 3375
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

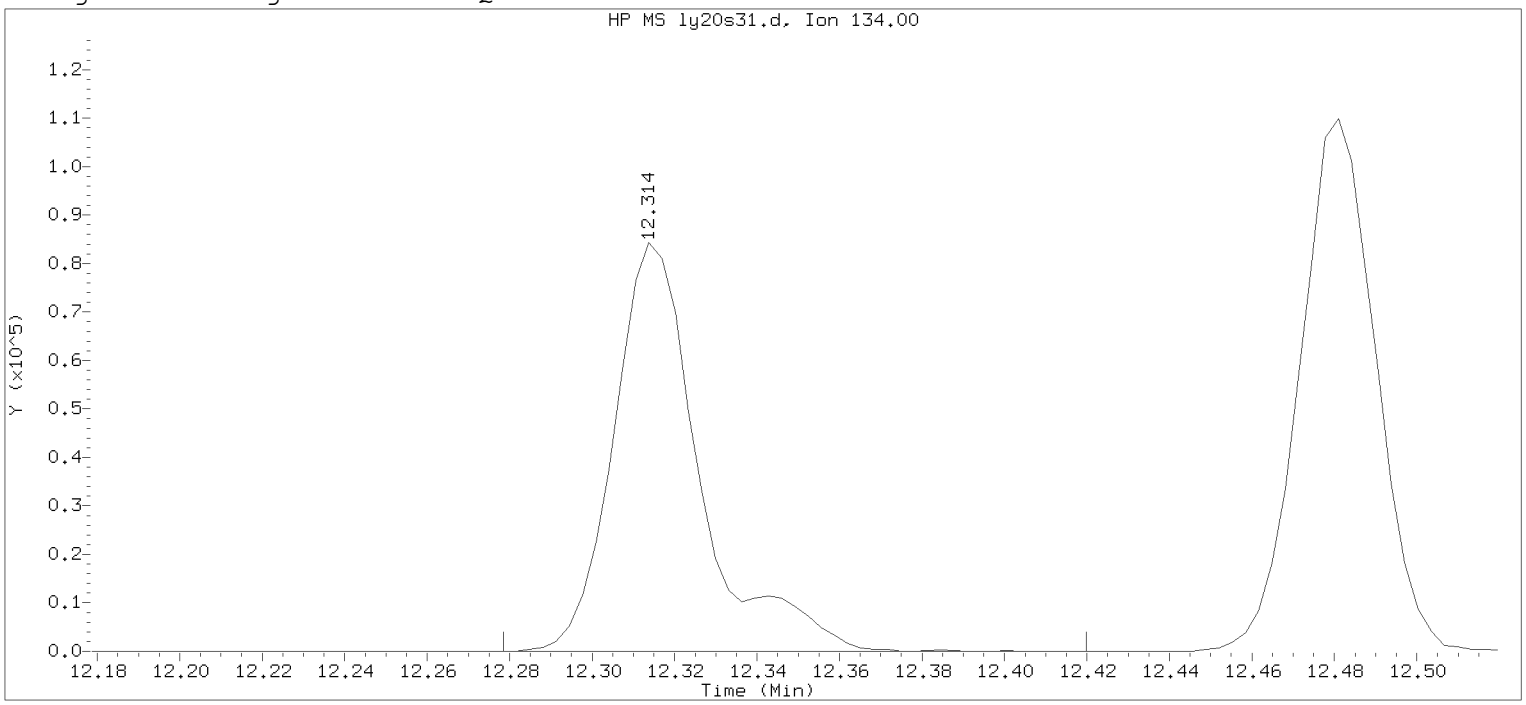
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/20/2019 at 21:24.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/21/2019 at 11:36.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19may20b.b/ly20s31.d Instrument ID: HP09915.i
Injection date and time: 20-MAY-2019 20:09 Analyst ID: DVV10203

Method used: /chem/HP09915.i/19may20b.b/m8260c5.m Sublist used: 8260W-DE
Calibration date and time: 20-MAY-2019 20:05
Date, time and analyst ID of latest file update: 20-May-2019 20:27 Automation

Sample Name: LCSL97 Lab Sample ID: LCSL97

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3369
Retention Time (minutes): 12.314
Quant Ion : 134.00
Area : 122694
On-column Amount (ng) : 20.3634
Integration start scan : 3357 Integration stop scan: 3401
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/20/2019 at 21:24.
Target 3.5 esignature user id: dviray

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSW34

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSW34

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may22a.b/wy22l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	16	
74-87-3	Chloromethane	16	
106-99-0	1,3-Butadiene	24	
75-01-4	Vinyl Chloride	17	
74-83-9	Bromomethane	15	
75-00-3	Chloroethane	15	
109-66-0	n-Pentane	16	
75-69-4	Trichlorofluoromethane	17	
64-17-5	Ethanol	450	J
354-23-4	Freon 123a	19	
107-02-8	Acrolein	130	
75-35-4	1,1-Dichloroethene	22	
67-64-1	Acetone	150	
76-13-1	Freon 113	20	
67-63-0	2-Propanol	160	
74-88-4	Methyl Iodide	19	
75-15-0	Carbon Disulfide	15	
107-05-1	Allyl Chloride	18	
79-20-9	Methyl Acetate	18	
75-09-2	Methylene Chloride	21	
75-65-0	t-Butyl alcohol	210	
107-13-1	Acrylonitrile	88	
156-60-5	trans-1,2-Dichloroethene	21	
1634-04-4	Methyl Tertiary Butyl Ether	24	
110-54-3	n-Hexane	19	
75-34-3	1,1-Dichloroethane	20	
108-20-3	di-Isopropyl ether	21	
126-99-8	2-Chloro-1,3-butadiene	19	
637-92-3	Ethyl t-butyl ether	21	
156-59-2	cis-1,2-Dichloroethene	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSW34

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSW34

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may22a.b/wy22l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	43	
78-93-3	2-Butanone	130	
594-20-7	2,2-Dichloropropane	18	
107-12-0	Propionitrile	170	
126-98-7	Methacrylonitrile	140	
74-97-5	Bromochloromethane	20	
109-99-9	Tetrahydrofuran	110	
67-66-3	Chloroform	21	
71-55-6	1,1,1-Trichloroethane	20	
110-82-7	Cyclohexane	19	
563-58-6	1,1-Dichloropropene	20	
56-23-5	Carbon Tetrachloride	19	
78-83-1	Isobutyl Alcohol	500	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	21	
994-05-8	t-Amyl methyl ether	22	
142-82-5	n-Heptane	18	
71-36-3	n-Butanol	950	
79-01-6	Trichloroethene	21	
108-87-2	Methylcyclohexane	20	
78-87-5	1,2-Dichloropropane	21	
74-95-3	Dibromomethane	21	
123-91-1	1,4-Dioxane	520	
80-62-6	Methyl Methacrylate	18	
75-27-4	Bromodichloromethane	20	
79-46-9	2-Nitropropane	15	
110-75-8	2-Chloroethyl Vinyl Ether	17	
10061-01-5	cis-1,3-Dichloropropene	19	
108-10-1	4-Methyl-2-pentanone	88	
108-88-3	Toluene	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSW34

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSW34

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may22a.b/wy22l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	19	
542-75-6	1,3-Dichloropropene (total)	38	
97-63-2	Ethyl Methacrylate	19	
79-00-5	1,1,2-Trichloroethane	23	
127-18-4	Tetrachloroethene	23	
142-28-9	1,3-Dichloropropane	22	
591-78-6	2-Hexanone	92	
124-48-1	Dibromochloromethane	21	
106-93-4	1,2-Dibromoethane	22	
108-90-7	Chlorobenzene	22	
630-20-6	1,1,1,2-Tetrachloroethane	21	
100-41-4	Ethylbenzene	22	
179601-23-1	m+p-Xylene	44	
95-47-6	o-Xylene	22	
1330-20-7	Xylene (Total)	66	
100-42-5	Styrene	22	
75-25-2	Bromoform	19	
98-82-8	Isopropylbenzene	21	
108-94-1	Cyclohexanone	400	
108-86-1	Bromobenzene	22	
79-34-5	1,1,2,2-Tetrachloroethane	22	
96-18-4	1,2,3-Trichloropropane	22	
110-57-6	trans-1,4-Dichloro-2-butene	79	
103-65-1	n-Propylbenzene	22	
95-49-8	2-Chlorotoluene	22	
106-43-4	4-Chlorotoluene	22	
108-67-8	1,3,5-Trimethylbenzene	21	
98-06-6	tert-Butylbenzene	21	
76-01-7	Pentachloroethane	21	
95-63-6	1,2,4-Trimethylbenzene	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSW34

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSW34

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may22a.b/wy22l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
135-98-8	sec-Butylbenzene	21	
541-73-1	1,3-Dichlorobenzene	22	
99-87-6	p-Isopropyltoluene	20	
106-46-7	1,4-Dichlorobenzene	22	
526-73-8	1,2,3-Trimethylbenzene	21	
100-44-7	Benzyl Chloride	17	
141-93-5	1,3-Diethylbenzene	19	
105-05-5	1,4-Diethylbenzene	19	
95-50-1	1,2-Dichlorobenzene	22	
104-51-8	n-Butylbenzene	19	
135-01-3	1,2-Diethylbenzene	20	
25340-17-4	Diethylbenzene (total)	58	
96-12-8	1,2-Dibromo-3-chloropropane	19	
108-70-3	1,3,5-Trichlorobenzene	19	
120-82-1	1,2,4-Trichlorobenzene	19	
87-68-3	Hexachlorobutadiene	18	
91-20-3	Naphthalene	18	
87-61-6	1,2,3-Trichlorobenzene	19	
91-57-6	2-Methylnaphthalene	12	

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may22a.b/wy22l01.d Injection date and time: **22-MAY-2019 13:16**
Data file Sample Info. Line: LCSW34;LCSW34;1;3;LCS;;;;wy22b02; Instrument ID: **HP09137.i** Batch: **W191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 13:46 cbs01947

Blank Data file reference: **/chem2/HP09137.i/19may22a.b/wy22b02.d**

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may22a.b/wy22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.735	(0.003)	593	65	228875	(-12)	250.00	
66) Fluorobenzene	5.029	(0.003)	1308	96	1122353	(-2)	50.00	
101) Chlorobenzene-d5	8.161	(0.003)	2284	117	864605	(-1)	50.00	
132) 1,4-Dichlorobenzene-d4	10.038	(0.003)	2869	152	466115	(-5)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.355	(0.000)	113	248204	47.735	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.689	(0.000)	102	66729	48.254	97%		80 - 120
84) Toluene-d8	(3)	6.695	(0.000)	98	1132572	52.276	105%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.000)	95	411453	47.471	95%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	1.259	(-0.000)	85	114076	15.719	15.72			0.2	1
4) Chloromethane	(2)	1.390	(-0.000)	50	141434	15.651	15.65			0.2	1
5) 1,3-Butadiene	(2)	1.477	(0.001)	39	132717M	24.099	24.10			1	3
6) Vinyl Chloride	(2)	1.461	(-0.000)	62	137618	16.612	16.61			0.2	1
8) Bromomethane	(2)	1.689	(-0.000)	94	99351M	15.206	15.21			0.3	1
9) Chloroethane	(2)	1.762	(0.001)	64	81121	14.881	14.88			0.2	1
11) n-Pentane	(2)	1.965	(0.000)	43	133983	16.012	16.01			0.4	10
12) Trichlorofluoromethane	(2)	1.933	(-0.000)	101	148499	16.878	16.88			0.2	1
13) Ethanol	(1)	2.035	(-0.000)	45	46844	448.770	448.77		J	280	750
15) Freon 123a	(2)	2.116	(0.000)	67	126898M	19.301	19.30			0.4	5
16) Acrolein	(1)	2.215	(0.000)	56	207668	126.032	126.03			2	100
17) 1,1-Dichloroethene	(2)	2.298	(0.000)	96	108082M	21.842	21.84			0.2	1
18) Acetone	(1)	2.337	(0.000)	58	123783	154.553	154.55			0.7	20
19) Freon 113	(2)	2.343	(-0.000)	101	86506M	19.908	19.91			0.2	10
21) 2-Propanol	(1)	2.446	(0.000)	45	95399	160.320	160.32			18	100
22) Methyl Iodide	(2)	2.475	(0.000)	142	178710M	18.846	18.85			0.2	1
23) Carbon Disulfide	(2)	2.491	(0.003)	76	262216	15.041	15.04			0.2	5
25) Allyl Chloride	(2)	2.603	(-0.000)	41	157164	18.231	18.23			0.3	5
27) Methyl Acetate	(2)	2.619	(-0.000)	43	134142	17.977	17.98			0.2	5
28) Methylene Chloride	(2)	2.706	(0.000)	84	126088M	20.846	20.85			0.3	1
30) t-Butyl alcohol	(1)	2.809	(-0.000)	59	221501	208.670	208.67			12	50
31) Acrylonitrile	(2)	2.921	(0.000)	53	347324	88.478	88.48			0.3	20
32) trans-1,2-Dichloroethene	(2)	2.953	(0.000)	96	112317	20.919	20.92			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	2.959	(0.000)	73	314028	24.021	24.02			0.2	1
34) n-Hexane	(2)	3.210	(0.000)	57	136671	19.024	19.02			0.2	5
36) 1,1-Dichloroethane	(2)	3.341	(-0.000)	63	197236	20.273	20.27			0.2	1
38) di-Isopropyl ether	(2)	3.412	(0.000)	45	386544	20.681	20.68			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	3.428	(0.000)	53	162909	19.334	19.33			0.2	5
40) Ethyl t-butyl ether	(2)	3.758	(-0.000)	59	292908	21.499	21.50			0.2	1
42) cis-1,2-Dichloroethene	(2)	3.893	(-0.000)	96	131849	21.872	21.87			0.2	1
43) 1,2-Dichloroethene (Total)	(2)			96	244166	42.791	42.79			0.2	2

M = Compound was manually integrated.

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Data file: /chem2/HP09137.i/19may22a.b/wy22101.d Injection date and time: **22-MAY-2019 13:16**
Data file Sample Info. Line: LCSW34;LCSW34;1;3;LCS;;;;wy22b02; Instrument ID: **HP09137.i** Batch: **W191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 13:46 cbs01947

Blank Data file reference: **/chem2/HP09137.i/19may22a.b/wy22b02.d**

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may22a.b/wy22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	3.906(-0.000)	43	713324	126.481	126.48			0.3	10
45) 2,2-Dichloropropane	(2)	3.890(0.000)	77	77328	17.698	17.70			0.3	1
47) Propionitrile	(1)	3.957(0.000)	54	221299	167.745	167.74			14	100
48) Methacrylonitrile	(2)	4.111(0.000)	67	576322	136.546	136.55			6	50
49) Bromochloromethane	(2)	4.121(-0.000)	128	62714	20.013	20.01			0.2	5
50) Tetrahydrofuran	(1)	4.169(-0.001)	71	134256	109.954	109.95			0.7	10
51) Chloroform	(2)	4.198(0.000)	83	189978	20.812	20.81			0.2	1
53) 1,1,1-Trichloroethane	(2)	4.384(-0.000)	97	137875	20.074	20.07			0.3	1
54) Cyclohexane	(2)	4.436(0.000)	56	171607	18.879	18.88			0.2	5
55) 1,1-Dichloropropene	(2)	4.545(0.000)	75	149846	20.475	20.48			0.2	5
56) Carbon Tetrachloride	(2)	4.548(-0.000)	117	112210	19.037	19.04			0.2	1
58) Isobutyl Alcohol	(1)	4.670(0.000)	41	194753	503.261	503.26			36	250
60) Benzene	(2)	4.750(0.000)	78	484191	20.583	20.58			0.2	1
61) 1,2-Dichloroethane	(2)	4.763(0.000)	62	151789	20.888	20.89			0.3	1
65) t-Amyl methyl ether	(2)	4.869(0.000)	73	302855	21.698	21.70			0.8	5
67) n-Heptane	(2)	5.036(-0.000)	43	123876	18.042	18.04			0.2	5
69) n-Butanol	(1)	5.353(-0.001)	56	325563	947.519	947.52			61	250
71) Trichloroethene	(2)	5.405(-0.000)	95	118334	20.772	20.77			0.2	1
73) Methylcyclohexane	(2)	5.607(-0.000)	83	162209	19.613	19.61			0.2	5
74) 1,2-Dichloropropane	(2)	5.636(-0.000)	63	125687	20.811	20.81			0.2	1
75) Dibromomethane	(2)	5.748(0.000)	93	76975	20.651	20.65			0.2	1
76) 1,4-Dioxane	(1)	5.783(-0.002)	88	53315M	519.054	519.05			29	250
77) Methyl Methacrylate	(2)	5.774(-0.000)	69	120412M	18.143	18.14			0.2	5
79) Bromodichloromethane	(2)	5.924(-0.000)	83	136758	19.969	19.97			0.2	1
80) 2-Nitropropane	(2)	6.175(-0.000)	41	34652	14.954	14.95			0.8	10
81) 2-Chloroethyl Vinyl Ether	(2)	6.261(-0.000)	63	78015	16.943	16.94			0.2	10
82) cis-1,3-Dichloropropene	(2)	6.406(-0.000)	75	177230	18.822	18.82			0.2	1
83) 4-Methyl-2-pentanone	(2)	6.586(-0.000)	43	977604	87.936	87.94			0.5	10
89) Toluene	(3)	6.768(0.000)	92	313686	22.476	22.48			0.2	1
90) trans-1,3-Dichloropropene	(3)	7.016(0.000)	75	160311	19.295	19.29			0.2	1
91) 1,3-Dichloropropene (total)	(3)		100	337541	38.116	38.12			0.2	5
92) Ethyl Methacrylate	(3)	7.137(0.000)	69	197837	19.378	19.38			0.2	5
93) 1,1,2-Trichloroethane	(3)	7.211(0.000)	97	123391	22.971	22.97			0.2	1
94) Tetrachloroethene	(3)	7.359(0.000)	166	127720	22.553	22.55			0.2	1
95) 1,3-Dichloropropane	(3)	7.384(0.000)	76	204600	21.929	21.93			0.2	1
97) 2-Hexanone	(3)	7.490(-0.000)	43	746051	91.790	91.79			0.3	10
98) Dibromochloromethane	(3)	7.609(0.000)	129	110912	21.140	21.14			0.2	1
100) 1,2-Dibromoethane	(3)	7.715(0.000)	107	128382	21.754	21.75			0.2	1
103) Chlorobenzene	(3)	8.187(-0.000)	112	347075	22.417	22.42			0.2	1
104) 1,1,1,2-Tetrachloroethane	(3)	8.264(-0.000)	131	106820	21.469	21.47			0.2	1
105) Ethylbenzene	(3)	8.296(-0.000)	91	577273	21.763	21.76			0.4	1
107) m+p-Xylene	(3)	8.398(-0.000)	106	463380	43.937	43.94			1	5
108) o-Xylene	(3)	8.739(-0.000)	106	225676	21.751	21.75			0.4	1
109) Xylene (Total)	(3)		106	689056	65.688	65.69			1	5
110) Styrene	(3)	8.748(-0.000)	104	379404	21.798	21.80			0.2	5
111) Bromoform	(3)	8.893(-0.000)	173	75555	18.504	18.50			0.2	4
112) Isopropylbenzene	(3)	9.047(-0.000)	105	546305	21.428	21.43			0.2	5
113) Cyclohexanone	(1)	9.111(-0.002)	55	186057	401.550	401.55			25	100
116) Bromobenzene	(4)	9.281(-0.000)	156	149683	22.295	22.30			0.2	5
117) 1,1,2,2-Tetrachloroethane	(4)	9.284(-0.000)	83	198323	21.905	21.91			0.2	1
118) 1,2,3-Trichloropropane	(4)	9.310(0.000)	110	58829	21.572	21.57			0.2	5
119) trans-1,4-Dichloro-2-butene	(4)	9.329(0.000)	53	230650	79.444	79.44			6	50
120) n-Propylbenzene	(4)	9.371(0.000)	91	654685	22.121	22.12			0.2	5
121) 2-Chlorotoluene	(4)	9.435(-0.000)	126	136720	22.396	22.40			0.2	5

M = Compound was manually integrated.

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may22a.b/wy22101.d Injection date and time: **22-MAY-2019 13:16**
Data file Sample Info. Line: LCSW34;LCSW34;1;3;LCS;;;;wy22b02; Instrument ID: **HP09137.i** Batch: **W191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 13:46 cbs01947

Blank Data file reference: **/chem2/HP09137.i/19may22a.b/wy22b02.d**

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may22a.b/wy22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
122) 4-Chlorotoluene	(4)	9.515(0.000)	126	145163	22.213	22.21			0.2	5
123) 1,3,5-Trimethylbenzene	(4)	9.509(0.000)	105	457890	21.452	21.45			0.3	5
125) tert-Butylbenzene	(4)	9.756(0.000)	134	102638	21.165	21.16			0.3	5
126) Pentachloroethane	(4)	9.766(0.000)	167	80982	21.124	21.12			0.2	5
127) 1,2,4-Trimethylbenzene	(4)	9.788(0.000)	105	485263	21.575	21.57			1	5
128) sec-Butylbenzene	(4)	9.916(0.000)	105	542325	20.699	20.70			0.2	5
130) 1,3-Dichlorobenzene	(4)	9.993(-0.000)	146	278536	21.757	21.76			0.2	5
131) p-Isopropyltoluene	(4)	10.022(0.000)	119	471123	20.313	20.31			0.2	5
134) 1,4-Dichlorobenzene	(4)	10.058(0.000)	146	295497	22.265	22.26			0.2	5
135) 1,2,3-Trimethylbenzene	(4)	10.096(-0.000)	105	505168	20.874	20.87			0.3	5
136) Benzyl Chloride	(4)	10.157(-0.000)	91	314999	16.957	16.96			0.3	5
137) 1,3-Diethylbenzene	(4)	10.237(-0.000)	119	277354	19.032	19.03			0.2	5
138) 1,4-Diethylbenzene	(4)	10.298(-0.000)	119	294164	18.840	18.84			0.2	5
139) 1,2-Dichlorobenzene	(4)	10.324(-0.000)	146	280335	22.071	22.07			0.2	5
140) n-Butylbenzene	(4)	10.314(-0.000)	92	227622	19.445	19.44			0.2	5
141) 1,2-Diethylbenzene	(4)	10.382(-0.000)	119	243242	19.770	19.77			0.2	5
142) Diethylbenzene (total)	(4)		100	814760	57.642	57.64			0.2	5
143) 1,2-Dibromo-3-chloropropane	(4)	10.863(-0.000)	75	38576	18.748	18.75			0.3	5
145) 1,3,5-Trichlorobenzene	(4)	11.007(-0.000)	180	181792	18.665	18.67			0.2	5
147) 1,2,4-Trichlorobenzene	(4)	11.418(-0.000)	180	174856	18.700	18.70			0.3	5
148) Hexachlorobutadiene	(4)	11.527(-0.000)	225	58336	17.516	17.52			0.7	5
149) Naphthalene	(4)	11.582(-0.000)	128	578047	18.270	18.27			1	5
150) 1,2,3-Trichlorobenzene	(4)	11.739(-0.000)	180	172319	18.880	18.88			0.4	5
151) 2-Methylnaphthalene	(4)	12.304(-0.000)	142	220106	12.194	12.19			0.7	5

Total number of targets = 109

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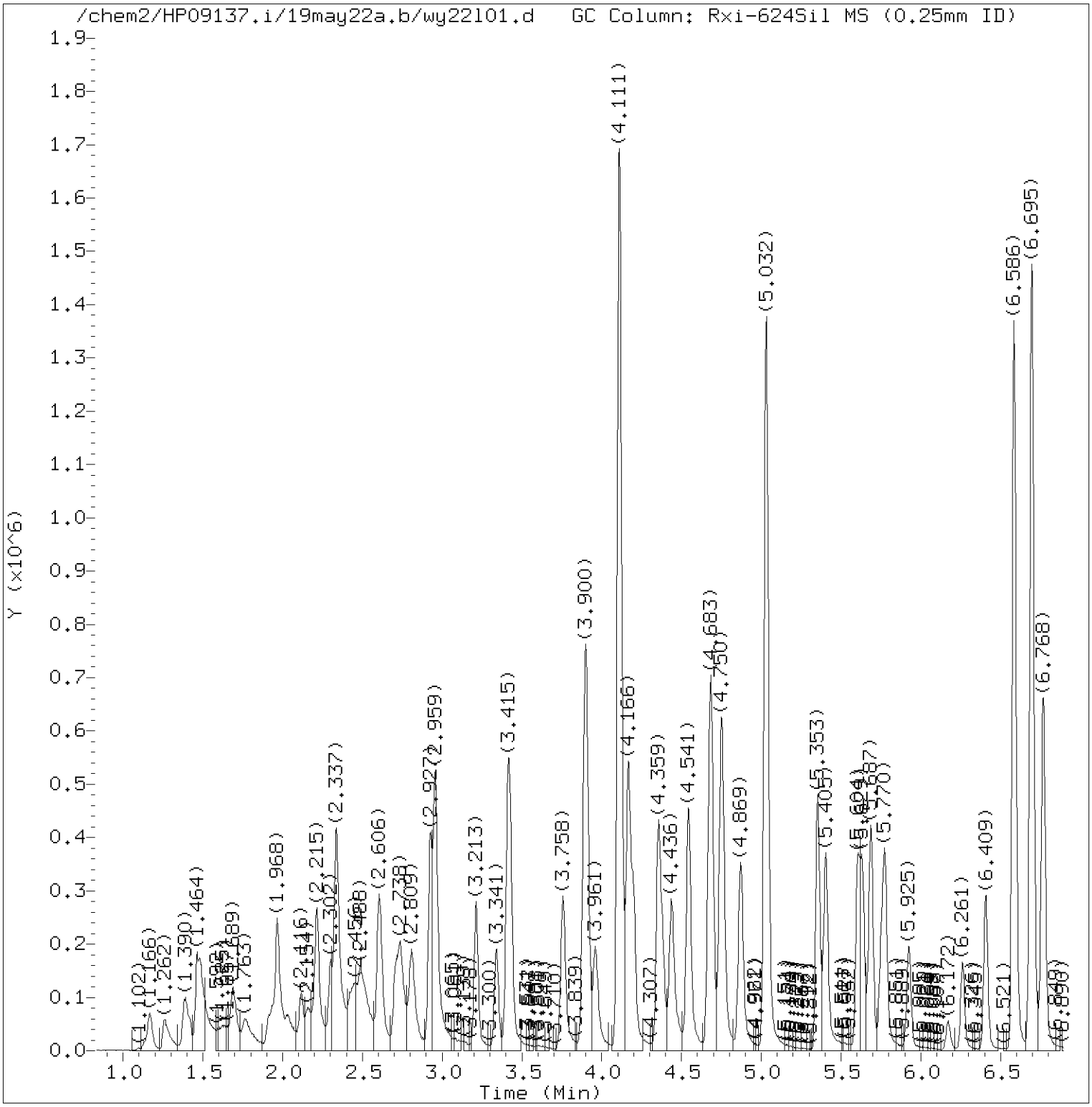
Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

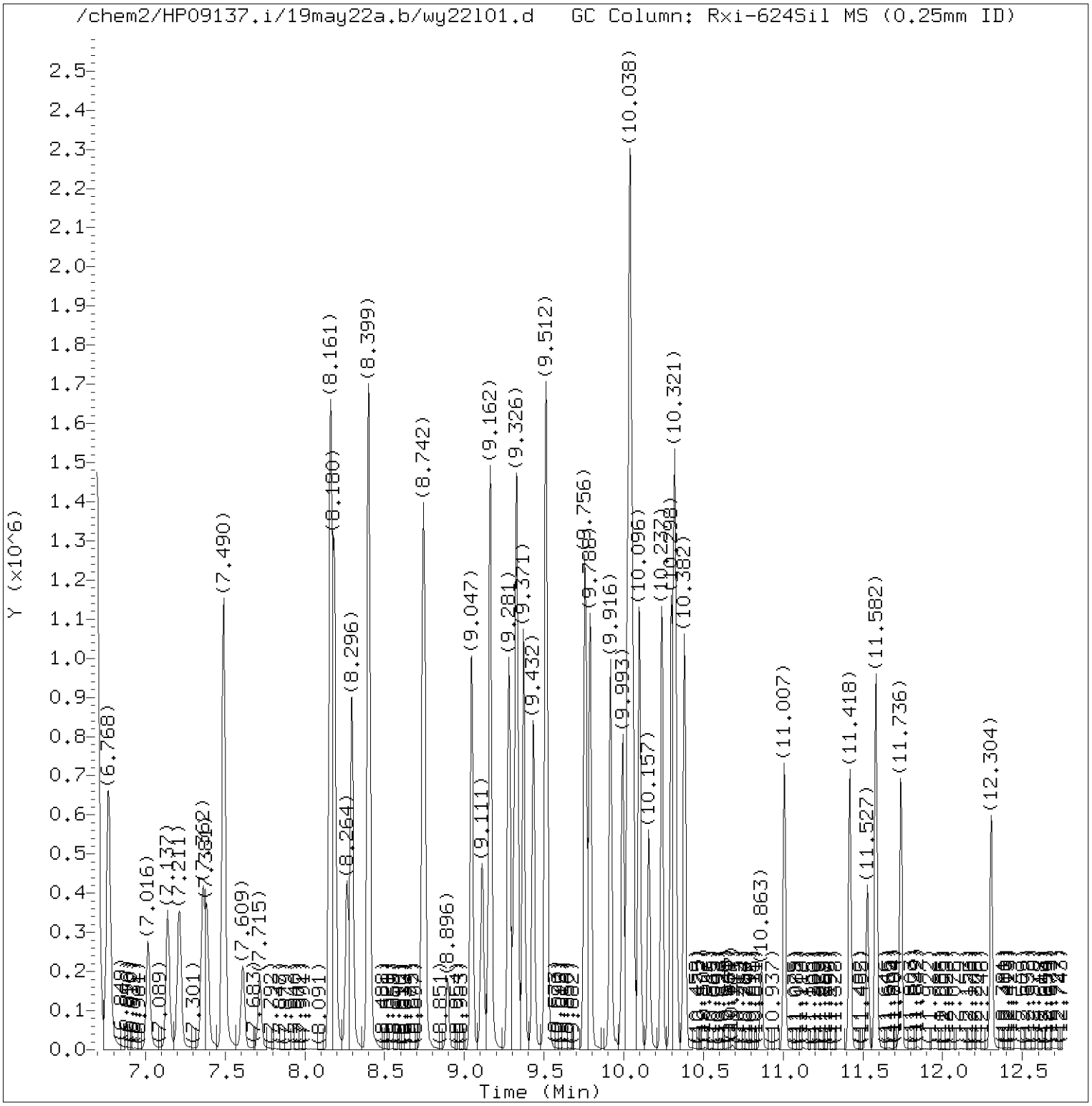
Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22l01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:16 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:46 cbs01947

Sample Name: LCSW34 Lab Sample ID: LCSW34

Digitally signed by Chelsea B. Stong
on 05/22/2019 at 13:47.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22l01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:16 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:46 cbs01947

Sample Name: LCSW34 Lab Sample ID: LCSW34

Digitally signed by Chelsea B. Stong
on 05/22/2019 at 13:47.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22l01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:16 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:46 cbs01947

Sample Name: LCSW34 Lab Sample ID: LCSW34

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.259	85	114076	15.719
4) Chloromethane	(2)	1.390	50	141434	15.651
6) Vinyl Chloride	(2)	1.461	62	137618	16.612
5) 1,3-Butadiene	(2)	1.477	39	132717M	24.099
8) Bromomethane	(2)	1.689	94	99351M	15.206
9) Chloroethane	(2)	1.763	64	81121	14.881
12) Trichlorofluoromethane	(2)	1.933	101	148499	16.878
11) n-Pentane	(2)	1.965	43	133983	16.012
13) Ethanol	(1)	2.035	45	46844	448.770
15) Freon 123a	(2)	2.116	67	126898M	19.301
16) Acrolein	(1)	2.215	56	207668	126.032
17) 1,1-Dichloroethene	(2)	2.298	96	108082M	21.842
18) Acetone	(1)	2.337	58	123783	154.553
19) Freon 113	(2)	2.343	101	86506M	19.908
21) 2-Propanol	(1)	2.446	45	95399	160.320
22) Methyl Iodide	(2)	2.475	142	178710M	18.846
23) Carbon Disulfide	(2)	2.491	76	262216	15.041
25) Allyl Chloride	(2)	2.603	41	157164	18.231
27) Methyl Acetate	(2)	2.619	43	134142	17.977
28) Methylene Chloride	(2)	2.706	84	126088M	20.846
29)*t-Butyl alcohol-d10	(1)	2.735	65	228875	250.000
30) t-Butyl alcohol	(1)	2.809	59	221501	208.670
31) Acrylonitrile	(2)	2.921	53	347324	88.478
32) trans-1,2-Dichloroethene	(2)	2.953	96	112317	20.919
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	314028	24.021
34) n-Hexane	(2)	3.210	57	136671	19.024
36) 1,1-Dichloroethane	(2)	3.341	63	197236	20.273
38) di-Isopropyl ether	(2)	3.412	45	386544	20.681
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	162909	19.334
40) Ethyl t-butyl ether	(2)	3.758	59	292908	21.499
45) 2,2-Dichloropropane	(2)	3.890	77	77328	17.698
42) cis-1,2-Dichloroethene	(2)	3.893	96	131849	21.872
44) 2-Butanone	(2)	3.906	43	713324	126.481
47) Propionitrile	(1)	3.957	54	221299	167.745
48) Methacrylonitrile	(2)	4.111	67	576322	136.546
49) Bromochloromethane	(2)	4.121	128	62714	20.013
50) Tetrahydrofuran	(1)	4.169	71	134256	109.954
51) Chloroform	(2)	4.198	83	189978	20.812

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 05/22/2019 at 13:47.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22l01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:16 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:46 cbs01947

Sample Name: LCSW34 Lab Sample ID: LCSW34

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
52)$Dibromofluoromethane	(2)	4.355	113	248204	47.735
53) 1,1,1-Trichloroethane	(2)	4.384	97	137875	20.074
54) Cyclohexane	(2)	4.436	56	171607	18.879
55) 1,1-Dichloropropene	(2)	4.545	75	149846	20.475
56) Carbon Tetrachloride	(2)	4.548	117	112210	19.037
58) Isobutyl Alcohol	(1)	4.670	41	194753	503.261
57)$1,2-Dichloroethane-d4	(2)	4.689	102	66729	48.254
60) Benzene	(2)	4.750	78	484191	20.583
61) 1,2-Dichloroethane	(2)	4.763	62	151789	20.888
65) t-Amyl methyl ether	(2)	4.869	73	302855	21.698
66)*Fluorobenzene	(2)	5.029	96	1122353	50.000
67) n-Heptane	(2)	5.036	43	123876	18.042
69) n-Butanol	(1)	5.353	56	325563	947.519
71) Trichloroethene	(2)	5.405	95	118334	20.772
73) Methylcyclohexane	(2)	5.607	83	162209	19.613
74) 1,2-Dichloropropane	(2)	5.636	63	125687	20.811
75) Dibromomethane	(2)	5.748	93	76975	20.651
77) Methyl Methacrylate	(2)	5.774	69	120412M	18.143
76) 1,4-Dioxane	(1)	5.783	88	53315M	519.054
79) Bromodichloromethane	(2)	5.925	83	136758	19.969
43) 1,2-Dichloroethene (Total)	(2)		96	244166	42.791
80) 2-Nitropropane	(2)	6.175	41	34652	14.954
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	78015	16.943
82) cis-1,3-Dichloropropene	(2)	6.406	75	177230	18.822
83) 4-Methyl-2-pentanone	(2)	6.586	43	977604	87.936
84)$Toluene-d8	(3)	6.695	98	1132572	52.276
89) Toluene	(3)	6.768	92	313686	22.476
90) trans-1,3-Dichloropropene	(3)	7.016	75	160311	19.295
92) Ethyl Methacrylate	(3)	7.137	69	197837	19.378
93) 1,1,2-Trichloroethane	(3)	7.211	97	123391	22.971
94) Tetrachloroethene	(3)	7.359	166	127720	22.553
95) 1,3-Dichloropropane	(3)	7.385	76	204600	21.929
97) 2-Hexanone	(3)	7.490	43	746051	91.790
98) Dibromochloromethane	(3)	7.609	129	110912	21.140
100) 1,2-Dibromoethane	(3)	7.715	107	128382	21.754
101)*Chlorobenzene-d5	(3)	8.161	117	864605	50.000
103) Chlorobenzene	(3)	8.187	112	347075	22.417
104) 1,1,1,2-Tetrachloroethane	(3)	8.264	131	106820	21.469

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 05/22/2019 at 13:47.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22l01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:16 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:46 cbs01947

Sample Name: LCSW34 Lab Sample ID: LCSW34

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
105) Ethylbenzene	(3)	8.296	91	577273	21.763
107) m+p-Xylene	(3)	8.399	106	463380	43.937
108) o-Xylene	(3)	8.739	106	225676	21.751
110) Styrene	(3)	8.748	104	379404	21.798
111) Bromoform	(3)	8.893	173	75555	18.504
112) Isopropylbenzene	(3)	9.047	105	546305	21.428
113) Cyclohexanone	(1)	9.111	55	186057	401.550
115)$4-Bromofluorobenzene	(3)	9.162	95	411453	47.471
116) Bromobenzene	(4)	9.281	156	149683	22.295
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	198323	21.905
118) 1,2,3-Trichloropropane	(4)	9.310	110	58829	21.572
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	230650	79.444
120) n-Propylbenzene	(4)	9.371	91	654685	22.121
121) 2-Chlorotoluene	(4)	9.435	126	136720	22.396
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	457890	21.452
122) 4-Chlorotoluene	(4)	9.515	126	145163	22.213
125) tert-Butylbenzene	(4)	9.756	134	102638	21.165
126) Pentachloroethane	(4)	9.766	167	80982	21.124
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	485263	21.575
128) sec-Butylbenzene	(4)	9.916	105	542325	20.699
130) 1,3-Dichlorobenzene	(4)	9.993	146	278536	21.757
131) p-Isopropyltoluene	(4)	10.022	119	471123	20.313
132)*1,4-Dichlorobenzene-d4	(4)	10.038	152	466115	50.000
134) 1,4-Dichlorobenzene	(4)	10.058	146	295497	22.265
91) 1,3-Dichloropropene (total)	(3)		100	337541	38.116
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	505168	20.874
136) Benzyl Chloride	(4)	10.157	91	314999	16.957
137) 1,3-Diethylbenzene	(4)	10.237	119	277354	19.032
138) 1,4-Diethylbenzene	(4)	10.298	119	294164	18.840
140) n-Butylbenzene	(4)	10.314	92	227622	19.445
139) 1,2-Dichlorobenzene	(4)	10.324	146	280335	22.071
141) 1,2-Diethylbenzene	(4)	10.382	119	243242	19.770
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	38576	18.748
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	181792	18.665
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	174856	18.700
148) Hexachlorobutadiene	(4)	11.527	225	58336	17.516
149) Naphthalene	(4)	11.582	128	578047	18.270
150) 1,2,3-Trichlorobenzene	(4)	11.739	180	172319	18.880

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/22/2019 at 13:47.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22l01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:16 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:46 cbs01947

Sample Name: LCSW34 Lab Sample ID: LCSW34

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
109) Xylene (Total)	(3)		106	689056	65.688
151) 2-Methylnaphthalene	(4)	12.304	142	220106	12.194
142) Diethylbenzene (total)	(4)		100	814760	57.642

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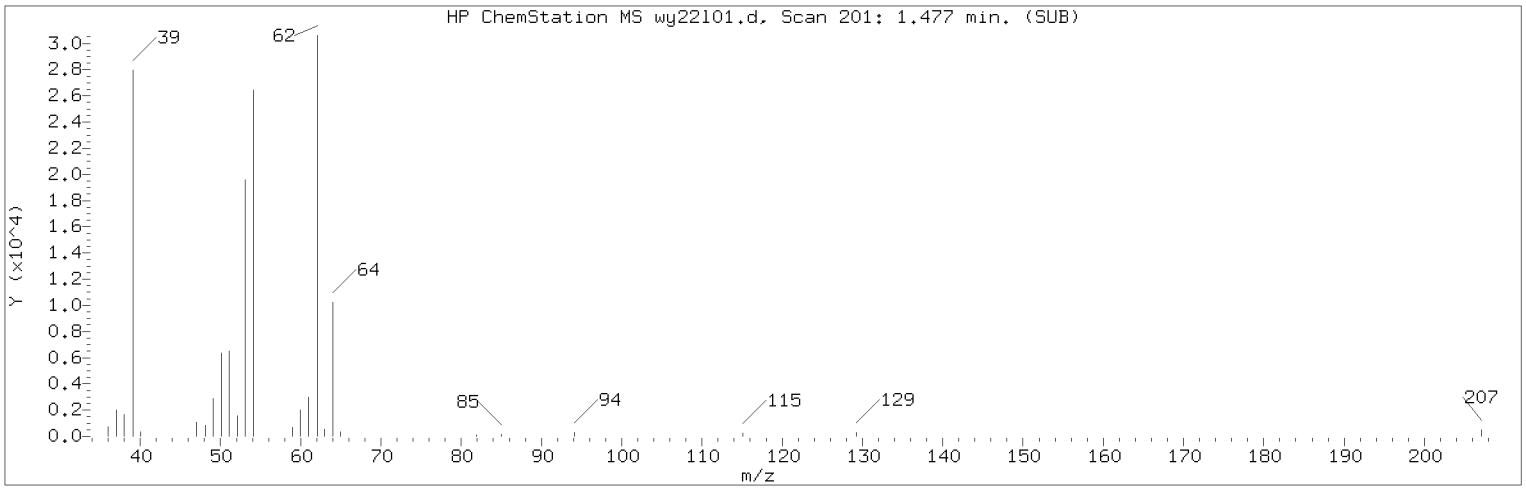
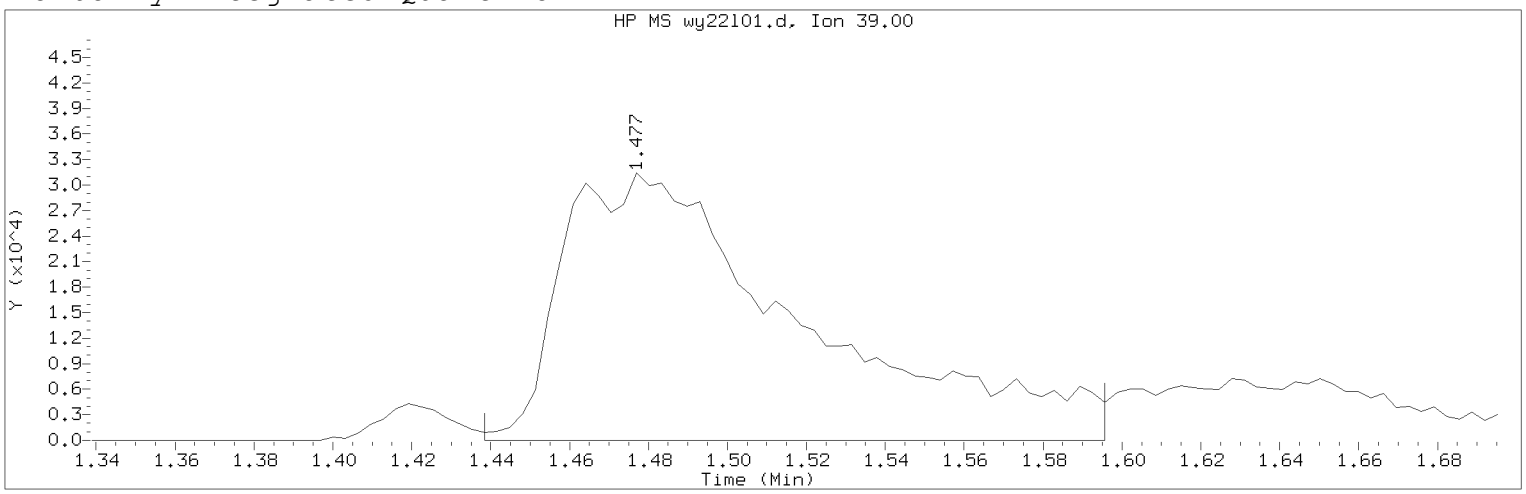
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22l01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:16 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:46 cbs01947

Sample Name: LCSW34 Lab Sample ID: LCSW34

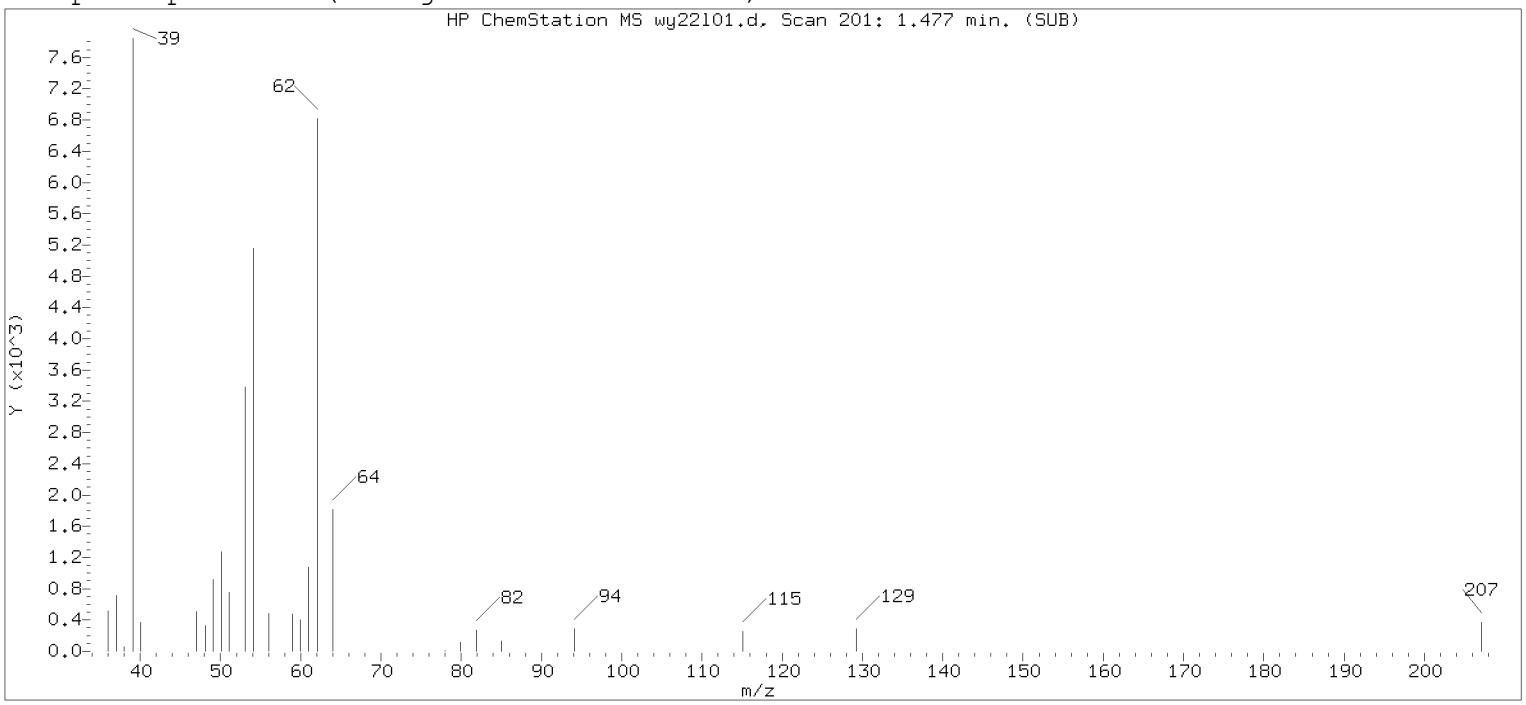
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 201
Retention Time (minutes): 1.477
Quant Ion : 39.00
Area (flag) : 132717M
On-Column Amount (ng) : 24.0988
Integration start scan : 188 Integration stop scan: 237
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

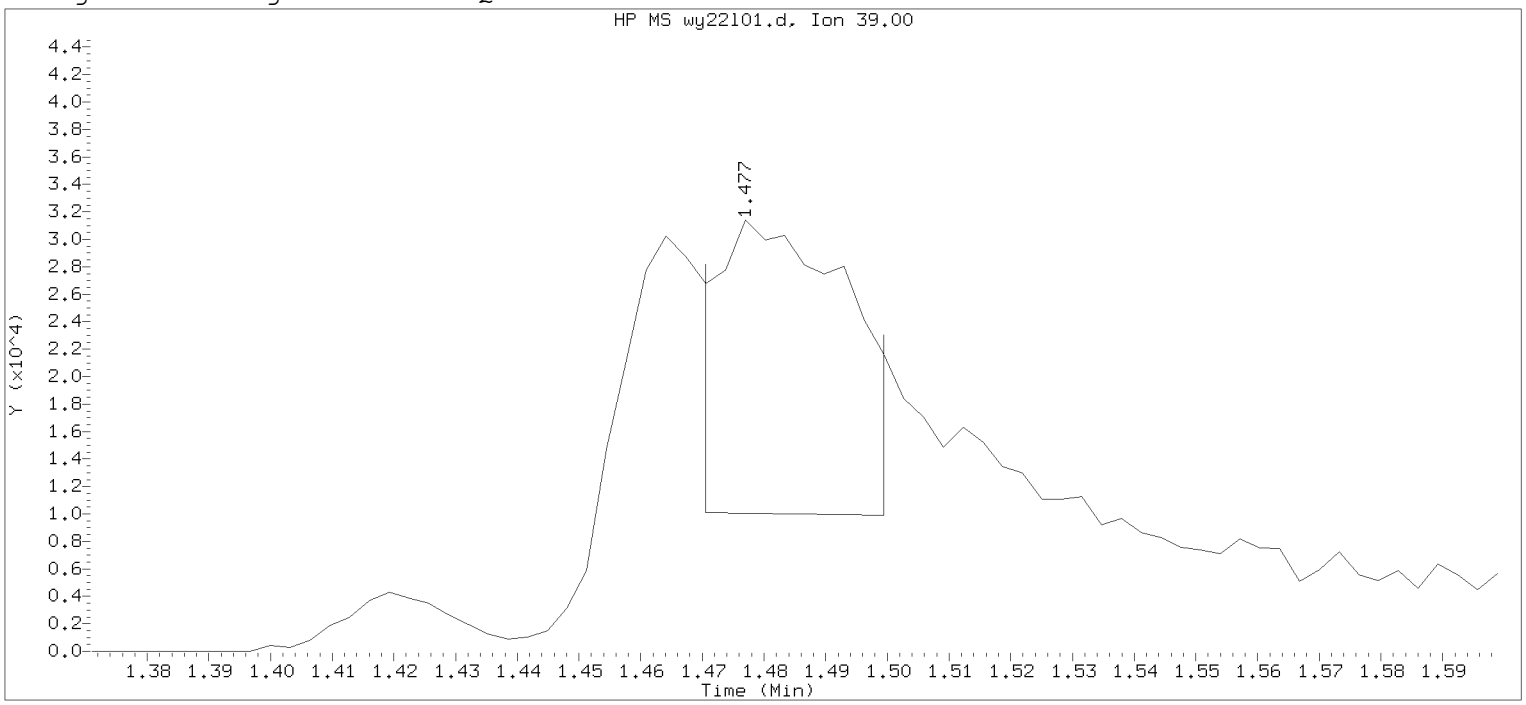
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/22/2019 at 13:47.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22l01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:16 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:31 Automation

Sample Name: LCSW34 Lab Sample ID: LCSW34

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 201
Retention Time (minutes): 1.477
Quant Ion : 39.00
Area : 31047
On-column Amount (ng) : 5.6375
Integration start scan : 198 Integration stop scan: 207
Y at integration start : 10104 Y at integration end: 9930

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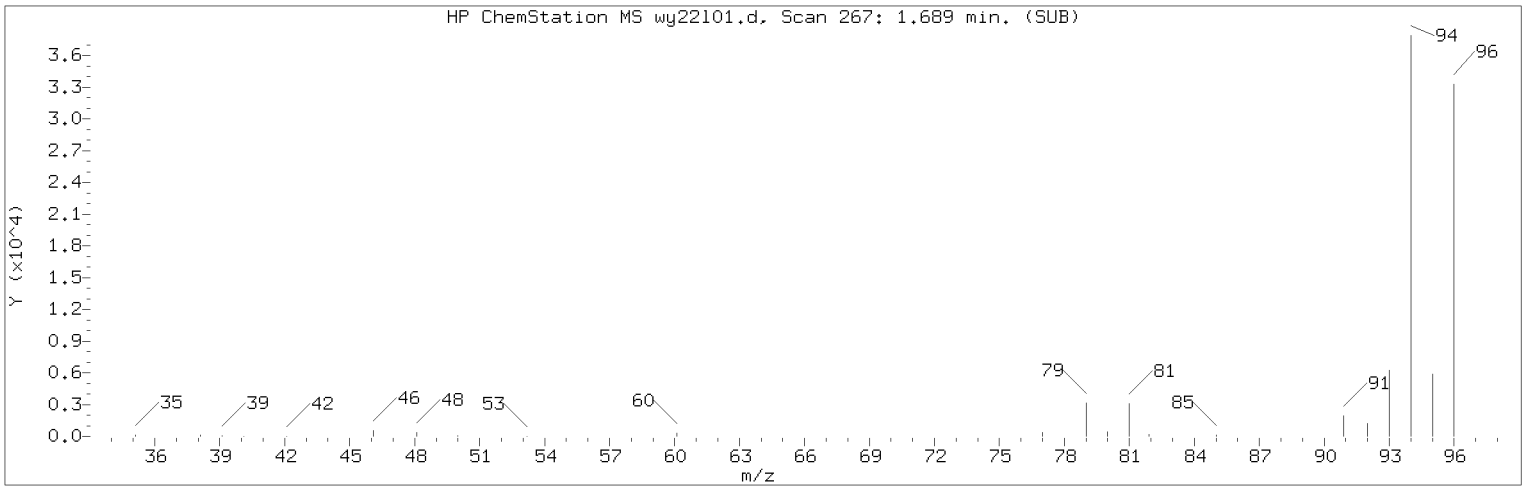
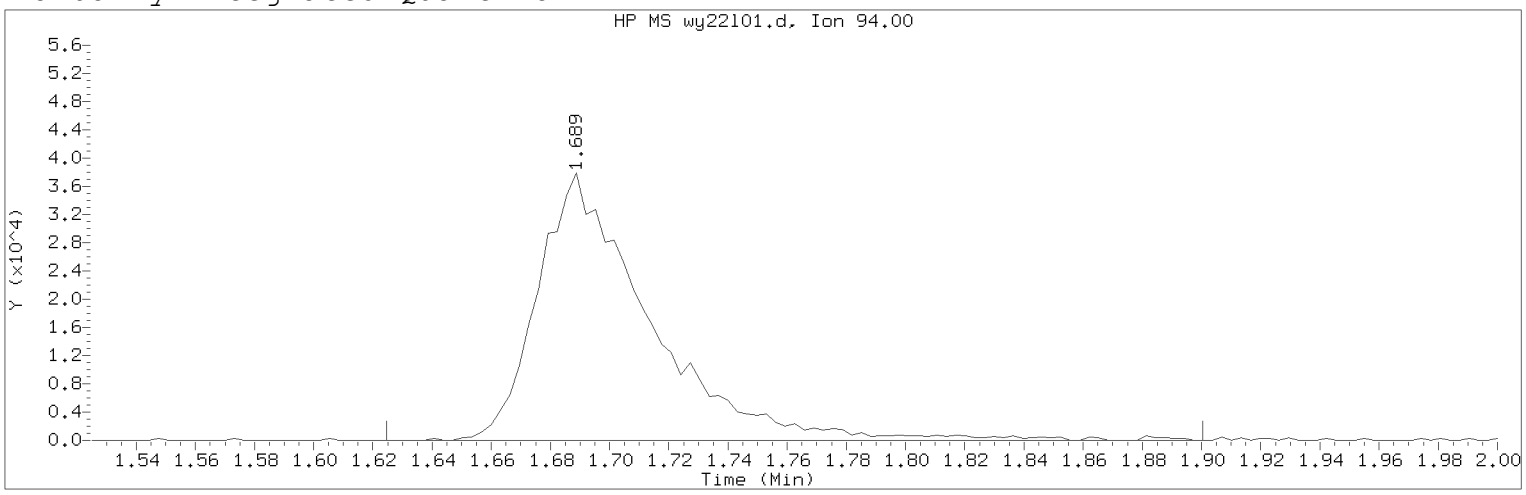
Target 3.5 esignature user: Chelsea B. Stong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22l01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:16 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:46 cbs01947

Sample Name: LCSW34 Lab Sample ID: LCSW34

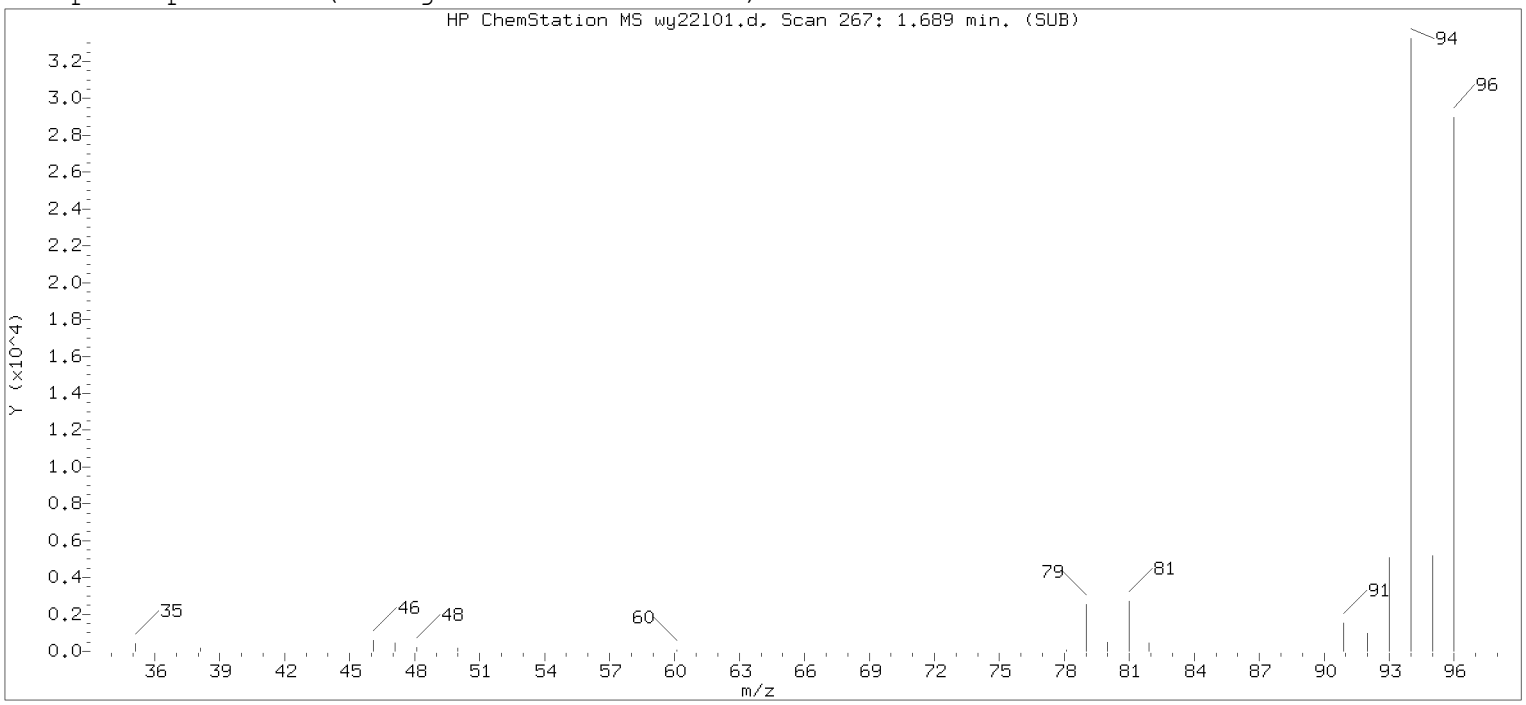
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 267
Retention Time (minutes): 1.689
Quant Ion : 94.00
Area (flag) : 99351M
On-Column Amount (ng) : 15.2064
Integration start scan : 246 Integration stop scan: 332
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

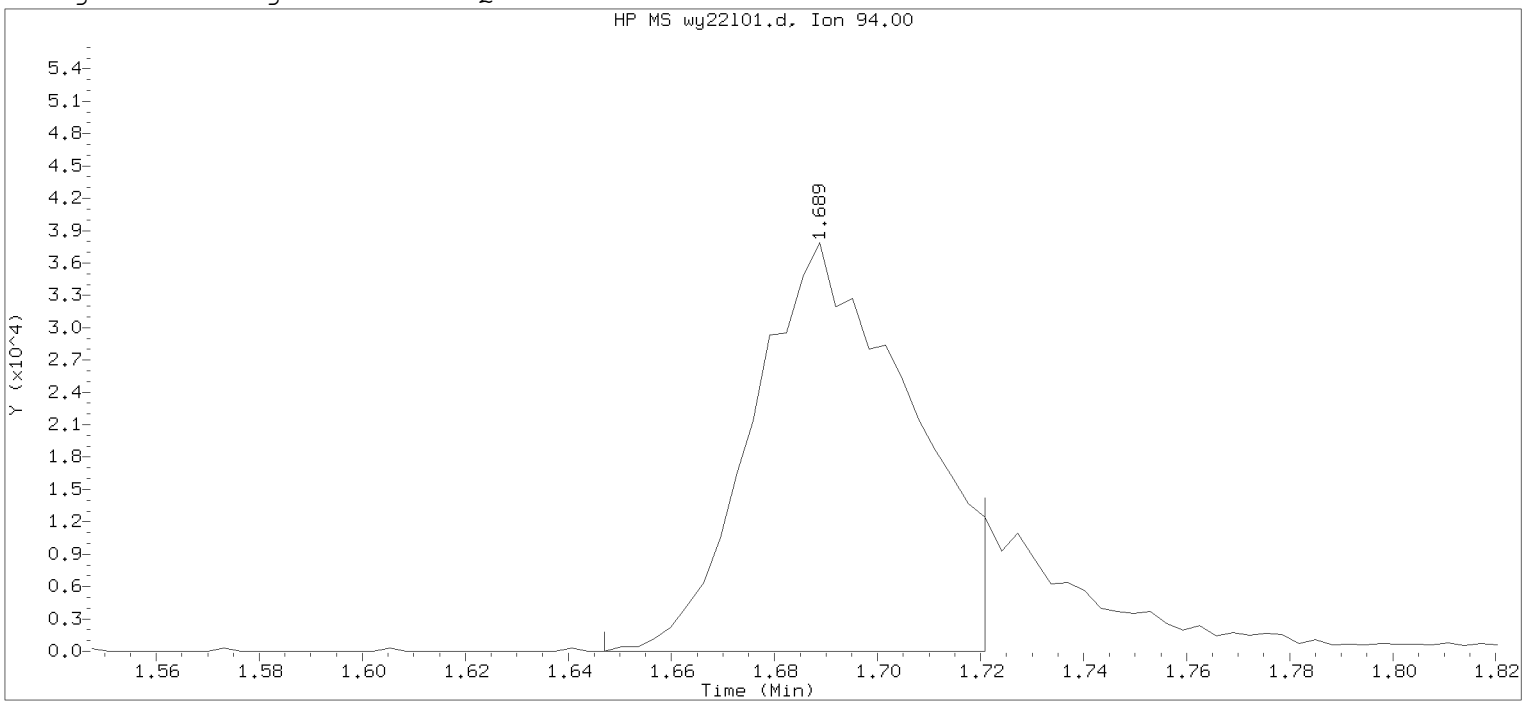
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/22/2019 at 13:47.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22l01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:16 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:31 Automation

Sample Name: LCSW34 Lab Sample ID: LCSW34

Compound Number : 8
Compound Name : Bromomethane
Scan Number : 267
Retention Time (minutes): 1.689
Quant Ion : 94.00
Area : 80336
On-column Amount (ng) : 12.2961
Integration start scan : 253 Integration stop scan: 276
Y at integration start : 0 Y at integration end: 0

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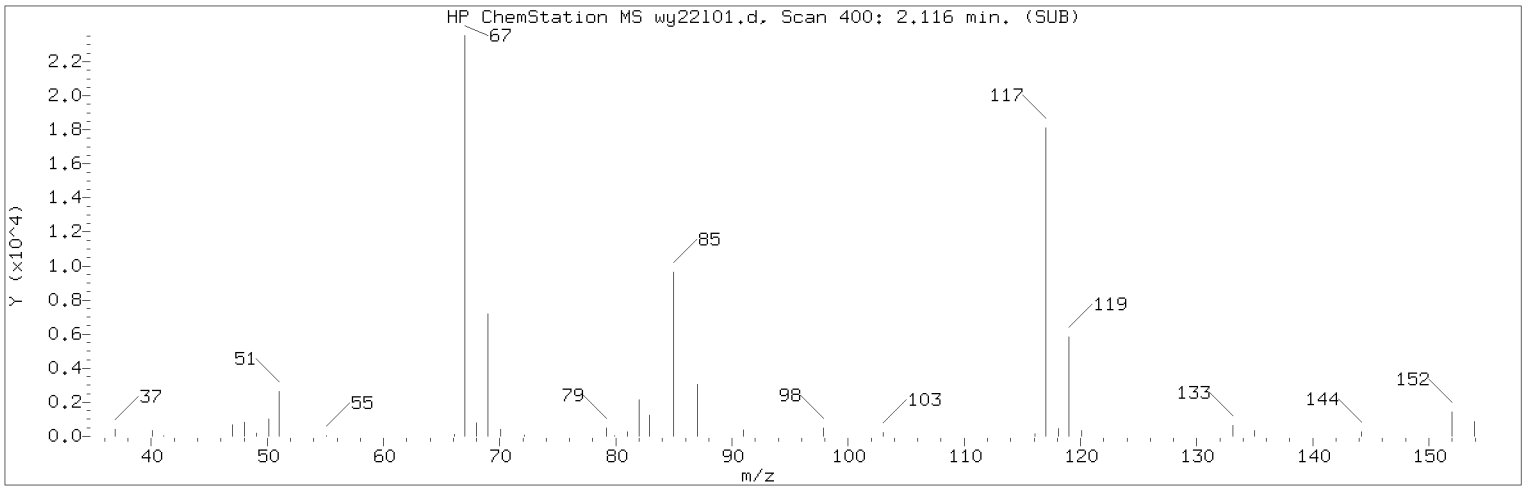
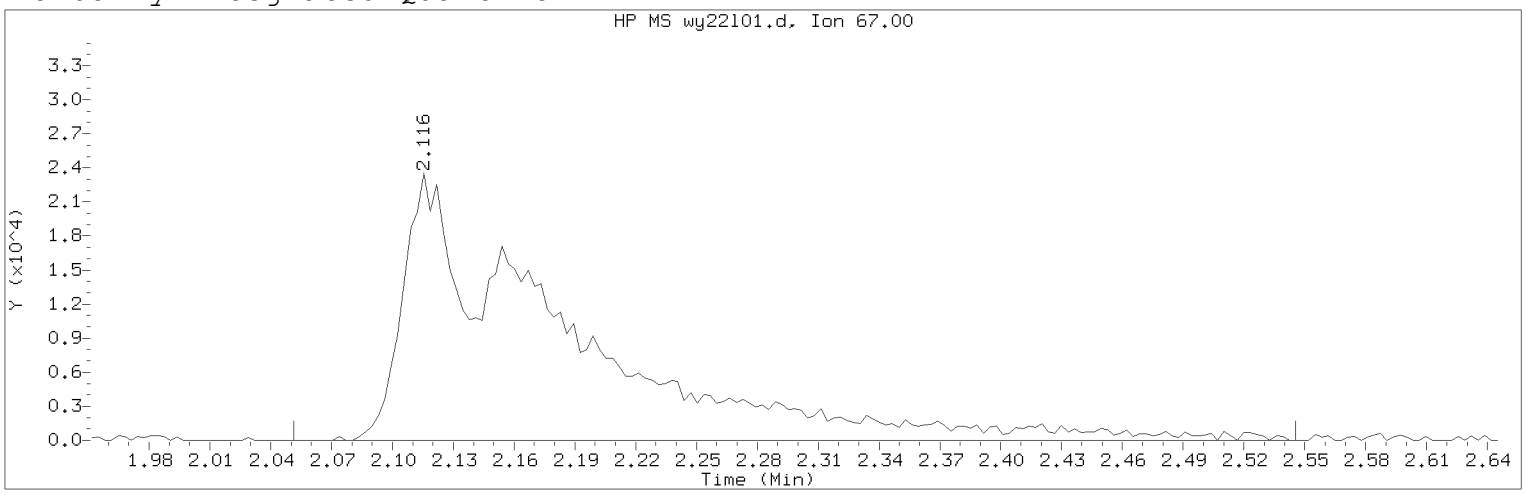
Target 3.5 esignature user: Chelsea B. Stong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22l01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:16 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:46 cbs01947

Sample Name: LCSW34 Lab Sample ID: LCSW34

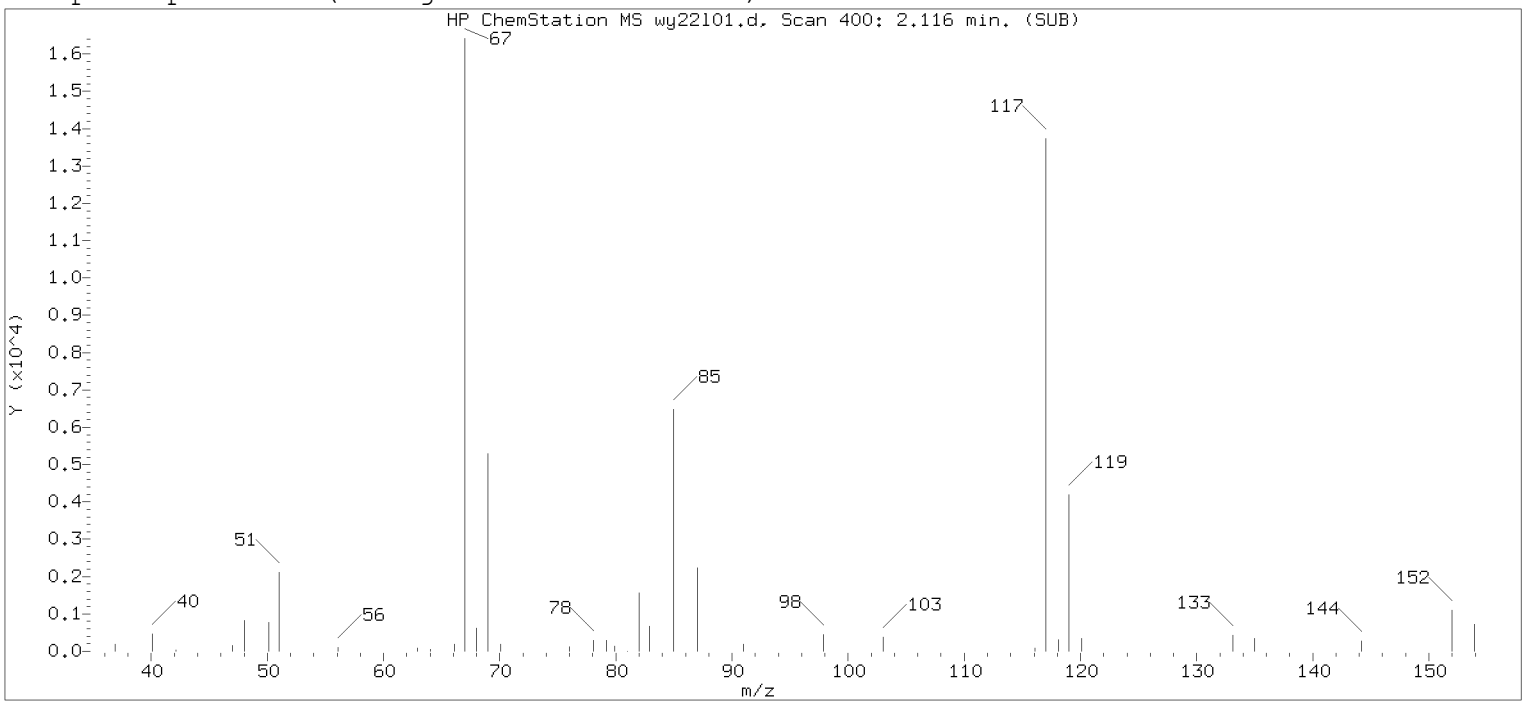
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 400
Retention Time (minutes): 2.116
Quant Ion : 67.00
Area (flag) : 126898M
On-Column Amount (ng) : 19.3011
Integration start scan : 379 Integration stop scan: 533
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

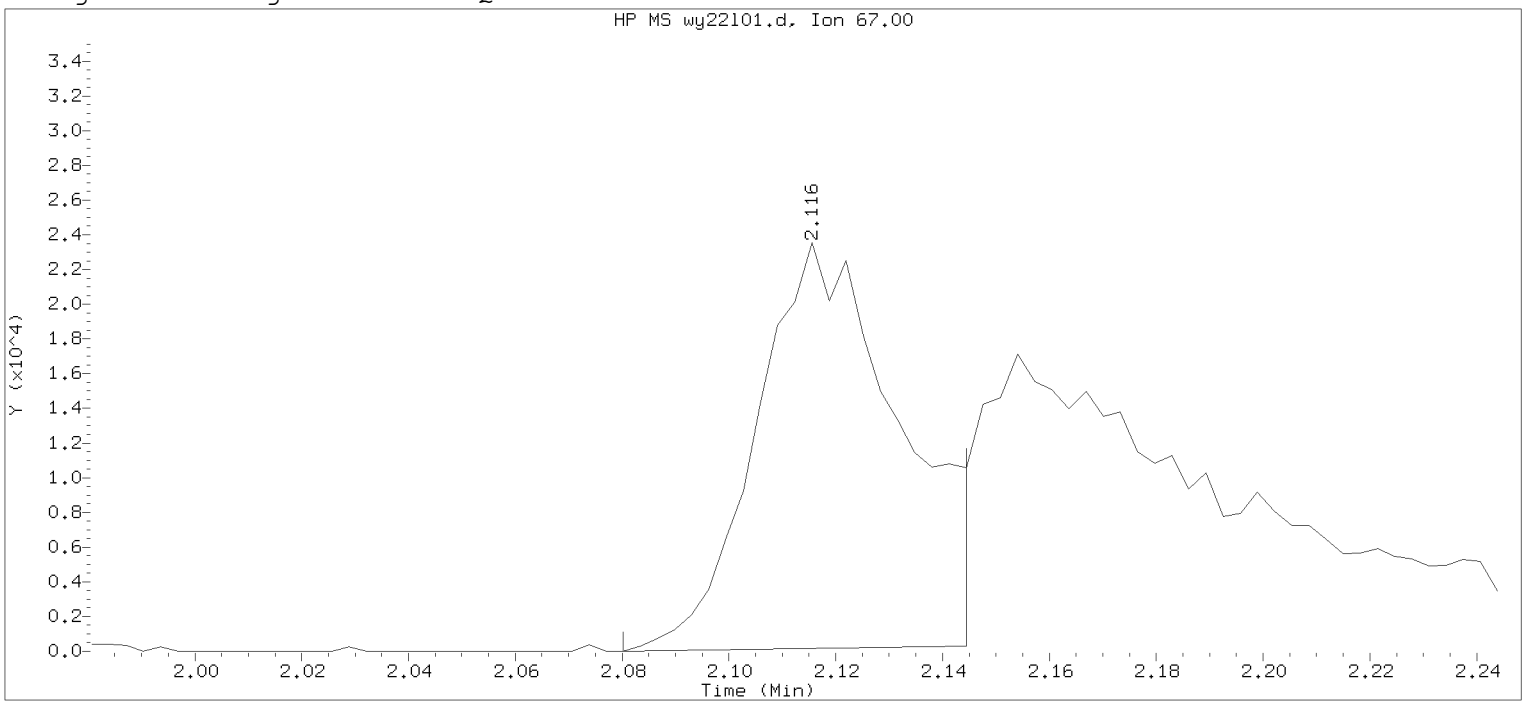
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/22/2019 at 13:47.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22l01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:16 Analyst ID: CBR01947

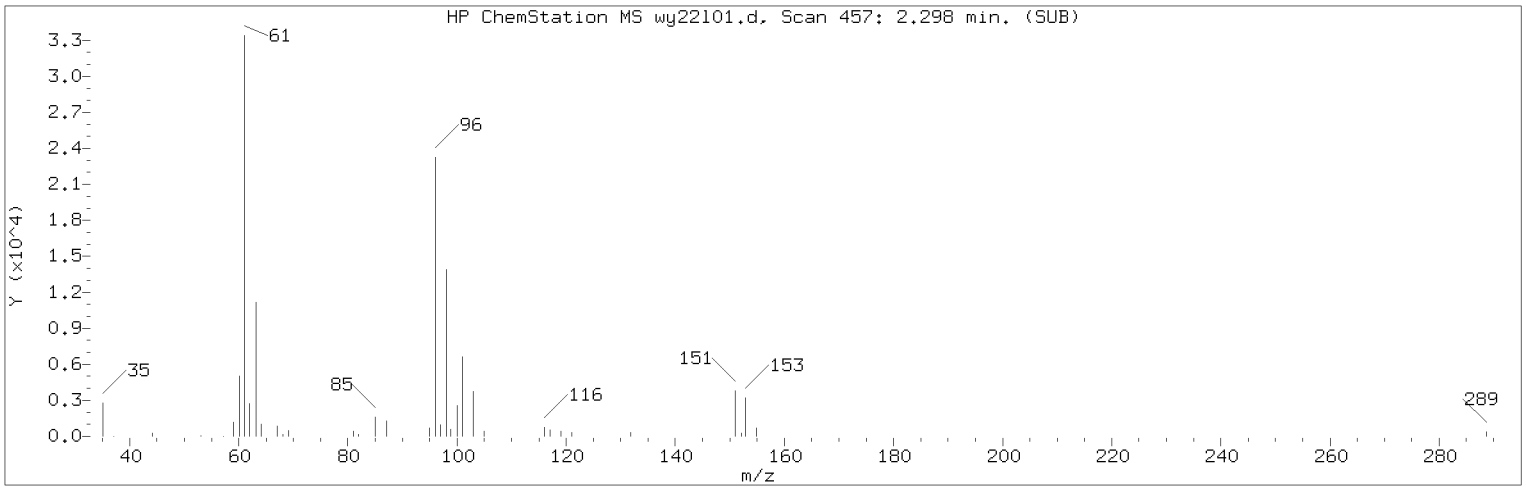
Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:31 Automation

Sample Name: LCSW34 Lab Sample ID: LCSW34

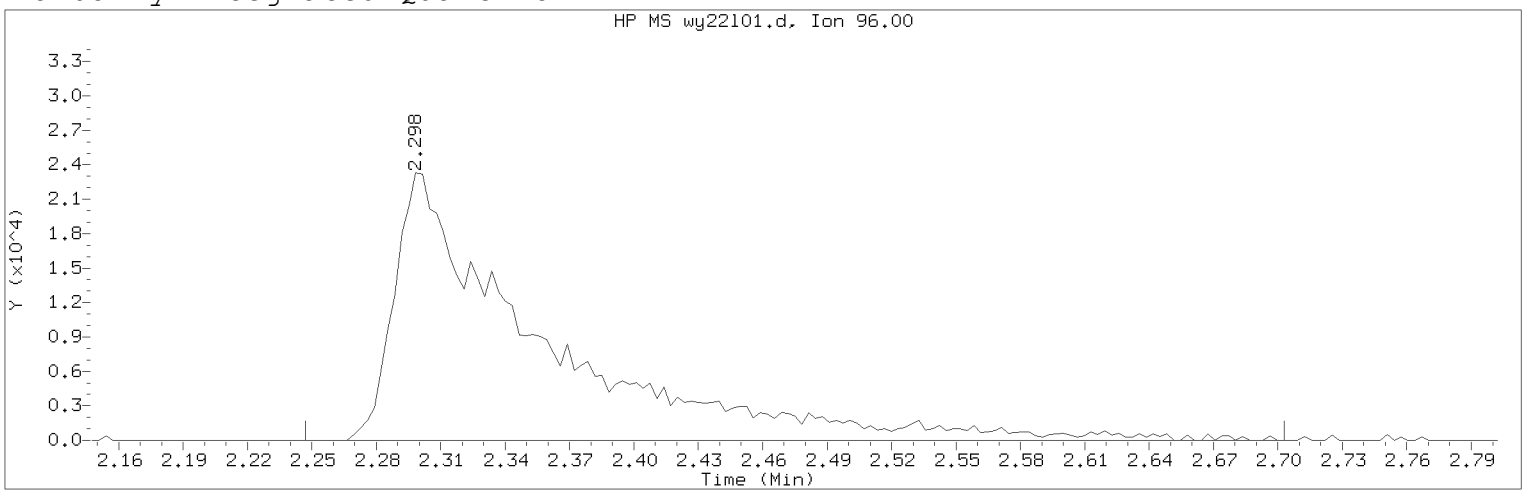
Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 400		
Retention Time (minutes)	: 2.116		
Quant Ion	: 67.00		
Area	: 43279		
On-column Amount (ng)	: 6.5827		
Integration start scan	: 388	Integration stop scan:	408
Y at integration start	: 0	Y at integration end:	304

Digitally signed by Chelsea B. Stong on 05/22/2019 at 13:47.
Target 3.5 esignature user ID: cbr01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22l01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:16 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:46 cbs01947

Sample Name: LCSW34 Lab Sample ID: LCSW34

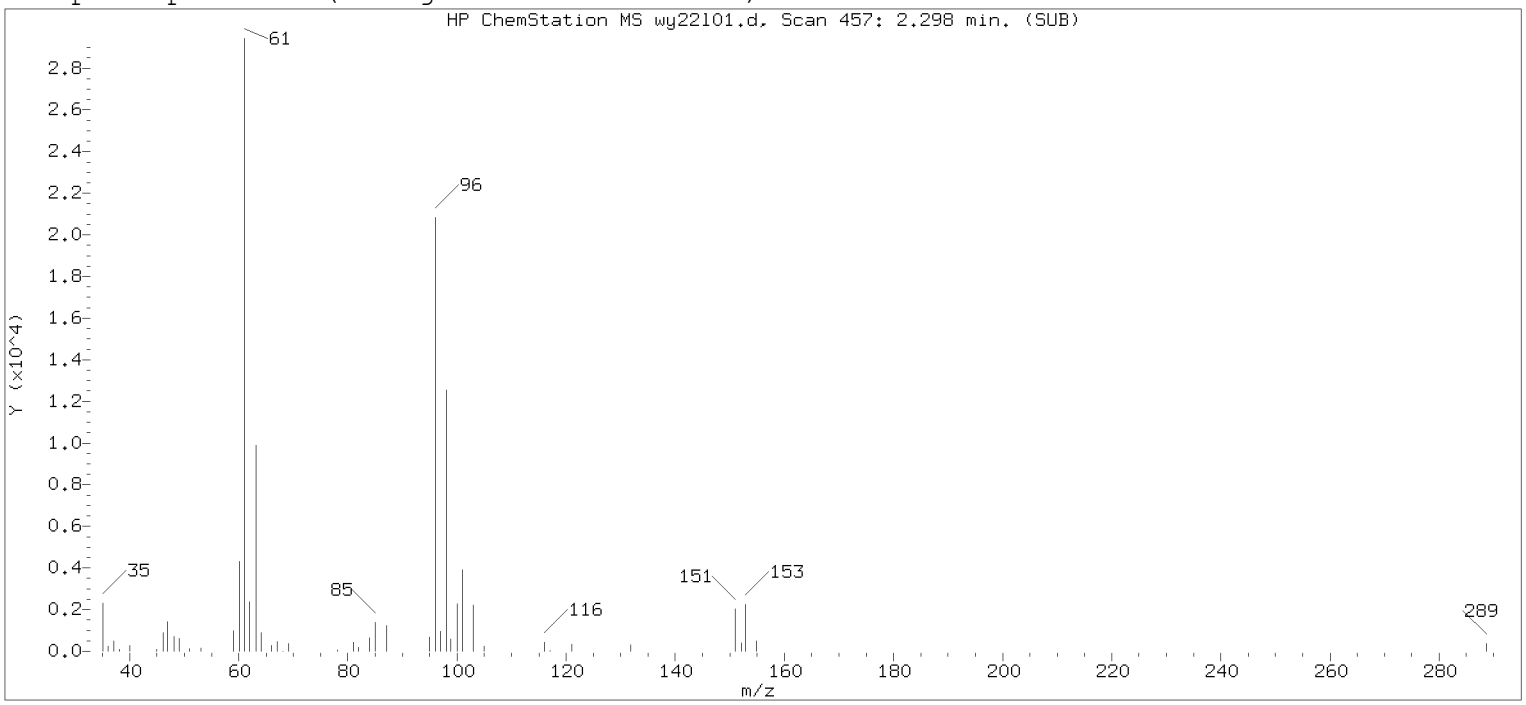
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 457
Retention Time (minutes): 2.298
Quant Ion : 96.00
Area (flag) : 108082M
On-Column Amount (ng) : 21.8415
Integration start scan : 440 Integration stop scan: 582
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

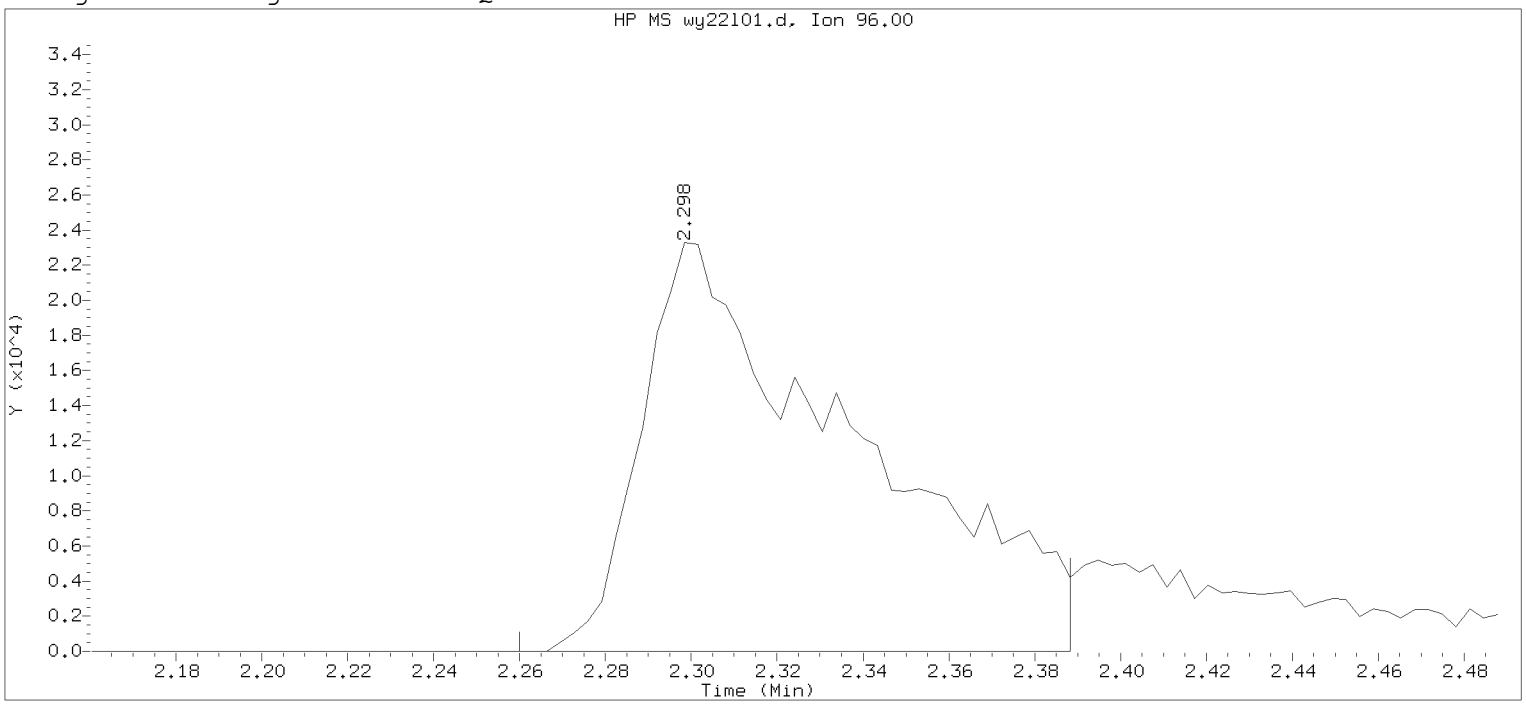
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/22/2019 at 13:47.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22l01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:16 Analyst ID: CBR01947

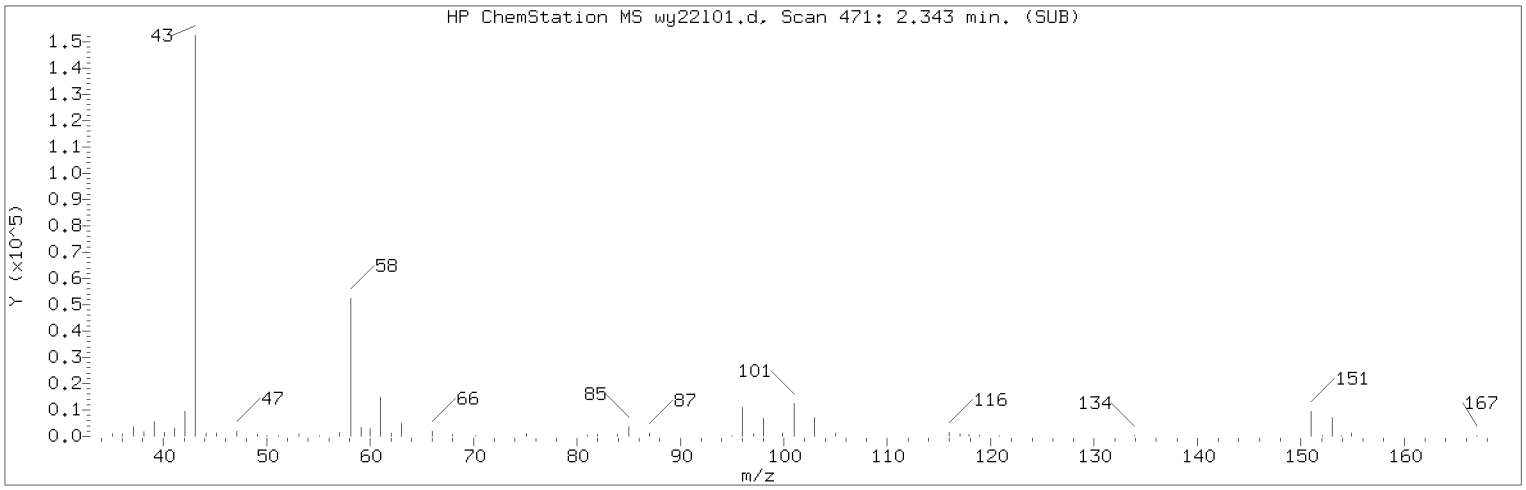
Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:31 Automation

Sample Name: LCSW34 Lab Sample ID: LCSW34

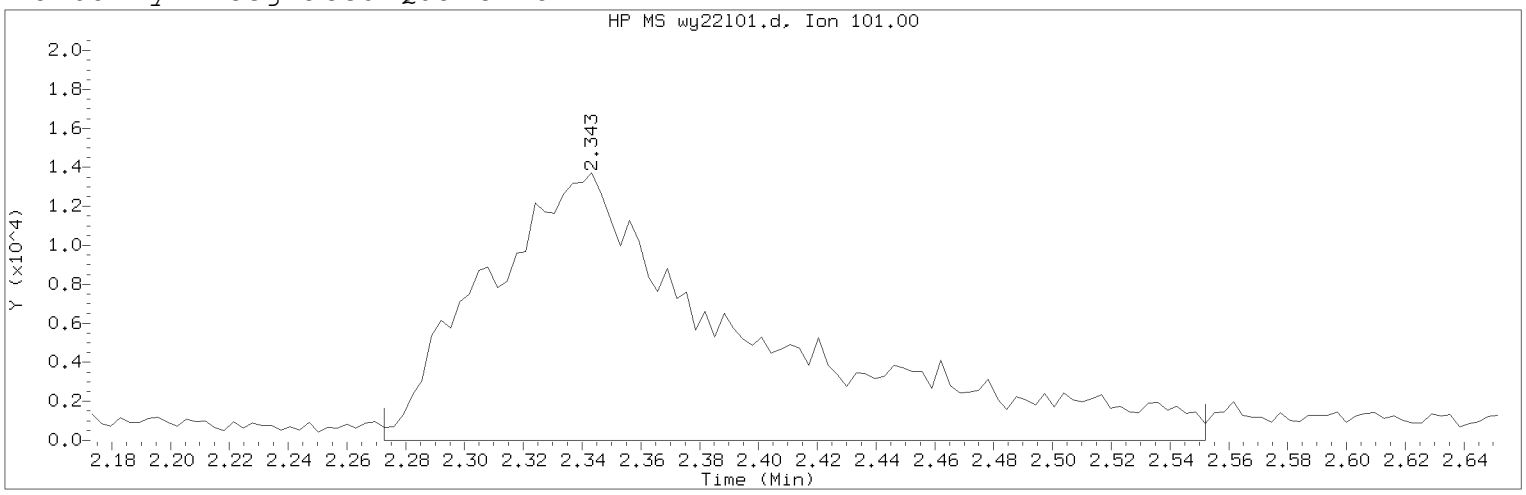
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 457
Retention Time (minutes): 2.298
Quant Ion : 96.00
Area : 80083
On-column Amount (ng) : 16.1834
Integration start scan : 444 Integration stop scan: 484
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 05/22/2019 at 13:47.
Target 3.5 esignature user ID: cbr01620

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22l01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:16 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:46 cbs01947

Sample Name: LCSW34 Lab Sample ID: LCSW34

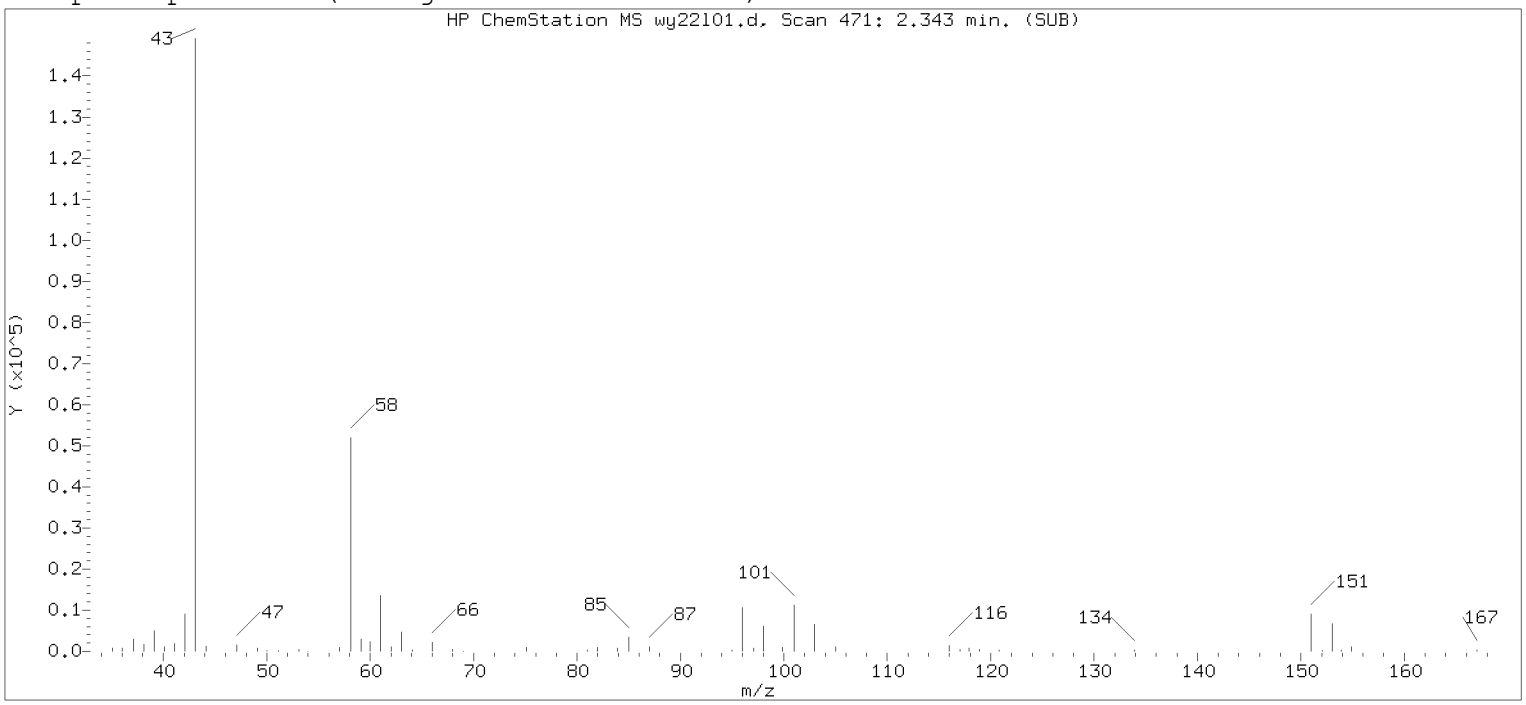
Compound Number : 19
Compound Name : Freon 113
Scan Number : 471
Retention Time (minutes): 2.343
Quant Ion : 101.00
Area (flag) : 86506M
On-Column Amount (ng) : 19.9077
Integration start scan : 448 Integration stop scan: 535
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

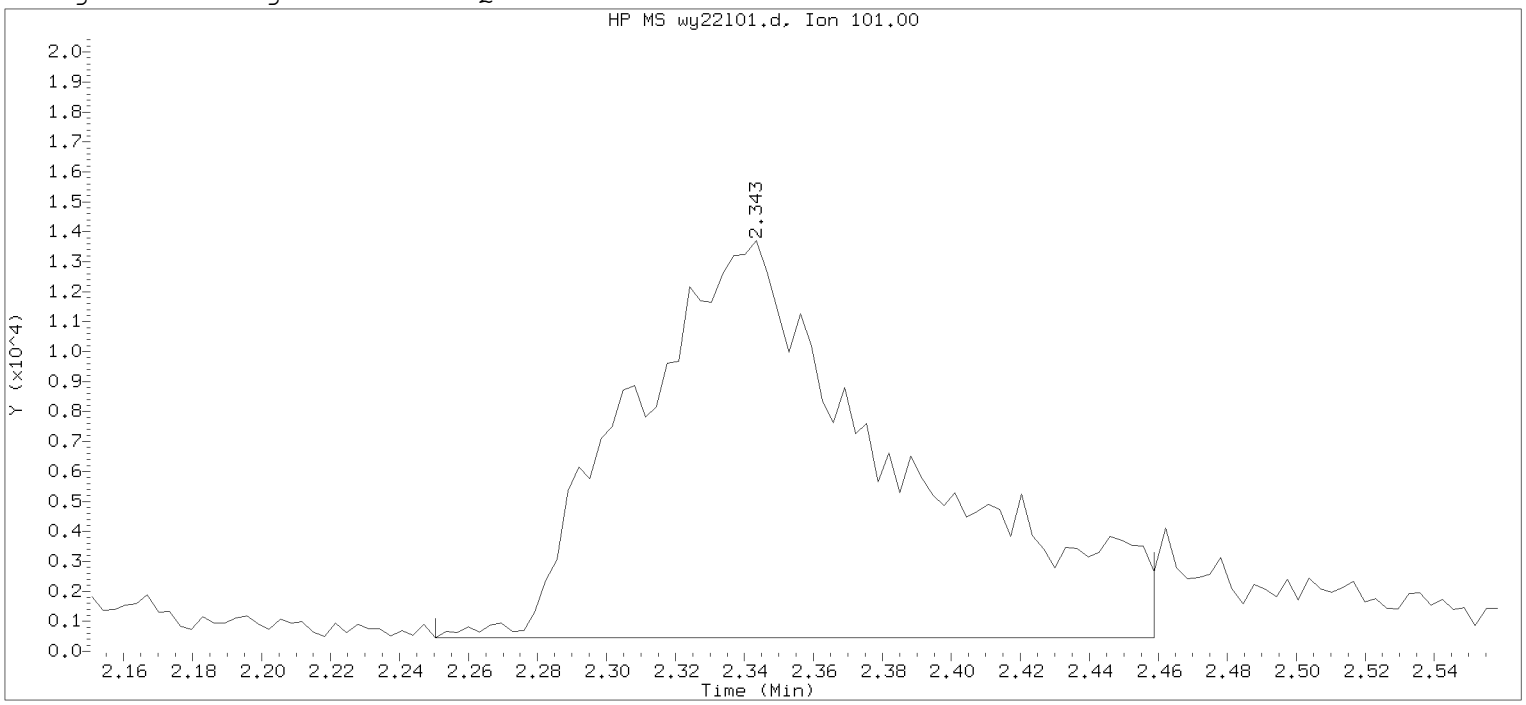
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/22/2019 at 13:47.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22l01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:16 Analyst ID: CBR01947

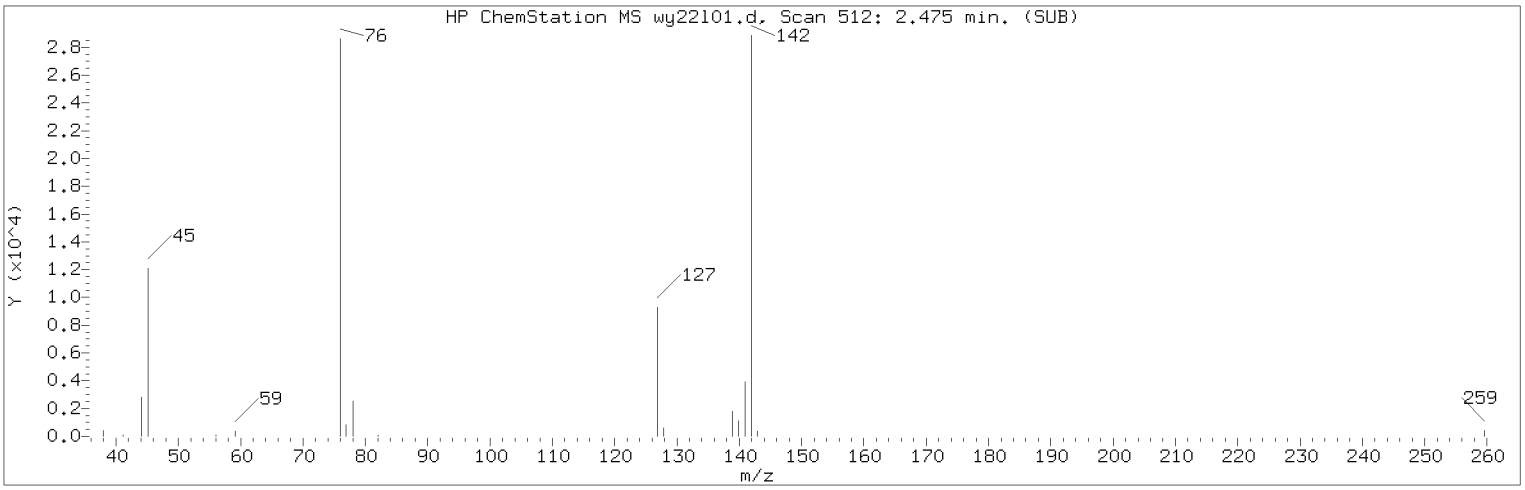
Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:31 Automation

Sample Name: LCSW34 Lab Sample ID: LCSW34

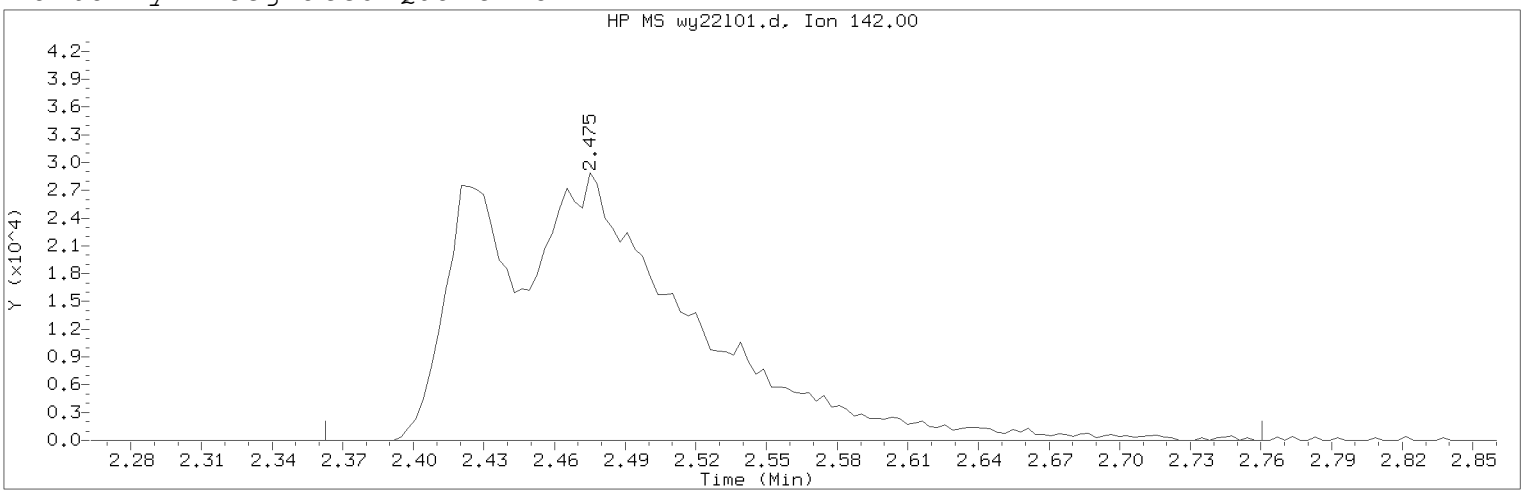
Compound Number : 19
Compound Name : Freon 113
Scan Number : 471
Retention Time (minutes): 2.343
Quant Ion : 101.00
Area : 70185
On-column Amount (ng) : 16.1519
Integration start scan : 441 Integration stop scan: 506
Y at integration start : 443 Y at integration end: 443

Digitally signed by Chelsea B. Stong on 05/22/2019 at 13:47.
Target 3.5 esignature user ID: cbr01622

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22l01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:16 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:46 cbs01947

Sample Name: LCSW34 Lab Sample ID: LCSW34

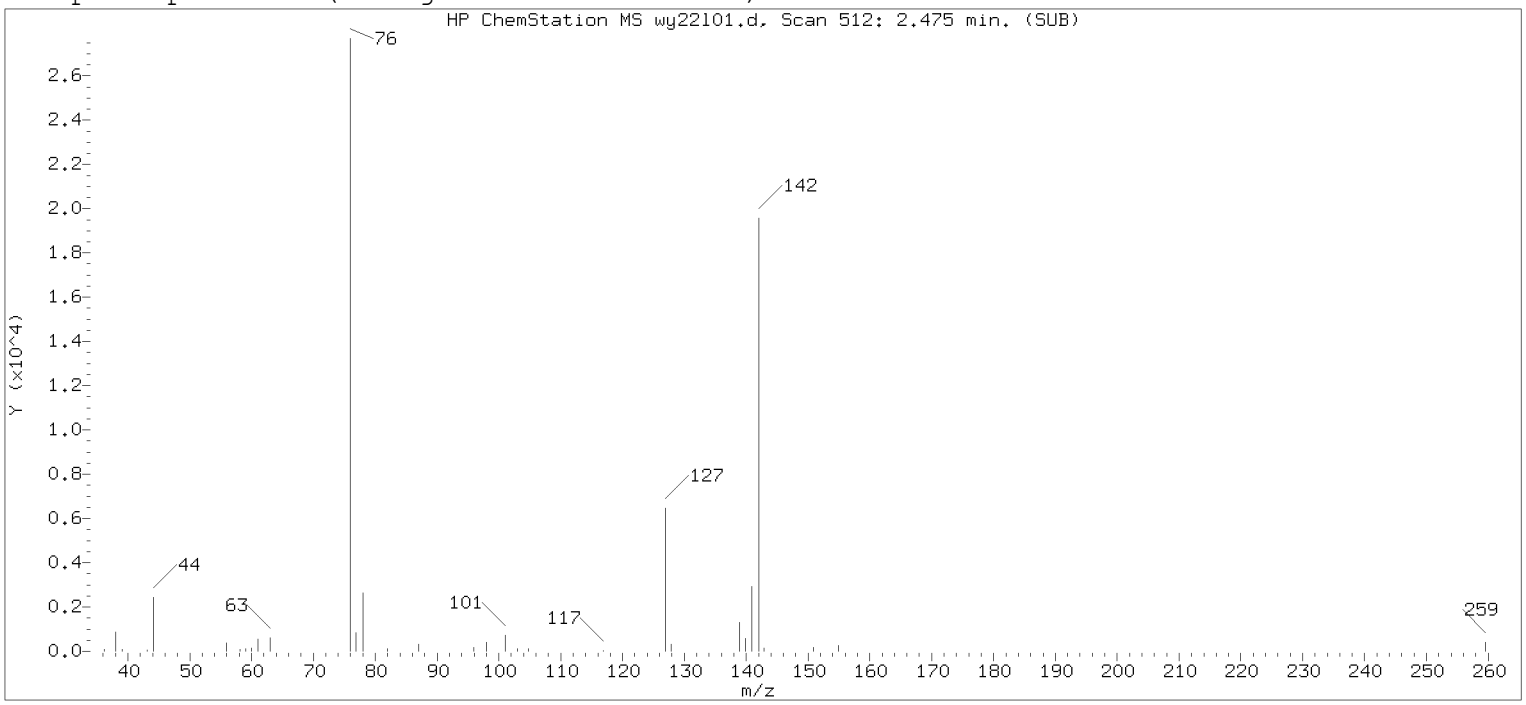
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 512
Retention Time (minutes): 2.475
Quant Ion : 142.00
Area (flag) : 178710M
On-Column Amount (ng) : 18.8457
Integration start scan : 476 Integration stop scan: 600
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

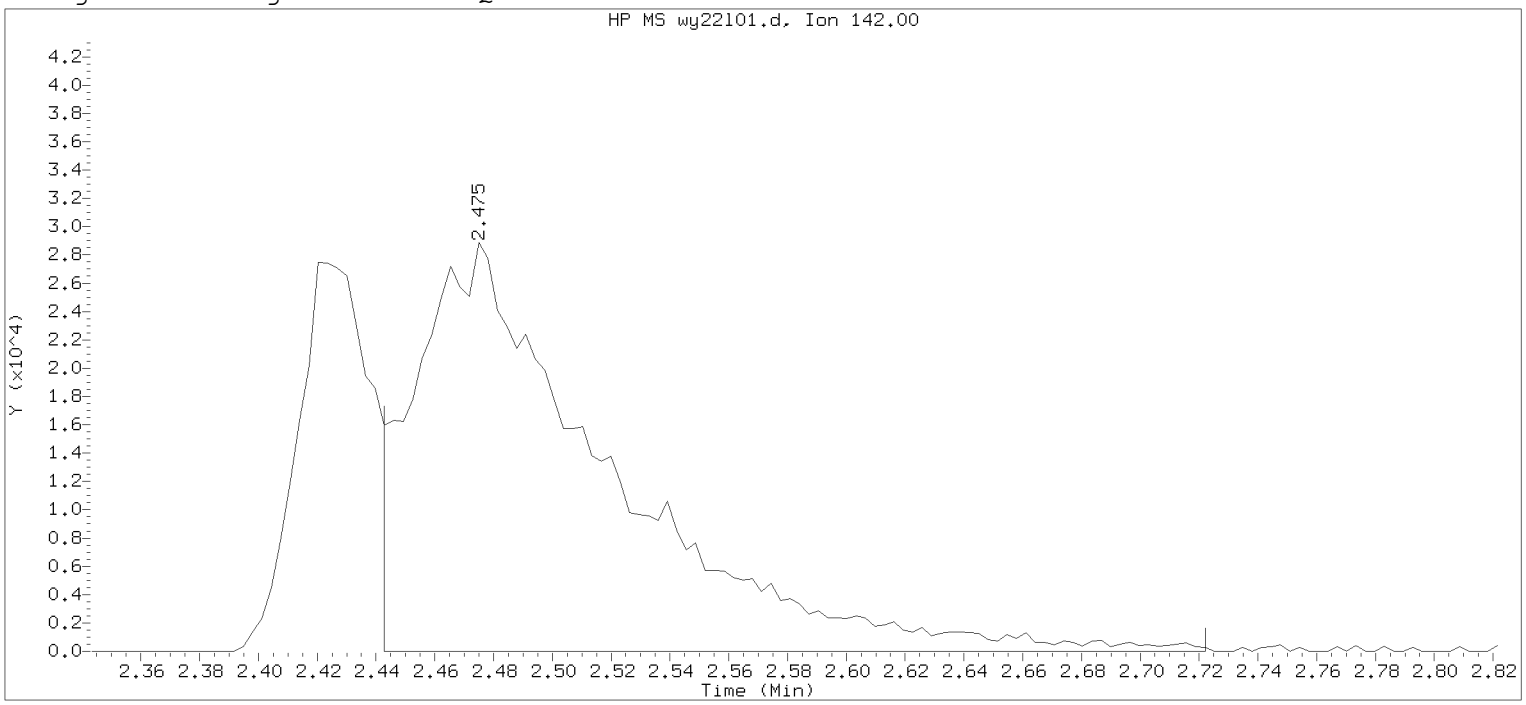
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/22/2019 at 13:47.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22l01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:16 Analyst ID: CBR01947

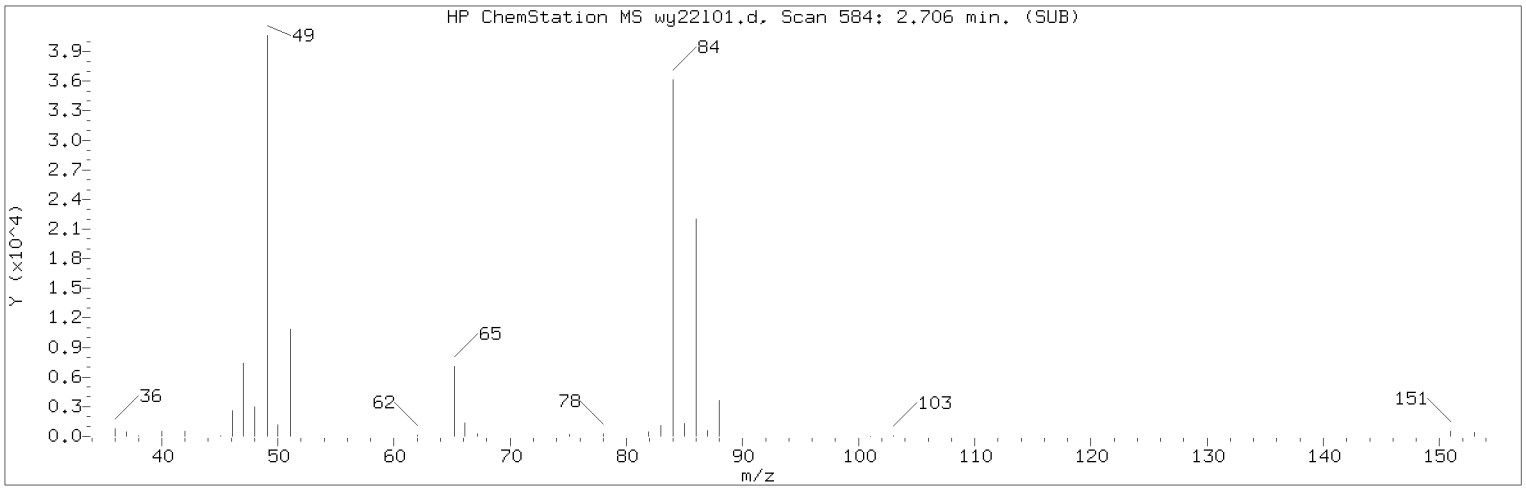
Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:31 Automation

Sample Name: LCSW34 Lab Sample ID: LCSW34

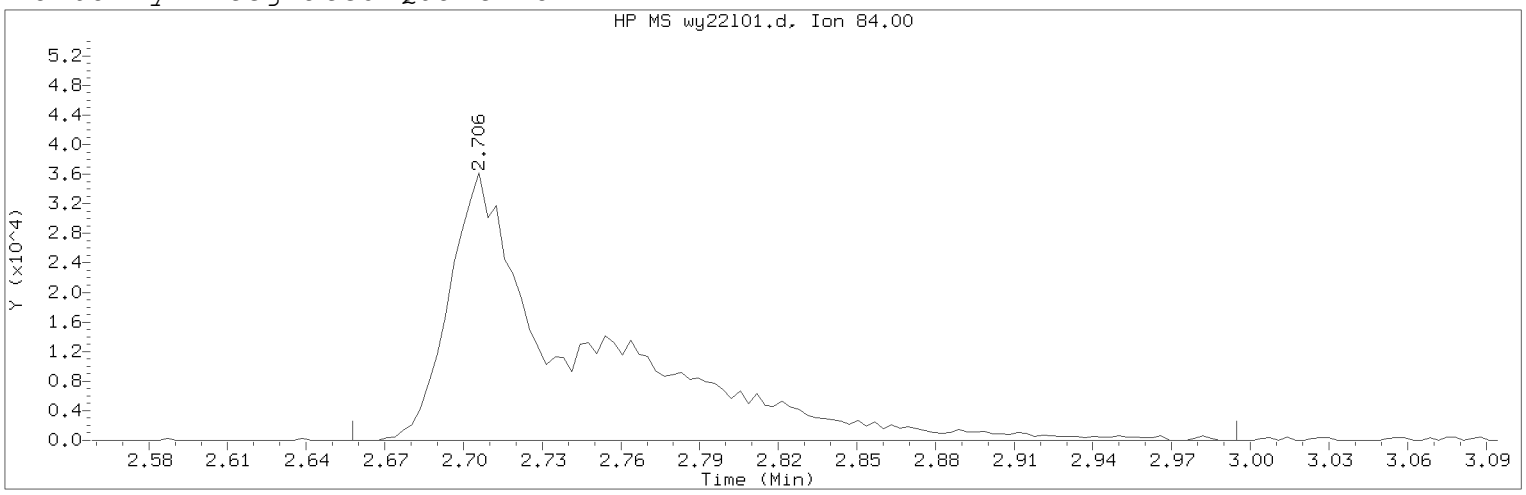
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 512
Retention Time (minutes): 2.475
Quant Ion : 142.00
Area : 131743
On-column Amount (ng) : 13.8928
Integration start scan : 501 Integration stop scan: 588
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 05/22/2019 at 13:47.
Target 3.5 esignature user ID: cbr01624

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22l01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:16 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:46 cbs01947

Sample Name: LCSW34 Lab Sample ID: LCSW34

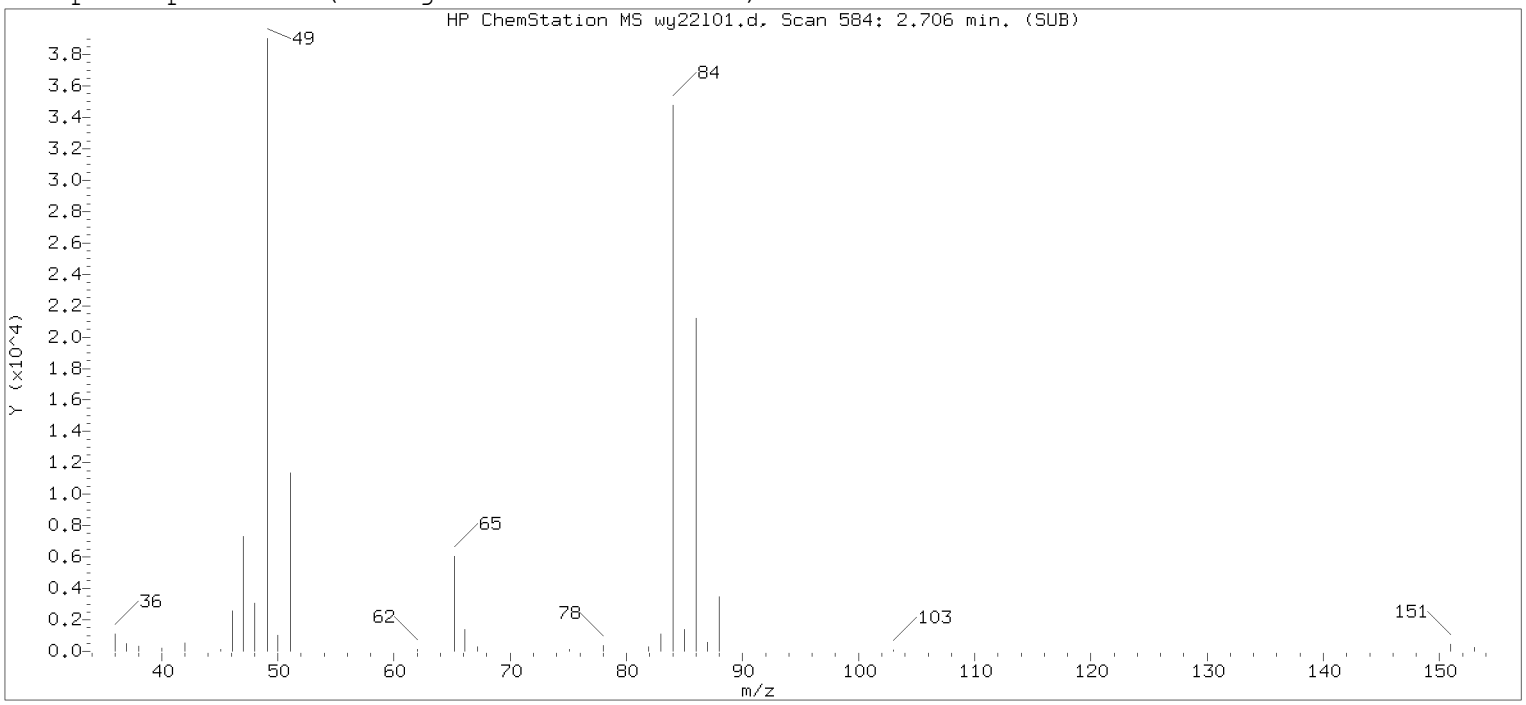
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 584
Retention Time (minutes): 2.706
Quant Ion : 84.00
Area (flag) : 126088M
On-Column Amount (ng) : 20.8457
Integration start scan : 568 Integration stop scan: 673
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

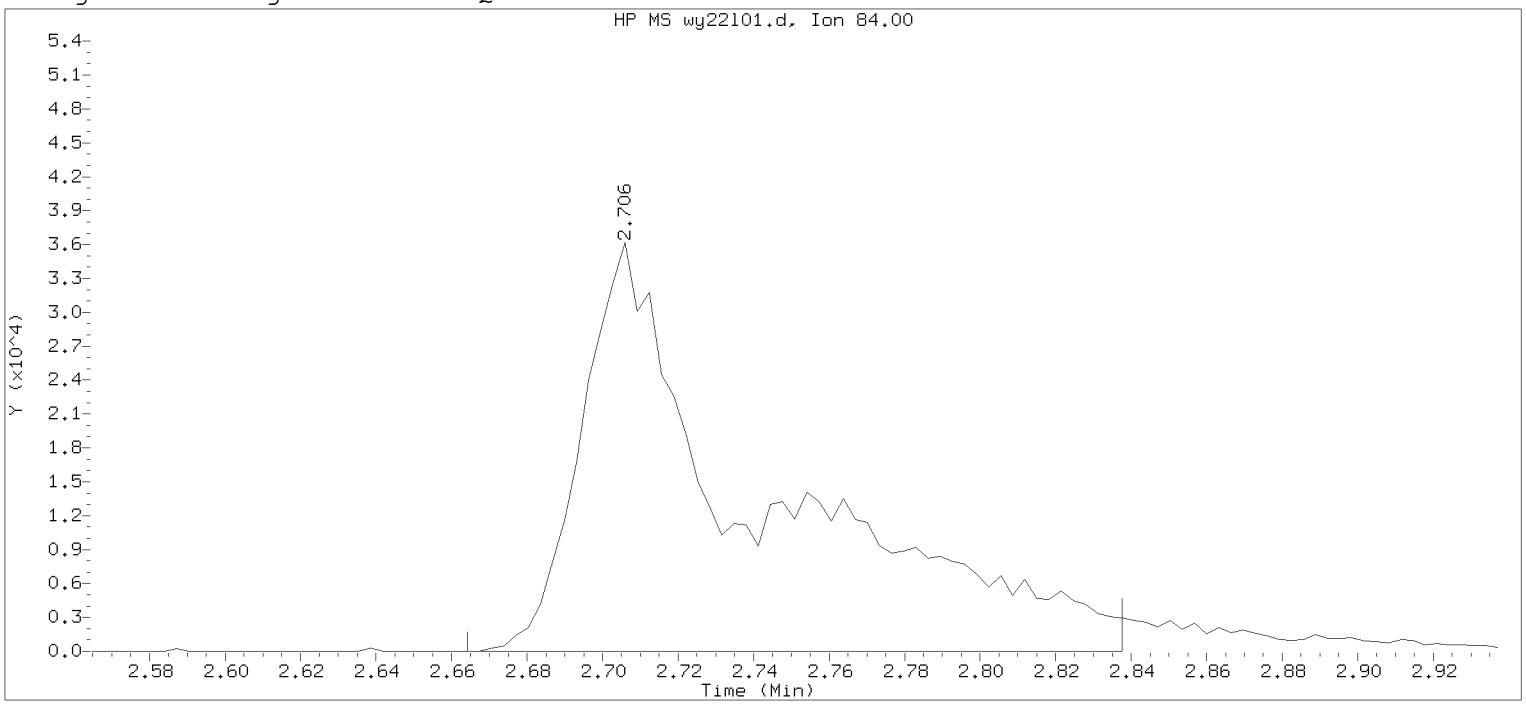
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/22/2019 at 13:47.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22l01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:16 Analyst ID: CBR01947

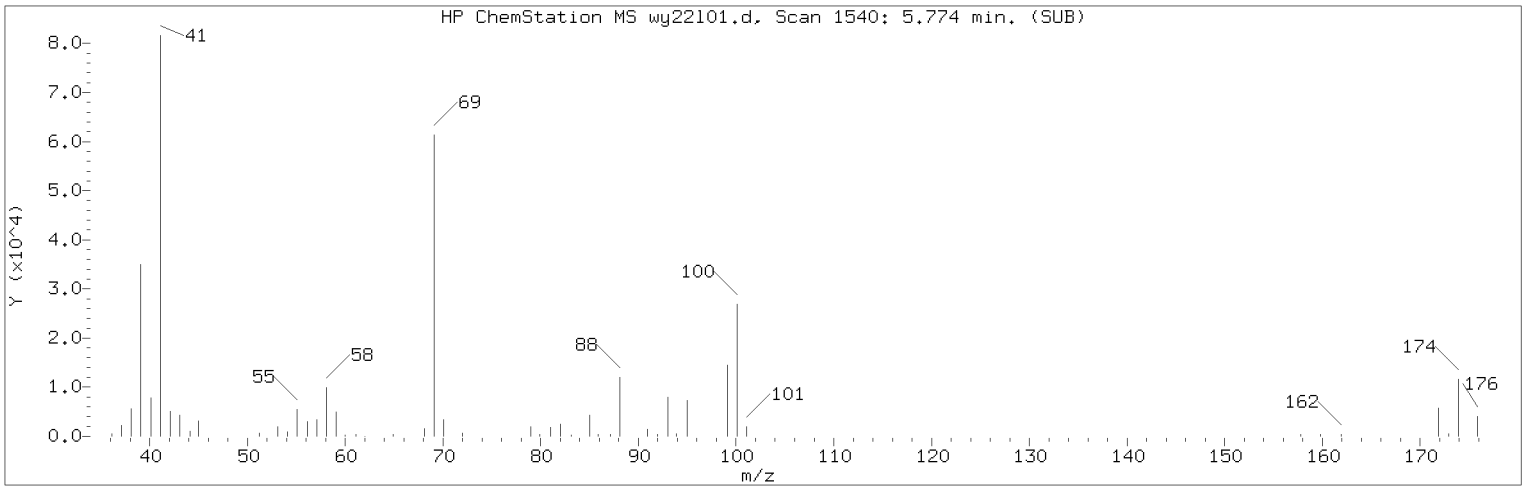
Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:31 Automation

Sample Name: LCSW34 Lab Sample ID: LCSW34

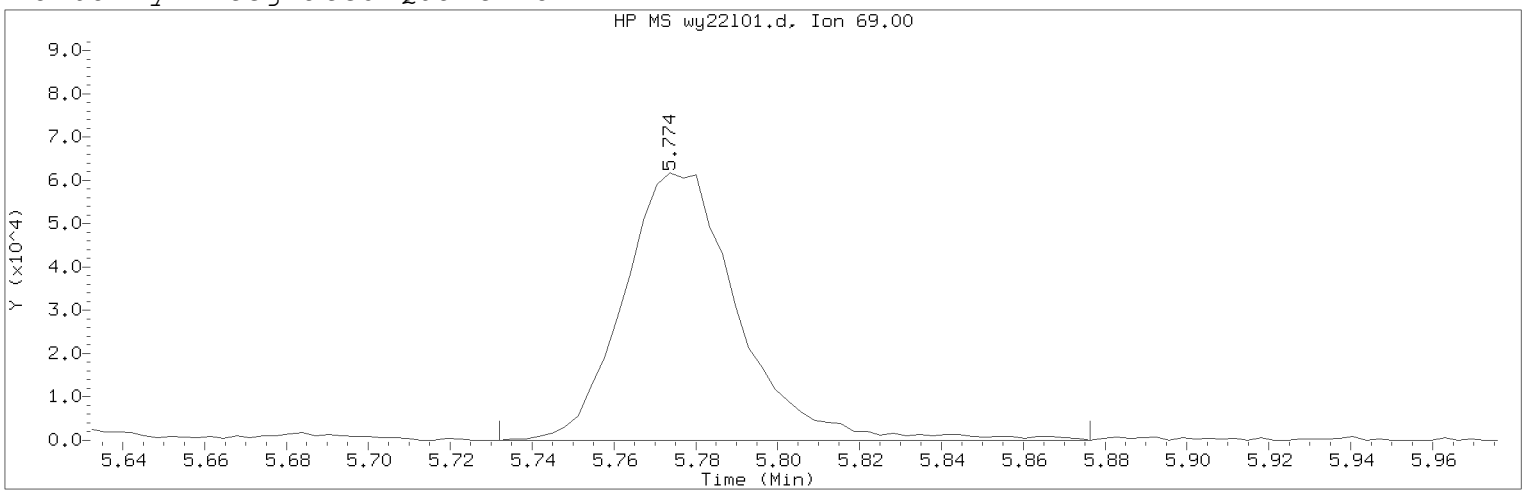
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 584
Retention Time (minutes): 2.706
Quant Ion : 84.00
Area : 116941
On-column Amount (ng) : 19.3335
Integration start scan : 570 Integration stop scan: 624
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 05/22/2019 at 13:47.
Target 3.5 esignature user ID: cbr01626

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22l01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:16 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:46 cbs01947

Sample Name: LCSW34 Lab Sample ID: LCSW34

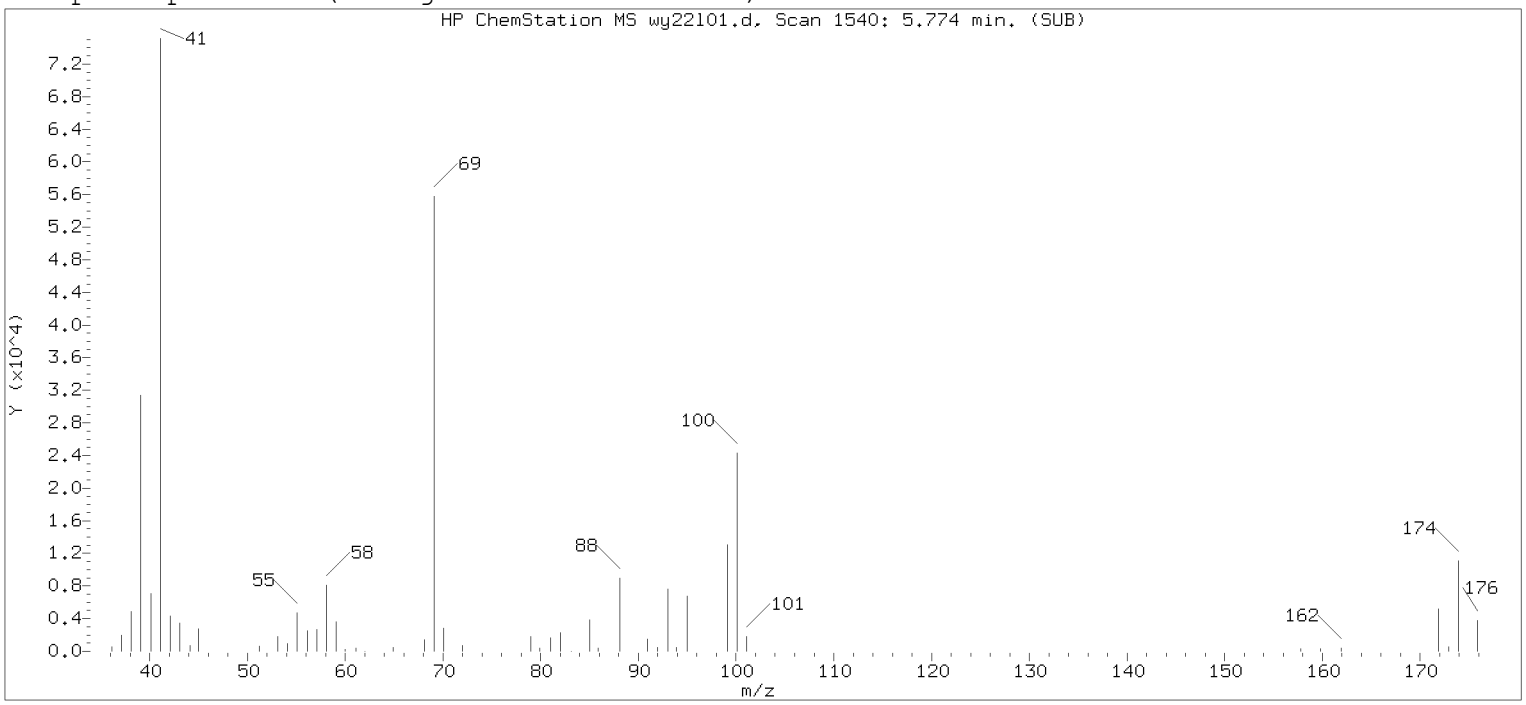
Compound Number : 77
Compound Name : Methyl Methacrylate
Scan Number : 1540
Retention Time (minutes): 5.774
Quant Ion : 69.00
Area (flag) : 120412M
On-Column Amount (ng) : 18.1427
Integration start scan : 1526 Integration stop scan: 1571
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

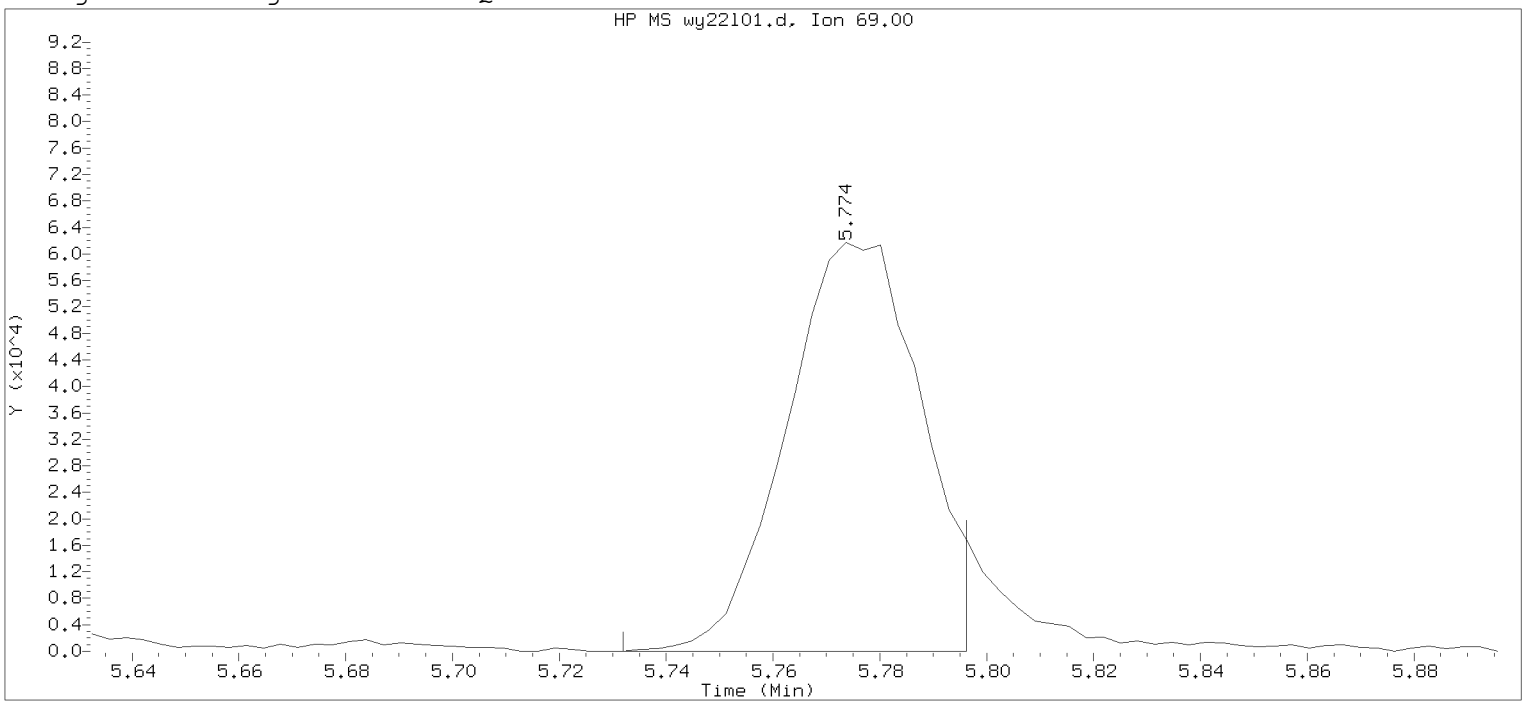
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/22/2019 at 13:47.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22l01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:16 Analyst ID: CBR01947

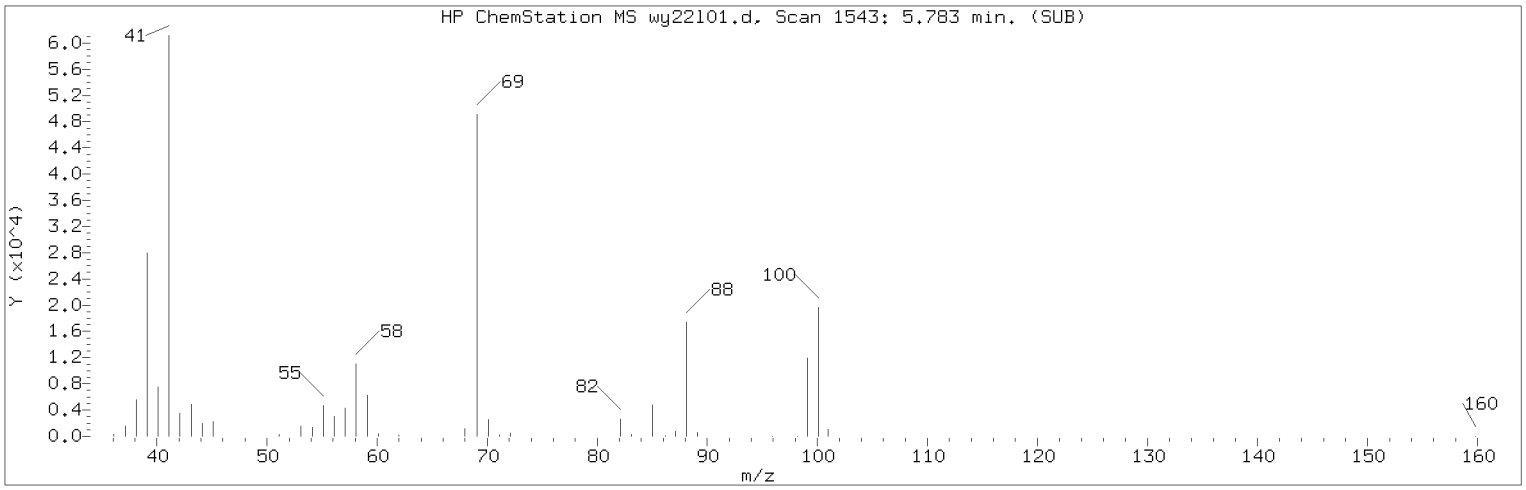
Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:31 Automation

Sample Name: LCSW34 Lab Sample ID: LCSW34

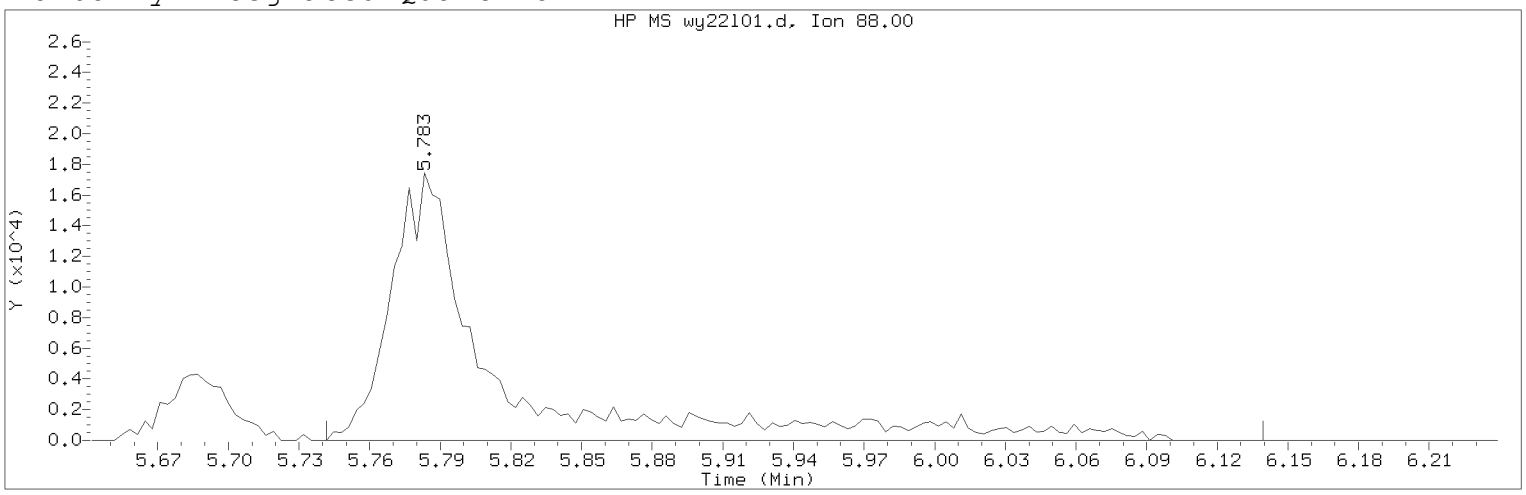
Compound Number : 77
Compound Name : Methyl Methacrylate
Scan Number : 1540
Retention Time (minutes): 5.774
Quant Ion : 69.00
Area : 107276
On-column Amount (ng) : 16.1634
Integration start scan : 1526 Integration stop scan: 1546
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 05/22/2019 at 13:47.
Target 3.5 esignature user ID: cbr01628

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22l01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:16 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:46 cbs01947

Sample Name: LCSW34 Lab Sample ID: LCSW34

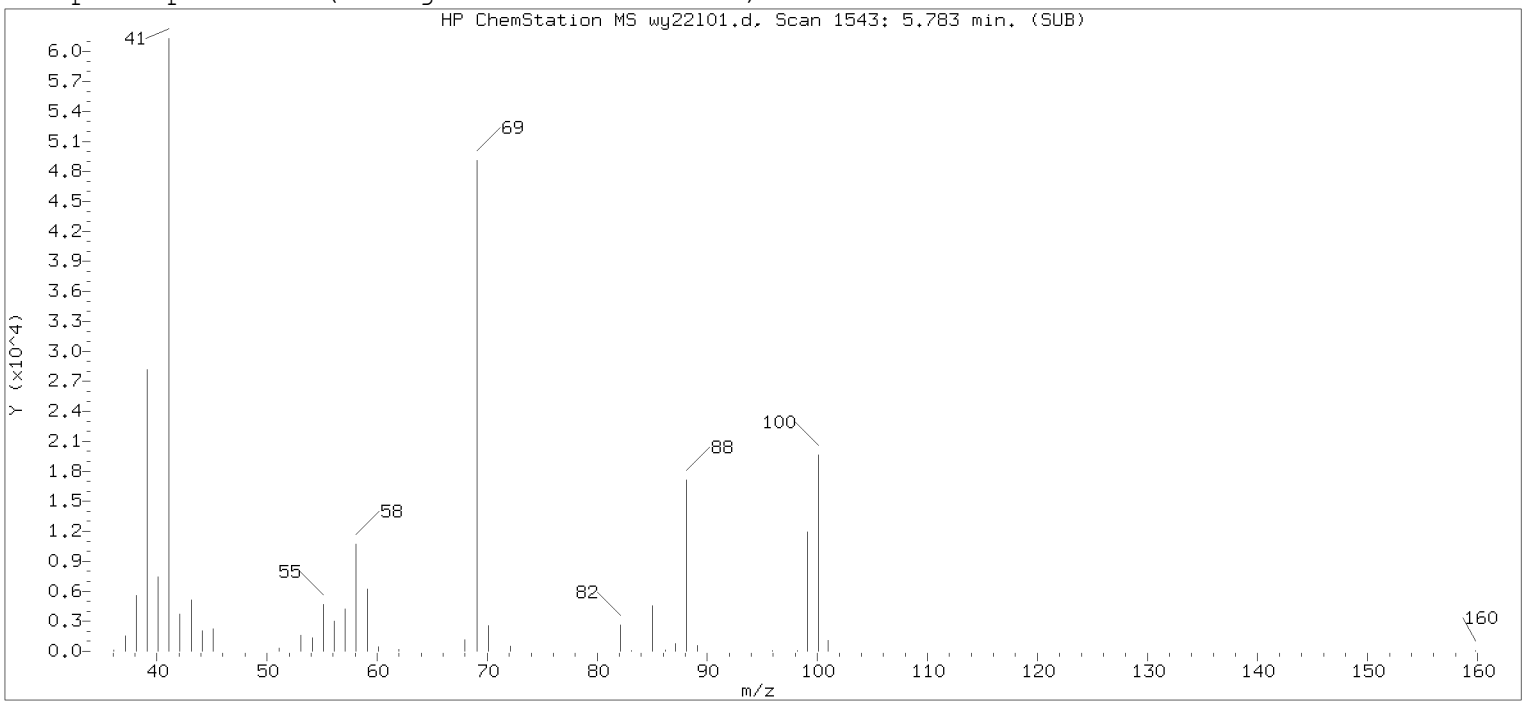
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1543
Retention Time (minutes): 5.783
Quant Ion : 88.00
Area (flag) : 53315M
On-Column Amount (ng) : 519.0541
Integration start scan : 1529 Integration stop scan: 1653
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

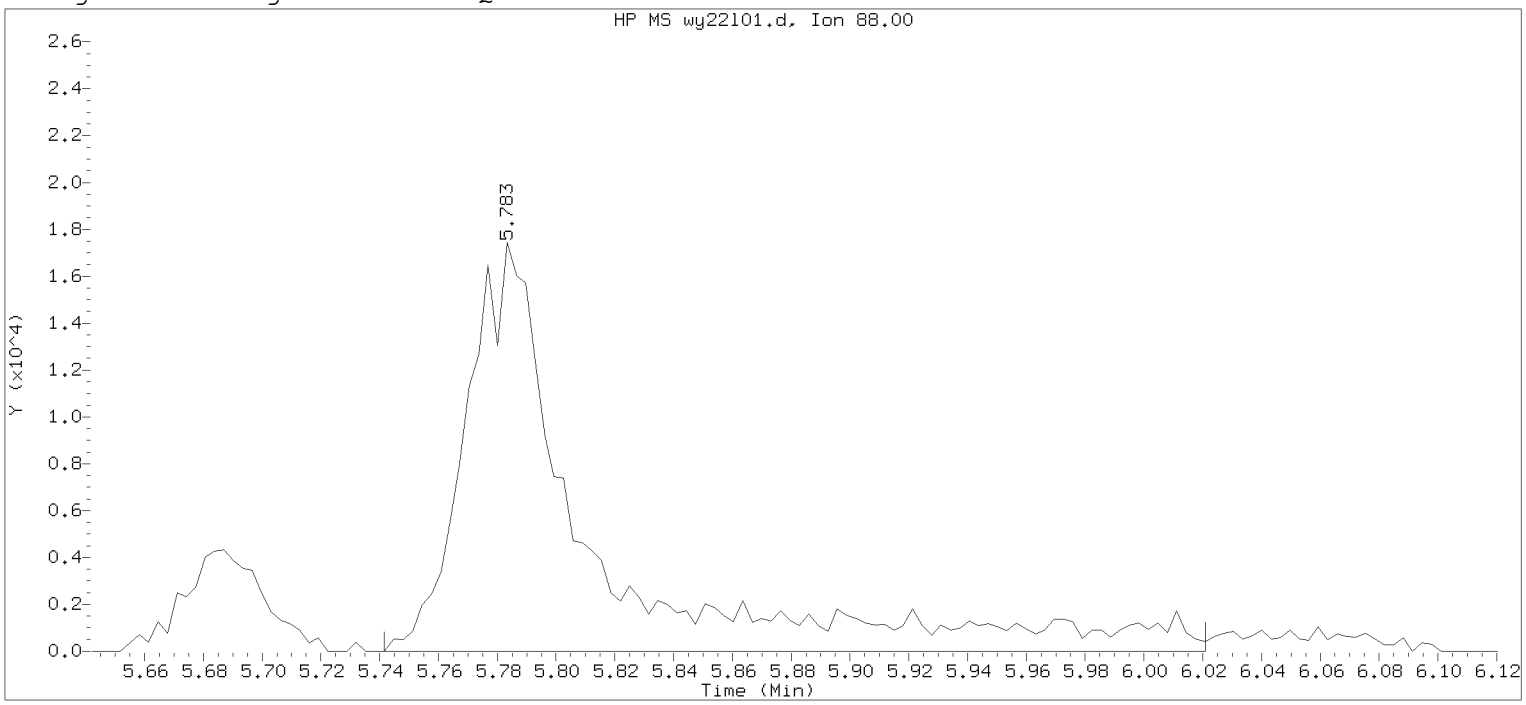
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/22/2019 at 13:47.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22l01.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:16 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:31 Automation

Sample Name: LCSW34 Lab Sample ID: LCSW34

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1543
Retention Time (minutes): 5.783
Quant Ion : 88.00
Area : 50605
On-column Amount (ng) : 492.6673
Integration start scan : 1529 Integration stop scan: 1616
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 05/22/2019 at 13:47.
Target 3.5 esignature user ID: cbr01947

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LCDW34

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDW34

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may22a.b/wy22l02.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	16	
74-87-3	Chloromethane	17	
106-99-0	1,3-Butadiene	26	
75-01-4	Vinyl Chloride	18	
74-83-9	Bromomethane	16	
75-00-3	Chloroethane	16	
109-66-0	n-Pentane	16	
75-69-4	Trichlorofluoromethane	17	
64-17-5	Ethanol	460	J
354-23-4	Freon 123a	20	
107-02-8	Acrolein	130	
75-35-4	1,1-Dichloroethene	23	
67-64-1	Acetone	200	
76-13-1	Freon 113	18	
67-63-0	2-Propanol	170	
74-88-4	Methyl Iodide	20	
75-15-0	Carbon Disulfide	17	
107-05-1	Allyl Chloride	19	
79-20-9	Methyl Acetate	18	
75-09-2	Methylene Chloride	22	
75-65-0	t-Butyl alcohol	210	
107-13-1	Acrylonitrile	89	
156-60-5	trans-1,2-Dichloroethene	22	
1634-04-4	Methyl Tertiary Butyl Ether	24	
110-54-3	n-Hexane	21	
75-34-3	1,1-Dichloroethane	21	
108-20-3	di-Isopropyl ether	21	
126-99-8	2-Chloro-1,3-butadiene	21	
637-92-3	Ethyl t-butyl ether	22	
156-59-2	cis-1,2-Dichloroethene	23	

FORM I VOA

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCDW34

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDW34

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may22a.b/wy22l02.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	45	
78-93-3	2-Butanone	140	
594-20-7	2,2-Dichloropropane	19	
107-12-0	Propionitrile	160	
126-98-7	Methacrylonitrile	140	
74-97-5	Bromochloromethane	21	
109-99-9	Tetrahydrofuran	110	
67-66-3	Chloroform	21	
71-55-6	1,1,1-Trichloroethane	21	
110-82-7	Cyclohexane	20	
563-58-6	1,1-Dichloropropene	22	
56-23-5	Carbon Tetrachloride	19	
78-83-1	Isobutyl Alcohol	490	
71-43-2	Benzene	22	
107-06-2	1,2-Dichloroethane	21	
994-05-8	t-Amyl methyl ether	22	
142-82-5	n-Heptane	20	
71-36-3	n-Butanol	940	
79-01-6	Trichloroethene	21	
108-87-2	Methylcyclohexane	21	
78-87-5	1,2-Dichloropropane	22	
74-95-3	Dibromomethane	21	
123-91-1	1,4-Dioxane	510	
80-62-6	Methyl Methacrylate	18	
75-27-4	Bromodichloromethane	20	
79-46-9	2-Nitropropane	15	
110-75-8	2-Chloroethyl Vinyl Ether	18	
10061-01-5	cis-1,3-Dichloropropene	20	
108-10-1	4-Methyl-2-pentanone	87	
108-88-3	Toluene	23	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCDW34

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDW34

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may22a.b/wy22l02.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	20	
542-75-6	1,3-Dichloropropene (total)	39	
97-63-2	Ethyl Methacrylate	20	
79-00-5	1,1,2-Trichloroethane	24	
127-18-4	Tetrachloroethene	24	
142-28-9	1,3-Dichloropropane	23	
591-78-6	2-Hexanone	96	
124-48-1	Dibromochloromethane	22	
106-93-4	1,2-Dibromoethane	22	
108-90-7	Chlorobenzene	23	
630-20-6	1,1,1,2-Tetrachloroethane	22	
100-41-4	Ethylbenzene	23	
179601-23-1	m+p-Xylene	46	
95-47-6	o-Xylene	22	
1330-20-7	Xylene (Total)	69	
100-42-5	Styrene	23	
75-25-2	Bromoform	19	
98-82-8	Isopropylbenzene	23	
108-94-1	Cyclohexanone	420	
108-86-1	Bromobenzene	23	
79-34-5	1,1,2,2-Tetrachloroethane	22	
96-18-4	1,2,3-Trichloropropane	22	
110-57-6	trans-1,4-Dichloro-2-butene	72	
103-65-1	n-Propylbenzene	23	
95-49-8	2-Chlorotoluene	23	
106-43-4	4-Chlorotoluene	23	
108-67-8	1,3,5-Trimethylbenzene	22	
98-06-6	tert-Butylbenzene	22	
76-01-7	Pentachloroethane	21	
95-63-6	1,2,4-Trimethylbenzene	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCDW34

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDW34

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may22a.b/wy22l02.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
135-98-8	sec-Butylbenzene	21	
541-73-1	1,3-Dichlorobenzene	23	
99-87-6	p-Isopropyltoluene	21	
106-46-7	1,4-Dichlorobenzene	23	
526-73-8	1,2,3-Trimethylbenzene	21	
100-44-7	Benzyl Chloride	17	
141-93-5	1,3-Diethylbenzene	20	
105-05-5	1,4-Diethylbenzene	19	
95-50-1	1,2-Dichlorobenzene	22	
104-51-8	n-Butylbenzene	20	
135-01-3	1,2-Diethylbenzene	21	
25340-17-4	Diethylbenzene (total)	60	
96-12-8	1,2-Dibromo-3-chloropropane	19	
108-70-3	1,3,5-Trichlorobenzene	20	
120-82-1	1,2,4-Trichlorobenzene	19	
87-68-3	Hexachlorobutadiene	18	
91-20-3	Naphthalene	19	
87-61-6	1,2,3-Trichlorobenzene	19	
91-57-6	2-Methylnaphthalene	13	

Data file: /chem2/HP09137.i/19may22a.b/wy22l02.d Injection date and time: **22-MAY-2019 13:40**
Data file Sample Info. Line: LCDW34;LCDW34;1;3;LCSD;;;;wy22b02; Instrument ID: **HP09137.i** Batch: **W191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 13:58 cbs01947

Blank Data file reference: **/chem2/HP09137.i/19may22a.b/wy22b02.d**

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may22a.b/wy22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.735	(0.003)	593	65	234361	(-10)	250.00	
66) Fluorobenzene	5.029	(0.003)	1308	96	1132675	(-1)	50.00	
101) Chlorobenzene-d5	8.161	(0.003)	2284	117	859132	(-2)	50.00	
132) 1,4-Dichlorobenzene-d4	10.038	(0.003)	2869	152	469994	(-4)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.355	(0.000)	113	250048	47.651	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.686	(0.001)	102	68968	49.418	99%		80 - 120
84) Toluene-d8	(3)	6.695	(0.000)	98	1120766	52.060	104%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.000)	95	407248	47.285	95%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	1.262	(-0.000)	85	120494	16.452	16.45			0.2	1
4) Chloromethane	(2)	1.390	(-0.000)	50	152790	16.754	16.75			0.2	1
5) 1,3-Butadiene	(2)	1.467	(0.003)	39	145214M	26.128	26.13			1	3
6) Vinyl Chloride	(2)	1.461	(-0.000)	62	146501	17.523	17.52			0.2	1
8) Bromomethane	(2)	1.685	(0.000)	94	105693M	16.030	16.03			0.3	1
9) Chloroethane	(2)	1.775	(-0.001)	64	88062	16.007	16.01			0.2	1
11) n-Pentane	(2)	1.965	(0.000)	43	136273	16.138	16.14			0.4	10
12) Trichlorofluoromethane	(2)	1.929	(0.000)	101	154705	17.423	17.42			0.2	1
13) Ethanol	(1)	2.032	(0.000)	45	48654	455.199	455.20		J	280	750
15) Freon 123a	(2)	2.115	(0.000)	67	130055M	19.601	19.60			0.4	5
16) Acrolein	(1)	2.215	(0.000)	56	215336	127.627	127.63			2	100
17) 1,1-Dichloroethene	(2)	2.302	(0.000)	96	116121M	23.252	23.25			0.2	1
18) Acetone	(1)	2.337	(0.000)	58	165906	202.298	202.30			0.7	20
19) Freon 113	(2)	2.340	(0.000)	101	79871	18.213	18.21			0.2	10
21) 2-Propanol	(1)	2.452	(-0.002)	45	102414	168.080	168.08			18	100
22) Methyl Iodide	(2)	2.478	(-0.000)	142	187387M	19.581	19.58			0.2	1
23) Carbon Disulfide	(2)	2.494	(0.002)	76	290762M	16.526	16.53			0.2	5
25) Allyl Chloride	(2)	2.603	(-0.000)	41	166248	19.109	19.11			0.3	5
27) Methyl Acetate	(2)	2.619	(-0.000)	43	137013	18.194	18.19			0.2	5
28) Methylene Chloride	(2)	2.709	(-0.000)	84	131659M	21.568	21.57			0.3	1
30) t-Butyl alcohol	(1)	2.812	(-0.001)	59	226542	208.424	208.42			12	50
31) Acrylonitrile	(2)	2.927	(-0.000)	53	350961	88.590	88.59			0.3	20
32) trans-1,2-Dichloroethene	(2)	2.953	(0.000)	96	118069	21.790	21.79			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	2.959	(0.000)	73	319411	24.210	24.21			0.2	1
34) n-Hexane	(2)	3.213	(-0.000)	57	149128	20.569	20.57			0.2	5
36) 1,1-Dichloroethane	(2)	3.338	(0.000)	63	205561	20.937	20.94			0.2	1
38) di-Isopropyl ether	(2)	3.412	(0.000)	45	402820	21.356	21.36			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	3.428	(0.000)	53	176377	20.741	20.74			0.2	5
40) Ethyl t-butyl ether	(2)	3.758	(-0.000)	59	309014	22.475	22.47			0.2	1
42) cis-1,2-Dichloroethene	(2)	3.887	(0.000)	96	139810	22.981	22.98			0.2	1
43) 1,2-Dichloroethene (Total)	(2)			96	257879	44.771	44.77			0.2	2

M = Compound was manually integrated.

Digitally signed by Chelsea B. Stong on 05/22/2019 at 13:59. Target 3.5 esignature user ID: cbs01947

Data file: /chem2/HP09137.i/19may22a.b/wy22102.d Injection date and time: **22-MAY-2019 13:40**
Data file Sample Info. Line: LCDW34;LCDW34;1;3;LCSD;;;;wy22b02; Instrument ID: **HP09137.i** Batch: **W191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 13:58 cbs01947

Blank Data file reference: **/chem2/HP09137.i/19may22a.b/wy22b02.d**

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may22a.b/wy22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	3.906(-0.000)	43	778188	136.725	136.72			0.3	10
45) 2,2-Dichloropropane	(2)	3.893(-0.000)	77	83179	18.864	18.86			0.3	1
47) Propionitrile	(1)	3.960(-0.000)	54	219195	162.261	162.26			14	100
48) Methacrylonitrile	(2)	4.111(0.000)	67	586739	137.747	137.75			6	50
49) Bromochloromethane	(2)	4.121(-0.000)	128	65169	20.607	20.61			0.2	5
50) Tetrahydrofuran	(1)	4.166(-0.000)	71	135319	108.231	108.23			0.7	10
51) Chloroform	(2)	4.195(0.000)	83	196774	21.360	21.36			0.2	1
53) 1,1,1-Trichloroethane	(2)	4.384(-0.000)	97	144916	20.907	20.91			0.3	1
54) Cyclohexane	(2)	4.442(-0.000)	56	182428	19.887	19.89			0.2	5
55) 1,1-Dichloropropene	(2)	4.545(0.000)	75	159067	21.537	21.54			0.2	5
56) Carbon Tetrachloride	(2)	4.548(-0.000)	117	115924	19.488	19.49			0.2	1
58) Isobutyl Alcohol	(1)	4.676(-0.002)	41	194503	490.850	490.85			36	250
60) Benzene	(2)	4.747(0.000)	78	518540	21.842	21.84			0.2	1
61) 1,2-Dichloroethane	(2)	4.766(0.000)	62	156762	21.376	21.38			0.3	1
65) t-Amyl methyl ether	(2)	4.869(0.000)	73	315000	22.363	22.36			0.8	5
67) n-Heptane	(2)	5.036(-0.000)	43	135271	19.522	19.52			0.2	5
69) n-Butanol	(1)	5.356(-0.002)	56	329664	936.995	937.00			61	250
71) Trichloroethene	(2)	5.404(-0.000)	95	122626	21.329	21.33			0.2	1
73) Methylcyclohexane	(2)	5.604(0.000)	83	174879	20.952	20.95			0.2	5
74) 1,2-Dichloropropane	(2)	5.636(-0.000)	63	133936	21.975	21.97			0.2	1
75) Dibromomethane	(2)	5.751(-0.000)	93	80006	21.269	21.27			0.2	1
76) 1,4-Dioxane	(1)	5.780(-0.001)	88	53967M	513.101	513.10			29	250
77) Methyl Methacrylate	(2)	5.774(-0.000)	69	119140	17.787	17.79			0.2	5
79) Bromodichloromethane	(2)	5.924(-0.000)	83	139983	20.254	20.25			0.2	1
80) 2-Nitropropane	(2)	6.172(-0.000)	41	35134	15.024	15.02			0.8	10
81) 2-Chloroethyl Vinyl Ether	(2)	6.264(-0.000)	63	81559	17.551	17.55			0.2	10
82) cis-1,3-Dichloropropene	(2)	6.406(-0.000)	75	186113	19.585	19.58			0.2	1
83) 4-Methyl-2-pentanone	(2)	6.585(-0.000)	43	973401	86.760	86.76			0.5	10
89) Toluene	(3)	6.768(0.000)	92	324981	23.434	23.43			0.2	1
90) trans-1,3-Dichloropropene	(3)	7.015(0.000)	75	161283	19.535	19.54			0.2	1
91) 1,3-Dichloropropene (total)	(3)		100	347396	39.120	39.12			0.2	5
92) Ethyl Methacrylate	(3)	7.141(-0.000)	69	197909	19.509	19.51			0.2	5
93) 1,1,2-Trichloroethane	(3)	7.211(0.000)	97	125562	23.524	23.52			0.2	1
94) Tetrachloroethene	(3)	7.359(0.000)	166	133298	23.688	23.69			0.2	1
95) 1,3-Dichloropropane	(3)	7.388(-0.000)	76	209481	22.595	22.60			0.2	1
97) 2-Hexanone	(3)	7.490(-0.000)	43	772239	95.617	95.62			0.3	10
98) Dibromochloromethane	(3)	7.612(-0.000)	129	113900	21.848	21.85			0.2	1
100) 1,2-Dibromoethane	(3)	7.718(-0.000)	107	131622	22.445	22.44			0.2	1
103) Chlorobenzene	(3)	8.187(-0.000)	112	358589	23.308	23.31			0.2	1
104) 1,1,1,2-Tetrachloroethane	(3)	8.264(-0.000)	131	110857	22.423	22.42			0.2	1
105) Ethylbenzene	(3)	8.293(-0.000)	91	594421	22.552	22.55			0.4	1
107) m+p-Xylene	(3)	8.398(-0.000)	106	485092	46.289	46.29			1	5
108) o-Xylene	(3)	8.739(-0.000)	106	229621	22.272	22.27			0.4	1
109) Xylene (Total)	(3)		106	714713	68.561	68.56			1	5
110) Styrene	(3)	8.751(-0.000)	104	391303	22.625	22.63			0.2	5
111) Bromoform	(3)	8.896(-0.000)	173	76466	18.846	18.85			0.2	4
112) Isopropylbenzene	(3)	9.047(-0.000)	105	572819	22.611	22.61			0.2	5
113) Cyclohexanone	(1)	9.111(-0.002)	55	199987	421.511	421.51			25	100
116) Bromobenzene	(4)	9.278(-0.000)	156	154983	22.894	22.89			0.2	5
117) 1,1,2,2-Tetrachloroethane	(4)	9.281(0.000)	83	200360	21.948	21.95			0.2	1
118) 1,2,3-Trichloropropane	(4)	9.313(-0.000)	110	60787	22.106	22.11			0.2	5
119) trans-1,4-Dichloro-2-butene	(4)	9.329(0.000)	53	210543	71.920	71.92			6	50
120) n-Propylbenzene	(4)	9.371(0.000)	91	679783	22.779	22.78			0.2	5
121) 2-Chlorotoluene	(4)	9.432(0.000)	126	142229	23.106	23.11			0.2	5

M = Compound was manually integrated.

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may22a.b/wy22102.d Injection date and time: **22-MAY-2019 13:40**
Data file Sample Info. Line: LCDW34;LCDW34;1;3;LCSD;;;;wy22b02; Instrument ID: **HP09137.i** Batch: **W191421AA**
Date, time and analyst ID of latest file update: 22-May-2019 13:58 cbs01947

Blank Data file reference: **/chem2/HP09137.i/19may22a.b/wy22b02.d**

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 22-MAY-2019 12:19
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may22a.b/wy22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

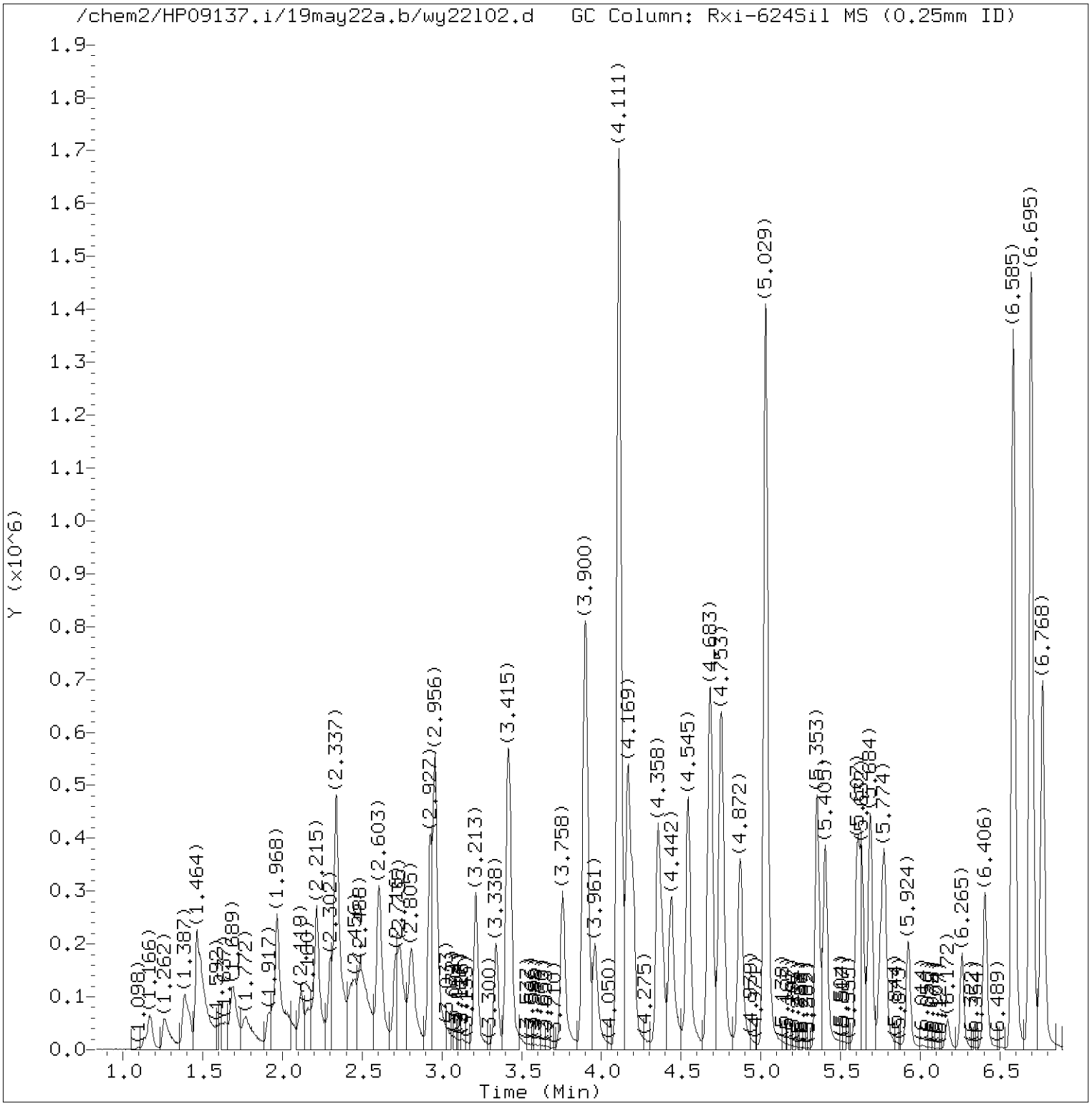
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
122) 4-Chlorotoluene	(4)	9.518(-0.000)	126	151985	23.065	23.07			0.2	5
123) 1,3,5-Trimethylbenzene	(4)	9.509(0.000)	105	480178	22.311	22.31			0.3	5
125) tert-Butylbenzene	(4)	9.756(0.000)	134	106724	21.826	21.83			0.3	5
126) Pentachloroethane	(4)	9.766(0.000)	167	81550	21.097	21.10			0.2	5
127) 1,2,4-Trimethylbenzene	(4)	9.788(0.000)	105	501800	22.126	22.13			1	5
128) sec-Butylbenzene	(4)	9.916(0.000)	105	567977	21.499	21.50			0.2	5
130) 1,3-Dichlorobenzene	(4)	9.993(-0.000)	146	293119	22.707	22.71			0.2	5
131) p-Isopropyltoluene	(4)	10.022(0.000)	119	486960	20.823	20.82			0.2	5
134) 1,4-Dichlorobenzene	(4)	10.058(0.000)	146	304167	22.729	22.73			0.2	5
135) 1,2,3-Trimethylbenzene	(4)	10.096(-0.000)	105	523906	21.470	21.47			0.3	5
136) Benzyl Chloride	(4)	10.157(-0.000)	91	325065	17.354	17.35			0.3	5
137) 1,3-Diethylbenzene	(4)	10.237(-0.000)	119	293531	19.976	19.98			0.2	5
138) 1,4-Diethylbenzene	(4)	10.298(-0.000)	119	305071	19.378	19.38			0.2	5
139) 1,2-Dichlorobenzene	(4)	10.324(-0.000)	146	287115	22.418	22.42			0.2	5
140) n-Butylbenzene	(4)	10.317(-0.000)	92	237210	20.096	20.10			0.2	5
141) 1,2-Diethylbenzene	(4)	10.382(-0.000)	119	259087	20.884	20.88			0.2	5
142) Diethylbenzene (total)	(4)		100	857689	60.237	60.24			0.2	5
143) 1,2-Dibromo-3-chloropropane	(4)	10.863(-0.000)	75	38719	18.663	18.66			0.3	5
145) 1,3,5-Trichlorobenzene	(4)	11.007(-0.000)	180	192189	19.570	19.57			0.2	5
147) 1,2,4-Trichlorobenzene	(4)	11.418(-0.000)	180	182542	19.360	19.36			0.3	5
148) Hexachlorobutadiene	(4)	11.530(-0.000)	225	60773	18.097	18.10			0.7	5
149) Naphthalene	(4)	11.582(-0.000)	128	601028	18.839	18.84			1	5
150) 1,2,3-Trichlorobenzene	(4)	11.739(-0.000)	180	177137	19.248	19.25			0.4	5
151) 2-Methylnaphthalene	(4)	12.304(-0.000)	142	237151	13.029	13.03			0.7	5

Total number of targets = 109

Digitally signed by Chelsea B. Stong on 05/22/2019 at 13:59. Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

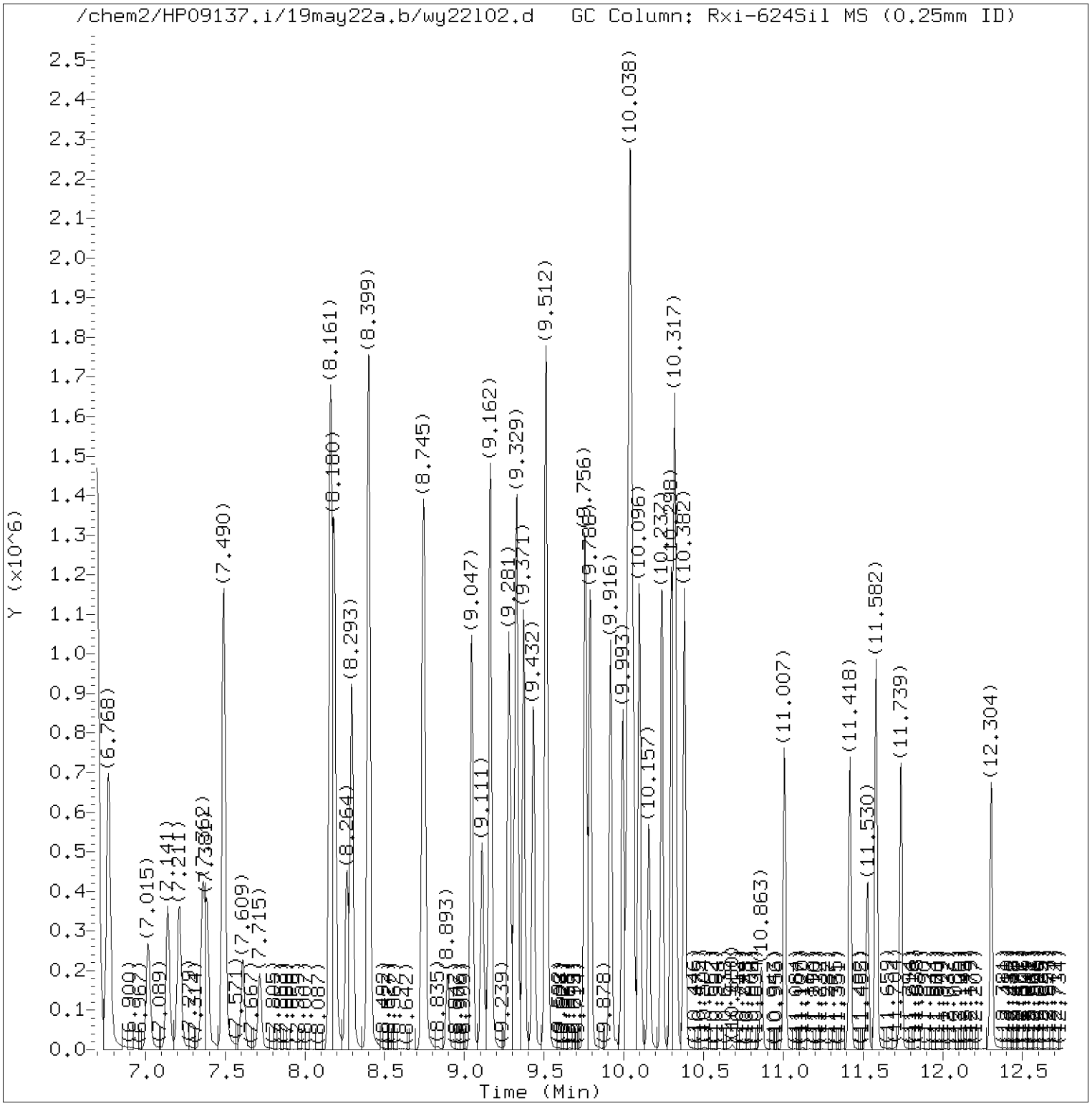
Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22l02.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:40 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:58 cbs01947

Sample Name: LCDW34 Lab Sample ID: LCDW34

Digitally signed by Chelsea B. Stong
on 05/22/2019 at 13:59.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22l02.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:40 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:58 cbs01947

Sample Name: LCDW34 Lab Sample ID: LCDW34

Digitally signed by Chelsea B. Stong
on 05/22/2019 at 13:59.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22l02.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:40 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:58 cbs01947

Sample Name: LCDW34 Lab Sample ID: LCDW34

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.262	85	120494	16.452
4) Chloromethane	(2)	1.390	50	152790	16.754
6) Vinyl Chloride	(2)	1.461	62	146501	17.523
5) 1,3-Butadiene	(2)	1.467	39	145214M	26.128
8) Bromomethane	(2)	1.685	94	105693M	16.030
9) Chloroethane	(2)	1.775	64	88062	16.007
12) Trichlorofluoromethane	(2)	1.929	101	154705	17.423
11) n-Pentane	(2)	1.965	43	136273	16.138
13) Ethanol	(1)	2.032	45	48654	455.199
15) Freon 123a	(2)	2.115	67	130055M	19.601
16) Acrolein	(1)	2.215	56	215336	127.627
17) 1,1-Dichloroethene	(2)	2.302	96	116121M	23.252
18) Acetone	(1)	2.337	58	165906	202.298
19) Freon 113	(2)	2.340	101	79871	18.213
21) 2-Propanol	(1)	2.452	45	102414	168.080
22) Methyl Iodide	(2)	2.478	142	187387M	19.581
23) Carbon Disulfide	(2)	2.494	76	290762M	16.526
25) Allyl Chloride	(2)	2.603	41	166248	19.109
27) Methyl Acetate	(2)	2.619	43	137013	18.194
28) Methylene Chloride	(2)	2.709	84	131659M	21.568
29)*t-Butyl alcohol-d10	(1)	2.735	65	234361	250.000
30) t-Butyl alcohol	(1)	2.812	59	226542	208.424
31) Acrylonitrile	(2)	2.927	53	350961	88.590
32) trans-1,2-Dichloroethene	(2)	2.953	96	118069	21.790
33) Methyl Tertiary Butyl Ether	(2)	2.959	73	319411	24.210
34) n-Hexane	(2)	3.213	57	149128	20.569
36) 1,1-Dichloroethane	(2)	3.338	63	205561	20.937
38) di-Isopropyl ether	(2)	3.412	45	402820	21.356
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	176377	20.741
40) Ethyl t-butyl ether	(2)	3.758	59	309014	22.475
42) cis-1,2-Dichloroethene	(2)	3.887	96	139810	22.981
45) 2,2-Dichloropropane	(2)	3.893	77	83179	18.864
44) 2-Butanone	(2)	3.906	43	778188	136.725
47) Propionitrile	(1)	3.961	54	219195	162.261
48) Methacrylonitrile	(2)	4.111	67	586739	137.747
49) Bromochloromethane	(2)	4.121	128	65169	20.607
50) Tetrahydrofuran	(1)	4.166	71	135319	108.231
51) Chloroform	(2)	4.195	83	196774	21.360

M = Compound was manually integrated.
* = Compound is an internal standard.

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Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22l02.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:40 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:58 cbs01947

Sample Name: LCDW34 Lab Sample ID: LCDW34

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
52)$Dibromofluoromethane	(2)	4.355	113	250048	47.651
53) 1,1,1-Trichloroethane	(2)	4.384	97	144916	20.907
54) Cyclohexane	(2)	4.442	56	182428	19.887
55) 1,1-Dichloropropene	(2)	4.545	75	159067	21.537
56) Carbon Tetrachloride	(2)	4.548	117	115924	19.488
58) Isobutyl Alcohol	(1)	4.676	41	194503	490.850
57)$1,2-Dichloroethane-d4	(2)	4.686	102	68968	49.418
60) Benzene	(2)	4.747	78	518540	21.842
61) 1,2-Dichloroethane	(2)	4.766	62	156762	21.376
65) t-Amyl methyl ether	(2)	4.869	73	315000	22.363
66)*Fluorobenzene	(2)	5.029	96	1132675	50.000
67) n-Heptane	(2)	5.036	43	135271	19.522
69) n-Butanol	(1)	5.356	56	329664	936.995
71) Trichloroethene	(2)	5.405	95	122626	21.329
73) Methylcyclohexane	(2)	5.604	83	174879	20.952
74) 1,2-Dichloropropane	(2)	5.636	63	133936	21.975
75) Dibromomethane	(2)	5.751	93	80006	21.269
77) Methyl Methacrylate	(2)	5.774	69	119140	17.787
76) 1,4-Dioxane	(1)	5.780	88	53967M	513.101
79) Bromodichloromethane	(2)	5.924	83	139983	20.254
43) 1,2-Dichloroethene (Total)	(2)		96	257879	44.771
80) 2-Nitropropane	(2)	6.172	41	35134	15.024
81) 2-Chloroethyl Vinyl Ether	(2)	6.265	63	81559	17.551
82) cis-1,3-Dichloropropene	(2)	6.406	75	186113	19.585
83) 4-Methyl-2-pentanone	(2)	6.585	43	973401	86.760
84)$Toluene-d8	(3)	6.695	98	1120766	52.060
89) Toluene	(3)	6.768	92	324981	23.434
90) trans-1,3-Dichloropropene	(3)	7.015	75	161283	19.535
92) Ethyl Methacrylate	(3)	7.141	69	197909	19.509
93) 1,1,2-Trichloroethane	(3)	7.211	97	125562	23.524
94) Tetrachloroethene	(3)	7.359	166	133298	23.688
95) 1,3-Dichloropropane	(3)	7.388	76	209481	22.595
97) 2-Hexanone	(3)	7.490	43	772239	95.617
98) Dibromochloromethane	(3)	7.612	129	113900	21.848
100) 1,2-Dibromoethane	(3)	7.718	107	131622	22.445
101)*Chlorobenzene-d5	(3)	8.161	117	859132	50.000
103) Chlorobenzene	(3)	8.187	112	358589	23.308
104) 1,1,1,2-Tetrachloroethane	(3)	8.264	131	110857	22.423

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on 05/22/2019 at 13:59.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22l02.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:40 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:58 cbs01947

Sample Name: LCDW34 Lab Sample ID: LCDW34

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
105) Ethylbenzene	(3)	8.293	91	594421	22.552
107) m+p-Xylene	(3)	8.399	106	485092	46.289
108) o-Xylene	(3)	8.739	106	229621	22.272
110) Styrene	(3)	8.751	104	391303	22.625
111) Bromoform	(3)	8.896	173	76466	18.846
112) Isopropylbenzene	(3)	9.047	105	572819	22.611
113) Cyclohexanone	(1)	9.111	55	199987	421.511
115)$4-Bromofluorobenzene	(3)	9.162	95	407248	47.285
116) Bromobenzene	(4)	9.278	156	154983	22.894
117) 1,1,2,2-Tetrachloroethane	(4)	9.281	83	200360	21.948
118) 1,2,3-Trichloropropane	(4)	9.313	110	60787	22.106
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	210543	71.920
120) n-Propylbenzene	(4)	9.371	91	679783	22.779
121) 2-Chlorotoluene	(4)	9.432	126	142229	23.106
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	480178	22.311
122) 4-Chlorotoluene	(4)	9.518	126	151985	23.065
125) tert-Butylbenzene	(4)	9.756	134	106724	21.826
126) Pentachloroethane	(4)	9.765	167	81550	21.097
127) 1,2,4-Trimethylbenzene	(4)	9.788	105	501800	22.126
128) sec-Butylbenzene	(4)	9.916	105	567977	21.499
130) 1,3-Dichlorobenzene	(4)	9.993	146	293119	22.707
131) p-Isopropyltoluene	(4)	10.022	119	486960	20.823
132)*1,4-Dichlorobenzene-d4	(4)	10.038	152	469994	50.000
134) 1,4-Dichlorobenzene	(4)	10.057	146	304167	22.729
91) 1,3-Dichloropropene (total)	(3)		100	347396	39.120
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	523906	21.470
136) Benzyl Chloride	(4)	10.157	91	325065	17.354
137) 1,3-Diethylbenzene	(4)	10.237	119	293531	19.976
138) 1,4-Diethylbenzene	(4)	10.298	119	305071	19.378
140) n-Butylbenzene	(4)	10.317	92	237210	20.096
139) 1,2-Dichlorobenzene	(4)	10.324	146	287115	22.418
141) 1,2-Diethylbenzene	(4)	10.382	119	259087	20.884
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	38719	18.663
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	192189	19.570
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	182542	19.360
148) Hexachlorobutadiene	(4)	11.530	225	60773	18.097
149) Naphthalene	(4)	11.582	128	601028	18.839
150) 1,2,3-Trichlorobenzene	(4)	11.739	180	177137	19.248

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$ = Compound is a surrogate standard.

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on 05/22/2019 at 13:59.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may22a.b/wy22l02.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:40 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:58 cbs01947

Sample Name: LCDW34 Lab Sample ID: LCDW34

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
109) Xylene (Total)	(3)		106	714713	68.561
151) 2-Methylnaphthalene	(4)	12.304	142	237151	13.029
142) Diethylbenzene (total)	(4)		100	857689	60.237

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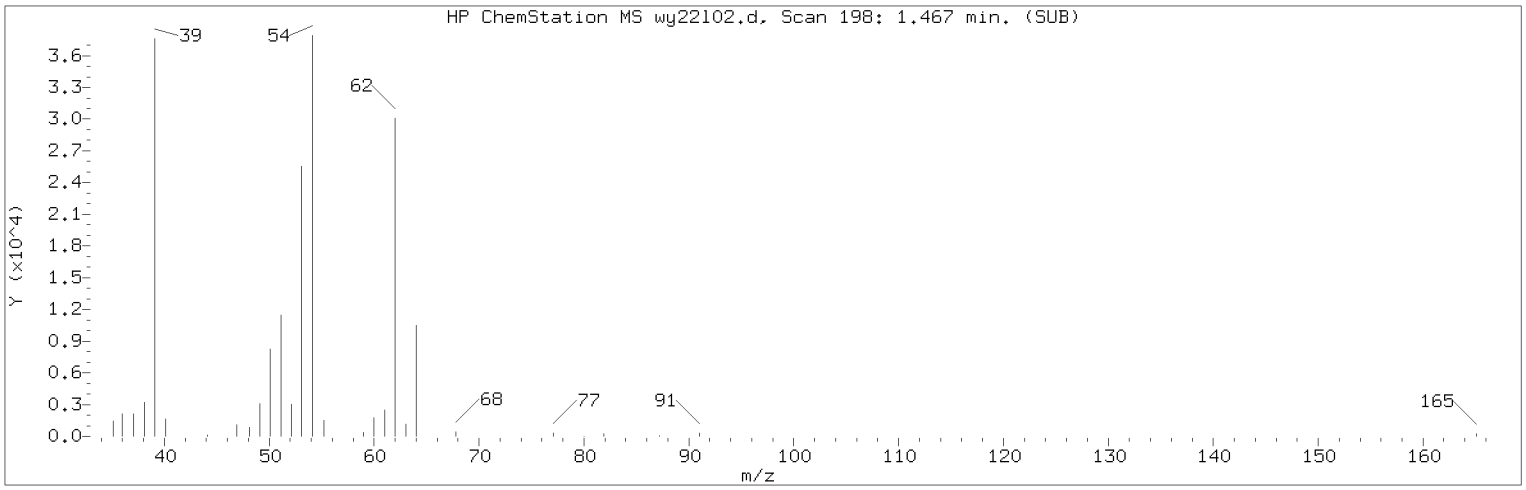
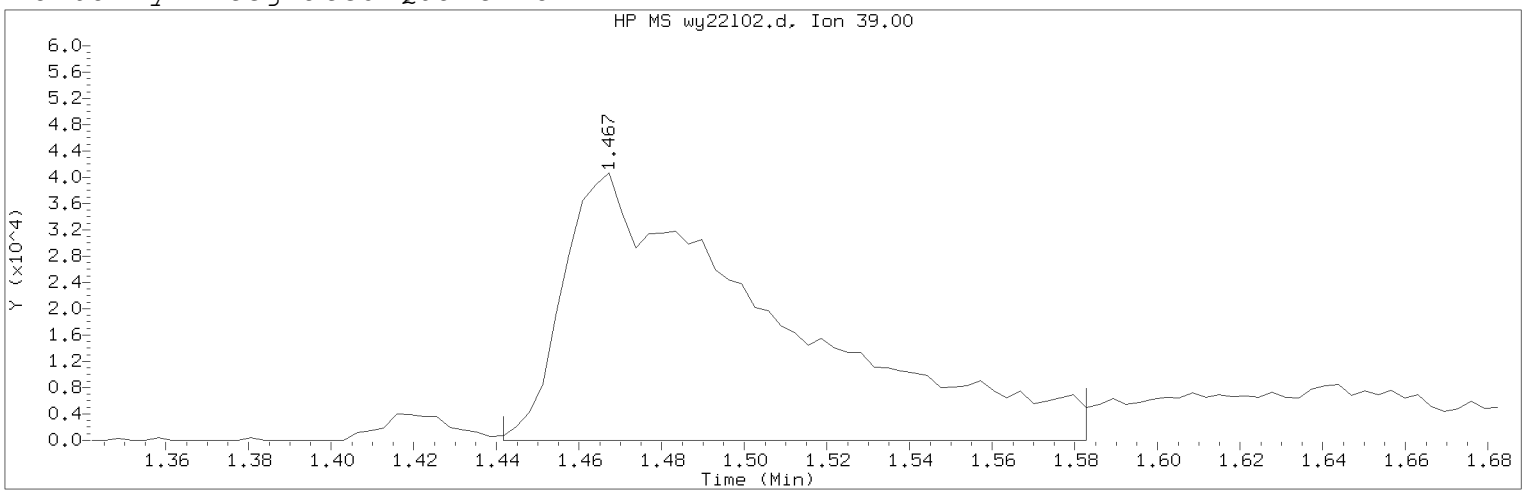
on 05/22/2019 at 13:59.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22l02.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:40 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:58 cbs01947

Sample Name: LCDW34 Lab Sample ID: LCDW34

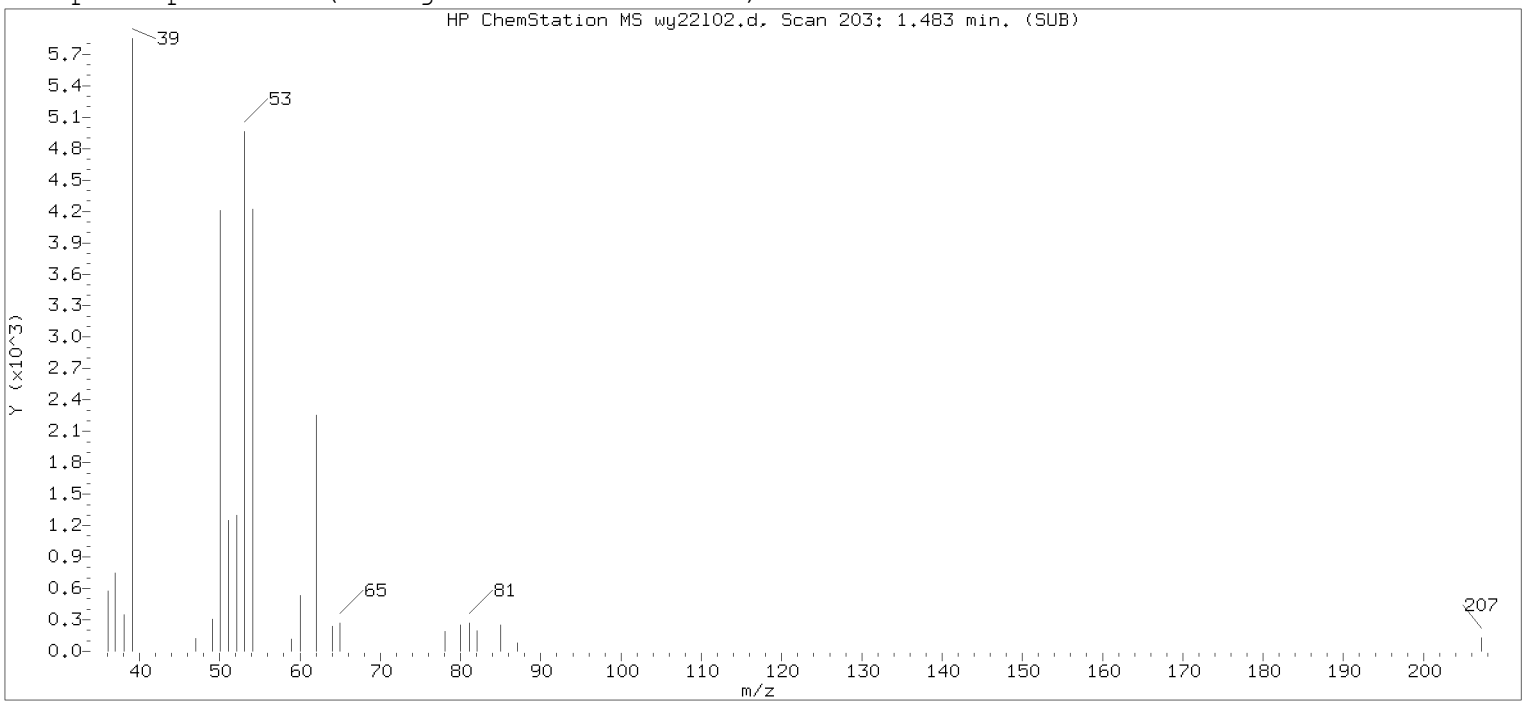
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 198
Retention Time (minutes): 1.467
Quant Ion : 39.00
Area (flag) : 145214M
On-Column Amount (ng) : 26.1278
Integration start scan : 189 Integration stop scan: 233
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

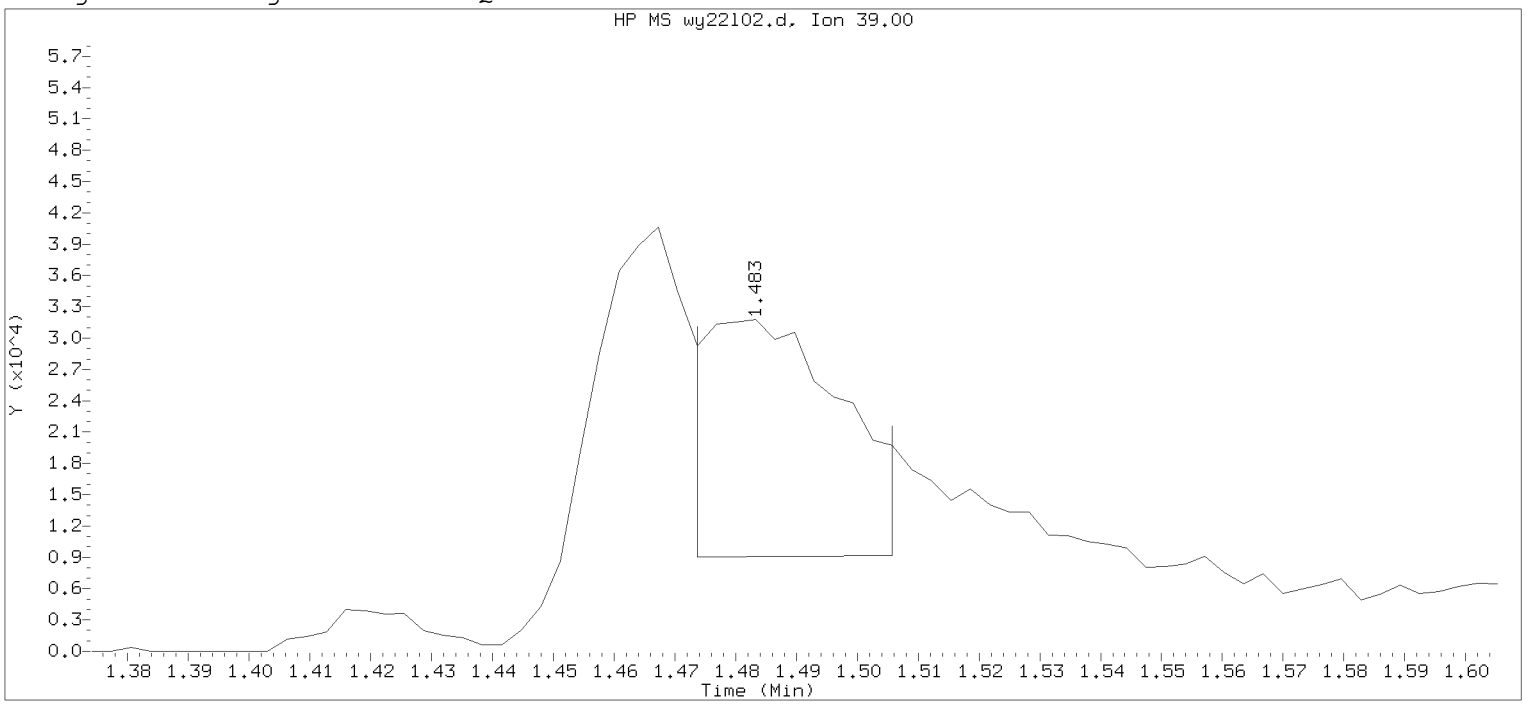
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/22/2019 at 13:59.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



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Injection date and time: 22-MAY-2019 13:40 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:55 Automation

Sample Name: LCDW34 Lab Sample ID: LCDW34

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 203
Retention Time (minutes): 1.483
Quant Ion : 39.00
Area : 35237
On-column Amount (ng) : 6.3400
Integration start scan : 199 Integration stop scan: 209
Y at integration start : 9043 Y at integration end: 9142

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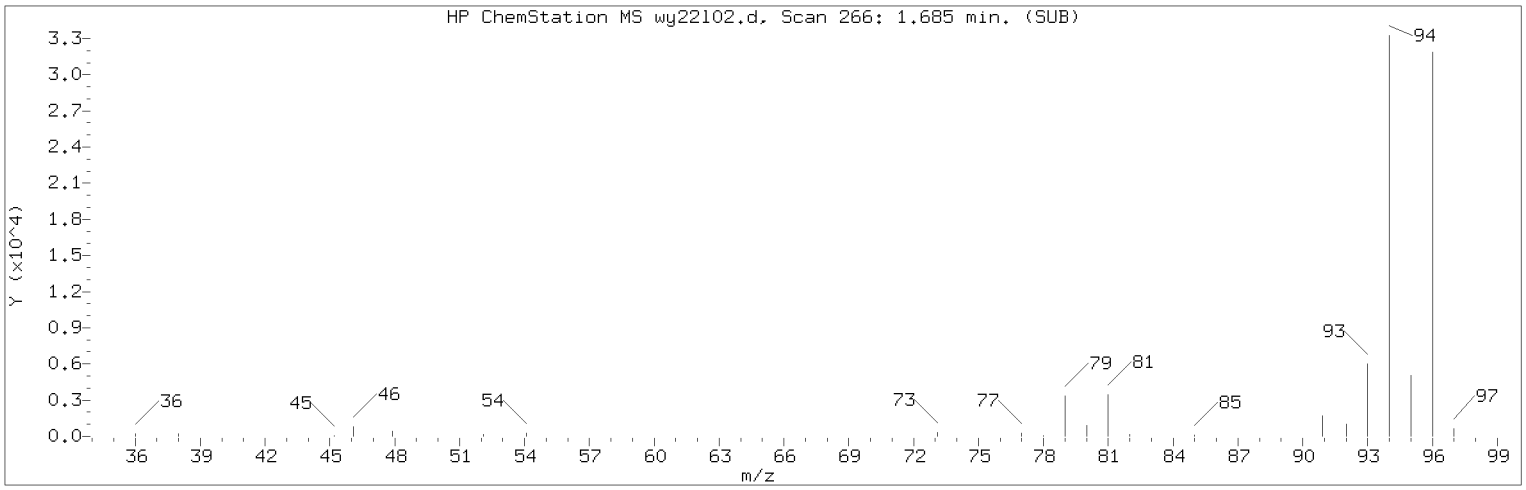
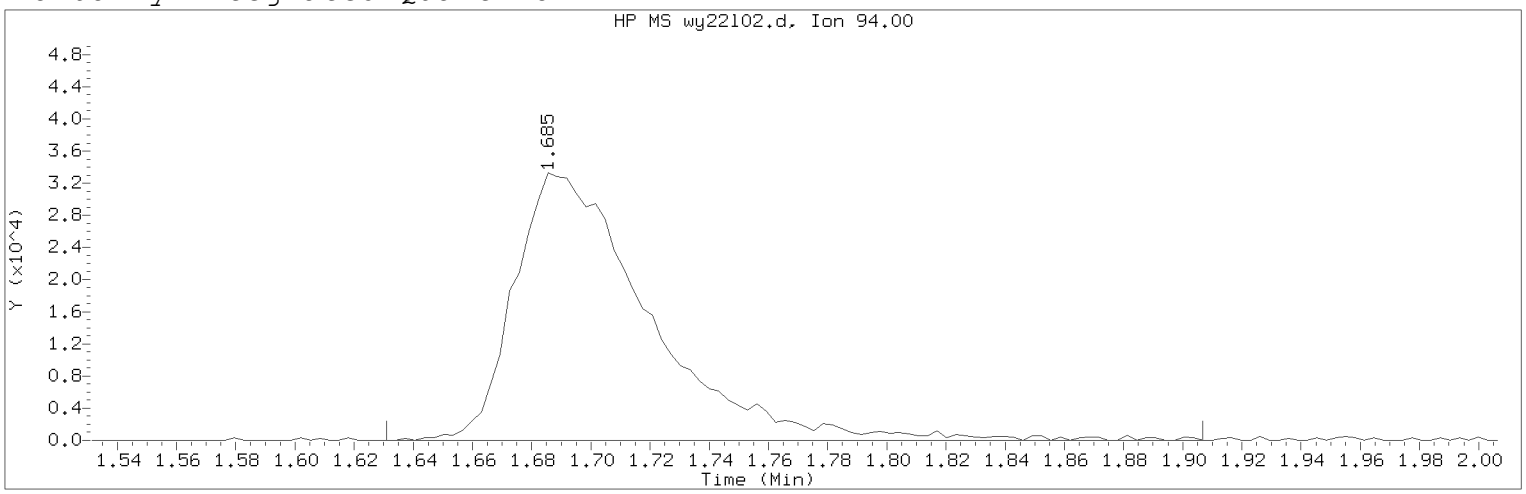
Target 3.5 esignature user ID: cbr01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22l02.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:40 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:58 cbs01947

Sample Name: LCDW34 Lab Sample ID: LCDW34

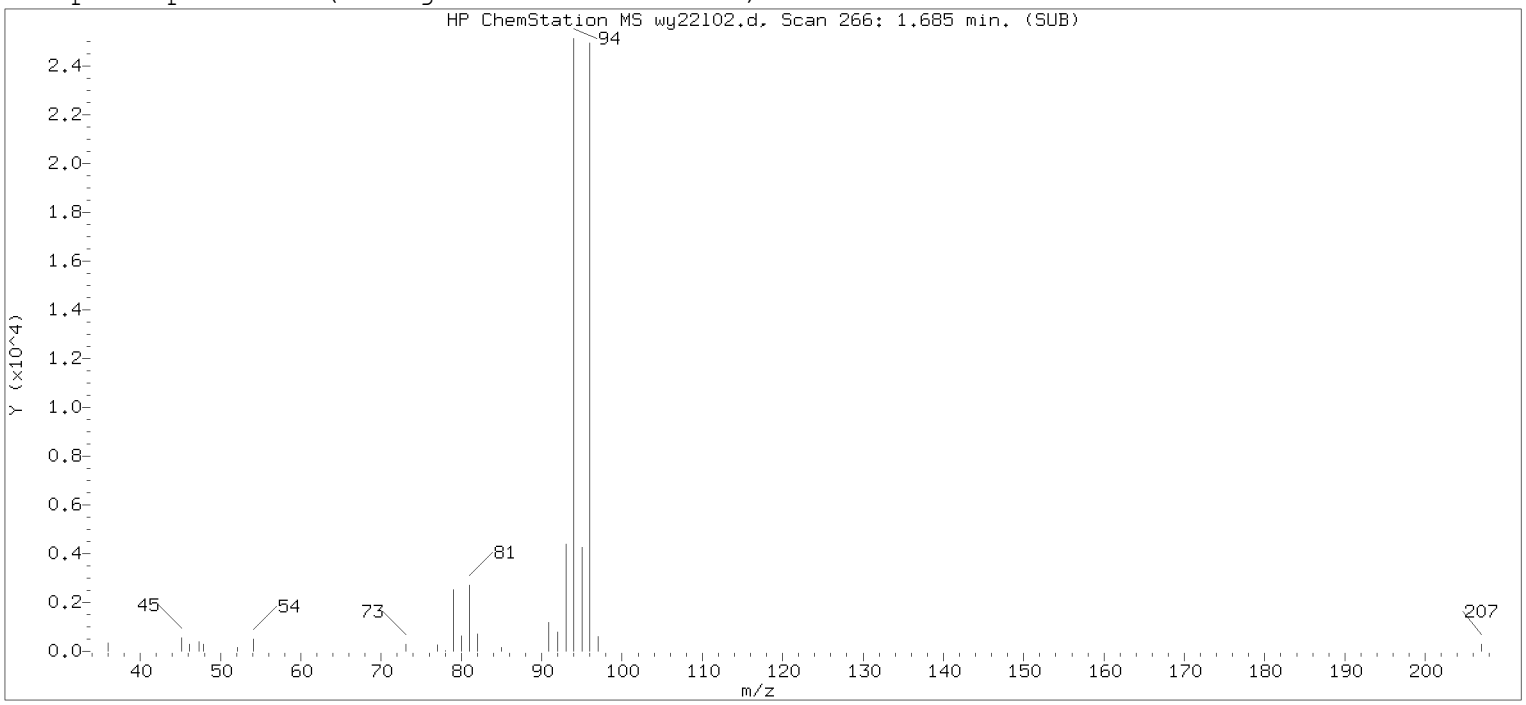
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 266
Retention Time (minutes): 1.685
Quant Ion : 94.00
Area (flag) : 105693M
On-Column Amount (ng) : 16.0296
Integration start scan : 248 Integration stop scan: 334
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

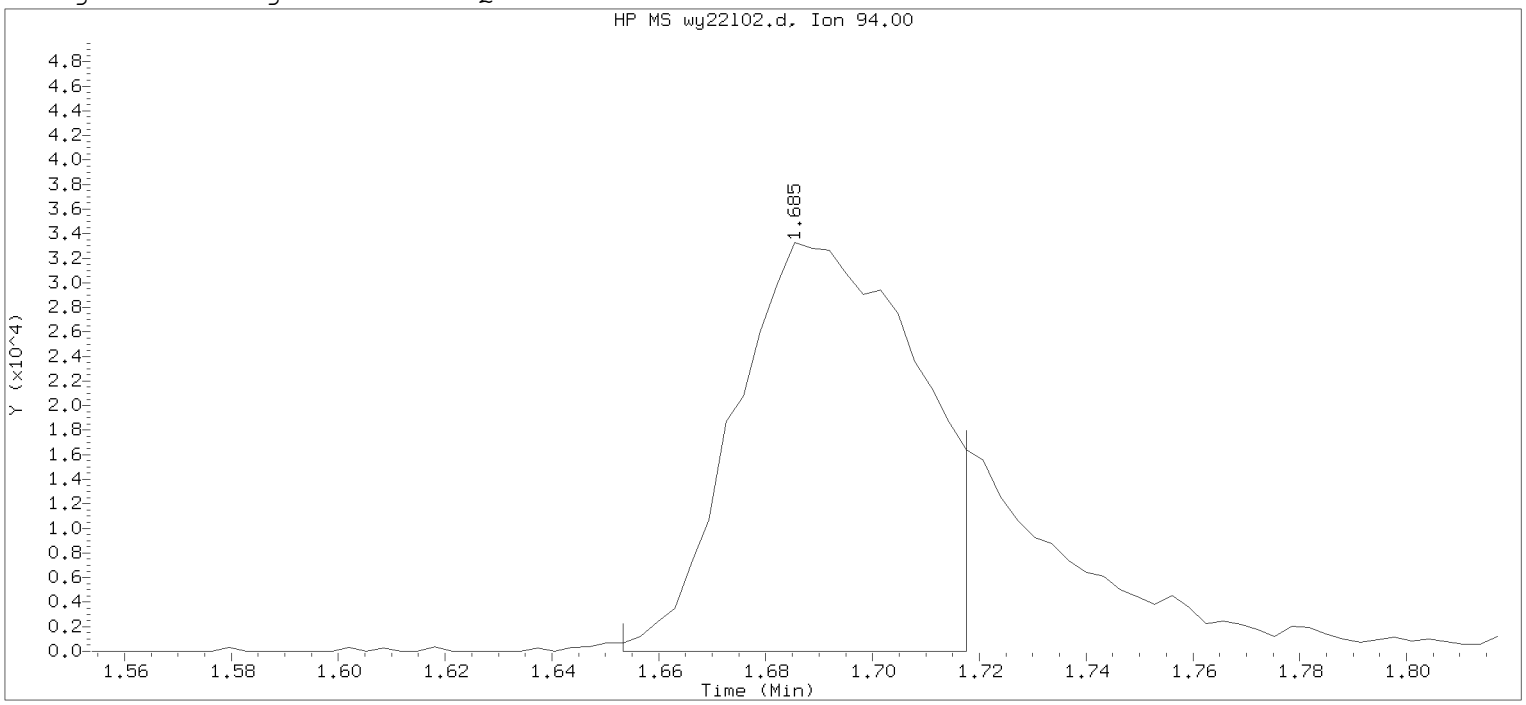
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/22/2019 at 13:59.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22l02.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:40 Analyst ID: CBR01947

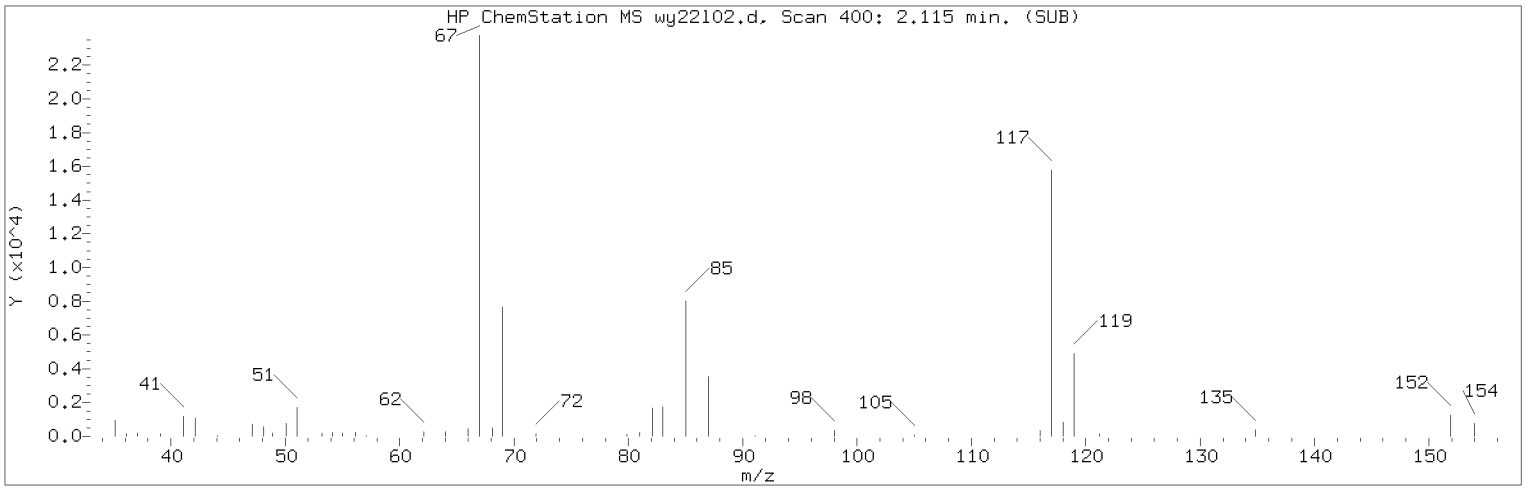
Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:55 Automation

Sample Name: LCDW34 Lab Sample ID: LCDW34

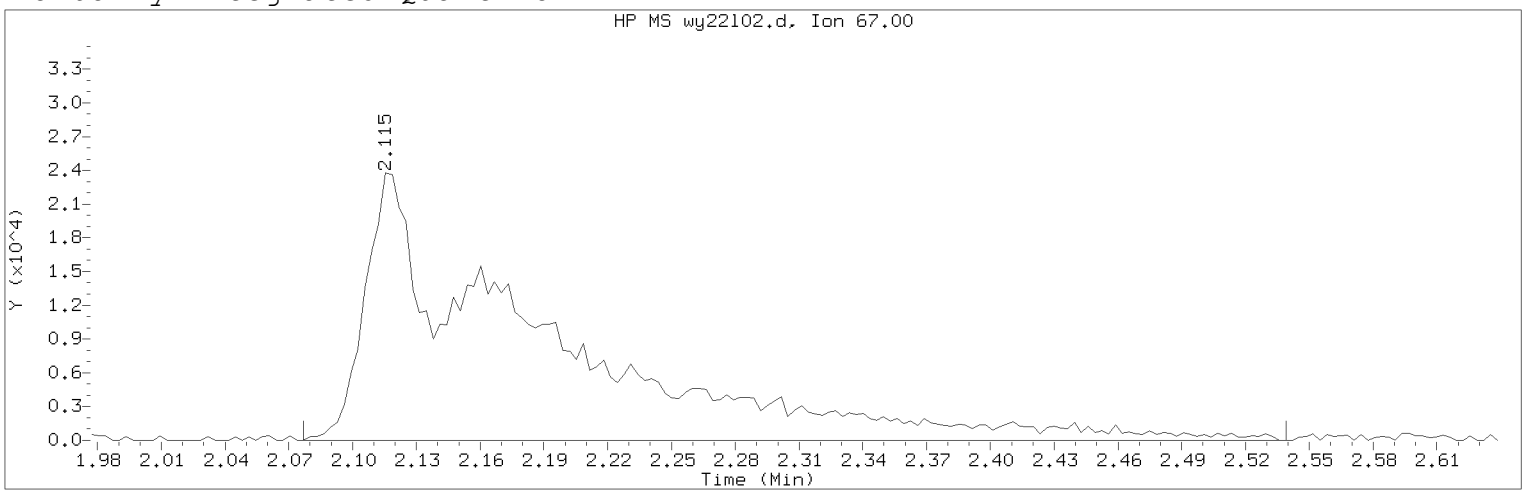
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 266
Retention Time (minutes): 1.685
Quant Ion : 94.00
Area : 78586
On-column Amount (ng) : 11.9186
Integration start scan : 255 Integration stop scan: 275
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 05/22/2019 at 13:59.
Target 3.5 esignature user ID: cbr01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22l02.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:40 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:58 cbs01947

Sample Name: LCDW34 Lab Sample ID: LCDW34

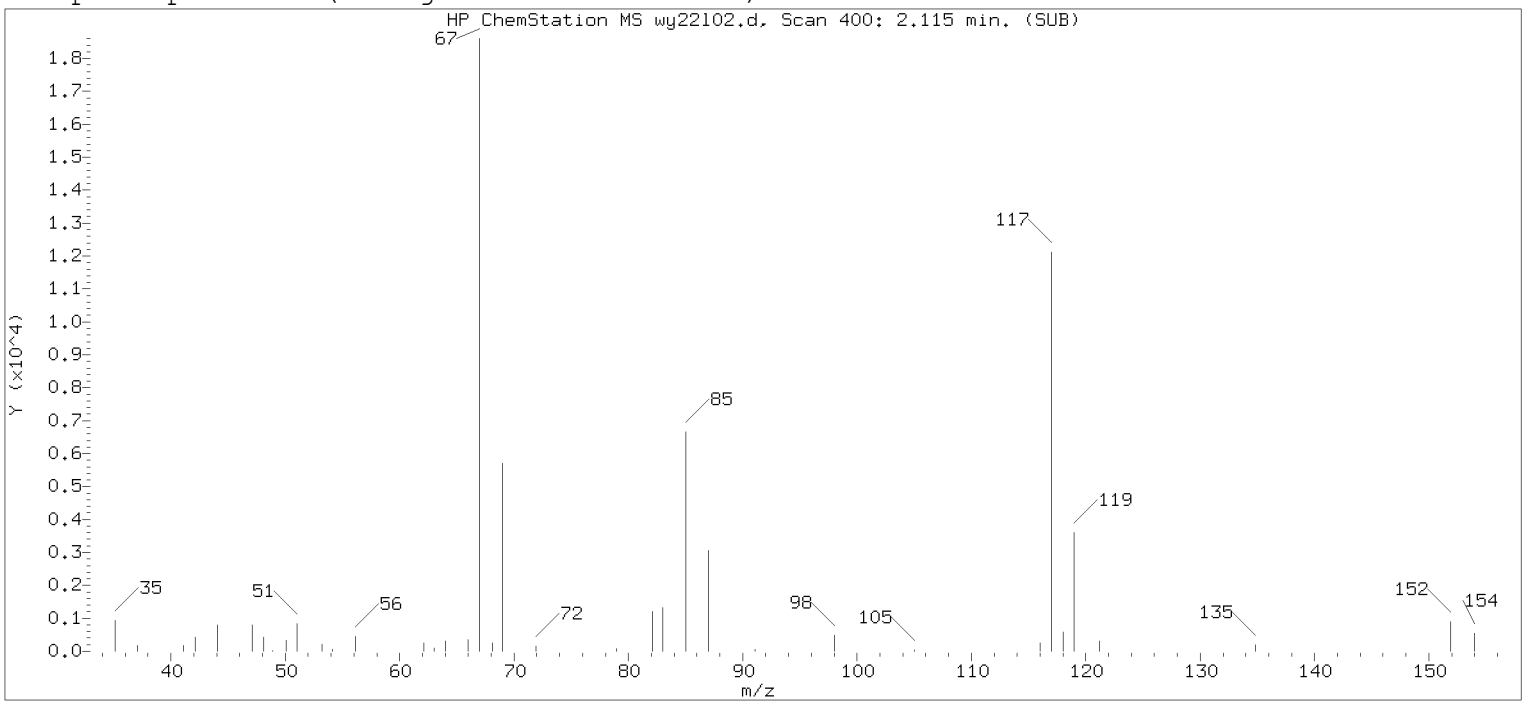
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 400
Retention Time (minutes): 2.115
Quant Ion : 67.00
Area (flag) : 130055M
On-Column Amount (ng) : 19.6010
Integration start scan : 387 Integration stop scan: 531
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

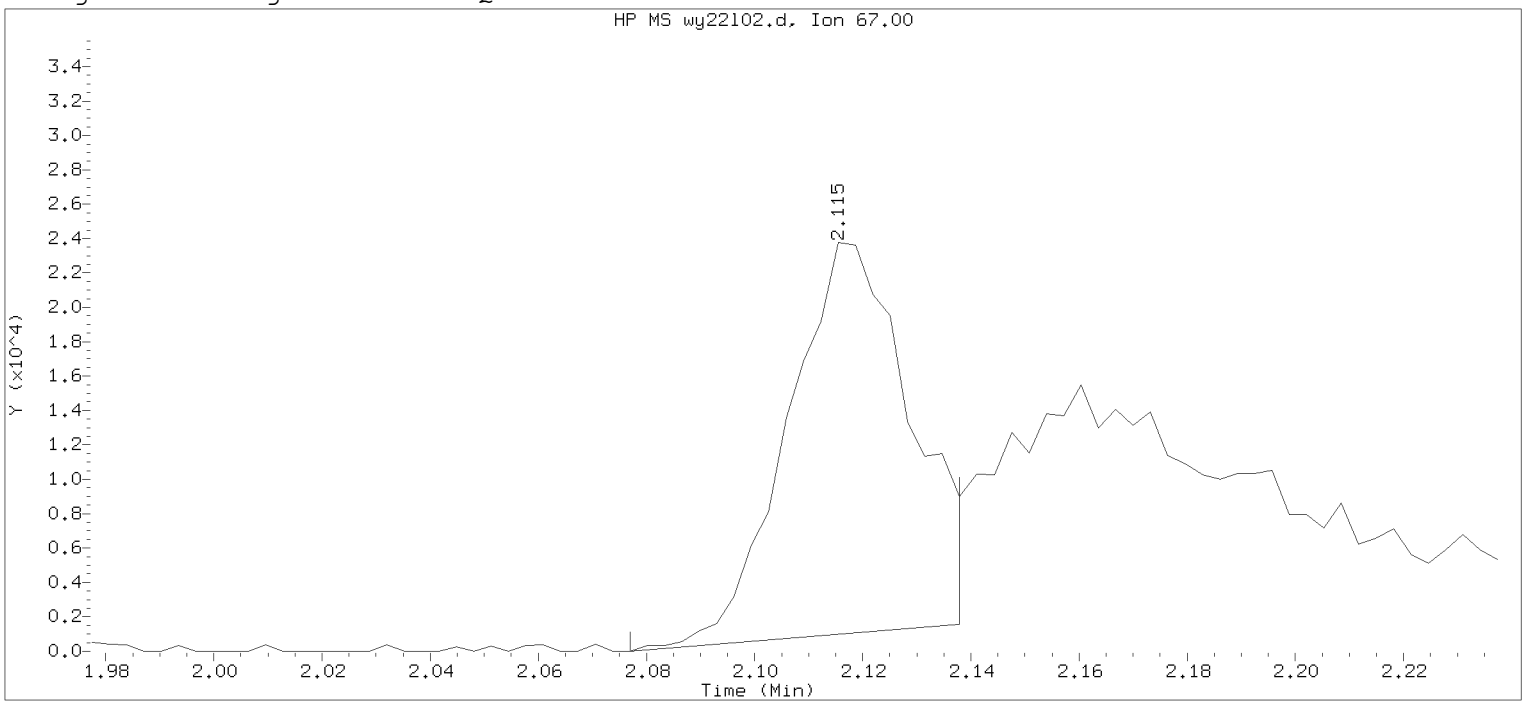
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/22/2019 at 13:59.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22l02.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:40 Analyst ID: CBR01947

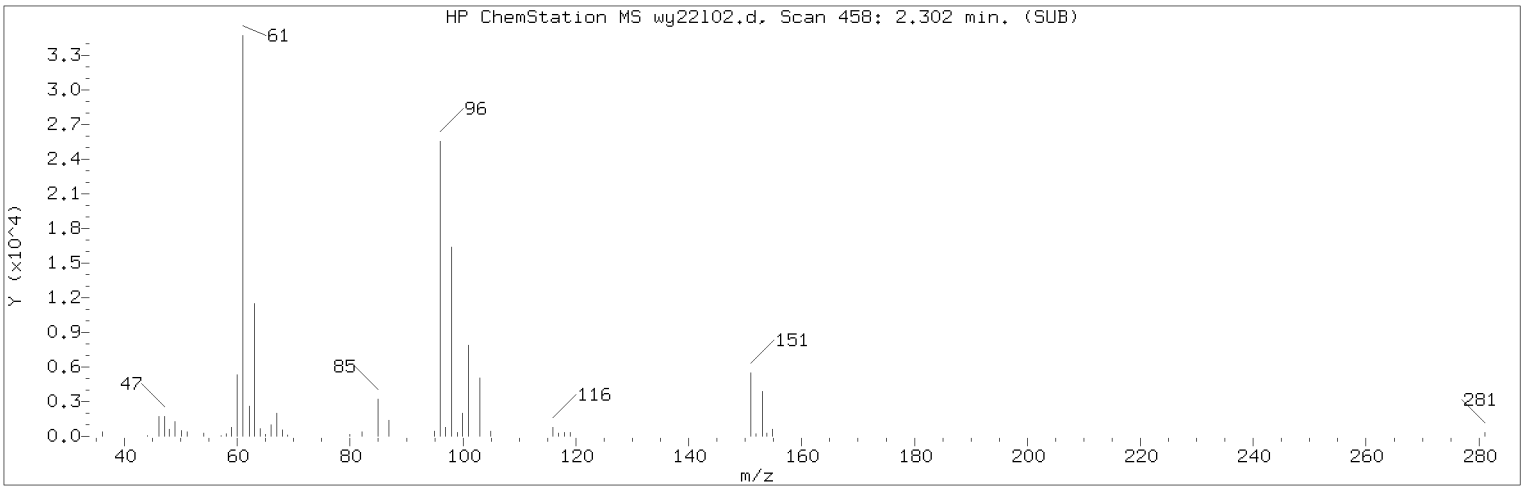
Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:55 Automation

Sample Name: LCDW34 Lab Sample ID: LCDW34

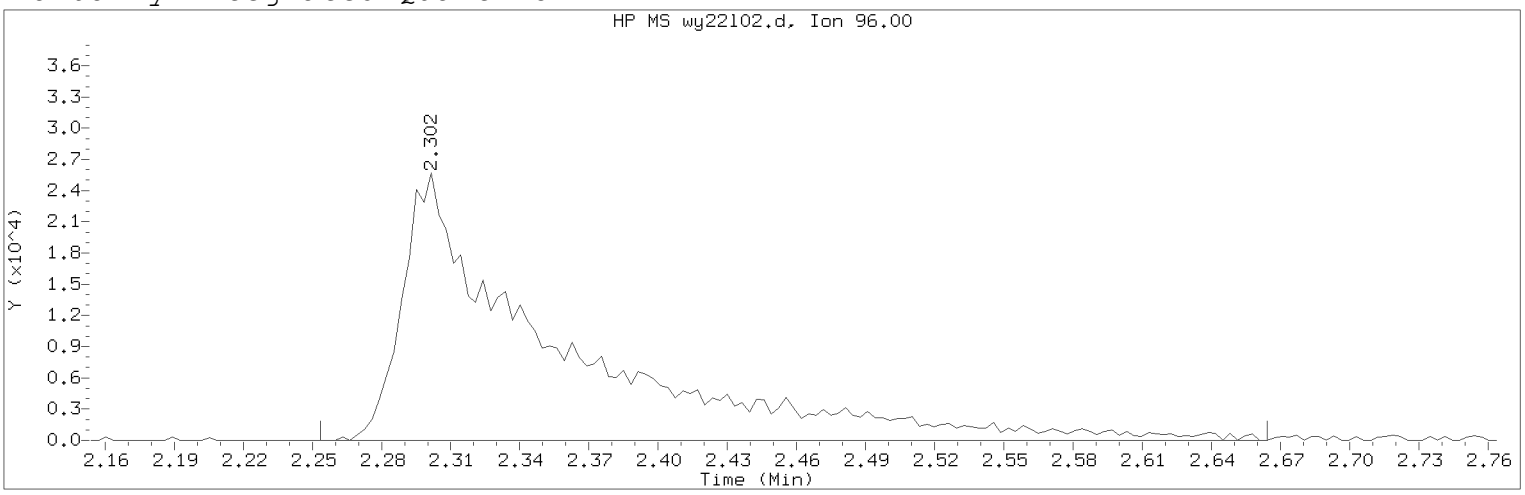
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 400
Retention Time (minutes): 2.115
Quant Ion : 67.00
Area : 35558
On-column Amount (ng) : 5.3592
Integration start scan : 387 Integration stop scan: 406
Y at integration start : 0 Y at integration end: 1555

Digitally signed by Chelsea B. Stong on 05/22/2019 at 13:59.
Target 3.5 esignature user ID: cbr01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22l02.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:40 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:58 cbs01947

Sample Name: LCDW34 Lab Sample ID: LCDW34

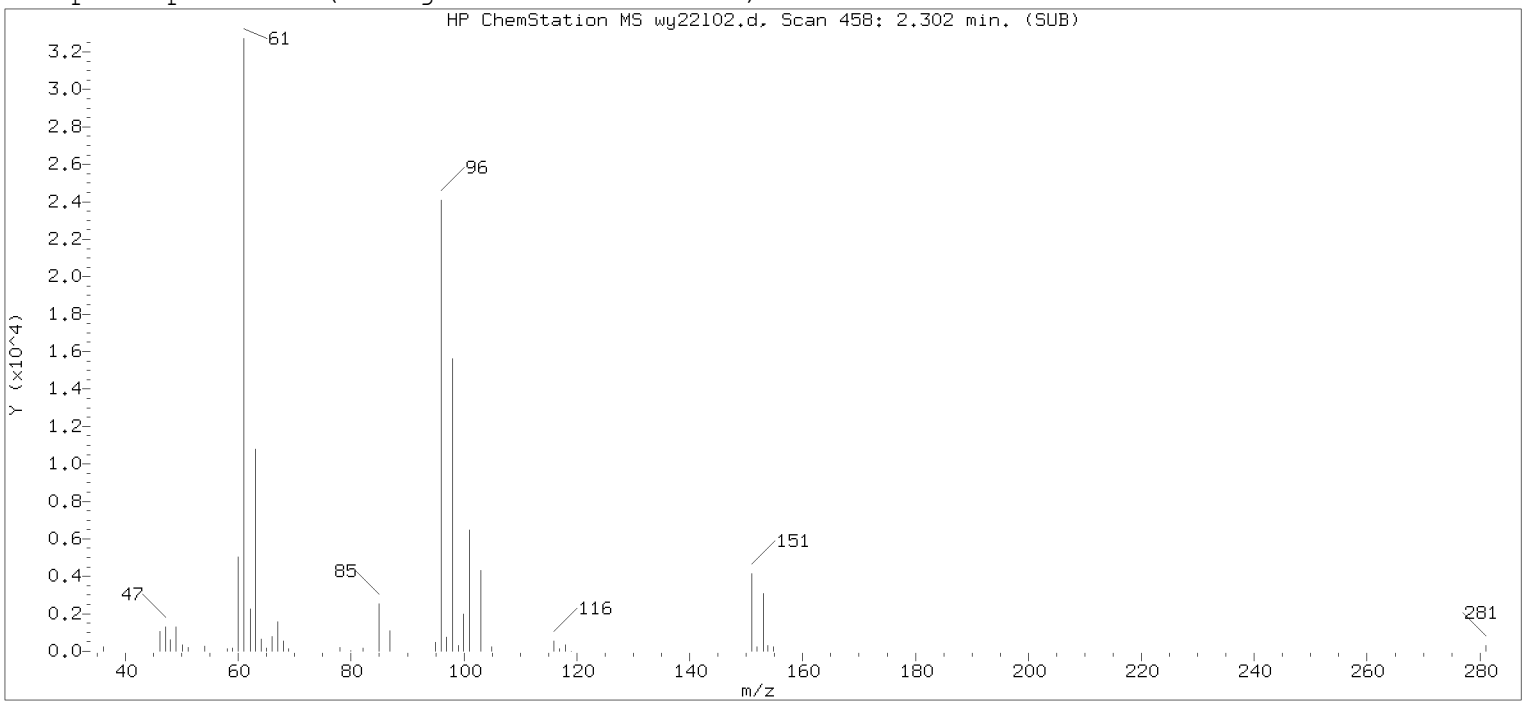
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 458
Retention Time (minutes): 2.302
Quant Ion : 96.00
Area (flag) : 116121M
On-Column Amount (ng) : 23.2522
Integration start scan : 442 Integration stop scan: 570
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

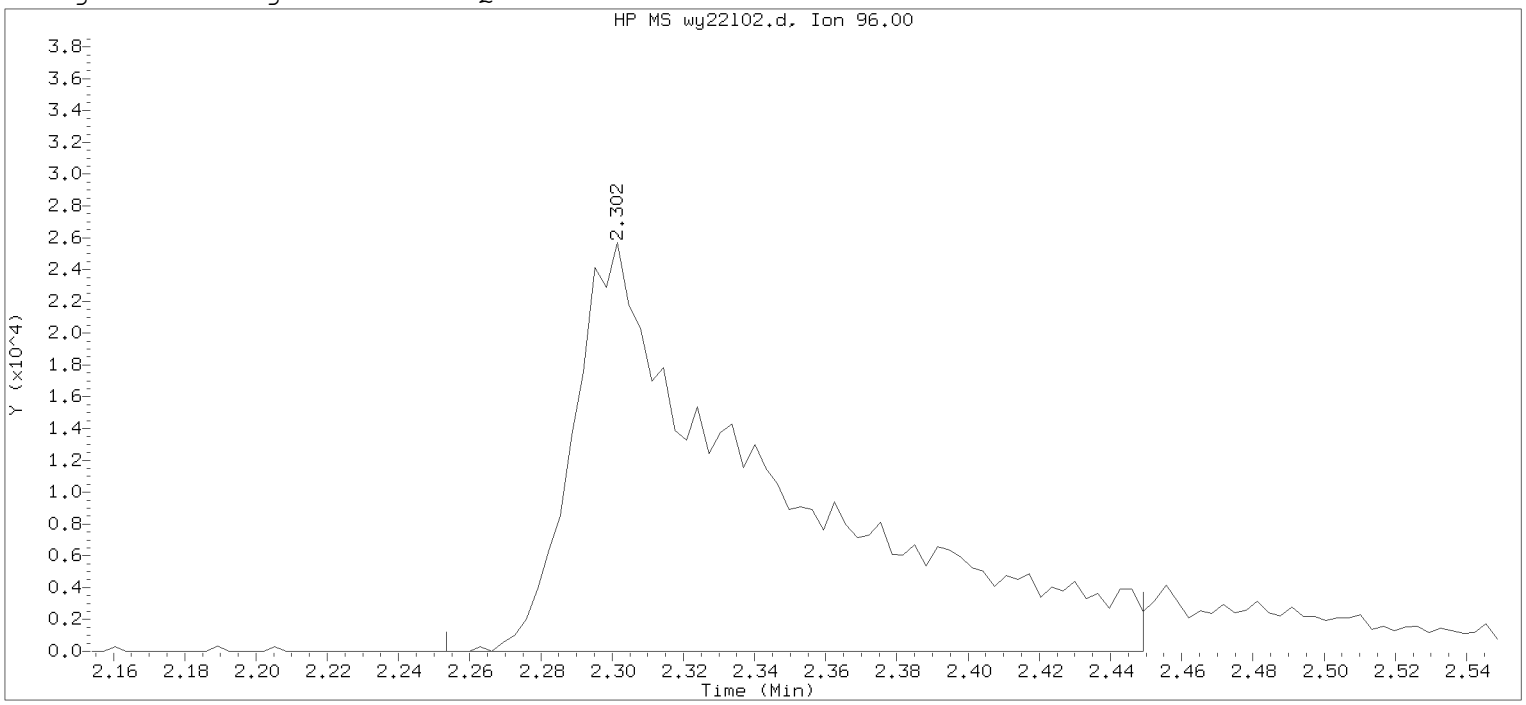
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/22/2019 at 13:59.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22102.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:40 Analyst ID: CBR01947

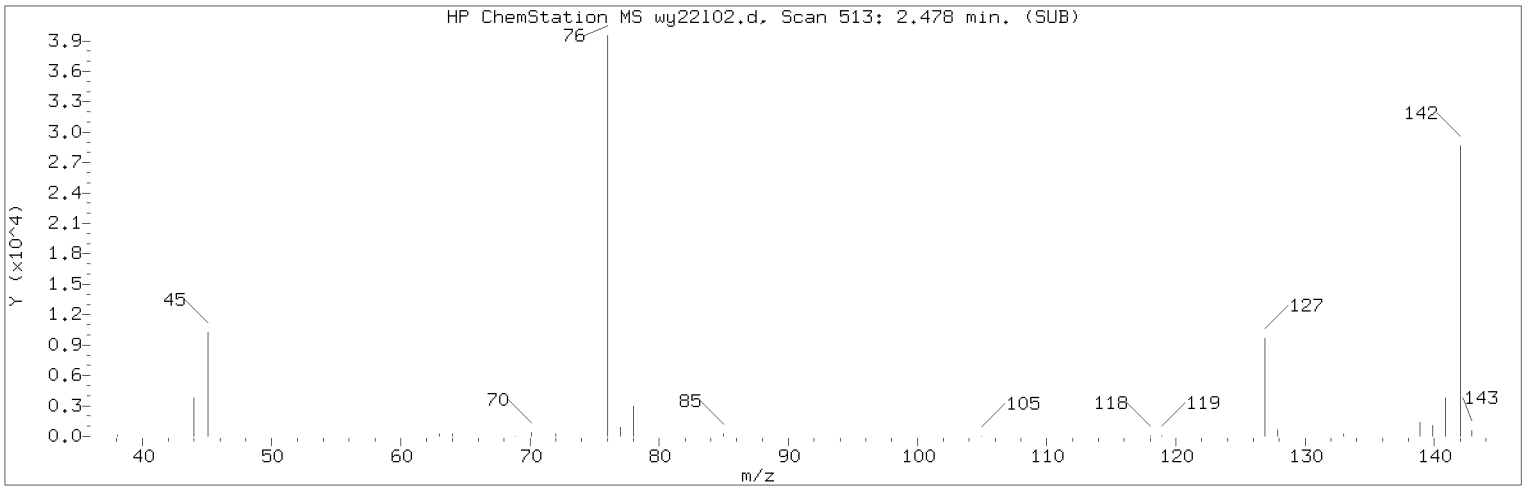
Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:55 Automation

Sample Name: LCDW34 Lab Sample ID: LCDW34

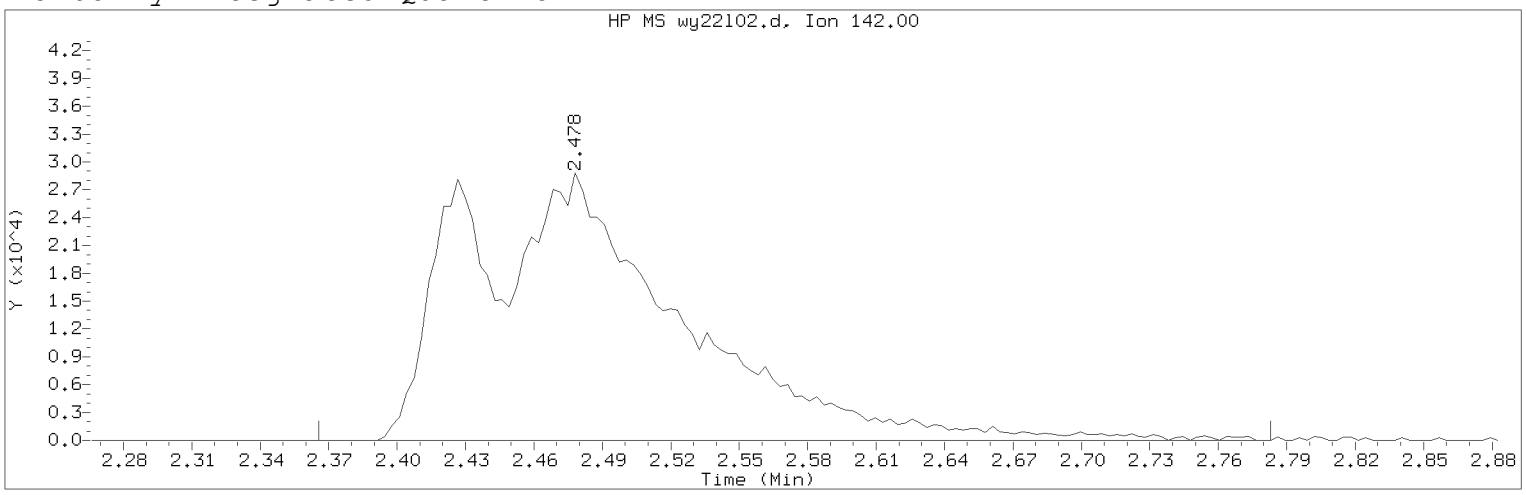
Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 458
Retention Time (minutes): 2.302
Quant Ion : 96.00
Area : 98858
On-column Amount (ng) : 19.7955
Integration start scan : 442 Integration stop scan: 503
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 05/22/2019 at 13:59.
Target 3.5 esignature user ID: CBR01651

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22102.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:40 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:58 cbs01947

Sample Name: LCDW34 Lab Sample ID: LCDW34

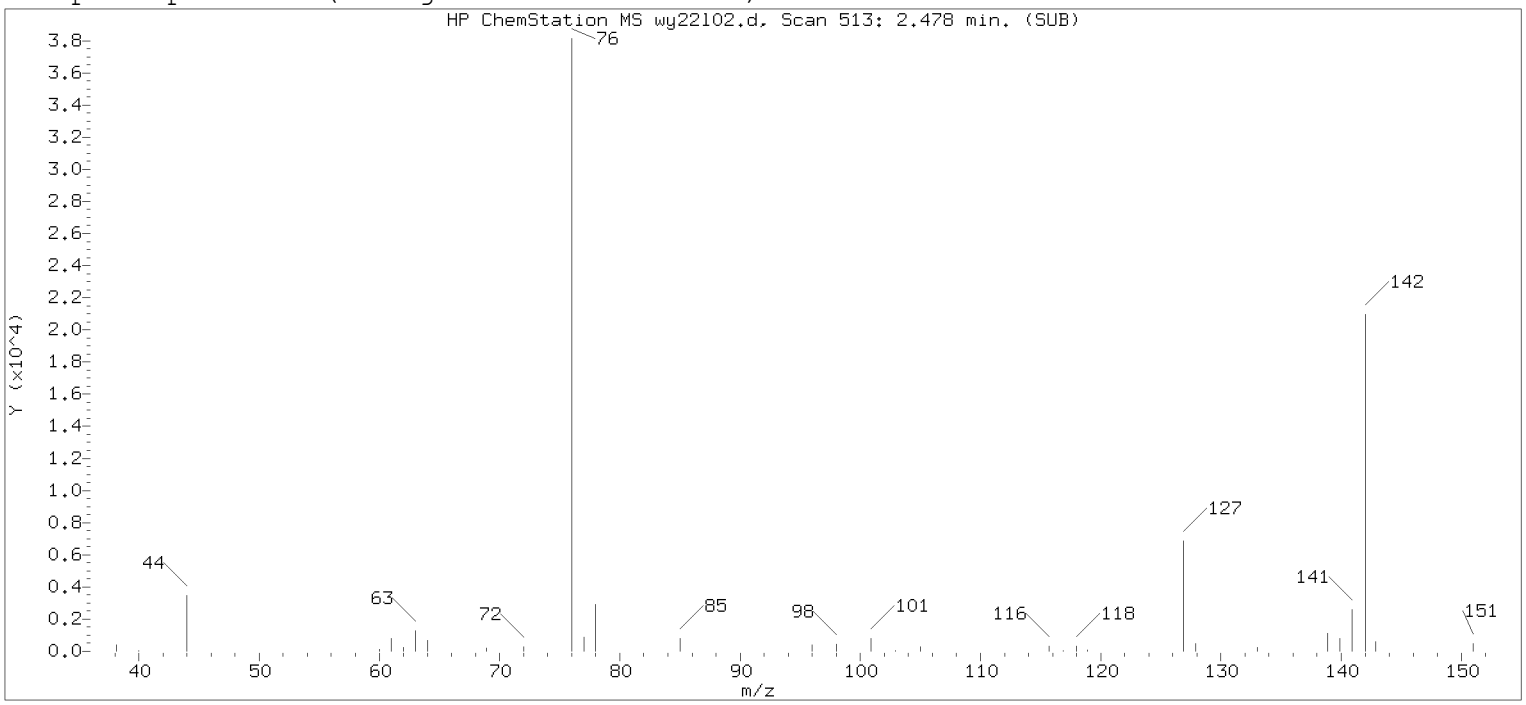
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 513
Retention Time (minutes): 2.478
Quant Ion : 142.00
Area (flag) : 187387M
On-Column Amount (ng) : 19.5805
Integration start scan : 477 Integration stop scan: 607
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

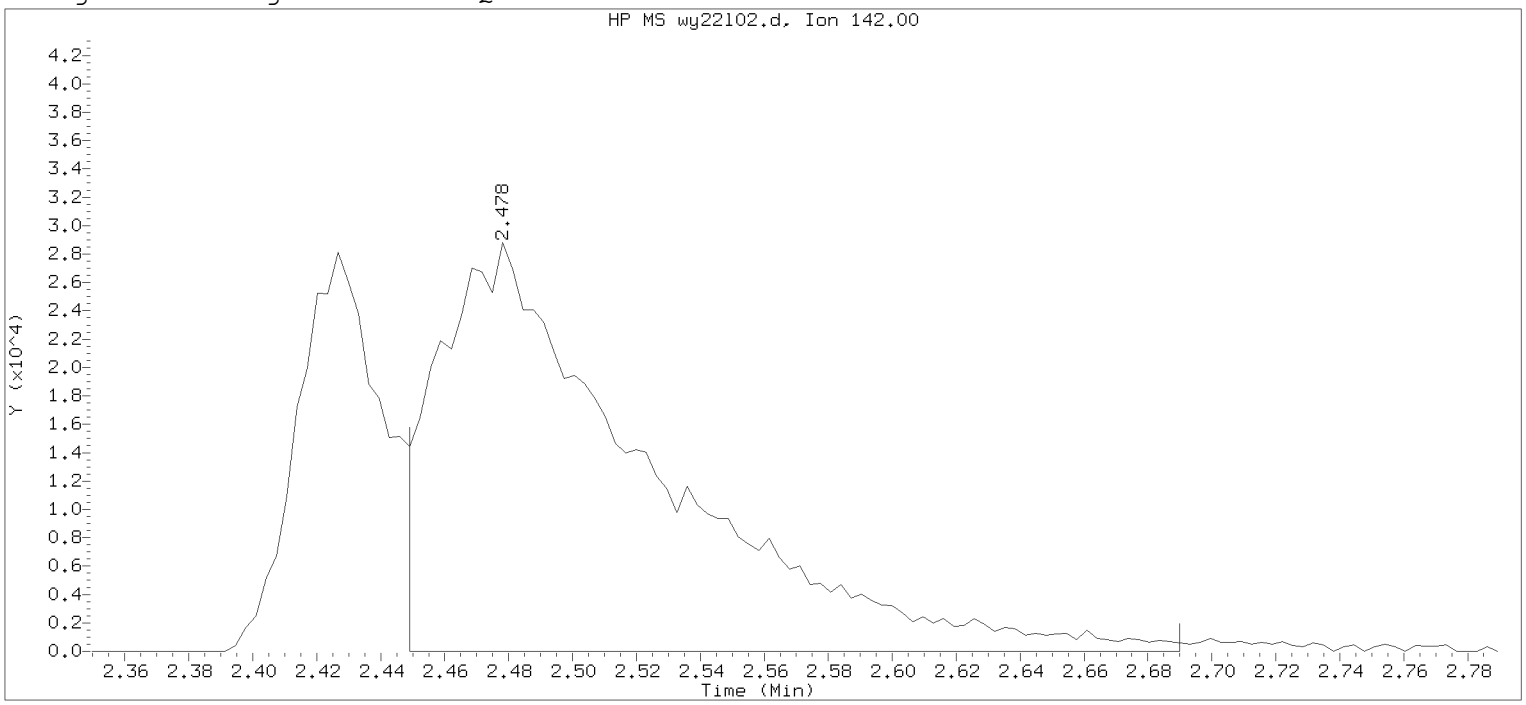
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/22/2019 at 13:59.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22102.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:40 Analyst ID: CBR01947

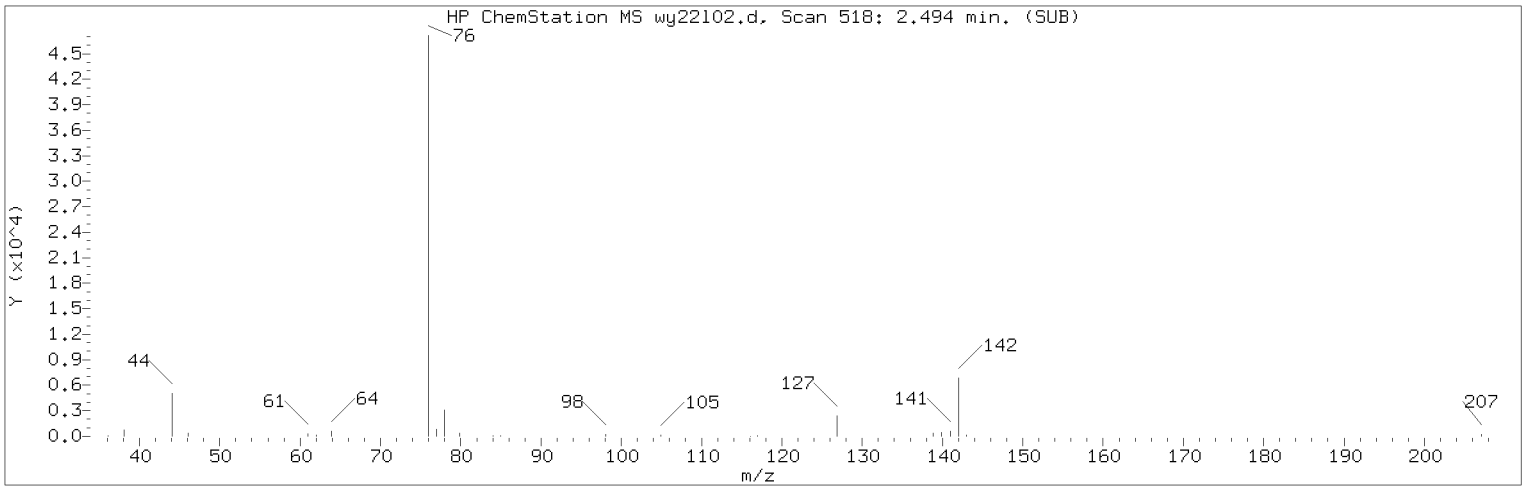
Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:55 Automation

Sample Name: LCDW34 Lab Sample ID: LCDW34

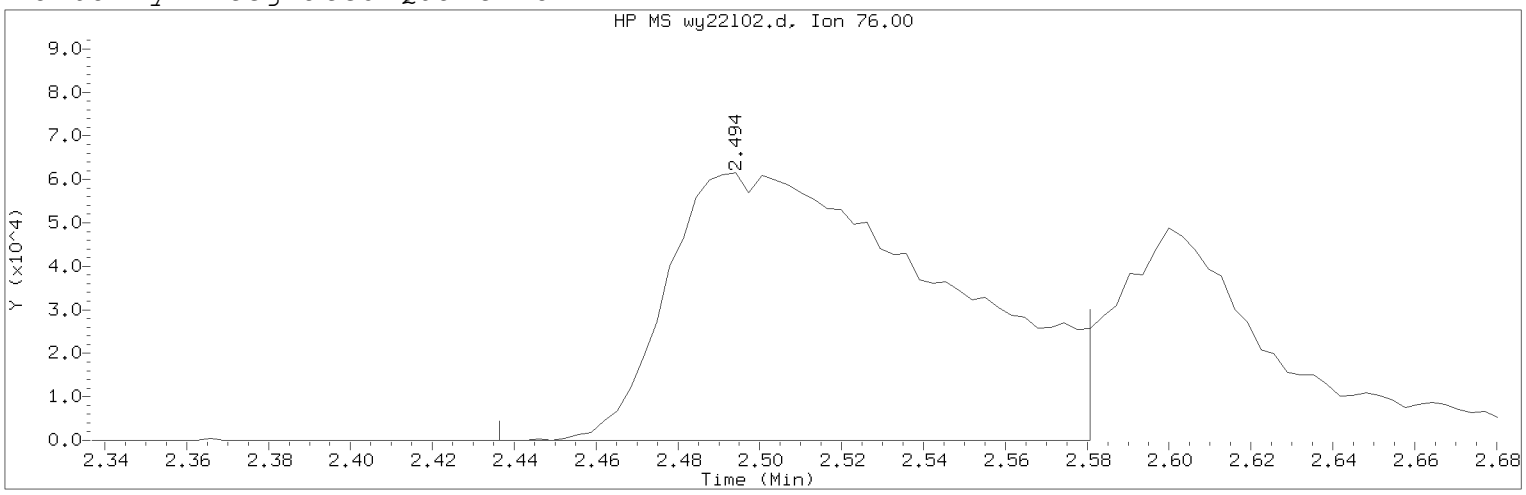
Compound Number	: 22		
Compound Name	: Methyl Iodide		
Scan Number	: 513		
Retention Time (minutes)	: 2.478		
Quant Ion	: 142.00		
Area	: 133704		
On-column Amount (ng)	: 13.9711		
Integration start scan	: 503	Integration stop scan:	578
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Chelsea B. Stong on 05/22/2019 at 13:59.
Target 3.5 esignature user ID: CBS01653

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22l02.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:40 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:58 cbs01947

Sample Name: LCDW34 Lab Sample ID: LCDW34

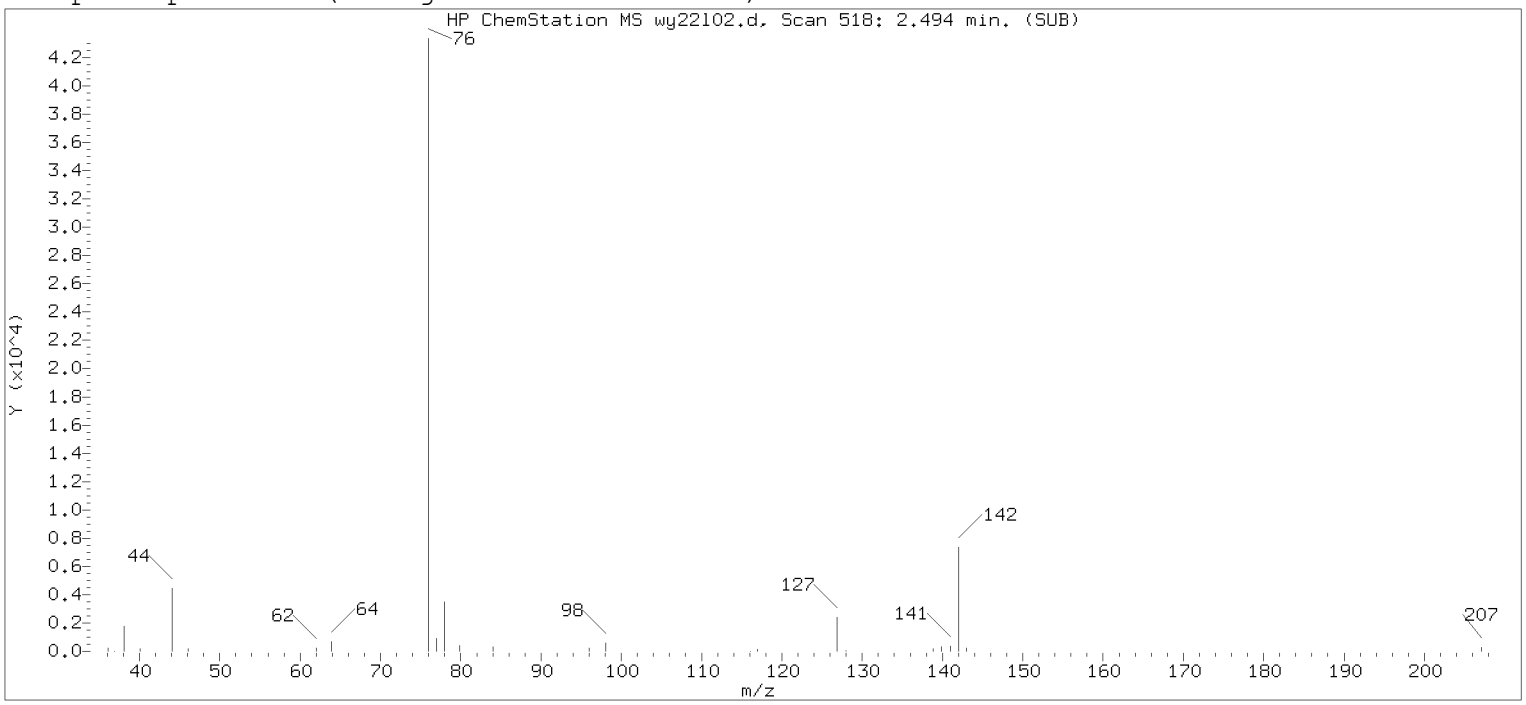
Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 518
Retention Time (minutes): 2.494
Quant Ion : 76.00
Area (flag) : 290762M
On-Column Amount (ng) : 16.5262
Integration start scan : 499 Integration stop scan: 544
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

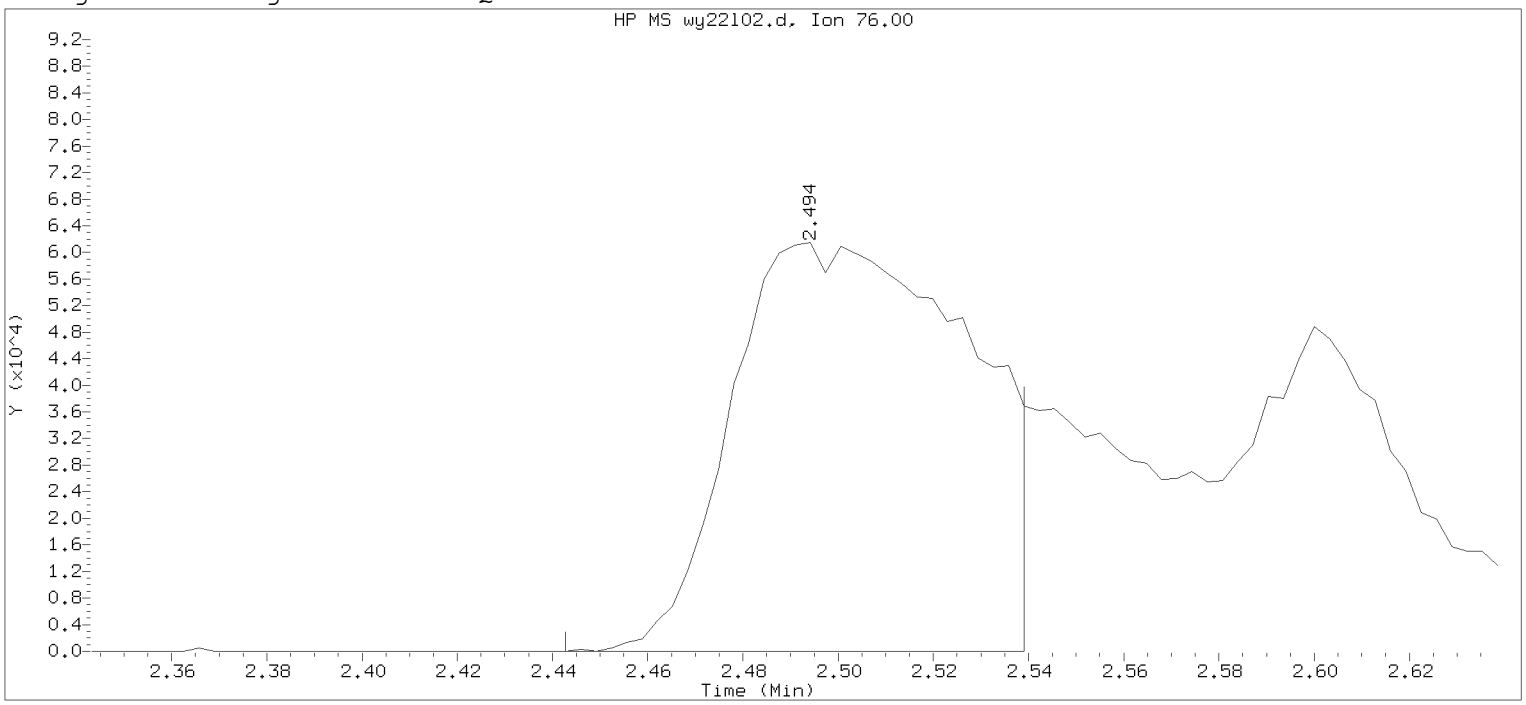
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/22/2019 at 13:59.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22102.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:40 Analyst ID: CBR01947

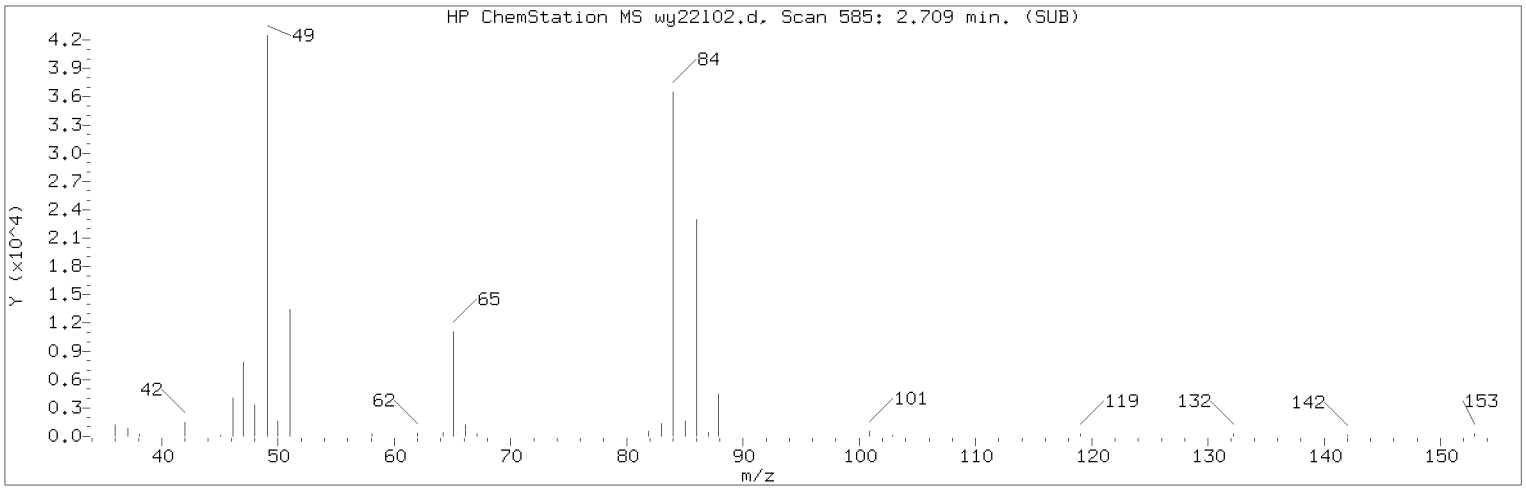
Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:55 Automation

Sample Name: LCDW34 Lab Sample ID: LCDW34

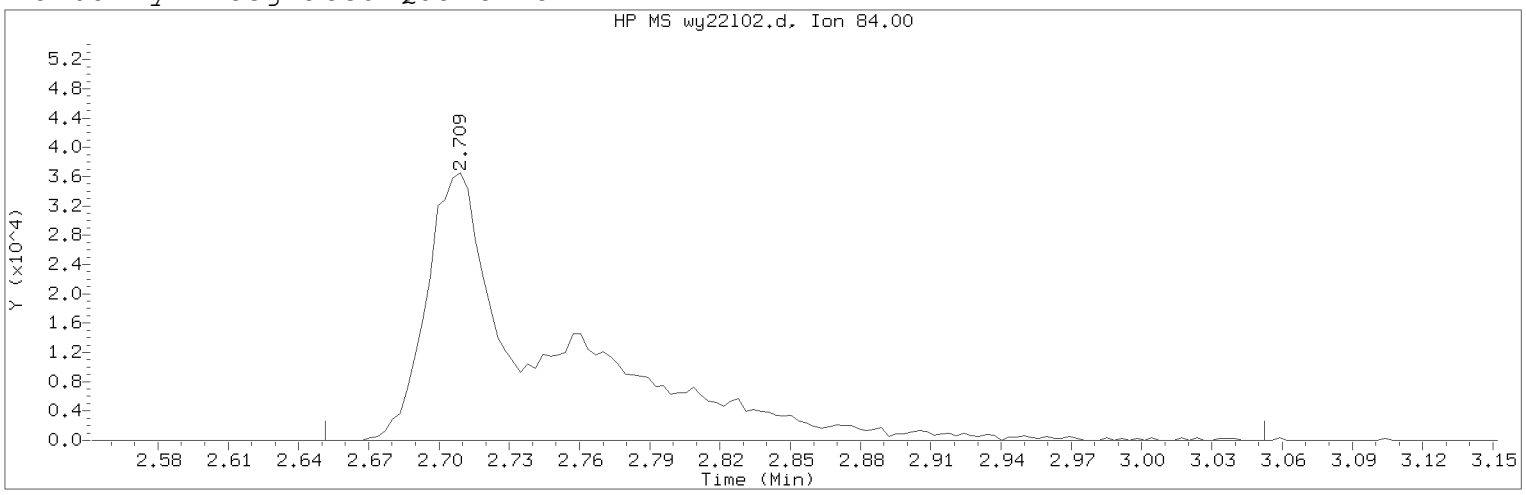
Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 518
Retention Time (minutes): 2.494
Quant Ion : 76.00
Area : 212179
On-column Amount (ng) : 12.0598
Integration start scan : 501 Integration stop scan: 531
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 05/22/2019 at 13:59.
Target 3.5 esignature user check: 1655

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22102.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:40 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:58 cbs01947

Sample Name: LCDW34 Lab Sample ID: LCDW34

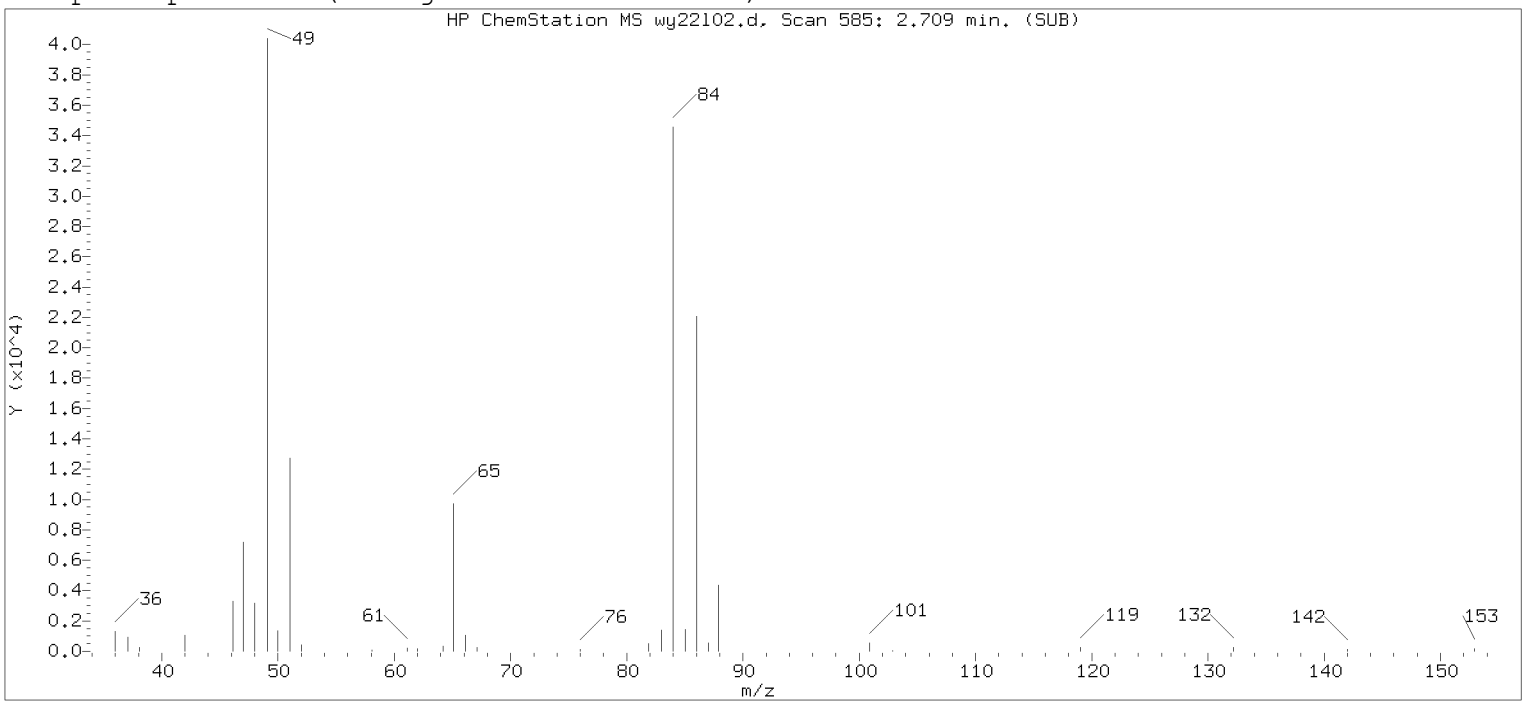
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area (flag) : 131659M
On-Column Amount (ng) : 21.5684
Integration start scan : 566 Integration stop scan: 691
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

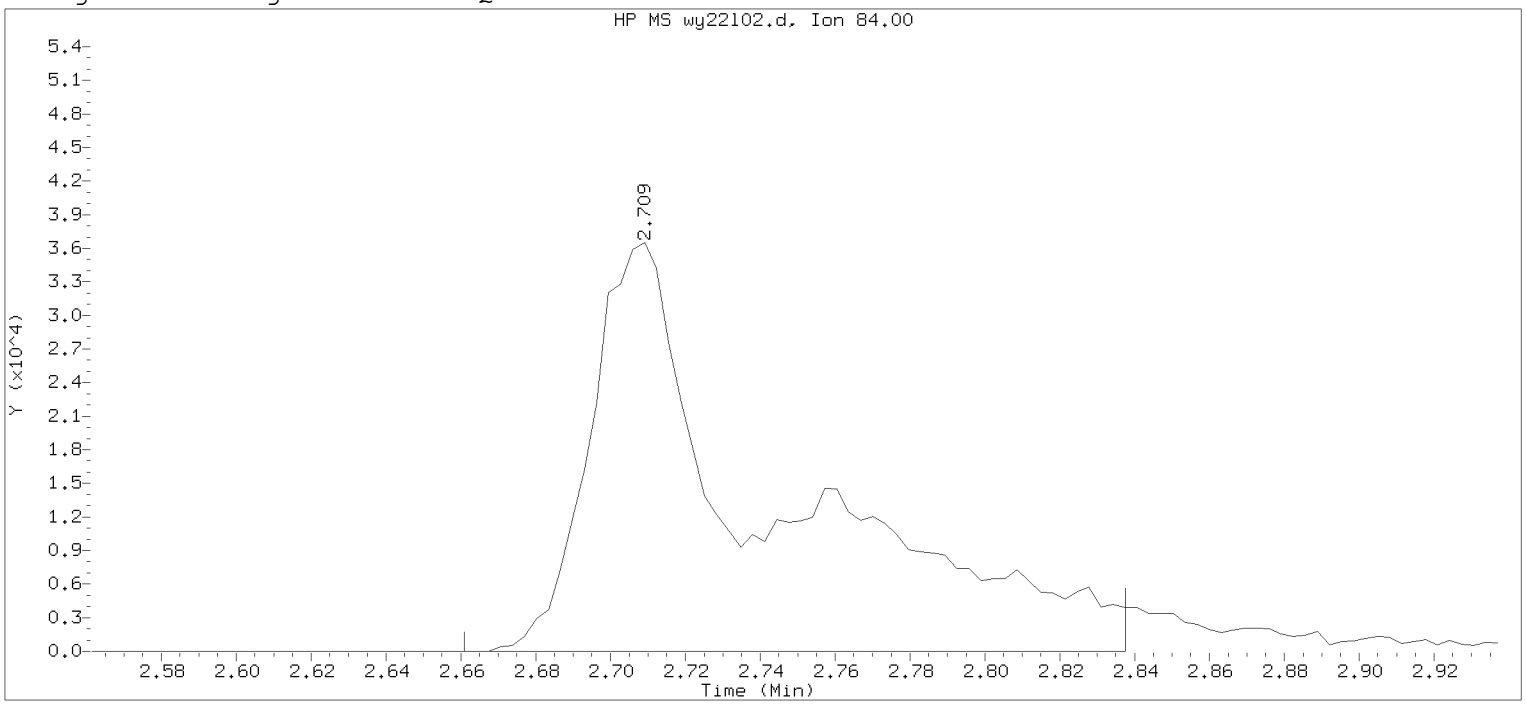
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/22/2019 at 13:59.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22l02.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:40 Analyst ID: CBR01947

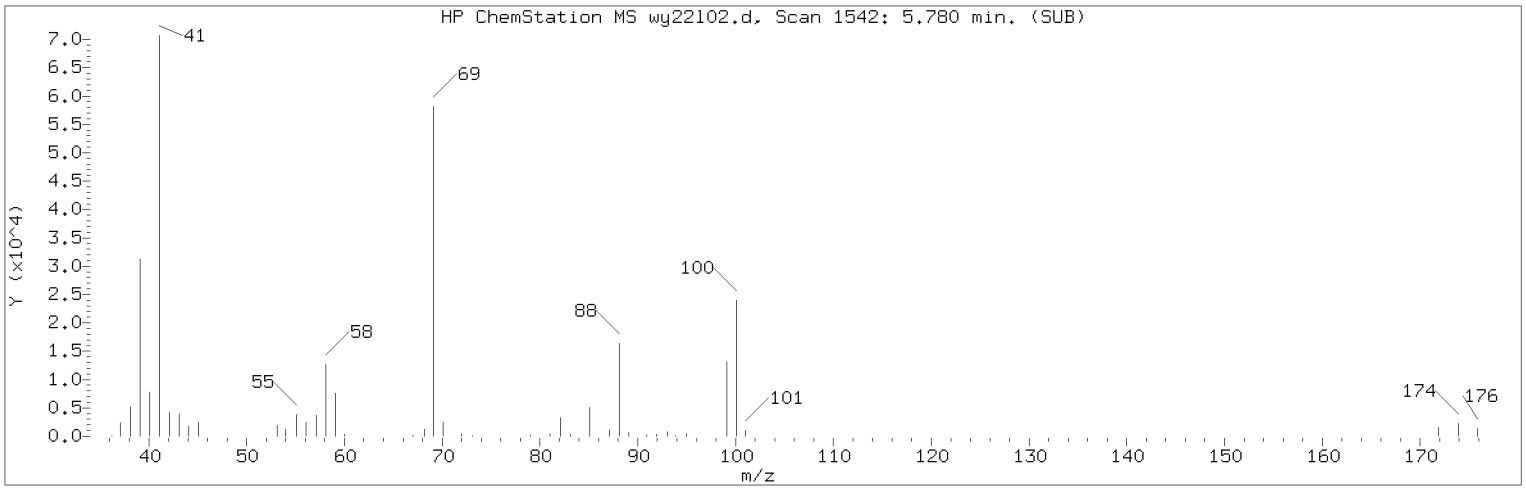
Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:55 Automation

Sample Name: LCDW34 Lab Sample ID: LCDW34

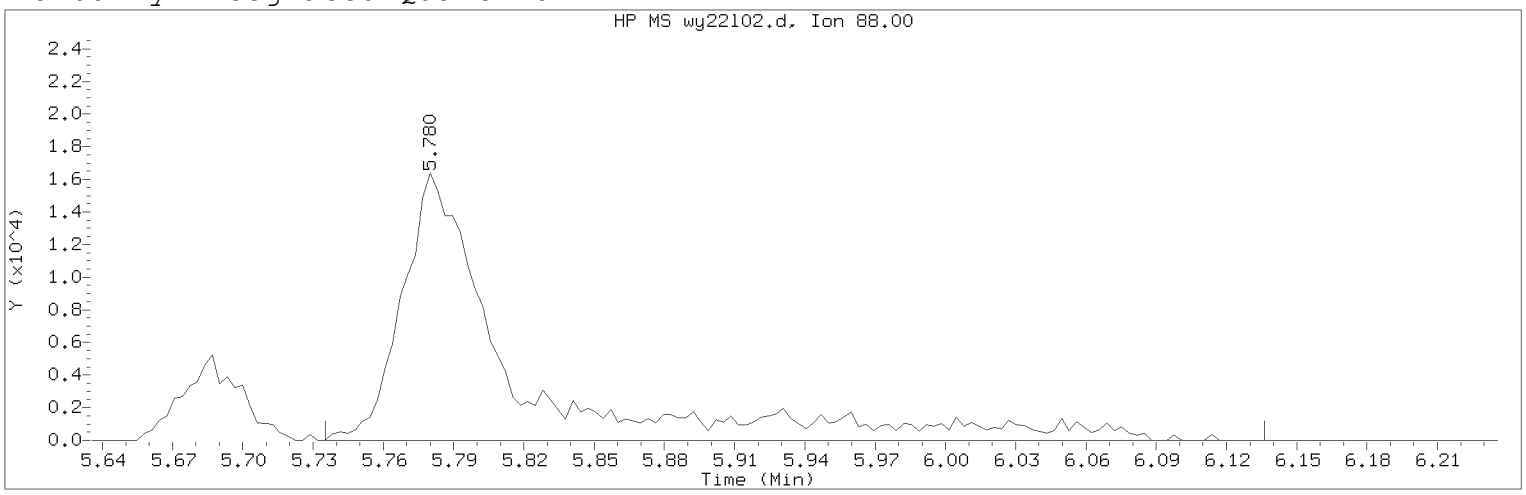
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area : 120440
On-column Amount (ng) : 19.7305
Integration start scan : 569 Integration stop scan: 624
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 05/22/2019 at 13:59.
Target 3.5 esignature user ID: cbr01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22102.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:40 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:58 cbs01947

Sample Name: LCDW34 Lab Sample ID: LCDW34

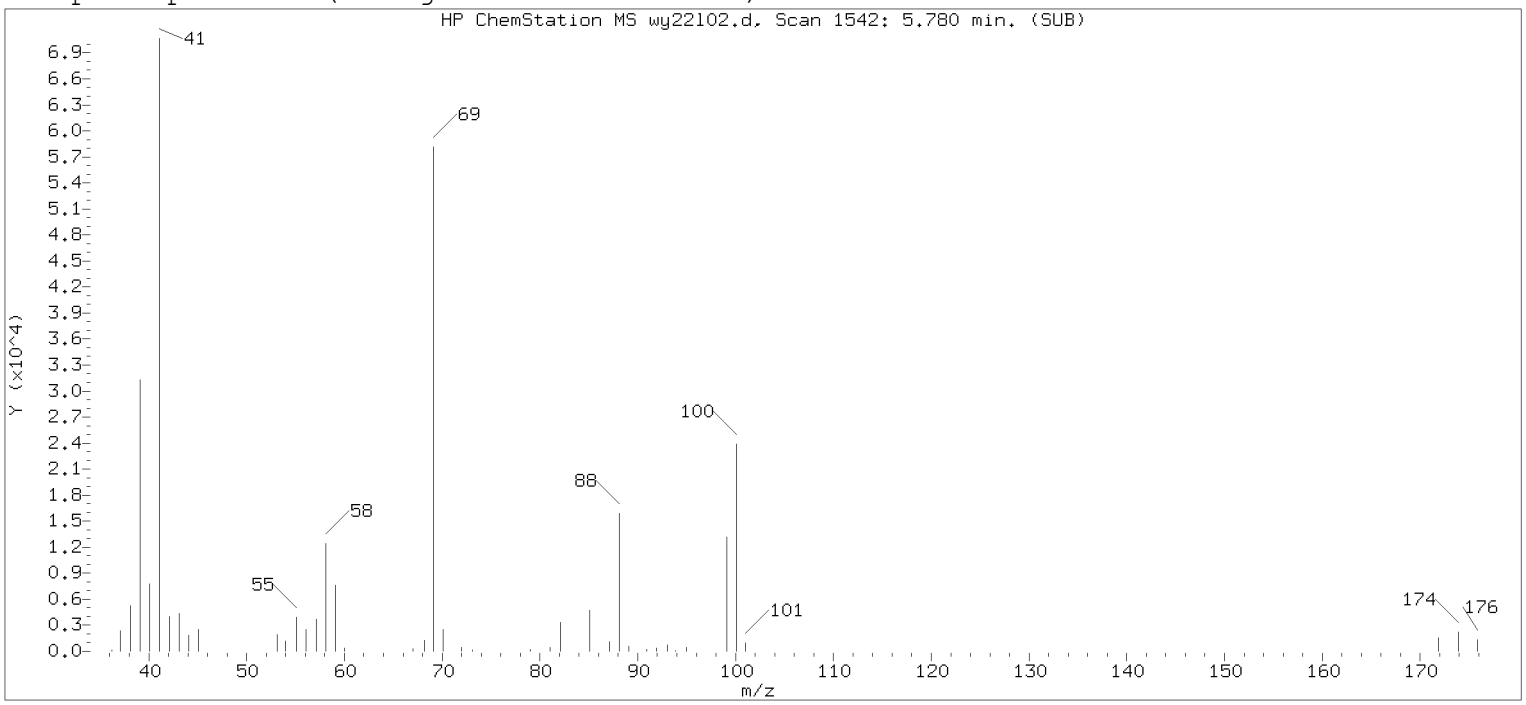
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area (flag) : 53967M
On-Column Amount (ng) : 513.1010
Integration start scan : 1527 Integration stop scan: 1652
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

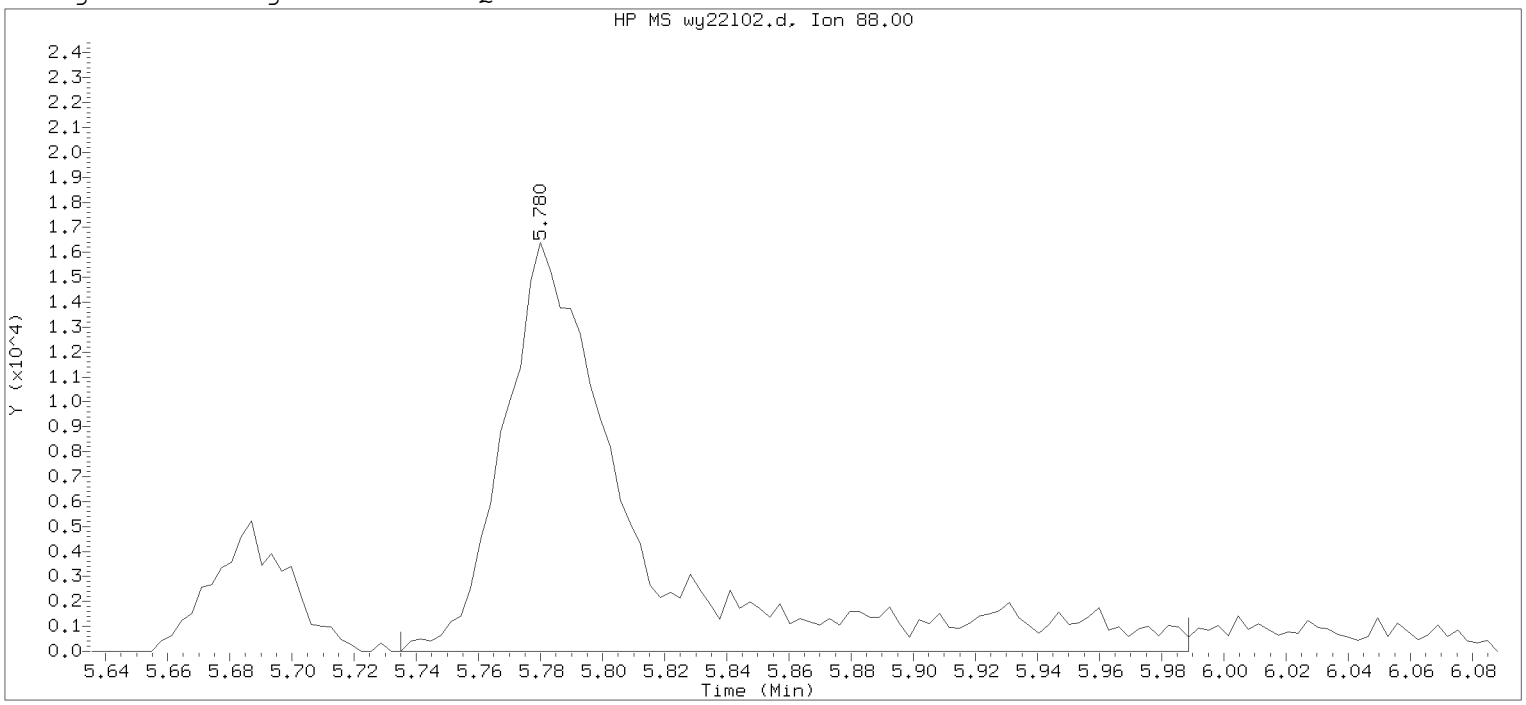
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 05/22/2019 at 13:59.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Kelly E. Keller on 05/23/2019 at 11:23.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may22a.b/wy22l02.d Instrument ID: HP09137.i
Injection date and time: 22-MAY-2019 13:40 Analyst ID: CBR01947

Method used: /chem2/HP09137.i/19may22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-MAY-2019 12:19
Date, time and analyst ID of latest file update: 22-May-2019 13:55 Automation

Sample Name: LCDW34 Lab Sample ID: LCDW34

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area : 49198
On-column Amount (ng) : 467.7522
Integration start scan : 1527 Integration stop scan: 1606
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 05/22/2019 at 13:59.
Target 3.5 esignature user ID: cbr01947

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSW35

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSW35

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may23a.b/wy23l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	17	
74-87-3	Chloromethane	16	
106-99-0	1,3-Butadiene	29	
75-01-4	Vinyl Chloride	17	
74-83-9	Bromomethane	16	
75-00-3	Chloroethane	16	
109-66-0	n-Pentane	15	
75-69-4	Trichlorofluoromethane	17	
64-17-5	Ethanol	450	J
354-23-4	Freon 123a	19	
107-02-8	Acrolein	130	
75-35-4	1,1-Dichloroethene	21	
67-64-1	Acetone	160	
76-13-1	Freon 113	18	
67-63-0	2-Propanol	170	
74-88-4	Methyl Iodide	19	
75-15-0	Carbon Disulfide	16	
107-05-1	Allyl Chloride	19	
79-20-9	Methyl Acetate	19	
75-09-2	Methylene Chloride	21	
75-65-0	t-Butyl alcohol	210	
107-13-1	Acrylonitrile	88	
156-60-5	trans-1,2-Dichloroethene	21	
1634-04-4	Methyl Tertiary Butyl Ether	24	
110-54-3	n-Hexane	18	
75-34-3	1,1-Dichloroethane	21	
108-20-3	di-Isopropyl ether	21	
126-99-8	2-Chloro-1,3-butadiene	21	
637-92-3	Ethyl t-butyl ether	22	
156-59-2	cis-1,2-Dichloroethene	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSW35

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSW35

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may23a.b/wy23l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	44	
78-93-3	2-Butanone	130	
594-20-7	2,2-Dichloropropane	19	
107-12-0	Propionitrile	170	
126-98-7	Methacrylonitrile	140	
74-97-5	Bromochloromethane	21	
109-99-9	Tetrahydrofuran	110	
67-66-3	Chloroform	22	
71-55-6	1,1,1-Trichloroethane	21	
110-82-7	Cyclohexane	18	
563-58-6	1,1-Dichloropropene	21	
56-23-5	Carbon Tetrachloride	20	
78-83-1	Isobutyl Alcohol	530	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	22	
994-05-8	t-Amyl methyl ether	22	
142-82-5	n-Heptane	18	
71-36-3	n-Butanol	920	
79-01-6	Trichloroethene	21	
108-87-2	Methylcyclohexane	19	
78-87-5	1,2-Dichloropropane	21	
74-95-3	Dibromomethane	21	
123-91-1	1,4-Dioxane	530	
80-62-6	Methyl Methacrylate	18	
75-27-4	Bromodichloromethane	20	
79-46-9	2-Nitropropane	15	
110-75-8	2-Chloroethyl Vinyl Ether	16	
10061-01-5	cis-1,3-Dichloropropene	20	
108-10-1	4-Methyl-2-pentanone	87	
108-88-3	Toluene	23	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSW35

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSW35

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may23a.b/wy23l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	20	
542-75-6	1,3-Dichloropropene (total)	39	
97-63-2	Ethyl Methacrylate	19	
79-00-5	1,1,2-Trichloroethane	24	
127-18-4	Tetrachloroethene	23	
142-28-9	1,3-Dichloropropane	22	
591-78-6	2-Hexanone	91	
124-48-1	Dibromochloromethane	22	
106-93-4	1,2-Dibromoethane	22	
108-90-7	Chlorobenzene	23	
630-20-6	1,1,1,2-Tetrachloroethane	22	
100-41-4	Ethylbenzene	22	
179601-23-1	m+p-Xylene	45	
95-47-6	o-Xylene	22	
1330-20-7	Xylene (Total)	67	
100-42-5	Styrene	22	
75-25-2	Bromoform	19	
98-82-8	Isopropylbenzene	22	
108-94-1	Cyclohexanone	420	
108-86-1	Bromobenzene	23	
79-34-5	1,1,2,2-Tetrachloroethane	22	
96-18-4	1,2,3-Trichloropropane	22	
110-57-6	trans-1,4-Dichloro-2-butene	85	
103-65-1	n-Propylbenzene	22	
95-49-8	2-Chlorotoluene	23	
106-43-4	4-Chlorotoluene	22	
108-67-8	1,3,5-Trimethylbenzene	22	
98-06-6	tert-Butylbenzene	22	
76-01-7	Pentachloroethane	22	
95-63-6	1,2,4-Trimethylbenzene	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSW35

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSW35

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may23a.b/wy23l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
135-98-8	sec-Butylbenzene	21	
541-73-1	1,3-Dichlorobenzene	22	
99-87-6	p-Isopropyltoluene	21	
106-46-7	1,4-Dichlorobenzene	22	
526-73-8	1,2,3-Trimethylbenzene	22	
100-44-7	Benzyl Chloride	17	
141-93-5	1,3-Diethylbenzene	20	
105-05-5	1,4-Diethylbenzene	19	
95-50-1	1,2-Dichlorobenzene	23	
104-51-8	n-Butylbenzene	20	
135-01-3	1,2-Diethylbenzene	21	
25340-17-4	Diethylbenzene (total)	60	
96-12-8	1,2-Dibromo-3-chloropropane	18	
108-70-3	1,3,5-Trichlorobenzene	19	
120-82-1	1,2,4-Trichlorobenzene	19	
87-68-3	Hexachlorobutadiene	18	
91-20-3	Naphthalene	18	
87-61-6	1,2,3-Trichlorobenzene	19	
91-57-6	2-Methylnaphthalene	13	

Data file: /chem2/HP09137.i/19may23a.b/wy23l01.d Injection date and time: **23-MAY-2019 06:10**
Data file Sample Info. Line: LCSW35;LCSW35;1;3;LCS;;;;wy23b01; Instrument ID: **HP09137.i** Batch: **W191431AA**
Date, time and analyst ID of latest file update: 23-May-2019 07:38 amd00492

Blank Data file reference: **/chem2/HP09137.i/19may23a.b/wy23b01.d**

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-MAY-2019 06:56
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may23a.b/wy23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.732	(0.003)	592	65	207297	(3)	250.00	
66) Fluorobenzene	5.032	(-0.003)	1309	96	1050294	(4)	50.00	
101) Chlorobenzene-d5	8.161	(0.000)	2284	117	803460	(4)	50.00	
132) 1,4-Dichlorobenzene-d4	10.042	(0.000)	2870	152	441907	(1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.352	(0.001)	113	234510	48.195	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.686	(0.002)	102	66520	51.403	103%		80 - 120
84) Toluene-d8	(3)	6.695	(0.000)	98	1051909	52.248	104%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.000)	95	381999	47.427	95%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	1.259	(0.000)	85	113117	16.656	16.66			0.2	1
4) Chloromethane	(2)	1.387	(0.000)	50	139132	16.453	16.45			0.2	1
5) 1,3-Butadiene	(2)	1.486	(0.000)	39	148852M	28.883	28.88			1	3
6) Vinyl Chloride	(2)	1.464	(-0.000)	62	131788	17.000	17.00			0.2	1
8) Bromomethane	(2)	1.686	(0.001)	94	95864M	15.679	15.68			0.3	1
9) Chloroethane	(2)	1.766	(0.002)	64	83607	16.389	16.39			0.2	1
11) n-Pentane	(2)	1.968	(0.000)	43	120736	15.419	15.42			0.4	10
12) Trichlorofluoromethane	(2)	1.929	(0.001)	101	141843	17.228	17.23			0.2	1
13) Ethanol	(1)	2.035	(-0.003)	45	42510	449.641	449.64		J	280	750
15) Freon 123a	(2)	2.116	(0.000)	67	117377M	19.078	19.08			0.4	5
16) Acrolein	(1)	2.218	(-0.000)	56	201140	134.777	134.78			2	100
17) 1,1-Dichloroethene	(2)	2.302	(0.000)	96	98150	21.195	21.20			0.2	1
18) Acetone	(1)	2.340	(-0.001)	58	114207	157.440	157.44			0.7	20
19) Freon 113	(2)	2.327	(0.003)	101	74684	18.366	18.37			0.2	10
21) 2-Propanol	(1)	2.449	(-0.002)	45	91220M	169.254	169.25			18	100
22) Methyl Iodide	(2)	2.475	(-0.009)	142	169170M	19.064	19.06			0.2	1
23) Carbon Disulfide	(2)	2.501	(-0.000)	76	261843M	16.050	16.05			0.2	5
25) Allyl Chloride	(2)	2.603	(0.000)	41	151801	18.817	18.82			0.3	5
27) Methyl Acetate	(2)	2.619	(0.000)	43	129195	18.502	18.50			0.2	5
28) Methylene Chloride	(2)	2.706	(0.001)	84	118164M	20.876	20.88			0.3	1
30) t-Butyl alcohol	(1)	2.812	(-0.002)	59	203837	212.018	212.02			12	50
31) Acrylonitrile	(2)	2.927	(-0.000)	53	324218	88.259	88.26			0.3	20
32) trans-1,2-Dichloroethene	(2)	2.956	(0.000)	96	106674	21.231	21.23			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	2.956	(0.001)	73	291316	23.813	23.81			0.2	1
34) n-Hexane	(2)	3.213	(0.001)	57	119350	17.753	17.75			0.2	5
36) 1,1-Dichloroethane	(2)	3.341	(0.000)	63	189104	20.771	20.77			0.2	1
38) di-Isopropyl ether	(2)	3.412	(0.000)	45	362850	20.745	20.75			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	3.425	(0.001)	53	163016	20.674	20.67			0.2	5
40) Ethyl t-butyl ether	(2)	3.758	(-0.000)	59	280283	21.984	21.98			0.2	1
42) cis-1,2-Dichloroethene	(2)	3.887	(0.001)	96	126478	22.420	22.42			0.2	1
43) 1,2-Dichloroethene (Total)	(2)			96	233152	43.652	43.65			0.2	2

M = Compound was manually integrated.

Digitally signed by Don V. Viray on 05/23/2019 at 20:19. Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may23a.b/wy23101.d Injection date and time: **23-MAY-2019 06:10**
Data file Sample Info. Line: LCSW35;LCSW35;1;3;LCS;;;;wy23b01; Instrument ID: **HP09137.i** Batch: **W191431AA**
Date, time and analyst ID of latest file update: 23-May-2019 07:38 amd00492

Blank Data file reference: **/chem2/HP09137.i/19may23a.b/wy23b01.d**

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-MAY-2019 06:56
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may23a.b/wy23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	3.906(0.000)	43	664315	125.872	125.87			0.3	10
45) 2,2-Dichloropropane	(2)	3.890(0.000)	77	78435	19.183	19.18			0.3	1
47) Propionitrile	(1)	3.961(-0.000)	54	206727	173.010	173.01			14	100
48) Methacrylonitrile	(2)	4.111(0.000)	67	544468	137.849	137.85			6	50
49) Bromochloromethane	(2)	4.115(0.001)	128	60530	20.642	20.64			0.2	5
50) Tetrahydrofuran	(1)	4.169(-0.002)	71	124257	112.358	112.36			0.7	10
51) Chloroform	(2)	4.198(0.000)	83	184738	21.627	21.63			0.2	1
53) 1,1,1-Trichloroethane	(2)	4.384(-0.000)	97	137311	21.363	21.36			0.3	1
54) Cyclohexane	(2)	4.439(0.000)	56	155306	18.258	18.26			0.2	5
55) 1,1-Dichloropropene	(2)	4.545(0.000)	75	143075	20.891	20.89			0.2	5
56) Carbon Tetrachloride	(2)	4.548(-0.000)	117	109020	19.765	19.77			0.2	1
58) Isobutyl Alcohol	(1)	4.673(-0.000)	41	186564	532.283	532.28			36	250
60) Benzene	(2)	4.750(0.000)	78	466899	21.209	21.21			0.2	1
61) 1,2-Dichloroethane	(2)	4.763(0.001)	62	148552	21.845	21.84			0.3	1
65) t-Amyl methyl ether	(2)	4.869(0.001)	73	286307	21.920	21.92			0.8	5
67) n-Heptane	(2)	5.036(0.000)	43	114567	17.831	17.83			0.2	5
69) n-Butanol	(1)	5.353(-0.002)	56	286264	919.867	919.87			61	250
71) Trichloroethene	(2)	5.405(0.000)	95	110828	20.789	20.79			0.2	1
73) Methylcyclohexane	(2)	5.607(0.000)	83	146737	18.959	18.96			0.2	5
74) 1,2-Dichloropropane	(2)	5.636(0.000)	63	120769	21.369	21.37			0.2	1
75) Dibromomethane	(2)	5.748(0.001)	93	73079	20.951	20.95			0.2	1
76) 1,4-Dioxane	(1)	5.780(-0.002)	88	49556M	532.668	532.67			29	250
77) Methyl Methacrylate	(2)	5.780(-0.000)	69	109459	17.624	17.62			0.2	5
79) Bromodichloromethane	(2)	5.924(0.000)	83	128170	19.999	20.00			0.2	1
80) 2-Nitropropane	(2)	6.178(0.000)	41	32678	15.070	15.07			0.8	10
81) 2-Chloroethyl Vinyl Ether	(2)	6.261(0.000)	63	70951	16.466	16.47			0.2	10
82) cis-1,3-Dichloropropene	(2)	6.406(0.000)	75	175556	19.923	19.92			0.2	1
83) 4-Methyl-2-pentanone	(2)	6.586(0.000)	43	900147	86.524	86.52			0.5	10
89) Toluene	(3)	6.768(-0.000)	92	296278	22.844	22.84			0.2	1
90) trans-1,3-Dichloropropene	(3)	7.016(-0.000)	75	150755	19.525	19.53			0.2	1
91) 1,3-Dichloropropene (total)	(3)		100	326311	39.448	39.45			0.2	5
92) Ethyl Methacrylate	(3)	7.137(0.000)	69	178783	18.844	18.84			0.2	5
93) 1,1,2-Trichloroethane	(3)	7.214(-0.000)	97	118848	23.809	23.81			0.2	1
94) Tetrachloroethene	(3)	7.359(-0.000)	166	121496	23.086	23.09			0.2	1
95) 1,3-Dichloropropane	(3)	7.388(-0.000)	76	194758	22.463	22.46			0.2	1
97) 2-Hexanone	(3)	7.490(-0.000)	43	683601	90.507	90.51			0.3	10
98) Dibromochloromethane	(3)	7.609(-0.000)	129	107230	21.994	21.99			0.2	1
100) 1,2-Dibromoethane	(3)	7.715(-0.000)	107	120821	22.031	22.03			0.2	1
103) Chlorobenzene	(3)	8.187(0.000)	112	330273	22.955	22.96			0.2	1
104) 1,1,1,2-Tetrachloroethane	(3)	8.264(0.000)	131	101233	21.895	21.89			0.2	1
105) Ethylbenzene	(3)	8.293(-0.000)	91	547239	22.201	22.20			0.4	1
107) m+p-Xylene	(3)	8.398(0.000)	106	439798	44.875	44.87			1	5
108) o-Xylene	(3)	8.739(0.000)	106	212332	22.022	22.02			0.4	1
109) Xylene (Total)	(3)		106	652130	66.897	66.90			1	5
110) Styrene	(3)	8.752(-0.000)	104	356551	22.044	22.04			0.2	5
111) Bromoform	(3)	8.896(0.000)	173	71078	18.732	18.73			0.2	4
112) Isopropylbenzene	(3)	9.047(0.000)	105	521673	22.019	22.02			0.2	5
113) Cyclohexanone	(1)	9.111(-0.003)	55	177577	423.142	423.14			25	100
116) Bromobenzene	(4)	9.278(-0.000)	156	146603	23.033	23.03			0.2	5
117) 1,1,2,2-Tetrachloroethane	(4)	9.281(-0.000)	83	188053	21.909	21.91			0.2	1
118) 1,2,3-Trichloropropane	(4)	9.313(-0.000)	110	56127	21.709	21.71			0.2	5
119) trans-1,4-Dichloro-2-butene	(4)	9.329(-0.000)	53	233759	84.926	84.93			6	50
120) n-Propylbenzene	(4)	9.371(-0.000)	91	627775	22.373	22.37			0.2	5
121) 2-Chlorotoluene	(4)	9.435(-0.000)	126	134260	23.198	23.20			0.2	5

M = Compound was manually integrated.

Digitally signed by Don V. Viray on 05/23/2019 at 20:19. Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may23a.b/wy23l01.d Injection date and time: **23-MAY-2019 06:10**
Data file Sample Info. Line: LCSW35;LCSW35;1;3;LCS;;;;wy23b01; Instrument ID: **HP09137.i** Batch: **W191431AA**
Date, time and analyst ID of latest file update: 23-May-2019 07:38 amd00492

Blank Data file reference: **/chem2/HP09137.i/19may23a.b/wy23b01.d**

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-MAY-2019 06:56
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may23a.b/wy23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

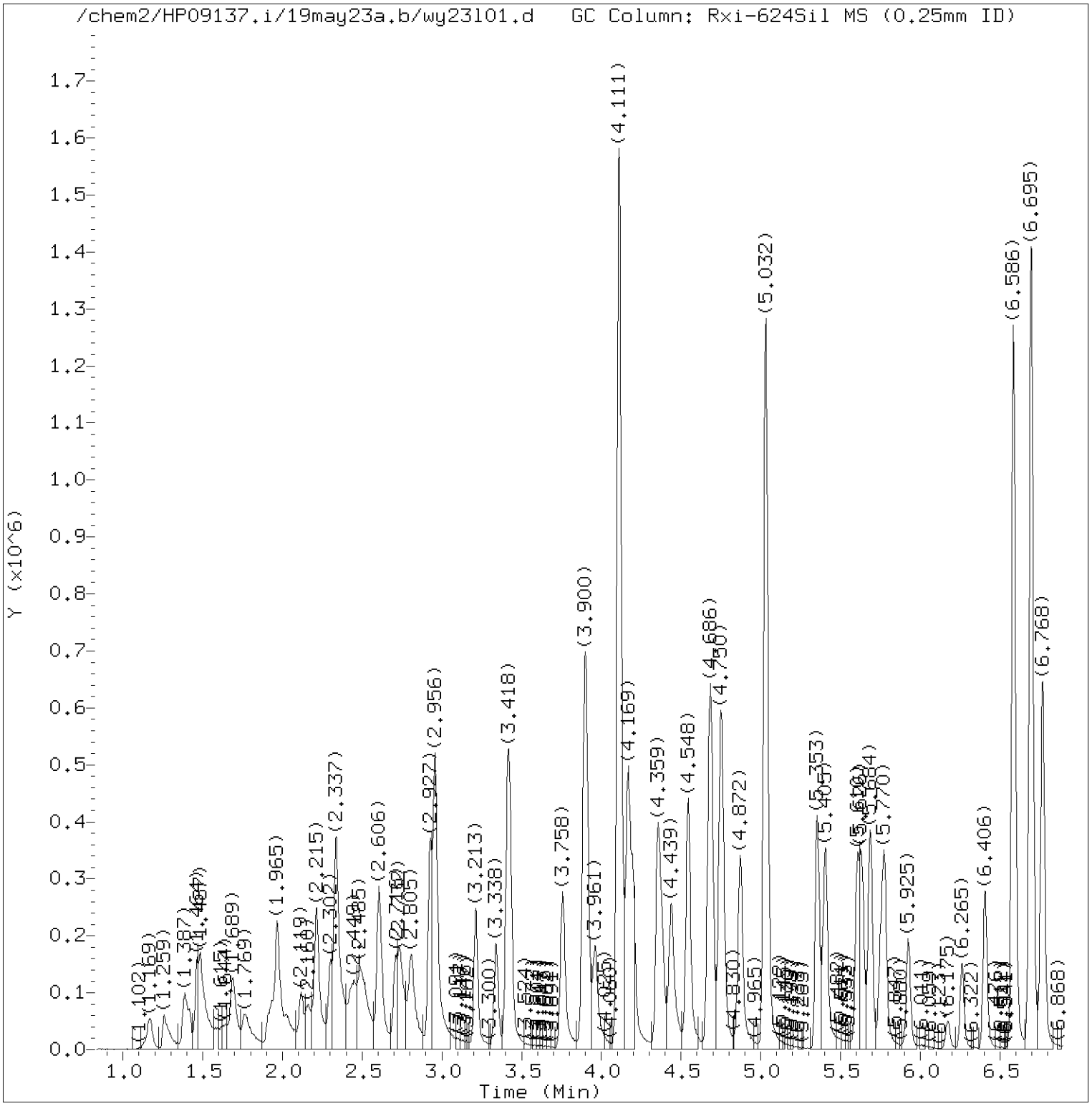
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
122) 4-Chlorotoluene	(4)	9.518(-0.000)	126	138357	22.332	22.33			0.2	5
123) 1,3,5-Trimethylbenzene	(4)	9.509(-0.000)	105	438584	21.673	21.67			0.3	5
125) tert-Butylbenzene	(4)	9.756(-0.000)	134	99799	21.707	21.71			0.3	5
126) Pentachloroethane	(4)	9.766(-0.000)	167	78878	21.703	21.70			0.2	5
127) 1,2,4-Trimethylbenzene	(4)	9.791(-0.000)	105	464150	21.766	21.77			1	5
128) sec-Butylbenzene	(4)	9.916(-0.000)	105	517103	20.818	20.82			0.2	5
130) 1,3-Dichlorobenzene	(4)	9.993(-0.000)	146	267661	22.052	22.05			0.2	5
131) p-Isopropyltoluene	(4)	10.022(-0.000)	119	455375	20.710	20.71			0.2	5
134) 1,4-Dichlorobenzene	(4)	10.058(0.000)	146	282737	22.470	22.47			0.2	5
135) 1,2,3-Trimethylbenzene	(4)	10.096(0.000)	105	494101	21.535	21.54			0.3	5
136) Benzyl Chloride	(4)	10.157(0.000)	91	299912	17.029	17.03			0.3	5
137) 1,3-Diethylbenzene	(4)	10.237(-0.000)	119	275854	19.966	19.97			0.2	5
138) 1,4-Diethylbenzene	(4)	10.298(0.000)	119	288620	19.498	19.50			0.2	5
139) 1,2-Dichlorobenzene	(4)	10.324(0.000)	146	272698	22.646	22.65			0.2	5
140) n-Butylbenzene	(4)	10.314(-0.000)	92	219876	19.812	19.81			0.2	5
141) 1,2-Diethylbenzene	(4)	10.382(0.000)	119	244584	20.968	20.97			0.2	5
142) Diethylbenzene (total)	(4)		100	809058	60.432	60.43			0.2	5
143) 1,2-Dibromo-3-chloropropane	(4)	10.860(0.000)	75	35793	18.349	18.35			0.3	5
145) 1,3,5-Trichlorobenzene	(4)	11.007(0.000)	180	176844	19.152	19.15			0.2	5
147) 1,2,4-Trichlorobenzene	(4)	11.418(0.000)	180	166523	18.784	18.78			0.3	5
148) Hexachlorobutadiene	(4)	11.527(0.000)	225	58405	18.498	18.50			0.7	5
149) Naphthalene	(4)	11.582(0.000)	128	549926	18.333	18.33			1	5
150) 1,2,3-Trichlorobenzene	(4)	11.736(0.000)	180	165530	19.130	19.13			0.4	5
151) 2-Methylnaphthalene	(4)	12.304(0.000)	142	216535	12.653	12.65			0.7	5

Total number of targets = 109

Digitally signed by Don V. Viray on 05/23/2019 at 20:19. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:39. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

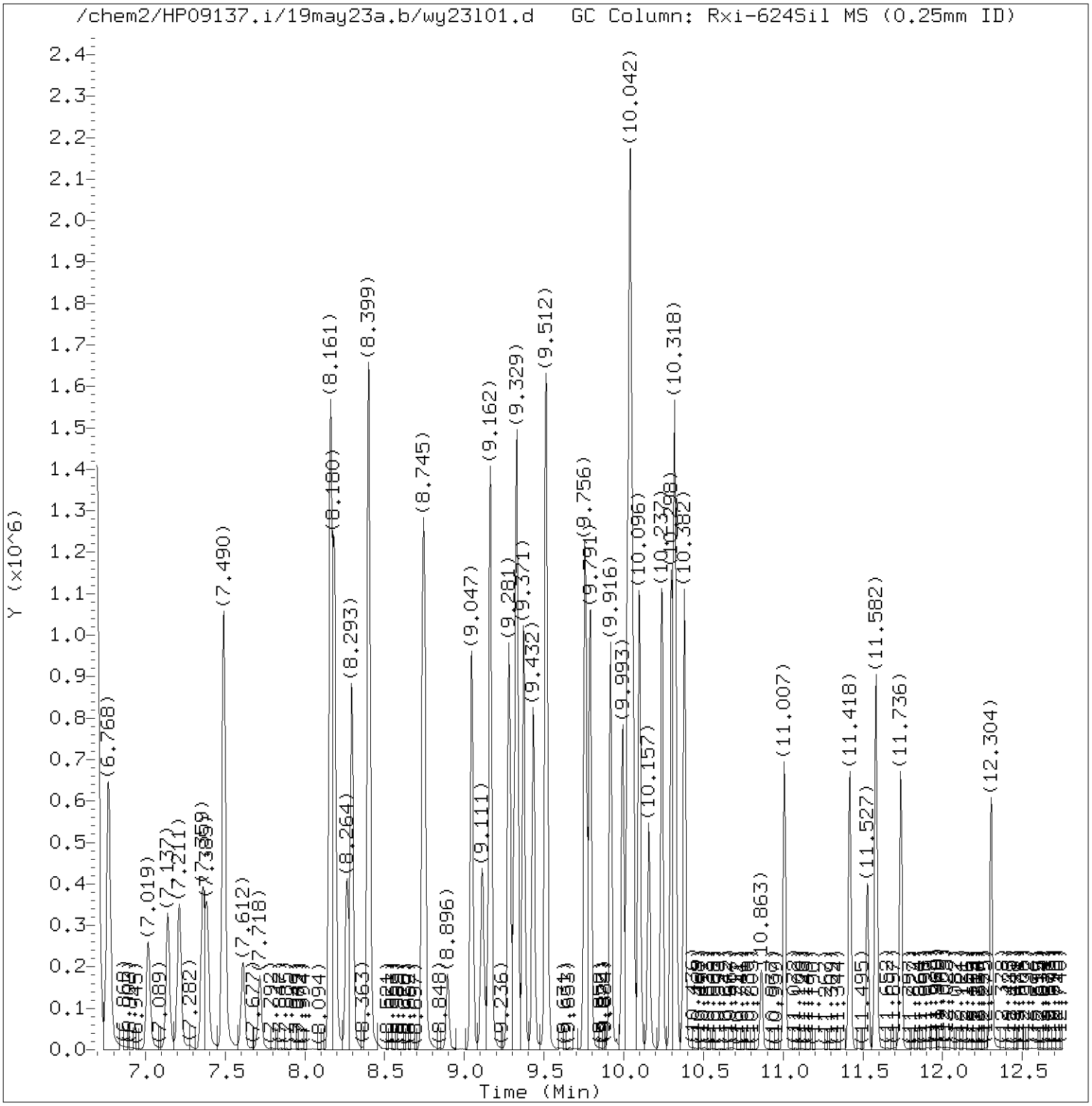
Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23l01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:10 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:38 amd00492

Sample Name: LCSW35 Lab Sample ID: LCSW35

Digitally signed by Don V. Viray
on 05/23/2019 at 20:19.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23l01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:10 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:38 amd00492

Sample Name: LCSW35 Lab Sample ID: LCSW35

Digitally signed by Don V. Viray
on 05/23/2019 at 20:19.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23l01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:10 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:38 amd00492

Sample Name: LCSW35 Lab Sample ID: LCSW35

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.259	85	113117	16.656
4) Chloromethane	(2)	1.387	50	139132	16.453
6) Vinyl Chloride	(2)	1.464	62	131788	17.000
5) 1,3-Butadiene	(2)	1.487	39	148852M	28.883
8) Bromomethane	(2)	1.686	94	95864M	15.679
9) Chloroethane	(2)	1.766	64	83607	16.389
12) Trichlorofluoromethane	(2)	1.929	101	141843	17.228
11) n-Pentane	(2)	1.968	43	120736	15.419
13) Ethanol	(1)	2.035	45	42510	449.641
15) Freon 123a	(2)	2.116	67	117377M	19.078
16) Acrolein	(1)	2.218	56	201140	134.777
17) 1,1-Dichloroethene	(2)	2.302	96	98150	21.195
19) Freon 113	(2)	2.327	101	74684	18.366
18) Acetone	(1)	2.340	58	114207	157.440
21) 2-Propanol	(1)	2.449	45	91220M	169.254
22) Methyl Iodide	(2)	2.475	142	169170M	19.064
23) Carbon Disulfide	(2)	2.501	76	261843M	16.050
25) Allyl Chloride	(2)	2.603	41	151801	18.817
27) Methyl Acetate	(2)	2.619	43	129195	18.502
28) Methylene Chloride	(2)	2.706	84	118164M	20.876
29)*t-Butyl alcohol-d10	(1)	2.732	65	207297	250.000
30) t-Butyl alcohol	(1)	2.812	59	203837	212.018
31) Acrylonitrile	(2)	2.927	53	324218	88.259
32) trans-1,2-Dichloroethene	(2)	2.956	96	106674	21.231
33) Methyl Tertiary Butyl Ether	(2)	2.956	73	291316	23.813
34) n-Hexane	(2)	3.213	57	119350	17.753
36) 1,1-Dichloroethane	(2)	3.341	63	189104	20.771
38) di-Isopropyl ether	(2)	3.412	45	362850	20.745
39) 2-Chloro-1,3-butadiene	(2)	3.425	53	163016	20.674
40) Ethyl t-butyl ether	(2)	3.758	59	280283	21.984
42) cis-1,2-Dichloroethene	(2)	3.887	96	126478	22.420
45) 2,2-Dichloropropane	(2)	3.890	77	78435	19.183
44) 2-Butanone	(2)	3.906	43	664315	125.872
47) Propionitrile	(1)	3.961	54	206727	173.010
48) Methacrylonitrile	(2)	4.111	67	544468	137.849
49) Bromochloromethane	(2)	4.115	128	60530	20.642
50) Tetrahydrofuran	(1)	4.169	71	124257	112.358
51) Chloroform	(2)	4.198	83	184738	21.627

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 05/23/2019 at 20:19.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23l01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:10 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:38 amd00492

Sample Name: LCSW35 Lab Sample ID: LCSW35

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
52)$Dibromofluoromethane	(2)	4.352	113	234510	48.195
53) 1,1,1-Trichloroethane	(2)	4.384	97	137311	21.363
54) Cyclohexane	(2)	4.439	56	155306	18.258
55) 1,1-Dichloropropene	(2)	4.545	75	143075	20.891
56) Carbon Tetrachloride	(2)	4.548	117	109020	19.765
58) Isobutyl Alcohol	(1)	4.673	41	186564	532.283
57)$1,2-Dichloroethane-d4	(2)	4.686	102	66520	51.403
60) Benzene	(2)	4.750	78	466899	21.209
61) 1,2-Dichloroethane	(2)	4.763	62	148552	21.845
65) t-Amyl methyl ether	(2)	4.869	73	286307	21.920
66)*Fluorobenzene	(2)	5.032	96	1050294	50.000
67) n-Heptane	(2)	5.036	43	114567	17.831
69) n-Butanol	(1)	5.353	56	286264	919.867
71) Trichloroethene	(2)	5.405	95	110828	20.789
73) Methylcyclohexane	(2)	5.607	83	146737	18.959
74) 1,2-Dichloropropane	(2)	5.636	63	120769	21.369
75) Dibromomethane	(2)	5.748	93	73079	20.951
77) Methyl Methacrylate	(2)	5.780	69	109459	17.624
76) 1,4-Dioxane	(1)	5.780	88	49556M	532.668
79) Bromodichloromethane	(2)	5.925	83	128170	19.999
43) 1,2-Dichloroethene (Total)	(2)		96	233152	43.652
80) 2-Nitropropane	(2)	6.178	41	32678	15.070
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	70951	16.466
82) cis-1,3-Dichloropropene	(2)	6.406	75	175556	19.923
83) 4-Methyl-2-pentanone	(2)	6.586	43	900147	86.524
84)$Toluene-d8	(3)	6.695	98	1051909	52.248
89) Toluene	(3)	6.768	92	296278	22.844
90) trans-1,3-Dichloropropene	(3)	7.016	75	150755	19.525
92) Ethyl Methacrylate	(3)	7.137	69	178783	18.844
93) 1,1,2-Trichloroethane	(3)	7.214	97	118848	23.809
94) Tetrachloroethene	(3)	7.359	166	121496	23.086
95) 1,3-Dichloropropane	(3)	7.388	76	194758	22.463
97) 2-Hexanone	(3)	7.490	43	683601	90.507
98) Dibromochloromethane	(3)	7.609	129	107230	21.994
100) 1,2-Dibromoethane	(3)	7.715	107	120821	22.031
101)*Chlorobenzene-d5	(3)	8.161	117	803460	50.000
103) Chlorobenzene	(3)	8.187	112	330273	22.955
104) 1,1,1,2-Tetrachloroethane	(3)	8.264	131	101233	21.895

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/23/2019 at 20:19.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23l01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:10 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:38 amd00492

Sample Name: LCSW35 Lab Sample ID: LCSW35

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
105) Ethylbenzene	(3)	8.293	91	547239	22.201
107) m+p-Xylene	(3)	8.399	106	439798	44.875
108) o-Xylene	(3)	8.739	106	212332	22.022
110) Styrene	(3)	8.752	104	356551	22.044
111) Bromoform	(3)	8.896	173	71078	18.732
112) Isopropylbenzene	(3)	9.047	105	521673	22.019
113) Cyclohexanone	(1)	9.111	55	177577	423.142
115)$4-Bromofluorobenzene	(3)	9.162	95	381999	47.427
116) Bromobenzene	(4)	9.278	156	146603	23.033
117) 1,1,2,2-Tetrachloroethane	(4)	9.281	83	188053	21.909
118) 1,2,3-Trichloropropane	(4)	9.313	110	56127	21.709
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	233759	84.926
120) n-Propylbenzene	(4)	9.371	91	627775	22.373
121) 2-Chlorotoluene	(4)	9.435	126	134260	23.198
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	438584	21.673
122) 4-Chlorotoluene	(4)	9.518	126	138357	22.332
125) tert-Butylbenzene	(4)	9.756	134	99799	21.707
126) Pentachloroethane	(4)	9.766	167	78878	21.703
127) 1,2,4-Trimethylbenzene	(4)	9.791	105	464150	21.766
128) sec-Butylbenzene	(4)	9.916	105	517103	20.818
130) 1,3-Dichlorobenzene	(4)	9.993	146	267661	22.052
131) p-Isopropyltoluene	(4)	10.022	119	455375	20.710
132)*1,4-Dichlorobenzene-d4	(4)	10.042	152	441907	50.000
134) 1,4-Dichlorobenzene	(4)	10.058	146	282737	22.470
91) 1,3-Dichloropropene (total)	(3)		100	326311	39.448
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	494101	21.535
136) Benzyl Chloride	(4)	10.157	91	299912	17.029
137) 1,3-Diethylbenzene	(4)	10.237	119	275854	19.966
138) 1,4-Diethylbenzene	(4)	10.298	119	288620	19.498
140) n-Butylbenzene	(4)	10.314	92	219876	19.812
139) 1,2-Dichlorobenzene	(4)	10.324	146	272698	22.646
141) 1,2-Diethylbenzene	(4)	10.382	119	244584	20.968
143) 1,2-Dibromo-3-chloropropane	(4)	10.860	75	35793	18.349
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	176844	19.152
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	166523	18.784
148) Hexachlorobutadiene	(4)	11.527	225	58405	18.498
149) Naphthalene	(4)	11.582	128	549926	18.333
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	165530	19.130

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/23/2019 at 20:19.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23l01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:10 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:38 amd00492

Sample Name: LCSW35 Lab Sample ID: LCSW35

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
109) Xylene (Total)	(3)		106	652130	66.897
151) 2-Methylnaphthalene	(4)	12.304	142	216535	12.653
142) Diethylbenzene (total)	(4)		100	809058	60.432

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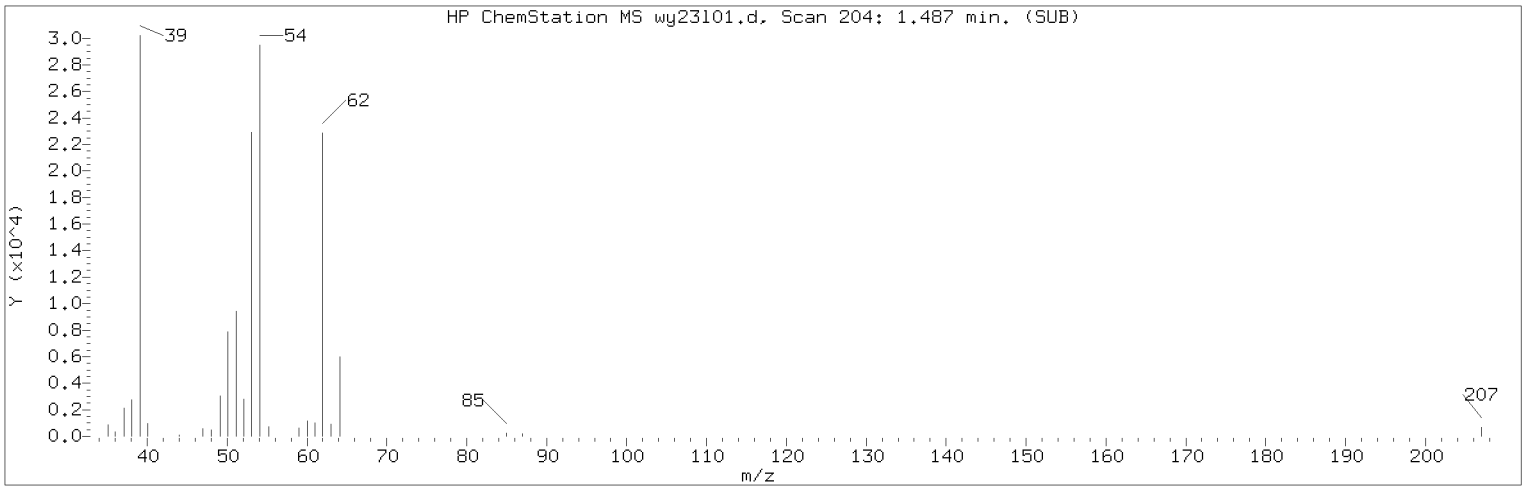
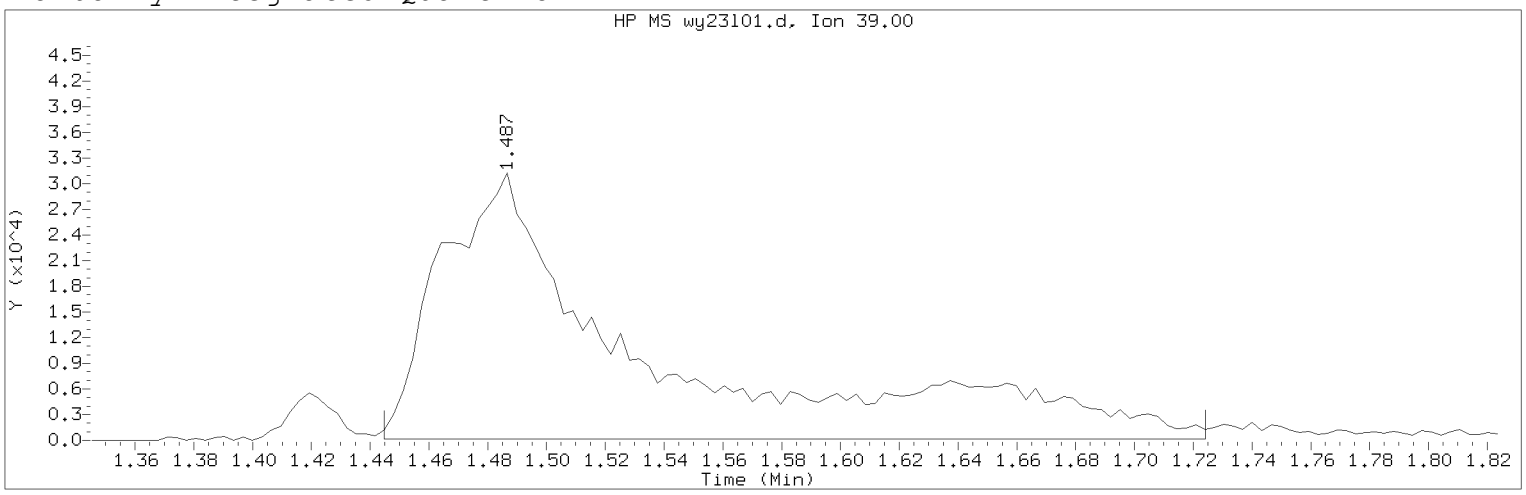
on 05/23/2019 at 20:19.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23l01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:10 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:38 amd00492

Sample Name: LCSW35 Lab Sample ID: LCSW35

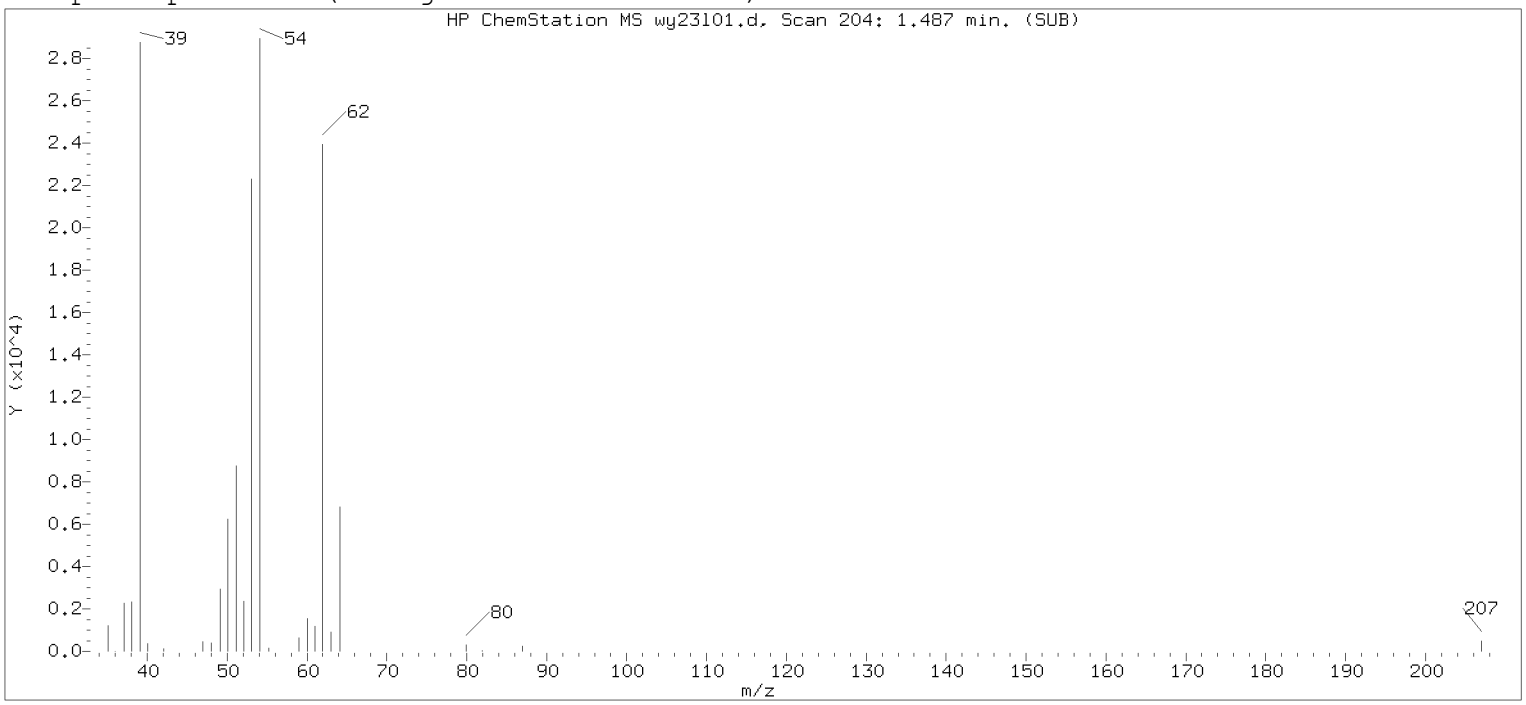
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 204
Retention Time (minutes): 1.487
Quant Ion : 39.00
Area (flag) : 148852M
On-Column Amount (ng) : 28.8829
Integration start scan : 190 Integration stop scan: 277
Y at integration start : 146 Y at integration end: 146

Reason for manual integration: improper integration

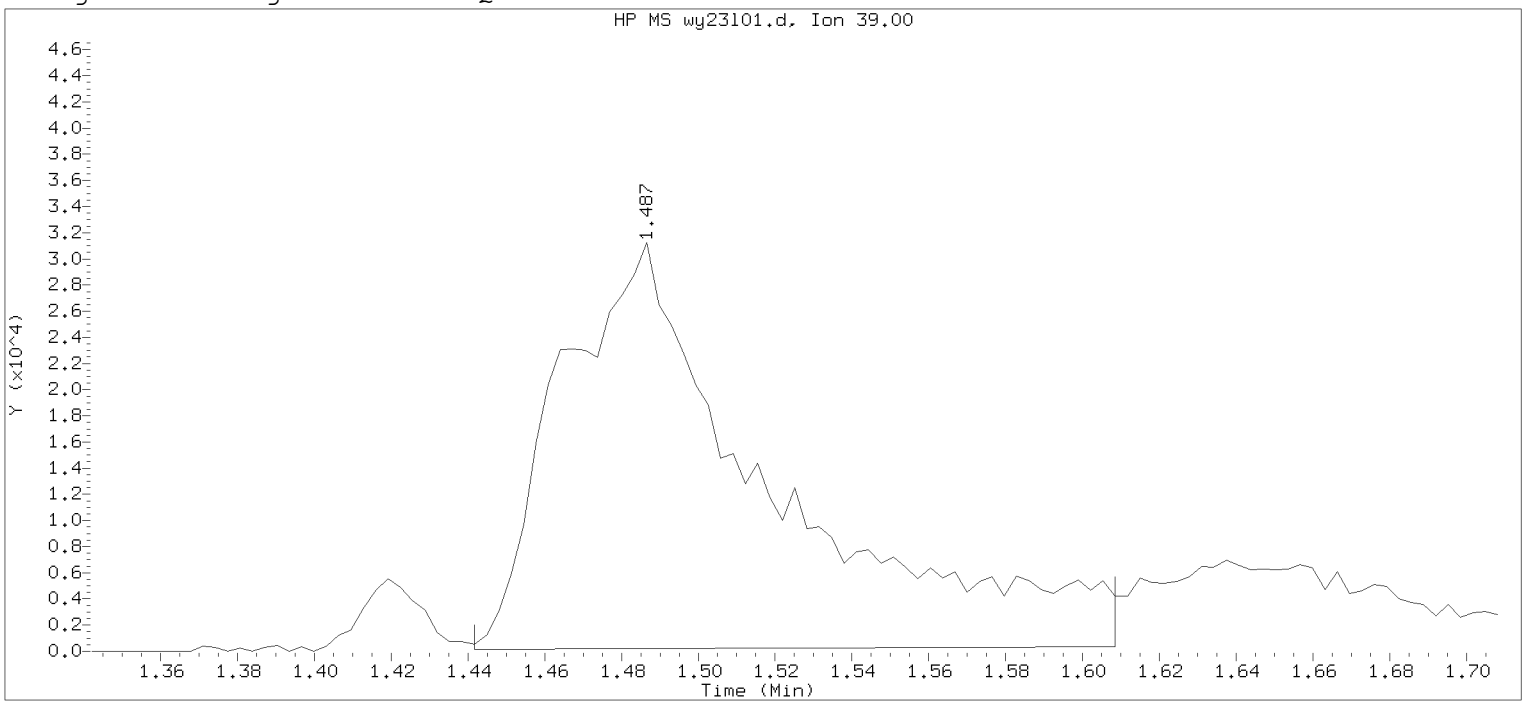
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:19.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:39.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23l01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:10 Analyst ID: and00492

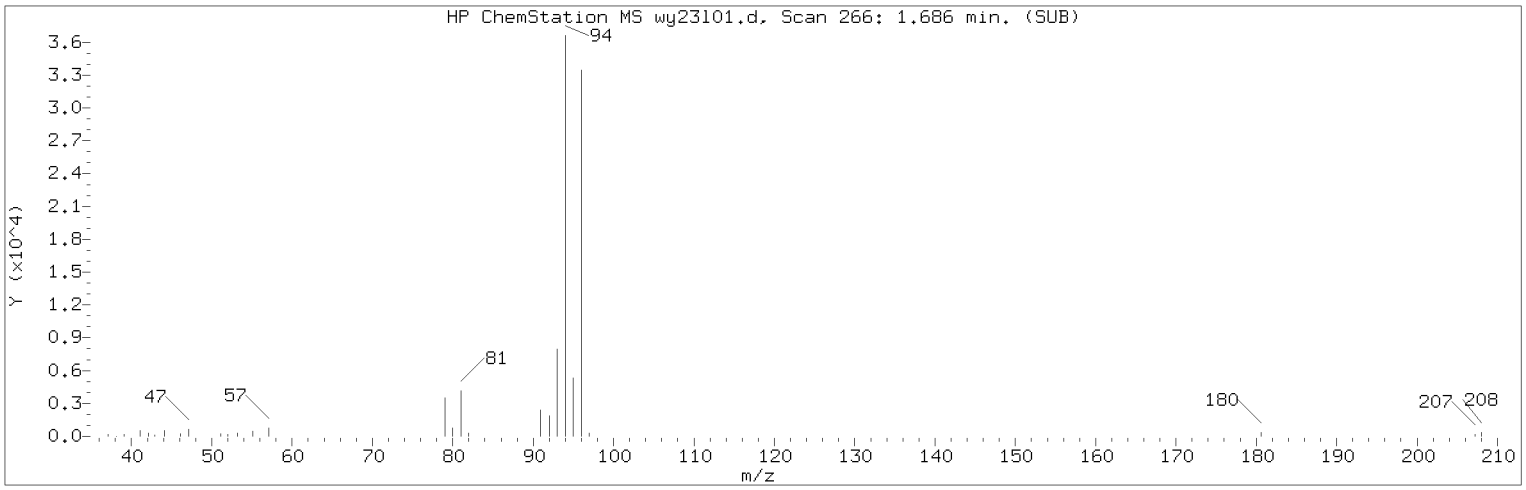
Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:12
Date, time and analyst ID of latest file update: 23-May-2019 06:25 Automation

Sample Name: LCSW35 Lab Sample ID: LCSW35

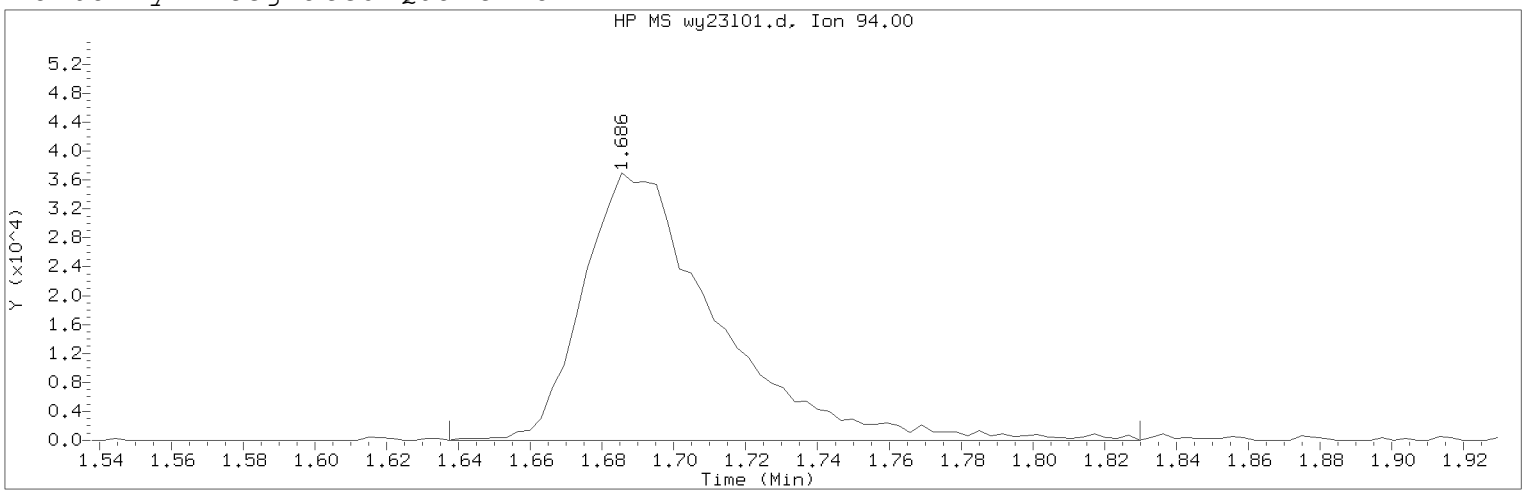
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 204
Retention Time (minutes): 1.487
Quant Ion : 39.00
Area : 117269
On-column Amount (ng) : 22.7547
Integration start scan : 189 Integration stop scan: 241
Y at integration start : 160 Y at integration end: 343

Digitally signed by Don V. Viray on 05/23/2019 at 20:19.
Target 3.5 esignature user id: dviray0674

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23l01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:10 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:38 amd00492

Sample Name: LCSW35 Lab Sample ID: LCSW35

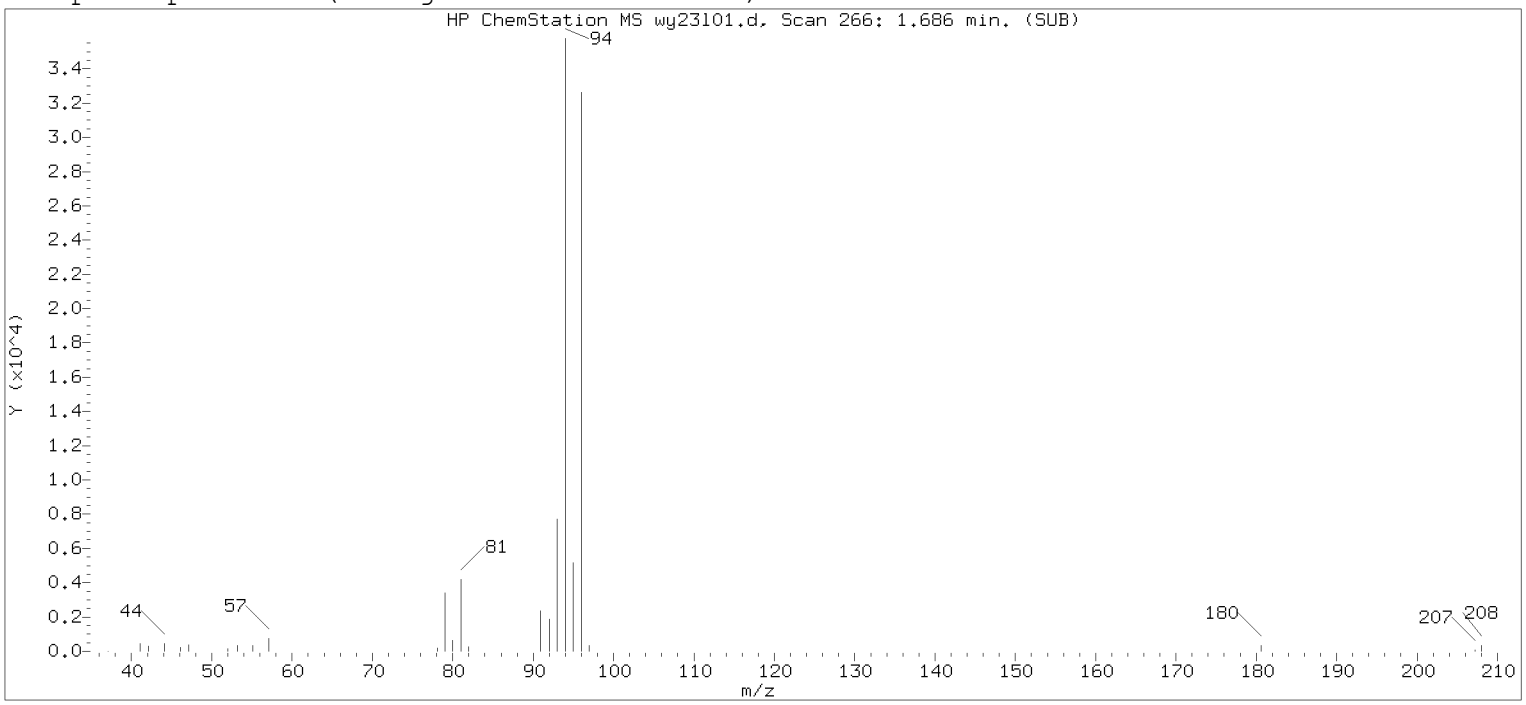
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 266
Retention Time (minutes): 1.686
Quant Ion : 94.00
Area (flag) : 95864M
On-Column Amount (ng) : 15.6793
Integration start scan : 250 Integration stop scan: 310
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

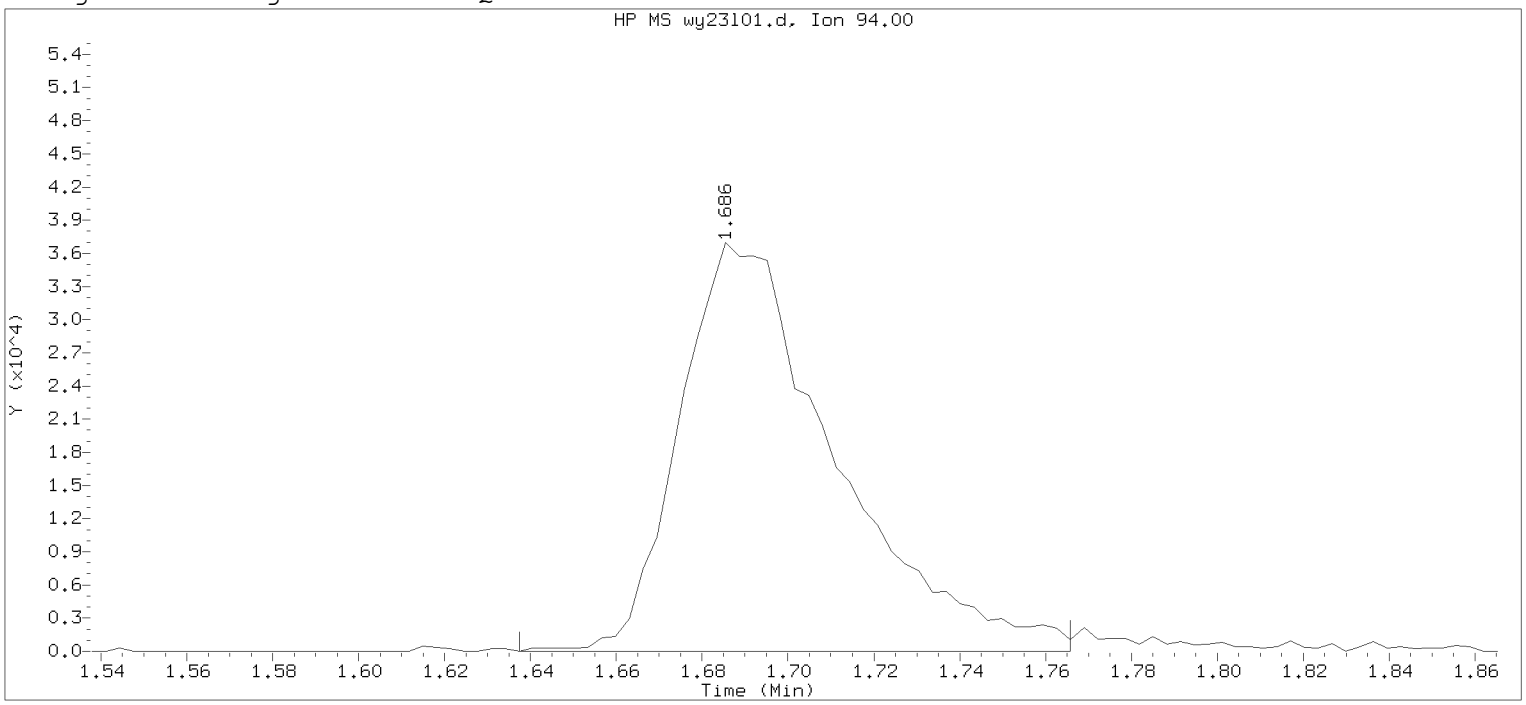
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:19.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:39.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23l01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:10 Analyst ID: and00492

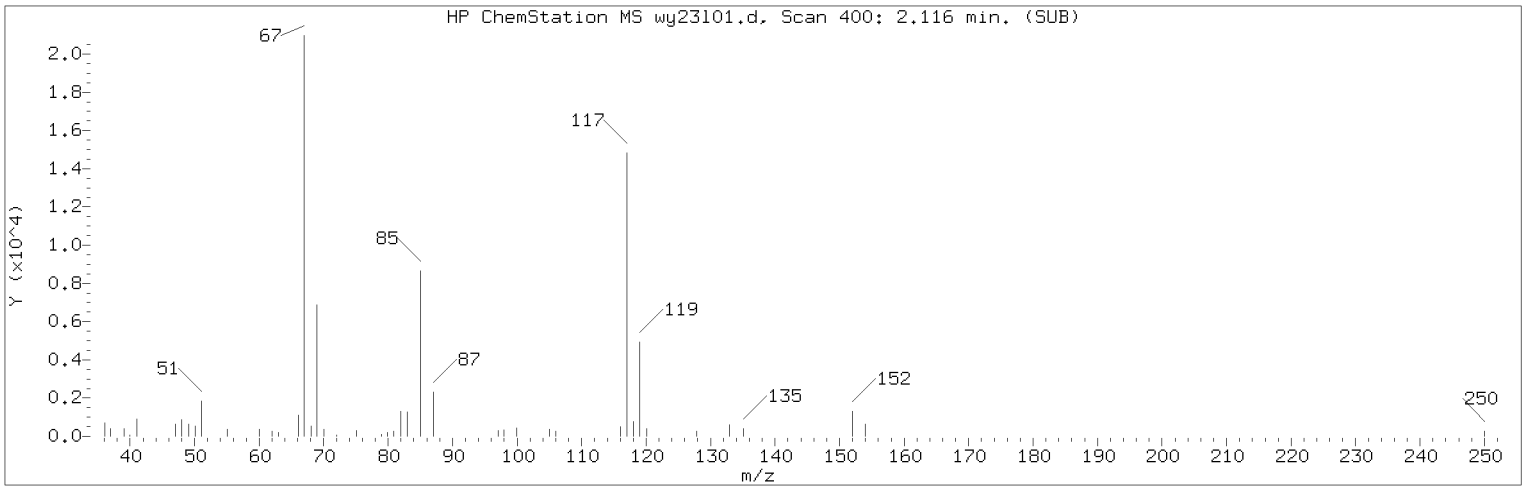
Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:12
Date, time and analyst ID of latest file update: 23-May-2019 06:25 Automation

Sample Name: LCSW35 Lab Sample ID: LCSW35

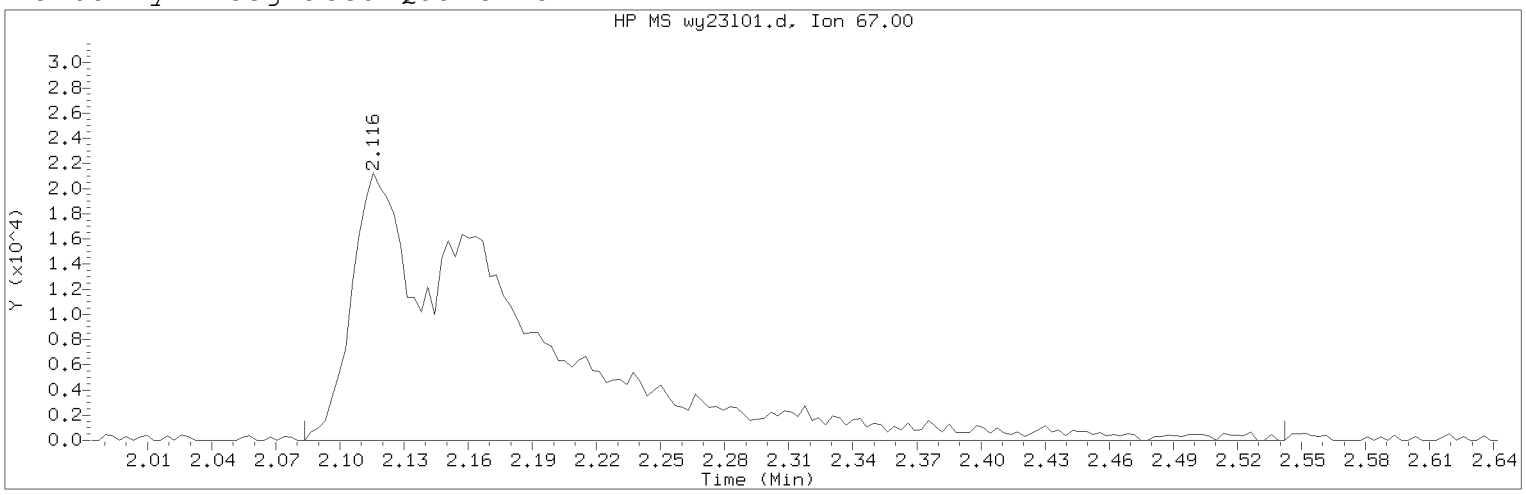
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 266
Retention Time (minutes): 1.686
Quant Ion : 94.00
Area : 92910
On-column Amount (ng) : 15.1962
Integration start scan : 250 Integration stop scan: 290
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/23/2019 at 20:19.
Target 3.5 esignature user id: dviray0677

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23l01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:10 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:38 amd00492

Sample Name: LCSW35 Lab Sample ID: LCSW35

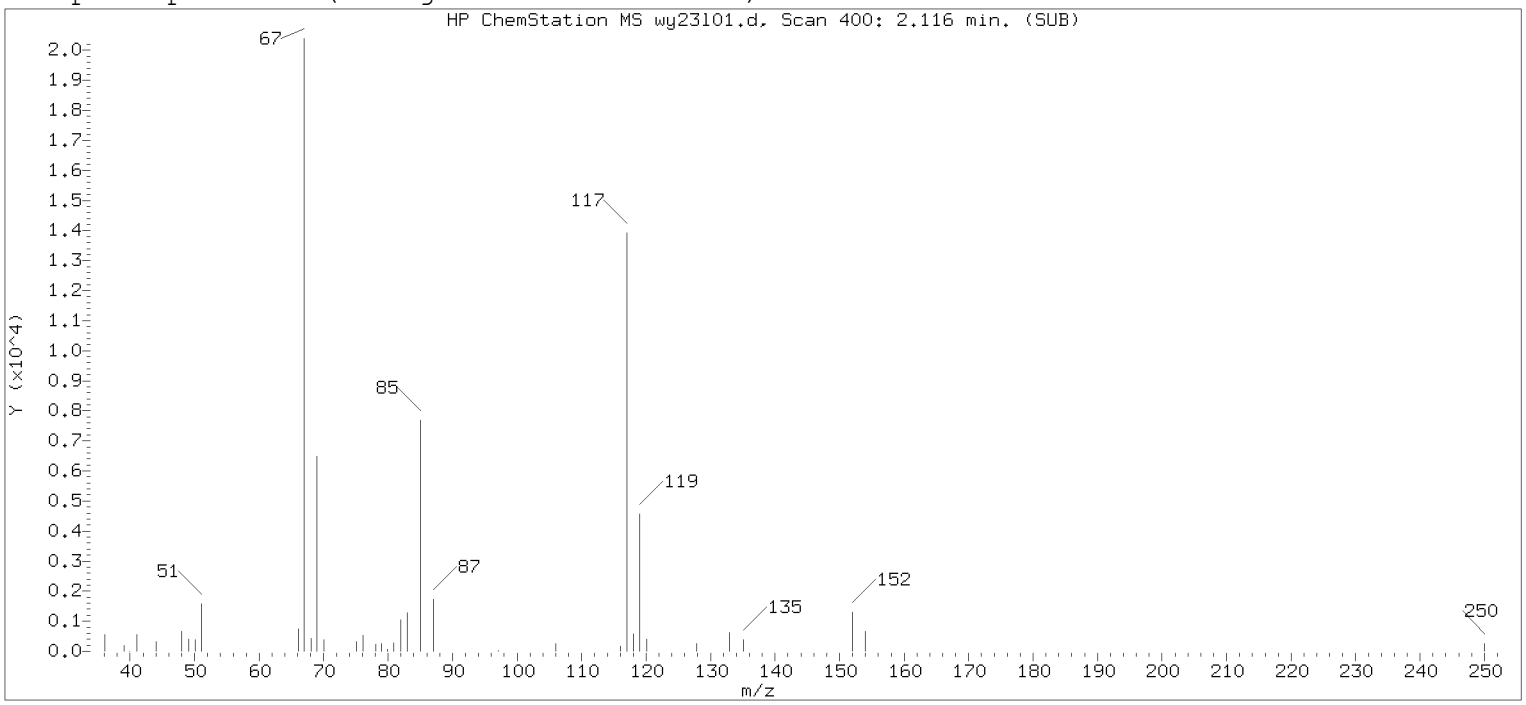
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 400
Retention Time (minutes): 2.116
Quant Ion : 67.00
Area (flag) : 117377M
On-Column Amount (ng) : 19.0777
Integration start scan : 389 Integration stop scan: 532
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

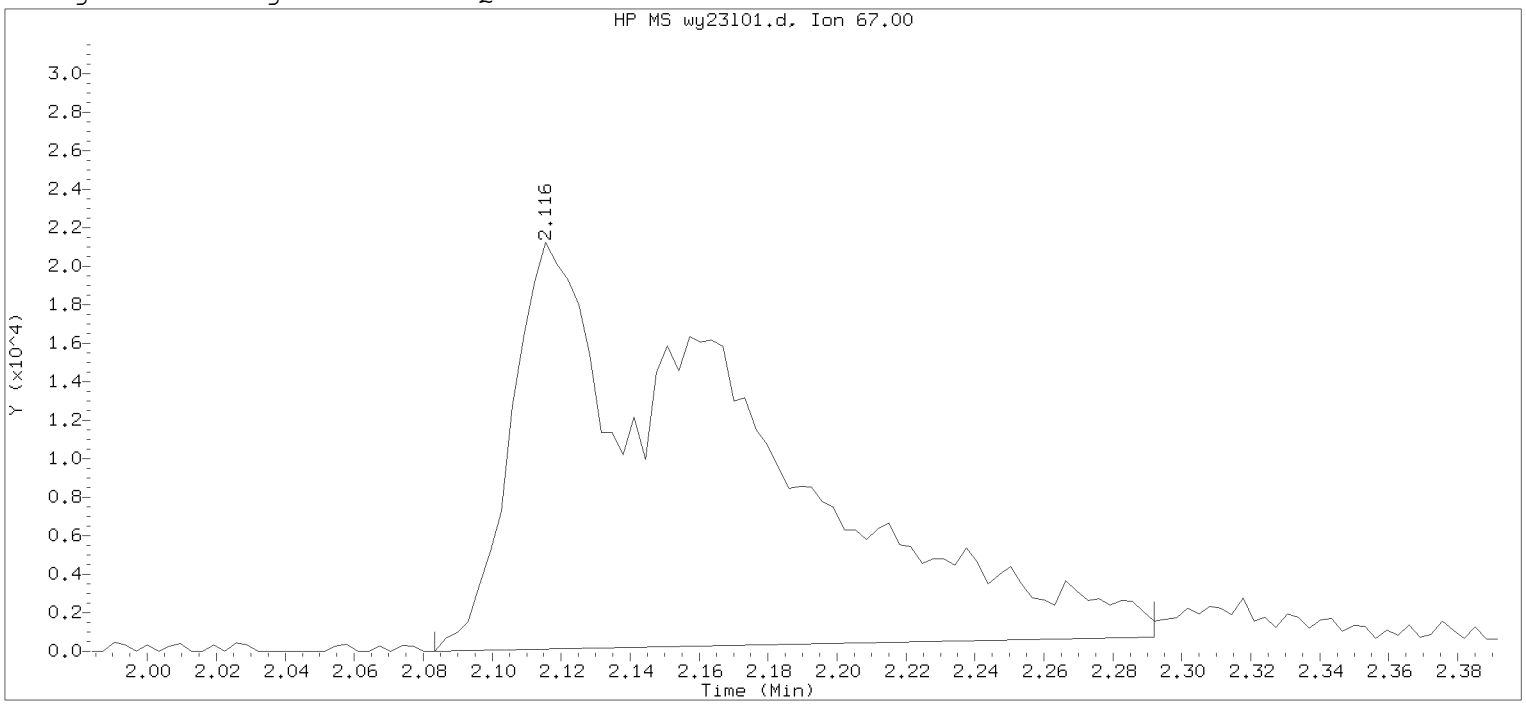
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:19.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:39.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23l01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:10 Analyst ID: and00492

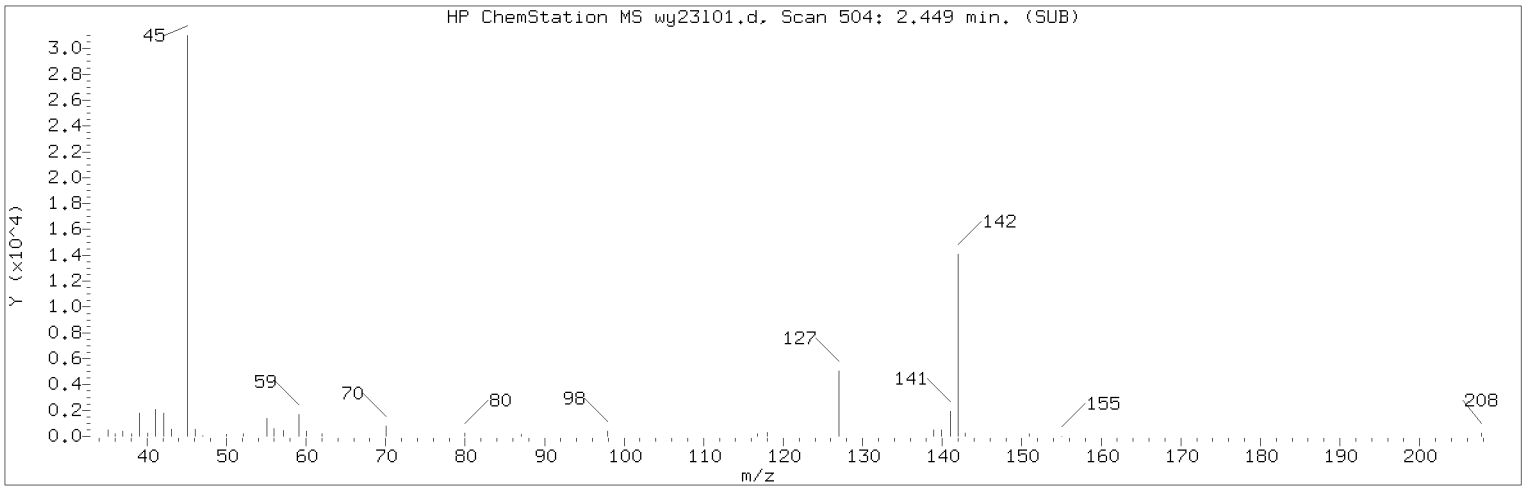
Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:12
Date, time and analyst ID of latest file update: 23-May-2019 06:25 Automation

Sample Name: LCSW35 Lab Sample ID: LCSW35

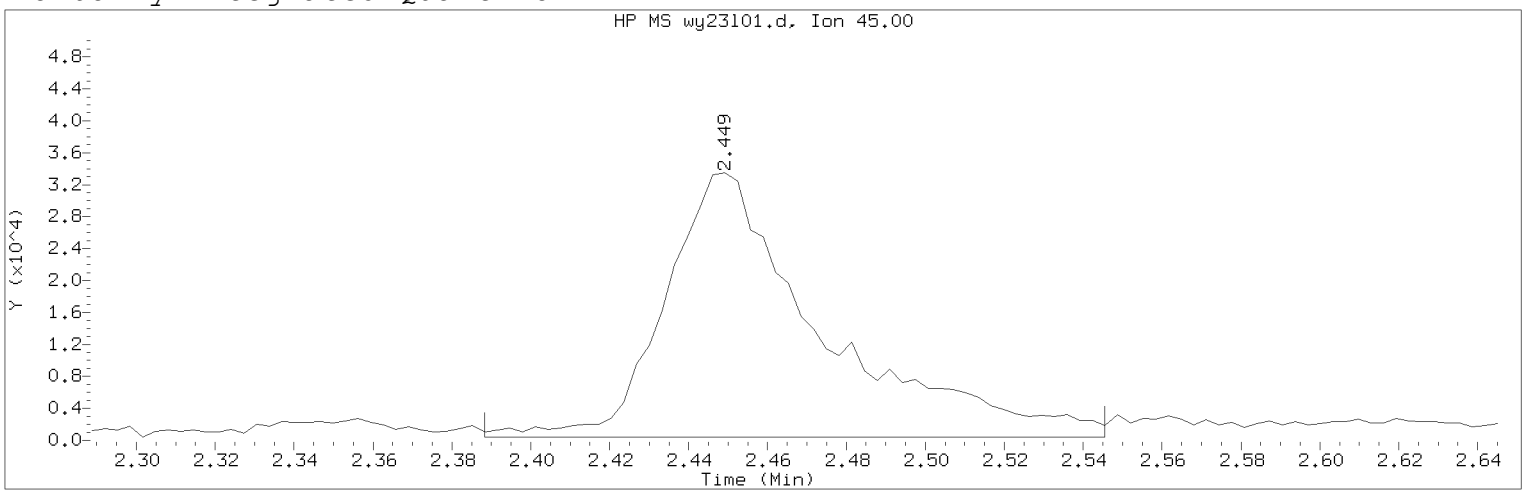
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 400
Retention Time (minutes): 2.116
Quant Ion : 67.00
Area : 99721
On-column Amount (ng) : 16.2081
Integration start scan : 389 Integration stop scan: 454
Y at integration start : 0 Y at integration end: 734

Digitally signed by Don V. Viray on 05/23/2019 at 20:19.
Target 3.5 esignature user id: dviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23l01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:10 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:38 amd00492

Sample Name: LCSW35 Lab Sample ID: LCSW35

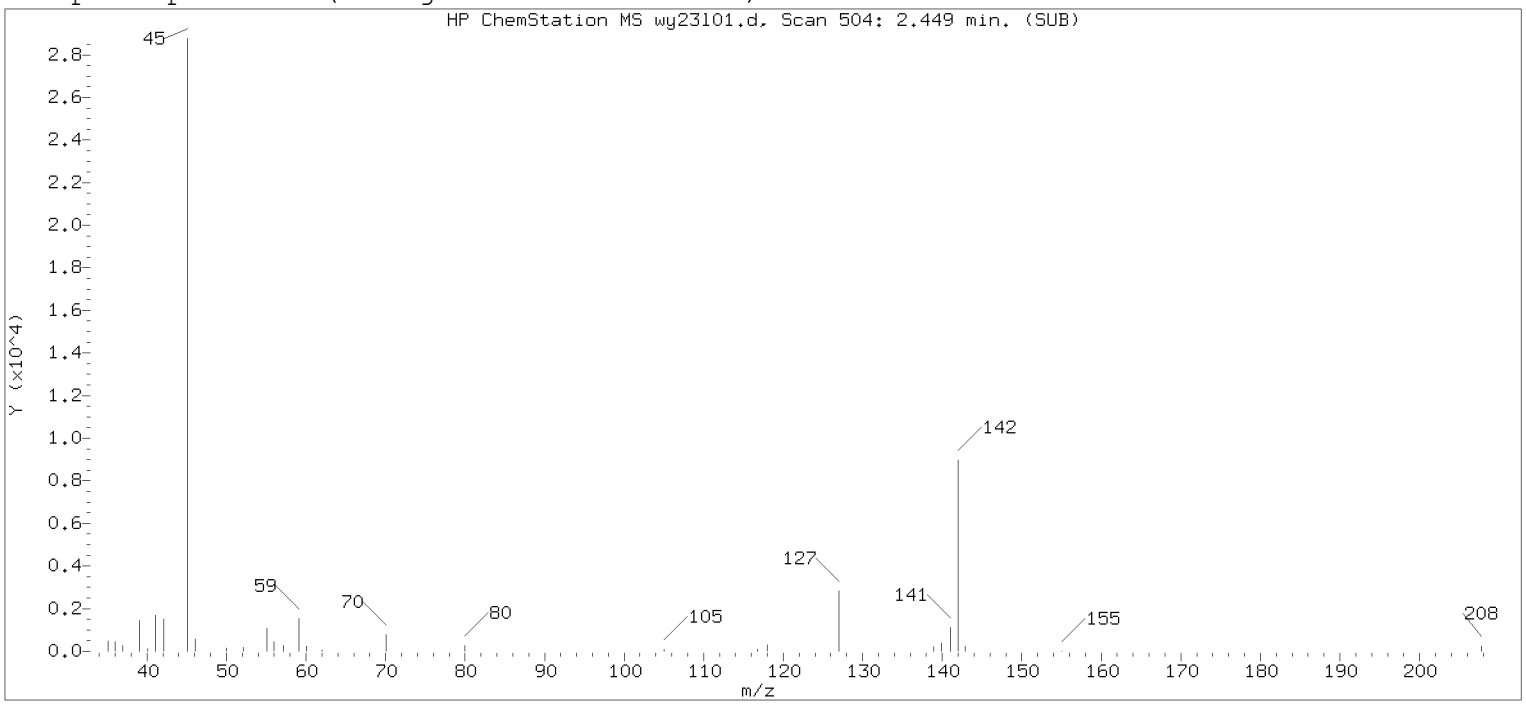
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 504
Retention Time (minutes): 2.449
Quant Ion : 45.00
Area (flag) : 91220M
On-Column Amount (ng) : 169.2538
Integration start scan : 484 Integration stop scan: 533
Y at integration start : 396 Y at integration end: 396

Reason for manual integration: improper integration

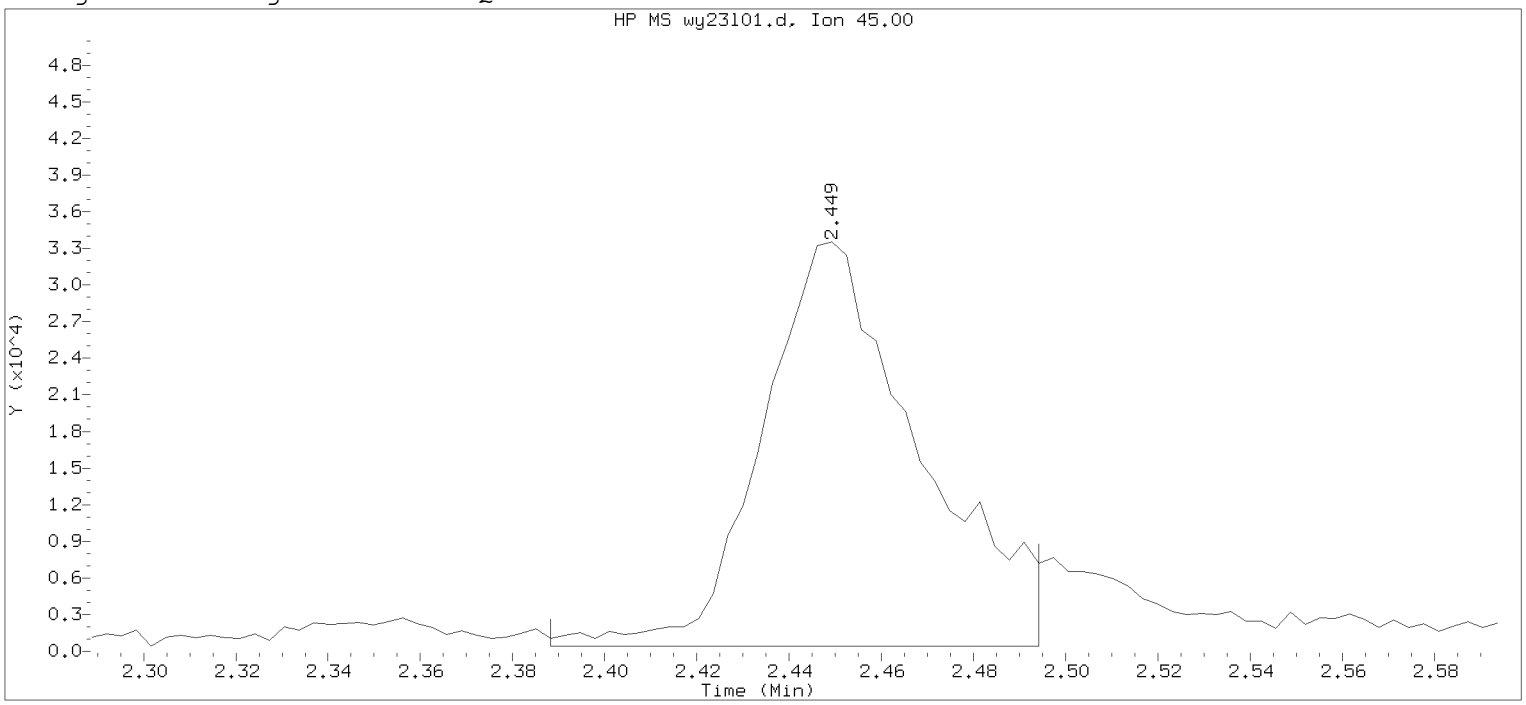
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:19.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:39.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23l01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:10 Analyst ID: and00492

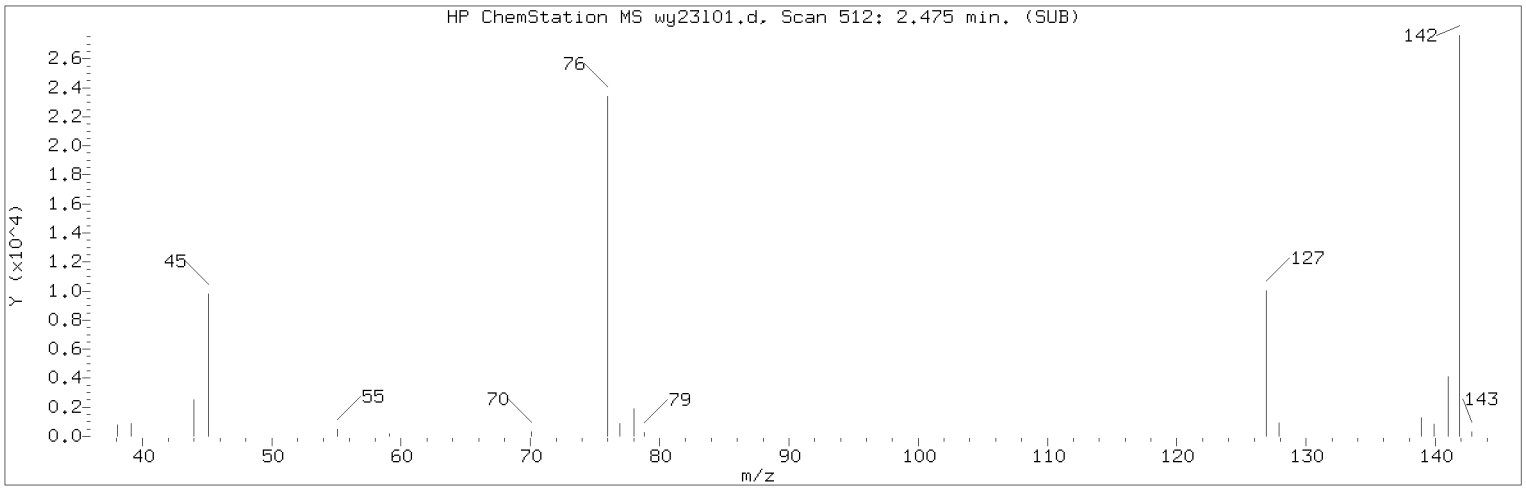
Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:12
Date, time and analyst ID of latest file update: 23-May-2019 06:25 Automation

Sample Name: LCSW35 Lab Sample ID: LCSW35

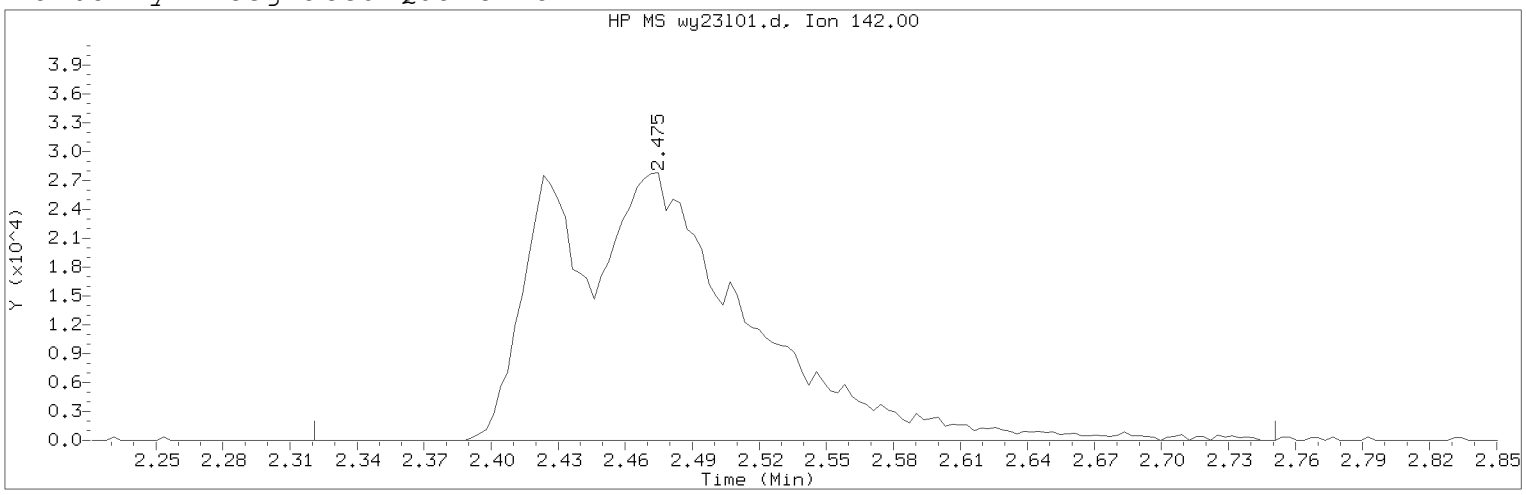
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 504
Retention Time (minutes): 2.449
Quant Ion : 45.00
Area : 78447
On-column Amount (ng) : 145.5557
Integration start scan : 484 Integration stop scan: 517
Y at integration start : 397 Y at integration end: 397

Digitally signed by Don V. Viray on 05/23/2019 at 20:19.
Target 3.5 esignature user id: dviray0680

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23l01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:10 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:38 amd00492

Sample Name: LCSW35 Lab Sample ID: LCSW35

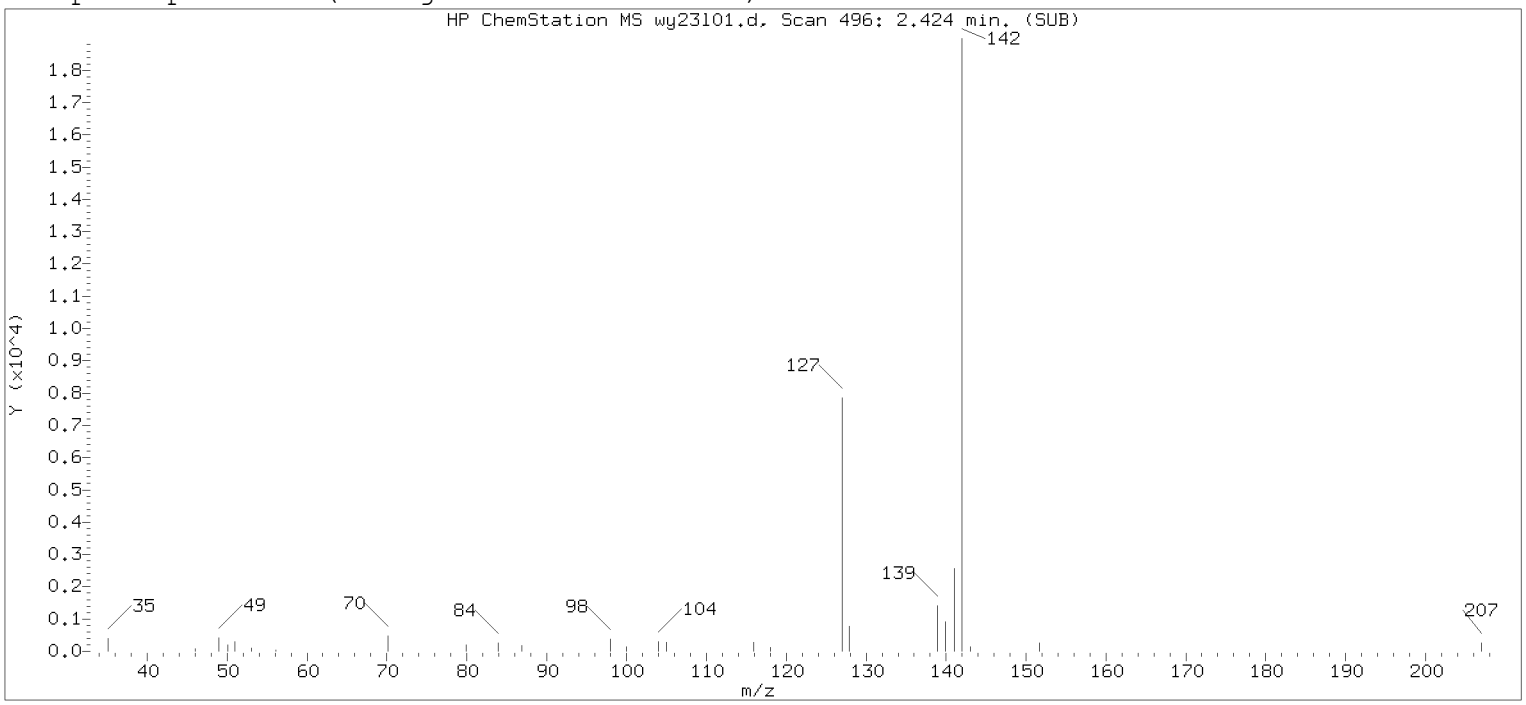
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 512
Retention Time (minutes): 2.475
Quant Ion : 142.00
Area (flag) : 169170M
On-Column Amount (ng) : 19.0635
Integration start scan : 463 Integration stop scan: 597
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

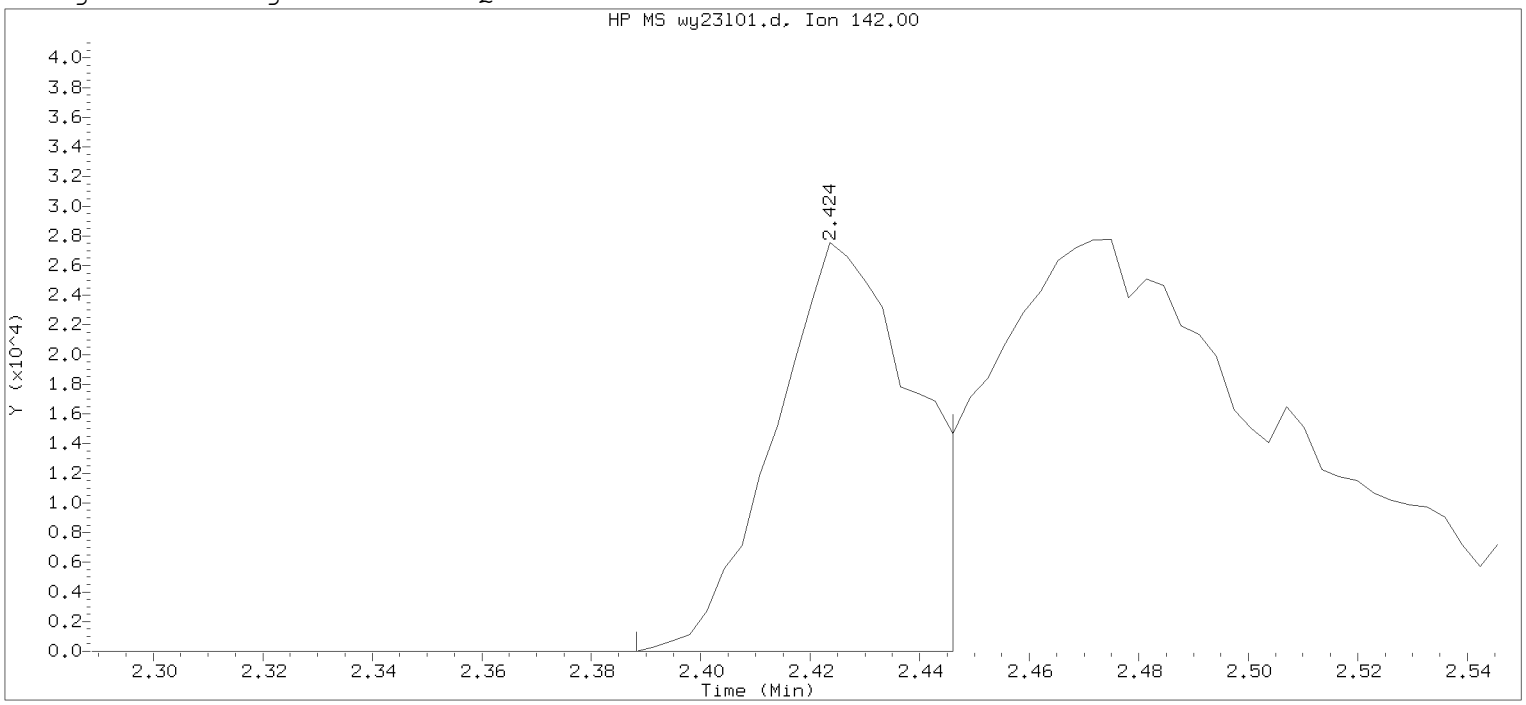
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:19.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:39.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23l01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:10 Analyst ID: and00492

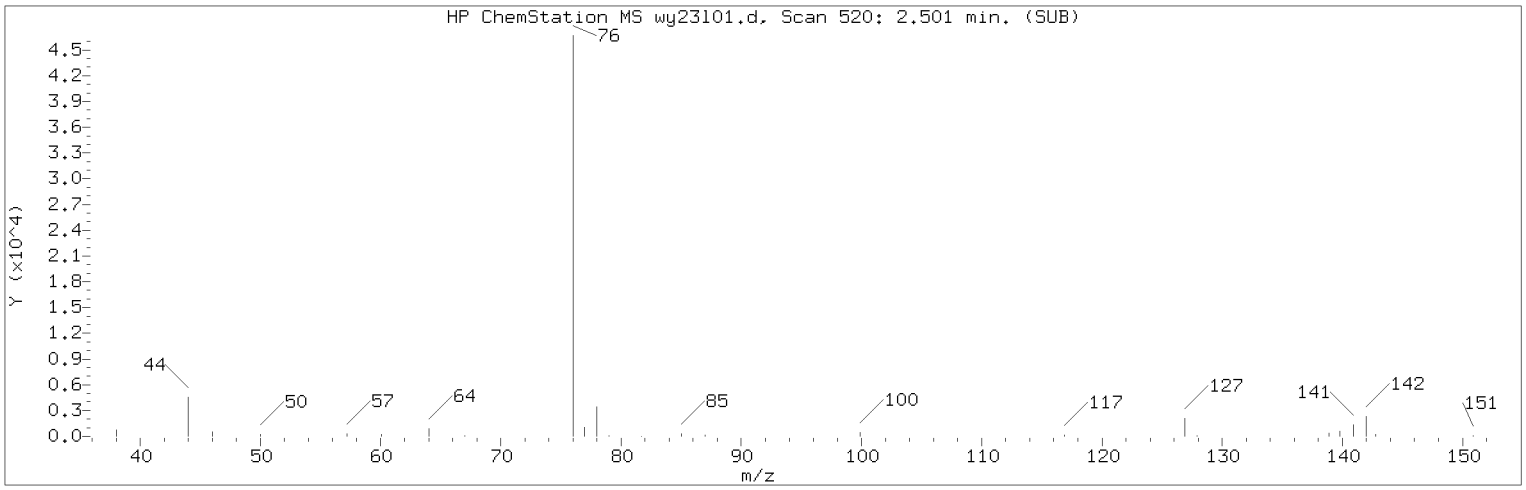
Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:12
Date, time and analyst ID of latest file update: 23-May-2019 06:25 Automation

Sample Name: LCSW35 Lab Sample ID: LCSW35

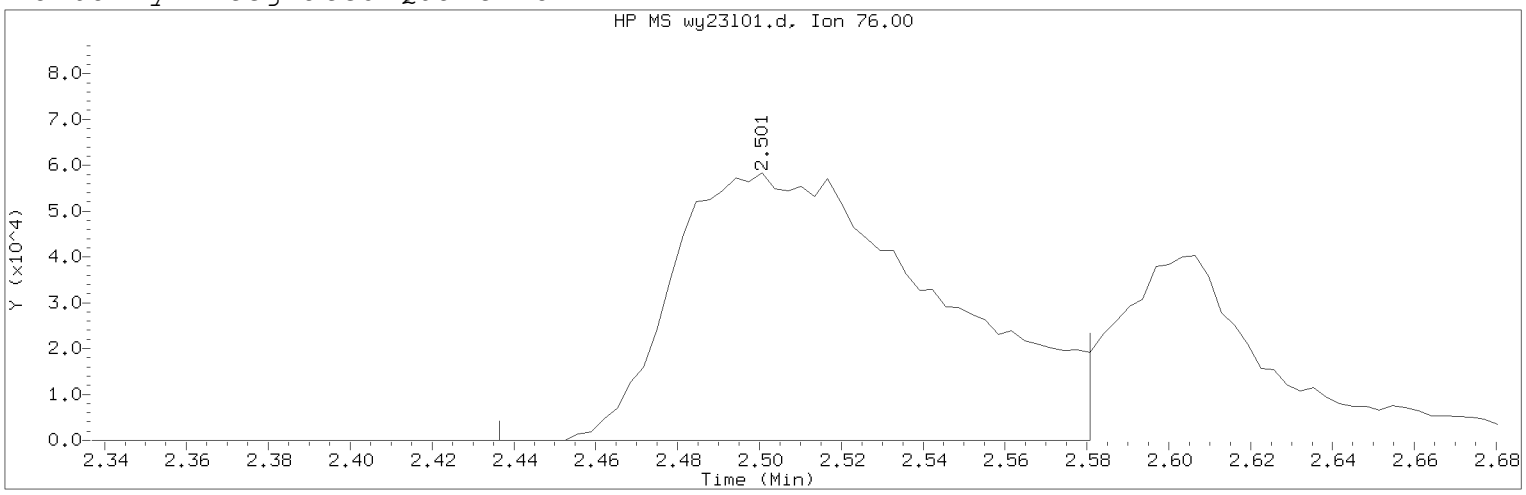
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 496
Retention Time (minutes): 2.424
Quant Ion : 142.00
Area : 48027
On-column Amount (ng) : 5.4122
Integration start scan : 484 Integration stop scan: 502
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/23/2019 at 20:19.
Target 3.5 esignature user id: dviray0492

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23l01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:10 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:38 amd00492

Sample Name: LCSW35 Lab Sample ID: LCSW35

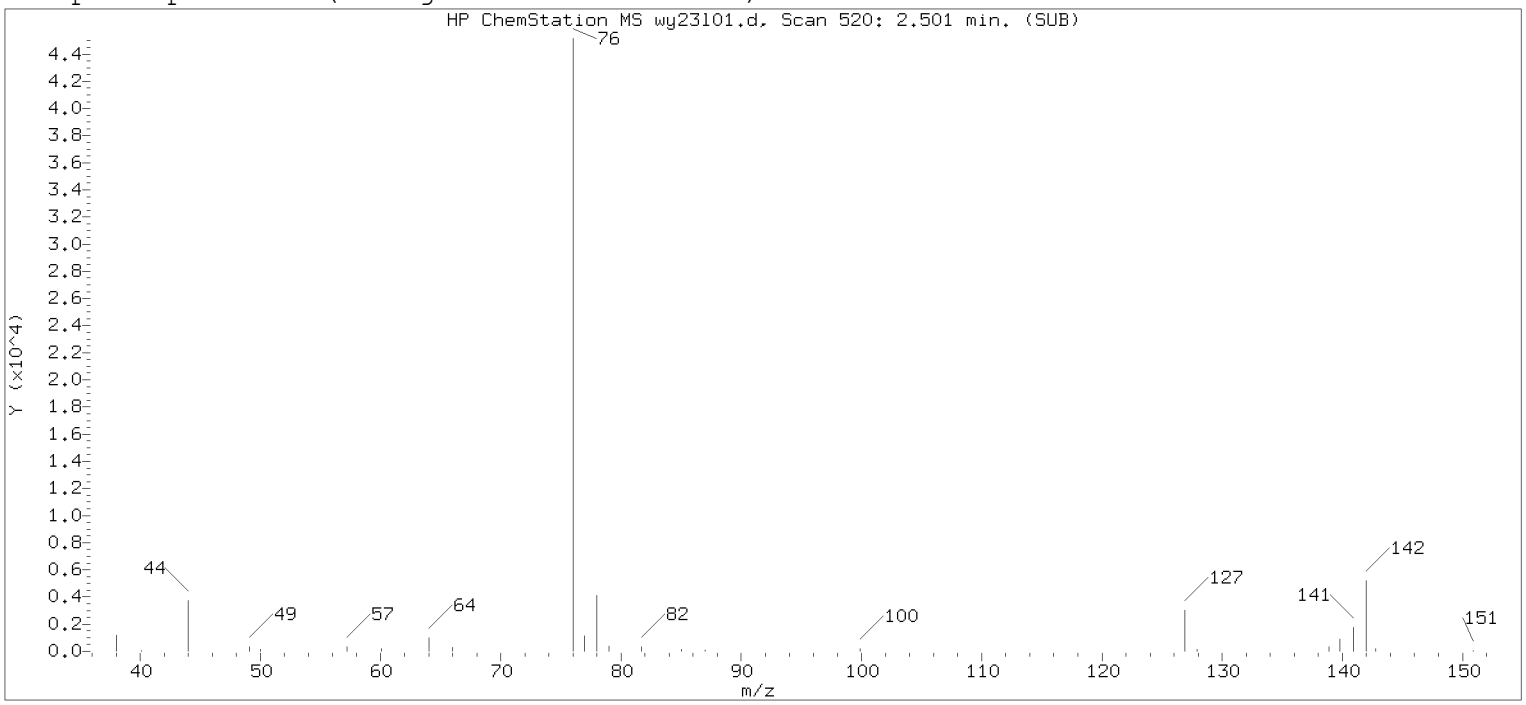
Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 520
Retention Time (minutes): 2.501
Quant Ion : 76.00
Area (flag) : 261843M
On-Column Amount (ng) : 16.0499
Integration start scan : 499 Integration stop scan: 544
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

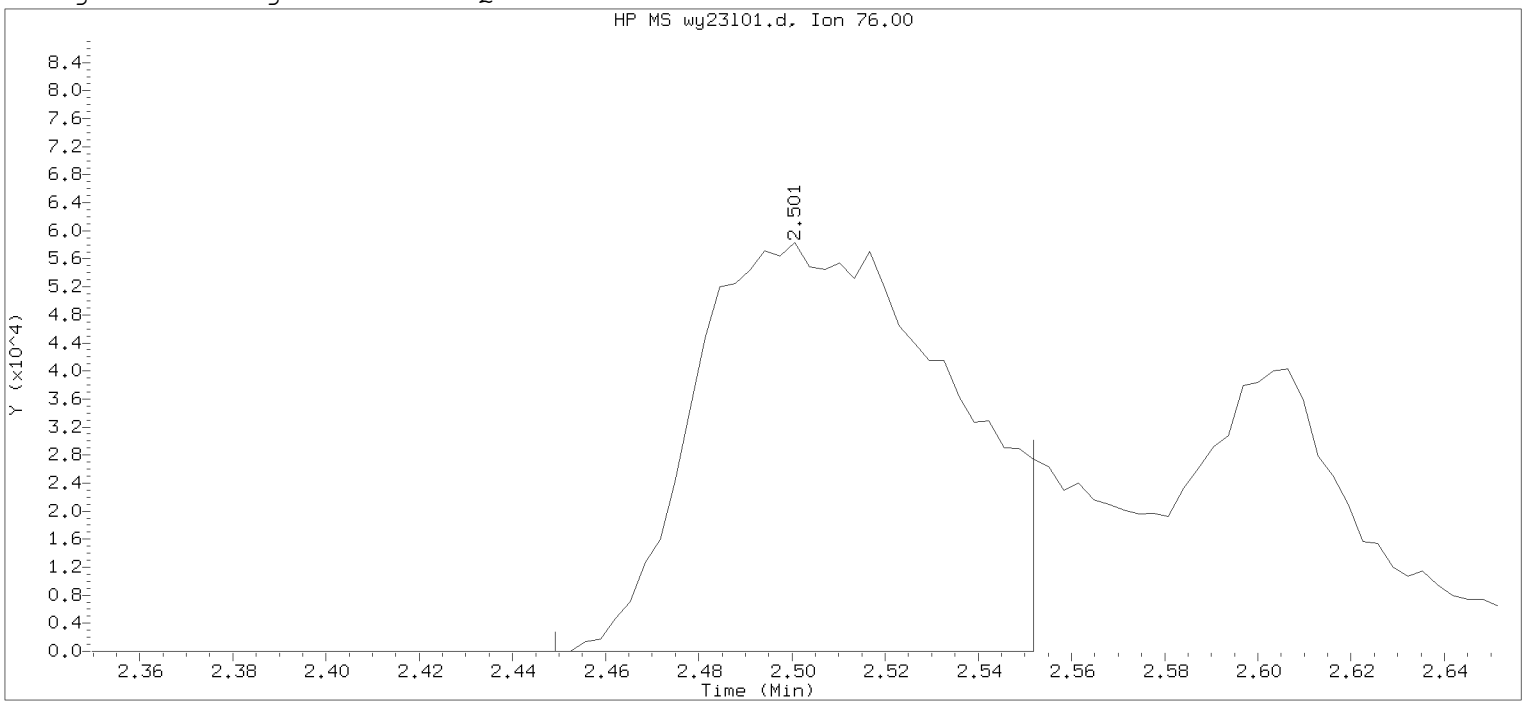
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:19.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:39.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23l01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:10 Analyst ID: and00492

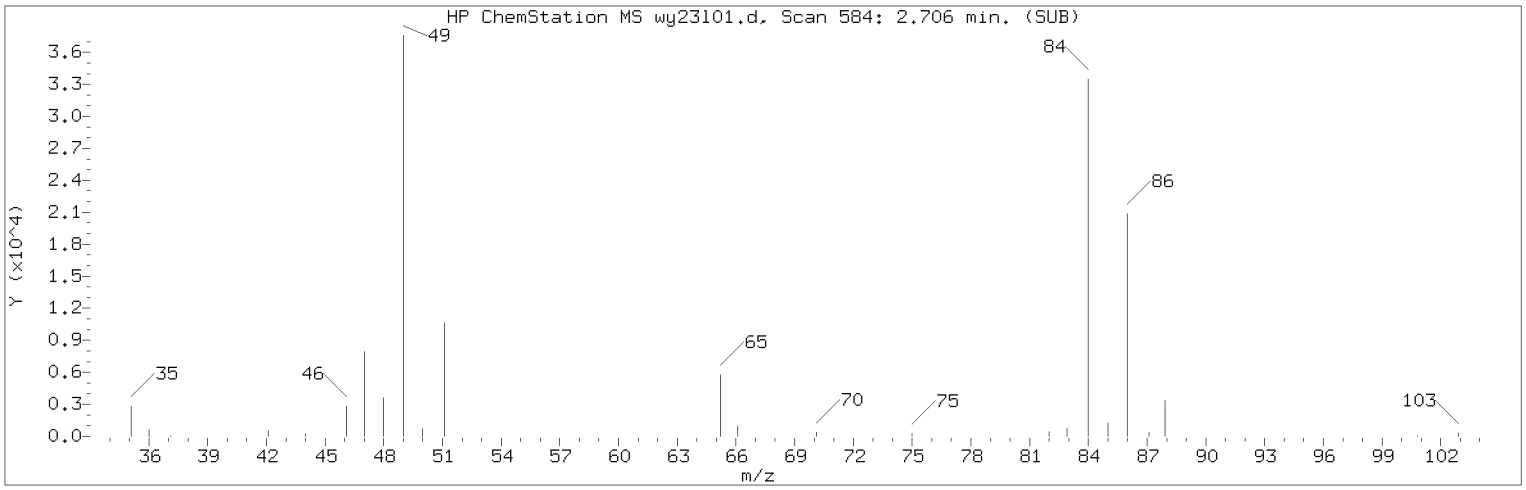
Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:12
Date, time and analyst ID of latest file update: 23-May-2019 06:25 Automation

Sample Name: LCSW35 Lab Sample ID: LCSW35

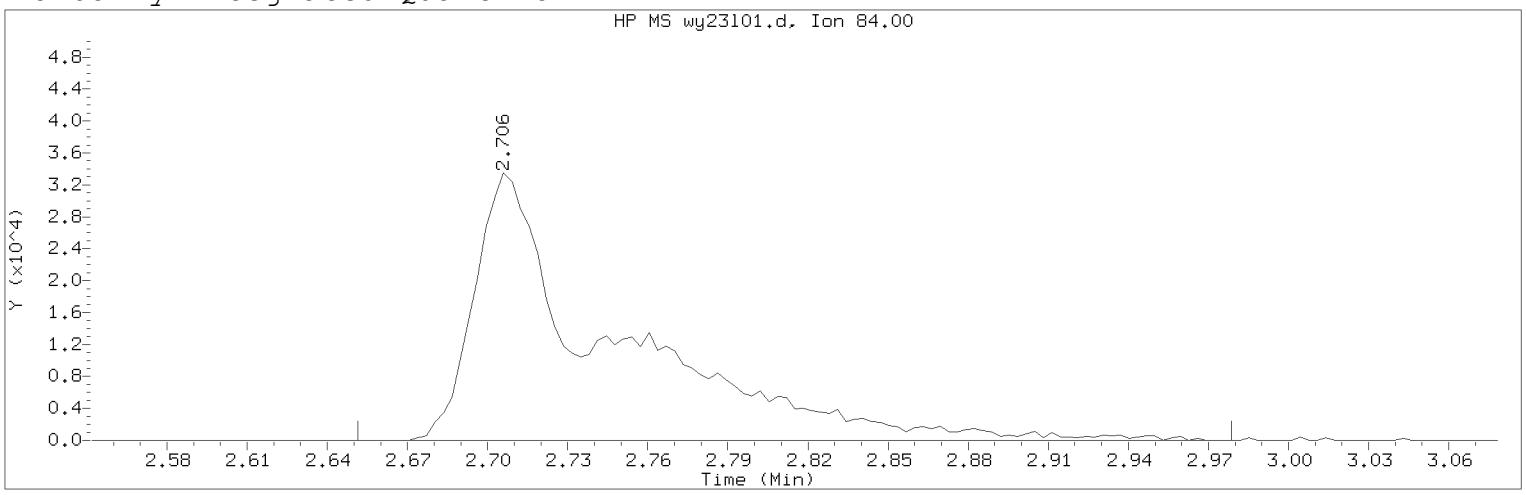
Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 520
Retention Time (minutes): 2.501
Quant Ion : 76.00
Area : 221747
On-column Amount (ng) : 13.5922
Integration start scan : 503 Integration stop scan: 535
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/23/2019 at 20:19.
Target 3.5 esignature user id: dviray0684

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23l01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:10 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:38 amd00492

Sample Name: LCSW35 Lab Sample ID: LCSW35

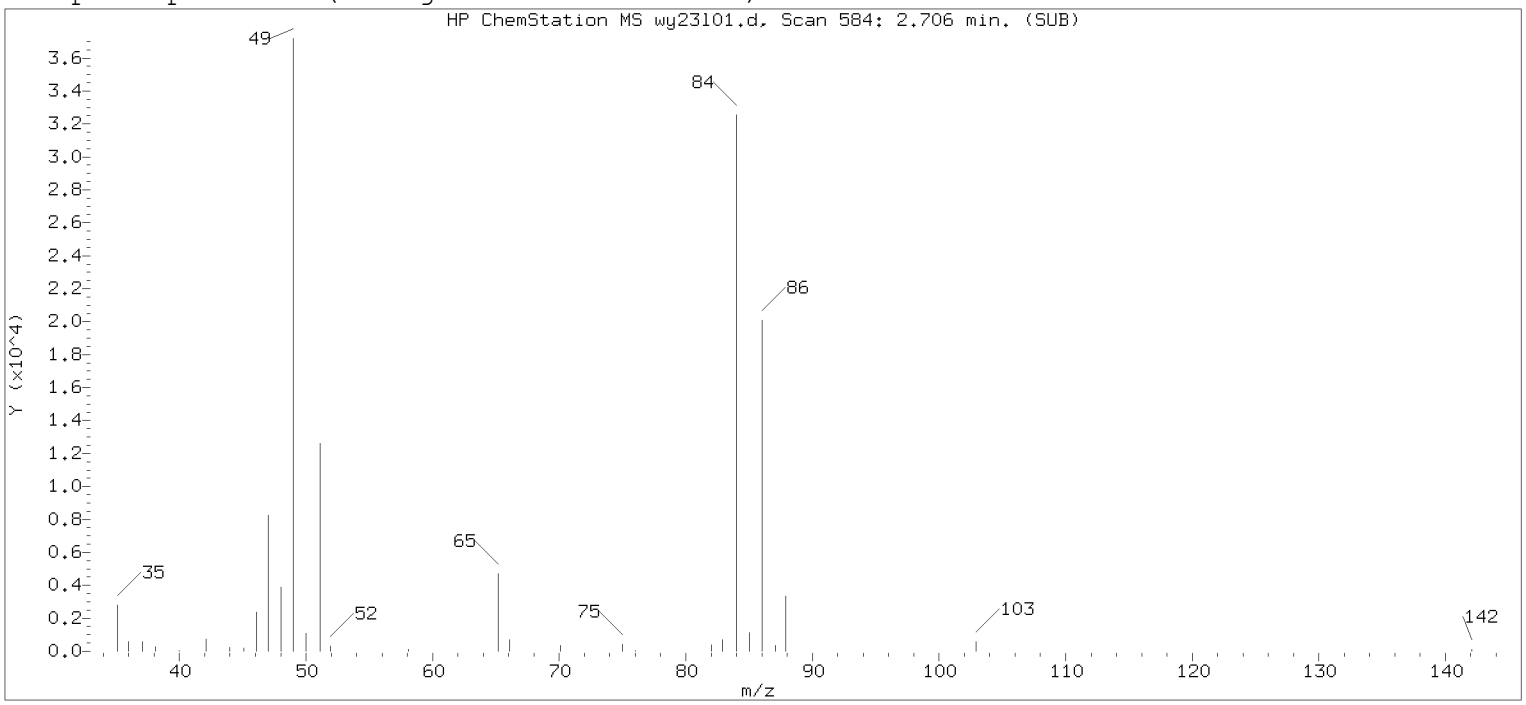
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 584
Retention Time (minutes): 2.706
Quant Ion : 84.00
Area (flag) : 118164M
On-Column Amount (ng) : 20.8759
Integration start scan : 566 Integration stop scan: 668
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

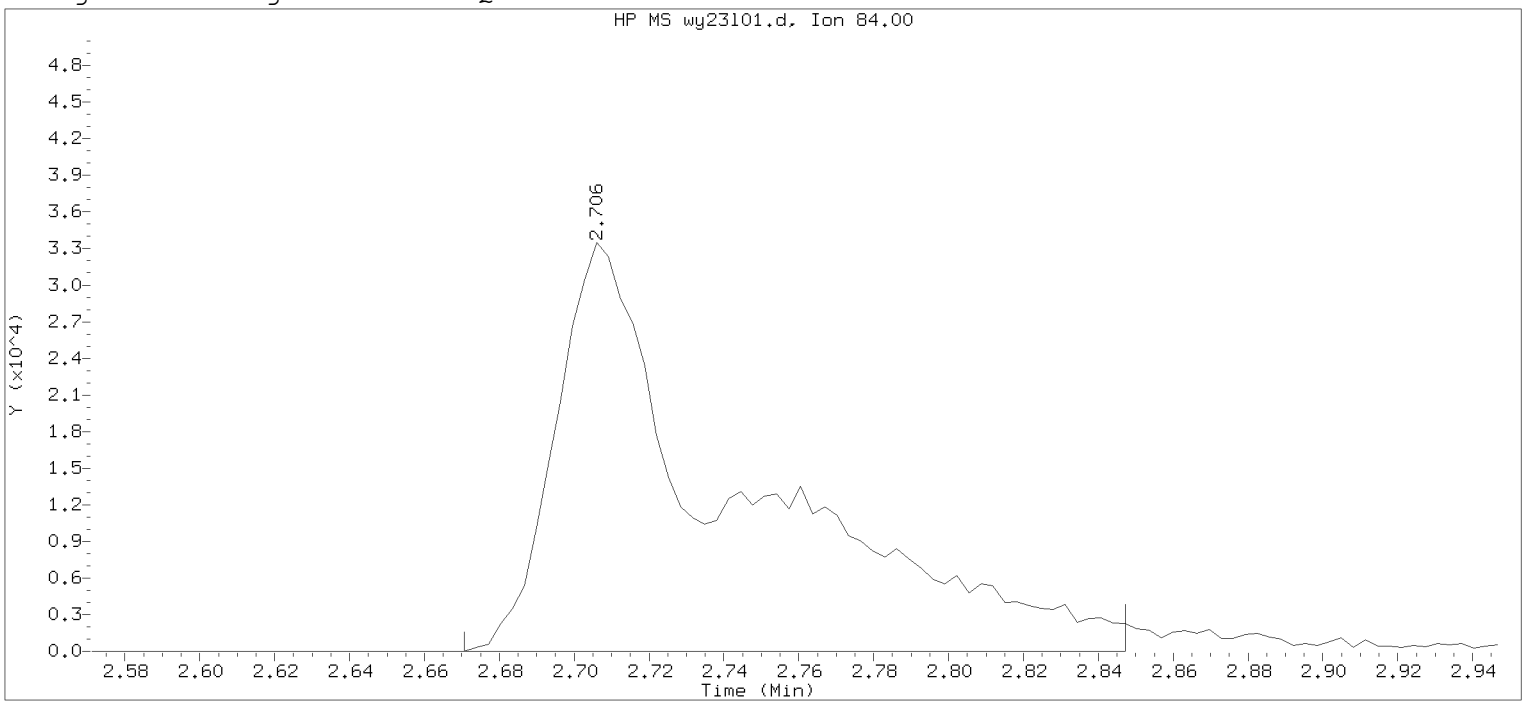
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:19.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:39.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23l01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:10 Analyst ID: and00492

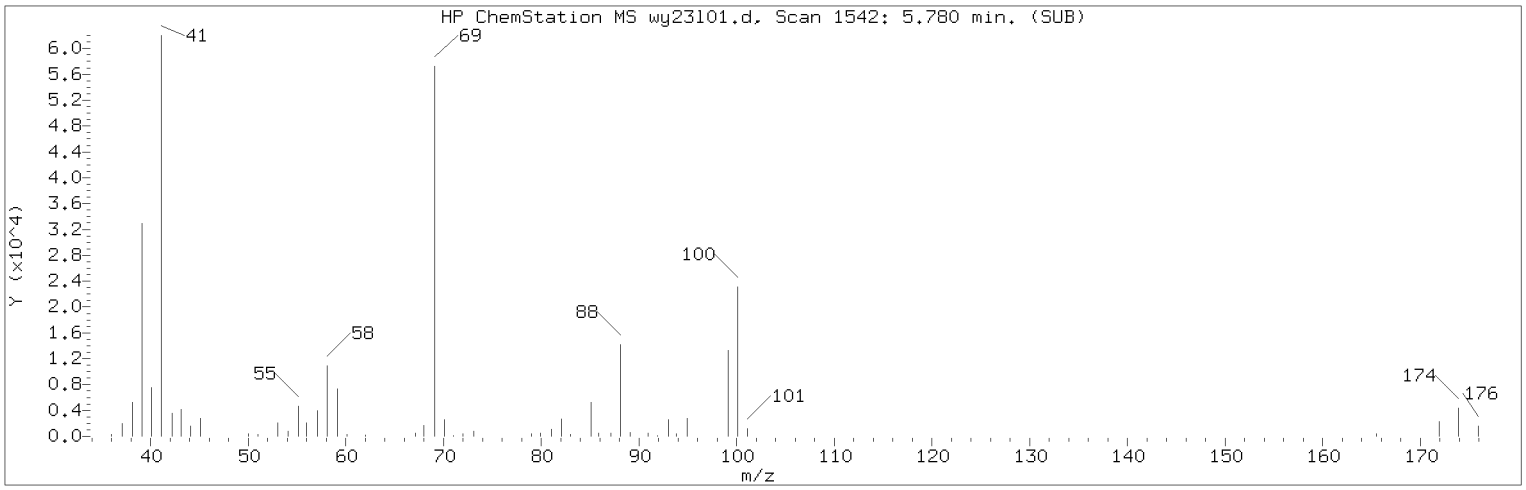
Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:12
Date, time and analyst ID of latest file update: 23-May-2019 06:25 Automation

Sample Name: LCSW35 Lab Sample ID: LCSW35

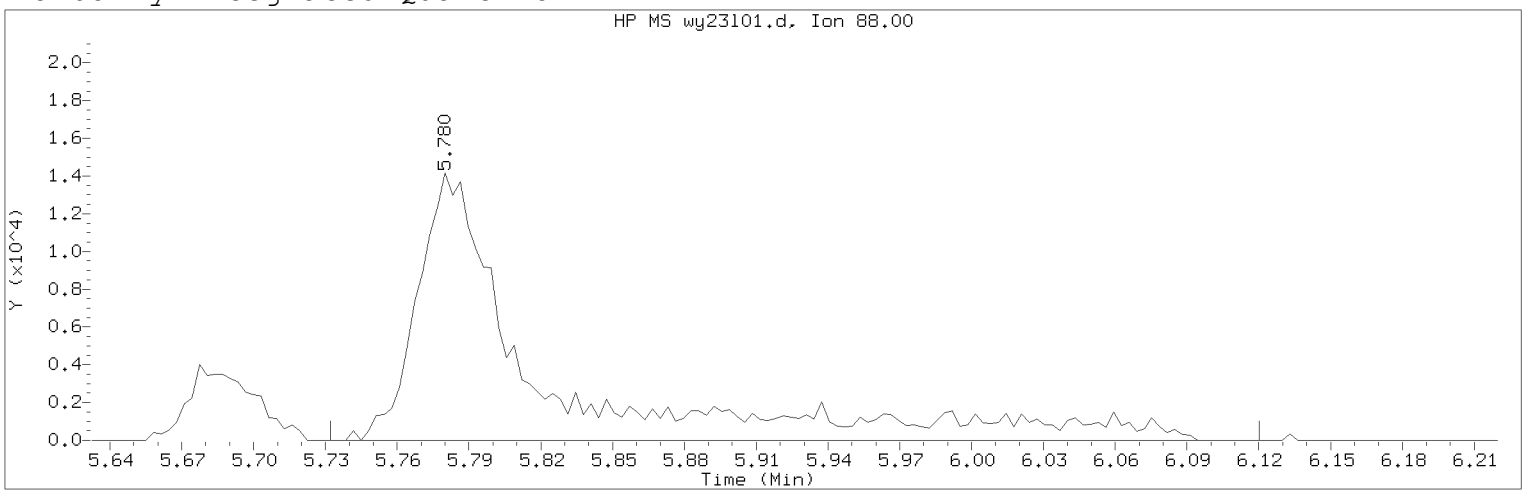
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 584
Retention Time (minutes): 2.706
Quant Ion : 84.00
Area : 112257
On-column Amount (ng) : 19.8323
Integration start scan : 572 Integration stop scan: 627
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/23/2019 at 20:19.
Target 3.5 esignature user ID: dvv10686

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23l01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:10 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:38 amd00492

Sample Name: LCSW35 Lab Sample ID: LCSW35

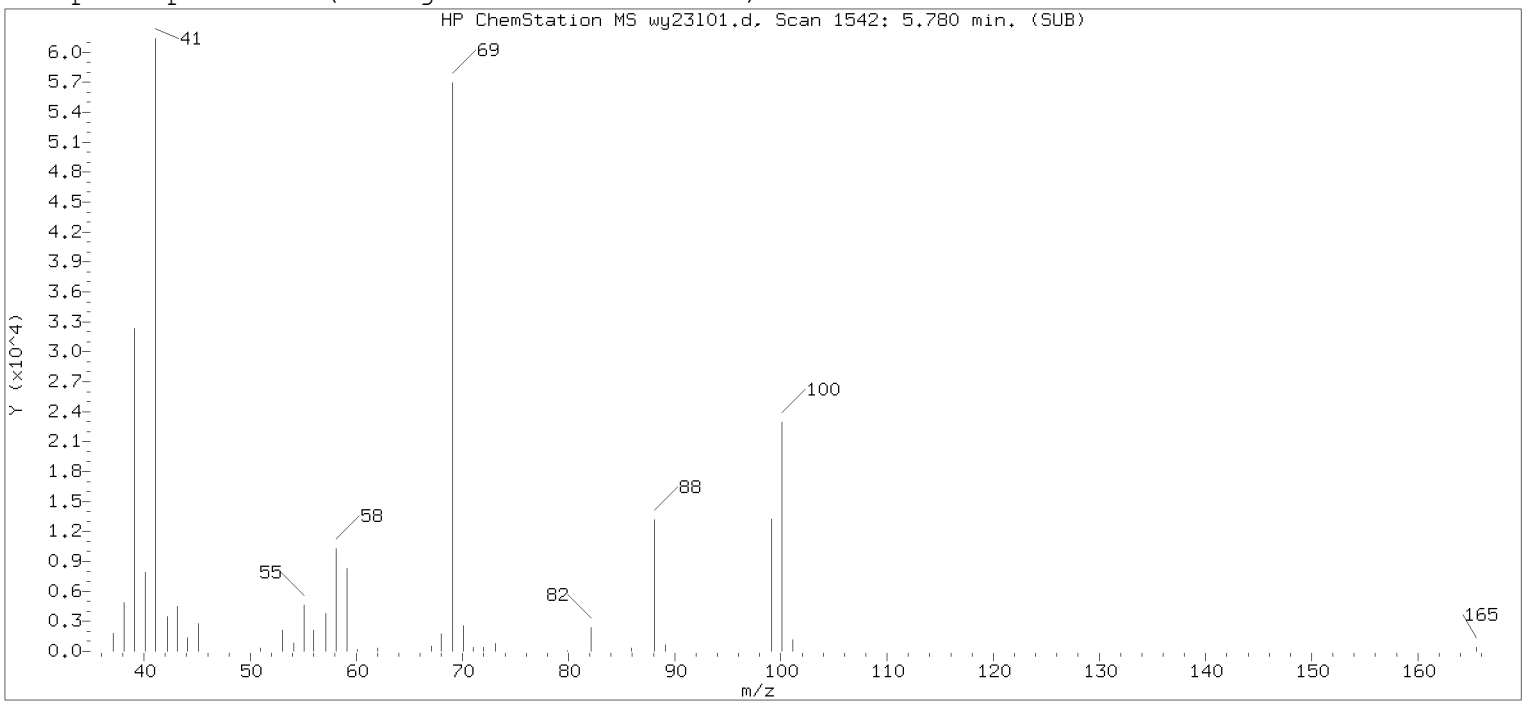
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area (flag) : 49556M
On-Column Amount (ng) : 532.6682
Integration start scan : 1526 Integration stop scan: 1647
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

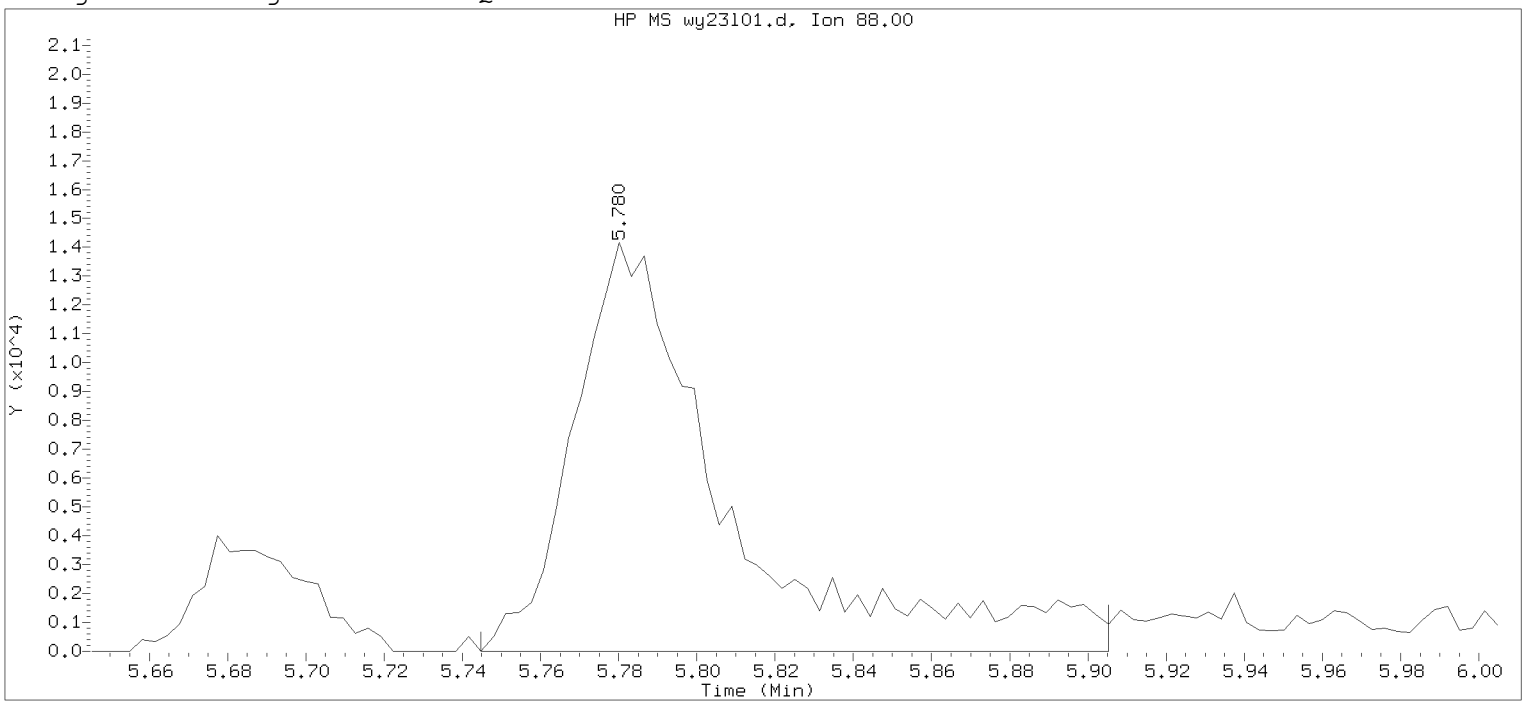
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:19.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:39.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23l01.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:10 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:12
Date, time and analyst ID of latest file update: 23-May-2019 06:25 Automation

Sample Name: LCSW35 Lab Sample ID: LCSW35

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1542
Retention Time (minutes): 5.780
Quant Ion : 88.00
Area : 38422
On-column Amount (ng) : 412.9992
Integration start scan : 1530 Integration stop scan: 1580
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/23/2019 at 20:19.
Target 3.5 esignature user ID: dvv0068

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCDW35

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDW35

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may23a.b/wy23l02.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	17	
74-87-3	Chloromethane	17	
106-99-0	1,3-Butadiene	32	
75-01-4	Vinyl Chloride	18	
74-83-9	Bromomethane	17	
75-00-3	Chloroethane	17	
109-66-0	n-Pentane	15	
75-69-4	Trichlorofluoromethane	18	
64-17-5	Ethanol	330	J
354-23-4	Freon 123a	20	
107-02-8	Acrolein	130	
75-35-4	1,1-Dichloroethene	22	
67-64-1	Acetone	170	
76-13-1	Freon 113	19	
67-63-0	2-Propanol	170	
74-88-4	Methyl Iodide	20	
75-15-0	Carbon Disulfide	17	
107-05-1	Allyl Chloride	19	
79-20-9	Methyl Acetate	19	
75-09-2	Methylene Chloride	21	
75-65-0	t-Butyl alcohol	220	
107-13-1	Acrylonitrile	87	
156-60-5	trans-1,2-Dichloroethene	22	
1634-04-4	Methyl Tertiary Butyl Ether	24	
110-54-3	n-Hexane	19	
75-34-3	1,1-Dichloroethane	22	
108-20-3	di-Isopropyl ether	21	
126-99-8	2-Chloro-1,3-butadiene	22	
637-92-3	Ethyl t-butyl ether	22	
156-59-2	cis-1,2-Dichloroethene	23	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCDW35

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDW35

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may23a.b/wy23l02.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	45	
78-93-3	2-Butanone	130	
594-20-7	2,2-Dichloropropane	20	
107-12-0	Propionitrile	170	
126-98-7	Methacrylonitrile	140	
74-97-5	Bromochloromethane	21	
109-99-9	Tetrahydrofuran	110	
67-66-3	Chloroform	22	
71-55-6	1,1,1-Trichloroethane	22	
110-82-7	Cyclohexane	19	
563-58-6	1,1-Dichloropropene	22	
56-23-5	Carbon Tetrachloride	21	
78-83-1	Isobutyl Alcohol	520	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	23	
994-05-8	t-Amyl methyl ether	22	
142-82-5	n-Heptane	17	
71-36-3	n-Butanol	920	
79-01-6	Trichloroethene	22	
108-87-2	Methylcyclohexane	19	
78-87-5	1,2-Dichloropropane	22	
74-95-3	Dibromomethane	22	
123-91-1	1,4-Dioxane	520	
80-62-6	Methyl Methacrylate	18	
75-27-4	Bromodichloromethane	21	
79-46-9	2-Nitropropane	16	
110-75-8	2-Chloroethyl Vinyl Ether	16	
10061-01-5	cis-1,3-Dichloropropene	20	
108-10-1	4-Methyl-2-pentanone	87	
108-88-3	Toluene	24	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCDW35

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDW35

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may23a.b/wy23l02.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	20	
542-75-6	1,3-Dichloropropene (total)	40	
97-63-2	Ethyl Methacrylate	19	
79-00-5	1,1,2-Trichloroethane	23	
127-18-4	Tetrachloroethene	24	
142-28-9	1,3-Dichloropropane	23	
591-78-6	2-Hexanone	93	
124-48-1	Dibromochloromethane	22	
106-93-4	1,2-Dibromoethane	22	
108-90-7	Chlorobenzene	24	
630-20-6	1,1,1,2-Tetrachloroethane	23	
100-41-4	Ethylbenzene	23	
179601-23-1	m+p-Xylene	47	
95-47-6	o-Xylene	23	
1330-20-7	Xylene (Total)	70	
100-42-5	Styrene	23	
75-25-2	Bromoform	19	
98-82-8	Isopropylbenzene	23	
108-94-1	Cyclohexanone	420	
108-86-1	Bromobenzene	23	
79-34-5	1,1,2,2-Tetrachloroethane	22	
96-18-4	1,2,3-Trichloropropane	22	
110-57-6	trans-1,4-Dichloro-2-butene	85	
103-65-1	n-Propylbenzene	23	
95-49-8	2-Chlorotoluene	23	
106-43-4	4-Chlorotoluene	23	
108-67-8	1,3,5-Trimethylbenzene	22	
98-06-6	tert-Butylbenzene	22	
76-01-7	Pentachloroethane	22	
95-63-6	1,2,4-Trimethylbenzene	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCDW35

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDW35

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09137.i/19may23a.b/wy23l02.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
135-98-8	sec-Butylbenzene	21	
541-73-1	1,3-Dichlorobenzene	23	
99-87-6	p-Isopropyltoluene	21	
106-46-7	1,4-Dichlorobenzene	23	
526-73-8	1,2,3-Trimethylbenzene	22	
100-44-7	Benzyl Chloride	17	
141-93-5	1,3-Diethylbenzene	20	
105-05-5	1,4-Diethylbenzene	20	
95-50-1	1,2-Dichlorobenzene	23	
104-51-8	n-Butylbenzene	20	
135-01-3	1,2-Diethylbenzene	21	
25340-17-4	Diethylbenzene (total)	62	
96-12-8	1,2-Dibromo-3-chloropropane	18	
108-70-3	1,3,5-Trichlorobenzene	19	
120-82-1	1,2,4-Trichlorobenzene	19	
87-68-3	Hexachlorobutadiene	18	
91-20-3	Naphthalene	18	
87-61-6	1,2,3-Trichlorobenzene	19	
91-57-6	2-Methylnaphthalene	12	

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may23a.b/wy23l02.d Injection date and time: **23-MAY-2019 06:34**
Data file Sample Info. Line: LCDW35;LCDW35;1;3;LCSD;;;;wy23b01; Instrument ID: **HP09137.i** Batch: **W191431AA**
Date, time and analyst ID of latest file update: 23-May-2019 07:39 amd00492

Blank Data file reference: **/chem2/HP09137.i/19may23a.b/wy23b01.d**

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-MAY-2019 06:56
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may23a.b/wy23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.735	(0.000)	593	65	203070	(1)	250.00	
66) Fluorobenzene	5.032	(-0.003)	1309	96	1044450	(3)	50.00	
101) Chlorobenzene-d5	8.161	(0.000)	2284	117	793557	(3)	50.00	
132) 1,4-Dichlorobenzene-d4	10.042	(0.000)	2870	152	442150	(1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.352	(0.001)	113	234720	48.509	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.686	(0.002)	102	66385	51.585	103%		80 - 120
84) Toluene-d8	(3)	6.695	(0.000)	98	1054124	53.011	106%		80 - 120
115) 4-Bromofluorobenzene	(3)	9.162	(0.000)	95	385994	48.521	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	1.256	(0.000)	85	116159	17.200	17.20			0.2	1
4) Chloromethane	(2)	1.390	(-0.000)	50	144804	17.219	17.22			0.2	1
5) 1,3-Butadiene	(2)	1.480	(0.001)	39	163225M	31.849	31.85			1	3
6) Vinyl Chloride	(2)	1.464	(-0.000)	62	140436	18.217	18.22			0.2	1
8) Bromomethane	(2)	1.686	(0.001)	94	100505	16.530	16.53			0.3	1
9) Chloroethane	(2)	1.762	(0.002)	64	87465M	17.241	17.24			0.2	1
11) n-Pentane	(2)	1.968	(0.000)	43	120564	15.483	15.48			0.4	10
12) Trichlorofluoromethane	(2)	1.926	(0.002)	101	144737	17.678	17.68			0.2	1
13) Ethanol	(1)	2.032	(-0.001)	45	30898	333.621	333.62		J	280	750
15) Freon 123a	(2)	2.116	(0.000)	67	122125M	19.961	19.96			0.4	5
16) Acrolein	(1)	2.218	(-0.000)	56	192830	131.898	131.90			2	100
17) 1,1-Dichloroethene	(2)	2.298	(0.000)	96	101144	21.964	21.96			0.2	1
18) Acetone	(1)	2.337	(0.001)	58	119822	168.619	168.62			0.7	20
19) Freon 113	(2)	2.334	(0.002)	101	75019	18.552	18.55			0.2	10
21) 2-Propanol	(1)	2.449	(-0.001)	45	88815	168.222	168.22			18	100
22) Methyl Iodide	(2)	2.472	(-0.008)	142	179208M	20.308	20.31			0.2	1
23) Carbon Disulfide	(2)	2.494	(0.000)	76	282980M	17.443	17.44			0.2	5
25) Allyl Chloride	(2)	2.603	(0.000)	41	154203	19.221	19.22			0.3	5
27) Methyl Acetate	(2)	2.616	(0.000)	43	129615	18.666	18.67			0.2	5
28) Methylene Chloride	(2)	2.709	(0.000)	84	120976M	21.492	21.49			0.3	1
30) t-Butyl alcohol	(1)	2.812	(-0.001)	59	202741	215.268	215.27			12	50
31) Acrylonitrile	(2)	2.927	(-0.000)	53	318113	87.082	87.08			0.3	20
32) trans-1,2-Dichloroethene	(2)	2.956	(0.000)	96	109104	21.837	21.84			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	2.966	(-0.000)	73	296196	24.347	24.35			0.2	1
34) n-Hexane	(2)	3.216	(0.000)	57	128510	19.223	19.22			0.2	5
36) 1,1-Dichloroethane	(2)	3.338	(0.001)	63	196176	21.668	21.67			0.2	1
38) di-Isopropyl ether	(2)	3.415	(-0.000)	45	373943	21.499	21.50			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	3.428	(0.000)	53	168590	21.500	21.50			0.2	5
40) Ethyl t-butyl ether	(2)	3.755	(0.000)	59	276245	21.788	21.79			0.2	1
42) cis-1,2-Dichloroethene	(2)	3.890	(0.000)	96	127326	22.697	22.70			0.2	1
43) 1,2-Dichloroethene (Total)	(2)			96	236430	44.533	44.53			0.2	2

M = Compound was manually integrated.

Digitally signed by Don V. Viray on 05/23/2019 at 20:20. Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may23a.b/wy23102.d Injection date and time: **23-MAY-2019 06:34**
Data file Sample Info. Line: LCDW35;LCDW35;1;3;LCSD;;;;wy23b01; Instrument ID: **HP09137.i** Batch: **W191431AA**
Date, time and analyst ID of latest file update: 23-May-2019 07:39 amd00492

Blank Data file reference: **/chem2/HP09137.i/19may23a.b/wy23b01.d**

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-MAY-2019 06:56
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may23a.b/wy23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	3.909(-0.000)	43	656956	125.175	125.17			0.3	10
45) 2,2-Dichloropropane	(2)	3.890(0.000)	77	80473	19.791	19.79			0.3	1
47) Propionitrile	(1)	3.961(0.001)	54	194596	166.248	166.25			14	100
48) Methacrylonitrile	(2)	4.111(0.000)	67	543108	138.274	138.27			6	50
49) Bromochloromethane	(2)	4.115(0.001)	128	60664	20.803	20.80			0.2	5
50) Tetrahydrofuran	(1)	4.169(-0.001)	71	124468	114.892	114.89			0.7	10
51) Chloroform	(2)	4.201(-0.000)	83	185974	21.893	21.89			0.2	1
53) 1,1,1-Trichloroethane	(2)	4.378(0.000)	97	139776	21.869	21.87			0.3	1
54) Cyclohexane	(2)	4.442(-0.000)	56	162400	19.199	19.20			0.2	5
55) 1,1-Dichloropropene	(2)	4.545(0.000)	75	146947	21.577	21.58			0.2	5
56) Carbon Tetrachloride	(2)	4.545(0.000)	117	112870	20.578	20.58			0.2	1
58) Isobutyl Alcohol	(1)	4.673(0.001)	41	179413	522.536	522.54			36	250
60) Benzene	(2)	4.747(0.001)	78	465256	21.253	21.25			0.2	1
61) 1,2-Dichloroethane	(2)	4.766(0.000)	62	152419	22.539	22.54			0.3	1
65) t-Amyl methyl ether	(2)	4.875(-0.000)	73	284696	21.919	21.92			0.8	5
67) n-Heptane	(2)	5.032(0.000)	43	111510	17.453	17.45			0.2	5
69) n-Butanol	(1)	5.356(-0.001)	56	281850	924.535	924.54			61	250
71) Trichloroethene	(2)	5.405(0.000)	95	115276	21.744	21.74			0.2	1
73) Methylcyclohexane	(2)	5.607(0.000)	83	148151	19.249	19.25			0.2	5
74) 1,2-Dichloropropane	(2)	5.632(0.001)	63	125500	22.330	22.33			0.2	1
75) Dibromomethane	(2)	5.754(0.000)	93	75229	21.688	21.69			0.2	1
76) 1,4-Dioxane	(1)	5.786(-0.002)	88	47403M	520.132	520.13			29	250
77) Methyl Methacrylate	(2)	5.774(0.000)	69	108832	17.621	17.62			0.2	5
79) Bromodichloromethane	(2)	5.928(0.000)	83	131963	20.706	20.71			0.2	1
80) 2-Nitropropane	(2)	6.175(0.000)	41	33981	15.759	15.76			0.8	10
81) 2-Chloroethyl Vinyl Ether	(2)	6.261(0.000)	63	68948	16.091	16.09			0.2	10
82) cis-1,3-Dichloropropene	(2)	6.406(0.000)	75	175233	19.998	20.00			0.2	1
83) 4-Methyl-2-pentanone	(2)	6.586(0.000)	43	896680	86.673	86.67			0.5	10
89) Toluene	(3)	6.768(-0.000)	92	307906	24.037	24.04			0.2	1
90) trans-1,3-Dichloropropene	(3)	7.019(-0.000)	75	150133	19.688	19.69			0.2	1
91) 1,3-Dichloropropene (total)	(3)		100	325366	39.685	39.69			0.2	5
92) Ethyl Methacrylate	(3)	7.141(-0.000)	69	181806	19.402	19.40			0.2	5
93) 1,1,2-Trichloroethane	(3)	7.211(-0.000)	97	115708	23.469	23.47			0.2	1
94) Tetrachloroethene	(3)	7.362(-0.000)	166	124124	23.880	23.88			0.2	1
95) 1,3-Dichloropropane	(3)	7.384(-0.000)	76	196606	22.959	22.96			0.2	1
97) 2-Hexanone	(3)	7.490(-0.000)	43	695649	93.251	93.25			0.3	10
98) Dibromochloromethane	(3)	7.612(-0.000)	129	107351	22.293	22.29			0.2	1
100) 1,2-Dibromoethane	(3)	7.715(-0.000)	107	119196	22.006	22.01			0.2	1
103) Chlorobenzene	(3)	8.187(0.000)	112	342145	24.077	24.08			0.2	1
104) 1,1,1,2-Tetrachloroethane	(3)	8.261(0.000)	131	104491	22.881	22.88			0.2	1
105) Ethylbenzene	(3)	8.293(-0.000)	91	563457	23.144	23.14			0.4	1
107) m+p-Xylene	(3)	8.402(-0.000)	106	453371	46.837	46.84			1	5
108) o-Xylene	(3)	8.739(0.000)	106	219077	23.006	23.01			0.4	1
109) Xylene (Total)	(3)		106	672448	69.842	69.84			1	5
110) Styrene	(3)	8.752(-0.000)	104	362472	22.690	22.69			0.2	5
111) Bromoform	(3)	8.893(0.000)	173	69839	18.635	18.64			0.2	4
112) Isopropylbenzene	(3)	9.047(0.000)	105	536671	22.934	22.93			0.2	5
113) Cyclohexanone	(1)	9.114(-0.000)	55	172885	420.536	420.54			25	100
116) Bromobenzene	(4)	9.278(-0.000)	156	146449	22.996	23.00			0.2	5
117) 1,1,2,2-Tetrachloroethane	(4)	9.284(-0.000)	83	188359	21.932	21.93			0.2	1
118) 1,2,3-Trichloropropane	(4)	9.313(-0.000)	110	57595	22.265	22.26			0.2	5
119) trans-1,4-Dichloro-2-butene	(4)	9.329(-0.000)	53	233079	84.632	84.63			6	50
120) n-Propylbenzene	(4)	9.371(-0.000)	91	638638	22.748	22.75			0.2	5
121) 2-Chlorotoluene	(4)	9.435(-0.000)	126	134112	23.160	23.16			0.2	5

M = Compound was manually integrated.

Digitally signed by Don V. Viray on 05/23/2019 at 20:20. Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/19may23a.b/wy23l02.d Injection date and time: **23-MAY-2019 06:34**
Data file Sample Info. Line: LCDW35;LCDW35;1;3;LCSD;;;;wy23b01; Instrument ID: **HP09137.i** Batch: **W191431AA**
Date, time and analyst ID of latest file update: 23-May-2019 07:39 amd00492

Blank Data file reference: **/chem2/HP09137.i/19may23a.b/wy23b01.d**

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-MAY-2019 06:56
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/19may23a.b/wy23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

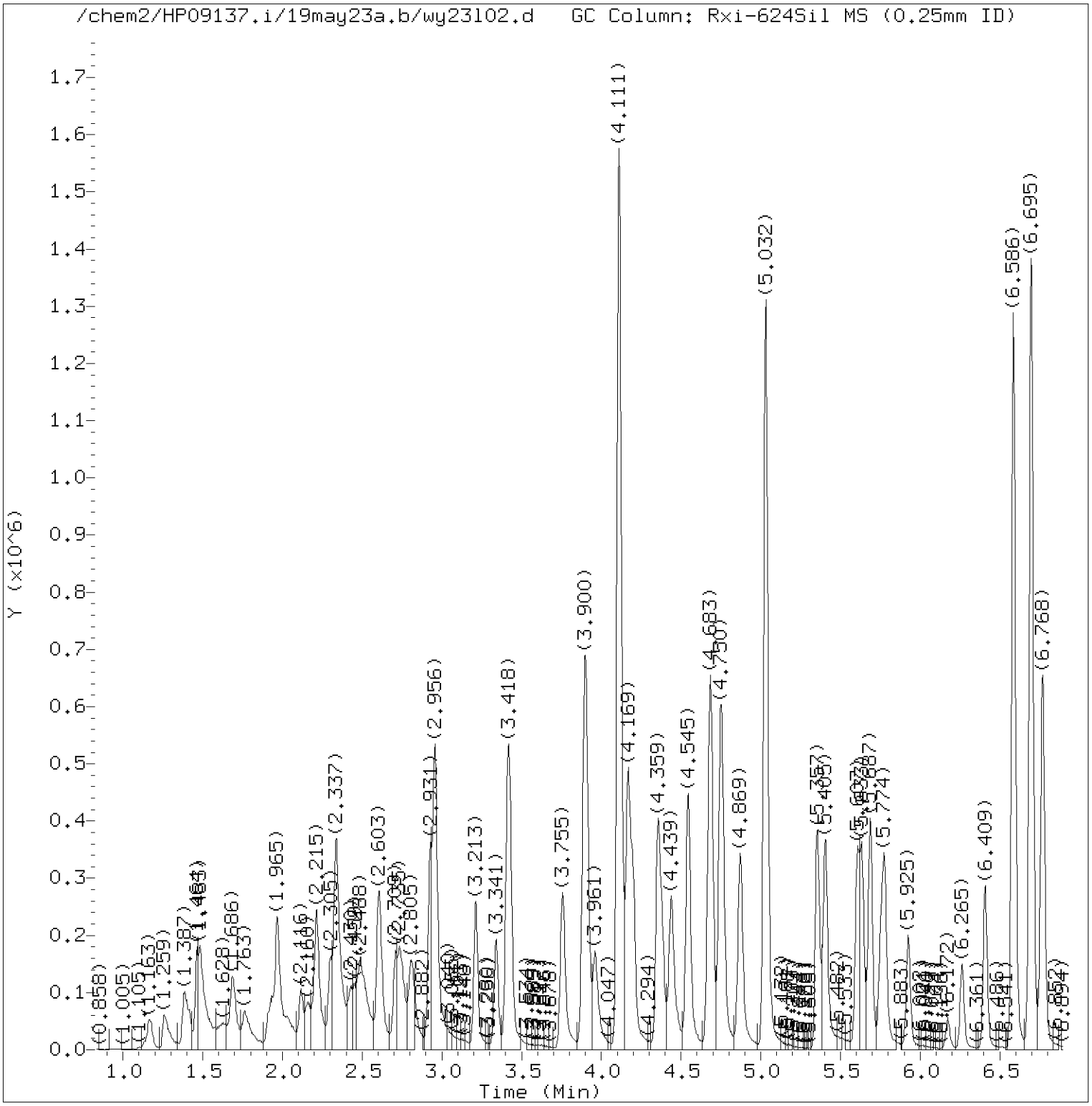
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
122) 4-Chlorotoluene	(4)	9.515(0.000)	126	142971	23.064	23.06			0.2	5
123) 1,3,5-Trimethylbenzene	(4)	9.509(-0.000)	105	454699	22.457	22.46			0.3	5
125) tert-Butylbenzene	(4)	9.756(-0.000)	134	101170	21.993	21.99			0.3	5
126) Pentachloroethane	(4)	9.762(0.000)	167	79939	21.983	21.98			0.2	5
127) 1,2,4-Trimethylbenzene	(4)	9.791(-0.000)	105	467392	21.906	21.91			1	5
128) sec-Butylbenzene	(4)	9.916(-0.000)	105	533786	21.477	21.48			0.2	5
130) 1,3-Dichlorobenzene	(4)	9.993(-0.000)	146	274460	22.600	22.60			0.2	5
131) p-Isopropyltoluene	(4)	10.022(-0.000)	119	466061	21.184	21.18			0.2	5
134) 1,4-Dichlorobenzene	(4)	10.058(0.000)	146	288900	22.947	22.95			0.2	5
135) 1,2,3-Trimethylbenzene	(4)	10.096(0.000)	105	505400	22.016	22.02			0.3	5
136) Benzyl Chloride	(4)	10.157(0.000)	91	303486	17.223	17.22			0.3	5
137) 1,3-Diethylbenzene	(4)	10.237(-0.000)	119	281855	20.389	20.39			0.2	5
138) 1,4-Diethylbenzene	(4)	10.298(0.000)	119	298024	20.122	20.12			0.2	5
139) 1,2-Dichlorobenzene	(4)	10.324(0.000)	146	274411	22.776	22.78			0.2	5
140) n-Butylbenzene	(4)	10.314(-0.000)	92	222225	20.013	20.01			0.2	5
141) 1,2-Diethylbenzene	(4)	10.382(0.000)	119	247334	21.192	21.19			0.2	5
142) Diethylbenzene (total)	(4)		100	827213	61.703	61.70			0.2	5
143) 1,2-Dibromo-3-chloropropane	(4)	10.863(0.000)	75	35983	18.436	18.44			0.3	5
145) 1,3,5-Trichlorobenzene	(4)	11.007(0.000)	180	178751	19.348	19.35			0.2	5
147) 1,2,4-Trichlorobenzene	(4)	11.418(0.000)	180	166728	18.797	18.80			0.3	5
148) Hexachlorobutadiene	(4)	11.527(0.000)	225	57107	18.077	18.08			0.7	5
149) Naphthalene	(4)	11.582(0.000)	128	541408	18.039	18.04			1	5
150) 1,2,3-Trichlorobenzene	(4)	11.736(0.000)	180	165394	19.104	19.10			0.4	5
151) 2-Methylnaphthalene	(4)	12.304(0.000)	142	213671	12.479	12.48			0.7	5

Total number of targets = 109

Digitally signed by Don V. Viray on 05/23/2019 at 20:20. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:39. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

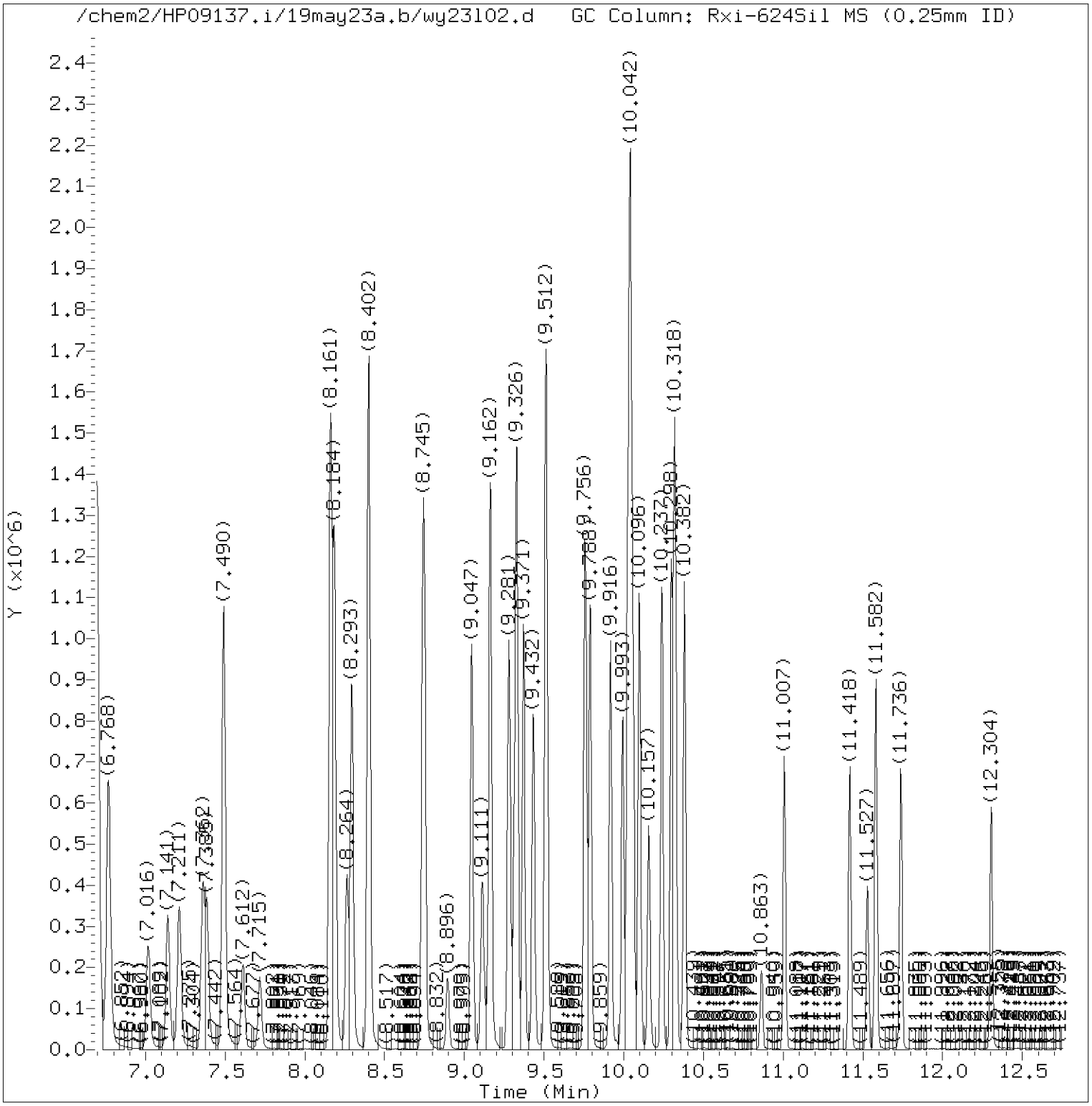
Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23l02.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:34 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:39 amd00492

Sample Name: LCDW35 Lab Sample ID: LCDW35

Digitally signed by Don V. Viray
on 05/23/2019 at 20:20.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23l02.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:34 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:39 amd00492

Sample Name: LCDW35 Lab Sample ID: LCDW35

Digitally signed by Don V. Viray
on 05/23/2019 at 20:20.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23l02.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:34 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:39 amd00492

Sample Name: LCDW35 Lab Sample ID: LCDW35

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.256	85	116159	17.200
4) Chloromethane	(2)	1.390	50	144804	17.219
6) Vinyl Chloride	(2)	1.464	62	140436	18.217
5) 1,3-Butadiene	(2)	1.480	39	163225M	31.849
8) Bromomethane	(2)	1.686	94	100505	16.530
9) Chloroethane	(2)	1.763	64	87465M	17.241
12) Trichlorofluoromethane	(2)	1.926	101	144737	17.678
11) n-Pentane	(2)	1.968	43	120564	15.483
13) Ethanol	(1)	2.032	45	30898	333.621
15) Freon 123a	(2)	2.116	67	122125M	19.961
16) Acrolein	(1)	2.218	56	192830	131.898
17) 1,1-Dichloroethene	(2)	2.298	96	101144	21.964
19) Freon 113	(2)	2.334	101	75019	18.552
18) Acetone	(1)	2.337	58	119822	168.619
21) 2-Propanol	(1)	2.449	45	88815	168.222
22) Methyl Iodide	(2)	2.472	142	179208M	20.308
23) Carbon Disulfide	(2)	2.494	76	282980M	17.443
25) Allyl Chloride	(2)	2.603	41	154203	19.221
27) Methyl Acetate	(2)	2.616	43	129615	18.666
28) Methylene Chloride	(2)	2.709	84	120976M	21.492
29)*t-Butyl alcohol-d10	(1)	2.735	65	203070	250.000
30) t-Butyl alcohol	(1)	2.812	59	202741	215.268
31) Acrylonitrile	(2)	2.927	53	318113	87.082
32) trans-1,2-Dichloroethene	(2)	2.956	96	109104	21.837
33) Methyl Tertiary Butyl Ether	(2)	2.966	73	296196	24.347
34) n-Hexane	(2)	3.216	57	128510	19.223
36) 1,1-Dichloroethane	(2)	3.338	63	196176	21.668
38) di-Isopropyl ether	(2)	3.415	45	373943	21.499
39) 2-Chloro-1,3-butadiene	(2)	3.428	53	168590	21.500
40) Ethyl t-butyl ether	(2)	3.755	59	276245	21.788
42) cis-1,2-Dichloroethene	(2)	3.890	96	127326	22.697
45) 2,2-Dichloropropane	(2)	3.890	77	80473	19.791
44) 2-Butanone	(2)	3.909	43	656956	125.175
47) Propionitrile	(1)	3.961	54	194596	166.248
48) Methacrylonitrile	(2)	4.111	67	543108	138.274
49) Bromochloromethane	(2)	4.115	128	60664	20.803
50) Tetrahydrofuran	(1)	4.169	71	124468	114.892
51) Chloroform	(2)	4.201	83	185974	21.893

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 05/23/2019 at 20:20.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23l02.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:34 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:39 amd00492

Sample Name: LCDW35 Lab Sample ID: LCDW35

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
52)$Dibromofluoromethane	(2)	4.352	113	234720	48.509
53) 1,1,1-Trichloroethane	(2)	4.378	97	139776	21.869
54) Cyclohexane	(2)	4.442	56	162400	19.199
55) 1,1-Dichloropropene	(2)	4.545	75	146947	21.577
56) Carbon Tetrachloride	(2)	4.545	117	112870	20.578
58) Isobutyl Alcohol	(1)	4.673	41	179413	522.536
57)$1,2-Dichloroethane-d4	(2)	4.686	102	66385	51.585
60) Benzene	(2)	4.747	78	465256	21.253
61) 1,2-Dichloroethane	(2)	4.766	62	152419	22.539
65) t-Amyl methyl ether	(2)	4.875	73	284696	21.919
67) n-Heptane	(2)	5.032	43	111510	17.453
66)*Fluorobenzene	(2)	5.032	96	1044450	50.000
69) n-Butanol	(1)	5.357	56	281850	924.535
71) Trichloroethene	(2)	5.405	95	115276	21.744
73) Methylcyclohexane	(2)	5.607	83	148151	19.249
74) 1,2-Dichloropropane	(2)	5.633	63	125500	22.330
75) Dibromomethane	(2)	5.754	93	75229	21.688
77) Methyl Methacrylate	(2)	5.774	69	108832	17.621
76) 1,4-Dioxane	(1)	5.787	88	47403M	520.132
79) Bromodichloromethane	(2)	5.928	83	131963	20.706
43) 1,2-Dichloroethene (Total)	(2)		96	236430	44.533
80) 2-Nitropropane	(2)	6.175	41	33981	15.759
81) 2-Chloroethyl Vinyl Ether	(2)	6.261	63	68948	16.091
82) cis-1,3-Dichloropropene	(2)	6.406	75	175233	19.998
83) 4-Methyl-2-pentanone	(2)	6.586	43	896680	86.673
84)$Toluene-d8	(3)	6.695	98	1054124	53.011
89) Toluene	(3)	6.768	92	307906	24.037
90) trans-1,3-Dichloropropene	(3)	7.019	75	150133	19.688
92) Ethyl Methacrylate	(3)	7.141	69	181806	19.402
93) 1,1,2-Trichloroethane	(3)	7.211	97	115708	23.469
94) Tetrachloroethene	(3)	7.362	166	124124	23.880
95) 1,3-Dichloropropane	(3)	7.385	76	196606	22.959
97) 2-Hexanone	(3)	7.490	43	695649	93.251
98) Dibromochloromethane	(3)	7.612	129	107351	22.293
100) 1,2-Dibromoethane	(3)	7.715	107	119196	22.006
101)*Chlorobenzene-d5	(3)	8.161	117	793557	50.000
103) Chlorobenzene	(3)	8.187	112	342145	24.077
104) 1,1,1,2-Tetrachloroethane	(3)	8.261	131	104491	22.881

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/23/2019 at 20:20.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23l02.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:34 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:39 amd00492

Sample Name: LCDW35 Lab Sample ID: LCDW35

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
105) Ethylbenzene	(3)	8.293	91	563457	23.144
107) m+p-Xylene	(3)	8.402	106	453371	46.837
108) o-Xylene	(3)	8.739	106	219077	23.006
110) Styrene	(3)	8.752	104	362472	22.690
111) Bromoform	(3)	8.893	173	69839	18.635
112) Isopropylbenzene	(3)	9.047	105	536671	22.934
113) Cyclohexanone	(1)	9.114	55	172885	420.536
115)$4-Bromofluorobenzene	(3)	9.162	95	385994	48.521
116) Bromobenzene	(4)	9.278	156	146449	22.996
117) 1,1,2,2-Tetrachloroethane	(4)	9.284	83	188359	21.932
118) 1,2,3-Trichloropropane	(4)	9.313	110	57595	22.265
119) trans-1,4-Dichloro-2-butene	(4)	9.329	53	233079	84.632
120) n-Propylbenzene	(4)	9.371	91	638638	22.748
121) 2-Chlorotoluene	(4)	9.435	126	134112	23.160
123) 1,3,5-Trimethylbenzene	(4)	9.509	105	454699	22.457
122) 4-Chlorotoluene	(4)	9.515	126	142971	23.064
125) tert-Butylbenzene	(4)	9.756	134	101170	21.993
126) Pentachloroethane	(4)	9.762	167	79939	21.983
127) 1,2,4-Trimethylbenzene	(4)	9.791	105	467392	21.906
128) sec-Butylbenzene	(4)	9.916	105	533786	21.477
130) 1,3-Dichlorobenzene	(4)	9.993	146	274460	22.600
131) p-Isopropyltoluene	(4)	10.022	119	466061	21.184
132)*1,4-Dichlorobenzene-d4	(4)	10.042	152	442150	50.000
134) 1,4-Dichlorobenzene	(4)	10.058	146	288900	22.947
91) 1,3-Dichloropropene (total)	(3)		100	325366	39.685
135) 1,2,3-Trimethylbenzene	(4)	10.096	105	505400	22.016
136) Benzyl Chloride	(4)	10.157	91	303486	17.223
137) 1,3-Diethylbenzene	(4)	10.237	119	281855	20.389
138) 1,4-Diethylbenzene	(4)	10.298	119	298024	20.122
140) n-Butylbenzene	(4)	10.314	92	222225	20.013
139) 1,2-Dichlorobenzene	(4)	10.324	146	274411	22.776
141) 1,2-Diethylbenzene	(4)	10.382	119	247334	21.192
143) 1,2-Dibromo-3-chloropropane	(4)	10.863	75	35983	18.436
145) 1,3,5-Trichlorobenzene	(4)	11.007	180	178751	19.348
147) 1,2,4-Trichlorobenzene	(4)	11.418	180	166728	18.797
148) Hexachlorobutadiene	(4)	11.527	225	57107	18.077
149) Naphthalene	(4)	11.582	128	541408	18.039
150) 1,2,3-Trichlorobenzene	(4)	11.736	180	165394	19.104

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/23/2019 at 20:20.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/19may23a.b/wy23l02.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:34 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:39 amd00492

Sample Name: LCDW35 Lab Sample ID: LCDW35

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
109) Xylene (Total)	(3)		106	672448	69.842
151) 2-Methylnaphthalene	(4)	12.304	142	213671	12.479
142) Diethylbenzene (total)	(4)		100	827213	61.703

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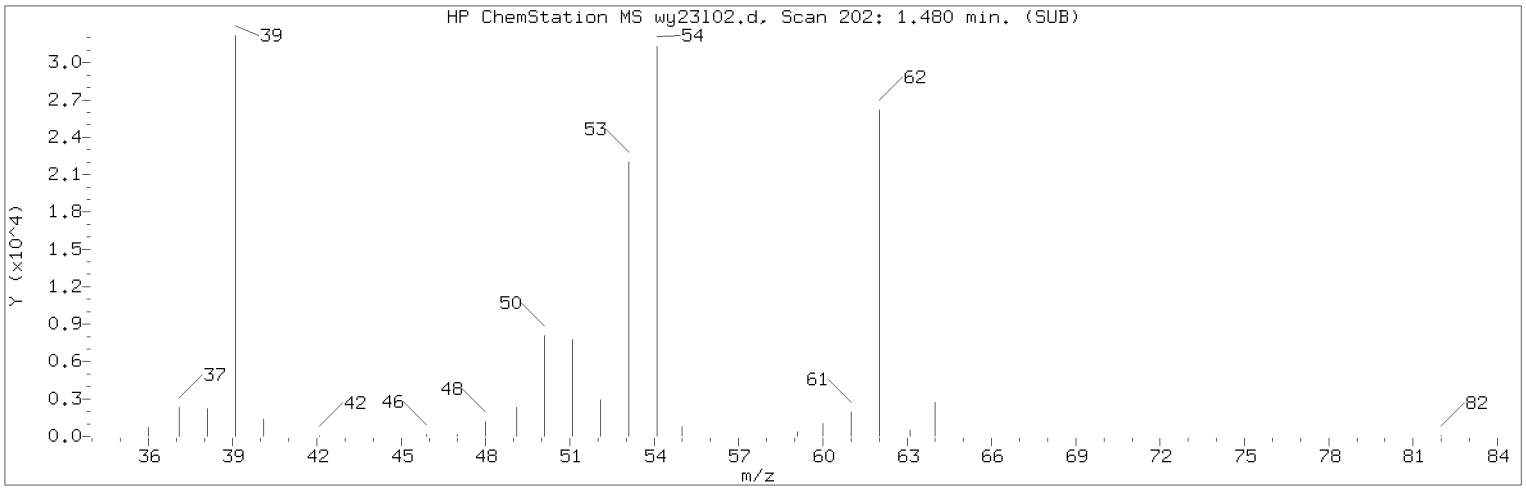
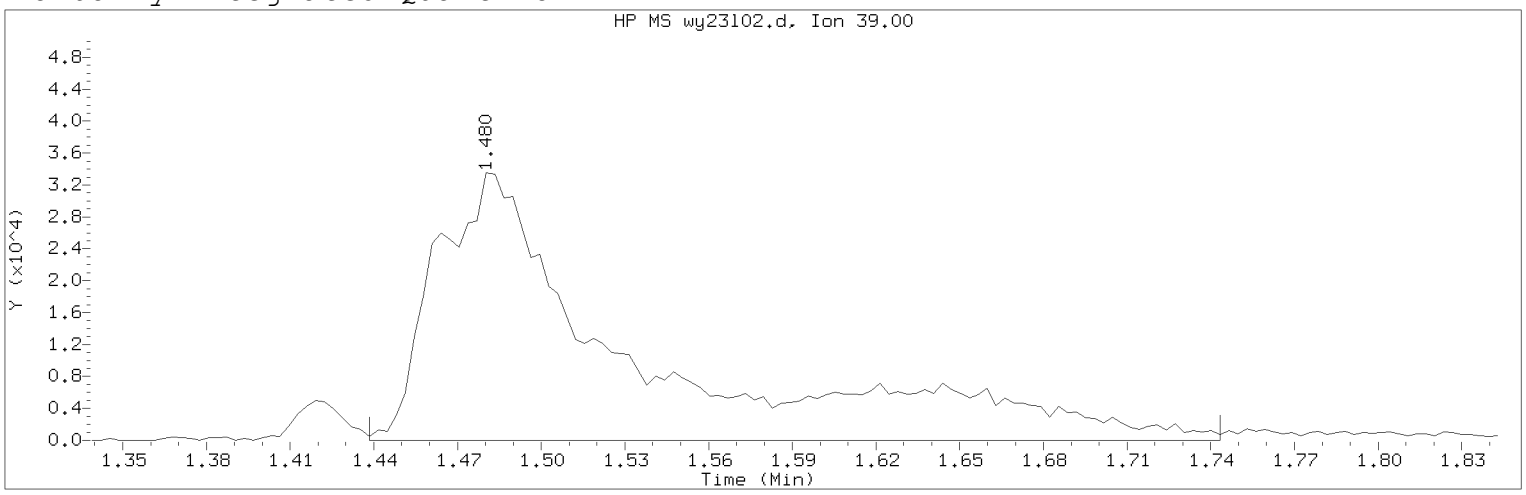
on 05/23/2019 at 20:20.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23102.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:34 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:39 amd00492

Sample Name: LCDW35 Lab Sample ID: LCDW35

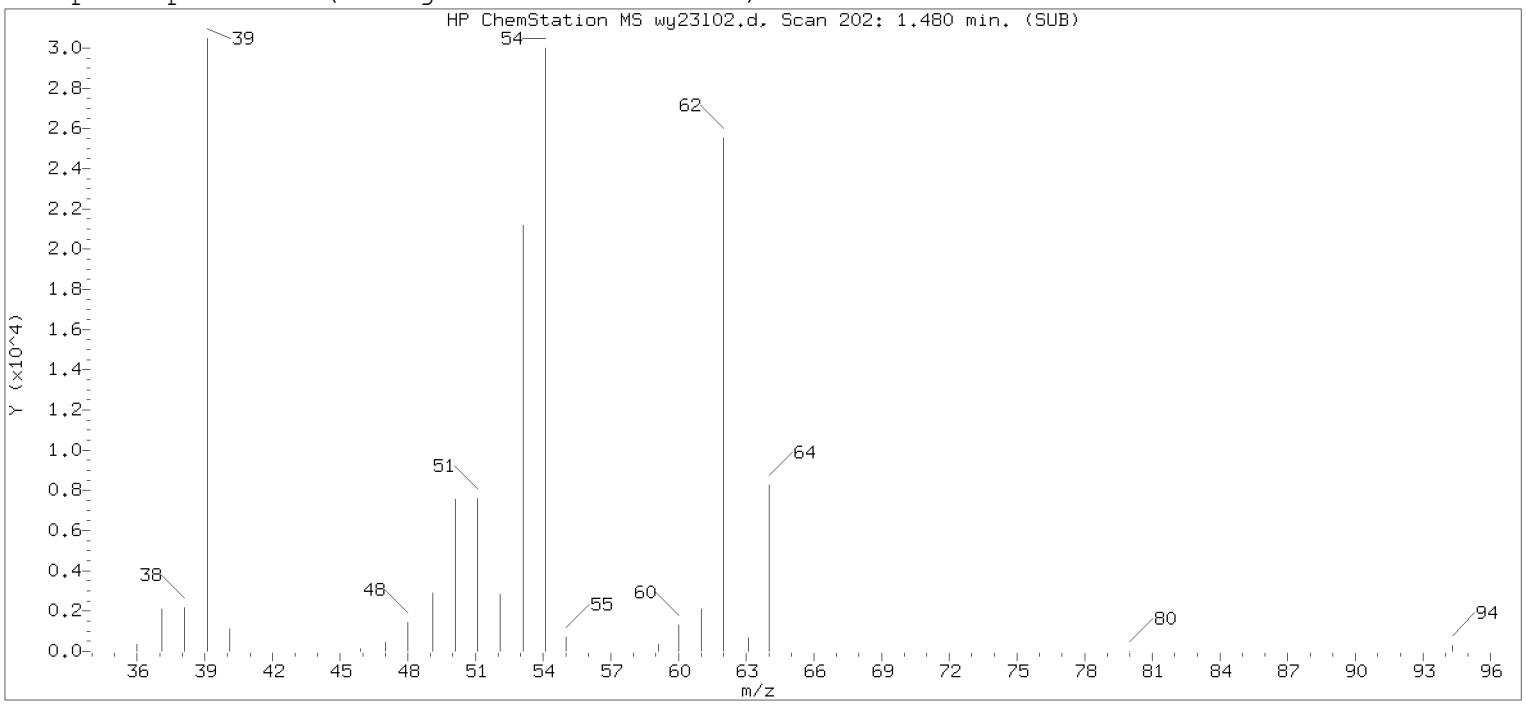
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 202
Retention Time (minutes): 1.480
Quant Ion : 39.00
Area (flag) : 163225M
On-Column Amount (ng) : 31.8491
Integration start scan : 188 Integration stop scan: 283
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

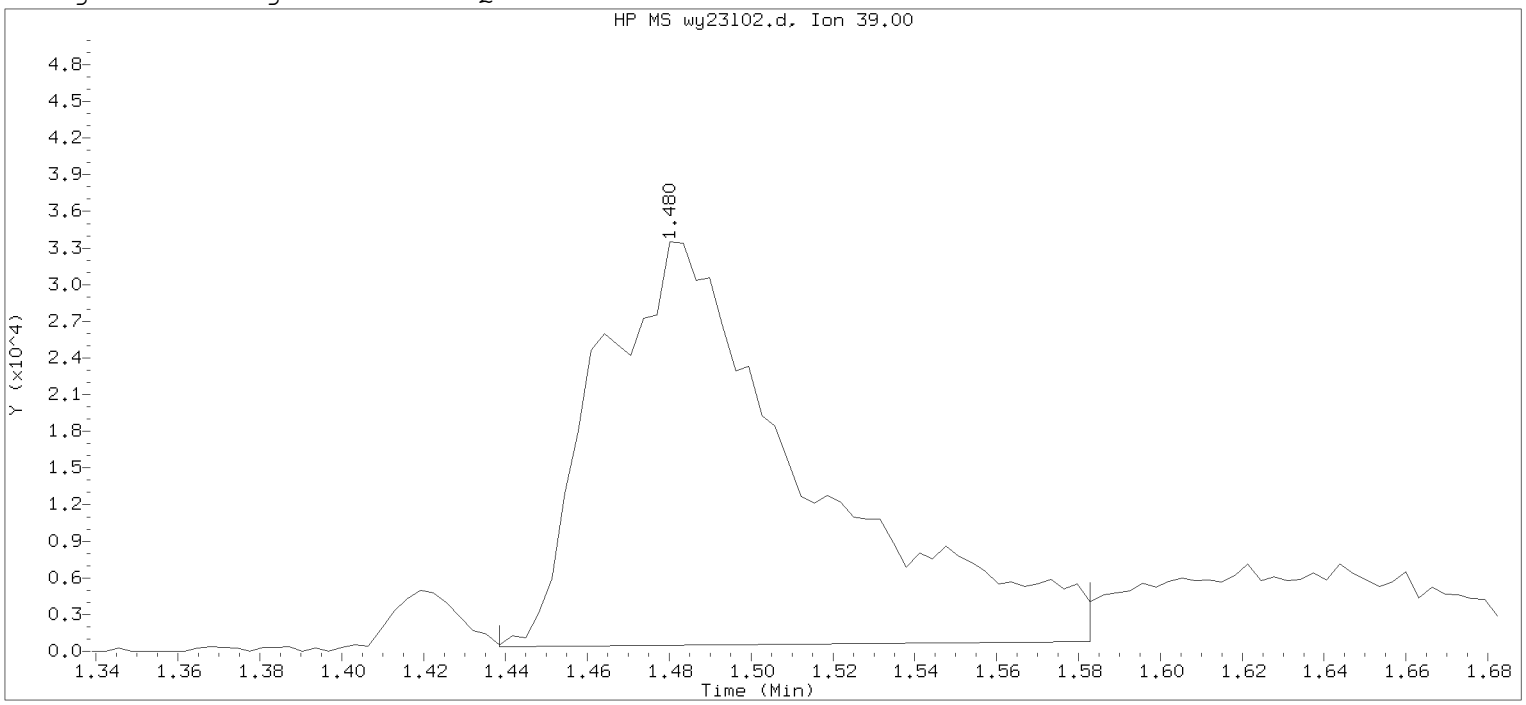
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:20.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:39.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23102.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:34 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:12
Date, time and analyst ID of latest file update: 23-May-2019 06:49 Automation

Sample Name: LCDW35 Lab Sample ID: LCDW35

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 202
Retention Time (minutes): 1.480
Quant Ion : 39.00
Area : 117261
On-column Amount (ng) : 22.8804
Integration start scan : 188 Integration stop scan: 233
Y at integration start : 372 Y at integration end: 812

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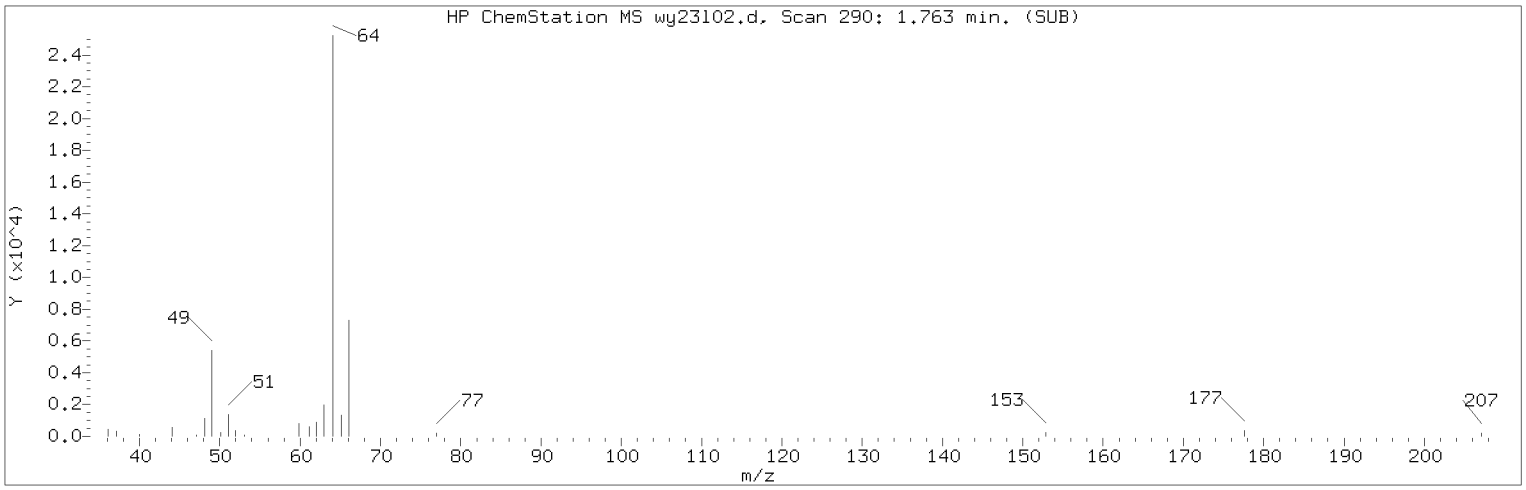
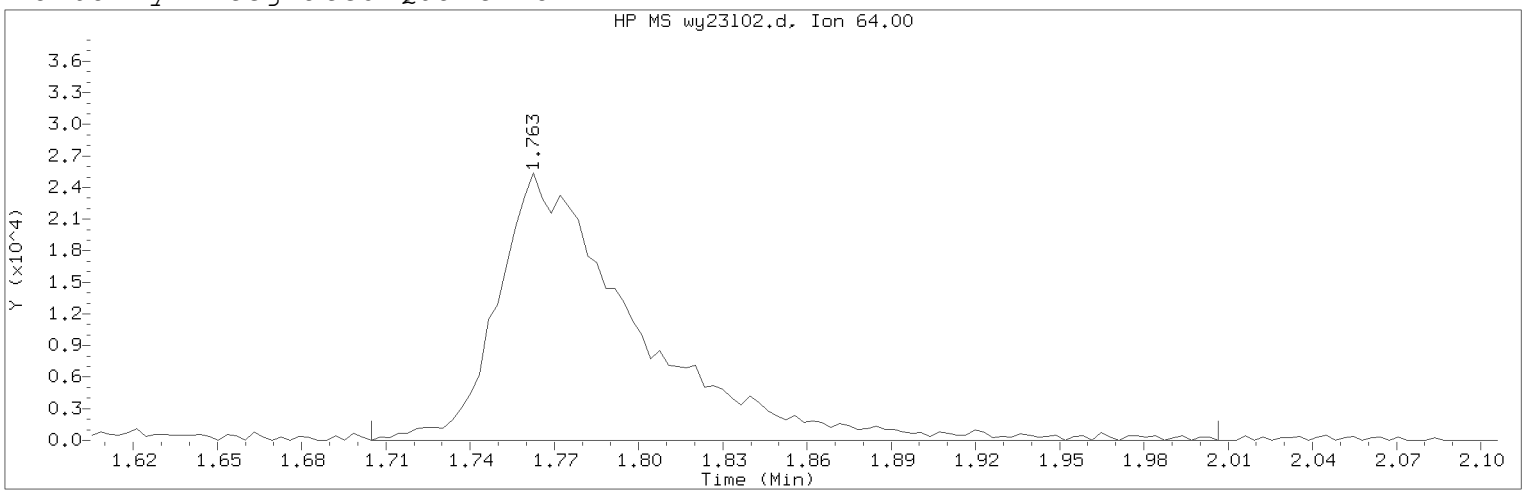
Target 3.5 esignature user id: dviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23102.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:34 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:39 amd00492

Sample Name: LCDW35 Lab Sample ID: LCDW35

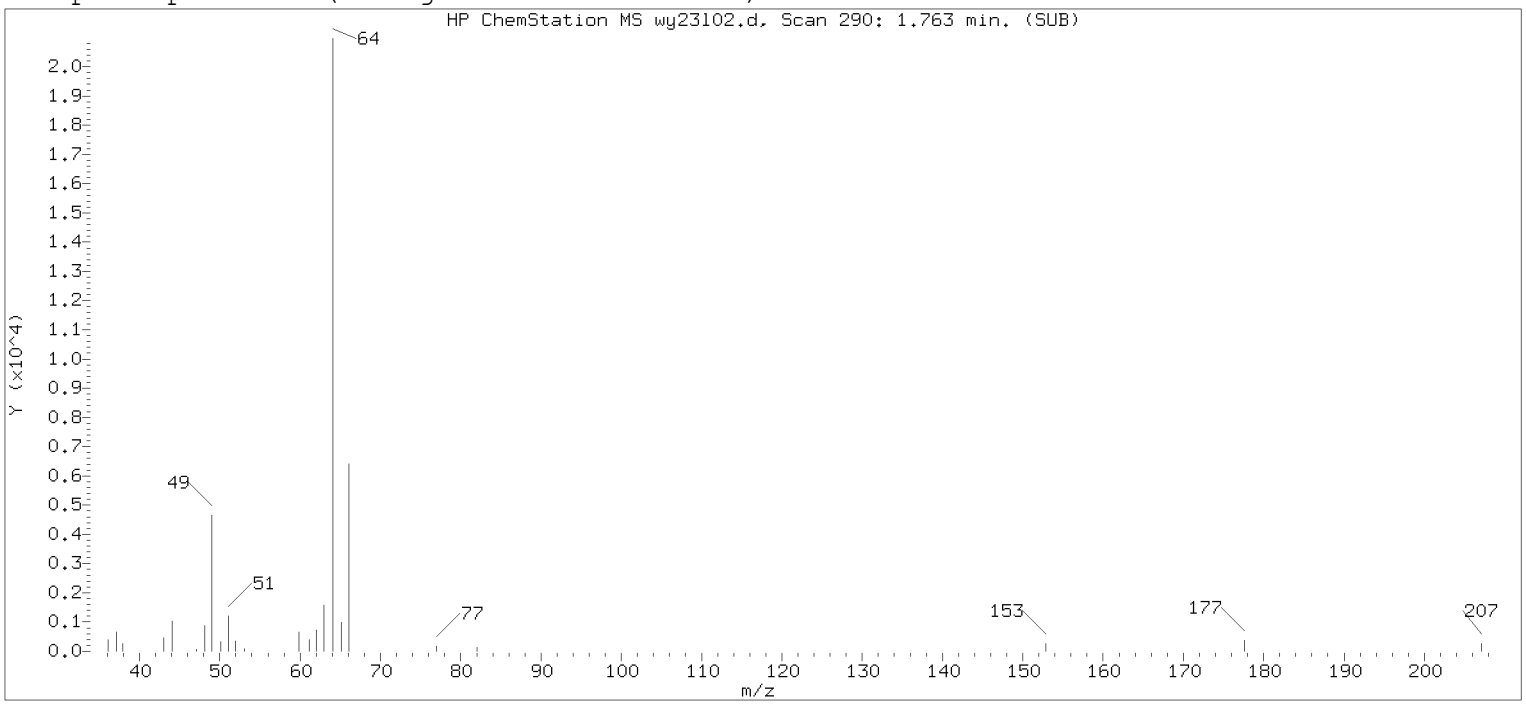
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 290
Retention Time (minutes): 1.763
Quant Ion : 64.00
Area (flag) : 87465M
On-Column Amount (ng) : 17.2413
Integration start scan : 271 Integration stop scan: 365
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

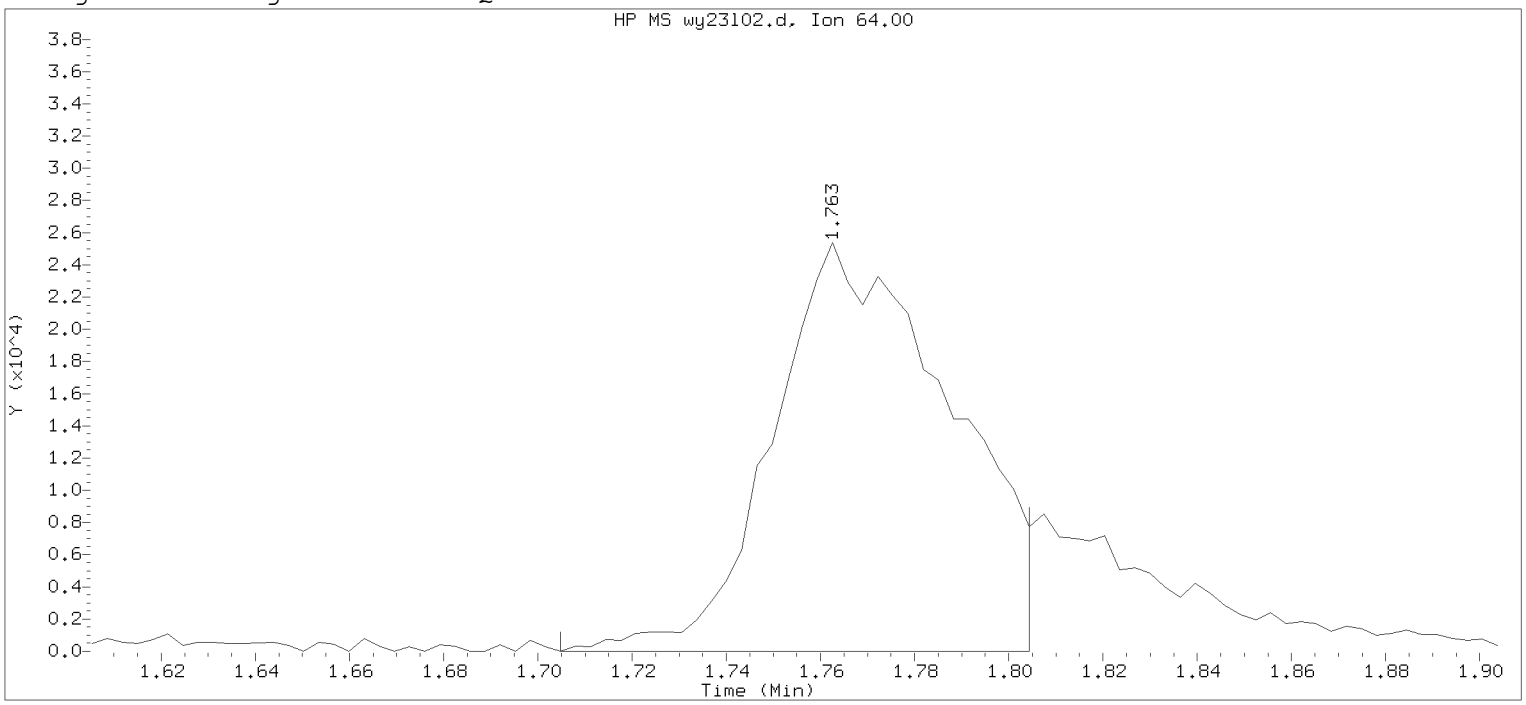
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:20.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:39.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23102.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:34 Analyst ID: and00492

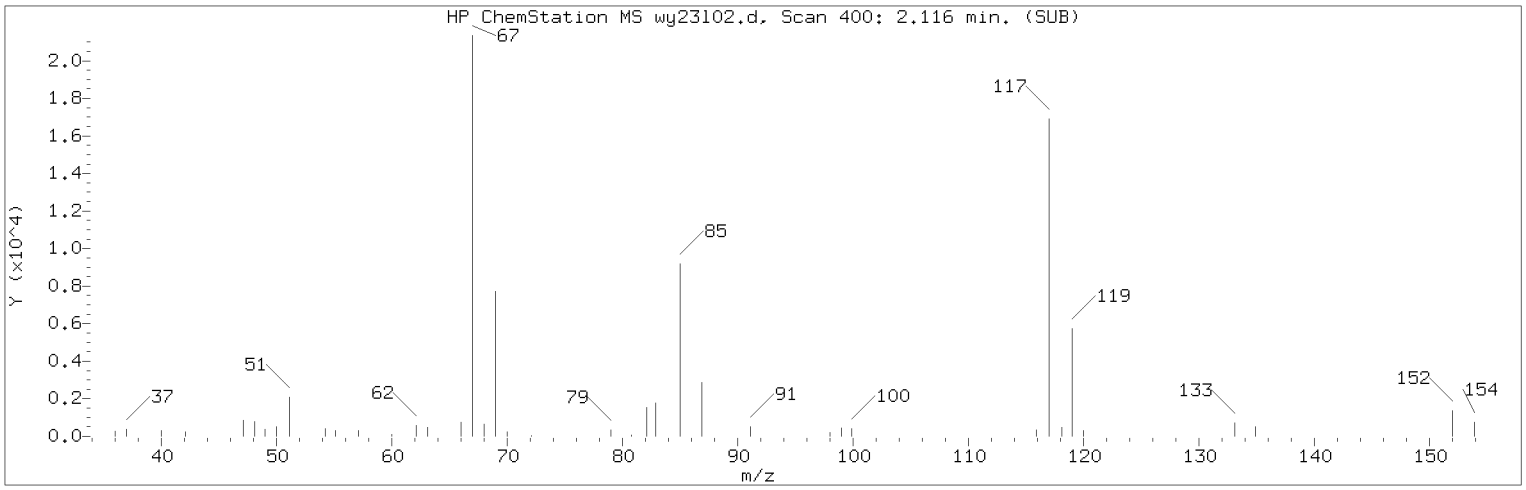
Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:12
Date, time and analyst ID of latest file update: 23-May-2019 06:49 Automation

Sample Name: LCDW35 Lab Sample ID: LCDW35

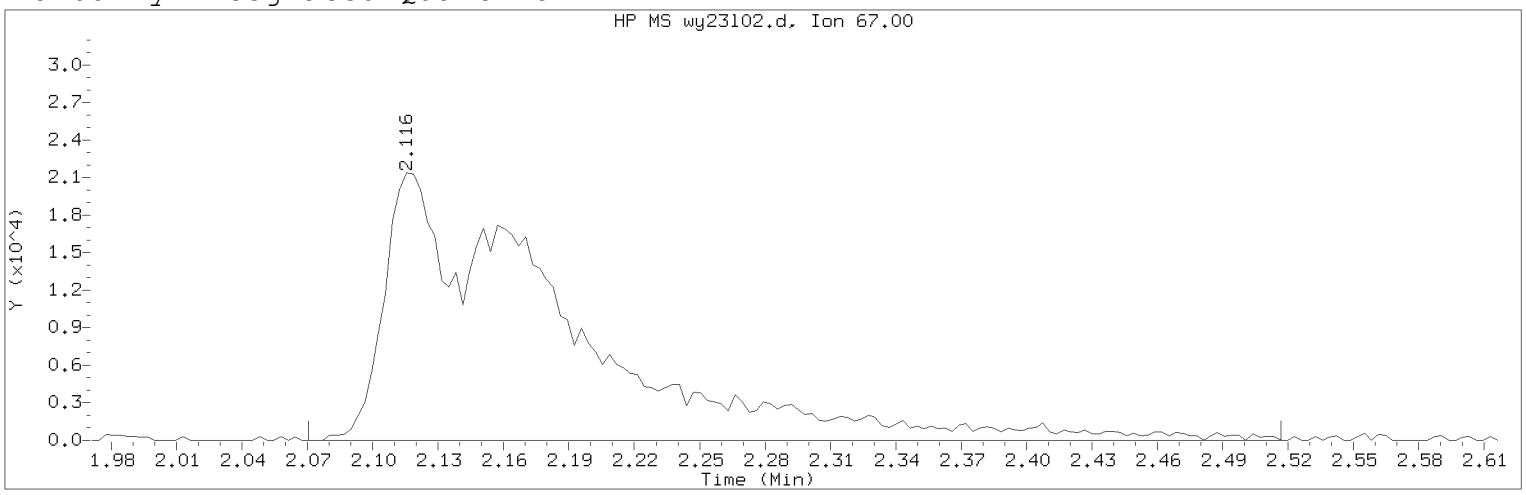
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 290
Retention Time (minutes): 1.763
Quant Ion : 64.00
Area : 66332
On-column Amount (ng) : 13.0756
Integration start scan : 271 Integration stop scan: 302
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/23/2019 at 20:20.
Target 3.5 esignature user id: dviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23102.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:34 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:39 amd00492

Sample Name: LCDW35 Lab Sample ID: LCDW35

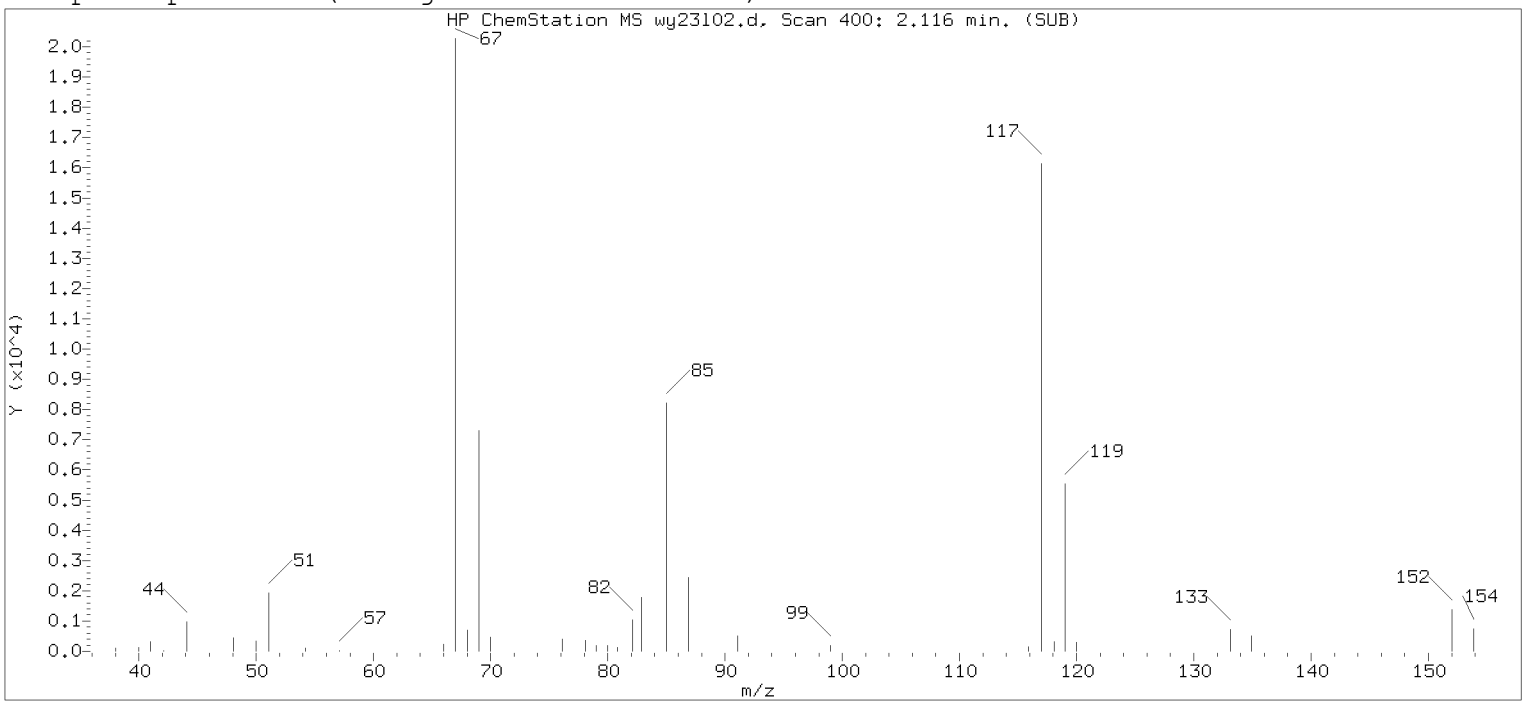
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 400
Retention Time (minutes): 2.116
Quant Ion : 67.00
Area (flag) : 122125M
On-Column Amount (ng) : 19.9605
Integration start scan : 385 Integration stop scan: 524
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

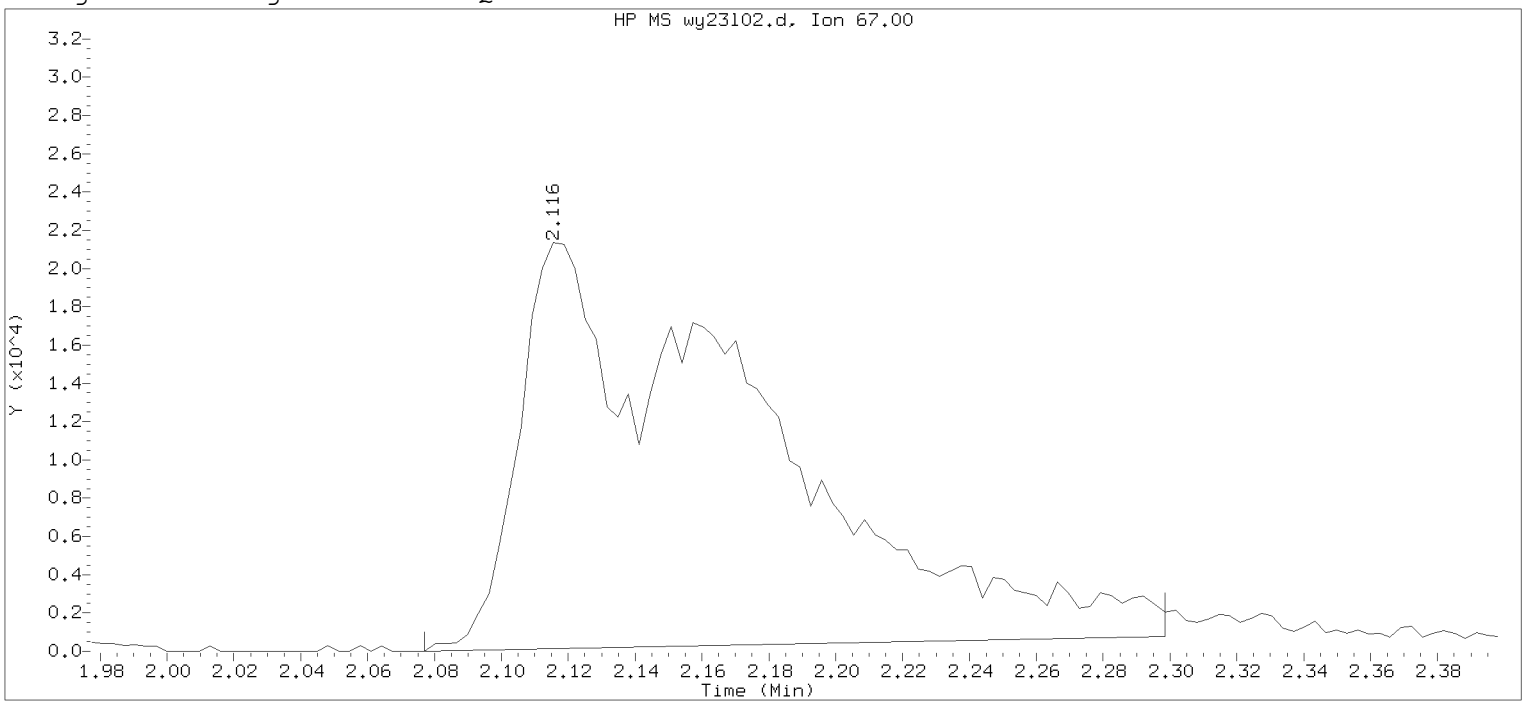
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:20.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:39.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23102.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:34 Analyst ID: and00492

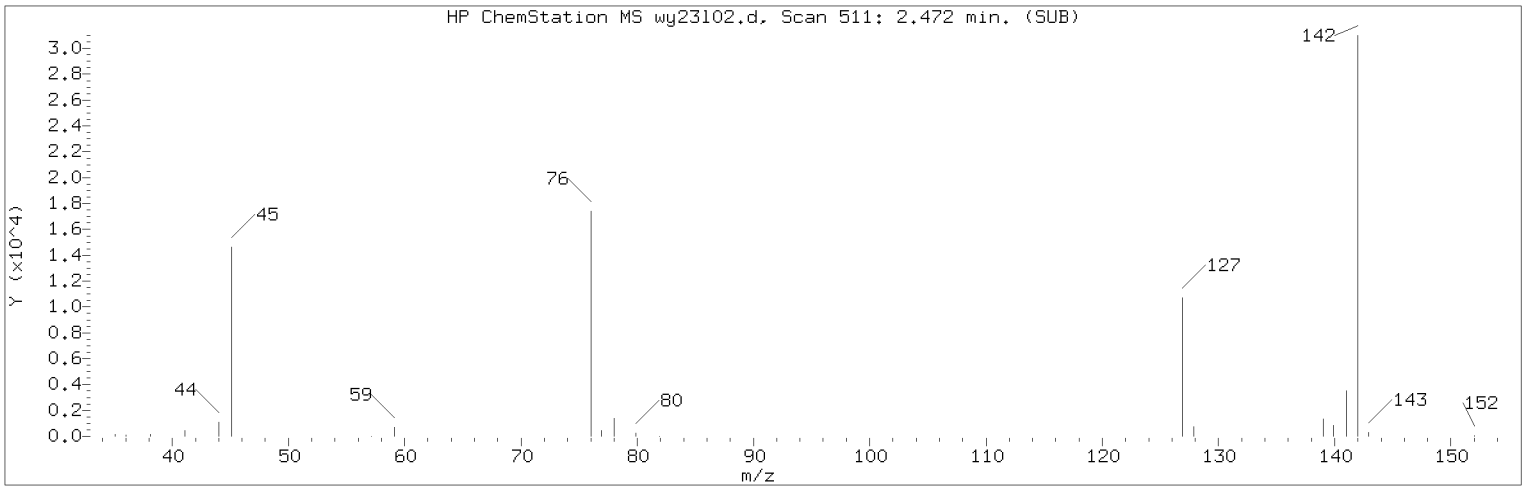
Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:12
Date, time and analyst ID of latest file update: 23-May-2019 06:49 Automation

Sample Name: LCDW35 Lab Sample ID: LCDW35

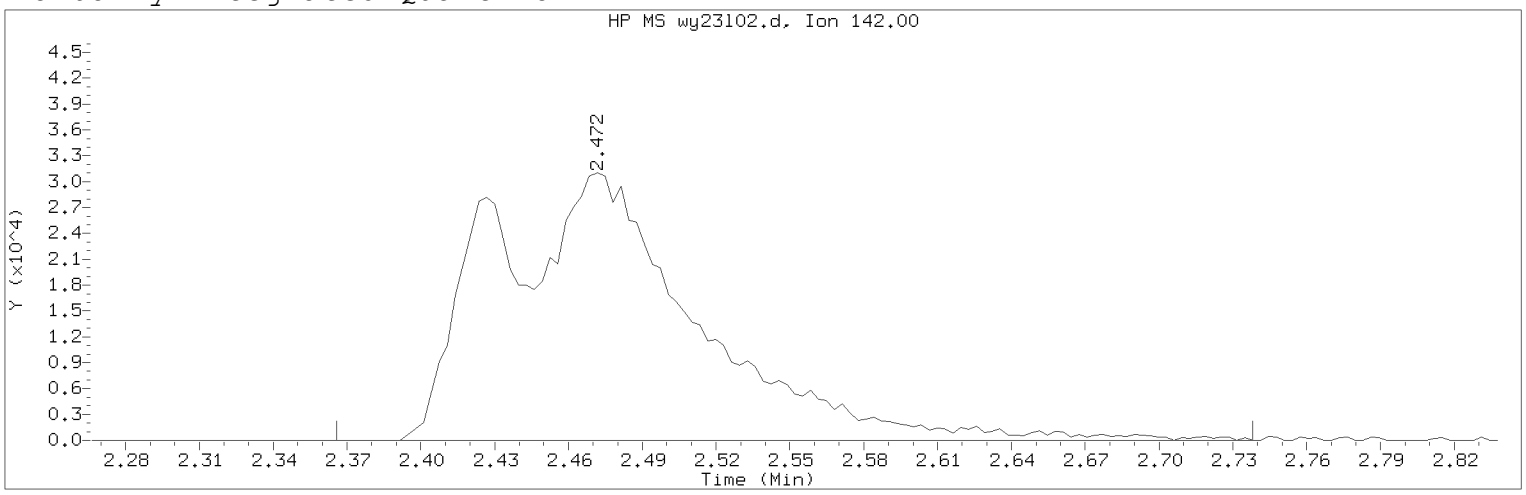
Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 400		
Retention Time (minutes)	: 2.116		
Quant Ion	: 67.00		
Area	: 105526		
On-column Amount (ng)	: 17.2476		
Integration start scan	: 387	Integration stop scan:	456
Y at integration start	: 0	Y at integration end:	777

Digitally signed by Don V. Viray on 05/23/2019 at 20:20.
Target 3.5 esignature user id: dviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23102.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:34 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:39 amd00492

Sample Name: LCDW35 Lab Sample ID: LCDW35

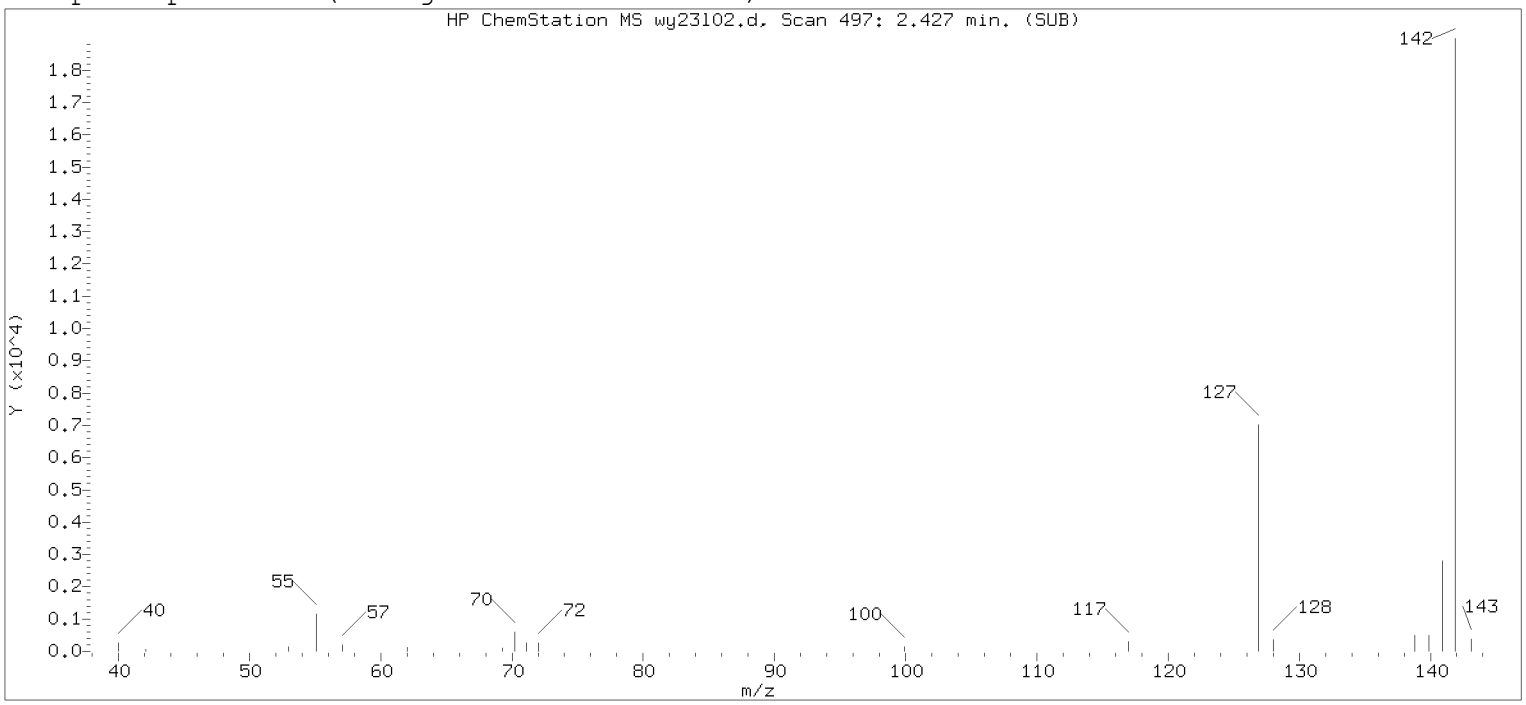
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 511
Retention Time (minutes): 2.472
Quant Ion : 142.00
Area (flag) : 179208M
On-Column Amount (ng) : 20.3077
Integration start scan : 477 Integration stop scan: 593
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

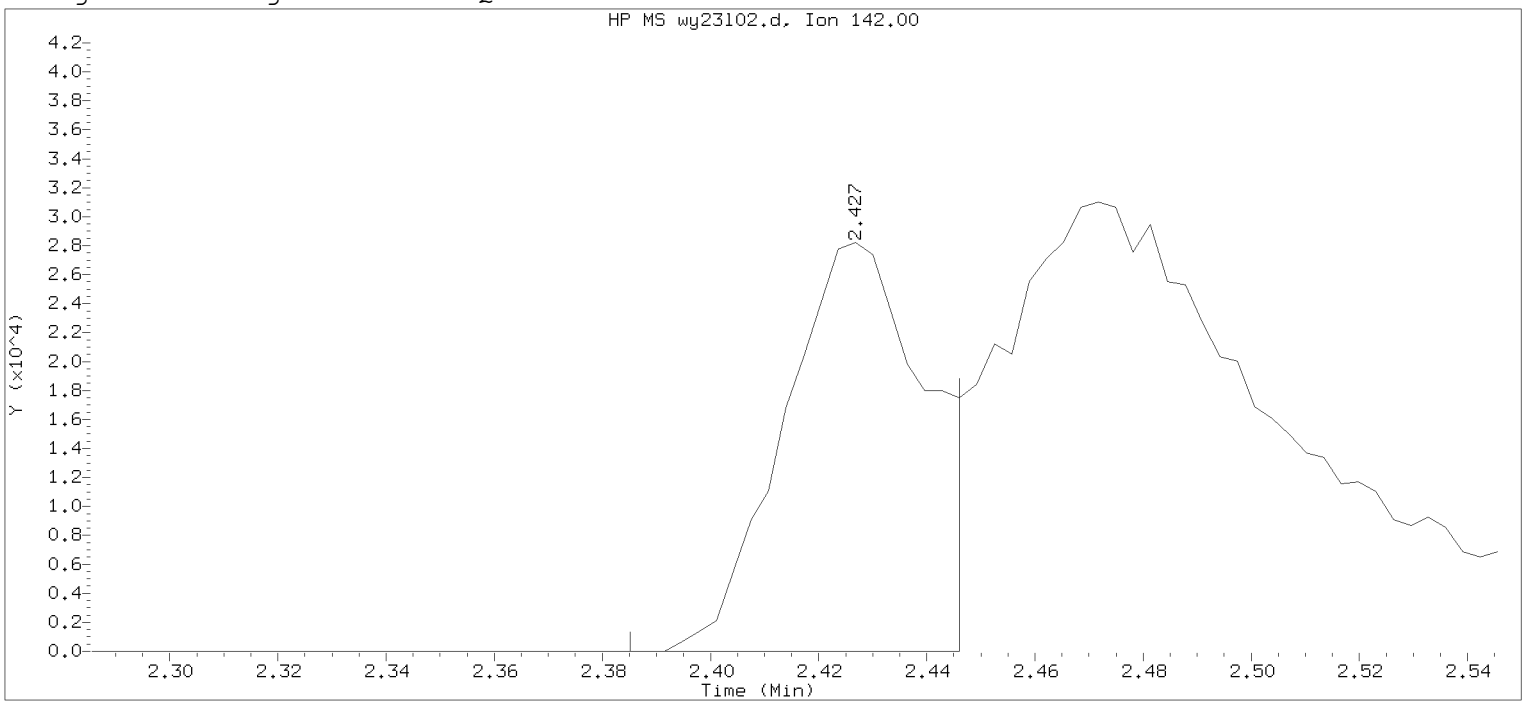
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:20.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:39.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23102.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:34 Analyst ID: and00492

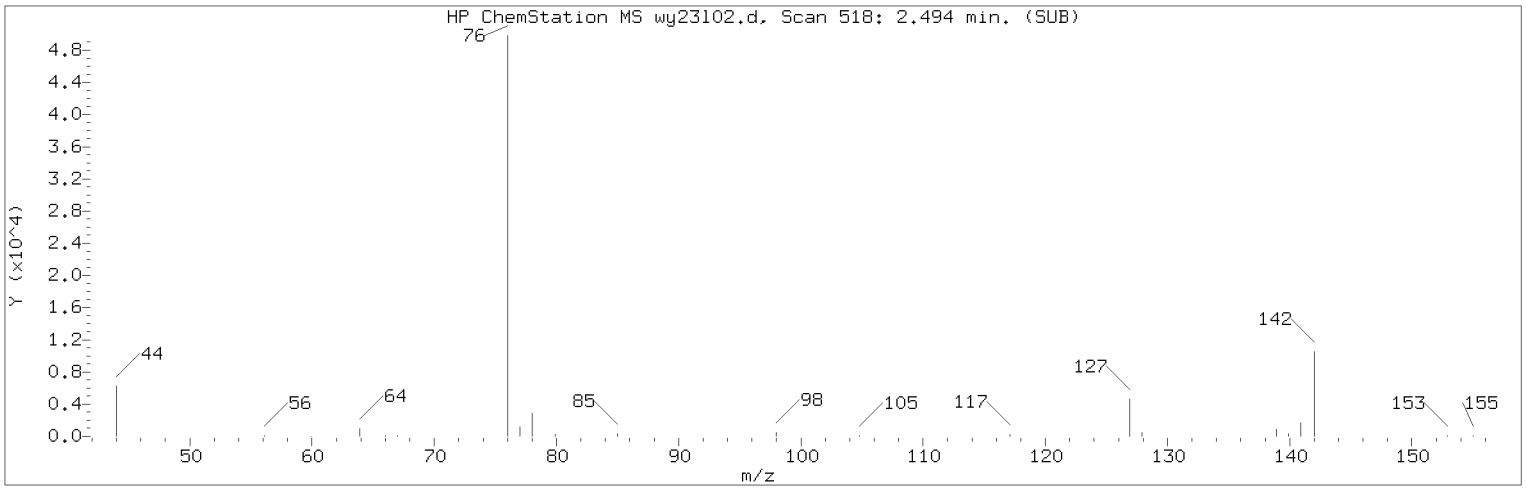
Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:12
Date, time and analyst ID of latest file update: 23-May-2019 06:49 Automation

Sample Name: LCDW35 Lab Sample ID: LCDW35

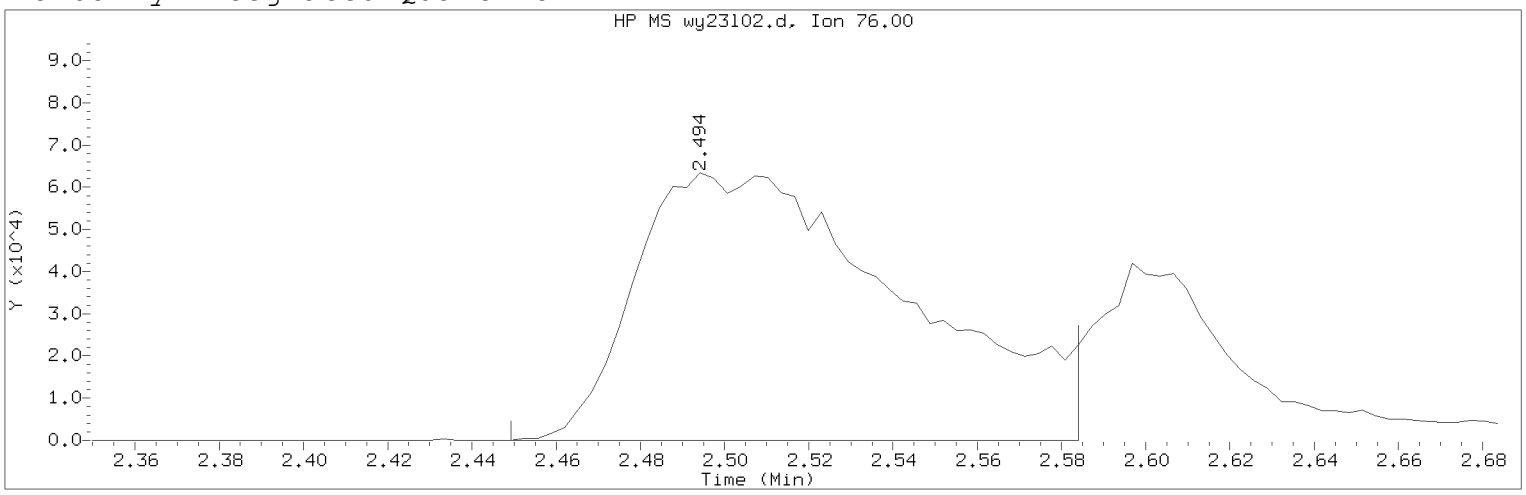
Compound Number : 22
Compound Name : Methyl Iodide
Scan Number : 497
Retention Time (minutes): 2.427
Quant Ion : 142.00
Area : 50568
On-column Amount (ng) : 5.7304
Integration start scan : 483 Integration stop scan: 502
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/23/2019 at 20:20.
Target 3.5 esignature user id: dviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23102.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:34 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:39 amd00492

Sample Name: LCDW35 Lab Sample ID: LCDW35

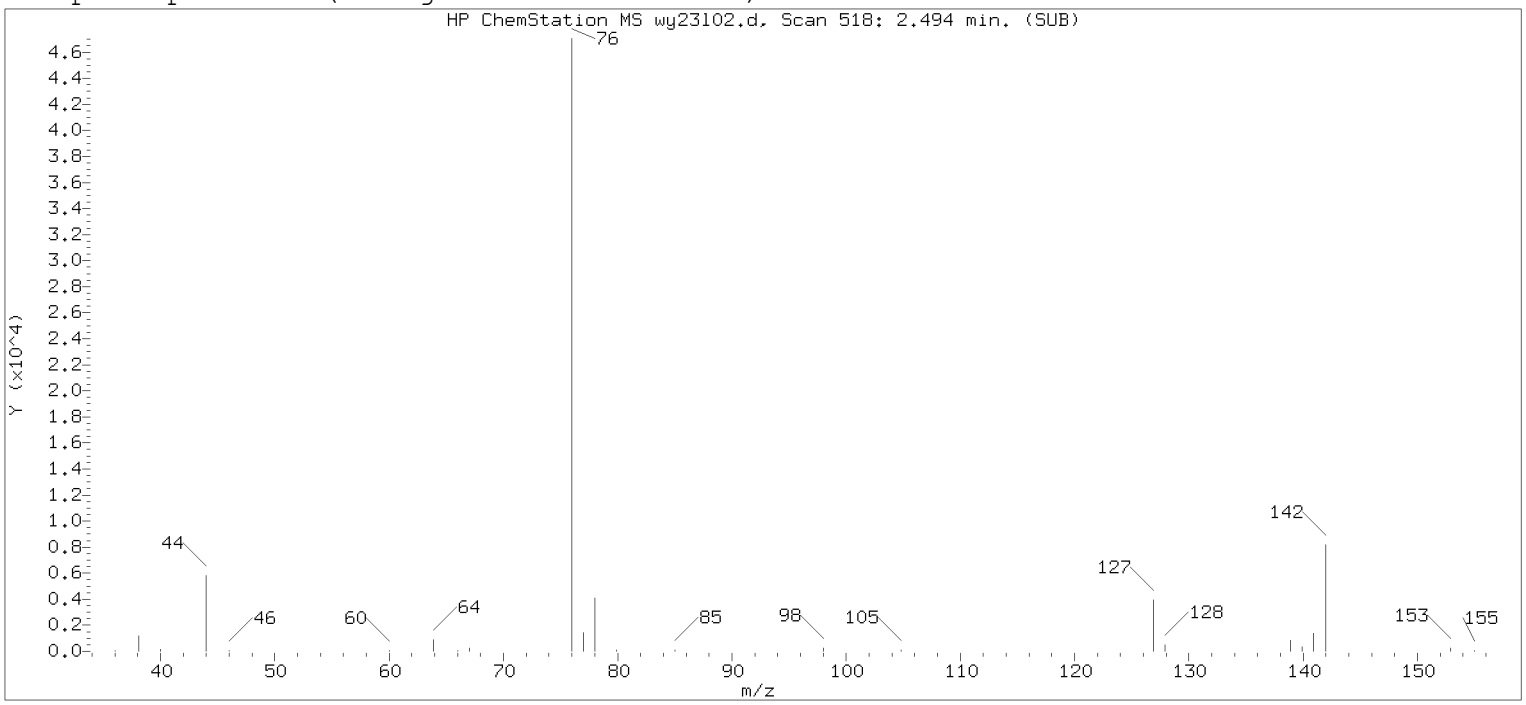
Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 518
Retention Time (minutes): 2.494
Quant Ion : 76.00
Area (flag) : 282980M
On-Column Amount (ng) : 17.4425
Integration start scan : 503 Integration stop scan: 545
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

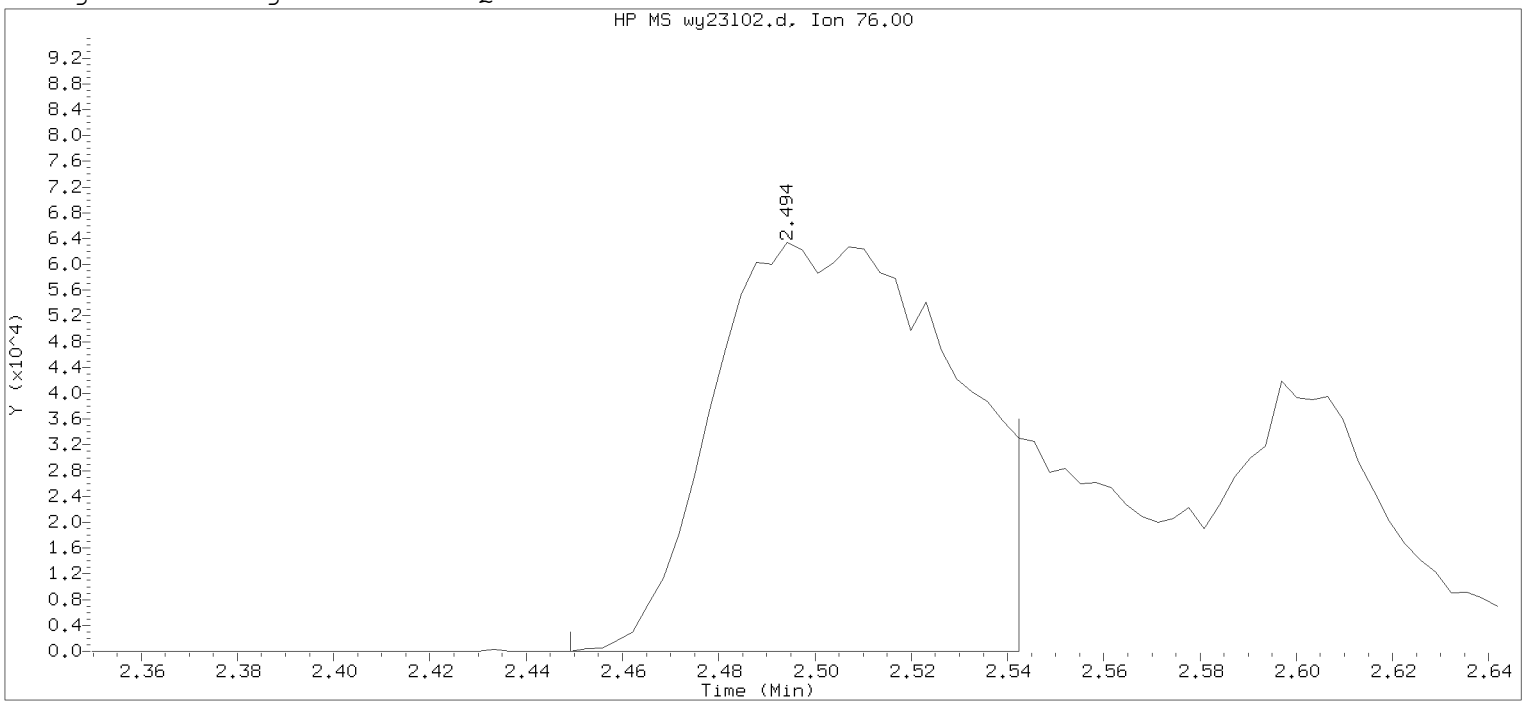
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:20.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:39.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



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Injection date and time: 23-MAY-2019 06:34 Analyst ID: and00492

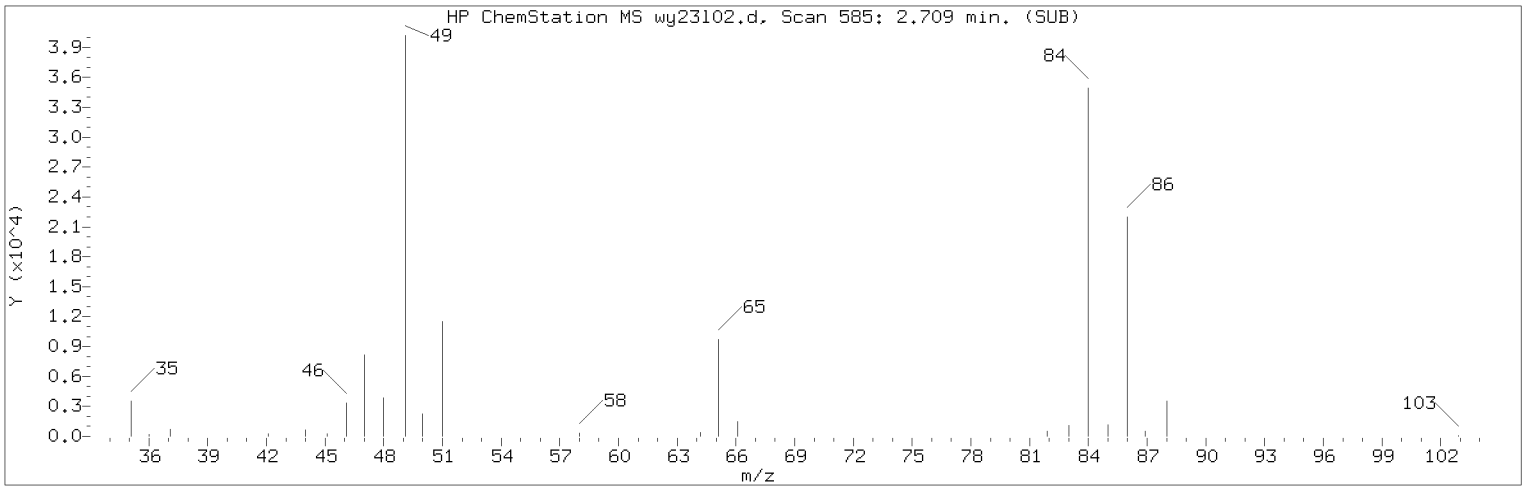
Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:12
Date, time and analyst ID of latest file update: 23-May-2019 06:49 Automation

Sample Name: LCDW35 Lab Sample ID: LCDW35

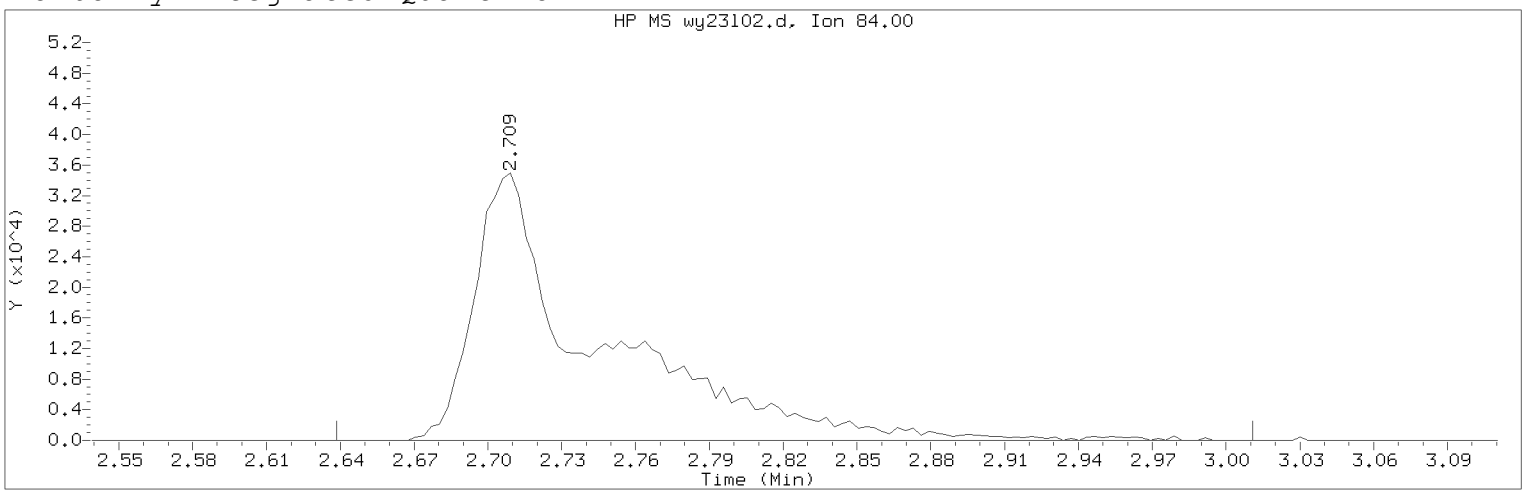
Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 518
Retention Time (minutes): 2.494
Quant Ion : 76.00
Area : 219305
On-column Amount (ng) : 13.5177
Integration start scan : 503 Integration stop scan: 532
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/23/2019 at 20:20.
Target 3.5 esignature user ID: dvv0203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23102.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:34 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:39 amd00492

Sample Name: LCDW35 Lab Sample ID: LCDW35

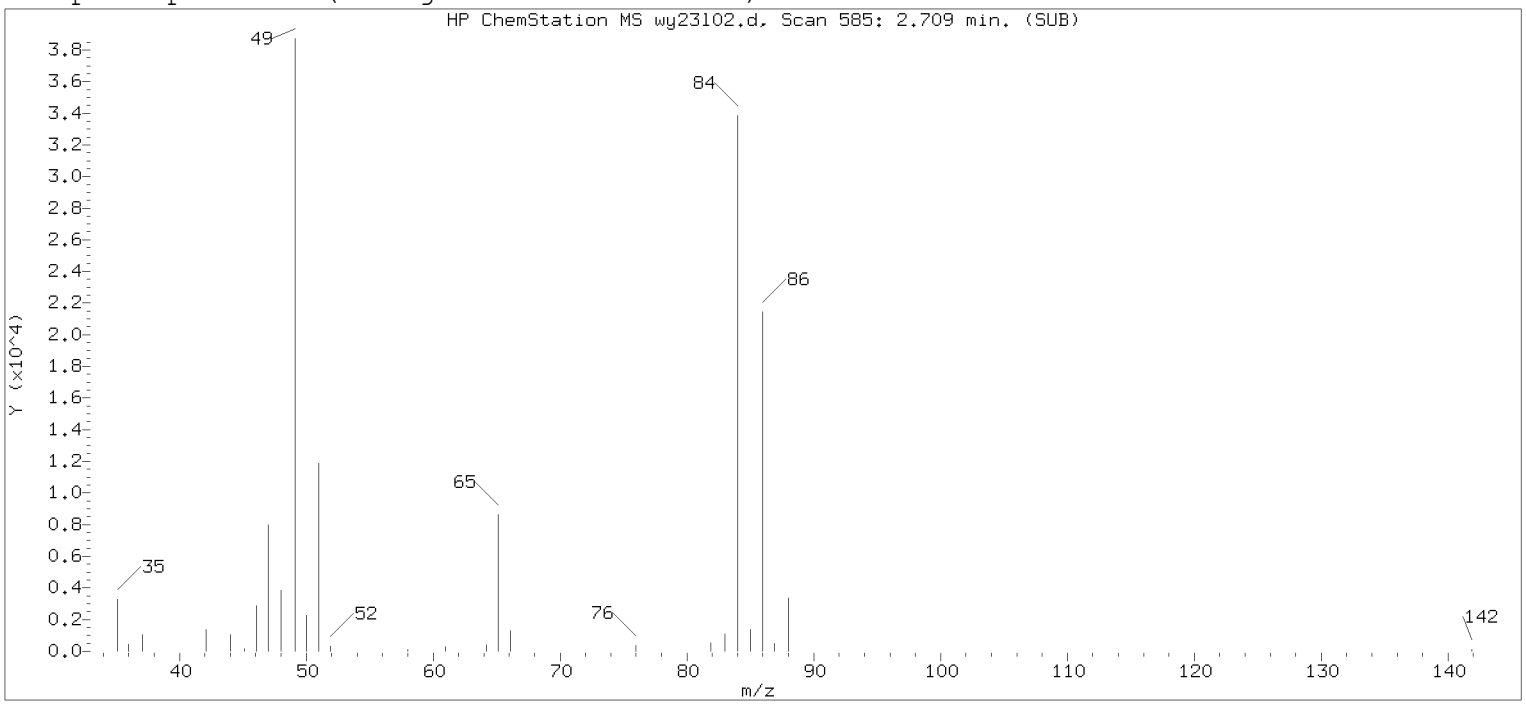
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area (flag) : 120976M
On-Column Amount (ng) : 21.4923
Integration start scan : 562 Integration stop scan: 678
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

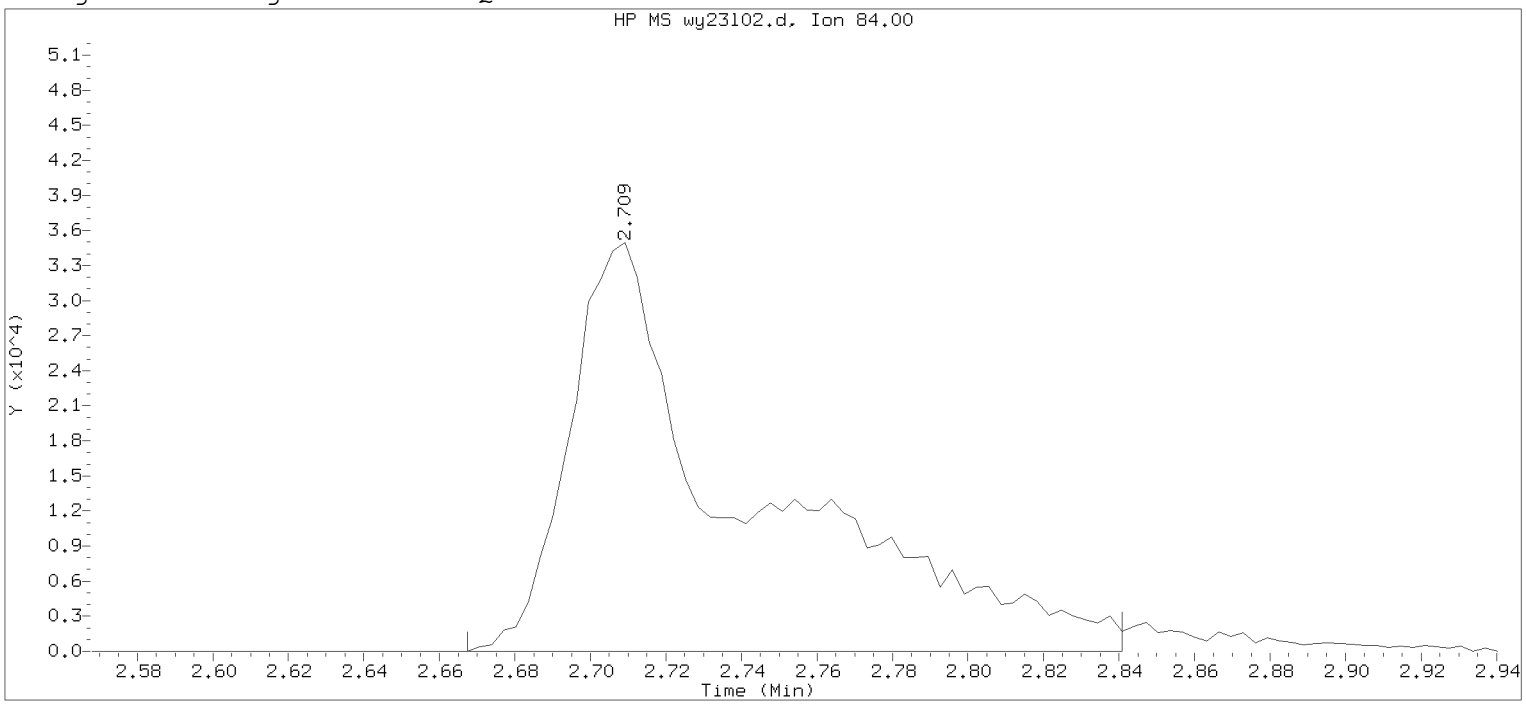
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:20.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:39.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23102.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:34 Analyst ID: and00492

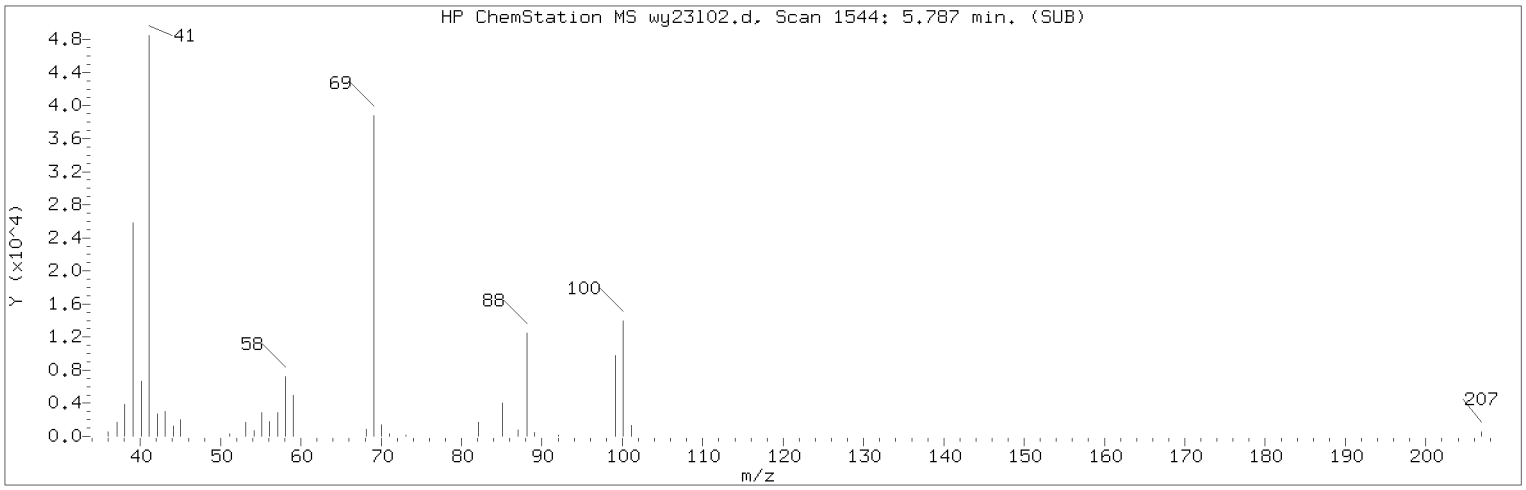
Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:12
Date, time and analyst ID of latest file update: 23-May-2019 06:49 Automation

Sample Name: LCDW35 Lab Sample ID: LCDW35

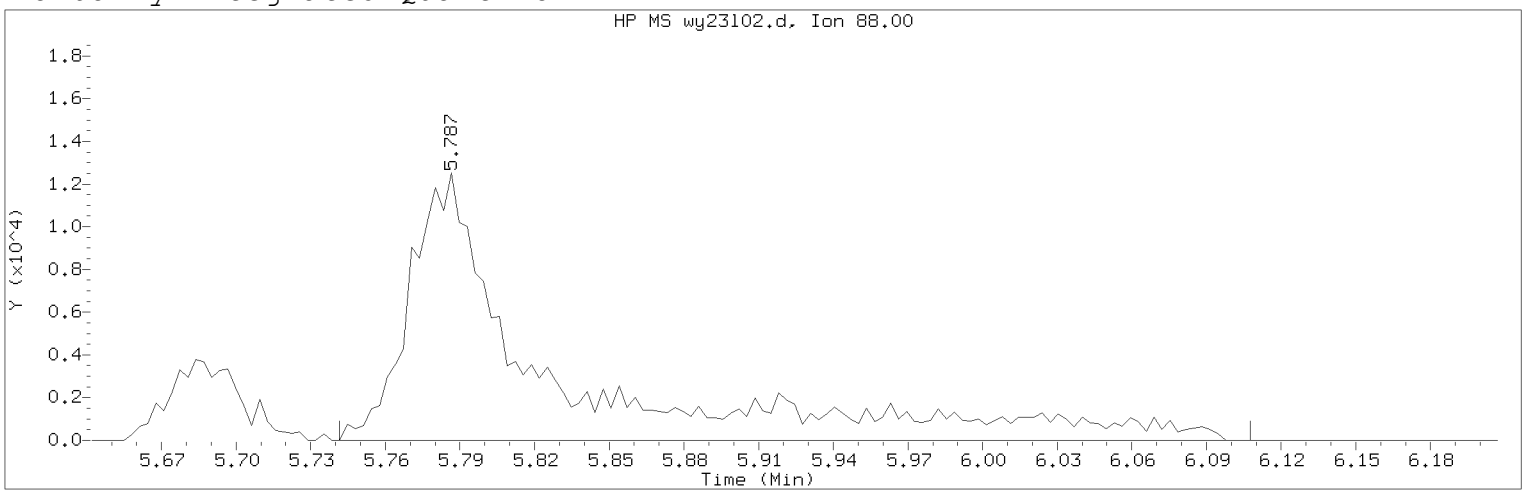
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 585
Retention Time (minutes): 2.709
Quant Ion : 84.00
Area : 114792
On-column Amount (ng) : 20.3937
Integration start scan : 571 Integration stop scan: 625
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/23/2019 at 20:20.
Target 3.5 esignature user id: dviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23102.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:34 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:56
Date, time and analyst ID of latest file update: 23-May-2019 07:39 amd00492

Sample Name: LCDW35 Lab Sample ID: LCDW35

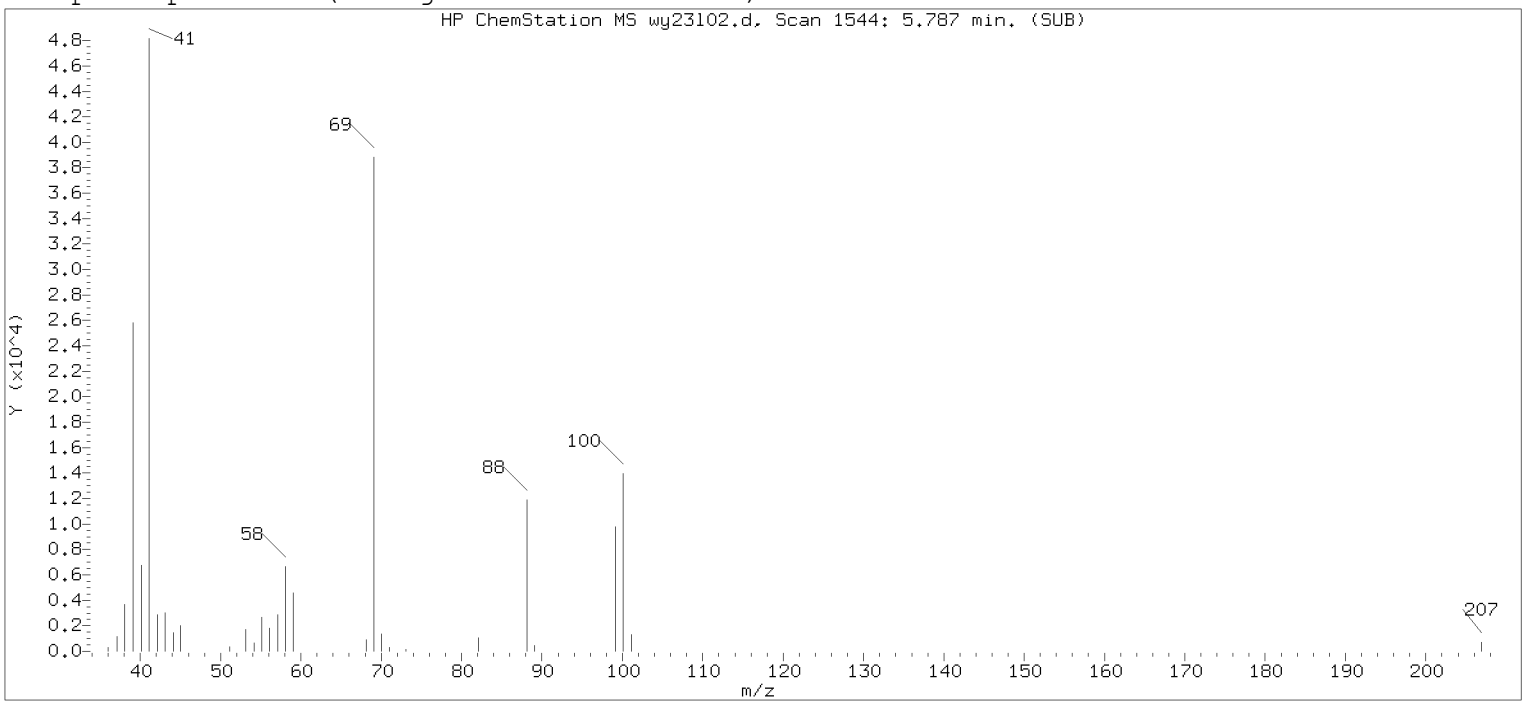
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1544
Retention Time (minutes): 5.787
Quant Ion : 88.00
Area (flag) : 47403M
On-Column Amount (ng) : 520.1320
Integration start scan : 1529 Integration stop scan: 1643
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

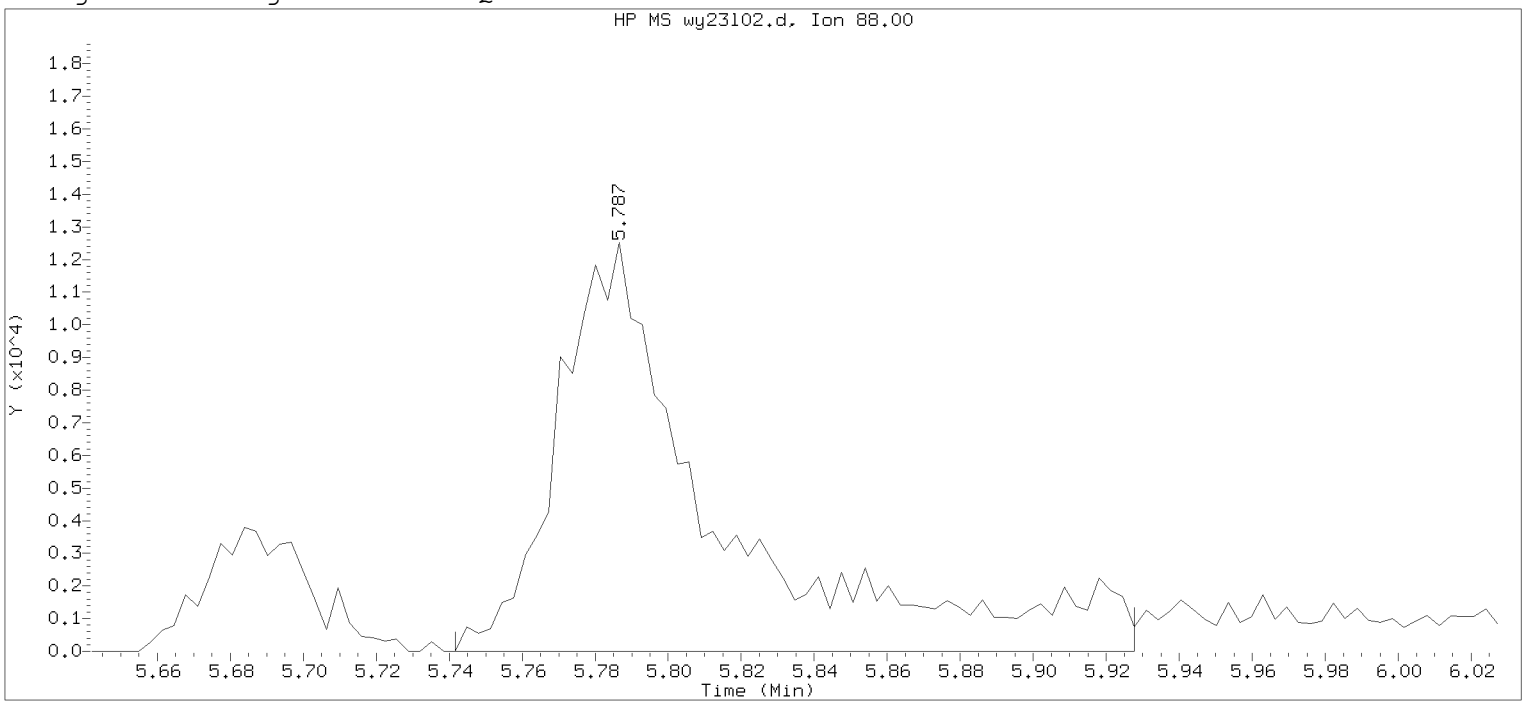
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/23/2019 at 20:20.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/24/2019 at 09:39.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/19may23a.b/wy23102.d Instrument ID: HP09137.i
Injection date and time: 23-MAY-2019 06:34 Analyst ID: and00492

Method used: /chem2/HP09137.i/19may23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-MAY-2019 06:12
Date, time and analyst ID of latest file update: 23-May-2019 06:49 Automation

Sample Name: LCDW35 Lab Sample ID: LCDW35

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1544
Retention Time (minutes): 5.787
Quant Ion : 88.00
Area : 37879
On-column Amount (ng) : 415.6318
Integration start scan : 1529 Integration stop scan: 1587
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/23/2019 at 20:20.
Target 3.5 esignature user id: dviray

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NYSDEC ASP Category B Data Package

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Project: AD-New Windsor, NY
Groundwater and Water Samples
Collected on 05/21/19

SDG# JCV94-V.2

GROUP	SAMPLE NUMBERS
2045235	1063765-1063773

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-18-27
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M. Kauffman

Dana M. Kauffman
Manager

Date: 08/05/2019

Any questions or concerns you might have regarding this data package should be directed to your client representative, Katherine Klinefelter at (717) 556-7256.

2425 New Holland Pike, Lancaster, PA 17601 | 717-656-2300 | Fax: 717-656-2681 | www.LancasterLabs.com

Table of Contents for SDG# JCV94

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3. Methodology Summary/Reference 5
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   b. Quality Control and Calibration Summary Forms 32
   c. Sample Data 68
   d. Standards Data 194
   e. Raw QC Data 404

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Sample Reference List for SDG Number JCV94
with a Data Package Type of NYSDEC B

06556 - The Johnson Company, Inc.

Project: AD-New Windsor, NY

Lab Sample Number	Client Sample ID	Collection Date	Date Received	Lab Sample Code
1063765	TB052119	05/21/2019 00:00	05/22/2019 10:10	94J01
1063766	Diff-DUP	05/21/2019 09:30	05/22/2019 10:10	94J02
1063767	Diff-01	05/21/2019 09:00	05/22/2019 10:10	94J03
1063768	Diff-02	05/21/2019 08:50	05/22/2019 10:10	94J04
1063769	Diff-03	05/21/2019 08:40	05/22/2019 10:10	94J05
1063770	Diff-04	05/21/2019 08:30	05/22/2019 10:10	94J06
1063771	Diff-05	05/21/2019 08:12	05/22/2019 10:10	94J07
1063772	Diff-06	05/21/2019 08:00	05/22/2019 10:10	94J08
1063773	Diff-07	05/21/2019 07:50	05/22/2019 10:10	94J09

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Sample pH Log

SDG: JCV94

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
1063765	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/31/2019 9:50:41AM	492
1063766	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/31/2019 9:50:18AM	492
1063767	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/31/2019 9:50:18AM	492
1063768	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/31/2019 9:50:18AM	492
1063769	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/31/2019 9:50:18AM	492
1063770	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/31/2019 9:50:18AM	492
1063771	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/31/2019 10:19:33PM	10203
1063772	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/31/2019 10:19:33PM	10203
1063773	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/31/2019 10:19:33PM	10203

*pH Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

**Chlorine Present Code Key
NA = Chlorine Not Checked
Y = Chlorine Present
N = Chlorine Not Present

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11997 VOCs- 5ml Water by 8260C/D

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Report Date: June 02, 2019 12:36

Project: AD-New Windsor, NY

Account #: 06556
Group Number: 2045235
SDG: JCV94
PO Number: 1-0145-05
Release Number: 58300.00
State of Sample Origin: NY

Electronic Copy To	The Johnson Company, Inc.	Attn: Tristan Hardy
Electronic Copy To	The Johnson Company, Inc.	Attn: George Lester

Respectfully Submitted,

Katherine A. Klinefelter

Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
TB052119 Water	05/21/2019	1063765
Diff-DUP Grab Groundwater	05/21/2019 09:30	1063766
Diff-01 Grab Groundwater	05/21/2019 09:00	1063767
Diff-02 Grab Groundwater	05/21/2019 08:50	1063768
Diff-03 Grab Groundwater	05/21/2019 08:40	1063769
Diff-04 Grab Groundwater	05/21/2019 08:30	1063770
Diff-05 Grab Groundwater	05/21/2019 08:12	1063771
Diff-06 Grab Groundwater	05/21/2019 08:00	1063772
Diff-07 Grab Groundwater	05/21/2019 07:50	1063773

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **TB052119 Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/22/2019 10:10
Collection Date/Time: 05/21/2019
SDG#: JCV94-01TB

The Johnson Company, Inc.
ELLE Sample #: GW 1063765
ELLE Group #: 2045235
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4191502AA	05/30/2019 21:32	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4191502AA	05/30/2019 21:31	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **Diff-DUP Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/22/2019 10:10
Collection Date/Time: 05/21/2019 09:30
SDG#: JCV94-02FD

The Johnson Company, Inc.
ELLE Sample #: GW 1063766
ELLE Group #: 2045235
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	1 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	0.8 J	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	12	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	2	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	25	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	0.3 J	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	0.4 J	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	12	0.3	1	1
11997	Trichloroethene	79-01-6	5	0.2	1	1
11997	Vinyl Chloride	75-01-4	5	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4191502AA	05/31/2019 03:59	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4191502AA	05/31/2019 03:58	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **Diff-01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/22/2019 10:10
Collection Date/Time: 05/21/2019 09:00
SDG#: JCV94-03

The Johnson Company, Inc.
ELLE Sample #: GW 1063767
ELLE Group #: 2045235
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	1 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	0.5 J	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	9	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	1	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	18	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	0.3 J	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	0.6 J	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	9	0.3	1	1
11997	Trichloroethene	79-01-6	4	0.2	1	1
11997	Vinyl Chloride	75-01-4	4	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4191502AA	05/31/2019 04:22	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4191502AA	05/31/2019 04:21	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **Diff-02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/22/2019 10:10
Collection Date/Time: 05/21/2019 08:50
SDG#: JCV94-04

The Johnson Company, Inc.
ELLE Sample #: GW 1063768
ELLE Group #: 2045235
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	2 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	0.8 J	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	5	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	0.9 J	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	23	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	0.6 J	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	0.6 J	0.3	1	1
11997	Trichloroethene	79-01-6	2	0.2	1	1
11997	Vinyl Chloride	75-01-4	7	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4191502AA	05/31/2019 04:45	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4191502AA	05/31/2019 04:44	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **Diff-03 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/22/2019 10:10
Collection Date/Time: 05/21/2019 08:40
SDG#: JCV94-05

The Johnson Company, Inc.
ELLE Sample #: GW 1063769
ELLE Group #: 2045235
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	1 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	0.7 J	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.5 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	0.3 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4191502AA	05/31/2019 05:08	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4191502AA	05/31/2019 05:07	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **Diff-04 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/22/2019 10:10
Collection Date/Time: 05/21/2019 08:30
SDG#: JCV94-06

The Johnson Company, Inc.
ELLE Sample #: GW 1063770
ELLE Group #: 2045235
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	2 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	0.7 J	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	3	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	0.5 J	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	0.3 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	0.4 J	0.2	1	1
11997	Toluene	108-88-3	0.4 J	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	2	0.3	1	1
11997	Trichloroethene	79-01-6	0.8 J	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4191502AA	05/31/2019 05:31	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4191502AA	05/31/2019 05:30	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **Diff-05 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/22/2019 10:10
Collection Date/Time: 05/21/2019 08:12
SDG#: JCV94-07

The Johnson Company, Inc.
ELLE Sample #: GW 1063771
ELLE Group #: 2045235
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	2 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	2 J	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	1	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	0.3 J	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	3	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	4	0.3	1	1
11997	Trichloroethene	79-01-6	5	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4191511AA	05/31/2019 17:31	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4191511AA	05/31/2019 17:30	Anita M Dale	1

*=This limit was used in the evaluation of the final result

Sample Description: **Diff-06 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/22/2019 10:10
Collection Date/Time: 05/21/2019 08:00
SDG#: JCV94-08

The Johnson Company, Inc.
ELLE Sample #: GW 1063772
ELLE Group #: 2045235
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	1 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	1 J	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.9 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	2	0.3	1	1
11997	Trichloroethene	79-01-6	1	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4191511AA	05/31/2019 17:53	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4191511AA	05/31/2019 17:52	Anita M Dale	1

*=This limit was used in the evaluation of the final result

Sample Description: **Diff-07 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 05/22/2019 10:10
Collection Date/Time: 05/21/2019 07:50
SDG#: JCV94-09

The Johnson Company, Inc.
ELLE Sample #: GW 1063773
ELLE Group #: 2045235
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	1 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	0.6 J	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.6 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	1	0.3	1	1
11997	Trichloroethene	79-01-6	0.6 J	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4191511AA	05/31/2019 18:16	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4191511AA	05/31/2019 18:15	Anita M Dale	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2045235
Reported: 06/02/2019 12:36

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 4191502AA	Sample number(s): 1063765-1063770		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: 4191511AA	Sample number(s): 1063771-1063773		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2045235
Reported: 06/02/2019 12:36

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 4191502AA	Sample number(s): 1063765-1063770								
Acetone	150	142.67			95		54-157		
Benzene	20	20.45			102		80-120		
2-Butanone	150	123.26			82		59-135		
Carbon Disulfide	20	20.23			101		65-128		
Chloroform	20	19.13			96		80-120		
1,2-Dichlorobenzene	20	19.82			99		80-120		
1,1-Dichloroethane	20	20.06			100		80-120		
1,2-Dichloroethane	20	18.2			91		73-124		
1,1-Dichloroethene	20	21.96			110		80-131		
cis-1,2-Dichloroethene	20	21.92			110		80-125		
trans-1,2-Dichloroethene	20	21.18			106		80-126		
1,4-Dioxane	500	545.99			109		63-146		
Ethylbenzene	20	19.35			97		80-120		
Freon 113	20	19.06			95		73-139		
Methylene Chloride	20	21.34			107		80-120		
Naphthalene	20	19.44			97		53-124		
Tetrachloroethene	20	19.82			99		80-120		
Toluene	20	20.07			100		80-120		
1,1,1-Trichloroethane	20	18.04			90		67-126		
Trichloroethene	20	19.81			99		80-120		
Vinyl Chloride	20	15.59			78		56-120		
Xylene (Total)	60	58.67			98		80-120		
Batch number: 4191511AA	Sample number(s): 1063771-1063773								
Acetone	150	147.22	150	156.38	98	104	54-157	6	30
Benzene	20	20.81	20	20.26	104	101	80-120	3	30
2-Butanone	150	129.31	150	127.79	86	85	59-135	1	30
Carbon Disulfide	20	20.09	20	19.6	100	98	65-128	2	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2045235
Reported: 06/02/2019 12:36

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Chloroform	20	19.75	20	19.3	99	96	80-120	2	30
1,2-Dichlorobenzene	20	20.43	20	19.94	102	100	80-120	2	30
1,1-Dichloroethane	20	20.41	20	19.91	102	100	80-120	2	30
1,2-Dichloroethane	20	18.94	20	18.43	95	92	73-124	3	30
1,1-Dichloroethene	20	22.39	20	21.81	112	109	80-131	3	30
cis-1,2-Dichloroethene	20	22.26	20	21.64	111	108	80-125	3	30
trans-1,2-Dichloroethene	20	21.69	20	20.89	108	104	80-126	4	30
1,4-Dioxane	500	566.3	500	553.04	113	111	63-146	2	30
Ethylbenzene	20	19.65	20	19.06	98	95	80-120	3	30
Freon 113	20	20.13	20	19.77	101	99	73-139	2	30
Methylene Chloride	20	21.52	20	21.14	108	106	80-120	2	30
Naphthalene	20	19.71	20	19.42	99	97	53-124	1	30
Tetrachloroethene	20	20.22	20	19.84	101	99	80-120	2	30
Toluene	20	20.27	20	19.75	101	99	80-120	3	30
1,1,1-Trichloroethane	20	18.5	20	18.08	93	90	67-126	2	30
Trichloroethene	20	20.5	20	19.71	103	99	80-120	4	30
Vinyl Chloride	20	15.16	20	14.71	76	74	56-120	3	30
Xylene (Total)	60	59.56	60	57.88	99	96	80-120	3	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: 4191502AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1063765	98	103	99	94
1063766	100	104	100	94
1063767	100	102	99	93
1063768	100	106	99	94
1063769	100	105	98	94
1063770	100	104	99	94
Blank	96	103	100	94
LCS	98	101	100	97
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: 4191511AA

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2045235
Reported: 06/02/2019 12:36

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: 4191511AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1063771	98	104	99	95
1063772	98	105	99	96
1063773	96	101	98	95
Blank	98	103	100	95
LCS	97	103	99	97
LCSD	98	102	100	96
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 6556 Group # 2045235 Sample # 1063765-73

COC #583013

Client Information

Client: VHB / The Johnson Company
Acct. #: 06556
Project Name/#: AD-New Windsor/58300/1-014
PWSID #: 5-05
Project Manager: George Lester
P.O. #:
Sampler: Adam Rooney
Quote #:
State where samples were collected: NY
For Compliance: Yes ☐ No ☒

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water ☒ Potable ☐ Ground ☐ NPDES ☐ Surface ☐ | Other: ___

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks
site specific Analyte List

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	H	8260 - VOCs
TB052119	—	—	1		2		X
Diff-Dup	5/21/19	936	X		3		X
Diff-01		900	X		3		X
Diff-02		850	X		3		X
Diff-03		840	X		3		X
Diff-04		830	X		3		X
Diff-05		812	X		3		X
Diff-06		800	X		3		X
Diff-07		750	X		3		X

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: ___

E-mail address: Glester@vhb.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP)
Type III (Reduced non-CLP)
NYSDEC Category A or B
Type VI (Raw Data Only)
NJ DKQP
MA MCP
TX TRRP-13
CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	5/21/19	1000			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	5/22/19	1010

EDD Required? Yes No
If yes, format: Excel

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ___ FedEx X Other ___

Temperature upon receipt 2.2 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 249659

Group Number(s): 2045235

Client: VHB/The Johnson Co.

AD-New Windsor/58300/1-0145-05

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	05/22/2019 10:10
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	Yes
Samples Chilled:	Yes	VOA IDs (≥ 6mm):	See Below
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	2
Samples Intact:	Yes	Trip Blank Type:	HCl
Missing Samples:	No	Air Quality Samples Present:	No
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

VOA Vial IDs (Headspace ≥ 6mm): 1 HCl Tripblank

Unpacked by Nicole Reiff (25684) at 15:46 on 05/22/2019

Samples Chilled Details: AD-New Windsor/58300/1-0145-05

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	2.2	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17601-2422
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCV94

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
1063765	TB052119	X		1	Trip Blank
1063766	Diff-DUP	X		1	Field Duplicate Sample
1063767	Diff-01	X		1	
1063768	Diff-02	X		1	
1063769	Diff-03	X		1	
1063770	Diff-04	X		1	
1063771	Diff-05	X		1	
1063772	Diff-06	X		1	
1063773	Diff-07	X		1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

SAMPLE ANALYSIS:

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCV94

GC/MS Volatiles

Fraction: Volatiles by GC/MS

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

1. Relative Response Factor (RRF)

$$RRF = \frac{AX}{Ais} \times \frac{Cis}{Cx}$$

Where:

Ax = Area of the characteristic ion for the compound to be measured
Ais = Area of the characteristic ion for the specific internal standard to be measured
Cis = Concentration of the internal standard
Cx = Concentration of the compound to be measured

2. % Relative Standard Deviation (%RSD)

$$\%RSD = \frac{standard\ deviation}{Mean} \times 100$$

3. % Difference

$$\%D = \frac{RRFc - RRFi}{RRFi} \times 100$$

Where:

RRFc = Relative response factor from the continuing calibration standard
RRFi = Mean relative response factor from the initial calibration

4. Concentration

$$Concentration\ (\mu g/L) = \frac{(Ax)(Is)(Df)}{(Ais)(RRF)}$$

Where:

Ax, Ais, and RRF are as given in 1. above
Is = Amount of internal standard added in parts per billion (µg/L)
Df = Dilution factor

5. % Recovery (% Rec)

$$\%Rec = \frac{SSR - SR}{SA} \times 100$$

Where:

SSR = Spiked sample result
SR = Sample result
SA = Spike added

6. Relative Percent Difference (RPD)

$$RPD = \frac{(MSR - MSRD)}{(1/2)(MSR + MSRD)} \times 100$$

Where:

MSR = Matrix spike recovery
MSRD = Matrix spike recovery duplicate

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: The Johnson Company, Inc.
SDG: JCV94

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
VOCs- 5ml Water by 8260C/D	4191502AA	VBLK440	05/30/2019 20:20
		LCS440	05/30/2019 19:34
		1063765	05/30/2019 21:32
		1063766	05/31/2019 03:59
		1063767	05/31/2019 04:22
		1063768	05/31/2019 04:45
		1063769	05/31/2019 05:08
		1063770	05/31/2019 05:31
VOCs- 5ml Water by 8260C/D	4191511AA	VBLK441	05/31/2019 08:48
		LCS441	05/31/2019 07:40
		LCD441	05/31/2019 08:03
		1063771	05/31/2019 17:31
		1063772	05/31/2019 17:53
		1063773	05/31/2019 18:16

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: JCV94
Matrix: LIQUID

Fraction: Volatiles by GC/MS

4191502AA / VBLK440 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	05/30/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	05/30/19	N.D.	ug/l	0.2	1
Acetone	05/30/19	N.D.	ug/l	0.7	20
Freon 113	05/30/19	N.D.	ug/l	0.2	10
Carbon Disulfide	05/30/19	N.D.	ug/l	0.2	5
Methylene Chloride	05/30/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	05/30/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	05/30/19	N.D.	ug/l	0.2	1
2-Butanone	05/30/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	05/30/19	N.D.	ug/l	0.2	1
Chloroform	05/30/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	05/30/19	N.D.	ug/l	0.3	1
Benzene	05/30/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	05/30/19	N.D.	ug/l	0.3	1
Trichloroethene	05/30/19	N.D.	ug/l	0.2	1
1,4-Dioxane	05/30/19	N.D.	ug/l	29	250
Toluene	05/30/19	N.D.	ug/l	0.2	1
Tetrachloroethene	05/30/19	N.D.	ug/l	0.2	1
Ethylbenzene	05/30/19	N.D.	ug/l	0.4	1
Xylene (Total)	05/30/19	N.D.	ug/l	1	5
1,2-Dichlorobenzene	05/30/19	N.D.	ug/l	0.2	5
Naphthalene	05/30/19	N.D.	ug/l	1	5

4191511AA / VBLK441 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	05/31/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	05/31/19	N.D.	ug/l	0.2	1
Acetone	05/31/19	N.D.	ug/l	0.7	20
Freon 113	05/31/19	N.D.	ug/l	0.2	10
Carbon Disulfide	05/31/19	N.D.	ug/l	0.2	5
Methylene Chloride	05/31/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	05/31/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	05/31/19	N.D.	ug/l	0.2	1
2-Butanone	05/31/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	05/31/19	N.D.	ug/l	0.2	1
Chloroform	05/31/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	05/31/19	N.D.	ug/l	0.3	1
Benzene	05/31/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	05/31/19	N.D.	ug/l	0.3	1
Trichloroethene	05/31/19	N.D.	ug/l	0.2	1
1,4-Dioxane	05/31/19	N.D.	ug/l	29	250
Toluene	05/31/19	N.D.	ug/l	0.2	1
Tetrachloroethene	05/31/19	N.D.	ug/l	0.2	1
Ethylbenzene	05/31/19	N.D.	ug/l	0.4	1
Xylene (Total)	05/31/19	N.D.	ug/l	1	5

Fraction: Volatiles by GC/MS

4191511AA / VBLK441 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
1,2-Dichlorobenzene	05/31/19	N.D.	ug/l	0.2	5
Naphthalene	05/31/19	N.D.	ug/l	1	5

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Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: JCV94
Matrix: LIQUID

Fraction: Volatiles by GC/MS

4191502AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLK440	103	80 - 120	94	80 - 120	96	80 - 120	100	80 - 120
LCS440	101	80 - 120	97	80 - 120	98	80 - 120	100	80 - 120
1063765	103	80 - 120	94	80 - 120	98	80 - 120	99	80 - 120
1063766	104	80 - 120	94	80 - 120	100	80 - 120	100	80 - 120
1063767	102	80 - 120	93	80 - 120	100	80 - 120	99	80 - 120
1063768	106	80 - 120	94	80 - 120	100	80 - 120	99	80 - 120
1063769	105	80 - 120	94	80 - 120	100	80 - 120	98	80 - 120
1063770	104	80 - 120	94	80 - 120	100	80 - 120	99	80 - 120

4191511AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLK441	103	80 - 120	95	80 - 120	98	80 - 120	100	80 - 120
LCS441	103	80 - 120	97	80 - 120	97	80 - 120	99	80 - 120
LCD441	102	80 - 120	96	80 - 120	98	80 - 120	100	80 - 120
1063771	104	80 - 120	95	80 - 120	98	80 - 120	99	80 - 120
1063772	105	80 - 120	96	80 - 120	98	80 - 120	99	80 - 120
1063773	101	80 - 120	95	80 - 120	96	80 - 120	98	80 - 120

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: JCV94
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCS440	Batch: **4191502AA** (Sample number(s): 1063765-1063770)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	15.59	NA	78	NA	56-120	NA	NA
1,1-Dichloroethene	20	21.96	NA	110	NA	80-131	NA	NA
Acetone	150	142.67	NA	95	NA	54-157	NA	NA
Freon 113	20	19.06	NA	95	NA	73-139	NA	NA
Carbon Disulfide	20	20.23	NA	101	NA	65-128	NA	NA
Methylene Chloride	20	21.34	NA	107	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	21.18	NA	106	NA	80-126	NA	NA
1,1-Dichloroethane	20	20.06	NA	100	NA	80-120	NA	NA
2-Butanone	150	123.26	NA	82	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	21.92	NA	110	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	18.04	NA	90	NA	67-126	NA	NA
Chloroform	20	19.13	NA	96	NA	80-120	NA	NA
1,2-Dichloroethane	20	18.2	NA	91	NA	73-124	NA	NA
Benzene	20	20.45	NA	102	NA	80-120	NA	NA
Trichloroethene	20	19.81	NA	99	NA	80-120	NA	NA
1,4-Dioxane	500	545.99	NA	109	NA	63-146	NA	NA
Toluene	20	20.07	NA	100	NA	80-120	NA	NA
Tetrachloroethene	20	19.82	NA	99	NA	80-120	NA	NA
Ethylbenzene	20	19.35	NA	97	NA	80-120	NA	NA
Xylene (Total)	60	58.67	NA	98	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	19.82	NA	99	NA	80-120	NA	NA
Naphthalene	20	19.44	NA	97	NA	53-124	NA	NA

LCS: LCS441 LCSD: LCD441	Batch: **4191511AA** (Sample number(s): 1063771-1063773)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	15.16	14.71	76	74	56-120	3	30
1,1-Dichloroethene	20	22.39	21.81	112	109	80-131	3	30
Acetone	150	147.22	156.38	98	104	54-157	6	30
Freon 113	20	20.13	19.77	101	99	73-139	2	30
Carbon Disulfide	20	20.09	19.6	100	98	65-128	2	30
Methylene Chloride	20	21.52	21.14	108	106	80-120	2	30
trans-1,2-Dichloroethene	20	21.69	20.89	108	104	80-126	4	30
1,1-Dichloroethane	20	20.41	19.91	102	100	80-120	2	30
2-Butanone	150	129.31	127.79	86	85	59-135	1	30
cis-1,2-Dichloroethene	20	22.26	21.64	111	108	80-125	3	30
1,1,1-Trichloroethane	20	18.5	18.08	93	90	67-126	2	30
Chloroform	20	19.75	19.3	99	96	80-120	2	30
1,2-Dichloroethane	20	18.94	18.43	95	92	73-124	3	30
Benzene	20	20.81	20.26	104	101	80-120	3	30
Trichloroethene	20	20.5	19.71	103	99	80-120	4	30

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCS441 LCSD: LCD441 **Analyte**	Batch: **4191511AA** (Sample number(s): 1063771-1063773) **Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
1,4-Dioxane	500	566.3	553.04	113	111	63-146	2	30
Toluene	20	20.27	19.75	101	99	80-120	3	30
Tetrachloroethene	20	20.22	19.84	101	99	80-120	2	30
Ethylbenzene	20	19.65	19.06	98	95	80-120	3	30
Xylene (Total)	60	59.56	57.88	99	96	80-120	3	30
1,2-Dichlorobenzene	20	20.43	19.94	102	100	80-120	2	30
Naphthalene	20	19.71	19.42	99	97	53-124	1	30

Fraction: Volatiles by GC/MS

11997: VOCs- 5ml Water by 8260C/D Analyte Name	Default MDL	Default LOQ	Units
Vinyl Chloride	0.2	1	ug/l
1,1-Dichloroethene	0.2	1	ug/l
Acetone	0.7	20	ug/l
Freon 113	0.2	10	ug/l
Carbon Disulfide	0.2	5	ug/l
Methylene Chloride	0.3	1	ug/l
trans-1,2-Dichloroethene	0.2	1	ug/l
1,1-Dichloroethane	0.2	1	ug/l
2-Butanone	0.3	10	ug/l
cis-1,2-Dichloroethene	0.2	1	ug/l
Chloroform	0.2	1	ug/l
1,1,1-Trichloroethane	0.3	1	ug/l
Benzene	0.2	1	ug/l
1,2-Dichloroethane	0.3	1	ug/l
Trichloroethene	0.2	1	ug/l
1,4-Dioxane	29	250	ug/l
Toluene	0.2	1	ug/l
Tetrachloroethene	0.2	1	ug/l
Ethylbenzene	0.4	1	ug/l
Xylene (Total)	1	5	ug/l
1,2-Dichlorobenzene	0.2	5	ug/l
Naphthalene	1	5	ug/l

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: 4a23t01.d BFB Injection Date: 04/23/19

Instrument ID: HP23297 BFB Injection Time: 14:13

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.42
75	30.0 - 60.0% of mass 95	46.67
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.99
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	89.33
175	5.0 - 9.0% of mass 174	6.21 (6.95)1
176	Greater than 95.0%, but less than 101.0% of mass 174	88.11 (98.63)1
177	5.0 - 9.0% of mass 176	5.49 (6.23)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD1	4a23i01.d	04/23/19	14:57
02	VSTD4	4a23i02.d	04/23/19	15:20
03	VSTD10	4a23i03.d	04/23/19	15:43
04	VSTD20	4a23i04.d	04/23/19	16:06
05	VSTD50	4a23i05.d	04/23/19	16:28
06	VSTD100	4a23i06.d	04/23/19	16:51
07	VSTD300	4a23i07.d	04/23/19	17:14
08	ICV401	4a23v01.d	04/23/19	18:00

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: 4y30t05.d BFB Injection Date: 05/30/19

Instrument ID: HP23297 BFB Injection Time: 18:34

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.67
75	30.0 - 60.0% of mass 95	43.44
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.83
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	91.96
175	5.0 - 9.0% of mass 174	6.57 (7.15)1
176	Greater than 95.0%, but less than 101.0% of mass 174	89.36 (97.18)1
177	5.0 - 9.0% of mass 176	6.04 (6.76)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	4y30c05.d	05/30/19	19:12
02	LCS440	4y30s41.d	05/30/19	19:34
03	MDL440 - MDL440	4y30m41.d	05/30/19	19:57
04	VBLK440	4y30b41.d	05/30/19	20:20
05	1064221	4y30s42.d	05/30/19	20:46
06	1065034	4y30s43.d	05/30/19	21:09
07	1063765	4y30s44.d	05/30/19	21:32
08	1065030	4y30s45.d	05/30/19	21:54
09	1065031MS	4y30s46.d	05/30/19	22:17
10	1065032MSD	4y30s47.d	05/30/19	22:40
11	1068734	4y30s48.d	05/30/19	23:25
12	1068729	4y30s49.d	05/30/19	23:48
13	1068730	4y30s50.d	05/31/19	00:11
14	1068731	4y30s51.d	05/31/19	00:34
15	1068732	4y30s52.d	05/31/19	00:57
16	1068728	4y30s54.d	05/31/19	01:42
17	1068728DL	4y30s55.d	05/31/19	02:05
18	1065027	4y30s56.d	05/31/19	02:28
19	1065028	4y30s57.d	05/31/19	02:51
20	1065029	4y30s58.d	05/31/19	03:14
21	1065033	4y30s59.d	05/31/19	03:36
22	1063766	4y30s60.d	05/31/19	03:59

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: 4y30t05.d BFB Injection Date: 05/30/19

Instrument ID: HP23297 BFB Injection Time: 18:34

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.67
75	30.0 - 60.0% of mass 95	43.44
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.83
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	91.96
175	5.0 - 9.0% of mass 174	6.57 (7.15)1
176	Greater than 95.0%, but less than 101.0% of mass 174	89.36 (97.18)1
177	5.0 - 9.0% of mass 176	6.04 (6.76)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1063767	4y30s61.d	05/31/19	04:22
24	1063768	4y30s62.d	05/31/19	04:45
25	1063769	4y30s63.d	05/31/19	05:08
26	1063770	4y30s64.d	05/31/19	05:31
27	1068733	4y30s65.d	05/31/19	05:53

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: 4y31t01.d BFB Injection Date: 05/31/19

Instrument ID: HP23297 BFB Injection Time: 06:45

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.67
75	30.0 - 60.0% of mass 95	44.07
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.80
173	Less than 2.0% of mass 174	0.29 (0.33)1
174	Greater than 50.0% of mass 95	88.87
175	5.0 - 9.0% of mass 174	6.44 (7.25)1
176	Greater than 95.0%, but less than 101.0% of mass 174	85.60 (96.33)1
177	5.0 - 9.0% of mass 176	5.41 (6.31)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	4y31c01.d	05/31/19	07:17
02	LCS441	4y31l01.d	05/31/19	07:40
03	LCD441	4y31l02.d	05/31/19	08:03
04	VSTD0.5	4y31m01.d	05/31/19	08:26
05	VBLK441	4y31b01.d	05/31/19	08:48
06	1063447	4y31s01.d	05/31/19	09:11
07	1064027	4y31s02.d	05/31/19	09:34
08	1064019	4y31s03.d	05/31/19	09:57
09	1064020MS	4y31s04.d	05/31/19	10:19
10	1064021MSD	4y31s05.d	05/31/19	10:42
11	1064019DL	4y31s06.d	05/31/19	11:05
12	1063963	4y31s07.d	05/31/19	11:27
13	1063964	4y31s08.d	05/31/19	11:50
14	1063965	4y31s09.d	05/31/19	12:13
15	1063966	4y31s10.d	05/31/19	12:35
16	1063967	4y31s11.d	05/31/19	12:58
17	1063968	4y31s12.d	05/31/19	13:21
18	1064010	4y31s13.d	05/31/19	13:43
19	1064023	4y31s14.d	05/31/19	14:06
20	1064025	4y31s16.d	05/31/19	14:52
21	1064030	4y31s17.d	05/31/19	15:14
22	1064033	4y31s18.d	05/31/19	15:37

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: 4y31t01.d BFB Injection Date: 05/31/19

Instrument ID: HP23297 BFB Injection Time: 06:45

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.67
75	30.0 - 60.0% of mass 95	44.07
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.80
173	Less than 2.0% of mass 174	0.29 (0.33)1
174	Greater than 50.0% of mass 95	88.87
175	5.0 - 9.0% of mass 174	6.44 (7.25)1
176	Greater than 95.0%, but less than 101.0% of mass 174	85.60 (96.33)1
177	5.0 - 9.0% of mass 176	5.41 (6.31)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1067163	4y31s19.d	05/31/19	16:00
24	1067164	4y31s20.d	05/31/19	16:23
25	1067165	4y31s21.d	05/31/19	16:45
26	1067167	4y31s22.d	05/31/19	17:08
27	1063771	4y31s23.d	05/31/19	17:31
28	1063772	4y31s24.d	05/31/19	17:53
29	1063773	4y31s25.d	05/31/19	18:16
30	1064083	4y31s26.d	05/31/19	18:39

FORM V VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 Calibration Date(s): 04/23/19 04/23/19

Heated Purge: (Y/N) Y Calibration Times: 14:57 17:14

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = 4a23i01.d RRF 4 = 4a23i02.d RRF 10= 4a23i03.d
RRF 20= 4a23i04.d RRF 50= 4a23i05.d RRF100= 4a23i06.d RRF300= 4a23i07.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
Dichlorodifluoromethane	#0.3267	0.4301	0.4096	0.4057	0.3789	0.3659	0.3519	0.3813	9	AVG	#
Chloromethane	#0.3643	0.4154	0.4109	0.3853	0.3581	0.3329	0.3180	0.3693	10	AVG	#
1,3-Butadiene	0.1993	0.2306	0.2133	0.2023	0.1987	0.1834	0.1741	0.2002	9	AVG	
Vinyl Chloride	#0.3535	0.3970	0.3956	0.3801	0.3483	0.3341	0.3186	0.3610	8	AVG	#
Bromomethane	#0.3083	0.3321	0.3229	0.3033	0.2819	0.2698	0.2555	0.2962	10	AVG	#
Chloroethane	#0.2114	0.2233	0.2149	0.2062	0.1905	0.1801	0.1693	0.1994	10	AVG	#
Dichlorofluoromethane	0.5461	0.5216	0.5016	0.4730	0.4412	0.4101	0.3824	0.4680	13	AVG	
n-Pentane	0.3188	0.3864	0.3448	0.3639	0.3660	0.3532	0.3430	0.3537	6	AVG	
Trichlorofluoromethane	#0.3835	0.4771	0.4693	0.4666	0.4363	0.4226	0.4093	0.4378	8	AVG	#
Ethanol	0.0850	0.1007	0.0950	0.0679	0.0764	0.0939	0.0702	0.0842	15	AVG	
Freon 123a	0.2440	0.2728	0.2625	0.2571	0.2500	0.2421	0.2347	0.2519	5	AVG	
Acrolein	1.3863	1.3676	1.4443	1.4906	1.4336	1.2732	1.5267	1.4175	6	AVG	
1,1-Dichloroethene	#0.1484	0.1846	0.1824	0.1767	0.1812	0.1735	0.1738	0.1744	7	AVG	#
1,1-Dichloroethene(2)	#0.0891	0.1005	0.0947	0.0924	0.0926	0.0881	0.0871	0.0921	5	AVG	#<-
Acetone	#0.6209	0.6742	0.7140	0.7505	0.7189	0.6492	0.7447	0.6961	7	AVG	#
Freon 113	#0.1583	0.2066	0.1979	0.1964	0.2002	0.1922	0.1916	0.1919	8	AVG	#
2-Propanol	0.5879	0.5527	0.5785	0.5371	0.5719	0.5861	0.5011	0.5593	6	AVG	
Methyl Iodide	0.3016	0.3638	0.3670	0.3548	0.3593	0.3461	0.3397	0.3475	6	AVG	
Carbon Disulfide	#0.5353	0.6647	0.6483	0.6318	0.6453	0.6169	0.6107	0.6219	7	AVG	#
Allyl Chloride	0.4359	0.4174	0.3945	0.3700	0.3733	0.3606	0.3551	0.3867	8	AVG	
Methyl Acetate	#0.4196	0.3955	0.3621	0.3515	0.3386	0.3445	0.3306	0.3632	9	AVG	#
Methylene Chloride	#0.2218	0.2342	0.2253	0.2207	0.2232	0.2129	0.2081	0.2209	4	AVG	#
t-Butyl alcohol	0.9755	0.9750	1.0394	1.0036	1.0249	0.9650	0.9032	0.9838	5	AVG	
Acrylonitrile	0.1769	0.1954	0.2050	0.2016	0.1881	0.1875	0.1774	0.1903	6	AVG	
trans-1,2-Dichloroethene	#0.1801	0.2161	0.2156	0.2143	0.2175	0.2090	0.2060	0.2084	6	AVG	#
Methyl Tertiary Butyl Ether	#0.6149	0.6592	0.6590	0.6402	0.6358	0.6005	0.5507	0.6229	6	AVG	#
n-Hexane	0.2958	0.3804	0.3499	0.3498	0.3581	0.3410	0.3340	0.3441	8	AVG	
1,1-Dichloroethane	#0.3509	0.4141	0.4033	0.3948	0.3989	0.3810	0.3675	0.3872	6	AVG	#
di-Isopropyl ether	0.7404	0.8094	0.7977	0.7927	0.7926	0.7477	0.6919	0.7675	6	AVG	
2-Chloro-1,3-butadiene	0.2952	0.3697	0.3685	0.3609	0.3694	0.3501	0.3403	0.3506	8	AVG	
Ethyl t-butyl ether	0.6533	0.6948	0.7072	0.6909	0.6751	0.6282	0.5653	0.6592	7	AVG	
cis-1,2-Dichloroethene	#0.2131	0.2489	0.2482	0.2446	0.2499	0.2399	0.2372	0.2403	5	AVG	#
2-Butanone	#0.3144	0.3066	0.3125	0.3076	0.2795	0.2854	0.2612	0.2953	7	AVG	#
2,2-Dichloropropane	0.2632	0.3260	0.3157	0.3126	0.3152	0.3007	0.2920	0.3036	7	AVG	
Propionitrile	0.9747	0.9795	1.0643	1.0776	1.1070	0.9850	1.1267	1.0450	6	AVG	
Methacrylonitrile	0.1696	0.1776	0.1841	0.1853	0.1835	0.1811	0.1751	0.1795	3	AVG	
Bromochloromethane	0.1176	0.1312	0.1368	0.1348	0.1367	0.1346	0.1370	0.1327	5	AVG	
Tetrahydrofuran	0.9882	0.9675	1.0425	1.0861	1.0524	0.9424	1.1415	1.0315	7	AVG	
Chloroform	#0.3690	0.3939	0.3987	0.3870	0.3909	0.3711	0.3591	0.3814	4	AVG	#
1,1,1-Trichloroethane	#0.2865	0.3391	0.3296	0.3267	0.3296	0.3147	0.3087	0.3193	6	AVG	#
Cyclohexane	#0.3722	0.4475	0.4218	0.4264	0.4278	0.4087	0.4021	0.4152	6	AVG	#
Cyclohexane(2)	#0.2874	0.3626	0.3451	0.3520	0.3540	0.3379	0.3346	0.3391	7	AVG	#
Cyclohexane(3)	#0.1038	0.1292	0.1299	0.1266	0.1313	0.1246	0.1232	0.1241	8	AVG	#
1,1-Dichloropropene	0.2740	0.3184	0.3102	0.3065	0.3116	0.2978	0.2929	0.3016	5	AVG	
Carbon Tetrachloride	#0.2380	0.2905	0.2851	0.2817	0.2892	0.2795	0.2778	0.2774	6	AVG	#
Isobutyl Alcohol	0.3406	0.3433	0.3589	0.3440	0.3533	0.3366	0.3481	0.3464	2	AVG	
Benzene	#0.8667	0.9646	0.9535	0.9390	0.9408	0.8929	0.8636	0.9173	5	AVG	#
1,2-Dichloroethane	#0.3434	0.3210	0.3192	0.3085	0.3106	0.2944	0.2792	0.3109	7	AVG	#
1,2-Dichloroethane(2)	#0.0125	0.0288	0.0285	0.0283	0.0279	0.0270	0.0266	0.0257	23	AVG	#<-
t-Amyl methyl ether	0.6688	0.7105	0.7215	0.7061	0.6841	0.6283	0.5467	0.6666	9	AVG	
n-Heptane	0.3907	0.4407	0.4062	0.4157	0.4036	0.3896	0.3895	0.4051	5	AVG	
n-Butanol	0.2516	0.2739	0.2990	0.2784	0.2919	0.2915	0.3050	0.2845	6	AVG	

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 Calibration Date(s): 04/23/19 04/23/19

Heated Purge: (Y/N) Y Calibration Times: 14:57 17:14

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = 4a23i01.d RRF 4 = 4a23i02.d RRF 10= 4a23i03.d
RRF 20= 4a23i04.d RRF 50= 4a23i05.d RRF100= 4a23i06.d RRF300= 4a23i07.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Trichloroethene	#0.2039	0.2446	0.2417	0.2373	0.2407	0.2318	0.2287	0.2327	6	AVG #
Methylcyclohexane	#0.3633	0.4602	0.4469	0.4526	0.4499	0.4435	0.4510	0.4382	8	AVG #
Methylcyclohexane(2)	#0.1575	0.1947	0.1907	0.1983	0.1956	0.1923	0.1987	0.1897	8	AVG #
1,2-Dichloropropane	#0.2217	0.2481	0.2460	0.2459	0.2498	0.2389	0.2364	0.2410	4	AVG #
Dibromomethane	0.1397	0.1590	0.1612	0.1607	0.1620	0.1575	0.1548	0.1564	5	AVG
1,4-Dioxane	0.0571	0.0834	0.0869	0.0598	0.0678	0.0852	0.0726	0.0733	17	AVG
Methyl Methacrylate	0.2610	0.2693	0.2764	0.2767	0.2800	0.2772	0.2697	0.2729	2	AVG
Bromodichloromethane	#0.2547	0.2857	0.2894	0.2912	0.2960	0.2882	0.2831	0.2840	5	AVG #
2-Nitropropane	0.1345	0.1467	0.1449	0.1429	0.1351	0.1375	0.1261	0.1382	5	AVG
2-Chloroethyl Vinyl Ether	0.2058	0.2213	0.2239	0.2259	0.2275	0.2201	0.2189	0.2205	3	AVG
cis-1,3-Dichloropropene	#0.3327	0.3733	0.3848	0.3842	0.3962	0.3815	0.3761	0.3755	5	AVG #
4-Methyl-2-pentanone	#0.5211	0.5424	0.5670	0.5620	0.5206	0.5221	0.4742	0.5299	6	AVG #
Toluene	#0.7051	0.7790	0.7786	0.7536	0.7613	0.7247	0.6937	0.7423	5	AVG #
trans-1,3-Dichloropropene	#0.3755	0.4278	0.4471	0.4489	0.4646	0.4547	0.4386	0.4367	7	AVG #
Ethyl Methacrylate	0.5214	0.5431	0.5639	0.5646	0.5703	0.5557	0.5233	0.5489	4	AVG
1,1,2-Trichloroethane	#0.2850	0.2887	0.3012	0.2982	0.2981	0.2845	0.2751	0.2901	3	AVG #
Tetrachloroethene	#0.2896	0.3331	0.3386	0.3318	0.3367	0.3209	0.3158	0.3238	5	AVG #
1,3-Dichloropropane	0.4648	0.5040	0.5004	0.4911	0.4910	0.4743	0.4456	0.4816	4	AVG
2-Hexanone	#0.5219	0.5394	0.5823	0.5598	0.5189	0.5162	0.4593	0.5282	7	AVG #
Dibromochloromethane	#0.2709	0.2916	0.3128	0.3135	0.3239	0.3218	0.3143	0.3070	6	AVG #
1,2-Dibromoethane	#0.3006	0.3234	0.3303	0.3285	0.3321	0.3204	0.3066	0.3203	4	AVG #
Chlorobenzene	#0.7677	0.8826	0.8817	0.8589	0.8620	0.8265	0.7932	0.8389	5	AVG #
1,1,1,2-Tetrachloroethane	0.2365	0.2790	0.2896	0.2918	0.3011	0.2904	0.2941	0.2832	8	AVG
Ethylbenzene	#1.2807	1.4990	1.5029	1.4668	1.4787	1.4116	1.3405	1.4257	6	AVG #
m+p-Xylene	#0.5027	0.5841	0.5973	0.5829	0.5918	0.5690	0.5516	0.5685	6	AVG #
o-Xylene	#0.5182	0.5793	0.5857	0.5763	0.5833	0.5604	0.5521	0.5651	4	AVG #
Styrene	#0.7963	0.9410	0.9703	0.9755	0.9939	0.9678	0.9367	0.9402	7	AVG #
Bromoform	#0.2005	0.2172	0.2369	0.2469	0.2624	0.2637	0.2656	0.2419	10	AVG #
Isopropylbenzene	#1.2737	1.4521	1.4912	1.4687	1.4823	1.4055	1.3218	1.4136	6	AVG #
Cyclohexanone	0.2594	0.3065	0.3380	0.2494	0.2827	0.3165	0.2965	0.2927	11	AVG
Bromobenzene	0.6436	0.6992	0.7167	0.7067	0.7005	0.6986	0.7324	0.6997	4	AVG
1,1,2,2-Tetrachloroethane	#0.8794	0.9346	0.9478	0.9461	0.9322	0.9252	0.8848	0.9214	3	AVG #
1,2,3-Trichloropropane	0.2722	0.2857	0.2952	0.2772	0.2770	0.2755	0.2676	0.2786	3	AVG
trans-1,4-Dichloro-2-butene	0.2802	0.3028	0.3176	0.3203	0.3105	0.3078	0.2811	0.3029	5	AVG
n-Propylbenzene	2.8469	3.1895	3.1794	3.1221	3.0671	2.9455	2.7131	3.0091	6	AVG
2-Chlorotoluene	0.5874	0.6366	0.6634	0.6426	0.6348	0.6229	0.6113	0.6284	4	AVG
4-Chlorotoluene	0.6188	0.6722	0.6740	0.6679	0.6597	0.6515	0.6412	0.6550	3	AVG
1,3,5-Trimethylbenzene	1.9963	2.2416	2.2771	2.2534	2.2357	2.1754	2.0642	2.1777	5	AVG
tert-Butylbenzene	0.4138	0.4621	0.4630	0.4619	0.4630	0.4674	0.4689	0.4572	4	AVG
Pentachloroethane	0.3633	0.3826	0.4080	0.4228	0.4225	0.4418	0.4769	0.4168	9	AVG
1,2,4-Trimethylbenzene	2.0554	2.3038	2.3660	2.3535	2.3451	2.2891	2.2028	2.2737	5	AVG
sec-Butylbenzene	2.4610	2.9115	2.9154	2.8968	2.8858	2.7989	2.6044	2.7820	6	AVG
1,3-Dichlorobenzene	#1.2294	1.3133	1.3351	1.3284	1.3306	1.3206	1.3224	1.3114	3	AVG #
p-Isopropyltoluene	2.1397	2.4650	2.5393	2.5467	2.5420	2.4979	2.4004	2.4473	6	AVG
1,4-Dichlorobenzene	#1.2354	1.3723	1.3874	1.3654	1.3565	1.3407	1.3470	1.3435	4	AVG #
1,2,3-Trimethylbenzene	2.2706	2.4574	2.5566	2.4975	2.4835	2.4533	2.3710	2.4414	4	AVG
Benzyl Chloride	1.5313	1.6782	1.8069	1.9041	1.9732	1.9980	1.9002	1.8274	9	AVG
1,3-Diethylbenzene	1.3338	1.5517	1.6009	1.5797	1.5572	1.5541	1.5303	1.5297	6	AVG
1,4-Diethylbenzene	1.4420	1.6197	1.7010	1.6759	1.6617	1.6614	1.6425	1.6292	5	AVG
1,2-Dichlorobenzene	#1.2076	1.2902	1.3097	1.2938	1.3037	1.2748	1.2653	1.2779	3	AVG #
n-Butylbenzene	1.1355	1.2986	1.3007	1.2855	1.2894	1.2570	1.2089	1.2537	5	AVG
1,2-Diethylbenzene	1.1427	1.2967	1.3440	1.3191	1.3059	1.3063	1.3124	1.2896	5	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 Calibration Date(s): 04/23/19 04/23/19

Heated Purge: (Y/N) Y Calibration Times: 14:57 17:14

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = 4a23i01.d RRF 4 = 4a23i02.d RRF 10= 4a23i03.d
RRF 20= 4a23i04.d RRF 50= 4a23i05.d RRF100= 4a23i06.d RRF300= 4a23i07.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
1,2-Dibromo-3-chloropropane#	0.2549	0.2354	0.2434	0.2510	0.2424	0.2465	0.2280	0.2431	4	AVG #
1,3,5-Trichlorobenzene	0.9398	0.9667	0.9783	0.9779	0.9747	0.9548	0.9520	0.9635	2	AVG
1,2,4-Trichlorobenzene #	0.9302	0.9255	0.9228	0.9132	0.9071	0.9007	0.8905	0.9128	2	AVG #
Hexachlorobutadiene	0.4929	0.4116	0.4079	0.4127	0.4069	0.4065	0.4144	0.4218	7	AVG
Naphthalene	3.0700	3.1681	3.2507	3.3121	3.2475	3.2113	2.8788	3.1627	5	AVG
1,2,3-Trichlorobenzene	0.8664	0.8820	0.8928	0.8820	0.8796	0.8757	0.8602	0.8770	1	AVG
2-Methylnaphthalene	1.8121	1.8709	2.0081	2.0258	2.0370	2.0913	2.0011	1.9780	5	AVG
Dibromofluoromethane	0.2449	0.2473	0.2436	0.2473	0.2467	0.2490	0.2465	0.2465	1	AVG
Dibromofluoromethane(2)	0.2505	0.2524	0.2500	0.2536	0.2532	0.2535	0.2532	0.2524	1	AVG
1,2-Dichloroethane-d4	0.0592	0.0603	0.0594	0.0626	0.0590	0.0608	0.0603	0.0602	2	AVG
1,2-Dichloroethane-d4(2)	0.2921	0.2974	0.2927	0.3011	0.2871	0.2899	0.2794	0.2914	2	AVG
1,2-Dichloroethane-d4(3)	0.0372	0.0389	0.0375	0.0392	0.0386	0.0391	0.0386	0.0384	2	AVG
Toluene-d8	1.3037	1.2987	1.2995	1.2961	1.2908	1.2654	1.2287	1.2833	2	AVG
Toluene-d8(2)	0.8413	0.8391	0.8471	0.8340	0.8397	0.8255	0.8041	0.8330	2	AVG
4-Bromofluorobenzene	0.4849	0.4948	0.4951	0.4965	0.4943	0.4885	0.4698	0.4891	2	AVG
4-Bromofluorobenzene(2)	0.4271	0.4339	0.4368	0.4368	0.4388	0.4316	0.4181	0.4319	2	AVG

Average %RSD 6

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP23297.i/19apr23i.b/4a23i01.d	VSTD001
/chem/HP23297.i/19apr23i.b/4a23i02.d	VSTD004
/chem/HP23297.i/19apr23i.b/4a23i03.d	VSTD010
/chem/HP23297.i/19apr23i.b/4a23i04.d	VSTD020
/chem/HP23297.i/19apr23i.b/4a23i05.d	VSTD050
/chem/HP23297.i/19apr23i.b/4a23i06.d	VSTD100
/chem/HP23297.i/19apr23i.b/4a23i07.d	VSTD300

Area Summary

File ID:

Internal Standard Name	4a23i01.d	4a23i02.d	4a23i03.d	4a23i04.d	4a23i05.d	4a23i06.d	4a23i07.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	443119	444616	425898	424635	399880	478539	387659	429192	7	Yes
Fluorobenzene	1140514	1107948	1094665	1136829	1115257	1169857	1215570	1140091	4	Yes
Chlorobenzene-d5	904161	883788	864912	909723	896314	947309	1005411	915945	5	Yes
1,4-Dichlorobenzene-d4	489109	497310	484581	508580	508818	529436	563820	511665	5	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	4a23i01.d	4a23i02.d	4a23i03.d	4a23i04.d	4a23i05.d	4a23i06.d	4a23i07.d	Avg. RT
t-Butyl alcohol-d10	4.374	4.374	4.374	4.367	4.380	4.367	4.373	4.373
Fluorobenzene	7.866	7.872	7.866	7.866	7.872	7.872	7.871	7.869
Chlorobenzene-d5	11.309	11.309	11.309	11.309	11.309	11.309	11.309	11.309
1,4-Dichlorobenzene-d4	13.189	13.189	13.189	13.189	13.189	13.189	13.188	13.189

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 04/24/2019 at 14:29.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 ICV Date: 04/23/19 Time: 18:00

Lab File ID: 4a23v01.d Init. Calib. Date(s): 04/23/19 04/23/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3813	0.3057	16.04	20	-20	#
# Chloromethane	0.3693	0.3563	19.30	20	-4	#
1,3-Butadiene	0.2002	0.2511	25.08	20	25	
# Vinyl Chloride	0.3610	0.3524	19.52	20	-2	#
# Bromomethane	0.2962	0.2584	17.45	20	-13	#
# Chloroethane	0.1994	0.1842	18.48	20	-8	#
Dichlorofluoromethane	0.4680	0.4592	19.62	20	-2	
n-Pentane	0.3537	0.4087	23.11	20	16	
# Trichlorofluoromethane	0.4378	0.3962	18.10	20	-9	#
Ethanol	0.0842	0.0918	545.20	500	9	
Freon 123a	0.2519	0.2578	20.47	20	2	
Acrolein	1.4175	1.0420	110.27	150	-26	
# 1,1-Dichloroethene	0.1744	0.2021	23.18	20	16	#
# Acetone	0.6961	0.5898	127.10	150	-15	#
# Freon 113	0.1919	0.2038	21.24	20	6	#
2-Propanol	0.5593	0.5516	147.94	150	-1	
Methyl Iodide	0.3475	0.3802	21.88	20	9	
# Carbon Disulfide	0.6219	0.7086	22.79	20	14	#
Allyl Chloride	0.3867	0.3720	19.24	20	-4	
# Methyl Acetate	0.3632	0.3527	19.42	20	-3	#
# Methylene Chloride	0.2209	0.2377	21.52	20	8	#
t-Butyl alcohol	0.9838	0.9503	193.18	200	-3	
Acrylonitrile	0.1903	0.1711	89.90	100	-10	
# trans-1,2-Dichloroethene	0.2084	0.2148	20.62	20	3	#
# Methyl Tertiary Butyl Ether	0.6229	0.6378	20.48	20	2	#
n-Hexane	0.3441	0.3503	20.36	20	2	
# 1,1-Dichloroethane	0.3872	0.4106	21.21	20	6	#
di-Isopropyl ether	0.7675	0.7938	20.69	20	3	
2-Chloro-1,3-butadiene	0.3506	0.3620	20.65	20	3	
Ethyl t-butyl ether	0.6592	0.6685	20.28	20	1	
# cis-1,2-Dichloroethene	0.2403	0.2828	23.55	20	18	#
# 2-Butanone	0.2953	0.2626	133.38	150	-11	#
2,2-Dichloropropane	0.3036	0.3264	21.50	20	7	
Propionitrile	1.0450	0.9918	142.37	150	-5	
Methacrylonitrile	0.1795	0.1772	148.06	150	-1	
Bromochloromethane	0.1327	0.1319	19.88	20	-1	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 ICV Date: 04/23/19 Time: 18:00

Lab File ID: 4a23v01.d Init. Calib. Date(s): 04/23/19 04/23/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
	COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
	Tetrahydrofuran	1.0315	0.8723	84.57	100	-15	
#	Chloroform	0.3814	0.3980	20.87	20	4	#
#	1,1,1-Trichloroethane	0.3193	0.3411	21.37	20	7	#
#	Cyclohexane	0.4152	0.4130	19.89	20	-1	#
	1,1-Dichloropropene	0.3016	0.3169	21.01	20	5	
#	Carbon Tetrachloride	0.2774	0.2892	20.85	20	4	#
	Isobutyl Alcohol	0.3464	0.3290	474.83	500	-5	
#	Benzene	0.9173	0.9615	20.96	20	5	#
#	1,2-Dichloroethane	0.3109	0.3251	20.92	20	5	#
	t-Amyl methyl ether	0.6666	0.6900	20.70	20	4	
	n-Heptane	0.4051	0.3964	19.57	20	-2	
	n-Butanol	0.2845	0.2776	975.76	1000	-2	
#	Trichloroethene	0.2327	0.2430	20.89	20	4	#
#	Methylcyclohexane	0.4382	0.4332	19.77	20	-1	#
#	1,2-Dichloropropane	0.2410	0.2559	21.24	20	6	#
	Dibromomethane	0.1564	0.1625	20.78	20	4	
	1,4-Dioxane	0.0733	0.0814	555.81	500	11	
	Methyl Methacrylate	0.2729	0.2625	19.24	20	-4	
#	Bromodichloromethane	0.2840	0.2952	20.79	20	4	#
	2-Nitropropane	0.1382	0.1161	16.80	20	-16	
	2-Chloroethyl Vinyl Ether	0.2205	0.2314	20.99	20	5	
#	cis-1,3-Dichloropropene	0.3755	0.3946	21.02	20	5	#
#	4-Methyl-2-pentanone	0.5299	0.4805	90.67	100	-9	#
#	Toluene	0.7423	0.7698	20.74	20	4	#
#	trans-1,3-Dichloropropene	0.4367	0.4361	19.97	20	0	#
	Ethyl Methacrylate	0.5489	0.5291	19.28	20	-4	
#	1,1,2-Trichloroethane	0.2901	0.3078	21.22	20	6	#
#	Tetrachloroethene	0.3238	0.3403	21.02	20	5	#
	1,3-Dichloropropane	0.4816	0.4904	20.36	20	2	
#	2-Hexanone	0.5282	0.4819	91.23	100	-9	#
#	Dibromochloromethane	0.3070	0.3186	20.76	20	4	#
#	1,2-Dibromoethane	0.3203	0.3306	20.65	20	3	#
#	Chlorobenzene	0.8389	0.8648	20.62	20	3	#
	1,1,1,2-Tetrachloroethane	0.2832	0.2927	20.67	20	3	
#	Ethylbenzene	1.4257	1.4706	20.63	20	3	#
#	m+p-Xylene	0.5685	0.5925	41.69	40	4	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 ICV Date: 04/23/19 Time: 18:00

Lab File ID: 4a23v01.d Init. Calib. Date(s): 04/23/19 04/23/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	o-Xylene	0.5651	0.5765	20.40	20	2	#
#	Styrene	0.9402	0.9869	20.99	20	5	#
#	Bromoform	0.2419	0.2390	19.76	20	-1	#
#	Isopropylbenzene	1.4136	1.4785	20.92	20	5	#
	Cyclohexanone	0.2927	0.3201	546.72	500	9	
	Bromobenzene	0.6997	0.7061	20.18	20	1	
#	1,1,2,2-Tetrachloroethane	0.9214	0.9427	20.46	20	2	#
	1,2,3-Trichloropropane	0.2786	0.2873	20.62	20	3	
	trans-1,4-Dichloro-2-butene	0.3029	0.3121	103.02	100	3	
	n-Propylbenzene	3.0091	3.1679	21.06	20	5	
	2-Chlorotoluene	0.6284	0.6439	20.49	20	2	
	4-Chlorotoluene	0.6550	0.6790	20.73	20	4	
	1,3,5-Trimethylbenzene	2.1777	2.2607	20.76	20	4	
	tert-Butylbenzene	0.4572	0.4631	20.26	20	1	
	Pentachloroethane	0.4168	0.4074	19.55	20	-2	
	1,2,4-Trimethylbenzene	2.2737	2.3364	20.55	20	3	
	sec-Butylbenzene	2.7820	2.9246	21.03	20	5	
#	1,3-Dichlorobenzene	1.3114	1.3172	20.09	20	0	#
	p-Isopropyltoluene	2.4473	2.5479	20.82	20	4	
#	1,4-Dichlorobenzene	1.3435	1.3795	20.54	20	3	#
	1,2,3-Trimethylbenzene	2.4414	2.5153	20.61	20	3	
	Benzyl Chloride	1.8274	1.8193	19.91	20	0	
	1,3-Diethylbenzene	1.5297	1.5532	20.31	20	2	
	1,4-Diethylbenzene	1.6292	1.6187	19.87	20	-1	
#	1,2-Dichlorobenzene	1.2779	1.3085	20.48	20	2	#
	n-Butylbenzene	1.2537	1.2811	20.44	20	2	
	1,2-Diethylbenzene	1.2896	1.3235	20.53	20	3	
#	1,2-Dibromo-3-chloropropane	0.2431	0.2474	20.36	20	2	#
	1,3,5-Trichlorobenzene	0.9635	0.9873	20.50	20	2	
#	1,2,4-Trichlorobenzene	0.9128	0.9361	20.51	20	3	#
	Hexachlorobutadiene	0.4218	0.4586	21.74	20	9	
	Naphthalene	3.1627	3.2815	20.75	20	4	
	1,2,3-Trichlorobenzene	0.8770	0.9033	20.60	20	3	
	2-Methylnaphthalene	1.9780	2.1348	21.59	20	8	

Average %Drift 5

Compounds with required minimum RRF.
Maximum % Drift = 30 %

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Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem/HP23297.i/19apr23i.b/4a23i01.d
/chem/HP23297.i/19apr23i.b/4a23i02.d
/chem/HP23297.i/19apr23i.b/4a23i03.d
/chem/HP23297.i/19apr23i.b/4a23i04.d
/chem/HP23297.i/19apr23i.b/4a23i05.d
/chem/HP23297.i/19apr23i.b/4a23i06.d
/chem/HP23297.i/19apr23i.b/4a23i07.d

File /chem/HP23297.i/19apr23i.b/4a23i05.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem/HP23297.i/19may30b.b/4y30c05.d

RT Summary

Internal Standard Name	File ID: 4y30c05.d	ICAL RT	In Spec
t-Butyl alcohol-d10	4.373	4.380	Yes
Fluorobenzene	7.872	7.872	Yes
Chlorobenzene-d5	11.309	11.309	Yes
1,4-Dichlorobenzene-d4	13.189	13.189	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: 4y30c05.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	397362	399880	199940	799760	Yes
Fluorobenzene	1127477	1115257	557628	2230514	Yes
Chlorobenzene-d5	909041	896314	448157	1792628	Yes
1,4-Dichlorobenzene-d4	501801	508818	254409	1017636	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 05/30/2019 at 20:20

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 Calibration Date: 05/30/19 Time: 19:12

Lab File ID: 4y30c05.d Init. Calib. Date(s): 04/23/19 04/23/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Dichlorodifluoromethane	0.3813	0.3203	42.01	50	-16	#
#	Chloromethane	0.3693	0.3018	40.86	50	-18	#
	1,3-Butadiene	0.2002	0.2978	74.36	50	49	<-
#	Vinyl Chloride	0.3610	0.2942	40.74	50	-19	#
#	Bromomethane	0.2962	0.2445	41.27	50	-17	#
#	Chloroethane	0.1994	0.1673	41.95	50	-16	#
	n-Pentane	0.3537	0.3954	55.89	50	12	
#	Trichlorofluoromethane	0.4378	0.3444	39.34	50	-21	#<-
	Ethanol	0.0842	0.0802	1190.64	1250	-5	
	Freon 123a	0.2519	0.2419	48.02	50	-4	
	Acrolein	1.4175	1.3477	475.38	500	-5	
#	1,1-Dichloroethene	0.1744	0.1858	53.28	50	7	#
#	1,1-Dichloroethene(2)	0.0921	0.0909	49.34	50	-1	#<-
#	Acetone	0.6961	0.6943	99.75	100	0	#
#	Freon 113	0.1919	0.1881	49.01	50	-2	#
	2-Propanol	0.5593	0.5394	241.07	250	-4	
	Methyl Iodide	0.3475	0.3785	54.46	50	9	
#	Carbon Disulfide	0.6219	0.6942	55.81	50	12	#
	Allyl Chloride	0.3867	0.3502	45.28	50	-9	
#	Methyl Acetate	0.3632	0.3381	46.55	50	-7	#
#	Methylene Chloride	0.2209	0.2206	49.94	50	0	#
	t-Butyl alcohol	0.9838	0.8731	221.87	250	-11	
	Acrylonitrile	0.1903	0.1765	46.39	50	-7	
#	trans-1,2-Dichloroethene	0.2084	0.2145	51.48	50	3	#
#	Methyl Tertiary Butyl Ether	0.6229	0.5724	45.95	50	-8	#
	n-Hexane	0.3441	0.3379	49.09	50	-2	
#	1,1-Dichloroethane	0.3872	0.3799	49.05	50	-2	#
	di-Isopropyl ether	0.7675	0.7253	47.25	50	-5	
	2-Chloro-1,3-butadiene	0.3506	0.3273	46.68	50	-7	
	Ethyl t-butyl ether	0.6592	0.5880	44.60	50	-11	
#	cis-1,2-Dichloroethene	0.2403	0.2419	50.33	50	1	#
#	2-Butanone	0.2953	0.2484	84.10	100	-16	#
	2,2-Dichloropropane	0.3036	0.2528	41.63	50	-17	
	Propionitrile	1.0450	1.0850	259.59	250	4	
	Methacrylonitrile	0.1795	0.1736	120.87	125	-3	
	Bromochloromethane	0.1327	0.1348	50.81	50	2	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 Calibration Date: 05/30/19 Time: 19:12

Lab File ID: 4y30c05.d Init. Calib. Date(s): 04/23/19 04/23/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Tetrahydrofuran	1.0315	0.9803	95.04	100	-5	
#	Chloroform	0.3814	0.3540	46.40	50	-7	#
#	1,1,1-Trichloroethane	0.3193	0.2804	43.92	50	-12	#
#	Cyclohexane	0.4152	0.3806	45.84	50	-8	#
#	Cyclohexane(2)	0.3391	0.3150	46.45	50	-7	#
#	Cyclohexane(3)	0.1241	0.1155	46.53	50	-7	#
	1,1-Dichloropropene	0.3016	0.2921	48.42	50	-3	
#	Carbon Tetrachloride	0.2774	0.2426	43.73	50	-13	#
	Isobutyl Alcohol	0.3464	0.3310	597.15	625	-4	
#	Benzene	0.9173	0.8995	49.03	50	-2	#
#	1,2-Dichloroethane	0.3109	0.2599	41.80	50	-16	#
#	1,2-Dichloroethane(2)	0.0257	0.0265	51.62	50	3	#<-
	t-Amyl methyl ether	0.6666	0.5830	43.73	50	-13	
	n-Heptane	0.4051	0.3619	44.66	50	-11	
	n-Butanol	0.2845	0.2864	1258.36	1250	1	
#	Trichloroethene	0.2327	0.2255	48.47	50	-3	#
#	Methylcyclohexane	0.4382	0.4040	46.10	50	-8	#
#	Methylcyclohexane(2)	0.1897	0.1759	46.36	50	-7	#
#	1,2-Dichloropropane	0.2410	0.2321	48.15	50	-4	#
	Dibromomethane	0.1564	0.1466	46.87	50	-6	
	1,4-Dioxane	0.0733	0.0841	717.38	625	15	
	Methyl Methacrylate	0.2729	0.2538	46.50	50	-7	
#	Bromodichloromethane	0.2840	0.2542	44.74	50	-11	#
	2-Nitropropane	0.1382	0.1019	73.68	100	-26	<-
	2-Chloroethyl Vinyl Ether	0.2205	0.2070	46.95	50	-6	
#	cis-1,3-Dichloropropene	0.3755	0.3426	45.61	50	-9	#
#	4-Methyl-2-pentanone	0.5299	0.4507	85.05	100	-15	#
#	Toluene	0.7423	0.7115	47.93	50	-4	#
#	trans-1,3-Dichloropropene	0.4367	0.3828	43.83	50	-12	#
	Ethyl Methacrylate	0.5489	0.5039	45.90	50	-8	
#	1,1,2-Trichloroethane	0.2901	0.2768	47.70	50	-5	#
#	Tetrachloroethene	0.3238	0.3118	48.15	50	-4	#
	1,3-Dichloropropane	0.4816	0.4535	47.09	50	-6	
#	2-Hexanone	0.5282	0.4468	84.58	100	-15	#
#	Dibromochloromethane	0.3070	0.2724	44.36	50	-11	#
#	1,2-Dibromoethane	0.3203	0.3054	47.68	50	-5	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 Calibration Date: 05/30/19 Time: 19:12

Lab File ID: 4y30c05.d Init. Calib. Date(s): 04/23/19 04/23/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Chlorobenzene	0.8389	0.8032	47.87	50	-4	#
	1,1,1,2-Tetrachloroethane	0.2832	0.2580	45.55	50	-9	
#	Ethylbenzene	1.4257	1.3358	46.84	50	-6	#
#	m+p-Xylene	0.5685	0.5440	95.69	100	-4	#
#	o-Xylene	0.5651	0.5295	46.86	50	-6	#
#	Styrene	0.9402	0.8923	47.45	50	-5	#
#	Bromoform	0.2419	0.2028	41.91	50	-16	#
#	Isopropylbenzene	1.4136	1.3273	46.95	50	-6	#
	Cyclohexanone	0.2927	0.2956	631.26	625	1	
	Bromobenzene	0.6997	0.6606	47.21	50	-6	
#	1,1,2,2-Tetrachloroethane	0.9214	0.8871	48.14	50	-4	#
	1,2,3-Trichloropropane	0.2786	0.2565	46.03	50	-8	
	trans-1,4-Dichloro-2-butene	0.3029	0.1912	78.92	125	-37	<-
	n-Propylbenzene	3.0091	2.8760	47.79	50	-4	
	2-Chlorotoluene	0.6284	0.6022	47.92	50	-4	
	4-Chlorotoluene	0.6550	0.6296	48.06	50	-4	
	1,3,5-Trimethylbenzene	2.1777	2.0331	46.68	50	-7	
	tert-Butylbenzene	0.4572	0.4359	47.67	50	-5	
	Pentachloroethane	0.4168	0.3972	47.64	50	-5	
	1,2,4-Trimethylbenzene	2.2737	2.1695	47.71	50	-5	
	sec-Butylbenzene	2.7820	2.6529	47.68	50	-5	
#	1,3-Dichlorobenzene	1.3114	1.2409	47.31	50	-5	#
	p-Isopropyltoluene	2.4473	2.2784	46.55	50	-7	
#	1,4-Dichlorobenzene	1.3435	1.2741	47.42	50	-5	#
	1,2,3-Trimethylbenzene	2.4414	2.2759	46.61	50	-7	
	Benzyl Chloride	1.8274	1.6642	45.53	50	-9	
	1,3-Diethylbenzene	1.5297	1.4719	48.11	50	-4	
	1,4-Diethylbenzene	1.6292	1.5493	47.55	50	-5	
#	1,2-Dichlorobenzene	1.2779	1.2051	47.15	50	-6	#
	n-Butylbenzene	1.2537	1.1622	46.35	50	-7	
	1,2-Diethylbenzene	1.2896	1.2393	48.05	50	-4	
#	1,2-Dibromo-3-chloropropane	0.2431	0.2008	41.30	50	-17	#
	1,3,5-Trichlorobenzene	0.9635	0.8947	46.43	50	-7	
#	1,2,4-Trichlorobenzene	0.9128	0.8319	45.57	50	-9	#
	Hexachlorobutadiene	0.4218	0.3485	41.30	50	-17	
	Naphthalene	3.1627	2.9623	46.83	50	-6	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 Calibration Date: 05/30/19 Time: 19:12

Lab File ID: 4y30c05.d Init. Calib. Date(s): 04/23/19 04/23/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,2,3-Trichlorobenzene	0.8770	0.8062	45.97	50	-8
2-Methylnaphthalene	1.9780	1.7688	44.71	50	-11
Dibromofluoromethane	0.2465	0.2431	49.32	50	-1
Dibromofluoromethane(2)	0.2524	0.2477	49.08	50	-2
1,2-Dichloroethane-d4	0.0602	0.0614	51.00	50	2
1,2-Dichloroethane-d4(2)	0.2914	0.2602	44.64	50	-11
1,2-Dichloroethane-d4(3)	0.0384	0.0390	50.72	50	1
Toluene-d8	1.2833	1.2724	49.58	50	-1
Toluene-d8(2)	0.8330	0.8303	49.84	50	0
4-Bromofluorobenzene	0.4891	0.4705	48.09	50	-4
4-Bromofluorobenzene(2)	0.4319	0.4332	50.15	50	0

Average %Drift 8

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem/HP23297.i/19apr23i.b/4a23i01.d
/chem/HP23297.i/19apr23i.b/4a23i02.d
/chem/HP23297.i/19apr23i.b/4a23i03.d
/chem/HP23297.i/19apr23i.b/4a23i04.d
/chem/HP23297.i/19apr23i.b/4a23i05.d
/chem/HP23297.i/19apr23i.b/4a23i06.d
/chem/HP23297.i/19apr23i.b/4a23i07.d

File /chem/HP23297.i/19apr23i.b/4a23i05.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem/HP23297.i/19may31a.b/4y31c01.d

RT Summary

Internal Standard Name	File ID: 4y31c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	4.374	4.380	Yes
Fluorobenzene	7.866	7.872	Yes
Chlorobenzene-d5	11.309	11.309	Yes
1,4-Dichlorobenzene-d4	13.189	13.189	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: 4y31c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	379338	399880	199940	799760	Yes
Fluorobenzene	1064093	1115257	557628	2230514	Yes
Chlorobenzene-d5	879724	896314	448157	1792628	Yes
1,4-Dichlorobenzene-d4	506936	508818	254409	1017636	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 05/31/2019 at 07:43

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 Calibration Date: 05/31/19 Time: 07:17

Lab File ID: 4y31c01.d Init. Calib. Date(s): 04/23/19 04/23/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3813	0.3812	49.99	50	0	#
# Chloromethane	0.3693	0.3192	43.22	50	-14	#
1,3-Butadiene	0.2002	0.3154	78.76	50	58	<-
# Vinyl Chloride	0.3610	0.3086	42.74	50	-15	#
# Bromomethane	0.2962	0.2575	43.46	50	-13	#
# Chloroethane	0.1994	0.1736	43.55	50	-13	#
n-Pentane	0.3537	0.4242	59.97	50	20	
# Trichlorofluoromethane	0.4378	0.3803	43.43	50	-13	#
Ethanol	0.0842	0.0878	1303.70	1250	4	
Freon 123a	0.2519	0.2500	49.62	50	-1	
Acrolein	1.4175	1.3486	475.69	500	-5	
# 1,1-Dichloroethene	0.1744	0.1889	54.17	50	8	#
# 1,1-Dichloroethene(2)	0.0921	0.0915	49.68	50	-1	#<-
# Acetone	0.6961	0.6807	97.78	100	-2	#
# Freon 113	0.1919	0.2049	53.40	50	7	#
2-Propanol	0.5593	0.5509	246.24	250	-2	
Methyl Iodide	0.3475	0.3817	54.93	50	10	
# Carbon Disulfide	0.6219	0.6951	55.89	50	12	#
Allyl Chloride	0.3867	0.3413	44.14	50	-12	
# Methyl Acetate	0.3632	0.3454	47.55	50	-5	#
# Methylene Chloride	0.2209	0.2253	51.00	50	2	#
t-Butyl alcohol	0.9838	0.8991	228.48	250	-9	
Acrylonitrile	0.1903	0.1789	47.02	50	-6	
# trans-1,2-Dichloroethene	0.2084	0.2170	52.08	50	4	#
# Methyl Tertiary Butyl Ether	0.6229	0.5889	47.27	50	-5	#
n-Hexane	0.3441	0.3599	52.29	50	5	
# 1,1-Dichloroethane	0.3872	0.3840	49.59	50	-1	#
di-Isopropyl ether	0.7675	0.7395	48.18	50	-4	
2-Chloro-1,3-butadiene	0.3506	0.3323	47.39	50	-5	
Ethyl t-butyl ether	0.6592	0.5985	45.39	50	-9	
# cis-1,2-Dichloroethene	0.2403	0.2434	50.66	50	1	#
# 2-Butanone	0.2953	0.2527	85.58	100	-14	#
2,2-Dichloropropane	0.3036	0.2591	42.66	50	-15	
Propionitrile	1.0450	1.1259	269.37	250	8	
Methacrylonitrile	0.1795	0.1792	124.83	125	0	
Bromochloromethane	0.1327	0.1357	51.13	50	2	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 Calibration Date: 05/31/19 Time: 07:17

Lab File ID: 4y31c01.d Init. Calib. Date(s): 04/23/19 04/23/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
Tetrahydrofuran	1.0315	0.9714	94.17	100	-6	
# Chloroform	0.3814	0.3611	47.34	50	-5	#
# 1,1,1-Trichloroethane	0.3193	0.2889	45.24	50	-10	#
# Cyclohexane	0.4152	0.4065	48.95	50	-2	#
# Cyclohexane(2)	0.3391	0.3345	49.32	50	-1	#
# Cyclohexane(3)	0.1241	0.1222	49.23	50	-2	#
1,1-Dichloropropene	0.3016	0.2948	48.87	50	-2	
# Carbon Tetrachloride	0.2774	0.2497	45.00	50	-10	#
Isobutyl Alcohol	0.3464	0.3475	626.96	625	0	
# Benzene	0.9173	0.9119	49.71	50	-1	#
# 1,2-Dichloroethane	0.3109	0.2758	44.36	50	-11	#
# 1,2-Dichloroethane(2)	0.0257	0.0276	53.75	50	7	#<-
t-Amyl methyl ether	0.6666	0.5974	44.81	50	-10	
n-Heptane	0.4051	0.3877	47.85	50	-4	
n-Butanol	0.2845	0.2944	1293.47	1250	3	
# Trichloroethene	0.2327	0.2286	49.13	50	-2	#
# Methylcyclohexane	0.4382	0.4209	48.03	50	-4	#
# Methylcyclohexane(2)	0.1897	0.1870	49.30	50	-1	#
# 1,2-Dichloropropane	0.2410	0.2382	49.41	50	-1	#
Dibromomethane	0.1564	0.1513	48.37	50	-3	
1,4-Dioxane	0.0733	0.0839	715.38	625	14	
Methyl Methacrylate	0.2729	0.2584	47.34	50	-5	
# Bromodichloromethane	0.2840	0.2594	45.66	50	-9	#
2-Nitropropane	0.1382	0.1065	77.04	100	-23	<-
2-Chloroethyl Vinyl Ether	0.2205	0.2067	46.88	50	-6	
# cis-1,3-Dichloropropene	0.3755	0.3470	46.20	50	-8	#
# 4-Methyl-2-pentanone	0.5299	0.4586	86.54	100	-13	#
# Toluene	0.7423	0.6998	47.14	50	-6	#
# trans-1,3-Dichloropropene	0.4367	0.3826	43.80	50	-12	#
Ethyl Methacrylate	0.5489	0.5025	45.78	50	-8	
# 1,1,2-Trichloroethane	0.2901	0.2776	47.84	50	-4	#
# Tetrachloroethene	0.3238	0.3062	47.29	50	-5	#
1,3-Dichloropropane	0.4816	0.4566	47.40	50	-5	
# 2-Hexanone	0.5282	0.4447	84.19	100	-16	#
# Dibromochloromethane	0.3070	0.2672	43.51	50	-13	#
# 1,2-Dibromoethane	0.3203	0.3066	47.86	50	-4	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 Calibration Date: 05/31/19 Time: 07:17

Lab File ID: 4y31c01.d Init. Calib. Date(s): 04/23/19 04/23/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Chlorobenzene	0.8389	0.8028	47.85	50	-4	#
1,1,1,2-Tetrachloroethane	0.2832	0.2591	45.75	50	-9	
# Ethylbenzene	1.4257	1.3246	46.45	50	-7	#
# m+p-Xylene	0.5685	0.5363	94.33	100	-6	#
# o-Xylene	0.5651	0.5248	46.43	50	-7	#
# Styrene	0.9402	0.8929	47.48	50	-5	#
# Bromoform	0.2419	0.1997	41.27	50	-17	#
# Isopropylbenzene	1.4136	1.3204	46.70	50	-7	#
Cyclohexanone	0.2927	0.3167	676.26	625	8	
Bromobenzene	0.6997	0.6341	45.31	50	-9	
# 1,1,2,2-Tetrachloroethane	0.9214	0.8481	46.02	50	-8	#
1,2,3-Trichloropropane	0.2786	0.2523	45.27	50	-9	
trans-1,4-Dichloro-2-butene	0.3029	0.1963	81.03	125	-35	<-
n-Propylbenzene	3.0091	2.7421	45.56	50	-9	
2-Chlorotoluene	0.6284	0.5758	45.81	50	-8	
4-Chlorotoluene	0.6550	0.5987	45.70	50	-9	
1,3,5-Trimethylbenzene	2.1777	1.9696	45.22	50	-10	
tert-Butylbenzene	0.4572	0.4184	45.76	50	-8	
Pentachloroethane	0.4168	0.3935	47.20	50	-6	
1,2,4-Trimethylbenzene	2.2737	2.0935	46.04	50	-8	
sec-Butylbenzene	2.7820	2.5856	46.47	50	-7	
# 1,3-Dichlorobenzene	1.3114	1.2059	45.98	50	-8	#
p-Isopropyltoluene	2.4473	2.2403	45.77	50	-8	
# 1,4-Dichlorobenzene	1.3435	1.2400	46.15	50	-8	#
1,2,3-Trimethylbenzene	2.4414	2.2386	45.85	50	-8	
Benzyl Chloride	1.8274	1.6212	44.36	50	-11	
1,3-Diethylbenzene	1.5297	1.4383	47.01	50	-6	
1,4-Diethylbenzene	1.6292	1.5237	46.76	50	-6	
# 1,2-Dichlorobenzene	1.2779	1.1672	45.67	50	-9	#
n-Butylbenzene	1.2537	1.1349	45.26	50	-9	
1,2-Diethylbenzene	1.2896	1.2131	47.03	50	-6	
# 1,2-Dibromo-3-chloropropane	0.2431	0.1928	39.66	50	-21	#<-
1,3,5-Trichlorobenzene	0.9635	0.8721	45.26	50	-9	
# 1,2,4-Trichlorobenzene	0.9128	0.8141	44.59	50	-11	#
Hexachlorobutadiene	0.4218	0.3528	41.81	50	-16	
Naphthalene	3.1627	2.8844	45.60	50	-9	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23297 Calibration Date: 05/31/19 Time: 07:17

Lab File ID: 4y31c01.d Init. Calib. Date(s): 04/23/19 04/23/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,2,3-Trichlorobenzene	0.8770	0.7887	44.97	50	-10
2-Methylnaphthalene	1.9780	1.7475	44.17	50	-12
Dibromofluoromethane	0.2465	0.2453	49.76	50	0
Dibromofluoromethane(2)	0.2524	0.2519	49.90	50	0
1,2-Dichloroethane-d4	0.0602	0.0619	51.40	50	3
1,2-Dichloroethane-d4(2)	0.2914	0.2699	46.32	50	-7
1,2-Dichloroethane-d4(3)	0.0384	0.0388	50.39	50	1
Toluene-d8	1.2833	1.2501	48.71	50	-3
Toluene-d8(2)	0.8330	0.8122	48.75	50	-2
4-Bromofluorobenzene	0.4891	0.4771	48.77	50	-2
4-Bromofluorobenzene(2)	0.4319	0.4404	50.98	50	2

Average %Drift 8

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): 4y30c05.d Date Analyzed: 05/30/19

Instrument ID: HP23297 Time Analyzed: 19:12

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	397362	4.373	1127477	7.872	909041	11.309	501801	13.188
UPPER LIMIT	794724	4.873	2254954	8.372	1818082	11.809	1003602	13.688
LOWER LIMIT	198681	3.873	563738	7.372	454520	10.809	250900	12.688
LAB SAMPLE ID								
01 LCS440	397505	4.380	1125670	7.866	909853	11.309	498265	13.189
02 MDL440 - MD	381585	4.368	1133098	7.866	900351	11.309	490657	13.189
03 VBLK440	347579	4.373	1084001	7.872	864307	11.309	472058	13.188
04 1064221	387380	4.373	1095096	7.865	883249	11.309	476758	13.188
05 1065034	345922	4.380	1081480	7.872	851056	11.309	457324	13.188
06 1063765	360648	4.380	1088019	7.872	874784	11.309	475921	13.189
07 1065030	329258	4.380	1092246	7.872	882495	11.309	472645	13.189
08 1065031MS	310002	4.374	1115898	7.866	898721	11.309	502810	13.189
09 1065032MSD	316840	4.380	1090593	7.872	881652	11.309	482243	13.189
10 1068734	359829	4.368	1091254	7.866	876428	11.309	475136	13.189
11 1068729	401114	4.367	1095039	7.865	890454	11.309	484988	13.189
12 1068730	380915	4.374	1067461	7.866	854795	11.309	468500	13.189
13 1068731	389026	4.380	1070006	7.865	866945	11.309	479403	13.188
14 1068732	793533	4.374	1092476	7.866	883732	11.309	479480	13.189
15 1068728	359301	4.380	1079520	7.872	855696	11.309	462364	13.189
16 1068728DL	361200	4.373	1054054	7.865	853791	11.309	458959	13.188
17 1065027	352943	4.368	1054107	7.866	852926	11.309	460435	13.189
18 1065028	330894	4.373	1051569	7.871	854838	11.309	461223	13.188
19 1065029	352829	4.373	1048953	7.865	852183	11.309	461249	13.188
20 1065033	258631	4.380	1036821	7.866	845162	11.309	454997	13.189
21 1063766	345832	4.380	1024798	7.872	824105	11.309	442403	13.189
22 1063767	355101	4.374	1067120	7.866	858242	11.309	465862	13.189

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): 4y30c05.d Date Analyzed: 05/30/19

Instrument ID: HP23297 Time Analyzed: 19:12

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA) AREA #	RT #	IS2(FBZ) AREA #	RT #	IS3(CBZ) AREA #	RT #	IS4(DCB) AREA #	RT #
12 HOUR STD	397362	4.373	1127477	7.872	909041	11.309	501801	13.188
UPPER LIMIT	794724	4.873	2254954	8.372	1818082	11.809	1003602	13.688
LOWER LIMIT	198681	3.873	563738	7.372	454520	10.809	250900	12.688
LAB SAMPLE ID								
23 1063768	354787	4.374	1061028	7.866	851033	11.309	456701	13.189
24 1063769	345729	4.374	1028402	7.866	836317	11.309	464212	13.189
25 1063770	343745	4.380	1020542	7.872	823487	11.309	451210	13.189
26 1068733	356380	4.367	1027124	7.866	832489	11.309	451457	13.189

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

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8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): 4y31c01.d Date Analyzed: 05/31/19

Instrument ID: HP23297 Time Analyzed: 07:17

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	379338	4.374	1064093	7.866	879724	11.309	506936	13.189
UPPER LIMIT	758676	4.874	2128186	8.366	1759448	11.809	1013872	13.689
LOWER LIMIT	189669	3.874	532046	7.366	439862	10.809	253468	12.689
LAB SAMPLE ID								
01 LCS441	381210	4.374	1064798	7.866	862482	11.309	472638	13.189
02 LCD441	388667	4.368	1099207	7.866	892768	11.309	483295	13.189
03 VSTD0.5	371495	4.367	1084479	7.866	875733	11.309	468759	13.189
04 VBLK441	361043	4.368	1040687	7.866	835897	11.309	456291	13.189
05 1063447	371882	4.373	1063180	7.872	861766	11.315	459891	13.188
06 1064027	347311	4.367	1033849	7.866	845936	11.309	459898	13.189
07 1064019	399017	4.386	1065765	7.872	871881	11.315	527602	13.188
08 1064020MS	433864	4.368	1150067	7.866	928413	11.309	514823	13.189
09 1064021MSD	464252	4.380	1167178	7.866	952314	11.309	531268	13.189
10 1064019DL	442622	4.368	1195938	7.866	976326	11.309	534849	13.189
11 1063963	413665	4.374	1179036	7.866	954336	11.309	513377	13.189
12 1063964	446841	4.367	1193911	7.865	964119	11.309	527987	13.188
13 1063965	420862	4.361	1187217	7.865	969242	11.309	528986	13.189
14 1063966	416638	4.380	1176266	7.872	952571	11.309	523610	13.189
15 1063967	427200	4.374	1179684	7.865	960930	11.309	529575	13.189
16 1063968	443648	4.380	1175787	7.872	958484	11.309	519381	13.188
17 1064010	441751	4.361	1186262	7.866	960206	11.309	536801	13.189
18 1064023	461761	4.374	1175385	7.866	956351	11.309	529897	13.189
19 1064025	410742	4.373	1163349	7.872	933634	11.309	507279	13.188
20 1064030	455089	4.374	1185569	7.866	958090	11.309	515660	13.189
21 1064033	434486	4.386	1184874	7.872	964669	11.309	525893	13.189
22 1067163	397248	4.368	1143912	7.866	927451	11.309	516637	13.189

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): 4y31c01.d Date Analyzed: 05/31/19

Instrument ID: HP23297 Time Analyzed: 07:17

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	379338	4.374	1064093	7.866	879724	11.309	506936	13.189
UPPER LIMIT	758676	4.874	2128186	8.366	1759448	11.809	1013872	13.689
LOWER LIMIT	189669	3.874	532046	7.366	439862	10.809	253468	12.689
LAB SAMPLE ID								
23 1067164	424678	4.380	1203842	7.866	973595	11.309	531223	13.189
24 1067165	444427	4.373	1199732	7.871	965906	11.309	521572	13.188
25 1067167	414603	4.367	1176098	7.865	951717	11.309	522319	13.188
26 1063771	431489	4.374	1194311	7.866	966160	11.309	514454	13.189
27 1063772	419295	4.374	1162091	7.866	945520	11.309	511494	13.189
28 1063773	426647	4.374	1193261	7.866	966774	11.309	527613	13.189
29 1064083	405209	4.368	1160302	7.866	933475	11.309	496419	13.189

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

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Sample Data

Volatiles by GC/MS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

94J01

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1063765

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may30b.b/4y30s44.d

Level: (low/med) LOW Date Received: 05/22/19

Moisture: not dec. _____ Date Analyzed: 05/30/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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94J01 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1063765

Data file: /chem/HP23297.i/19may30b.b/4y30s44.d Injection date and time: **30-MAY-2019 21:32**
Data file Sample Info. Line: 94J01;1063765;1;0;;JCV94;;;4y30b41; Instrument ID: **HP23297.i** Batch: **4191502AA**
Date, time and analyst ID of latest file update: 30-May-2019 21:49 Automation

Blank Data file reference: **/chem/HP23297.i/19may30b.b/4y30b41.d**

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 30-MAY-2019 19:29
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may30b.b/4y30c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.380	(-0.006)	460	65	360648	(-9)	250.00	
66) Fluorobenzene	7.872	(0.000)	1034	96	1088019	(-3)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	874784	(-4)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189	(0.000)	1908	152	475921	(-5)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977	(0.000)	113	263942	49.215	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.440	(0.000)	102	67216	51.293	103%		80 - 120
83) Toluene-d8	(3)	9.867	(0.000)	98	1113149	49.580	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.307	(0.000)	95	402966	47.088	94%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 05/30/2019 at 23:52. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP23297.i/19may30b.b/4y30s44.d Injection date and time: **30-MAY-2019 21:32**
Data file Sample Info. Line: 94J01;1063765;1;0;;JCV94;;;4y30b41; Instrument ID: **HP23297.i** Batch: **4191502AA**
Date, time and analyst ID of latest file update: 30-May-2019 21:49 Automation

Blank Data file reference: **/chem/HP23297.i/19may30b.b/4y30b41.d**

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 30-MAY-2019 19:29
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may30b.b/4y30c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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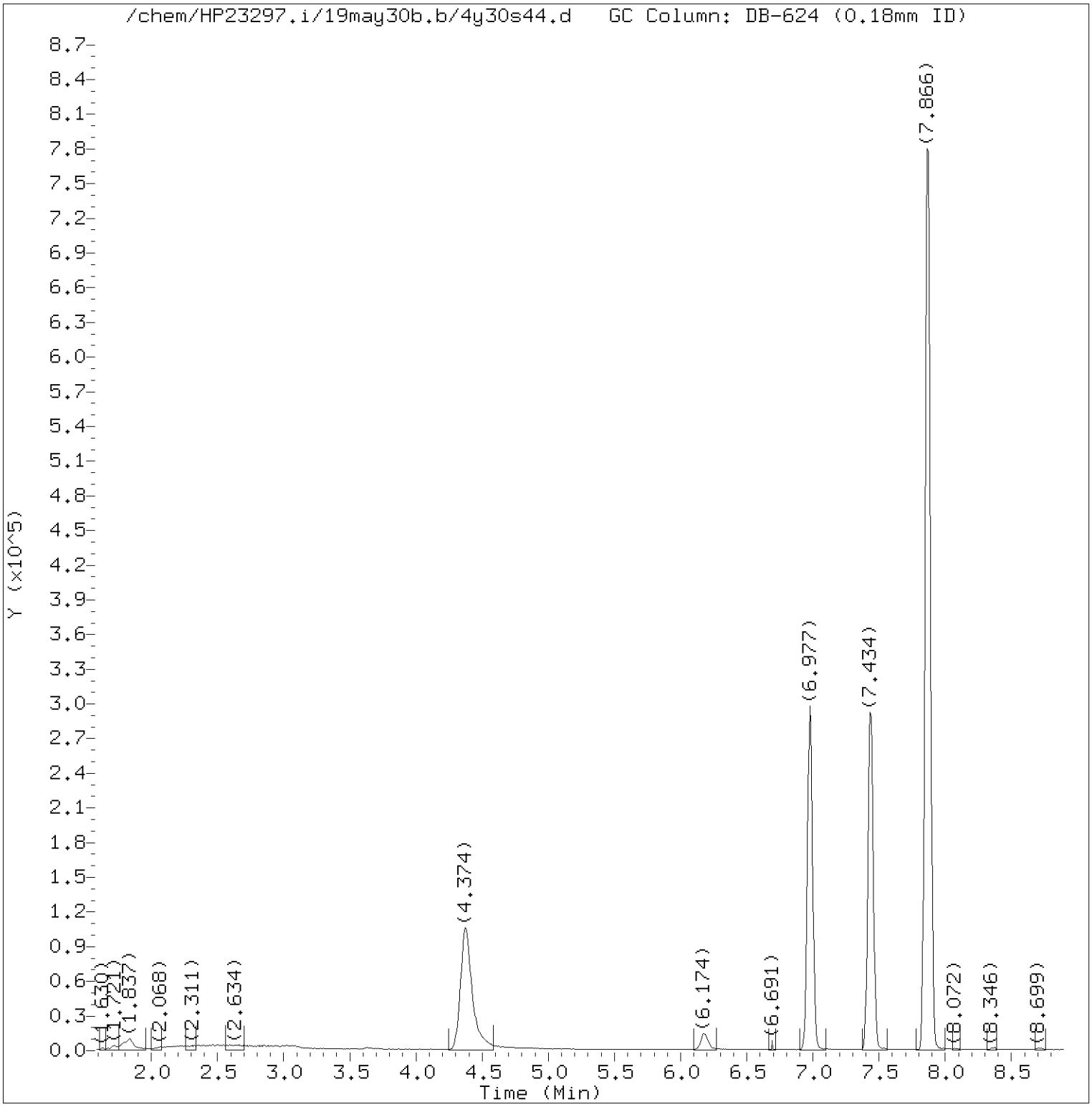
Total number of targets = 24

Digitally signed by Don V. Viray on 05/30/2019 at 23:52. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/31/2019 at 12:22. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

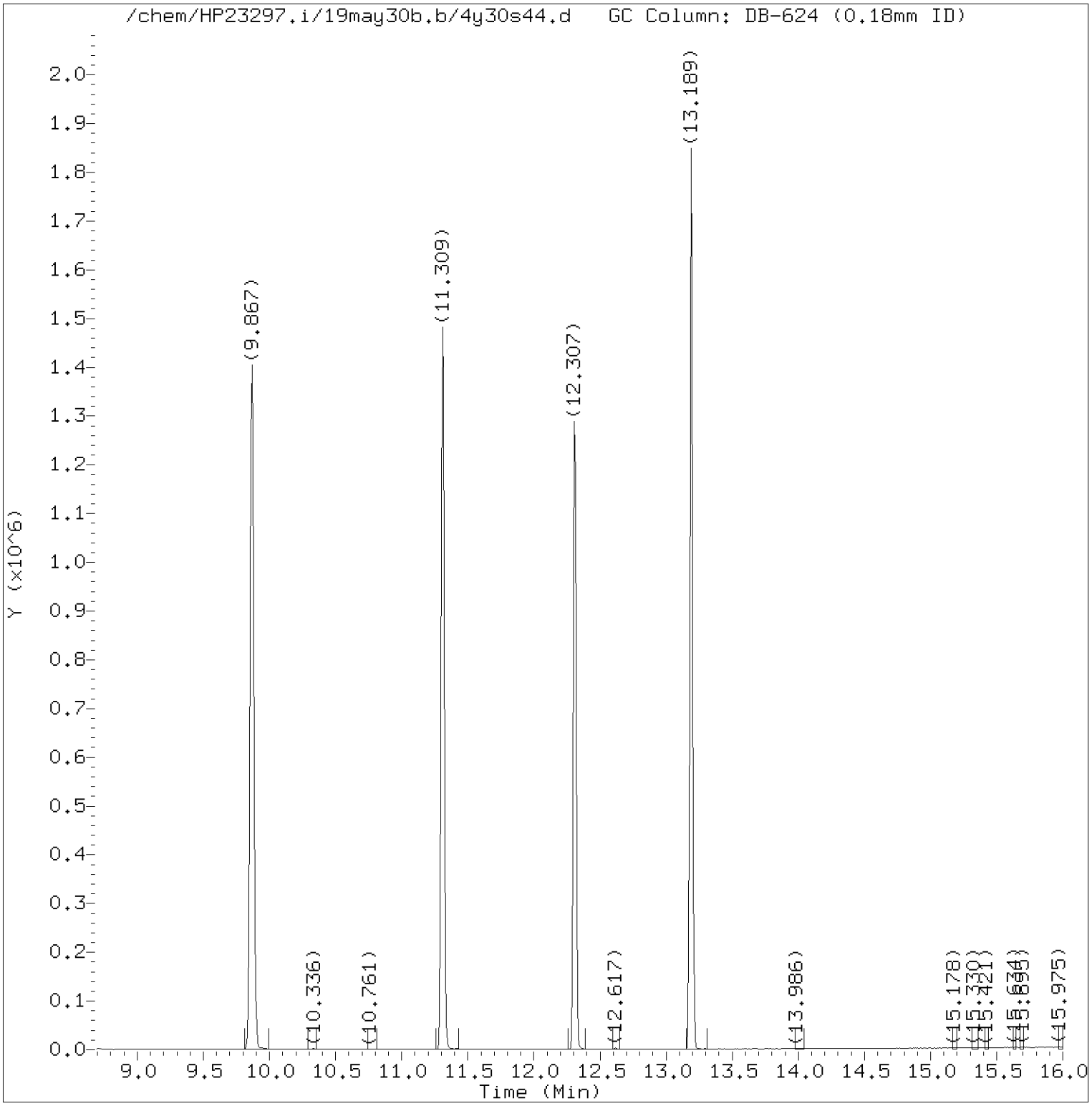
Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30s44.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 21:32 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 21:49 Automation

Sample Name: 94J01 Lab Sample ID: 1063765

Digitally signed by Don V. Viray
on 05/30/2019 at 23:52.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30s44.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 21:32 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 21:49 Automation

Sample Name: 94J01 Lab Sample ID: 1063765

Digitally signed by Don V. Viray
on 05/30/2019 at 23:52.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30s44.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 21:32 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 21:49 Automation

Sample Name: 94J01 Lab Sample ID: 1063765

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.380	65	360648	250.000
52)$Dibromofluoromethane	(2)	6.977	113	263942	49.215
57)$1,2-Dichloroethane-d4	(2)	7.440	102	67216	51.293
66)*Fluorobenzene	(2)	7.872	96	1088019	50.000
83)$Toluene-d8	(3)	9.867	98	1113149	49.580
100)*Chlorobenzene-d5	(3)	11.309	117	874784	50.000
114)$4-Bromofluorobenzene	(3)	12.307	95	402966	47.088
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	475921	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/30/2019 at 23:52.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

94J02

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1063766

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may30b.b/4y30s60.d

Level: (low/med) LOW Date Received: 05/22/19

Moisture: not dec. _____ Date Analyzed: 05/31/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	5	
75-35-4	1,1-Dichloroethene	2	
67-64-1	Acetone	1	J
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	0.3	J
75-34-3	1,1-Dichloroethane	12	
156-59-2	cis-1,2-Dichloroethene	25	
78-93-3	2-Butanone	0.8	J
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	12	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	5	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	0.4	J
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may30b.b/4y30s60.d
Injection date and time: **31-MAY-2019 03:59**
Data file Sample Info. Line: 94J02;1063766;1;0;;JCV94;;;4y30b41;
Instrument ID: **HP23297.i** Batch: **4191502AA**
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Blank Data file reference: **/chem/HP23297.i/19may30b.b/4y30b41.d**

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 30-MAY-2019 23:57
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may30b.b/4y30c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.380 (-0.006)	460	65	345832 (-13)	250.00	
66) Fluorobenzene	7.872 (0.000)	1034	96	1024798 (-9)	50.00	
100) Chlorobenzene-d5	11.309 (0.000)	1599	117	824105 (-9)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189 (0.000)	1908	152	442403 (-12)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.983 (-0.001)	113	251800	49.847	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.440 (0.000)	102	64281	52.079	104%		80 - 120
83) Toluene-d8	(3)	9.867 (0.000)	98	1056926	49.971	100%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.307 (0.000)	95	378562	46.957	94%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)	2.323 (-0.000)	62	38646	5.223	5.22			0.2	1
17) 1,1-Dichloroethene	(2)	3.668 (-0.000)	96	8210	2.297	2.30			0.2	1
18) Acetone	(1)	3.710 (-0.001)	58	1207	1.254	1.25		J	0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)	4.787 (-0.001)	96	1384	0.324	0.32		J	0.2	1
36) 1,1-Dichloroethane	(2)	5.444 (-0.000)	63	93805	11.819	11.82			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.284 (-0.000)	96	122262	24.828	24.83			0.2	1
44) 2-Butanone	(2)	6.284 (-0.003)	43	4692M	0.775	0.78		J	0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	6.983 (0.000)	97	81062	12.388	12.39			0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	8.340 (0.000)	95	23768	4.984	4.98			0.2	1
75) 1,4-Dioxane	(1)			Not Detected					29	250
88) Toluene	(3)	9.940 (0.000)	92	5043	0.412	0.41		J	0.2	1
93) Tetrachloroethene	(3)			Not Detected					0.2	1
104) Ethylbenzene	(3)			Not Detected					0.4	1
106) m+p-Xylene	(3)			Not Detected					1	5
107) o-Xylene	(3)			Not Detected					0.4	1
108) Xylene (Total)	(3)			Not Detected					1	5
138) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
148) Naphthalene	(4)			Not Detected					1	5

M = Compound was manually integrated.

Digitally signed by Kevin A. Sposito on 05/31/2019 at 12:37. Target 3.5 esignature user ID: kas02648

Data file: /chem/HP23297.i/19may30b.b/4y30s60.d Injection date and time: **31-MAY-2019 03:59**
Data file Sample Info. Line: 94J02;1063766;1;0;;JCV94;;;4y30b41; Instrument ID: **HP23297.i** Batch: **4191502AA**
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Blank Data file reference: **/chem/HP23297.i/19may30b.b/4y30b41.d**

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 30-MAY-2019 23:57
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may30b.b/4y30c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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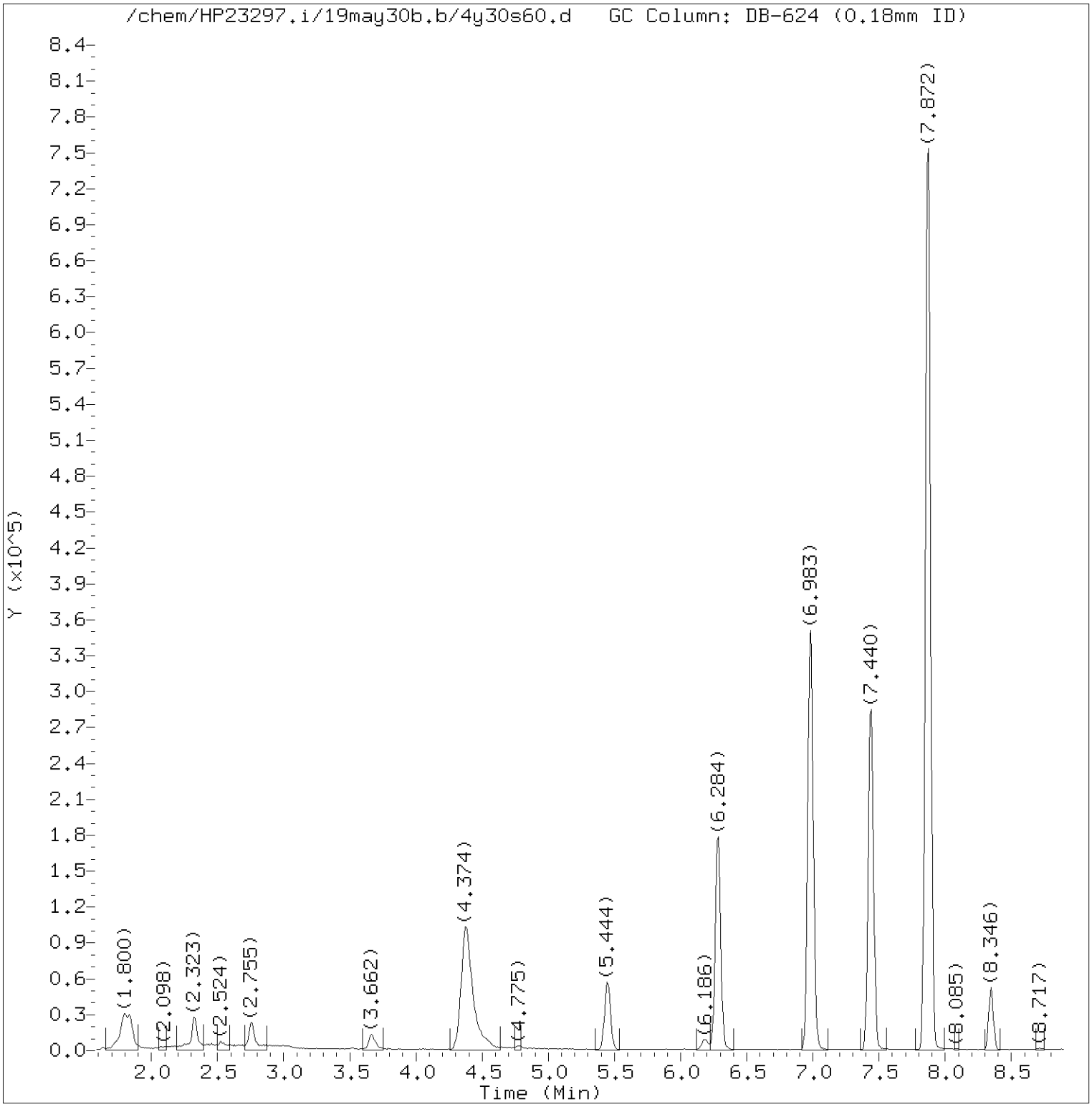
Total number of targets = 24

Digitally signed by Kevin A. Sposito on 05/31/2019 at 12:37. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/31/2019 at 12:59. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

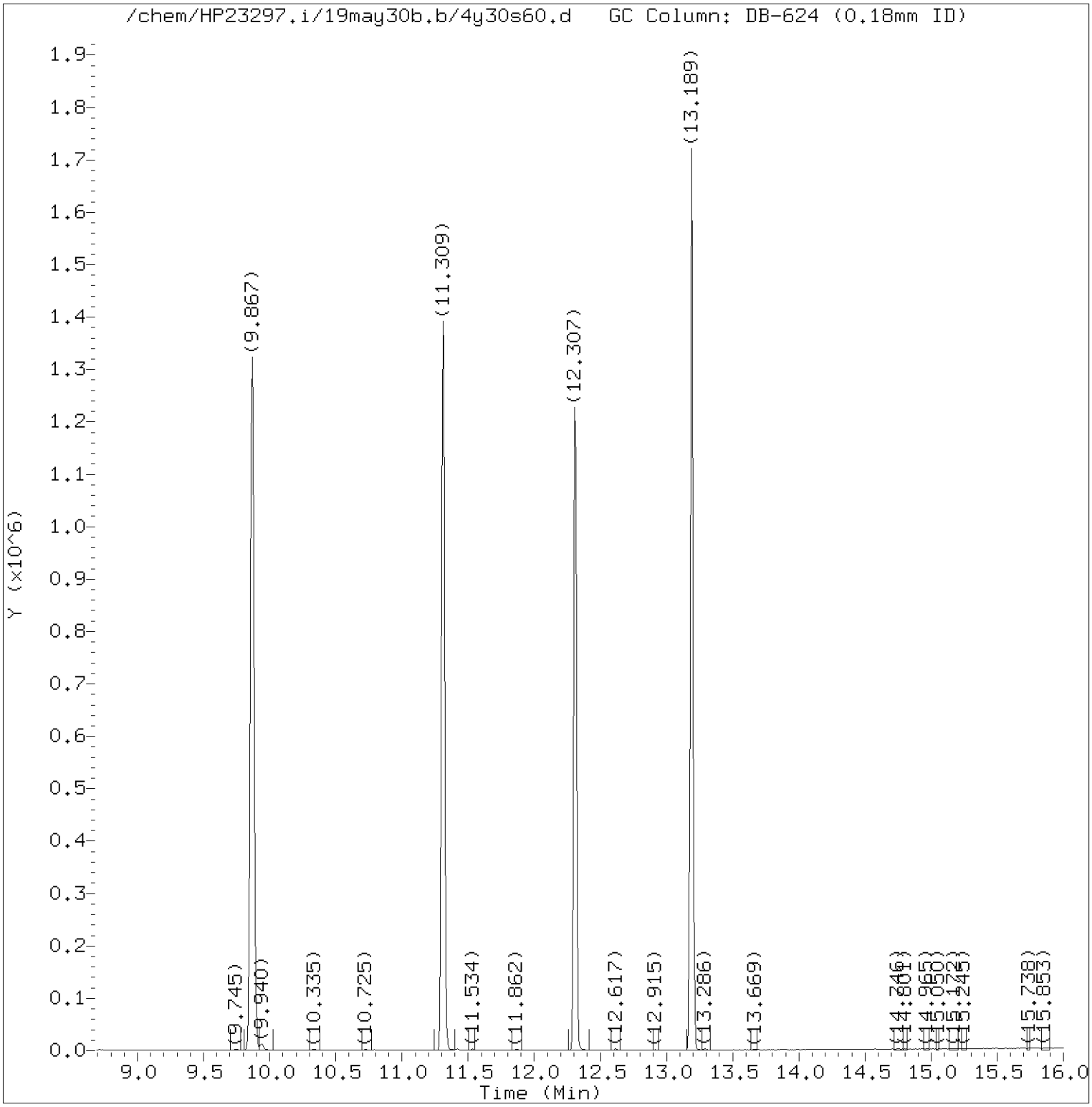
Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30s60.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 03:59 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Sample Name: 94J02 Lab Sample ID: 1063766

Digitally signed by Kevin A. Sposito
on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30s60.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 03:59 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Sample Name: 94J02 Lab Sample ID: 1063766

Digitally signed by Kevin A. Sposito
on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30s60.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 03:59 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Sample Name: 94J02 Lab Sample ID: 1063766

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	2.323	62	38646	5.223
17) 1,1-Dichloroethene	(2)	3.668	96	8210	2.297
18) Acetone	(1)	3.710	58	1207	1.254
29)*t-Butyl alcohol-d10	(1)	4.380	65	345832	250.000
32) trans-1,2-Dichloroethene	(2)	4.787	96	1384	0.324
36) 1,1-Dichloroethane	(2)	5.444	63	93805	11.819
42) cis-1,2-Dichloroethene	(2)	6.284	96	122262	24.828
44) 2-Butanone	(2)	6.284	43	4692M	0.775
53) 1,1,1-Trichloroethane	(2)	6.983	97	81062	12.388
52)$Dibromofluoromethane	(2)	6.983	113	251800	49.847
57)$1,2-Dichloroethane-d4	(2)	7.440	102	64281	52.079
66)*Fluorobenzene	(2)	7.872	96	1024798	50.000
71) Trichloroethene	(2)	8.340	95	23768	4.984
83)$Toluene-d8	(3)	9.867	98	1056926	49.971
88) Toluene	(3)	9.940	92	5043	0.412
100)*Chlorobenzene-d5	(3)	11.309	117	824105	50.000
114)$4-Bromofluorobenzene	(3)	12.307	95	378562	46.957
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	442403	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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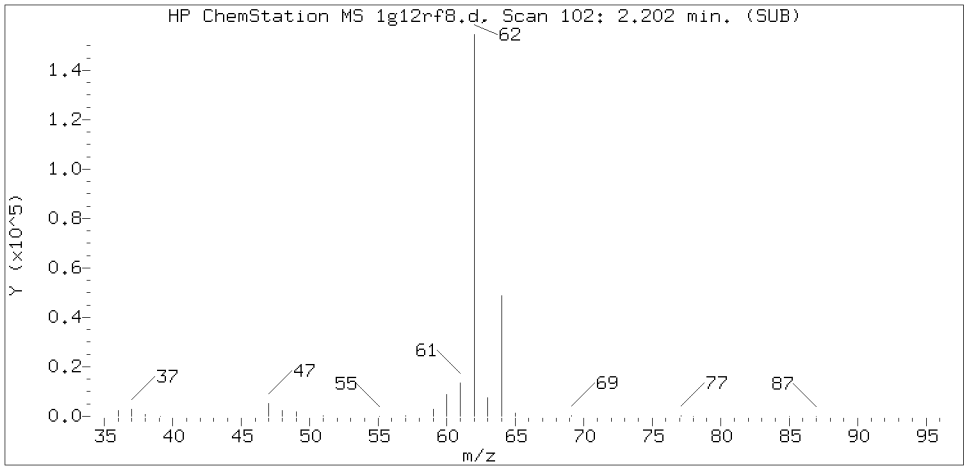
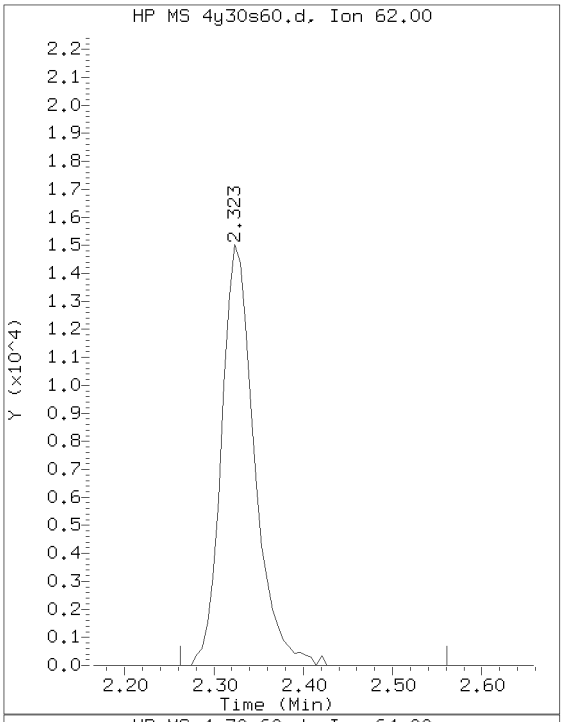
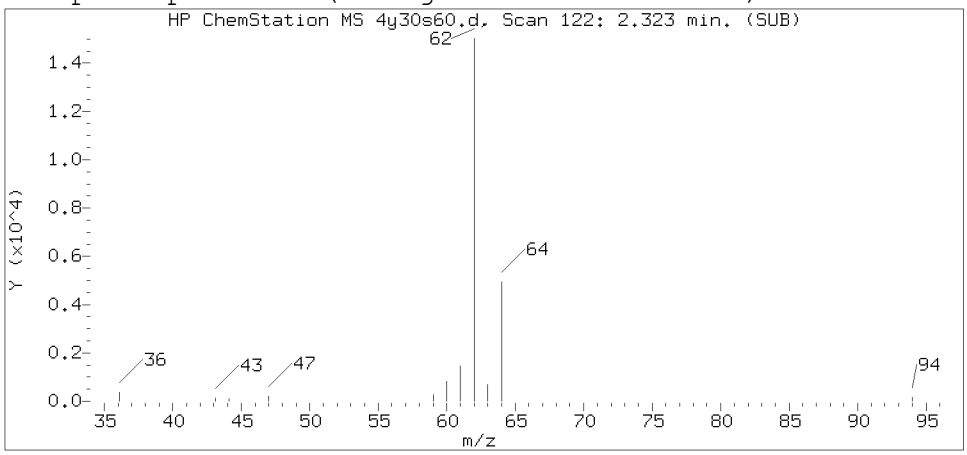
Target 3.5 esignature user ID: kas02648

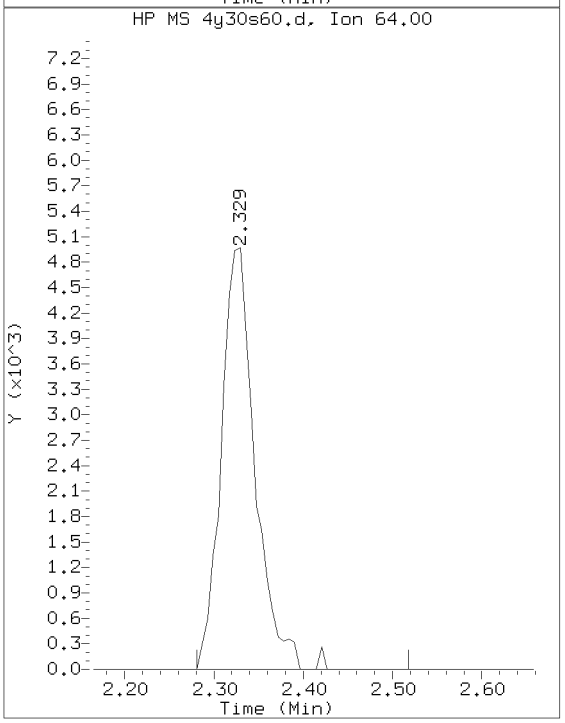
Reference Standard Spectrum for Vinyl Chloride



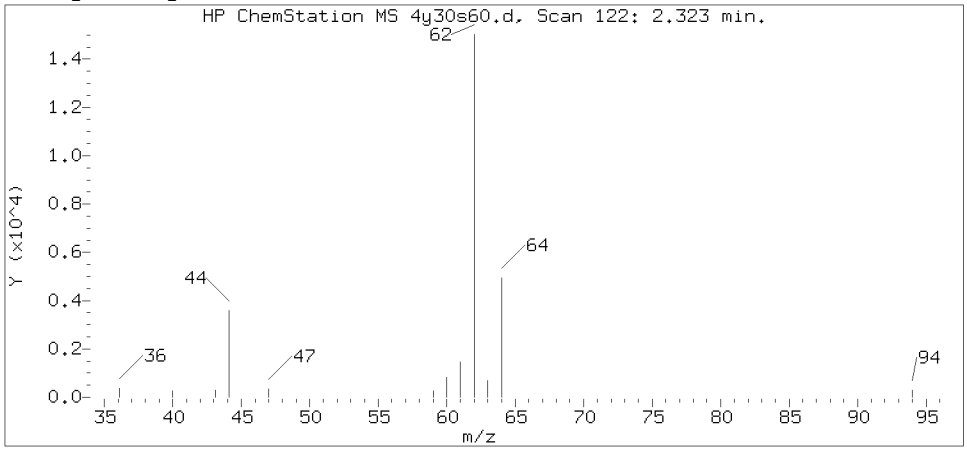


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP23297.i/19may30b.b/4y30s60.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 03:59 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Sample Name: 94J02 Lab Sample ID: 1063766

Compound Number : 6
Compound Name : Vinyl Chloride
Scan Number : 122
Retention Time (minutes): 2.323
Relative Retention Time :-0.00078
Quant Ion : 62.00
Area (flag) : 38646
On-Column Amount (ng) : 5.2227

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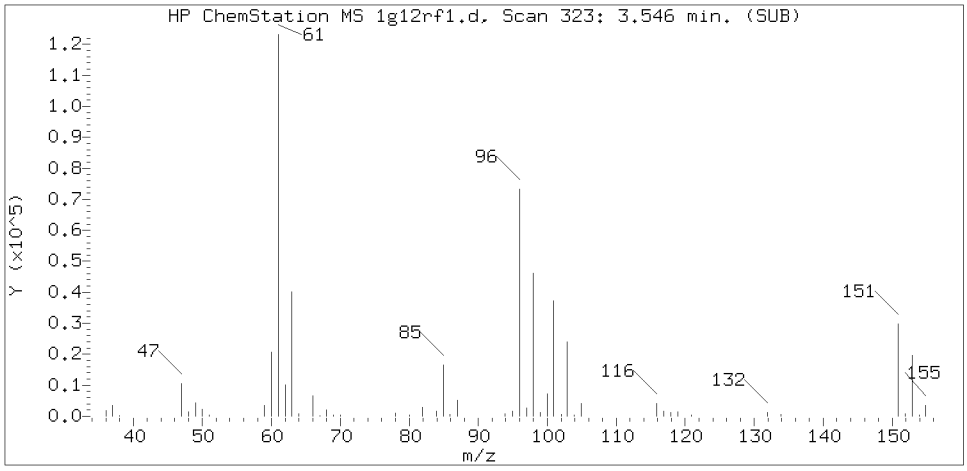
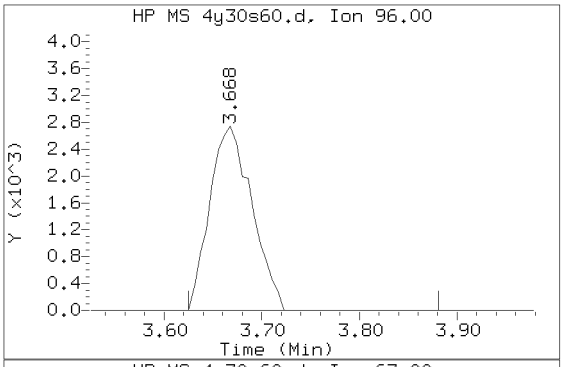
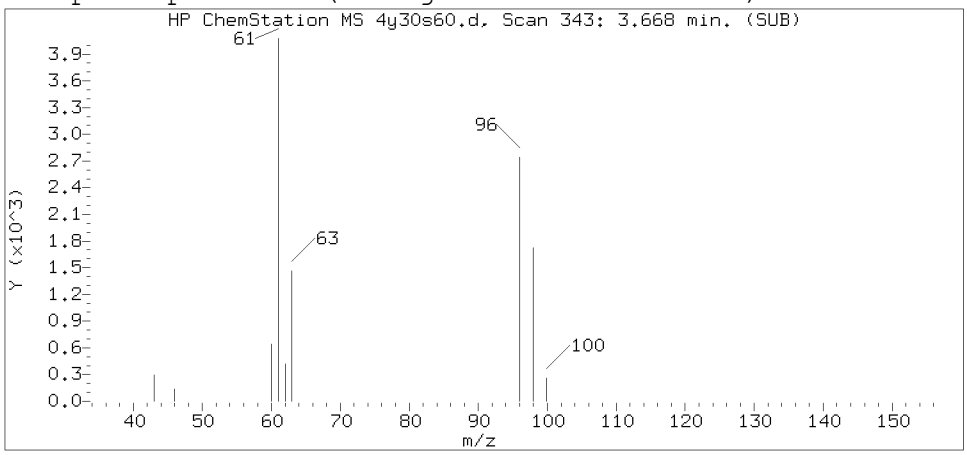
Target 3.5 esignature user ID: kas02648

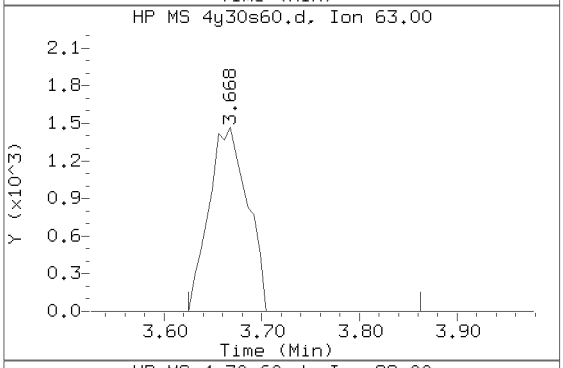
Reference Standard Spectrum for 1,1-Dichloroethene

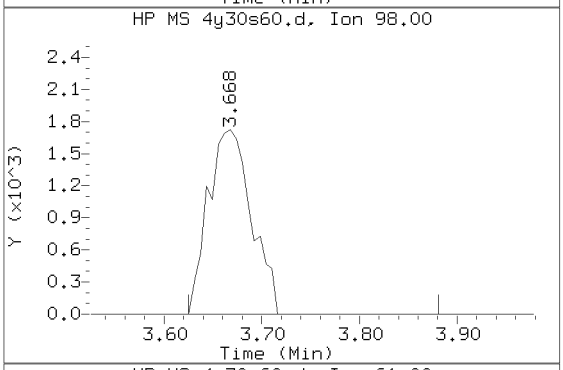




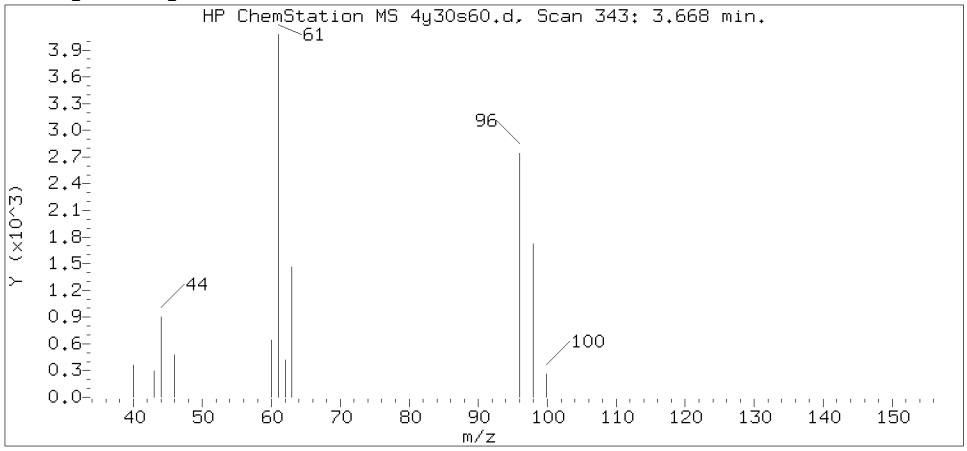
Sample Spectrum (Background Subtracted)

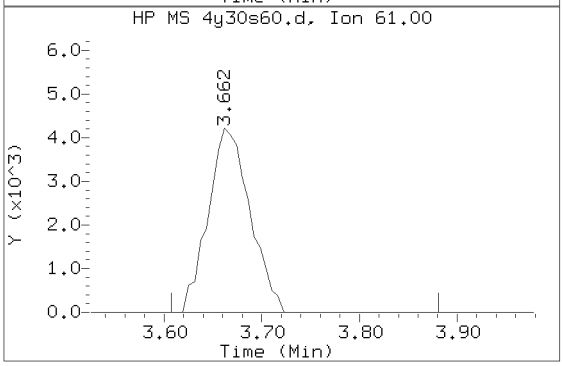






Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may30b.b/4y30s60.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 03:59 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Sample Name: 94J02 Lab Sample ID: 1063766

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 343
Retention Time (minutes): 3.668
Relative Retention Time :-0.00078
Quant Ion : 96.00
Area (flag) : 8210
On-Column Amount (ng) : 2.2971

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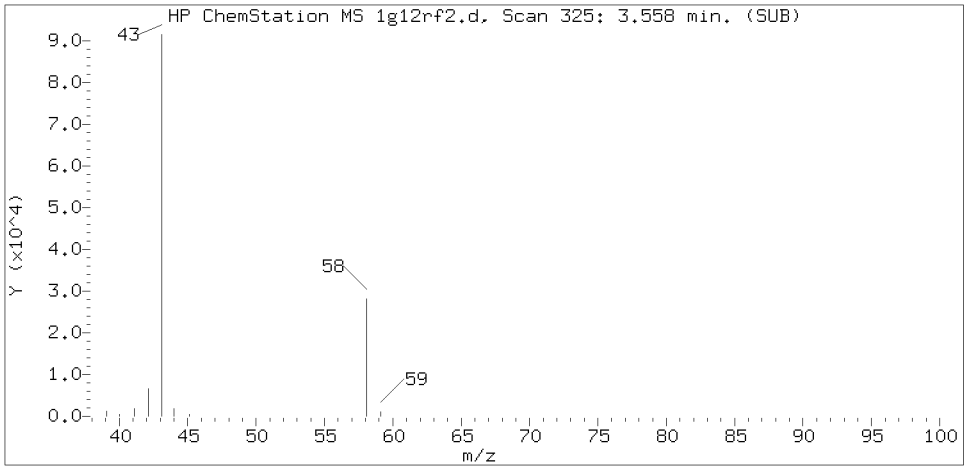
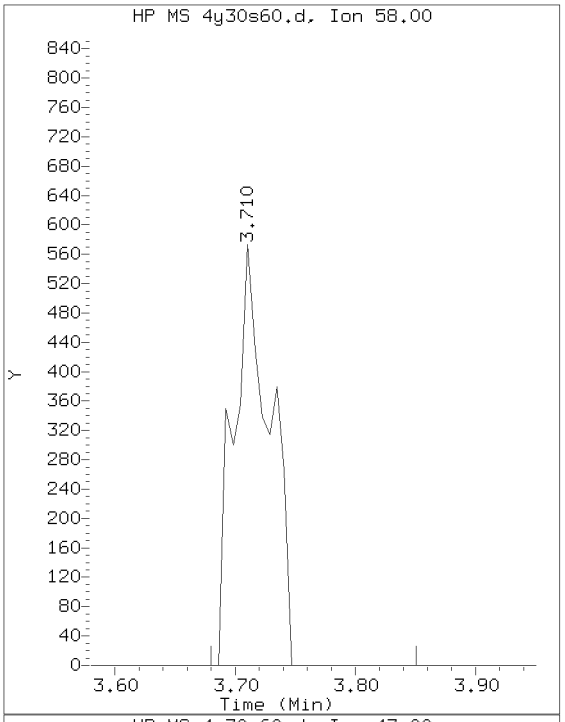
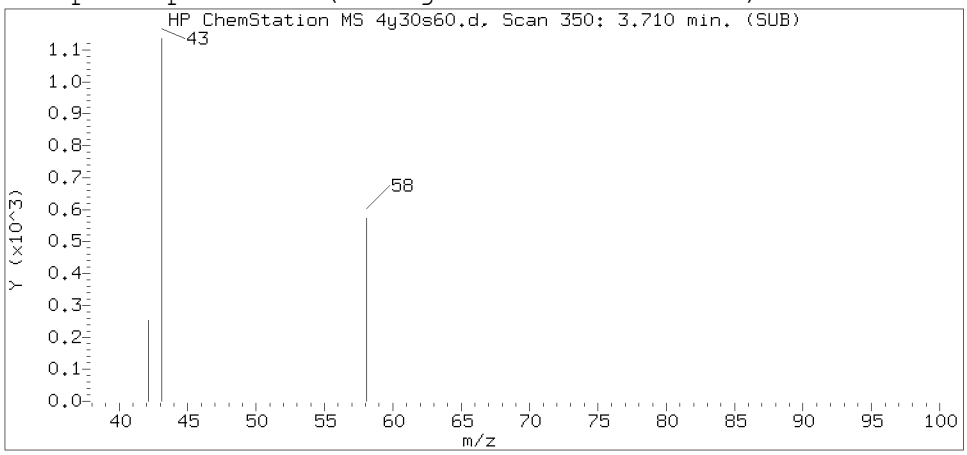
Target 3.5 esignature user ID: kas02648

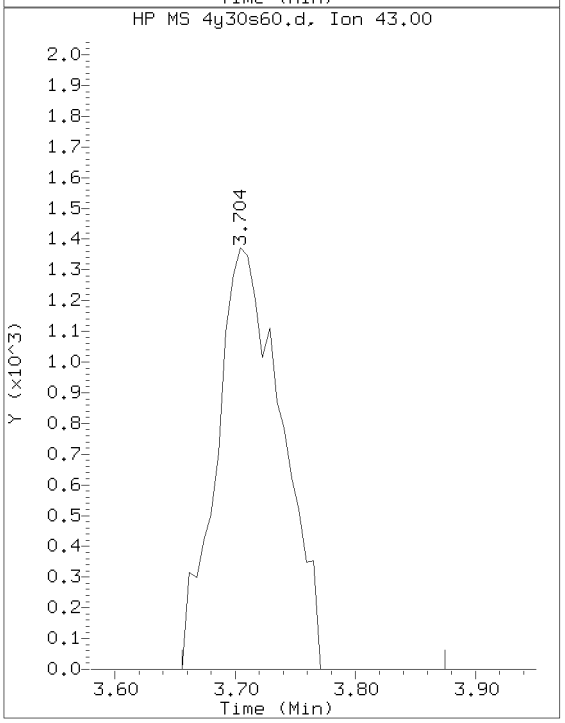
Reference Standard Spectrum for Acetone



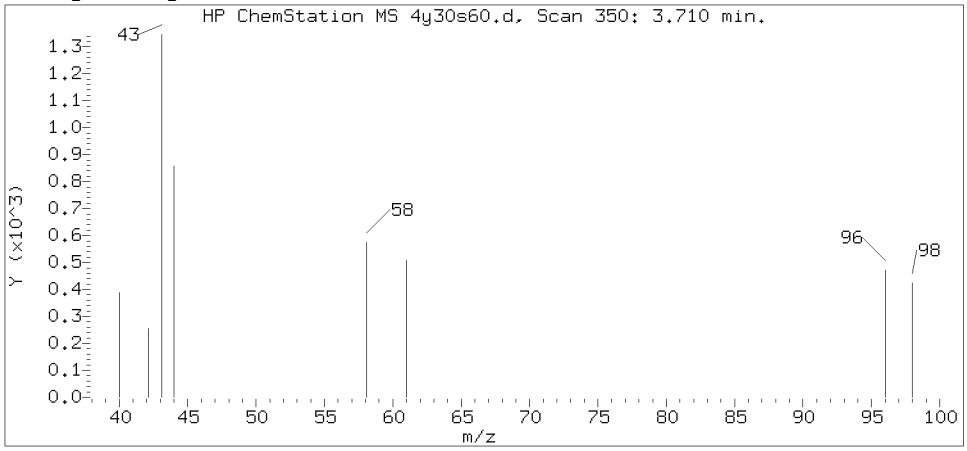


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP23297.i/19may30b.b/4y30s60.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 03:59 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Sample Name: 94J02 Lab Sample ID: 1063766

Compound Number : 18
Compound Name : Acetone
Scan Number : 350
Retention Time (minutes): 3.710
Relative Retention Time :-0.00161
Quant Ion : 58.00
Area (flag) : 1207
On-Column Amount (ng) : 1.2535

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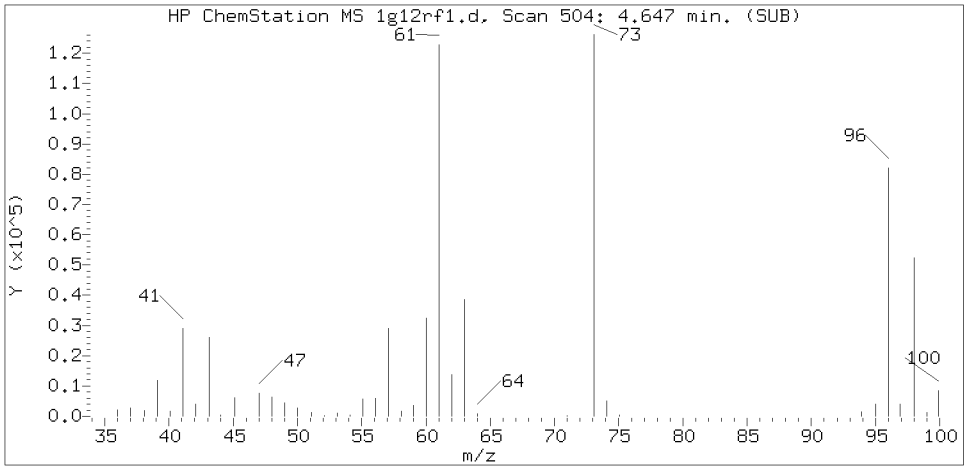
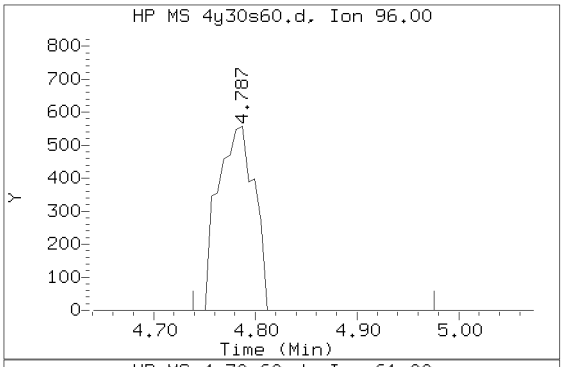
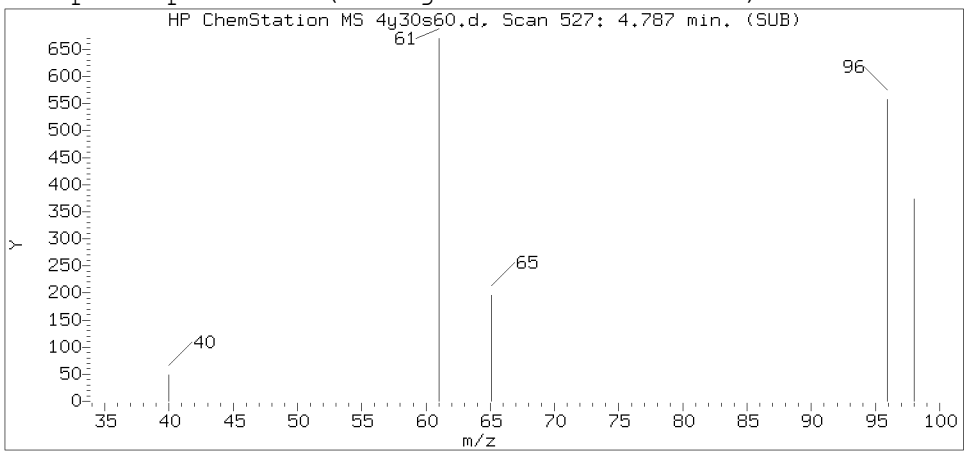
Target 3.5 esignature user ID: kas02648

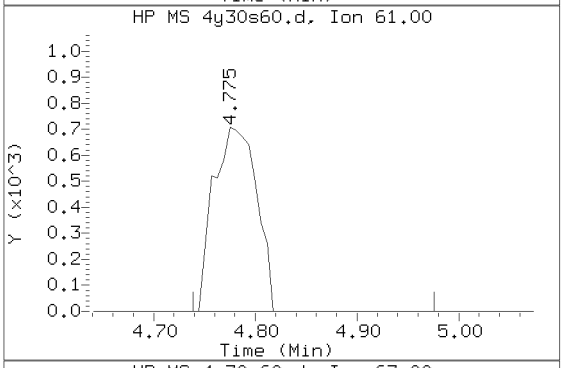
Reference Standard Spectrum for trans-1,2-Dichloroethene

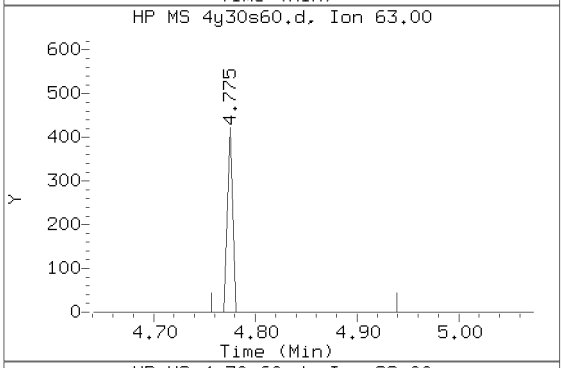




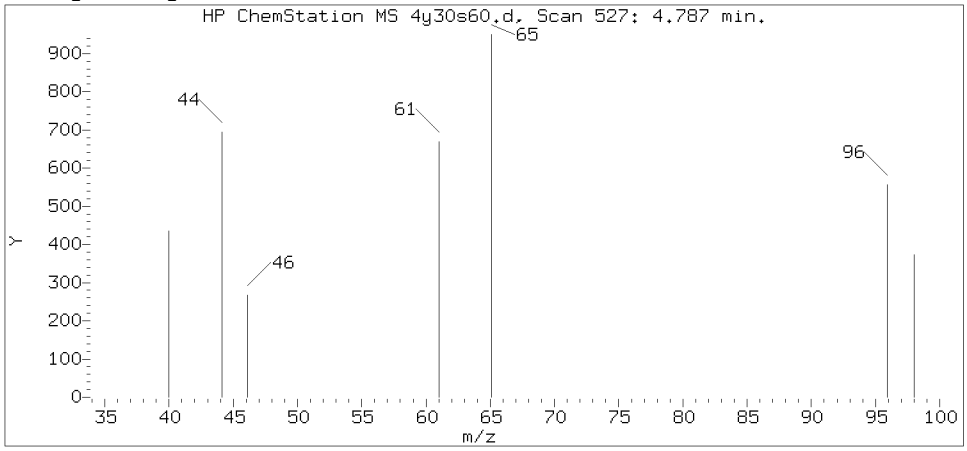
Sample Spectrum (Background Subtracted)

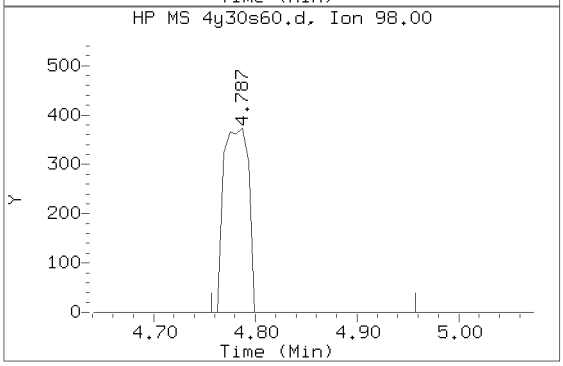






Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may30b.b/4y30s60.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 03:59 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Sample Name: 94J02 Lab Sample ID: 1063766

Compound Number : 32
Compound Name : trans-1,2-Dichloroethene
Scan Number : 527
Retention Time (minutes): 4.787
Relative Retention Time :-0.00155
Quant Ion : 96.00
Area (flag) : 1384
On-Column Amount (ng) : 0.3241

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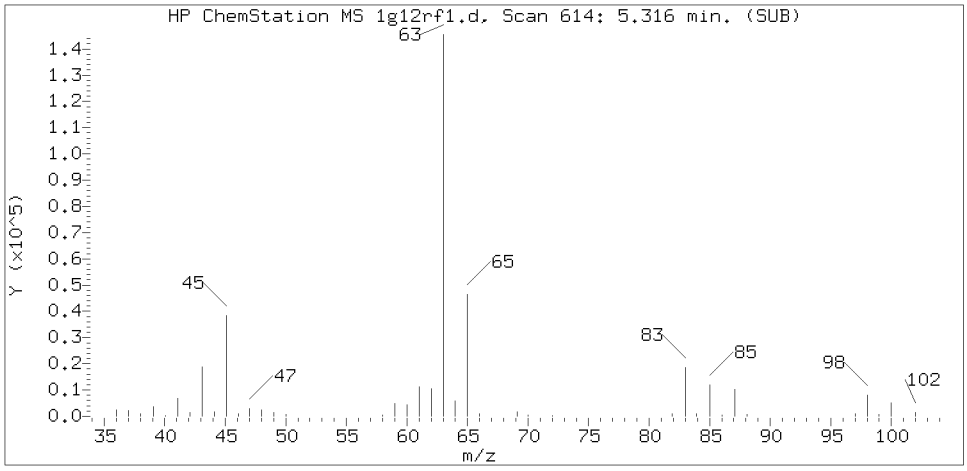
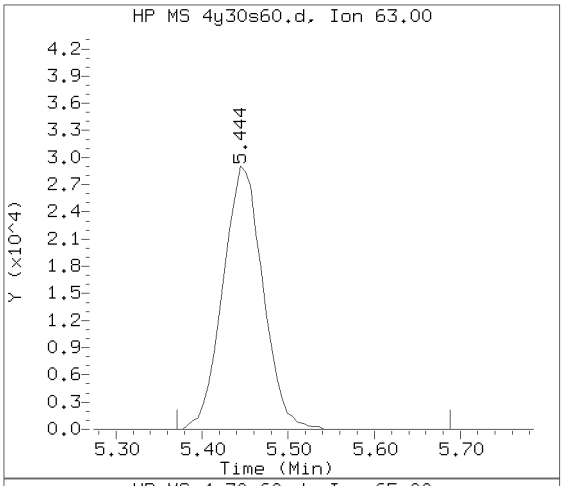
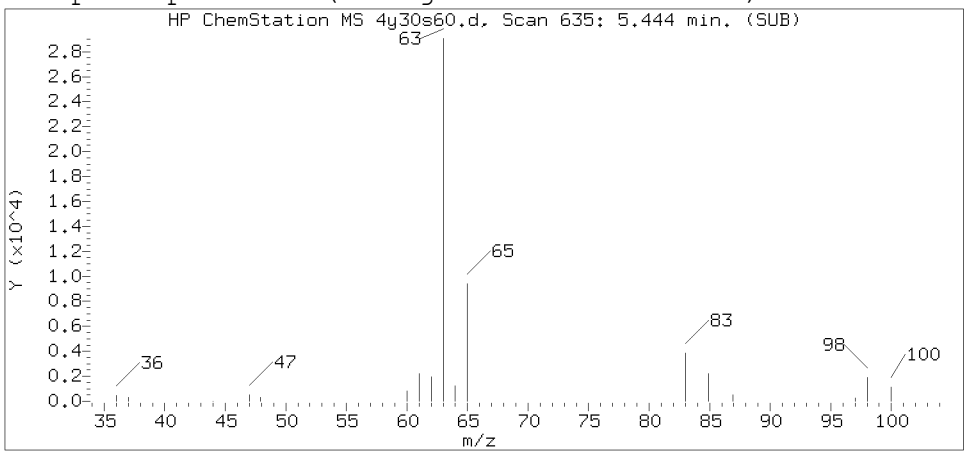
Target 3.5 esignature user ID: kas02648

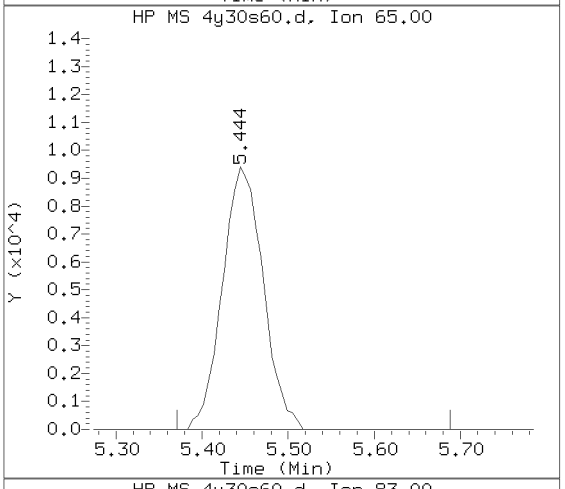
Reference Standard Spectrum for 1,1-Dichloroethane



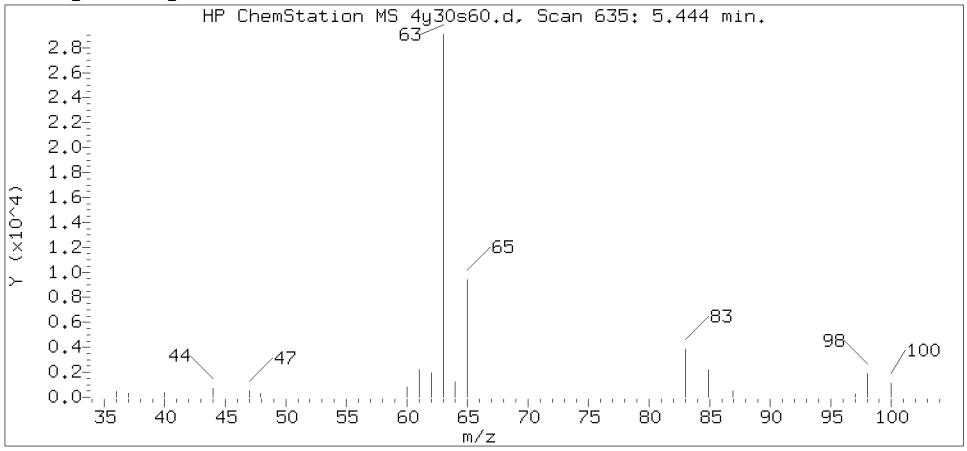


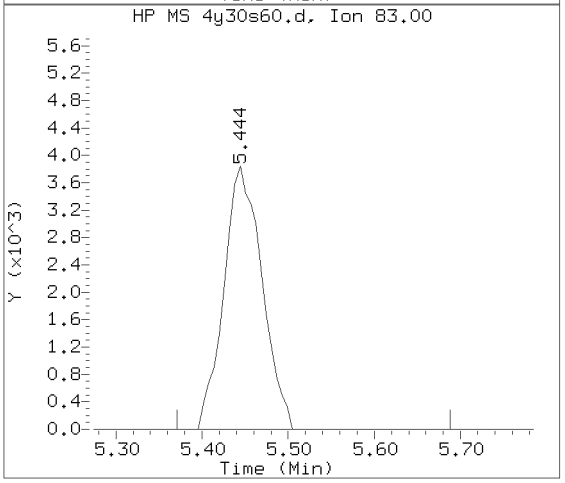
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may30b.b/4y30s60.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 03:59 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Sample Name: 94J02 Lab Sample ID: 1063766

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 635
Retention Time (minutes): 5.444
Relative Retention Time :-0.00000
Quant Ion : 63.00
Area (flag) : 93805
On-Column Amount (ng) : 11.8190

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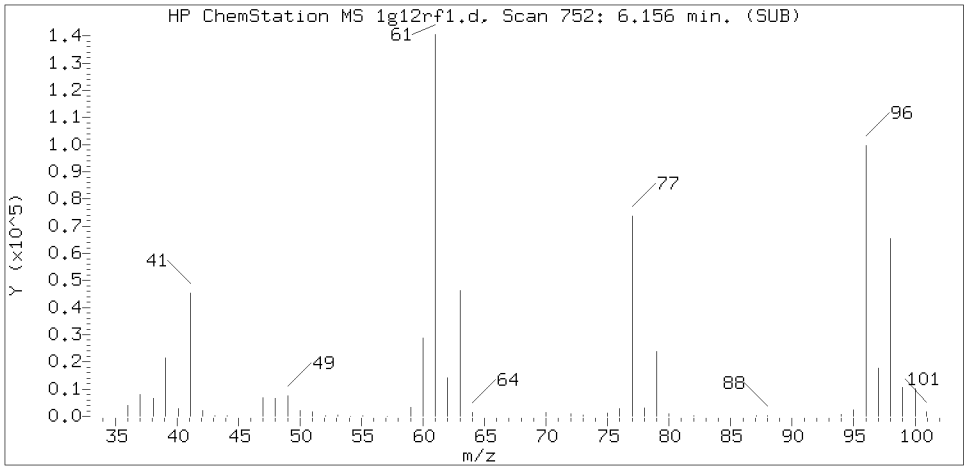
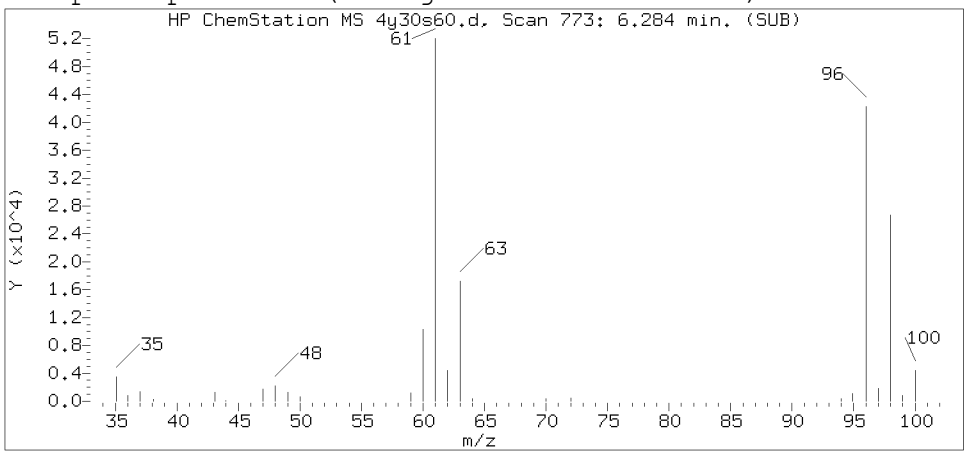
Target 3.5 esignature user ID: kas02648

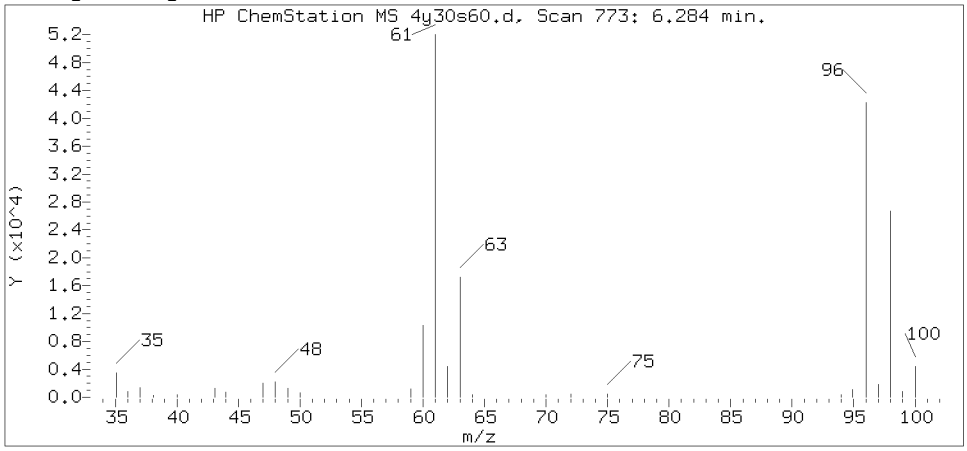
Reference Standard Spectrum for cis-1,2-Dichloroethene

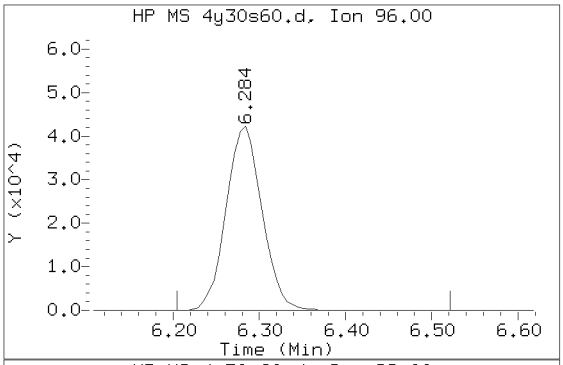


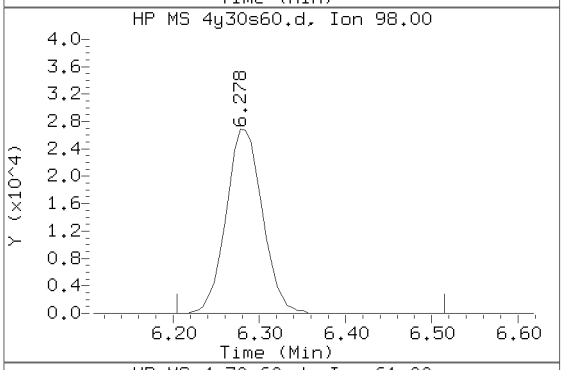
Sample Spectrum (Background Subtracted)

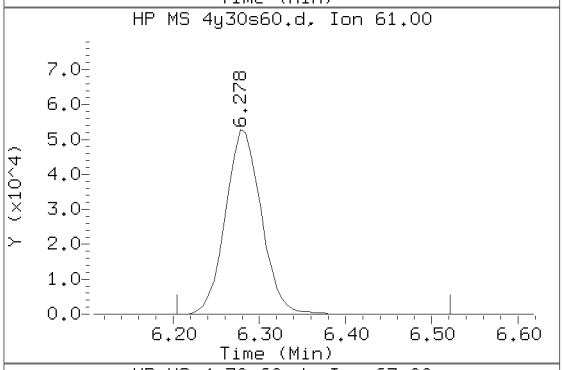


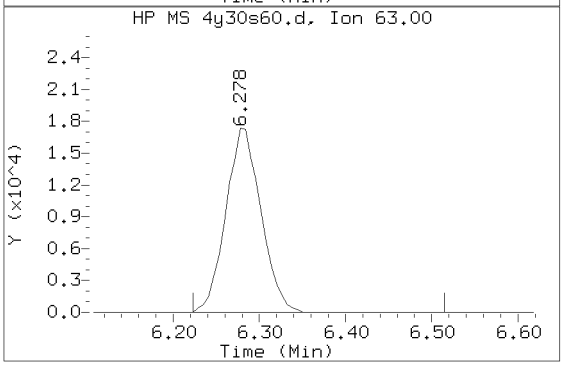
Sample Spectrum (Unaltered)











Data File: /chem/HP23297.i/19may30b.b/4y30s60.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 03:59 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Sample Name: 94J02 Lab Sample ID: 1063766

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 773
Retention Time (minutes): 6.284
Relative Retention Time :-0.00078
Quant Ion : 96.00
Area (flag) : 122262
On-Column Amount (ng) : 24.8283

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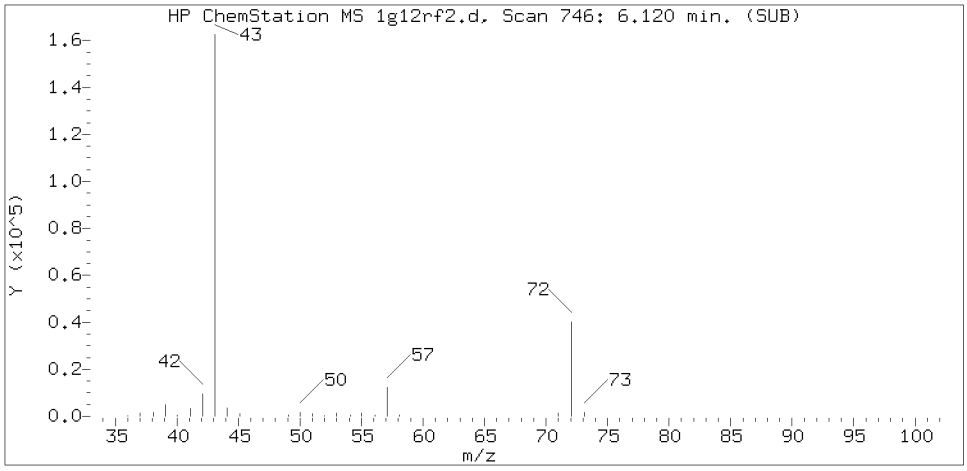
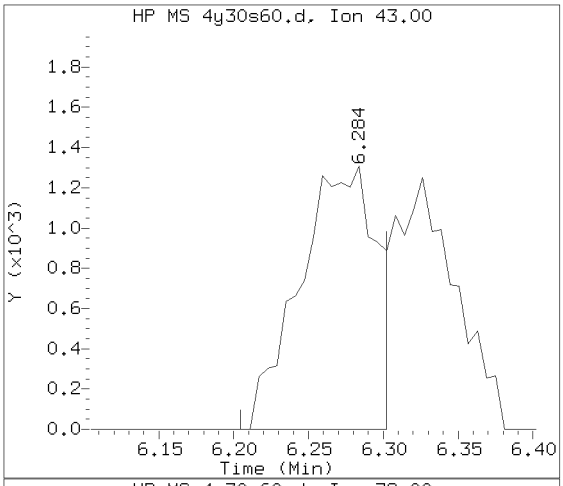
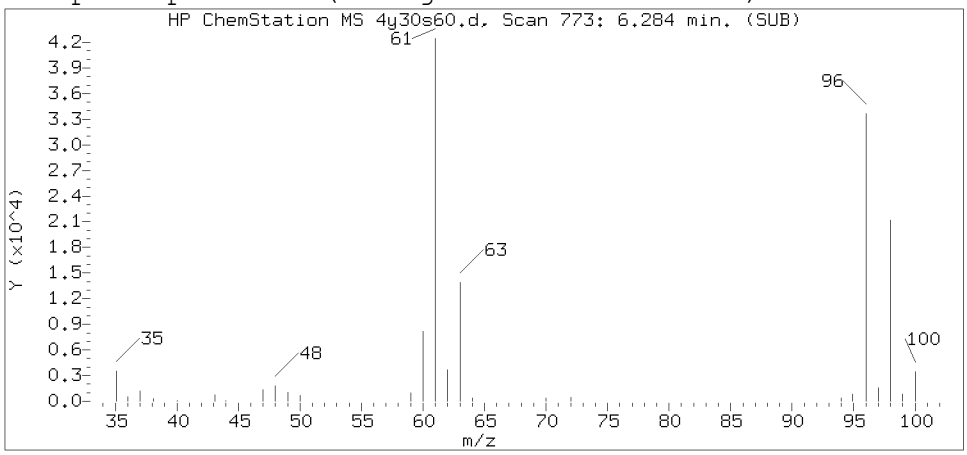
Target 3.5 esignature user ID: kas02648

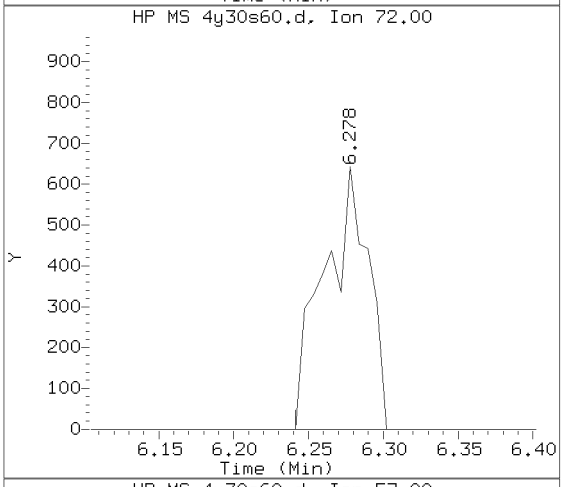
Reference Standard Spectrum for 2-Butanone



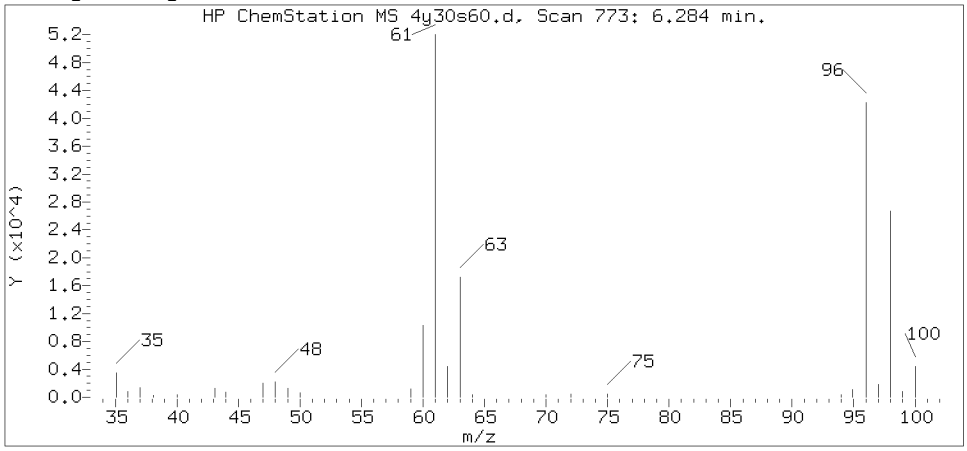


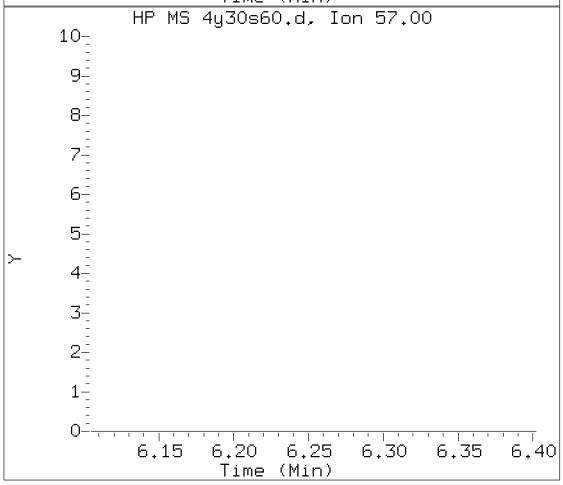
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may30b.b/4y30s60.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 03:59 Analyst ID: DVV10203

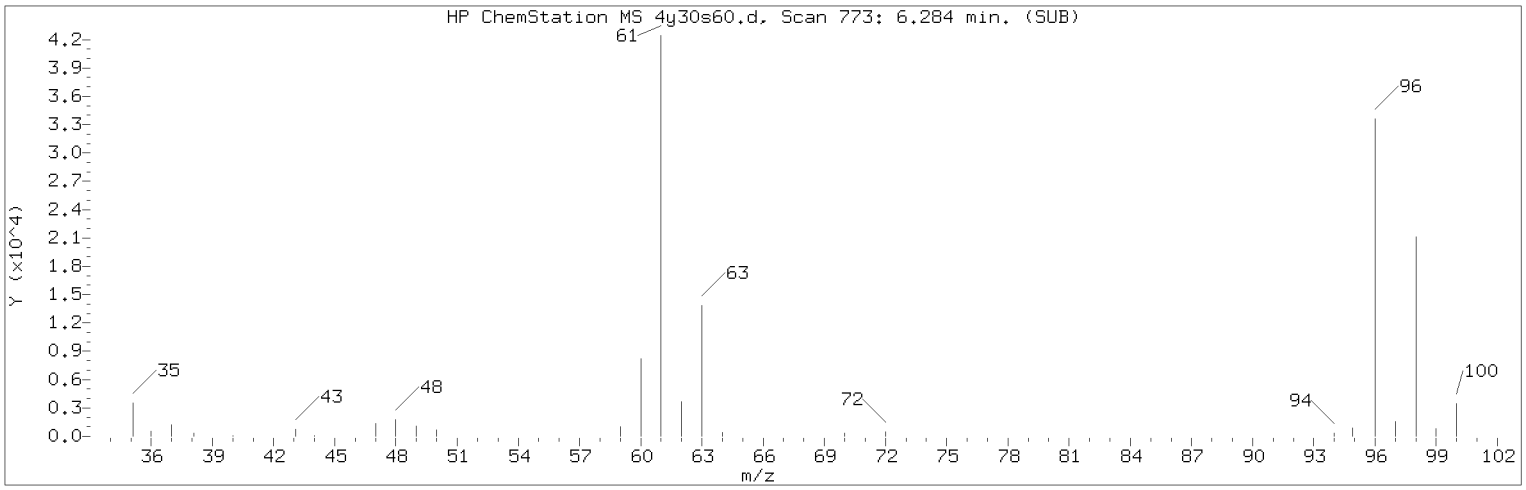
Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Sample Name: 94J02 Lab Sample ID: 1063766

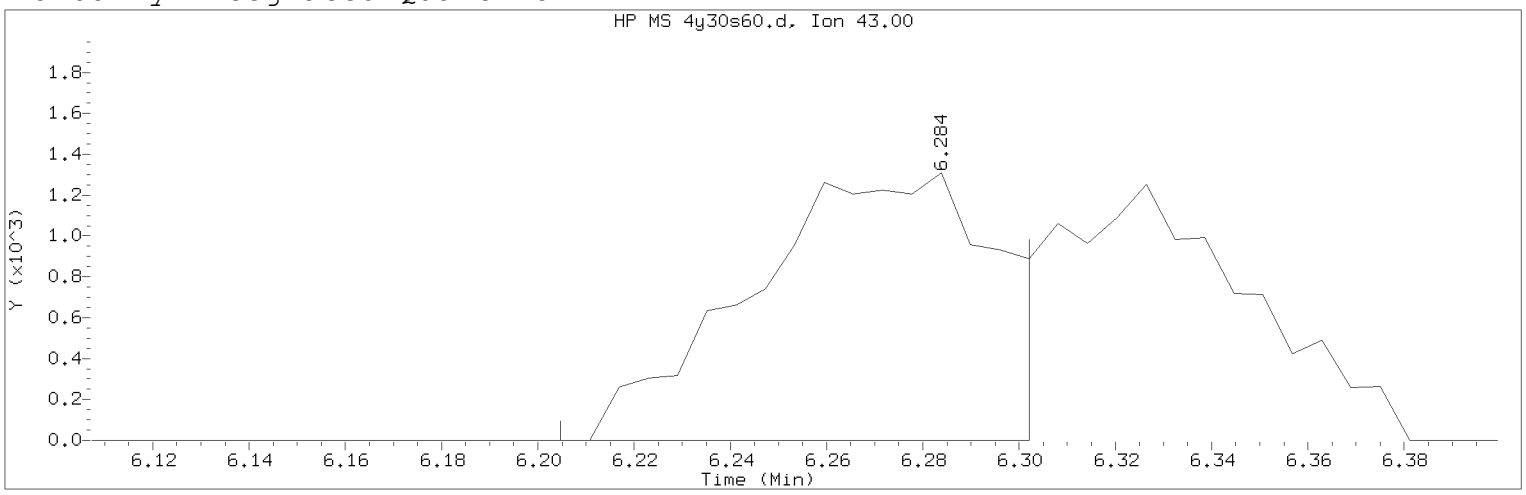
Compound Number : 44
Compound Name : 2-Butanone
Scan Number : 773
Retention Time (minutes): 6.284
Relative Retention Time :-0.00309
Quant Ion : 43.00
Area (flag) : 4692M
On-Column Amount (ng) : 0.7753

Digitally signed by Kevin A. Sposito on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may30b.b/4y30s60.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 03:59 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Sample Name: 94J02 Lab Sample ID: 1063766

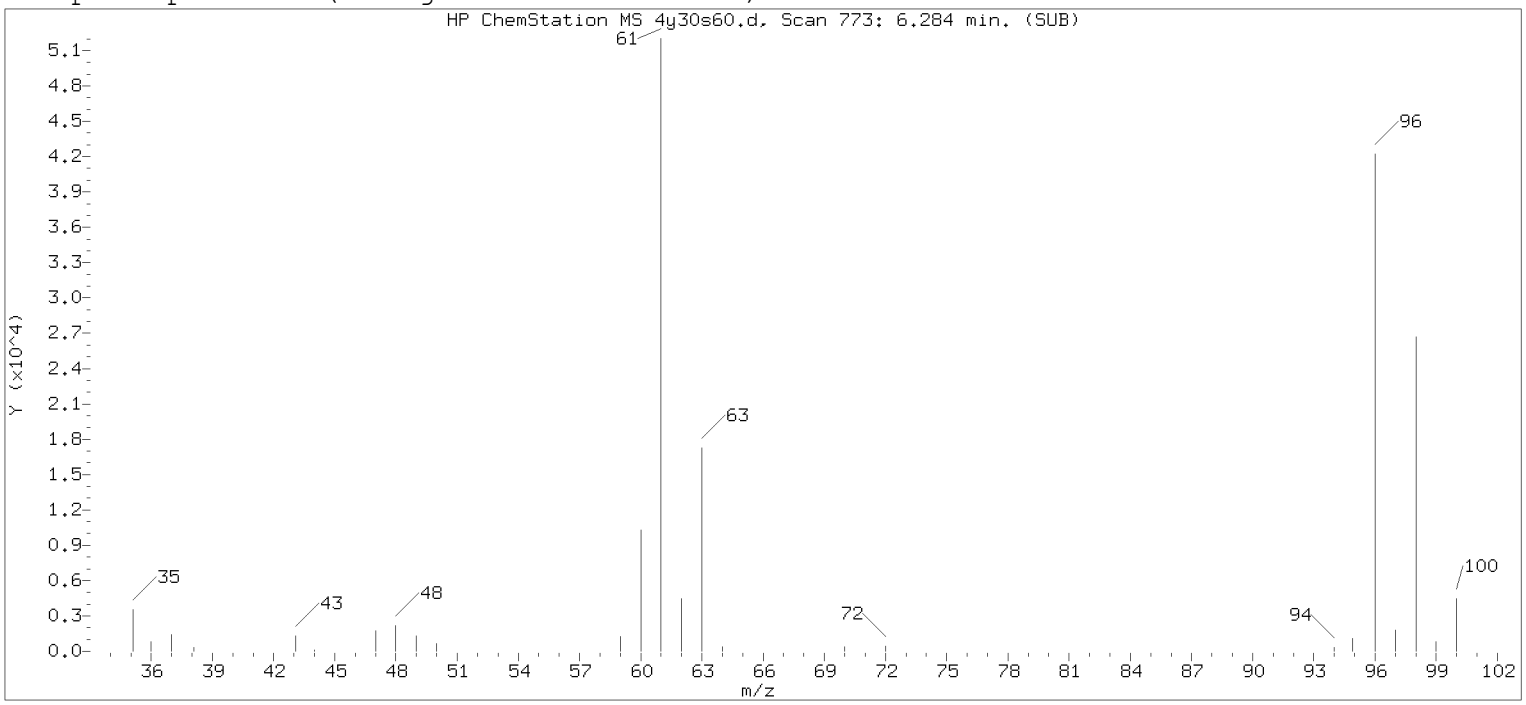
Compound Number : 44
Compound Name : 2-Butanone
Scan Number : 773
Retention Time (minutes): 6.284
Quant Ion : 43.00
Area (flag) : 4692M
On-Column Amount (ng) : 0.7753
Integration start scan : 759 Integration stop scan: 775
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

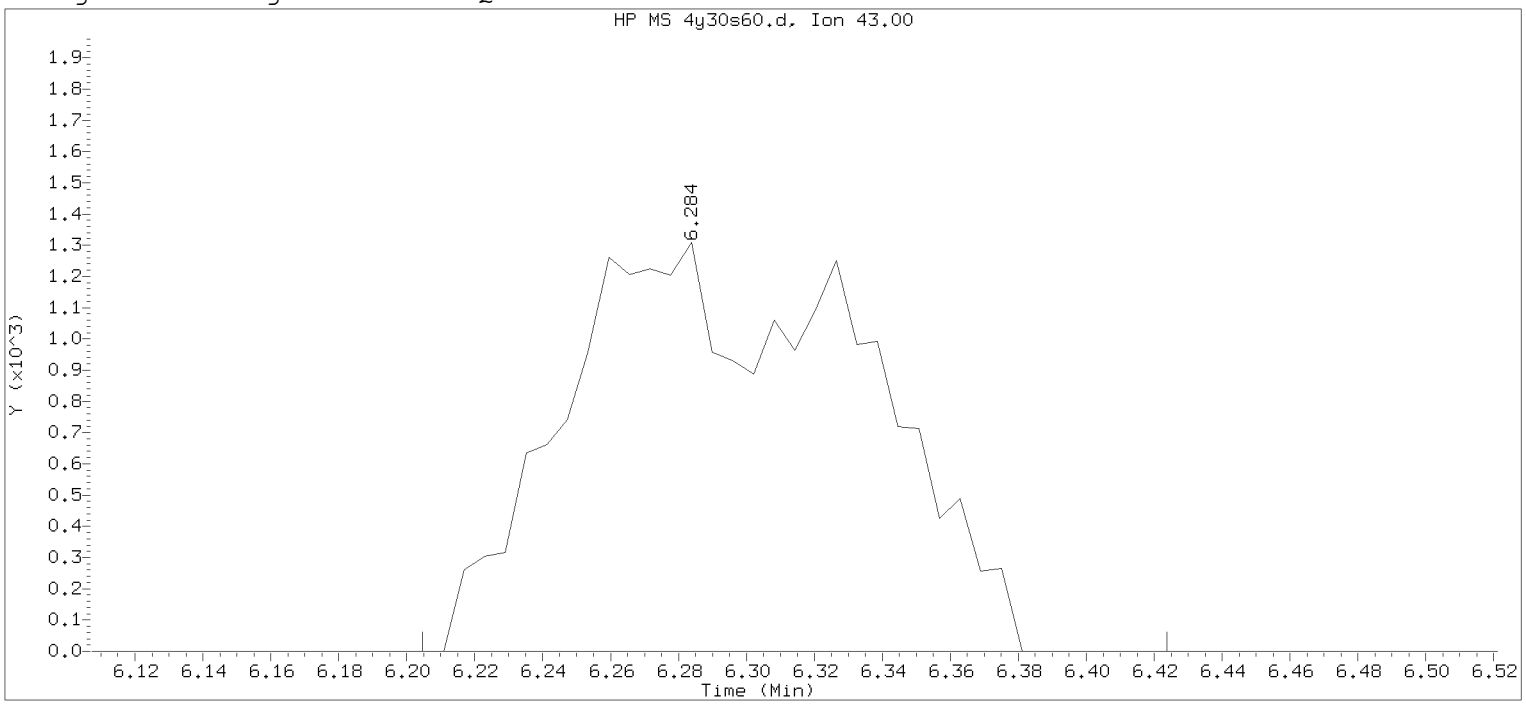
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/31/2019 at 12:59.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may30b.b/4y30s60.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 03:59 Analyst ID: DVV10203

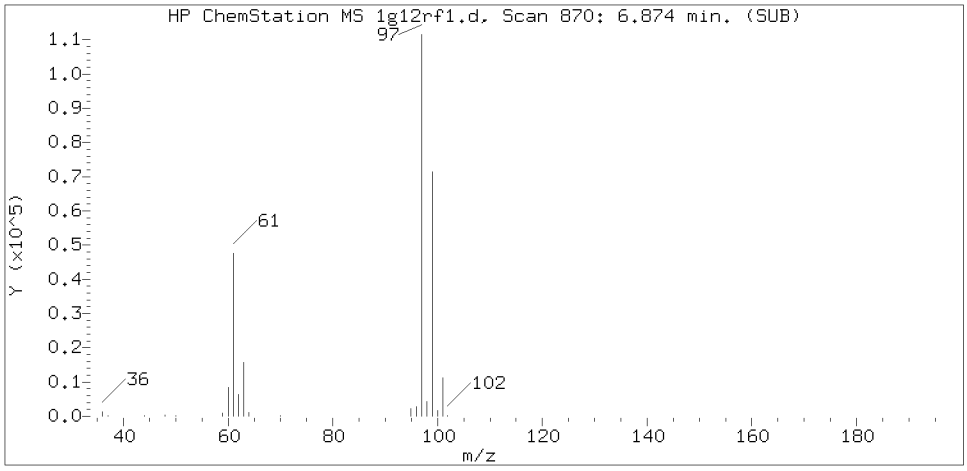
Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 04:17 Automation

Sample Name: 94J02 Lab Sample ID: 1063766

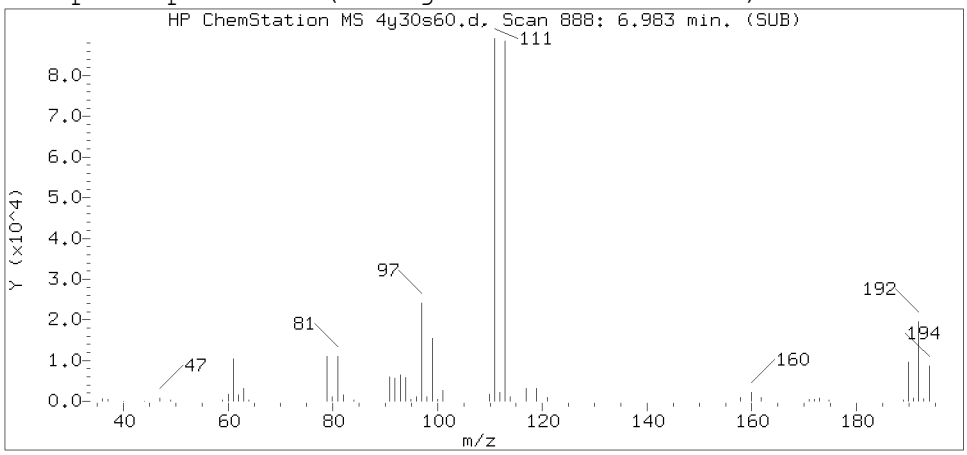
Compound Number	: 44		
Compound Name	: 2-Butanone		
Scan Number	: 773		
Retention Time (minutes)	: 6.284		
Quant Ion	: 43.00		
Area	: 8052		
On-column Amount (ng)	: 1.3305		
Integration start scan	: 759	Integration stop scan:	795
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kasposito

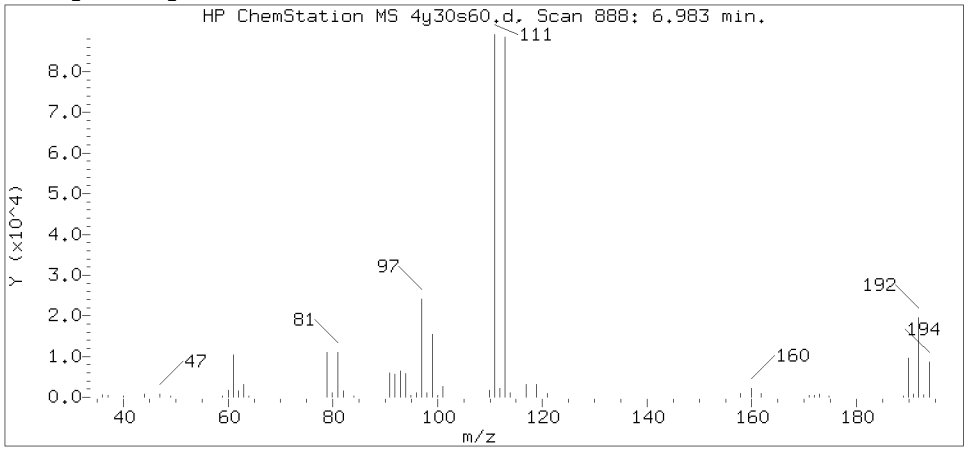
Reference Standard Spectrum for 1,1,1-Trichloroethane

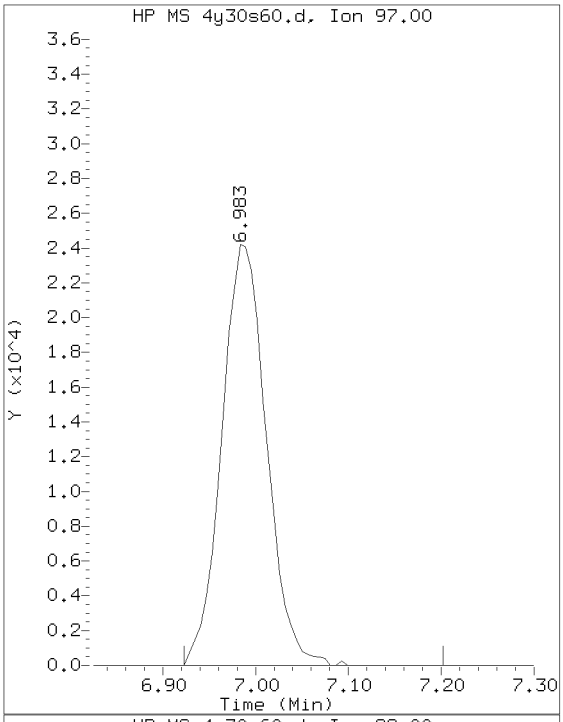


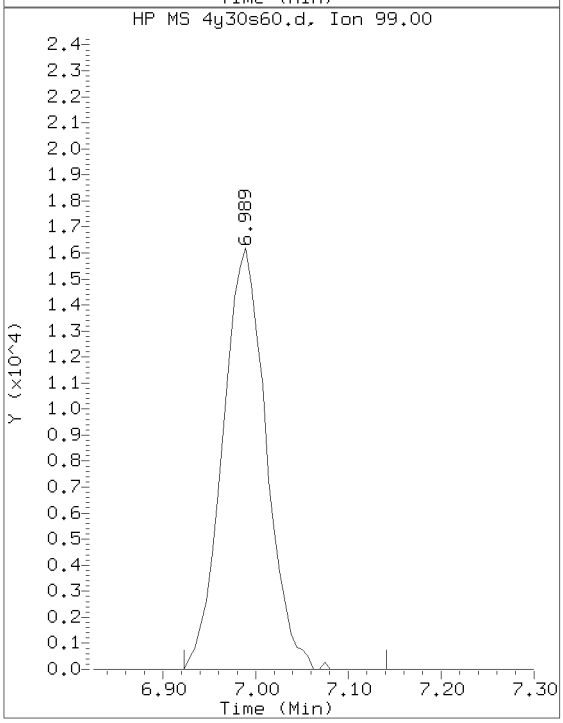
Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)







Data File: /chem/HP23297.i/19may30b.b/4y30s60.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 03:59 Analyst ID: DVV10203

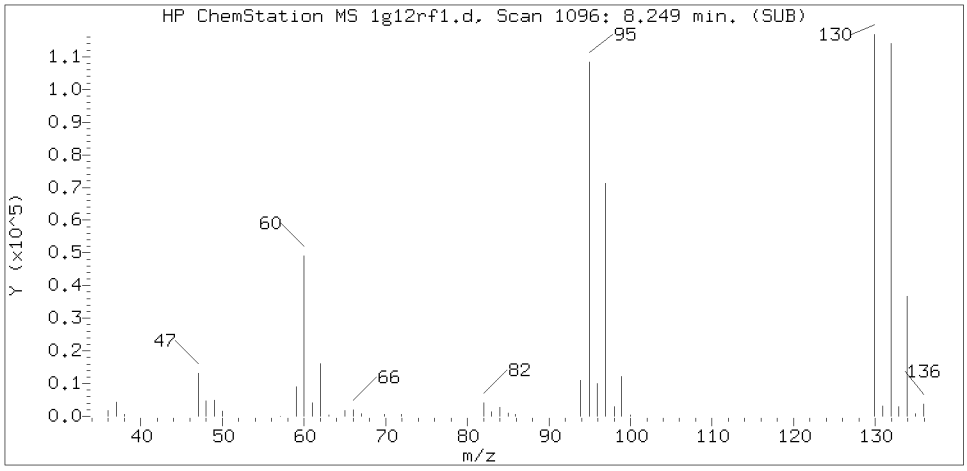
Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Sample Name: 94J02 Lab Sample ID: 1063766

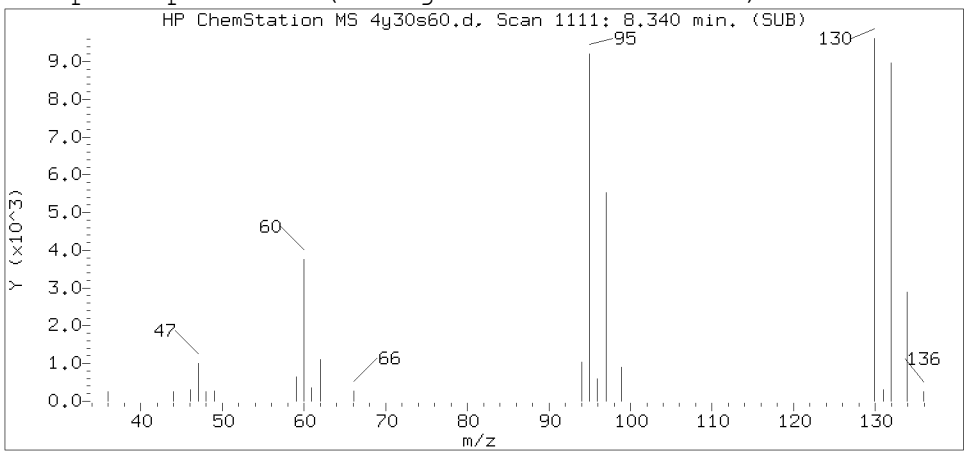
Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 888
Retention Time (minutes)	: 6.983
Relative Retention Time	: 0.00000
Quant Ion	: 97.00
Area (flag)	: 81062
On-Column Amount (ng)	: 12.3880

Digitally signed by Kevin A. Sposito on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kas02648

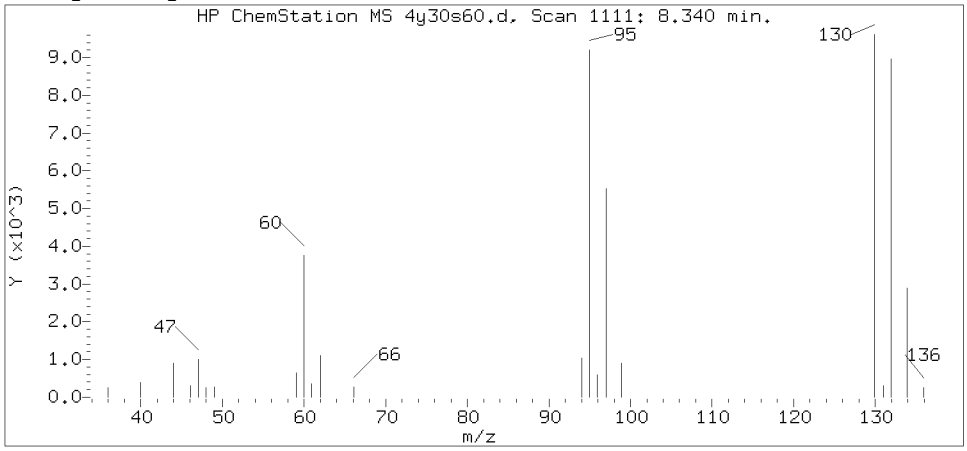
Reference Standard Spectrum for Trichloroethene

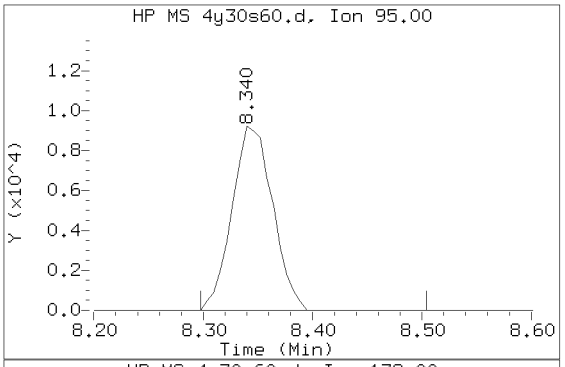


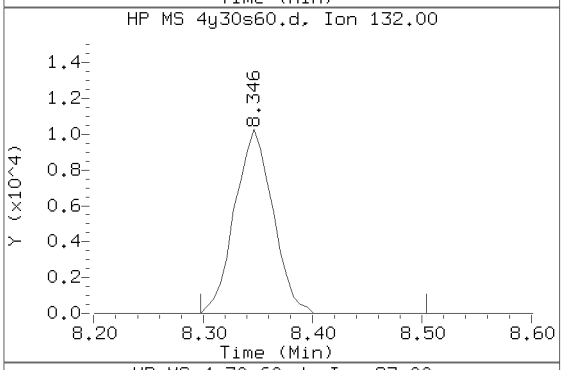
Sample Spectrum (Background Subtracted)

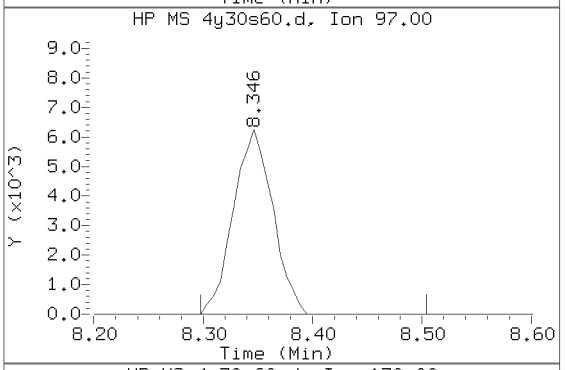


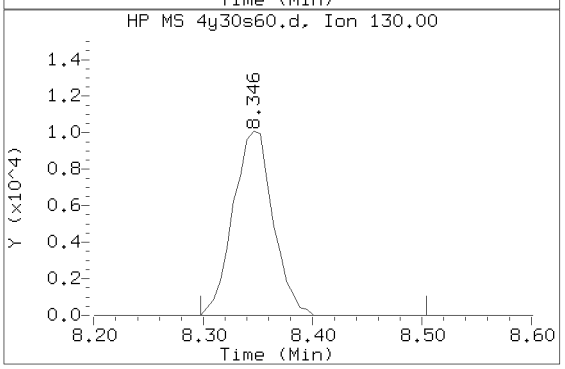
Sample Spectrum (Unaltered)











Data File: /chem/HP23297.i/19may30b.b/4y30s60.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 03:59 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Sample Name: 94J02 Lab Sample ID: 1063766

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 1111
Retention Time (minutes)	: 8.340
Relative Retention Time	: 0.00077
Quant Ion	: 95.00
Area (flag)	: 23768
On-Column Amount (ng)	: 4.9837

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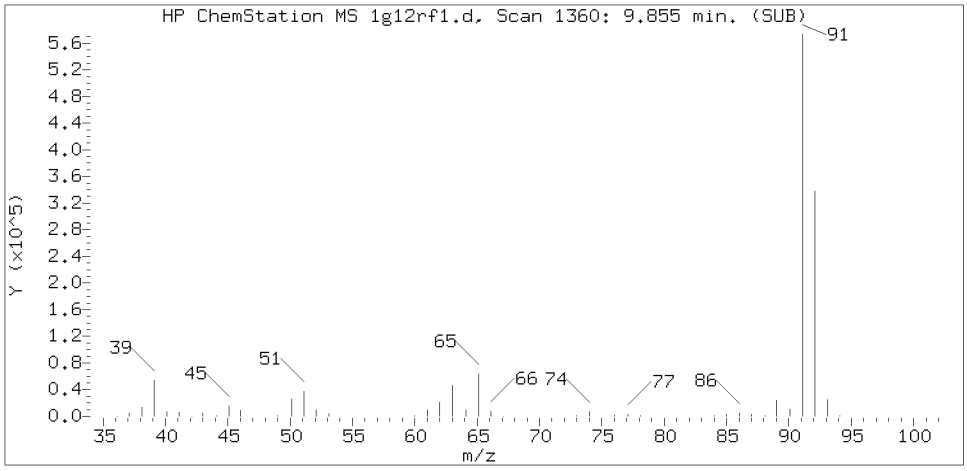
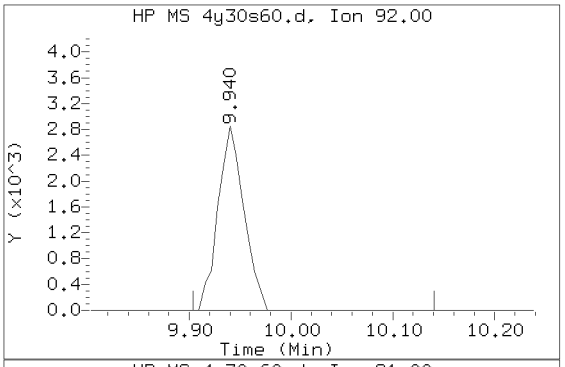
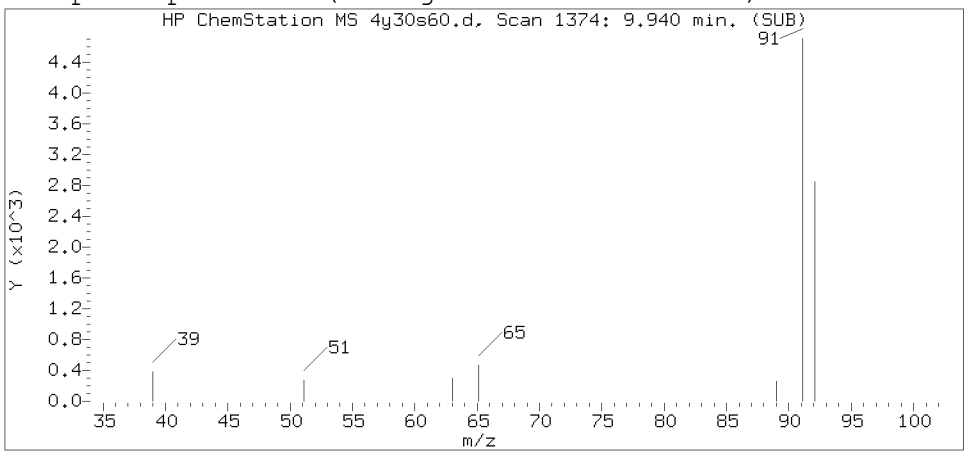
Target 3.5 esignature user ID: kas02648

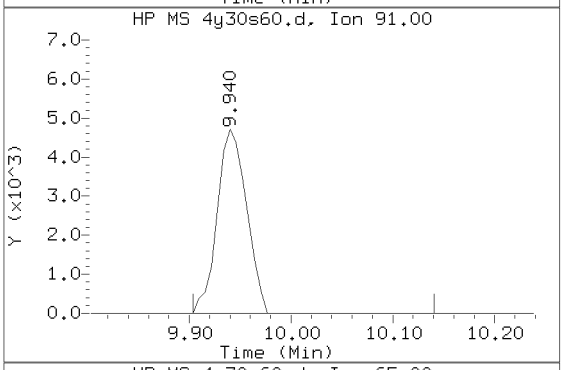
Reference Standard Spectrum for Toluene

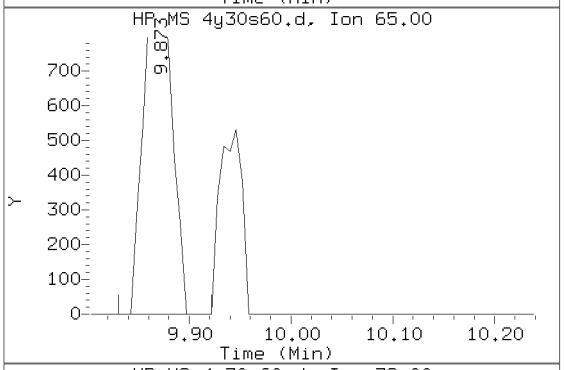




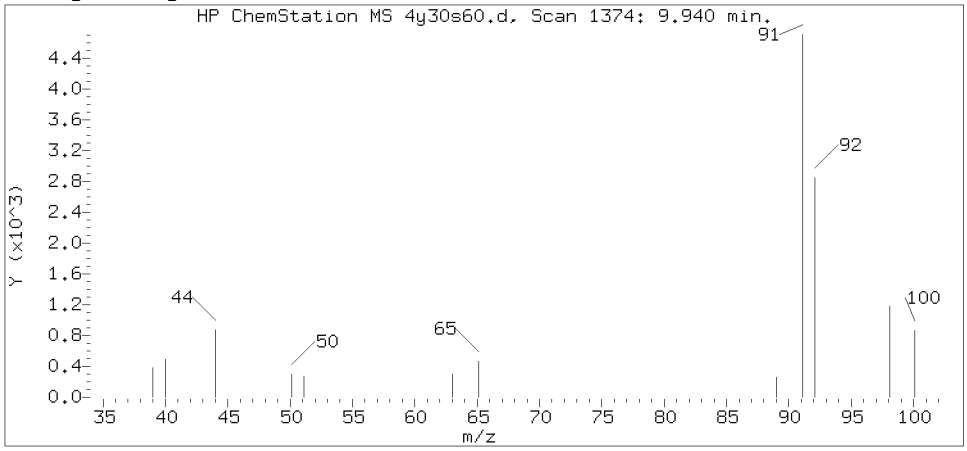
Sample Spectrum (Background Subtracted)

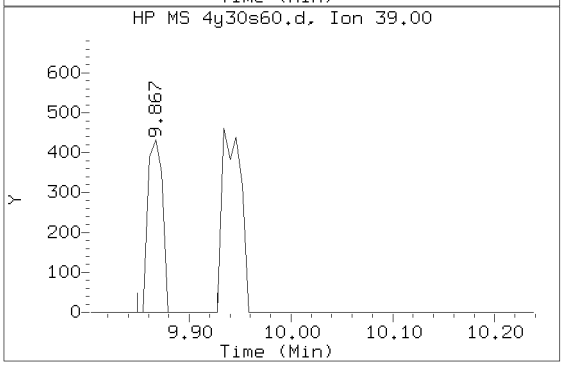






Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may30b.b/4y30s60.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 03:59 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Sample Name: 94J02 Lab Sample ID: 1063766

Compound Number	: 88
Compound Name	: Toluene
Scan Number	: 1374
Retention Time (minutes)	: 9.940
Relative Retention Time	: 0.00000
Quant Ion	: 92.00
Area (flag)	: 5043
On-Column Amount (ng)	: 0.4122

Digitally signed by Kevin A. Sposito on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kas02648

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

94J03

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1063767

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may30b.b/4y30s61.d

Level: (low/med) LOW Date Received: 05/22/19

Moisture: not dec. _____ Date Analyzed: 05/31/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	4	
75-35-4	1,1-Dichloroethene	1	
67-64-1	Acetone	1	J
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	0.3	J
75-34-3	1,1-Dichloroethane	9	
156-59-2	cis-1,2-Dichloroethene	18	
78-93-3	2-Butanone	0.5	J
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	9	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	4	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	0.6	J
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may30b.b/4y30s61.d
Injection date and time: **31-MAY-2019 04:22**
Data file Sample Info. Line: 94J03;1063767;1;0;;JCV94;;;4y30b41;
Instrument ID: **HP23297.i** Batch: **4191502AA**
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Blank Data file reference: **/chem/HP23297.i/19may30b.b/4y30b41.d**

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 30-MAY-2019 23:57
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may30b.b/4y30c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.374(0.000)	459	65	355101 (-11)	250.00	
66) Fluorobenzene	7.866(0.006)	1033	96	1067120 (-5)	50.00	
100) Chlorobenzene-d5	11.309(0.000)	1599	117	858242 (-6)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189(0.000)	1908	152	465862 (-7)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977(-0.001)	113	263361	50.068	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434(0.000)	102	65652	51.080	102%		80 - 120
83) Toluene-d8	(3)	9.867(0.000)	98	1090253	49.496	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.307(0.000)	95	392319	46.728	93%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)	2.317(-0.000)	62	30197	3.919	3.92			0.2	1
17) 1,1-Dichloroethene	(2)	3.656(0.000)	96	5457	1.466	1.47			0.2	1
18) Acetone	(1)	3.698(-0.000)	58	1311	1.326	1.33		J	0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)	4.769(0.000)	96	1219	0.274	0.27		J	0.2	1
36) 1,1-Dichloroethane	(2)	5.438(0.000)	63	76230	9.224	9.22			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.278(-0.000)	96	91637	17.871	17.87			0.2	1
44) 2-Butanone	(2)	6.266(-0.001)	43	3203M	0.508	0.51		J	0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	6.983(-0.000)	97	62636	9.193	9.19			0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	8.346(-0.000)	95	18396	3.704	3.70			0.2	1
75) 1,4-Dioxane	(1)			Not Detected					29	250
88) Toluene	(3)	9.940(-0.000)	92	7763	0.609	0.61		J	0.2	1
93) Tetrachloroethene	(3)			Not Detected					0.2	1
104) Ethylbenzene	(3)			Not Detected					0.4	1
106) m+p-Xylene	(3)			Not Detected					1	5
107) o-Xylene	(3)			Not Detected					0.4	1
108) Xylene (Total)	(3)			Not Detected					1	5
138) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
148) Naphthalene	(4)			Not Detected					1	5

M = Compound was manually integrated.

Digitally signed by Kevin A. Sposito on 05/31/2019 at 12:37. Target 3.5 esignature user ID: kas02648

Data file: /chem/HP23297.i/19may30b.b/4y30s61.d Injection date and time: **31-MAY-2019 04:22**
Data file Sample Info. Line: 94J03;1063767;1;0;;JCV94;;;4y30b41; Instrument ID: **HP23297.i** Batch: **4191502AA**
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Blank Data file reference: **/chem/HP23297.i/19may30b.b/4y30b41.d**

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 30-MAY-2019 23:57
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may30b.b/4y30c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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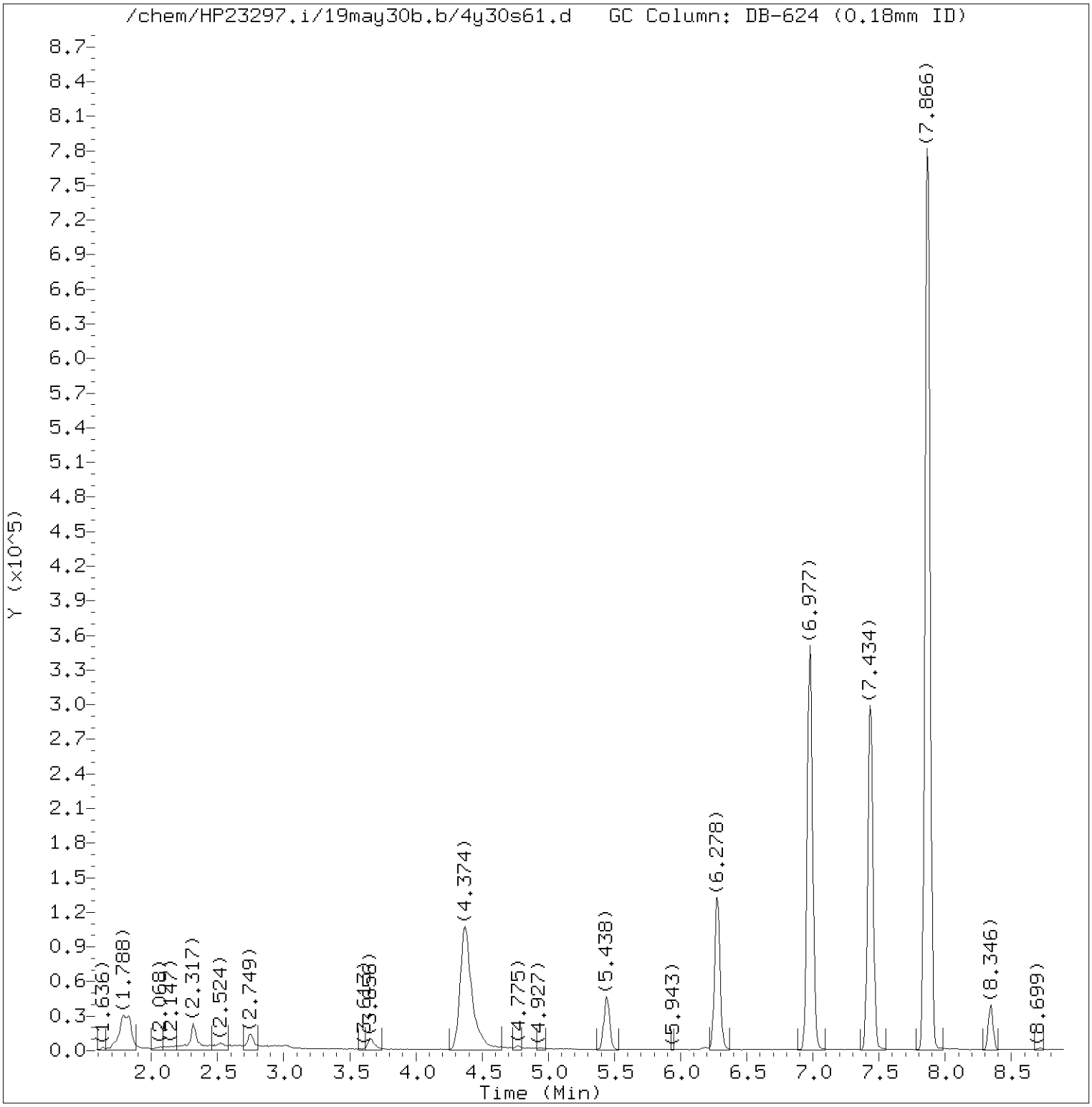
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Kevin A. Sposito on 05/31/2019 at 12:37. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/31/2019 at 12:59. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

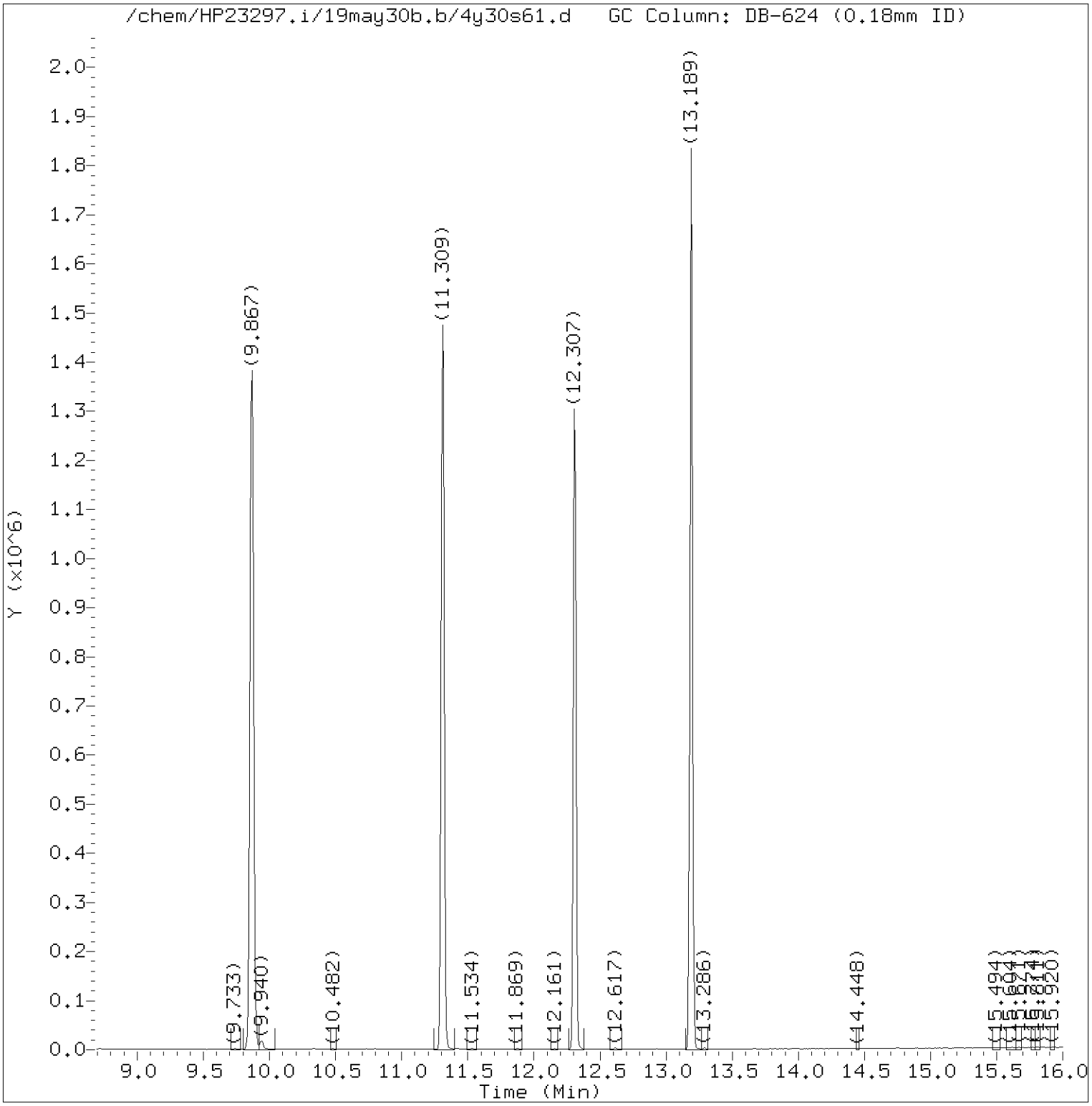
Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30s61.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:22 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Sample Name: 94J03 Lab Sample ID: 1063767

Digitally signed by Kevin A. Sposito
on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30s61.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:22 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Sample Name: 94J03 Lab Sample ID: 1063767

Digitally signed by Kevin A. Sposito
on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30s61.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:22 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Sample Name: 94J03 Lab Sample ID: 1063767

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	2.317	62	30197	3.919
17) 1,1-Dichloroethene	(2)	3.656	96	5457	1.466
18) Acetone	(1)	3.698	58	1311	1.326
29)*t-Butyl alcohol-d10	(1)	4.374	65	355101	250.000
32) trans-1,2-Dichloroethene	(2)	4.769	96	1219	0.274
36) 1,1-Dichloroethane	(2)	5.438	63	76230	9.224
44) 2-Butanone	(2)	6.266	43	3203M	0.508
42) cis-1,2-Dichloroethene	(2)	6.278	96	91637	17.871
52)$Dibromofluoromethane	(2)	6.977	113	263361	50.068
53) 1,1,1-Trichloroethane	(2)	6.983	97	62636	9.193
57)$1,2-Dichloroethane-d4	(2)	7.434	102	65652	51.080
66)*Fluorobenzene	(2)	7.866	96	1067120	50.000
71) Trichloroethene	(2)	8.346	95	18396	3.704
83)$Toluene-d8	(3)	9.867	98	1090253	49.496
88) Toluene	(3)	9.940	92	7763	0.609
100)*Chlorobenzene-d5	(3)	11.309	117	858242	50.000
114)$4-Bromofluorobenzene	(3)	12.307	95	392319	46.728
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	465862	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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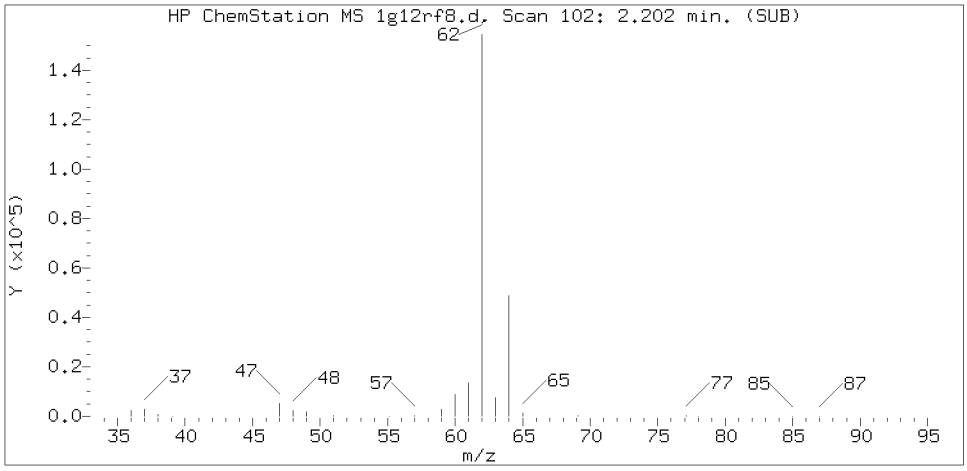
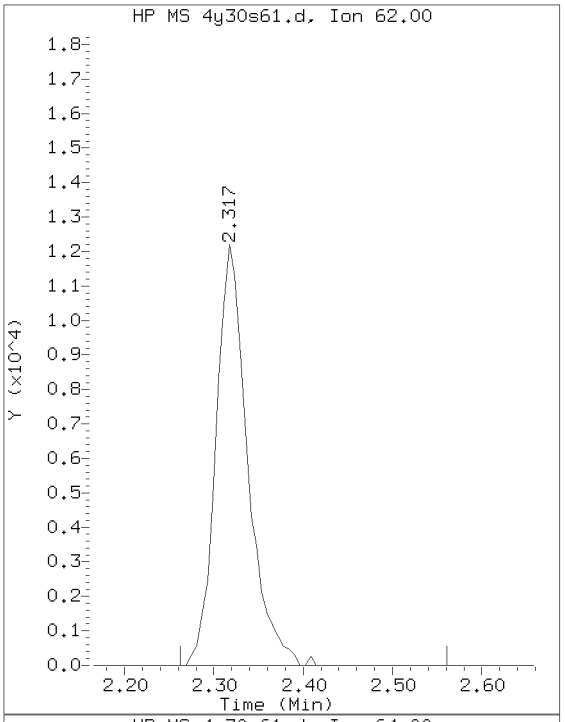
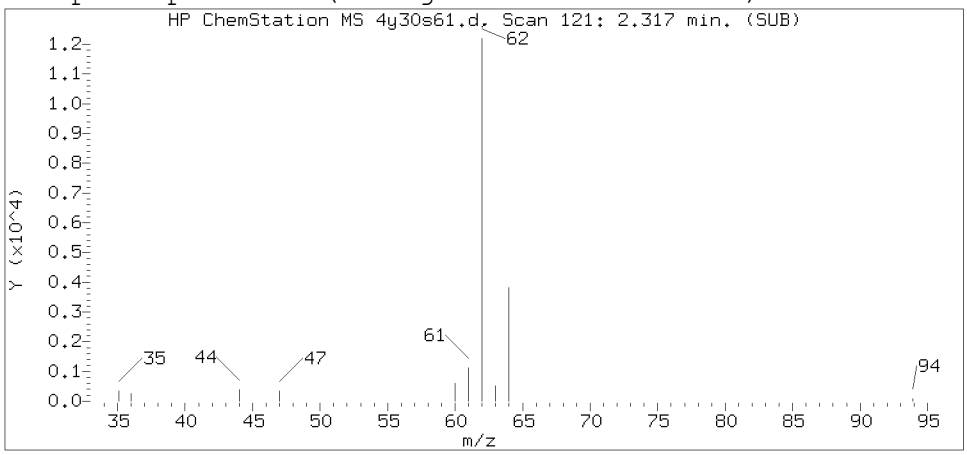
on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kas02648

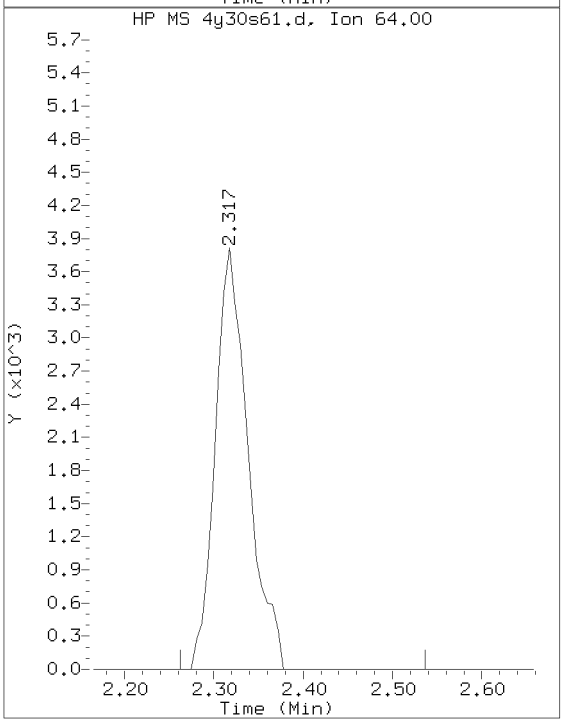
Reference Standard Spectrum for Vinyl Chloride





Sample Spectrum (Background Subtracted)





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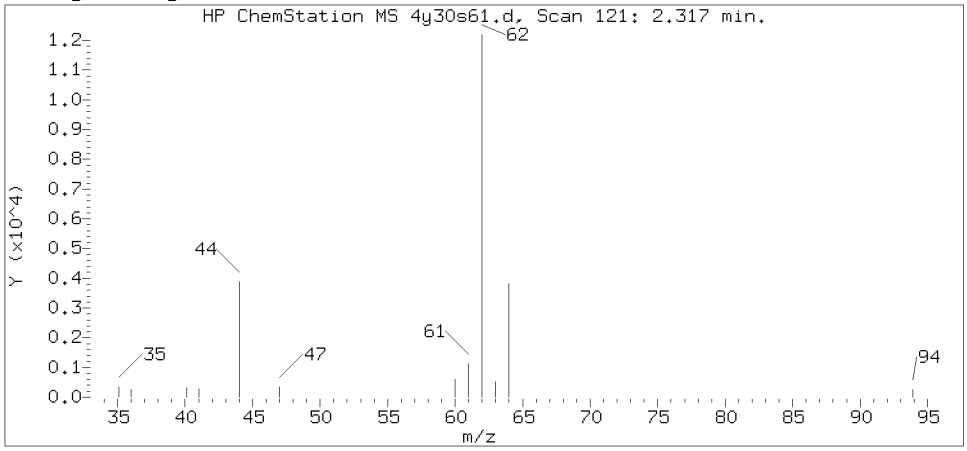

Data File: /chem/HP23297.i/19may30b.b/4y30s61.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:22 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Sample Name: 94J03 Lab Sample ID: 1063767

Compound Number	: 6
Compound Name	: Vinyl Chloride
Scan Number	: 121
Retention Time (minutes)	: 2.317
Relative Retention Time	:-0.00024
Quant Ion	: 62.00
Area (flag)	: 30197
On-Column Amount (ng)	: 3.9190

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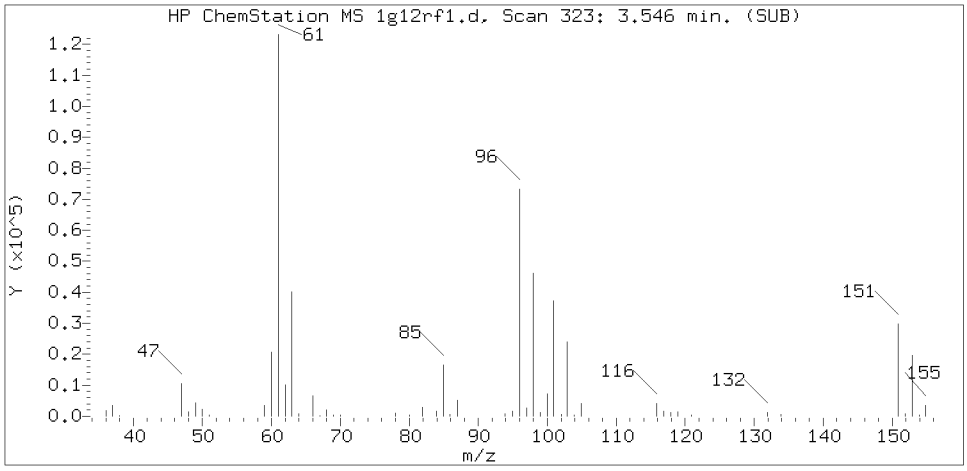
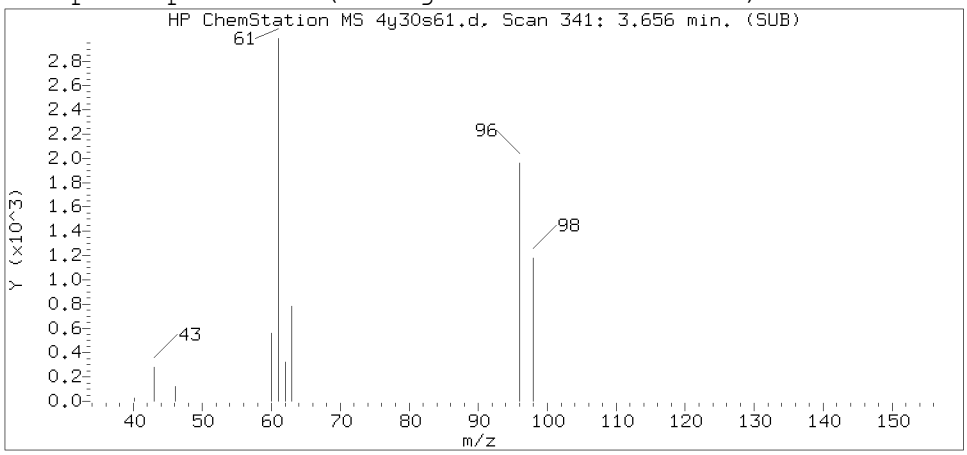
Target 3.5 esignature user ID: kas02648

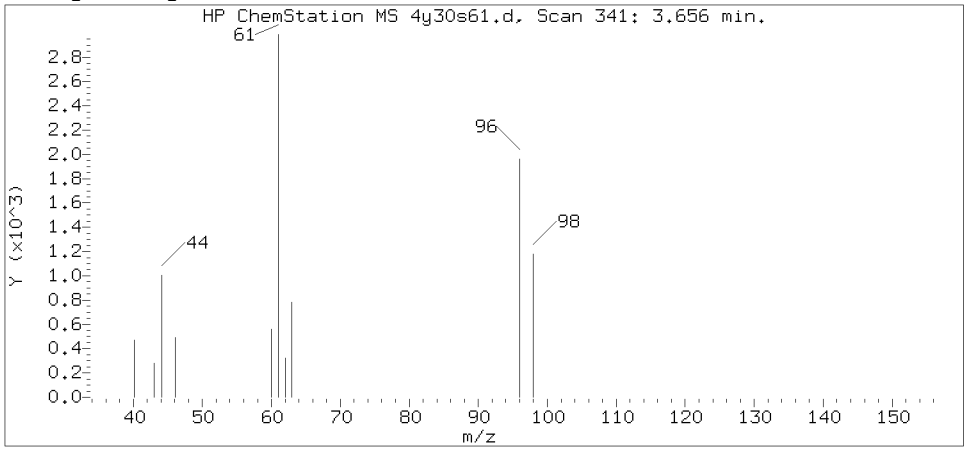
Reference Standard Spectrum for 1,1-Dichloroethene

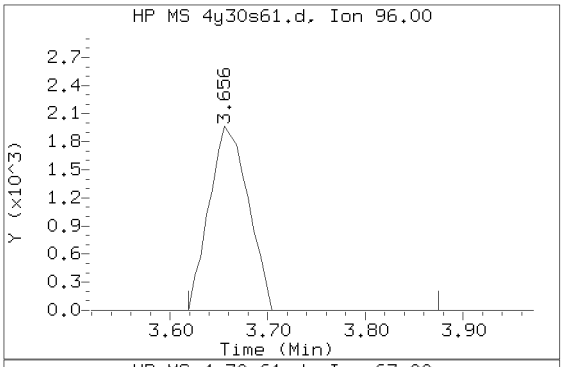


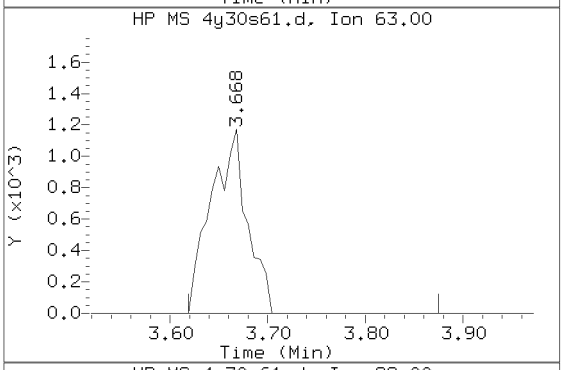
Sample Spectrum (Background Subtracted)

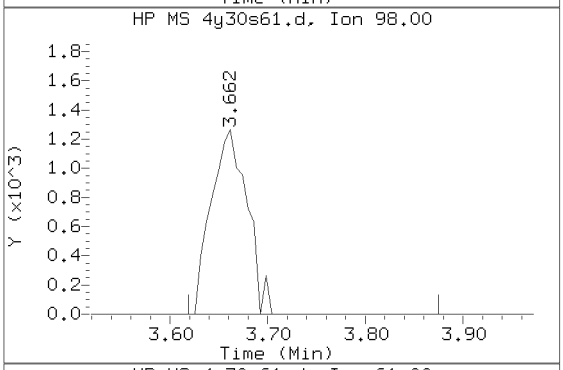


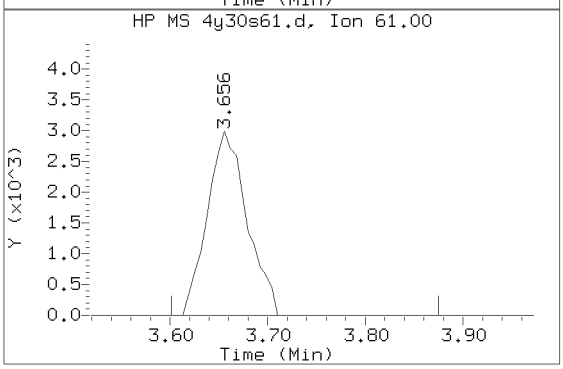
Sample Spectrum (Unaltered)











Data File: /chem/HP23297.i/19may30b.b/4y30s61.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:22 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Sample Name: 94J03 Lab Sample ID: 1063767

Compound Number	: 17
Compound Name	: 1,1-Dichloroethene
Scan Number	: 341
Retention Time (minutes)	: 3.656
Relative Retention Time	: 0.00040
Quant Ion	: 96.00
Area (flag)	: 5457
On-Column Amount (ng)	: 1.4663

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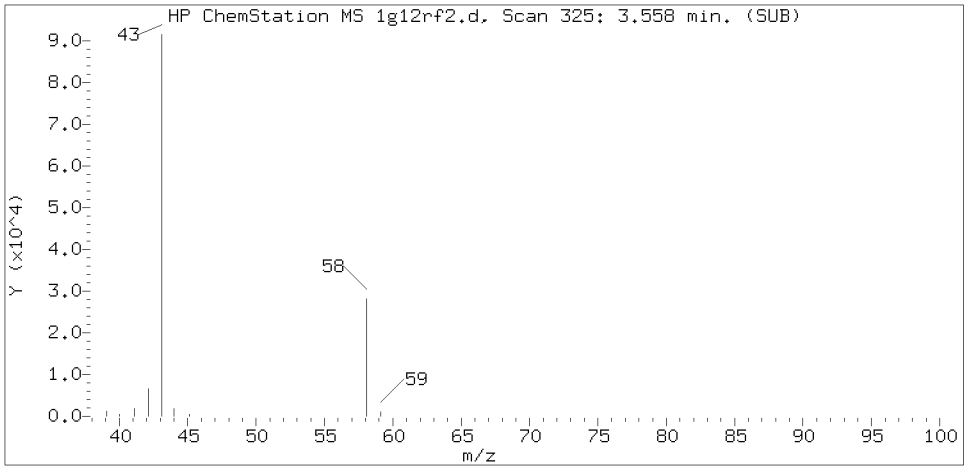
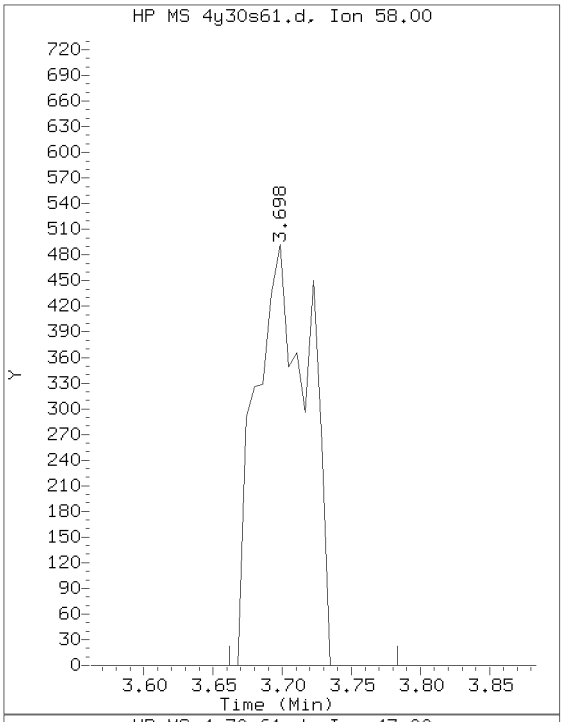
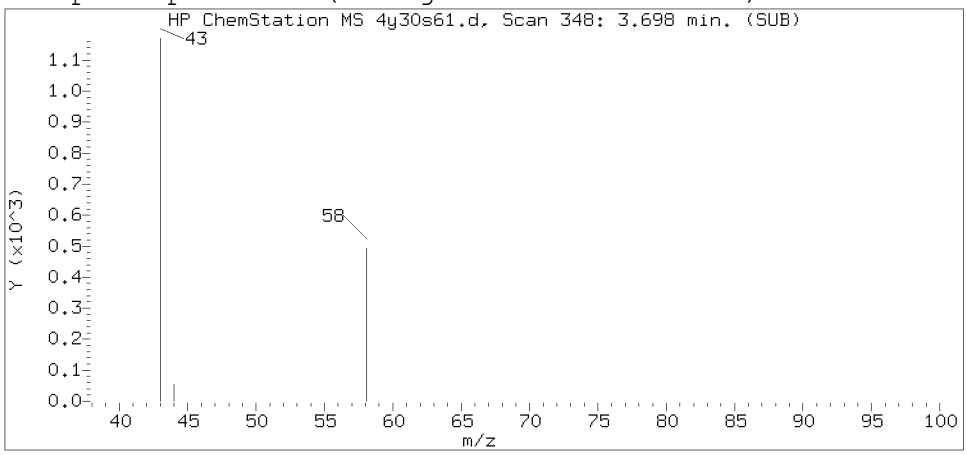
Target 3.5 esignature user ID: kas02648

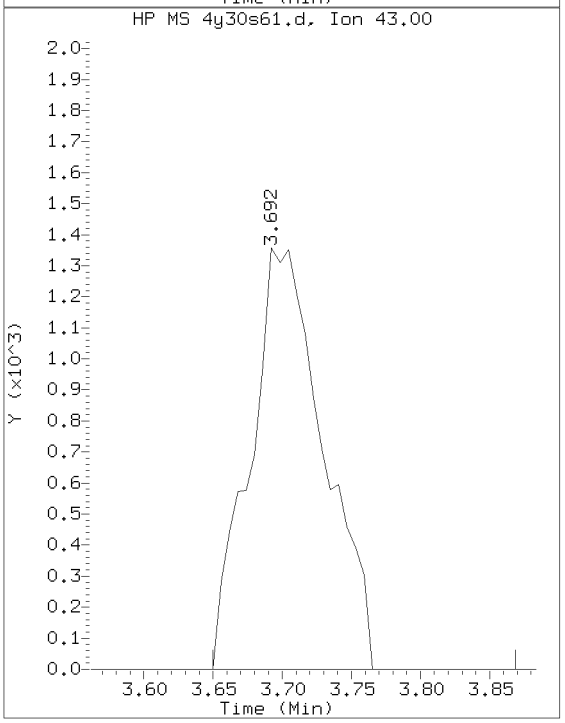
Reference Standard Spectrum for Acetone



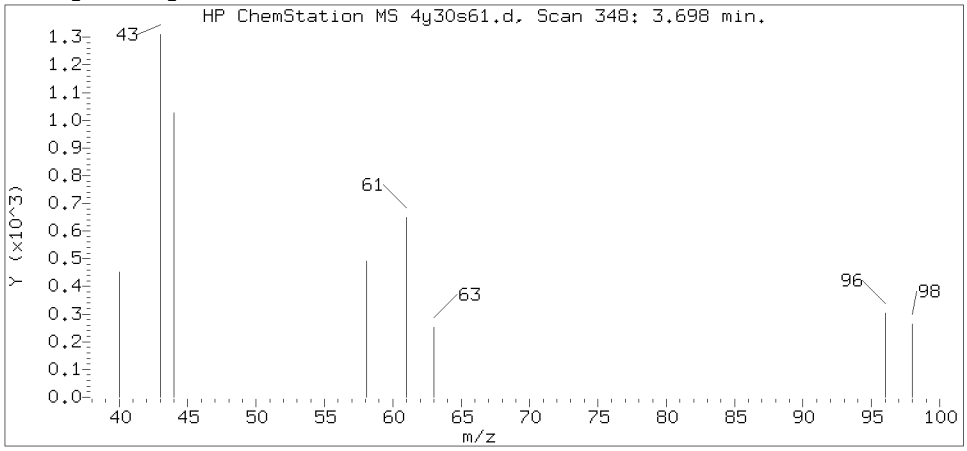


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP23297.i/19may30b.b/4y30s61.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:22 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Sample Name: 94J03 Lab Sample ID: 1063767

Compound Number	: 18
Compound Name	: Acetone
Scan Number	: 348
Retention Time (minutes)	: 3.698
Relative Retention Time	:-0.00001
Quant Ion	: 58.00
Area (flag)	: 1311
On-Column Amount (ng)	: 1.3260

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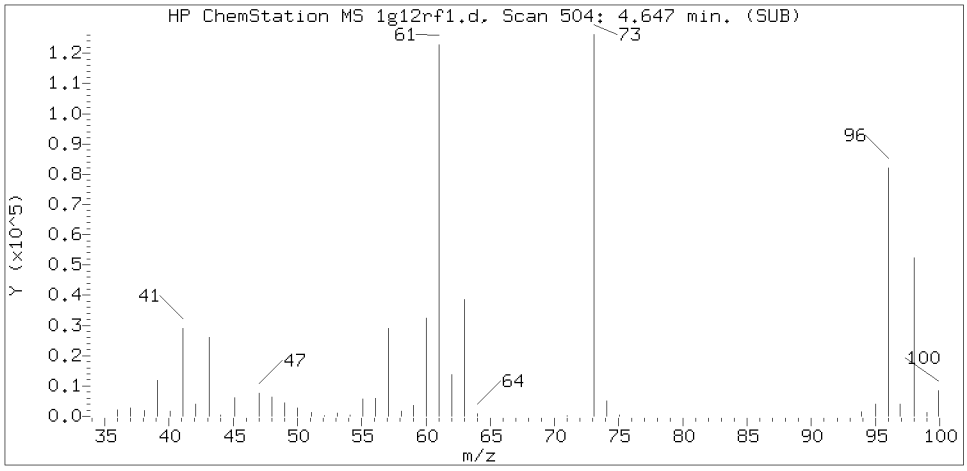
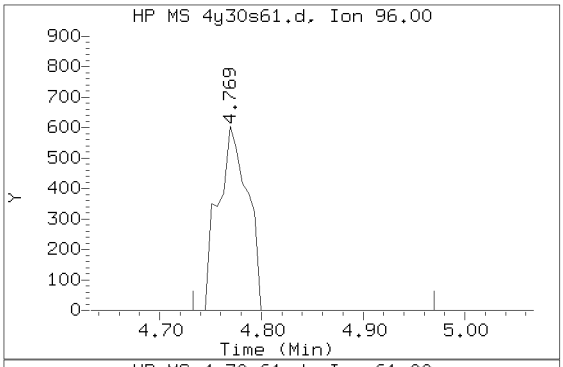
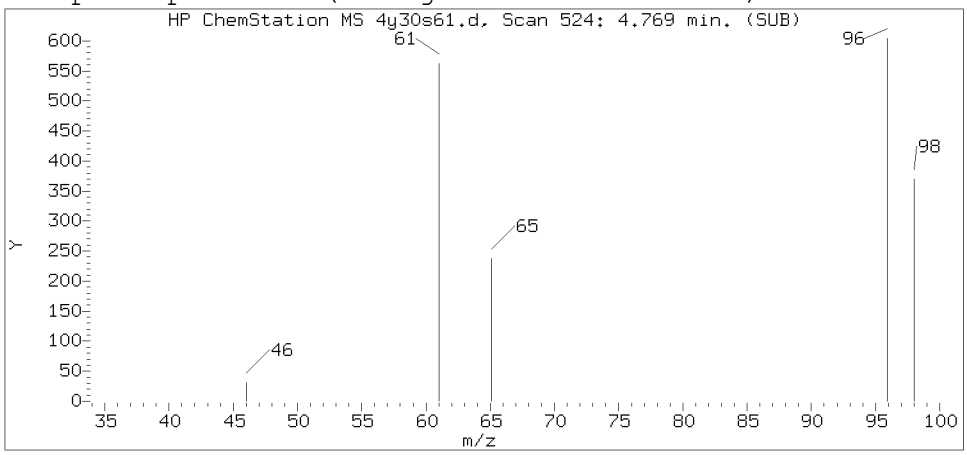
Target 3.5 esignature user ID: kas02648

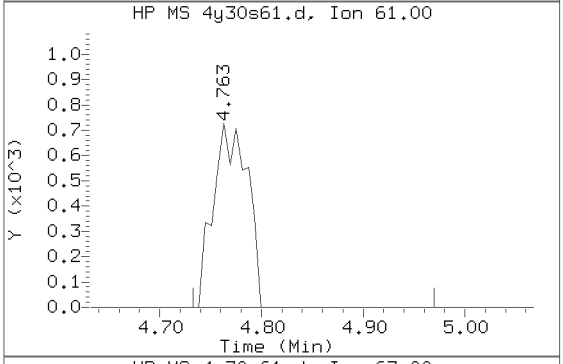
Reference Standard Spectrum for trans-1,2-Dichloroethene

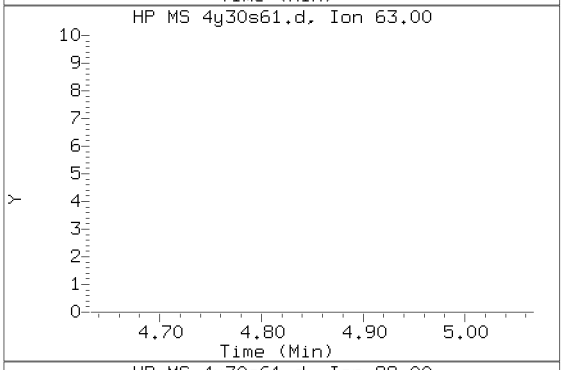




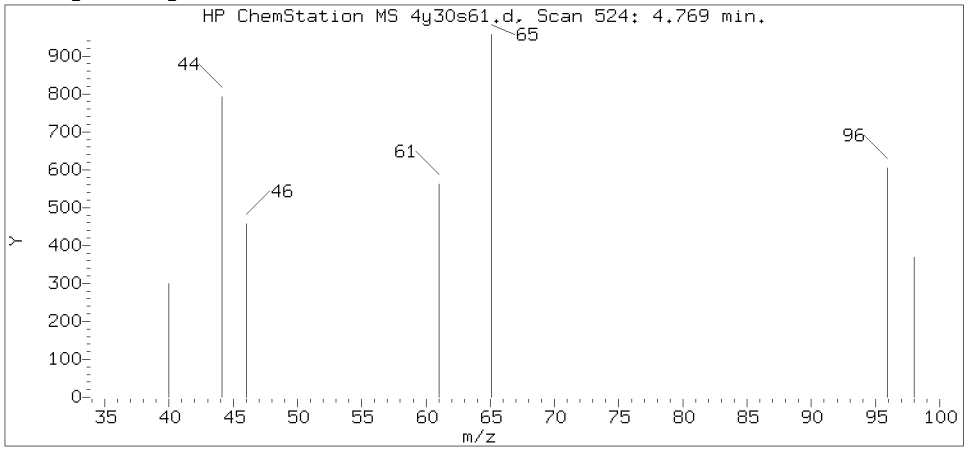
Sample Spectrum (Background Subtracted)

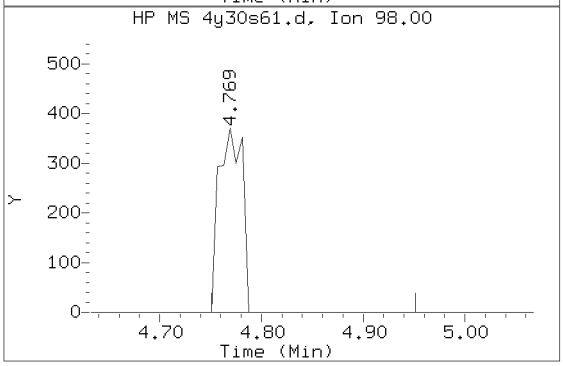






Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may30b.b/4y30s61.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:22 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Sample Name: 94J03 Lab Sample ID: 1063767

Compound Number	: 32
Compound Name	: trans-1,2-Dichloroethene
Scan Number	: 524
Retention Time (minutes)	: 4.769
Relative Retention Time	: 0.00030
Quant Ion	: 96.00
Area (flag)	: 1219
On-Column Amount (ng)	: 0.2741

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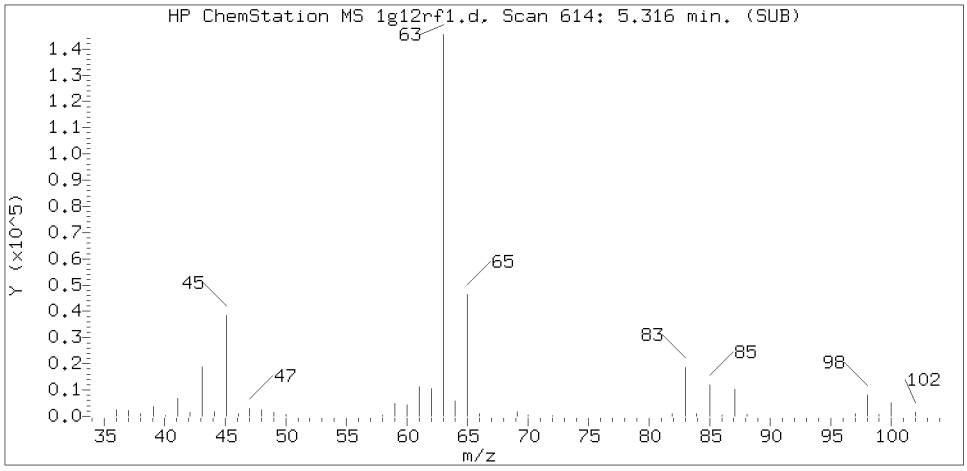
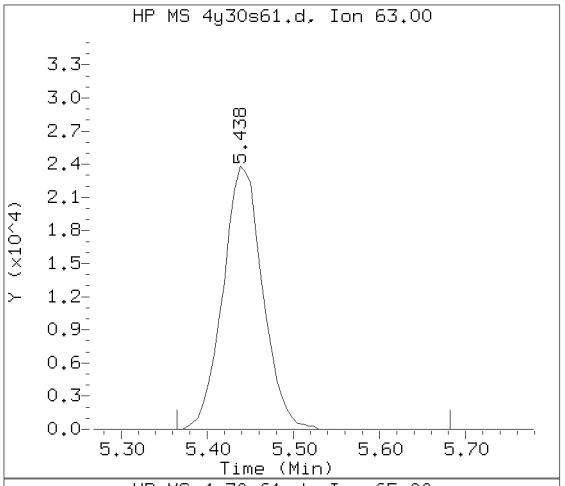
Target 3.5 esignature user ID: kas02648

Reference Standard Spectrum for 1,1-Dichloroethane





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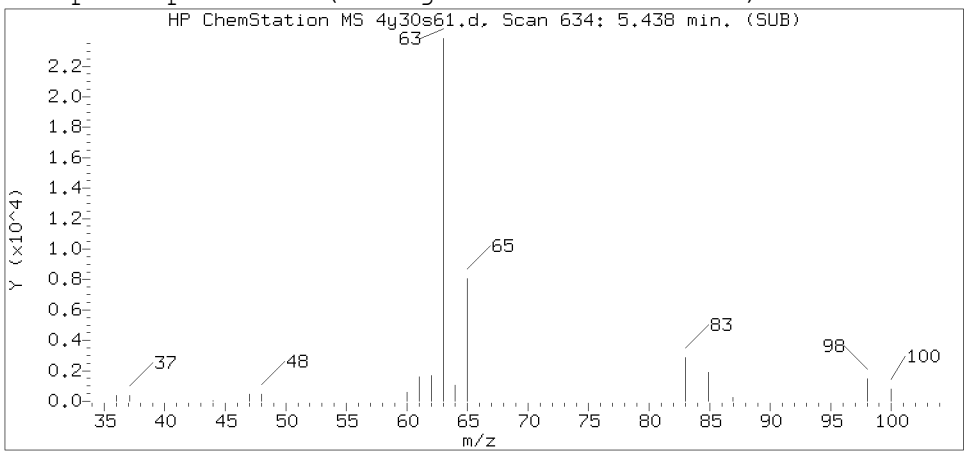
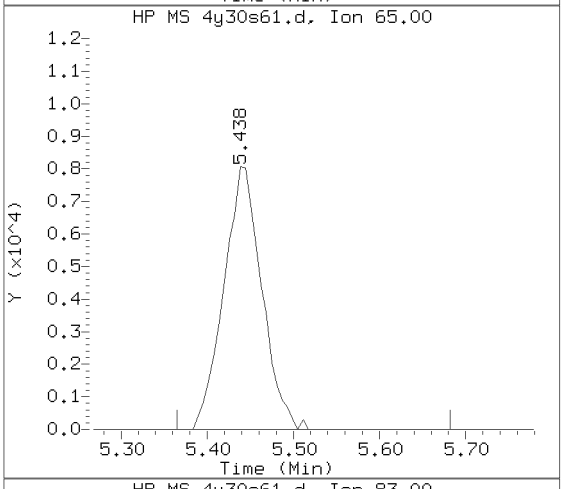
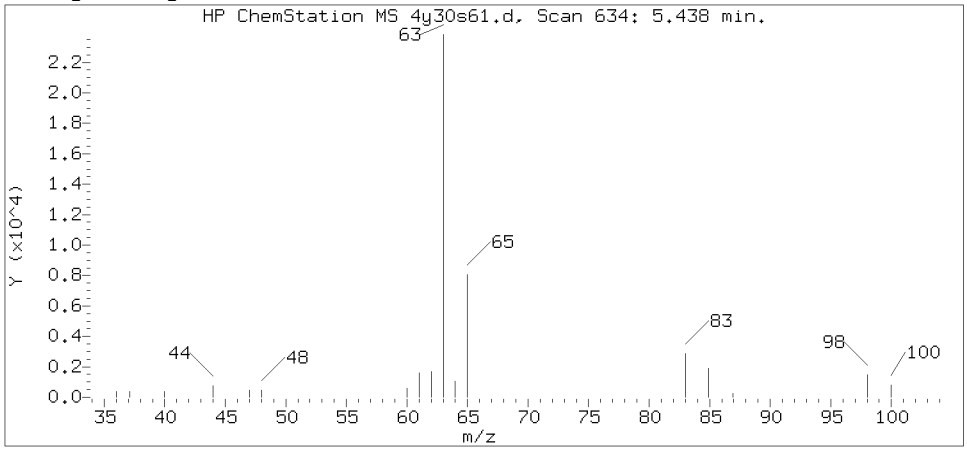
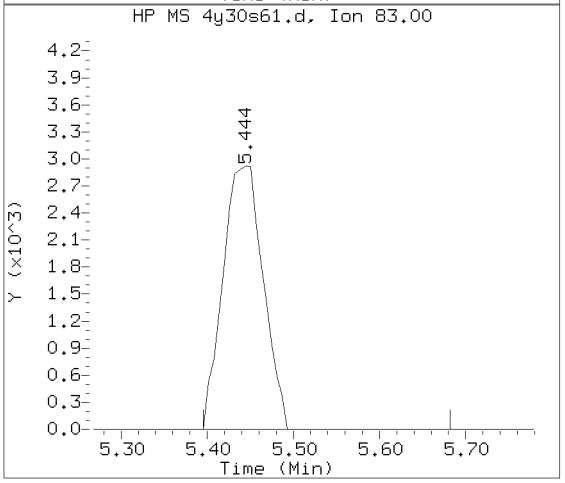




Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may30b.b/4y30s61.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:22 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Sample Name: 94J03 Lab Sample ID: 1063767

Compound Number	: 36
Compound Name	: 1,1-Dichloroethane
Scan Number	: 634
Retention Time (minutes)	: 5.438
Relative Retention Time	: 0.00023
Quant Ion	: 63.00
Area (flag)	: 76230
On-Column Amount (ng)	: 9.2237

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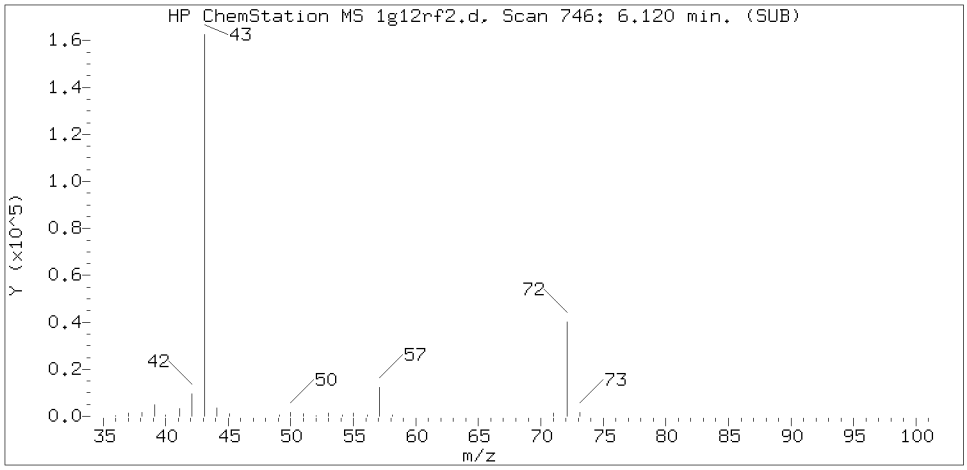
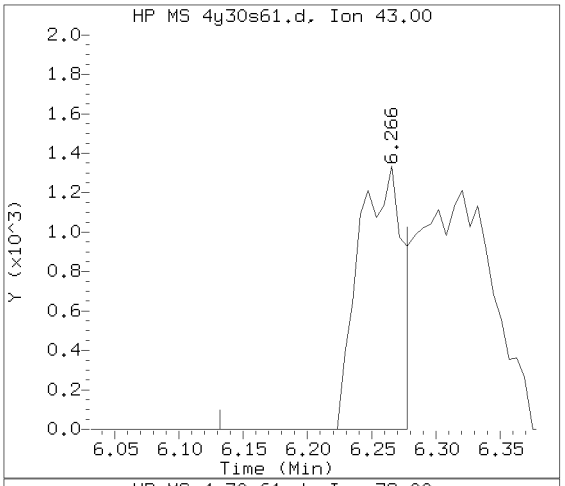
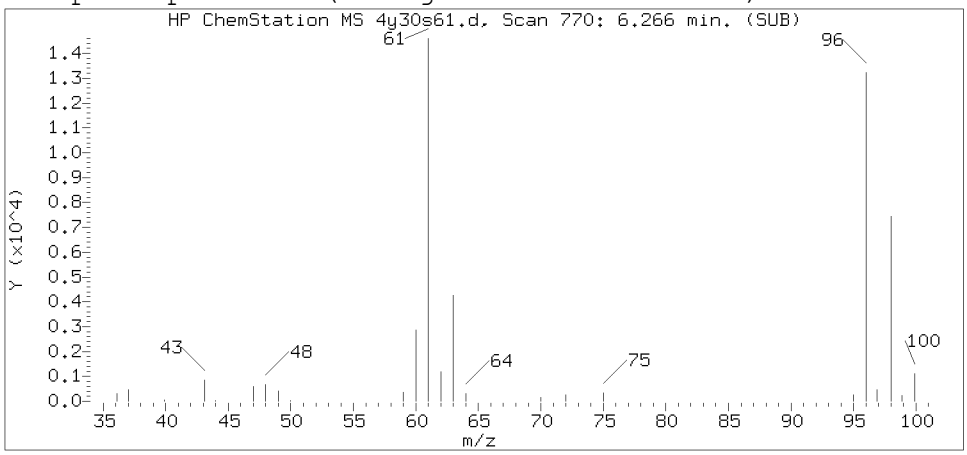
Target 3.5 esignature user ID: kas02648

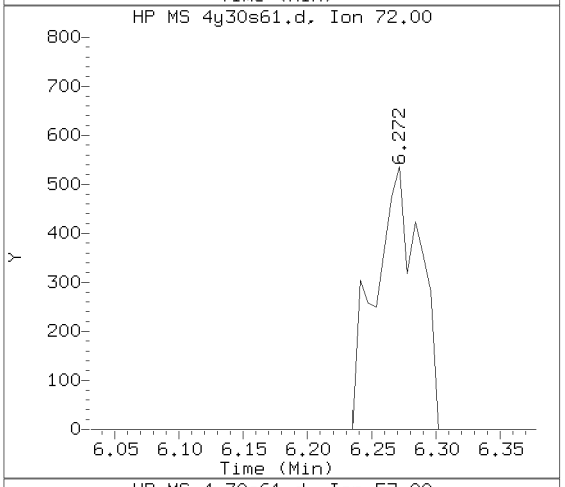
Reference Standard Spectrum for 2-Butanone



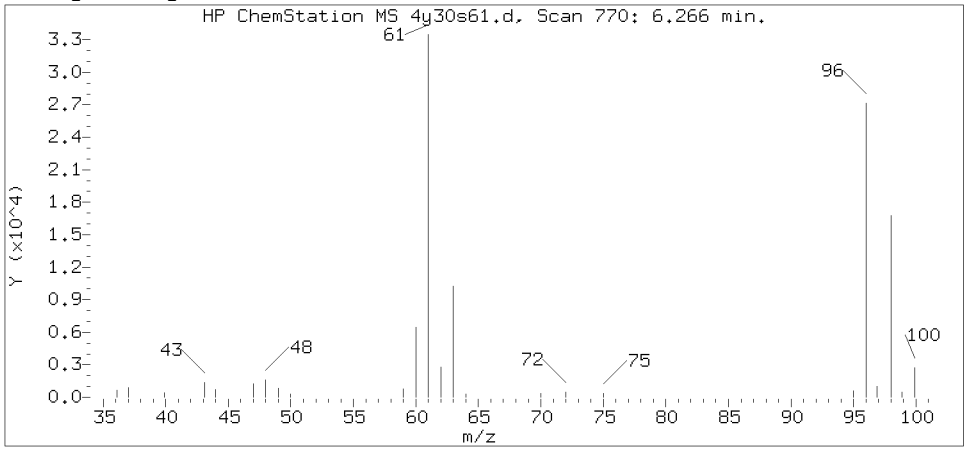


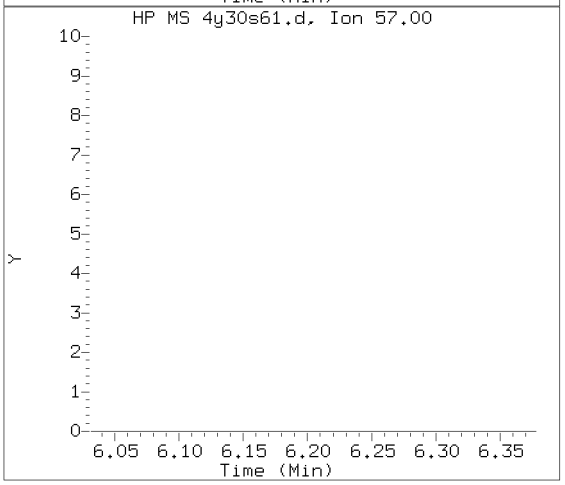
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may30b.b/4y30s61.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:22 Analyst ID: DVV10203

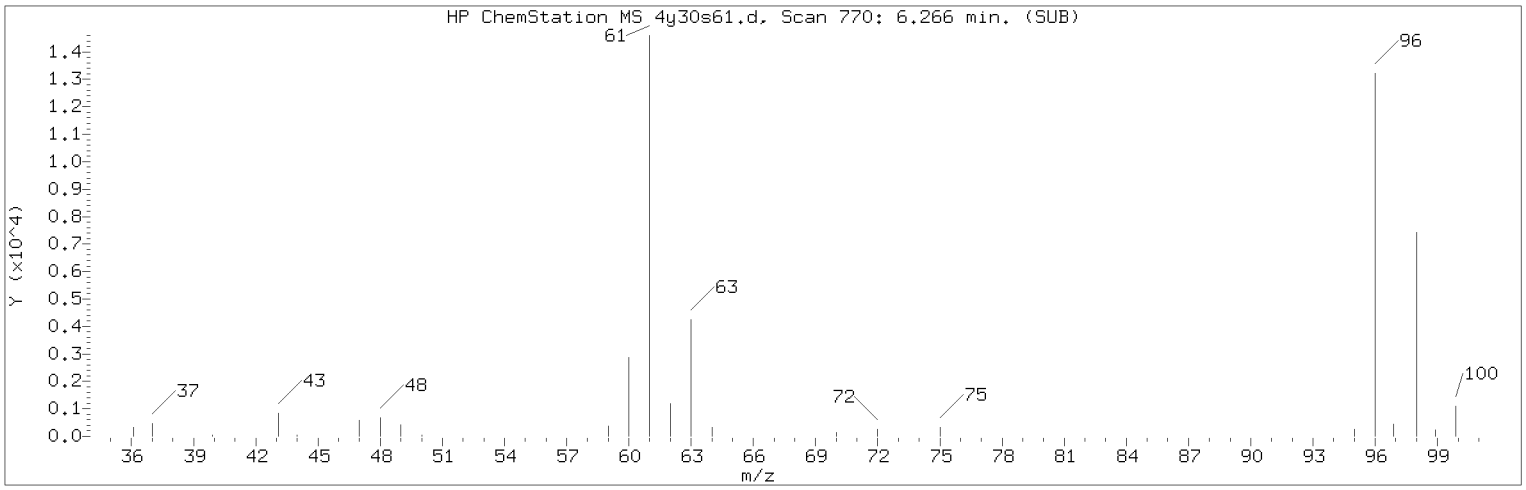
Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Sample Name: 94J03 Lab Sample ID: 1063767

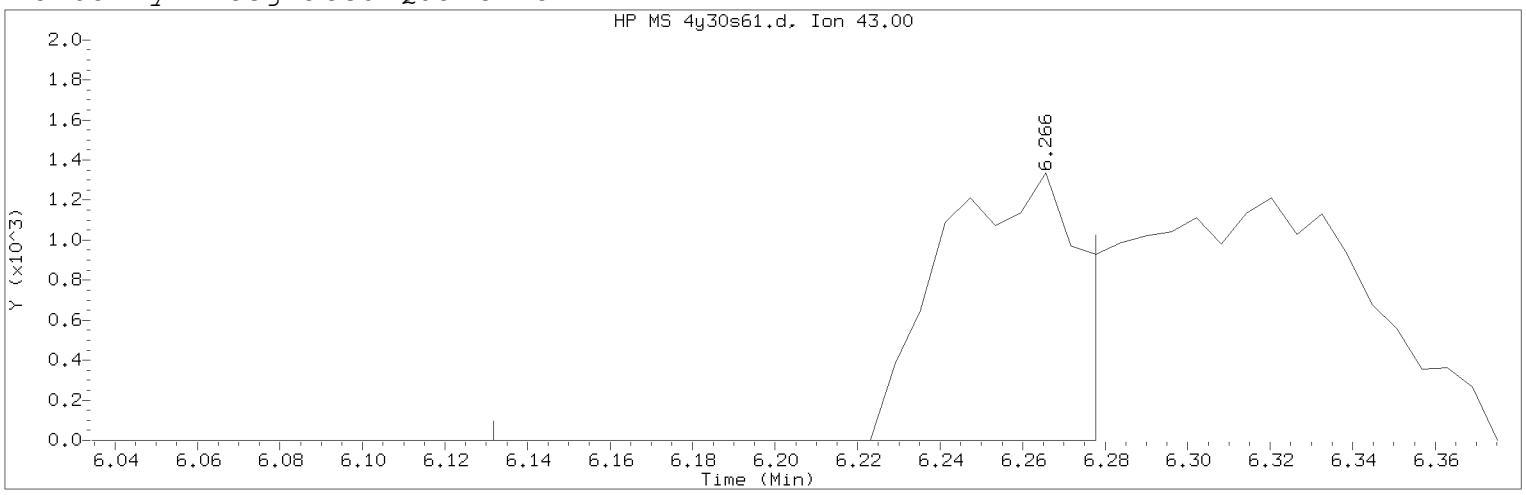
Compound Number : 44
Compound Name : 2-Butanone
Scan Number : 770
Retention Time (minutes): 6.266
Relative Retention Time :-0.00139
Quant Ion : 43.00
Area (flag) : 3203M
On-Column Amount (ng) : 0.5083

Digitally signed by Kevin A. Sposito on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may30b.b/4y30s61.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:22 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Sample Name: 94J03 Lab Sample ID: 1063767

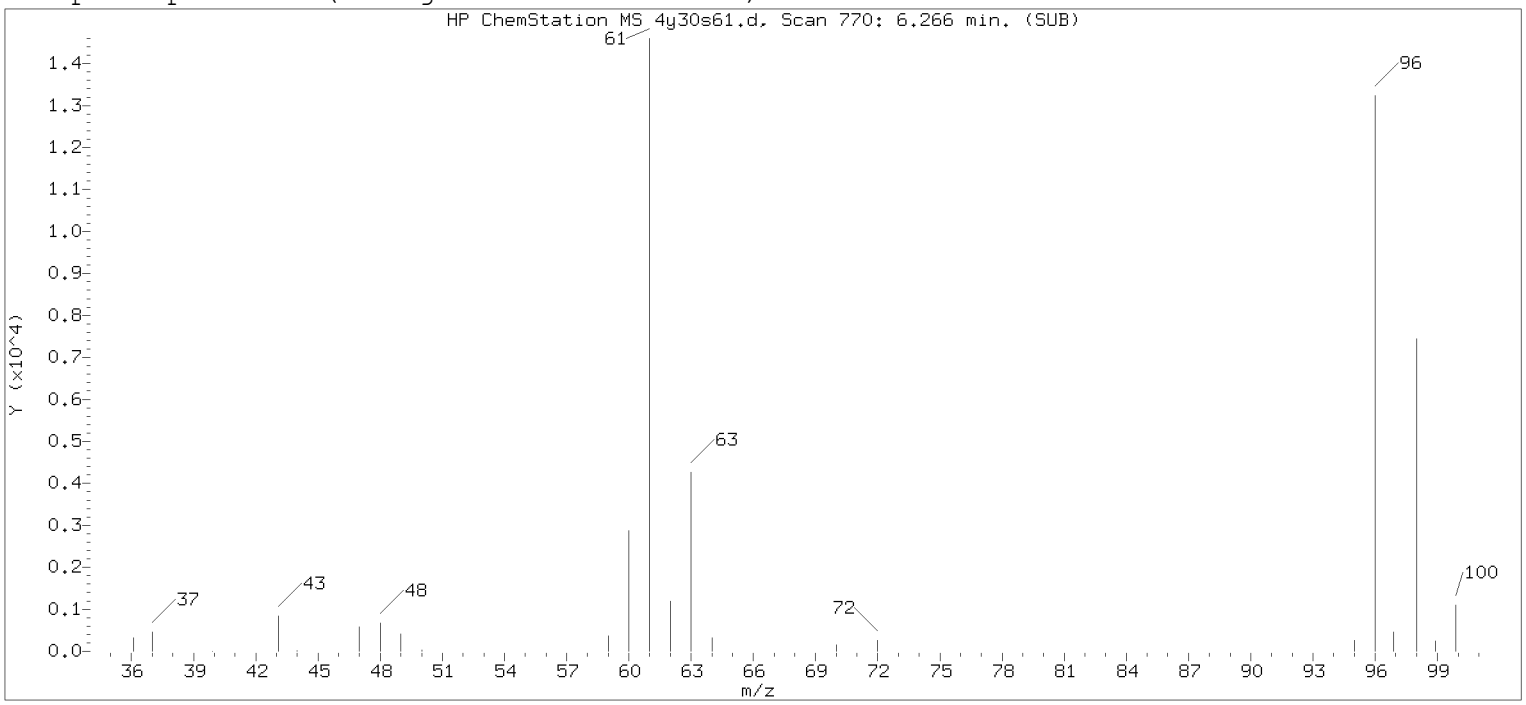
Compound Number : 44
Compound Name : 2-Butanone
Scan Number : 770
Retention Time (minutes): 6.266
Quant Ion : 43.00
Area (flag) : 3203M
On-Column Amount (ng) : 0.5083
Integration start scan : 747 Integration stop scan: 771
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

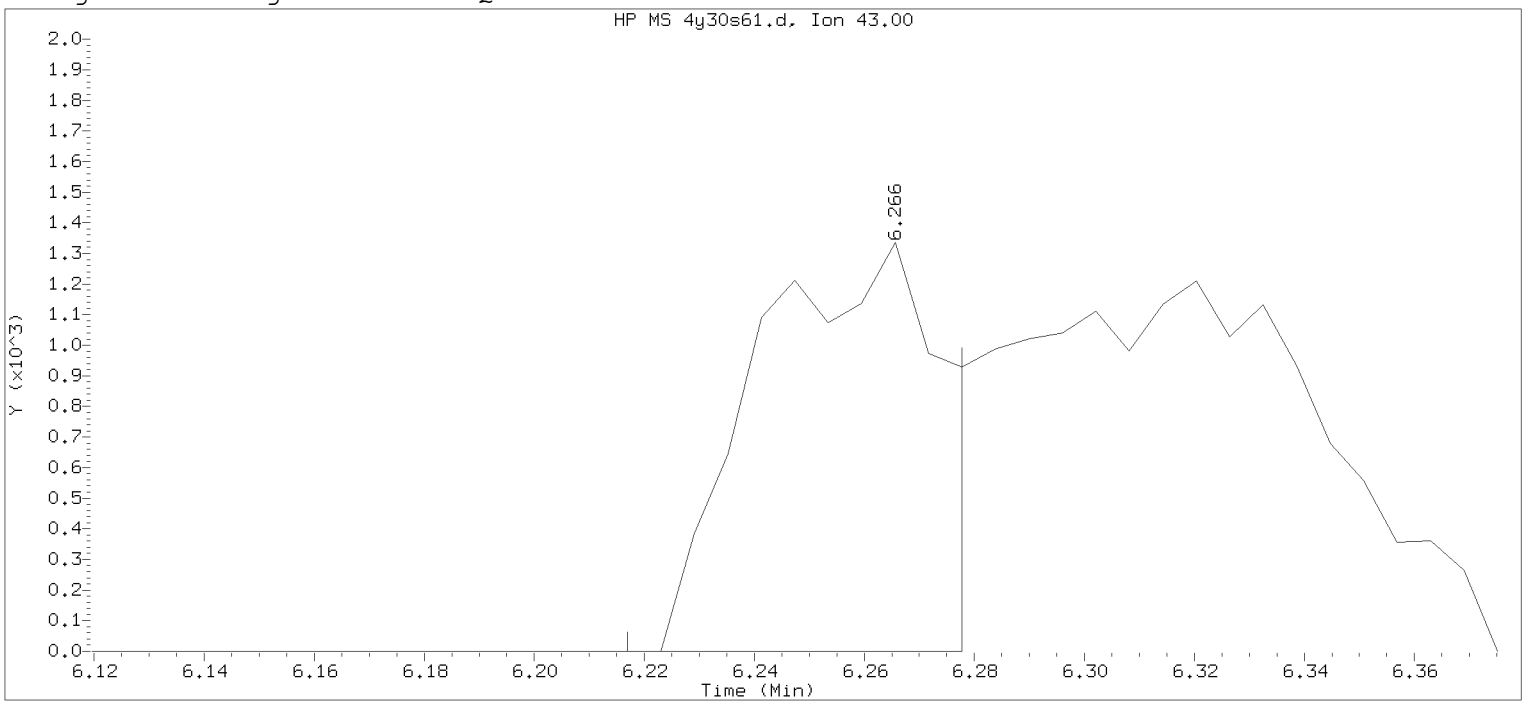
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/31/2019 at 12:59.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may30b.b/4y30s61.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:22 Analyst ID: DVV10203

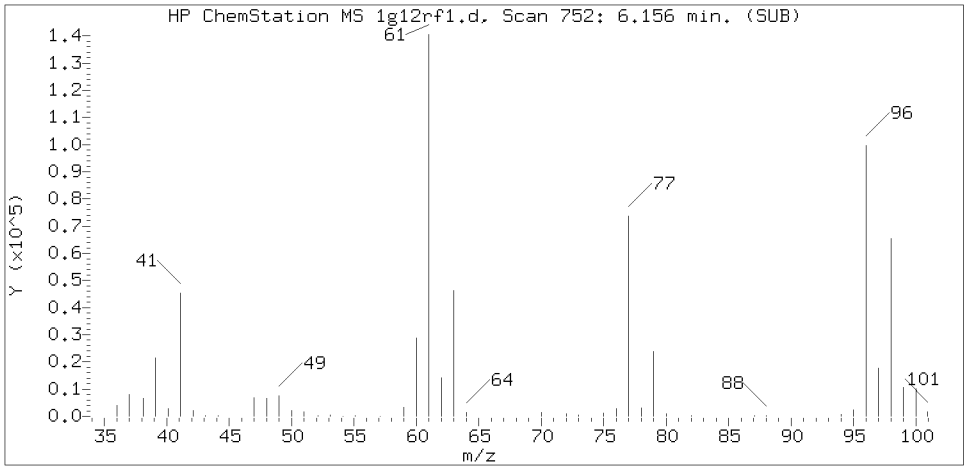
Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 04:40 Automation

Sample Name: 94J03 Lab Sample ID: 1063767

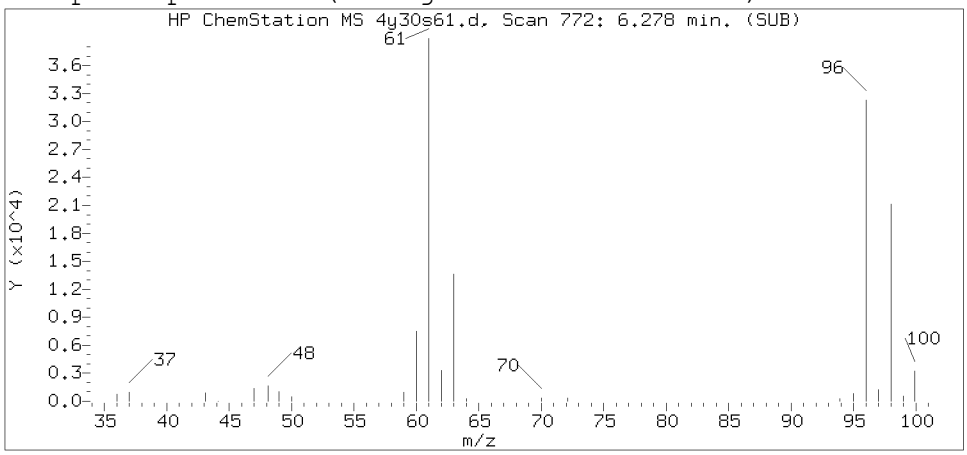
Compound Number : 44
Compound Name : 2-Butanone
Scan Number : 770
Retention Time (minutes): 6.266
Quant Ion : 43.00
Area : 3034
On-column Amount (ng) : 0.4814
Integration start scan : 761 Integration stop scan: 771
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kasposito

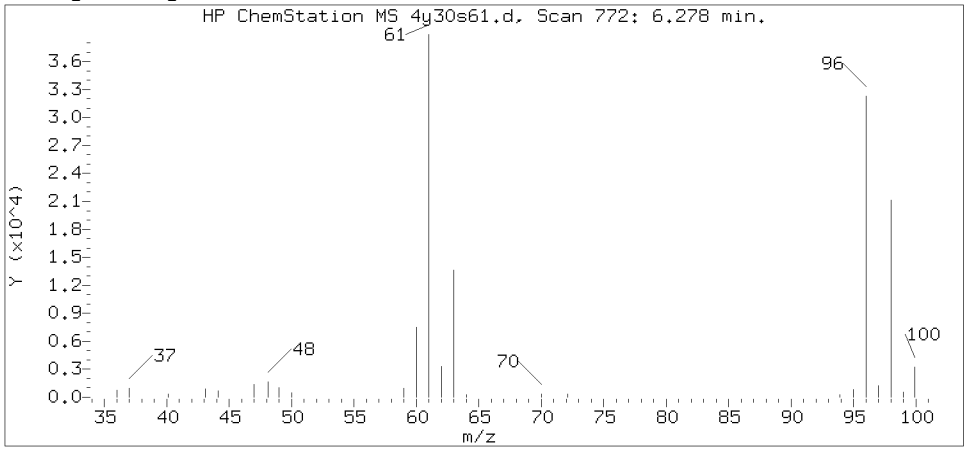
Reference Standard Spectrum for cis-1,2-Dichloroethene

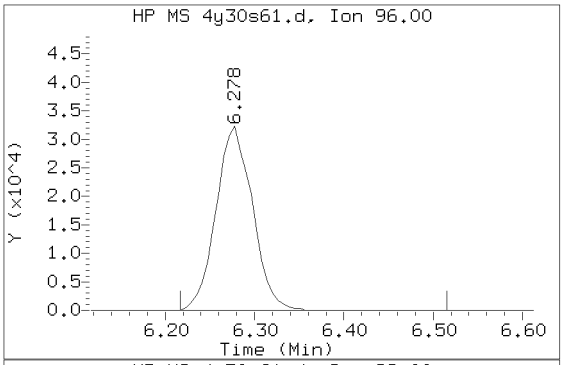


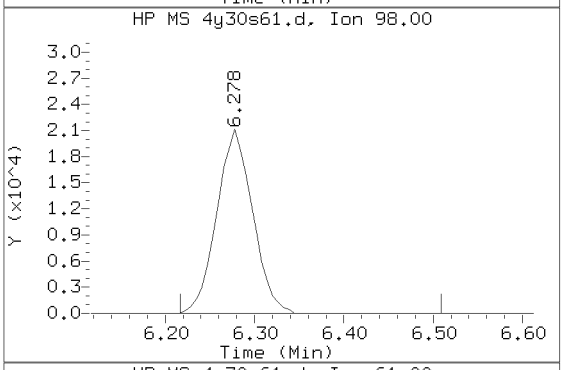
Sample Spectrum (Background Subtracted)

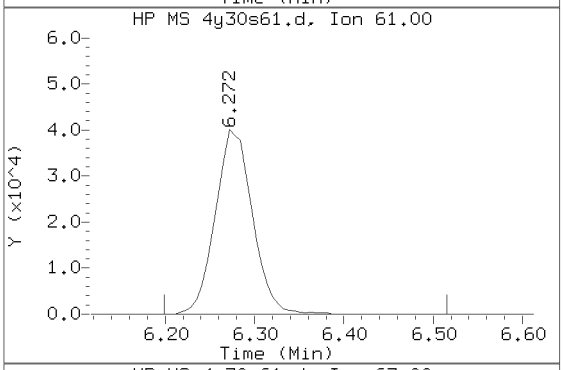


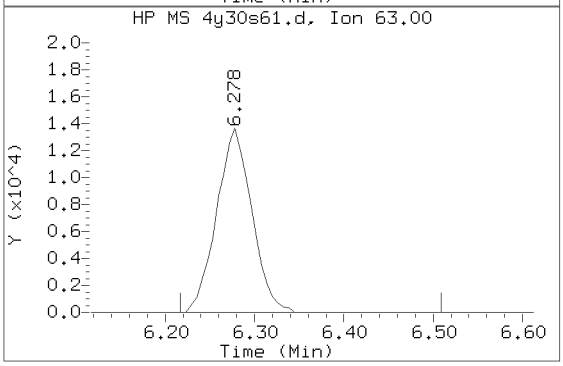
Sample Spectrum (Unaltered)











Data File: /chem/HP23297.i/19may30b.b/4y30s61.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:22 Analyst ID: DVV10203

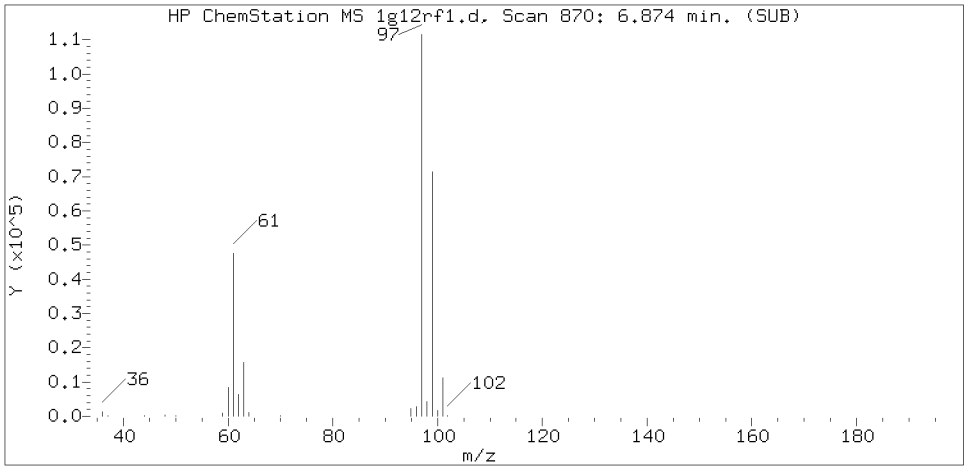
Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

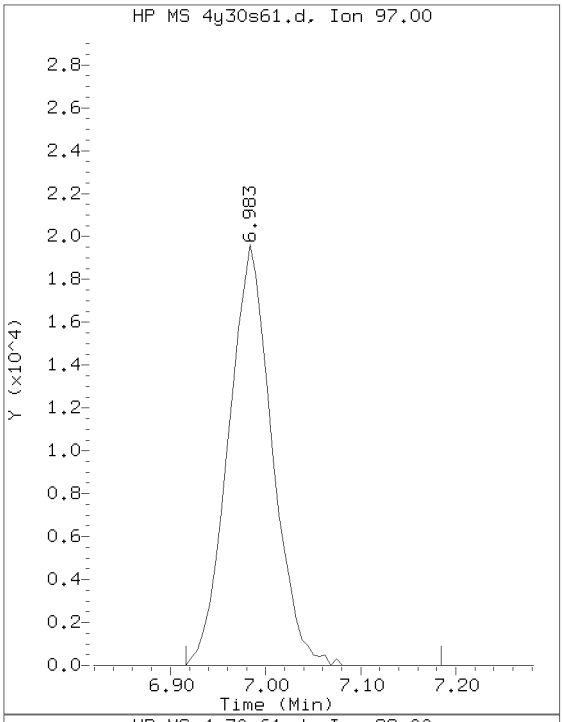
Sample Name: 94J03 Lab Sample ID: 1063767

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 772
Retention Time (minutes): 6.278
Relative Retention Time :-0.00062
Quant Ion : 96.00
Area (flag) : 91637
On-Column Amount (ng) : 17.8711

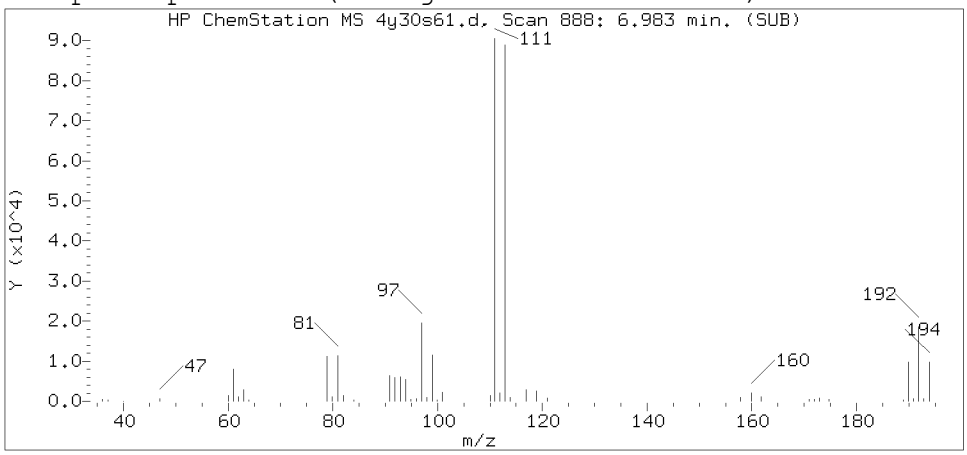
Digitally signed by Kevin A. Sposito on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kas02648

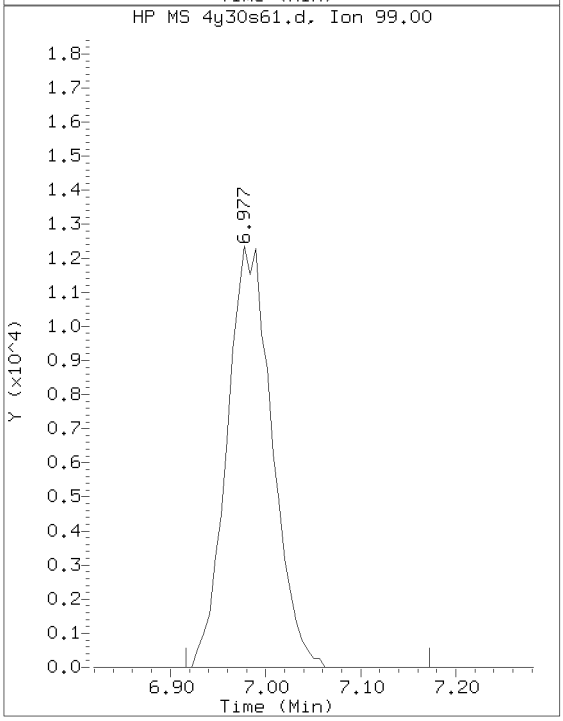
Reference Standard Spectrum for 1,1,1-Trichloroethane



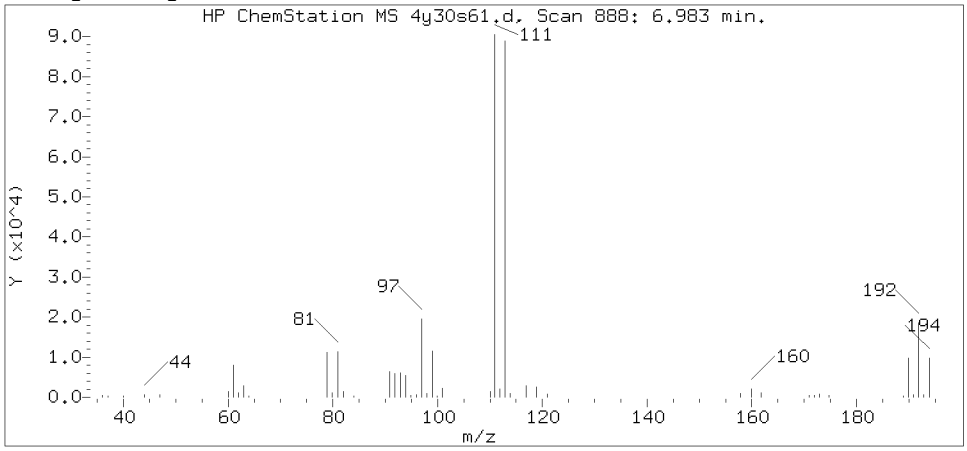


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP23297.i/19may30b.b/4y30s61.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:22 Analyst ID: DVV10203

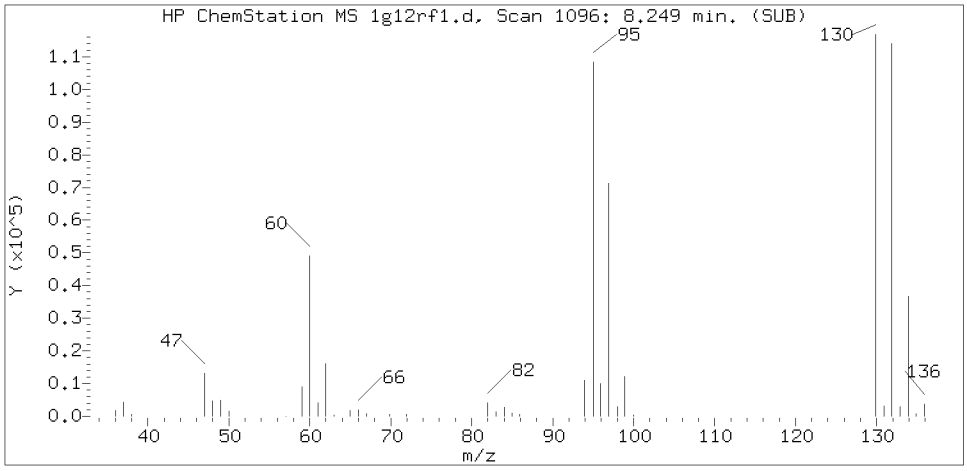
Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Sample Name: 94J03 Lab Sample ID: 1063767

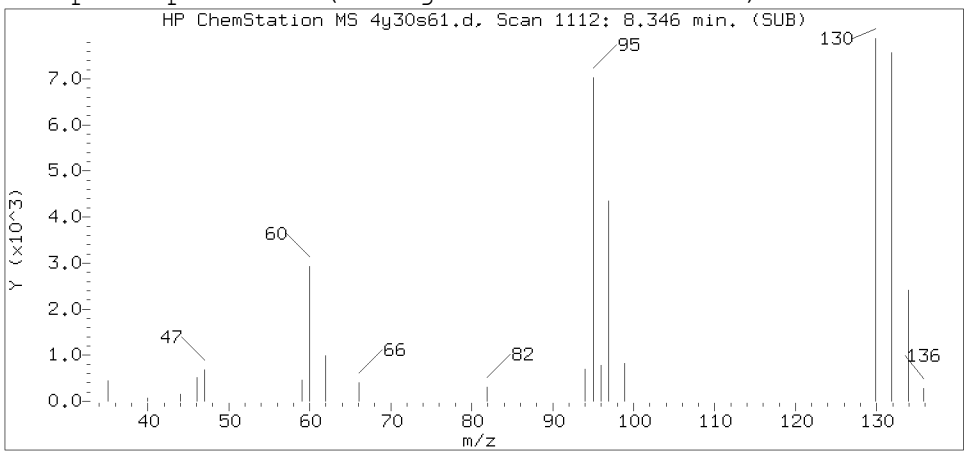
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 888
Retention Time (minutes): 6.983
Relative Retention Time :-0.00069
Quant Ion : 97.00
Area (flag) : 62636
On-Column Amount (ng) : 9.1925

Digitally signed by Kevin A. Sposito on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kas02648

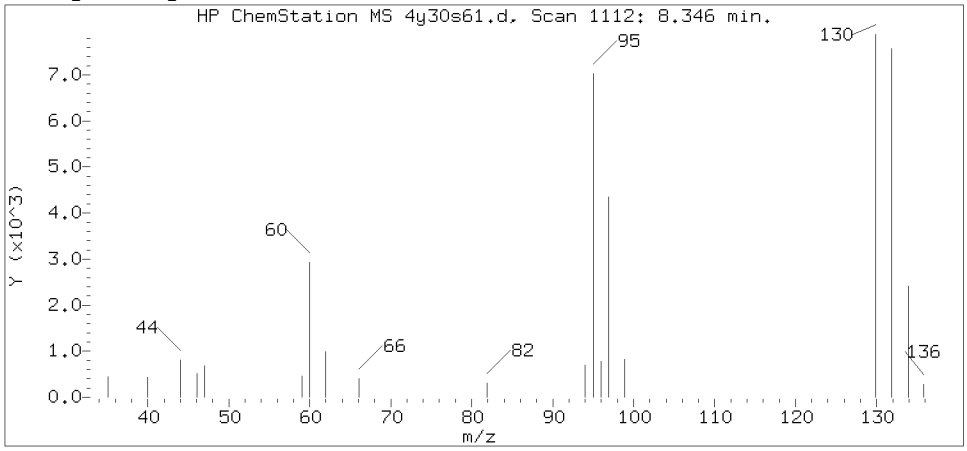
Reference Standard Spectrum for Trichloroethene

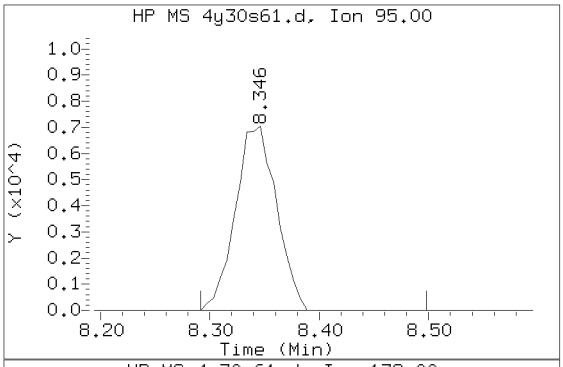


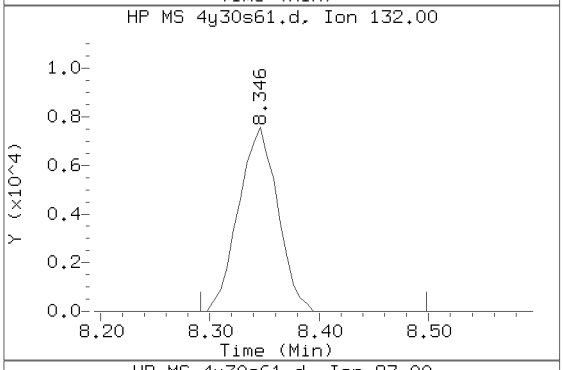
Sample Spectrum (Background Subtracted)

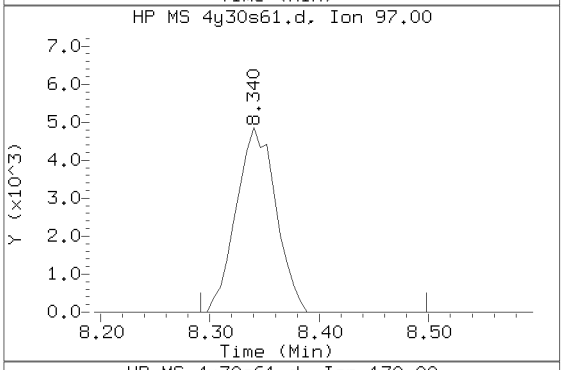


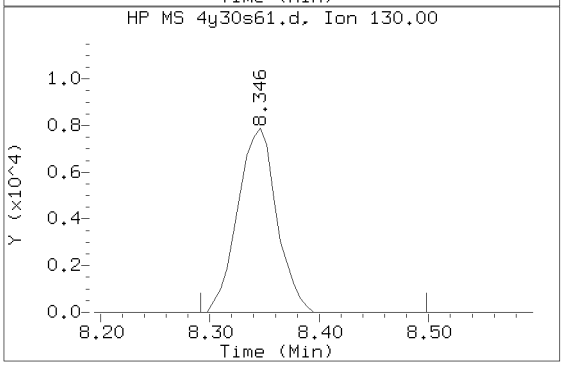
Sample Spectrum (Unaltered)











Data File: /chem/HP23297.i/19may30b.b/4y30s61.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:22 Analyst ID: DVV10203

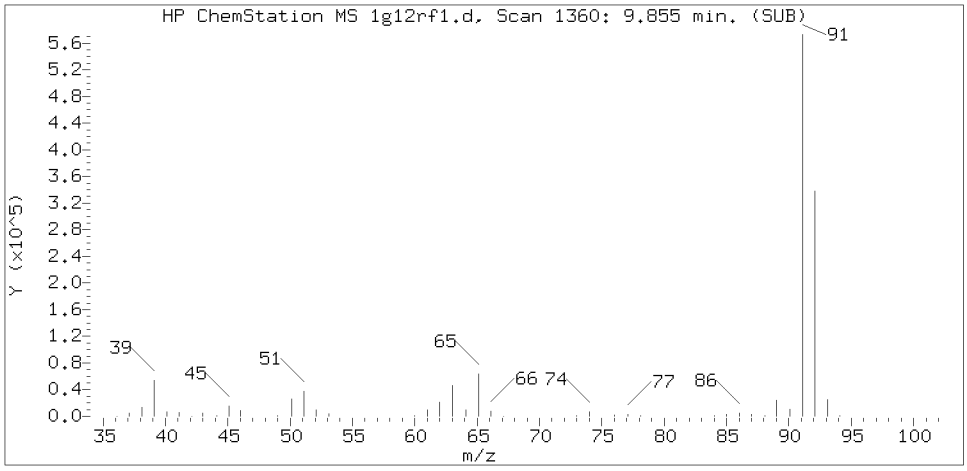
Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Sample Name: 94J03 Lab Sample ID: 1063767

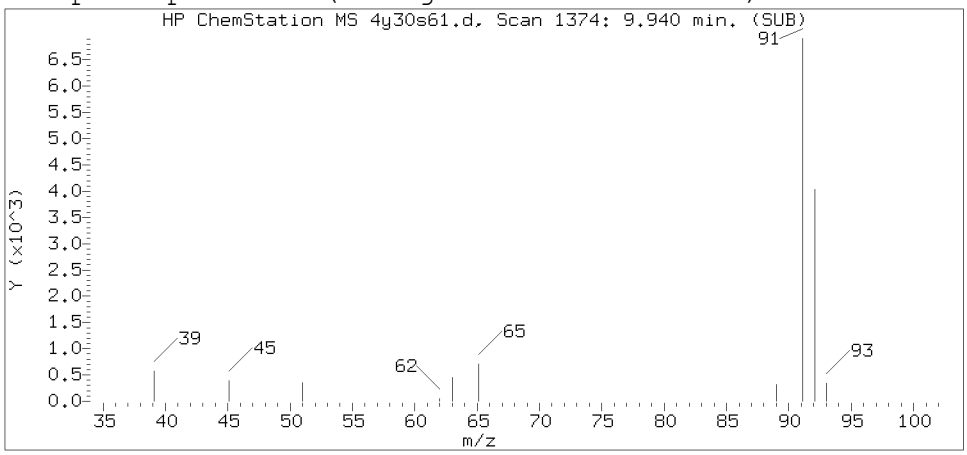
Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 1112
Retention Time (minutes): 8.346
Relative Retention Time :-0.00082
Quant Ion : 95.00
Area (flag) : 18396
On-Column Amount (ng) : 3.7043

Digitally signed by Kevin A. Sposito on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kas02648

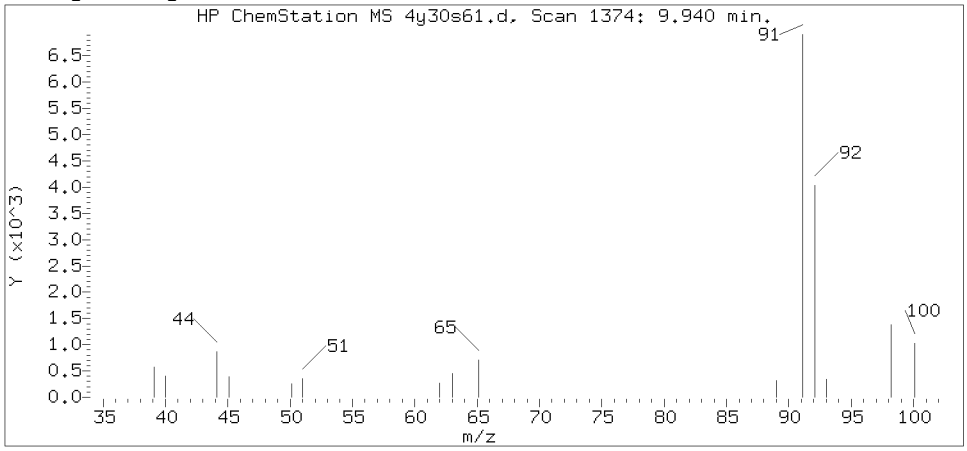
Reference Standard Spectrum for Toluene

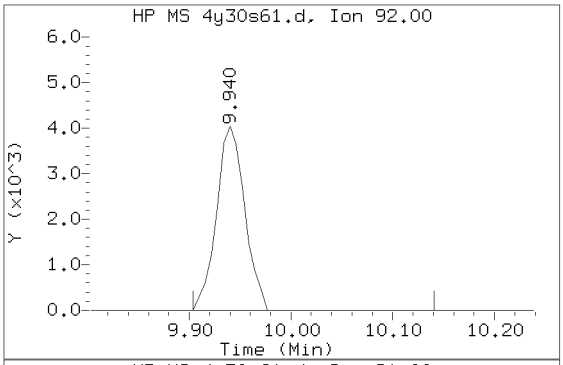


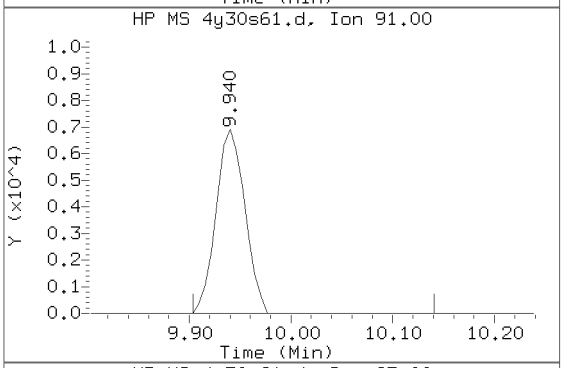
Sample Spectrum (Background Subtracted)

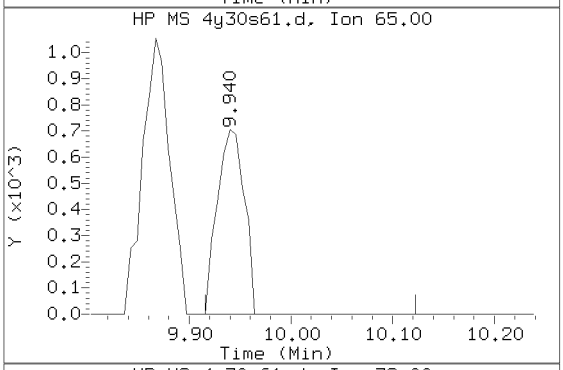


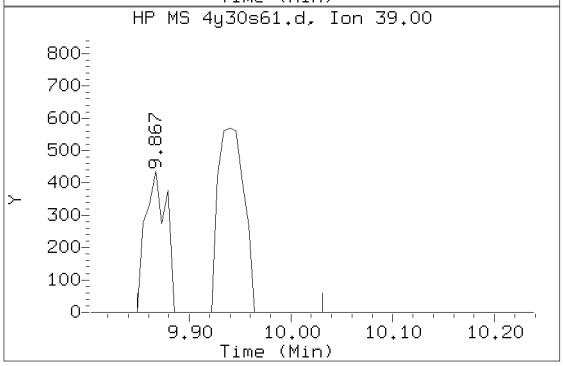
Sample Spectrum (Unaltered)











Data File: /chem/HP23297.i/19may30b.b/4y30s61.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:22 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:35 kas02648

Sample Name: 94J03 Lab Sample ID: 1063767

Compound Number	: 88
Compound Name	: Toluene
Scan Number	: 1374
Retention Time (minutes)	: 9.940
Relative Retention Time	:-0.00000
Quant Ion	: 92.00
Area (flag)	: 7763
On-Column Amount (ng)	: 0.6093

Digitally signed by Kevin A. Sposito on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kas02648

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

94J04

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1063768

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may30b.b/4y30s62.d

Level: (low/med) LOW Date Received: 05/22/19

Moisture: not dec. _____ Date Analyzed: 05/31/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	7	
75-35-4	1,1-Dichloroethene	0.9	J
67-64-1	Acetone	2	J
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	0.6	J
75-34-3	1,1-Dichloroethane	5	
156-59-2	cis-1,2-Dichloroethene	23	
78-93-3	2-Butanone	0.8	J
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	0.6	J
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	2	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may30b.b/4y30s62.d
Injection date and time: **31-MAY-2019 04:45**
Data file Sample Info. Line: 94J04;1063768;1;0;;JCV94;;;4y30b41;
Instrument ID: **HP23297.i** Batch: **4191502AA**
Date, time and analyst ID of latest file update: 31-May-2019 12:36 kas02648

Blank Data file reference: **/chem/HP23297.i/19may30b.b/4y30b41.d**

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 30-MAY-2019 23:57
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may30b.b/4y30c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.374	(0.000)	459	65	354787	(-11)	250.00	
66) Fluorobenzene	7.866	(0.006)	1033	96	1061028	(-6)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	851033	(-6)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189	(0.000)	1908	152	456701	(-9)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977	(-0.001)	113	261854	50.068	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434	(0.000)	102	67431	52.766	106%		80 - 120
83) Toluene-d8	(3)	9.867	(0.000)	98	1082665	49.568	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.307	(0.000)	95	392492	47.144	94%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)	2.311	(0.000)	62	52562	6.861	6.86			0.2	1
17) 1,1-Dichloroethene	(2)	3.662	(-0.000)	96	3407	0.921	0.92		J	0.2	1
18) Acetone	(1)	3.704	(-0.001)	58	1983	2.007	2.01		J	0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)	4.781	(-0.001)	96	2769	0.626	0.63		J	0.2	1
36) 1,1-Dichloroethane	(2)	5.438	(0.000)	63	44317	5.393	5.39			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.278	(-0.000)	96	118481	23.239	23.24			0.2	1
44) 2-Butanone	(2)	6.247	(0.000)	43	5058M	0.807	0.81		J	0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	6.971	(0.000)	97	4044	0.597	0.60		J	0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.346	(-0.000)	95	8087	1.638	1.64			0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

M = Compound was manually integrated.

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Data file: /chem/HP23297.i/19may30b.b/4y30s62.d Injection date and time: **31-MAY-2019 04:45**
Data file Sample Info. Line: 94J04;1063768;1;0;;JCV94;;;4y30b41; Instrument ID: **HP23297.i** Batch: **4191502AA**
Date, time and analyst ID of latest file update: 31-May-2019 12:36 kas02648

Blank Data file reference: **/chem/HP23297.i/19may30b.b/4y30b41.d**

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 30-MAY-2019 23:57
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may30b.b/4y30c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

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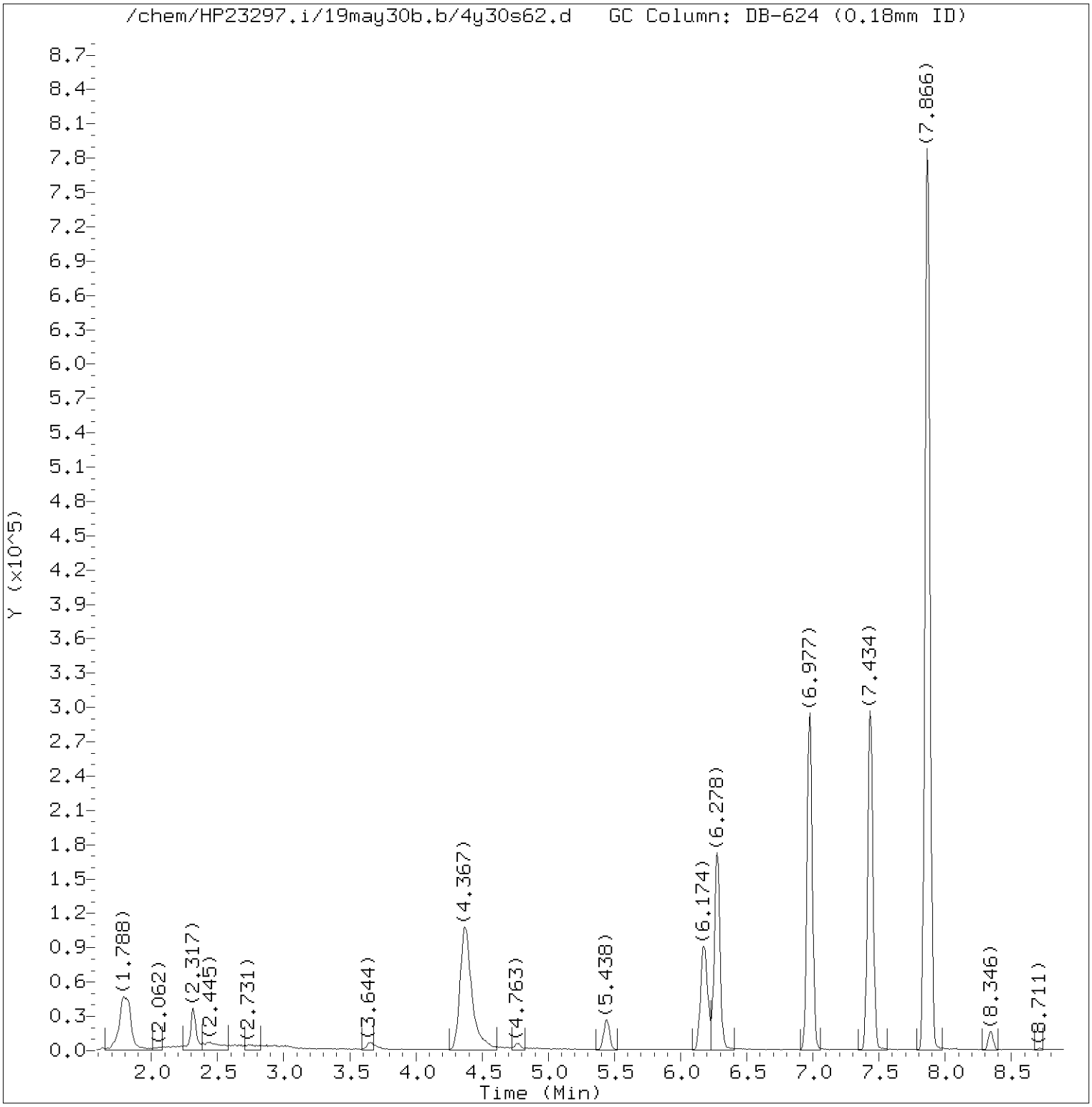
Secondary review performed and digitally signed by Kelly E. Keller on 05/31/2019 at 12:59. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30s62.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:45 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:36 kas02648

Sample Name: 94J04 Lab Sample ID: 1063768

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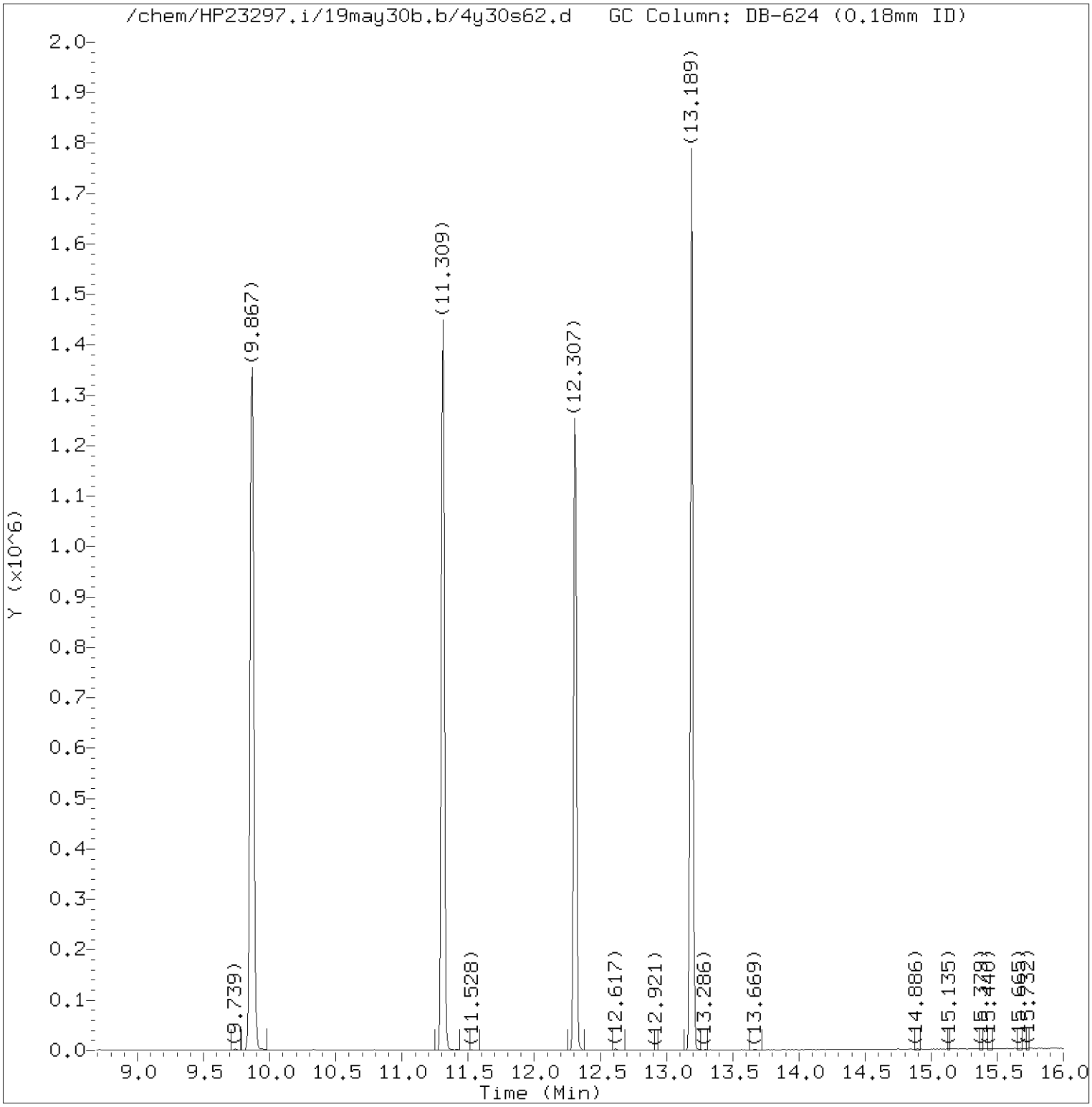
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30s62.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:45 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:36 kas02648

Sample Name: 94J04 Lab Sample ID: 1063768

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Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30s62.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:45 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:36 kas02648

Sample Name: 94J04 Lab Sample ID: 1063768

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	2.311	62	52562	6.861
17) 1,1-Dichloroethene	(2)	3.662	96	3407	0.921
18) Acetone	(1)	3.704	58	1983	2.007
29)*t-Butyl alcohol-d10	(1)	4.374	65	354787	250.000
32) trans-1,2-Dichloroethene	(2)	4.781	96	2769	0.626
36) 1,1-Dichloroethane	(2)	5.438	63	44317	5.393
44) 2-Butanone	(2)	6.247	43	5058M	0.807
42) cis-1,2-Dichloroethene	(2)	6.278	96	118481	23.239
53) 1,1,1-Trichloroethane	(2)	6.971	97	4044	0.597
52)$Dibromofluoromethane	(2)	6.977	113	261854	50.068
57)$1,2-Dichloroethane-d4	(2)	7.434	102	67431	52.766
66)*Fluorobenzene	(2)	7.866	96	1061028	50.000
71) Trichloroethene	(2)	8.346	95	8087	1.638
83)$Toluene-d8	(3)	9.867	98	1082665	49.568
100)*Chlorobenzene-d5	(3)	11.309	117	851033	50.000
114)$4-Bromofluorobenzene	(3)	12.307	95	392492	47.144
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	456701	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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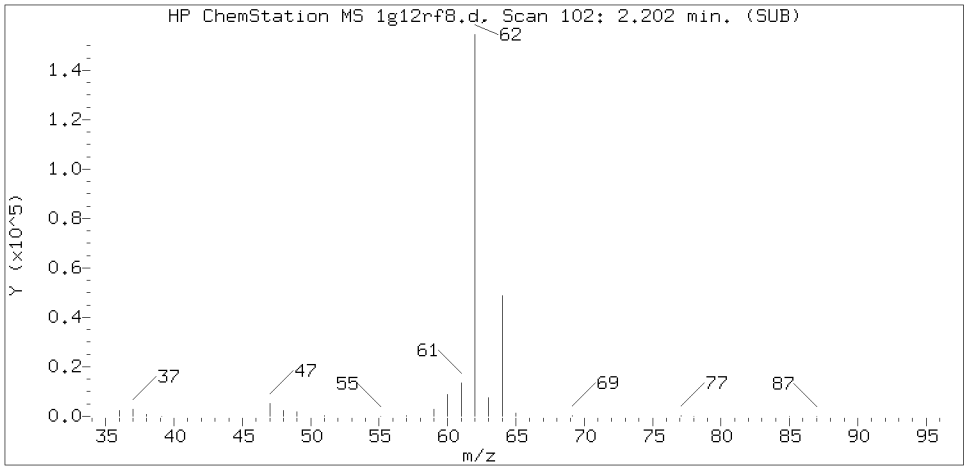
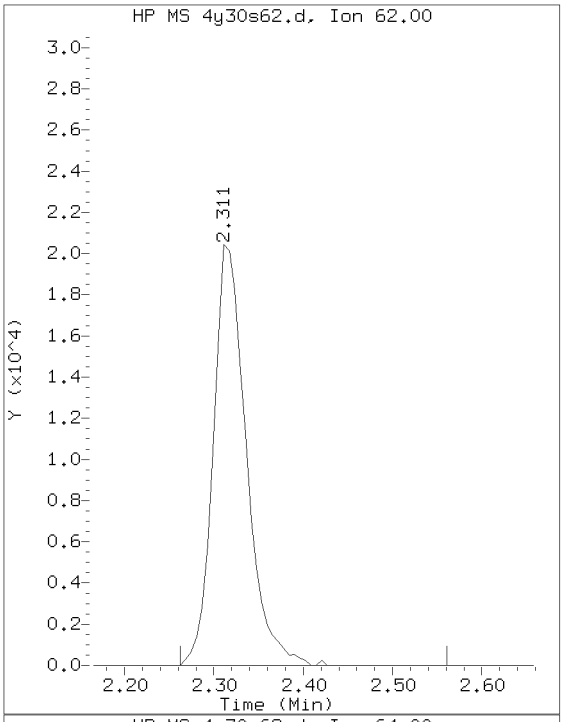
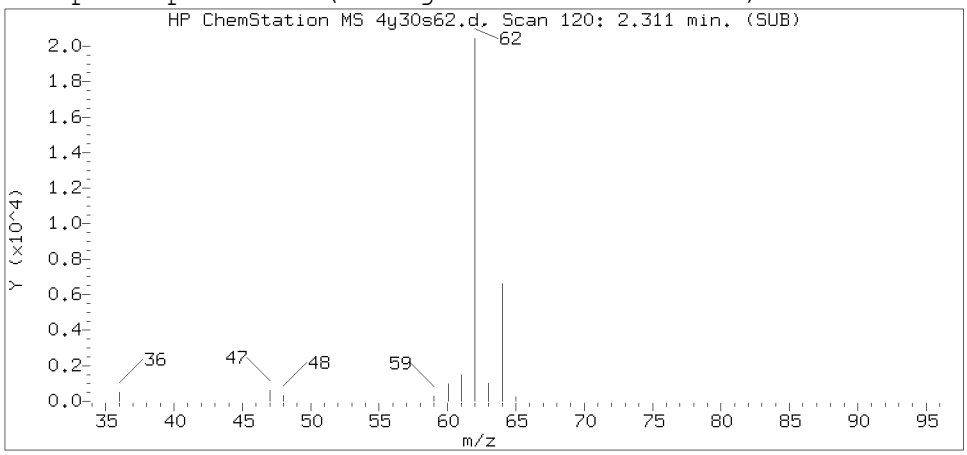
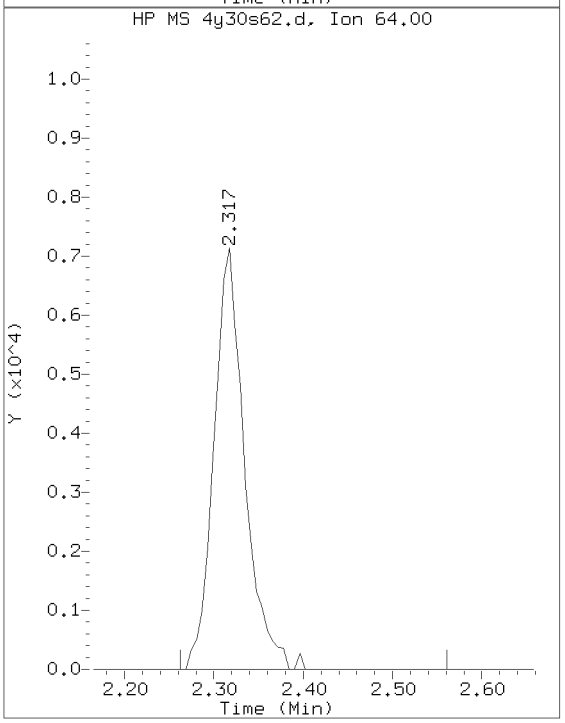
Reference Standard Spectrum for Vinyl Chloride



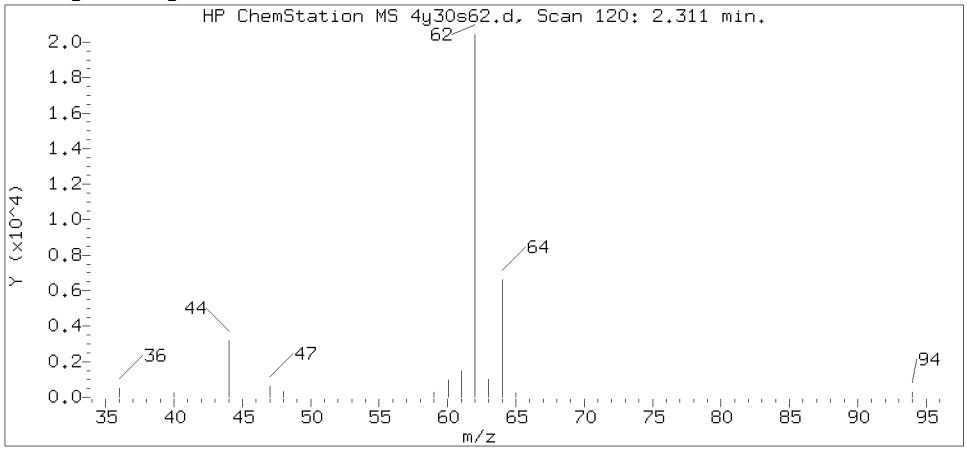


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP23297.i/19may30b.b/4y30s62.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:45 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:36 kas02648

Sample Name: 94J04 Lab Sample ID: 1063768

Compound Number	: 6
Compound Name	: Vinyl Chloride
Scan Number	: 120
Retention Time (minutes)	: 2.311
Relative Retention Time	: 0.00054
Quant Ion	: 62.00
Area (flag)	: 52562
On-Column Amount (ng)	: 6.8607

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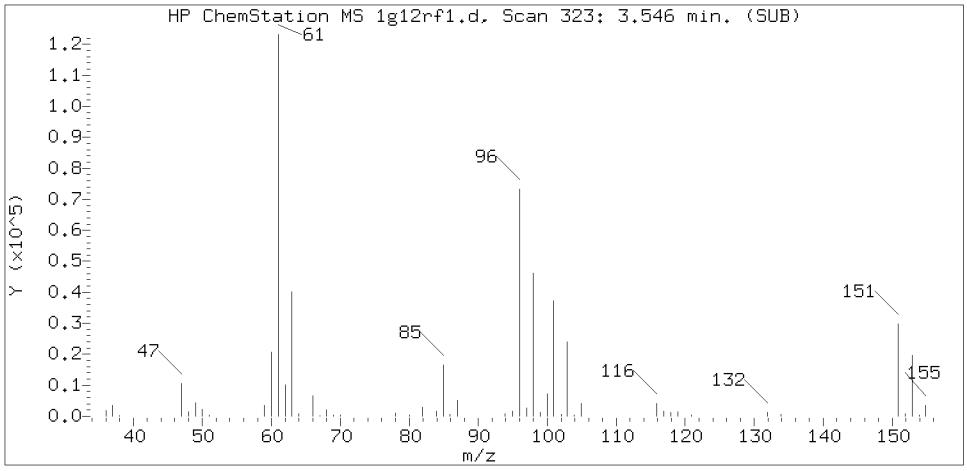
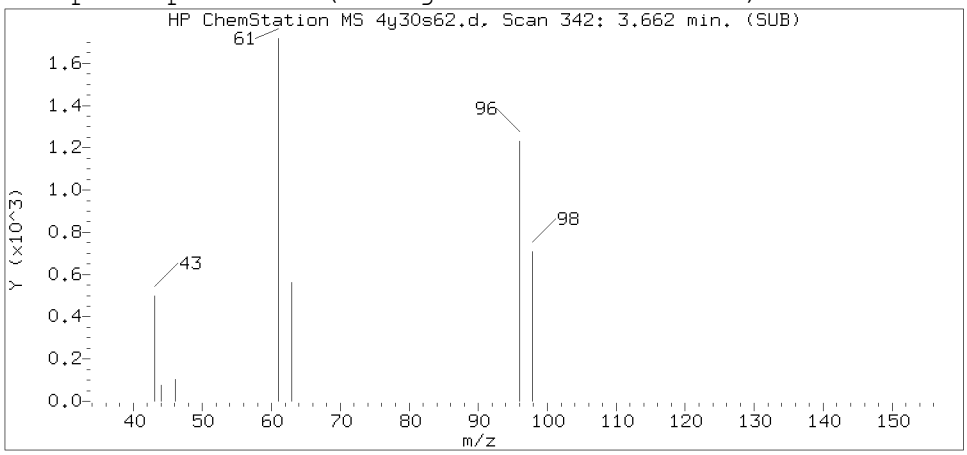
Target 3.5 esignature user ID: kas02648

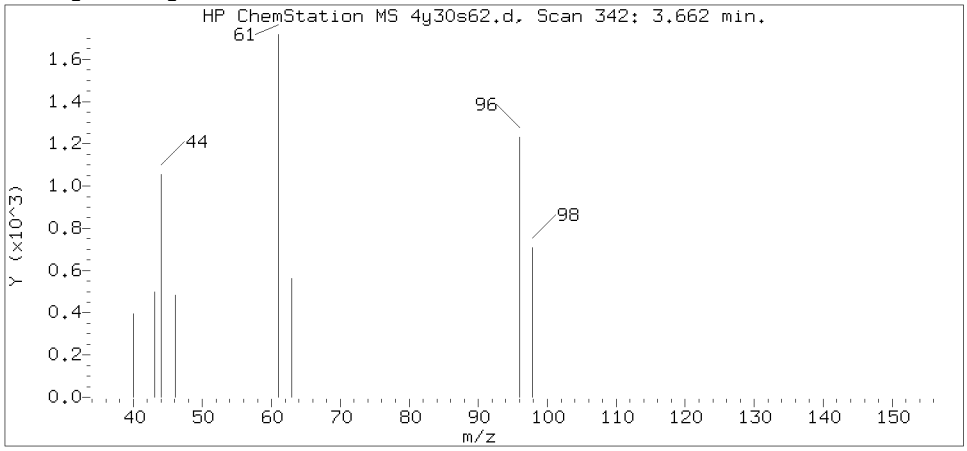
Reference Standard Spectrum for 1,1-Dichloroethene

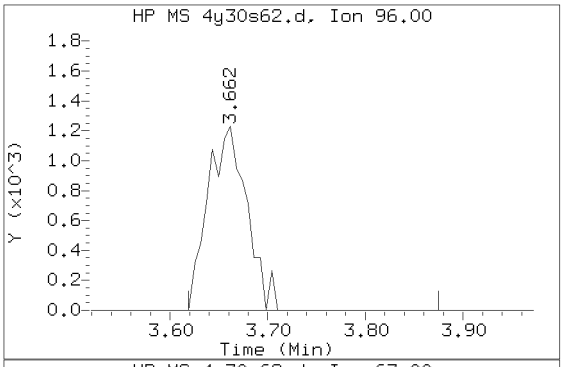


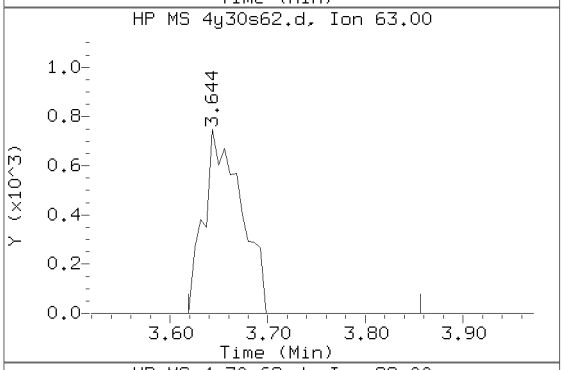
Sample Spectrum (Background Subtracted)

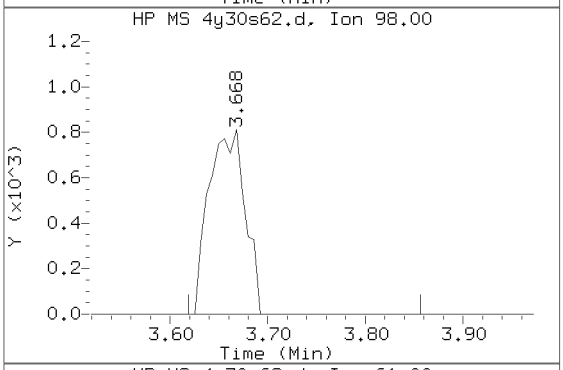


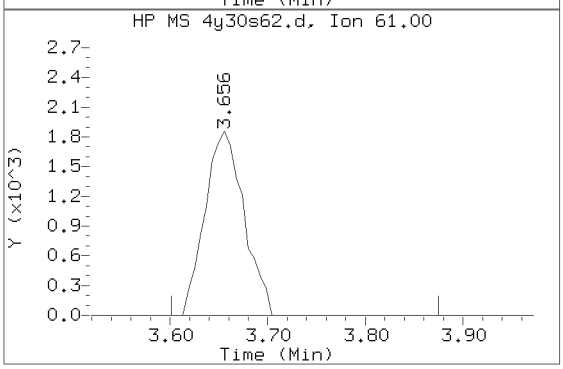
Sample Spectrum (Unaltered)











Data File: /chem/HP23297.i/19may30b.b/4y30s62.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:45 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:36 kas02648

Sample Name: 94J04 Lab Sample ID: 1063768

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 342
Retention Time (minutes): 3.662
Relative Retention Time :-0.00037
Quant Ion : 96.00
Area (flag) : 3407
On-Column Amount (ng) : 0.9207

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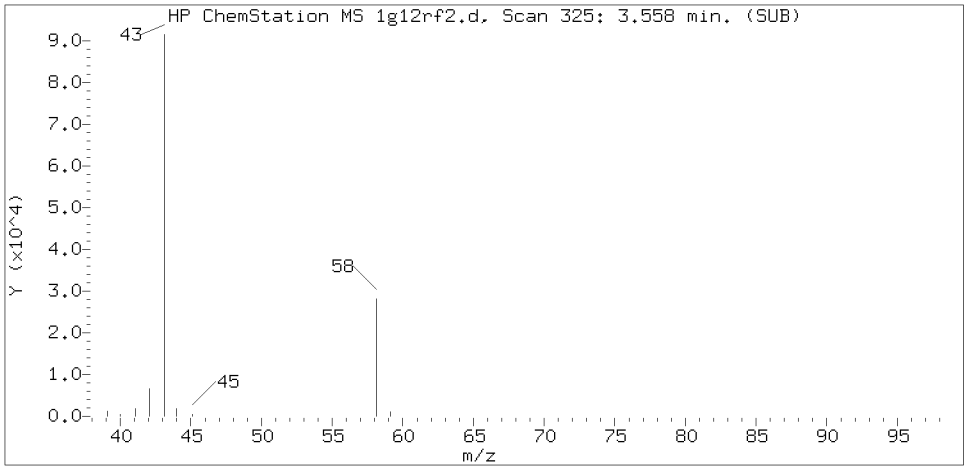
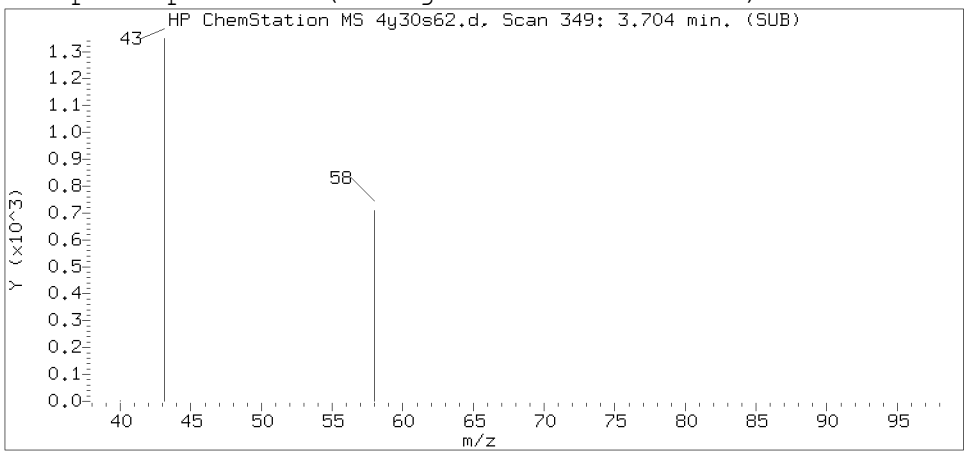
Target 3.5 esignature user ID: kas02648

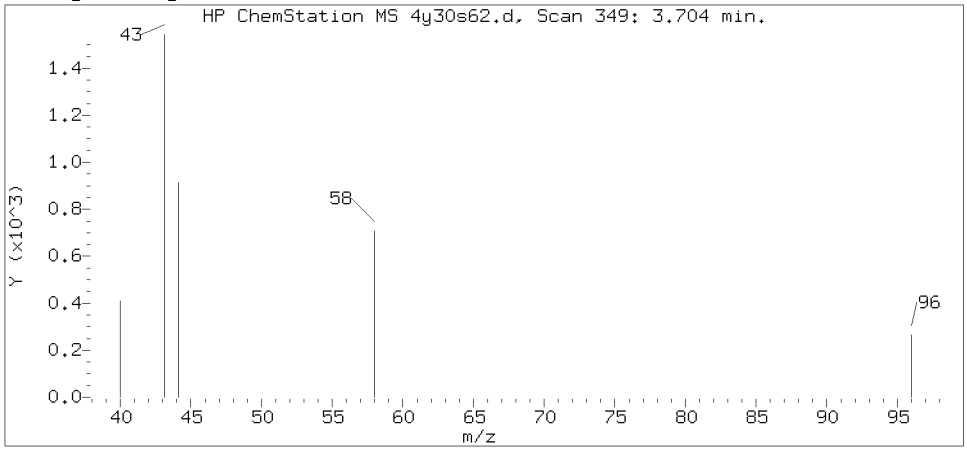
Reference Standard Spectrum for Acetone

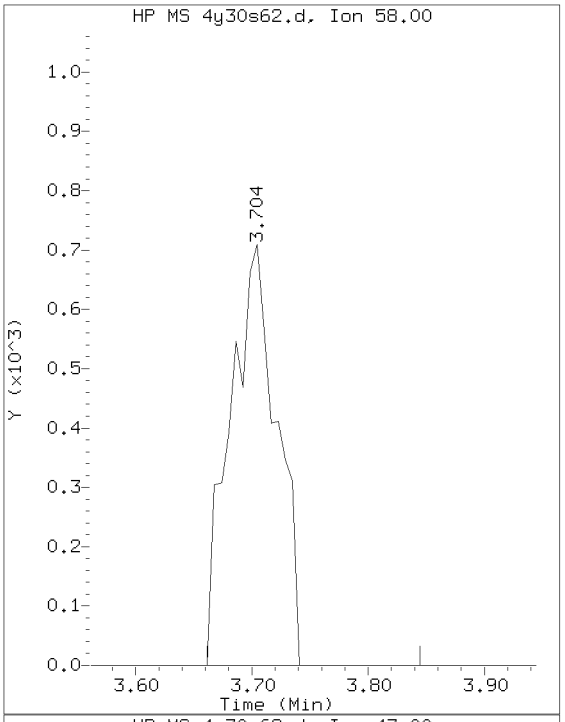


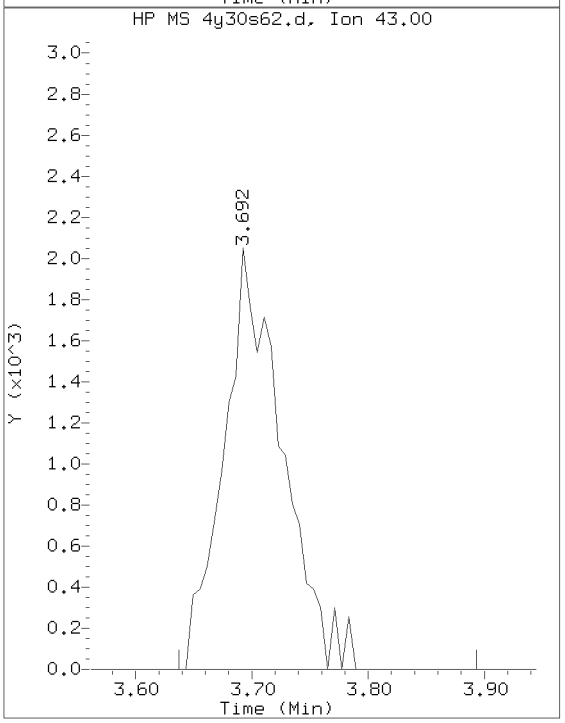
Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)







Data File: /chem/HP23297.i/19may30b.b/4y30s62.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:45 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:36 kas02648

Sample Name: 94J04 Lab Sample ID: 1063768

Compound Number : 18
Compound Name : Acetone
Scan Number : 349
Retention Time (minutes): 3.704
Relative Retention Time :-0.00140
Quant Ion : 58.00
Area (flag) : 1983
On-Column Amount (ng) : 2.0074

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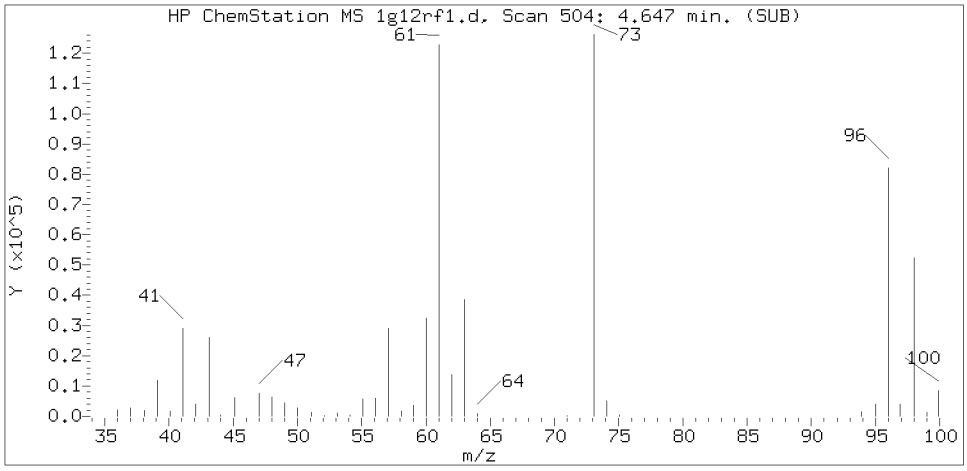
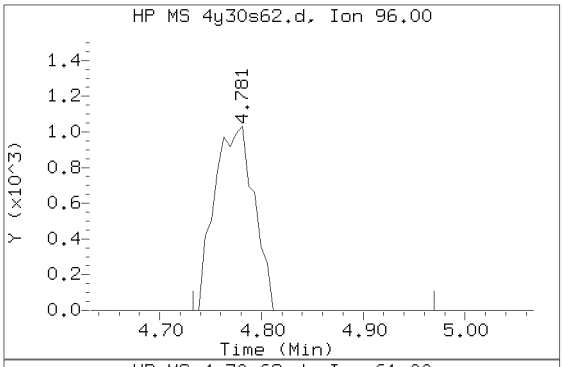
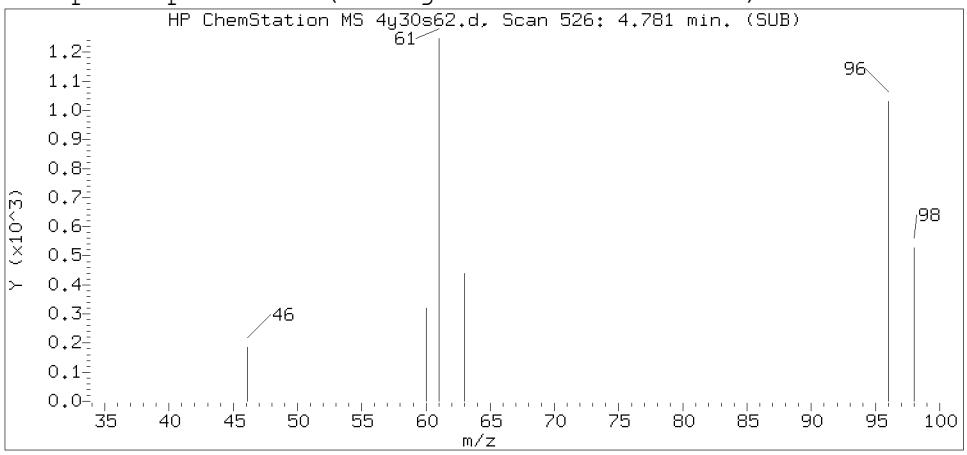
Target 3.5 esignature user ID: kas02648

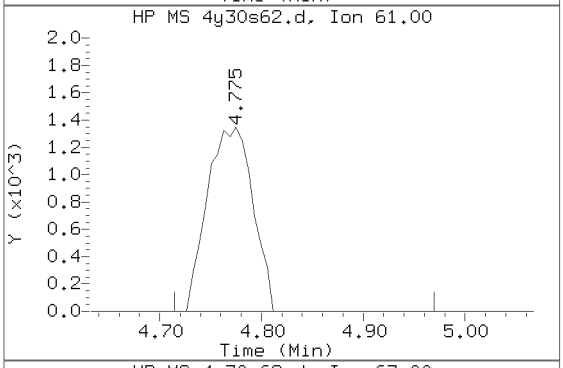
Reference Standard Spectrum for trans-1,2-Dichloroethene

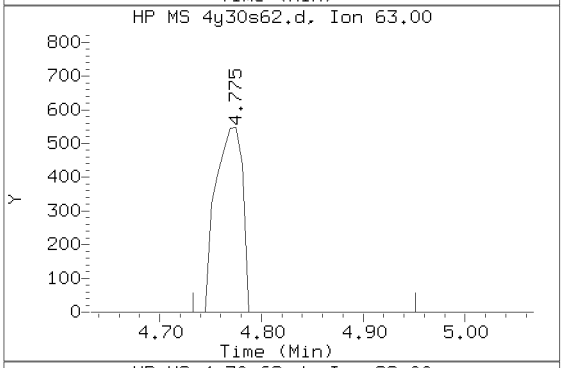




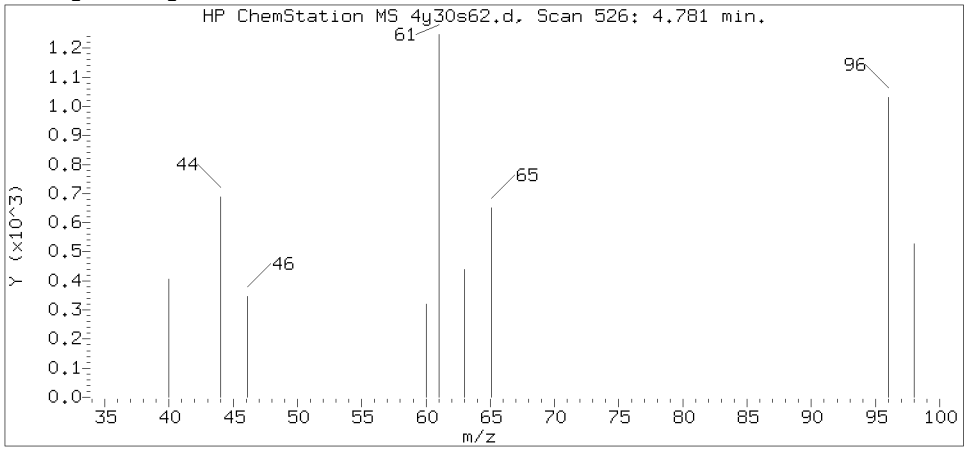
Sample Spectrum (Background Subtracted)

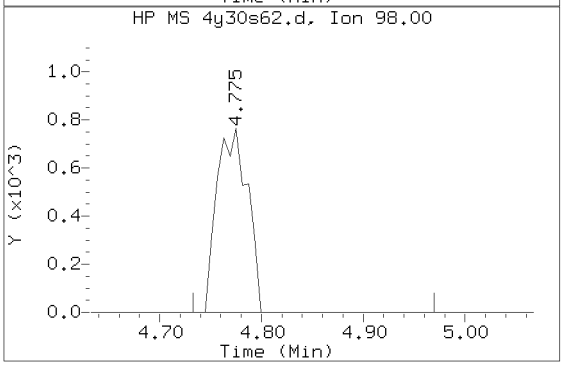






Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may30b.b/4y30s62.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:45 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:36 kas02648

Sample Name: 94J04 Lab Sample ID: 1063768

Compound Number : 32
Compound Name : trans-1,2-Dichloroethene
Scan Number : 526
Retention Time (minutes): 4.781
Relative Retention Time :-0.00125
Quant Ion : 96.00
Area (flag) : 2769
On-Column Amount (ng) : 0.6263

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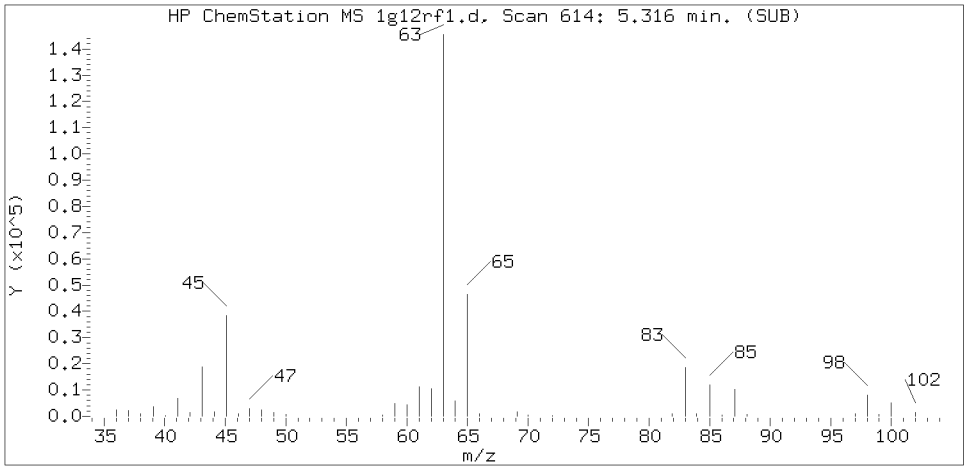
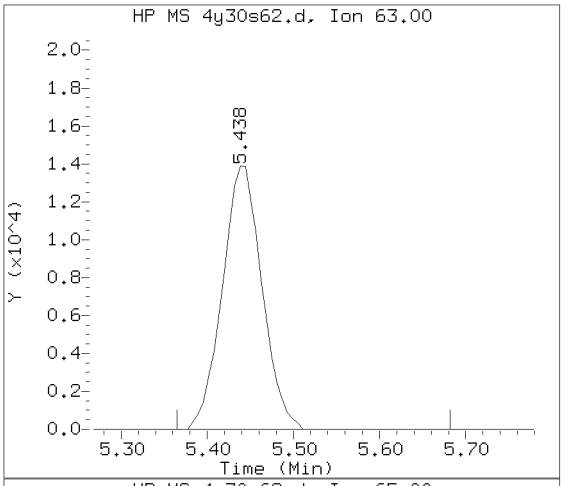
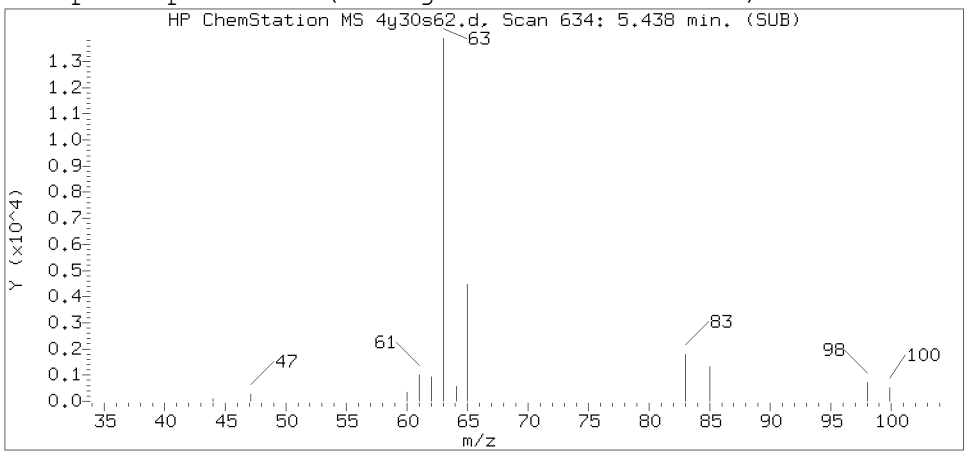
Target 3.5 esignature user ID: kas02648

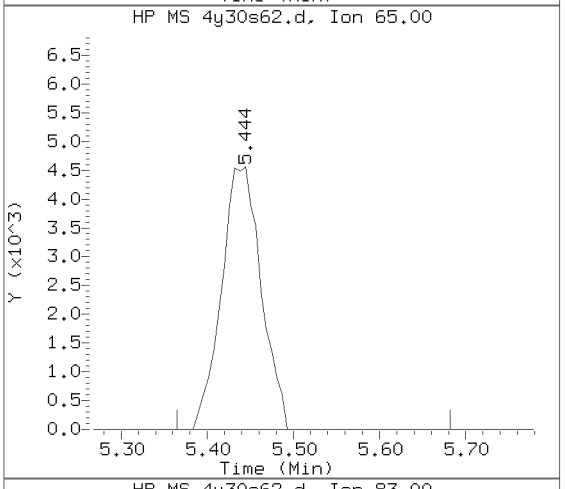
Reference Standard Spectrum for 1,1-Dichloroethane



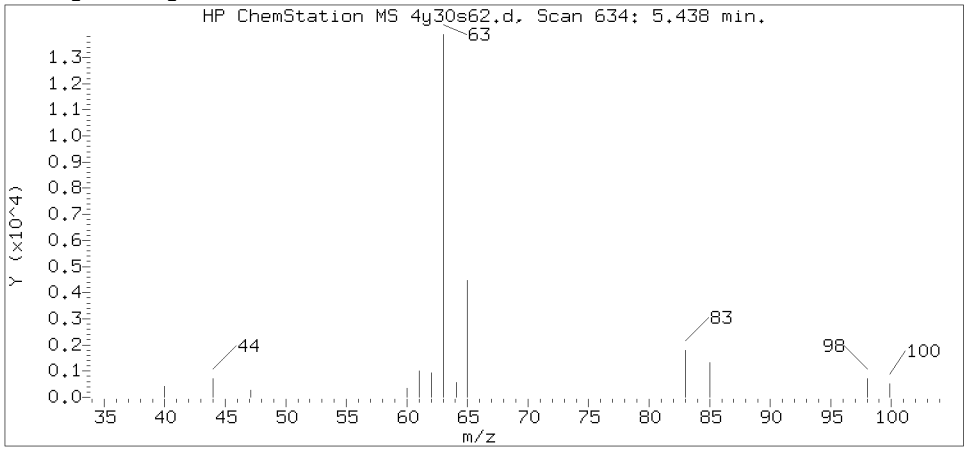


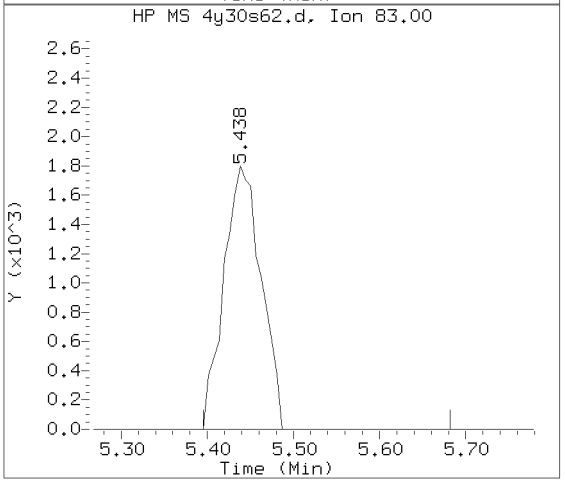
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may30b.b/4y30s62.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:45 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:36 kas02648

Sample Name: 94J04 Lab Sample ID: 1063768

Compound Number	: 36
Compound Name	: 1,1-Dichloroethane
Scan Number	: 634
Retention Time (minutes)	: 5.438
Relative Retention Time	: 0.00024
Quant Ion	: 63.00
Area (flag)	: 44317
On-Column Amount (ng)	: 5.3931

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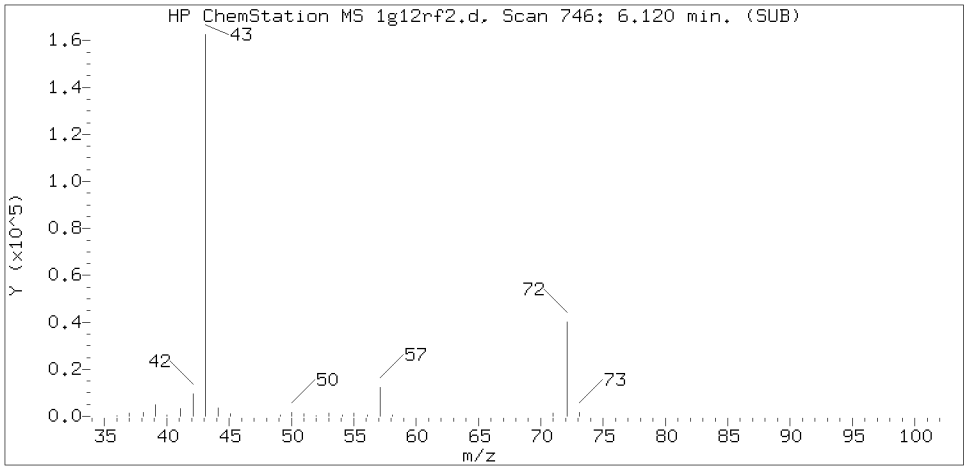
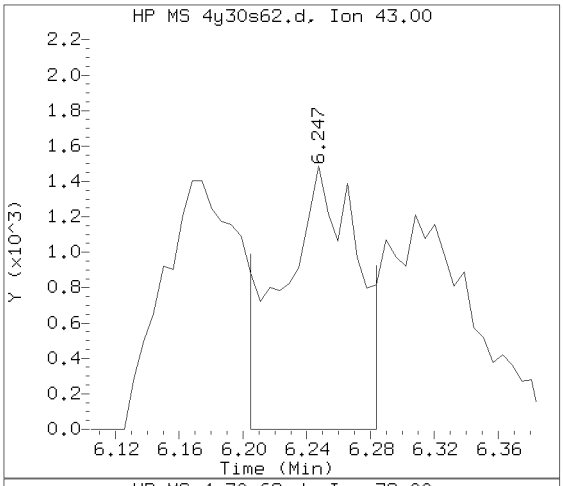
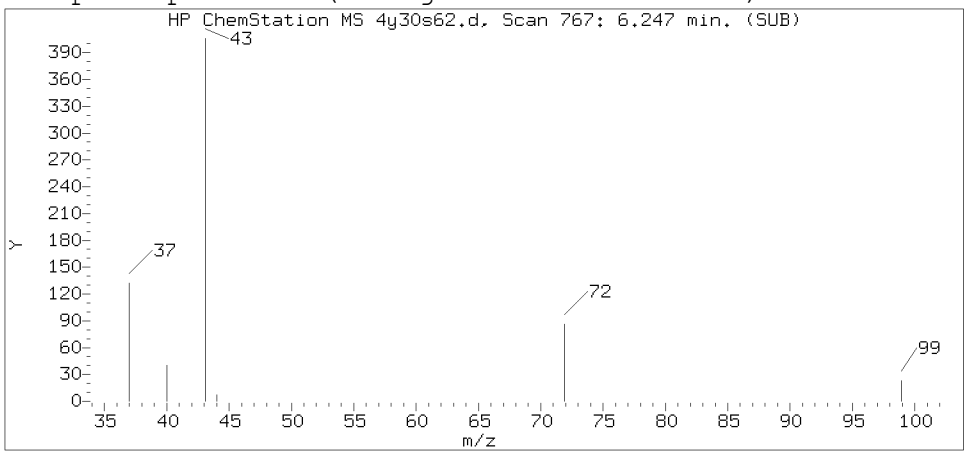
Target 3.5 esignature user ID: kas02648

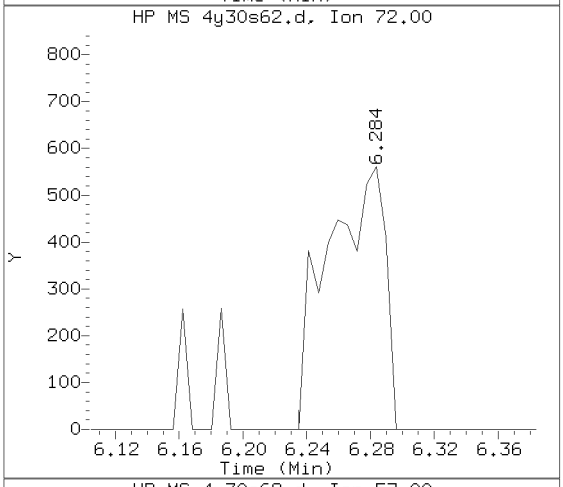
Reference Standard Spectrum for 2-Butanone



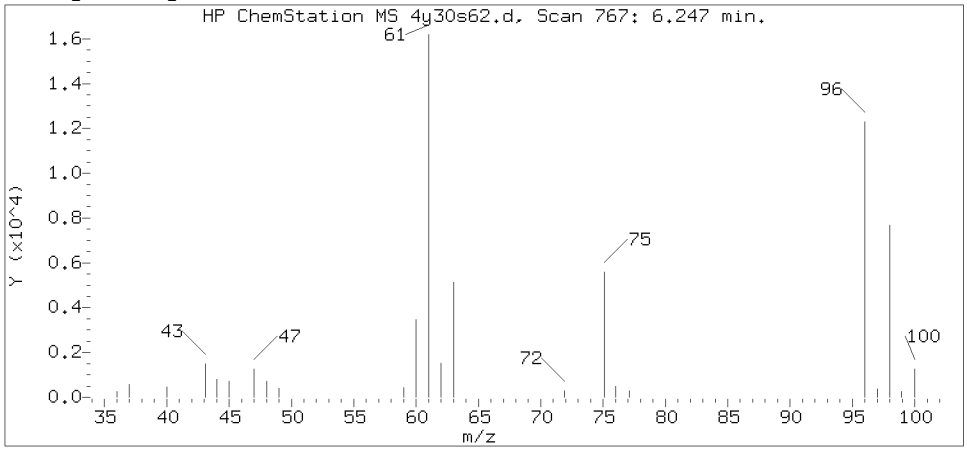


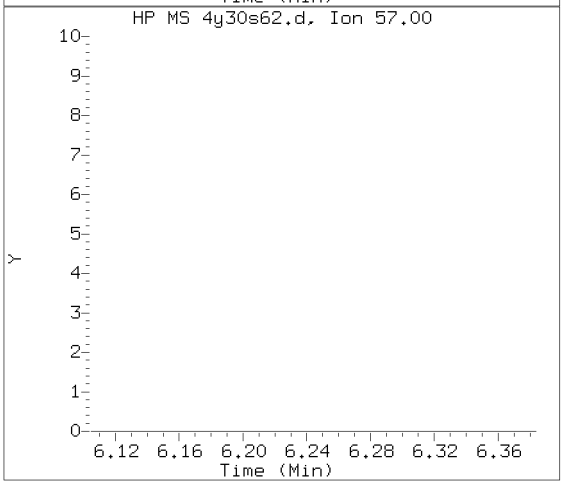
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may30b.b/4y30s62.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:45 Analyst ID: DVV10203

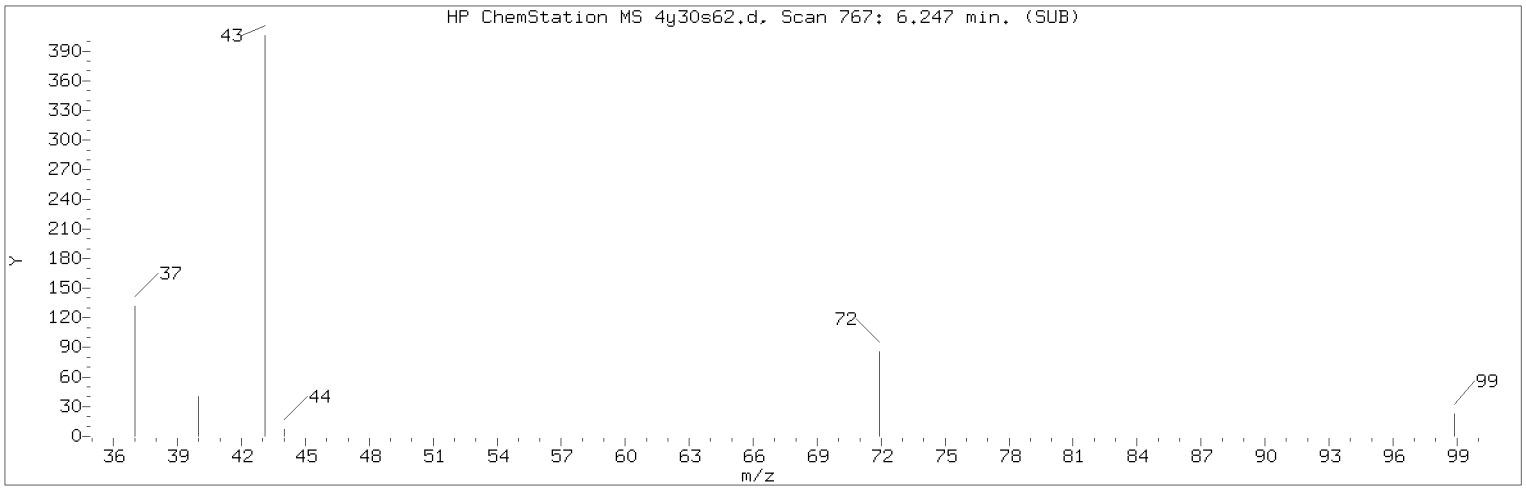
Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:36 kas02648

Sample Name: 94J04 Lab Sample ID: 1063768

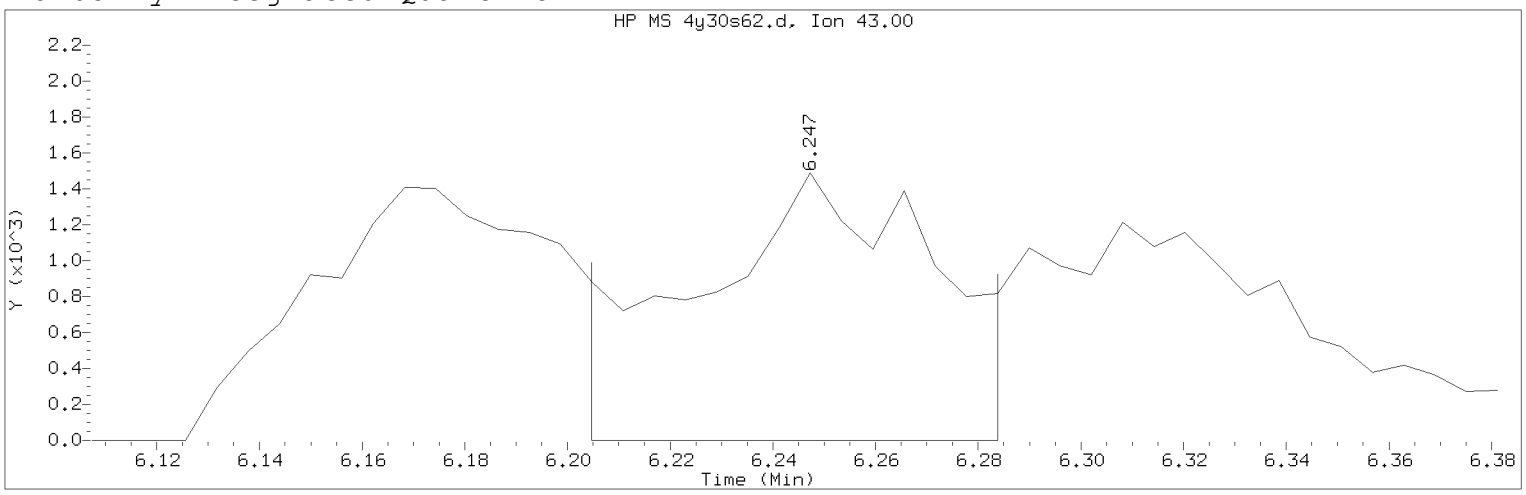
Compound Number	: 44
Compound Name	: 2-Butanone
Scan Number	: 767
Retention Time (minutes)	: 6.247
Relative Retention Time	: 0.00093
Quant Ion	: 43.00
Area (flag)	: 5058M
On-Column Amount (ng)	: 0.8071

Digitally signed by Kevin A. Sposito on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may30b.b/4y30s62.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:45 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:36 kas02648

Sample Name: 94J04 Lab Sample ID: 1063768

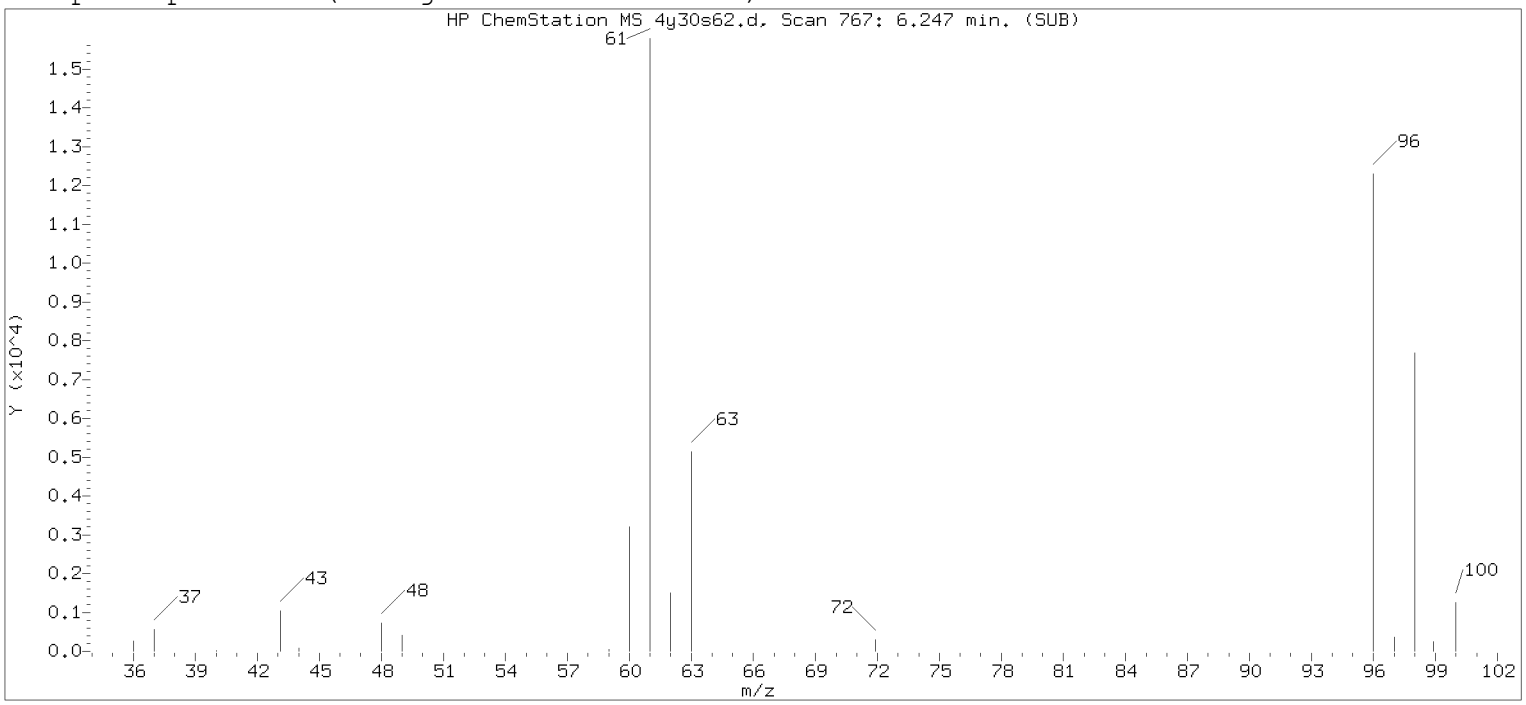
Compound Number : 44
Compound Name : 2-Butanone
Scan Number : 767
Retention Time (minutes): 6.247
Quant Ion : 43.00
Area (flag) : 5058M
On-Column Amount (ng) : 0.8071
Integration start scan : 759 Integration stop scan: 772
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

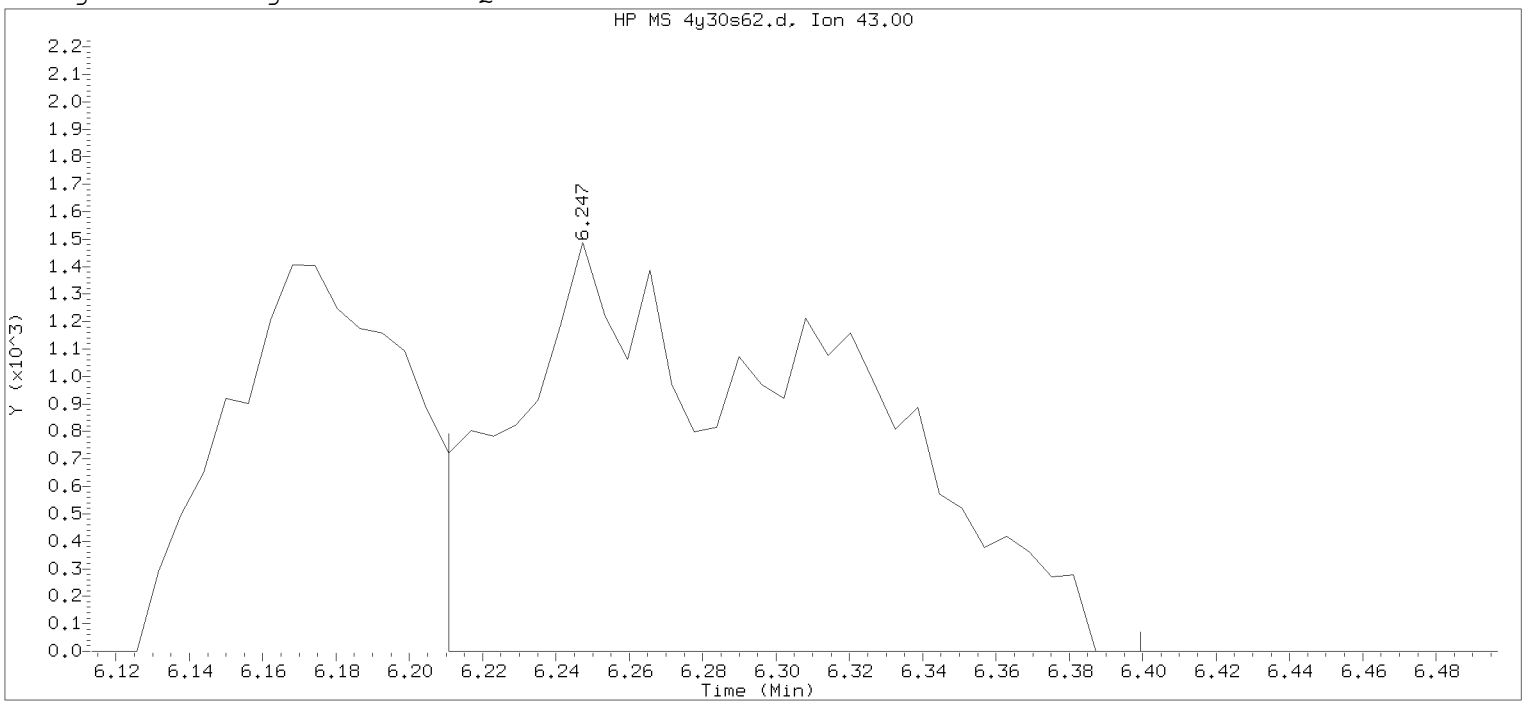
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/31/2019 at 12:59.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may30b.b/4y30s62.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:45 Analyst ID: DVV10203

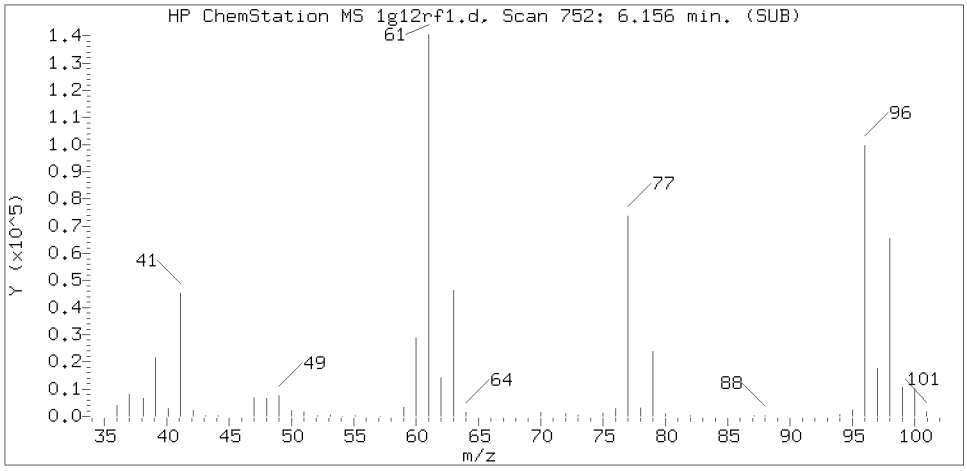
Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 05:02 Automation

Sample Name: 94J04 Lab Sample ID: 1063768

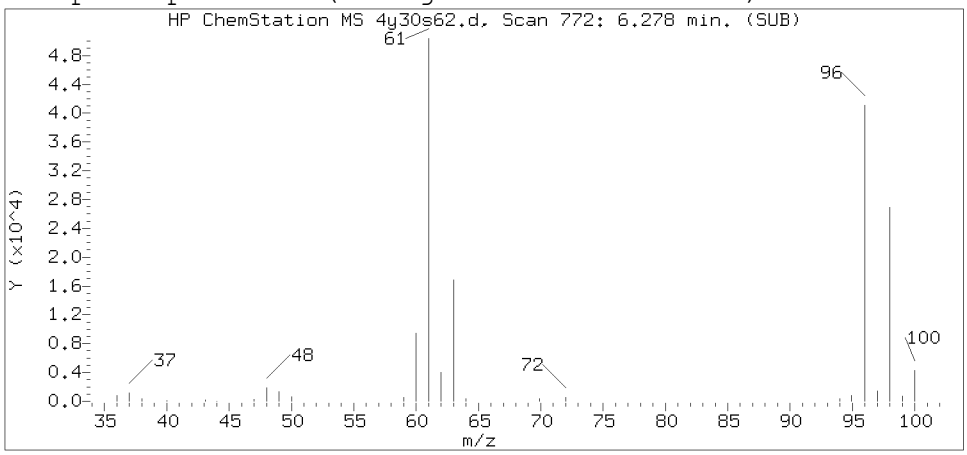
Compound Number	: 44		
Compound Name	: 2-Butanone		
Scan Number	: 767		
Retention Time (minutes)	: 6.247		
Quant Ion	: 43.00		
Area	: 8946		
On-column Amount (ng)	: 1.4276		
Integration start scan	: 760	Integration stop scan:	791
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 05/31/2019 at 12:37.
Target 3.5 esignature user: kevin.sposito

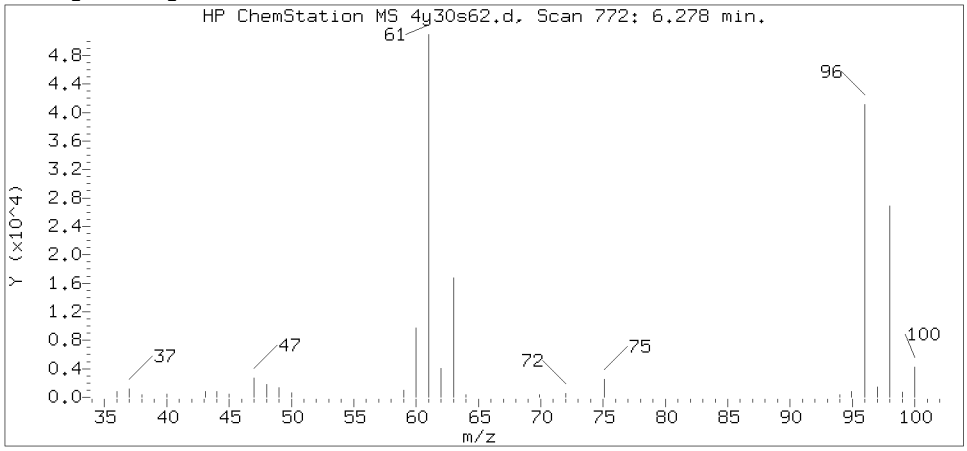
Reference Standard Spectrum for cis-1,2-Dichloroethene

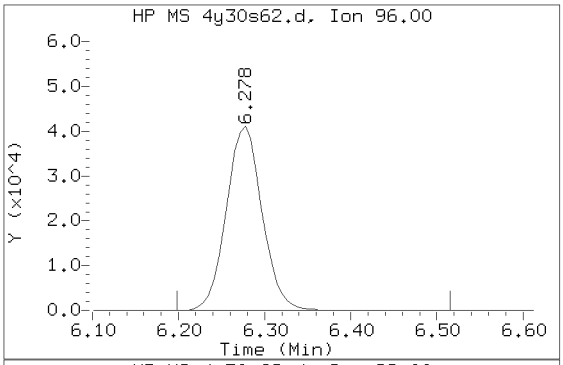


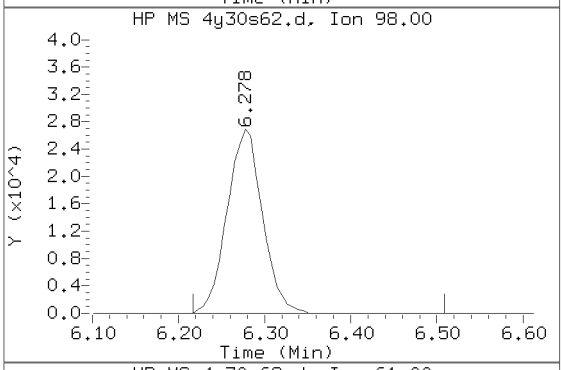
Sample Spectrum (Background Subtracted)

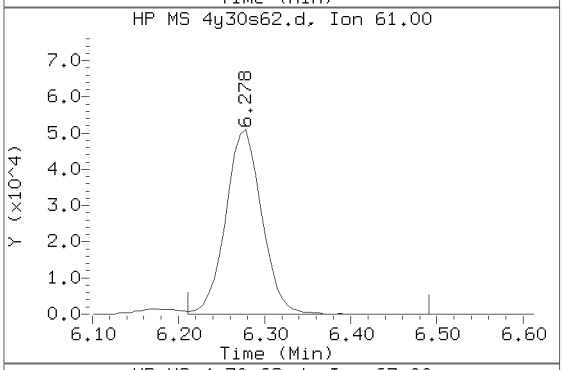


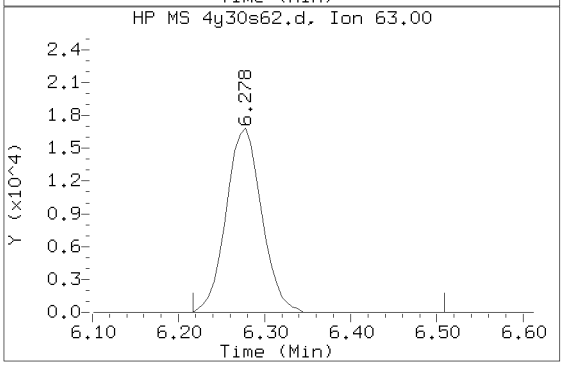
Sample Spectrum (Unaltered)











Data File: /chem/HP23297.i/19may30b.b/4y30s62.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:45 Analyst ID: DVV10203

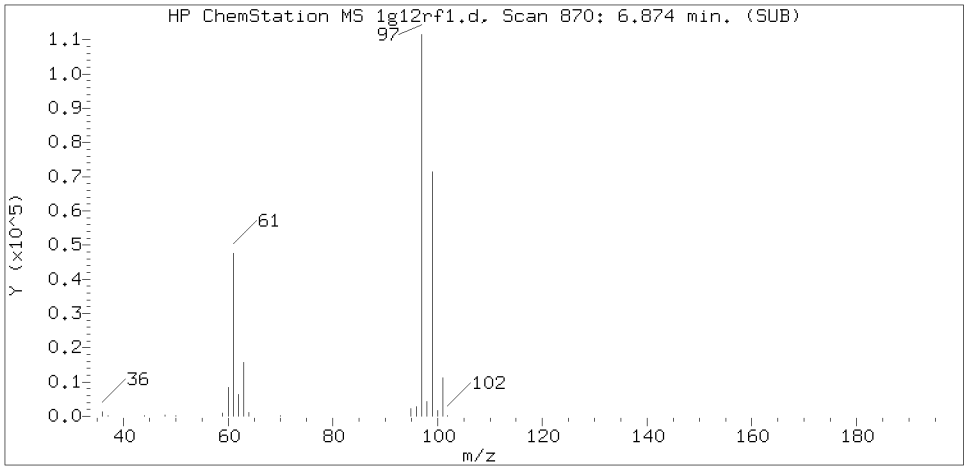
Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:36 kas02648

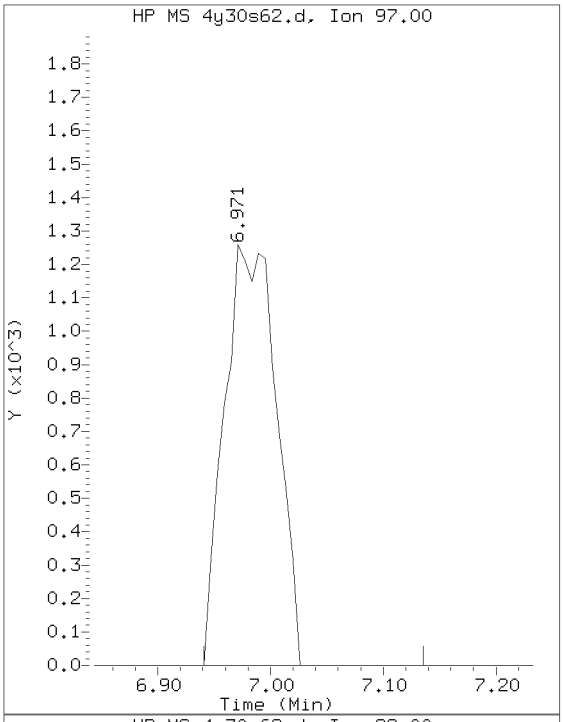
Sample Name: 94J04 Lab Sample ID: 1063768

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 772
Retention Time (minutes): 6.278
Relative Retention Time :-0.00062
Quant Ion : 96.00
Area (flag) : 118481
On-Column Amount (ng) : 23.2389

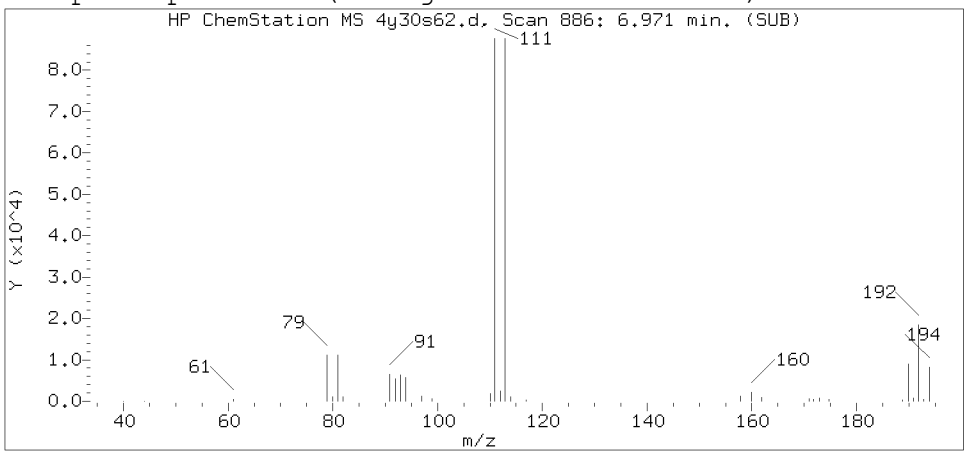
Digitally signed by Kevin A. Sposito on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kas02648

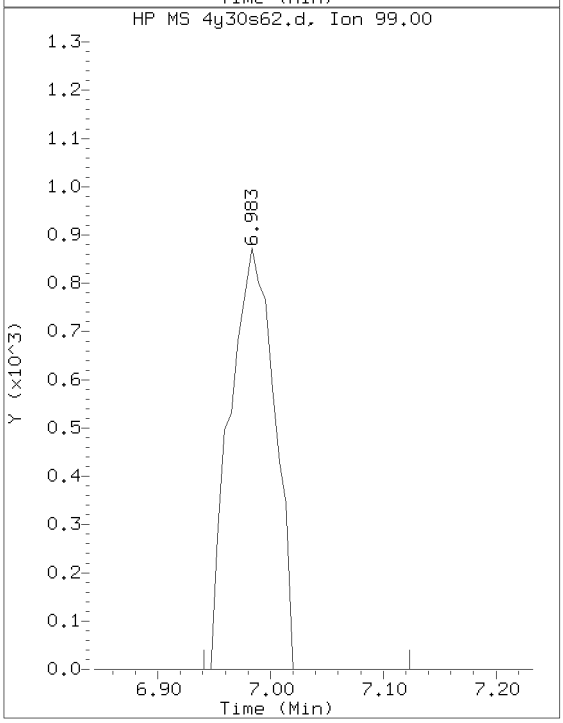
Reference Standard Spectrum for 1,1,1-Trichloroethane



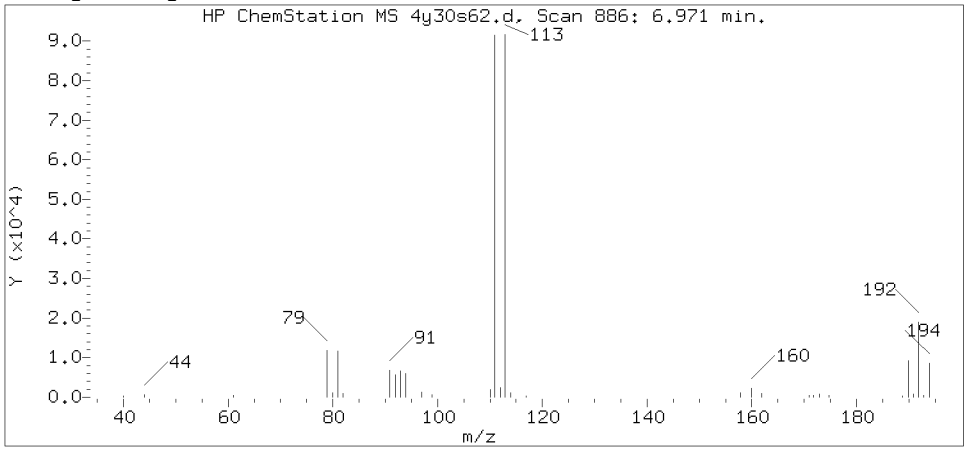


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP23297.i/19may30b.b/4y30s62.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:45 Analyst ID: DVV10203

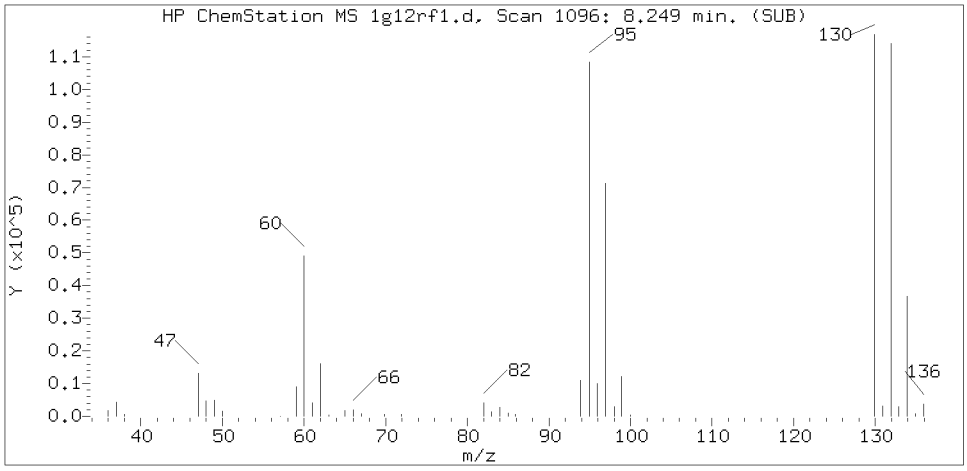
Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:36 kas02648

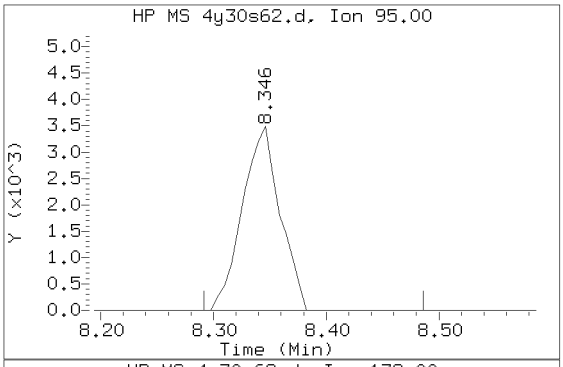
Sample Name: 94J04 Lab Sample ID: 1063768

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 886
Retention Time (minutes)	: 6.971
Relative Retention Time	: 0.00086
Quant Ion	: 97.00
Area (flag)	: 4044
On-Column Amount (ng)	: 0.5969

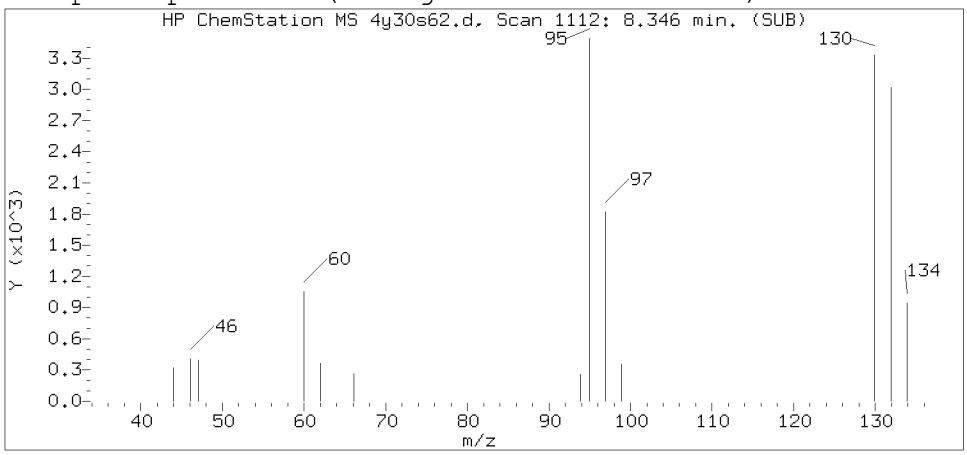
Digitally signed by Kevin A. Sposito on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kas02648

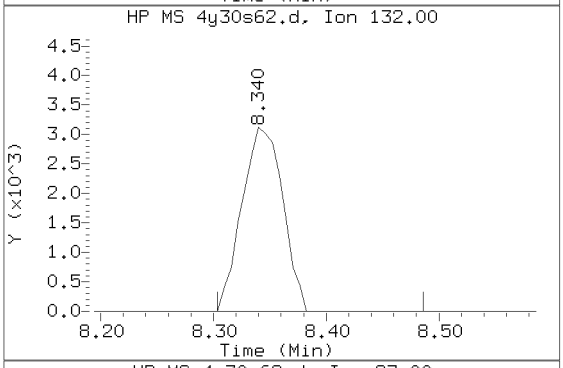
Reference Standard Spectrum for Trichloroethene

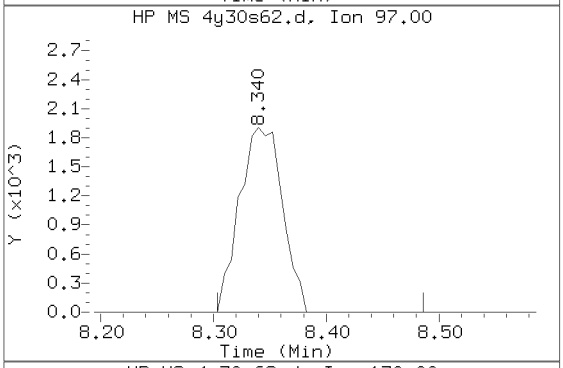




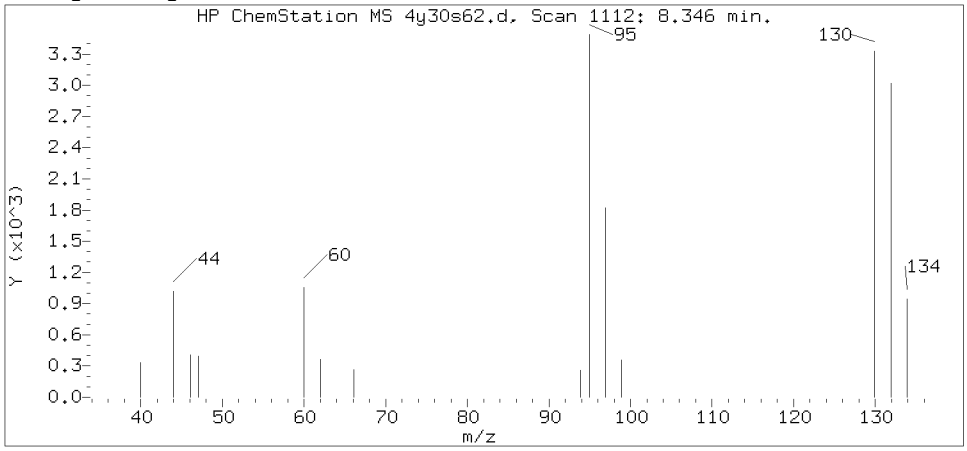
Sample Spectrum (Background Subtracted)

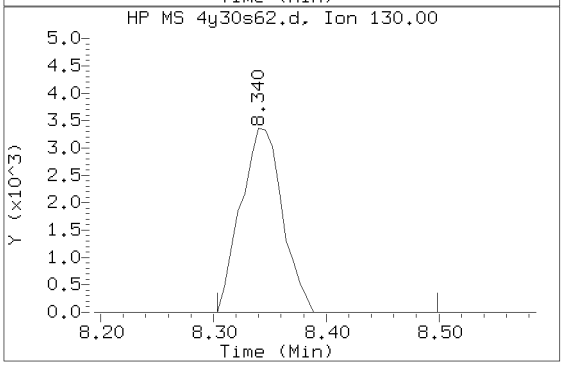






Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may30b.b/4y30s62.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 04:45 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:36 kas02648

Sample Name: 94J04 Lab Sample ID: 1063768

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 1112
Retention Time (minutes): 8.346
Relative Retention Time :-0.00082
Quant Ion : 95.00
Area (flag) : 8087
On-Column Amount (ng) : 1.6378

Digitally signed by Kevin A. Sposito on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kas02648

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

94J05

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1063769

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may30b.b/4y30s63.d

Level: (low/med) LOW Date Received: 05/22/19

Moisture: not dec. _____ Date Analyzed: 05/31/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	1	J
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.5	J
156-59-2	cis-1,2-Dichloroethene	0.3	J
78-93-3	2-Butanone	0.7	J
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

^

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may30b.b/4y30s63.d Injection date and time: **31-MAY-2019 05:08**
Data file Sample Info. Line: 94J05;1063769;1;0;;JCV94;;;4y30b41; Instrument ID: **HP23297.i** Batch: **4191502AA**
Date, time and analyst ID of latest file update: 31-May-2019 05:25 Automation

Blank Data file reference: **/chem/HP23297.i/19may30b.b/4y30b41.d**

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 30-MAY-2019 23:57
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may30b.b/4y30c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.374	(0.000)	459	65	345729	(-13)	250.00	
66) Fluorobenzene	7.866	(0.006)	1033	96	1028402	(-9)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	836317	(-8)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189	(0.000)	1908	152	464212	(-7)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977	(-0.001)	113	252497	49.810	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434	(0.000)	102	64878	52.379	105%		80 - 120
83) Toluene-d8	(3)	9.867	(0.000)	98	1053355	49.075	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.307	(0.000)	95	384241	46.965	94%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)	3.698	(-0.000)	58	1129	1.173	1.17		J	0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.438	(0.000)	63	3828	0.481	0.48		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	6.278	(-0.000)	96	1453	0.294	0.29		J	0.2	1
44) 2-Butanone	(2)	6.253	(0.000)	43	4181	0.688	0.69		J	0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Kevin A. Sposito on 05/31/2019 at 10:35. Target 3.5 esignature user ID: kas02648

Data file: /chem/HP23297.i/19may30b.b/4y30s63.d Injection date and time: **31-MAY-2019 05:08**
Data file Sample Info. Line: 94J05;1063769;1;0;;JCV94;;;4y30b41; Instrument ID: **HP23297.i** Batch: **4191502AA**
Date, time and analyst ID of latest file update: 31-May-2019 05:25 Automation

Blank Data file reference: **/chem/HP23297.i/19may30b.b/4y30b41.d**

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 30-MAY-2019 23:57
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may30b.b/4y30c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

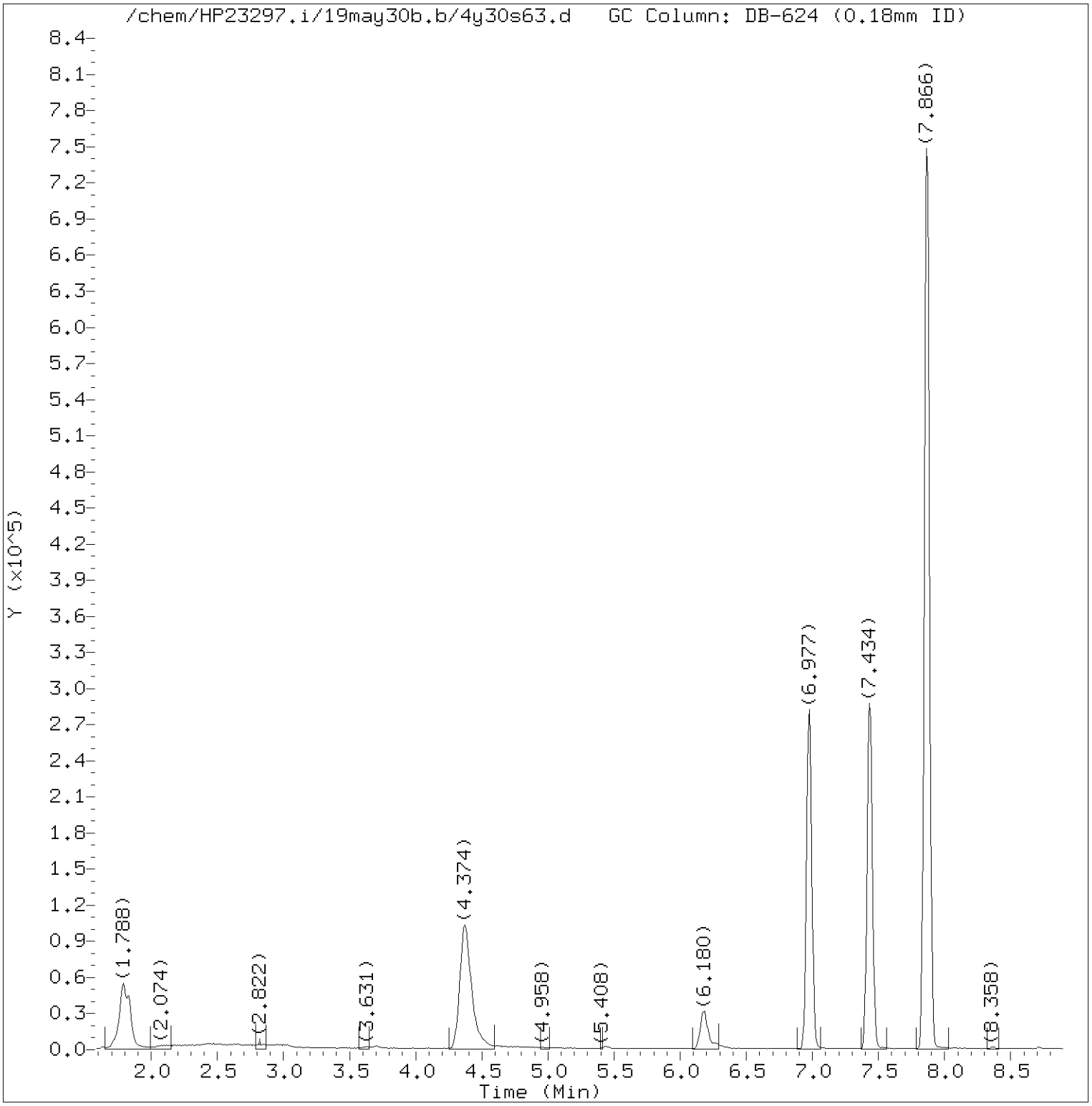
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Kevin A. Sposito on 05/31/2019 at 10:35. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/31/2019 at 12:24. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

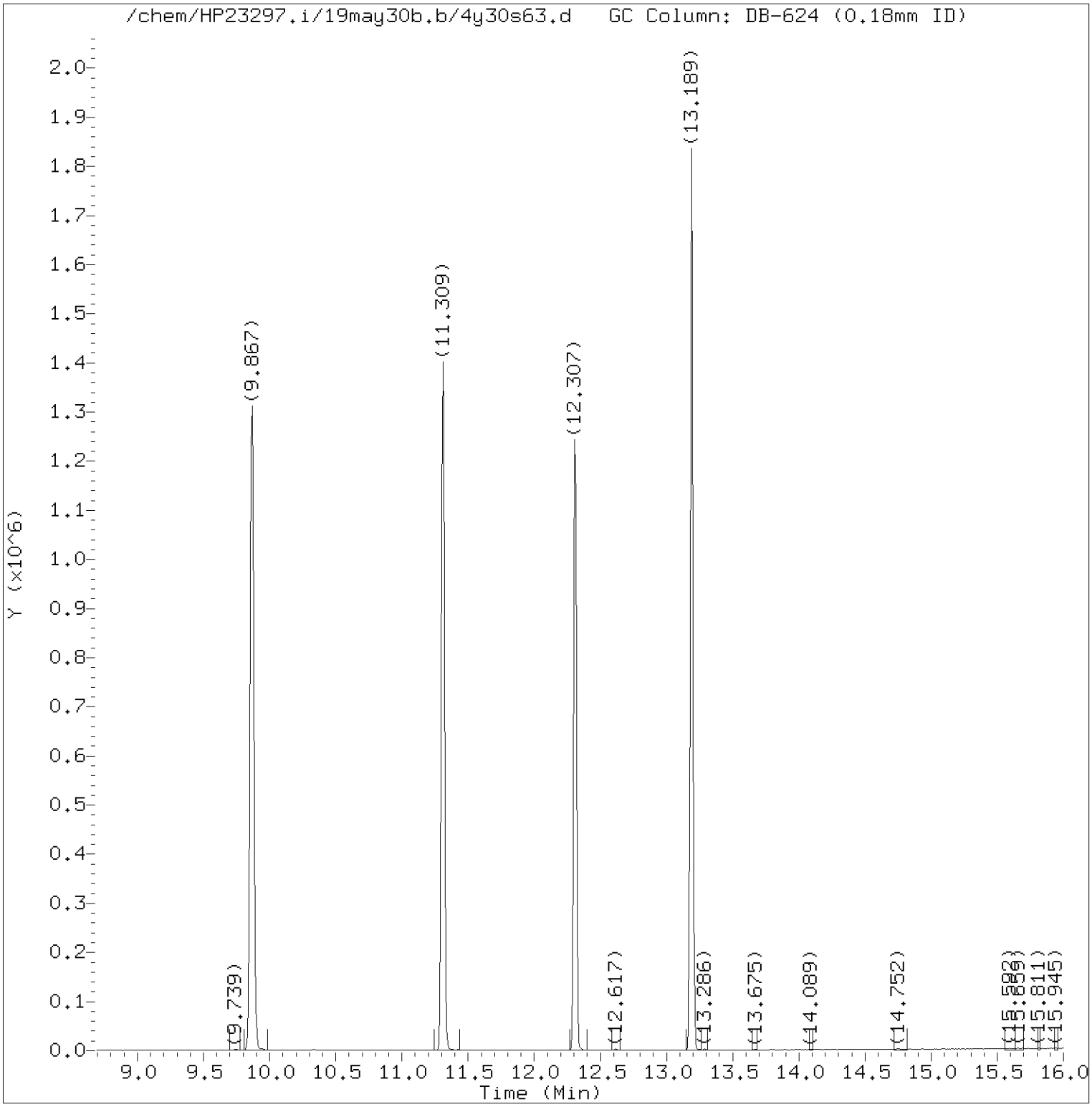
Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30s63.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 05:08 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 05:25 Automation

Sample Name: 94J05 Lab Sample ID: 1063769

Digitally signed by Kevin A. Sposito
on 05/31/2019 at 10:35.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30s63.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 05:08 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 05:25 Automation

Sample Name: 94J05 Lab Sample ID: 1063769

Digitally signed by Kevin A. Sposito
on 05/31/2019 at 10:35.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30s63.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 05:08 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 05:25 Automation

Sample Name: 94J05 Lab Sample ID: 1063769

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
18) Acetone	(1)	3.698	58	1129	1.173
29)*t-Butyl alcohol-d10	(1)	4.374	65	345729	250.000
36) 1,1-Dichloroethane	(2)	5.438	63	3828	0.481
44) 2-Butanone	(2)	6.253	43	4181	0.688
42) cis-1,2-Dichloroethene	(2)	6.278	96	1453	0.294
52)$Dibromofluoromethane	(2)	6.977	113	252497	49.810
57)$1,2-Dichloroethane-d4	(2)	7.434	102	64878	52.379
66)*Fluorobenzene	(2)	7.866	96	1028402	50.000
83)$Toluene-d8	(3)	9.867	98	1053355	49.075
100)*Chlorobenzene-d5	(3)	11.309	117	836317	50.000
114)$4-Bromofluorobenzene	(3)	12.307	95	384241	46.965
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	464212	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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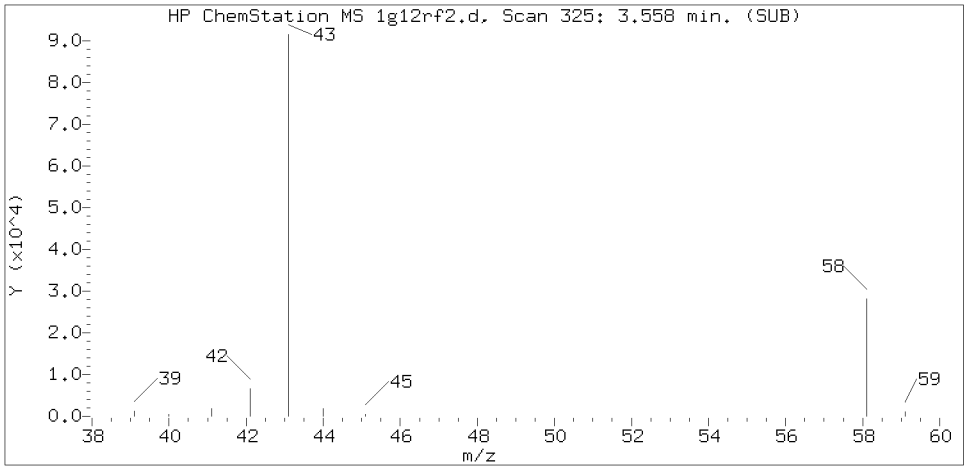
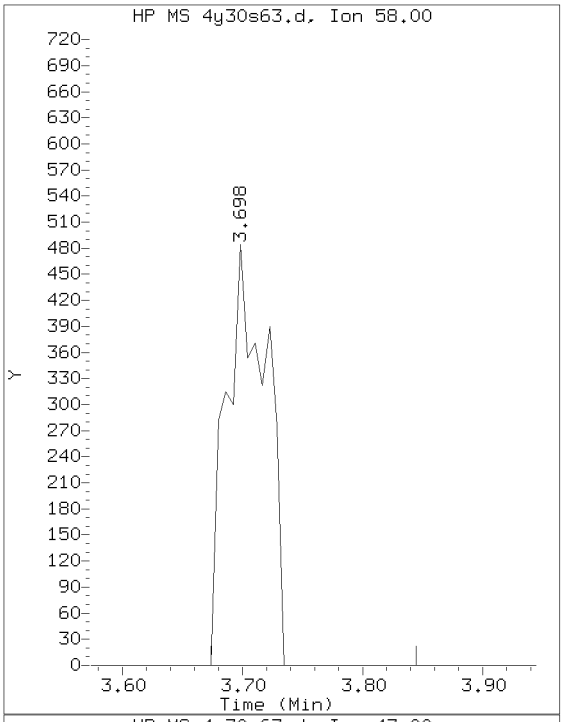
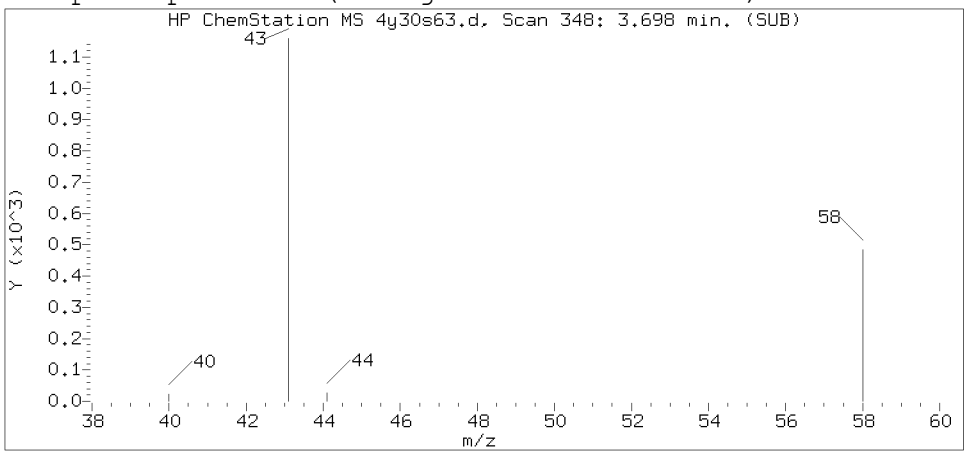
on 05/31/2019 at 10:35.
Target 3.5 esignature user ID: kas02648

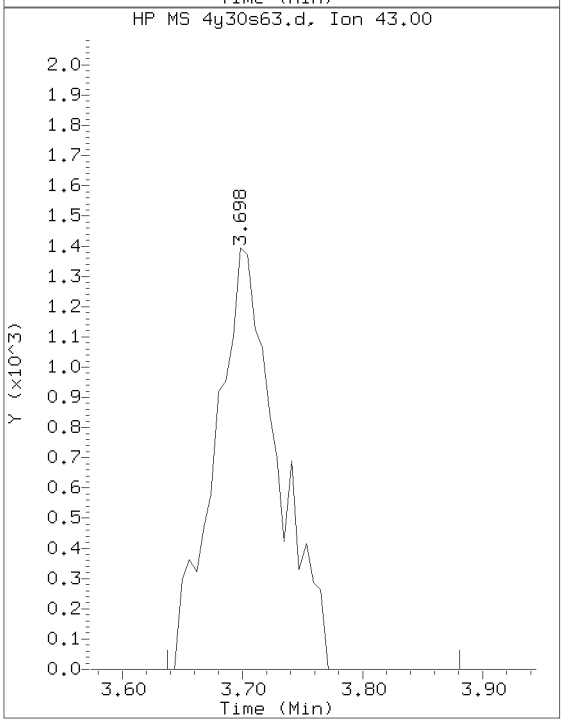
Reference Standard Spectrum for Acetone



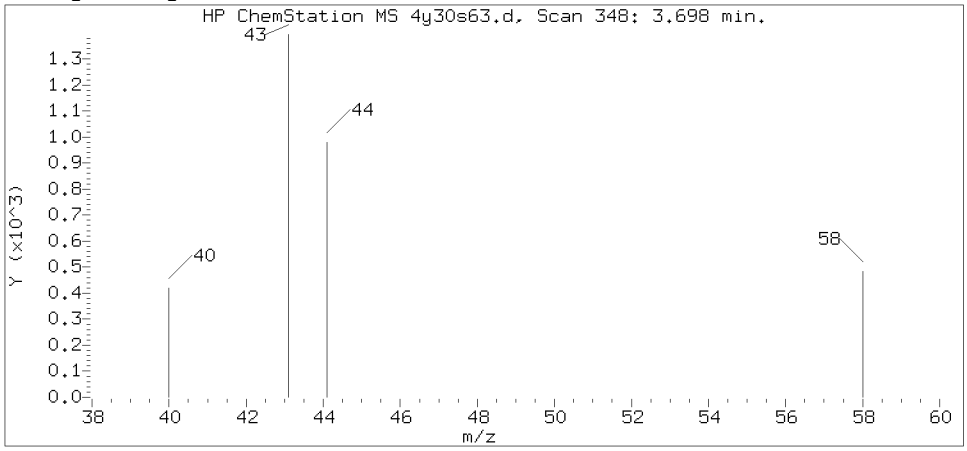


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP23297.i/19may30b.b/4y30s63.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 05:08 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 05:25 Automation

Sample Name: 94J05 Lab Sample ID: 1063769

Compound Number : 18
Compound Name : Acetone
Scan Number : 348
Retention Time (minutes): 3.698
Relative Retention Time :-0.00001
Quant Ion : 58.00
Area (flag) : 1129
On-Column Amount (ng) : 1.1732

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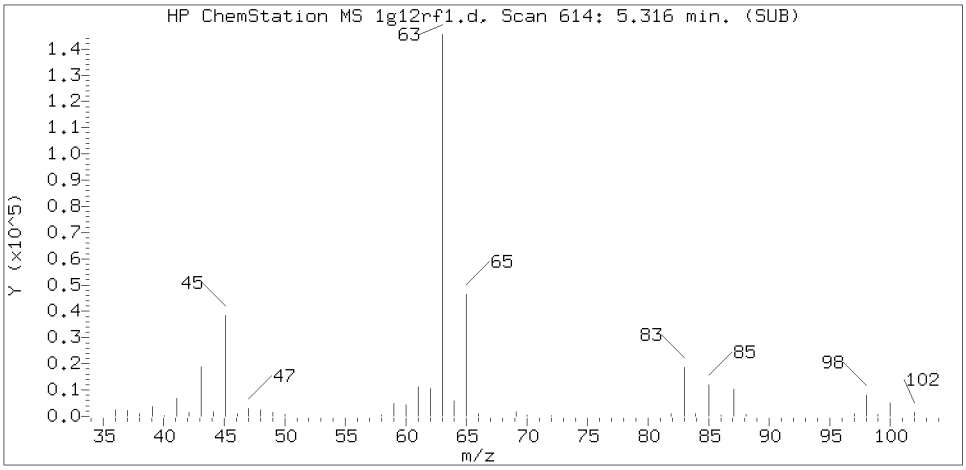
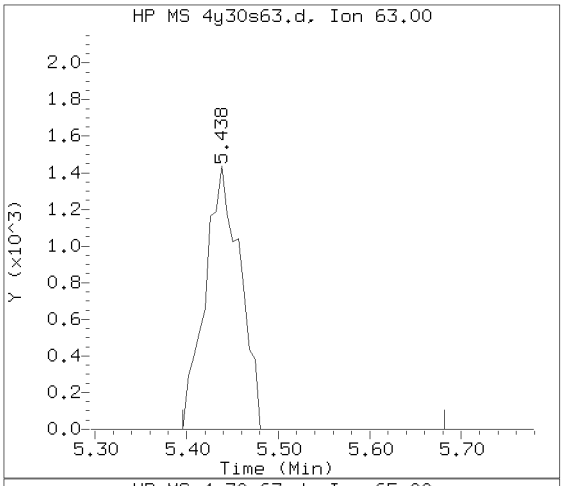
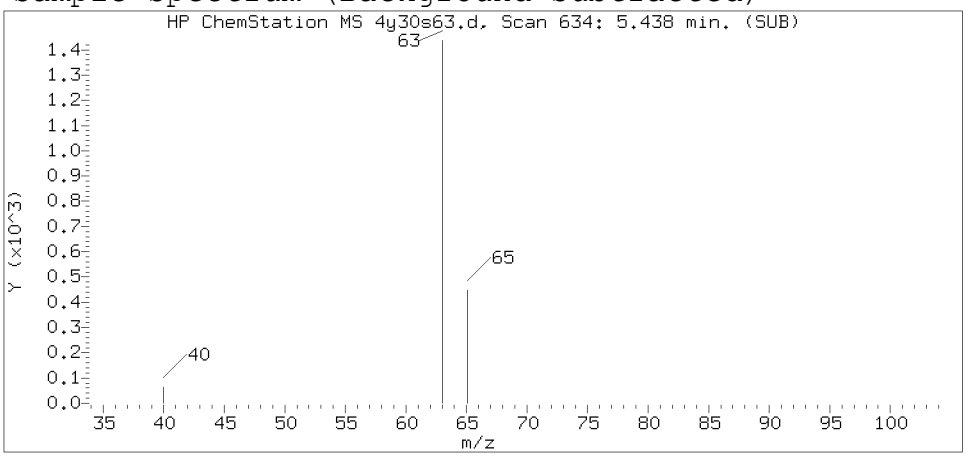
Target 3.5 esignature user ID: kas02648

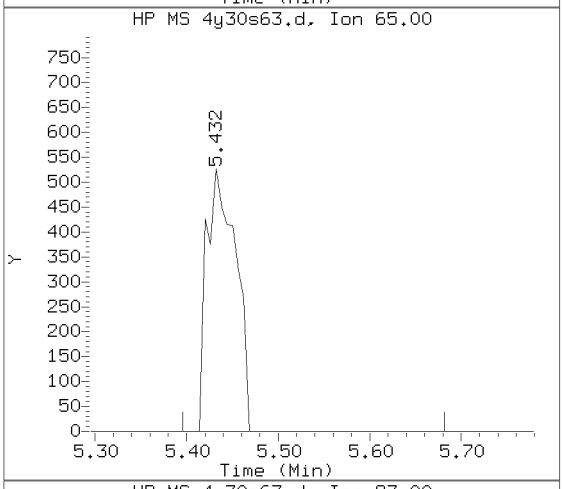
Reference Standard Spectrum for 1,1-Dichloroethane



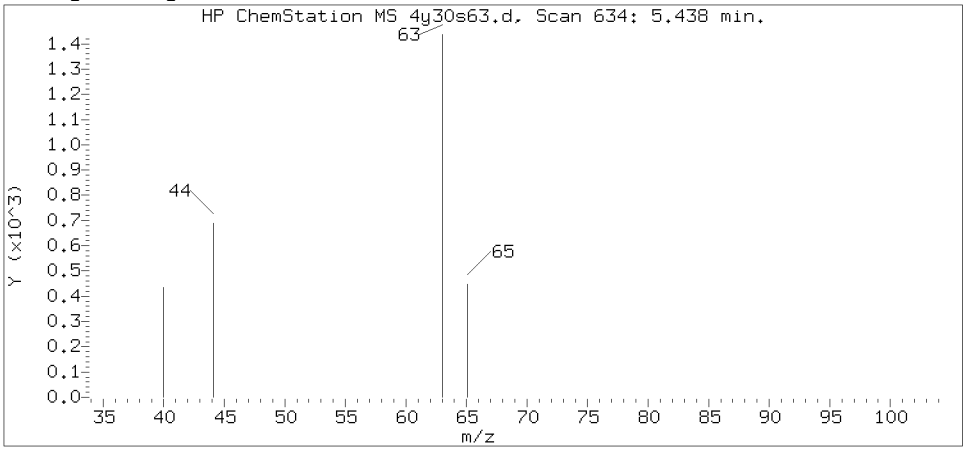


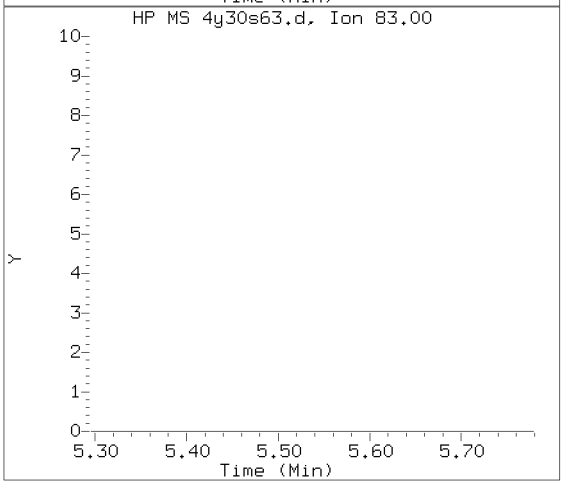
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may30b.b/4y30s63.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 05:08 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 05:25 Automation

Sample Name: 94J05 Lab Sample ID: 1063769

Compound Number	: 36
Compound Name	: 1,1-Dichloroethane
Scan Number	: 634
Retention Time (minutes)	: 5.438
Relative Retention Time	: 0.00023
Quant Ion	: 63.00
Area (flag)	: 3828
On-Column Amount (ng)	: 0.4807

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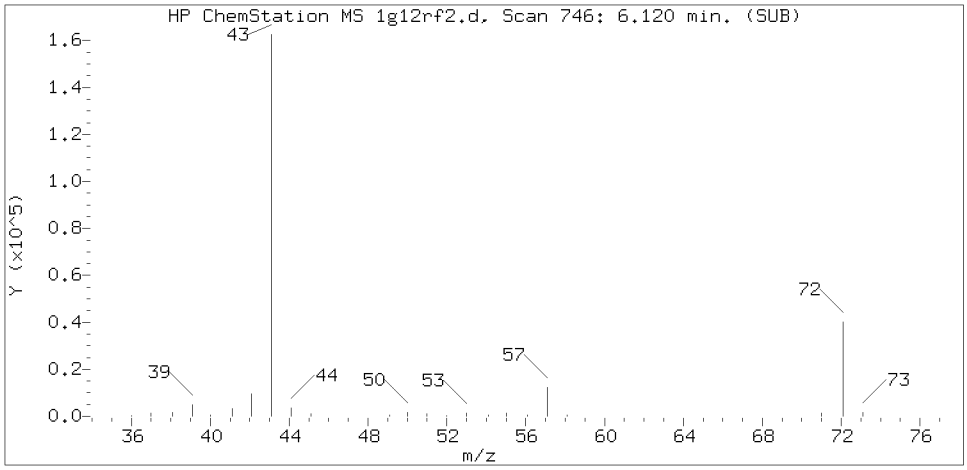
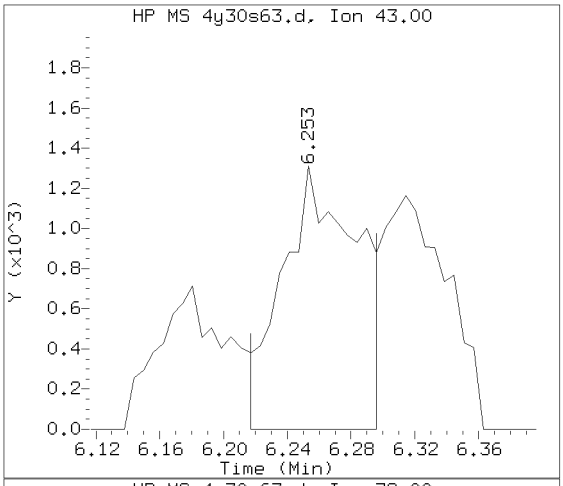
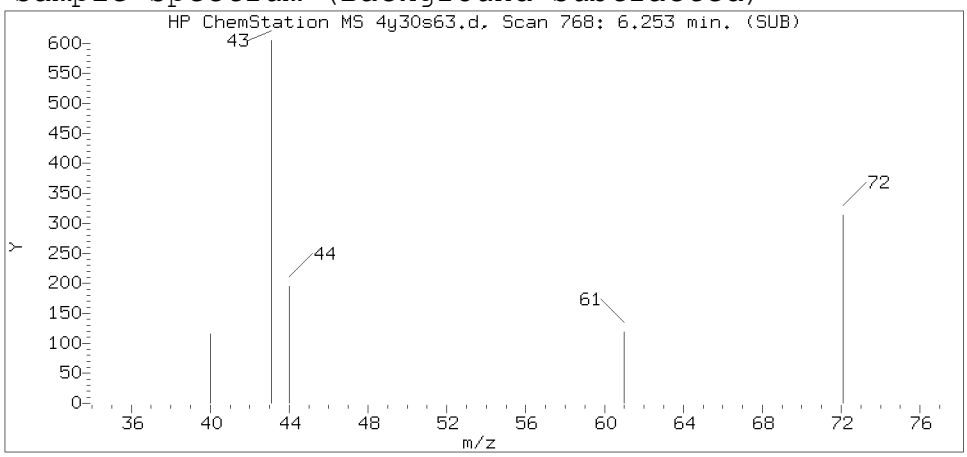
Target 3.5 esignature user ID: kas02648

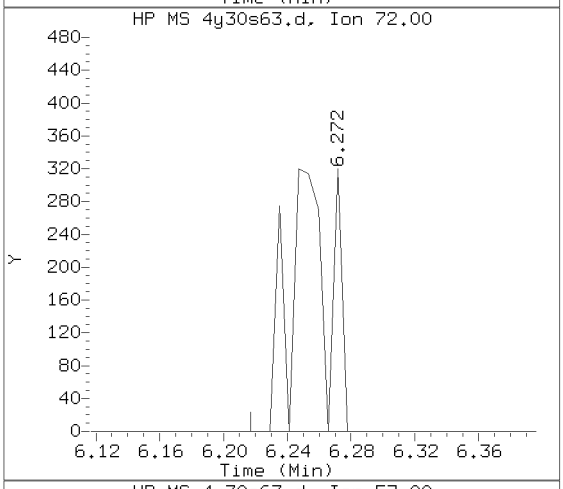
Reference Standard Spectrum for 2-Butanone



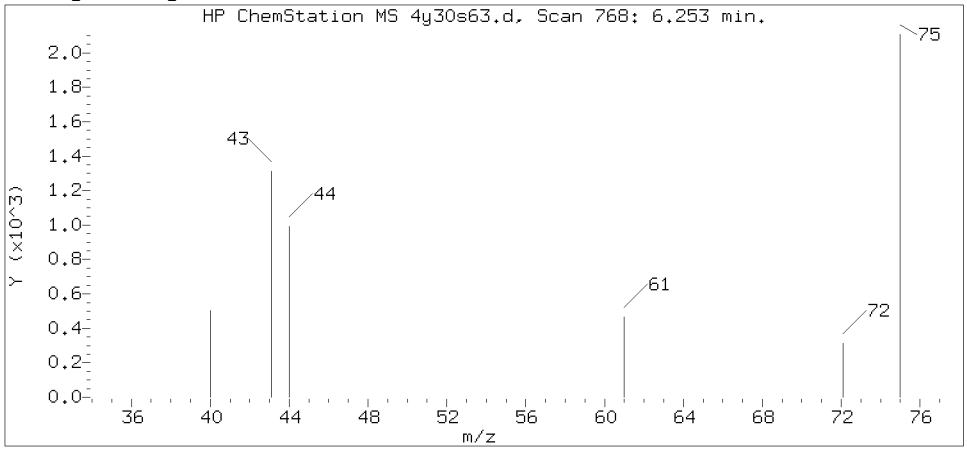


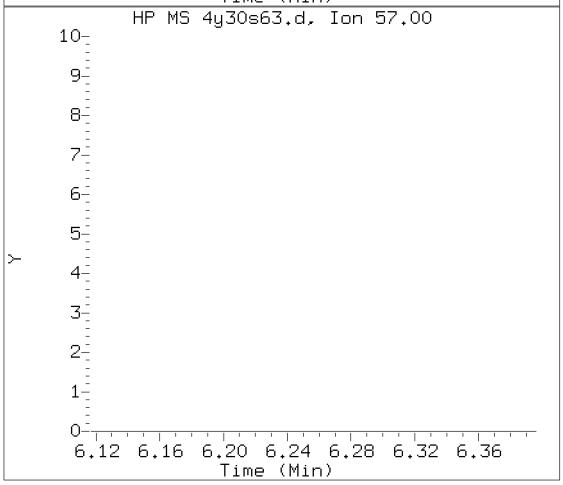
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may30b.b/4y30s63.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 05:08 Analyst ID: DVV10203

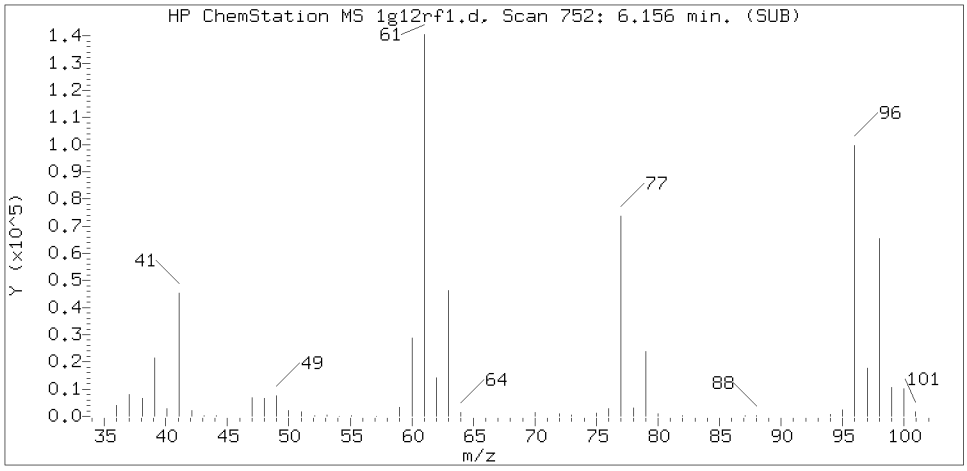
Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 05:25 Automation

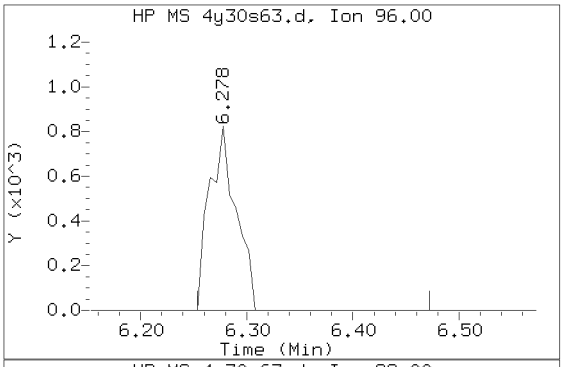
Sample Name: 94J05 Lab Sample ID: 1063769

Compound Number	: 44
Compound Name	: 2-Butanone
Scan Number	: 768
Retention Time (minutes)	: 6.253
Relative Retention Time	: 0.00015
Quant Ion	: 43.00
Area (flag)	: 4181
On-Column Amount (ng)	: 0.6885

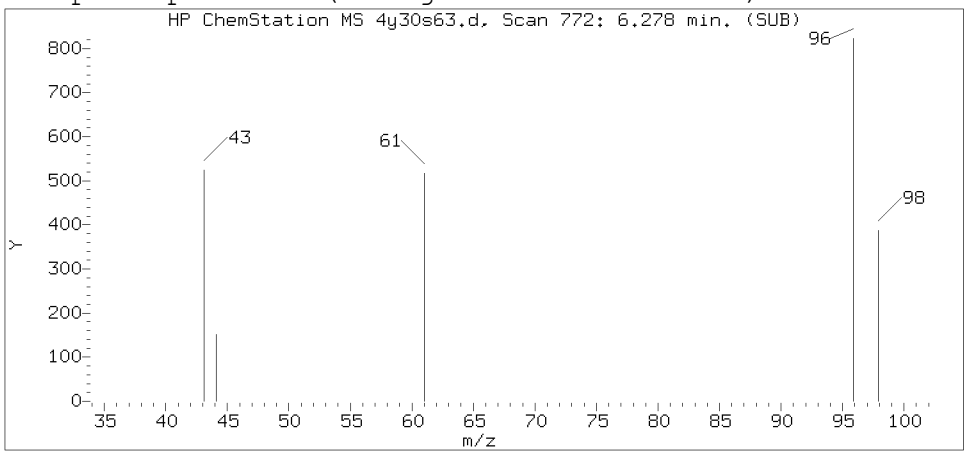
Digitally signed by Kevin A. Sposito on 05/31/2019 at 10:35.
Target 3.5 esignature user ID: kas02648

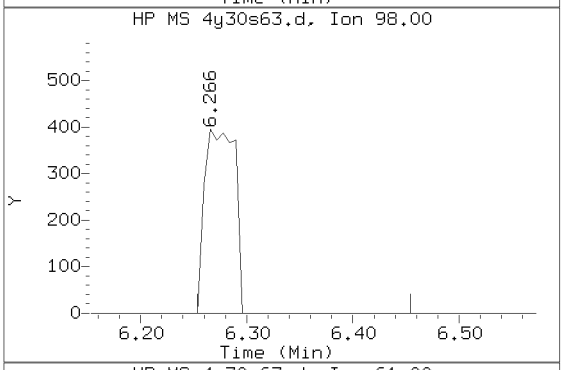
Reference Standard Spectrum for cis-1,2-Dichloroethene



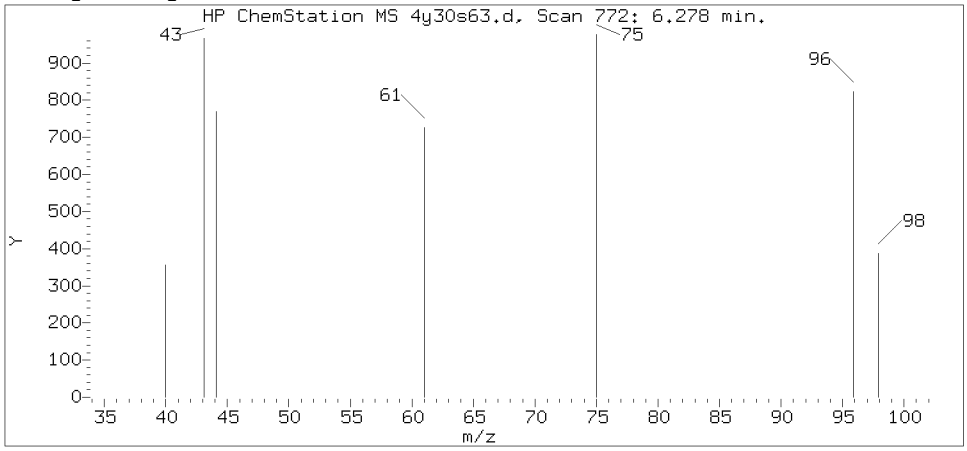


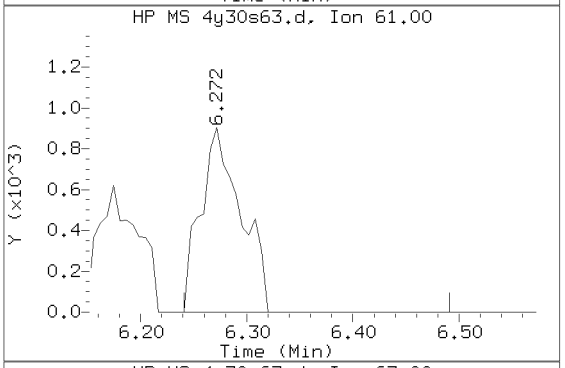
Sample Spectrum (Background Subtracted)

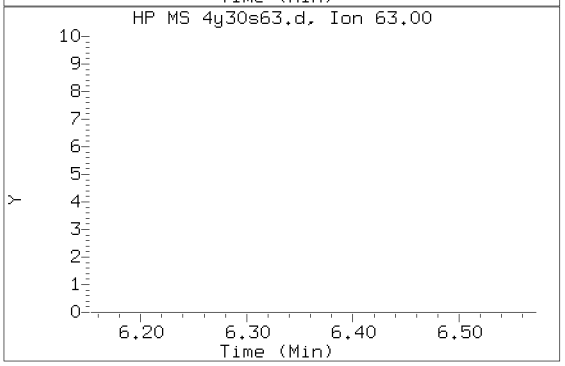




Sample Spectrum (Unaltered)







Data File: /chem/HP23297.i/19may30b.b/4y30s63.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 05:08 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 05:25 Automation

Sample Name: 94J05 Lab Sample ID: 1063769

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 772
Retention Time (minutes): 6.278
Relative Retention Time :-0.00062
Quant Ion : 96.00
Area (flag) : 1453
On-Column Amount (ng) : 0.2941

Digitally signed by Kevin A. Sposito on 05/31/2019 at 10:35.
Target 3.5 esignature user ID: kas02648

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

94J06

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1063770

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may30b.b/4y30s64.d

Level: (low/med) LOW Date Received: 05/22/19

Moisture: not dec. _____ Date Analyzed: 05/31/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L		Q
75-01-4	Vinyl Chloride		1	U
75-35-4	1,1-Dichloroethene		0.5	J
67-64-1	Acetone		2	J
76-13-1	Freon 113		10	U
75-15-0	Carbon Disulfide		5	U
75-09-2	Methylene Chloride		1	U
156-60-5	trans-1,2-Dichloroethene		1	U
75-34-3	1,1-Dichloroethane		3	
156-59-2	cis-1,2-Dichloroethene		0.3	J
78-93-3	2-Butanone		0.7	J
67-66-3	Chloroform		1	U
71-55-6	1,1,1-Trichloroethane		2	
71-43-2	Benzene		1	U
107-06-2	1,2-Dichloroethane		1	U
79-01-6	Trichloroethene		0.8	J
123-91-1	1,4-Dioxane		250	U
108-88-3	Toluene		0.4	J
127-18-4	Tetrachloroethene		0.4	J
100-41-4	Ethylbenzene		1	U
1330-20-7	Xylene (Total)		5	U
95-50-1	1,2-Dichlorobenzene		5	U
91-20-3	Naphthalene		5	U

FORM I VOA

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94J06 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1063770

Data file: /chem/HP23297.i/19may30b.b/4y30s64.d Injection date and time: **31-MAY-2019 05:31**
Data file Sample Info. Line: 94J06;1063770;1;0;;JCV94;;;4y30b41; Instrument ID: **HP23297.i** Batch: **4191502AA**
Date, time and analyst ID of latest file update: 31-May-2019 12:37 kas02648

Blank Data file reference: **/chem/HP23297.i/19may30b.b/4y30b41.d**

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 30-MAY-2019 23:57
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may30b.b/4y30c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.380(-0.006)	460	65	343745 (-13)	250.00	
66) Fluorobenzene	7.872(0.000)	1034	96	1020542 (-9)	50.00	
100) Chlorobenzene-d5	11.309(0.000)	1599	117	823487 (-9)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189(0.000)	1908	152	451210 (-10)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977(0.000)	113	252449	50.184	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.440(0.000)	102	63988	52.058	104%		80 - 120
83) Toluene-d8	(3)	9.867(0.000)	98	1049717	49.667	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.306(0.000)	95	380465	47.228	94%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	3.662(-0.000)	96	1664	0.468	0.47		J	0.2	1
18) Acetone	(1)	3.698(0.001)	58	1648	1.722	1.72		J	0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.444(-0.000)	63	26585	3.364	3.36			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.284(-0.000)	96	1628	0.332	0.33		J	0.2	1
44) 2-Butanone	(2)	6.266(-0.000)	43	4063M	0.674	0.67		J	0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	6.983(-0.000)	97	12492	1.917	1.92			0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	8.340(0.000)	95	3678	0.774	0.77		J	0.2	1
75) 1,4-Dioxane	(1)			Not Detected					29	250
88) Toluene	(3)	9.940(-0.000)	92	4958	0.406	0.41		J	0.2	1
93) Tetrachloroethene	(3)	10.481(-0.000)	166	1993	0.374	0.37		J	0.2	1
104) Ethylbenzene	(3)			Not Detected					0.4	1
106) m+p-Xylene	(3)			Not Detected					1	5
107) o-Xylene	(3)			Not Detected					0.4	1
108) Xylene (Total)	(3)			Not Detected					1	5
138) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
148) Naphthalene	(4)			Not Detected					1	5

M = Compound was manually integrated.

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Data file: /chem/HP23297.i/19may30b.b/4y30s64.d Injection date and time: **31-MAY-2019 05:31**
Data file Sample Info. Line: 94J06;1063770;1;0;;JCV94;;;4y30b41; Instrument ID: **HP23297.i** Batch: **4191502AA**
Date, time and analyst ID of latest file update: 31-May-2019 12:37 kas02648

Blank Data file reference: **/chem/HP23297.i/19may30b.b/4y30b41.d**

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 30-MAY-2019 23:57
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may30b.b/4y30c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

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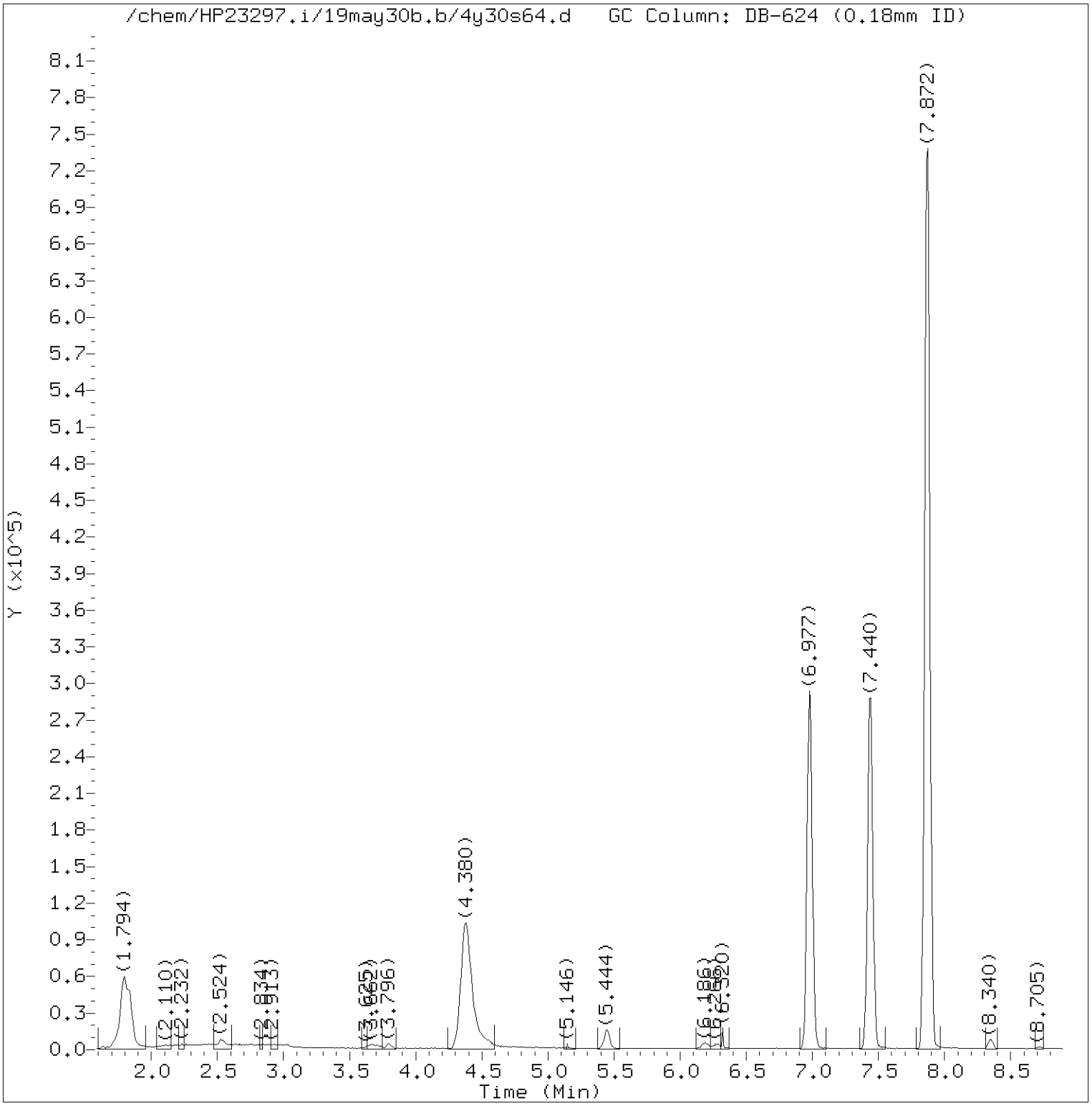
Secondary review performed and digitally signed by Kelly E. Keller on 05/31/2019 at 12:59. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

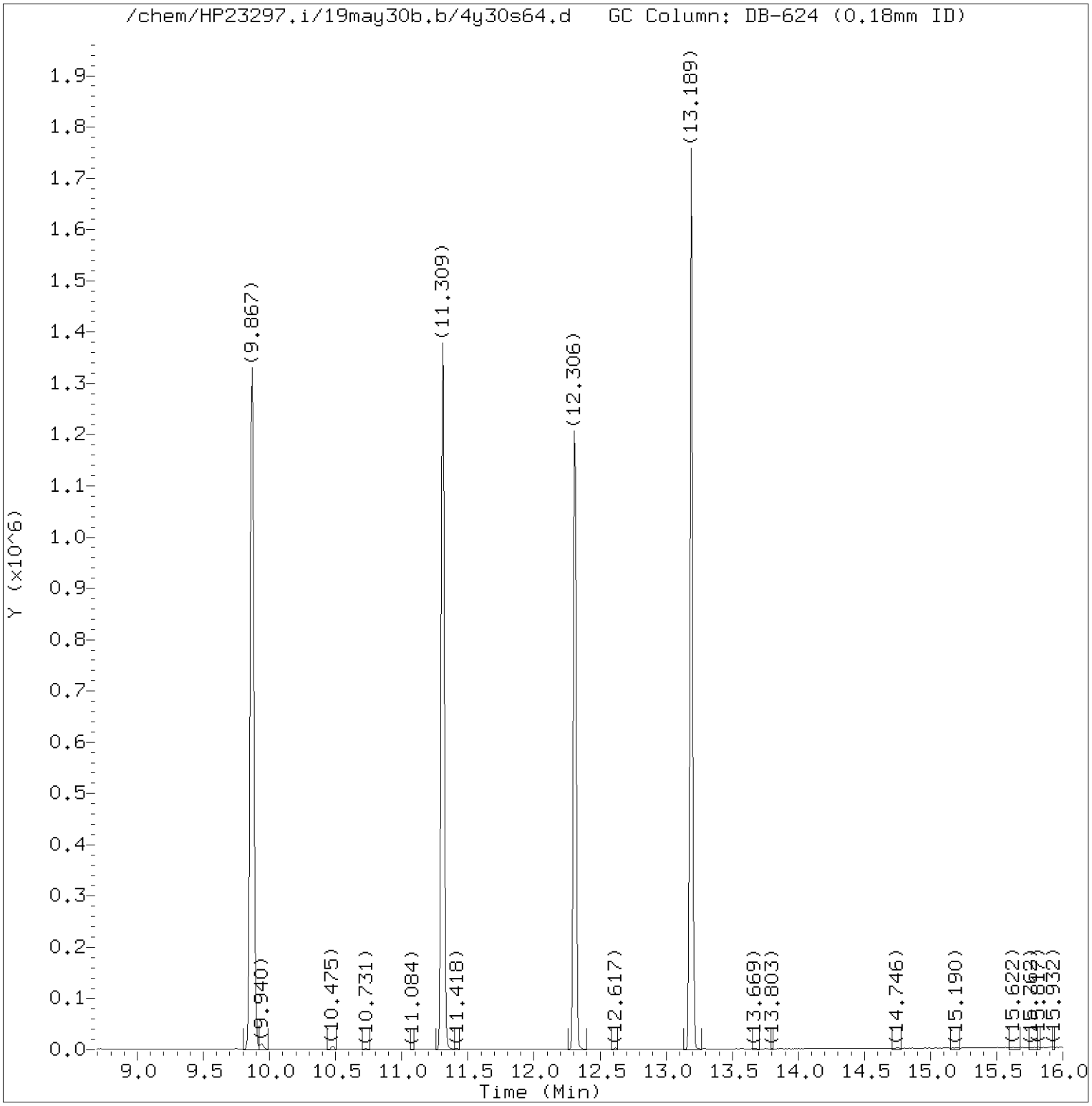
Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30s64.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 05:31 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:37 kas02648

Sample Name: 94J06 Lab Sample ID: 1063770

Digitally signed by Kevin A. Sposito
on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30s64.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 05:31 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:37 kas02648

Sample Name: 94J06 Lab Sample ID: 1063770

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on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30s64.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 05:31 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:37 kas02648

Sample Name: 94J06 Lab Sample ID: 1063770

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	3.662	96	1664	0.468
18) Acetone	(1)	3.698	58	1648	1.722
29)*t-Butyl alcohol-d10	(1)	4.380	65	343745	250.000
36) 1,1-Dichloroethane	(2)	5.444	63	26585	3.364
44) 2-Butanone	(2)	6.266	43	4063M	0.674
42) cis-1,2-Dichloroethene	(2)	6.284	96	1628	0.332
52)$Dibromofluoromethane	(2)	6.977	113	252449	50.184
53) 1,1,1-Trichloroethane	(2)	6.983	97	12492	1.917
57)$1,2-Dichloroethane-d4	(2)	7.440	102	63988	52.058
66)*Fluorobenzene	(2)	7.872	96	1020542	50.000
71) Trichloroethene	(2)	8.340	95	3678	0.774
83)$Toluene-d8	(3)	9.867	98	1049717	49.667
88) Toluene	(3)	9.940	92	4958	0.406
93) Tetrachloroethene	(3)	10.481	166	1993	0.374
100)*Chlorobenzene-d5	(3)	11.309	117	823487	50.000
114)$4-Bromofluorobenzene	(3)	12.306	95	380465	47.228
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	451210	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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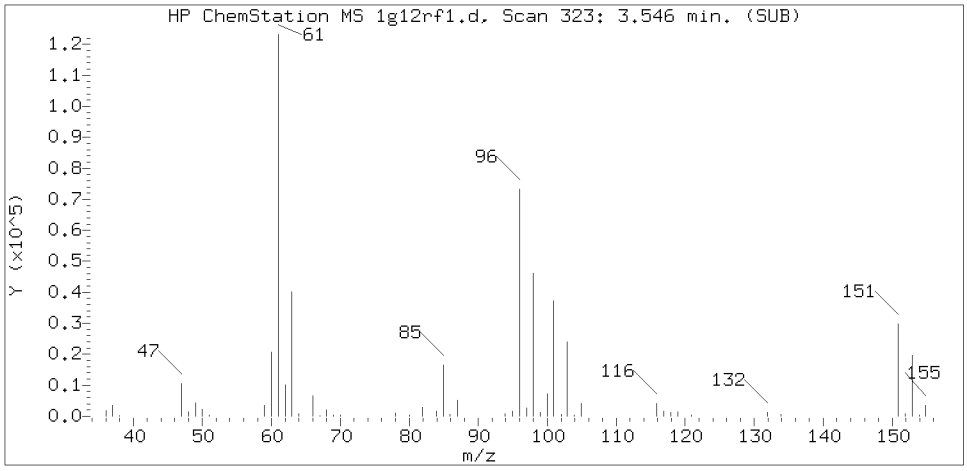
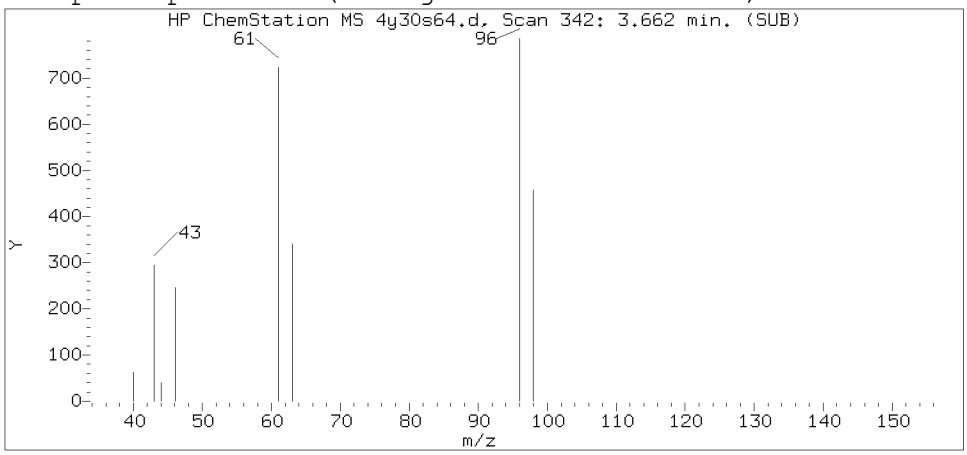
on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kas02648

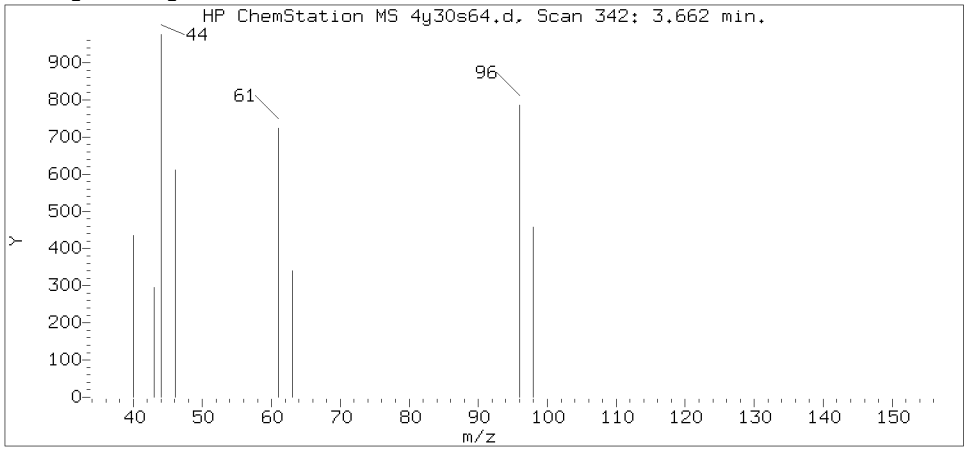
Reference Standard Spectrum for 1,1-Dichloroethene

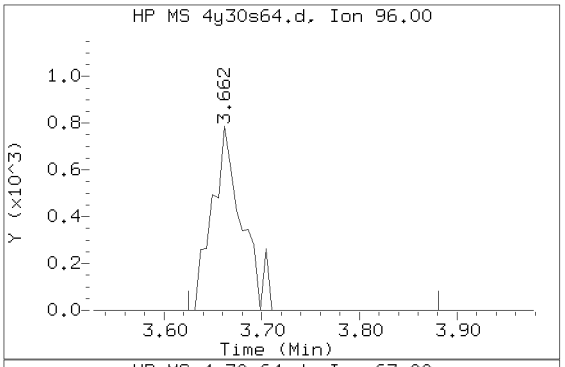


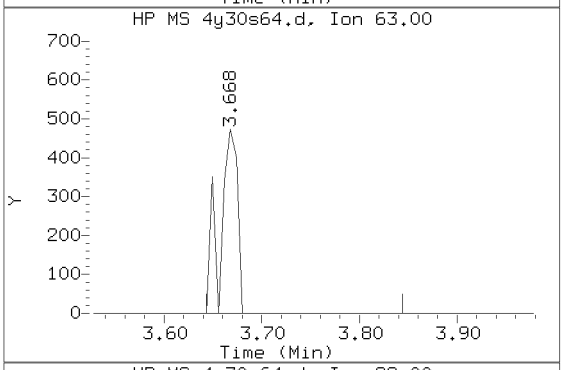
Sample Spectrum (Background Subtracted)

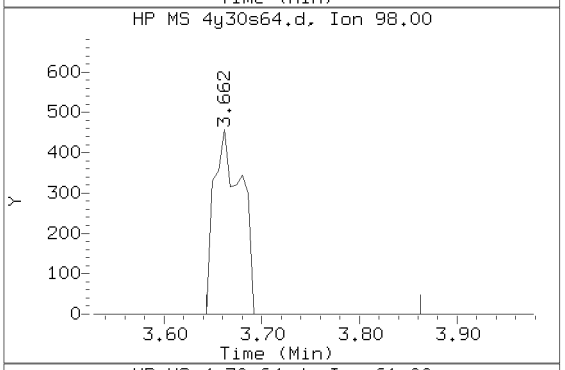


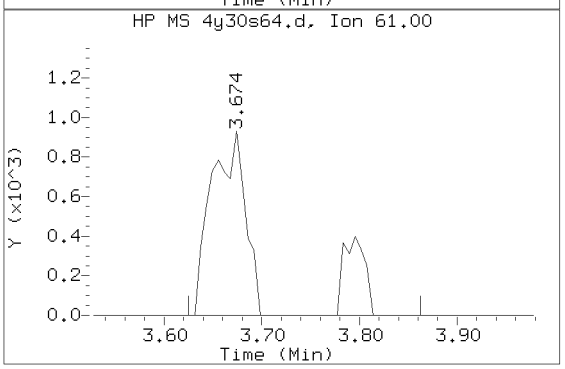
Sample Spectrum (Unaltered)











Data File: /chem/HP23297.i/19may30b.b/4y30s64.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 05:31 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:37 kas02648

Sample Name: 94J06 Lab Sample ID: 1063770

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 342
Retention Time (minutes): 3.662
Relative Retention Time :-0.00001
Quant Ion : 96.00
Area (flag) : 1664
On-Column Amount (ng) : 0.4675

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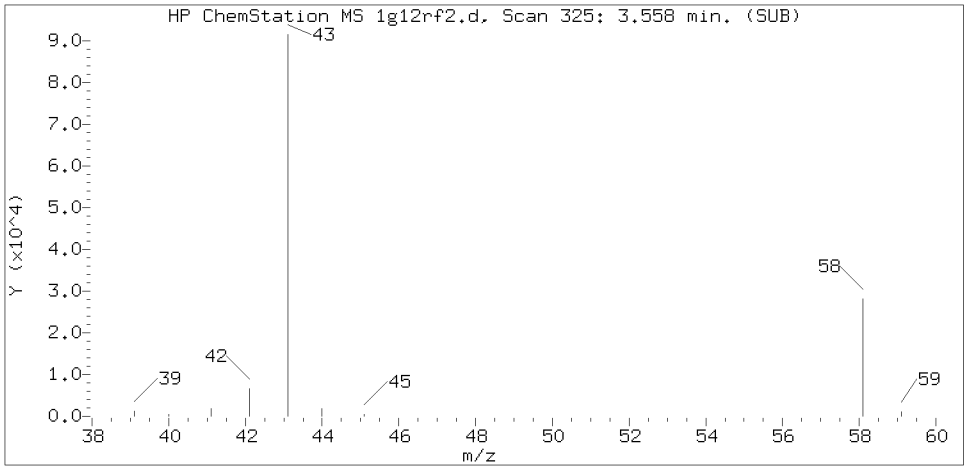
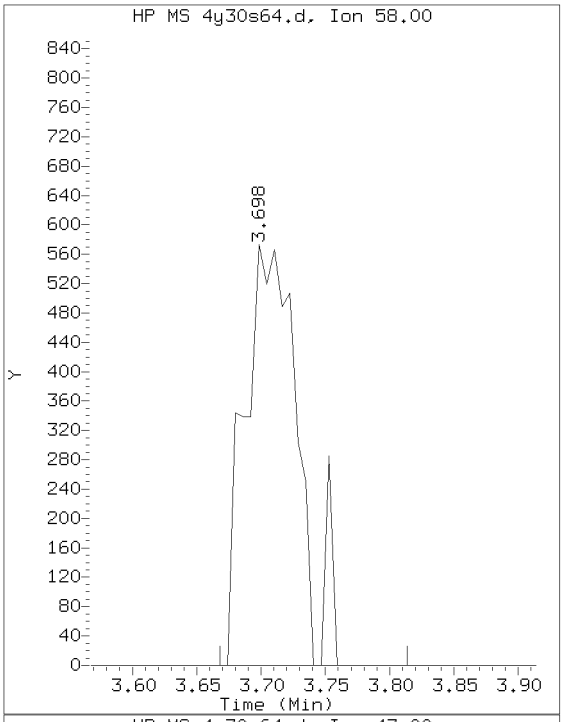
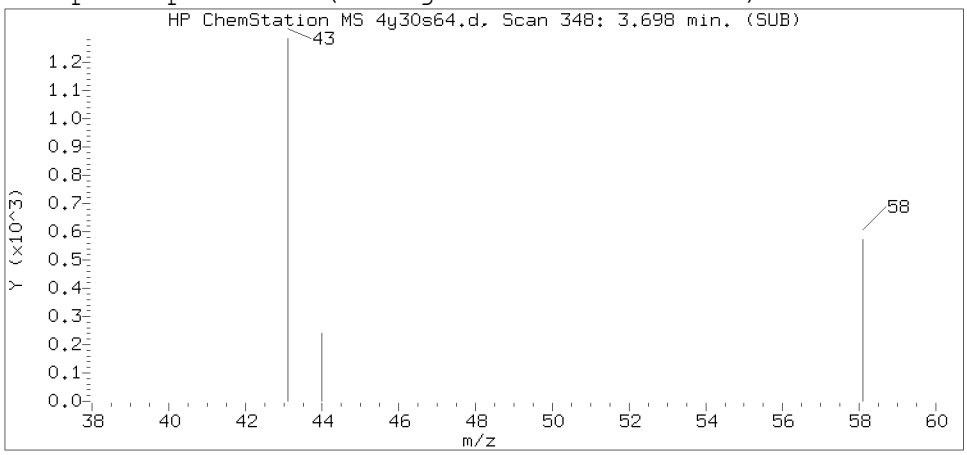
Target 3.5 esignature user ID: kas02648

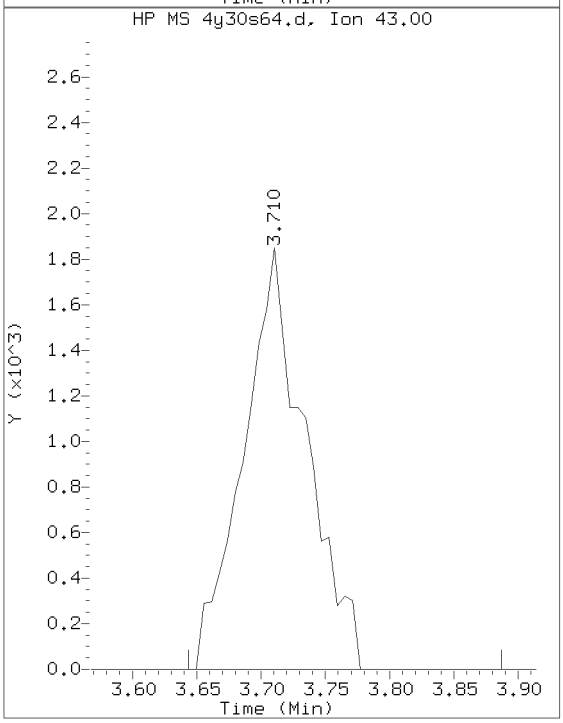
Reference Standard Spectrum for Acetone



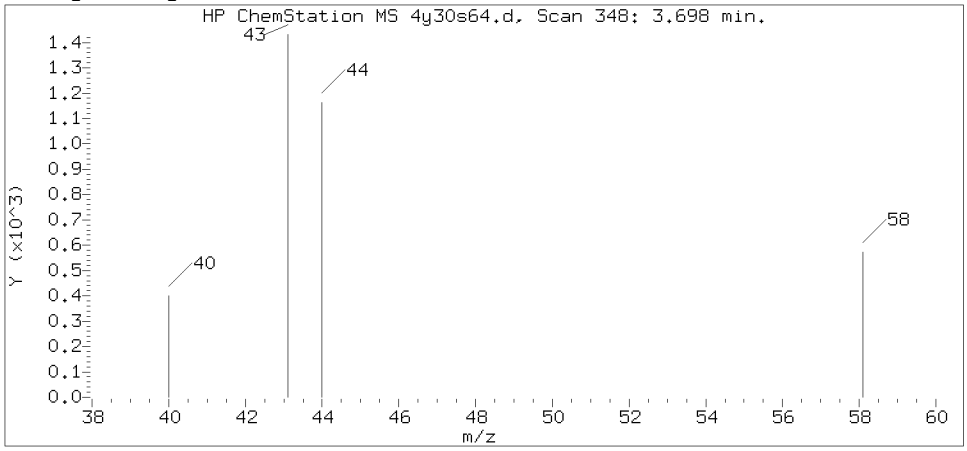


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP23297.i/19may30b.b/4y30s64.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 05:31 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:37 kas02648

Sample Name: 94J06 Lab Sample ID: 1063770

Compound Number	: 18
Compound Name	: Acetone
Scan Number	: 348
Retention Time (minutes)	: 3.698
Relative Retention Time	: 0.00117
Quant Ion	: 58.00
Area (flag)	: 1648
On-Column Amount (ng)	: 1.7219

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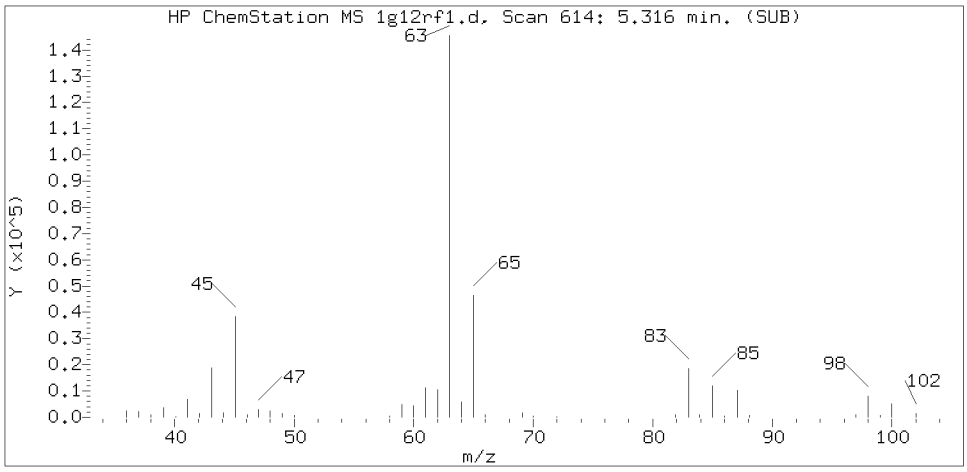
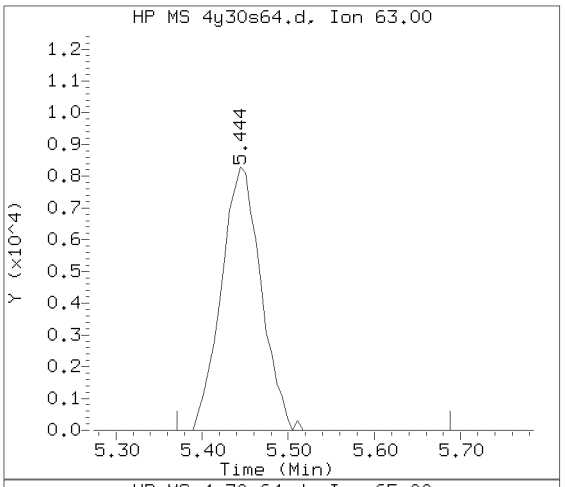
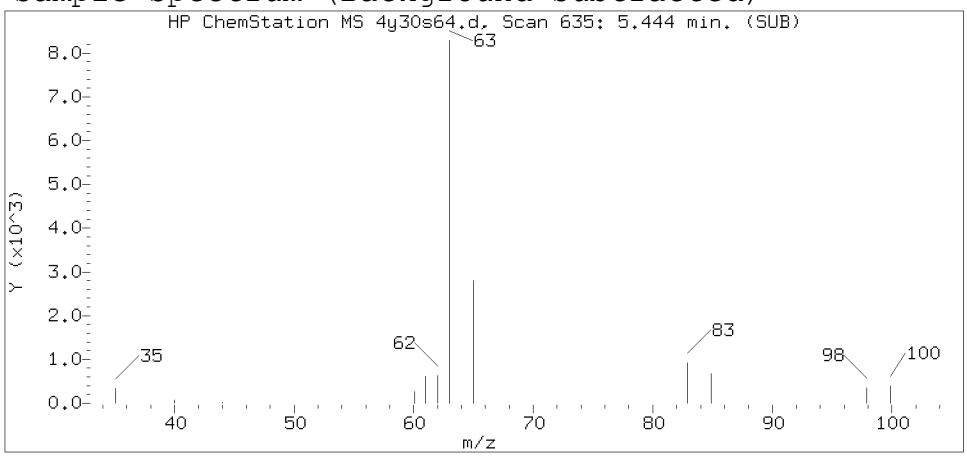
Target 3.5 esignature user ID: kas02648

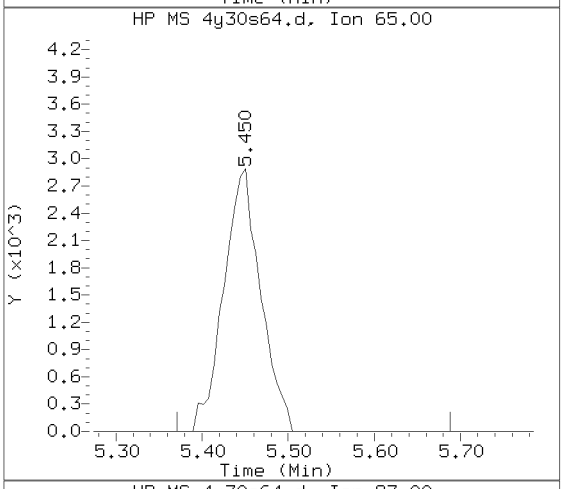
Reference Standard Spectrum for 1,1-Dichloroethane



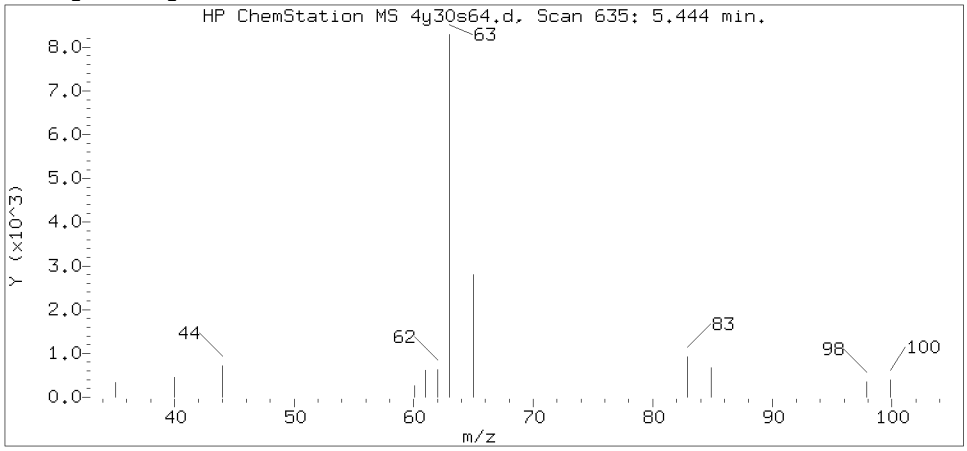


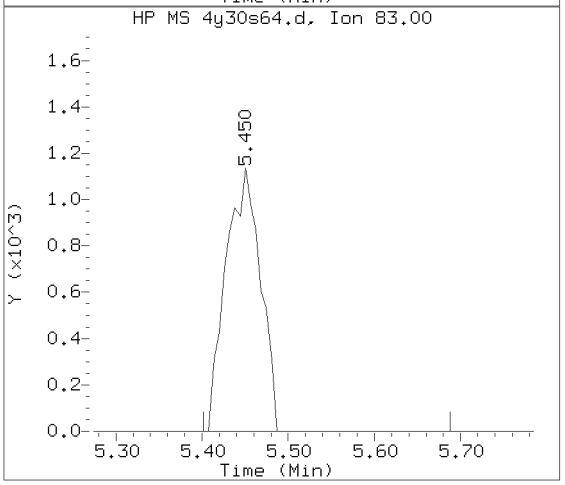
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may30b.b/4y30s64.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 05:31 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:37 kas02648

Sample Name: 94J06 Lab Sample ID: 1063770

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 635
Retention Time (minutes): 5.444
Relative Retention Time :-0.00000
Quant Ion : 63.00
Area (flag) : 26585
On-Column Amount (ng) : 3.3636

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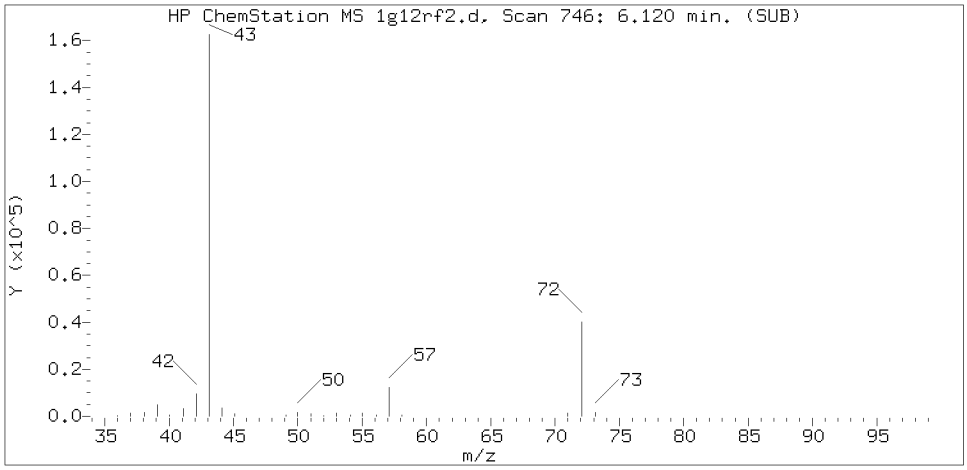
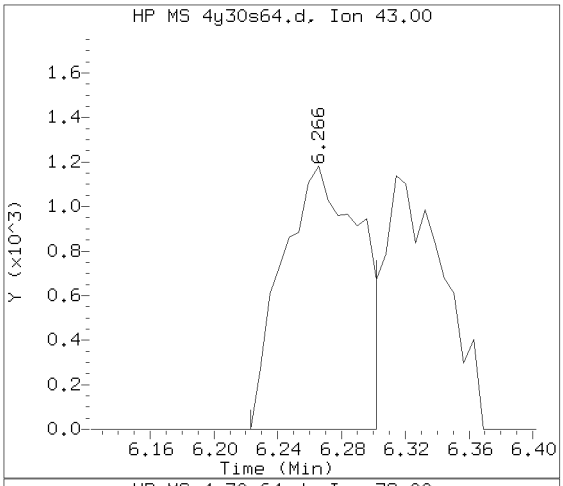
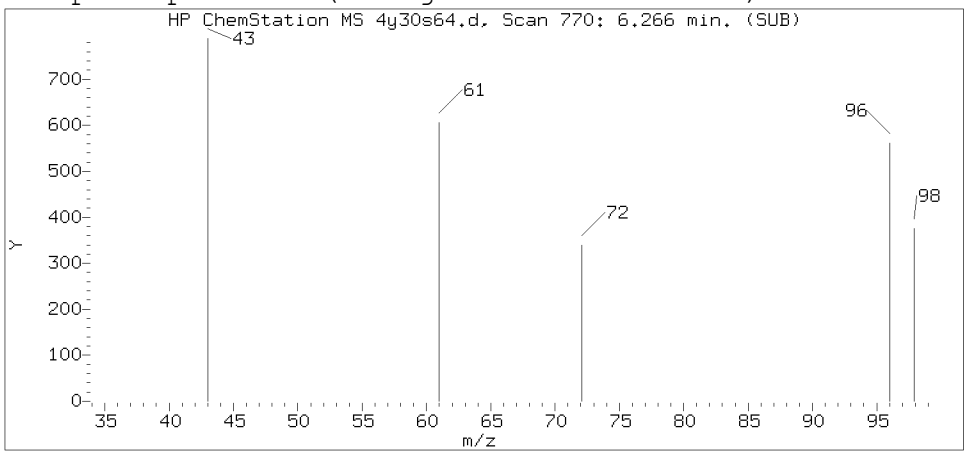
Target 3.5 esignature user ID: kas02648

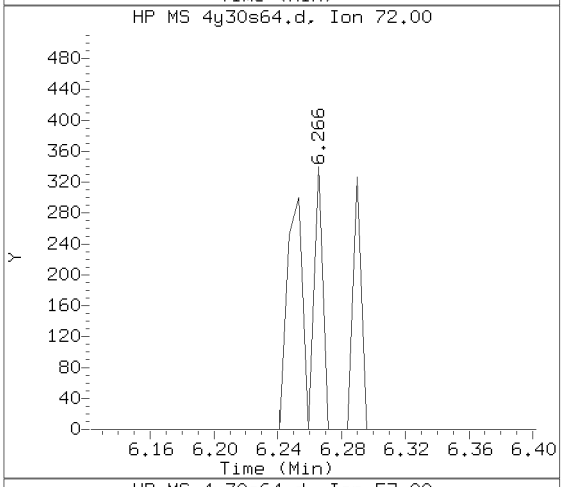
Reference Standard Spectrum for 2-Butanone



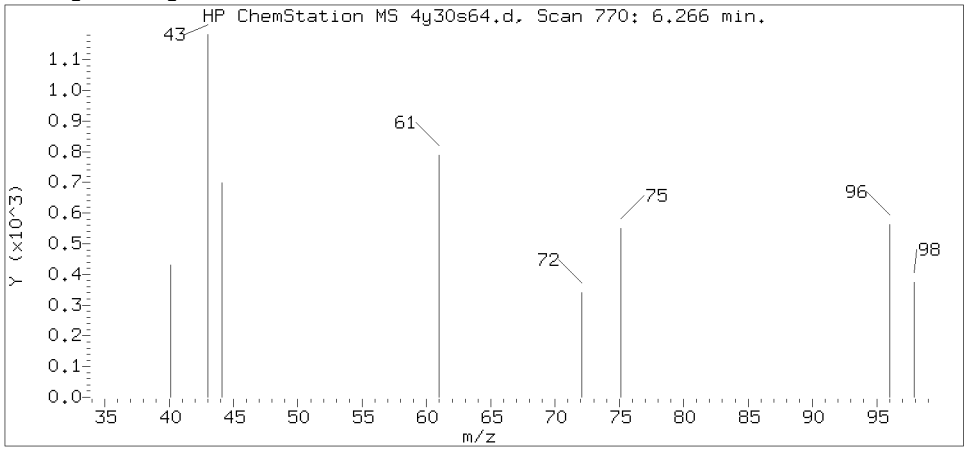


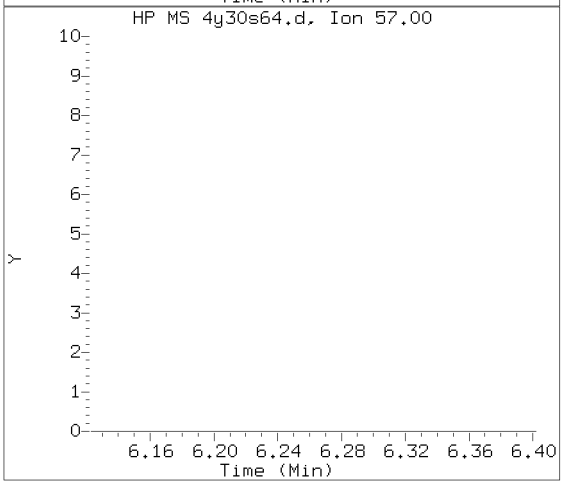
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may30b.b/4y30s64.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 05:31 Analyst ID: DVV10203

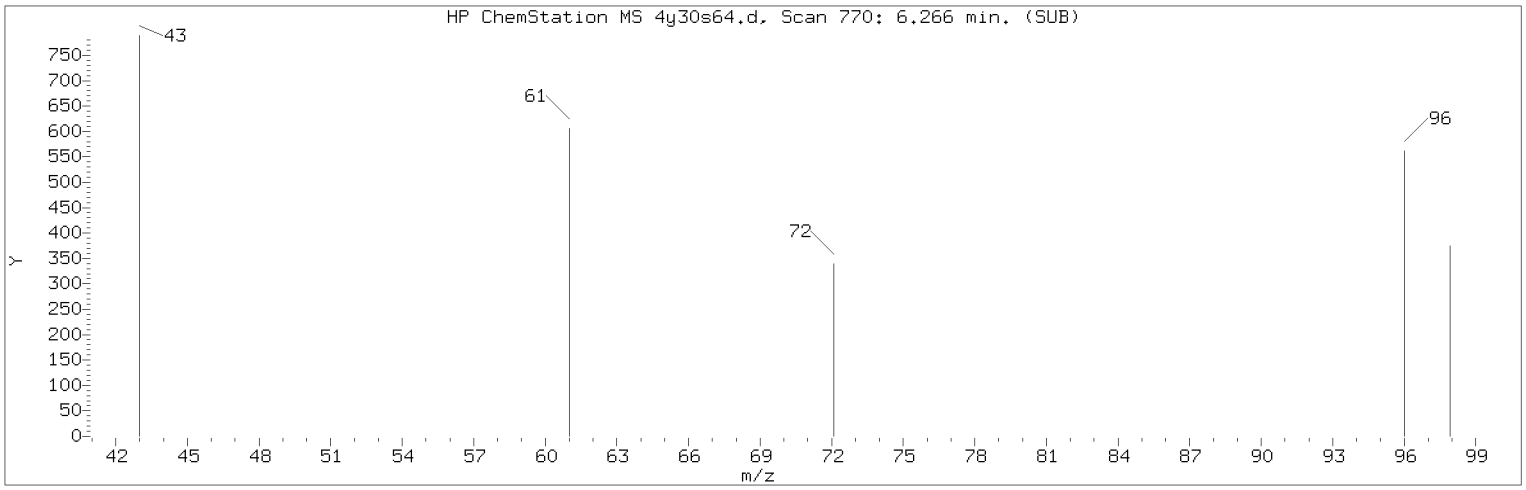
Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:37 kas02648

Sample Name: 94J06 Lab Sample ID: 1063770

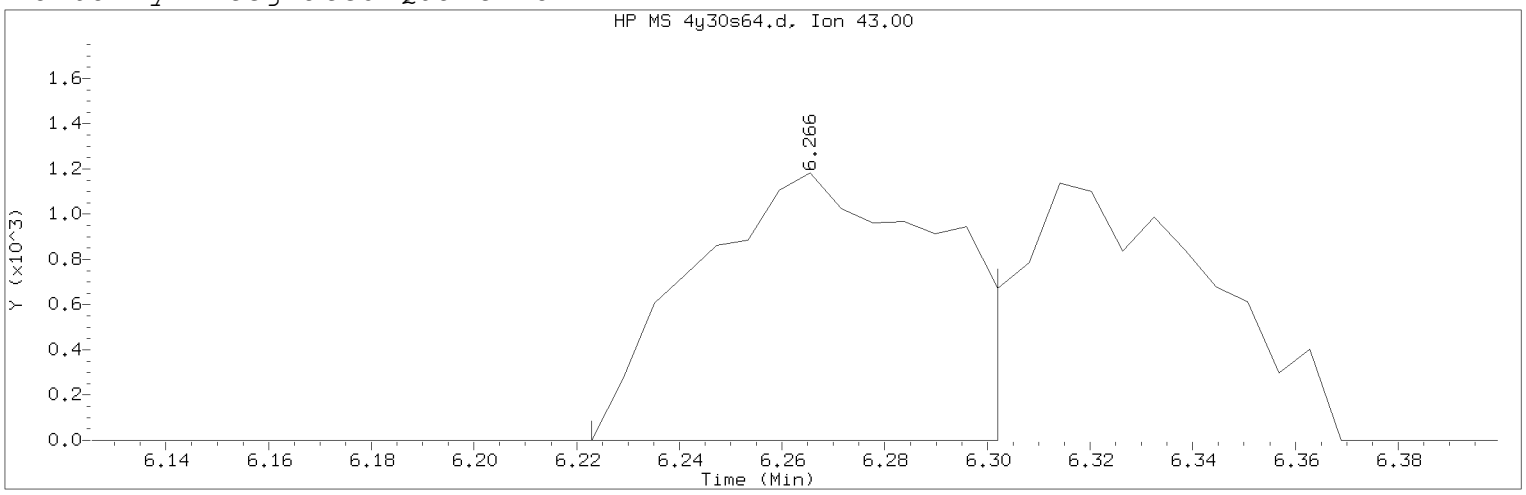
Compound Number : 44
Compound Name : 2-Butanone
Scan Number : 770
Retention Time (minutes): 6.266
Relative Retention Time :-0.00077
Quant Ion : 43.00
Area (flag) : 4063M
On-Column Amount (ng) : 0.6742

Digitally signed by Kevin A. Sposito on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may30b.b/4y30s64.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 05:31 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:37 kas02648

Sample Name: 94J06 Lab Sample ID: 1063770

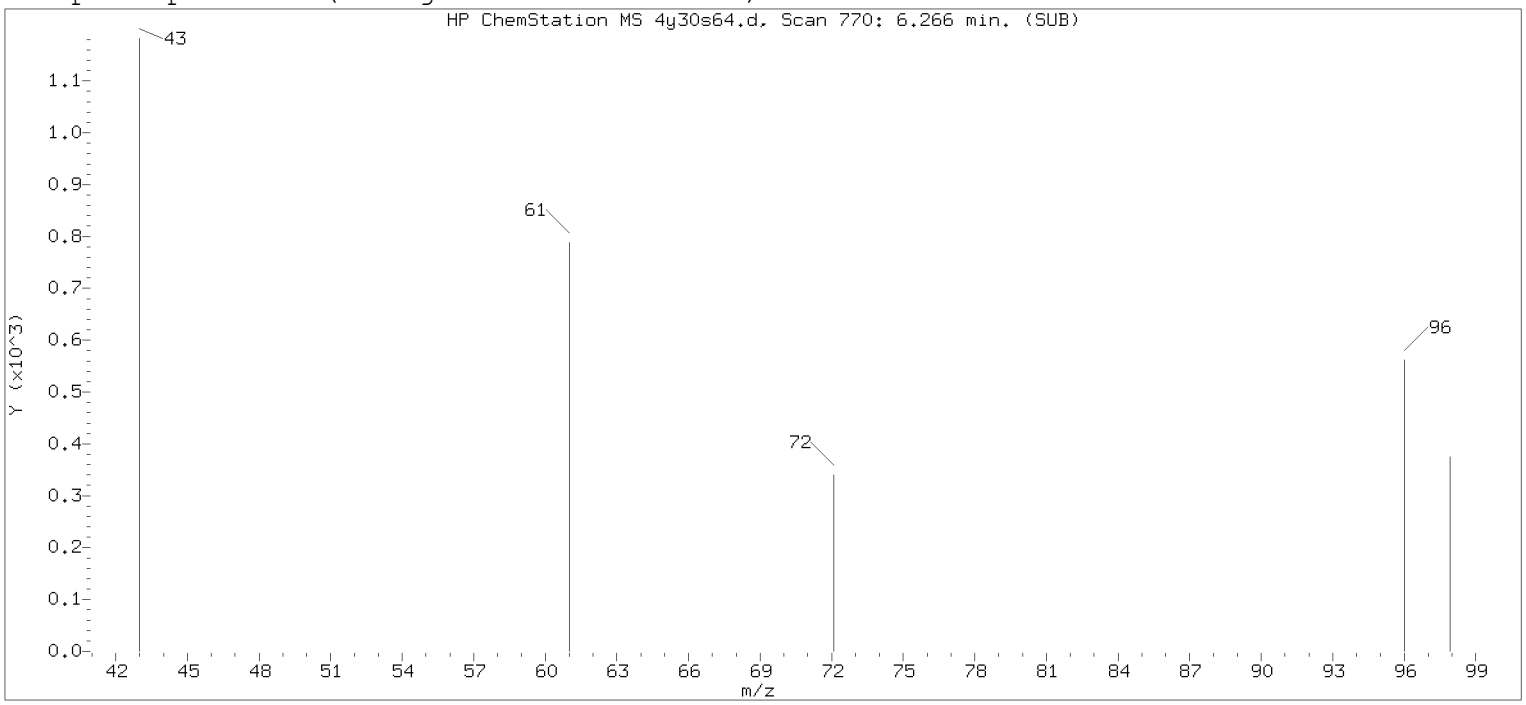
Compound Number : 44
Compound Name : 2-Butanone
Scan Number : 770
Retention Time (minutes): 6.266
Quant Ion : 43.00
Area (flag) : 4063M
On-Column Amount (ng) : 0.6742
Integration start scan : 762 Integration stop scan: 775
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

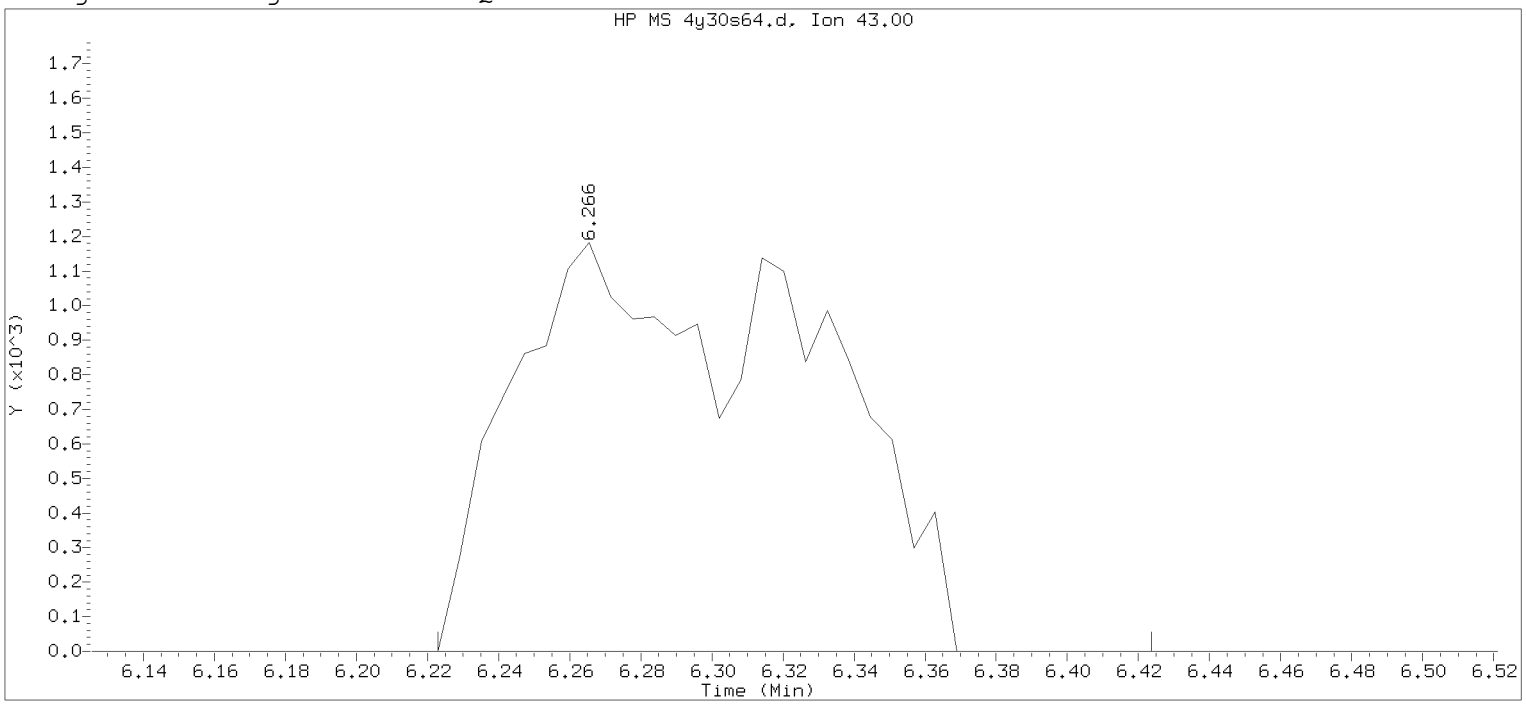
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 05/31/2019 at 12:59.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may30b.b/4y30s64.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 05:31 Analyst ID: DVV10203

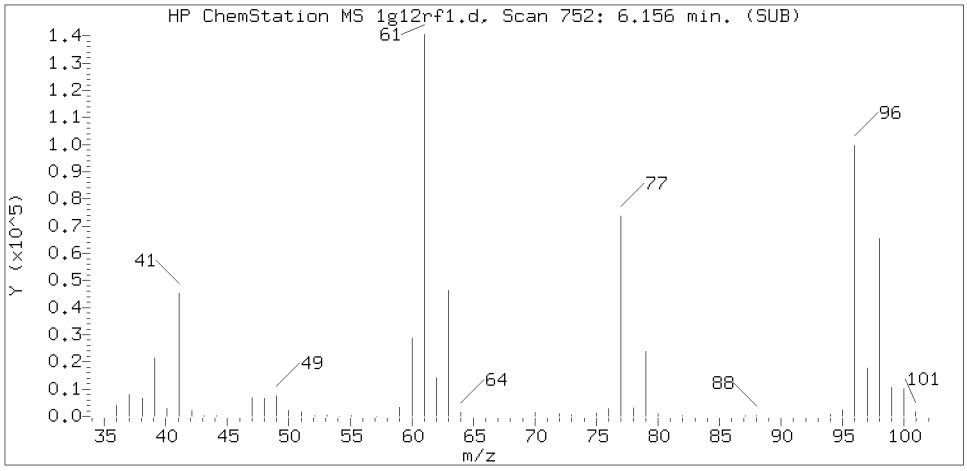
Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 05:48 Automation

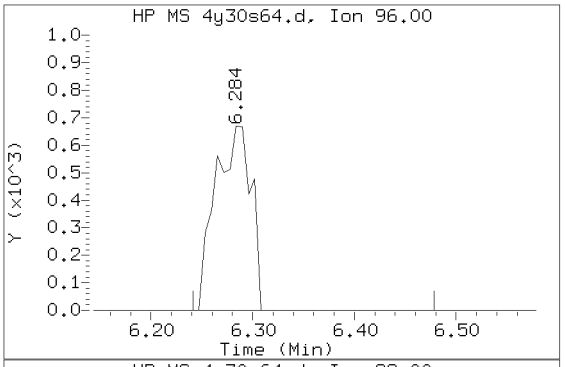
Sample Name: 94J06 Lab Sample ID: 1063770

Compound Number : 44
Compound Name : 2-Butanone
Scan Number : 770
Retention Time (minutes): 6.266
Quant Ion : 43.00
Area : 6866
On-column Amount (ng) : 1.1392
Integration start scan : 762 Integration stop scan: 795
Y at integration start : 0 Y at integration end: 0

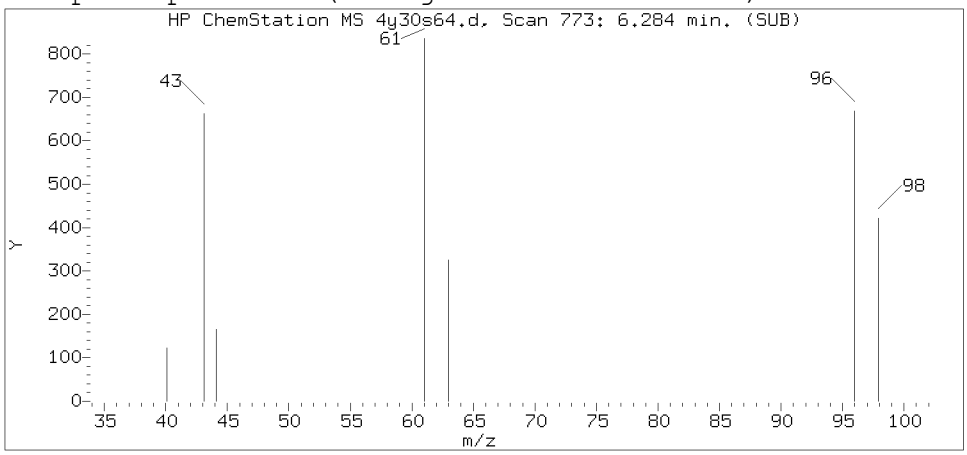
Digitally signed by Kevin A. Sposito on 05/31/2019 at 12:37.
Target 3.5 esignature user: kasposito

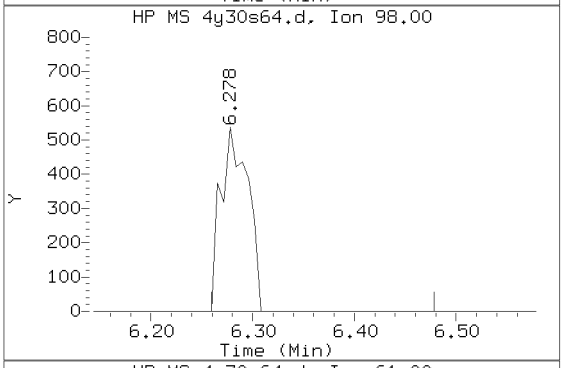
Reference Standard Spectrum for cis-1,2-Dichloroethene



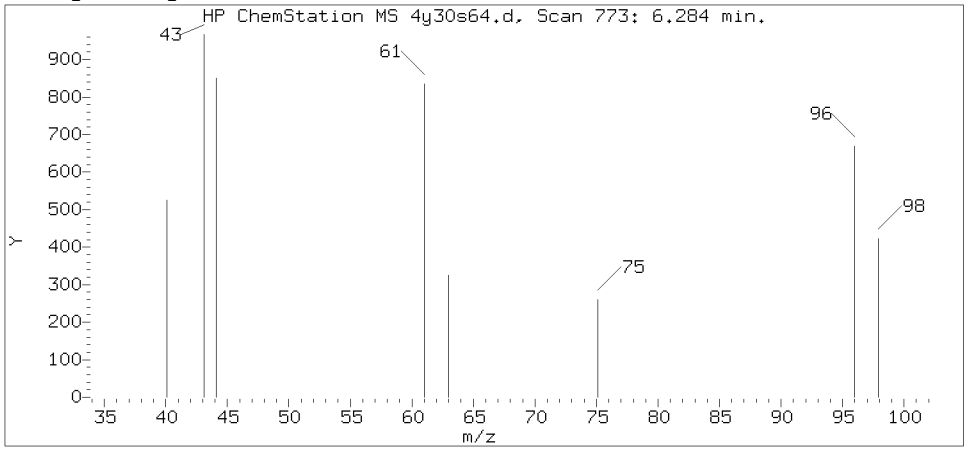


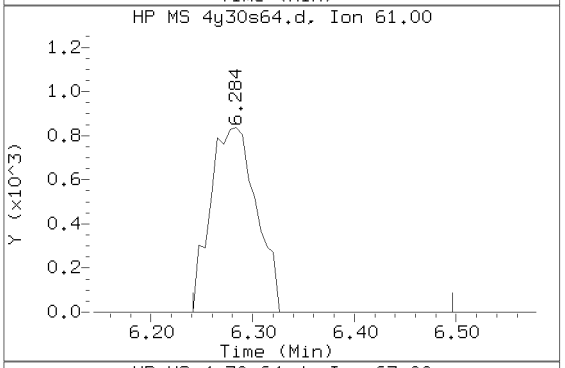
Sample Spectrum (Background Subtracted)

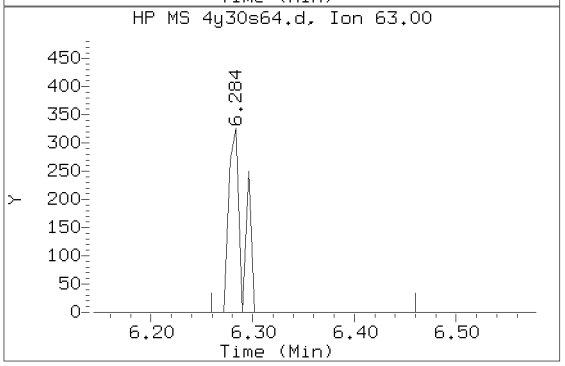




Sample Spectrum (Unaltered)







Data File: /chem/HP23297.i/19may30b.b/4y30s64.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 05:31 Analyst ID: DVV10203

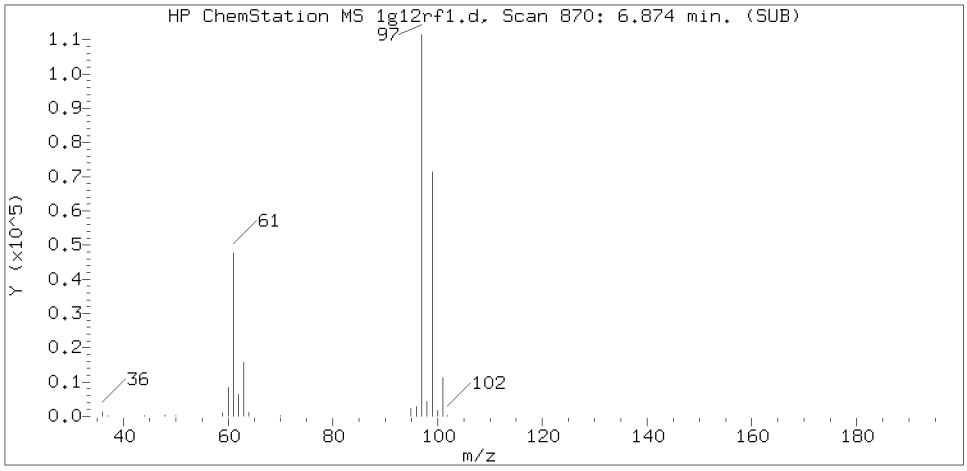
Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:37 kas02648

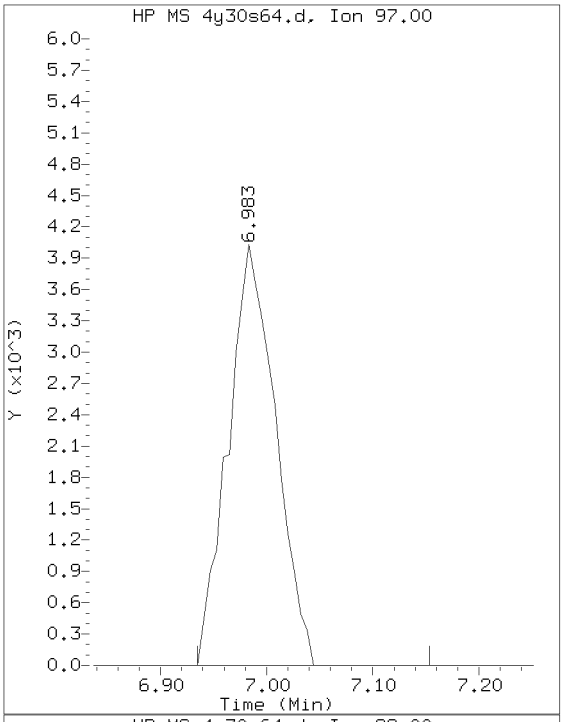
Sample Name: 94J06 Lab Sample ID: 1063770

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 773
Retention Time (minutes): 6.284
Relative Retention Time :-0.00077
Quant Ion : 96.00
Area (flag) : 1628
On-Column Amount (ng) : 0.3320

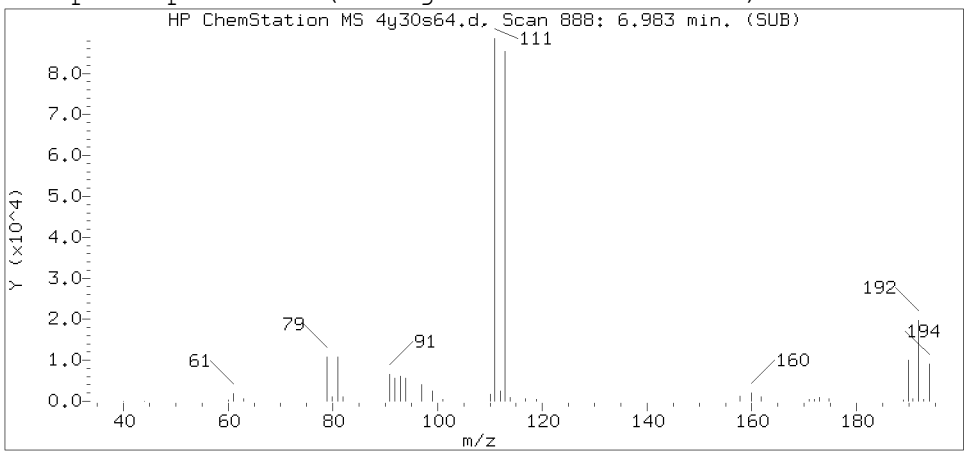
Digitally signed by Kevin A. Sposito on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kas02648

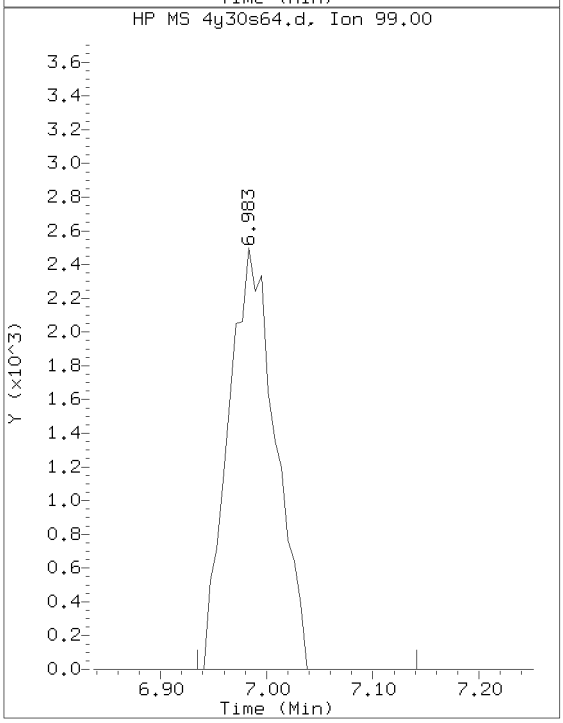
Reference Standard Spectrum for 1,1,1-Trichloroethane



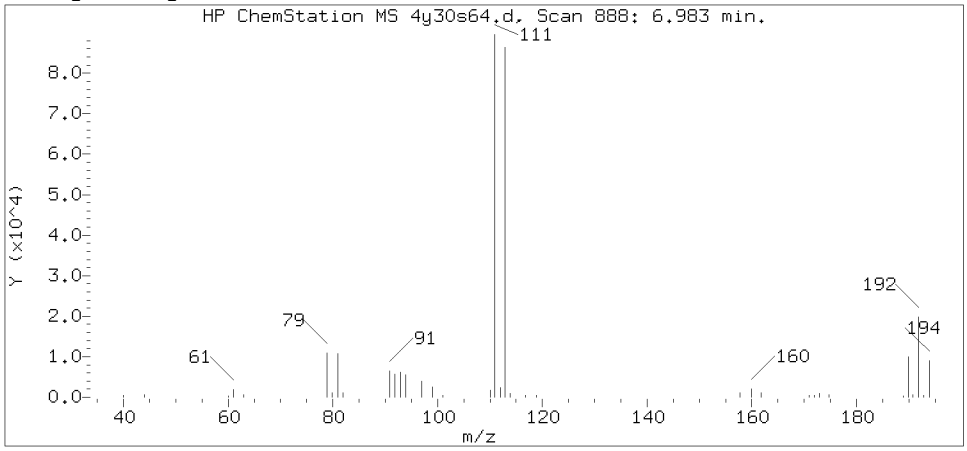


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP23297.i/19may30b.b/4y30s64.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 05:31 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:37 kas02648

Sample Name: 94J06 Lab Sample ID: 1063770

Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 888
Retention Time (minutes): 6.983
Relative Retention Time :-0.00000
Quant Ion : 97.00
Area (flag) : 12492
On-Column Amount (ng) : 1.9170

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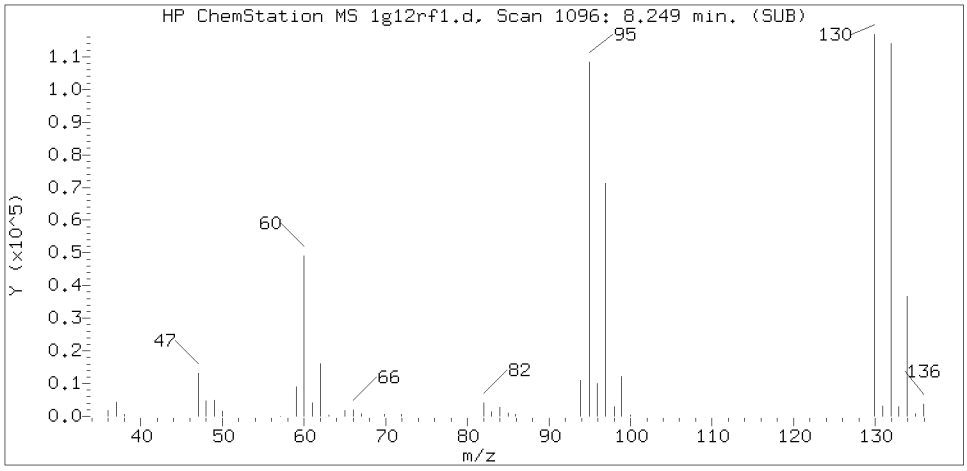
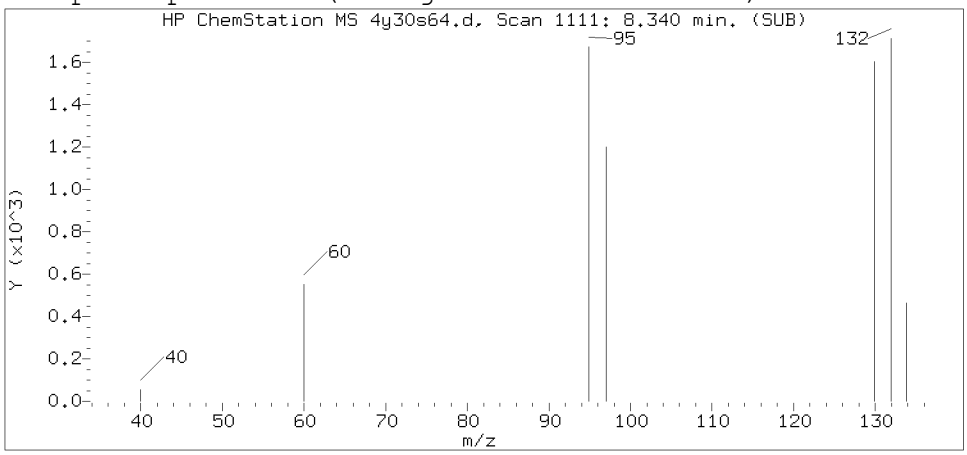
Target 3.5 esignature user ID: kas02648

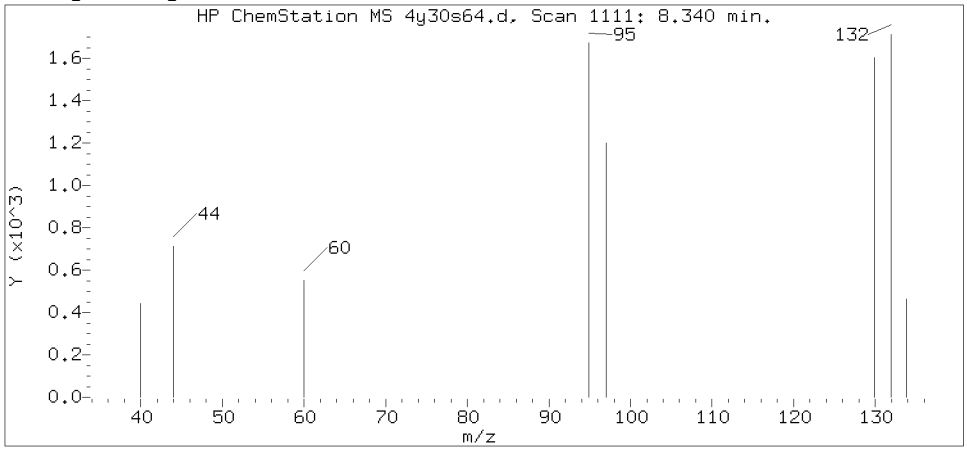
Reference Standard Spectrum for Trichloroethene

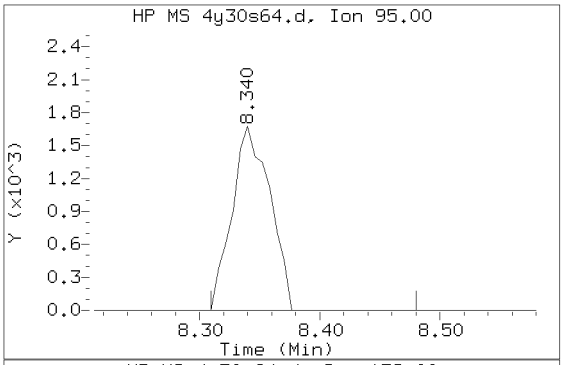


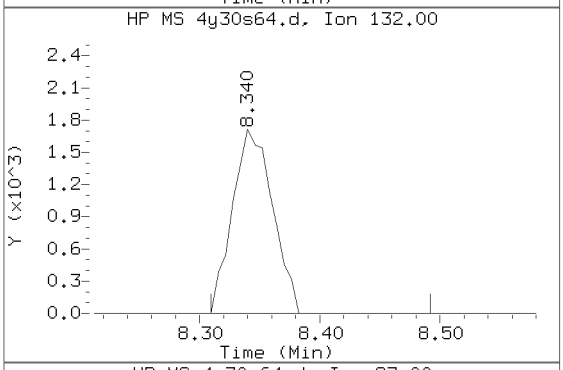
Sample Spectrum (Background Subtracted)

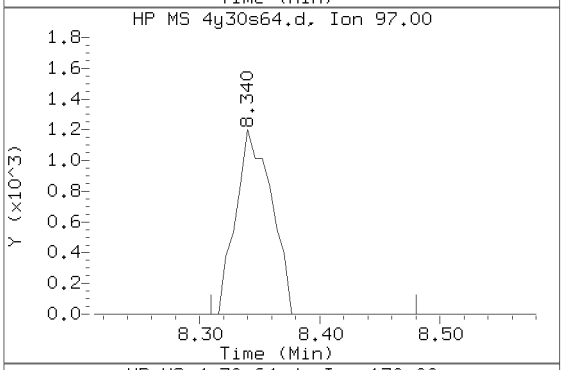


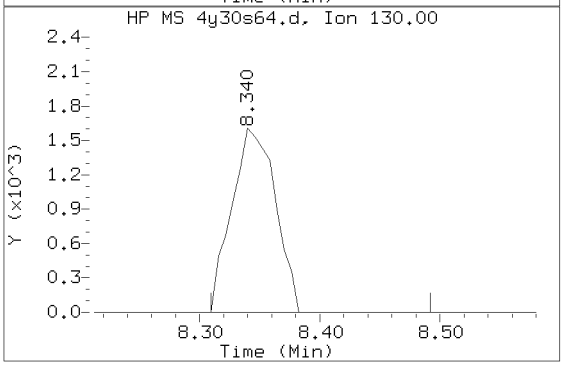
Sample Spectrum (Unaltered)











Data File: /chem/HP23297.i/19may30b.b/4y30s64.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 05:31 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:37 kas02648

Sample Name: 94J06 Lab Sample ID: 1063770

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 1111
Retention Time (minutes)	: 8.340
Relative Retention Time	: 0.00077
Quant Ion	: 95.00
Area (flag)	: 3678
On-Column Amount (ng)	: 0.7744

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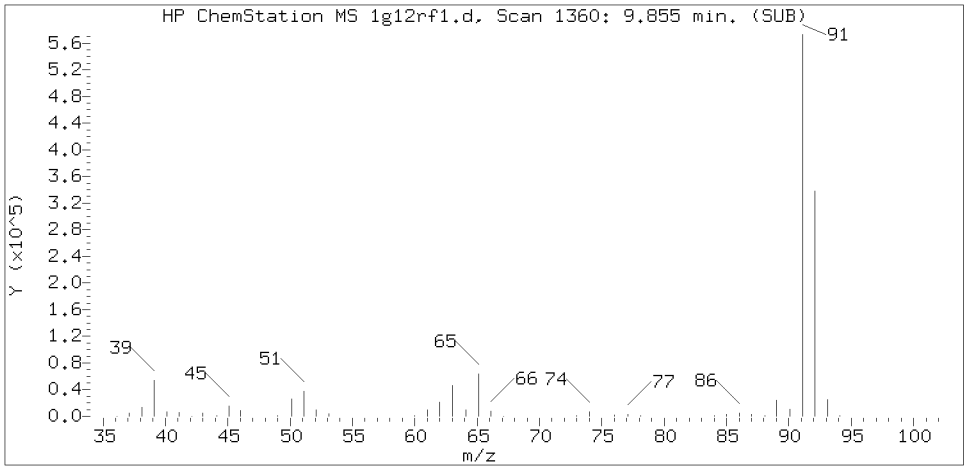
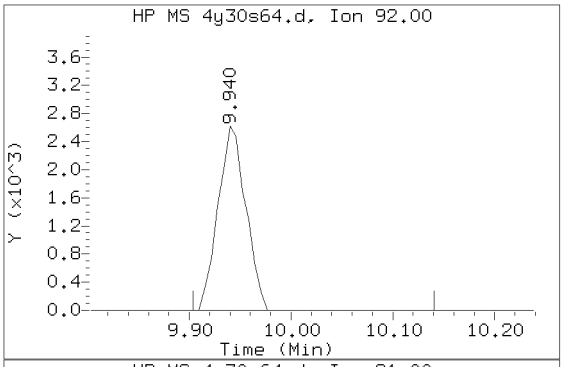
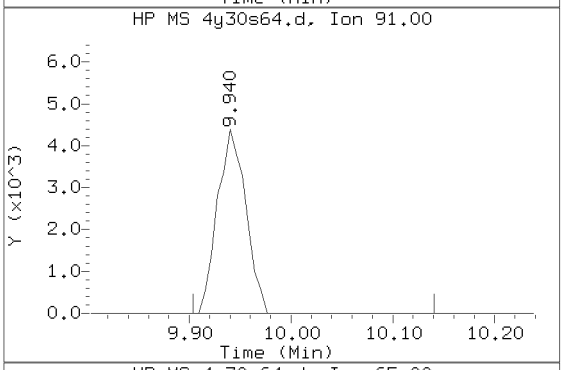
Target 3.5 esignature user ID: kas02648

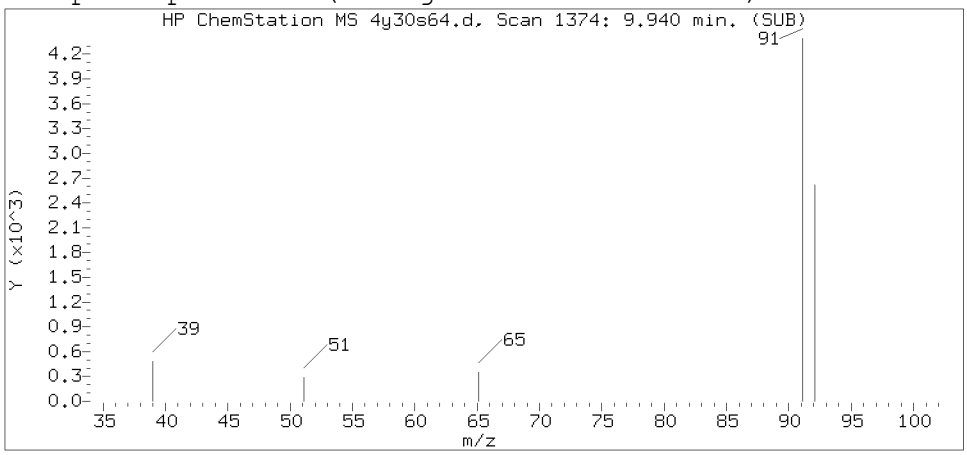
Reference Standard Spectrum for Toluene

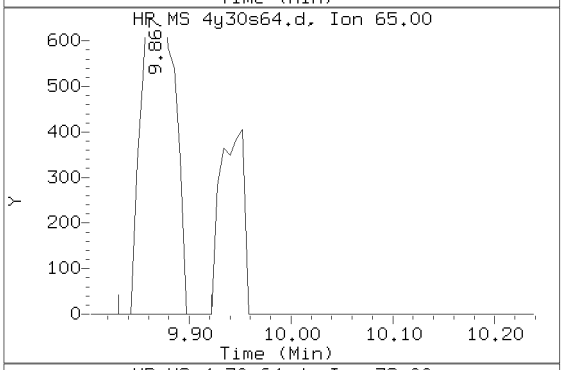




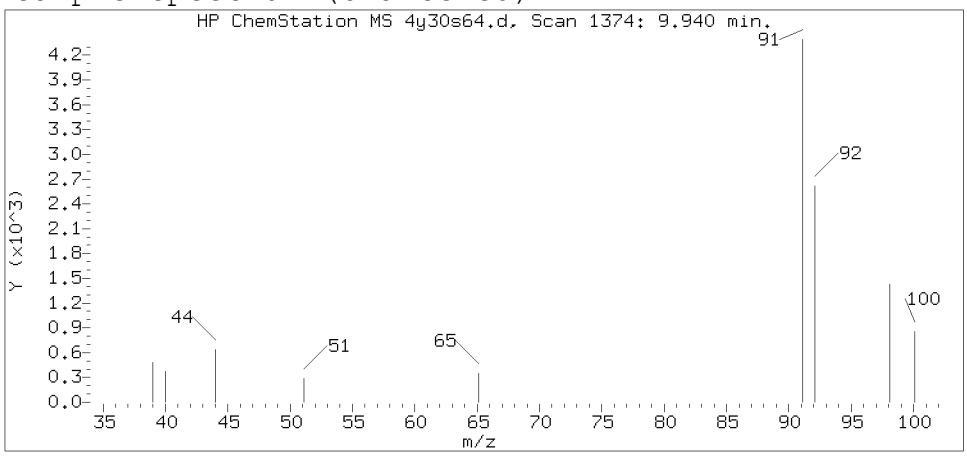


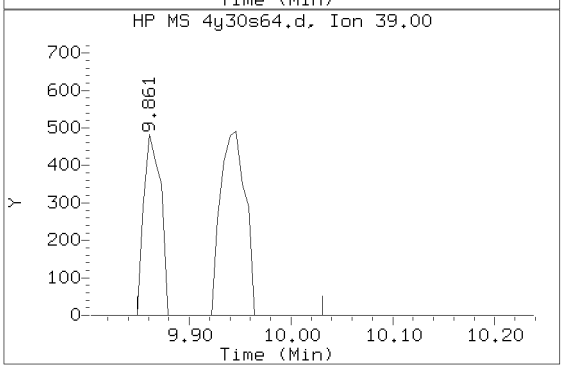
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may30b.b/4y30s64.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 05:31 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:37 kas02648

Sample Name: 94J06 Lab Sample ID: 1063770

Compound Number	: 88
Compound Name	: Toluene
Scan Number	: 1374
Retention Time (minutes)	: 9.940
Relative Retention Time	:-0.00000
Quant Ion	: 92.00
Area (flag)	: 4958
On-Column Amount (ng)	: 0.4056

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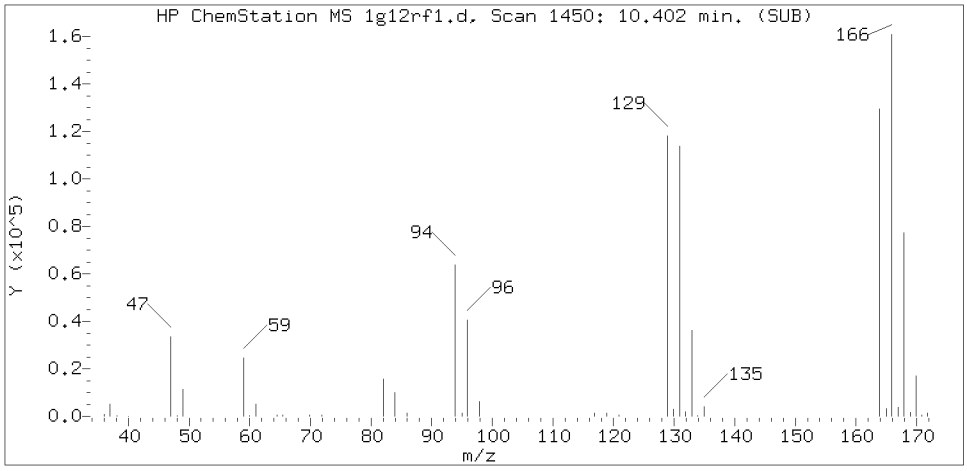
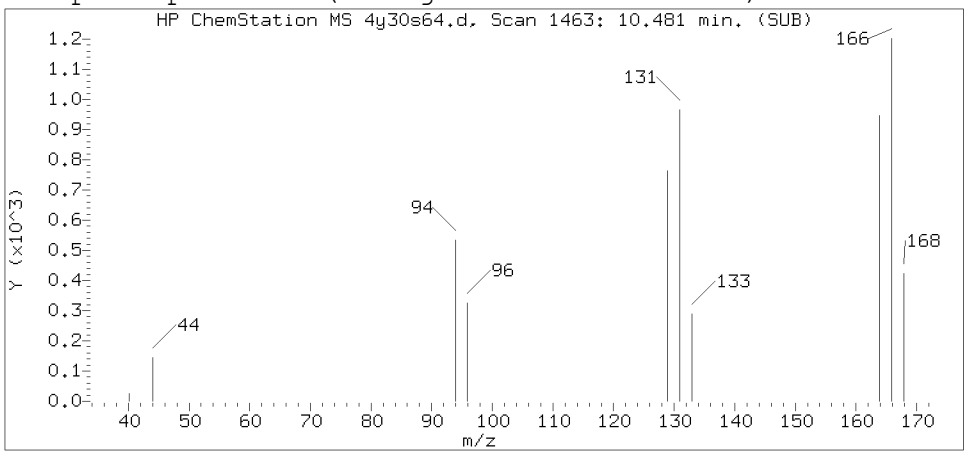
Target 3.5 esignature user ID: kas02648

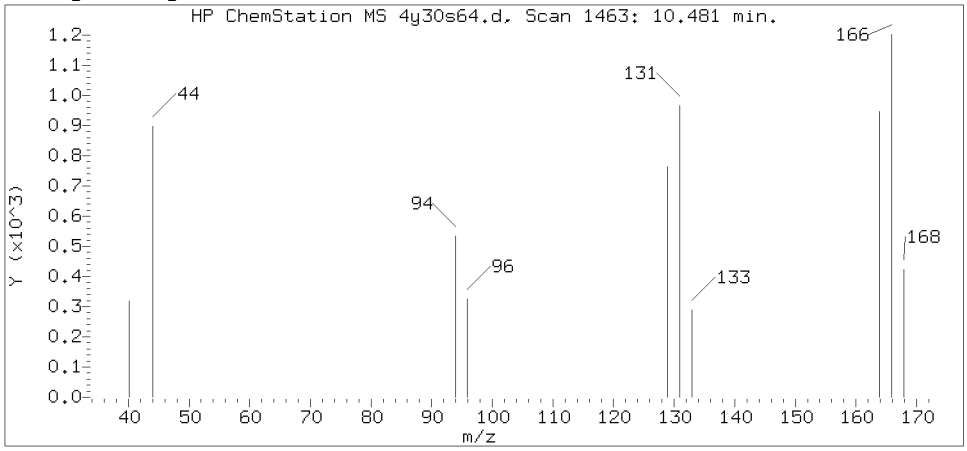
Reference Standard Spectrum for Tetrachloroethene

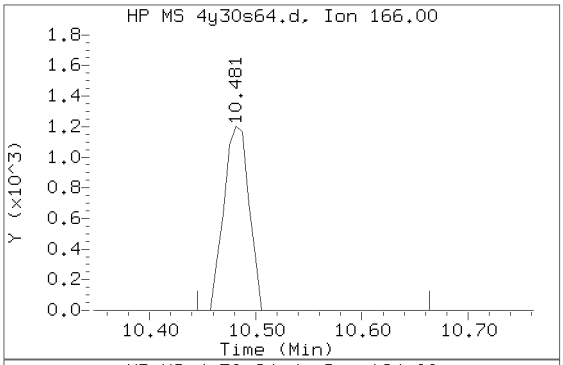


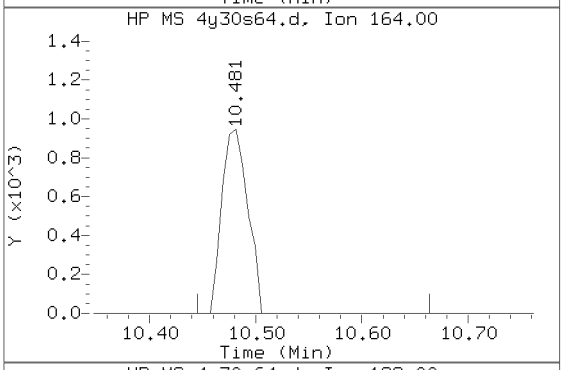
Sample Spectrum (Background Subtracted)

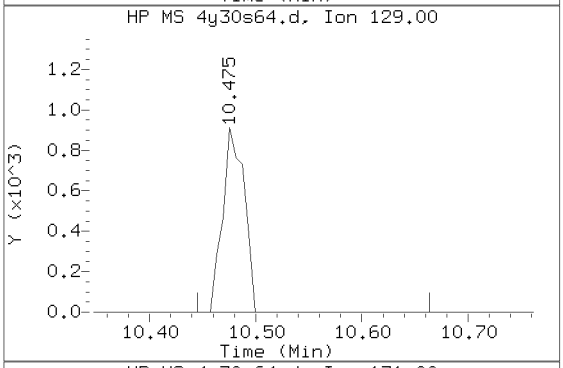


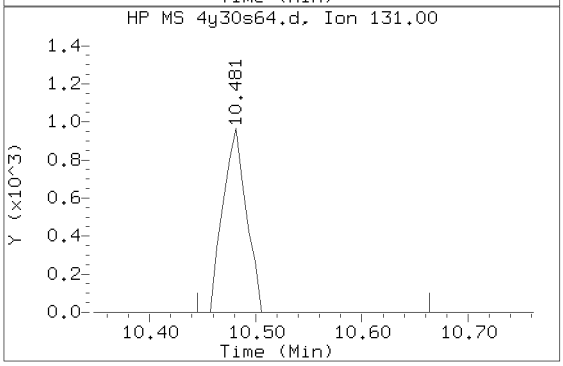
Sample Spectrum (Unaltered)











Data File: /chem/HP23297.i/19may30b.b/4y30s64.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 05:31 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 30-MAY-2019 23:57
Date, time and analyst ID of latest file update: 31-May-2019 12:37 kas02648

Sample Name: 94J06 Lab Sample ID: 1063770

Compound Number : 93
Compound Name : Tetrachloroethene
Scan Number : 1463
Retention Time (minutes): 10.481
Relative Retention Time :-0.00000
Quant Ion : 166.00
Area (flag) : 1993
On-Column Amount (ng) : 0.3737

Digitally signed by Kevin A. Sposito on 05/31/2019 at 12:37.
Target 3.5 esignature user ID: kas02648

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

94J07

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1063771

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may31a.b/4y31s23.d

Level: (low/med) LOW Date Received: 05/22/19

Moisture: not dec. _____ Date Analyzed: 05/31/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L		Q
75-01-4	Vinyl Chloride		1	U
75-35-4	1,1-Dichloroethene		0.3	J
67-64-1	Acetone		2	J
76-13-1	Freon 113		10	U
75-15-0	Carbon Disulfide		5	U
75-09-2	Methylene Chloride		1	U
156-60-5	trans-1,2-Dichloroethene		1	U
75-34-3	1,1-Dichloroethane		1	
156-59-2	cis-1,2-Dichloroethene		3	
78-93-3	2-Butanone		2	J
67-66-3	Chloroform		1	U
71-55-6	1,1,1-Trichloroethane		4	
71-43-2	Benzene		1	U
107-06-2	1,2-Dichloroethane		1	U
79-01-6	Trichloroethene		5	
123-91-1	1,4-Dioxane		250	U
108-88-3	Toluene		1	U
127-18-4	Tetrachloroethene		1	U
100-41-4	Ethylbenzene		1	U
1330-20-7	Xylene (Total)		5	U
95-50-1	1,2-Dichlorobenzene		5	U
91-20-3	Naphthalene		5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may31a.b/4y31s23.d Injection date and time: **31-MAY-2019 17:31**
Data file Sample Info. Line: 94J07;1063771;1;0;;JCV94;;;4y31b01; Instrument ID: **HP23297.i** Batch: **4191511AA**
Date, time and analyst ID of latest file update: 31-May-2019 17:48 Automation

Blank Data file reference: **/chem/HP23297.i/19may31a.b/4y31b01.d**

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 31-MAY-2019 09:29
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may31a.b/4y31c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.374	(0.000)	459	65	431489	(14)	250.00	
66) Fluorobenzene	7.866	(0.000)	1033	96	1194311	(12)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	966160	(10)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189	(0.000)	1908	152	514454	(1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977	(0.000)	113	287600	48.854	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434	(0.000)	102	75002	52.141	104%		80 - 120
83) Toluene-d8	(3)	9.867	(0.000)	98	1224387	49.377	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.307	(0.000)	95	447559	47.353	95%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	3.662	(-0.000)	96	1399	0.336	0.34		J	0.2	1
18) Acetone	(1)	3.704	(-0.001)	58	1980	1.649	1.65		J	0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.444	(-0.000)	63	11341	1.226	1.23			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.278	(-0.000)	96	14527	2.532	2.53			0.2	1
44) 2-Butanone	(2)	6.278	(-0.003)	43	10649	1.510	1.51		J	0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	6.990	(-0.000)	97	27688	3.631	3.63			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.346	(-0.000)	95	26263	4.725	4.73			0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

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Data file: /chem/HP23297.i/19may31a.b/4y31s23.d Injection date and time: **31-MAY-2019 17:31**
Data file Sample Info. Line: 94J07;1063771;1;0;;JCV94;;;4y31b01; Instrument ID: **HP23297.i** Batch: **4191511AA**
Date, time and analyst ID of latest file update: 31-May-2019 17:48 Automation

Blank Data file reference: **/chem/HP23297.i/19may31a.b/4y31b01.d**

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 31-MAY-2019 09:29
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may31a.b/4y31c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

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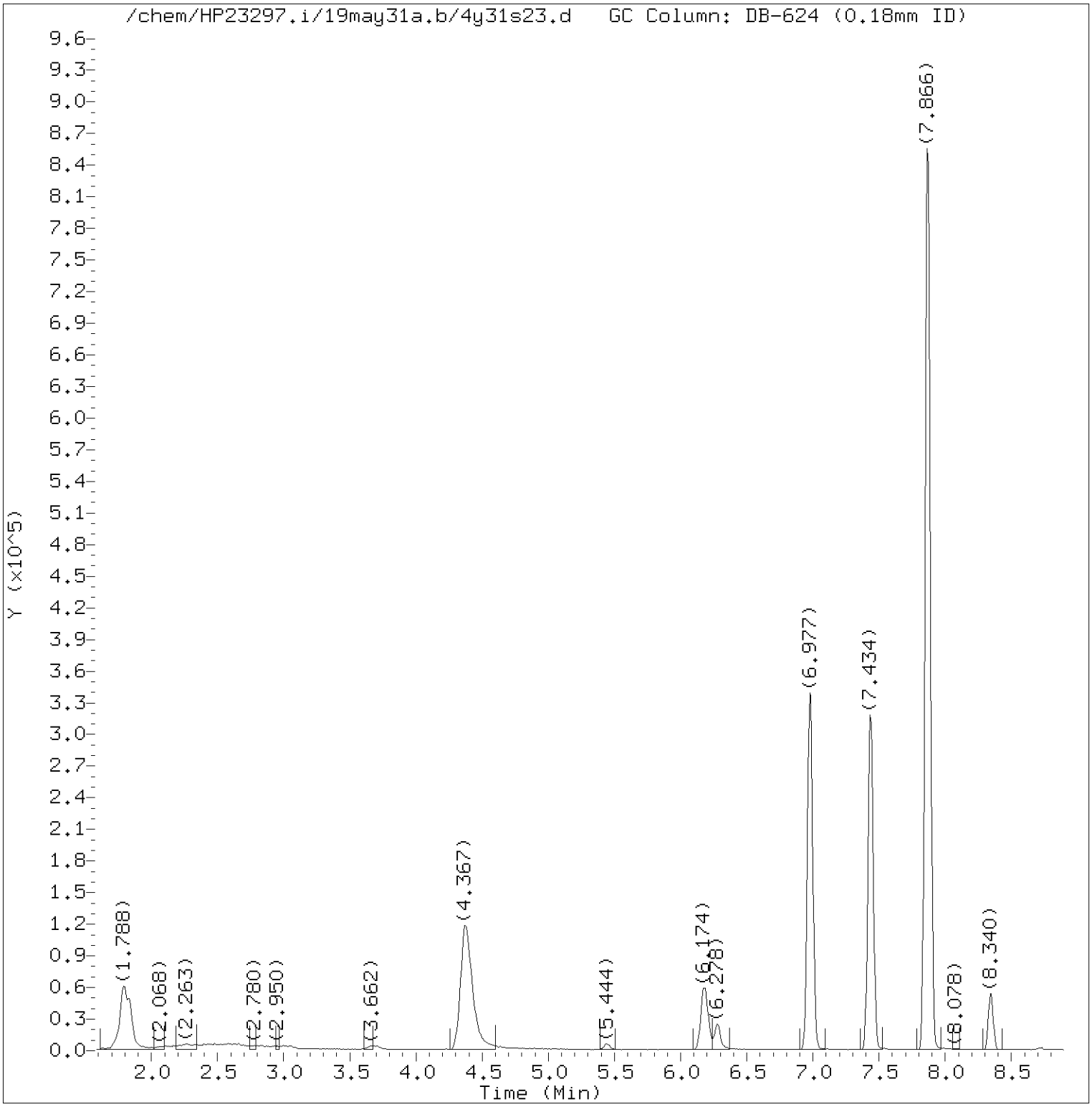
Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:42. PARALLAX ID: rcr00559



Total Ion Chromatogram (TIC)

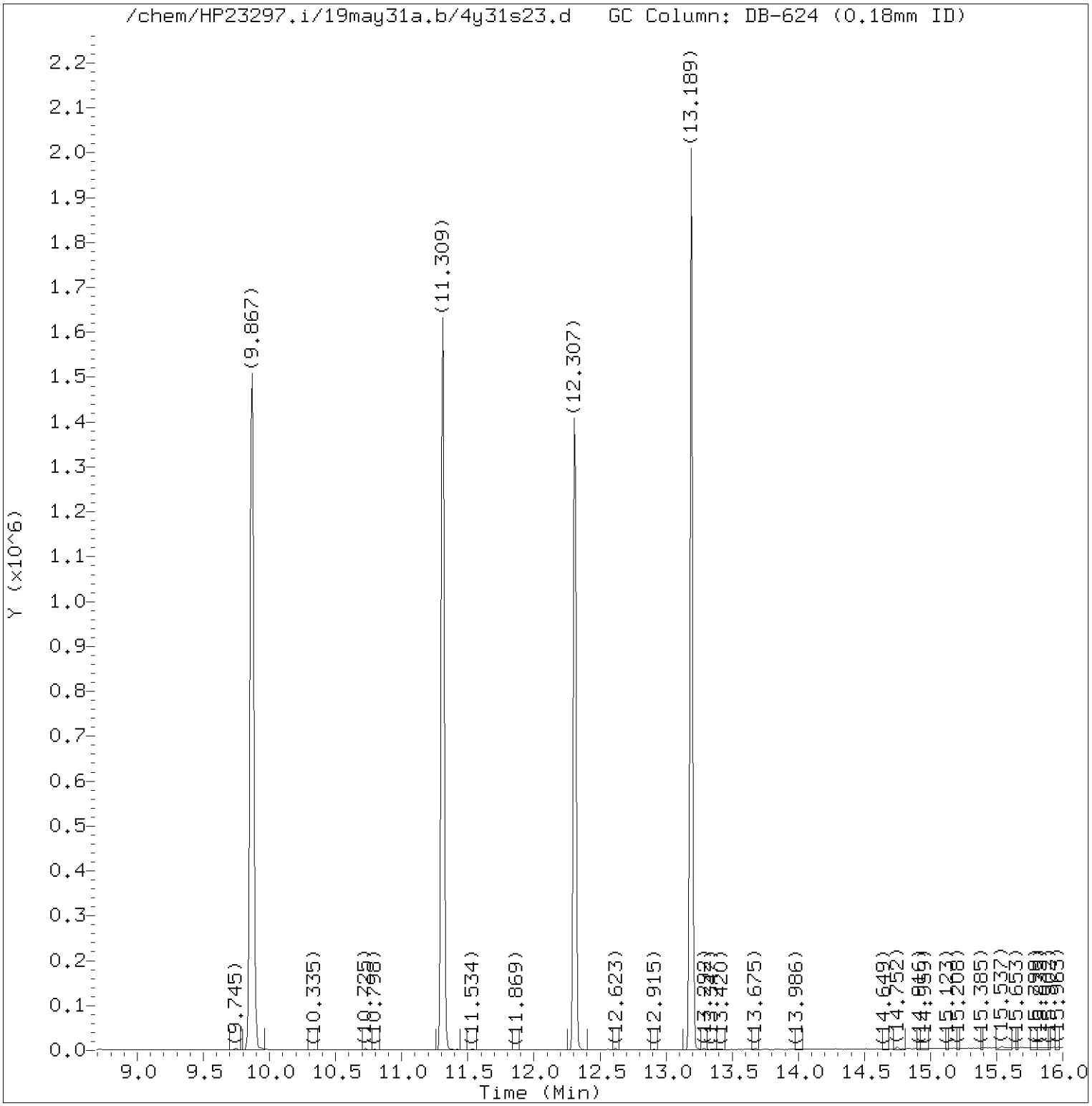
Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31s23.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 17:31 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 17:48 Automation

Sample Name: 94J07 Lab Sample ID: 1063771

Digitally signed by Don V. Viray
on 05/31/2019 at 22:15.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31s23.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 17:31 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 17:48 Automation

Sample Name: 94J07 Lab Sample ID: 1063771

Digitally signed by Don V. Viray
on 05/31/2019 at 22:15.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31s23.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 17:31 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 17:48 Automation

Sample Name: 94J07 Lab Sample ID: 1063771

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	3.662	96	1399	0.336
18) Acetone	(1)	3.704	58	1980	1.649
29)*t-Butyl alcohol-d10	(1)	4.374	65	431489	250.000
36) 1,1-Dichloroethane	(2)	5.444	63	11341	1.226
42) cis-1,2-Dichloroethene	(2)	6.278	96	14527	2.532
44) 2-Butanone	(2)	6.278	43	10649	1.510
52)$Dibromofluoromethane	(2)	6.977	113	287600	48.854
53) 1,1,1-Trichloroethane	(2)	6.990	97	27688	3.631
57)$1,2-Dichloroethane-d4	(2)	7.434	102	75002	52.141
66)*Fluorobenzene	(2)	7.866	96	1194311	50.000
71) Trichloroethene	(2)	8.346	95	26263	4.725
83)$Toluene-d8	(3)	9.867	98	1224387	49.377
100)*Chlorobenzene-d5	(3)	11.309	117	966160	50.000
114)$4-Bromofluorobenzene	(3)	12.307	95	447559	47.353
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	514454	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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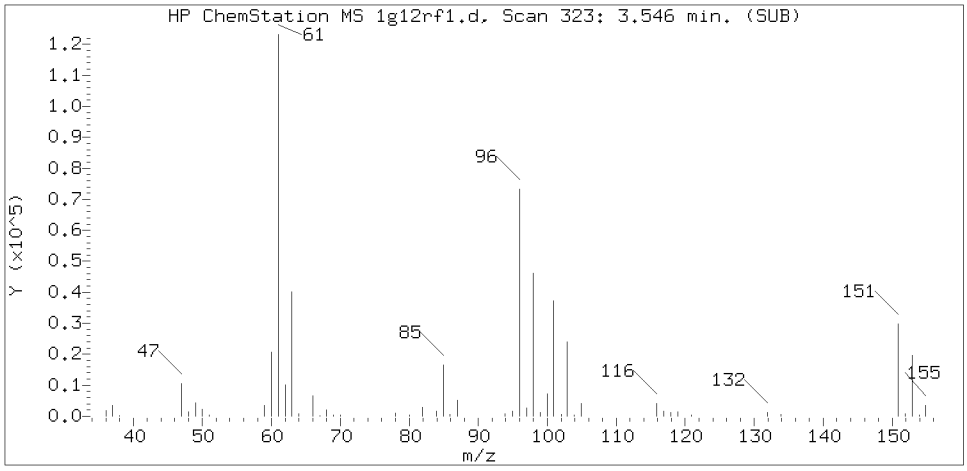
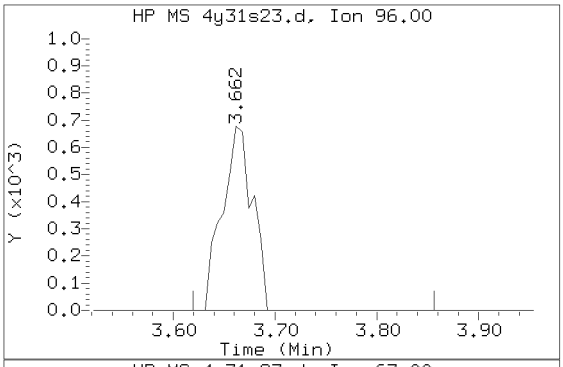
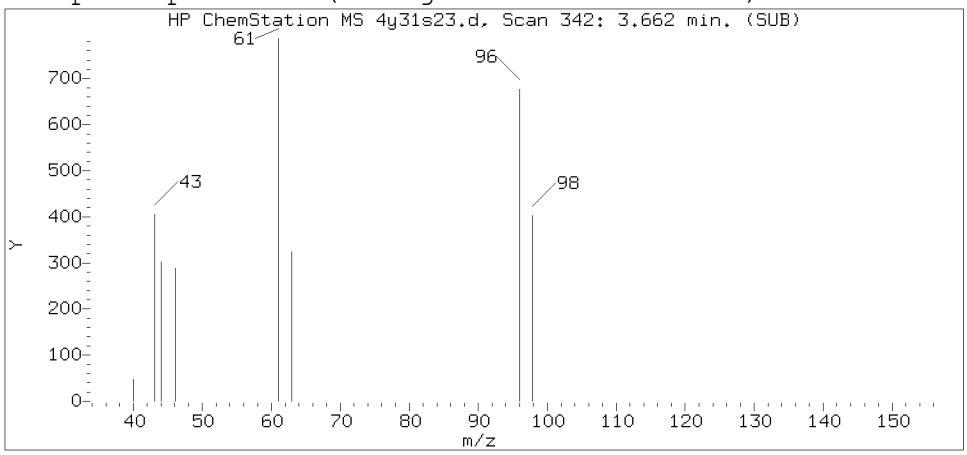
on 05/31/2019 at 22:15.
Target 3.5 esignature user ID: dvv10203

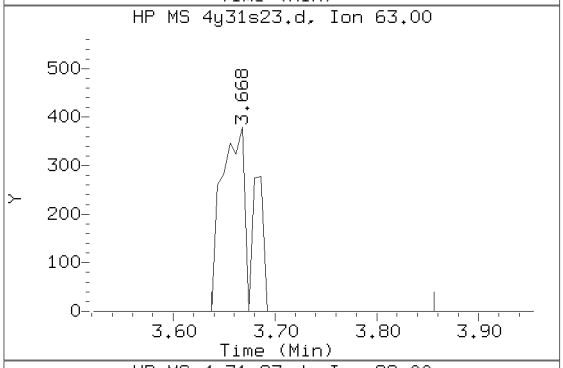
Reference Standard Spectrum for 1,1-Dichloroethene

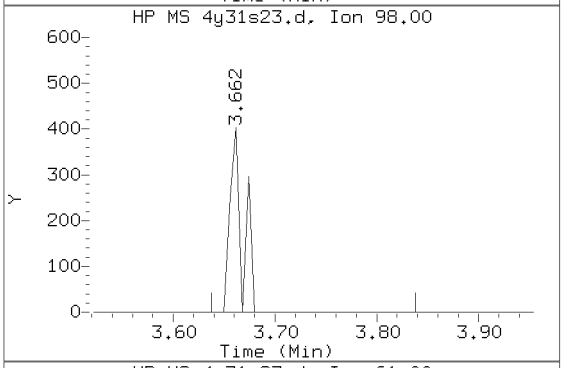




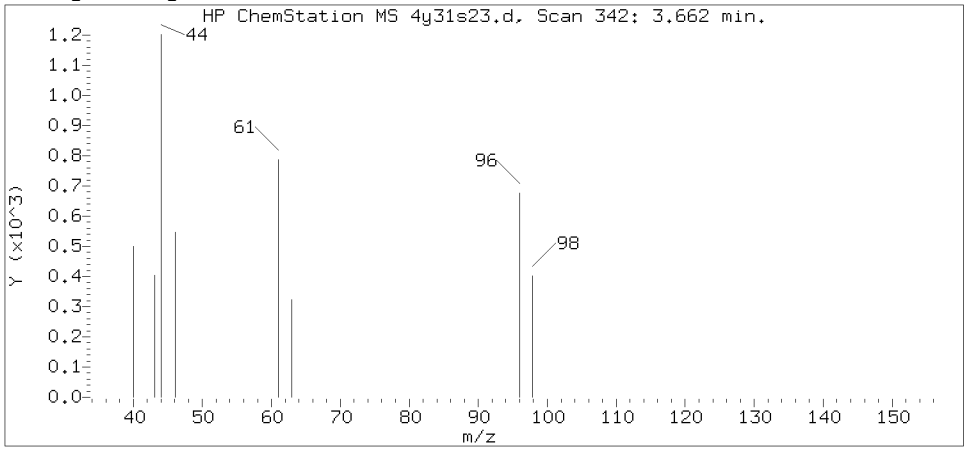
Sample Spectrum (Background Subtracted)

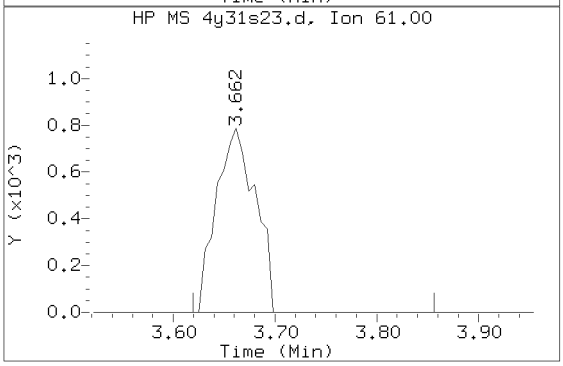






Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may31a.b/4y31s23.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 17:31 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 17:48 Automation

Sample Name: 94J07 Lab Sample ID: 1063771

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 342
Retention Time (minutes): 3.662
Relative Retention Time :-0.00077
Quant Ion : 96.00
Area (flag) : 1399
On-Column Amount (ng) : 0.3361

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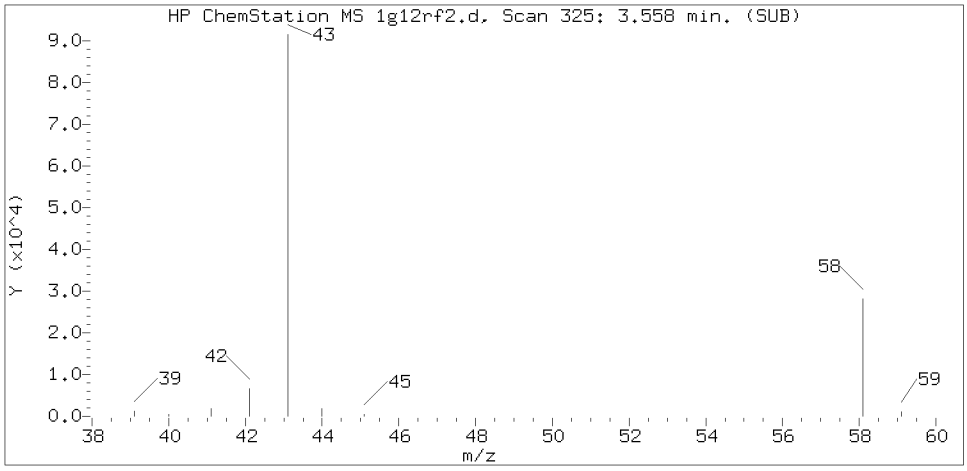
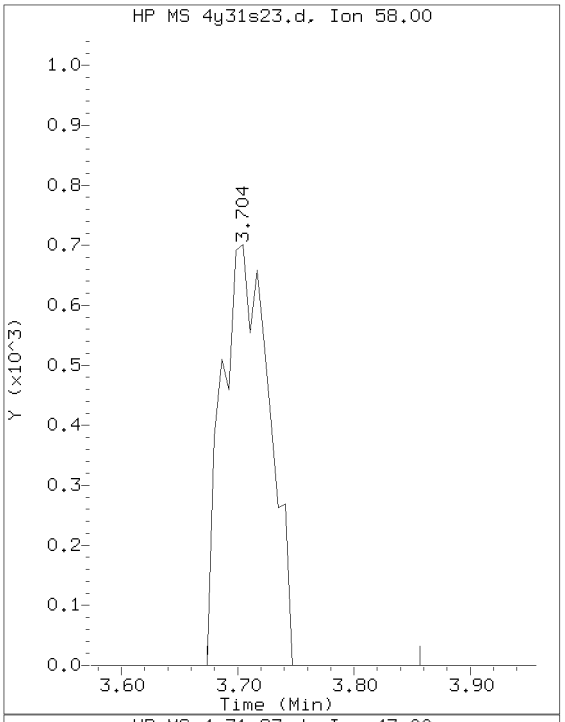
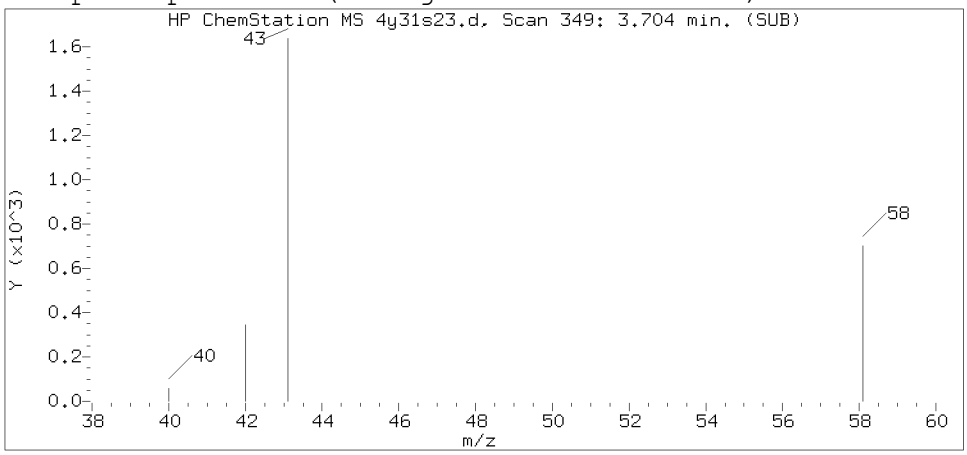
Target 3.5 esignature user ID: dvv10203

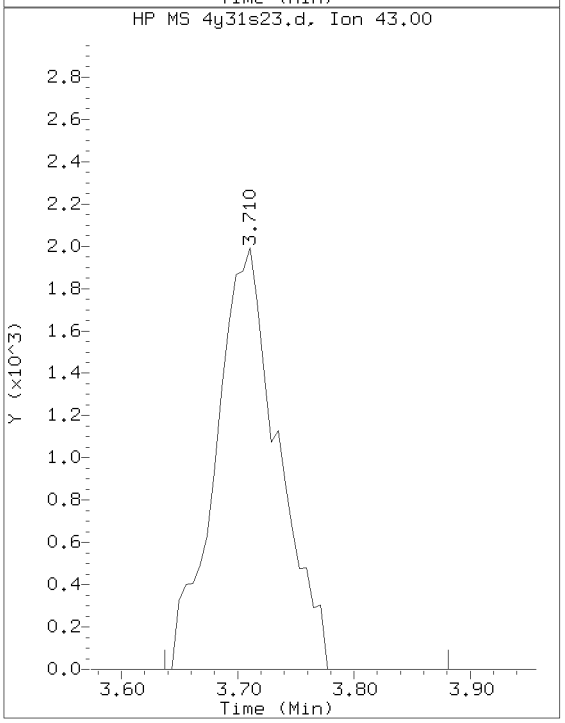
Reference Standard Spectrum for Acetone



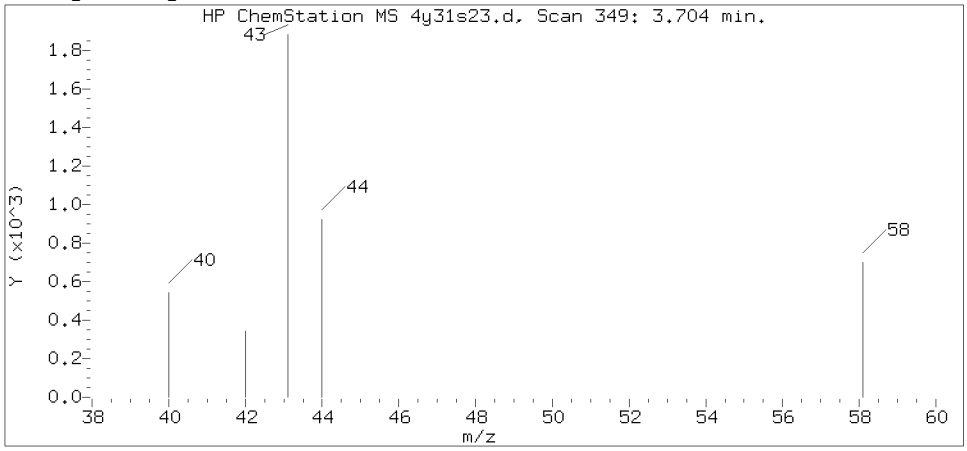


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP23297.i/19may31a.b/4y31s23.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 17:31 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 17:48 Automation

Sample Name: 94J07 Lab Sample ID: 1063771

Compound Number	: 18
Compound Name	: Acetone
Scan Number	: 349
Retention Time (minutes)	: 3.704
Relative Retention Time	:-0.00139
Quant Ion	: 58.00
Area (flag)	: 1980
On-Column Amount (ng)	: 1.6486

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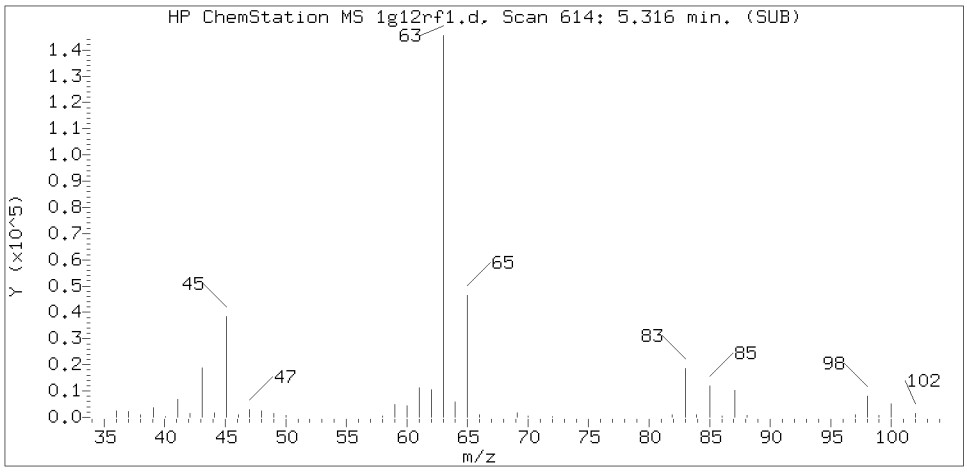
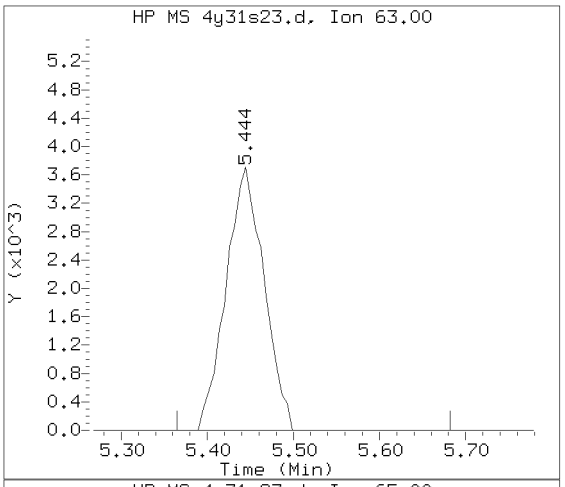
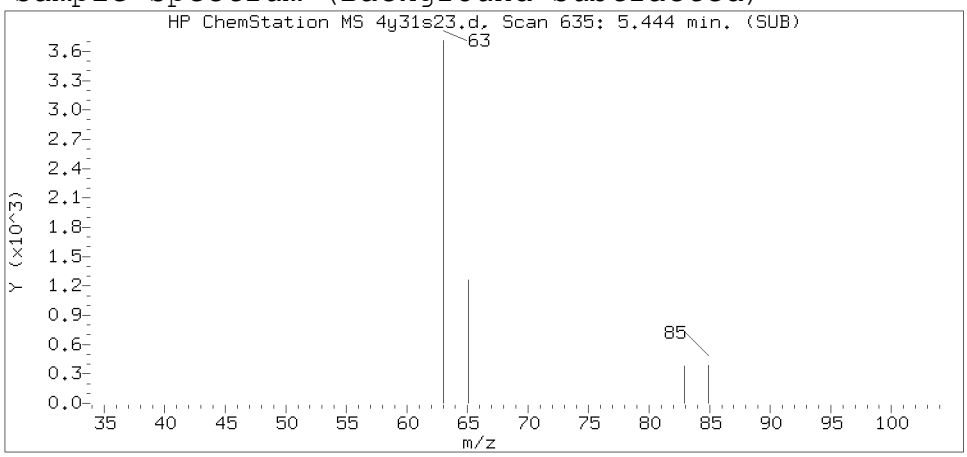
Target 3.5 esignature user ID: dvv10203

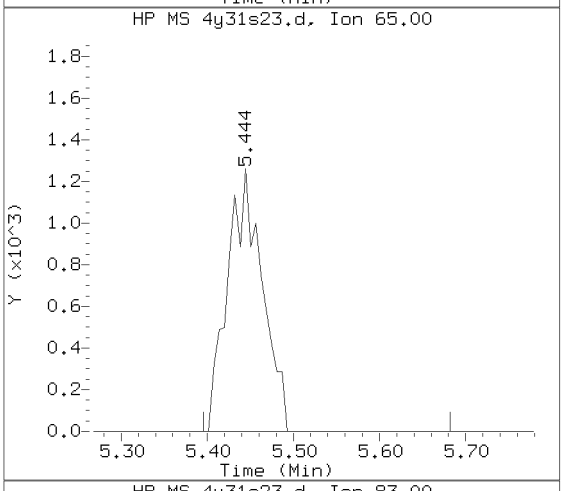
Reference Standard Spectrum for 1,1-Dichloroethane



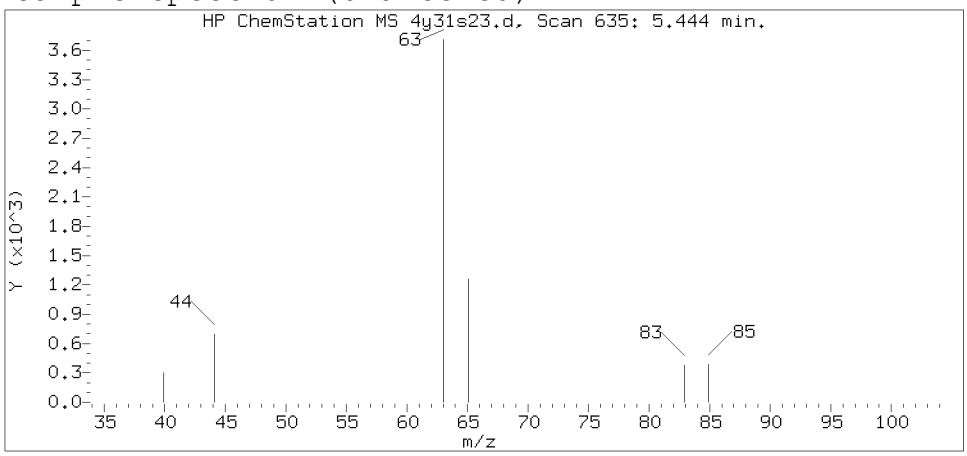


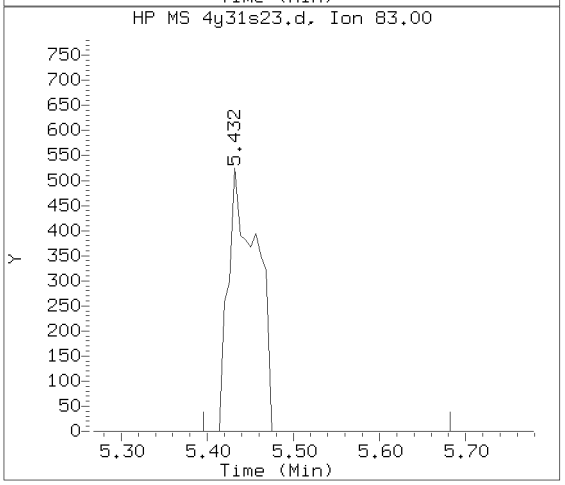
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may31a.b/4y31s23.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 17:31 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 17:48 Automation

Sample Name: 94J07 Lab Sample ID: 1063771

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 635
Retention Time (minutes): 5.444
Relative Retention Time :-0.00077
Quant Ion : 63.00
Area (flag) : 11341
On-Column Amount (ng) : 1.2262

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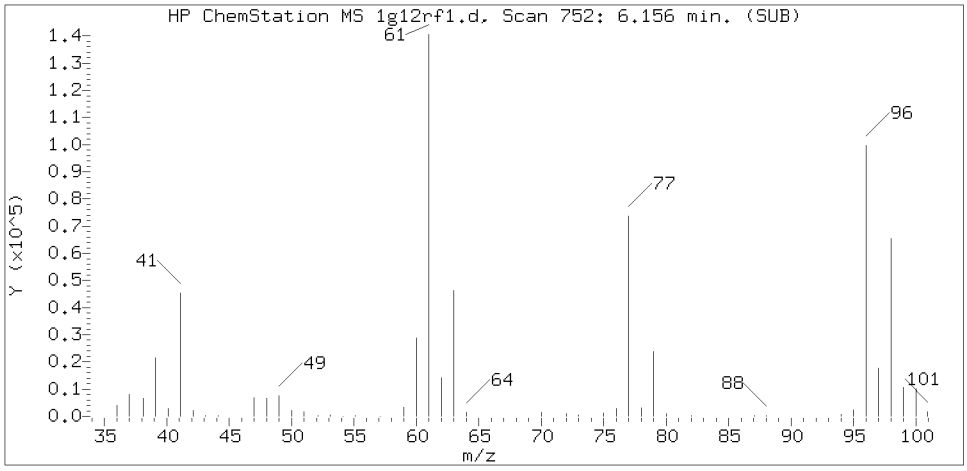
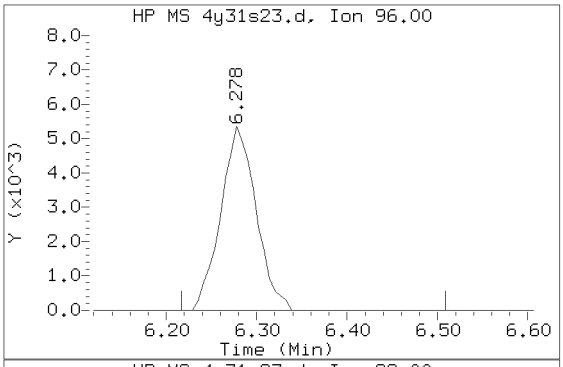
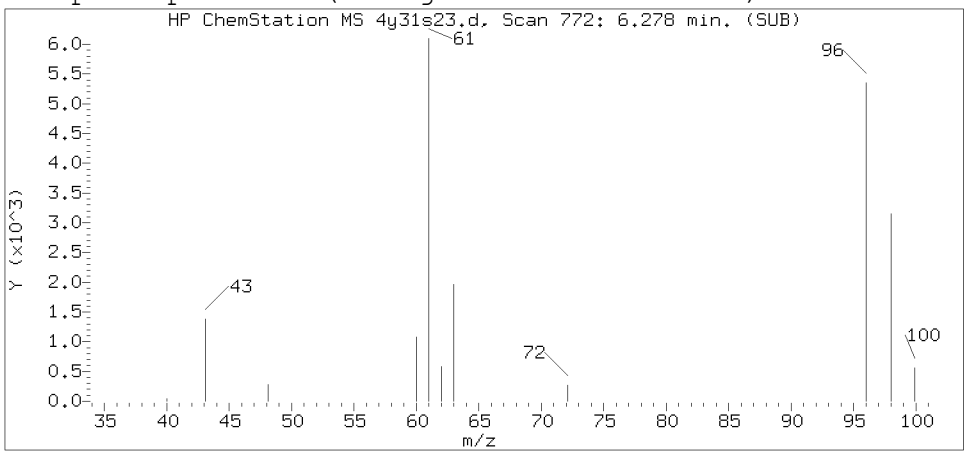
Target 3.5 esignature user ID: dvv10203

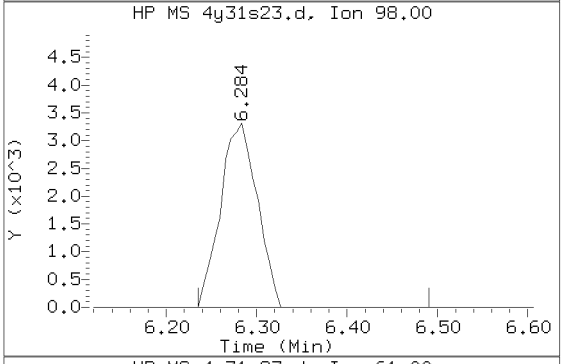
Reference Standard Spectrum for cis-1,2-Dichloroethene

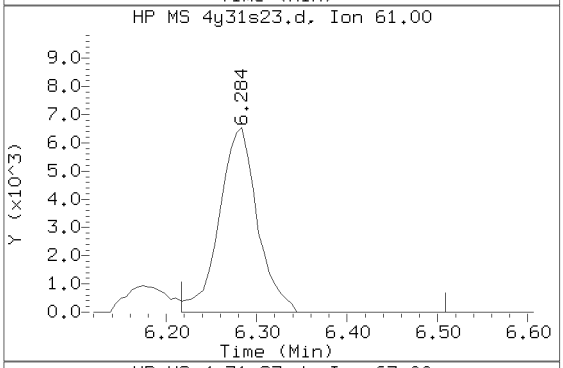




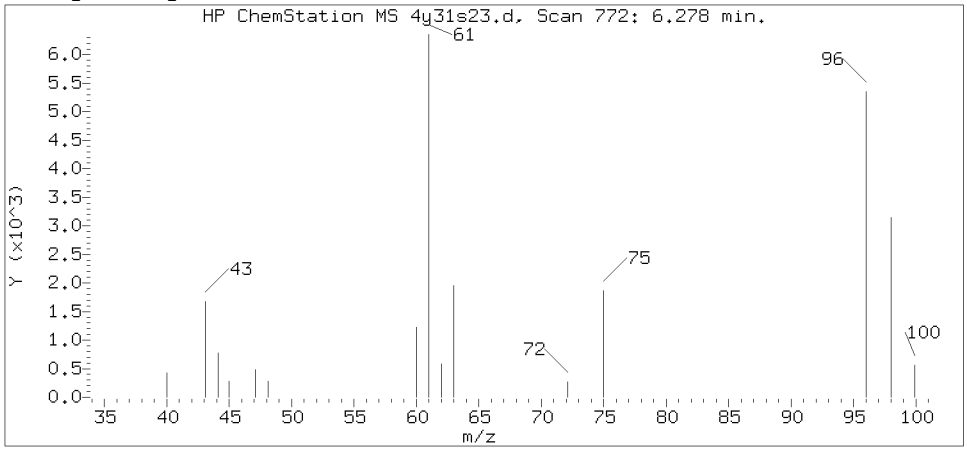
Sample Spectrum (Background Subtracted)

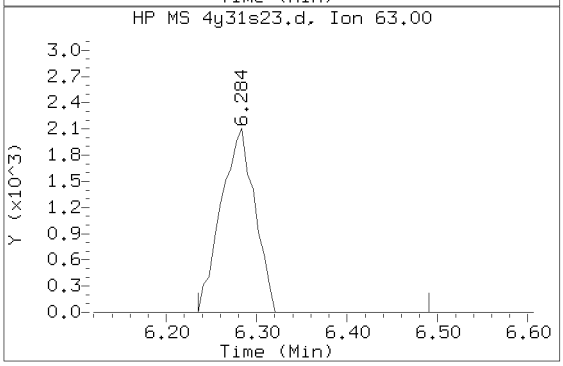






Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may31a.b/4y31s23.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 17:31 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 17:48 Automation

Sample Name: 94J07 Lab Sample ID: 1063771

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 772
Retention Time (minutes): 6.278
Relative Retention Time :-0.00077
Quant Ion : 96.00
Area (flag) : 14527
On-Column Amount (ng) : 2.5315

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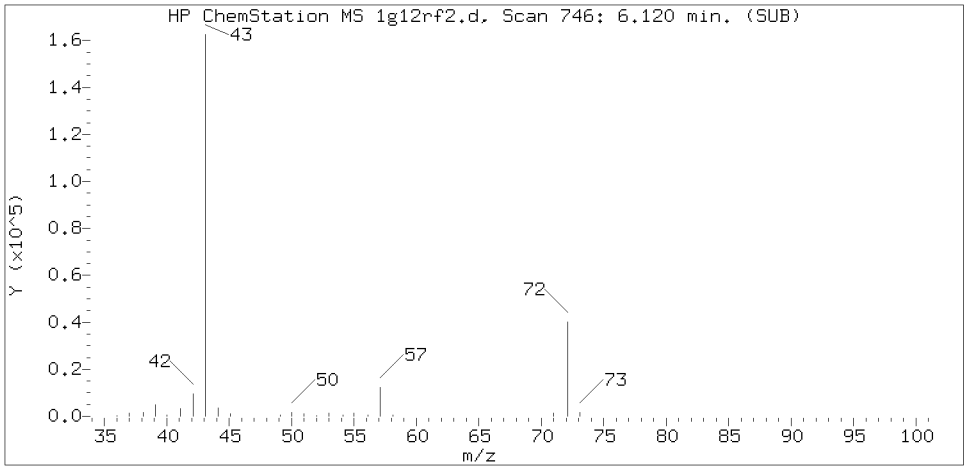
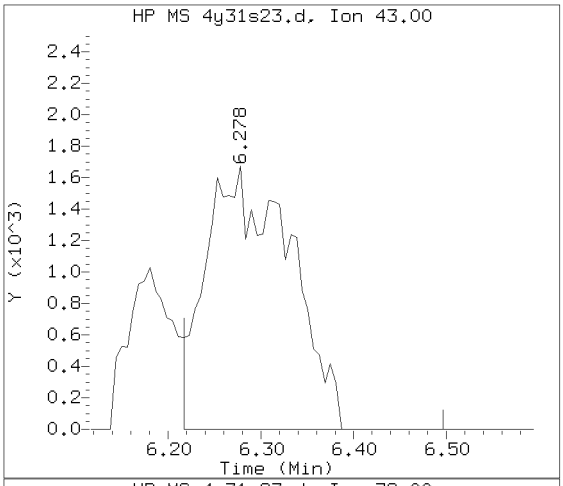
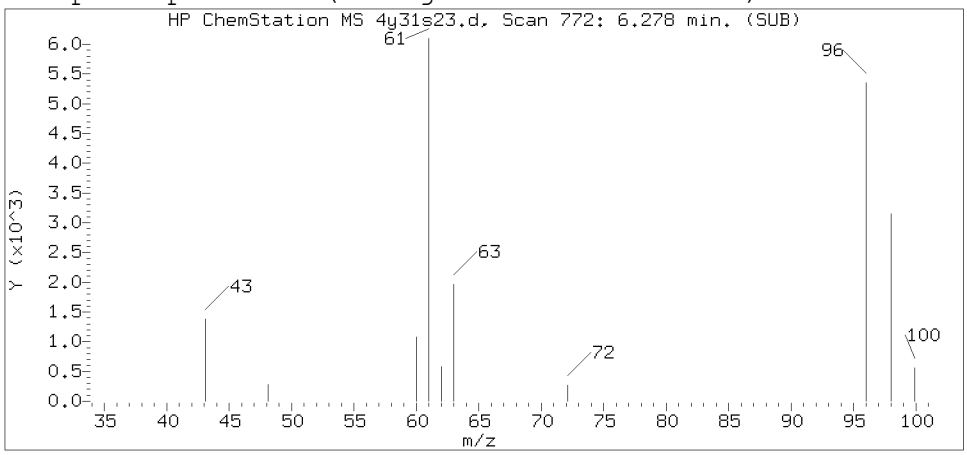
Target 3.5 esignature user ID: dvv10203

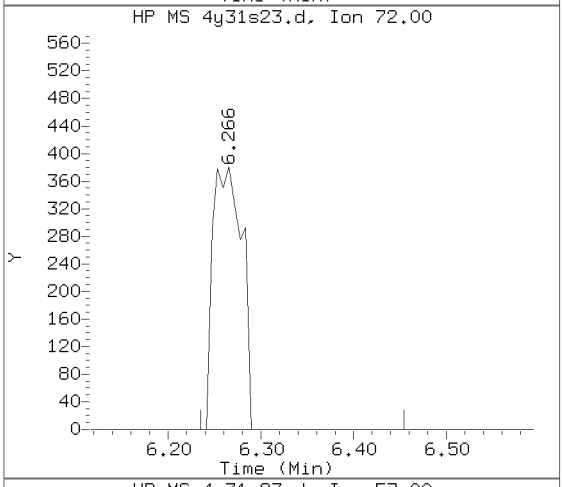
Reference Standard Spectrum for 2-Butanone



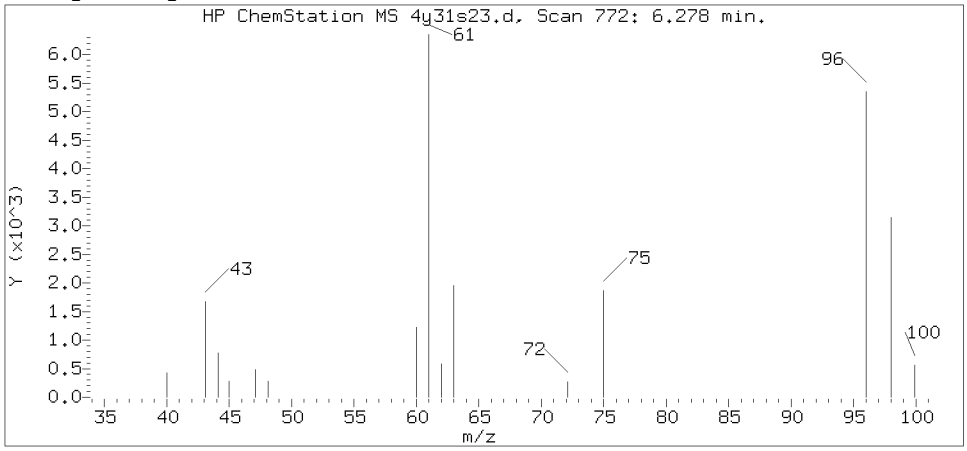


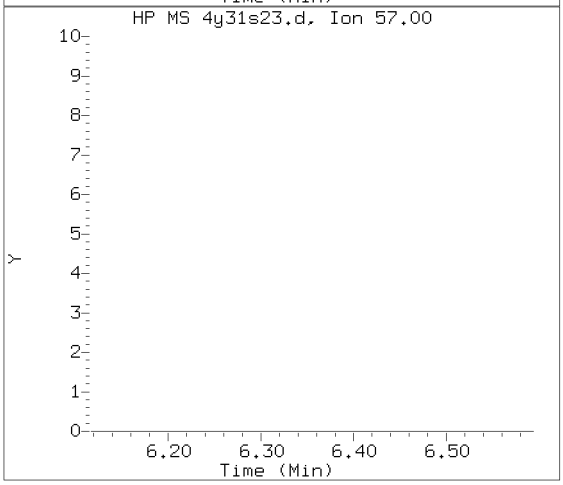
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may31a.b/4y31s23.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 17:31 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 17:48 Automation

Sample Name: 94J07 Lab Sample ID: 1063771

Compound Number : 44
Compound Name : 2-Butanone
Scan Number : 772
Retention Time (minutes): 6.278
Relative Retention Time :-0.00309
Quant Ion : 43.00
Area (flag) : 10649
On-Column Amount (ng) : 1.5098

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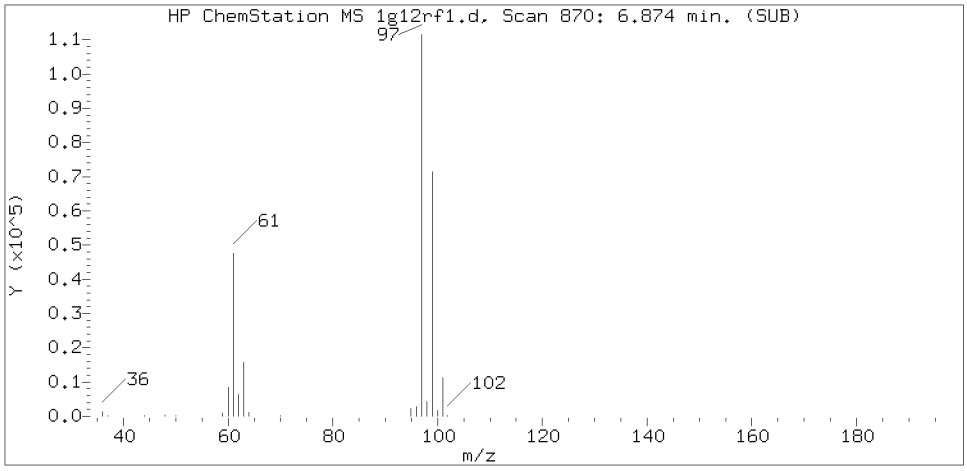
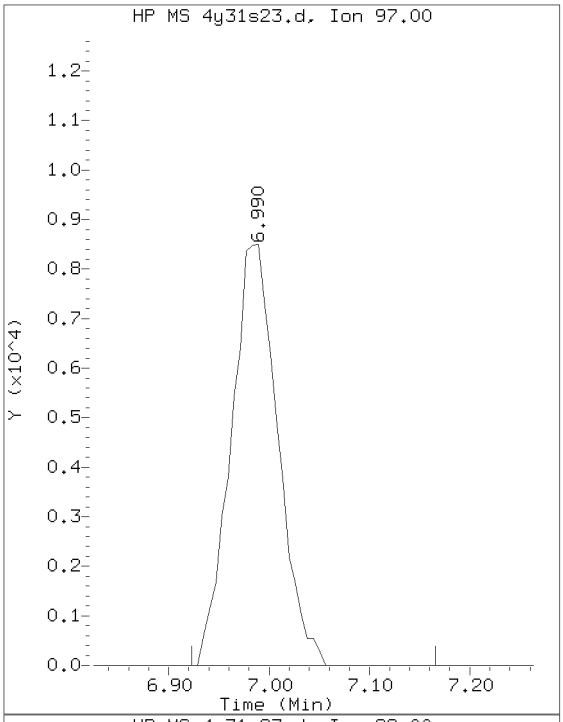
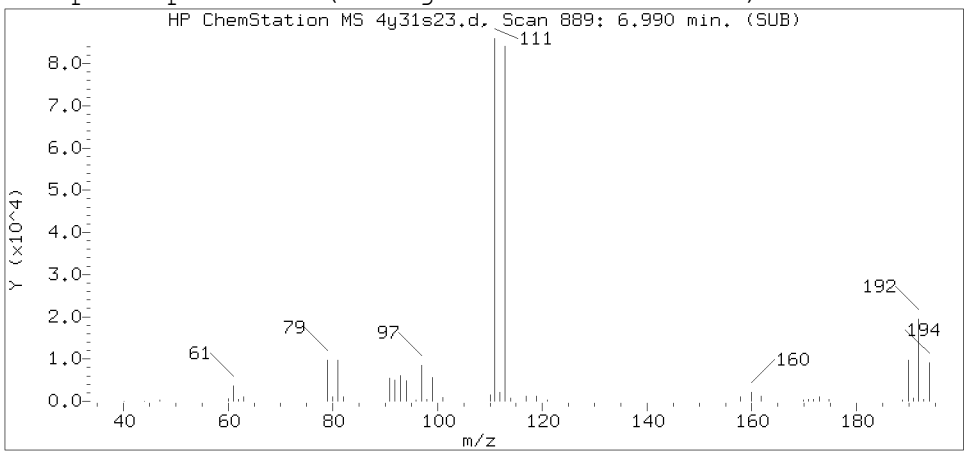
Target 3.5 esignature user ID: dvv10203

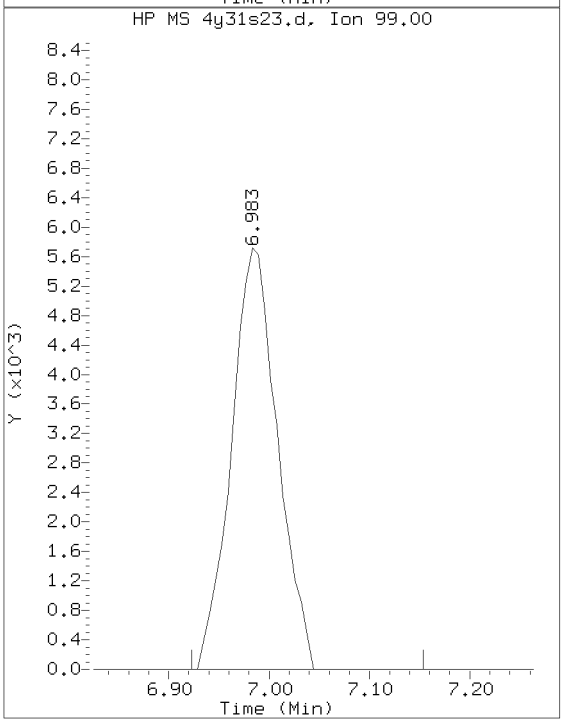
Reference Standard Spectrum for 1,1,1-Trichloroethane



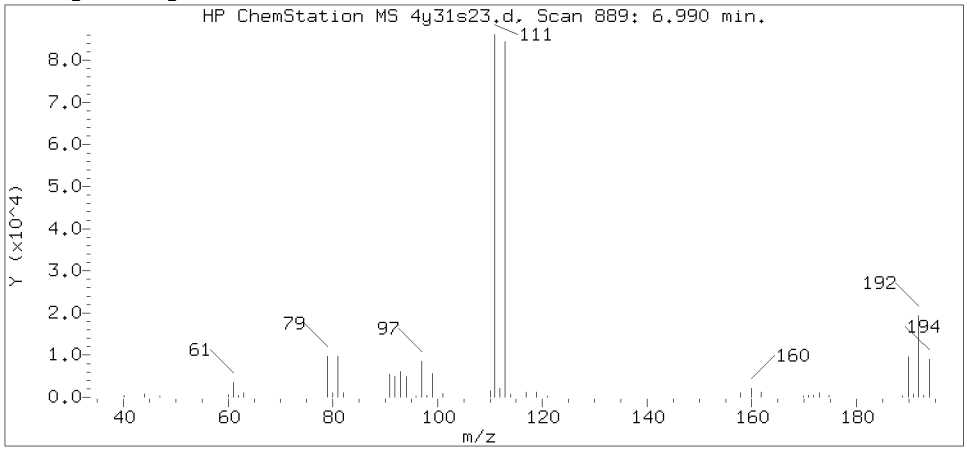


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP23297.i/19may31a.b/4y31s23.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 17:31 Analyst ID: amd00492

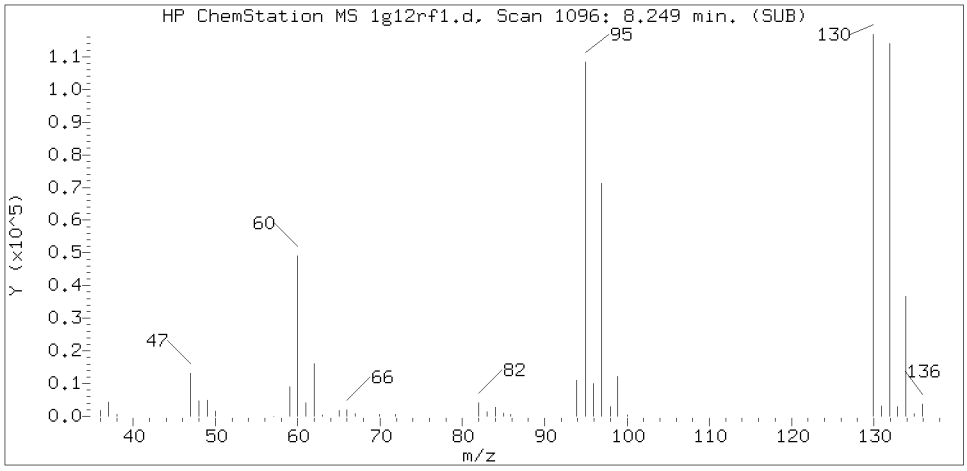
Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 17:48 Automation

Sample Name: 94J07 Lab Sample ID: 1063771

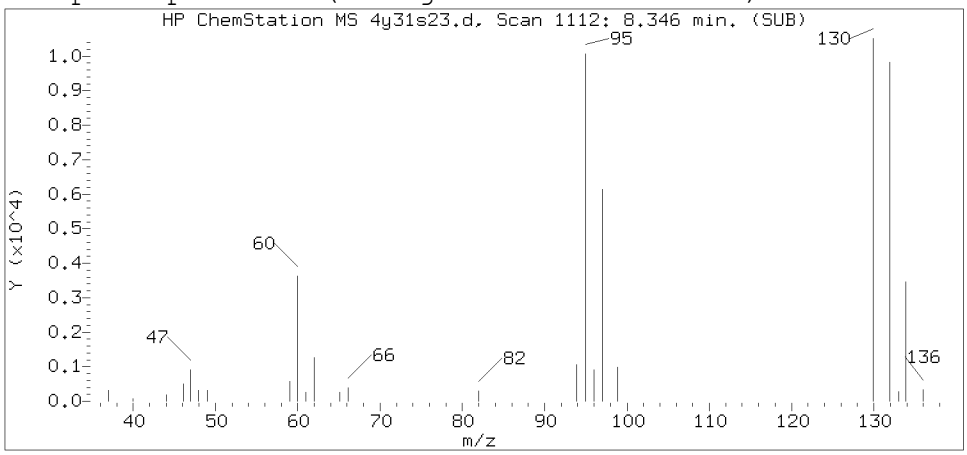
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 889
Retention Time (minutes): 6.990
Relative Retention Time :-0.00077
Quant Ion : 97.00
Area (flag) : 27688
On-Column Amount (ng) : 3.6308

Digitally signed by Don V. Viray on 05/31/2019 at 22:15.
Target 3.5 esignature user ID: dvv10202

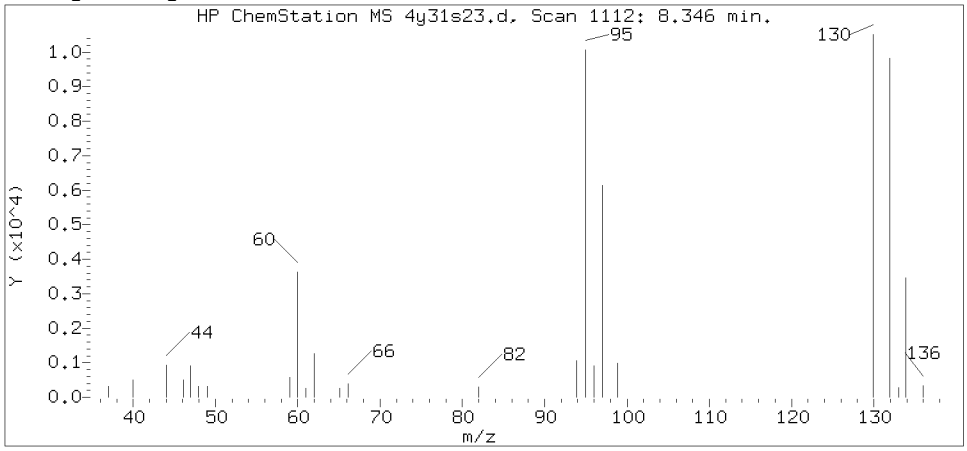
Reference Standard Spectrum for Trichloroethene

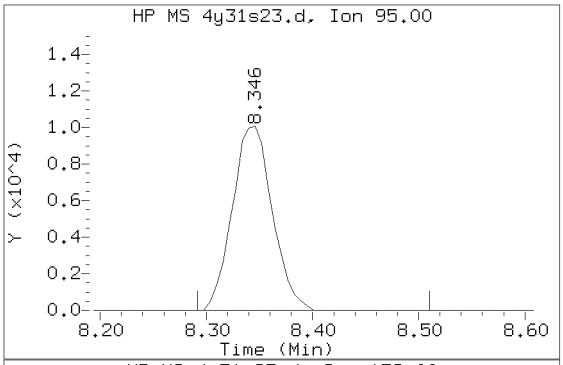


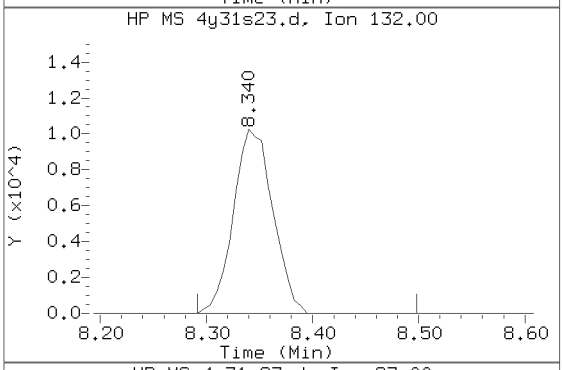
Sample Spectrum (Background Subtracted)

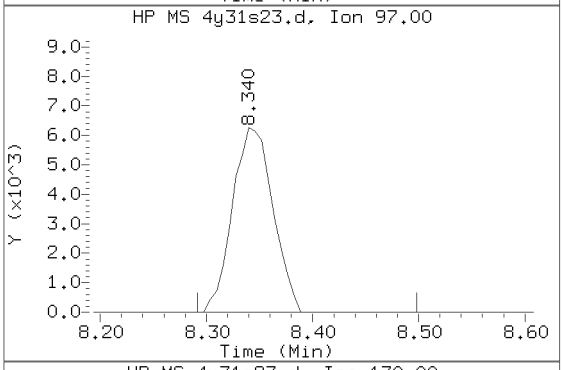


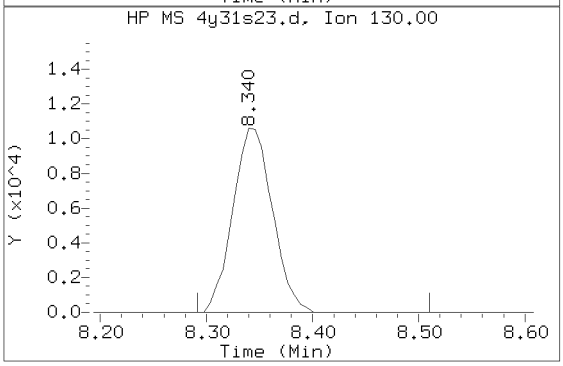
Sample Spectrum (Unaltered)











Data File: /chem/HP23297.i/19may31a.b/4y31s23.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 17:31 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 17:48 Automation

Sample Name: 94J07 Lab Sample ID: 1063771

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 1112
Retention Time (minutes): 8.346
Relative Retention Time :-0.00077
Quant Ion : 95.00
Area (flag) : 26263
On-Column Amount (ng) : 4.7254

Digitally signed by Don V. Viray on 05/31/2019 at 22:15.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

94J08

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1063772

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may31a.b/4y31s24.d

Level: (low/med) LOW Date Received: 05/22/19

Moisture: not dec. _____ Date Analyzed: 05/31/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	1	J
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.9	J
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	1	J
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	2	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

^

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may31a.b/4y31s24.d Injection date and time: **31-MAY-2019 17:53**
Data file Sample Info. Line: 94J08;1063772;1;0;;JCV94;;;4y31b01; Instrument ID: **HP23297.i** Batch: **4191511AA**
Date, time and analyst ID of latest file update: 31-May-2019 22:11 dvv10203

Blank Data file reference: **/chem/HP23297.i/19may31a.b/4y31b01.d**

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 31-MAY-2019 09:29
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may31a.b/4y31c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.374(0.000)	459	65	419295M (11)	250.00	
66) Fluorobenzene	7.866(0.000)	1033	96	1162091 (9)	50.00	
100) Chlorobenzene-d5	11.309(0.000)	1599	117	945520 (7)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189(0.000)	1908	152	511494 (1)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977(0.000)	113	280462	48.962	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434(0.000)	102	73298	52.369	105%		80 - 120
83) Toluene-d8	(3)	9.867(0.000)	98	1196088	49.288	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.307(0.000)	95	441989	47.784	96%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)	3.686(0.002)	58	1426	1.221	1.22		J	0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.438(-0.000)	63	8255	0.917	0.92		J	0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)	6.253(-0.000)	43	8325	1.213	1.21		J	0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	6.977(0.000)	97	17319	2.334	2.33			0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	8.334(0.000)	95	5693	1.053	1.05			0.2	1
75) 1,4-Dioxane	(1)			Not Detected					29	250
88) Toluene	(3)			Not Detected					0.2	1
93) Tetrachloroethene	(3)			Not Detected					0.2	1
104) Ethylbenzene	(3)			Not Detected					0.4	1
106) m+p-Xylene	(3)			Not Detected					1	5
107) o-Xylene	(3)			Not Detected					0.4	1
108) Xylene (Total)	(3)			Not Detected					1	5
138) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
148) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Don V. Viray on 05/31/2019 at 22:15. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP23297.i/19may31a.b/4y31s24.d Injection date and time: **31-MAY-2019 17:53**
Data file Sample Info. Line: 94J08;1063772;1;0;;JCV94;;;4y31b01; Instrument ID: **HP23297.i** Batch: **4191511AA**
Date, time and analyst ID of latest file update: 31-May-2019 22:11 dvv10203

Blank Data file reference: **/chem/HP23297.i/19may31a.b/4y31b01.d**

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 31-MAY-2019 09:29
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may31a.b/4y31c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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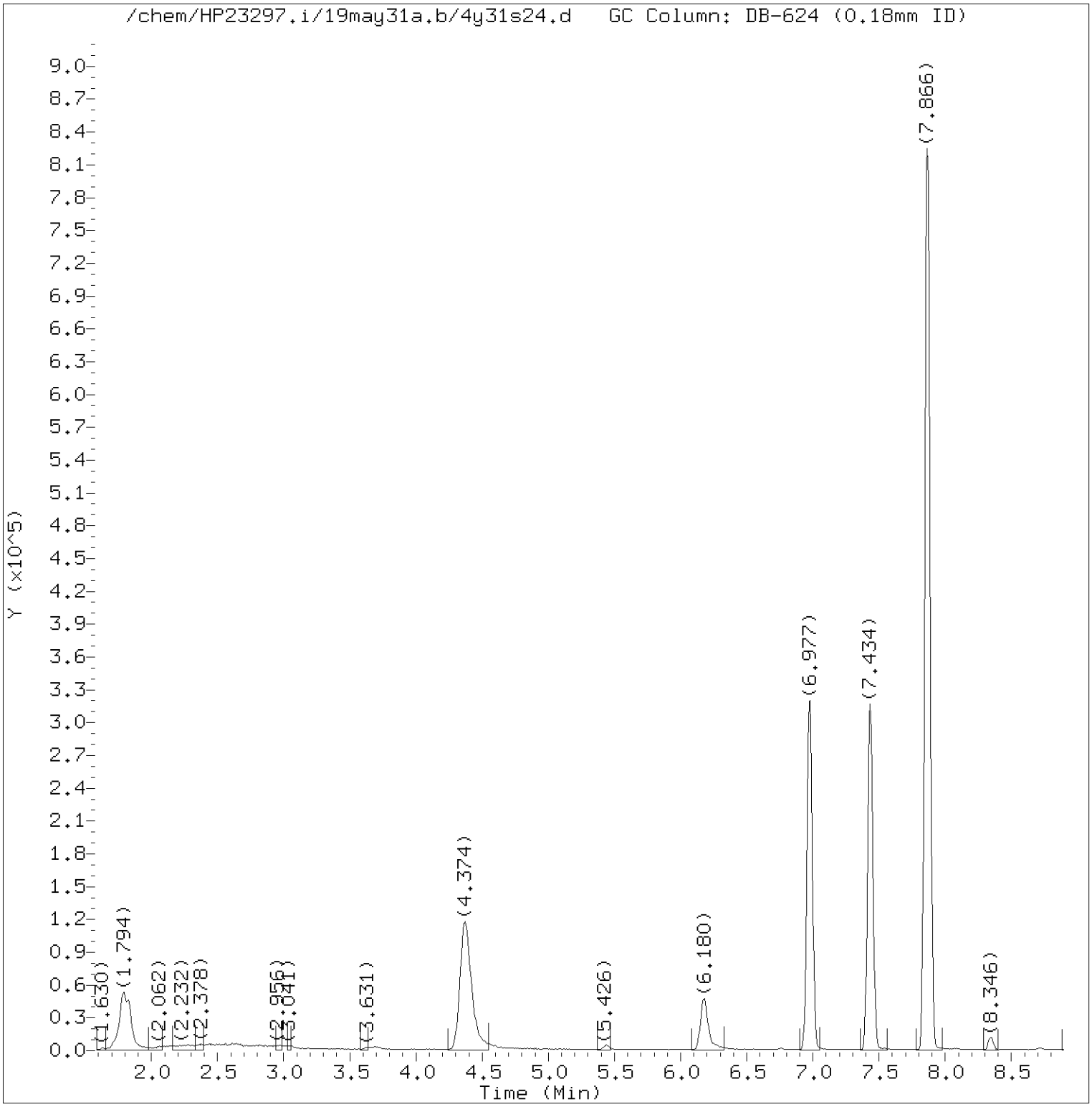
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 05/31/2019 at 22:15. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:42. PARALLAX ID: rcr00559



Total Ion Chromatogram (TIC)

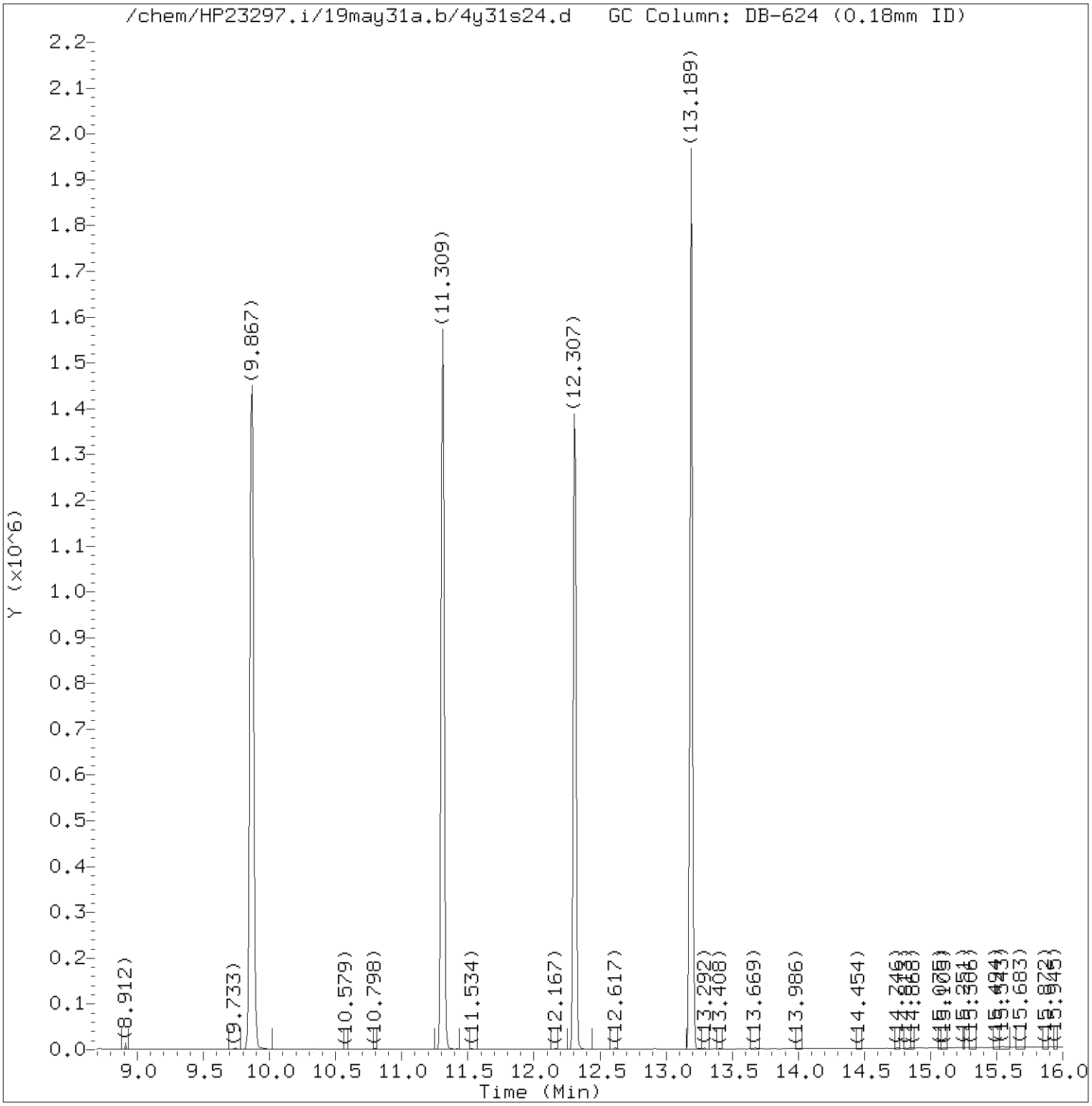
Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31s24.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 17:53 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 22:11 dvv10203

Sample Name: 94J08 Lab Sample ID: 1063772

Digitally signed by Don V. Viray
on 05/31/2019 at 22:15.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31s24.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 17:53 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 22:11 dvv10203

Sample Name: 94J08 Lab Sample ID: 1063772

Digitally signed by Don V. Viray
on 05/31/2019 at 22:15.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31s24.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 17:53 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 22:11 dvv10203

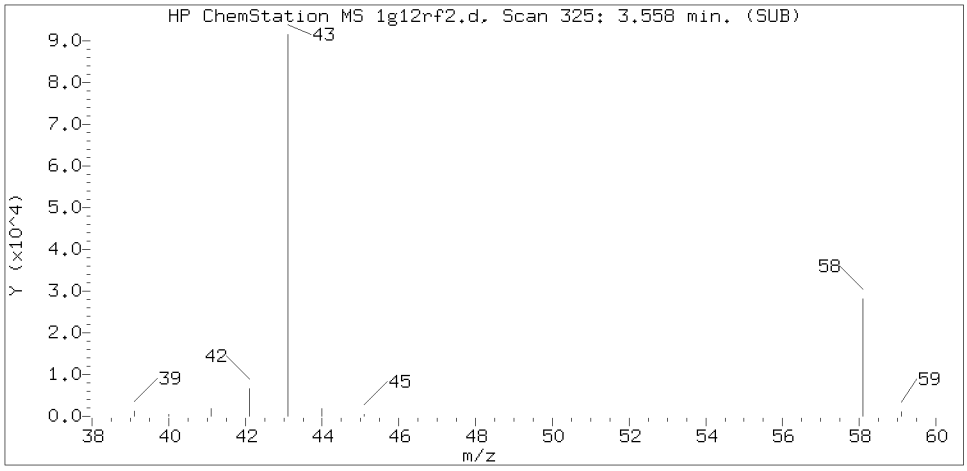
Sample Name: 94J08 Lab Sample ID: 1063772

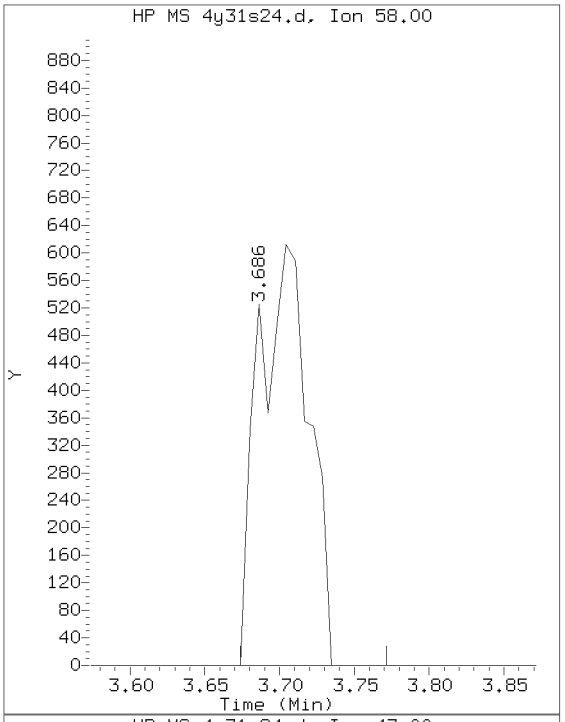
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
18) Acetone	(1)	3.686	58	1426	1.221
29)*t-Butyl alcohol-d10	(1)	4.374	65	419295M	250.000
36) 1,1-Dichloroethane	(2)	5.438	63	8255	0.917
44) 2-Butanone	(2)	6.253	43	8325	1.213
53) 1,1,1-Trichloroethane	(2)	6.977	97	17319	2.334
52)$Dibromofluoromethane	(2)	6.977	113	280462	48.962
57)$1,2-Dichloroethane-d4	(2)	7.434	102	73298	52.369
66)*Fluorobenzene	(2)	7.866	96	1162091	50.000
71) Trichloroethene	(2)	8.334	95	5693	1.053
83)$Toluene-d8	(3)	9.867	98	1196088	49.288
100)*Chlorobenzene-d5	(3)	11.309	117	945520	50.000
114)$4-Bromofluorobenzene	(3)	12.307	95	441989	47.784
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	511494	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

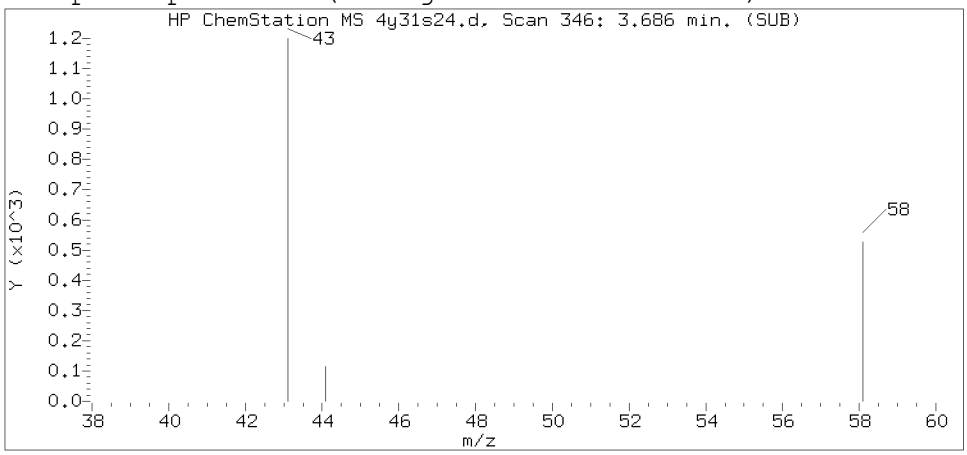
Digitally signed by Don V. Viray
on 05/31/2019 at 22:15.
Target 3.5 esignature user ID: dvv10203

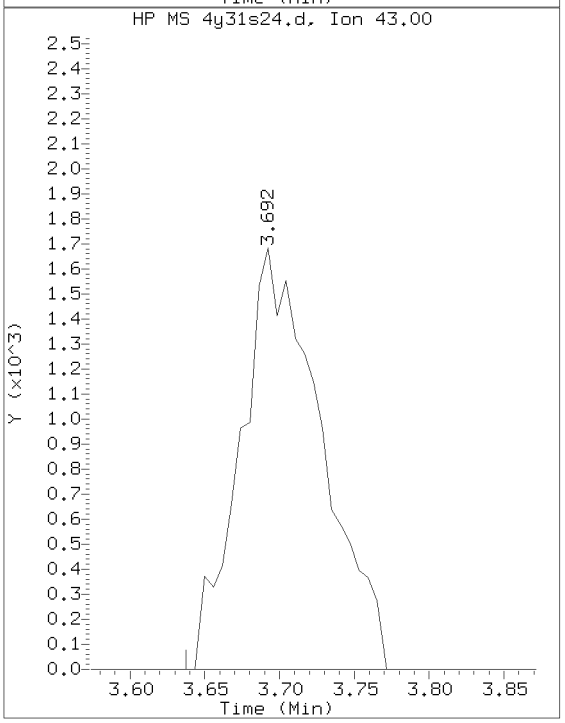
Reference Standard Spectrum for Acetone



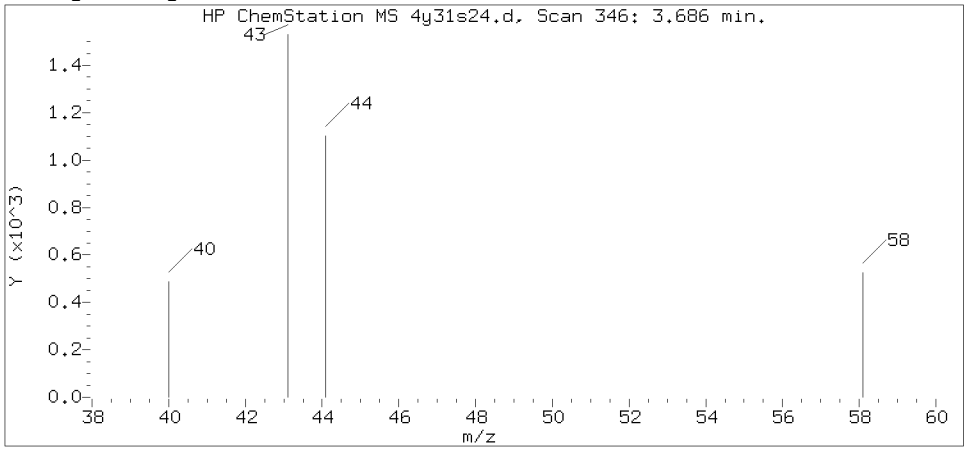


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP23297.i/19may31a.b/4y31s24.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 17:53 Analyst ID: amd00492

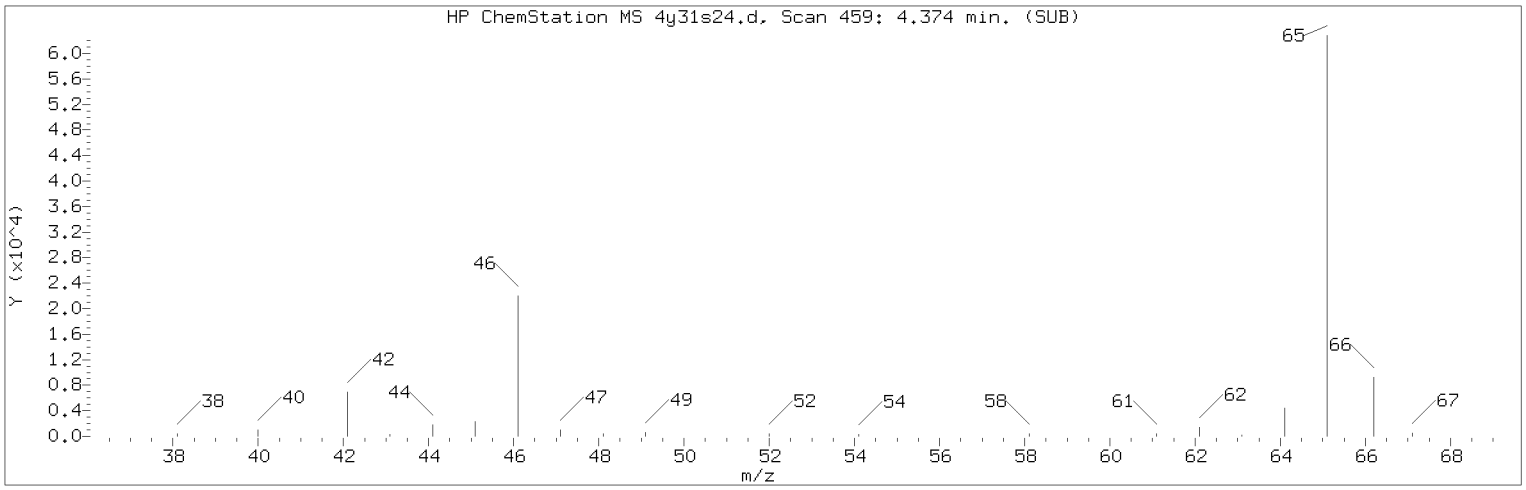
Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 22:11 dvv10203

Sample Name: 94J08 Lab Sample ID: 1063772

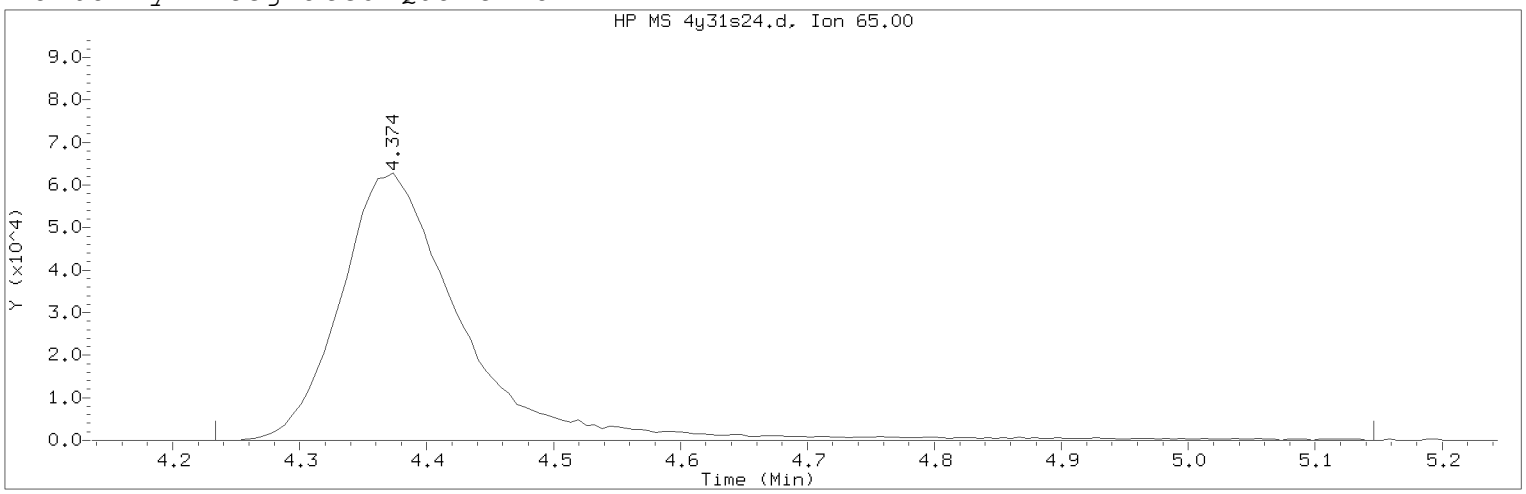
Compound Number	: 18
Compound Name	: Acetone
Scan Number	: 346
Retention Time (minutes)	: 3.686
Relative Retention Time	: 0.00278
Quant Ion	: 58.00
Area (flag)	: 1426
On-Column Amount (ng)	: 1.2215

Digitally signed by Don V. Viray on 05/31/2019 at 22:15.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31s24.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 17:53 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 22:11 dvv10203

Sample Name: 94J08 Lab Sample ID: 1063772

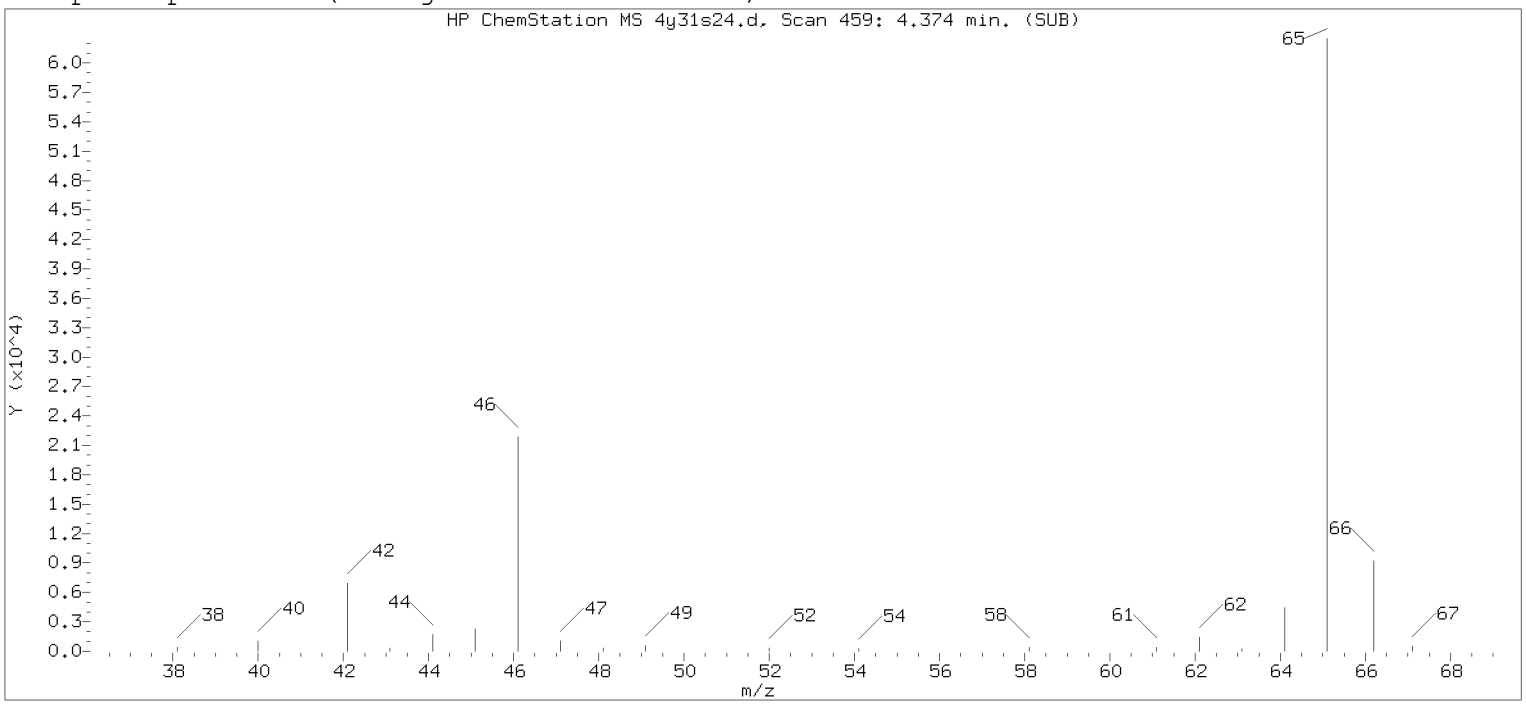
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 459
Retention Time (minutes): 4.374
Quant Ion : 65.00
Area (flag) : 419295M
On-Column Amount (ng) : 250.0000
Integration start scan : 435 Integration stop scan: 585
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

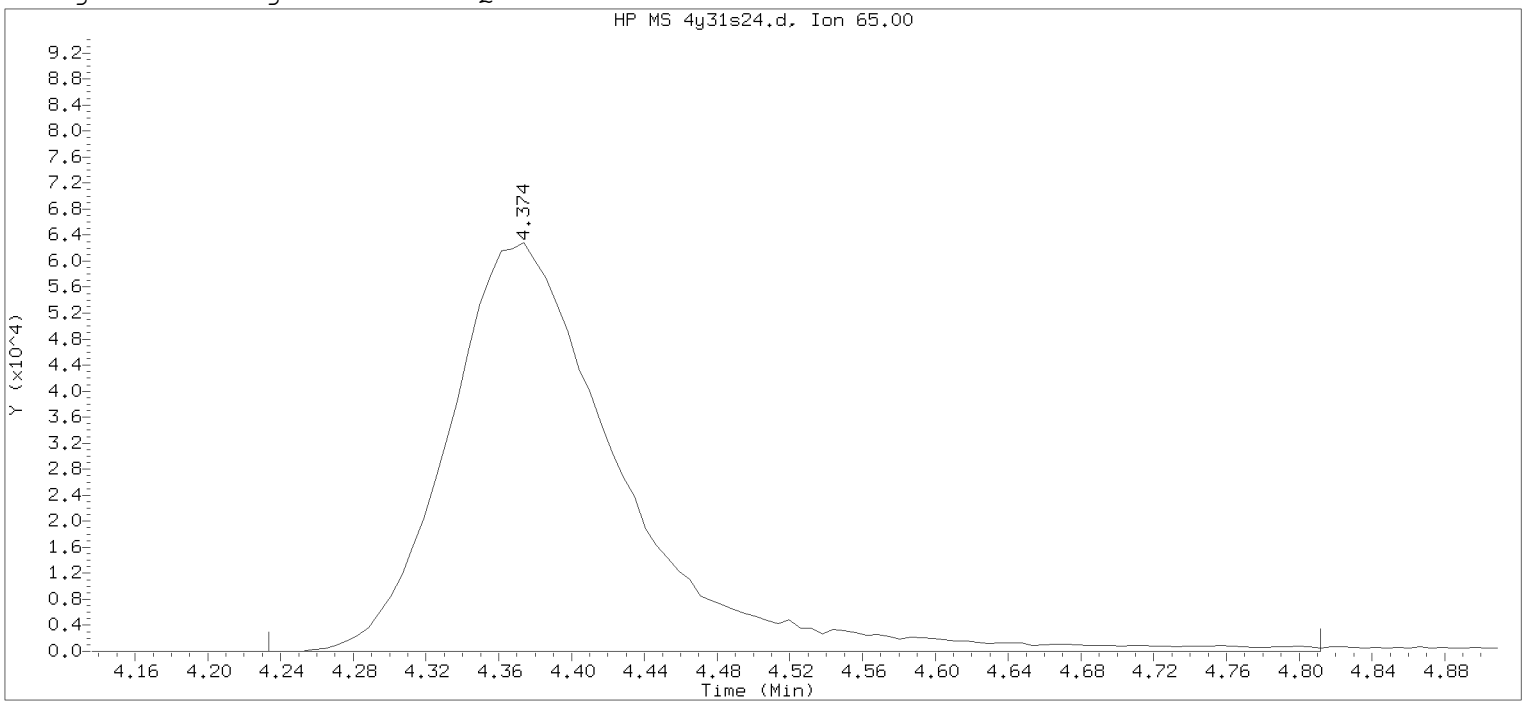
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/31/2019 at 22:15.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:42.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31s24.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 17:53 Analyst ID: amd00492

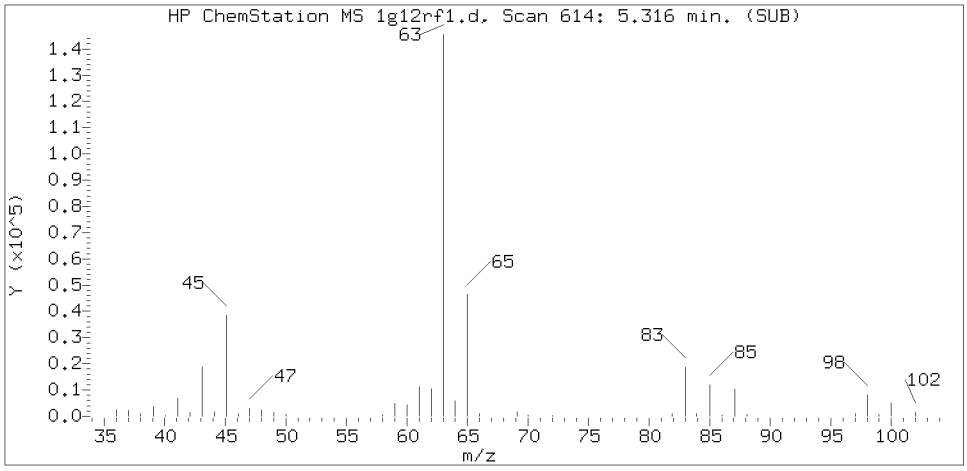
Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 18:11 Automation

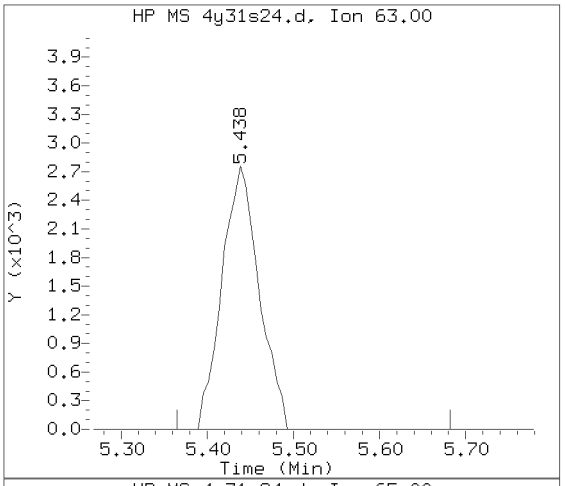
Sample Name: 94J08 Lab Sample ID: 1063772

Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 459
Retention Time (minutes): 4.374
Quant Ion : 65.00
Area : 411297
On-column Amount (ng) : 250.0000
Integration start scan : 435 Integration stop scan: 530
Y at integration start : 0 Y at integration end: 0

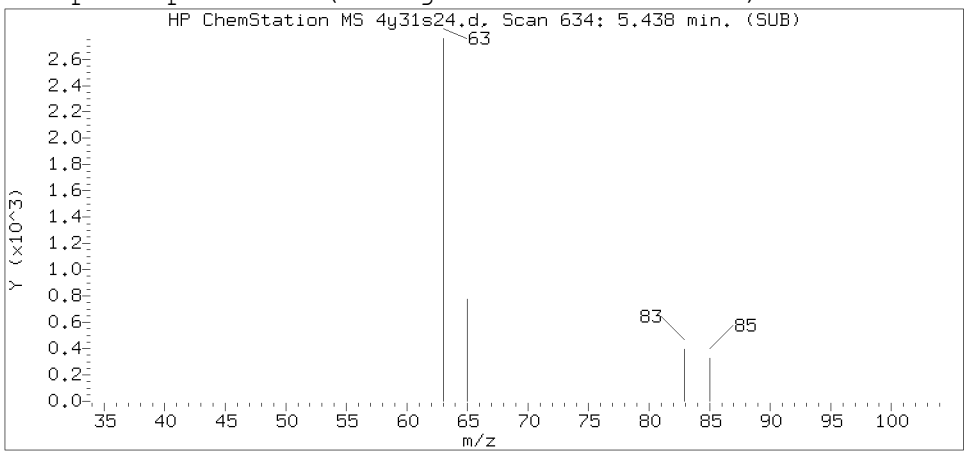
Digitally signed by Don V. Viray on 05/31/2019 at 22:15.
Target 3.5 esignature user id: dviray

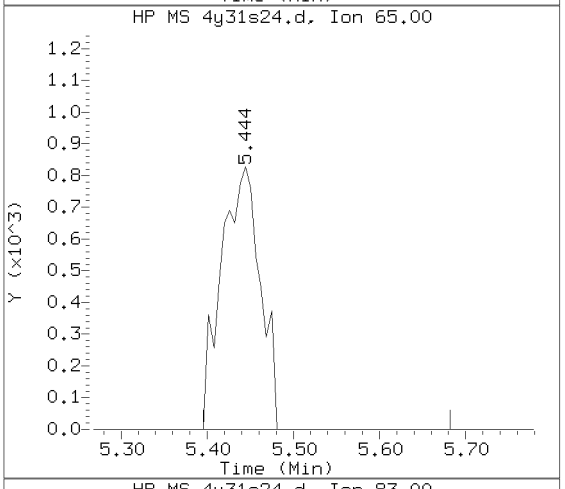
Reference Standard Spectrum for 1,1-Dichloroethane



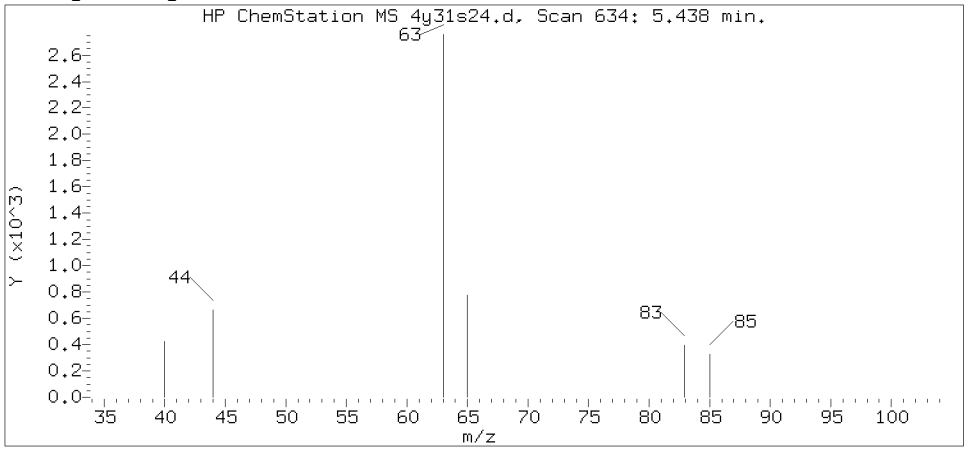


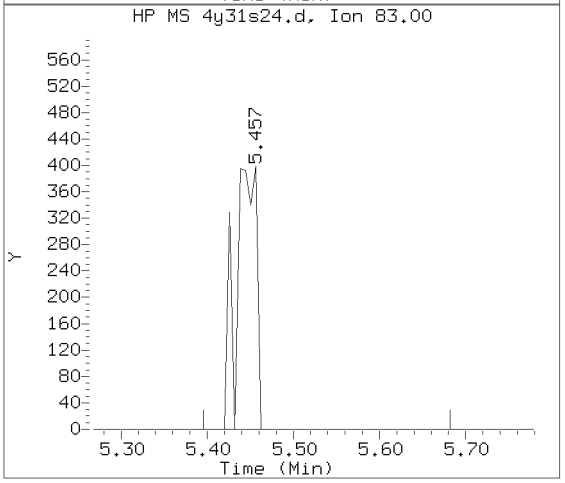
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may31a.b/4y31s24.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 17:53 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 22:11 dvv10203

Sample Name: 94J08 Lab Sample ID: 1063772

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 634
Retention Time (minutes): 5.438
Relative Retention Time :-0.00000
Quant Ion : 63.00
Area (flag) : 8255
On-Column Amount (ng) : 0.9172

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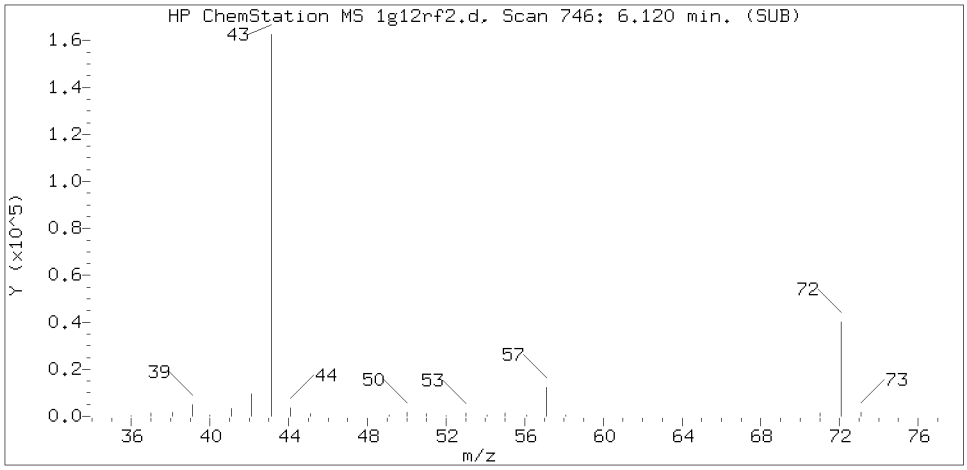
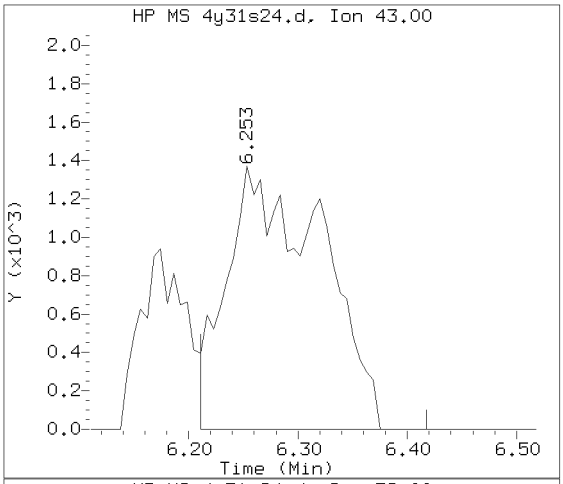
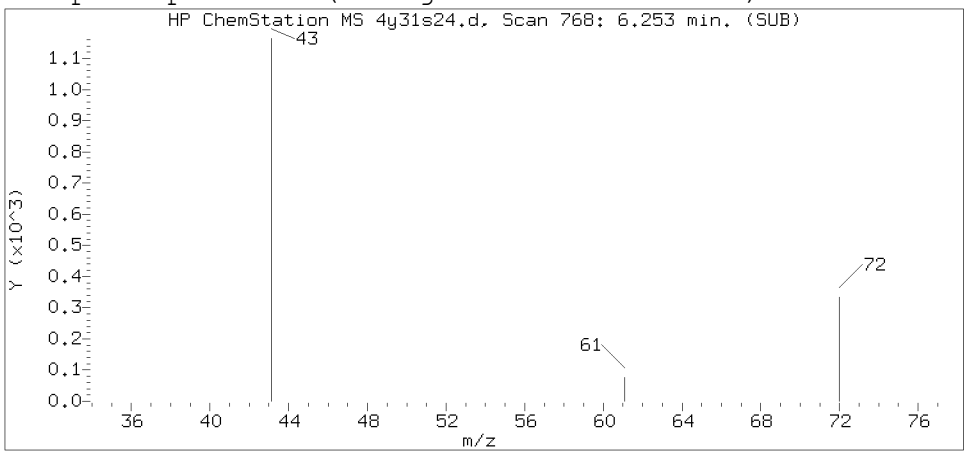
Target 3.5 esignature user ID: dvv10203

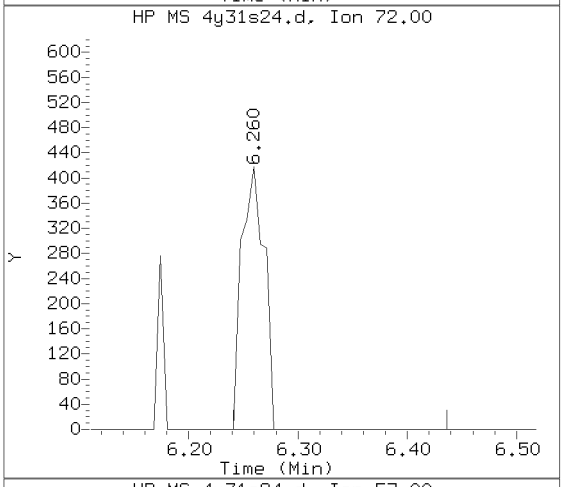
Reference Standard Spectrum for 2-Butanone



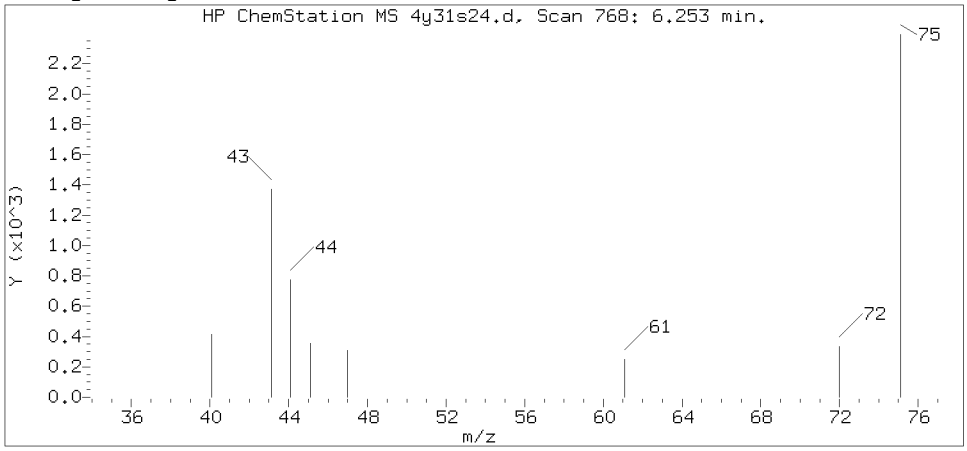


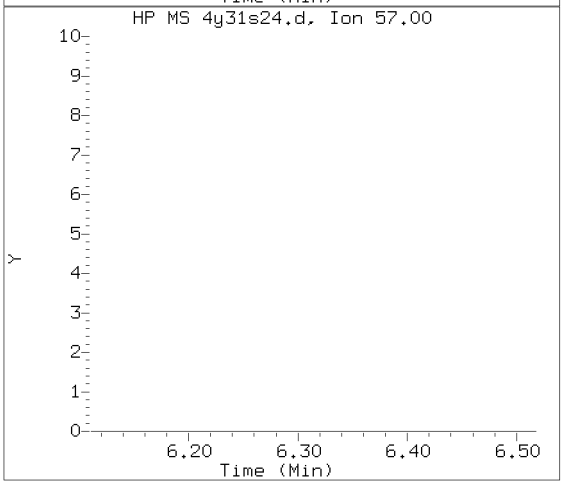
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may31a.b/4y31s24.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 17:53 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 22:11 dvv10203

Sample Name: 94J08 Lab Sample ID: 1063772

Compound Number : 44
Compound Name : 2-Butanone
Scan Number : 768
Retention Time (minutes): 6.253
Relative Retention Time :-0.00000
Quant Ion : 43.00
Area (flag) : 8325
On-Column Amount (ng) : 1.2129

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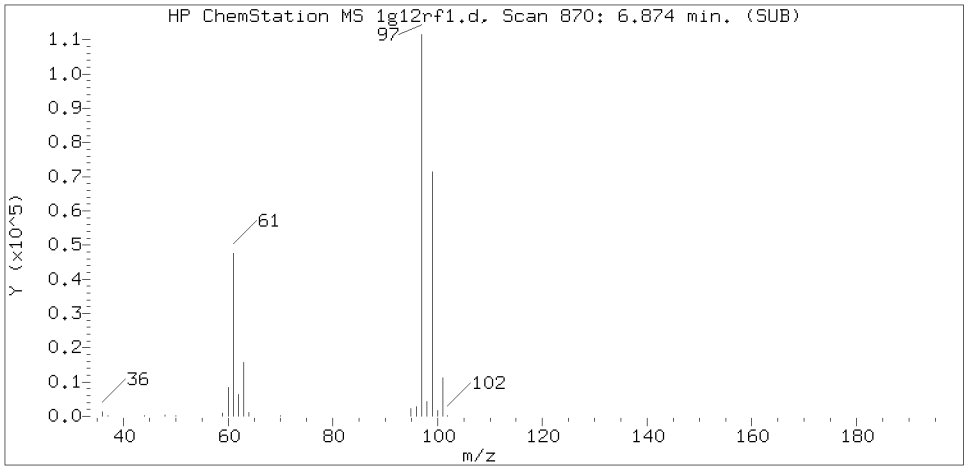
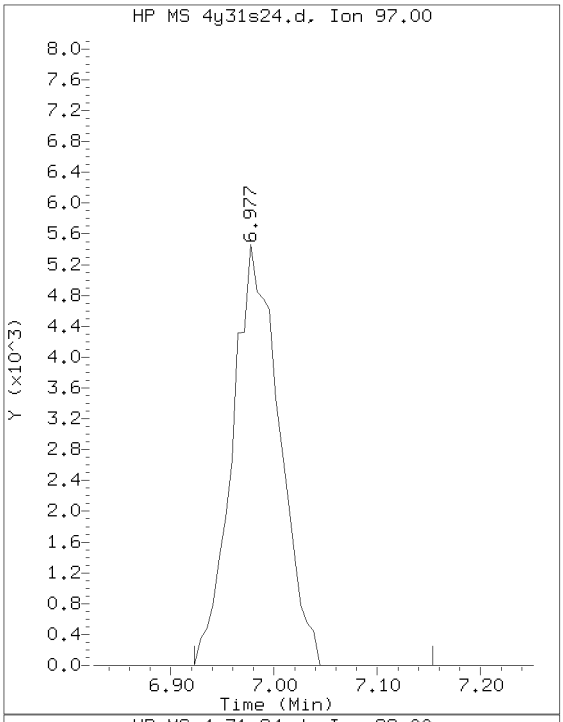
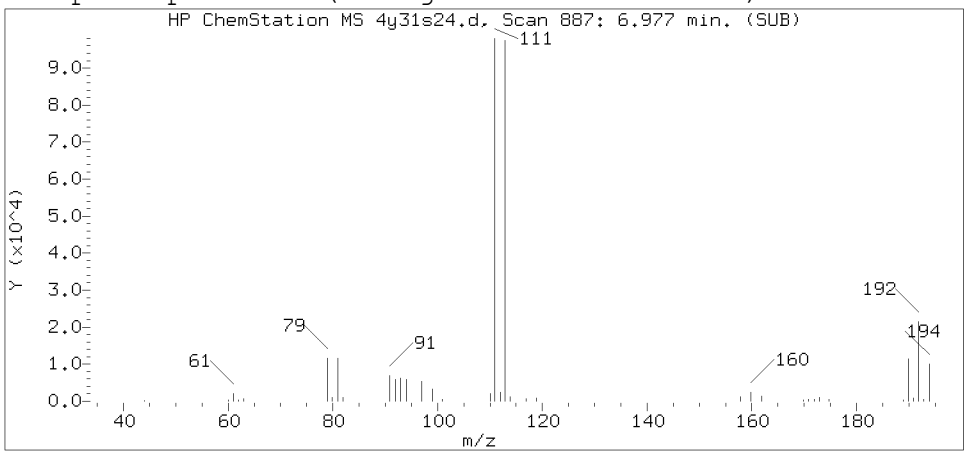
Target 3.5 esignature user ID: dvv10203

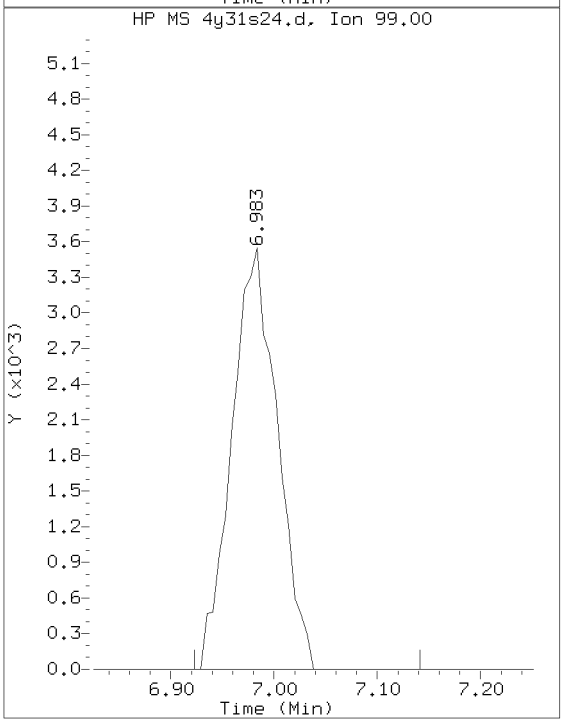
Reference Standard Spectrum for 1,1,1-Trichloroethane



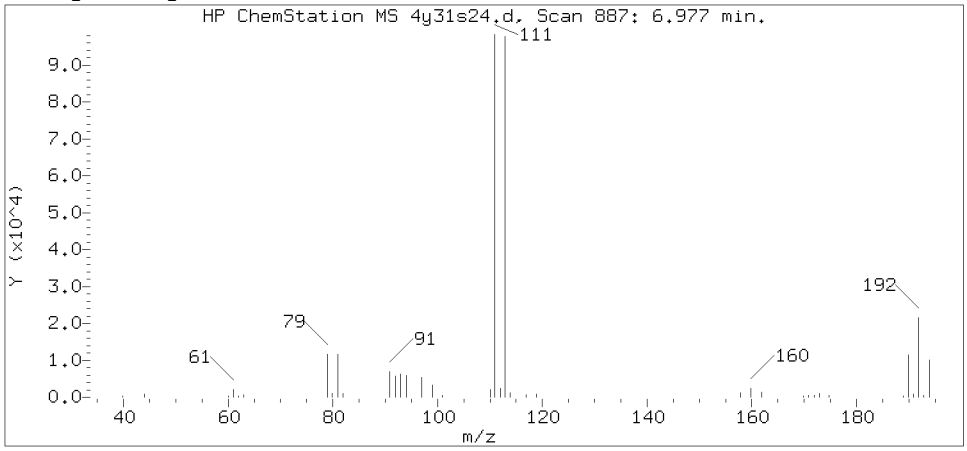


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP23297.i/19may31a.b/4y31s24.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 17:53 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 22:11 dvv10203

Sample Name: 94J08 Lab Sample ID: 1063772

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 887
Retention Time (minutes)	: 6.977
Relative Retention Time	: 0.00077
Quant Ion	: 97.00
Area (flag)	: 17319
On-Column Amount (ng)	: 2.3340

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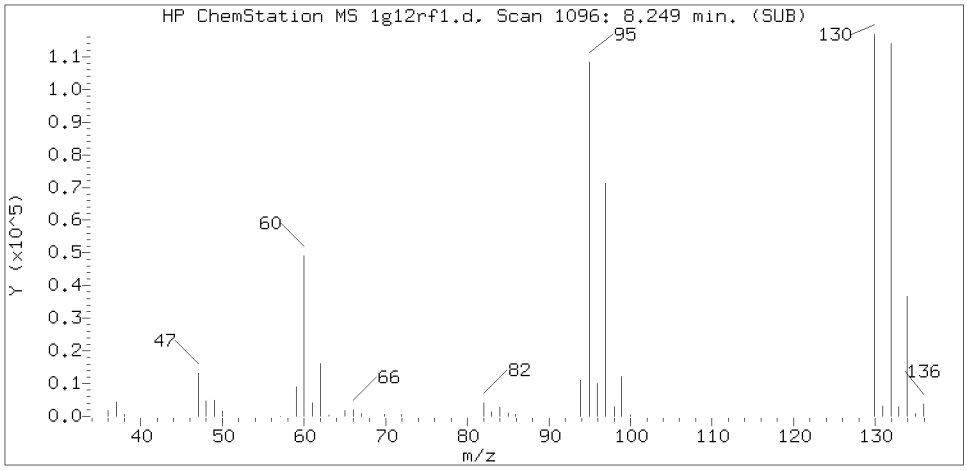
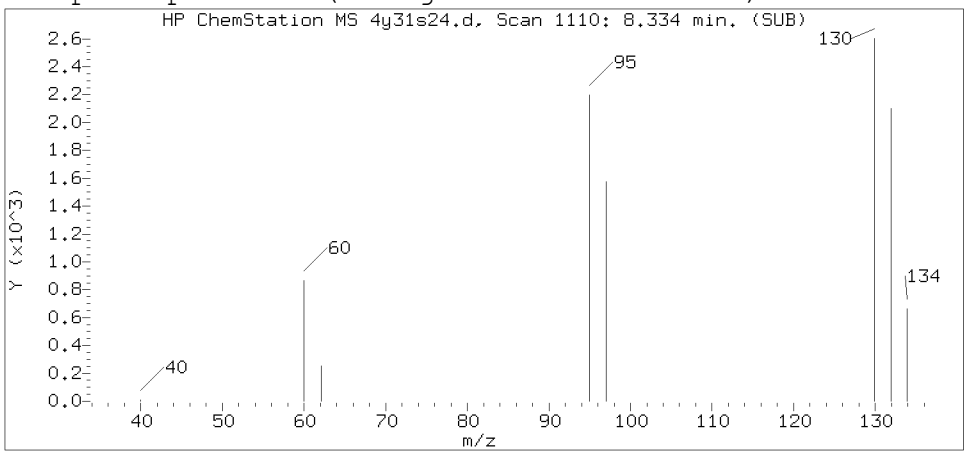
Target 3.5 esignature user ID: dvv10203

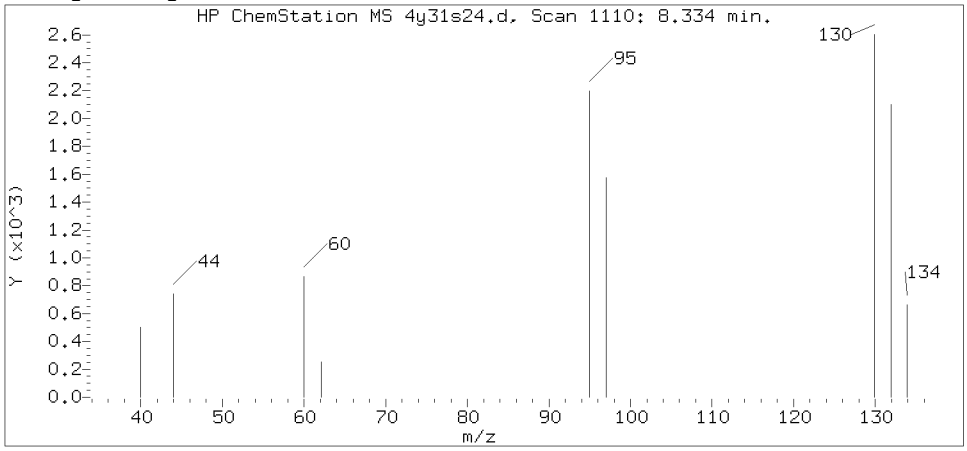
Reference Standard Spectrum for Trichloroethene

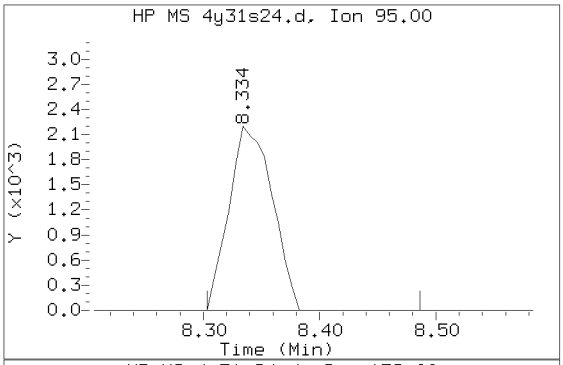


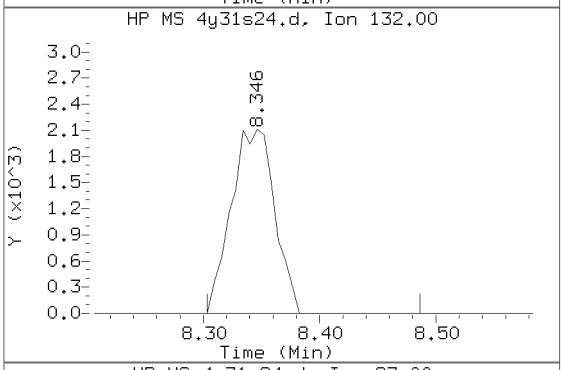
Sample Spectrum (Background Subtracted)

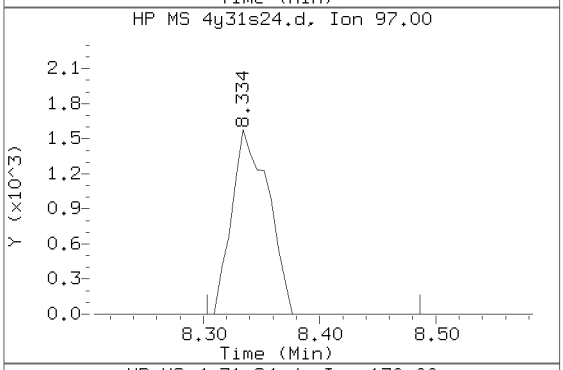


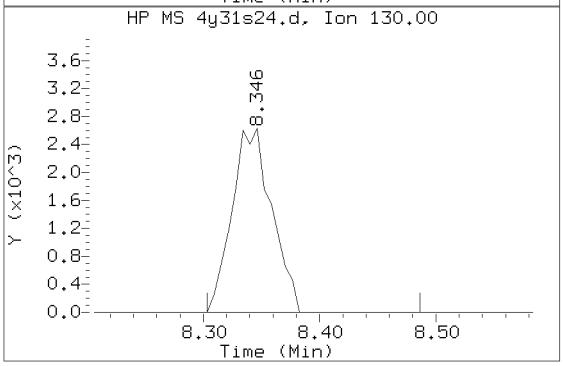
Sample Spectrum (Unaltered)











Data File: /chem/HP23297.i/19may31a.b/4y31s24.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 17:53 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 22:11 dvv10203

Sample Name: 94J08 Lab Sample ID: 1063772

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 1110
Retention Time (minutes)	: 8.334
Relative Retention Time	: 0.00077
Quant Ion	: 95.00
Area (flag)	: 5693
On-Column Amount (ng)	: 1.0527

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Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

94J09

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1063773

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may31a.b/4y31s25.d

Level: (low/med) LOW Date Received: 05/22/19

Moisture: not dec. _____ Date Analyzed: 05/31/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	1	J
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.6	J
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	0.6	J
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	0.6	J
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	5	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may31a.b/4y31s25.d Injection date and time: **31-MAY-2019 18:16**
Data file Sample Info. Line: 94J09;1063773;1;0;;JCV94;;;4y31b01; Instrument ID: **HP23297.i** Batch: **4191511AA**
Date, time and analyst ID of latest file update: 31-May-2019 22:11 dvv10203

Blank Data file reference: **/chem/HP23297.i/19may31a.b/4y31b01.d**

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 31-MAY-2019 09:29
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may31a.b/4y31c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.374	(0.000)	459	65	426647M	(12)	250.00	
66) Fluorobenzene	7.866	(0.000)	1033	96	1193261	(12)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	966774	(10)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189	(0.000)	1908	152	527613	(4)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.971	(0.001)	113	282558	48.039	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434	(0.000)	102	72837	50.680	101%		80 - 120
83) Toluene-d8	(3)	9.867	(0.000)	98	1221504	49.229	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.307	(0.000)	95	448222	47.393	95%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)	3.692	(0.001)	58	1647	1.386	1.39		J	0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.432	(0.000)	63	5377	0.582	0.58		J	0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)	6.266	(-0.001)	43	4321	0.613	0.61		J	0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	6.977	(0.000)	97	7890	1.036	1.04			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.340	(0.000)	95	3178	0.572	0.57		J	0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

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Data file: /chem/HP23297.i/19may31a.b/4y31s25.d Injection date and time: **31-MAY-2019 18:16**
Data file Sample Info. Line: 94J09;1063773;1;0;;JCV94;;;4y31b01; Instrument ID: **HP23297.i** Batch: **4191511AA**
Date, time and analyst ID of latest file update: 31-May-2019 22:11 dvv10203

Blank Data file reference: **/chem/HP23297.i/19may31a.b/4y31b01.d**

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 31-MAY-2019 09:29
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may31a.b/4y31c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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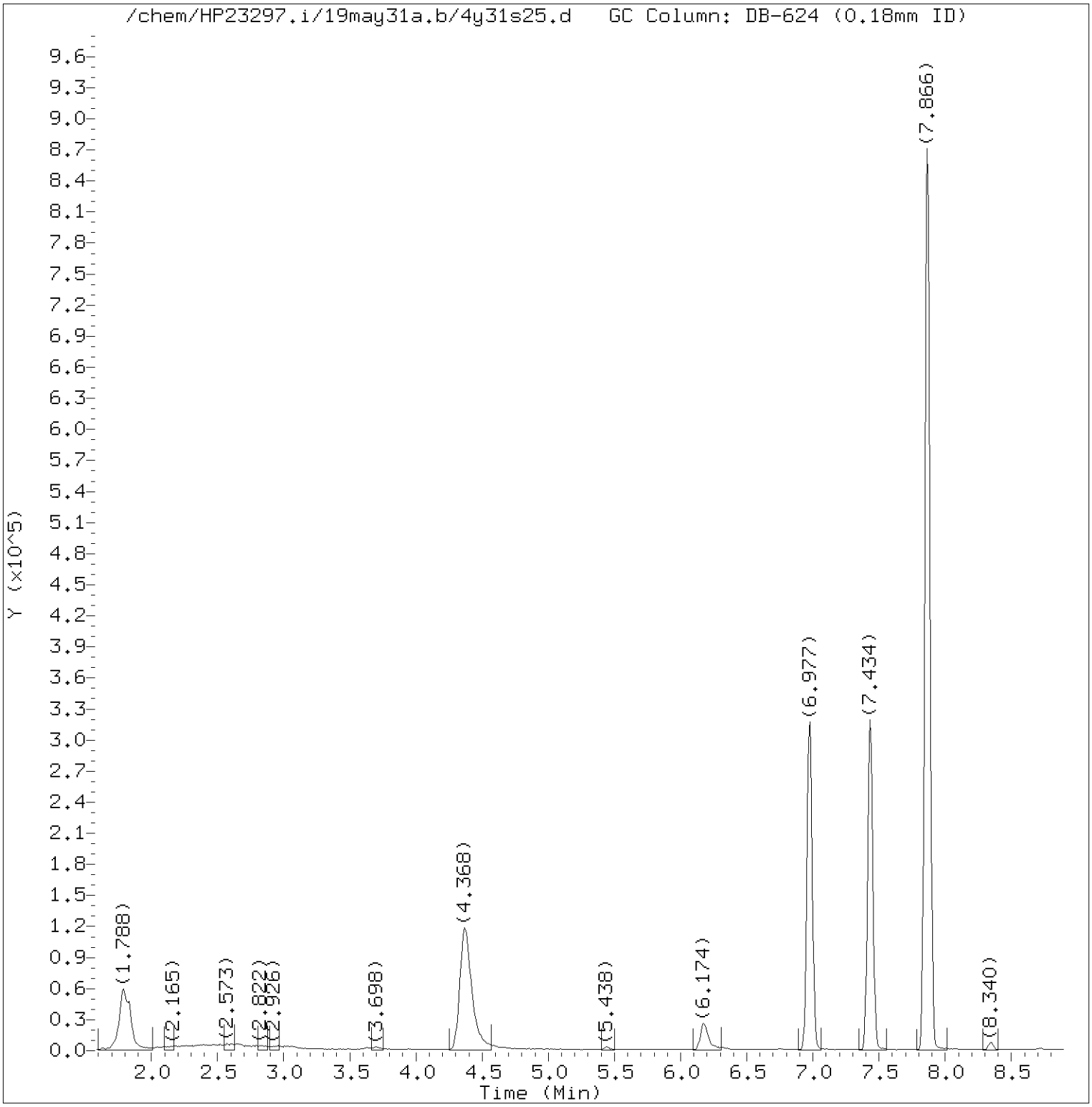
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 05/31/2019 at 22:15. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:42. PARALLAX ID: rcr00559



Total Ion Chromatogram (TIC)

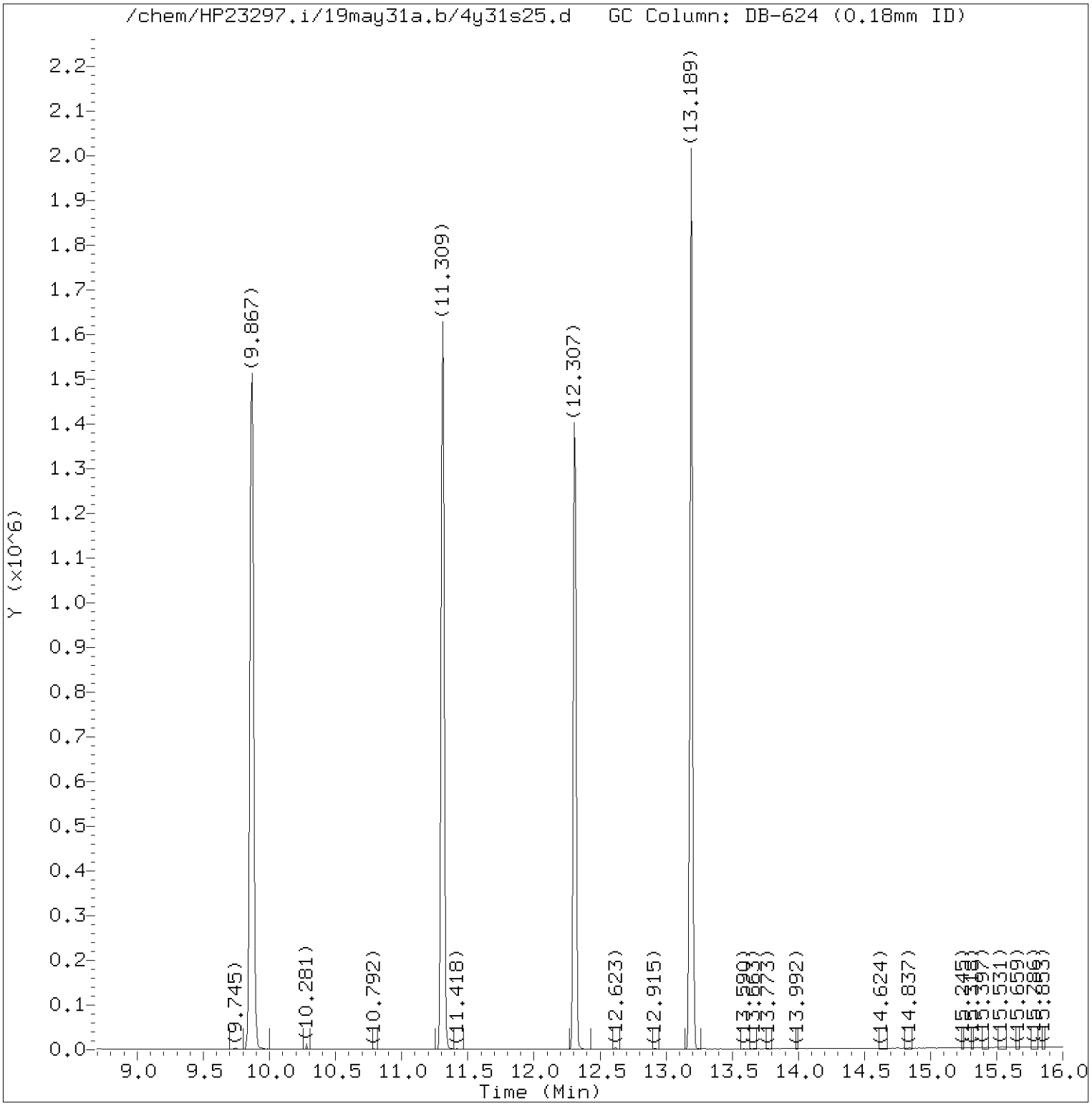
Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31s25.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 18:16 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 22:11 dvv10203

Sample Name: 94J09 Lab Sample ID: 1063773

Digitally signed by Don V. Viray
on 05/31/2019 at 22:15.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31s25.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 18:16 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 22:11 dvv10203

Sample Name: 94J09 Lab Sample ID: 1063773

Digitally signed by Don V. Viray
on 05/31/2019 at 22:15.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31s25.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 18:16 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 22:11 dvv10203

Sample Name: 94J09 Lab Sample ID: 1063773

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
18) Acetone	(1)	3.692	58	1647	1.386
29)*t-Butyl alcohol-d10	(1)	4.374	65	426647M	250.000
36) 1,1-Dichloroethane	(2)	5.432	63	5377	0.582
44) 2-Butanone	(2)	6.266	43	4321	0.613
52)$Dibromofluoromethane	(2)	6.971	113	282558	48.039
53) 1,1,1-Trichloroethane	(2)	6.977	97	7890	1.036
57)$1,2-Dichloroethane-d4	(2)	7.434	102	72837	50.680
66)*Fluorobenzene	(2)	7.866	96	1193261	50.000
71) Trichloroethene	(2)	8.340	95	3178	0.572
83)$Toluene-d8	(3)	9.867	98	1221504	49.229
100)*Chlorobenzene-d5	(3)	11.309	117	966774	50.000
114)$4-Bromofluorobenzene	(3)	12.307	95	448222	47.393
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	527613	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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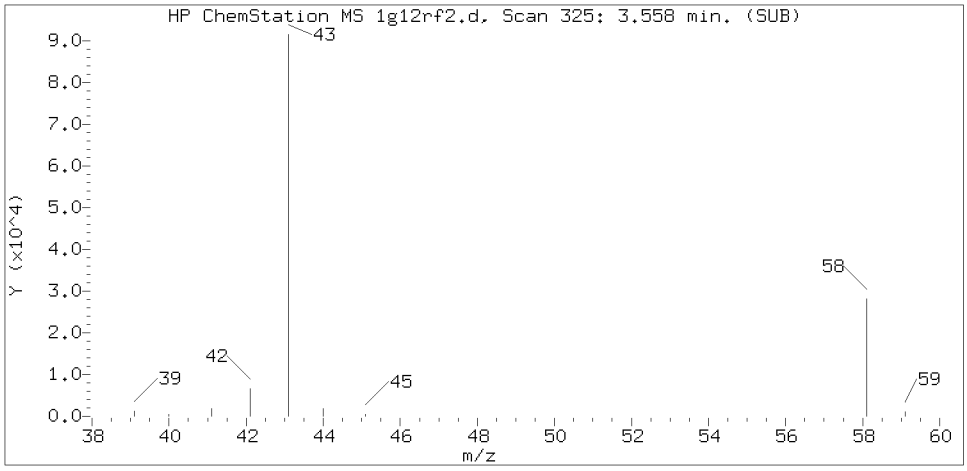
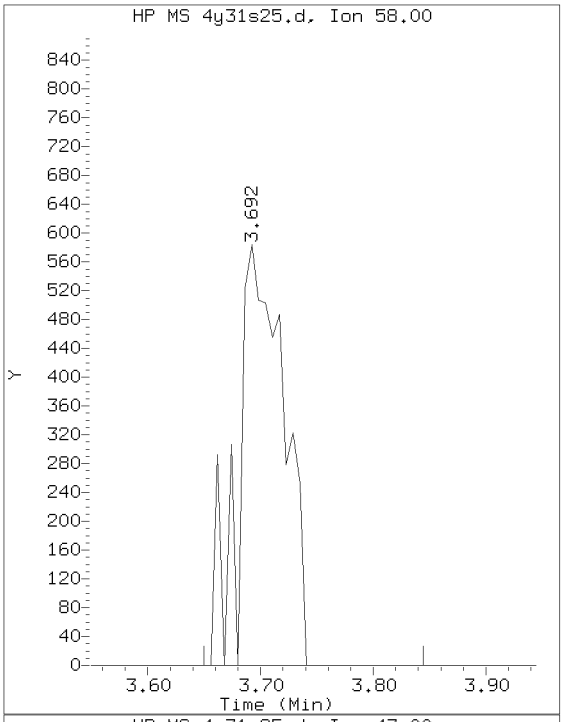
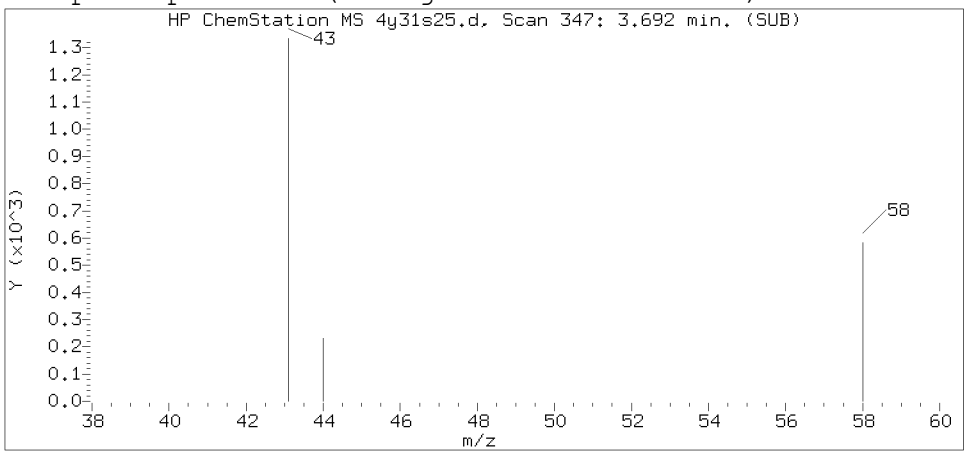
on 05/31/2019 at 22:15.
Target 3.5 esignature user ID: dvv10203

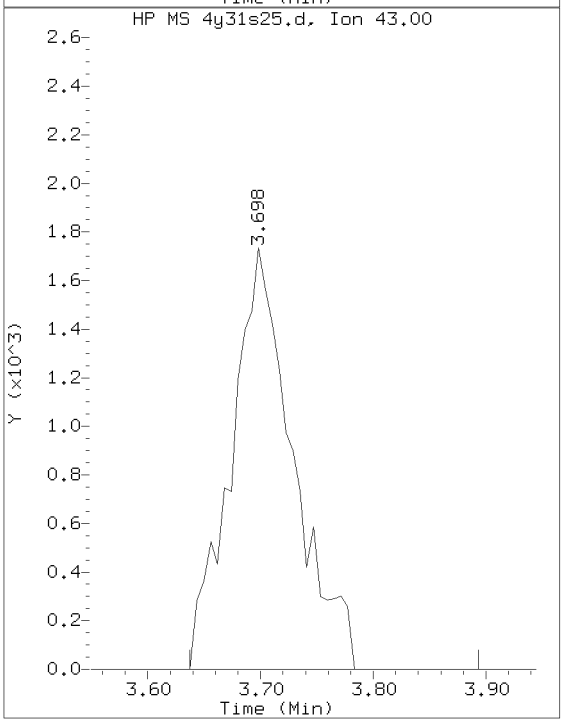
Reference Standard Spectrum for Acetone



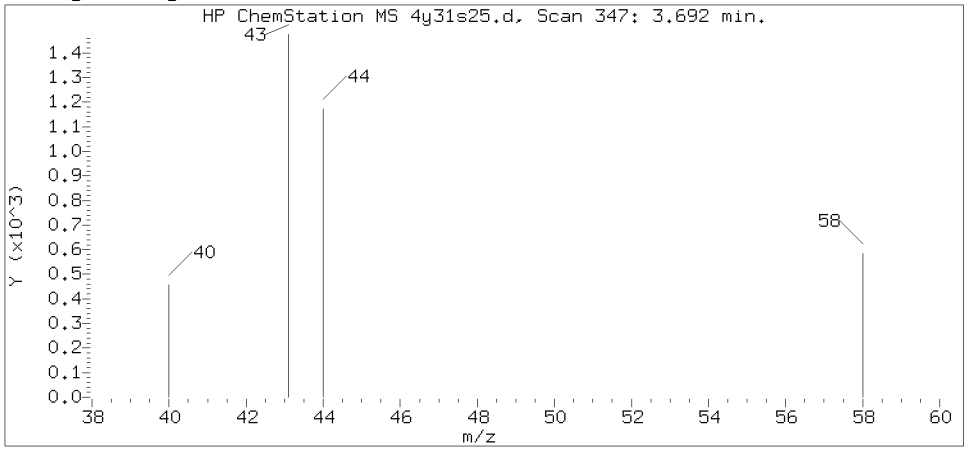


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP23297.i/19may31a.b/4y31s25.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 18:16 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 22:11 dvv10203

Sample Name: 94J09 Lab Sample ID: 1063773

Compound Number	: 18
Compound Name	: Acetone
Scan Number	: 347
Retention Time (minutes)	: 3.692
Relative Retention Time	: 0.00139
Quant Ion	: 58.00
Area (flag)	: 1647
On-Column Amount (ng)	: 1.3865

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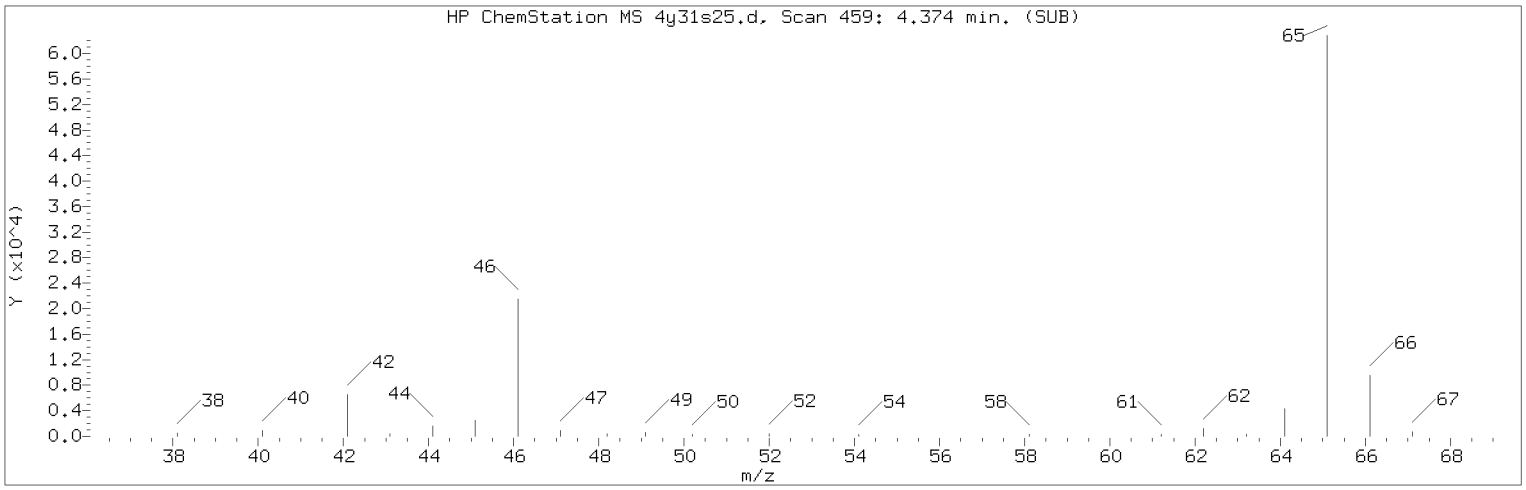
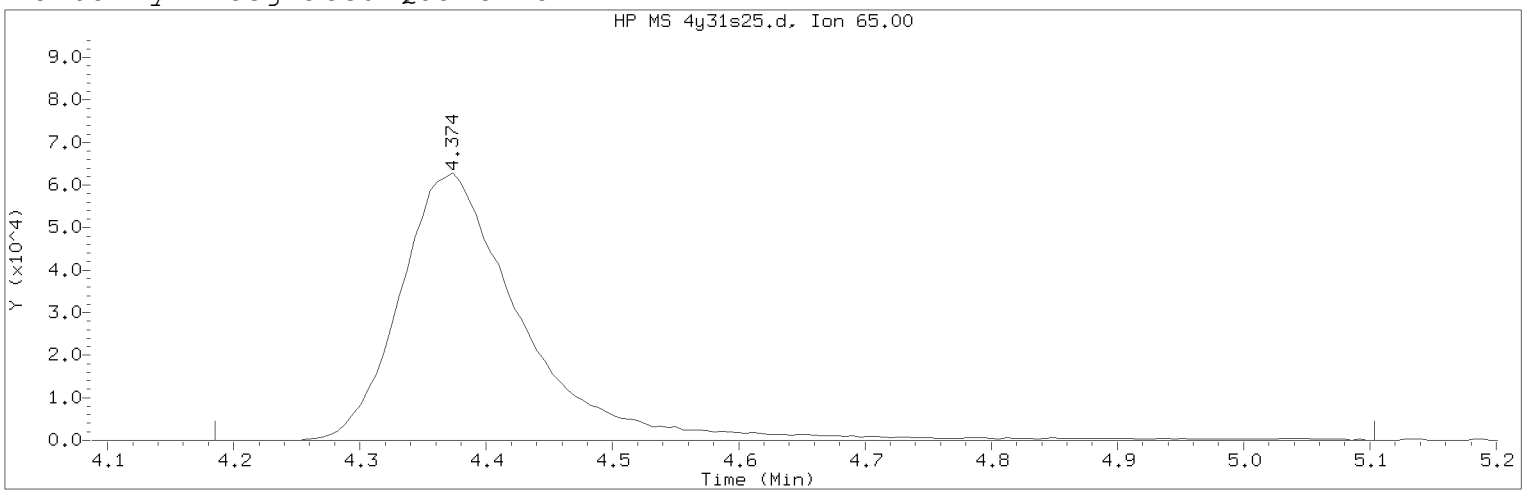
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31s25.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 18:16 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 22:11 dvv10203

Sample Name: 94J09 Lab Sample ID: 1063773

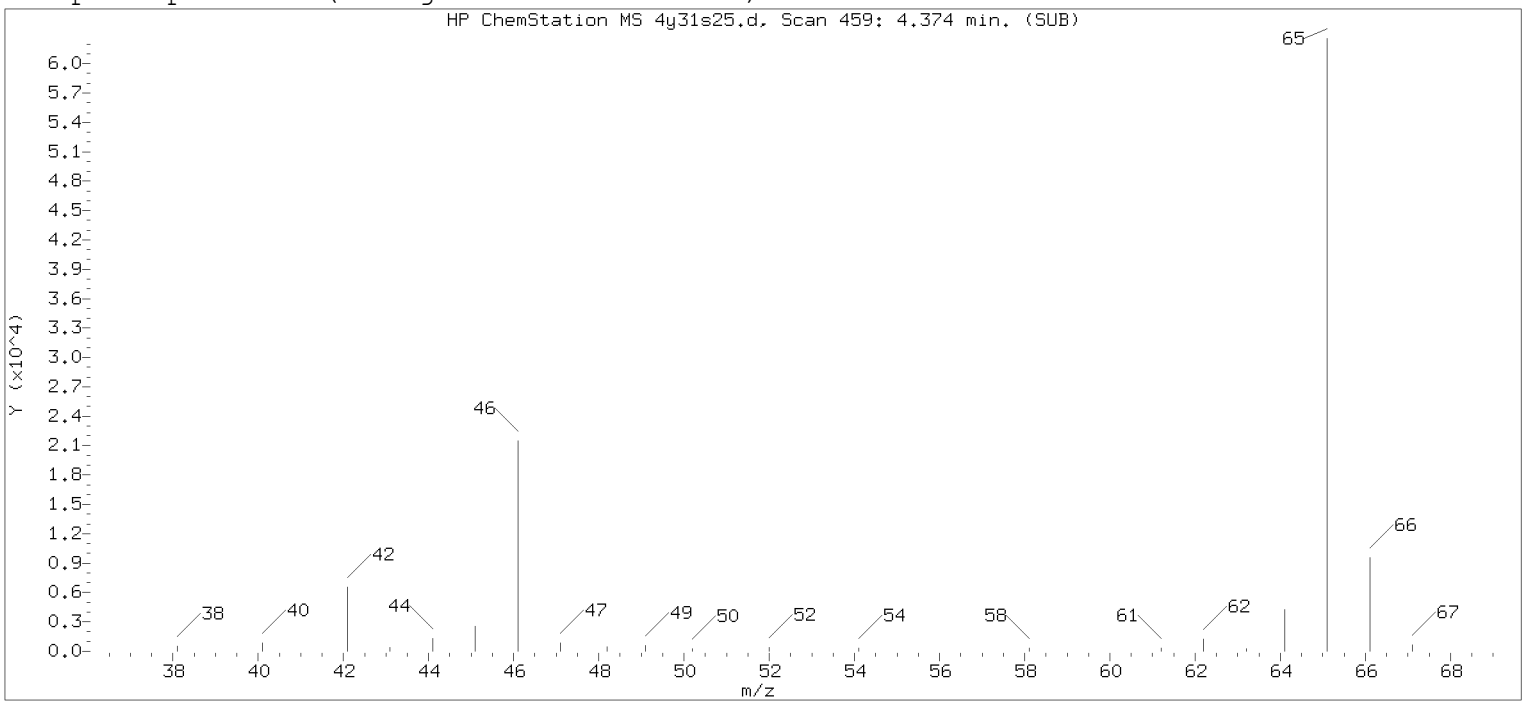
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 459
Retention Time (minutes): 4.374
Quant Ion : 65.00
Area (flag) : 426647M
On-Column Amount (ng) : 250.0000
Integration start scan : 427 Integration stop scan: 578
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

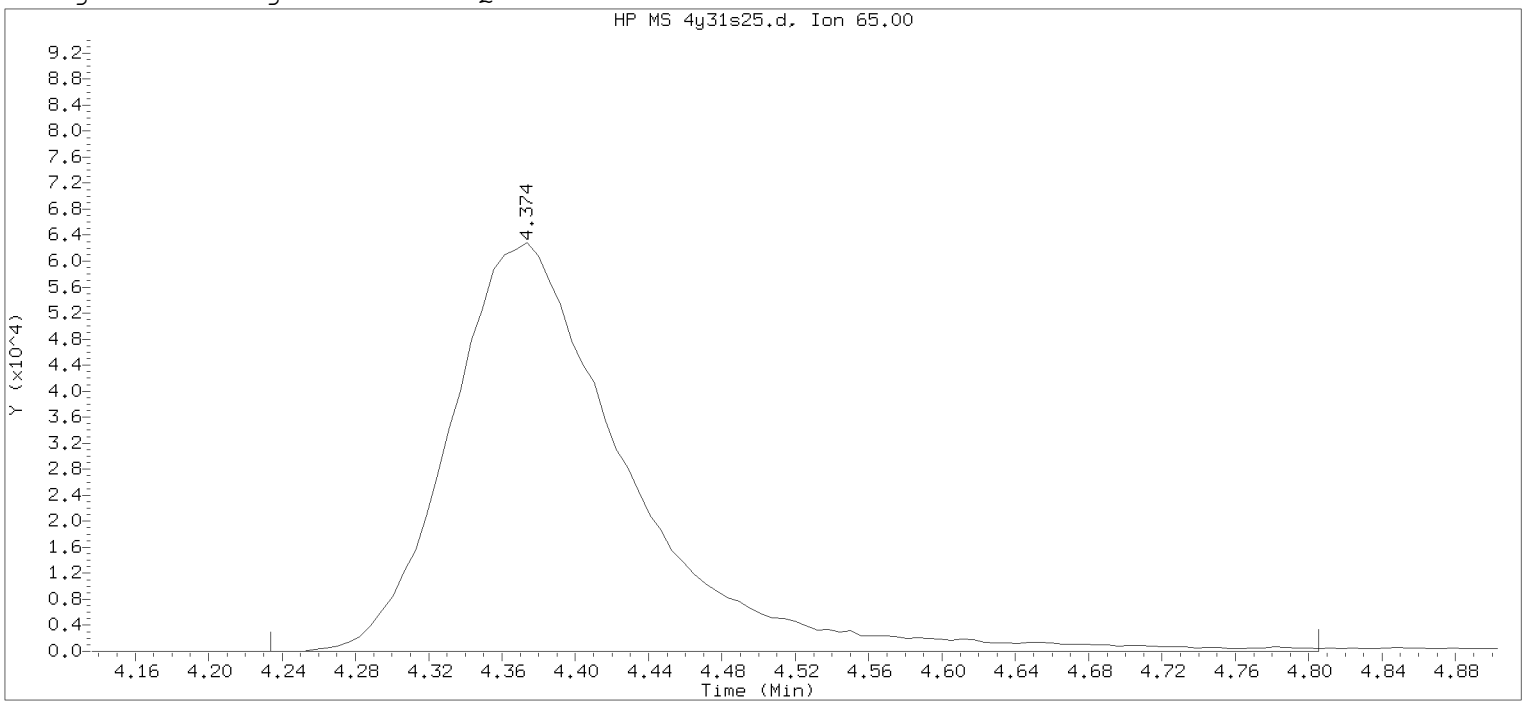
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/31/2019 at 22:15.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:42.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31s25.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 18:16 Analyst ID: amd00492

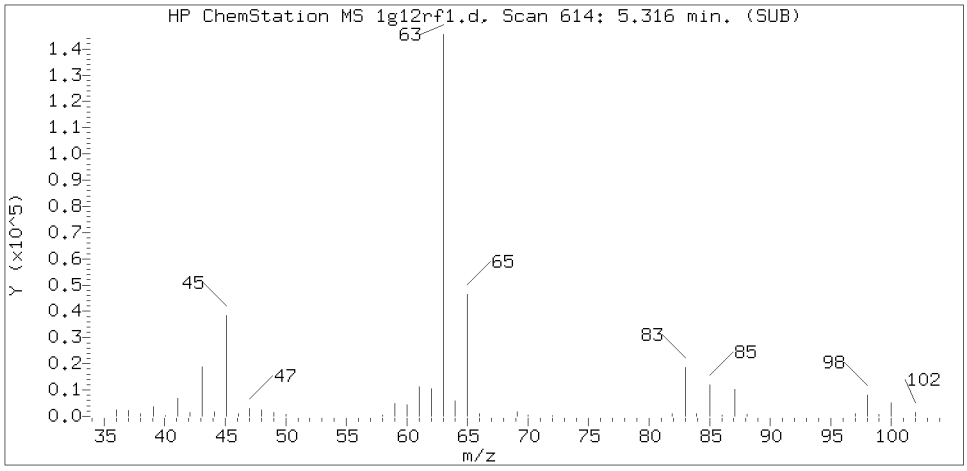
Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 18:34 Automation

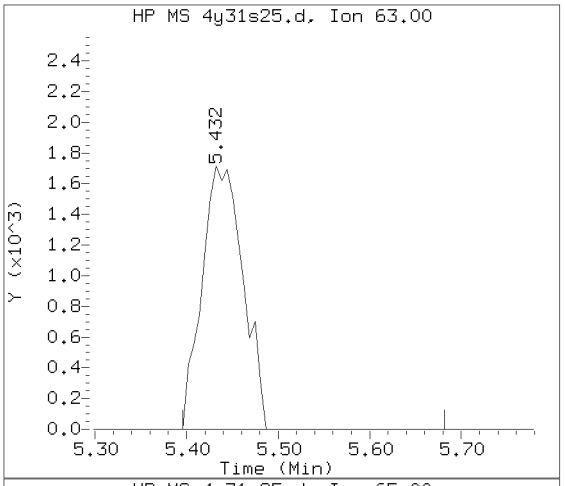
Sample Name: 94J09 Lab Sample ID: 1063773

Compound Number	: 29		
Compound Name	: t-Butyl alcohol-d10		
Scan Number	: 459		
Retention Time (minutes)	: 4.374		
Quant Ion	: 65.00		
Area	: 420166		
On-column Amount (ng)	: 250.0000		
Integration start scan	: 435	Integration stop scan:	529
Y at integration start	: 0	Y at integration end:	0

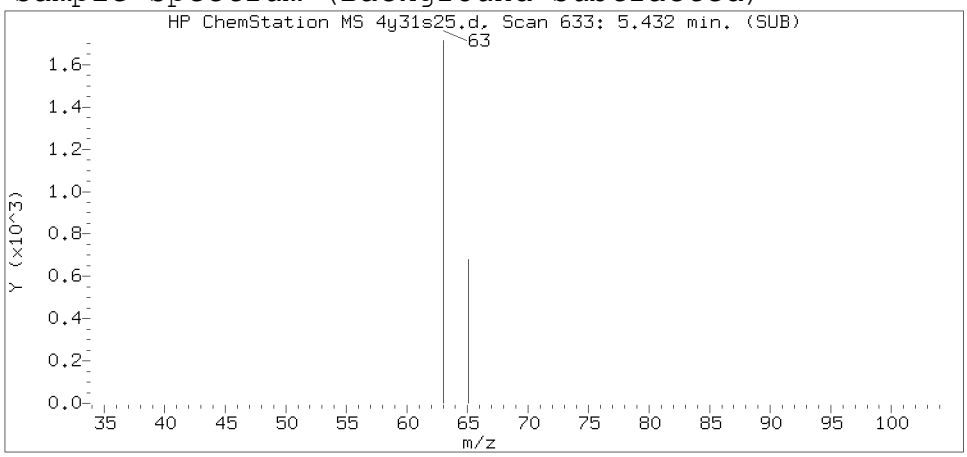
Digitally signed by Don V. Viray on 05/31/2019 at 22:15.
Target 3.5 esignature user id: dviray

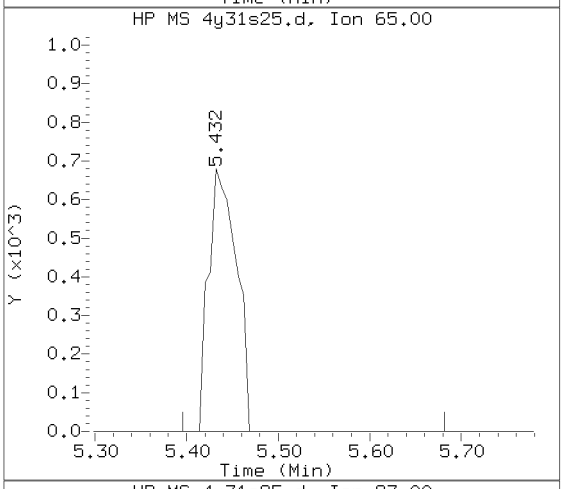
Reference Standard Spectrum for 1,1-Dichloroethane



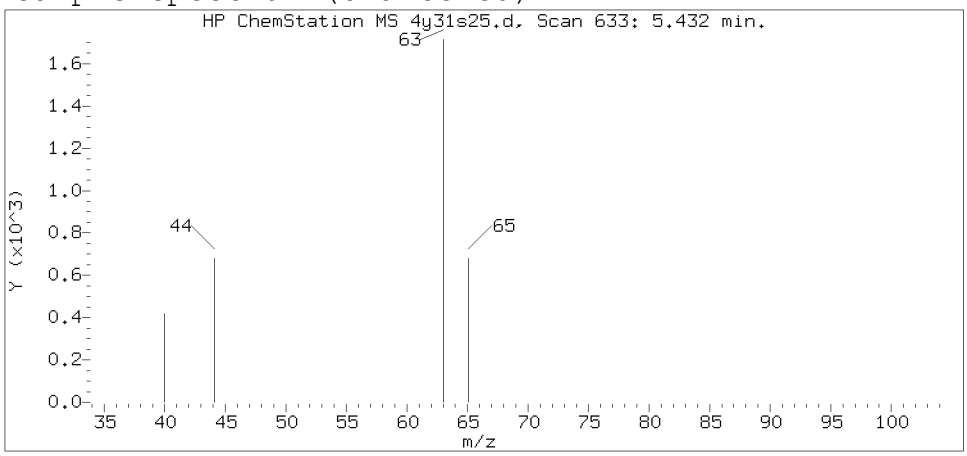


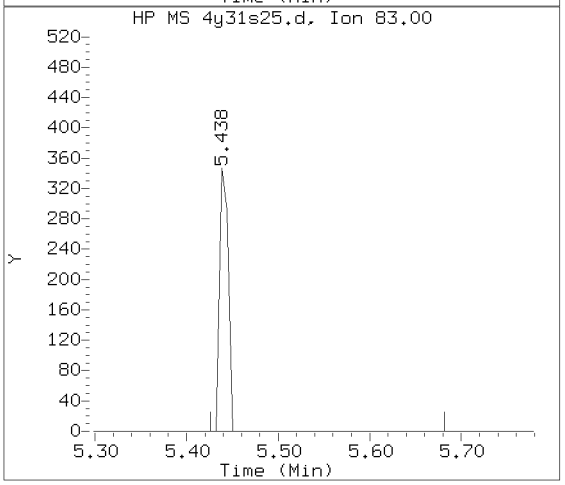
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may31a.b/4y31s25.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 18:16 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 22:11 dvv10203

Sample Name: 94J09 Lab Sample ID: 1063773

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 633
Retention Time (minutes): 5.432
Relative Retention Time : 0.00077
Quant Ion : 63.00
Area (flag) : 5377
On-Column Amount (ng) : 0.5818

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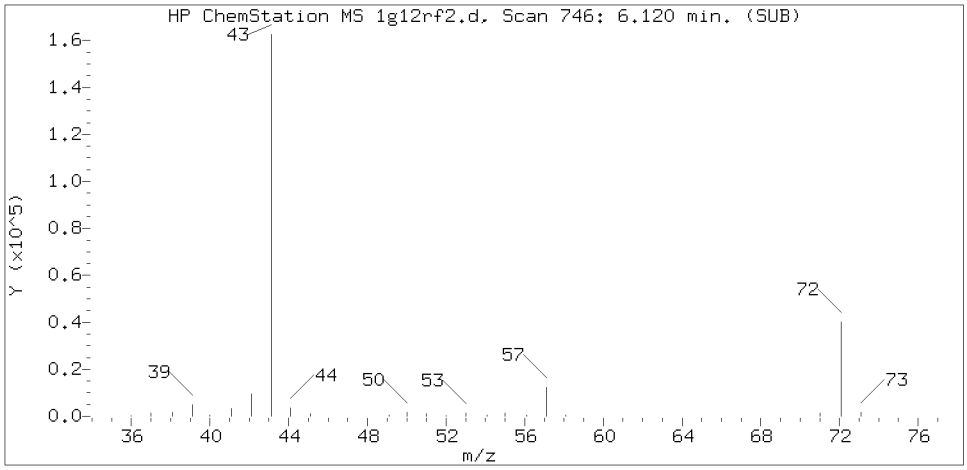
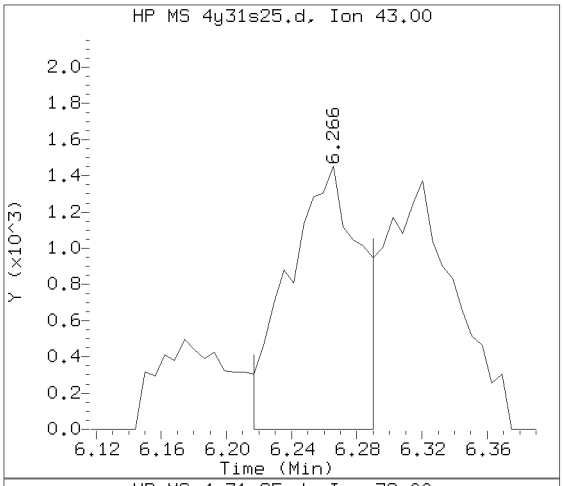
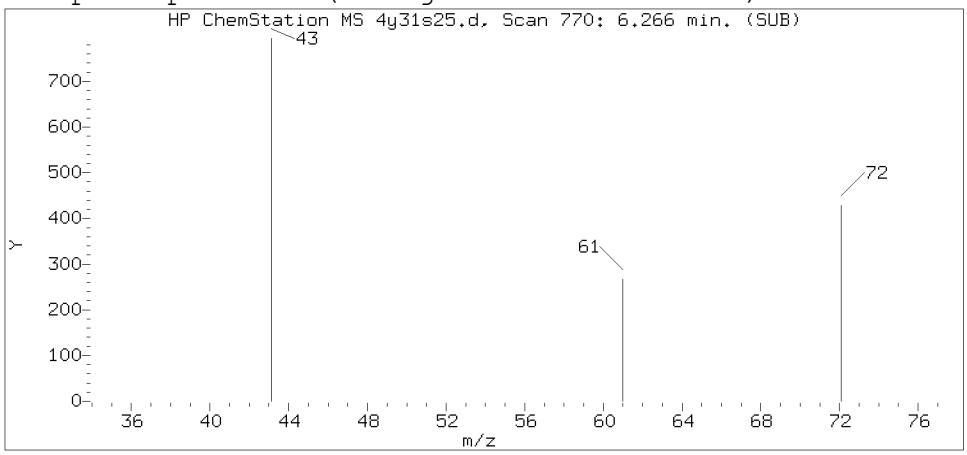
Target 3.5 esignature user ID: dvv10203

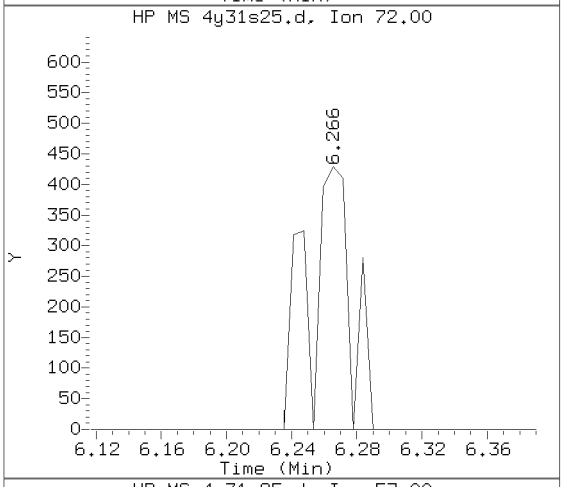
Reference Standard Spectrum for 2-Butanone



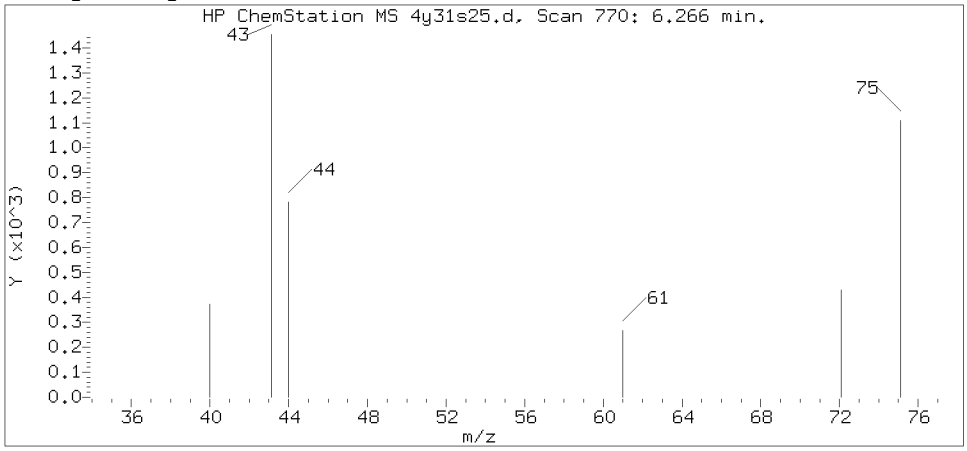


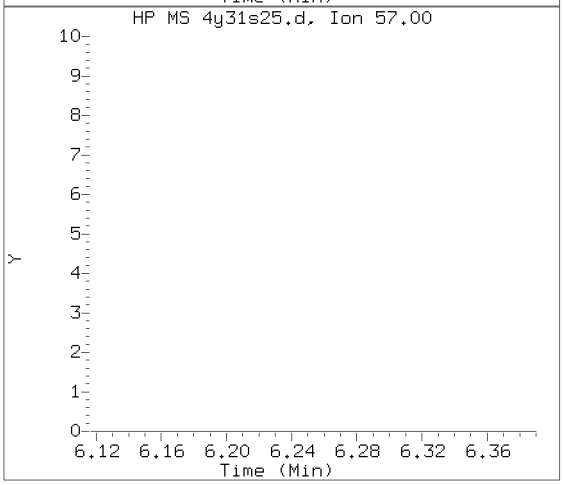
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may31a.b/4y31s25.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 18:16 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 22:11 dvv10203

Sample Name: 94J09 Lab Sample ID: 1063773

Compound Number : 44
Compound Name : 2-Butanone
Scan Number : 770
Retention Time (minutes): 6.266
Relative Retention Time :-0.00155
Quant Ion : 43.00
Area (flag) : 4321
On-Column Amount (ng) : 0.6131

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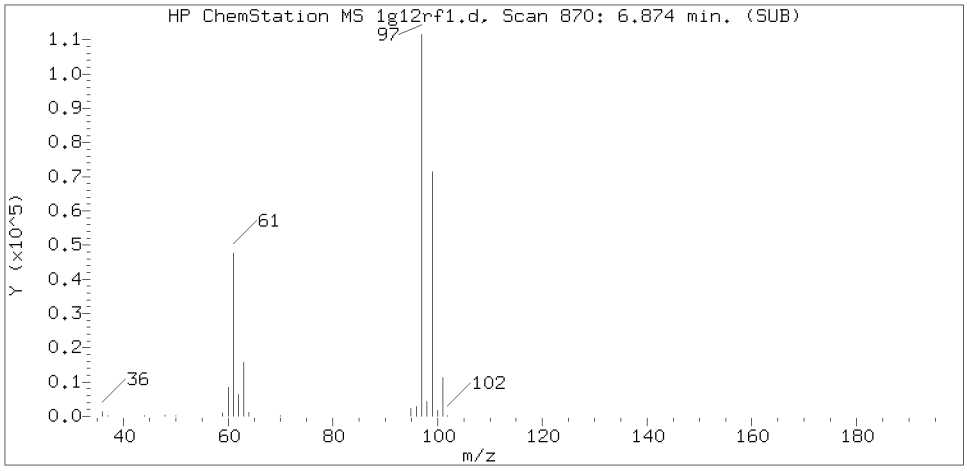
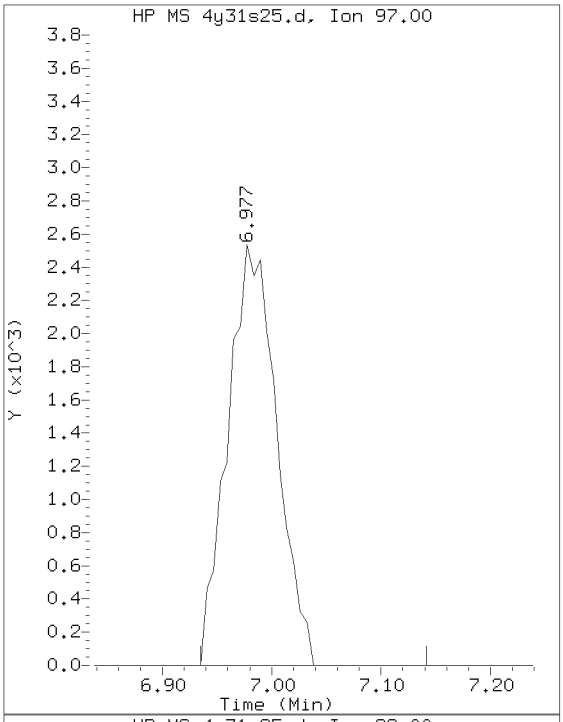
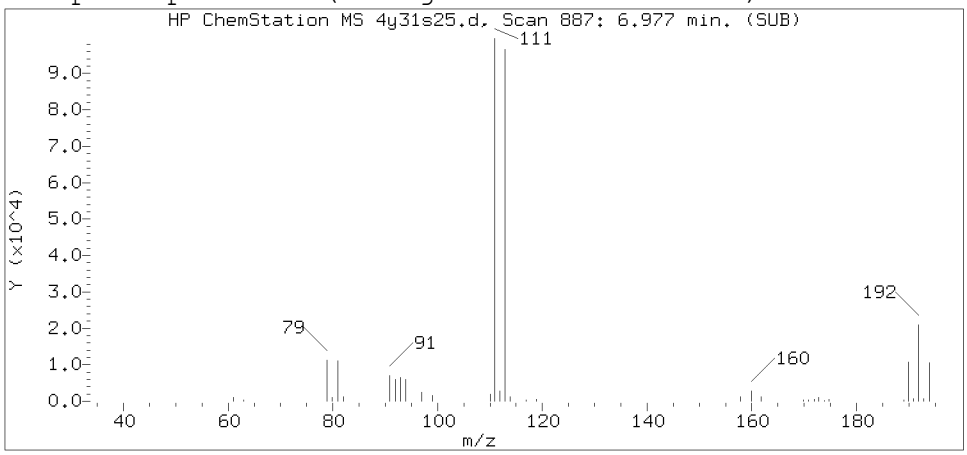
Target 3.5 esignature user ID: dvv10203

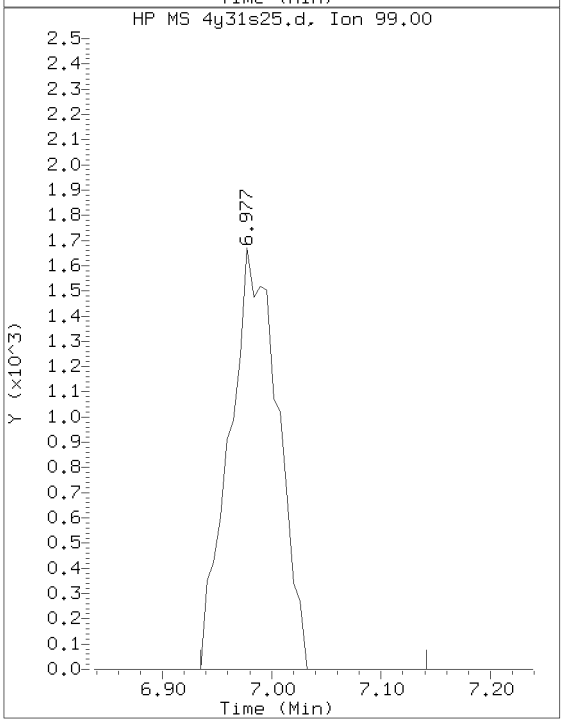
Reference Standard Spectrum for 1,1,1-Trichloroethane



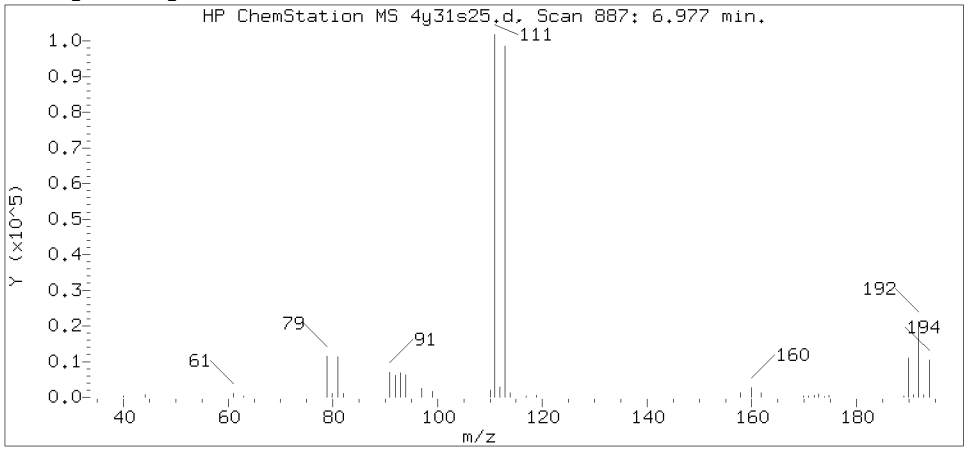


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP23297.i/19may31a.b/4y31s25.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 18:16 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 22:11 dvv10203

Sample Name: 94J09 Lab Sample ID: 1063773

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 887
Retention Time (minutes)	: 6.977
Relative Retention Time	: 0.00077
Quant Ion	: 97.00
Area (flag)	: 7890
On-Column Amount (ng)	: 1.0355

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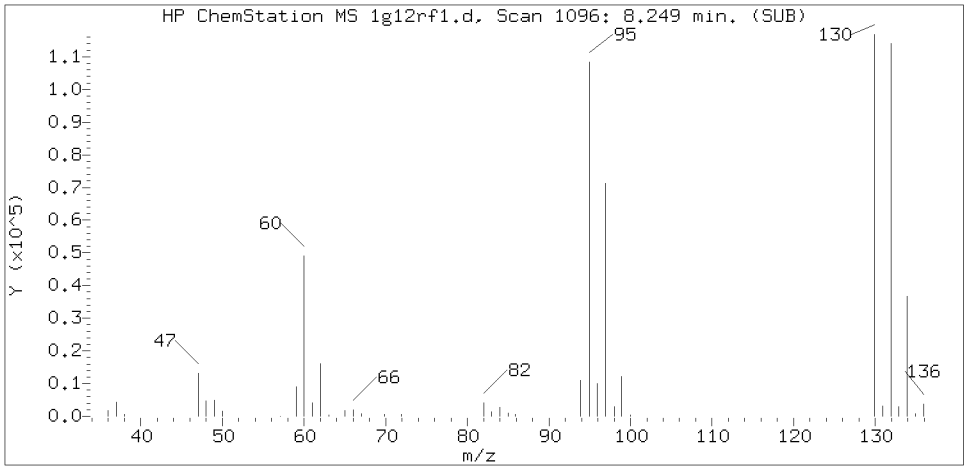
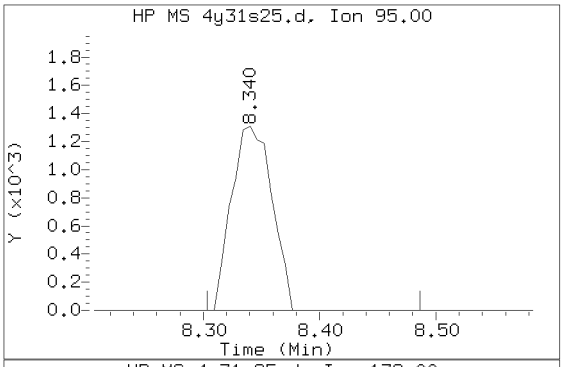
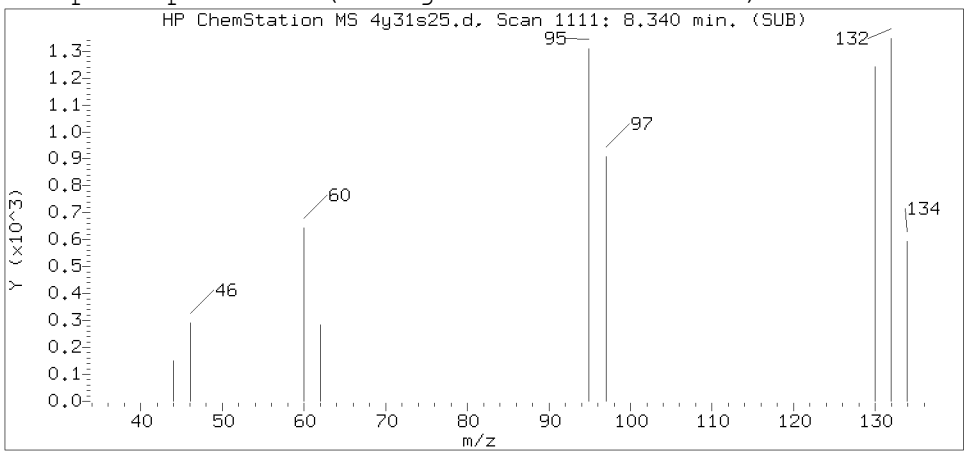
Target 3.5 esignature user ID: dvv10203

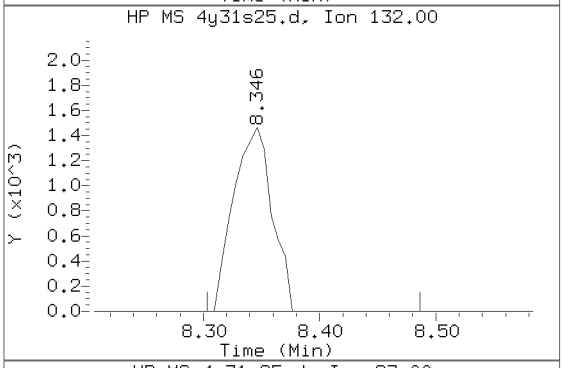
Reference Standard Spectrum for Trichloroethene

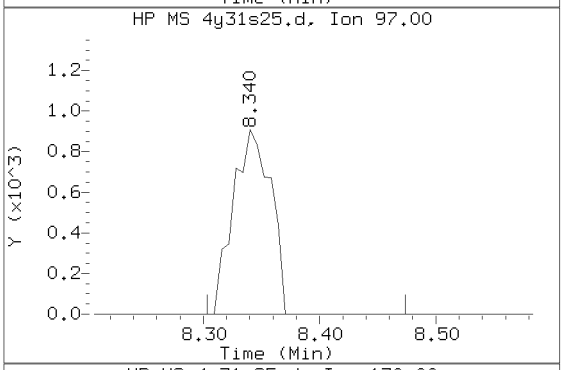




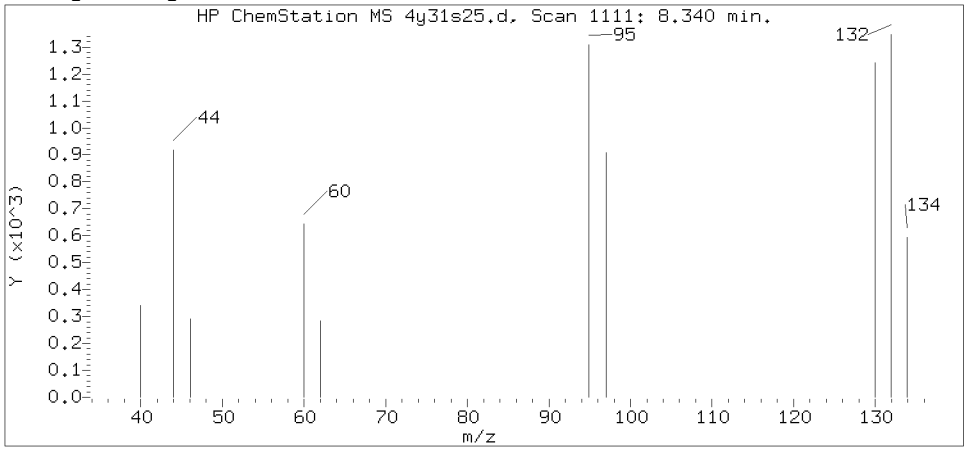
Sample Spectrum (Background Subtracted)

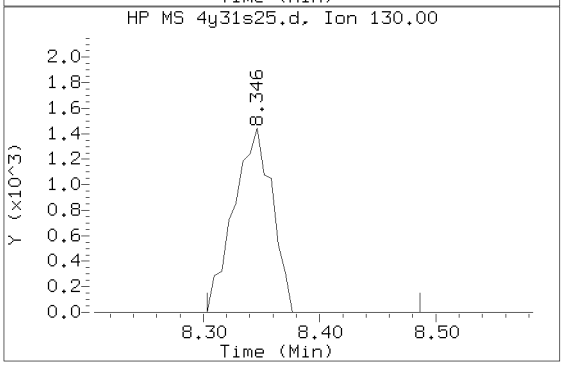






Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may31a.b/4y31s25.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 18:16 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 31-MAY-2019 09:29
Date, time and analyst ID of latest file update: 31-May-2019 22:11 dvv10203

Sample Name: 94J09 Lab Sample ID: 1063773

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 1111
Retention Time (minutes): 8.340
Relative Retention Time : 0.00000
Quant Ion : 95.00
Area (flag) : 3178
On-Column Amount (ng) : 0.5723

Digitally signed by Don V. Viray on 05/31/2019 at 22:15.
Target 3.5 esignature user ID: dvv10203

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP23297 **HP #04**

Data Directory Path is - D:\DATA\19APR23I\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
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JML01693	4A23X01.D	BLANK	04/23/2019	14:34		
JML01693	4A23I01.D	VSTD001	04/23/2019	14:57		
JML01693	4A23I02.D	VSTD004	04/23/2019	15:20		
JML01693	4A23I03.D	VSTD010	04/23/2019	15:43		
JML01693	4A23I04.D	VSTD020	04/23/2019	16:06		
JML01693	4A23I05.D	VSTD050	04/23/2019	16:28		
JML01693	4A23I06.D	VSTD100	04/23/2019	16:51		
JML01693	4A23I07.D	VSTD300	04/23/2019	17:14		
JML01693	4A23X02.D	BLANK	04/23/2019	17:37		
JML01693	4A23V01.D	ICV401	04/23/2019	18:00		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP23297 **HP #04**

Data Directory Path is - D:\DATA\19MAY30B\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
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DVV10203	4Y30X41.D	BLK	05/30/2019	18:49	4191502AA	
DVV10203	4Y30C05.D	VSTD050	05/30/2019	19:12	4191502AA	
DVV10203	4Y30S41.D	LCS440	05/30/2019	19:34	4191502AA	
DVV10203	4Y30M41.D	MDL440	05/30/2019	19:57	4191502AA	
DVV10203	4Y30B41.D	VBLK440	05/30/2019	20:20	4191502AA	
DVV10203	4Y30S42.D	1064221	05/30/2019	20:46	4191502AA	
DVV10203	4Y30S43.D	1065034	05/30/2019	21:09	4191502AA	
DVV10203	4Y30S44.D	1063765	05/30/2019	21:32	4191502AA	
DVV10203	4Y30S45.D	1065030	05/30/2019	21:54	4191502AA	
DVV10203	4Y30S46.D	1065031MS	05/30/2019	22:17	4191502AA	
DVV10203	4Y30X42.D	BLK	05/30/2019	23:03	4191502AA	
DVV10203	4Y30S48.D	1068734	05/30/2019	23:25	4191502AA	
DVV10203	4Y30S49.D	1068729	05/30/2019	23:48	4191502AA	
DVV10203	4Y30S50.D	1068730	05/31/2019	00:11	4191502AA	
DVV10203	4Y30S51.D	1068731	05/31/2019	00:34	4191502AA	
DVV10203	4Y30S52.D	1068732	05/31/2019	00:57	4191502AA	
DVV10203	4Y30S53.D	1068733	05/31/2019	01:19	4191502AA	
DVV10203	4Y30S54.D	1068728	05/31/2019	01:42	4191502AA	5
DVV10203	4Y30S55.D	1068728DL	05/31/2019	02:05	4191502AA	50
DVV10203	4Y30S56.D	1065027	05/31/2019	02:28	4191502AA	
DVV10203	4Y30S57.D	1065028	05/31/2019	02:51	4191502AA	
DVV10203	4Y30S58.D	1065029	05/31/2019	03:14	4191502AA	
DVV10203	4Y30S59.D	1065033	05/31/2019	03:36	4191502AA	
DVV10203	4Y30S60.D	1063766	05/31/2019	03:59	4191502AA	
DVV10203	4Y30S61.D	1063767	05/31/2019	04:22	4191502AA	
DVV10203	4Y30S62.D	1063768	05/31/2019	04:45	4191502AA	
DVV10203	4Y30S63.D	1063769	05/31/2019	05:08	4191502AA	
DVV10203	4Y30S64.D	1063770	05/31/2019	05:31	4191502AA	
DVV10203	4Y30S65.D	1068733RE	05/31/2019	05:53	4191502AA	

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP23297 **HP #04**

Data Directory Path is - d:\DATA\19may31a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
amd00492	4Y31T01.D	50NGBFB	05/31/2019	06:45	4191511AA	
amd00492	4Y31xx1.D	blk	05/31/2019	06:55		
amd00492	4Y31C01.D	VSTD050	05/31/2019	07:17	4191511AA	
amd00492	4Y31L01.D	LCS441	05/31/2019	07:40	4191511AA	
amd00492	4Y31L02.D	LCD441	05/31/2019	08:03	4191511AA	
amd00492	4Y31M01.D	VSTD0.5	05/31/2019	08:26	4191511AA	
amd00492	4Y31B01.D	VBLK441	05/31/2019	08:48	4191511AA	
amd00492	4Y31S01.D	1063447	05/31/2019	09:11	4191511AA	
amd00492	4Y31S02.D	1064027	05/31/2019	09:34	4191511AA	
amd00492	4Y31S03.D	1064019	05/31/2019	09:57	4191511AA	
amd00492	4Y31S04.D	1064020MS	05/31/2019	10:19	4191511AA	
amd00492	4Y31S05.D	1064021MSD	05/31/2019	10:42	4191511AA	
amd00492	4Y31S06.D	1064019DL	05/31/2019	11:05	4191511AA	10
amd00492	4Y31S07.D	1063963	05/31/2019	11:27	4191511AA	
amd00492	4Y31S08.D	1063964	05/31/2019	11:50	4191511AA	
amd00492	4Y31S09.D	1063965	05/31/2019	12:13	4191511AA	
amd00492	4Y31S10.D	1063966	05/31/2019	12:35	4191511AA	
amd00492	4Y31S11.D	1063967	05/31/2019	12:58	4191511AA	
amd00492	4Y31S12.D	1063968	05/31/2019	13:21	4191511AA	
amd00492	4Y31S13.D	1064010	05/31/2019	13:43	4191511AA	
amd00492	4Y31S14.D	1064023	05/31/2019	14:06	4191511AA	2
amd00492	4Y31S15.D	1064023DL	05/31/2019	14:29	4191511AA	20
amd00492	4Y31S16.D	1064025	05/31/2019	14:52	4191511AA	
amd00492	4Y31S17.D	1064030	05/31/2019	15:14	4191511AA	5
amd00492	4Y31S18.D	1064033	05/31/2019	15:37	4191511AA	
amd00492	4Y31S19.D	1067163	05/31/2019	16:00	4191511AA	
amd00492	4Y31S20.D	1067164	05/31/2019	16:23	4191511AA	
amd00492	4Y31S21.D	1067165	05/31/2019	16:45	4191511AA	
amd00492	4Y31S22.D	1067167	05/31/2019	17:08	4191511AA	
amd00492	4Y31S23.D	1063771	05/31/2019	17:31	4191511AA	
amd00492	4Y31S24.D	1063772	05/31/2019	17:53	4191511AA	
amd00492	4Y31S25.D	1063773	05/31/2019	18:16	4191511AA	
amd00492	4Y31S26.D	1064083	05/31/2019	18:39	4191511AA	

Data File: /chem/HP23297.i/19apr23i.b/4a23t01.d

Date : 23-APR-2019 14:13

Client ID: bfb FEB05-19

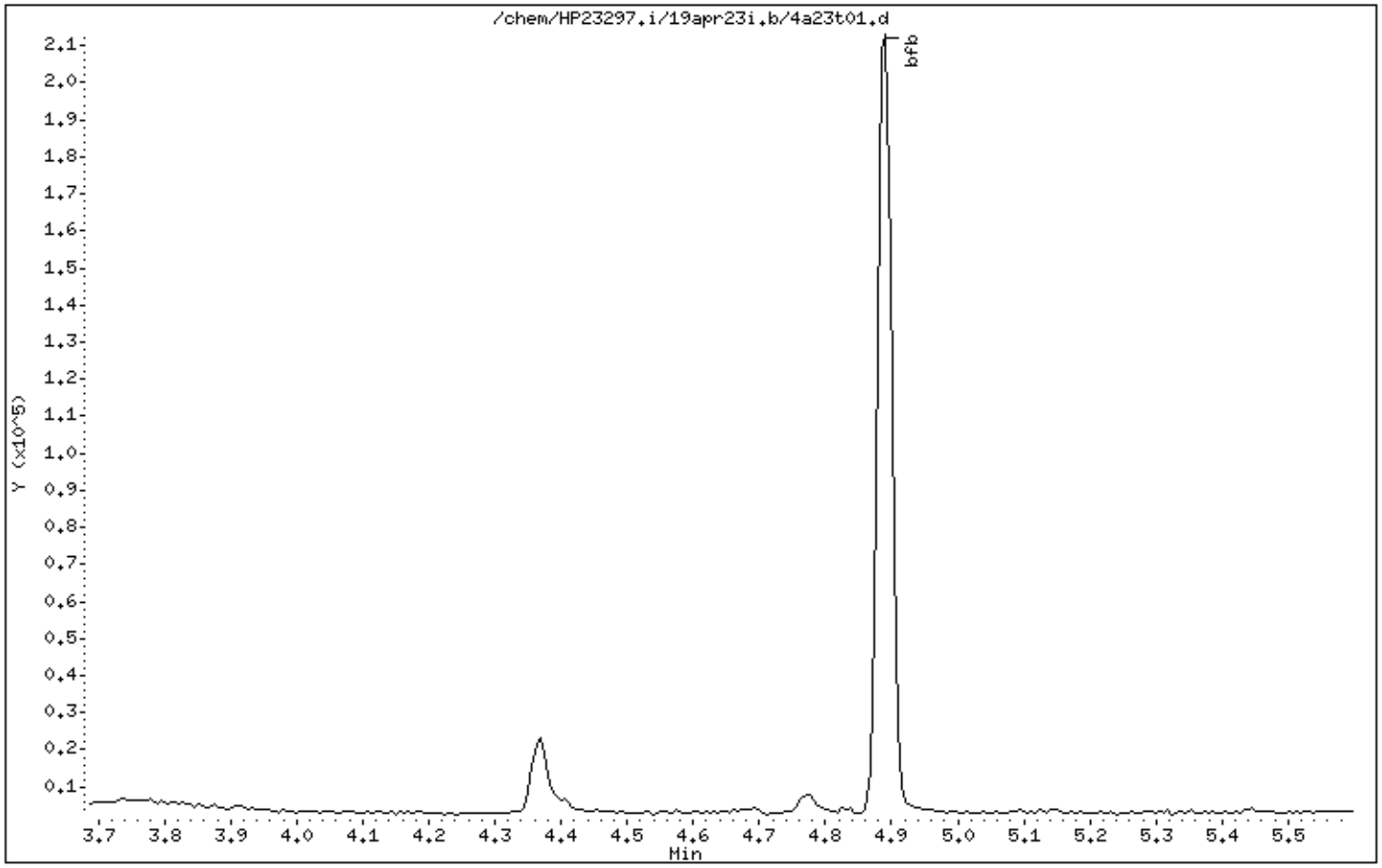
Instrument: HP23297.i

Sample Info: bfb FEB05-19;50NG BFB;1;3;;;;;;

Operator: JML01693

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Jason M. Long on 04/23/2019 at 14:18.
Target 3.5 esignature user ID: jml01693

Data File: /chem/HP23297.i/19apr23i.b/4a23t01.d

Date : 23-APR-2019 14:13

Client ID: bfb FEB05-19

Instrument: HP23297.i

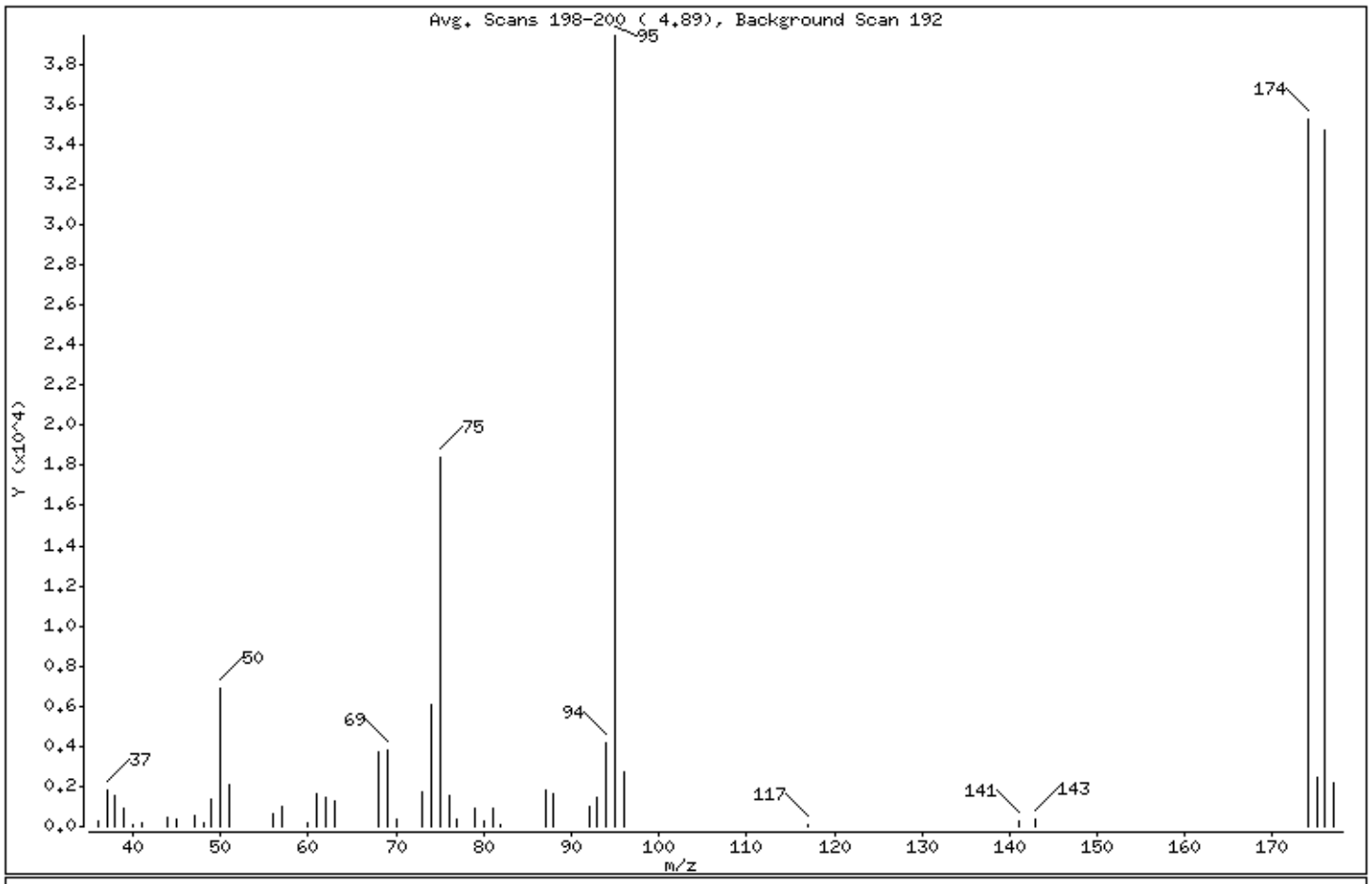
Sample Info: bfb FEB05-19;50NG BFB;1;3;;;;;;

Operator: JML01693

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.42
75	30.00 - 60.00% of mass 95	46.67
96	5.00 - 9.00% of mass 95	6.99
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	89.33
175	5.00 - 9.00% of mass 174	6.21 (6.95)
176	95.00 - 101.00% of mass 174	88.11 (98.63)
177	5.00 - 9.00% of mass 176	5.49 (6.23)

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Target 3.5 esignature user ID: jml01693

Data File: /chem/HP23297.i/19apr23i.b/4a23t01.d

Date : 23-APR-2019 14:13

Client ID: bfb FEB05-19

Instrument: HP23297.i

Sample Info: bfb FEB05-19;50NG BFB;1;3;;;;;;

Operator: JML01693

Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: 4a23t01.d
Spectrum: Avg. Scans 198-200 (4.89), Background Scan 192
Location of Maximum: 95.00
Number of points: 45

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	250	51.00	2127	75.00	18400	95.00	39432
37.00	1792	56.00	600	76.00	1586	96.00	2756
38.00	1571	57.00	960	77.00	352	117.00	91
39.00	862	60.00	214	79.00	900	141.00	248
40.00	49	61.00	1659	80.00	315	143.00	364
41.00	196	62.00	1489	81.00	918	174.00	35224
44.00	449	63.00	1237	82.00	124	175.00	2449
45.00	397	68.00	3678	87.00	1786	176.00	34744
47.00	515	69.00	3785	88.00	1643	177.00	2164
48.00	170	70.00	401	92.00	1017		
49.00	1378	73.00	1706	93.00	1453		
50.00	6870	74.00	6097	94.00	4156		

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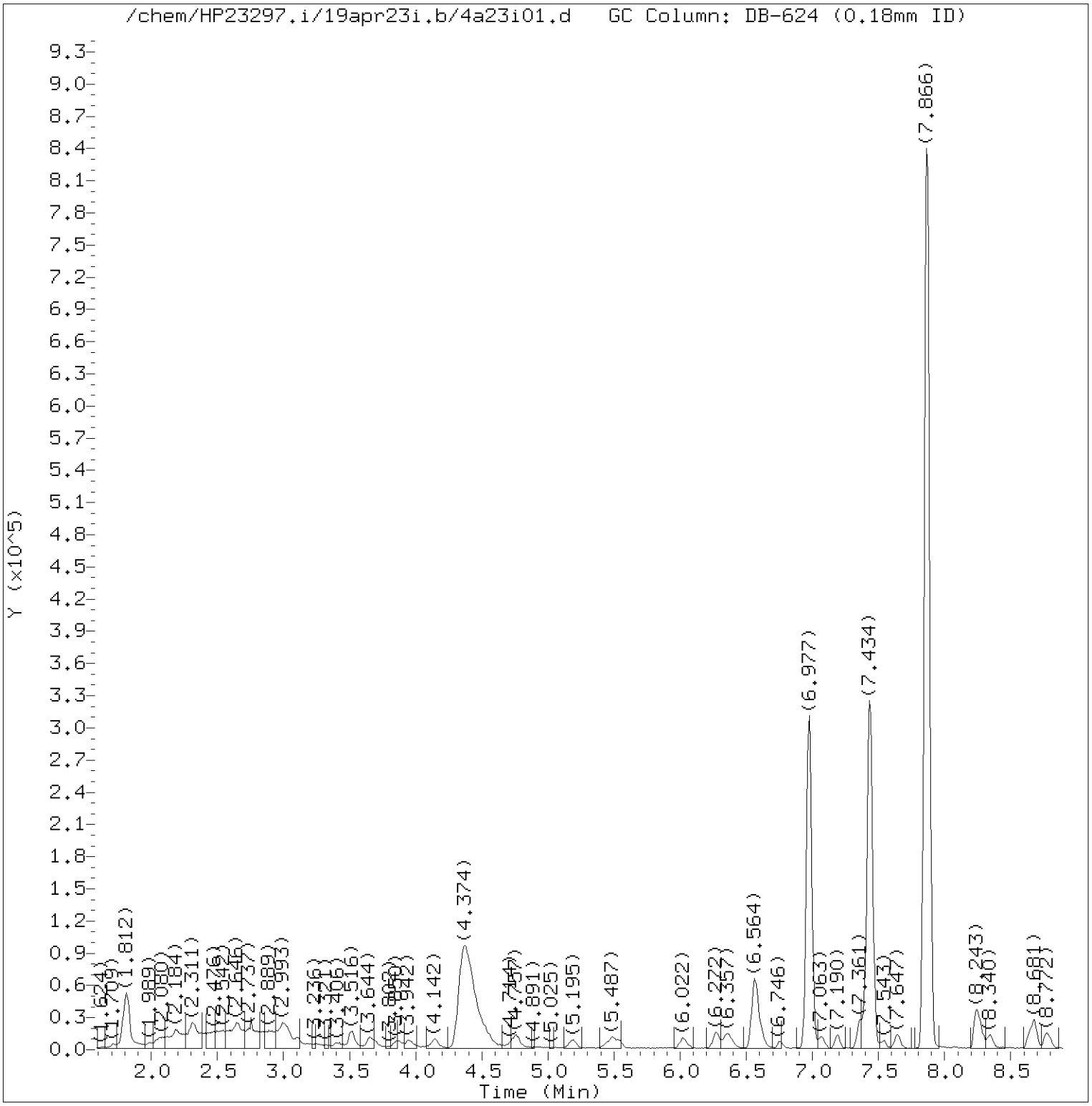
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

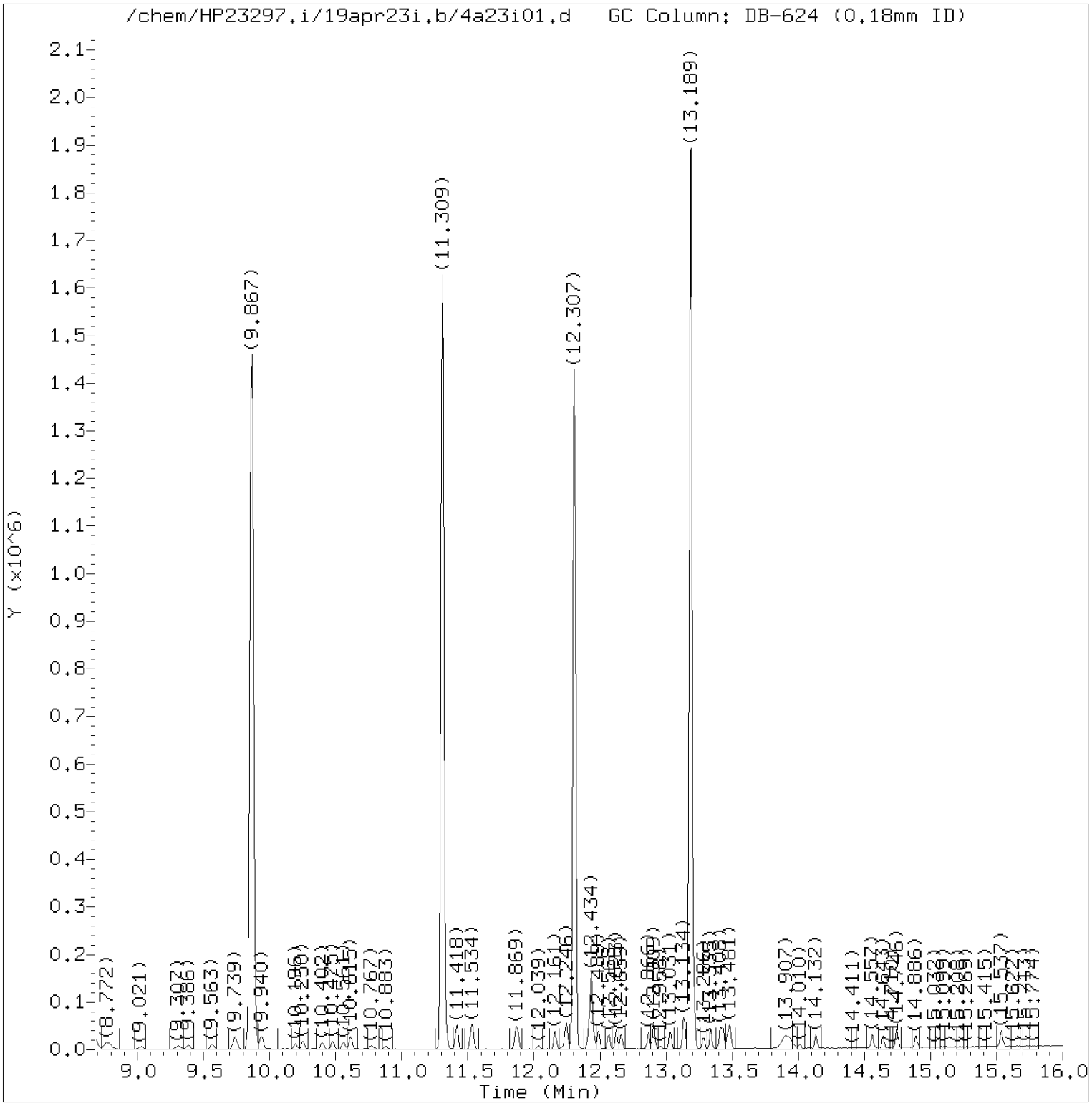
Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Jason M. Long
on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
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Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Jason M. Long
on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.983	85	7453	1.000
4) Chloromethane	(2)	2.190	50	8309	1.000
6) Vinyl Chloride	(2)	2.311	62	8064	1.000
5) 1,3-Butadiene	(2)	2.317	39	4546	1.000
8) Bromomethane	(2)	2.652	94	7033M	1.000
9) Chloroethane	(2)	2.749	64	4821	1.000
10) Dichlorofluoromethane	(2)	2.993	67	12456	1.000
12) Trichlorofluoromethane	(2)	3.047	101	8747	1.000
11) n-Pentane	(2)	3.108	43	7272M	1.000
13) Ethanol	(1)	3.218	45	9411	62.500
15) Freon 123a	(2)	3.406	67	5566	1.000
16) Acrolein	(1)	3.516	56	24572	10.000
17) 1,1-Dichloroethene	(2)	3.656	96	3386	1.000
17) 1,1-Dichloroethene	(2)	3.650	63	2033	1.000
19) Freon 113	(2)	3.680	101	3611	1.000
18) Acetone	(1)	3.710	58	2201	2.000
22) Methyl Iodide	(2)	3.850	142	6880	1.000
21) 2-Propanol	(1)	3.875	45	20840	20.000
23) Carbon Disulfide	(2)	3.948	76	12210	1.000
27) Methyl Acetate	(2)	4.142	43	9571M	1.000
25) Allyl Chloride	(2)	4.161	41	9944	1.000
28) Methylene Chloride	(2)	4.343	84	5060	1.000
29)*t-Butyl alcohol-d10	(1)	4.374	65	443119	250.000
30) t-Butyl alcohol	(1)	4.514	59	34580M	20.000
31) Acrylonitrile	(2)	4.708	53	4035	1.000
33) Methyl Tertiary Butyl Ether	(2)	4.757	73	14027	1.000
32) trans-1,2-Dichloroethene	(2)	4.763	96	4107	1.000
34) n-Hexane	(2)	5.183	57	6748	1.000
36) 1,1-Dichloroethane	(2)	5.438	63	8005	1.000
38) di-Isopropyl ether	(2)	5.493	45	16888	1.000
39) 2-Chloro-1,3-butadiene	(2)	5.542	53	6733	1.000
40) Ethyl t-butyl ether	(2)	6.016	59	14903	1.000
43) 1,2-Dichloroethene (Total)	(2)		96	8967	2.000
44) 2-Butanone	(2)	6.260	43	14345	2.000
42) cis-1,2-Dichloroethene	(2)	6.272	96	4860	1.000
45) 2,2-Dichloropropane	(2)	6.290	77	6004	1.000
47) Propionitrile	(1)	6.357	54	34552	20.000
48) Methacrylonitrile	(2)	6.558	67	38689	10.000

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.606	128	2682	1.000
50) Tetrahydrofuran	(1)	6.631	71	3503	2.000
51) Chloroform	(2)	6.764	83	8417	1.000
52)$Dibromofluoromethane	(2)	6.977	113	279337	50.000
52)$Dibromofluoromethane	(2)	6.977	111	285753	50.000
53) 1,1,1-Trichloroethane	(2)	6.977	97	6535	1.000
54) Cyclohexane	(2)	7.069	56	8489	1.000
54) Cyclohexane	(2)	7.069	84	6556	1.000
54) Cyclohexane	(2)	7.056	69	2368	1.000
56) Carbon Tetrachloride	(2)	7.184	117	5428	1.000
55) 1,1-Dichloropropene	(2)	7.190	75	6251	1.000
58) Isobutyl Alcohol	(1)	7.373	41	30183	50.000
57)$1,2-Dichloroethane-d4	(2)	7.434	102	67496	50.000
57)$1,2-Dichloroethane-d4	(2)	7.434	65	333102	50.000
57)$1,2-Dichloroethane-d4	(2)	7.434	104	42429	50.000
60) Benzene	(2)	7.464	78	19770	1.000
61) 1,2-Dichloroethane	(2)	7.543	62	7834	1.000
61) 1,2-Dichloroethane	(2)	7.531	98	286	1.000
65) t-Amyl methyl ether	(2)	7.640	73	15255	1.000
67) n-Heptane	(2)	7.866	43	8911	1.000
66)*Fluorobenzene	(2)	7.866	96	1140514	50.000
69) n-Butanol	(1)	8.243	56	44602	100.000
71) Trichloroethene	(2)	8.334	95	4652	1.000
72) Methylcyclohexane	(2)	8.644	83	8286	1.000
72) Methylcyclohexane	(2)	8.644	98	3592	1.000
73) 1,2-Dichloropropane	(2)	8.681	63	5058	1.000
76) Methyl Methacrylate	(2)	8.766	69	5953	1.000
74) Dibromomethane	(2)	8.790	93	3187	1.000
75) 1,4-Dioxane	(1)	8.802	88	5064	50.000
78) Bromodichloromethane	(2)	9.034	83	5810	1.000
79) 2-Nitropropane	(2)	9.307	41	6136	2.000
80) 2-Chloroethyl Vinyl Ether	(2)	9.386	63	4695	1.000
81) cis-1,3-Dichloropropene	(2)	9.569	75	7590	1.000
82) 4-Methyl-2-pentanone	(2)	9.739	43	23771	2.000
83)$Toluene-d8	(3)	9.867	98	1178775	50.000
83)$Toluene-d8	(3)	9.867	100	760681	50.000
88) Toluene	(3)	9.940	92	12751	1.000
90) 1,3-Dichloropropene (total)	(3)		100	14380	2.000

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$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.196	75	6790	1.000
91) Ethyl Methacrylate	(3)	10.250	69	9428	1.000
92) 1,1,2-Trichloroethane	(3)	10.396	97	5153	1.000
93) Tetrachloroethene	(3)	10.475	166	5236	1.000
94) 1,3-Dichloropropane	(3)	10.561	76	8405	1.000
96) 2-Hexanone	(3)	10.615	43	18874	2.000
97) Dibromochloromethane	(3)	10.774	129	4899	1.000
99) 1,2-Dibromoethane	(3)	10.883	107	5436	1.000
100)*Chlorobenzene-d5	(3)	11.309	117	904161	50.000
102) Chlorobenzene	(3)	11.333	112	13882	1.000
103) 1,1,1,2-Tetrachloroethane	(3)	11.412	131	4276	1.000
104) Ethylbenzene	(3)	11.418	91	23160	1.000
106) m+p-Xylene	(3)	11.528	106	18180	2.000
108) Xylene (Total)	(3)		106	27551	3.000
107) o-Xylene	(3)	11.862	106	9371	1.000
109) Styrene	(3)	11.881	104	14400	1.000
110) Bromoform	(3)	12.039	173	3626	1.000
111) Isopropylbenzene	(3)	12.161	105	23033	1.000
112) Cyclohexanone	(1)	12.246	55	22989M	50.000
114)$4-Bromofluorobenzene	(3)	12.307	95	438470	50.000
114)$4-Bromofluorobenzene	(3)	12.307	174	386155	50.000
116) 1,1,2,2-Tetrachloroethane	(4)	12.410	83	8602	1.000
115) Bromobenzene	(4)	12.422	156	6296	1.000
118) trans-1,4-Dichloro-2-butene	(4)	12.434	53	27412	10.000
117) 1,2,3-Trichloropropane	(4)	12.453	110	2663	1.000
119) n-Propylbenzene	(4)	12.489	91	27849	1.000
120) 2-Chlorotoluene	(4)	12.562	126	5746	1.000
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	19528	1.000
121) 4-Chlorotoluene	(4)	12.659	126	6053	1.000
124) tert-Butylbenzene	(4)	12.866	134	4048M	1.000
125) Pentachloroethane	(4)	12.903	167	3554	1.000
126) 1,2,4-Trimethylbenzene	(4)	12.909	105	20106	1.000
127) sec-Butylbenzene	(4)	13.031	105	24074	1.000
129) 1,3-Dichlorobenzene	(4)	13.134	146	12026	1.000
130) p-Isopropyltoluene	(4)	13.140	119	20931	1.000
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	489109	50.000
133) 1,4-Dichlorobenzene	(4)	13.201	146	12085	1.000
134) 1,2,3-Trimethylbenzene	(4)	13.213	105	22211	1.000

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on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

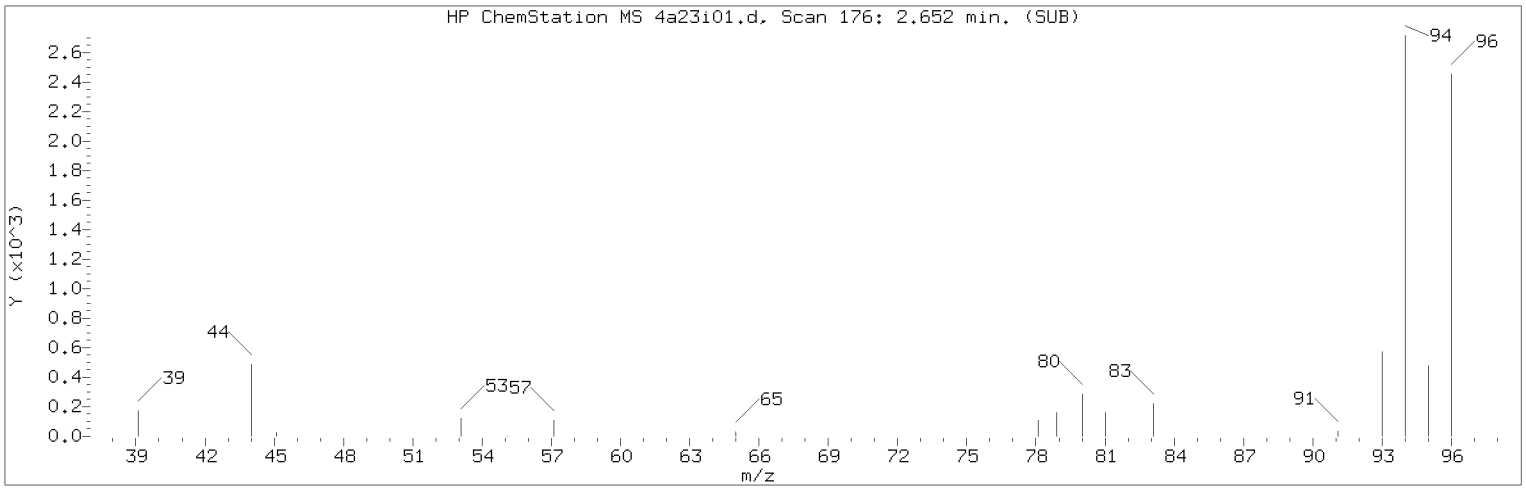
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.286	91	14979	1.000
136) 1,3-Diethylbenzene	(4)	13.341	119	13047	1.000
141) Diethylbenzene (total)	(4)		100	38331	3.000
137) 1,4-Diethylbenzene	(4)	13.408	119	14106	1.000
139) n-Butylbenzene	(4)	13.432	92	11108M	1.000
138) 1,2-Dichlorobenzene	(4)	13.469	146	11813	1.000
140) 1,2-Diethylbenzene	(4)	13.481	119	11178	1.000
142) 1,2-Dibromo-3-chloropropane	(4)	14.016	75	2493	1.000
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	9193	1.000
146) 1,2,4-Trichlorobenzene	(4)	14.557	180	9099	1.000
147) Hexachlorobutadiene	(4)	14.643	225	4822	1.000
148) Naphthalene	(4)	14.746	128	30031	1.000
149) 1,2,3-Trichlorobenzene	(4)	14.892	180	8475	1.000
150) 2-Methylnaphthalene	(4)	15.537	142	17726	1.000

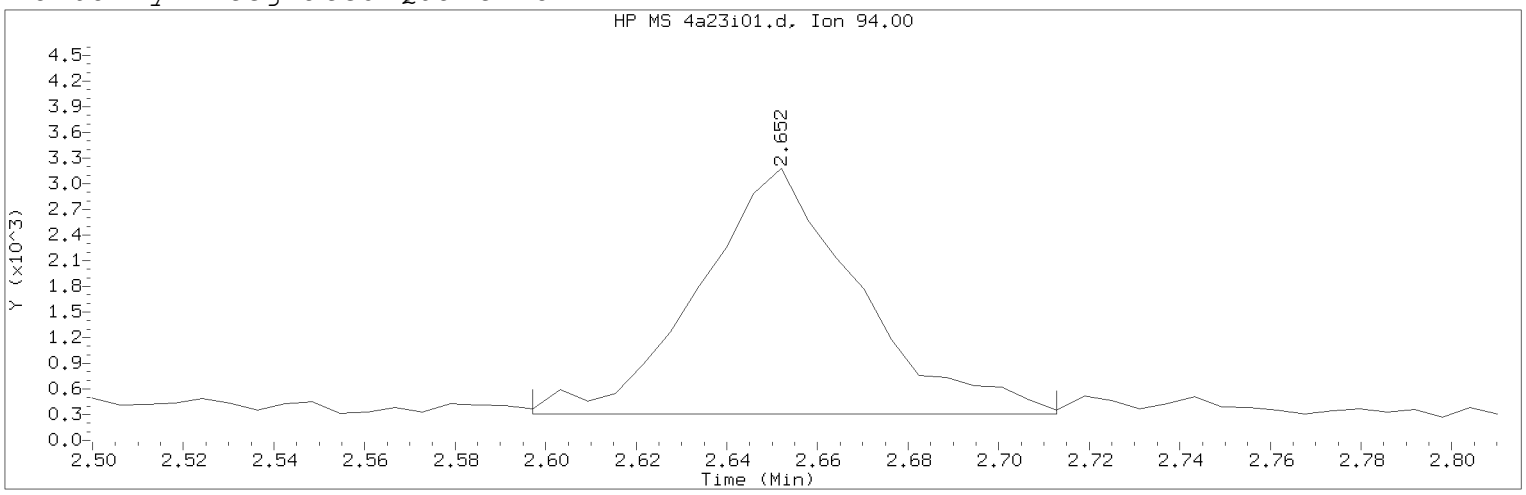
M = Compound was manually integrated.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

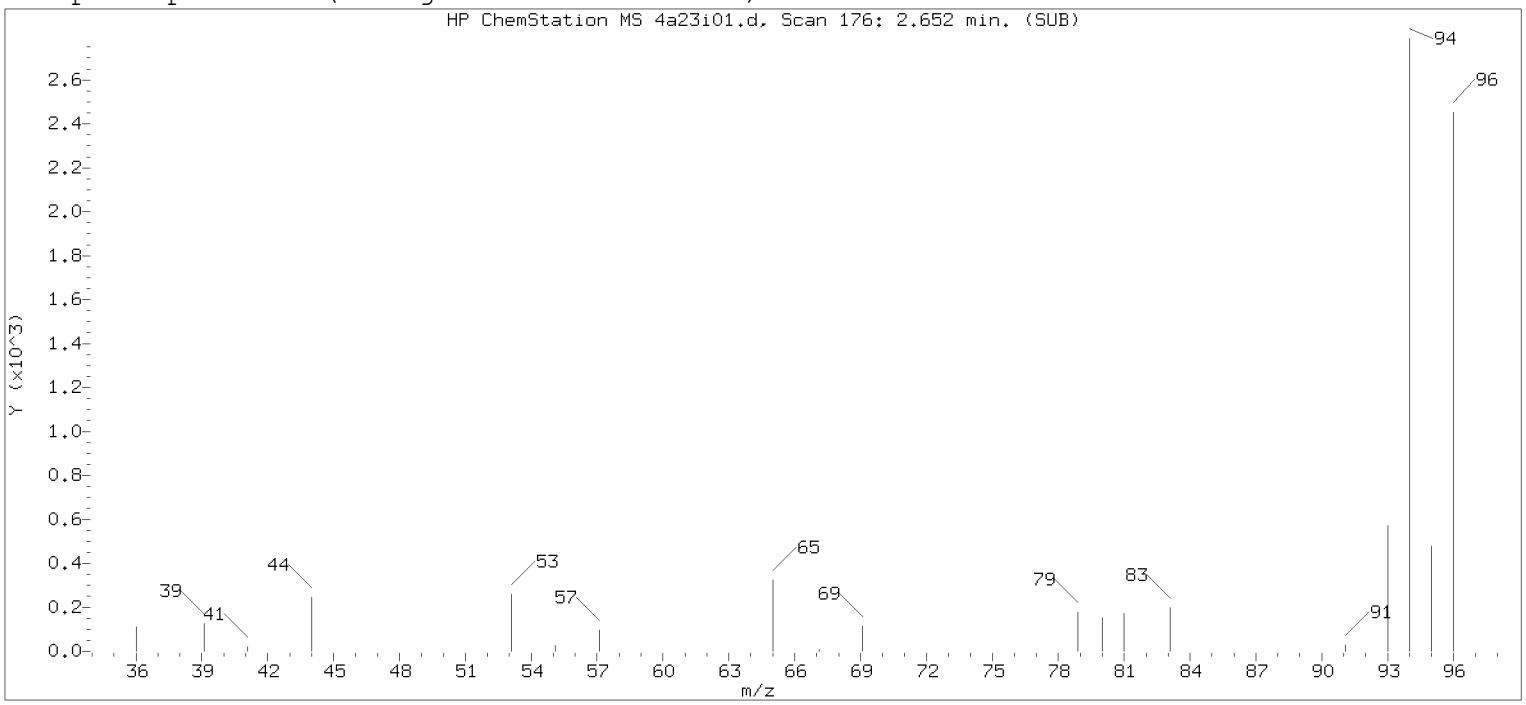
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 176
Retention Time (minutes): 2.652
Quant Ion : 94.00
Area (flag) : 7033M
On-Column Amount (ng) : 1.0000
Integration start scan : 166 Integration stop scan: 185
Y at integration start : 309 Y at integration end: 309

Reason for manual integration: improper integration

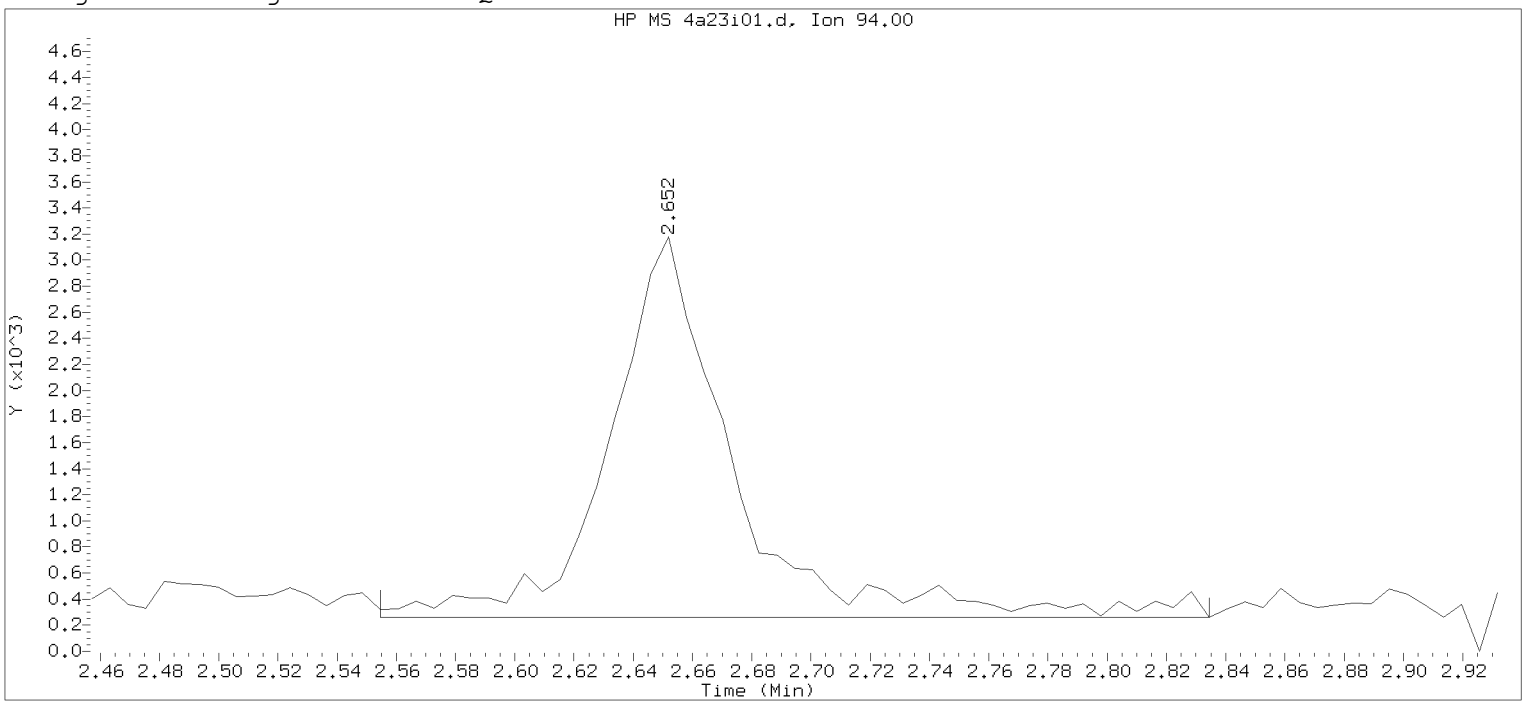
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

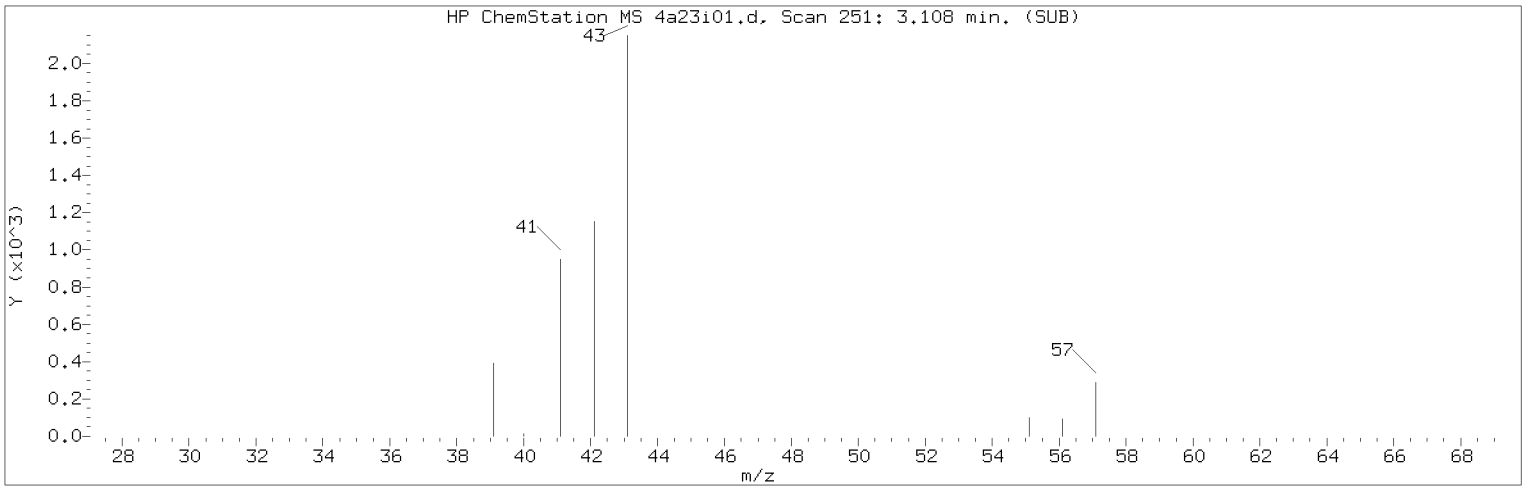
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 15:15
Date, time and analyst ID of latest file update: 23-Apr-2019 15:15 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

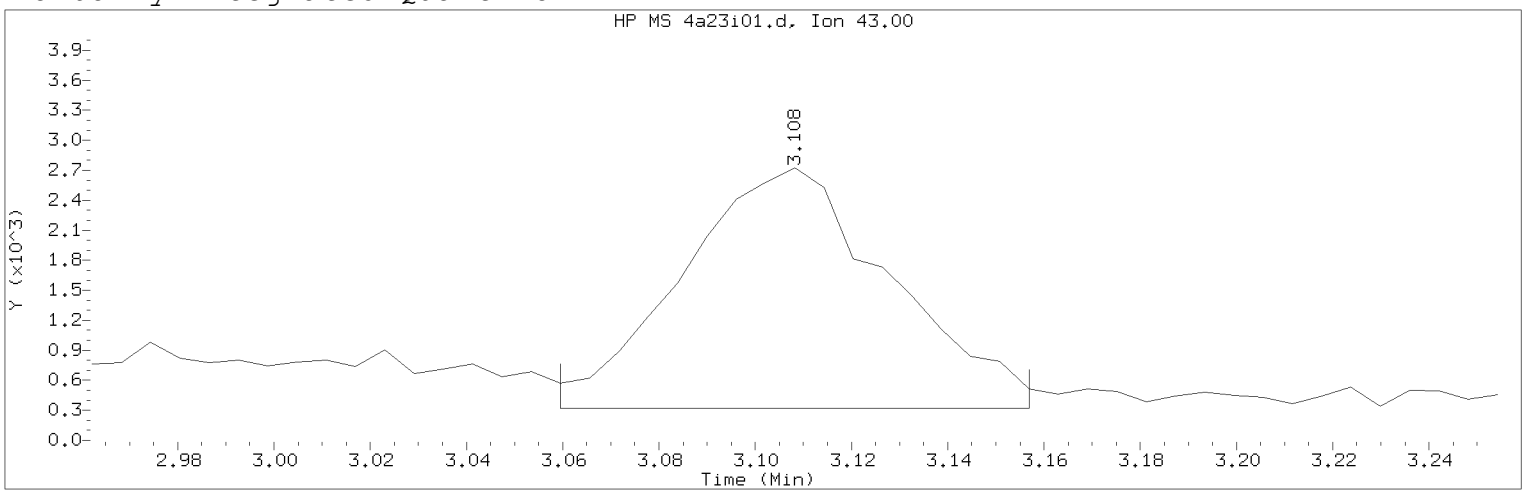
Compound Number	: 8		
Compound Name	: Bromomethane		
Scan Number	: 176		
Retention Time (minutes)	: 2.652		
Quant Ion	: 94.00		
Area	: 8484		
On-column Amount (ng)	: 1.4800		
Integration start scan	: 159	Integration stop scan:	205
Y at integration start	: 262	Y at integration end:	262

Digitally signed by Jason M. Long on 04/24/2019 at 14:26.
Target 3.5 esignature user id: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

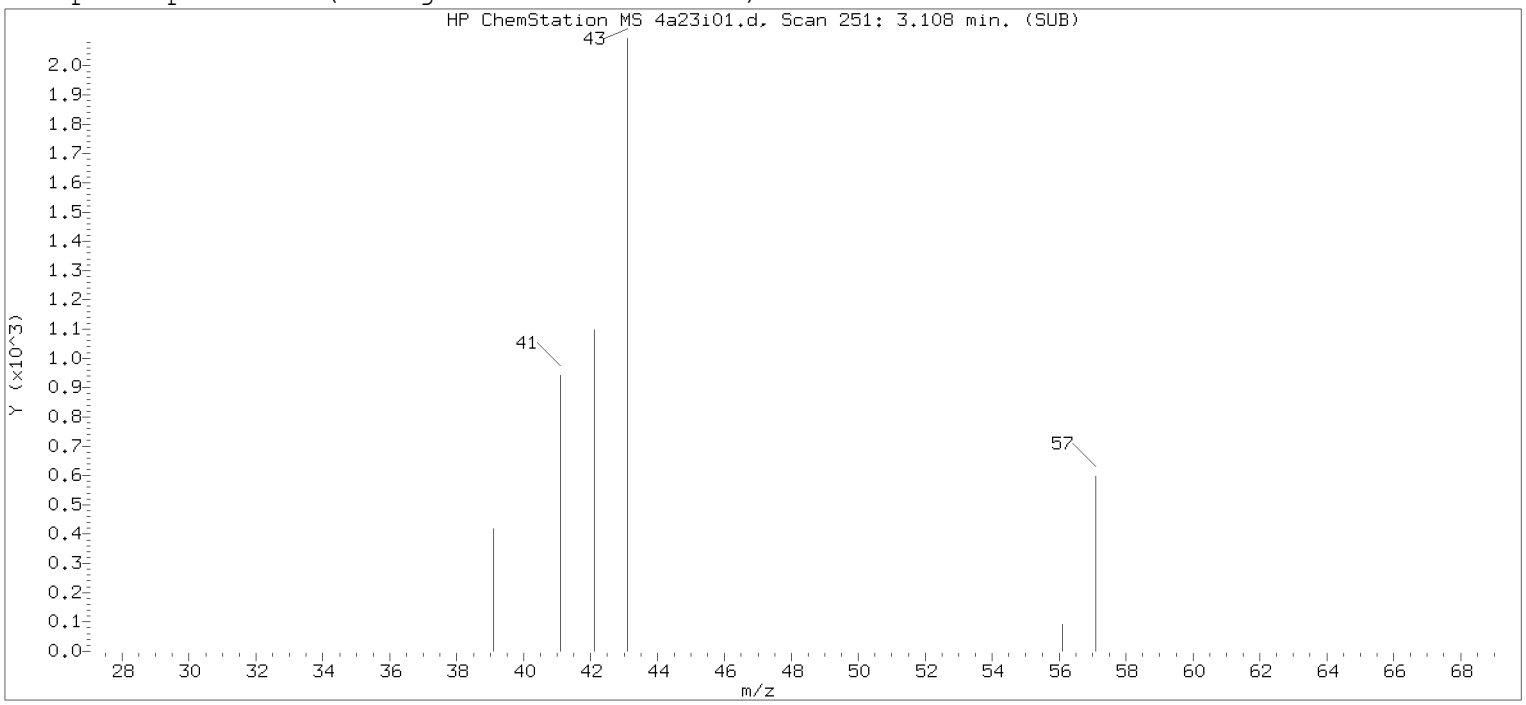
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 251
Retention Time (minutes): 3.108
Quant Ion : 43.00
Area (flag) : 7272M
On-Column Amount (ng) : 1.0000
Integration start scan : 242 Integration stop scan: 258
Y at integration start : 323 Y at integration end: 323

Reason for manual integration: improper integration

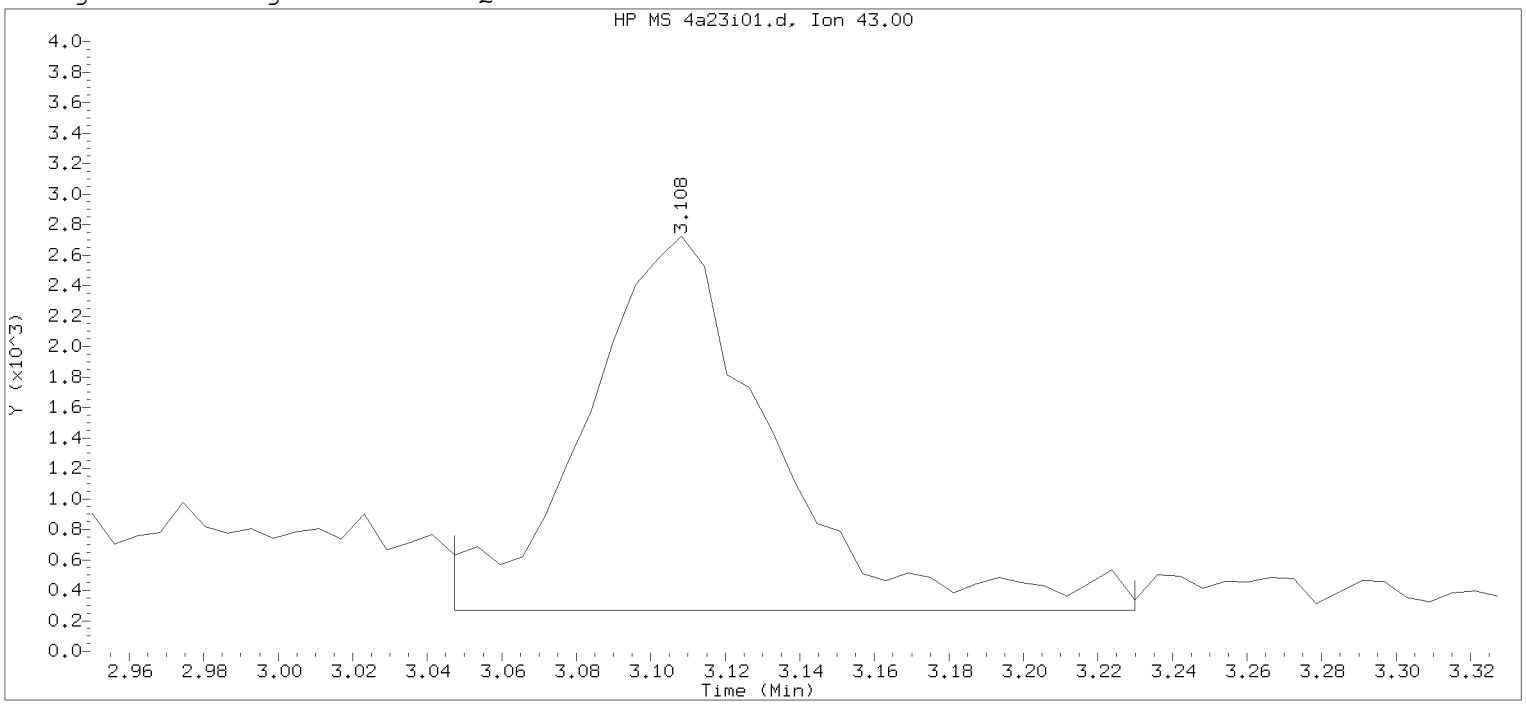
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 15:15
Date, time and analyst ID of latest file update: 23-Apr-2019 15:15 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 11
Compound Name : n-Pentane
Scan Number : 251
Retention Time (minutes): 3.108
Quant Ion : 43.00
Area : 8581
On-column Amount (ng) : 1.0868
Integration start scan : 240 Integration stop scan: 270
Y at integration start : 269 Y at integration end: 269

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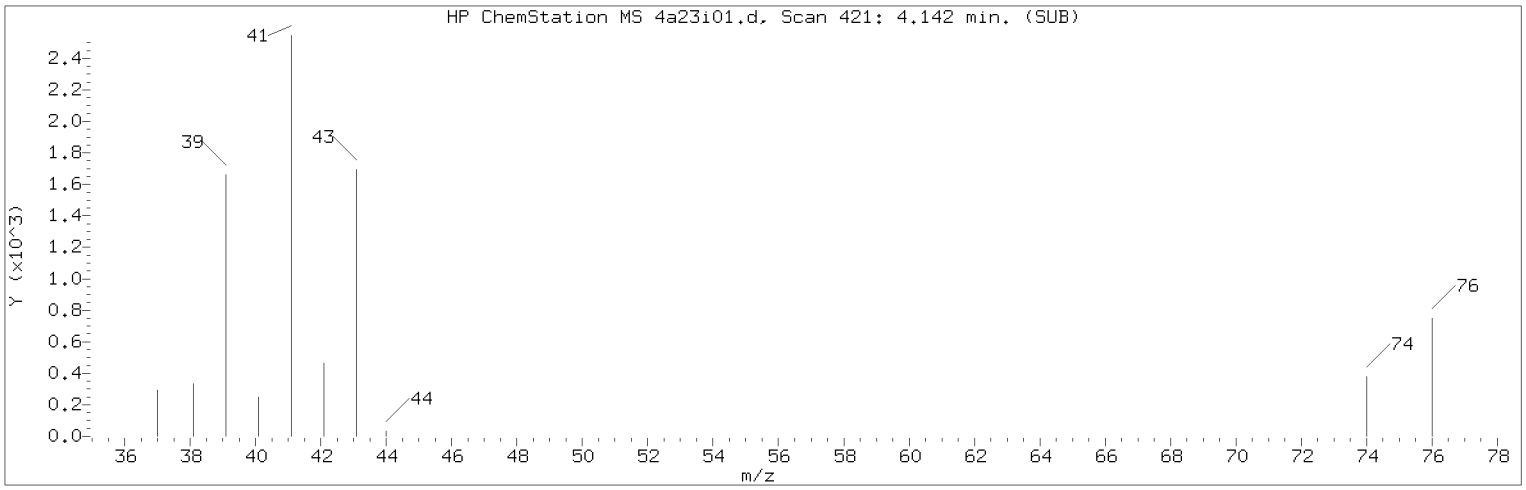
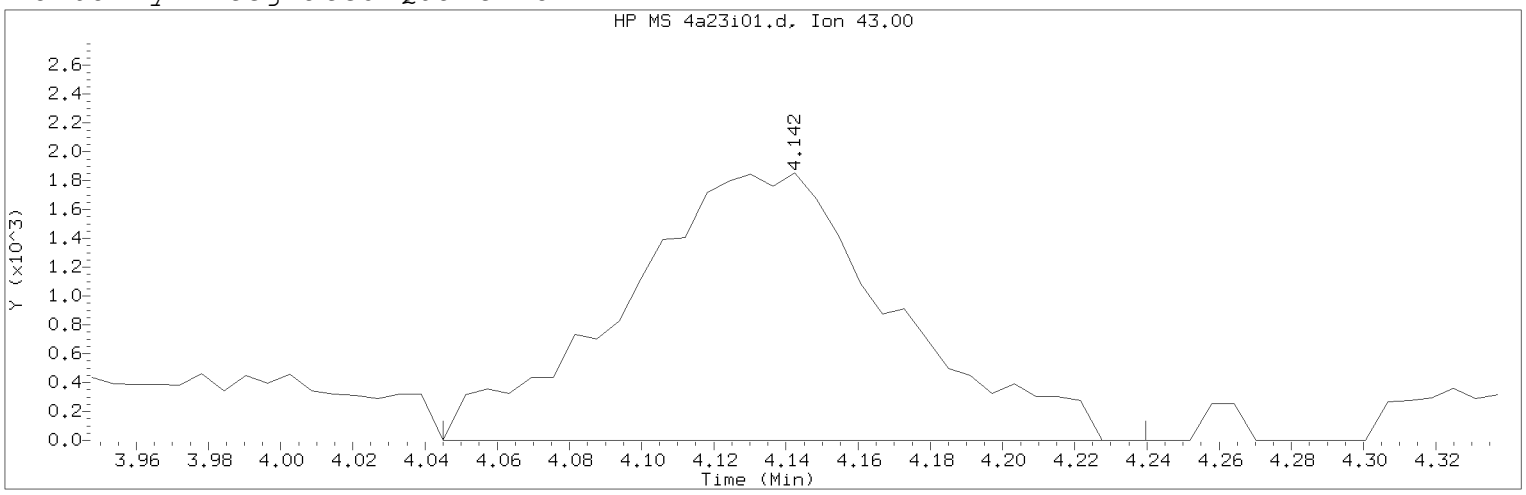
Target 3.5 esignature user ID: jmlo1693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

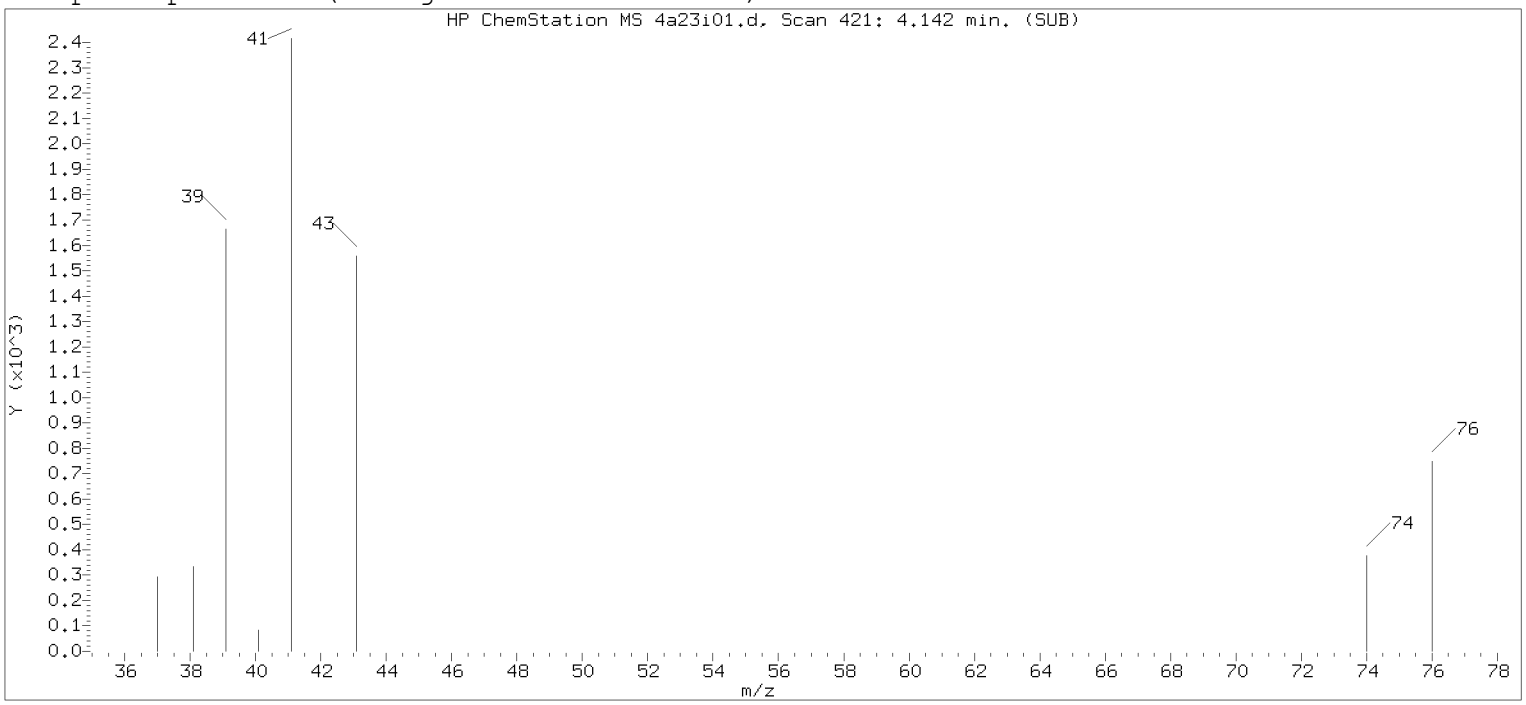
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 421
Retention Time (minutes): 4.142
Quant Ion : 43.00
Area (flag) : 9571M
On-Column Amount (ng) : 1.0000
Integration start scan : 404 Integration stop scan: 436
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

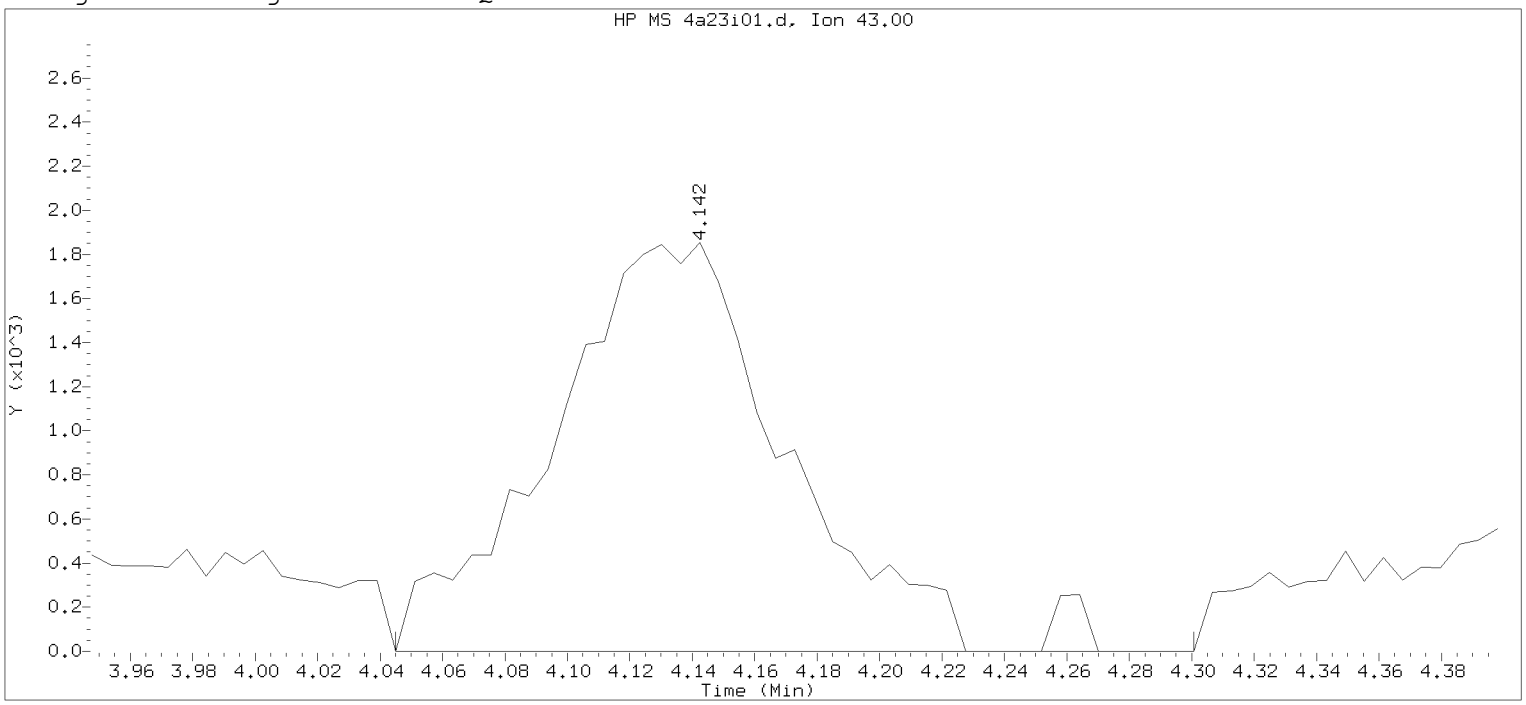
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

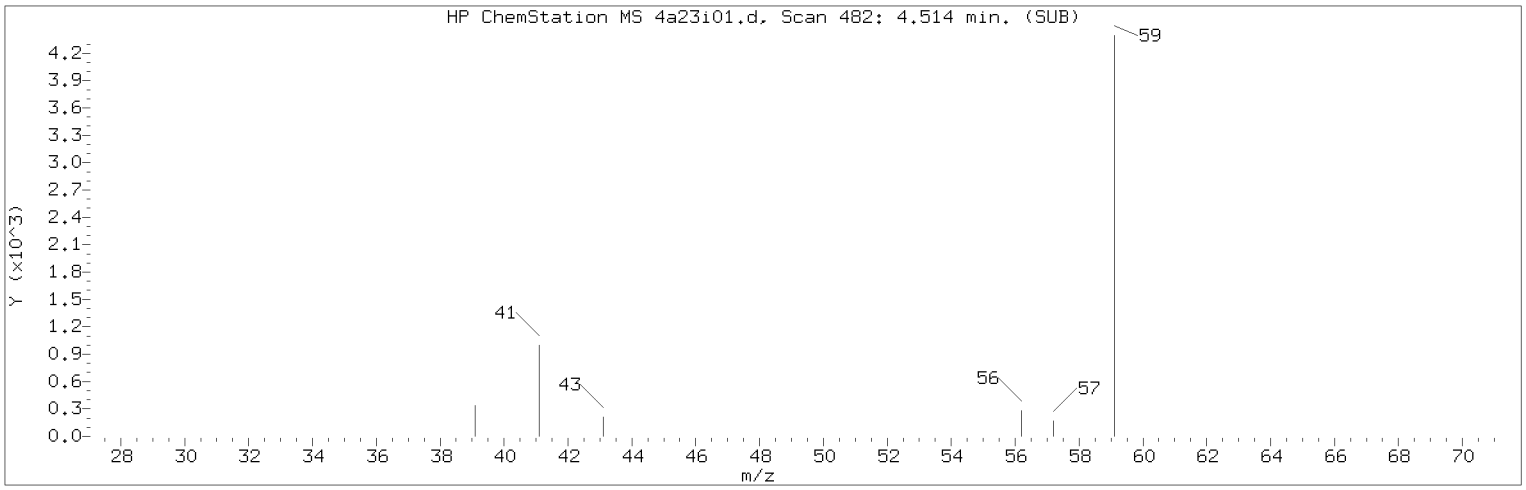
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 15:15
Date, time and analyst ID of latest file update: 23-Apr-2019 15:15 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

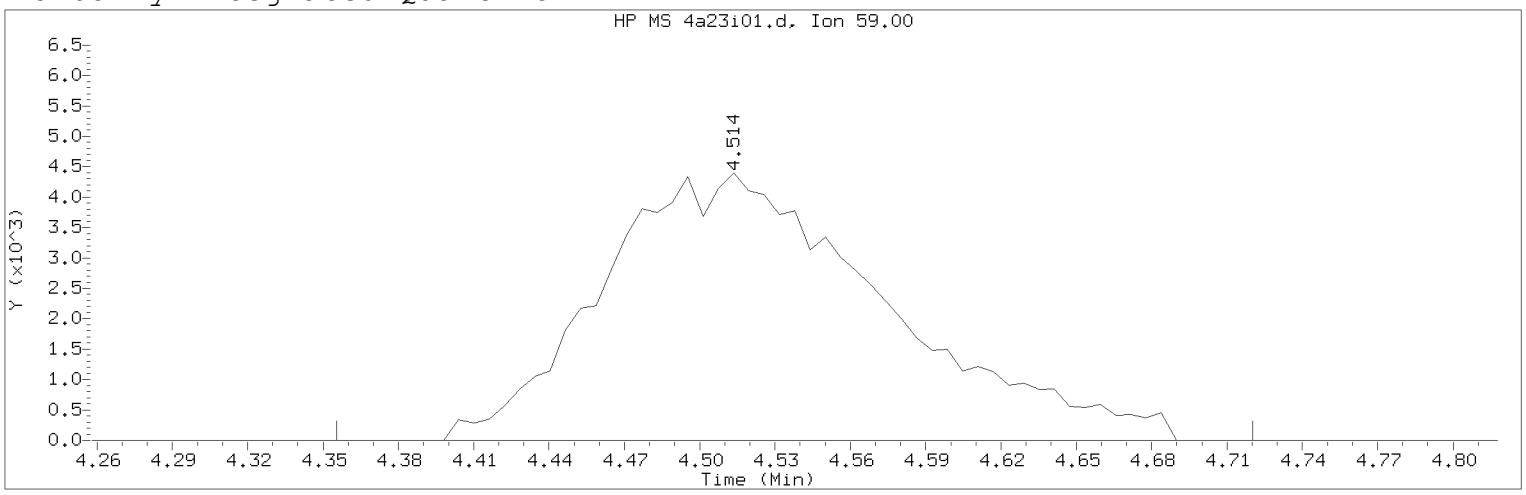
Compound Number	: 27		
Compound Name	: Methyl Acetate		
Scan Number	: 421		
Retention Time (minutes)	: 4.142		
Quant Ion	: 43.00		
Area	: 9756		
On-column Amount (ng)	: 1.3808		
Integration start scan	: 404	Integration stop scan:	446
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jason M. Long on 04/24/2019 at 14:26.
Target 3.5 esignature user: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

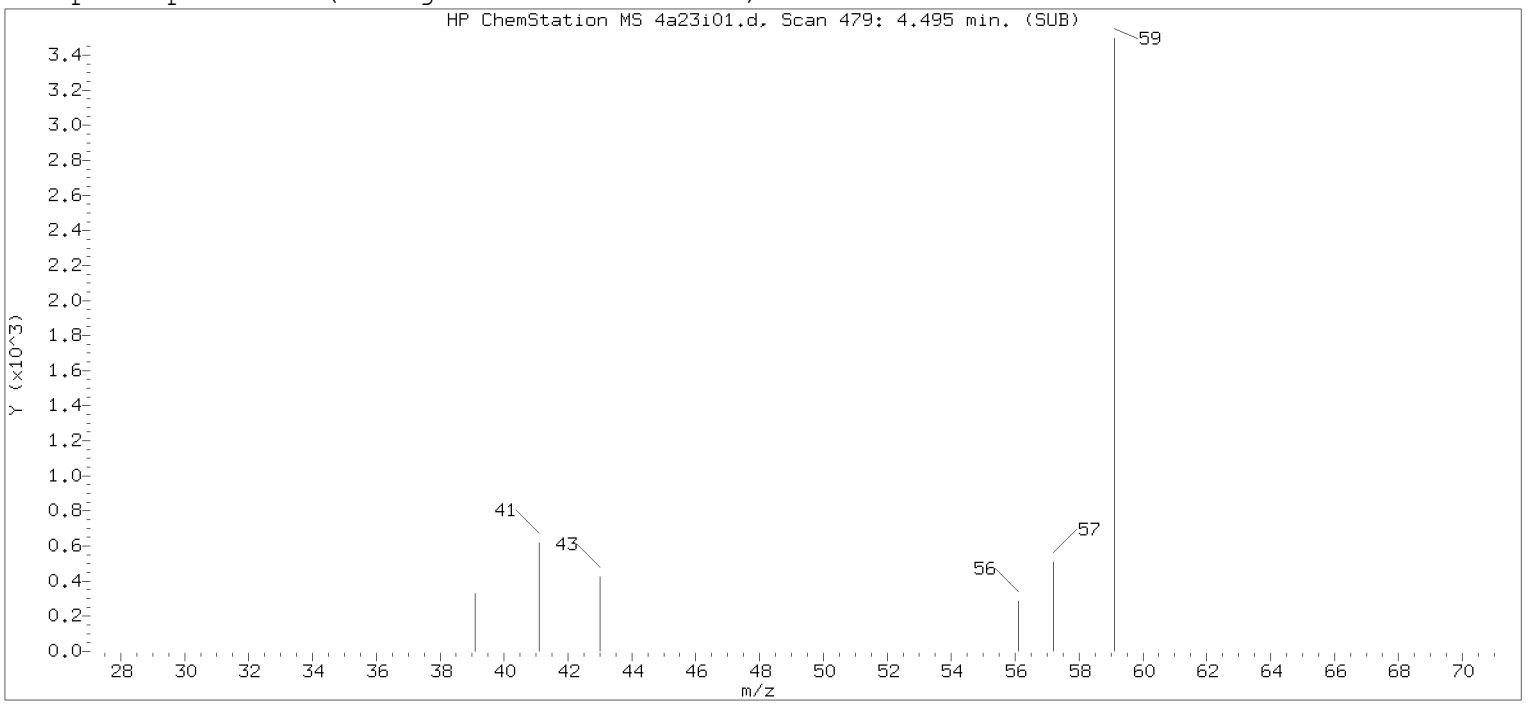
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 482
Retention Time (minutes): 4.514
Quant Ion : 59.00
Area (flag) : 34580M
On-Column Amount (ng) : 20.0000
Integration start scan : 455 Integration stop scan: 515
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

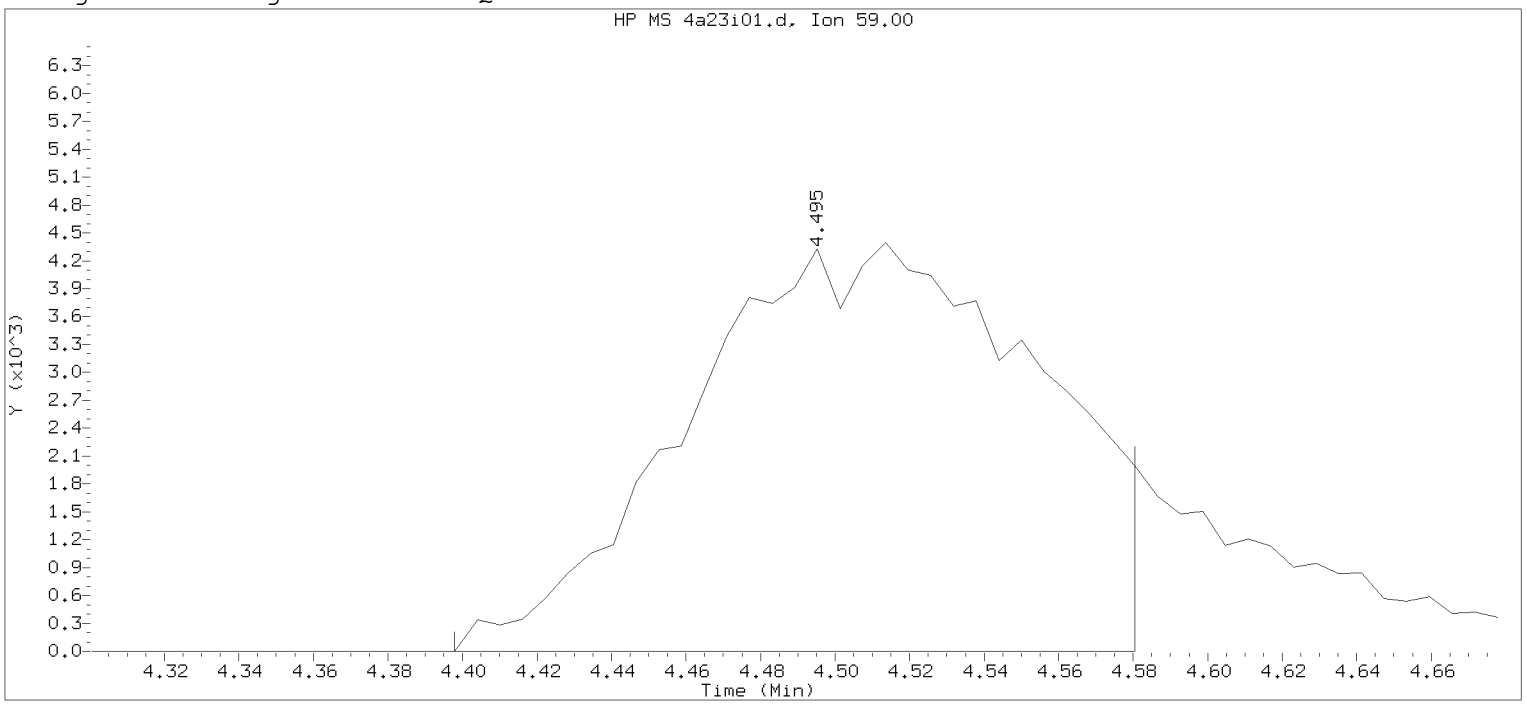
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

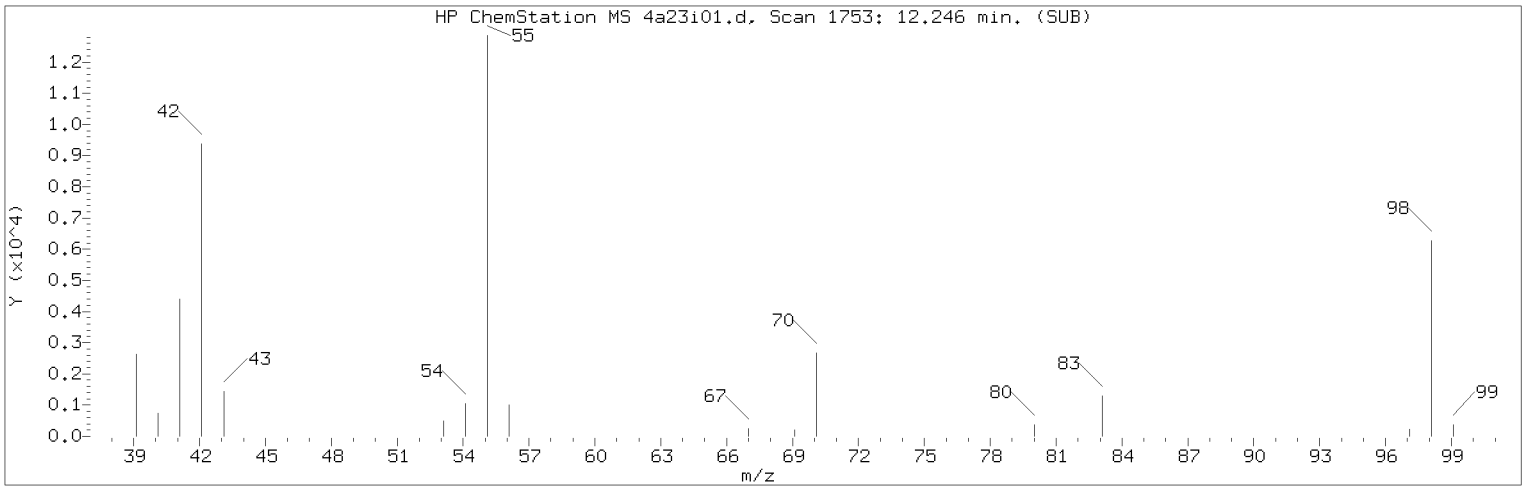
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 15:15
Date, time and analyst ID of latest file update: 23-Apr-2019 15:15 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

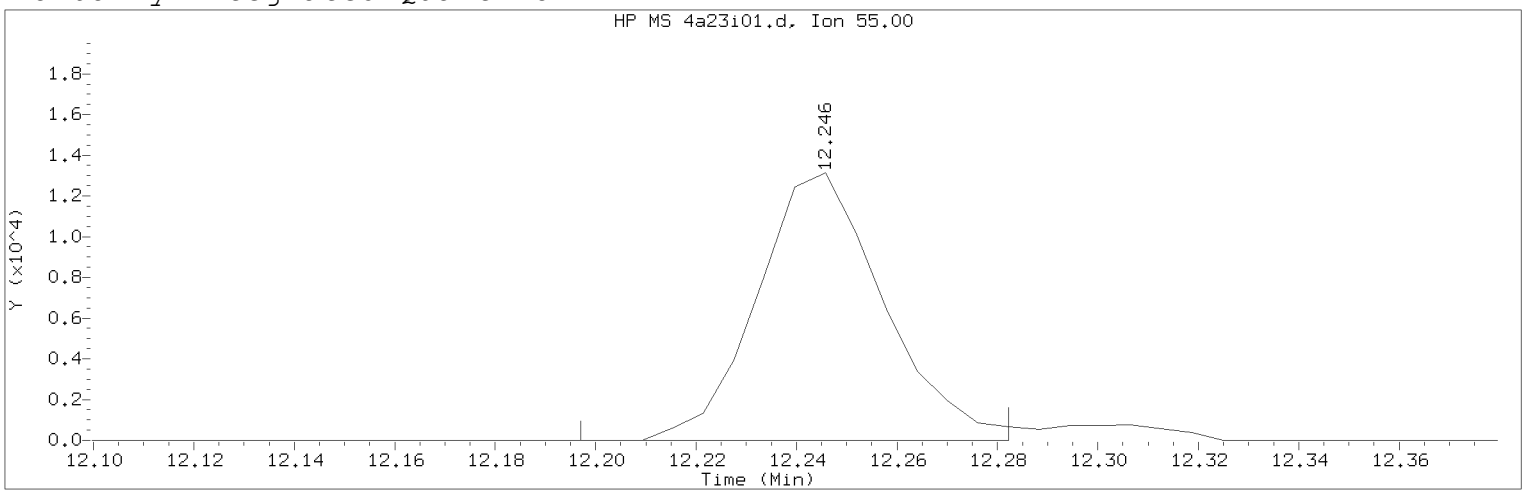
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 479
Retention Time (minutes): 4.495
Quant Ion : 59.00
Area : 28741
On-column Amount (ng) : 18.7893
Integration start scan : 462 Integration stop scan: 492
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

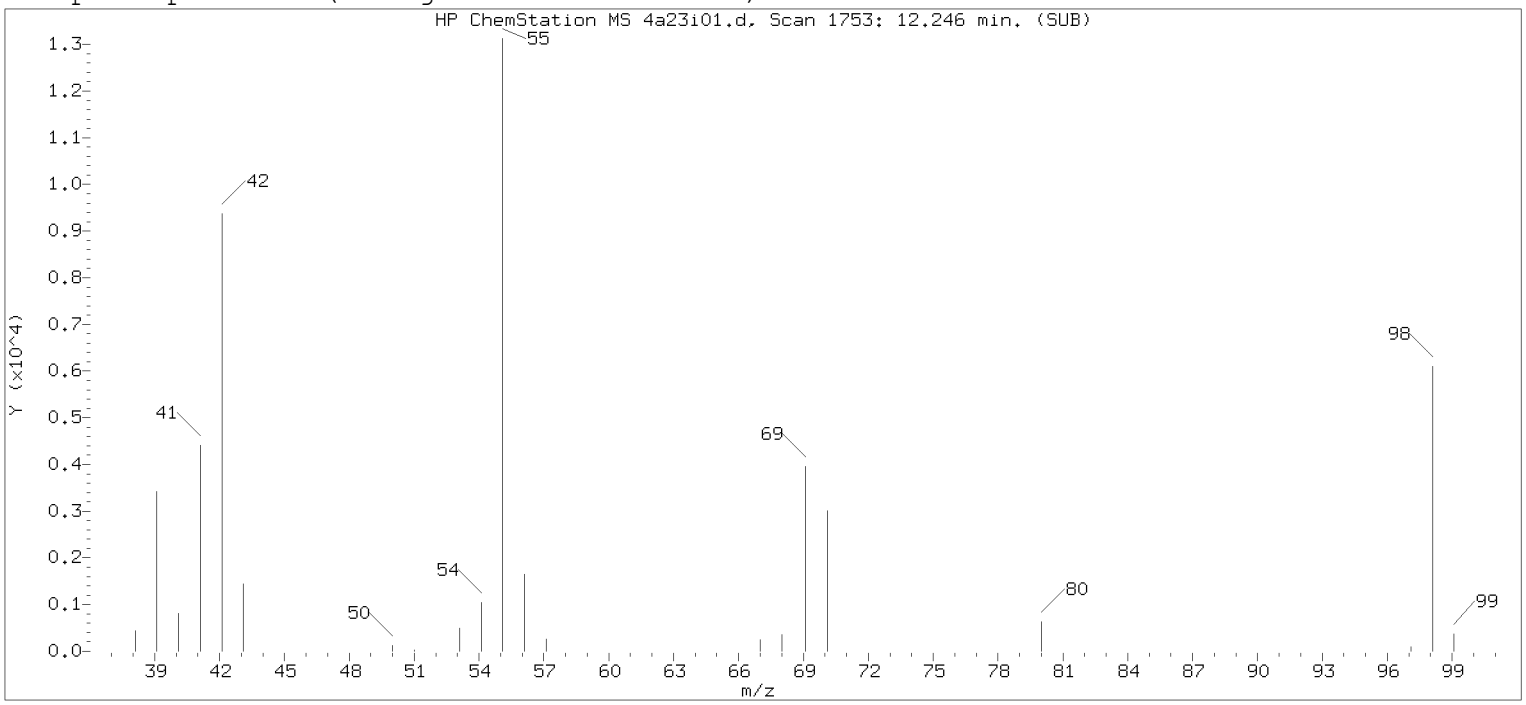
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1753
Retention Time (minutes): 12.246
Quant Ion : 55.00
Area (flag) : 22989M
On-Column Amount (ng) : 50.0000
Integration start scan : 1744 Integration stop scan: 1758
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

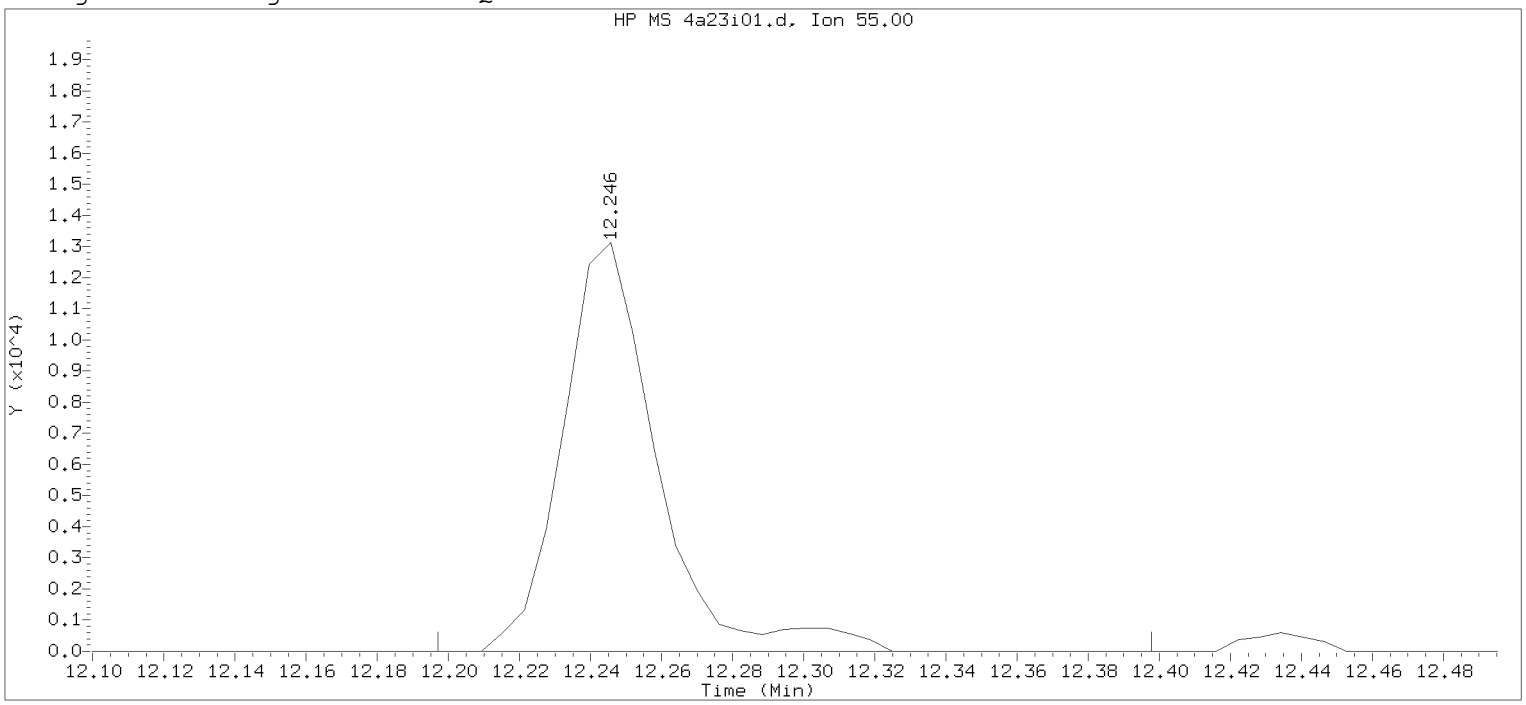
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

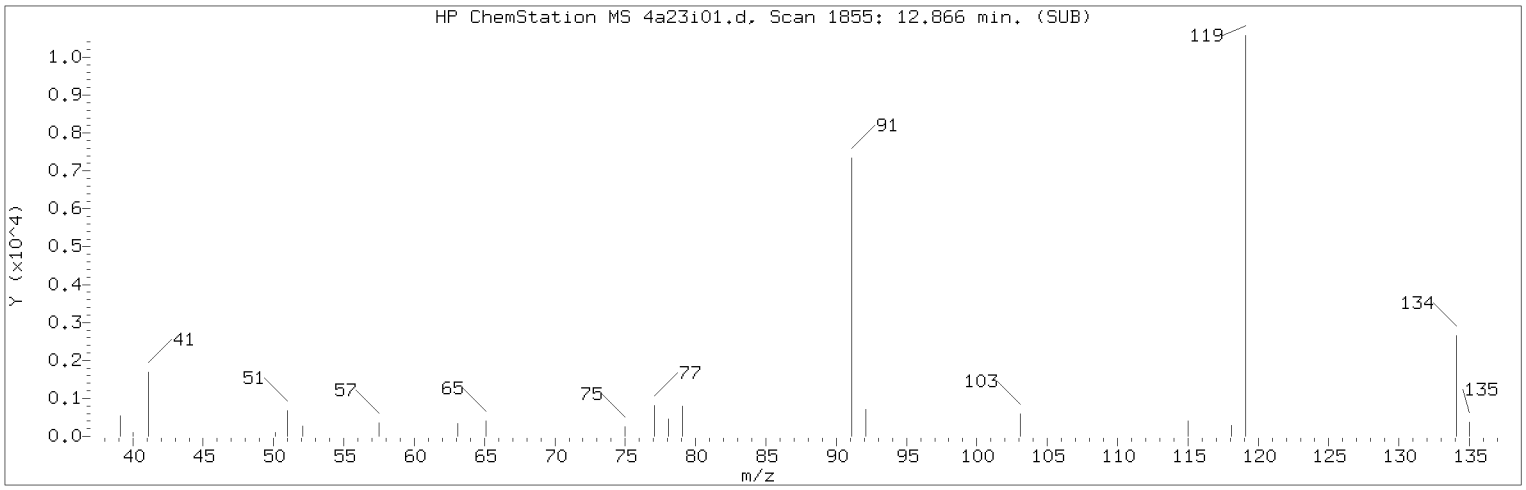
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 15:15
Date, time and analyst ID of latest file update: 23-Apr-2019 15:15 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

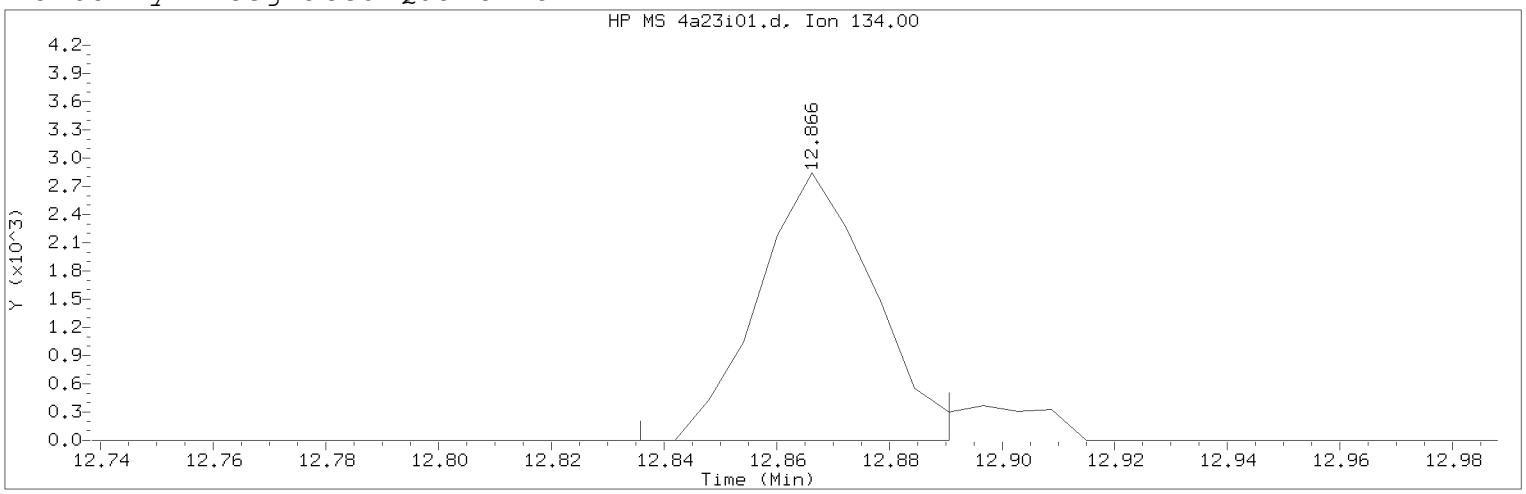
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1753
Retention Time (minutes): 12.246
Quant Ion : 55.00
Area : 24332
On-column Amount (ng) : 44.2430
Integration start scan : 1744 Integration stop scan: 1777
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

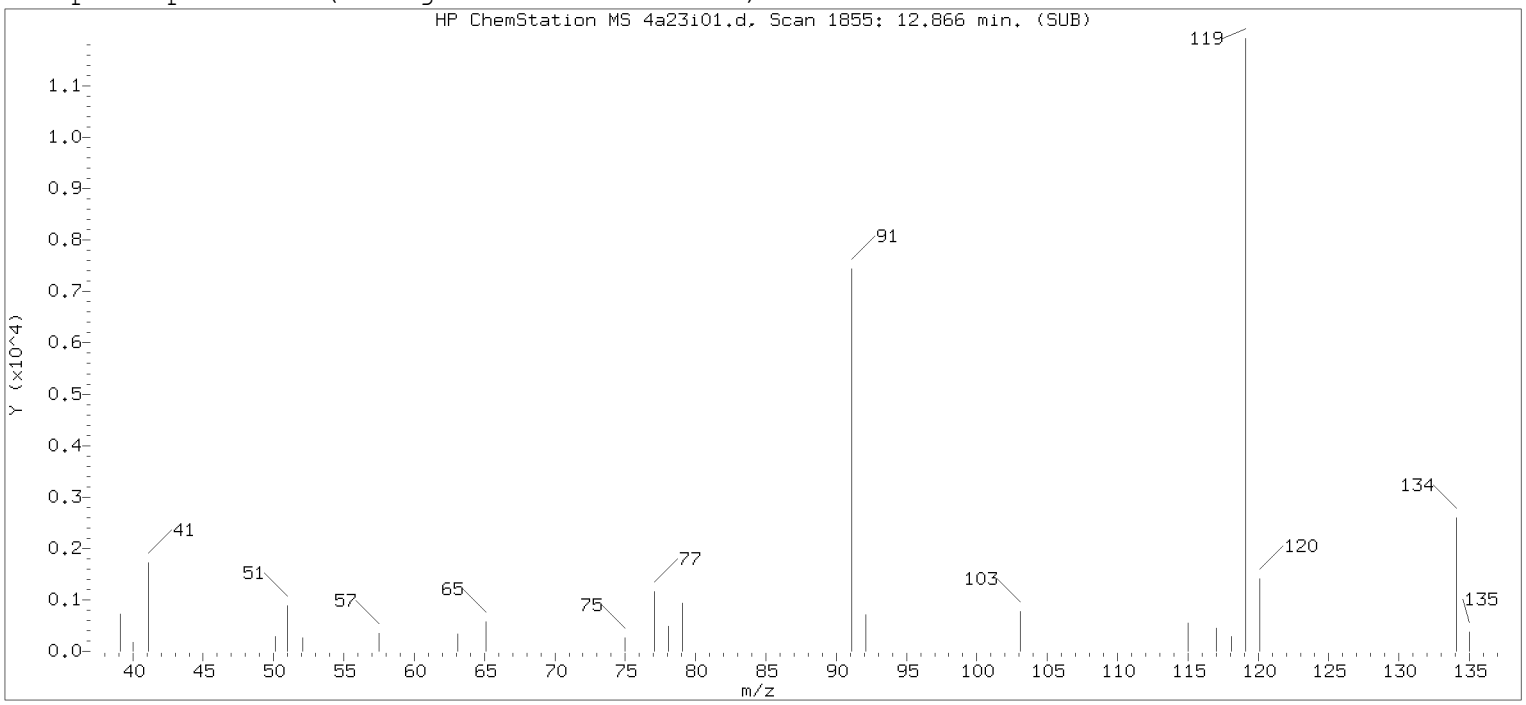
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area (flag) : 4048M
On-Column Amount (ng) : 1.0000
Integration start scan : 1849 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

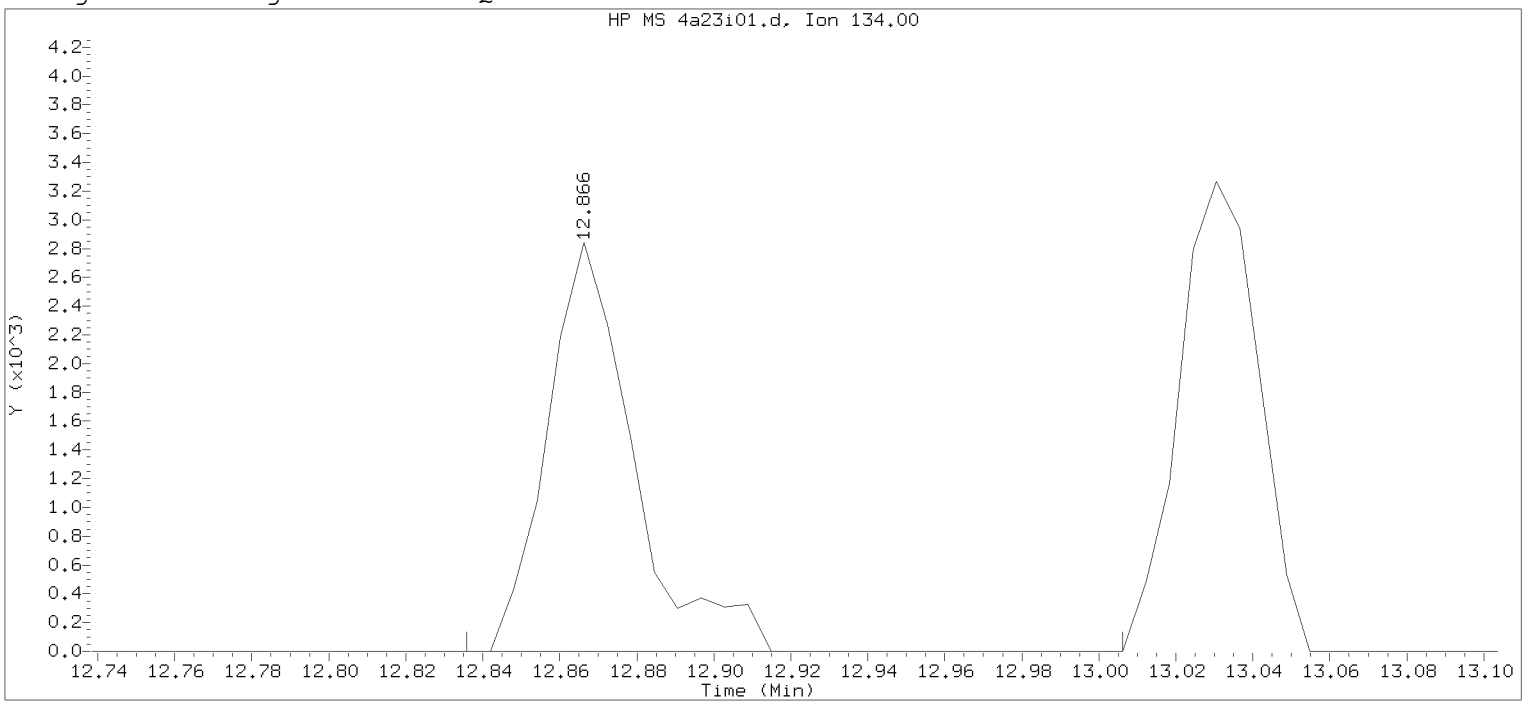
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

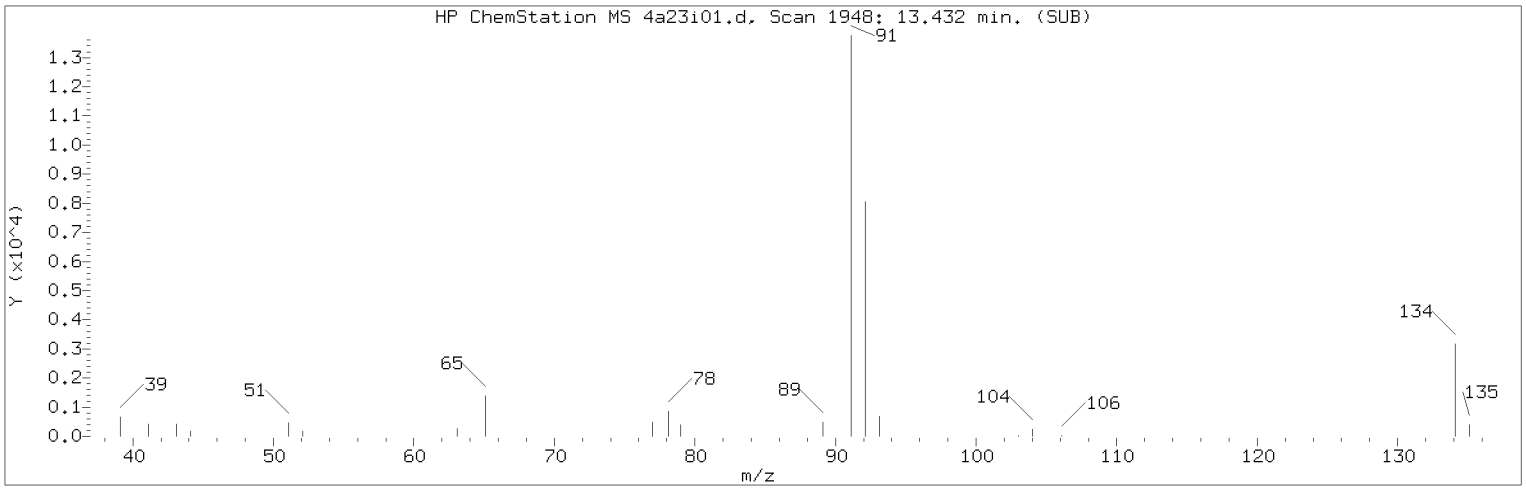
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 15:15
Date, time and analyst ID of latest file update: 23-Apr-2019 15:15 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

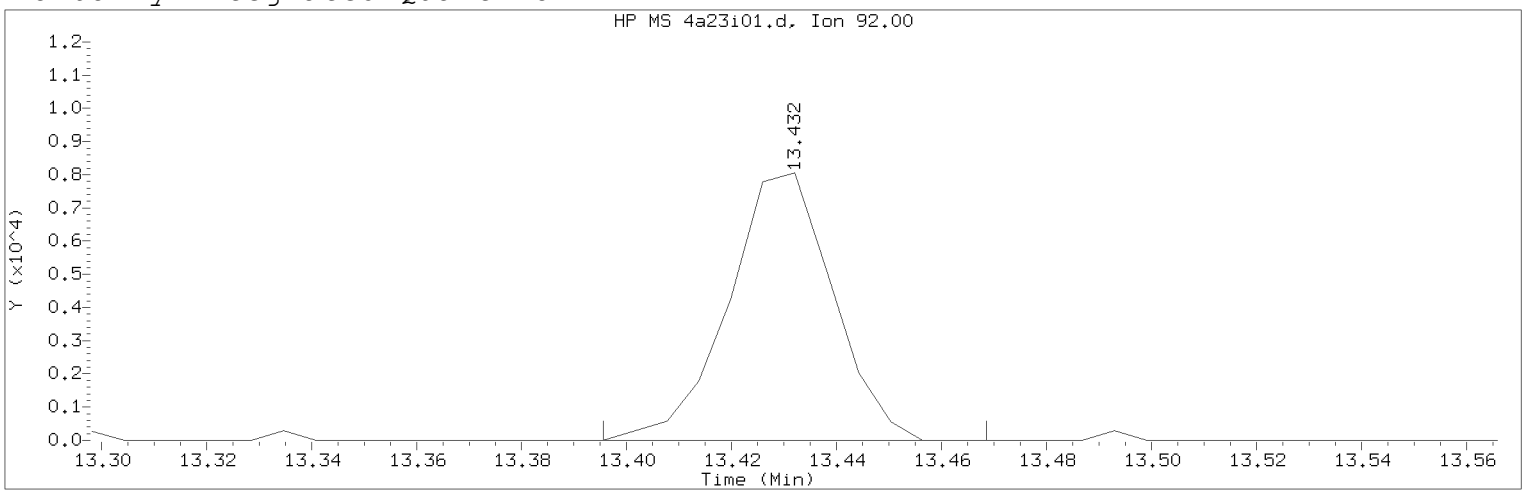
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area : 4414
On-column Amount (ng) : 0.9786
Integration start scan : 1849 Integration stop scan: 1877
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

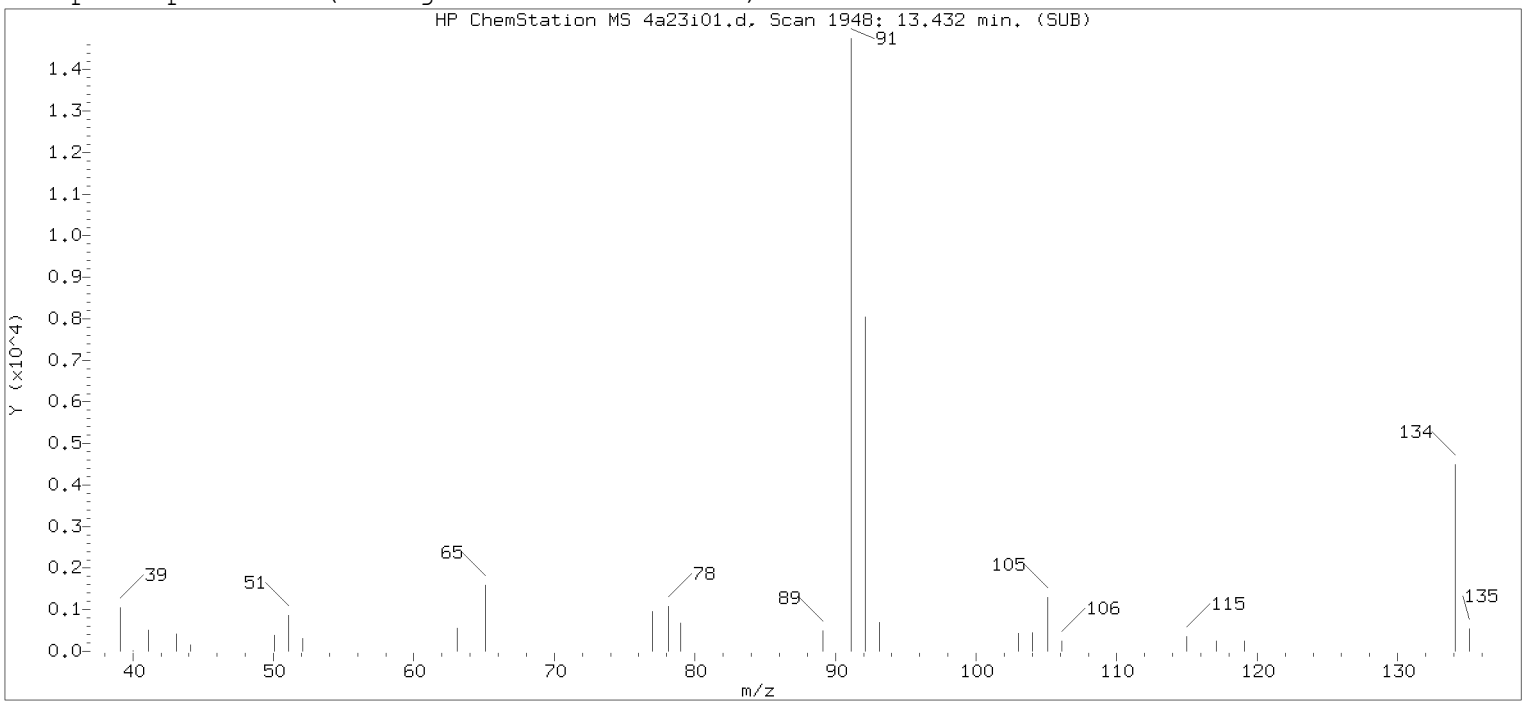
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1948
Retention Time (minutes): 13.432
Quant Ion : 92.00
Area (flag) : 11108M
On-Column Amount (ng) : 1.0000
Integration start scan : 1941 Integration stop scan: 1953
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

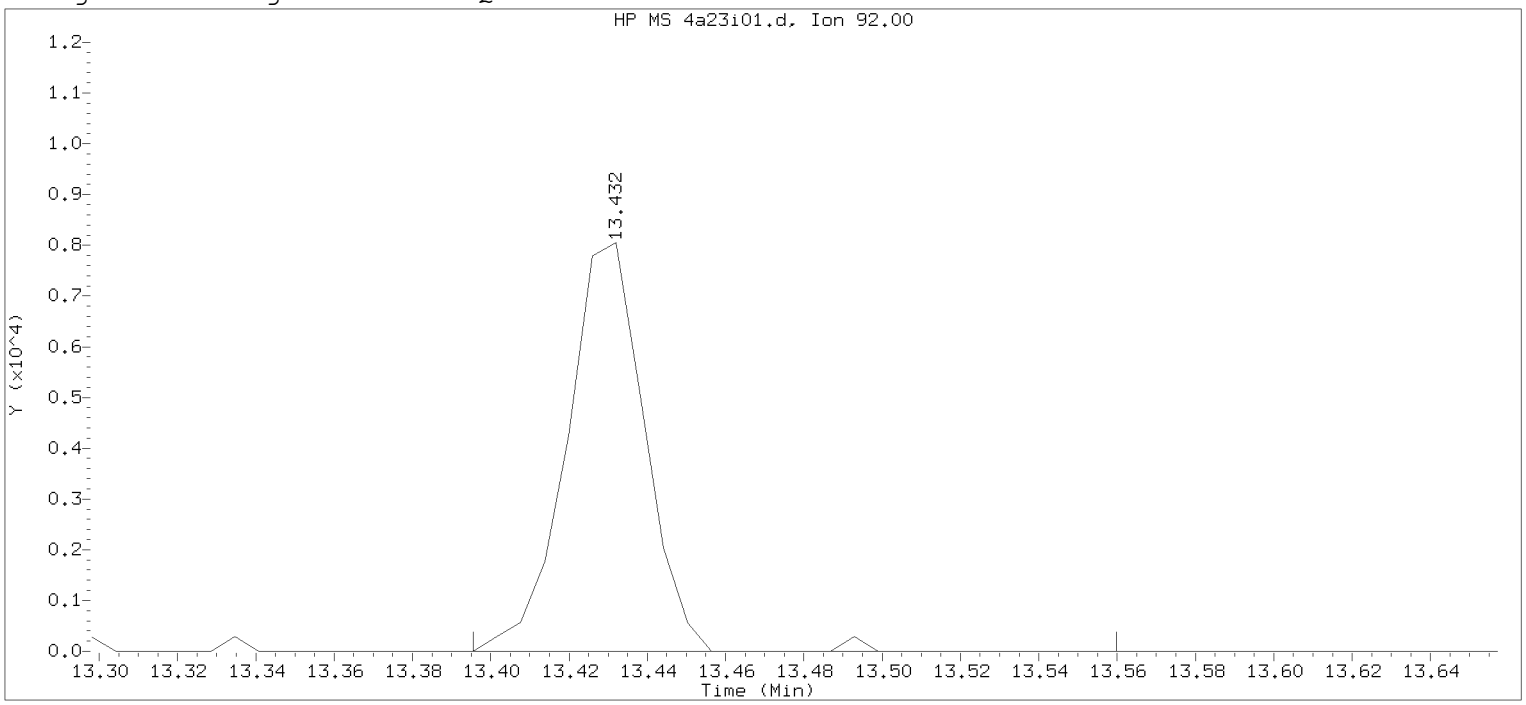
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



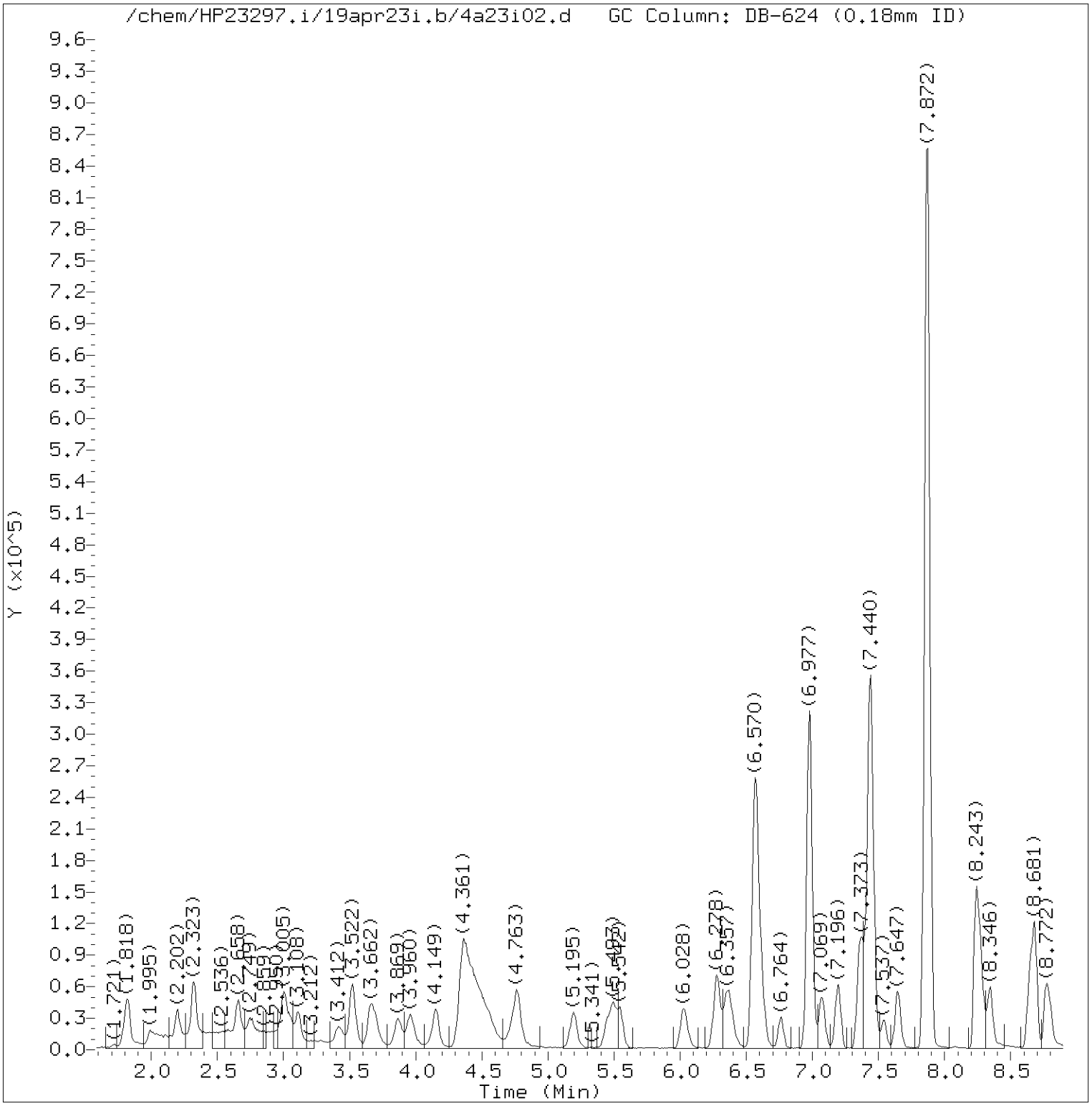
Data File: /chem/HP23297.i/19apr23i.b/4a23i01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 14:57 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 15:15
Date, time and analyst ID of latest file update: 23-Apr-2019 15:15 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1948
Retention Time (minutes): 13.432
Quant Ion : 92.00
Area : 11213
On-column Amount (ng) : 0.9511
Integration start scan : 1941 Integration stop scan: 1968
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:26.
Target 3.5 esignature user ID: jmlong



Total Ion Chromatogram (TIC)

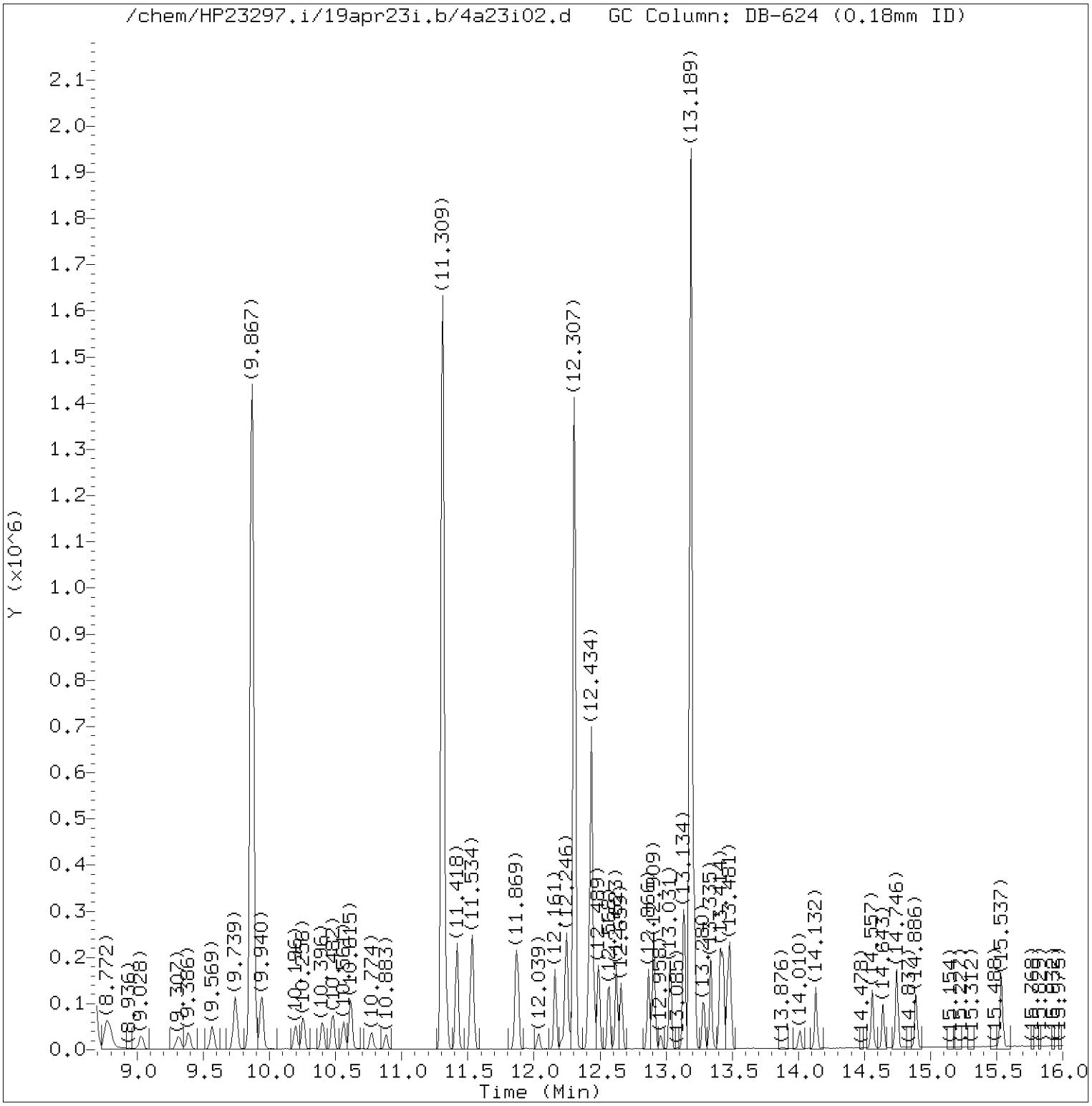
Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.995	85	38121	4.546
4) Chloromethane	(2)	2.196	50	36820	4.262
6) Vinyl Chloride	(2)	2.317	62	35190	4.232
5) 1,3-Butadiene	(2)	2.323	39	20442M	4.292
8) Bromomethane	(2)	2.658	94	29438M	4.149
9) Chloroethane	(2)	2.749	64	19790	4.110
10) Dichlorofluoromethane	(2)	3.005	67	46231	3.908
12) Trichlorofluoromethane	(2)	3.060	101	42287	4.435
11) n-Pentane	(2)	3.114	43	34246	4.383
13) Ethanol	(1)	3.279	45	44794M	271.264
15) Freon 123a	(2)	3.412	67	24177	4.223
16) Acrolein	(1)	3.522	56	97290	39.728
17) 1,1-Dichloroethene	(2)	3.656	96	16363	4.434
17) 1,1-Dichloroethene	(2)	3.656	63	8909	4.240
19) Freon 113	(2)	3.692	101	18312	4.529
18) Acetone	(1)	3.704	58	9593	8.330
22) Methyl Iodide	(2)	3.863	142	32244	4.374
21) 2-Propanol	(1)	3.881	45	78631M	77.530
23) Carbon Disulfide	(2)	3.960	76	58918	4.431
27) Methyl Acetate	(2)	4.136	43	35055	3.882
25) Allyl Chloride	(2)	4.155	41	36995	3.913
28) Methylene Chloride	(2)	4.361	84	20756	4.108
29)*t-Butyl alcohol-d10	(1)	4.374	65	444616	250.000
30) t-Butyl alcohol	(1)	4.520	59	138716	79.979
31) Acrylonitrile	(2)	4.726	53	17323	4.199
33) Methyl Tertiary Butyl Ether	(2)	4.763	73	58433	4.139
32) trans-1,2-Dichloroethene	(2)	4.769	96	19151	4.364
34) n-Hexane	(2)	5.195	57	33718	4.500
36) 1,1-Dichloroethane	(2)	5.444	63	36702	4.330
38) di-Isopropyl ether	(2)	5.493	45	71738	4.178
39) 2-Chloro-1,3-butadiene	(2)	5.548	53	32765	4.448
40) Ethyl t-butyl ether	(2)	6.028	59	61583	4.123
43) 1,2-Dichloroethene (Total)	(2)		96	41209	8.674
44) 2-Butanone	(2)	6.260	43	54351	7.899
42) cis-1,2-Dichloroethene	(2)	6.278	96	22058	4.310
45) 2,2-Dichloropropane	(2)	6.290	77	28892	4.426
47) Propionitrile	(1)	6.363	54	139356	80.196
48) Methacrylonitrile	(2)	6.570	67	157457	40.925

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.612	128	11629	4.219
50) Tetrahydrofuran	(1)	6.625	71	13766	7.916
51) Chloroform	(2)	6.764	83	34917	4.131
52)$Dibromofluoromethane	(2)	6.977	113	273943	50.237
52)$Dibromofluoromethane	(2)	6.977	111	279678	50.187
53) 1,1,1-Trichloroethane	(2)	6.983	97	30055	4.336
54) Cyclohexane	(2)	7.063	56	39669	4.368
54) Cyclohexane	(2)	7.069	84	32136	4.462
54) Cyclohexane	(2)	7.075	69	11453	4.436
56) Carbon Tetrachloride	(2)	7.190	117	25745	4.397
55) 1,1-Dichloropropene	(2)	7.196	75	28221	4.299
58) Isobutyl Alcohol	(1)	7.373	41	122096	200.786
57)$1,2-Dichloroethane-d4	(2)	7.440	102	66840	50.480
57)$1,2-Dichloroethane-d4	(2)	7.440	65	329512	50.453
57)$1,2-Dichloroethane-d4	(2)	7.440	104	43058	51.092
60) Benzene	(2)	7.458	78	85495	4.214
61) 1,2-Dichloroethane	(2)	7.543	62	28450	3.865
61) 1,2-Dichloroethane	(2)	7.543	98	2555	5.575
65) t-Amyl methyl ether	(2)	7.640	73	62974	4.121
67) n-Heptane	(2)	7.866	43	39061	4.241
66)*Fluorobenzene	(2)	7.872	96	1107948	50.000
69) n-Butanol	(1)	8.243	56	194818	416.914
71) Trichloroethene	(2)	8.346	95	21683	4.363
72) Methylcyclohexane	(2)	8.644	83	40794	4.471
72) Methylcyclohexane	(2)	8.650	98	17261	4.423
73) 1,2-Dichloropropane	(2)	8.687	63	21994	4.225
76) Methyl Methacrylate	(2)	8.760	69	23867	4.063
75) 1,4-Dioxane	(1)	8.790	88	29670	237.386
74) Dibromomethane	(2)	8.796	93	14097	4.259
78) Bromodichloromethane	(2)	9.028	83	25327	4.230
79) 2-Nitropropane	(2)	9.307	41	26005	8.347
80) 2-Chloroethyl Vinyl Ether	(2)	9.386	63	19613	4.145
81) cis-1,3-Dichloropropene	(2)	9.569	75	33085	4.230
82) 4-Methyl-2-pentanone	(2)	9.739	43	96160	8.161
83)$Toluene-d8	(3)	9.867	98	1147757	49.903
83)$Toluene-d8	(3)	9.867	100	741630	49.936
88) Toluene	(3)	9.940	92	55080	4.199
90) 1,3-Dichloropropene (total)	(3)		100	63331	8.490

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.196	75	30246	4.260
91) Ethyl Methacrylate	(3)	10.256	69	38402	4.082
92) 1,1,2-Trichloroethane	(3)	10.396	97	20410	4.026
93) Tetrachloroethene	(3)	10.482	166	23550	4.280
94) 1,3-Dichloropropane	(3)	10.561	76	35632	4.162
96) 2-Hexanone	(3)	10.615	43	76271	8.132
97) Dibromochloromethane	(3)	10.774	129	20616	4.147
99) 1,2-Dibromoethane	(3)	10.883	107	22868	4.146
100)*Chlorobenzene-d5	(3)	11.309	117	883788	50.000
102) Chlorobenzene	(3)	11.333	112	62399	4.278
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	19727	4.330
104) Ethylbenzene	(3)	11.418	91	105984	4.314
106) m+p-Xylene	(3)	11.534	106	82600	8.600
108) Xylene (Total)	(3)		106	123559	12.822
107) o-Xylene	(3)	11.862	106	40959	4.223
109) Styrene	(3)	11.875	104	66529	4.333
110) Bromoform	(3)	12.039	173	15357	4.160
111) Isopropylbenzene	(3)	12.161	105	102670	4.262
112) Cyclohexanone	(1)	12.246	55	109021	216.647
114)$4-Bromofluorobenzene	(3)	12.307	95	437336	50.505
114)$4-Bromofluorobenzene	(3)	12.307	174	383507	50.398
116) 1,1,2,2-Tetrachloroethane	(4)	12.410	83	37181	4.122
115) Bromobenzene	(4)	12.422	156	27819	4.166
118) trans-1,4-Dichloro-2-butene	(4)	12.434	53	120454	41.547
117) 1,2,3-Trichloropropane	(4)	12.453	110	11365	4.096
119) n-Propylbenzene	(4)	12.489	91	126895	4.227
120) 2-Chlorotoluene	(4)	12.568	126	25325	4.161
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	89182	4.232
121) 4-Chlorotoluene	(4)	12.659	126	26743	4.165
124) tert-Butylbenzene	(4)	12.866	134	18384M	4.220
125) Pentachloroethane	(4)	12.903	167	15222	4.103
126) 1,2,4-Trimethylbenzene	(4)	12.909	105	91657	4.228
127) sec-Butylbenzene	(4)	13.031	105	115833	4.335
129) 1,3-Dichlorobenzene	(4)	13.128	146	52251	4.132
130) p-Isopropyltoluene	(4)	13.140	119	98068	4.283
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	497310	50.000
133) 1,4-Dichlorobenzene	(4)	13.201	146	54595	4.210
134) 1,2,3-Trimethylbenzene	(4)	13.213	105	97768	4.158

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

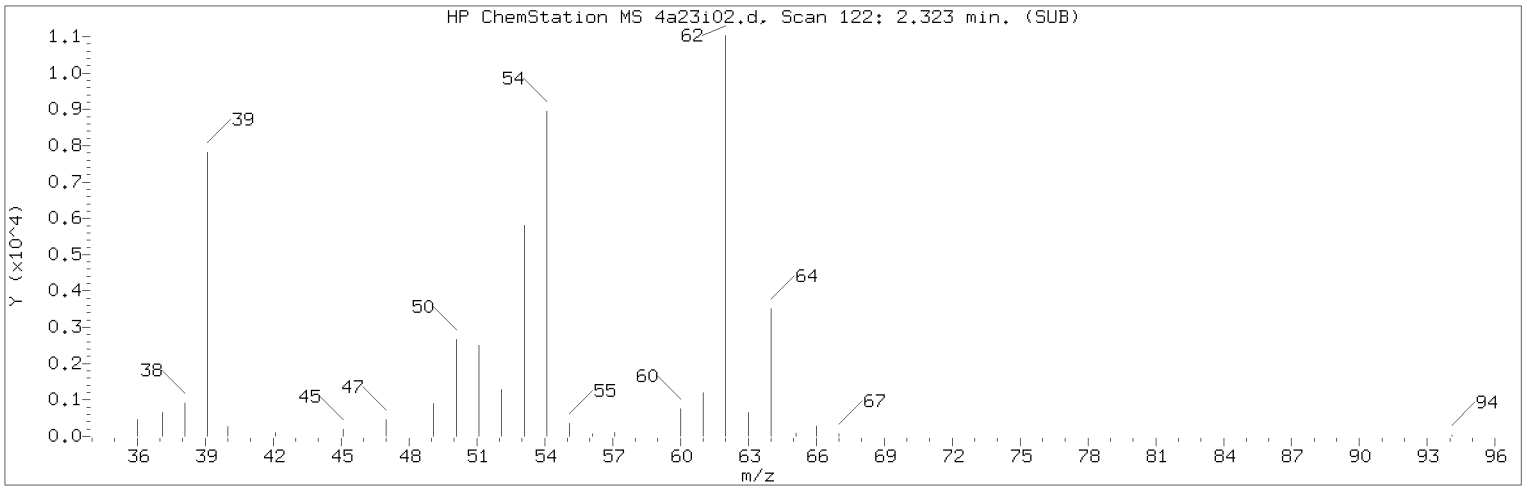
Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.280	91	66766	4.183
136) 1,3-Diethylbenzene	(4)	13.341	119	61735	4.302
141) Diethylbenzene (total)	(4)		100	177761	12.787
137) 1,4-Diethylbenzene	(4)	13.408	119	64438	4.232
139) n-Butylbenzene	(4)	13.432	92	51666M	4.268
138) 1,2-Dichlorobenzene	(4)	13.469	146	51332	4.132
140) 1,2-Diethylbenzene	(4)	13.487	119	51588	4.253
142) 1,2-Dibromo-3-chloropropane	(4)	14.010	75	9364	3.841
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	38459	4.056
146) 1,2,4-Trichlorobenzene	(4)	14.557	180	36821	3.990
147) Hexachlorobutadiene	(4)	14.643	225	16377	3.641
148) Naphthalene	(4)	14.746	128	126044	4.063
149) 1,2,3-Trichlorobenzene	(4)	14.886	180	35090	4.036
150) 2-Methylnaphthalene	(4)	15.537	142	74432	4.064

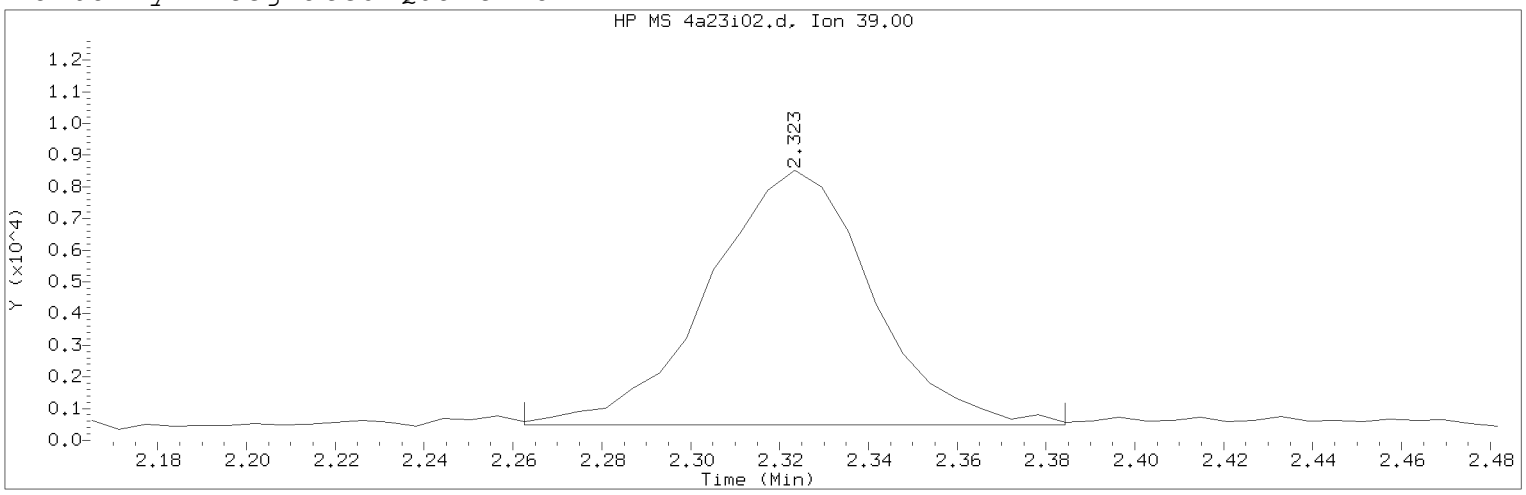
M = Compound was manually integrated.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

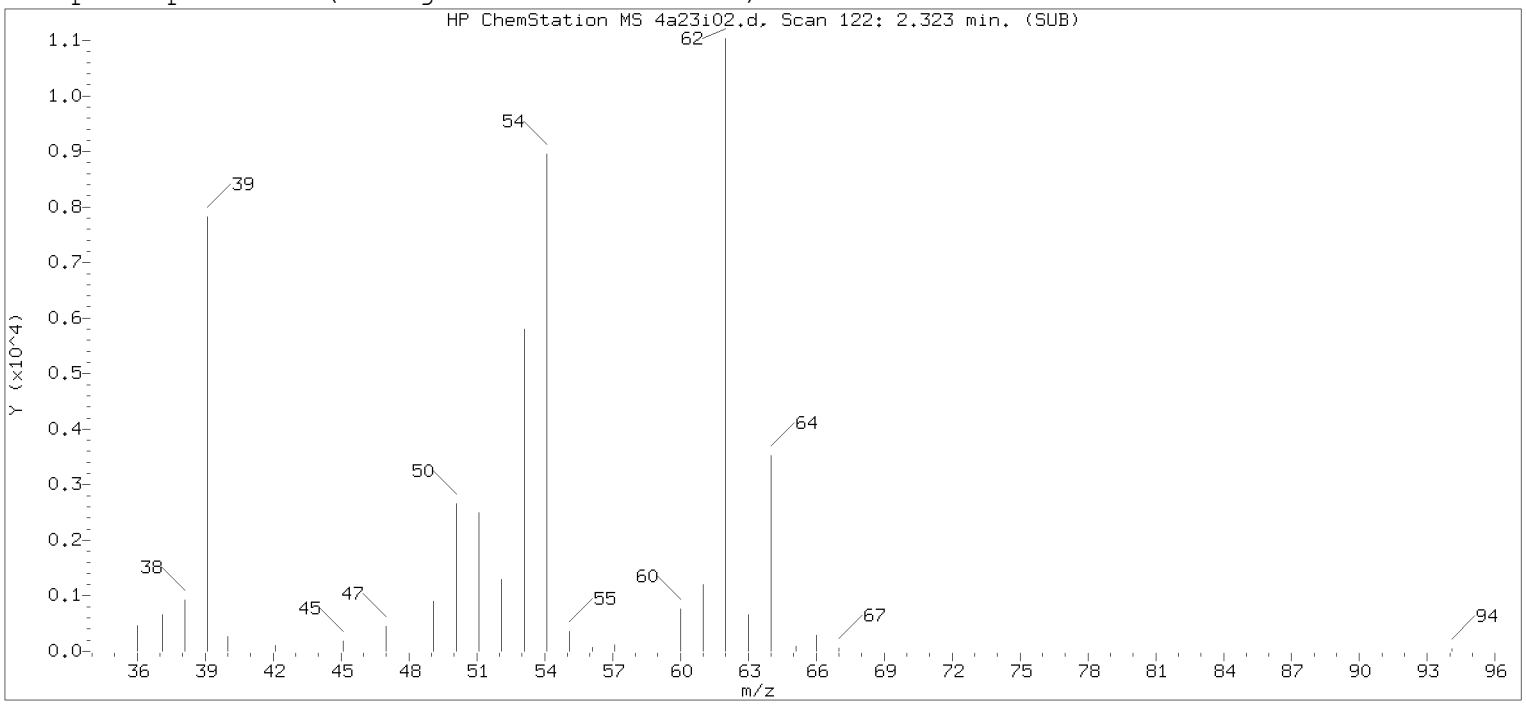
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 122
Retention Time (minutes): 2.323
Quant Ion : 39.00
Area (flag) : 20442M
On-Column Amount (ng) : 4.2915
Integration start scan : 111 Integration stop scan: 131
Y at integration start : 493 Y at integration end: 493

Reason for manual integration: improper integration

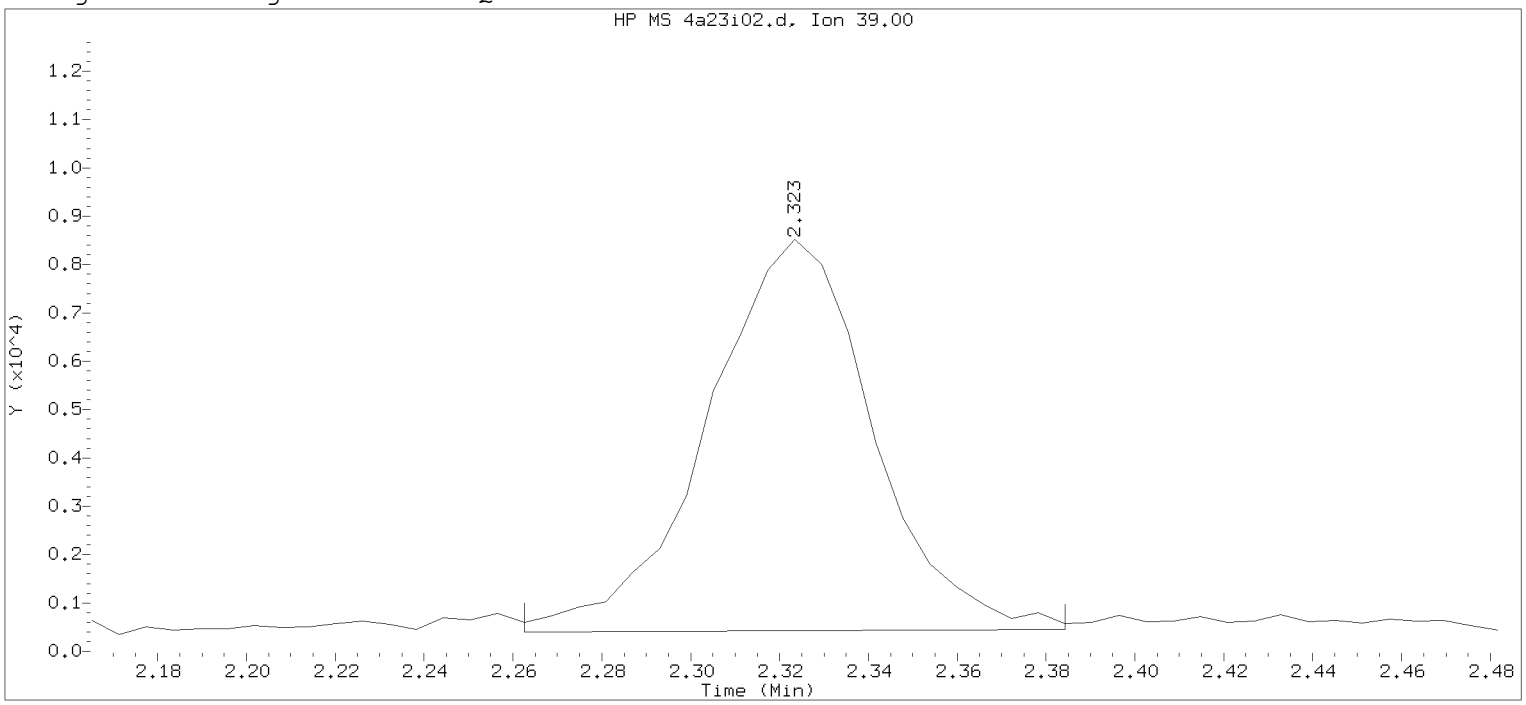
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

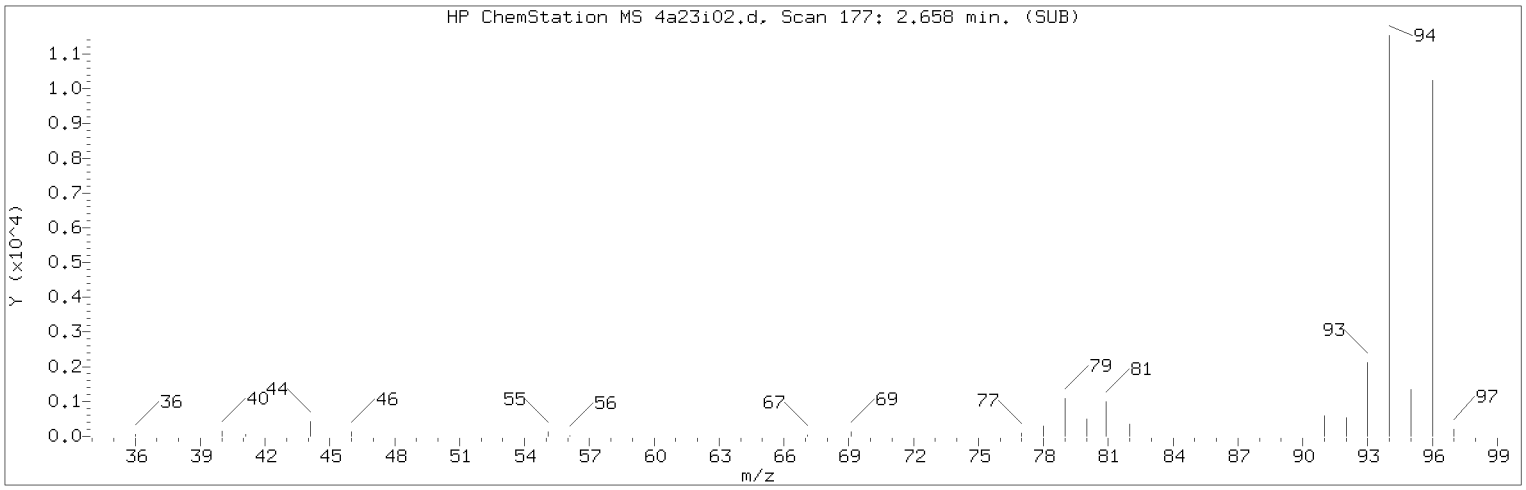
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 15:38
Date, time and analyst ID of latest file update: 23-Apr-2019 15:38 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

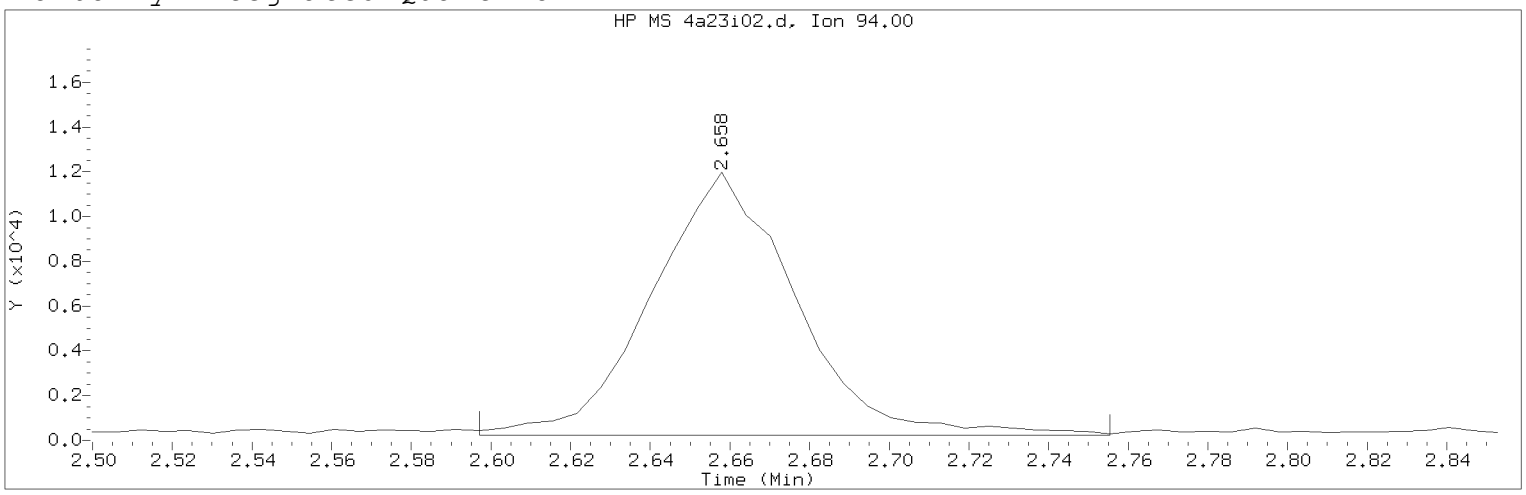
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 122
Retention Time (minutes): 2.323
Quant Ion : 39.00
Area : 20916
On-column Amount (ng) : 5.0290
Integration start scan : 111 Integration stop scan: 131
Y at integration start : 398 Y at integration end: 449

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

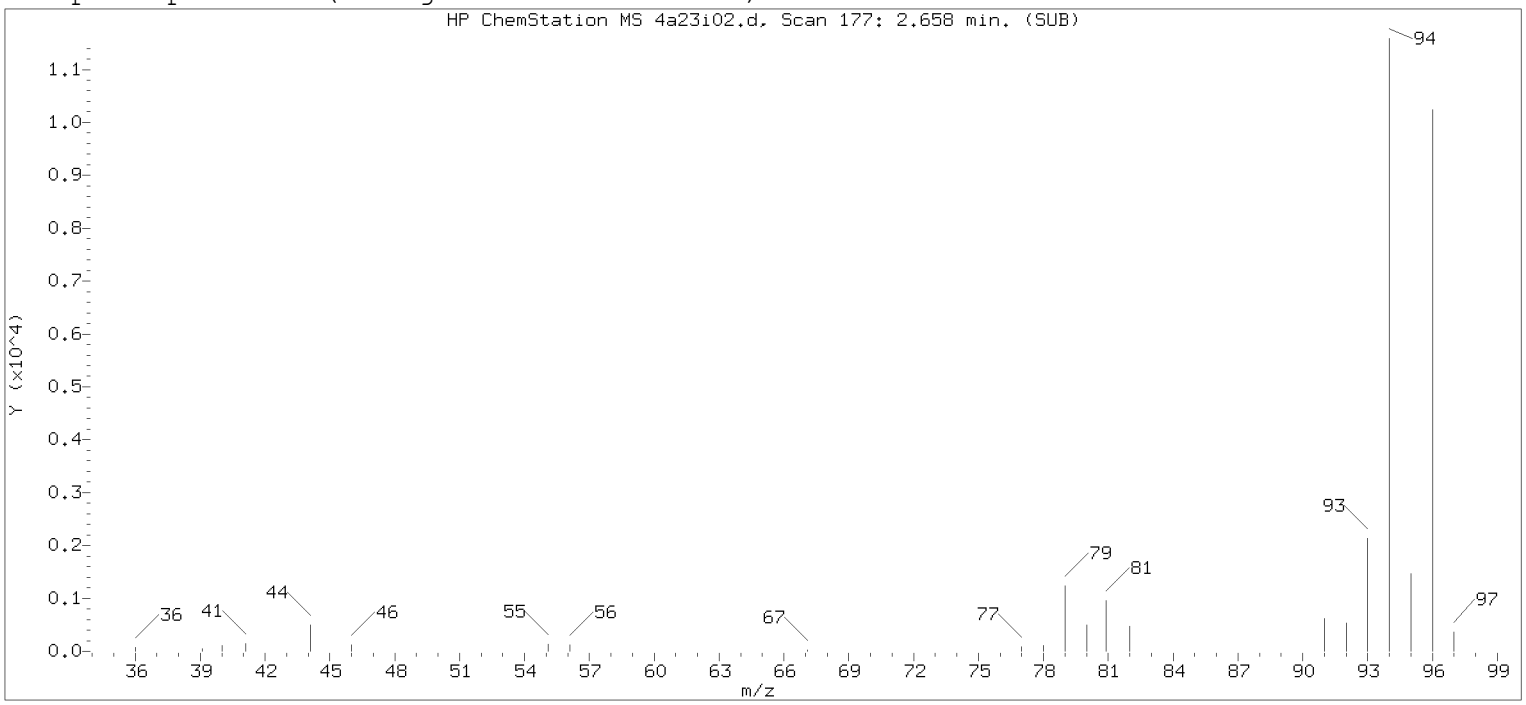
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 177
Retention Time (minutes): 2.658
Quant Ion : 94.00
Area (flag) : 29438M
On-Column Amount (ng) : 4.1486
Integration start scan : 166 Integration stop scan: 192
Y at integration start : 242 Y at integration end: 242

Reason for manual integration: improper integration

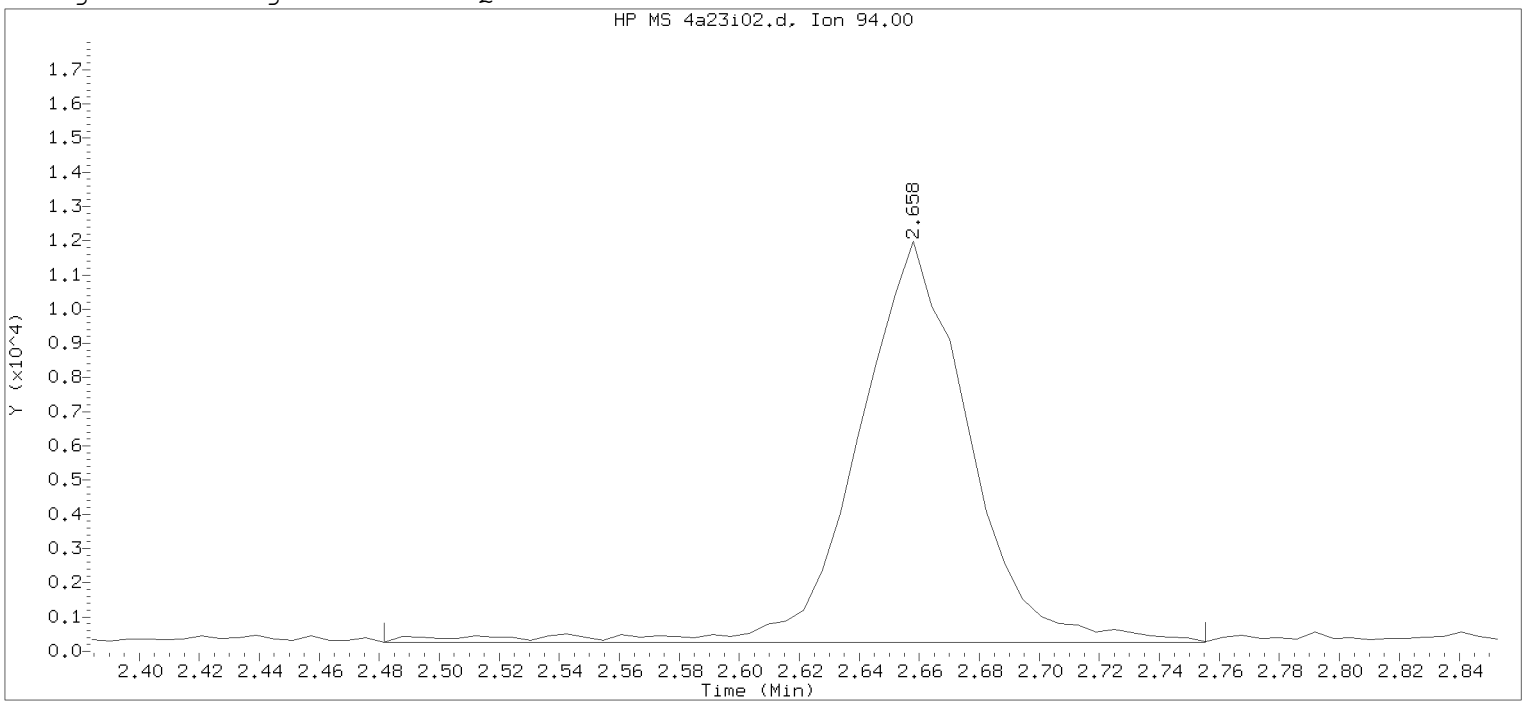
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

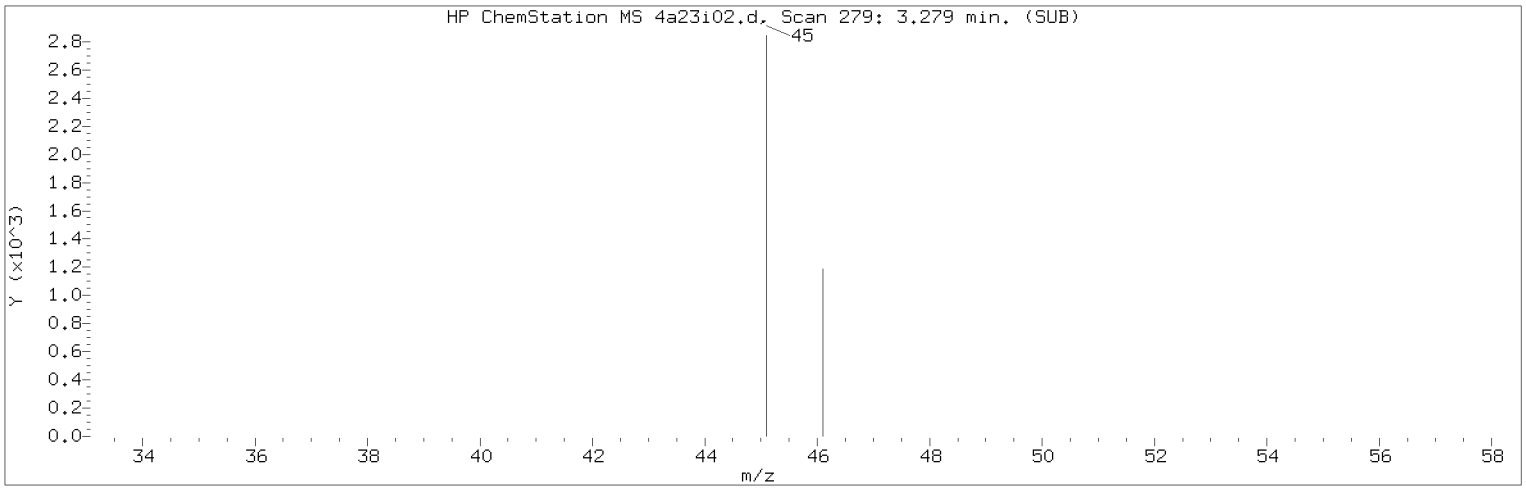
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 15:38
Date, time and analyst ID of latest file update: 23-Apr-2019 15:38 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

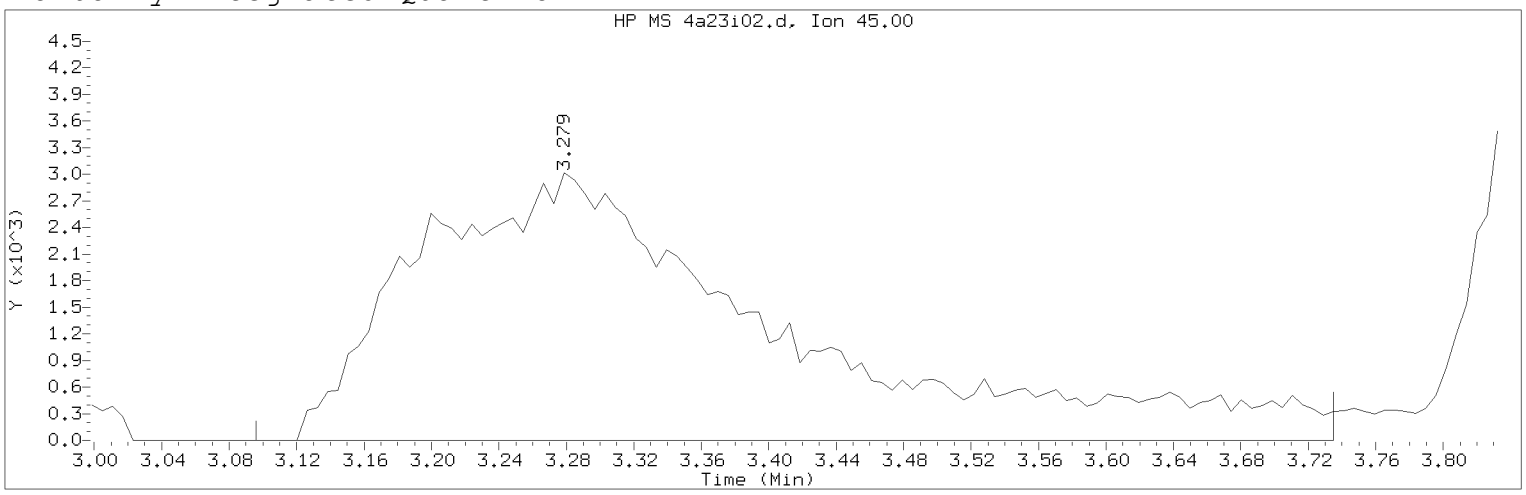
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 177
Retention Time (minutes): 2.658
Quant Ion : 94.00
Area : 30285
On-column Amount (ng) : 5.1764
Integration start scan : 147 Integration stop scan: 192
Y at integration start : 261 Y at integration end: 261

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlo1230

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

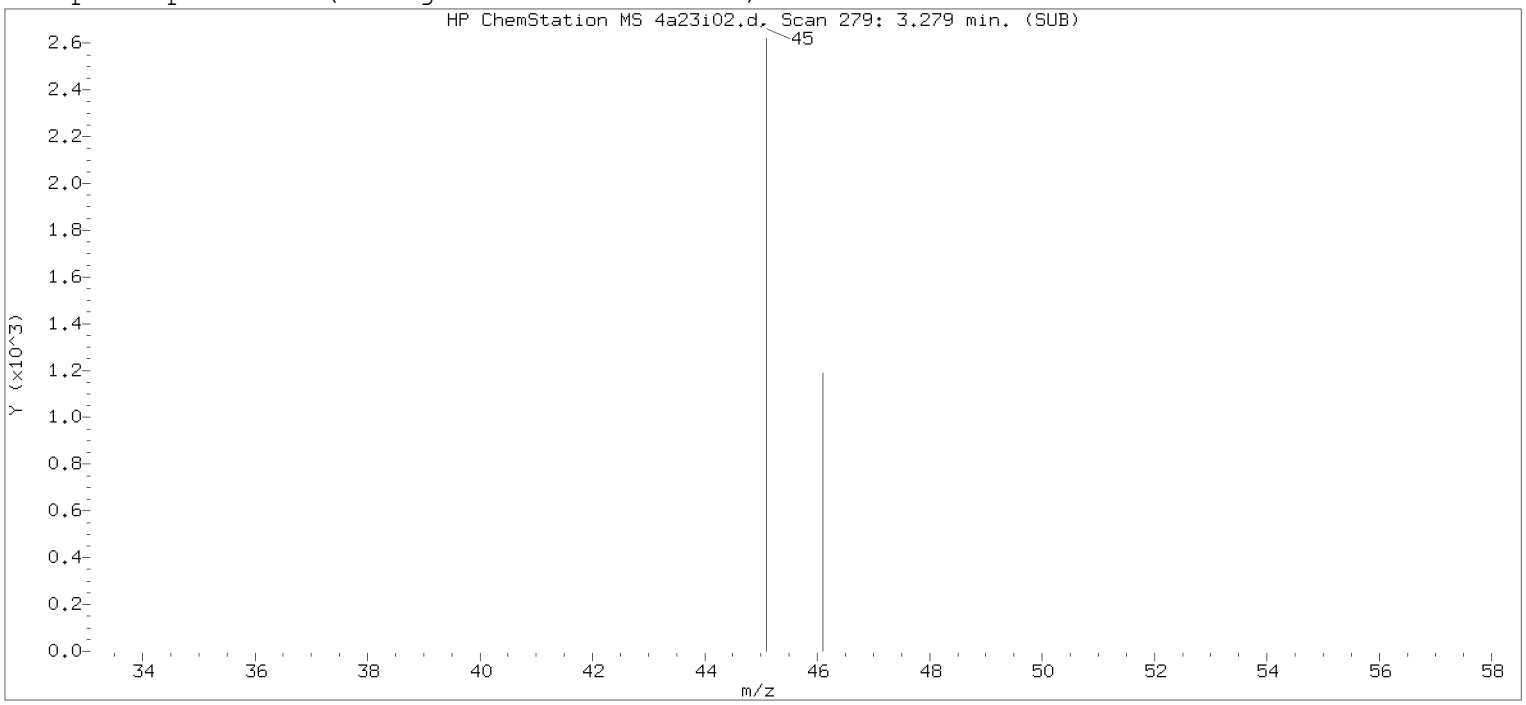
Compound Number : 13
Compound Name : Ethanol
Scan Number : 279
Retention Time (minutes): 3.279
Quant Ion : 45.00
Area (flag) : 44794M
On-Column Amount (ng) : 271.2645
Integration start scan : 248 Integration stop scan: 353
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

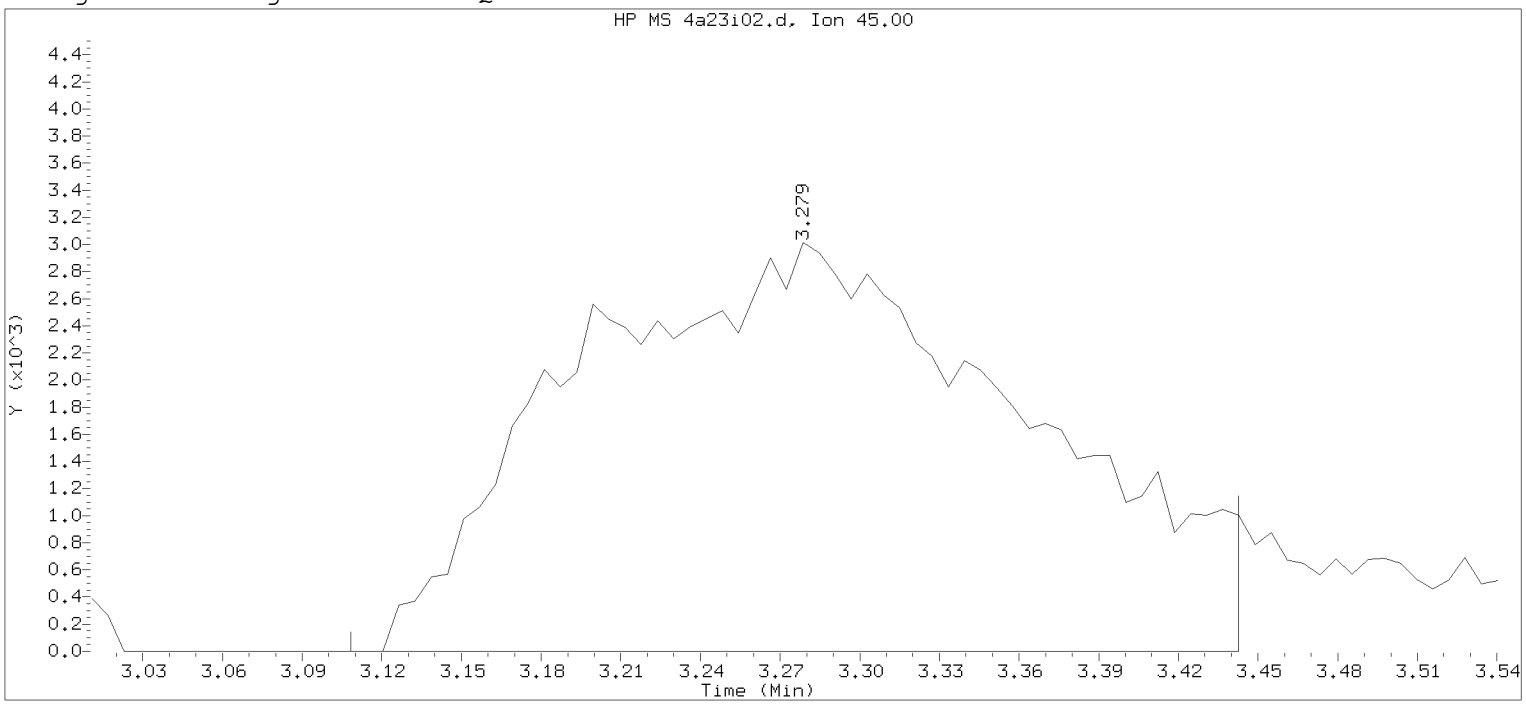
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

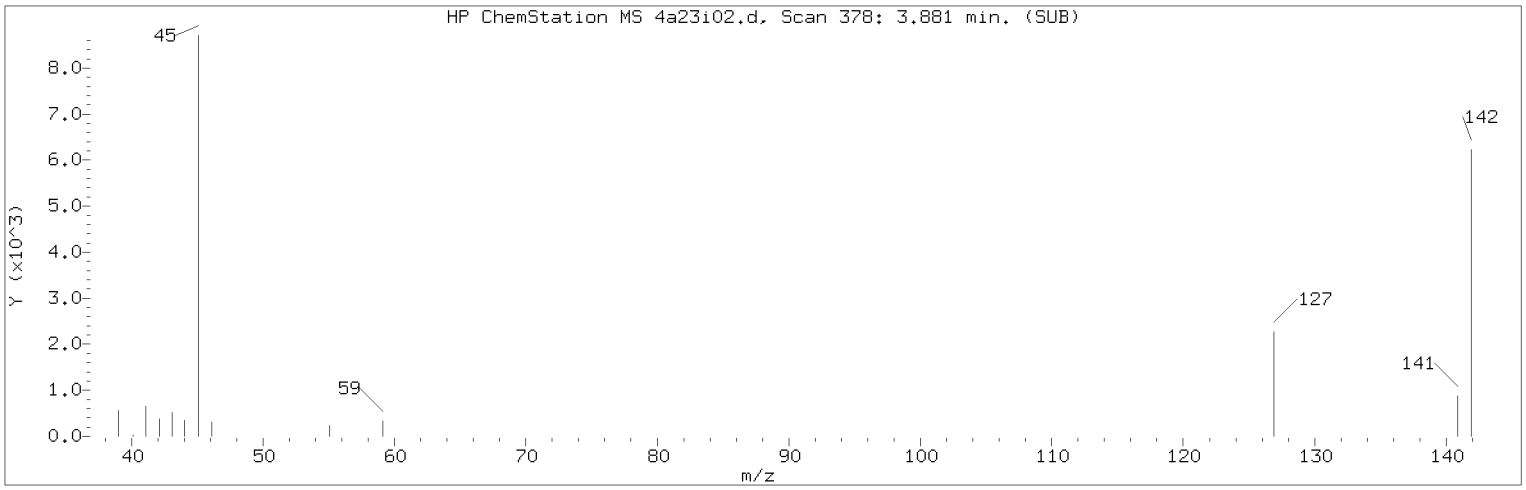
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 15:38
Date, time and analyst ID of latest file update: 23-Apr-2019 15:38 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

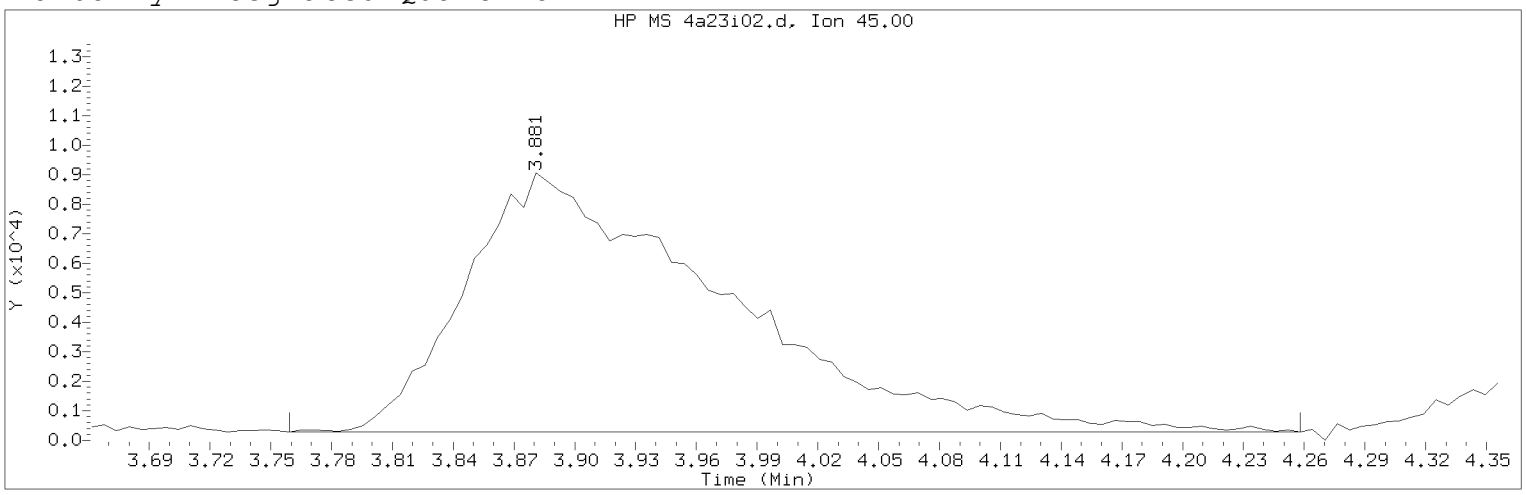
Compound Number	: 13		
Compound Name	: Ethanol		
Scan Number	: 279		
Retention Time (minutes)	: 3.279		
Quant Ion	: 45.00		
Area	: 35729		
On-column Amount (ng)	: 266.6786		
Integration start scan	: 250	Integration stop scan:	305
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user_id: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

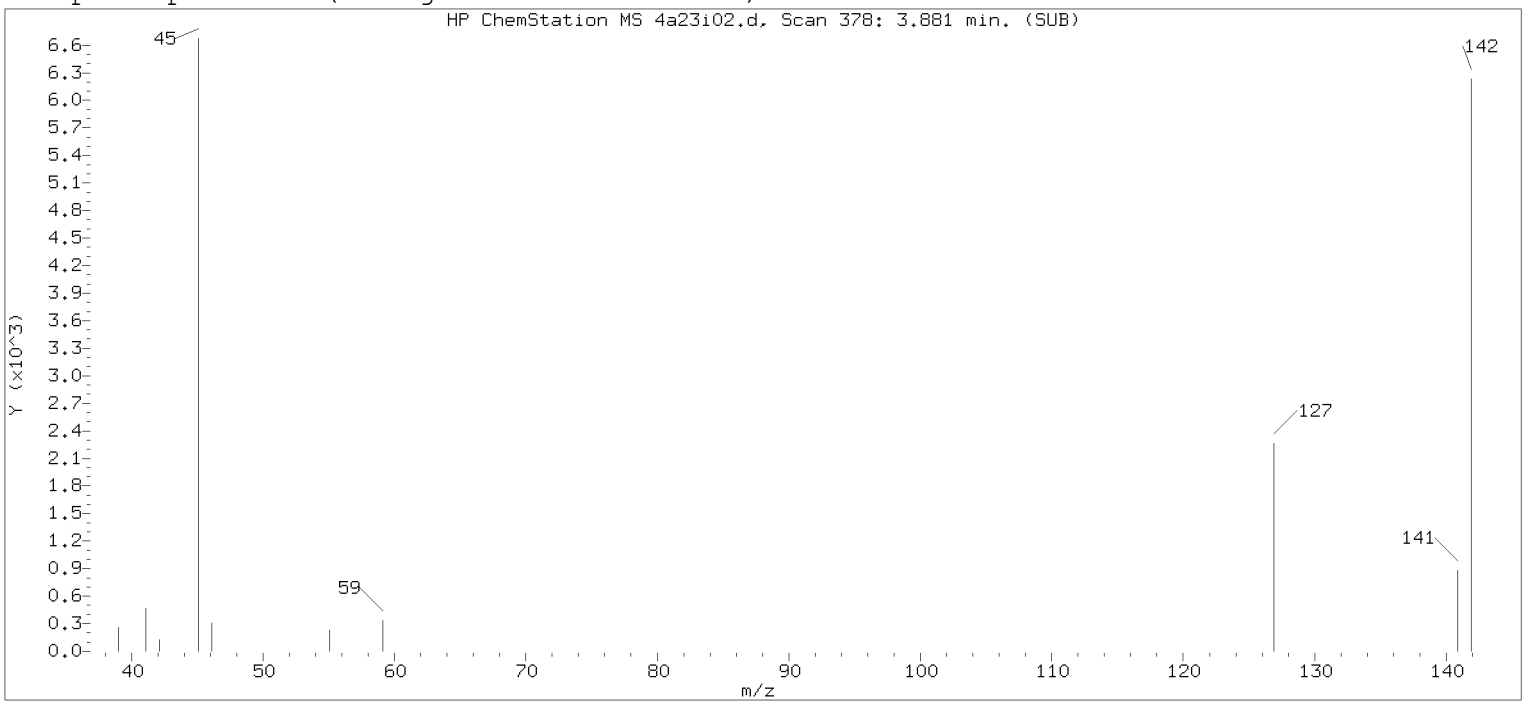
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 378
Retention Time (minutes): 3.881
Quant Ion : 45.00
Area (flag) : 78631M
On-Column Amount (ng) : 77.5298
Integration start scan : 357 Integration stop scan: 439
Y at integration start : 273 Y at integration end: 273

Reason for manual integration: improper integration

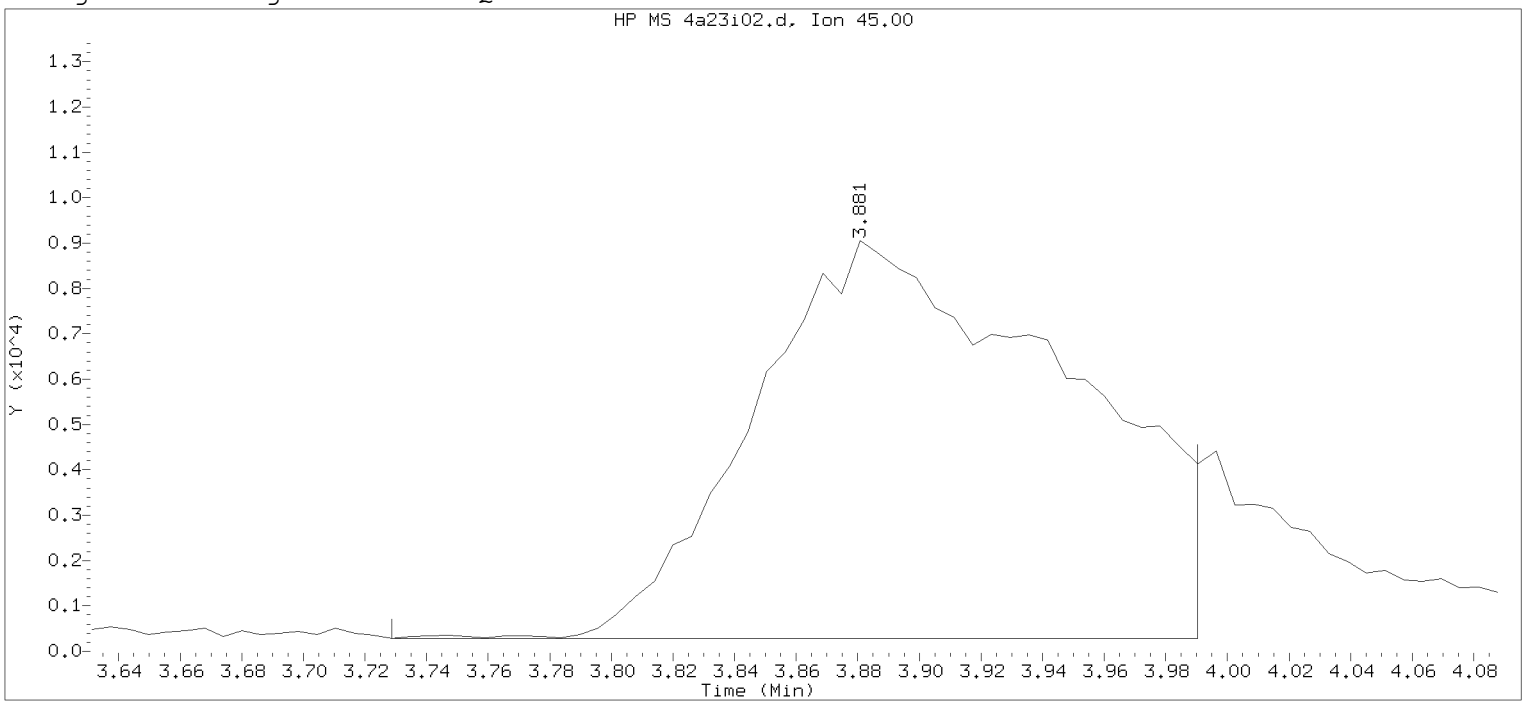
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

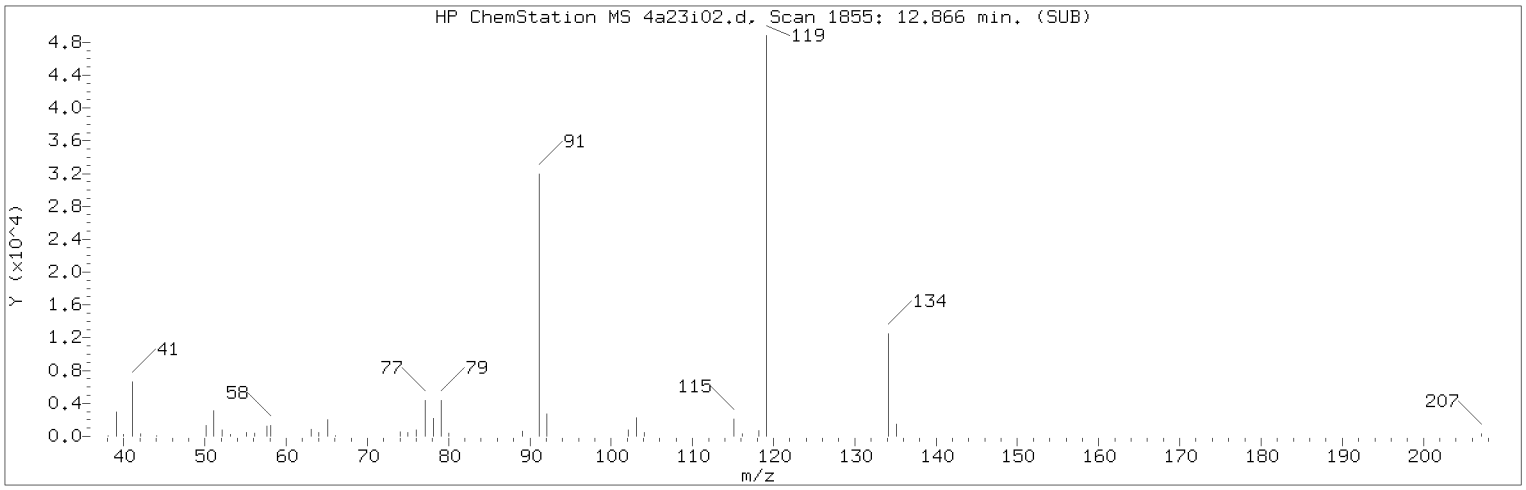
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 15:38
Date, time and analyst ID of latest file update: 23-Apr-2019 15:38 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

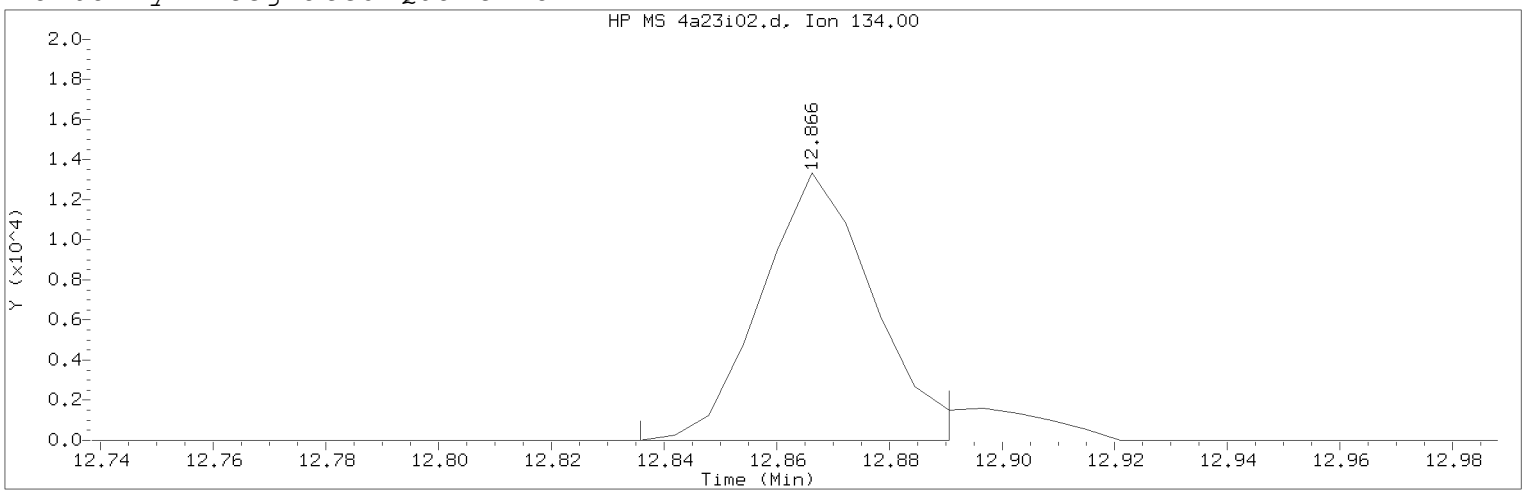
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 378
Retention Time (minutes): 3.881
Quant Ion : 45.00
Area : 62868
On-column Amount (ng) : 72.8356
Integration start scan : 352 Integration stop scan: 395
Y at integration start : 280 Y at integration end: 280

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlo1234

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

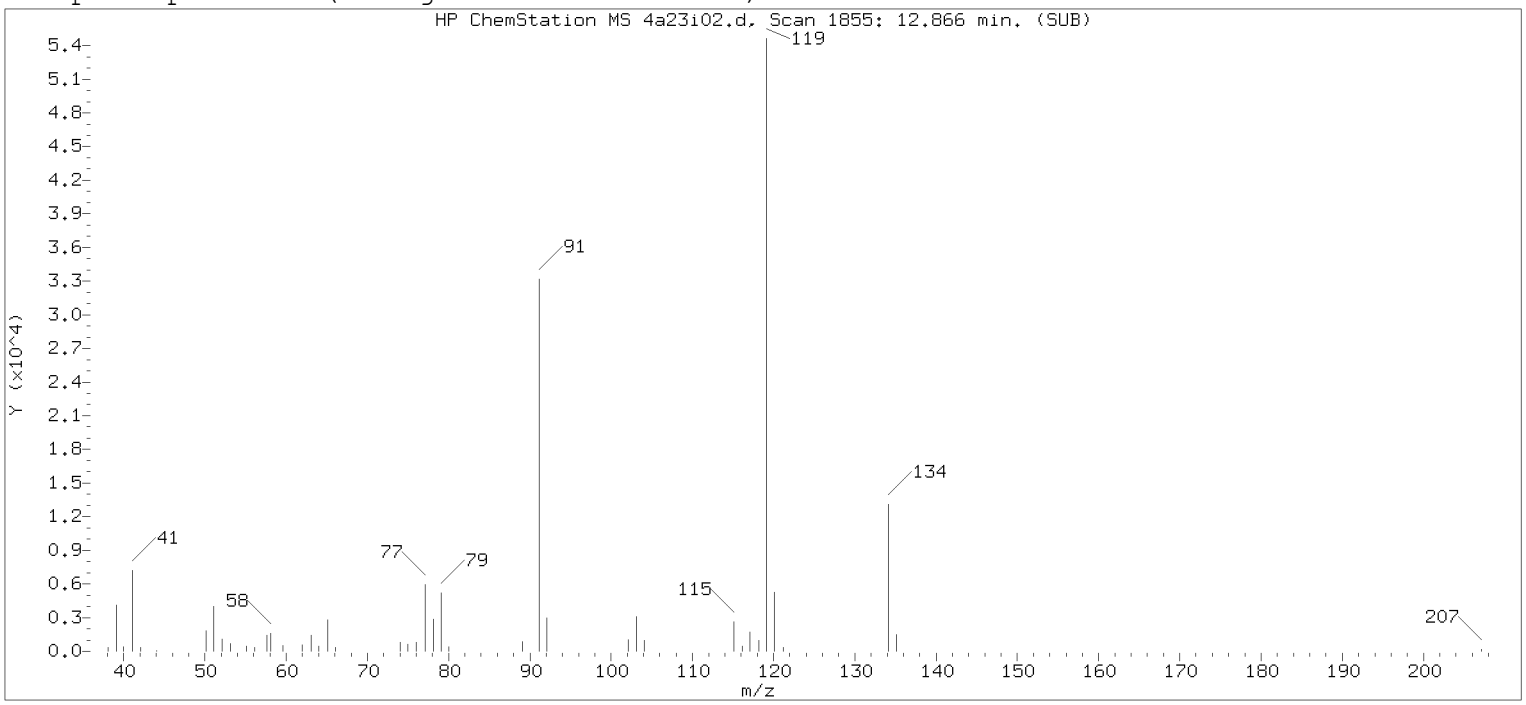
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area (flag) : 18384M
On-Column Amount (ng) : 4.2204
Integration start scan : 1849 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

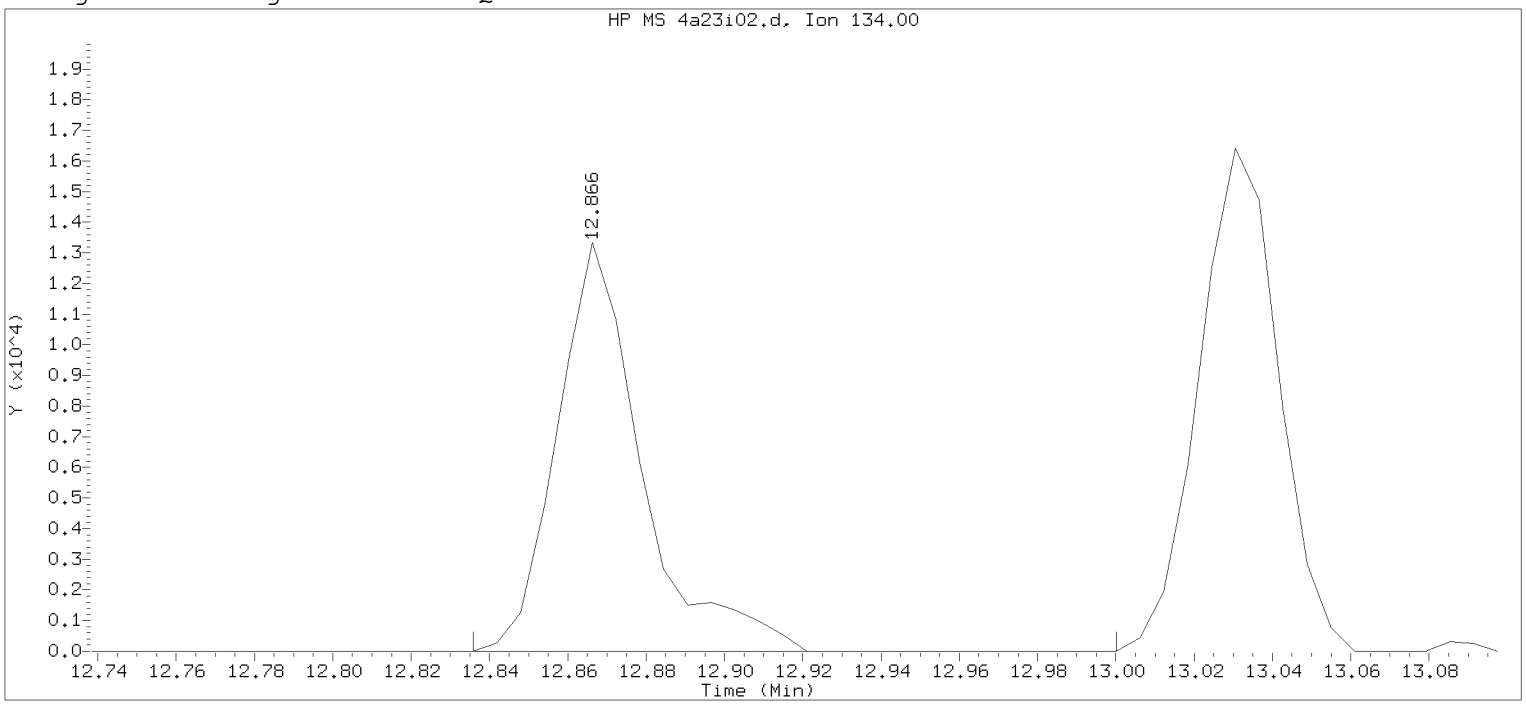
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

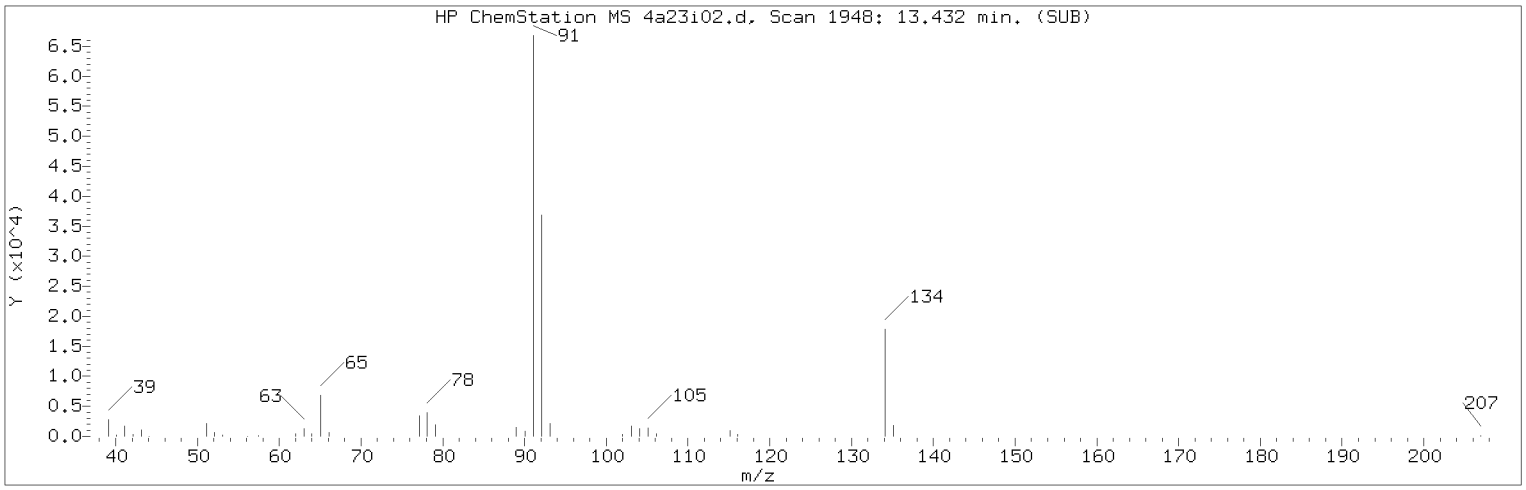
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 15:38
Date, time and analyst ID of latest file update: 23-Apr-2019 15:38 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

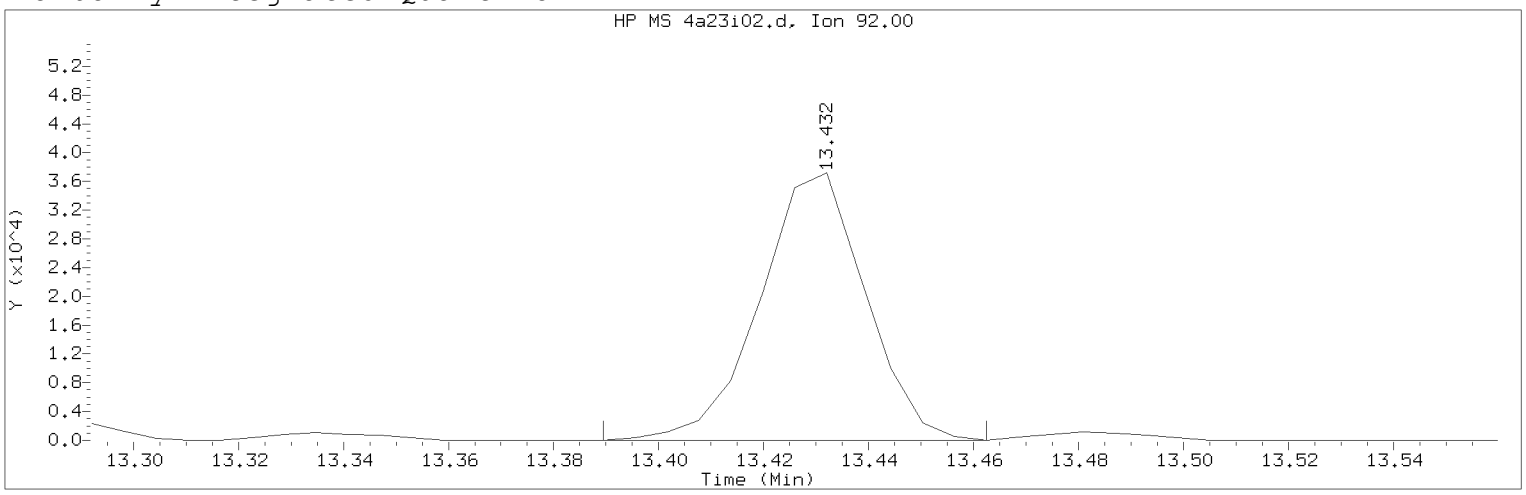
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area : 20017
On-column Amount (ng) : 4.3236
Integration start scan : 1849 Integration stop scan: 1876
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

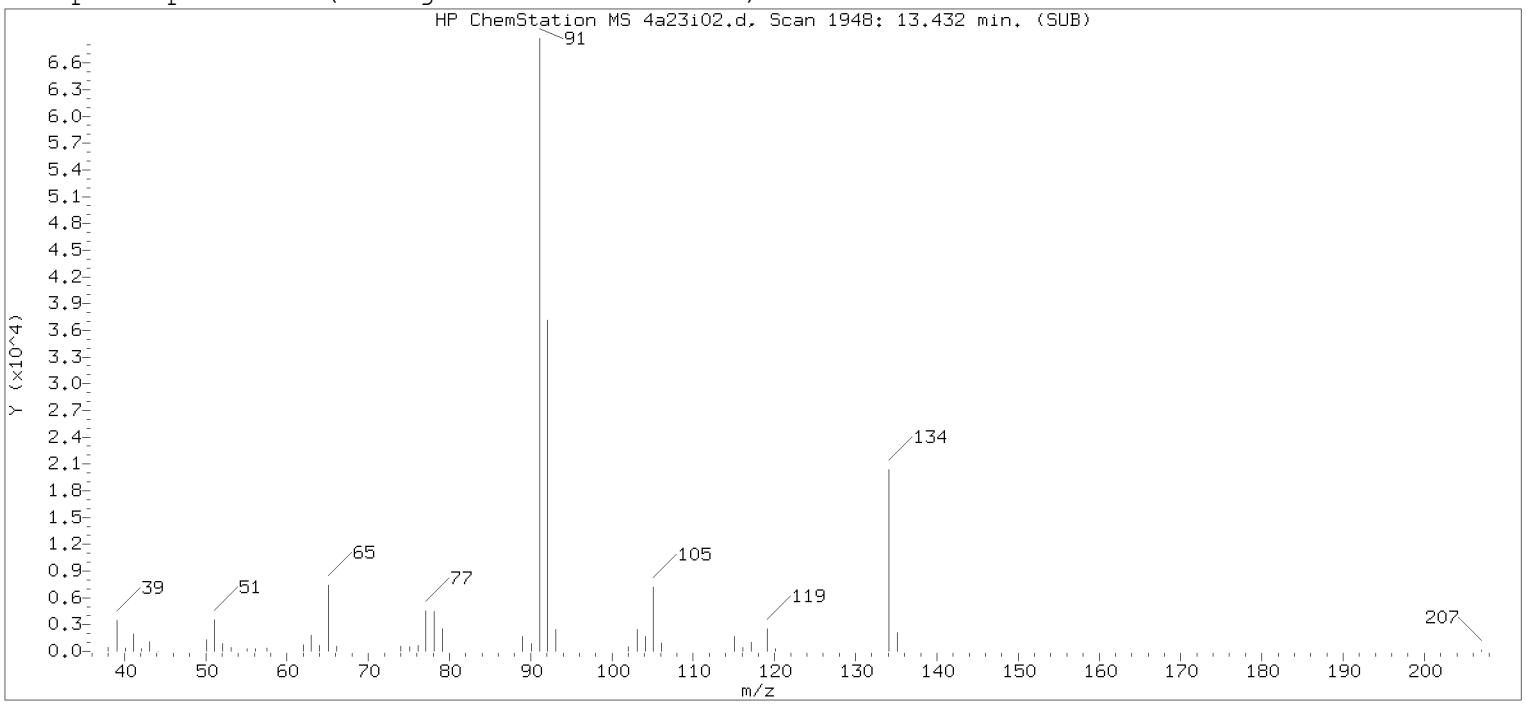
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1948
Retention Time (minutes): 13.432
Quant Ion : 92.00
Area (flag) : 51666M
On-Column Amount (ng) : 4.2680
Integration start scan : 1940 Integration stop scan: 1952
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

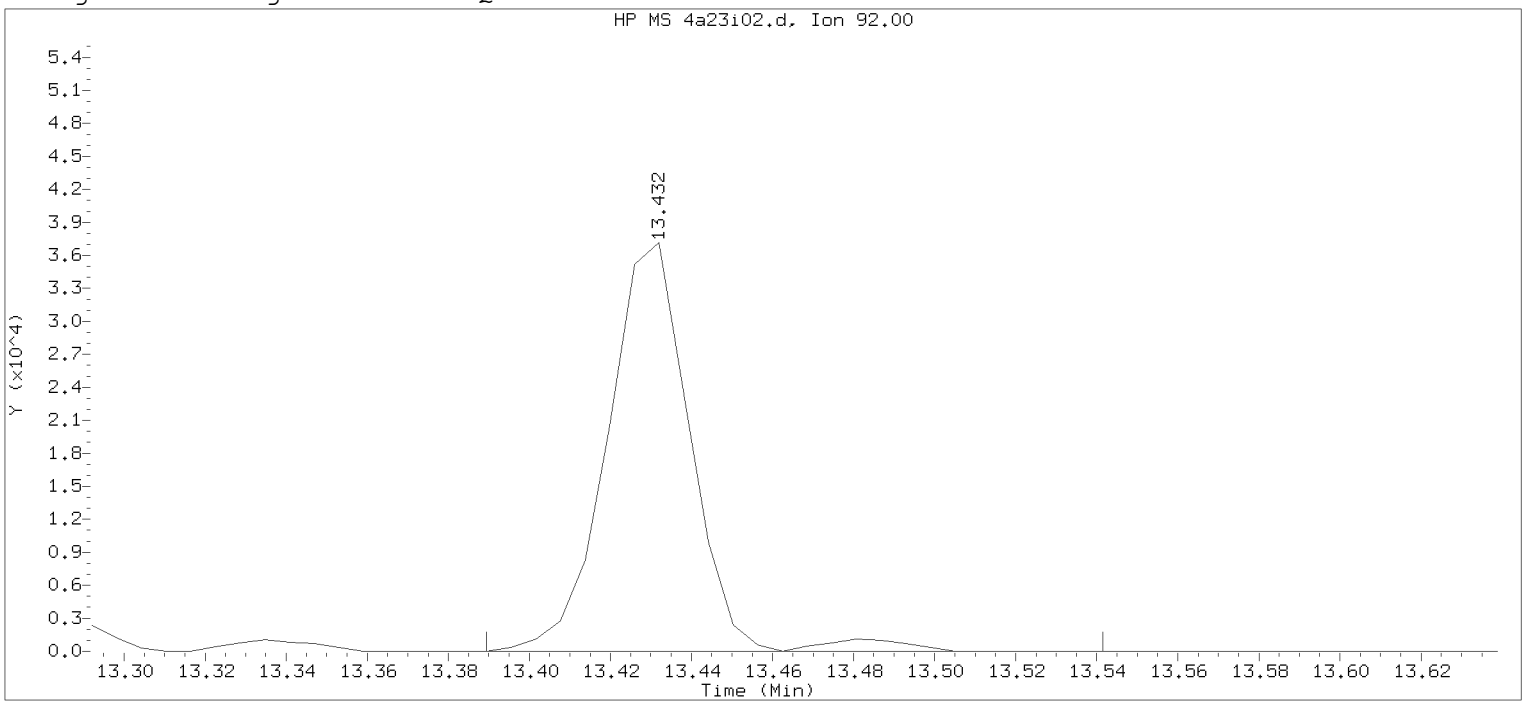
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



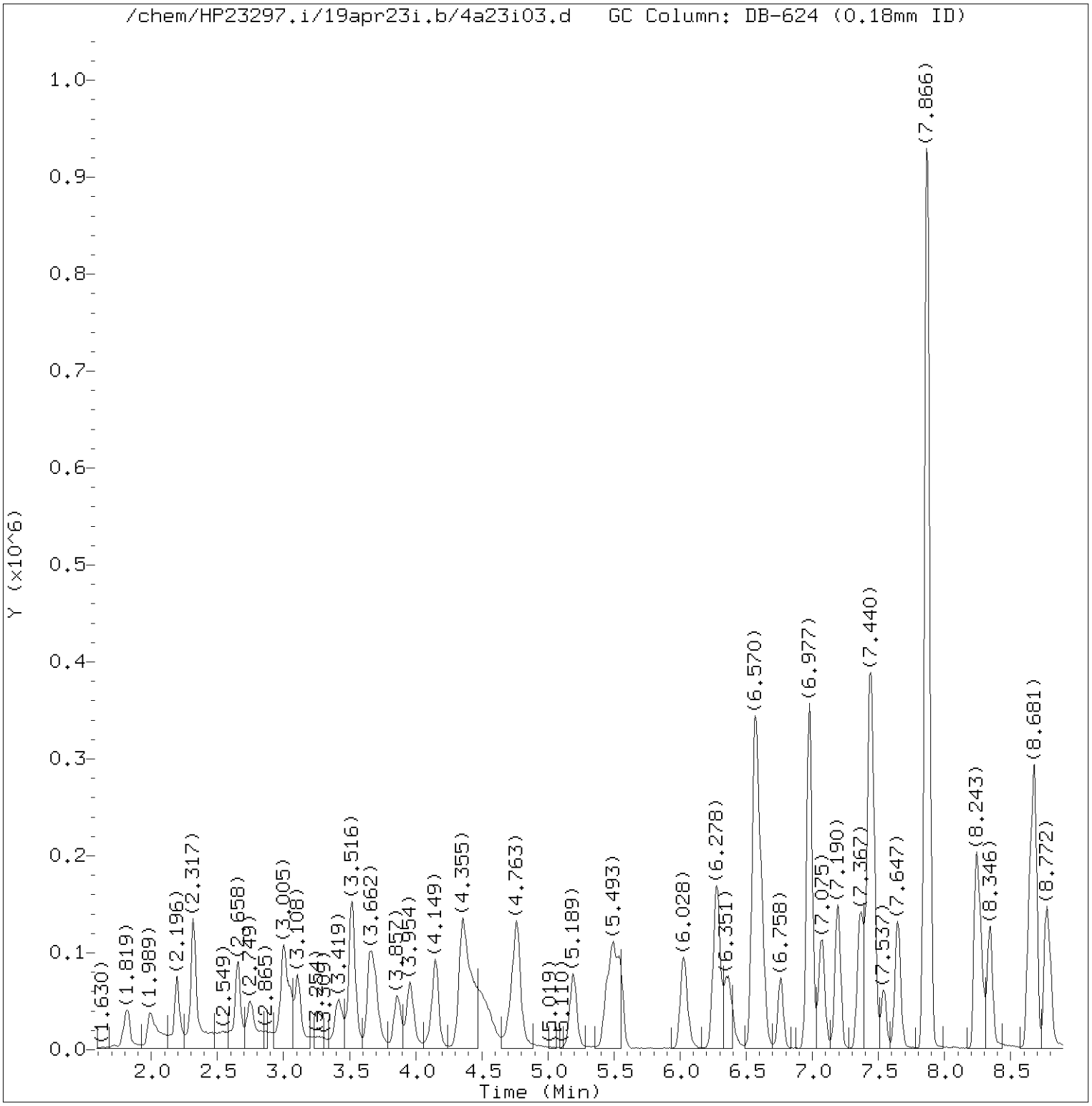
Data File: /chem/HP23297.i/19apr23i.b/4a23i02.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:20 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 15:38
Date, time and analyst ID of latest file update: 23-Apr-2019 15:38 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1948
Retention Time (minutes): 13.432
Quant Ion : 92.00
Area : 53267
On-column Amount (ng) : 4.4165
Integration start scan : 1940 Integration stop scan: 1965
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user_id: jmlong



Total Ion Chromatogram (TIC)

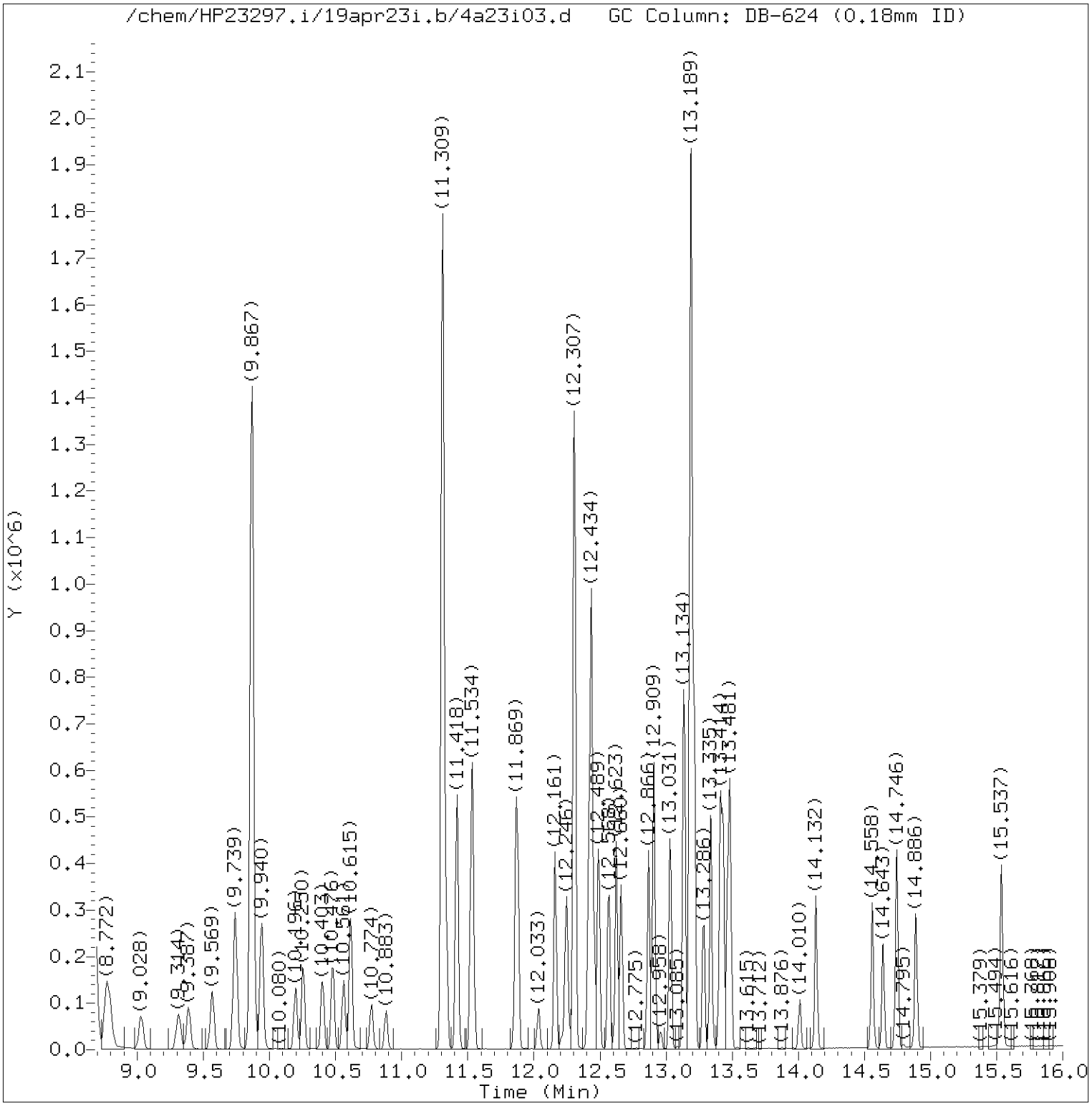
Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.989	85	89678	10.535
4) Chloromethane	(2)	2.196	50	89959	10.354
6) Vinyl Chloride	(2)	2.311	62	86618	10.355
5) 1,3-Butadiene	(2)	2.324	39	46705	9.949
8) Bromomethane	(2)	2.658	94	70686	10.055
9) Chloroethane	(2)	2.749	64	47039	9.924
10) Dichlorofluoromethane	(2)	2.999	67	109826	9.590
12) Trichlorofluoromethane	(2)	3.054	101	102748	10.587
11) n-Pentane	(2)	3.108	43	75485M	9.851
13) Ethanol	(1)	3.273	45	80898M	507.566
15) Freon 123a	(2)	3.419	67	57463	10.105
16) Acrolein	(1)	3.522	56	246043	103.206
17) 1,1-Dichloroethene	(2)	3.650	96	39942	10.617
17) 1,1-Dichloroethene	(2)	3.650	63	20743	9.995
19) Freon 113	(2)	3.674	101	43319	10.548
18) Acetone	(1)	3.711	58	24329	21.324
22) Methyl Iodide	(2)	3.857	142	80339	10.664
21) 2-Propanol	(1)	3.869	45	98546	100.953
23) Carbon Disulfide	(2)	3.954	76	141941	10.523
27) Methyl Acetate	(2)	4.130	43	79281	9.228
25) Allyl Chloride	(2)	4.149	41	86373	9.485
28) Methylene Chloride	(2)	4.355	84	49329	9.921
29)*t-Butyl alcohol-d10	(1)	4.374	65	425898	250.000
30) t-Butyl alcohol	(1)	4.520	59	177075	104.295
31) Acrylonitrile	(2)	4.714	53	44874	10.651
33) Methyl Tertiary Butyl Ether	(2)	4.757	73	144272	10.226
32) trans-1,2-Dichloroethene	(2)	4.769	96	47204	10.574
34) n-Hexane	(2)	5.189	57	76602	10.229
36) 1,1-Dichloroethane	(2)	5.438	63	88297	10.356
38) di-Isopropyl ether	(2)	5.493	45	174633	10.194
39) 2-Chloro-1,3-butadiene	(2)	5.548	53	80684	10.699
40) Ethyl t-butyl ether	(2)	6.028	59	154820	10.322
43) 1,2-Dichloroethene (Total)	(2)		96	101534	21.058
44) 2-Butanone	(2)	6.260	43	136834	20.085
42) cis-1,2-Dichloroethene	(2)	6.278	96	54330	10.484
45) 2,2-Dichloropropane	(2)	6.290	77	69112	10.466
47) Propionitrile	(1)	6.363	54	181319	105.782
48) Methacrylonitrile	(2)	6.570	67	201541	51.973

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.612	128	29947	10.643
50) Tetrahydrofuran	(1)	6.625	71	35519	20.862
51) Chloroform	(2)	6.758	83	87280	10.296
52)$Dibromofluoromethane	(2)	6.977	113	266635	49.659
52)$Dibromofluoromethane	(2)	6.977	111	273699	49.806
53) 1,1,1-Trichloroethane	(2)	6.984	97	72151	10.351
54) Cyclohexane	(2)	7.075	56	92350	10.193
54) Cyclohexane	(2)	7.069	84	75545	10.403
54) Cyclohexane	(2)	7.069	69	28435	10.737
56) Carbon Tetrachloride	(2)	7.190	117	62418	10.514
55) 1,1-Dichloropropene	(2)	7.196	75	67911	10.310
58) Isobutyl Alcohol	(1)	7.361	41	152866	258.155
57)$1,2-Dichloroethane-d4	(2)	7.434	102	64990	49.785
57)$1,2-Dichloroethane-d4	(2)	7.434	65	320439	49.772
57)$1,2-Dichloroethane-d4	(2)	7.434	104	41093	49.566
60) Benzene	(2)	7.464	78	208747	10.272
61) 1,2-Dichloroethane	(2)	7.537	62	69885	9.736
61) 1,2-Dichloroethane	(2)	7.531	98	6243	12.242
65) t-Amyl methyl ether	(2)	7.647	73	157953	10.303
67) n-Heptane	(2)	7.866	43	88938	9.847
66)*Fluorobenzene	(2)	7.866	96	1094665	50.000
69) n-Butanol	(1)	8.243	56	254670	543.947
71) Trichloroethene	(2)	8.346	95	52918	10.505
72) Methylcyclohexane	(2)	8.644	83	97837	10.553
72) Methylcyclohexane	(2)	8.644	98	41748	10.537
73) 1,2-Dichloropropane	(2)	8.687	63	53856	10.309
76) Methyl Methacrylate	(2)	8.766	69	60515	10.280
75) 1,4-Dioxane	(1)	8.784	88	37028M	286.624
74) Dibromomethane	(2)	8.796	93	35291	10.514
78) Bromodichloromethane	(2)	9.028	83	63363	10.463
79) 2-Nitropropane	(2)	9.314	41	63450M	20.405
80) 2-Chloroethyl Vinyl Ether	(2)	9.387	63	49018	10.318
81) cis-1,3-Dichloropropene	(2)	9.569	75	84237	10.582
82) 4-Methyl-2-pentanone	(2)	9.739	43	248251	20.864
83)$Toluene-d8	(3)	9.867	98	1123970	49.957
83)$Toluene-d8	(3)	9.867	100	732631	50.270
88) Toluene	(3)	9.940	92	134683	10.323
90) 1,3-Dichloropropene (total)	(3)		100	161585	21.310

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.196	75	77348	10.728
91) Ethyl Methacrylate	(3)	10.250	69	97537	10.388
92) 1,1,2-Trichloroethane	(3)	10.396	97	52105	10.329
93) Tetrachloroethene	(3)	10.476	166	58579	10.569
94) 1,3-Dichloropropane	(3)	10.561	76	86555	10.218
96) 2-Hexanone	(3)	10.615	43	201461	21.258
97) Dibromochloromethane	(3)	10.774	129	54113	10.721
99) 1,2-Dibromoethane	(3)	10.883	107	57141	10.384
100)*Chlorobenzene-d5	(3)	11.309	117	864912	50.000
102) Chlorobenzene	(3)	11.333	112	152513	10.447
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	50089	10.791
104) Ethylbenzene	(3)	11.418	91	259968	10.528
106) m+p-Xylene	(3)	11.534	106	206629	21.279
108) Xylene (Total)	(3)		106	307953	31.718
107) o-Xylene	(3)	11.863	106	101324	10.439
109) Styrene	(3)	11.875	104	167840	10.751
110) Bromoform	(3)	12.033	173	40978	10.856
111) Isopropylbenzene	(3)	12.161	105	257943	10.608
112) Cyclohexanone	(1)	12.246	55	143944M	280.439
114)$4-Bromofluorobenzene	(3)	12.307	95	428193	50.351
114)$4-Bromofluorobenzene	(3)	12.307	174	377783	50.484
116) 1,1,2,2-Tetrachloroethane	(4)	12.410	83	91861	10.296
115) Bromobenzene	(4)	12.422	156	69456	10.439
118) trans-1,4-Dichloro-2-butene	(4)	12.434	53	153910	52.900
117) 1,2,3-Trichloropropane	(4)	12.453	110	28609	10.381
119) n-Propylbenzene	(4)	12.489	91	308138	10.350
120) 2-Chlorotoluene	(4)	12.568	126	64291	10.545
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	220689	10.486
121) 4-Chlorotoluene	(4)	12.660	126	65324	10.290
124) tert-Butylbenzene	(4)	12.866	134	44873M	10.374
125) Pentachloroethane	(4)	12.903	167	39537	10.606
126) 1,2,4-Trimethylbenzene	(4)	12.909	105	229305	10.554
127) sec-Butylbenzene	(4)	13.031	105	282547	10.553
129) 1,3-Dichlorobenzene	(4)	13.134	146	129394	10.329
130) p-Isopropyltoluene	(4)	13.134	119	246097	10.663
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	484581	50.000
133) 1,4-Dichlorobenzene	(4)	13.201	146	134465	10.419
134) 1,2,3-Trimethylbenzene	(4)	13.213	105	247776	10.529

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

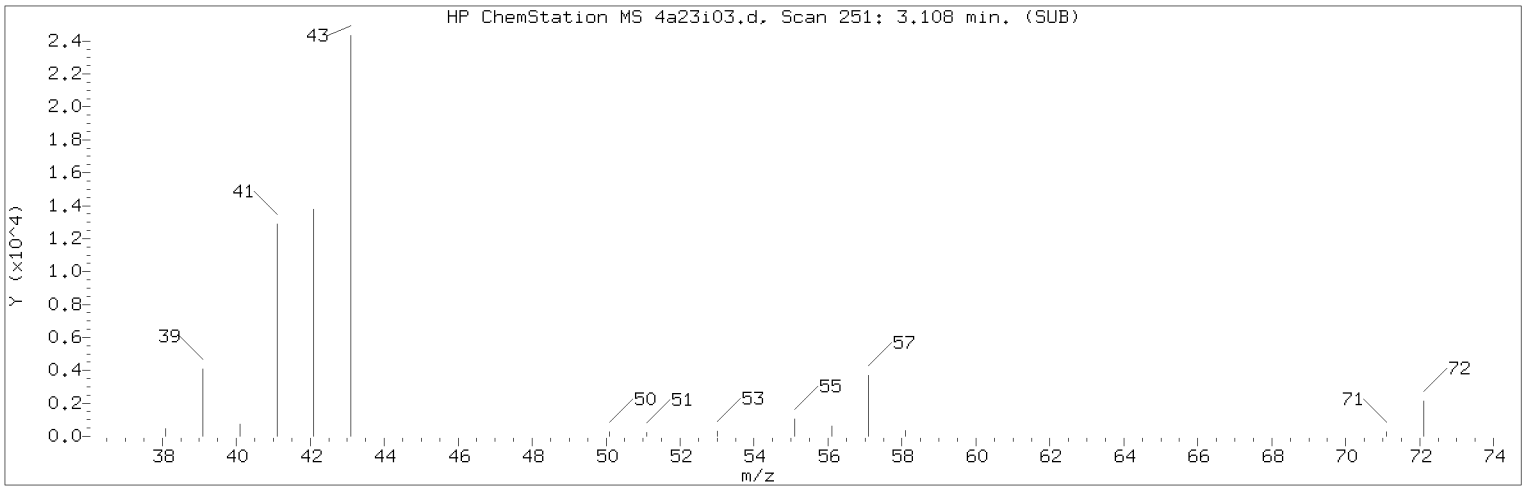
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.286	91	175119	10.806
136) 1,3-Diethylbenzene	(4)	13.341	119	155157	10.705
141) Diethylbenzene (total)	(4)		100	450267	32.077
137) 1,4-Diethylbenzene	(4)	13.408	119	164853	10.715
139) n-Butylbenzene	(4)	13.432	92	126058M	10.448
138) 1,2-Dichlorobenzene	(4)	13.469	146	126935	10.319
140) 1,2-Diethylbenzene	(4)	13.481	119	130257	10.657
142) 1,2-Dibromo-3-chloropropane	(4)	14.010	75	23588	9.953
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	94818	10.174
146) 1,2,4-Trichlorobenzene	(4)	14.558	180	89430	9.963
147) Hexachlorobutadiene	(4)	14.643	225	39528	9.323
148) Naphthalene	(4)	14.746	128	315046	10.277
149) 1,2,3-Trichlorobenzene	(4)	14.892	180	86526	10.141
150) 2-Methylnaphthalene	(4)	15.537	142	194616	10.586

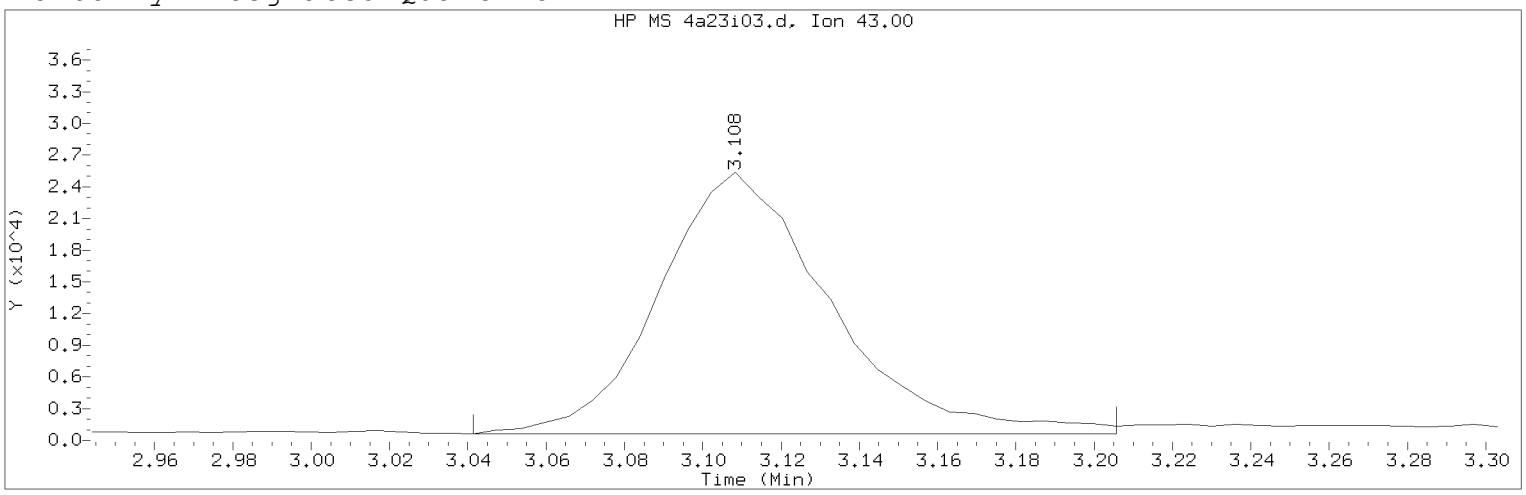
M = Compound was manually integrated.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

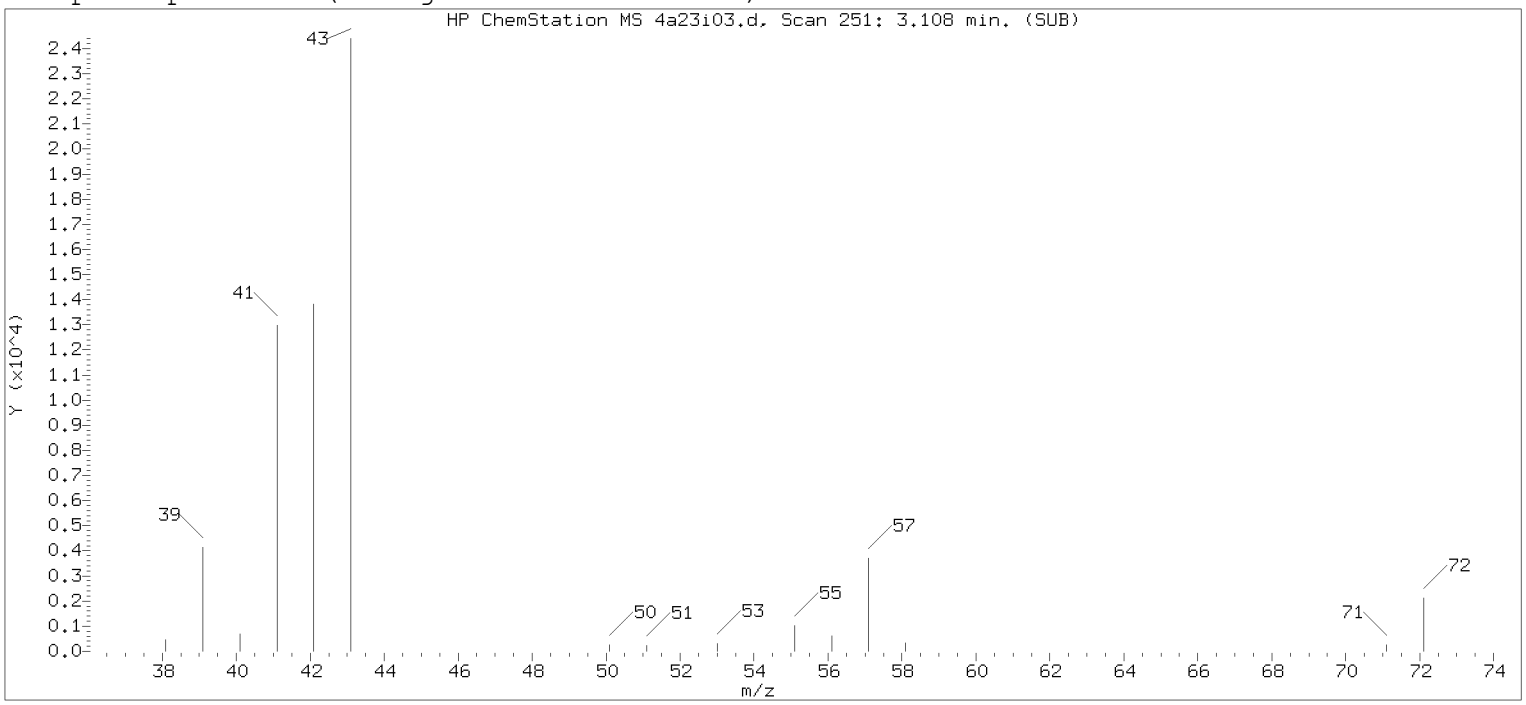
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 251
Retention Time (minutes): 3.108
Quant Ion : 43.00
Area (flag) : 75485M
On-Column Amount (ng) : 9.8514
Integration start scan : 239 Integration stop scan: 266
Y at integration start : 603 Y at integration end: 603

Reason for manual integration: improper integration

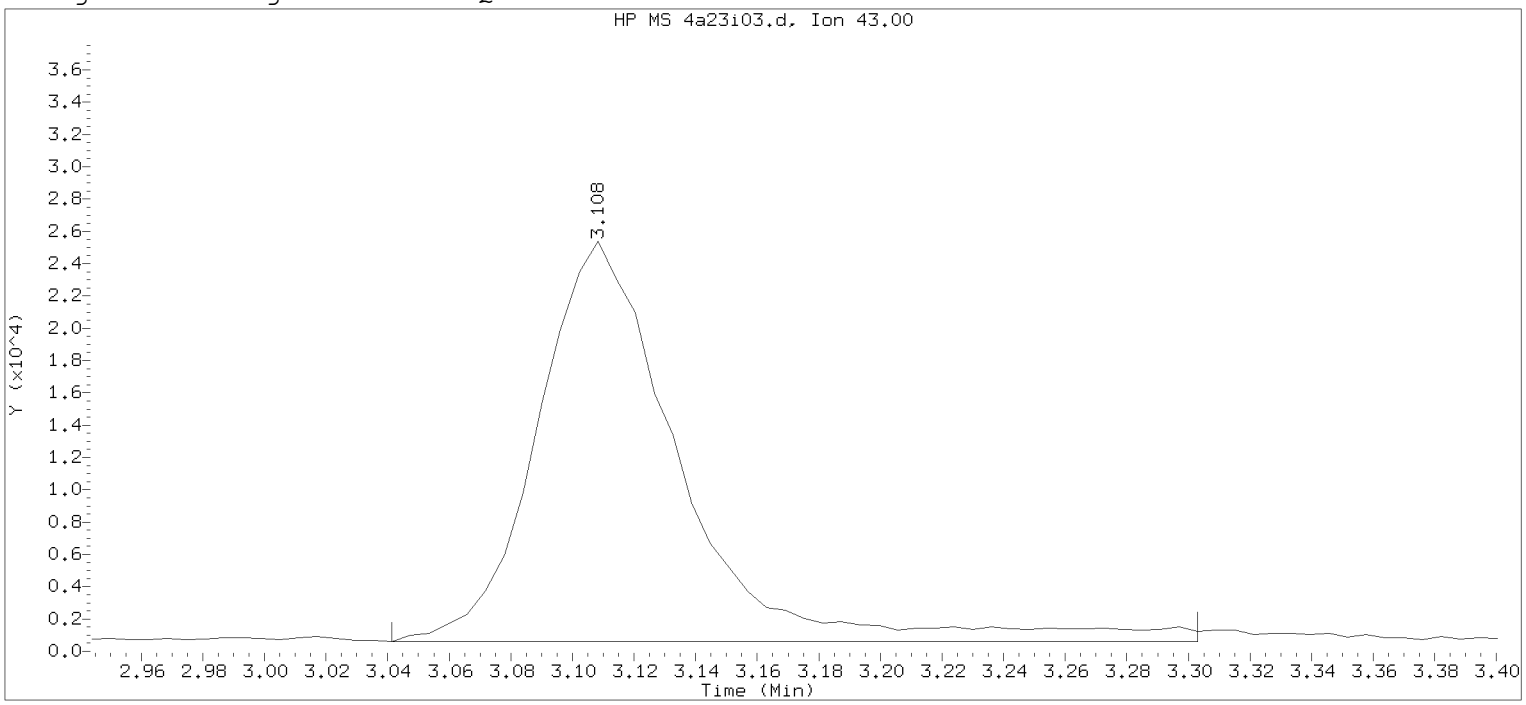
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

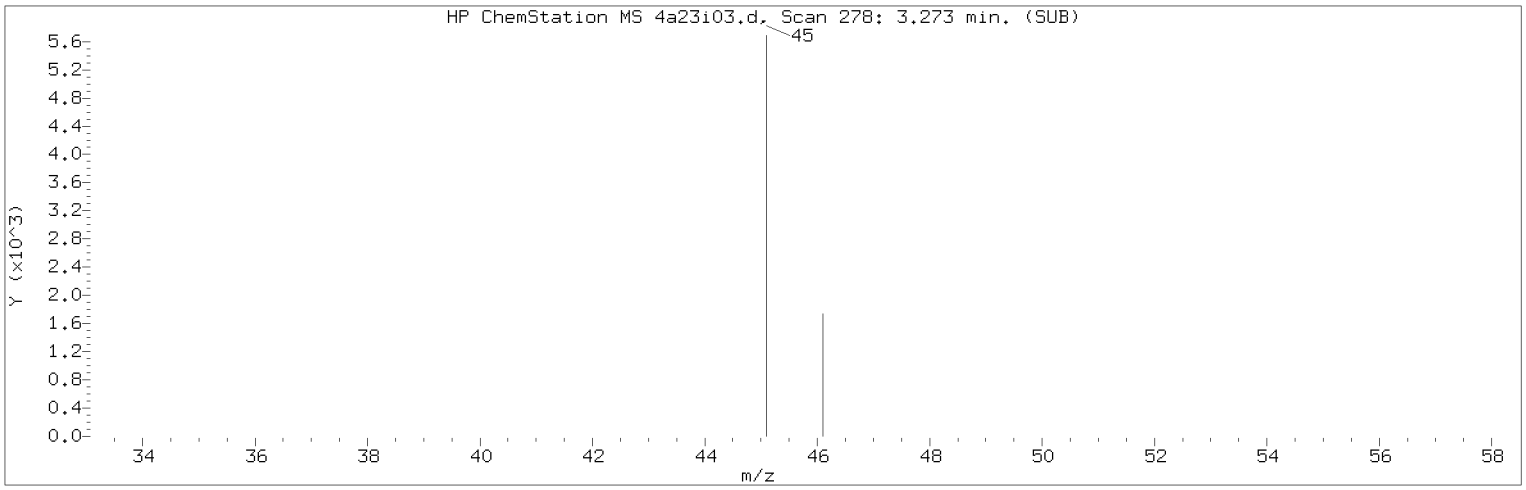
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:00
Date, time and analyst ID of latest file update: 23-Apr-2019 16:01 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

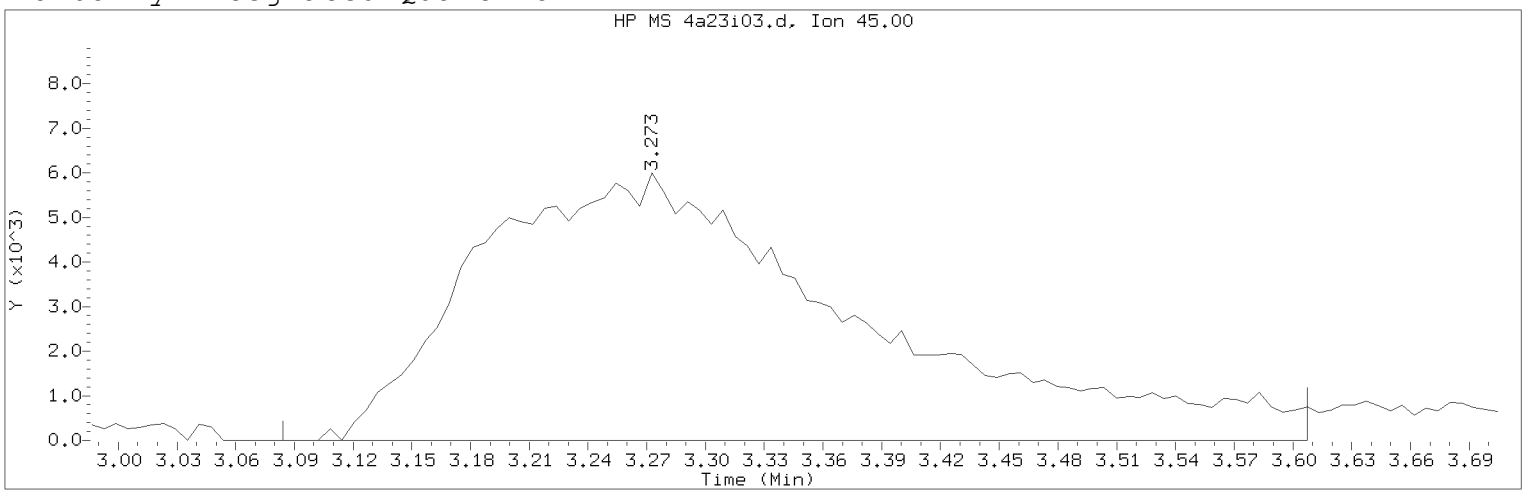
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 251
Retention Time (minutes): 3.108
Quant Ion : 43.00
Area : 79906
On-column Amount (ng) : 9.7109
Integration start scan : 239 Integration stop scan: 282
Y at integration start : 608 Y at integration end: 608

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

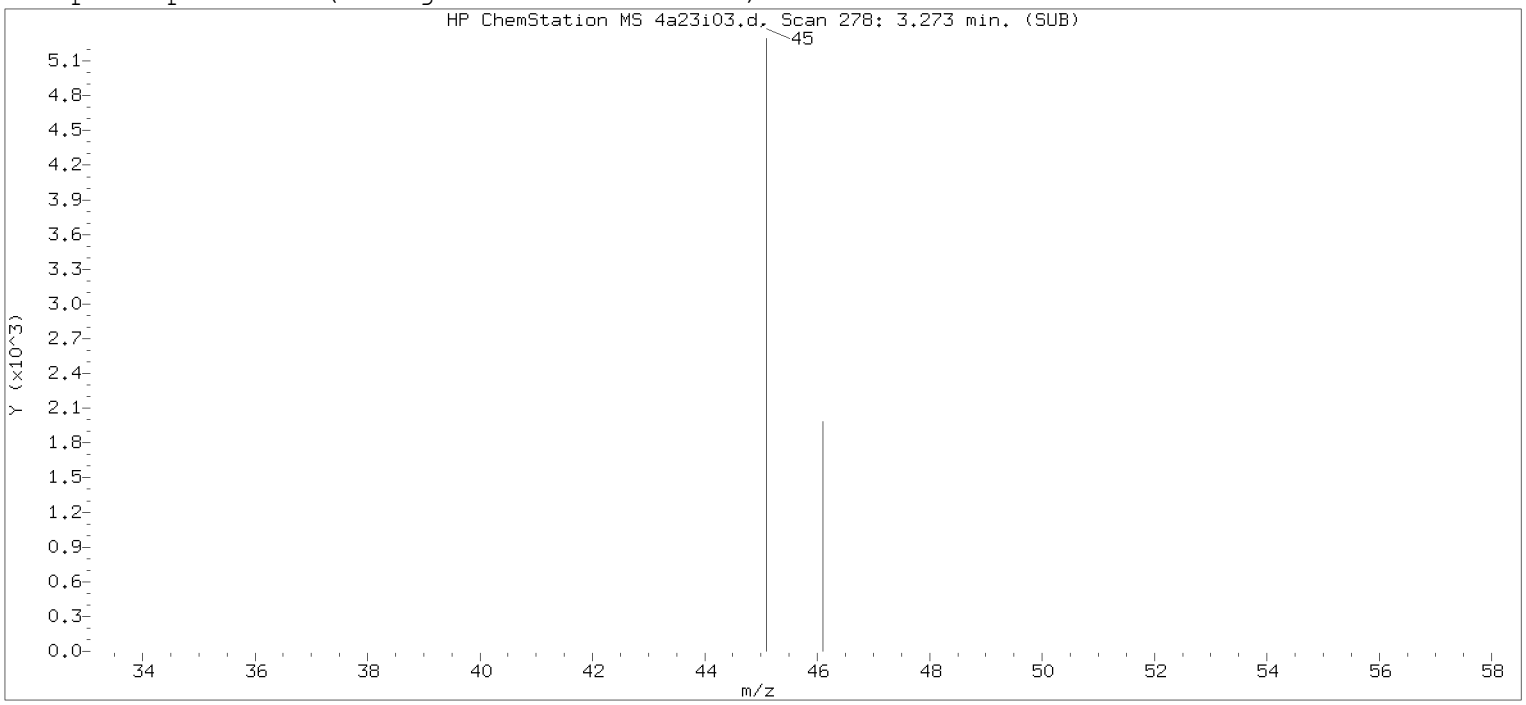
Compound Number : 13
Compound Name : Ethanol
Scan Number : 278
Retention Time (minutes): 3.273
Quant Ion : 45.00
Area (flag) : 80898M
On-Column Amount (ng) : 507.5656
Integration start scan : 246 Integration stop scan: 332
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

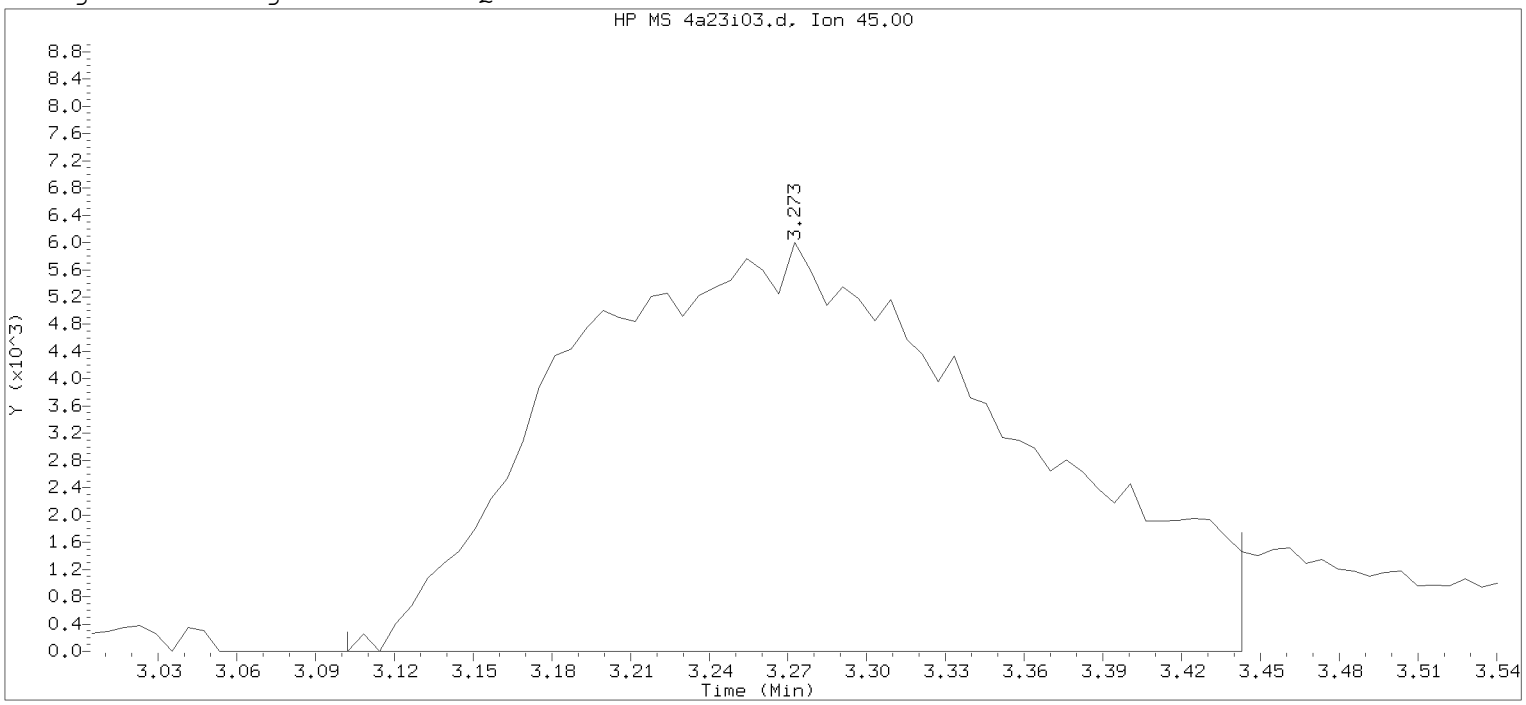
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

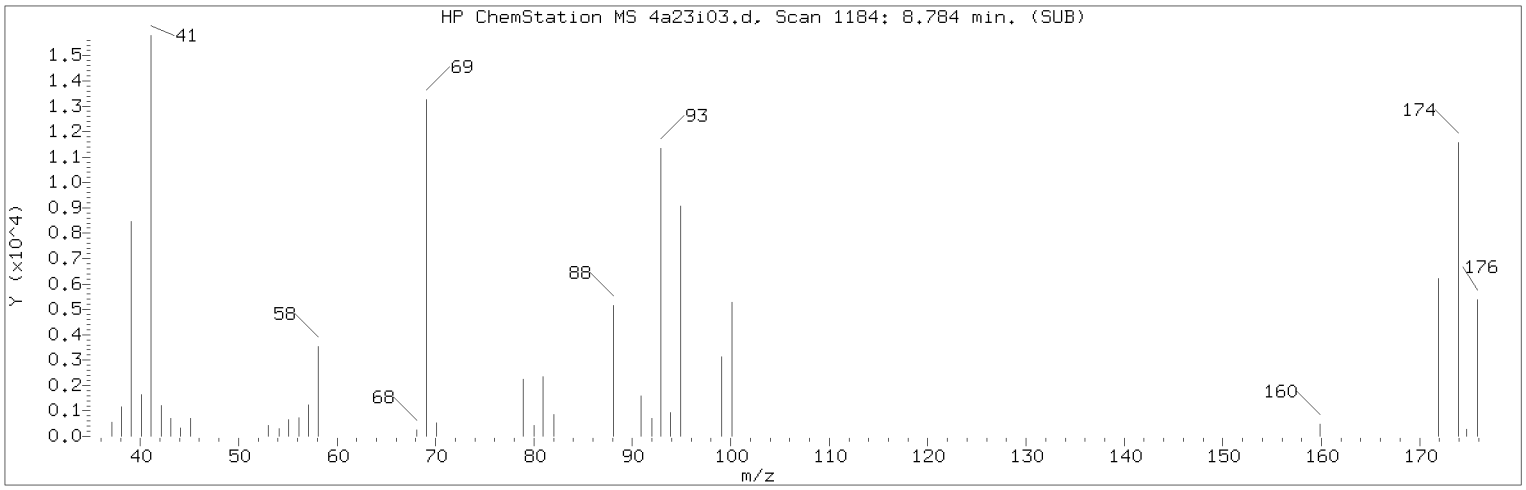
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:00
Date, time and analyst ID of latest file update: 23-Apr-2019 16:01 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

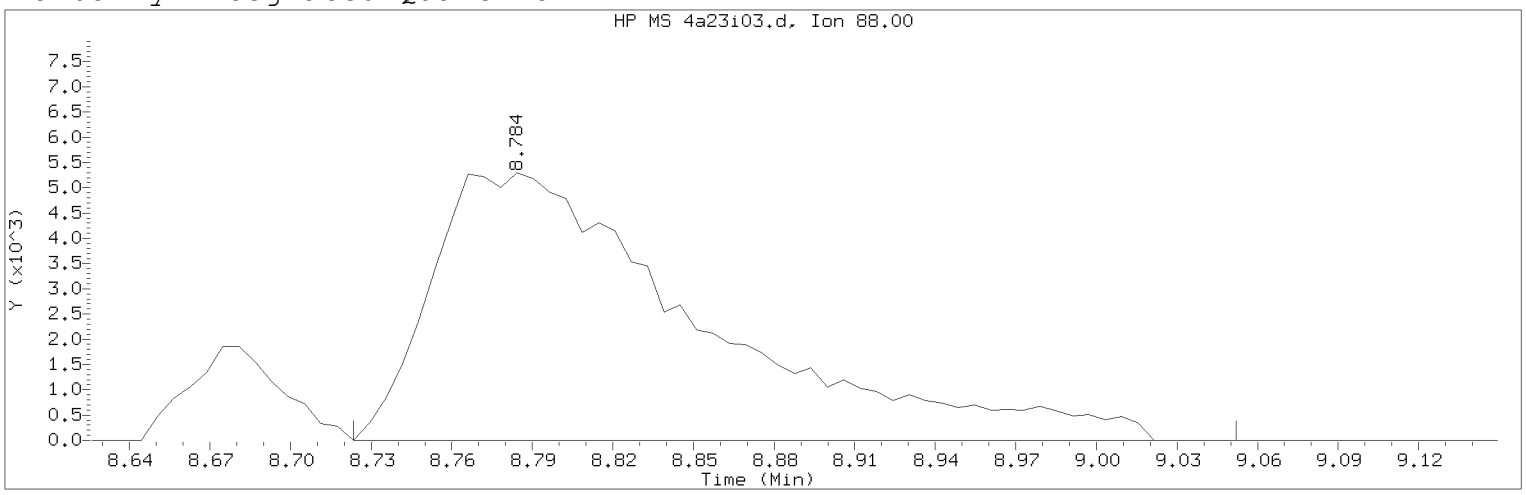
Compound Number	: 13		
Compound Name	: Ethanol		
Scan Number	: 278		
Retention Time (minutes)	: 3.273		
Quant Ion	: 45.00		
Area	: 70509		
On-column Amount (ng)	: 500.4875		
Integration start scan	: 249	Integration stop scan:	305
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

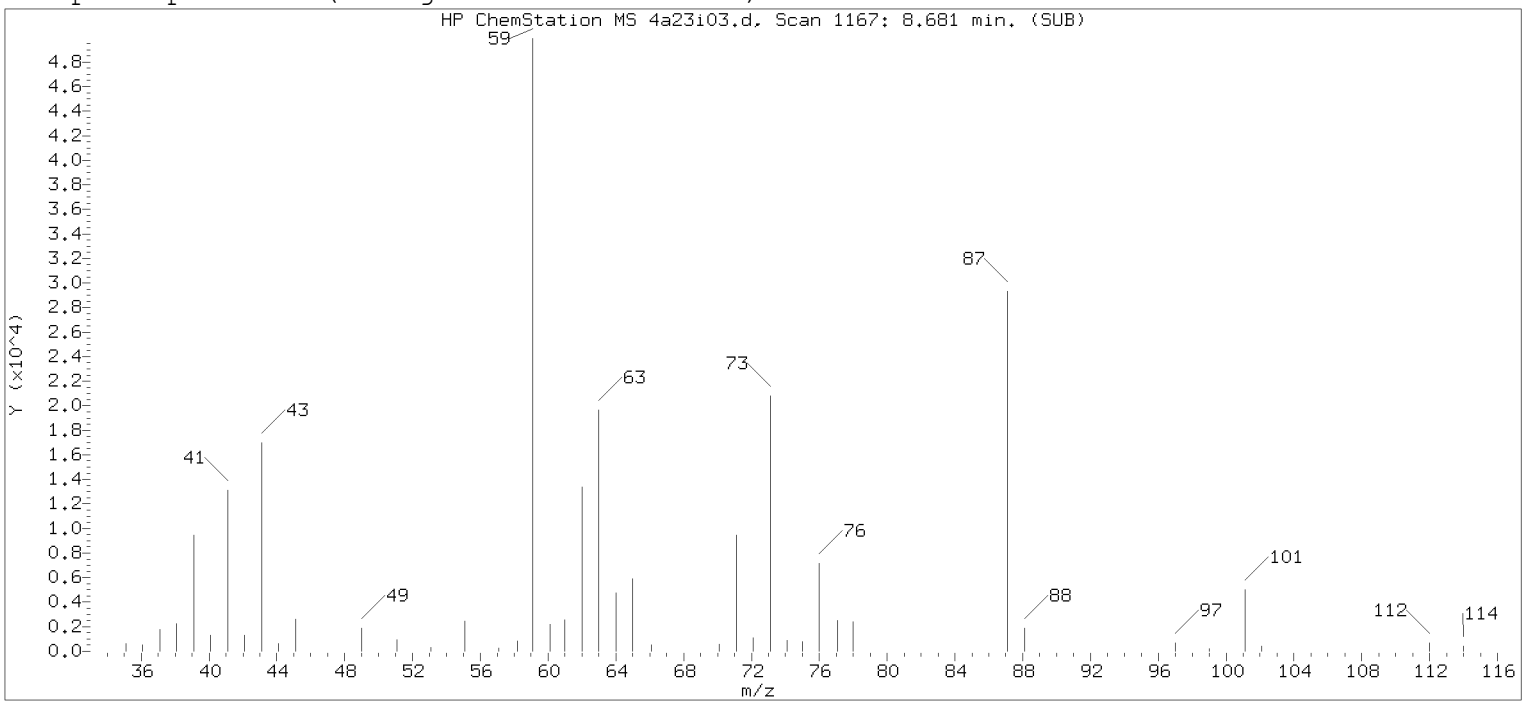
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1184
Retention Time (minutes): 8.784
Quant Ion : 88.00
Area (flag) : 37028M
On-Column Amount (ng) : 286.6236
Integration start scan : 1173 Integration stop scan: 1227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

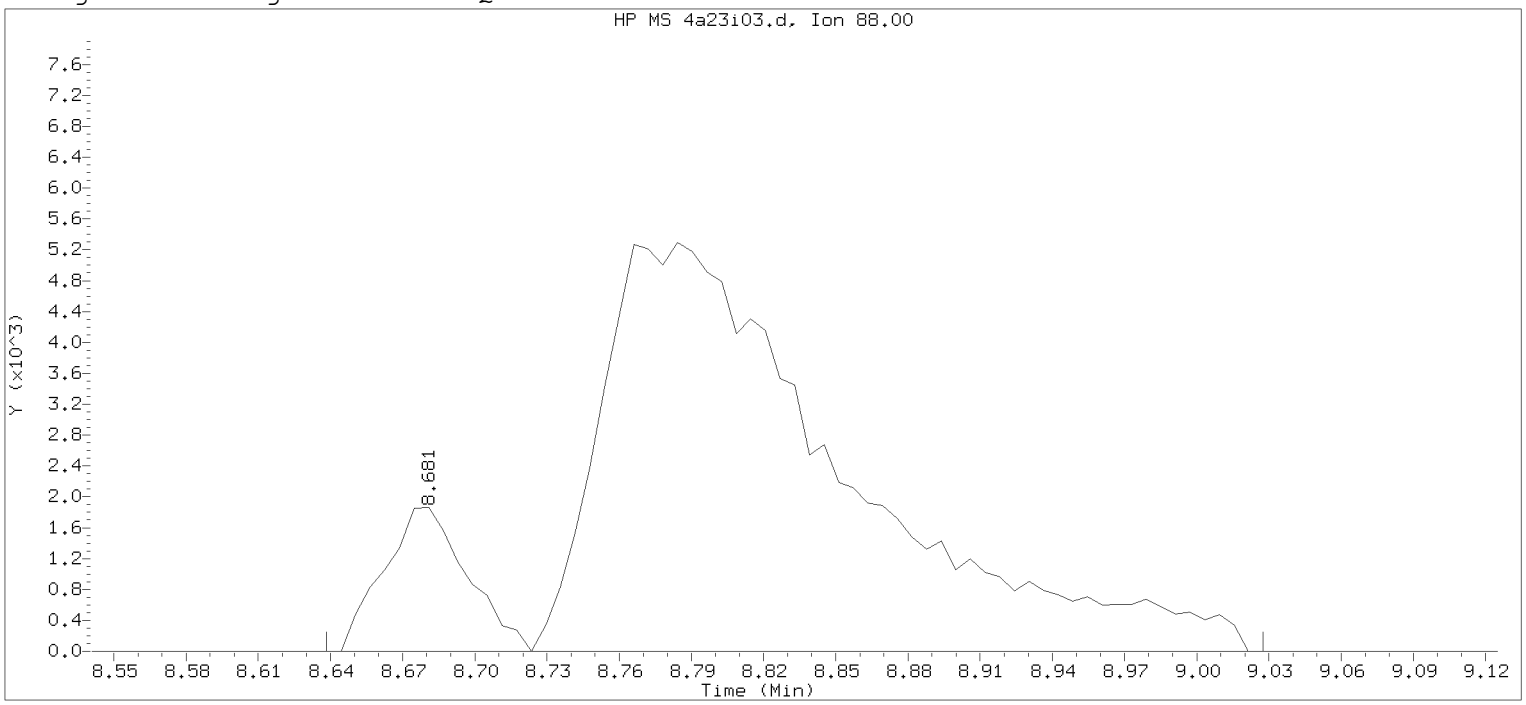
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

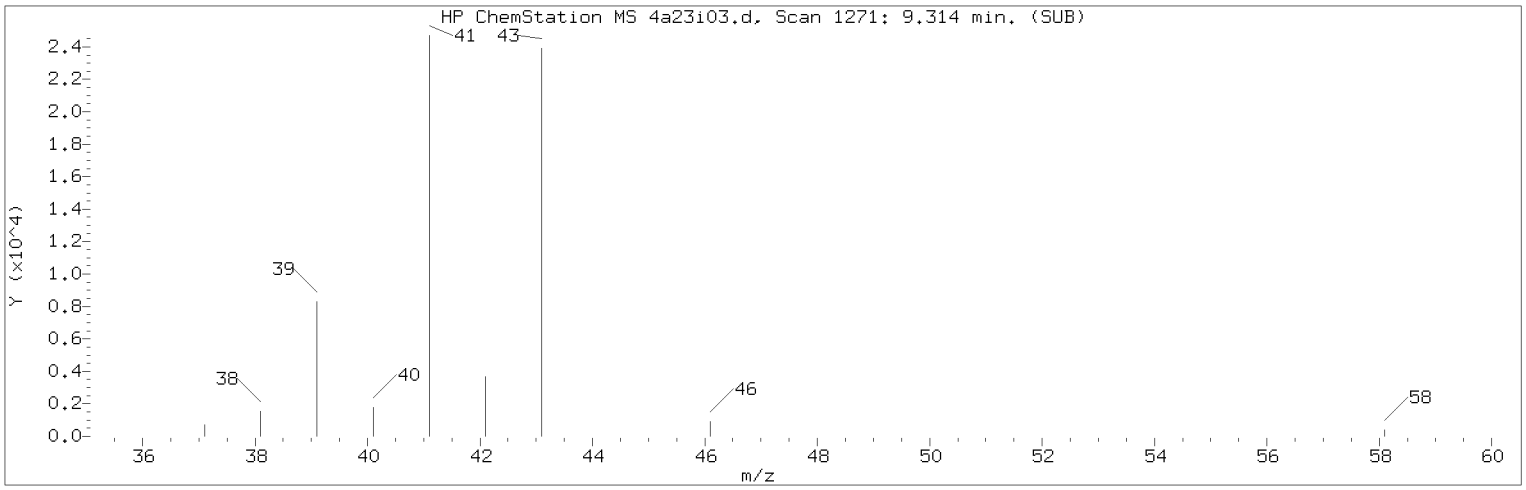
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:00
Date, time and analyst ID of latest file update: 23-Apr-2019 16:01 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

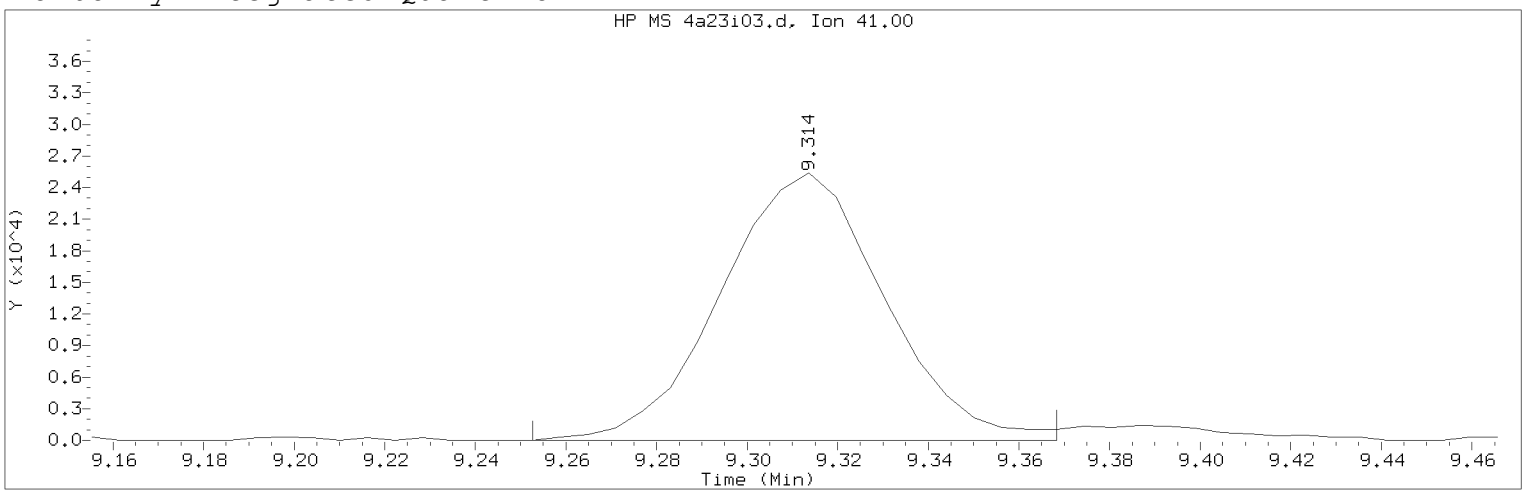
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1167
Retention Time (minutes): 8.681
Quant Ion : 88.00
Area : 41524
On-column Amount (ng) : 307.1725
Integration start scan : 1159 Integration stop scan: 1223
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

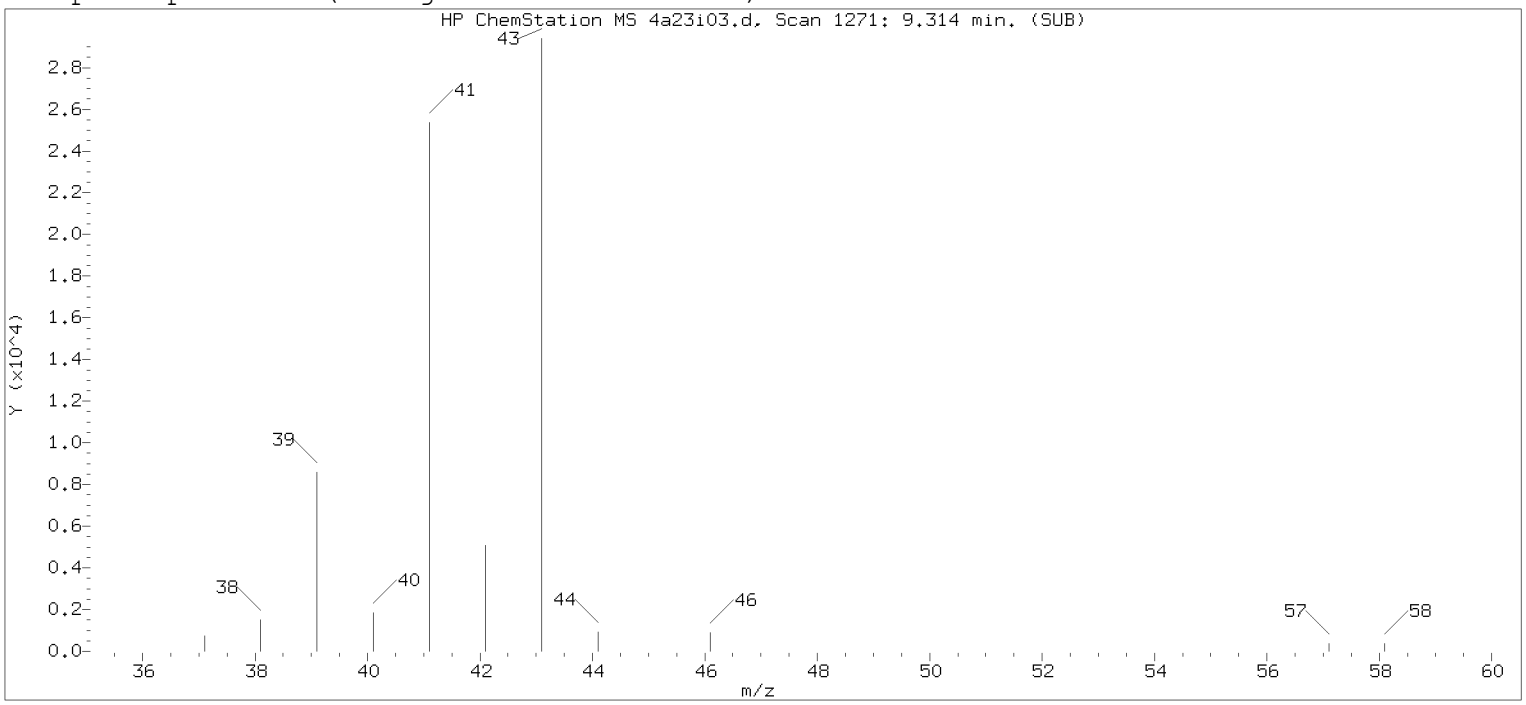
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 1271
Retention Time (minutes): 9.314
Quant Ion : 41.00
Area (flag) : 63450M
On-Column Amount (ng) : 20.4045
Integration start scan : 1260 Integration stop scan: 1279
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

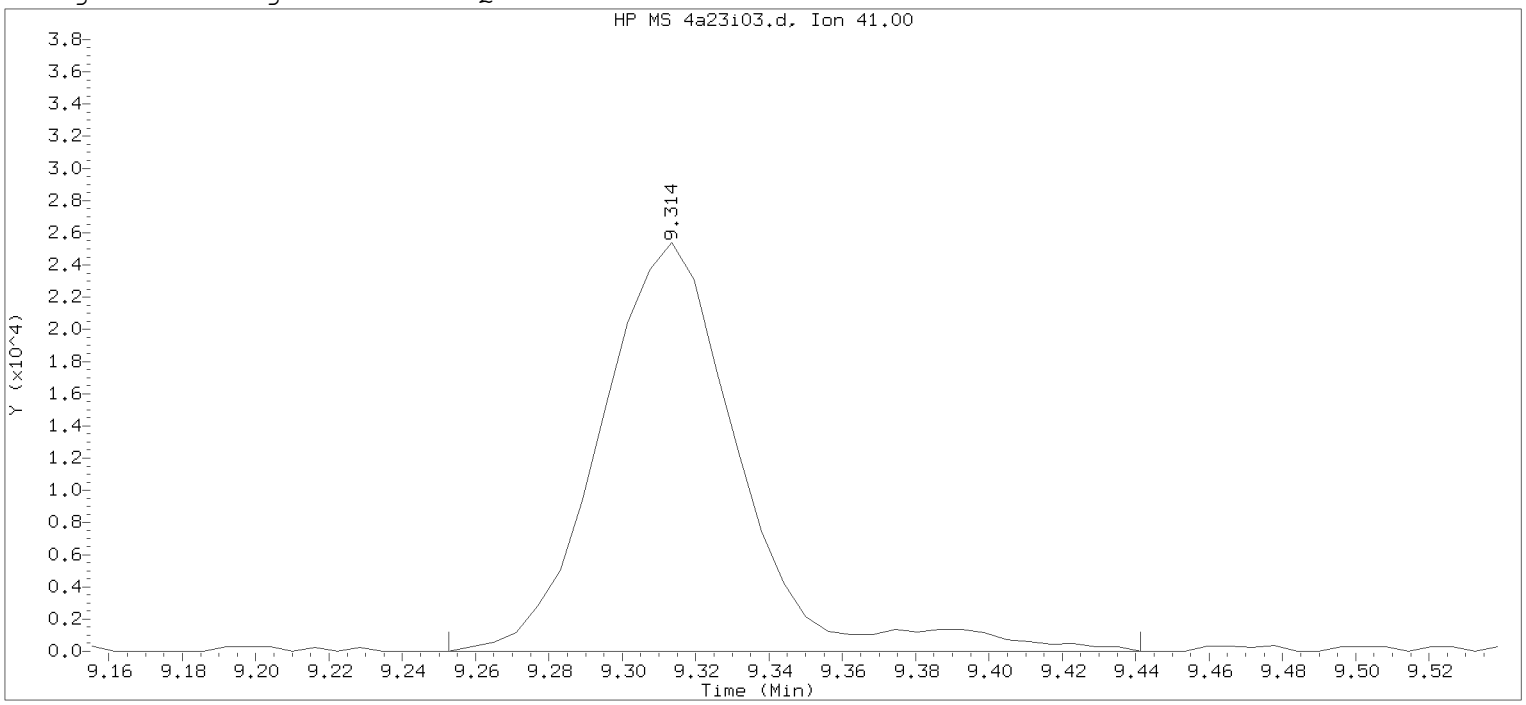
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

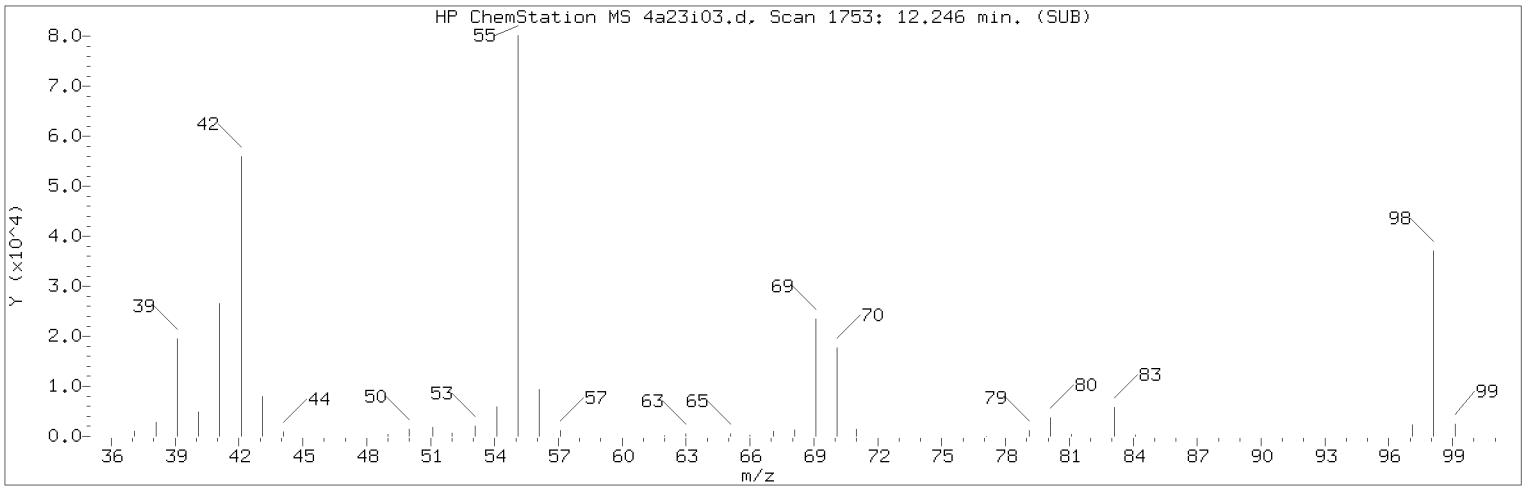
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:00
Date, time and analyst ID of latest file update: 23-Apr-2019 16:01 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

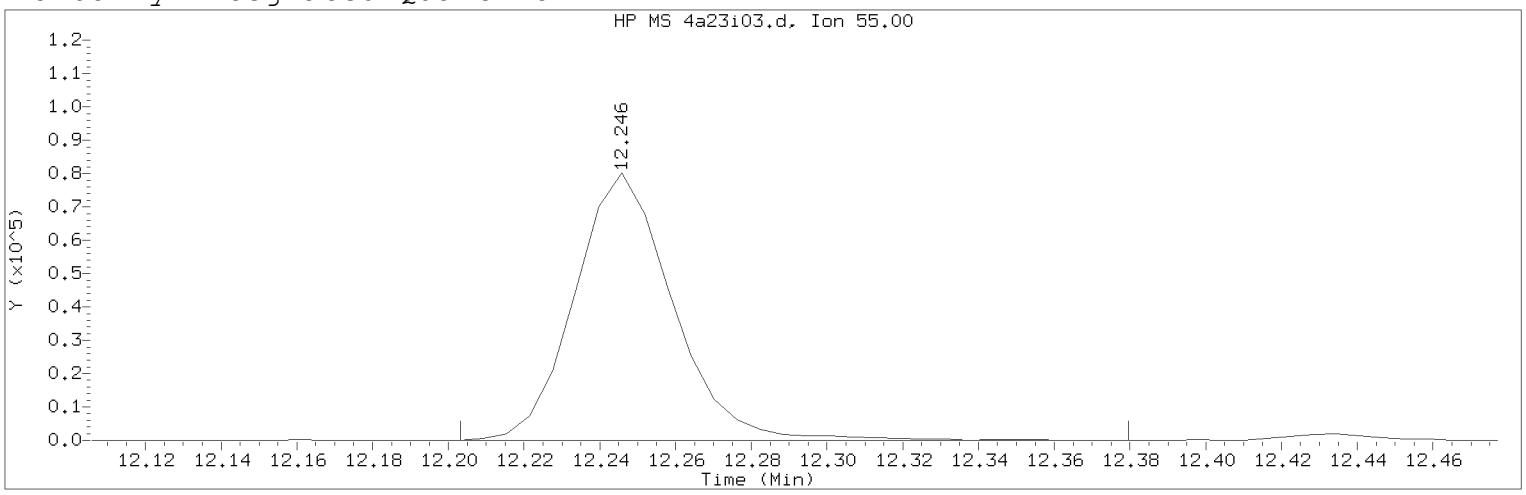
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 1271
Retention Time (minutes): 9.314
Quant Ion : 41.00
Area : 66816
On-column Amount (ng) : 21.1062
Integration start scan : 1260 Integration stop scan: 1291
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong252

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

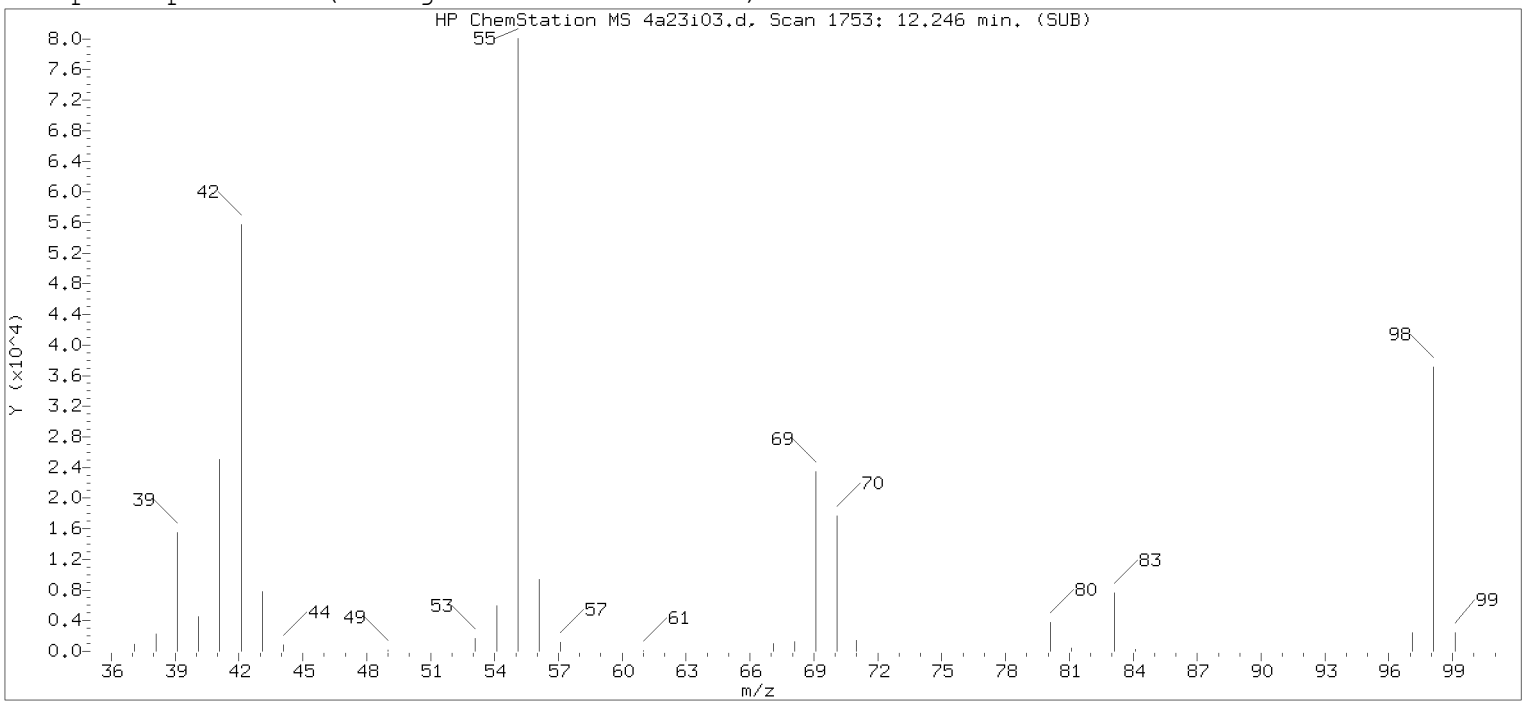
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1753
Retention Time (minutes): 12.246
Quant Ion : 55.00
Area (flag) : 143944M
On-Column Amount (ng) : 280.4388
Integration start scan : 1745 Integration stop scan: 1774
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

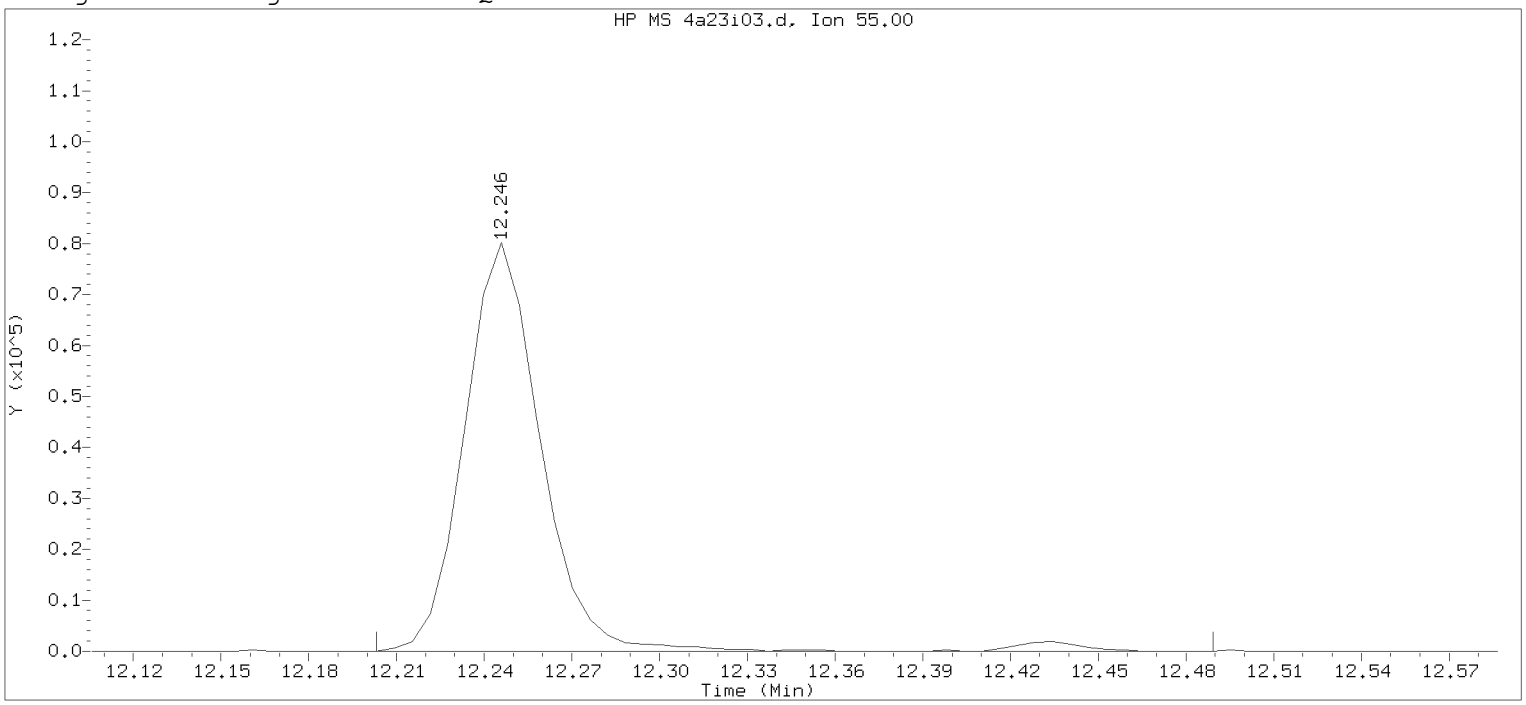
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

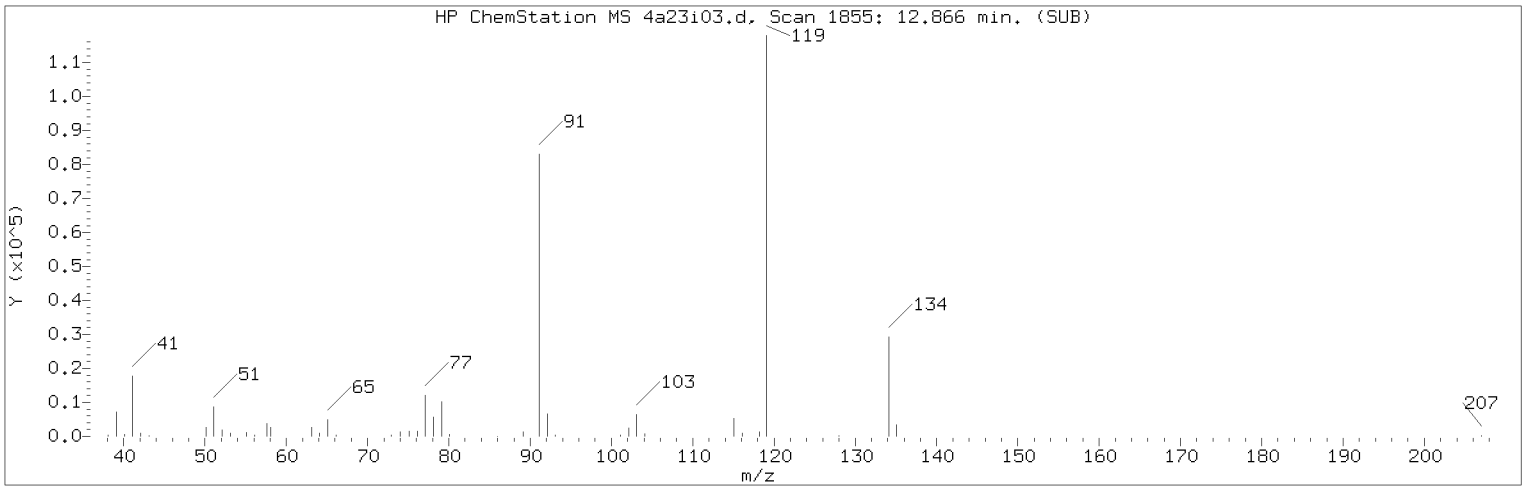
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:00
Date, time and analyst ID of latest file update: 23-Apr-2019 16:01 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

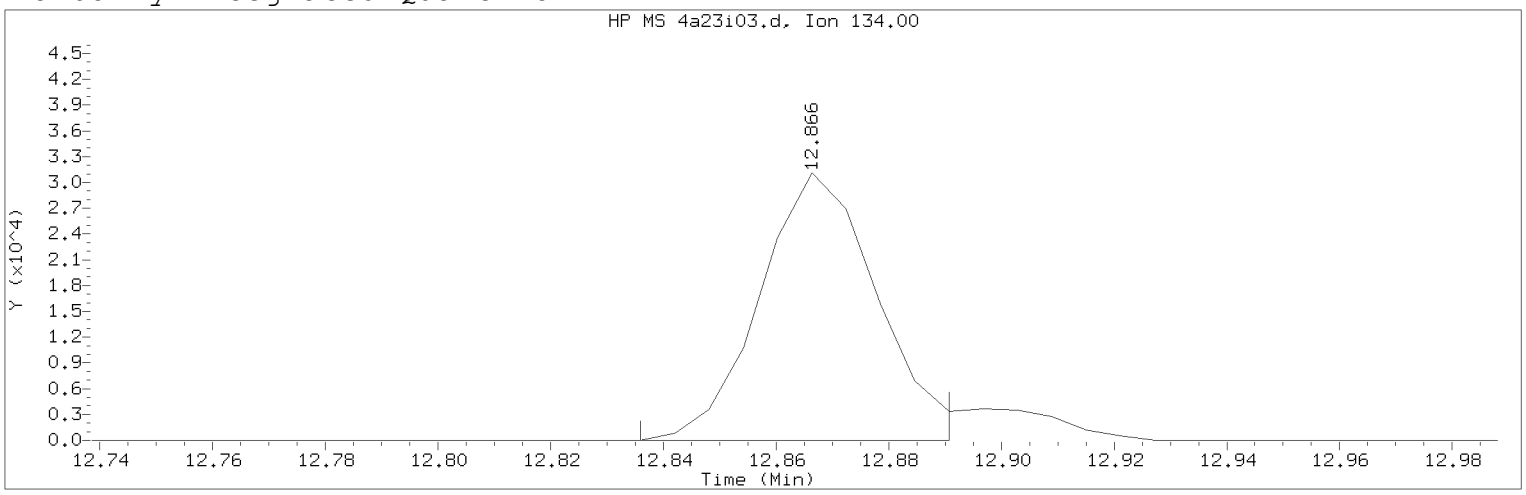
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1753
Retention Time (minutes): 12.246
Quant Ion : 55.00
Area : 146985
On-column Amount (ng) : 279.4708
Integration start scan : 1745 Integration stop scan: 1792
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong1254

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

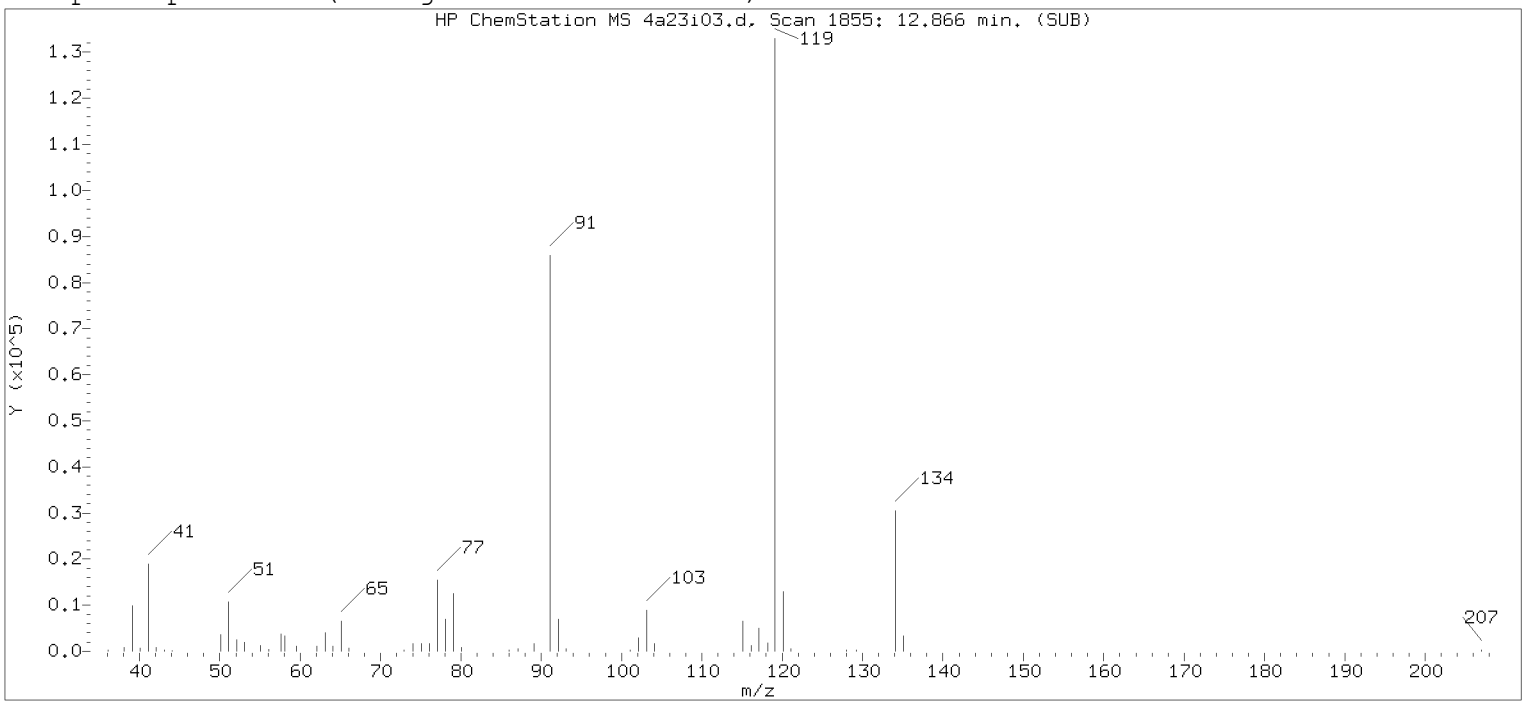
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area (flag) : 44873M
On-Column Amount (ng) : 10.3743
Integration start scan : 1849 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

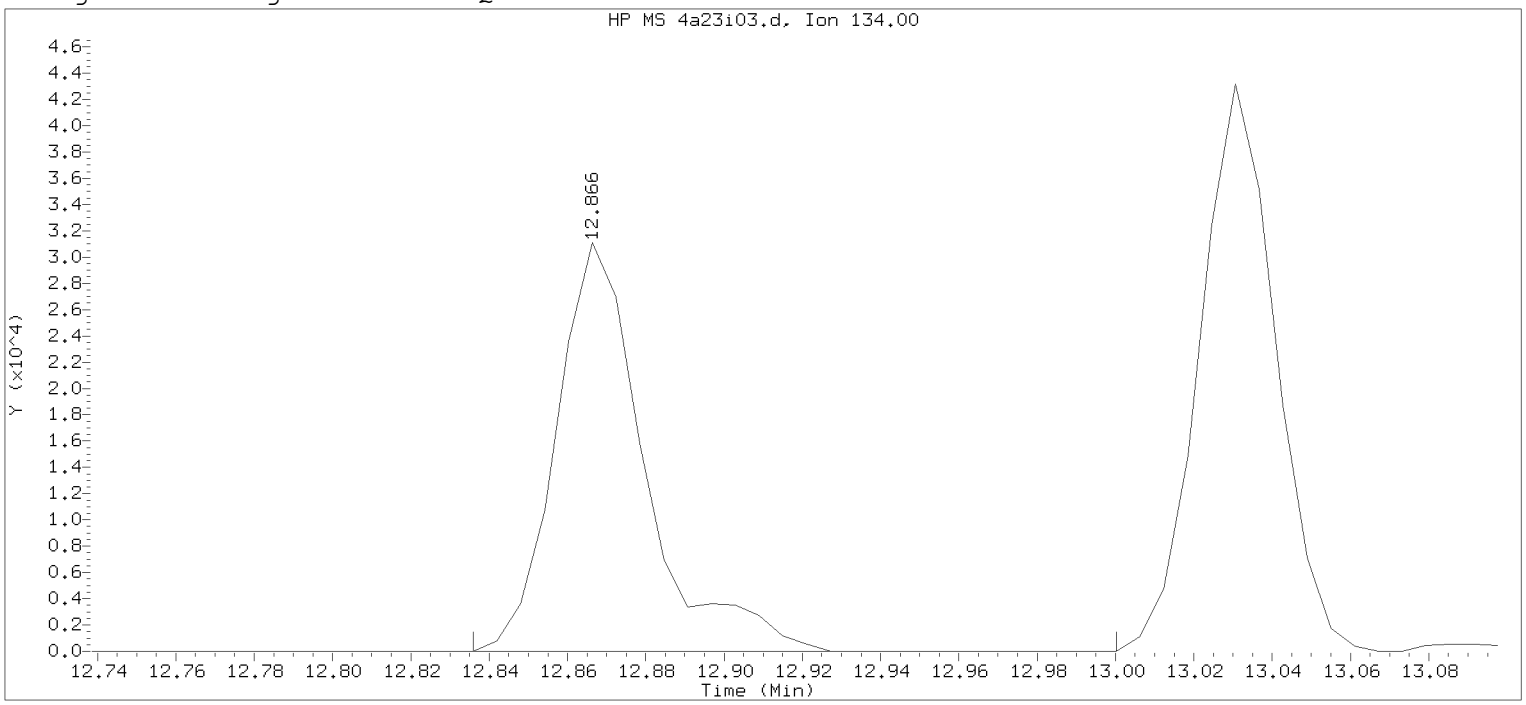
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

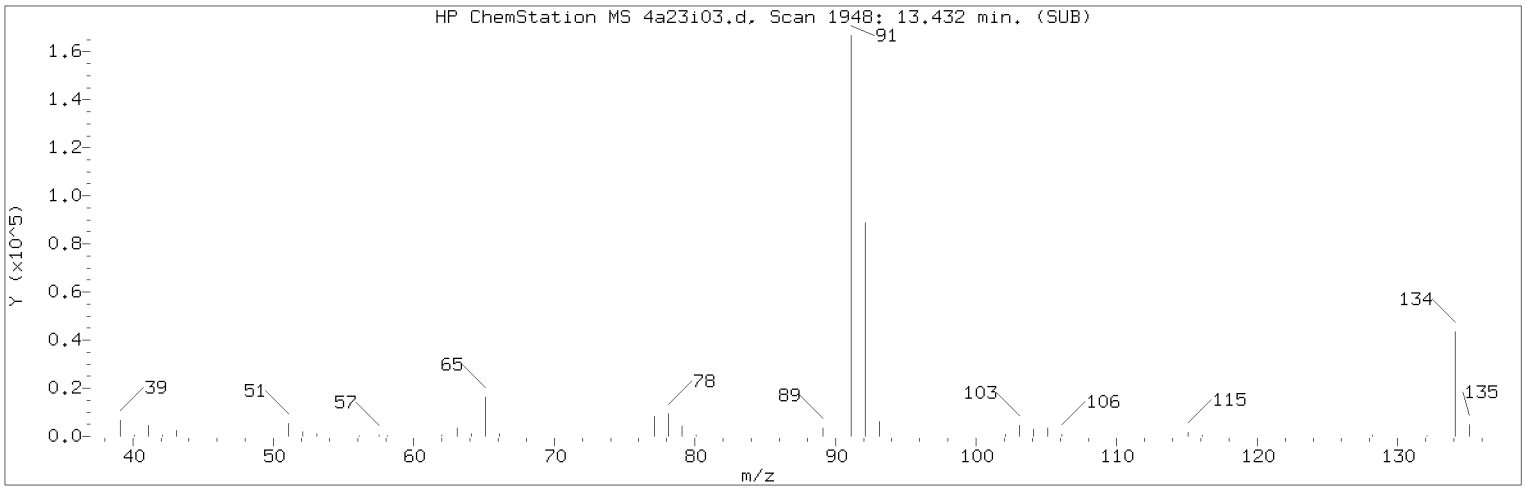
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:00
Date, time and analyst ID of latest file update: 23-Apr-2019 16:01 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

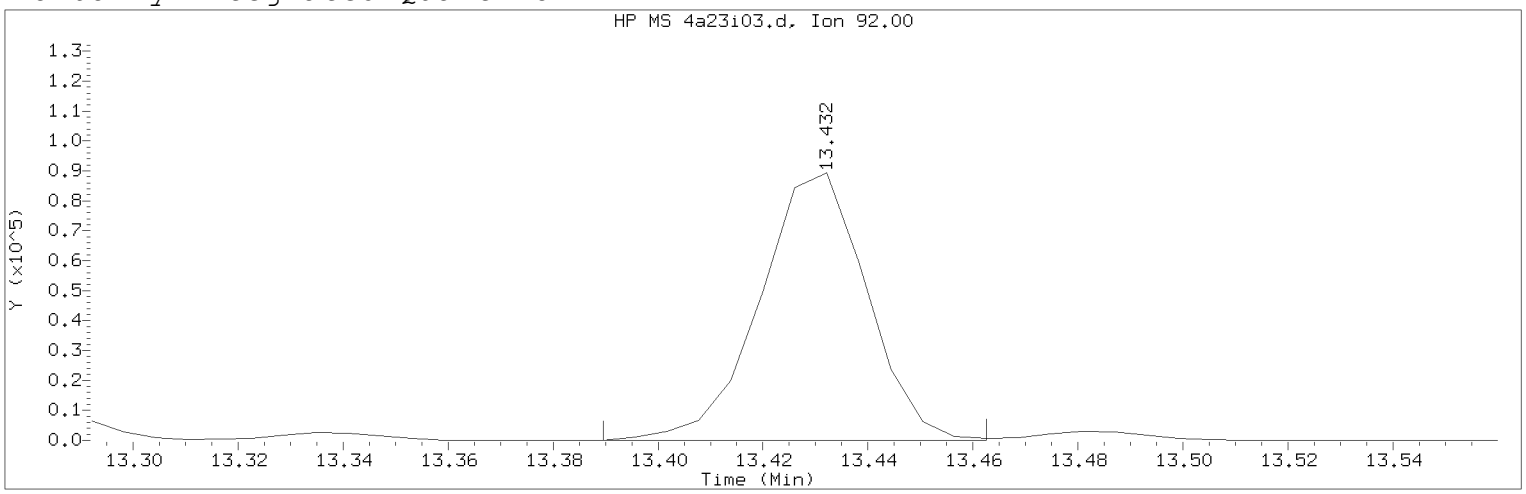
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area : 49113
On-column Amount (ng) : 10.4050
Integration start scan : 1849 Integration stop scan: 1876
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user: jmlong1256

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

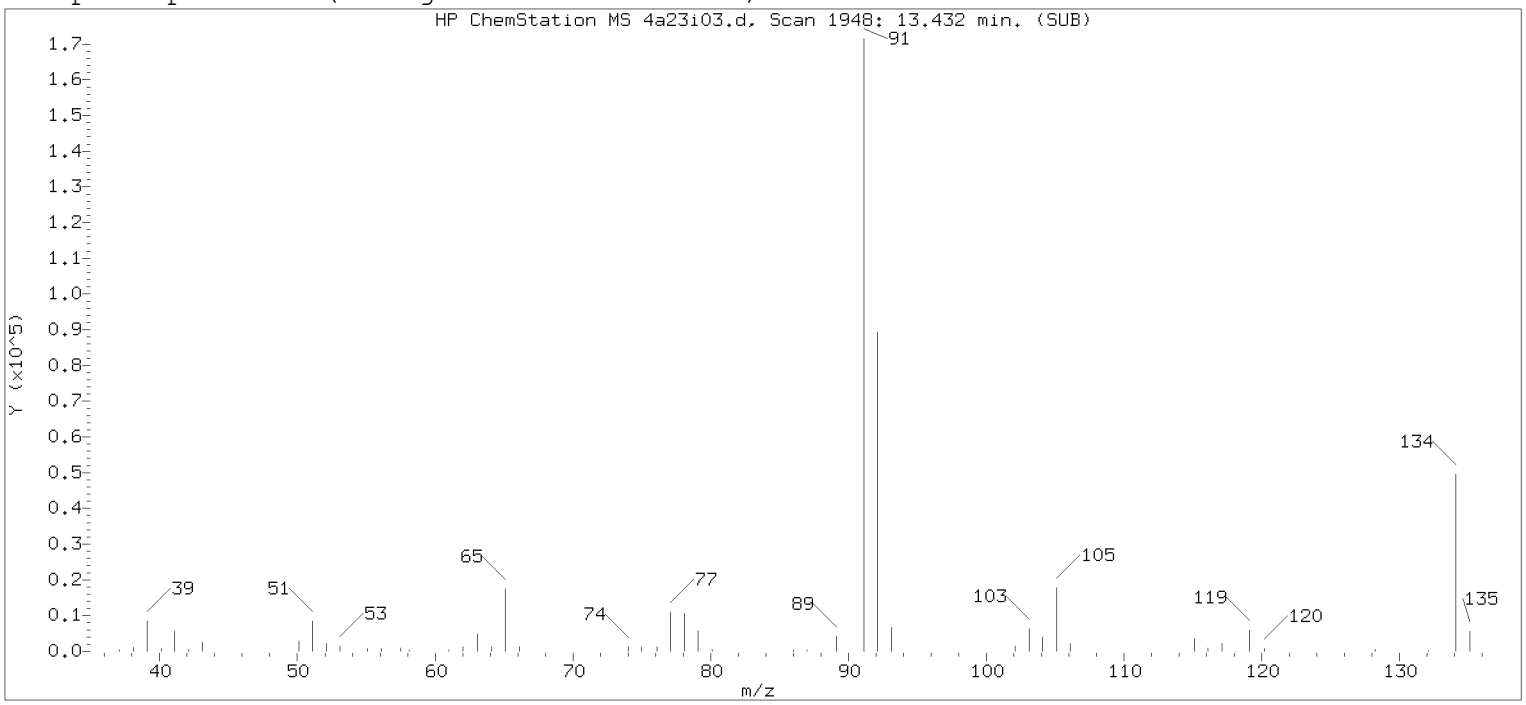
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1948
Retention Time (minutes): 13.432
Quant Ion : 92.00
Area (flag) : 126058M
On-Column Amount (ng) : 10.4477
Integration start scan : 1940 Integration stop scan: 1952
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

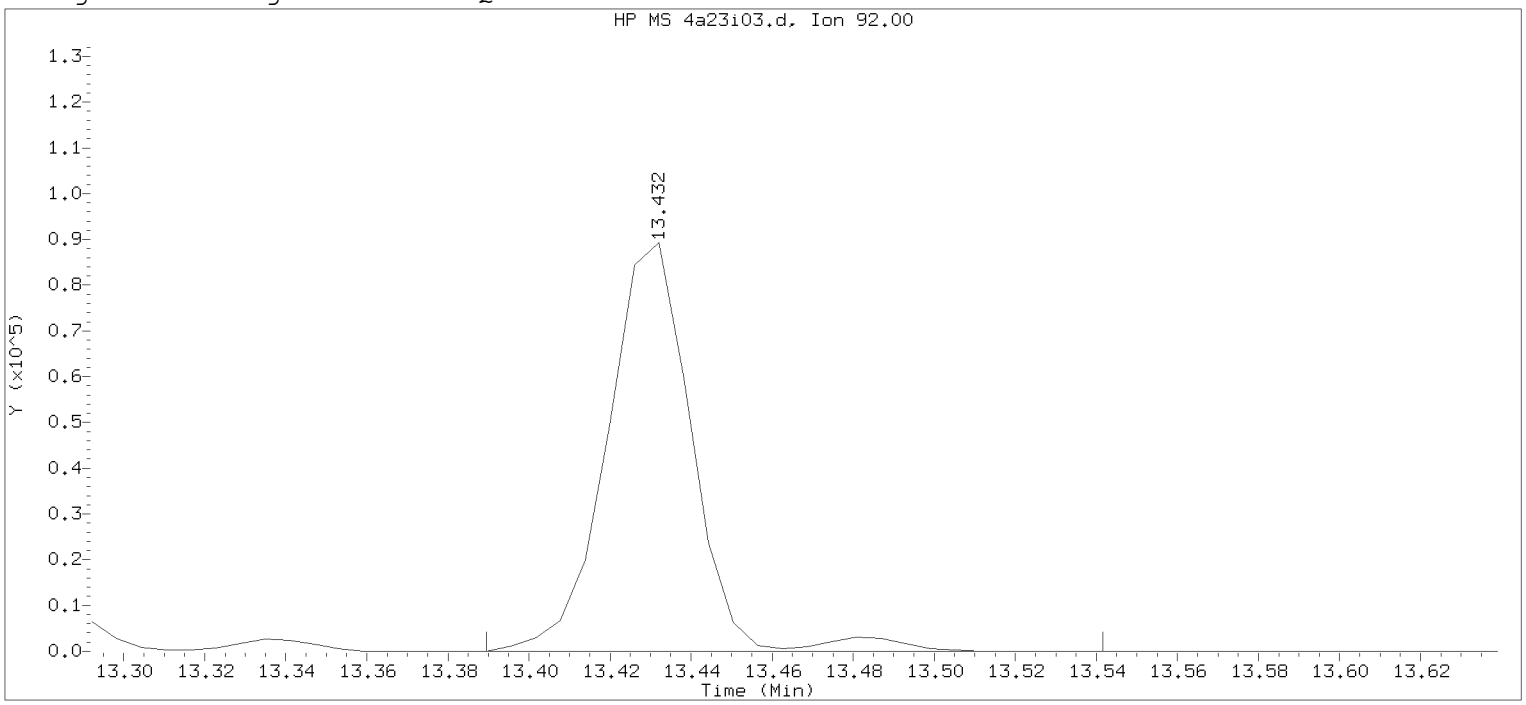
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



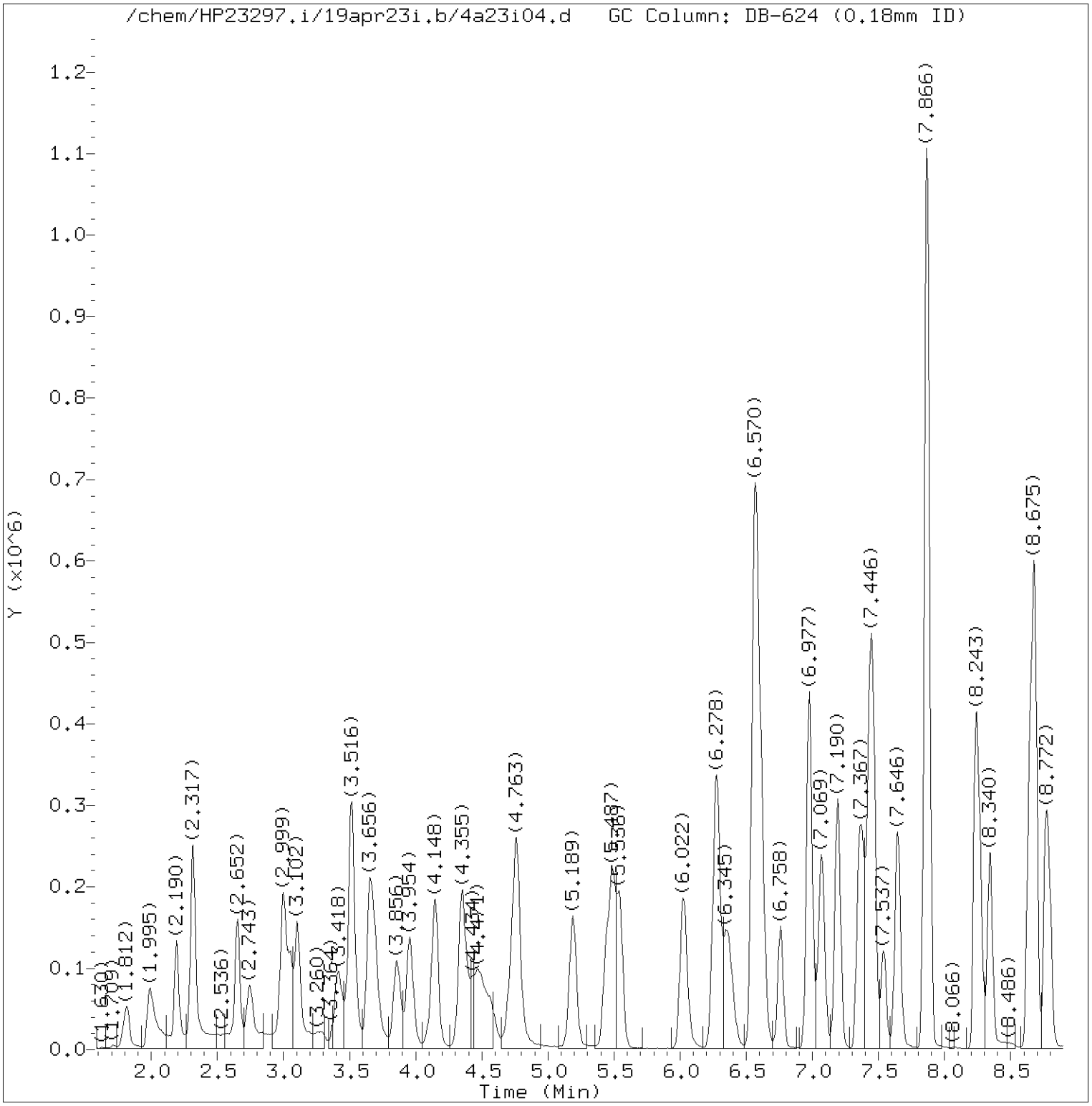
Data File: /chem/HP23297.i/19apr23i.b/4a23i03.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 15:43 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:00
Date, time and analyst ID of latest file update: 23-Apr-2019 16:01 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1948
Retention Time (minutes): 13.432
Quant Ion : 92.00
Area : 130281
On-column Amount (ng) : 10.5311
Integration start scan : 1940 Integration stop scan: 1965
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong255



Total Ion Chromatogram (TIC)

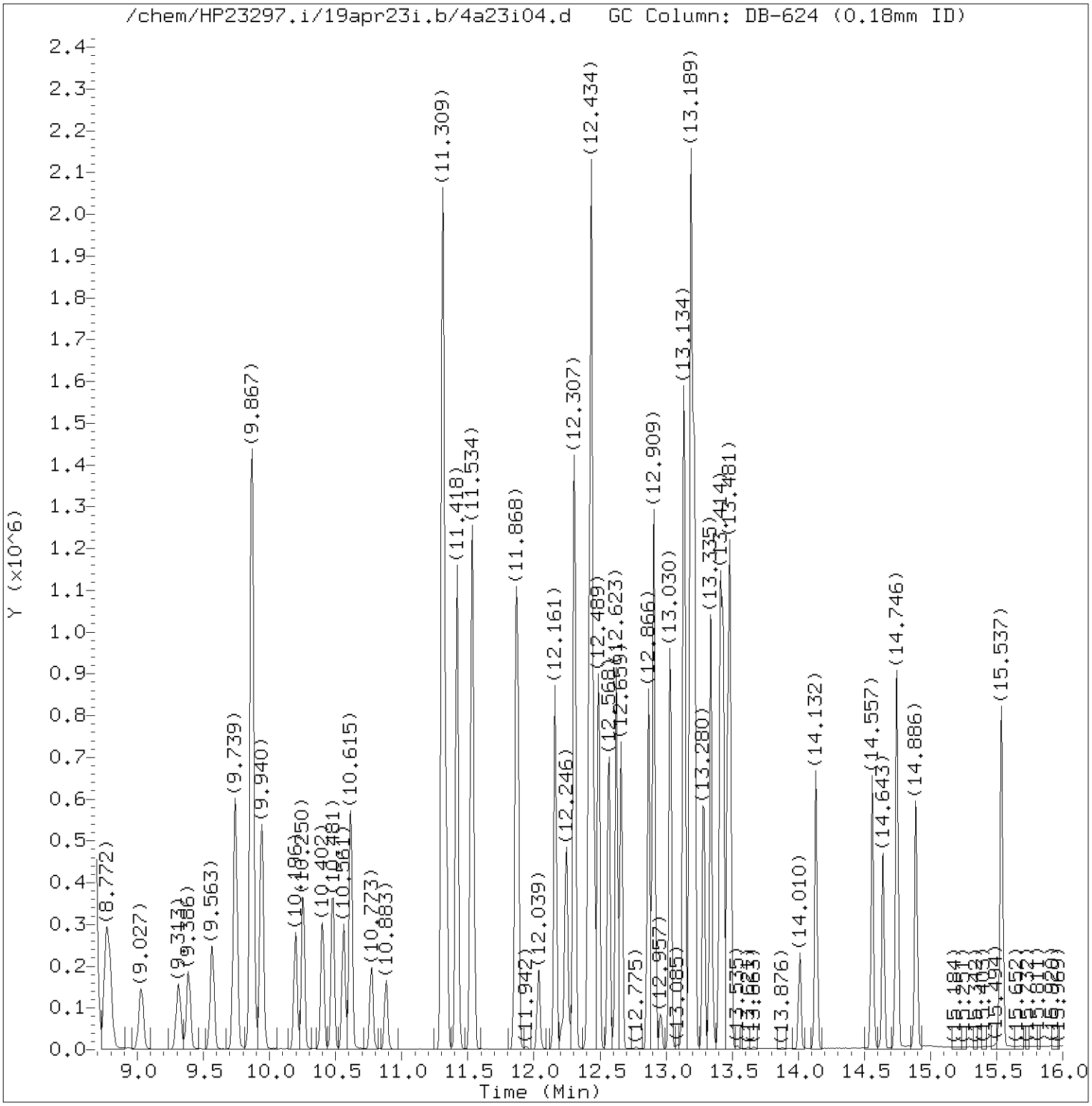
Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.989	85	184488	20.645
4) Chloromethane	(2)	2.190	50	175191	19.559
6) Vinyl Chloride	(2)	2.311	62	172847	19.923
5) 1,3-Butadiene	(2)	2.317	39	91973	19.137
8) Bromomethane	(2)	2.652	94	137928	19.157
9) Chloroethane	(2)	2.749	64	93761	19.277
10) Dichlorofluoromethane	(2)	2.993	67	215095	18.529
12) Trichlorofluoromethane	(2)	3.047	101	212165	20.778
11) n-Pentane	(2)	3.108	43	165482	20.591
13) Ethanol	(1)	3.279	45	115356M	779.313
15) Freon 123a	(2)	3.418	67	116906M	19.846
16) Acrolein	(1)	3.516	56	506382	209.624
17) 1,1-Dichloroethene	(2)	3.650	96	80364	20.425
17) 1,1-Dichloroethene	(2)	3.650	63	41997	19.612
19) Freon 113	(2)	3.668	101	89328	20.700
18) Acetone	(1)	3.698	58	50991	43.513
22) Methyl Iodide	(2)	3.856	142	161350	20.463
21) 2-Propanol	(1)	3.875	45	182473	190.465
23) Carbon Disulfide	(2)	3.954	76	287300	20.380
27) Methyl Acetate	(2)	4.124	43	159823	18.393
25) Allyl Chloride	(2)	4.148	41	168262	18.297
28) Methylene Chloride	(2)	4.349	84	100381	19.577
29)*t-Butyl alcohol-d10	(1)	4.367	65	424635	250.000
30) t-Butyl alcohol	(1)	4.507	59	340916	201.042
31) Acrylonitrile	(2)	4.714	53	91696	20.710
33) Methyl Tertiary Butyl Ether	(2)	4.751	73	291132	19.903
32) trans-1,2-Dichloroethene	(2)	4.769	96	97452	20.755
34) n-Hexane	(2)	5.189	57	159047	20.337
36) 1,1-Dichloroethane	(2)	5.438	63	179550	20.208
38) di-Isopropyl ether	(2)	5.487	45	360446	20.195
39) 2-Chloro-1,3-butadiene	(2)	5.548	53	164120	20.708
40) Ethyl t-butyl ether	(2)	6.028	59	314179	20.127
43) 1,2-Dichloroethene (Total)	(2)		96	208688	41.253
44) 2-Butanone	(2)	6.253	43	279717	39.650
42) cis-1,2-Dichloroethene	(2)	6.278	96	111236	20.498
45) 2,2-Dichloropropane	(2)	6.284	77	142148	20.541
47) Propionitrile	(1)	6.357	54	366070	210.465
48) Methacrylonitrile	(2)	6.564	67	421345	103.430

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.612	128	61300	20.724
50) Tetrahydrofuran	(1)	6.618	71	73788	42.546
51) Chloroform	(2)	6.758	83	175981	19.992
52)$Dibromofluoromethane	(2)	6.977	113	281150	50.314
52)$Dibromofluoromethane	(2)	6.977	111	288338	50.392
53) 1,1,1-Trichloroethane	(2)	6.977	97	148550	20.388
54) Cyclohexane	(2)	7.069	56	193876	20.450
54) Cyclohexane	(2)	7.069	84	160073	20.906
54) Cyclohexane	(2)	7.069	69	57555	20.686
56) Carbon Tetrachloride	(2)	7.184	117	128114	20.579
55) 1,1-Dichloropropene	(2)	7.196	75	139380	20.280
58) Isobutyl Alcohol	(1)	7.367	41	292185	496.165
57)$1,2-Dichloroethane-d4	(2)	7.434	102	71145	51.836
57)$1,2-Dichloroethane-d4	(2)	7.434	65	342285	50.890
57)$1,2-Dichloroethane-d4	(2)	7.434	104	44532	51.280
60) Benzene	(2)	7.464	78	426985	20.173
61) 1,2-Dichloroethane	(2)	7.537	62	140264	19.098
61) 1,2-Dichloroethane	(2)	7.537	98	12869	23.060
65) t-Amyl methyl ether	(2)	7.646	73	321081	20.125
67) n-Heptane	(2)	7.866	43	189010	20.113
66)*Fluorobenzene	(2)	7.866	96	1136829	50.000
69) n-Butanol	(1)	8.237	56	472861	1009.706
71) Trichloroethene	(2)	8.340	95	107901	20.465
72) Methylcyclohexane	(2)	8.644	83	205816	21.015
72) Methylcyclohexane	(2)	8.644	98	90177	21.404
73) 1,2-Dichloropropane	(2)	8.687	63	111831	20.456
76) Methyl Methacrylate	(2)	8.766	69	125817	20.432
75) 1,4-Dioxane	(1)	8.772	88	50746M	416.033
74) Dibromomethane	(2)	8.796	93	73058	20.710
78) Bromodichloromethane	(2)	9.027	83	132409	20.779
79) 2-Nitropropane	(2)	9.313	41	129961M	40.182
80) 2-Chloroethyl Vinyl Ether	(2)	9.386	63	102729	20.610
81) cis-1,3-Dichloropropene	(2)	9.569	75	174698	20.837
82) 4-Methyl-2-pentanone	(2)	9.739	43	511158	41.016
83)$Toluene-d8	(3)	9.867	98	1179083	49.869
83)$Toluene-d8	(3)	9.867	100	758711	49.621
88) Toluene	(3)	9.940	92	274209	19.986
90) 1,3-Dichloropropene (total)	(3)		100	338063	41.972

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.196	75	163365	21.135
91) Ethyl Methacrylate	(3)	10.256	69	205439	20.596
92) 1,1,2-Trichloroethane	(3)	10.396	97	108525	20.339
93) Tetrachloroethene	(3)	10.481	166	120754	20.530
94) 1,3-Dichloropropane	(3)	10.561	76	178716	20.043
96) 2-Hexanone	(3)	10.615	43	407424	40.652
97) Dibromochloromethane	(3)	10.773	129	114079	21.096
99) 1,2-Dibromoethane	(3)	10.883	107	119524	20.483
100)*Chlorobenzene-d5	(3)	11.309	117	909723	50.000
102) Chlorobenzene	(3)	11.333	112	312557	20.265
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	106192	21.284
104) Ethylbenzene	(3)	11.418	91	533748	20.410
106) m+p-Xylene	(3)	11.534	106	424190	41.138
108) Xylene (Total)	(3)		106	633901	61.542
107) o-Xylene	(3)	11.862	106	209711	20.404
109) Styrene	(3)	11.875	104	354982	21.189
110) Bromoform	(3)	12.039	173	89837	21.909
111) Isopropylbenzene	(3)	12.161	105	534444	20.665
112) Cyclohexanone	(1)	12.246	55	211775	432.453
114)$4-Bromofluorobenzene	(3)	12.307	95	451684	50.372
114)$4-Bromofluorobenzene	(3)	12.307	174	397323	50.359
116) 1,1,2,2-Tetrachloroethane	(4)	12.410	83	192466	20.413
115) Bromobenzene	(4)	12.422	156	143762	20.438
118) trans-1,4-Dichloro-2-butene	(4)	12.434	53	325814	104.943
117) 1,2,3-Trichloropropane	(4)	12.459	110	56397	19.621
119) n-Propylbenzene	(4)	12.489	91	635144	20.244
120) 2-Chlorotoluene	(4)	12.568	126	130732	20.321
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	458407M	20.559
121) 4-Chlorotoluene	(4)	12.659	126	135862	20.293
124) tert-Butylbenzene	(4)	12.866	134	93971M	20.521
125) Pentachloroethane	(4)	12.903	167	86007	21.452
126) 1,2,4-Trimethylbenzene	(4)	12.909	105	478774	20.739
127) sec-Butylbenzene	(4)	13.030	105	589304	20.720
129) 1,3-Dichlorobenzene	(4)	13.134	146	270245	20.413
130) p-Isopropyltoluene	(4)	13.140	119	518077	21.024
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	508580	50.000
133) 1,4-Dichlorobenzene	(4)	13.207	146	277767	20.377
134) 1,2,3-Trimethylbenzene	(4)	13.213	105	508068	20.425

M = Compound was manually integrated.
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Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

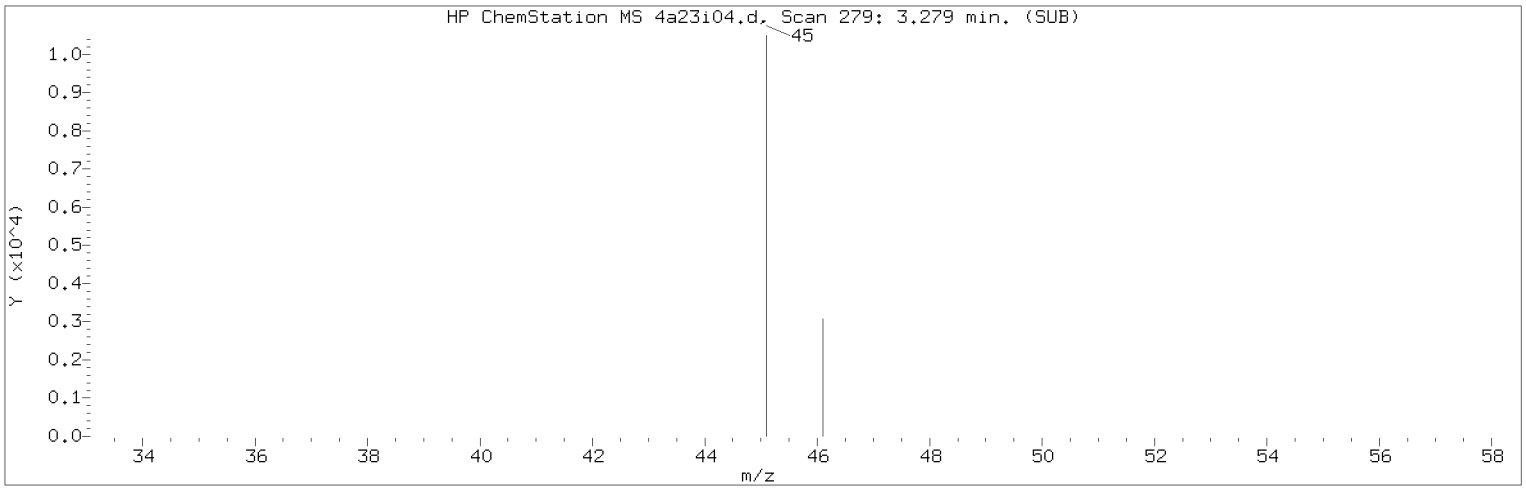
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

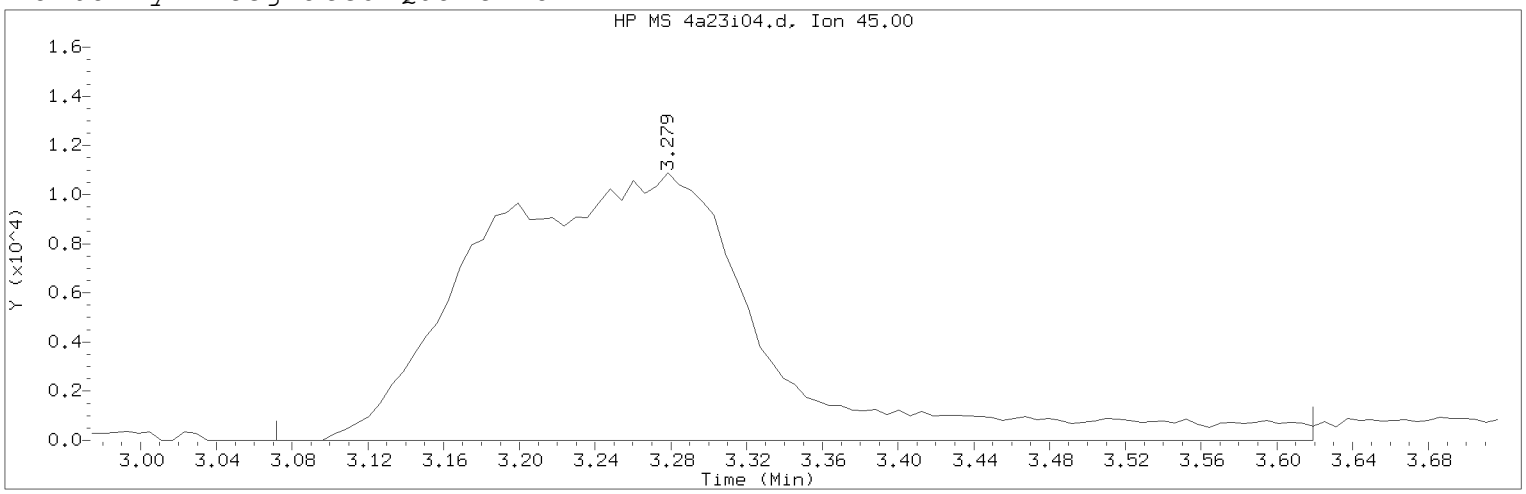
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.280	91	387360	22.012
136) 1,3-Diethylbenzene	(4)	13.341	119	321352	20.833
141) Diethylbenzene (total)	(4)		100	930635	62.338
137) 1,4-Diethylbenzene	(4)	13.408	119	340934	20.823
139) n-Butylbenzene	(4)	13.432	92	261520	20.485
138) 1,2-Dichlorobenzene	(4)	13.468	146	263193	20.289
140) 1,2-Diethylbenzene	(4)	13.487	119	268349	20.682
142) 1,2-Dibromo-3-chloropropane	(4)	14.010	75	51058	20.393
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	198932	20.253
146) 1,2,4-Trichlorobenzene	(4)	14.557	180	185764	19.789
147) Hexachlorobutadiene	(4)	14.643	225	83954	19.138
148) Naphthalene	(4)	14.746	128	673789	20.699
149) 1,2,3-Trichlorobenzene	(4)	14.892	180	179421	20.027
150) 2-Methylnaphthalene	(4)	15.537	142	412116	21.002

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

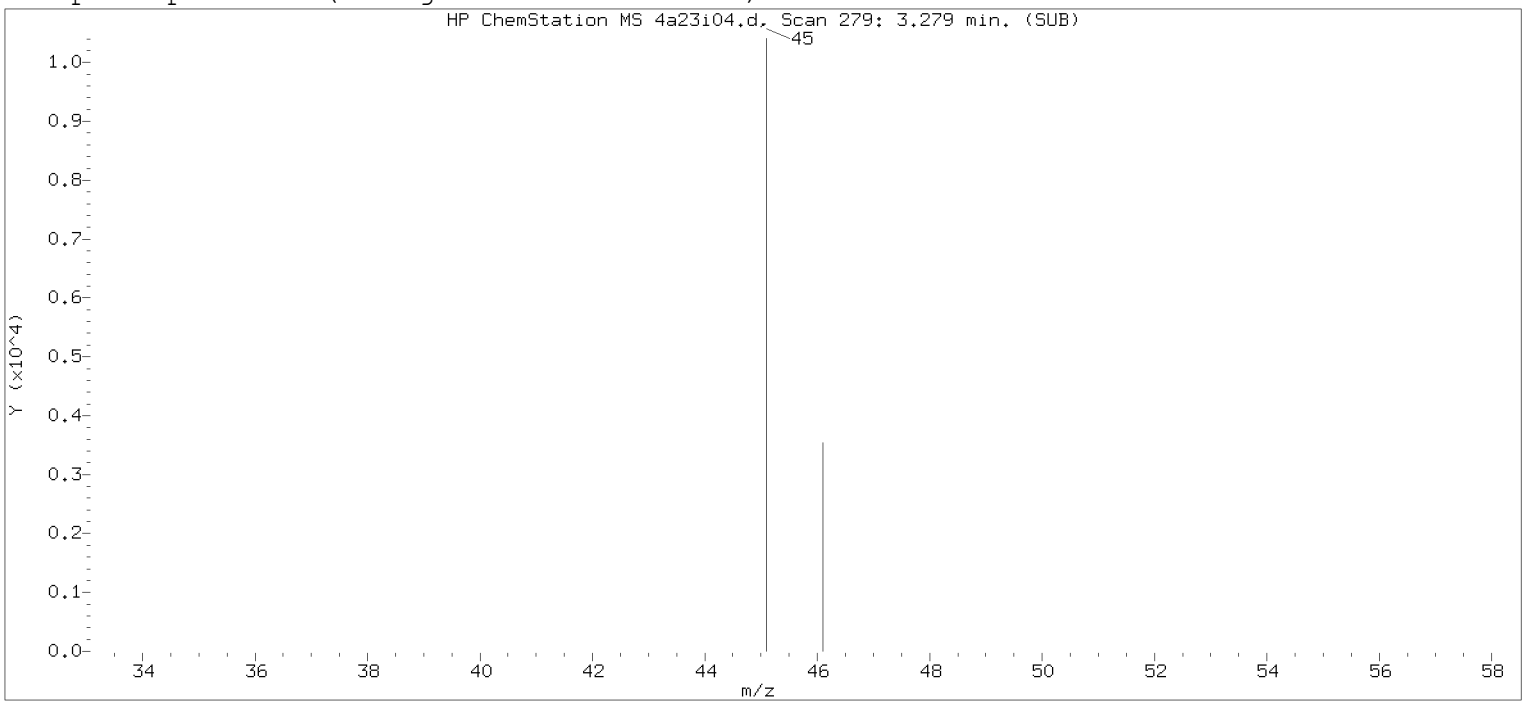
Compound Number : 13
Compound Name : Ethanol
Scan Number : 279
Retention Time (minutes): 3.279
Quant Ion : 45.00
Area (flag) : 115356M
On-Column Amount (ng) : 779.3126
Integration start scan : 244 Integration stop scan: 334
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

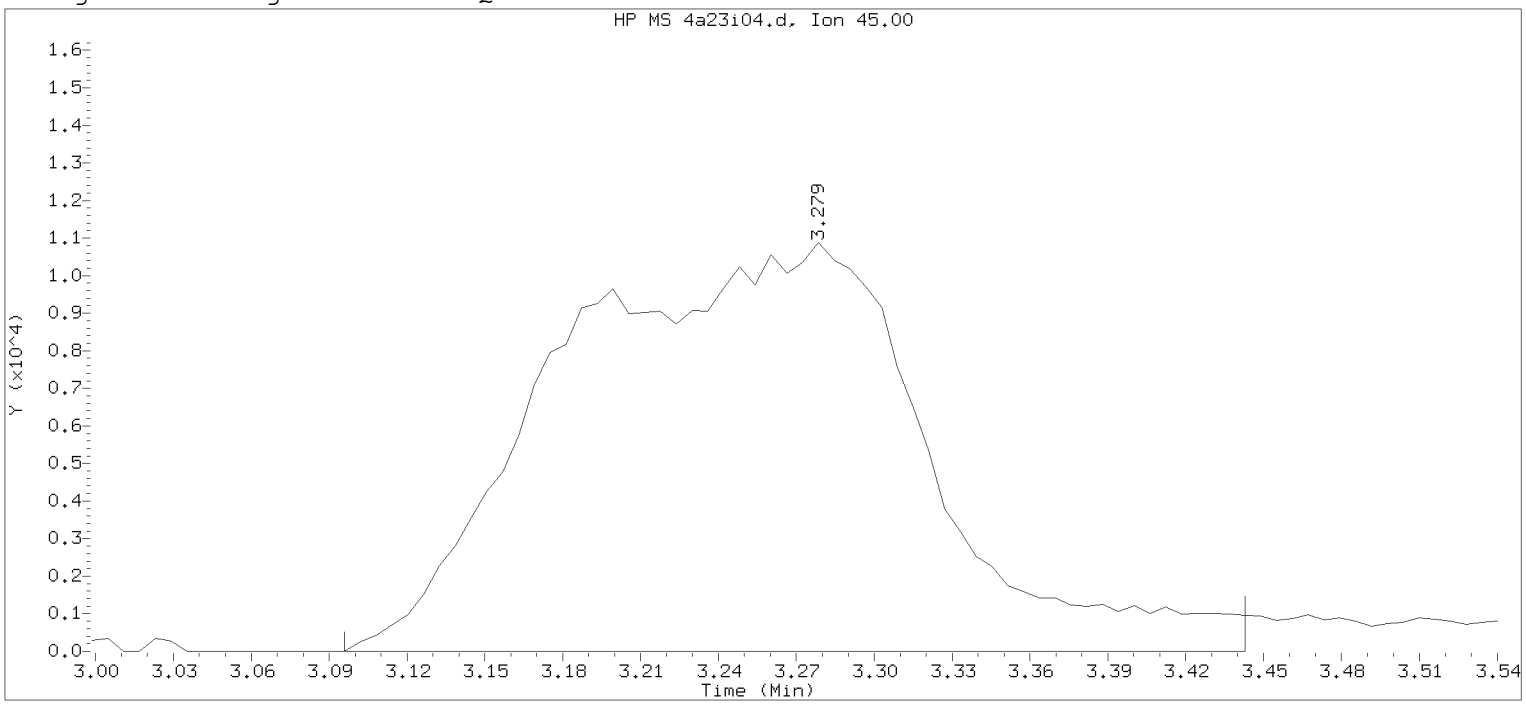
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

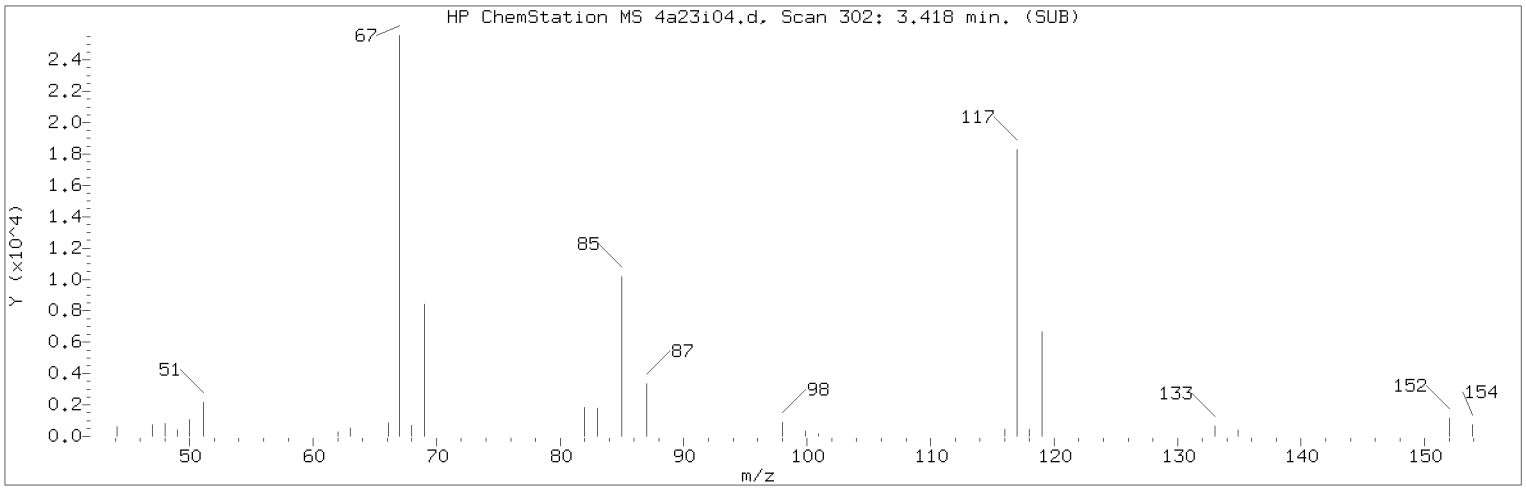
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:23
Date, time and analyst ID of latest file update: 23-Apr-2019 16:23 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

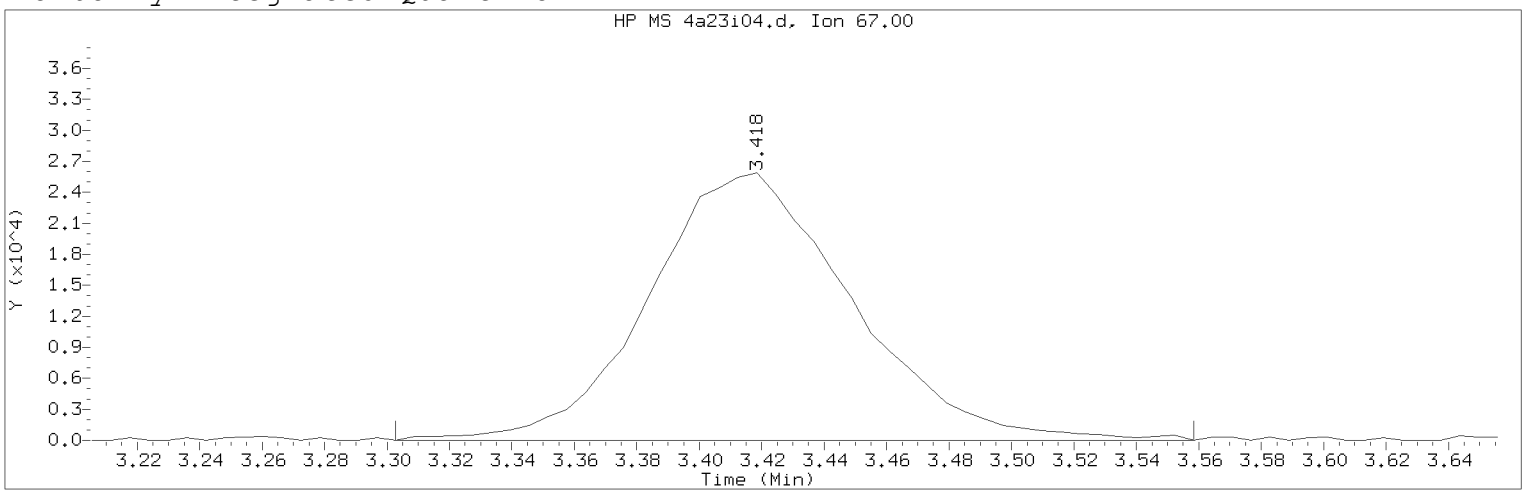
Compound Number	: 13		
Compound Name	: Ethanol		
Scan Number	: 279		
Retention Time (minutes)	: 3.279		
Quant Ion	: 45.00		
Area	: 107075		
On-column Amount (ng)	: 810.4674		
Integration start scan	: 248	Integration stop scan:	305
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

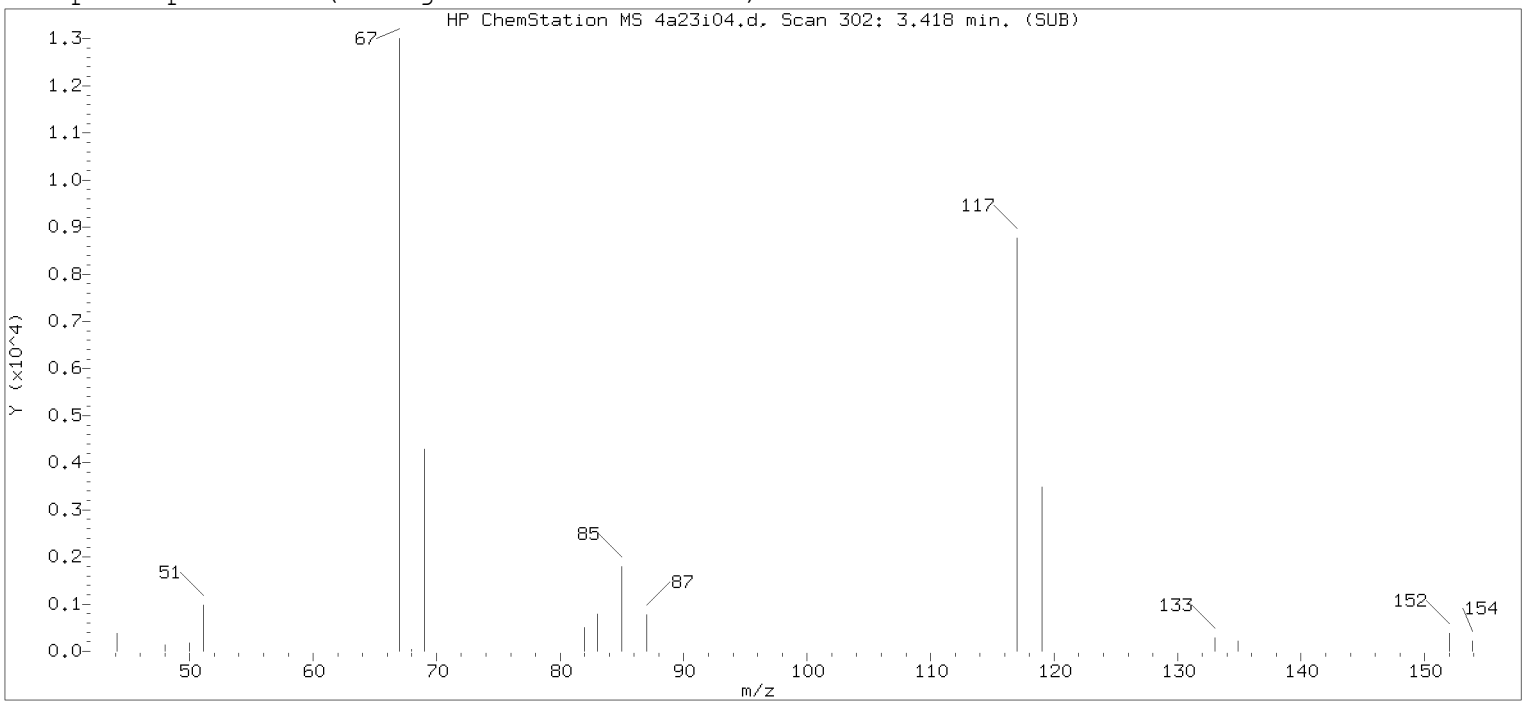
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 302
Retention Time (minutes): 3.418
Quant Ion : 67.00
Area (flag) : 116906M
On-Column Amount (ng) : 19.8459
Integration start scan : 282 Integration stop scan: 324
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

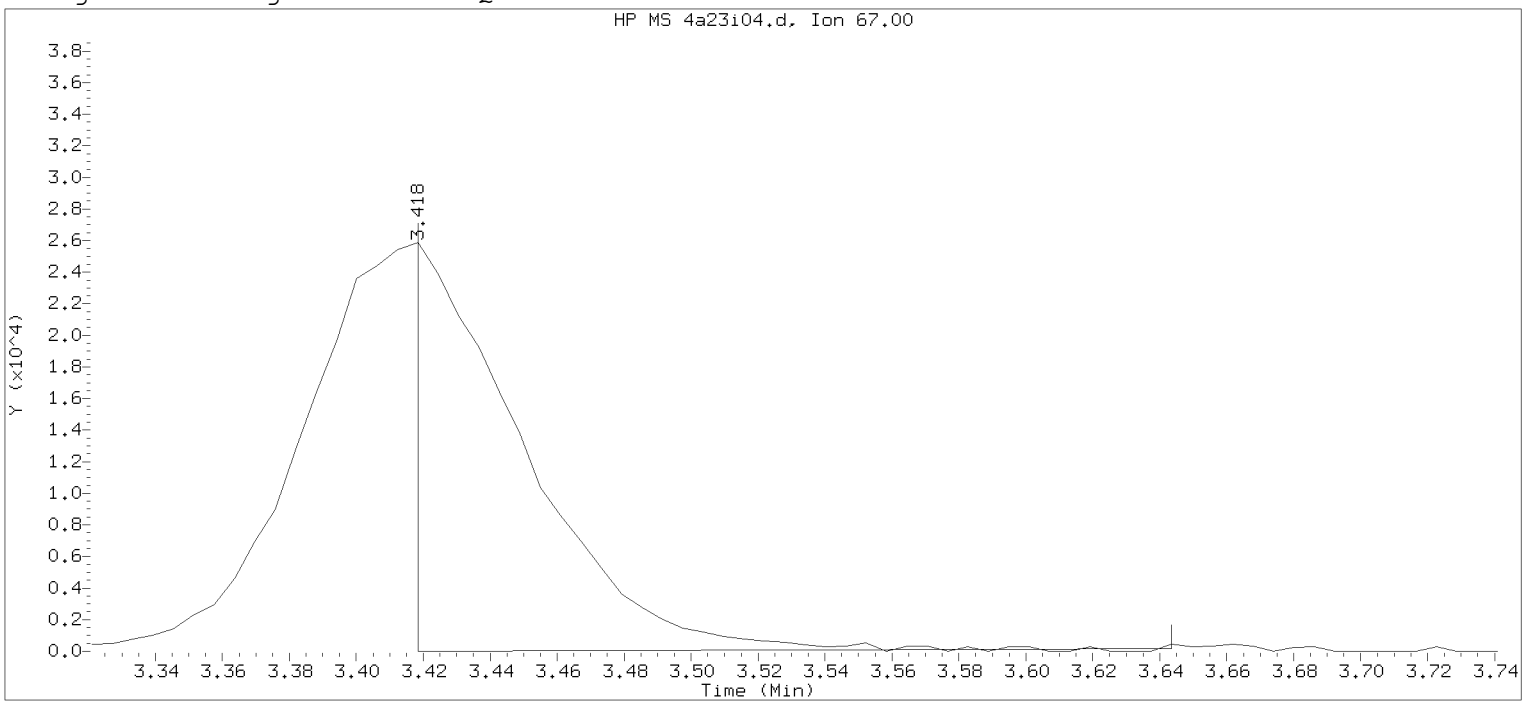
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

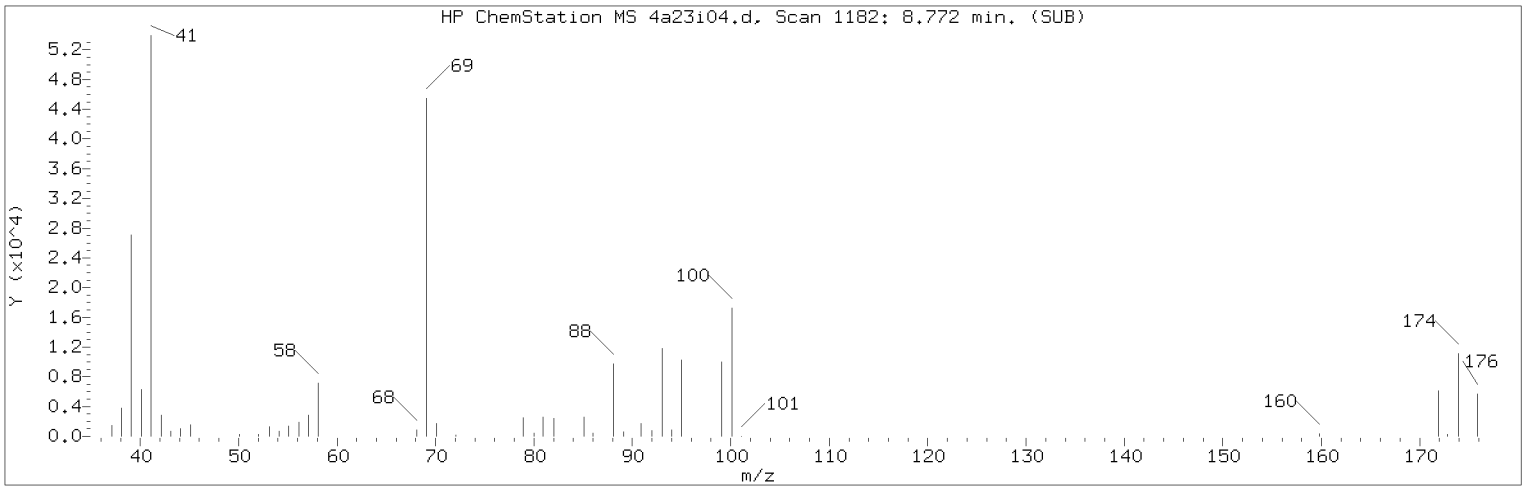
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:23
Date, time and analyst ID of latest file update: 23-Apr-2019 16:23 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

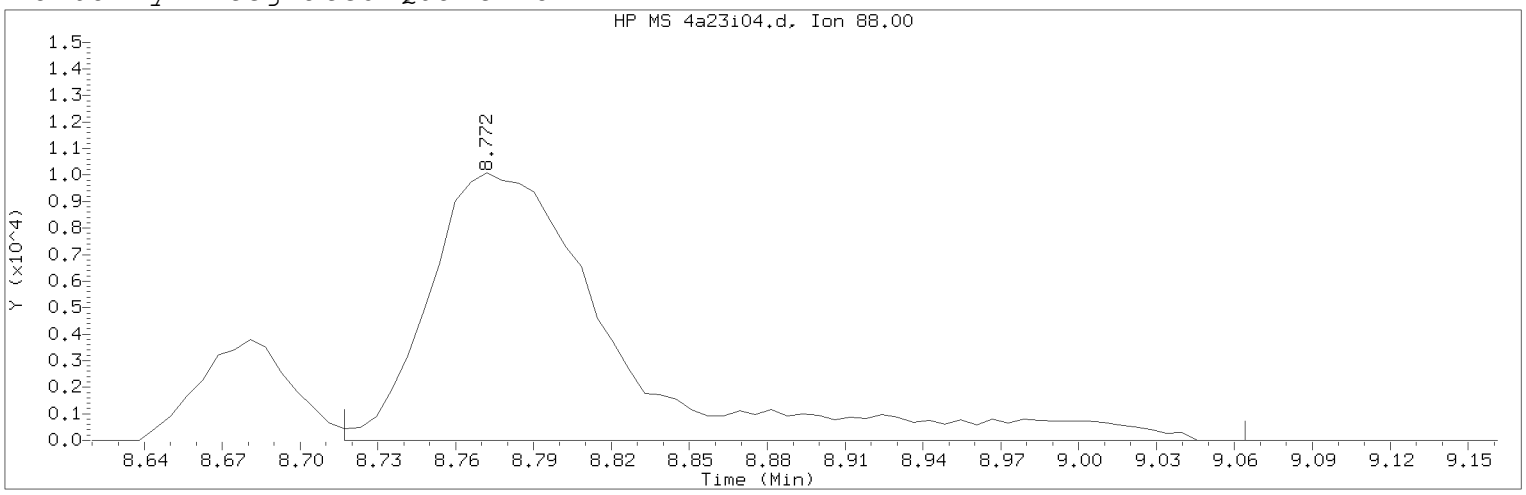
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 302
Retention Time (minutes): 3.418
Quant Ion : 67.00
Area : 55814
On-column Amount (ng) : 10.8863
Integration start scan : 301 Integration stop scan: 338
Y at integration start : 0 Y at integration end: 182

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong26

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

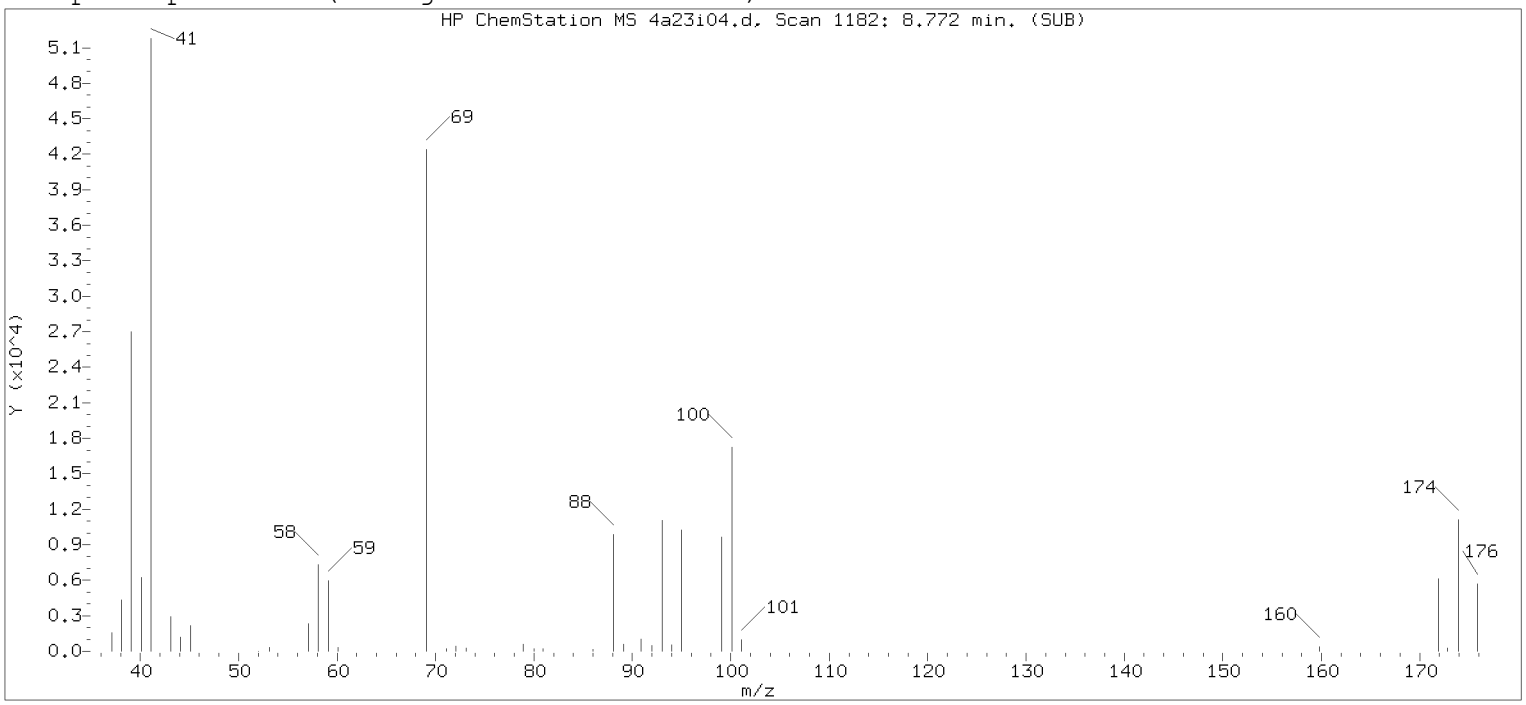
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1182
Retention Time (minutes): 8.772
Quant Ion : 88.00
Area (flag) : 50746M
On-Column Amount (ng) : 416.0333
Integration start scan : 1172 Integration stop scan: 1229
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

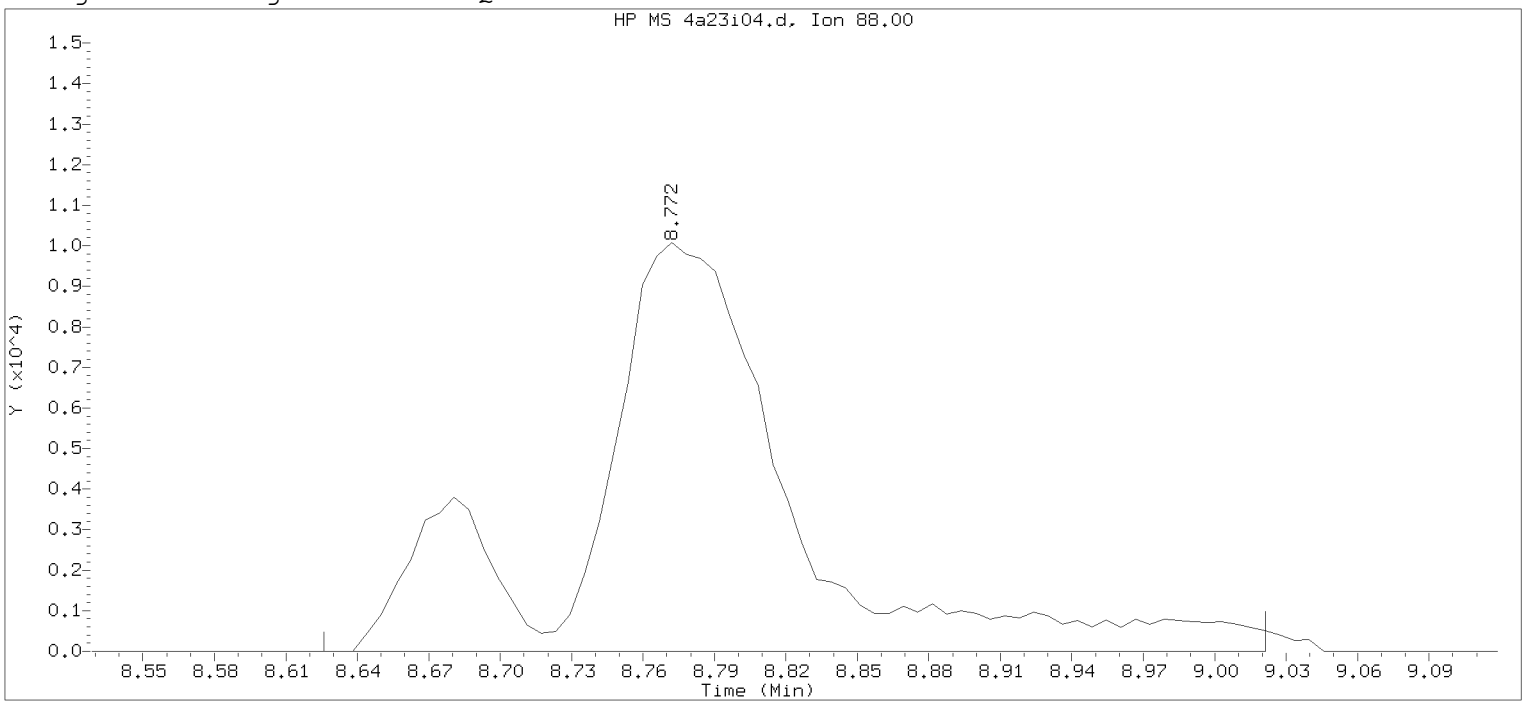
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

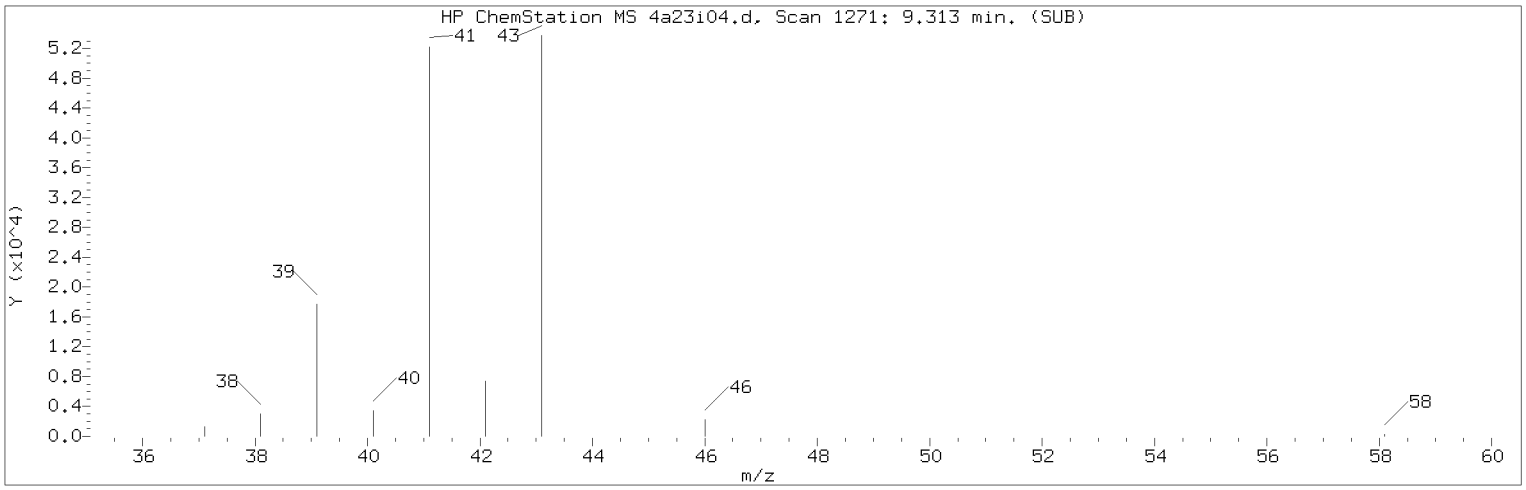
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:23
Date, time and analyst ID of latest file update: 23-Apr-2019 16:23 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

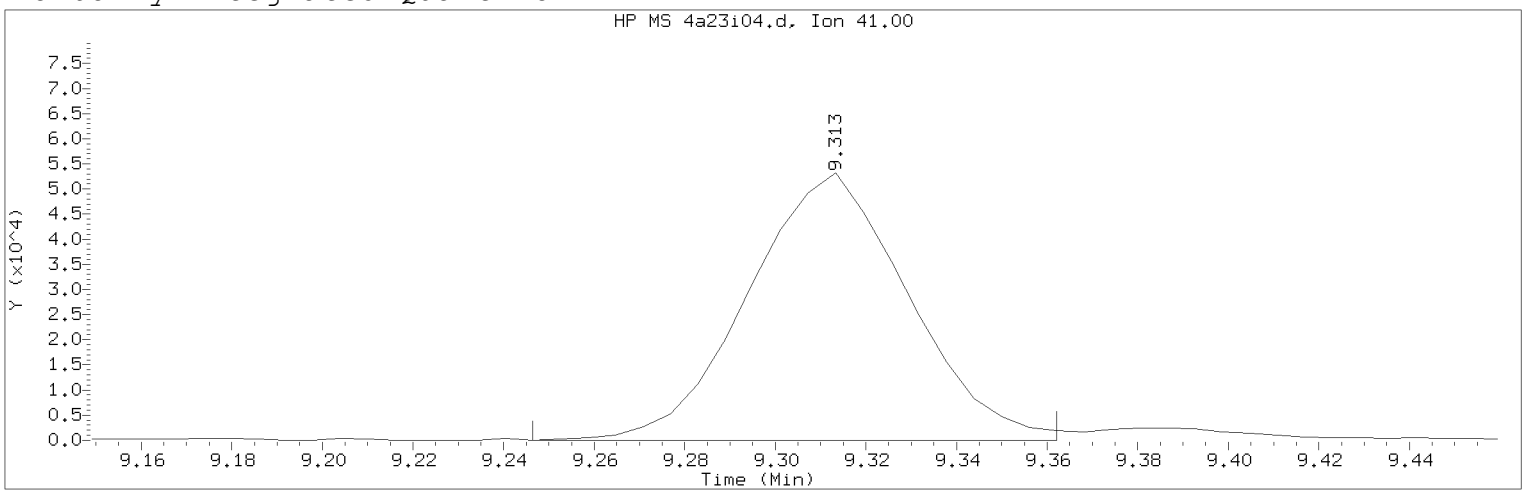
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1182		
Retention Time (minutes)	: 8.772		
Quant Ion	: 88.00		
Area	: 59618		
On-column Amount (ng)	: 455.4708		
Integration start scan	: 1157	Integration stop scan:	1222
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong270

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

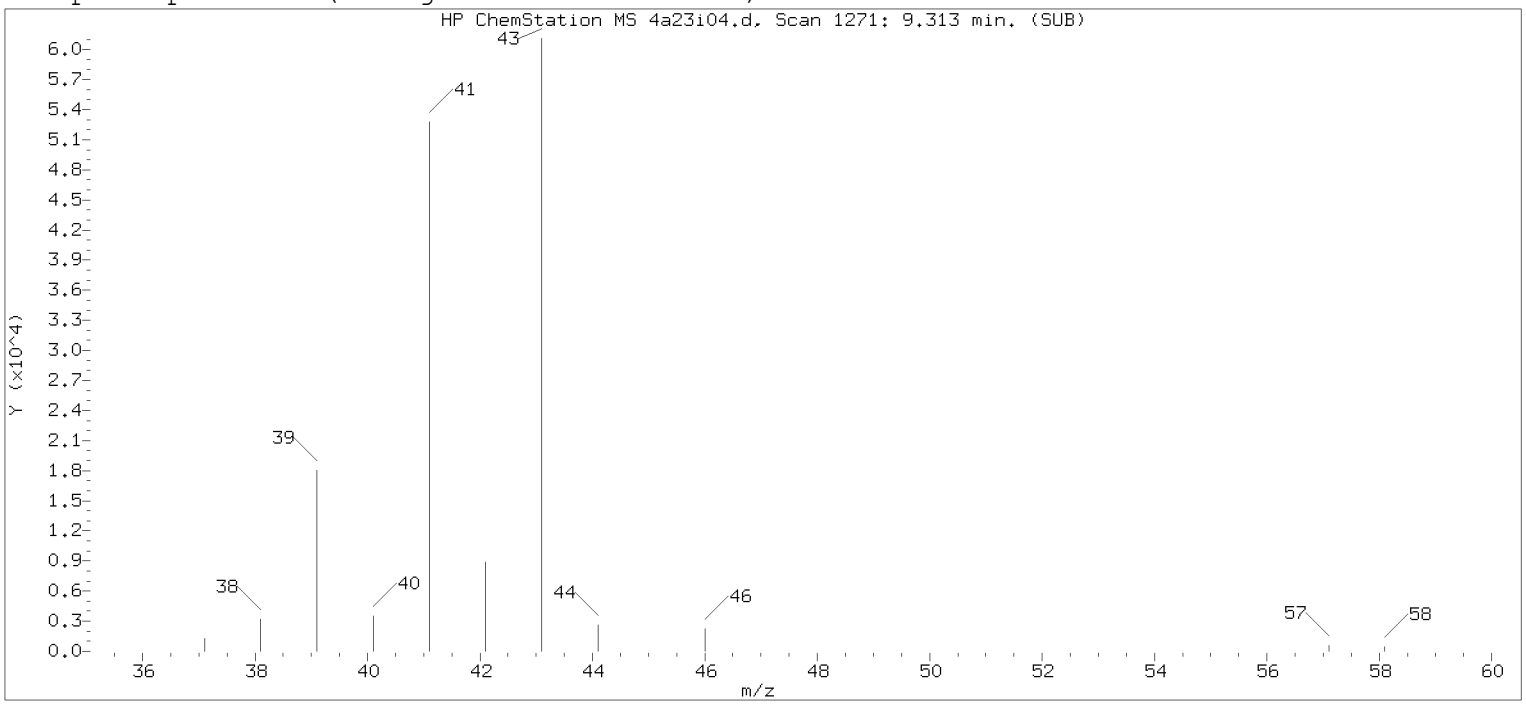
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 1271
Retention Time (minutes): 9.313
Quant Ion : 41.00
Area (flag) : 129961M
On-Column Amount (ng) : 40.1822
Integration start scan : 1259 Integration stop scan: 1278
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

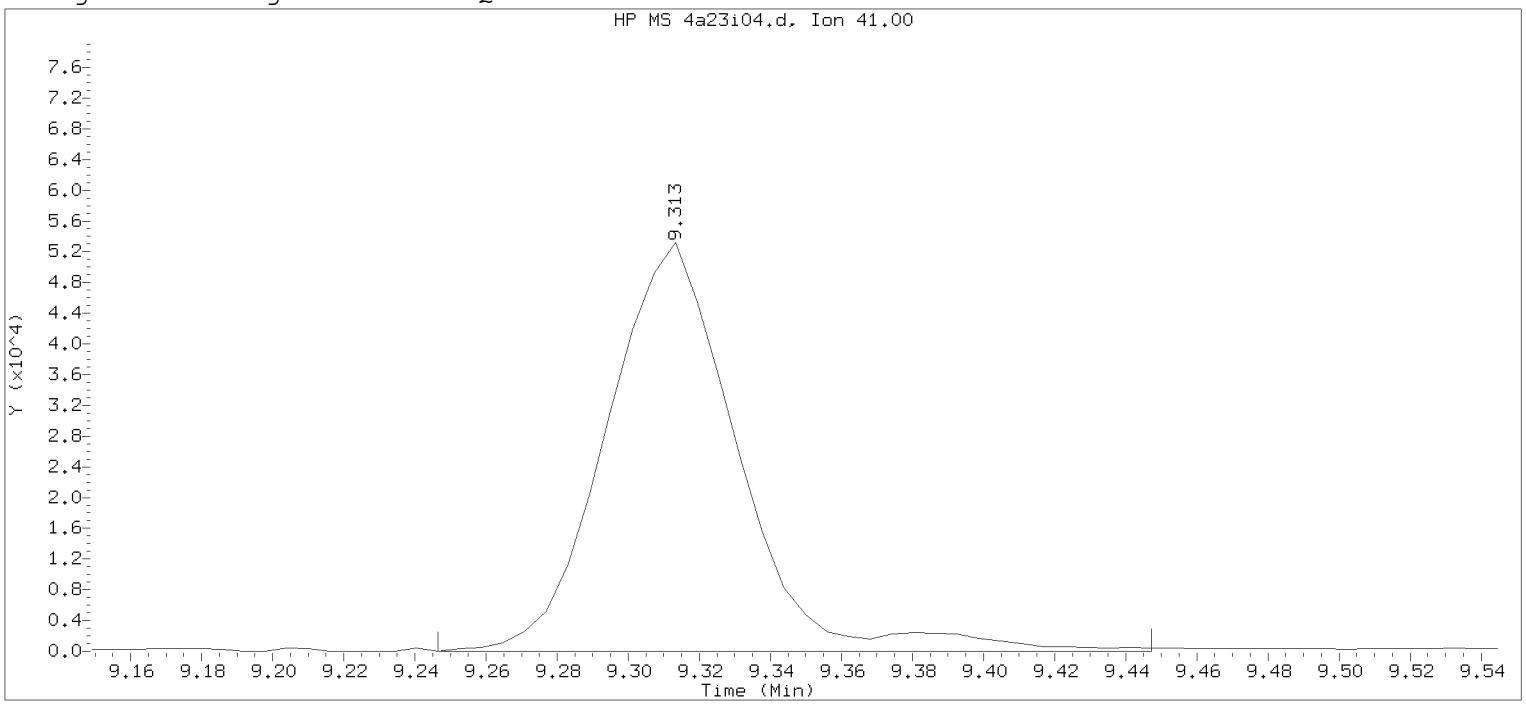
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

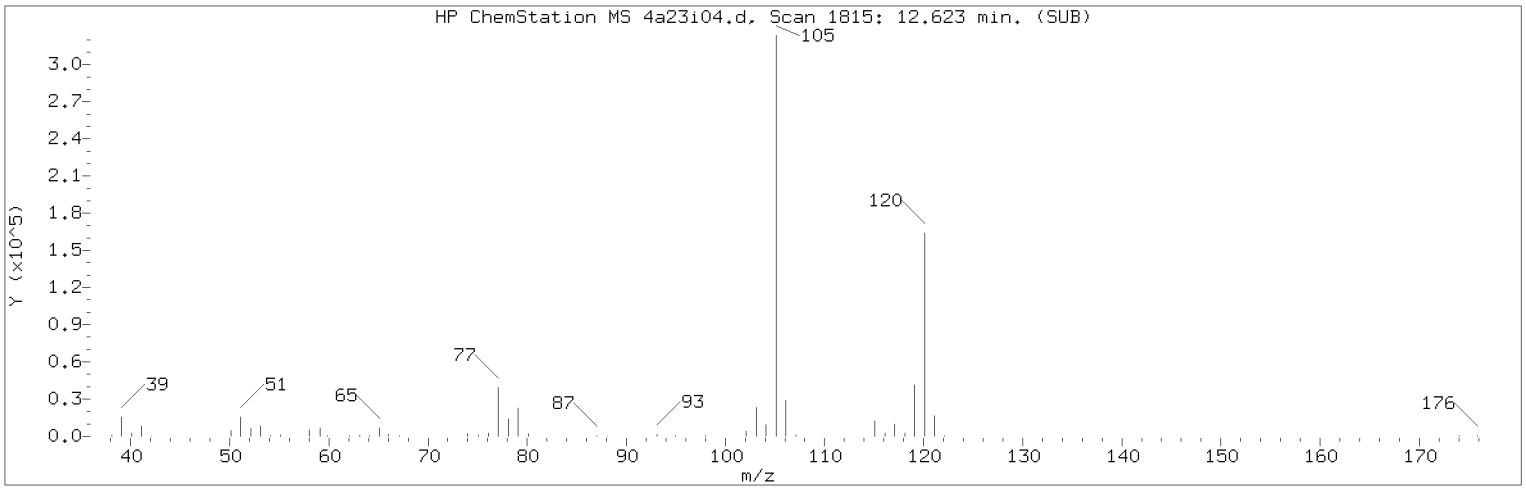
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:23
Date, time and analyst ID of latest file update: 23-Apr-2019 16:23 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

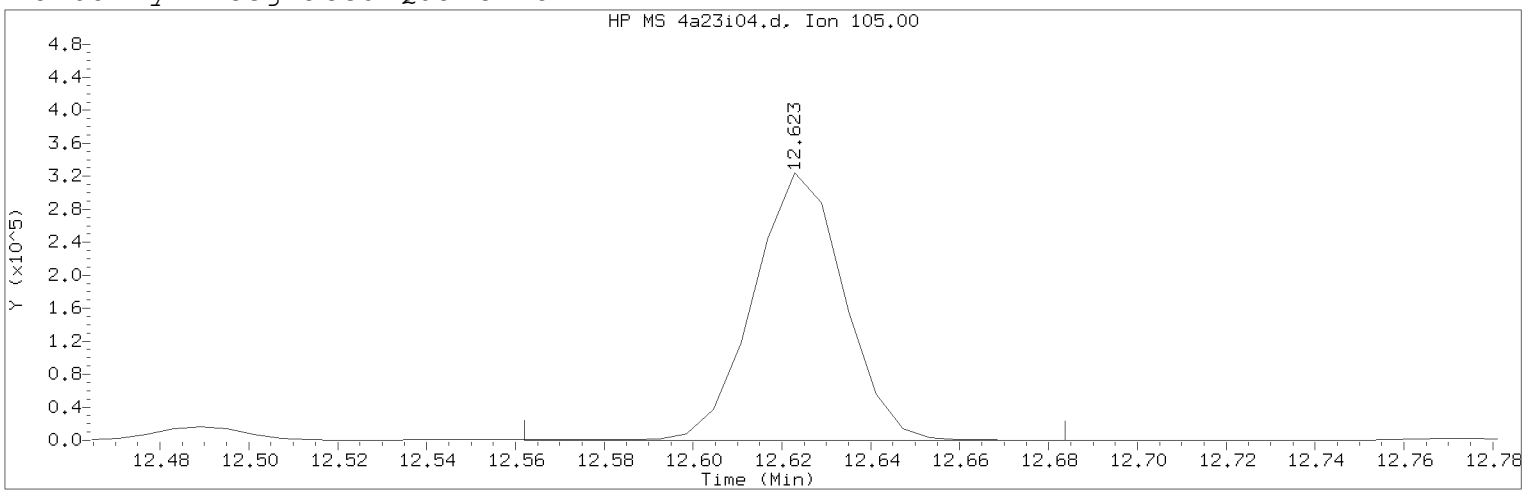
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 1271
Retention Time (minutes): 9.313
Quant Ion : 41.00
Area : 136454
On-column Amount (ng) : 41.1184
Integration start scan : 1259 Integration stop scan: 1292
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

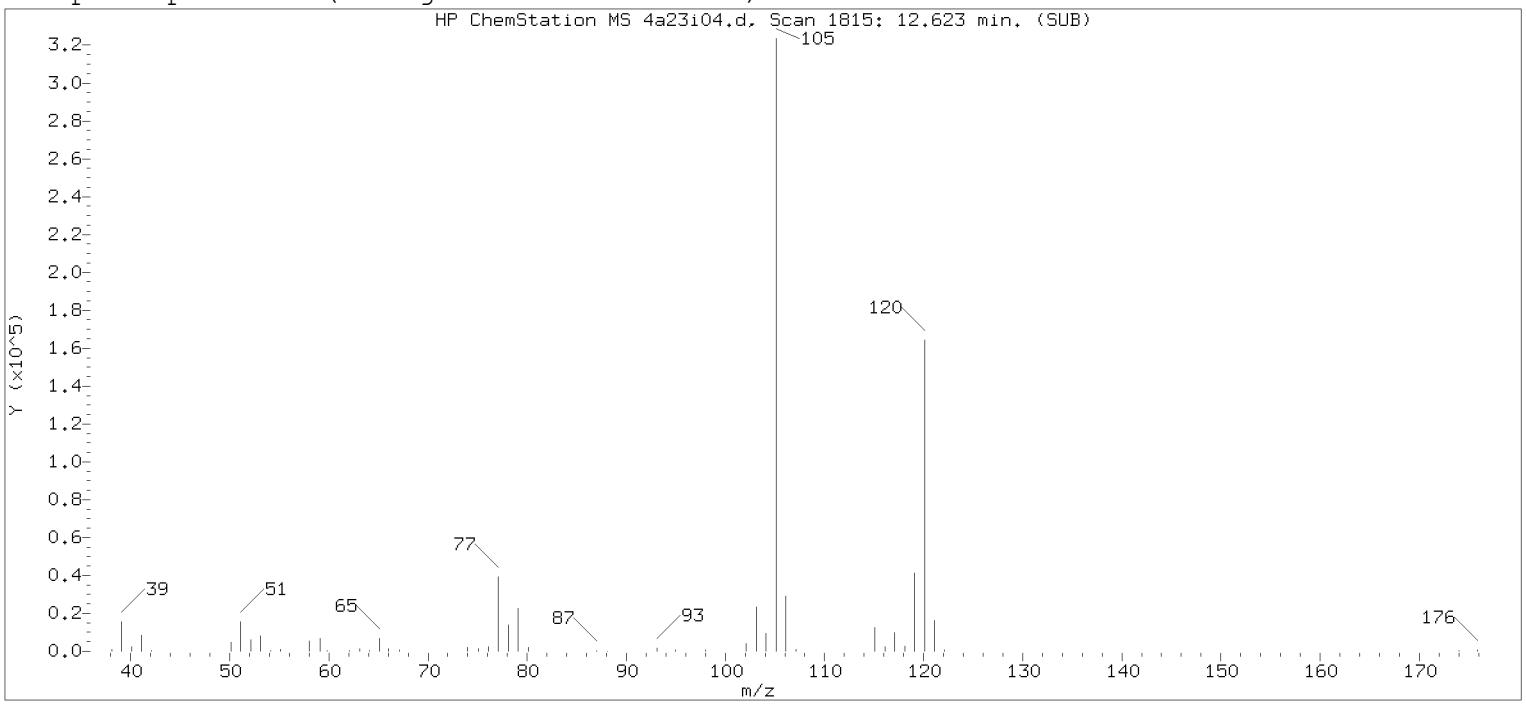
Compound Number : 122
Compound Name : 1,3,5-Trimethylbenzene
Scan Number : 1815
Retention Time (minutes): 12.623
Quant Ion : 105.00
Area (flag) : 458407M
On-Column Amount (ng) : 20.5590
Integration start scan : 1804 Integration stop scan: 1824
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

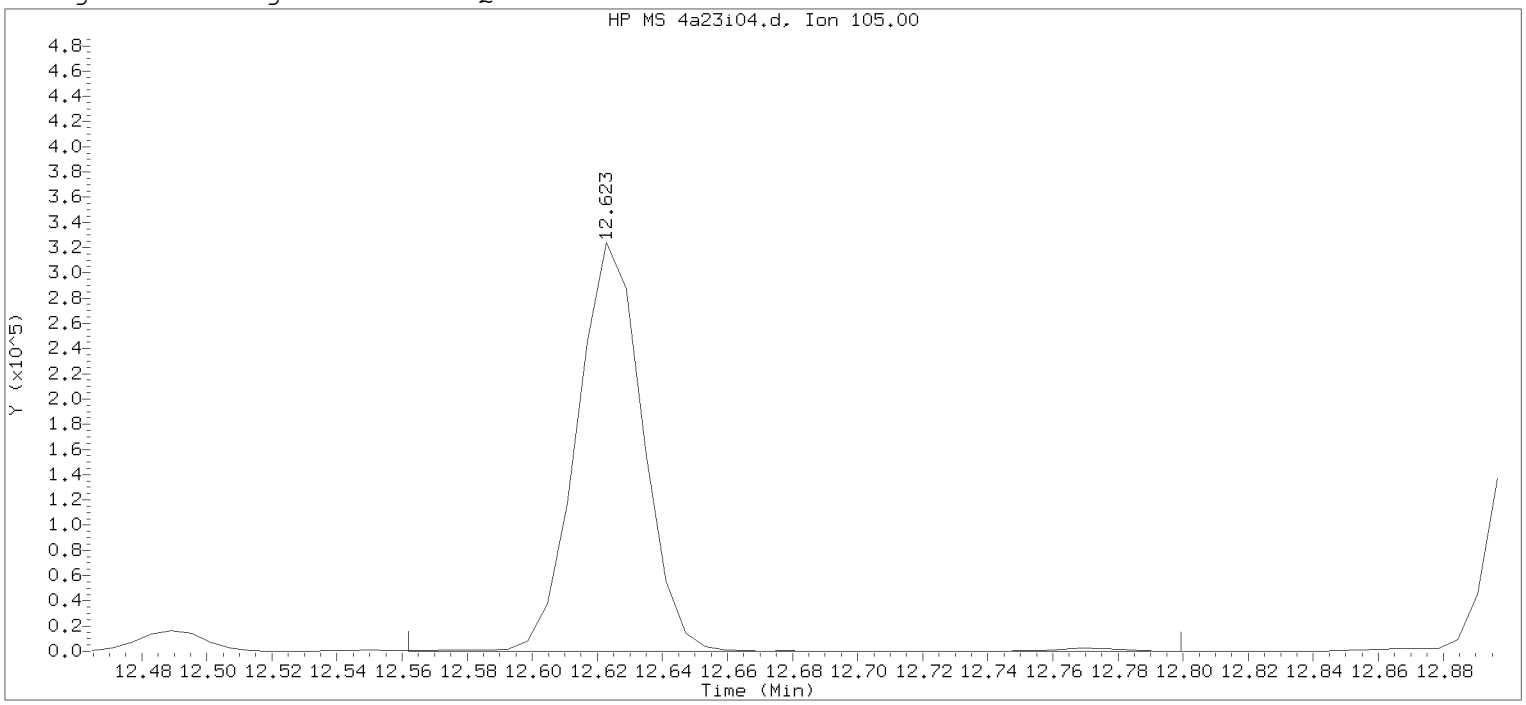
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

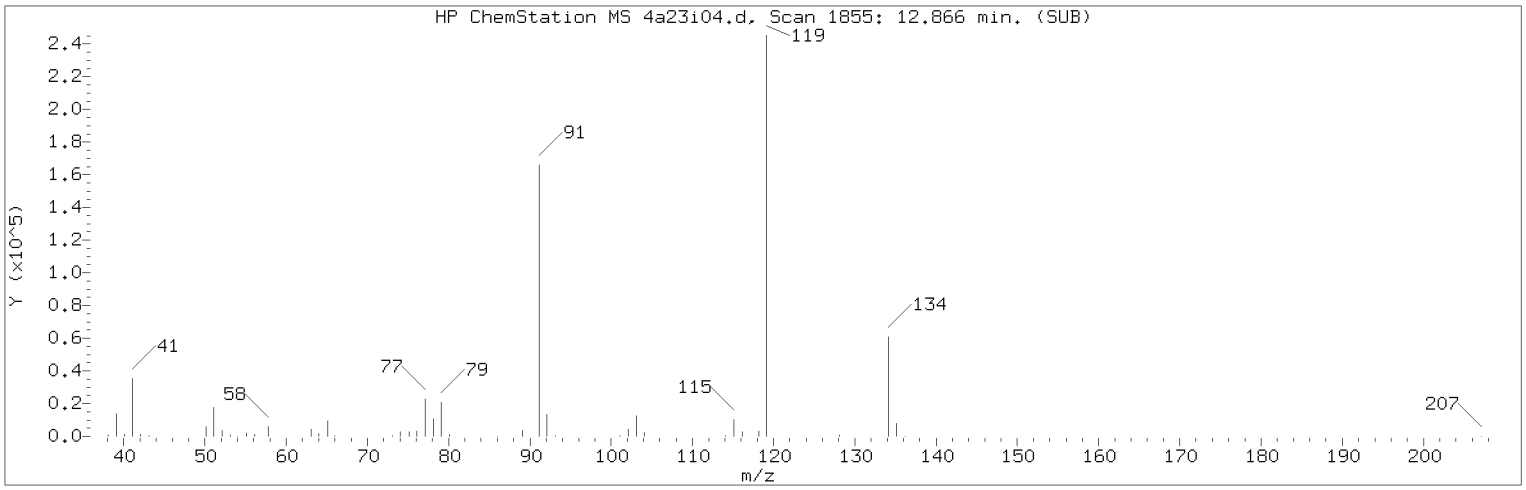
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:23
Date, time and analyst ID of latest file update: 23-Apr-2019 16:23 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

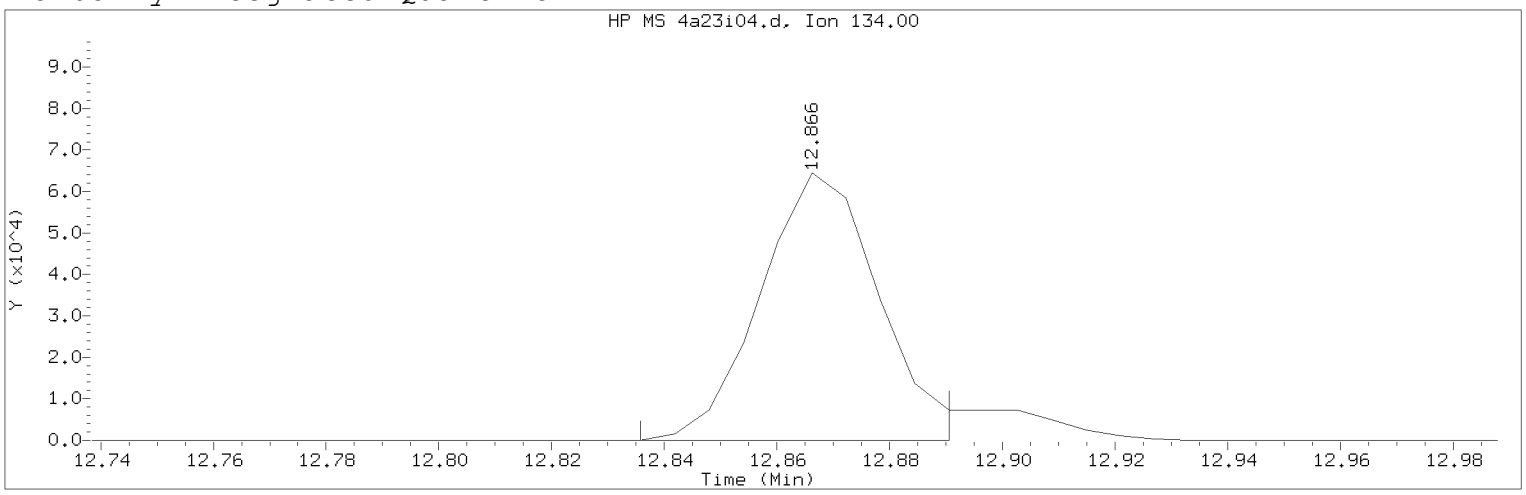
Compound Number : 122
Compound Name : 1,3,5-Trimethylbenzene
Scan Number : 1815
Retention Time (minutes): 12.623
Quant Ion : 105.00
Area : 461702
On-column Amount (ng) : 20.6686
Integration start scan : 1804 Integration stop scan: 1843
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user: jmlong1274

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

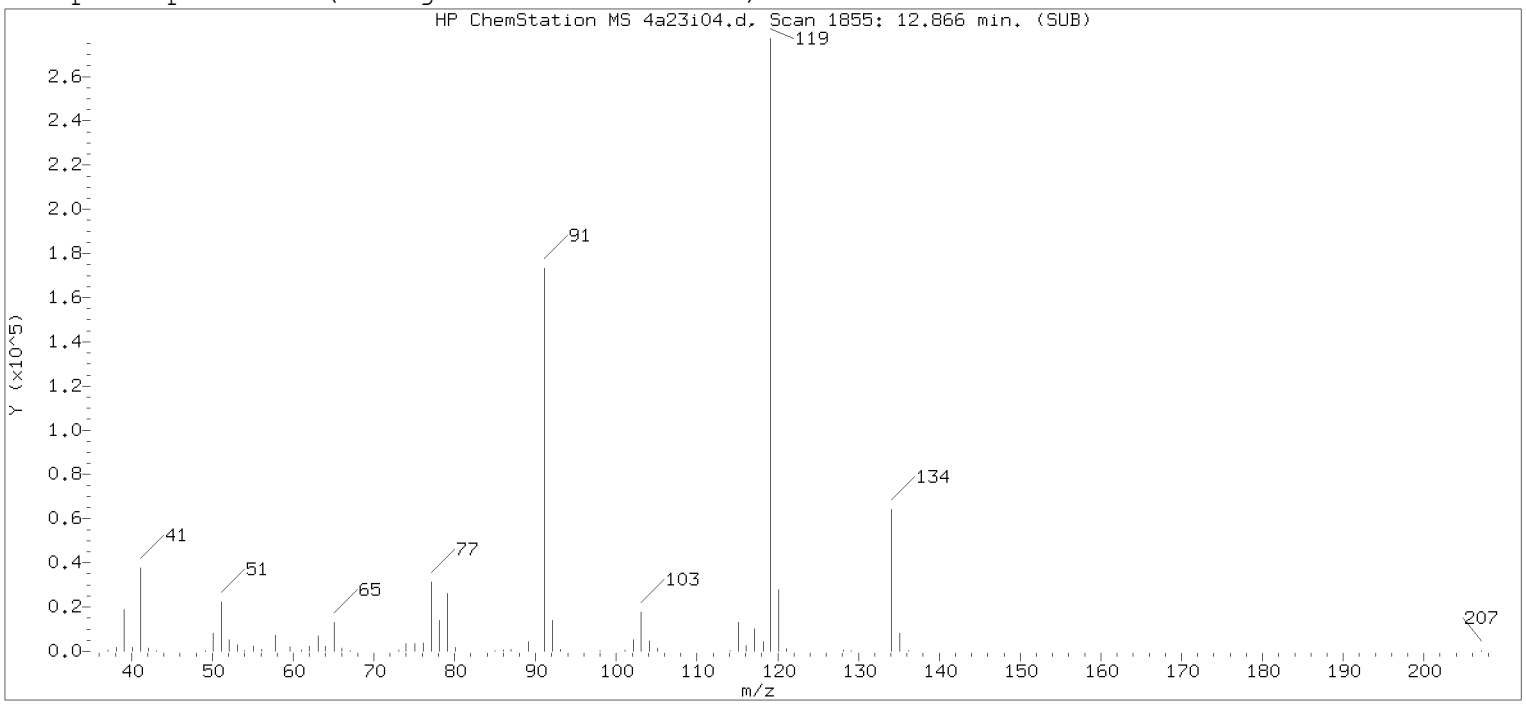
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area (flag) : 93971M
On-Column Amount (ng) : 20.5206
Integration start scan : 1849 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

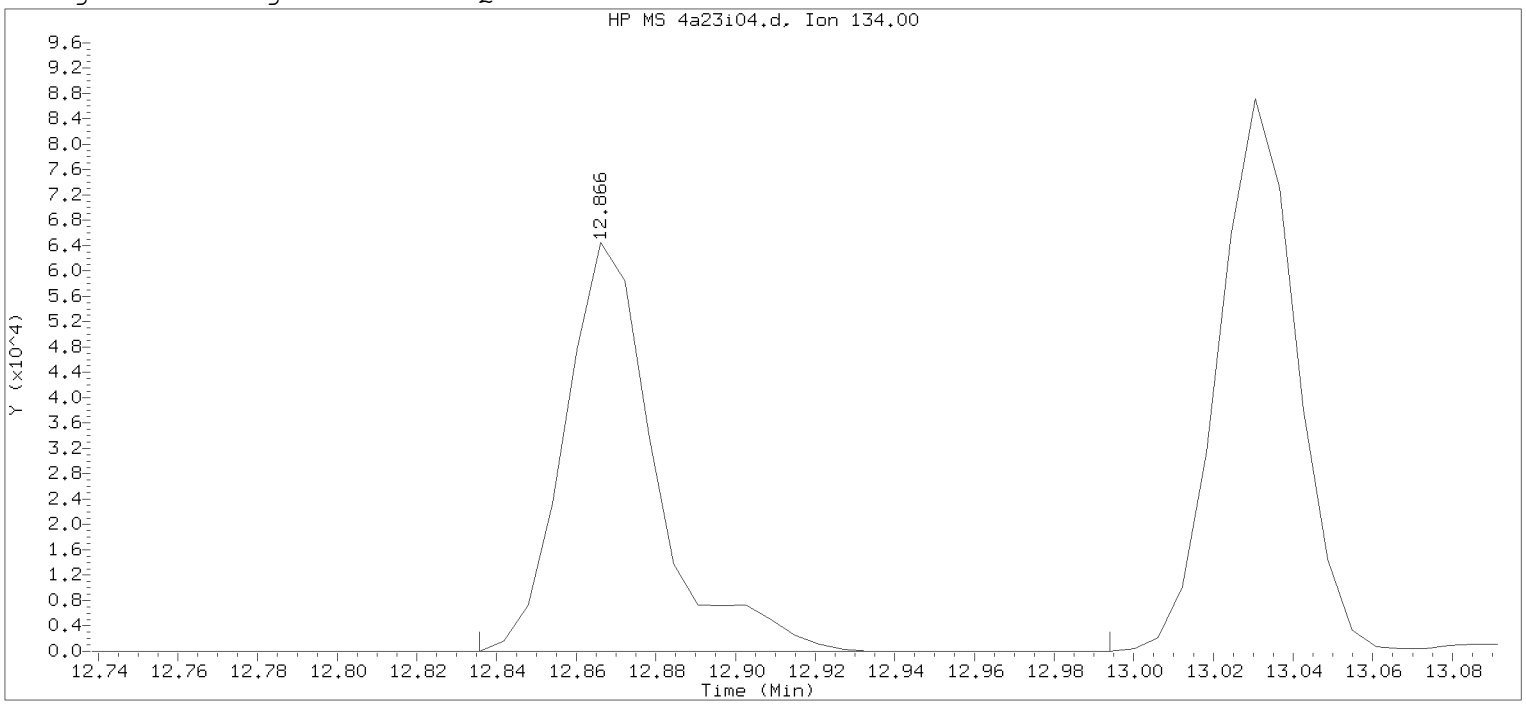
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



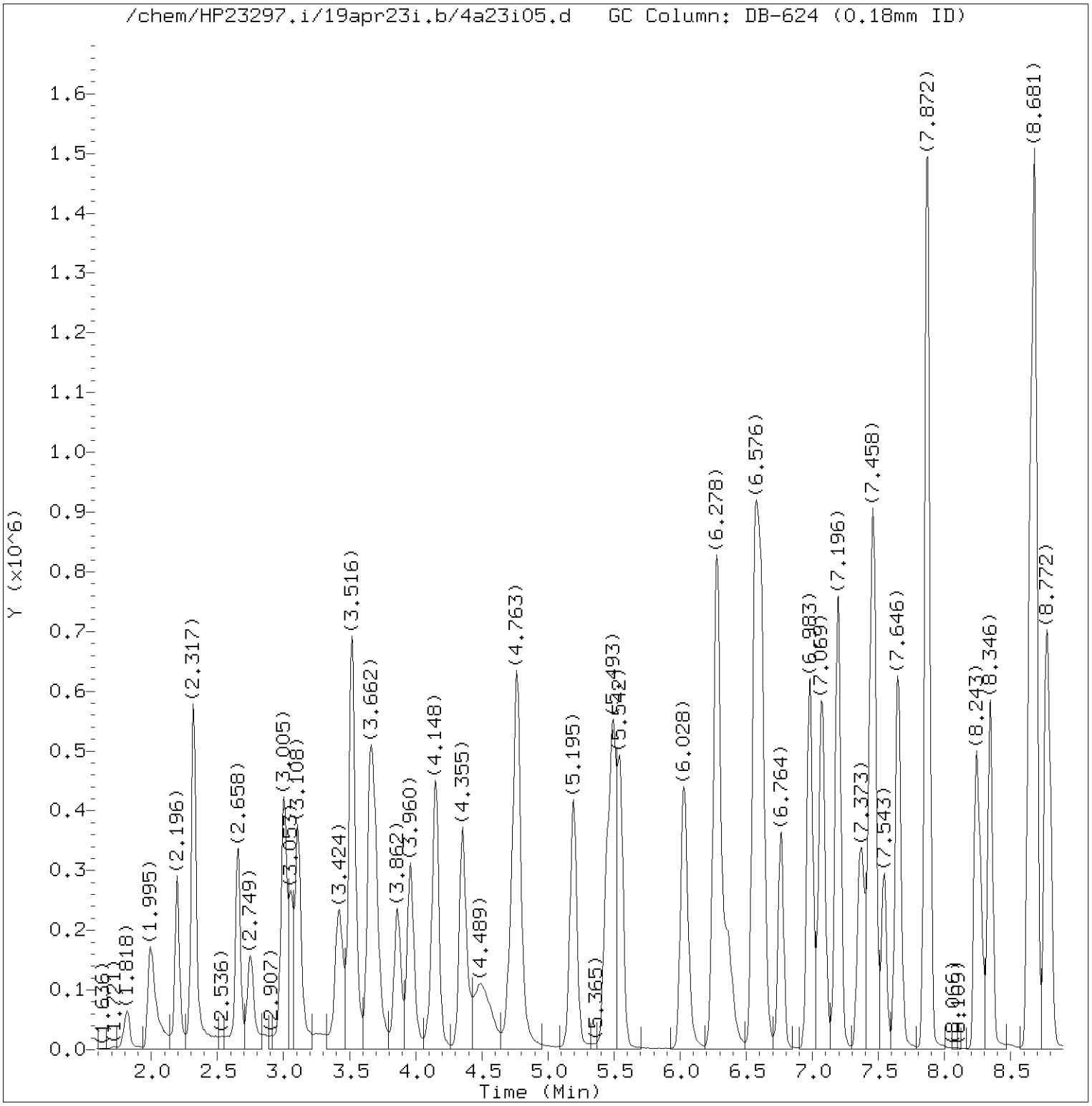
Data File: /chem/HP23297.i/19apr23i.b/4a23i04.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:06 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:23
Date, time and analyst ID of latest file update: 23-Apr-2019 16:23 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area : 102552
On-column Amount (ng) : 20.5213
Integration start scan : 1849 Integration stop scan: 1875
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong



Total Ion Chromatogram (TIC)

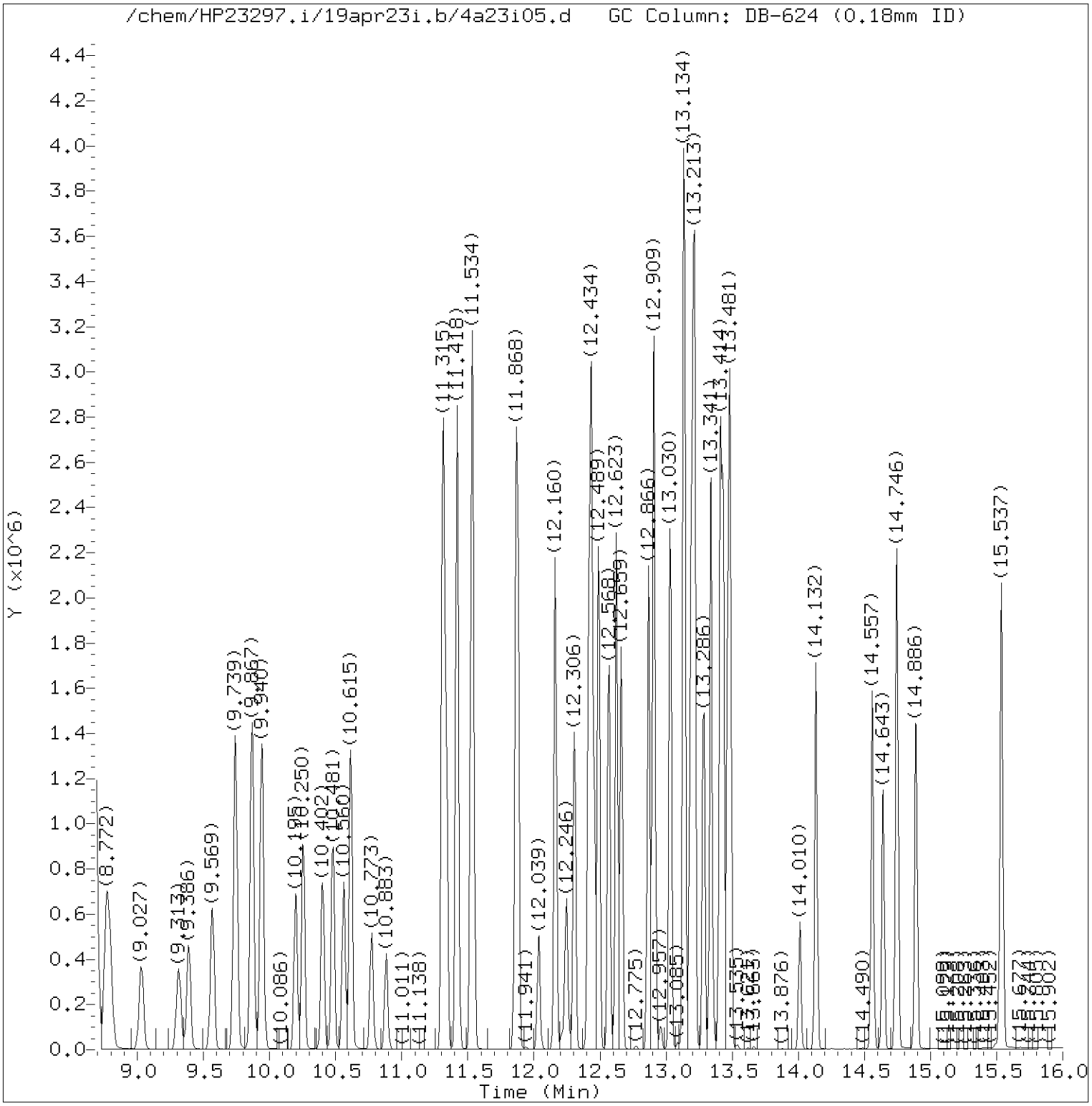
Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.995	85	422543	48.548
4) Chloromethane	(2)	2.196	50	399384	46.293
6) Vinyl Chloride	(2)	2.317	62	388406	46.447
5) 1,3-Butadiene	(2)	2.323	39	221643	47.579
8) Bromomethane	(2)	2.658	94	314370	45.508
9) Chloroethane	(2)	2.749	64	212494	45.530
10) Dichlorofluoromethane	(2)	2.999	67	492073	44.415
12) Trichlorofluoromethane	(2)	3.053	101	486554	48.850
11) n-Pentane	(2)	3.108	43	408169	51.407
13) Ethanol	(1)	3.278	45	152752M	1123.548
15) Freon 123a	(2)	3.412	67	278833	48.590
16) Acrolein	(1)	3.516	56	1146549	503.204
17) 1,1-Dichloroethene	(2)	3.656	96	202043	51.857
17) 1,1-Dichloroethene	(2)	3.650	63	103299	49.335
19) Freon 113	(2)	3.686	101	223274	52.167
18) Acetone	(1)	3.698	58	114990	103.332
22) Methyl Iodide	(2)	3.862	142	400742	51.435
21) 2-Propanol	(1)	3.869	45	228709	252.796
23) Carbon Disulfide	(2)	3.960	76	719650	51.615
27) Methyl Acetate	(2)	4.130	43	377651	45.336
25) Allyl Chloride	(2)	4.154	41	416279	46.865
28) Methylene Chloride	(2)	4.349	84	248892	49.583
29)*t-Butyl alcohol-d10	(1)	4.380	65	399880	250.000
30) t-Butyl alcohol	(1)	4.507	59	409820	255.281
31) Acrylonitrile	(2)	4.714	53	209749	48.622
33) Methyl Tertiary Butyl Ether	(2)	4.757	73	709128	49.532
32) trans-1,2-Dichloroethene	(2)	4.769	96	242526	52.100
34) n-Hexane	(2)	5.195	57	399360	51.628
36) 1,1-Dichloroethane	(2)	5.444	63	444914	50.830
38) di-Isopropyl ether	(2)	5.493	45	883931	50.385
39) 2-Chloro-1,3-butadiene	(2)	5.548	53	411983	52.363
40) Ethyl t-butyl ether	(2)	6.028	59	752871	49.329
43) 1,2-Dichloroethene (Total)	(2)		96	521250	103.966
44) 2-Butanone	(2)	6.253	43	623431	91.905
42) cis-1,2-Dichloroethene	(2)	6.278	96	278724	51.867
45) 2,2-Dichloropropane	(2)	6.290	77	351494	51.410
47) Propionitrile	(1)	6.363	54	442678	265.953
48) Methacrylonitrile	(2)	6.570	67	511631	127.406

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.612	128	152475	52.016
50) Tetrahydrofuran	(1)	6.618	71	168329	102.438
51) Chloroform	(2)	6.758	83	435986	50.390
52)$Dibromofluoromethane	(2)	6.977	113	275133	50.152
52)$Dibromofluoromethane	(2)	6.977	111	282412	50.249
53) 1,1,1-Trichloroethane	(2)	6.983	97	367602	51.137
54) Cyclohexane	(2)	7.069	56	477122	51.035
54) Cyclohexane	(2)	7.075	84	394832	52.030
54) Cyclohexane	(2)	7.075	69	146483	52.892
56) Carbon Tetrachloride	(2)	7.190	117	322577	52.228
55) 1,1-Dichloropropene	(2)	7.196	75	347518	51.226
58) Isobutyl Alcohol	(1)	7.373	41	353205	634.496
57)$1,2-Dichloroethane-d4	(2)	7.440	102	65849	49.121
57)$1,2-Dichloroethane-d4	(2)	7.440	65	320218	48.817
57)$1,2-Dichloroethane-d4	(2)	7.440	104	43090	50.463
60) Benzene	(2)	7.464	78	1049268	50.424
61) 1,2-Dichloroethane	(2)	7.543	62	346438	48.455
61) 1,2-Dichloroethane	(2)	7.537	98	31077	55.269
65) t-Amyl methyl ether	(2)	7.646	73	762980	48.993
67) n-Heptane	(2)	7.865	43	450122	49.056
66)*Fluorobenzene	(2)	7.872	96	1115257	50.000
69) n-Butanol	(1)	8.243	56	583632	1308.027
71) Trichloroethene	(2)	8.346	95	268477	51.513
72) Methylcyclohexane	(2)	8.644	83	501796	51.766
72) Methylcyclohexane	(2)	8.644	98	218099	52.190
73) 1,2-Dichloropropane	(2)	8.687	63	278588	51.543
76) Methyl Methacrylate	(2)	8.766	69	312291	51.347
75) 1,4-Dioxane	(1)	8.778	88	67814M	596.994
74) Dibromomethane	(2)	8.796	93	180647	51.744
78) Bromodichloromethane	(2)	9.027	83	330144	52.225
79) 2-Nitropropane	(2)	9.313	41	301290M	95.924
80) 2-Chloroethyl Vinyl Ether	(2)	9.386	63	253756	51.504
81) cis-1,3-Dichloropropene	(2)	9.569	75	441857	52.935
82) 4-Methyl-2-pentanone	(2)	9.739	43	1161159	95.939
83)$Toluene-d8	(3)	9.867	98	1156942	49.731
83)$Toluene-d8	(3)	9.867	100	752673	49.970
88) Toluene	(3)	9.940	92	682329	50.380
90) 1,3-Dichloropropene (total)	(3)		100	858309	106.612

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on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.195	75	416452	53.677
91) Ethyl Methacrylate	(3)	10.250	69	511131	51.594
92) 1,1,2-Trichloroethane	(3)	10.402	97	267210	50.659
93) Tetrachloroethene	(3)	10.481	166	301813	51.650
94) 1,3-Dichloropropane	(3)	10.560	76	440061	50.074
96) 2-Hexanone	(3)	10.615	43	930264	95.312
97) Dibromochloromethane	(3)	10.773	129	290322	53.530
99) 1,2-Dibromoethane	(3)	10.883	107	297688	51.414
100)*Chlorobenzene-d5	(3)	11.309	117	896314	50.000
102) Chlorobenzene	(3)	11.339	112	772592	50.671
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	269911	53.851
104) Ethylbenzene	(3)	11.418	91	1325409	51.145
106) m+p-Xylene	(3)	11.534	106	1060948	103.513
108) Xylene (Total)	(3)		106	1583776	154.809
107) o-Xylene	(3)	11.862	106	522828	51.295
109) Styrene	(3)	11.881	104	890830	53.126
110) Bromoform	(3)	12.039	173	235207	56.365
111) Isopropylbenzene	(3)	12.160	105	1328624	51.699
112) Cyclohexanone	(1)	12.246	55	282631	615.260
114)$4-Bromofluorobenzene	(3)	12.306	95	443023	50.116
114)$4-Bromofluorobenzene	(3)	12.306	174	393335	50.478
116) 1,1,2,2-Tetrachloroethane	(4)	12.410	83	474303	50.224
115) Bromobenzene	(4)	12.422	156	356423	50.516
118) trans-1,4-Dichloro-2-butene	(4)	12.434	53	394932	126.711
117) 1,2,3-Trichloropropane	(4)	12.459	110	140917	49.200
119) n-Propylbenzene	(4)	12.489	91	1560578	49.774
120) 2-Chlorotoluene	(4)	12.568	126	323014	50.148
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	1137588	50.793
121) 4-Chlorotoluene	(4)	12.659	126	335655	50.089
124) tert-Butylbenzene	(4)	12.866	134	235601M	51.133
125) Pentachloroethane	(4)	12.903	167	214970	52.834
126) 1,2,4-Trimethylbenzene	(4)	12.909	105	1193252	51.321
127) sec-Butylbenzene	(4)	13.030	105	1468344	51.274
129) 1,3-Dichlorobenzene	(4)	13.134	146	677034	50.888
130) p-Isopropyltoluene	(4)	13.140	119	1293400	51.951
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	508818	50.000
133) 1,4-Dichlorobenzene	(4)	13.207	146	690187	50.486
134) 1,2,3-Trimethylbenzene	(4)	13.213	105	1263672	50.620

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Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

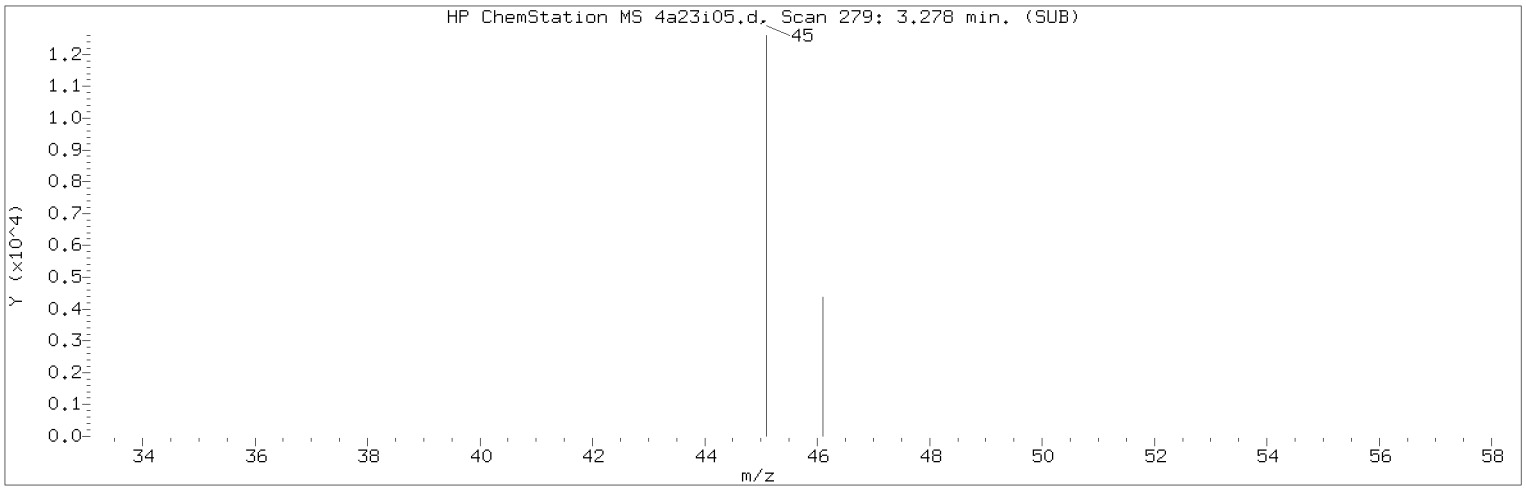
Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.286	91	1003985	55.466
136) 1,3-Diethylbenzene	(4)	13.341	119	792327	51.067
141) Diethylbenzene (total)	(4)		100	2302295	153.298
137) 1,4-Diethylbenzene	(4)	13.408	119	845488	51.285
139) n-Butylbenzene	(4)	13.432	92	656056M	51.086
138) 1,2-Dichlorobenzene	(4)	13.468	146	663331	50.885
140) 1,2-Diethylbenzene	(4)	13.487	119	664480	50.946
142) 1,2-Dibromo-3-chloropropane	(4)	14.010	75	123353	49.394
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	495932	50.372
146) 1,2,4-Trichlorobenzene	(4)	14.557	180	461562	49.314
147) Hexachlorobutadiene	(4)	14.643	225	207023	47.710
148) Naphthalene	(4)	14.746	128	1652399	50.589
149) 1,2,3-Trichlorobenzene	(4)	14.892	180	447560	49.947
150) 2-Methylnaphthalene	(4)	15.537	142	1036463	52.210

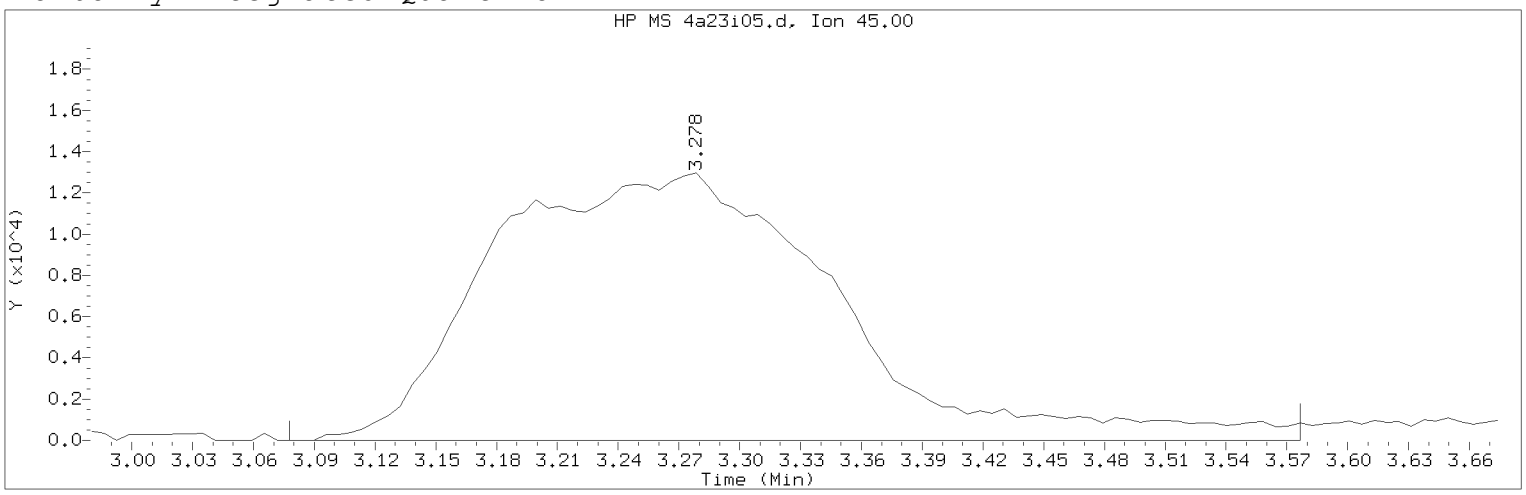
M = Compound was manually integrated.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

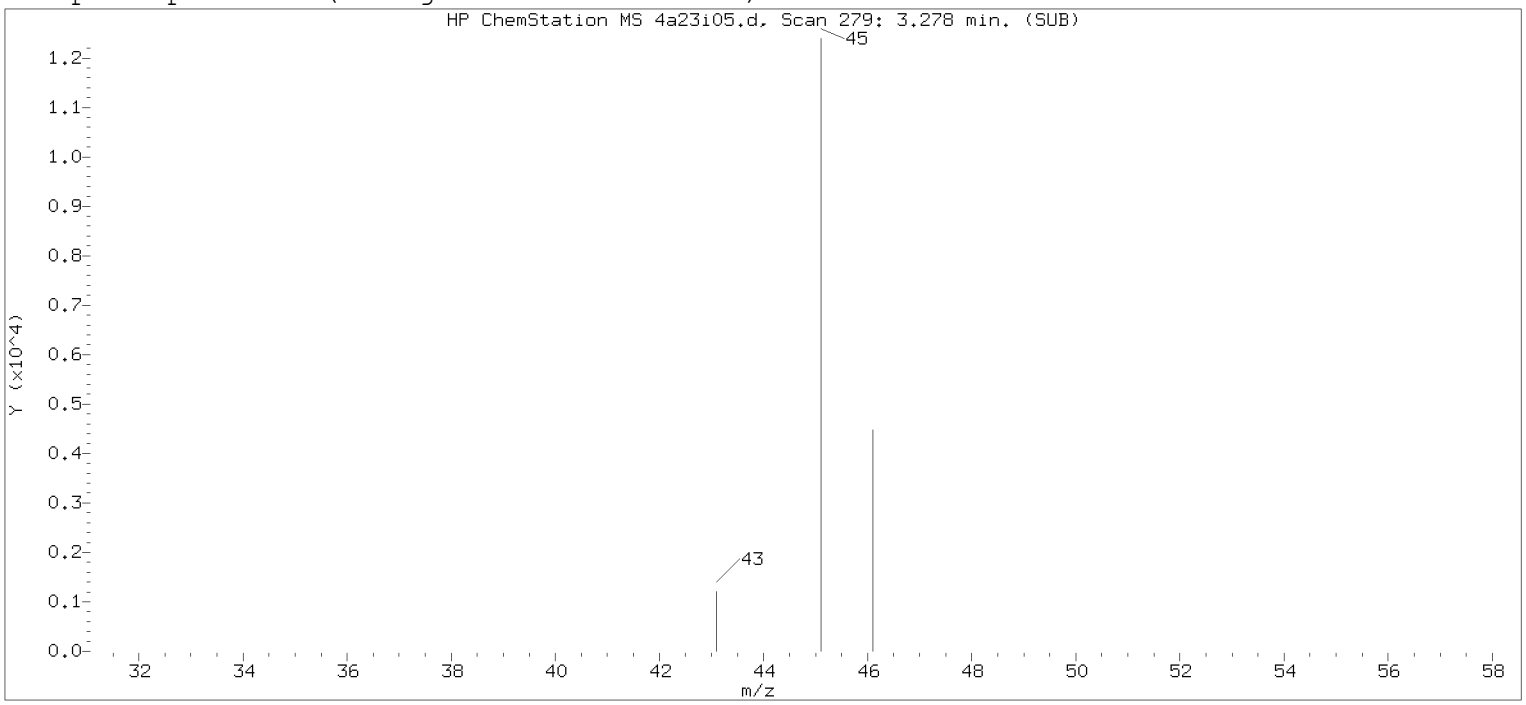
Compound Number : 13
Compound Name : Ethanol
Scan Number : 279
Retention Time (minutes): 3.278
Quant Ion : 45.00
Area (flag) : 152752M
On-Column Amount (ng) : 1123.5476
Integration start scan : 245 Integration stop scan: 327
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

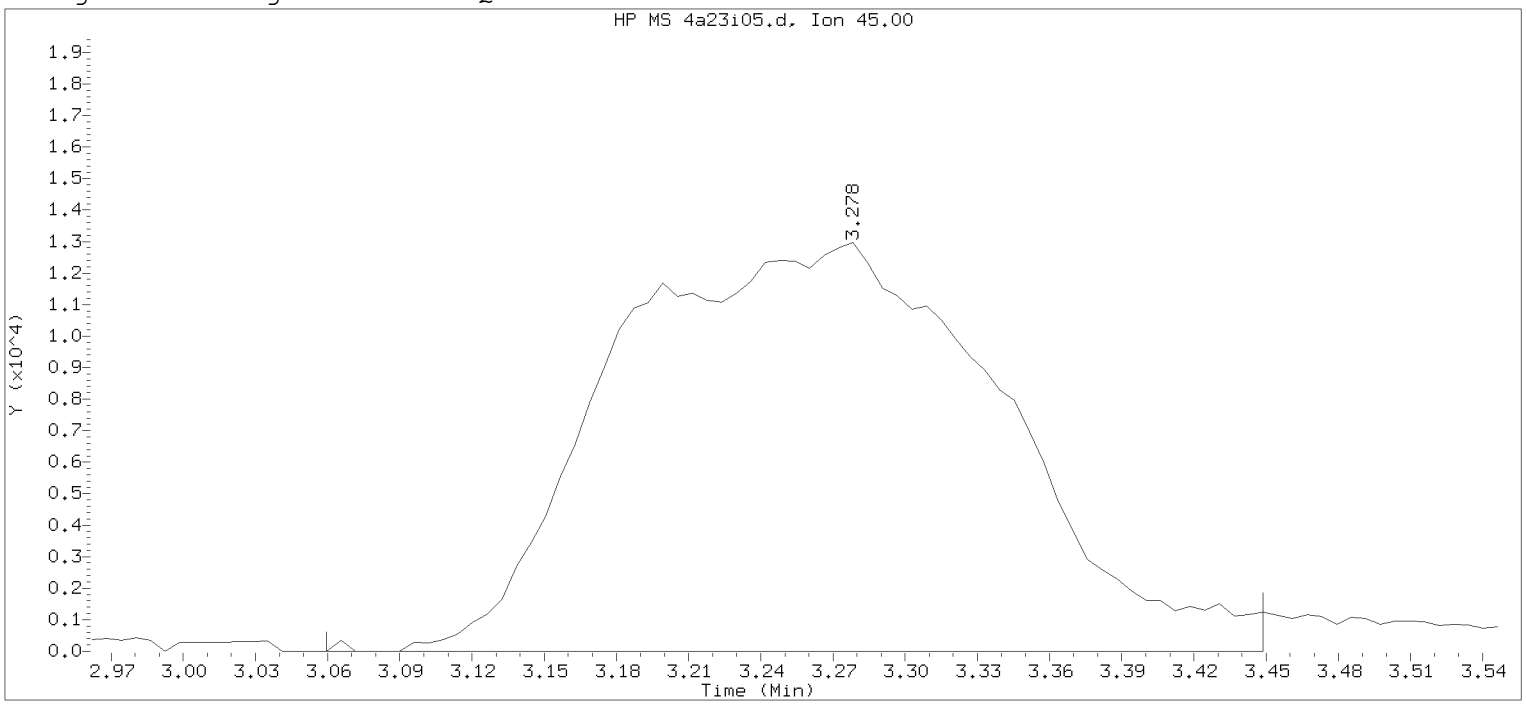
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

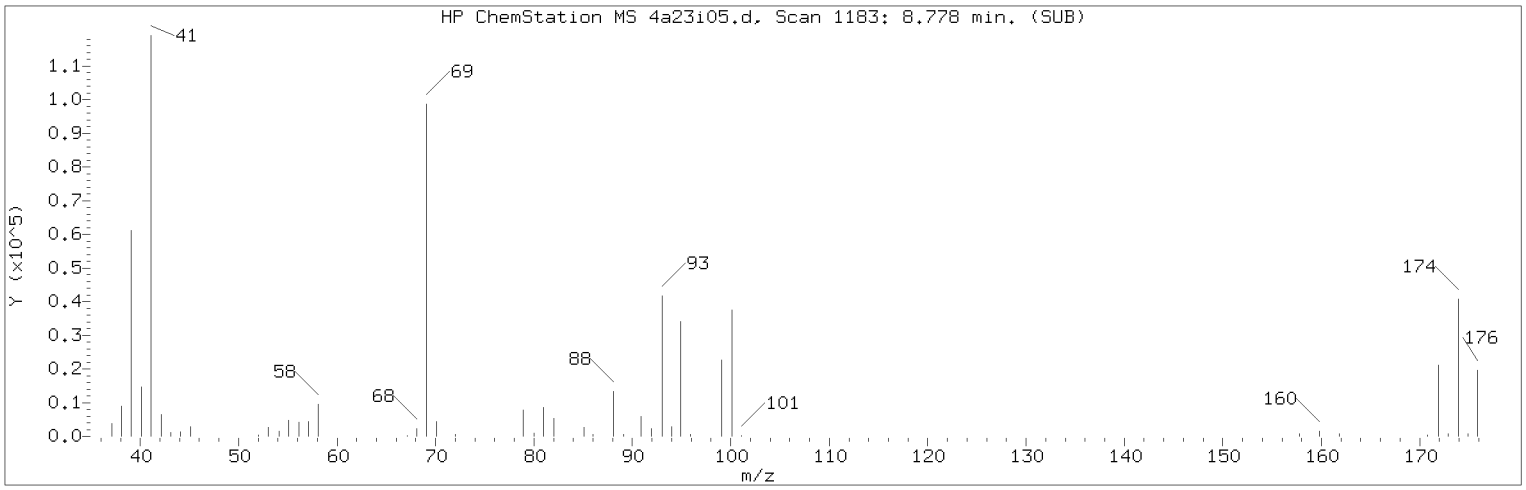
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:46
Date, time and analyst ID of latest file update: 23-Apr-2019 16:46 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

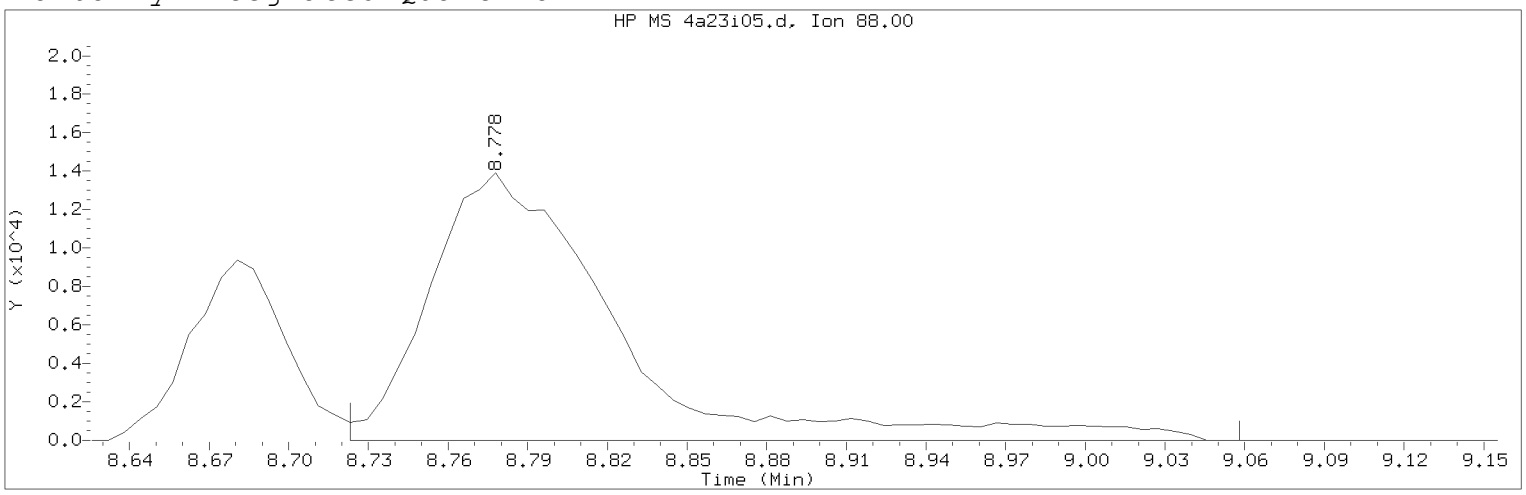
Compound Number	: 13
Compound Name	: Ethanol
Scan Number	: 279
Retention Time (minutes)	: 3.278
Quant Ion	: 45.00
Area	: 145692
On-column Amount (ng)	: 1186.0159
Integration start scan	: 242 Integration stop scan: 306
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong1284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

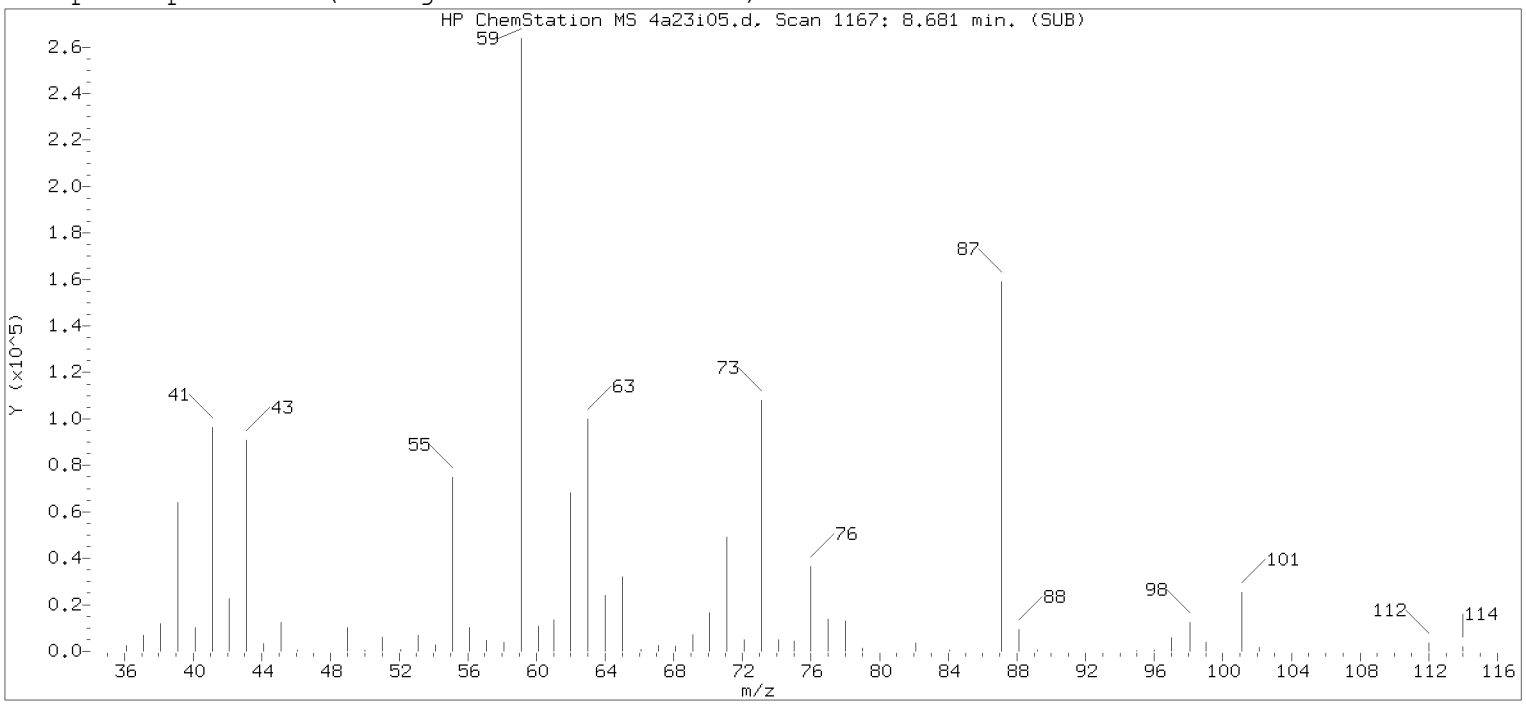
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1183
Retention Time (minutes): 8.778
Quant Ion : 88.00
Area (flag) : 67814M
On-Column Amount (ng) : 596.9939
Integration start scan : 1173 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

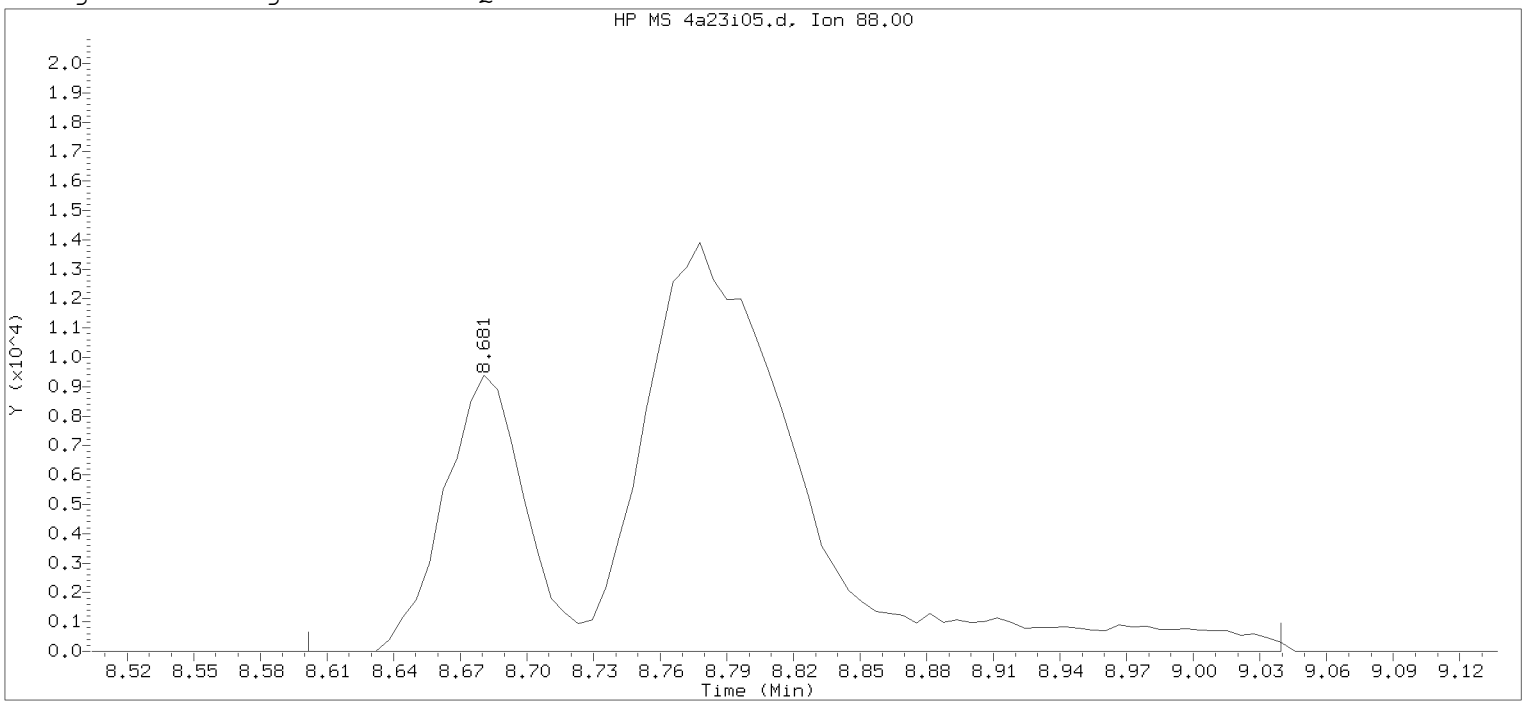
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

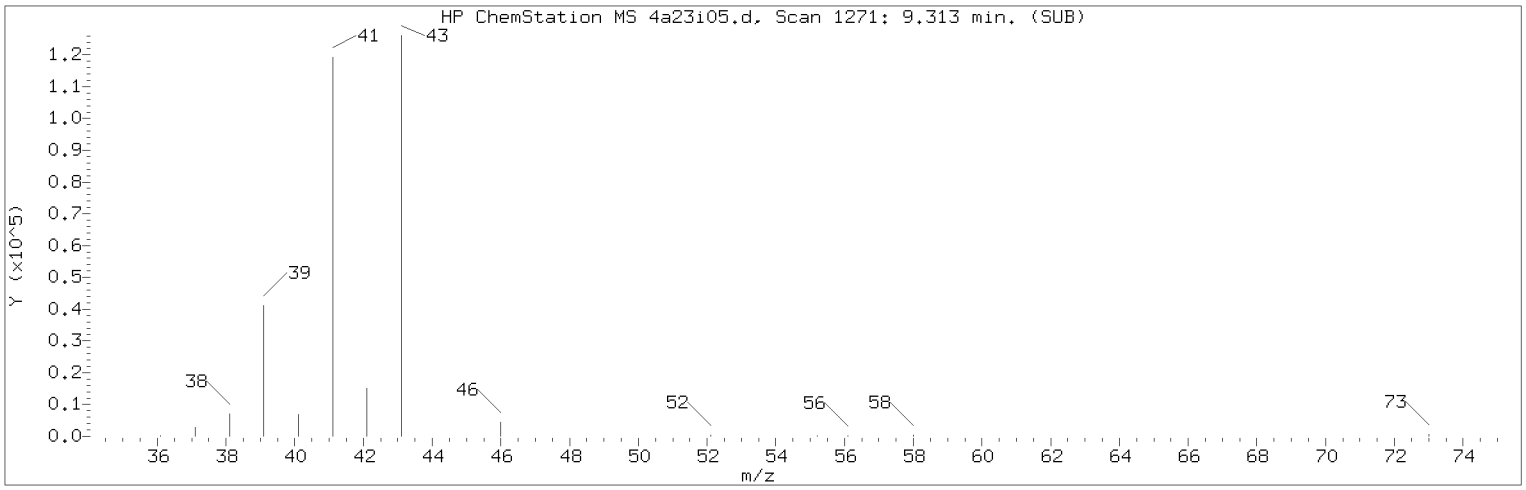
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:46
Date, time and analyst ID of latest file update: 23-Apr-2019 16:46 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

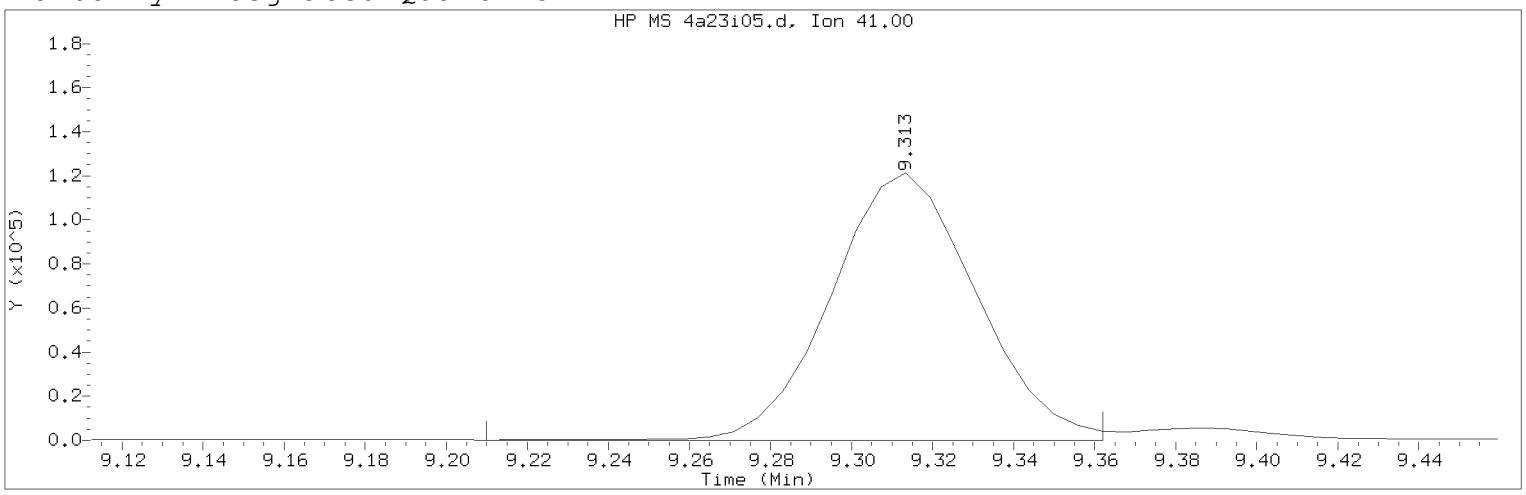
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1167		
Retention Time (minutes)	: 8.681		
Quant Ion	: 88.00		
Area	: 91095		
On-column Amount (ng)	: 713.0143		
Integration start scan	: 1153	Integration stop scan:	1225
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user id: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

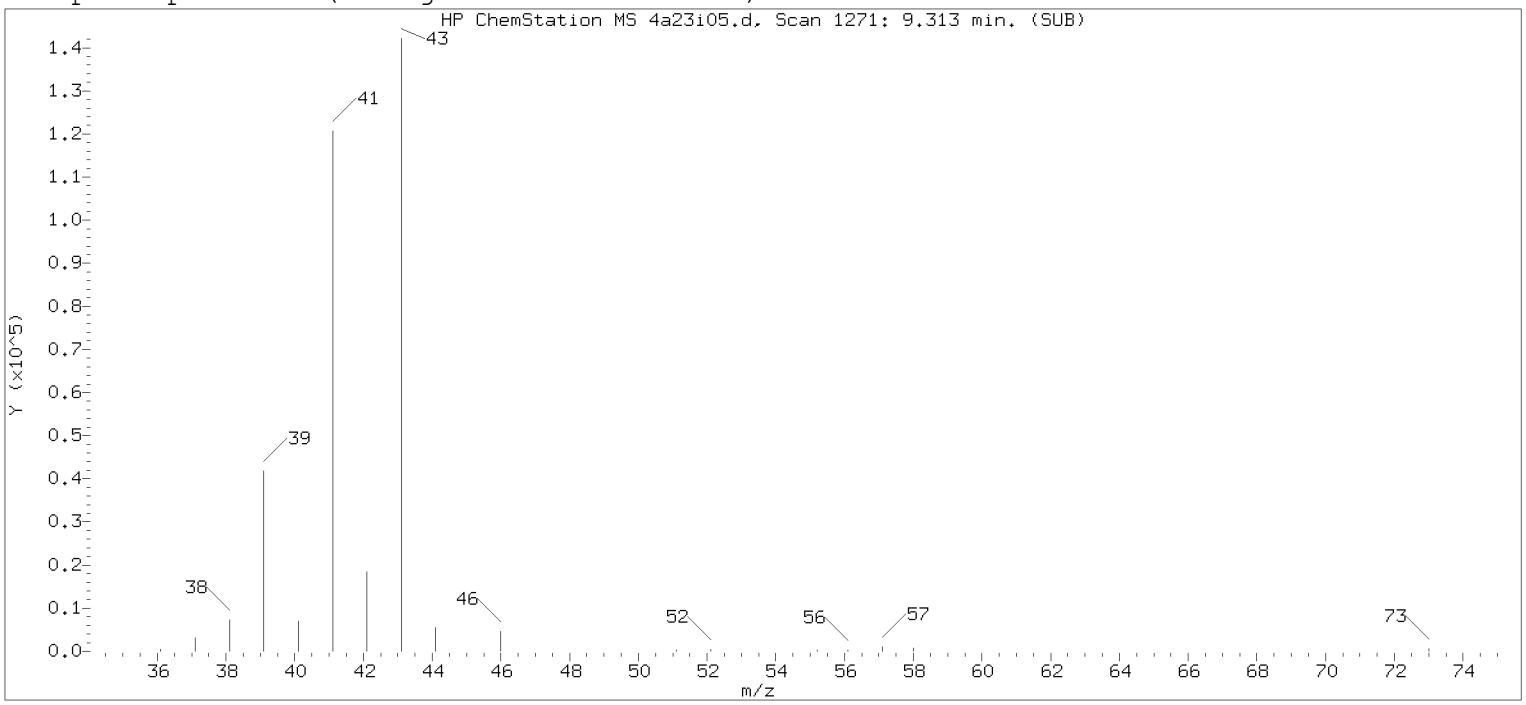
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 1271
Retention Time (minutes): 9.313
Quant Ion : 41.00
Area (flag) : 301290M
On-Column Amount (ng) : 95.9243
Integration start scan : 1253 Integration stop scan: 1278
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

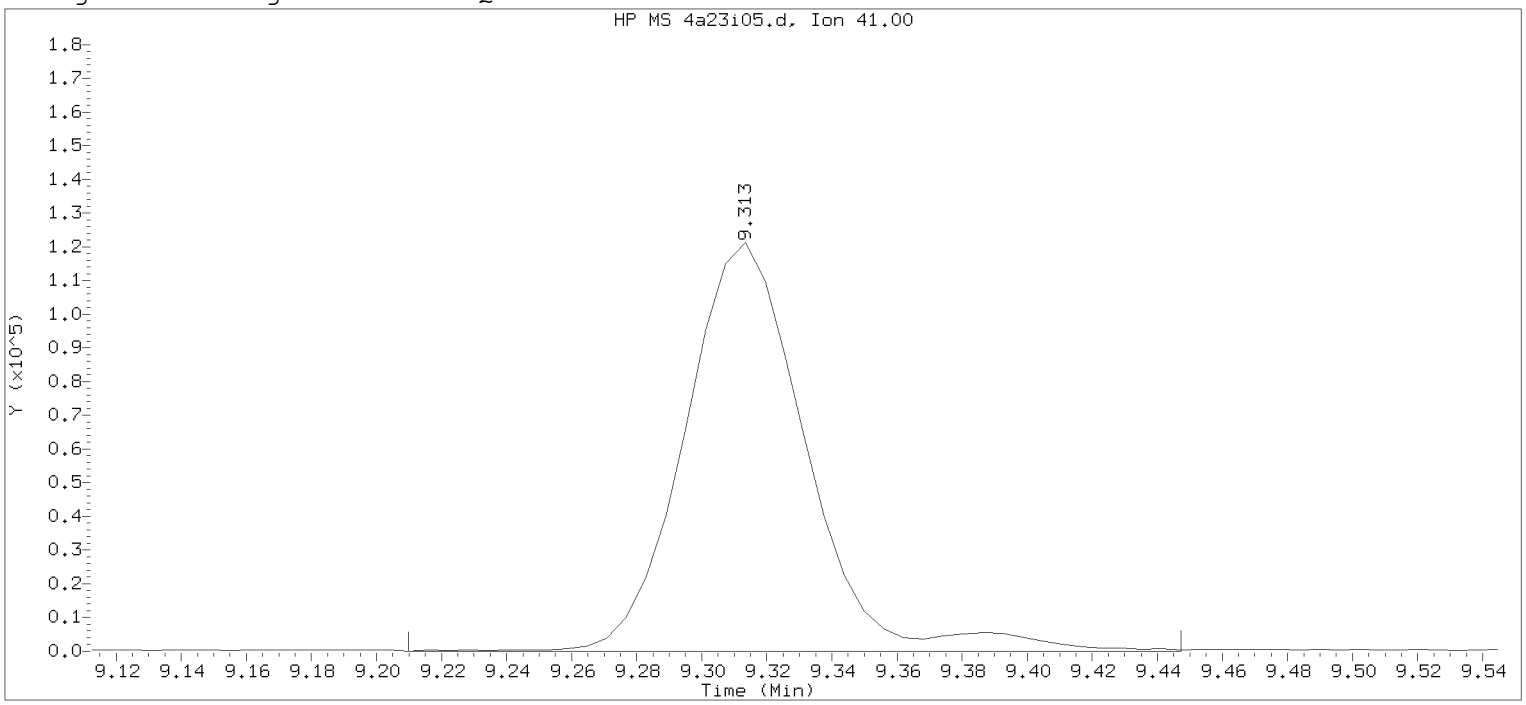
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

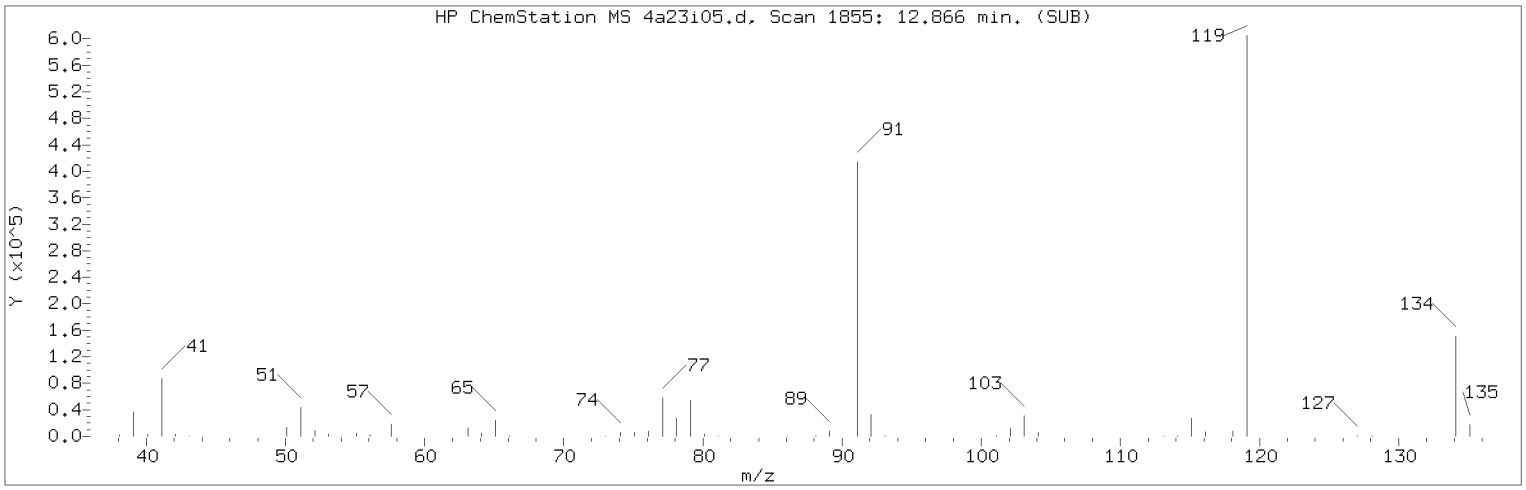
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:46
Date, time and analyst ID of latest file update: 23-Apr-2019 16:46 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

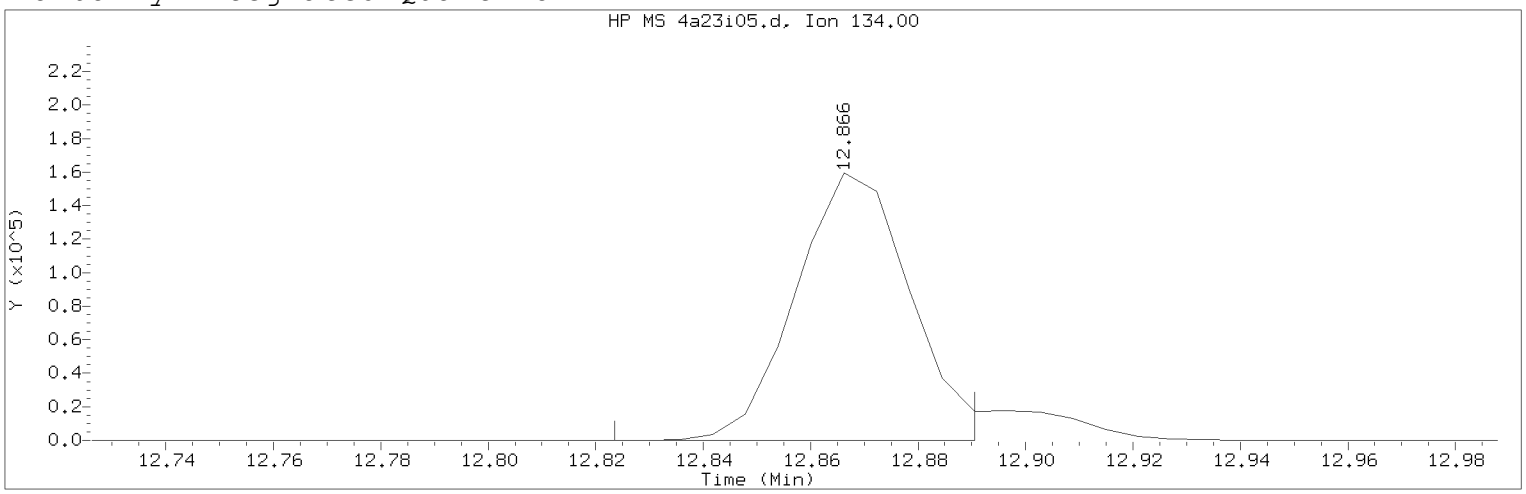
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 1271
Retention Time (minutes): 9.313
Quant Ion : 41.00
Area : 315199
On-column Amount (ng) : 97.4378
Integration start scan : 1253 Integration stop scan: 1292
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user: JML01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

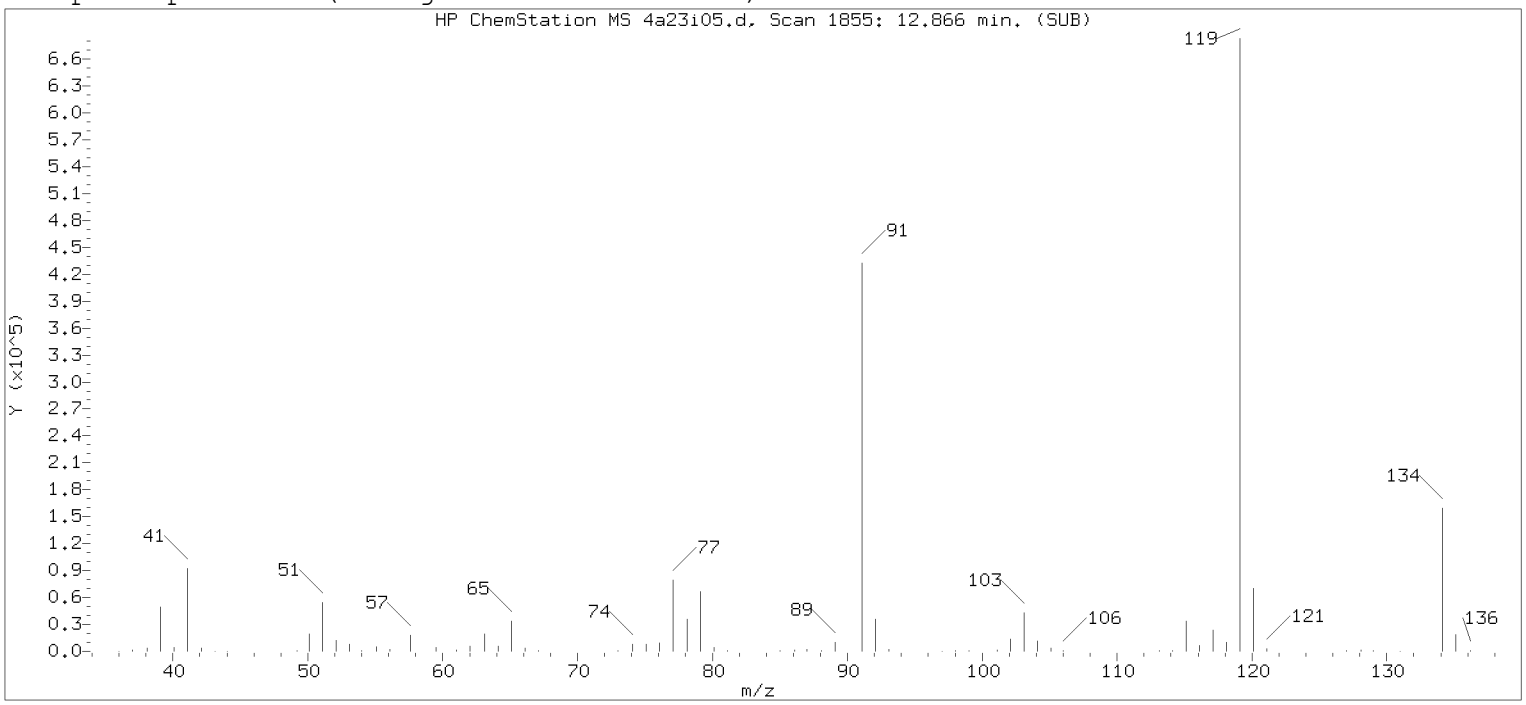
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area (flag) : 235601M
On-Column Amount (ng) : 51.1332
Integration start scan : 1847 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

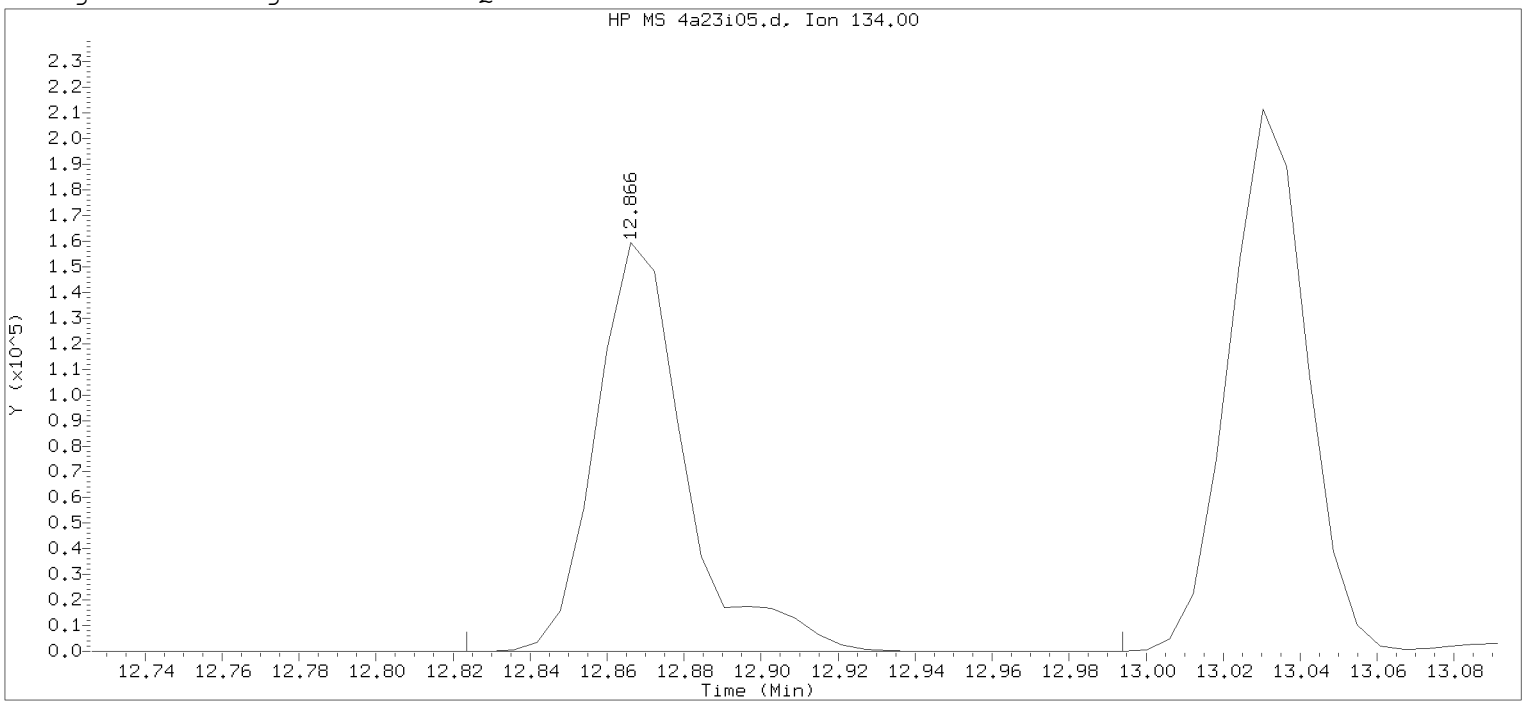
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

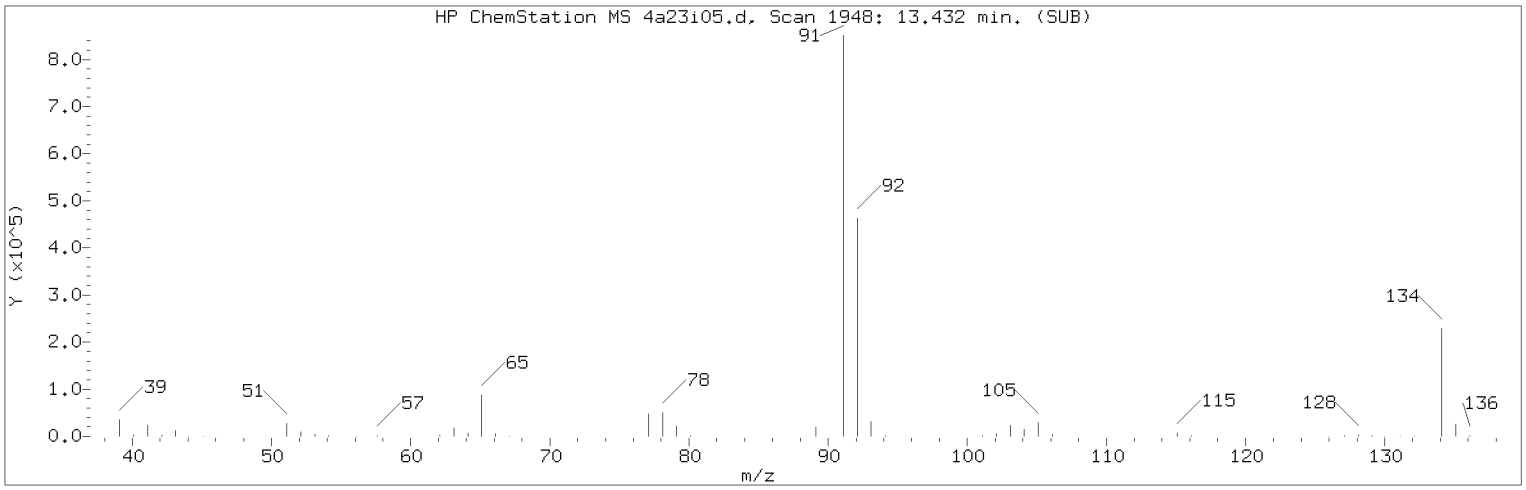
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:46
Date, time and analyst ID of latest file update: 23-Apr-2019 16:46 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

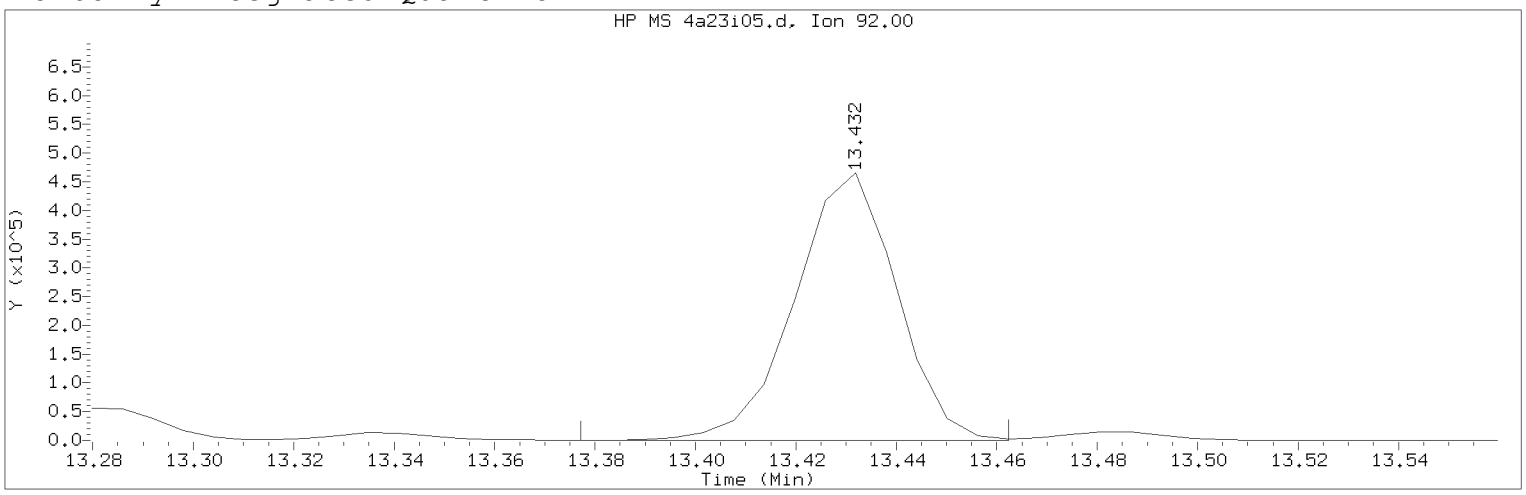
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area : 256607
On-column Amount (ng) : 51.0539
Integration start scan : 1847 Integration stop scan: 1875
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

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Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

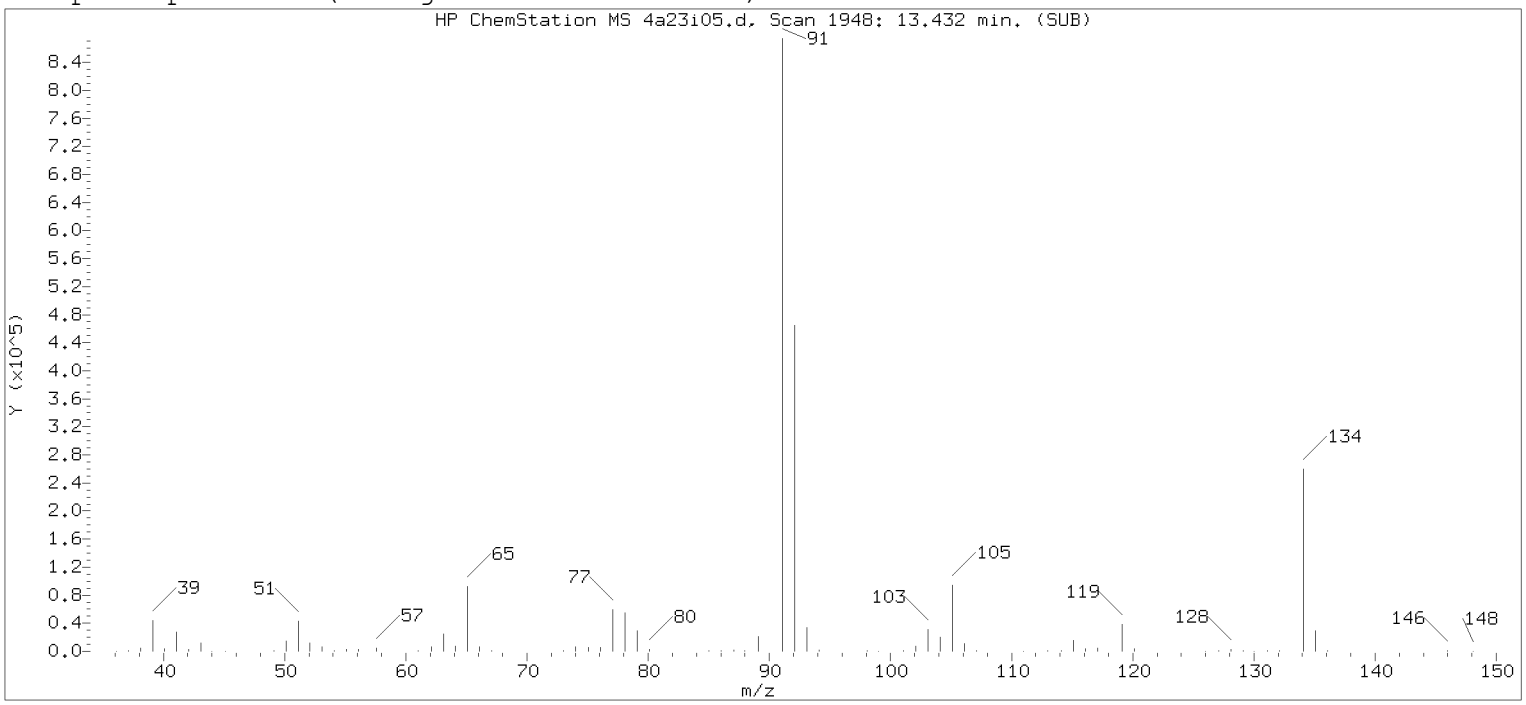
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1948
Retention Time (minutes): 13.432
Quant Ion : 92.00
Area (flag) : 656056M
On-Column Amount (ng) : 51.0863
Integration start scan : 1938 Integration stop scan: 1952
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

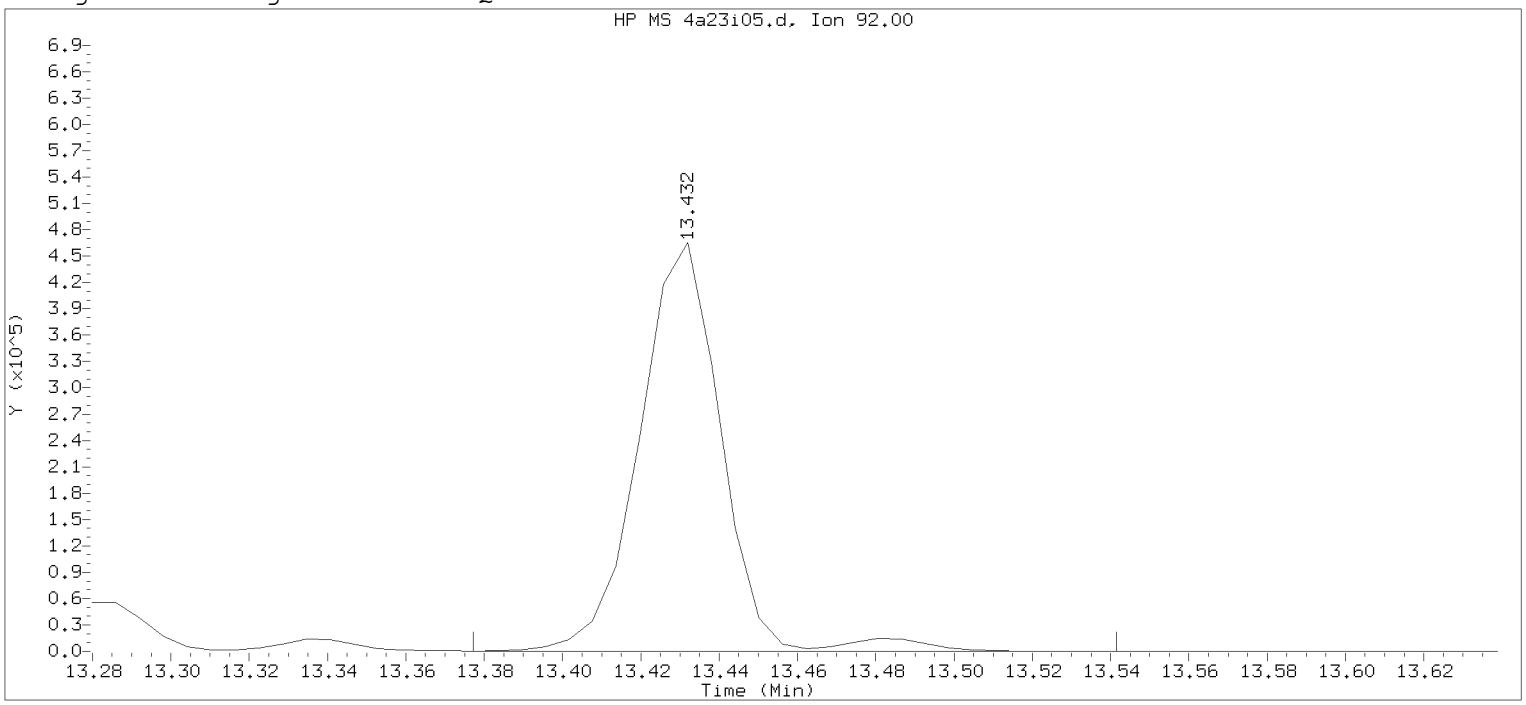
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



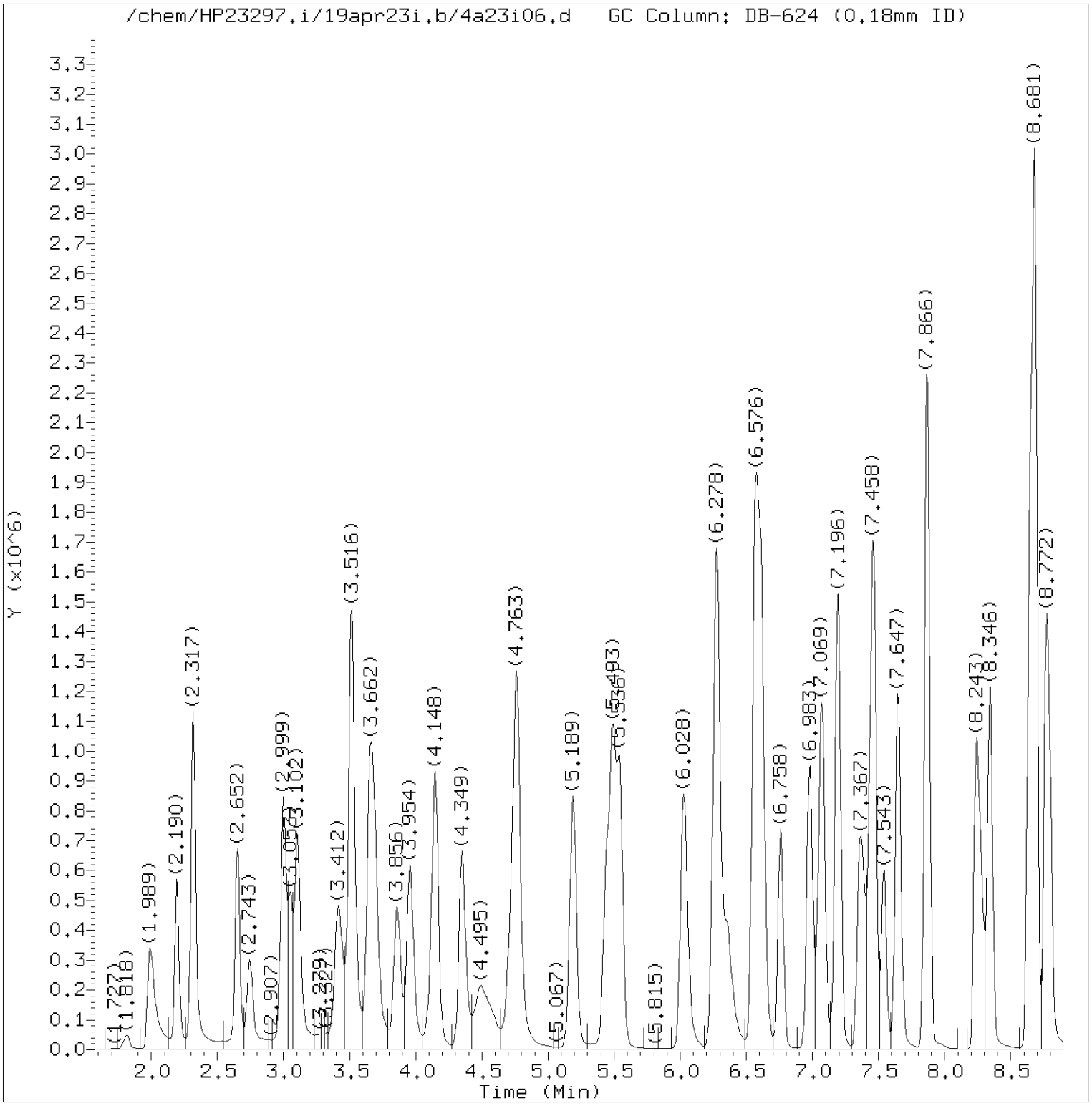
Data File: /chem/HP23297.i/19apr23i.b/4a23i05.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:28 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 16:46
Date, time and analyst ID of latest file update: 23-Apr-2019 16:46 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1948
Retention Time (minutes): 13.432
Quant Ion : 92.00
Area : 676997
On-column Amount (ng) : 51.6070
Integration start scan : 1938 Integration stop scan: 1965
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong



Total Ion Chromatogram (TIC)

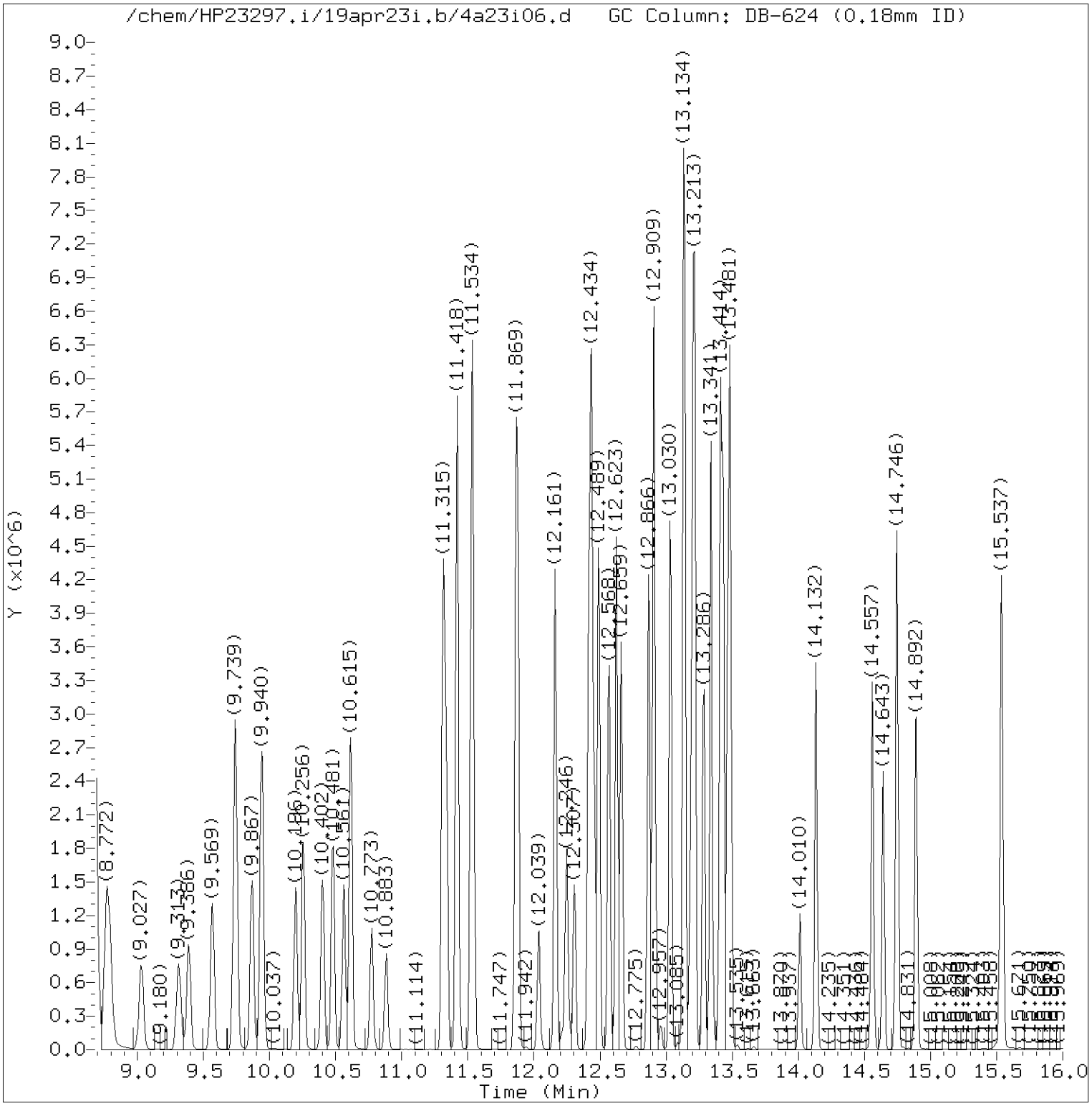
Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.989	85	856197	94.764
4) Chloromethane	(2)	2.196	50	778963	88.121
6) Vinyl Chloride	(2)	2.311	62	781652	90.757
5) 1,3-Butadiene	(2)	2.317	39	429104	89.635
8) Bromomethane	(2)	2.652	94	631155M	89.016
9) Chloroethane	(2)	2.743	64	421422	88.125
10) Dichlorofluoromethane	(2)	2.999	67	959500	85.034
12) Trichlorofluoromethane	(2)	3.053	101	988788	95.494
11) n-Pentane	(2)	3.108	43	826274	99.339
13) Ethanol	(1)	3.266	45	449372M	2714.581
15) Freon 123a	(2)	3.412	67	566404M	95.031
16) Acrolein	(1)	3.516	56	2437168	909.922
17) 1,1-Dichloroethene	(2)	3.650	96	405892	99.428
17) 1,1-Dichloroethene	(2)	3.650	63	206048	94.791
19) Freon 113	(2)	3.680	101	449666	100.133
18) Acetone	(1)	3.692	58	248523	188.723
22) Methyl Iodide	(2)	3.856	142	809687	99.226
21) 2-Propanol	(1)	3.875	45	560926M	514.984
23) Carbon Disulfide	(2)	3.960	76	1443285	98.902
27) Methyl Acetate	(2)	4.124	43	805972	93.447
25) Allyl Chloride	(2)	4.148	41	843587	91.990
28) Methylene Chloride	(2)	4.349	84	498069	95.452
29)*t-Butyl alcohol-d10	(1)	4.367	65	478539	250.000
30) t-Butyl alcohol	(1)	4.495	59	923610M	483.862
31) Acrylonitrile	(2)	4.714	53	438803	97.463
33) Methyl Tertiary Butyl Ether	(2)	4.757	73	1405033	94.575
32) trans-1,2-Dichloroethene	(2)	4.763	96	488979	100.117
34) n-Hexane	(2)	5.189	57	797738	98.593
36) 1,1-Dichloroethane	(2)	5.438	63	891494	97.569
38) di-Isopropyl ether	(2)	5.493	45	1749511	95.857
39) 2-Chloro-1,3-butadiene	(2)	5.548	53	819107	99.373
40) Ethyl t-butyl ether	(2)	6.028	59	1469725	93.074
43) 1,2-Dichloroethene (Total)	(2)		96	1050357	199.774
44) 2-Butanone	(2)	6.259	43	1335553	189.639
42) cis-1,2-Dichloroethene	(2)	6.278	96	561378	99.658
45) 2,2-Dichloropropane	(2)	6.290	77	703463	98.401
47) Propionitrile	(1)	6.363	54	942685	477.513
48) Methacrylonitrile	(2)	6.570	67	1059264	251.220

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.606	128	315011	102.033
50) Tetrahydrofuran	(1)	6.618	71	360785	186.032
51) Chloroform	(2)	6.758	83	868170	96.354
52)$Dibromofluoromethane	(2)	6.977	113	291262	50.511
52)$Dibromofluoromethane	(2)	6.977	111	296612	50.260
53) 1,1,1-Trichloroethane	(2)	6.983	97	736290	98.029
54) Cyclohexane	(2)	7.069	56	956235	97.915
54) Cyclohexane	(2)	7.075	84	790572	99.430
54) Cyclohexane	(2)	7.069	69	291603	100.314
56) Carbon Tetrachloride	(2)	7.184	117	653943	100.781
55) 1,1-Dichloropropene	(2)	7.196	75	696830	98.262
58) Isobutyl Alcohol	(1)	7.367	41	805417M	1215.666
57)$1,2-Dichloroethane-d4	(2)	7.434	102	71093	50.464
57)$1,2-Dichloroethane-d4	(2)	7.434	65	339197	49.413
57)$1,2-Dichloroethane-d4	(2)	7.434	104	45774	50.917
60) Benzene	(2)	7.464	78	2089040	96.397
61) 1,2-Dichloroethane	(2)	7.543	62	688919	93.122
61) 1,2-Dichloroethane	(2)	7.543	98	63130	105.793
65) t-Amyl methyl ether	(2)	7.647	73	1470024	91.516
67) n-Heptane	(2)	7.866	43	911489	95.546
66)*Fluorobenzene	(2)	7.872	96	1169857	50.000
69) n-Butanol	(1)	8.243	56	1394845	2592.853
71) Trichloroethene	(2)	8.346	95	542445	99.351
72) Methylcyclohexane	(2)	8.644	83	1037629	101.701
72) Methylcyclohexane	(2)	8.644	98	449921	102.189
73) 1,2-Dichloropropane	(2)	8.687	63	559067	98.837
76) Methyl Methacrylate	(2)	8.766	69	648672	101.393
75) 1,4-Dioxane	(1)	8.772	88	203900M	1451.583
74) Dibromomethane	(2)	8.796	93	368537	100.529
78) Bromodichloromethane	(2)	9.027	83	674216	101.392
79) 2-Nitropropane	(2)	9.313	41	643313	196.032
80) 2-Chloroethyl Vinyl Ether	(2)	9.386	63	515039	99.713
81) cis-1,3-Dichloropropene	(2)	9.569	75	892525	101.607
82) 4-Methyl-2-pentanone	(2)	9.739	43	2443324	193.671
83)$Toluene-d8	(3)	9.867	98	1198705	48.956
83)$Toluene-d8	(3)	9.867	100	781993	49.266
88) Toluene	(3)	9.940	92	1373082	96.581
90) 1,3-Dichloropropene (total)	(3)		100	1753973	205.785

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Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.196	75	861448	104.178
91) Ethyl Methacrylate	(3)	10.256	69	1052886	100.465
92) 1,1,2-Trichloroethane	(3)	10.402	97	538973	97.219
93) Tetrachloroethene	(3)	10.481	166	608023	98.706
94) 1,3-Dichloropropane	(3)	10.561	76	898708	97.283
96) 2-Hexanone	(3)	10.615	43	1955942	191.268
97) Dibromochloromethane	(3)	10.773	129	609734	105.254
99) 1,2-Dibromoethane	(3)	10.883	107	607123	99.342
100)*Chlorobenzene-d5	(3)	11.309	117	947309	50.000
102) Chlorobenzene	(3)	11.333	112	1565907	97.632
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	550242	103.206
104) Ethylbenzene	(3)	11.418	91	2674438	98.031
106) m+p-Xylene	(3)	11.534	106	2156238	199.210
108) Xylene (Total)	(3)		106	3218040	298.013
107) o-Xylene	(3)	11.862	106	1061802	98.803
109) Styrene	(3)	11.881	104	1833651	102.873
110) Bromoform	(3)	12.039	173	499671	110.840
111) Isopropylbenzene	(3)	12.161	105	2662972	98.364
112) Cyclohexanone	(1)	12.246	55	757278	1354.512
114)$4-Bromofluorobenzene	(3)	12.307	95	462772	49.609
114)$4-Bromofluorobenzene	(3)	12.307	174	408837	49.702
116) 1,1,2,2-Tetrachloroethane	(4)	12.410	83	979635	99.745
115) Bromobenzene	(4)	12.422	156	739678	100.626
118) trans-1,4-Dichloro-2-butene	(4)	12.434	53	814801	251.034
117) 1,2,3-Trichloropropane	(4)	12.459	110	291694	98.224
119) n-Propylbenzene	(4)	12.489	91	3118876	96.307
120) 2-Chlorotoluene	(4)	12.568	126	659589	98.675
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	2303481	99.036
121) 4-Chlorotoluene	(4)	12.659	126	689825	99.108
124) tert-Butylbenzene	(4)	12.866	134	494874M	102.670
125) Pentachloroethane	(4)	12.903	167	467801	108.596
126) 1,2,4-Trimethylbenzene	(4)	12.909	105	2423838	100.157
127) sec-Butylbenzene	(4)	13.030	105	2963684	99.550
129) 1,3-Dichlorobenzene	(4)	13.134	146	1398348	100.842
130) p-Isopropyltoluene	(4)	13.140	119	2644983	101.745
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	529436	50.000
133) 1,4-Dichlorobenzene	(4)	13.207	146	1419634	99.833
134) 1,2,3-Trimethylbenzene	(4)	13.213	105	2597696	100.005

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Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

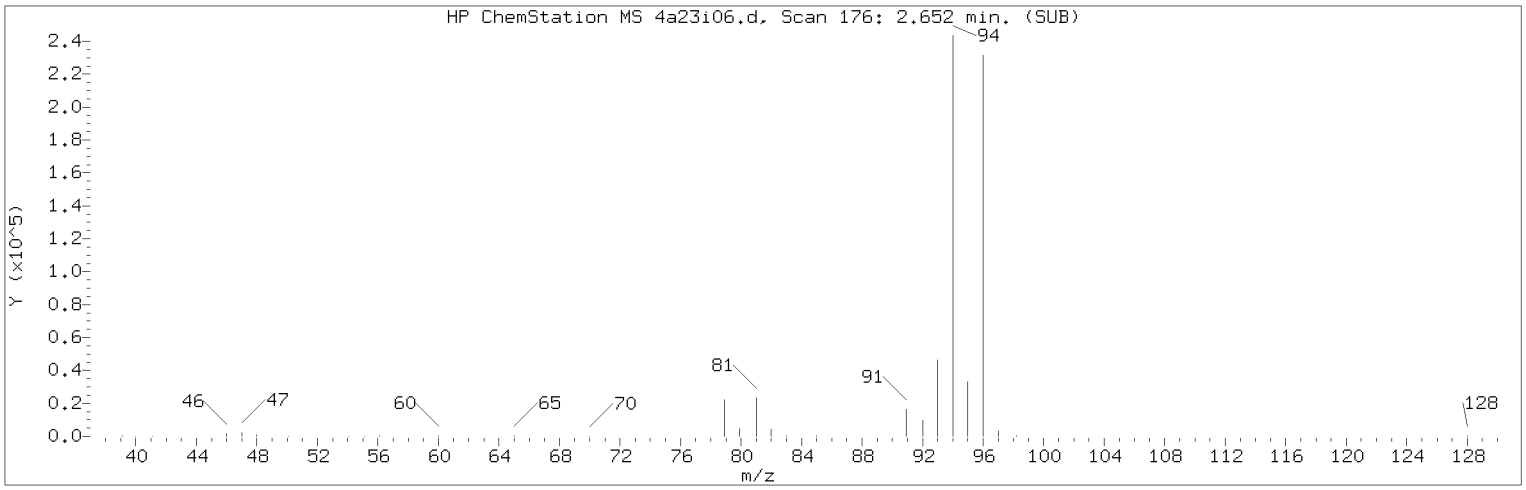
Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.286	91	2115626	110.066
136) 1,3-Diethylbenzene	(4)	13.341	119	1645588	101.604
141) Diethylbenzene (total)	(4)		100	4787931	305.314
137) 1,4-Diethylbenzene	(4)	13.408	119	1759160	102.116
139) n-Butylbenzene	(4)	13.432	92	1330962M	99.670
138) 1,2-Dichlorobenzene	(4)	13.469	146	1349803	99.593
140) 1,2-Diethylbenzene	(4)	13.487	119	1383183	101.594
142) 1,2-Dibromo-3-chloropropane	(4)	14.010	75	261035	100.380
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	1010981	98.904
146) 1,2,4-Trichlorobenzene	(4)	14.557	180	953741	98.270
147) Hexachlorobutadiene	(4)	14.643	225	430482	96.090
148) Naphthalene	(4)	14.746	128	3400393	100.043
149) 1,2,3-Trichlorobenzene	(4)	14.892	180	927242	99.540
150) 2-Methylnaphthalene	(4)	15.537	142	2214369	105.930

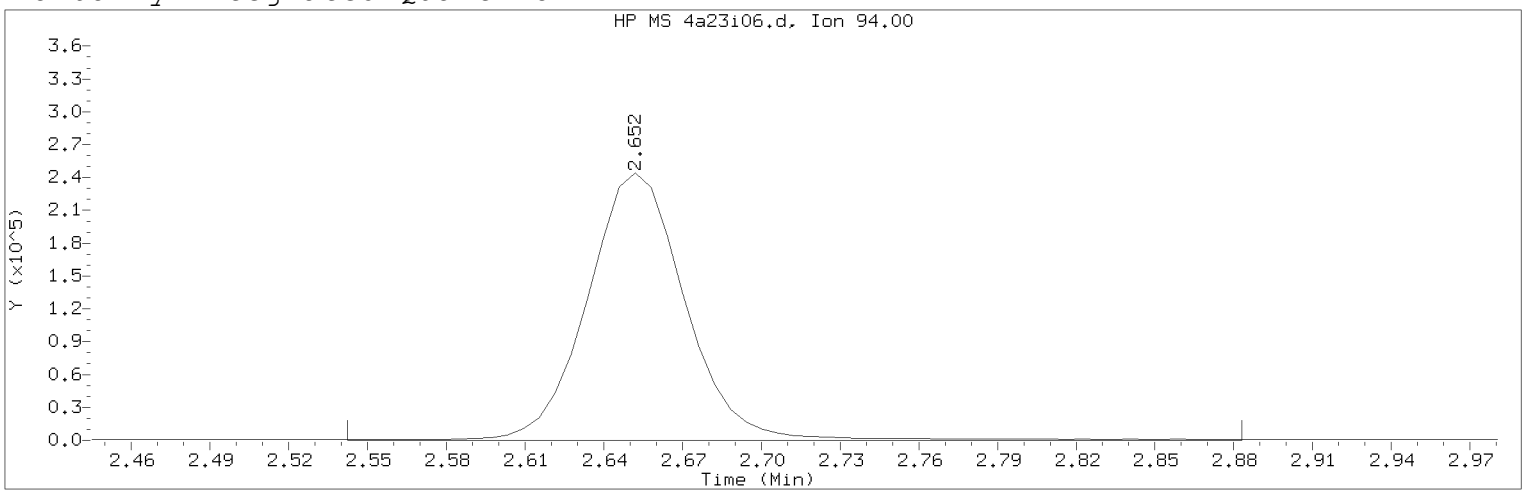
M = Compound was manually integrated.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

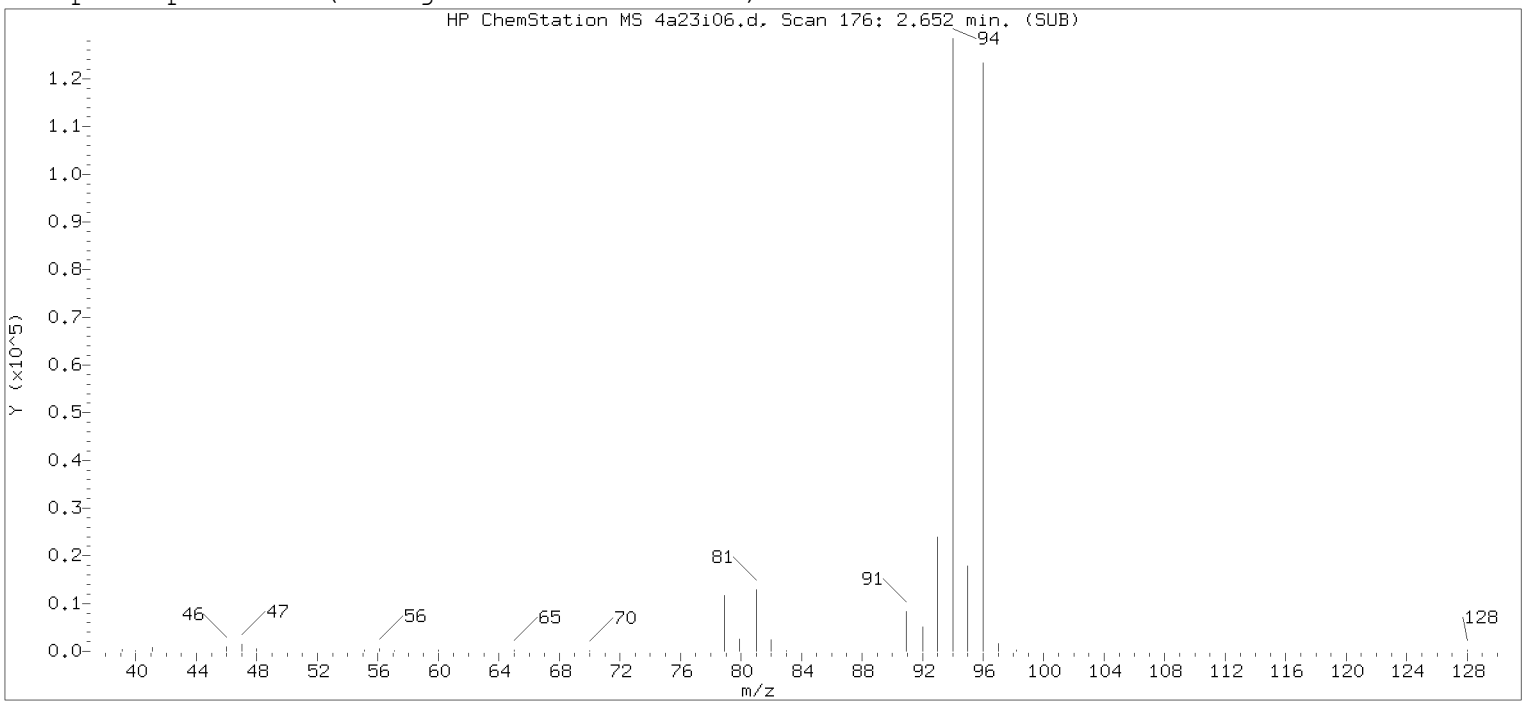
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 176
Retention Time (minutes): 2.652
Quant Ion : 94.00
Area (flag) : 631155M
On-Column Amount (ng) : 89.0156
Integration start scan : 157 Integration stop scan: 213
Y at integration start : 262 Y at integration end: 262

Reason for manual integration: improper integration

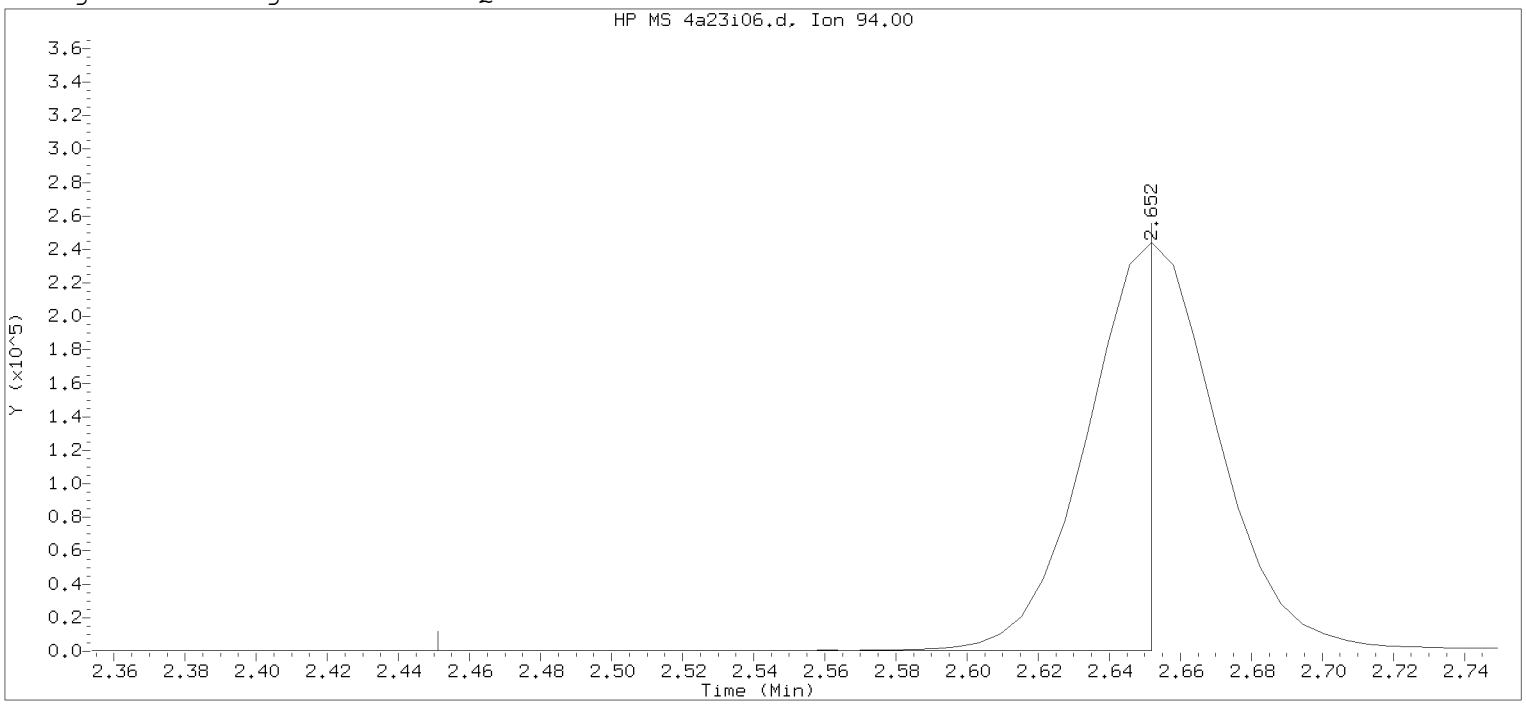
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

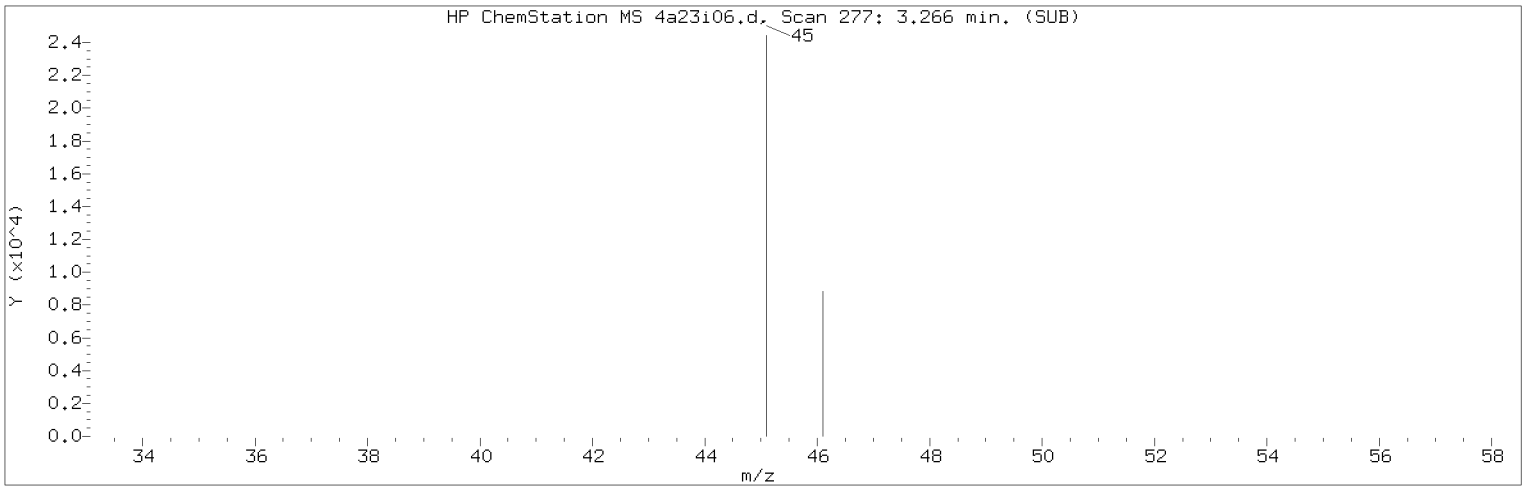
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:09
Date, time and analyst ID of latest file update: 23-Apr-2019 17:09 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

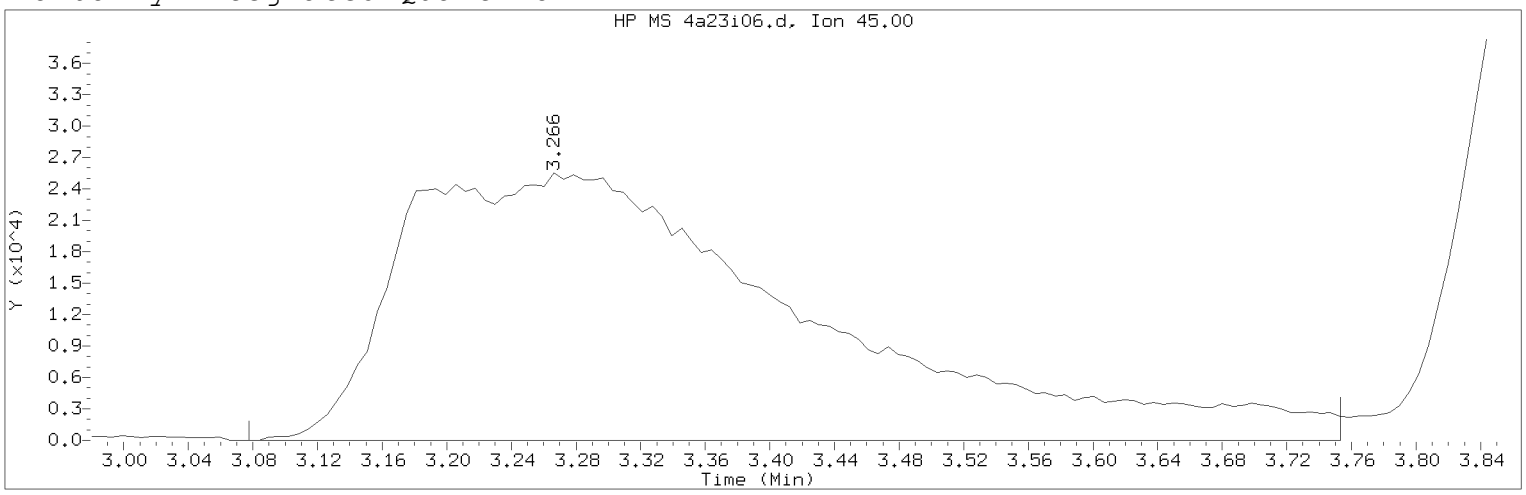
Compound Number	: 8		
Compound Name	: Bromomethane		
Scan Number	: 176		
Retention Time (minutes)	: 2.652		
Quant Ion	: 94.00		
Area	: 302085		
On-column Amount (ng)	: 44.2470		
Integration start scan	: 142	Integration stop scan:	175
Y at integration start	: 319	Y at integration end:	319

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

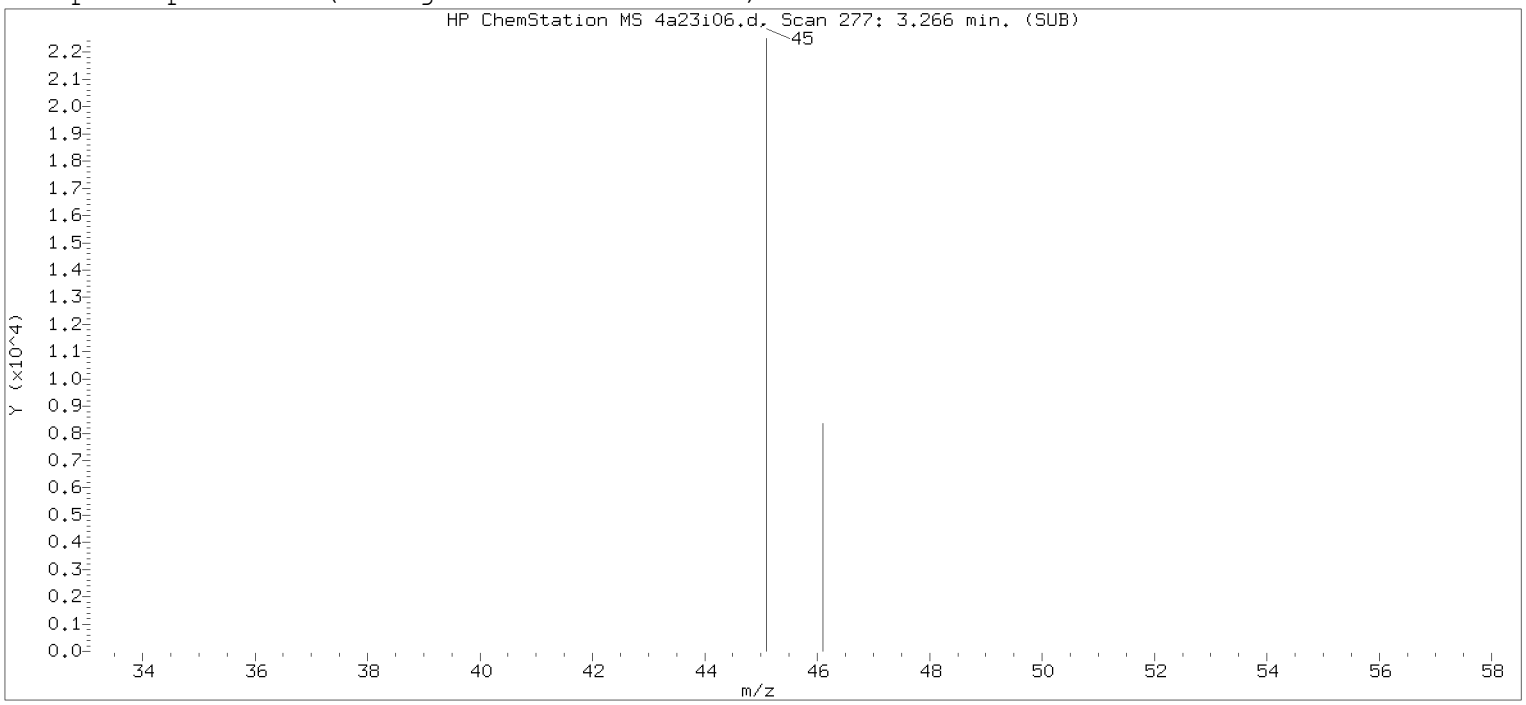
Compound Number : 13
Compound Name : Ethanol
Scan Number : 277
Retention Time (minutes): 3.266
Quant Ion : 45.00
Area (flag) : 449372M
On-Column Amount (ng) : 2714.5813
Integration start scan : 245 Integration stop scan: 356
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

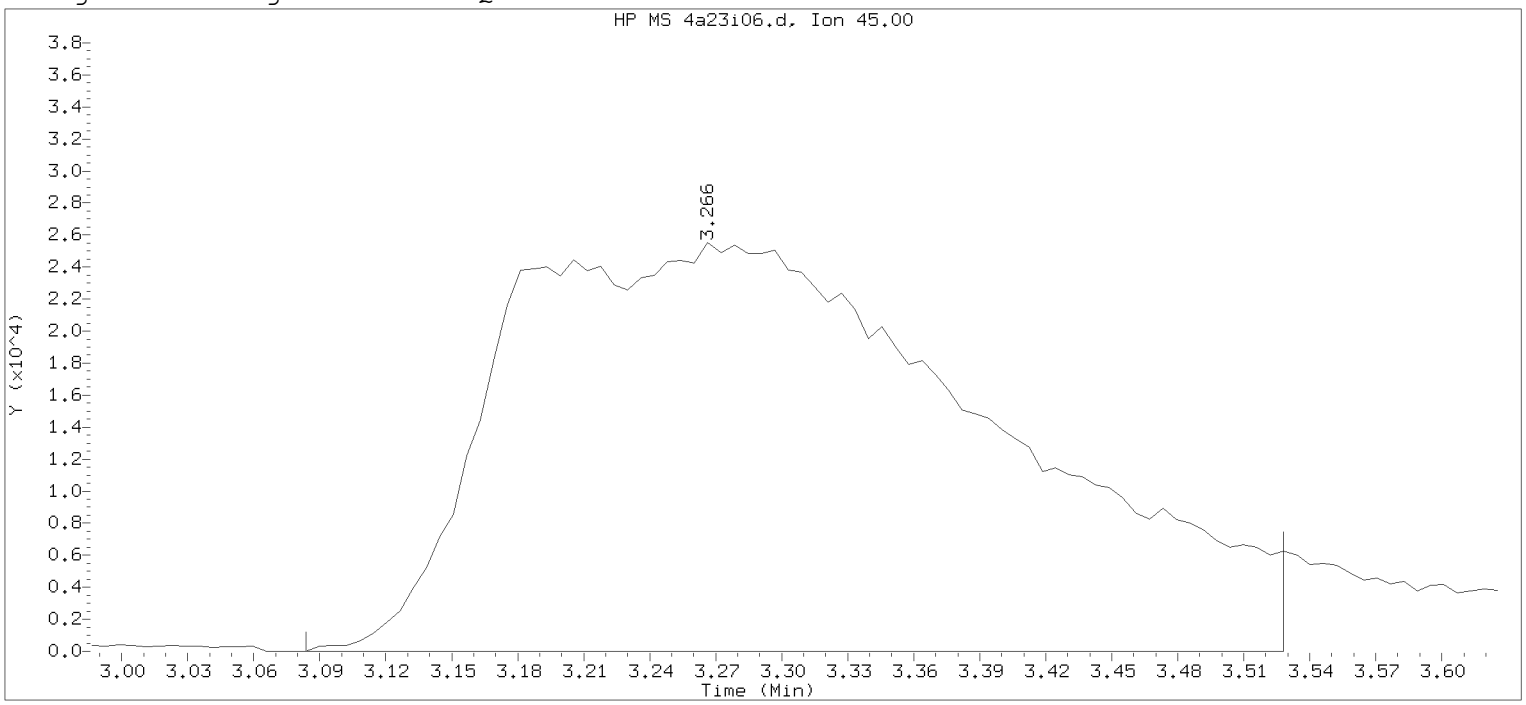
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

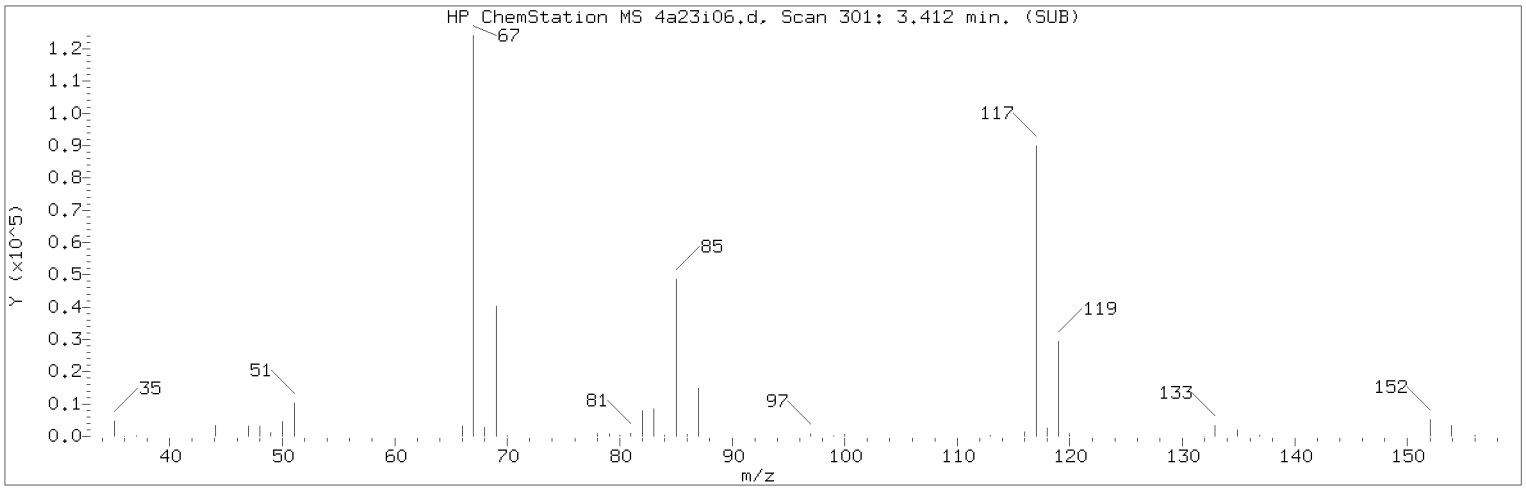
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:09
Date, time and analyst ID of latest file update: 23-Apr-2019 17:09 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

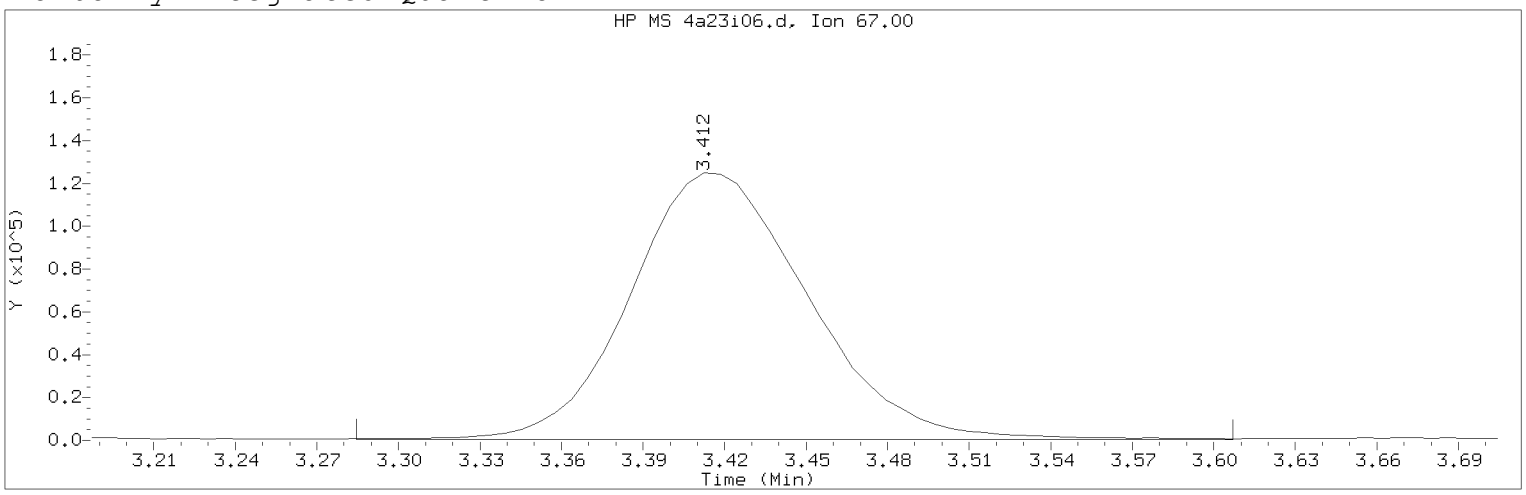
Compound Number	: 13		
Compound Name	: Ethanol		
Scan Number	: 277		
Retention Time (minutes)	: 3.266		
Quant Ion	: 45.00		
Area	: 398005		
On-column Amount (ng)	: 2670.4853		
Integration start scan	: 246	Integration stop scan:	319
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

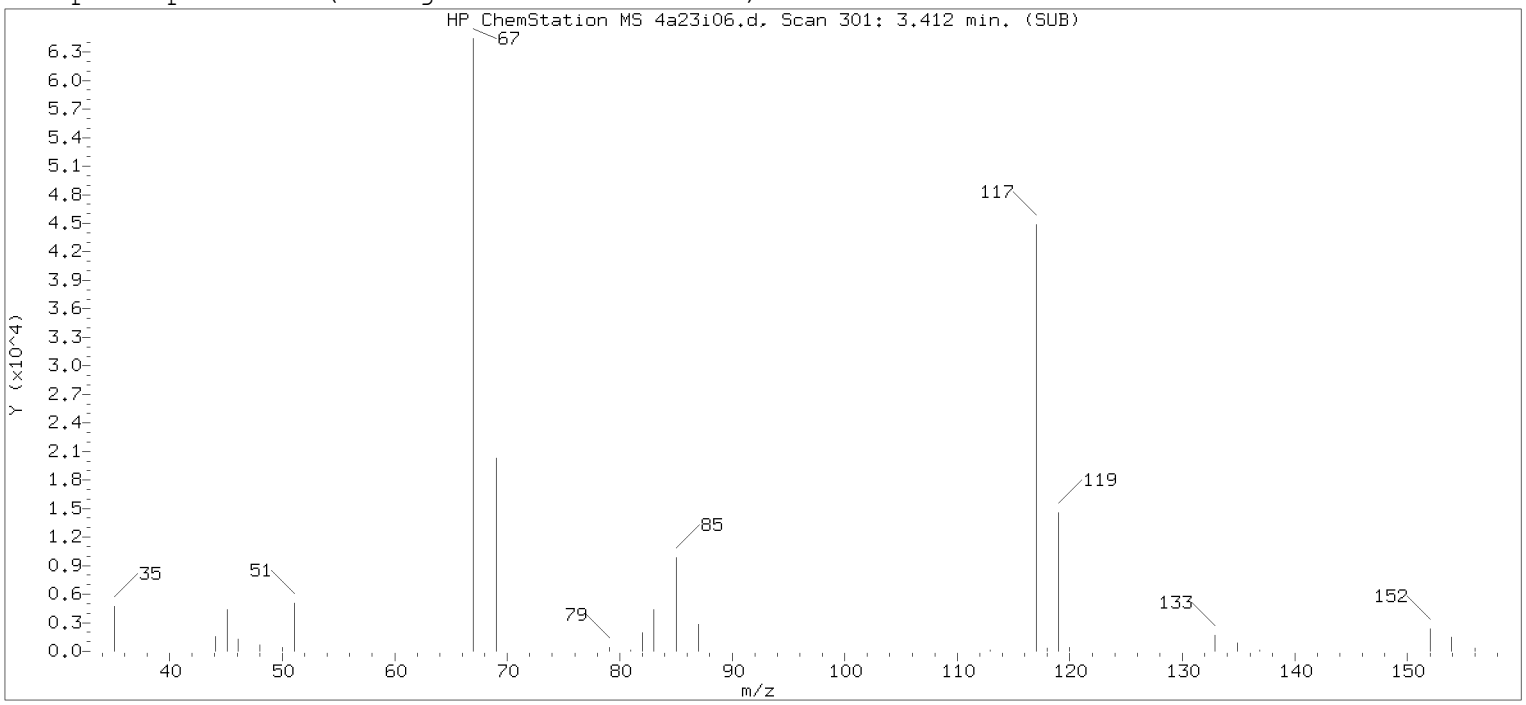
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 301
Retention Time (minutes): 3.412
Quant Ion : 67.00
Area (flag) : 566404M
On-Column Amount (ng) : 95.0315
Integration start scan : 279 Integration stop scan: 332
Y at integration start : 366 Y at integration end: 366

Reason for manual integration: improper integration

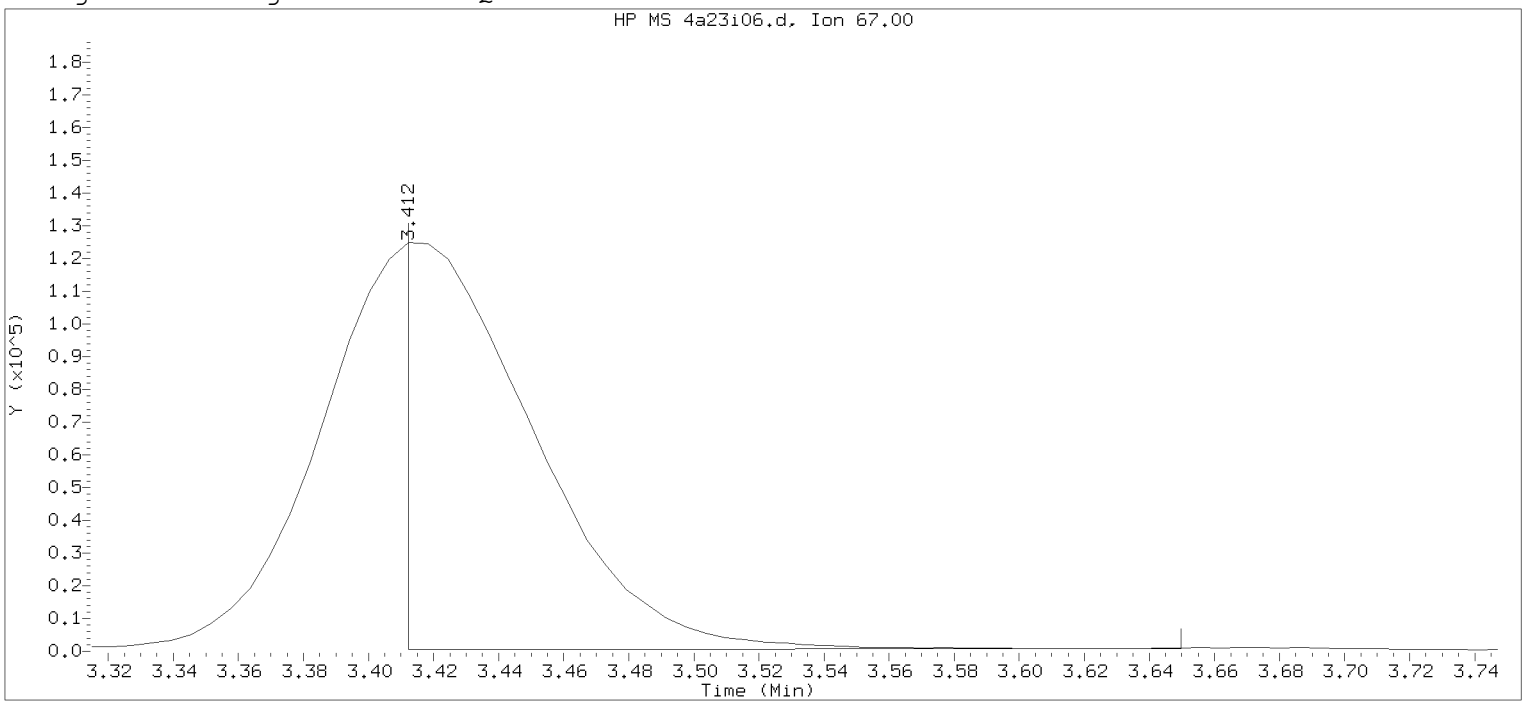
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:09
Date, time and analyst ID of latest file update: 23-Apr-2019 17:09 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 15
Compound Name : Freon 123a
Scan Number : 301
Retention Time (minutes): 3.412
Quant Ion : 67.00
Area : 327993
On-column Amount (ng) : 65.0918
Integration start scan : 300 Integration stop scan: 339
Y at integration start : 537 Y at integration end: 773

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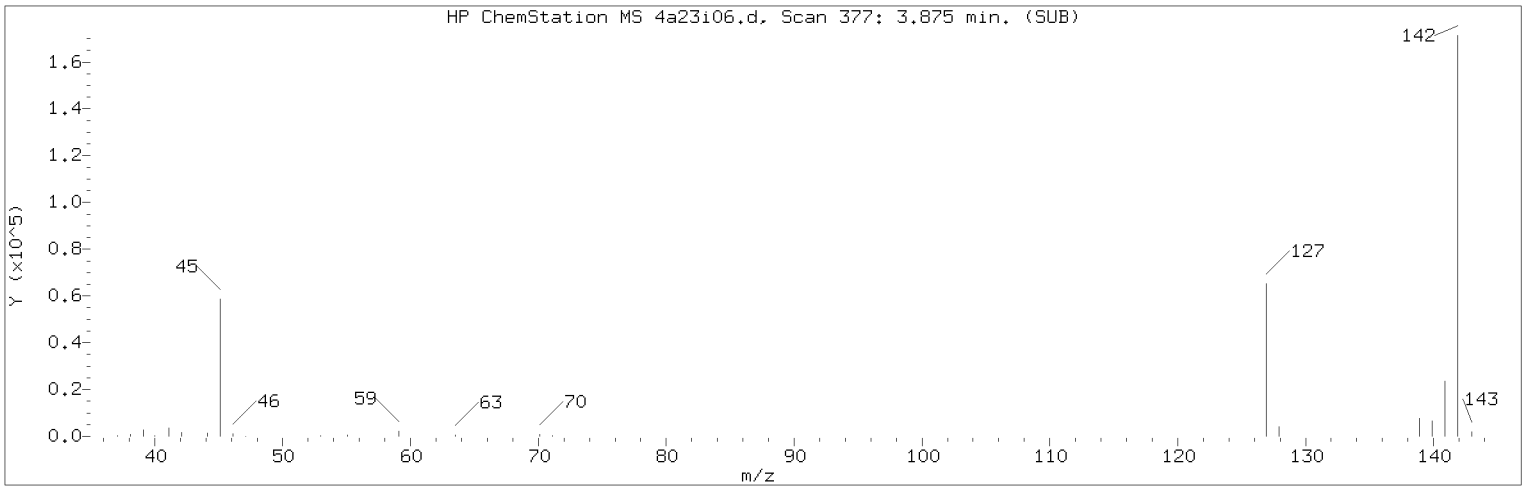
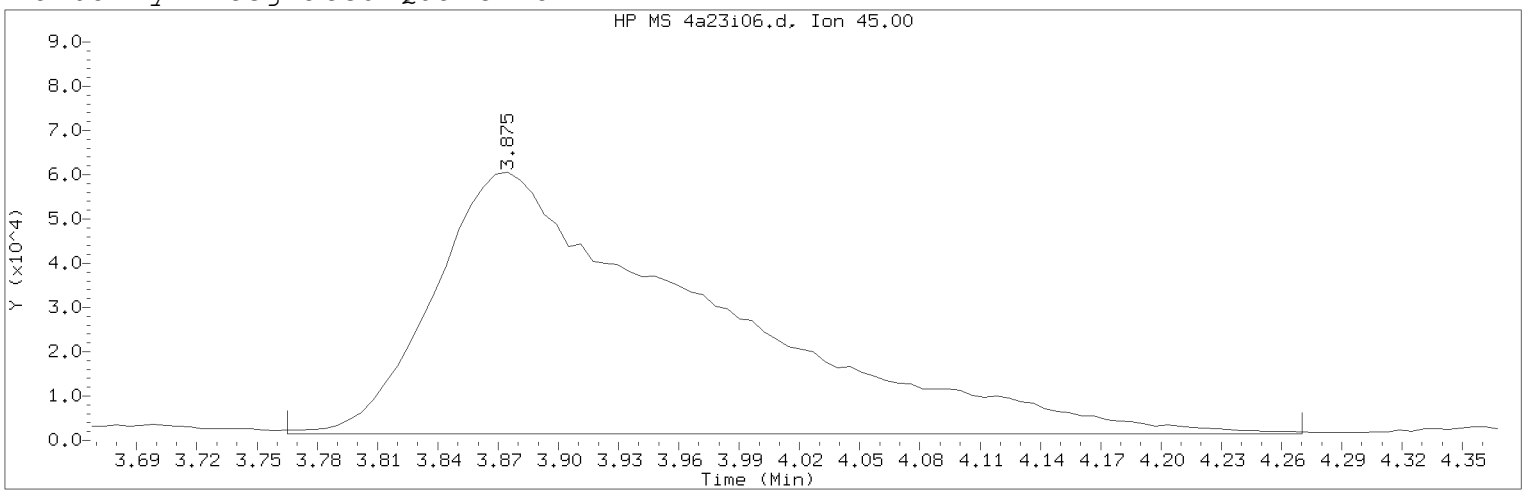
Target 3.5 esignature user ID: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

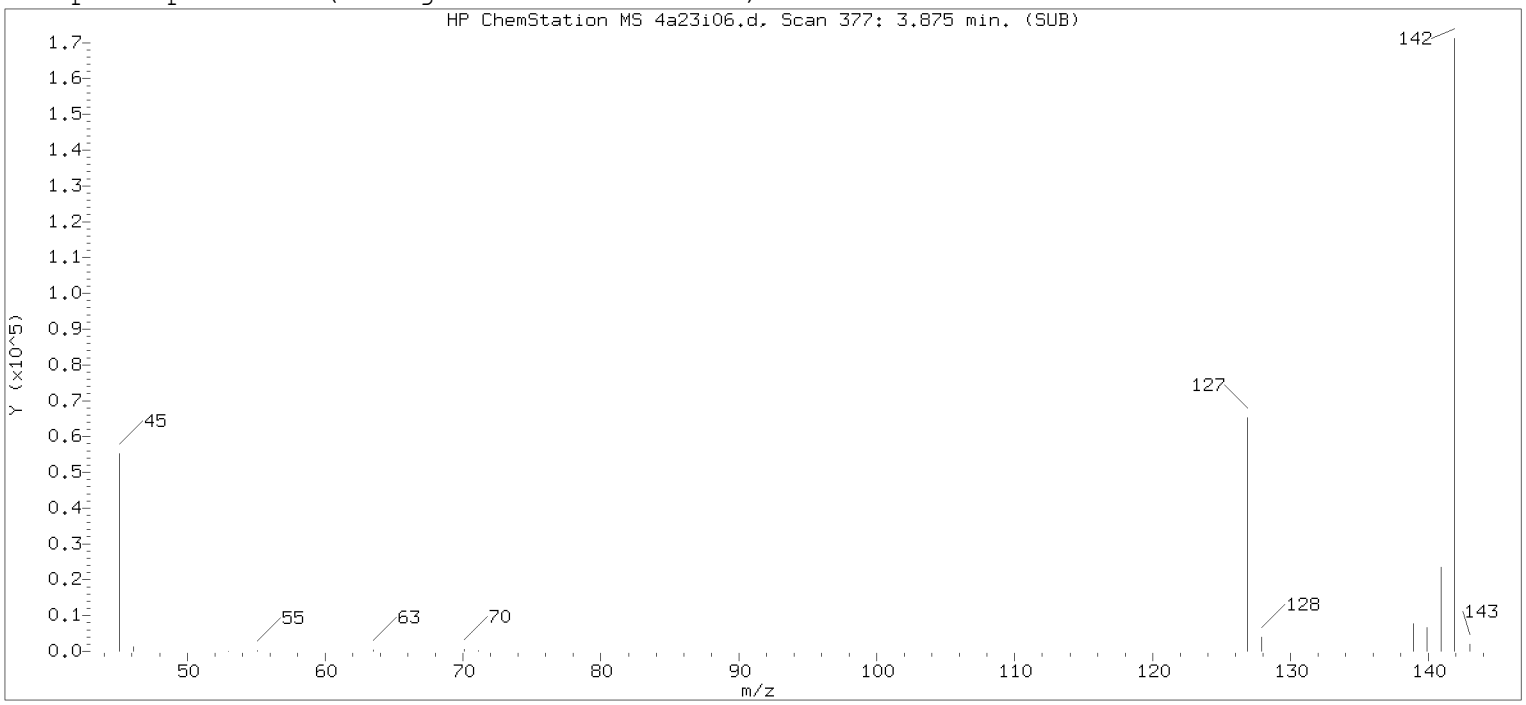
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 377
Retention Time (minutes): 3.875
Quant Ion : 45.00
Area (flag) : 560926M
On-Column Amount (ng) : 514.9845
Integration start scan : 358 Integration stop scan: 441
Y at integration start : 1501 Y at integration end: 1501

Reason for manual integration: improper integration

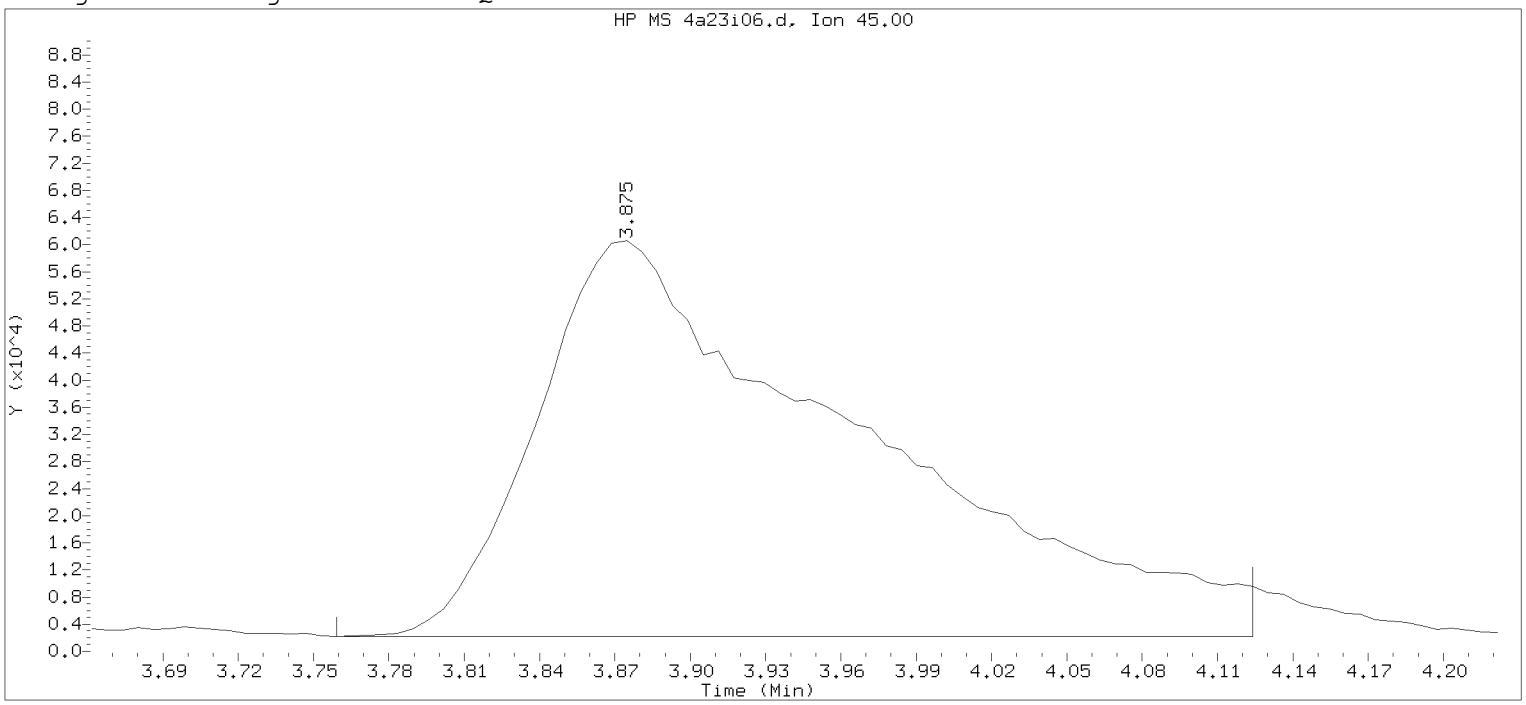
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

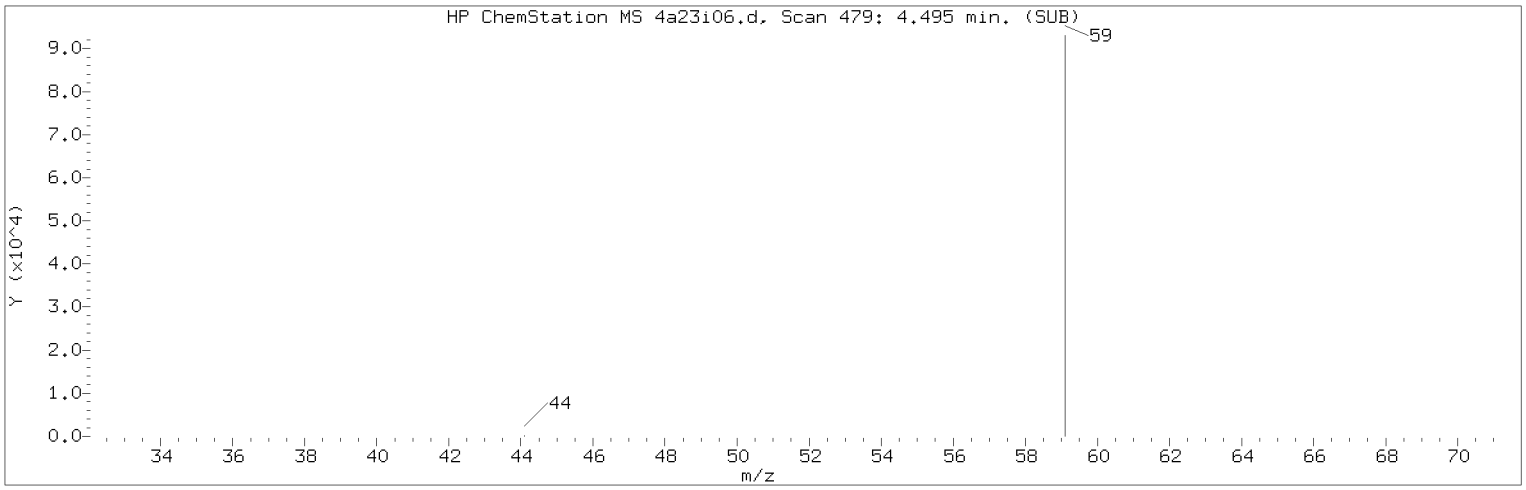
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:09
Date, time and analyst ID of latest file update: 23-Apr-2019 17:09 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

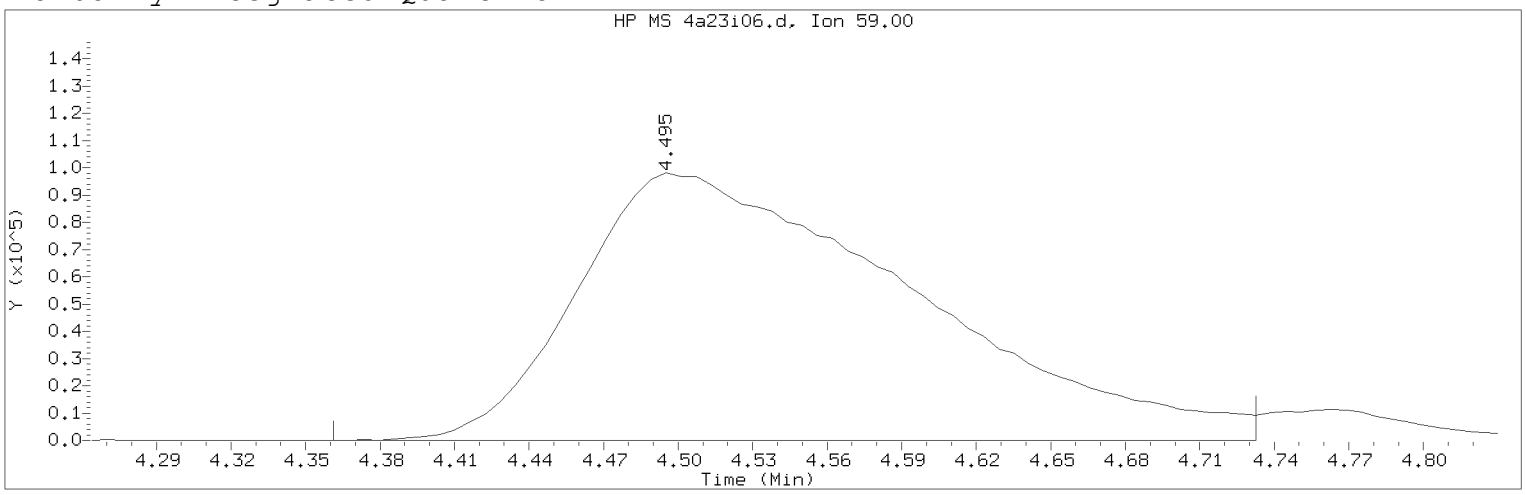
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 377
Retention Time (minutes): 3.875
Quant Ion : 45.00
Area : 522306
On-column Amount (ng) : 501.7389
Integration start scan : 357 Integration stop scan: 417
Y at integration start : 2175 Y at integration end: 2175

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

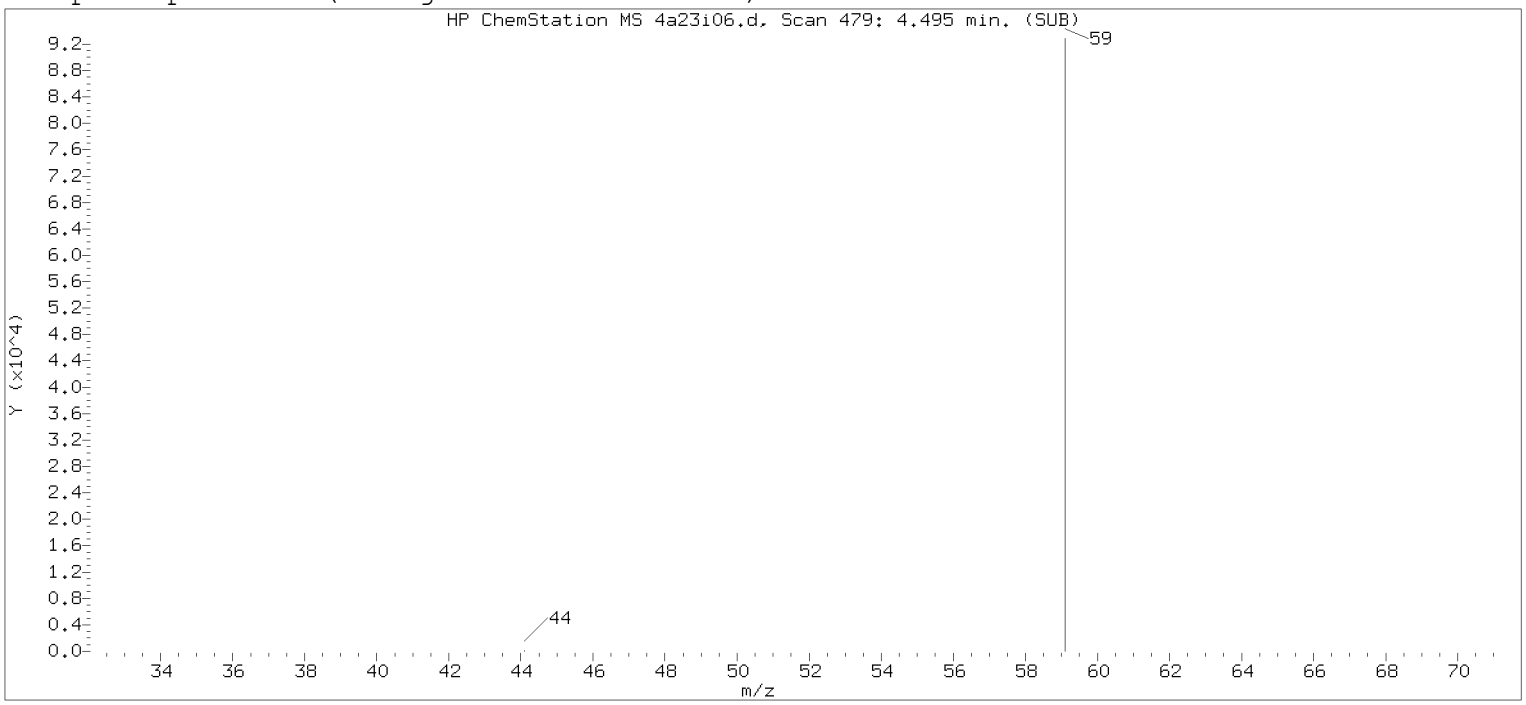
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 479
Retention Time (minutes): 4.495
Quant Ion : 59.00
Area (flag) : 923610M
On-Column Amount (ng) : 483.8616
Integration start scan : 456 Integration stop scan: 517
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

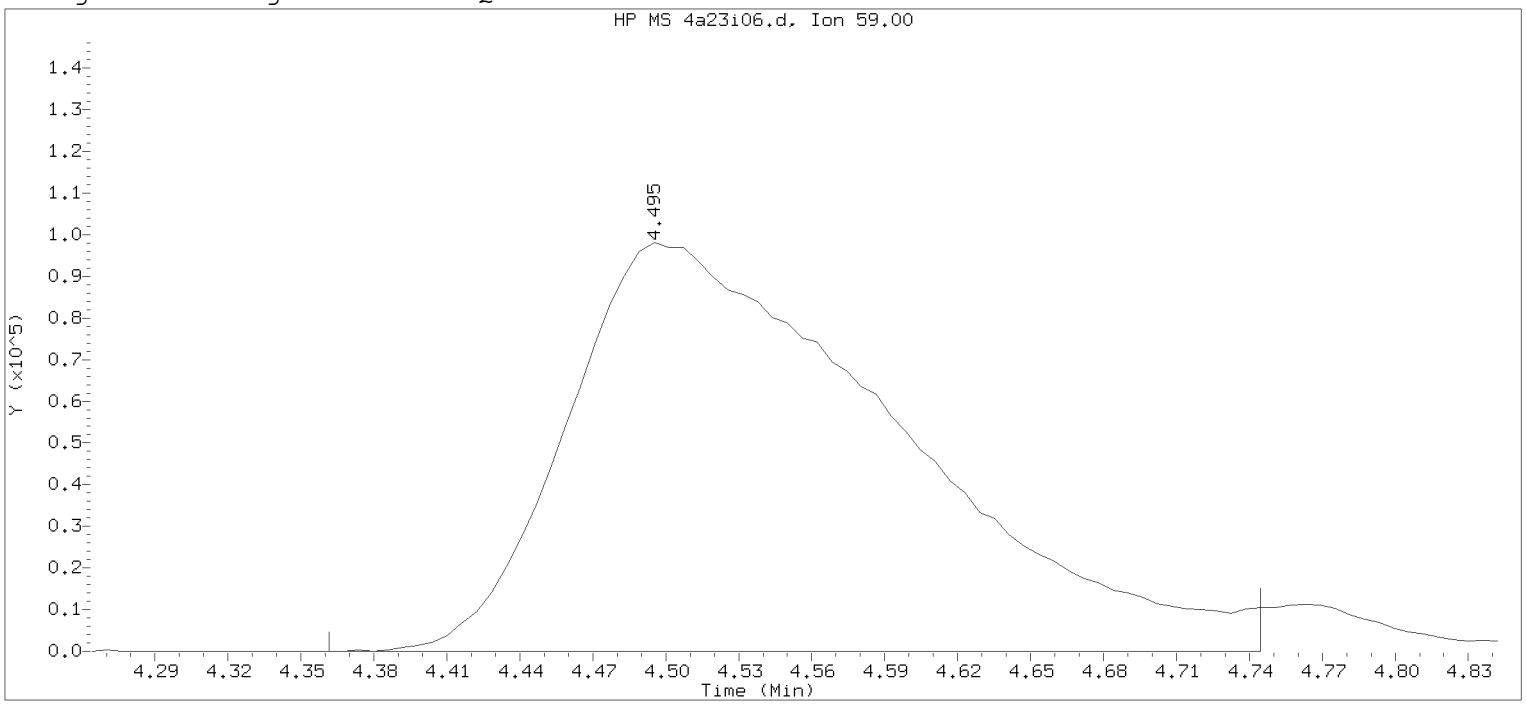
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

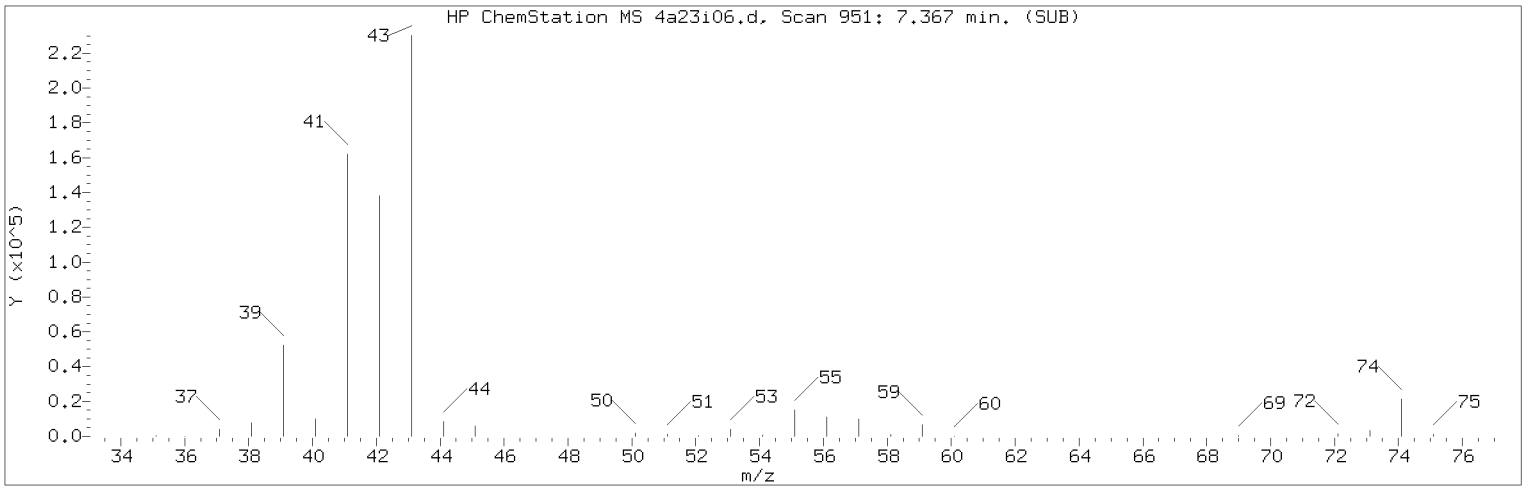
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:09
Date, time and analyst ID of latest file update: 23-Apr-2019 17:09 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

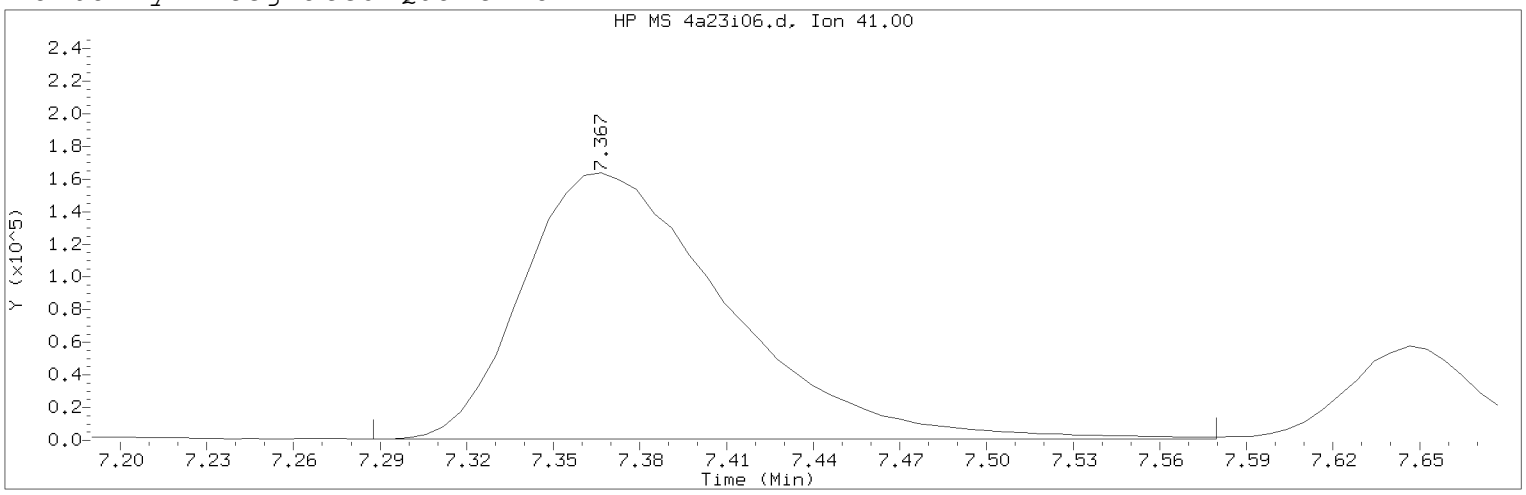
Compound Number	: 30		
Compound Name	: t-Butyl alcohol		
Scan Number	: 479		
Retention Time (minutes)	: 4.495		
Quant Ion	: 59.00		
Area	: 929191		
On-column Amount (ng)	: 500.0638		
Integration start scan	: 456	Integration stop scan:	519
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

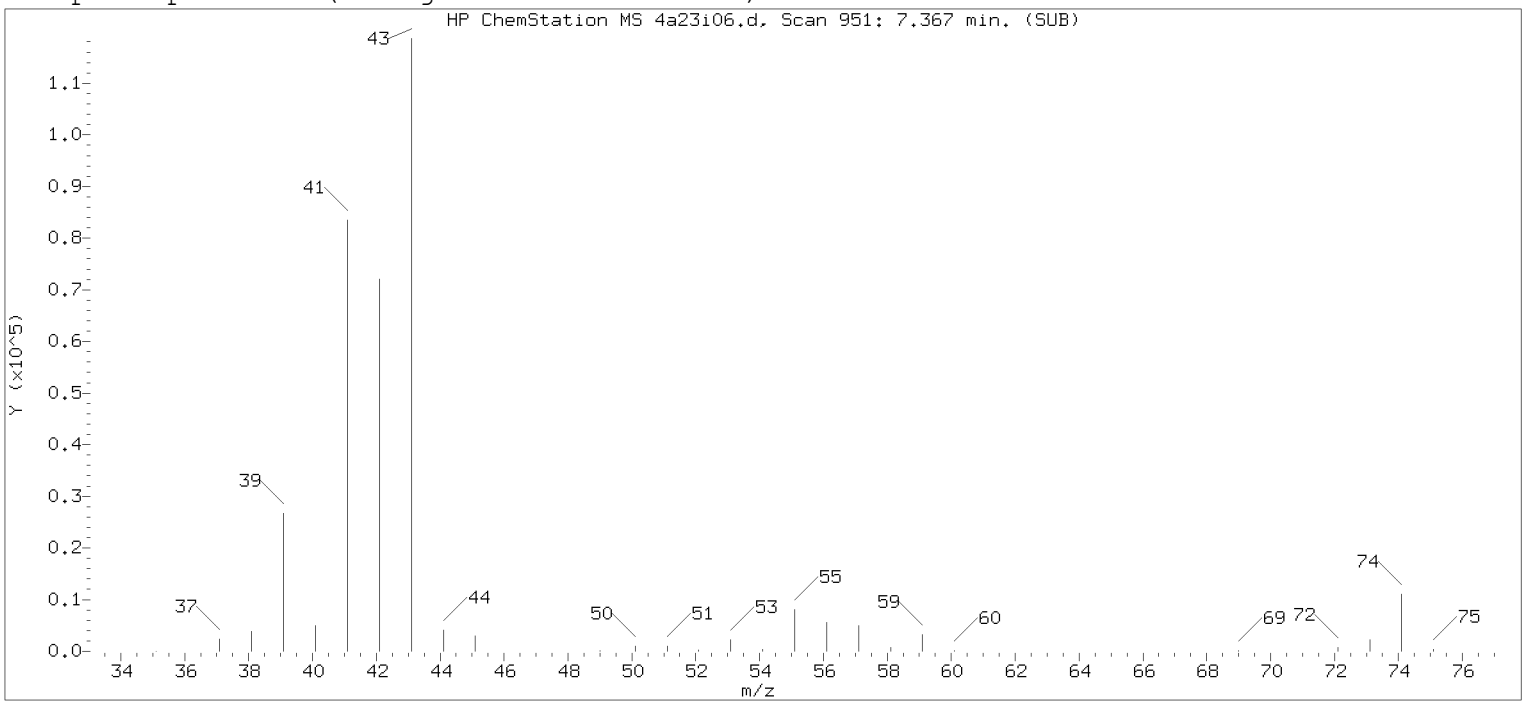
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 951
Retention Time (minutes): 7.367
Quant Ion : 41.00
Area (flag) : 805417M
On-Column Amount (ng) : 1215.6661
Integration start scan : 937 Integration stop scan: 985
Y at integration start : 610 Y at integration end: 610

Reason for manual integration: improper integration

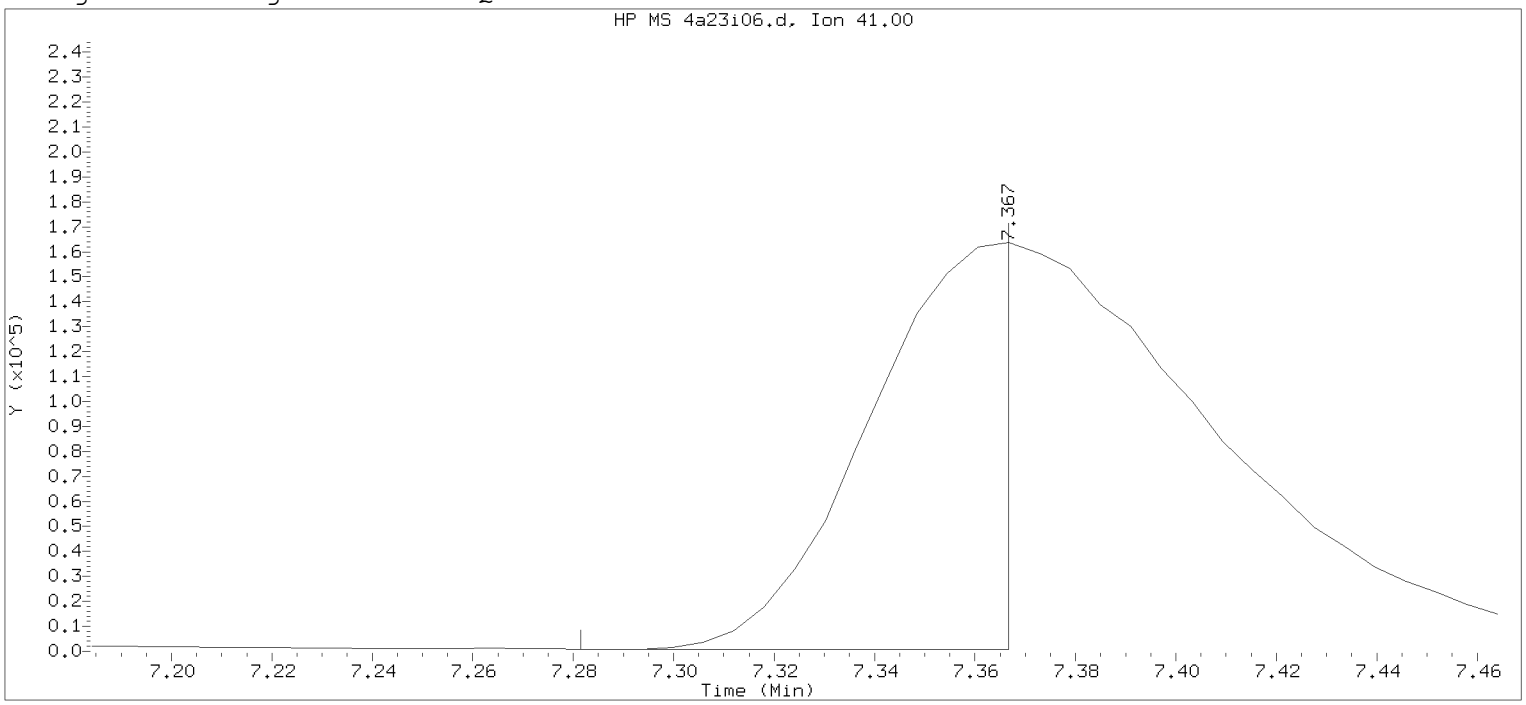
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

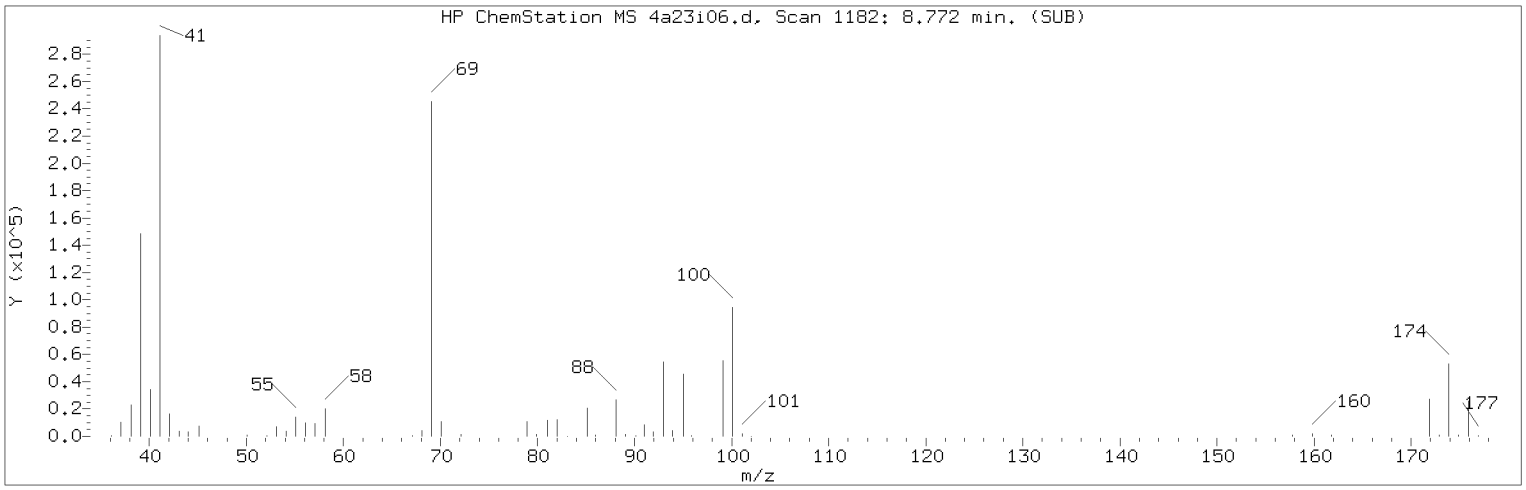
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:09
Date, time and analyst ID of latest file update: 23-Apr-2019 17:09 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

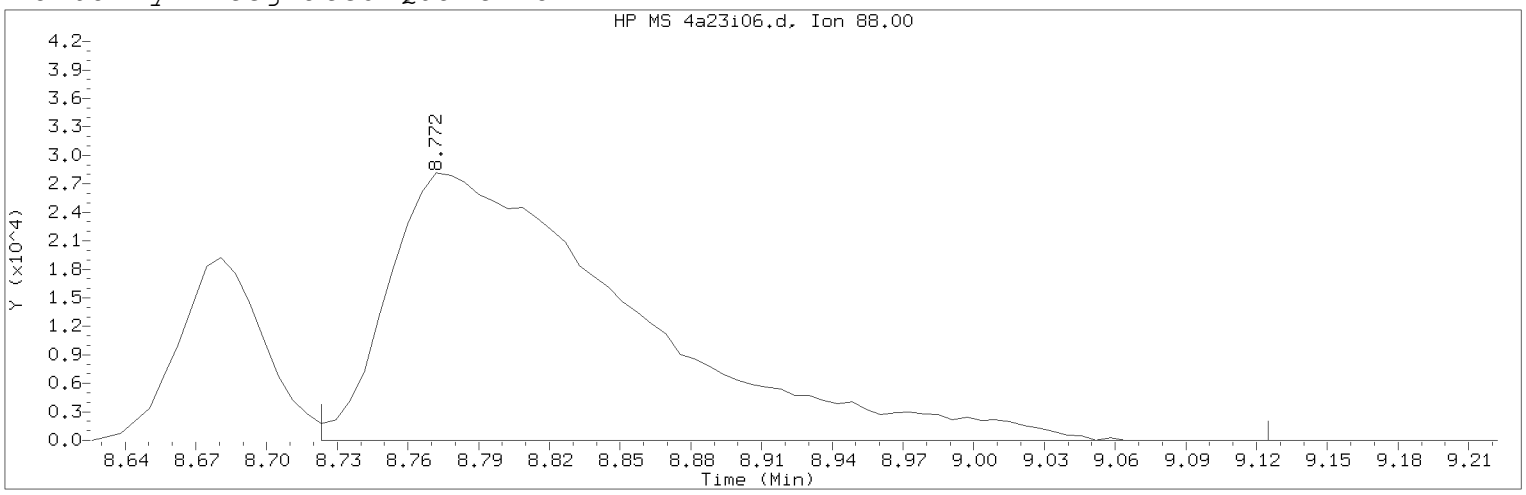
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 951
Retention Time (minutes): 7.367
Quant Ion : 41.00
Area : 301668
On-column Amount (ng) : 506.6950
Integration start scan : 936 Integration stop scan: 950
Y at integration start : 879 Y at integration end: 879

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

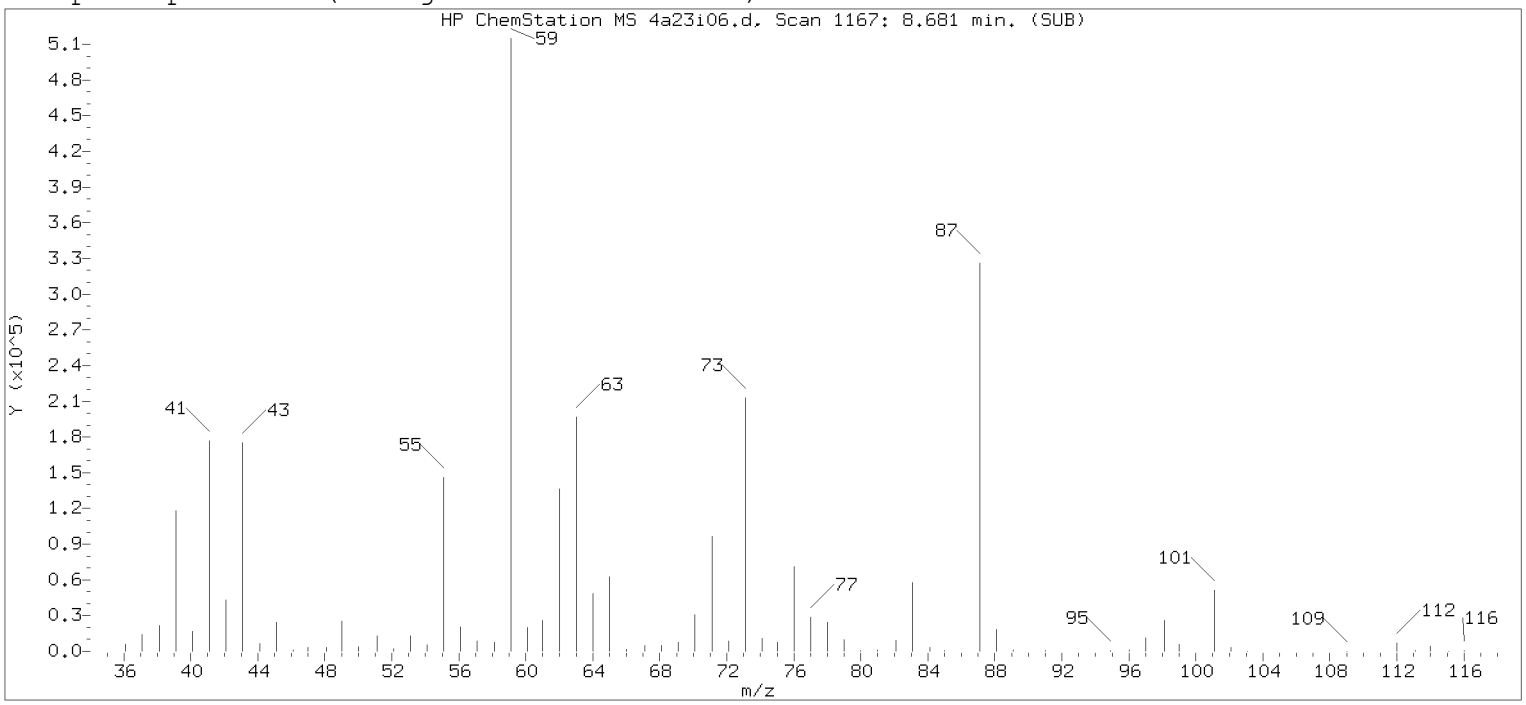
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1182
Retention Time (minutes): 8.772
Quant Ion : 88.00
Area (flag) : 203900M
On-Column Amount (ng) : 1451.5828
Integration start scan : 1173 Integration stop scan: 1239
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

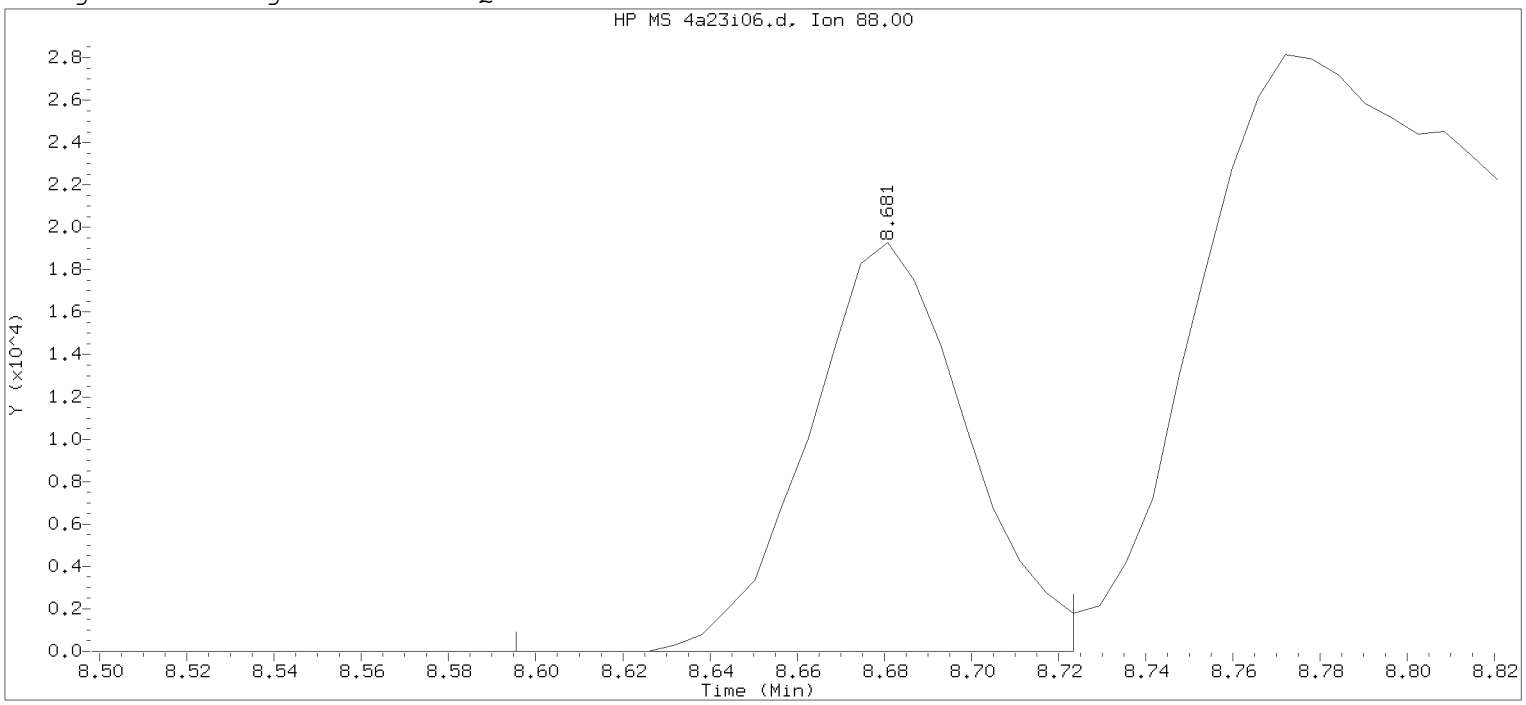
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

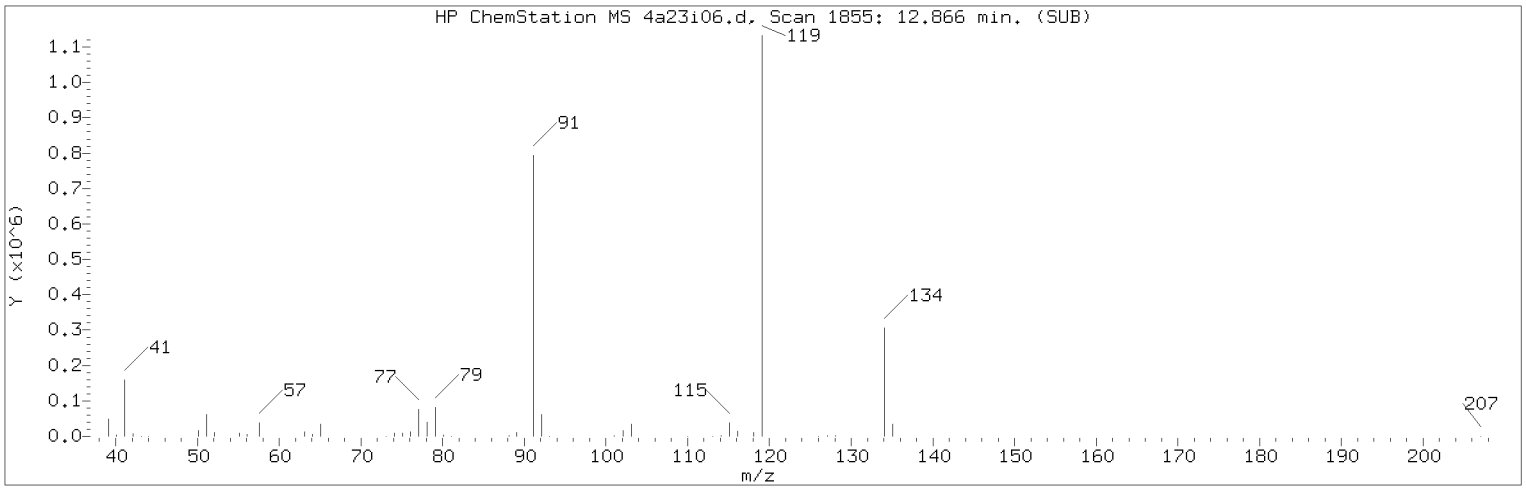
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:09
Date, time and analyst ID of latest file update: 23-Apr-2019 17:09 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

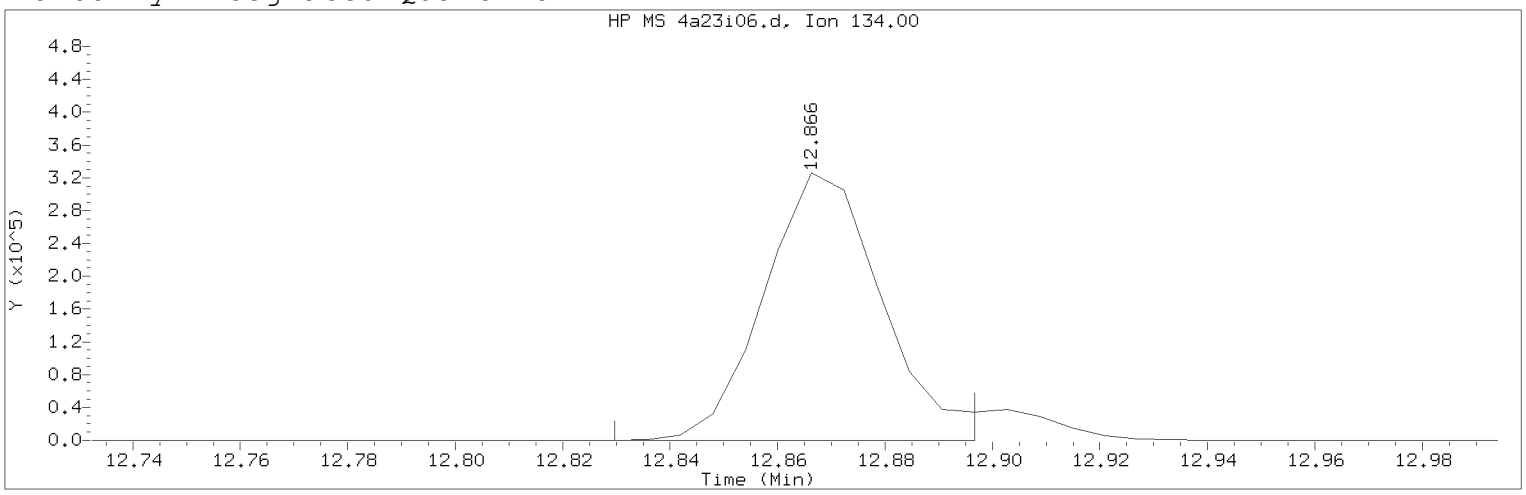
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1167		
Retention Time (minutes)	: 8.681		
Quant Ion	: 88.00		
Area	: 48238		
On-column Amount (ng)	: 360.4096		
Integration start scan	: 1152	Integration stop scan:	1173
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user id: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

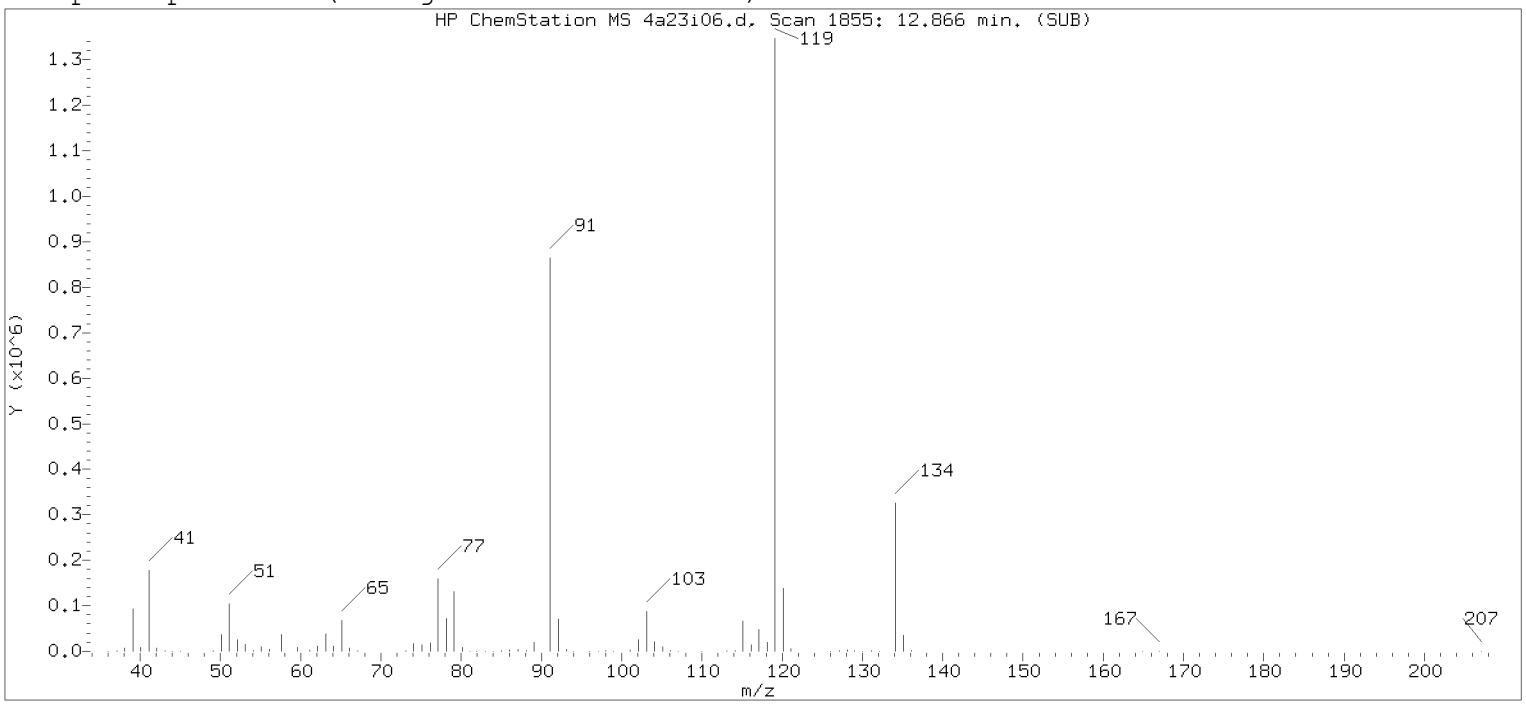
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area (flag) : 494874M
On-Column Amount (ng) : 102.6701
Integration start scan : 1848 Integration stop scan: 1859
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

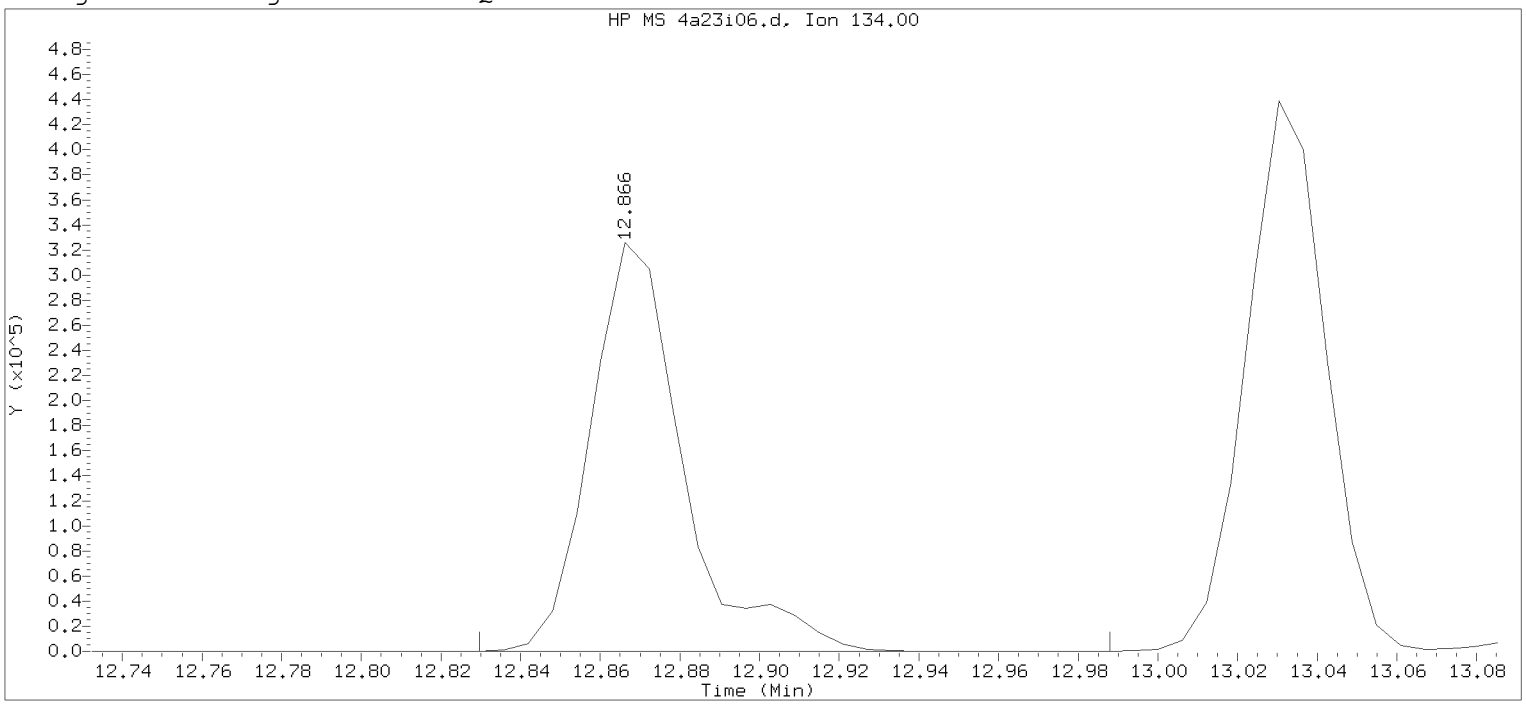
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

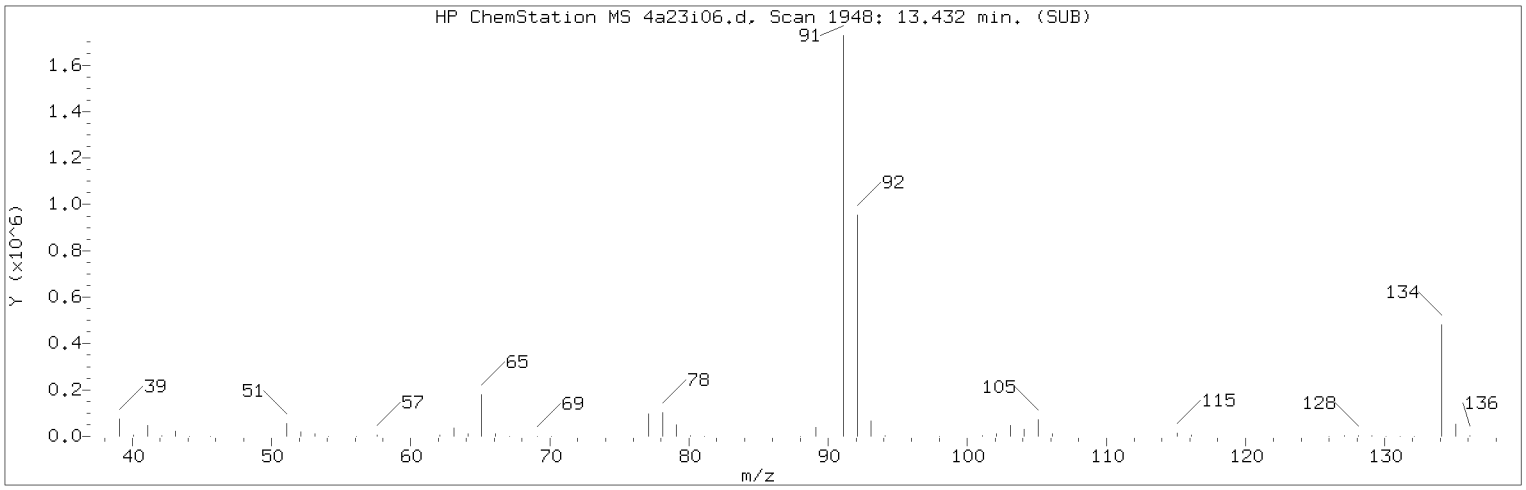
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:09
Date, time and analyst ID of latest file update: 23-Apr-2019 17:09 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

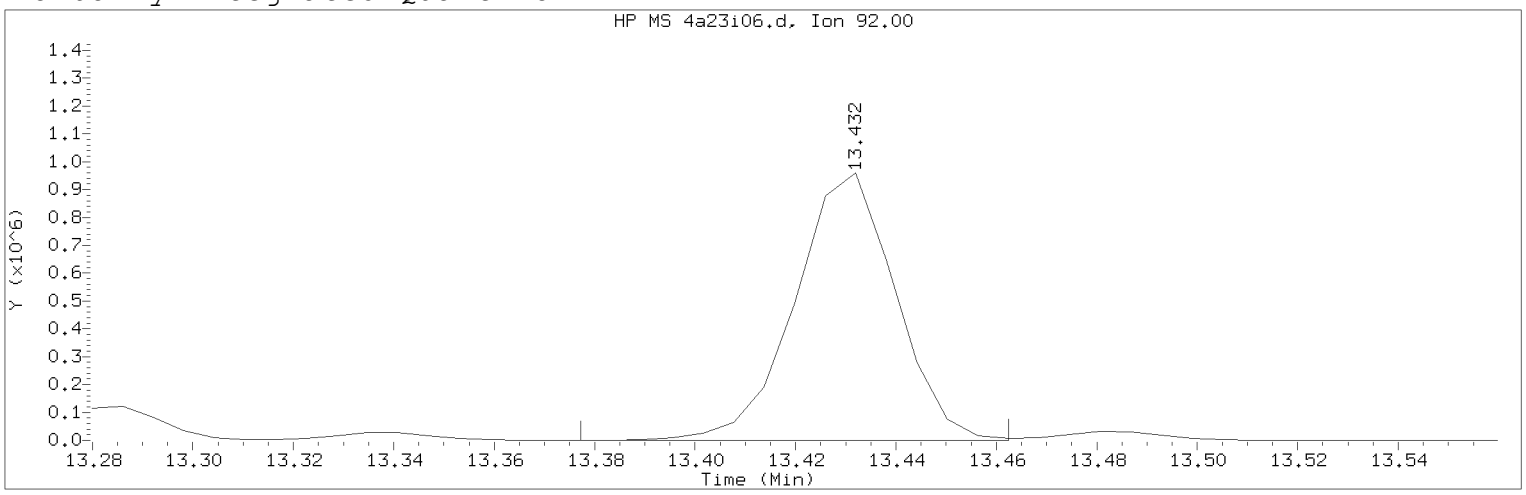
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area : 527130
On-column Amount (ng) : 100.6594
Integration start scan : 1848 Integration stop scan: 1874
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlo1694

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

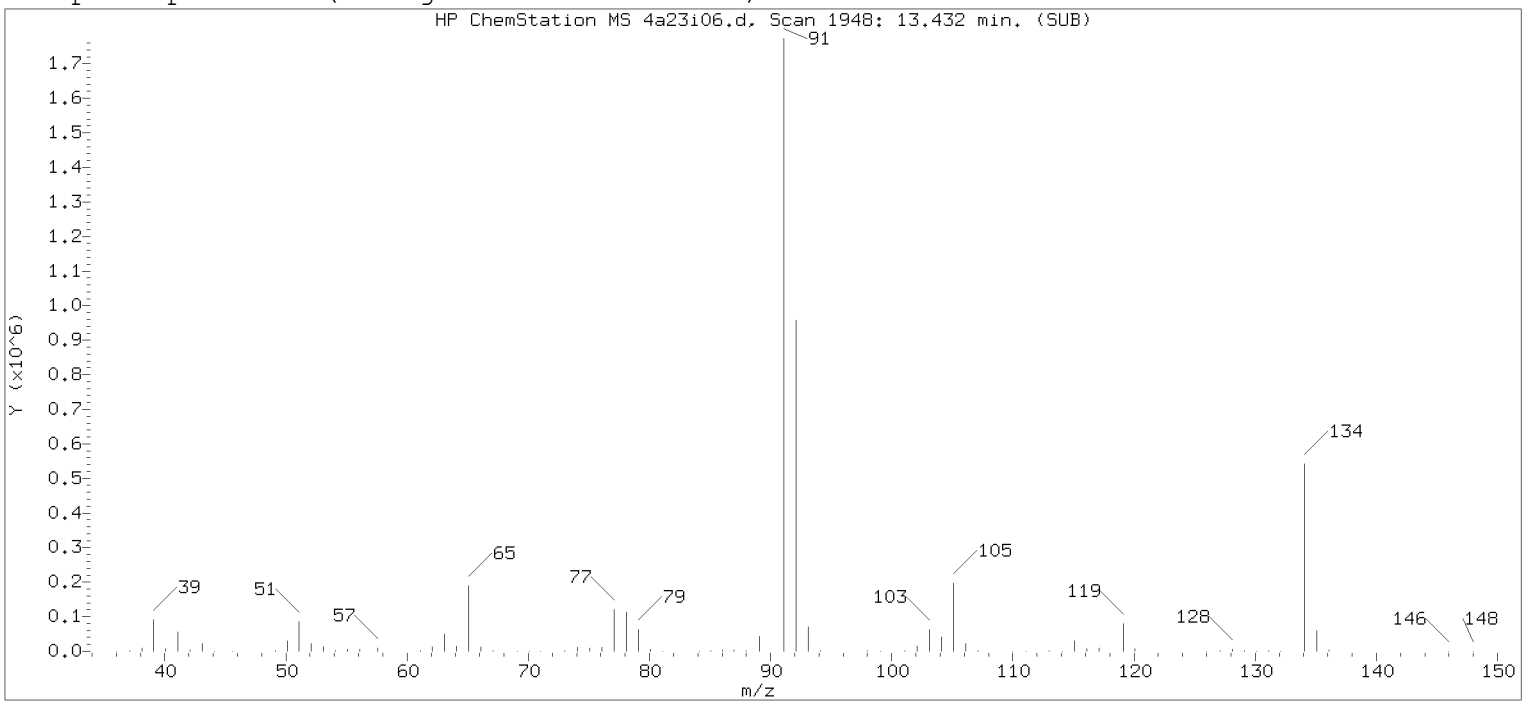
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1948
Retention Time (minutes): 13.432
Quant Ion : 92.00
Area (flag) : 1330962M
On-Column Amount (ng) : 99.6701
Integration start scan : 1938 Integration stop scan: 1952
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

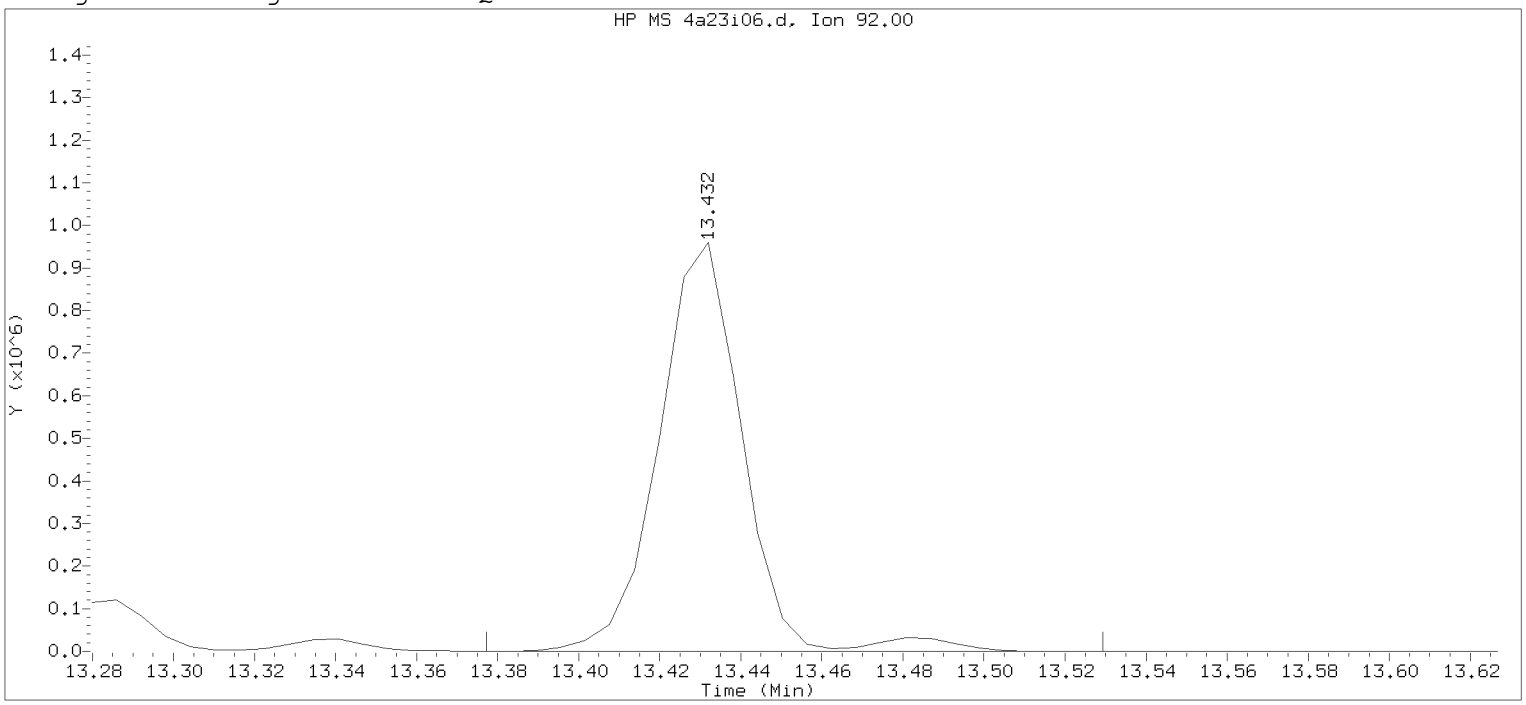
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i06.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 16:51 Analyst ID: JML01693

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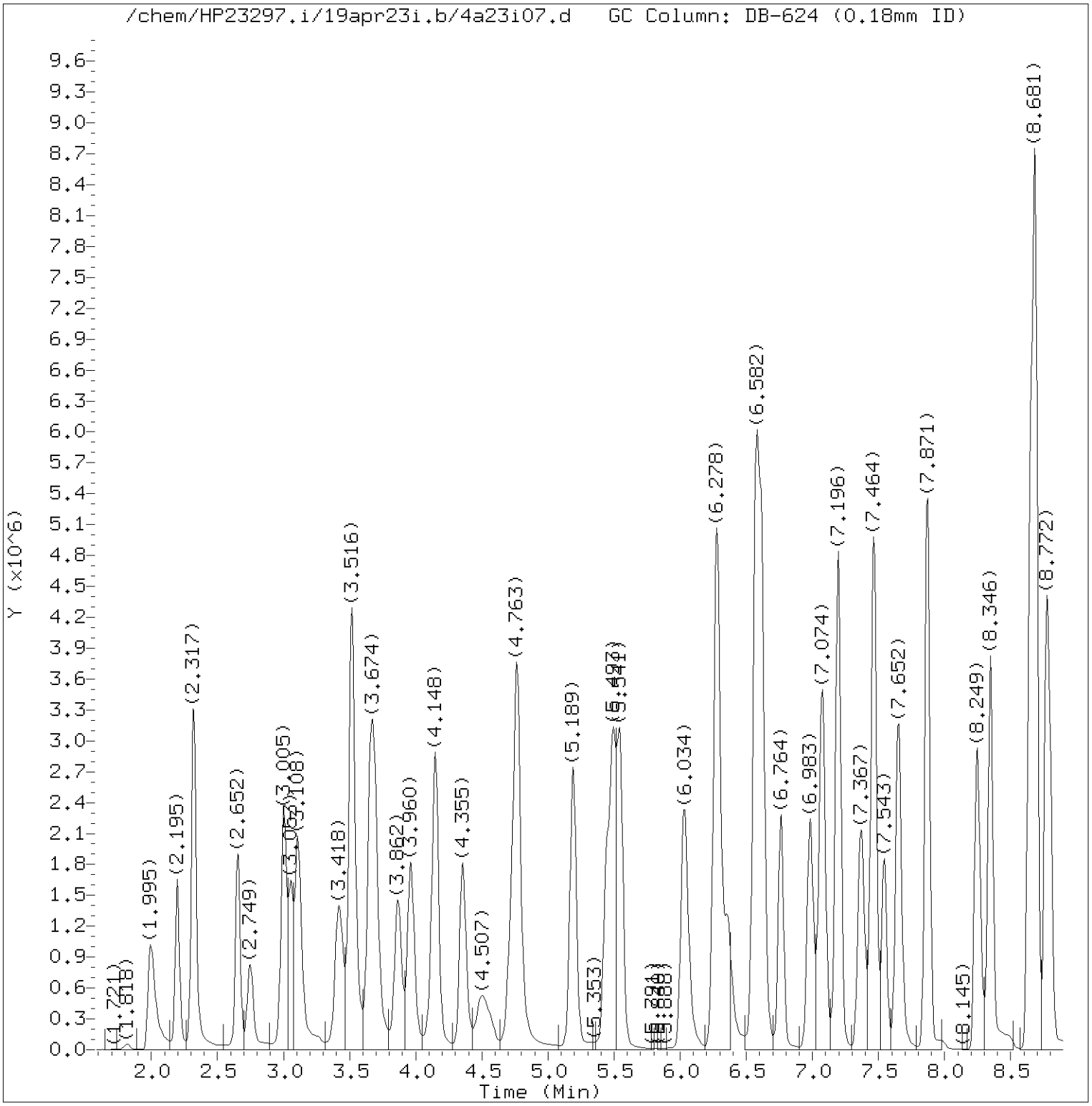
Calibration date and time: 23-APR-2019 17:09
Date, time and analyst ID of latest file update: 23-Apr-2019 17:09 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1948
Retention Time (minutes): 13.432
Quant Ion : 92.00
Area : 1375447
On-column Amount (ng) : 100.6377
Integration start scan : 1938 Integration stop scan: 1963
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jmlong



Total Ion Chromatogram (TIC)

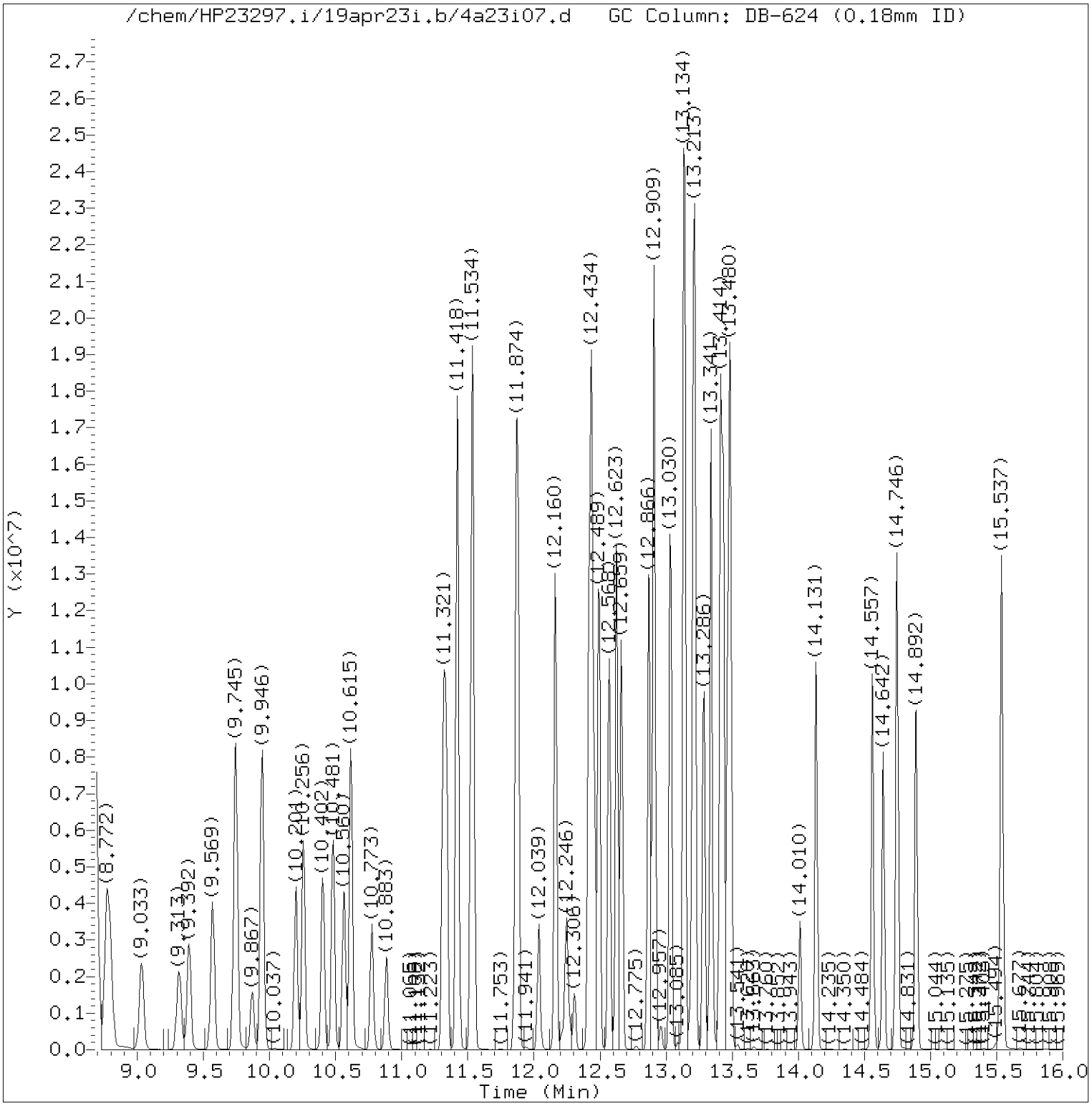
Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.995	85	2566751	276.912
4) Chloromethane	(2)	2.195	50	2319571	258.375
6) Vinyl Chloride	(2)	2.317	62	2323599	264.732
5) 1,3-Butadiene	(2)	2.323	39	1269509	260.774
8) Bromomethane	(2)	2.652	94	1863444	258.729
9) Chloroethane	(2)	2.749	64	1234439	254.686
10) Dichlorofluoromethane	(2)	2.998	67	2788717M	245.104
12) Trichlorofluoromethane	(2)	3.053	101	2985003	280.453
11) n-Pentane	(2)	3.108	43	2501599	290.908
13) Ethanol	(1)	3.193	45	816483M	6256.731
15) Freon 123a	(2)	3.418	67	1711914	279.563
16) Acrolein	(1)	3.516	56	7101938	3231.103
17) 1,1-Dichloroethene	(2)	3.656	96	1267493	298.981
17) 1,1-Dichloroethene	(2)	3.656	63	635170	283.755
19) Freon 113	(2)	3.680	101	1397534	299.575
18) Acetone	(1)	3.698	58	692885	641.945
22) Methyl Iodide	(2)	3.862	142	2477941	293.331
21) 2-Propanol	(1)	3.875	45	1165477	1343.794
23) Carbon Disulfide	(2)	3.960	76	4454036	294.616
27) Methyl Acetate	(2)	4.130	43	2411560	273.110
25) Allyl Chloride	(2)	4.154	41	2589610	275.471
28) Methylene Chloride	(2)	4.355	84	1517521	282.594
29)*t-Butyl alcohol-d10	(1)	4.373	65	387659	250.000
30) t-Butyl alcohol	(1)	4.507	59	2100774	1377.112
31) Acrylonitrile	(2)	4.714	53	1293819	279.685
33) Methyl Tertiary Butyl Ether	(2)	4.757	73	4016216	265.202
32) trans-1,2-Dichloroethene	(2)	4.769	96	1502367	296.596
34) n-Hexane	(2)	5.189	57	2435688	291.134
36) 1,1-Dichloroethane	(2)	5.438	63	2680570	284.734
38) di-Isopropyl ether	(2)	5.493	45	5046265	270.459
39) 2-Chloro-1,3-butadiene	(2)	5.548	53	2481639	291.170
40) Ethyl t-butyl ether	(2)	6.028	59	4122955	257.247
43) 1,2-Dichloroethene (Total)	(2)		96	3232725	592.840
44) 2-Butanone	(2)	6.265	43	3809472	530.611
42) cis-1,2-Dichloroethene	(2)	6.278	96	1730358	296.244
45) 2,2-Dichloropropane	(2)	6.290	77	2129444	288.499
47) Propionitrile	(1)	6.363	54	2620635	1617.313
48) Methacrylonitrile	(2)	6.576	67	3192984	731.742

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.612	128	998963	309.718
50) Tetrahydrofuran	(1)	6.624	71	1062072	664.004
51) Chloroform	(2)	6.764	83	2619405	282.503
52)$Dibromofluoromethane	(2)	6.977	113	299613	50.004
52)$Dibromofluoromethane	(2)	6.977	111	307731	50.157
53) 1,1,1-Trichloroethane	(2)	6.983	97	2251587	290.090
54) Cyclohexane	(2)	7.074	56	2932336	290.496
54) Cyclohexane	(2)	7.074	84	2440601	296.058
54) Cyclohexane	(2)	7.074	69	898662	297.873
56) Carbon Tetrachloride	(2)	7.190	117	2025785	300.392
55) 1,1-Dichloropropene	(2)	7.196	75	2136292	291.315
58) Isobutyl Alcohol	(1)	7.367	41	2024023	3768.133
57)$1,2-Dichloroethane-d4	(2)	7.439	102	73270	50.045
57)$1,2-Dichloroethane-d4	(2)	7.439	65	339637	47.943
57)$1,2-Dichloroethane-d4	(2)	7.433	104	46978	50.249
60) Benzene	(2)	7.464	78	6298659	282.443
61) 1,2-Dichloroethane	(2)	7.543	62	2036278	269.399
61) 1,2-Dichloroethane	(2)	7.543	98	194312	311.397
65) t-Amyl methyl ether	(2)	7.652	73	3987579	246.068
67) n-Heptane	(2)	7.871	43	2841067	288.450
66)*Fluorobenzene	(2)	7.871	96	1215570	50.000
69) n-Butanol	(1)	8.249	56	3546873M	8041.034
71) Trichloroethene	(2)	8.346	95	1667751	294.815
72) Methylcyclohexane	(2)	8.650	83	3289680	308.790
72) Methylcyclohexane	(2)	8.650	98	1449014M	314.230
73) 1,2-Dichloropropane	(2)	8.687	63	1723877	294.241
76) Methyl Methacrylate	(2)	8.772	69	1967185	296.501
75) 1,4-Dioxane	(1)	8.778	88	421920M	3713.813
74) Dibromomethane	(2)	8.796	93	1129011	296.899
78) Bromodichloromethane	(2)	9.033	83	2064777	299.000
79) 2-Nitropropane	(2)	9.313	41	1839910	547.455
80) 2-Chloroethyl Vinyl Ether	(2)	9.392	63	1596318	297.795
81) cis-1,3-Dichloropropene	(2)	9.569	75	2743334	300.481
82) 4-Methyl-2-pentanone	(2)	9.745	43	6916626	536.883
83)$Toluene-d8	(3)	9.867	98	1235354	47.874
83)$Toluene-d8	(3)	9.867	100	808483	48.268
88) Toluene	(3)	9.946	92	4184634	280.359
90) 1,3-Dichloropropene (total)	(3)		100	5389305	601.763

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$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.201	75	2645971	301.282
91) Ethyl Methacrylate	(3)	10.256	69	3156927	286.025
92) 1,1,2-Trichloroethane	(3)	10.402	97	1659703	284.502
93) Tetrachloroethene	(3)	10.481	166	1905016	292.588
94) 1,3-Dichloropropane	(3)	10.566	76	2687921	277.564
96) 2-Hexanone	(3)	10.615	43	5541717	521.702
97) Dibromochloromethane	(3)	10.773	129	1895951	307.147
99) 1,2-Dibromoethane	(3)	10.883	107	1849755	287.207
100)*Chlorobenzene-d5	(3)	11.309	117	1005411	50.000
102) Chlorobenzene	(3)	11.339	112	4784702	283.635
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	1773989	311.504
104) Ethylbenzene	(3)	11.418	91	8086322	282.057
106) m+p-Xylene	(3)	11.534	106	6654635	582.149
108) Xylene (Total)	(3)		106	9985313	875.280
107) o-Xylene	(3)	11.862	106	3330678	293.131
109) Styrene	(3)	11.880	104	5650480	298.874
110) Bromoform	(3)	12.039	173	1602304	329.418
111) Isopropylbenzene	(3)	12.160	105	7973543	280.508
112) Cyclohexanone	(1)	12.246	55	1723856	3798.100
114)$4-Bromofluorobenzene	(3)	12.306	95	472315	48.021
114)$4-Bromofluorobenzene	(3)	12.306	174	420328	48.403
116) 1,1,2,2-Tetrachloroethane	(4)	12.410	83	2993329	288.086
115) Bromobenzene	(4)	12.428	156	2477694	314.041
118) trans-1,4-Dichloro-2-butene	(4)	12.434	53	2377219	695.993
117) 1,2,3-Trichloropropane	(4)	12.458	110	905185	288.111
119) n-Propylbenzene	(4)	12.489	91	9178231	270.491
120) 2-Chlorotoluene	(4)	12.568	126	2068029	291.830
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	6983082	284.370
121) 4-Chlorotoluene	(4)	12.659	126	2169232	293.679
124) tert-Butylbenzene	(4)	12.872	134	1586274M	307.707
125) Pentachloroethane	(4)	12.903	167	1613349	343.237
126) 1,2,4-Trimethylbenzene	(4)	12.909	105	7451967	290.651
127) sec-Butylbenzene	(4)	13.030	105	8810484	280.852
129) 1,3-Dichlorobenzene	(4)	13.134	146	4473645	302.518
130) p-Isopropyltoluene	(4)	13.140	119	8120326	294.253
131)*1,4-Dichlorobenzene-d4	(4)	13.188	152	563820	50.000
133) 1,4-Dichlorobenzene	(4)	13.207	146	4556873	300.781
134) 1,2,3-Trimethylbenzene	(4)	13.213	105	8020954	291.350

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on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

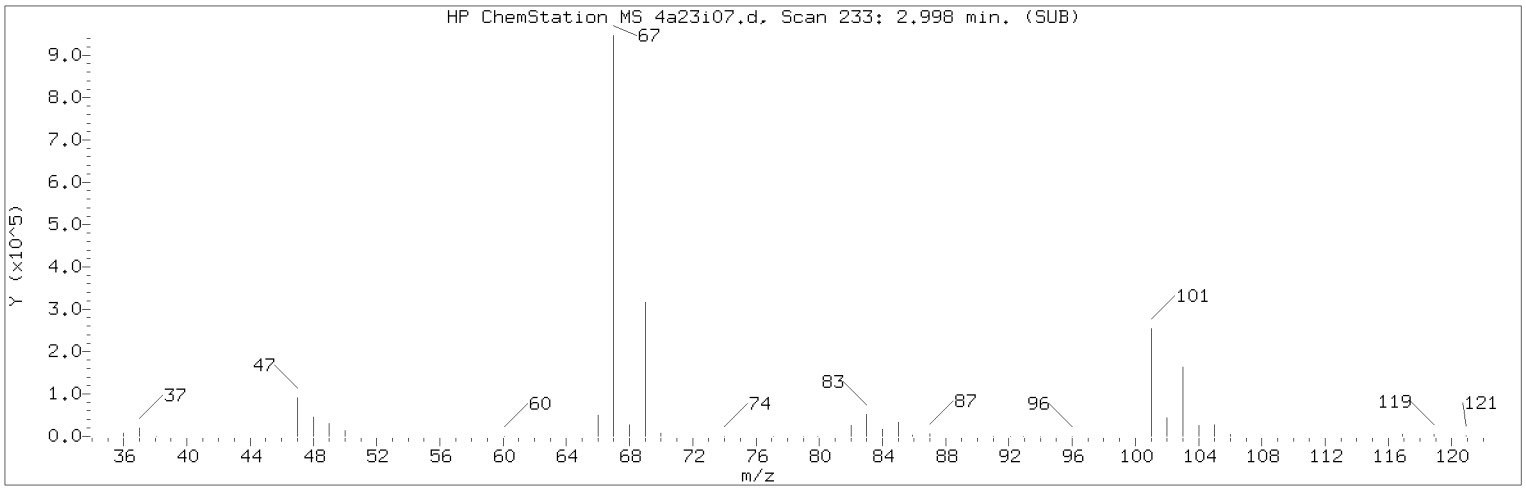
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

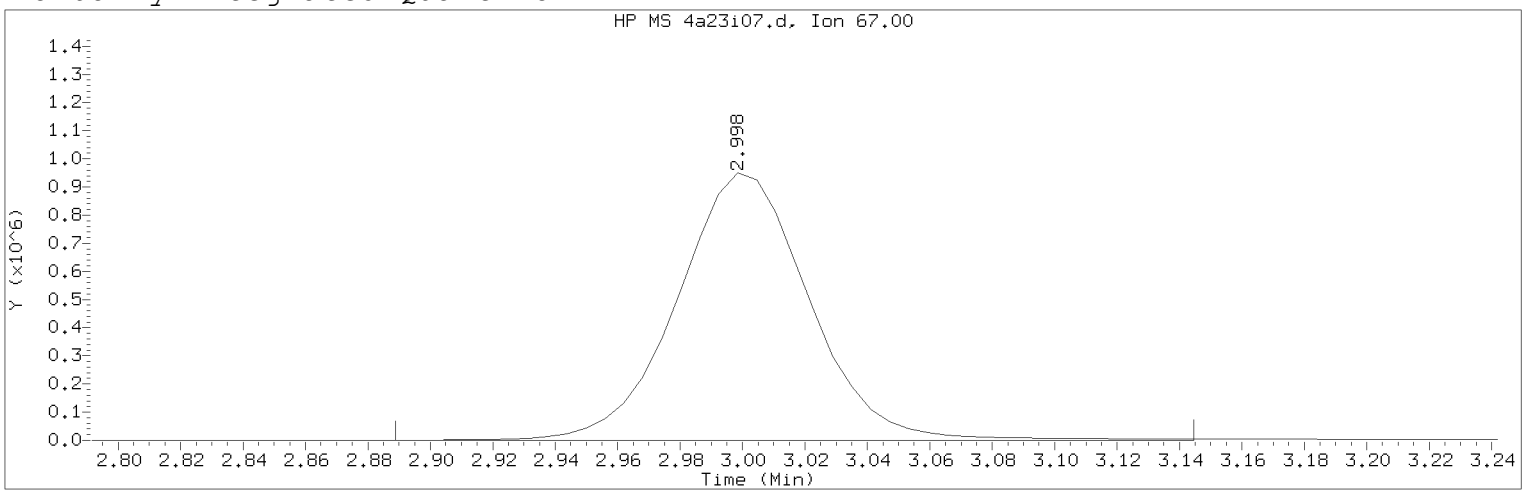
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.286	91	6428200	311.949
136) 1,3-Diethylbenzene	(4)	13.341	119	5177019	300.131
141) Diethylbenzene (total)	(4)		100	15173173	907.893
137) 1,4-Diethylbenzene	(4)	13.414	119	5556483	302.459
139) n-Butylbenzene	(4)	13.432	92	4089667	289.292
138) 1,2-Dichlorobenzene	(4)	13.468	146	4280571	297.059
140) 1,2-Diethylbenzene	(4)	13.487	119	4439671	305.303
142) 1,2-Dibromo-3-chloropropane	(4)	14.010	75	771193	281.357
144) 1,3,5-Trichlorobenzene	(4)	14.131	180	3220573	296.439
146) 1,2,4-Trichlorobenzene	(4)	14.557	180	3012360	292.646
147) Hexachlorobutadiene	(4)	14.642	225	1401908	294.708
148) Naphthalene	(4)	14.746	128	9738806	273.076
149) 1,2,3-Trichlorobenzene	(4)	14.892	180	2910144	294.285
150) 2-Methylnaphthalene	(4)	15.537	142	6769578	303.500

Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

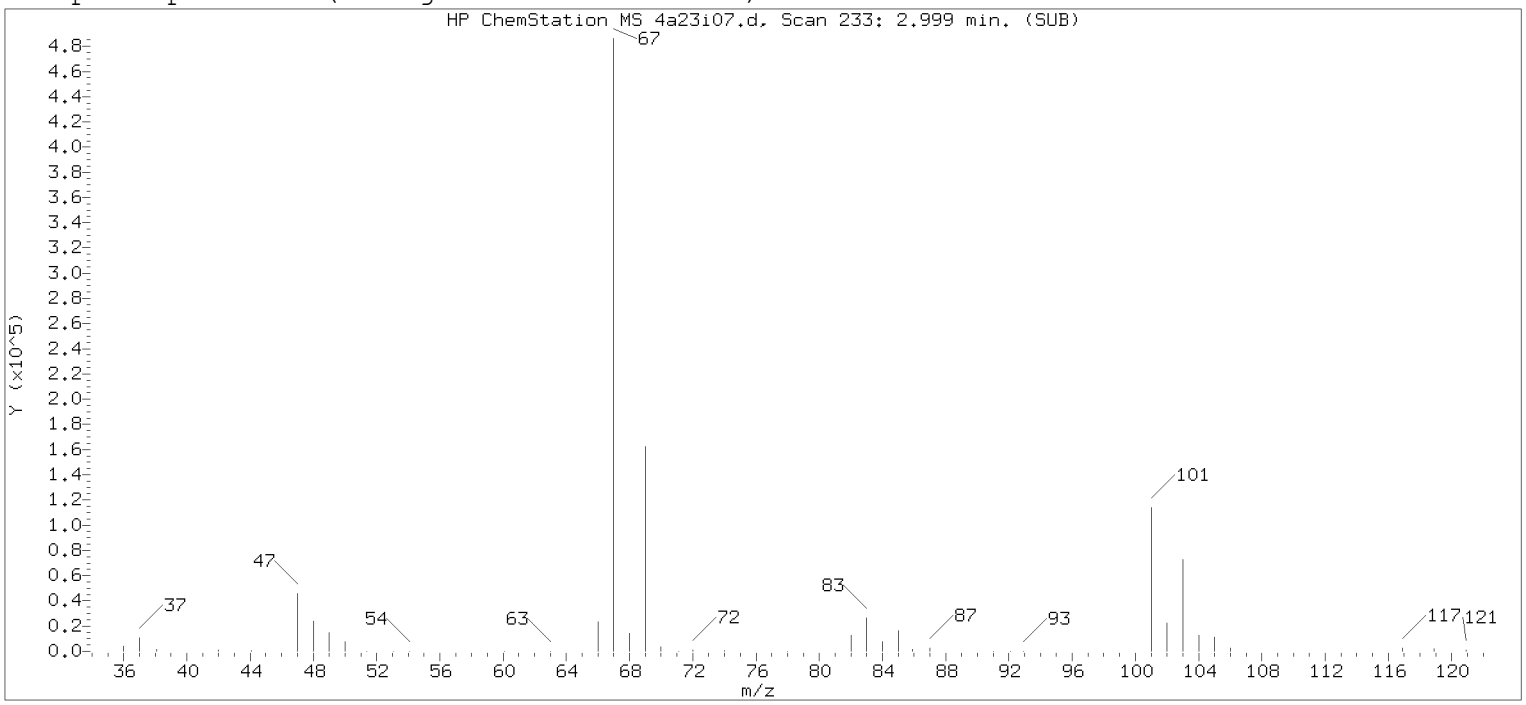
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 233
Retention Time (minutes): 2.998
Quant Ion : 67.00
Area (flag) : 2788717M
On-Column Amount (ng) : 245.1042
Integration start scan : 214 Integration stop scan: 256
Y at integration start : 190 Y at integration end: 190

Reason for manual integration: improper integration

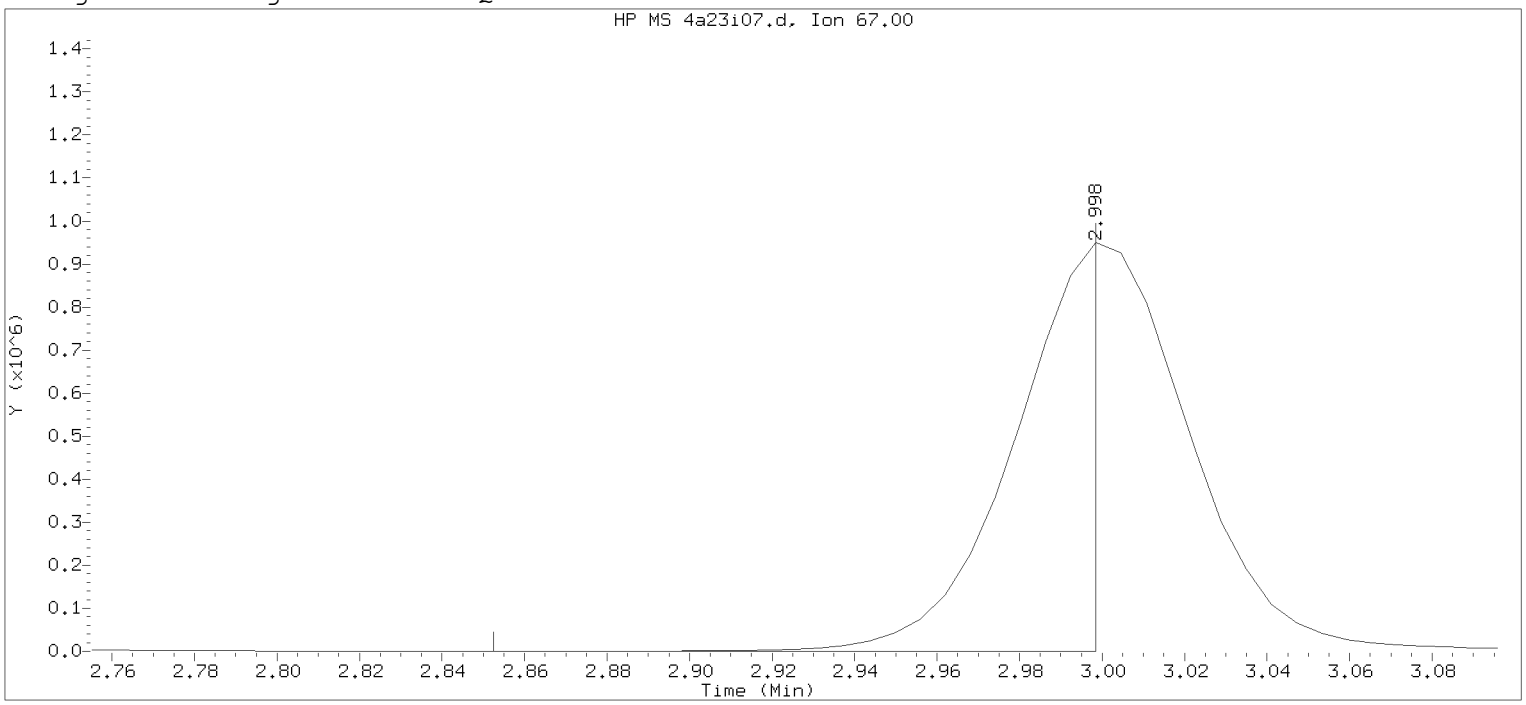
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

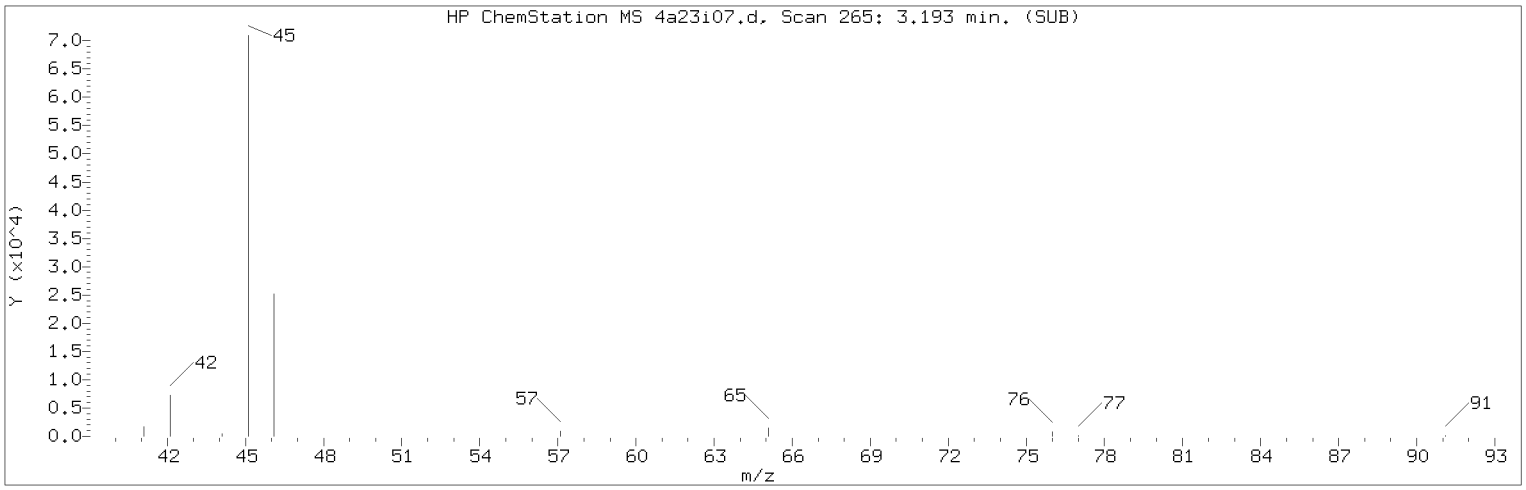
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:32
Date, time and analyst ID of latest file update: 23-Apr-2019 17:32 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

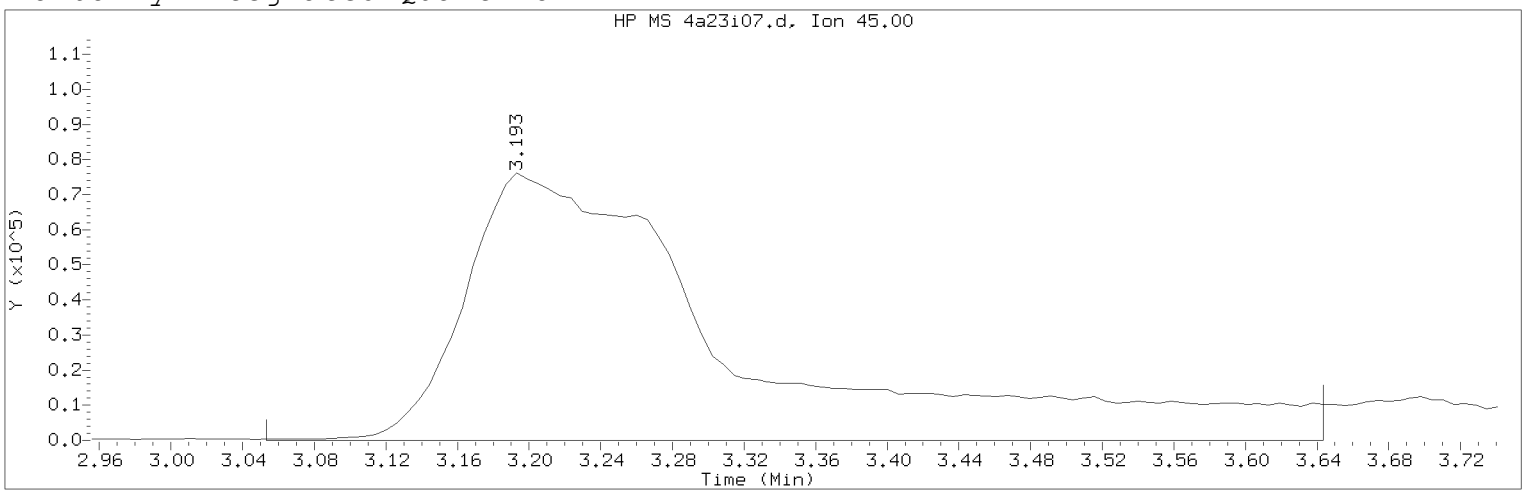
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 233
Retention Time (minutes): 2.998
Quant Ion : 67.00
Area : 1272833
On-column Amount (ng) : 119.4495
Integration start scan : 208 Integration stop scan: 232
Y at integration start : 310 Y at integration end: 310

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

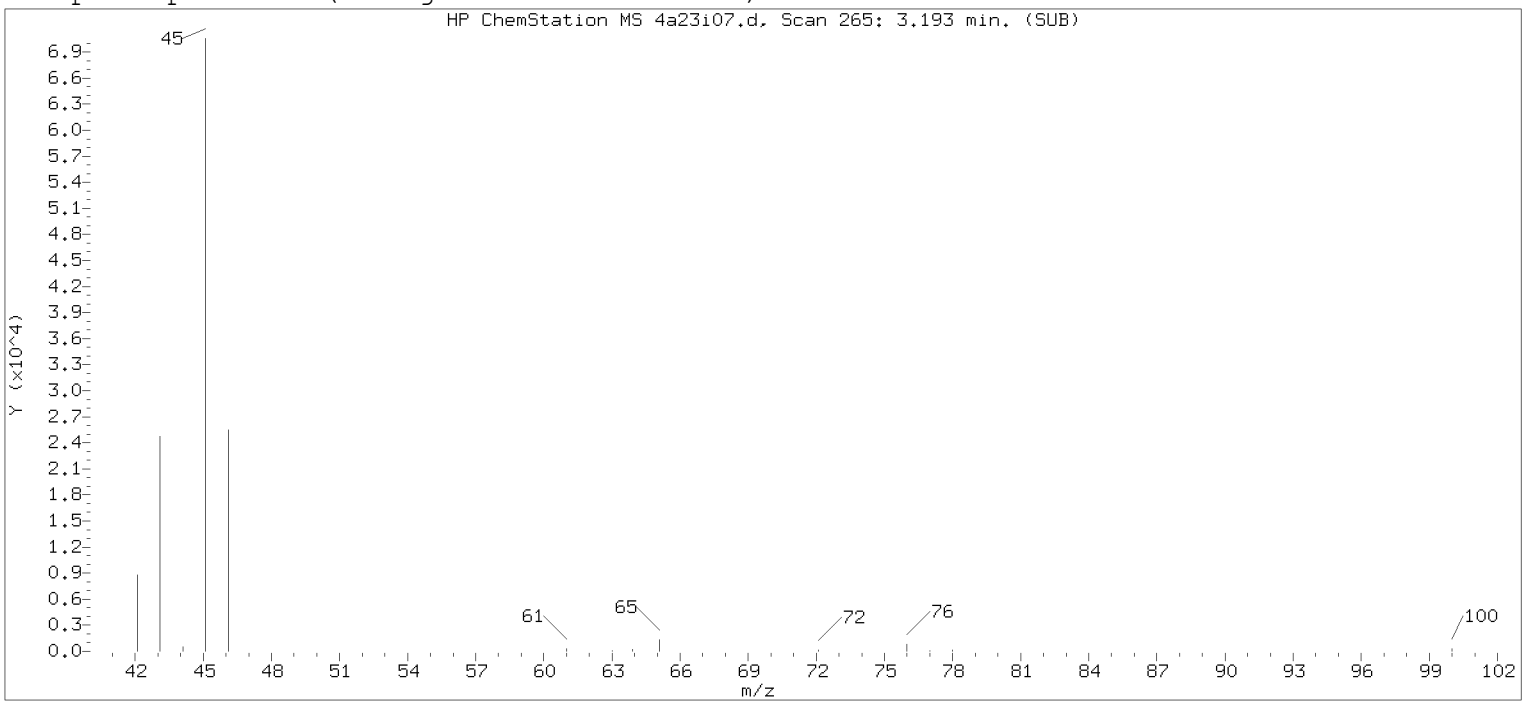
Compound Number : 13
Compound Name : Ethanol
Scan Number : 265
Retention Time (minutes): 3.193
Quant Ion : 45.00
Area (flag) : 816483M
On-Column Amount (ng) : 6256.7309
Integration start scan : 241 Integration stop scan: 338
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

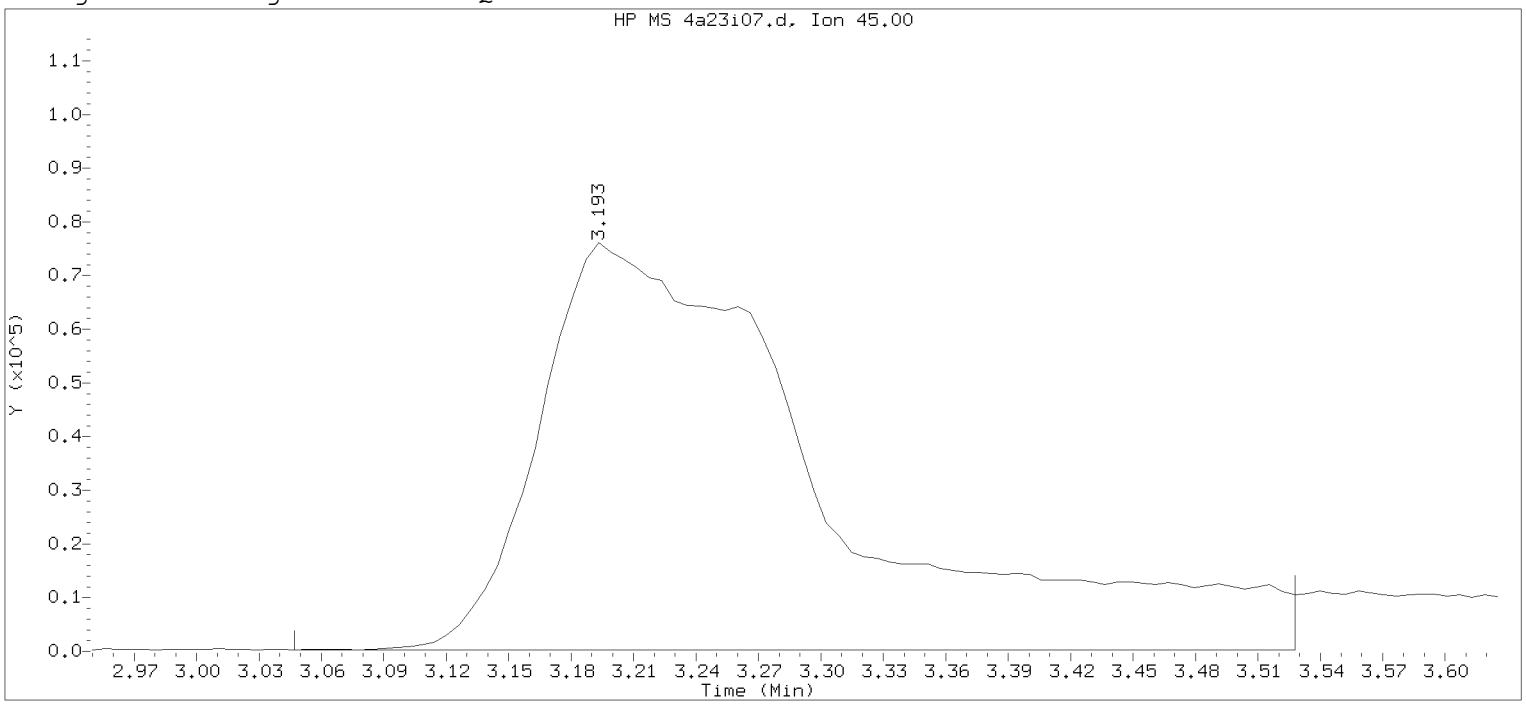
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:32
Date, time and analyst ID of latest file update: 23-Apr-2019 17:32 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 13
Compound Name : Ethanol
Scan Number : 265
Retention Time (minutes): 3.193
Quant Ion : 45.00
Area : 733743
On-column Amount (ng) : 6246.6132
Integration start scan : 240 Integration stop scan: 319
Y at integration start : 272 Y at integration end: 272

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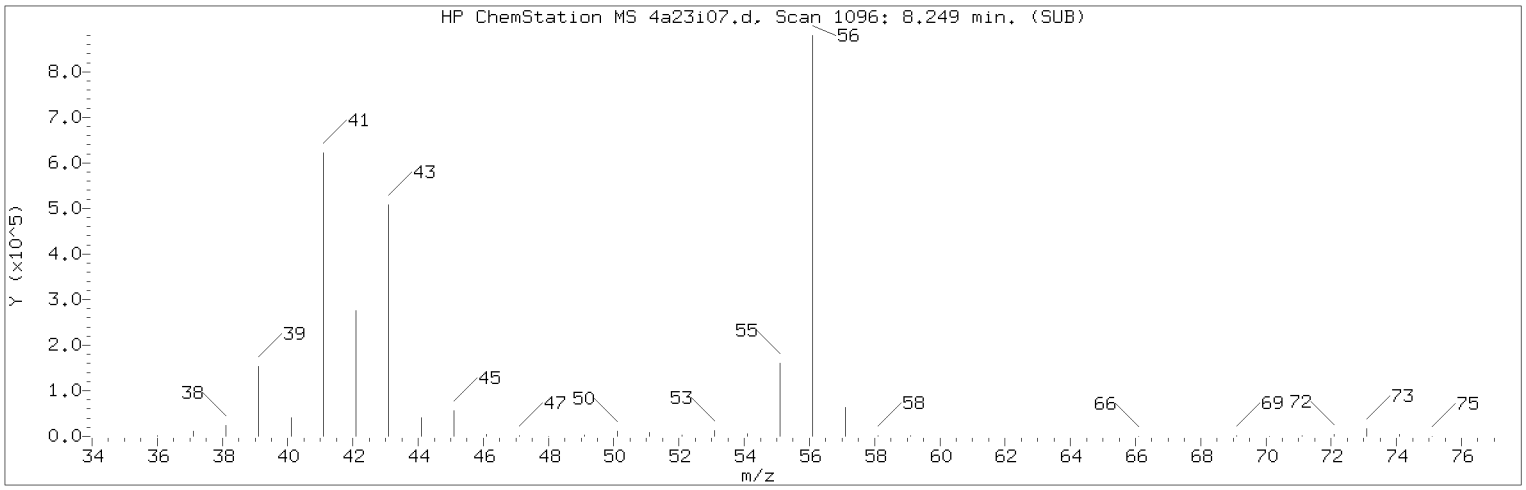
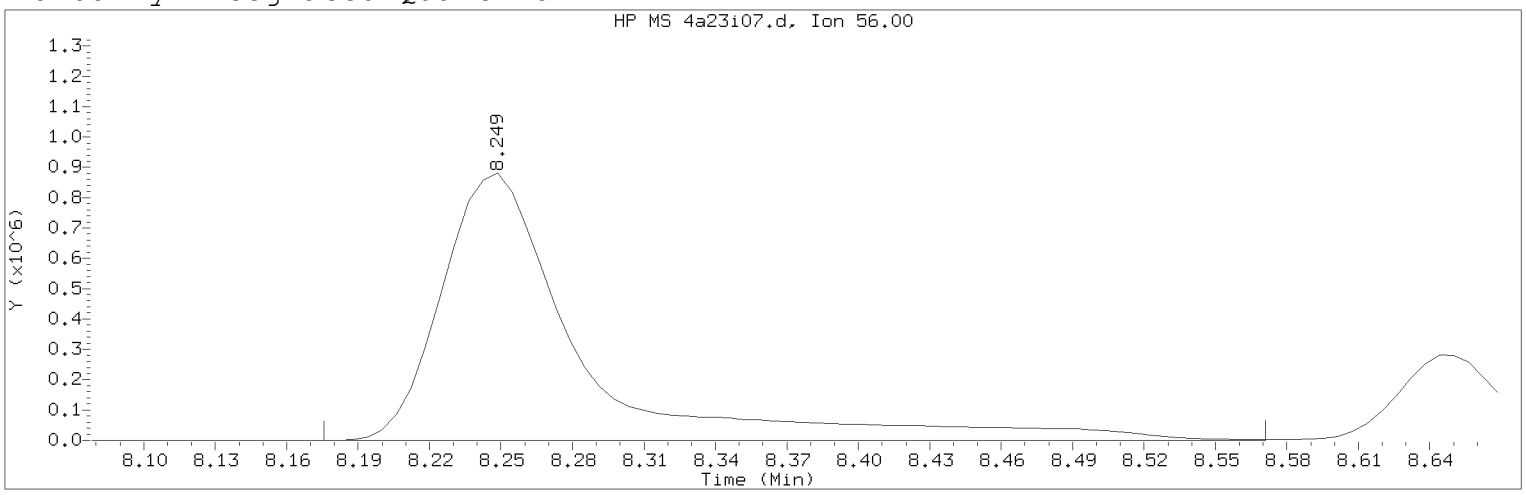
Target 3.5 esignature user id: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

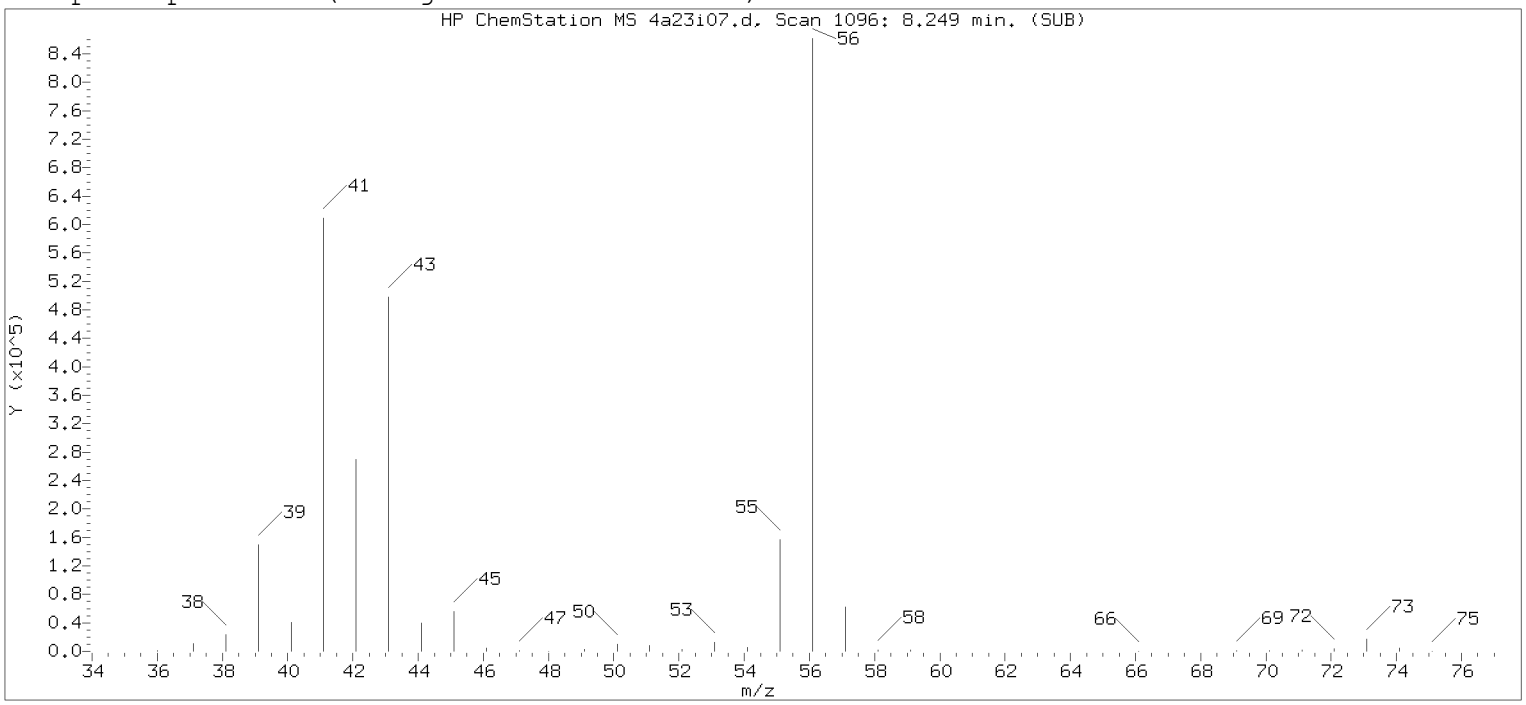
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 1096
Retention Time (minutes): 8.249
Quant Ion : 56.00
Area (flag) : 3546873M
On-Column Amount (ng) : 8041.0344
Integration start scan : 1083 Integration stop scan: 1148
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

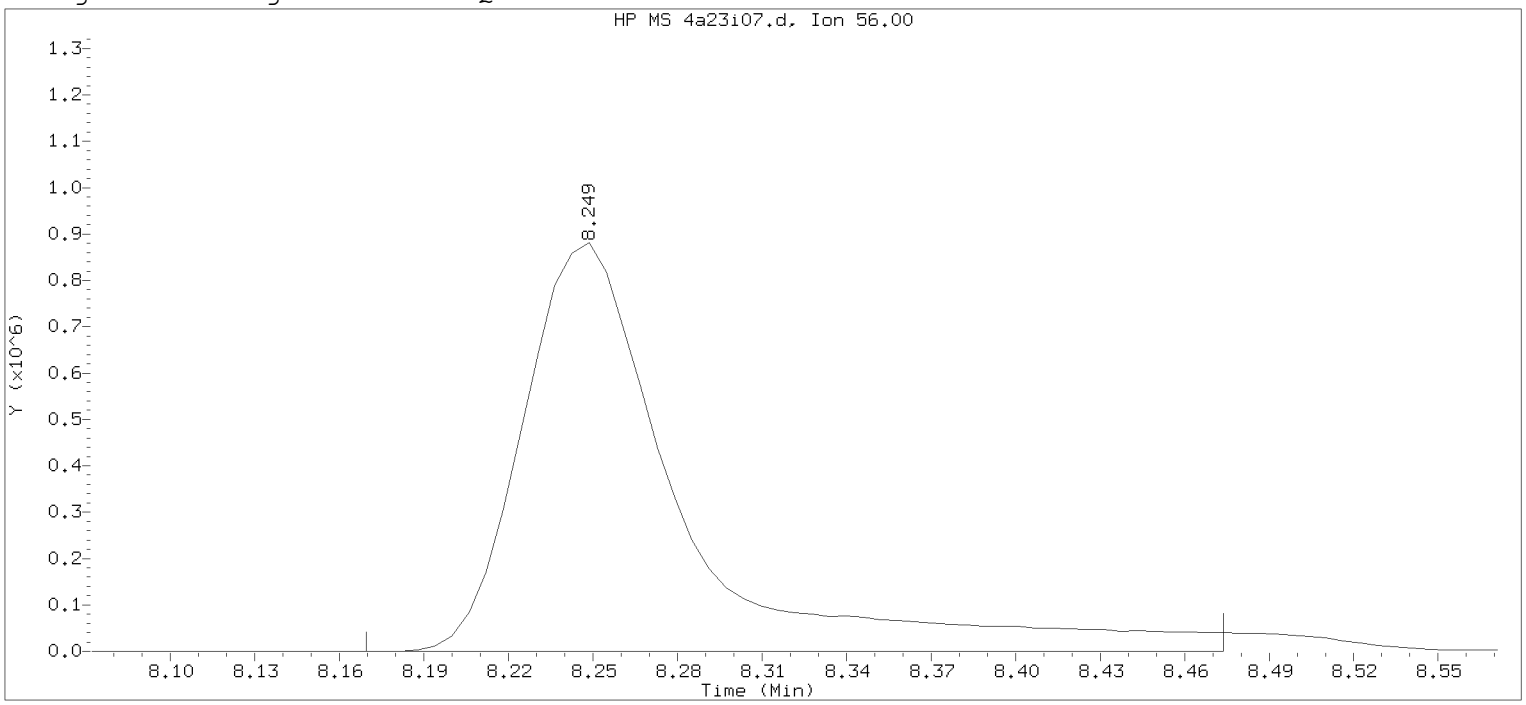
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

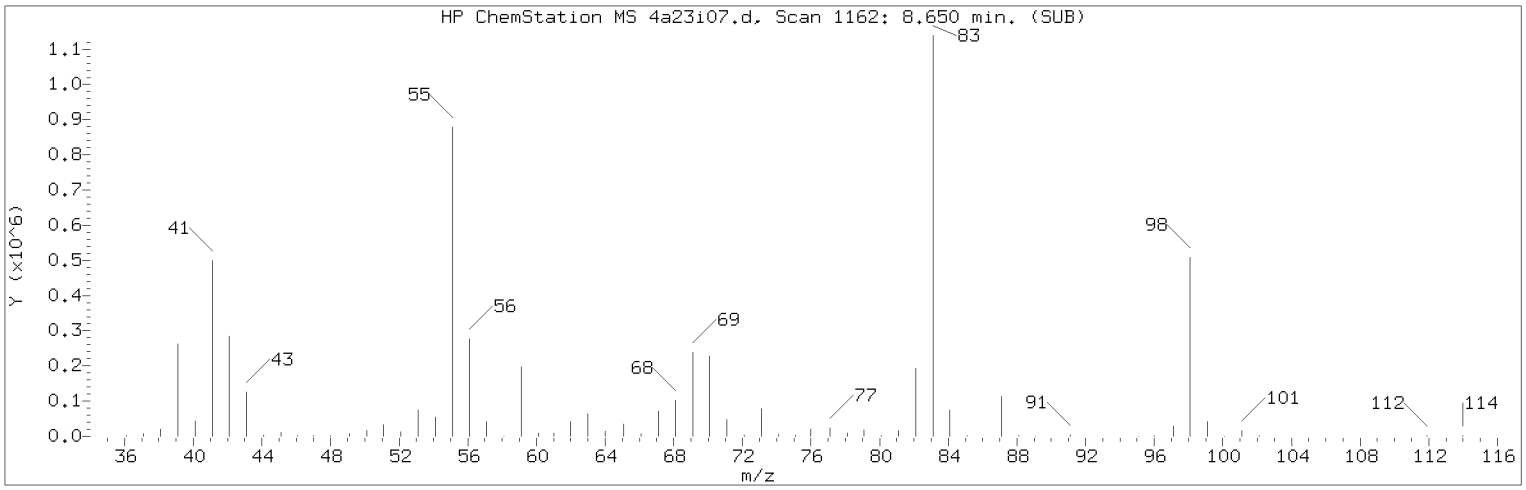
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:32
Date, time and analyst ID of latest file update: 23-Apr-2019 17:32 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

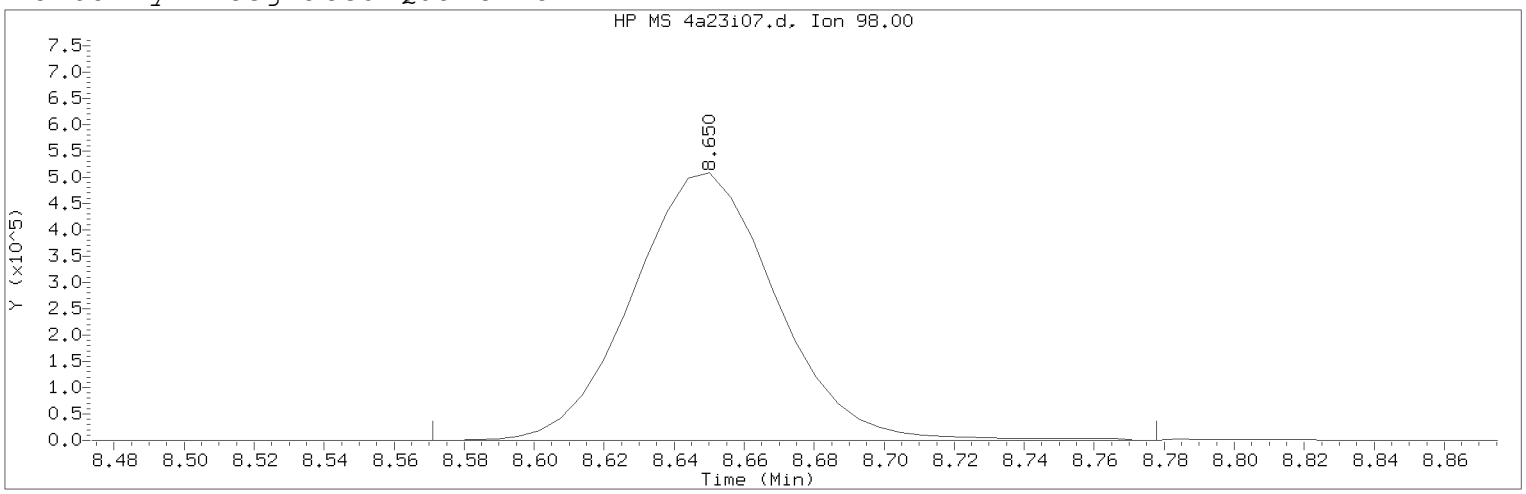
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 1096
Retention Time (minutes): 8.249
Quant Ion : 56.00
Area : 3431606
On-column Amount (ng) : 7818.6298
Integration start scan : 1082 Integration stop scan: 1132
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

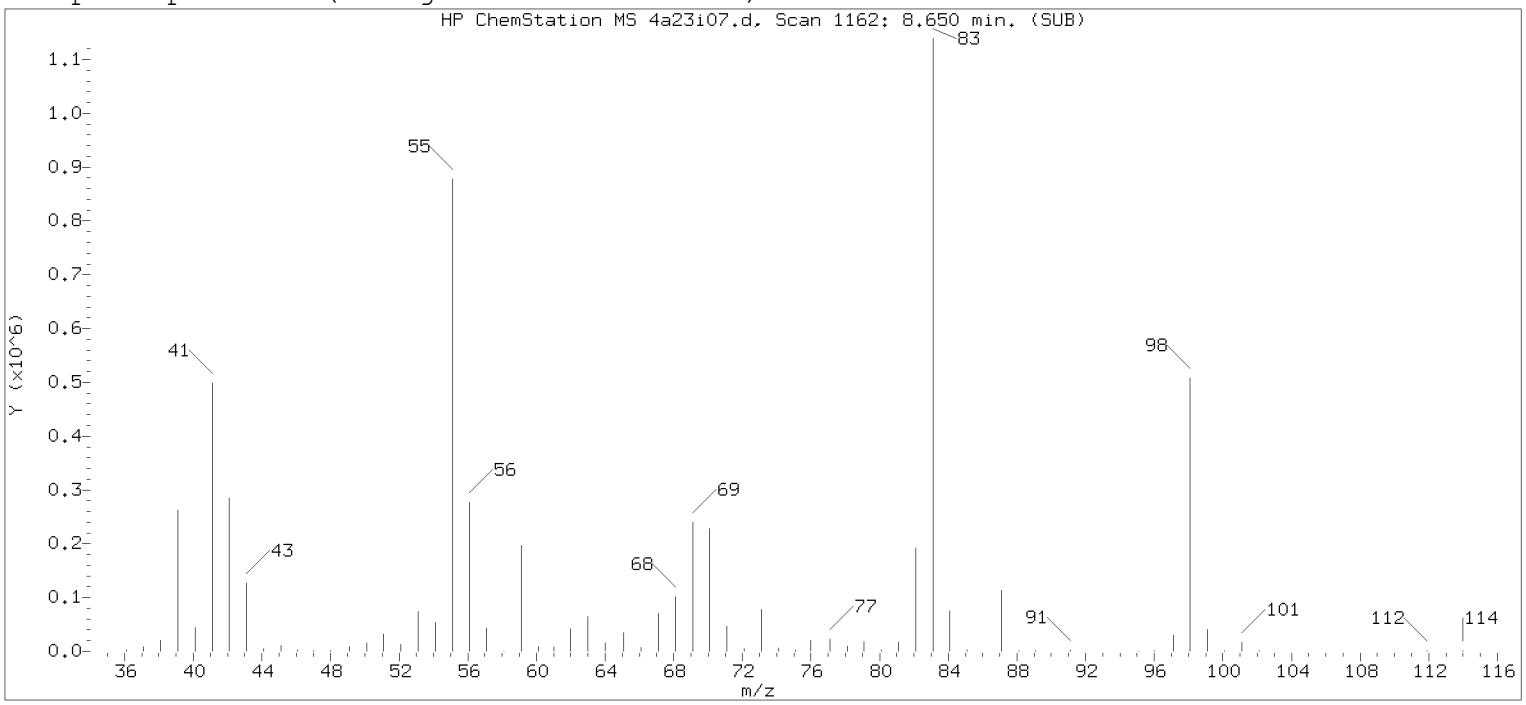
Compound Number : 72
Compound Name : Methylcyclohexane
Scan Number : 1162
Retention Time (minutes): 8.650
Quant Ion : 98.00
Area (flag) : 1449014M
On-Column Amount (ng) : 314.2297
Integration start scan : 1148 Integration stop scan: 1182
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

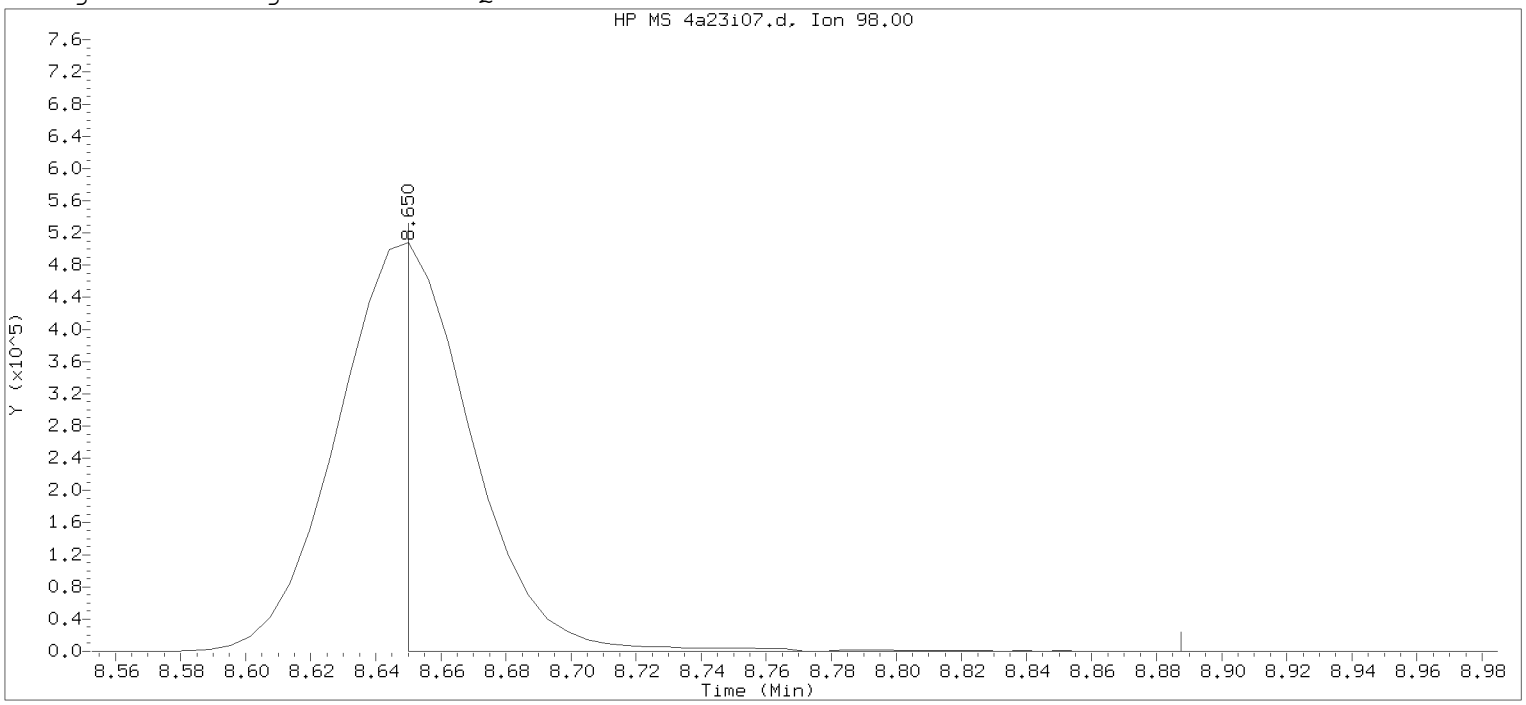
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

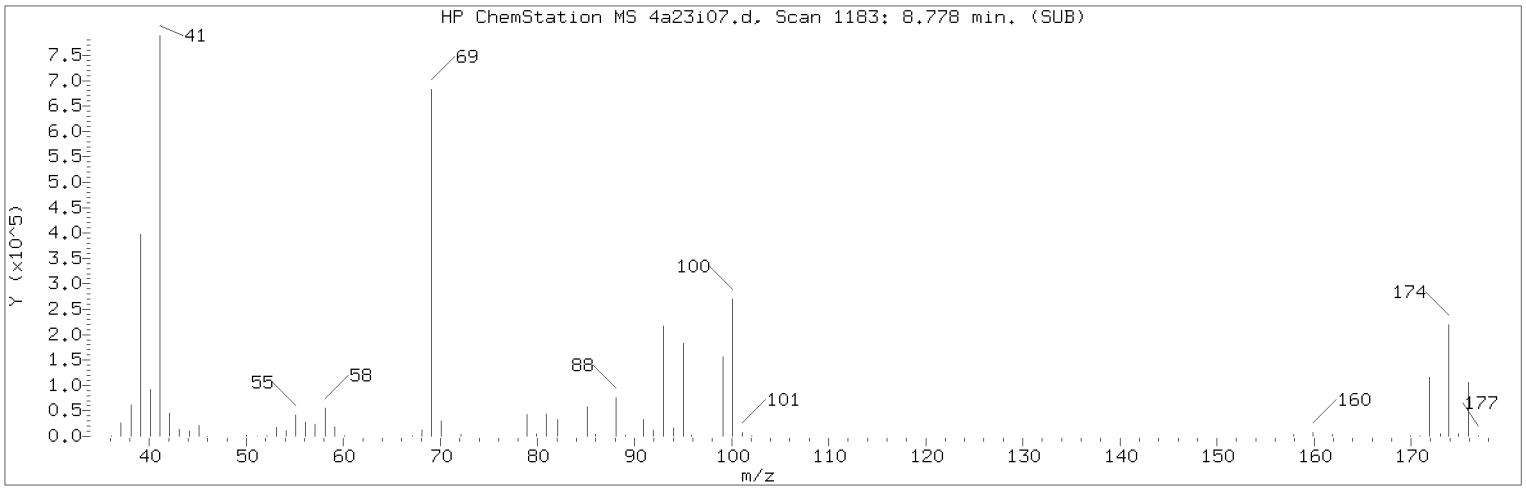
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:32
Date, time and analyst ID of latest file update: 23-Apr-2019 17:32 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

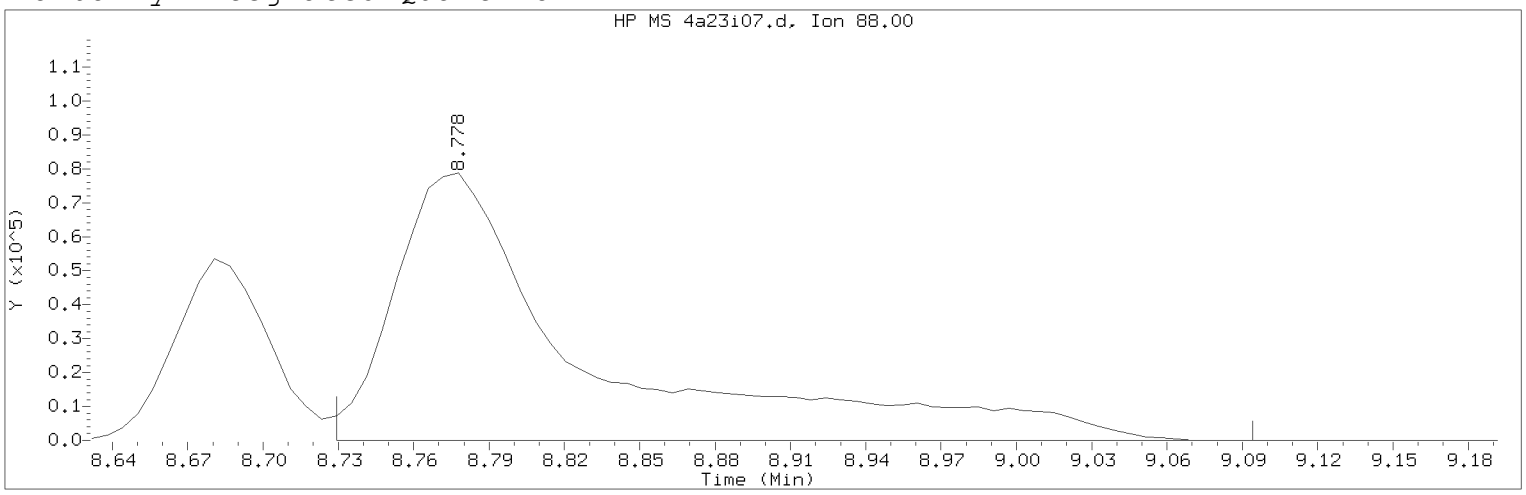
Compound Number : 72
Compound Name : Methylcyclohexane
Scan Number : 1162
Retention Time (minutes): 8.650
Quant Ion : 98.00
Area : 694283
On-column Amount (ng) : 163.2869
Integration start scan : 1161 Integration stop scan: 1200
Y at integration start : 0 Y at integration end: 191

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user: JML01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

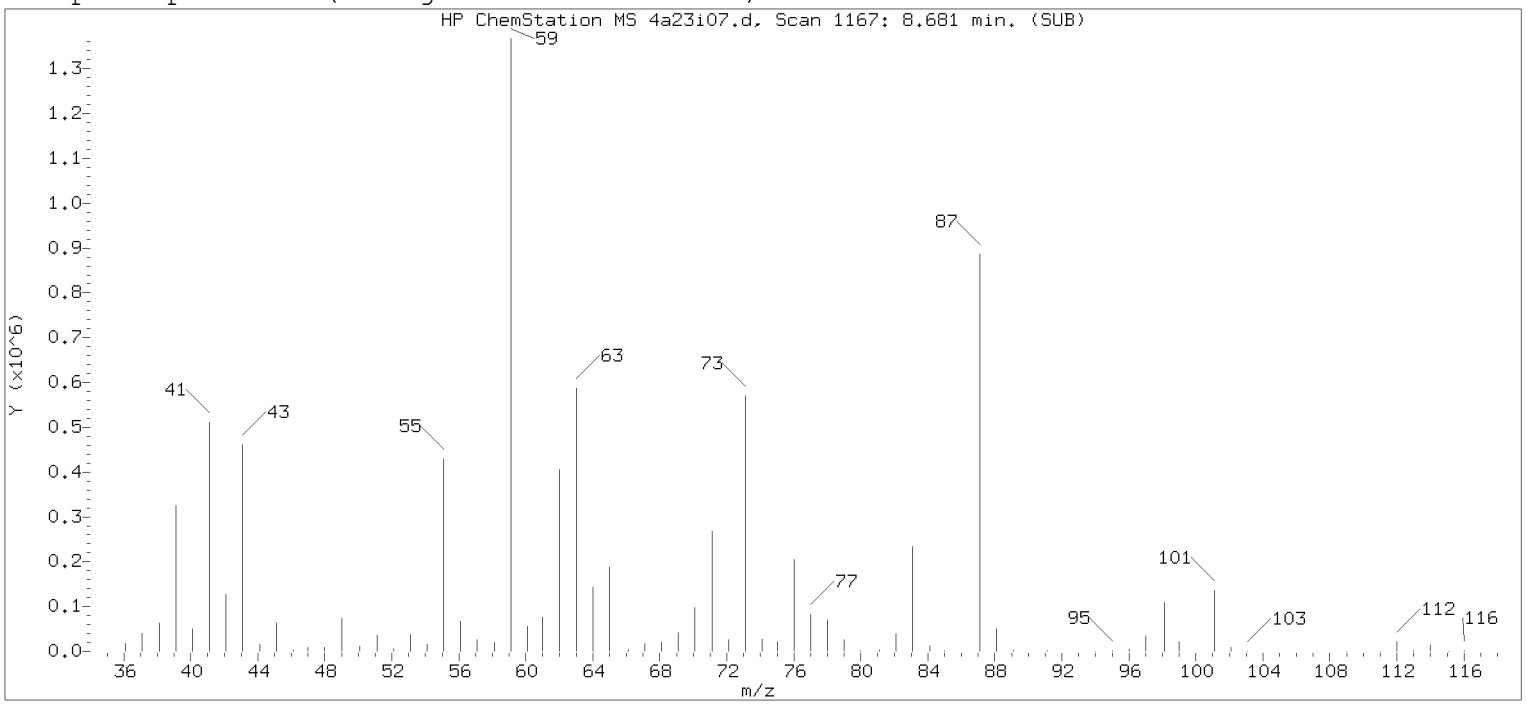
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1183
Retention Time (minutes): 8.778
Quant Ion : 88.00
Area (flag) : 421920M
On-Column Amount (ng) : 3713.8135
Integration start scan : 1174 Integration stop scan: 1234
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

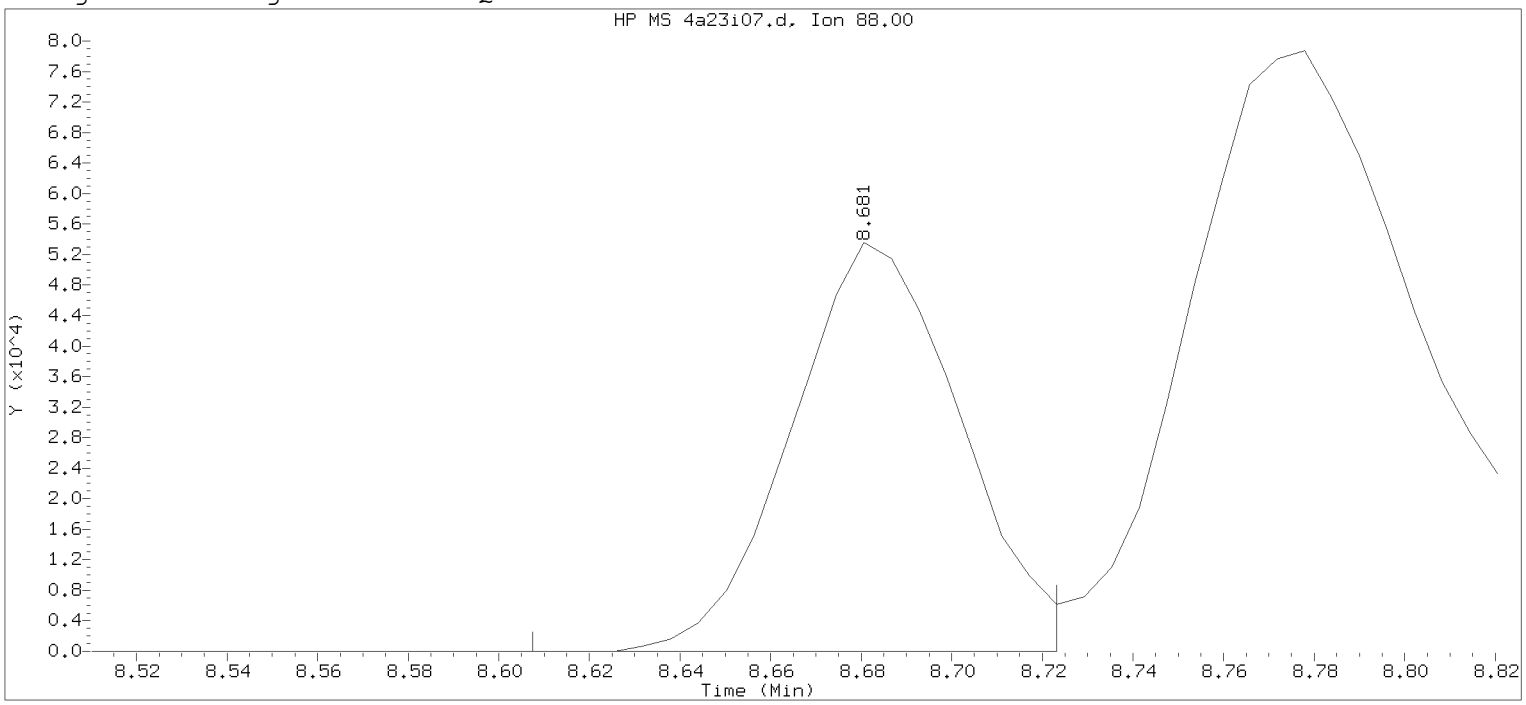
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

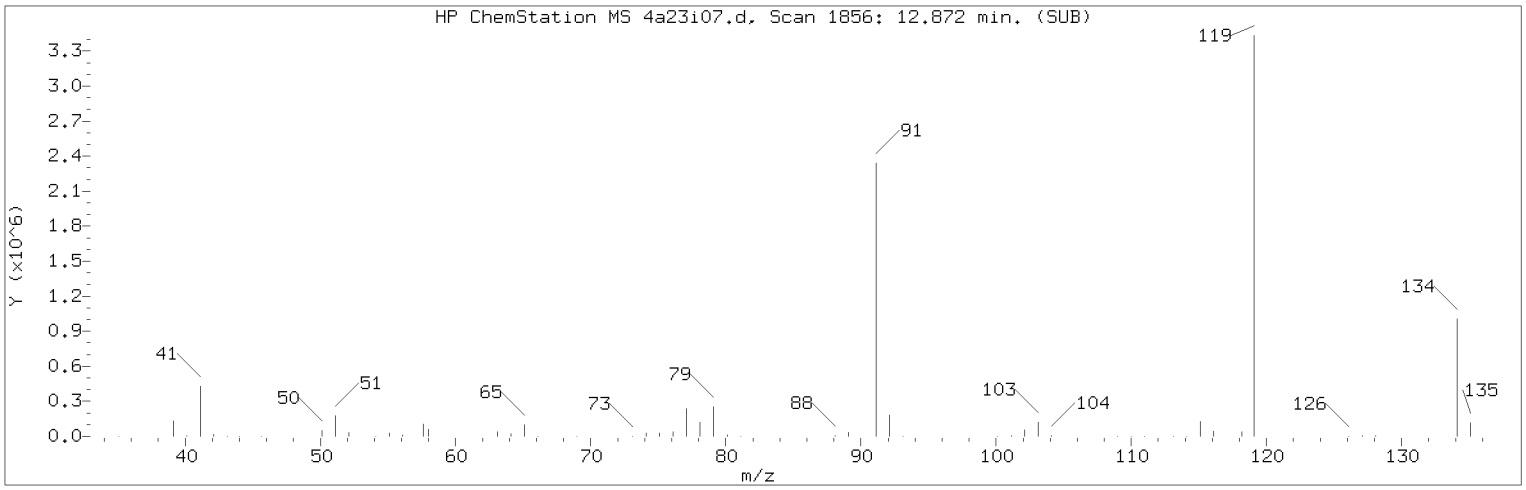
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:32
Date, time and analyst ID of latest file update: 23-Apr-2019 17:32 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

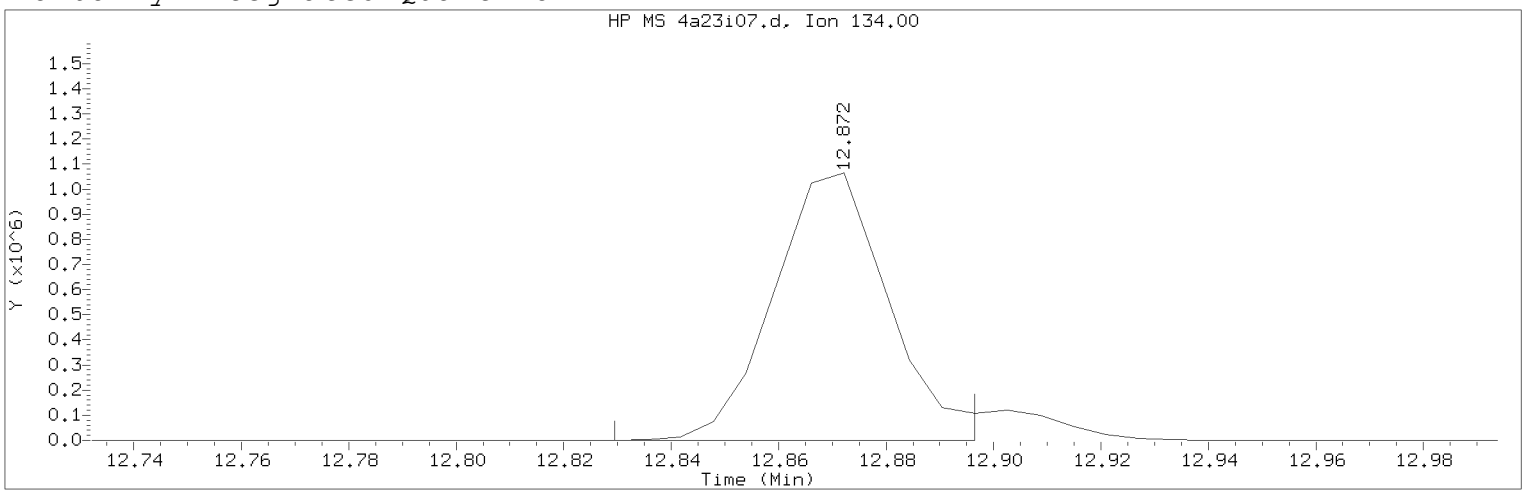
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1167		
Retention Time (minutes)	: 8.681		
Quant Ion	: 88.00		
Area	: 137510		
On-column Amount (ng)	: 1400.6888		
Integration start scan	: 1154	Integration stop scan:	1173
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user id: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

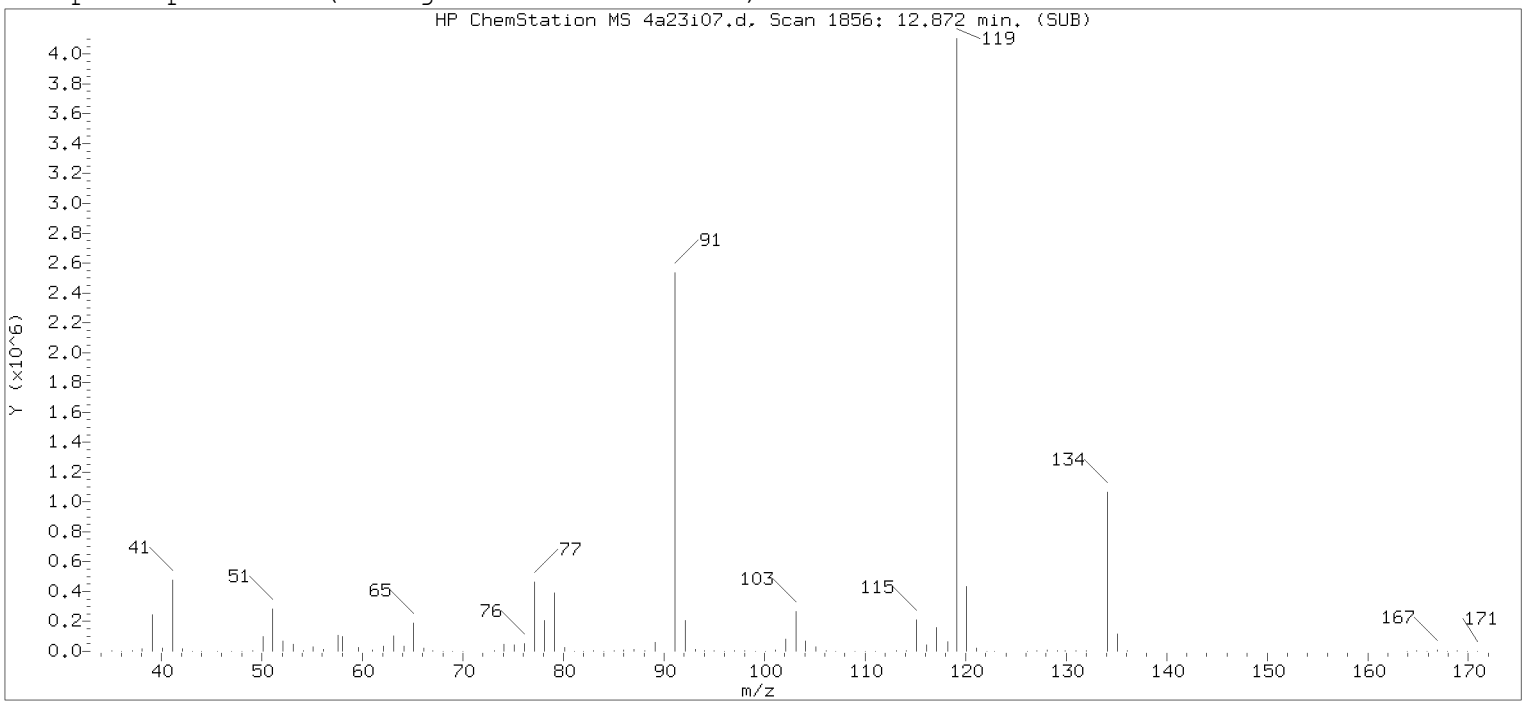
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1856
Retention Time (minutes): 12.872
Quant Ion : 134.00
Area (flag) : 1586274M
On-Column Amount (ng) : 307.7067
Integration start scan : 1848 Integration stop scan: 1859
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

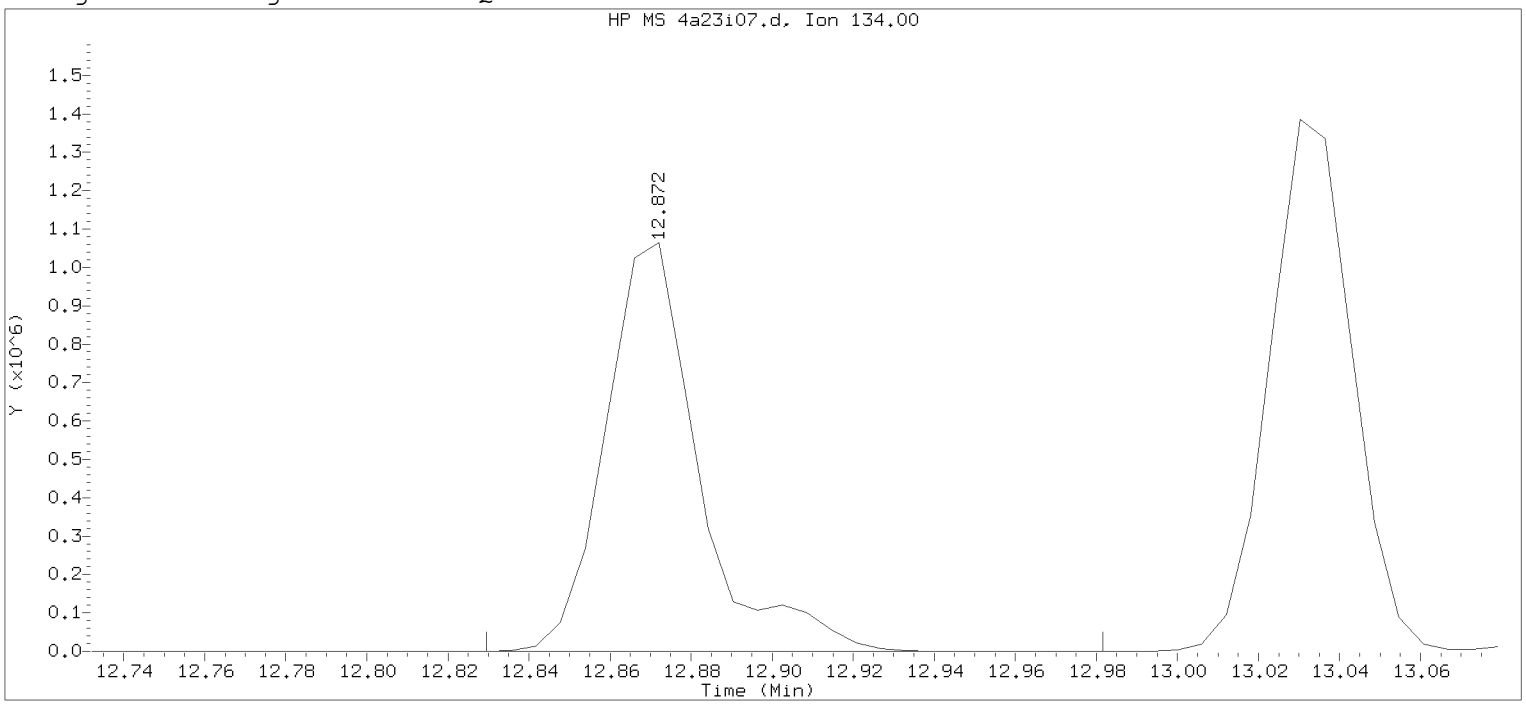
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



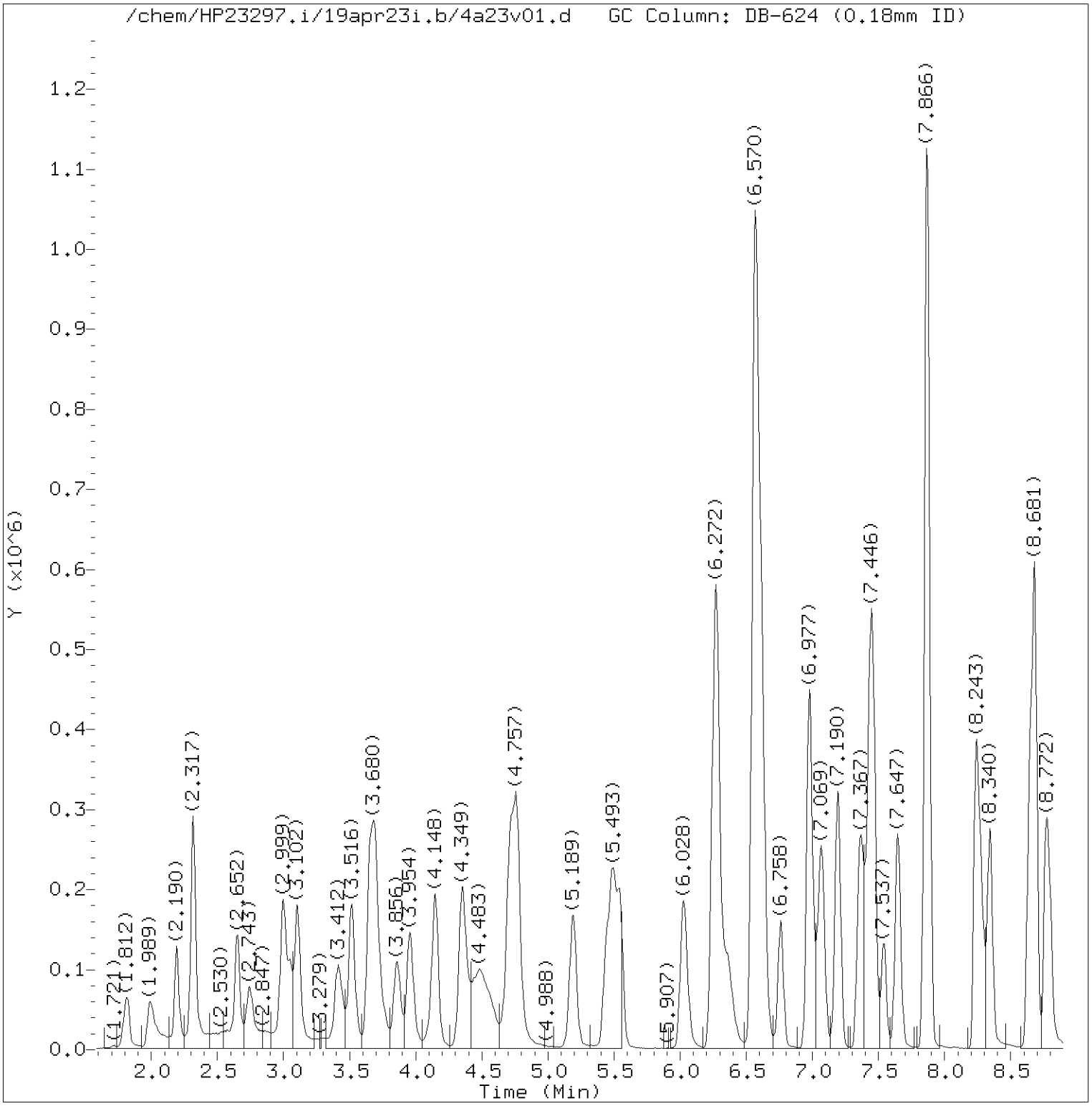
Data File: /chem/HP23297.i/19apr23i.b/4a23i07.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 17:14 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:32
Date, time and analyst ID of latest file update: 23-Apr-2019 17:32 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1856
Retention Time (minutes): 12.872
Quant Ion : 134.00
Area : 1698518
On-column Amount (ng) : 303.9041
Integration start scan : 1848 Integration stop scan: 1873
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:27.
Target 3.5 esignature user_jason_long



Total Ion Chromatogram (TIC)

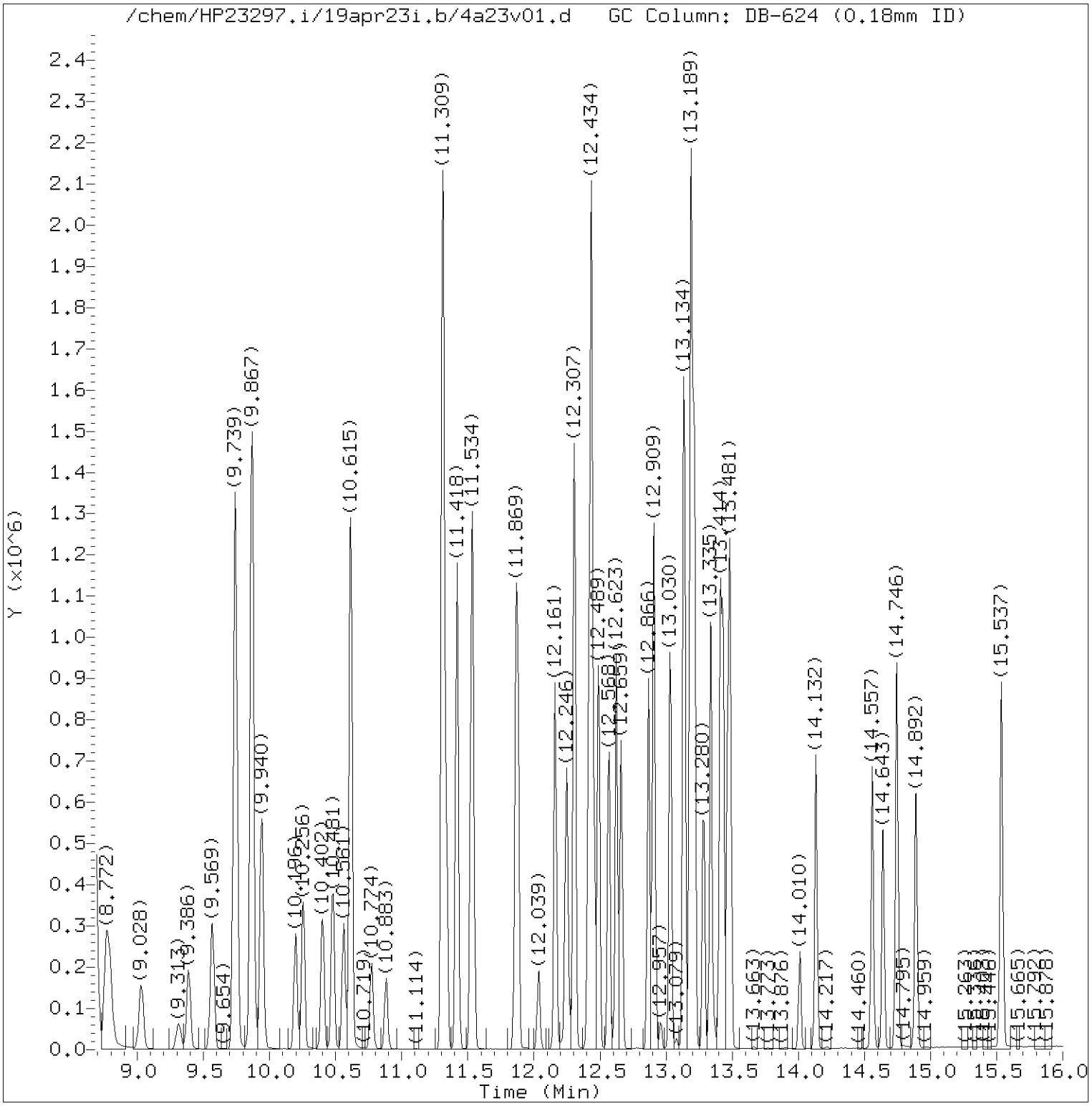
Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23v01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: ICV401 Lab Sample ID: ICV401

Digitally signed by Jason M. Long
on 04/24/2019 at 14:28.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23v01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: ICV401 Lab Sample ID: ICV401

Digitally signed by Jason M. Long
on 04/24/2019 at 14:28.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23v01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: ICV401 Lab Sample ID: ICV401

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.989	85	141487	16.038
4) Chloromethane	(2)	2.190	50	164863	19.295
6) Vinyl Chloride	(2)	2.311	62	163060	19.520
5) 1,3-Butadiene	(2)	2.317	39	116187	25.077
8) Bromomethane	(2)	2.652	94	119596	17.447
9) Chloroethane	(2)	2.743	64	85243	18.479
10) Dichlorofluoromethane	(2)	2.993	67	212505	19.624
12) Trichlorofluoromethane	(2)	3.047	101	183356	18.101
11) n-Pentane	(2)	3.102	43	189146	23.111
13) Ethanol	(1)	3.279	45	84925M	545.203
15) Freon 123a	(2)	3.412	67	119316	20.473
16) Acrolein	(1)	3.516	56	289296	110.265
17) 1,1-Dichloroethene	(2)	3.656	96	93534	23.182
19) Freon 113	(2)	3.680	101	94318	21.243
18) Acetone	(1)	3.698	58	163753	127.101
22) Methyl Iodide	(2)	3.863	142	175948	21.884
21) 2-Propanol	(1)	3.875	45	153156M	147.940
23) Carbon Disulfide	(2)	3.954	76	327916	22.790
27) Methyl Acetate	(2)	4.124	43	163194	19.419
25) Allyl Chloride	(2)	4.148	41	172129	19.239
28) Methylene Chloride	(2)	4.349	84	109977	21.518
29)*t-Butyl alcohol-d10	(1)	4.380	65	462730	250.000
30) t-Butyl alcohol	(1)	4.507	59	351768	193.183
31) Acrylonitrile	(2)	4.714	53	395805	89.900
33) Methyl Tertiary Butyl Ether	(2)	4.757	73	295171	20.479
32) trans-1,2-Dichloroethene	(2)	4.763	96	99389	20.616
34) n-Hexane	(2)	5.195	57	162102	20.358
36) 1,1-Dichloroethane	(2)	5.438	63	190030	21.209
38) di-Isopropyl ether	(2)	5.487	45	367329	20.686
39) 2-Chloro-1,3-butadiene	(2)	5.548	53	167505	20.650
40) Ethyl t-butyl ether	(2)	6.028	59	309335	20.279
43) 1,2-Dichloroethene (Total)	(2)		96	230279	44.161
44) 2-Butanone	(2)	6.259	43	911355	133.377
42) cis-1,2-Dichloroethene	(2)	6.278	96	130890	23.545
45) 2,2-Dichloropropane	(2)	6.290	77	151034	21.500
47) Propionitrile	(1)	6.357	54	275358	142.366
48) Methacrylonitrile	(2)	6.570	67	614873	148.056
49) Bromochloromethane	(2)	6.612	128	61020	19.878

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 04/24/2019 at 14:28.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23v01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: ICV401 Lab Sample ID: ICV401

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.618	71	161460	84.568
51) Chloroform	(2)	6.758	83	184193	20.872
52)$Dibromofluoromethane	(2)	6.977	113	284634	49.913
53) 1,1,1-Trichloroethane	(2)	6.983	97	157859	21.369
54) Cyclohexane	(2)	7.069	56	191118	19.893
56) Carbon Tetrachloride	(2)	7.184	117	133854	20.855
55) 1,1-Dichloropropene	(2)	7.196	75	146633	21.009
58) Isobutyl Alcohol	(1)	7.367	41	304442	474.829
57)$1,2-Dichloroethane-d4	(2)	7.434	102	69900	50.164
60) Benzene	(2)	7.464	78	444969	20.965
61) 1,2-Dichloroethane	(2)	7.537	62	150462	20.915
65) t-Amyl methyl ether	(2)	7.647	73	319298	20.702
67) n-Heptane	(2)	7.866	43	183428	19.568
66)*Fluorobenzene	(2)	7.866	96	1156910	50.000
69) n-Butanol	(1)	8.243	56	513751	975.756
71) Trichloroethene	(2)	8.346	95	112447	20.886
72) Methylcyclohexane	(2)	8.644	83	200449	19.769
73) 1,2-Dichloropropane	(2)	8.687	63	118436	21.240
76) Methyl Methacrylate	(2)	8.766	69	121466	19.236
75) 1,4-Dioxane	(1)	8.778	88	75373M	555.812
74) Dibromomethane	(2)	8.796	93	75206	20.780
78) Bromodichloromethane	(2)	9.028	83	136616	20.786
79) 2-Nitropropane	(2)	9.313	41	53738	16.800
80) 2-Chloroethyl Vinyl Ether	(2)	9.386	63	107076	20.988
81) cis-1,3-Dichloropropene	(2)	9.569	75	182611	21.016
82) 4-Methyl-2-pentanone	(2)	9.739	43	1111722	90.670
83)$Toluene-d8	(3)	9.867	98	1199626	50.303
88) Toluene	(3)	9.940	92	286103	20.741
90) 1,3-Dichloropropene (total)	(3)		100	344682	40.984
89) trans-1,3-Dichloropropene	(3)	10.196	75	162071	19.968
91) Ethyl Methacrylate	(3)	10.256	69	196638	19.277
92) 1,1,2-Trichloroethane	(3)	10.402	97	114413	21.221
93) Tetrachloroethene	(3)	10.481	166	126494	21.022
94) 1,3-Dichloropropane	(3)	10.561	76	182254	20.364
96) 2-Hexanone	(3)	10.615	43	895634	91.232
97) Dibromochloromethane	(3)	10.774	129	118406	20.755
99) 1,2-Dibromoethane	(3)	10.883	107	122889	20.646
100)*Chlorobenzene-d5	(3)	11.309	117	929188	50.000

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Digitally signed by Jason M. Long
on 04/24/2019 at 14:28.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23v01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: ICV401 Lab Sample ID: ICV401

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
102) Chlorobenzene	(3)	11.333	112	321425	20.617
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	108783	20.669
104) Ethylbenzene	(3)	11.418	91	546582	20.629
106) m+p-Xylene	(3)	11.534	106	440444	41.691
108) Xylene (Total)	(3)		106	654715	62.096
107) o-Xylene	(3)	11.862	106	214271	20.405
109) Styrene	(3)	11.881	104	366811	20.993
110) Bromoform	(3)	12.039	173	88822	19.759
111) Isopropylbenzene	(3)	12.161	105	549540	20.919
112) Cyclohexanone	(1)	12.246	55	296194	546.719
114)$4-Bromofluorobenzene	(3)	12.307	95	456228	50.191
116) 1,1,2,2-Tetrachloroethane	(4)	12.410	83	196465	20.462
115) Bromobenzene	(4)	12.422	156	147162	20.185
118) trans-1,4-Dichloro-2-butene	(4)	12.434	53	325173	103.024
117) 1,2,3-Trichloropropane	(4)	12.459	110	59874	20.623
119) n-Propylbenzene	(4)	12.489	91	660216	21.056
120) 2-Chlorotoluene	(4)	12.568	126	134196	20.493
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	471148	20.763
121) 4-Chlorotoluene	(4)	12.659	126	141509	20.732
124) tert-Butylbenzene	(4)	12.866	134	96515M	20.260
125) Pentachloroethane	(4)	12.903	167	84911	19.549
126) 1,2,4-Trimethylbenzene	(4)	12.909	105	486924	20.552
127) sec-Butylbenzene	(4)	13.030	105	609518	21.026
129) 1,3-Dichlorobenzene	(4)	13.134	146	274507	20.088
130) p-Isopropyltoluene	(4)	13.140	119	530998	20.822
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	521019	50.000
133) 1,4-Dichlorobenzene	(4)	13.207	146	287498	20.535
134) 1,2,3-Trimethylbenzene	(4)	13.213	105	524217	20.606
135) Benzyl Chloride	(4)	13.280	91	379152	19.911
136) 1,3-Diethylbenzene	(4)	13.341	119	323702	20.308
141) Diethylbenzene (total)	(4)		100	936869	60.705
137) 1,4-Diethylbenzene	(4)	13.408	119	337340	19.871
139) n-Butylbenzene	(4)	13.432	92	266994	20.438
138) 1,2-Dichlorobenzene	(4)	13.469	146	272704	20.480
140) 1,2-Diethylbenzene	(4)	13.487	119	275827	20.526
142) 1,2-Dibromo-3-chloropropane	(4)	14.010	75	51564	20.358
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	205765	20.496
146) 1,2,4-Trichlorobenzene	(4)	14.557	180	195092	20.510

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Digitally signed by Jason M. Long
on 04/24/2019 at 14:28.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19apr23i.b/4a23v01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: ICV401 Lab Sample ID: ICV401

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Hexachlorobutadiene	(4)	14.643	225	95578	21.743
148) Naphthalene	(4)	14.746	128	683899	20.752
149) 1,2,3-Trichlorobenzene	(4)	14.892	180	188265	20.602
150) 2-Methylnaphthalene	(4)	15.537	142	444917	21.586

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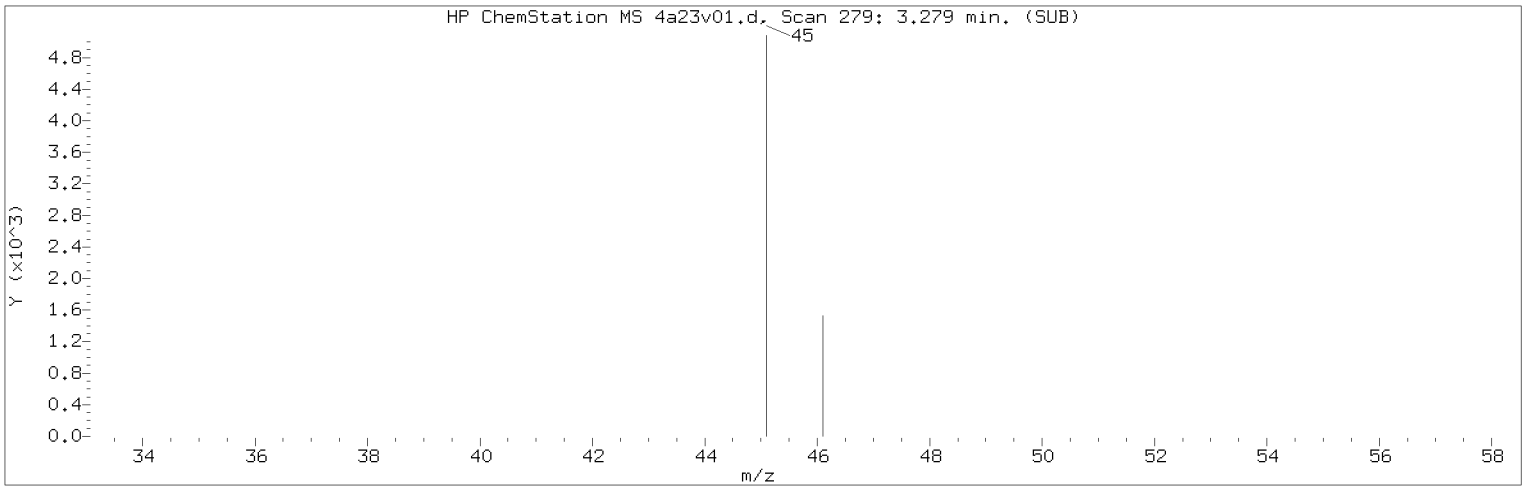
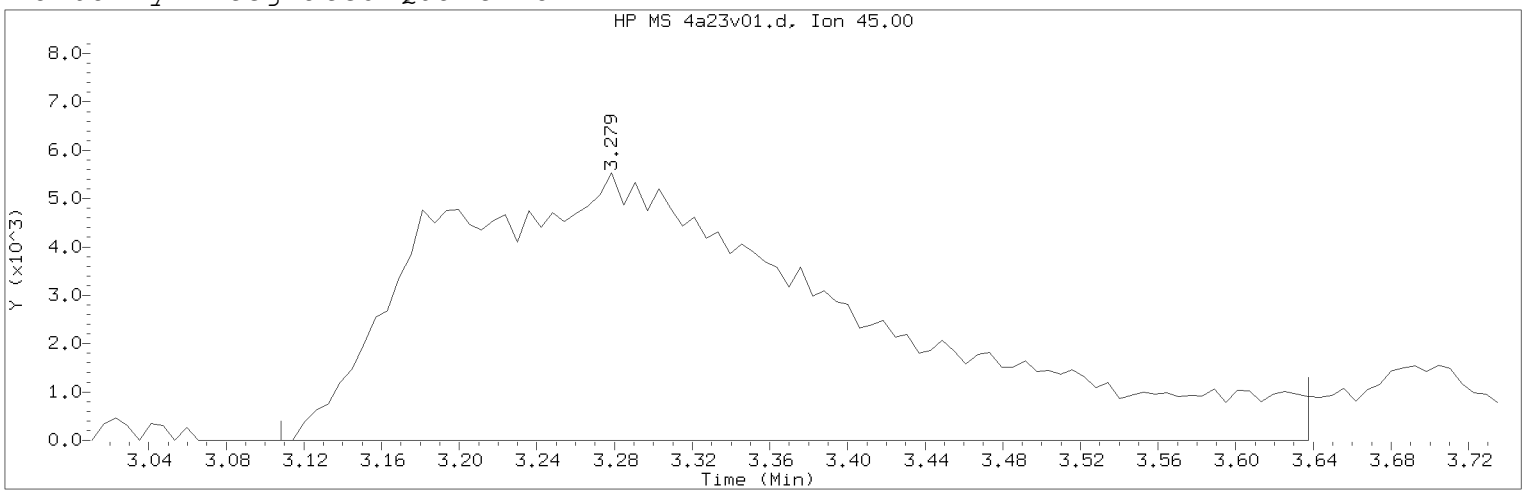
on 04/24/2019 at 14:28.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: ICV401 Lab Sample ID: ICV401

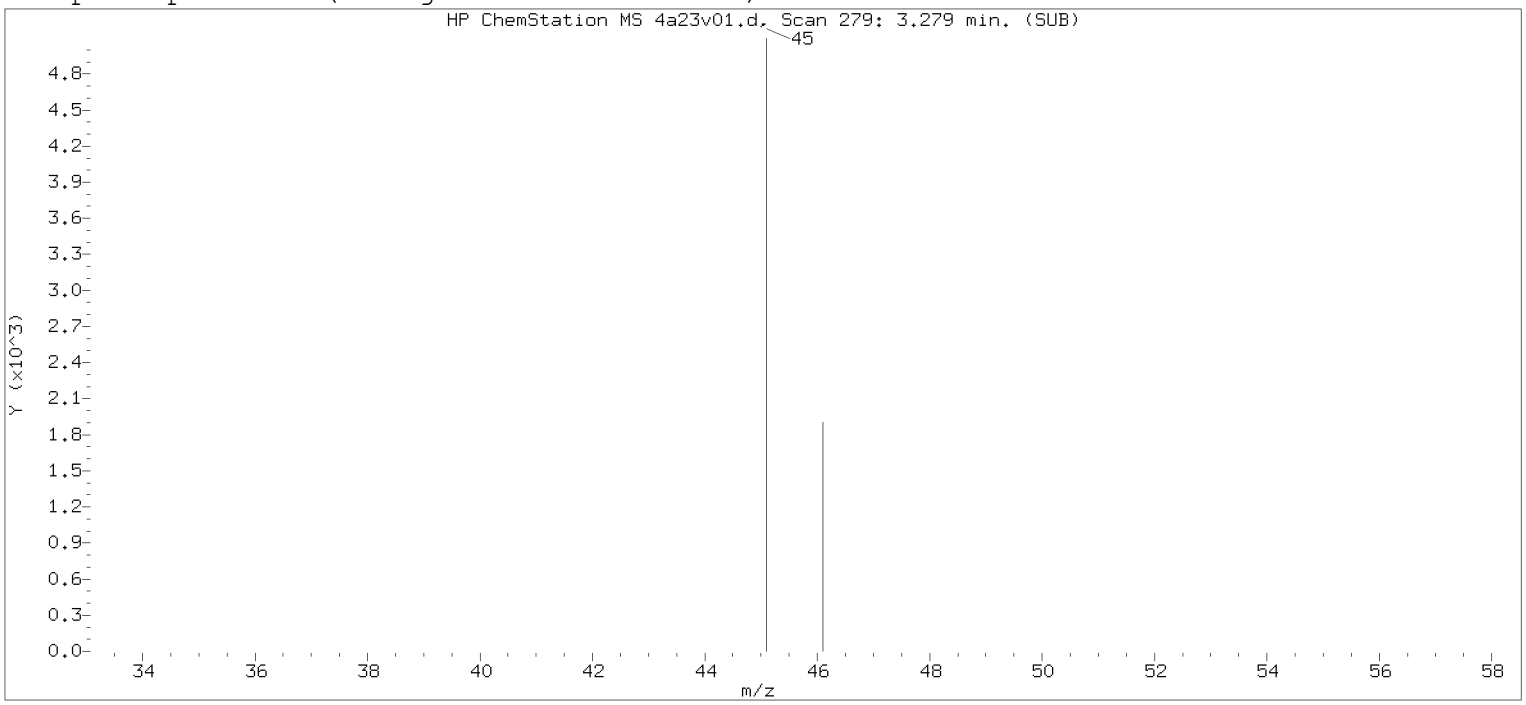
Compound Number : 13
Compound Name : Ethanol
Scan Number : 279
Retention Time (minutes): 3.279
Quant Ion : 45.00
Area (flag) : 84925M
On-Column Amount (ng) : 545.2028
Integration start scan : 250 Integration stop scan: 337
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

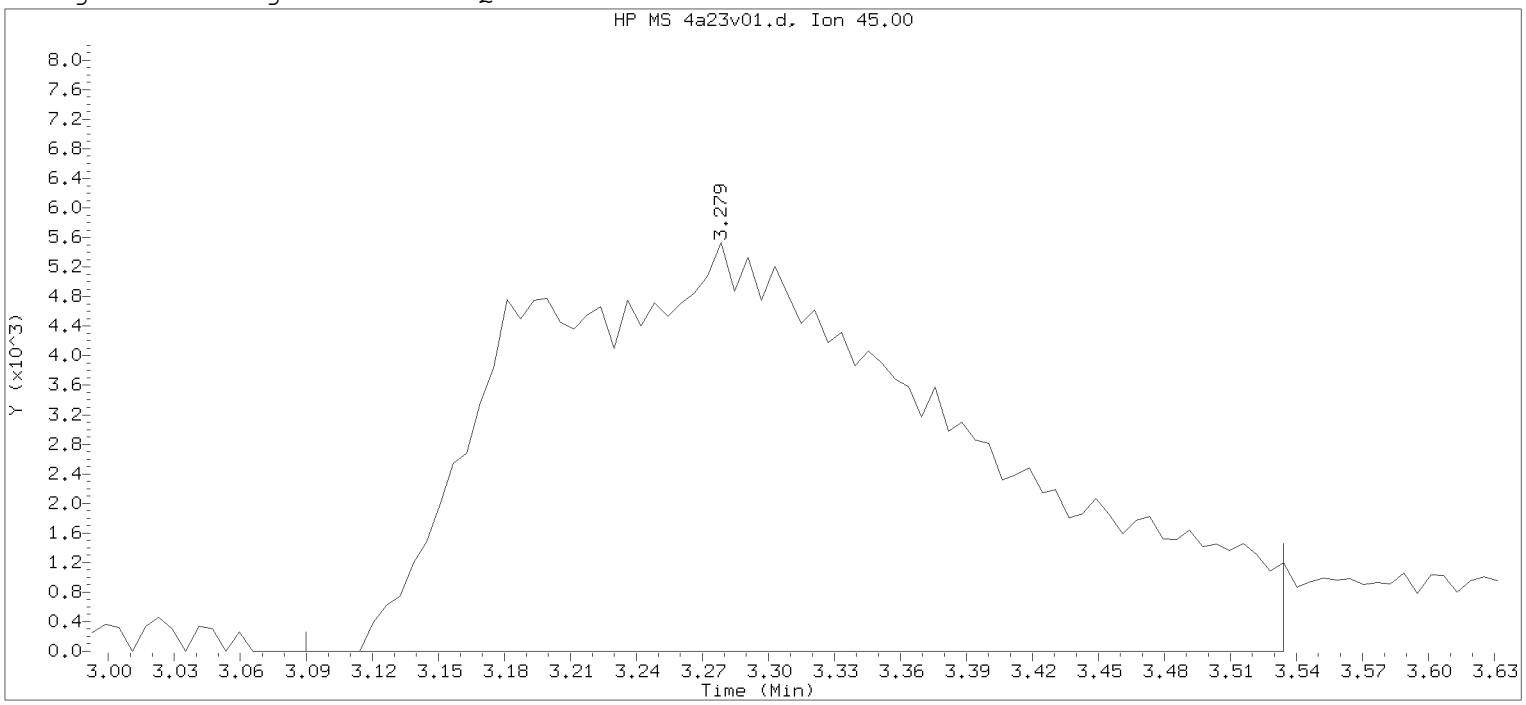
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:28.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23v01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

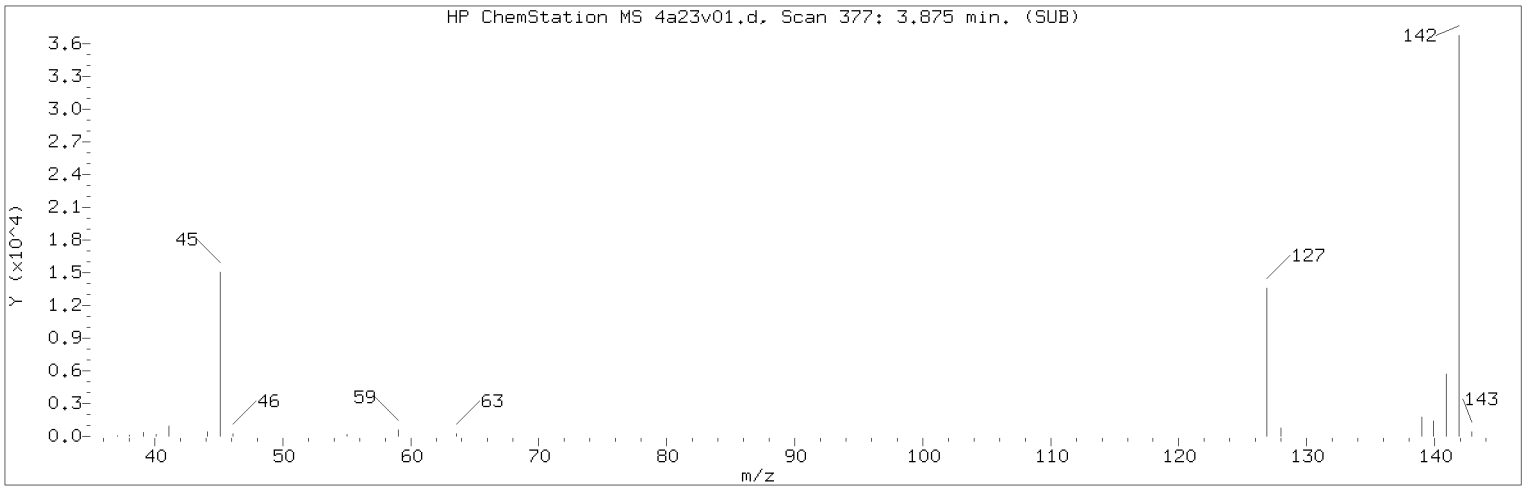
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:32
Date, time and analyst ID of latest file update: 23-Apr-2019 18:17 Automation

Sample Name: ICV401 Lab Sample ID: ICV401

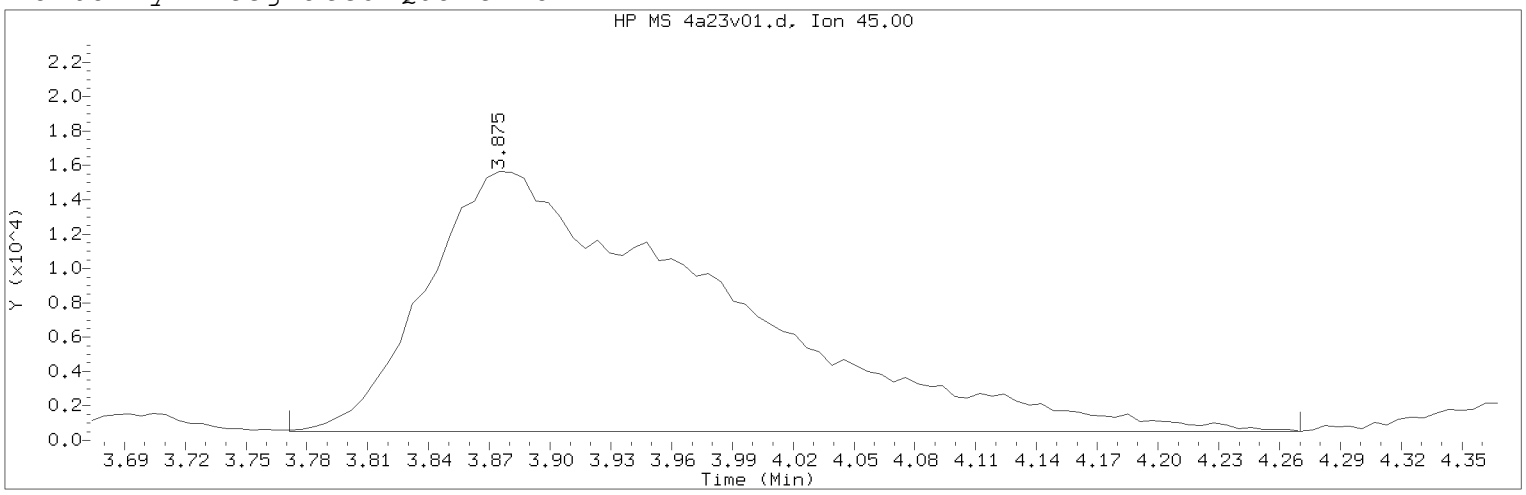
Compound Number : 13
Compound Name : Ethanol
Scan Number : 279
Retention Time (minutes): 3.279
Quant Ion : 45.00
Area : 78867
On-column Amount (ng) : 562.4958
Integration start scan : 247 Integration stop scan: 320
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:28.
Target 3.5 esignature user ID: jmlo1642

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23v01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: ICV401 Lab Sample ID: ICV401

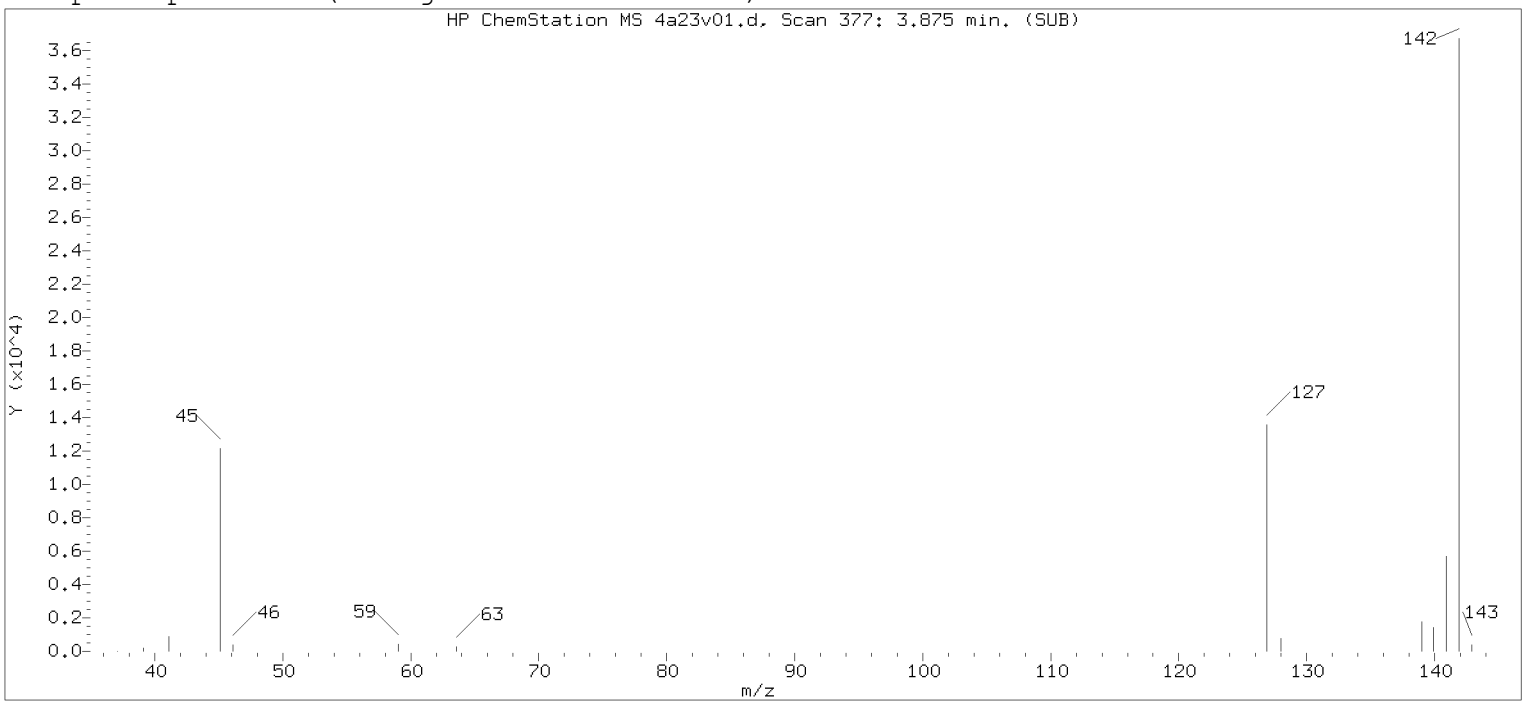
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 377
Retention Time (minutes): 3.875
Quant Ion : 45.00
Area (flag) : 153156M
On-Column Amount (ng) : 147.9399
Integration start scan : 359 Integration stop scan: 441
Y at integration start : 518 Y at integration end: 518

Reason for manual integration: improper integration

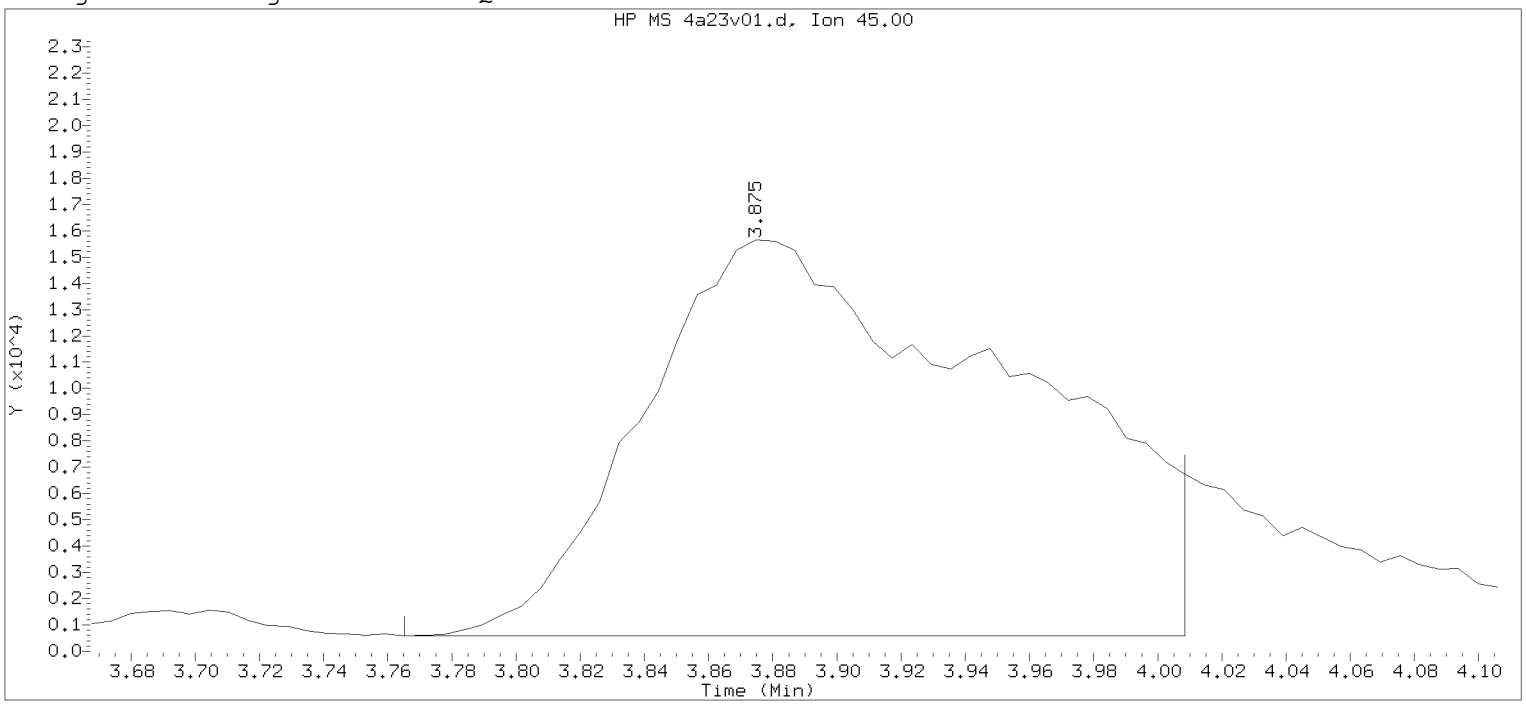
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:28.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23v01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

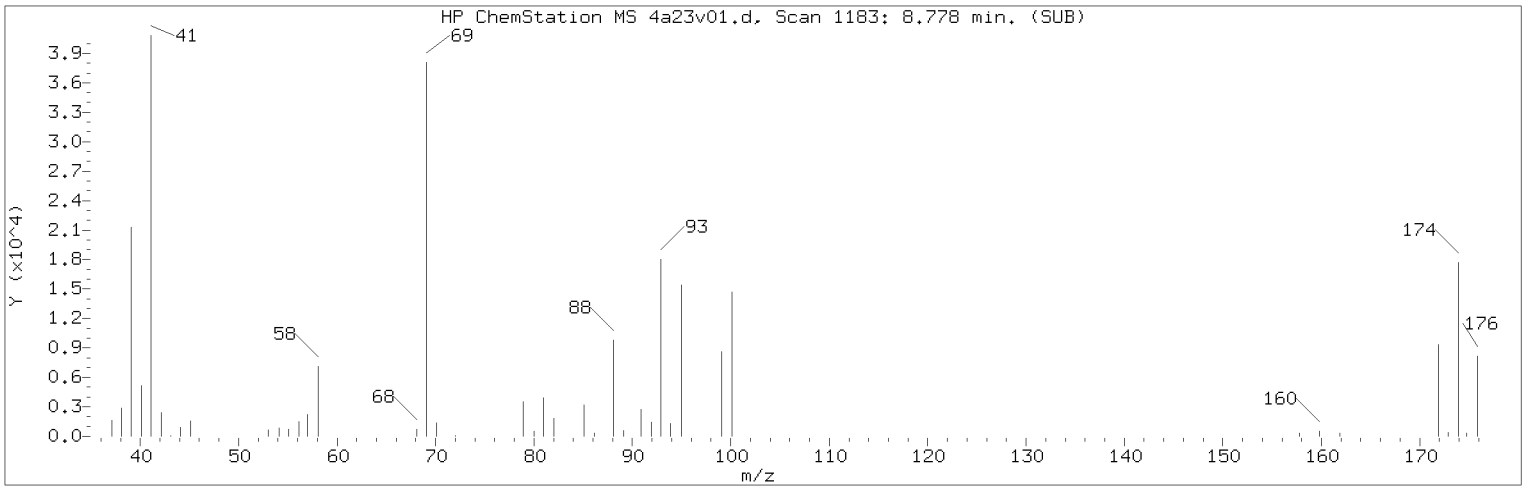
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:32
Date, time and analyst ID of latest file update: 23-Apr-2019 18:17 Automation

Sample Name: ICV401 Lab Sample ID: ICV401

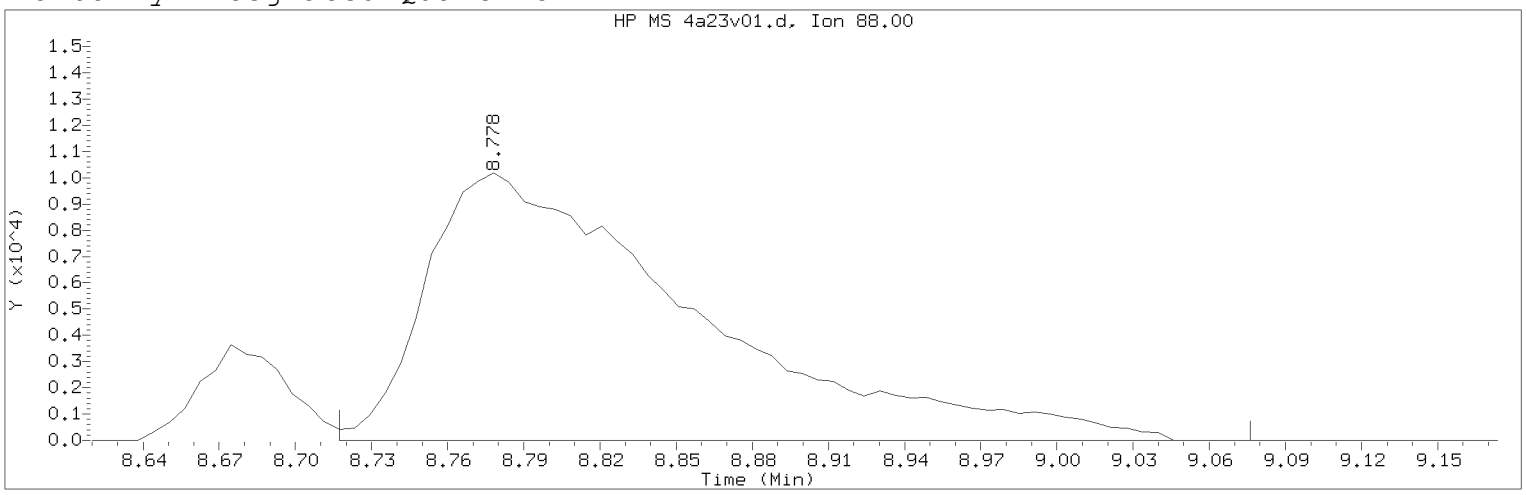
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 377
Retention Time (minutes): 3.875
Quant Ion : 45.00
Area : 121562
On-column Amount (ng) : 122.1369
Integration start scan : 358 Integration stop scan: 398
Y at integration start : 584 Y at integration end: 584

Digitally signed by Jason M. Long on 04/24/2019 at 14:28.
Target 3.5 esignature user ID: jmlo1644

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23v01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: ICV401 Lab Sample ID: ICV401

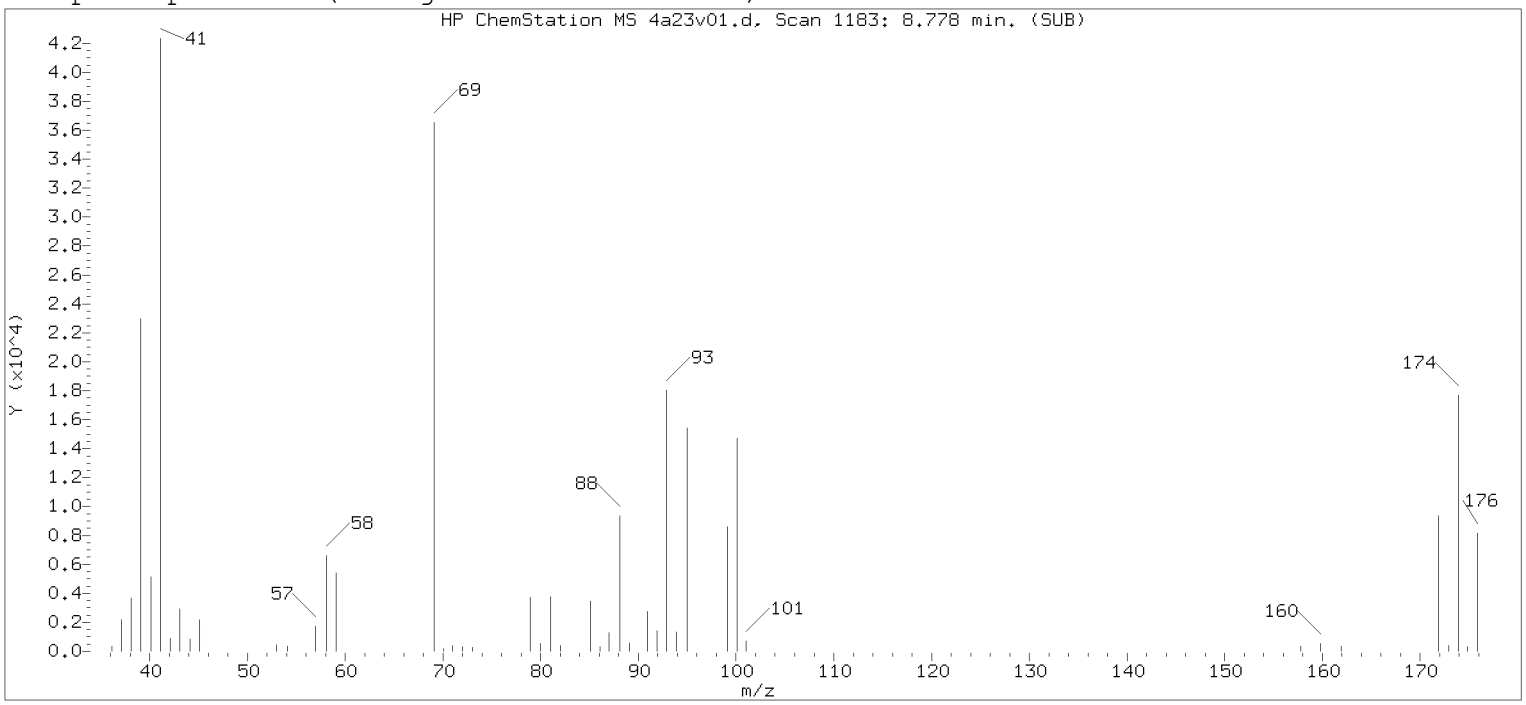
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1183
Retention Time (minutes): 8.778
Quant Ion : 88.00
Area (flag) : 75373M
On-Column Amount (ng) : 555.8121
Integration start scan : 1172 Integration stop scan: 1231
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

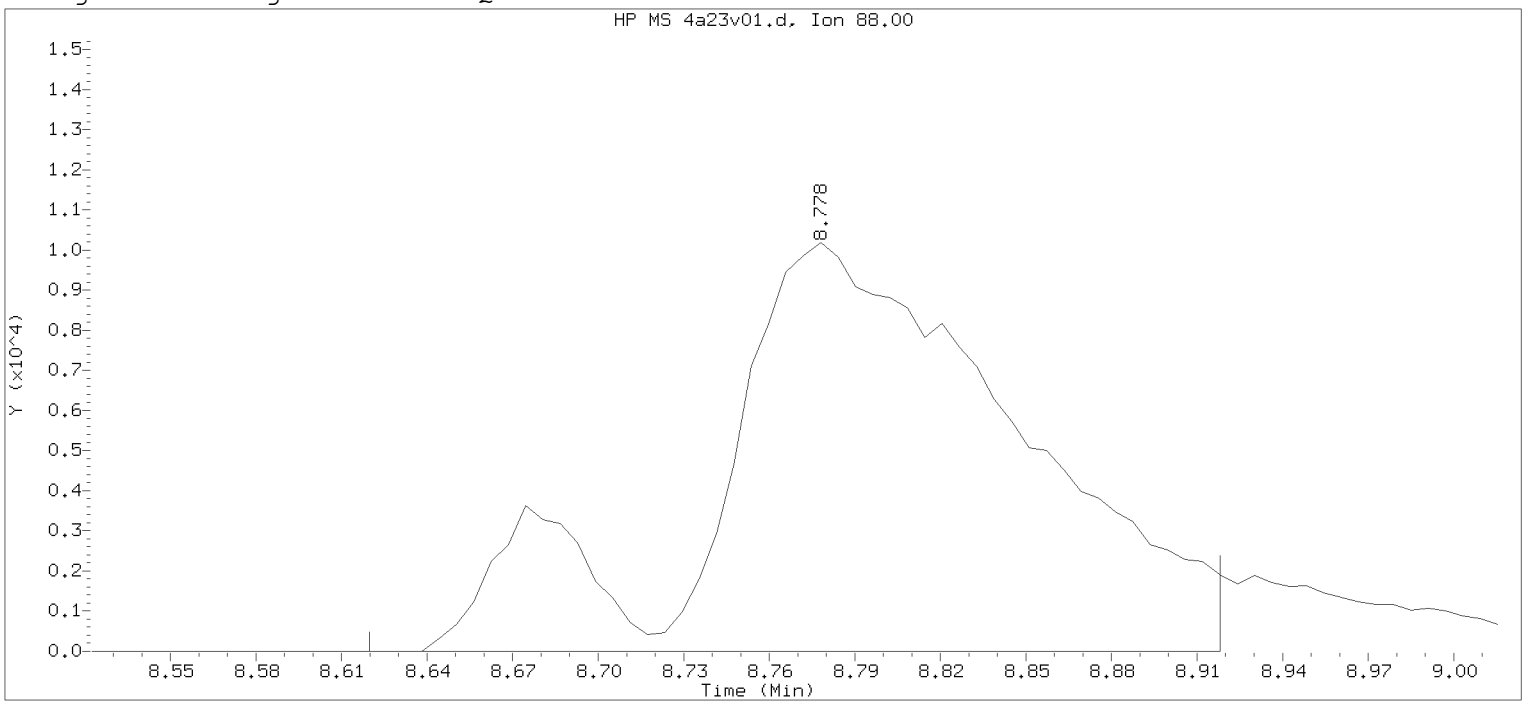
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:28.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23v01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

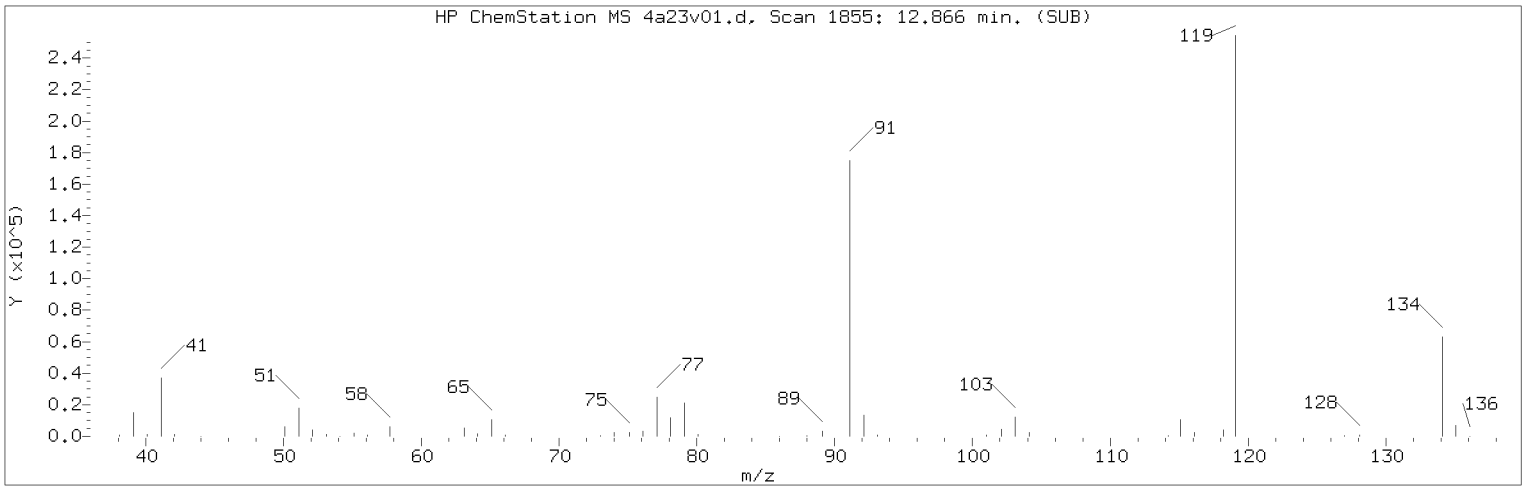
Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:32
Date, time and analyst ID of latest file update: 23-Apr-2019 18:17 Automation

Sample Name: ICV401 Lab Sample ID: ICV401

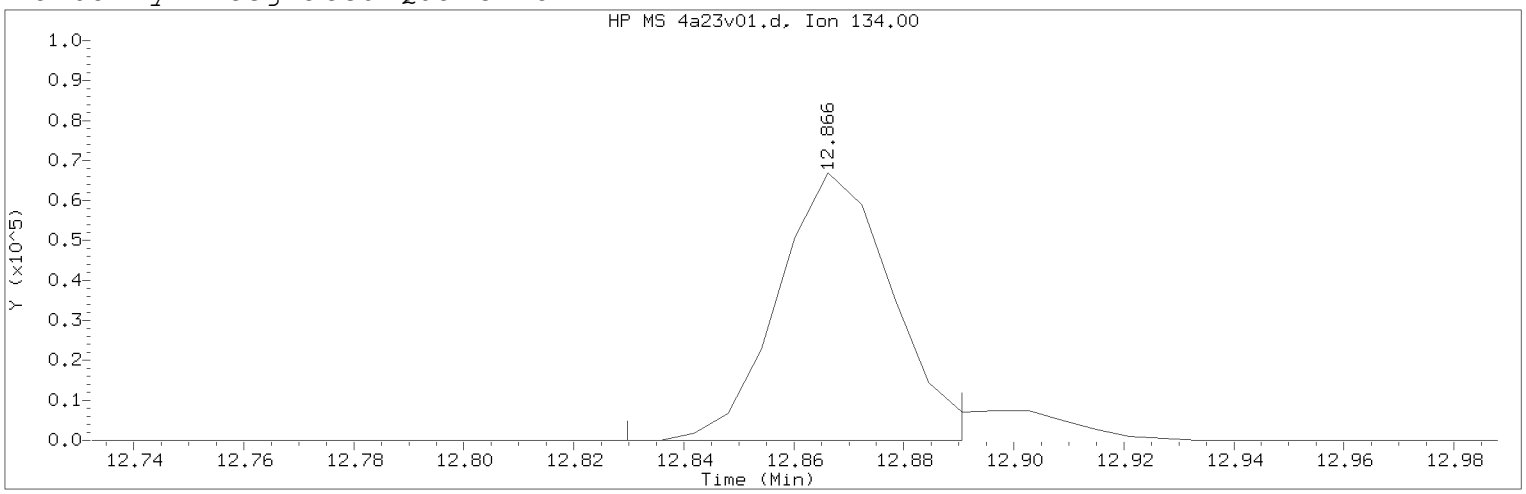
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1183
Retention Time (minutes): 8.778
Quant Ion : 88.00
Area : 75677
On-column Amount (ng) : 645.7966
Integration start scan : 1156 Integration stop scan: 1205
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:28.
Target 3.5 esignature user ID: jmlo1346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23v01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-APR-2019 14:24
Date, time and analyst ID of latest file update: 24-Apr-2019 14:24 jml01693

Sample Name: ICV401 Lab Sample ID: ICV401

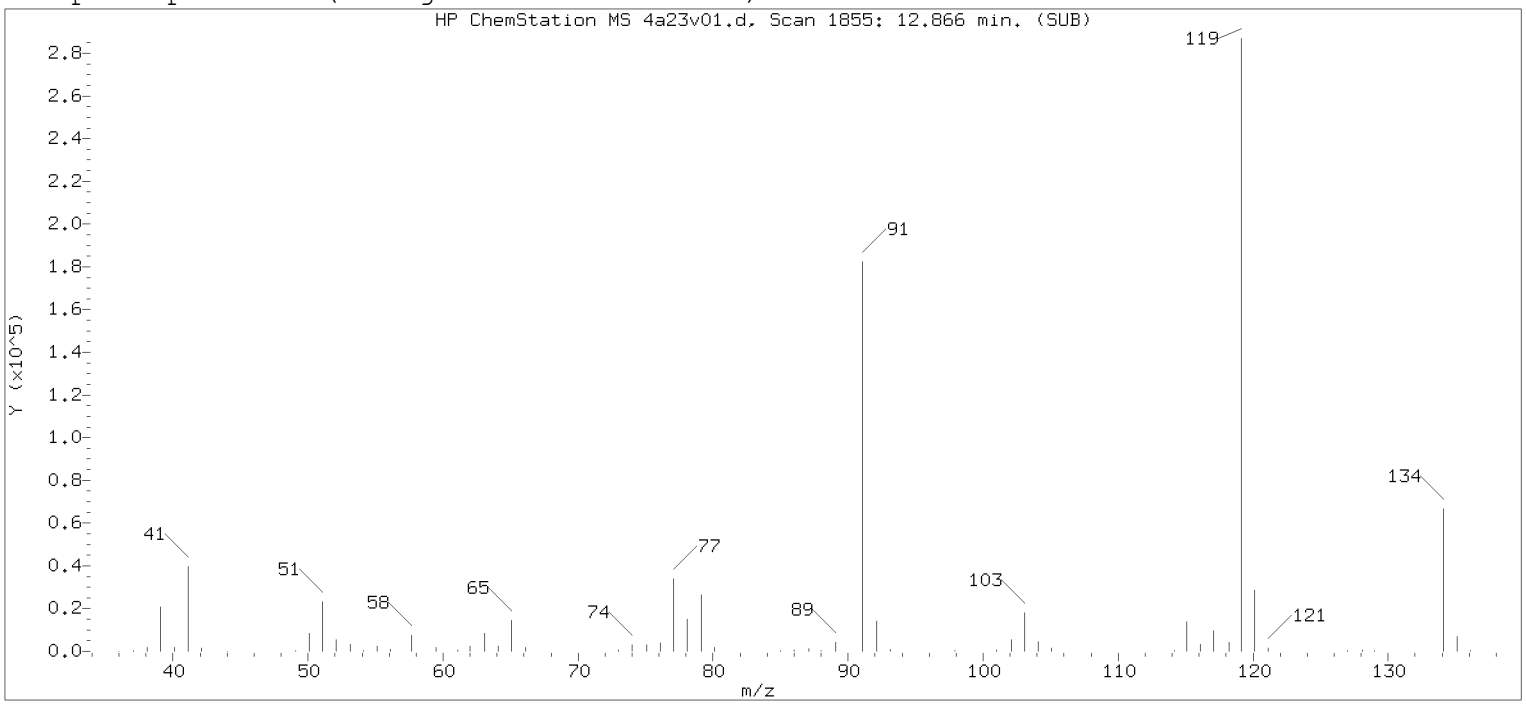
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area (flag) : 96515M
On-Column Amount (ng) : 20.2601
Integration start scan : 1848 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

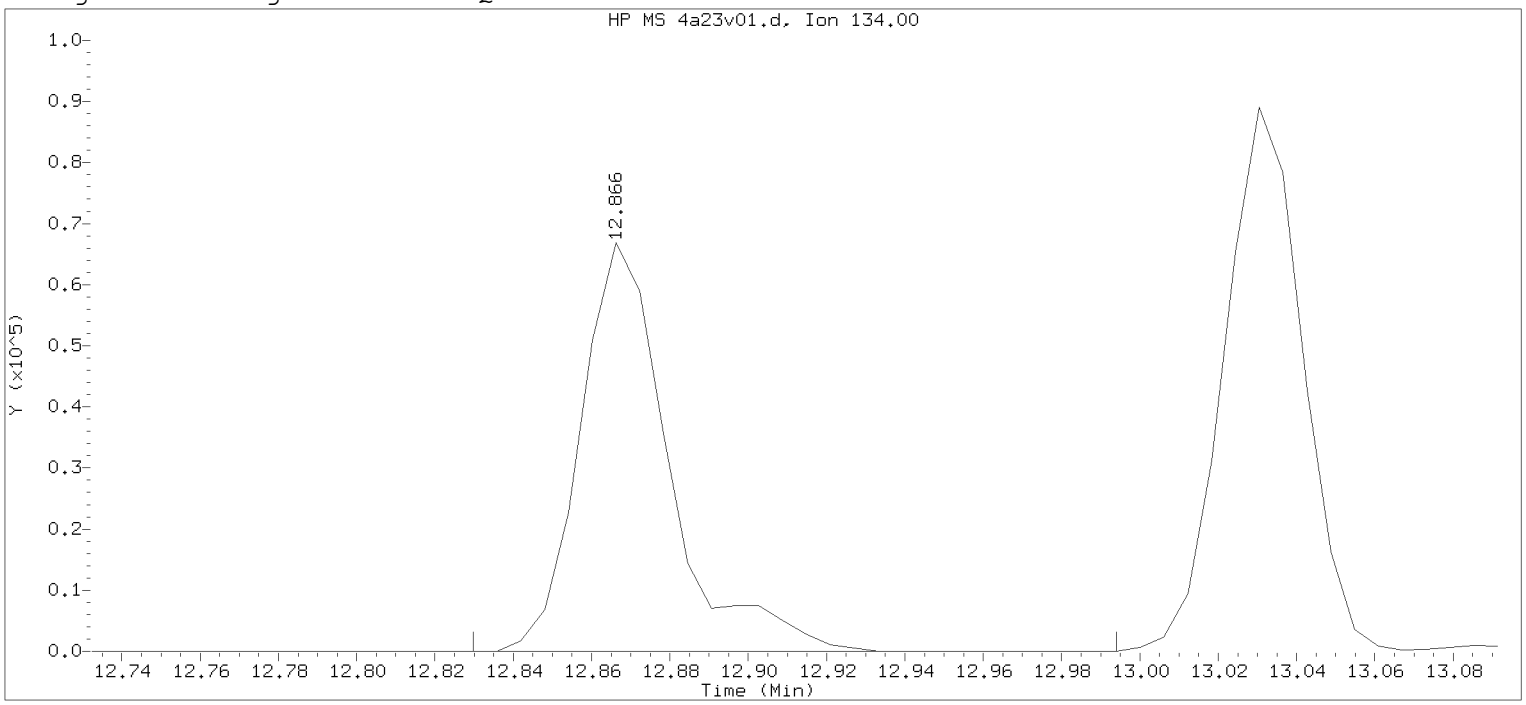
Analyst responsible for change: Digitally signed by Jason M. Long
on 04/24/2019 at 14:28.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 04/25/2019 at 09:16.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19apr23i.b/4a23v01.d Instrument ID: HP23297.i
Injection date and time: 23-APR-2019 18:00 Analyst ID: JML01693

Method used: /chem/HP23297.i/19apr23i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-APR-2019 17:32
Date, time and analyst ID of latest file update: 23-Apr-2019 18:17 Automation

Sample Name: ICV401 Lab Sample ID: ICV401

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area : 105313
On-column Amount (ng) : 20.3910
Integration start scan : 1848 Integration stop scan: 1875
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 04/24/2019 at 14:28.
Target 3.5 esignature user ID: jmlo1648

Data File: /chem/HP23297.i/19may30b.b/4y30t05.d

Date : 30-MAY-2019 18:34

Client ID: bfb FEB05-19

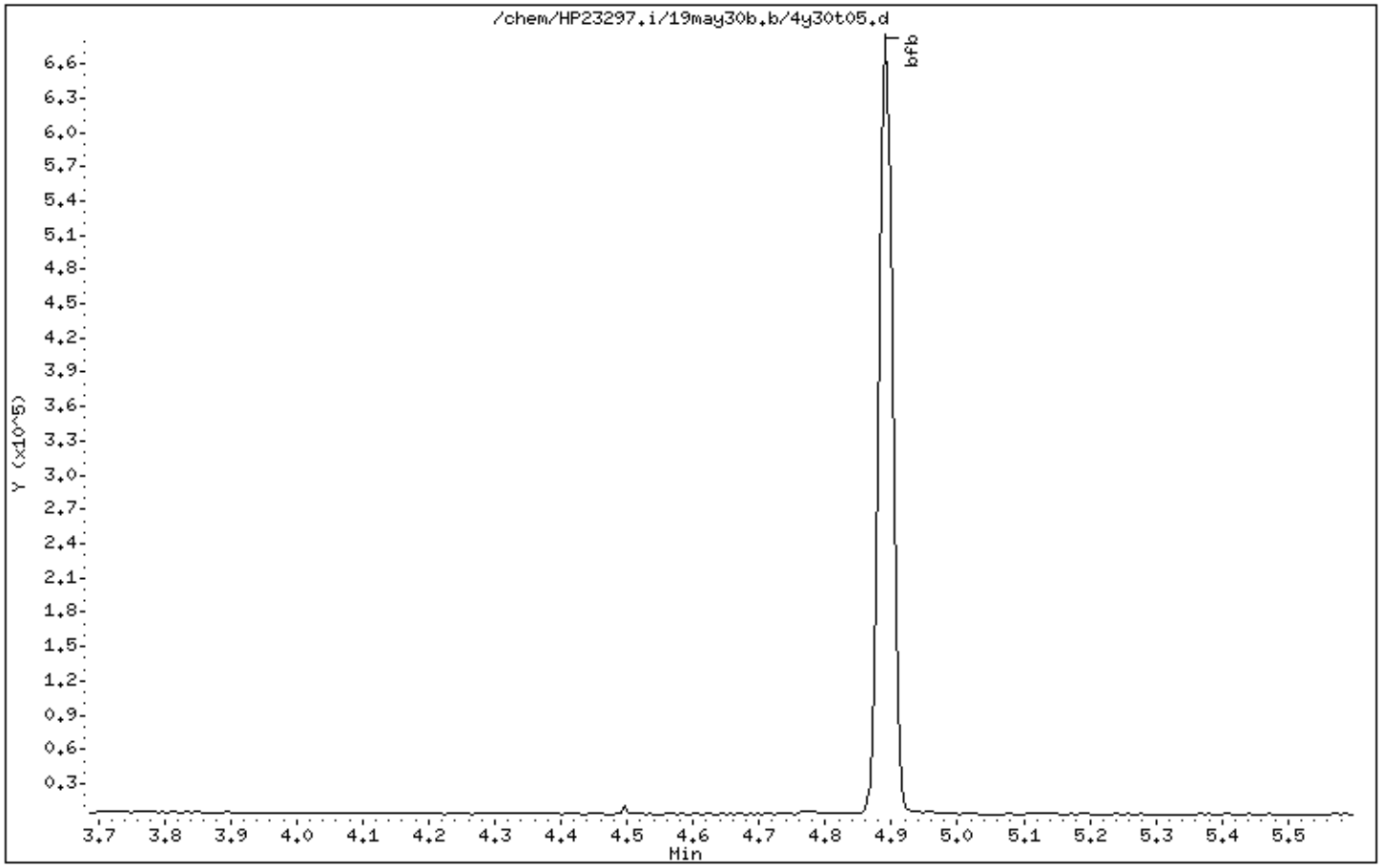
Instrument: HP23297.i

Sample Info: bfb FEB05-19;50NG BFB;1;3;;;;;;

Operator: DVV10203

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Don V. Viray on 05/30/2019 at 18:40.
Target 3.5 esignature user ID: dvv10203

Data File: /chem/HP23297.i/19may30b.b/4y30t05.d

Date : 30-MAY-2019 18:34

Client ID: bfb FEB05-19

Instrument: HP23297.i

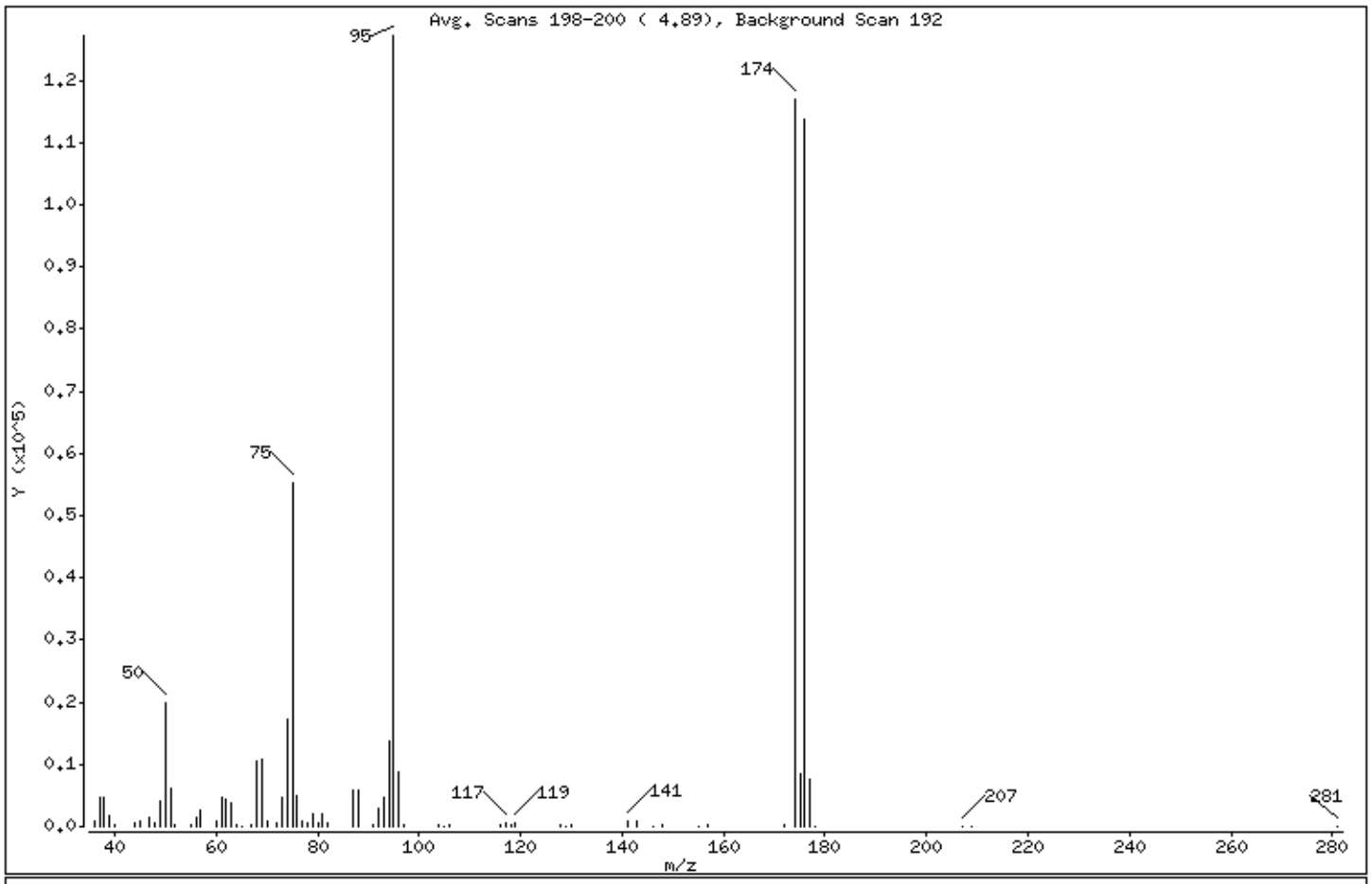
Sample Info: bfb FEB05-19;50NG BFB;1;3;;;;;;

Operator: DVV10203

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.67
75	30.00 - 60.00% of mass 95	43.44
96	5.00 - 9.00% of mass 95	6.83
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	91.96
175	5.00 - 9.00% of mass 174	6.57 (7.15)
176	95.00 - 101.00% of mass 174	89.36 (97.18)
177	5.00 - 9.00% of mass 176	6.04 (6.76)

Digitally signed by Don V. Viray on 05/30/2019 at 18:40.
Target 3.5 esignature user ID: dvv10203

Data File: /chem/HP23297.i/19may30b.b/4y30t05.d

Date : 30-MAY-2019 18:34

Client ID: bfb FEB05-19

Instrument: HP23297.i

Sample Info: bfb FEB05-19;50NG BFB;1;3;;;;;;

Operator: DVV10203

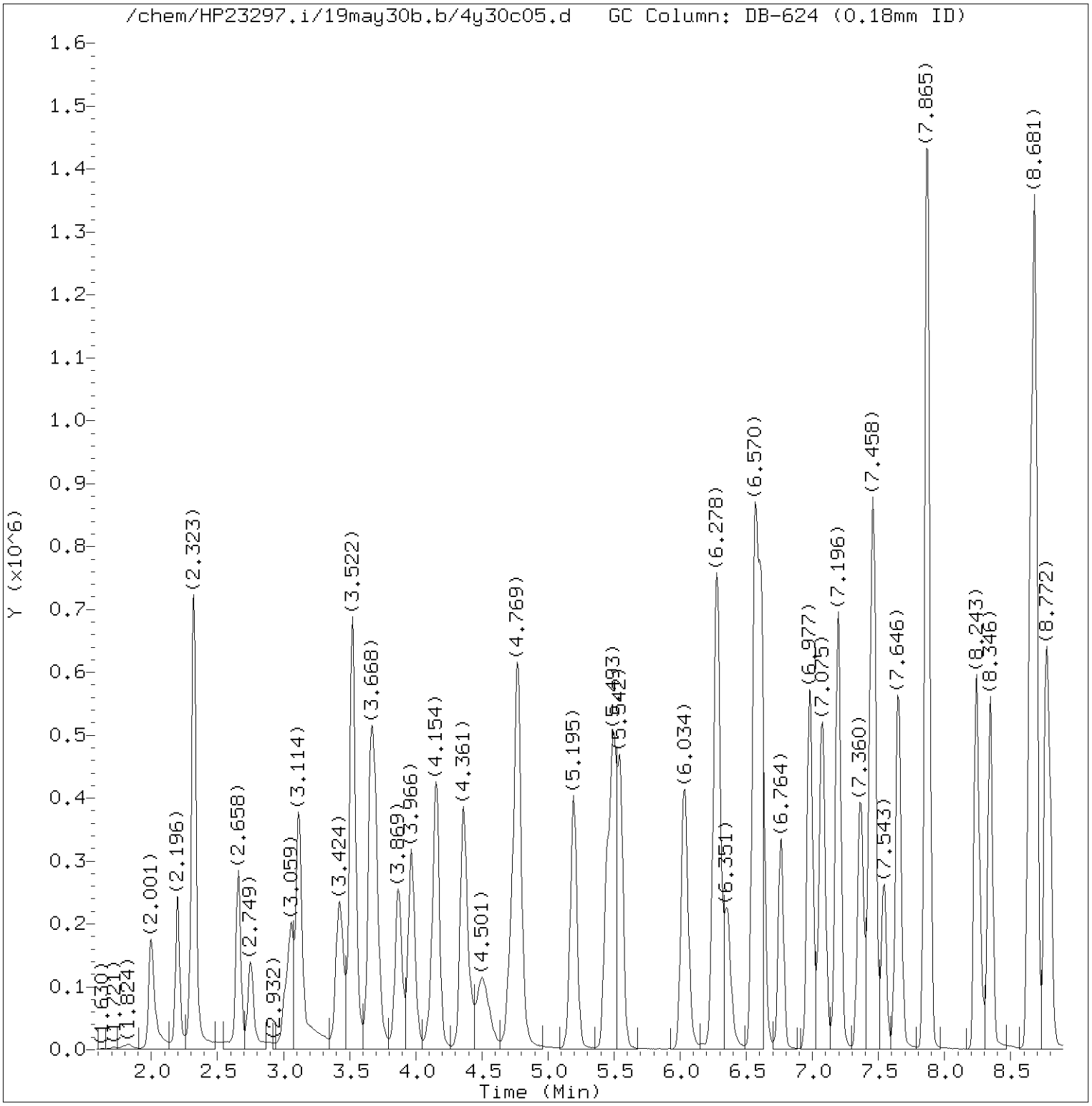
Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: 4y30t05.d
Spectrum: Avg. Scans 198-200 (4.89), Background Scan 192
Location of Maximum: 95.00
Number of points: 71

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	958	62.00	4325	82.00	508	129.00	100
37.00	4781	63.00	3696	87.00	5776	130.00	305
38.00	4539	64.00	330	88.00	5714	141.00	897
39.00	1853	65.00	90	91.00	349	143.00	827
40.00	149	67.00	351	92.00	3025	146.00	90
44.00	557	68.00	10657	93.00	4713	148.00	276
45.00	930	69.00	10859	94.00	13807	155.00	87
47.00	1598	70.00	837	95.00	127208	157.00	193
48.00	670	72.00	581	96.00	8694	172.00	390
49.00	4010	73.00	4725	97.00	181	174.00	116976
50.00	19936	74.00	17328	104.00	406	175.00	8359
51.00	6263	75.00	55248	105.00	87	176.00	113672
52.00	196	76.00	4960	106.00	396	177.00	7685
55.00	326	77.00	805	116.00	233	178.00	88
56.00	1385	78.00	544	117.00	612	207.00	145
57.00	2588	79.00	2130	118.00	302	209.00	92
60.00	876	80.00	677	119.00	518	281.00	13
61.00	4786	81.00	2111	128.00	374		

Digitally signed by Don V. Viray on 05/30/2019 at 18:40.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

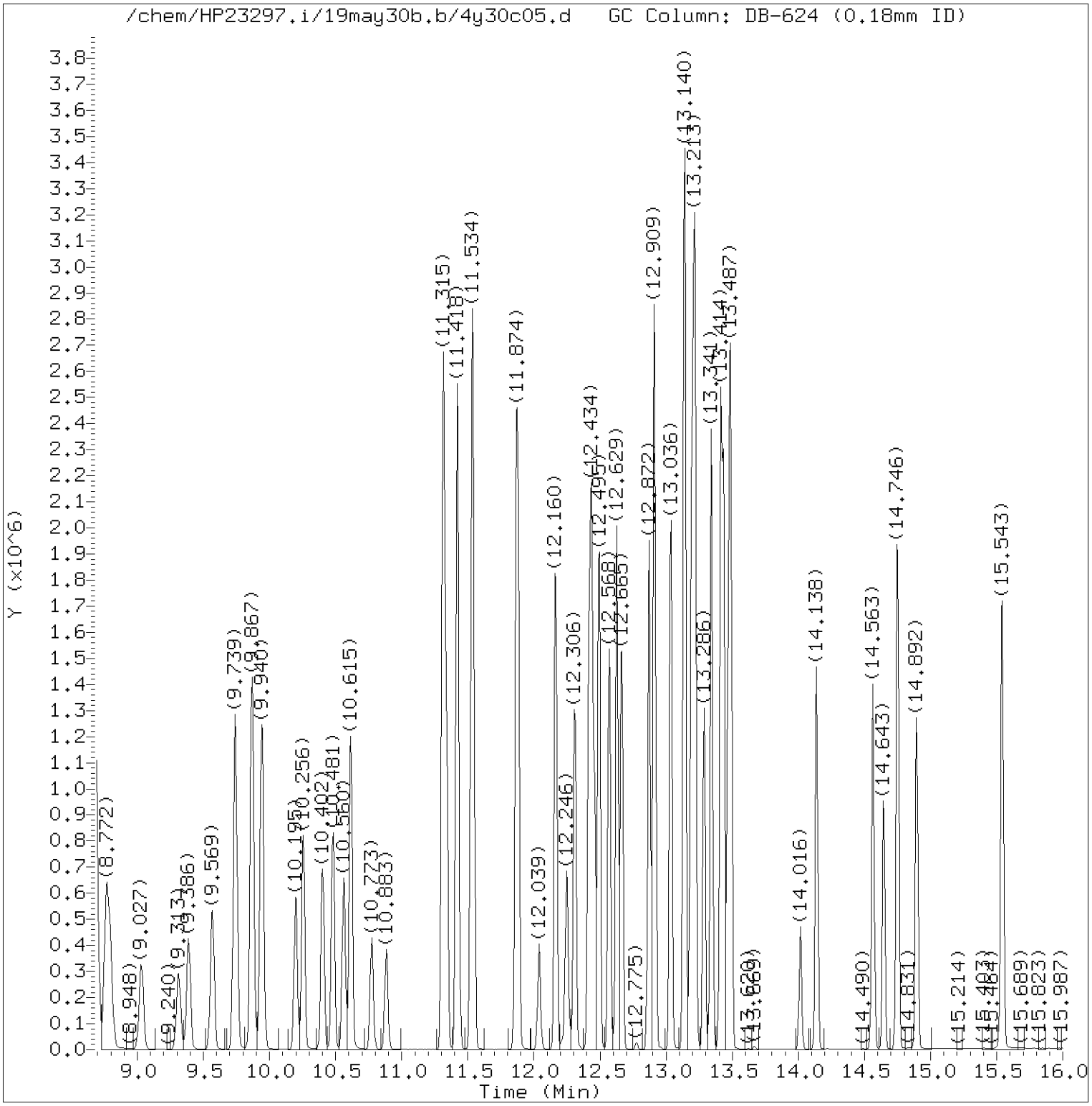
Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30c05.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:12 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 20:19 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Don V. Viray
on 05/30/2019 at 20:19.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30c05.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:12 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 20:19 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Don V. Viray
on 05/30/2019 at 20:19.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30c05.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:12 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 20:19 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.001	85	361184	42.011
4) Chloromethane	(2)	2.196	50	340217	40.857
6) Vinyl Chloride	(2)	2.317	62	331679	40.741
5) 1,3-Butadiene	(2)	2.323	39	335746	74.355
8) Bromomethane	(2)	2.658	94	275702	41.271
9) Chloroethane	(2)	2.749	64	188605	41.953
12) Trichlorofluoromethane	(2)	3.053	101	388358	39.339
11) n-Pentane	(2)	3.114	43	445812	55.894
13) Ethanol	(1)	3.205	45	159264	1190.640
15) Freon 123a	(2)	3.424	67	272763	48.024
16) Acrolein	(1)	3.522	56	1071039	475.381
17) 1,1-Dichloroethene	(2)	3.662	96	209509	53.281
17) 1,1-Dichloroethene	(2)	3.662	63	102444	49.341
19) Freon 113	(2)	3.674	101	212046	49.006
18) Acetone	(1)	3.698	58	110357	99.747
22) Methyl Iodide	(2)	3.862	142	426730	54.462
21) 2-Propanol	(1)	3.875	45	214318	241.074
23) Carbon Disulfide	(2)	3.966	76	782660	55.815
27) Methyl Acetate	(2)	4.130	43	381255	46.551
25) Allyl Chloride	(2)	4.161	41	394791	45.277
28) Methylene Chloride	(2)	4.361	84	248755	49.943
29)*t-Butyl alcohol-d10	(1)	4.373	65	397362M	250.000
30) t-Butyl alcohol	(1)	4.501	59	346930	221.868
31) Acrylonitrile	(2)	4.714	53	199053	46.391
33) Methyl Tertiary Butyl Ether	(2)	4.763	73	645384	45.946
32) trans-1,2-Dichloroethene	(2)	4.775	96	241857	51.478
34) n-Hexane	(2)	5.195	57	380943	49.091
36) 1,1-Dichloroethane	(2)	5.444	63	428297	49.049
38) di-Isopropyl ether	(2)	5.493	45	817738	47.252
39) 2-Chloro-1,3-butadiene	(2)	5.548	53	369022	46.680
40) Ethyl t-butyl ether	(2)	6.034	59	662976	44.598
43) 1,2-Dichloroethene (Total)	(2)		96	514556	101.813
44) 2-Butanone	(2)	6.259	43	560062	84.105
42) cis-1,2-Dichloroethene	(2)	6.278	96	272699	50.335
45) 2,2-Dichloropropane	(2)	6.290	77	285021	41.632
47) Propionitrile	(1)	6.357	54	431158	259.589
48) Methacrylonitrile	(2)	6.570	67	489191	120.868
49) Bromochloromethane	(2)	6.612	128	151992	50.805

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 05/30/2019 at 20:19.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30c05.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:12 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 20:19 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.618	71	155814	95.036
51) Chloroform	(2)	6.764	83	399087	46.405
52)$Dibromofluoromethane	(2)	6.977	113	274114	49.323
52)$Dibromofluoromethane	(2)	6.977	111	279305	49.080
53) 1,1,1-Trichloroethane	(2)	6.983	97	316160	43.916
54) Cyclohexane	(2)	7.075	56	429164	45.838
54) Cyclohexane	(2)	7.075	84	355165	46.450
54) Cyclohexane	(2)	7.075	69	130212	46.533
56) Carbon Tetrachloride	(2)	7.190	117	273524	43.728
55) 1,1-Dichloropropene	(2)	7.196	75	329328	48.418
58) Isobutyl Alcohol	(1)	7.360	41	328786	597.155
57)$1,2-Dichloroethane-d4	(2)	7.440	102	69252	50.997
57)$1,2-Dichloroethane-d4	(2)	7.440	65	293317	44.639
57)$1,2-Dichloroethane-d4	(2)	7.440	104	43979	50.717
60) Benzene	(2)	7.464	78	1014167	49.030
61) 1,2-Dichloroethane	(2)	7.543	62	293036	41.798
61) 1,2-Dichloroethane	(2)	7.543	98	29879	51.624
65) t-Amyl methyl ether	(2)	7.646	73	657328	43.732
67) n-Heptane	(2)	7.872	43	408007	44.661
66)*Fluorobenzene	(2)	7.872	96	1127477	50.000
69) n-Butanol	(1)	8.243	56	568953	1258.361
71) Trichloroethene	(2)	8.346	95	254301	48.466
72) Methylcyclohexane	(2)	8.650	83	455547	46.101
72) Methylcyclohexane	(2)	8.650	98	198289	46.360
73) 1,2-Dichloropropane	(2)	8.687	63	261665	48.152
76) Methyl Methacrylate	(2)	8.766	69	286132	46.496
75) 1,4-Dioxane	(1)	8.772	88	83540M	717.383
74) Dibromomethane	(2)	8.796	93	165312	46.869
78) Bromodichloromethane	(2)	9.027	83	286583	44.743
79) 2-Nitropropane	(2)	9.313	41	229684	73.681
80) 2-Chloroethyl Vinyl Ether	(2)	9.386	63	233438	46.951
81) cis-1,3-Dichloropropene	(2)	9.569	75	386234	45.610
82) 4-Methyl-2-pentanone	(2)	9.739	43	1016310	85.052
83)$Toluene-d8	(3)	9.867	98	1156645	49.576
83)$Toluene-d8	(3)	9.867	100	754809	49.841
88) Toluene	(3)	9.940	92	646795	47.927
90) 1,3-Dichloropropene (total)	(3)		100	734245	89.437
89) trans-1,3-Dichloropropene	(3)	10.195	75	348011	43.827

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/30/2019 at 20:19.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30c05.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:12 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 20:19 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	10.256	69	458023	45.897
92) 1,1,2-Trichloroethane	(3)	10.402	97	251612	47.703
93) Tetrachloroethene	(3)	10.481	166	283462	48.152
94) 1,3-Dichloropropane	(3)	10.560	76	412267	47.085
96) 2-Hexanone	(3)	10.615	43	812341	84.582
97) Dibromochloromethane	(3)	10.773	129	247577	44.360
99) 1,2-Dibromoethane	(3)	10.883	107	277632	47.677
100)*Chlorobenzene-d5	(3)	11.309	117	909041	50.000
102) Chlorobenzene	(3)	11.339	112	730141	47.871
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	234520	45.546
104) Ethylbenzene	(3)	11.418	91	1214267	46.845
106) m+p-Xylene	(3)	11.534	106	989038	95.694
108) Xylene (Total)	(3)		106	1470418	142.551
107) o-Xylene	(3)	11.862	106	481380	46.857
109) Styrene	(3)	11.881	104	811126	47.452
110) Bromoform	(3)	12.039	173	184324	41.913
111) Isopropylbenzene	(3)	12.166	105	1206535	46.945
112) Cyclohexanone	(1)	12.246	55	293682	631.256
114)$4-Bromofluorobenzene	(3)	12.306	95	427691	48.094
114)$4-Bromofluorobenzene	(3)	12.313	174	393770	50.151
116) 1,1,2,2-Tetrachloroethane	(4)	12.410	83	445136	48.136
115) Bromobenzene	(4)	12.428	156	331477	47.206
118) trans-1,4-Dichloro-2-butene	(4)	12.440	53	239911	78.921
117) 1,2,3-Trichloropropane	(4)	12.459	110	128716	46.033
119) n-Propylbenzene	(4)	12.495	91	1443204	47.789
120) 2-Chlorotoluene	(4)	12.568	126	302202	47.916
122) 1,3,5-Trimethylbenzene	(4)	12.629	105	1020220	46.681
121) 4-Chlorotoluene	(4)	12.665	126	315950	48.061
124) tert-Butylbenzene	(4)	12.872	134	218723M	47.672
125) Pentachloroethane	(4)	12.903	167	199305	47.642
126) 1,2,4-Trimethylbenzene	(4)	12.915	105	1088676	47.710
127) sec-Butylbenzene	(4)	13.036	105	1331238	47.681
129) 1,3-Dichlorobenzene	(4)	13.134	146	622709	47.313
130) p-Isopropyltoluene	(4)	13.140	119	1143315	46.550
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	501801	50.000
133) 1,4-Dichlorobenzene	(4)	13.207	146	639353	47.417
134) 1,2,3-Trimethylbenzene	(4)	13.219	105	1142057	46.611
135) Benzyl Chloride	(4)	13.286	91	835097	45.535

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/30/2019 at 20:19.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30c05.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:12 Analyst ID: DVV10203

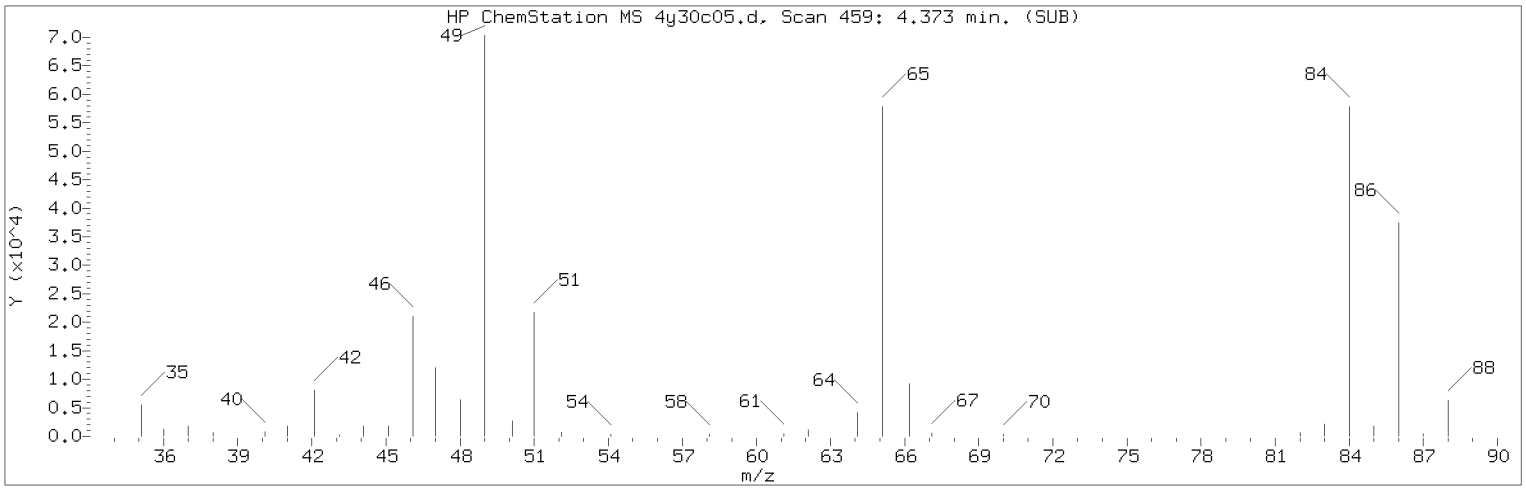
Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 20:19 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

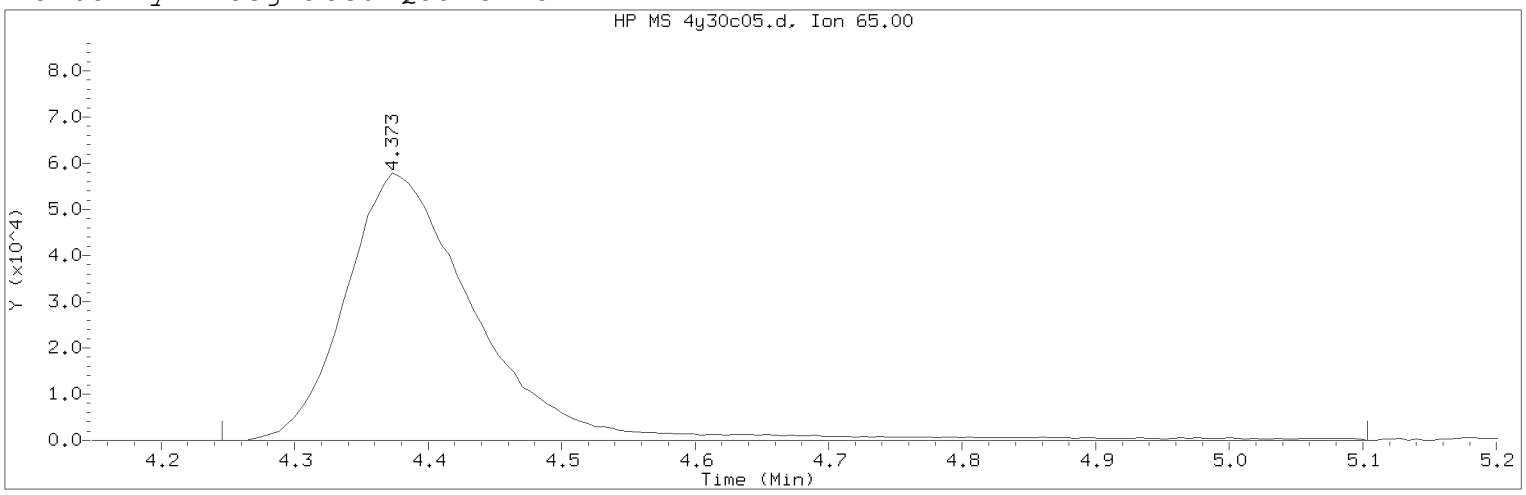
	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
136)	1,3-Diethylbenzene	(4)	13.341	119	738595	48.111
141)	Diethylbenzene (total)	(4)		100	2137903	143.710
137)	1,4-Diethylbenzene	(4)	13.414	119	777424	47.548
139)	n-Butylbenzene	(4)	13.432	92	583180	46.351
138)	1,2-Dichlorobenzene	(4)	13.468	146	604735	47.154
140)	1,2-Diethylbenzene	(4)	13.487	119	621884	48.051
142)	1,2-Dibromo-3-chloropropane	(4)	14.016	75	100747	41.299
144)	1,3,5-Trichlorobenzene	(4)	14.138	180	448986	46.435
146)	1,2,4-Trichlorobenzene	(4)	14.563	180	417465	45.568
147)	Hexachlorobutadiene	(4)	14.649	225	174867	41.304
148)	Naphthalene	(4)	14.752	128	1486486	46.832
149)	1,2,3-Trichlorobenzene	(4)	14.892	180	404552	45.966
150)	2-Methylnaphthalene	(4)	15.543	142	887561	44.710

Digitally signed by Don V. Viray
on 05/30/2019 at 20:19.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may30b.b/4y30c05.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:12 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 20:19 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

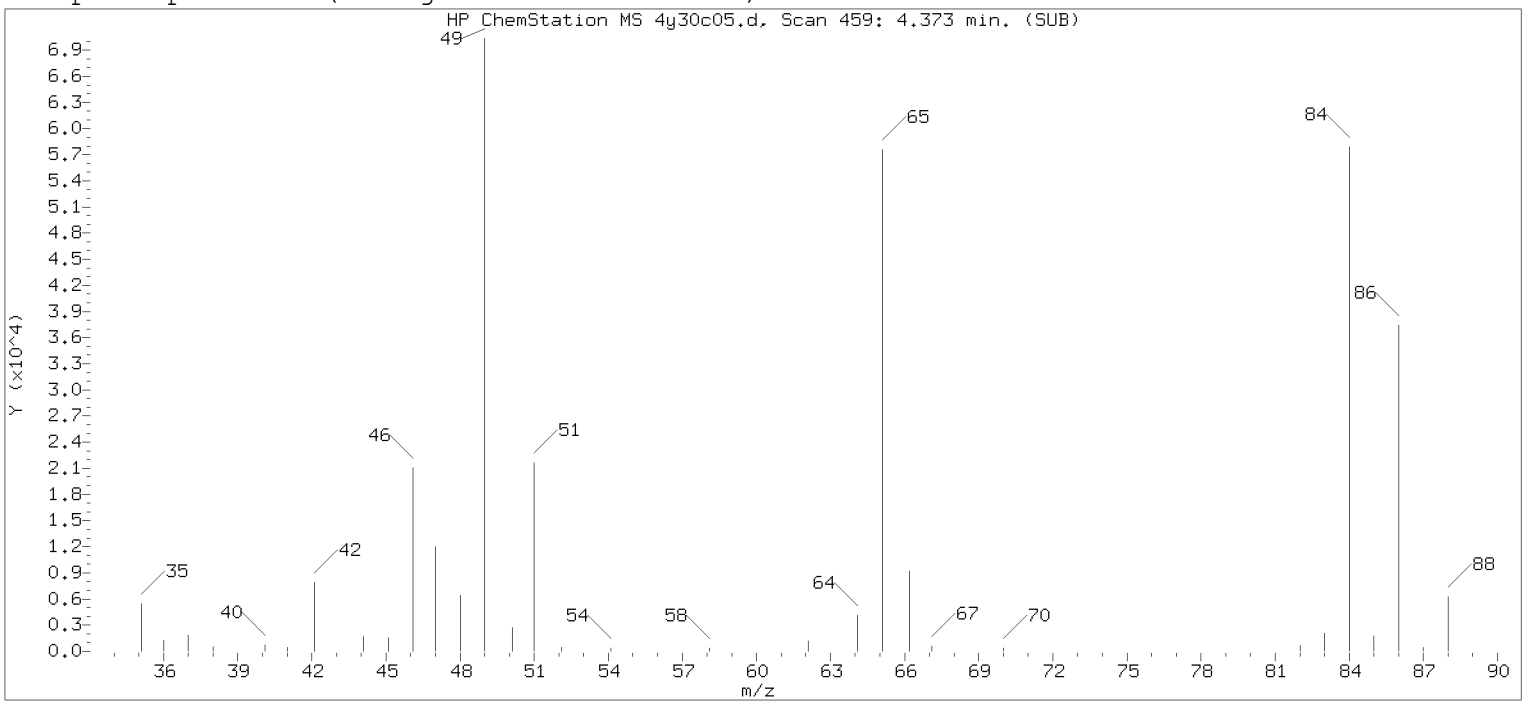
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 459
Retention Time (minutes): 4.373
Quant Ion : 65.00
Area (flag) : 397362M
On-Column Amount (ng) : 250.0000
Integration start scan : 437 Integration stop scan: 578
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

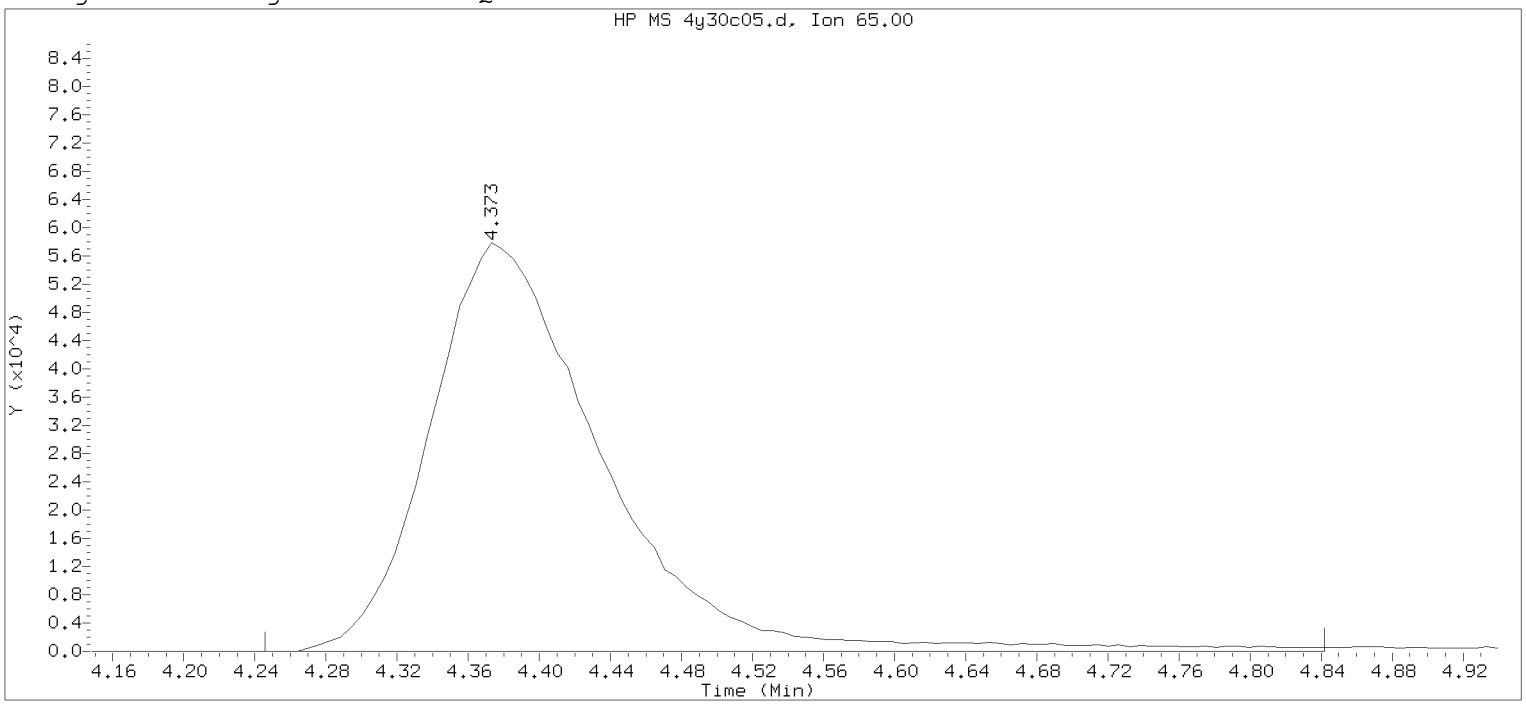
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/30/2019 at 20:19.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/31/2019 at 12:22.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may30b.b/4y30c05.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:12 Analyst ID: DVV10203

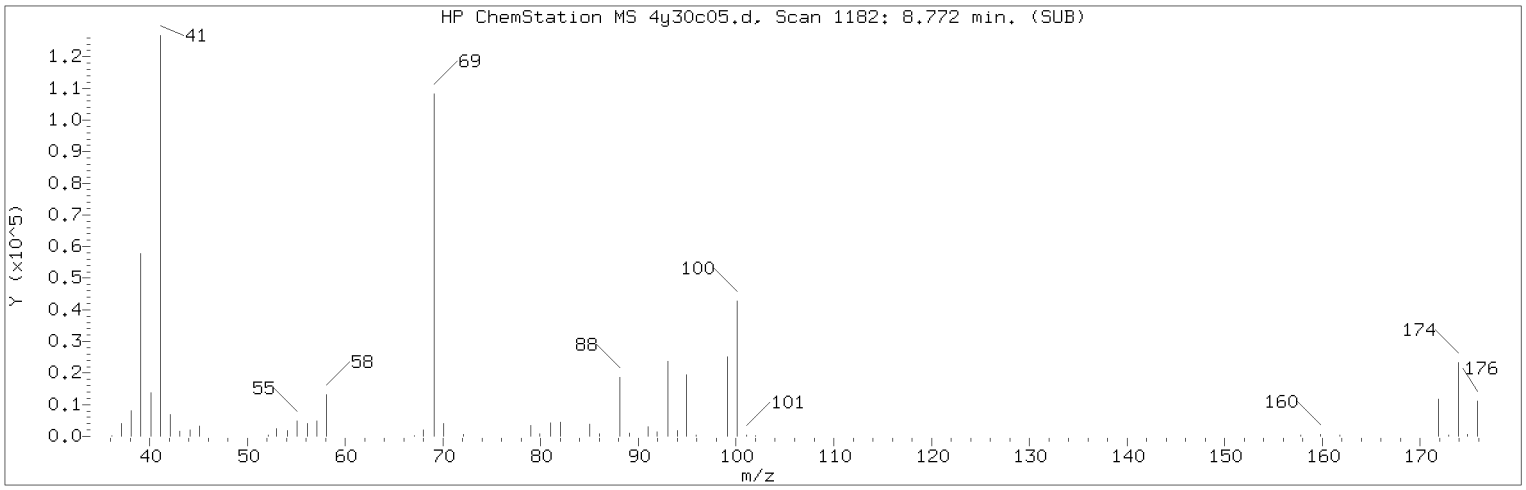
Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 19:29 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

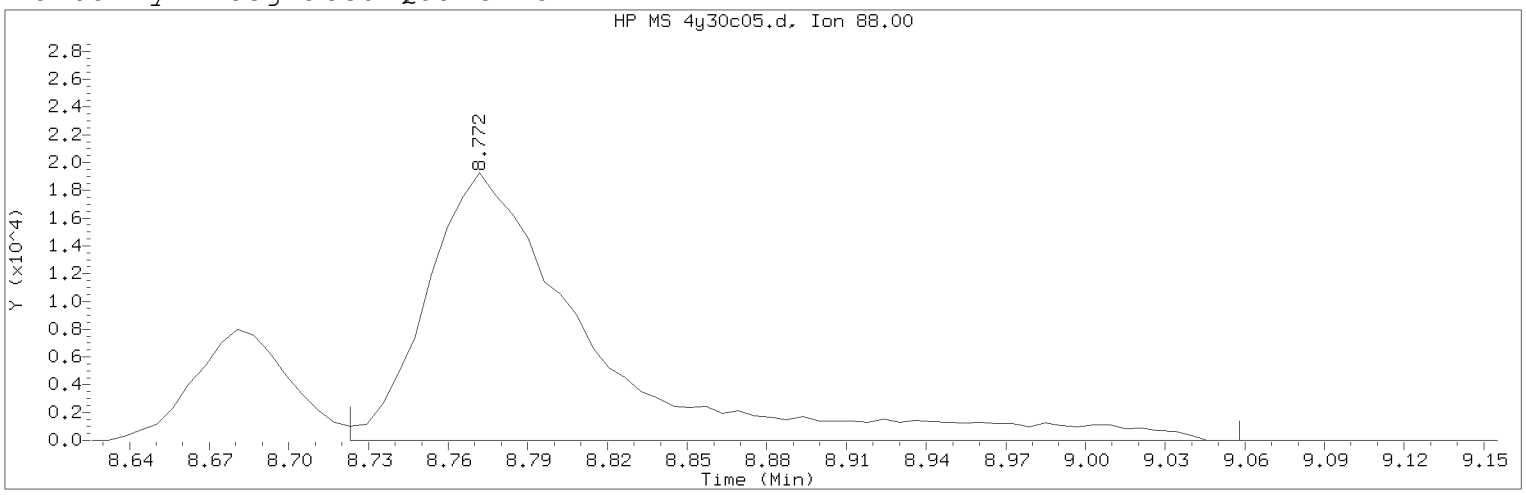
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 459
Retention Time (minutes): 4.373
Quant Ion : 65.00
Area : 390476
On-column Amount (ng) : 250.0000
Integration start scan : 437 Integration stop scan: 535
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/30/2019 at 20:19.
Target 3.5 esignature user id: dviray0203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may30b.b/4y30c05.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:12 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 20:19 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

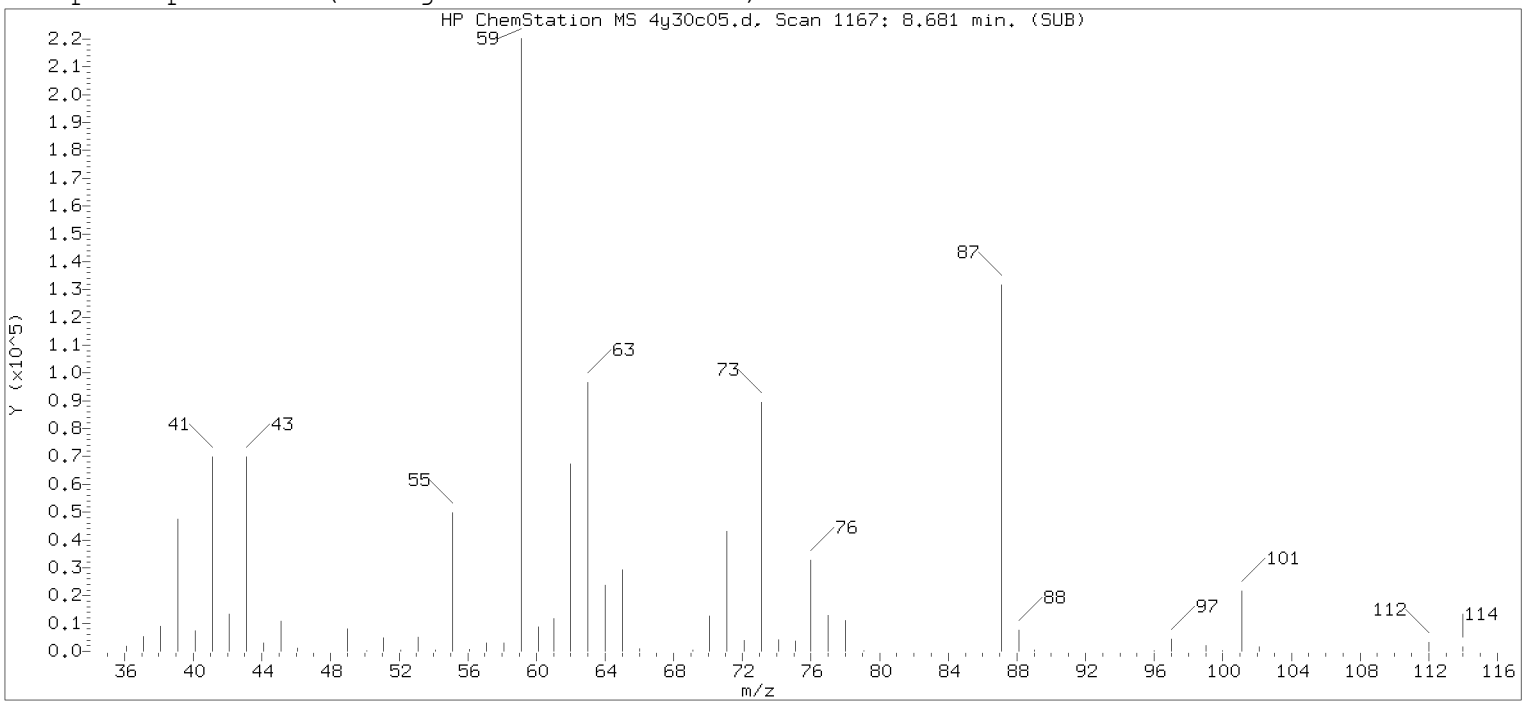
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1182
Retention Time (minutes): 8.772
Quant Ion : 88.00
Area (flag) : 83540M
On-Column Amount (ng) : 717.3825
Integration start scan : 1173 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

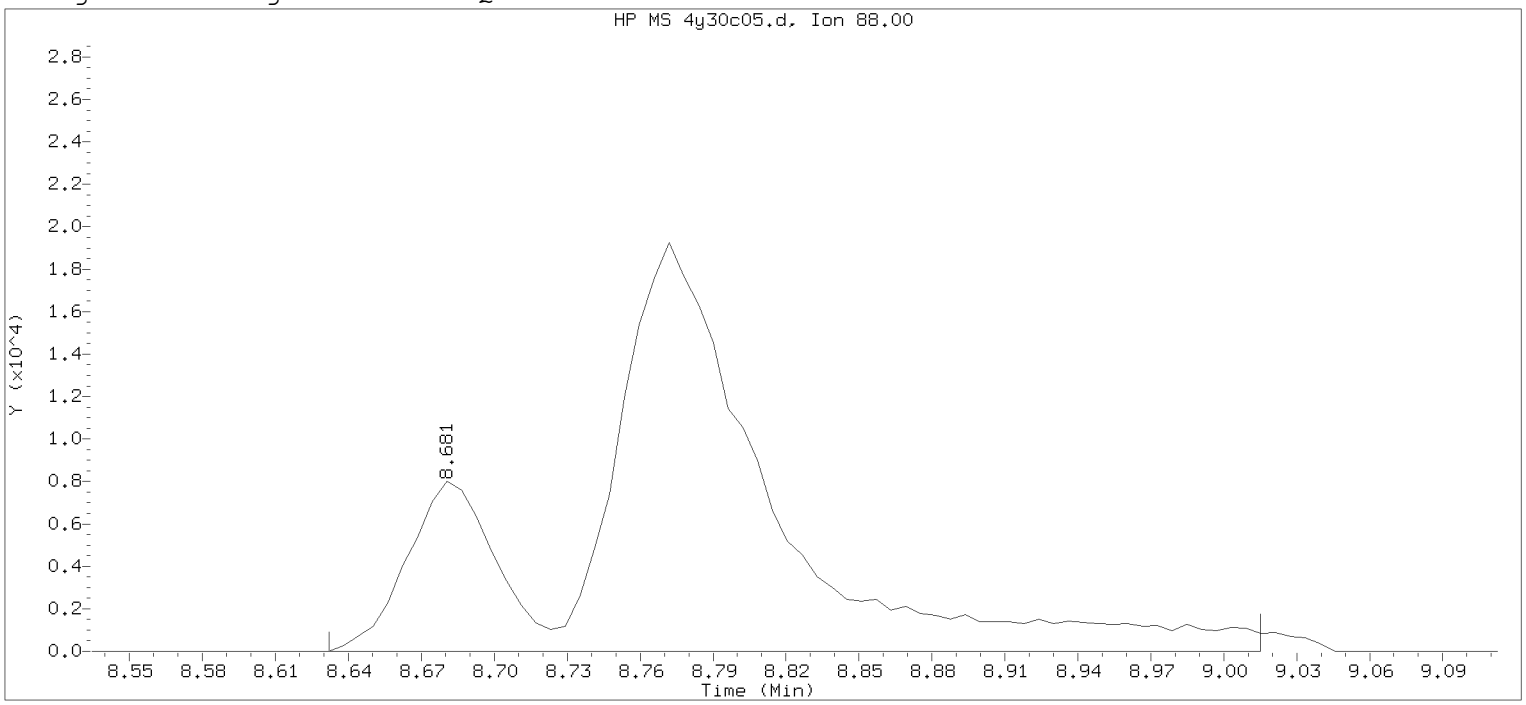
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/30/2019 at 20:19.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/31/2019 at 12:22.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may30b.b/4y30c05.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:12 Analyst ID: DVV10203

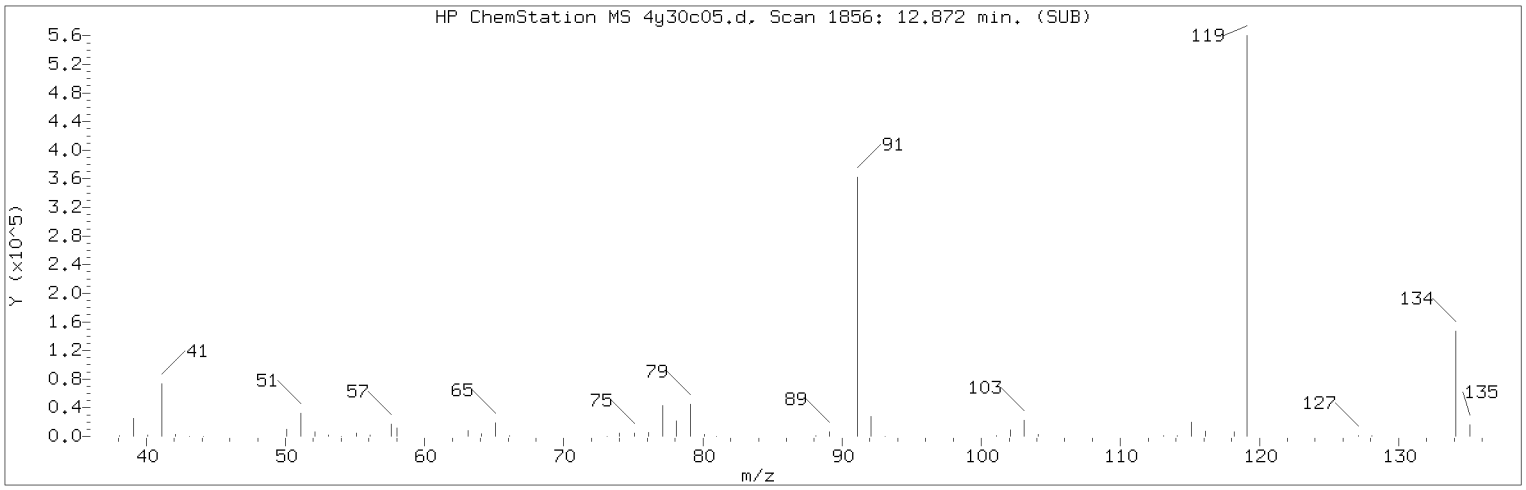
Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 19:29 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

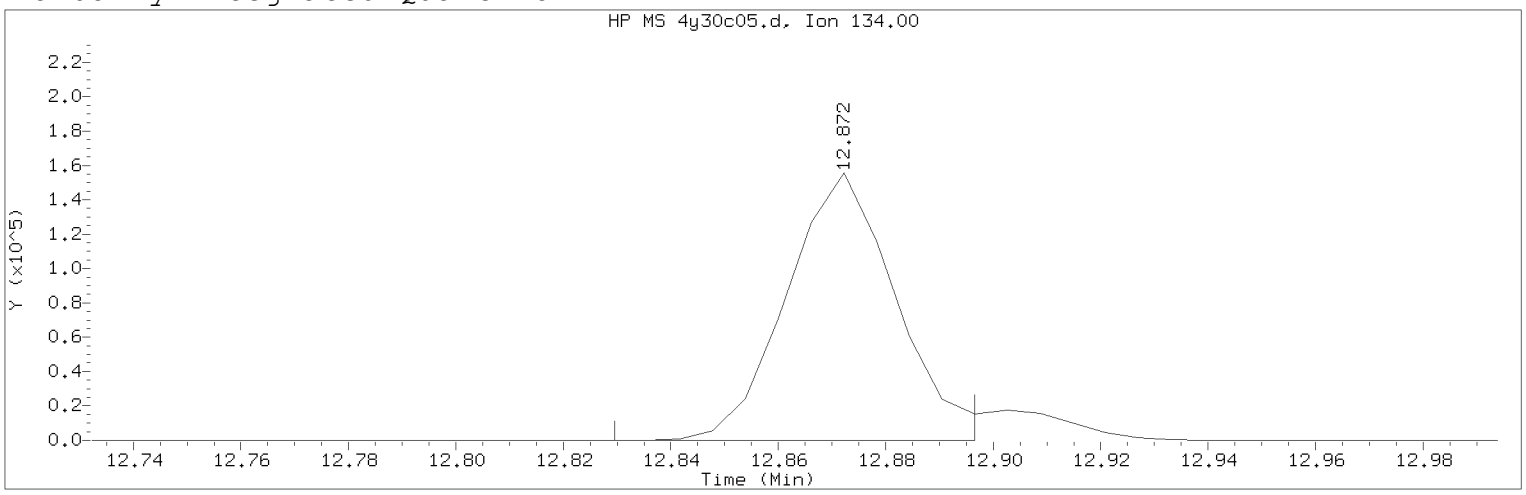
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1167		
Retention Time (minutes)	: 8.681		
Quant Ion	: 88.00		
Area	: 102276		
On-column Amount (ng)	: 893.7553		
Integration start scan	: 1158	Integration stop scan:	1221
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 05/30/2019 at 20:19.
Target 3.5 esignature user id: dviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may30b.b/4y30c05.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:12 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 20:19 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

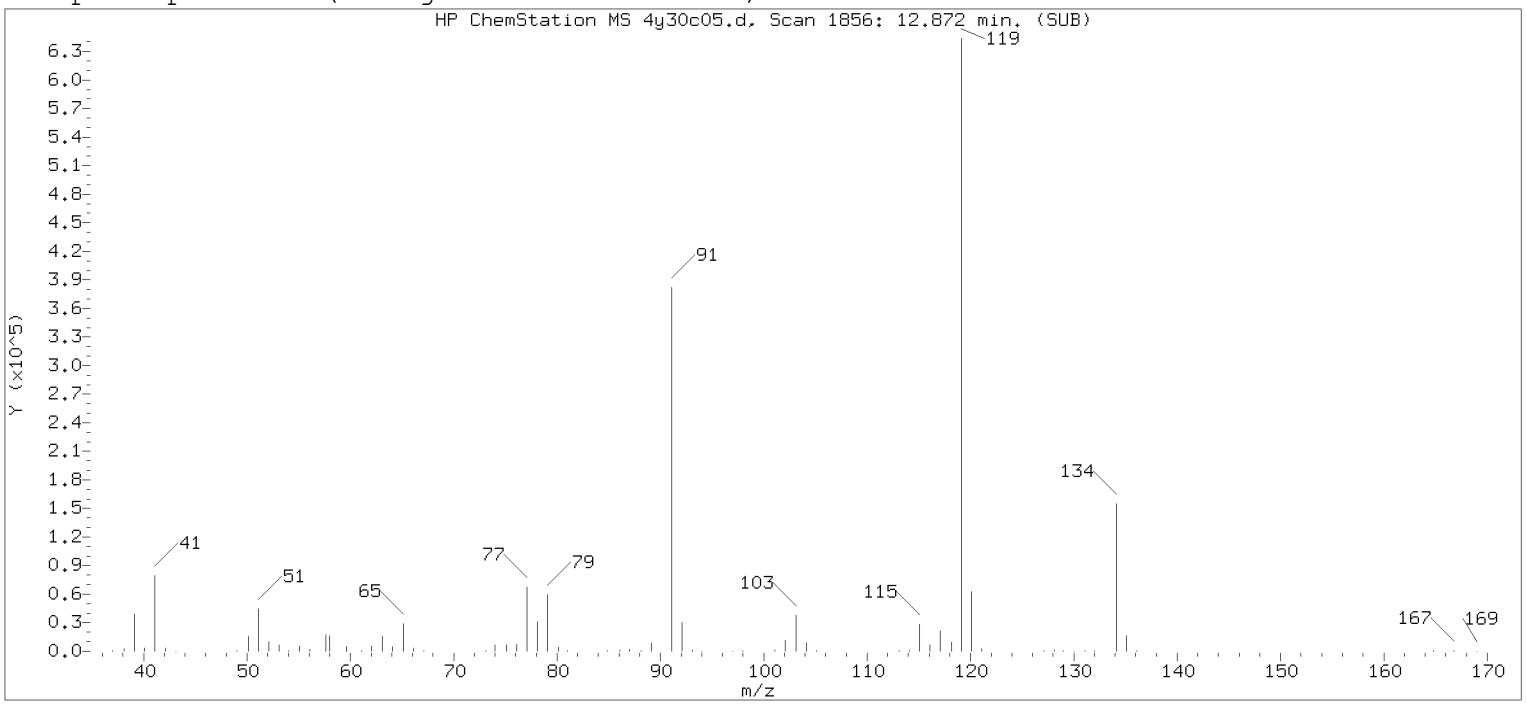
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1856
Retention Time (minutes): 12.872
Quant Ion : 134.00
Area (flag) : 218723M
On-Column Amount (ng) : 47.6720
Integration start scan : 1848 Integration stop scan: 1859
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

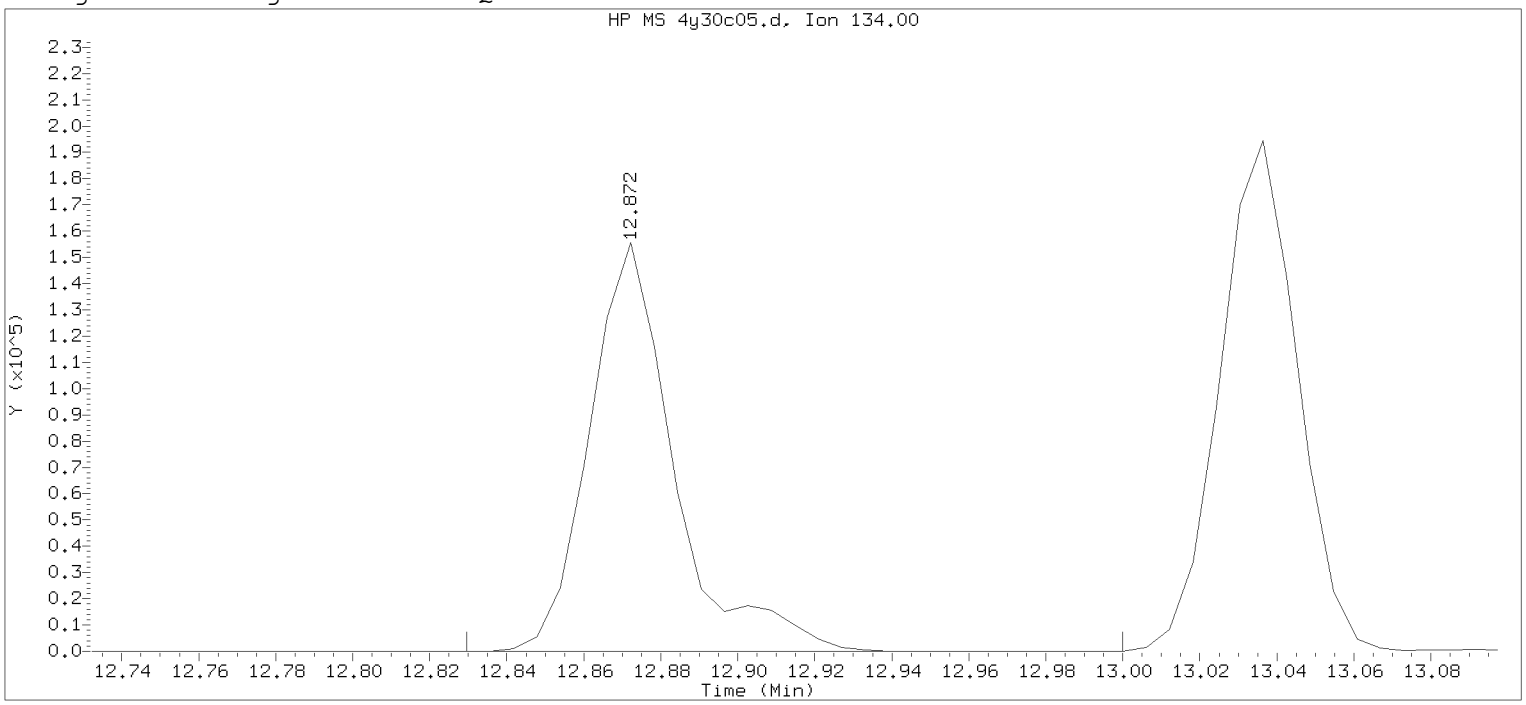
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/30/2019 at 20:19.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/31/2019 at 12:22.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may30b.b/4y30c05.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:12 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 19:29 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1856
Retention Time (minutes): 12.872
Quant Ion : 134.00
Area : 236813
On-column Amount (ng) : 51.6148
Integration start scan : 1848 Integration stop scan: 1876
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/30/2019 at 20:19.
Target 3.5 esignature user id: dviray

Data File: /chem/HP23297.i/19may31a.b/4y31t01.d

Page 1

Date : 31-MAY-2019 06:45

Client ID: bfbfeb0519

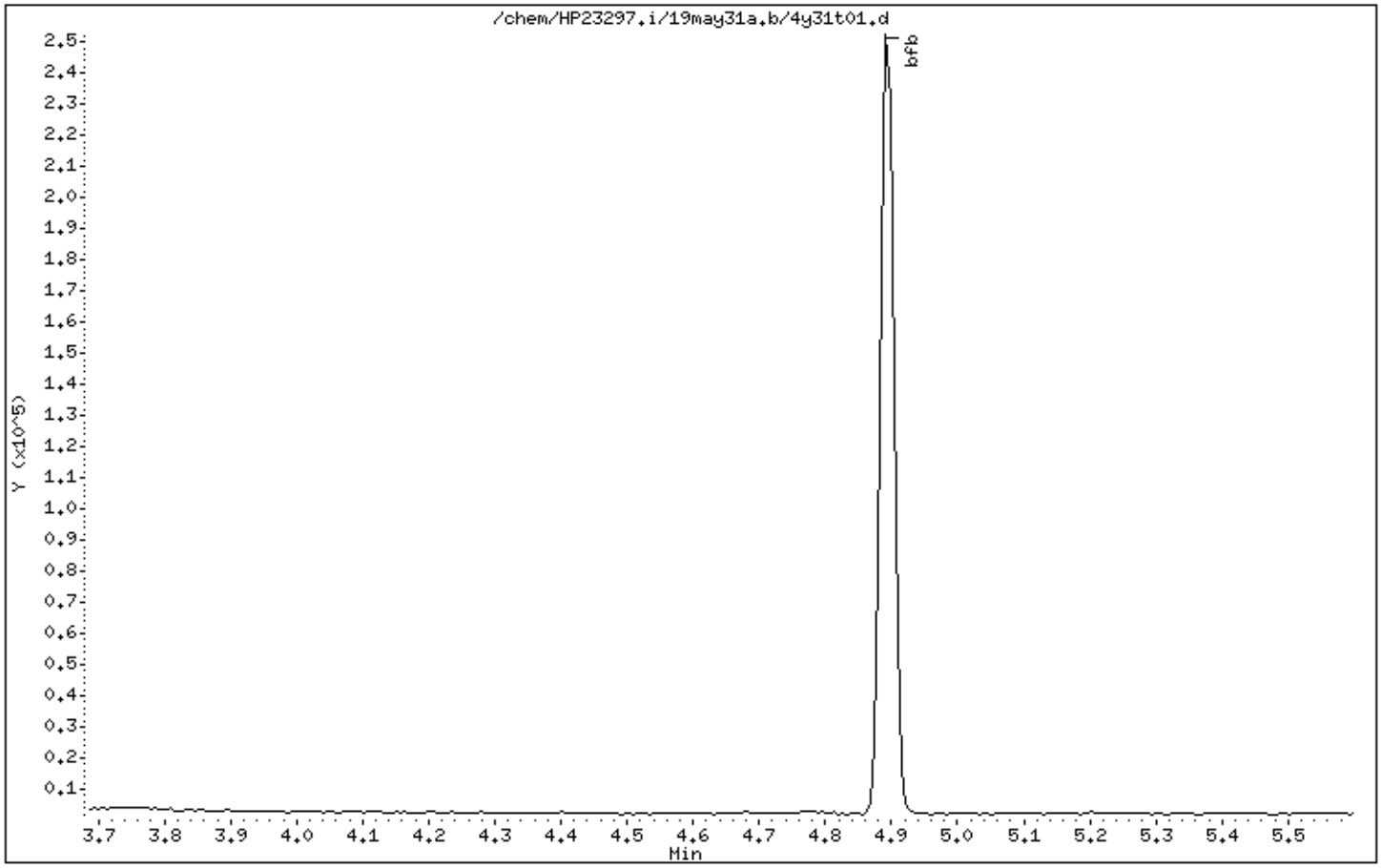
Instrument: HP23297.i

Sample Info: bfbfeb0519;50NGBFB;1;3;;;;;;

Operator: amd00492

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Anita M. Dale on 05/31/2019 at 06:50.
Target 3.5 esignature user ID: amd00492

Data File: /chem/HP23297.i/19may31a.b/4y31t01.d

Date : 31-MAY-2019 06:45

Client ID: bfbfeb0519

Instrument: HP23297.i

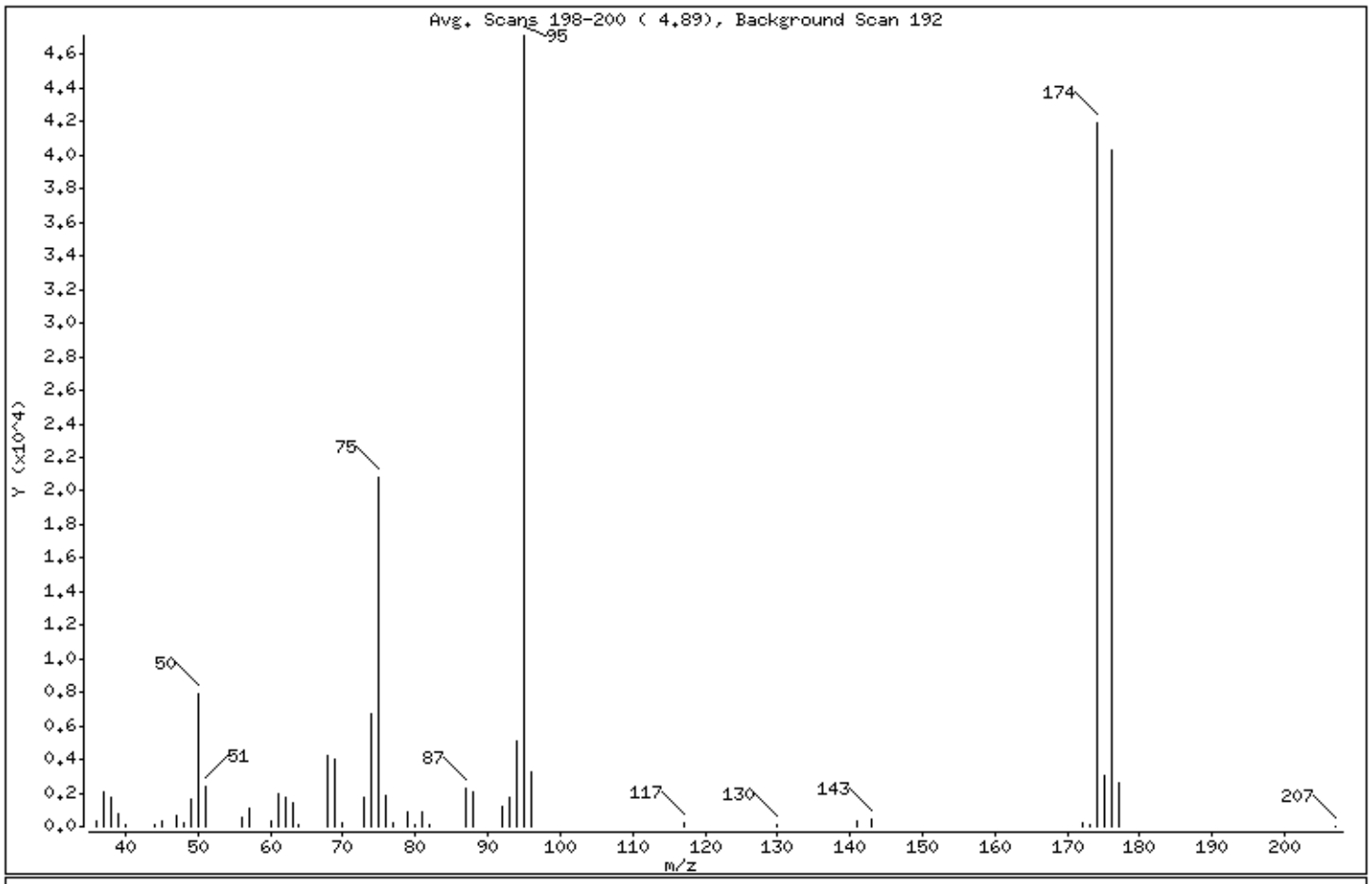
Sample Info: bfbfeb0519;50NGBFB;1;3;;;;;;

Operator: amd00492

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.67
75	30.00 - 60.00% of mass 95	44.07
96	5.00 - 9.00% of mass 95	6.80
173	Less than 2.00% of mass 174	0.29 (0.33)
174	50.00 - 100.00% of mass 95	88.87
175	5.00 - 9.00% of mass 174	6.44 (7.25)
176	95.00 - 101.00% of mass 174	85.60 (96.33)
177	5.00 - 9.00% of mass 176	5.41 (6.31)

Digitally signed by Anita M. Dale on 05/31/2019 at 06:50.
Target 3.5 esignature user ID: amd00492

Data File: /chem/HP23297.i/19may31a.b/4y31t01.d

Date : 31-MAY-2019 06:45

Client ID: bfbfeb0519 Instrument: HP23297.i

Sample Info: bfbfeb0519;50NGBFB;1;3;;;;;;

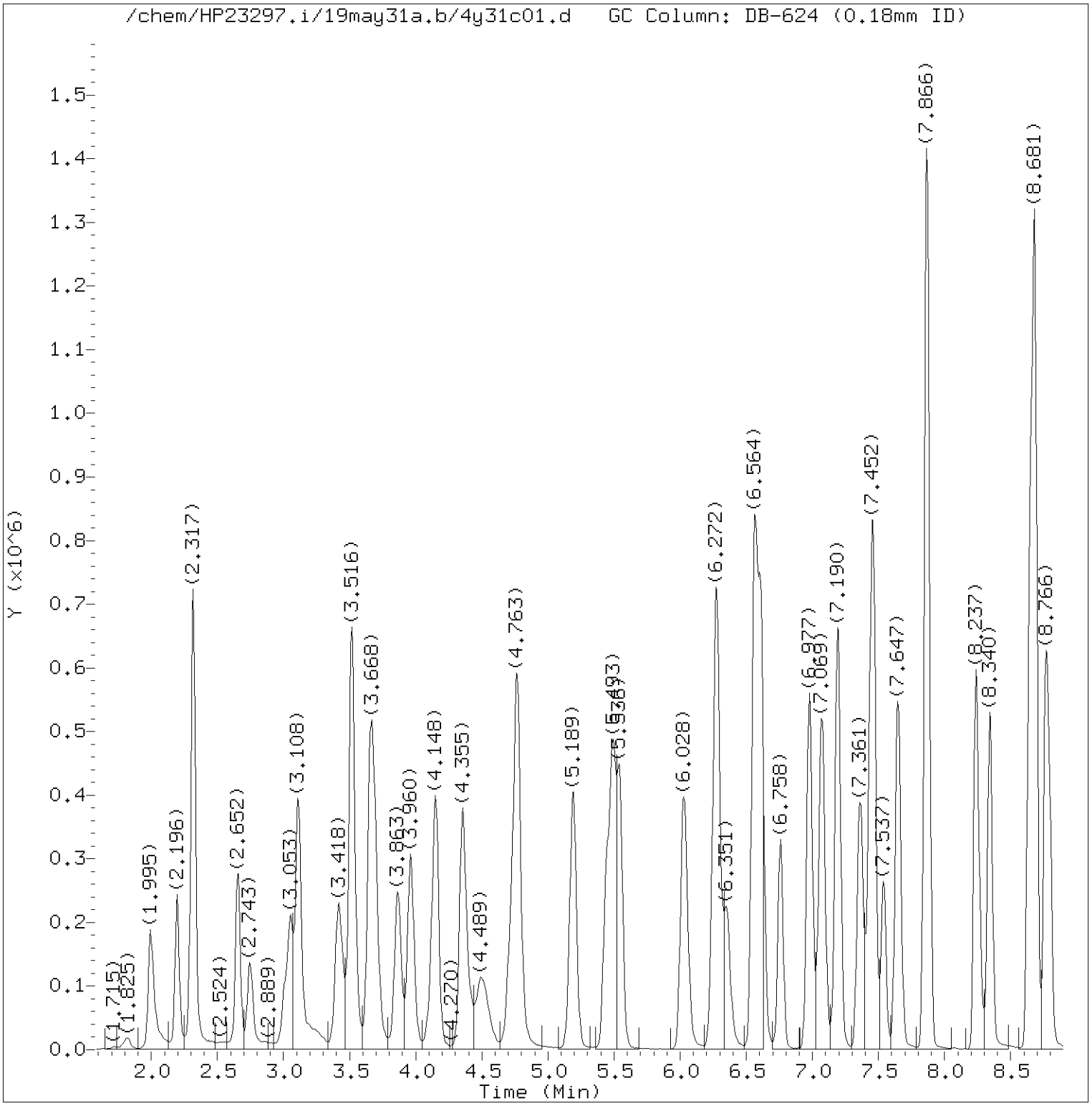
Operator: amd00492

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: 4y31t01.d
Spectrum: Avg. Scans 198-200 (4.89), Background Scan 192
Location of Maximum: 95.00
Number of points: 49

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	350	57.00	1046	77.00	203	130.00	84
37.00	2019	60.00	377	79.00	875	141.00	337
38.00	1757	61.00	1903	80.00	89	143.00	394
39.00	714	62.00	1763	81.00	839	172.00	203
40.00	116	63.00	1386	82.00	85	173.00	138
44.00	145	64.00	92	87.00	2227	174.00	41888
45.00	360	68.00	4256	88.00	2008	175.00	3037
47.00	599	69.00	4052	92.00	1157	176.00	40344
48.00	205	70.00	245	93.00	1717	177.00	2548
49.00	1670	73.00	1744	94.00	5060	207.00	54
50.00	7858	74.00	6765	95.00	47136		
51.00	2418	75.00	20768	96.00	3205		
56.00	518	76.00	1811	117.00	196		

Digitally signed by Anita M. Dale on 05/31/2019 at 06:50.
Target 3.5 esignature user ID: amd00492



Total Ion Chromatogram (TIC)

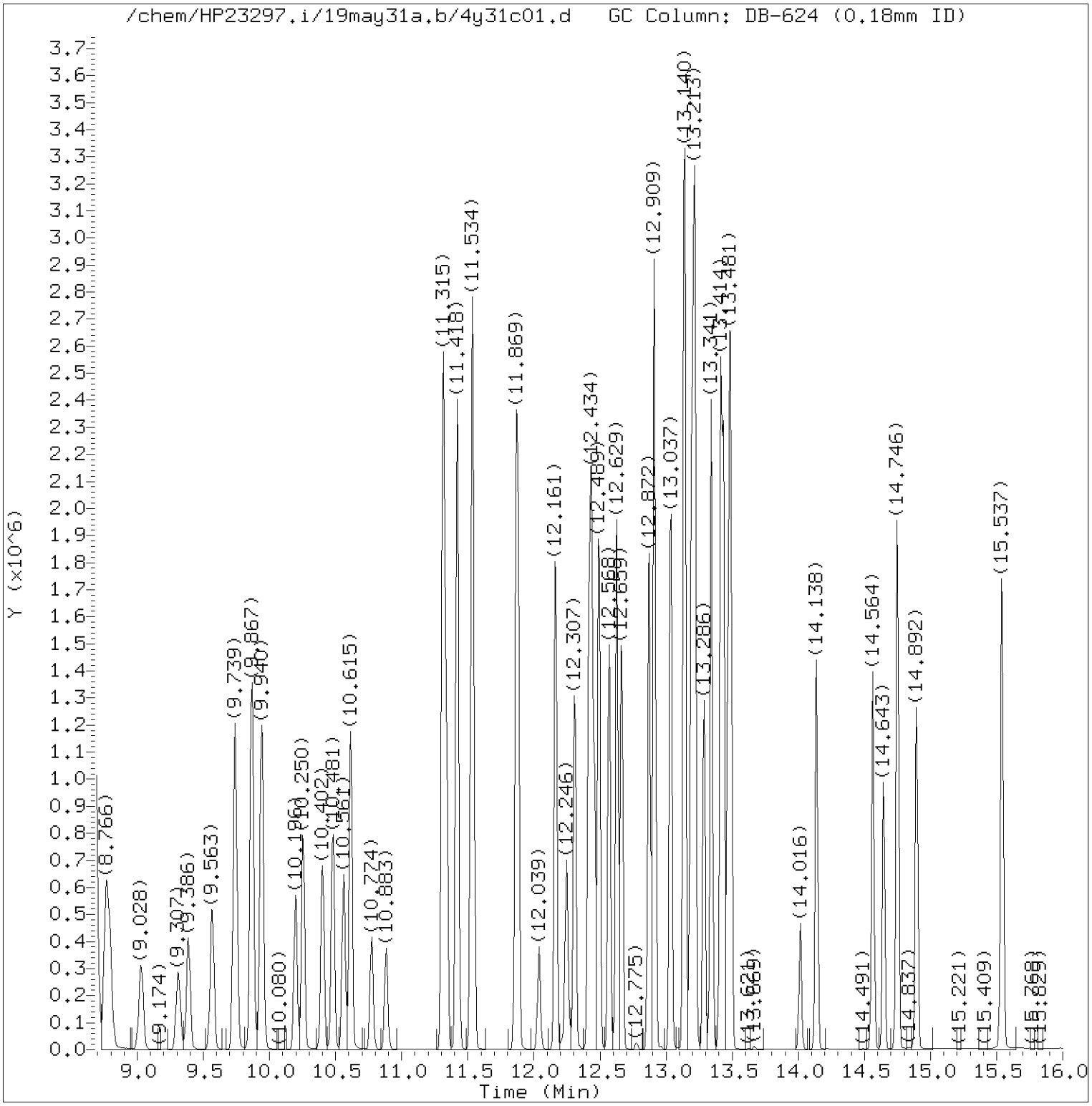
Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31c01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:17 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 07:42 amd00492

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Don V. Viray
on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31c01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:17 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 07:42 amd00492

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Don V. Viray
on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31c01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:17 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 07:42 amd00492

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.995	85	405636M	49.991
4) Chloromethane	(2)	2.196	50	339683	43.223
5) 1,3-Butadiene	(2)	2.317	39	335663	78.765
6) Vinyl Chloride	(2)	2.317	62	328369	42.737
8) Bromomethane	(2)	2.652	94	273989	43.457
9) Chloroethane	(2)	2.749	64	184776	43.549
12) Trichlorofluoromethane	(2)	3.053	101	404650	43.431
11) n-Pentane	(2)	3.114	43	451413	59.967
13) Ethanol	(1)	3.193	45	166477M	1303.701
15) Freon 123a	(2)	3.418	67	265998	49.622
16) Acrolein	(1)	3.516	56	1023122	475.691
17) 1,1-Dichloroethene	(2)	3.656	96	201040	54.173
17) 1,1-Dichloroethene	(2)	3.656	63	97348	49.680
19) Freon 113	(2)	3.674	101	218077	53.401
18) Acetone	(1)	3.698	58	103279	97.785
22) Methyl Iodide	(2)	3.863	142	406171	54.926
21) 2-Propanol	(1)	3.875	45	208980	246.239
23) Carbon Disulfide	(2)	3.960	76	739611	55.886
27) Methyl Acetate	(2)	4.124	43	367520	47.547
25) Allyl Chloride	(2)	4.155	41	363210	44.137
28) Methylene Chloride	(2)	4.355	84	239736	50.999
29)*t-Butyl alcohol-d10	(1)	4.374	65	379338M	250.000
30) t-Butyl alcohol	(1)	4.501	59	341064	228.481
31) Acrylonitrile	(2)	4.708	53	190397	47.017
33) Methyl Tertiary Butyl Ether	(2)	4.757	73	626592	47.266
32) trans-1,2-Dichloroethene	(2)	4.769	96	230933	52.081
34) n-Hexane	(2)	5.195	57	382984	52.294
36) 1,1-Dichloroethane	(2)	5.438	63	408639	49.585
38) di-Isopropyl ether	(2)	5.493	45	786863	48.176
39) 2-Chloro-1,3-butadiene	(2)	5.542	53	353551	47.387
40) Ethyl t-butyl ether	(2)	6.028	59	636870	45.393
43) 1,2-Dichloroethene (Total)	(2)		96	489954	102.739
44) 2-Butanone	(2)	6.253	43	537831	85.577
42) cis-1,2-Dichloroethene	(2)	6.272	96	259021	50.658
45) 2,2-Dichloropropane	(2)	6.290	77	275656	42.662
47) Propionitrile	(1)	6.351	54	427102	269.366
48) Methacrylonitrile	(2)	6.564	67	476834	124.833
49) Bromochloromethane	(2)	6.606	128	144369	51.132

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31c01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:17 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 07:42 amd00492

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.612	71	147398	94.174
51) Chloroform	(2)	6.758	83	384269	47.343
52)$Dibromofluoromethane	(2)	6.977	113	261015	49.764
52)$Dibromofluoromethane	(2)	6.977	111	267999	49.899
53) 1,1,1-Trichloroethane	(2)	6.983	97	307375	45.239
54) Cyclohexane	(2)	7.069	56	432562	48.953
54) Cyclohexane	(2)	7.069	84	355911	49.320
54) Cyclohexane	(2)	7.069	69	130007	49.227
56) Carbon Tetrachloride	(2)	7.190	117	265655	45.000
55) 1,1-Dichloropropene	(2)	7.196	75	313744	48.874
58) Isobutyl Alcohol	(1)	7.361	41	329539	626.962
57)$1,2-Dichloroethane-d4	(2)	7.434	102	65876	51.400
57)$1,2-Dichloroethane-d4	(2)	7.434	65	287224	46.316
57)$1,2-Dichloroethane-d4	(2)	7.434	104	41241	50.392
60) Benzene	(2)	7.464	78	970394	49.709
61) 1,2-Dichloroethane	(2)	7.537	62	293507	44.359
61) 1,2-Dichloroethane	(2)	7.537	98	29358	53.745
65) t-Amyl methyl ether	(2)	7.647	73	635673	44.811
67) n-Heptane	(2)	7.866	43	412569	47.851
66)*Fluorobenzene	(2)	7.866	96	1064093	50.000
69) n-Butanol	(1)	8.237	56	558297	1293.466
71) Trichloroethene	(2)	8.340	95	243299	49.131
72) Methylcyclohexane	(2)	8.644	83	447881	48.026
72) Methylcyclohexane	(2)	8.644	98	199025	49.304
73) 1,2-Dichloropropane	(2)	8.681	63	253414	49.412
76) Methyl Methacrylate	(2)	8.766	69	274968	47.344
75) 1,4-Dioxane	(1)	8.772	88	79529M	715.384
74) Dibromomethane	(2)	8.796	93	161002	48.366
78) Bromodichloromethane	(2)	9.028	83	276036	45.663
79) 2-Nitropropane	(2)	9.307	41	226668M	77.045
80) 2-Chloroethyl Vinyl Ether	(2)	9.386	63	219979	46.879
81) cis-1,3-Dichloropropene	(2)	9.563	75	369267	46.204
82) 4-Methyl-2-pentanone	(2)	9.739	43	975924M	86.537
83)$Toluene-d8	(3)	9.867	98	1099772	48.709
83)$Toluene-d8	(3)	9.867	100	714503	48.752
88) Toluene	(3)	9.940	92	615670	47.141
90) 1,3-Dichloropropene (total)	(3)		100	705863	90.006
89) trans-1,3-Dichloropropene	(3)	10.196	75	336596	43.802

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31c01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:17 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 07:42 amd00492

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	10.250	69	442094	45.777
92) 1,1,2-Trichloroethane	(3)	10.402	97	244195M	47.840
93) Tetrachloroethene	(3)	10.481	166	269415	47.291
94) 1,3-Dichloropropane	(3)	10.561	76	401658	47.402
96) 2-Hexanone	(3)	10.615	43	782502	84.190
97) Dibromochloromethane	(3)	10.774	129	235021	43.513
99) 1,2-Dibromoethane	(3)	10.883	107	269701	47.859
100)*Chlorobenzene-d5	(3)	11.309	117	879724	50.000
102) Chlorobenzene	(3)	11.339	112	706212	47.845
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	227949	45.745
104) Ethylbenzene	(3)	11.418	91	1165313	46.454
106) m+p-Xylene	(3)	11.534	106	943541	94.334
108) Xylene (Total)	(3)		106	1405177	140.767
107) o-Xylene	(3)	11.862	106	461636	46.433
109) Styrene	(3)	11.881	104	785496	47.484
110) Bromoform	(3)	12.039	173	175641	41.269
111) Isopropylbenzene	(3)	12.167	105	1161571	46.702
112) Cyclohexanone	(1)	12.246	55	300349	676.262
114)$4-Bromofluorobenzene	(3)	12.307	95	419719	48.770
114)$4-Bromofluorobenzene	(3)	12.307	174	387389	50.983
116) 1,1,2,2-Tetrachloroethane	(4)	12.410	83	429928M	46.020
115) Bromobenzene	(4)	12.428	156	321423	45.311
118) trans-1,4-Dichloro-2-butene	(4)	12.434	53	248835	81.028
117) 1,2,3-Trichloropropane	(4)	12.459	110	127884	45.272
119) n-Propylbenzene	(4)	12.489	91	1390054	45.563
120) 2-Chlorotoluene	(4)	12.568	126	291892	45.812
122) 1,3,5-Trimethylbenzene	(4)	12.629	105	998450	45.222
121) 4-Chlorotoluene	(4)	12.665	126	303518	45.702
124) tert-Butylbenzene	(4)	12.872	134	212093M	45.759
125) Pentachloroethane	(4)	12.903	167	199461	47.197
126) 1,2,4-Trimethylbenzene	(4)	12.915	105	1061262	46.037
127) sec-Butylbenzene	(4)	13.037	105	1310732	46.471
129) 1,3-Dichlorobenzene	(4)	13.134	146	611333	45.979
130) p-Isopropyltoluene	(4)	13.140	119	1135691	45.771
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	506936	50.000
133) 1,4-Dichlorobenzene	(4)	13.207	146	628599	46.147
134) 1,2,3-Trimethylbenzene	(4)	13.219	105	1134841	45.847
135) Benzyl Chloride	(4)	13.286	91	821829	44.357

M = Compound was manually integrated.
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Digitally signed by Don V. Viray
on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31c01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:17 Analyst ID: amd00492

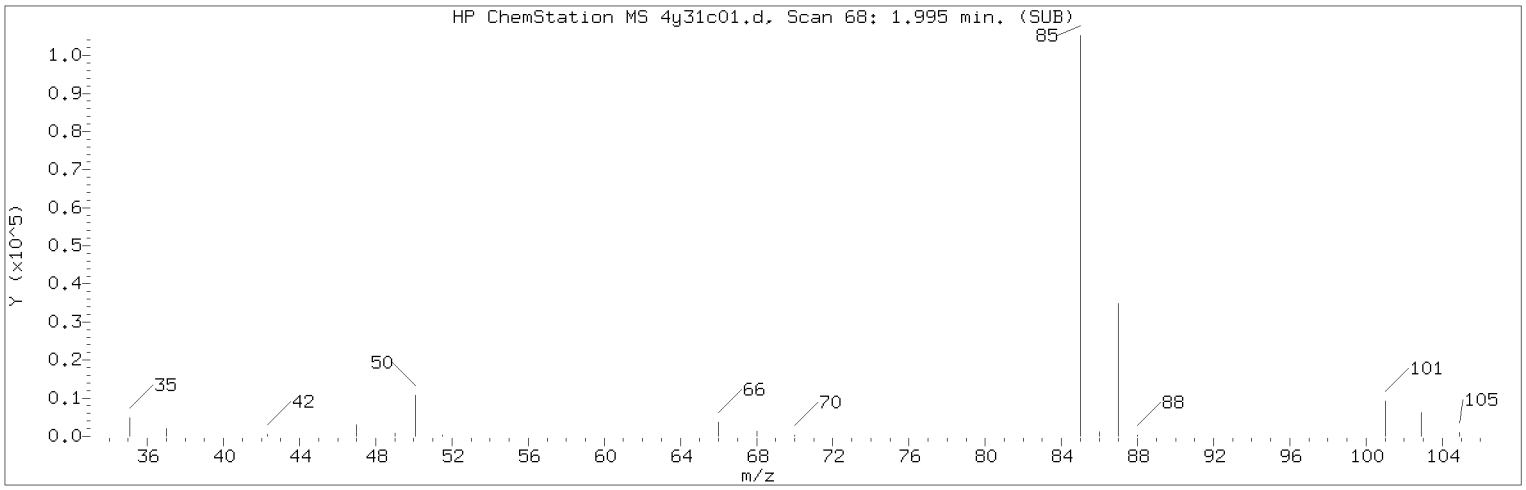
Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 07:42 amd00492

Sample Name: VSTD050 Lab Sample ID: VSTD050

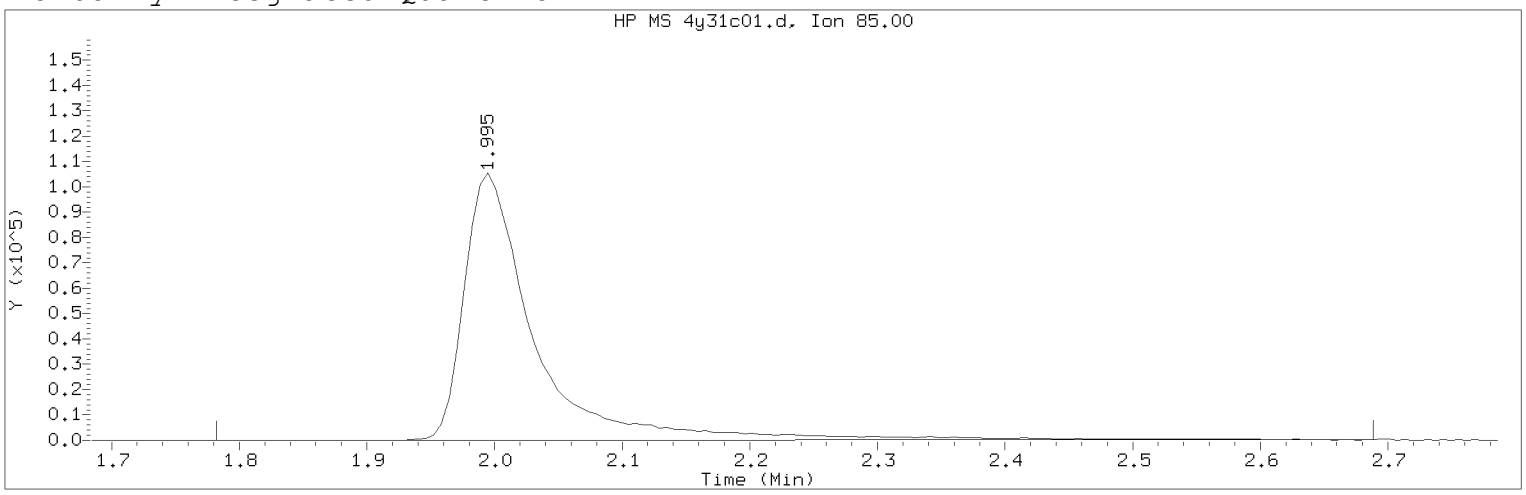
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
136) 1,3-Diethylbenzene	(4)	13.341	119	729136	47.014
141) Diethylbenzene (total)	(4)		100	2116511	140.812
137) 1,4-Diethylbenzene	(4)	13.414	119	772406	46.763
139) n-Butylbenzene	(4)	13.432	92	575316	45.263
138) 1,2-Dichlorobenzene	(4)	13.469	146	591686	45.669
140) 1,2-Diethylbenzene	(4)	13.487	119	614969	47.035
142) 1,2-Dibromo-3-chloropropane	(4)	14.016	75	97741	39.661
144) 1,3,5-Trichlorobenzene	(4)	14.138	180	442080	45.257
146) 1,2,4-Trichlorobenzene	(4)	14.564	180	412719	44.594
147) Hexachlorobutadiene	(4)	14.643	225	178839	41.814
148) Naphthalene	(4)	14.746	128	1462220	45.601
149) 1,2,3-Trichlorobenzene	(4)	14.892	180	399817	44.968
150) 2-Methylnaphthalene	(4)	15.537	142	885892	44.174

Digitally signed by Don V. Viray
on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31c01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:17 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 07:42 amd00492

Sample Name: VSTD050 Lab Sample ID: VSTD050

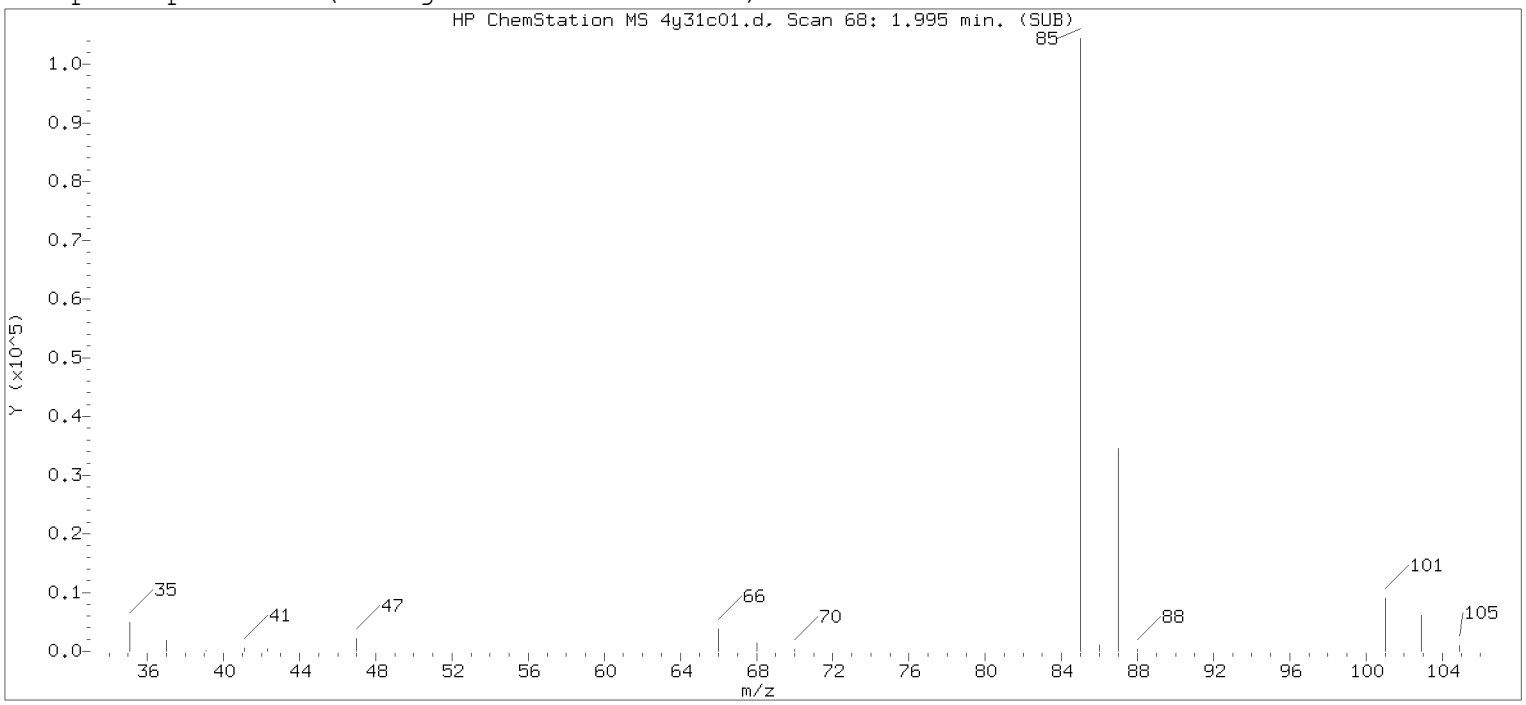
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 68
Retention Time (minutes): 1.995
Quant Ion : 85.00
Area (flag) : 405636M
On-Column Amount (ng) : 49.9913
Integration start scan : 32 Integration stop scan: 181
Y at integration start : 0 Y at integration end: 260

Reason for manual integration: improper integration

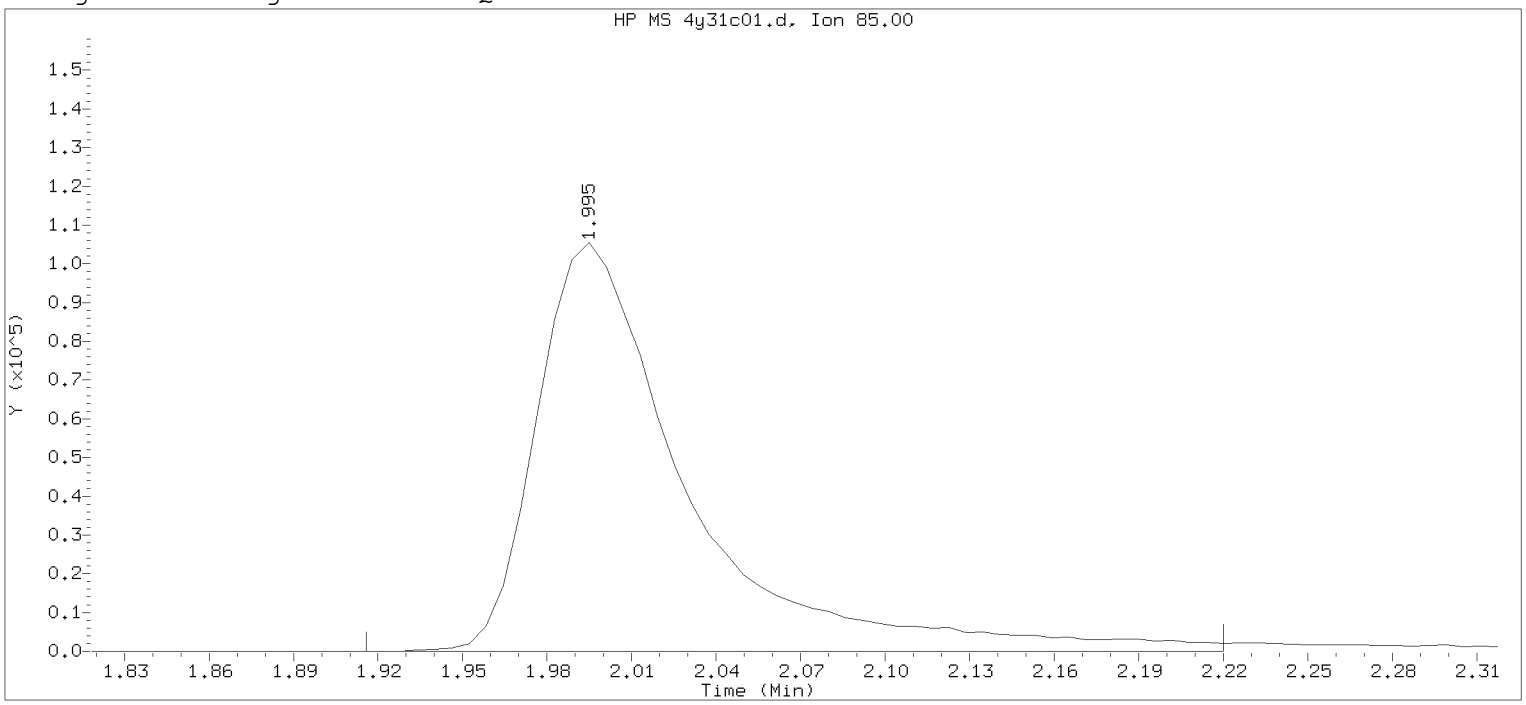
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:27.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31c01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:17 Analyst ID: amd00492

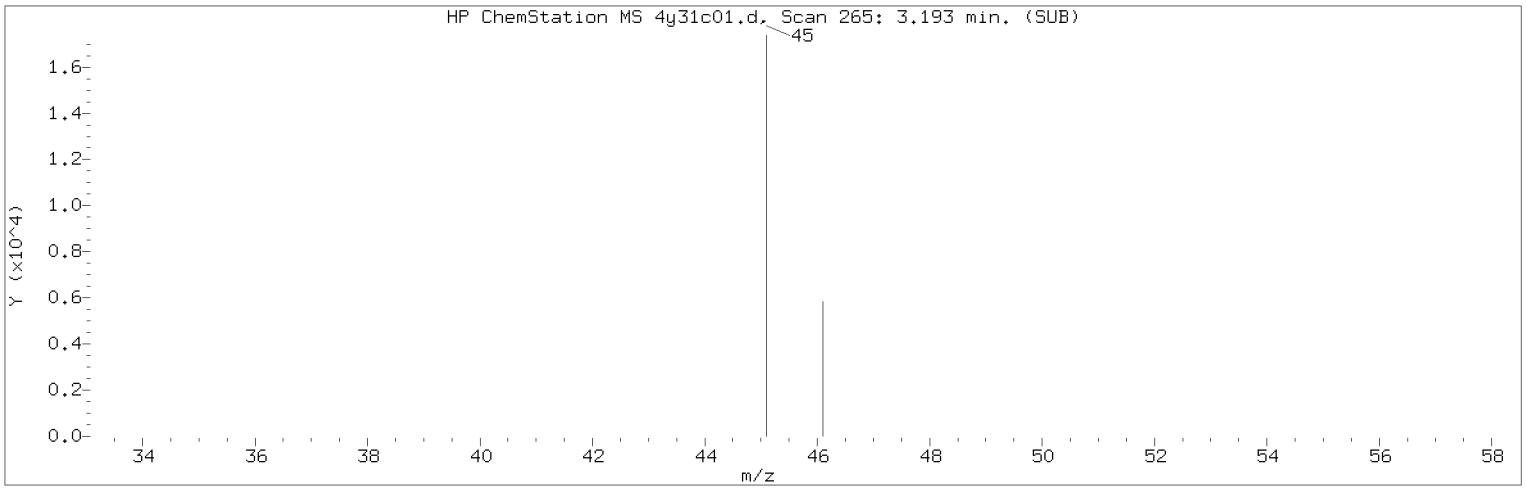
Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 31-MAY-2019 07:35
Date, time and analyst ID of latest file update: 31-May-2019 07:35 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

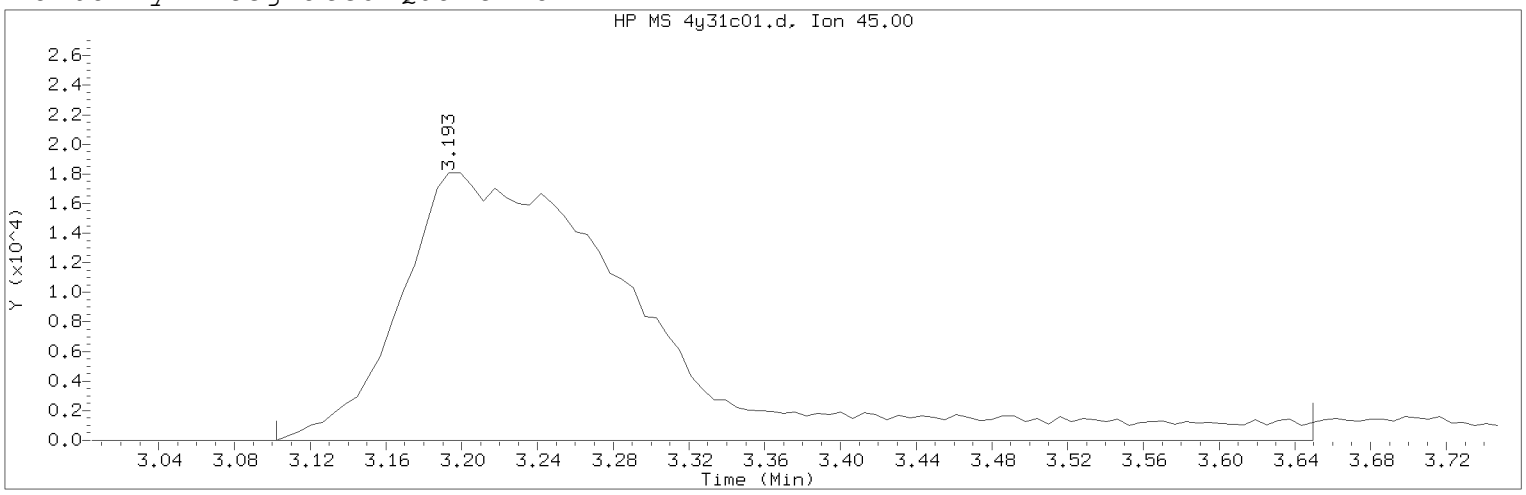
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 68
Retention Time (minutes): 1.995
Quant Ion : 85.00
Area : 390081
On-column Amount (ng) : 48.0744
Integration start scan : 54 Integration stop scan: 104
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/31/2019 at 21:34.
Target 3.5 esignature user id: dviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31c01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:17 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 07:42 amd00492

Sample Name: VSTD050 Lab Sample ID: VSTD050

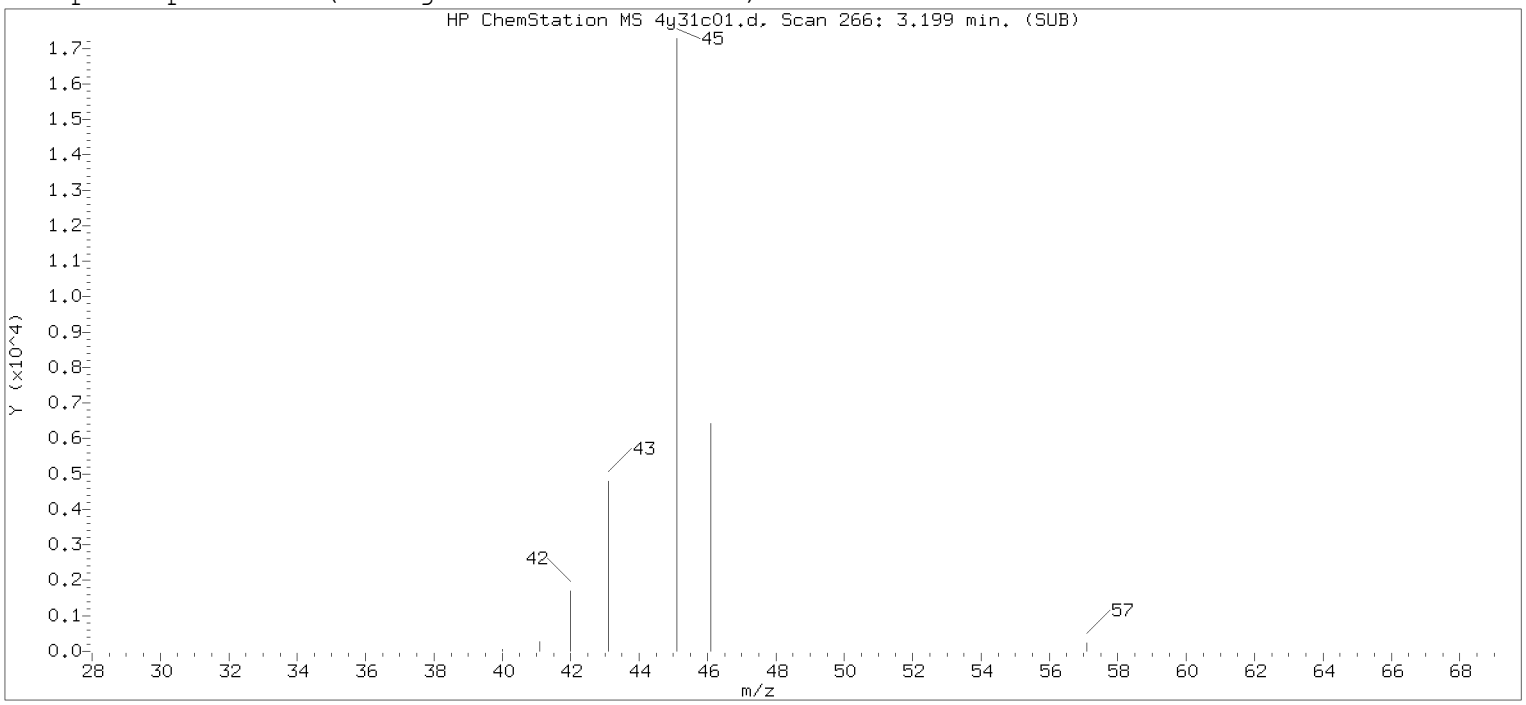
Compound Number : 13
Compound Name : Ethanol
Scan Number : 265
Retention Time (minutes): 3.193
Quant Ion : 45.00
Area (flag) : 166477M
On-Column Amount (ng) : 1303.7013
Integration start scan : 249 Integration stop scan: 339
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

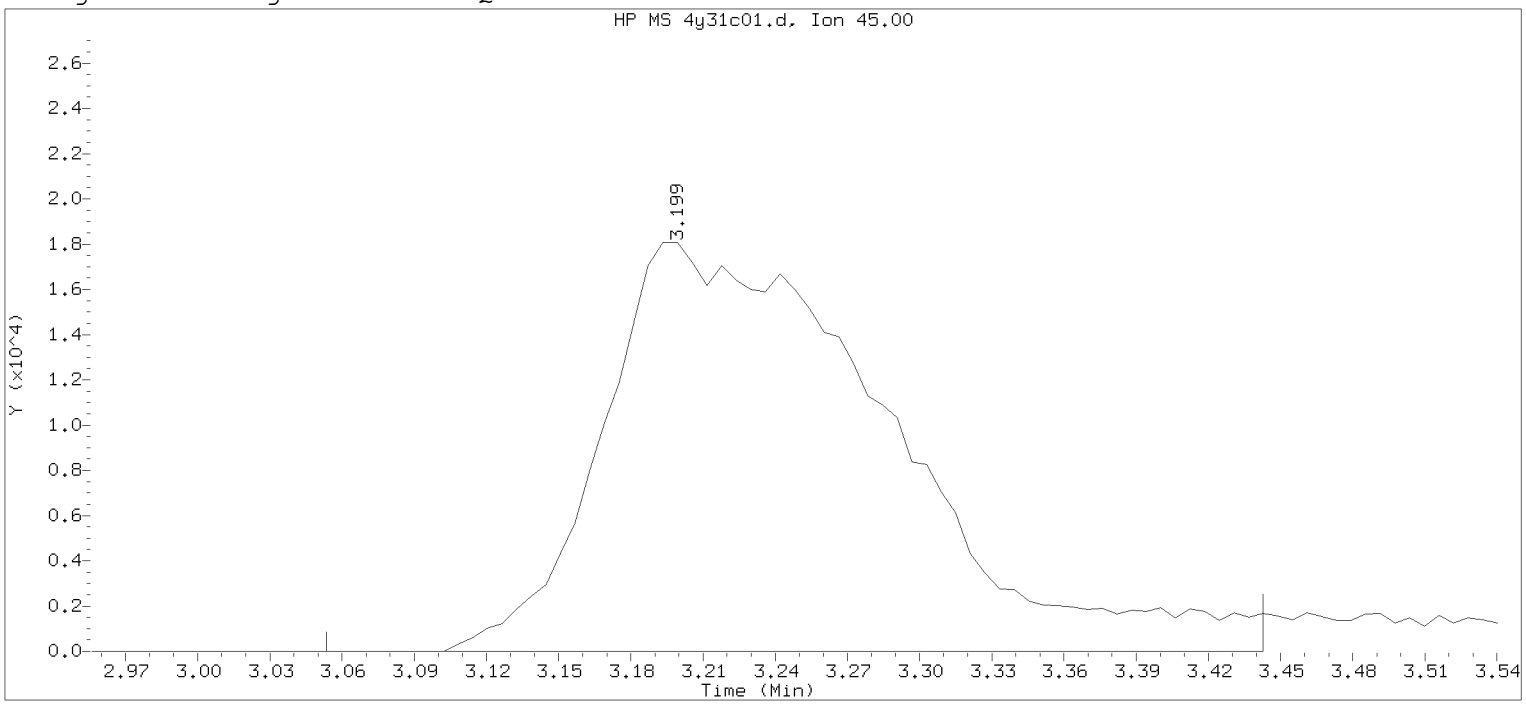
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:27.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31c01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:17 Analyst ID: amd00492

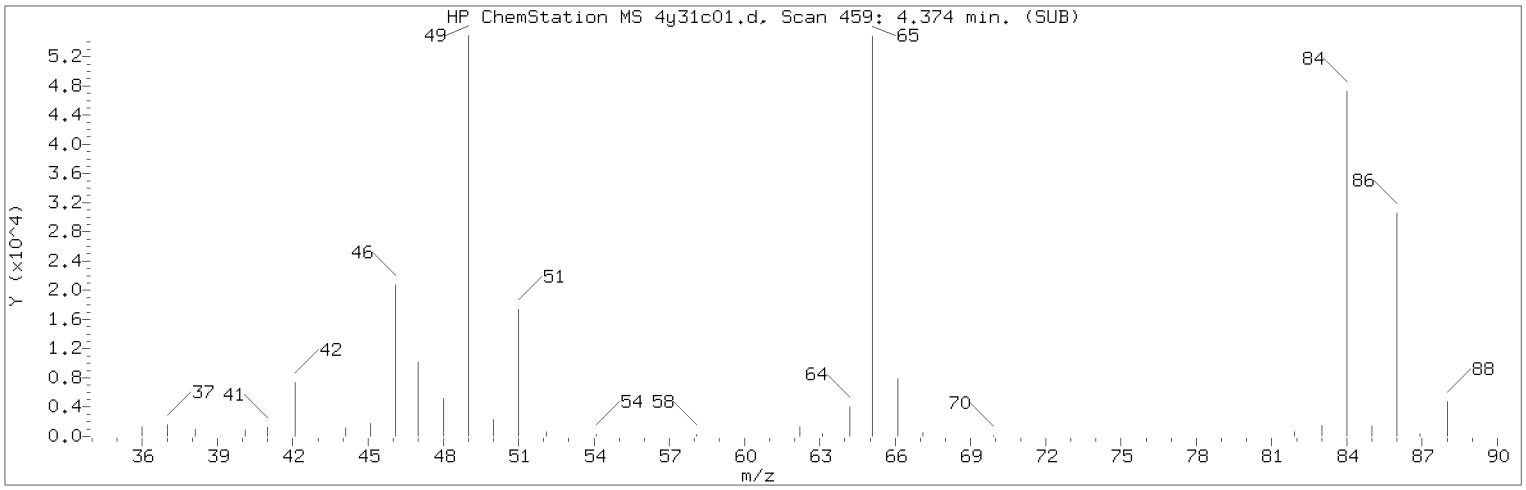
Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 31-MAY-2019 07:35
Date, time and analyst ID of latest file update: 31-May-2019 07:35 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

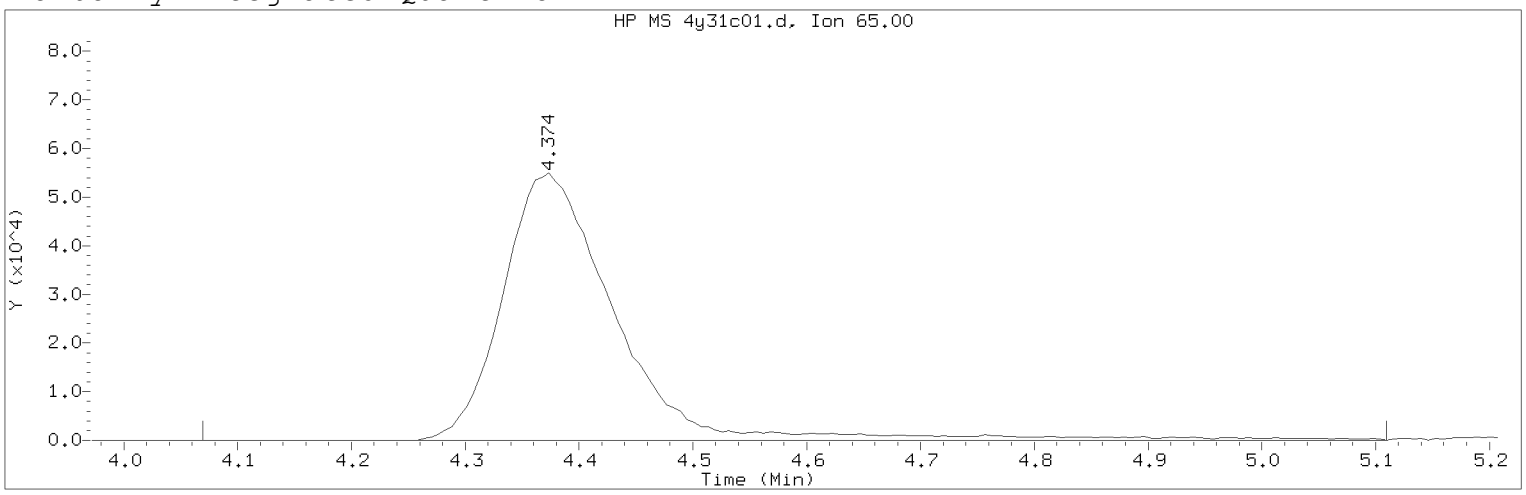
Compound Number : 13
Compound Name : Ethanol
Scan Number : 266
Retention Time (minutes): 3.199
Quant Ion : 45.00
Area : 149896
On-column Amount (ng) : 1199.7246
Integration start scan : 241 Integration stop scan: 305
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/31/2019 at 21:34.
Target 3.5 esignature user id: amd00492

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31c01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:17 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 07:42 amd00492

Sample Name: VSTD050 Lab Sample ID: VSTD050

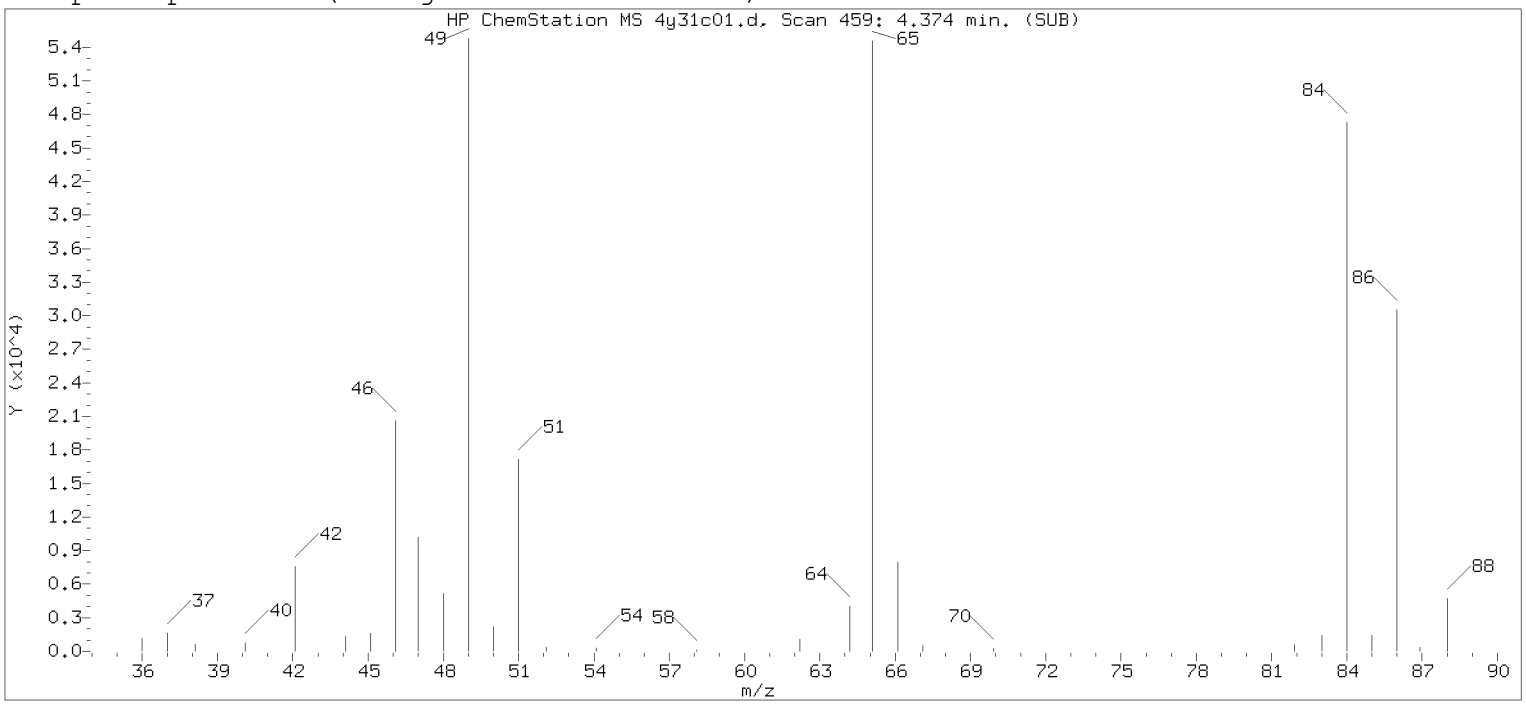
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 459
Retention Time (minutes): 4.374
Quant Ion : 65.00
Area (flag) : 379338M
On-Column Amount (ng) : 250.0000
Integration start scan : 408 Integration stop scan: 579
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

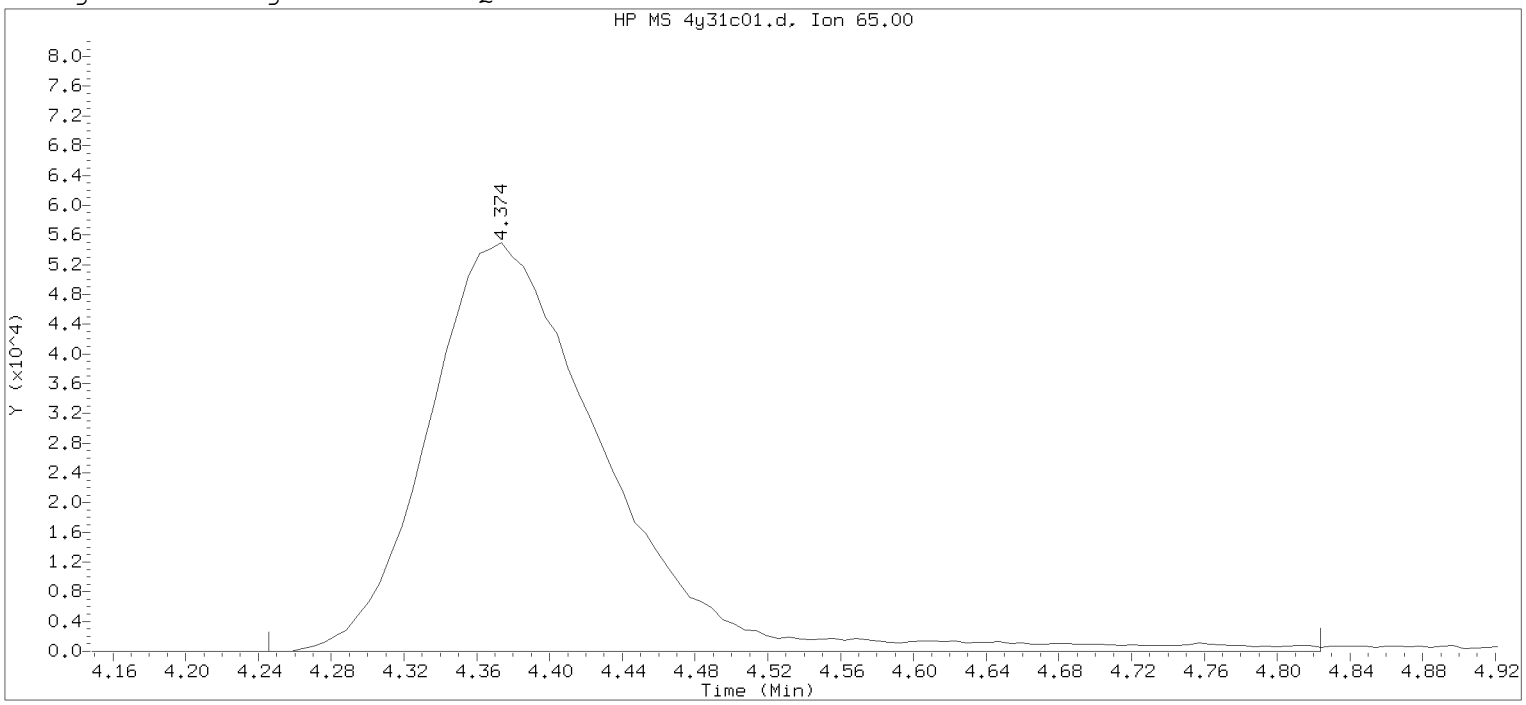
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:27.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31c01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:17 Analyst ID: amd00492

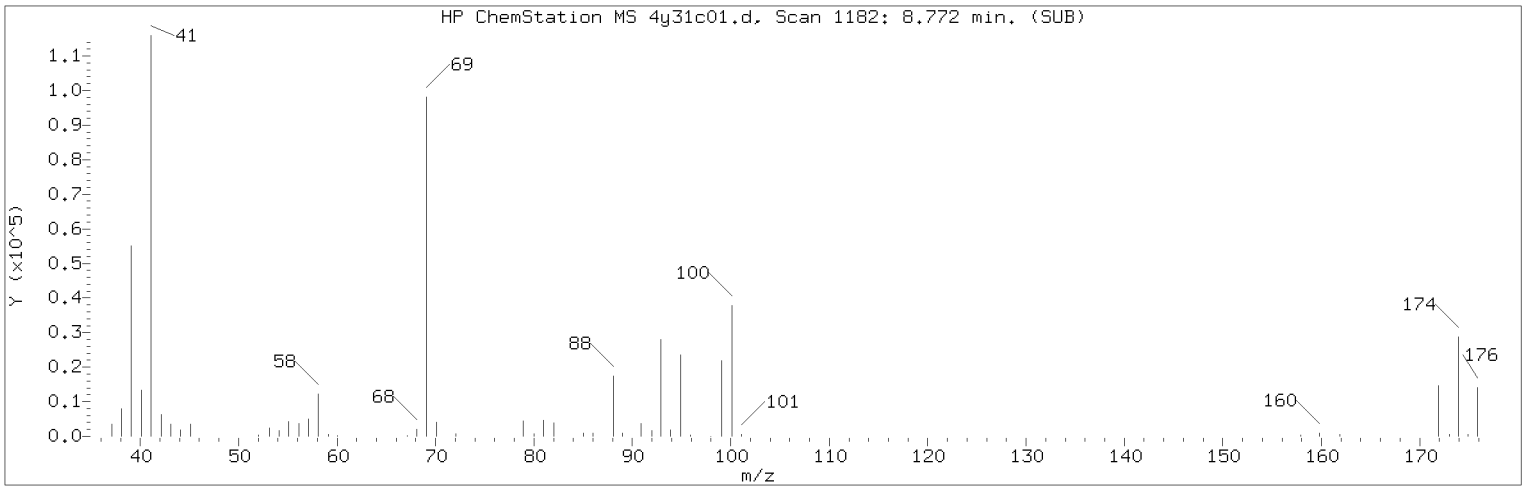
Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 31-MAY-2019 07:35
Date, time and analyst ID of latest file update: 31-May-2019 07:35 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

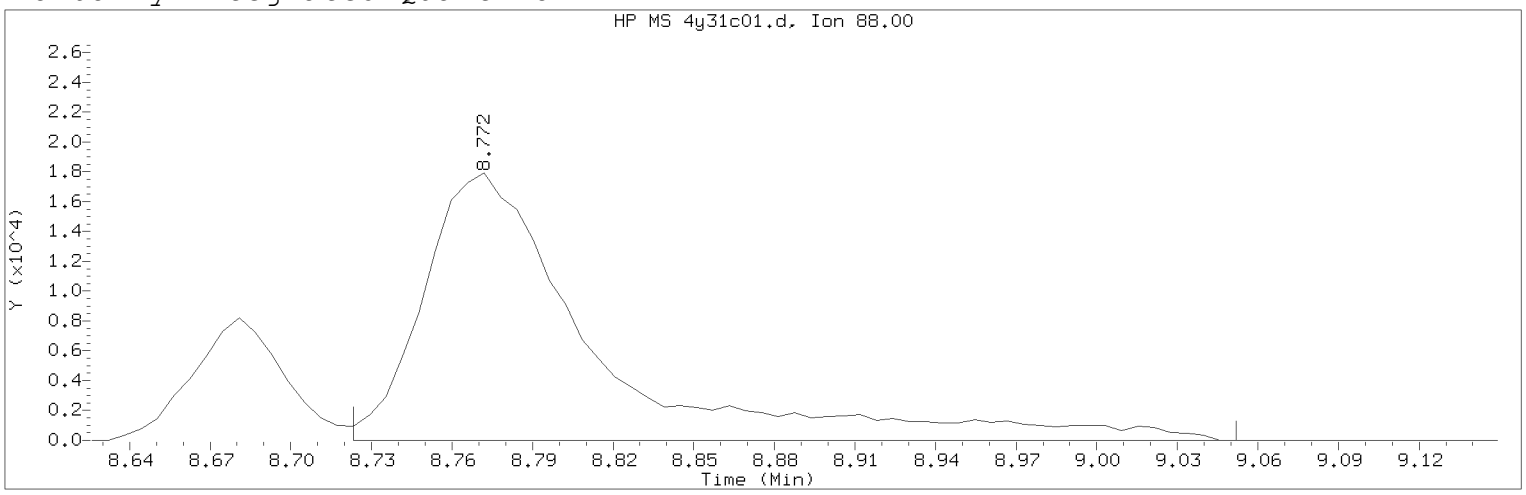
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 459
Retention Time (minutes): 4.374
Quant Ion : 65.00
Area : 371158
On-column Amount (ng) : 250.0000
Integration start scan : 437 Integration stop scan: 532
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/31/2019 at 21:34.
Target 3.5 esignature user id: dviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31c01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:17 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 07:42 amd00492

Sample Name: VSTD050 Lab Sample ID: VSTD050

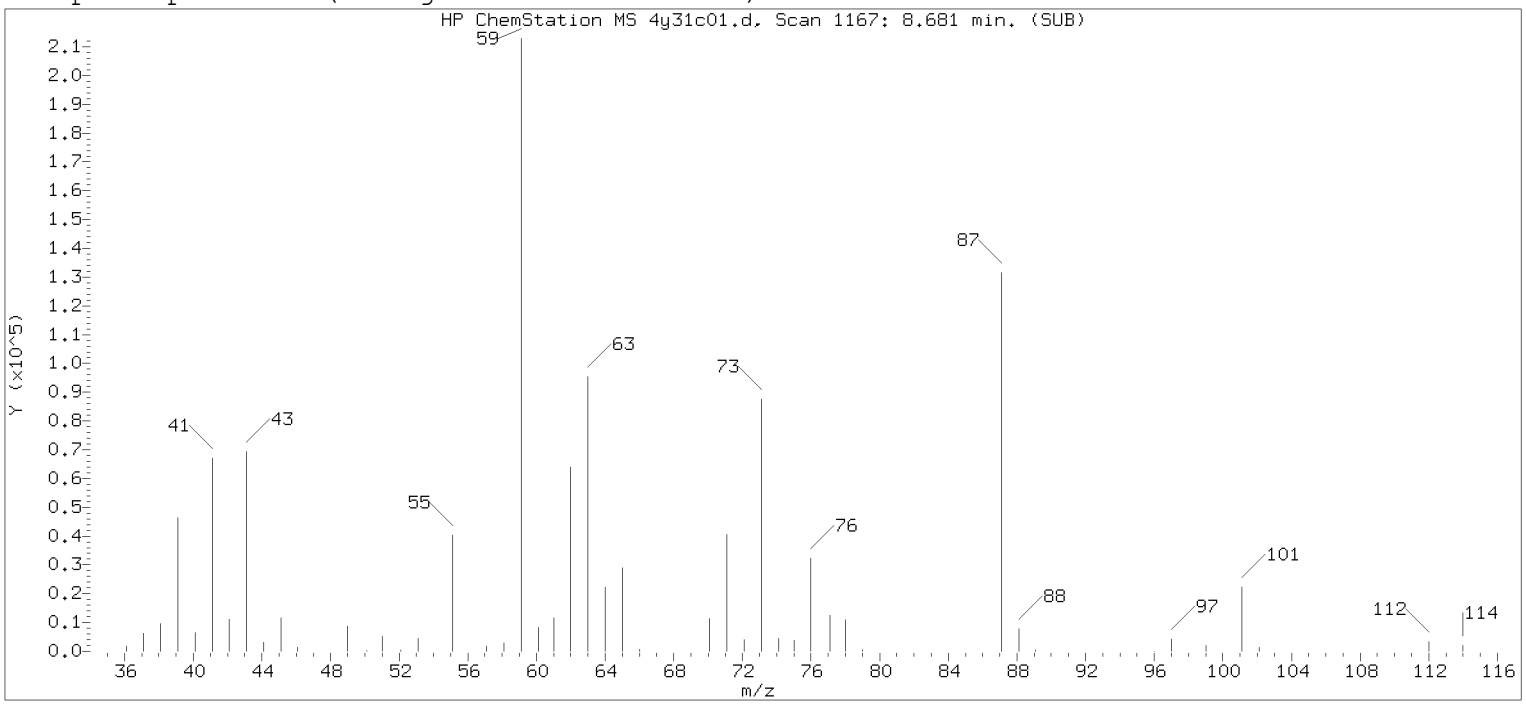
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1182
Retention Time (minutes): 8.772
Quant Ion : 88.00
Area (flag) : 79529M
On-Column Amount (ng) : 715.3837
Integration start scan : 1173 Integration stop scan: 1227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

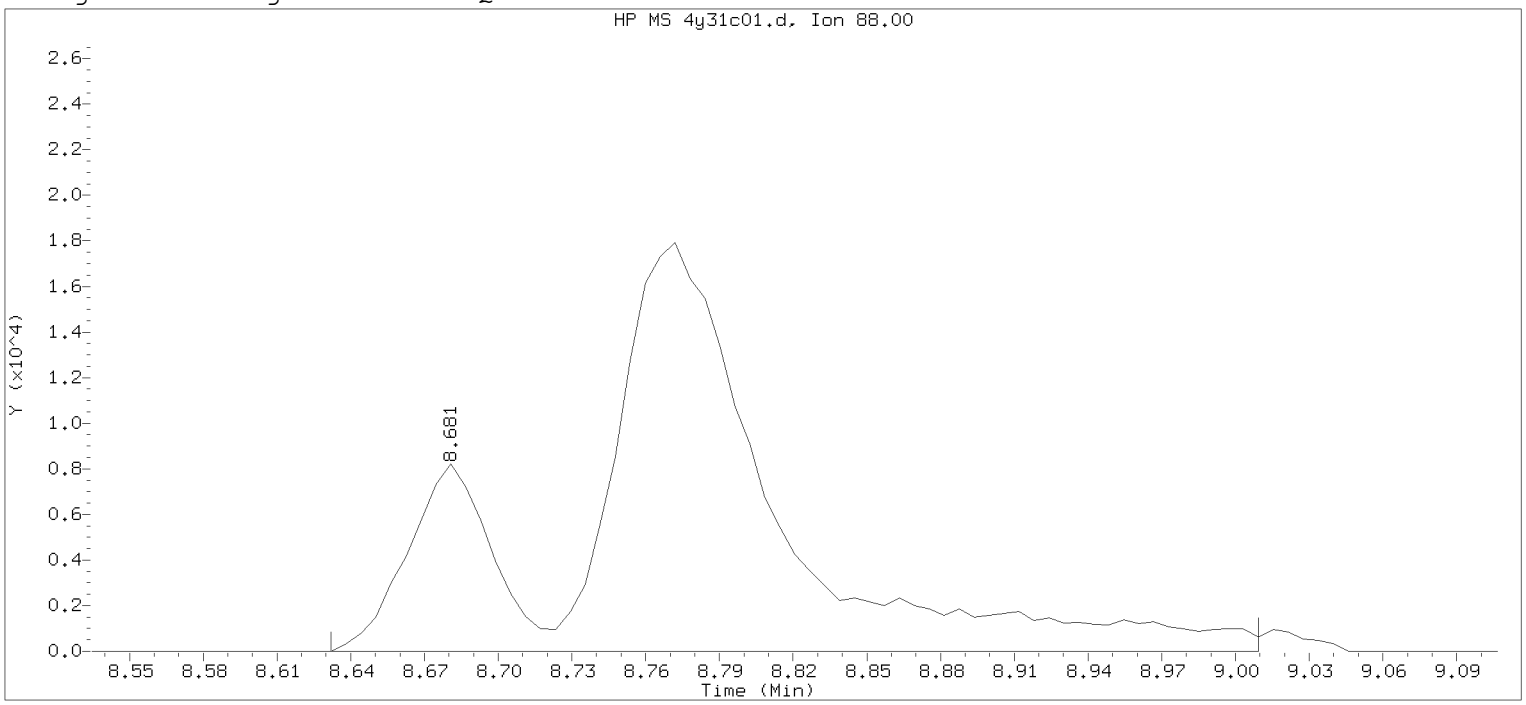
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:27.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31c01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:17 Analyst ID: amd00492

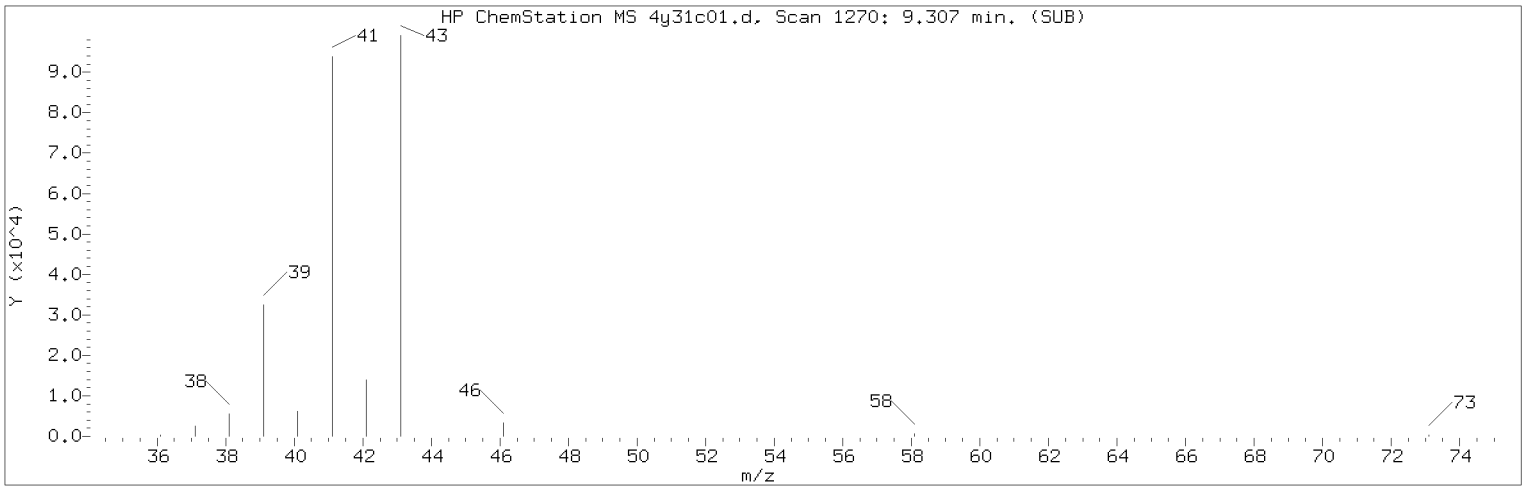
Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 31-MAY-2019 07:35
Date, time and analyst ID of latest file update: 31-May-2019 07:35 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

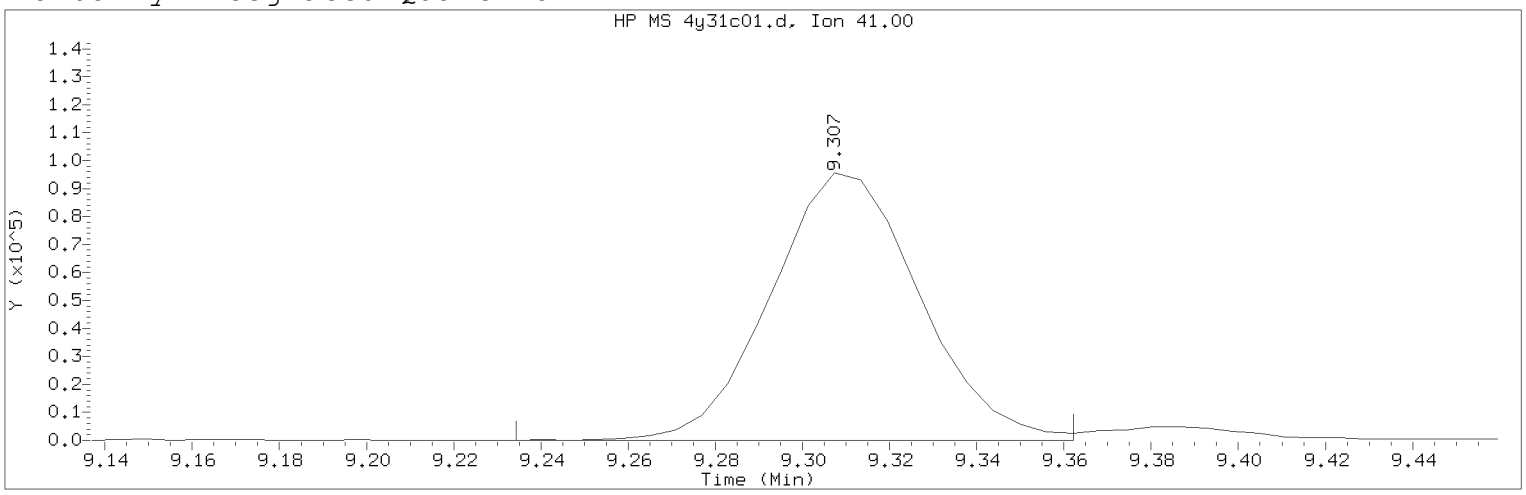
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1167		
Retention Time (minutes)	: 8.681		
Quant Ion	: 88.00		
Area	: 97581		
On-column Amount (ng)	: 897.1109		
Integration start scan	: 1158	Integration stop scan:	1220
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 05/31/2019 at 21:34.
Target 3.5 esignature user id: dviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31c01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:17 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 07:42 amd00492

Sample Name: VSTD050 Lab Sample ID: VSTD050

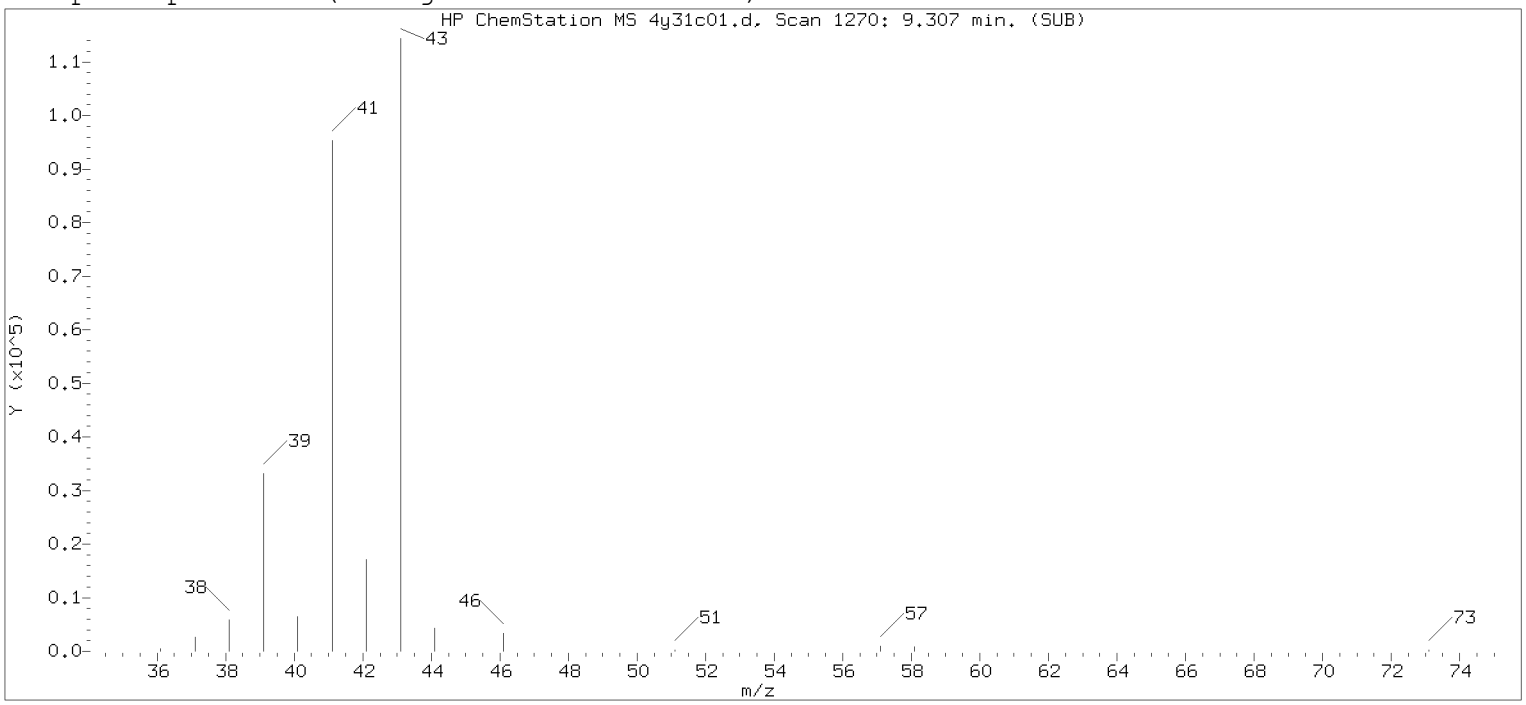
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 1270
Retention Time (minutes): 9.307
Quant Ion : 41.00
Area (flag) : 226668M
On-Column Amount (ng) : 77.0446
Integration start scan : 1257 Integration stop scan: 1278
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

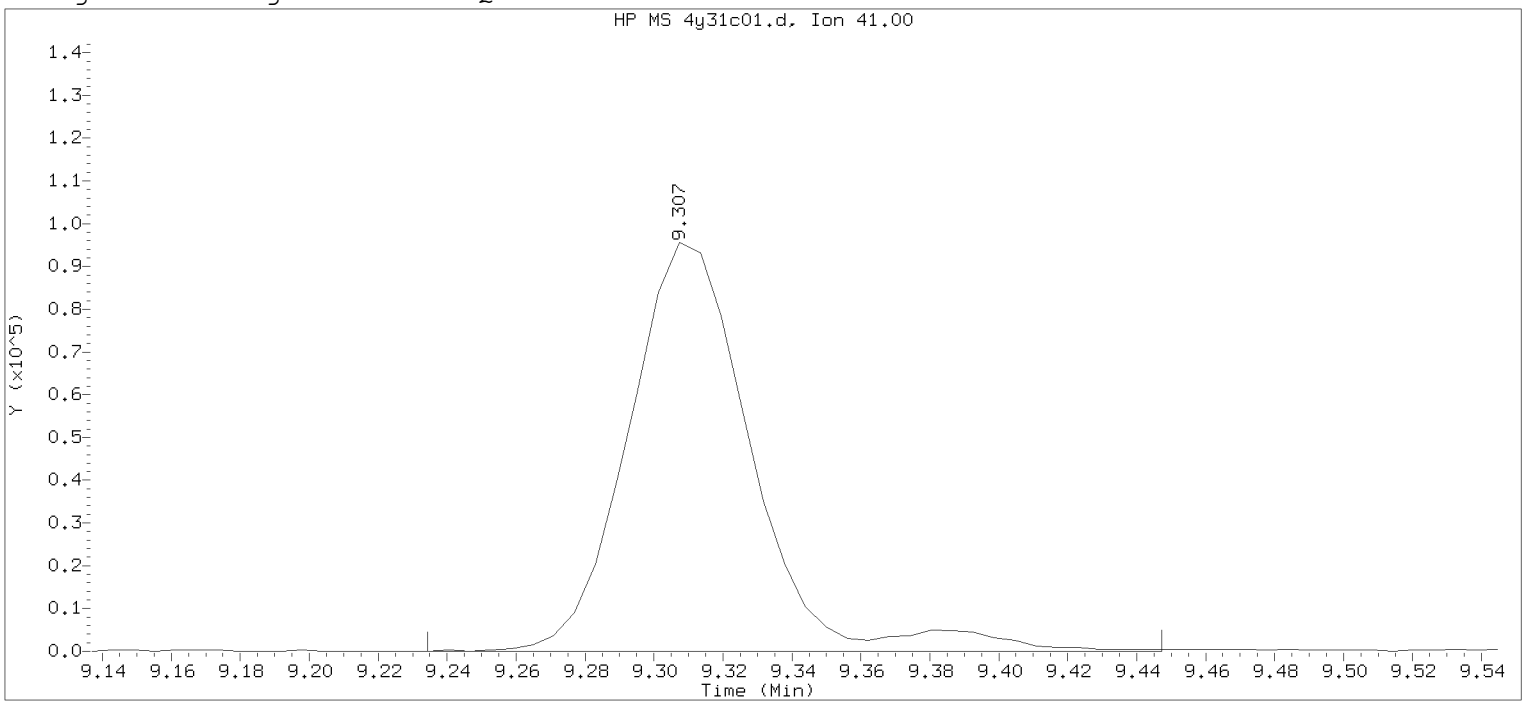
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:27.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31c01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:17 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 31-MAY-2019 07:35
Date, time and analyst ID of latest file update: 31-May-2019 07:35 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

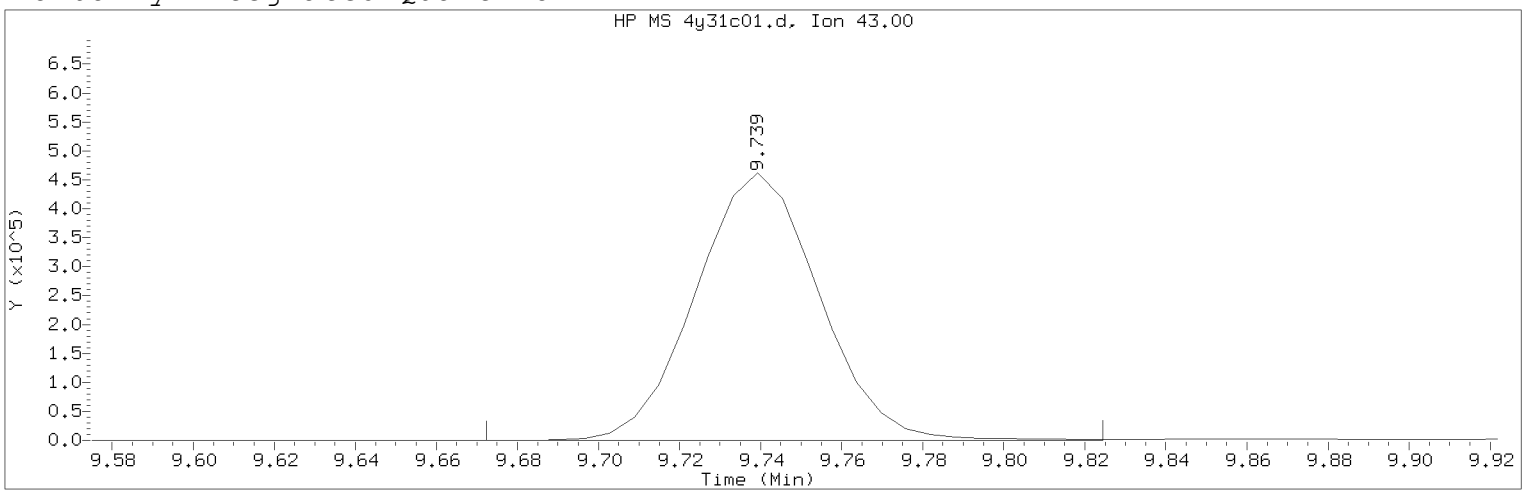
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 1270
Retention Time (minutes): 9.307
Quant Ion : 41.00
Area : 238182
On-column Amount (ng) : 80.9584
Integration start scan : 1257 Integration stop scan: 1292
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/31/2019 at 21:34.
Target 3.5 esignature user id: dviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31c01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:17 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 07:42 amd00492

Sample Name: VSTD050 Lab Sample ID: VSTD050

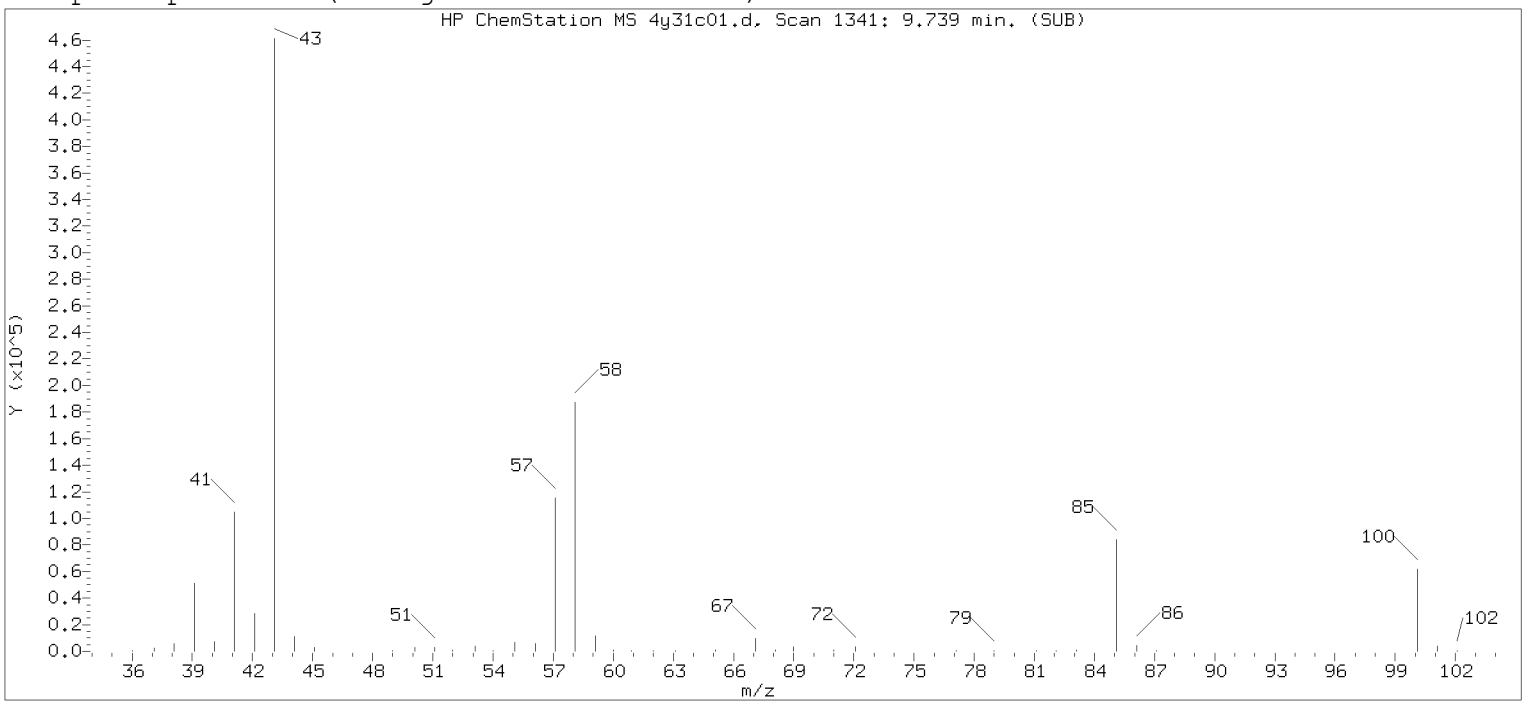
Compound Number : 82
Compound Name : 4-Methyl-2-pentanone
Scan Number : 1341
Retention Time (minutes): 9.739
Quant Ion : 43.00
Area (flag) : 975924M
On-Column Amount (ng) : 86.5370
Integration start scan : 1329 Integration stop scan: 1354
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

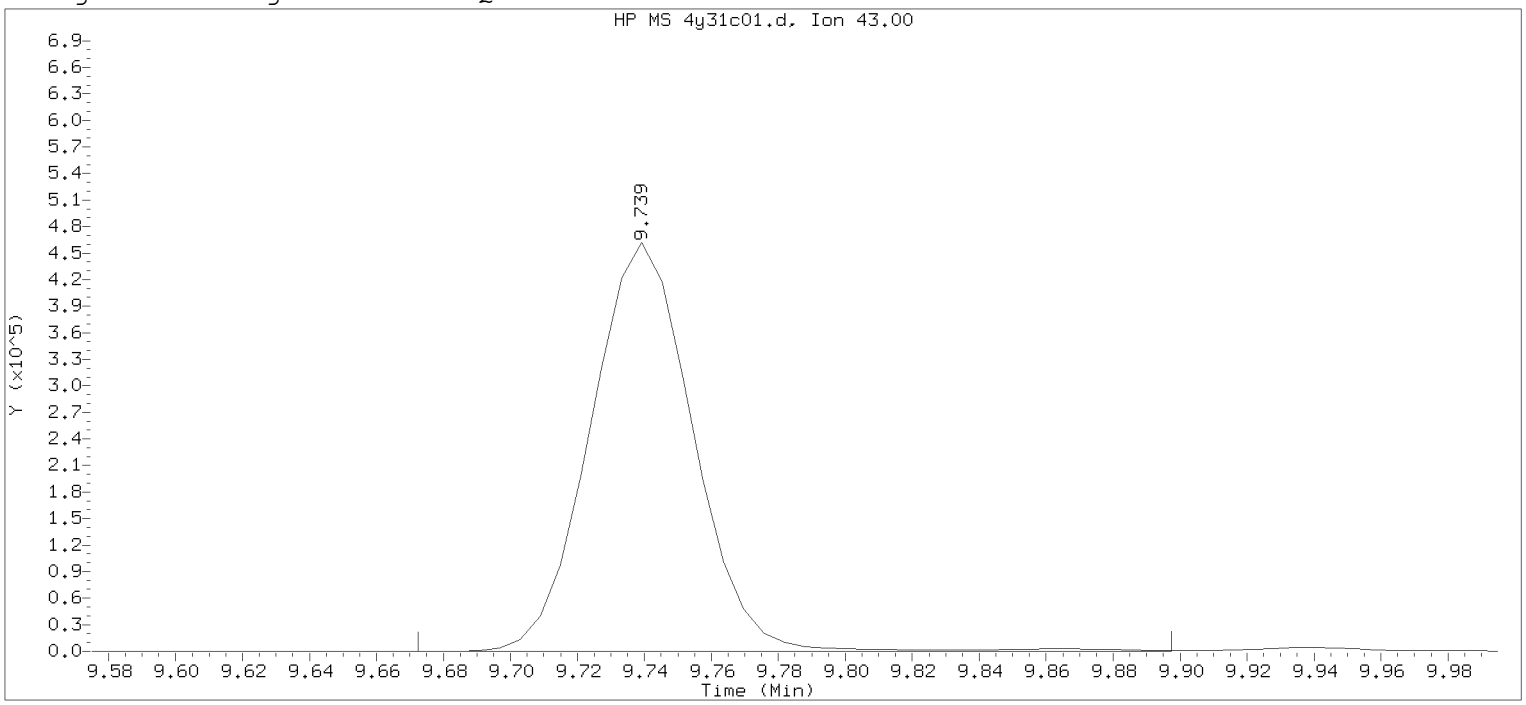
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:27.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31c01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:17 Analyst ID: amd00492

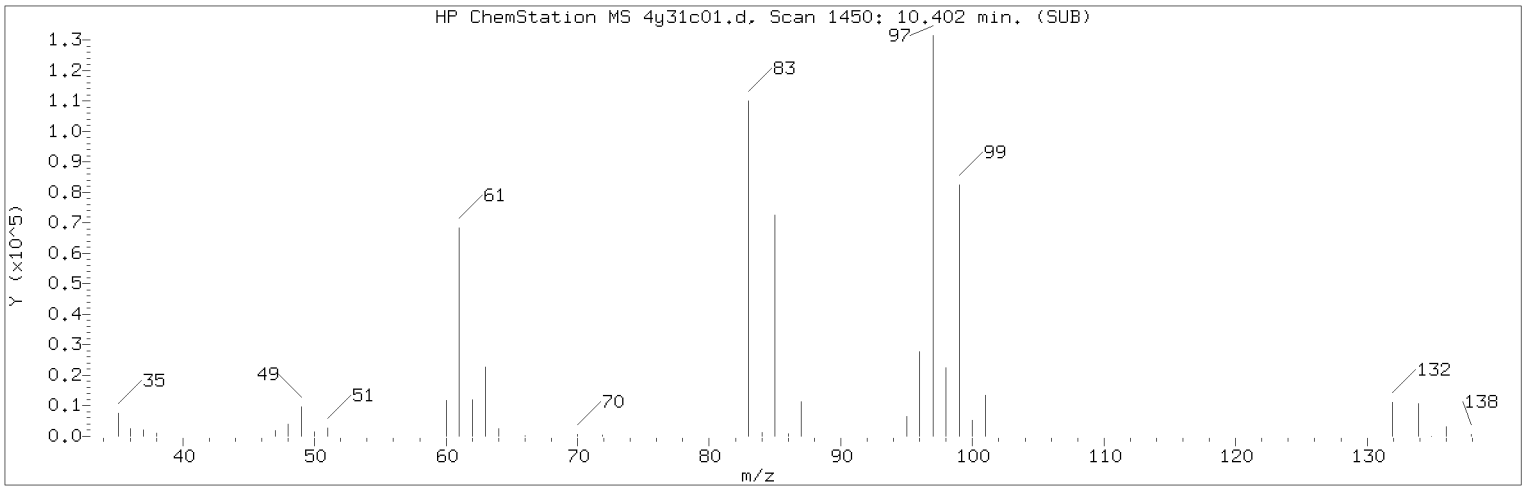
Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 31-MAY-2019 07:35
Date, time and analyst ID of latest file update: 31-May-2019 07:35 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

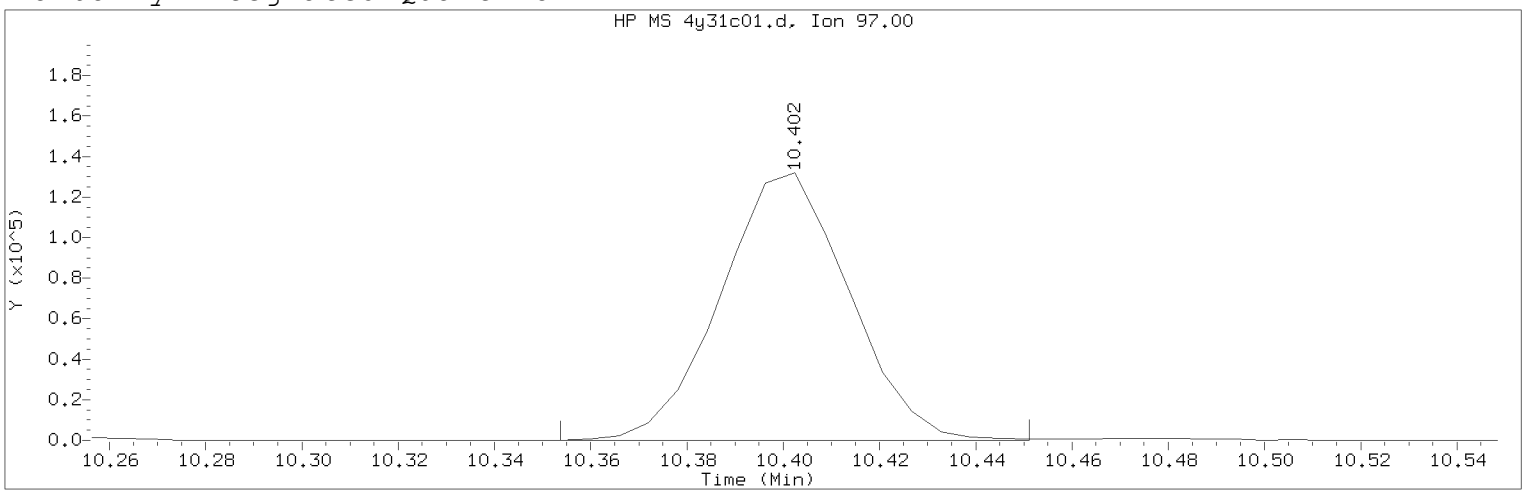
Compound Number : 82
Compound Name : 4-Methyl-2-pentanone
Scan Number : 1341
Retention Time (minutes): 9.739
Quant Ion : 43.00
Area : 983637
On-column Amount (ng) : 87.2209
Integration start scan : 1329 Integration stop scan: 1366
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv0284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31c01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:17 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 07:42 amd00492

Sample Name: VSTD050 Lab Sample ID: VSTD050

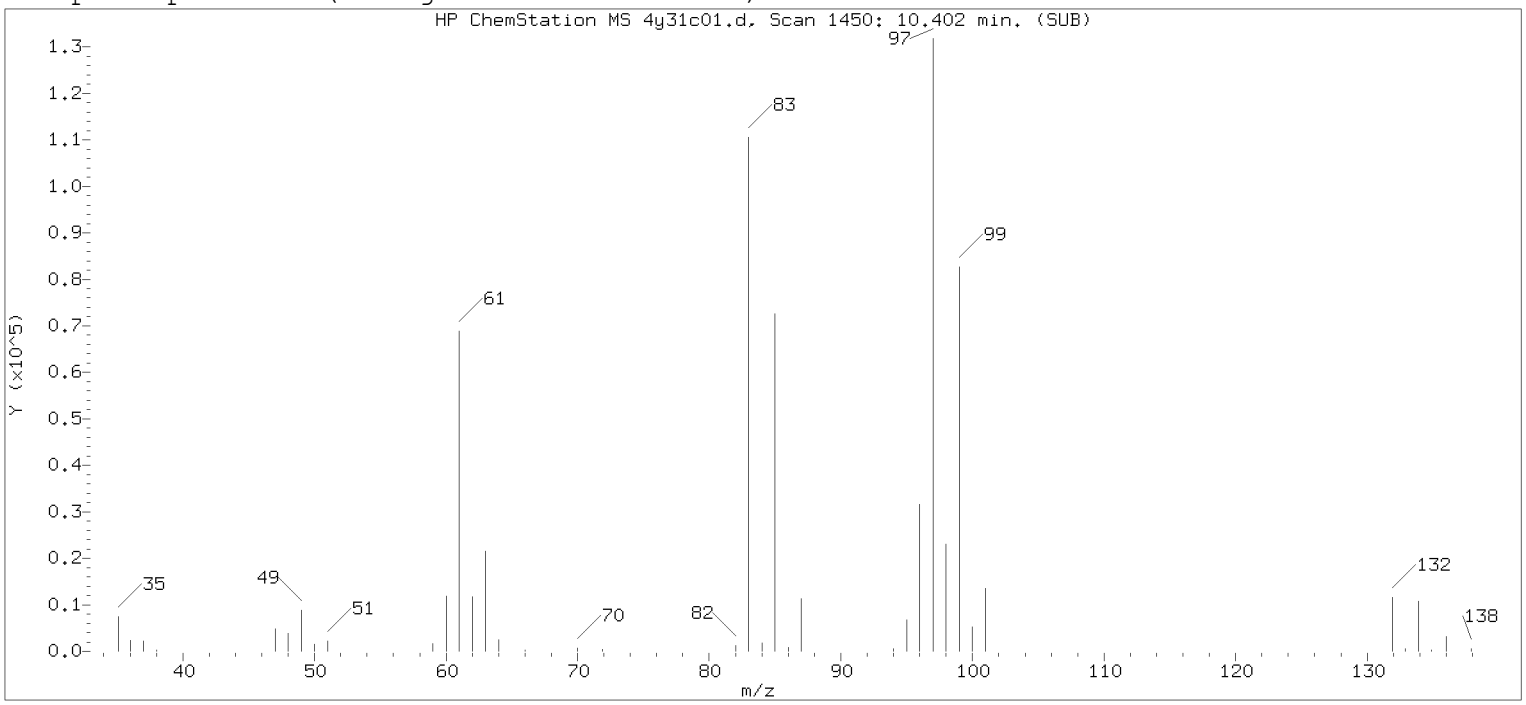
Compound Number : 92
Compound Name : 1,1,2-Trichloroethane
Scan Number : 1450
Retention Time (minutes): 10.402
Quant Ion : 97.00
Area (flag) : 244195M
On-Column Amount (ng) : 47.8398
Integration start scan : 1441 Integration stop scan: 1457
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

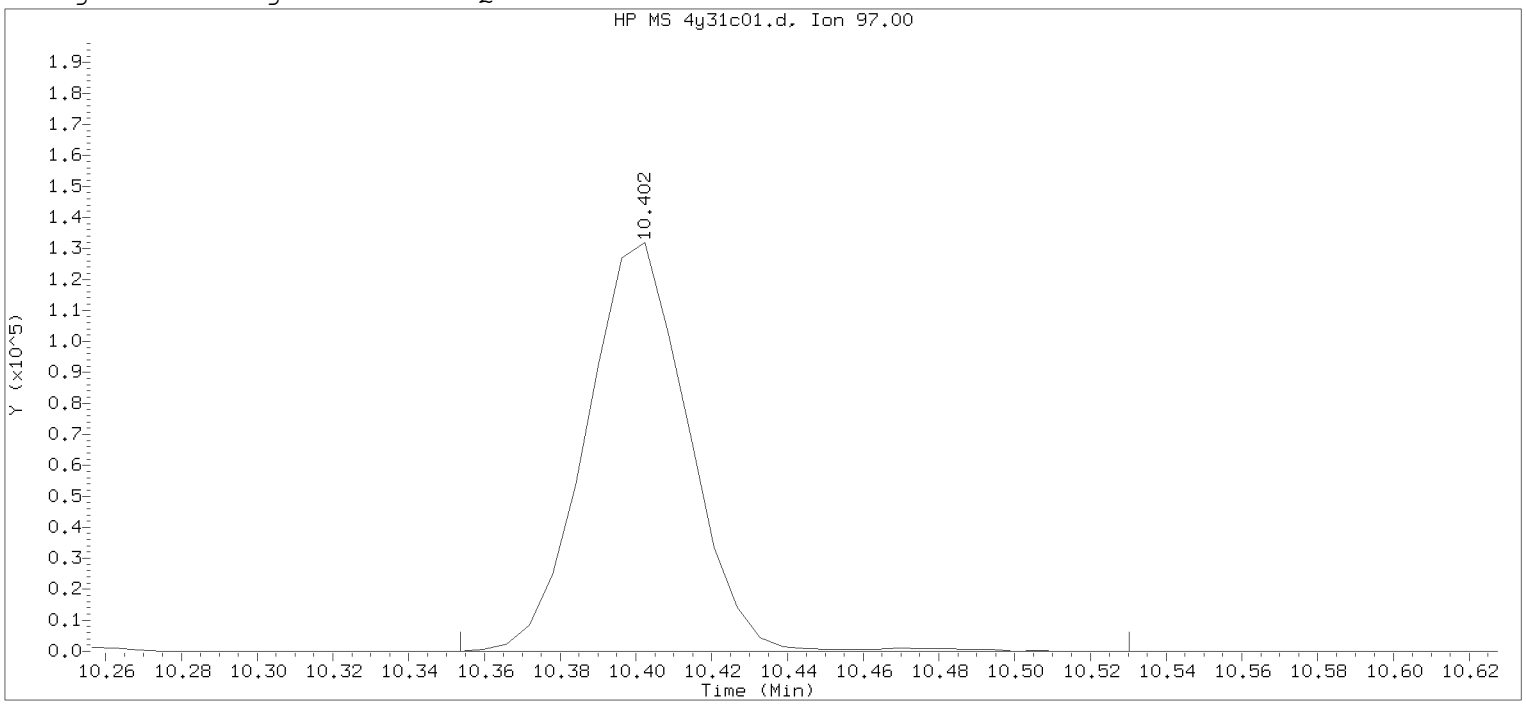
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:27.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31c01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:17 Analyst ID: amd00492

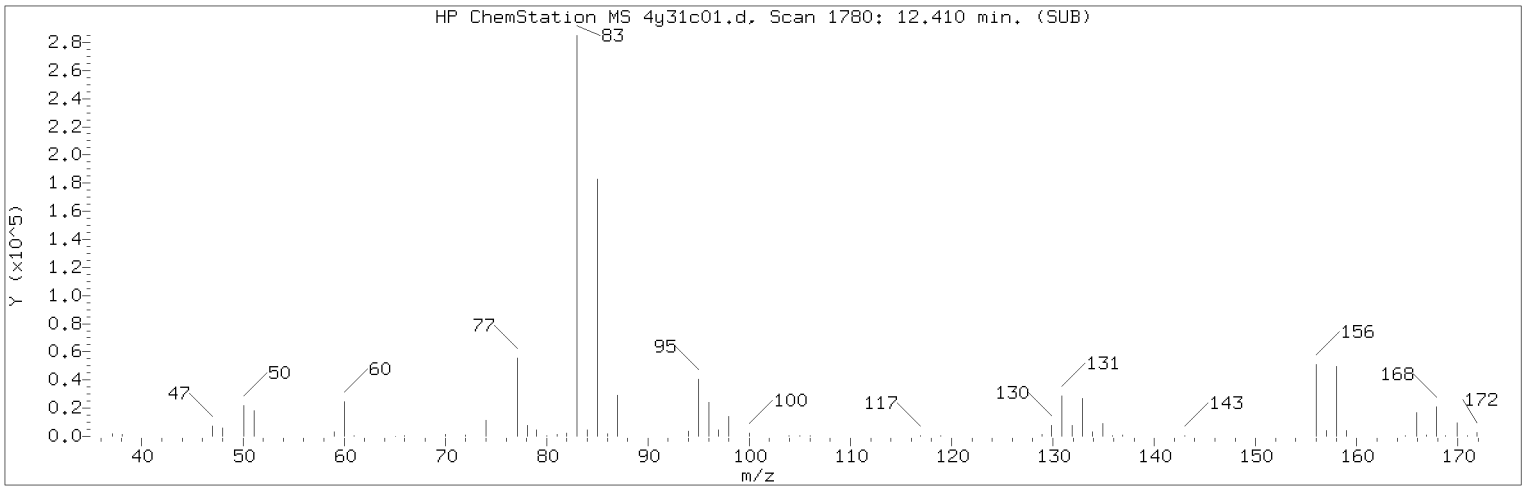
Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 31-MAY-2019 07:35
Date, time and analyst ID of latest file update: 31-May-2019 07:35 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

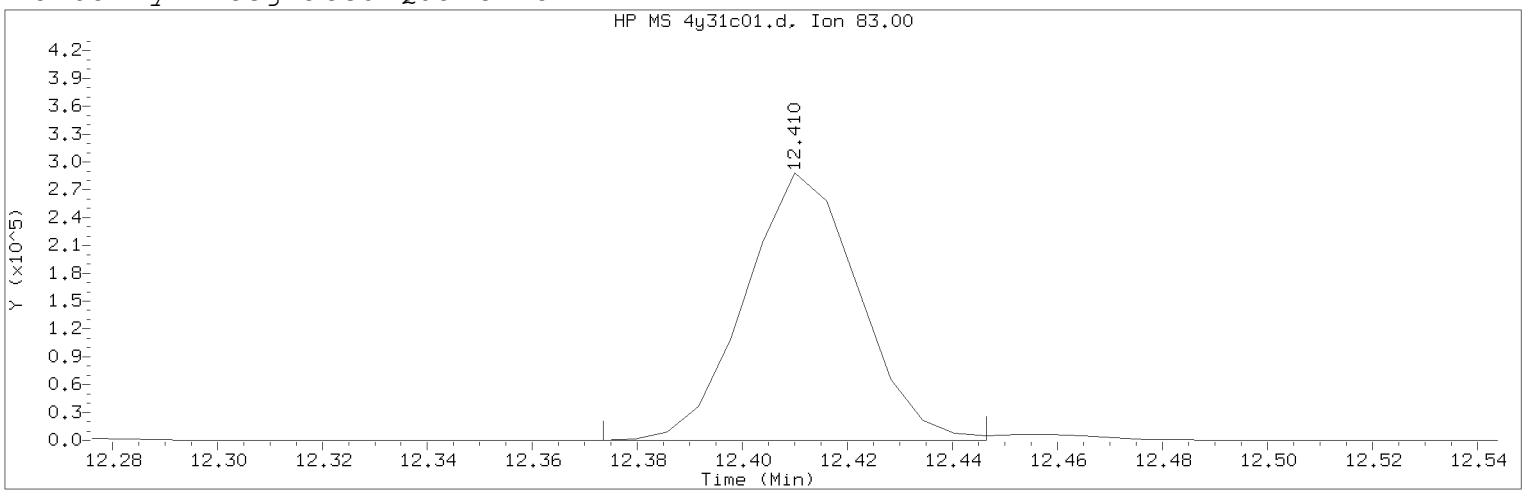
Compound Number : 92
Compound Name : 1,1,2-Trichloroethane
Scan Number : 1450
Retention Time (minutes): 10.402
Quant Ion : 97.00
Area : 246151
On-column Amount (ng) : 48.2231
Integration start scan : 1441 Integration stop scan: 1470
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/31/2019 at 21:34.
Target 3.5 esignature user id: dviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31c01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:17 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 07:42 amd00492

Sample Name: VSTD050 Lab Sample ID: VSTD050

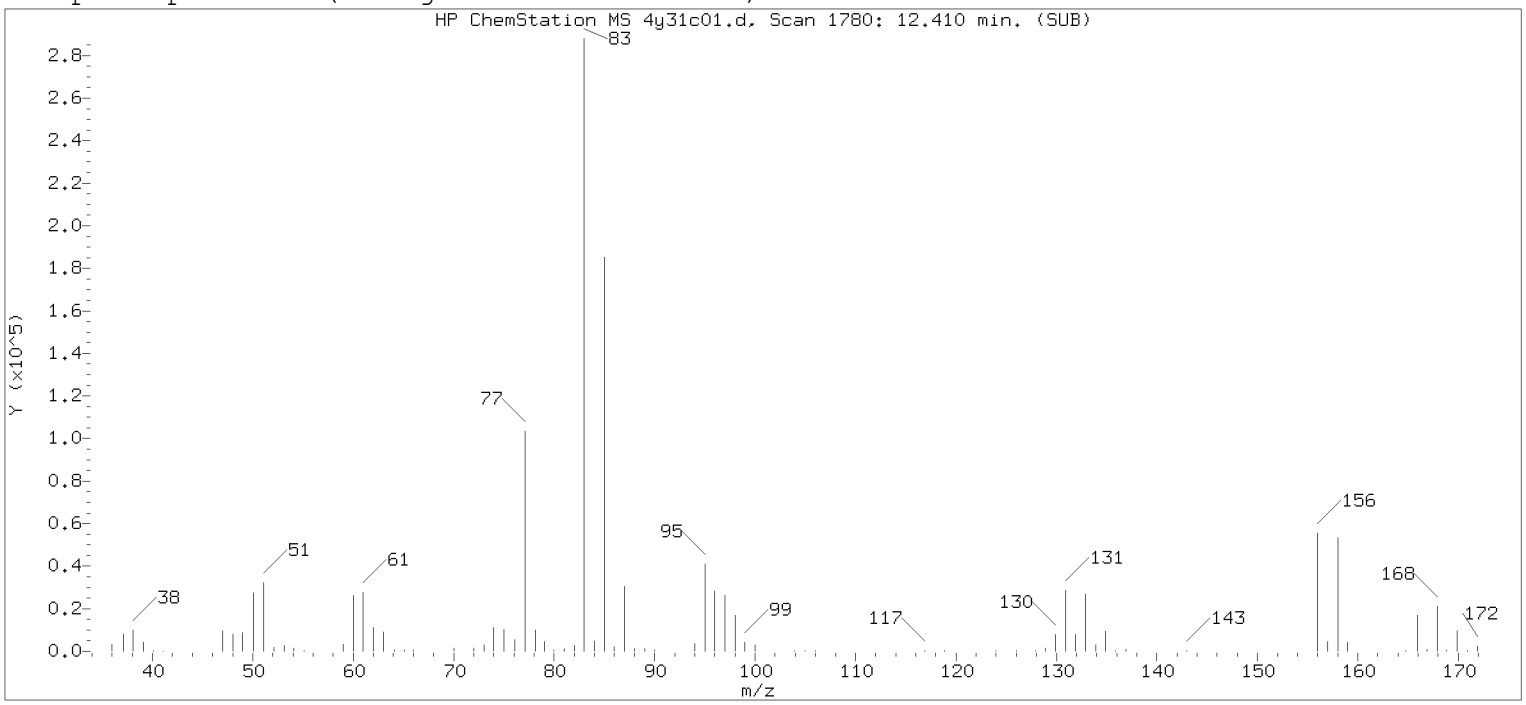
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1780
Retention Time (minutes): 12.410
Quant Ion : 83.00
Area (flag) : 429928M
On-Column Amount (ng) : 46.0204
Integration start scan : 1773 Integration stop scan: 1785
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

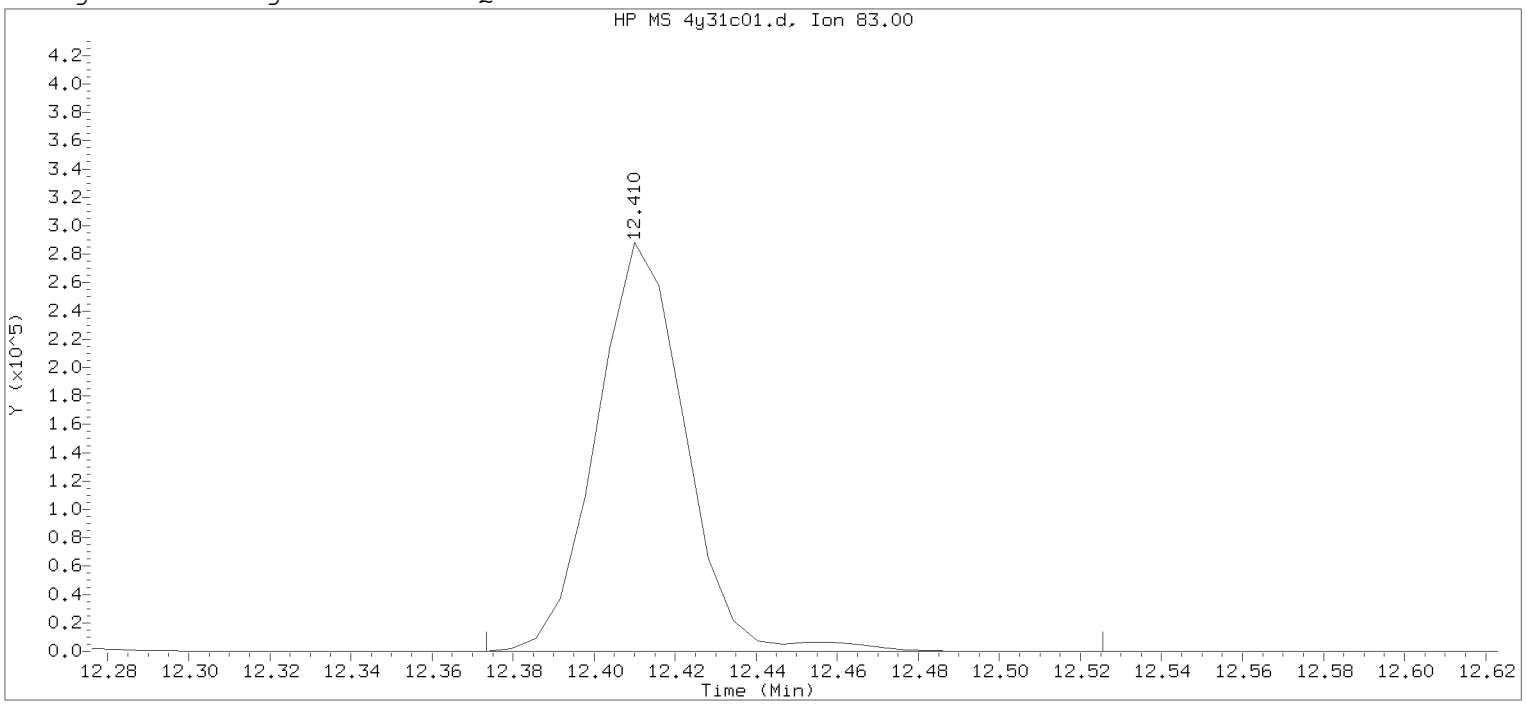
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:27.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31c01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:17 Analyst ID: amd00492

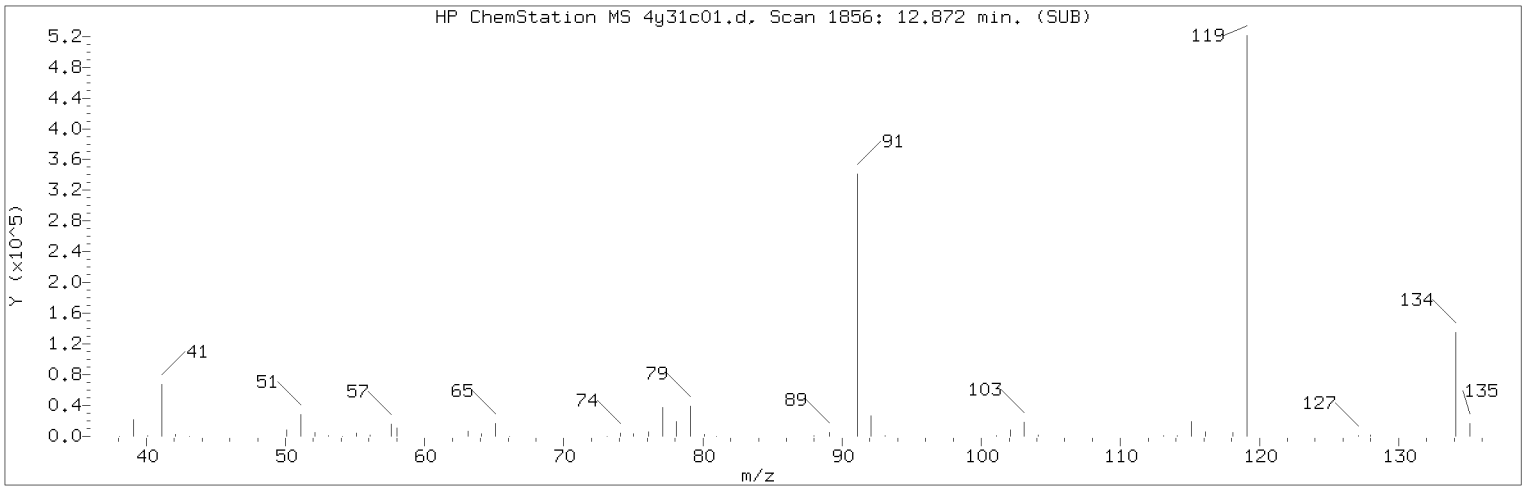
Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 31-MAY-2019 07:35
Date, time and analyst ID of latest file update: 31-May-2019 07:35 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

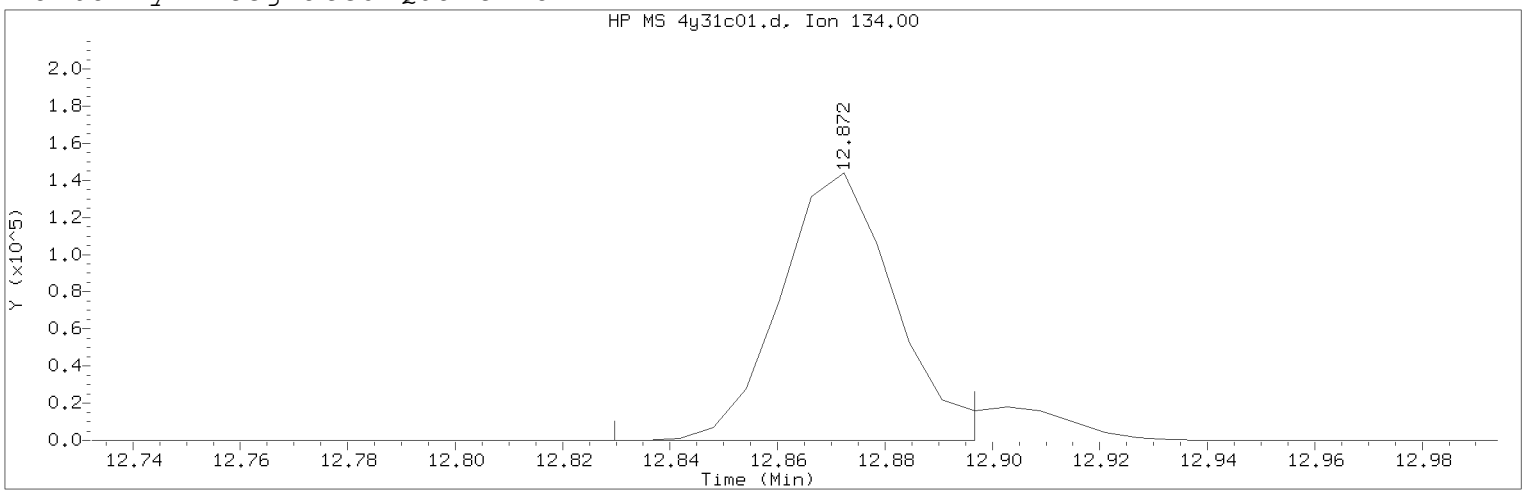
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1780
Retention Time (minutes): 12.410
Quant Ion : 83.00
Area : 437900
On-column Amount (ng) : 46.8737
Integration start scan : 1773 Integration stop scan: 1798
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/31/2019 at 21:34.
Target 3.5 esignature user id: dviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31c01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:17 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 07:42 amd00492

Sample Name: VSTD050 Lab Sample ID: VSTD050

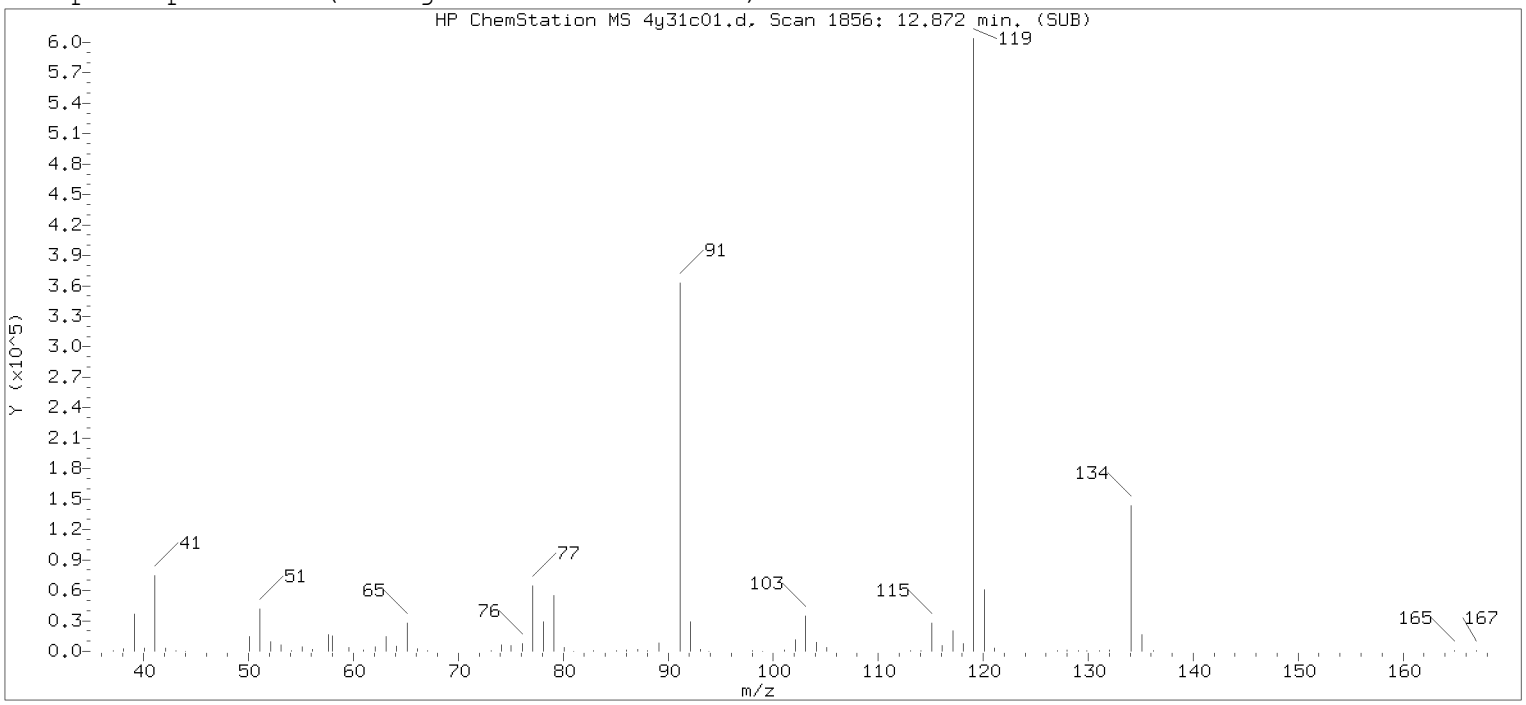
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1856
Retention Time (minutes): 12.872
Quant Ion : 134.00
Area (flag) : 212093M
On-Column Amount (ng) : 45.7586
Integration start scan : 1848 Integration stop scan: 1859
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

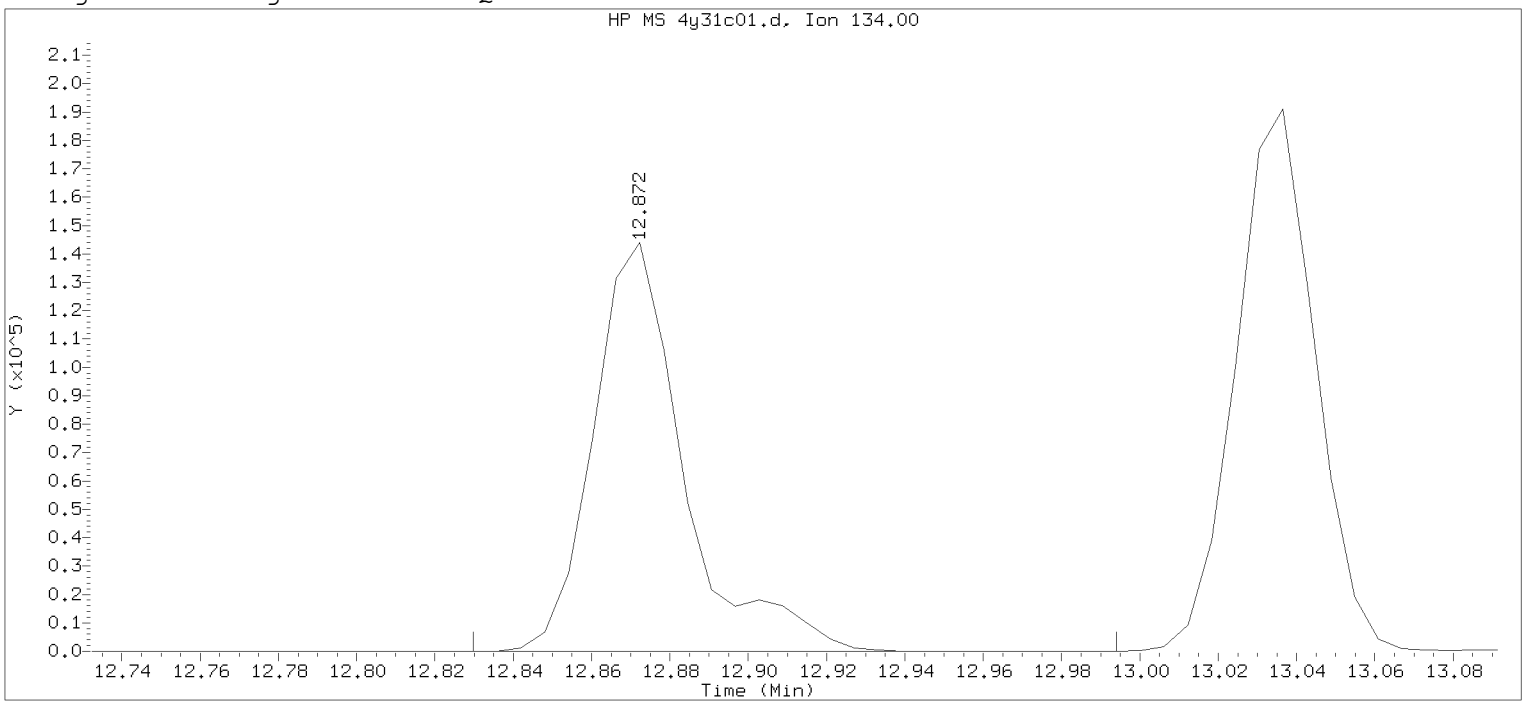
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:27.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31c01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:17 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 31-MAY-2019 07:35
Date, time and analyst ID of latest file update: 31-May-2019 07:35 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1856
Retention Time (minutes): 12.872
Quant Ion : 134.00
Area : 230263
On-column Amount (ng) : 49.6789
Integration start scan : 1848 Integration stop scan: 1875
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/31/2019 at 21:34.
Target 3.5 esignature user id: dviray

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

MDL440

Data file: /chem/HP23297.i/19may30b.b/4y30m41.d
Injection date and time: **30-MAY-2019 19:57**
Data file Sample Info. Line: MDL440;MDL440;1;3;MDL/LOQ;;;;4y30b41;
Instrument ID: **HP23297.i** Batch: **4191502AA**
Date, time and analyst ID of latest file update: 30-May-2019 21:09 dvv10203

Blank Data file reference: **/chem/HP23297.i/19may30b.b/4y30b41.d**

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: **MDL440**
Calibration date and time (Last Method Edit): 30-MAY-2019 19:29
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may30b.b/4y30c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.368(0.006)	458	65	381585 (-4)	250.00	
66) Fluorobenzene	7.866(0.006)	1033	96	1133098 (0)	50.00	
100) Chlorobenzene-d5	11.309(0.000)	1599	117	900351 (-1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189(0.000)	1908	152	490657 (-2)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977(-0.001)	113	270496	48.430	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434(0.000)	102	69339	50.808	102%		80 - 120
83) Toluene-d8	(3)	9.867(0.000)	98	1154062	49.942	100%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.307(0.000)	95	418787	47.547	95%		80 - 120

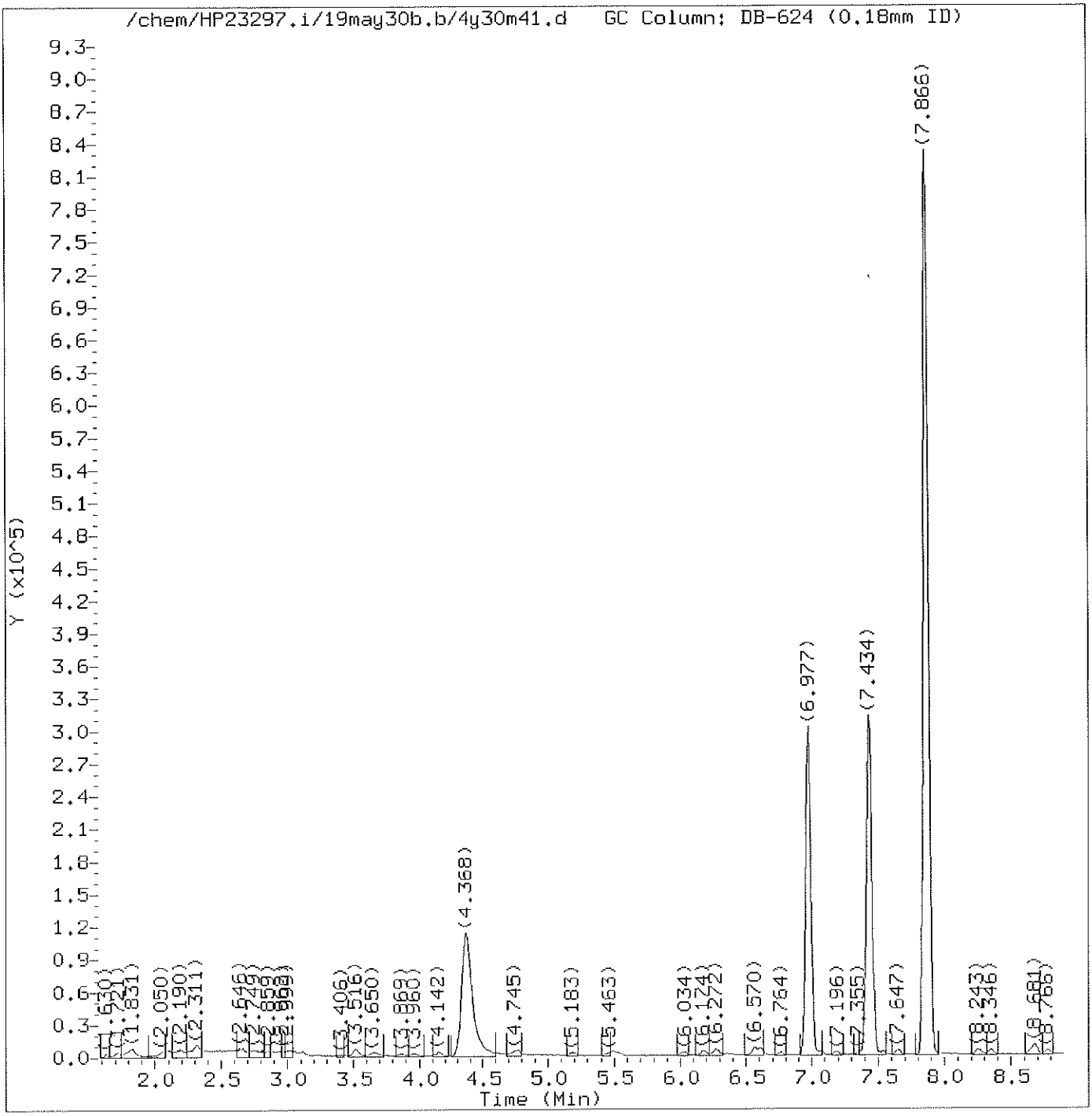
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
12) Trichlorofluoromethane	(2)	3.054(-0.000)	101	2024M	0.204	0.20		J	0.2	1

M = Compound was manually integrated.

Total number of targets = 1

Digitally signed by Don V. Viray on 05/30/2019 at 21:10. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/31/2019 at 12:00. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

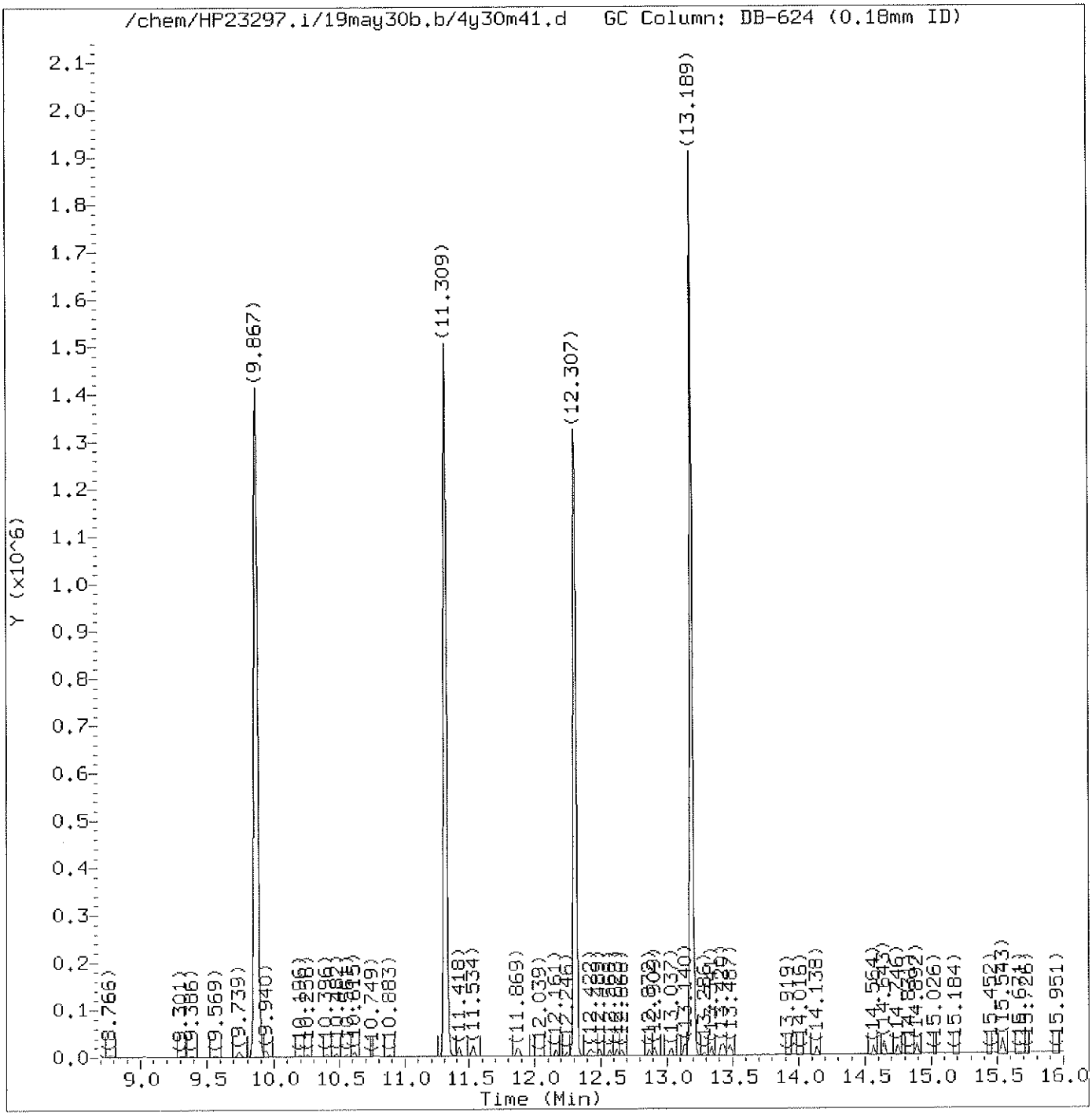
Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30m41.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:57 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: MDL440
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 21:09 dvv10203

Sample Name: MDL440 Lab Sample ID: MDL440

Digitally signed by Don V. Viray
on 05/30/2019 at 21:10.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30m41.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:57 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: MDL440
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 21:09 dvv10203

Sample Name: MDL440 Lab Sample ID: MDL440

Digitally signed by Don V. Viray
on 05/30/2019 at 21:10.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30m41.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:57 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: MDL440
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 21:09 dvv10203

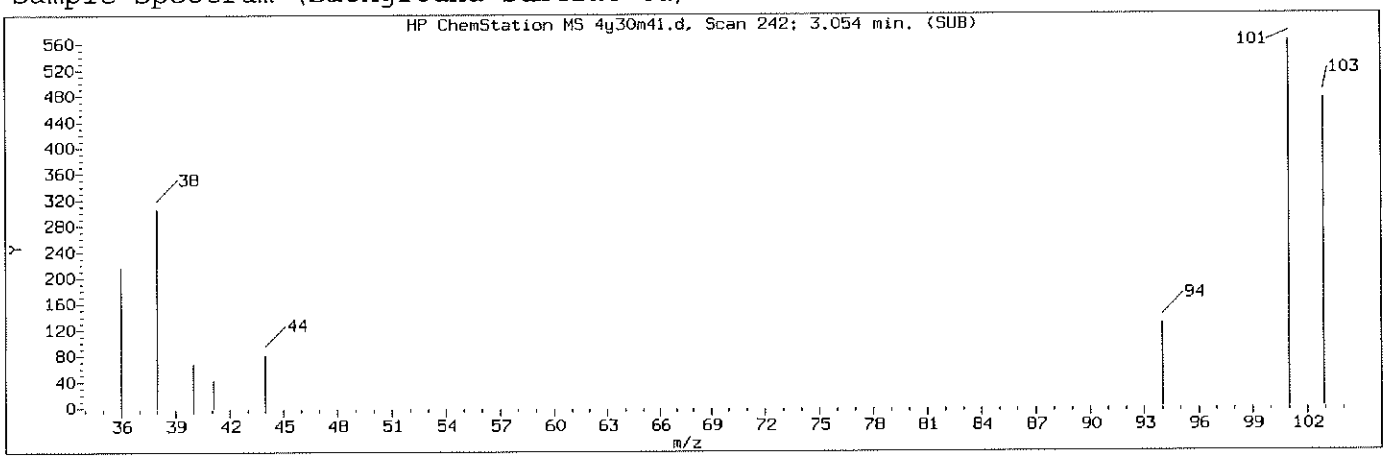
Sample Name: MDL440 Lab Sample ID: MDL440

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
12) Trichlorofluoromethane	(2)	3.054	101	2024M	0.204
29)*t-Butyl alcohol-d10	(1)	4.368	65	381585	250.000
52)$Dibromofluoromethane	(2)	6.977	113	270496	48.430
57)$1,2-Dichloroethane-d4	(2)	7.434	102	69339	50.808
66)*Fluorobenzene	(2)	7.866	96	1133098	50.000
83)$Toluene-d8	(3)	9.867	98	1154062	49.942
100)*Chlorobenzene-d5	(3)	11.309	117	900351	50.000
114)$4-Bromofluorobenzene	(3)	12.307	95	418787	47.547
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	490657	50.000

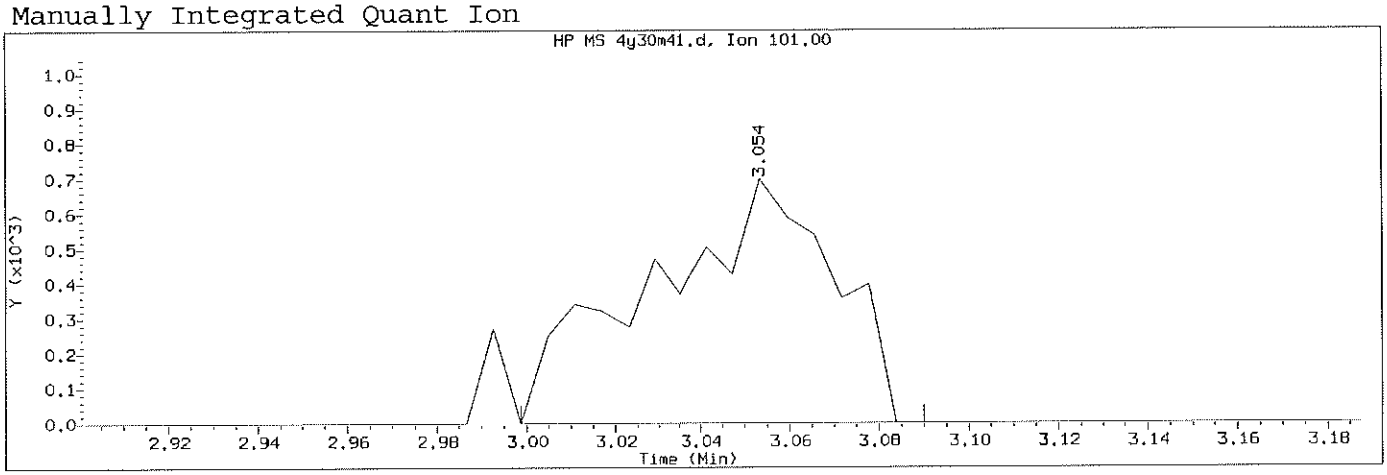
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/30/2019 at 21:10.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may30b.b/4y30m41.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:57 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: MDL440
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 21:09 dvv10203

Sample Name: MDL440 Lab Sample ID: MDL440

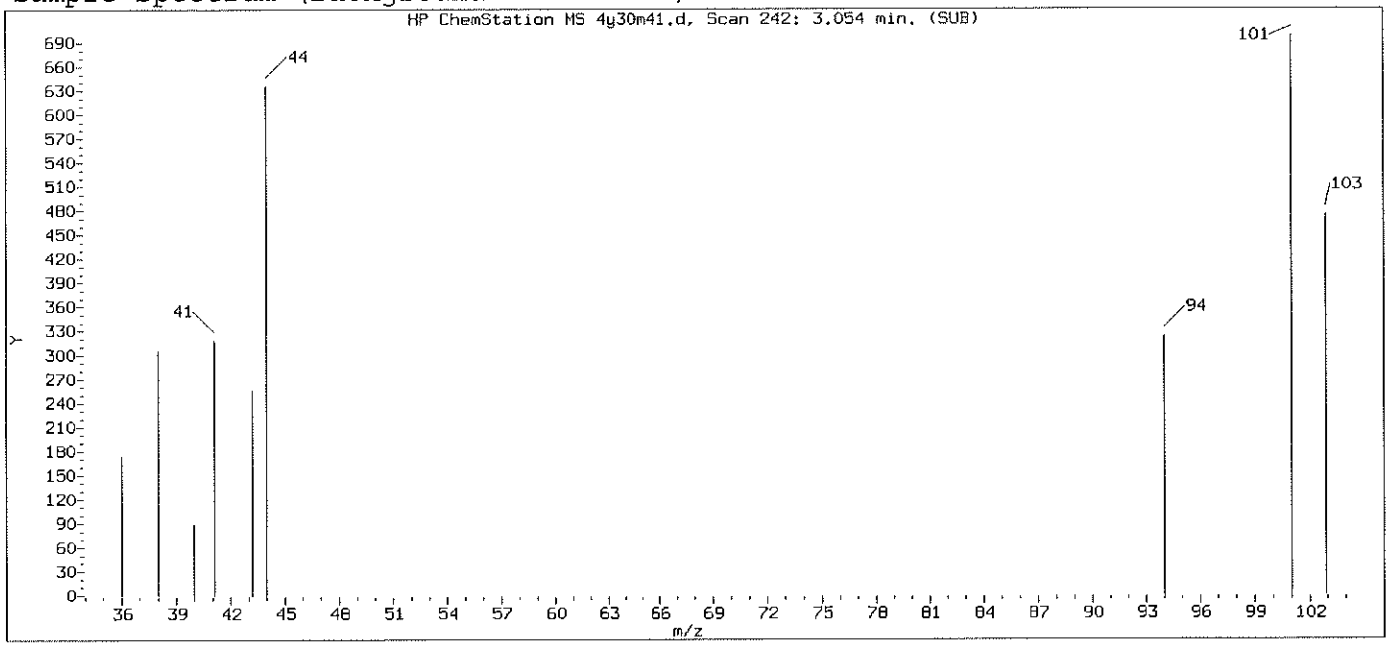
Compound Number : 12
Compound Name : Trichlorofluoromethane
Scan Number : 242
Retention Time (minutes): 3.054
Quant Ion : 101.00
Area (flag) : 2024M
On-Column Amount (ng) : 0.2040
Integration start scan : 232 Integration stop scan: 247
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

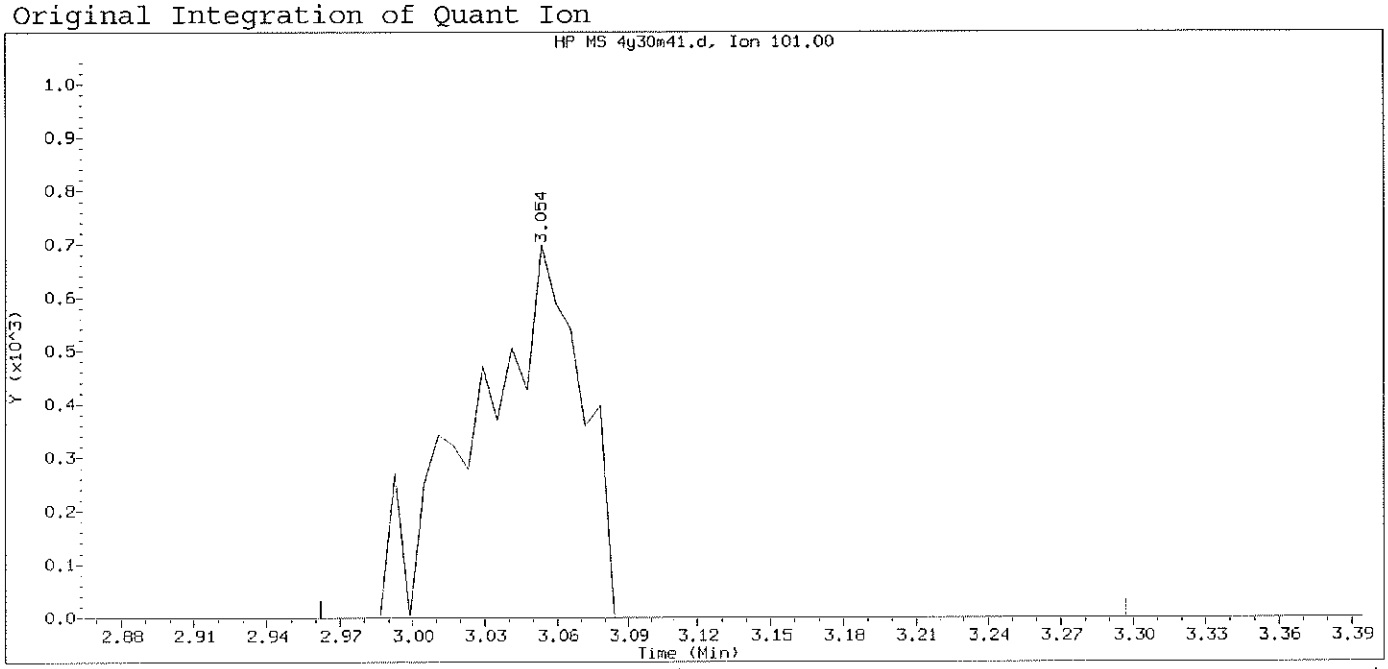
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/30/2019 at 21:10.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/31/2019 at 12:00.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may30b.b/4y30m41.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:57 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: MDL440
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 20:24 dvv10203

Sample Name: MDL440 Lab Sample ID: MDL440

Compound Number : 12
Compound Name : Trichlorofluoromethane
Scan Number : 242
Retention Time (minutes): 3.054
Quant Ion : 101.00
Area : 2123
On-column Amount (ng) : 0.2140
Integration start scan : 226 Integration stop scan: 281
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/30/2019 at 21:10.
Target 3.5 esignature user ID: dvv10203

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VSTD0.5

Data file: /chem/HP23297.i/19may31a.b/4y31m01.d Injection date and time: **31-MAY-2019 08:26**
Data file Sample Info. Line: VSTD0.5;VSTD0.5;1;3;MDL/LOQ;;;;4y31b01; Instrument ID: **HP23297.i** Batch: **4191511AA**
Date, time and analyst ID of latest file update: 31-May-2019 09:12 amd00492

Blank Data file reference: **/chem/HP23297.i/19may31a.b/4y31b01.d**

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: **MDL**
Calibration date and time (Last Method Edit): 31-MAY-2019 09:10
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may31a.b/4y31c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.367(0.006)	458	65	371495 (-2)	250.00	
66) Fluorobenzene	7.866(0.000)	1033	96	1084479 (2)	50.00	
100) Chlorobenzene-d5	11.309(0.000)	1599	117	875733 (0)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189(0.000)	1908	152	468759 (-8)	50.00	

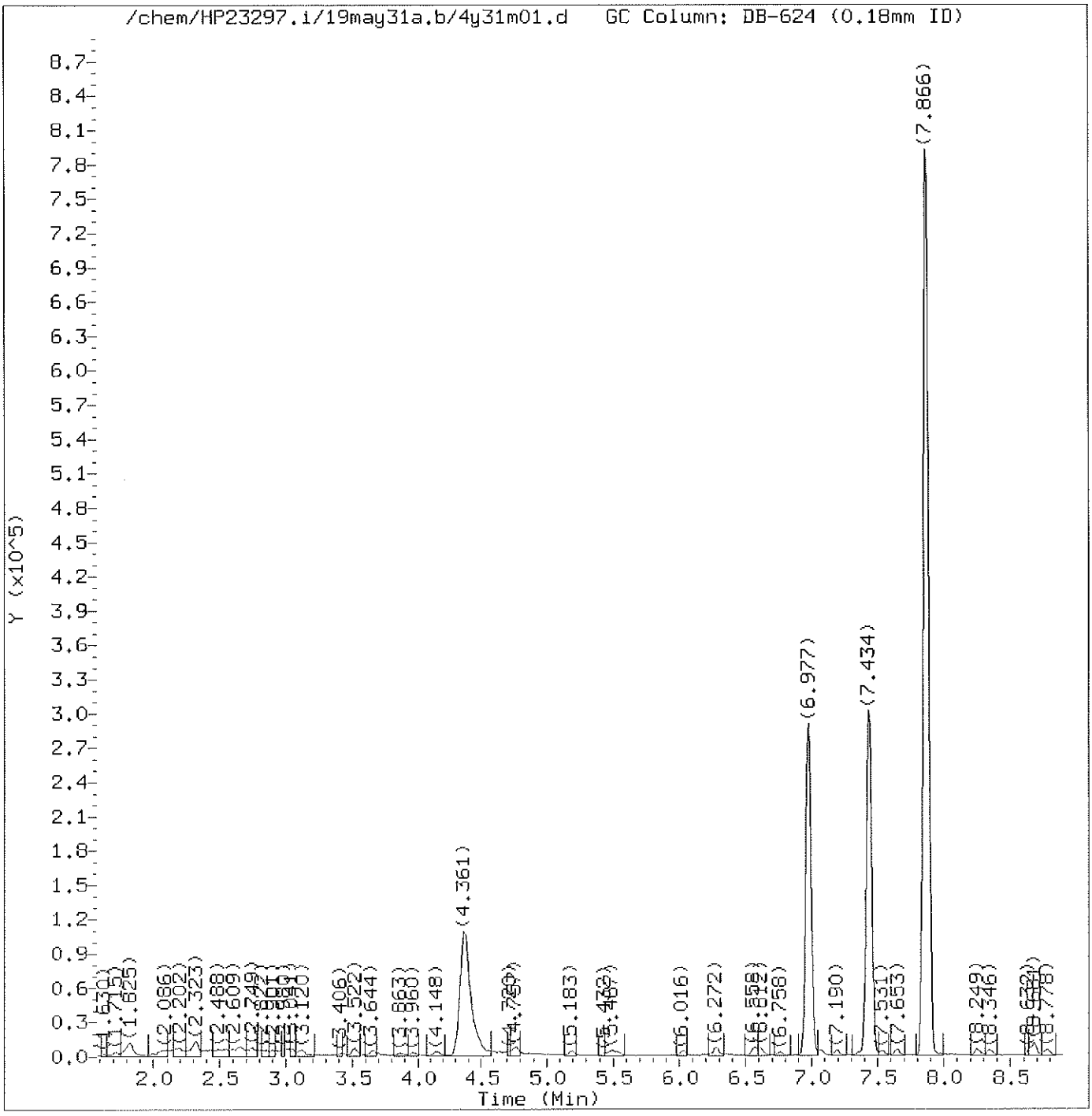
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977(0.000)	113	261728	48.961	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434(0.000)	102	67565	51.727	103%		80 - 120
83) Toluene-d8	(3)	9.867(0.000)	98	1114020	49.565	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.307(0.000)	95	404998	47.274	95%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
79) 2-Nitropropane	(2)	9.307(-0.000)	41	1574	0.525	0.52		J	0.8	10
118) trans-1,4-Dichloro-2-butene	(4)	12.434(0.000)	53	1729	0.609	0.61		J	6	50
142) 1,2-Dibromo-3-chloropropane	(4)	14.016(-0.000)	75	650	0.285	0.29		J	0.3	5

Total number of targets = 3

Digitally signed by Don V. Viray on 05/31/2019 at 21:36. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:27. PARALLAX ID: rcr00559



Total Ion Chromatogram (TIC)

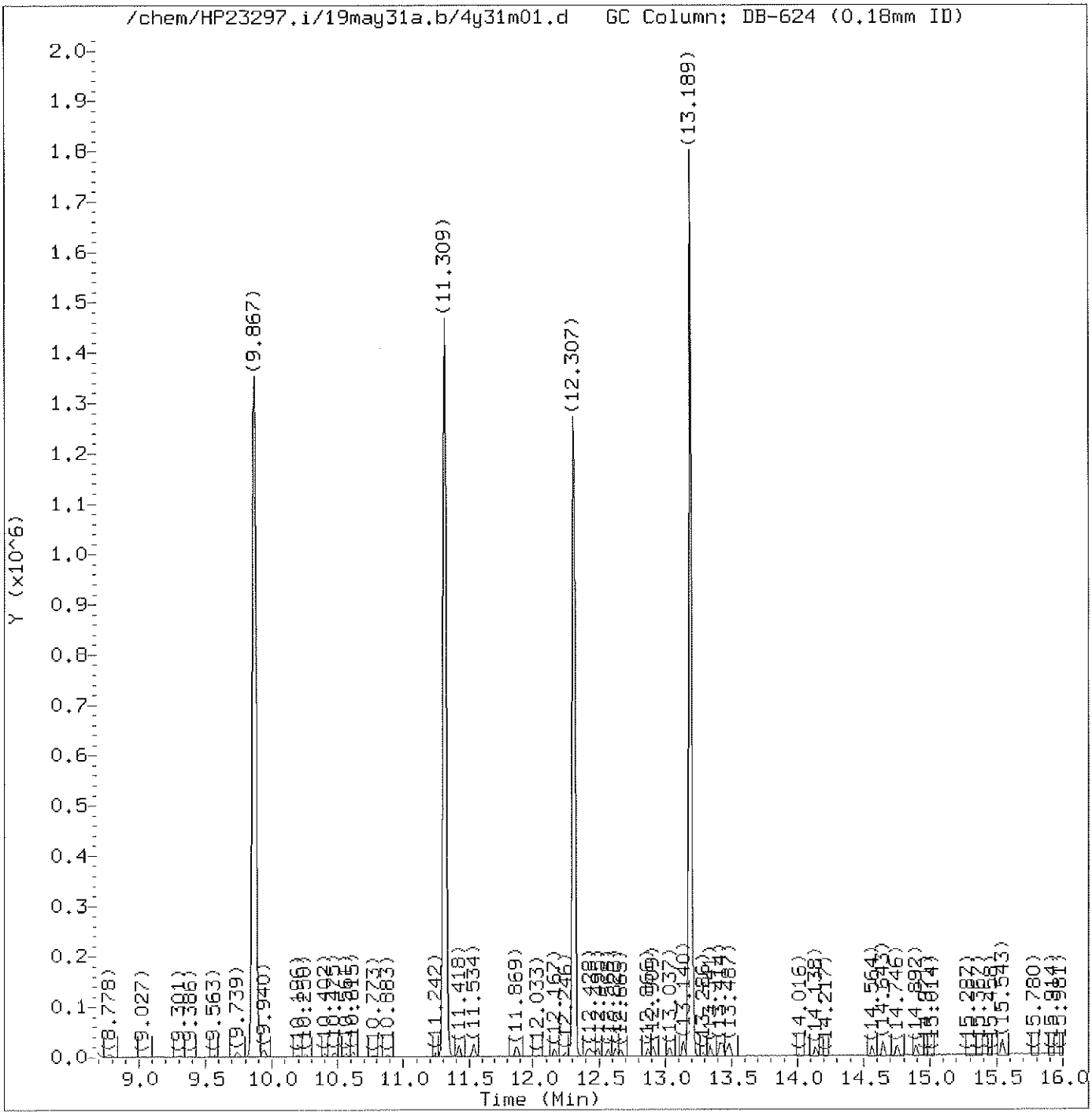
Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31m01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:26 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: MDL
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:12 amd00492

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Don V. Viray
on 05/31/2019 at 21:36.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31m01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:26 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: MDL
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:12 amd00492

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Don V. Viray
on 05/31/2019 at 21:36.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31m01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:26 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: MDL
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:12 amd00492

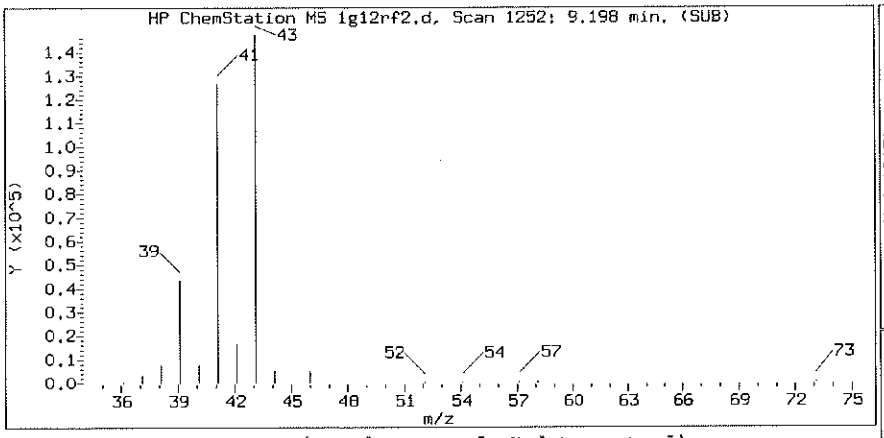
Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

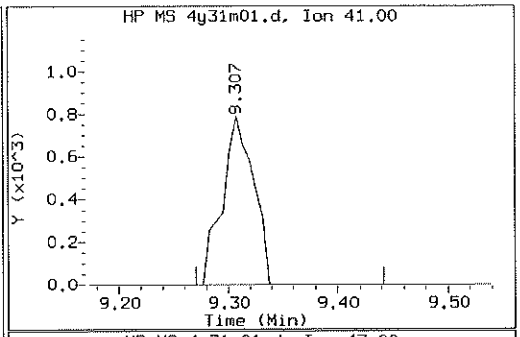
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.367	65	371495	250.000
52)$Dibromofluoromethane	(2)	6.977	113	261728	48.961
57)$1,2-Dichloroethane-d4	(2)	7.434	102	67565	51.727
66)*Fluorobenzene	(2)	7.866	96	1084479	50.000
79) 2-Nitropropane	(2)	9.307	41	1574	0.525
83)$Toluene-d8	(3)	9.867	98	1114020	49.565
100)*Chlorobenzene-d5	(3)	11.309	117	875733	50.000
114)$4-Bromofluorobenzene	(3)	12.307	95	404998	47.274
118) trans-1,4-Dichloro-2-butene	(4)	12.434	53	1729	0.609
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	468759	50.000
142) 1,2-Dibromo-3-chloropropane	(4)	14.016	75	650	0.285

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

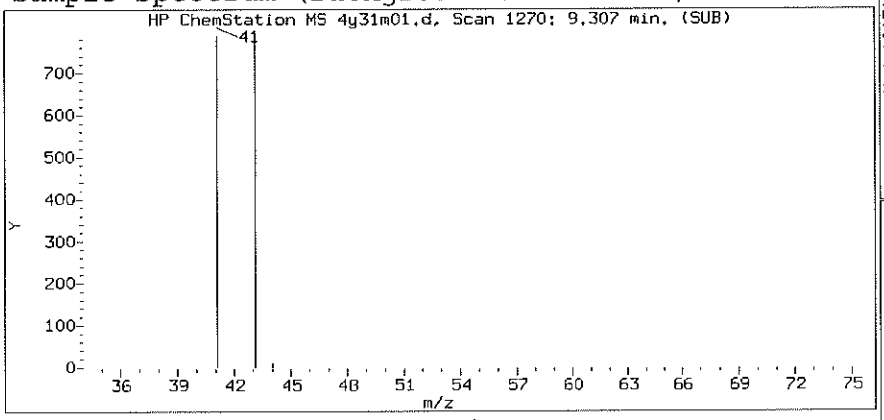
Digitally signed by Don V. Viray
on 05/31/2019 at 21:36.
Target 3.5 esignature user ID: dvv10203

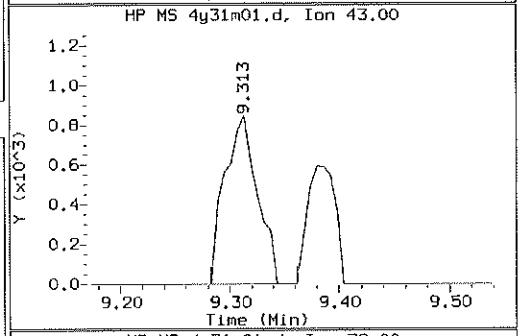
Reference Standard Spectrum for 2-Nitropropane

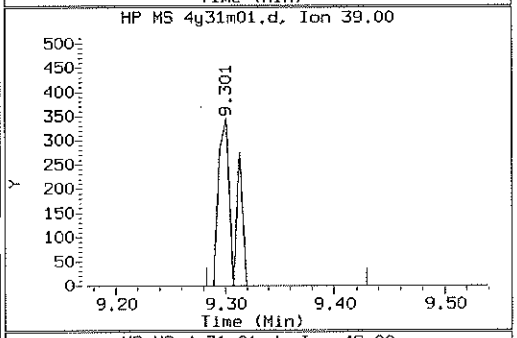




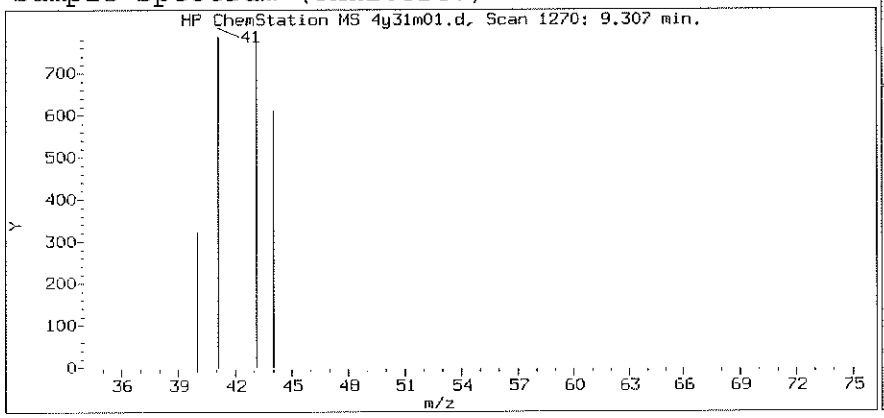
Sample Spectrum (Background Subtracted)

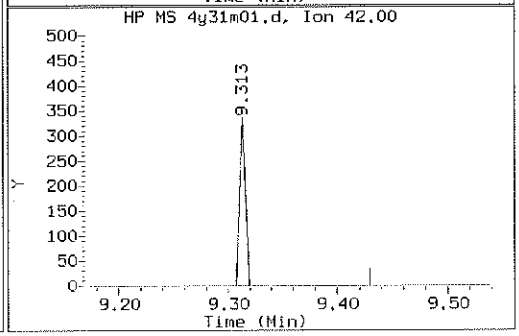






Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may31a.b/4y31m01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:26 Analyst ID: amd00492

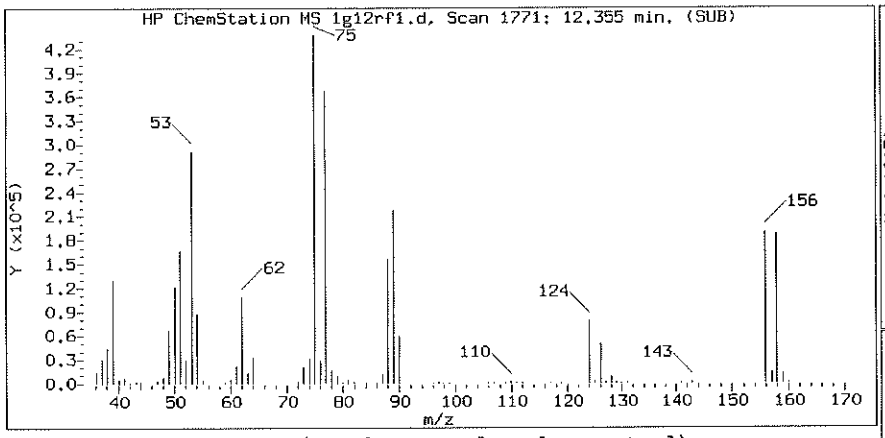
Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: MDL
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:12 amd00492

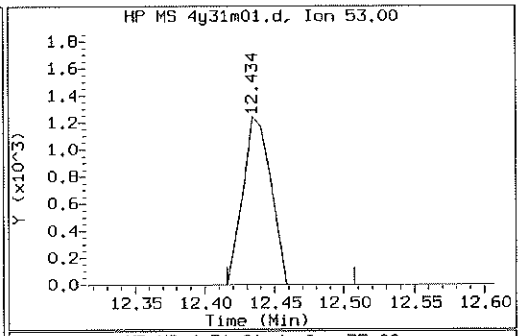
Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

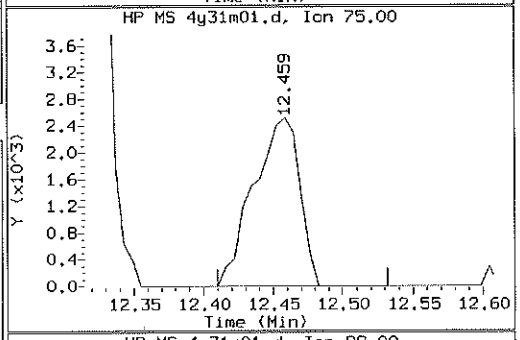
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 1270
Retention Time (minutes): 9.307
Relative Retention Time :-0.00000
Quant Ion : 41.00
Area (flag) : 1574
On-Column Amount (ng) : 0.5249

Digitally signed by Don V. Viray on 05/31/2019 at 21:36.
Target 3.5 esignature user ID: dvv10203

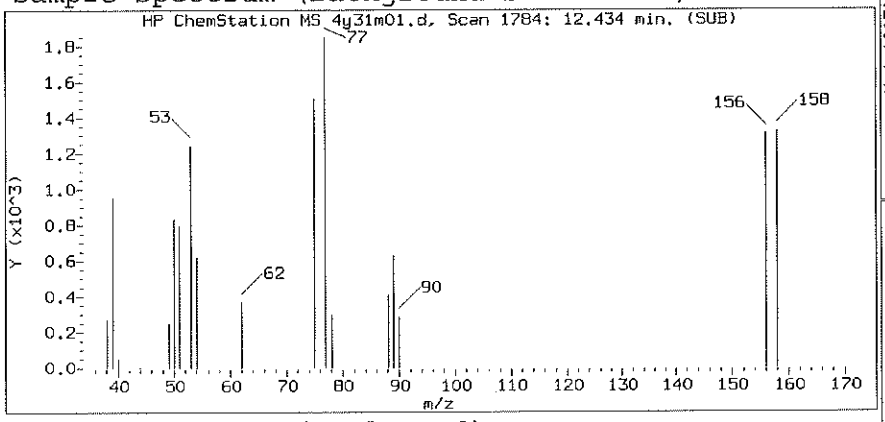
Reference Standard Spectrum for trans-1,4-Dichloro-2-butene

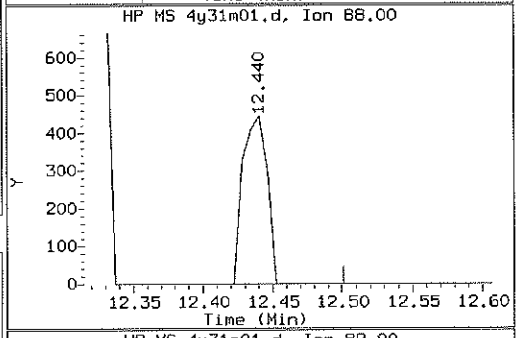




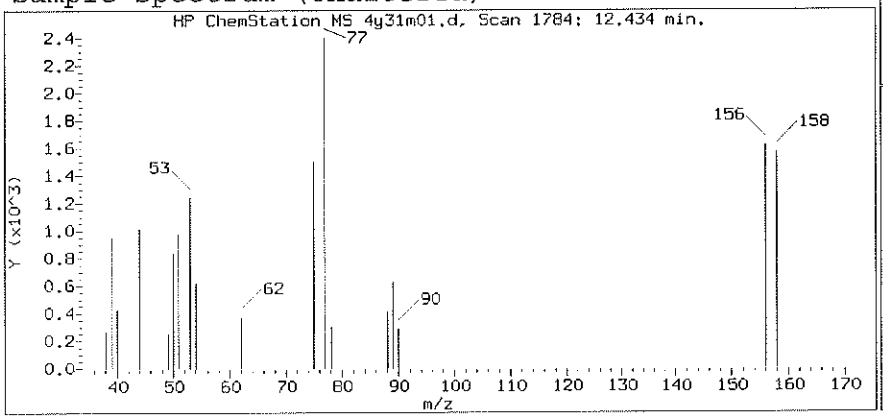


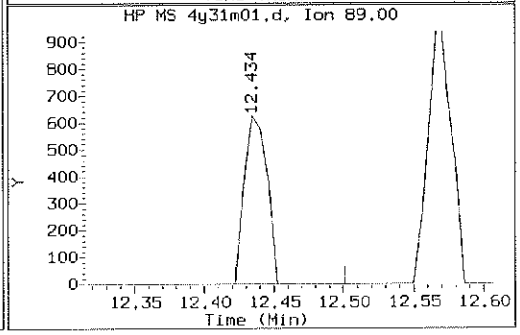
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may31a.b/4y31m01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:26 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: MDL
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:12 amd00492

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 118
Compound Name	: trans-1,4-Dichloro-2-butene
Scan Number	: 1784
Retention Time (minutes)	: 12.434
Relative Retention Time	: 0.00000
Quant Ion	: 53.00
Area (flag)	: 1729
On-Column Amount (ng)	: 0.6089

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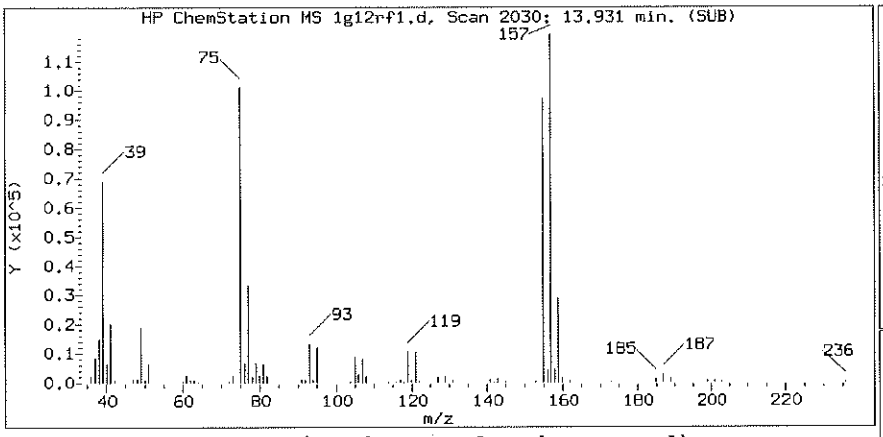
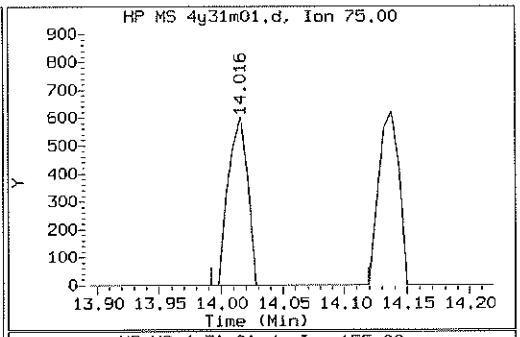
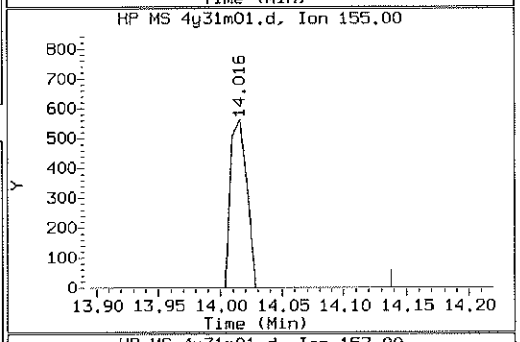
Target 3.5 esignature user ID: dvv10203

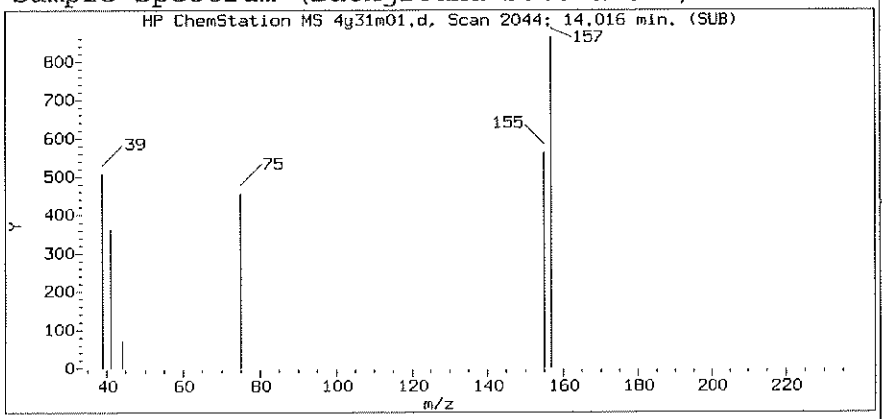
Reference Standard Spectrum for 1,2-Dibromo-3-chloropropane

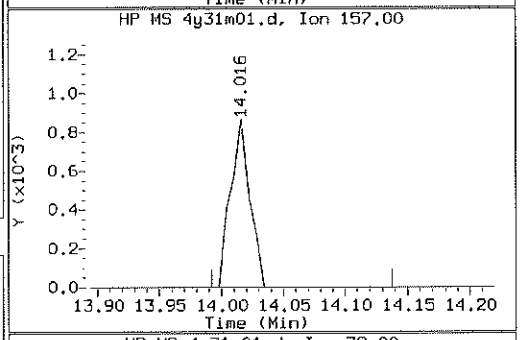




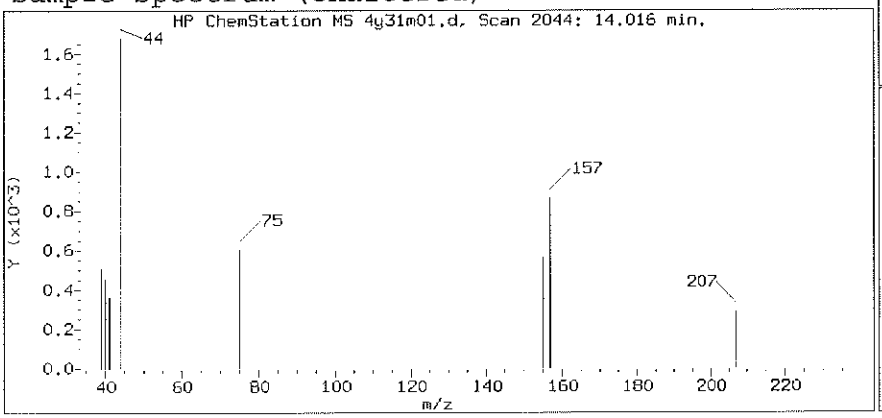


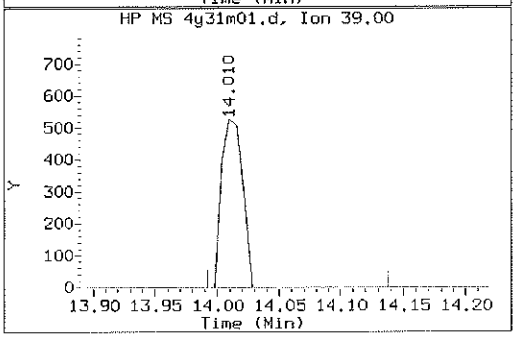
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23297.i/19may31a.b/4y31m01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:26 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: MDL
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:12 amd00492

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 142
Compound Name : 1,2-Dibromo-3-chloropropane
Scan Number : 2044
Retention Time (minutes): 14.016
Relative Retention Time :-0.00000
Quant Ion : 75.00
Area (flag) : 650
On-Column Amount (ng) : 0.2852

Digitally signed by Don V. Viray on 05/31/2019 at 21:36.
Target 3.5 esignature user ID: dvv10203

Raw QC Data

Volatiles by GC/MS

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may30b.b/4y30b41.d
Injection date and time: **30-MAY-2019 20:20**
Data file Sample Info. Line: VBLK440;VBLK440;1;3;;;;;;
Instrument ID: **HP23297.i** Batch: **4191502AA**
Date, time and analyst ID of latest file update: 30-May-2019 21:09 dvv10203

Blank Data file reference: **/chem/HP23297.i/19may30b.b/4y30b41.d**

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 30-MAY-2019 19:29
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may30b.b/4y30c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.373	(0.000)	459	65	347579	(-13)	250.00	
66) Fluorobenzene	7.872	(0.000)	1034	96	1084001	(-4)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	864307	(-5)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189	(0.000)	1908	152	472058	(-6)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977	(0.000)	113	256698	48.042	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.440	(0.000)	102	67111	51.402	103%		80 - 120
83) Toluene-d8	(3)	9.867	(0.000)	98	1111556	50.109	100%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.306	(0.000)	95	399345	47.231	94%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)				Not Detected					0.2	1
4) Chloromethane	(2)				Not Detected					0.2	1
5) 1,3-Butadiene	(2)				Not Detected					1	3
6) Vinyl Chloride	(2)				Not Detected					0.2	1
8) Bromomethane	(2)				Not Detected					0.3	1
9) Chloroethane	(2)				Not Detected					0.2	1
11) n-Pentane	(2)				Not Detected					0.4	10
12) Trichlorofluoromethane	(2)				Not Detected					0.2	1
13) Ethanol	(1)				Not Detected					280	750
15) Freon 123a	(2)				Not Detected					0.4	5
16) Acrolein	(1)				Not Detected					2	100
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
21) 2-Propanol	(1)				Not Detected					18	100
22) Methyl Iodide	(2)				Not Detected					0.2	1
23) Carbon Disulfide	(2)				Not Detected					0.2	5
25) Allyl Chloride	(2)				Not Detected					0.3	5
27) Methyl Acetate	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
30) t-Butyl alcohol	(1)				Not Detected					12	50
31) Acrylonitrile	(2)				Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.2	1
34) n-Hexane	(2)				Not Detected					0.2	5
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
38) di-Isopropyl ether	(2)				Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)				Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)				Not Detected					0.2	2

Digitally signed by Don V. Viray on 05/30/2019 at 21:10. Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may30b.b/4y30b41.d Injection date and time: **30-MAY-2019 20:20**
Data file Sample Info. Line: VBLK440;VBLK440;1;3;;;;;; Instrument ID: **HP23297.i** Batch: **4191502AA**
Date, time and analyst ID of latest file update: 30-May-2019 21:09 dvv10203

Blank Data file reference: **/chem/HP23297.i/19may30b.b/4y30b41.d**

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 30-MAY-2019 19:29
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may30b.b/4y30c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)				Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					0.2	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					0.2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
72) Methylcyclohexane	(2)				Not Detected					0.2	5
73) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
74) Dibromomethane	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
76) Methyl Methacrylate	(2)				Not Detected					0.2	5
78) Bromodichloromethane	(2)				Not Detected					0.2	1
79) 2-Nitropropane	(2)				Not Detected					0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
81) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
82) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
88) Toluene	(3)				Not Detected					0.2	1
89) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
90) 1,3-Dichloropropene (total)	(3)				Not Detected					0.2	5
91) Ethyl Methacrylate	(3)				Not Detected					0.2	5
92) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
94) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
96) 2-Hexanone	(3)				Not Detected					0.3	10
97) Dibromochloromethane	(3)				Not Detected					0.2	1
99) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
102) Chlorobenzene	(3)				Not Detected					0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	5
109) Styrene	(3)				Not Detected					0.2	5
110) Bromoform	(3)				Not Detected					0.2	4
111) Isopropylbenzene	(3)				Not Detected					0.2	5
112) Cyclohexanone	(1)				Not Detected					25	100
115) Bromobenzene	(4)				Not Detected					0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
117) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
118) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50
119) n-Propylbenzene	(4)				Not Detected					0.2	5
120) 2-Chlorotoluene	(4)				Not Detected					0.2	5

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may30b.b/4y30b41.d Injection date and time: **30-MAY-2019 20:20**
Data file Sample Info. Line: VBLK440;VBLK440;1;3;;;;;; Instrument ID: **HP23297.i** Batch: **4191502AA**
Date, time and analyst ID of latest file update: 30-May-2019 21:09 dvv10203

Blank Data file reference: **/chem/HP23297.i/19may30b.b/4y30b41.d**

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 30-MAY-2019 19:29
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may30b.b/4y30c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
121) 4-Chlorotoluene	(4)				Not Detected					0.2	5
122) 1,3,5-Trimethylbenzene	(4)				Not Detected					0.3	5
124) tert-Butylbenzene	(4)				Not Detected					0.3	5
125) Pentachloroethane	(4)				Not Detected					0.2	5
126) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5
127) sec-Butylbenzene	(4)				Not Detected					0.2	5
129) 1,3-Dichlorobenzene	(4)				Not Detected					0.2	5
130) p-Isopropyltoluene	(4)				Not Detected					0.2	5
133) 1,4-Dichlorobenzene	(4)				Not Detected					0.2	5
134) 1,2,3-Trimethylbenzene	(4)				Not Detected					0.3	5
135) Benzyl Chloride	(4)				Not Detected					0.3	5
136) 1,3-Diethylbenzene	(4)				Not Detected					0.2	5
137) 1,4-Diethylbenzene	(4)				Not Detected					0.2	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
139) n-Butylbenzene	(4)				Not Detected					0.2	5
140) 1,2-Diethylbenzene	(4)				Not Detected					0.2	5
141) Diethylbenzene (total)	(4)				Not Detected					0.2	5
142) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.3	5
144) 1,3,5-Trichlorobenzene	(4)				Not Detected					0.2	5
146) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	5
147) Hexachlorobutadiene	(4)				Not Detected					0.7	5
148) Naphthalene	(4)				Not Detected					1	5
149) 1,2,3-Trichlorobenzene	(4)				Not Detected					0.4	5
150) 2-Methylnaphthalene	(4)				Not Detected					0.7	5

Total number of targets = 109

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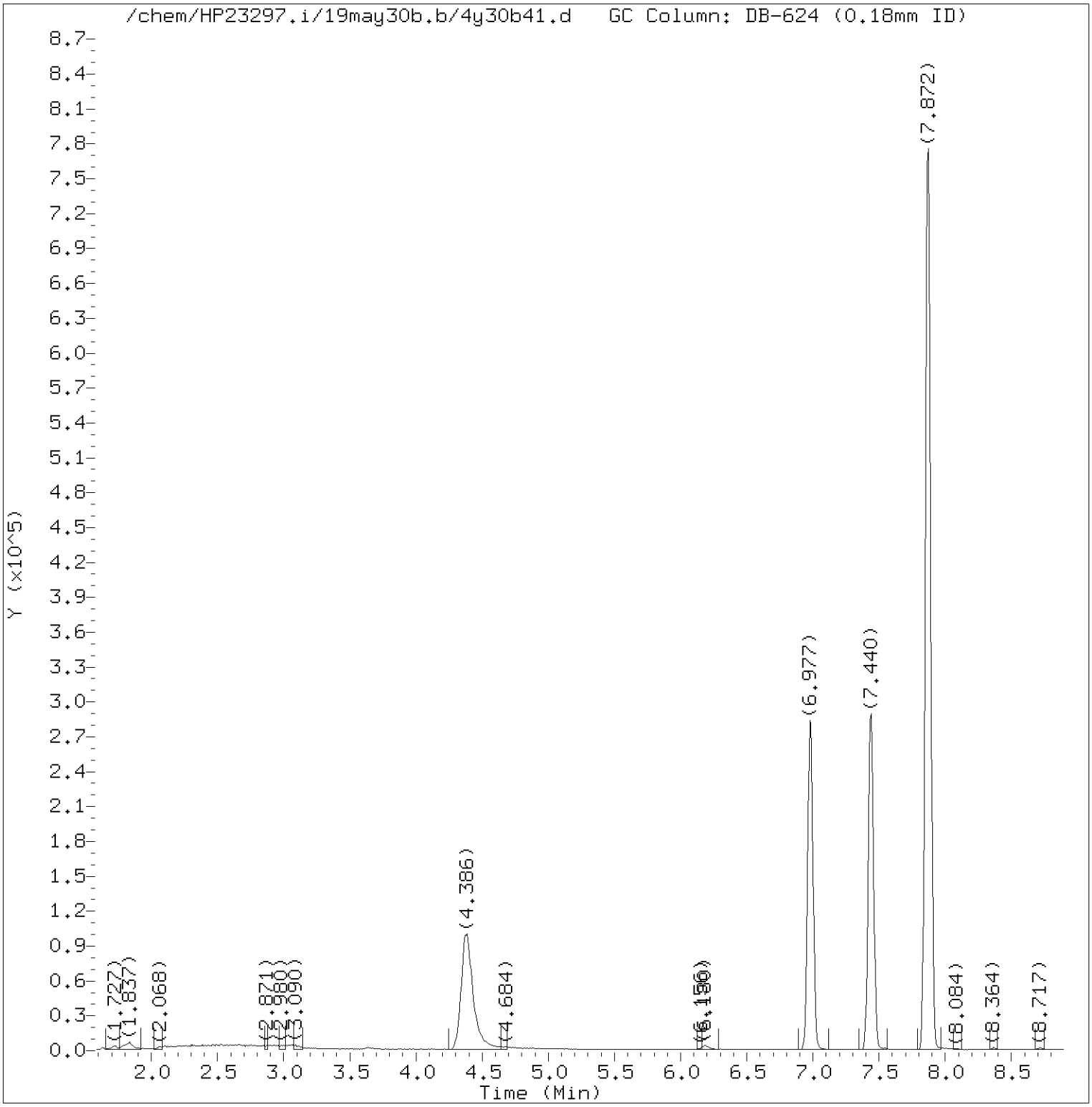
Secondary review performed and digitally signed by Kelly E. Keller on 05/31/2019 at 12:22. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

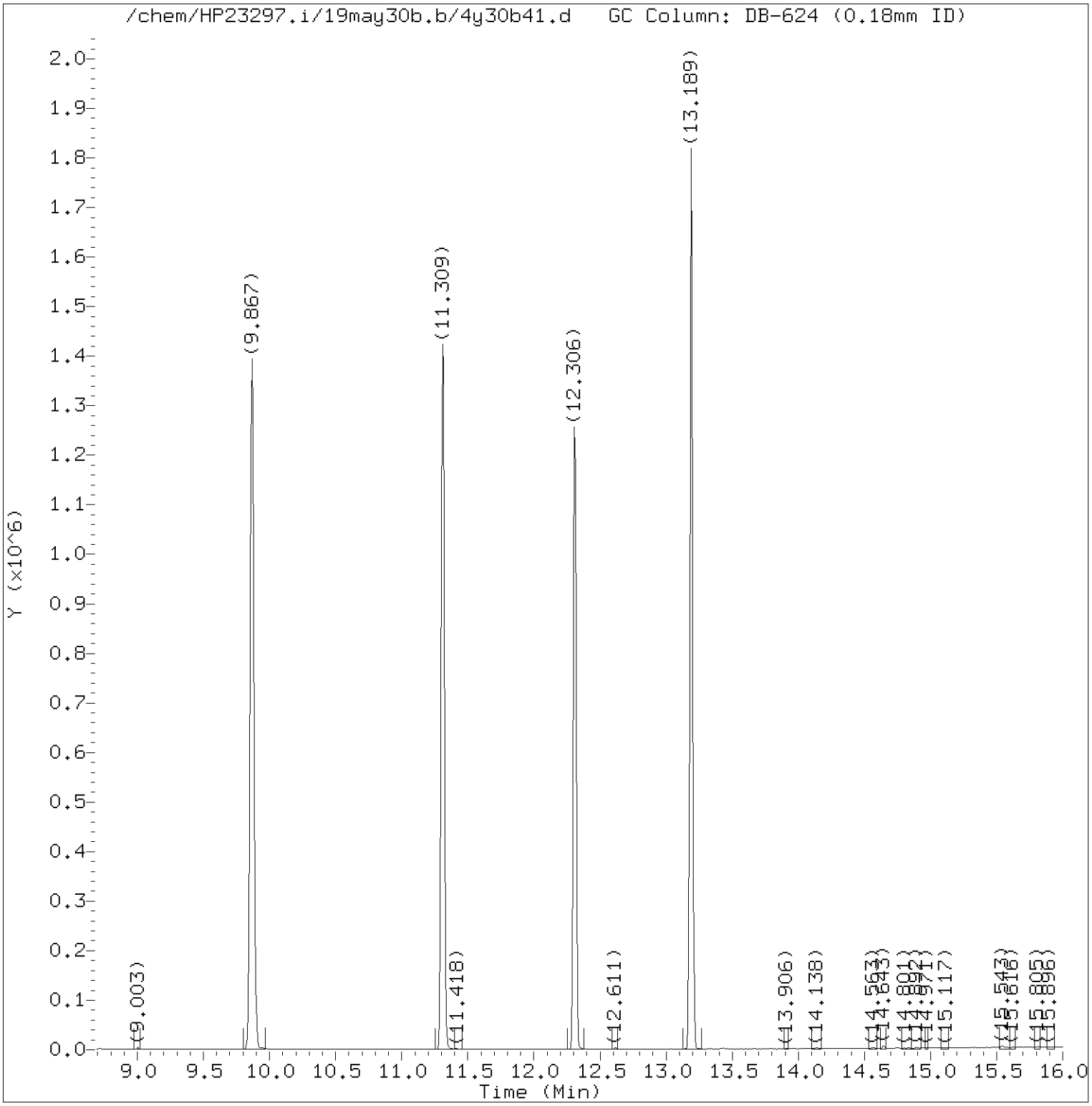
Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30b41.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 20:20 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 21:09 dvv10203

Sample Name: VBLK440 Lab Sample ID: VBLK440

Digitally signed by Don V. Viray
on 05/30/2019 at 21:10.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30b41.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 20:20 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 21:09 dvv10203

Sample Name: VBLK440 Lab Sample ID: VBLK440

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on 05/30/2019 at 21:10.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30b41.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 20:20 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 21:09 dvv10203

Sample Name: VBLK440 Lab Sample ID: VBLK440

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.373	65	347579	250.000
52)$Dibromofluoromethane	(2)	6.977	113	256698	48.042
57)$1,2-Dichloroethane-d4	(2)	7.440	102	67111	51.402
66)*Fluorobenzene	(2)	7.872	96	1084001	50.000
83)$Toluene-d8	(3)	9.867	98	1111556	50.109
100)*Chlorobenzene-d5	(3)	11.309	117	864307	50.000
114)$4-Bromofluorobenzene	(3)	12.306	95	399345	47.231
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	472058	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/30/2019 at 21:10.
Target 3.5 esignature user ID: dvv10203

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLK441

Data file: /chem/HP23297.i/19may31a.b/4y31b01.d
Data file Sample Info. Line: VBLK441;VBLK441;1;3;;;;;;
Date, time and analyst ID of latest file update: 31-May-2019 09:29 amd00492

Injection date and time: **31-MAY-2019 08:48**
Instrument ID: **HP23297.i** Batch: **4191511AA**

Blank Data file reference: **/chem/HP23297.i/19may31a.b/4y31b01.d**

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 31-MAY-2019 07:42
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may31a.b/4y31c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.368	(0.006)	458	65	361043	(-5)	250.00	
66) Fluorobenzene	7.866	(0.000)	1033	96	1040687	(-2)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	835897	(-5)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189	(0.000)	1908	152	456291	(-10)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977	(0.000)	113	251779	49.082	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434	(0.000)	102	64621	51.555	103%		80 - 120
83) Toluene-d8	(3)	9.867	(0.000)	98	1069303	49.843	100%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.307	(0.000)	95	388832	47.550	95%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)				Not Detected					0.2	1
4) Chloromethane	(2)				Not Detected					0.2	1
5) 1,3-Butadiene	(2)				Not Detected					1	3
6) Vinyl Chloride	(2)				Not Detected					0.2	1
8) Bromomethane	(2)				Not Detected					0.3	1
9) Chloroethane	(2)				Not Detected					0.2	1
11) n-Pentane	(2)				Not Detected					0.4	10
12) Trichlorofluoromethane	(2)				Not Detected					0.2	1
13) Ethanol	(1)				Not Detected					280	750
15) Freon 123a	(2)				Not Detected					0.4	5
16) Acrolein	(1)				Not Detected					2	100
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
21) 2-Propanol	(1)				Not Detected					18	100
22) Methyl Iodide	(2)				Not Detected					0.2	1
23) Carbon Disulfide	(2)				Not Detected					0.2	5
25) Allyl Chloride	(2)				Not Detected					0.3	5
27) Methyl Acetate	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
30) t-Butyl alcohol	(1)				Not Detected					12	50
31) Acrylonitrile	(2)				Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.2	1
34) n-Hexane	(2)				Not Detected					0.2	5
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
38) di-Isopropyl ether	(2)				Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)				Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)				Not Detected					0.2	2

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may31a.b/4y31b01.d Injection date and time: **31-MAY-2019 08:48**
Data file Sample Info. Line: VBLK441;VBLK441;1;3;;;;;; Instrument ID: **HP23297.i** Batch: **4191511AA**
Date, time and analyst ID of latest file update: 31-May-2019 09:29 amd00492

Blank Data file reference: **/chem/HP23297.i/19may31a.b/4y31b01.d**

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 31-MAY-2019 07:42
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may31a.b/4y31c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)				Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					0.2	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					0.2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
72) Methylcyclohexane	(2)				Not Detected					0.2	5
73) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
74) Dibromomethane	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
76) Methyl Methacrylate	(2)				Not Detected					0.2	5
78) Bromodichloromethane	(2)				Not Detected					0.2	1
79) 2-Nitropropane	(2)				Not Detected					0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
81) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
82) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
88) Toluene	(3)				Not Detected					0.2	1
89) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
90) 1,3-Dichloropropene (total)	(3)				Not Detected					0.2	5
91) Ethyl Methacrylate	(3)				Not Detected					0.2	5
92) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
94) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
96) 2-Hexanone	(3)				Not Detected					0.3	10
97) Dibromochloromethane	(3)				Not Detected					0.2	1
99) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
102) Chlorobenzene	(3)				Not Detected					0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	5
109) Styrene	(3)				Not Detected					0.2	5
110) Bromoform	(3)				Not Detected					0.2	4
111) Isopropylbenzene	(3)				Not Detected					0.2	5
112) Cyclohexanone	(1)				Not Detected					25	100
115) Bromobenzene	(4)				Not Detected					0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
117) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
118) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50
119) n-Propylbenzene	(4)				Not Detected					0.2	5
120) 2-Chlorotoluene	(4)				Not Detected					0.2	5

Digitally signed by Don V. Viray on 05/31/2019 at 21:34. Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may31a.b/4y31b01.d Injection date and time: **31-MAY-2019 08:48**
Data file Sample Info. Line: VBLK441;VBLK441;1;3;;;;;; Instrument ID: **HP23297.i** Batch: **4191511AA**
Date, time and analyst ID of latest file update: 31-May-2019 09:29 amd00492

Blank Data file reference: **/chem/HP23297.i/19may31a.b/4y31b01.d**

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 31-MAY-2019 07:42
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may31a.b/4y31c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

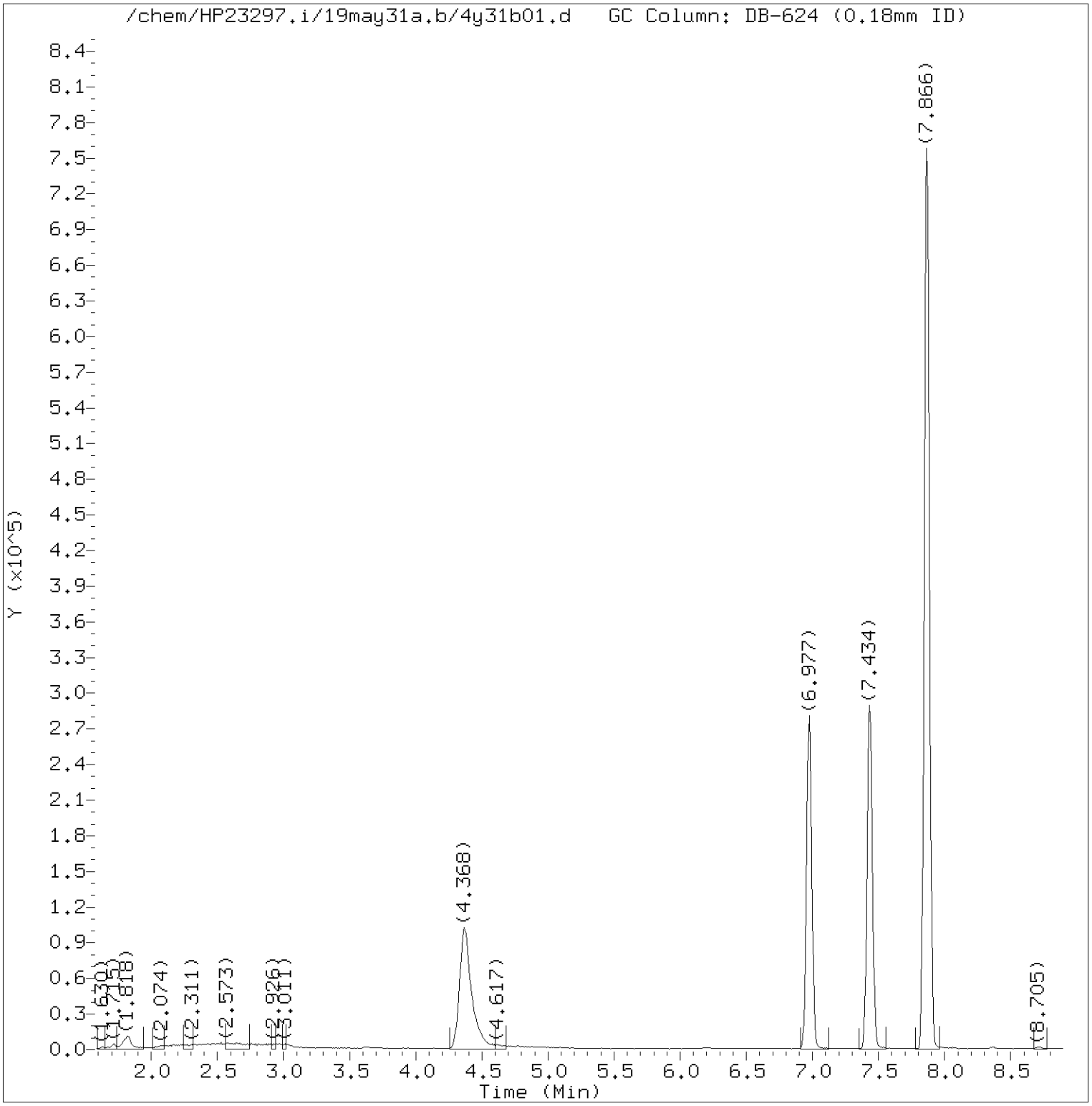
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
121) 4-Chlorotoluene	(4)				Not Detected					0.2	5
122) 1,3,5-Trimethylbenzene	(4)				Not Detected					0.3	5
124) tert-Butylbenzene	(4)				Not Detected					0.3	5
125) Pentachloroethane	(4)				Not Detected					0.2	5
126) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5
127) sec-Butylbenzene	(4)				Not Detected					0.2	5
129) 1,3-Dichlorobenzene	(4)				Not Detected					0.2	5
130) p-Isopropyltoluene	(4)				Not Detected					0.2	5
133) 1,4-Dichlorobenzene	(4)				Not Detected					0.2	5
134) 1,2,3-Trimethylbenzene	(4)				Not Detected					0.3	5
135) Benzyl Chloride	(4)				Not Detected					0.3	5
136) 1,3-Diethylbenzene	(4)				Not Detected					0.2	5
137) 1,4-Diethylbenzene	(4)				Not Detected					0.2	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
139) n-Butylbenzene	(4)				Not Detected					0.2	5
140) 1,2-Diethylbenzene	(4)				Not Detected					0.2	5
141) Diethylbenzene (total)	(4)				Not Detected					0.2	5
142) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.3	5
144) 1,3,5-Trichlorobenzene	(4)				Not Detected					0.2	5
146) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	5
147) Hexachlorobutadiene	(4)				Not Detected					0.7	5
148) Naphthalene	(4)				Not Detected					1	5
149) 1,2,3-Trichlorobenzene	(4)				Not Detected					0.4	5
150) 2-Methylnaphthalene	(4)				Not Detected					0.7	5

Total number of targets = 109

Digitally signed by Don V. Viray on 05/31/2019 at 21:34. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:27. PARALLAX ID: rcr00559



Total Ion Chromatogram (TIC)

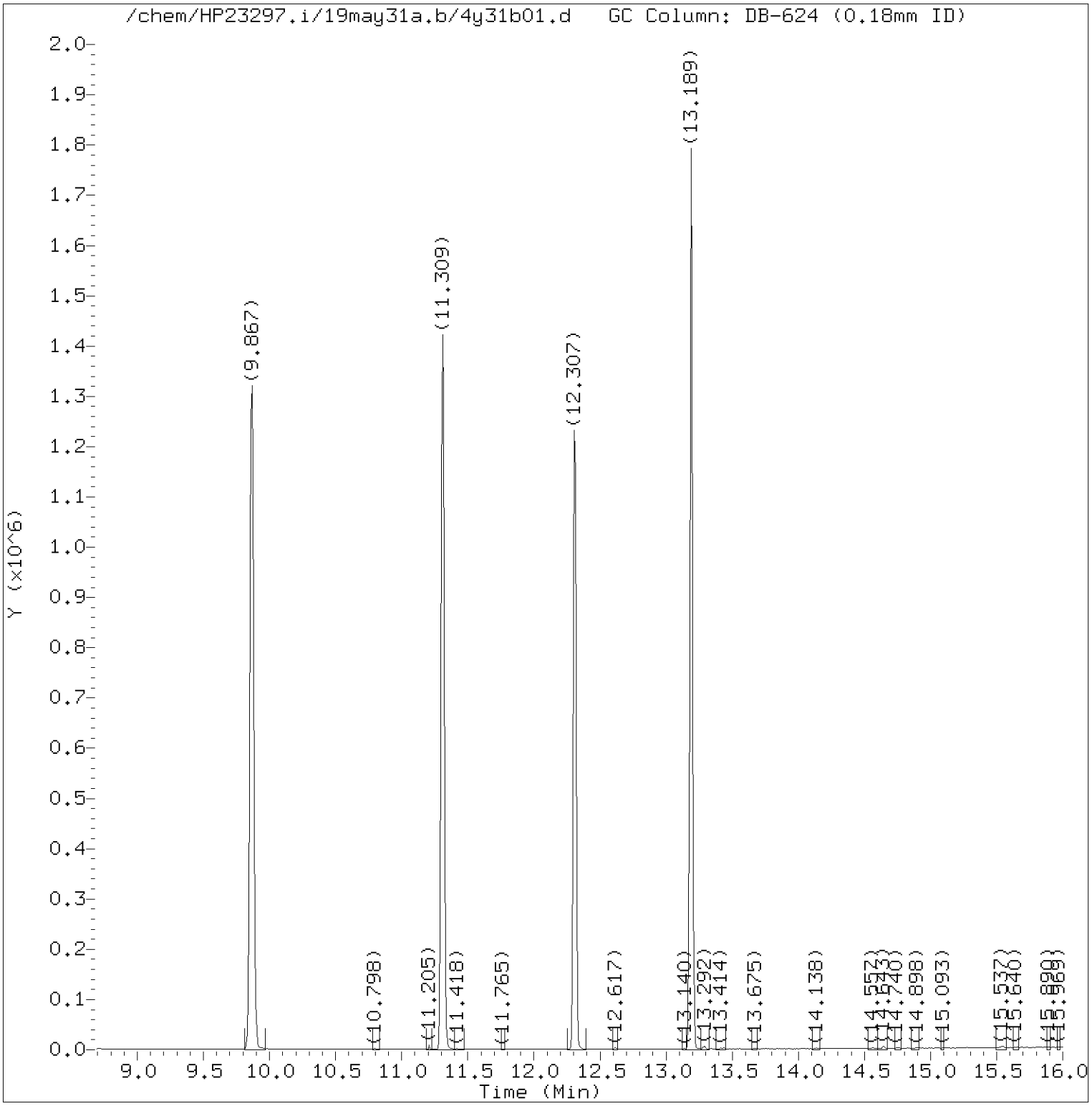
Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31b01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:48 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 09:29 amd00492

Sample Name: VBLK441 Lab Sample ID: VBLK441

Digitally signed by Don V. Viray
on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31b01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:48 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 09:29 amd00492

Sample Name: VBLK441 Lab Sample ID: VBLK441

Digitally signed by Don V. Viray
on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31b01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:48 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 09:29 amd00492

Sample Name: VBLK441 Lab Sample ID: VBLK441

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.368	65	361043	250.000
52)$Dibromofluoromethane	(2)	6.977	113	251779	49.082
57)$1,2-Dichloroethane-d4	(2)	7.434	102	64621	51.555
66)*Fluorobenzene	(2)	7.866	96	1040687	50.000
83)$Toluene-d8	(3)	9.867	98	1069303	49.843
100)*Chlorobenzene-d5	(3)	11.309	117	835897	50.000
114)$4-Bromofluorobenzene	(3)	12.307	95	388832	47.550
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	456291	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS440

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCS440

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may30b.b/4y30s41.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/30/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	12	
74-87-3	Chloromethane	15	
106-99-0	1,3-Butadiene	38	
75-01-4	Vinyl Chloride	16	
74-83-9	Bromomethane	15	
75-00-3	Chloroethane	15	
109-66-0	n-Pentane	19	
75-69-4	Trichlorofluoromethane	14	
64-17-5	Ethanol	420	J
354-23-4	Freon 123a	19	
107-02-8	Acrolein	140	
75-35-4	1,1-Dichloroethene	22	
67-64-1	Acetone	140	
76-13-1	Freon 113	19	
67-63-0	2-Propanol	130	
74-88-4	Methyl Iodide	21	
75-15-0	Carbon Disulfide	20	
107-05-1	Allyl Chloride	17	
79-20-9	Methyl Acetate	19	
75-09-2	Methylene Chloride	21	
75-65-0	t-Butyl alcohol	170	
107-13-1	Acrylonitrile	89	
156-60-5	trans-1,2-Dichloroethene	21	
1634-04-4	Methyl Tertiary Butyl Ether	18	
110-54-3	n-Hexane	18	
75-34-3	1,1-Dichloroethane	20	
108-20-3	di-Isopropyl ether	19	
126-99-8	2-Chloro-1,3-butadiene	18	
637-92-3	Ethyl t-butyl ether	18	
156-59-2	cis-1,2-Dichloroethene	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS440

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCS440

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may30b.b/4y30s41.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/30/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	43	
78-93-3	2-Butanone	120	
594-20-7	2,2-Dichloropropane	17	
107-12-0	Propionitrile	160	
126-98-7	Methacrylonitrile	140	
74-97-5	Bromochloromethane	20	
109-99-9	Tetrahydrofuran	92	
67-66-3	Chloroform	19	
71-55-6	1,1,1-Trichloroethane	18	
110-82-7	Cyclohexane	18	
563-58-6	1,1-Dichloropropene	20	
56-23-5	Carbon Tetrachloride	17	
78-83-1	Isobutyl Alcohol	470	
71-43-2	Benzene	20	
107-06-2	1,2-Dichloroethane	18	
994-05-8	t-Amyl methyl ether	18	
142-82-5	n-Heptane	16	
71-36-3	n-Butanol	960	
79-01-6	Trichloroethene	20	
108-87-2	Methylcyclohexane	17	
78-87-5	1,2-Dichloropropane	20	
74-95-3	Dibromomethane	19	
123-91-1	1,4-Dioxane	550	
80-62-6	Methyl Methacrylate	18	
75-27-4	Bromodichloromethane	18	
79-46-9	2-Nitropropane	12	
110-75-8	2-Chloroethyl Vinyl Ether	18	
10061-01-5	cis-1,3-Dichloropropene	18	
108-10-1	4-Methyl-2-pentanone	84	
108-88-3	Toluene	20	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS440

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCS440

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may30b.b/4y30s41.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/30/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	17	
542-75-6	1,3-Dichloropropene (total)	35	
97-63-2	Ethyl Methacrylate	17	
79-00-5	1,1,2-Trichloroethane	20	
127-18-4	Tetrachloroethene	20	
142-28-9	1,3-Dichloropropane	19	
591-78-6	2-Hexanone	84	
124-48-1	Dibromochloromethane	17	
106-93-4	1,2-Dibromoethane	19	
108-90-7	Chlorobenzene	20	
630-20-6	1,1,1,2-Tetrachloroethane	18	
100-41-4	Ethylbenzene	19	
179601-23-1	m+p-Xylene	40	
95-47-6	o-Xylene	19	
1330-20-7	Xylene (Total)	59	
100-42-5	Styrene	19	
75-25-2	Bromoform	15	
98-82-8	Isopropylbenzene	19	
108-94-1	Cyclohexanone	510	
108-86-1	Bromobenzene	19	
79-34-5	1,1,2,2-Tetrachloroethane	20	
96-18-4	1,2,3-Trichloropropane	19	
110-57-6	trans-1,4-Dichloro-2-butene	61	
103-65-1	n-Propylbenzene	20	
95-49-8	2-Chlorotoluene	20	
106-43-4	4-Chlorotoluene	20	
108-67-8	1,3,5-Trimethylbenzene	20	
98-06-6	tert-Butylbenzene	19	
76-01-7	Pentachloroethane	18	
95-63-6	1,2,4-Trimethylbenzene	19	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS440

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCS440

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may30b.b/4y30s41.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/30/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
135-98-8	sec-Butylbenzene	20	
541-73-1	1,3-Dichlorobenzene	20	
99-87-6	p-Isopropyltoluene	19	
106-46-7	1,4-Dichlorobenzene	20	
526-73-8	1,2,3-Trimethylbenzene	19	
100-44-7	Benzyl Chloride	16	
141-93-5	1,3-Diethylbenzene	19	
105-05-5	1,4-Diethylbenzene	19	
95-50-1	1,2-Dichlorobenzene	20	
104-51-8	n-Butylbenzene	19	
135-01-3	1,2-Diethylbenzene	19	
25340-17-4	Diethylbenzene (total)	58	
96-12-8	1,2-Dibromo-3-chloropropane	16	
108-70-3	1,3,5-Trichlorobenzene	20	
120-82-1	1,2,4-Trichlorobenzene	20	
87-68-3	Hexachlorobutadiene	19	
91-20-3	Naphthalene	19	
87-61-6	1,2,3-Trichlorobenzene	20	
91-57-6	2-Methylnaphthalene	18	

Data file: /chem/HP23297.i/19may30b.b/4y30s41.d Injection date and time: **30-MAY-2019 19:34**
Data file Sample Info. Line: LCS440;LCS440;1;3;LCS;;;;4y30b41; Instrument ID: **HP23297.i** Batch: **4191502AA**
Date, time and analyst ID of latest file update: 30-May-2019 21:09 dvv10203

Blank Data file reference: **/chem/HP23297.i/19may30b.b/4y30b41.d**

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 30-MAY-2019 19:29
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may30b.b/4y30c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.380	(-0.006)	460	65	397505M	(0)	250.00	
66) Fluorobenzene	7.866	(0.006)	1033	96	1125670	(0)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	909853	(0)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189	(0.000)	1908	152	498265	(-1)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977	(-0.001)	113	271237	48.884	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.440	(-0.001)	102	68545	50.557	101%		80 - 120
83) Toluene-d8	(3)	9.867	(0.000)	98	1161806	49.753	100%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.307	(0.000)	95	429800	48.288	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	1.995	(0.000)	85	107232	12.493	12.49			0.2	1
4) Chloromethane	(2)	2.202	(-0.001)	50	126170	15.176	15.18			0.2	1
5) 1,3-Butadiene	(2)	2.324	(-0.000)	39	172441	38.251	38.25			1	3
6) Vinyl Chloride	(2)	2.324	(-0.001)	62	126679	15.585	15.59			0.2	1
8) Bromomethane	(2)	2.658	(-0.000)	94	97374	14.600	14.60			0.3	1
9) Chloroethane	(2)	2.743	(0.000)	64	67715	15.087	15.09			0.2	1
11) n-Pentane	(2)	3.114	(-0.000)	43	152205	19.113	19.11			0.4	10
12) Trichlorofluoromethane	(2)	3.060	(-0.001)	101	133876	13.583	13.58			0.2	1
13) Ethanol	(1)	3.200	(0.002)	45	55601	415.518	415.52		J	280	750
15) Freon 123a	(2)	3.425	(-0.000)	67	108260	19.091	19.09			0.4	5
16) Acrolein	(1)	3.522	(0.001)	56	314787	139.668	139.67			2	100
17) 1,1-Dichloroethene	(2)	3.662	(-0.000)	96	86223	21.963	21.96			0.2	1
18) Acetone	(1)	3.698	(0.001)	58	157907	142.674	142.67			0.7	20
19) Freon 113	(2)	3.674	(-0.000)	101	82354	19.063	19.06			0.2	10
21) 2-Propanol	(1)	3.881	(-0.000)	45	115595	129.980	129.98			18	100
22) Methyl Iodide	(2)	3.863	(-0.000)	142	162467	20.768	20.77			0.2	1
23) Carbon Disulfide	(2)	3.972	(-0.001)	76	283258	20.233	20.23			0.2	5
25) Allyl Chloride	(2)	4.161	(-0.000)	41	151386	17.390	17.39			0.3	5
27) Methyl Acetate	(2)	4.130	(-0.000)	43	152685	18.673	18.67			0.2	5
28) Methylene Chloride	(2)	4.361	(-0.000)	84	106125	21.341	21.34			0.3	1
30) t-Butyl alcohol	(1)	4.514	(-0.001)	59	270852	173.153	173.15			12	50
31) Acrylonitrile	(2)	4.714	(-0.000)	53	381777	89.120	89.12			0.3	20
32) trans-1,2-Dichloroethene	(2)	4.775	(-0.000)	96	99351	21.180	21.18			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	4.763	(-0.000)	73	258408	18.426	18.43			0.2	1
34) n-Hexane	(2)	5.195	(-0.000)	57	139306	17.981	17.98			0.2	5
36) 1,1-Dichloroethane	(2)	5.444	(-0.000)	63	174886	20.060	20.06			0.2	1
38) di-Isopropyl ether	(2)	5.499	(-0.001)	45	328924	19.037	19.04			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	5.554	(-0.001)	53	139967	17.734	17.73			0.2	5
40) Ethyl t-butyl ether	(2)	6.034	(-0.000)	59	263420	17.748	17.75			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.278	(-0.000)	96	118570	21.921	21.92			0.2	1

Digitally signed by Don V. Viray on 05/30/2019 at 21:10. Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may30b.b/4y30s41.d Injection date and time: **30-MAY-2019 19:34**
Data file Sample Info. Line: LCS440;LCS440;1;3;LCS;;;;4y30b41; Instrument ID: **HP23297.i** Batch: **4191502AA**
Date, time and analyst ID of latest file update: 30-May-2019 21:09 dvv10203

Blank Data file reference: **/chem/HP23297.i/19may30b.b/4y30b41.d**

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 30-MAY-2019 19:29
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may30b.b/4y30c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
43) 1,2-Dichloroethene (Total)	(2)		96	217921	43.101	43.10			0.2	2
44) 2-Butanone	(2)	6.260(-0.000)	43	819468	123.257	123.26			0.3	10
45) 2,2-Dichloropropane	(2)	6.296(-0.001)	77	117293	17.160	17.16			0.3	1
47) Propionitrile	(1)	6.357(0.002)	54	259622	156.256	156.26			14	100
48) Methacrylonitrile	(2)	6.570(-0.000)	67	577158	142.832	142.83			6	50
49) Bromochloromethane	(2)	6.612(-0.000)	128	58493	19.583	19.58			0.2	5
50) Tetrahydrofuran	(1)	6.618(0.002)	71	151268	92.230	92.23			0.7	10
51) Chloroform	(2)	6.764(-0.000)	83	164218	19.125	19.13			0.2	1
53) 1,1,1-Trichloroethane	(2)	6.984(-0.000)	97	129639	18.036	18.04			0.3	1
54) Cyclohexane	(2)	7.075(-0.000)	56	165947	17.753	17.75			0.2	5
55) 1,1-Dichloropropene	(2)	7.196(-0.000)	75	132575	19.522	19.52			0.2	5
56) Carbon Tetrachloride	(2)	7.196(-0.001)	117	108044	17.301	17.30			0.2	1
58) Isobutyl Alcohol	(1)	7.367(0.000)	41	259459	471.072	471.07			36	250
60) Benzene	(2)	7.464(-0.000)	78	422399	20.454	20.45			0.2	1
61) 1,2-Dichloroethane	(2)	7.537(0.000)	62	127425	18.205	18.20			0.3	1
65) t-Amyl methyl ether	(2)	7.647(-0.000)	73	270087	17.998	18.00			0.8	5
67) n-Heptane	(2)	7.866(0.000)	43	149041	16.340	16.34			0.2	5
69) n-Butanol	(1)	8.243(0.002)	56	434133	959.835	959.83			61	250
71) Trichloroethene	(2)	8.346(-0.000)	95	103778	19.810	19.81			0.2	1
72) Methylcyclohexane	(2)	8.644(-0.000)	83	170292	17.261	17.26			0.2	5
73) 1,2-Dichloropropane	(2)	8.687(-0.000)	63	110108	20.295	20.29			0.2	1
74) Dibromomethane	(2)	8.796(-0.000)	93	67446	19.153	19.15			0.2	1
75) 1,4-Dioxane	(1)	8.766(0.004)	88	63605M	545.995	545.99			29	250
76) Methyl Methacrylate	(2)	8.766(-0.000)	69	107857	17.555	17.55			0.2	5
78) Bromodichloromethane	(2)	9.028(-0.000)	83	114587	17.919	17.92			0.2	1
79) 2-Nitropropane	(2)	9.307(-0.000)	41	38793M	12.464	12.46			0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)	9.386(-0.000)	63	89455M	18.021	18.02			0.2	10
81) cis-1,3-Dichloropropene	(2)	9.569(-0.000)	75	154025	18.218	18.22			0.2	1
82) 4-Methyl-2-pentanone	(2)	9.739(-0.000)	43	997200	83.587	83.59			0.5	10
88) Toluene	(3)	9.940(-0.000)	92	271061	20.068	20.07			0.2	1
89) trans-1,3-Dichloropropene	(3)	10.202(-0.000)	75	132479	16.669	16.67			0.2	1
90) 1,3-Dichloropropene (total)	(3)		100	286504	34.887	34.89			0.2	5
91) Ethyl Methacrylate	(3)	10.256(-0.000)	69	169091	16.929	16.93			0.2	5
92) 1,1,2-Trichloroethane	(3)	10.402(-0.000)	97	107355	20.335	20.34			0.2	1
93) Tetrachloroethene	(3)	10.482(-0.000)	166	116810	19.825	19.82			0.2	1
94) 1,3-Dichloropropane	(3)	10.561(0.000)	76	168359	19.211	19.21			0.2	1
96) 2-Hexanone	(3)	10.615(0.000)	43	804034	83.642	83.64			0.3	10
97) Dibromochloromethane	(3)	10.774(0.000)	129	96637	17.300	17.30			0.2	1
99) 1,2-Dibromoethane	(3)	10.883(-0.000)	107	113444	19.464	19.46			0.2	1
102) Chlorobenzene	(3)	11.339(0.000)	112	303217	19.862	19.86			0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)	11.418(0.000)	131	92921	18.030	18.03			0.2	1
104) Ethylbenzene	(3)	11.418(0.000)	91	502089	19.353	19.35			0.4	1
106) m+p-Xylene	(3)	11.534(0.000)	106	409507	39.586	39.59			1	5
107) o-Xylene	(3)	11.862(0.000)	106	196256	19.086	19.09			0.4	1
108) Xylene (Total)	(3)		106	605763	58.673	58.67			1	5
109) Styrene	(3)	11.881(0.000)	104	327756	19.157	19.16			0.2	5
110) Bromoform	(3)	12.039(0.000)	173	68064	15.463	15.46			0.2	4
111) Isopropylbenzene	(3)	12.161(0.000)	105	499608	19.422	19.42			0.2	5
112) Cyclohexanone	(1)	12.246(0.003)	55	238971	513.473	513.47			25	100
115) Bromobenzene	(4)	12.428(-0.000)	156	134969	19.358	19.36			0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	12.410(-0.000)	83	184295	20.071	20.07			0.2	1
117) 1,2,3-Trichloropropane	(4)	12.459(-0.000)	110	53789	19.373	19.37			0.2	5
118) trans-1,4-Dichloro-2-butene	(4)	12.434(0.000)	53	183749	60.875	60.88			6	50
119) n-Propylbenzene	(4)	12.489(0.000)	91	603128	20.113	20.11			0.2	5

M = Compound was manually integrated.

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may30b.b/4y30s41.d Injection date and time: **30-MAY-2019 19:34**
Data file Sample Info. Line: LCS440;LCS440;1;3;LCS;;;;4y30b41; Instrument ID: **HP23297.i** Batch: **4191502AA**
Date, time and analyst ID of latest file update: 30-May-2019 21:09 dvv10203

Blank Data file reference: **/chem/HP23297.i/19may30b.b/4y30b41.d**

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 30-MAY-2019 19:29
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may30b.b/4y30c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)	12.568(-0.000)	126	123535	19.726	19.73			0.2	5
121) 4-Chlorotoluene	(4)	12.666(-0.000)	126	130726	20.027	20.03			0.2	5
122) 1,3,5-Trimethylbenzene	(4)	12.629(-0.000)	105	425537	19.609	19.61			0.3	5
124) tert-Butylbenzene	(4)	12.872(-0.000)	134	87348M	19.173	19.17			0.3	5
125) Pentachloroethane	(4)	12.903(-0.000)	167	76132	18.328	18.33			0.2	5
126) 1,2,4-Trimethylbenzene	(4)	12.915(-0.000)	105	441271	19.475	19.48			1	5
127) sec-Butylbenzene	(4)	13.037(-0.000)	105	544271	19.632	19.63			0.2	5
129) 1,3-Dichlorobenzene	(4)	13.134(-0.000)	146	256392	19.619	19.62			0.2	5
130) p-Isopropyltoluene	(4)	13.140(-0.000)	119	468514	19.211	19.21			0.2	5
133) 1,4-Dichlorobenzene	(4)	13.207(0.000)	146	268813	20.078	20.08			0.2	5
134) 1,2,3-Trimethylbenzene	(4)	13.219(0.000)	105	465498	19.133	19.13			0.3	5
135) Benzyl Chloride	(4)	13.286(0.000)	91	290604	15.958	15.96			0.3	5
136) 1,3-Diethylbenzene	(4)	13.341(0.000)	119	296751	19.467	19.47			0.2	5
137) 1,4-Diethylbenzene	(4)	13.414(-0.000)	119	311124	19.164	19.16			0.2	5
138) 1,2-Dichlorobenzene	(4)	13.469(-0.000)	146	252454	19.825	19.82			0.2	5
139) n-Butylbenzene	(4)	13.432(-0.000)	92	240637	19.262	19.26			0.2	5
140) 1,2-Diethylbenzene	(4)	13.487(-0.000)	119	248397	19.329	19.33			0.2	5
141) Diethylbenzene (total)	(4)		100	856272	57.960	57.96			0.2	5
142) 1,2-Dibromo-3-chloropropane	(4)	14.016(0.000)	75	39740	16.406	16.41			0.3	5
144) 1,3,5-Trichlorobenzene	(4)	14.138(0.000)	180	187397	19.518	19.52			0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.564(0.000)	180	178512	19.624	19.62			0.3	5
147) Hexachlorobutadiene	(4)	14.643(0.000)	225	78133	18.586	18.59			0.7	5
148) Naphthalene	(4)	14.746(0.000)	128	612689	19.440	19.44			1	5
149) 1,2,3-Trichlorobenzene	(4)	14.892(0.000)	180	173681	19.874	19.87			0.4	5
150) 2-Methylnaphthalene	(4)	15.537(0.000)	142	359876	18.257	18.26			0.7	5

M = Compound was manually integrated.

Total number of targets = 109

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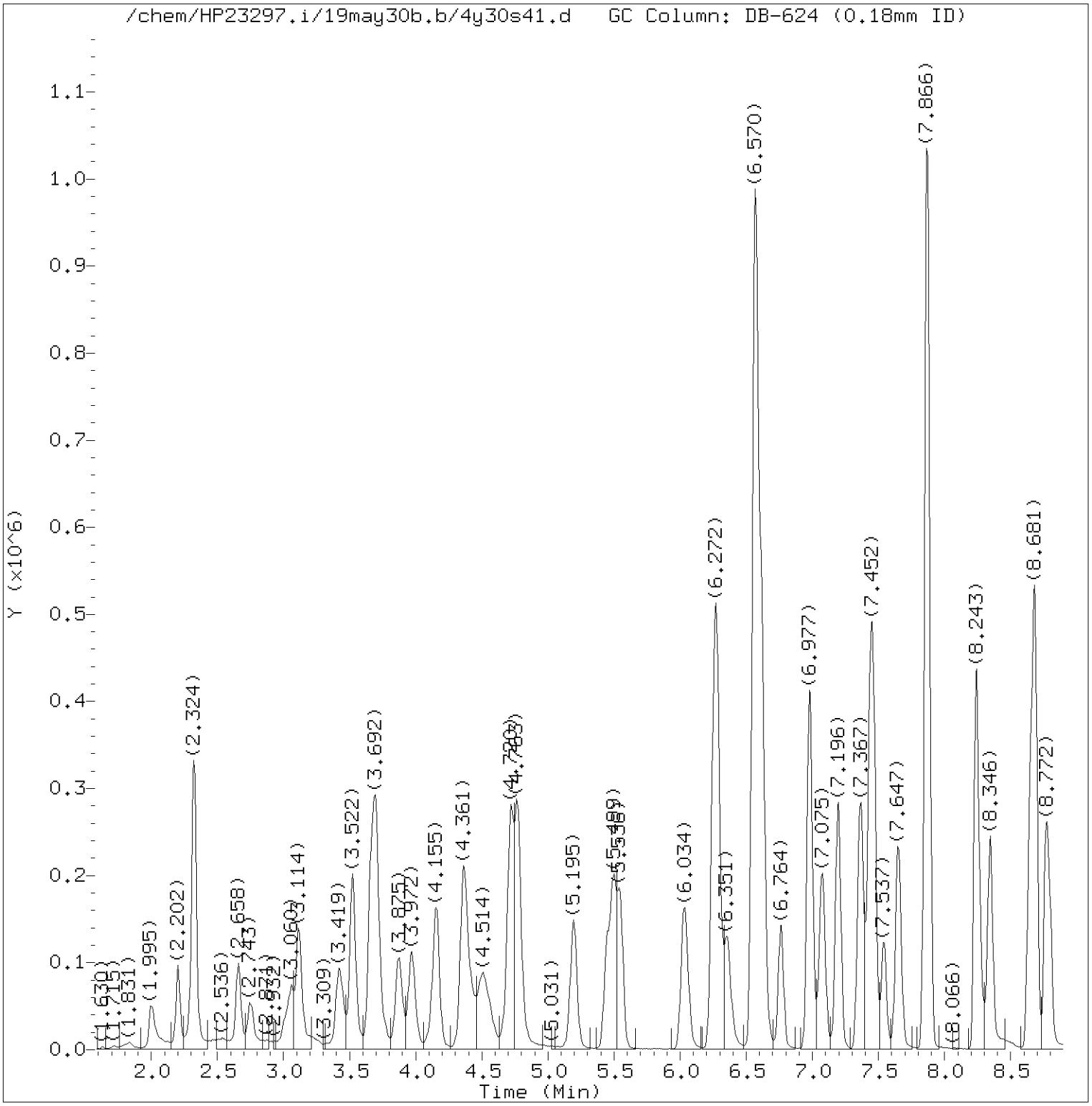
Secondary review performed and digitally signed by Kelly E. Keller on 05/31/2019 at 12:22. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

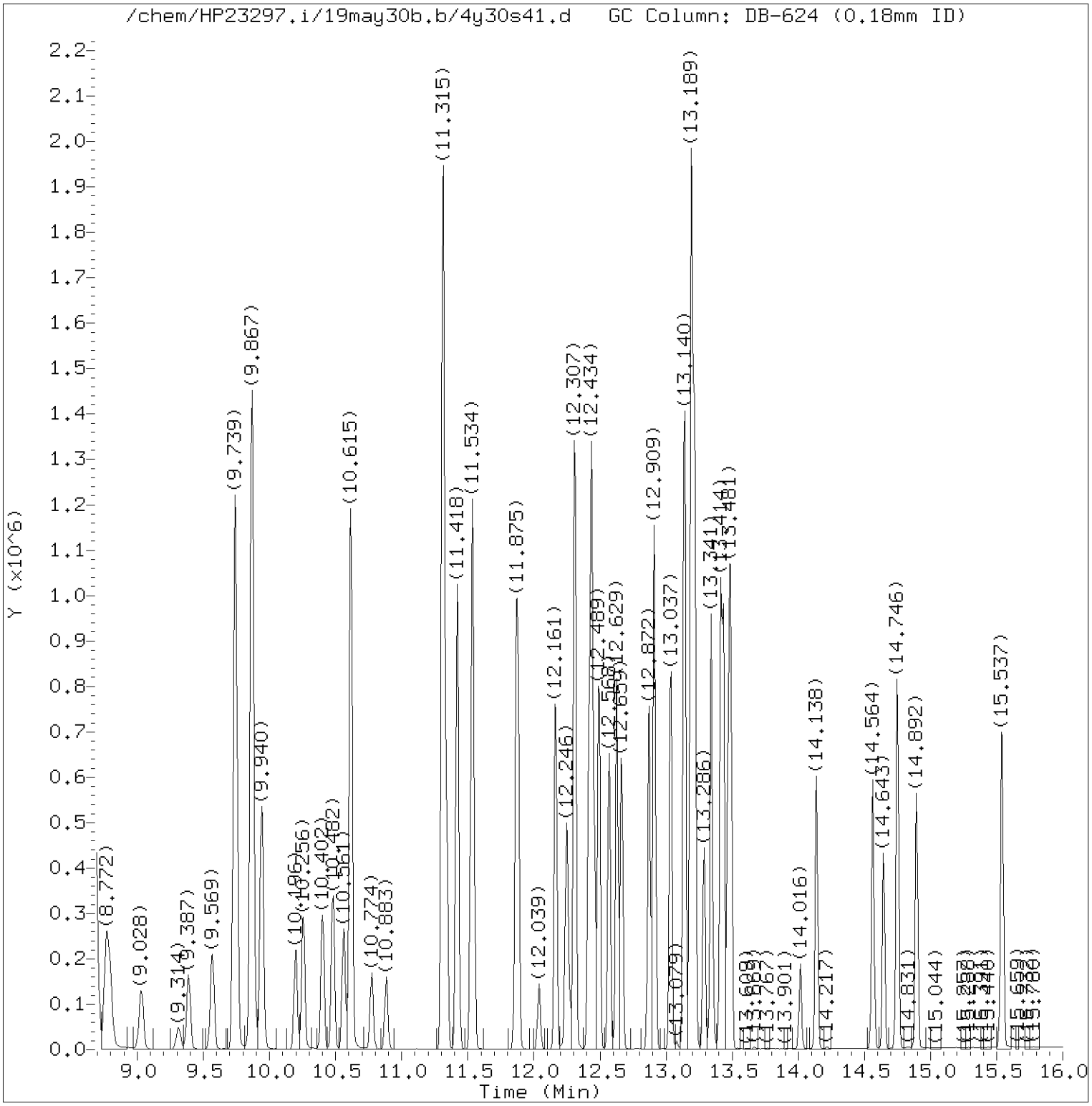
Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30s41.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:34 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 21:09 dvv10203

Sample Name: LCS440 Lab Sample ID: LCS440

Digitally signed by Don V. Viray
on 05/30/2019 at 21:10.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30s41.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:34 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 21:09 dvv10203

Sample Name: LCS440 Lab Sample ID: LCS440

Digitally signed by Don V. Viray
on 05/30/2019 at 21:10.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30s41.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:34 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 21:09 dvv10203

Sample Name: LCS440 Lab Sample ID: LCS440

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.995	85	107232	12.493
4) Chloromethane	(2)	2.202	50	126170	15.176
5) 1,3-Butadiene	(2)	2.324	39	172441	38.251
6) Vinyl Chloride	(2)	2.324	62	126679	15.585
8) Bromomethane	(2)	2.658	94	97374	14.600
9) Chloroethane	(2)	2.743	64	67715	15.087
12) Trichlorofluoromethane	(2)	3.060	101	133876	13.583
11) n-Pentane	(2)	3.114	43	152205	19.113
13) Ethanol	(1)	3.200	45	55601	415.518
15) Freon 123a	(2)	3.425	67	108260	19.091
16) Acrolein	(1)	3.522	56	314787	139.668
17) 1,1-Dichloroethene	(2)	3.662	96	86223	21.963
19) Freon 113	(2)	3.674	101	82354	19.063
18) Acetone	(1)	3.698	58	157907	142.674
22) Methyl Iodide	(2)	3.863	142	162467	20.768
21) 2-Propanol	(1)	3.881	45	115595	129.980
23) Carbon Disulfide	(2)	3.972	76	283258	20.233
27) Methyl Acetate	(2)	4.130	43	152685	18.673
25) Allyl Chloride	(2)	4.161	41	151386	17.390
28) Methylene Chloride	(2)	4.361	84	106125	21.341
29)*t-Butyl alcohol-d10	(1)	4.380	65	397505M	250.000
30) t-Butyl alcohol	(1)	4.514	59	270852	173.153
31) Acrylonitrile	(2)	4.714	53	381777	89.120
33) Methyl Tertiary Butyl Ether	(2)	4.763	73	258408	18.426
32) trans-1,2-Dichloroethene	(2)	4.775	96	99351	21.180
34) n-Hexane	(2)	5.195	57	139306	17.981
36) 1,1-Dichloroethane	(2)	5.444	63	174886	20.060
38) di-Isopropyl ether	(2)	5.499	45	328924	19.037
39) 2-Chloro-1,3-butadiene	(2)	5.554	53	139967	17.734
40) Ethyl t-butyl ether	(2)	6.034	59	263420	17.748
43) 1,2-Dichloroethene (Total)	(2)		96	217921	43.101
44) 2-Butanone	(2)	6.260	43	819468	123.257
42) cis-1,2-Dichloroethene	(2)	6.278	96	118570	21.921
45) 2,2-Dichloropropane	(2)	6.296	77	117293	17.160
47) Propionitrile	(1)	6.357	54	259622	156.256
48) Methacrylonitrile	(2)	6.570	67	577158	142.832
49) Bromochloromethane	(2)	6.612	128	58493	19.583
50) Tetrahydrofuran	(1)	6.618	71	151268	92.230

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 05/30/2019 at 21:10.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30s41.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:34 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 21:09 dvv10203

Sample Name: LCS440 Lab Sample ID: LCS440

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	6.764	83	164218	19.125
52)$Dibromofluoromethane	(2)	6.977	113	271237	48.884
53) 1,1,1-Trichloroethane	(2)	6.984	97	129639	18.036
54) Cyclohexane	(2)	7.075	56	165947	17.753
55) 1,1-Dichloropropene	(2)	7.196	75	132575	19.522
56) Carbon Tetrachloride	(2)	7.196	117	108044	17.301
58) Isobutyl Alcohol	(1)	7.367	41	259459	471.072
57)$1,2-Dichloroethane-d4	(2)	7.440	102	68545	50.557
60) Benzene	(2)	7.464	78	422399	20.454
61) 1,2-Dichloroethane	(2)	7.537	62	127425	18.205
65) t-Amyl methyl ether	(2)	7.647	73	270087	17.998
66)*Fluorobenzene	(2)	7.866	96	1125670	50.000
67) n-Heptane	(2)	7.866	43	149041	16.340
69) n-Butanol	(1)	8.243	56	434133	959.835
71) Trichloroethene	(2)	8.346	95	103778	19.810
72) Methylcyclohexane	(2)	8.644	83	170292	17.261
73) 1,2-Dichloropropane	(2)	8.687	63	110108	20.295
75) 1,4-Dioxane	(1)	8.766	88	63605M	545.995
76) Methyl Methacrylate	(2)	8.766	69	107857	17.555
74) Dibromomethane	(2)	8.796	93	67446	19.153
78) Bromodichloromethane	(2)	9.028	83	114587	17.919
79) 2-Nitropropane	(2)	9.307	41	38793M	12.464
80) 2-Chloroethyl Vinyl Ether	(2)	9.387	63	89455M	18.021
81) cis-1,3-Dichloropropene	(2)	9.569	75	154025	18.218
82) 4-Methyl-2-pentanone	(2)	9.739	43	997200	83.587
83)$Toluene-d8	(3)	9.867	98	1161806	49.753
88) Toluene	(3)	9.940	92	271061	20.068
90) 1,3-Dichloropropene (total)	(3)		100	286504	34.887
89) trans-1,3-Dichloropropene	(3)	10.202	75	132479	16.669
91) Ethyl Methacrylate	(3)	10.256	69	169091	16.929
92) 1,1,2-Trichloroethane	(3)	10.402	97	107355	20.335
93) Tetrachloroethene	(3)	10.482	166	116810	19.825
94) 1,3-Dichloropropane	(3)	10.561	76	168359	19.211
96) 2-Hexanone	(3)	10.615	43	804034	83.642
97) Dibromochloromethane	(3)	10.774	129	96637	17.300
99) 1,2-Dibromoethane	(3)	10.883	107	113444	19.464
100)*Chlorobenzene-d5	(3)	11.309	117	909853	50.000
102) Chlorobenzene	(3)	11.339	112	303217	19.862

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/30/2019 at 21:10.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30s41.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:34 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 21:09 dvv10203

Sample Name: LCS440 Lab Sample ID: LCS440

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	92921	18.030
104) Ethylbenzene	(3)	11.418	91	502089	19.353
106) m+p-Xylene	(3)	11.534	106	409507	39.586
108) Xylene (Total)	(3)		106	605763	58.673
107) o-Xylene	(3)	11.863	106	196256	19.086
109) Styrene	(3)	11.881	104	327756	19.157
110) Bromoform	(3)	12.039	173	68064	15.463
111) Isopropylbenzene	(3)	12.161	105	499608	19.422
112) Cyclohexanone	(1)	12.246	55	238971	513.473
114)$4-Bromofluorobenzene	(3)	12.307	95	429800	48.288
116) 1,1,2,2-Tetrachloroethane	(4)	12.410	83	184295	20.071
115) Bromobenzene	(4)	12.428	156	134969	19.358
118) trans-1,4-Dichloro-2-butene	(4)	12.434	53	183749	60.875
117) 1,2,3-Trichloropropane	(4)	12.459	110	53789	19.373
119) n-Propylbenzene	(4)	12.489	91	603128	20.113
120) 2-Chlorotoluene	(4)	12.568	126	123535	19.726
122) 1,3,5-Trimethylbenzene	(4)	12.629	105	425537	19.609
121) 4-Chlorotoluene	(4)	12.666	126	130726	20.027
124) tert-Butylbenzene	(4)	12.872	134	87348M	19.173
125) Pentachloroethane	(4)	12.903	167	76132	18.328
126) 1,2,4-Trimethylbenzene	(4)	12.915	105	441271	19.475
127) sec-Butylbenzene	(4)	13.037	105	544271	19.632
129) 1,3-Dichlorobenzene	(4)	13.134	146	256392	19.619
130) p-Isopropyltoluene	(4)	13.140	119	468514	19.211
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	498265	50.000
133) 1,4-Dichlorobenzene	(4)	13.207	146	268813	20.078
134) 1,2,3-Trimethylbenzene	(4)	13.219	105	465498	19.133
135) Benzyl Chloride	(4)	13.286	91	290604	15.958
136) 1,3-Diethylbenzene	(4)	13.341	119	296751	19.467
141) Diethylbenzene (total)	(4)		100	856272	57.960
137) 1,4-Diethylbenzene	(4)	13.414	119	311124	19.164
139) n-Butylbenzene	(4)	13.432	92	240637	19.262
138) 1,2-Dichlorobenzene	(4)	13.469	146	252454	19.825
140) 1,2-Diethylbenzene	(4)	13.487	119	248397	19.329
142) 1,2-Dibromo-3-chloropropane	(4)	14.016	75	39740	16.406
144) 1,3,5-Trichlorobenzene	(4)	14.138	180	187397	19.518
146) 1,2,4-Trichlorobenzene	(4)	14.564	180	178512	19.624
147) Hexachlorobutadiene	(4)	14.643	225	78133	18.586

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/30/2019 at 21:10.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may30b.b/4y30s41.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:34 Analyst ID: DVV10203

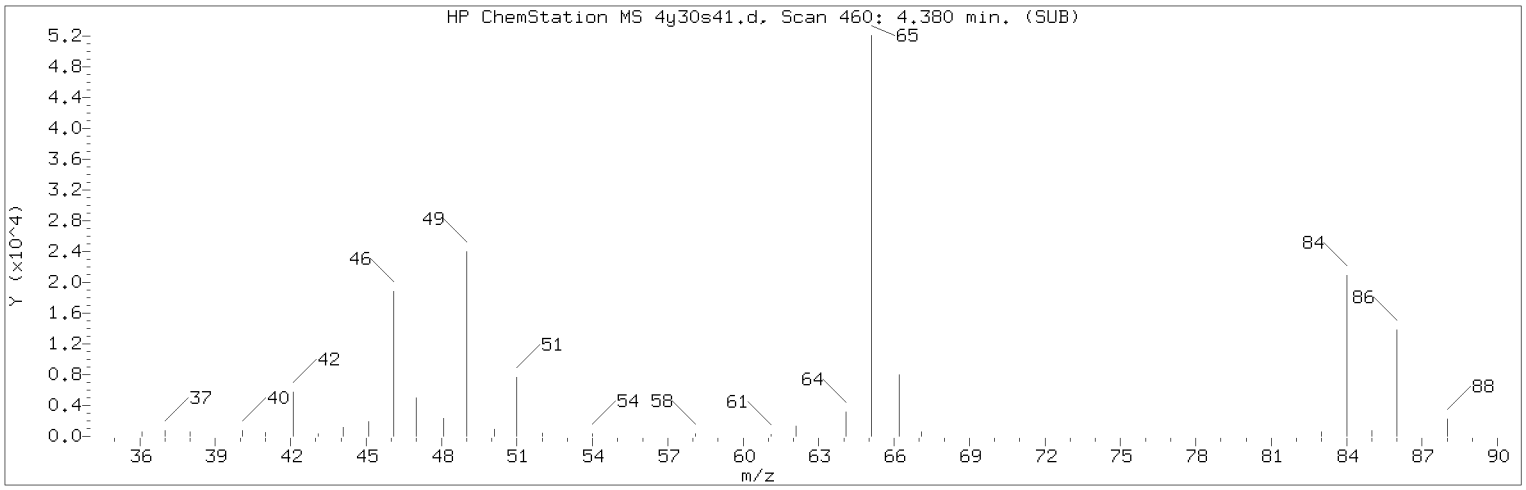
Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 21:09 dvv10203

Sample Name: LCS440 Lab Sample ID: LCS440

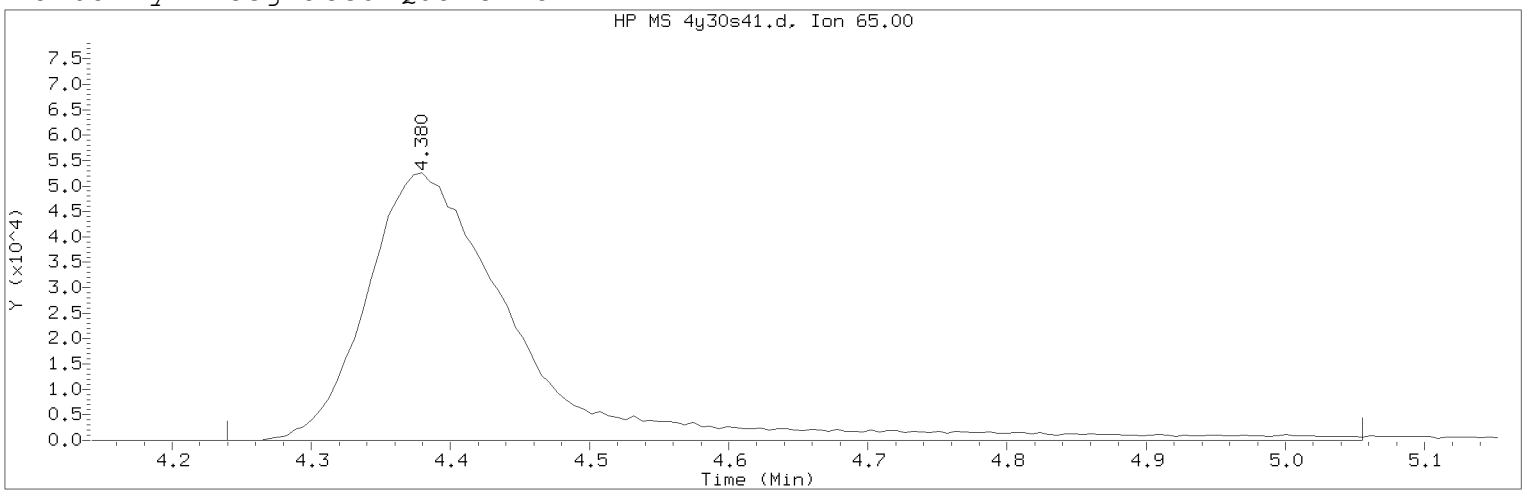
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) Naphthalene	(4)	14.746	128	612689	19.440
149) 1,2,3-Trichlorobenzene	(4)	14.892	180	173681	19.874
150) 2-Methylnaphthalene	(4)	15.537	142	359876	18.257

Digitally signed by Don V. Viray
on 05/30/2019 at 21:10.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may30b.b/4y30s41.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:34 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 21:09 dvv10203

Sample Name: LCS440 Lab Sample ID: LCS440

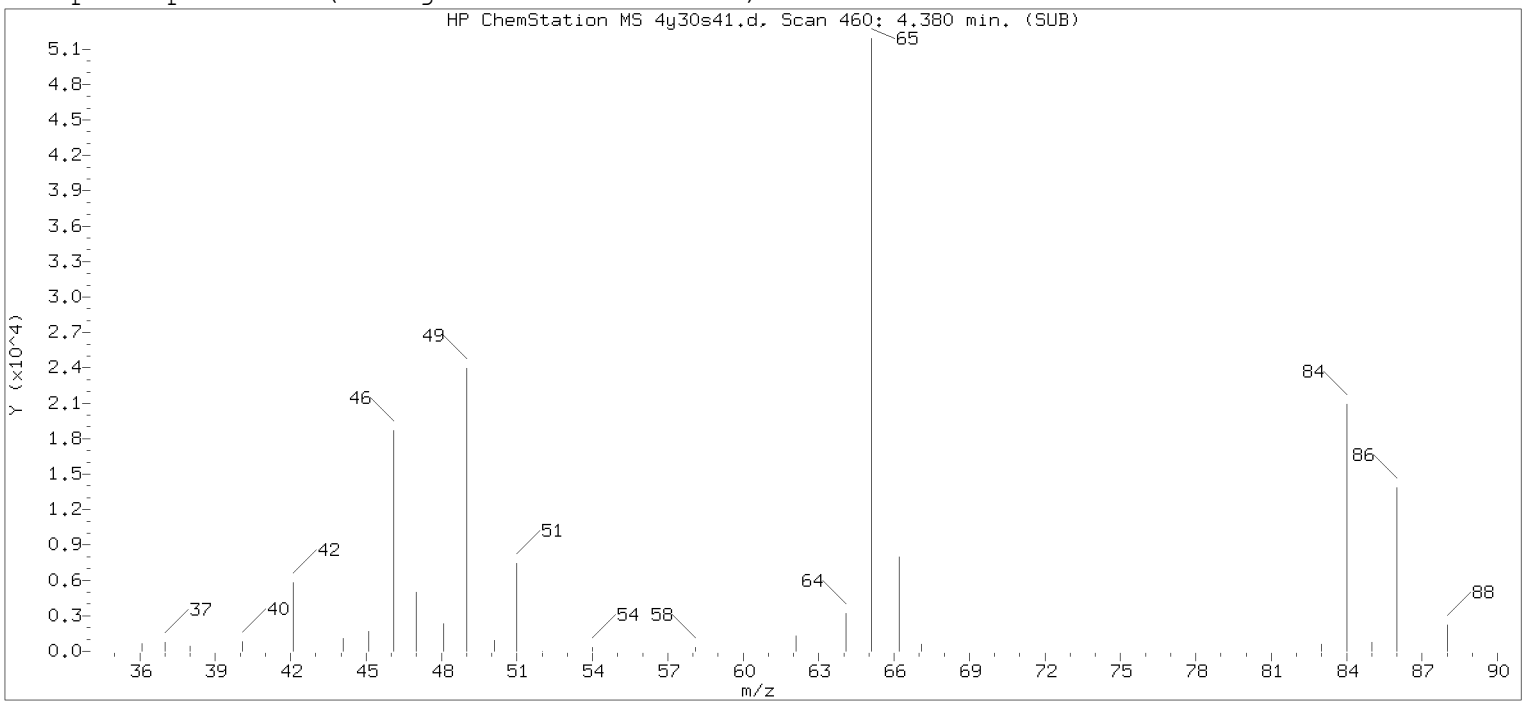
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 460
Retention Time (minutes): 4.380
Quant Ion : 65.00
Area (flag) : 397505M
On-Column Amount (ng) : 250.0000
Integration start scan : 436 Integration stop scan: 570
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

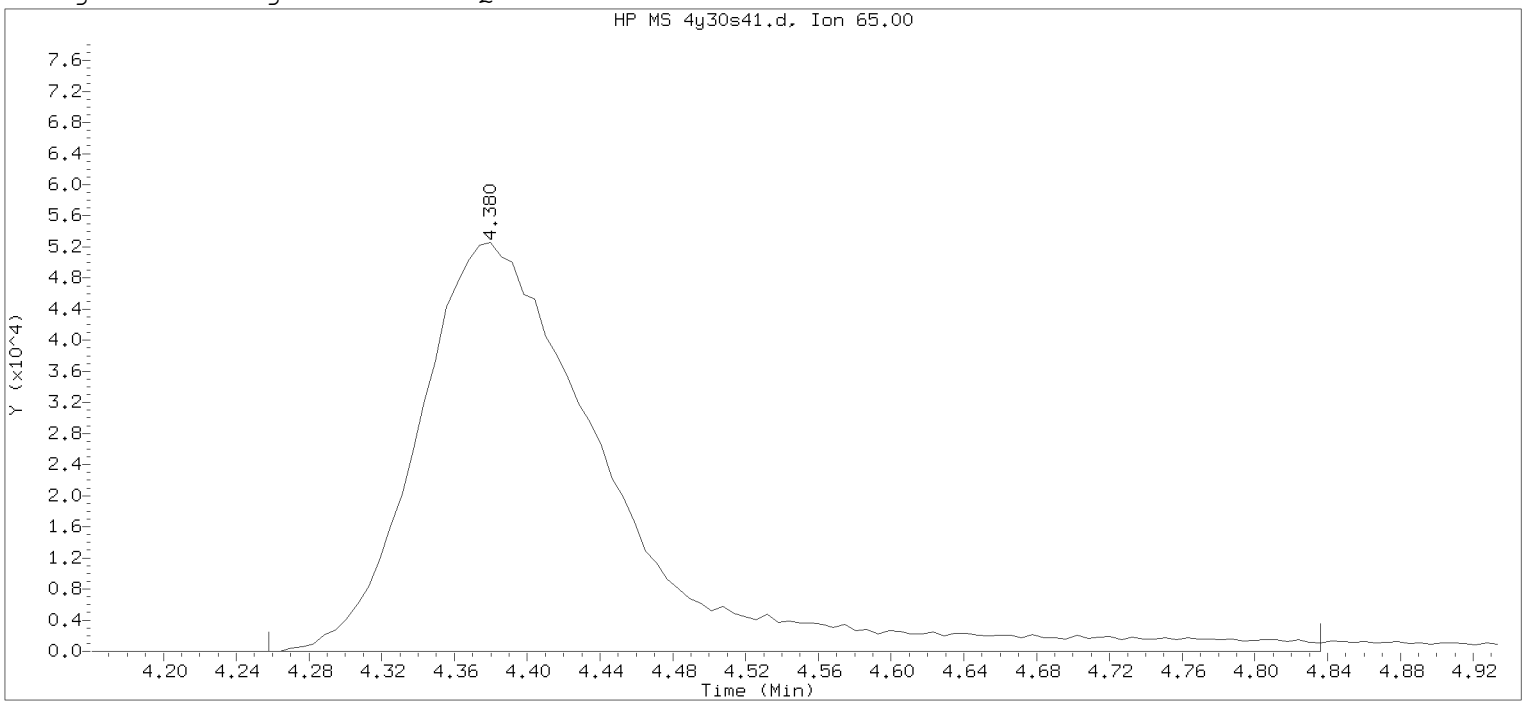
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/30/2019 at 21:10.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/31/2019 at 12:22.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may30b.b/4y30s41.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:34 Analyst ID: DVV10203

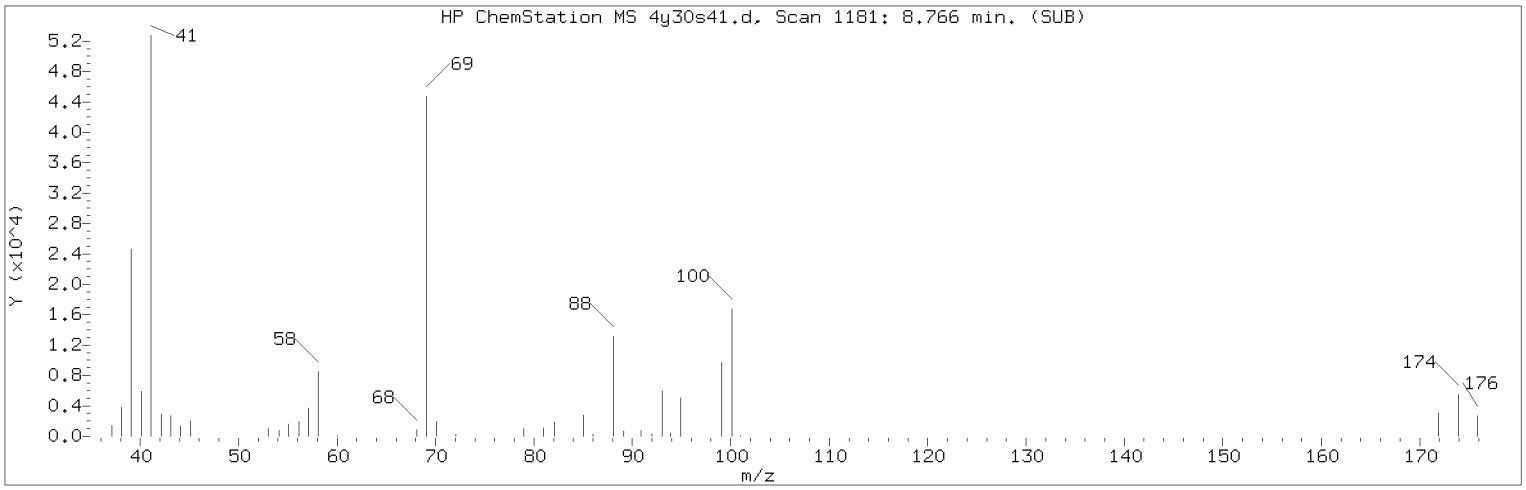
Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 19:52 Automation

Sample Name: LCS440 Lab Sample ID: LCS440

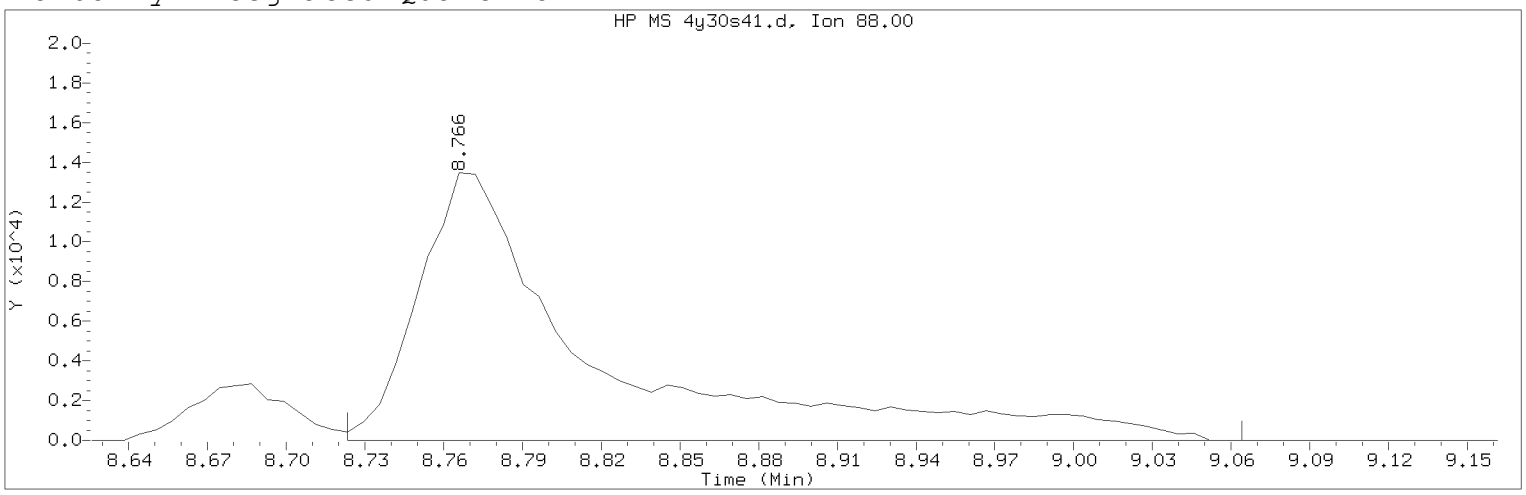
Compound Number	: 29		
Compound Name	: t-Butyl alcohol-d10		
Scan Number	: 460		
Retention Time (minutes)	: 4.380		
Quant Ion	: 65.00		
Area	: 384693		
On-column Amount (ng)	: 250.0000		
Integration start scan	: 439	Integration stop scan:	534
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 05/30/2019 at 21:10.
Target 3.5 esignature user id: dviray0203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may30b.b/4y30s41.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:34 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 21:09 dvv10203

Sample Name: LCS440 Lab Sample ID: LCS440

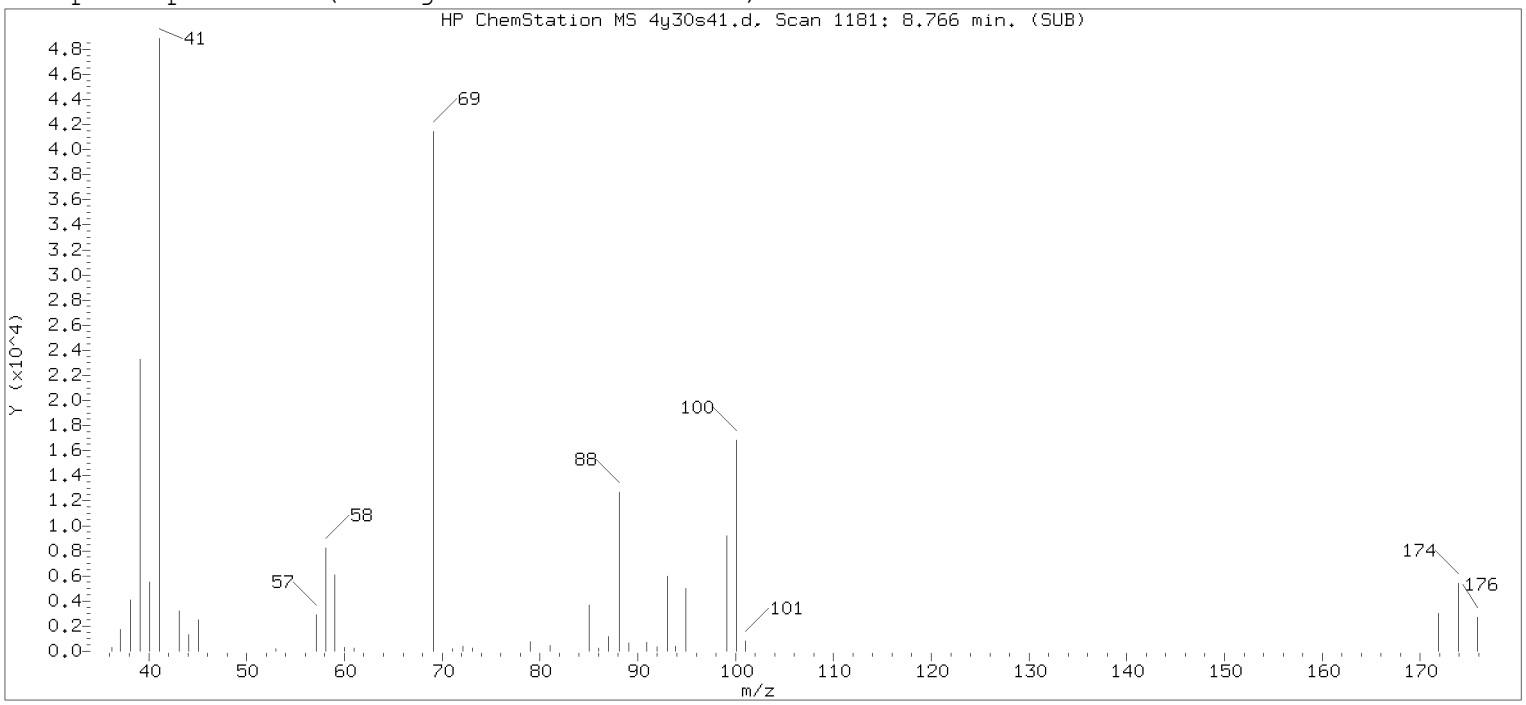
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1181
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area (flag) : 63605M
On-Column Amount (ng) : 545.9948
Integration start scan : 1173 Integration stop scan: 1229
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

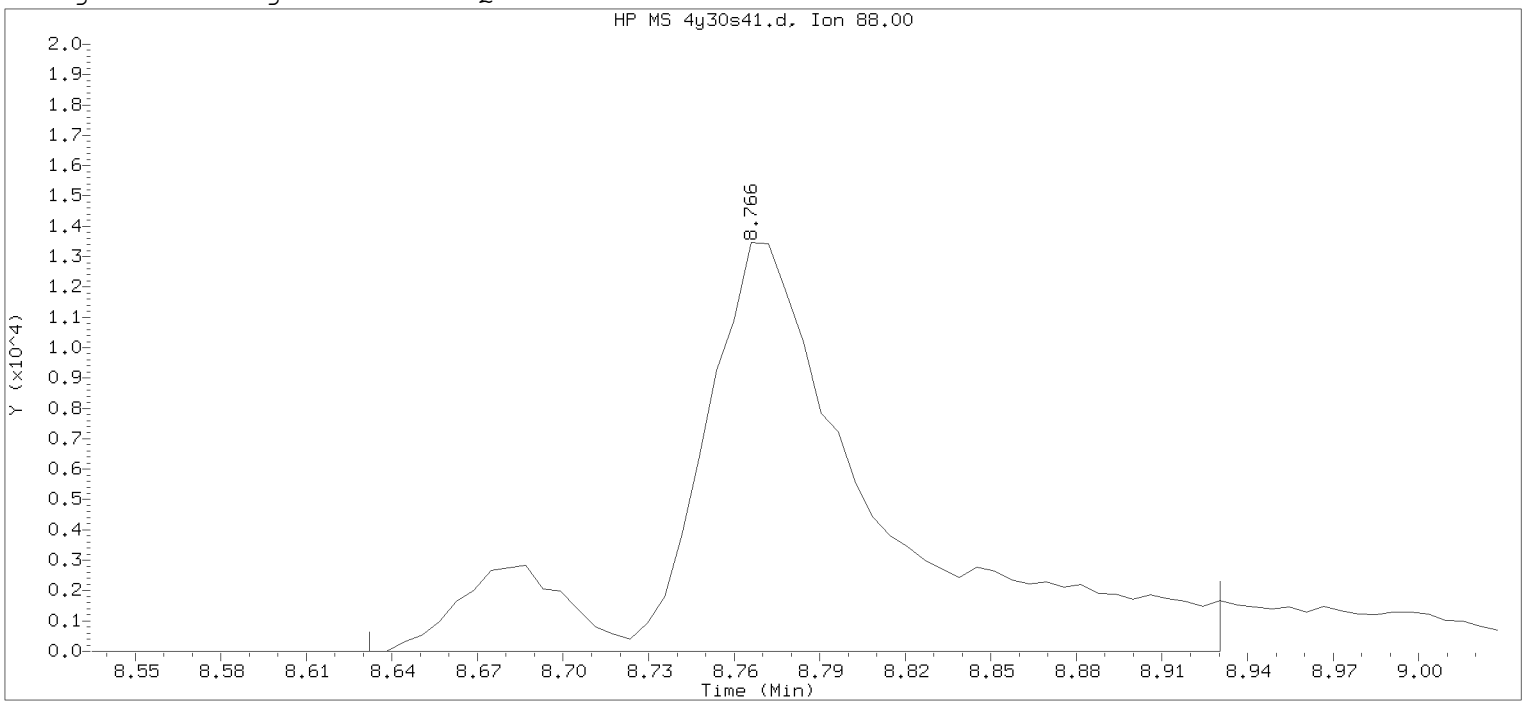
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/30/2019 at 21:10.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/31/2019 at 12:22.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may30b.b/4y30s41.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:34 Analyst ID: DVV10203

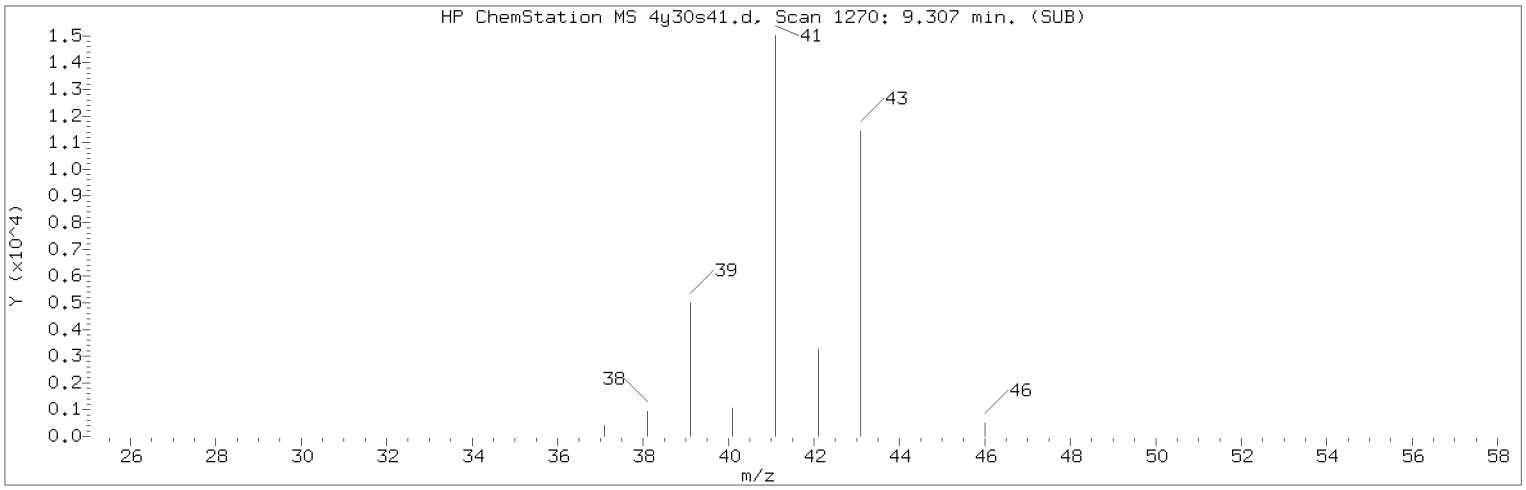
Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 19:52 Automation

Sample Name: LCS440 Lab Sample ID: LCS440

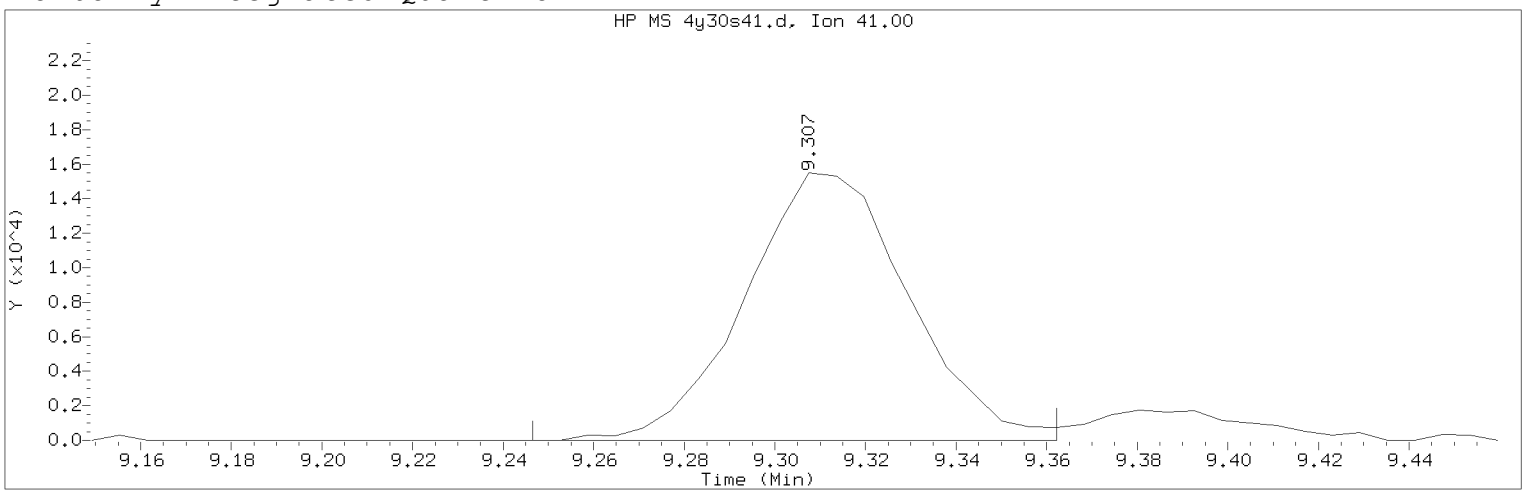
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1181
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area : 63179
On-column Amount (ng) : 560.4013
Integration start scan : 1158 Integration stop scan: 1207
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/30/2019 at 21:10.
Target 3.5 esignature user id: dvviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may30b.b/4y30s41.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:34 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 21:09 dvv10203

Sample Name: LCS440 Lab Sample ID: LCS440

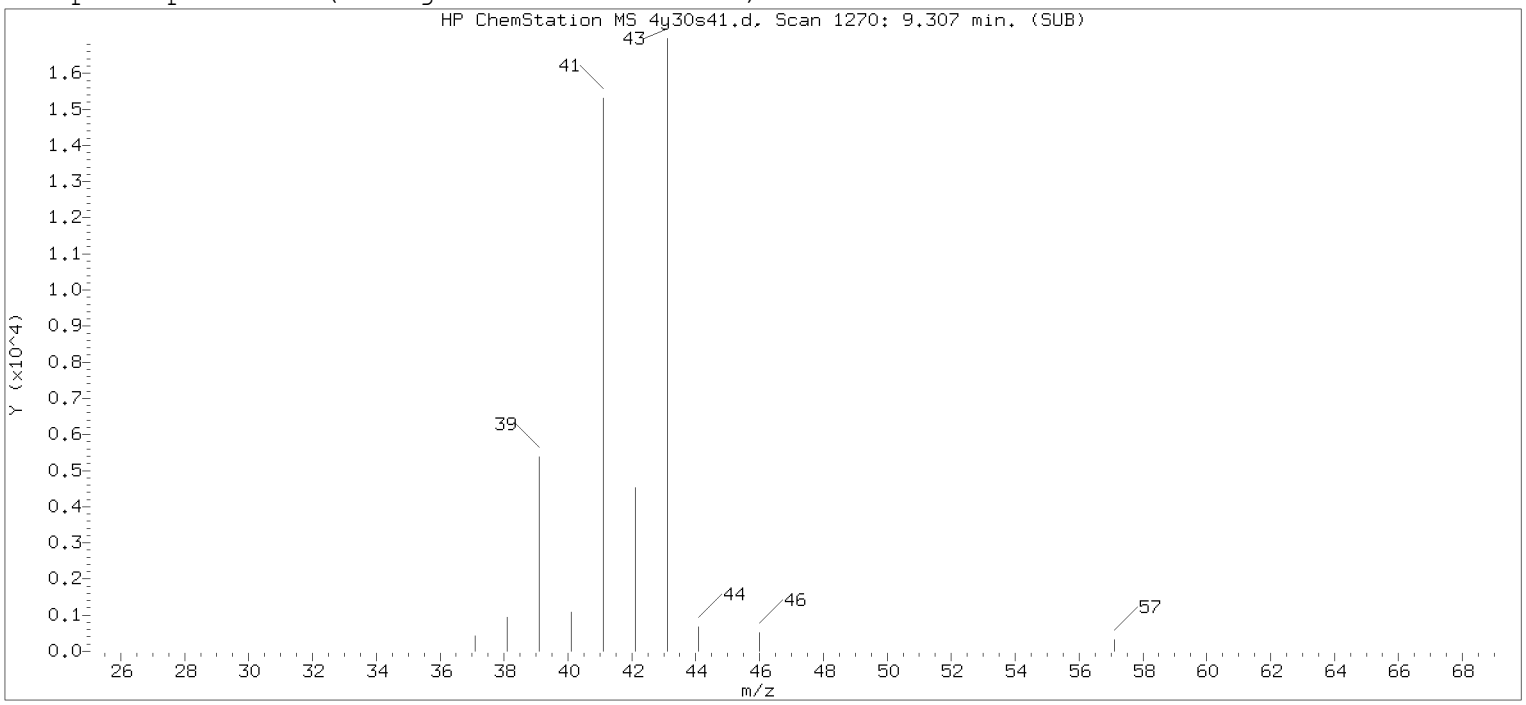
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 1270
Retention Time (minutes): 9.307
Quant Ion : 41.00
Area (flag) : 38793M
On-Column Amount (ng) : 12.4645
Integration start scan : 1259 Integration stop scan: 1278
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

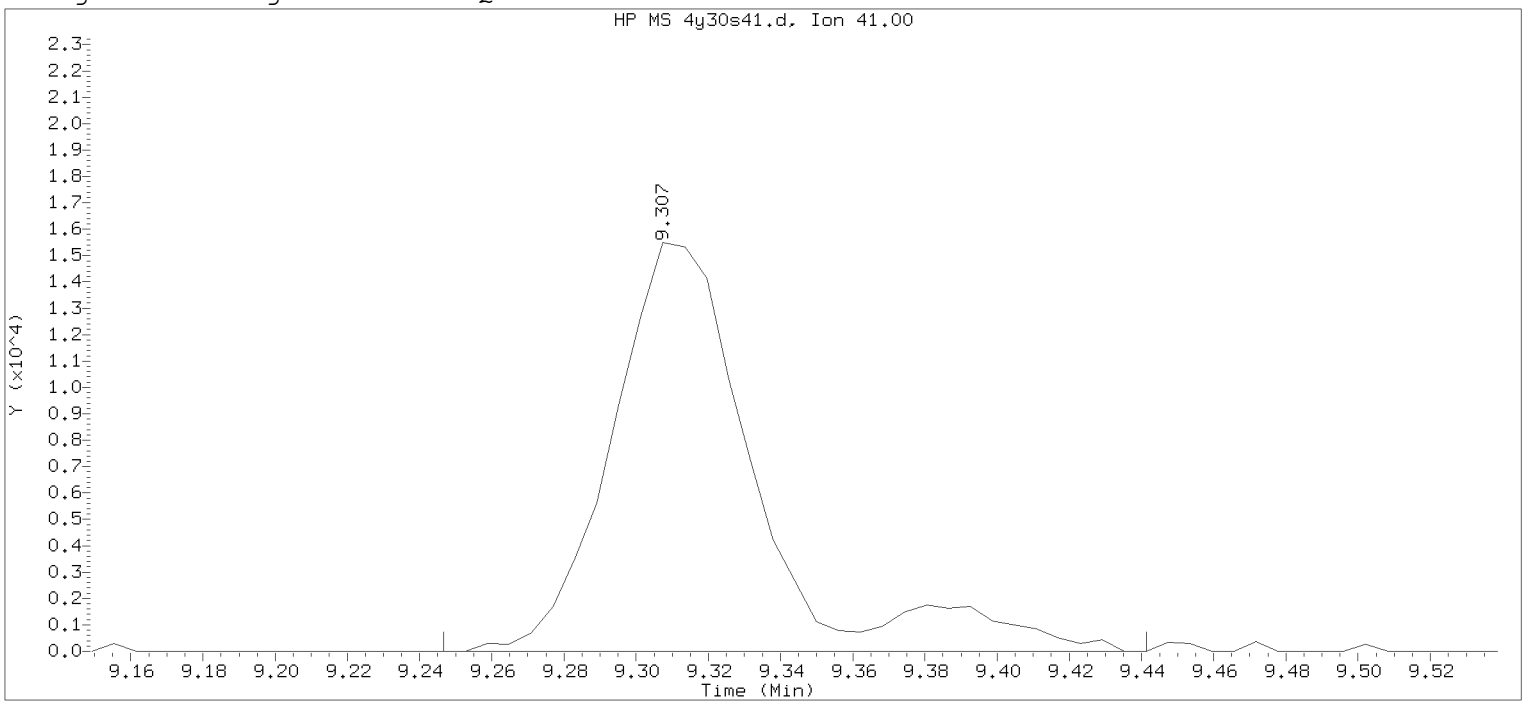
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/30/2019 at 21:10.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/31/2019 at 12:22.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may30b.b/4y30s41.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:34 Analyst ID: DVV10203

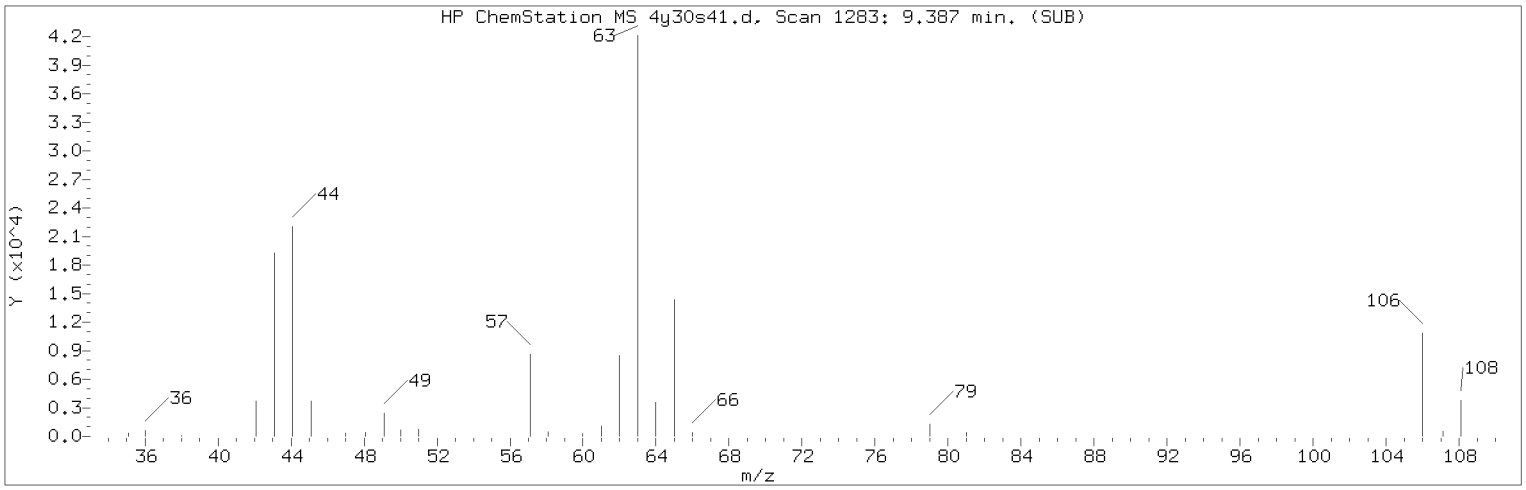
Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 19:52 Automation

Sample Name: LCS440 Lab Sample ID: LCS440

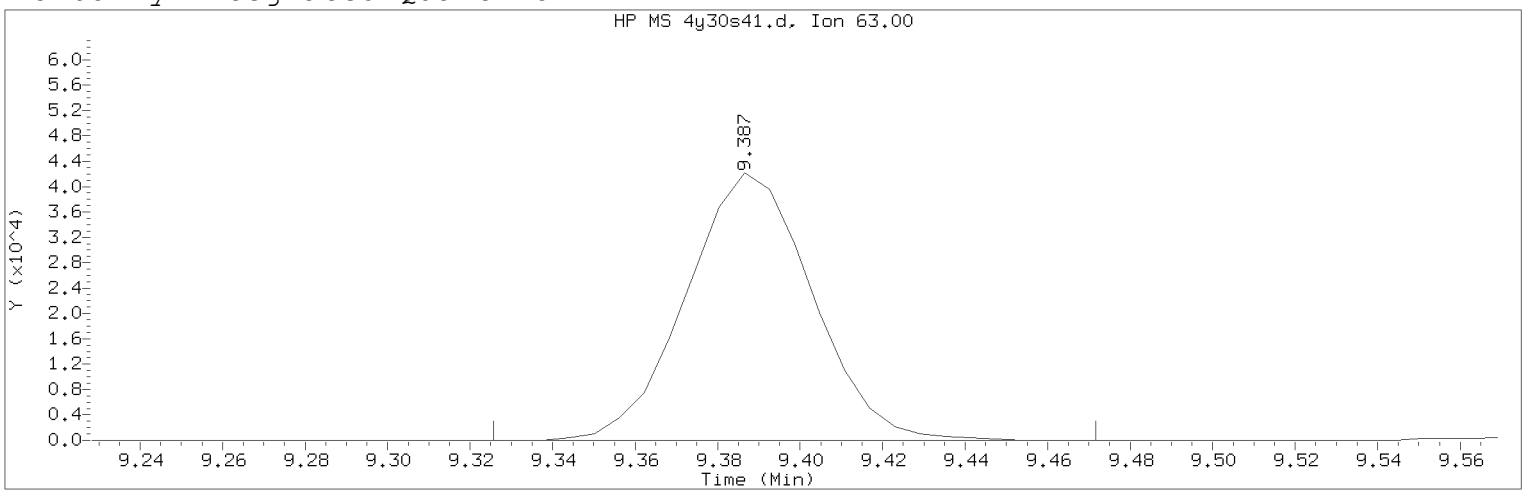
Compound Number	: 79		
Compound Name	: 2-Nitropropane		
Scan Number	: 1270		
Retention Time (minutes)	: 9.307		
Quant Ion	: 41.00		
Area	: 43086		
On-column Amount (ng)	: 13.8438		
Integration start scan	: 1259	Integration stop scan:	1291
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 05/30/2019 at 21:10.
Target 3.5 esignature user id: dviray0203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may30b.b/4y30s41.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:34 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 21:09 dvv10203

Sample Name: LCS440 Lab Sample ID: LCS440

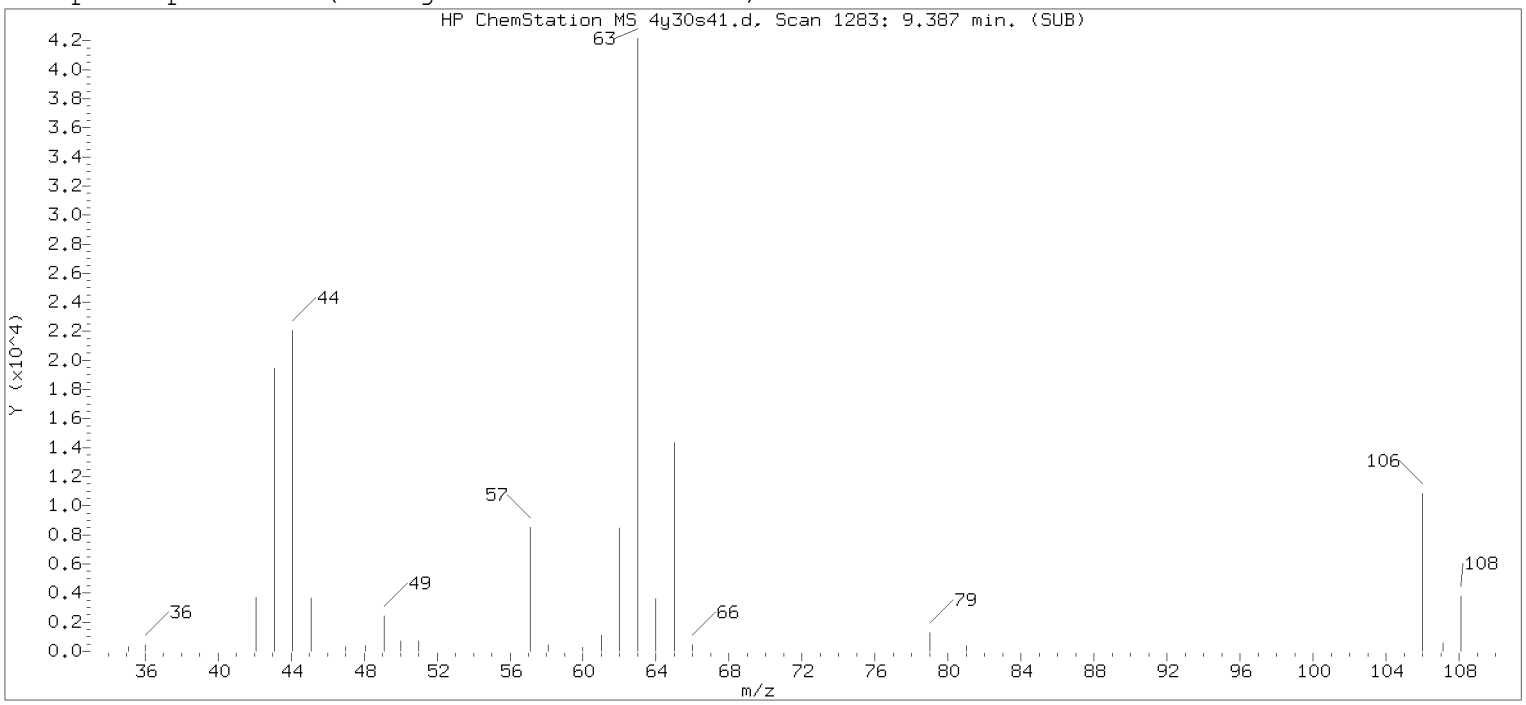
Compound Number : 80
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1283
Retention Time (minutes): 9.387
Quant Ion : 63.00
Area (flag) : 89455M
On-Column Amount (ng) : 18.0207
Integration start scan : 1272 Integration stop scan: 1296
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

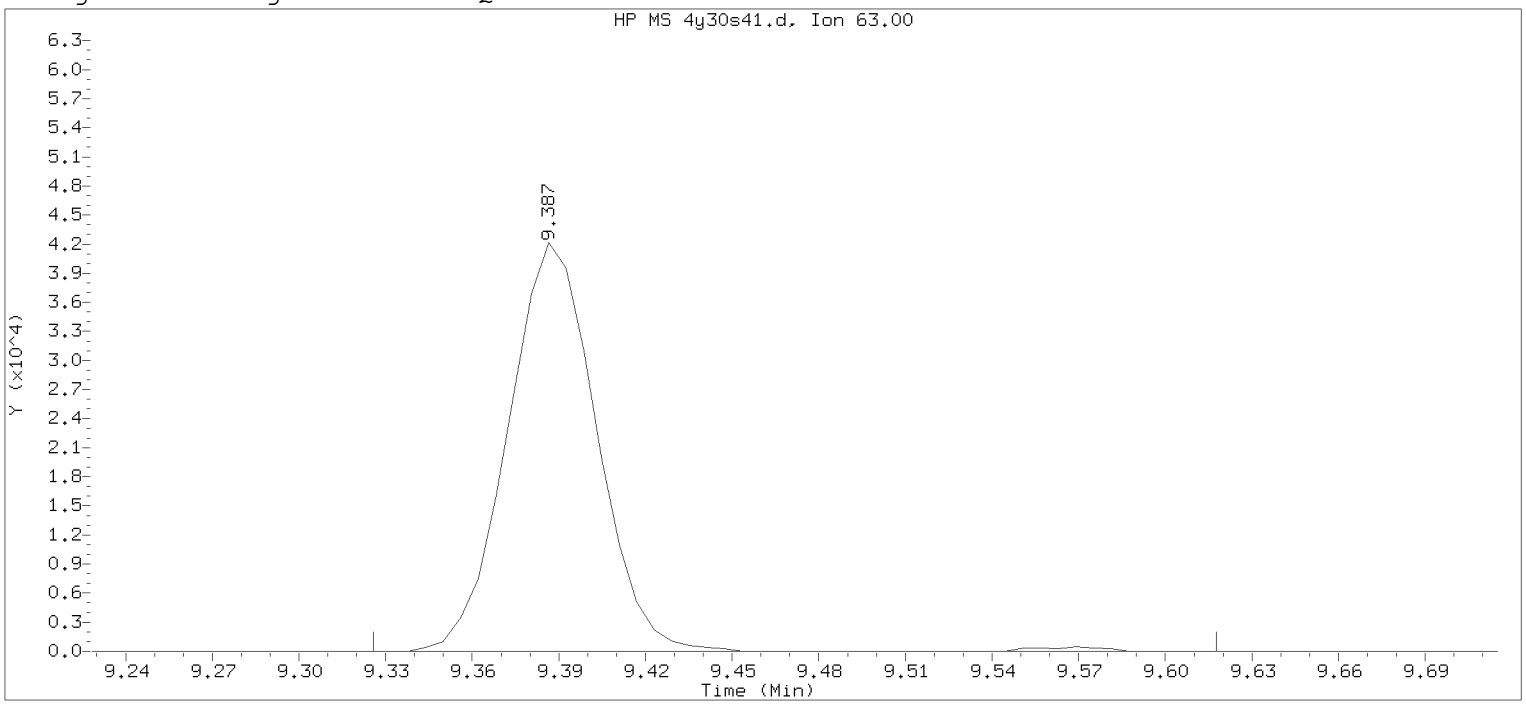
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/30/2019 at 21:10.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/31/2019 at 12:22.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may30b.b/4y30s41.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:34 Analyst ID: DVV10203

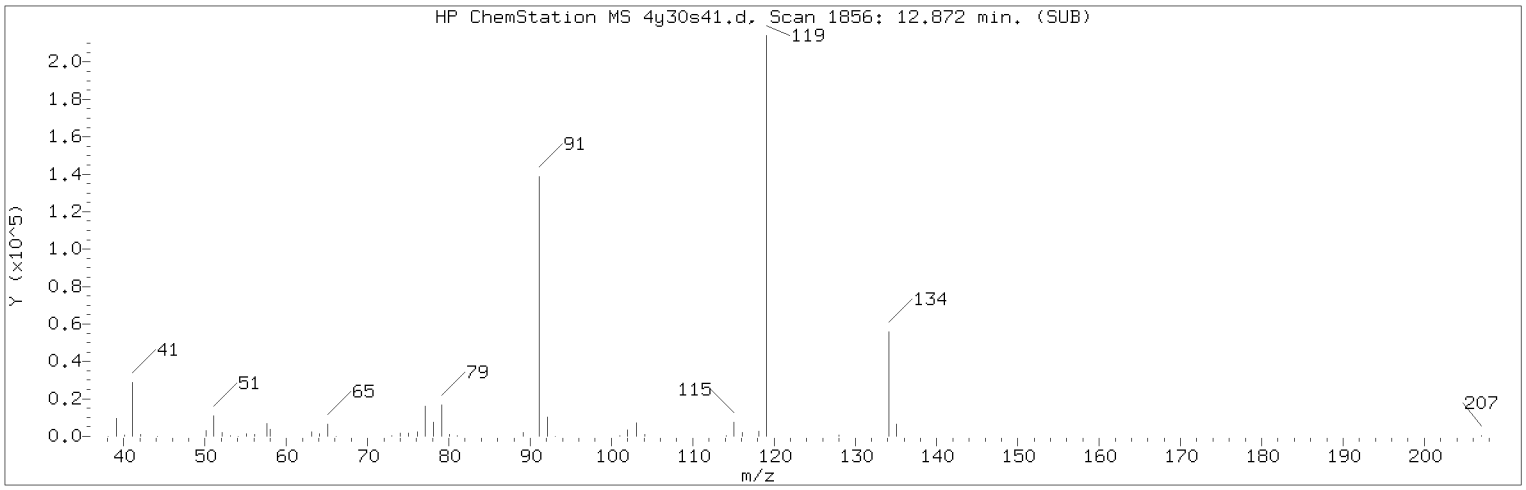
Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 19:52 Automation

Sample Name: LCS440 Lab Sample ID: LCS440

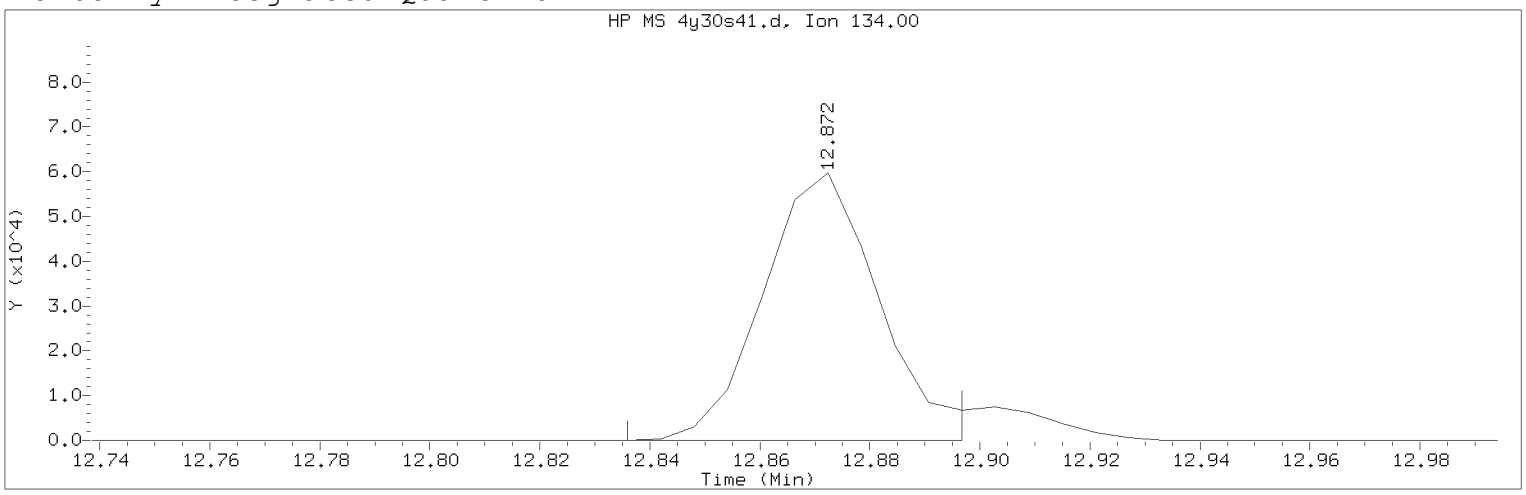
Compound Number : 80
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1283
Retention Time (minutes): 9.387
Quant Ion : 63.00
Area : 90161
On-column Amount (ng) : 18.1630
Integration start scan : 1272 Integration stop scan: 1320
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/30/2019 at 21:10.
Target 3.5 esignature user id: dviray0203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may30b.b/4y30s41.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:34 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 21:09 dvv10203

Sample Name: LCS440 Lab Sample ID: LCS440

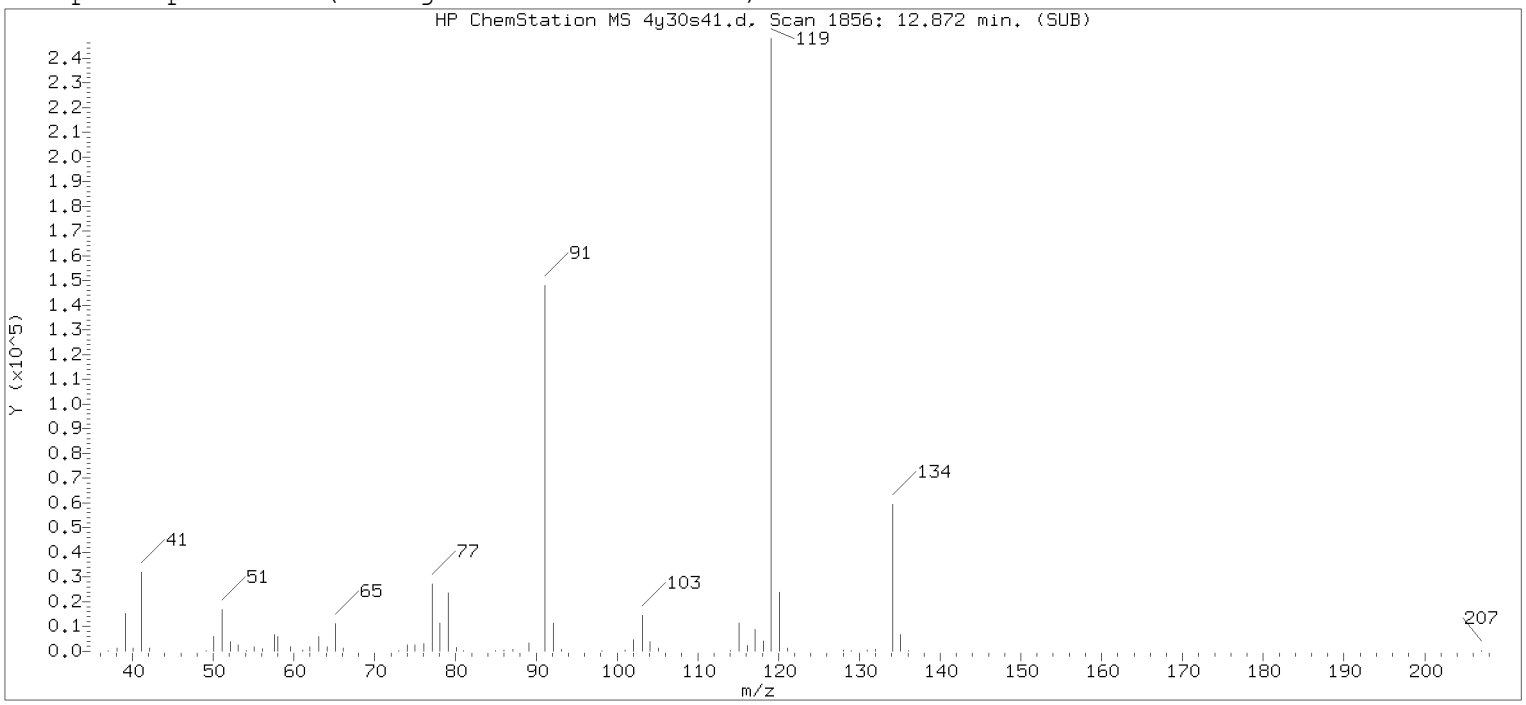
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1856
Retention Time (minutes): 12.872
Quant Ion : 134.00
Area (flag) : 87348M
On-Column Amount (ng) : 19.1731
Integration start scan : 1849 Integration stop scan: 1859
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

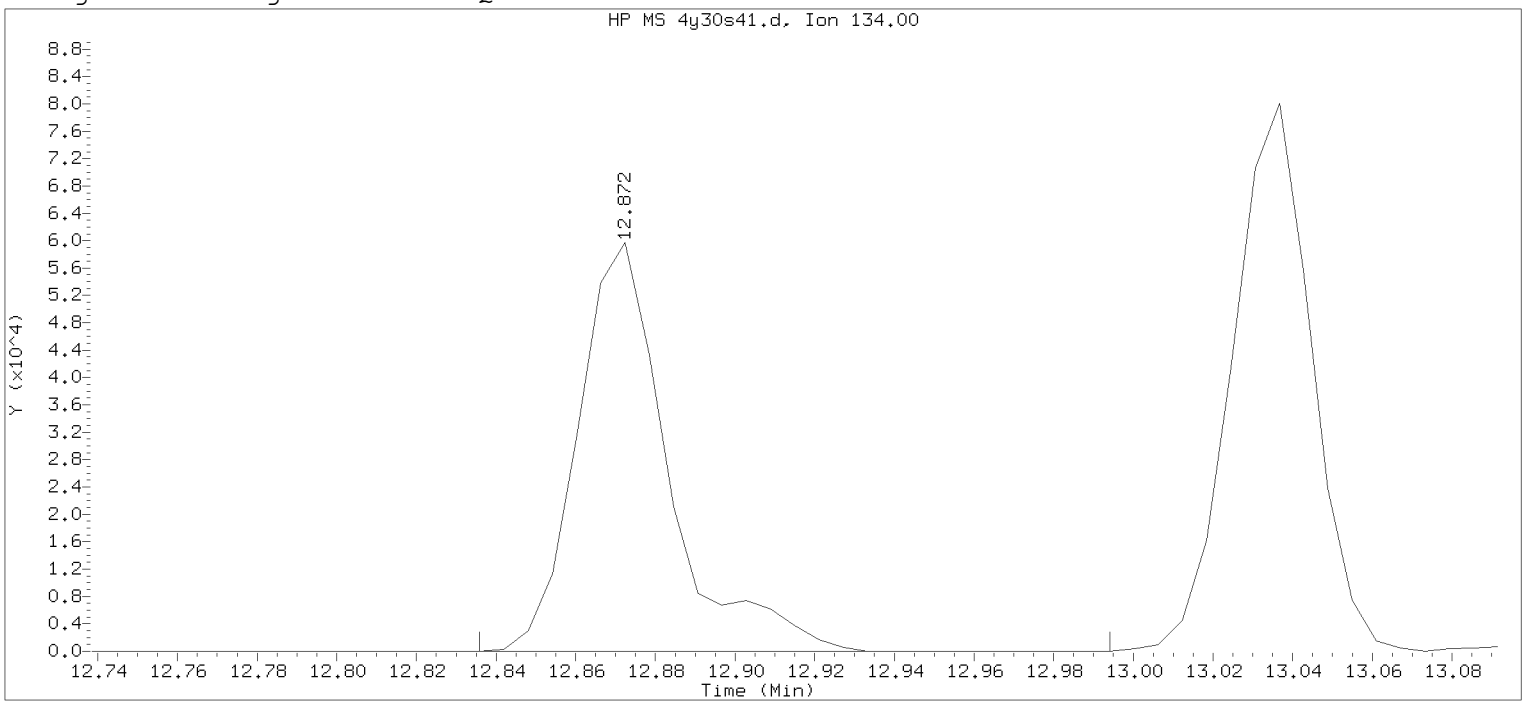
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/30/2019 at 21:10.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 05/31/2019 at 12:22.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may30b.b/4y30s41.d Instrument ID: HP23297.i
Injection date and time: 30-MAY-2019 19:34 Analyst ID: DVV10203

Method used: /chem/HP23297.i/19may30b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 30-MAY-2019 19:29
Date, time and analyst ID of latest file update: 30-May-2019 19:52 Automation

Sample Name: LCS440 Lab Sample ID: LCS440

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1856
Retention Time (minutes): 12.872
Quant Ion : 134.00
Area : 94492
On-column Amount (ng) : 20.7414
Integration start scan : 1849 Integration stop scan: 1875
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/30/2019 at 21:10.
Target 3.5 esignature user id: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS441

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCS441

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may31a.b/4y31l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/31/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	13	
74-87-3	Chloromethane	15	
106-99-0	1,3-Butadiene	39	
75-01-4	Vinyl Chloride	15	
74-83-9	Bromomethane	15	
75-00-3	Chloroethane	15	
109-66-0	n-Pentane	22	
75-69-4	Trichlorofluoromethane	14	
64-17-5	Ethanol	500	J
354-23-4	Freon 123a	20	
107-02-8	Acrolein	89	J
75-35-4	1,1-Dichloroethene	22	
67-64-1	Acetone	150	
76-13-1	Freon 113	20	
67-63-0	2-Propanol	140	
74-88-4	Methyl Iodide	21	
75-15-0	Carbon Disulfide	20	
107-05-1	Allyl Chloride	17	
79-20-9	Methyl Acetate	19	
75-09-2	Methylene Chloride	22	
75-65-0	t-Butyl alcohol	180	
107-13-1	Acrylonitrile	93	
156-60-5	trans-1,2-Dichloroethene	22	
1634-04-4	Methyl Tertiary Butyl Ether	19	
110-54-3	n-Hexane	19	
75-34-3	1,1-Dichloroethane	20	
108-20-3	di-Isopropyl ether	19	
126-99-8	2-Chloro-1,3-butadiene	18	
637-92-3	Ethyl t-butyl ether	18	
156-59-2	cis-1,2-Dichloroethene	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS441

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCS441

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may31a.b/4y31l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/31/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	44	
78-93-3	2-Butanone	130	
594-20-7	2,2-Dichloropropane	18	
107-12-0	Propionitrile	160	
126-98-7	Methacrylonitrile	150	
74-97-5	Bromochloromethane	19	
109-99-9	Tetrahydrofuran	95	
67-66-3	Chloroform	20	
71-55-6	1,1,1-Trichloroethane	19	
110-82-7	Cyclohexane	19	
563-58-6	1,1-Dichloropropene	20	
56-23-5	Carbon Tetrachloride	18	
78-83-1	Isobutyl Alcohol	500	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	19	
994-05-8	t-Amyl methyl ether	19	
142-82-5	n-Heptane	18	
71-36-3	n-Butanol	990	
79-01-6	Trichloroethene	21	
108-87-2	Methylcyclohexane	18	
78-87-5	1,2-Dichloropropane	21	
74-95-3	Dibromomethane	20	
123-91-1	1,4-Dioxane	570	
80-62-6	Methyl Methacrylate	18	
75-27-4	Bromodichloromethane	18	
79-46-9	2-Nitropropane	13	
110-75-8	2-Chloroethyl Vinyl Ether	18	
10061-01-5	cis-1,3-Dichloropropene	18	
108-10-1	4-Methyl-2-pentanone	86	
108-88-3	Toluene	20	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS441

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCS441

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may31a.b/4y31l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/31/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	17	
542-75-6	1,3-Dichloropropene (total)	36	
97-63-2	Ethyl Methacrylate	17	
79-00-5	1,1,2-Trichloroethane	21	
127-18-4	Tetrachloroethene	20	
142-28-9	1,3-Dichloropropane	20	
591-78-6	2-Hexanone	87	
124-48-1	Dibromochloromethane	17	
106-93-4	1,2-Dibromoethane	20	
108-90-7	Chlorobenzene	21	
630-20-6	1,1,1,2-Tetrachloroethane	19	
100-41-4	Ethylbenzene	20	
179601-23-1	m+p-Xylene	40	
95-47-6	o-Xylene	19	
1330-20-7	Xylene (Total)	60	
100-42-5	Styrene	20	
75-25-2	Bromoform	15	
98-82-8	Isopropylbenzene	20	
108-94-1	Cyclohexanone	510	
108-86-1	Bromobenzene	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	
96-18-4	1,2,3-Trichloropropane	20	
110-57-6	trans-1,4-Dichloro-2-butene	68	
103-65-1	n-Propylbenzene	21	
95-49-8	2-Chlorotoluene	21	
106-43-4	4-Chlorotoluene	21	
108-67-8	1,3,5-Trimethylbenzene	20	
98-06-6	tert-Butylbenzene	20	
76-01-7	Pentachloroethane	18	
95-63-6	1,2,4-Trimethylbenzene	20	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS441

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCS441

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may31a.b/4y31l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/31/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
135-98-8	sec-Butylbenzene	20	
541-73-1	1,3-Dichlorobenzene	20	
99-87-6	p-Isopropyltoluene	20	
106-46-7	1,4-Dichlorobenzene	21	
526-73-8	1,2,3-Trimethylbenzene	19	
100-44-7	Benzyl Chloride	16	
141-93-5	1,3-Diethylbenzene	19	
105-05-5	1,4-Diethylbenzene	19	
95-50-1	1,2-Dichlorobenzene	20	
104-51-8	n-Butylbenzene	20	
135-01-3	1,2-Diethylbenzene	19	
25340-17-4	Diethylbenzene (total)	57	
96-12-8	1,2-Dibromo-3-chloropropane	17	
108-70-3	1,3,5-Trichlorobenzene	20	
120-82-1	1,2,4-Trichlorobenzene	20	
87-68-3	Hexachlorobutadiene	19	
91-20-3	Naphthalene	20	
87-61-6	1,2,3-Trichlorobenzene	20	
91-57-6	2-Methylnaphthalene	18	

Data file: /chem/HP23297.i/19may31a.b/4y31l01.d Injection date and time: **31-MAY-2019 07:40**
Data file Sample Info. Line: LCS441;LCS441;1;3;LCS;;;;4y31b01; Instrument ID: **HP23297.i** Batch: **4191511AA**
Date, time and analyst ID of latest file update: 31-May-2019 09:11 amd00492

Blank Data file reference: **/chem/HP23297.i/19may31a.b/4y31b01.d**

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 31-MAY-2019 09:10
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may31a.b/4y31c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.374(0.000)	459	65	381210M (0)	250.00	
66) Fluorobenzene	7.866(0.000)	1033	96	1064798 (0)	50.00	
100) Chlorobenzene-d5	11.309(0.000)	1599	117	862482 (-2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189(0.000)	1908	152	472638 (-7)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977(0.000)	113	254727	48.533	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434(0.000)	102	66005	51.467	103%		80 - 120
83) Toluene-d8	(3)	9.867(0.000)	98	1097559	49.583	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.307(0.000)	95	408758	48.446	97%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	1.995(-0.000)	85	107646M	13.258	13.26			0.2	1
4) Chloromethane	(2)	2.196(-0.000)	50	116688	14.838	14.84			0.2	1
5) 1,3-Butadiene	(2)	2.317(-0.000)	39	165165	38.731	38.73			1	3
6) Vinyl Chloride	(2)	2.311(0.000)	62	116548	15.159	15.16			0.2	1
8) Bromomethane	(2)	2.652(-0.000)	94	95325	15.109	15.11			0.3	1
9) Chloroethane	(2)	2.743(0.000)	64	61907	14.581	14.58			0.2	1
11) n-Pentane	(2)	3.108(0.000)	43	164145	21.791	21.79			0.4	10
12) Trichlorofluoromethane	(2)	3.054(-0.000)	101	130235	13.969	13.97			0.2	1
13) Ethanol	(1)	3.206(-0.002)	45	63583M	495.481	495.48		J	280	750
15) Freon 123a	(2)	3.412(0.000)	67	107097	19.966	19.97			0.4	5
16) Acrolein	(1)	3.516(-0.000)	56	192461	89.044	89.04		J	2	100
17) 1,1-Dichloroethene	(2)	3.656(-0.000)	96	83161	22.394	22.39			0.2	1
18) Acetone	(1)	3.698(-0.000)	58	156260	147.221	147.22			0.7	20
19) Freon 113	(2)	3.674(-0.000)	101	82255	20.129	20.13			0.2	10
21) 2-Propanol	(1)	3.875(-0.000)	45	123042	144.267	144.27			18	100
22) Methyl Iodide	(2)	3.863(-0.000)	142	155553	21.021	21.02			0.2	1
23) Carbon Disulfide	(2)	3.960(-0.000)	76	266030	20.088	20.09			0.2	5
25) Allyl Chloride	(2)	4.155(-0.000)	41	136266	16.548	16.55			0.3	5
27) Methyl Acetate	(2)	4.124(-0.000)	43	144215	18.645	18.65			0.2	5
28) Methylene Chloride	(2)	4.349(0.000)	84	101228	21.520	21.52			0.3	1
30) t-Butyl alcohol	(1)	4.501(-0.000)	59	275847	183.884	183.88			12	50
31) Acrylonitrile	(2)	4.714(-0.000)	53	376375	92.882	92.88			0.3	20
32) trans-1,2-Dichloroethene	(2)	4.769(-0.000)	96	96231	21.688	21.69			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	4.757(-0.000)	73	248868	18.760	18.76			0.2	1
34) n-Hexane	(2)	5.189(0.000)	57	139248	19.001	19.00			0.2	5
36) 1,1-Dichloroethane	(2)	5.444(-0.000)	63	168294	20.408	20.41			0.2	1
38) di-Isopropyl ether	(2)	5.493(-0.000)	45	316000	19.334	19.33			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	5.542(-0.000)	53	136362	18.265	18.26			0.2	5
40) Ethyl t-butyl ether	(2)	6.022(0.000)	59	252234	17.966	17.97			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.272(-0.000)	96	113888	22.259	22.26			0.2	1

M = Compound was manually integrated.

Digitally signed by Don V. Viray on 05/31/2019 at 21:34. Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may31a.b/4y31l01.d Injection date and time: **31-MAY-2019 07:40**
Data file Sample Info. Line: LCS441;LCS441;1;3;LCS;;;;4y31b01; Instrument ID: **HP23297.i** Batch: **4191511AA**
Date, time and analyst ID of latest file update: 31-May-2019 09:11 amd00492

Blank Data file reference: **/chem/HP23297.i/19may31a.b/4y31b01.d**

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 31-MAY-2019 09:10
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may31a.b/4y31c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
43) 1,2-Dichloroethene (Total)	(2)		96	210119	43.947	43.95			0.2	2
44) 2-Butanone	(2)	6.253(-0.000)	43	813194	129.306	129.31			0.3	10
45) 2,2-Dichloropropane	(2)	6.290(-0.000)	77	114931	17.776	17.78			0.3	1
47) Propionitrile	(1)	6.351(0.000)	54	254025	159.423	159.42			14	100
48) Methacrylonitrile	(2)	6.564(-0.000)	67	565799	148.025	148.03			6	50
49) Bromochloromethane	(2)	6.612(-0.000)	128	54166	19.172	19.17			0.2	5
50) Tetrahydrofuran	(1)	6.612(0.000)	71	149059	94.768	94.77			0.7	10
51) Chloroform	(2)	6.764(-0.000)	83	160433	19.753	19.75			0.2	1
53) 1,1,1-Trichloroethane	(2)	6.984(-0.000)	97	125787	18.501	18.50			0.3	1
54) Cyclohexane	(2)	7.069(-0.000)	56	164396	18.592	18.59			0.2	5
55) 1,1-Dichloropropene	(2)	7.196(-0.000)	75	129842	20.213	20.21			0.2	5
56) Carbon Tetrachloride	(2)	7.190(-0.000)	117	104943	17.765	17.76			0.2	1
58) Isobutyl Alcohol	(1)	7.361(0.000)	41	261920	495.867	495.87			36	250
60) Benzene	(2)	7.458(0.000)	78	406535	20.811	20.81			0.2	1
61) 1,2-Dichloroethane	(2)	7.537(-0.000)	62	125386	18.937	18.94			0.3	1
65) t-Amyl methyl ether	(2)	7.647(-0.000)	73	276432	19.474	19.47			0.8	5
67) n-Heptane	(2)	7.866(0.000)	43	152023	17.620	17.62			0.2	5
69) n-Butanol	(1)	8.237(0.000)	56	430535	992.568	992.57			61	250
71) Trichloroethene	(2)	8.340(0.000)	95	101600	20.503	20.50			0.2	1
72) Methylcyclohexane	(2)	8.644(0.000)	83	164869	17.667	17.67			0.2	5
73) 1,2-Dichloropropane	(2)	8.681(0.000)	63	107742	20.994	20.99			0.2	1
74) Dibromomethane	(2)	8.790(0.000)	93	66442	19.946	19.95			0.2	1
75) 1,4-Dioxane	(1)	8.772(0.000)	88	63266M	566.299	566.30			29	250
76) Methyl Methacrylate	(2)	8.766(0.000)	69	106463	18.319	18.32			0.2	5
78) Bromodichloromethane	(2)	9.028(0.000)	83	110716	18.303	18.30			0.2	1
79) 2-Nitropropane	(2)	9.314(-0.000)	41	38820	13.186	13.19			0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)	9.386(0.000)	63	86329	18.385	18.39			0.2	10
81) cis-1,3-Dichloropropene	(2)	9.563(0.000)	75	147402	18.431	18.43			0.2	1
82) 4-Methyl-2-pentanone	(2)	9.739(0.000)	43	972601	86.185	86.19			0.5	10
88) Toluene	(3)	9.940(0.000)	92	259499	20.267	20.27			0.2	1
89) trans-1,3-Dichloropropene	(3)	10.196(-0.000)	75	129882	17.240	17.24			0.2	1
90) 1,3-Dichloropropene (total)	(3)		100	277284	35.671	35.67			0.2	5
91) Ethyl Methacrylate	(3)	10.256(-0.000)	69	161604	17.068	17.07			0.2	5
92) 1,1,2-Trichloroethane	(3)	10.402(-0.000)	97	105947	21.171	21.17			0.2	1
93) Tetrachloroethene	(3)	10.482(-0.000)	166	112959	20.224	20.22			0.2	1
94) 1,3-Dichloropropane	(3)	10.561(-0.000)	76	165408	19.911	19.91			0.2	1
96) 2-Hexanone	(3)	10.615(-0.000)	43	797239	87.490	87.49			0.3	10
97) Dibromochloromethane	(3)	10.774(0.000)	129	91534	17.286	17.29			0.2	1
99) 1,2-Dibromoethane	(3)	10.883(-0.000)	107	111065	20.103	20.10			0.2	1
102) Chlorobenzene	(3)	11.339(0.000)	112	298632	20.636	20.64			0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)	11.418(0.000)	131	90752	18.576	18.58			0.2	1
104) Ethylbenzene	(3)	11.418(0.000)	91	483260	19.650	19.65			0.4	1
106) m+p-Xylene	(3)	11.534(0.000)	106	393587	40.137	40.14			1	5
107) o-Xylene	(3)	11.862(0.000)	106	189312	19.422	19.42			0.4	1
108) Xylene (Total)	(3)		106	582899	59.559	59.56			1	5
109) Styrene	(3)	11.881(0.000)	104	317687	19.588	19.59			0.2	5
110) Bromoform	(3)	12.039(0.000)	173	62739	15.036	15.04			0.2	4
111) Isopropylbenzene	(3)	12.161(0.000)	105	478269	19.614	19.61			0.2	5
112) Cyclohexanone	(1)	12.246(0.000)	55	228137	511.148	511.15			25	100
115) Bromobenzene	(4)	12.428(-0.000)	156	132950	20.102	20.10			0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	12.410(-0.000)	83	176796M	20.298	20.30			0.2	1
117) 1,2,3-Trichloropropane	(4)	12.459(-0.000)	110	53523	20.322	20.32			0.2	5
118) trans-1,4-Dichloro-2-butene	(4)	12.434(-0.000)	53	193910	67.725	67.72			6	50
119) n-Propylbenzene	(4)	12.489(-0.000)	91	586697	20.626	20.63			0.2	5

M = Compound was manually integrated.

Digitally signed by Don V. Viray on 05/31/2019 at 21:34. Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may31a.b/4y31l01.d Injection date and time: **31-MAY-2019 07:40**
Data file Sample Info. Line: LCS441;LCS441;1;3;LCS;;;;4y31b01; Instrument ID: **HP23297.i** Batch: **4191511AA**
Date, time and analyst ID of latest file update: 31-May-2019 09:11 amd00492

Blank Data file reference: **/chem/HP23297.i/19may31a.b/4y31b01.d**

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 31-MAY-2019 09:10
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may31a.b/4y31c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

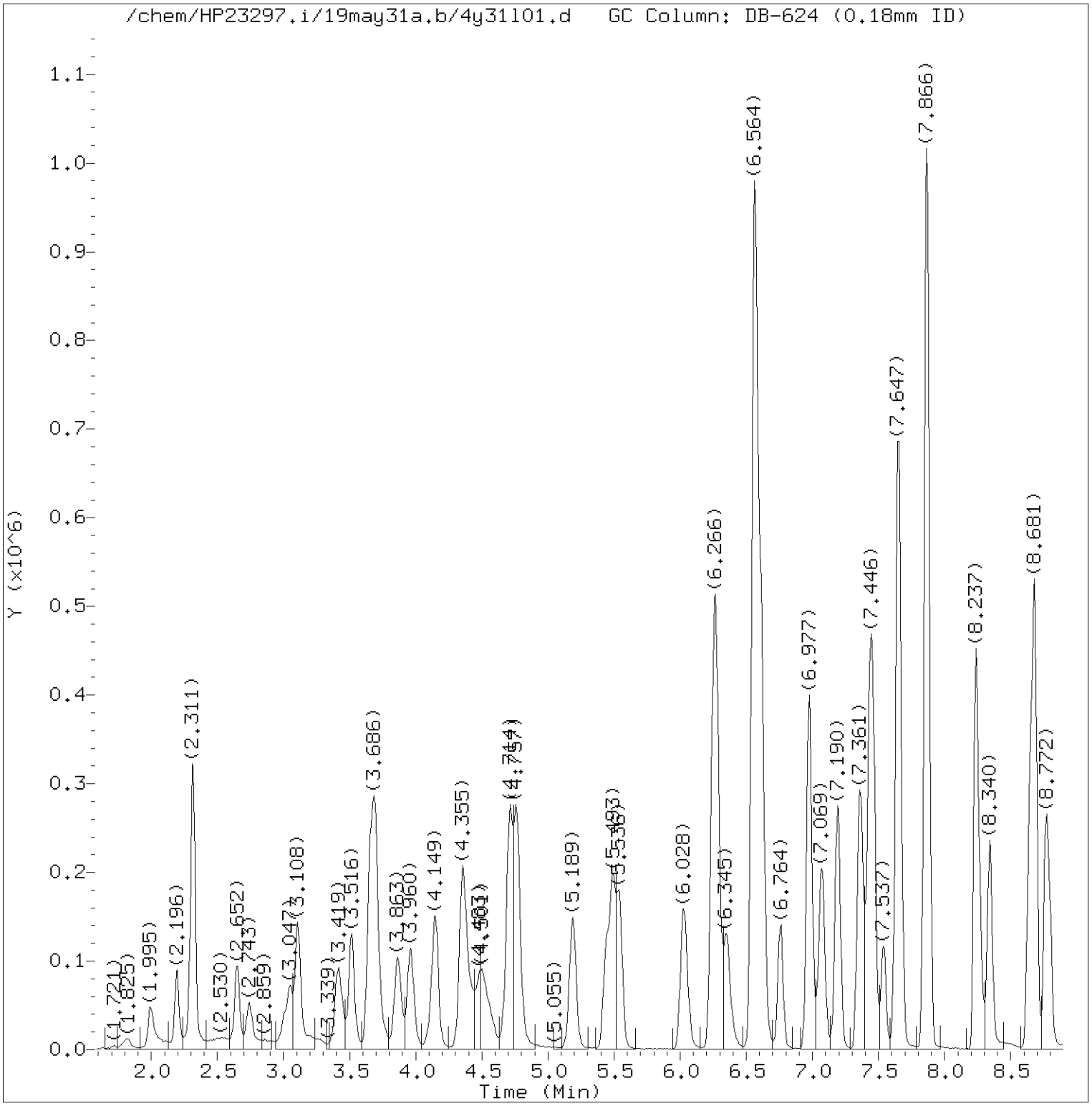
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)	12.568(-0.000)	126	122586	20.636	20.64			0.2	5
121) 4-Chlorotoluene	(4)	12.659(0.000)	126	127277	20.556	20.56			0.2	5
122) 1,3,5-Trimethylbenzene	(4)	12.629(-0.000)	105	407447	19.793	19.79			0.3	5
124) tert-Butylbenzene	(4)	12.872(-0.000)	134	85400M	19.762	19.76			0.3	5
125) Pentachloroethane	(4)	12.903(-0.000)	167	70642	17.928	17.93			0.2	5
126) 1,2,4-Trimethylbenzene	(4)	12.909(0.000)	105	423603	19.709	19.71			1	5
127) sec-Butylbenzene	(4)	13.037(-0.000)	105	528167	20.084	20.08			0.2	5
129) 1,3-Dichlorobenzene	(4)	13.134(-0.000)	146	251065	20.253	20.25			0.2	5
130) p-Isopropyltoluene	(4)	13.140(-0.000)	119	458240	19.809	19.81			0.2	5
133) 1,4-Dichlorobenzene	(4)	13.207(0.000)	146	261585	20.597	20.60			0.2	5
134) 1,2,3-Trimethylbenzene	(4)	13.219(0.000)	105	437361	18.951	18.95			0.3	5
135) Benzyl Chloride	(4)	13.286(0.000)	91	282244	16.339	16.34			0.3	5
136) 1,3-Diethylbenzene	(4)	13.341(0.000)	119	273917	18.944	18.94			0.2	5
137) 1,4-Diethylbenzene	(4)	13.414(-0.000)	119	289760	18.816	18.82			0.2	5
138) 1,2-Dichlorobenzene	(4)	13.469(-0.000)	146	246751	20.427	20.43			0.2	5
139) n-Butylbenzene	(4)	13.432(-0.000)	92	233680	19.719	19.72			0.2	5
140) 1,2-Diethylbenzene	(4)	13.487(-0.000)	119	230946	18.945	18.95			0.2	5
141) Diethylbenzene (total)	(4)		100	794623	56.704	56.70			0.2	5
142) 1,2-Dibromo-3-chloropropane	(4)	14.016(-0.000)	75	39719	17.286	17.29			0.3	5
144) 1,3,5-Trichlorobenzene	(4)	14.138(0.000)	180	183938	20.197	20.20			0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.564(0.000)	180	171975	19.930	19.93			0.3	5
147) Hexachlorobutadiene	(4)	14.643(-0.000)	225	77726	19.492	19.49			0.7	5
148) Naphthalene	(4)	14.746(-0.000)	128	589331	19.713	19.71			1	5
149) 1,2,3-Trichlorobenzene	(4)	14.892(0.000)	180	168063	20.274	20.27			0.4	5
150) 2-Methylnaphthalene	(4)	15.543(-0.000)	142	331862	17.749	17.75			0.7	5

M = Compound was manually integrated.

Total number of targets = 109

Digitally signed by Don V. Viray on 05/31/2019 at 21:34. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:27. PARALLAX ID: rcr00559



Total Ion Chromatogram (TIC)

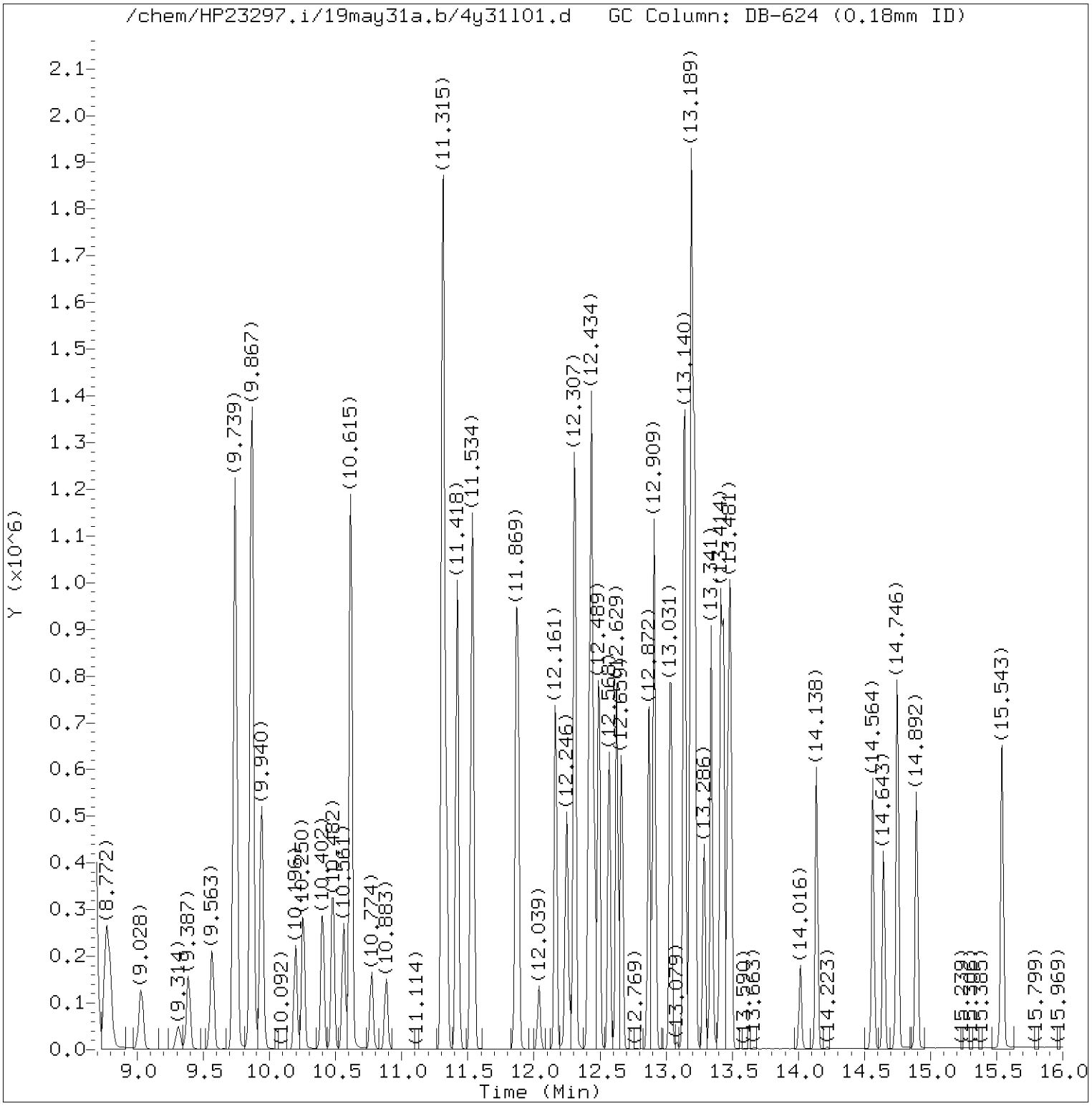
Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31l01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:40 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:11 amd00492

Sample Name: LCS441 Lab Sample ID: LCS441

Digitally signed by Don V. Viray
on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31l01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:40 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:11 amd00492

Sample Name: LCS441 Lab Sample ID: LCS441

Digitally signed by Don V. Viray
on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31l01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:40 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:11 amd00492

Sample Name: LCS441 Lab Sample ID: LCS441

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.995	85	107646M	13.258
4) Chloromethane	(2)	2.196	50	116688	14.838
6) Vinyl Chloride	(2)	2.311	62	116548	15.159
5) 1,3-Butadiene	(2)	2.317	39	165165	38.731
8) Bromomethane	(2)	2.652	94	95325	15.109
9) Chloroethane	(2)	2.743	64	61907	14.581
12) Trichlorofluoromethane	(2)	3.054	101	130235	13.969
11) n-Pentane	(2)	3.108	43	164145	21.791
13) Ethanol	(1)	3.206	45	63583M	495.481
15) Freon 123a	(2)	3.412	67	107097	19.966
16) Acrolein	(1)	3.516	56	192461	89.044
17) 1,1-Dichloroethene	(2)	3.656	96	83161	22.394
19) Freon 113	(2)	3.674	101	82255	20.129
18) Acetone	(1)	3.698	58	156260	147.221
22) Methyl Iodide	(2)	3.863	142	155553	21.021
21) 2-Propanol	(1)	3.875	45	123042	144.267
23) Carbon Disulfide	(2)	3.960	76	266030	20.088
27) Methyl Acetate	(2)	4.124	43	144215	18.645
25) Allyl Chloride	(2)	4.155	41	136266	16.548
28) Methylene Chloride	(2)	4.349	84	101228	21.520
29)*t-Butyl alcohol-d10	(1)	4.374	65	381210M	250.000
30) t-Butyl alcohol	(1)	4.501	59	275847	183.884
31) Acrylonitrile	(2)	4.714	53	376375	92.882
33) Methyl Tertiary Butyl Ether	(2)	4.757	73	248868	18.760
32) trans-1,2-Dichloroethene	(2)	4.769	96	96231	21.688
34) n-Hexane	(2)	5.189	57	139248	19.001
36) 1,1-Dichloroethane	(2)	5.444	63	168294	20.408
38) di-Isopropyl ether	(2)	5.493	45	316000	19.334
39) 2-Chloro-1,3-butadiene	(2)	5.542	53	136362	18.265
40) Ethyl t-butyl ether	(2)	6.022	59	252234	17.966
43) 1,2-Dichloroethene (Total)	(2)		96	210119	43.947
44) 2-Butanone	(2)	6.253	43	813194	129.306
42) cis-1,2-Dichloroethene	(2)	6.272	96	113888	22.259
45) 2,2-Dichloropropane	(2)	6.290	77	114931	17.776
47) Propionitrile	(1)	6.351	54	254025	159.423
48) Methacrylonitrile	(2)	6.564	67	565799	148.025
49) Bromochloromethane	(2)	6.612	128	54166	19.172
50) Tetrahydrofuran	(1)	6.612	71	149059	94.768

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31l01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:40 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:11 amd00492

Sample Name: LCS441 Lab Sample ID: LCS441

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	6.764	83	160433	19.753
52)$Dibromofluoromethane	(2)	6.977	113	254727	48.533
53) 1,1,1-Trichloroethane	(2)	6.984	97	125787	18.501
54) Cyclohexane	(2)	7.069	56	164396	18.592
56) Carbon Tetrachloride	(2)	7.190	117	104943	17.765
55) 1,1-Dichloropropene	(2)	7.196	75	129842	20.213
58) Isobutyl Alcohol	(1)	7.361	41	261920	495.867
57)$1,2-Dichloroethane-d4	(2)	7.434	102	66005	51.467
60) Benzene	(2)	7.458	78	406535	20.811
61) 1,2-Dichloroethane	(2)	7.537	62	125386	18.937
65) t-Amyl methyl ether	(2)	7.647	73	276432	19.474
66)*Fluorobenzene	(2)	7.866	96	1064798	50.000
67) n-Heptane	(2)	7.866	43	152023	17.620
69) n-Butanol	(1)	8.237	56	430535	992.568
71) Trichloroethene	(2)	8.340	95	101600	20.503
72) Methylcyclohexane	(2)	8.644	83	164869	17.667
73) 1,2-Dichloropropane	(2)	8.681	63	107742	20.994
76) Methyl Methacrylate	(2)	8.766	69	106463	18.319
75) 1,4-Dioxane	(1)	8.772	88	63266M	566.299
74) Dibromomethane	(2)	8.790	93	66442	19.946
78) Bromodichloromethane	(2)	9.028	83	110716	18.303
79) 2-Nitropropane	(2)	9.314	41	38820	13.186
80) 2-Chloroethyl Vinyl Ether	(2)	9.387	63	86329	18.385
81) cis-1,3-Dichloropropene	(2)	9.563	75	147402	18.431
82) 4-Methyl-2-pentanone	(2)	9.739	43	972601	86.185
83)$Toluene-d8	(3)	9.867	98	1097559	49.583
88) Toluene	(3)	9.940	92	259499	20.267
90) 1,3-Dichloropropene (total)	(3)		100	277284	35.671
89) trans-1,3-Dichloropropene	(3)	10.196	75	129882	17.240
91) Ethyl Methacrylate	(3)	10.256	69	161604	17.068
92) 1,1,2-Trichloroethane	(3)	10.402	97	105947	21.171
93) Tetrachloroethene	(3)	10.482	166	112959	20.224
94) 1,3-Dichloropropane	(3)	10.561	76	165408	19.911
96) 2-Hexanone	(3)	10.615	43	797239	87.490
97) Dibromochloromethane	(3)	10.774	129	91534	17.286
99) 1,2-Dibromoethane	(3)	10.883	107	111065	20.103
100)*Chlorobenzene-d5	(3)	11.309	117	862482	50.000
102) Chlorobenzene	(3)	11.339	112	298632	20.636

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on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31l01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:40 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:11 amd00492

Sample Name: LCS441 Lab Sample ID: LCS441

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	90752	18.576
104) Ethylbenzene	(3)	11.418	91	483260	19.650
106) m+p-Xylene	(3)	11.534	106	393587	40.137
108) Xylene (Total)	(3)		106	582899	59.559
107) o-Xylene	(3)	11.863	106	189312	19.422
109) Styrene	(3)	11.881	104	317687	19.588
110) Bromoform	(3)	12.039	173	62739	15.036
111) Isopropylbenzene	(3)	12.161	105	478269	19.614
112) Cyclohexanone	(1)	12.246	55	228137	511.148
114)$4-Bromofluorobenzene	(3)	12.307	95	408758	48.446
116) 1,1,2,2-Tetrachloroethane	(4)	12.410	83	176796M	20.298
115) Bromobenzene	(4)	12.428	156	132950	20.102
118) trans-1,4-Dichloro-2-butene	(4)	12.434	53	193910	67.725
117) 1,2,3-Trichloropropane	(4)	12.459	110	53523	20.322
119) n-Propylbenzene	(4)	12.489	91	586697	20.626
120) 2-Chlorotoluene	(4)	12.568	126	122586	20.636
122) 1,3,5-Trimethylbenzene	(4)	12.629	105	407447	19.793
121) 4-Chlorotoluene	(4)	12.659	126	127277	20.556
124) tert-Butylbenzene	(4)	12.872	134	85400M	19.762
125) Pentachloroethane	(4)	12.903	167	70642	17.928
126) 1,2,4-Trimethylbenzene	(4)	12.909	105	423603	19.709
127) sec-Butylbenzene	(4)	13.037	105	528167	20.084
129) 1,3-Dichlorobenzene	(4)	13.134	146	251065	20.253
130) p-Isopropyltoluene	(4)	13.140	119	458240	19.809
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	472638	50.000
133) 1,4-Dichlorobenzene	(4)	13.207	146	261585	20.597
134) 1,2,3-Trimethylbenzene	(4)	13.219	105	437361	18.951
135) Benzyl Chloride	(4)	13.286	91	282244	16.339
136) 1,3-Diethylbenzene	(4)	13.341	119	273917	18.944
141) Diethylbenzene (total)	(4)		100	794623	56.704
137) 1,4-Diethylbenzene	(4)	13.414	119	289760	18.816
139) n-Butylbenzene	(4)	13.432	92	233680	19.719
138) 1,2-Dichlorobenzene	(4)	13.469	146	246751	20.427
140) 1,2-Diethylbenzene	(4)	13.487	119	230946	18.945
142) 1,2-Dibromo-3-chloropropane	(4)	14.016	75	39719	17.286
144) 1,3,5-Trichlorobenzene	(4)	14.138	180	183938	20.197
146) 1,2,4-Trichlorobenzene	(4)	14.564	180	171975	19.930
147) Hexachlorobutadiene	(4)	14.643	225	77726	19.492

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on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31l01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:40 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:11 amd00492

Sample Name: LCS441 Lab Sample ID: LCS441

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) Naphthalene	(4)	14.746	128	589331	19.713
149) 1,2,3-Trichlorobenzene	(4)	14.892	180	168063	20.274
150) 2-Methylnaphthalene	(4)	15.543	142	331862	17.749

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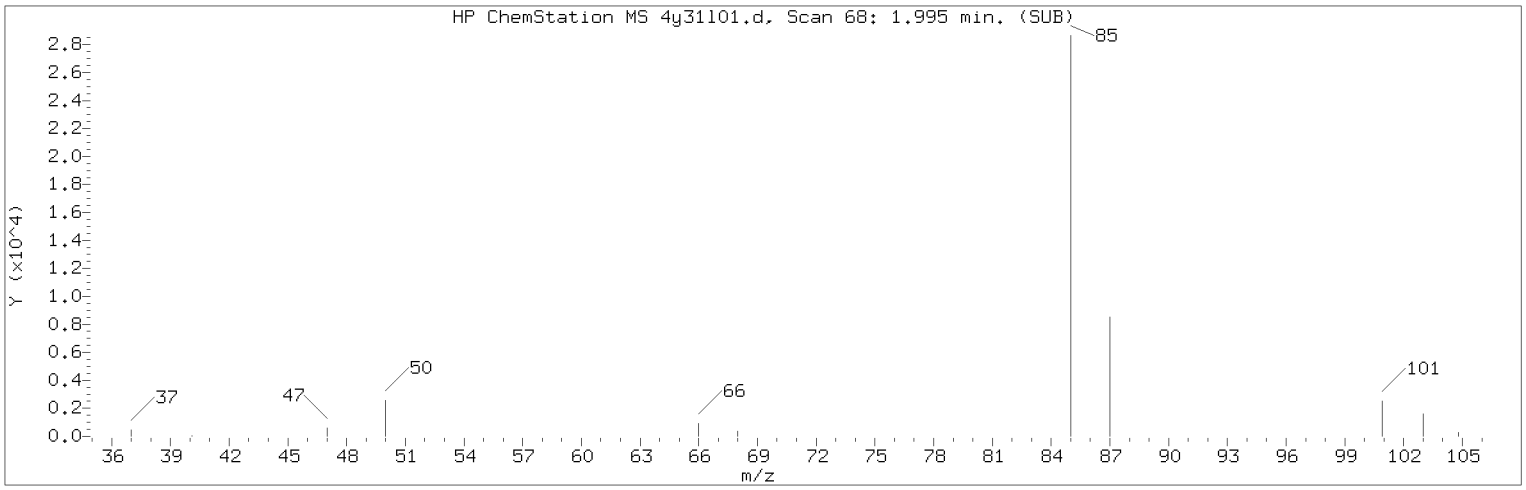
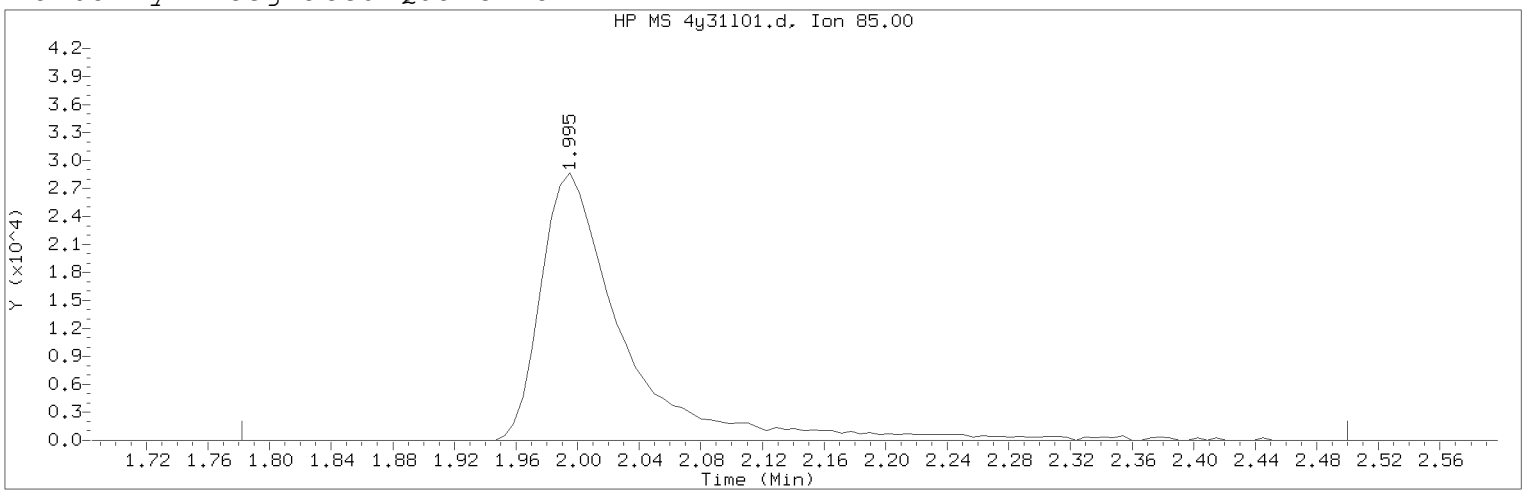
on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31l01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:40 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:11 amd00492

Sample Name: LCS441 Lab Sample ID: LCS441

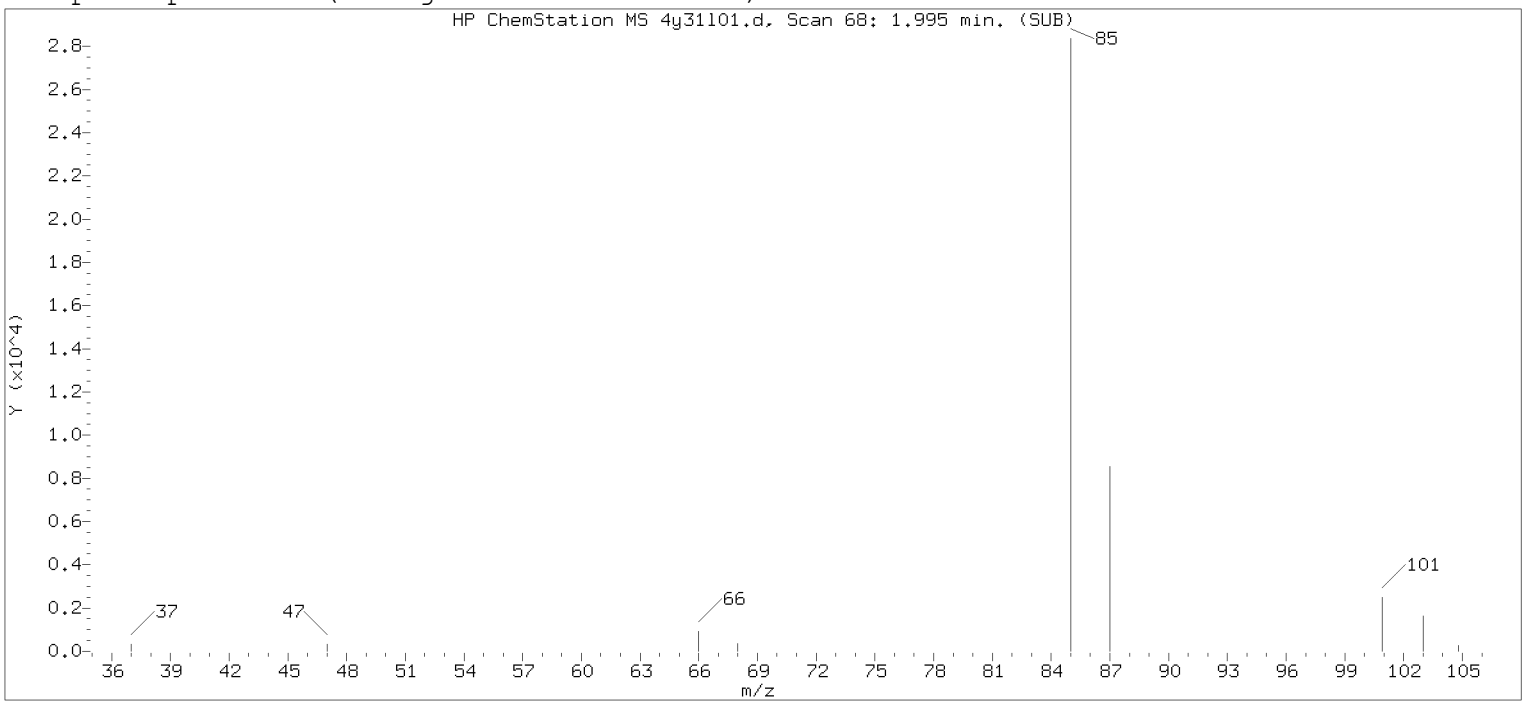
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 68
Retention Time (minutes): 1.995
Quant Ion : 85.00
Area (flag) : 107646M
On-Column Amount (ng) : 13.2577
Integration start scan : 32 Integration stop scan: 150
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

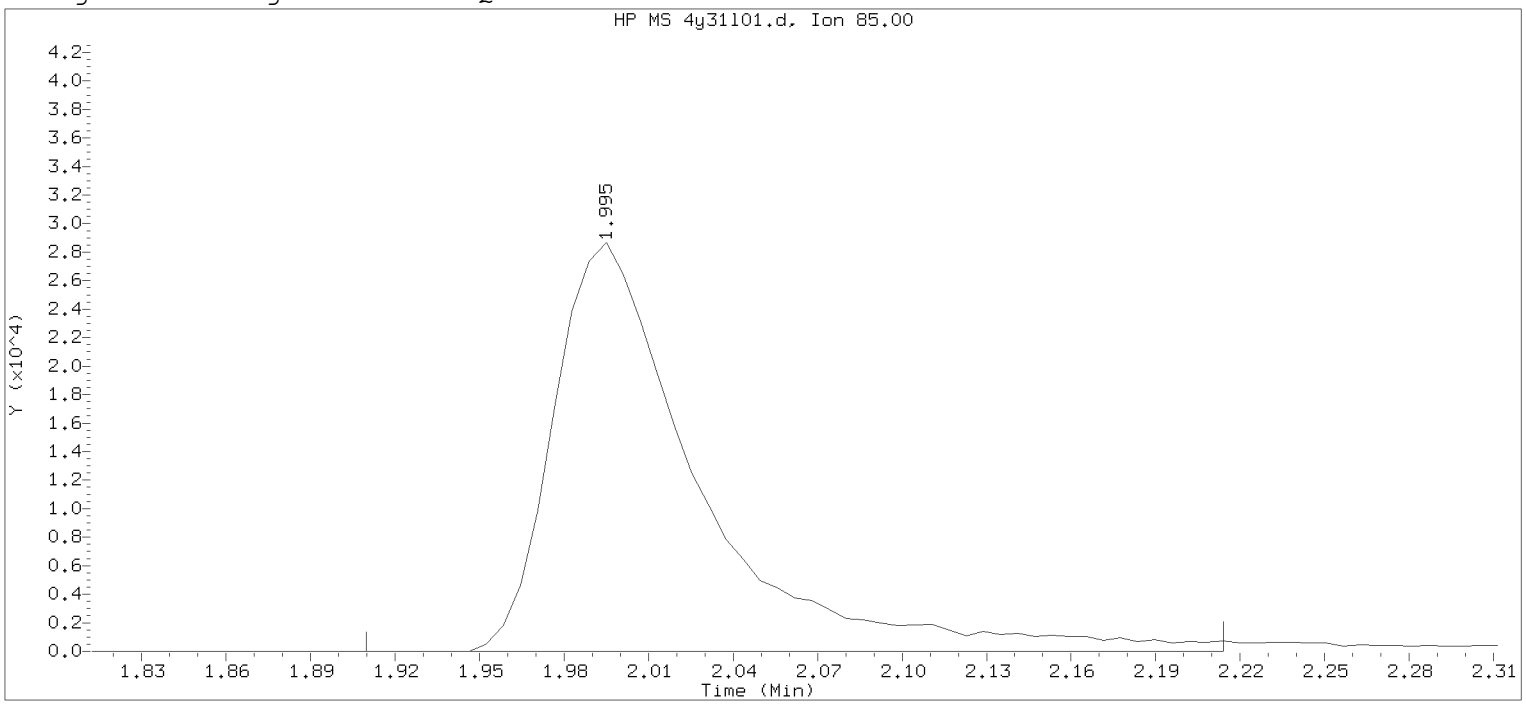
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:27.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31101.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:40 Analyst ID: amd00492

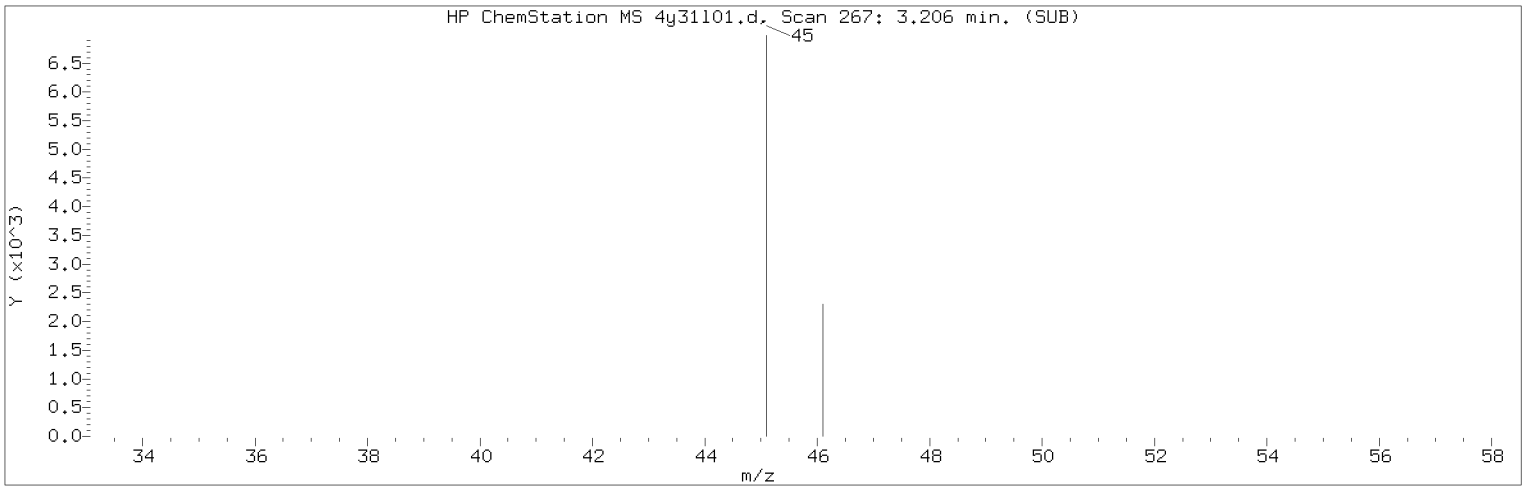
Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 07:58 Automation

Sample Name: LCS441 Lab Sample ID: LCS441

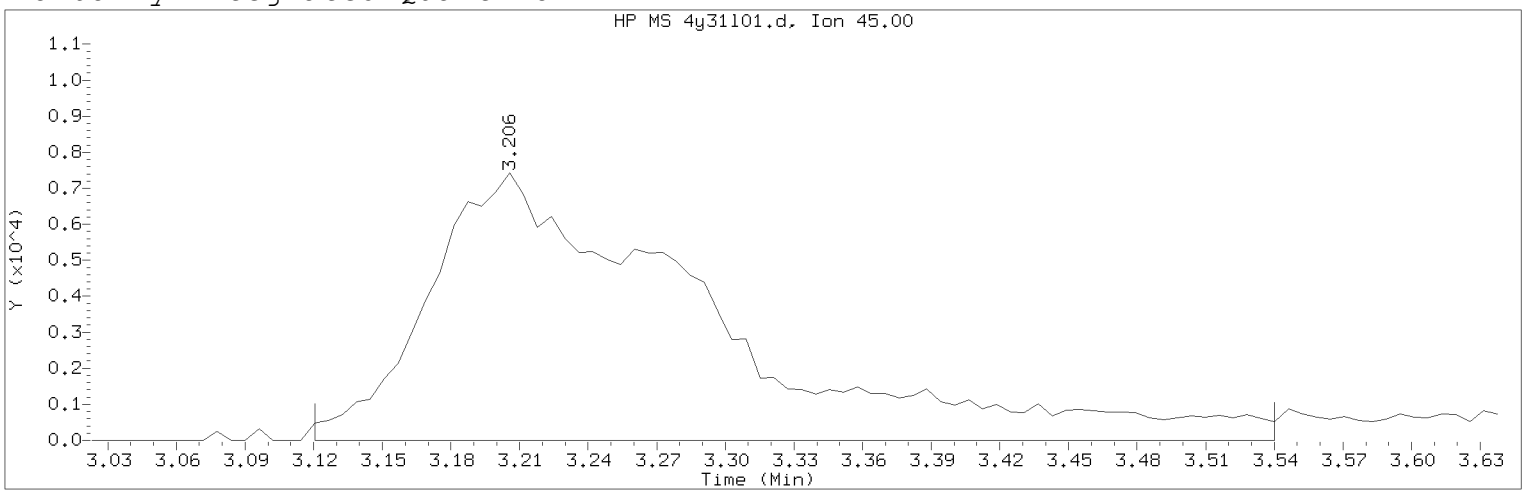
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 68
Retention Time (minutes): 1.995
Quant Ion : 85.00
Area : 103392
On-column Amount (ng) : 12.7339
Integration start scan : 53 Integration stop scan: 103
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/31/2019 at 21:34.
Target 3.5 esignature user id: dviray0454

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31l01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:40 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:11 amd00492

Sample Name: LCS441 Lab Sample ID: LCS441

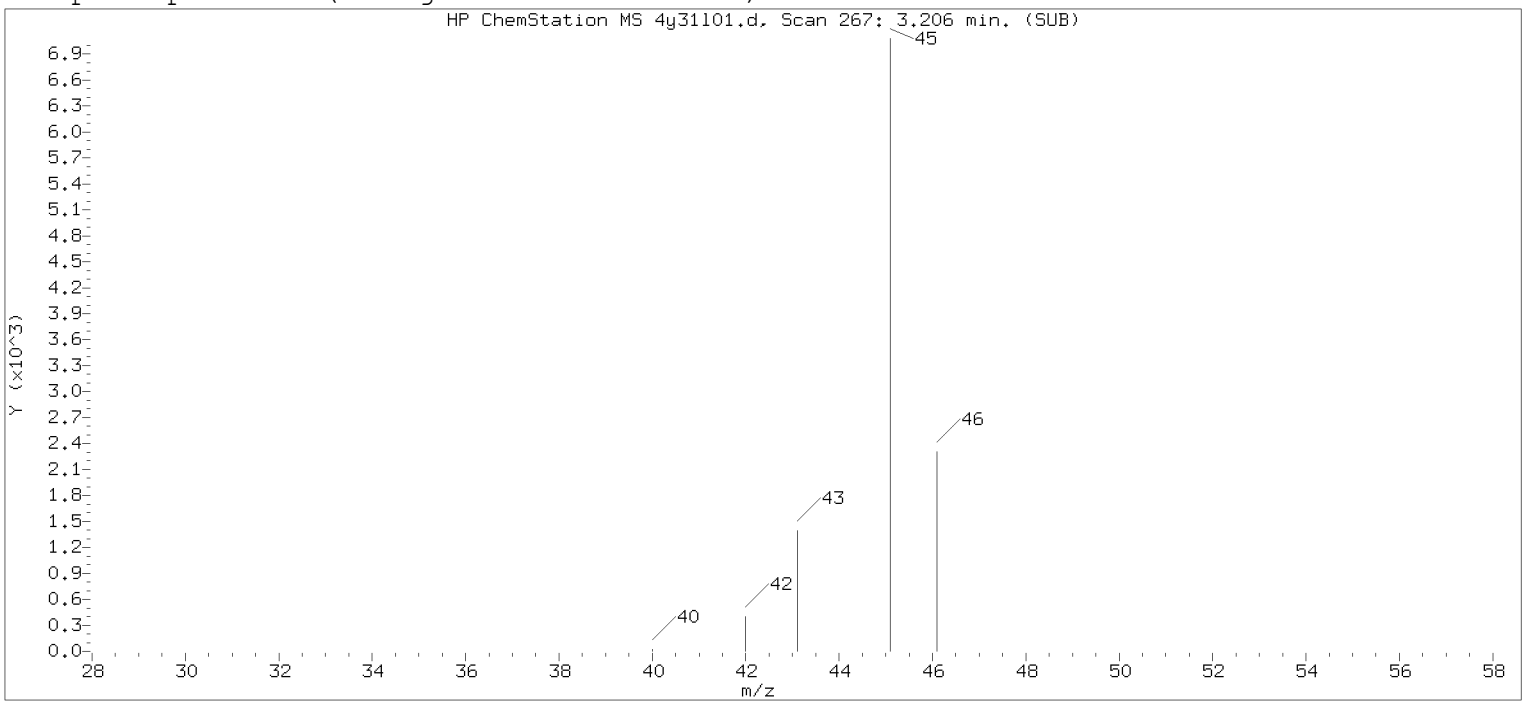
Compound Number : 13
Compound Name : Ethanol
Scan Number : 267
Retention Time (minutes): 3.206
Quant Ion : 45.00
Area (flag) : 63583M
On-Column Amount (ng) : 495.4809
Integration start scan : 252 Integration stop scan: 321
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

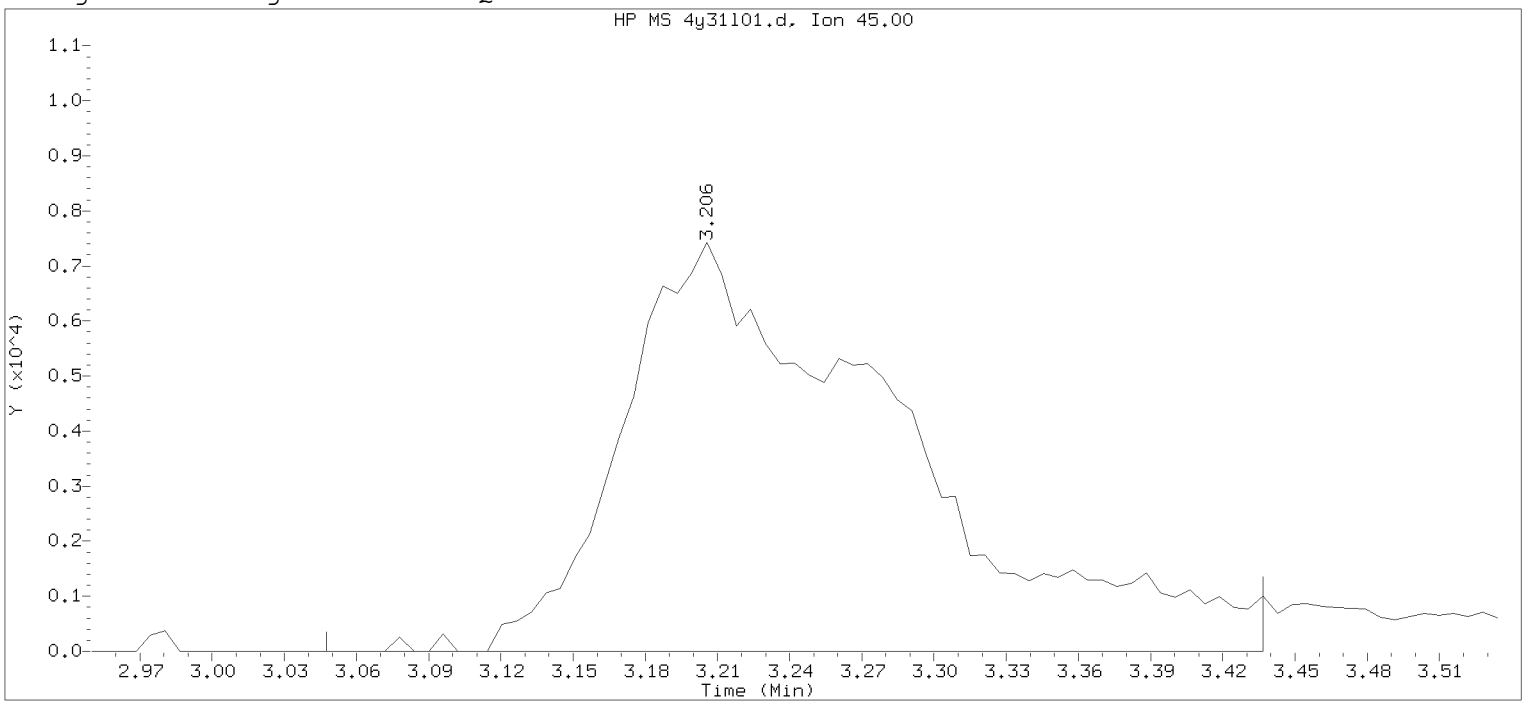
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:27.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31101.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:40 Analyst ID: amd00492

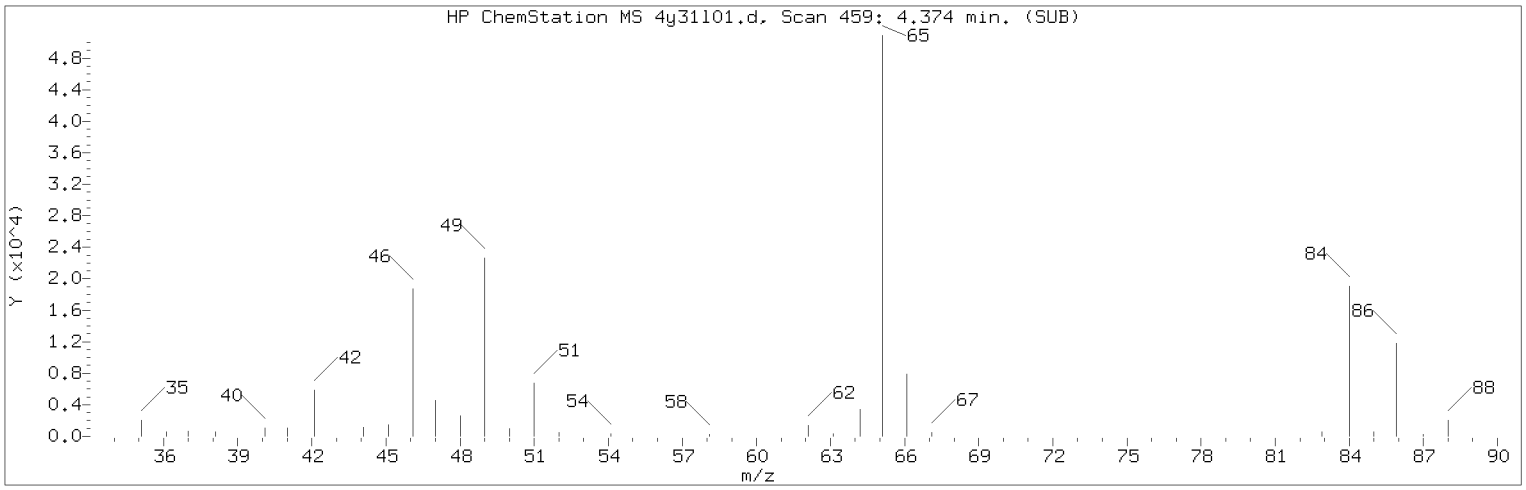
Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 07:58 Automation

Sample Name: LCS441 Lab Sample ID: LCS441

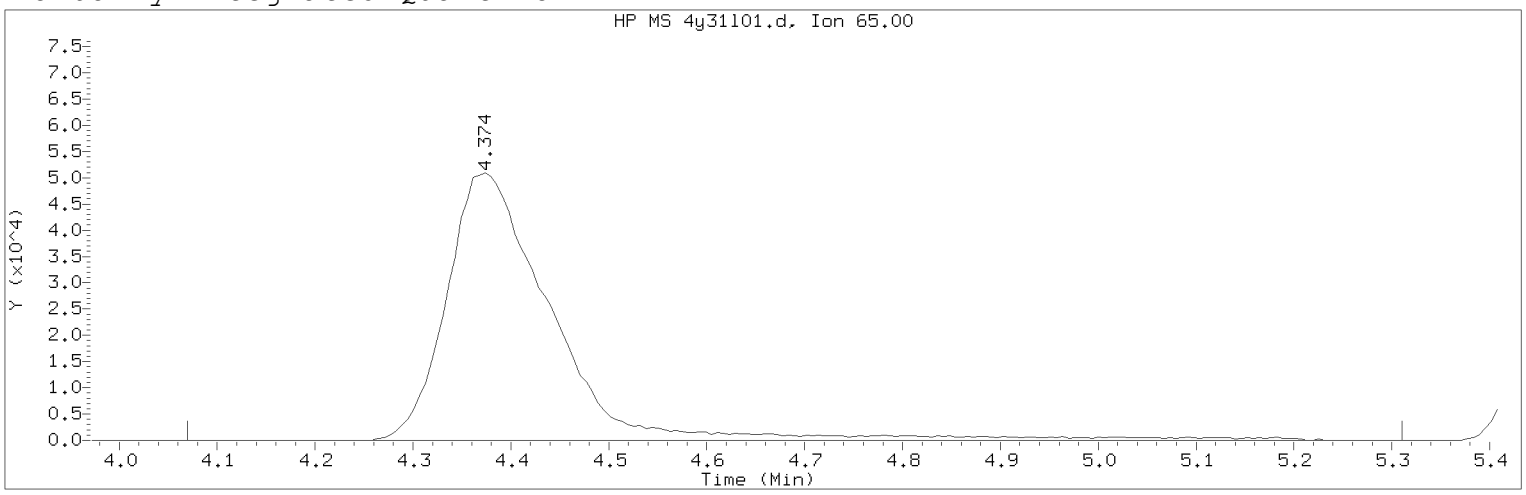
Compound Number : 13
Compound Name : Ethanol
Scan Number : 267
Retention Time (minutes): 3.206
Quant Ion : 45.00
Area : 59282
On-column Amount (ng) : 482.5179
Integration start scan : 240 Integration stop scan: 304
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/31/2019 at 21:34.
Target 3.5 esignature user id: dviray0456

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31l01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:40 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:11 amd00492

Sample Name: LCS441 Lab Sample ID: LCS441

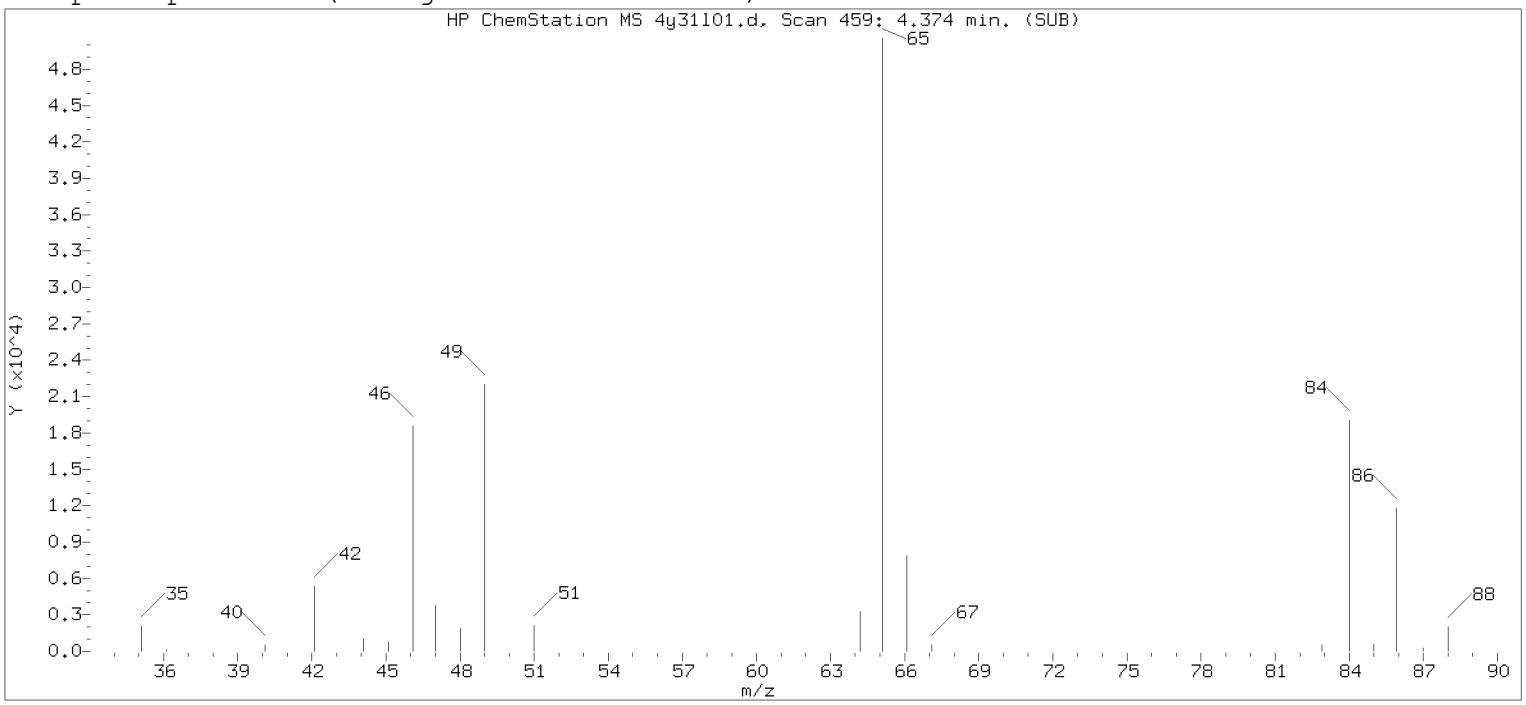
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 459
Retention Time (minutes): 4.374
Quant Ion : 65.00
Area (flag) : 381210M
On-Column Amount (ng) : 250.0000
Integration start scan : 408 Integration stop scan: 612
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

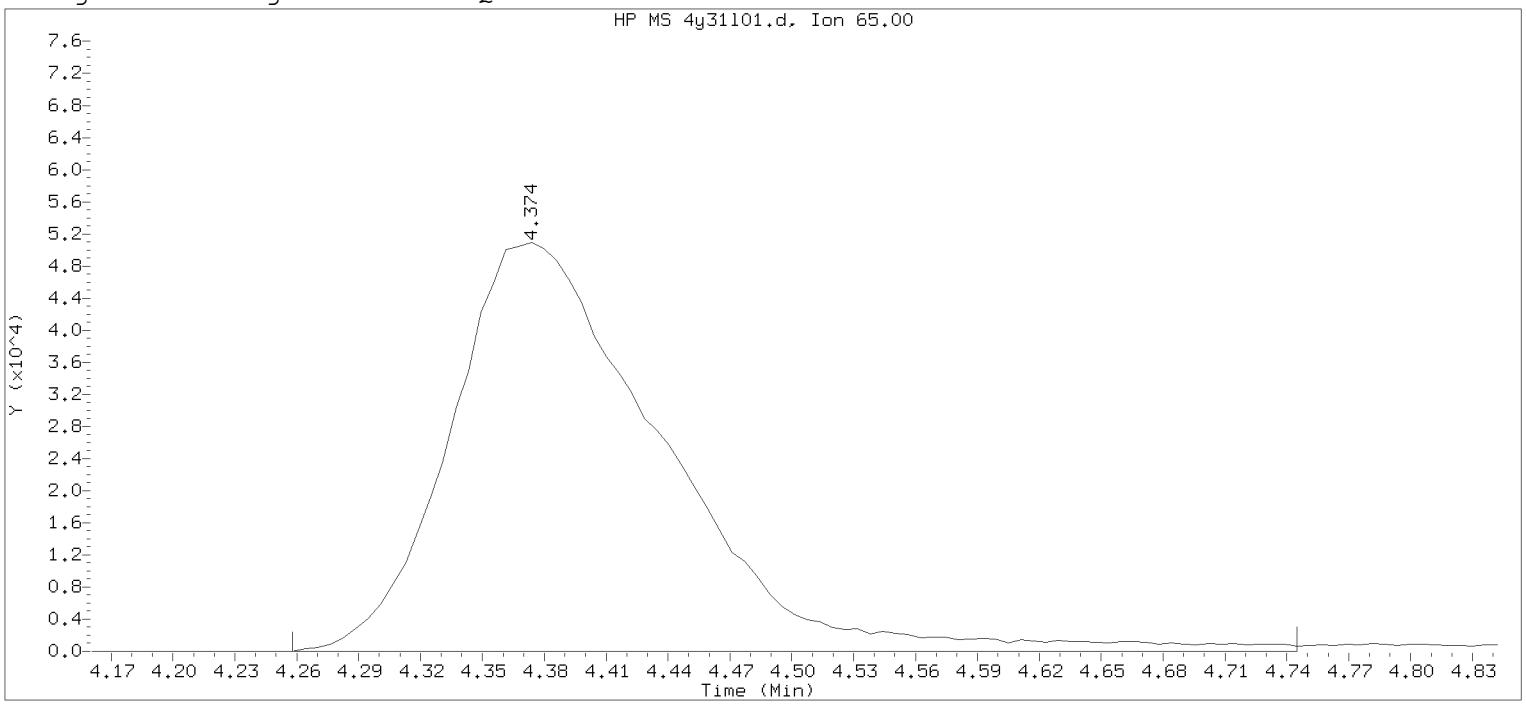
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:27.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31101.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:40 Analyst ID: amd00492

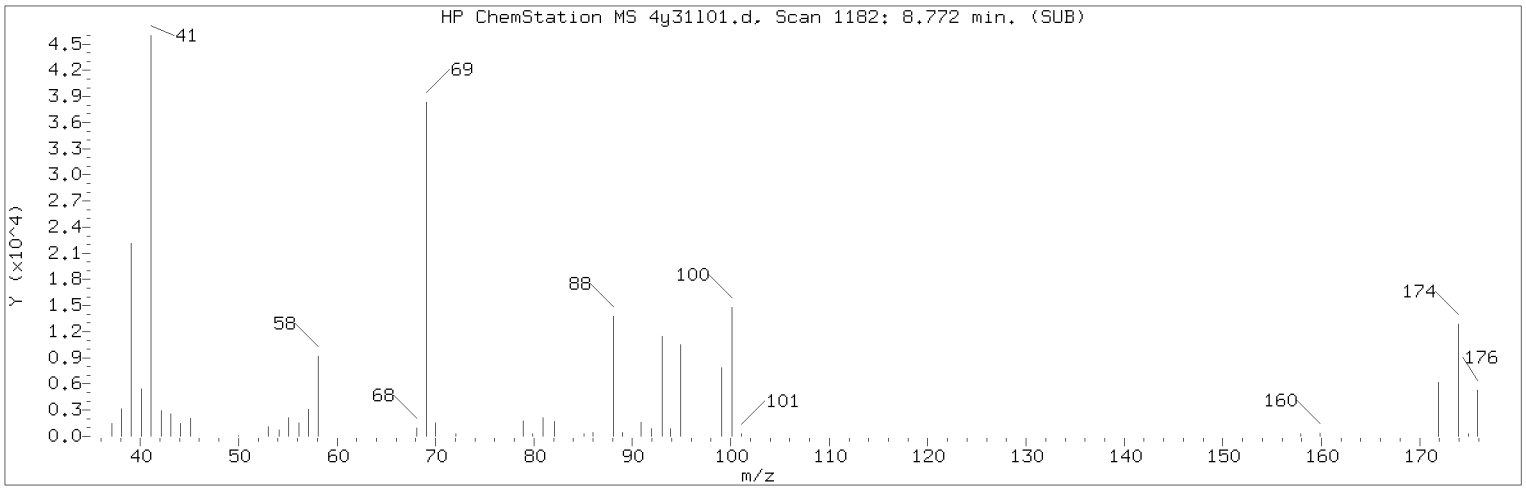
Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 07:58 Automation

Sample Name: LCS441 Lab Sample ID: LCS441

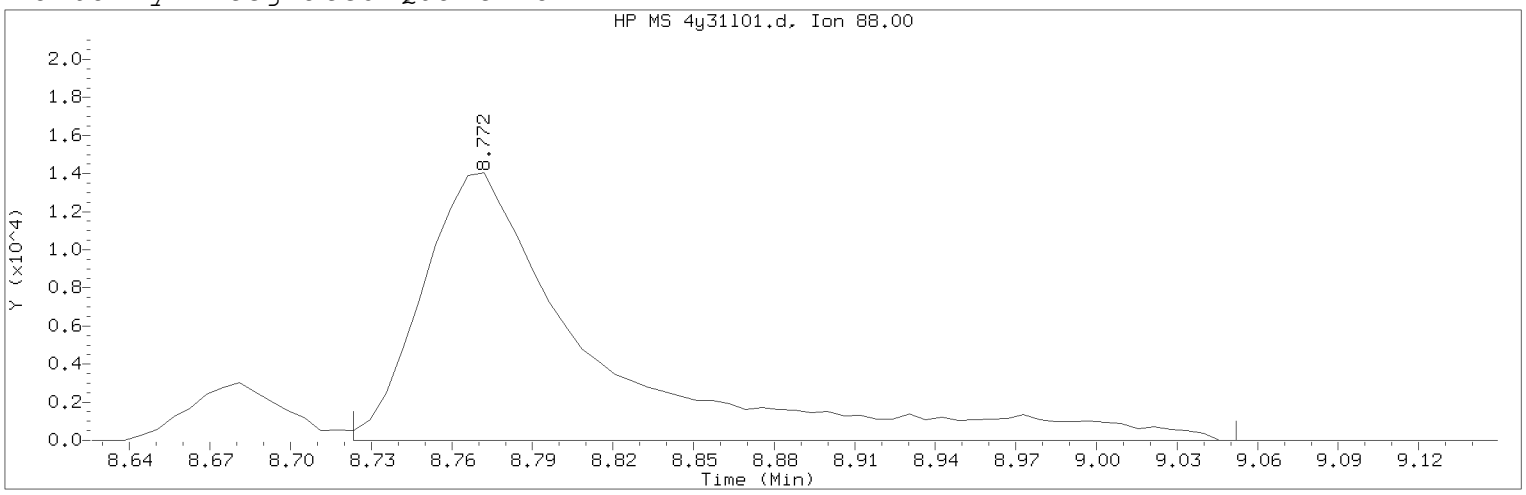
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 459
Retention Time (minutes): 4.374
Quant Ion : 65.00
Area : 364975
On-column Amount (ng) : 250.0000
Integration start scan : 439 Integration stop scan: 519
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/31/2019 at 21:34.
Target 3.5 esignature user id: dviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31101.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:40 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:11 amd00492

Sample Name: LCS441 Lab Sample ID: LCS441

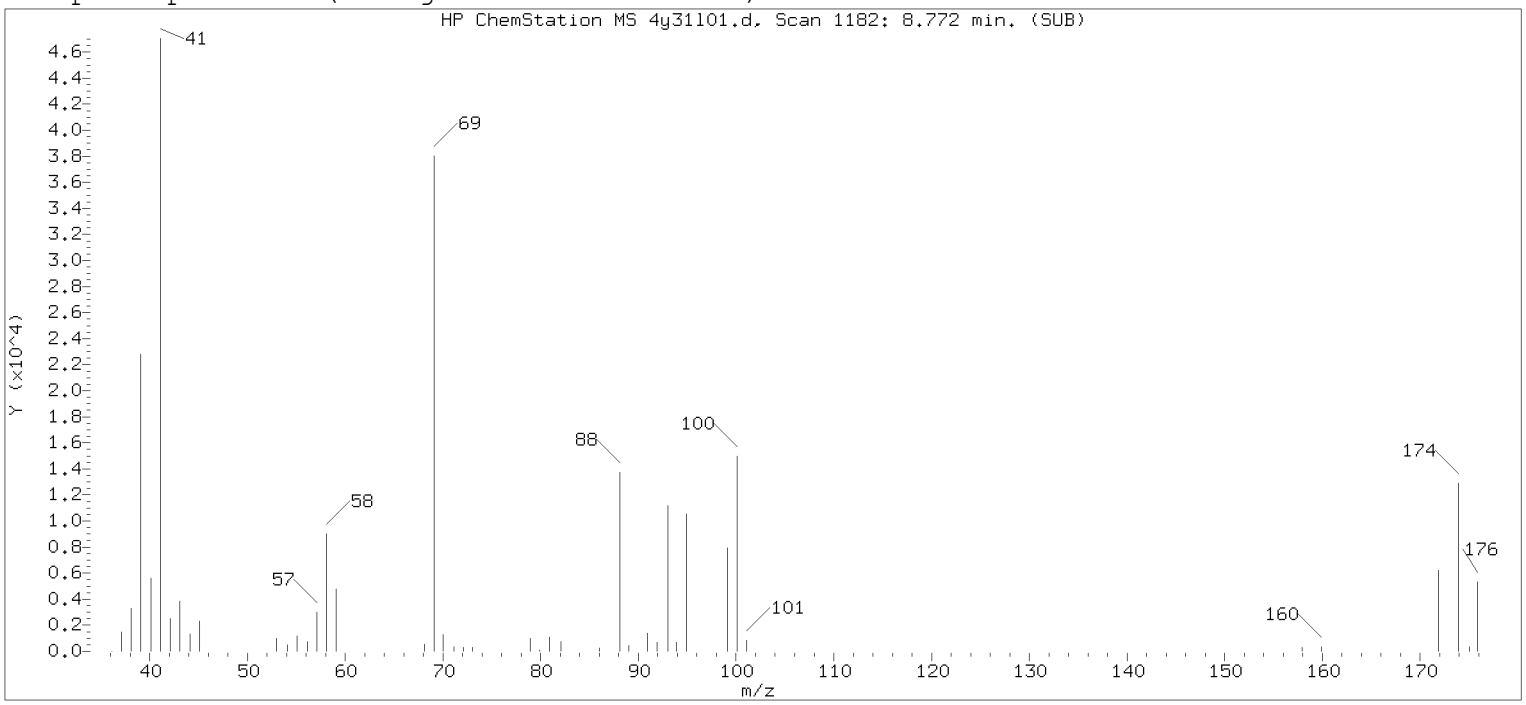
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1182
Retention Time (minutes): 8.772
Quant Ion : 88.00
Area (flag) : 63266M
On-Column Amount (ng) : 566.2992
Integration start scan : 1173 Integration stop scan: 1227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

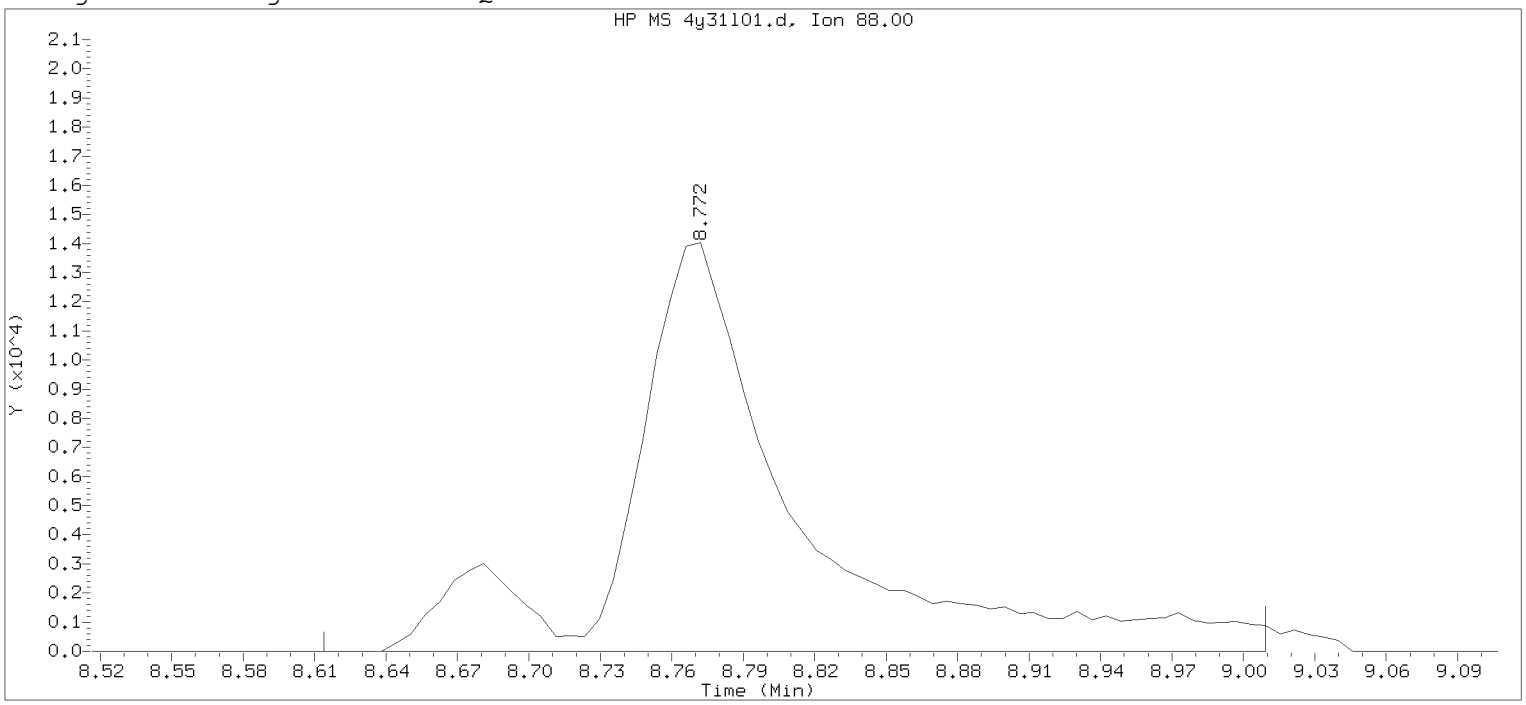
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:27.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31l01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:40 Analyst ID: amd00492

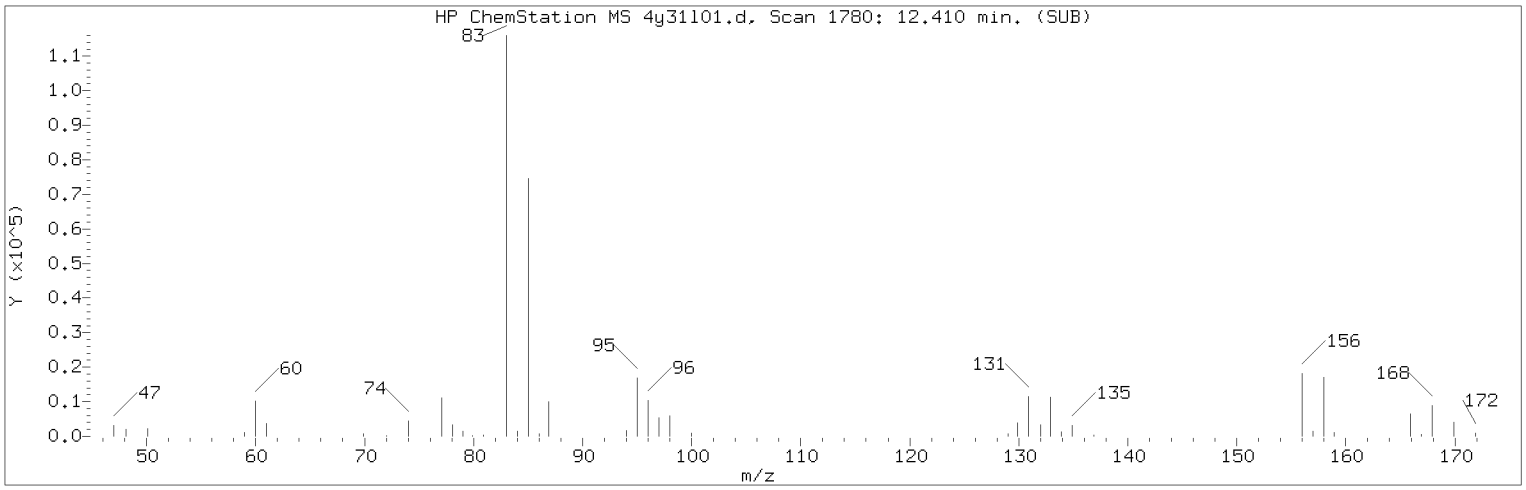
Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 07:58 Automation

Sample Name: LCS441 Lab Sample ID: LCS441

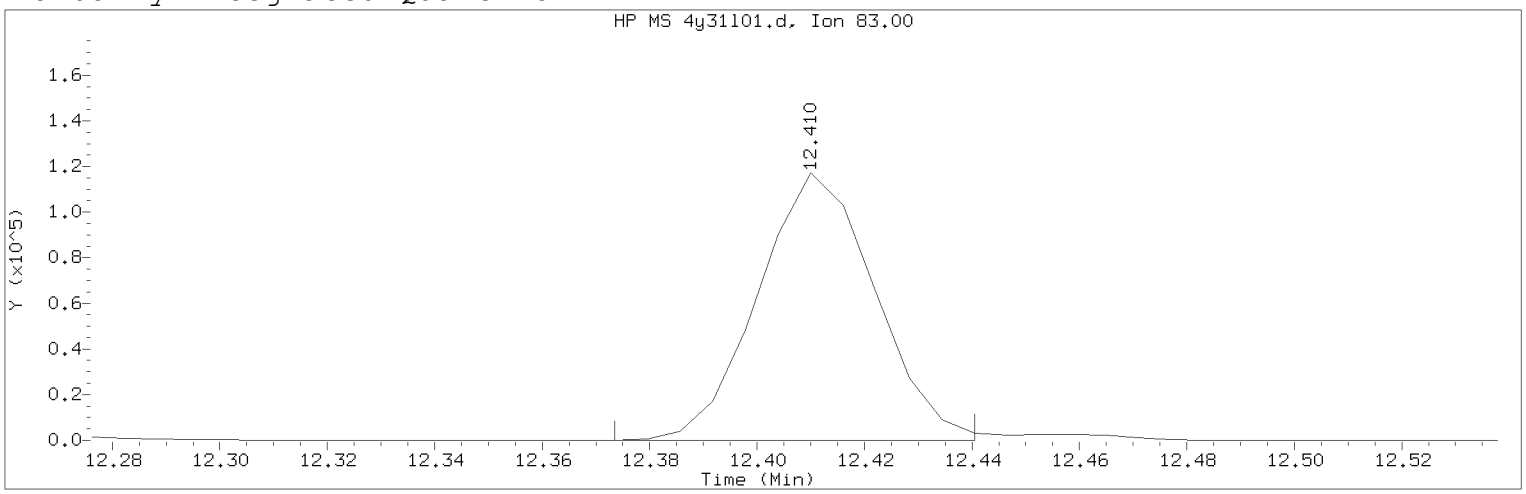
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1182
Retention Time (minutes): 8.772
Quant Ion : 88.00
Area : 69531
On-column Amount (ng) : 650.0669
Integration start scan : 1155 Integration stop scan: 1220
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvaid0263

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31l01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:40 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:11 amd00492

Sample Name: LCS441 Lab Sample ID: LCS441

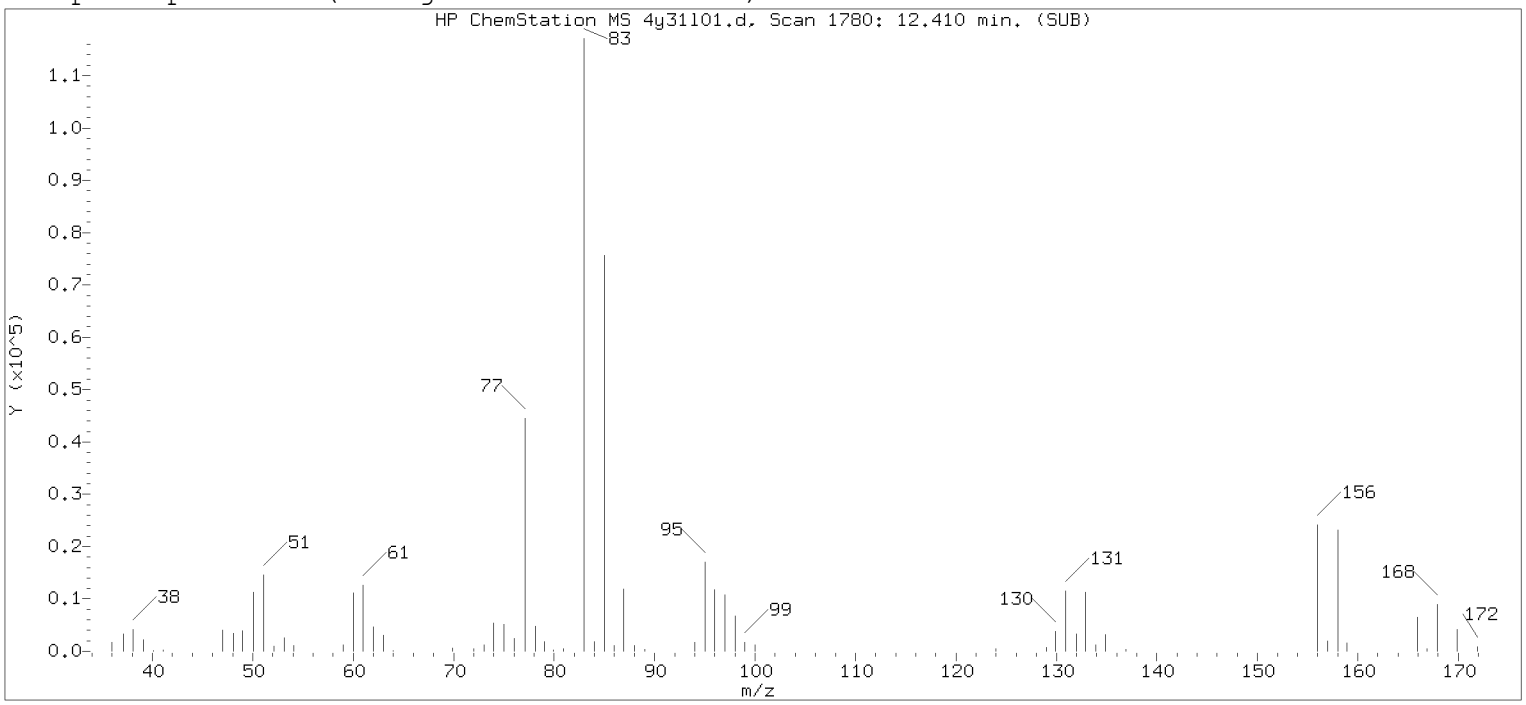
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1780
Retention Time (minutes): 12.410
Quant Ion : 83.00
Area (flag) : 176796M
On-Column Amount (ng) : 20.2979
Integration start scan : 1773 Integration stop scan: 1784
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

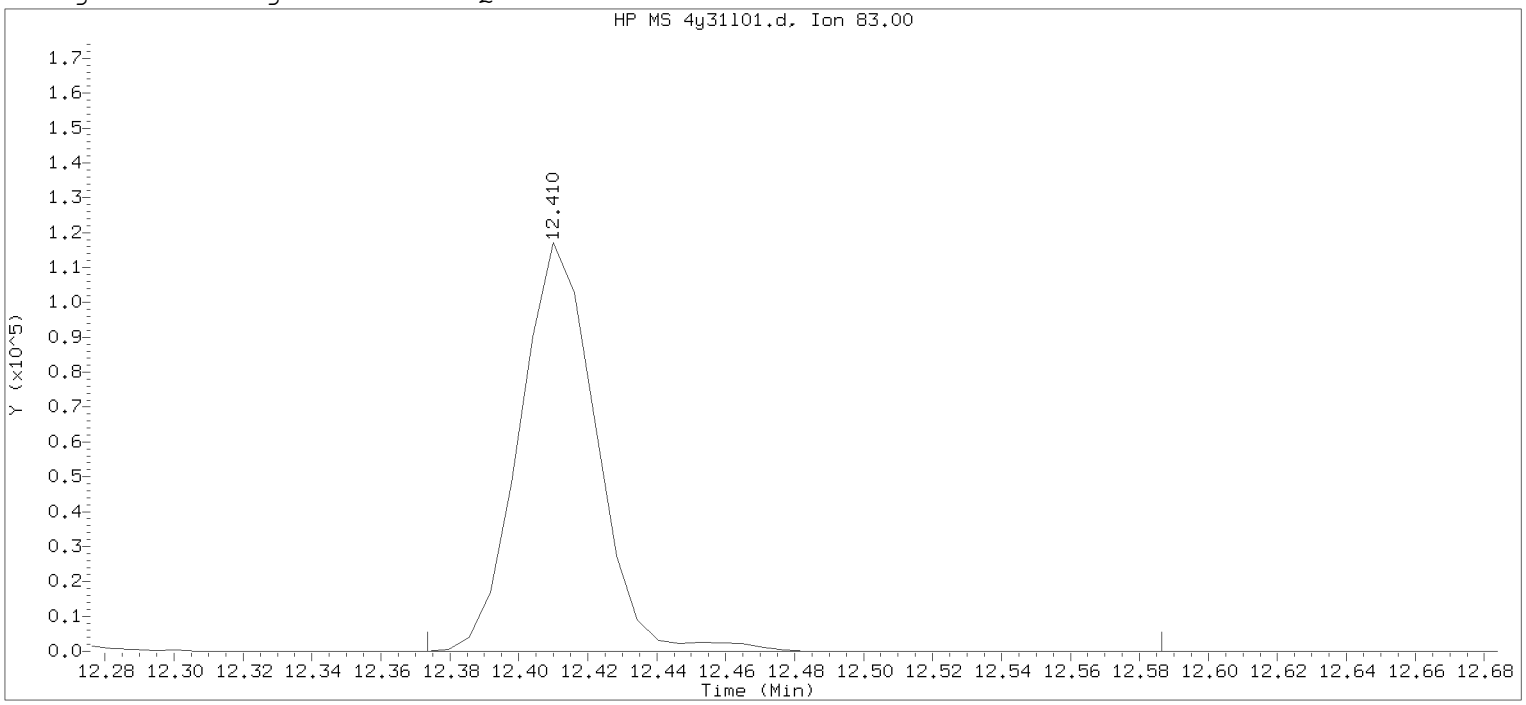
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:27.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31l01.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:40 Analyst ID: amd00492

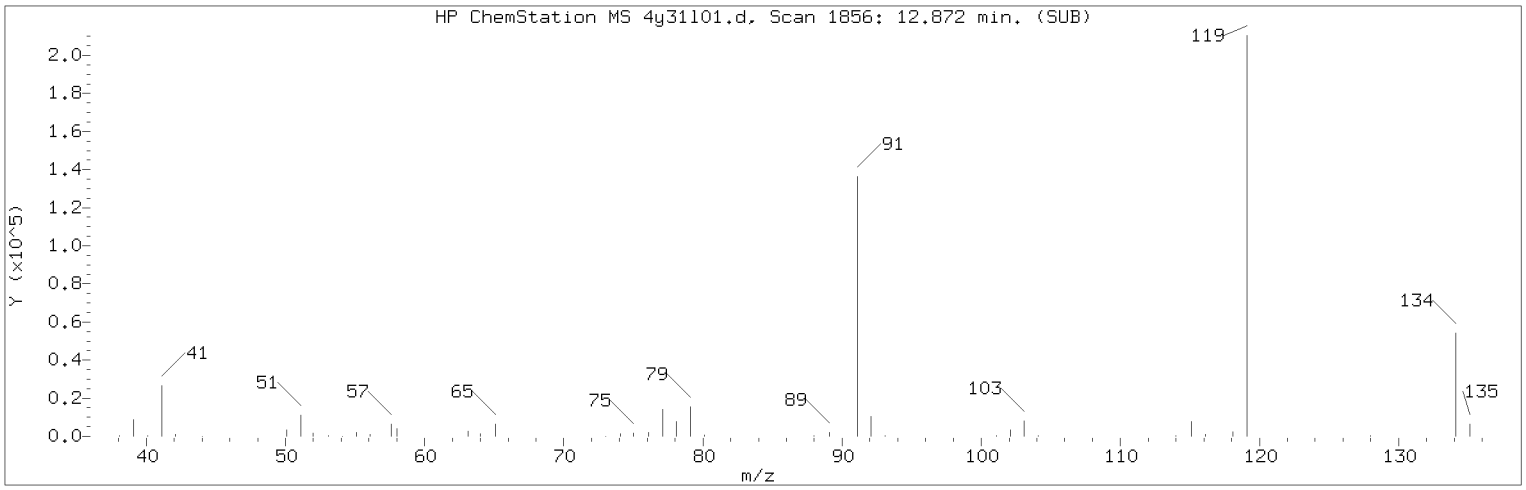
Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 07:58 Automation

Sample Name: LCS441 Lab Sample ID: LCS441

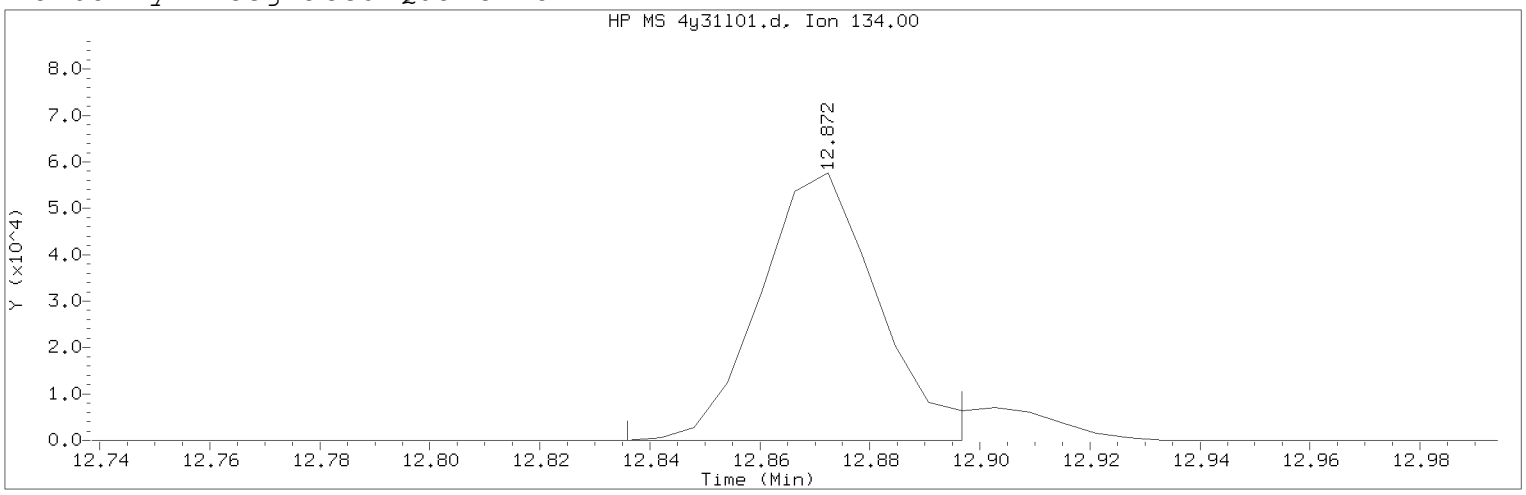
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1780
Retention Time (minutes): 12.410
Quant Ion : 83.00
Area : 180805
On-column Amount (ng) : 20.7582
Integration start scan : 1773 Integration stop scan: 1808
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/31/2019 at 21:34.
Target 3.5 esignature user id: dviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31101.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:40 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:11 amd00492

Sample Name: LCS441 Lab Sample ID: LCS441

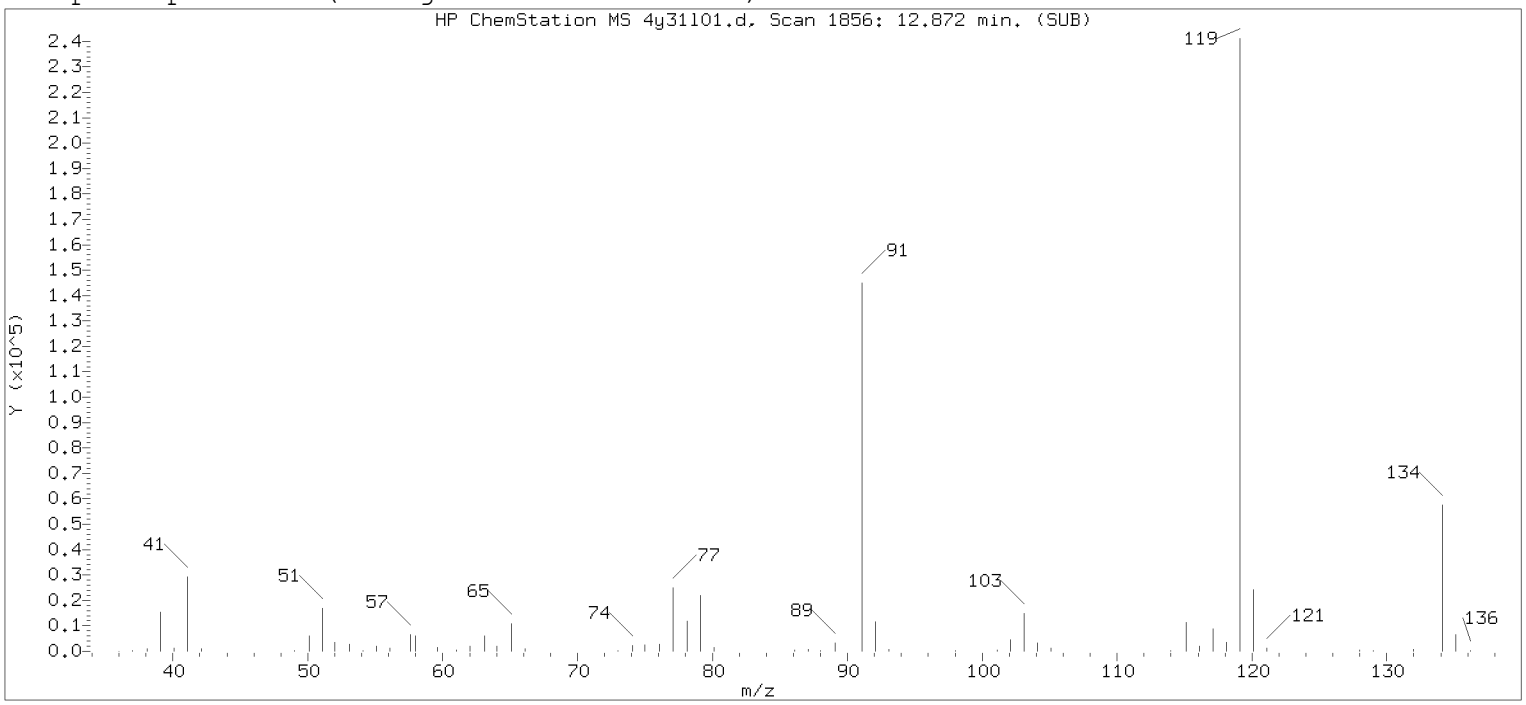
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1856
Retention Time (minutes): 12.872
Quant Ion : 134.00
Area (flag) : 85400M
On-Column Amount (ng) : 19.7619
Integration start scan : 1849 Integration stop scan: 1859
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

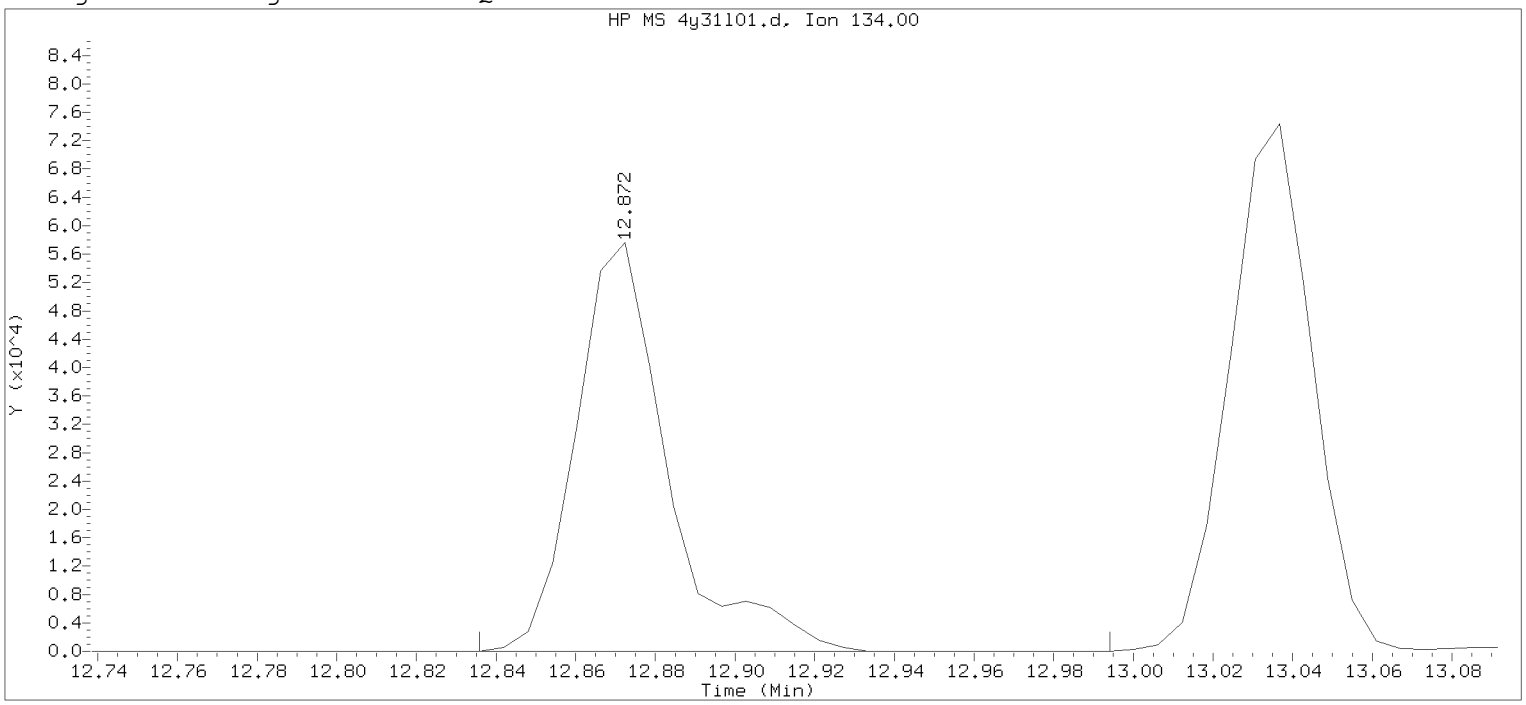
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/31/2019 at 21:34.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:27.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31101.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 07:40 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 07:58 Automation

Sample Name: LCS441 Lab Sample ID: LCS441

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1856
Retention Time (minutes): 12.872
Quant Ion : 134.00
Area : 92322
On-column Amount (ng) : 21.3638
Integration start scan : 1849 Integration stop scan: 1875
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/31/2019 at 21:34.
Target 3.5 esignature user id: dviray0464

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCD441

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCD441

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may31a.b/4y31l02.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/31/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	13	
74-87-3	Chloromethane	15	
106-99-0	1,3-Butadiene	37	
75-01-4	Vinyl Chloride	15	
74-83-9	Bromomethane	15	
75-00-3	Chloroethane	14	
109-66-0	n-Pentane	21	
75-69-4	Trichlorofluoromethane	13	
64-17-5	Ethanol	480	J
354-23-4	Freon 123a	19	
107-02-8	Acrolein	60	J
75-35-4	1,1-Dichloroethene	22	
67-64-1	Acetone	160	
76-13-1	Freon 113	20	
67-63-0	2-Propanol	140	
74-88-4	Methyl Iodide	20	
75-15-0	Carbon Disulfide	20	
107-05-1	Allyl Chloride	16	
79-20-9	Methyl Acetate	18	
75-09-2	Methylene Chloride	21	
75-65-0	t-Butyl alcohol	180	
107-13-1	Acrylonitrile	90	
156-60-5	trans-1,2-Dichloroethene	21	
1634-04-4	Methyl Tertiary Butyl Ether	19	
110-54-3	n-Hexane	19	
75-34-3	1,1-Dichloroethane	20	
108-20-3	di-Isopropyl ether	19	
126-99-8	2-Chloro-1,3-butadiene	18	
637-92-3	Ethyl t-butyl ether	18	
156-59-2	cis-1,2-Dichloroethene	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCD441

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCD441

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may31a.b/4y31l02.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/31/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	43	
78-93-3	2-Butanone	130	
594-20-7	2,2-Dichloropropane	17	
107-12-0	Propionitrile	160	
126-98-7	Methacrylonitrile	140	
74-97-5	Bromochloromethane	19	
109-99-9	Tetrahydrofuran	93	
67-66-3	Chloroform	19	
71-55-6	1,1,1-Trichloroethane	18	
110-82-7	Cyclohexane	18	
563-58-6	1,1-Dichloropropene	20	
56-23-5	Carbon Tetrachloride	17	
78-83-1	Isobutyl Alcohol	490	
71-43-2	Benzene	20	
107-06-2	1,2-Dichloroethane	18	
994-05-8	t-Amyl methyl ether	19	
142-82-5	n-Heptane	17	
71-36-3	n-Butanol	980	
79-01-6	Trichloroethene	20	
108-87-2	Methylcyclohexane	17	
78-87-5	1,2-Dichloropropane	20	
74-95-3	Dibromomethane	19	
123-91-1	1,4-Dioxane	550	
80-62-6	Methyl Methacrylate	17	
75-27-4	Bromodichloromethane	18	
79-46-9	2-Nitropropane	13	
110-75-8	2-Chloroethyl Vinyl Ether	18	
10061-01-5	cis-1,3-Dichloropropene	18	
108-10-1	4-Methyl-2-pentanone	85	
108-88-3	Toluene	20	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCD441

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCD441

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may31a.b/4y31l02.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/31/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	17	
542-75-6	1,3-Dichloropropene (total)	35	
97-63-2	Ethyl Methacrylate	17	
79-00-5	1,1,2-Trichloroethane	21	
127-18-4	Tetrachloroethene	20	
142-28-9	1,3-Dichloropropane	19	
591-78-6	2-Hexanone	85	
124-48-1	Dibromochloromethane	17	
106-93-4	1,2-Dibromoethane	20	
108-90-7	Chlorobenzene	20	
630-20-6	1,1,1,2-Tetrachloroethane	18	
100-41-4	Ethylbenzene	19	
179601-23-1	m+p-Xylene	39	
95-47-6	o-Xylene	19	
1330-20-7	Xylene (Total)	58	
100-42-5	Styrene	19	
75-25-2	Bromoform	15	
98-82-8	Isopropylbenzene	19	
108-94-1	Cyclohexanone	500	
108-86-1	Bromobenzene	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	
96-18-4	1,2,3-Trichloropropane	20	
110-57-6	trans-1,4-Dichloro-2-butene	68	
103-65-1	n-Propylbenzene	20	
95-49-8	2-Chlorotoluene	20	
106-43-4	4-Chlorotoluene	20	
108-67-8	1,3,5-Trimethylbenzene	19	
98-06-6	tert-Butylbenzene	19	
76-01-7	Pentachloroethane	18	
95-63-6	1,2,4-Trimethylbenzene	19	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCD441

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCD441

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP23297.i/19may31a.b/4y31l02.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 05/31/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
135-98-8	sec-Butylbenzene	20	
541-73-1	1,3-Dichlorobenzene	20	
99-87-6	p-Isopropyltoluene	19	
106-46-7	1,4-Dichlorobenzene	20	
526-73-8	1,2,3-Trimethylbenzene	19	
100-44-7	Benzyl Chloride	16	
141-93-5	1,3-Diethylbenzene	19	
105-05-5	1,4-Diethylbenzene	18	
95-50-1	1,2-Dichlorobenzene	20	
104-51-8	n-Butylbenzene	19	
135-01-3	1,2-Diethylbenzene	19	
25340-17-4	Diethylbenzene (total)	56	
96-12-8	1,2-Dibromo-3-chloropropane	17	
108-70-3	1,3,5-Trichlorobenzene	20	
120-82-1	1,2,4-Trichlorobenzene	19	
87-68-3	Hexachlorobutadiene	18	
91-20-3	Naphthalene	19	
87-61-6	1,2,3-Trichlorobenzene	20	
91-57-6	2-Methylnaphthalene	17	

Data file: /chem/HP23297.i/19may31a.b/4y31l02.d Injection date and time: **31-MAY-2019 08:03**
Data file Sample Info. Line: LCD441;LCD441;1;3;LCSD;;;;4y31b01; Instrument ID: **HP23297.i** Batch: **4191511AA**
Date, time and analyst ID of latest file update: 31-May-2019 09:12 amd00492

Blank Data file reference: **/chem/HP23297.i/19may31a.b/4y31b01.d**

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 31-MAY-2019 09:10
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may31a.b/4y31c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.368	(0.006)	458	65	388667M	(2)	250.00	
66) Fluorobenzene	7.866	(0.000)	1033	96	1099207	(3)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	892768	(1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.189	(0.000)	1908	152	483295	(-5)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977	(0.000)	113	265336	48.971	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434	(0.000)	102	67547	51.021	102%		80 - 120
83) Toluene-d8	(3)	9.867	(0.000)	98	1142068	49.843	100%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.307	(0.000)	95	421293	48.238	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	2.001	(-0.000)	85	108160M	12.904	12.90			0.2	1
4) Chloromethane	(2)	2.196	(-0.000)	50	118955	14.653	14.65			0.2	1
5) 1,3-Butadiene	(2)	2.317	(-0.000)	39	160967	36.565	36.57			1	3
6) Vinyl Chloride	(2)	2.317	(-0.000)	62	116716	14.705	14.71			0.2	1
8) Bromomethane	(2)	2.652	(-0.000)	94	95175	14.613	14.61			0.3	1
9) Chloroethane	(2)	2.743	(0.000)	64	63161	14.411	14.41			0.2	1
11) n-Pentane	(2)	3.114	(-0.000)	43	163361	21.008	21.01			0.4	10
12) Trichlorofluoromethane	(2)	3.054	(-0.000)	101	127805	13.279	13.28			0.2	1
13) Ethanol	(1)	3.206	(-0.003)	45	62776M	479.807	479.81		J	280	750
15) Freon 123a	(2)	3.418	(-0.000)	67	106850	19.296	19.30			0.4	5
16) Acrolein	(1)	3.522	(-0.002)	56	132457	60.106	60.11		J	2	100
17) 1,1-Dichloroethene	(2)	3.656	(-0.000)	96	83612	21.811	21.81			0.2	1
18) Acetone	(1)	3.698	(-0.001)	58	169232	156.384	156.38			0.7	20
19) Freon 113	(2)	3.674	(-0.000)	101	83399	19.770	19.77			0.2	10
21) 2-Propanol	(1)	3.881	(-0.002)	45	123405	141.917	141.92			18	100
22) Methyl Iodide	(2)	3.863	(-0.000)	142	153994	20.159	20.16			0.2	1
23) Carbon Disulfide	(2)	3.966	(-0.000)	76	267901	19.596	19.60			0.2	5
25) Allyl Chloride	(2)	4.155	(-0.000)	41	137235	16.144	16.14			0.3	5
27) Methyl Acetate	(2)	4.124	(-0.000)	43	144104	18.047	18.05			0.2	5
28) Methylene Chloride	(2)	4.355	(-0.000)	84	102669	21.143	21.14			0.3	1
30) t-Butyl alcohol	(1)	4.508	(-0.002)	59	280021	183.085	183.08			12	50
31) Acrylonitrile	(2)	4.708	(-0.000)	53	378220	90.415	90.42			0.3	20
32) trans-1,2-Dichloroethene	(2)	4.775	(-0.000)	96	95668	20.886	20.89			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	4.763	(-0.000)	73	254689	18.598	18.60			0.2	1
34) n-Hexane	(2)	5.195	(-0.000)	57	140740	18.603	18.60			0.2	5
36) 1,1-Dichloroethane	(2)	5.438	(-0.000)	63	169482	19.908	19.91			0.2	1
38) di-Isopropyl ether	(2)	5.493	(-0.000)	45	320344	18.987	18.99			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	5.548	(-0.000)	53	136993	17.775	17.77			0.2	5
40) Ethyl t-butyl ether	(2)	6.034	(-0.000)	59	256652	17.709	17.71			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.278	(-0.000)	96	114292	21.639	21.64			0.2	1

M = Compound was manually integrated.

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP23297.i/19may31a.b/4y31l02.d Injection date and time: **31-MAY-2019 08:03**
Data file Sample Info. Line: LCD441;LCD441;1;3;LCSD;;;;4y31b01; Instrument ID: **HP23297.i** Batch: **4191511AA**
Date, time and analyst ID of latest file update: 31-May-2019 09:12 amd00492

Blank Data file reference: **/chem/HP23297.i/19may31a.b/4y31b01.d**

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 31-MAY-2019 09:10
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may31a.b/4y31c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
43) 1,2-Dichloroethene (Total)	(2)		96	209960	42.525	42.52			0.2	2
44) 2-Butanone	(2)	6.253(-0.000)	43	829645	127.792	127.79			0.3	10
45) 2,2-Dichloropropane	(2)	6.284(0.000)	77	115959	17.373	17.37			0.3	1
47) Propionitrile	(1)	6.351(-0.002)	54	255522	157.285	157.29			14	100
48) Methacrylonitrile	(2)	6.564(-0.000)	67	570026	144.463	144.46			6	50
49) Bromochloromethane	(2)	6.612(-0.000)	128	54324	18.626	18.63			0.2	5
50) Tetrahydrofuran	(1)	6.618(-0.003)	71	148492	92.596	92.60			0.7	10
51) Chloroform	(2)	6.758(-0.000)	83	161814	19.299	19.30			0.2	1
53) 1,1,1-Trichloroethane	(2)	6.984(-0.000)	97	126876	18.077	18.08			0.3	1
54) Cyclohexane	(2)	7.075(-0.000)	56	166258	18.214	18.21			0.2	5
55) 1,1-Dichloropropene	(2)	7.196(-0.000)	75	129356	19.507	19.51			0.2	5
56) Carbon Tetrachloride	(2)	7.190(-0.000)	117	106599	17.480	17.48			0.2	1
58) Isobutyl Alcohol	(1)	7.361(-0.002)	41	262781	487.952	487.95			36	250
60) Benzene	(2)	7.464(-0.000)	78	408468	20.255	20.26			0.2	1
61) 1,2-Dichloroethane	(2)	7.537(-0.000)	62	125939	18.425	18.43			0.3	1
65) t-Amyl methyl ether	(2)	7.647(-0.000)	73	284393	19.407	19.41			0.8	5
67) n-Heptane	(2)	7.866(0.000)	43	149938	16.835	16.83			0.2	5
69) n-Butanol	(1)	8.237(-0.002)	56	432431	977.812	977.81			61	250
71) Trichloroethene	(2)	8.340(0.000)	95	100834	19.712	19.71			0.2	1
72) Methylcyclohexane	(2)	8.644(0.000)	83	165332	17.162	17.16			0.2	5
73) 1,2-Dichloropropane	(2)	8.681(0.000)	63	108113	20.407	20.41			0.2	1
74) Dibromomethane	(2)	8.796(0.000)	93	66546	19.352	19.35			0.2	1
75) 1,4-Dioxane	(1)	8.766(-0.001)	88	62993M	553.037	553.04			29	250
76) Methyl Methacrylate	(2)	8.766(0.000)	69	104831	17.473	17.47			0.2	5
78) Bromodichloromethane	(2)	9.028(0.000)	83	111430	17.844	17.84			0.2	1
79) 2-Nitropropane	(2)	9.314(-0.000)	41	38687	12.730	12.73			0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)	9.386(0.000)	63	84975M	17.530	17.53			0.2	10
81) cis-1,3-Dichloropropene	(2)	9.569(-0.000)	75	150088	18.180	18.18			0.2	1
82) 4-Methyl-2-pentanone	(2)	9.739(0.000)	43	985087	84.559	84.56			0.5	10
88) Toluene	(3)	9.940(-0.000)	92	261717	19.747	19.75			0.2	1
89) trans-1,3-Dichloropropene	(3)	10.196(-0.000)	75	130664	16.755	16.76			0.2	1
90) 1,3-Dichloropropene (total)	(3)		100	280752	34.935	34.93			0.2	5
91) Ethyl Methacrylate	(3)	10.256(-0.000)	69	164557	16.790	16.79			0.2	5
92) 1,1,2-Trichloroethane	(3)	10.402(-0.000)	97	106591	20.577	20.58			0.2	1
93) Tetrachloroethene	(3)	10.482(-0.000)	166	114679	19.836	19.84			0.2	1
94) 1,3-Dichloropropane	(3)	10.561(-0.000)	76	166809	19.399	19.40			0.2	1
96) 2-Hexanone	(3)	10.615(-0.000)	43	800947	84.916	84.92			0.3	10
97) Dibromochloromethane	(3)	10.774(-0.000)	129	93321	17.026	17.03			0.2	1
99) 1,2-Dibromoethane	(3)	10.883(-0.000)	107	111614	19.517	19.52			0.2	1
102) Chlorobenzene	(3)	11.339(0.000)	112	296685	19.806	19.81			0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)	11.418(0.000)	131	91976	18.188	18.19			0.2	1
104) Ethylbenzene	(3)	11.418(0.000)	91	485144	19.057	19.06			0.4	1
106) m+p-Xylene	(3)	11.534(0.000)	106	393866	38.803	38.80			1	5
107) o-Xylene	(3)	11.862(0.000)	106	192442	19.074	19.07			0.4	1
108) Xylene (Total)	(3)		106	586308	57.877	57.88			1	5
109) Styrene	(3)	11.881(0.000)	104	317963	18.940	18.94			0.2	5
110) Bromoform	(3)	12.039(0.000)	173	63770	14.765	14.76			0.2	4
111) Isopropylbenzene	(3)	12.161(0.000)	105	480231	19.026	19.03			0.2	5
112) Cyclohexanone	(1)	12.246(-0.003)	55	229722	504.824	504.82			25	100
115) Bromobenzene	(4)	12.428(-0.000)	156	134993	19.961	19.96			0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	12.410(-0.000)	83	180063M	20.217	20.22			0.2	1
117) 1,2,3-Trichloropropane	(4)	12.459(-0.000)	110	53204	19.756	19.76			0.2	5
118) trans-1,4-Dichloro-2-butene	(4)	12.434(-0.000)	53	197822	67.568	67.57			6	50
119) n-Propylbenzene	(4)	12.489(-0.000)	91	588723	20.241	20.24			0.2	5

M = Compound was manually integrated.

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Data file: /chem/HP23297.i/19may31a.b/4y31l02.d Injection date and time: **31-MAY-2019 08:03**
Data file Sample Info. Line: LCD441;LCD441;1;3;LCSD;;;;4y31b01; Instrument ID: **HP23297.i** Batch: **4191511AA**
Date, time and analyst ID of latest file update: 31-May-2019 09:12 amd00492

Blank Data file reference: **/chem/HP23297.i/19may31a.b/4y31b01.d**

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 31-MAY-2019 09:10
Mid Level Daily Calibration Standard Reference: **/chem/HP23297.i/19may31a.b/4y31c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)	12.568(-0.000)	126	121551	20.011	20.01			0.2	5
121) 4-Chlorotoluene	(4)	12.666(-0.000)	126	128038	20.222	20.22			0.2	5
122) 1,3,5-Trimethylbenzene	(4)	12.629(-0.000)	105	410103	19.483	19.48			0.3	5
124) tert-Butylbenzene	(4)	12.872(-0.000)	134	84942M	19.222	19.22			0.3	5
125) Pentachloroethane	(4)	12.903(-0.000)	167	71098	17.646	17.65			0.2	5
126) 1,2,4-Trimethylbenzene	(4)	12.909(0.000)	105	424686	19.324	19.32			1	5
127) sec-Butylbenzene	(4)	13.037(-0.000)	105	528722	19.662	19.66			0.2	5
129) 1,3-Dichlorobenzene	(4)	13.134(-0.000)	146	252579	19.926	19.93			0.2	5
130) p-Isopropyltoluene	(4)	13.140(-0.000)	119	452794	19.141	19.14			0.2	5
133) 1,4-Dichlorobenzene	(4)	13.207(0.000)	146	263542	20.294	20.29			0.2	5
134) 1,2,3-Trimethylbenzene	(4)	13.219(0.000)	105	439861	18.639	18.64			0.3	5
135) Benzyl Chloride	(4)	13.286(0.000)	91	283499	16.050	16.05			0.3	5
136) 1,3-Diethylbenzene	(4)	13.341(-0.000)	119	274372	18.557	18.56			0.2	5
137) 1,4-Diethylbenzene	(4)	13.414(-0.000)	119	289057	18.356	18.36			0.2	5
138) 1,2-Dichlorobenzene	(4)	13.469(-0.000)	146	246349	19.944	19.94			0.2	5
139) n-Butylbenzene	(4)	13.432(-0.000)	92	230300	19.005	19.01			0.2	5
140) 1,2-Diethylbenzene	(4)	13.487(-0.000)	119	232811	18.677	18.68			0.2	5
141) Diethylbenzene (total)	(4)		100	796240	55.590	55.59			0.2	5
142) 1,2-Dibromo-3-chloropropane	(4)	14.016(-0.000)	75	39871	16.970	16.97			0.3	5
144) 1,3,5-Trichlorobenzene	(4)	14.138(0.000)	180	183118	19.663	19.66			0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.564(0.000)	180	170711	19.348	19.35			0.3	5
147) Hexachlorobutadiene	(4)	14.643(-0.000)	225	74480	18.266	18.27			0.7	5
148) Naphthalene	(4)	14.746(-0.000)	128	593772	19.423	19.42			1	5
149) 1,2,3-Trichlorobenzene	(4)	14.892(0.000)	180	169278	19.970	19.97			0.4	5
150) 2-Methylnaphthalene	(4)	15.537(-0.000)	142	321441	16.812	16.81			0.7	5

M = Compound was manually integrated.

Total number of targets = 109

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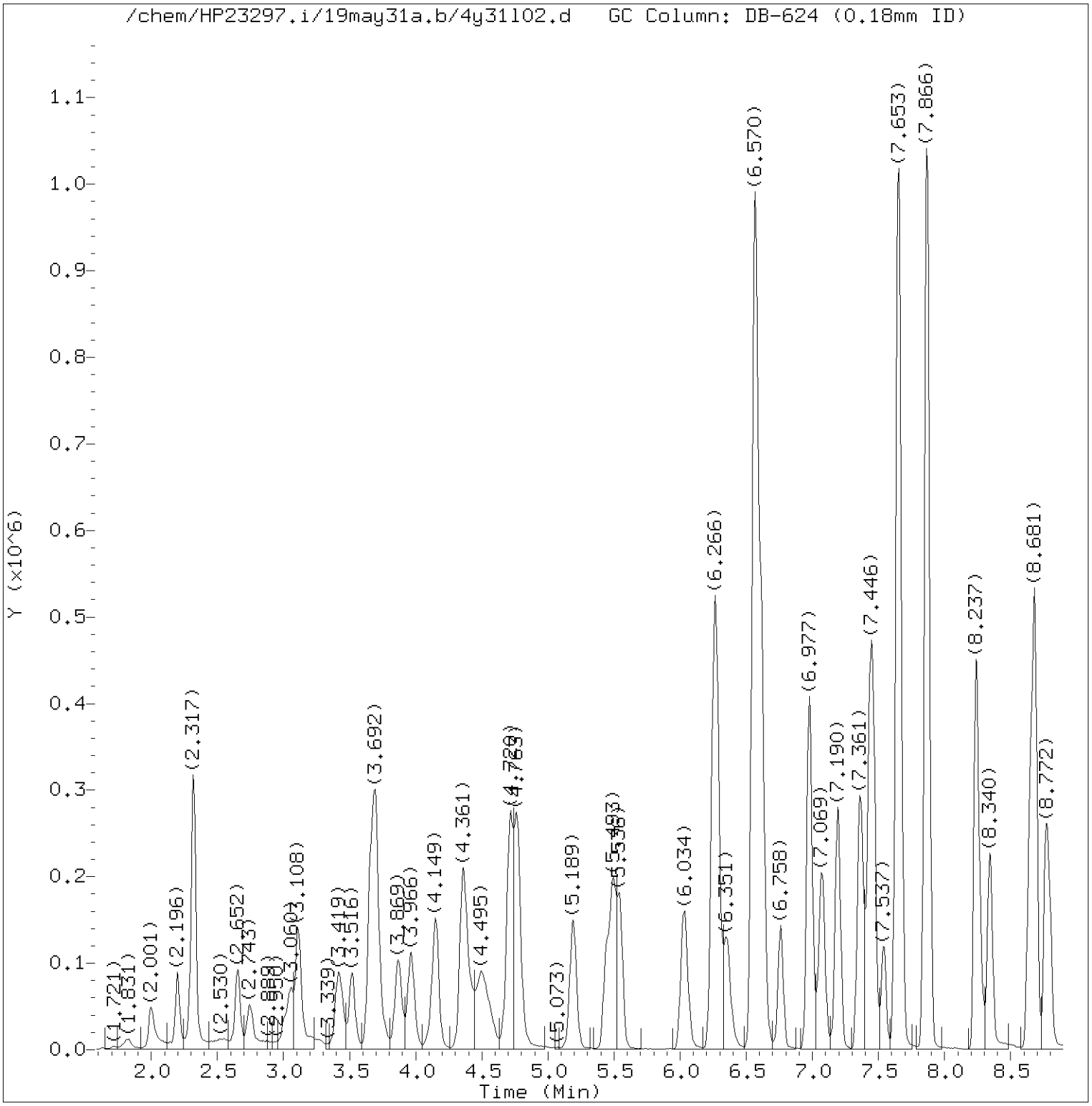
Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:27. PARALLAX ID: rcr00559



Total Ion Chromatogram (TIC)

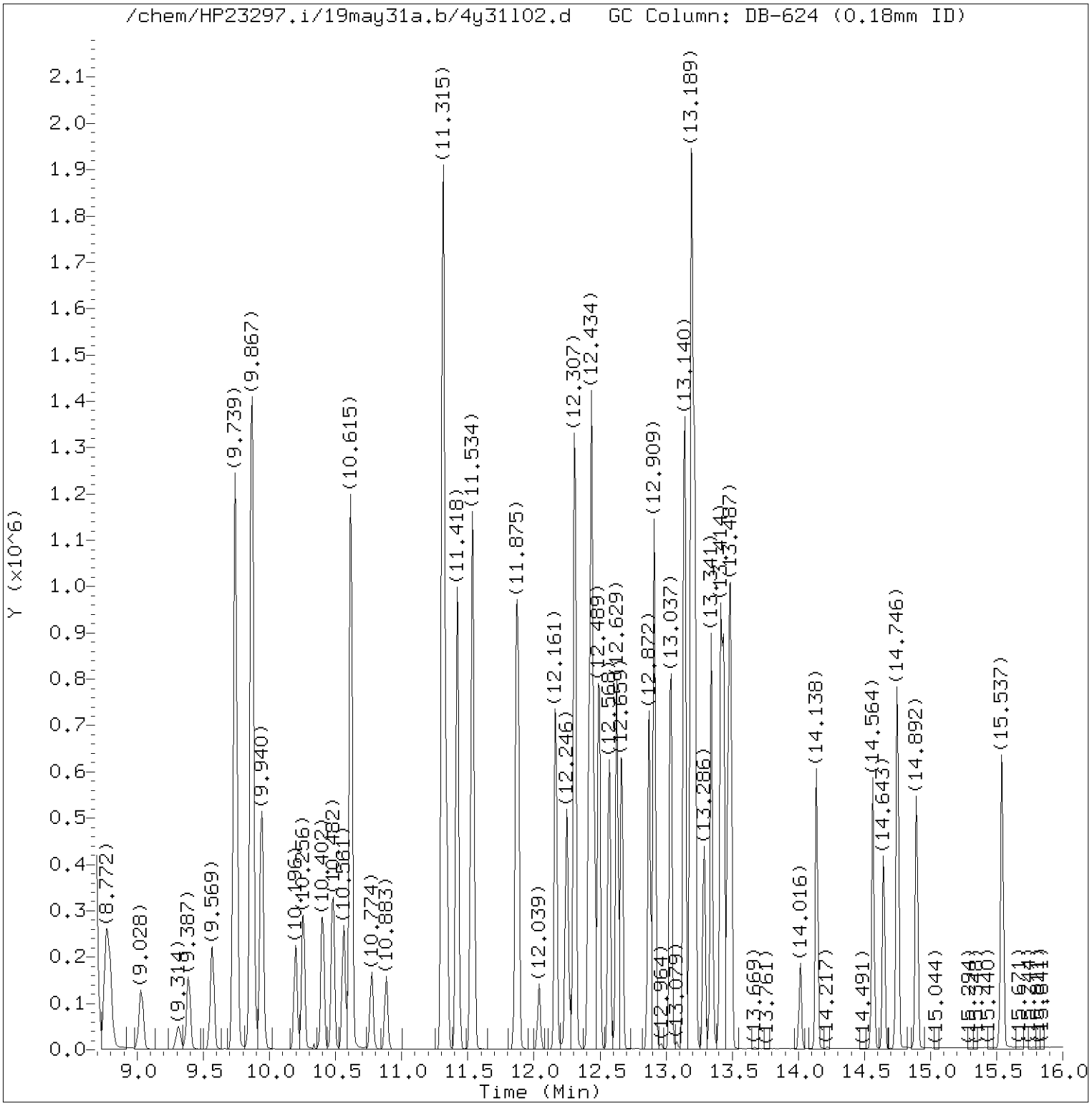
Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31l02.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:03 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:12 amd00492

Sample Name: LCD441 Lab Sample ID: LCD441

Digitally signed by Don V. Viray
on 05/31/2019 at 21:35.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31l02.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:03 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:12 amd00492

Sample Name: LCD441 Lab Sample ID: LCD441

Digitally signed by Don V. Viray
on 05/31/2019 at 21:35.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31l02.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:03 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:12 amd00492

Sample Name: LCD441 Lab Sample ID: LCD441

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.001	85	108160M	12.904
4) Chloromethane	(2)	2.196	50	118955	14.653
5) 1,3-Butadiene	(2)	2.317	39	160967	36.565
6) Vinyl Chloride	(2)	2.317	62	116716	14.705
8) Bromomethane	(2)	2.652	94	95175	14.613
9) Chloroethane	(2)	2.743	64	63161	14.411
12) Trichlorofluoromethane	(2)	3.054	101	127805	13.279
11) n-Pentane	(2)	3.114	43	163361	21.008
13) Ethanol	(1)	3.206	45	62776M	479.807
15) Freon 123a	(2)	3.419	67	106850	19.296
16) Acrolein	(1)	3.522	56	132457	60.106
17) 1,1-Dichloroethene	(2)	3.656	96	83612	21.811
19) Freon 113	(2)	3.674	101	83399	19.770
18) Acetone	(1)	3.698	58	169232	156.384
22) Methyl Iodide	(2)	3.863	142	153994	20.159
21) 2-Propanol	(1)	3.881	45	123405	141.917
23) Carbon Disulfide	(2)	3.966	76	267901	19.596
27) Methyl Acetate	(2)	4.124	43	144104	18.047
25) Allyl Chloride	(2)	4.155	41	137235	16.144
28) Methylene Chloride	(2)	4.355	84	102669	21.143
29)*t-Butyl alcohol-d10	(1)	4.368	65	388667M	250.000
30) t-Butyl alcohol	(1)	4.508	59	280021	183.085
31) Acrylonitrile	(2)	4.708	53	378220	90.415
33) Methyl Tertiary Butyl Ether	(2)	4.763	73	254689	18.598
32) trans-1,2-Dichloroethene	(2)	4.775	96	95668	20.886
34) n-Hexane	(2)	5.195	57	140740	18.603
36) 1,1-Dichloroethane	(2)	5.438	63	169482	19.908
38) di-Isopropyl ether	(2)	5.493	45	320344	18.987
39) 2-Chloro-1,3-butadiene	(2)	5.548	53	136993	17.775
40) Ethyl t-butyl ether	(2)	6.034	59	256652	17.709
43) 1,2-Dichloroethene (Total)	(2)		96	209960	42.525
44) 2-Butanone	(2)	6.253	43	829645	127.792
42) cis-1,2-Dichloroethene	(2)	6.278	96	114292	21.639
45) 2,2-Dichloropropane	(2)	6.284	77	115959	17.373
47) Propionitrile	(1)	6.351	54	255522	157.285
48) Methacrylonitrile	(2)	6.564	67	570026	144.463
49) Bromochloromethane	(2)	6.612	128	54324	18.626
50) Tetrahydrofuran	(1)	6.618	71	148492	92.596

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 05/31/2019 at 21:35.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31l02.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:03 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:12 amd00492

Sample Name: LCD441 Lab Sample ID: LCD441

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	6.758	83	161814	19.299
52)$Dibromofluoromethane	(2)	6.977	113	265336	48.971
53) 1,1,1-Trichloroethane	(2)	6.984	97	126876	18.077
54) Cyclohexane	(2)	7.075	56	166258	18.214
56) Carbon Tetrachloride	(2)	7.190	117	106599	17.480
55) 1,1-Dichloropropene	(2)	7.196	75	129356	19.507
58) Isobutyl Alcohol	(1)	7.361	41	262781	487.952
57)$1,2-Dichloroethane-d4	(2)	7.434	102	67547	51.021
60) Benzene	(2)	7.464	78	408468	20.255
61) 1,2-Dichloroethane	(2)	7.537	62	125939	18.425
65) t-Amyl methyl ether	(2)	7.647	73	284393	19.407
66)*Fluorobenzene	(2)	7.866	96	1099207	50.000
67) n-Heptane	(2)	7.866	43	149938	16.835
69) n-Butanol	(1)	8.237	56	432431	977.812
71) Trichloroethene	(2)	8.340	95	100834	19.712
72) Methylcyclohexane	(2)	8.644	83	165332	17.162
73) 1,2-Dichloropropane	(2)	8.681	63	108113	20.407
75) 1,4-Dioxane	(1)	8.766	88	62993M	553.037
76) Methyl Methacrylate	(2)	8.766	69	104831	17.473
74) Dibromomethane	(2)	8.796	93	66546	19.352
78) Bromodichloromethane	(2)	9.028	83	111430	17.844
79) 2-Nitropropane	(2)	9.314	41	38687	12.730
80) 2-Chloroethyl Vinyl Ether	(2)	9.387	63	84975M	17.530
81) cis-1,3-Dichloropropene	(2)	9.569	75	150088	18.180
82) 4-Methyl-2-pentanone	(2)	9.739	43	985087	84.559
83)$Toluene-d8	(3)	9.867	98	1142068	49.843
88) Toluene	(3)	9.940	92	261717	19.747
90) 1,3-Dichloropropene (total)	(3)		100	280752	34.935
89) trans-1,3-Dichloropropene	(3)	10.196	75	130664	16.755
91) Ethyl Methacrylate	(3)	10.256	69	164557	16.790
92) 1,1,2-Trichloroethane	(3)	10.402	97	106591	20.577
93) Tetrachloroethene	(3)	10.482	166	114679	19.836
94) 1,3-Dichloropropane	(3)	10.561	76	166809	19.399
96) 2-Hexanone	(3)	10.615	43	800947	84.916
97) Dibromochloromethane	(3)	10.774	129	93321	17.026
99) 1,2-Dibromoethane	(3)	10.883	107	111614	19.517
100)*Chlorobenzene-d5	(3)	11.309	117	892768	50.000
102) Chlorobenzene	(3)	11.339	112	296685	19.806

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/31/2019 at 21:35.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31l02.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:03 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:12 amd00492

Sample Name: LCD441 Lab Sample ID: LCD441

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	91976	18.188
104) Ethylbenzene	(3)	11.418	91	485144	19.057
106) m+p-Xylene	(3)	11.534	106	393866	38.803
108) Xylene (Total)	(3)		106	586308	57.877
107) o-Xylene	(3)	11.863	106	192442	19.074
109) Styrene	(3)	11.881	104	317963	18.940
110) Bromoform	(3)	12.039	173	63770	14.765
111) Isopropylbenzene	(3)	12.161	105	480231	19.026
112) Cyclohexanone	(1)	12.246	55	229722	504.824
114)$4-Bromofluorobenzene	(3)	12.307	95	421293	48.238
116) 1,1,2,2-Tetrachloroethane	(4)	12.410	83	180063M	20.217
115) Bromobenzene	(4)	12.428	156	134993	19.961
118) trans-1,4-Dichloro-2-butene	(4)	12.434	53	197822	67.568
117) 1,2,3-Trichloropropane	(4)	12.459	110	53204	19.756
119) n-Propylbenzene	(4)	12.489	91	588723	20.241
120) 2-Chlorotoluene	(4)	12.568	126	121551	20.011
122) 1,3,5-Trimethylbenzene	(4)	12.629	105	410103	19.483
121) 4-Chlorotoluene	(4)	12.666	126	128038	20.222
124) tert-Butylbenzene	(4)	12.872	134	84942M	19.222
125) Pentachloroethane	(4)	12.903	167	71098	17.646
126) 1,2,4-Trimethylbenzene	(4)	12.909	105	424686	19.324
127) sec-Butylbenzene	(4)	13.037	105	528722	19.662
129) 1,3-Dichlorobenzene	(4)	13.134	146	252579	19.926
130) p-Isopropyltoluene	(4)	13.140	119	452794	19.141
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	483295	50.000
133) 1,4-Dichlorobenzene	(4)	13.207	146	263542	20.294
134) 1,2,3-Trimethylbenzene	(4)	13.219	105	439861	18.639
135) Benzyl Chloride	(4)	13.286	91	283499	16.050
136) 1,3-Diethylbenzene	(4)	13.341	119	274372	18.557
141) Diethylbenzene (total)	(4)		100	796240	55.590
137) 1,4-Diethylbenzene	(4)	13.414	119	289057	18.356
139) n-Butylbenzene	(4)	13.432	92	230300	19.005
138) 1,2-Dichlorobenzene	(4)	13.469	146	246349	19.944
140) 1,2-Diethylbenzene	(4)	13.487	119	232811	18.677
142) 1,2-Dibromo-3-chloropropane	(4)	14.016	75	39871	16.970
144) 1,3,5-Trichlorobenzene	(4)	14.138	180	183118	19.663
146) 1,2,4-Trichlorobenzene	(4)	14.564	180	170711	19.348
147) Hexachlorobutadiene	(4)	14.643	225	74480	18.266

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/31/2019 at 21:35.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP23297.i/19may31a.b/4y31l02.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:03 Analyst ID: amd00492

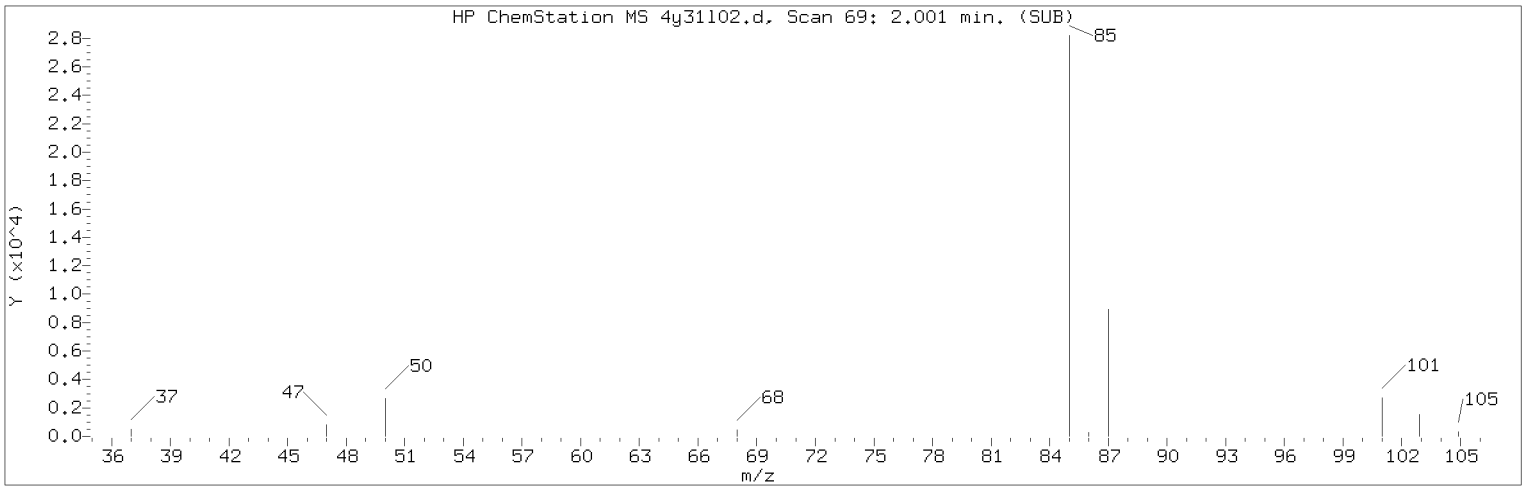
Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:12 amd00492

Sample Name: LCD441 Lab Sample ID: LCD441

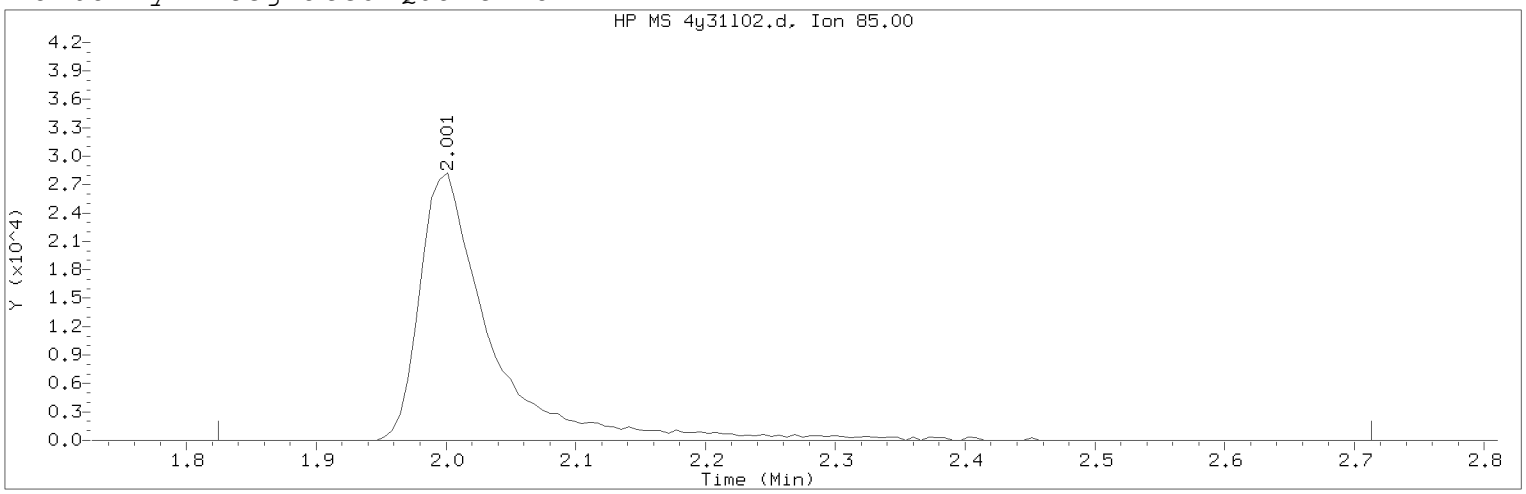
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) Naphthalene	(4)	14.746	128	593772	19.423
149) 1,2,3-Trichlorobenzene	(4)	14.892	180	169278	19.970
150) 2-Methylnaphthalene	(4)	15.537	142	321441	16.812

Digitally signed by Don V. Viray
on 05/31/2019 at 21:35.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31102.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:03 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:12 amd00492

Sample Name: LCD441 Lab Sample ID: LCD441

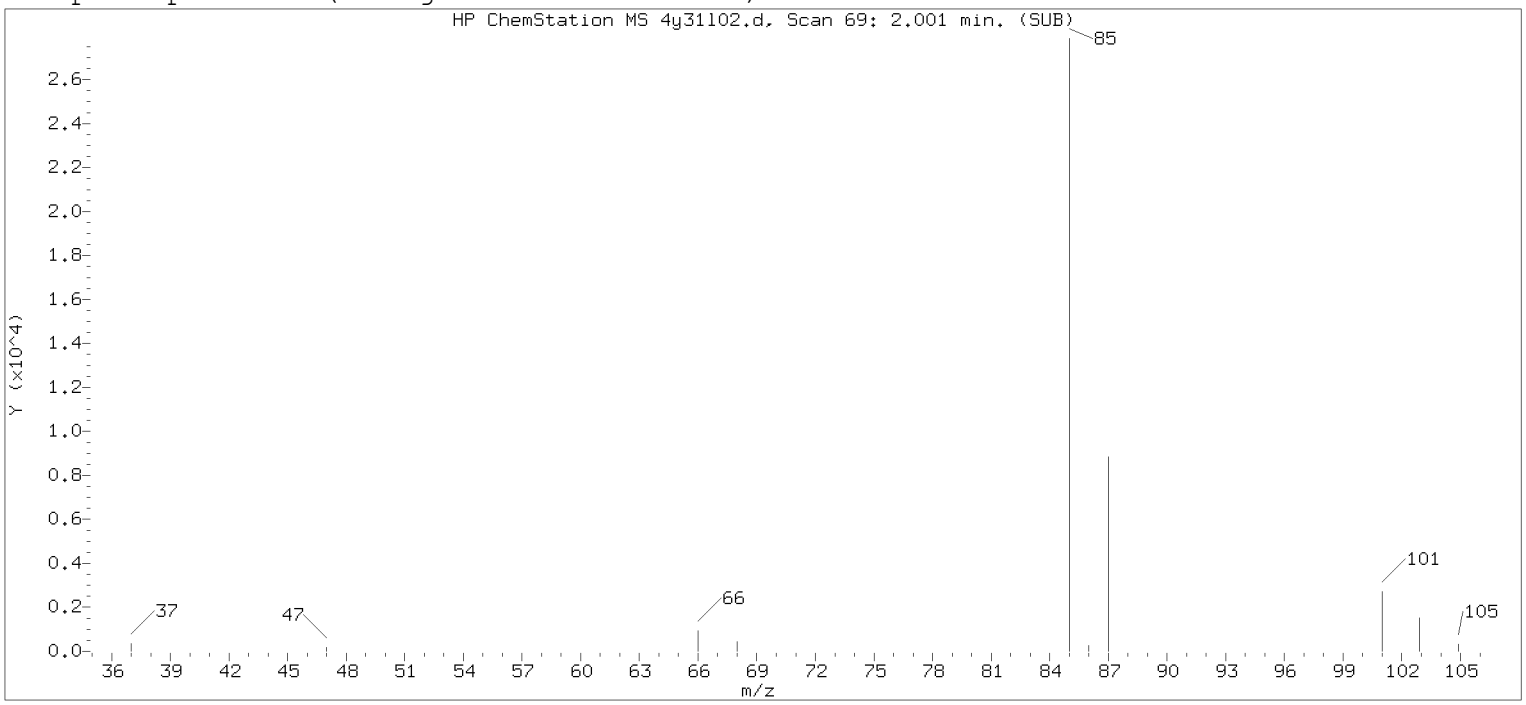
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 69
Retention Time (minutes): 2.001
Quant Ion : 85.00
Area (flag) : 108160M
On-Column Amount (ng) : 12.9040
Integration start scan : 39 Integration stop scan: 185
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

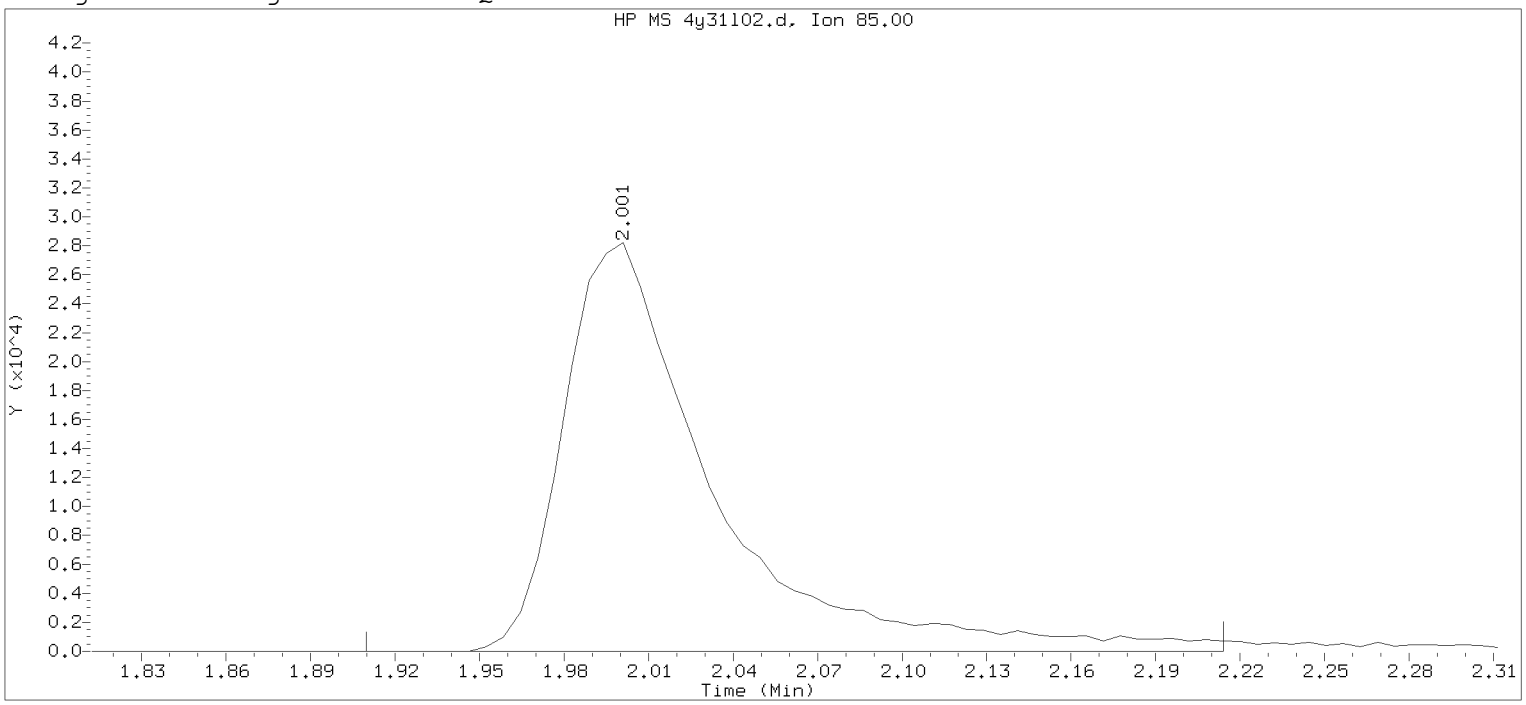
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/31/2019 at 21:35.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:27.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31102.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:03 Analyst ID: amd00492

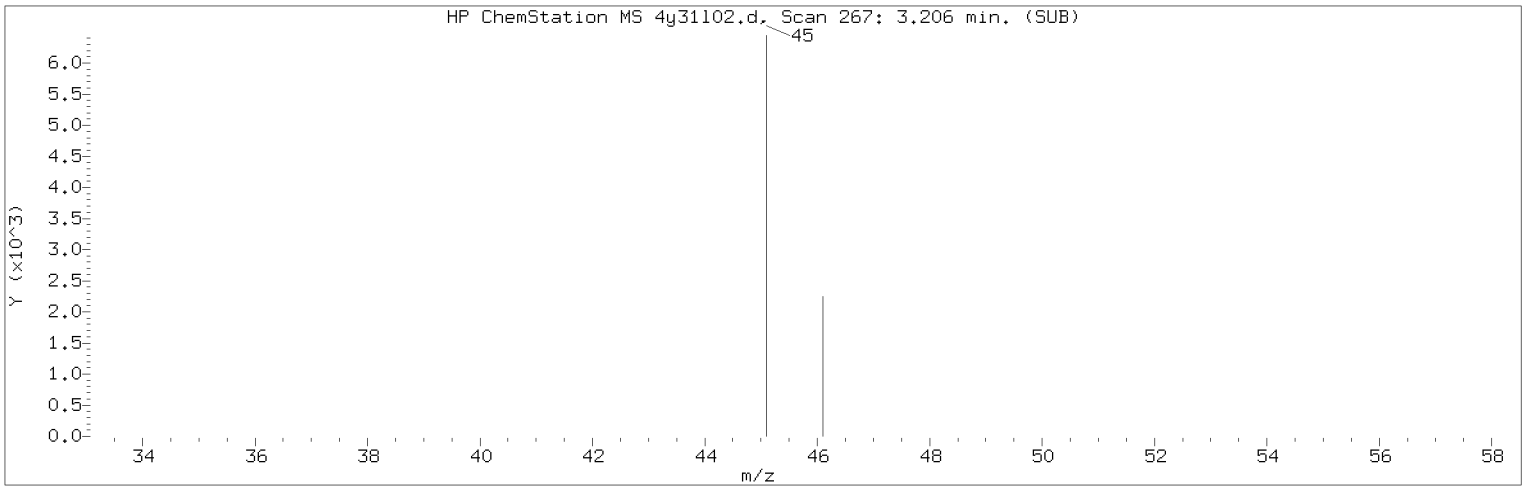
Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 08:20 Automation

Sample Name: LCD441 Lab Sample ID: LCD441

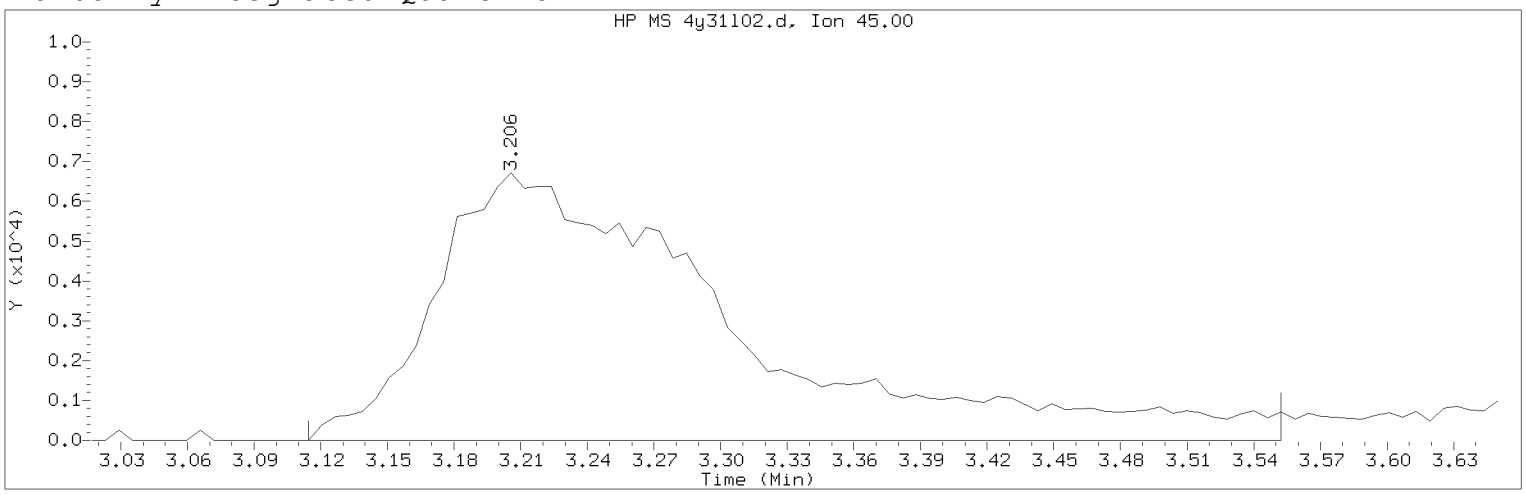
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 69
Retention Time (minutes): 2.001
Quant Ion : 85.00
Area : 103829
On-column Amount (ng) : 12.3874
Integration start scan : 53 Integration stop scan: 103
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/31/2019 at 21:35.
Target 3.5 esignature user id: dviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31102.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:03 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:12 amd00492

Sample Name: LCD441 Lab Sample ID: LCD441

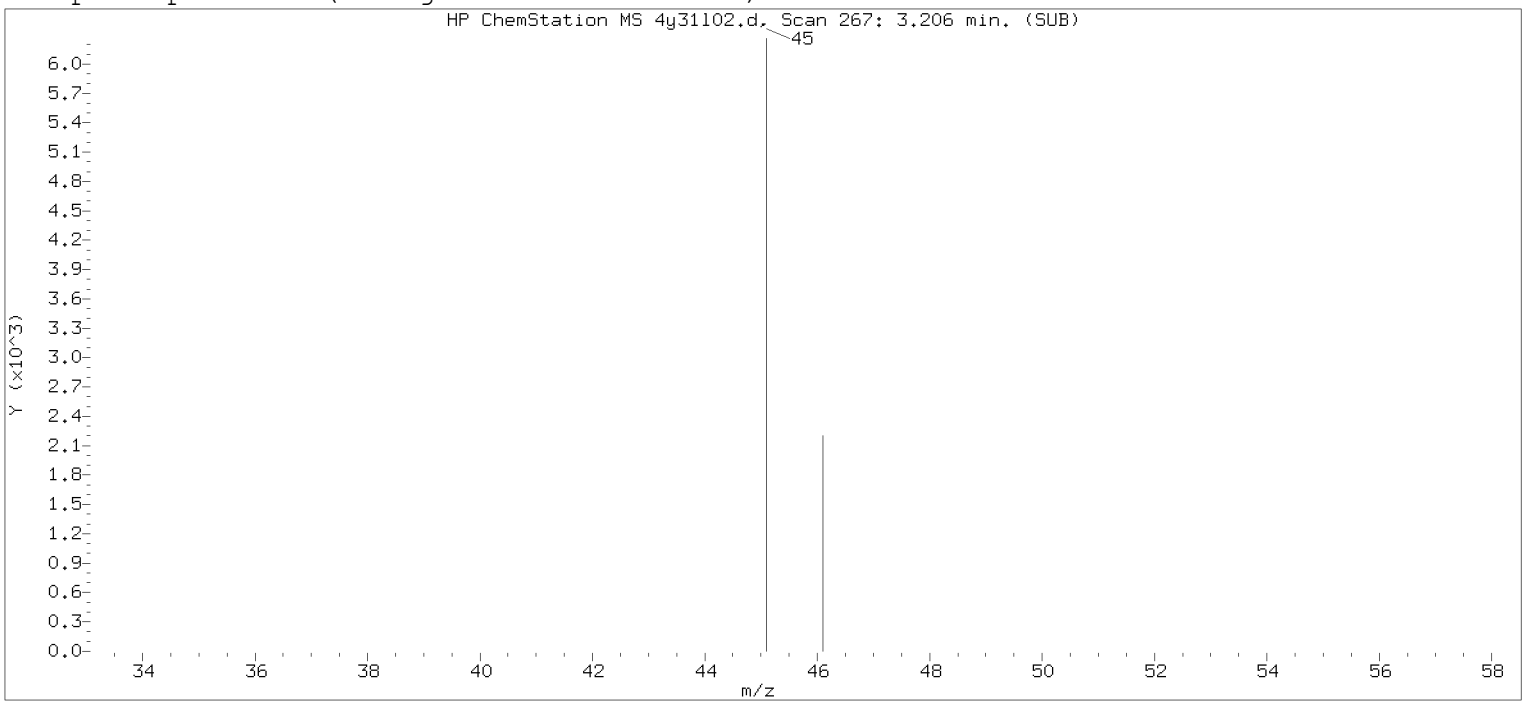
Compound Number : 13
Compound Name : Ethanol
Scan Number : 267
Retention Time (minutes): 3.206
Quant Ion : 45.00
Area (flag) : 62776M
On-Column Amount (ng) : 479.8066
Integration start scan : 251 Integration stop scan: 323
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

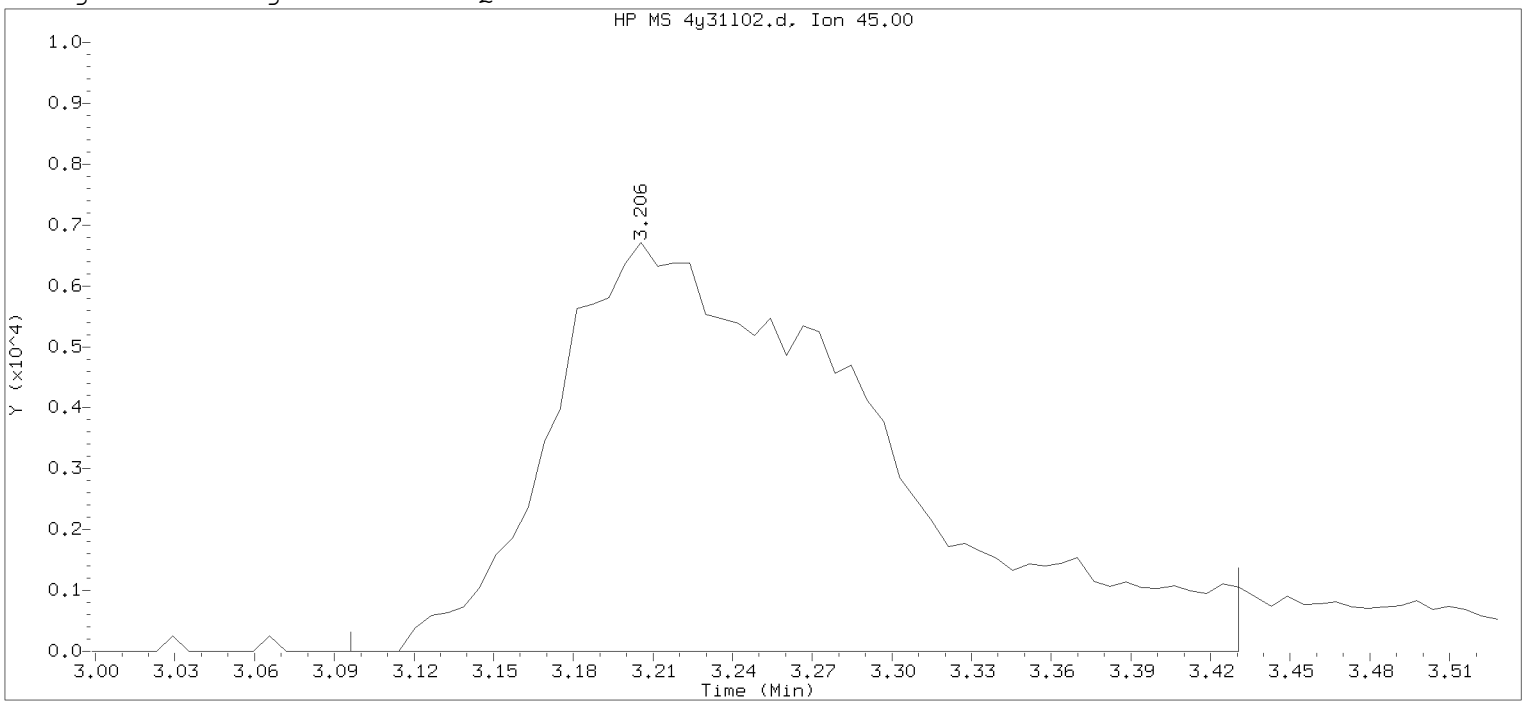
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/31/2019 at 21:35.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:27.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31102.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:03 Analyst ID: amd00492

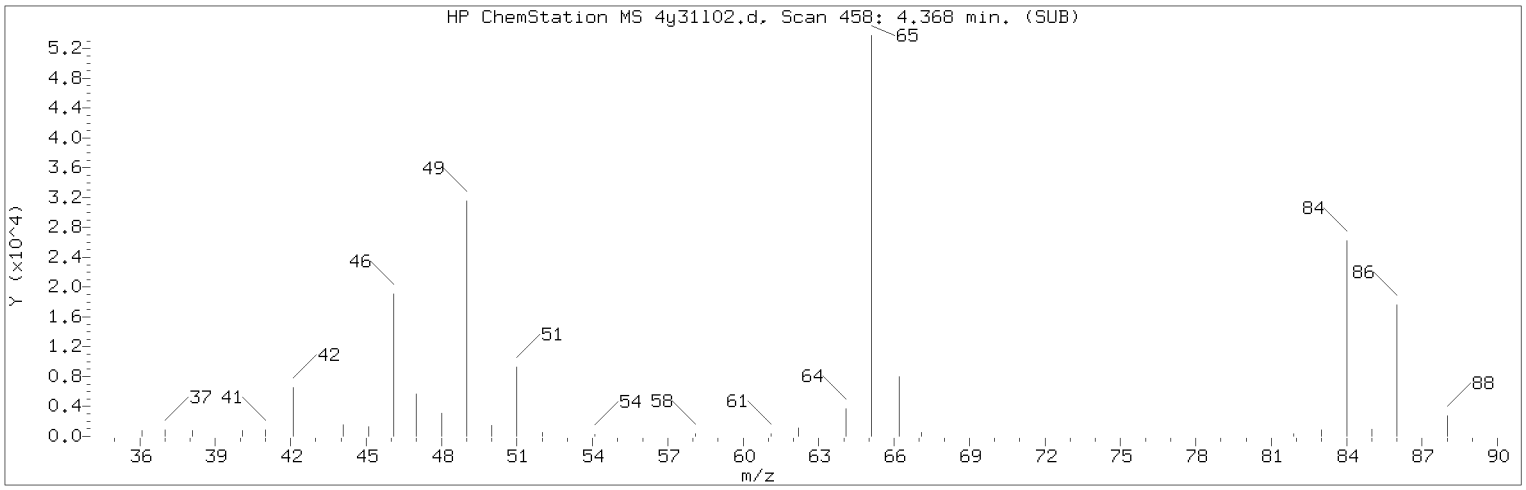
Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 08:20 Automation

Sample Name: LCD441 Lab Sample ID: LCD441

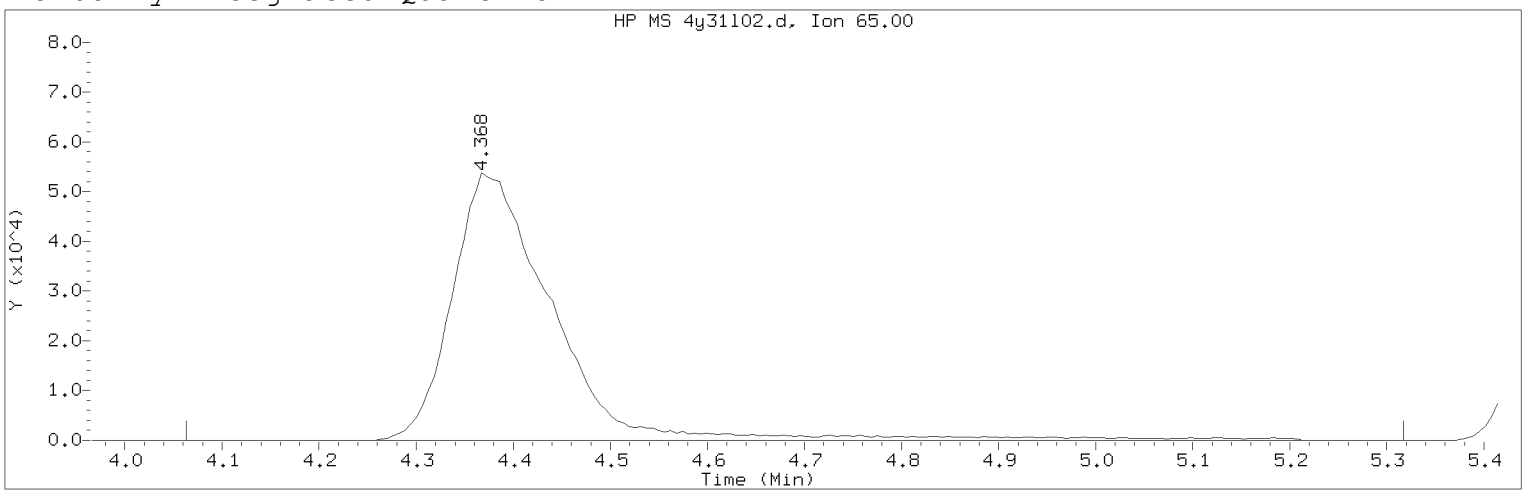
Compound Number : 13
Compound Name : Ethanol
Scan Number : 267
Retention Time (minutes): 3.206
Quant Ion : 45.00
Area : 57270
On-column Amount (ng) : 450.0538
Integration start scan : 248 Integration stop scan: 303
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/31/2019 at 21:35.
Target 3.5 esignature user id: dviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31102.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:03 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:12 amd00492

Sample Name: LCD441 Lab Sample ID: LCD441

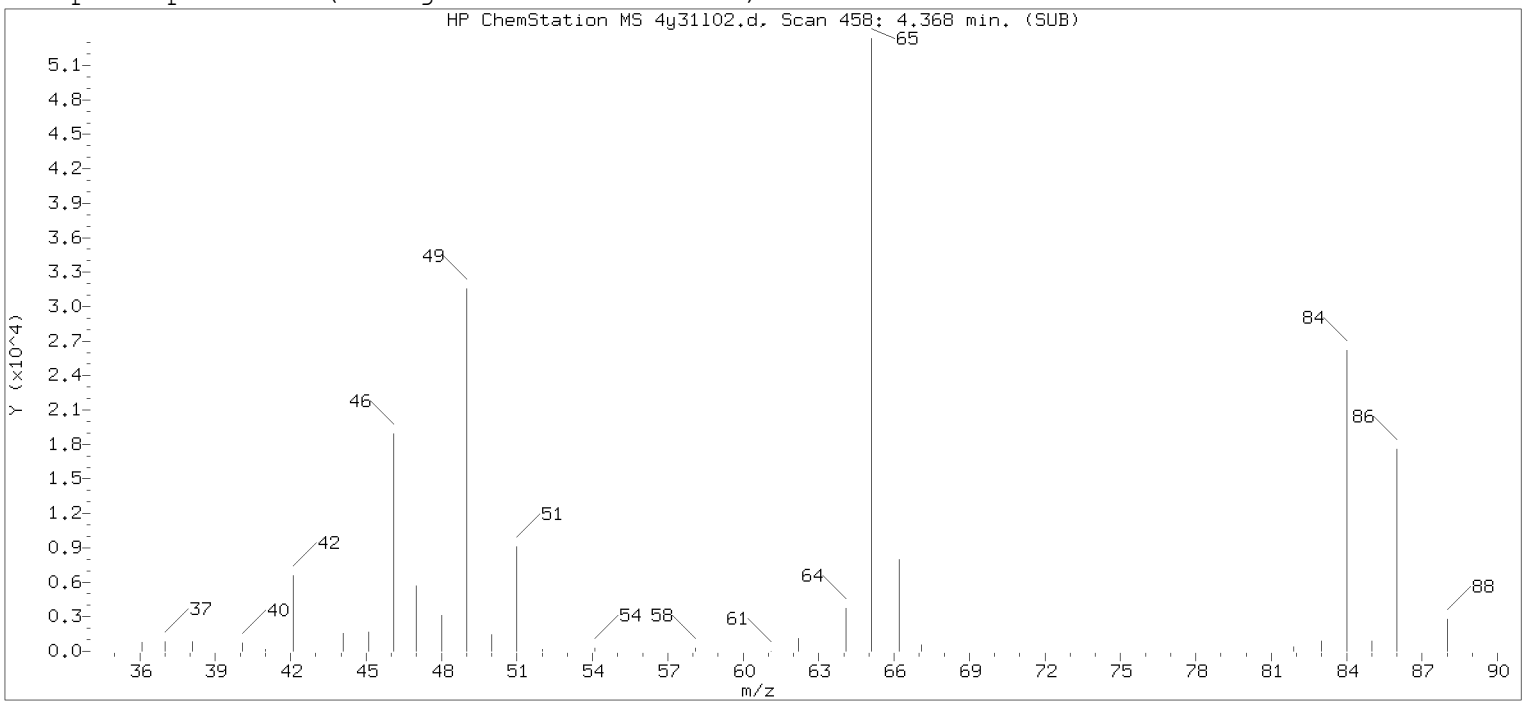
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 458
Retention Time (minutes): 4.368
Quant Ion : 65.00
Area (flag) : 388667M
On-Column Amount (ng) : 250.0000
Integration start scan : 407 Integration stop scan: 613
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

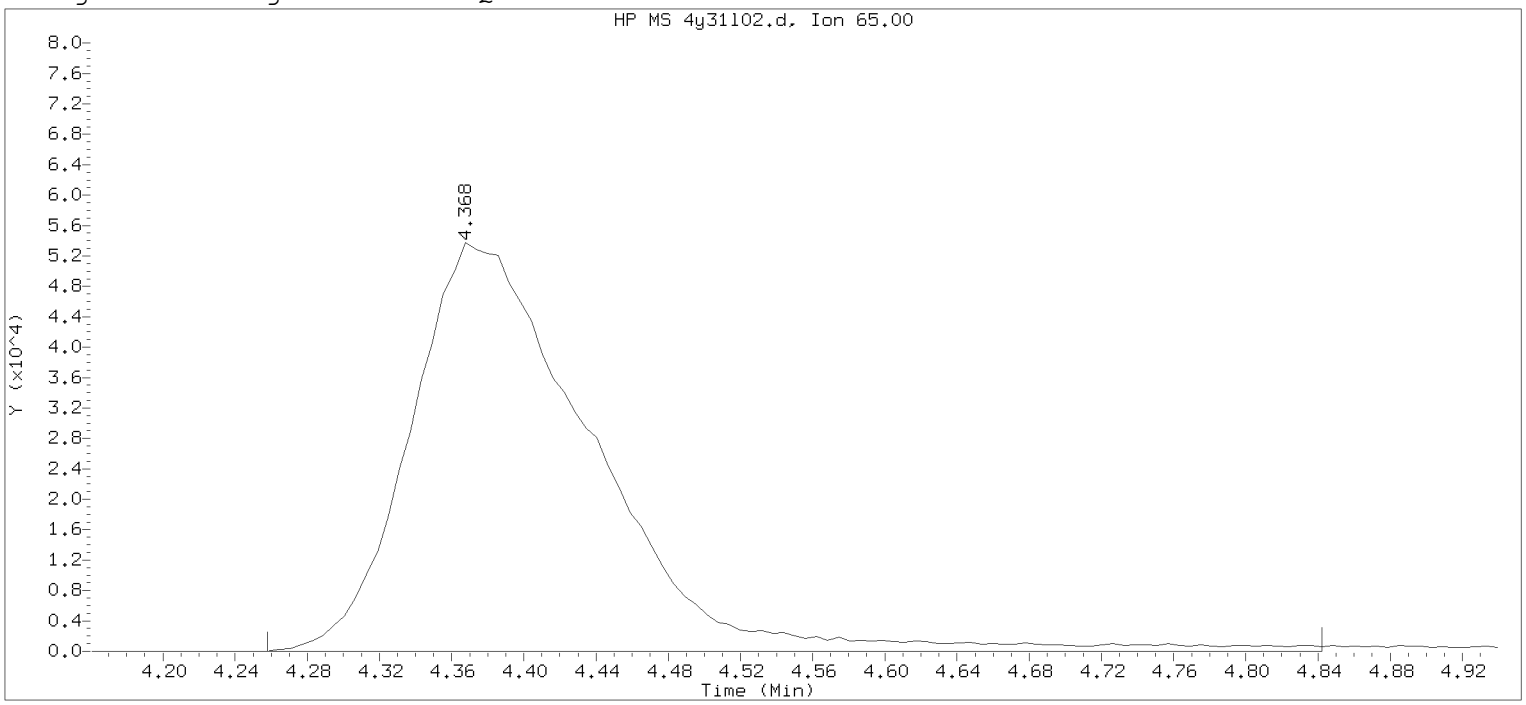
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/31/2019 at 21:35.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:27.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31102.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:03 Analyst ID: amd00492

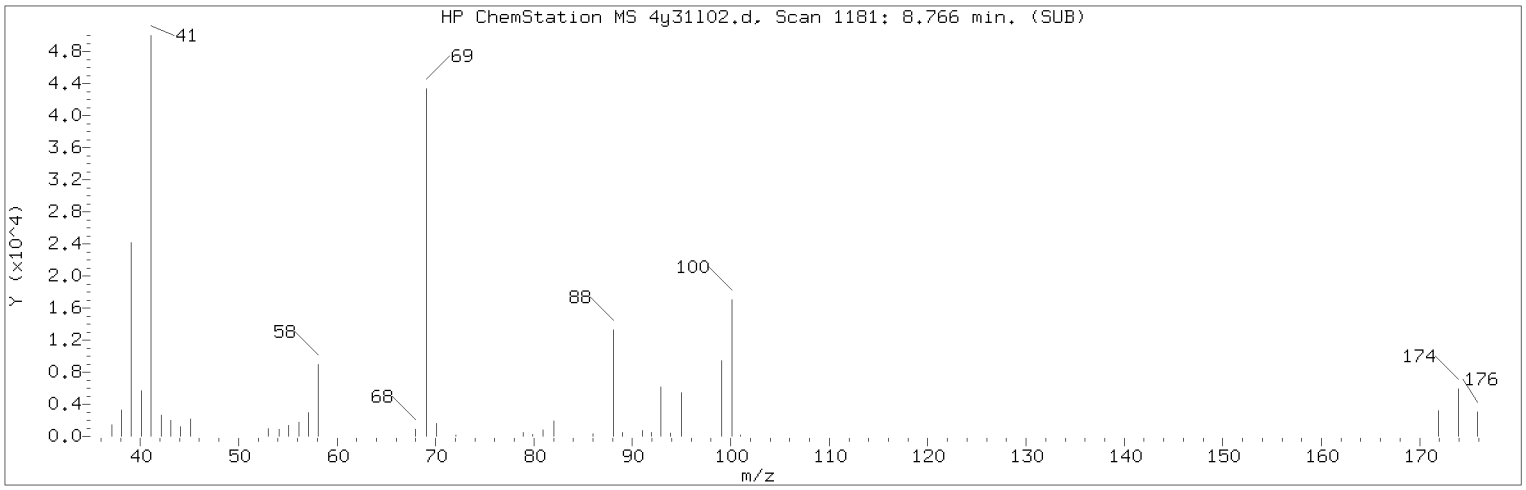
Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 08:20 Automation

Sample Name: LCD441 Lab Sample ID: LCD441

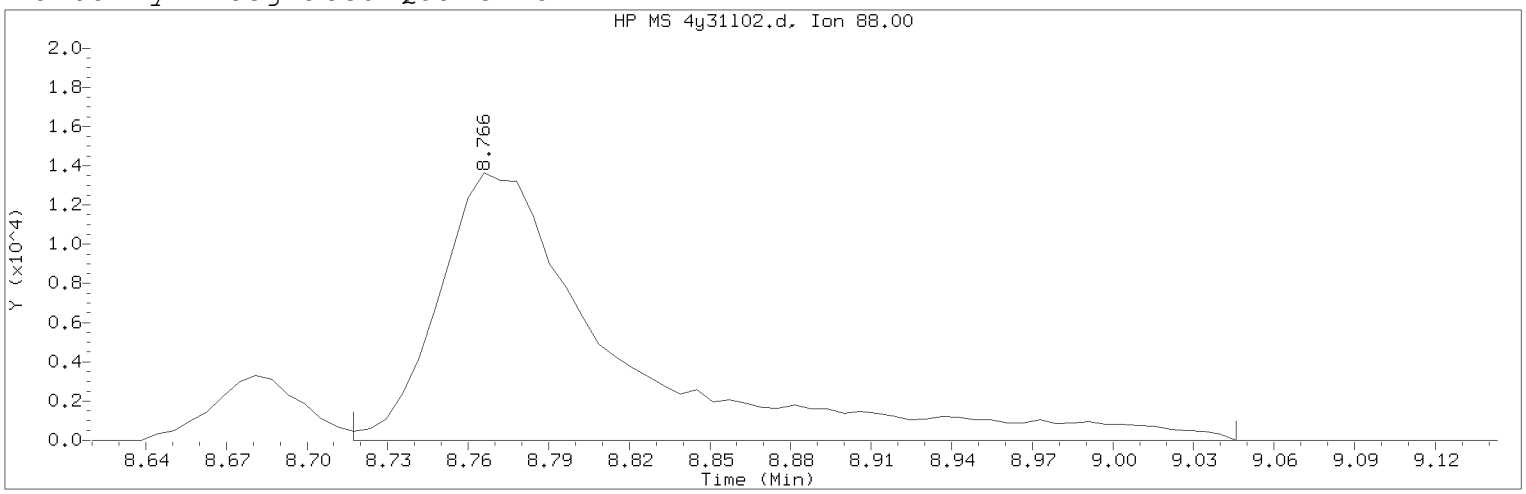
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 458
Retention Time (minutes): 4.368
Quant Ion : 65.00
Area : 378023
On-column Amount (ng) : 250.0000
Integration start scan : 439 Integration stop scan: 535
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/31/2019 at 21:35.
Target 3.5 esignature user id: dviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31l02.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:03 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:12 amd00492

Sample Name: LCD441 Lab Sample ID: LCD441

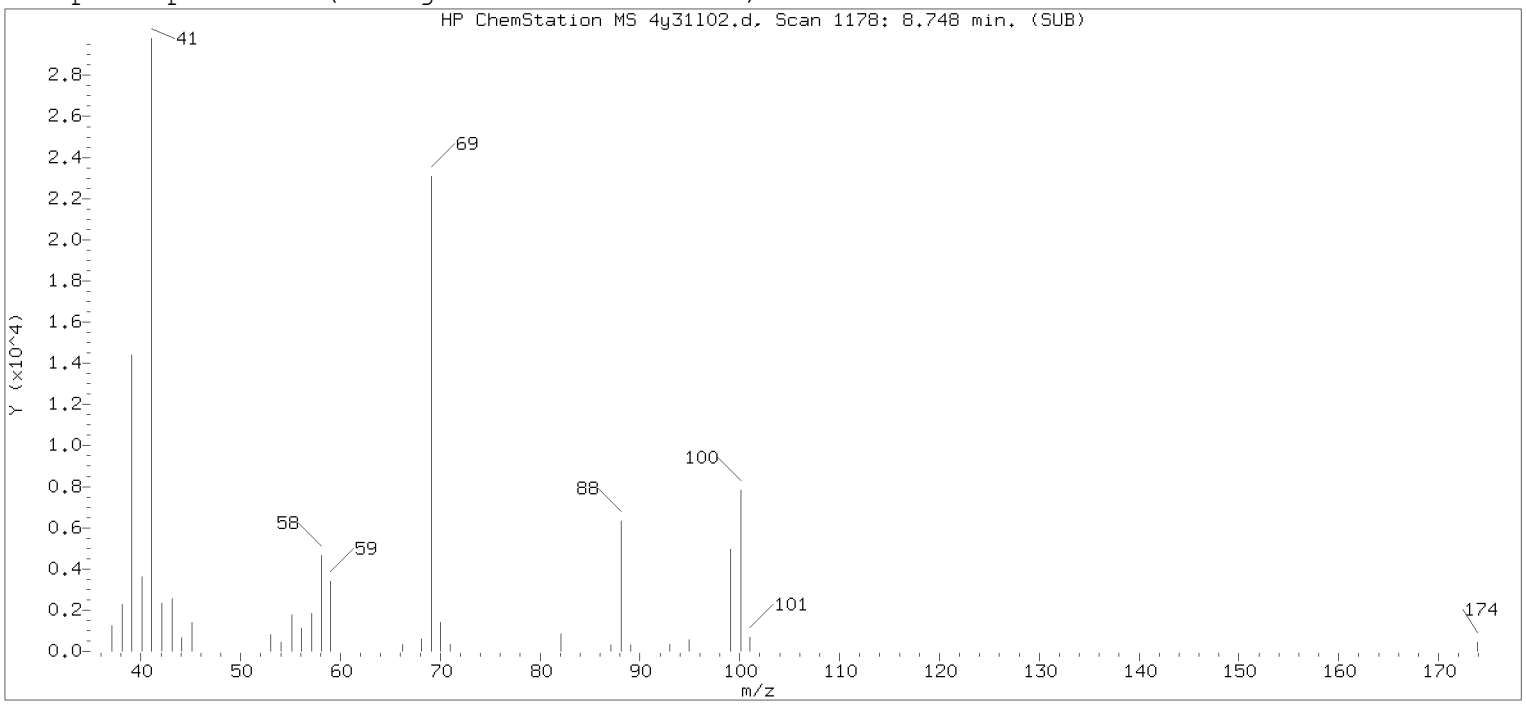
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1181
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area (flag) : 62993M
On-Column Amount (ng) : 553.0374
Integration start scan : 1172 Integration stop scan: 1226
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

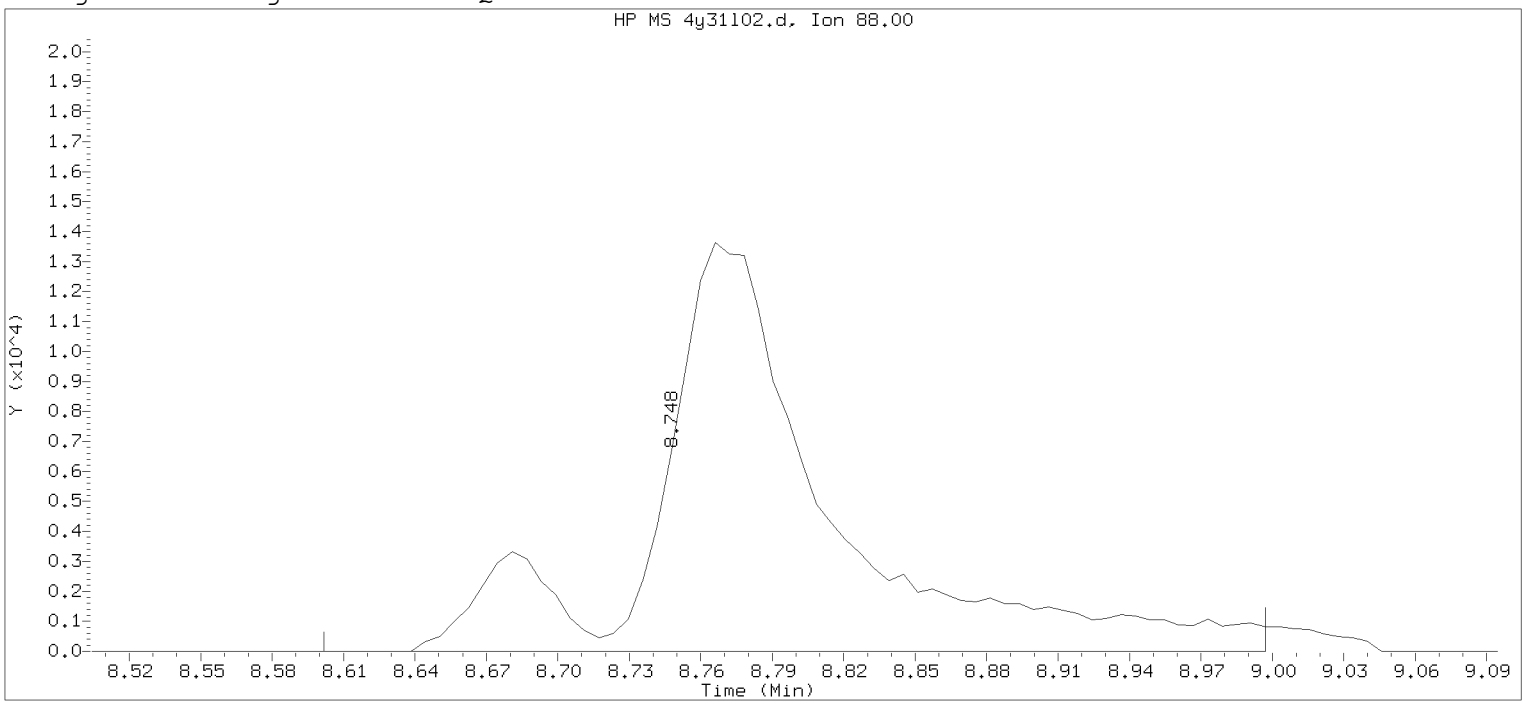
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/31/2019 at 21:35.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:27.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31102.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:03 Analyst ID: amd00492

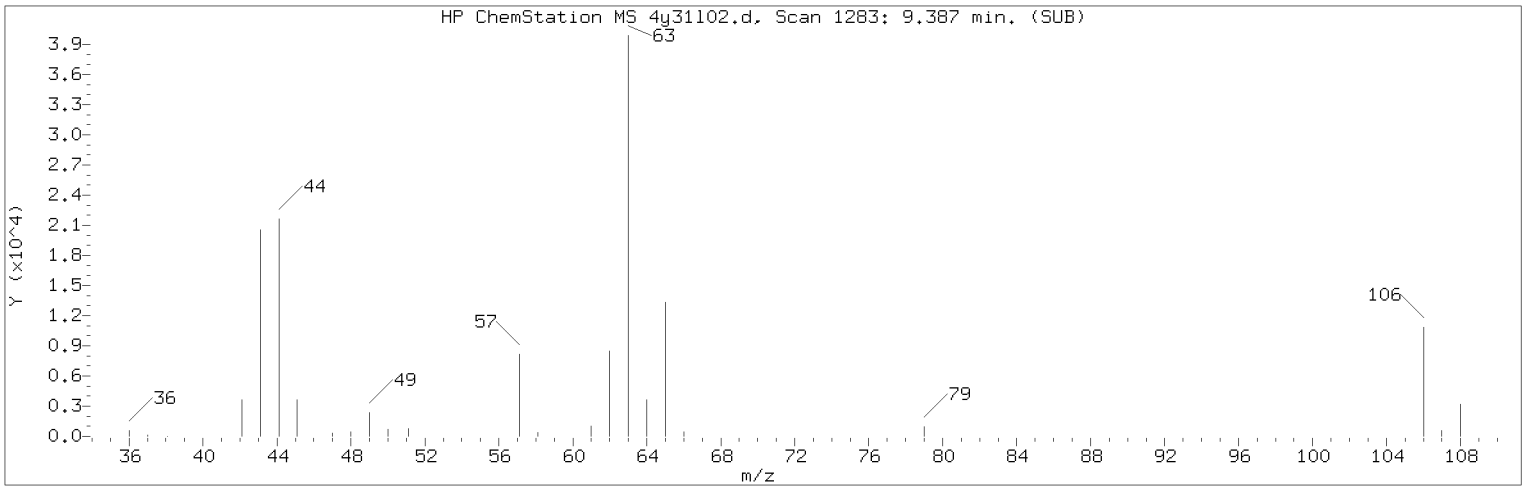
Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 08:20 Automation

Sample Name: LCD441 Lab Sample ID: LCD441

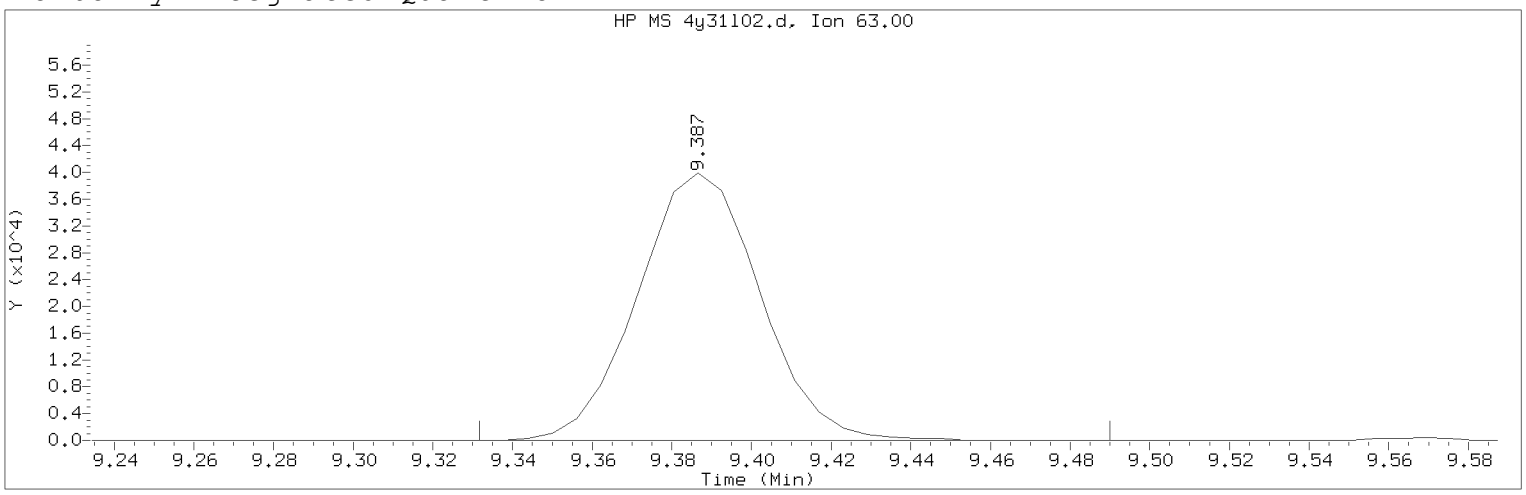
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1178
Retention Time (minutes): 8.748
Quant Ion : 88.00
Area : 68942
On-column Amount (ng) : 622.3093
Integration start scan : 1153 Integration stop scan: 1218
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/31/2019 at 21:35.
Target 3.5 esignature user id: dviray0492

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31l02.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:03 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:12 amd00492

Sample Name: LCD441 Lab Sample ID: LCD441

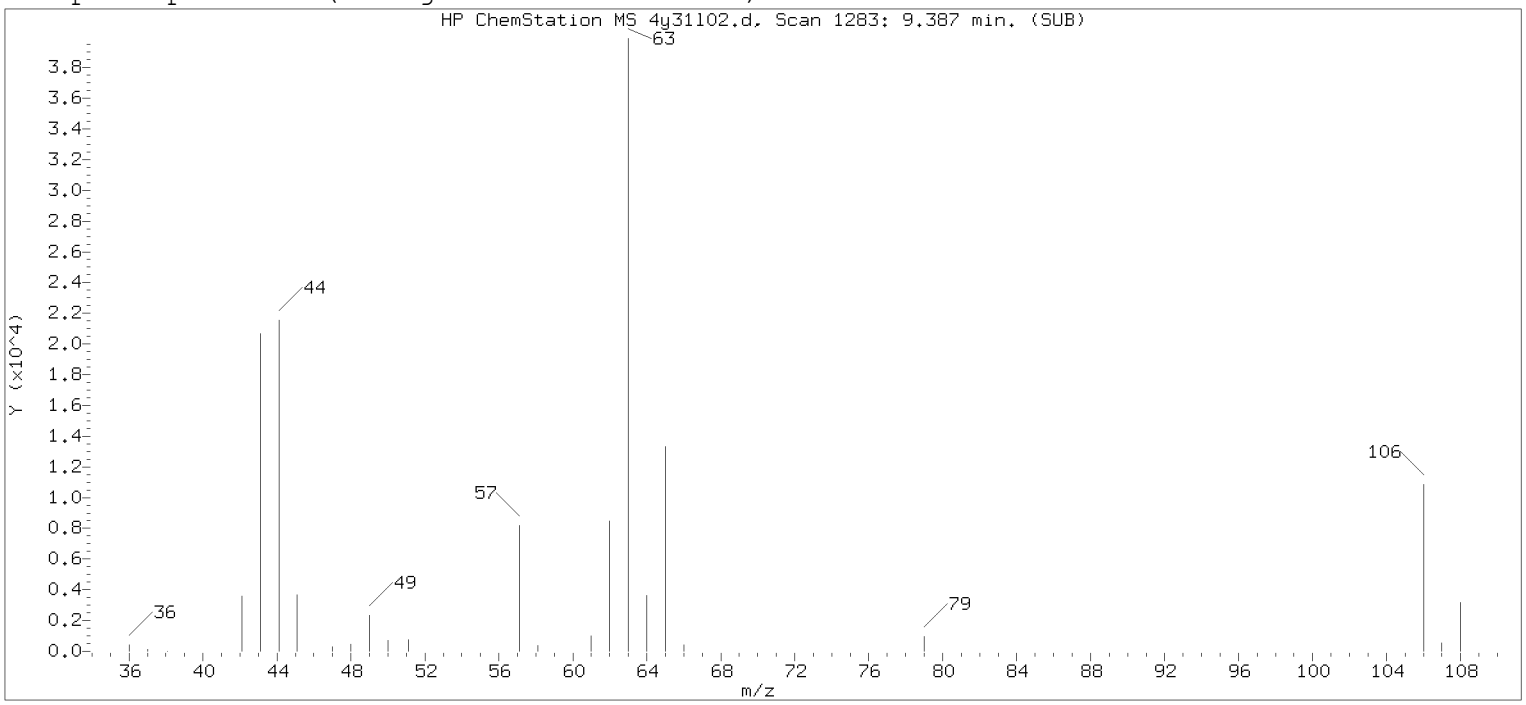
Compound Number : 80
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1283
Retention Time (minutes): 9.387
Quant Ion : 63.00
Area (flag) : 84975M
On-Column Amount (ng) : 17.5303
Integration start scan : 1273 Integration stop scan: 1299
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

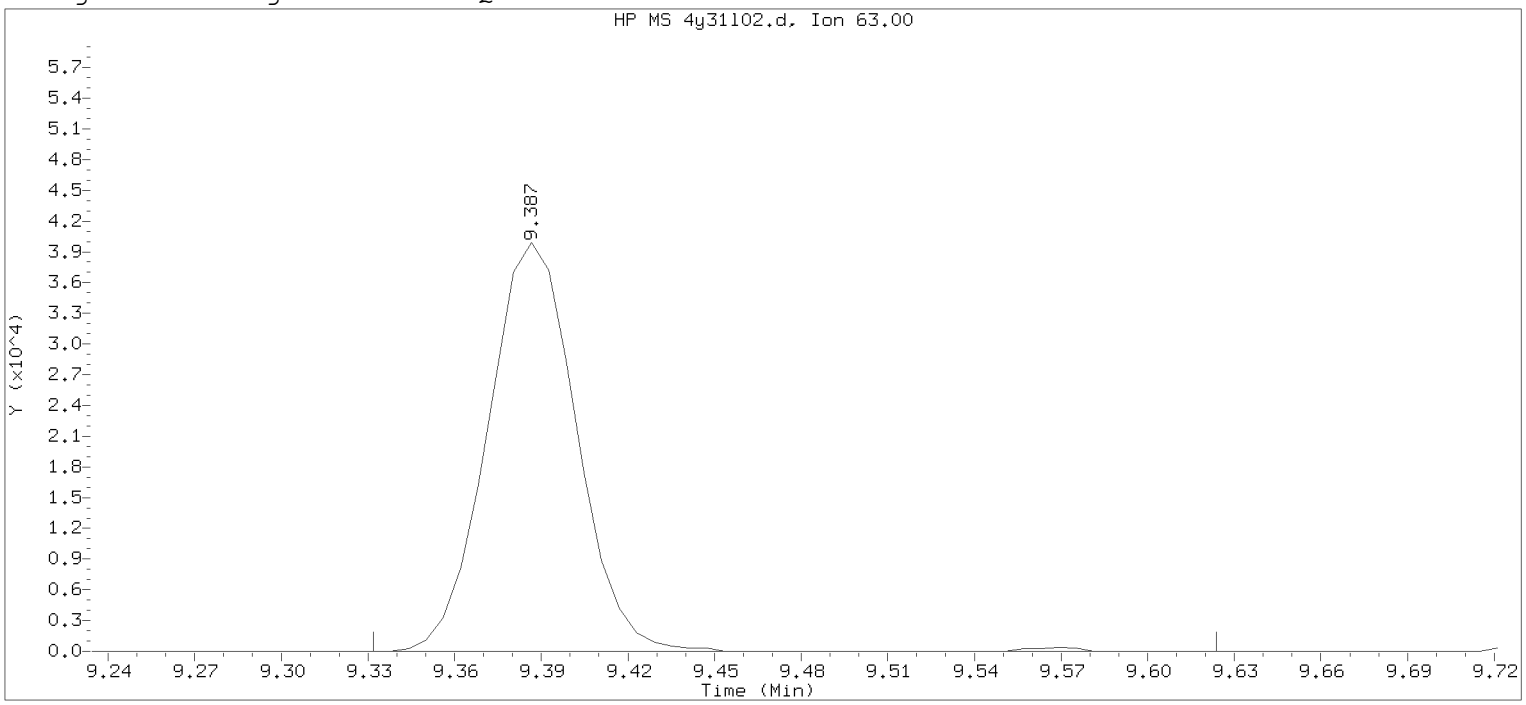
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/31/2019 at 21:35.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:27.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31102.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:03 Analyst ID: amd00492

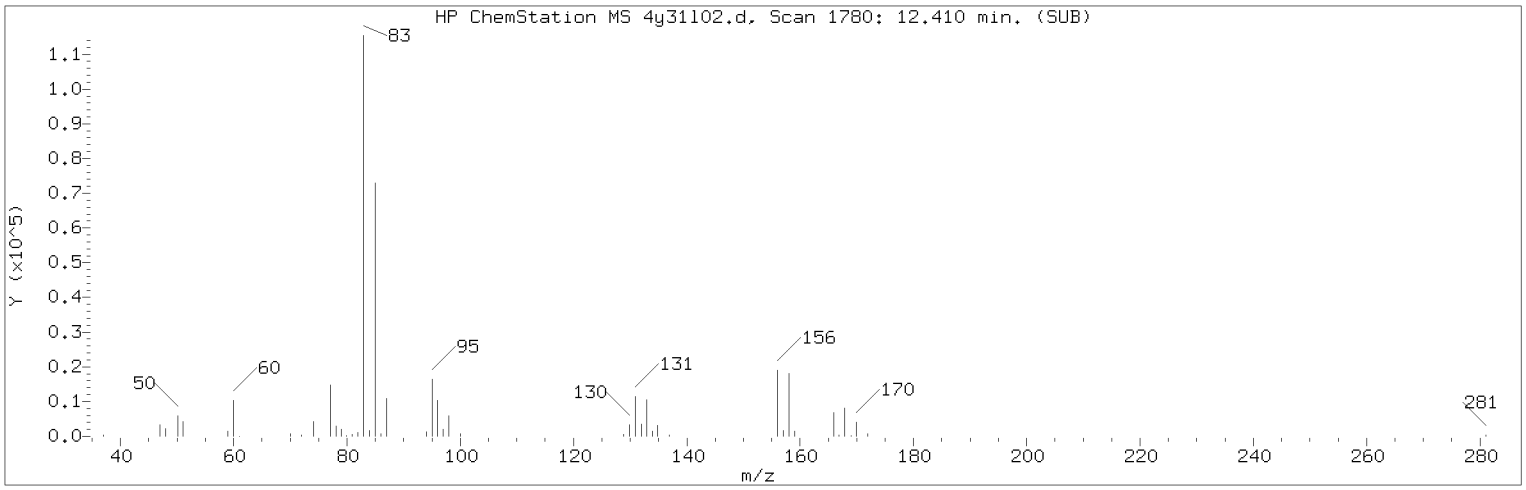
Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 08:20 Automation

Sample Name: LCD441 Lab Sample ID: LCD441

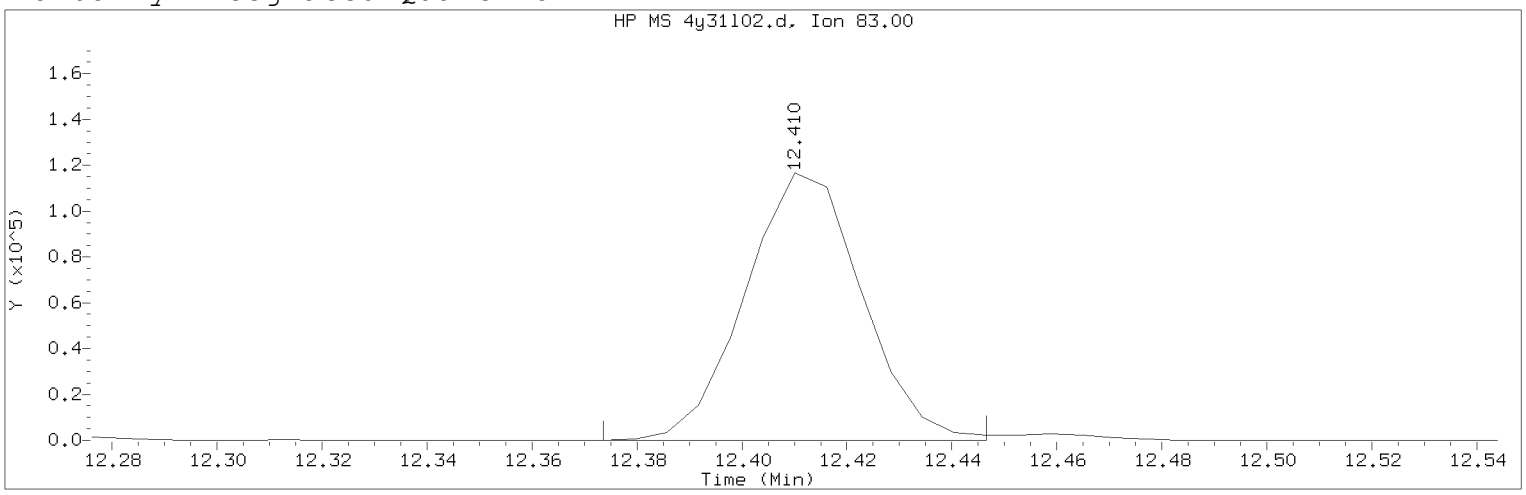
Compound Number : 80
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1283
Retention Time (minutes): 9.387
Quant Ion : 63.00
Area : 85404
On-column Amount (ng) : 17.6188
Integration start scan : 1273 Integration stop scan: 1321
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/31/2019 at 21:35.
Target 3.5 esignature user id: dviray0427

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31102.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:03 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:12 amd00492

Sample Name: LCD441 Lab Sample ID: LCD441

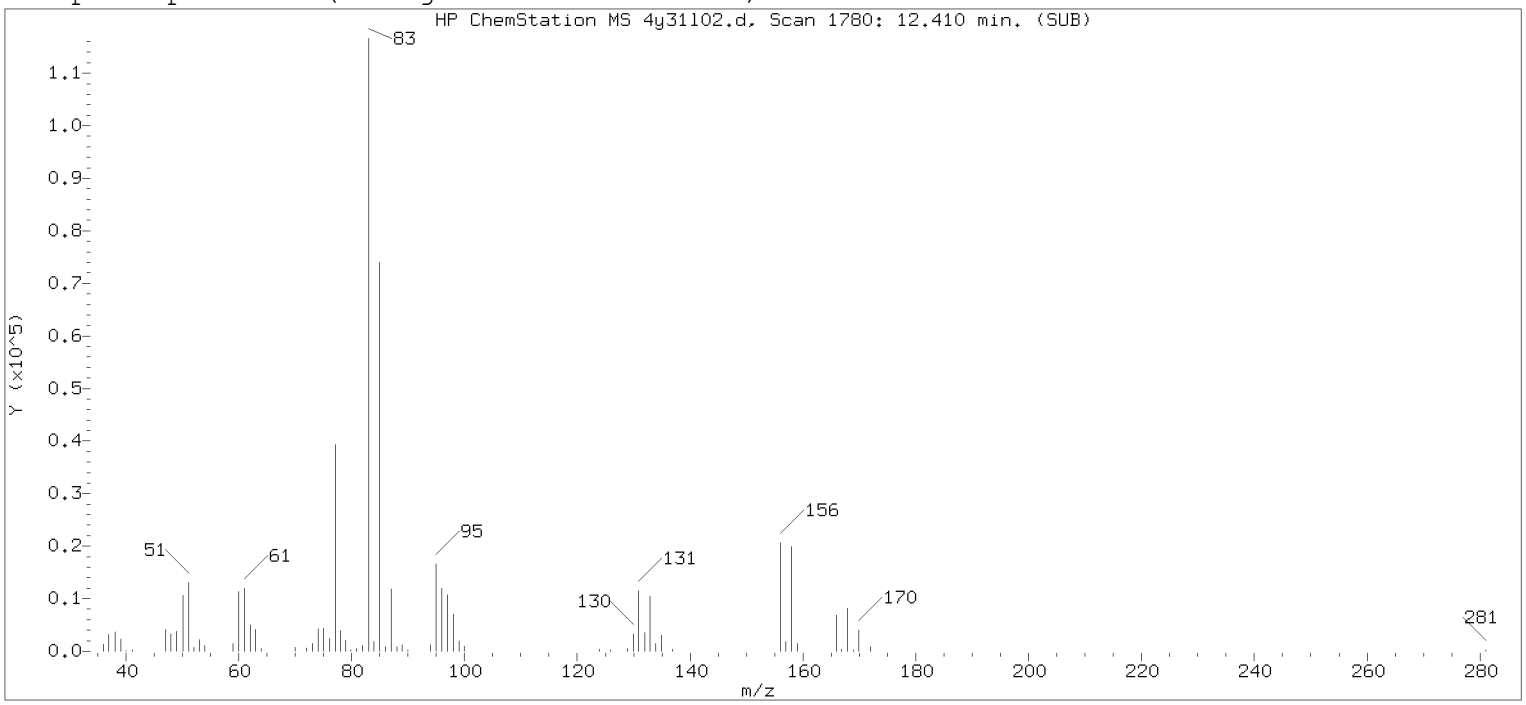
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1780
Retention Time (minutes): 12.410
Quant Ion : 83.00
Area (flag) : 180063M
On-Column Amount (ng) : 20.2171
Integration start scan : 1773 Integration stop scan: 1785
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

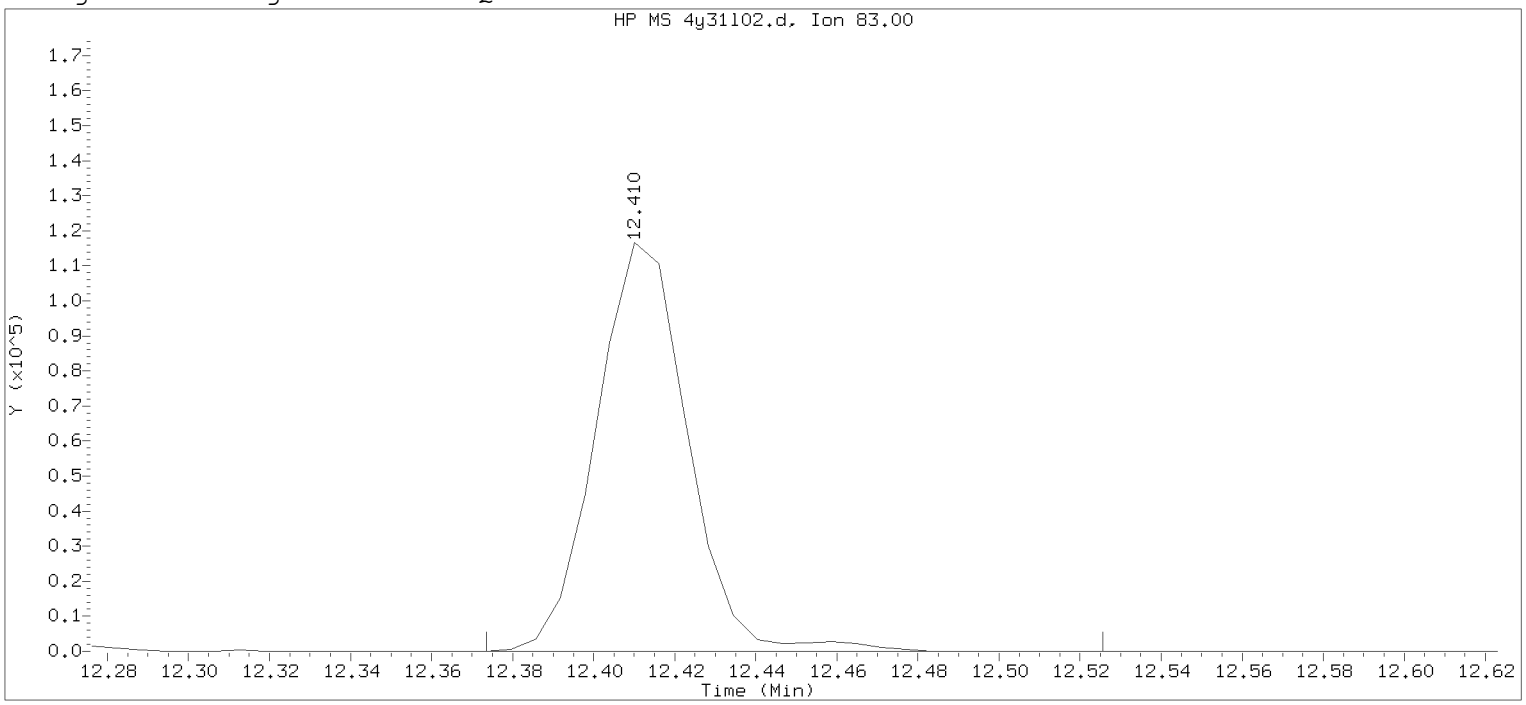
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/31/2019 at 21:35.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:27.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31102.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:03 Analyst ID: amd00492

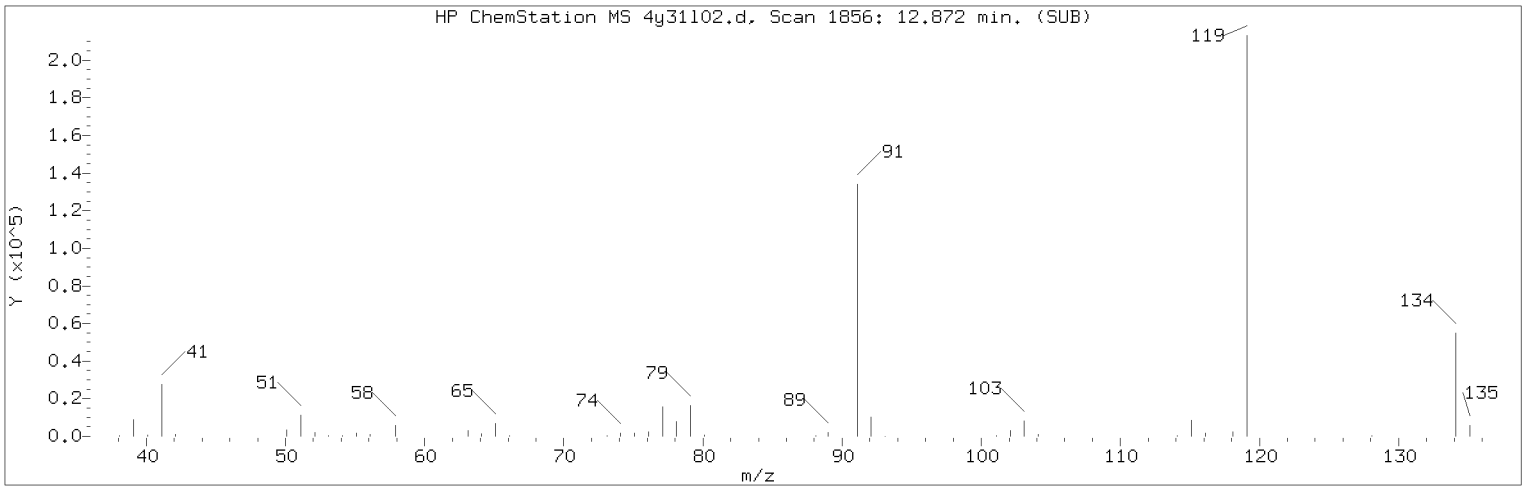
Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 08:20 Automation

Sample Name: LCD441 Lab Sample ID: LCD441

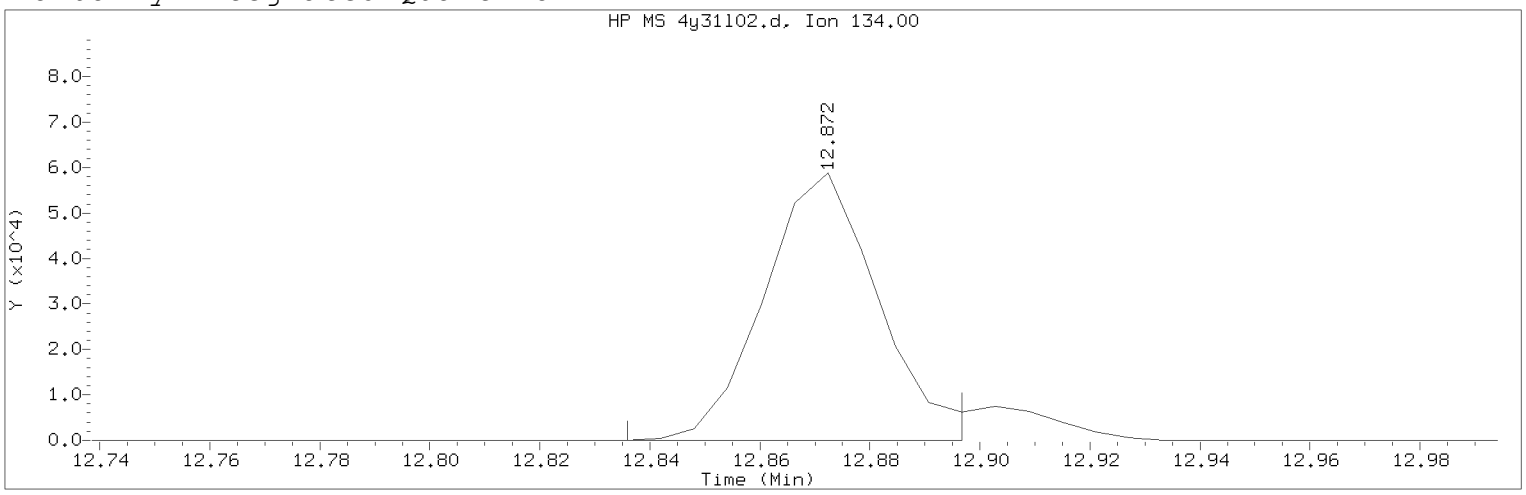
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1780
Retention Time (minutes): 12.410
Quant Ion : 83.00
Area : 183305
On-column Amount (ng) : 20.5811
Integration start scan : 1773 Integration stop scan: 1798
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/31/2019 at 21:35.
Target 3.5 esignature user id: dviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31102.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:03 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 09:10
Date, time and analyst ID of latest file update: 31-May-2019 09:12 amd00492

Sample Name: LCD441 Lab Sample ID: LCD441

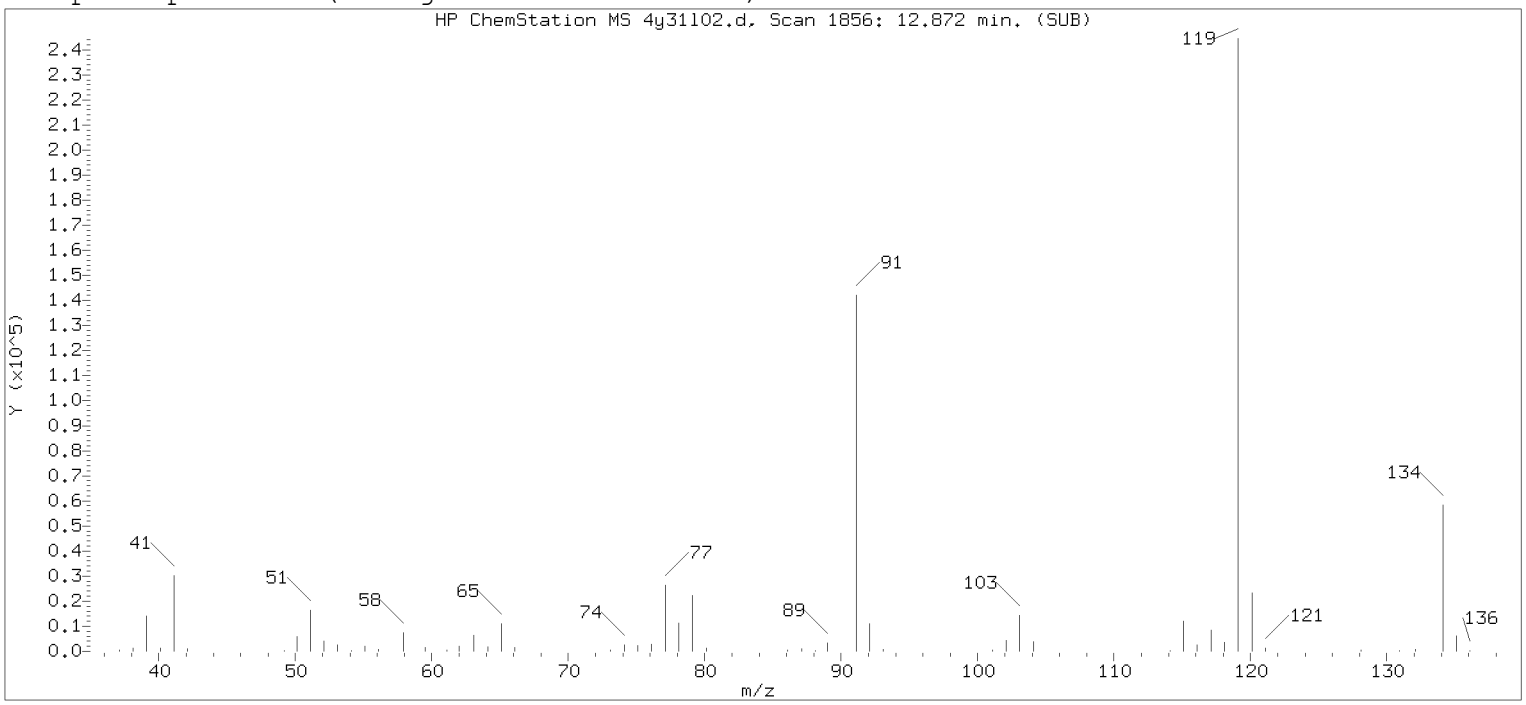
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1856
Retention Time (minutes): 12.872
Quant Ion : 134.00
Area (flag) : 84942M
On-Column Amount (ng) : 19.2225
Integration start scan : 1849 Integration stop scan: 1859
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

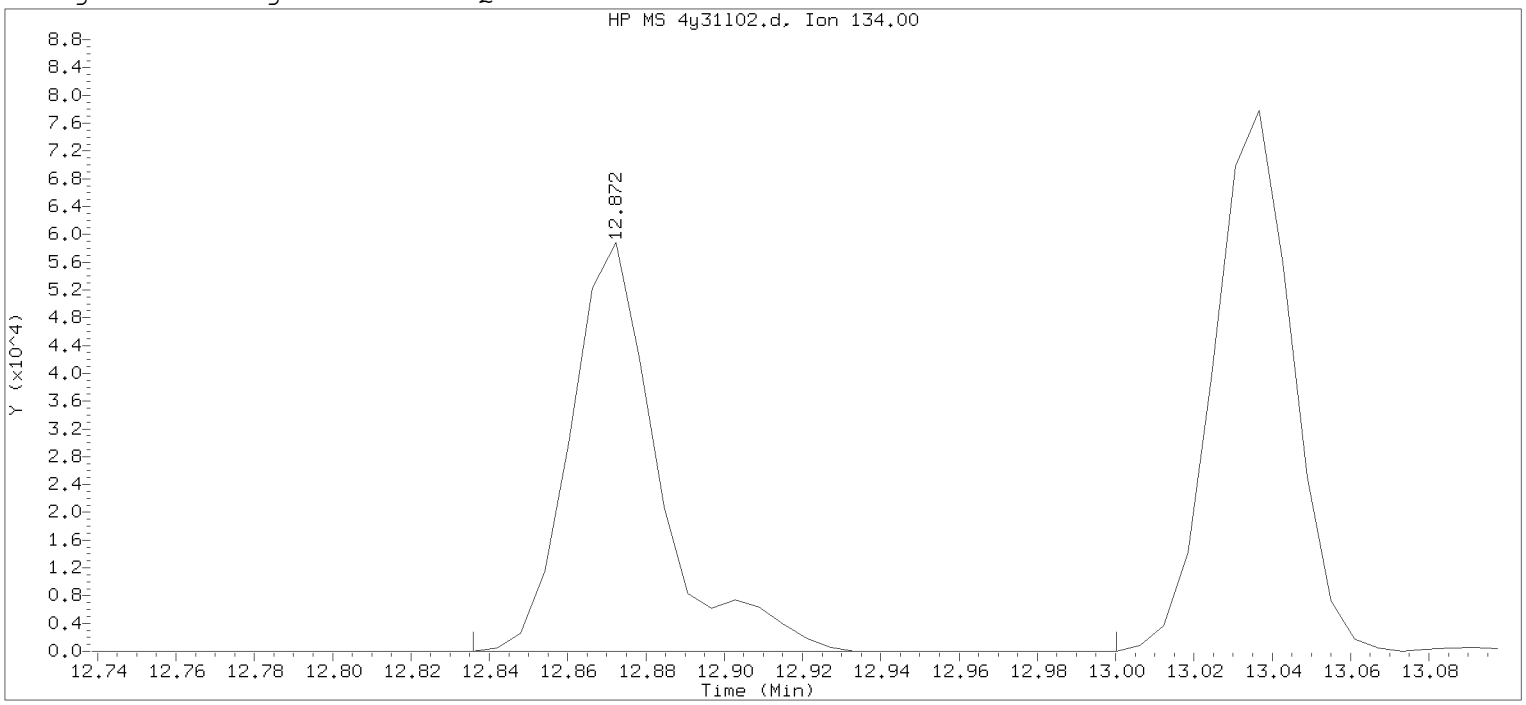
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/31/2019 at 21:35.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Robin C. Runkle on 06/02/2019 at 11:27.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23297.i/19may31a.b/4y31102.d Instrument ID: HP23297.i
Injection date and time: 31-MAY-2019 08:03 Analyst ID: amd00492

Method used: /chem/HP23297.i/19may31a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 31-MAY-2019 07:42
Date, time and analyst ID of latest file update: 31-May-2019 08:20 Automation

Sample Name: LCD441 Lab Sample ID: LCD441

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1856
Retention Time (minutes): 12.872
Quant Ion : 134.00
Area : 92302
On-column Amount (ng) : 20.8882
Integration start scan : 1849 Integration stop scan: 1876
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/31/2019 at 21:35.
Target 3.5 esignature user id: dviray

APPENDIX D LABORATORY DATA PACKAGES AND DATA VALIDATION AND DATA USABILITY SUMMARY REPORTS – FALL 2019 SEMI-ANNUAL MONITORING

Data Usability Summary Report (DUSR)
NYSDEC ASP Category B

Client/Company:	VHB Engineering, Surveying, Landscape Architecture, Albany, New York
Site/Project Name:	Former Dennison/Monarch Systems Site, New Windsor, New York Groundwater, Surface Water, and Sediment Pore Water Sampling November 2019
Laboratories:	Eurofins Lancaster Laboratories, Lancaster, Pennsylvania
SDGs/Lab Project #:	JCW18, JCW19, JCW20, JCW21, JCW22, JCW23, JCW24, JCW25, JCW26, & JCW27
Date(s) of Collection:	November 11, 2019 through November 19, 2019 & November 26, 2019
Samples & Analyses:	60 groundwater, 15 surface water, 8 pore water, 3 Equipment Blanks, and 4 Trip Blanks for 22 project-specific Volatile Organic Compounds (VOCs)
Senior Data Reviewers:	Nancy C. Rothman, Ph.D., New Environmental Horizons, Inc. Susan D. Chapnick, M.S., New Environmental Horizons, Inc.
Date Completed:	January 7, 2020

This Data Usability Summary Report (DUSR) is based on guidance developed by the New York State Department of Conservation (NYSDEC) for technical review of analytical data as defined in DER-10 "Technical Guidance for Site Investigation and Remediation" (May 2010 with updates through April 2019). The objective of the DUSR is to determine whether or not the data as presented meet NYSDEC ASP 2005 or EPA method QC acceptance criteria and site-specific criteria for data quality and use.

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I. Required DUSR Questions

1. ***Is the data package complete as defined under the requirements for the most current NYSDEC ASP Category B or USEPA CLP deliverables?***

   Yes.

2. ***Have all holding times been met?***

   Yes.

3. ***Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications?***

   Yes. Some QC exceptions resulted in qualification of data as noted in the Data Validation Checklists (DV Checklists).

4. ***Have all of the data been generated using established and agreed upon analytical protocols?***

   Yes. Analytical data were generated using established EPA Methods (see analytical references in Section II below). Deviations from EPA and NYSDEC ASP 2005 QC protocols are discussed in the DV Checklists of this DUSR.

5. ***Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms?***

   Yes. The raw data were checked to verify that detected results met retention time and mass spectral criteria, where applicable, for qualitative identification. A spot check was performed to verify quantitative accuracy (calculation verification) for reporting of validated results (see the DV Checklists).

6. ***Have the correct data qualifiers been used and are they consistent with the most current NYSDEC ASP?***

   Yes. The laboratory used the correct data qualifiers in reporting of results. Data qualifiers were changed for some results during this review, as discussed in the DV Checklists and Table 2 of this DUSR.

7. ***Have any quality control (QC) exceedances been specifically noted in the DUSR and have the corresponding QC summary sheets from the data package been attached to the DUSR?***

   Yes. QC exceedances are specified in the DV Checklists. QC summary sheets from the data package have not been attached; however, all QC exceedances that required data qualification are summarized in Table 2 of the DUSR and flagged (qualified) in the validated electronic data deliverable (EDD).

II. Sample Descriptions and Analytical Parameters

The sample IDs, dates of sampling, identification of QC samples and the analytical parameters reviewed in this DUSR are listed below in Table 1. Any deviations noted for sample collection or receipt are documented in the DV Checklists.

Table 1. Sample Identification and Analytical Parameters Validated

Sample ID	SDG / Lab ID	Collection Date	Matrix	Analytical Parameters	Sample Type
J02-BR02	JCW18 / 1202284	11/12/2019	GW	VOC	Field Sample
J02-UC01	JCW18 / 1202285	11/12/2019	GW	VOC	Field Sample
J01-UC01	JCW18 / 1202286	11/13/2019	GW	VOC	Field Sample [used for MS/MSD]
J01-BR01	JCW18 / 1202289	11/13/2019	GW	VOC	Field Sample
J01-UC02	JCW18 / 1202290	11/13/2019	GW	VOC	Field Sample
J01-BR02	JCW18 / 1202291	11/13/2019	GW	VOC	Field Sample
J04-BR02	JCW18 / 1202292	11/13/2019	GW	VOC	Field Sample
J04-BR01	JCW18 / 1202293	11/13/2019	GW	VOC	Field Sample
J02-BR01	JCW18 / 1202294	11/13/2019	GW	VOC	Field Sample
TB-111219-NLS	JCW18 / 1202295	11/12/2109	Water	VOC	Trip Blank
RS-03	JCW19 / 1202296	11/12/2019	SW	VOC	Field Sample [used for MS/MSD]
RS-DUP	JCW19 / 1202299	11/12/2019	SW	VOC	Field Duplicate of RS-03
RS-10	JCW19 / 1202300	11/12/2019	SW	VOC	Field Sample
RS-02	JCW19 / 1202301	11/12/2019	SW	VOC	Field Sample

Table 1. Sample Identification and Analytical Parameters Validated - *continued*

Sample ID	Lab ID	Collection Date	Matrix	Analytical Parameters[1]	Sample Type
RS-11	JCW19 / 1202302	11/12/2019	SW	VOC	Field Sample
RS-08	JCW19 / 1202303	11/11/2019	SW	VOC	Field Sample
RS-07	JCW19 / 1202304	11/11/2019	SW	VOC	Field Sample
RS-14	JCW19 / 1202305	11/11/2019	SW	VOC	Field Sample
RS-15	JCW19 / 1202306	11/11/2019	SW	VOC	Field Sample
RS-04	JCW19 / 1202307	11/11/2019	SW	VOC	Field Sample
PDBBLANK	JCW20 / 1202314	11/12/2019	Water	VOC	Passive Diffusion Bag Blank
J17-UC02	JCW20 / 1202315	11/12/2019	GW	VOC	Field Sample
RS-05	JCW20 / 1202316	11/11/2019	SW	VOC	Field Sample
RS-12A	JCW20 / 1202317	11/12/2019	SW	VOC	Field Sample
RS-01	JCW20 / 1202318	11/12/2019	SW	VOC	Field Sample
RS-09	JCW20 / 1202319	11/12/2019	SW	VOC	Field Sample
RS-13	JCW20 / 1202320	11/12/2019	SW	VOC	Field Sample
J18-UC03	JCW20 / 1202321	11/13/2019	GW	VOC	Field Sample
J21-UC01	JCW20 / 1202322	11/13/2019	GW	VOC	Field Sample
J21-UC02	JCW20 / 1202323	11/13/2019	GW	VOC	Field Sample
J16-UC02	JCW21 / 1202325	11/13/2019	GW	VOC	Field Sample
J16-UC01	JCW21 / 1202326	11/13/2019	GW	VOC	Field Sample
J17-UC01	JCW21 / 1202327	11/13/2019	GW	VOC	Field Sample
J14-UC01	JCW22 / 1205892	11/14/2019	GW	VOC	Field Sample
J14-BR01	JCW22 / 1205893	11/14/2019	GW	VOC	Field Sample [used for MS/MSD]

Table 1. Sample Identification and Analytical Parameters Validated - *continued*

Sample ID	Lab ID	Collection Date	Matrix	Analytical Parameters[1]	Sample Type
J14-BR02	JCW22 / 1205896	11/14/2019	GW	VOC	Field Sample
J14-UC02	JCW22 / 1205897	11/14/2019	GW	VOC	Field Sample
J15-UC01	JCW22 / 1205898	11/14/2019	GW	VOC	Field Sample
J15-UC02	JCW22 / 1205899	11/14/2019	GW	VOC	Field Sample
J18-UC02	JCW22 / 1205900	11/14/2019	GW	VOC	Field Sample [used for MS/MSD]
J22-BR02	JCW22 / 1205903	11/16/2019	GW	VOC	Field Sample
J22-BR01	JCW22 / 1205904	11/16/2019	GW	VOC	Field Sample
TB-AWR-111419	JCW22 / 1205905	11/14/2019	Water	VOC	Trip Blank
J20-UC02	JCW23 / 1205910	11/15/2019	GW	VOC	Field Sample
J20-UC01	JCW23 / 1205911	11/15/2019	GW	VOC	Field Sample
J20-BR02	JCW23 / 1205912	11/15/2019	GW	VOC	Field Sample
J20-BR01	JCW23 / 1205913	11/15/2019	GW	VOC	Field Sample
J06-UC01	JCW23 / 1205914	11/15/2019	GW	VOC	Field Sample
J19-UC02	JCW23 / 1205915	11/16/2019	GW	VOC	Field Sample
J19-UC01	JCW23 / 1205916	11/16/2019	GW	VOC	Field Sample
RIZ-7	JCW23 / 1205917	11/16/2019	GW	VOC	Field Sample
J13-BR01	JCW24 / 1205918	11/14/2019	GW	VOC	Field Sample
J13-UC02	JCW24 / 1205919	11/14/2019	GW	VOC	Field Sample
J13-UC03	JCW24 / 1205920	11/14/2019	GW	VOC	Field Sample
J13-BR02	JCW24 / 1205921	11/14/2019	GW	VOC	Field Sample
J12-BR01	JCW24 / 1205922	11/14/2019	GW	VOC	Field Sample

Table 1. Sample Identification and Analytical Parameters Validated - *continued*

Sample ID	Lab ID	Collection Date	Matrix	Analytical Parameters[1]	Sample Type
J12-BR02	JCW24 / 1205923	11/14/2019	GW	VOC	Field Sample
J05-BR02	JCW24 / 1205924	11/15/2019	GW	VOC	Field Sample
DUP-01	JCW24 / 1205925	11/15/2019	GW	VOC	Field Duplicate of J05-BR02
J05-BR01	JCW24 / 1205926	11/15/2019	GW	VOC	Field Sample
EB-111519-NLS	JCW24 / 1205927	11/15/2019	Water	VOC	Equipment Blank
J08-UC01	JCW25 / 1205928	11/15/2019	GW	VOC	Field Sample
J08-UC02	JCW25 / 1205929	11/15/2019	GW	VOC	Field Sample
MW-1S	JCW26 / 1206729	11/18/2019	GW	VOC	Field Sample
Dup-03	JCW26 / 1206730	11/18/2019	GW	VOC	Field Duplicate of MW-1S
MW-1D	JCW26 / 1206731	11/18/2019	GW	VOC	Field Sample
J23-UC02	JCW26 / 1206732	11/18/2019	GW	VOC	Field Sample
J23-UC01	JCW26 / 1206733	11/18/2019	GW	VOC	Field Sample
J17-BR01	JCW26 / 1206734	11/18/2019	GW	VOC	Field Sample
J06-UC02	JCW26 / 1206735	11/19/2019	GW	VOC	Field Sample
J07-UC02	JCW26 / 1206736	11/19/2019	GW	VOC	Field Sample
RIZ-19	JCW26 / 1206737	11/19/2019	GW	VOC	Field Sample
J11-UC02	JCW26 / 1206738	11/17/2019	GW	VOC	Field Sample
J11-BR02	JCW26 / 1206739	11/17/2019	GW	VOC	Field Sample
J11-UC01	JCW26 / 1206740	11/17/2019	GW	VOC	Field Sample
J11-BR01	JCW26 / 1206741	11/17/2019	GW	VOC	Field Sample
Dup-02	JCW26 / 1206742	11/17/2019	GW	VOC	Field Duplicate of MW-2

Table 1. Sample Identification and Analytical Parameters Validated - *continued*

Sample ID	Lab ID	Collection Date	Matrix	Analytical Parameters[1]	Sample Type
MW-2	JCW26 / 1206743	11/17/2019	GW	VOC	Field Sample
MW-2I	JCW26 / 1206744	11/17/2019	GW	VOC	Field Sample
EB-AWR-111919	JCW26 / 1206745	11/19/2019	Water	VOC	Equipment Blank
TB-AWR-111719	JCW26 / 1206746	11/17/2019	Water	VOC	Trip Blank
Diff-07	JCW27 / 1212641	11/26/2019	PW	VOC	Field Sample
Diff-06	JCW27 / 1212642	11/26/2019	PW	VOC	Field Sample
Diff-05	JCW27 / 1212643	11/26/2019	PW	VOC	Field Sample
Diff-03	JCW27 / 1212644	11/26/2019	PW	VOC	Field Sample
Diff-04	JCW27 / 1212645	11/26/2019	PW	VOC	Field Sample
Diff-02	JCW27 / 1212646	11/26/2019	PW	VOC	Field Sample
Diff-Dup	JCW27 / 1212647	11/26/2019	PW	VOC	Field Duplicate of Diff-01
Diff-01	JCW27 / 1212648	11/26/2019	PW	VOC	Field Sample
TB-AWR-112619	JCW27 / 1212649	11/26/2019	Water	VOC	Trip Blank

Analytical Method References:

VOC: EPA SW846 Method 8260C for 22 project-specific VOCs (acetone, benzene, 2-butanone, carbon disulfide, chloroform, 1,2-dichlorobenzene, 1,1-dichloroethane, 1,2-dichloroethane, 1,1-dichloroethene, cis-1,2-dichloroethene, trans-1,2-dichloroethene, 1,4-dioxane, ethylbenzene, Freon 113, methylene chloride, naphthalene, tetrachloroethene, toluene, 1,1,1-trichloroethane, trichloroethene, xylenes (total), and vinyl chloride) identified in Table 3-2 of the *Sampling and Analysis Plan Physical Containment with Groundwater Treatment, Former Dennison/Monarch Systems Site, Operable Unit 01, New Windsor, New York, NYSDEC Site No. 336090* (SAP); prepared for Avery Dennison Corporation by The Johnson Company (currently VHB), November 2018.

III. Data Deficiencies, Analytical Protocol Deviations, and Quality Control Issues

The following QC elements, as applicable to the analytical methods, were reviewed during this DUSR:

- Data package completeness and reporting protocols
- Sample receipt, holding times, and preservation criteria
- Calibration criteria (instrument tuning, initial and continuing calibration verifications)
- Method and field blank results
- Laboratory Control Sample (LCS) recoveries
- Surrogate Recoveries
- Matrix Spike (MS) / Matrix Spike Duplicate (MSD) Recoveries
- MS/MSD, sample/Laboratory Duplicate (LD), or sample/Field Duplicate (FD) Relative Percent Differences (RPDs)
- Sample result reporting (including reporting limits and units)
- Other method-specific QC if applicable and reported (e.g., internal standard areas)
- Deficiencies or protocol deviations as noted in the Laboratory Narrative

During this review of the 22 project-specific VOCs, several results were negated (U) or estimated (J or UJ) due to QC issues. Table 2 summarizes the actions taken during this review. NEH generated a validated electronic data deliverable (EDD) based on the Eurofins Lancaster Laboratories EDDs received at NEH. All results were considered acceptable compared to NYSDEC ASP 2005 and EPA method criteria and usable for project decisions, with the understanding of the potential uncertainty (bias) in the qualified results.

Sensitivity for all results was considered acceptable since the non-detect values were supported by the instrument initial calibrations. There were no Project Action Limits (PALs) identified in Table 3-2 of the SAP for the analysis of these 22 project-specific VOCs.

As required by the DUSR, the DV Checklists attached to this DUSR report, one for each SDG analyzed, document the QC reviewed and the issues that required action or affected the data certainty in terms of the project data quality objectives (DQO) of accuracy, precision, representativeness, comparability, and sensitivity. The DQO for completeness can be evaluated by VHB after all the data planned for this SAP have been collected.

Table 2. Summary of Data Validation Actions

Field Sample ID	Analyte	Qual	Bias	Validation Comments
J02-UC01	Tetrachloroethene	J	I	Result < QL
J01-UC01	trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene 1,1,1-Trichloroethane	J	I	Result < QL
RS-03	Vinyl chloride	UJ	I	MS/MSD imprecision
RS-03 RS-DUP	1,1,1-Trichloroethane	J	I	FD imprecision
RS-03 RS-DUP	1,1-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene	J	I	Result < QL
RS-10	1,1-Dichloroethane cis-1,2-Dichloroethene 1,1,1-Trichloroethane Tetrachloroethene Acetone	J	I	Result < QL
RS-02	1,1,1-Trichloroethane	J	I	Result < QL
RS-11	1,1,1-Trichloroethane Acetone 2-Butanone	J	I	Result < QL
RS-07	Vinyl Chloride 1,1-Dichloroethane 1,1,1-Trichloroethane	J	I	Result < QL
RS-15	1,1-Dichloroethane	J	I	Result < QL
RS-04	1,1-Dichloroethene trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene Acetone	J	I	Result < QL
PDBBLANK	Methylene Chloride Acetone	J	I	Result < QL

Table 2. Summary of Data Validation Actions - *continued*

Field Sample ID	Analyte	Qual	Bias	Validation Comments
RS-05	1,1-Dichloroethene 1,1-Dichloroethane	J	I	Result < QL
RS-12A RS-01	1,1,1-Trichloroethane Trichloroethene	J	I	Result < QL
RS-09	1,1,1-Trichloroethane	J	I	Result < QL
RS-13	1,1-Dichloroethene 1,1-Dichloroethane	J	I	Result < QL
J21-UC01	Chloroform Trichloroethene	J	I	Result < QL
J21-UC02	Chloroform 1,1,1-Trichloroethane	J	I	Result < QL
J16-UC02	1,1-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene Chloroform	J	I	Result < QL
J16-UC01	1,1-Dichloroethane cis-1,2-Dichloroethene Chloroform	J	I	Result < QL
J14-UC01	1,1-Dichloroethane 1,1,1-Trichloroethane	J	I	Result < QL
J14-BR01	1,1-Dichloroethene 1,1-Dichloroethane	J	I	Result < QL
J18-UC02	1,1-Dichloroethane Chloroform	J	I	Result < QL
J20-UC02	trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene Trichloroethene	J	I	Result < QL

Table 2. Summary of Data Validation Actions - *continued*

Field Sample ID	Analyte	Qual	Bias	Validation Comments
J20-UC01	1,1-Dichloroethane cis-1,2-Dichloroethene	J	I	Result < QL
J06-UC01	Trichloroethene	J	I	Result < QL
J19-UC02	1,1-Dichloroethane 1,1,1-Trichloroethane	J	I	Result < QL
J19-UC01	1,1-Dichloroethane	J	I	Result < QL
RIZ-7	cis-1,2-Dichloroethene Tetrachloroethene	J	I	Result < QL
J13-UC02 J13-UC03	1,1-Dichloroethene	J	I	Result < QL
J05-BR02 DUP-01	Vinyl Chloride 1,1-Dichloroethene 1,1,1-Trichloroethane	J	I	Result < QL
J05-BR01	Trichloroethene	J	I	Result < QL
MW-1S Dup-03	1,1-Dichloroethene 1,1-Dichloroethane	J	I	Result < QL
J23-UC02	1,1-Dichloroethane Freon 113	J	I	Result < QL
J23-UC01	cis-1,2-Dichloroethene Freon 113	J	I	Result < QL
RIZ-19	Tetrachloroethene	J	I	Result < QL
Dup-02	trans-1,2-Dichloroethene Freon 113	J	I	Result < QL
MW-2I	1,1-Dichloroethene	J	I	Result < QL

Table 2. Summary of Data Validation Actions - *continued*

Field Sample ID	Analyte	Qual	Bias	Validation Comments
Diff-07 Diff-06 Diff-05 Diff-03 Diff-04 Diff-02 Diff-Dup Diff-01	Acetone	U		Negated at the QL due to Equipment Blank Action
Diff-07 Diff-05 Diff-03 Diff-02 Diff-Dup	1,1-Dichloroethane	J	I	Result < QL
Diff-05	1,1-Dichloroethene	J	I	Result < QL
Diff-06	Chloroform	J	I	Result < QL
Diff-03 Diff-02 Diff-01	cis-1,2-Dichloroethene	J	I	Result < QL
Diff-02	trans-1,2-Dichloroethene	J	I	Result < QL
Diff-04	Trichloroethene	J	I	Result < QL

Qualifiers: U = analyte is non-detect at the sample-specific Quantitation Limit (usable); UJ = non-detect is usable as an estimated value; J = result is usable as an estimated value with indeterminate bias; J+ = result is usable as an estimated value with possible high bias; J- = result is usable as an estimated value with possible low bias; JN = the analyte has been "tentatively identified" and the result is usable as an estimated value with indeterminate bias; R = result is rejected due to severe QC exceedance and unusable for project objectives

Bias: L = Low; H = High; I = Indeterminate

Abbreviations used in Table 2:

MS = Matrix Spike
MSD = Matrix Spike Duplicate
FD = Field Duplicate
QL = Quantitation Limit (= Reporting Limit)

VHB: Former Dennison/Monarch Systems Site, Operable Unit 01, New Windsor, NY

Date Sampled: 11/12/19-11/13/19
Method of Analysis: 8260C

No. Samples: 9 + 1TB
Matrix: Groundwater

Data Element Acceptable	Preservation & HT	Surrogates	LCS / Blank Spike	MS/MSD	FD	Tunes ICALs CCALs	IS'	QL & Quant. Correct	%Solids	Blank Action
Yes	√	√	√	√	NA	√	√	√	NA	√
No										None

Comments: ***Qualifier Action:*** 5 J-qualified results reported by the laboratory accepted as estimated (J) data due to result < QL

The data package consisted of a NYDEC Category B deliverable.

Data Package Completeness:

1. Were all required forms (results, summary QC, COC), as required to validate the data in accordance with NYSDEC ASP 2005 and DUSR requirements present in the data package? *Yes.*

2. Were all result forms for all samples listed on the chain-of-custody present in data package? Yes. Samples were reported on summary forms using the laboratory IDs (ELLE#) and Lab Sample Code. A Sample Reference List in the data package cross references the COC Client ID to the ELLE Lab Sample Number and Lab Sample Codes.

Sample Receiving: Samples were received intact on 11/14/19 at < 6 °C. These are grab samples that were preserved with HCl. Sample J01-BR01 time of sample collection on the COC (955) differed from the time of collection listed on the sample vial labels. The laboratory used the time listed on the COC for association with this sample in reporting of results.

Holding Time: The samples were verified to be at pH < 2 at the time of analysis. Samples J02-BR02, J02-UC01, and TB-111219-NLS were analyzed on 11/20/19 in QC Batch L193241AA and all other samples were analyzed on 11/21/19 in QC Batch L193251AA. All samples were analyzed within HT - No Action required.

Date: ***12/20/19***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

Blank Action: Blanks Reviewed: Method Blank: VBLKL80 (11/20 analyses) and VBLKL83 (11/21 analyses)

Trip Blank =TB-111219-NLS; EB: EB-111519-NLS (reported in JCW24) & EB-AWR-111919 (reported in SDG JCW26)

Blank ID	Contaminant / Level	Matrix Related?	Action Level / Action	Sample and Reported Result	Corrected Result
VBLKL80	None	-	-	No Blank Action required	
VBLKL83	None	-	-	No Blank Action required	
TB-111219-NLS	None	-	-	No Blank Action required	
EB-111519-NLS	None	-	-	No Blank Action required	
EB-AWR-111919	None	-	-	No Blank Action required	

Surrogates: The lab used surrogate dibromofluoromethane and 1,2-dichloroethane-d4 in addition to toluene-d8 and 4-bromofluorobenzene, which are in ASP2005. Since SW-846 method used for analysis allows use of alternate surrogates, no action required. All surrogates are within NYSDEC ASP2005 or lab criteria (80-120%) - no action required.

LCS /LCSD: L193241AA and L193251AA LCS - no LCSD performed. The lab spiked all 22 project-specific VOCs into LCS as compared to NYSDEC ASP 2005 requirement of a subset of compounds. All LCS %Rec were within lab criteria. Therefore, the lab demonstrated acceptable accuracy for the analysis of the 22 project-specific VOCs in the absence of the site matrix. No Action required.

MS/MSD: MS/MSD performed on J01-UC01 for QC Batch L193251AA. All MS & MSD %Rec and MS/MSD RPDs were within lab criteria indicating acceptable accuracy and precision for the method of analysis for the 22 VOCs from the site matrix. No Action required.

FD evaluation: there were no FD samples associated with the samples in this SDG; therefore, precision from sample collection through analysis could not be evaluated. See DV Checklists for SDGs JCW24 & JCW26 for Groundwater FD evaluation.

Tunes *:* Instrument HP09915 11/4/19 (ICAL), 11/20/19 & 11/21/19. Verified that Method 8260C criteria used for Tune acceptance. All Abundances were acceptable and all samples were analyzed within 12 hours of tune. Average of scans across peak with background correction used to generate tunes - acceptable. No action required.

ICAL: HP09915 analyzed 11/4/19 7-level ICAL from 1 to 300 µg/L for 22 project-specific VOCs except for 1,4-Dioxane, which was analyzed from 50 to 3000 µg/L, plus many non-project required VOCs. Min. RRF and Maximum %RSD given Method 8260C were achieved for all compounds in the ICAL - valid ICAL - No Action required.

CCVs: HP09915 11/20/19 & 11/21/19. CCV min. RRF and maximum %D achieved for all target compounds in both CCVs except: 1,4-dioxane %D > 20% (Method 8260C criteria) due to enhanced sensitivity to detection of 1,4-dioxane in both CCVs as compared to sensitivity during ICAL. Since 1,4-dioxane was non-detect in all samples, no action for enhanced sensitivity of the instrument for this compound on the days of sample analyses.

Internal Standards (IS): lab used four IS (t-butyl alcohol-d10, fluorobenzene, chlorobenzene-d5, and 1,4-dichlorobenzene-d4) as compared to three IS' required by NYSDEC ASP2005 (1,4-difluorobenzene, chlorobenzene-d5, and 1,4-dichlorobenzene-d4) - this is acceptable based upon lab using SW-846 method for analysis. All 4 IS Areas and Retention Times were in criteria in all samples and QC - No Action required.

Compound Reporting: Lab reported results for all 22 project-specific VOCs requested in SAP Table 3-2.

Samples were all analyzed once without dilution (i.e., DF=1) - no secondary dilution analyses required.

Sensitivity: All non-detects were reported at QL supported by the Initial Calibration. Since there are no Project Action Limits for this work (see SAP Table 3-2); sensitivity for these data was acceptable. No Action required.

Qualifier Action: there were 5 results reported at levels < QL and flagged "J" by the laboratory. The result for 1,1,1-trichloroethane in sample J01-UC01 was reported at the QL (1 µg/L) but was flagged as an estimated result by the lab since the value to more than 1 significant figure was < 1 µg/L; therefore, since the lab qualified this result as a "J" value, this was accepted for association with the final DV qualifier. All other data were either non-detect (flagged "U") at the QL or were detected and not qualified.
****ACTION: 5 J-qualified results reported by the laboratory accepted as estimated (J) data due to result < QL***

Date: ***12/20/19***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

Calculation check: Tetrachloroethene in sample J01-UC01 (lab sample ID 1202286)

Response of Cpd = 17348 ; Response of IS (Chlorobenzene-d5) = 692359 @ 50; 5-mL purge, DF = 1; RRF from ICAL = 0.3474

Lowest Level ICAL std =1 µg/L for 5 mL purge

Sample-Specific QL: Sample-Specific QL based on 1 µg/L lowest std = 1 x 1 = 1 µg/L √

$$\text{Tetrachloroethene Conc.} = \frac{17348 \times 50 \times 1}{692359 \times 0.3474} = 3.6 = 4\ \mu g/L$$ √

The sample chromatogram, mass spectra of detects and quantitation report was scanned and data appeared to have been reported correctly.

Narrative: the narrative did not mention any issues with quality that would affect the sample data - No Action required

SW-846 Method 8260C, Region II DV SOP, and NYSDEC ASP2005 - ACTIONS

Preservation:	Temperature upon receipt 4°±°2C; use judgment if outside criteria if Method 5035a not followed
HT:	waters- pH >2 or no HCl: 7d<HT; J- det/R NDs
	pH < 2, 14d <HT; J- det/R NDs
	low- or medium-level solid - 14d <HT< 28 d, J det/J NDs; HT > 28 days, J- det/R NDs
	unfrozen solid - 48 hrs < HT < 96 hrs, J det/J NDs; HT > 96hrs, J- det/R NDs
Surrogates:	Criteria per Table 11A of NYSDEC ASP2005 Exhibit E or lab limits as long as results within ± 10% of ASP limits
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs.
LCS:	Lab limits accepted since LCS not required for NYSDEC ASP2005
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs.
Tunes:	Samples analyzed within 12-hrs and criteria met per Table 3, Method 8260C. If out, use professional judgment.
ICAL:	minimum 5-Level ; min. RRF and %RSD per Method 8260C criteria.
CCV:	min. RRF and %D per Method 8260C criteria.
Blanks:	If contamination in method blank or matrix-related blank(s) exist, comparison of the blank to the samples must take into consideration all sample-specific preparation and analysis factors (e.g., dilution used in analysis, dry weights analyzed, etc.). Blank Action Level (BAL) = Blank QL on a sample-equivalent basis (or 2x Blank QL for 2-butanone, acetone, and methylene chloride) if the result in blank < QL or the value of the Blank on a sample-equivalent basis if result in Blank is > QL. If the sample value is < sample-specific BAL, negate (U) at sample QL if sample result < QL or at the value found in the sample if this value is > sample QL but < sample-equivalent BAL. If sample value > sample-equivalent BAL, no action required.
	Non-Matrix-related Blank contamination: Blank Action taken the sample way as for matrix-related blanks except data are not negated but are estimated (J+ or J) depending on professional judgment.
MS/MSD:	Table 12 of Exhibit E, NYSDEC ASP2005 or lab limits as long as results within ± 10% of ASP limits
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs- Unspiked Sample only. RPD > Control limit, J det / J ND; %RSD of non-spiked > 50%, J det
FD:	Both Conc. > 2xQL, RPD >30% (water) 50% (soil), J det; One result ND, other >2 x QL, J det/J NDs; Both Conc. < 2xQL; RPD >criteria, LCS OK, Accept data
IS:	20% ≤ Area < 50% of IS in CCAL , J det/ J NDs; Area < 20% of CCAL, J det / R NDs; Area > 150% IS in CCAL, J det / Accept NDs. Overall bias for IS outside criteria considered indeterminate since a it is unclear whether low IS is a mis-spike of IS (causing low of high bias in results using the IS that's out of criteria) or whether entire region of GC/MS is affected causing IS and results to be equally affected so no bias in results. This action is taken based on professional judgment.
%solids	If %solids < 50%, J det/J NDs; if %solids <10%, J det/R NDs (Region II SOP). Not applicable to this SAP.

Date: ***12/20/19***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

SW-846 Method 8260C, Region II DV SOP, and NYSDEC ASP2005 - ACTIONS *(continued)*

Compound List:	22 Compounds listed in Table 3-2 of SAP reported for all samples
QLs:	If result > upper calibration range, J result, if result < lowest calibration standard, J result. Verify all J data reported properly, if applicable. Verify QLs are sample specific and that all compounds requested were reported.
TICs:	If a VOC compound reported from another analysis or target VOC is reported as a TIC, the data are rejected (R). TICs that have no identification (i.e., reported as "Unknown") are estimated (J) and those TICs that are reported with a CAS#, are estimated with presumptive evidence for identification (JN). Professional judgment used to accept or reject TICs. Not required for this SAP.
DV Qualifier Definitions:	U = analyte is non-detect at the sample-specific Quantitation Limit (usable); UJ = non-detect is usable as an estimated value; J = result is usable as an estimated value with indeterminate bias; J+ = result is usable as an estimated value with possible high bias; J- = result is usable as an estimated value with possible low bias; JN = the analyte has been "tentatively identified" and the result is usable as an estimated value with indeterminate bias; R = result is rejected due to severe QC exceedance and unusable for project objectives. Bias: L = Low; H = High; I = Indeterminate.
Sensitivity:	QLs reported must be supported by the Initial Calibration. Table 3-2 of SAP indicates that there are no Project Action Limits for VOCs in Groundwater, Surface Water, and Pore Water samples; therefore, sensitivity is acceptable in QLs are properly reported.
References:	*Sampling and Analysis Plan Physical Containment with Groundwater Treatment, Former Dennison/Monarch Systems Site, Operable Unit 01, New Windsor, New York, NYSDEC Site No. 336090;* prepared for Avery Dennison Corporation by The Johnson Company (VHB), November 2018*;* NYSDEC *DER-10, Technical Guidance for Site Investigation and Remediation* (May 3, 2010 with updates through April 9, 2019); NYSDEC *6 NYCRR Part 375 (December 14, 2006);* SW-846 Method 8260B; and USEPA Region II, USEPA Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Methods 8260B & 8260C, SOP# HW-24; rev. 4 (October 2014).

VHB: Former Dennison/Monarch Systems Site, Operable Unit 01, New Windsor, NY

Date Sampled: 11/11/19-11/12/19
Method of Analysis: 8260C

No. Samples: 9 + 1FD
Matrix: Surface Water

Data Element Acceptable	Preservation & HT	Surrogates	LCS / Blank Spike	MS/MSD	FD	Tunes ICALs CCALs	IS'	QL & Quant. Correct	%Solids	Blank Action
Yes	√	√	√			√	√	√	NA	√
No				Estimate (UJ) 1 result	Estimate (J) 2 results					None

Comments: ***Qualifier Action:*** 24 J-qualified results reported by the laboratory accepted as estimated (J) data due to result < QL

The data package consisted of a NYDEC Category B deliverable.

Data Package Completeness:

1. Were all required forms (results, summary QC, COC), as required to validate the data in accordance with NYSDEC ASP 2005 and DUSR requirements present in the data package? *Yes.*

2. Were all result forms for all samples listed on the chain-of-custody present in data package? Yes. Samples were reported on summary forms using the laboratory IDs (ELLE#) and Lab Sample Code. A Sample Reference List in the data package cross references the COC Client ID to the ELLE Lab Sample Number and Lab Sample Codes.

Sample Receiving: Samples were received intact on 11/14/19 at < 6 °C. These are grab samples that were preserved with HCl. There were no COC issues noted.

Holding Time: The samples were verified to be at pH < 2 at the time of analysis. All samples were analyzed on 11/20/19 in QC Batch L193241AA. All samples were analyzed within HT - No Action required.

Date: ***12/26/19***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

Blank Action: Blanks Reviewed: Method Blank: VBLKL80

Trip Blank: none; EB: none

Blank ID	Contaminant / Level	Matrix Related?		Action Level / Action		Sample and Reported Result	Corrected Result
VBLKL80	None	-		-		No Blank Action required	

Surrogates: The lab used surrogate dibromofluoromethane and 1,2-dichloroethane-d4 in addition to toluene-d8 and 4-bromofluorobenzene, which are in ASP2005. Since SW-846 method used for analysis allows use of alternate surrogates, no action required. All surrogates are within NYSDEC ASP2005 or lab criteria (80-120%) - no action required.

LCS /LCSD: L193241AA LCS - no LCSD performed. The lab spiked all 22 project-specific VOCs into LCS as compared to NYSDEC ASP 2005 requirement of a subset of compounds. All LCS %Rec were within lab criteria. Therefore, the lab demonstrated acceptable accuracy for the analysis of the 22 project-specific VOCs in the absence of the site matrix. No Action required.

MS/MSD: MS/MSD performed on RS-03 (lab ID 1202296) for QC Batch L193241AA. All MS & MSD %Rec and MS/MSD RPDs were within lab criteria except for vinyl chloride which reported MS/MSD RPD > criteria. These results indicate acceptable accuracy and precision for the method of analysis for the 22 VOCs except for vinyl chloride.
****ACTION: Vinyl chloride estimated (UJ) with indeterminate bias in sample RS-03 due to MS/MSD imprecision***

Tunes: Instrument HP09915 11/4/19 (ICAL) & 11/20/19. Verified that Method 8260C criteria used for Tune acceptance. All Abundances were acceptable and all samples were analyzed within 12 hours of tune. Average of scans across peak with background correction used to generate tunes - acceptable. No action required.

ICAL: HP09915 analyzed 11/4/19 7-level ICAL from 1 to 300 µg/L for 22 project-specific VOCs except for 1,4-Dioxane, which was analyzed from 50 to 3000 µg/L plus many non-project required VOCs. Min. RRF and Maximum %RSD given Method 8260C were achieved for all compounds in the ICAL - valid ICAL - No Action required.

Date: ***12/26/19***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

CCVs: HP09915 11/20/19. CCV min. RRF and maximum %D achieved for all target compounds in both CCVs except: 1,4-dioxane %D > 20% (Method 8260C criteria) due to enhanced sensitivity to detection of 1,4-dioxane in CCV as compared to sensitivity during ICAL. Since 1,4-dioxane was non-detect in all samples, no action for enhanced sensitivity of the instrument for this compound on the days of sample analyses.

Internal Standards (IS): lab used four IS (t-butyl alcohol-d10, fluorobenzene, chlorobenzene-d5, and 1,4-dichlorobenzene-d4) as compared to three IS' required by NYSDEC ASP2005 (1,4-difluorobenzene, chlorobenzene-d5, and 1,4-dichlorobenzene-d4) - this is acceptable based upon lab using SW-846 method for analysis. All 4 IS Areas and Retention Times were in criteria in all samples and QC - No Action required.

Compound Reporting: Lab reported results for all 22 project-specific VOCs requested in SAP Table 3-2.

Samples were all analyzed once without dilution (i.e., DF=1) - no secondary dilution analyses required.

Sensitivity: All non-detects were reported at QL supported by the Initial Calibration. Since there are no Project Action Limits for this work (see SAP Table 3-2); sensitivity for these data was acceptable. No Action required.

Qualifier Action: there were 24 results reported at levels < QL and flagged "J" by the laboratory. The results for cis-1,2-dichloroethene in samples RS-03 and RS-DUP were reported at the QL (1 µg/L) but were flagged as estimated results by the lab since the values to more than 1 significant figure was < 1 µg/L; therefore, since the lab qualified these results as "J" values, these were accepted for association with the final DV qualifiers. All other data were either non-detect (flagged "U") at the QL or were detected and not qualified.
****ACTION: 24 J-qualified results reported by the laboratory accepted as estimated (J) data due to result < QL***

Calculation check: Trichloroethene in sample RS-04 (lab sample ID 1202307)

Response of Cpd = 93797 ; Response of IS (Fluorobenzene) = 845869 @ 50; 5-mL purge, DF = 1; RRF from ICAL = 0.2561
Lowest Level ICAL std =1 µg/L for 5 mL purge

Sample-Specific QL: Sample-Specific QL based on 1 µg/L lowest std = 1 x 1 = 1 µg/L √

$$\text{Trichloroethene Conc.} = \frac{93797 \times 50 \times 1}{845869 \times 0.2561} = 21.6 = 22\ \mu g/L$$ √

Date: ***12/26/19***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

The sample chromatogram, mass spectra of detects and quantitation report was scanned and data appeared to have been reported correctly.

Narrative: the narrative did not mention any issues not already addressed in this DV checklist that would affect the sample data - No Action required

FD evaluation: FD pair was RS-03 / RS-DUP. A comparison of detected results in this FD pair is shown below

Field Duplicate Evaluation_ Sample IDs: Sample = RS-03 FD = RS-DUP

Analyte Name	DF= 1 QL (µg/L)	Sample µg/L	Q	Sample Result Level	FD µg/L	Q	FD Result Level	RPD	Action *
1,1-Dichloroethene	1	0.3	J	> 2 x QL	0.3	J	> 2 x QL	0.0%	None
1,1-Dichloroethane	1	0.8	J	> 2 x QL	0.8	J	> 2 x QL	0.0%	None
cis-1,2-Dichloroethene	1	1		< 2 x QL	1		< 2 x QL	0.0%	None
1,1,1-Trichloroethane	1	3		> 2 x QL	2		2 x QL	40.0%	**J Both**
Trichloroethene	1	12		> 2 x QL	10		> 2 x QL	18.2%	None
Tetrachloroethene	1	1		> 2 x QL	1		> 2 x QL	0.0%	None

Q = Validation Qualifier

*Action only taken for RPD > 30% if one or both results are > 2 x QL

FD precision was acceptable for all VOCs in FD pair RS-03 and RS-DUP except for 1,1,1-trichloroethane, which had RPD > 30% with one result s> 2 x QL. These results indicate acceptable precision from sample collection through analysis for all VOCs from the site location except for 1,1,1-trichlorethane.

****ACTION: 1,1,1-Trichloroethane estimated (J) in sample RS-03 and RS-DUP with indeterminate bias due to FD imprecision***

Date: ***12/26/19***

Data Reviewer: ***Nancy C. Rothman, Ph.D.***

SW-846 Method 8260C, Region II DV SOP, and NYSDEC ASP2005 - ACTIONS

Preservation:	Temperature upon receipt 4°±°2C; use judgment if outside criteria if Method 5035a not followed
HT:	waters- pH >2 or no HCl: 7d<HT; J- det/R NDs
	pH < 2, 14d <HT; J- det/R NDs
	low- or medium-level solid - 14d <HT< 28 d, J det/J NDs; HT > 28 days, J- det/R NDs
	unfrozen solid - 48 hrs < HT < 96 hrs, J det/J NDs; HT > 96hrs, J- det/R NDs
Surrogates:	Criteria per Table 11A of NYSDEC ASP2005 Exhibit E or lab limits as long as results within ± 10% of ASP limits
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs.
LCS:	Lab limits accepted since LCS not required for NYSDEC ASP2005
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs.
Tunes:	Samples analyzed within 12-hrs and criteria met per Table 3, Method 8260C. If out, use professional judgment.
ICAL:	minimum 5-Level ; min. RRF and %RSD per Method 8260C criteria.
CCV:	min. RRF and %D per Method 8260C criteria.
Blanks:	If contamination in method blank or matrix-related blank(s) exist, comparison of the blank to the samples must take into consideration all sample-specific preparation and analysis factors (e.g., dilution used in analysis, dry weights analyzed, etc.). Blank Action Level (BAL) = Blank QL on a sample-equivalent basis (or 2x Blank QL for 2-butanone, acetone, and methylene chloride) if the result in blank < QL or the value of the Blank on a sample-equivalent basis if result in Blank is > QL. If the sample value is < sample-specific BAL, negate (U) at sample QL if sample result < QL or at the value found in the sample if this value is > sample QL but < sample-equivalent BAL. If sample value > sample-equivalent BAL, no action required.
	Non-Matrix-related Blank contamination: Blank Action taken the sample way as for matrix-related blanks except data are not negated but are estimated (J+ or J) depending on professional judgment.
MS/MSD:	Table 12 of Exhibit E, NYSDEC ASP2005 or lab limits as long as results within ± 10% of ASP limits
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs- Unspiked Sample only. RPD > Control limit, J det / J ND; %RSD of non-spiked > 50%, J det
FD:	Both Conc. > 2xQL, RPD >30% (water) 50% (soil), J det; One result ND, other >2 x QL, J det/J NDs; Both Conc. < 2xQL; RPD >criteria, LCS OK, Accept data
IS:	20% ≤ Area < 50% of IS in CCAL , J det/ J NDs; Area < 20% of CCAL, J det / R NDs; Area > 150% IS in CCAL, J det / Accept NDs. Overall bias for IS outside criteria considered indeterminate since a it is unclear whether low IS is a mis-spike of IS (causing low of high bias in results using the IS that's out of criteria) or whether entire region of GC/MS is affected causing IS and results to be equally affected so no bias in results. This action is taken based on professional judgment.
%solids	If %solids < 50%, J det/J NDs; if %solids <10%, J det/R NDs (Region II SOP). Not applicable to this SAP.

Date: ***12/26/19***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

SW-846 Method 8260C, Region II DV SOP, and NYSDEC ASP2005 - ACTIONS *(continued)*

Compound List:	22 Compounds listed in Table 3-2 of SAP reported for all samples
QLs:	If result > upper calibration range, J result, if result < lowest calibration standard, J result. Verify all J data reported properly, if applicable. Verify QLs are sample specific and that all compounds requested were reported.
TICs:	If a VOC compound reported from another analysis or target VOC is reported as a TIC, the data are rejected (R). TICs that have no identification (i.e., reported as "Unknown") are estimated (J) and those TICs that are reported with a CAS#, are estimated with presumptive evidence for identification (JN). Professional judgment used to accept or reject TICs. Not required for this SAP.
DV Qualifier Definitions:	U = analyte is non-detect at the sample-specific Quantitation Limit (usable); UJ = non-detect is usable as an estimated value; J = result is usable as an estimated value with indeterminate bias; J+ = result is usable as an estimated value with possible high bias; J- = result is usable as an estimated value with possible low bias; JN = the analyte has been "tentatively identified" and the result is usable as an estimated value with indeterminate bias; R = result is rejected due to severe QC exceedance and unusable for project objectives. Bias: L = Low; H = High; I = Indeterminate.
Sensitivity:	QLs reported must be supported by the Initial Calibration. Table 3-2 of SAP indicates that there are no Project Action Limits for VOCs in Groundwater, Surface Water, and Pore Water samples; therefore, sensitivity is acceptable in QLs are properly reported.
References:	*Sampling and Analysis Plan Physical Containment with Groundwater Treatment, Former Dennison/Monarch Systems Site, Operable Unit 01, New Windsor, New York, NYSDEC Site No. 336090;* prepared for Avery Dennison Corporation by The Johnson Company (VHB), November 2018*;* NYSDEC *DER-10, Technical Guidance for Site Investigation and Remediation* (May 3, 2010 with updates through April 9, 2019); NYSDEC *6 NYCRR Part 375 (December 14, 2006);* SW-846 Method 8260B; and USEPA Region II, USEPA Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Methods 8260B & 8260C, SOP# HW-24; rev. 4 (October 2014).

VHB: Former Dennison/Monarch Systems Site, Operable Unit 01, New Windsor, NY

Date Sampled: 11/12/19-11/13/19
Method of Analysis: 8260C

No. Samples: 9 + 1FB
Matrix: 4 GW + 5 SW

Data Element Acceptable	Preservation & HT	Surrogates	LCS / Blank Spike	MS/MSD	FD	Tunes ICALs CCALs	IS'	QL & Quant. Correct	%Solids	Blank Action
Yes	√	√	√	NA	NA	√	√	√	NA	√
No										None

Comments: ***Qualifier Action:*** 15 J-qualified results reported by the laboratory accepted as estimated (J) data due to result < QL

The data package consisted of a NYDEC Category B deliverable.

Data Package Completeness:

1. Were all required forms (results, summary QC, COC), as required to validate the data in accordance with NYSDEC ASP 2005 and DUSR requirements present in the data package? *Yes.*

2. Were all result forms for all samples listed on the chain-of-custody present in data package? Yes. Samples were reported on summary forms using the laboratory IDs (ELLE#) and Lab Sample Code. A Sample Reference List in the data package cross references the COC Client ID to the ELLE Lab Sample Number and Lab Sample Codes.

Sample Receiving: Samples were received intact on 11/14/19 at < 6 °C. These are grab samples that were preserved with HCl. There were no COC issues noted.

Holding Time: The samples were verified to be at pH < 2 at the time of analysis. All samples except J18-UC03, J21-UC01, and J21-UC02 were analyzed in QC Batch L193241AA on 11/20/19 and samples J18-UC03, J21-UC01, and J21-UC02 were analyzed on 11/21/19 in QC Batch L193251AA. All samples were analyzed within HT - No Action required.

Date: ***1/2/20***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

Blank Action: Blanks Reviewed: Method Blank: VBLKL80 (11/20 analyses) and VBLKL83 (11/21 analyses)

Trip Blank = none; EB (associated with GW only): EB-111519-NLS (reported in JCW24) & EB-AWR-111919 (reported in SDG JCW26). PDBBLANK reported in this SDG is associated with Diffusion Bag Samples reported in SDG JCW27

Blank ID	Contaminant / Level	Matrix Related?	Action Level / Action	Sample and Reported Result	Corrected Result
VBLKL80	None	-	-	No Blank Action required	
VBLKL83	None	-	-	No Blank Action required	
EB-111519-NLS	None	-	-	No Blank Action required	
EB-AWR-111919	None	-	-	No Blank Action required	

Surrogates: The lab used surrogate dibromofluoromethane and 1,2-dichloroethane-d4 in addition to toluene-d8 and 4-bromofluorobenzene, which are in ASP2005. Since SW-846 method used for analysis allows use of alternate surrogates, no action required. All surrogates are within NYSDEC ASP2005 or lab criteria (80-120%) - no action required.

LCS /LCSD: L193241AA and L193251AA LCS - no LCSD performed. The lab spiked all 22 project-specific VOCs into LCS as compared to NYSDEC ASP 2005 requirement of a subset of compounds. All LCS %Rec were within lab criteria. Therefore, the lab demonstrated acceptable accuracy for the analysis of the 22 project-specific VOCs in the absence of the site matrix. No Action required.

MS/MSD: not performed on a sample reported in this SDG. The lab was method compliant in that MS/MSD analysis was performed for these QC Batches but not on a sample reported in JCW20. No Action required.

FD evaluation: there were no FD samples associated with the samples in this SDG; therefore, precision from sample collection through analysis could not be evaluated. See DV Checklists for SDGs JCW24 & JCW26 for Groundwater FD evaluation and SDG JCW19 for Surface Water FD evaluation.

Tunes : Instrument HP09915 11/4/19 (ICAL), 11/20/19 & 11/21/19. Verified that Method 8260C criteria used for Tune acceptance. All Abundances were acceptable and all samples were analyzed within 12 hours of tune. Average of scans across peak with background correction used to generate tunes - acceptable. No action required.

Date: ***1/2/20***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

ICAL: HP09915 analyzed 11/4/19 7-level ICAL from 1 to 300 µg/L for 22 project-specific VOCs except for 1,4-Dioxane, which was analyzed from 50 to 3000 µg/L, plus many non-project required VOCs. Min. RRF and Maximum %RSD given Method 8260C were achieved for all compounds in the ICAL - valid ICAL - No Action required.

CCVs: HP09915 11/20/19 & 11/21/19. CCV min. RRF and maximum %D achieved for all target compounds in both CCVs except: 1,4-dioxane %D > 20% (Method 8260C criteria) due to enhanced sensitivity to detection of 1,4-dioxane in both CCVs as compared to sensitivity during ICAL. Since 1,4-dioxane was non-detect in all samples, no action for enhanced sensitivity of the instrument for this compound on the days of sample analyses.

Internal Standards (IS): lab used four IS (t-butyl alcohol-d10, fluorobenzene, chlorobenzene-d5, and 1,4-dichlorobenzene-d4) as compared to three IS' required by NYSDEC ASP2005 (1,4-difluorobenzene, chlorobenzene-d5, and 1,4-dichlorobenzene-d4) - this is acceptable based upon lab using SW-846 method for analysis. All 4 IS Areas and Retention Times were in criteria in all samples and QC - No Action required.

Compound Reporting: Lab reported results for all 22 project-specific VOCs requested in SAP Table 3-2.

Samples were all analyzed once without dilution (i.e., DF=1) - no secondary dilution analyses required.

Sensitivity: All non-detects were reported at QL supported by the Initial Calibration. Since there are no Project Action Limits for this work (see SAP Table 3-2); sensitivity for these data was acceptable. No Action required.

Qualifier Action: there were 15 results reported at levels < QL and flagged "J" by the laboratory. The result for trichloroethene in sample J21-UC01 was reported at the QL (1 µg/L) but was flagged as an estimated result by the lab since the value to more than 1 significant figure was < 1 µg/L; therefore, since the lab qualified this result as a "J" value, this was accepted for association with the final DV qualifier. All other data were either non-detect (flagged "U") at the QL or were detected and not qualified.
****ACTION: 15 J-qualified results reported by the laboratory accepted as estimated (J) data due to result < QL***

Calculation check: 1,1,1-Trichloroethane in sample J18-UC03 (lab sample ID 1202321)

Sample-Specific QL:

Response of Cpd = 22921 ; Response of IS (Fluorobenzene) = 832267 @ 50; 5-mL purge, DF = 1; RRF from ICAL = 0.3492

Lowest Level ICAL std =1 µg/L for 5 mL purge

Sample-Specific QL based on 1 µg/L lowest std = 1 x 1 = 1 µg/L √

$$\text{1,1,1-Trichloroethane Conc.} = \frac{22921 \times 50 \times 1}{832267 \times 0.3492} = 3.9 = 4\ \mu g/L$$ √

The sample chromatogram, mass spectra of detects and quantitation report was scanned and data appeared to have been reported correctly.

Narrative: the narrative did not mention any issues with quality that would affect the sample data - No Action required

SW-846 Method 8260C, Region II DV SOP, and NYSDEC ASP2005 - ACTIONS

Preservation:	Temperature upon receipt 4°±°2C; use judgment if outside criteria if Method 5035a not followed
HT:	waters- pH >2 or no HCl: 7d<HT; J- det/R NDs
	pH < 2, 14d <HT; J- det/R NDs
	low- or medium-level solid - 14d <HT< 28 d, J det/J NDs; HT > 28 days, J- det/R NDs
	unfrozen solid - 48 hrs < HT < 96 hrs, J det/J NDs; HT > 96hrs, J- det/R NDs
Surrogates:	Criteria per Table 11A of NYSDEC ASP2005 Exhibit E or lab limits as long as results within ± 10% of ASP limits
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs.
LCS:	Lab limits accepted since LCS not required for NYSDEC ASP2005
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs.
Tunes:	Samples analyzed within 12-hrs and criteria met per Table 3, Method 8260C. If out, use professional judgment.
ICAL:	minimum 5-Level ; min. RRF and %RSD per Method 8260C criteria.
CCV:	min. RRF and %D per Method 8260C criteria.
Blanks:	If contamination in method blank or matrix-related blank(s) exist, comparison of the blank to the samples must take into consideration all sample-specific preparation and analysis factors (e.g., dilution used in analysis, dry weights analyzed, etc.). Blank Action Level (BAL) = Blank QL on a sample-equivalent basis (or 2x Blank QL for 2-butanone, acetone, and methylene chloride) if the result in blank < QL or the value of the Blank on a sample-equivalent basis if result in Blank is > QL. If the sample value is < sample-specific BAL, negate (U) at sample QL if sample result < QL or at the value found in the sample if this value is > sample QL but < sample-equivalent BAL. If sample value > sample-equivalent BAL, no action required.
	Non-Matrix-related Blank contamination: Blank Action taken the sample way as for matrix-related blanks except data are not negated but are estimated (J+ or J) depending on professional judgment.
MS/MSD:	Table 12 of Exhibit E, NYSDEC ASP2005 or lab limits as long as results within ± 10% of ASP limits
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs- Unspiked Sample only. RPD > Control limit, J det / J ND; %RSD of non-spiked > 50%, J det
FD:	Both Conc. > 2xQL, RPD >30% (water) 50% (soil), J det; One result ND, other >2 x QL, J det/J NDs; Both Conc. < 2xQL; RPD >criteria, LCS OK, Accept data
IS:	20% ≤ Area < 50% of IS in CCAL , J det/ J NDs; Area < 20% of CCAL, J det / R NDs; Area > 150% IS in CCAL, J det / Accept NDs. Overall bias for IS outside criteria considered indeterminate since a it is unclear whether low IS is a mis-spike of IS (causing low of high bias in results using the IS that's out of criteria) or whether entire region of GC/MS is affected causing IS and results to be equally affected so no bias in results. This action is taken based on professional judgment.
%solids	If %solids < 50%, J det/J NDs; if %solids <10%, J det/R NDs (Region II SOP). Not applicable to this SAP.

Date: ***1/2/20***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

SW-846 Method 8260C, Region II DV SOP, and NYSDEC ASP2005 - ACTIONS *(continued)*

Compound List:	22 Compounds listed in Table 3-2 of SAP reported for all samples
QLs:	If result > upper calibration range, J result, if result < lowest calibration standard, J result. Verify all J data reported properly, if applicable. Verify QLs are sample specific and that all compounds requested were reported.
TICs:	If a VOC compound reported from another analysis or target VOC is reported as a TIC, the data are rejected (R). TICs that have no identification (i.e., reported as "Unknown") are estimated (J) and those TICs that are reported with a CAS#, are estimated with presumptive evidence for identification (JN). Professional judgment used to accept or reject TICs. Not required for this SAP.
DV Qualifier Definitions:	U = analyte is non-detect at the sample-specific Quantitation Limit (usable); UJ = non-detect is usable as an estimated value; J = result is usable as an estimated value with indeterminate bias; J+ = result is usable as an estimated value with possible high bias; J- = result is usable as an estimated value with possible low bias; JN = the analyte has been "tentatively identified" and the result is usable as an estimated value with indeterminate bias; R = result is rejected due to severe QC exceedance and unusable for project objectives. Bias: L = Low; H = High; I = Indeterminate.
Sensitivity:	QLs reported must be supported by the Initial Calibration. Table 3-2 of SAP indicates that there are no Project Action Limits for VOCs in Groundwater, Surface Water, and Pore Water samples; therefore, sensitivity is acceptable in QLs are properly reported.
References:	*Sampling and Analysis Plan Physical Containment with Groundwater Treatment, Former Dennison/Monarch Systems Site, Operable Unit 01, New Windsor, New York, NYSDEC Site No. 336090;* prepared for Avery Dennison Corporation by The Johnson Company (VHB), November 2018*;* NYSDEC *DER-10, Technical Guidance for Site Investigation and Remediation* (May 3, 2010 with updates through April 9, 2019); NYSDEC *6 NYCRR Part 375 (December 14, 2006);* SW-846 Method 8260B; and USEPA Region II, USEPA Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Methods 8260B & 8260C, SOP# HW-24; rev. 4 (October 2014).

VHB: Former Dennison/Monarch Systems Site, Operable Unit 01, New Windsor, NY

Date Sampled: 11/13/19
Method of Analysis: 8260C

No. Samples: 3
Matrix: Groundwater

Data Element Acceptable	Preservation & HT	Surrogates	LCS / Blank Spike	MS/MSD	FD	Tunes ICALs CCALs	IS'	QL & Quant. Correct	%Solids	Blank Action
Yes	√	√	√	NA	NA	√	√	√	NA	√
No										None

Comments: ***Qualifier Action:*** 7 J-qualified results reported by the laboratory accepted as estimated (J) data

The data package consisted of a NYDEC Category B deliverable.

Data Package Completeness:

1. Were all required forms (results, summary QC, COC), as required to validate the data in accordance with NYSDEC ASP 2005 and DUSR requirements present in the data package? *Yes.*

2. Were all result forms for all samples listed on the chain-of-custody present in data package? Yes. Samples were reported on summary forms using the laboratory IDs (ELLE#) and Lab Sample Code. A Sample Reference List in the data package cross references the COC Client ID to the ELLE Lab Sample Number and Lab Sample Codes.

Sample Receiving: Samples were received intact on 11/14/19 at < 6 °C. These are grab samples that were preserved with HCl. There were no COC issues noted by the lab.

Holding Time: The samples were verified to be at pH < 2 at the time of analysis. Samples were all analyzed on 11/21/19 in QC Batch L193251AA. All samples were analyzed within HT - No Action required.

Date: ***12/27/19***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

VHB: Former Dennison/Monarch Systems Site, Operable Unit 01, New Windsor, NY

Blank Action: Blanks Reviewed: Method Blank: VBLKL83

Trip Blank = none; EB: EB-111519-NLS (reported in JCW24) & EB-AWR-111919 (reported in SDG JCW26)

Blank ID	Contaminant / Level	Matrix Related?		Action Level / Action		Sample and Reported Result	Corrected Result
VBLKL83	None	-		-		No Blank Action required	
EB-111519-NLS	None	-		-		No Blank Action required	
EB-AWR-111919	None	-		-		No Blank Action required	

Surrogates: The lab used surrogate dibromofluoromethane and 1,2-dichloroethane-d4 in addition to toluene-d8 and 4-bromofluorobenzene, which are in ASP2005. Since SW-846 method used for analysis allows use of alternate surrogates, no action required. All surrogates are within NYSDEC ASP2005 or lab criteria (80-120%) - no action required.

LCS /LCSD: L193251AA LCS - no LCSD performed. The lab spiked all 22 project-specific VOCs into LCS as compared to NYSDEC ASP 2005 requirement of a subset of compounds. All LCS %Rec were within lab criteria. Therefore, the lab demonstrated acceptable accuracy for the analysis of the 22 project-specific VOCs in the absence of the site matrix. No Action required.

MS/MSD: none performed on the samples in this SDG and not requested on the COC. Batch QC MS/MSD performed by the lab on a sample not reported in this SDG; therefore, the lab was method compliant.

FD evaluation: there were no FD samples associated with the samples in this SDG; therefore, precision from sample collection through analysis could not be evaluated. See DV Checklists for SDGs JCW24 & JCW26 for Groundwater FD evaluation.

Tunes : Instrument HP09915 11/4/19 (ICAL) & 11/21/19. Verified that Method 8260C criteria used for Tune acceptance. All Abundances were acceptable and all samples were analyzed within 12 hours of tune. Average of scans across peak with background correction used to generate tunes - acceptable. No action required.

Date: ***12/27/19***

Data Reviewer: ***Nancy C. Rothman, Ph.D.***

ICAL: HP09915 analyzed on 11/4/19 7-level ICAL from 1 to 300 µg/L for 22 project-specific VOCs except for 1,4-Dioxane, which was analyzed from 50 to 3000 µg/L, plus many non-project required VOCs. Min. RRF and Maximum %RSD given Method 8260C were achieved for all compounds in the ICAL - valid ICAL - No Action required.

CCV: HP09915 11/21/19. CCV min. RRF and maximum %D achieved for all target compounds in CCV except: 1,4-dioxane %D > 20% (Method 8260C criteria) due to enhanced sensitivity to detection of 1,4-dioxane as compared to sensitivity during ICAL. Since 1,4-dioxane was non-detect in all samples, no action for enhanced sensitivity of the instrument for this compound on the day of sample analyses.

Internal Standards (IS): lab used four IS (t-butyl alcohol-d10, fluorobenzene, chlorobenzene-d5, and 1,4-dichlorobenzene-d4) as compared to three IS' required by NYSDEC ASP2005 (1,4-difluorobenzene, chlorobenzene-d5, and 1,4-dichlorobenzene-d4) - this is acceptable based upon lab using SW-846 method for analysis. All 4 IS Areas and Retention Times were in criteria in all samples and QC - No Action required.

Compound Reporting: Lab reported results for all 22 project-specific VOCs requested in SAP Table 3-2.

Samples were all analyzed once without dilution (i.e., DF=1) - no secondary dilution analyses required.

Sensitivity: All non-detects were reported at QL supported by the Initial Calibration. Since there are no Project Action Limits for this work (see SAP Table 3-2); sensitivity for these data was acceptable. No Action required.

Qualifier Action: there were 7 results reported at levels < QL and flagged "J" by the laboratory. All other data were either non-detect (flagged "U") at the QL or were detected and not qualified.
****ACTION: 7 J-qualified results reported by the laboratory accepted as estimated (J) data***

Calculation check: Trichloroethene in sample J01-UC01 (lab sample ID 1202286)

Sample-Specific QL:

Response of Cpd = 156022 ; Response of IS (Fluorobenzene) = 793651 @ 50; 5-mL purge, DF = 1; RRF from ICAL = 0.2561

Lowest Level ICAL std =1 µg/L for 5 mL purge

Sample-Specific QL based on 1 µg/L lowest std = 1 x 1 = 1 µg/L √

$$\text{Trichloroethene Conc.} = \frac{156022 \times 50 \times 1}{793651 \times 0.2561} = 38.4 = 38\ \mu g/L$$ √

The sample chromatogram, mass spectra of detects and quantitation report was scanned and data appeared to have been reported correctly.

Narrative: the narrative did not mention any issues with quality that would affect the sample data - No Action required

SW-846 Method 8260C, Region II DV SOP, and NYSDEC ASP2005 - ACTIONS

Preservation:	Temperature upon receipt 4°±°2C; use judgment if outside criteria if Method 5035a not followed
HT:	waters- pH >2 or no HCl: 7d<HT; J- det/R NDs
	pH < 2, 14d <HT; J- det/R NDs
	low- or medium-level solid - 14d <HT< 28 d, J det/J NDs; HT > 28 days, J- det/R NDs
	unfrozen solid - 48 hrs < HT < 96 hrs, J det/J NDs; HT > 96hrs, J- det/R NDs
Surrogates:	Criteria per Table 11A of NYSDEC ASP2005 Exhibit E or lab limits as long as results within ± 10% of ASP limits
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs.
LCS:	Lab limits accepted since LCS not required for NYSDEC ASP2005
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs.
Tunes:	Samples analyzed within 12-hrs and criteria met per Table 3, Method 8260C. If out, use professional judgment.
ICAL:	minimum 5-Level ; min. RRF and %RSD per Method 8260C criteria.
CCV:	min. RRF and %D per Method 8260C criteria.
Blanks:	If contamination in method blank or matrix-related blank(s) exist, comparison of the blank to the samples must take into consideration all sample-specific preparation and analysis factors (e.g., dilution used in analysis, dry weights analyzed, etc.). Blank Action Level (BAL) = Blank QL on a sample-equivalent basis (or 2x Blank QL for 2-butanone, acetone, and methylene chloride) if the result in blank < QL or the value of the Blank on a sample-equivalent basis if result in Blank is > QL. If the sample value is < sample-specific BAL, negate (U) at sample QL if sample result < QL or at the value found in the sample if this value is > sample QL but < sample-equivalent BAL. If sample value > sample-equivalent BAL, no action required.
	Non-Matrix-related Blank contamination: Blank Action taken the sample way as for matrix-related blanks except data are not negated but are estimated (J+ or J) depending on professional judgment.
MS/MSD:	Table 12 of Exhibit E, NYSDEC ASP2005 or lab limits as long as results within ± 10% of ASP limits
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs- Unspiked Sample only. RPD > Control limit, J det / J ND; %RSD of non-spiked > 50%, J det
FD:	Both Conc. > 2xQL, RPD >30% (water) 50% (soil), J det; One result ND, other >2 x QL, J det/J NDs; Both Conc. < 2xQL; RPD >criteria, LCS OK, Accept data
IS:	20% ≤ Area < 50% of IS in CCAL , J det/ J NDs; Area < 20% of CCAL, J det / R NDs; Area > 150% IS in CCAL, J det / Accept NDs. Overall bias for IS outside criteria considered indeterminate since a it is unclear whether low IS is a mis-spike of IS (causing low of high bias in results using the IS that's out of criteria) or whether entire region of GC/MS is affected causing IS and results to be equally affected so no bias in results. This action is taken based on professional judgment.
%solids	If %solids < 50%, J det/J NDs; if %solids <10%, J det/R NDs (Region II SOP). Not applicable to this SAP.

Date: ***12/27/19***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

SW-846 Method 8260C, Region II DV SOP, and NYSDEC ASP2005 - ACTIONS *(continued)*

Compound List:	22 Compounds listed in Table 3-2 of SAP reported for all samples
QLs:	If result > upper calibration range, J result, if result < lowest calibration standard, J result. Verify all J data reported properly, if applicable. Verify QLs are sample specific and that all compounds requested were reported.
TICs:	If a VOC compound reported from another analysis or target VOC is reported as a TIC, the data are rejected (R). TICs that have no identification (i.e., reported as "Unknown") are estimated (J) and those TICs that are reported with a CAS#, are estimated with presumptive evidence for identification (JN). Professional judgment used to accept or reject TICs. Not required for this SAP.
DV Qualifier Definitions:	U = analyte is non-detect at the sample-specific Quantitation Limit (usable); UJ = non-detect is usable as an estimated value; J = result is usable as an estimated value with indeterminate bias; J+ = result is usable as an estimated value with possible high bias; J- = result is usable as an estimated value with possible low bias; JN = the analyte has been "tentatively identified" and the result is usable as an estimated value with indeterminate bias; R = result is rejected due to severe QC exceedance and unusable for project objectives. Bias: L = Low; H = High; I = Indeterminate.
Sensitivity:	QLs reported must be supported by the Initial Calibration. Table 3-2 of SAP indicates that there are no Project Action Limits for VOCs in Groundwater, Surface Water, and Pore Water samples; therefore, sensitivity is acceptable in QLs are properly reported.
References:	*Sampling and Analysis Plan Physical Containment with Groundwater Treatment, Former Dennison/Monarch Systems Site, Operable Unit 01, New Windsor, New York, NYSDEC Site No. 336090;* prepared for Avery Dennison Corporation by The Johnson Company (VHB), November 2018*;* NYSDEC *DER-10, Technical Guidance for Site Investigation and Remediation* (May 3, 2010 with updates through April 9, 2019); NYSDEC *6 NYCRR Part 375 (December 14, 2006);* SW-846 Method 8260B; and USEPA Region II, USEPA Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Methods 8260B & 8260C, SOP# HW-24; rev. 4 (October 2014).

VHB: Former Dennison/Monarch Systems Site, Operable Unit 01, New Windsor, NY

Date Sampled: 11/14/19 & 11/16/19
Method of Analysis: 8260C

No. Samples: 9 + 1TB
Matrix: Groundwater

Data Element Acceptable	Preservation & HT	Surrogates	LCS / Blank Spike	MS/MSD	FD	Tunes ICALs CCALs	IS'	QL & Quant. Correct	%Solids	Blank Action
Yes	√	√	√	√	NA	√	√	√	NA	√
No										None

Comments: ***Qualifier Action:*** 6 J-qualified results reported by the laboratory accepted as estimated (J) data due to result < QL

The data package consisted of a NYDEC Category B deliverable.

Data Package Completeness:

1. Were all required forms (results, summary QC, COC), as required to validate the data in accordance with NYSDEC ASP 2005 and DUSR requirements present in the data package? *Yes.*

2. Were all result forms for all samples listed on the chain-of-custody present in data package? Yes. Samples were reported on summary forms using the laboratory IDs (ELLE#) and Lab Sample Code. A Sample Reference List in the data package cross references the COC Client ID to the ELLE Lab Sample Number and Lab Sample Codes.

Sample Receiving: Samples were received intact on 11/19/19 at < 6 °C. These are grab samples that were preserved with HCl. There were no COC issues noted by the lab.

Holding Time: The samples were verified to be at pH < 2 at the time of analysis. Samples were analyzed in 2 QC Batches: L193262AA (associated with samples 1205892, 1205896 through 1205899) on 11/22/19 and L193271AA (associated with samples 1205903 through 1205905) on 11/23/19. All samples were analyzed within HT - No Action required.

Date: ***12/27/19***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

Blank Action: Blanks Reviewed: Method Blank: VBLKL86 (11/22/19 analyses) and VBLKL87 (11/23/19 analyses)

Trip Blank = TB-AWR-111419; EB: EB-111519-NLS (reported in JCW24) & EB-AWR-111919 (reported in SDG JCW26)

Blank ID	Contaminant / Level	Matrix Related?	Action Level / Action	Sample and Reported Result	Corrected Result
VBLKL86	None	-	-	No Blank Action required	
VBLKL87	None	-	-	No Blank Action required	
TB-AWR-111419	None	-	-	No Blank Action required	
EB-111519-NLS	None	-	-	No Blank Action required	
EB-AWR-111919	None	-	-	No Blank Action required	

Surrogates: The lab used surrogate dibromofluoromethane and 1,2-dichloroethane-d4 in addition to toluene-d8 and 4-bromofluorobenzene, which are in ASP2005. Since SW-846 method used for analysis allows use of alternate surrogates, no action required. All surrogates are within NYSDEC ASP2005 or lab criteria (80-120%) - no action required.

LCS /LCSD: L193262AA LCS/LCSD and L193271AA LCS - no LCSD performed for second QC Batch. The lab spiked all 22 project-specific VOCs into LCS as compared to NYSDEC ASP 2005 requirement of a subset of compounds. All LCS %Rec and LCS/LCSD RPDs were within lab criteria. Therefore, the lab demonstrated acceptable accuracy and precision for the analysis of the 22 project-specific VOCs in the absence of the site matrix. No Action required.

MS/MSD: performed on J14-BR01 [lab ID 1205893] for L193262AA QC Batch and on J18-UC02 [lab ID 1205900] for QC Batch L193271AA. Lab spiked all 22 target VOCs. For both sets of MS/MSDs, MS/MSD %Rec and MS/MSD RPDs were acceptable; therefore, lab demonstrated acceptable accuracy and precision for the method of analysis for the 22 target VOCs from the site matrices - No Action required.

FD evaluation: there were no FD samples associated with the samples in this SDG; therefore, precision from sample collection through analysis could not be evaluated. See DV Checklists for SDGs JCW24 & JCW26 for Groundwater FD evaluation.

Date: ***12/27/19***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

Tunes : Instrument HP09915 11/4/19 (ICAL), 11/22/19, & 11/23/19. Verified that Method 8260C criteria used for Tune acceptance. All Abundances were acceptable and all samples were analyzed within 12 hours of tune. Average of scans across peak with background correction used to generate tunes - acceptable. No action required.

ICAL: HP09915 analyzed on 11/4/19 7-level ICAL from 1 to 300 µg/L for 22 project-specific VOCs except for 1,4-Dioxane, which was analyzed from 50 to 3000 µg/L, plus many non-project required VOCs. Min. RRF and Maximum %RSD given Method 8260C were achieved for all compounds in the ICAL - valid ICAL - No Action required.

CCV: HP09915 11/22/19 & 11/23/19. CCV min. RRF and maximum %D achieved for all target compounds in both CCVs except: 1,4-dioxane %D > 20% (Method 8260C criteria) due to enhanced sensitivity to detection of 1,4-dioxane in both CCVs as compared to sensitivity during ICAL. Since 1,4-dioxane was non-detect in all samples, no action for enhanced sensitivity of the instrument for this compound on the days of sample analyses.

Internal Standards (IS): lab used four IS (t-butyl alcohol-d10, fluorobenzene, chlorobenzene-d5, and 1,4-dichlorobenzene-d4) as compared to three IS' required by NYSDEC ASP2005 (1,4-difluorobenzene, chlorobenzene-d5, and 1,4-dichlorobenzene-d4) - this is acceptable based upon lab using SW-846 method for analysis. All 4 IS Areas and Retention Times were in criteria in all samples and QC - No Action required.

Compound Reporting: Lab reported results for all 22 project-specific VOCs requested in SAP Table 3-2.

Samples were all analyzed once without dilution (i.e., DF=1) - no secondary dilution analyses required.

Sensitivity: All non-detects were reported at QL supported by the Initial Calibration. Since there are no Project Action Limits for this work (see SAP Table 3-2); sensitivity for these data was acceptable. No Action required.

Qualifier Action: there were 6 results reported at levels < QL and flagged "J" by the laboratory. All other data were either non-detect (flagged "U") at the QL or were detected and not qualified.
****ACTION: 6 J-qualified results reported by the laboratory accepted as estimated (J) data due to result < QL***

Date: ***12/27/19***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

Calculation check: 1,1,1-Trichloroethane in sample J18-UC02 (lab sample ID 1205900)

Response of Cpd = 147766 ; Response of IS (Fluorobenzene) = 1136731 @ 50; 5-mL purge, DF = 1; RRF from ICAL = 0.3492

Lowest Level ICAL std =1 µg/L for 5 mL purge

Sample-Specific QL: Sample-Specific QL based on 1 µg/L lowest std = 1 x 1 = 1 µg/L √

$$\text{1,1,1-Trichloroethane Conc.} = \frac{147766 \times 50 \times 1}{1136731 \times 0.3492} = 18.6 = 19\ \mu g/L$$ √

The sample chromatogram, mass spectra of detects and quantitation report was scanned and data appeared to have been reported correctly.

Narrative: the narrative did not mention any issues with quality that would affect the sample data - No Action required

SW-846 Method 8260C, Region II DV SOP, and NYSDEC ASP2005 - ACTIONS

Preservation:	Temperature upon receipt 4°±°2C; use judgment if outside criteria if Method 5035a not followed
HT:	waters- pH >2 or no HCl: 7d<HT; J- det/R NDs
	pH < 2, 14d <HT; J- det/R NDs
	low- or medium-level solid - 14d <HT< 28 d, J det/J NDs; HT > 28 days, J- det/R NDs
	unfrozen solid - 48 hrs < HT < 96 hrs, J det/J NDs; HT > 96hrs, J- det/R NDs
Surrogates:	Criteria per Table 11A of NYSDEC ASP2005 Exhibit E or lab limits as long as results within ± 10% of ASP limits
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs.
LCS:	Lab limits accepted since LCS not required for NYSDEC ASP2005
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs.
Tunes:	Samples analyzed within 12-hrs and criteria met per Table 3, Method 8260C. If out, use professional judgment.
ICAL:	minimum 5-Level ; min. RRF and %RSD per Method 8260C criteria.
CCV:	min. RRF and %D per Method 8260C criteria.
Blanks:	If contamination in method blank or matrix-related blank(s) exist, comparison of the blank to the samples must take into consideration all sample-specific preparation and analysis factors (e.g., dilution used in analysis, dry weights analyzed, etc.). Blank Action Level (BAL) = Blank QL on a sample-equivalent basis (or 2x Blank QL for 2-butanone, acetone, and methylene chloride) if the result in blank < QL or the value of the Blank on a sample-equivalent basis if result in Blank is > QL. If the sample value is < sample-specific BAL, negate (U) at sample QL if sample result < QL or at the value found in the sample if this value is > sample QL but < sample-equivalent BAL. If sample value > sample-equivalent BAL, no action required.
	Non-Matrix-related Blank contamination: Blank Action taken the sample way as for matrix-related blanks except data are not negated but are estimated (J+ or J) depending on professional judgment.
MS/MSD:	Table 12 of Exhibit E, NYSDEC ASP2005 or lab limits as long as results within ± 10% of ASP limits
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs- Unspiked Sample only. RPD > Control limit, J det / J ND; %RSD of non-spiked > 50%, J det
FD:	Both Conc. > 2xQL, RPD >30% (water) 50% (soil), J det; One result ND, other >2 x QL, J det/J NDs; Both Conc. < 2xQL; RPD >criteria, LCS OK, Accept data
IS:	20% ≤ Area < 50% of IS in CCAL , J det/ J NDs; Area < 20% of CCAL, J det / R NDs; Area > 150% IS in CCAL, J det / Accept NDs. Overall bias for IS outside criteria considered indeterminate since a it is unclear whether low IS is a mis-spike of IS (causing low of high bias in results using the IS that's out of criteria) or whether entire region of GC/MS is affected causing IS and results to be equally affected so no bias in results. This action is taken based on professional judgment.
%solids	If %solids < 50%, J det/J NDs; if %solids <10%, J det/R NDs (Region II SOP). Not applicable to this SAP.

SW-846 Method 8260C, Region II DV SOP, and NYSDEC ASP2005 - ACTIONS *(continued)*

Compound List:	22 Compounds listed in Table 3-2 of SAP reported for all samples
QLs:	If result > upper calibration range, J result, if result < lowest calibration standard, J result. Verify all J data reported properly, if applicable. Verify QLs are sample specific and that all compounds requested were reported.
TICs:	If a VOC compound reported from another analysis or target VOC is reported as a TIC, the data are rejected (R). TICs that have no identification (i.e., reported as "Unknown") are estimated (J) and those TICs that are reported with a CAS#, are estimated with presumptive evidence for identification (JN). Professional judgment used to accept or reject TICs. Not required for this SAP.
DV Qualifier Definitions:	U = analyte is non-detect at the sample-specific Quantitation Limit (usable); UJ = non-detect is usable as an estimated value; J = result is usable as an estimated value with indeterminate bias; J+ = result is usable as an estimated value with possible high bias; J- = result is usable as an estimated value with possible low bias; JN = the analyte has been "tentatively identified" and the result is usable as an estimated value with indeterminate bias; R = result is rejected due to severe QC exceedance and unusable for project objectives. Bias: L = Low; H = High; I = Indeterminate.
Sensitivity:	QLs reported must be supported by the Initial Calibration. Table 3-2 of SAP indicates that there are no Project Action Limits for VOCs in Groundwater, Surface Water, and Pore Water samples; therefore, sensitivity is acceptable in QLs are properly reported.
References:	*Sampling and Analysis Plan Physical Containment with Groundwater Treatment, Former Dennison/Monarch Systems Site, Operable Unit 01, New Windsor, New York, NYSDEC Site No. 336090;* prepared for Avery Dennison Corporation by The Johnson Company (VHB), November 2018*;* NYSDEC *DER-10, Technical Guidance for Site Investigation and Remediation* (May 3, 2010 with updates through April 9, 2019); NYSDEC *6 NYCRR Part 375 (December 14, 2006);* SW-846 Method 8260B; and USEPA Region II, USEPA Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Methods 8260B & 8260C, SOP# HW-24; rev. 4 (October 2014).

VHB: Former Dennison/Monarch Systems Site, Operable Unit 01, New Windsor, NY

Date Sampled: 11/15/19 - 11/16/19
Method of Analysis: 8260C

No. Samples: 8
Matrix: Groundwater

Data Element Acceptable	Preservation & HT	Surrogates	LCS / Blank Spike	MS/MSD	FD	Tunes ICALs CCALs	IS'	QL & Quant. Correct	%Solids	Blank Action
Yes	√	√	√	NA	NA	√	√	√	NA	√
No										None

Comments: ***Qualifier Action:*** 12 J-qualified results reported by the laboratory accepted as estimated (J) data due to result < QL

The data package consisted of a NYDEC Category B deliverable.

Data Package Completeness:

1. Were all required forms (results, summary QC, COC), as required to validate the data in accordance with NYSDEC ASP 2005 and DUSR requirements present in the data package? *Yes.*

2. Were all result forms for all samples listed on the chain-of-custody present in data package? Yes. Samples were reported on summary forms using the laboratory IDs (ELLE#) and Lab Sample Code. A Sample Reference List in the data package cross references the COC Client ID to the ELLE Lab Sample Number and Lab Sample Codes.

Sample Receiving: Samples were received intact on 11/19/19 at < 6 °C. These are grab samples that were preserved with HCl. The sample receipt documentation indicates that a Trip Blank was received with this shipment; however, that was not the case. This is a laboratory documentation error. There were no COC issues noted by the lab.

Holding Time: The samples were verified to be at pH < 2 at the time of analysis. All samples were analyzed in QC Batch L193271AA on 11/23/19. All samples were analyzed within HT - No Action required.

Date: ***12/28/19***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

Blank Action: Blanks Reviewed: Method Blank: VBLKL87

Trip Blank = none; EB: EB-111519-NLS (reported in JCW24) & EB-AWR-111919 (reported in SDG JCW26)

Blank ID	Contaminant / Level	Matrix Related?		Action Level / Action		Sample and Reported Result	Corrected Result
VBLKL87	None	-		-		No Blank Action required	
EB-111519-NLS	None	-		-		No Blank Action required	
EB-AWR-111919	None	-		-		No Blank Action required	

Surrogates: The lab used surrogate dibromofluoromethane and 1,2-dichloroethane-d4 in addition to toluene-d8 and 4-bromofluorobenzene, which are in ASP2005. Since SW-846 method used for analysis allows use of alternate surrogates, no action required. All surrogates are within NYSDEC ASP2005 or lab criteria (80-120%) - no action required.

LCS /LCSD: L193271AA LCS - no LCSD performed. The lab spiked all 22 project-specific VOCs into LCS as compared to NYSDEC ASP 2005 requirement of a subset of compounds. All LCS %Rec were within lab criteria. Therefore, the lab demonstrated acceptable accuracy for the analysis of the 22 project-specific VOCs in the absence of the site matrix. No Action required.

MS/MSD: none performed on the samples in this SDG and none were requested on the COC. Lab analyzed MS/MSD for this QC Batch on a sample not reported in this SDG; therefore, lab was method compliant.

FD evaluation: there were no FD samples associated with the samples in this SDG; therefore, precision from sample collection through analysis could not be evaluated. See DV Checklists for SDGs JCW24 & JCW26 for Groundwater FD evaluation.

Tunes *:* Instrument HP09915 11/4/19 (ICAL) & 11/23/19. Verified that Method 8260C criteria used for Tune acceptance. All Abundances were acceptable and all samples were analyzed within 12 hours of tune. Average of scans across peak with background correction used to generate tunes - acceptable. No action required.

Date: ***12/28/19***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

ICAL: HP09915 analyzed on 11/4/19 7-level ICAL from 1 to 300 µg/L for 22 project-specific VOCs except for 1,4-Dioxane, which was analyzed from 50 to 3000 µg/L, plus many non-project required VOCs. Min. RRF and Maximum %RSD given Method 8260C were achieved for all compounds in the ICAL - valid ICAL - No Action required.

CCV: HP09915 11/23/19. CCV min. RRF and maximum %D achieved for all target compounds in CCV except: 1,4-dioxane %D > 20% (Method 8260C criteria) due to enhanced sensitivity to detection of 1,4-dioxane as compared to sensitivity during ICAL. Since 1,4-dioxane was non-detect in all samples, no action for enhanced sensitivity of the instrument for this compound on the days of sample analyses.

Internal Standards (IS): lab used four IS (t-butyl alcohol-d10, fluorobenzene, chlorobenzene-d5, and 1,4-dichlorobenzene-d4) as compared to three IS' required by NYSDEC ASP2005 (1,4-difluorobenzene, chlorobenzene-d5, and 1,4-dichlorobenzene-d4) - this is acceptable based upon lab using SW-846 method for analysis. All 4 IS Areas and Retention Times were in criteria in all samples and QC - No Action required.

Compound Reporting: Lab reported results for all 22 project-specific VOCs requested in SAP Table 3-2.

Samples were all analyzed once without dilution (i.e., DF=1) - no secondary dilution analyses required.

Sensitivity: All non-detects were reported at QL supported by the Initial Calibration. Since there are no Project Action Limits for this work (see SAP Table 3-2); sensitivity for these data was acceptable. No Action required.

Qualifier Action: there were 12 results reported at levels < QL and flagged "J" by the laboratory. All other data were either non-detect (flagged "U") at the QL or were detected and not qualified.
****ACTION: 12 J-qualified results reported by the laboratory accepted as estimated (J) data due to result < QL***

Calculation check: Trichloroethene in sample J20-UC01 (lab sample ID 1205911)

Response of Cpd = 6107 ; Response of IS (Fluorobenzene) = 1115518 @ 50; 5-mL purge, DF = 1; RRF from ICAL = 0.2561

Lowest Level ICAL std =1 µg/L for 5 mL purge

Sample-Specific QL: Sample-Specific QL based on 1 µg/L lowest std = 1 x 1 = 1 µg/L √

$$\text{Trichloroethene Conc.} = \frac{6107 \times 50 \times 1}{1115518 \times 0.2561} = 1.07 = 1\ \mu g/L$$ √

The sample chromatogram, mass spectra of detects and quantitation report was scanned and data appeared to have been reported correctly.

Narrative: the narrative did not mention any issues with quality that would affect the sample data - No Action required

SW-846 Method 8260C, Region II DV SOP, and NYSDEC ASP2005 - ACTIONS

Preservation:	Temperature upon receipt 4°±°2C; use judgment if outside criteria if Method 5035a not followed
HT:	waters- pH >2 or no HCl: 7d<HT; J- det/R NDs
	pH < 2, 14d <HT; J- det/R NDs
	low- or medium-level solid - 14d <HT< 28 d, J det/J NDs; HT > 28 days, J- det/R NDs
	unfrozen solid - 48 hrs < HT < 96 hrs, J det/J NDs; HT > 96hrs, J- det/R NDs
Surrogates:	Criteria per Table 11A of NYSDEC ASP2005 Exhibit E or lab limits as long as results within ± 10% of ASP limits
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs.
LCS:	Lab limits accepted since LCS not required for NYSDEC ASP2005
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs.
Tunes:	Samples analyzed within 12-hrs and criteria met per Table 3, Method 8260C. If out, use professional judgment.
ICAL:	minimum 5-Level ; min. RRF and %RSD per Method 8260C criteria.
CCV:	min. RRF and %D per Method 8260C criteria.
Blanks:	If contamination in method blank or matrix-related blank(s) exist, comparison of the blank to the samples must take into consideration all sample-specific preparation and analysis factors (e.g., dilution used in analysis, dry weights analyzed, etc.). Blank Action Level (BAL) = Blank QL on a sample-equivalent basis (or 2x Blank QL for 2-butanone, acetone, and methylene chloride) if the result in blank < QL or the value of the Blank on a sample-equivalent basis if result in Blank is > QL. If the sample value is < sample-specific BAL, negate (U) at sample QL if sample result < QL or at the value found in the sample if this value is > sample QL but < sample-equivalent BAL. If sample value > sample-equivalent BAL, no action required.
	Non-Matrix-related Blank contamination: Blank Action taken the sample way as for matrix-related blanks except data are not negated but are estimated (J+ or J) depending on professional judgment.
MS/MSD:	Table 12 of Exhibit E, NYSDEC ASP2005 or lab limits as long as results within ± 10% of ASP limits
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs- Unspiked Sample only. RPD > Control limit, J det / J ND; %RSD of non-spiked > 50%, J det
FD:	Both Conc. > 2xQL, RPD >30% (water) 50% (soil), J det; One result ND, other >2 x QL, J det/J NDs; Both Conc. < 2xQL; RPD >criteria, LCS OK, Accept data
IS:	20% ≤ Area < 50% of IS in CCAL , J det/ J NDs; Area < 20% of CCAL, J det / R NDs; Area > 150% IS in CCAL, J det / Accept NDs. Overall bias for IS outside criteria considered indeterminate since a it is unclear whether low IS is a mis-spike of IS (causing low of high bias in results using the IS that's out of criteria) or whether entire region of GC/MS is affected causing IS and results to be equally affected so no bias in results. This action is taken based on professional judgment.
%solids	If %solids < 50%, J det/J NDs; if %solids <10%, J det/R NDs (Region II SOP). Not applicable to this SAP.

Date: ***12/28/19***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

SW-846 Method 8260C, Region II DV SOP, and NYSDEC ASP2005 - ACTIONS *(continued)*

Compound List:	22 Compounds listed in Table 3-2 of SAP reported for all samples
QLs:	If result > upper calibration range, J result, if result < lowest calibration standard, J result. Verify all J data reported properly, if applicable. Verify QLs are sample specific and that all compounds requested were reported.
TICs:	If a VOC compound reported from another analysis or target VOC is reported as a TIC, the data are rejected (R). TICs that have no identification (i.e., reported as "Unknown") are estimated (J) and those TICs that are reported with a CAS#, are estimated with presumptive evidence for identification (JN). Professional judgment used to accept or reject TICs. Not required for this SAP.
DV Qualifier Definitions:	U = analyte is non-detect at the sample-specific Quantitation Limit (usable); UJ = non-detect is usable as an estimated value; J = result is usable as an estimated value with indeterminate bias; J+ = result is usable as an estimated value with possible high bias; J- = result is usable as an estimated value with possible low bias; JN = the analyte has been "tentatively identified" and the result is usable as an estimated value with indeterminate bias; R = result is rejected due to severe QC exceedance and unusable for project objectives. Bias: L = Low; H = High; I = Indeterminate.
Sensitivity:	QLs reported must be supported by the Initial Calibration. Table 3-2 of SAP indicates that there are no Project Action Limits for VOCs in Groundwater, Surface Water, and Pore Water samples; therefore, sensitivity is acceptable in QLs are properly reported.
References:	*Sampling and Analysis Plan Physical Containment with Groundwater Treatment, Former Dennison/Monarch Systems Site, Operable Unit 01, New Windsor, New York, NYSDEC Site No. 336090;* prepared for Avery Dennison Corporation by The Johnson Company (VHB), November 2018*;* NYSDEC *DER-10, Technical Guidance for Site Investigation and Remediation* (May 3, 2010 with updates through April 9, 2019); NYSDEC *6 NYCRR Part 375 (December 14, 2006);* SW-846 Method 8260B; and USEPA Region II, USEPA Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Methods 8260B & 8260C, SOP# HW-24; rev. 4 (October 2014).

VHB: Former Dennison/Monarch Systems Site, Operable Unit 01, New Windsor, NY

Date Sampled: 11/14/19 - 11/15/19
Method of Analysis: 8260C

No. Samples: 8 + 1FD + 1EB
Matrix: Groundwater

Data Element Acceptable	Preservation & HT	Surrogates	LCS / Blank Spike	MS/MSD	FD	Tunes ICALs CCALs	IS'	QL & Quant. Correct	%Solids	Blank Action
Yes	√	√	√	NA	√	√	√	√	NA	√
No										None

Comments: ***Qualifier Action:*** 9 J-qualified results reported by the laboratory accepted as estimated (J) data due to result < QL

The data package consisted of a NYDEC Category B deliverable.

Data Package Completeness:

1. Were all required forms (results, summary QC, COC), as required to validate the data in accordance with NYSDEC ASP 2005 and DUSR requirements present in the data package? *Yes.*

2. Were all result forms for all samples listed on the chain-of-custody present in data package? Yes. Samples were reported on summary forms using the laboratory IDs (ELLE#) and Lab Sample Code. A Sample Reference List in the data package cross references the COC Client ID to the ELLE Lab Sample Number and Lab Sample Codes.

Sample Receiving: Samples were received intact on 11/19/19 at < 6 °C. These are grab samples that were preserved with HCl. The sample receipt documentation indicates that a Trip Blank was received with this shipment; however, that was not the case. This is a laboratory documentation error. There were no COC issues noted by the lab.

Holding Time: The samples were verified to be at pH < 2 at the time of analysis. All samples except J13-BR01 were analyzed in QC Batch L193262AA on 11/22/19 and sample J13-BR01 was analyzed in QC Batch L193271AA on 11/23/19. All samples were analyzed within HT - No Action required.

Date: ***12/30/19***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

Blank Action: Blanks Reviewed: Method Blank: VBLKL86 & VBLKL87

Trip Blank = none; EB: EB-111519-NLS (reported in this SDG JCW24) & EB-AWR-111919 (reported in SDG JCW26)

Blank ID	Contaminant / Level	Matrix Related?	Action Level / Action	Sample and Reported Result	Corrected Result
VBLKL86	None	-	-	No Blank Action required	
VBLKL87	None	-	-	No Blank Action required	
EB-111519-NLS	None	-	-	No Blank Action required	
EB-AWR-111919	None	-	-	No Blank Action required	

Surrogates: The lab used surrogate dibromofluoromethane and 1,2-dichloroethane-d4 in addition to toluene-d8 and 4-bromofluorobenzene, which are in ASP2005. Since SW-846 method used for analysis allows use of alternate surrogates, no action required. All surrogates are within NYSDEC ASP2005 or lab criteria (80-120%) - no action required.

LCS /LCSD: L193262AA LCS/LCSD & L193271AA LCS - no LCSD performed for second QC Batch. The lab spiked all 22 project-specific VOCs into LCS as compared to NYSDEC ASP 2005 requirement of a subset of compounds. All LCS %Rec and LCS/LCSD RPDs were within lab criteria. Therefore, the lab demonstrated acceptable accuracy and precision for the analysis of the 22 project-specific VOCs in the absence of the site matrix. No Action required.

MS/MSD: none performed on the samples in this SDG and none were requested on the COC. Lab analyzed MS/MSD for these QC Batches on samples not reported in this SDG; therefore, lab was method compliant.

Tunes : Instrument HP09915 11/4/19 (ICAL), 11/22/19 & 11/23/19. Verified that Method 8260C criteria used for Tune acceptance. All Abundances were acceptable and all samples were analyzed within 12 hours of tune. Average of scans across peak with background correction used to generate tunes - acceptable. No action required.

Date: ***12/30/19***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

ICAL: HP09915 analyzed on 11/4/19 7-level ICAL from 1 to 300 µg/L for 22 project-specific VOCs except for 1,4-Dioxane, which was analyzed from 50 to 3000 µg/L, plus many non-project required VOCs. Min. RRF and Maximum %RSD given Method 8260C were achieved for all compounds in the ICAL - valid ICAL - No Action required.

CCV: HP09915 11/22/19 & 11/23/19. CCV min. RRF and maximum %D achieved for all target compounds in both CCVs except: 1,4-dioxane %D > 20% (Method 8260C criteria) due to enhanced sensitivity to detection of 1,4-dioxane as compared to sensitivity during ICAL. Since 1,4-dioxane was non-detect in all samples, no action for enhanced sensitivity of the instrument for this compound on the days of sample analyses.

Internal Standards (IS): lab used four IS (t-butyl alcohol-d10, fluorobenzene, chlorobenzene-d5, and 1,4-dichlorobenzene-d4) as compared to three IS' required by NYSDEC ASP2005 (1,4-difluorobenzene, chlorobenzene-d5, and 1,4-dichlorobenzene-d4) - this is acceptable based upon lab using SW-846 method for analysis. All 4 IS Areas and Retention Times were in criteria in all samples and QC - No Action required.

Compound Reporting: Lab reported results for all 22 project-specific VOCs requested in SAP Table 3-2.

Samples were all analyzed once without dilution (i.e., DF=1) - no secondary dilution analyses required.

Sensitivity: All non-detects were reported at QL supported by the Initial Calibration. Since there are no Project Action Limits for this work (see SAP Table 3-2); sensitivity for these data was acceptable. No Action required.

Qualifier Action: there were 9 results reported at levels < QL and flagged "J" by the laboratory. The result for 1,1-dichloroethene in sample J13-UC02 was reported at the QL (1 µg/L) but was flagged as an estimated result by the lab since the value to more than 1 significant figure was < 1 µg/L; therefore, since the lab qualified this result as a "J" value, this was accepted for association with the final DV qualifier. All other data were either non-detect (flagged "U") at the QL or were detected and not qualified.
****ACTION: 9 J-qualified results reported by the laboratory accepted as estimated (J) data due to result < QL***

Calculation check: Trichloroethene in sample J13-UC02 (lab sample ID 1205919)

Response of Cpd = 628937 ; Response of IS (Fluorobenzene) = 1184916 @ 50; 5-mL purge, DF = 1; RRF from ICAL = 0.2561

Lowest Level ICAL std =1 µg/L for 5 mL purge

Sample-Specific QL: Sample-Specific QL based on 1 µg/L lowest std = 1 x 1 = 1 µg/L √

$$\text{Trichloroethene Conc.} = \frac{628937 \times 50 \times 1}{1184916 \times 0.2561} = 104 = 100\ \mu g/L$$ √

The sample chromatogram, mass spectra of detects and quantitation report was scanned and data appeared to have been reported correctly.

Narrative: the narrative did not mention any issues with quality that would affect the sample data - No Action required

FD evaluation: FD pair was J05-BR02 / DUP-01. A comparison of detected results in this FD pair is shown below

Field Duplicate Evaluation_ Sample IDs: Sample = J05-BR02 FD = DUP-01

Analyte Name	DF= 1 QL (µg/L)	Sample µg/L	Q	Sample Result Level	FD µg/L	Q	FD Result Level	RPD	Action *
Vinyl Chloride	1	0.4	J	< 2 x QL	0.4	J	< 2 x QL	0.0%	None
1,1-Dichloroethene	1	0.2	J	< 2 x QL	0.3	J	< 2 x QL	40.0%	None *
1,1-Dichloroethane	1	1		< 2 x QL	1		< 2 x QL	0.0%	None
cis-1,2-Dichloroethene	1	1		< 2 x QL	1		< 2 x QL	0.0%	None
1,1,1-Trichloroethane	1	0.6	J	> 2 x QL	0.6	J	> 2 x QL	0.0%	None
Trichloroethene	1	7		> 2 x QL	7		> 2 x QL	0.0%	None

Q = Validation Qualifier

*Action only taken for RPD > 30% if one or both results are > 2 x QL

FD precision was acceptable for all VOCs in FD pair J05-BR02 and DUP-01 indicating acceptable precision from sample collection through analysis for this site location for the 22 VOCs analyzed - No Action required.

Date: ***12/30/19***

Data Reviewer: ***Nancy C. Rothman, Ph.D.***

SW-846 Method 8260C, Region II DV SOP, and NYSDEC ASP2005 - ACTIONS

Preservation:	Temperature upon receipt 4°±°2C; use judgment if outside criteria if Method 5035a not followed
HT:	waters- pH >2 or no HCl: 7d<HT; J- det/R NDs
	pH < 2, 14d <HT; J- det/R NDs
	low- or medium-level solid - 14d <HT< 28 d, J det/J NDs; HT > 28 days, J- det/R NDs
	unfrozen solid - 48 hrs < HT < 96 hrs, J det/J NDs; HT > 96hrs, J- det/R NDs
Surrogates:	Criteria per Table 11A of NYSDEC ASP2005 Exhibit E or lab limits as long as results within ± 10% of ASP limits
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs.
LCS:	Lab limits accepted since LCS not required for NYSDEC ASP2005
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs.
Tunes:	Samples analyzed within 12-hrs and criteria met per Table 3, Method 8260C. If out, use professional judgment.
ICAL:	minimum 5-Level ; min. RRF and %RSD per Method 8260C criteria.
CCV:	min. RRF and %D per Method 8260C criteria.
Blanks:	If contamination in method blank or matrix-related blank(s) exist, comparison of the blank to the samples must take into consideration all sample-specific preparation and analysis factors (e.g., dilution used in analysis, dry weights analyzed, etc.). Blank Action Level (BAL) = Blank QL on a sample-equivalent basis (or 2x Blank QL for 2-butanone, acetone, and methylene chloride) if the result in blank < QL or the value of the Blank on a sample-equivalent basis if result in Blank is > QL. If the sample value is < sample-specific BAL, negate (U) at sample QL if sample result < QL or at the value found in the sample if this value is > sample QL but < sample-equivalent BAL. If sample value > sample-equivalent BAL, no action required.
	Non-Matrix-related Blank contamination: Blank Action taken the sample way as for matrix-related blanks except data are not negated but are estimated (J+ or J) depending on professional judgment.
MS/MSD:	Table 12 of Exhibit E, NYSDEC ASP2005 or lab limits as long as results within ± 10% of ASP limits
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs- Unspiked Sample only. RPD > Control limit, J det / J ND; %RSD of non-spiked > 50%, J det
FD:	Both Conc. > 2xQL, RPD >30% (water) 50% (soil), J det; One result ND, other >2 x QL, J det/J NDs; Both Conc. < 2xQL; RPD >criteria, LCS OK, Accept data
IS:	20% ≤ Area < 50% of IS in CCAL , J det/ J NDs; Area < 20% of CCAL, J det / R NDs; Area > 150% IS in CCAL, J det / Accept NDs. Overall bias for IS outside criteria considered indeterminate since a it is unclear whether low IS is a mis-spike of IS (causing low of high bias in results using the IS that's out of criteria) or whether entire region of GC/MS is affected causing IS and results to be equally affected so no bias in results. This action is taken based on professional judgment.
%solids	If %solids < 50%, J det/J NDs; if %solids <10%, J det/R NDs (Region II SOP). Not applicable to this SAP.

SW-846 Method 8260C, Region II DV SOP, and NYSDEC ASP2005 - ACTIONS *(continued)*

Compound List:	22 Compounds listed in Table 3-2 of SAP reported for all samples
QLs:	If result > upper calibration range, J result, if result < lowest calibration standard, J result. Verify all J data reported properly, if applicable. Verify QLs are sample specific and that all compounds requested were reported.
TICs:	If a VOC compound reported from another analysis or target VOC is reported as a TIC, the data are rejected (R). TICs that have no identification (i.e., reported as "Unknown") are estimated (J) and those TICs that are reported with a CAS#, are estimated with presumptive evidence for identification (JN). Professional judgment used to accept or reject TICs. Not required for this SAP.
DV Qualifier Definitions:	U = analyte is non-detect at the sample-specific Quantitation Limit (usable); UJ = non-detect is usable as an estimated value; J = result is usable as an estimated value with indeterminate bias; J+ = result is usable as an estimated value with possible high bias; J- = result is usable as an estimated value with possible low bias; JN = the analyte has been "tentatively identified" and the result is usable as an estimated value with indeterminate bias; R = result is rejected due to severe QC exceedance and unusable for project objectives. Bias: L = Low; H = High; I = Indeterminate.
Sensitivity:	QLs reported must be supported by the Initial Calibration. Table 3-2 of SAP indicates that there are no Project Action Limits for VOCs in Groundwater, Surface Water, and Pore Water samples; therefore, sensitivity is acceptable in QLs are properly reported.
References:	*Sampling and Analysis Plan Physical Containment with Groundwater Treatment, Former Dennison/Monarch Systems Site, Operable Unit 01, New Windsor, New York, NYSDEC Site No. 336090;* prepared for Avery Dennison Corporation by The Johnson Company (VHB), November 2018*;* NYSDEC *DER-10, Technical Guidance for Site Investigation and Remediation* (May 3, 2010 with updates through April 9, 2019); NYSDEC *6 NYCRR Part 375 (December 14, 2006);* SW-846 Method 8260B; and USEPA Region II, USEPA Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Methods 8260B & 8260C, SOP# HW-24; rev. 4 (October 2014).

Lab: Eurofins Lancaster Laboratories

Volatile Data Review Checklist

SDG#: JCW25

VHB: Former Dennison/Monarch Systems Site, Operable Unit 01, New Windsor, NY

Date Sampled: 11/15/19

Method of Analysis: 8260C

No. Samples: 2

Matrix: Groundwater

Data Element Acceptable	Preservation & HT	Surrogates	LCS / Blank Spike	MS/MSD	FD	Tunes ICALs CCALs	IS'	QL & Quant. Correct	%Solids	Blank Action
Yes	√	√	√	NA	NA	√	√	√	NA	√
No										None

Comments: ***Qualifier Action:*** none

The data package consisted of a NYDEC Category B deliverable.

Data Package Completeness:

1. Were all required forms (results, summary QC, COC), as required to validate the data in accordance with NYSDEC ASP 2005 and DUSR requirements present in the data package? *Yes.*

2. Were all result forms for all samples listed on the chain-of-custody present in data package? Yes. Samples were reported on summary forms using the laboratory IDs (ELLE#) and Lab Sample Code. A Sample Reference List in the data package cross references the COC Client ID to the ELLE Lab Sample Number and Lab Sample Codes.

Sample Receiving: Samples were received intact on 11/19/19 at < 6 °C. These are grab samples that were preserved with HCl. There were no COC issues noted by the lab.

Holding Time: The samples were verified to be at pH < 2 at the time of analysis. Samples were all analyzed on 11/23/19 in QC Batch L193271AA. All samples were analyzed within HT - No Action required.

Date: ***12/30/19***

Data Reviewer: ***Nancy C. Rothman, Ph.D.***

Blank Action: Blanks Reviewed: Method Blank: VBLKL87

Trip Blank = none; EB: EB-111519-NLS (reported in JCW24) & EB-AWR-111919 (reported in SDG JCW26)

Blank ID	Contaminant / Level	Matrix Related?		Action Level / Action		Sample and Reported Result	Corrected Result
VBLKL87	None	-		-		No Blank Action required	
EB-111519-NLS	None	-		-		No Blank Action required	
EB-AWR-111919	None	-		-		No Blank Action required	

Surrogates: The lab used surrogate dibromofluoromethane and 1,2-dichloroethane-d4 in addition to toluene-d8 and 4-bromofluorobenzene, which are in ASP2005. Since SW-846 method used for analysis allows use of alternate surrogates, no action required. All surrogates are within NYSDEC ASP2005 or lab criteria (80-120%) - no action required.

LCS /LCSD: L193271AA LCS - no LCSD performed. The lab spiked all 22 project-specific VOCs into LCS as compared to NYSDEC ASP 2005 requirement of a subset of compounds. All LCS %Rec were within lab criteria. Therefore, the lab demonstrated acceptable accuracy for the analysis of the 22 project-specific VOCs in the absence of the site matrix. No Action required.

MS/MSD: none performed on the samples in this SDG and not requested on the COC. Batch QC MS/MSD performed by the lab on a sample not reported in this SDG; therefore, the lab was method compliant.

FD evaluation: there were no FD samples associated with the samples in this SDG; therefore, precision from sample collection through analysis could not be evaluated. See DV Checklists for SDGs JCW24 & JCW26 for Groundwater FD evaluation.

Tunes : Instrument HP09915 11/4/19 (ICAL) & 11/23/19. Verified that Method 8260C criteria used for Tune acceptance. All Abundances were acceptable and all samples were analyzed within 12 hours of tune. Average of scans across peak with background correction used to generate tunes - acceptable. No action required.

Date: ***12/30/19***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

ICAL: HP09915 analyzed on 11/4/19 7-level ICAL from 1 to 300 µg/L for 22 project-specific VOCs except for 1,4-Dioxane, which was analyzed from 50 to 3000 µg/L, plus many non-project required VOCs. Min. RRF and Maximum %RSD given Method 8260C were achieved for all compounds in the ICAL - valid ICAL - No Action required.

CCV: HP09915 11/23/19. CCV min. RRF and maximum %D achieved for all target compounds in CCV except: 1,4-dioxane %D > 20% (Method 8260C criteria) due to enhanced sensitivity to detection of 1,4-dioxane as compared to sensitivity during ICAL. Since 1,4-dioxane was non-detect in all samples, no action for enhanced sensitivity of the instrument for this compound on the day of sample analyses.

Internal Standards (IS): lab used four IS (t-butyl alcohol-d10, fluorobenzene, chlorobenzene-d5, and 1,4-dichlorobenzene-d4) as compared to three IS' required by NYSDEC ASP2005 (1,4-difluorobenzene, chlorobenzene-d5, and 1,4-dichlorobenzene-d4) - this is acceptable based upon lab using SW-846 method for analysis. All 4 IS Areas and Retention Times were in criteria in all samples and QC - No Action required.

Compound Reporting: Lab reported results for all 22 project-specific VOCs requested in SAP Table 3-2.

Samples were all analyzed once without dilution (i.e., DF=1) - no secondary dilution analyses required.

Sensitivity: All non-detects were reported at QL supported by the Initial Calibration. Since there are no Project Action Limits for this work (see SAP Table 3-2); sensitivity for these data was acceptable. No Action required.

Qualifier Action: there were no results reported at levels < QL. All data were either non-detect (flagged "U") at the QL or were detected and not qualified. No qualifier action required.

Calculation check: Trichloroethene in sampleJ08-UC02 (lab sample ID 1205929)

Sample-Specific QL:

Response of Cpd = 10567 ; Response of IS (Fluorobenzene) = 1055579 @ 50; 5-mL purge, DF = 1; RRF from ICAL = 0.2561

Lowest Level ICAL std =1 µg/L for 5 mL purge

Sample-Specific QL based on 1 µg/L lowest std = 1 x 1 = 1 µg/L √

$$\text{Trichloroethene Conc.} = \frac{10567 \times 50 \times 1}{1055579 \times 0.2561} = 1.95 = 2\ \mu g/L$$ √

The sample chromatogram, mass spectra of detects and quantitation report was scanned and data appeared to have been reported correctly.

Narrative: the narrative did not mention any issues with quality that would affect the sample data - No Action required

SW-846 Method 8260C, Region II DV SOP, and NYSDEC ASP2005 - ACTIONS

Preservation:	Temperature upon receipt 4°±°2C; use judgment if outside criteria if Method 5035a not followed
HT:	waters- pH >2 or no HCl: 7d<HT; J- det/R NDs
	pH < 2, 14d <HT; J- det/R NDs
	low- or medium-level solid - 14d <HT< 28 d, J det/J NDs; HT > 28 days, J- det/R NDs
	unfrozen solid - 48 hrs < HT < 96 hrs, J det/J NDs; HT > 96hrs, J- det/R NDs
Surrogates:	Criteria per Table 11A of NYSDEC ASP2005 Exhibit E or lab limits as long as results within ± 10% of ASP limits
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs.
LCS:	Lab limits accepted since LCS not required for NYSDEC ASP2005
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs.
Tunes:	Samples analyzed within 12-hrs and criteria met per Table 3, Method 8260C. If out, use professional judgment.
ICAL:	minimum 5-Level ; min. RRF and %RSD per Method 8260C criteria.
CCV:	min. RRF and %D per Method 8260C criteria.
Blanks:	If contamination in method blank or matrix-related blank(s) exist, comparison of the blank to the samples must take into consideration all sample-specific preparation and analysis factors (e.g., dilution used in analysis, dry weights analyzed, etc.). Blank Action Level (BAL) = Blank QL on a sample-equivalent basis (or 2x Blank QL for 2-butanone, acetone, and methylene chloride) if the result in blank < QL or the value of the Blank on a sample-equivalent basis if result in Blank is > QL. If the sample value is < sample-specific BAL, negate (U) at sample QL if sample result < QL or at the value found in the sample if this value is > sample QL but < sample-equivalent BAL. If sample value > sample-equivalent BAL, no action required.
	Non-Matrix-related Blank contamination: Blank Action taken the sample way as for matrix-related blanks except data are not negated but are estimated (J+ or J) depending on professional judgment.
MS/MSD:	Table 12 of Exhibit E, NYSDEC ASP2005 or lab limits as long as results within ± 10% of ASP limits
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs- Unspiked Sample only. RPD > Control limit, J det / J ND; %RSD of non-spiked > 50%, J det
FD:	Both Conc. > 2xQL, RPD >30% (water) 50% (soil), J det; One result ND, other >2 x QL, J det/J NDs; Both Conc. < 2xQL; RPD >criteria, LCS OK, Accept data
IS:	20% ≤ Area < 50% of IS in CCAL , J det/ J NDs; Area < 20% of CCAL, J det / R NDs; Area > 150% IS in CCAL, J det / Accept NDs. Overall bias for IS outside criteria considered indeterminate since a it is unclear whether low IS is a mis-spike of IS (causing low of high bias in results using the IS that's out of criteria) or whether entire region of GC/MS is affected causing IS and results to be equally affected so no bias in results. This action is taken based on professional judgment.
%solids	If %solids < 50%, J det/J NDs; if %solids <10%, J det/R NDs (Region II SOP). Not applicable to this SAP.

SW-846 Method 8260C, Region II DV SOP, and NYSDEC ASP2005 - ACTIONS *(continued)*

Compound List:	22 Compounds listed in Table 3-2 of SAP reported for all samples
QLs:	If result > upper calibration range, J result, if result < lowest calibration standard, J result. Verify all J data reported properly, if applicable. Verify QLs are sample specific and that all compounds requested were reported.
TICs:	If a VOC compound reported from another analysis or target VOC is reported as a TIC, the data are rejected (R). TICs that have no identification (i.e., reported as "Unknown") are estimated (J) and those TICs that are reported with a CAS#, are estimated with presumptive evidence for identification (JN). Professional judgment used to accept or reject TICs. Not required for this SAP.
DV Qualifier Definitions:	U = analyte is non-detect at the sample-specific Quantitation Limit (usable); UJ = non-detect is usable as an estimated value; J = result is usable as an estimated value with indeterminate bias; J+ = result is usable as an estimated value with possible high bias; J- = result is usable as an estimated value with possible low bias; JN = the analyte has been "tentatively identified" and the result is usable as an estimated value with indeterminate bias; R = result is rejected due to severe QC exceedance and unusable for project objectives. Bias: L = Low; H = High; I = Indeterminate.
Sensitivity:	QLs reported must be supported by the Initial Calibration. Table 3-2 of SAP indicates that there are no Project Action Limits for VOCs in Groundwater, Surface Water, and Pore Water samples; therefore, sensitivity is acceptable in QLs are properly reported.
References:	*Sampling and Analysis Plan Physical Containment with Groundwater Treatment, Former Dennison/Monarch Systems Site, Operable Unit 01, New Windsor, New York, NYSDEC Site No. 336090;* prepared for Avery Dennison Corporation by The Johnson Company (VHB), November 2018*;* NYSDEC *DER-10, Technical Guidance for Site Investigation and Remediation* (May 3, 2010 with updates through April 9, 2019); NYSDEC *6 NYCRR Part 375 (December 14, 2006);* SW-846 Method 8260B; and USEPA Region II, USEPA Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Methods 8260B & 8260C, SOP# HW-24; rev. 4 (October 2014).

VHB: Former Dennison/Monarch Systems Site, Operable Unit 01, New Windsor, NY

Date Sampled: 11/17/19 - 11/19/19
Method of Analysis: 8260C

No. Samples: 14 + 2FD + 1EB + 1TB
Matrix: Groundwater

Data Element Acceptable	Preservation & HT	Surrogates	LCS / Blank Spike	MS/MSD	FD	Tunes ICALs CCALs	IS'	QL & Quant. Correct	%Solids	Blank Action
Yes	√	√	√	NA	√	√	√	√	NA	√
No										None

Comments: ***Qualifier Action:*** 12 J-qualified results reported by the laboratory accepted as estimated (J) data due to result < QL

The data package consisted of a NYDEC Category B deliverable.

Data Package Completeness:

1. Were all required forms (results, summary QC, COC), as required to validate the data in accordance with NYSDEC ASP 2005 and DUSR requirements present in the data package? *Yes.*

2. Were all result forms for all samples listed on the chain-of-custody present in data package? Yes. Samples were reported on summary forms using the laboratory IDs (ELLE#) and Lab Sample Code. A Sample Reference List in the data package cross references the COC Client ID to the ELLE Lab Sample Number and Lab Sample Codes.

Sample Receiving: Samples were received intact on 11/20/19 at < 6 °C. These are grab samples that were preserved with HCl. There were no COC issues noted by the lab.

Holding Time: The samples were verified to be at pH < 2 at the time of analysis. Samples were analyzed in 3 QC Batches: E193301AA on 11/26/19; L193271AA on 11/23/19; and Y193312AA on 11/27-11/28/19. All samples were analyzed within HT - No Action required.

Date: ***1/2/20***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

Blank Action: Blanks Reviewed: Method Blank: VBLKE76, VBLKL87, & VBLKY09

Trip Blank = TB-AWR-111719; EB: EB-111519-NLS (reported in this SDG JCW24) & EB-AWR-111919 (reported in this SDG)

Blank ID	Contaminant / Level	Matrix Related?	Action Level / Action	Sample and Reported Result	Corrected Result
VBLKE76	None	-	-	No Blank Action required	
VBLKL87	None	-	-	No Blank Action required	
VBLKY09	None	-	-	No Blank Action required	
TB-AWR-111719	None	-	-	No Blank Action required	
EB-111519-NLS	None	-	-	No Blank Action required	
EB-AWR-111919	None	-	-	No Blank Action required	

Surrogates: The lab used surrogate dibromofluoromethane and 1,2-dichloroethane-d4 in addition to toluene-d8 and 4-bromofluorobenzene, which are in ASP2005. Since SW-846 method used for analysis allows use of alternate surrogates, no action required. All surrogates are within NYSDEC ASP2005 or lab criteria (80-120%) - no action required.

LCS /LCSD: E193301AA LCS/LCSD, L193271AA LCS, & Y193312AA LCS/LCSD - no LCSD performed for L193271AA QC Batch. The lab spiked all 22 project-specific VOCs into LCS as compared to NYSDEC ASP 2005 requirement of a subset of compounds. All LCS %Rec and LCS/LCSD RPDs were within lab criteria. Therefore, the lab demonstrated acceptable accuracy and precision for the analysis of the 22 project-specific VOCs in the absence of the site matrix. No Action required.

MS/MSD: none performed on the samples in this SDG and none were requested on the COC. Lab analyzed MS/MSD for these QC Batches on samples not reported in this SDG; therefore, lab was method compliant.

Tunes *:* Instruments HP09355 9/10/19 (ICAL) & 11/27/19; HP09915 11/4/19 (ICAL) & 11/23/19; and HP15648 11/25/19 (ICAL) & 11/26/19. Verified that Method 8260C criteria used for Tune acceptance. All Abundances were acceptable and all samples were analyzed within 12 hours of tune. Average of scans across peak with background correction used to generate tunes - acceptable. No action required.

Date: ***1/2/20***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

ICALs: HP09355 on 9/10/19; HP09915 on 11/4/19; and HP15648 on 11/25/19 7-level ICALs from 1 to 300 µg/L for 22 project-specific VOCs except for 1,4-Dioxane, which was analyzed from 50 to 3000 µg/L, plus many non-project required VOCs. Min. RRF and Maximum %RSD given Method 8260C were achieved for all compounds in these three ICALs - valid ICALs - No Action required.

CCV: HP09355 11/27/19; HP09915 11/23/19; and HP15648 11/26/19. CCV min. RRF and maximum %D achieved for all target compounds in all three CCVs except: 1,4-dioxane %D > 20% (Method 8260C criteria) due to enhanced sensitivity to detection of 1,4-dioxane as compared to sensitivity during ICAL for HP09915 11/23/19 CCV. Since 1,4-dioxane was non-detect in all samples, no action for enhanced sensitivity of instrument HP09915 for this compound on the day of sample analysis.

Internal Standards (IS): lab used four IS (t-butyl alcohol-d10, fluorobenzene, chlorobenzene-d5, and 1,4-dichlorobenzene-d4) as compared to three IS' required by NYSDEC ASP2005 (1,4-difluorobenzene, chlorobenzene-d5, and 1,4-dichlorobenzene-d4) - this is acceptable based upon lab using SW-846 method for analysis. All 4 IS Areas and Retention Times were in criteria in all samples and QC - No Action required.

Compound Reporting: Lab reported results for all 22 project-specific VOCs requested in SAP Table 3-2.

Samples were all analyzed without dilution (i.e., DF=1) and samples J23-UC02, J23-UC01, Dup-02, and MW-2 were reanalyzed at DF=10 to report trichloroethene within the linear calibration range (DF=1 analyses of these samples reported trichloroethene over the calibration range). A review of the data indicate that the dilutions were appropriate.

Sensitivity: All non-detects were reported at QL supported by the Initial Calibration. Since there are no Project Action Limits for this work (see SAP Table 3-2); sensitivity for these data was acceptable. No Action required.

Qualifier Action: there were 12 results reported at levels < QL and flagged "J" by the laboratory. All other data were either non-detect (flagged "U") at the QL or were detected and not qualified.
****ACTION: 12 J-qualified results reported by the laboratory accepted as estimated (J) data due to result < QL***

Calculation check: Trichloroethene in sample J23-UC01 (lab sample ID 1206733)

Response of Cpd = 295601 ; Response of IS (Fluorobenzene) = 998567 @ 50; 5-mL purge, DF = 10; RRF from ICAL = 0.2800 (HP09355)
Lowest Level ICAL std =1 µg/L for 5 mL purge

Sample-Specific QL: Sample-Specific QL based on 1 µg/L lowest std = 1 x 10 = 10 µg/L √

$$\text{Trichloroethene Conc.} = \frac{295601 \times 50 \times 10}{998567 \times 0.2800} = 528 = 530\ \mu g/L$$ √

The sample chromatogram, mass spectra of detects and quantitation report was scanned and data appeared to have been reported correctly.

Narrative: the narrative did not mention any issues with quality that would affect the sample data - No Action required

FD evaluation: FD pair was MW-2 / DUP-02 & MW-1S / DUP-03. A comparison of detected results in these two FD pairs is shown below

Field Duplicate Evaluation_ Sample IDs: Sample = MW-2 FD = DUP-02

Analyte Name	DF= 1 & 10 QL (µg/L)	Sample µg/L	Q	Sample Result Level	FD µg/L	Q	FD Result Level	RPD	Action *
1,1-Dichloroethene	1	7		>2 x QL	7		> 2 x QL	0.0%	None
trans-1,2-Dichloroethene	1	1	U	QL	0.2	J	< 2 x QL	NC	None
1,1-Dichloroethane	1	1		< 2 x QL	1		< 2 x QL	0.0%	None
cis-1,2-Dichloroethene	1	16		> 2 x QL	16		> 2 x QL	0.0%	None
1,1,1-Trichloroethane	1	60		> 2 x QL	58		> 2 x QL	3.4%	None
Trichloroethene	10	360		> 2 x QL	360		> 2 x QL	0.0%	None
Tetrachloroethene	1	3		> 2 x QL	3		> 2 x QL	0.0%	None
Freon 113	10	10	U	QL	0.2	J	< 2 x QL	NC	None

Q = Validation Qualifier; NC = Not Calculated

*Action only taken for RPD > 30% if one or both results are > 2 x QL

FD precision was acceptable for all VOCs in FD pair MW-2 and DUP-02 indicating acceptable precision from sample collection through analysis for this site location for the 22 VOCs analyzed - No Action required.

Field Duplicate Evaluation_ Sample IDs: Sample = MW-1S FD = DUP-03

Analyte Name	DF= 1 QL (µg/L)	Sample µg/L	Q	Sample Result Level	FD µg/L	Q	FD Result Level	RPD	Action *
1,1-Dichloroethene	1	0.4	J	< 2 x QL	0.4	J	< 2 x QL	0.0%	None
1,1-Dichloroethane	1	0.4	J	< 2 x QL	0.4	J	< 2 x QL	0.0%	None
cis-1,2-Dichloroethene	1	1		< 2 x QL	1		< 2 x QL	0.0%	None
1,1,1-Trichloroethane	1	1		< 2 x QL	1		< 2 x QL	0.0%	None
Trichloroethene	1	6		> 2 x QL	6		> 2 x QL	0.0%	None

Q = Validation Qualifier; NC = Not Calculated

*Action only taken for RPD > 30% if one or both results are > 2 x QL

FD precision was acceptable for all VOCs in FD pair MW-1S and DUP-03 indicating acceptable precision from sample collection through analysis for this site location for the 22 VOCs analyzed - No Action required.

Date: ***1/2/20***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

SW-846 Method 8260C, Region II DV SOP, and NYSDEC ASP2005 - ACTIONS

Preservation:	Temperature upon receipt 4°±°2C; use judgment if outside criteria if Method 5035a not followed
HT:	waters- pH >2 or no HCl: 7d<HT; J- det/R NDs
	pH < 2, 14d <HT; J- det/R NDs
	low- or medium-level solid - 14d <HT< 28 d, J det/J NDs; HT > 28 days, J- det/R NDs
	unfrozen solid - 48 hrs < HT < 96 hrs, J det/J NDs; HT > 96hrs, J- det/R NDs
Surrogates:	Criteria per Table 11A of NYSDEC ASP2005 Exhibit E or lab limits as long as results within ± 10% of ASP limits
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs.
LCS:	Lab limits accepted since LCS not required for NYSDEC ASP2005
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs.
Tunes:	Samples analyzed within 12-hrs and criteria met per Table 3, Method 8260C. If out, use professional judgment.
ICAL:	minimum 5-Level ; min. RRF and %RSD per Method 8260C criteria.
CCV:	min. RRF and %D per Method 8260C criteria.
Blanks:	If contamination in method blank or matrix-related blank(s) exist, comparison of the blank to the samples must take into consideration all sample-specific preparation and analysis factors (e.g., dilution used in analysis, dry weights analyzed, etc.). Blank Action Level (BAL) = Blank QL on a sample-equivalent basis (or 2x Blank QL for 2-butanone, acetone, and methylene chloride) if the result in blank < QL or the value of the Blank on a sample-equivalent basis if result in Blank is > QL. If the sample value is < sample-specific BAL, negate (U) at sample QL if sample result < QL or at the value found in the sample if this value is > sample QL but < sample-equivalent BAL. If sample value > sample-equivalent BAL, no action required.
	Non-Matrix-related Blank contamination: Blank Action taken the sample way as for matrix-related blanks except data are not negated but are estimated (J+ or J) depending on professional judgment.
MS/MSD:	Table 12 of Exhibit E, NYSDEC ASP2005 or lab limits as long as results within ± 10% of ASP limits
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs- Unspiked Sample only. RPD > Control limit, J det / J ND; %RSD of non-spiked > 50%, J det
FD:	Both Conc. > 2xQL, RPD >30% (water) 50% (soil), J det; One result ND, other >2 x QL, J det/J NDs; Both Conc. < 2xQL; RPD >criteria, LCS OK, Accept data
IS:	20% ≤ Area < 50% of IS in CCAL , J det/ J NDs; Area < 20% of CCAL, J det / R NDs; Area > 150% IS in CCAL, J det / Accept NDs. Overall bias for IS outside criteria considered indeterminate since a it is unclear whether low IS is a mis-spike of IS (causing low of high bias in results using the IS that's out of criteria) or whether entire region of GC/MS is affected causing IS and results to be equally affected so no bias in results. This action is taken based on professional judgment.
%solids	If %solids < 50%, J det/J NDs; if %solids <10%, J det/R NDs (Region II SOP). Not applicable to this SAP.

Date: ***1/2/20***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

SW-846 Method 8260C, Region II DV SOP, and NYSDEC ASP2005 - ACTIONS *(continued)*

Compound List:	22 Compounds listed in Table 3-2 of SAP reported for all samples
QLs:	If result > upper calibration range, J result, if result < lowest calibration standard, J result. Verify all J data reported properly, if applicable. Verify QLs are sample specific and that all compounds requested were reported.
TICs:	If a VOC compound reported from another analysis or target VOC is reported as a TIC, the data are rejected (R). TICs that have no identification (i.e., reported as "Unknown") are estimated (J) and those TICs that are reported with a CAS#, are estimated with presumptive evidence for identification (JN). Professional judgment used to accept or reject TICs. Not required for this SAP.
DV Qualifier Definitions:	U = analyte is non-detect at the sample-specific Quantitation Limit (usable); UJ = non-detect is usable as an estimated value; J = result is usable as an estimated value with indeterminate bias; J+ = result is usable as an estimated value with possible high bias; J- = result is usable as an estimated value with possible low bias; JN = the analyte has been "tentatively identified" and the result is usable as an estimated value with indeterminate bias; R = result is rejected due to severe QC exceedance and unusable for project objectives. Bias: L = Low; H = High; I = Indeterminate.
Sensitivity:	QLs reported must be supported by the Initial Calibration. Table 3-2 of SAP indicates that there are no Project Action Limits for VOCs in Groundwater, Surface Water, and Pore Water samples; therefore, sensitivity is acceptable in QLs are properly reported.
References:	*Sampling and Analysis Plan Physical Containment with Groundwater Treatment, Former Dennison/Monarch Systems Site, Operable Unit 01, New Windsor, New York, NYSDEC Site No. 336090;* prepared for Avery Dennison Corporation by The Johnson Company (VHB), November 2018*;* NYSDEC *DER-10, Technical Guidance for Site Investigation and Remediation* (May 3, 2010 with updates through April 9, 2019); NYSDEC *6 NYCRR Part 375 (December 14, 2006);* SW-846 Method 8260B; and USEPA Region II, USEPA Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Methods 8260B & 8260C, SOP# HW-24; rev. 4 (October 2014).

VHB: Former Dennison/Monarch Systems Site, Operable Unit 01, New Windsor, NY

Date Sampled: 11/26/19
Method of Analysis: 8260C

No. Samples: 7 + 1FD + 1TB
Matrix: Pore Water

Data Element Acceptable	Preservation & HT	Surrogates	LCS / Blank Spike	MS/MSD	FD	Tunes ICALs CCALs	IS'	QL & Quant. Correct	%Solids	Blank Action
Yes	√	√	√	NA	√	√	√	√	NA	
No										Negate (U) 8 results at QL

Comments: ***Qualifier Action:*** 12 J-qualified results reported by the laboratory accepted as estimated (J) data due to result < QL

The data package consisted of a NYDEC Category B deliverable.

Data Package Completeness:

1. Were all required forms (results, summary QC, COC), as required to validate the data in accordance with NYSDEC ASP 2005 and DUSR requirements present in the data package? *Yes.*

2. Were all result forms for all samples listed on the chain-of-custody present in data package? Yes. Samples were reported on summary forms using the laboratory IDs (ELLE#) and Lab Sample Code. A Sample Reference List in the data package cross references the COC Client ID to the ELLE Lab Sample Number and Lab Sample Codes.

Sample Receiving: Samples were received intact on 11/27/19 at < 6 °C. These are grab samples that were preserved with HCl. There were no COC issues noted by the lab.

Holding Time: The samples were verified to be at pH < 2 at the time of analysis. Sample Diff-07 was analyzed on 12/5/19 in QC Batch Y193391AA and all other samples were analyzed on 12/7/19 in QC Batch Y193411AA. All samples were analyzed within HT - No Action required.

Date: ***1/6/20***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

VHB: Former Dennison/Monarch Systems Site, Operable Unit 01, New Windsor, NY

Blank Action: Blanks Reviewed: Method Blank: VBLKY15 & VBLKY17

Trip Blank = TB-AWR-112619; EB: PDBBLANK (reported in SDG JCW20)

Blank ID	Contaminant / Level (µg/L)	Matrix Related?	Action Level / Action	Sample and Reported Result (µg/L)		Corrected Result
VBLKY15	None	-	-	No Blank Action required		
VBLKY17	None	-	-	No Blank Action required		
TB-AWR-112619	None	-	-	No Blank Action required		
PDBBLANK	Methylene Chloride 0.3 J	Y	1	All samples are ND - No Blank Action required		
	Acetone 2 J	Y	20	Diff-07	2 J	20 U
				Diff-06	3 J	20 U
				Diff-05	2 J	20 U
				Diff-03	2 J	20 U
				Diff-04	3 J	20 U
				Diff-02	3 J	20 U
				Diff-Dup	2 J	20 U
				Diff-01	3 J	20 U

Surrogates: The lab used surrogate dibromofluoromethane and 1,2-dichloroethane-d4 in addition to toluene-d8 and 4-bromofluorobenzene, which are in ASP2005. Since SW-846 method used for analysis allows use of alternate surrogates, no action required. All surrogates are within NYSDEC ASP2005 or lab criteria (80-120%) - no action required.

LCS /LCSD: Y193391AA & Y193411AA LCS - no LCSD performed for either QC Batch. The lab spiked all 22 project-specific VOCs into LCS as compared to NYSDEC ASP 2005 requirement of a subset of compounds. All LCS %Rec were within lab criteria. Therefore, the lab demonstrated acceptable accuracy for the analysis of the 22 project-specific VOCs in the absence of the site matrix. No Action required.

Date: ***1/6/20***

Data Reviewer: ***Nancy C. Rothman, Ph.D.***

MS/MSD: none performed on the samples in this SDG and none were requested on the COC. Lab analyzed MS/MSD for these QC Batches on samples not reported in this SDG; therefore, lab was method compliant.

Tunes *:* Instrument HP09355 9/10/19 (ICAL), 12/5/19, & 12/7/19. Verified that Method 8260C criteria used for Tune acceptance. All Abundances were acceptable and all samples were analyzed within 12 hours of tune. Average of scans across peak with background correction used to generate tunes - acceptable. No action required.

ICAL: HP09355 on 9/10/19 7-level ICAL from 1 to 300 µg/L for 22 project-specific VOCs except for 1,4-Dioxane, which was analyzed from 50 to 3000 µg/L, plus many non-project required VOCs. Min. RRF and Maximum %RSD given Method 8260C were achieved for all compounds in this ICAL - valid ICAL - No Action required.

CCV: HP09355 12/5/19 & 12/7/19. CCV min. RRF and maximum %D achieved for all target compounds in all both CCVs except: acetone %D > 20% (Method 8260C criteria) in 12/5/19 CCV and 1,4-dioxane %D > 20% in both CCVs due to enhanced sensitivity to detection of these compounds as compared to sensitivity during ICAL. Since acetone was negated due to blank action and since 1,4-dioxane was non-detect in all samples, no action for enhanced sensitivity of instrument for these compounds on the days of sample analysis.

Internal Standards (IS): lab used four IS (t-butyl alcohol-d10, fluorobenzene, chlorobenzene-d5, and 1,4-dichlorobenzene-d4) as compared to three IS' required by NYSDEC ASP2005 (1,4-difluorobenzene, chlorobenzene-d5, and 1,4-dichlorobenzene-d4) - this is acceptable based upon lab using SW-846 method for analysis. All 4 IS Areas and Retention Times were in criteria in all samples and QC - No Action required.

Compound Reporting: Lab reported results for all 22 project-specific VOCs requested in SAP Table 3-2.

Samples were all analyzed without dilution (i.e., DF=1) and a review of the sample data indicate dilutions weren't required.

Sensitivity: All non-detects were reported at QL supported by the Initial Calibration. Since there are no Project Action Limits for this work (see SAP Table 3-2); sensitivity for these data was acceptable. No Action required.

Date: ***1/6/20***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

Qualifier Action: there were 12 results reported at levels < QL and flagged "J" by the laboratory [this excludes the 8 "J" qualified acetone results that were negated due to blank action]. All other data were either non-detect (flagged "U") at the QL or were detected and not qualified.
****ACTION: 12 J-qualified results reported by the laboratory accepted as estimated (J) data due to result < QL***

Calculation check: cis-1,2-Dichloroethene in sample Diff-05 (lab sample ID 1212643)

Response of Cpd = 30314 ; Response of IS (Fluorobenzene) = 1090412 @ 50; 5-mL purge, DF = 1; RRF from ICAL = 0.2858
Lowest Level ICAL std =1 µg/L for 5 mL purge

Sample-Specific QL: Sample-Specific QL based on 1 µg/L lowest std = 1 x 1 = 1 µg/L √

cis-1,2-Dichloroethene Conc. = $\frac{30314 \times 50 \times 1}{1090412 \times 0.2858}$ = 4.9 = 5 µg/L √

The sample chromatogram, mass spectra of detects and quantitation report was scanned and data appeared to have been reported correctly.

Narrative: the narrative did not mention any issues with quality that weren't already addressed that would affect the sample data - No Action required

FD evaluation: FD pair was Diff-01 / Diff-Dup A comparison of detected results in these two FD pairs is shown below

Field Duplicate Evaluation_ Sample IDs: Sample = Diff-01 FD = Diff-Dup

Analyte Name	DF= 1 QL (µg/L)	Sample µg/L	Q	Sample Result Level	FD µg/L	Q	FD Result Level	RPD	Action *
1,1-Dichloroethane	1	1		< 2 x QL	0.9	U	< 2 x QL	10.5%	None
cis-1,2-Dichloroethene	1	0.3	J	< 2 x QL	1	U	QL	NC	None

Q = Validation Qualifier; NC = Not Calculated

*Action only taken for RPD > 30% if one or both results are > 2 x QL

FD precision was acceptable for all VOCs in FD pair Diff-01 and Diff-Dup indicating acceptable precision from sample collection through analysis for this site location for the 22 VOCs analyzed - No Action required.

Date: ***1/6/20***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

SW-846 Method 8260C, Region II DV SOP, and NYSDEC ASP2005 - ACTIONS

Preservation:	Temperature upon receipt 4°±°2C; use judgment if outside criteria if Method 5035a not followed
HT:	waters- pH >2 or no HCl: 7d<HT; J- det/R NDs
	pH < 2, 14d <HT; J- det/R NDs
	low- or medium-level solid - 14d <HT< 28 d, J det/J NDs; HT > 28 days, J- det/R NDs
	unfrozen solid - 48 hrs < HT < 96 hrs, J det/J NDs; HT > 96hrs, J- det/R NDs
Surrogates:	Criteria per Table 11A of NYSDEC ASP2005 Exhibit E or lab limits as long as results within ± 10% of ASP limits
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs.
LCS:	Lab limits accepted since LCS not required for NYSDEC ASP2005
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs.
Tunes:	Samples analyzed within 12-hrs and criteria met per Table 3, Method 8260C. If out, use professional judgment.
ICAL:	minimum 5-Level ; min. RRF and %RSD per Method 8260C criteria.
CCV:	min. RRF and %D per Method 8260C criteria.
Blanks:	If contamination in method blank or matrix-related blank(s) exist, comparison of the blank to the samples must take into consideration all sample-specific preparation and analysis factors (e.g., dilution used in analysis, dry weights analyzed, etc.). Blank Action Level (BAL) = Blank QL on a sample-equivalent basis (or 2x Blank QL for 2-butanone, acetone, and methylene chloride) if the result in blank < QL or the value of the Blank on a sample-equivalent basis if result in Blank is > QL. If the sample value is < sample-specific BAL, negate (U) at sample QL if sample result < QL or at the value found in the sample if this value is > sample QL but < sample-equivalent BAL. If sample value > sample-equivalent BAL, no action required.
	Non-Matrix-related Blank contamination: Blank Action taken the sample way as for matrix-related blanks except data are not negated but are estimated (J+ or J) depending on professional judgment.
MS/MSD:	Table 12 of Exhibit E, NYSDEC ASP2005 or lab limits as long as results within ± 10% of ASP limits
	%Rec<10%, J- det/ R NDs; 10% <%Rec<LCL, J- det/ J NDs; %Rec >UCL, J+ det/Accept NDs- Unspiked Sample only. RPD > Control limit, J det / J ND; %RSD of non-spiked > 50%, J det
FD:	Both Conc. > 2xQL, RPD >30% (water) 50% (soil), J det; One result ND, other >2 x QL, J det/J NDs; Both Conc. < 2xQL; RPD >criteria, LCS OK, Accept data
IS:	20% ≤ Area < 50% of IS in CCAL , J det/ J NDs; Area < 20% of CCAL, J det / R NDs; Area > 150% IS in CCAL, J det / Accept NDs. Overall bias for IS outside criteria considered indeterminate since a it is unclear whether low IS is a mis-spike of IS (causing low of high bias in results using the IS that's out of criteria) or whether entire region of GC/MS is affected causing IS and results to be equally affected so no bias in results. This action is taken based on professional judgment.
%solids	If %solids < 50%, J det/J NDs; if %solids <10%, J det/R NDs (Region II SOP). Not applicable to this SAP.

Date: ***1/6/20***
Data Reviewer: ***Nancy C. Rothman, Ph.D.***

SW-846 Method 8260C, Region II DV SOP, and NYSDEC ASP2005 - ACTIONS *(continued)*

Compound List:	22 Compounds listed in Table 3-2 of SAP reported for all samples
QLs:	If result > upper calibration range, J result, if result < lowest calibration standard, J result. Verify all J data reported properly, if applicable. Verify QLs are sample specific and that all compounds requested were reported.
TICs:	If a VOC compound reported from another analysis or target VOC is reported as a TIC, the data are rejected (R). TICs that have no identification (i.e., reported as "Unknown") are estimated (J) and those TICs that are reported with a CAS#, are estimated with presumptive evidence for identification (JN). Professional judgment used to accept or reject TICs. Not required for this SAP.
DV Qualifier Definitions:	U = analyte is non-detect at the sample-specific Quantitation Limit (usable); UJ = non-detect is usable as an estimated value; J = result is usable as an estimated value with indeterminate bias; J+ = result is usable as an estimated value with possible high bias; J- = result is usable as an estimated value with possible low bias; JN = the analyte has been "tentatively identified" and the result is usable as an estimated value with indeterminate bias; R = result is rejected due to severe QC exceedance and unusable for project objectives. Bias: L = Low; H = High; I = Indeterminate.
Sensitivity:	QLs reported must be supported by the Initial Calibration. Table 3-2 of SAP indicates that there are no Project Action Limits for VOCs in Groundwater, Surface Water, and Pore Water samples; therefore, sensitivity is acceptable in QLs are properly reported.
References:	*Sampling and Analysis Plan Physical Containment with Groundwater Treatment, Former Dennison/Monarch Systems Site, Operable Unit 01, New Windsor, New York, NYSDEC Site No. 336090;* prepared for Avery Dennison Corporation by The Johnson Company (VHB), November 2018*;* NYSDEC *DER-10, Technical Guidance for Site Investigation and Remediation* (May 3, 2010 with updates through April 9, 2019); NYSDEC *6 NYCRR Part 375 (December 14, 2006);* SW-846 Method 8260B; and USEPA Region II, USEPA Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Methods 8260B & 8260C, SOP# HW-24; rev. 4 (October 2014).

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NYSDEC ASP Category B Data Package

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Project: AD-New Windsor, NY
Groundwater and Water Samples
Collected on 11/12/19-11/13/19

SDG# JCW18

GROUP	SAMPLE NUMBERS
2074774	1202284-1202295

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-18-27
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M. Kauffman **Date:** **12/13/2019**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Katherine Klinefelter at (717) 556-7256.

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Sample Reference List for SDG Number JCW18
with a Data Package Type of NYSDEC B

06556 - The Johnson Company, Inc.

Project: AD-New Windsor, NY

Lab Sample Number	Client Sample ID	Collection Date	Date Received	Lab Sample Code
1202284	J02-BR02	11/12/2019 15:36	11/14/2019 10:55	W1801
1202285	J02-UC01	11/12/2019 16:18	11/14/2019 10:55	W1802
1202286	J01-UC01	11/13/2019 08:50	11/14/2019 10:55	W1803
1202287	J01-UC01 MS	11/13/2019 08:50	11/14/2019 10:55	W1803
1202288	J01-UC01 MSD	11/13/2019 08:50	11/14/2019 10:55	W1803
1202289	J01-BR01	11/13/2019 09:55	11/14/2019 10:55	W1804
1202290	J01-UC02	11/13/2019 11:02	11/14/2019 10:55	W1805
1202291	J01-BR02	11/13/2019 11:43	11/14/2019 10:55	W1806
1202292	J04-BR02	11/13/2019 13:16	11/14/2019 10:55	W1807
1202293	J04-BR01	11/13/2019 14:13	11/14/2019 10:55	W1808
1202294	J02-BR01	11/13/2019 15:54	11/14/2019 10:55	W1809
1202295	TB-111219-NLS	11/12/2019 00:00	11/14/2019 10:55	W1810

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Sample pH Log

SDG: JCW18

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
1202284	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/20/2019 10:26:17PM	10203
1202285	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/20/2019 10:26:15PM	10203
1202286	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/21/2019 11:09:55PM	10203
1202287	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/21/2019 11:09:53PM	10203
1202288	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/21/2019 11:09:53PM	10203
1202289	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/21/2019 11:09:53PM	10203
1202290	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/21/2019 11:09:53PM	10203
1202291	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/21/2019 11:09:53PM	10203
1202292	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/21/2019 11:09:53PM	10203
1202293	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/21/2019 11:09:53PM	10203
1202294	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/21/2019 11:09:53PM	10203
1202295	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/20/2019 10:26:15PM	10203

*pH Check Code Key	**Chlorine Present Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added) **PA** = Original container checked - pH adjusted to correct range. (Preservative was added) **PV** = Volatile container checked **PC** = pH checked (unpreserved container) **SPK** = Subsampled from an original container. Original container checked - pH is within correct range **SPA** = Subsampled from an original container. Subsample container checked - pH adjusted to correct range. **SPC** = Subsampled from an original container. pH checked (unpreserved container). **SUP** = Subsampled from original container. Unable to be preserved due to the matrix of the sample. **UP** = Unable to preserve due to matrix of the sample. **NA** = Not applicable	**NA** = Chlorine Not Checked **Y** = Chlorine Present **N** = Chlorine Not Present

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11997 VOCs- 5ml Water by 8260C/D

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Report Date: November 24, 2019 11:27

Project: AD-New Windsor, NY

Account #: 06556
Group Number: 2074774
SDG: JCW18
PO Number: 1-0145-05
Release Number: 58300.00
State of Sample Origin: NY

Electronic Copy To	The Johnson Company, Inc.	Attn: Tristan Hardy
Electronic Copy To	The Johnson Company, Inc.	Attn: George Lester
Electronic Copy To	VHB	Attn: Quinn Ledak

Respectfully Submitted,

Katherine A. Klinefelter

Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
J02-BR02 Grab Groundwater	11/12/2019 15:36	1202284
J02-UC01 Grab Groundwater	11/12/2019 16:18	1202285
J01-UC01 Grab Groundwater	11/13/2019 08:50	1202286
J01-UC01 MS Grab Groundwater	11/13/2019 08:50	1202287
J01-UC01 MSD Grab Groundwater	11/13/2019 08:50	1202288
J01-BR01 Grab Groundwater	11/13/2019 09:55	1202289
J01-UC02 Grab Groundwater	11/13/2019 11:02	1202290
J01-BR02 Grab Groundwater	11/13/2019 11:43	1202291
J04-BR02 Grab Groundwater	11/13/2019 13:16	1202292
J04-BR01 Grab Groundwater	11/13/2019 14:13	1202293
J02-BR01 Grab Groundwater	11/13/2019 15:54	1202294
TB-111219-NLS Water	11/12/2019	1202295

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **J02-BR02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/12/2019 15:36
SDG#: JCW18-01

The Johnson Company, Inc.
ELLE Sample #: GW 1202284
ELLE Group #: 2074774
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193241AA	11/20/2019 10:41	Kathrine K Muramatsu	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193241AA	11/20/2019 10:40	Kathrine K Muramatsu	1

*=This limit was used in the evaluation of the final result

Sample Description: **J02-UC01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/12/2019 16:18
SDG#: JCW18-02

The Johnson Company, Inc.
ELLE Sample #: GW 1202285
ELLE Group #: 2074774
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	0.2 J	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193241AA	11/20/2019 11:03	Kathrine K Muramatsu	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193241AA	11/20/2019 11:02	Kathrine K Muramatsu	1

*=This limit was used in the evaluation of the final result

Sample Description: **J01-UC01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/13/2019 08:50
SDG#: JCW18-03BKG

The Johnson Company, Inc.
ELLE Sample #: GW 1202286
ELLE Group #: 2074774
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.3 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	0.6 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	0.2 J	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	4	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	1 J	0.3	1	1
11997	Trichloroethene	79-01-6	2	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193251AA	11/21/2019 11:21	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193251AA	11/21/2019 11:20	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **J01-UC01 MS Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/13/2019 08:50
SDG#: JCW18-03MS

The Johnson Company, Inc.
ELLE Sample #: GW 1202287
ELLE Group #: 2074774
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	140	0.7	20	1
11997	Benzene	71-43-2	21	0.2	1	1
11997	2-Butanone	78-93-3	130	0.3	10	1
11997	Carbon Disulfide	75-15-0	17	0.2	5	1
11997	Chloroform	67-66-3	21	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	21	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	20	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	20	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	21	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	22	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	21	0.2	1	1
11997	1,4-Dioxane	123-91-1	600	29	250	1
11997	Ethylbenzene	100-41-4	21	0.4	1	1
11997	Freon 113	76-13-1	20	0.2	10	1
11997	Methylene Chloride	75-09-2	20	0.3	1	1
11997	Naphthalene	91-20-3	19	1	5	1
11997	Tetrachloroethene	127-18-4	26	0.2	1	1
11997	Toluene	108-88-3	21	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	22	0.3	1	1
11997	Trichloroethene	79-01-6	24	0.2	1	1
11997	Vinyl Chloride	75-01-4	20	0.2	1	1
11997	Xylene (Total)	1330-20-7	64	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193251AA	11/21/2019 11:43	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193251AA	11/21/2019 11:42	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **J01-UC01 MSD Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/13/2019 08:50
SDG#: JCW18-03MSD

The Johnson Company, Inc.
ELLE Sample #: GW 1202288
ELLE Group #: 2074774
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	140	0.7	20	1
11997	Benzene	71-43-2	21	0.2	1	1
11997	2-Butanone	78-93-3	130	0.3	10	1
11997	Carbon Disulfide	75-15-0	17	0.2	5	1
11997	Chloroform	67-66-3	21	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	21	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	20	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	20	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	21	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	22	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	21	0.2	1	1
11997	1,4-Dioxane	123-91-1	610	29	250	1
11997	Ethylbenzene	100-41-4	21	0.4	1	1
11997	Freon 113	76-13-1	20	0.2	10	1
11997	Methylene Chloride	75-09-2	21	0.3	1	1
11997	Naphthalene	91-20-3	20	1	5	1
11997	Tetrachloroethene	127-18-4	25	0.2	1	1
11997	Toluene	108-88-3	21	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	22	0.3	1	1
11997	Trichloroethene	79-01-6	24	0.2	1	1
11997	Vinyl Chloride	75-01-4	20	0.2	1	1
11997	Xylene (Total)	1330-20-7	65	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193251AA	11/21/2019 12:04	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193251AA	11/21/2019 12:03	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **J01-BR01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/13/2019 09:55
SDG#: JCW18-04

The Johnson Company, Inc.
ELLE Sample #: GW 1202289
ELLE Group #: 2074774
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193251AA	11/21/2019 12:26	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193251AA	11/21/2019 12:25	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **J01-UC02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/13/2019 11:02
SDG#: JCW18-05

The Johnson Company, Inc.
ELLE Sample #: GW 1202290
ELLE Group #: 2074774
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193251AA	11/21/2019 12:48	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193251AA	11/21/2019 12:47	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **J01-BR02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/13/2019 11:43
SDG#: JCW18-06

The Johnson Company, Inc.
ELLE Sample #: GW 1202291
ELLE Group #: 2074774
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193251AA	11/21/2019 13:10	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193251AA	11/21/2019 13:09	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **J04-BR02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/13/2019 13:16
SDG#: JCW18-07

The Johnson Company, Inc.
ELLE Sample #: GW 1202292
ELLE Group #: 2074774
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193251AA	11/21/2019 13:32	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193251AA	11/21/2019 13:31	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **J04-BR01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/13/2019 14:13
SDG#: JCW18-08

The Johnson Company, Inc.
ELLE Sample #: GW 1202293
ELLE Group #: 2074774
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193251AA	11/21/2019 13:54	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193251AA	11/21/2019 13:53	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **J02-BR01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/13/2019 15:54
SDG#: JCW18-09

The Johnson Company, Inc.
ELLE Sample #: GW 1202294
ELLE Group #: 2074774
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193251AA	11/21/2019 14:16	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193251AA	11/21/2019 14:15	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB-111219-NLS Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/12/2019
SDG#: JCW18-10TB

The Johnson Company, Inc.
ELLE Sample #: GW 1202295
ELLE Group #: 2074774
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193241AA	11/20/2019 09:57	Kathrine K Muramatsu	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193241AA	11/20/2019 09:56	Kathrine K Muramatsu	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2074774
Reported: 11/24/2019 11:27

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: L193241AA	Sample number(s): 1202284-1202285,1202295		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	6
Batch number: L193251AA	Sample number(s): 1202286-1202294		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2074774
Reported: 11/24/2019 11:27

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	6

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: L193241AA	Sample number(s): 1202284-1202285,1202295								
Acetone	150	157.23			105		54-157		
Benzene	20	20.7			104		80-120		
2-Butanone	150	130.12			87		59-135		
Carbon Disulfide	20	16.75			84		65-128		
Chloroform	20	20.39			102		80-120		
1,2-Dichlorobenzene	20	20.57			103		80-120		
1,1-Dichloroethane	20	19.65			98		80-120		
1,2-Dichloroethane	20	20.14			101		73-124		
1,1-Dichloroethene	20	20.27			101		80-131		
cis-1,2-Dichloroethene	20	21.37			107		80-125		
trans-1,2-Dichloroethene	20	20.27			101		80-126		
1,4-Dioxane	500	642.6			129		63-146		
Ethylbenzene	20	20.35			102		80-120		
Freon 113	20	18.89			94		73-139		
Methylene Chloride	20	20.6			103		80-120		
Naphthalene	20	20.04			100		53-124		
Tetrachloroethene	20	19.97			100		80-120		
Toluene	20	20.45			102		80-120		
1,1,1-Trichloroethane	20	19.91			100		67-126		
Trichloroethene	20	20.7			104		80-120		
Vinyl Chloride	20	19.84			99		56-120		
Xylene (Total)	60	61.64			103		80-120		
Batch number: L193251AA	Sample number(s): 1202286-1202294								
Acetone	150	146.22			97		54-157		
Benzene	20	20.19			101		80-120		
2-Butanone	150	131.01			87		59-135		
Carbon Disulfide	20	15.74			79		65-128		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2074774
Reported: 11/24/2019 11:27

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Chloroform	20	20.01			100		80-120		
1,2-Dichlorobenzene	20	20.49			102		80-120		
1,1-Dichloroethane	20	18.72			94		80-120		
1,2-Dichloroethane	20	20.32			102		73-124		
1,1-Dichloroethene	20	19.25			96		80-131		
cis-1,2-Dichloroethene	20	20.73			104		80-125		
trans-1,2-Dichloroethene	20	19.48			97		80-126		
1,4-Dioxane	500	616.34			123		63-146		
Ethylbenzene	20	20.34			102		80-120		
Freon 113	20	17.96			90		73-139		
Methylene Chloride	20	20			100		80-120		
Naphthalene	20	19.46			97		53-124		
Tetrachloroethene	20	19.67			98		80-120		
Toluene	20	20.1			101		80-120		
1,1,1-Trichloroethane	20	19.03			95		67-126		
Trichloroethene	20	20.17			101		80-120		
Vinyl Chloride	20	18.91			95		56-120		
Xylene (Total)	60	61.82			103		80-120		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: L193251AA	Sample number(s): 1202286-1202294 UNSPK: 1202286									
Acetone	N.D.	150	135.37	150	136.34	90	91	54-157	1	30
Benzene	N.D.	20	21.16	20	21.07	106	105	80-120	0	30
2-Butanone	N.D.	150	128.7	150	128.54	86	86	59-135	0	30
Carbon Disulfide	N.D.	20	17.14	20	17.2	86	86	65-128	0	30
Chloroform	N.D.	20	21.1	20	20.81	105	104	80-120	1	30
1,2-Dichlorobenzene	N.D.	20	21.1	20	21.39	106	107	80-120	1	30
1,1-Dichloroethane	0.327	20	20.06	20	20.14	99	99	80-120	0	30
1,2-Dichloroethane	N.D.	20	20.25	20	20.13	101	101	73-124	1	30
1,1-Dichloroethene	N.D.	20	21.49	20	21.15	107	106	80-131	2	30
cis-1,2-Dichloroethene	0.616	20	22.33	20	22.36	109	109	80-120	0	30
trans-1,2-Dichloroethene	0.232	20	20.79	20	20.88	103	103	80-120	0	30
1,4-Dioxane	N.D.	500	596.87	500	613.33	119	123	63-146	3	30
Ethylbenzene	N.D.	20	21.17	20	21.44	106	107	80-120	1	30
Freon 113	N.D.	20	20.24	20	19.87	101	99	73-139	2	30
Methylene Chloride	N.D.	20	20.47	20	20.7	102	104	80-120	1	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2074774
Reported: 11/24/2019 11:27

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Naphthalene	N.D.	20	19.35	20	20.05	97	100	53-124	4	30
Tetrachloroethene	3.61	20	26.1	20	25.09	112	107	80-120	4	30
Toluene	N.D.	20	20.85	20	21.17	104	106	80-120	2	30
1,1,1-Trichloroethane	0.961	20	21.92	20	21.66	105	104	67-126	1	30
Trichloroethene	1.95	20	23.89	20	23.65	110	109	80-120	1	30
Vinyl Chloride	N.D.	20	20.34	20	20.41	102	102	56-120	0	30
Xylene (Total)	N.D.	60	63.55	60	64.69	106	108	80-120	2	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: L193241AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1202284	95	100	96	97
1202285	95	101	96	97
1202295	94	100	97	97
Blank	93	98	97	98
LCS	96	99	97	99
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: L193251AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1202286	96	102	95	97
1202287	96	101	97	100
1202288	94	98	99	101
1202289	96	102	96	98
1202290	94	100	96	97
1202291	96	101	96	97
1202292	95	100	96	97
1202293	95	101	96	97
1202294	96	102	96	96
Blank	95	101	96	97
LCS	95	99	97	100
MS	96	101	97	100
MSD	94	98	99	101

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2074774
Reported: 11/24/2019 11:27

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: L193251AA

Limits:	80-120	80-120	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 6556 Group # 2074774 Sample # 120 2284-95

COC # 514465

Client Information

Client: VHB/The Johnson Company	Acct. #: 06556
Project Name/#: AD-New Windsor / 58300.00	PWSID #:
Project Manager: George Lester	P.O. #:
Sampler: Nicole Saitta	Quote #:
State where samples were collected: NY	For Compliance: Yes ☐ No ☒

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water ☒ Potable ☐ Ground ☐ NPDES ☐ Surface ☐ | Other: ____

Analysis Requested

Preservation Codes: H

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	8260C - VOCs	Remarks
J02-BR02	11/12/19	1536	X		3	X	
J02-UC01	11/12/19	1618	X		3	X	
J01-UC01	11/13/19	850	X		9	X	MS/MSD
J01-BR01	11/13/19	955	X		3	X	
J01-UC02	11/13/19	1102	X		3	X	
J01-BR02	11/13/19	1143	X		3	X	
J04-BR02	11/13/19	1316	X		3	X	
J04-BR01	11/13/19	1413	X		3	X	
J02-BR01	11/13/19	1554	X		3	X	
TB-111219-NLS	11/12/19	—	X		2	X	

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: ____

E-mail address: glester@vhb.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or (B) MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	11/13/19	1645			
			[signature]	11/14/19	1055

EDD Required? (Yes) No

If yes, format: Excel

Site-Specific QC (MS/MSD/Dup)? (Yes) No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ____ Other ____

Temperature upon receipt 1.3 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 266478

Group Number(s): 2074774

Client: VHB THE JOHNSON COMPANY

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	11/14/2019
Number of Packages:	1	Number of Projects:	3
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	No
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Julissa Rivera-Santa

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192050133	1.3	IR	Wet	Y	Bagged	N

Sample Date/Time Discrepancy Details

Sample ID on COC	Date/Time on Label	Comments
J01-BR01	11/13/2019 09:40	

2425 New Holland Pike
Lancaster, PA 17605-2425
T : 717-656-2300
F : 717-656-2681
www.LancasterLabs.cor

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCW18

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
1202284	J02-BR02	X		1	
1202285	J02-UC01	X		1	
1202286	J01-UC01	X		1	Unspiked
1202287	J01-UC01 MS	X		1	Matrix Spike
1202288	J01-UC01 MSD	X		1	Matrix Spike Duplicate
1202289	J01-BR01	X		1	
1202290	J01-UC02	X		1	
1202291	J01-BR02	X		1	
1202292	J04-BR02	X		1	
1202293	J04-BR01	X		1	
1202294	J02-BR01	X		1	
1202295	TB-111219-NLS	X		1	Trip Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

All QC is within specification.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCW18

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

1. Relative Response Factor (RRF)

$$RRF = \frac{AX}{Ais} \times \frac{Cis}{Cx}$$

Where:

Ax = Area of the characteristic ion for the compound to be measured
Ais = Area of the characteristic ion for the specific internal standard to be measured
Cis = Concentration of the internal standard
Cx = Concentration of the compound to be measured

2. % Relative Standard Deviation (%RSD)

$$\%RSD = \frac{standard\ deviation}{Mean} \times 100$$

3. % Difference

$$\%D = \frac{RRFc - RRFi}{RRFi} \times 100$$

Where:

RRFc = Relative response factor from the continuing calibration standard
RRFi = Mean relative response factor from the initial calibration

4. Concentration

$$Concentration\ (\mu g / L) = \frac{(Ax)(Is)(Df)}{(Ais)(RRF)}$$

Where:

Ax, Ais, and RRF are as given in 1. above
Is = Amount of internal standard added in parts per billion (µg/L)
Df = Dilution factor

5. % Recovery (% Rec)

$$\%Rec = \frac{SSR - SR}{SA} \times 100$$

Where:

SSR = Spiked sample result
SR = Sample result
SA = Spike added

6. Relative Percent Difference (RPD)

$$RPD = \frac{(MSR - MSRD)}{(1/2)(MSR + MSRD)} \times 100$$

Where:

MSR = Matrix spike recovery
MSRD = Matrix spike recovery duplicate

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: The Johnson Company, Inc.
SDG: JCW18

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
VOCs- 5ml Water by 8260C/D	L193241AA	VBLKL80	11/20/2019 09:35
		LCSL80	11/20/2019 09:13
		1202284	11/20/2019 10:41
		1202285	11/20/2019 11:03
		1202295	11/20/2019 09:57
VOCs- 5ml Water by 8260C/D	L193251AA	VBLKL83	11/21/2019 09:24
		LCSL83	11/21/2019 09:50
		1202286 UNSPK	11/21/2019 11:21
		1202287 MS	11/21/2019 11:43
		1202288 MSD	11/21/2019 12:04
		1202289	11/21/2019 12:26
		1202290	11/21/2019 12:48
		1202291	11/21/2019 13:10
		1202292	11/21/2019 13:32
		1202293	11/21/2019 13:54
		1202294	11/21/2019 14:16

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: JCW18
Matrix: LIQUID

Fraction: Volatiles by GC/MS

L193241AA / VBLKL80 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	11/20/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	11/20/19	N.D.	ug/l	0.2	1
Acetone	11/20/19	N.D.	ug/l	0.7	20
Freon 113	11/20/19	N.D.	ug/l	0.2	10
Carbon Disulfide	11/20/19	N.D.	ug/l	0.2	5
Methylene Chloride	11/20/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	11/20/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	11/20/19	N.D.	ug/l	0.2	1
2-Butanone	11/20/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	11/20/19	N.D.	ug/l	0.2	1
Chloroform	11/20/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	11/20/19	N.D.	ug/l	0.3	1
Benzene	11/20/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	11/20/19	N.D.	ug/l	0.3	1
Trichloroethene	11/20/19	N.D.	ug/l	0.2	1
1,4-Dioxane	11/20/19	N.D.	ug/l	29	250
Toluene	11/20/19	N.D.	ug/l	0.2	1
Tetrachloroethene	11/20/19	N.D.	ug/l	0.2	1
Ethylbenzene	11/20/19	N.D.	ug/l	0.4	1
Xylene (Total)	11/20/19	N.D.	ug/l	1	6
1,2-Dichlorobenzene	11/20/19	N.D.	ug/l	0.2	5
Naphthalene	11/20/19	N.D.	ug/l	1	5

L193251AA / VBLKL83 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	11/21/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	11/21/19	N.D.	ug/l	0.2	1
Acetone	11/21/19	N.D.	ug/l	0.7	20
Freon 113	11/21/19	N.D.	ug/l	0.2	10
Carbon Disulfide	11/21/19	N.D.	ug/l	0.2	5
Methylene Chloride	11/21/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	11/21/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	11/21/19	N.D.	ug/l	0.2	1
2-Butanone	11/21/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	11/21/19	N.D.	ug/l	0.2	1
Chloroform	11/21/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	11/21/19	N.D.	ug/l	0.3	1
Benzene	11/21/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	11/21/19	N.D.	ug/l	0.3	1
Trichloroethene	11/21/19	N.D.	ug/l	0.2	1
1,4-Dioxane	11/21/19	N.D.	ug/l	29	250
Toluene	11/21/19	N.D.	ug/l	0.2	1
Tetrachloroethene	11/21/19	N.D.	ug/l	0.2	1
Ethylbenzene	11/21/19	N.D.	ug/l	0.4	1
Xylene (Total)	11/21/19	N.D.	ug/l	1	6

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: JCW18
Matrix: LIQUID

Fraction: Volatiles by GC/MS

L193251AA / VBLKL83 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
1,2-Dichlorobenzene	11/21/19	N.D.	ug/l	0.2	5
Naphthalene	11/21/19	N.D.	ug/l	1	5

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Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: JCW18
Matrix: LIQUID

Fraction: Volatiles by GC/MS

L193241AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKL80	98	80 - 120	98	80 - 120	93	80 - 120	97	80 - 120
LCSL80	99	80 - 120	99	80 - 120	96	80 - 120	97	80 - 120
1202284	100	80 - 120	97	80 - 120	95	80 - 120	96	80 - 120
1202285	101	80 - 120	97	80 - 120	95	80 - 120	96	80 - 120
1202295	100	80 - 120	97	80 - 120	94	80 - 120	97	80 - 120

L193251AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKL83	101	80 - 120	97	80 - 120	95	80 - 120	96	80 - 120
LCSL83	99	80 - 120	100	80 - 120	95	80 - 120	97	80 - 120
1202286 UNSPK	102	80 - 120	97	80 - 120	96	80 - 120	95	80 - 120
1202287 MS	101	80 - 120	100	80 - 120	96	80 - 120	97	80 - 120
1202288 MSD	98	80 - 120	101	80 - 120	94	80 - 120	99	80 - 120
1202289	102	80 - 120	98	80 - 120	96	80 - 120	96	80 - 120
1202290	100	80 - 120	97	80 - 120	94	80 - 120	96	80 - 120
1202291	101	80 - 120	97	80 - 120	96	80 - 120	96	80 - 120
1202292	100	80 - 120	97	80 - 120	95	80 - 120	96	80 - 120
1202293	101	80 - 120	97	80 - 120	95	80 - 120	96	80 - 120
1202294	102	80 - 120	96	80 - 120	96	80 - 120	96	80 - 120

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 1202286 MS: 1202287 MSD: 1202288 **Analyte**	Batch: **L193251AA** (Sample number(s): 1202286-1202294)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	N.D.	20.34	20.41	102	102	56-120	0	30
1,1-Dichloroethene	20	N.D.	21.49	21.15	107	106	80-131	2	30
Acetone	150	N.D.	135.37	136.34	90	91	54-157	1	30
Freon 113	20	N.D.	20.24	19.87	101	99	73-139	2	30
Carbon Disulfide	20	N.D.	17.14	17.2	86	86	65-128	0	30
Methylene Chloride	20	N.D.	20.47	20.7	102	104	80-120	1	30
trans-1,2-Dichloroethene	20	0.232 J	20.79	20.88	103	103	80-120	0	30
1,1-Dichloroethane	20	0.327 J	20.06	20.14	99	99	80-120	0	30
2-Butanone	150	N.D.	128.7	128.54	86	86	59-135	0	30
cis-1,2-Dichloroethene	20	0.616 J	22.33	22.36	109	109	80-120	0	30
1,1,1-Trichloroethane	20	0.961 J	21.92	21.66	105	104	67-126	1	30
Chloroform	20	N.D.	21.1	20.81	105	104	80-120	1	30
1,2-Dichloroethane	20	N.D.	20.25	20.13	101	101	73-124	1	30
Benzene	20	N.D.	21.16	21.07	106	105	80-120	0	30
Trichloroethene	20	1.95	23.89	23.65	110	109	80-120	1	30
1,4-Dioxane	500	N.D.	596.87	613.33	119	123	63-146	3	30
Toluene	20	N.D.	20.85	21.17	104	106	80-120	2	30
Tetrachloroethene	20	3.61	26.1	25.09	112	107	80-120	4	30
Ethylbenzene	20	N.D.	21.17	21.44	106	107	80-120	1	30
Xylene (Total)	60	N.D.	63.55	64.69	106	108	80-120	2	30
1,2-Dichlorobenzene	20	N.D.	21.1	21.39	106	107	80-120	1	30
Naphthalene	20	N.D.	19.35	20.05	97	100	53-124	4	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: JCW18
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSL80	Batch: **L193241AA** (Sample number(s): 1202284-1202285, 1202295)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	19.84	NA	99	NA	56-120	NA	NA
1,1-Dichloroethene	20	20.27	NA	101	NA	80-131	NA	NA
Acetone	150	157.23	NA	105	NA	54-157	NA	NA
Freon 113	20	18.89	NA	94	NA	73-139	NA	NA
Carbon Disulfide	20	16.75	NA	84	NA	65-128	NA	NA
Methylene Chloride	20	20.6	NA	103	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	20.27	NA	101	NA	80-126	NA	NA
1,1-Dichloroethane	20	19.65	NA	98	NA	80-120	NA	NA
2-Butanone	150	130.12	NA	87	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	21.37	NA	107	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	19.91	NA	100	NA	67-126	NA	NA
Chloroform	20	20.39	NA	102	NA	80-120	NA	NA
1,2-Dichloroethane	20	20.14	NA	101	NA	73-124	NA	NA
Benzene	20	20.7	NA	104	NA	80-120	NA	NA
Trichloroethene	20	20.7	NA	104	NA	80-120	NA	NA
1,4-Dioxane	500	642.6	NA	129	NA	63-146	NA	NA
Toluene	20	20.45	NA	102	NA	80-120	NA	NA
Tetrachloroethene	20	19.97	NA	100	NA	80-120	NA	NA
Ethylbenzene	20	20.35	NA	102	NA	80-120	NA	NA
Xylene (Total)	60	61.64	NA	103	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	20.57	NA	103	NA	80-120	NA	NA
Naphthalene	20	20.04	NA	100	NA	53-124	NA	NA

LCS: LCSL83	Batch: **L193251AA** (Sample number(s): 1202286-1202294)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	18.91	NA	95	NA	56-120	NA	NA
1,1-Dichloroethene	20	19.25	NA	96	NA	80-131	NA	NA
Acetone	150	146.22	NA	97	NA	54-157	NA	NA
Freon 113	20	17.96	NA	90	NA	73-139	NA	NA
Carbon Disulfide	20	15.74	NA	79	NA	65-128	NA	NA
Methylene Chloride	20	20	NA	100	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	19.48	NA	97	NA	80-126	NA	NA
1,1-Dichloroethane	20	18.72	NA	94	NA	80-120	NA	NA
2-Butanone	150	131.01	NA	87	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	20.73	NA	104	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	19.03	NA	95	NA	67-126	NA	NA
Chloroform	20	20.01	NA	100	NA	80-120	NA	NA
1,2-Dichloroethane	20	20.32	NA	102	NA	73-124	NA	NA
Benzene	20	20.19	NA	101	NA	80-120	NA	NA
Trichloroethene	20	20.17	NA	101	NA	80-120	NA	NA

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSL83	Batch: **L193251AA** (Sample number(s): 1202286-1202294)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
1,4-Dioxane	500	616.34	NA	123	NA	63-146	NA	NA
Toluene	20	20.1	NA	101	NA	80-120	NA	NA
Tetrachloroethene	20	19.67	NA	98	NA	80-120	NA	NA
Ethylbenzene	20	20.34	NA	102	NA	80-120	NA	NA
Xylene (Total)	60	61.82	NA	103	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	20.49	NA	102	NA	80-120	NA	NA
Naphthalene	20	19.46	NA	97	NA	53-124	NA	NA

Fraction: Volatiles by GC/MS

11997: VOCs- 5ml Water by 8260C/D Analyte Name	Default MDL	Default LOQ	Units
Vinyl Chloride	0.2	1	ug/l
1,1-Dichloroethene	0.2	1	ug/l
Acetone	0.7	20	ug/l
Freon 113	0.2	10	ug/l
Carbon Disulfide	0.2	5	ug/l
Methylene Chloride	0.3	1	ug/l
trans-1,2-Dichloroethene	0.2	1	ug/l
1,1-Dichloroethane	0.2	1	ug/l
2-Butanone	0.3	10	ug/l
cis-1,2-Dichloroethene	0.2	1	ug/l
Chloroform	0.2	1	ug/l
1,1,1-Trichloroethane	0.3	1	ug/l
Benzene	0.2	1	ug/l
1,2-Dichloroethane	0.3	1	ug/l
Trichloroethene	0.2	1	ug/l
1,4-Dioxane	29	250	ug/l
Toluene	0.2	1	ug/l
Tetrachloroethene	0.2	1	ug/l
Ethylbenzene	0.4	1	ug/l
Xylene (Total)	1	6	ug/l
1,2-Dichlorobenzene	0.2	5	ug/l
Naphthalene	1	5	ug/l

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln04t06.d BFB Injection Date: 11/04/19

Instrument ID: HP09915 BFB Injection Time: 14:18

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.48
75	30.0 - 60.0% of mass 95	44.65
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.22
173	Less than 2.0% of mass 174	0.51 (0.61)1
174	Greater than 50.0% of mass 95	83.73
175	5.0 - 9.0% of mass 174	5.92 (7.07)1
176	Greater than 95.0%, but less than 101.0% of mass 174	82.66 (98.72)1
177	5.0 - 9.0% of mass 176	5.37 (6.49)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	ln04i01.d	11/04/19	14:51
02	VSTD100	ln04i02.d	11/04/19	15:13
03	VSTD50	ln04i03.d	11/04/19	15:35
04	VSTD20	ln04i04.d	11/04/19	15:57
05	VSTD10	ln04i05.d	11/04/19	16:19
06	VSTD4	ln04i06.d	11/04/19	16:41
07	VSTD1	ln04i07.d	11/04/19	17:03
08	ICVLLG	ln04v02.d	11/04/19	18:42

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln20t01.d BFB Injection Date: 11/20/19

Instrument ID: HP09915 BFB Injection Time: 08:00

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.52
75	30.0 - 60.0% of mass 95	44.88
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.35
173	Less than 2.0% of mass 174	0.43 (0.54)1
174	Greater than 50.0% of mass 95	80.67
175	5.0 - 9.0% of mass 174	5.73 (7.10)1
176	Greater than 95.0%, but less than 101.0% of mass 174	79.93 (99.08)1
177	5.0 - 9.0% of mass 176	5.28 (6.60)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	ln20c01.d	11/20/19	08:51
02	LCSL80	ln20l01.d	11/20/19	09:13
03	VBLKL80	ln20b01.d	11/20/19	09:35
04	1202295	ln20s01.d	11/20/19	09:57
05	1202314	ln20s02.d	11/20/19	10:19
06	1202284	ln20s03.d	11/20/19	10:41
07	1202285	ln20s04.d	11/20/19	11:03
08	1202296	ln20s05.d	11/20/19	11:25
09	1202297MS	ln20s06.d	11/20/19	11:52
10	1202298MSD	ln20s07.d	11/20/19	12:14
11	1202299	ln20s08.d	11/20/19	12:36
12	1202300	ln20s09.d	11/20/19	12:58
13	1202301	ln20s10.d	11/20/19	13:20
14	1202302	ln20s11.d	11/20/19	13:42
15	1202303	ln20s12.d	11/20/19	14:04
16	1202304	ln20s13.d	11/20/19	14:26
17	1202305	ln20s14.d	11/20/19	14:48
18	1202306	ln20s15.d	11/20/19	15:10
19	1202307	ln20s16.d	11/20/19	15:32
20	1202315	ln20s17.d	11/20/19	15:54
21	1202316	ln20s18.d	11/20/19	16:16
22	1202317	ln20s19.d	11/20/19	16:38

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln20t01.d BFB Injection Date: 11/20/19

Instrument ID: HP09915 BFB Injection Time: 08:00

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.52
75	30.0 - 60.0% of mass 95	44.88
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.35
173	Less than 2.0% of mass 174	0.43 (0.54)1
174	Greater than 50.0% of mass 95	80.67
175	5.0 - 9.0% of mass 174	5.73 (7.10)1
176	Greater than 95.0%, but less than 101.0% of mass 174	79.93 (99.08)1
177	5.0 - 9.0% of mass 176	5.28 (6.60)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1202318	ln20s20.d	11/20/19	17:00
24	1202319	ln20s21.d	11/20/19	17:22
25	1202320	ln20s22.d	11/20/19	17:44

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln21t02.d BFB Injection Date: 11/21/19

Instrument ID: HP09915 BFB Injection Time: 07:42

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.38
75	30.0 - 60.0% of mass 95	44.70
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.06
173	Less than 2.0% of mass 174	0.40 (0.48)1
174	Greater than 50.0% of mass 95	82.72
175	5.0 - 9.0% of mass 174	5.73 (6.92)1
176	Greater than 95.0%, but less than 101.0% of mass 174	80.53 (97.35)1
177	5.0 - 9.0% of mass 176	5.22 (6.48)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	ln21c01.d	11/21/19	08:18
02	RVLL83 - RLVL83	ln21r01.d	11/21/19	09:02
03	VBLKL83	ln21b01.d	11/21/19	09:24
04	LCSL83	ln21l01.d	11/21/19	09:50
05	1202441	ln21s02.d	11/21/19	10:59
06	1202286	ln21s03.d	11/21/19	11:21
07	1202287MS	ln21s04.d	11/21/19	11:43
08	1202288MSD	ln21s05.d	11/21/19	12:04
09	1202289	ln21s06.d	11/21/19	12:26
10	1202290	ln21s07.d	11/21/19	12:48
11	1202291	ln21s08.d	11/21/19	13:10
12	1202292	ln21s09.d	11/21/19	13:32
13	1202293	ln21s10.d	11/21/19	13:54
14	1202294	ln21s11.d	11/21/19	14:16
15	1202321	ln21s12.d	11/21/19	14:39
16	1202322	ln21s13.d	11/21/19	15:01
17	1202323	ln21s14.d	11/21/19	15:23
18	1202325	ln21s15.d	11/21/19	15:45
19	1202326	ln21s16.d	11/21/19	16:07
20	1202327	ln21s17.d	11/21/19	16:29
21	1202434	ln21s18.d	11/21/19	16:51
22	1202437	ln21s19.d	11/21/19	17:13

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln21t02.d BFB Injection Date: 11/21/19

Instrument ID: HP09915 BFB Injection Time: 07:42

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.38
75	30.0 - 60.0% of mass 95	44.70
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.06
173	Less than 2.0% of mass 174	0.40 (0.48)1
174	Greater than 50.0% of mass 95	82.72
175	5.0 - 9.0% of mass 174	5.73 (6.92)1
176	Greater than 95.0%, but less than 101.0% of mass 174	80.53 (97.35)1
177	5.0 - 9.0% of mass 176	5.22 (6.48)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1202438	ln21s20.d	11/21/19	17:35
24	1202439	ln21s21.d	11/21/19	17:57
25	1202440	ln21s22.d	11/21/19	18:19

FORM V VOA

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6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 11/04/19 11/04/19

Heated Purge: (Y/N) Y Calibration Times: 14:51 17:03

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ln04i07.d RRF 4 = ln04i06.d RRF 10= ln04i05.d
RRF 20= ln04i04.d RRF 50= ln04i03.d RRF100= ln04i02.d RRF300= ln04i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
Dichlorodifluoromethane	#0.2770	0.3398	0.3322	0.3567	0.3683	0.3624	0.4044	0.3487	11	AVG	#
Chloromethane	#0.3032	0.3486	0.3309	0.3441	0.3366	0.3315	0.3574	0.3361	5	AVG	#
1,3-Butadiene	0.3190	0.2966	0.2596	0.2831	0.2680	0.2614	0.2655	0.2790	8	AVG	
Vinyl Chloride	#0.3148	0.3359	0.3281	0.3461	0.3340	0.3300	0.3588	0.3354	4	AVG	#
Bromomethane	#0.2465	0.2525	0.2338	0.2435	0.2351	0.2280	0.2436	0.2404	4	AVG	#
Chloroethane	#0.1829	0.1883	0.1826	0.1903	0.1829	0.1768	0.1864	0.1843	2	AVG	#
Dichlorofluoromethane	0.4438	0.4434	0.4617	0.4547	0.4393	0.4194	0.4429	0.4436	3	AVG	
n-Pentane	0.4515	0.4661	0.3729	0.4321	0.4220	0.4236	0.4188	0.4267	7	AVG	
Trichlorofluoromethane	#0.3135	0.3650	0.3480	0.3680	0.3738	0.3637	0.3957	0.3611	7	AVG	#
Ethyl ether	0.2040	0.2292	0.2248	0.2407	0.2462	0.2325	0.2560	0.2333	7	AVG	
Freon 123a	0.2731	0.2973	0.2841	0.3052	0.2905	0.2871	0.2961	0.2905	4	AVG	
Acrolein	1.8108	1.7178	1.8759	1.9357	1.9501	1.9507	1.8885	1.8756	5	AVG	
1,1-Dichloroethene	#0.1836	0.2109	0.2092	0.2256	0.2170	0.2158	0.2215	0.2120	6	AVG	#
1,1-Dichloroethene(2)	#0.1023	0.1059	0.1045	0.1117	0.1063	0.1059	0.1072	0.1063	3	AVG	#
Acetone	#0.8149	0.8065	0.8248	0.8719	0.8448	0.8521	0.8711	0.8409	3	AVG	#
Freon 113	#0.2090	0.2460	0.2241	0.2555	0.2493	0.2512	0.2576	0.2418	8	AVG	#
2-Propanol	0.6190	0.5470	0.6059	0.5854	0.6149	0.6455	0.6138	0.6045	5	AVG	
Methyl Iodide	0.3896	0.4318	0.4390	0.4699	0.4471	0.4440	0.4531	0.4392	6	AVG	
Carbon Disulfide	#0.6790	0.7802	0.7759	0.8606	0.8244	0.8268	0.8441	0.7987	8	AVG	#
Allyl Chloride	0.3592	0.3785	0.3741	0.3853	0.3781	0.3777	0.4087	0.3802	4	AVG	
Methyl Acetate	#0.2759	0.2713	0.2678	0.2699	0.2708	0.2665	0.2887	0.2730	3	AVG	#
Methylene Chloride	#0.2376	0.2470	0.2510	0.2643	0.2542	0.2521	0.2596	0.2523	3	AVG	#
t-Butyl alcohol	0.9987	0.9567	1.0535	1.0361	1.0823	1.1654	1.0751	1.0525	6	AVG	
Acrylonitrile	0.1302	0.1382	0.1473	0.1543	0.1516	0.1518	0.1546	0.1469	6	AVG	
trans-1,2-Dichloroethene	#0.2214	0.2420	0.2423	0.2603	0.2478	0.2478	0.2548	0.2452	5	AVG	#
Methyl Tertiary Butyl Ether	#0.7408	0.7784	0.8166	0.8514	0.8245	0.8033	0.8186	0.8048	4	AVG	#
n-Hexane	0.3287	0.3697	0.3246	0.4104	0.3995	0.4116	0.4257	0.3815	11	AVG	
1,1-Dichloroethane	#0.3709	0.4279	0.4277	0.4500	0.4356	0.4348	0.4472	0.4277	6	AVG	#
di-Isopropyl ether	0.7323	0.7905	0.8261	0.8844	0.8488	0.8391	0.8535	0.8250	6	AVG	
2-Chloro-1,3-butadiene	0.3275	0.3721	0.3665	0.4087	0.3982	0.4003	0.4129	0.3838	8	AVG	
Ethyl t-butyl ether	0.7062	0.7711	0.8131	0.8688	0.8314	0.8069	0.8067	0.8006	6	AVG	
cis-1,2-Dichloroethene	#0.2518	0.2724	0.2701	0.2905	0.2780	0.2764	0.2874	0.2752	5	AVG	#
2-Butanone	#0.1780	0.1771	0.1844	0.1937	0.1954	0.1945	0.1965	0.1885	4	AVG	#
2,2-Dichloropropane	0.2822	0.3252	0.3231	0.3546	0.3451	0.3438	0.3535	0.3325	8	AVG	
Propionitrile	1.2429	1.2037	1.2978	1.3520	1.3266	1.3641	1.3930	1.3114	5	AVG	
Methacrylonitrile	0.1422	0.1460	0.1564	0.1674	0.1637	0.1633	0.1700	0.1584	7	AVG	
Bromochloromethane	0.1253	0.1402	0.1475	0.1518	0.1494	0.1475	0.1599	0.1459	7	AVG	
Tetrahydrofuran	1.1900	1.0886	1.1667	1.2087	1.1678	1.2286	1.2418	1.1846	4	AVG	
Chloroform	#0.3565	0.3938	0.4037	0.4404	0.4177	0.4181	0.4336	0.4091	7	AVG	#
1,1,1-Trichloroethane	#0.2897	0.3392	0.3356	0.3727	0.3627	0.3635	0.3807	0.3492	9	AVG	#
Cyclohexane	#0.3956	0.4609	0.4169	0.5022	0.4885	0.4944	0.5099	0.4669	10	AVG	#
Cyclohexane(2)	#0.3456	0.3987	0.3627	0.4329	0.4236	0.4319	0.4438	0.4056	9	AVG	#
Cyclohexane(3)	#0.1219	0.1428	0.1291	0.1542	0.1510	0.1531	0.1588	0.1444	10	AVG	#
1,1-Dichloropropene	0.2907	0.3348	0.3278	0.3579	0.3462	0.3479	0.3620	0.3382	7	AVG	
Carbon Tetrachloride	#0.2440	0.2777	0.2747	0.3128	0.3114	0.3175	0.3350	0.2961	11	AVG	#
Isobutyl Alcohol	0.3485	0.3107	0.3595	0.3421	0.3590	0.3974	0.3623	0.3542	7	AVG	
Benzene	#0.8990	1.0067	1.0148	1.0842	1.0359	1.0238	1.0549	1.0170	6	AVG	#
1,2-Dichloroethane	#0.3434	0.3191	0.3218	0.3337	0.3212	0.3202	0.3304	0.3271	3	AVG	#
1,2-Dichloroethane(2)	#0.0306	0.0316	0.0313	0.0343	0.0326	0.0322	0.0340	0.0324	4	AVG	#<-
t-Amyl methyl ether	0.7161	0.7648	0.8115	0.8675	0.8369	0.8221	0.8061	0.8036	6	AVG	
n-Heptane	0.3313	0.3538	0.2821	0.3843	0.3724	0.3852	0.3855	0.3564	11	AVG	
n-Butanol	0.2496	0.2624	0.3164	0.3024	0.3250	0.3551	0.3230	0.3049	12	AVG	

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 11/04/19 11/04/19

Heated Purge: (Y/N) Y Calibration Times: 14:51 17:03

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ln04i07.d RRF 4 = ln04i06.d RRF 10= ln04i05.d
RRF 20= ln04i04.d RRF 50= ln04i03.d RRF100= ln04i02.d RRF300= ln04i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Trichloroethene	#0.2300	0.2478	0.2477	0.2710	0.2607	0.2615	0.2739	0.2561	6	AVG #
Methylcyclohexane	#0.4066	0.4619	0.4494	0.4907	0.4946	0.4918	0.5306	0.4751	8	AVG #
Methylcyclohexane(2)	#0.1773	0.2158	0.2019	0.2198	0.2245	0.2228	0.2428	0.2150	10	AVG #
1,2-Dichloropropane	#0.2299	0.2478	0.2567	0.2731	0.2644	0.2644	0.2715	0.2582	6	AVG #
Dibromomethane	0.1450	0.1593	0.1638	0.1764	0.1719	0.1732	0.1801	0.1671	7	AVG
1,4-Dioxane	0.0728	0.0772	0.0845	0.0860	0.0888	0.0886	0.0887	0.0838	8	AVG
Methyl Methacrylate	0.2026	0.2254	0.2423	0.2604	0.2637	0.2705	0.2832	0.2497	11	AVG
Bromodichloromethane	#0.2483	0.2630	0.2867	0.3150	0.3161	0.3256	0.3442	0.2998	12	AVG #
2-Nitropropane	0.0733	0.0770	0.0825	0.0914	0.1013	0.1033	0.1070	0.0908	15	AVG
2-Chloroethyl Vinyl Ether	0.0882	0.0977	0.1040	0.1130	0.1155	0.1203	0.1378	0.1109	15	AVG
cis-1,3-Dichloropropene	#0.3066	0.3495	0.3874	0.4270	0.4265	0.4334	0.4572	0.3982	13	AVG #
4-Methyl-2-pentanone	#0.3519	0.3696	0.3930	0.4183	0.4328	0.4167	0.4032	0.3979	7	AVG #
Toluene	#0.7332	0.7931	0.8181	0.8731	0.8456	0.8312	0.8473	0.8202	6	AVG #
trans-1,3-Dichloropropene	#0.3482	0.3965	0.4507	0.4938	0.5103	0.5177	0.5421	0.4656	15	AVG #
Ethyl Methacrylate	0.4474	0.4901	0.5672	0.5969	0.6125	0.6196	0.6273	0.5659	12	AVG
1,1,2-Trichloroethane	#0.2783	0.2901	0.3087	0.3230	0.3222	0.3239	0.3306	0.3110	6	AVG #
Tetrachloroethene	#0.3162	0.3426	0.3214	0.3690	0.3559	0.3544	0.3721	0.3474	6	AVG #
1,3-Dichloropropane	0.4832	0.4915	0.5312	0.5551	0.5463	0.5472	0.5620	0.5309	6	AVG
2-Hexanone	#0.3356	0.3575	0.3750	0.3917	0.4210	0.3894	0.3737	0.3777	7	AVG #
Dibromochloromethane	#0.2335	0.2673	0.3027	0.3338	0.3491	0.3626	0.3808	0.3185	17	AVG #
1,2-Dibromoethane	#0.2934	0.3052	0.3308	0.3537	0.3534	0.3557	0.3715	0.3377	9	AVG #
1-Chlorohexane	0.4605	0.4391	0.3819	0.4601	0.4417	0.4418	0.4594	0.4406	6	AVG
Chlorobenzene	#0.8164	0.9033	0.9335	0.9825	0.9556	0.9405	0.9609	0.9275	6	AVG #
1,1,1,2-Tetrachloroethane	0.2351	0.2774	0.2999	0.3286	0.3310	0.3327	0.3346	0.3056	12	AVG
Ethylbenzene	#1.3747	1.5457	1.5220	1.6801	1.6314	1.6113	1.6087	1.5677	6	AVG #
m+p-Xylene	#0.5374	0.6016	0.5976	0.6715	0.6453	0.6383	0.6253	0.6167	7	AVG #
o-Xylene	#0.5399	0.5806	0.5978	0.6590	0.6427	0.6294	0.6148	0.6092	7	AVG #
Styrene	#0.8016	0.9301	1.0102	1.0972	1.0847	1.0669	1.0557	1.0066	11	AVG #
Bromoform	#	0.1724	0.2151	0.2312	0.2542	0.2685	0.2868	0.2380	17	AVG #
Isopropylbenzene	#1.2910	1.5137	1.4363	1.6684	1.6105	1.5929	1.5825	1.5279	8	AVG #
Cyclohexanone	0.3281	0.3024	0.3195	0.3248	0.3437	0.3247	0.3541	0.3282	5	AVG
Bromobenzene	0.6787	0.7176	0.7360	0.7885	0.7819	0.7772	0.7803	0.7515	6	AVG
1,1,2,2-Tetrachloroethane	#0.8022	0.8637	0.9996	0.9771	0.9960	0.9947	0.9782	0.9445	8	AVG #
1,2,3-Trichloropropane	0.2561	0.2658	0.3031	0.2987	0.2999	0.3027	0.3026	0.2898	7	AVG
trans-1,4-Dichloro-2-butene	0.2392	0.2651	0.2913	0.3105	0.3171	0.3156	0.3005	0.2913	10	AVG
n-Propylbenzene	2.9207	3.2949	2.9806	3.5724	3.4357	3.4054	3.3722	3.2831	7	AVG
2-Chlorotoluene	0.6482	0.6609	0.6535	0.7438	0.7252	0.7177	0.7330	0.6975	6	AVG
4-Chlorotoluene	0.6762	0.7074	0.6870	0.7741	0.7474	0.7369	0.7530	0.7260	5	AVG
1,3,5-Trimethylbenzene	1.9893	2.3249	2.1852	2.6169	2.5322	2.5250	2.5281	2.3860	10	AVG
tert-Butylbenzene	0.4288	0.4845	0.4243	0.5332	0.5247	0.5261	0.5325	0.4934	10	AVG
Pentachloroethane	0.2905	0.3724	0.4105	0.4466	0.4692	0.4744	0.5106	0.4249	18	AVG
1,2,4-Trimethylbenzene	2.1648	2.4282	2.3275	2.7429	2.6696	2.6607	2.6088	2.5147	8	AVG
sec-Butylbenzene	2.5710	2.9123	2.5624	3.2580	3.1256	3.1495	3.0325	2.9444	9	AVG
1,3-Dichlorobenzene	#1.3168	1.3435	1.3443	1.4749	1.4337	1.4053	1.3479	1.3809	4	AVG #
p-Isopropyltoluene	2.2311	2.5145	2.2448	2.8322	2.7191	2.7434	2.5461	2.5473	9	AVG
1,4-Dichlorobenzene	#1.3913	1.3992	1.3855	1.5164	1.4765	1.4501	1.4018	1.4315	4	AVG #
1,2,3-Trimethylbenzene	2.3717	2.5881	2.6584	2.7814	2.7739	2.7079	2.7646	2.6637	6	AVG
Benzyl Chloride		1.4905	1.9042	2.0277	2.1892	2.2241	2.2651	2.0168	14	AVG
1,3-Diethylbenzene	1.4770	1.6040	1.6373	1.7518	1.7206	1.7031	1.7107	1.6578	6	AVG
1,4-Diethylbenzene	1.6313	1.7295	1.7208	1.8600	1.8134	1.7888	1.7510	1.7564	4	AVG
1,2-Dichlorobenzene	#1.2854	1.3272	1.3476	1.4407	1.4096	1.3800	1.3479	1.3626	4	AVG #
n-Butylbenzene	1.2635	1.3335	1.1354	1.4216	1.3485	1.3543	1.2604	1.3024	7	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 11/04/19 11/04/19

Heated Purge: (Y/N) Y Calibration Times: 14:51 17:03

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ln04i07.d RRF 4 = ln04i06.d RRF 10= ln04i05.d
RRF 20= ln04i04.d RRF 50= ln04i03.d RRF100= ln04i02.d RRF300= ln01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
1,2-Diethylbenzene	1.2665	1.3513	1.3737	1.4741	1.4581	1.4365	1.4223	1.3975	5	AVG
1,2-Dibromo-3-chloropropane#	0.1653	0.1703	0.2163	0.2130	0.2240	0.2247	0.2337	0.2068	13	AVG #
1,3,5-Trichlorobenzene	1.0736	1.0363	0.9506	1.1293	1.0680	1.0728	0.9975	1.0469	6	AVG
1,2,4-Trichlorobenzene #	1.0928	0.9898	0.9467	1.0851	1.0411	1.0335	0.9366	1.0179	6	AVG #
Hexachlorobutadiene		0.6224	0.4463	0.5319	0.4489	0.4300	0.4042	0.4806	17	AVG
Naphthalene	2.9793	3.0036	3.3068	3.4936	3.4918	3.4237	3.2086	3.2725	7	AVG
1,2,3-Trichlorobenzene	1.0616	0.9674	0.9274	1.0684	1.0300	1.0095	0.8692	0.9905	7	AVG
2-Methylnaphthalene	1.9837	1.8879	2.0390	2.2209	2.2298	2.1150	1.6300	2.0152	10	AVG
Dibromofluoromethane	0.2407	0.2444	0.2426	0.2463	0.2437	0.2470	0.2465	0.2445	1	AVG
Dibromofluoromethane(2)	0.2457	0.2504	0.2472	0.2513	0.2494	0.2516	0.2491	0.2492	1	AVG
1,2-Dichloroethane-d4	0.0612	0.0629	0.0625	0.0629	0.0628	0.0627	0.0611	0.0623	1	AVG
1,2-Dichloroethane-d4(2)	0.2741	0.2818	0.2744	0.2819	0.2771	0.2799	0.2742	0.2776	1	AVG
1,2-Dichloroethane-d4(3)	0.0389	0.0398	0.0398	0.0408	0.0397	0.0402	0.0393	0.0398	2	AVG
Toluene-d8	1.3149	1.3039	1.3148	1.3125	1.3146	1.3005	1.2968	1.3083	1	AVG
Toluene-d8(2)	0.8480	0.8436	0.8547	0.8509	0.8480	0.8442	0.8428	0.8475	1	AVG
4-Bromofluorobenzene	0.4958	0.4982	0.5005	0.4967	0.4932	0.4898	0.4935	0.4954	1	AVG
4-Bromofluorobenzene(2)	0.4097	0.4154	0.4152	0.4118	0.4097	0.4065	0.4066	0.4107	1	AVG

Average %RSD 7

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

FORM VI VOA

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP09915.i/19nov04i.b/ln04i01.d	VSTD300
/chem/HP09915.i/19nov04i.b/ln04i02.d	VSTD100
/chem/HP09915.i/19nov04i.b/ln04i03.d	VSTD050
/chem/HP09915.i/19nov04i.b/ln04i04.d	VSTD020
/chem/HP09915.i/19nov04i.b/ln04i05.d	VSTD010
/chem/HP09915.i/19nov04i.b/ln04i06.d	VSTD004
/chem/HP09915.i/19nov04i.b/ln04i07.d	VSTD001

Area Summary

File ID:

Internal Standard Name	ln04i01.d	ln04i02.d	ln04i03.d	ln04i04.d	ln04i05.d	ln04i06.d	ln04i07.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	254406	265971	269779	258058	263427	262044	243591	259611	3	Yes
Fluorobenzene	1120873	1183605	1160755	1128743	1158257	1148427	1137124	1148255	2	Yes
Chlorobenzene-d5	891668	935628	904578	883281	897139	884065	879875	896605	2	Yes
1,4-Dichlorobenzene-d4	477171	500629	483927	476218	496298	480071	473433	483964	2	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	ln04i01.d	ln04i02.d	ln04i03.d	ln04i04.d	ln04i05.d	ln04i06.d	ln04i07.d	Avg. RT
t-Butyl alcohol-d10	4.503	4.509	4.509	4.512	4.509	4.512	4.496	4.507
Fluorobenzene	7.959	7.962	7.959	7.962	7.956	7.959	7.959	7.960
Chlorobenzene-d5	11.361	11.361	11.361	11.361	11.358	11.358	11.358	11.360
1,4-Dichlorobenzene-d4	13.223	13.223	13.223	13.223	13.223	13.223	13.223	13.223

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 11/05/2019 at 16:07.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 11/04/19 Time: 18:42

Lab File ID: ln04v02.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3487	0.3266	18.73	20	-6	#
# Chloromethane	0.3361	0.3180	18.93	20	-5	#
1,3-Butadiene	0.2790	0.2741	19.65	20	-2	
# Vinyl Chloride	0.3354	0.3245	19.35	20	-3	#
# Bromomethane	0.2404	0.2156	17.93	20	-10	#
# Chloroethane	0.1843	0.1704	18.49	20	-8	#
Dichlorofluoromethane	0.4436	0.3598	16.22	20	-19	
n-Pentane	0.4267	0.4057	19.01	20	-5	
# Trichlorofluoromethane	0.3611	0.3746	20.75	20	4	#
Ethyl ether	0.2333	0.1939	16.62	20	-17	
Freon 123a	0.2905	0.2825	19.45	20	-3	
Acrolein	1.8756	1.6896	135.12	150	-10	
# 1,1-Dichloroethene	0.2120	0.2216	20.91	20	5	#
# Acetone	0.8409	0.7666	136.75	150	-9	#
# Freon 113	0.2418	0.2394	19.80	20	-1	#
2-Propanol	0.6045	0.5806	144.06	150	-4	
Methyl Iodide	0.4392	0.4077	18.56	20	-7	
# Carbon Disulfide	0.7987	0.7452	18.66	20	-7	#
Allyl Chloride	0.3802	0.3535	18.59	20	-7	
# Methyl Acetate	0.2730	0.2606	19.09	20	-5	#
# Methylene Chloride	0.2523	0.2570	20.38	20	2	#
t-Butyl alcohol	1.0525	1.0046	190.90	200	-5	
Acrylonitrile	0.1469	0.1395	94.98	100	-5	
# trans-1,2-Dichloroethene	0.2452	0.2452	20.00	20	0	#
# Methyl Tertiary Butyl Ether	0.8048	0.7596	18.87	20	-6	#
n-Hexane	0.3815	0.3828	20.07	20	0	
# 1,1-Dichloroethane	0.4277	0.4163	19.46	20	-3	#
di-Isopropyl ether	0.8250	0.7868	19.08	20	-5	
2-Chloro-1,3-butadiene	0.3838	0.3659	19.07	20	-5	
Ethyl t-butyl ether	0.8006	0.7634	19.07	20	-5	
# cis-1,2-Dichloroethene	0.2752	0.2889	20.99	20	5	#
# 2-Butanone	0.1885	0.1794	142.74	150	-5	#
2,2-Dichloropropane	0.3325	0.3377	20.31	20	2	
Propionitrile	1.3114	1.2333	141.06	150	-6	
Methacrylonitrile	0.1584	0.1535	145.31	150	-3	
Bromochloromethane	0.1459	0.1368	18.75	20	-6	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 11/04/19 Time: 18:42

Lab File ID: ln04v02.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Tetrahydrofuran	1.1846	1.0959	92.51	100	-7	
#	Chloroform	0.4091	0.4123	20.16	20	1	#
#	1,1,1-Trichloroethane	0.3492	0.3558	20.38	20	2	#
#	Cyclohexane	0.4669	0.4442	19.02	20	-5	#
	1,1-Dichloropropene	0.3382	0.3393	20.07	20	0	
#	Carbon Tetrachloride	0.2961	0.2964	20.02	20	0	#
	Isobutyl Alcohol	0.3542	0.3198	451.41	500	-10	
#	Benzene	1.0170	1.0168	20.00	20	0	#
#	1,2-Dichloroethane	0.3271	0.3373	20.62	20	3	#
	t-Amyl methyl ether	0.8036	0.7630	18.99	20	-5	
	n-Heptane	0.3564	0.3376	18.95	20	-5	
	n-Butanol	0.3049	0.2780	911.92	1000	-9	
#	Trichloroethene	0.2561	0.2581	20.16	20	1	#
#	Methylcyclohexane	0.4751	0.4589	19.32	20	-3	#
#	1,2-Dichloropropane	0.2582	0.2641	20.45	20	2	#
	Dibromomethane	0.1671	0.1672	20.01	20	0	
	1,4-Dioxane	0.0838	0.0844	503.75	500	1	
	Methyl Methacrylate	0.2497	0.2388	19.13	20	-4	
#	Bromodichloromethane	0.2998	0.2984	19.91	20	0	#
	2-Nitropropane	0.0908	0.0741	16.32	20	-18	
	2-Chloroethyl Vinyl Ether	0.1109	0.1056	19.04	20	-5	
#	cis-1,3-Dichloropropene	0.3982	0.3957	19.87	20	-1	#
#	4-Methyl-2-pentanone	0.3979	0.3693	92.81	100	-7	#
#	Toluene	0.8202	0.8294	20.22	20	1	#
#	trans-1,3-Dichloropropene	0.4656	0.4472	19.21	20	-4	#
	Ethyl Methacrylate	0.5659	0.5138	18.16	20	-9	
#	1,1,2-Trichloroethane	0.3110	0.3171	20.39	20	2	#
#	Tetrachloroethene	0.3474	0.3842	22.12	20	11	#
	1,3-Dichloropropane	0.5309	0.5224	19.68	20	-2	
#	2-Hexanone	0.3777	0.3481	92.15	100	-8	#
#	Dibromochloromethane	0.3185	0.3147	19.76	20	-1	#
#	1,2-Dibromoethane	0.3377	0.3356	19.88	20	-1	#
	1-Chlorohexane	0.4406	0.4292	19.48	20	-3	
#	Chlorobenzene	0.9275	0.9379	20.22	20	1	#
	1,1,1,2-Tetrachloroethane	0.3056	0.3029	19.82	20	-1	
#	Ethylbenzene	1.5677	1.5899	20.28	20	1	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 11/04/19 Time: 18:42

Lab File ID: ln04v02.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
	COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
#	m+p-Xylene	0.6167	0.6315	40.96	40	2	#
#	o-Xylene	0.6092	0.6189	20.32	20	2	#
#	Styrene	1.0066	1.0350	20.56	20	3	#
#	Bromoform	0.2380	0.2137	17.95	20	-10	#
#	Isopropylbenzene	1.5279	1.5939	20.86	20	4	#
	Cyclohexanone	0.3282	0.2949	449.36	500	-10	
	Bromobenzene	0.7515	0.7447	19.82	20	-1	
#	1,1,2,2-Tetrachloroethane	0.9445	0.9245	19.58	20	-2	#
	1,2,3-Trichloropropane	0.2898	0.2890	19.94	20	0	
	trans-1,4-Dichloro-2-butene	0.2913	0.2850	97.83	100	-2	
	n-Propylbenzene	3.2831	3.4091	20.77	20	4	
	2-Chlorotoluene	0.6975	0.7037	20.18	20	1	
	4-Chlorotoluene	0.7260	0.7301	20.11	20	1	
	1,3,5-Trimethylbenzene	2.3860	2.4518	20.55	20	3	
	tert-Butylbenzene	0.4934	0.5090	20.63	20	3	
	Pentachloroethane	0.4249	0.3657	17.21	20	-14	
	1,2,4-Trimethylbenzene	2.5147	2.5110	19.97	20	0	
	sec-Butylbenzene	2.9444	3.0247	20.55	20	3	
#	1,3-Dichlorobenzene	1.3809	1.3855	20.07	20	0	#
	p-Isopropyltoluene	2.5473	2.6162	20.54	20	3	
#	1,4-Dichlorobenzene	1.4315	1.4660	20.48	20	2	#
	1,2,3-Trimethylbenzene	2.6637	2.6470	19.87	20	-1	
	Benzyl Chloride	2.0168	1.6153	16.02	20	-20	
	1,3-Diethylbenzene	1.6578	1.5827	19.09	20	-5	
	1,4-Diethylbenzene	1.7564	1.6691	19.01	20	-5	
#	1,2-Dichlorobenzene	1.3626	1.3874	20.36	20	2	#
	n-Butylbenzene	1.3024	1.2702	19.50	20	-2	
	1,2-Diethylbenzene	1.3975	1.3386	19.16	20	-4	
#	1,2-Dibromo-3-chloropropane	0.2068	0.1994	19.29	20	-4	#
	1,3,5-Trichlorobenzene	1.0469	0.9964	19.04	20	-5	
#	1,2,4-Trichlorobenzene	1.0179	0.9765	19.19	20	-4	#
	Hexachlorobutadiene	0.4806	0.4071	16.94	20	-15	
	Naphthalene	3.2725	3.2676	19.97	20	0	
	1,2,3-Trichlorobenzene	0.9905	0.9443	19.07	20	-5	
	2-Methylnaphthalene	2.0152	1.8367	18.23	20	-9	

Average %Drift 5

Compounds with required minimum RRF.
Maximum % Drift = 30 %

^

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem/HP09915.i/19nov04i.b/ln04i07.d
/chem/HP09915.i/19nov04i.b/ln04i06.d
/chem/HP09915.i/19nov04i.b/ln04i05.d
/chem/HP09915.i/19nov04i.b/ln04i04.d
/chem/HP09915.i/19nov04i.b/ln04i03.d
/chem/HP09915.i/19nov04i.b/ln04i02.d
/chem/HP09915.i/19nov04i.b/ln04i01.d

File /chem/HP09915.i/19nov04i.b/ln04i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem/HP09915.i/19nov20a.b/ln20c01.d

RT Summary

Internal Standard Name	File ID: ln20c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	4.493	4.509	Yes
Fluorobenzene	7.959	7.959	Yes
Chlorobenzene-d5	11.361	11.361	Yes
1,4-Dichlorobenzene-d4	13.223	13.223	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: ln20c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	153357	269779	134890	539558	Yes
Fluorobenzene	890803	1160755	580378	2321510	Yes
Chlorobenzene-d5	725253	904578	452289	1809156	Yes
1,4-Dichlorobenzene-d4	391522	483927	241964	967854	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 11/20/2019 at 09:17

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/20/19 Time: 08:51

Lab File ID: ln20c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	$\overline{RRF}$	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Dichlorodifluoromethane	0.3487	0.3663	52.52	50	5	#
#	Chloromethane	0.3361	0.3552	52.85	50	6	#
	1,3-Butadiene	0.2790	0.3839	68.80	50	38	<-
#	Vinyl Chloride	0.3354	0.3481	51.89	50	4	#
#	Bromomethane	0.2404	0.2527	52.55	50	5	#
#	Chloroethane	0.1843	0.1927	52.27	50	5	#
	n-Pentane	0.4267	0.3812	44.67	50	-11	
#	Trichlorofluoromethane	0.3611	0.3889	53.86	50	8	#
	Freon 123a	0.2905	0.2922	50.29	50	1	
	Acrolein	1.8756	2.2714	605.50	500	21	<-
#	1,1-Dichloroethene	0.2120	0.2140	50.48	50	1	#
#	1,1-Dichloroethene(2)	0.1063	0.1027	48.32	50	-3	#
#	Acetone	0.8409	0.9685	115.18	100	15	#
#	Freon 113	0.2418	0.2490	51.48	50	3	#
	2-Propanol	0.6045	0.6006	248.38	250	-1	
	Methyl Iodide	0.4392	0.4368	49.73	50	-1	
#	Carbon Disulfide	0.7987	0.7959	49.82	50	0	#
	Allyl Chloride	0.3802	0.3440	45.23	50	-10	
#	Methyl Acetate	0.2730	0.2451	44.89	50	-10	#
#	Methylene Chloride	0.2523	0.2580	51.13	50	2	#
	t-Butyl alcohol	1.0525	1.0681	253.70	250	1	
	Acrylonitrile	0.1469	0.1433	48.78	50	-2	
#	trans-1,2-Dichloroethene	0.2452	0.2494	50.85	50	2	#
#	Methyl Tertiary Butyl Ether	0.8048	0.7542	46.85	50	-6	#
	n-Hexane	0.3815	0.3808	49.91	50	0	
#	1,1-Dichloroethane	0.4277	0.4207	49.18	50	-2	#
	di-Isopropyl ether	0.8250	0.7958	48.23	50	-4	
	2-Chloro-1,3-butadiene	0.3838	0.3805	49.57	50	-1	
	Ethyl t-butyl ether	0.8006	0.7583	47.36	50	-5	
#	cis-1,2-Dichloroethene	0.2752	0.2787	50.64	50	1	#
#	2-Butanone	0.1885	0.1711	90.76	100	-9	#
	2,2-Dichloropropane	0.3325	0.3228	48.54	50	-3	
	Propionitrile	1.3114	1.6002	305.05	250	22	<-
	Methacrylonitrile	0.1584	0.1578	124.54	125	0	
	Bromochloromethane	0.1459	0.1495	51.24	50	2	
	Tetrahydrofuran	1.1846	1.4626	123.46	100	23	<-

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

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7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/20/19 Time: 08:51

Lab File ID: ln20c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Chloroform	0.4091	0.4156	50.80	50	2	#
#	1,1,1-Trichloroethane	0.3492	0.3481	49.85	50	0	#
#	Cyclohexane	0.4669	0.4701	50.34	50	1	#
#	Cyclohexane(2)	0.4056	0.4128	50.88	50	2	#
#	Cyclohexane(3)	0.1444	0.1459	50.51	50	1	#
	1,1-Dichloropropene	0.3382	0.3371	49.84	50	0	
#	Carbon Tetrachloride	0.2961	0.2939	49.62	50	-1	#
	Isobutyl Alcohol	0.3542	0.3893	687.03	625	10	
#	Benzene	1.0170	1.0492	51.58	50	3	#
#	1,2-Dichloroethane	0.3271	0.3180	48.60	50	-3	#
#	1,2-Dichloroethane(2)	0.0324	0.0332	51.26	50	3	#<-
	t-Amyl methyl ether	0.8036	0.7748	48.21	50	-4	
	n-Heptane	0.3564	0.3500	49.10	50	-2	
	n-Butanol	0.3049	0.3299	1352.51	1250	8	
#	Trichloroethene	0.2561	0.2683	52.38	50	5	#
#	Methylcyclohexane	0.4751	0.4693	49.39	50	-1	#
#	Methylcyclohexane(2)	0.2150	0.2121	49.33	50	-1	#
#	1,2-Dichloropropane	0.2582	0.2588	50.11	50	0	#
	Dibromomethane	0.1671	0.1726	51.66	50	3	
	1,4-Dioxane	0.0838	0.1144	853.29	625	37	<-
	Methyl Methacrylate	0.2497	0.2526	50.57	50	1	
#	Bromodichloromethane	0.2998	0.3018	50.32	50	1	#
	2-Nitropropane	0.0908	0.0825	90.80	100	-9	
	2-Chloroethyl Vinyl Ether	0.1109	0.1930	87.02	50	74	<-
#	cis-1,3-Dichloropropene	0.3982	0.3969	49.83	50	0	#
#	4-Methyl-2-pentanone	0.3979	0.3747	94.16	100	-6	#
#	Toluene	0.8202	0.8307	50.64	50	1	#
#	trans-1,3-Dichloropropene	0.4656	0.4436	47.64	50	-5	#
	Ethyl Methacrylate	0.5659	0.5631	49.76	50	0	
#	1,1,2-Trichloroethane	0.3110	0.3168	50.94	50	2	#
#	Tetrachloroethene	0.3474	0.3484	50.15	50	0	#
	1,3-Dichloropropane	0.5309	0.5280	49.72	50	-1	
#	2-Hexanone	0.3777	0.3402	90.06	100	-10	#
#	Dibromochloromethane	0.3185	0.2967	46.58	50	-7	#
#	1,2-Dibromoethane	0.3377	0.3445	51.01	50	2	#
	1-Chlorohexane	0.4406	0.4277	48.53	50	-3	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/20/19 Time: 08:51

Lab File ID: ln20c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Chlorobenzene	0.9275	0.9300	50.13	50	0	#
	1,1,1,2-Tetrachloroethane	0.3056	0.3006	49.18	50	-2	
#	Ethylbenzene	1.5677	1.6070	51.25	50	3	#
#	m+p-Xylene	0.6167	0.6327	102.60	100	3	#
#	o-Xylene	0.6092	0.6202	50.91	50	2	#
#	Styrene	1.0066	1.0480	52.05	50	4	#
#	Bromoform	0.2380	0.1905	40.01	50	-20	#
#	Isopropylbenzene	1.5279	1.5780	51.64	50	3	#
	Bromobenzene	0.7515	0.7507	49.95	50	0	
#	1,1,2,2-Tetrachloroethane	0.9445	0.9318	49.33	50	-1	#
	1,2,3-Trichloropropane	0.2898	0.2820	48.64	50	-3	
	trans-1,4-Dichloro-2-butene	0.2913	0.1700	72.96	125	-42	<-
	n-Propylbenzene	3.2831	3.4188	52.07	50	4	
	2-Chlorotoluene	0.6975	0.6959	49.89	50	0	
	4-Chlorotoluene	0.7260	0.7251	49.93	50	0	
	1,3,5-Trimethylbenzene	2.3860	2.4961	52.31	50	5	
	tert-Butylbenzene	0.4934	0.4988	50.55	50	1	
	Pentachloroethane	0.4249	0.4262	50.16	50	0	
	1,2,4-Trimethylbenzene	2.5147	2.6341	52.37	50	5	
	sec-Butylbenzene	2.9444	3.0119	51.14	50	2	
#	1,3-Dichlorobenzene	1.3809	1.3943	50.48	50	1	#
	p-Isopropyltoluene	2.5473	2.5877	50.79	50	2	
#	1,4-Dichlorobenzene	1.4315	1.4245	49.75	50	0	#
	1,2,3-Trimethylbenzene	2.6637	2.7124	50.91	50	2	
	Benzyl Chloride	2.0168	1.9540	48.44	50	-3	
	1,3-Diethylbenzene	1.6578	1.6441	49.59	50	-1	
	1,4-Diethylbenzene	1.7564	1.7102	48.68	50	-3	
#	1,2-Dichlorobenzene	1.3626	1.3641	50.05	50	0	#
	n-Butylbenzene	1.3024	1.2815	49.19	50	-2	
	1,2-Diethylbenzene	1.3975	1.3818	49.44	50	-1	
#	1,2-Dibromo-3-chloropropane	0.2068	0.1866	45.13	50	-10	#
	1,3,5-Trichlorobenzene	1.0469	0.9594	45.82	50	-8	
#	1,2,4-Trichlorobenzene	1.0179	0.9184	45.11	50	-10	#
	Hexachlorobutadiene	0.4806	0.3699	38.48	50	-23	<-
	Naphthalene	3.2725	3.2814	50.14	50	0	
	1,2,3-Trichlorobenzene	0.9905	0.8982	45.34	50	-9	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/20/19 Time: 08:51

Lab File ID: ln20c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	$\overline{RRF}$	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
2-Methylnaphthalene	2.0152	1.8591	46.13	50	-8
Dibromofluoromethane	0.2445	0.2348	48.02	50	-4
Dibromofluoromethane(2)	0.2492	0.2401	48.17	50	-4
1,2-Dichloroethane-d4	0.0623	0.0609	48.89	50	-2
1,2-Dichloroethane-d4(2)	0.2776	0.2742	49.39	50	-1
1,2-Dichloroethane-d4(3)	0.0398	0.0385	48.32	50	-3
Toluene-d8	1.3083	1.2833	49.05	50	-2
Toluene-d8(2)	0.8475	0.8246	48.65	50	-3
4-Bromofluorobenzene	0.4954	0.4950	49.96	50	0
4-Bromofluorobenzene(2)	0.4107	0.4104	49.96	50	0

Average %Drift 5

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

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Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem/HP09915.i/19nov04i.b/ln04i07.d
/chem/HP09915.i/19nov04i.b/ln04i06.d
/chem/HP09915.i/19nov04i.b/ln04i05.d
/chem/HP09915.i/19nov04i.b/ln04i04.d
/chem/HP09915.i/19nov04i.b/ln04i03.d
/chem/HP09915.i/19nov04i.b/ln04i02.d
/chem/HP09915.i/19nov04i.b/ln04i01.d

File /chem/HP09915.i/19nov04i.b/ln04i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem/HP09915.i/19nov21a.b/ln21c01.d

RT Summary

Internal Standard Name	File ID: ln21c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	4.493	4.509	Yes
Fluorobenzene	7.959	7.959	Yes
Chlorobenzene-d5	11.361	11.361	Yes
1,4-Dichlorobenzene-d4	13.223	13.223	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: ln21c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	153538	269779	134890	539558	Yes
Fluorobenzene	842128	1160755	580378	2321510	Yes
Chlorobenzene-d5	689674	904578	452289	1809156	Yes
1,4-Dichlorobenzene-d4	371519	483927	241964	967854	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments:_____

report generated on 11/21/2019 at 08:49

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/21/19 Time: 08:18

Lab File ID: ln21c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3487	0.3200	45.89	50	-8	#
# Chloromethane	0.3361	0.3161	47.03	50	-6	#
1,3-Butadiene	0.2790	0.3523	63.13	50	26	<-
# Vinyl Chloride	0.3354	0.3056	45.55	50	-9	#
# Bromomethane	0.2404	0.2245	46.69	50	-7	#
# Chloroethane	0.1843	0.1686	45.74	50	-9	#
n-Pentane	0.4267	0.3590	42.06	50	-16	
# Trichlorofluoromethane	0.3611	0.3399	47.06	50	-6	#
Ethyl ether	0.2333	0.2035	43.60	50	-13	
Freon 123a	0.2905	0.2705	46.55	50	-7	
Acrolein	1.8756	2.0074	535.14	500	7	
# 1,1-Dichloroethene	0.2120	0.1985	46.82	50	-6	#
# 1,1-Dichloroethene(2)	0.1063	0.0960	45.18	50	-10	#<-
# Acetone	0.8409	0.8836	105.08	100	5	#
# Freon 113	0.2418	0.2339	48.36	50	-3	#
2-Propanol	0.6045	0.5949	246.02	250	-2	
Methyl Iodide	0.4392	0.4071	46.34	50	-7	
# Carbon Disulfide	0.7987	0.7437	46.56	50	-7	#
Allyl Chloride	0.3802	0.2978	39.16	50	-22	<-
# Methyl Acetate	0.2730	0.2237	40.97	50	-18	#
# Methylene Chloride	0.2523	0.2372	47.01	50	-6	#
t-Butyl alcohol	1.0525	1.0059	238.91	250	-4	
Acrylonitrile	0.1469	0.1320	44.95	50	-10	
# trans-1,2-Dichloroethene	0.2452	0.2282	46.53	50	-7	#
# Methyl Tertiary Butyl Ether	0.8048	0.7031	43.68	50	-13	#
n-Hexane	0.3815	0.3533	46.30	50	-7	
# 1,1-Dichloroethane	0.4277	0.3850	45.01	50	-10	#
di-Isopropyl ether	0.8250	0.7258	43.99	50	-12	
2-Chloro-1,3-butadiene	0.3838	0.3516	45.81	50	-8	
Ethyl t-butyl ether	0.8006	0.6984	43.62	50	-13	
# cis-1,2-Dichloroethene	0.2752	0.2548	46.28	50	-7	#
# 2-Butanone	0.1885	0.1618	85.83	100	-14	#
2,2-Dichloropropane	0.3325	0.2951	44.38	50	-11	
Propionitrile	1.3114	1.4743	281.05	250	12	
Methacrylonitrile	0.1584	0.1468	115.86	125	-7	
Bromochloromethane	0.1459	0.1352	46.32	50	-7	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/21/19 Time: 08:18

Lab File ID: ln21c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
Tetrahydrofuran	1.1846	1.3047	110.13	100	10	
# Chloroform	0.4091	0.3871	47.31	50	-5	#
# 1,1,1-Trichloroethane	0.3492	0.3233	46.30	50	-7	#
# Cyclohexane	0.4669	0.4265	45.67	50	-9	#
# Cyclohexane(2)	0.4056	0.3744	46.15	50	-8	#
# Cyclohexane(3)	0.1444	0.1318	45.64	50	-9	#
1,1-Dichloropropene	0.3382	0.3080	45.53	50	-9	
# Carbon Tetrachloride	0.2961	0.2706	45.69	50	-9	#
Isobutyl Alcohol	0.3542	0.3594	634.13	625	1	
# Benzene	1.0170	0.9633	47.36	50	-5	#
# 1,2-Dichloroethane	0.3271	0.2992	45.73	50	-9	#
# 1,2-Dichloroethane(2)	0.0324	0.0303	46.86	50	-6	#<-
t-Amyl methyl ether	0.8036	0.7147	44.47	50	-11	
n-Heptane	0.3564	0.3297	46.25	50	-7	
n-Butanol	0.3049	0.3064	1256.42	1250	1	
# Trichloroethene	0.2561	0.2449	47.82	50	-4	#
# Methylcyclohexane	0.4751	0.4317	45.43	50	-9	#
# Methylcyclohexane(2)	0.2150	0.1969	45.80	50	-8	#
# 1,2-Dichloropropane	0.2582	0.2405	46.56	50	-7	#
Dibromomethane	0.1671	0.1609	48.13	50	-4	
1,4-Dioxane	0.0838	0.1182	881.89	625	41	<-
Methyl Methacrylate	0.2497	0.2366	47.37	50	-5	
# Bromodichloromethane	0.2998	0.2845	47.44	50	-5	#
2-Nitropropane	0.0908	0.0803	88.39	100	-12	
2-Chloroethyl Vinyl Ether	0.1109	0.1785	80.47	50	61	<-
# cis-1,3-Dichloropropene	0.3982	0.3716	46.66	50	-7	#
# 4-Methyl-2-pentanone	0.3979	0.3523	88.53	100	-11	#
# Toluene	0.8202	0.7631	46.52	50	-7	#
# trans-1,3-Dichloropropene	0.4656	0.4237	45.50	50	-9	#
Ethyl Methacrylate	0.5659	0.5170	45.68	50	-9	
# 1,1,2-Trichloroethane	0.3110	0.2923	47.00	50	-6	#
# Tetrachloroethene	0.3474	0.3163	45.52	50	-9	#
1,3-Dichloropropane	0.5309	0.4878	45.93	50	-8	
# 2-Hexanone	0.3777	0.3137	83.06	100	-17	#
# Dibromochloromethane	0.3185	0.2875	45.12	50	-10	#
# 1,2-Dibromoethane	0.3377	0.3186	47.17	50	-6	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/21/19 Time: 08:18

Lab File ID: ln21c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
1-Chlorohexane	0.4406	0.3845	43.63	50	-13	
Chlorobenzene	0.9275	0.8582	46.26	50	-7	#
1,1,1,2-Tetrachloroethane	0.3056	0.2805	45.90	50	-8	
Ethylbenzene	1.5677	1.4572	46.47	50	-7	#
m+p-Xylene	0.6167	0.5791	93.91	100	-6	#
o-Xylene	0.6092	0.5639	46.28	50	-7	#
Styrene	1.0066	0.9611	47.74	50	-5	#
Bromoform	0.2380	0.1890	39.71	50	-21	#<-
Isopropylbenzene	1.5279	1.4377	47.05	50	-6	#
Cyclohexanone	0.3282	0.3730	710.42	625	14	
Bromobenzene	0.7515	0.6958	46.30	50	-7	
1,1,2,2-Tetrachloroethane	0.9445	0.8837	46.78	50	-6	#
1,2,3-Trichloropropane	0.2898	0.2634	45.44	50	-9	
trans-1,4-Dichloro-2-butene	0.2913	0.1626	69.76	125	-44	<-
n-Propylbenzene	3.2831	3.1169	47.47	50	-5	
2-Chlorotoluene	0.6975	0.6358	45.58	50	-9	
4-Chlorotoluene	0.7260	0.6612	45.54	50	-9	
1,3,5-Trimethylbenzene	2.3860	2.2782	47.74	50	-5	
tert-Butylbenzene	0.4934	0.4590	46.51	50	-7	
Pentachloroethane	0.4249	0.3962	46.62	50	-7	
1,2,4-Trimethylbenzene	2.5147	2.3780	47.28	50	-5	
sec-Butylbenzene	2.9444	2.7623	46.91	50	-6	
1,3-Dichlorobenzene	1.3809	1.2750	46.16	50	-8	#
p-Isopropyltoluene	2.5473	2.3679	46.48	50	-7	
1,4-Dichlorobenzene	1.4315	1.3137	45.88	50	-8	#
1,2,3-Trimethylbenzene	2.6637	2.5245	47.39	50	-5	
Benzyl Chloride	2.0168	1.8117	44.92	50	-10	
1,3-Diethylbenzene	1.6578	1.5200	45.84	50	-8	
1,4-Diethylbenzene	1.7564	1.5854	45.13	50	-10	
1,2-Dichlorobenzene	1.3626	1.2546	46.04	50	-8	#
n-Butylbenzene	1.3024	1.1619	44.60	50	-11	
1,2-Diethylbenzene	1.3975	1.2968	46.40	50	-7	
1,2-Dibromo-3-chloropropane	0.2068	0.1796	43.43	50	-13	#
1,3,5-Trichlorobenzene	1.0469	0.8882	42.42	50	-15	
1,2,4-Trichlorobenzene	1.0179	0.8437	41.44	50	-17	#
Hexachlorobutadiene	0.4806	0.3489	36.30	50	-27	<-

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/21/19 Time: 08:18

Lab File ID: ln21c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Naphthalene	3.2725	3.0277	46.26	50	-7
1,2,3-Trichlorobenzene	0.9905	0.8309	41.95	50	-16
2-Methylnaphthalene	2.0152	1.7164	42.59	50	-15
Dibromofluoromethane	0.2445	0.2351	48.09	50	-4
Dibromofluoromethane(2)	0.2492	0.2421	48.56	50	-3
1,2-Dichloroethane-d4	0.0623	0.0610	48.95	50	-2
1,2-Dichloroethane-d4(2)	0.2776	0.2763	49.75	50	0
1,2-Dichloroethane-d4(3)	0.0398	0.0389	48.92	50	-2
Toluene-d8	1.3083	1.2671	48.42	50	-3
Toluene-d8(2)	0.8475	0.8168	48.19	50	-4
4-Bromofluorobenzene	0.4954	0.4937	49.83	50	0
4-Bromofluorobenzene(2)	0.4107	0.4083	49.71	50	-1

Average %Drift 9

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ln20c01.d Date Analyzed: 11/20/19

Instrument ID: HP09915 Time Analyzed: 08:51

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	153357	4.493	890803	7.959	725253	11.361	391522	13.222
UPPER LIMIT	306714	4.993	1781606	8.459	1450506	11.861	783044	13.722
LOWER LIMIT	76678	3.993	445402	7.459	362626	10.861	195761	12.722
LAB SAMPLE ID								
01 LCSL80	168087	4.516	923804	7.962	756463	11.361	402949	13.222
02 VBLKL80	162533	4.496	913789	7.959	734830	11.358	395483	13.223
03 1202295	156140	4.487	904207	7.956	729832	11.358	390781	13.223
04 1202314	159398	4.500	895343	7.959	721900	11.361	387240	13.219
05 1202284	157544	4.490	883856	7.956	716251	11.361	379191	13.219
06 1202285	154791	4.490	865108	7.959	706277	11.358	377485	13.223
07 1202296	146194	4.493	869235	7.959	707177	11.358	381477	13.219
08 1202297MS	169394	4.500	914986	7.959	738299	11.358	397756	13.219
09 1202298MSD	177410	4.493	893439	7.956	724388	11.358	385924	13.223
10 1202299	172141	4.499	902148	7.962	726877	11.358	389170	13.222
11 1202300	172523	4.496	901563	7.956	733643	11.361	386696	13.222
12 1202301	155204	4.496	883077	7.959	718457	11.358	379474	13.223
13 1202302	157932	4.496	869741	7.959	711550	11.361	380015	13.220
14 1202303	158597	4.500	875434	7.962	708598	11.361	377448	13.219
15 1202304	157315	4.486	877236	7.956	709324	11.358	382620	13.222
16 1202305	143509	4.496	845285	7.959	691126	11.358	371262	13.219
17 1202306	147376	4.496	854788	7.962	692345	11.358	370267	13.223
18 1202307	154257	4.500	845869	7.962	695063	11.361	370586	13.223
19 1202315	147174	4.496	846942	7.956	689587	11.361	367930	13.222
20 1202316	148761	4.493	838211	7.959	689898	11.358	371294	13.223
21 1202317	150545	4.487	847494	7.959	691987	11.358	372909	13.223
22 1202318	139721	4.490	817772	7.959	674532	11.358	363582	13.223

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ln20c01.d Date Analyzed: 11/20/19

Instrument ID: HP09915 Time Analyzed: 08:51

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA) AREA #	RT #	IS2(FBZ) AREA #	RT #	IS3(CBZ) AREA #	RT #	IS4(DCB) AREA #	RT #
12 HOUR STD	153357	4.493	890803	7.959	725253	11.361	391522	13.222
UPPER LIMIT	306714	4.993	1781606	8.459	1450506	11.861	783044	13.722
LOWER LIMIT	76678	3.993	445402	7.459	362626	10.861	195761	12.722
LAB SAMPLE ID								
23 1202319	141822	4.493	822195	7.959	678476	11.361	363942	13.223
24 1202320	147376	4.496	819786	7.959	672667	11.361	356658	13.223

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

page 2 of 2

FORM VIII VOA

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8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ln21c01.d Date Analyzed: 11/21/19

Instrument ID: HP09915 Time Analyzed: 08:18

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	153538	4.493	842128	7.959	689674	11.361	371519	13.223
UPPER LIMIT	307076	4.993	1684256	8.459	1379348	11.861	743038	13.723
LOWER LIMIT	76769	3.993	421064	7.459	344837	10.861	185760	12.723
LAB SAMPLE ID								
01 RVLL83 - RL	163145	4.493	871784	7.956	717899	11.358	380162	13.220
02 VBLKL83	158112	4.509	860082	7.959	701132	11.358	371721	13.223
03 LCSL83	170757	4.496	895510	7.959	731089	11.361	395685	13.223
04 1202441	182891	4.490	914801	7.959	740356	11.361	394661	13.222
05 1202286	162918	4.499	847279	7.962	692359	11.361	371627	13.222
06 1202287MS	171692	4.509	862571	7.962	705149	11.361	381480	13.222
07 1202288MSD	172012	4.506	873696	7.962	703392	11.361	376918	13.223
08 1202289	164174	4.496	869822	7.956	712323	11.358	380294	13.223
09 1202290	158215	4.496	865306	7.956	705018	11.358	375108	13.223
10 1202291	156545	4.503	848538	7.962	697784	11.361	368917	13.219
11 1202292	154593	4.496	841386	7.956	685547	11.358	361435	13.223
12 1202293	148061	4.503	821642	7.962	673731	11.361	354768	13.222
13 1202294	147640	4.486	821085	7.962	673890	11.361	359670	13.222
14 1202321	143852	4.503	832267	7.962	679478	11.361	360892	13.223
15 1202322	146070	4.496	803691	7.956	668682	11.358	359126	13.219
16 1202323	139158	4.496	792251	7.956	650705	11.358	349954	13.223
17 1202325	137315	4.490	794207	7.956	660553	11.358	359250	13.219
18 1202326	140046	4.500	793651	7.959	648071	11.358	348594	13.223
19 1202327	144523	4.500	806944	7.959	666802	11.361	358400	13.223
20 1202434	151018	4.500	789510	7.959	657287	11.358	350013	13.219
21 1202437	141202	4.506	794599	7.962	661153	11.361	352032	13.223
22 1202438	135653	4.506	776680	7.962	640590	11.358	343644	13.223

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ln21c01.d Date Analyzed: 11/21/19

Instrument ID: HP09915 Time Analyzed: 08:18

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	153538	4.493	842128	7.959	689674	11.361	371519	13.223
UPPER LIMIT	307076	4.993	1684256	8.459	1379348	11.861	743038	13.723
LOWER LIMIT	76769	3.993	421064	7.459	344837	10.861	185760	12.723
LAB SAMPLE ID								
23 1202439	135273	4.499	772937	7.962	634274	11.358	343213	13.222
24 1202440	134172	4.490	769976	7.956	645962	11.361	345182	13.220

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

page 2 of 2

FORM VIII VOA

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Sample Data

Volatiles by GC/MS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W1801

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202284

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov20a.b/ln20s03.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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W1801 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202284

Data file: /chem/HP09915.i/19nov20a.b/ln20s03.d Injection date and time: **20-NOV-2019 10:41**
Data file Sample Info. Line: W1801;1202284;1;0;;JCW18;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 10:59 Automation

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.490	(0.003)	935	65	157544	(3)	250.00	
66) Fluorobenzene	7.956	(0.003)	2013	96	883856	(-1)	50.00	
100) Chlorobenzene-d5	11.361	(0.000)	3072	117	716251	(-1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.220	(0.003)	3650	152	379191	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072	(0.000)	113	206032	47.680	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	55297	50.212	100%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	903526	48.211	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	342716	48.294	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 11/20/2019 at 18:21. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov20a.b/ln20s03.d Injection date and time: **20-NOV-2019 10:41**
Data file Sample Info. Line: W1801;1202284;1;0;;JCW18;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 10:59 Automation

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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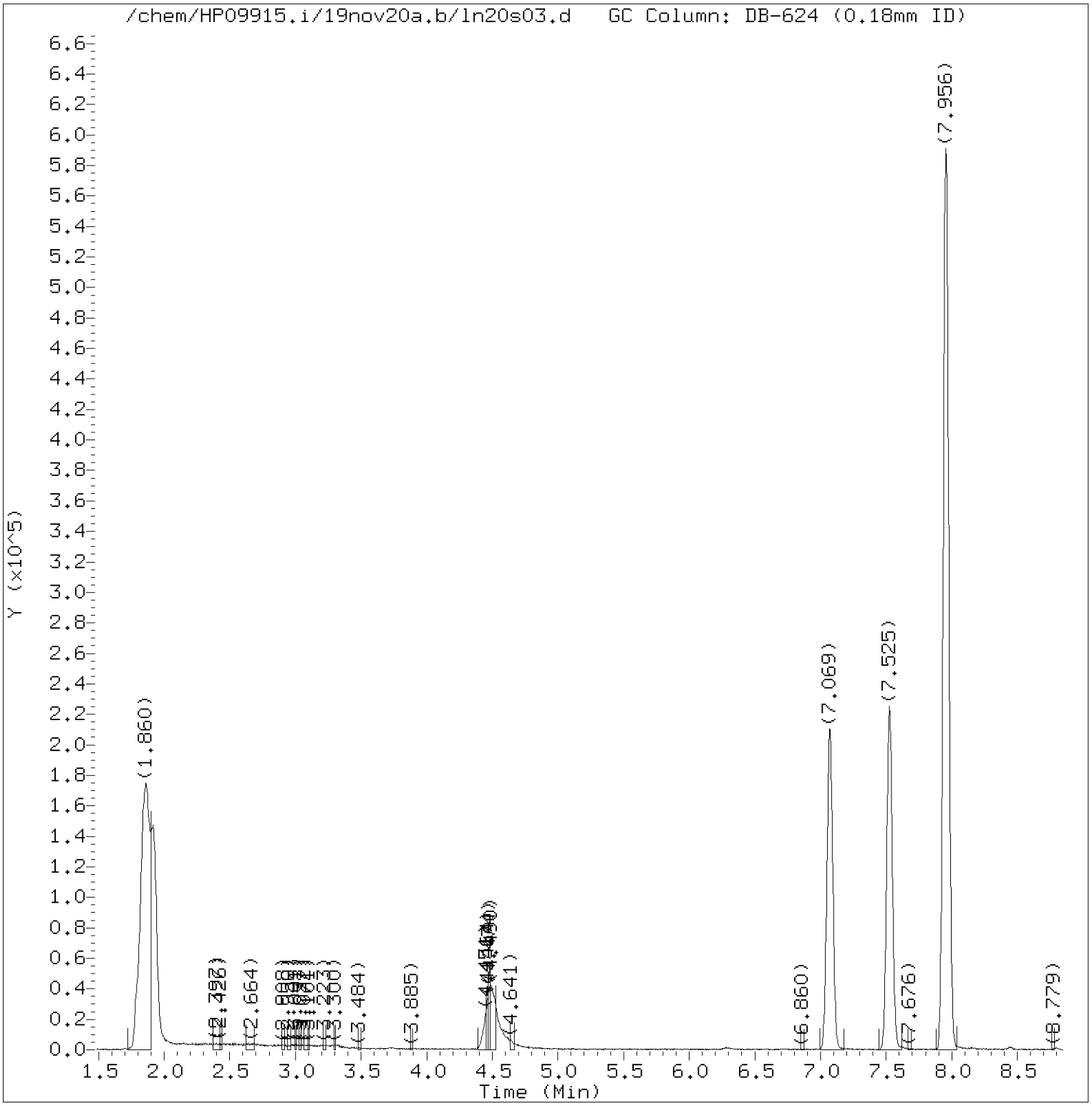
Total number of targets = 24

Digitally signed by Don V. Viray on 11/20/2019 at 18:21. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:50. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

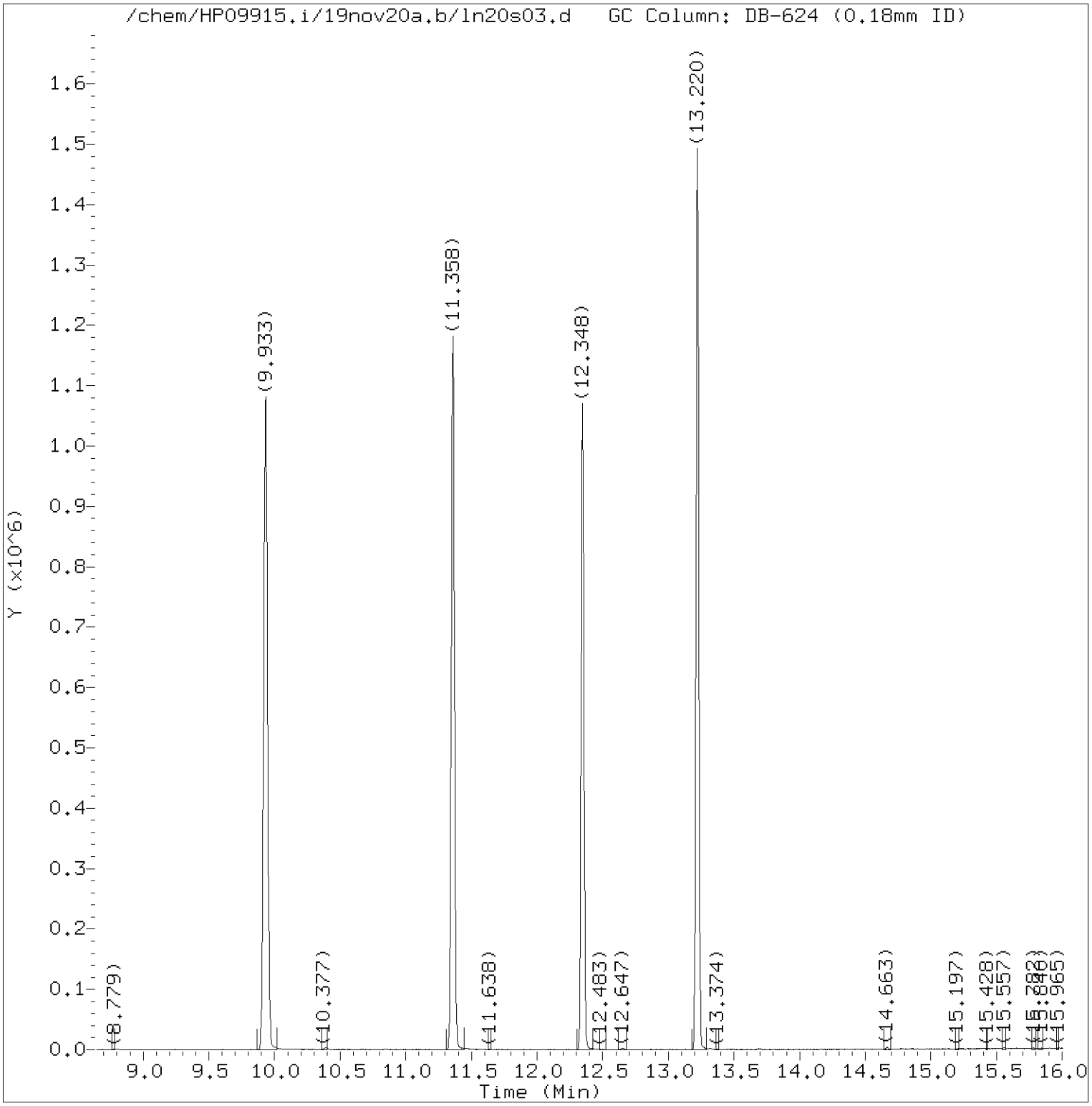
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s03.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 10:41 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 10:59 Automation

Sample Name: W1801 Lab Sample ID: 1202284

Digitally signed by Don V. Viray
on 11/20/2019 at 18:21.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s03.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 10:41 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 10:59 Automation

Sample Name: W1801 Lab Sample ID: 1202284

Digitally signed by Don V. Viray
on 11/20/2019 at 18:21.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s03.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 10:41 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 10:59 Automation

Sample Name: W1801 Lab Sample ID: 1202284

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.490	65	157544	250.000
52)$Dibromofluoromethane	(2)	7.072	113	206032	47.680
57)$1,2-Dichloroethane-d4	(2)	7.525	102	55297	50.212
66)*Fluorobenzene	(2)	7.956	96	883856	50.000
83)$Toluene-d8	(3)	9.933	98	903526	48.211
100)*Chlorobenzene-d5	(3)	11.361	117	716251	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	342716	48.294
131)*1,4-Dichlorobenzene-d4	(4)	13.220	152	379191	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/20/2019 at 18:21.
Target 3.5 esignature user ID: dvv10203

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
W1802

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202285

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov20a.b/ln20s04.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	0.2	J
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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W1802 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202285

Data file: /chem/HP09915.i/19nov20a.b/ln20s04.d Injection date and time: **20-NOV-2019 11:03**
Data file Sample Info. Line: W1802;1202285;1;0;;JCW18;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 11:20 Automation

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.490	(0.003)	935	65	154791	(1)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	865108	(-3)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	706277	(-3)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	377485	(-4)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072	(0.000)	113	200665	47.444	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	54664	50.712	101%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	884212	47.846	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	340701	48.688	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)	10.532	(0.000)	166	1152	0.235	0.23		J	0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 11/20/2019 at 18:21. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov20a.b/ln20s04.d Injection date and time: **20-NOV-2019 11:03**
Data file Sample Info. Line: W1802;1202285;1;0;;JCW18;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 11:20 Automation

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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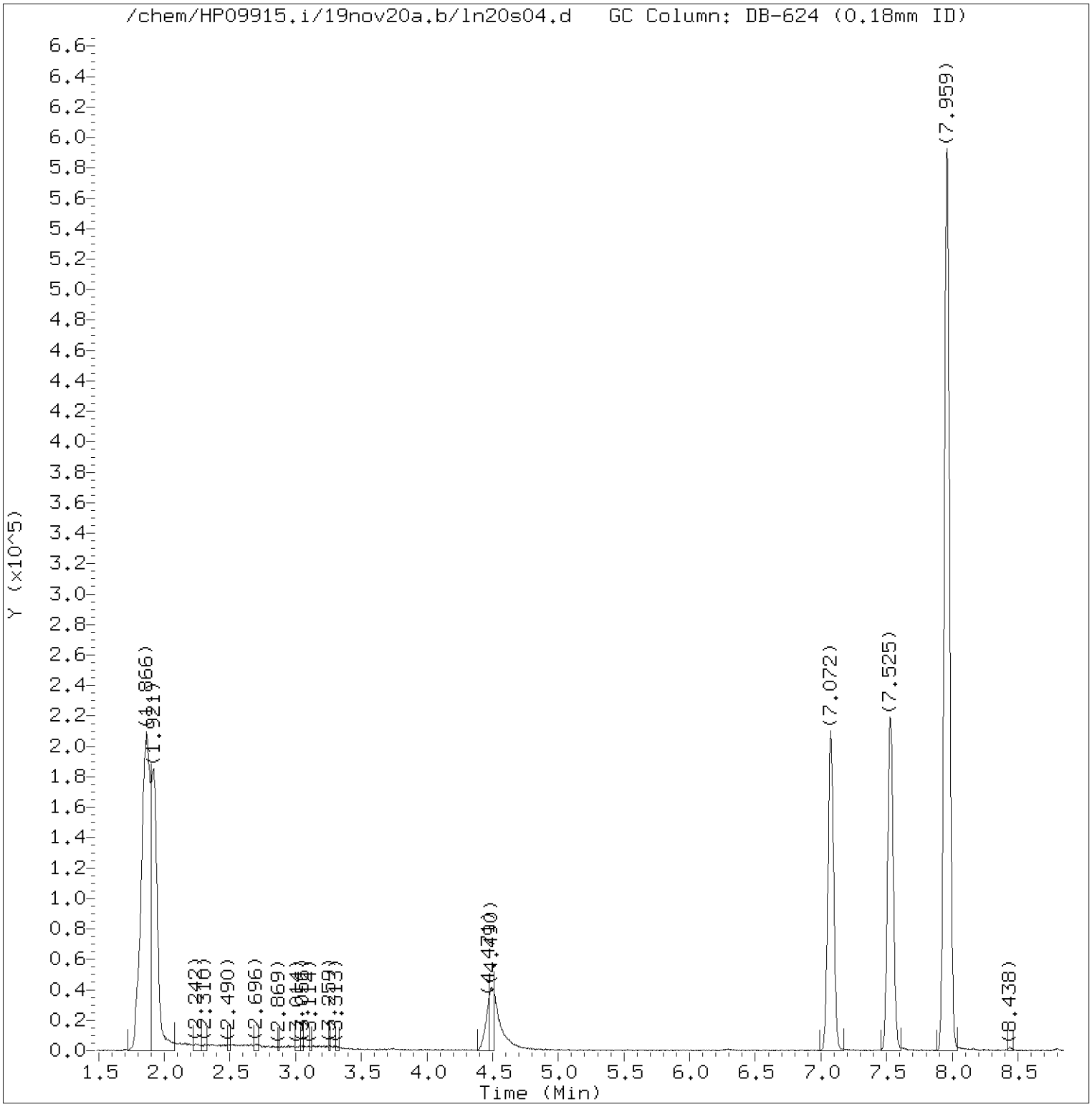
Total number of targets = 24

Digitally signed by Don V. Viray on 11/20/2019 at 18:21. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:50. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

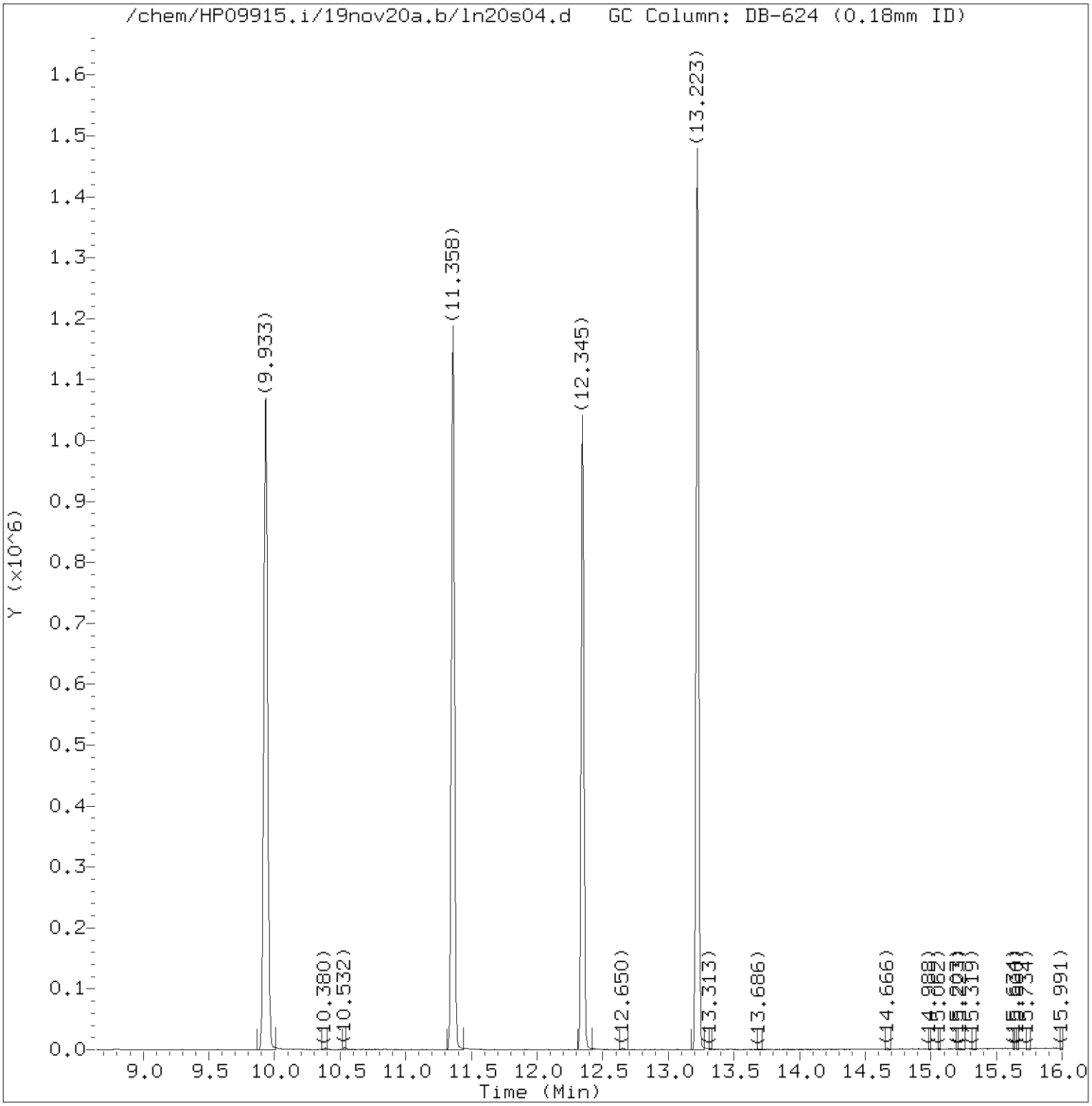
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s04.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 11:03 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:20 Automation

Sample Name: W1802 Lab Sample ID: 1202285

Digitally signed by Don V. Viray
on 11/20/2019 at 18:21.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s04.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 11:03 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:20 Automation

Sample Name: W1802 Lab Sample ID: 1202285

Digitally signed by Don V. Viray
on 11/20/2019 at 18:21.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s04.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 11:03 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:20 Automation

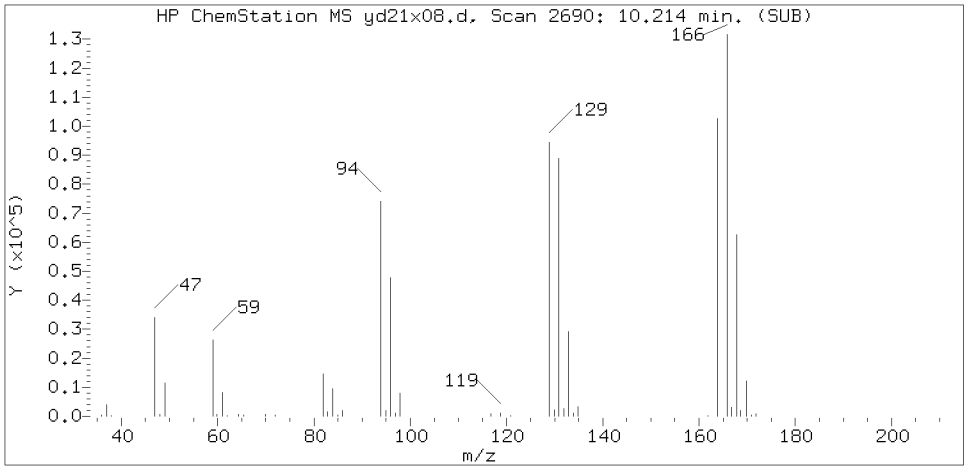
Sample Name: W1802 Lab Sample ID: 1202285

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.490	65	154791	250.000
52)$Dibromofluoromethane	(2)	7.072	113	200665	47.444
57)$1,2-Dichloroethane-d4	(2)	7.525	102	54664	50.712
66)*Fluorobenzene	(2)	7.959	96	865108	50.000
83)$Toluene-d8	(3)	9.930	98	884212	47.846
93) Tetrachloroethene	(3)	10.532	166	1152	0.235
100)*Chlorobenzene-d5	(3)	11.358	117	706277	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	340701	48.688
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	377485	50.000

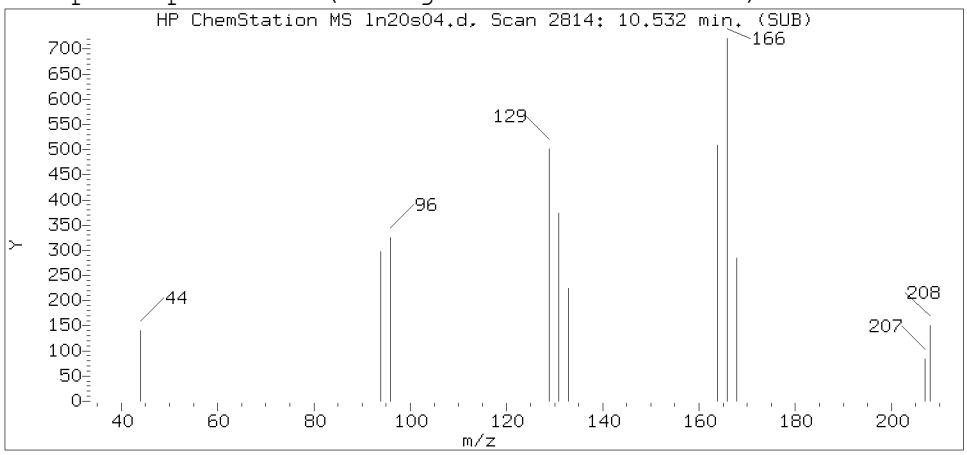
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/20/2019 at 18:21.
Target 3.5 esignature user ID: dvv10203

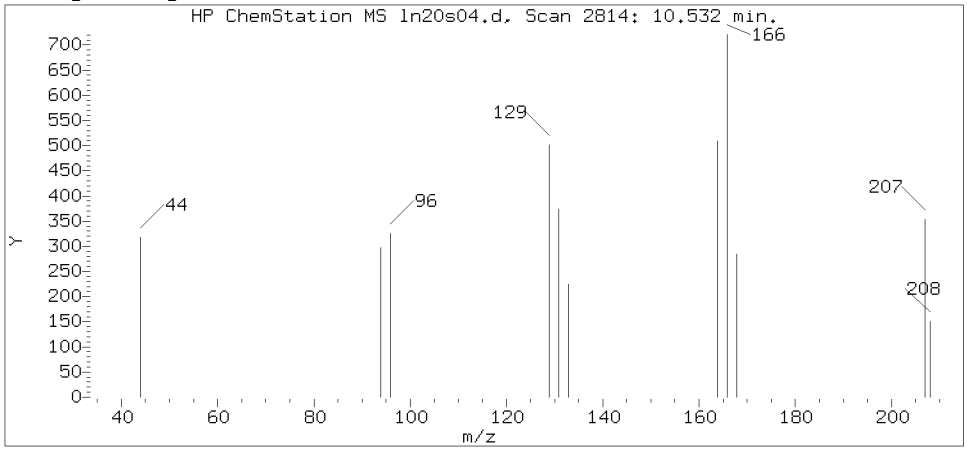
Reference Standard Spectrum for Tetrachloroethene

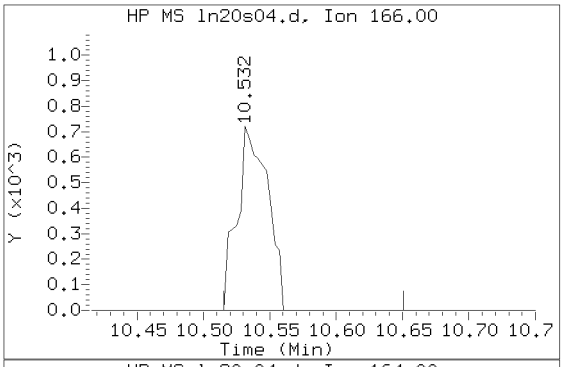


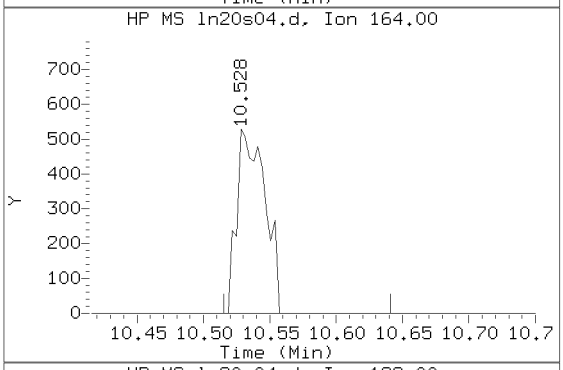
Sample Spectrum (Background Subtracted)

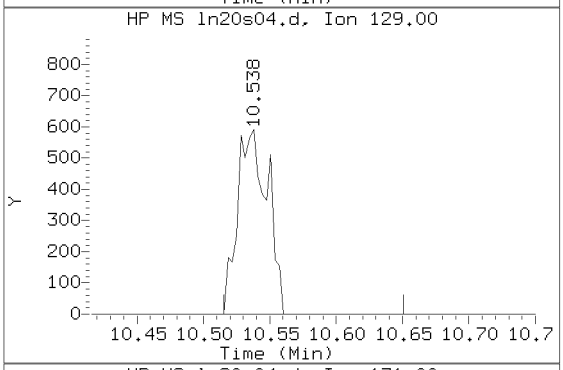


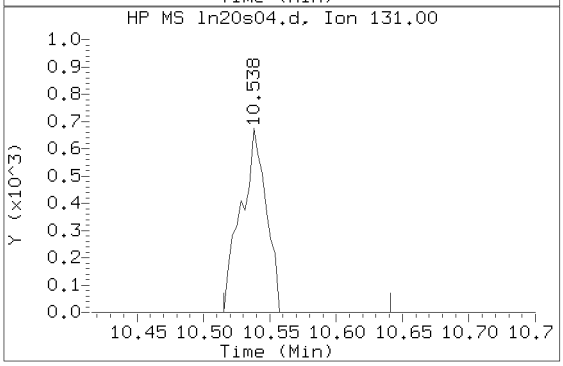
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov20a.b/ln20s04.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 11:03 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:20 Automation

Sample Name: W1802 Lab Sample ID: 1202285

Compound Number	: 93
Compound Name	: Tetrachloroethene
Scan Number	: 2814
Retention Time (minutes)	: 10.532
Relative Retention Time	: 0.00059
Quant Ion	: 166.00
Area (flag)	: 1152
On-Column Amount (ng)	: 0.2349

Digitally signed by Don V. Viray on 11/20/2019 at 18:21.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W1803

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202286

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov21a.b/ln21s03.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	0.2	J
75-34-3	1,1-Dichloroethane	0.3	J
156-59-2	cis-1,2-Dichloroethene	0.6	J
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	J
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	2	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	4	
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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W1803 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202286

Data file: /chem/HP09915.i/19nov21a.b/ln21s03.d Injection date and time: **21-NOV-2019 11:21**
Data file Sample Info. Line: W1803;1202286;1;0;;JCW18;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 22:42 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.499	(-0.006)	938	65	162918	(6)	250.00	
66) Fluorobenzene	7.962	(-0.003)	2015	96	847279	(1)	50.00	
100) Chlorobenzene-d5	11.361	(0.000)	3072	117	692359	(0)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	371627	(0)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.078	(0.000)	113	198837	48.001	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.531	(0.000)	102	53866	51.023	102%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	864166	47.702	95%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.348	(0.000)	95	332437	48.462	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)	4.892	(0.000)	96	963M	0.232	0.23		J	0.2	1
36) 1,1-Dichloroethane	(2)	5.551	(0.000)	63	2373	0.327	0.33		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	6.387	(-0.000)	96	2875	0.616	0.62		J	0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	7.088	(0.000)	97	5687	0.961	0.96		J	0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.432	(0.000)	95	8463	1.950	1.95			0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)	10.541	(-0.000)	166	17348	3.607	3.61			0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

M = Compound was manually integrated.

Digitally signed by Don V. Viray on 11/21/2019 at 22:42. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov21a.b/ln21s03.d Injection date and time: **21-NOV-2019 11:21**
Data file Sample Info. Line: W1803;1202286;1;0;;JCW18;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 22:42 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

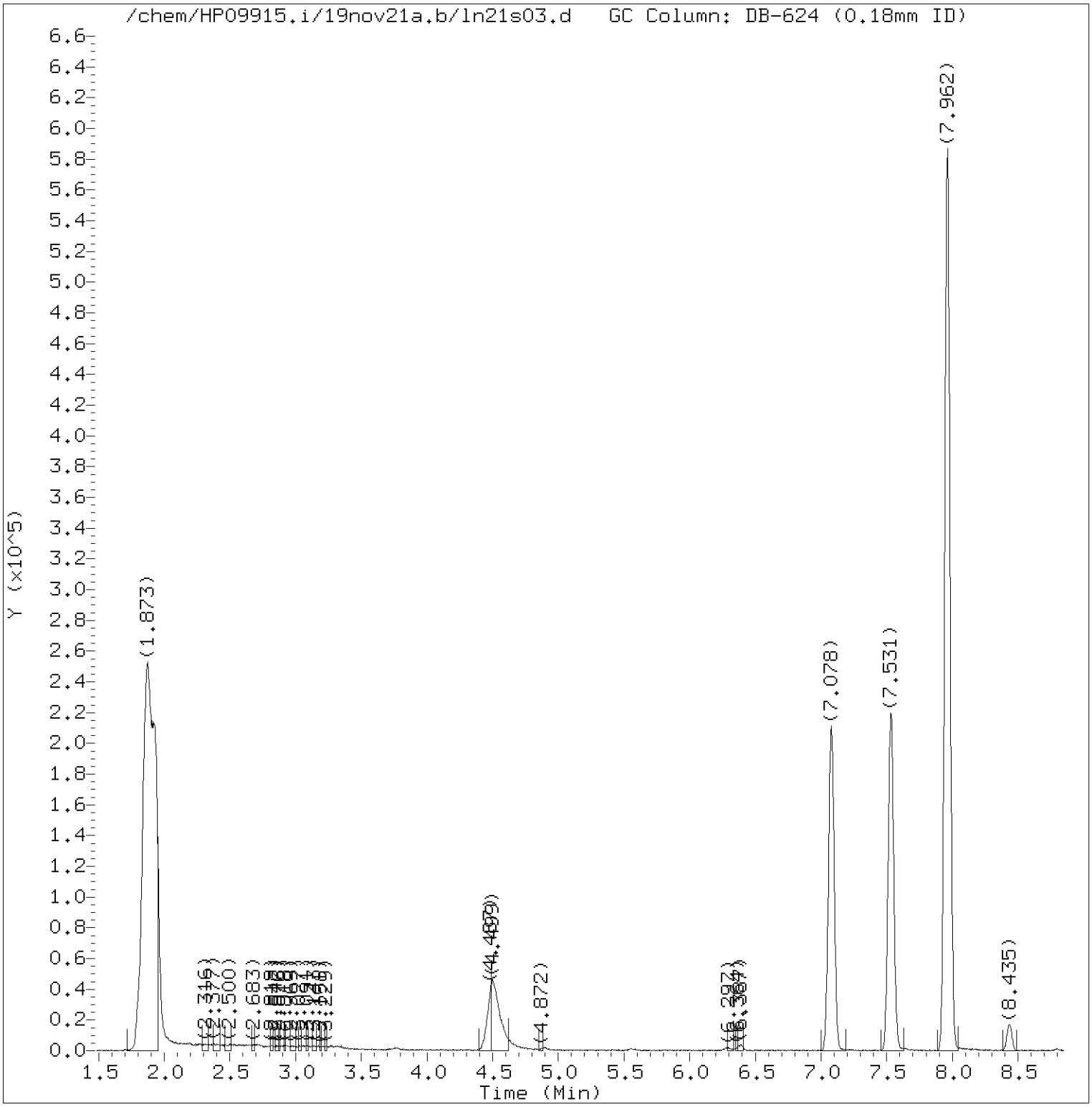
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 11/21/2019 at 22:42. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:40. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

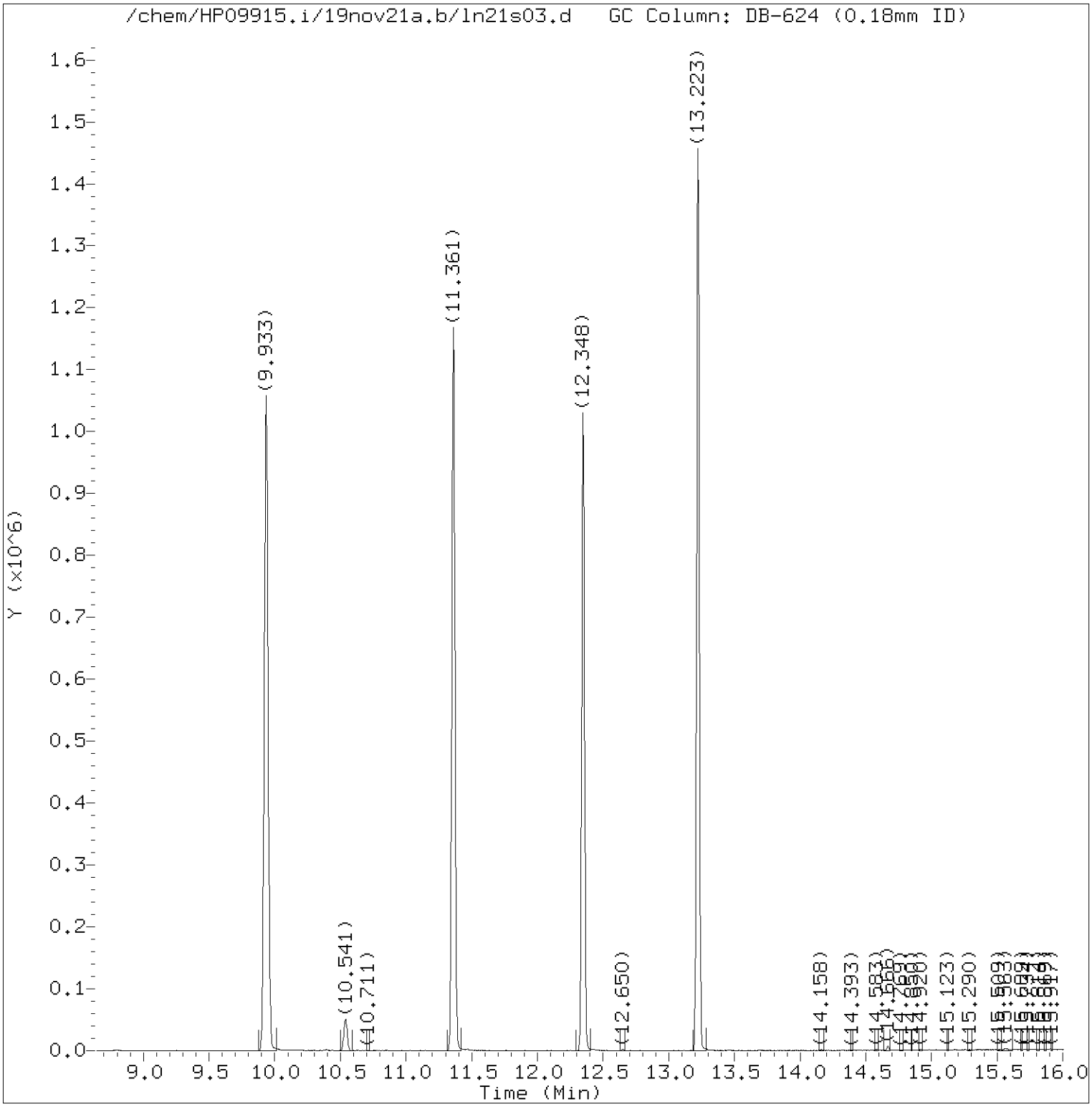
Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s03.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 11:21 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 22:42 dvv10203

Sample Name: W1803 Lab Sample ID: 1202286

Digitally signed by Don V. Viray
on 11/21/2019 at 22:42.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s03.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 11:21 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 22:42 dvv10203

Sample Name: W1803 Lab Sample ID: 1202286

Digitally signed by Don V. Viray
on 11/21/2019 at 22:42.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s03.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 11:21 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 22:42 dvv10203

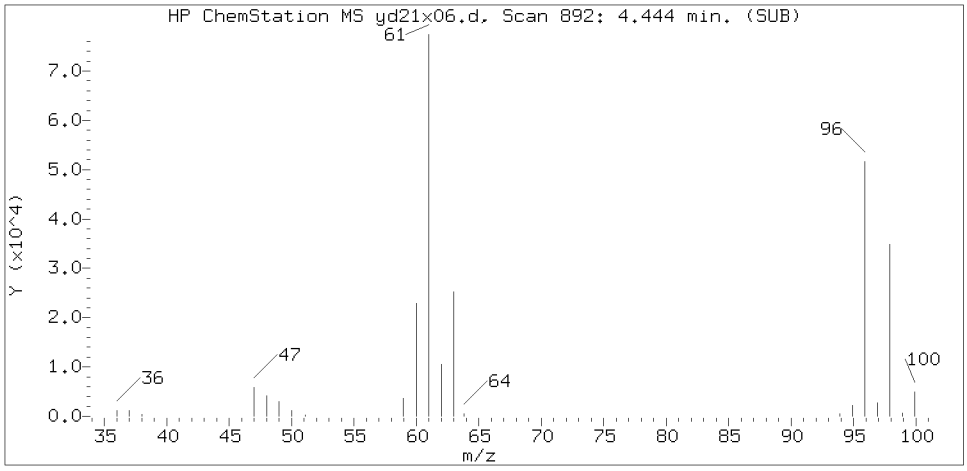
Sample Name: W1803 Lab Sample ID: 1202286

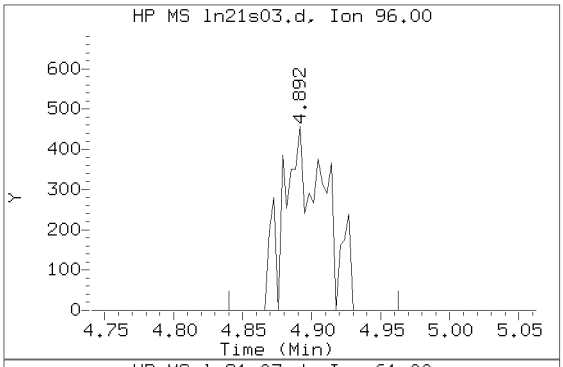
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.499	65	162918	250.000
32) trans-1,2-Dichloroethene	(2)	4.892	96	963M	0.232
36) 1,1-Dichloroethane	(2)	5.551	63	2373	0.327
42) cis-1,2-Dichloroethene	(2)	6.387	96	2875	0.616
52)$Dibromofluoromethane	(2)	7.078	113	198837	48.001
53) 1,1,1-Trichloroethane	(2)	7.088	97	5687	0.961
57)$1,2-Dichloroethane-d4	(2)	7.531	102	53866	51.023
66)*Fluorobenzene	(2)	7.962	96	847279	50.000
71) Trichloroethene	(2)	8.432	95	8463	1.950
83)$Toluene-d8	(3)	9.933	98	864166	47.702
93) Tetrachloroethene	(3)	10.541	166	17348	3.607
100)*Chlorobenzene-d5	(3)	11.361	117	692359	50.000
114)$4-Bromofluorobenzene	(3)	12.348	95	332437	48.462
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	371627	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

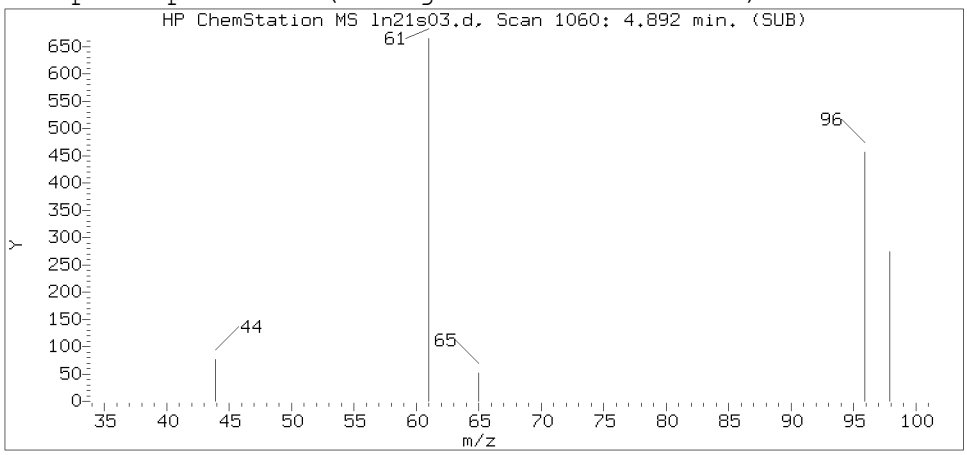
Digitally signed by Don V. Viray
on 11/21/2019 at 22:42.
Target 3.5 esignature user ID: dvv10203

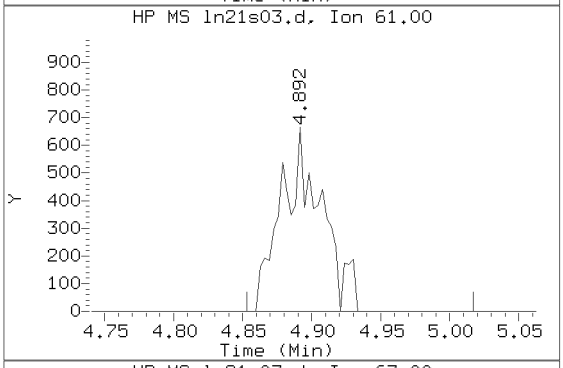
Reference Standard Spectrum for trans-1,2-Dichloroethene

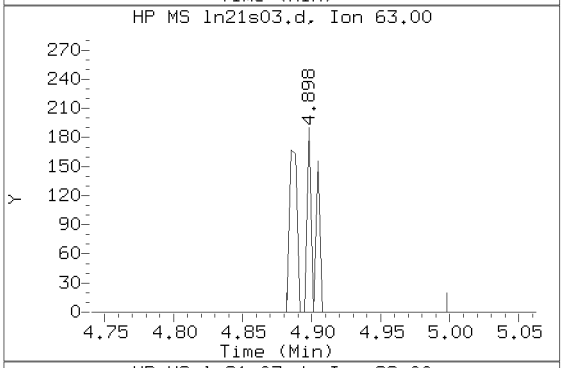




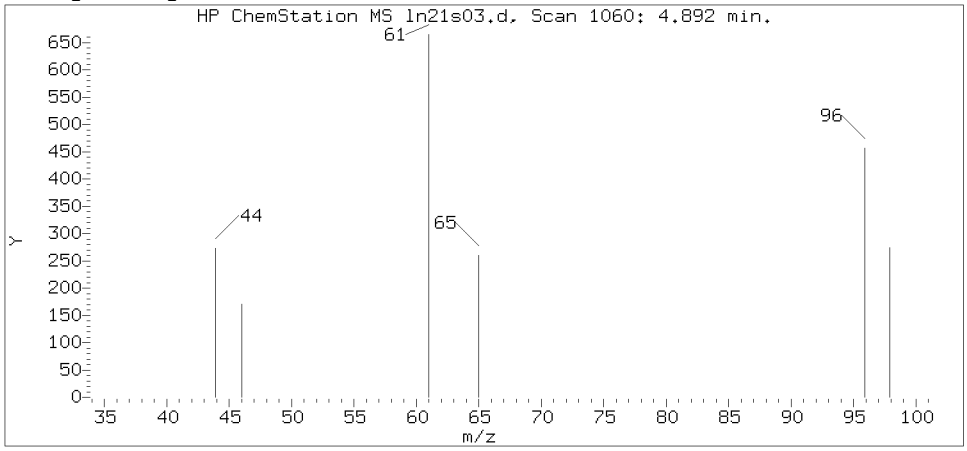
Sample Spectrum (Background Subtracted)

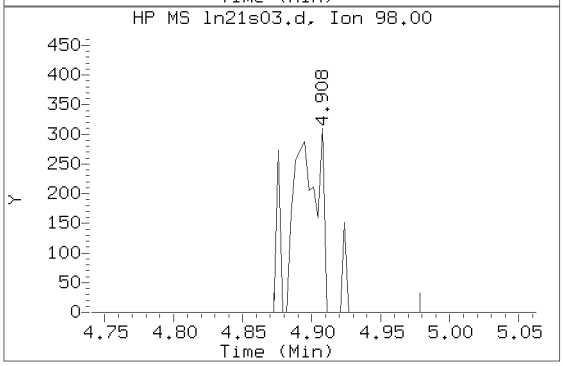






Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov21a.b/ln21s03.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 11:21 Analyst ID: LCP00895

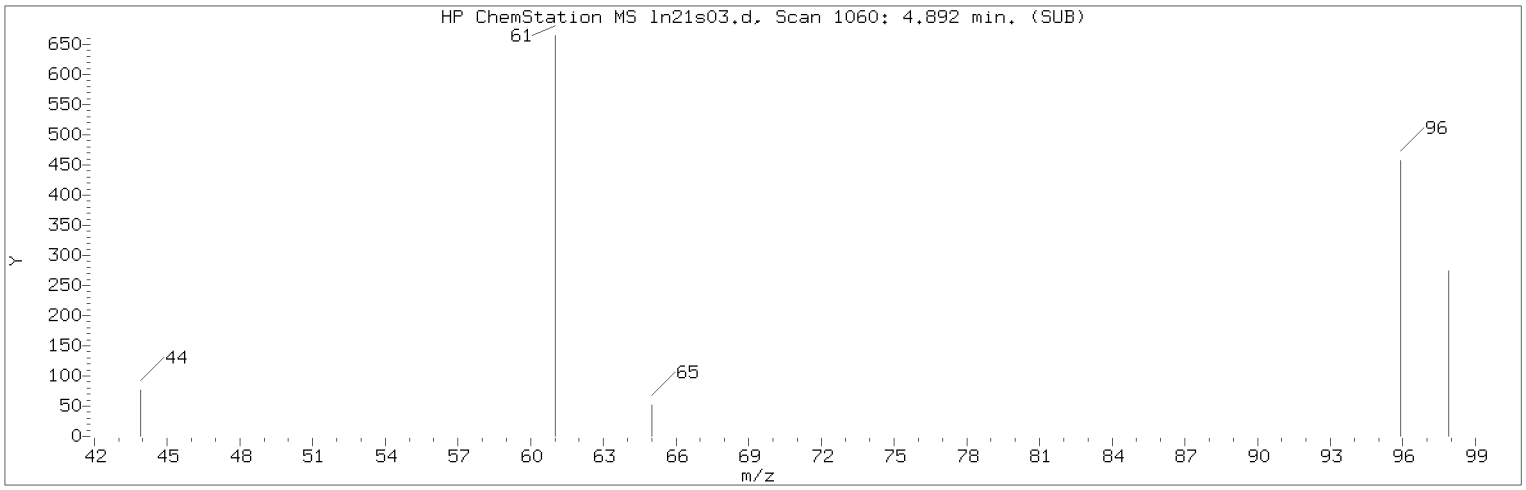
Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 22:42 dvv10203

Sample Name: W1803 Lab Sample ID: 1202286

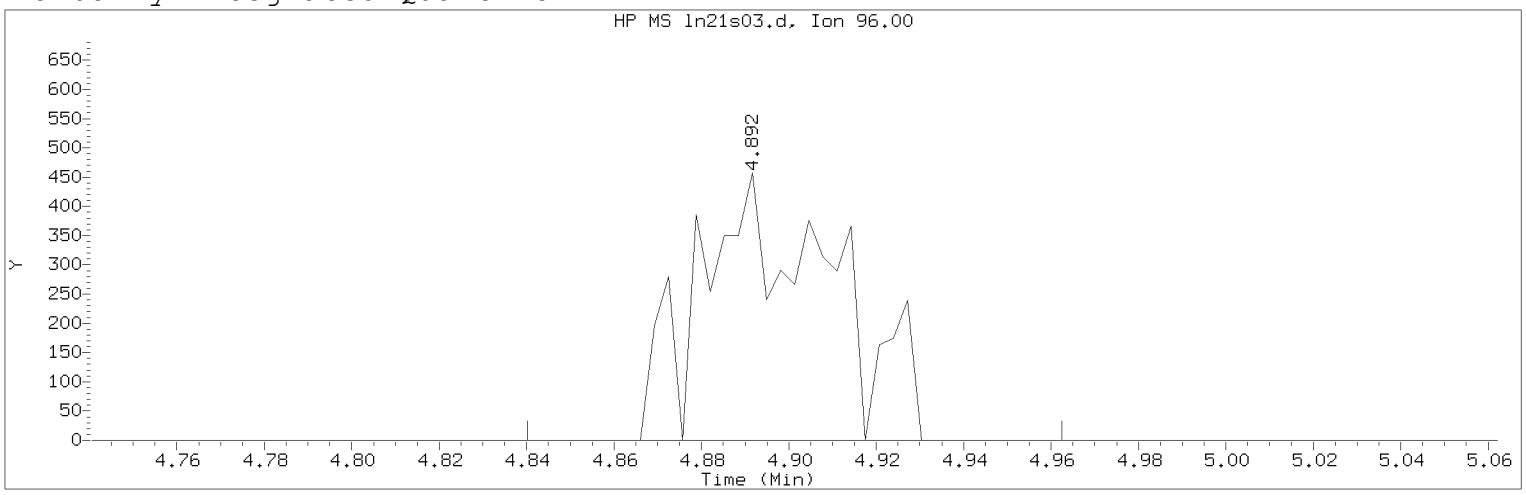
Compound Number	: 32
Compound Name	: trans-1,2-Dichloroethene
Scan Number	: 1060
Retention Time (minutes)	: 4.892
Relative Retention Time	: 0.00025
Quant Ion	: 96.00
Area (flag)	: 963M
On-Column Amount (ng)	: 0.2318

Digitally signed by Don V. Viray on 11/21/2019 at 22:42.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov21a.b/ln21s03.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 11:21 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 22:42 dvv10203

Sample Name: W1803 Lab Sample ID: 1202286

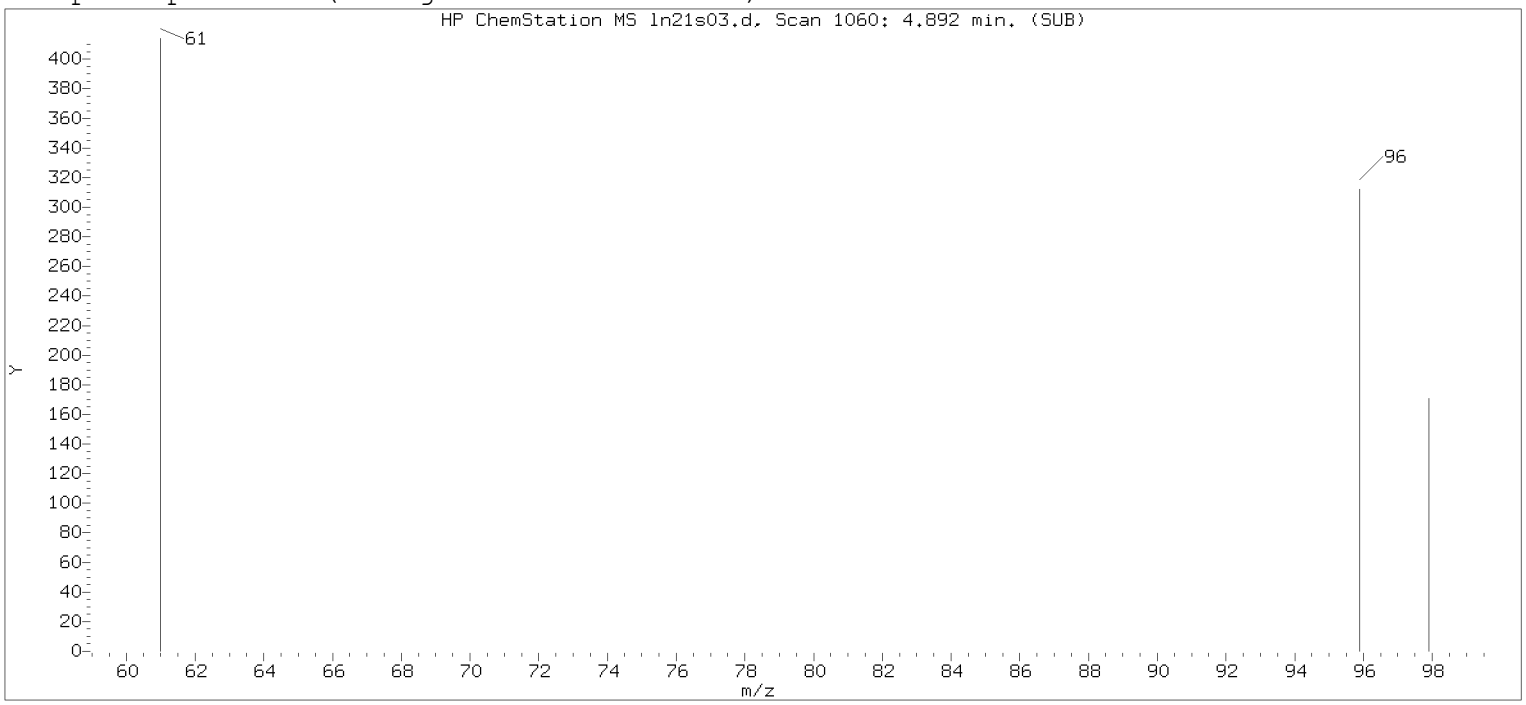
Compound Number : 32
Compound Name : trans-1,2-Dichloroethene
Scan Number : 1060
Retention Time (minutes): 4.892
Quant Ion : 96.00
Area (flag) : 963M
On-Column Amount (ng) : 0.2318
Integration start scan : 1043 Integration stop scan: 1081
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

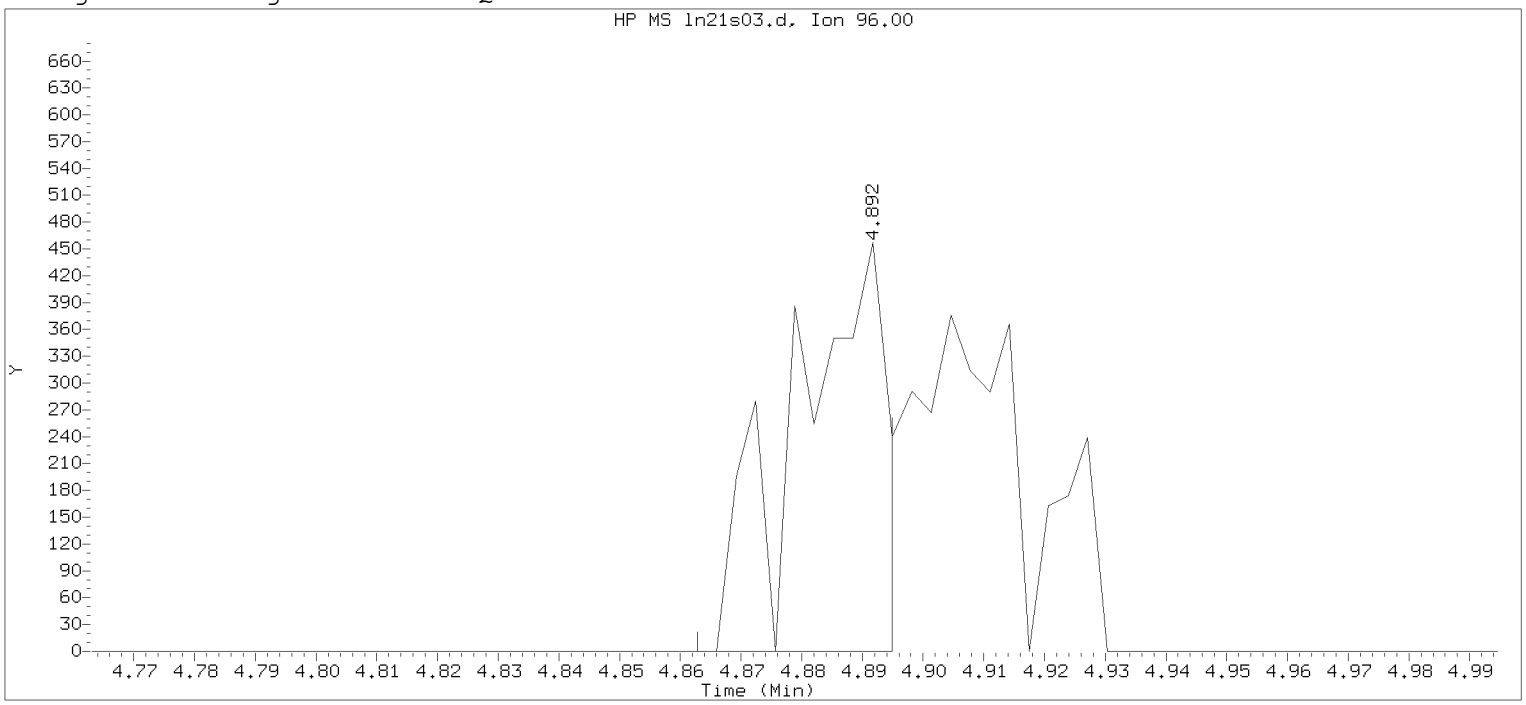
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/21/2019 at 22:42.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:40.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov21a.b/ln21s03.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 11:21 Analyst ID: LCP00895

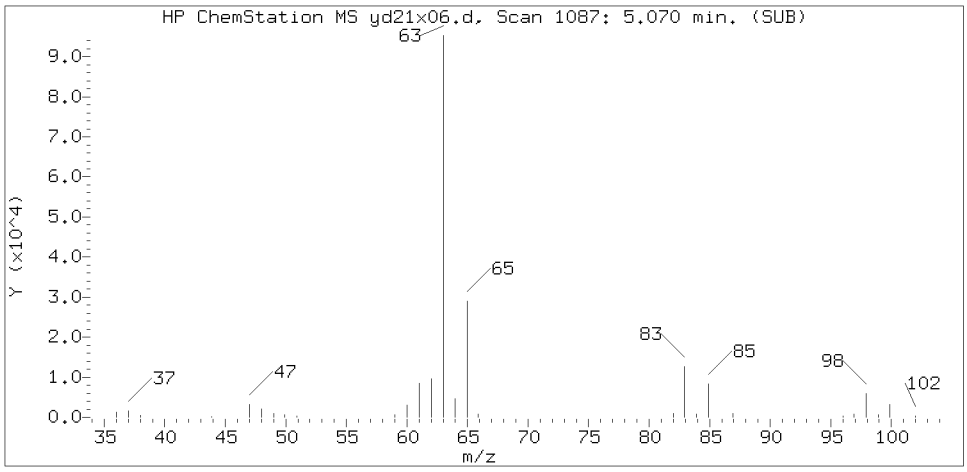
Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 22:30 dvv10203

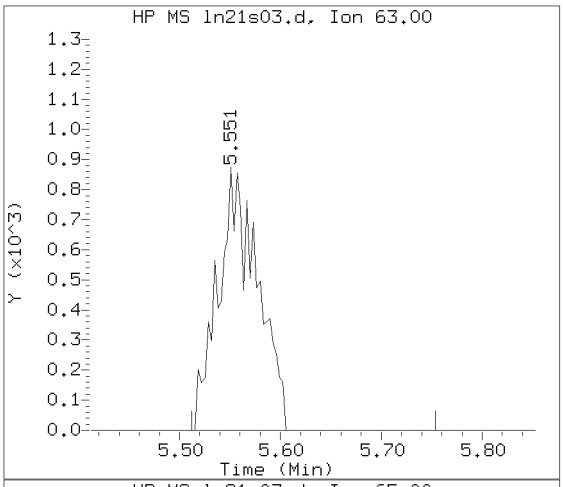
Sample Name: W1803 Lab Sample ID: 1202286

Compound Number : 32
Compound Name : trans-1,2-Dichloroethene
Scan Number : 1060
Retention Time (minutes): 4.892
Quant Ion : 96.00
Area : 461
On-column Amount (ng) : 0.1111
Integration start scan : 1050 Integration stop scan: 1060
Y at integration start : 0 Y at integration end: 0

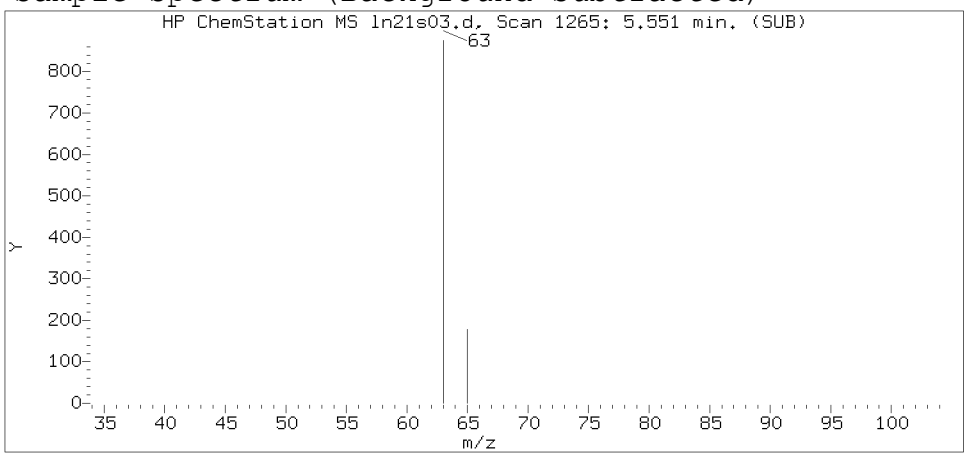
Digitally signed by Don V. Viray on 11/21/2019 at 22:42.
Target 3.5 esignature user ID: dvv10203

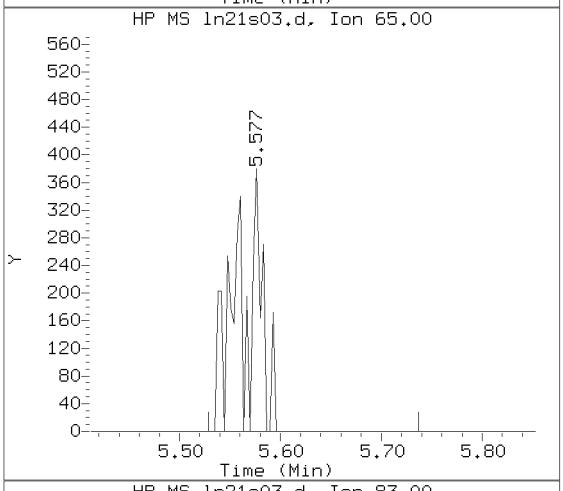
Reference Standard Spectrum for 1,1-Dichloroethane



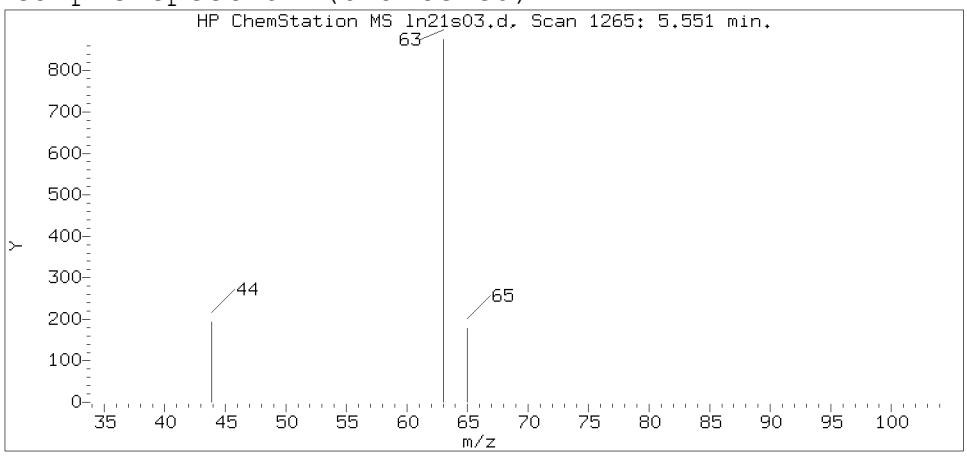


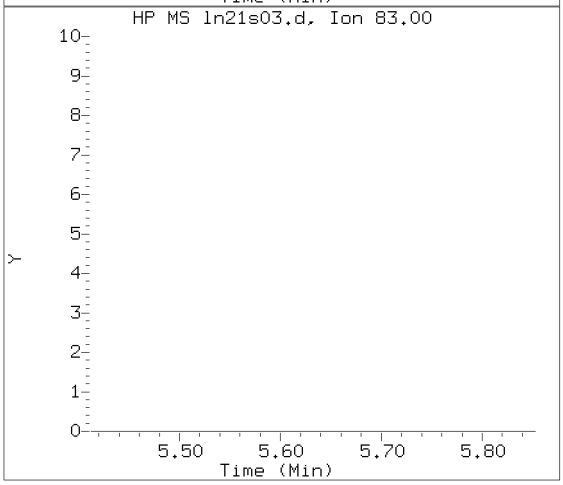
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov21a.b/ln21s03.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 11:21 Analyst ID: LCP00895

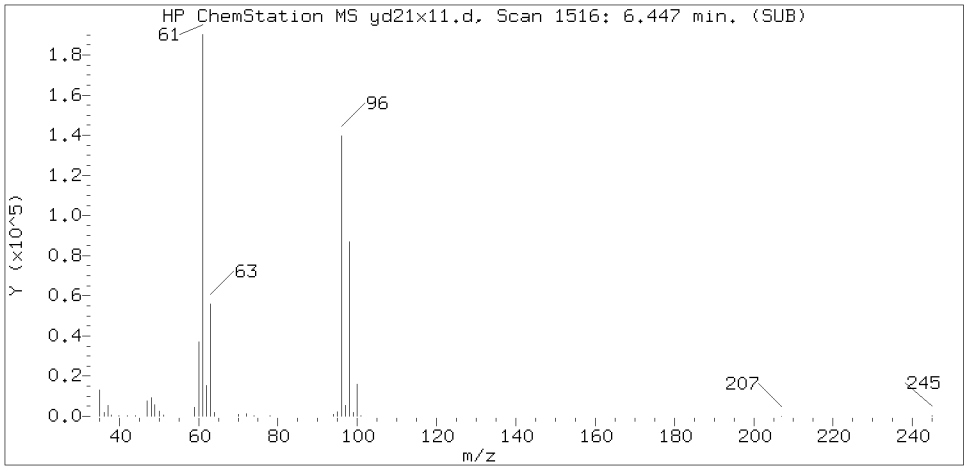
Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 22:42 dvv10203

Sample Name: W1803 Lab Sample ID: 1202286

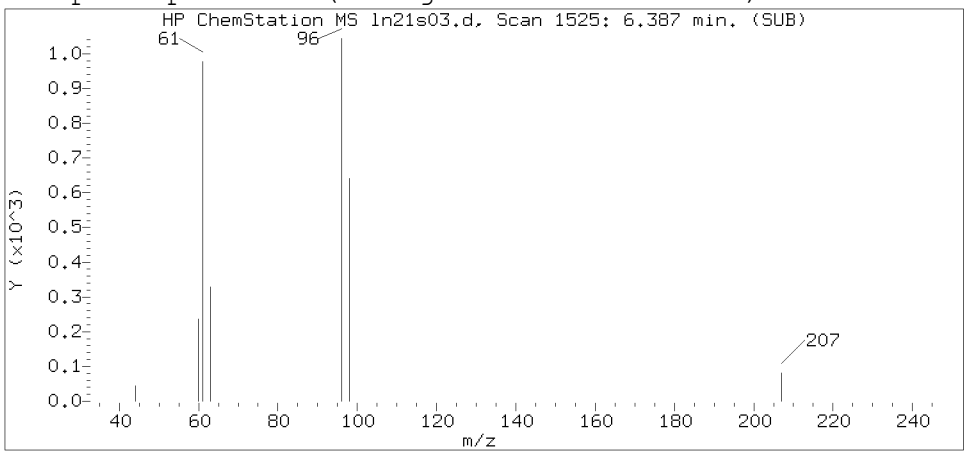
Compound Number	: 36
Compound Name	: 1,1-Dichloroethane
Scan Number	: 1265
Retention Time (minutes)	: 5.551
Relative Retention Time	: 0.00069
Quant Ion	: 63.00
Area (flag)	: 2373
On-Column Amount (ng)	: 0.3274

Digitally signed by Don V. Viray on 11/21/2019 at 22:42.
Target 3.5 esignature user ID: dvv10203

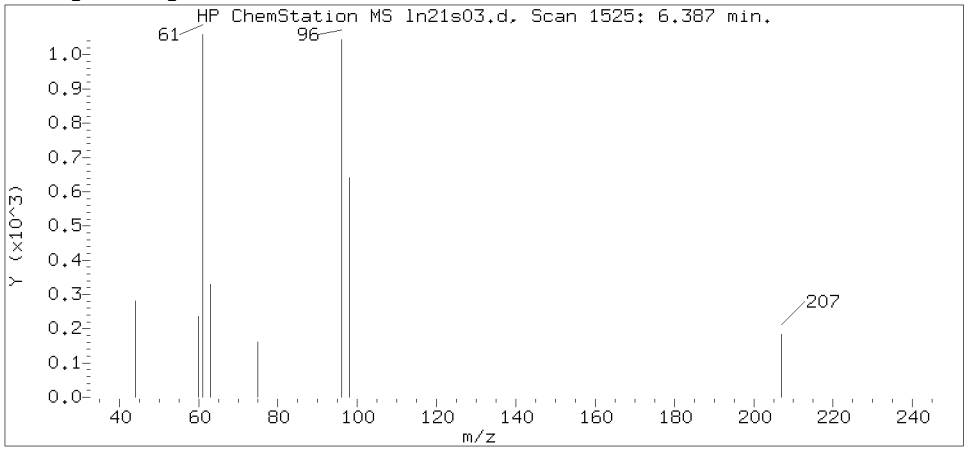
Reference Standard Spectrum for cis-1,2-Dichloroethene

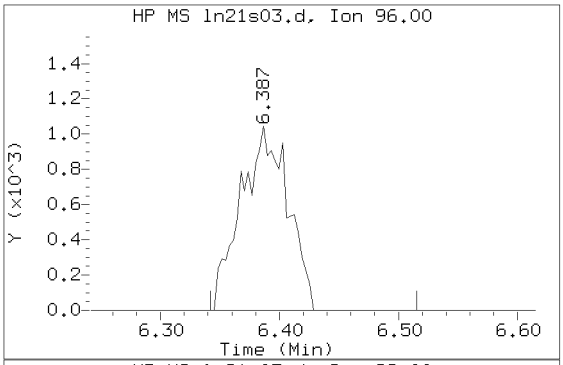


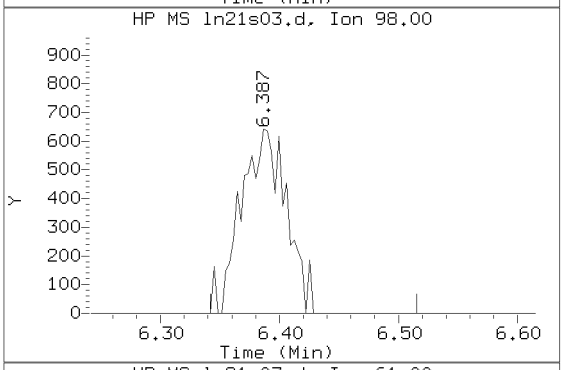
Sample Spectrum (Background Subtracted)

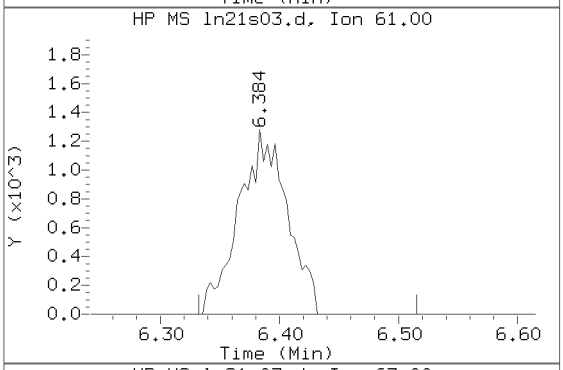


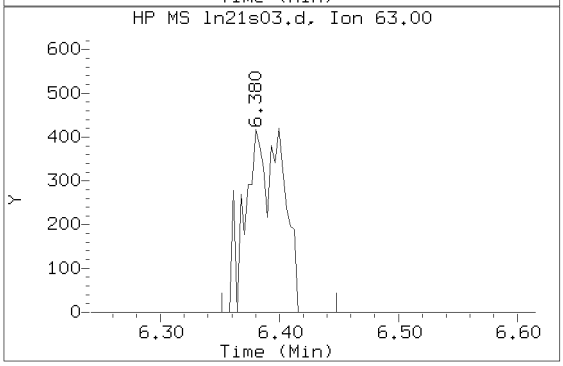
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov21a.b/ln21s03.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 11:21 Analyst ID: LCP00895

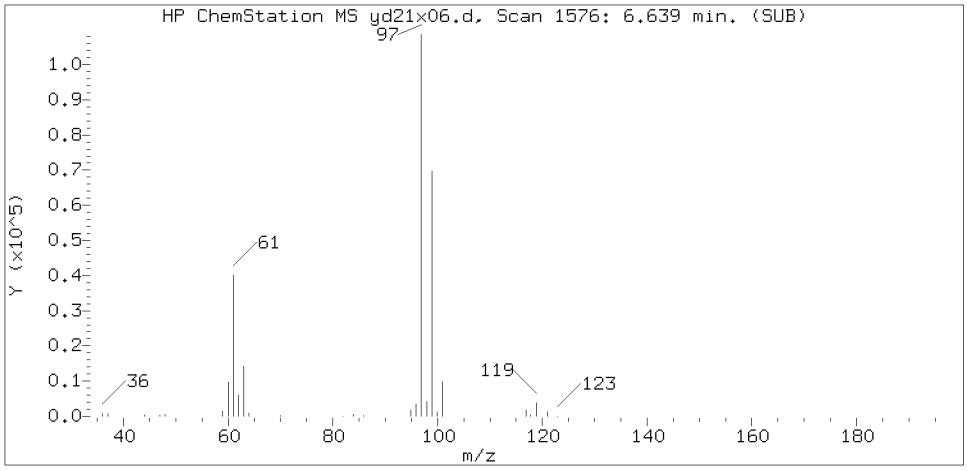
Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 22:42 dvv10203

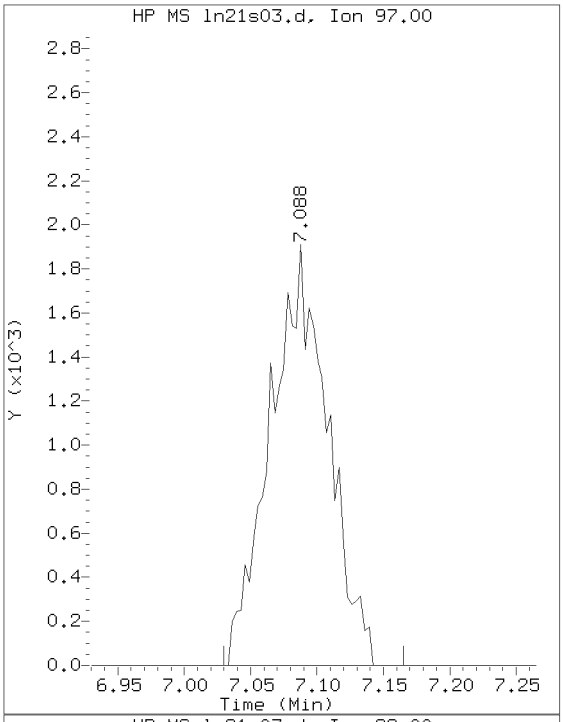
Sample Name: W1803 Lab Sample ID: 1202286

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 1525
Retention Time (minutes): 6.387
Relative Retention Time :-0.00048
Quant Ion : 96.00
Area (flag) : 2875
On-Column Amount (ng) : 0.6165

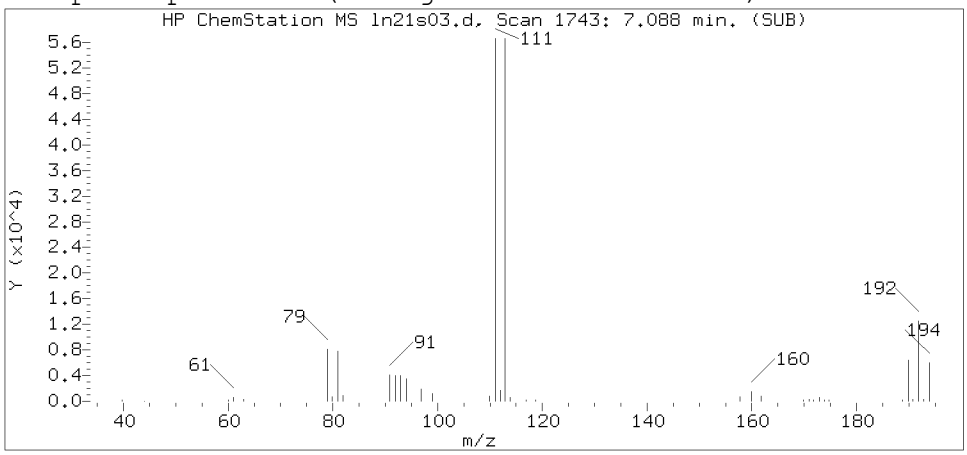
Digitally signed by Don V. Viray on 11/21/2019 at 22:42.
Target 3.5 esignature user ID: dvv10203

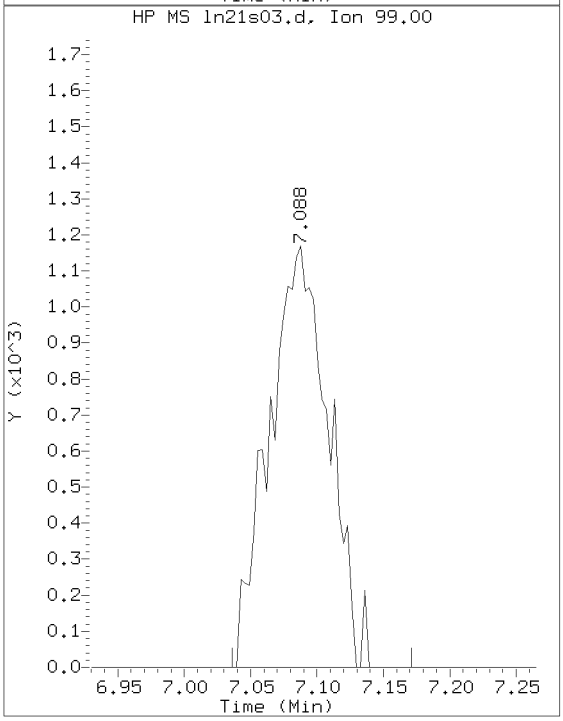
Reference Standard Spectrum for 1,1,1-Trichloroethane



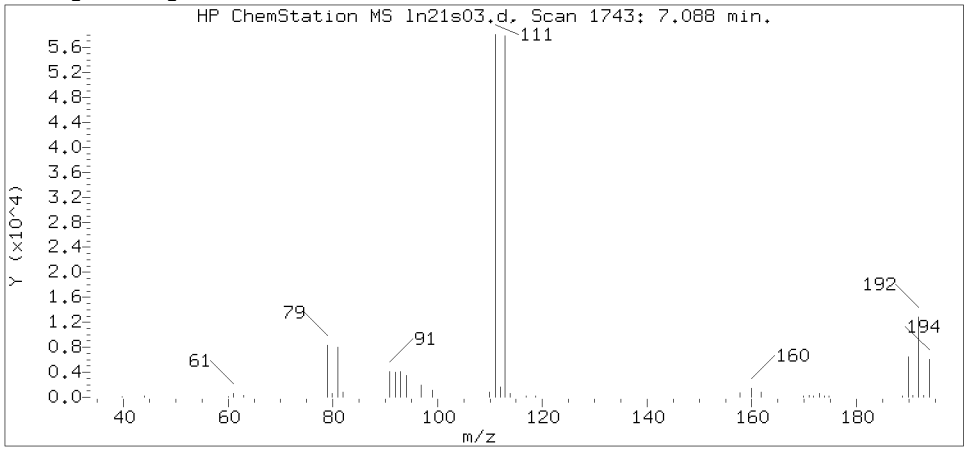


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov21a.b/ln21s03.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 11:21 Analyst ID: LCP00895

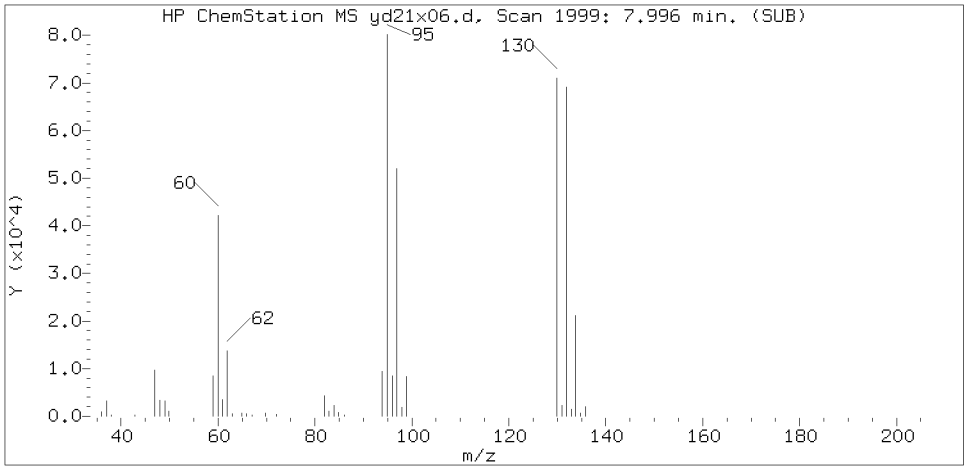
Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 22:42 dvv10203

Sample Name: W1803 Lab Sample ID: 1202286

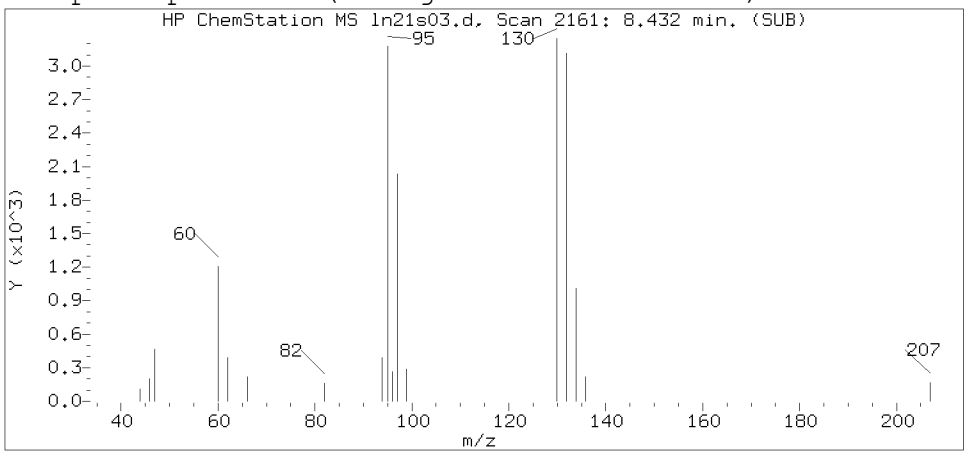
Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1743
Retention Time (minutes)	: 7.088
Relative Retention Time	: 0.00036
Quant Ion	: 97.00
Area (flag)	: 5687
On-Column Amount (ng)	: 0.9611

Digitally signed by Don V. Viray on 11/21/2019 at 22:42.
Target 3.5 esignature user ID: dvv10203

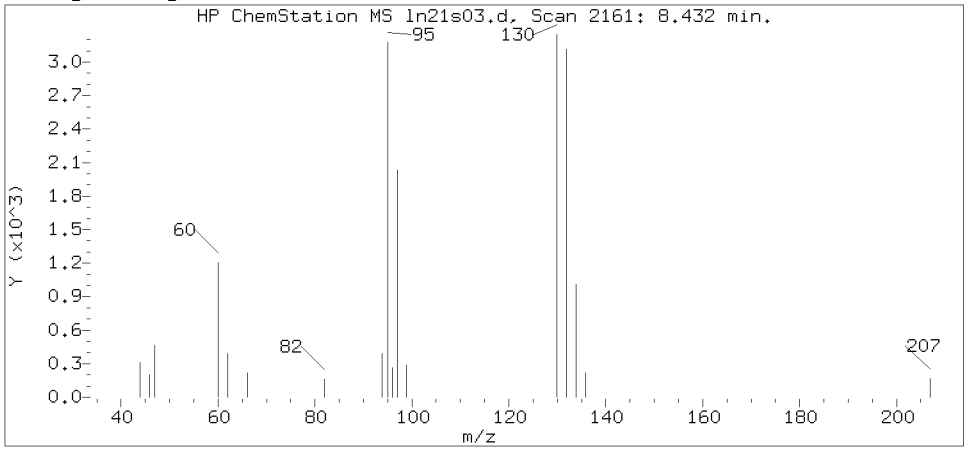
Reference Standard Spectrum for Trichloroethene

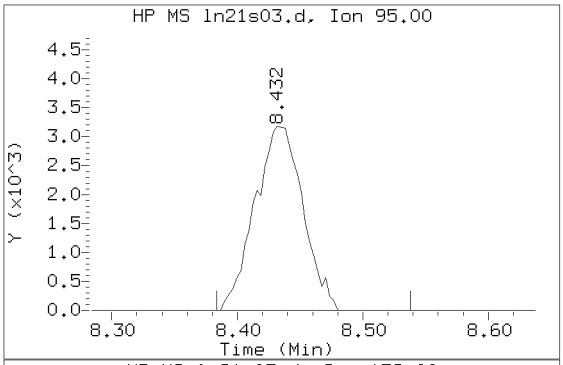


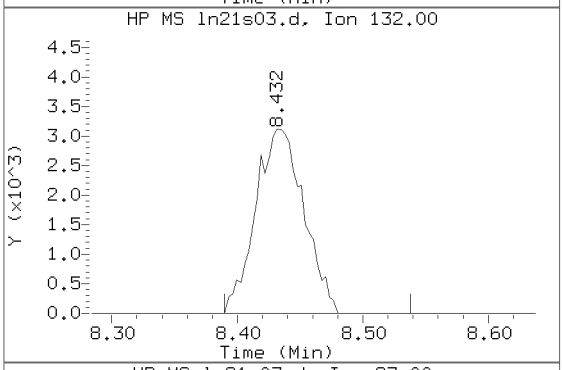
Sample Spectrum (Background Subtracted)

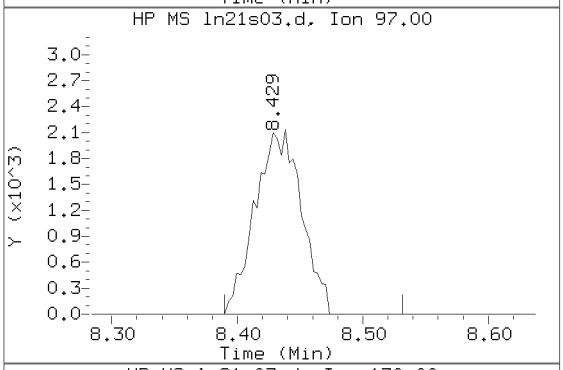


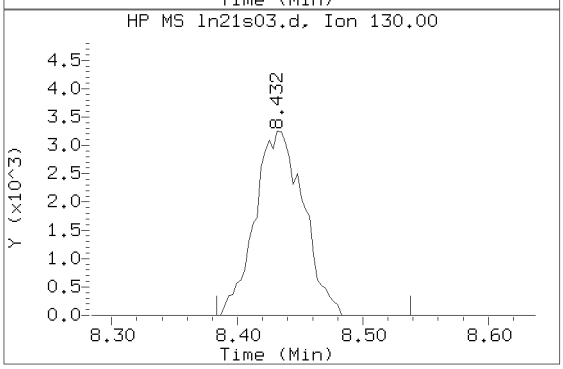
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov21a.b/ln21s03.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 11:21 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 22:42 dvv10203

Sample Name: W1803 Lab Sample ID: 1202286

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 2161
Retention Time (minutes)	: 8.432
Relative Retention Time	: 0.00002
Quant Ion	: 95.00
Area (flag)	: 8463
On-Column Amount (ng)	: 1.9503

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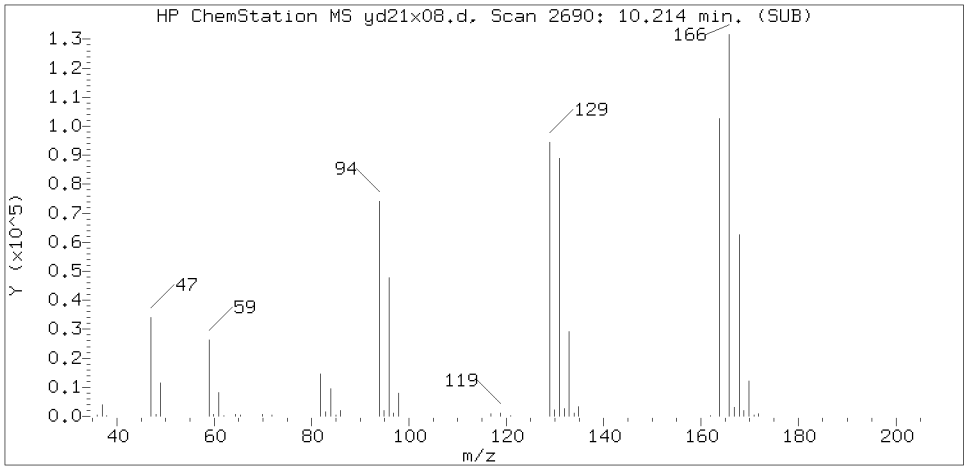
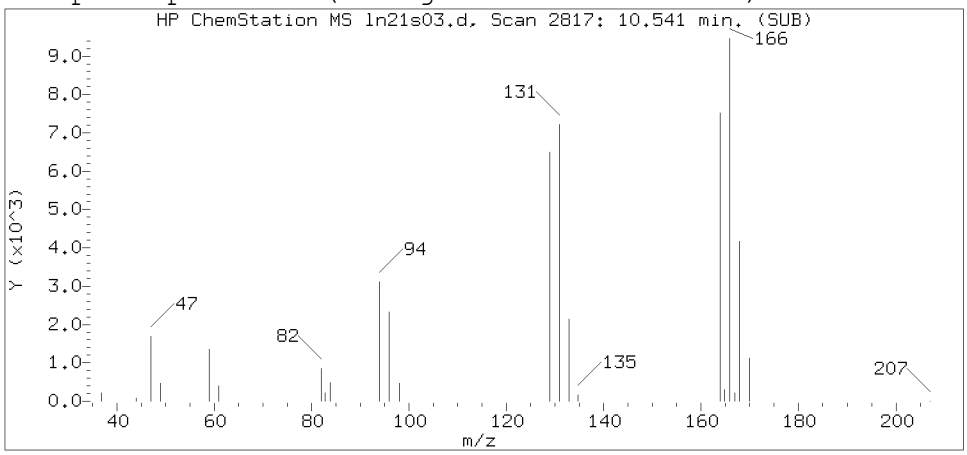
Target 3.5 esignature user ID: dvv10203

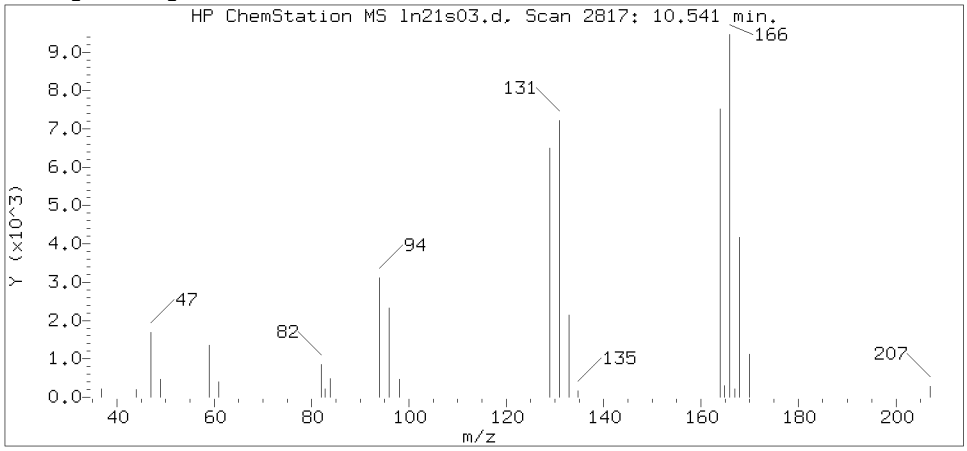
Reference Standard Spectrum for Tetrachloroethene

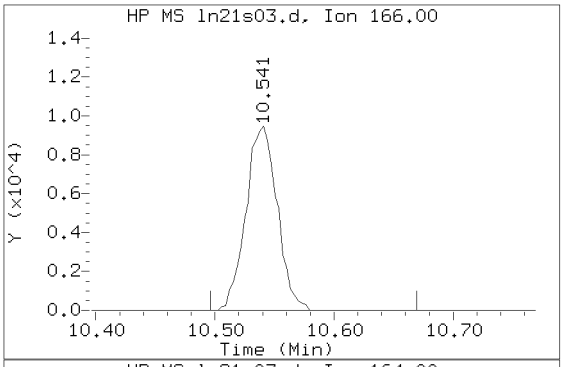


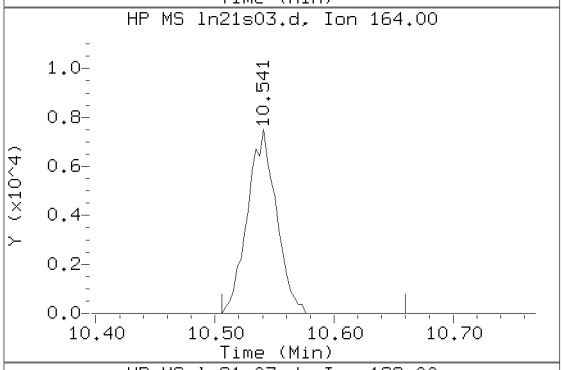
Sample Spectrum (Background Subtracted)

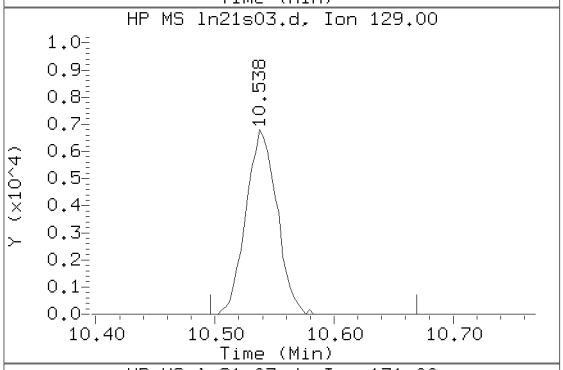


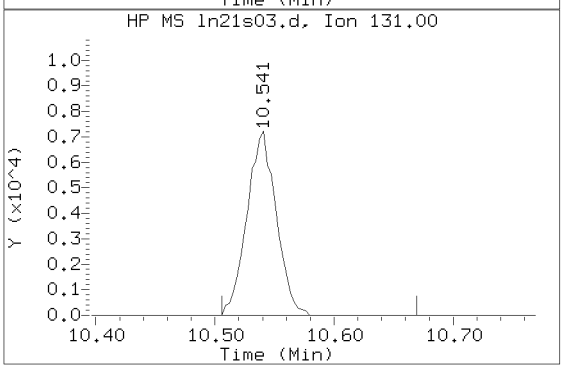
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov21a.b/ln21s03.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 11:21 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 22:42 dvv10203

Sample Name: W1803 Lab Sample ID: 1202286

Compound Number : 93
Compound Name : Tetrachloroethene
Scan Number : 2817
Retention Time (minutes): 10.541
Relative Retention Time :-0.00028
Quant Ion : 166.00
Area (flag) : 17348
On-Column Amount (ng) : 3.6065

Digitally signed by Don V. Viray on 11/21/2019 at 22:42.
Target 3.5 esignature user ID: dvv10203

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
W1804

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202289

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov21a.b/ln21s06.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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W1804 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202289

Data file: /chem/HP09915.i/19nov21a.b/ln21s06.d Injection date and time: **21-NOV-2019 12:26**
Data file Sample Info. Line: W1804;1202289;1;0;;JCW18;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 12:44 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.496	(-0.003)	937	65	164174	(7)	250.00	
66) Fluorobenzene	7.956	(0.003)	2013	96	869822	(3)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	712323	(3)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	380294	(2)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072	(0.000)	113	203242	47.793	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(0.000)	102	55199	50.931	102%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	891667	47.840	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	346554	49.104	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 11/21/2019 at 22:34. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov21a.b/ln21s06.d Injection date and time: **21-NOV-2019 12:26**
Data file Sample Info. Line: W1804;1202289;1;0;;JCW18;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 12:44 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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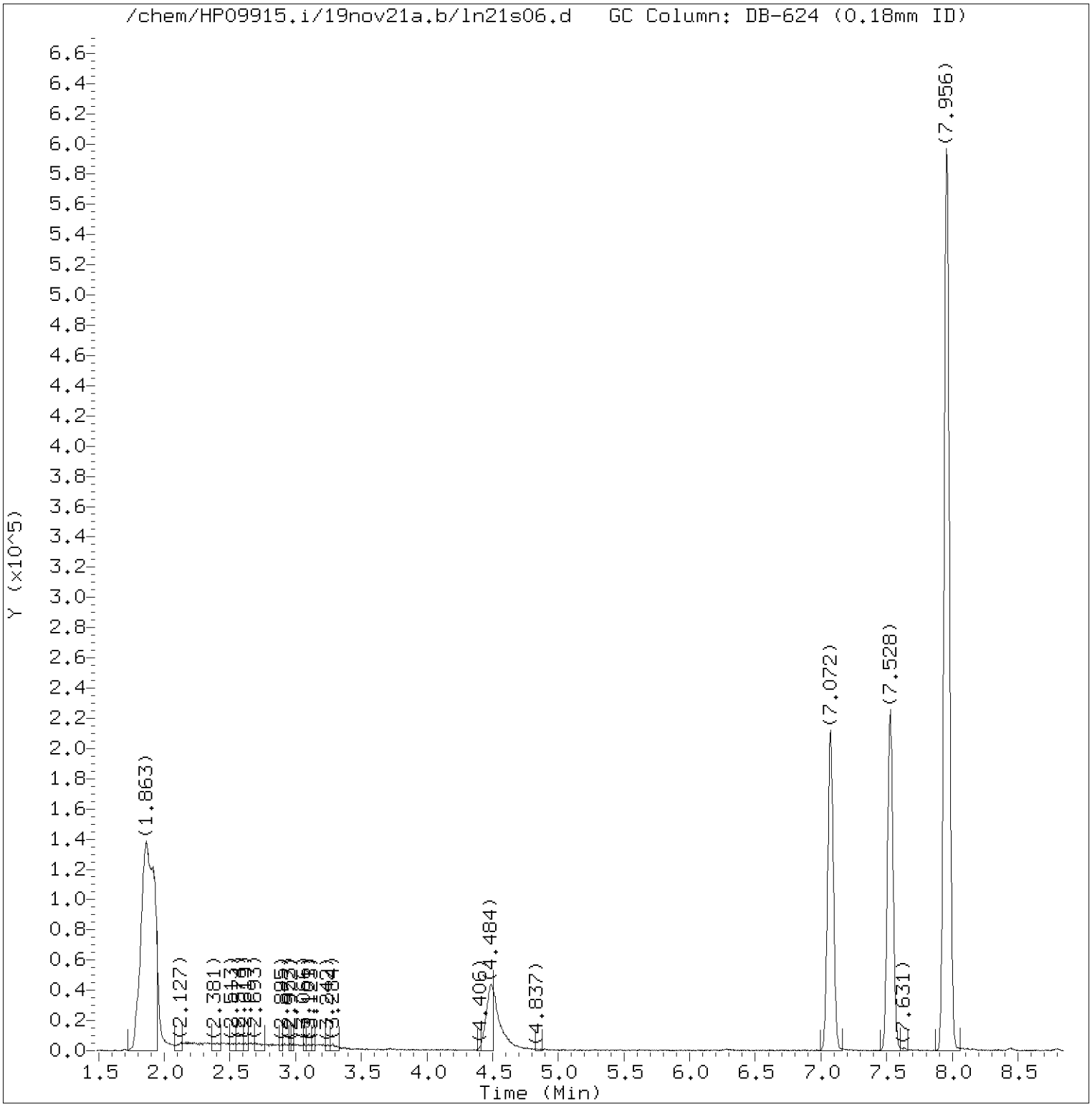
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 11/21/2019 at 22:34. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:42. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

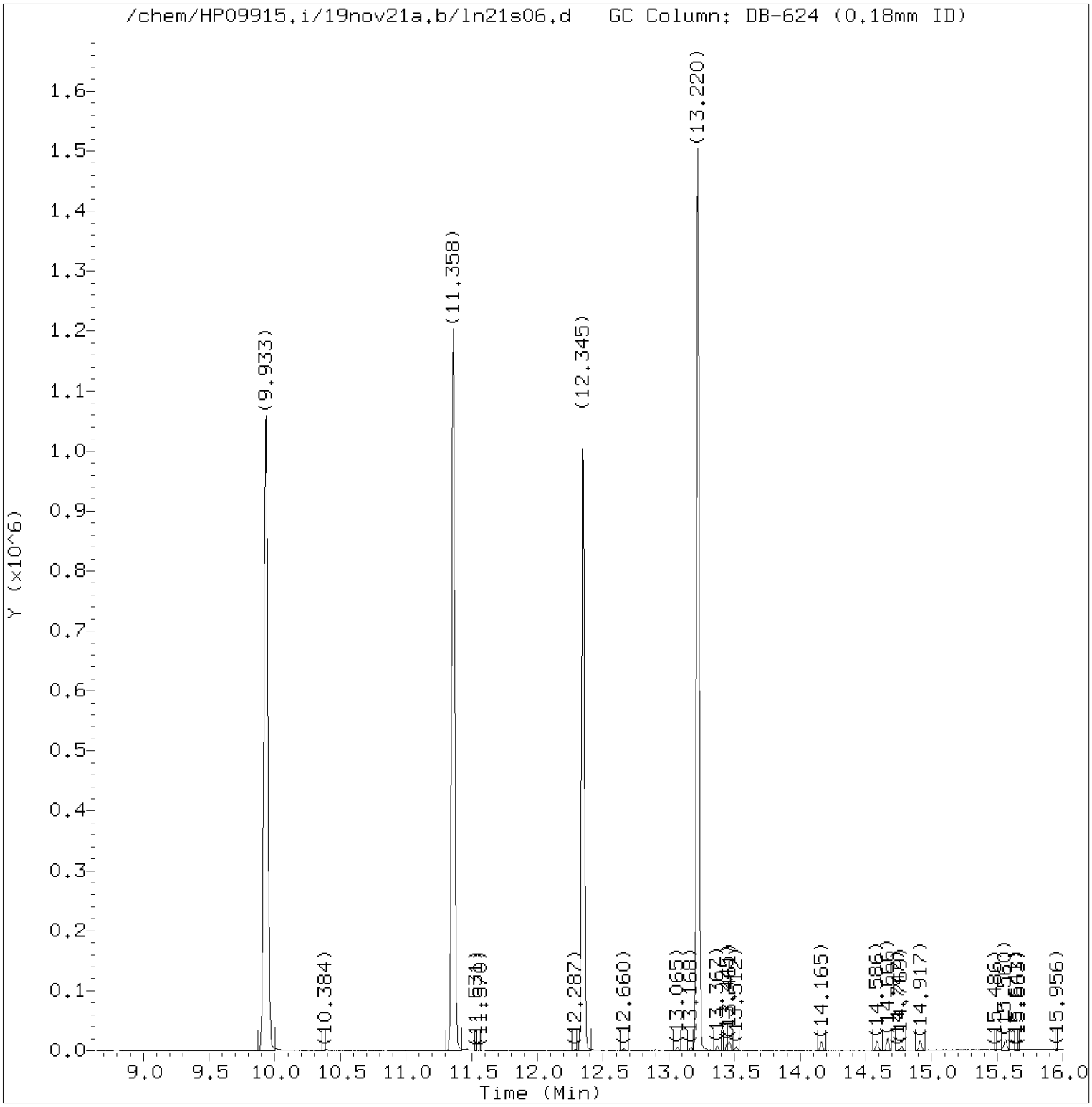
Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s06.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 12:26 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 12:44 Automation

Sample Name: W1804 Lab Sample ID: 1202289

Digitally signed by Don V. Viray
on 11/21/2019 at 22:34.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s06.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 12:26 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 12:44 Automation

Sample Name: W1804 Lab Sample ID: 1202289

Digitally signed by Don V. Viray
on 11/21/2019 at 22:34.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s06.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 12:26 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 12:44 Automation

Sample Name: W1804 Lab Sample ID: 1202289

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.496	65	164174	250.000
52)$Dibromofluoromethane	(2)	7.072	113	203242	47.793
57)$1,2-Dichloroethane-d4	(2)	7.528	102	55199	50.931
66)*Fluorobenzene	(2)	7.956	96	869822	50.000
83)$Toluene-d8	(3)	9.933	98	891667	47.840
100)*Chlorobenzene-d5	(3)	11.358	117	712323	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	346554	49.104
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	380294	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/21/2019 at 22:34.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W1805

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202290

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov21a.b/ln21s07.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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W1805 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202290

Data file: /chem/HP09915.i/19nov21a.b/ln21s07.d Injection date and time: **21-NOV-2019 12:48**
Data file Sample Info. Line: W1805;1202290;1;0;;JCW18;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 13:06 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.496	(-0.003)	937	65	158215	(3)	250.00	
66) Fluorobenzene	7.956	(0.003)	2013	96	865306	(3)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	705018	(2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	375108	(1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072	(0.000)	113	198111	46.830	94%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	54127	50.202	100%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	884757	47.961	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	339812	48.647	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 11/21/2019 at 22:39. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov21a.b/ln21s07.d Injection date and time: **21-NOV-2019 12:48**
Data file Sample Info. Line: W1805;1202290;1;0;;JCW18;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 13:06 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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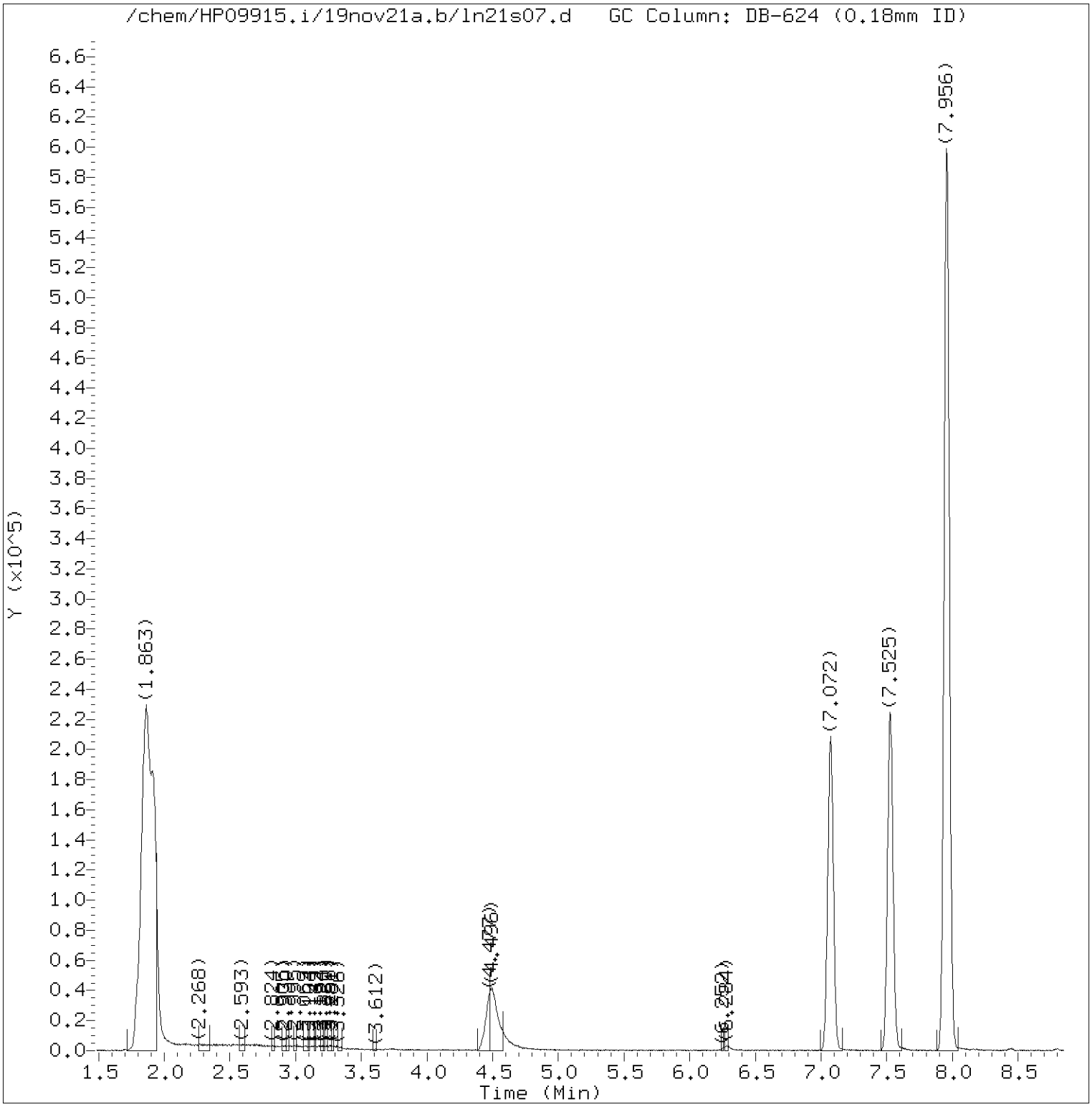
Total number of targets = 24

Digitally signed by Don V. Viray on 11/21/2019 at 22:39. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:42. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

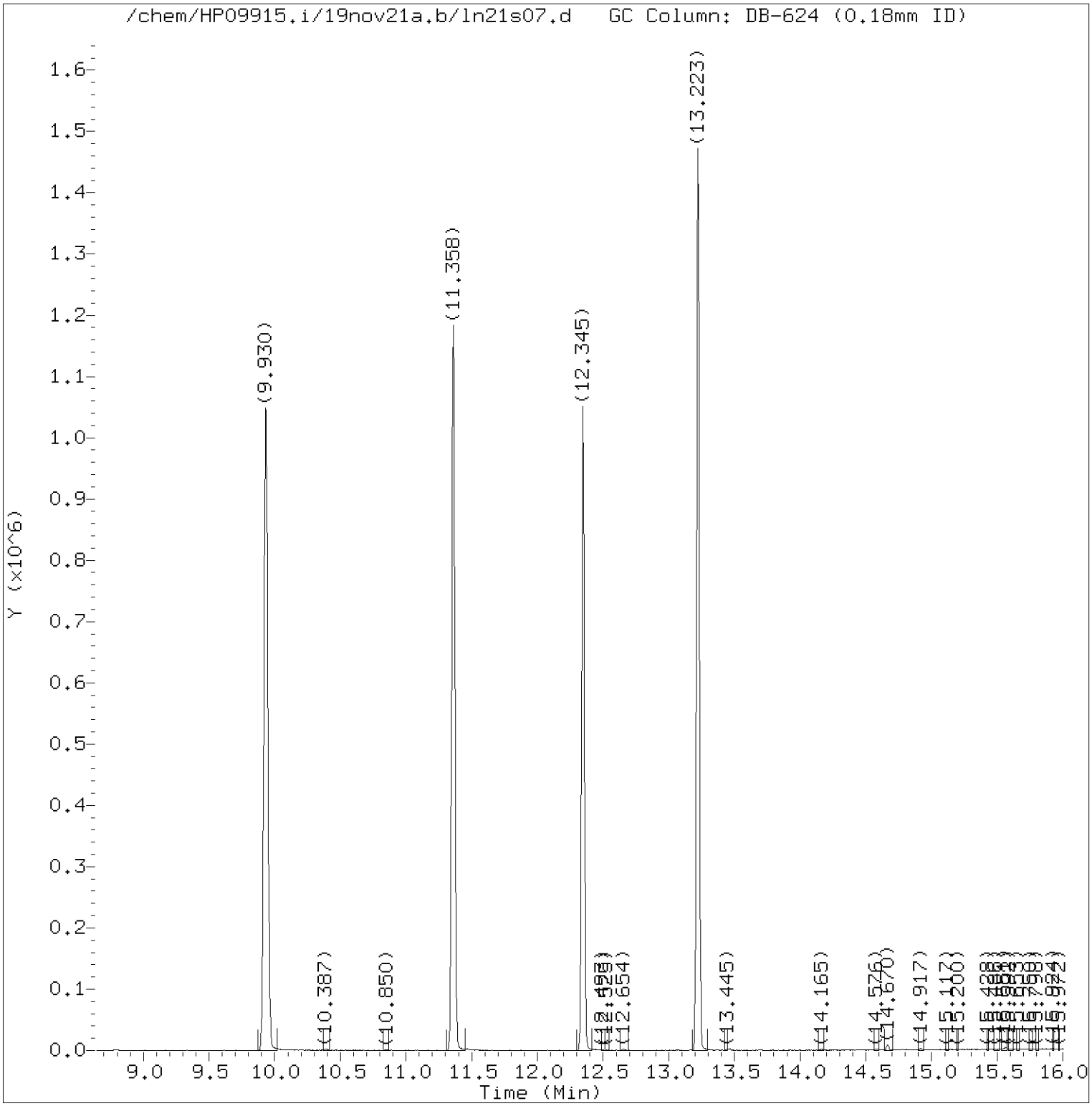
Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s07.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 12:48 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 13:06 Automation

Sample Name: W1805 Lab Sample ID: 1202290

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s07.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 12:48 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 13:06 Automation

Sample Name: W1805 Lab Sample ID: 1202290

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s07.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 12:48 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 13:06 Automation

Sample Name: W1805 Lab Sample ID: 1202290

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.496	65	158215	250.000
52)$Dibromofluoromethane	(2)	7.072	113	198111	46.830
57)$1,2-Dichloroethane-d4	(2)	7.525	102	54127	50.202
66)*Fluorobenzene	(2)	7.956	96	865306	50.000
83)$Toluene-d8	(3)	9.930	98	884757	47.961
100)*Chlorobenzene-d5	(3)	11.358	117	705018	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	339812	48.647
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	375108	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
W1806

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202291

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov21a.b/ln21s08.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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W1806 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202291

Data file: /chem/HP09915.i/19nov21a.b/ln21s08.d Injection date and time: **21-NOV-2019 13:10**
Data file Sample Info. Line: W1806;1202291;1;0;;JCW18;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 13:28 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.503	(-0.010)	939	65	156545	(2)	250.00	
66) Fluorobenzene	7.962	(-0.003)	2015	96	848538	(1)	50.00	
100) Chlorobenzene-d5	11.361	(0.000)	3072	117	697784	(1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.219	(0.003)	3650	152	368917	(-1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.078	(0.000)	113	199658	48.128	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.535	(0.000)	102	53378	50.486	101%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	875232	47.937	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	335368	48.509	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 11/21/2019 at 22:39. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov21a.b/ln21s08.d Injection date and time: **21-NOV-2019 13:10**
Data file Sample Info. Line: W1806;1202291;1;0;;JCW18;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 13:28 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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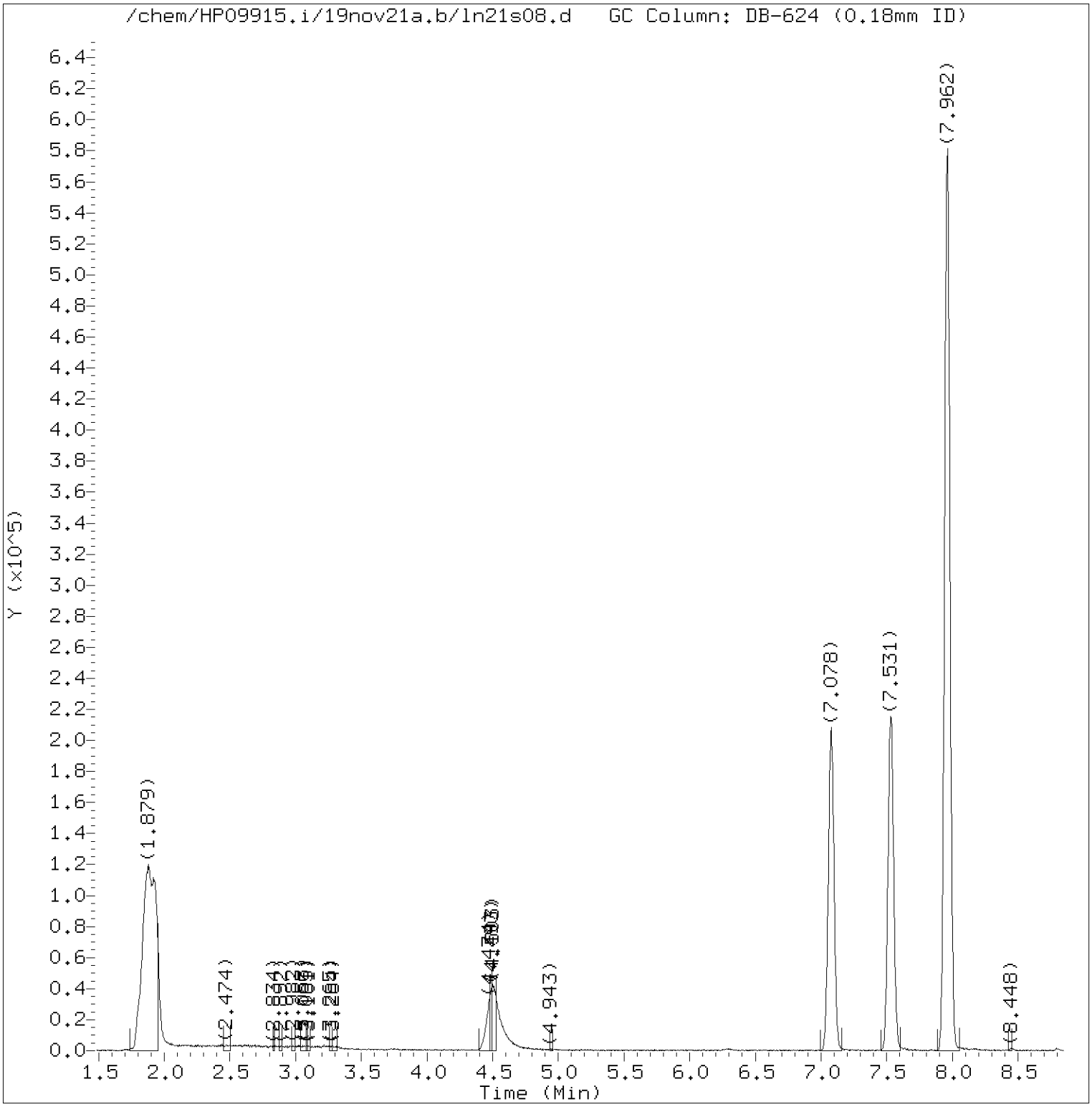
Total number of targets = 24

Digitally signed by Don V. Viray on 11/21/2019 at 22:39. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:42. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

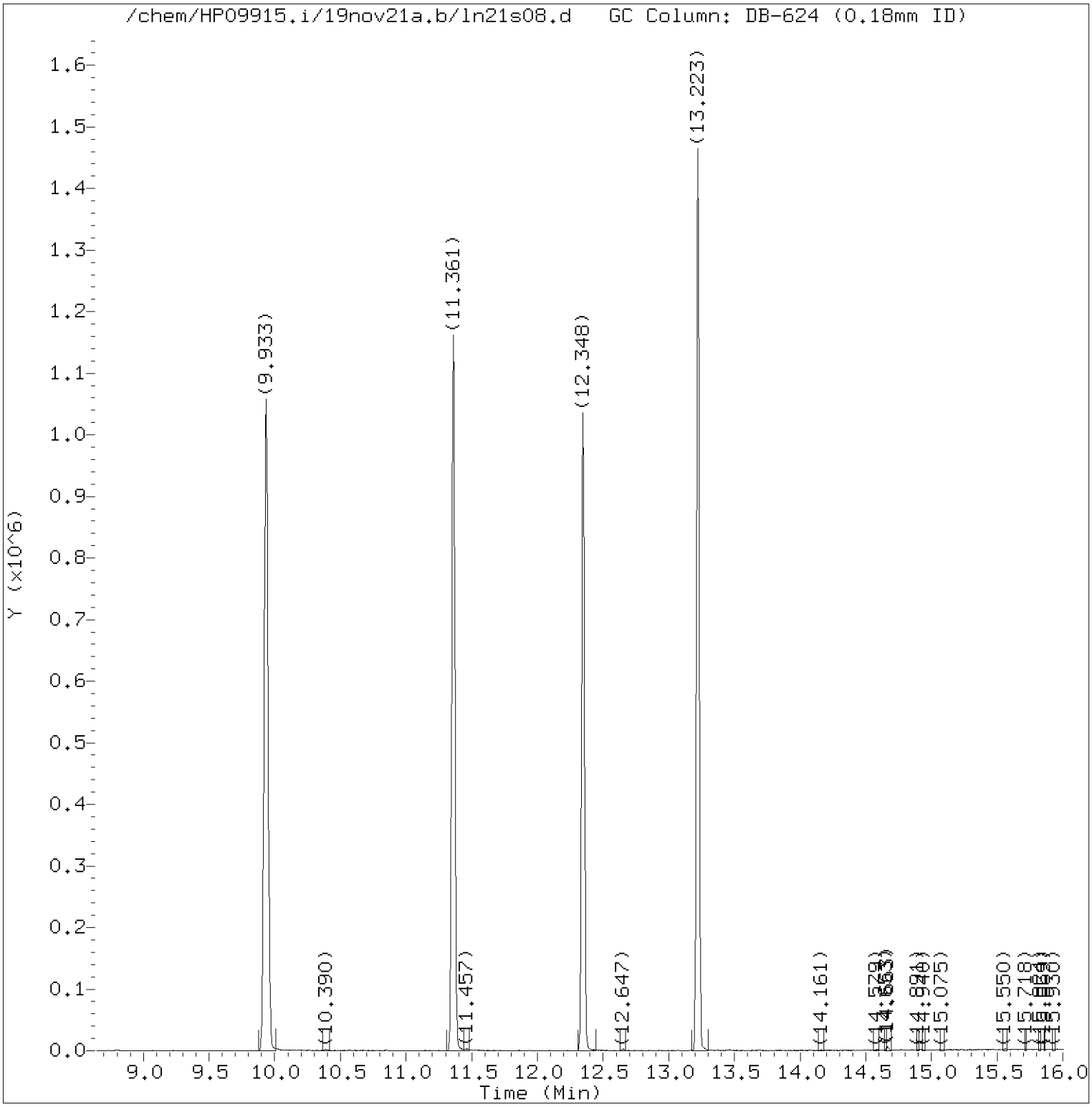
Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s08.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 13:10 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 13:28 Automation

Sample Name: W1806 Lab Sample ID: 1202291

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s08.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 13:10 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 13:28 Automation

Sample Name: W1806 Lab Sample ID: 1202291

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s08.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 13:10 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 13:28 Automation

Sample Name: W1806 Lab Sample ID: 1202291

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.503	65	156545	250.000
52)$Dibromofluoromethane	(2)	7.078	113	199658	48.128
57)$1,2-Dichloroethane-d4	(2)	7.535	102	53378	50.486
66)*Fluorobenzene	(2)	7.962	96	848538	50.000
83)$Toluene-d8	(3)	9.933	98	875232	47.937
100)*Chlorobenzene-d5	(3)	11.361	117	697784	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	335368	48.509
131)*1,4-Dichlorobenzene-d4	(4)	13.219	152	368917	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
W1807

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202292

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov21a.b/ln21s09.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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W1807 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202292

Data file: /chem/HP09915.i/19nov21a.b/ln21s09.d Injection date and time: **21-NOV-2019 13:32**
Data file Sample Info. Line: W1807;1202292;1;0;;JCW18;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 13:50 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.496	(-0.003)	937	65	154593	(1)	250.00	
66) Fluorobenzene	7.956	(0.003)	2013	96	841386	(0)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	685547	(-1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	361435	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(0.000)	113	195267	47.470	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(0.000)	102	52640	50.211	100%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	861500	48.027	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	328361	48.343	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 11/21/2019 at 22:39. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov21a.b/ln21s09.d Injection date and time: **21-NOV-2019 13:32**
Data file Sample Info. Line: W1807;1202292;1;0;;JCW18;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 13:50 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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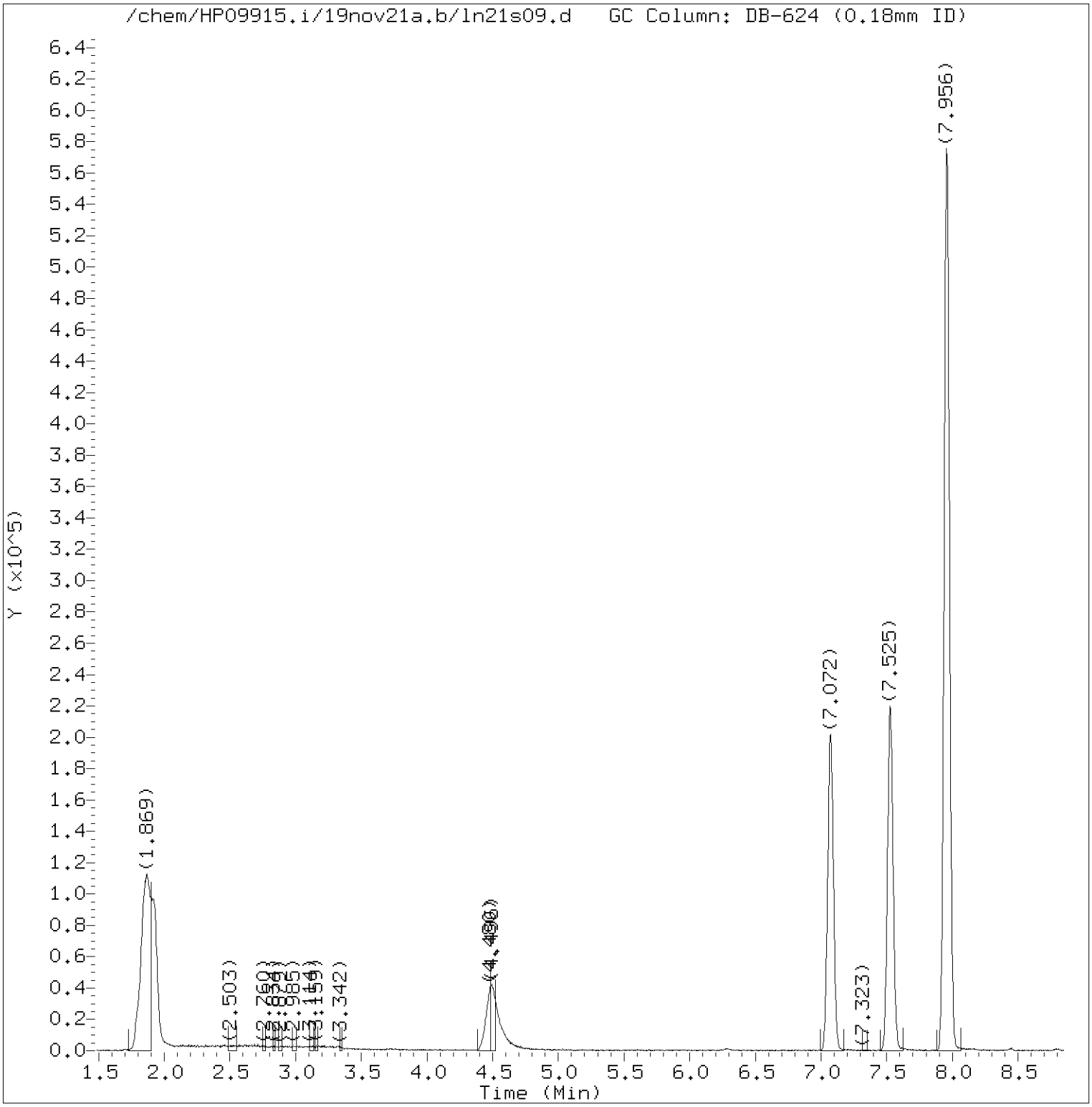
Total number of targets = 24

Digitally signed by Don V. Viray on 11/21/2019 at 22:39. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:42. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

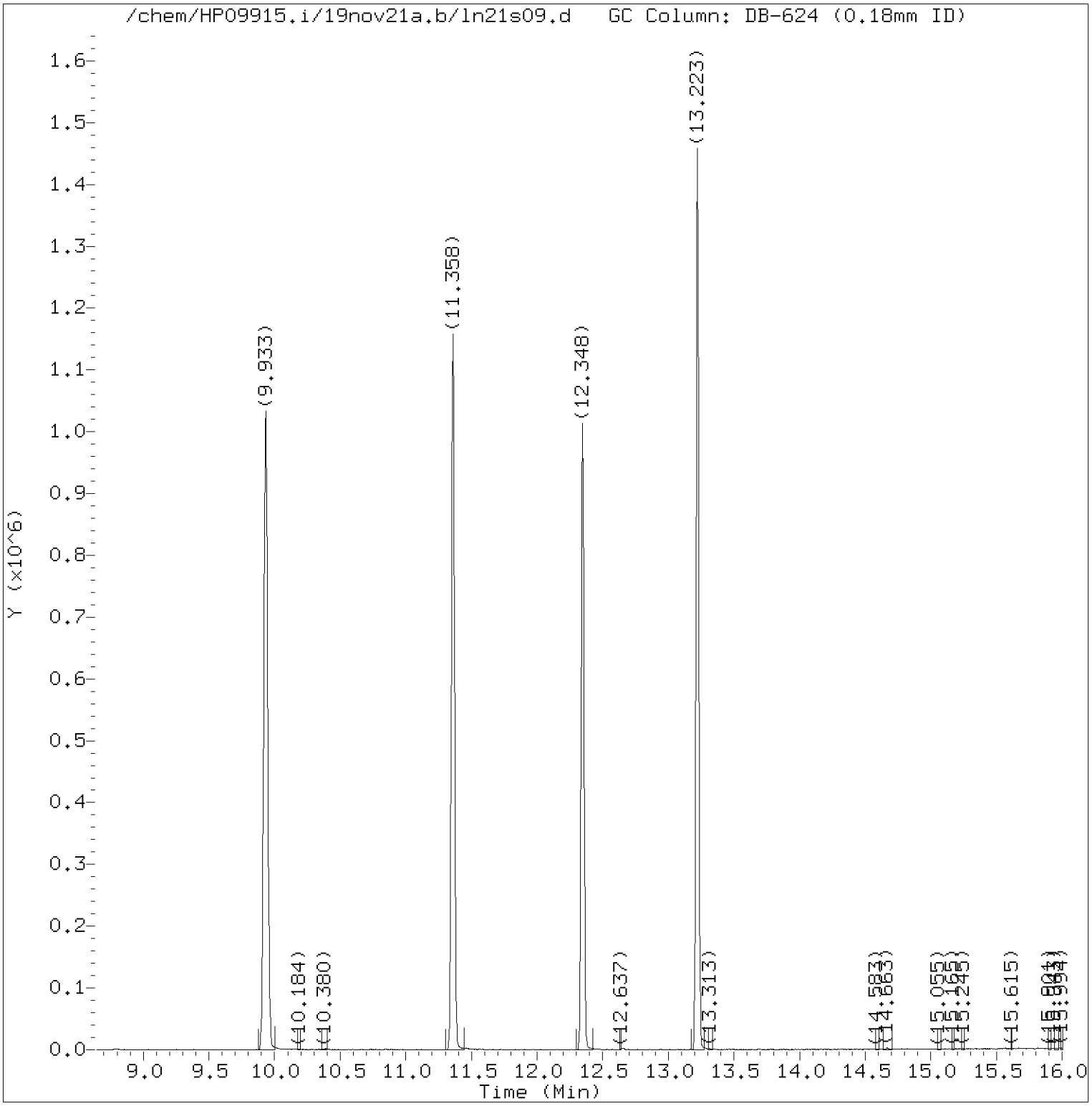
Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s09.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 13:32 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 13:50 Automation

Sample Name: W1807 Lab Sample ID: 1202292

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s09.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 13:32 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 13:50 Automation

Sample Name: W1807 Lab Sample ID: 1202292

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s09.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 13:32 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 13:50 Automation

Sample Name: W1807 Lab Sample ID: 1202292

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.496	65	154593	250.000
52)$Dibromofluoromethane	(2)	7.075	113	195267	47.470
57)$1,2-Dichloroethane-d4	(2)	7.528	102	52640	50.211
66)*Fluorobenzene	(2)	7.956	96	841386	50.000
83)$Toluene-d8	(3)	9.933	98	861500	48.027
100)*Chlorobenzene-d5	(3)	11.358	117	685547	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	328361	48.343
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	361435	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
W1808

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202293

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov21a.b/ln21s10.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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W1808 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202293

Data file: /chem/HP09915.i/19nov21a.b/ln21s10.d Injection date and time: **21-NOV-2019 13:54**
Data file Sample Info. Line: W1808;1202293;1;0;;JCW18;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 14:12 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.503	(-0.010)	939	65	148061	(-4)	250.00	
66) Fluorobenzene	7.962	(-0.003)	2015	96	821642	(-2)	50.00	
100) Chlorobenzene-d5	11.361	(0.000)	3072	117	673731	(-2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	354768	(-5)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.069	(0.001)	113	190773	47.492	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(0.000)	102	51583	50.385	101%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	844220	47.889	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	322751	48.351	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 11/21/2019 at 22:39. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov21a.b/ln21s10.d Injection date and time: **21-NOV-2019 13:54**
Data file Sample Info. Line: W1808;1202293;1;0;;JCW18;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 14:12 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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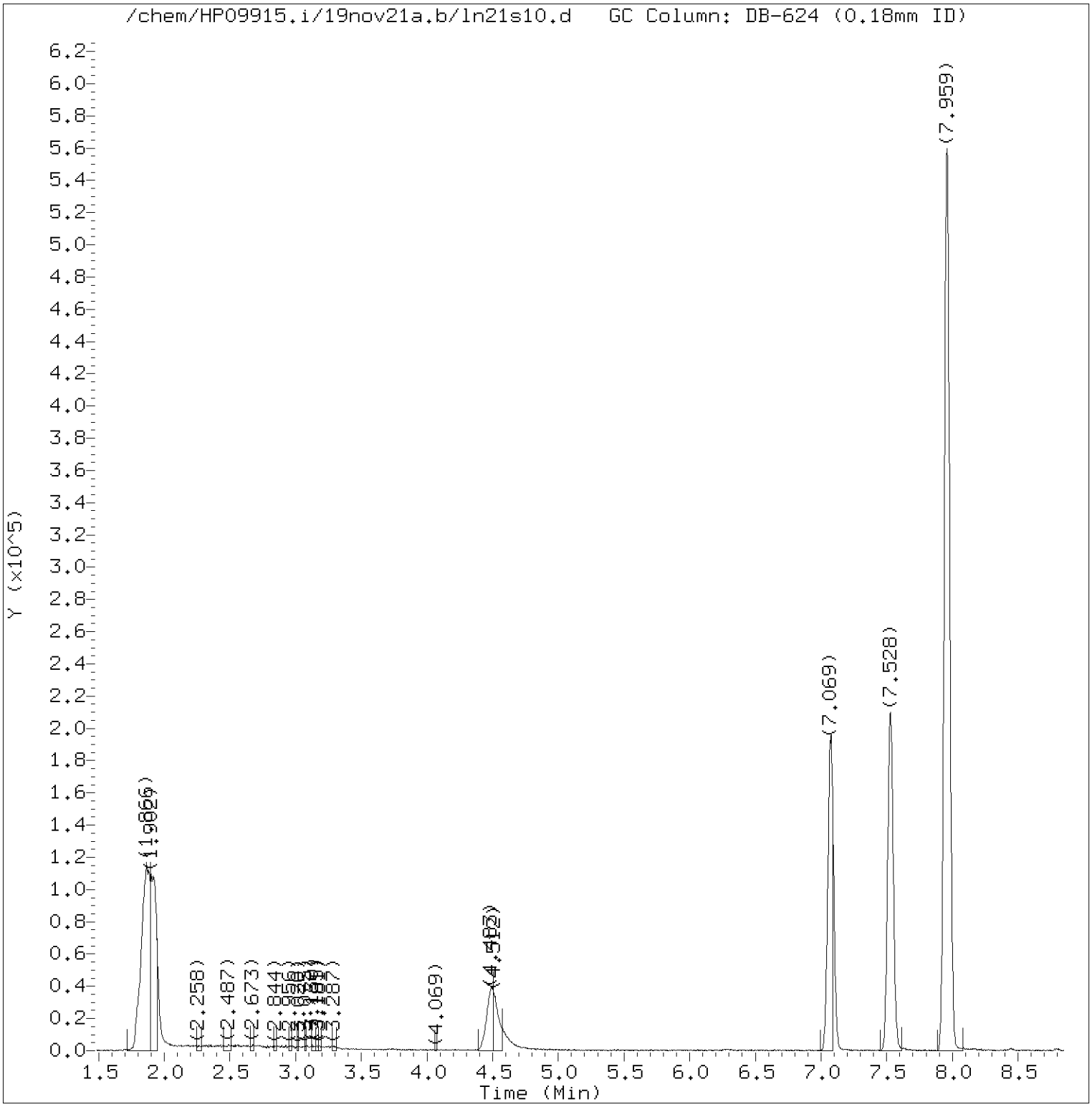
Total number of targets = 24

Digitally signed by Don V. Viray on 11/21/2019 at 22:39. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:42. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

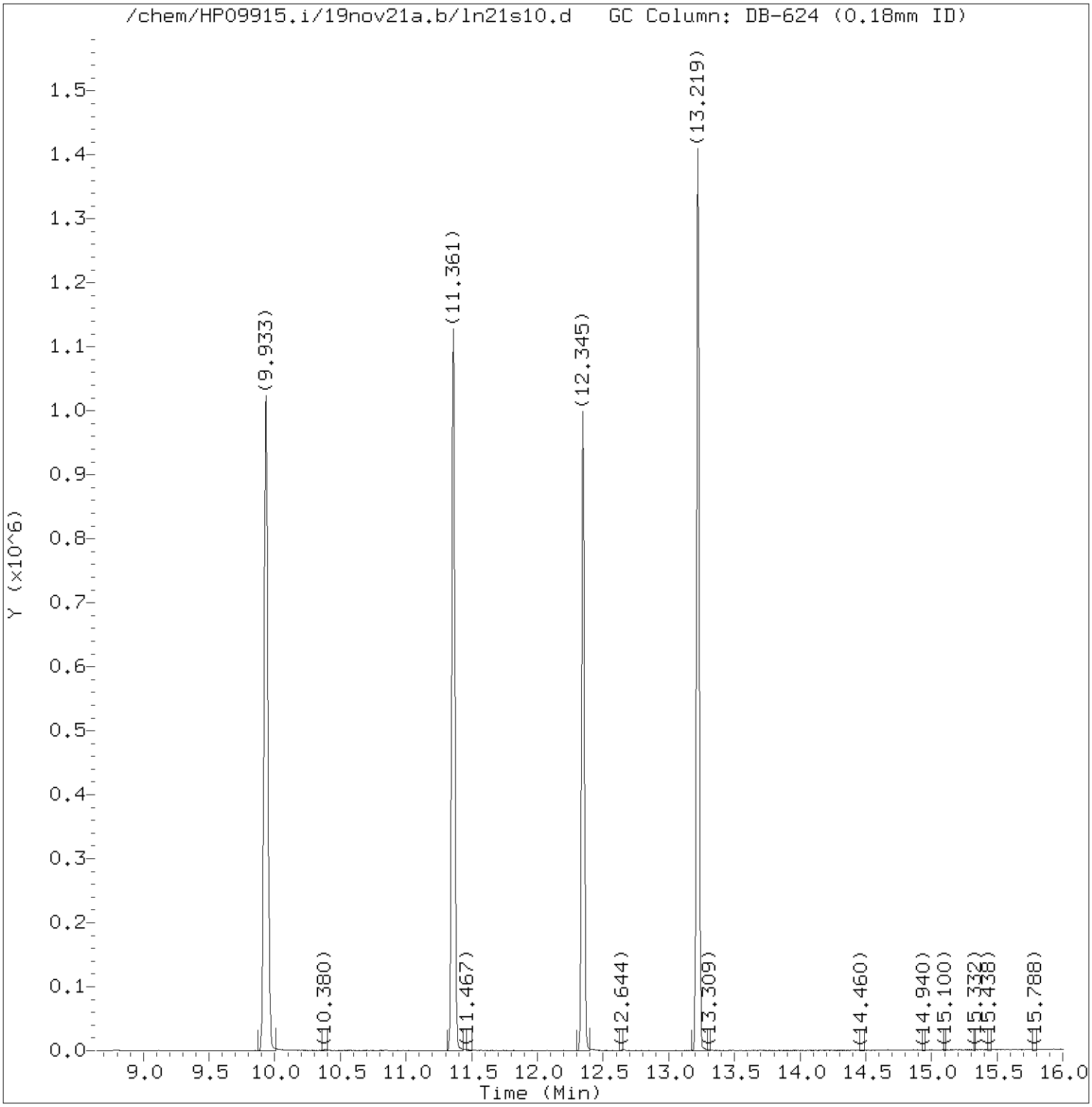
Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s10.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 13:54 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 14:12 Automation

Sample Name: W1808 Lab Sample ID: 1202293

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s10.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 13:54 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 14:12 Automation

Sample Name: W1808 Lab Sample ID: 1202293

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s10.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 13:54 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 14:12 Automation

Sample Name: W1808 Lab Sample ID: 1202293

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.503	65	148061	250.000
52)$Dibromofluoromethane	(2)	7.069	113	190773	47.492
57)$1,2-Dichloroethane-d4	(2)	7.528	102	51583	50.385
66)*Fluorobenzene	(2)	7.962	96	821642	50.000
83)$Toluene-d8	(3)	9.933	98	844220	47.889
100)*Chlorobenzene-d5	(3)	11.361	117	673731	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	322751	48.351
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	354768	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
W1809

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202294

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov21a.b/ln21s11.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L		Q
75-01-4	Vinyl Chloride		1	U
75-35-4	1,1-Dichloroethene		1	U
67-64-1	Acetone		20	U
76-13-1	Freon 113		10	U
75-15-0	Carbon Disulfide		5	U
75-09-2	Methylene Chloride		1	U
156-60-5	trans-1,2-Dichloroethene		1	U
75-34-3	1,1-Dichloroethane		1	U
156-59-2	cis-1,2-Dichloroethene		1	U
78-93-3	2-Butanone		10	U
67-66-3	Chloroform		1	U
71-55-6	1,1,1-Trichloroethane		1	U
71-43-2	Benzene		1	U
107-06-2	1,2-Dichloroethane		1	U
79-01-6	Trichloroethene		1	U
123-91-1	1,4-Dioxane		250	U
108-88-3	Toluene		1	U
127-18-4	Tetrachloroethene		1	U
100-41-4	Ethylbenzene		1	U
1330-20-7	Xylene (Total)		6	U
95-50-1	1,2-Dichlorobenzene		5	U
91-20-3	Naphthalene		5	U

FORM I VOA

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W1809 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202294

Data file: /chem/HP09915.i/19nov21a.b/ln21s11.d Injection date and time: **21-NOV-2019 14:16**
Data file Sample Info. Line: W1809;1202294;1;0;;JCW18;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 14:34 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.487	(0.006)	934	65	147640	(-4)	250.00	
66) Fluorobenzene	7.962	(-0.003)	2015	96	821085	(-2)	50.00	
100) Chlorobenzene-d5	11.361	(0.000)	3072	117	673890	(-2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	359670	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(0.000)	113	193031	48.086	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(0.000)	102	52160	50.984	102%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	842843	47.800	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	321342	48.128	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 11/21/2019 at 22:39. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov21a.b/ln21s11.d Injection date and time: **21-NOV-2019 14:16**
Data file Sample Info. Line: W1809;1202294;1;0;;JCW18;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 14:34 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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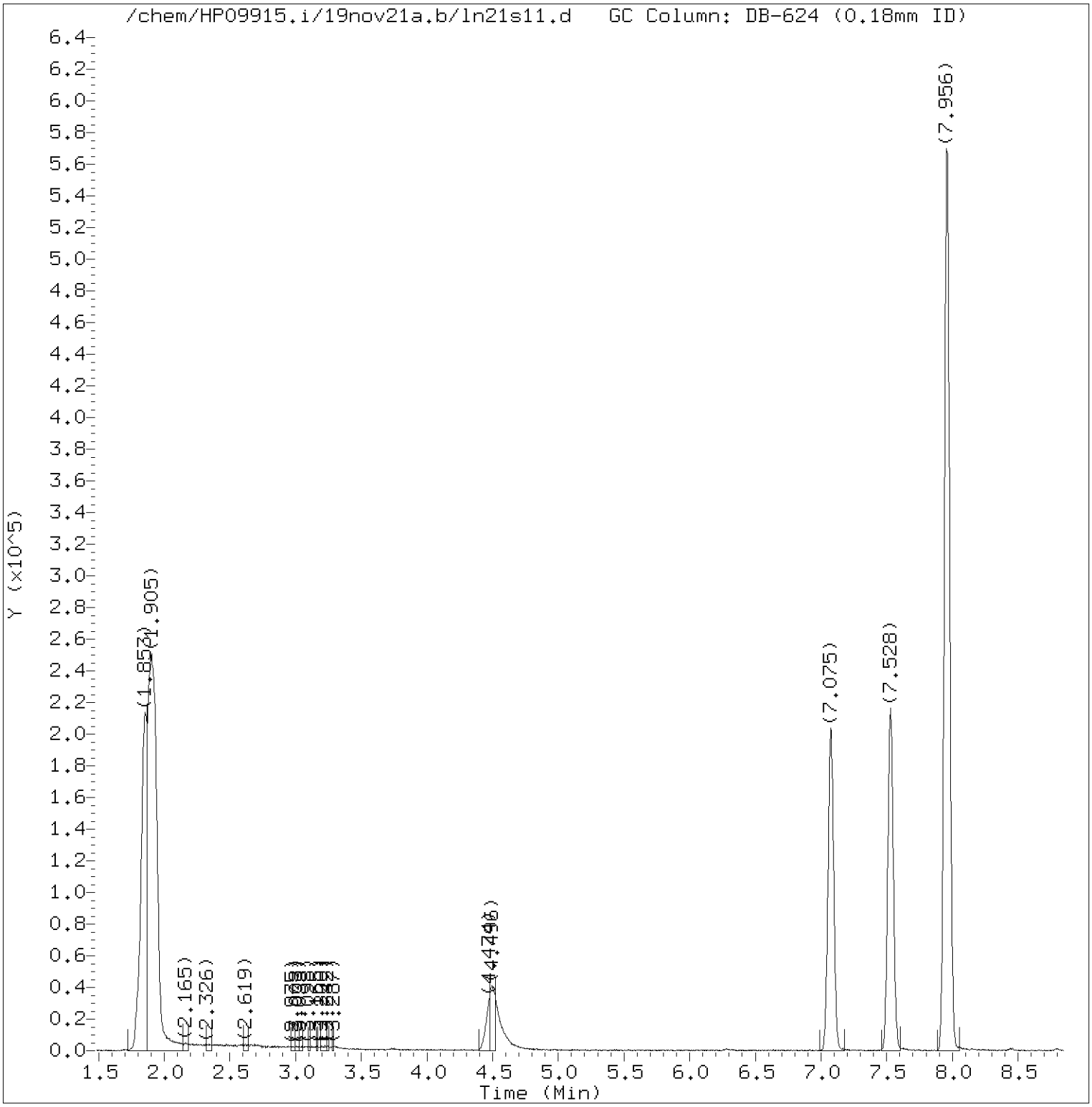
Total number of targets = 24

Digitally signed by Don V. Viray on 11/21/2019 at 22:39. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:42. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

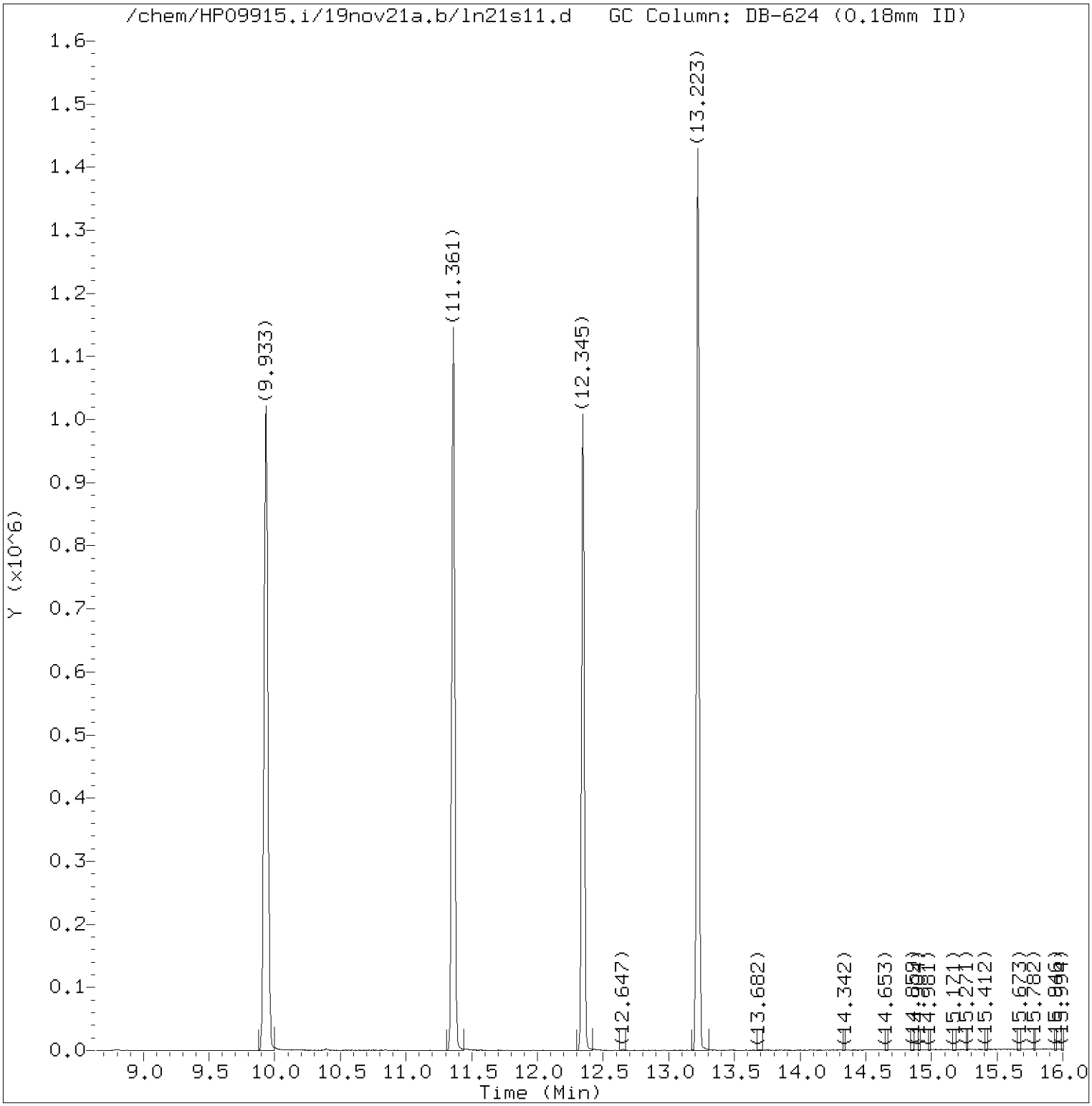
Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s11.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 14:16 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 14:34 Automation

Sample Name: W1809 Lab Sample ID: 1202294

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s11.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 14:16 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 14:34 Automation

Sample Name: W1809 Lab Sample ID: 1202294

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s11.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 14:16 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 14:34 Automation

Sample Name: W1809 Lab Sample ID: 1202294

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.487	65	147640	250.000
52)$Dibromofluoromethane	(2)	7.075	113	193031	48.086
57)$1,2-Dichloroethane-d4	(2)	7.528	102	52160	50.984
66)*Fluorobenzene	(2)	7.962	96	821085	50.000
83)$Toluene-d8	(3)	9.933	98	842843	47.800
100)*Chlorobenzene-d5	(3)	11.361	117	673890	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	321342	48.128
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	359670	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
W1810

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202295

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov20a.b/ln20s01.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

^

W1810 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202295

Data file: /chem/HP09915.i/19nov20a.b/ln20s01.d Injection date and time: **20-NOV-2019 09:57**
Data file Sample Info. Line: W1810;1202295;1;0;;JCW18;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 10:14 Automation

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.487	(0.006)	934	65	156140	(2)	250.00	
66) Fluorobenzene	7.956	(0.003)	2013	96	904207	(2)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	729832	(1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	390781	(0)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072	(0.000)	113	208747	47.221	94%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	56561	50.203	100%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	922598	48.312	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	351506	48.611	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 11/20/2019 at 18:21. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov20a.b/ln20s01.d Injection date and time: **20-NOV-2019 09:57**
Data file Sample Info. Line: W1810;1202295;1;0;;JCW18;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 10:14 Automation

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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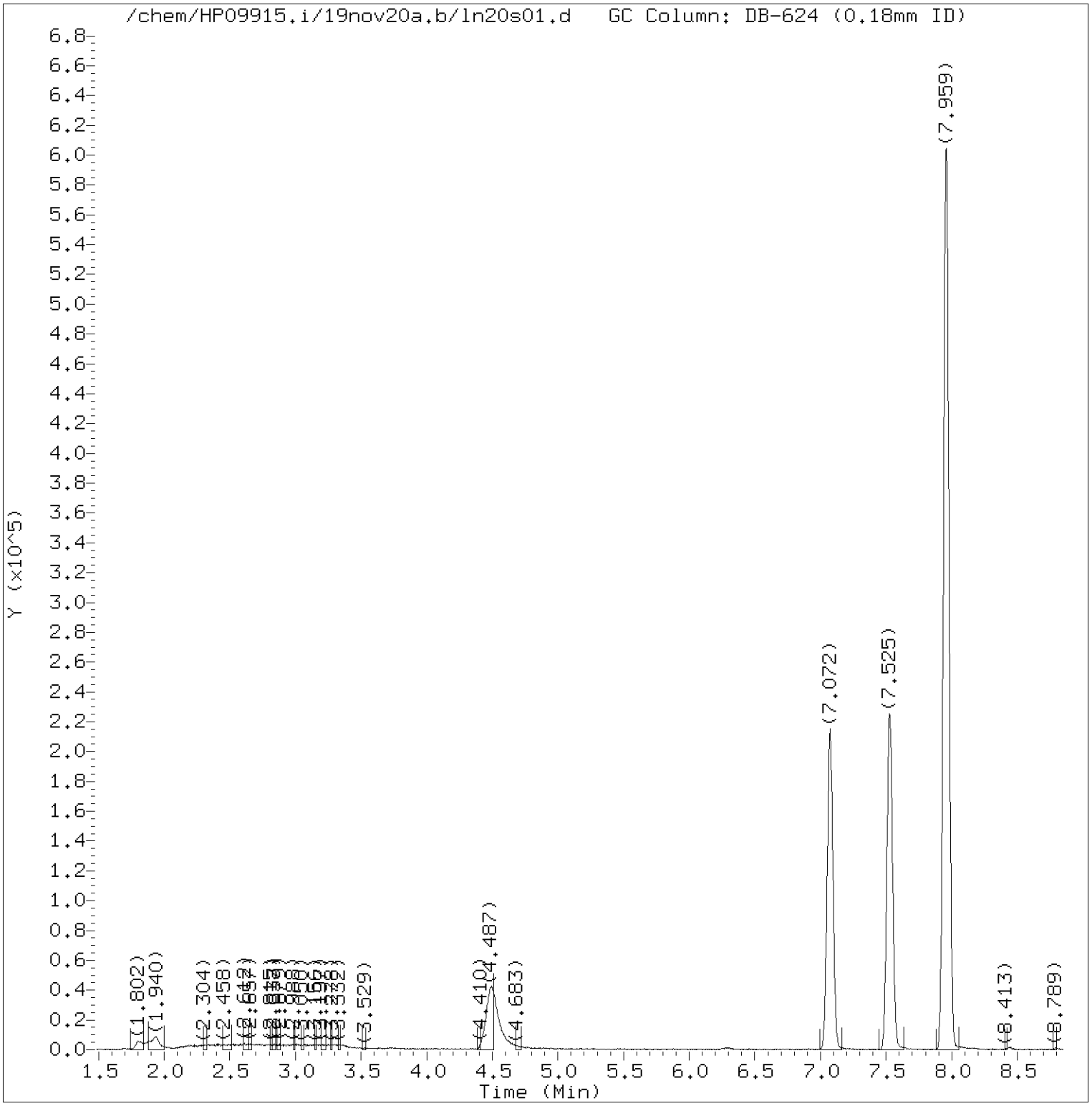
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 11/20/2019 at 18:21. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:50. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

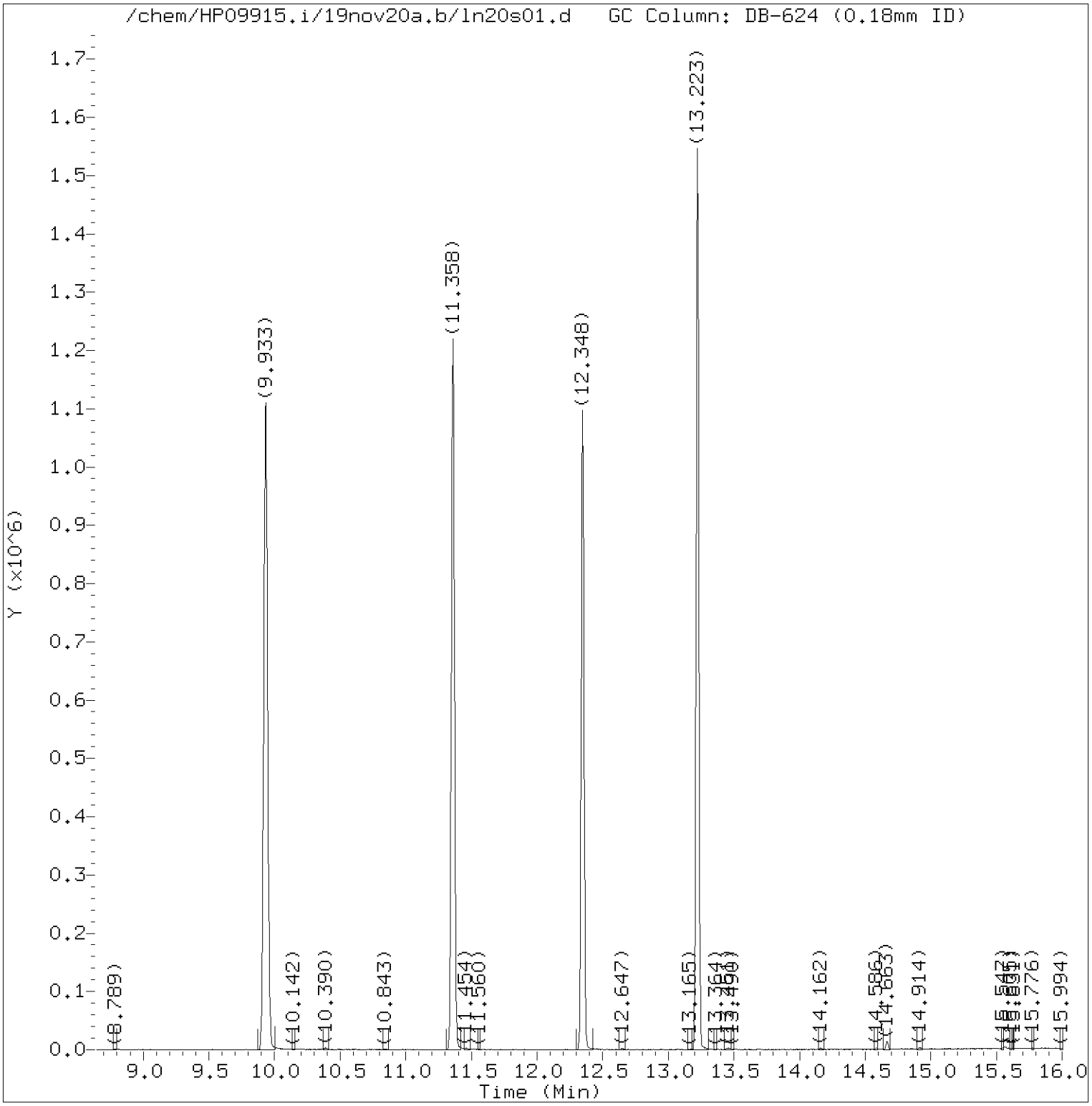
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 09:57 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 10:14 Automation

Sample Name: W1810 Lab Sample ID: 1202295

Digitally signed by Don V. Viray
on 11/20/2019 at 18:21.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 09:57 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 10:14 Automation

Sample Name: W1810 Lab Sample ID: 1202295

Digitally signed by Don V. Viray
on 11/20/2019 at 18:21.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 09:57 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 10:14 Automation

Sample Name: W1810 Lab Sample ID: 1202295

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.487	65	156140	250.000
52)$Dibromofluoromethane	(2)	7.072	113	208747	47.221
57)$1,2-Dichloroethane-d4	(2)	7.525	102	56561	50.203
66)*Fluorobenzene	(2)	7.956	96	904207	50.000
83)$Toluene-d8	(3)	9.933	98	922598	48.312
100)*Chlorobenzene-d5	(3)	11.358	117	729832	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	351506	48.611
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	390781	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/20/2019 at 18:21.
Target 3.5 esignature user ID: dvv10203

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\19nov04i\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
KAS02648	LN04T01.D	50NGBFB	11/04/2019	12:52	L191821AA	
KAS02648	LN04T02.D	50NGBFB	11/04/2019	13:05	L191821AA	
KAS02648	LN04T03.D	50NGBFB	11/04/2019	13:27	L191821AA	
KAS02648	LN04T04.D	50NGBFB	11/04/2019	13:45	L191821AA	
KAS02648	LN04T05.D	50NGBFB	11/04/2019	14:07	L191821AA	
KAS02648	LN04T06.D	50NGBFB	11/04/2019	14:18	L191821AA	
KAS02648	LN04X01.D	CLNBLK	11/04/2019	14:29		
KAS02648	LN04I01.D	VSTD300	11/04/2019	14:51		
KAS02648	LN04I02.D	VSTD100	11/04/2019	15:13		
KAS02648	LN04I03.D	VSTD050	11/04/2019	15:35		
KAS02648	LN04I04.D	VSTD020	11/04/2019	15:57		
KAS02648	LN04I05.D	VSTD010	11/04/2019	16:19		
KAS02648	LN04I06.D	VSTD004	11/04/2019	16:41		
KAS02648	LN04I07.D	VSTD001	11/04/2019	17:03		
KAS02648	LN04V01.D	ICVLLG	11/04/2019	17:25		
KAS02648	LN04V02.D	ICVLLG	11/04/2019	18:42		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\19NOV20A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
KKM02078	LN20T01.D	50NGBFB	11/20/2019	08:00	L191821AA	
KKM02078	LN20X01.D	VBLKL80	11/20/2019	08:29	L193241AA	
KKM02078	LN20C01.D	VSTD050	11/20/2019	08:51	L193241AA	
KKM02078	LN20L01.D	LCSL80	11/20/2019	09:13	L193241AA	
KKM02078	LN20B01.D	VBLKL80	11/20/2019	09:35	L193241AA	
KKM02078	LN20S01.D	1202295	11/20/2019	09:57	L193241AA	
KKM02078	LN20S02.D	1202314	11/20/2019	10:19	L193241AA	
KKM02078	LN20S03.D	1202284	11/20/2019	10:41	L193241AA	
KKM02078	LN20S04.D	1202285	11/20/2019	11:03	L193241AA	
KKM02078	LN20S05.D	1202296	11/20/2019	11:25	L193241AA	
KKM02078	LN20S06.D	1202297MS	11/20/2019	11:52	L193241AA	
KKM02078	LN20S07.D	1202298MSD	11/20/2019	12:14	L193241AA	
KKM02078	LN20S08.D	1202299	11/20/2019	12:36	L193241AA	
KKM02078	LN20S09.D	1202300	11/20/2019	12:58	L193241AA	
KKM02078	LN20S10.D	1202301	11/20/2019	13:20	L193241AA	
KKM02078	LN20S11.D	1202302	11/20/2019	13:42	L193241AA	
KKM02078	LN20S12.D	1202303	11/20/2019	14:04	L193241AA	
KKM02078	LN20S13.D	1202304	11/20/2019	14:26	L193241AA	
KKM02078	LN20S14.D	1202305	11/20/2019	14:48	L193241AA	
KKM02078	LN20S15.D	1202306	11/20/2019	15:10	L193241AA	
KKM02078	LN20S16.D	1202307	11/20/2019	15:32	L193241AA	
KKM02078	LN20S17.D	1202315	11/20/2019	15:54	L193241AA	
KKM02078	LN20S18.D	1202316	11/20/2019	16:16	L193241AA	
KKM02078	LN20S19.D	1202317	11/20/2019	16:38	L193241AA	
KKM02078	LN20S20.D	1202318	11/20/2019	17:00	L193241AA	
KKM02078	LN20S21.D	1202319	11/20/2019	17:22	L193241AA	
KKM02078	LN20S22.D	1202320	11/20/2019	17:44	L193241AA	

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\19NOV21a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
lcp00895	LN21T01.D	50NGBFB	11/21/2019	07:27	L191821AA	
lcp00895	LN21T02.D	50NGBFB	11/21/2019	07:42	L191821AA	
LCP00895	LN21X01.D	CBLK	11/21/2019	07:56	L193251AA	
LCP00895	LN21C01.D	VSTD050	11/21/2019	08:18	L193251AA	
LCP00895	LN21S01.D	LCSL83	11/21/2019	08:40	L193251AA	
LCP00895	LN21r01.D	RVLL83	11/21/2019	09:02	L193251AA	
LCP00895	LN21B01.D	VBLKL83	11/21/2019	09:24	L193251AA	
LCP00895	LN21L01.D	LCSL83	11/21/2019	09:50	L193251AA	
LCP00895	LN21S02.D	1202441	11/21/2019	10:59	L193251AA	
LCP00895	LN21S03.D	1202286	11/21/2019	11:21	L193251AA	
LCP00895	LN21S04.D	1202287MS	11/21/2019	11:43	L193251AA	
LCP00895	LN21S05.D	1202288MSD	11/21/2019	12:04	L193251AA	
LCP00895	LN21S06.D	1202289	11/21/2019	12:26	L193251AA	
LCP00895	LN21S07.D	1202290	11/21/2019	12:48	L193251AA	
LCP00895	LN21S08.D	1202291	11/21/2019	13:10	L193251AA	
LCP00895	LN21S09.D	1202292	11/21/2019	13:32	L193251AA	
LCP00895	LN21S10.D	1202293	11/21/2019	13:54	L193251AA	
LCP00895	LN21S11.D	1202294	11/21/2019	14:16	L193251AA	
LCP00895	LN21S12.D	1202321	11/21/2019	14:39	L193251AA	
LCP00895	LN21S13.D	1202322	11/21/2019	15:01	L193251AA	
LCP00895	LN21S14.D	1202323	11/21/2019	15:23	L193251AA	
LCP00895	LN21S15.D	1202325	11/21/2019	15:45	L193251AA	
LCP00895	LN21S16.D	1202326	11/21/2019	16:07	L193251AA	
LCP00895	LN21S17.D	1202327	11/21/2019	16:29	L193251AA	
LCP00895	LN21S18.D	1202434	11/21/2019	16:51	L193251AA	
LCP00895	LN21S19.D	1202437	11/21/2019	17:13	L193251AA	
LCP00895	LN21S20.D	1202438	11/21/2019	17:35	L193251AA	
LCP00895	LN21S21.D	1202439	11/21/2019	17:57	L193251AA	
LCP00895	LN21S22.D	1202440	11/21/2019	18:19	L193251AA	

Data File: /chem/HP09915.i/19nov04i.b/ln04t06.d

Date : 04-NOV-2019 14:18

Client ID: AUG02-19

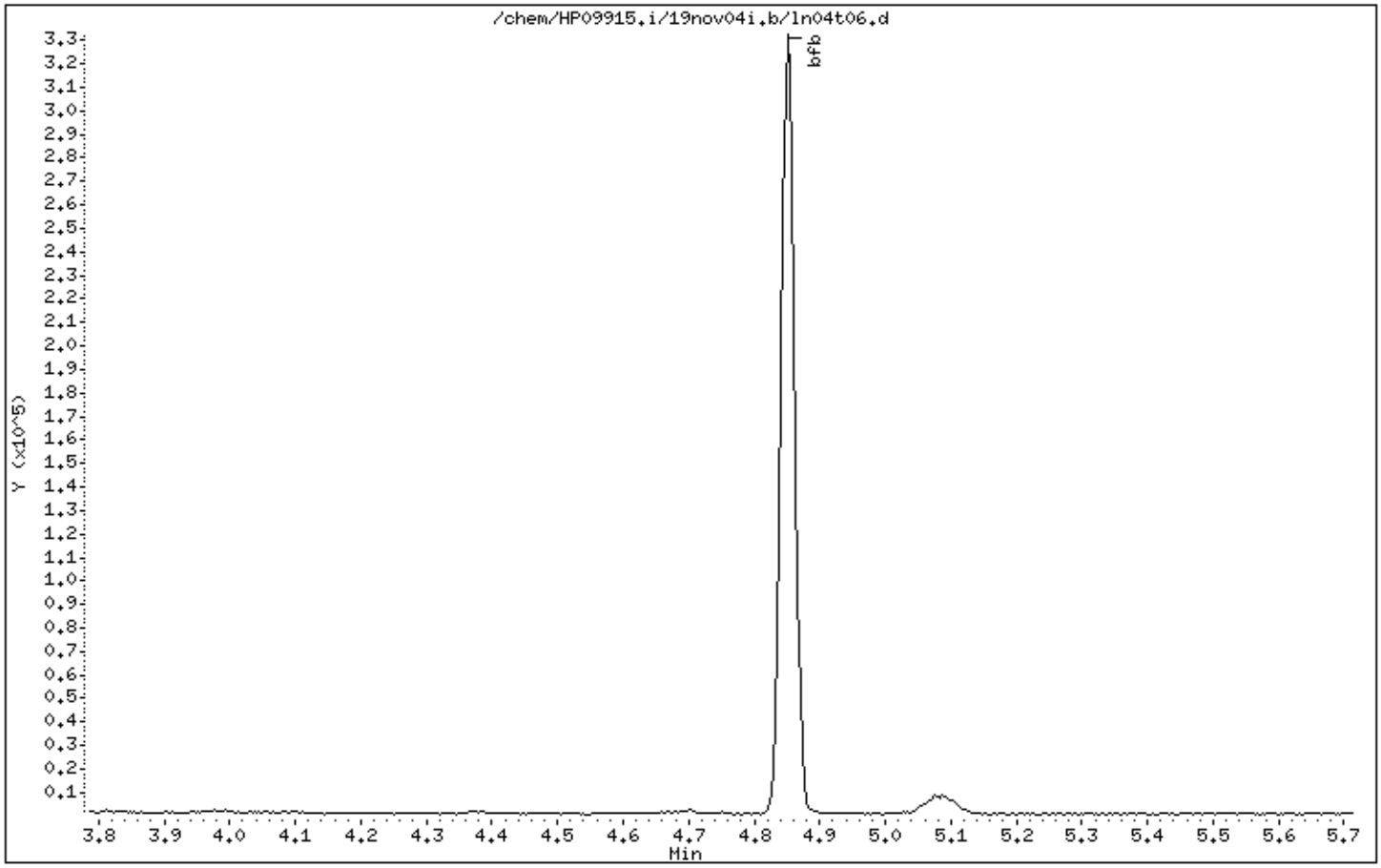
Instrument: HP09915.i

Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem/HP09915.i/19nov04i.b/ln04t06.d

Date : 04-NOV-2019 14:18

Client ID: AUG02-19

Instrument: HP09915.i

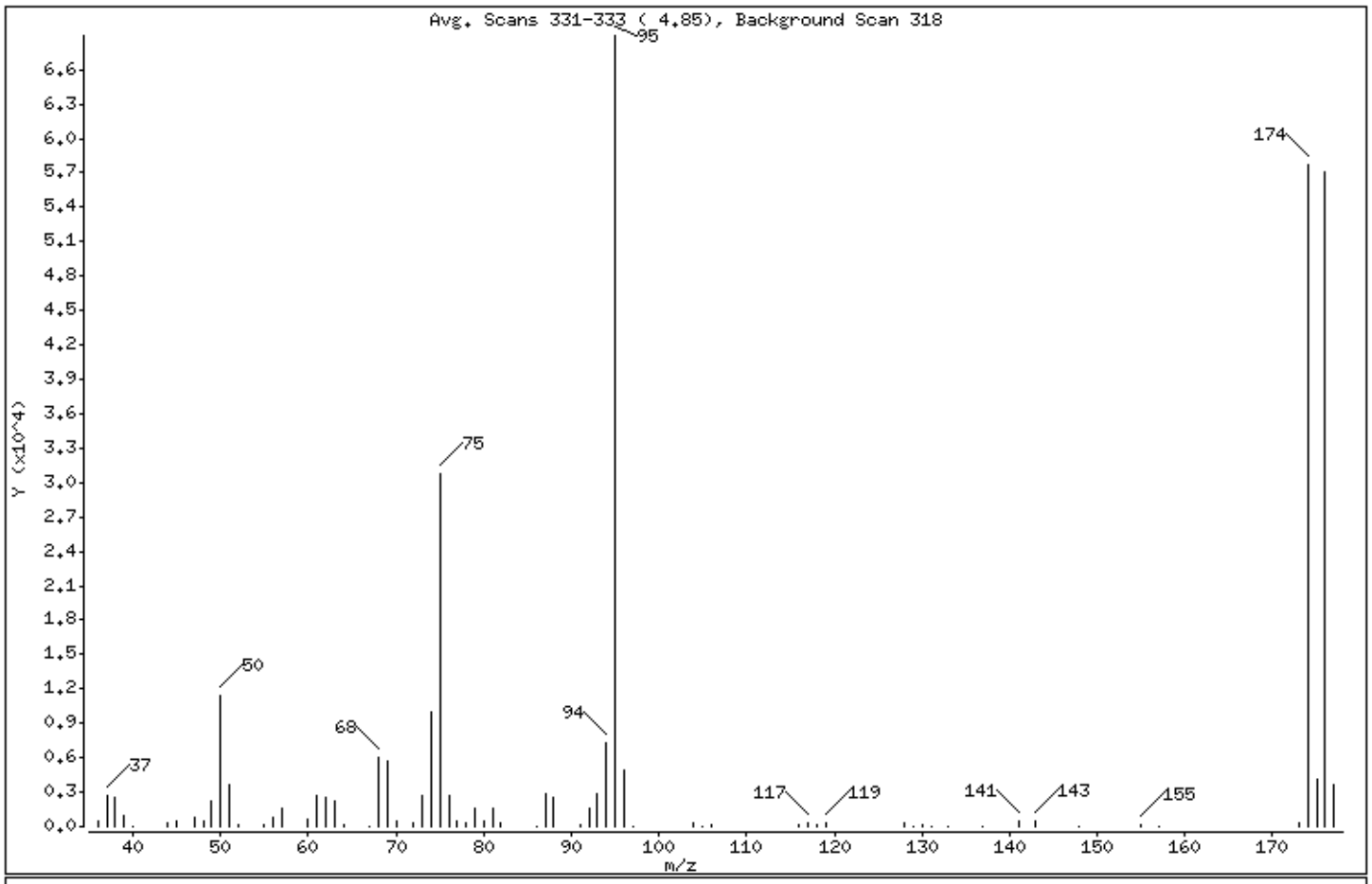
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.48
75	30.00 - 60.00% of mass 95	44.65
96	5.00 - 9.00% of mass 95	7.22
173	Less than 2.00% of mass 174	0.51 (0.61)
174	50.00 - 100.00% of mass 95	83.73
175	5.00 - 9.00% of mass 174	5.92 (7.07)
176	95.00 - 101.00% of mass 174	82.66 (98.72)
177	5.00 - 9.00% of mass 176	5.37 (6.49)

Date : 04-NOV-2019 14:18

Client ID: AUG02-19 Instrument: HP09915.i

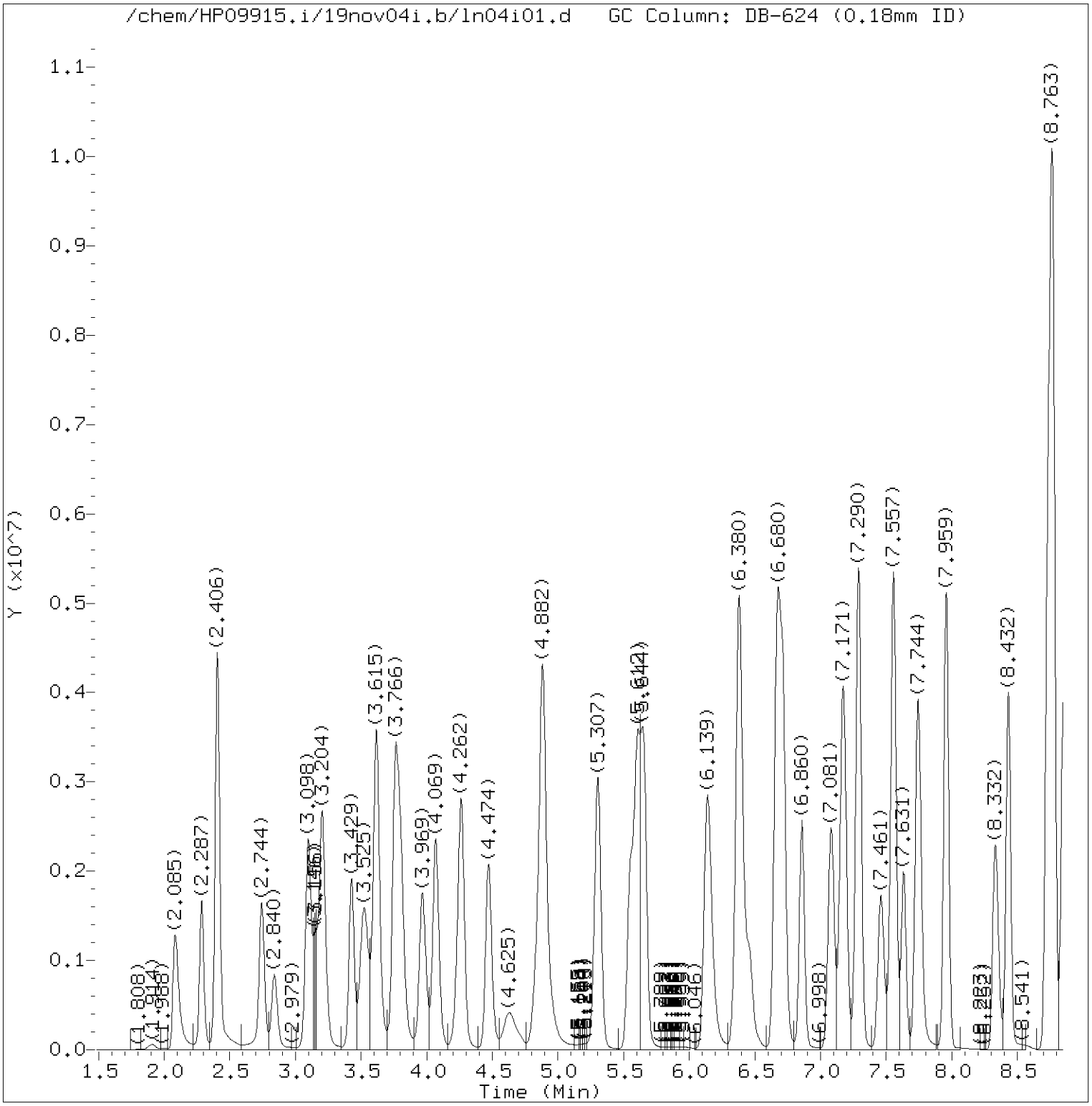
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: ln04t06.d
Spectrum: Avg. Scans 331-333 (4.85), Background Scan 318
Location of Maximum: 95.00
Number of points: 69

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	529	62.00	2498	86.00	55	129.00	53
37.00	2736	63.00	2218	87.00	2840	130.00	112
38.00	2557	64.00	150	88.00	2593	131.00	53
39.00	971	67.00	71	91.00	144	133.00	52
40.00	22	68.00	6076	92.00	1588	137.00	53
44.00	270	69.00	5647	93.00	2845	141.00	538
45.00	457	70.00	476	94.00	7275	143.00	484
47.00	784	72.00	322	95.00	68968	148.00	77
48.00	424	73.00	2656	96.00	4977	155.00	162
49.00	2292	74.00	10024	97.00	62	157.00	63
50.00	11364	75.00	30792	104.00	284	173.00	350
51.00	3586	76.00	2712	105.00	50	174.00	57744
52.00	134	77.00	405	106.00	233	175.00	4082
55.00	217	78.00	267	116.00	189	176.00	57008
56.00	871	79.00	1601	117.00	348	177.00	3701
57.00	1629	80.00	440	118.00	231		
60.00	555	81.00	1543	119.00	348		
61.00	2700	82.00	307	128.00	239		



Total Ion Chromatogram (TIC)

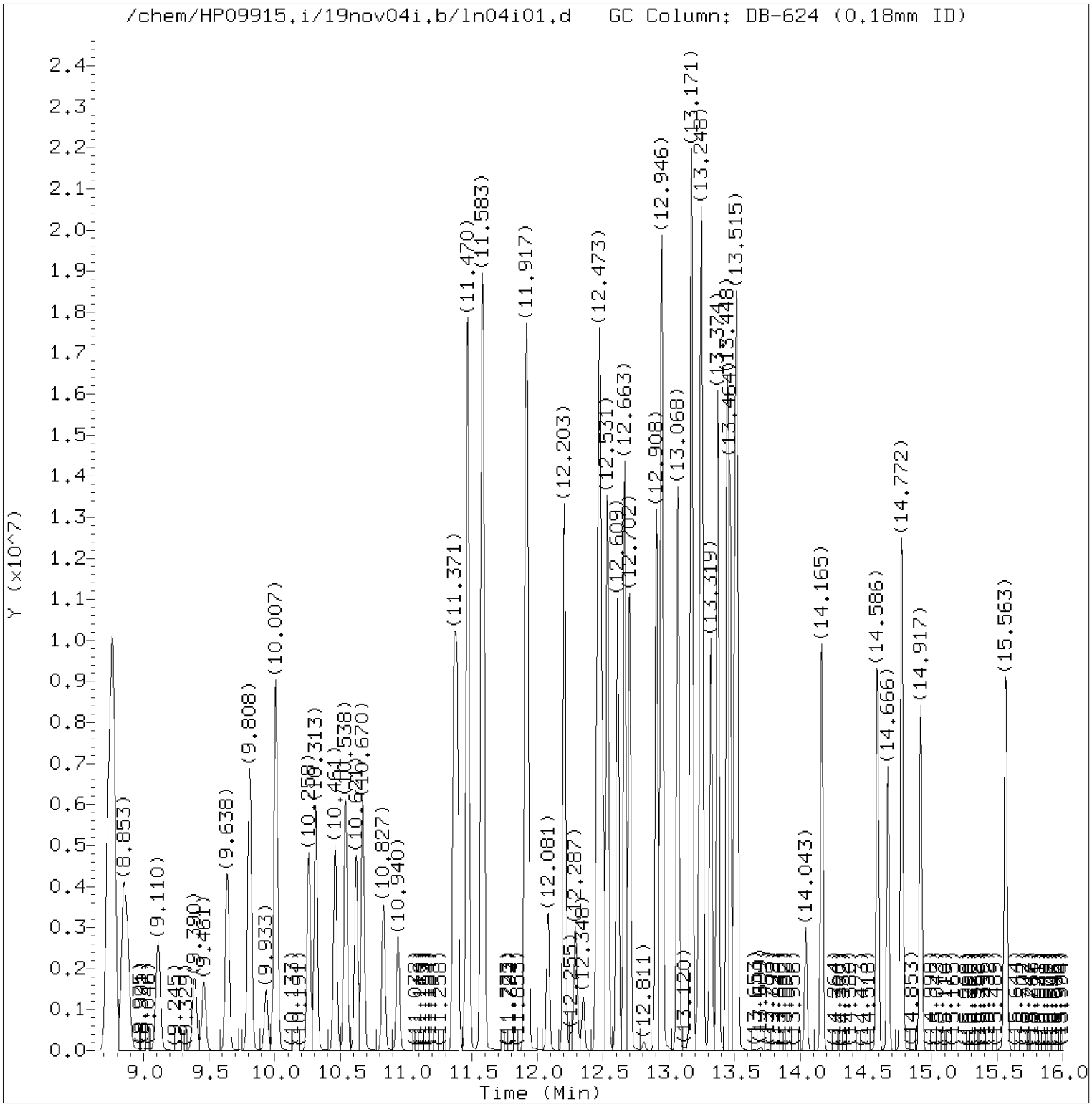
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.085	85	2719746M	347.943
4) Chloromethane	(2)	2.287	50	2403581	319.051
5) 1,3-Butadiene	(2)	2.406	39	1785787M	285.486
6) Vinyl Chloride	(2)	2.406	62	2412855	320.904
8) Bromomethane	(2)	2.744	94	1638575	304.015
9) Chloroethane	(2)	2.837	64	1253478	303.356
12) Trichlorofluoromethane	(2)	3.152	101	2661050	328.734
11) n-Pentane	(2)	3.204	43	2816823	294.455
14) Ethyl ether	(2)	3.429	59	1721693	329.146
15) Freon 123a	(2)	3.525	67	1991616	305.852
16) Acrolein	(1)	3.615	56	5765354	3020.583
17) 1,1-Dichloroethene	(2)	3.760	96	1489890	313.570
17) 1,1-Dichloroethene	(2)	3.757	63	721205	302.767
19) Freon 113	(2)	3.792	101	1732433	319.583
18) Acetone	(1)	3.802	58	531845	621.534
22) Methyl Iodide	(2)	3.966	142	3047145	309.483
21) 2-Propanol	(1)	3.995	45	936919	1523.065
23) Carbon Disulfide	(2)	4.069	76	5676465	317.027
27) Methyl Acetate	(2)	4.239	43	1941315	317.230
25) Allyl Chloride	(2)	4.265	41	2748698	322.482
28) Methylene Chloride	(2)	4.474	84	1745840	308.716
29)*t-Butyl alcohol-d10	(1)	4.503	65	254406M	250.000
30) t-Butyl alcohol	(1)	4.638	59	1641037	1532.140
31) Acrylonitrile	(2)	4.827	53	1039800	315.820
32) trans-1,2-Dichloroethene	(2)	4.885	96	1713357	311.714
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	5505439	305.143
34) n-Hexane	(2)	5.307	57	2863189M	334.811
36) 1,1-Dichloroethane	(2)	5.548	63	3007196	313.618
38) di-Isopropyl ether	(2)	5.609	45	5739955	310.377
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	2776921	322.788
40) Ethyl t-butyl ether	(2)	6.139	59	5425034	302.275
43) 1,2-Dichloroethene (Total)	(2)		96	3646040	624.977
44) 2-Butanone	(2)	6.364	43	2642793	625.317
42) cis-1,2-Dichloroethene	(2)	6.380	96	1932683	313.263
45) 2,2-Dichloropropane	(2)	6.397	77	2377411	318.945
47) Propionitrile	(1)	6.458	54	2126389	1593.336
48) Methacrylonitrile	(2)	6.670	67	2858148	804.768
49) Bromochloromethane	(2)	6.708	128	1075154	328.655

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.718	71	758236	628.991
51) Chloroform	(2)	6.860	83	2916299	317.988
52)$Dibromofluoromethane	(2)	7.075	113	276322	50.424
52)$Dibromofluoromethane	(2)	7.075	111	279197	49.969
53) 1,1,1-Trichloroethane	(2)	7.081	97	2560601	327.130
54) Cyclohexane	(2)	7.171	56	3429211	327.611
54) Cyclohexane	(2)	7.171	84	2984908	328.282
54) Cyclohexane	(2)	7.171	69	1068201	329.937
56) Carbon Tetrachloride	(2)	7.287	117	2252864	339.350
55) 1,1-Dichloropropene	(2)	7.294	75	2434619	321.125
58) Isobutyl Alcohol	(1)	7.461	41	1382486	3835.573
57)$1,2-Dichloroethane-d4	(2)	7.528	102	68480	49.033
57)$1,2-Dichloroethane-d4	(2)	7.532	65	307306	49.375
57)$1,2-Dichloroethane-d4	(2)	7.528	104	44002	49.326
60) Benzene	(2)	7.557	78	7094466	311.169
61) 1,2-Dichloroethane	(2)	7.634	62	2222342	303.049
61) 1,2-Dichloroethane	(2)	7.634	98	228988	315.535
65) t-Amyl methyl ether	(2)	7.744	73	5421278	300.945
67) n-Heptane	(2)	7.959	43	2592531MA	324.518
66)*Fluorobenzene	(2)	7.959	96	1120873	50.000
69) n-Butanol	(1)	8.332	56	2465385M	7947.068
71) Trichloroethene	(2)	8.432	95	1841720	320.821
72) Methylcyclohexane	(2)	8.734	83	3568410	335.054
72) Methylcyclohexane	(2)	8.734	98	1632993	338.844
73) 1,2-Dichloropropane	(2)	8.769	63	1825943	315.397
76) Methyl Methacrylate	(2)	8.850	69	1904896A	340.256
75) 1,4-Dioxane	(1)	8.856	88	338379M	3968.421
74) Dibromomethane	(2)	8.879	93	1210939	323.274
78) Bromodichloromethane	(2)	9.113	83	2314651	344.351
79) 2-Nitropropane	(2)	9.390	41	1438925	706.755
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	926413	372.584
81) cis-1,3-Dichloropropene	(2)	9.638	75	3074664	344.402
82) 4-Methyl-2-pentanone	(2)	9.808	43	5422938	607.899
83)$Toluene-d8	(3)	9.933	98	1156351	49.563
83)$Toluene-d8	(3)	9.933	100	751534	49.726
88) Toluene	(3)	10.007	92	4532879	309.894
90) 1,3-Dichloropropene (total)	(3)		100	5974636	693.659
89) trans-1,3-Dichloropropene	(3)	10.258	75	2899972	349.257

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	10.313	69	3356305	332.603
92) 1,1,2-Trichloroethane	(3)	10.461	97	1768710	318.935
93) Tetrachloroethene	(3)	10.541	166	1990565	321.327
94) 1,3-Dichloropropane	(3)	10.621	76	3006585	317.532
96) 2-Hexanone	(3)	10.670	43	3998423	593.616
97) Dibromochloromethane	(3)	10.827	129	2037523	358.670
99) 1,2-Dibromoethane	(3)	10.940	107	1987783	330.088
100)*Chlorobenzene-d5	(3)	11.361	117	891668	50.000
101) 1-Chlorohexane	(3)	11.364	91	2458057	312.814
102) Chlorobenzene	(3)	11.387	112	5140609	310.783
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	1789998	328.446
104) Ethylbenzene	(3)	11.470	91	8606821	307.854
106) m+p-Xylene	(3)	11.583	106	6690837	608.359
108) Xylene (Total)	(3)		106	9979970	911.130
107) o-Xylene	(3)	11.908	106	3289133	302.771
109) Styrene	(3)	11.924	104	5647939	314.619
110) Bromoform	(3)	12.081	173	1534520	361.500
111) Isopropylbenzene	(3)	12.203	105	8466138	310.714
112) Cyclohexanone	(1)	12.287	55	1351186	4046.080
114)$4-Bromofluorobenzene	(3)	12.348	95	440049	49.810
114)$4-Bromofluorobenzene	(3)	12.348	174	362553	49.502
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	2800639M	310.705
115) Bromobenzene	(4)	12.467	156	2234066	311.517
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	2150976	773.637
117) 1,2,3-Trichloropropane	(4)	12.499	110	866230	313.172
119) n-Propylbenzene	(4)	12.531	91	9654812	308.142
120) 2-Chlorotoluene	(4)	12.609	126	2098494	315.266
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	7238022	317.873
121) 4-Chlorotoluene	(4)	12.702	126	2155793	311.148
124) tert-Butylbenzene	(4)	12.908	134	1524421M	323.717
125) Pentachloroethane	(4)	12.940	167	1461833	360.511
126) 1,2,4-Trimethylbenzene	(4)	12.949	105	7469187	311.236
127) sec-Butylbenzene	(4)	13.068	105	8682126	308.971
129) 1,3-Dichlorobenzene	(4)	13.168	146	3858953	292.822
130) p-Isopropyltoluene	(4)	13.174	119	7289488	299.854
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	477171	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	4013510	293.777
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	7915203	311.364

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

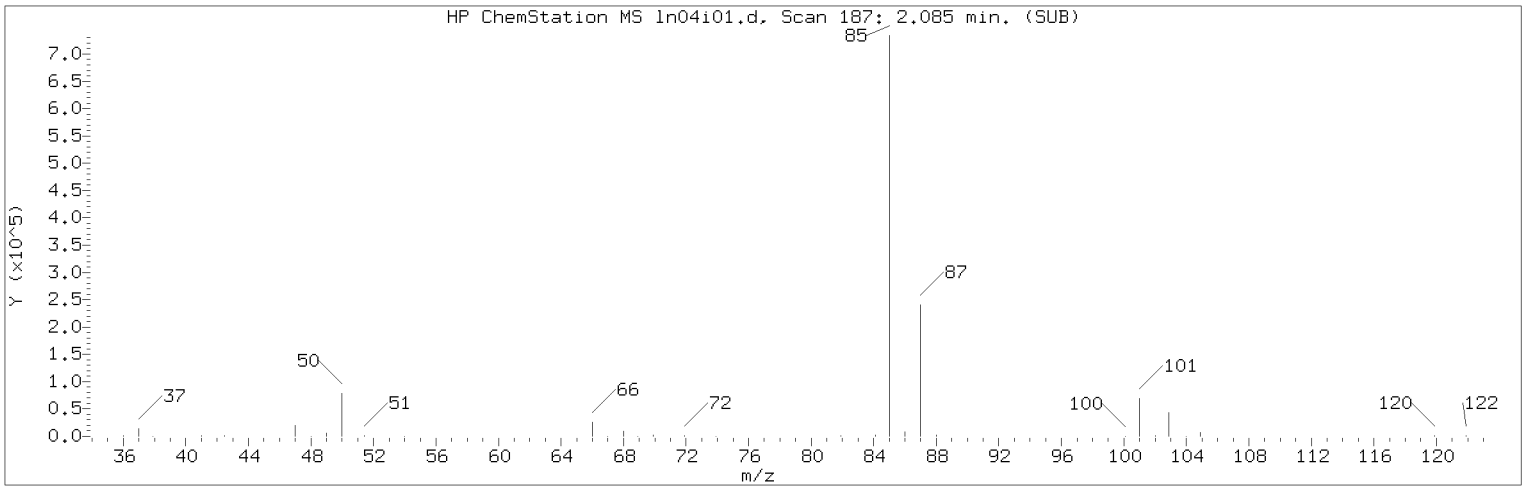
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

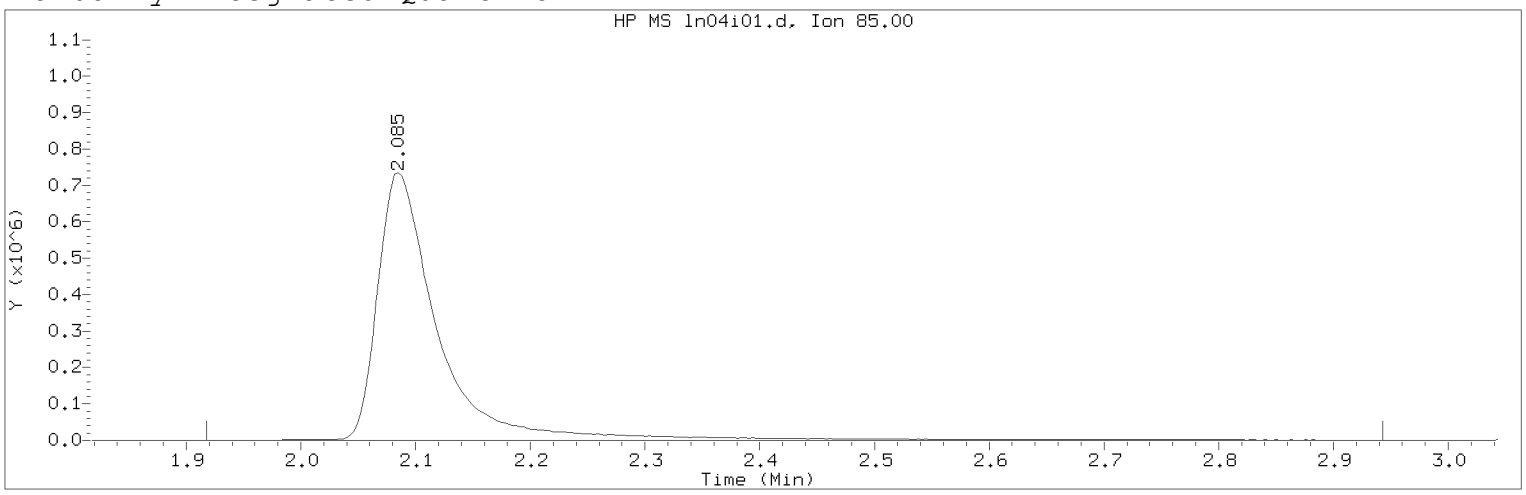
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.319	91	6484944	336.931
136) 1,3-Diethylbenzene	(4)	13.374	119	4897725	309.573
141) Diethylbenzene (total)	(4)		100	13982971	913.975
137) 1,4-Diethylbenzene	(4)	13.444	119	5013123	299.077
139) n-Butylbenzene	(4)	13.467	92	3608595	290.316
138) 1,2-Dichlorobenzene	(4)	13.502	146	3859125	296.761
140) 1,2-Diethylbenzene	(4)	13.518	119	4072123	305.325
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	669008	339.050
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	2855960	285.855
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	2681523	276.030
147) Hexachlorobutadiene	(4)	14.670	225	1157297	252.311
148) Naphthalene	(4)	14.772	128	9186333	294.145
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	2488608	263.270
150) 2-Methylnaphthalene	(4)	15.563	142	4666682	242.655

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

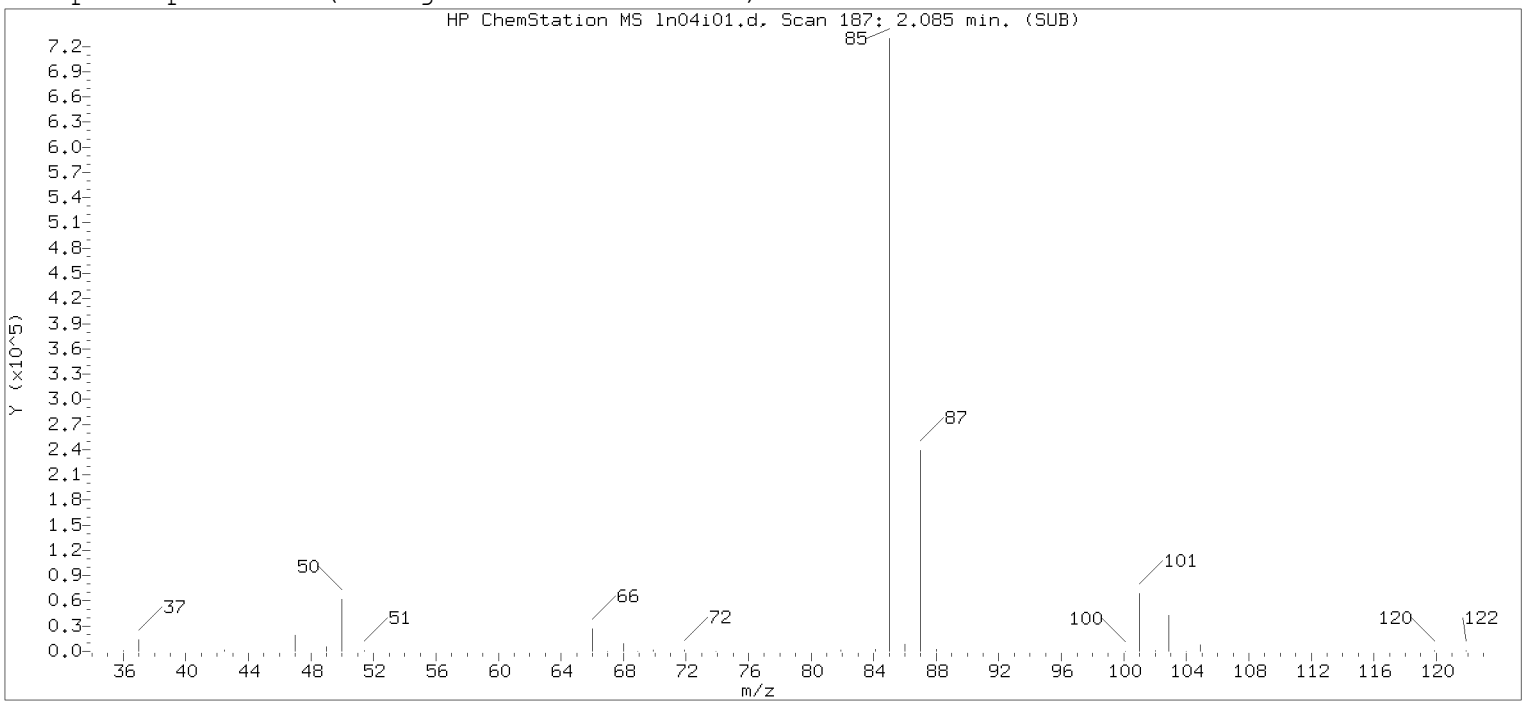
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area (flag) : 2719746M
On-Column Amount (ng) : 347.9426
Integration start scan : 134 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

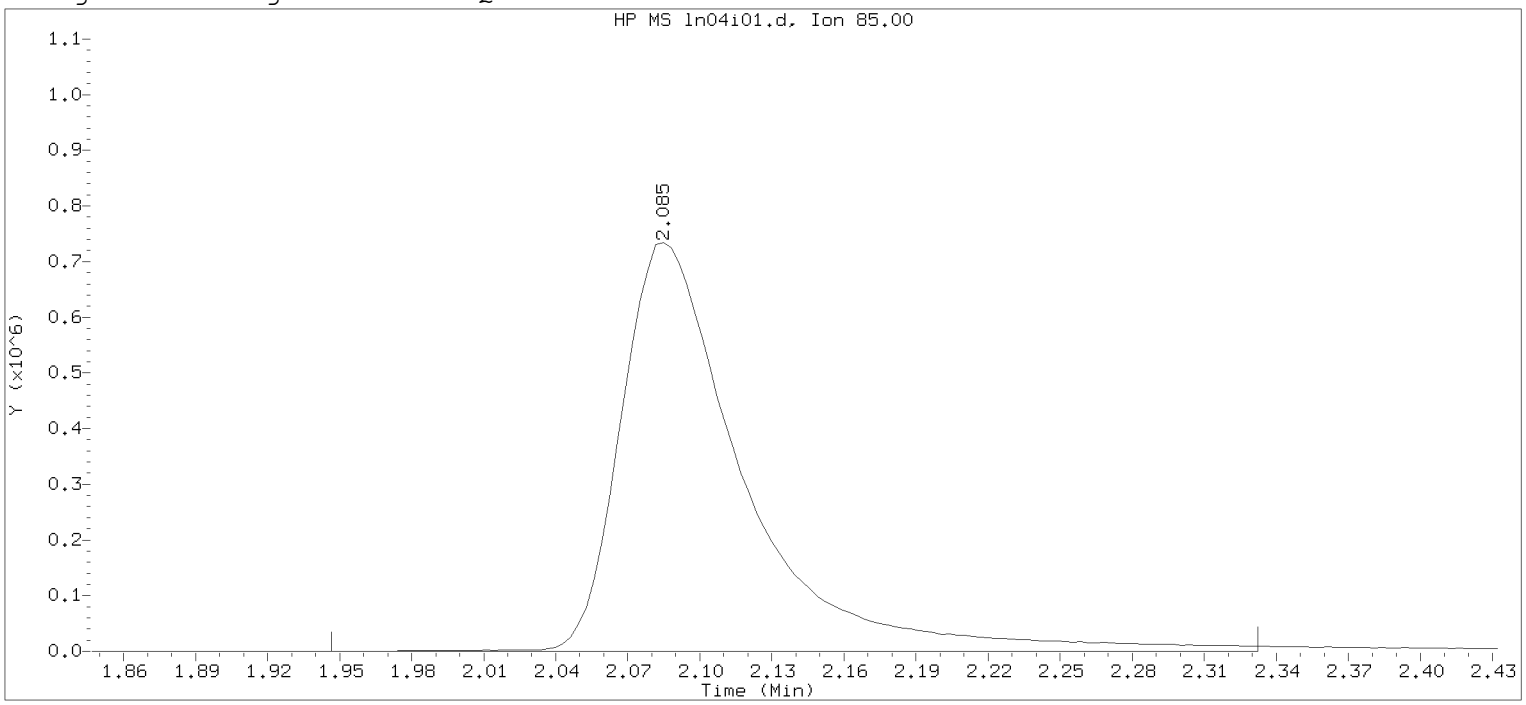
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

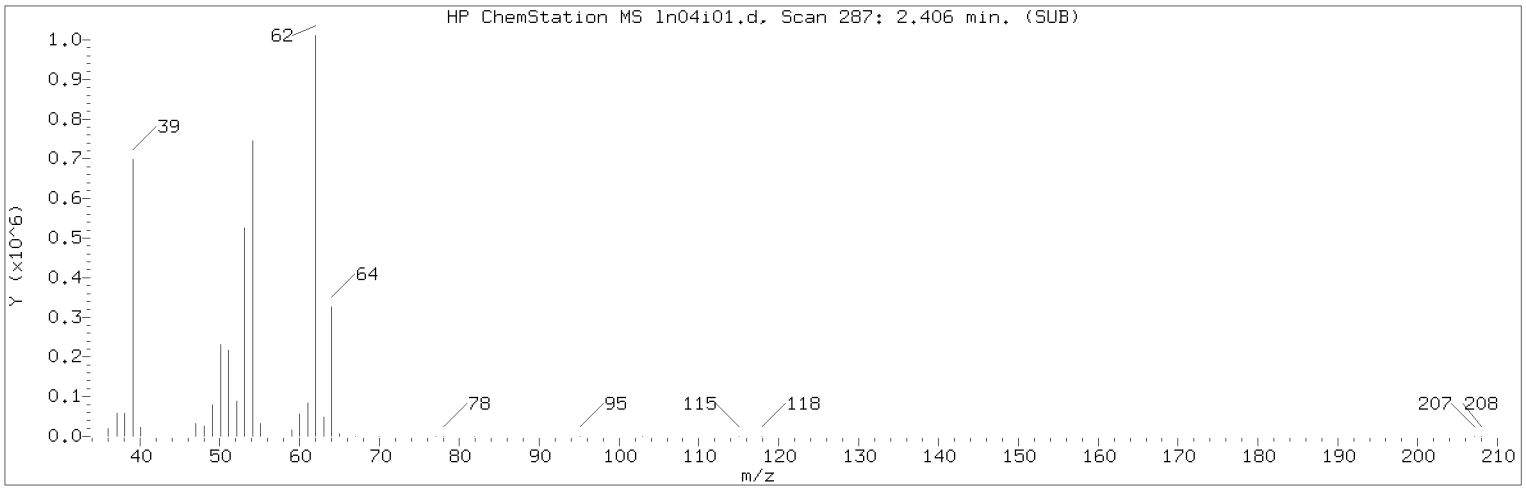
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

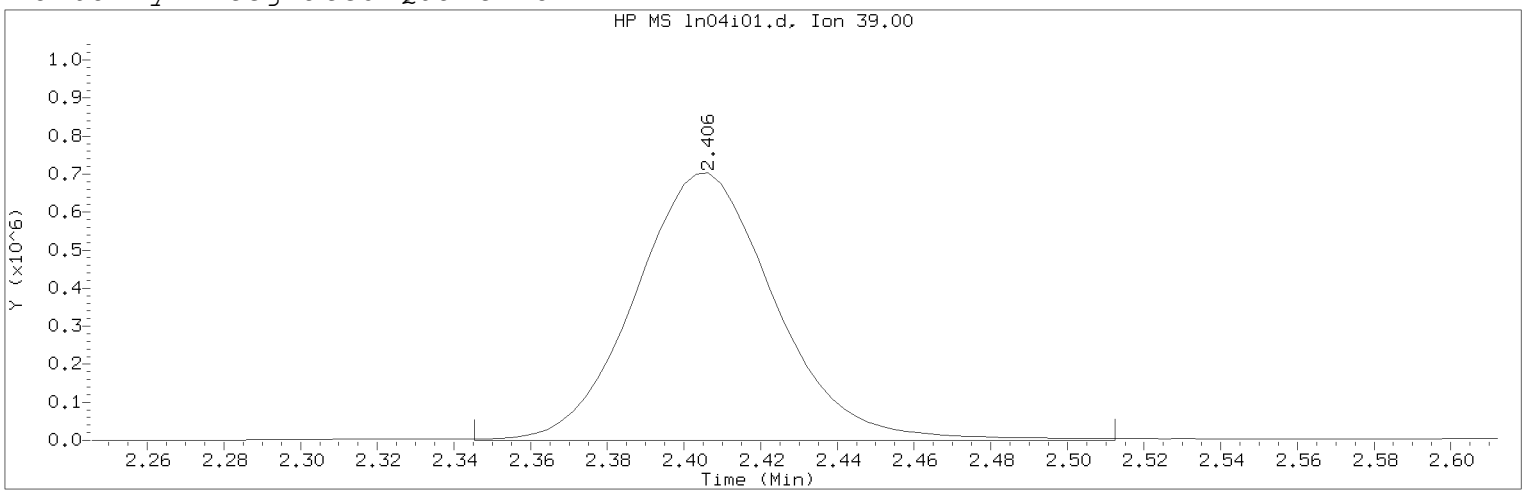
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area : 2624212
On-column Amount (ng) : 308.6520
Integration start scan : 143 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user id: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

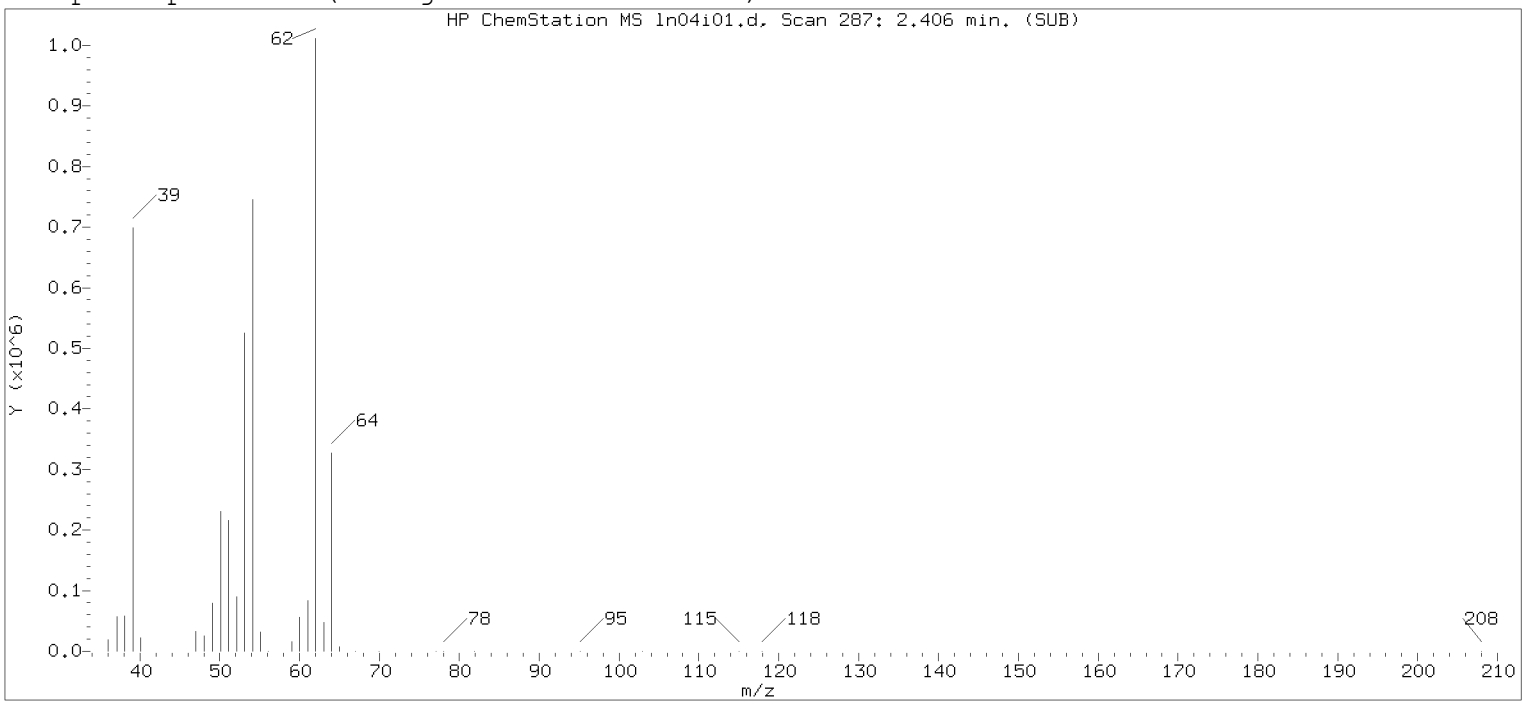
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 1785787M
On-Column Amount (ng) : 285.4858
Integration start scan : 267 Integration stop scan: 319
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

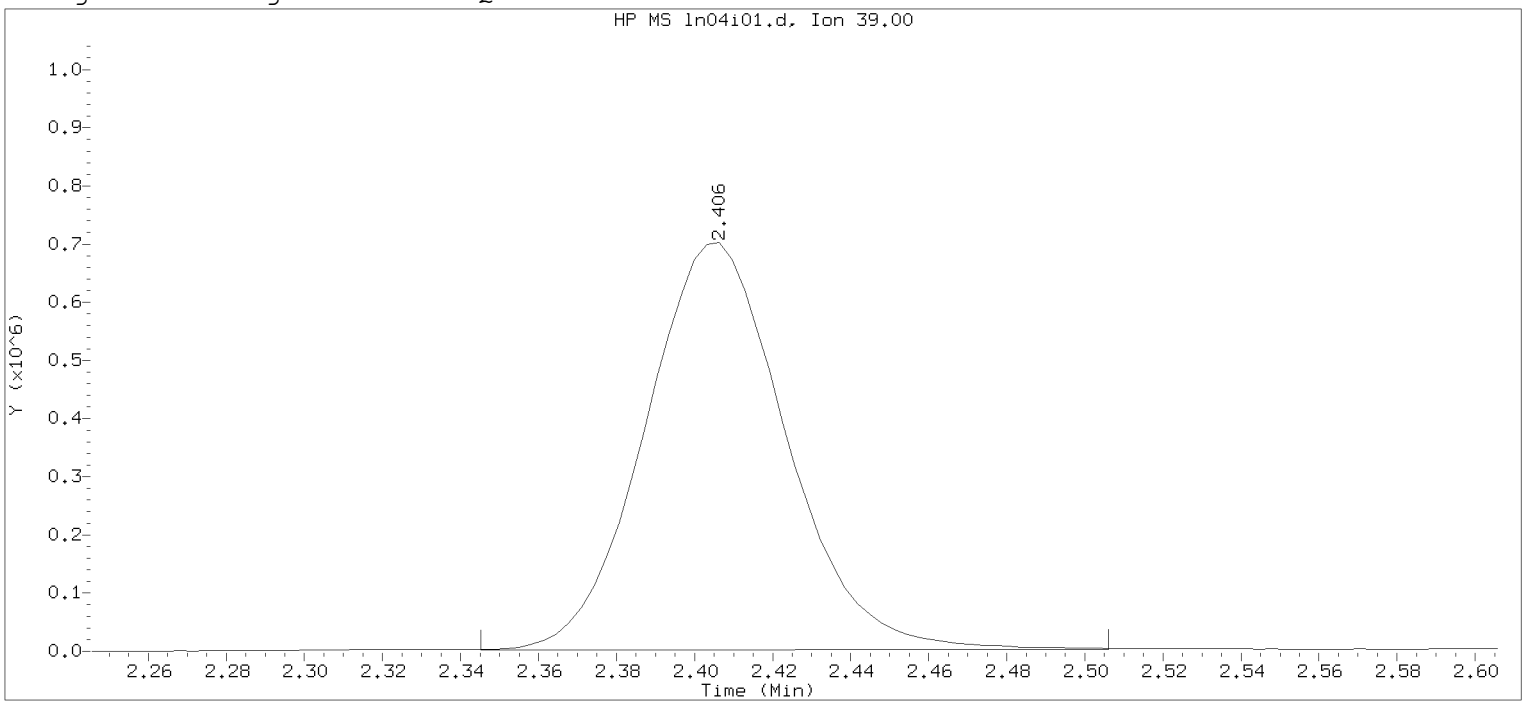
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

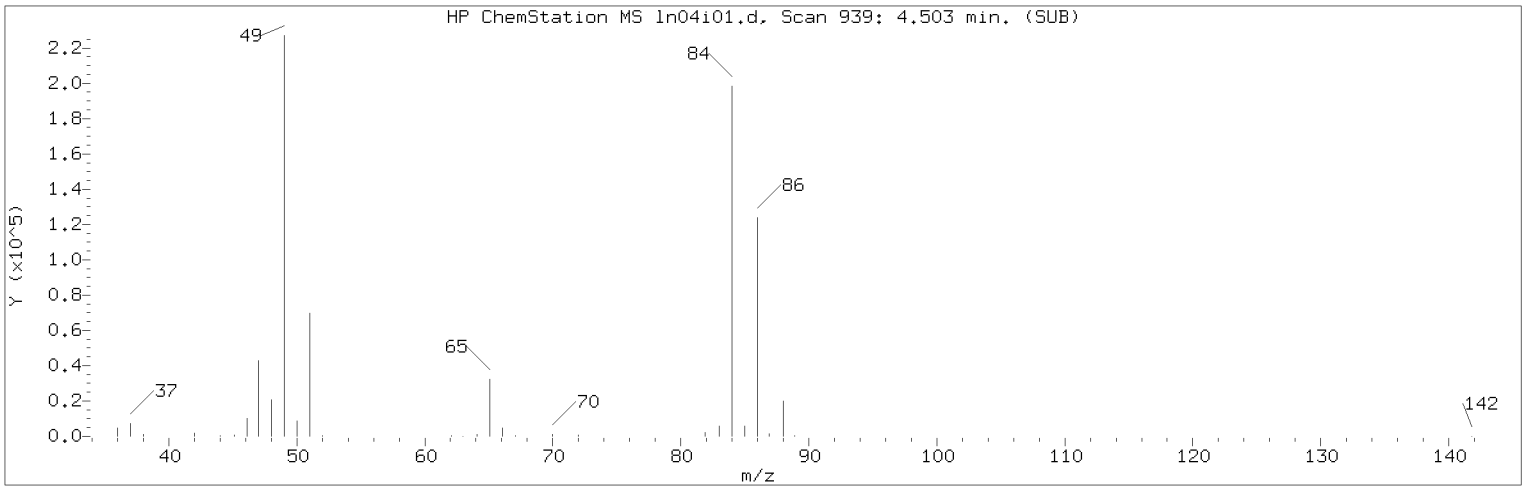
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

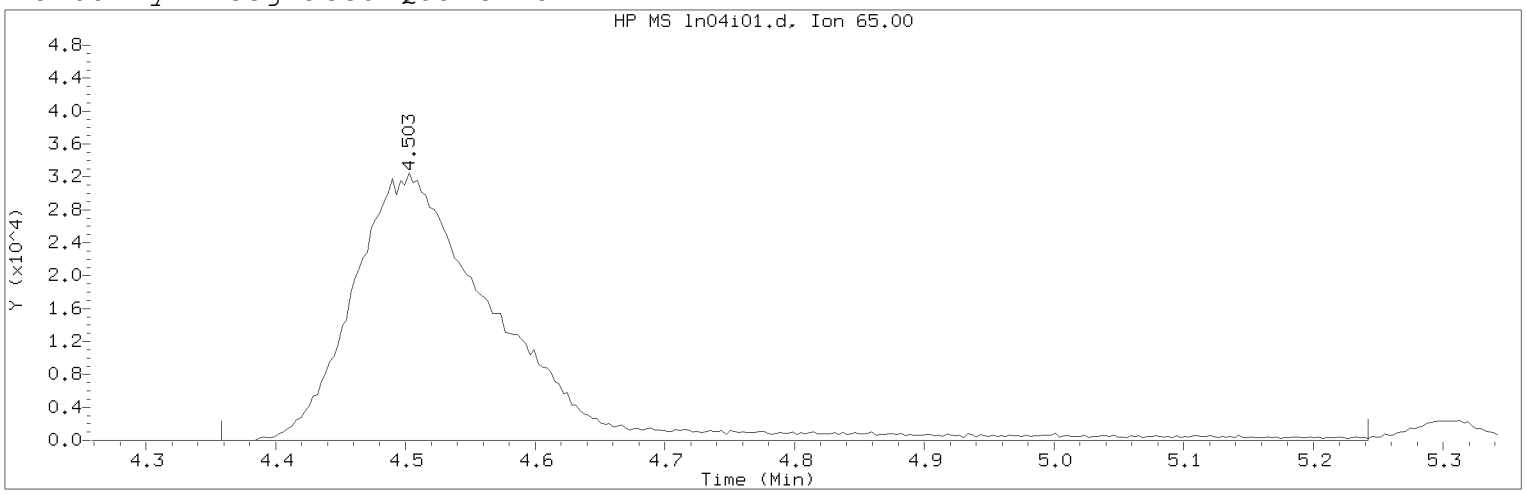
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 1755596
On-column Amount (ng) : 295.0708
Integration start scan : 267 Integration stop scan: 317
Y at integration start : 2196 Y at integration end: 3553

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh0052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

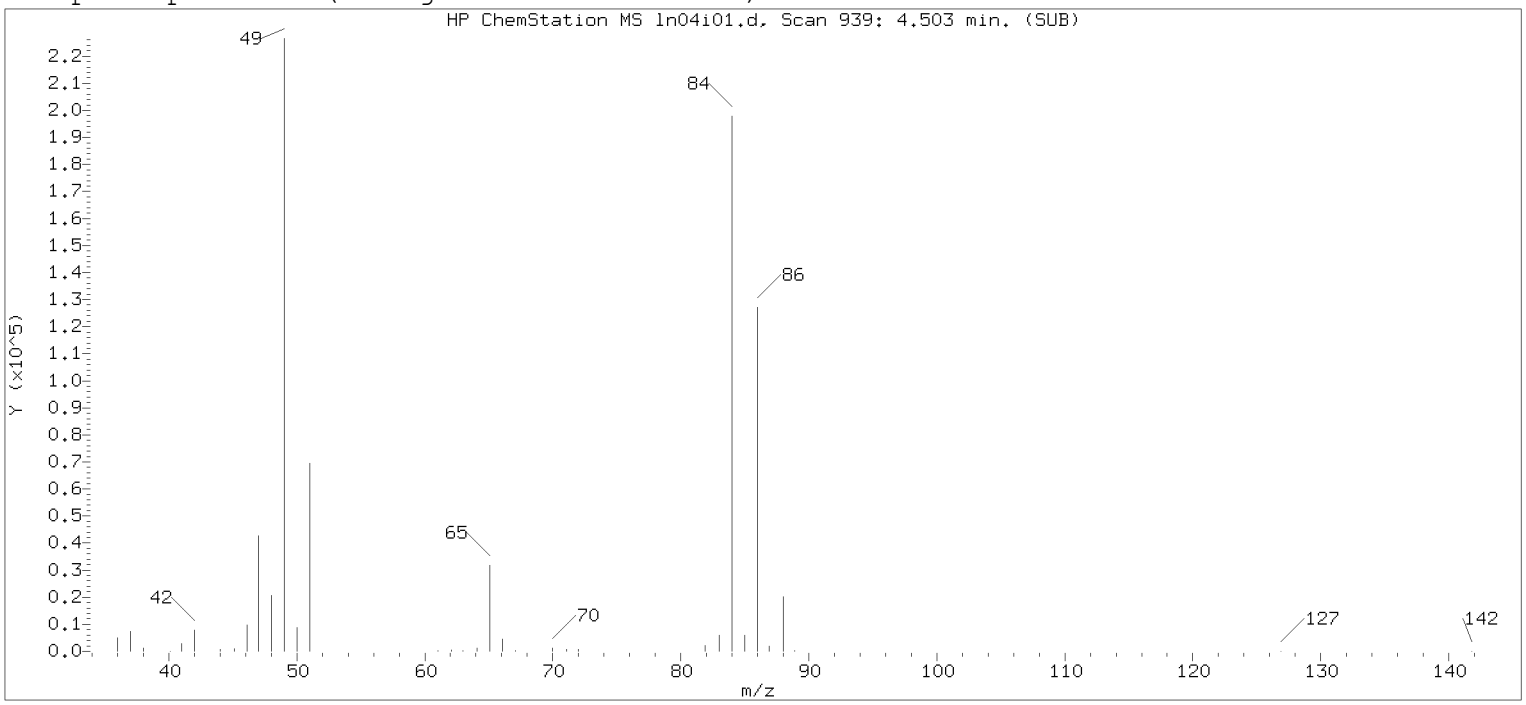
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area (flag) : 254406M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1168
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

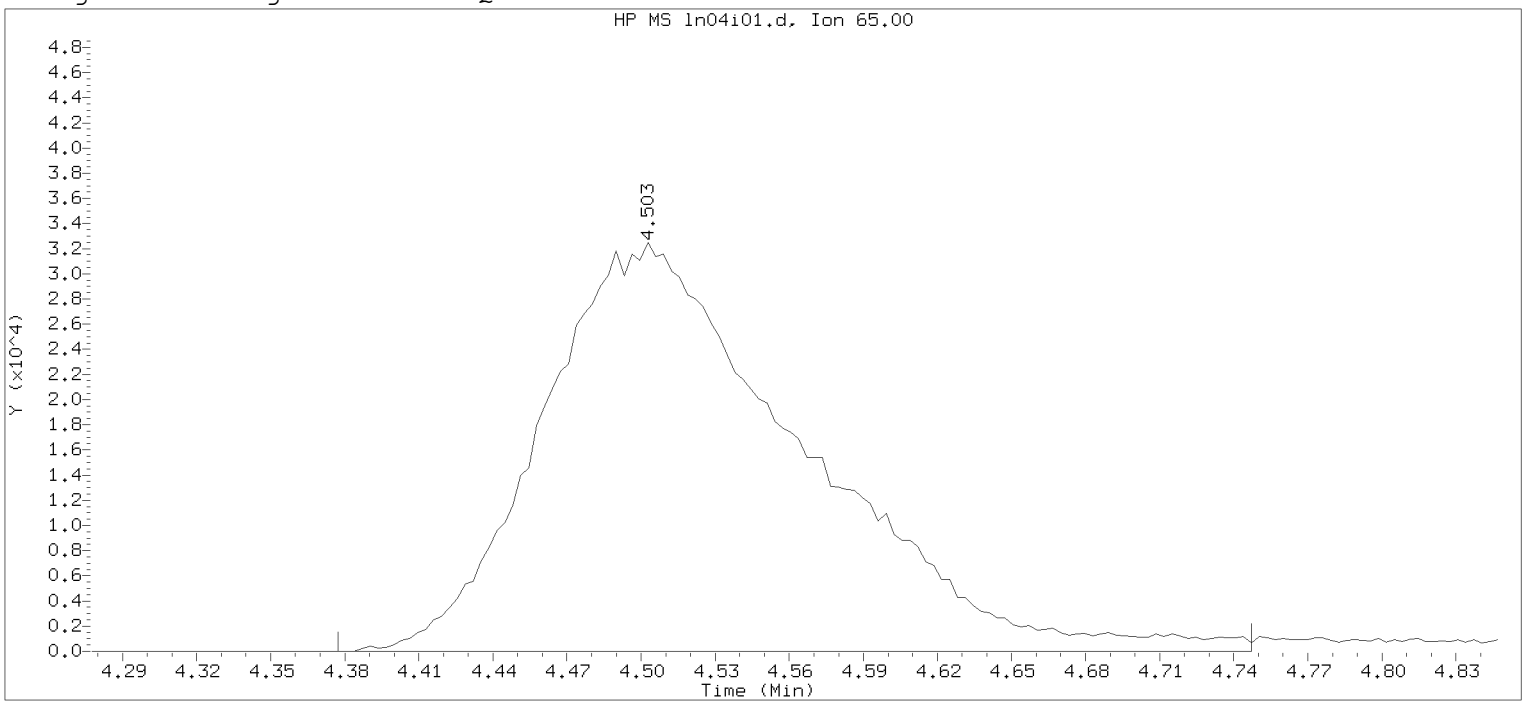
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

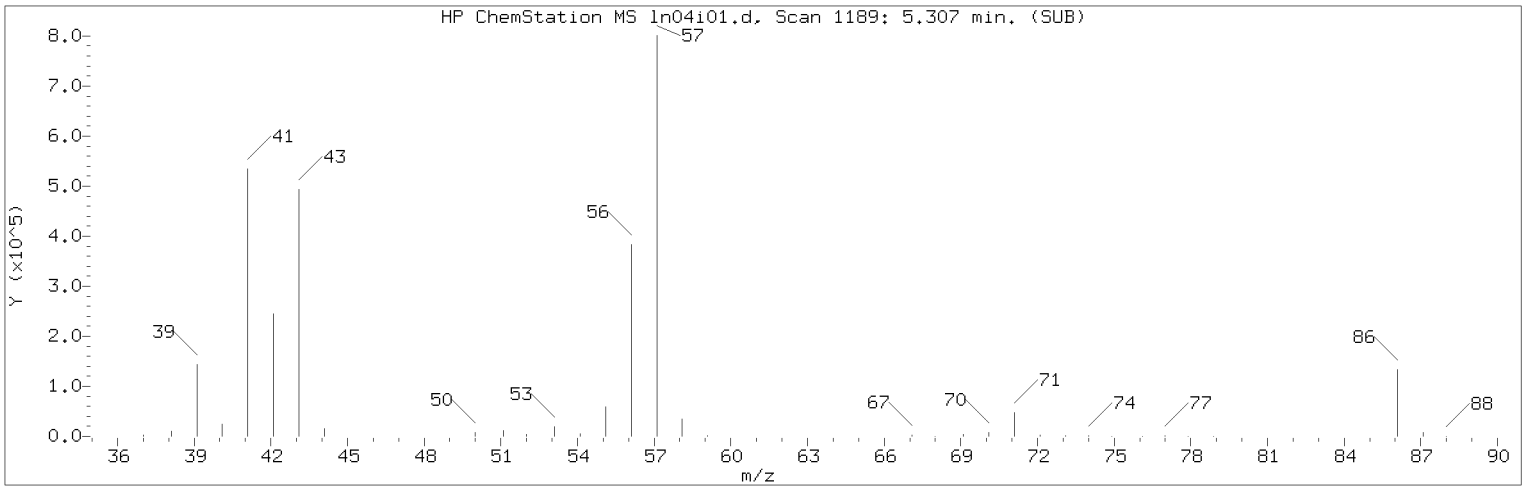
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

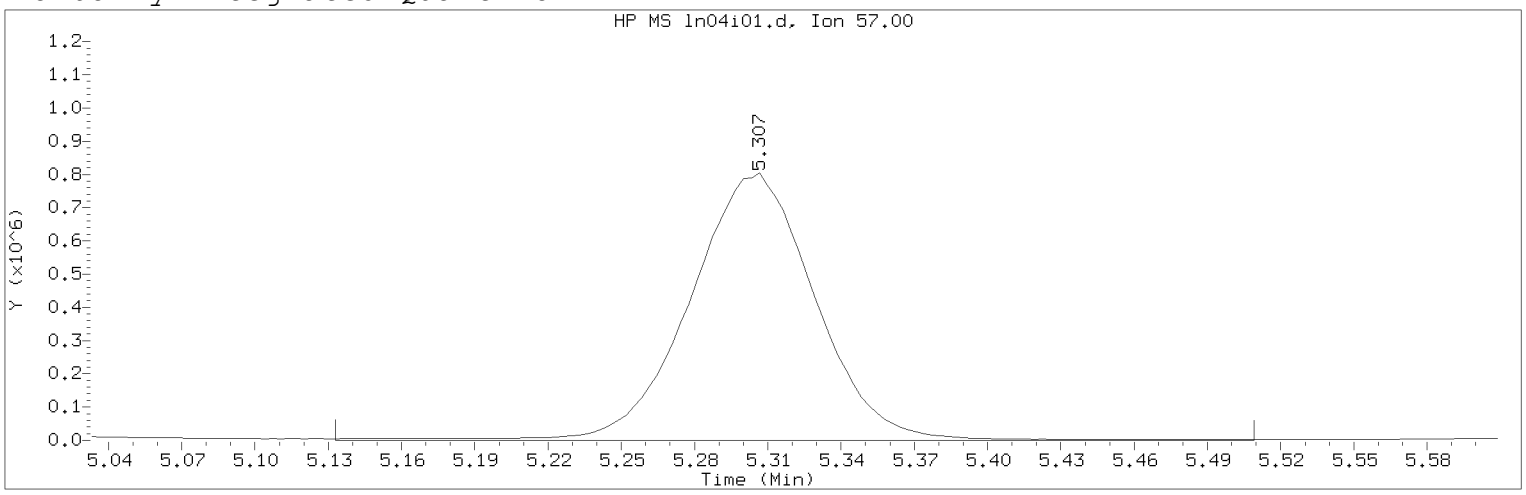
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area : 237264
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user: JKHowe01

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

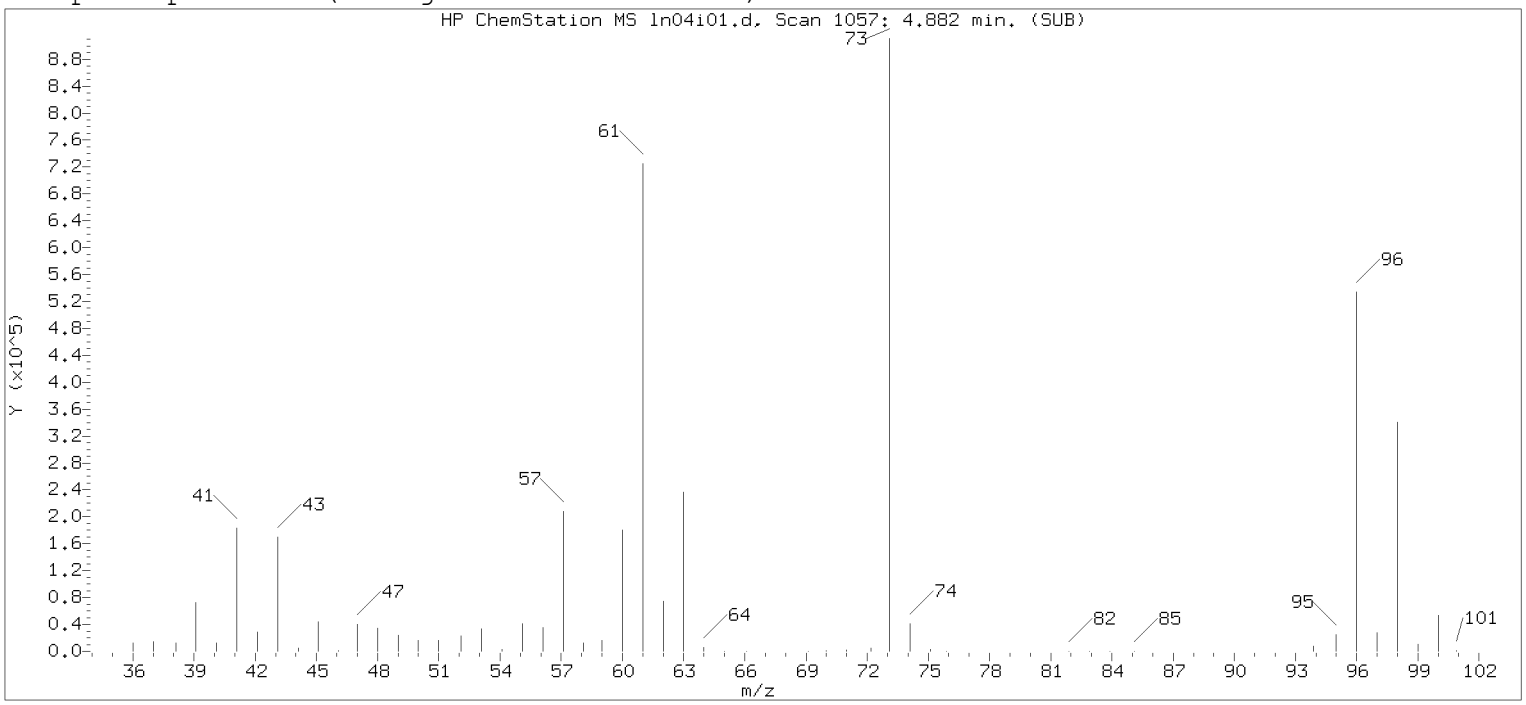
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1189
Retention Time (minutes): 5.307
Quant Ion : 57.00
Area (flag) : 2863189M
On-Column Amount (ng) : 334.8105
Integration start scan : 1134 Integration stop scan: 1251
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

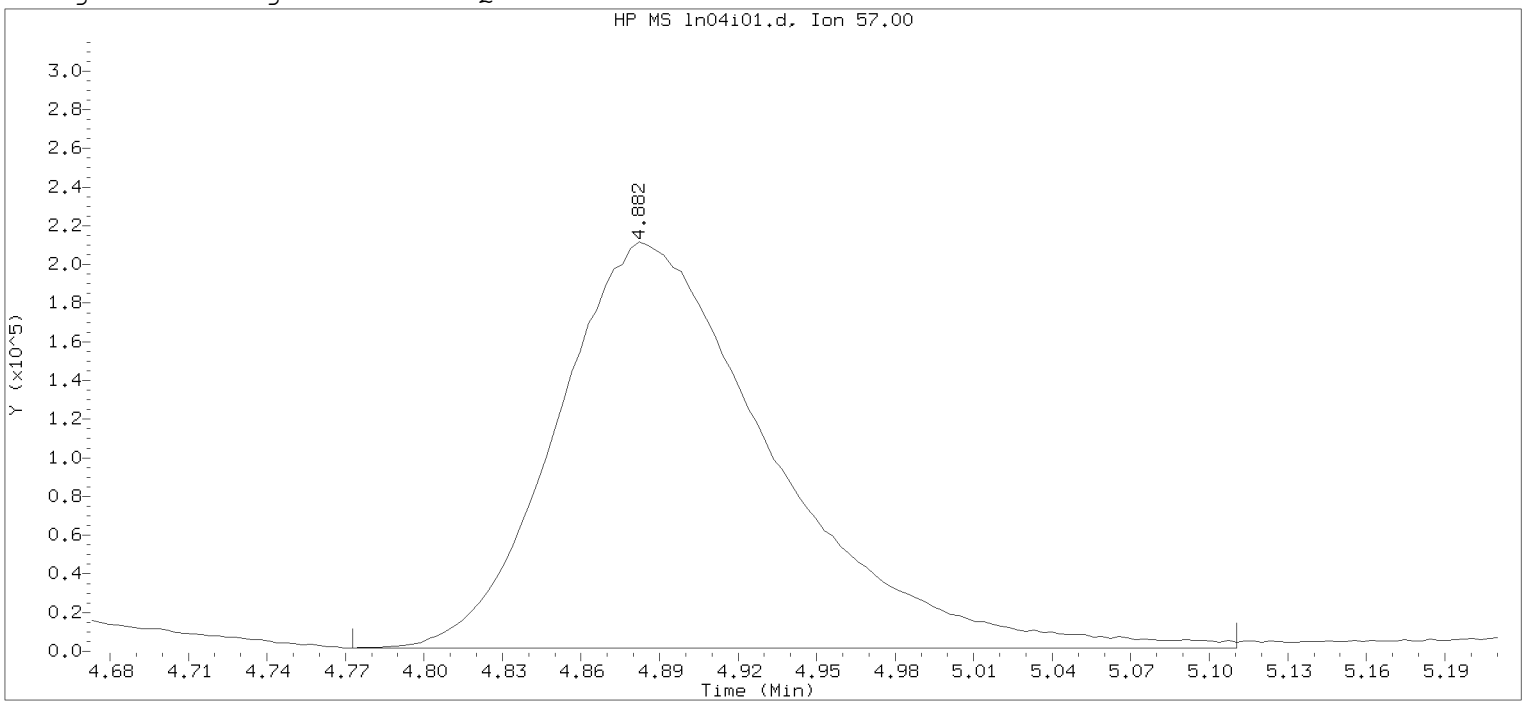
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

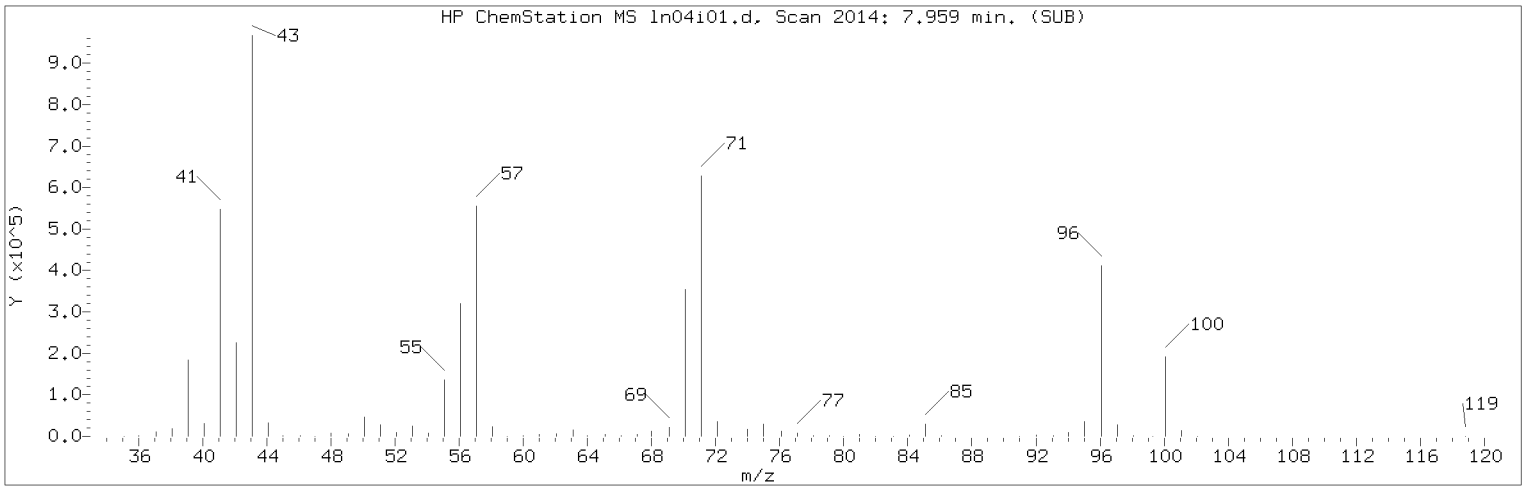
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

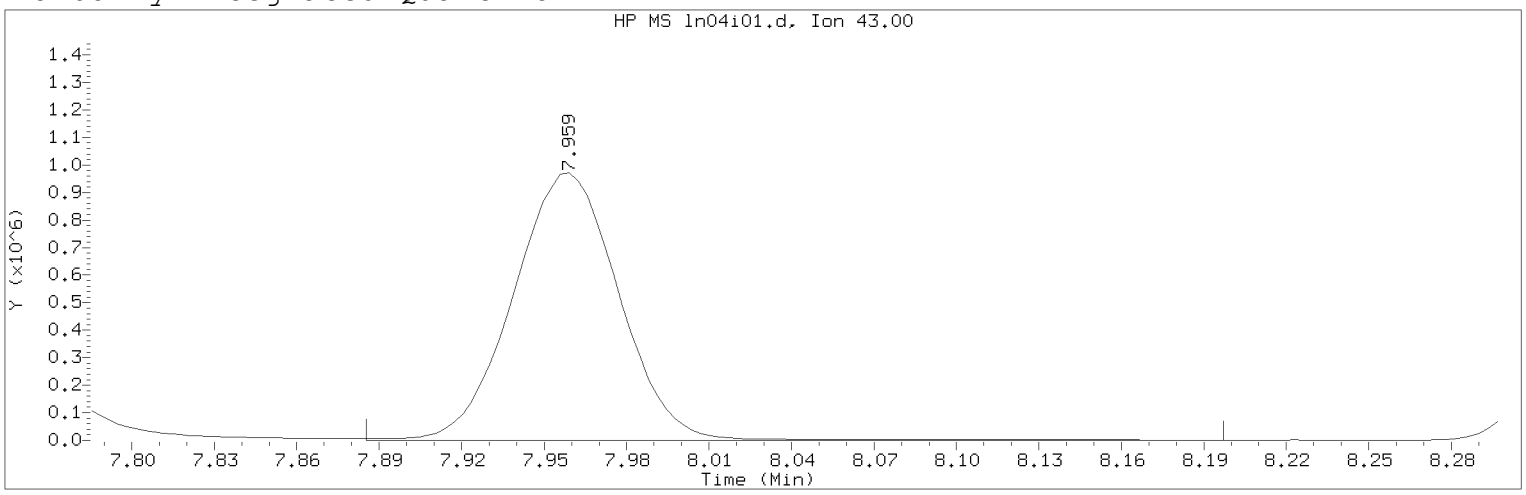
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1057
Retention Time (minutes): 4.882
Quant Ion : 57.00
Area : 1202378
On-column Amount (ng) : 301.4561
Integration start scan : 1022 Integration stop scan: 1127
Y at integration start : 1806 Y at integration end: 1806

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user id: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

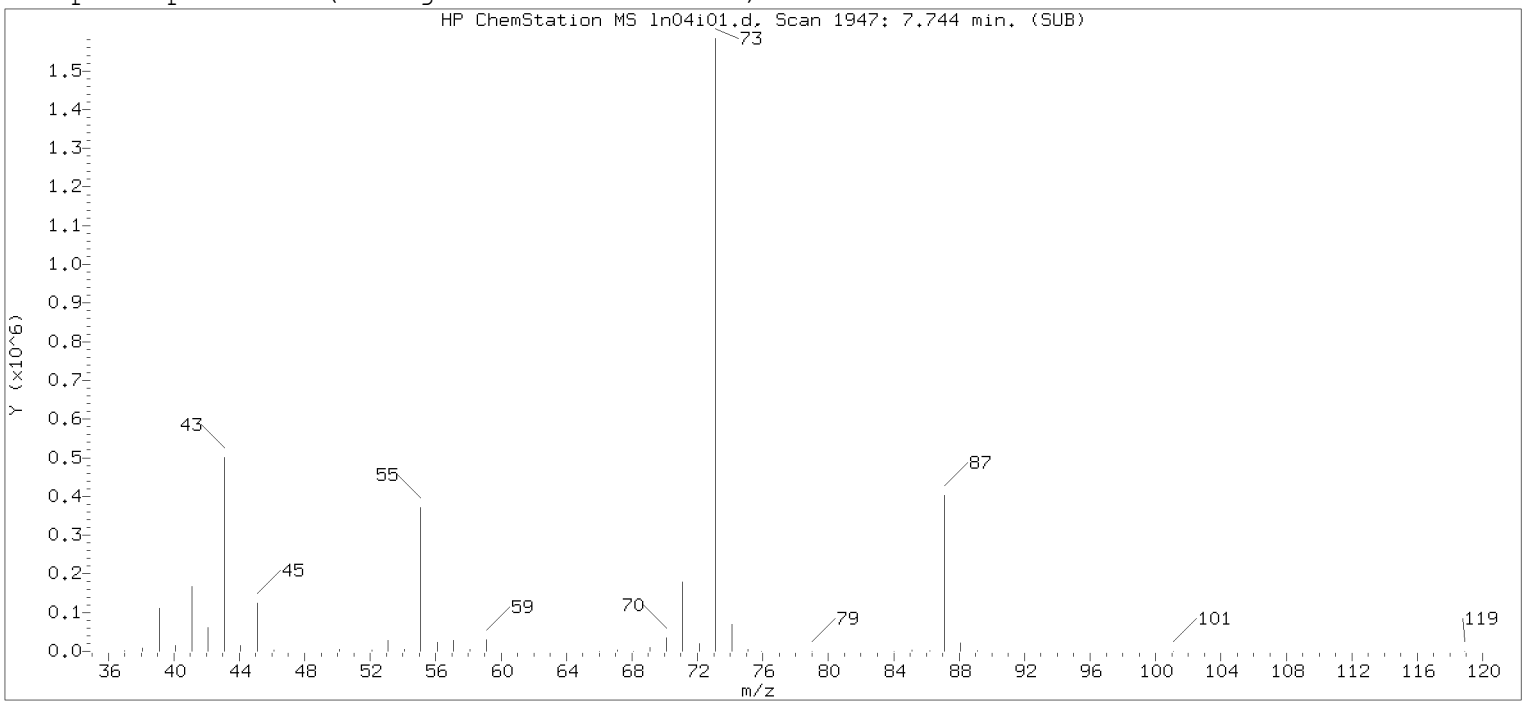
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2014
Retention Time (minutes): 7.959
Quant Ion : 43.00
Area (flag) : 2592531MA
On-Column Amount (ng) : 324.5176
Integration start scan : 1990 Integration stop scan: 2087
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

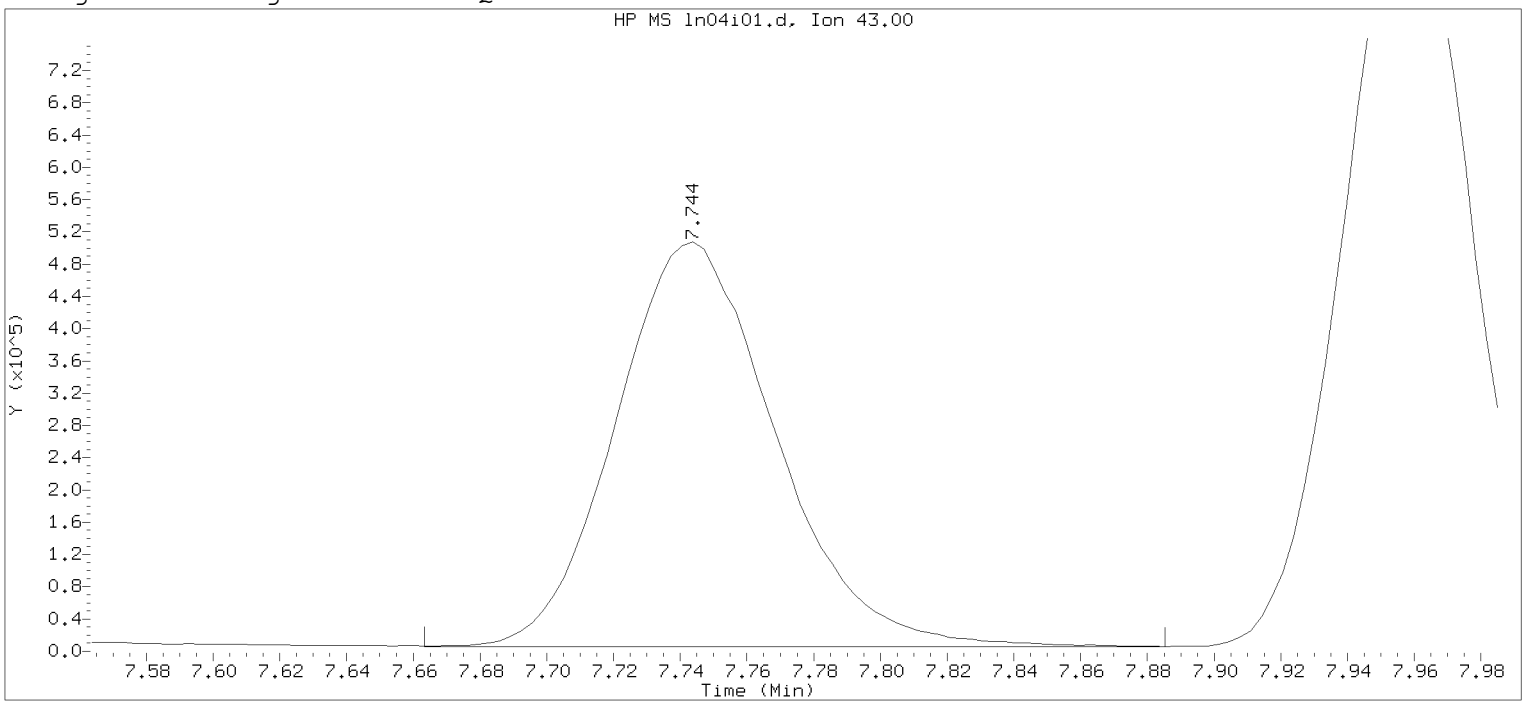
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

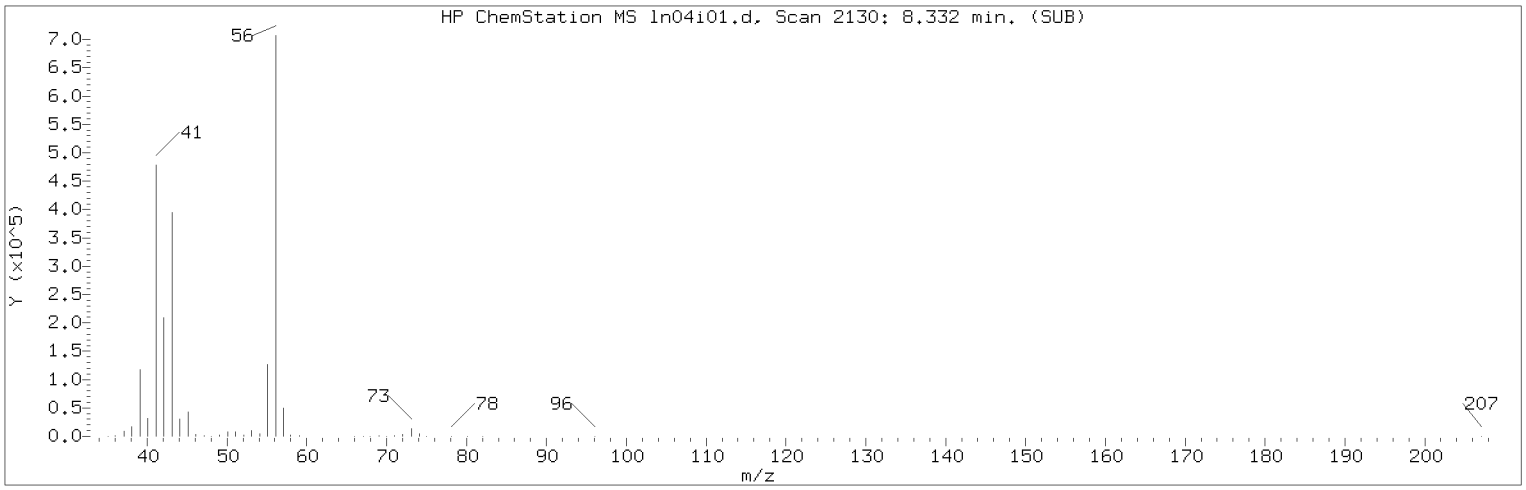
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

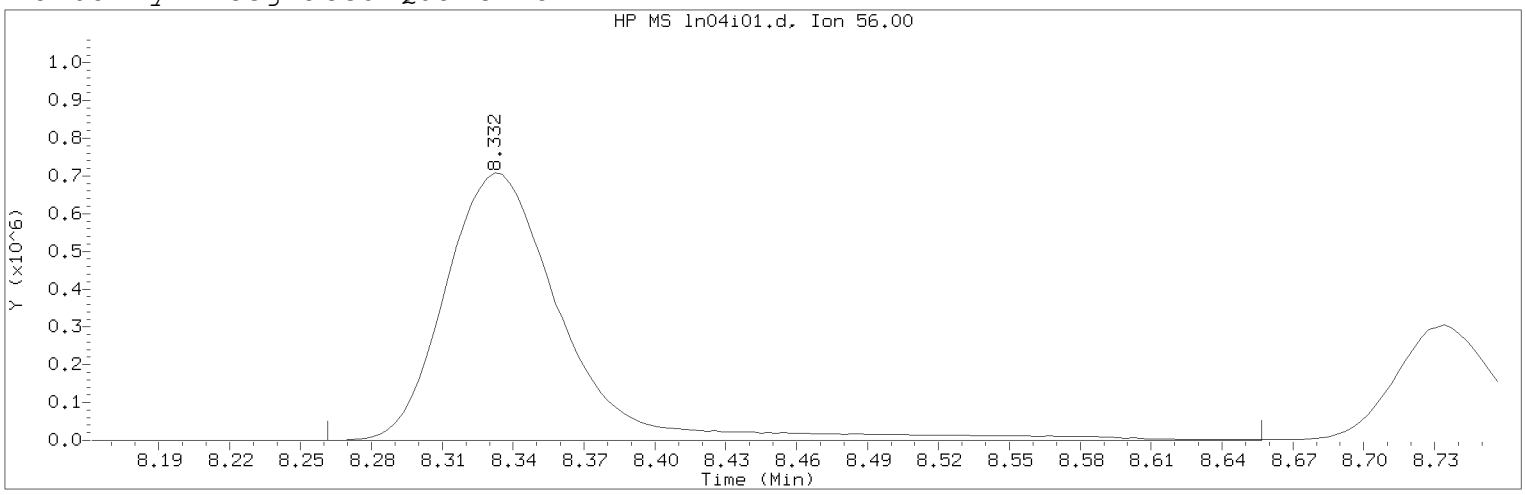
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1947
Retention Time (minutes): 7.744
Quant Ion : 43.00
Area : 1668813
On-column Amount (ng) : 288.4319
Integration start scan : 1921 Integration stop scan: 1990
Y at integration start : 5866 Y at integration end: 5866

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user id: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

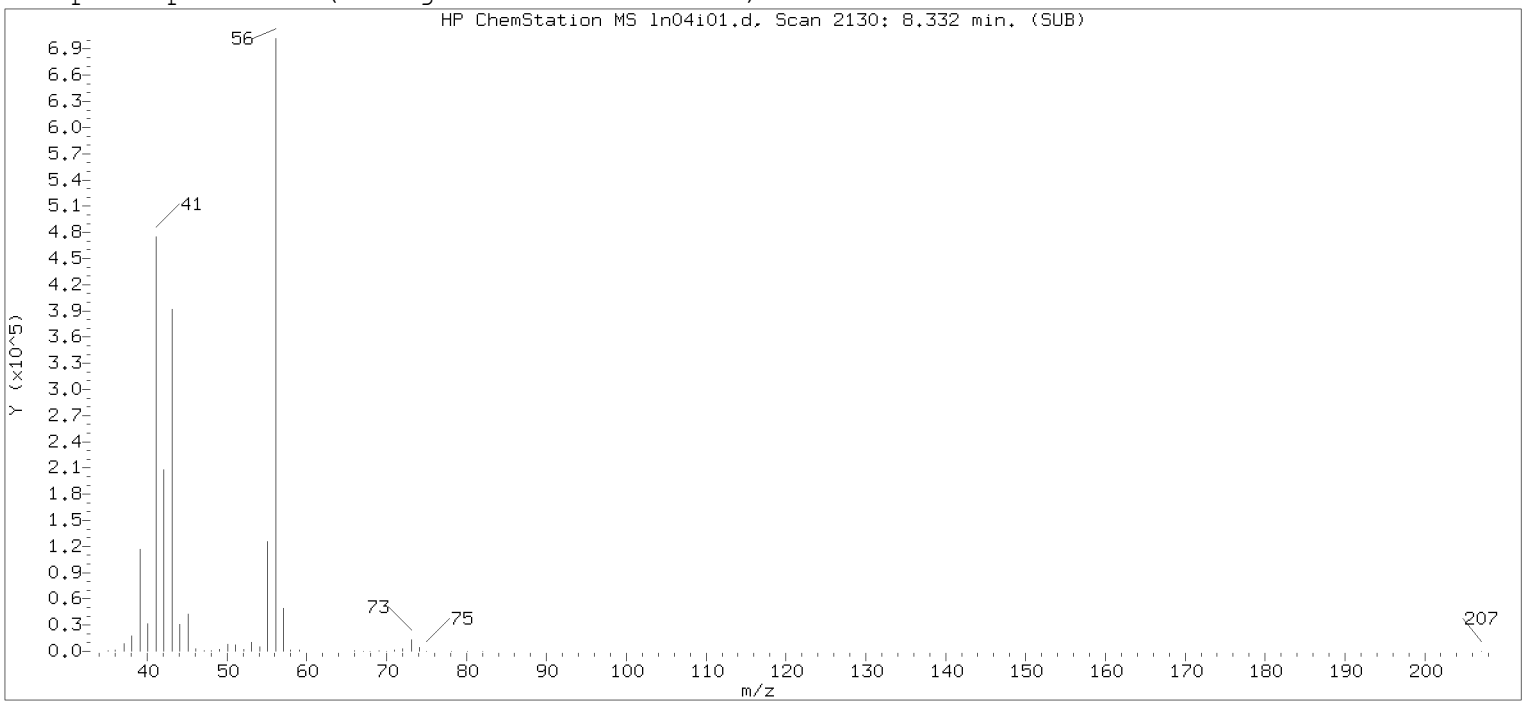
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area (flag) : 2465385M
On-Column Amount (ng) : 7947.0678
Integration start scan : 2107 Integration stop scan: 2230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

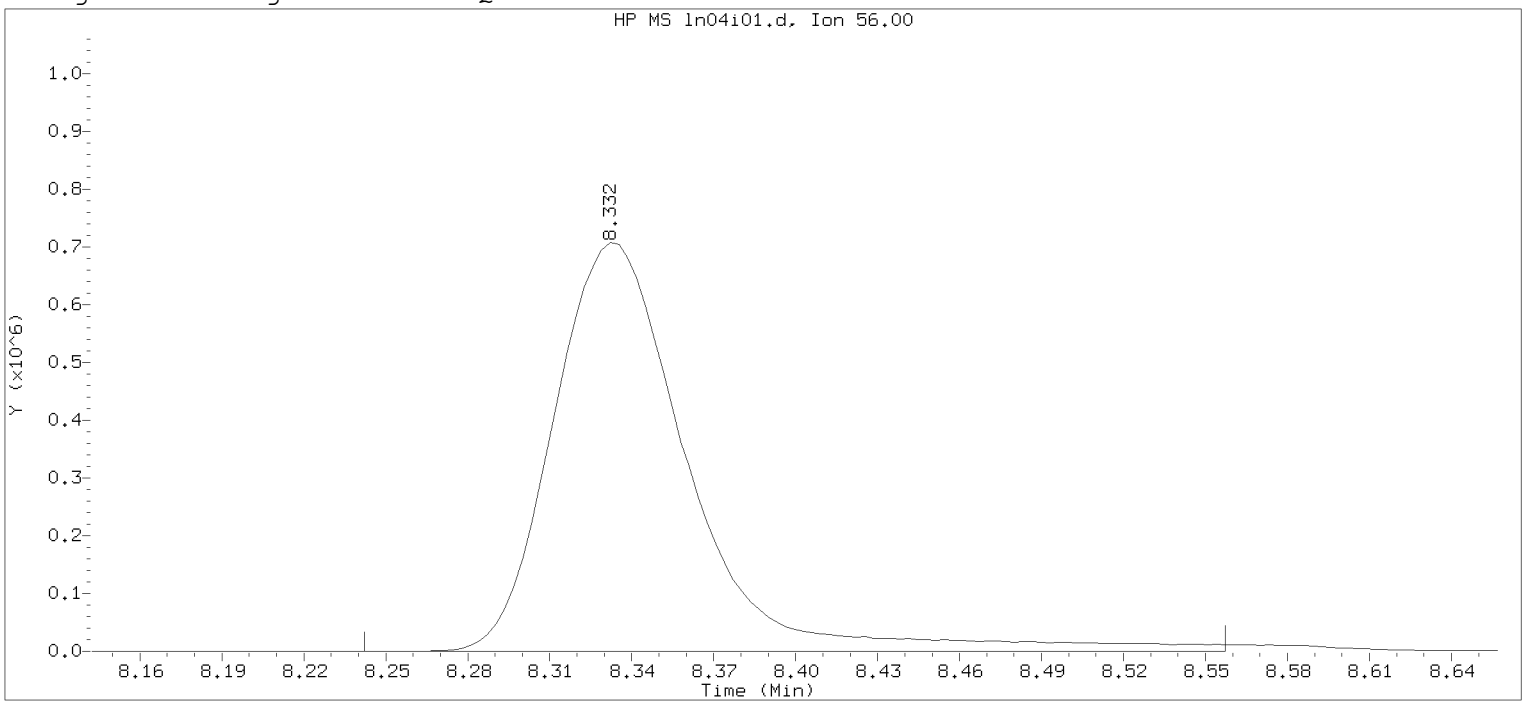
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

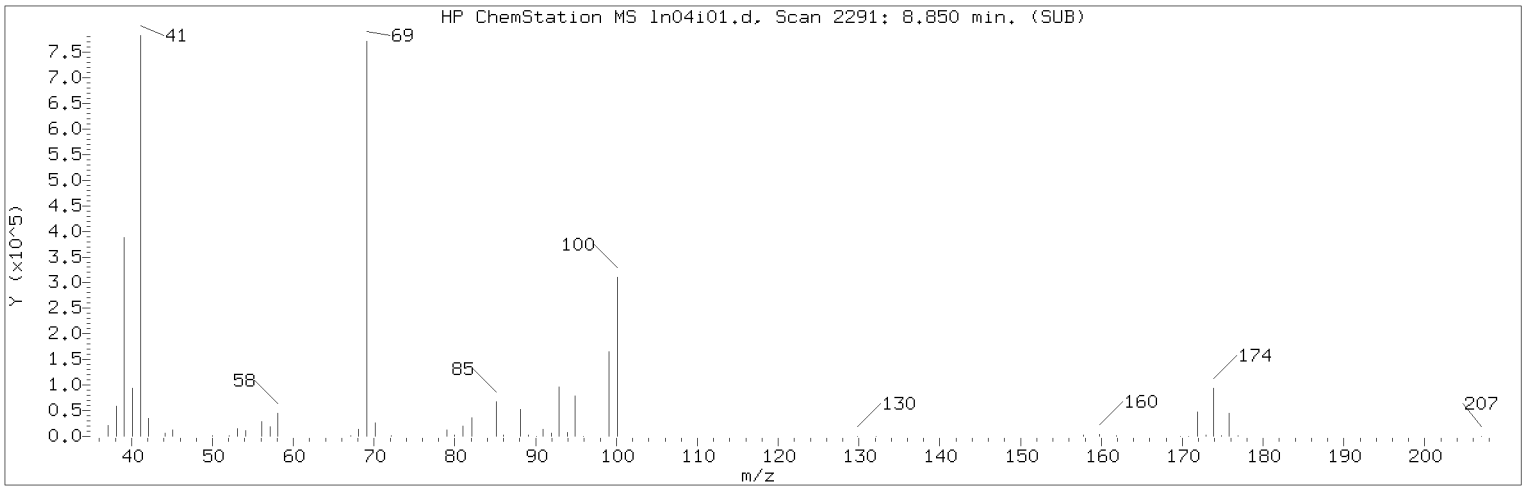
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

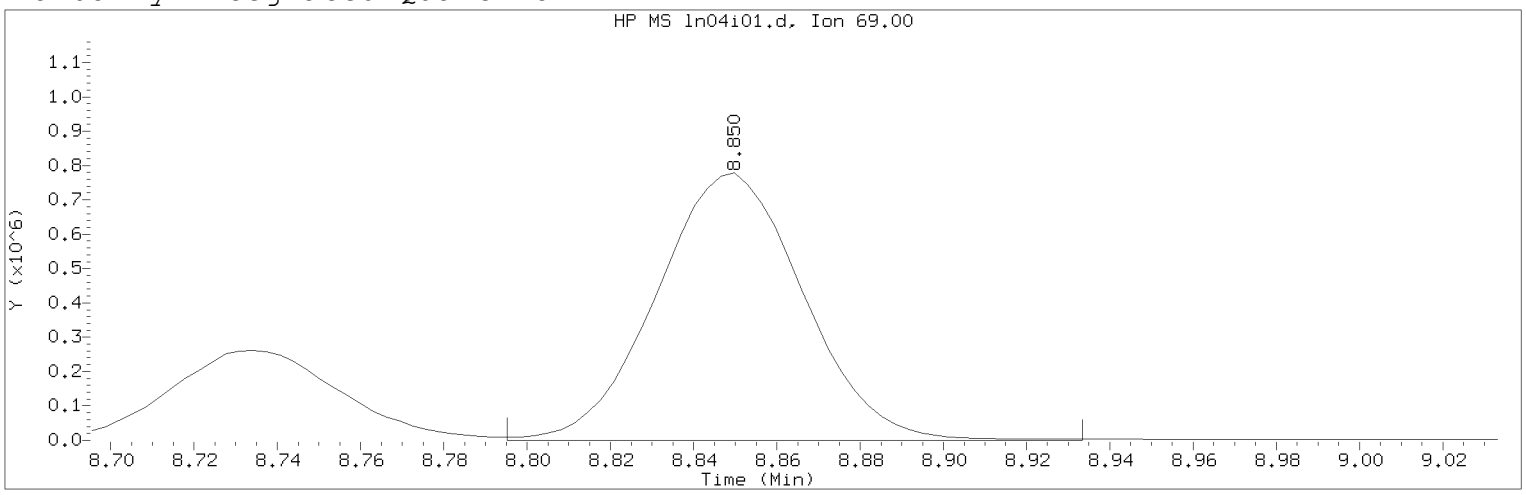
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area : 2429255
On-column Amount (ng) : 7682.9381
Integration start scan : 2101 Integration stop scan: 2199
Y at integration start : 176 Y at integration end: 176

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user id: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

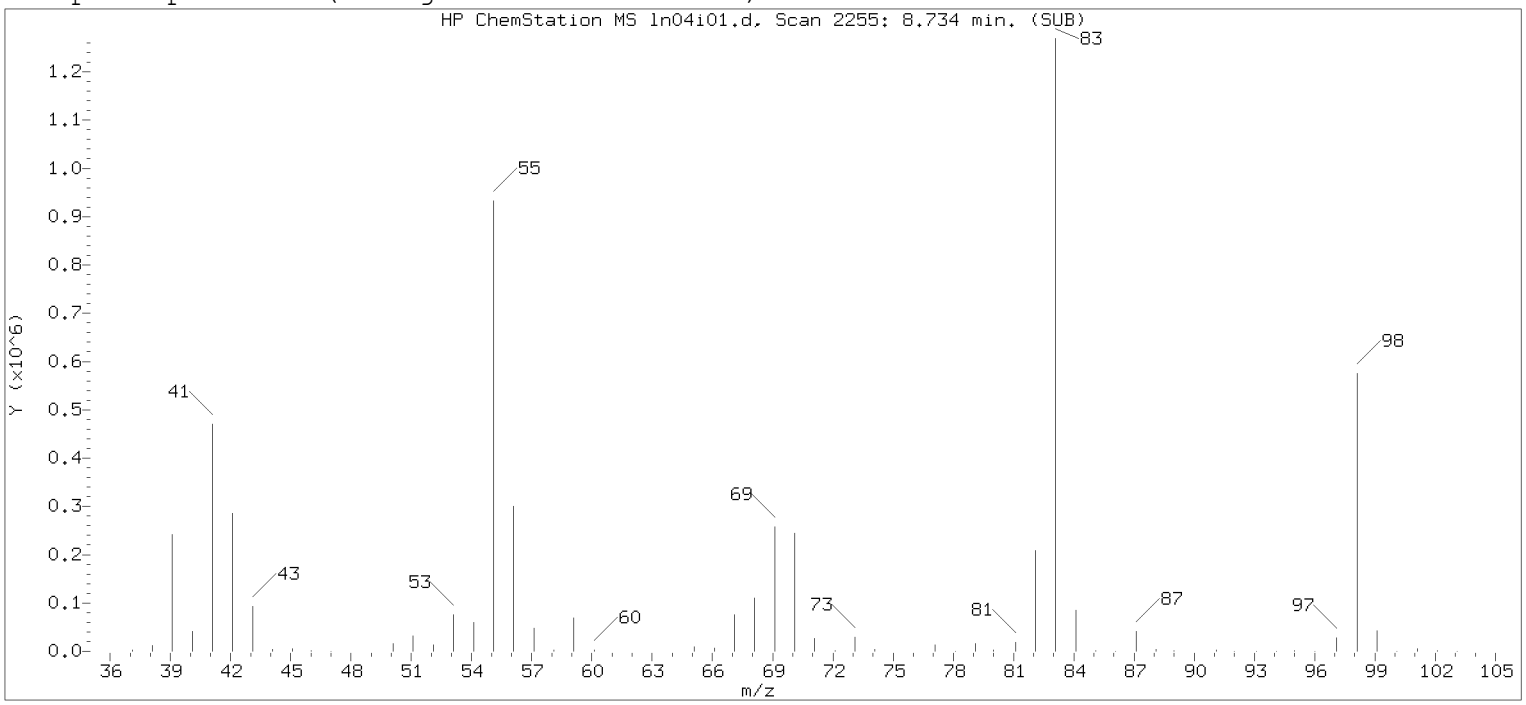
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2291
Retention Time (minutes): 8.850
Quant Ion : 69.00
Area (flag) : 1904896A
On-Column Amount (ng) : 340.2564
Integration start scan : 2273 Integration stop scan: 2316
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

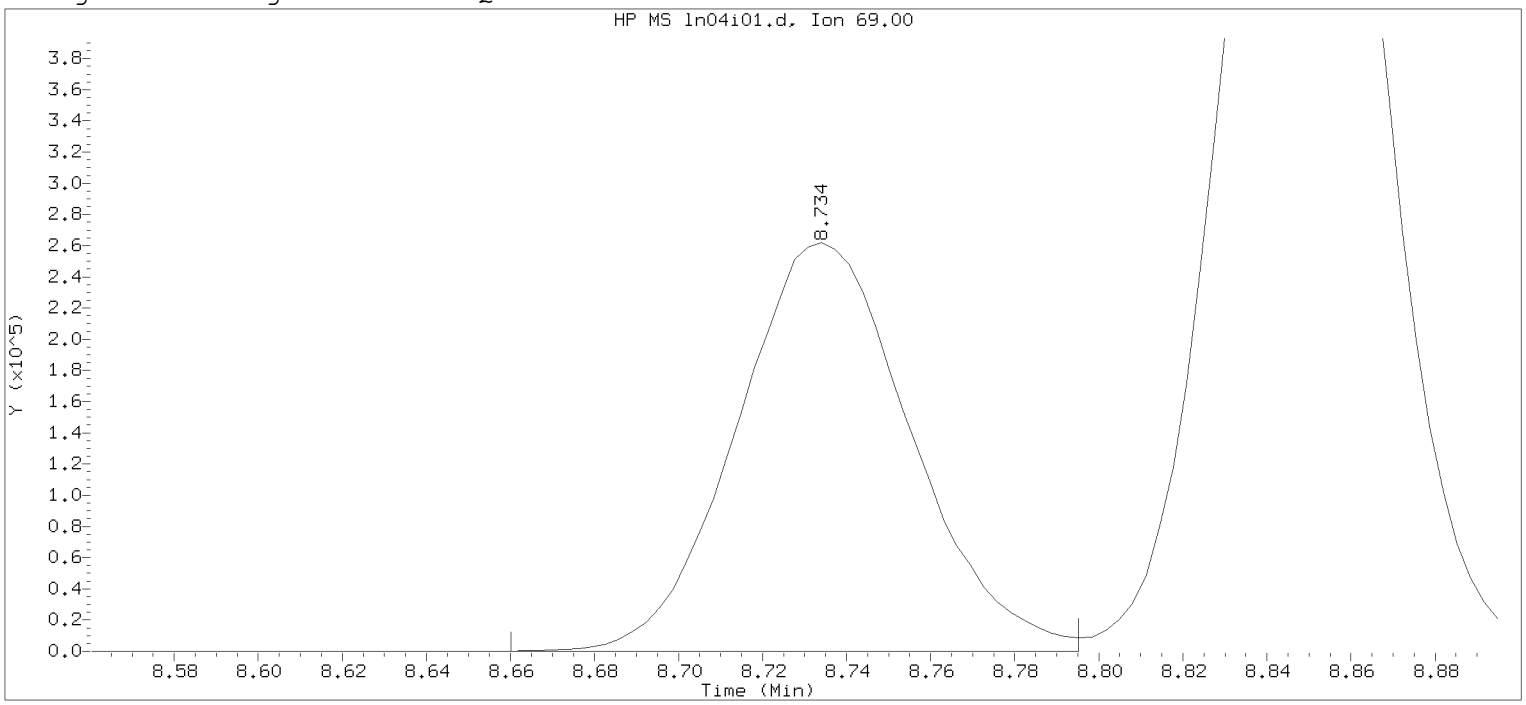
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

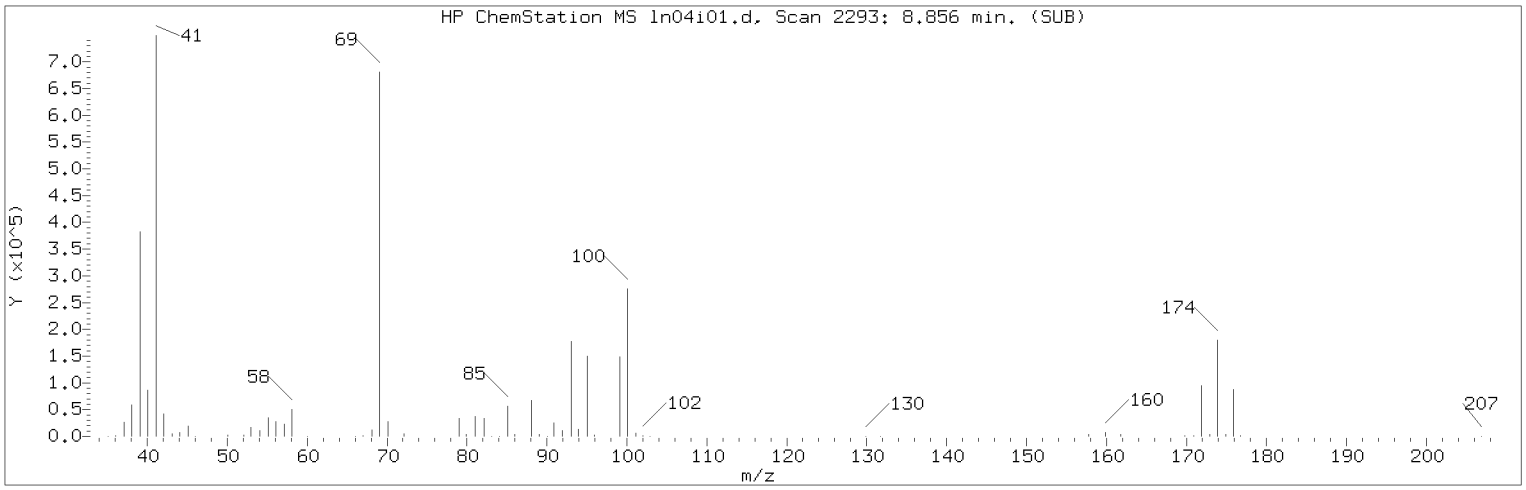
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

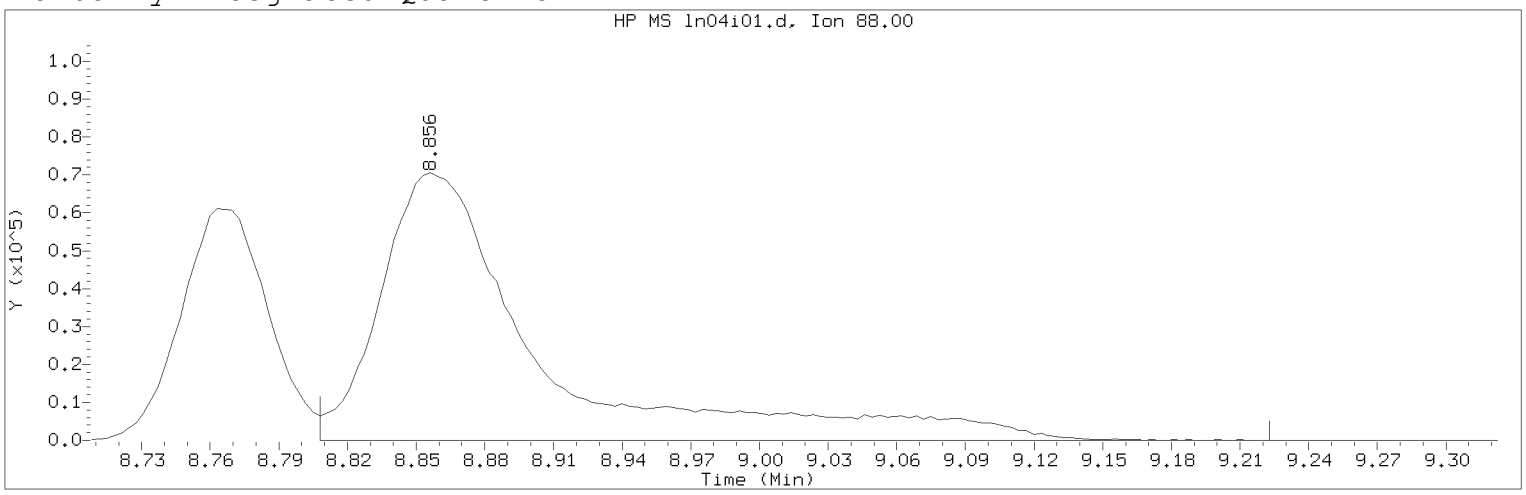
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 752058
On-column Amount (ng) : 311.1363
Integration start scan : 2231 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh00052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

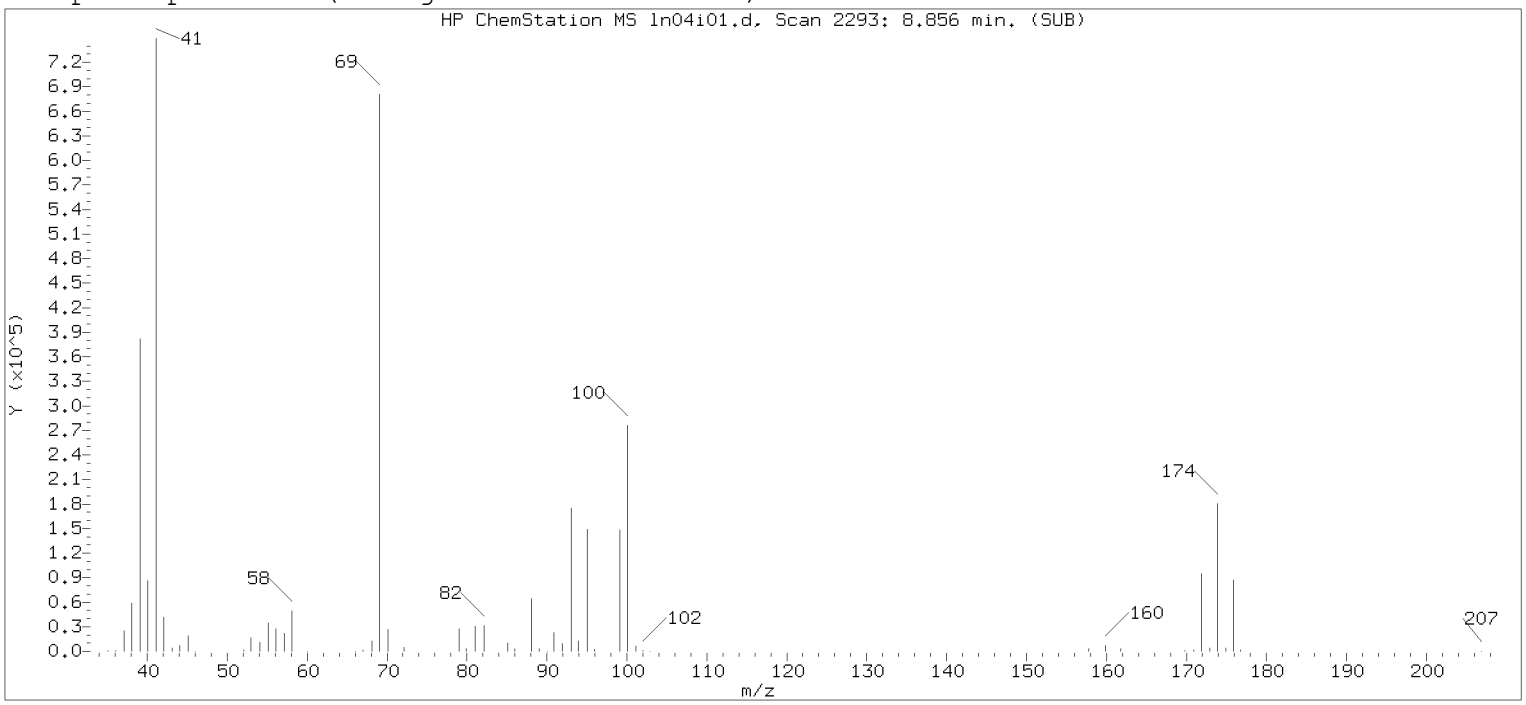
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 338379M
On-Column Amount (ng) : 3968.4208
Integration start scan : 2277 Integration stop scan: 2406
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

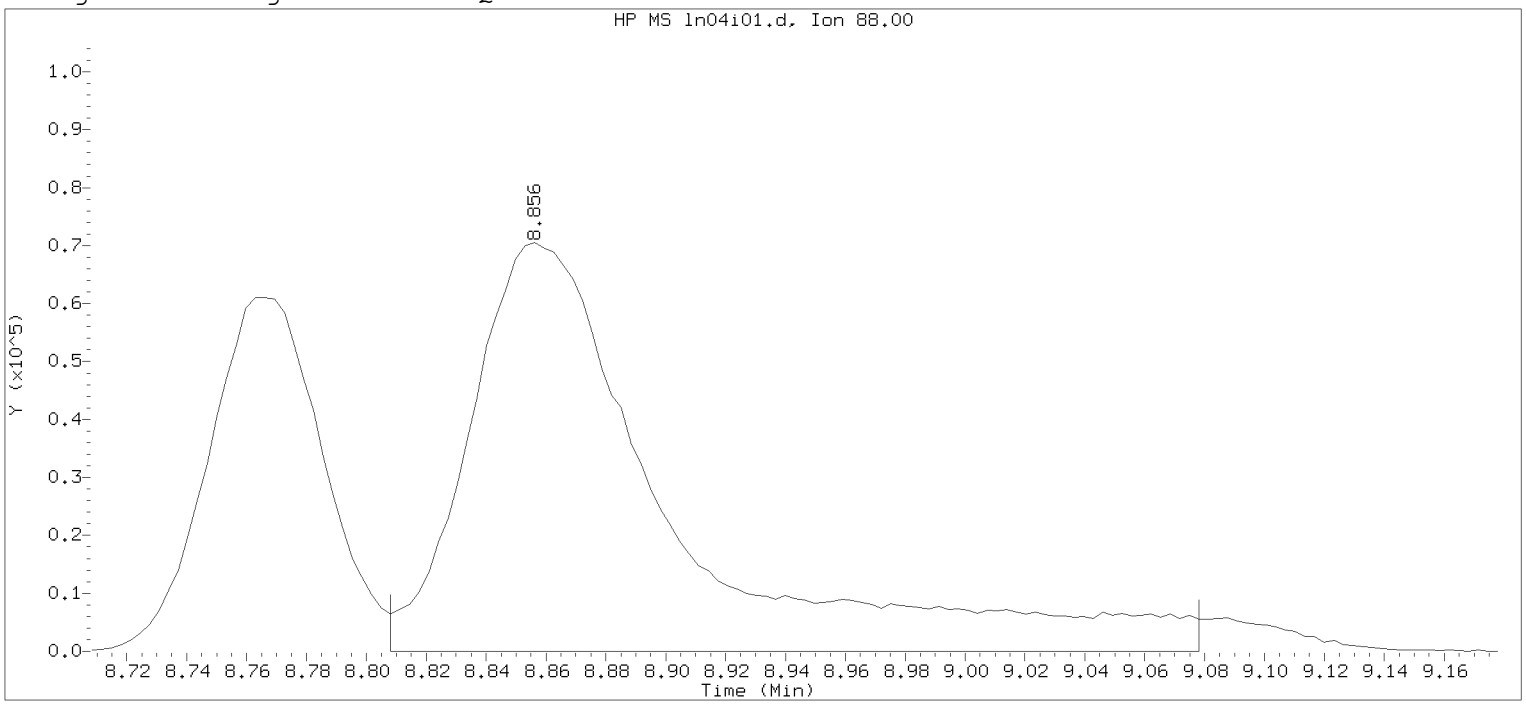
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

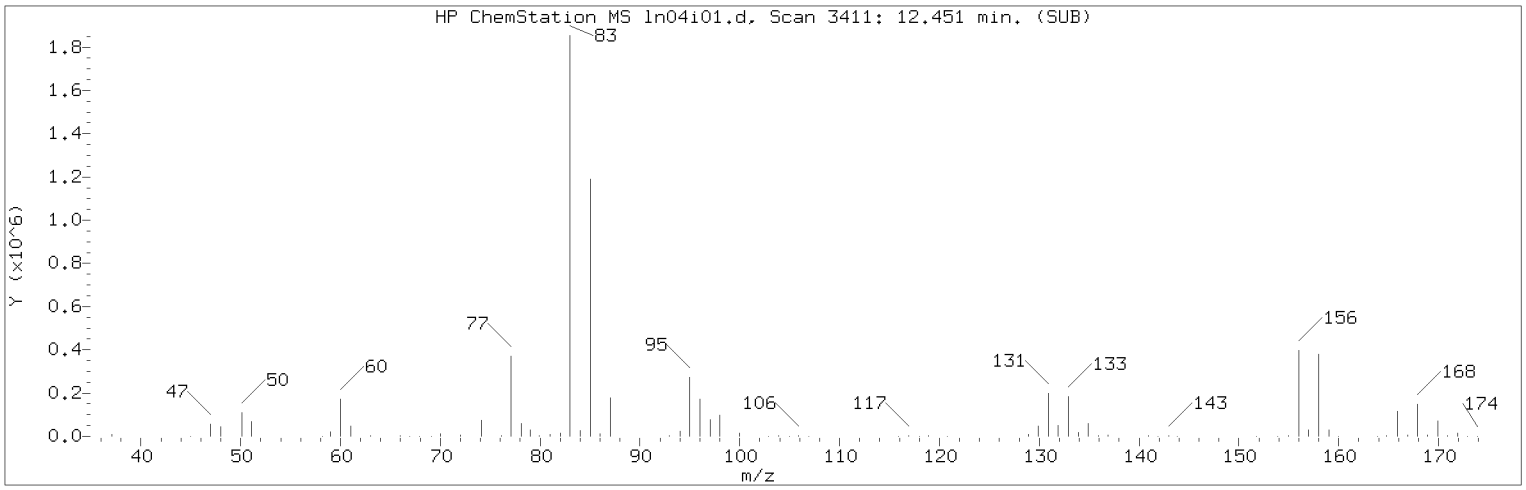
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

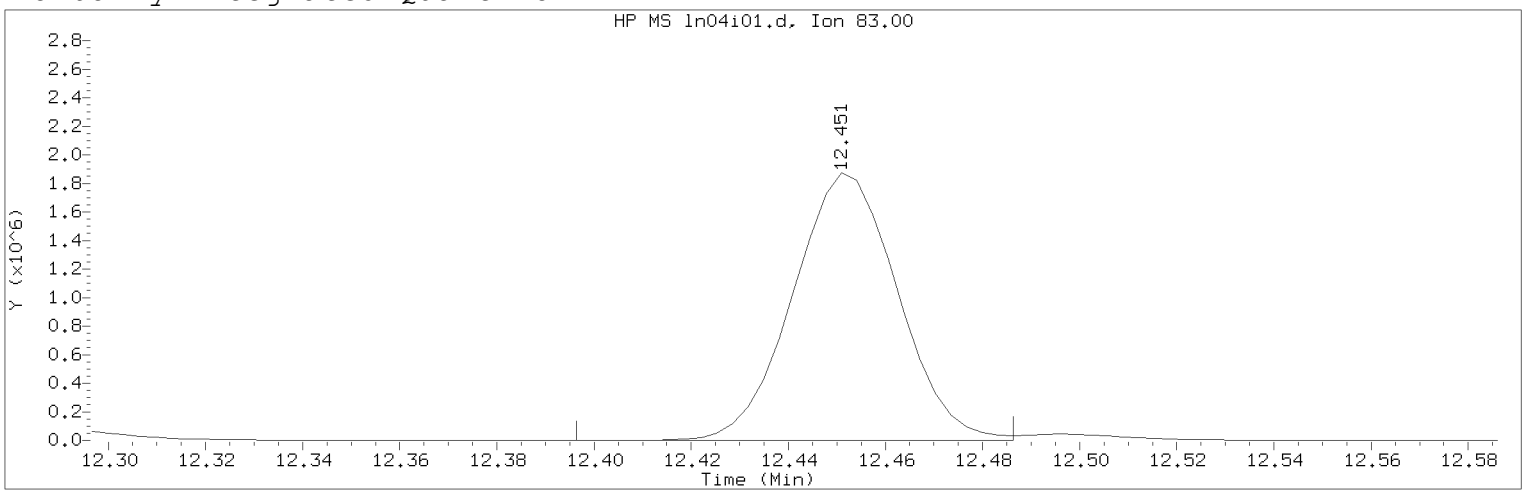
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area : 325164
On-column Amount (ng) : 3803.8575
Integration start scan : 2277 Integration stop scan: 2361
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user id: jkhowe171

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

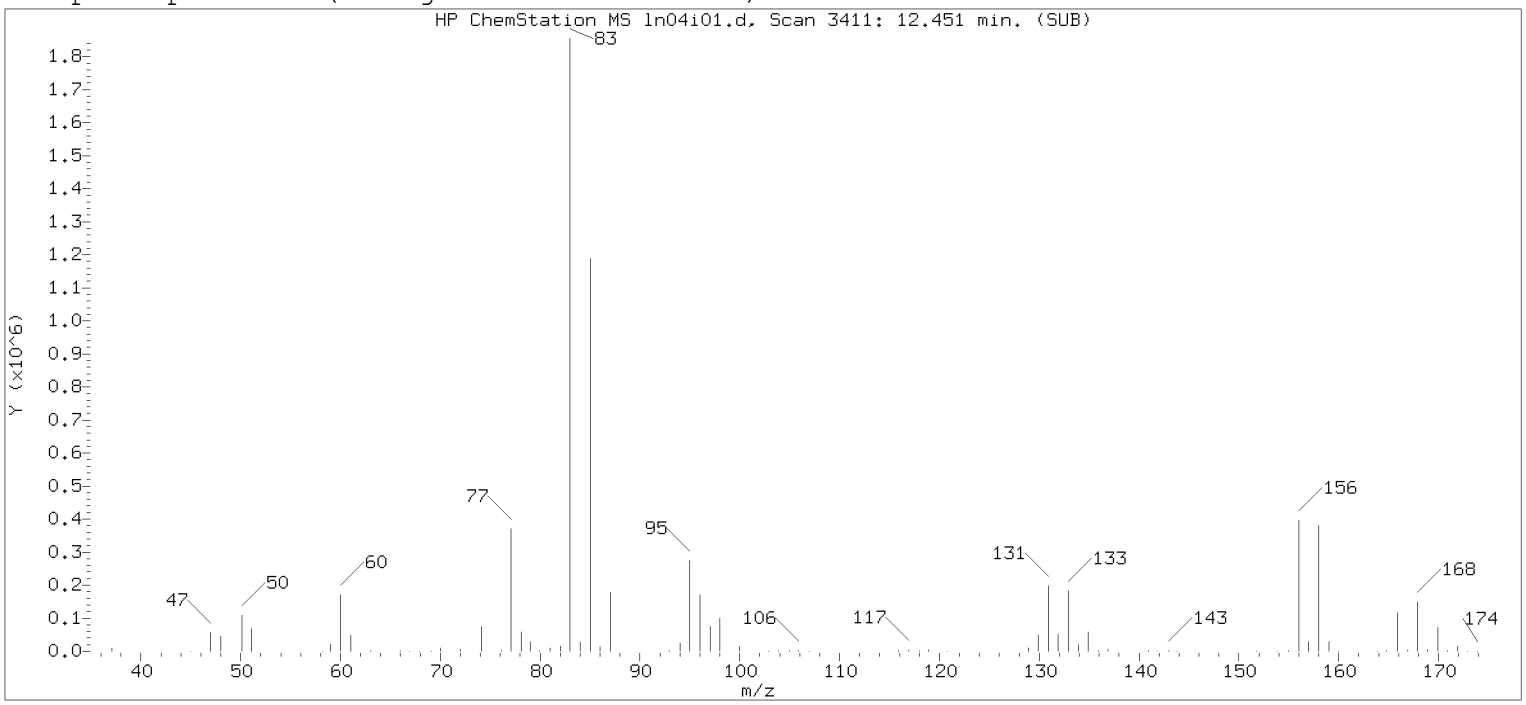
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 2800639M
On-Column Amount (ng) : 310.7054
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

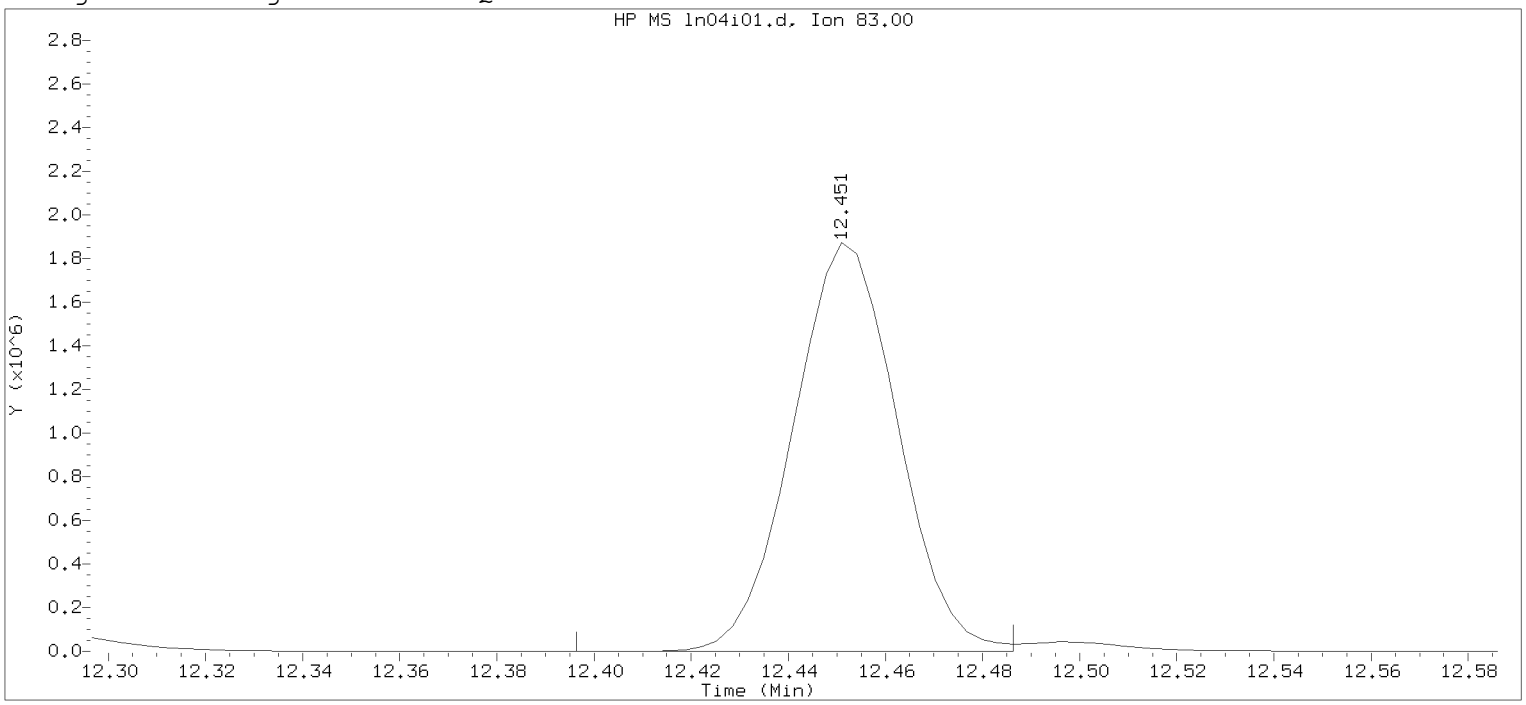
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

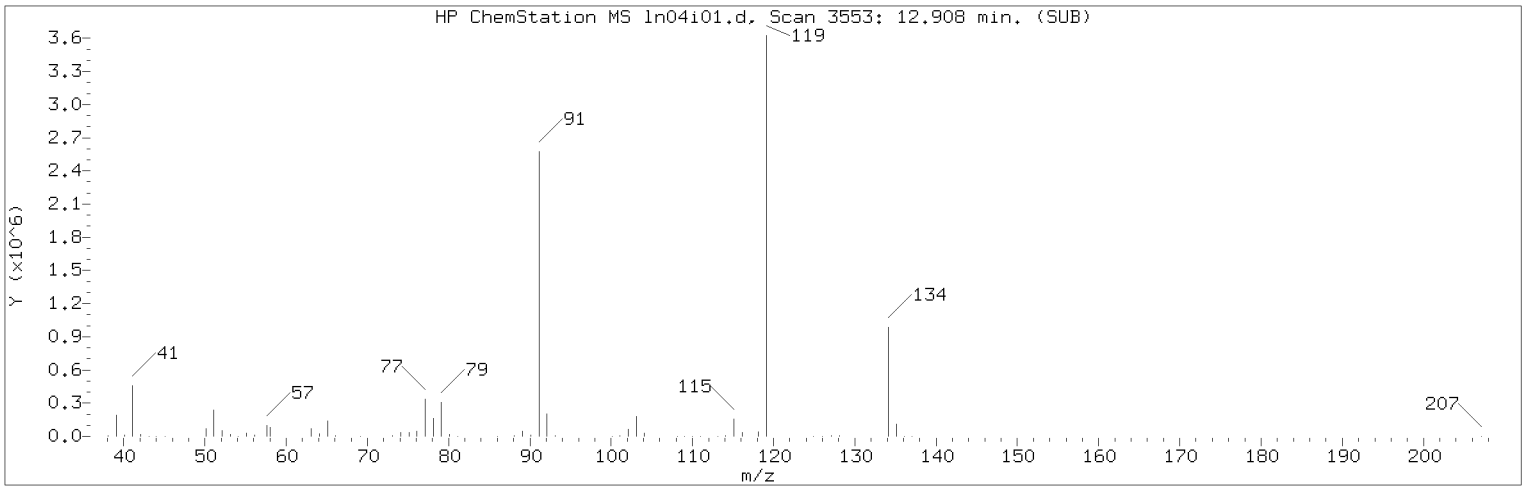
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

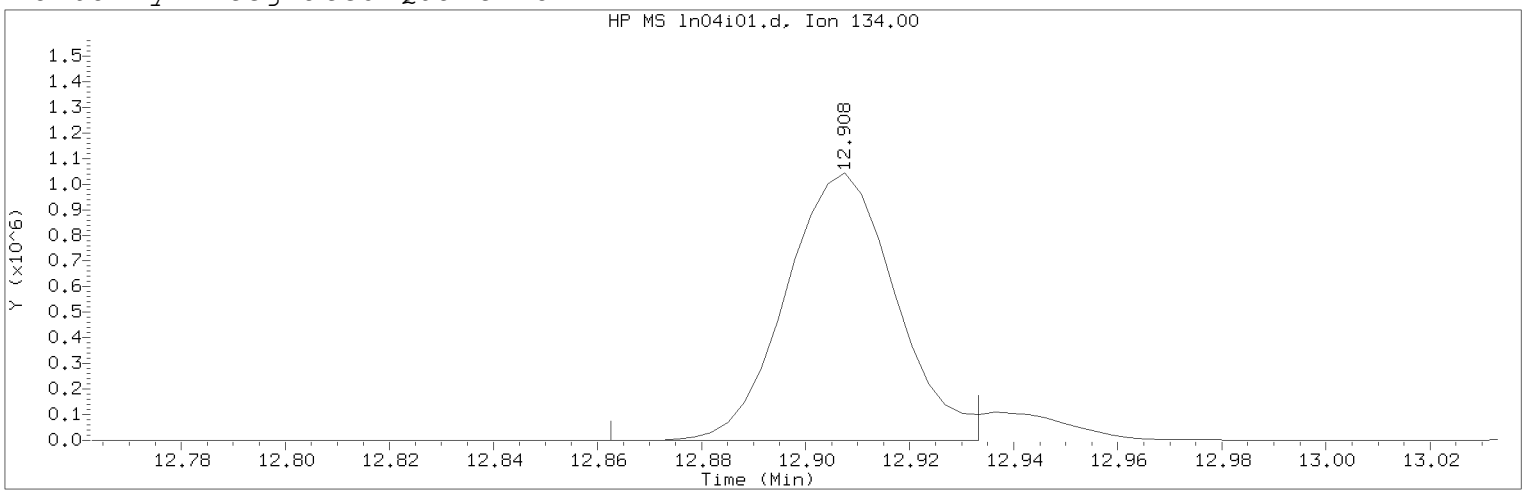
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 2797364
On-column Amount (ng) : 294.0638
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user: JKHowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

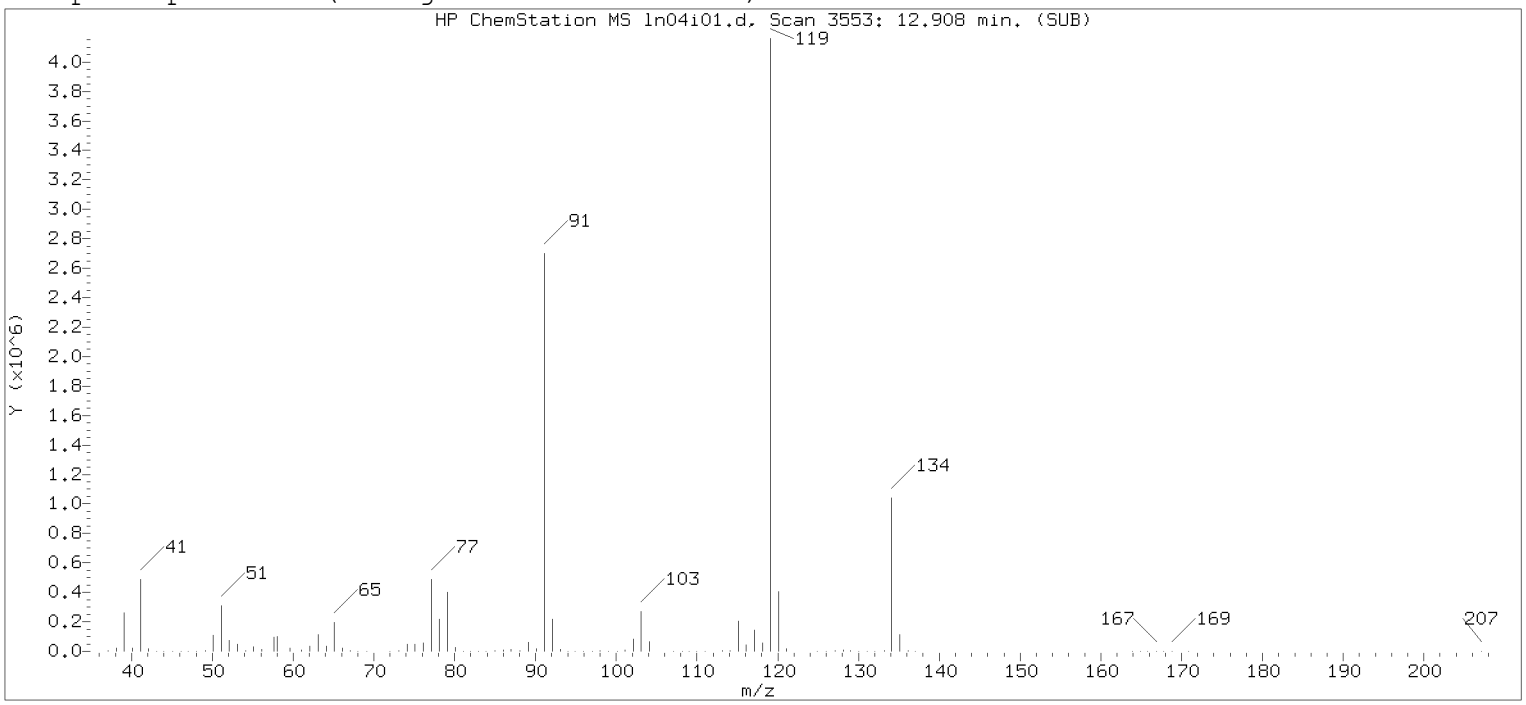
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area (flag) : 1524421M
On-Column Amount (ng) : 323.7167
Integration start scan : 3538 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

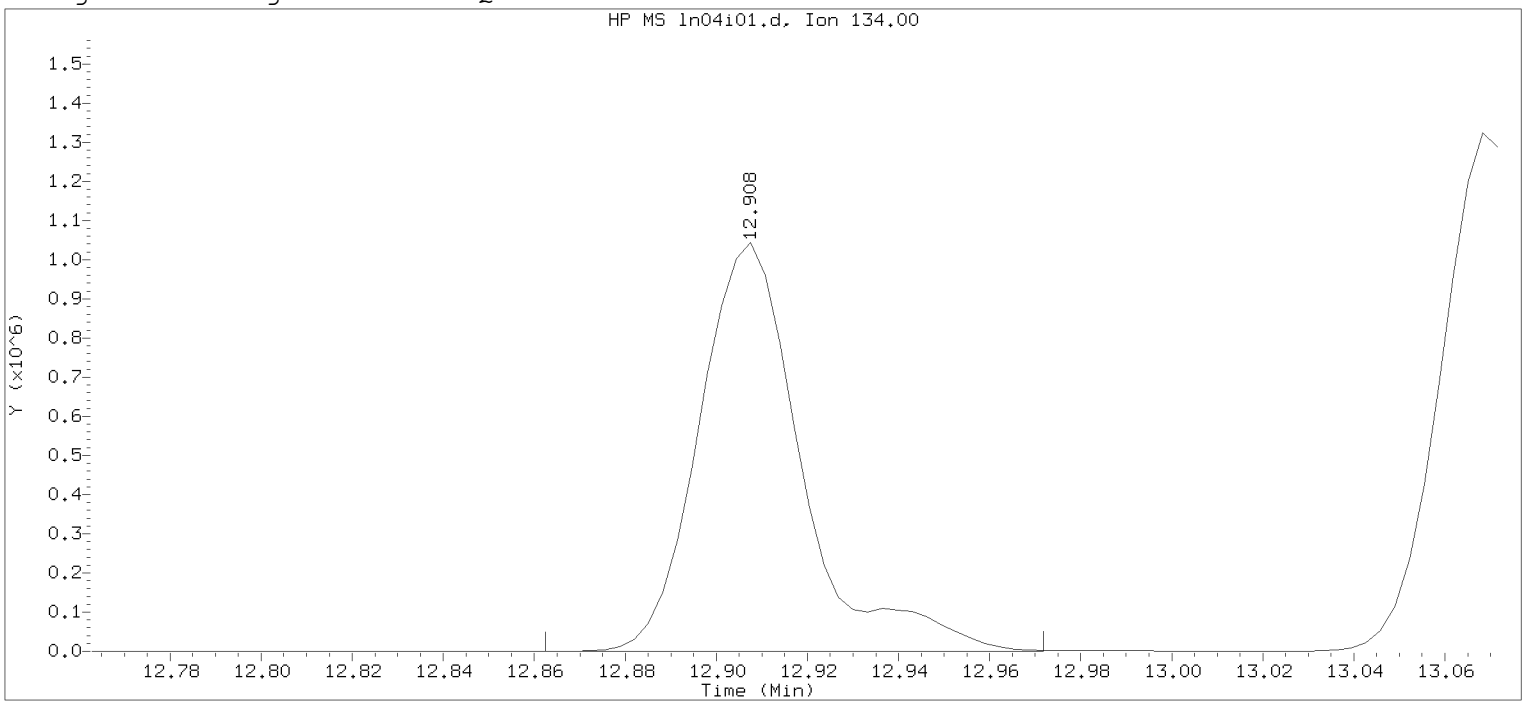
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



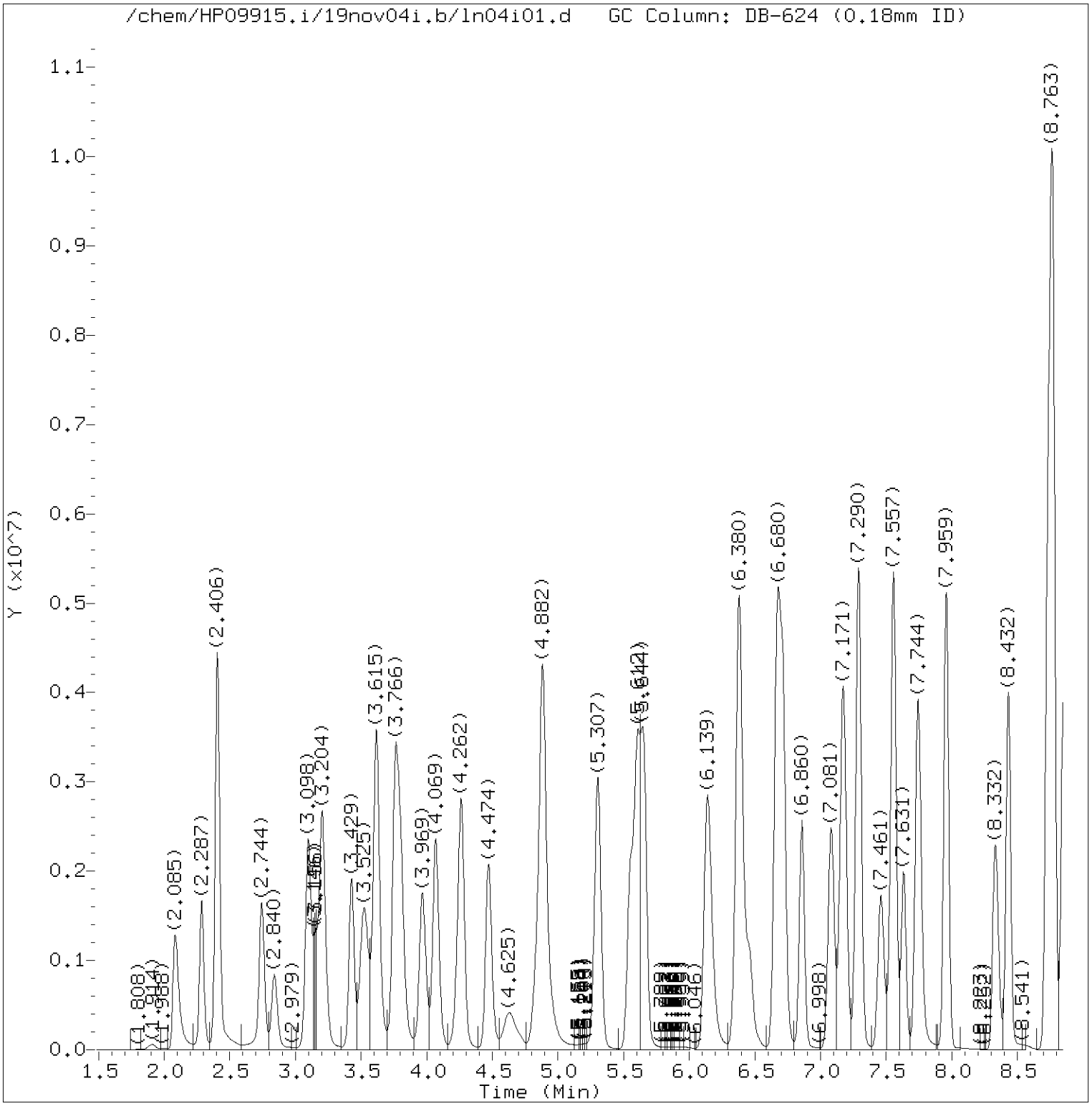
Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area : 1639624
On-column Amount (ng) : 313.1253
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkhowe175



Total Ion Chromatogram (TIC)

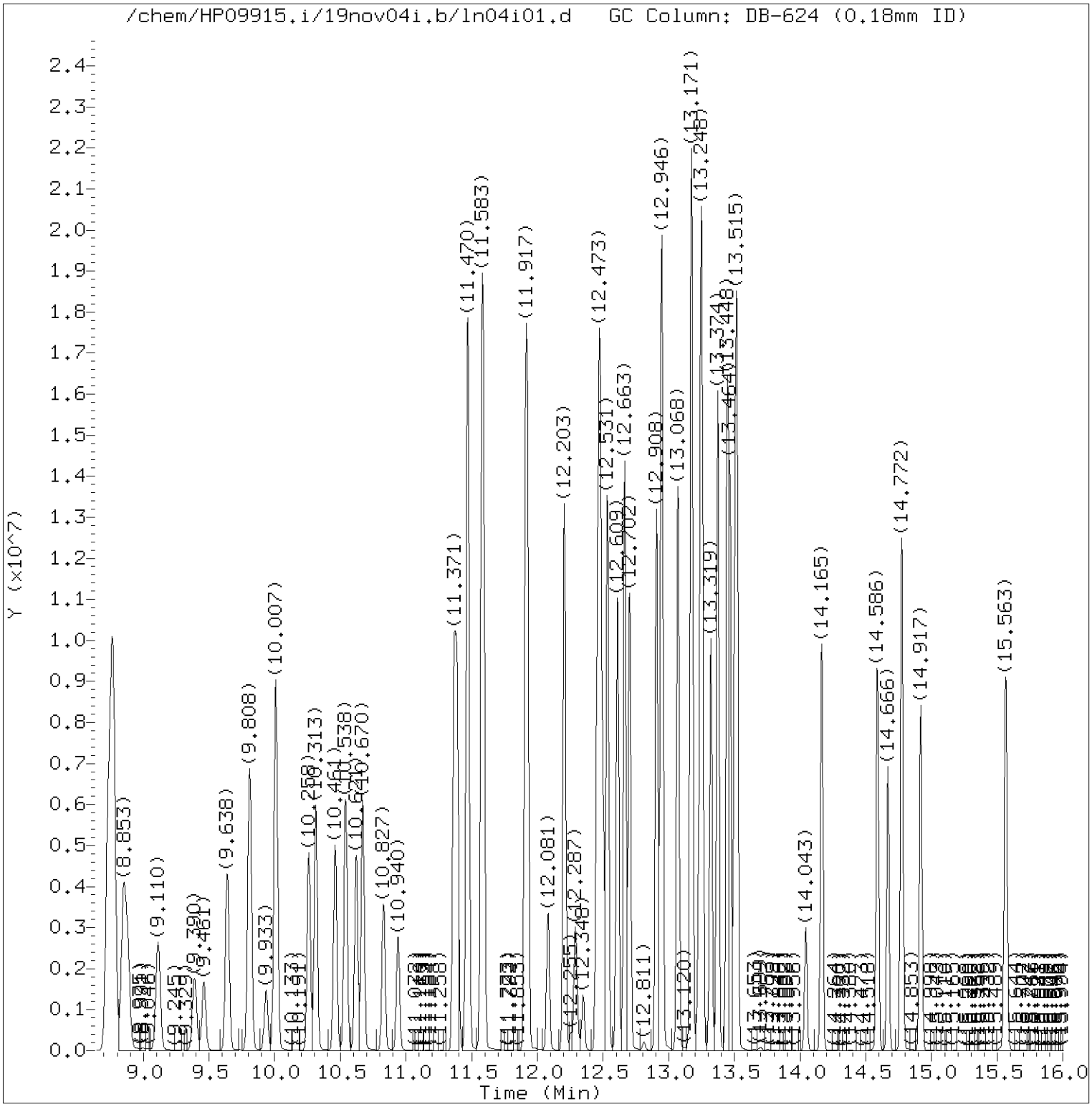
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.085	85	2719746M	347.943
4) Chloromethane	(2)	2.287	50	2403581	319.051
5) 1,3-Butadiene	(2)	2.406	39	1785787M	285.486
6) Vinyl Chloride	(2)	2.406	62	2412855	320.904
8) Bromomethane	(2)	2.744	94	1638575	304.015
9) Chloroethane	(2)	2.837	64	1253478	303.356
10) Dichlorofluoromethane	(2)	3.098	67	2978303M	300.258
12) Trichlorofluoromethane	(2)	3.152	101	2661050	328.734
11) n-Pentane	(2)	3.204	43	2816823	294.455
14) Ethyl ether	(2)	3.429	59	1721693	329.146
15) Freon 123a	(2)	3.525	67	1991616	305.852
16) Acrolein	(1)	3.615	56	5765354	3020.583
17) 1,1-Dichloroethene	(2)	3.760	96	1489890	313.570
17) 1,1-Dichloroethene	(2)	3.757	63	721205	302.767
19) Freon 113	(2)	3.792	101	1732433	319.583
18) Acetone	(1)	3.802	58	531845	621.534
22) Methyl Iodide	(2)	3.966	142	3047145	309.483
21) 2-Propanol	(1)	3.995	45	936919	1523.065
23) Carbon Disulfide	(2)	4.069	76	5676465	317.027
27) Methyl Acetate	(2)	4.239	43	1941315	317.230
25) Allyl Chloride	(2)	4.265	41	2748698	322.482
28) Methylene Chloride	(2)	4.474	84	1745840	308.716
29)*t-Butyl alcohol-d10	(1)	4.503	65	254406M	250.000
30) t-Butyl alcohol	(1)	4.638	59	1641037	1532.140
31) Acrylonitrile	(2)	4.827	53	1039800	315.820
32) trans-1,2-Dichloroethene	(2)	4.885	96	1713357	311.714
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	5505439	305.143
34) n-Hexane	(2)	5.307	57	2863189M	334.811
36) 1,1-Dichloroethane	(2)	5.548	63	3007196	313.618
38) di-Isopropyl ether	(2)	5.609	45	5739955	310.377
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	2776921	322.788
40) Ethyl t-butyl ether	(2)	6.139	59	5425034	302.275
43) 1,2-Dichloroethene (Total)	(2)		96	3646040	624.977
44) 2-Butanone	(2)	6.364	43	2642793	625.317
42) cis-1,2-Dichloroethene	(2)	6.380	96	1932683	313.263
45) 2,2-Dichloropropane	(2)	6.397	77	2377411	318.945
47) Propionitrile	(1)	6.458	54	2126389	1593.336
48) Methacrylonitrile	(2)	6.670	67	2858148	804.768

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.708	128	1075154	328.655
50) Tetrahydrofuran	(1)	6.718	71	758236	628.991
51) Chloroform	(2)	6.860	83	2916299	317.988
52)$Dibromofluoromethane	(2)	7.075	113	276322	50.424
52)$Dibromofluoromethane	(2)	7.075	111	279197	49.969
53) 1,1,1-Trichloroethane	(2)	7.081	97	2560601	327.130
54) Cyclohexane	(2)	7.171	56	3429211	327.611
54) Cyclohexane	(2)	7.171	84	2984908	328.282
54) Cyclohexane	(2)	7.171	69	1068201	329.937
56) Carbon Tetrachloride	(2)	7.287	117	2252864	339.350
55) 1,1-Dichloropropene	(2)	7.294	75	2434619	321.125
58) Isobutyl Alcohol	(1)	7.461	41	1382486	3835.573
57)$1,2-Dichloroethane-d4	(2)	7.528	102	68480	49.033
57)$1,2-Dichloroethane-d4	(2)	7.532	65	307306	49.375
57)$1,2-Dichloroethane-d4	(2)	7.528	104	44002	49.326
60) Benzene	(2)	7.557	78	7094466	311.169
61) 1,2-Dichloroethane	(2)	7.634	62	2222342	303.049
61) 1,2-Dichloroethane	(2)	7.634	98	228988	315.535
65) t-Amyl methyl ether	(2)	7.744	73	5421278	300.945
67) n-Heptane	(2)	7.959	43	2592531MA	324.518
66)*Fluorobenzene	(2)	7.959	96	1120873	50.000
69) n-Butanol	(1)	8.332	56	2465385M	7947.068
71) Trichloroethene	(2)	8.432	95	1841720	320.821
72) Methylcyclohexane	(2)	8.734	83	3568410	335.054
72) Methylcyclohexane	(2)	8.734	98	1632993	338.844
73) 1,2-Dichloropropane	(2)	8.769	63	1825943	315.397
76) Methyl Methacrylate	(2)	8.850	69	1904896A	340.256
75) 1,4-Dioxane	(1)	8.856	88	338379M	3968.421
74) Dibromomethane	(2)	8.879	93	1210939	323.274
78) Bromodichloromethane	(2)	9.113	83	2314651	344.351
79) 2-Nitropropane	(2)	9.390	41	1438925	706.755
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	926413	372.584
81) cis-1,3-Dichloropropene	(2)	9.638	75	3074664	344.402
82) 4-Methyl-2-pentanone	(2)	9.808	43	5422938	607.899
83)$Toluene-d8	(3)	9.933	98	1156351	49.563
83)$Toluene-d8	(3)	9.933	100	751534	49.726
88) Toluene	(3)	10.007	92	4532879	309.894
90) 1,3-Dichloropropene (total)	(3)		100	5974636	693.659

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	2899972	349.257
91) Ethyl Methacrylate	(3)	10.313	69	3356305	332.603
92) 1,1,2-Trichloroethane	(3)	10.461	97	1768710	318.935
93) Tetrachloroethene	(3)	10.541	166	1990565	321.327
94) 1,3-Dichloropropane	(3)	10.621	76	3006585	317.532
96) 2-Hexanone	(3)	10.670	43	3998423	593.616
97) Dibromochloromethane	(3)	10.827	129	2037523	358.670
99) 1,2-Dibromoethane	(3)	10.940	107	1987783	330.088
100)*Chlorobenzene-d5	(3)	11.361	117	891668	50.000
101) 1-Chlorohexane	(3)	11.364	91	2458057	312.814
102) Chlorobenzene	(3)	11.387	112	5140609	310.783
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	1789998	328.446
104) Ethylbenzene	(3)	11.470	91	8606821	307.854
106) m+p-Xylene	(3)	11.583	106	6690837	608.359
108) Xylene (Total)	(3)		106	9979970	911.130
107) o-Xylene	(3)	11.908	106	3289133	302.771
109) Styrene	(3)	11.924	104	5647939	314.619
110) Bromoform	(3)	12.081	173	1534520	361.500
111) Isopropylbenzene	(3)	12.203	105	8466138	310.714
112) Cyclohexanone	(1)	12.287	55	1351186	4046.080
114)$4-Bromofluorobenzene	(3)	12.348	95	440049	49.810
114)$4-Bromofluorobenzene	(3)	12.348	174	362553	49.502
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	2800639M	310.705
115) Bromobenzene	(4)	12.467	156	2234066	311.517
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	2150976	773.637
117) 1,2,3-Trichloropropane	(4)	12.499	110	866230	313.172
119) n-Propylbenzene	(4)	12.531	91	9654812	308.142
120) 2-Chlorotoluene	(4)	12.609	126	2098494	315.266
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	7238022	317.873
121) 4-Chlorotoluene	(4)	12.702	126	2155793	311.148
124) tert-Butylbenzene	(4)	12.908	134	1524421M	323.717
125) Pentachloroethane	(4)	12.940	167	1461833	360.511
126) 1,2,4-Trimethylbenzene	(4)	12.949	105	7469187	311.236
127) sec-Butylbenzene	(4)	13.068	105	8682126	308.971
129) 1,3-Dichlorobenzene	(4)	13.168	146	3858953	292.822
130) p-Isopropyltoluene	(4)	13.174	119	7289488	299.854
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	477171	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	4013510	293.777

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

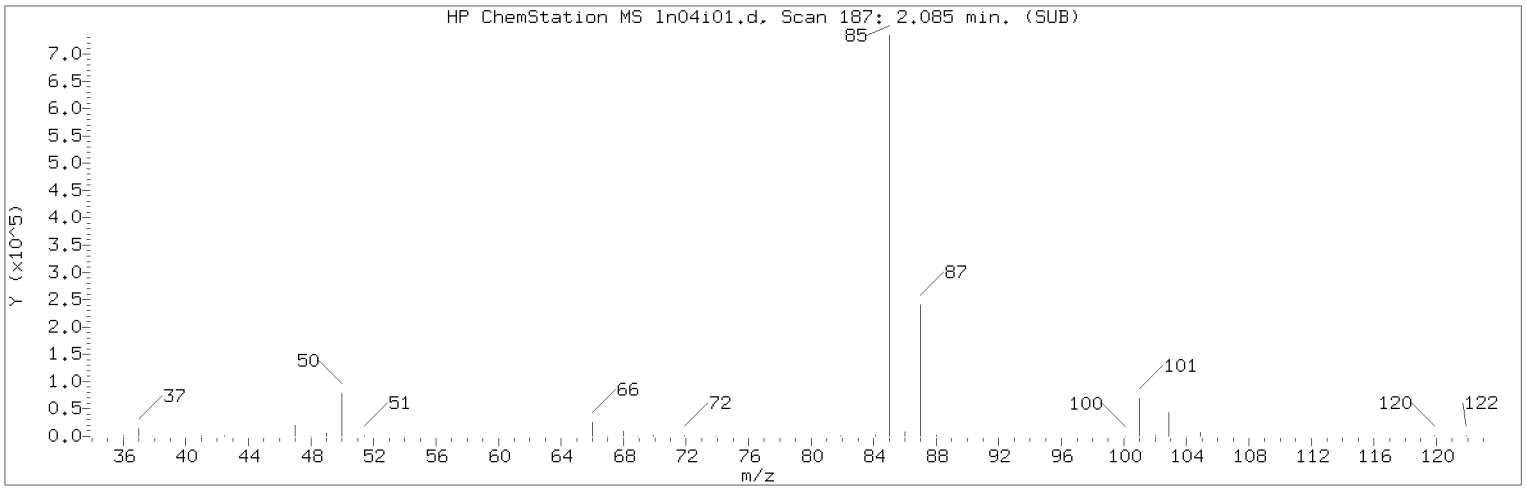
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

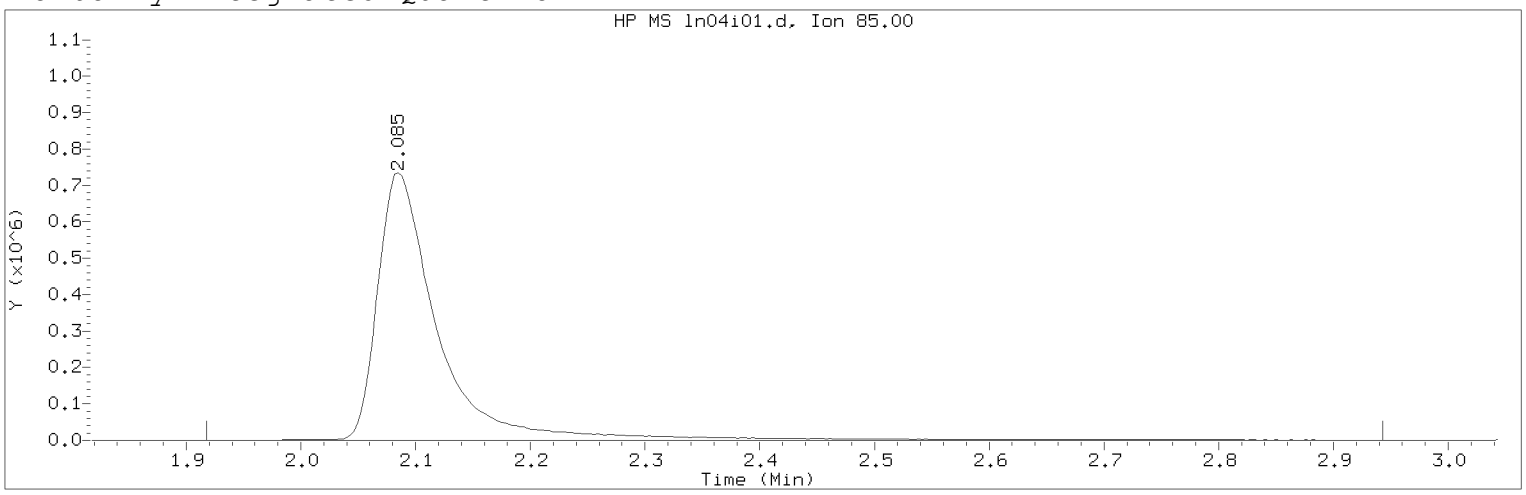
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	7915203	311.364
135) Benzyl Chloride	(4)	13.319	91	6484944	336.931
136) 1,3-Diethylbenzene	(4)	13.374	119	4897725	309.573
141) Diethylbenzene (total)	(4)		100	13982971	913.975
137) 1,4-Diethylbenzene	(4)	13.444	119	5013123	299.077
139) n-Butylbenzene	(4)	13.467	92	3608595	290.316
138) 1,2-Dichlorobenzene	(4)	13.502	146	3859125	296.761
140) 1,2-Diethylbenzene	(4)	13.518	119	4072123	305.325
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	669008	339.050
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	2855960	285.855
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	2681523	276.030
147) Hexachlorobutadiene	(4)	14.670	225	1157297	252.311
148) Naphthalene	(4)	14.772	128	9186333	294.145
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	2488608	263.270
150) 2-Methylnaphthalene	(4)	15.563	142	4666682	242.655

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

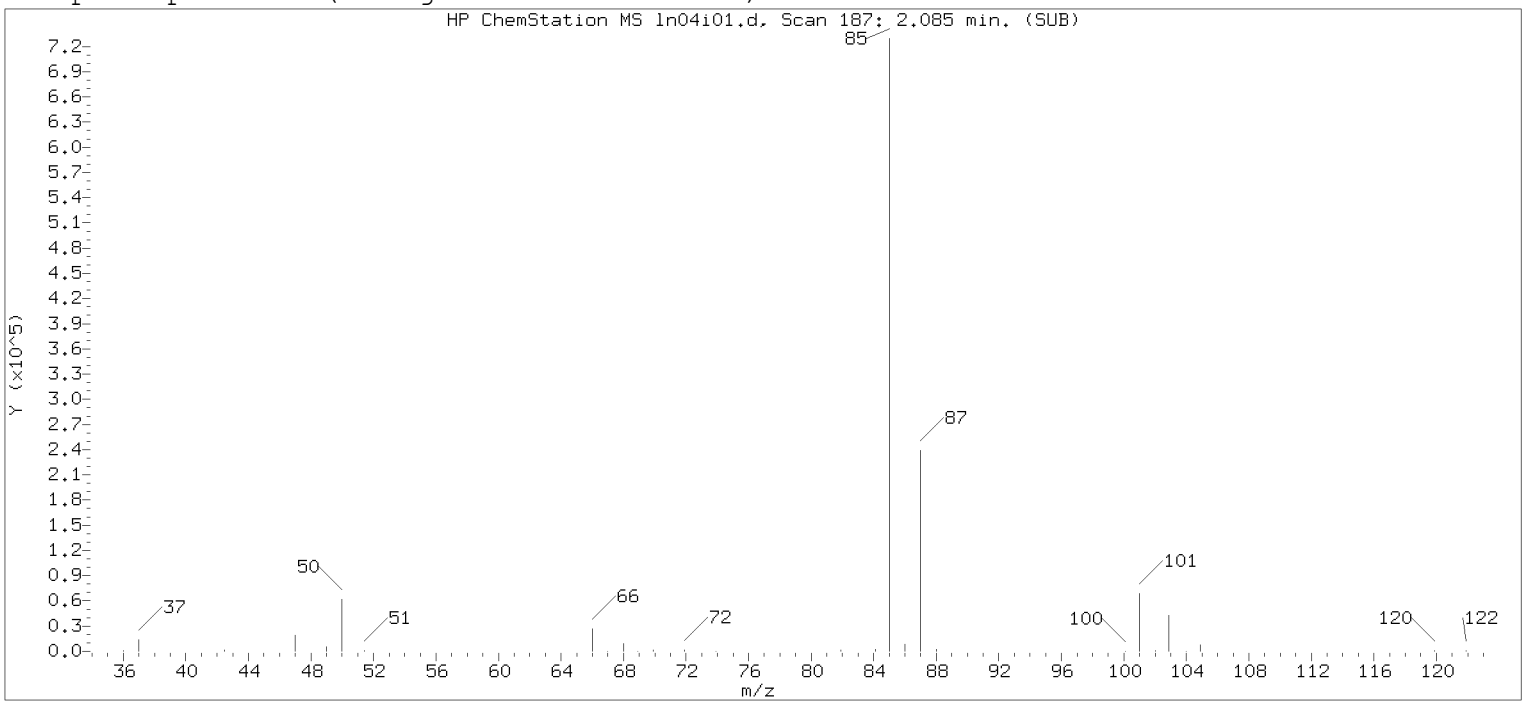
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area (flag) : 2719746M
On-Column Amount (ng) : 347.9426
Integration start scan : 134 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

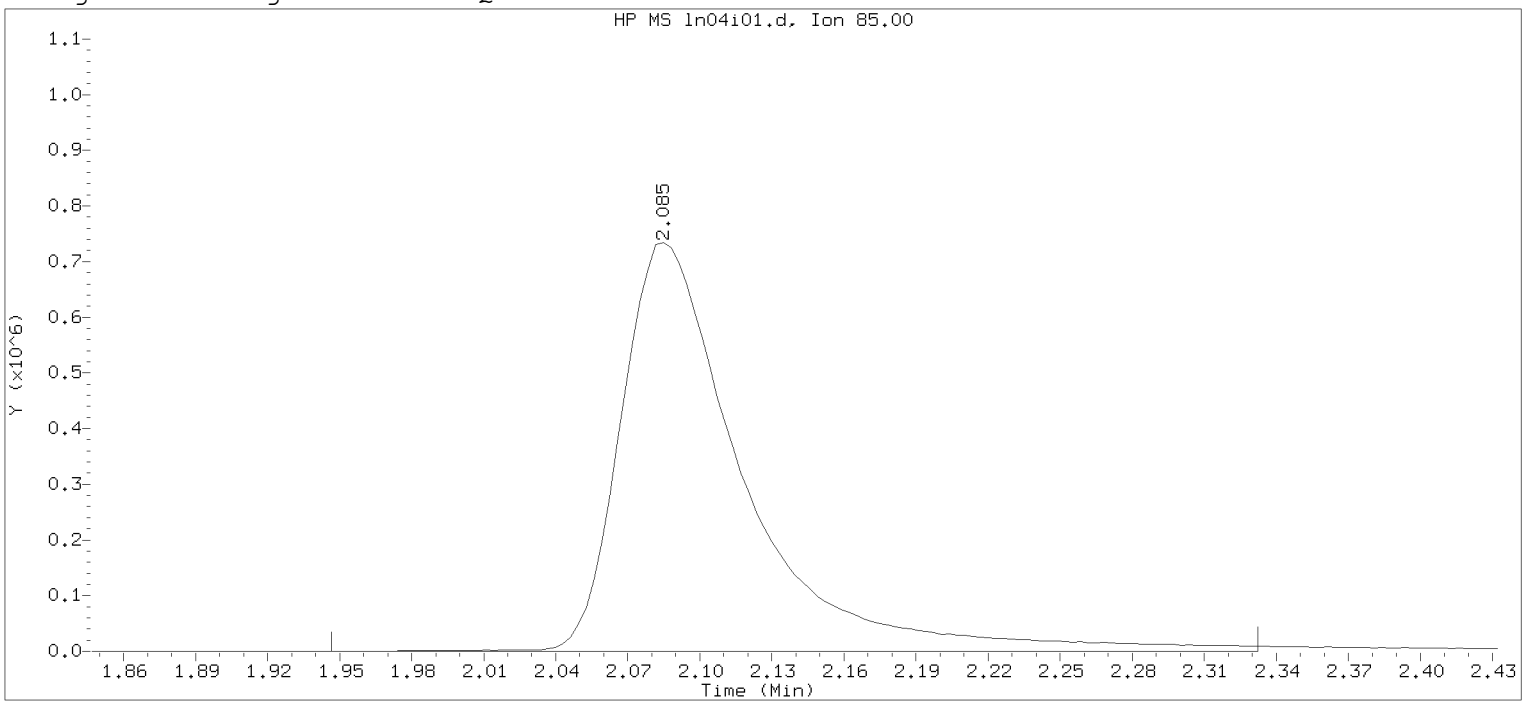
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

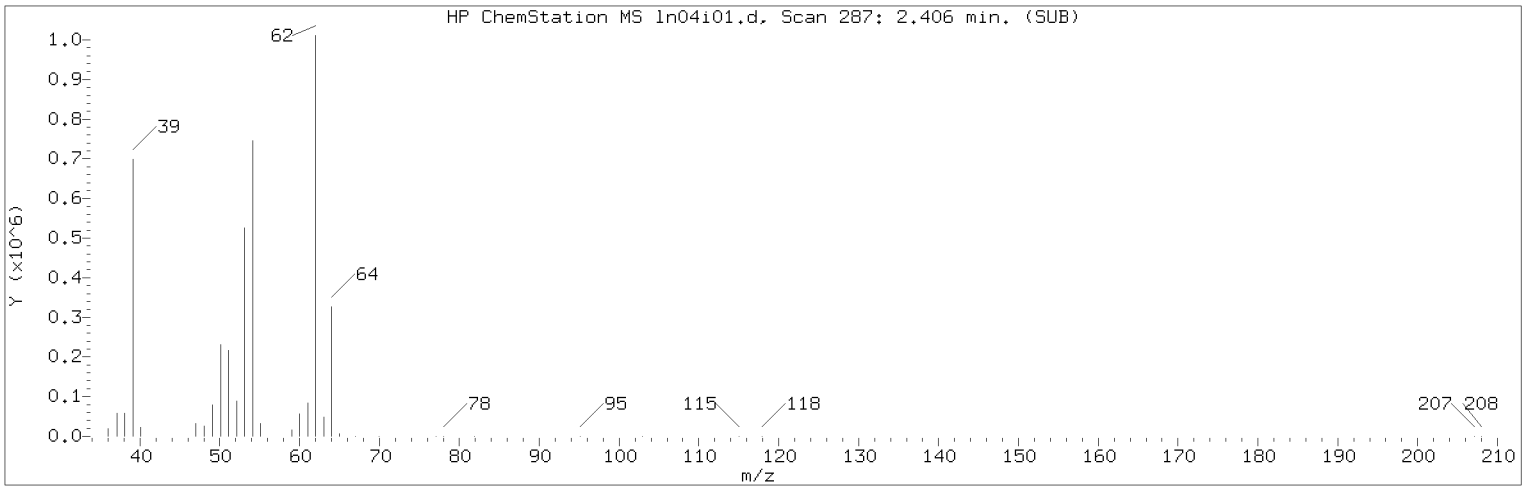
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

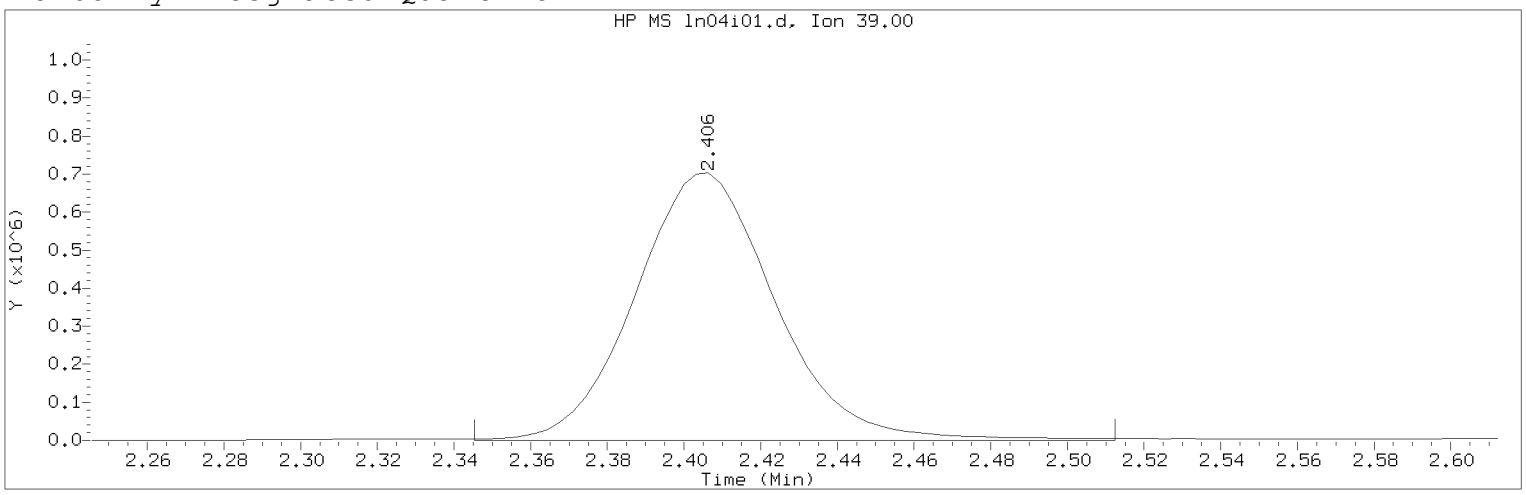
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area : 2624212
On-column Amount (ng) : 308.6520
Integration start scan : 143 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

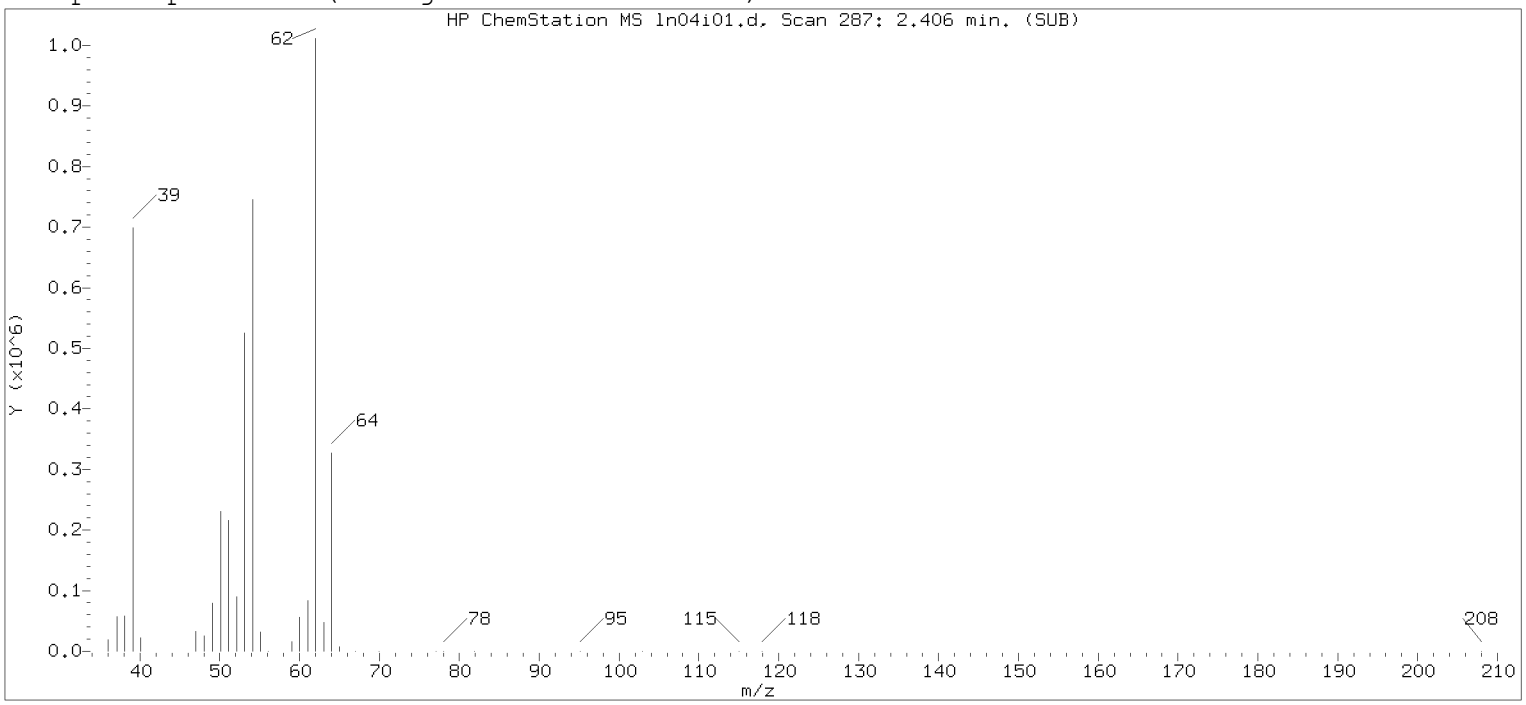
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 1785787M
On-Column Amount (ng) : 285.4858
Integration start scan : 267 Integration stop scan: 319
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

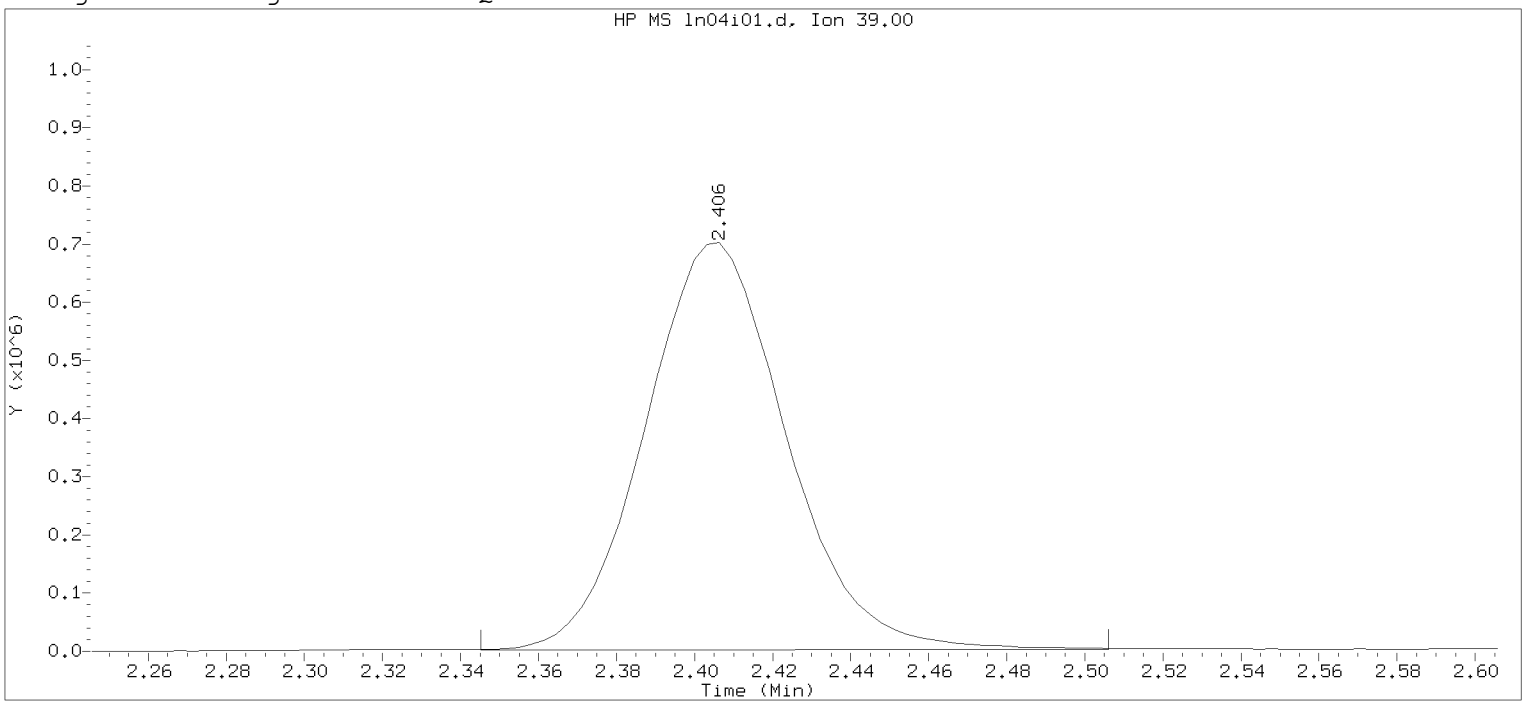
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

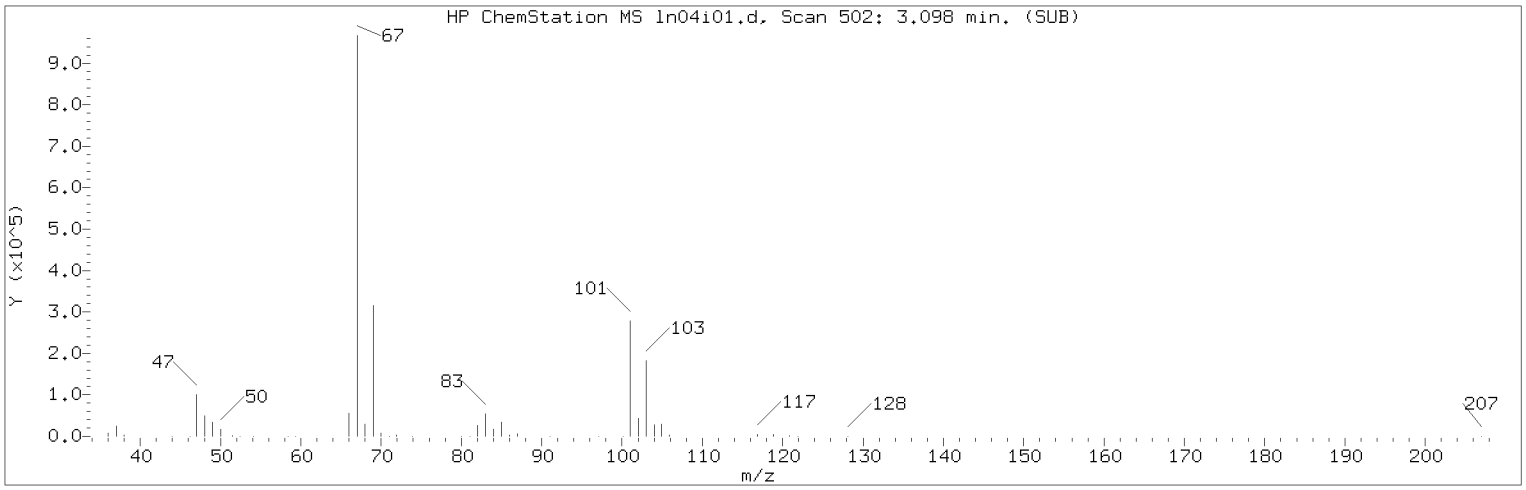
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

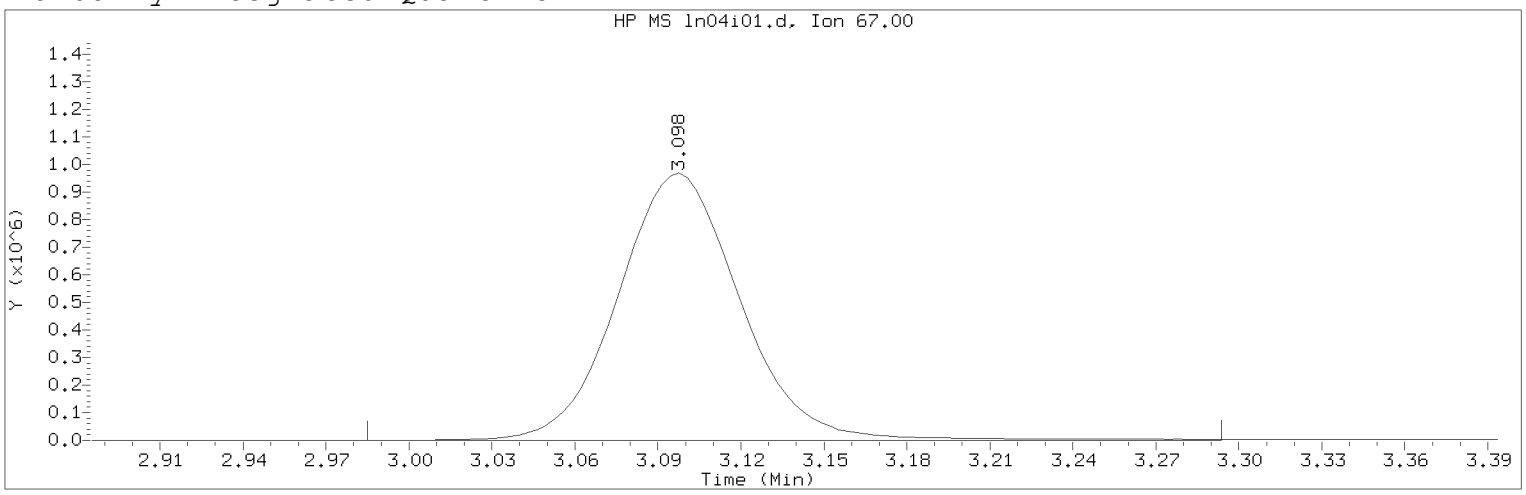
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 1755596
On-column Amount (ng) : 295.0708
Integration start scan : 267 Integration stop scan: 317
Y at integration start : 2196 Y at integration end: 3553

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

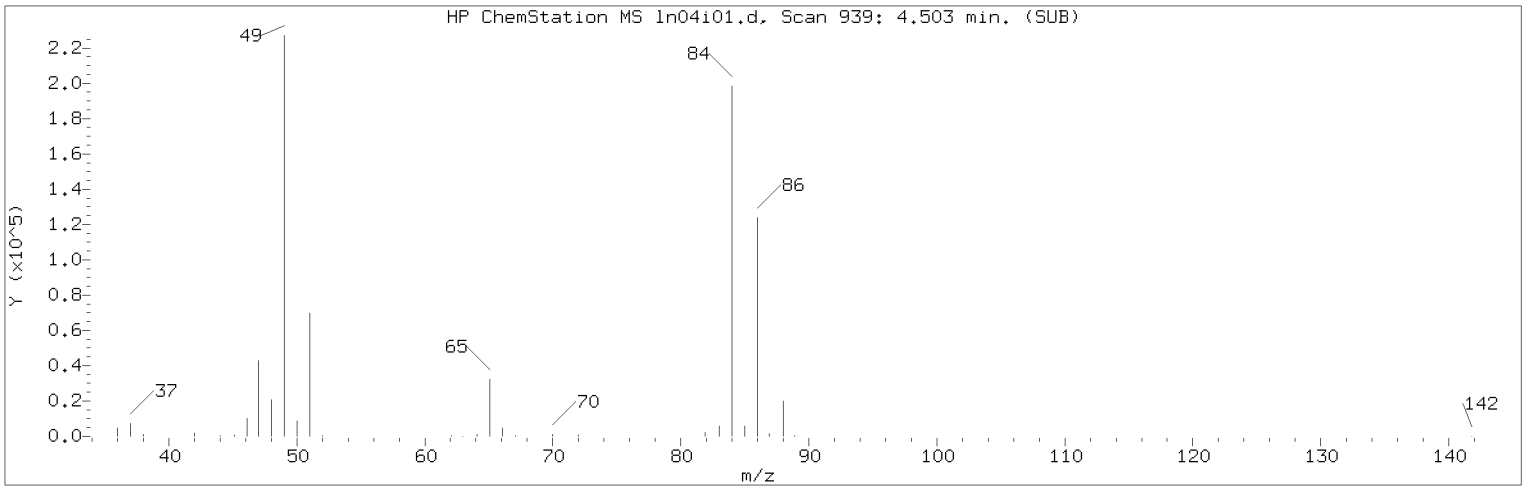
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 502
Retention Time (minutes): 3.098
Quant Ion : 67.00
Area (flag) : 2978303M
On-Column Amount (ng) : 300.2583
Integration start scan : 466 Integration stop scan: 562
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

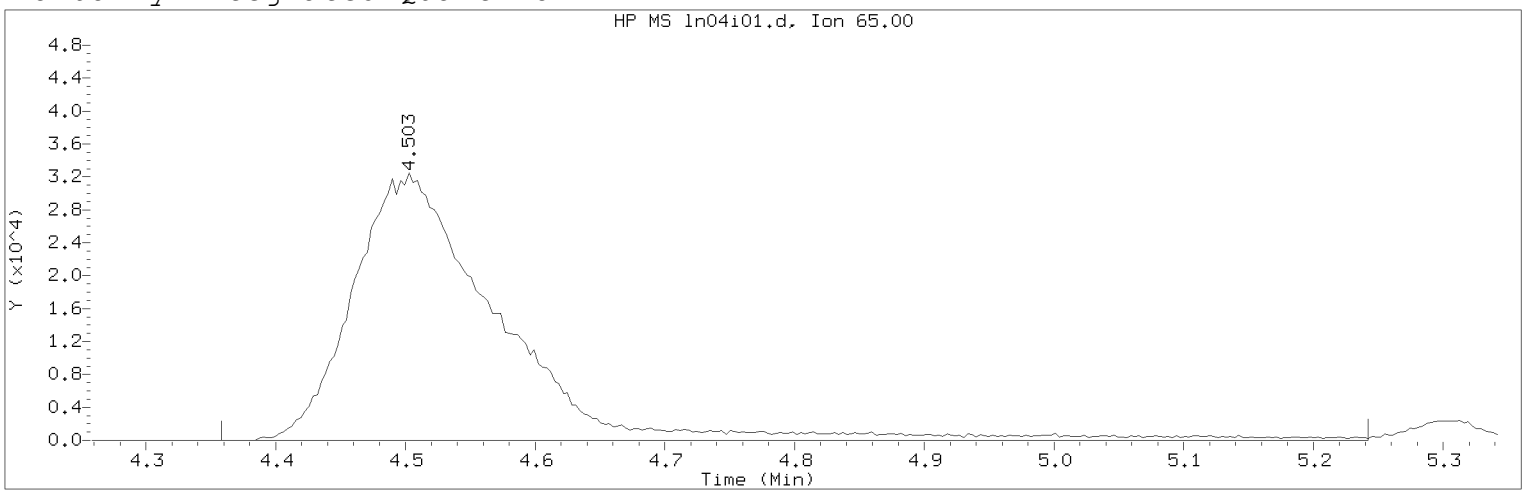
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

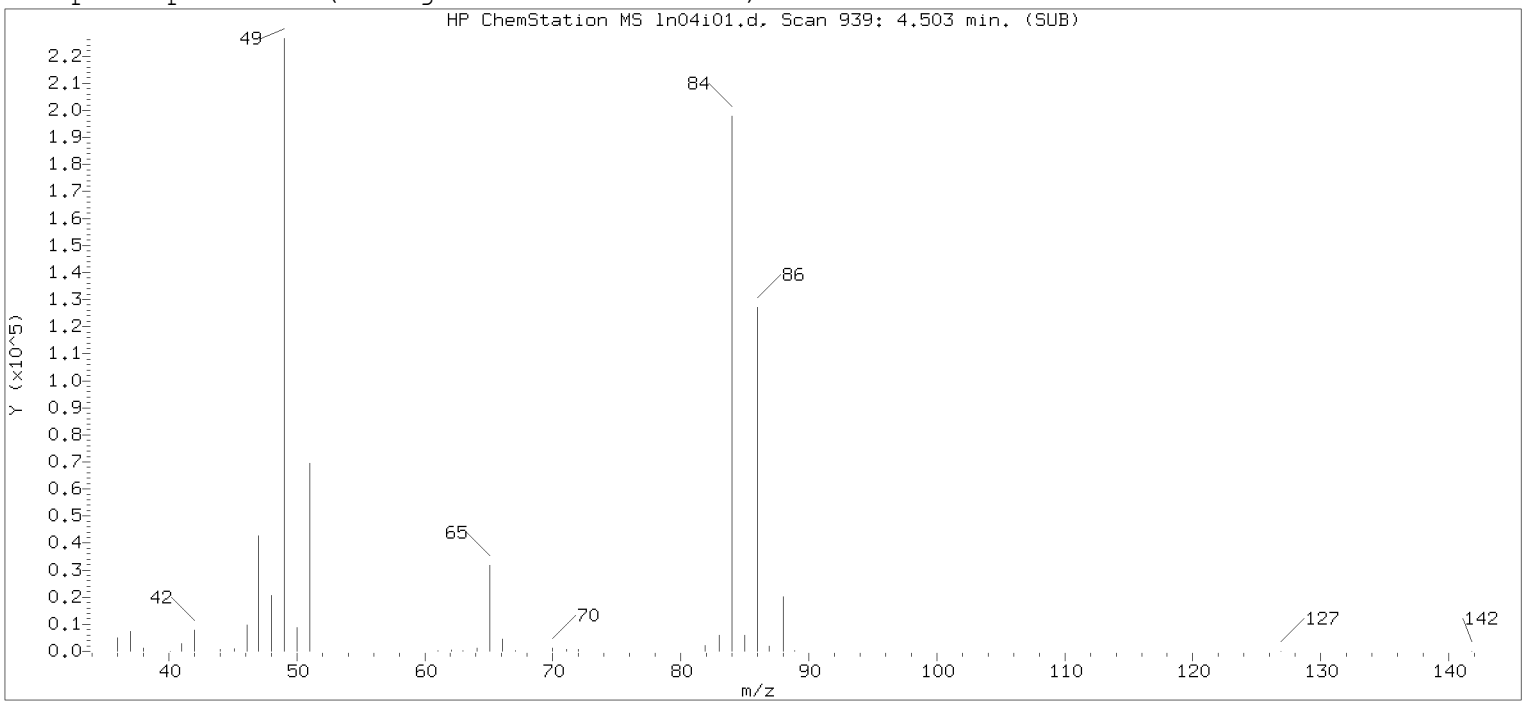
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area (flag) : 254406M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1168
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

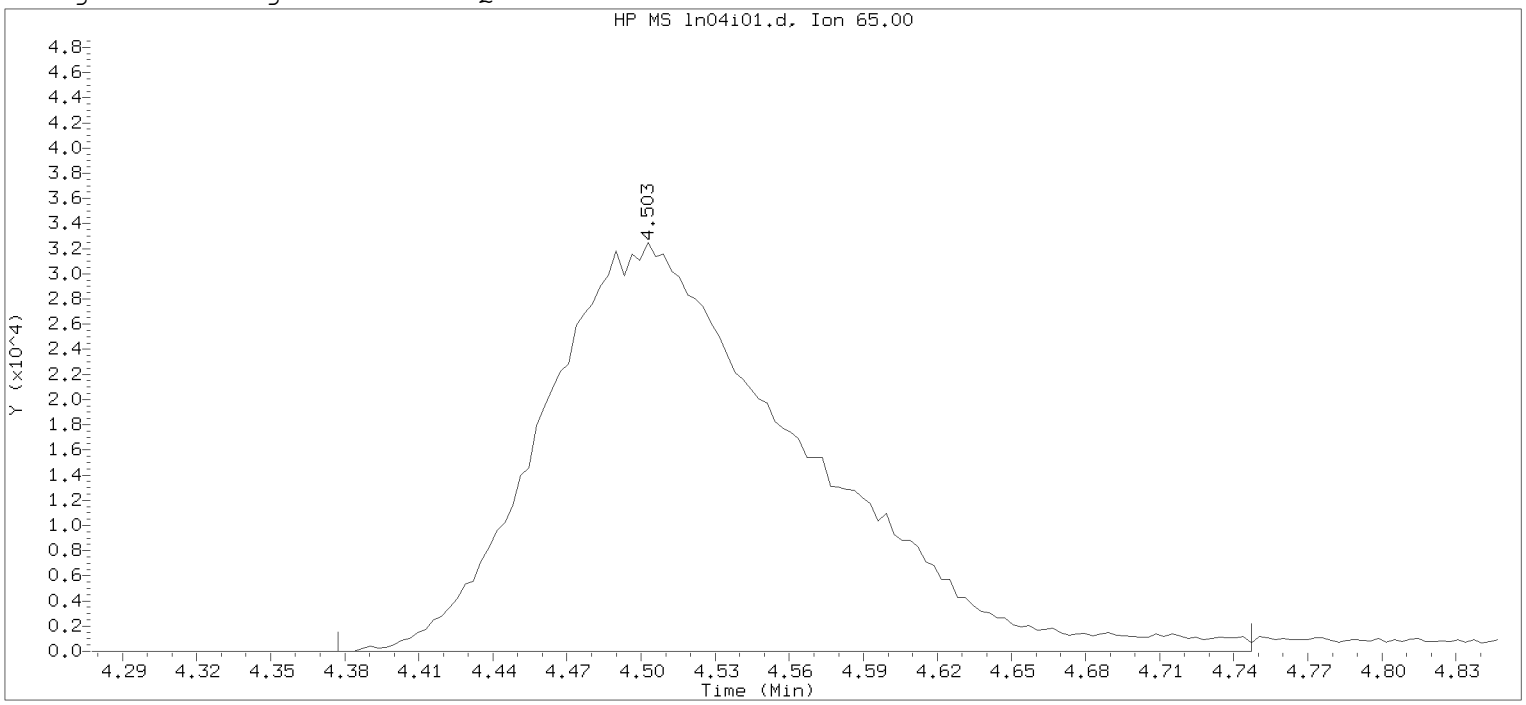
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

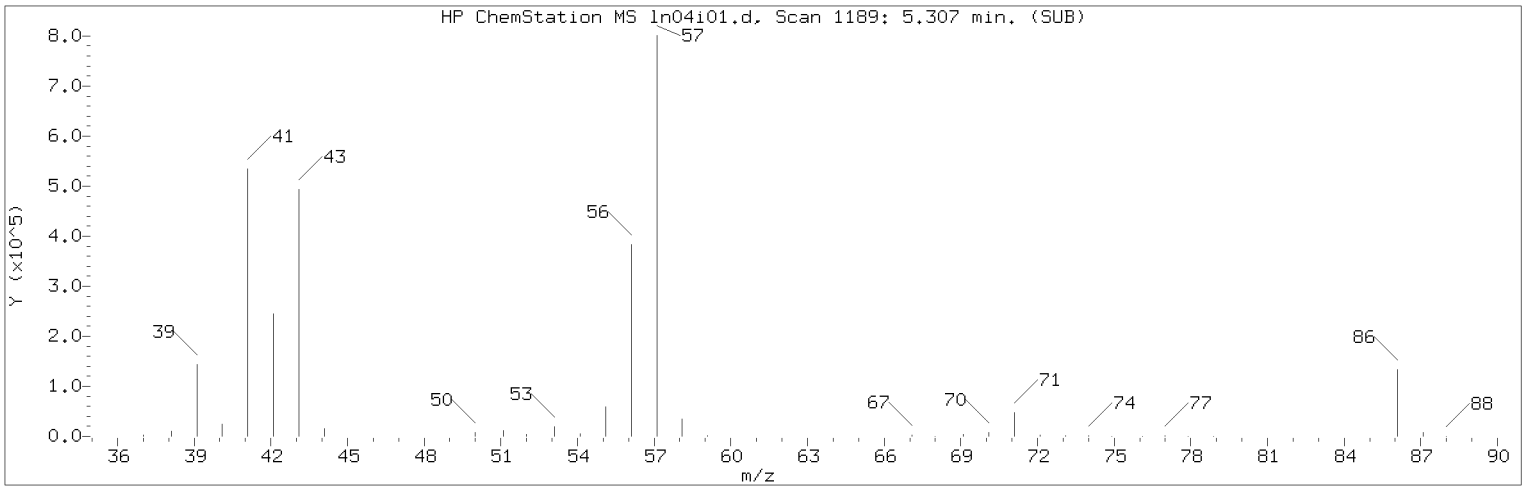
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

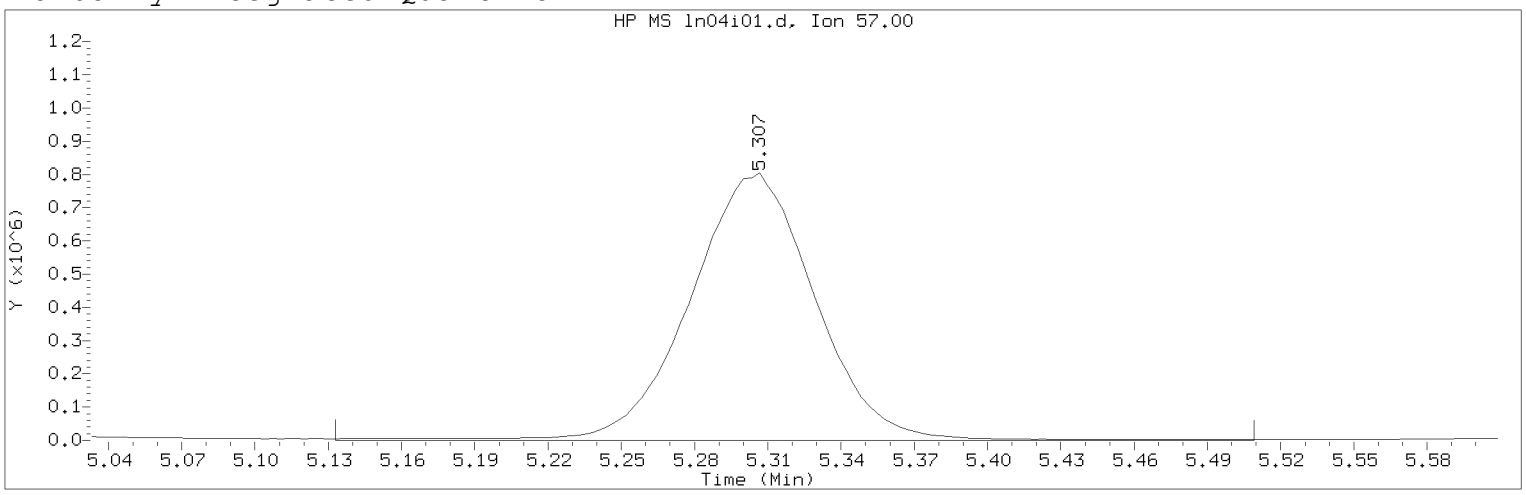
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area : 237264
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

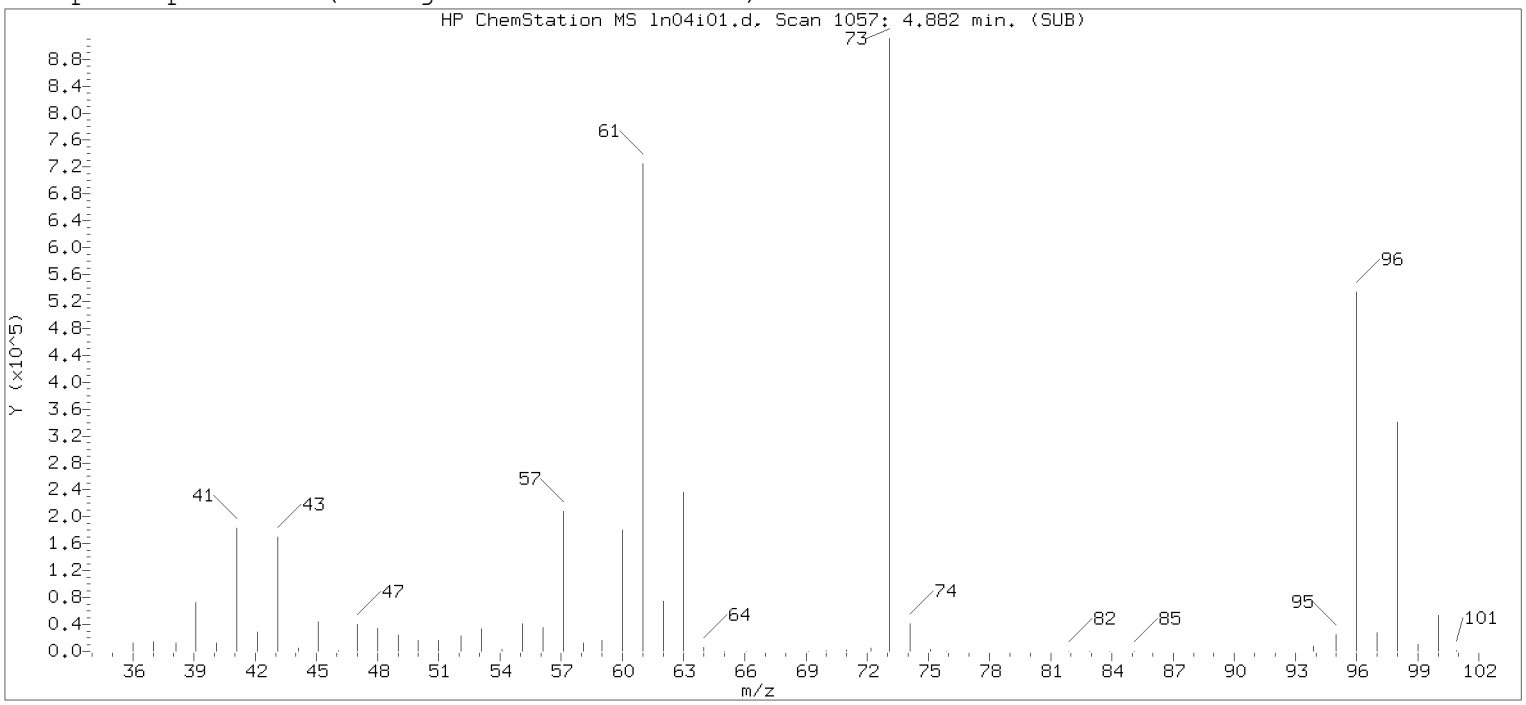
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1189
Retention Time (minutes): 5.307
Quant Ion : 57.00
Area (flag) : 2863189M
On-Column Amount (ng) : 334.8105
Integration start scan : 1134 Integration stop scan: 1251
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

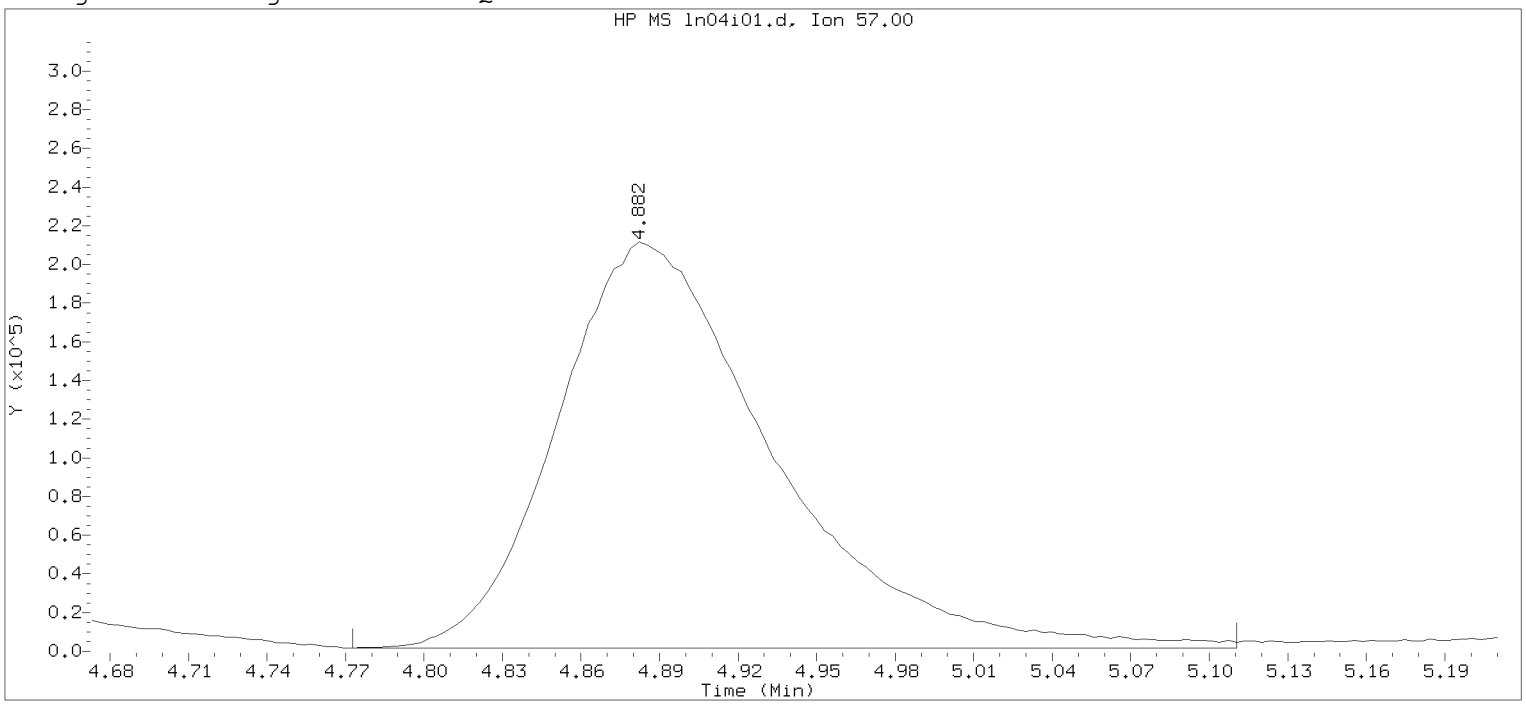
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

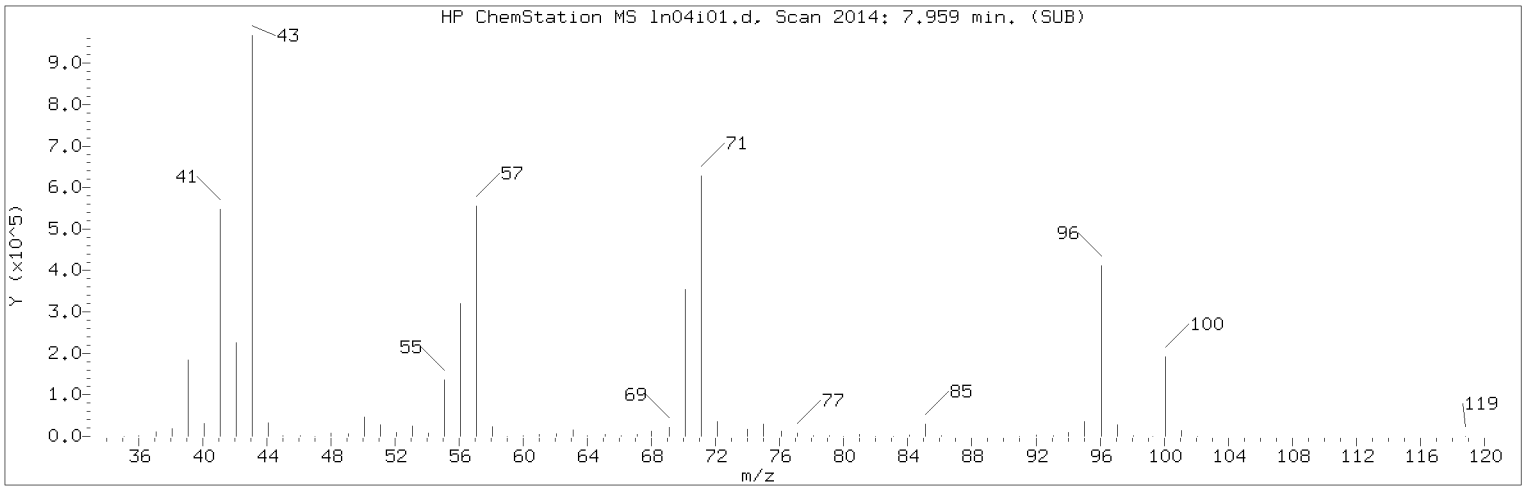
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

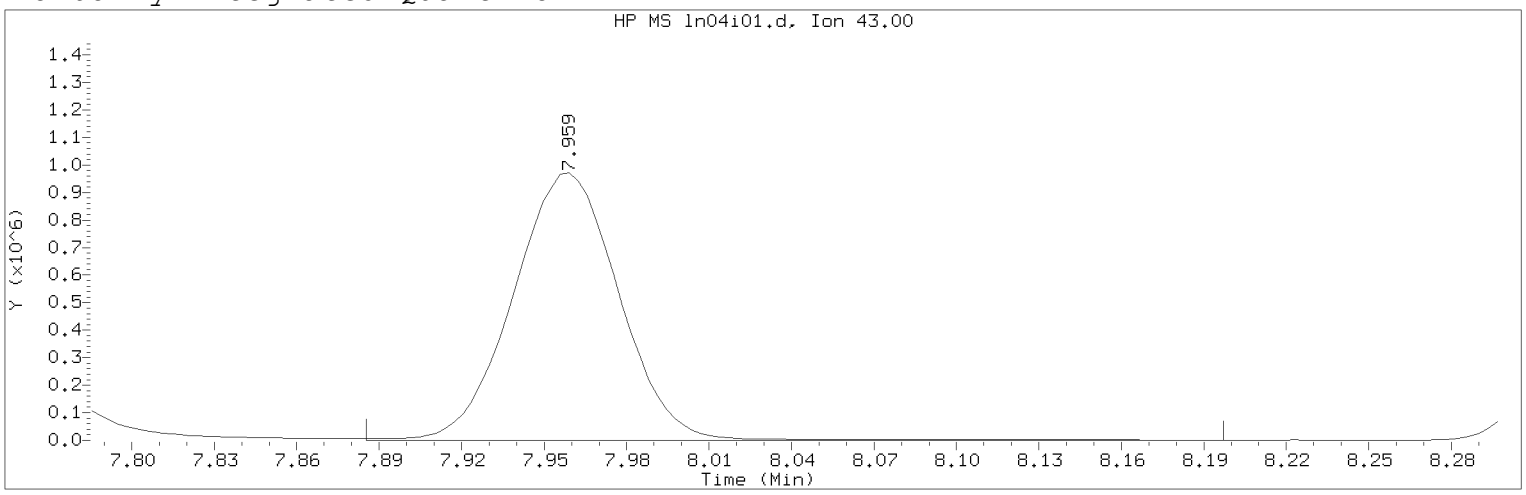
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1057
Retention Time (minutes): 4.882
Quant Ion : 57.00
Area : 1202378
On-column Amount (ng) : 301.4561
Integration start scan : 1022 Integration stop scan: 1127
Y at integration start : 1806 Y at integration end: 1806

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

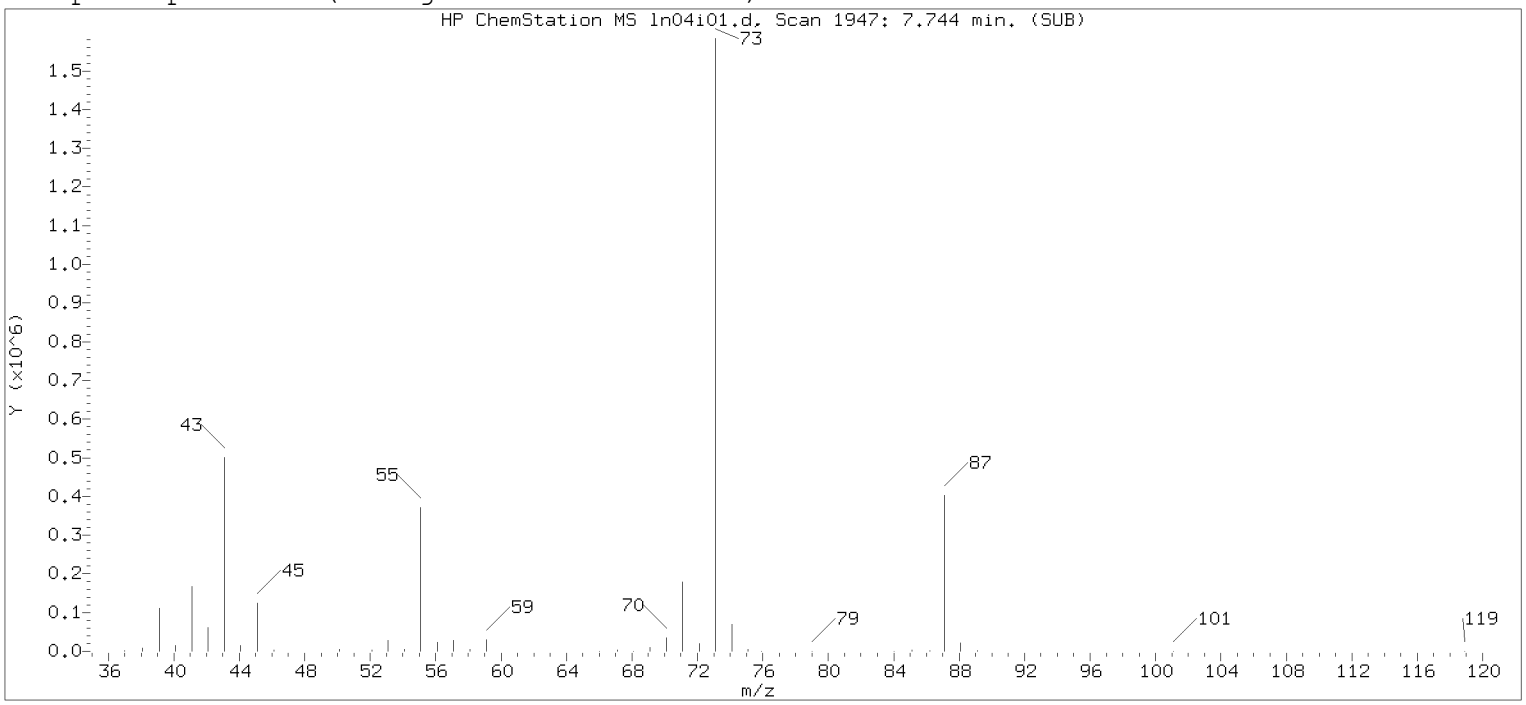
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2014
Retention Time (minutes): 7.959
Quant Ion : 43.00
Area (flag) : 2592531MA
On-Column Amount (ng) : 324.5176
Integration start scan : 1990 Integration stop scan: 2087
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

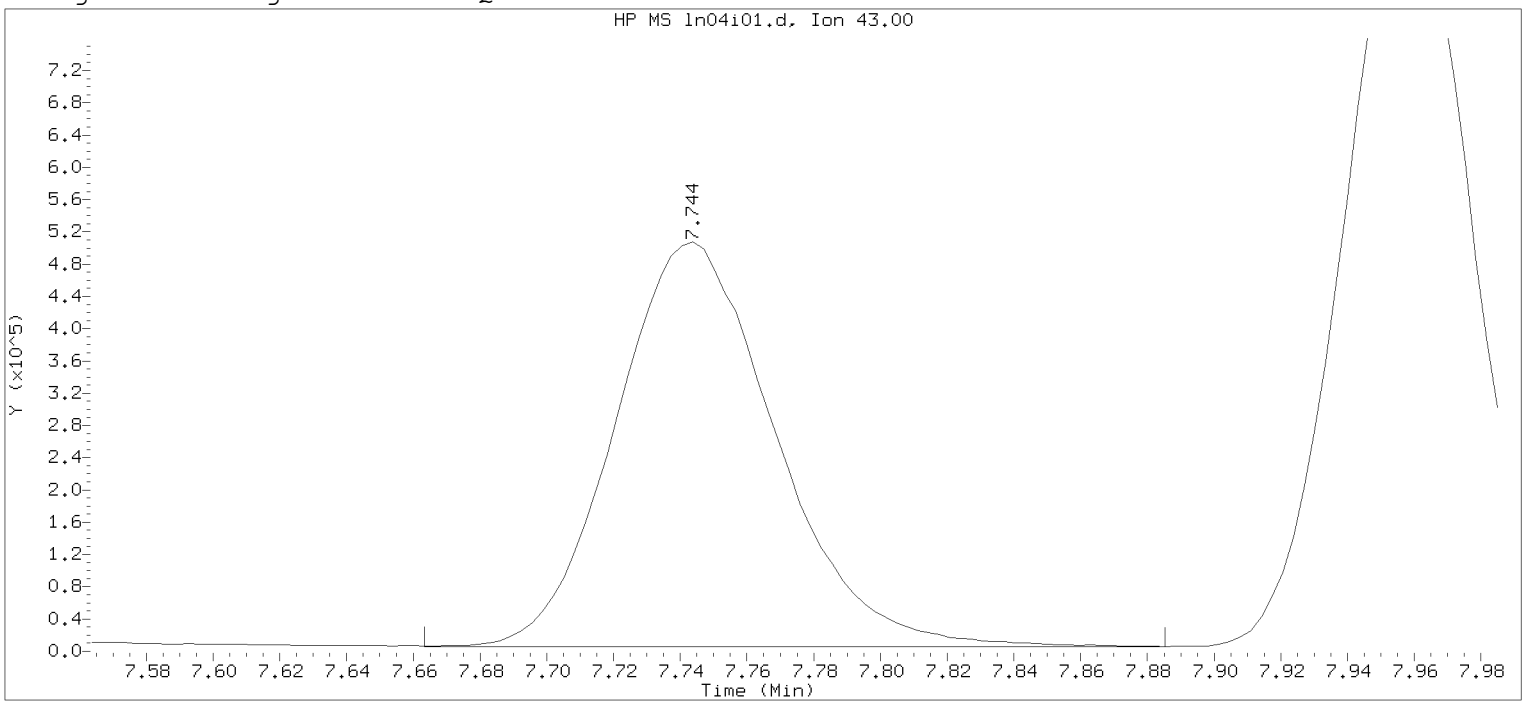
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

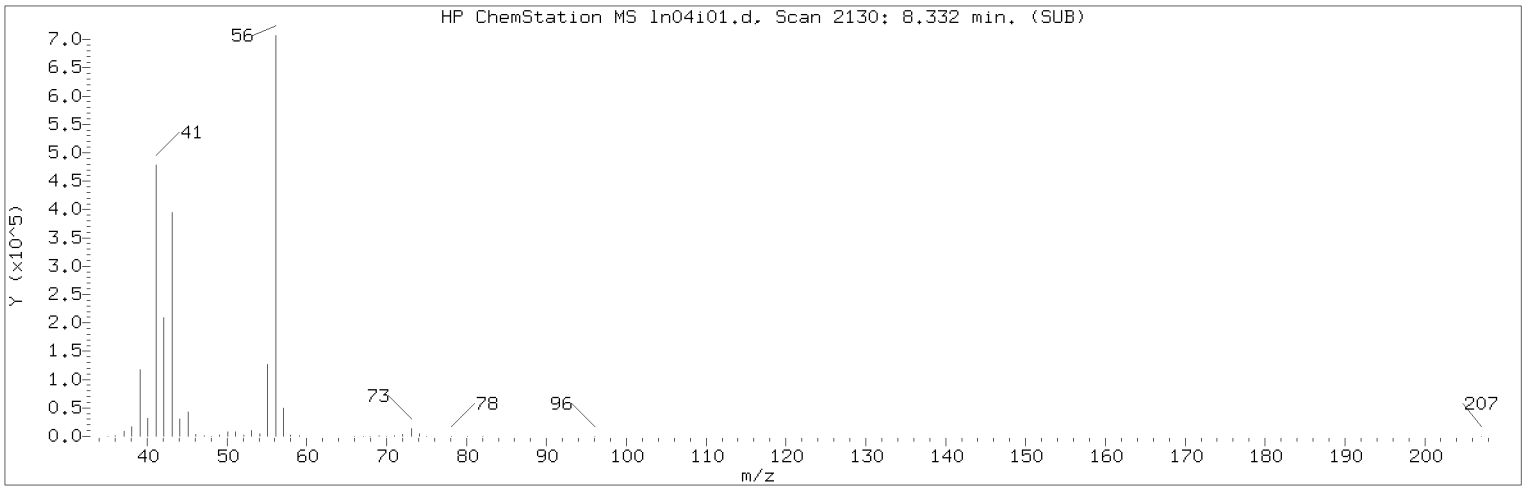
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

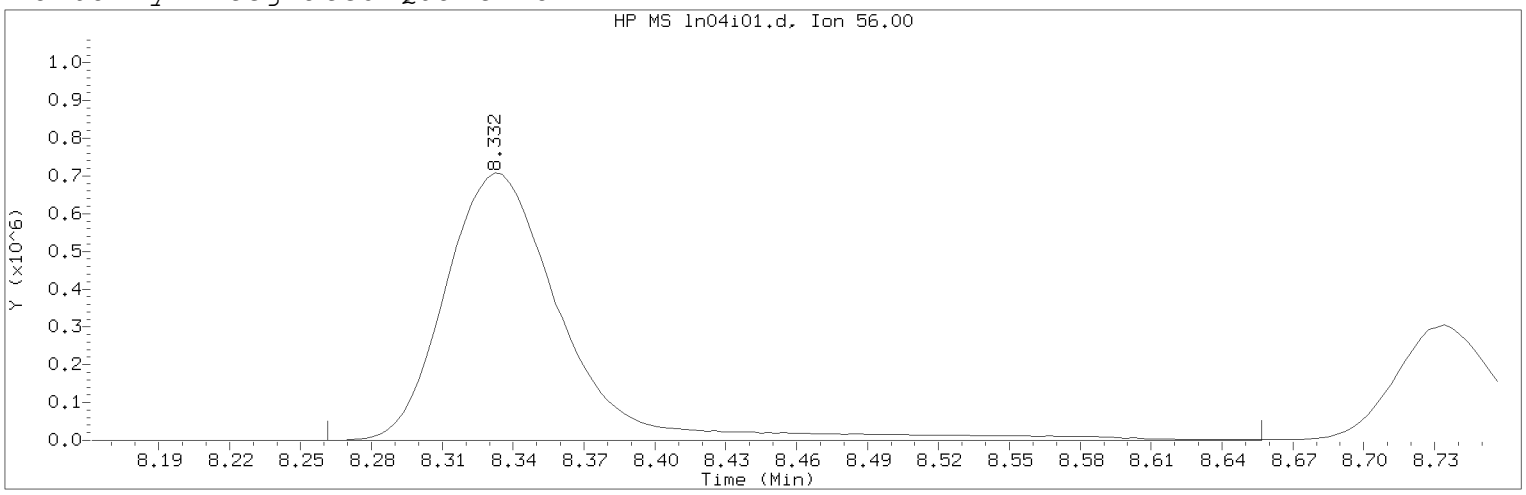
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1947
Retention Time (minutes): 7.744
Quant Ion : 43.00
Area : 1668813
On-column Amount (ng) : 288.4319
Integration start scan : 1921 Integration stop scan: 1990
Y at integration start : 5866 Y at integration end: 5866

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

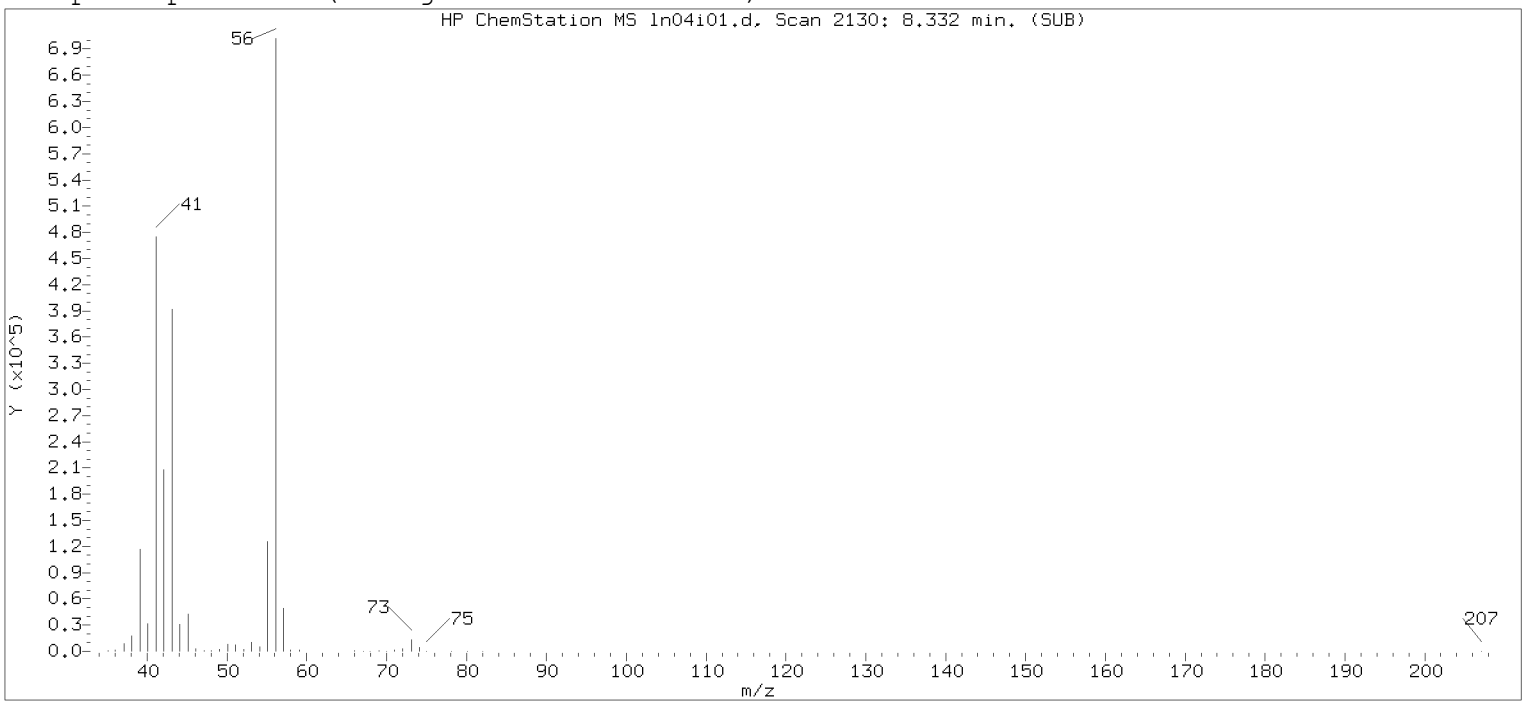
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area (flag) : 2465385M
On-Column Amount (ng) : 7947.0678
Integration start scan : 2107 Integration stop scan: 2230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

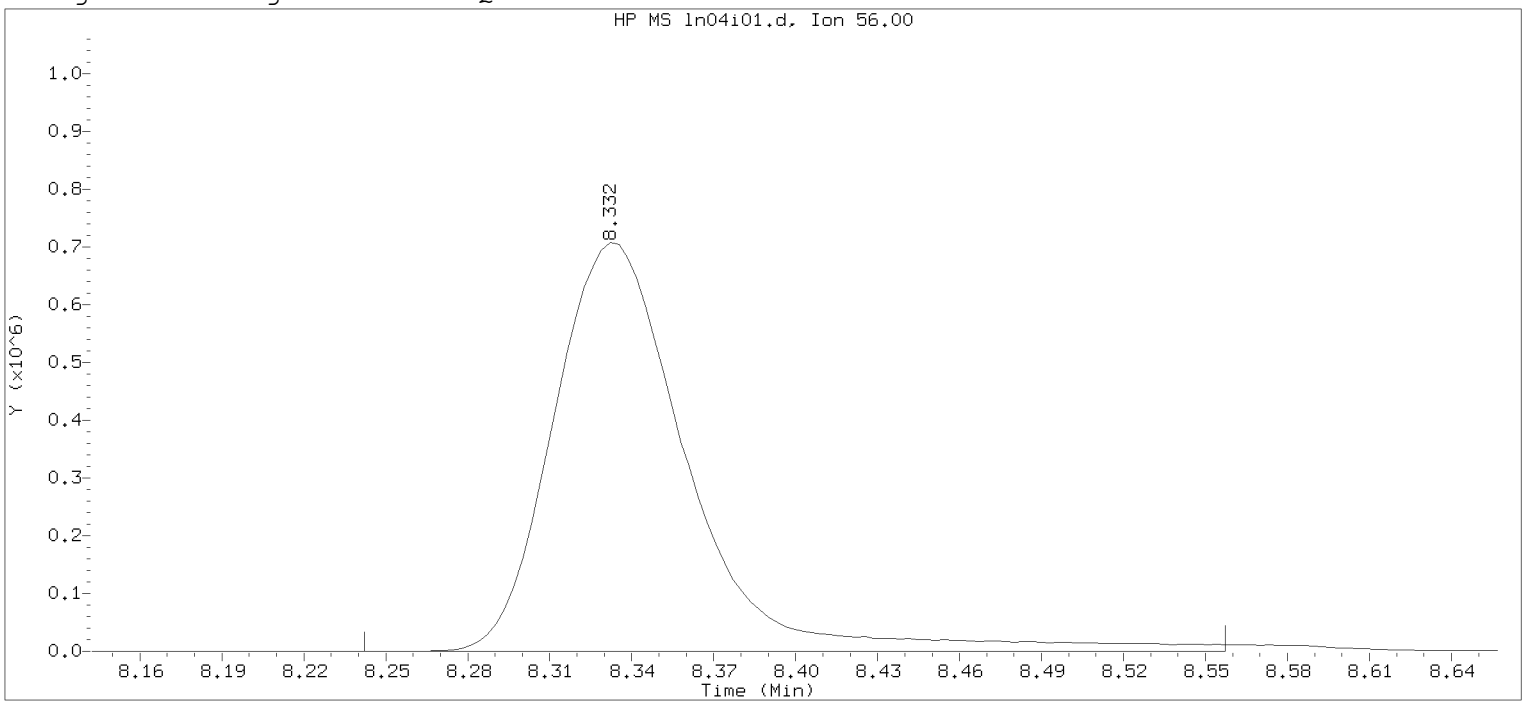
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

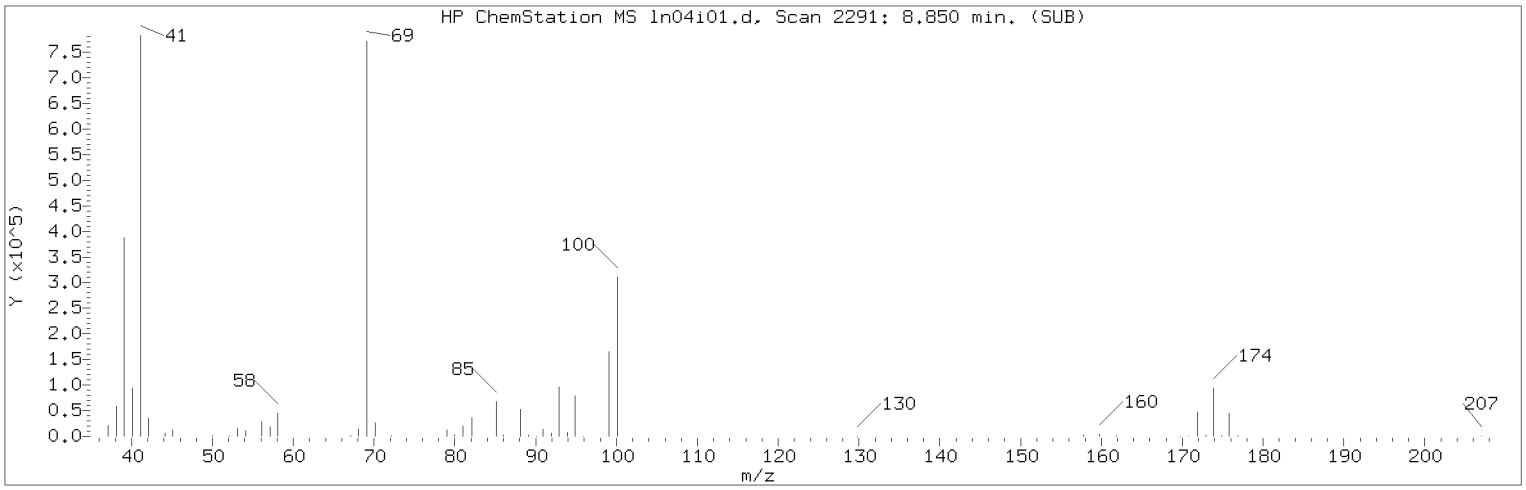
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

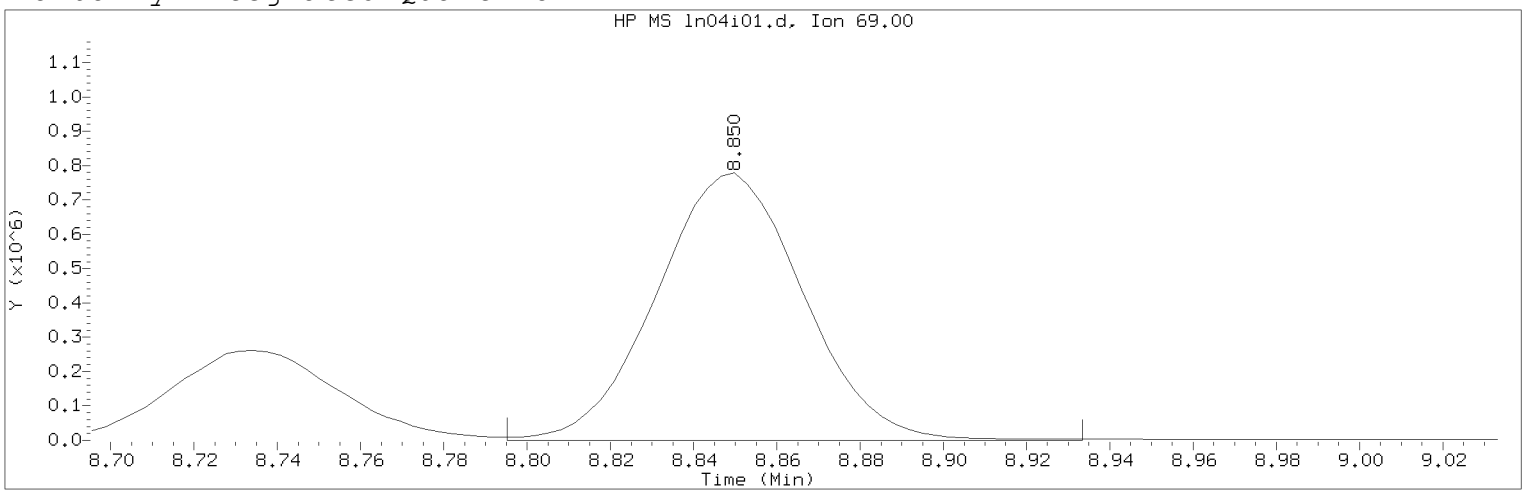
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area : 2429255
On-column Amount (ng) : 7682.9381
Integration start scan : 2101 Integration stop scan: 2199
Y at integration start : 176 Y at integration end: 176

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

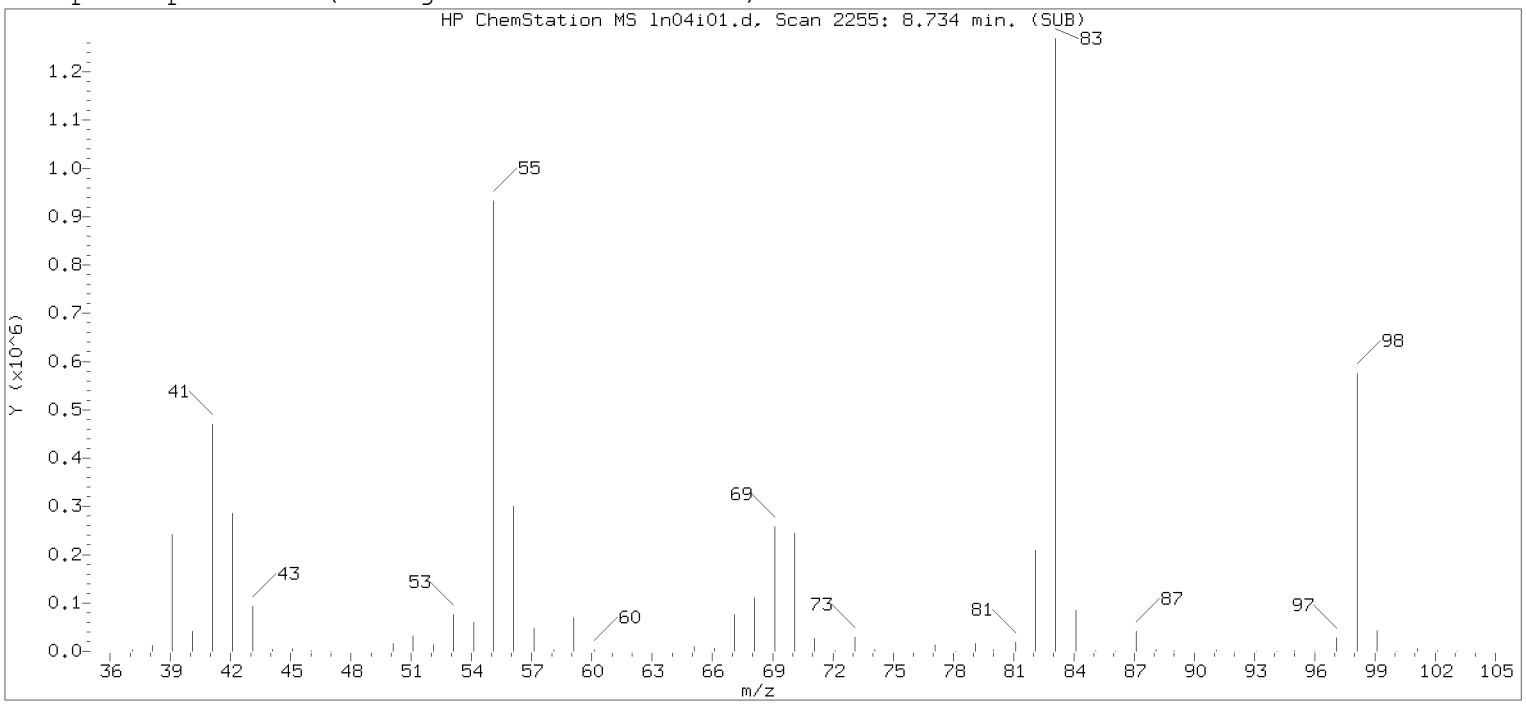
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2291
Retention Time (minutes): 8.850
Quant Ion : 69.00
Area (flag) : 1904896A
On-Column Amount (ng) : 340.2564
Integration start scan : 2273 Integration stop scan: 2316
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

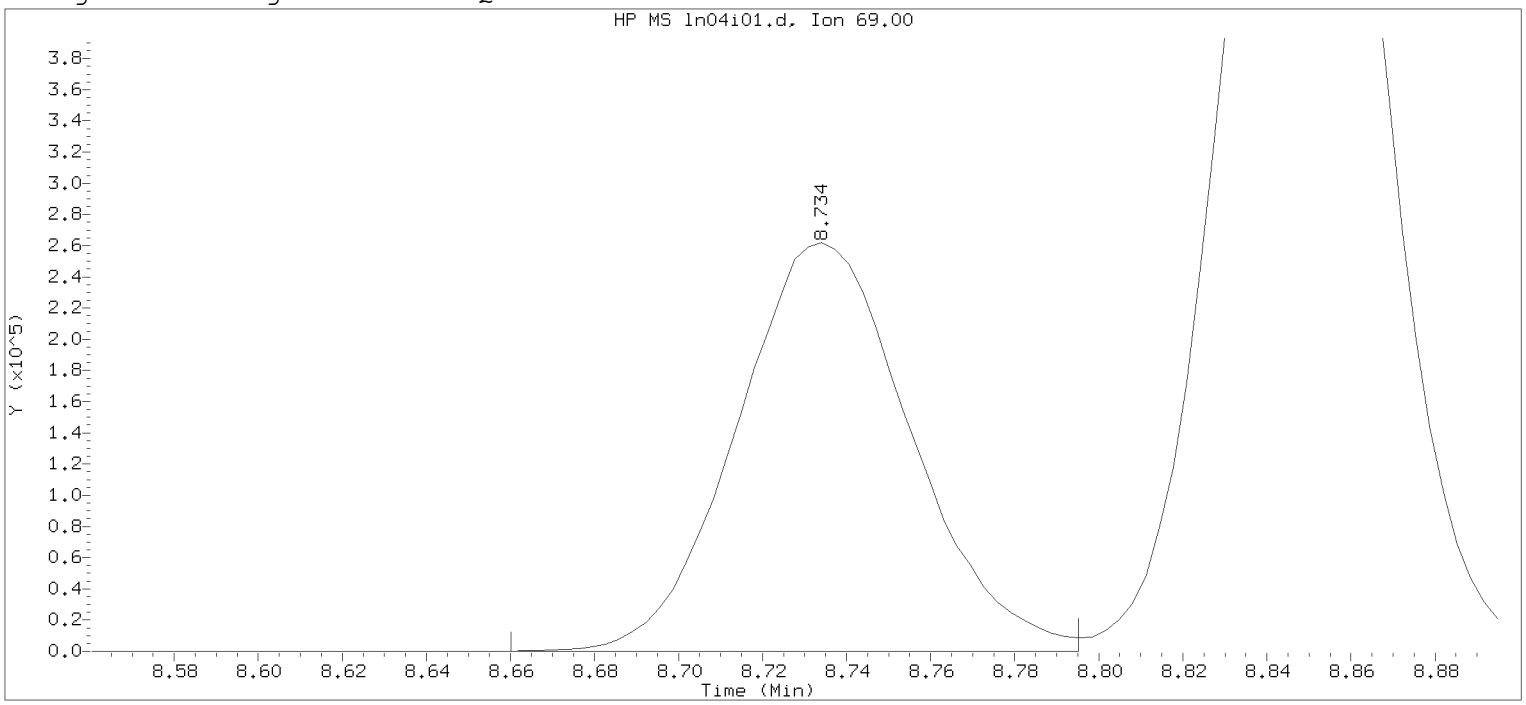
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

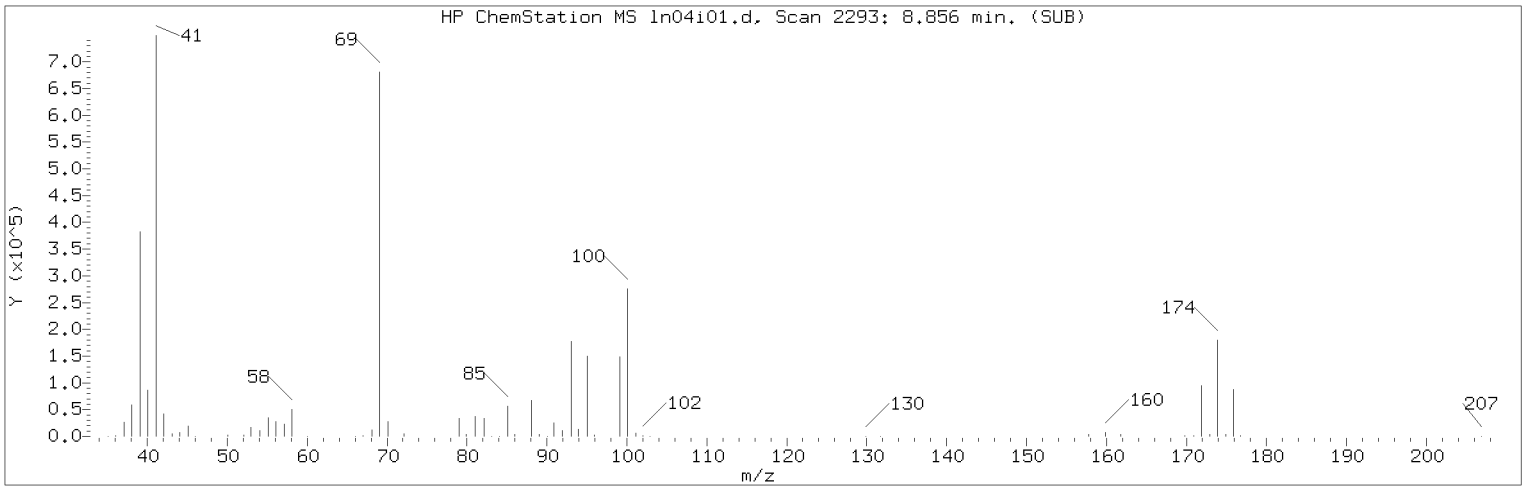
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

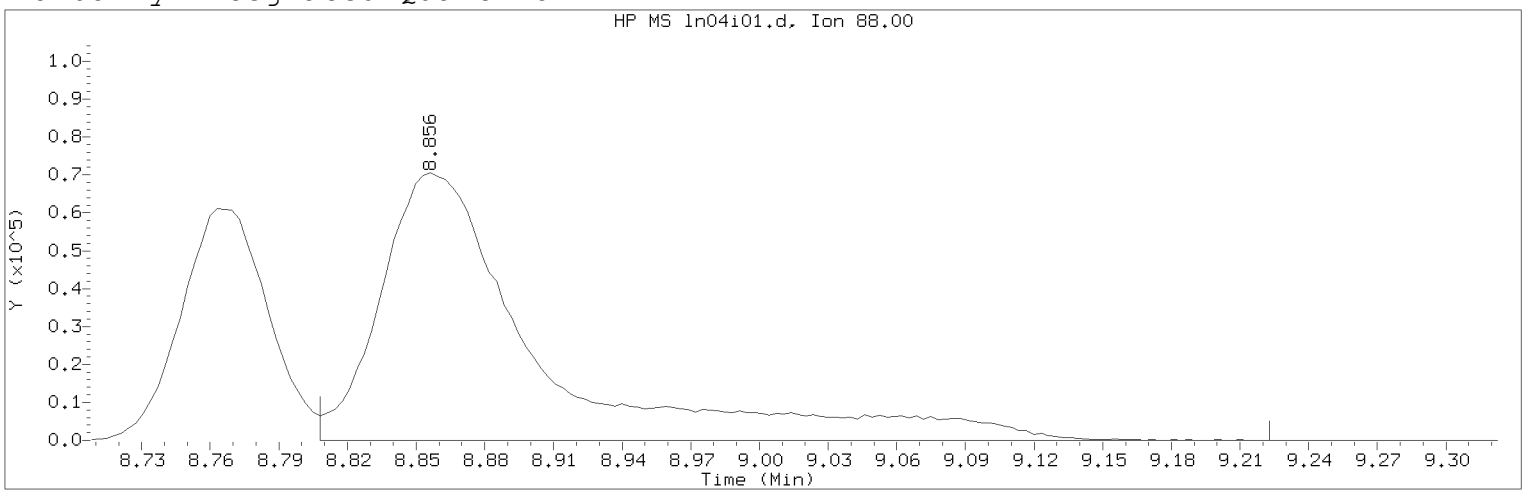
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 752058
On-column Amount (ng) : 311.1363
Integration start scan : 2231 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

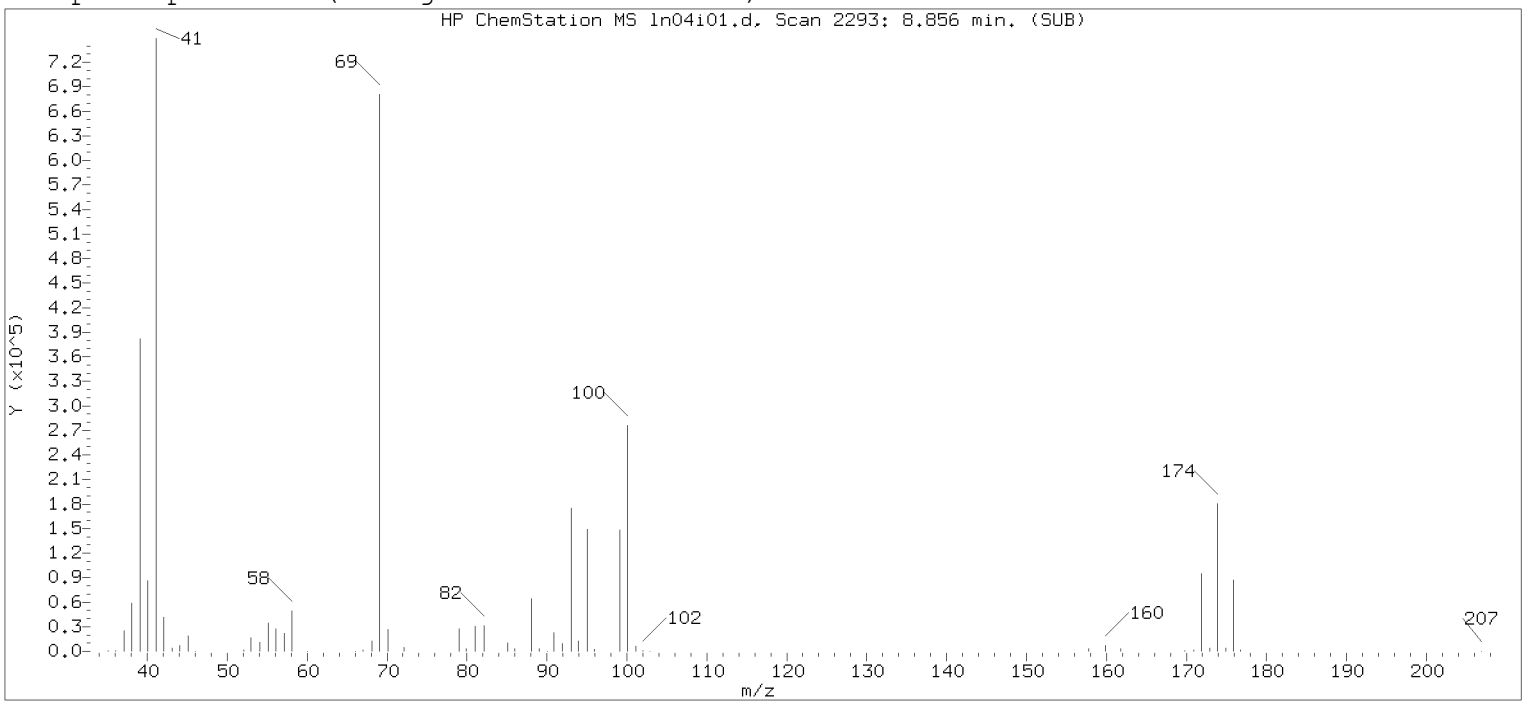
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 338379M
On-Column Amount (ng) : 3968.4208
Integration start scan : 2277 Integration stop scan: 2406
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

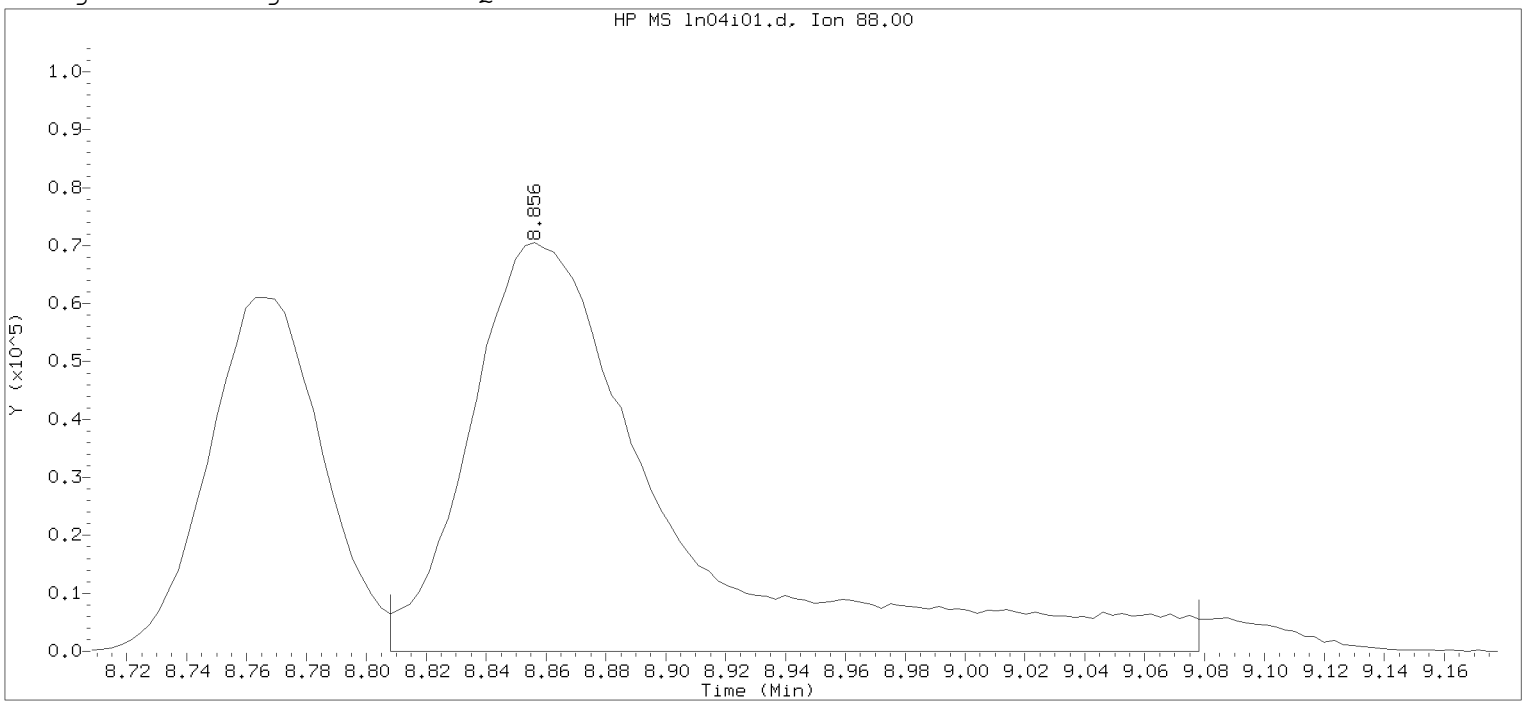
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

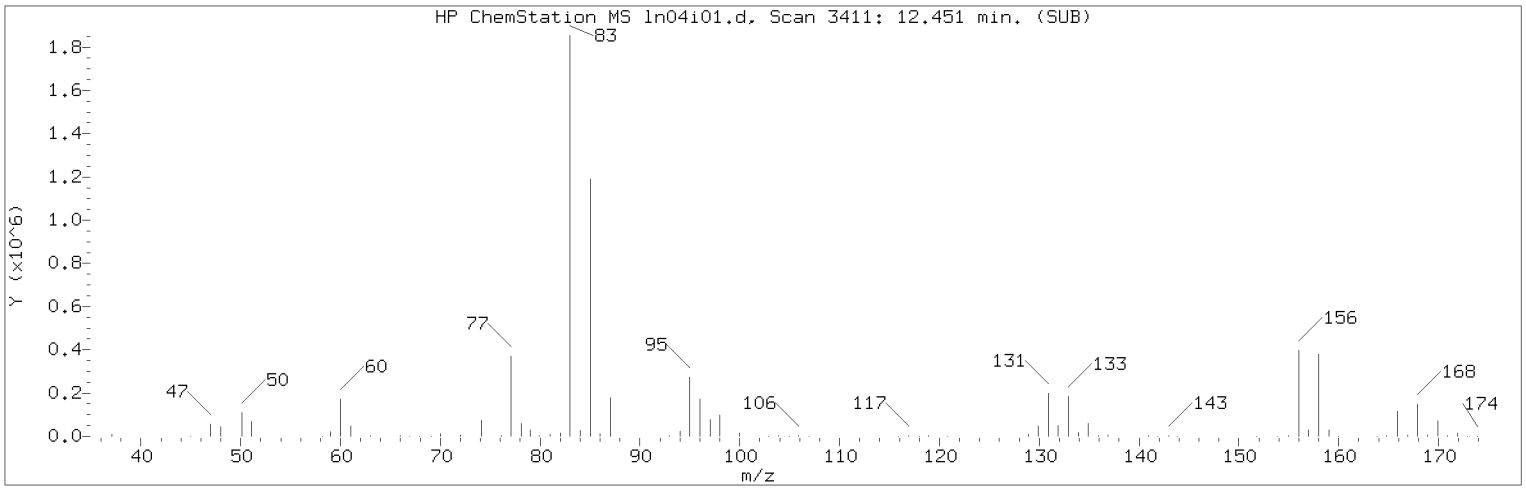
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

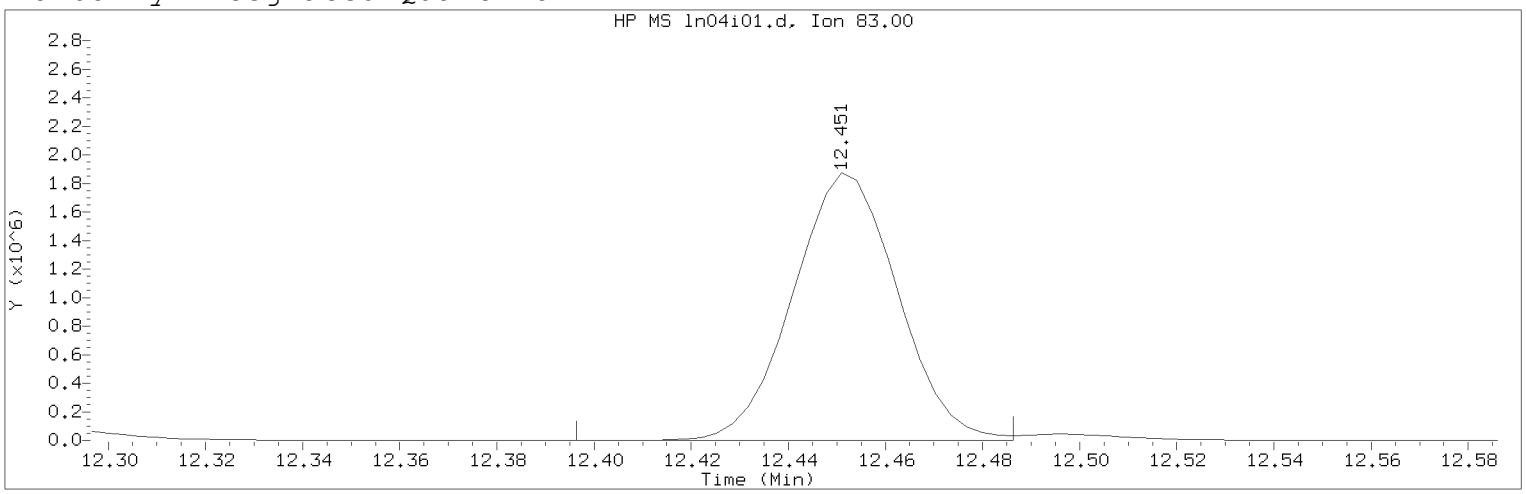
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area : 325164
On-column Amount (ng) : 3803.8575
Integration start scan : 2277 Integration stop scan: 2361
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

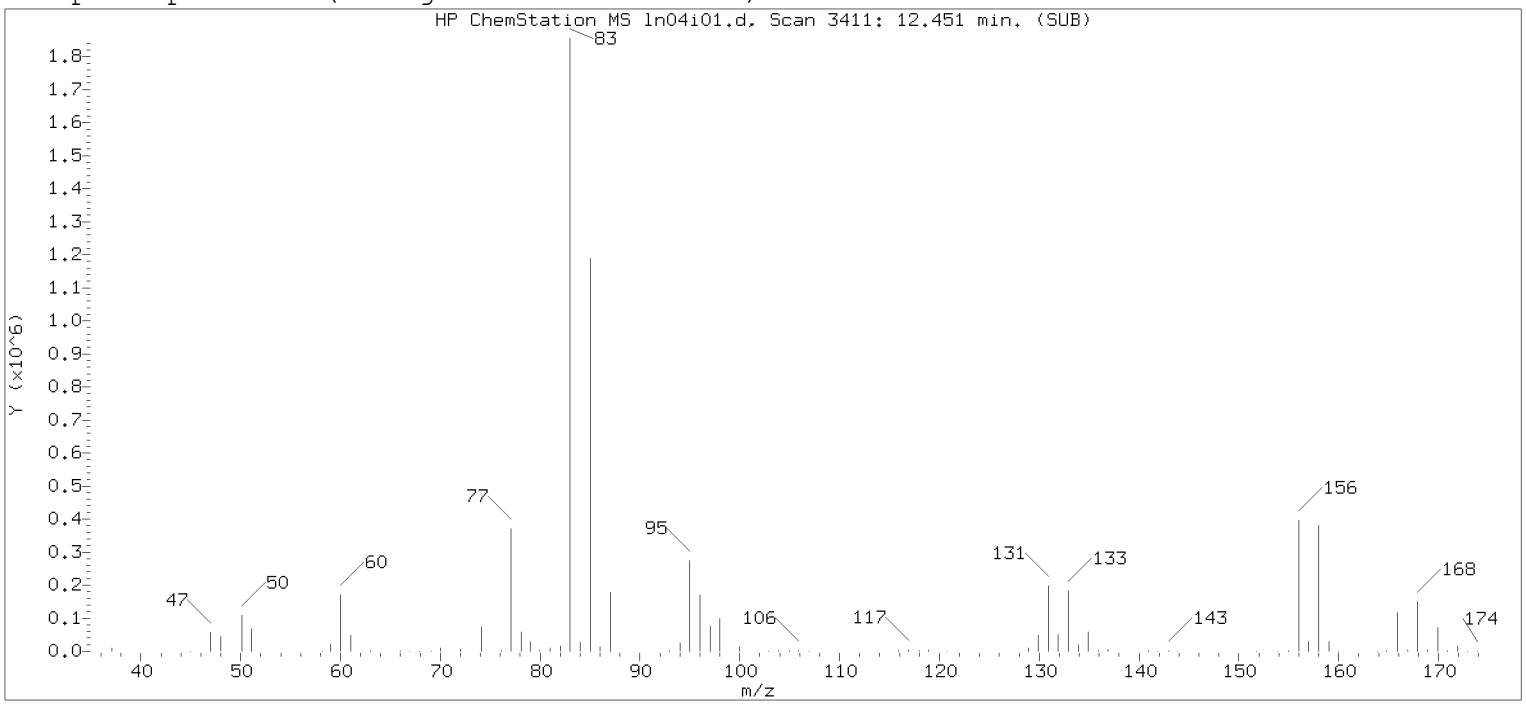
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 2800639M
On-Column Amount (ng) : 310.7054
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

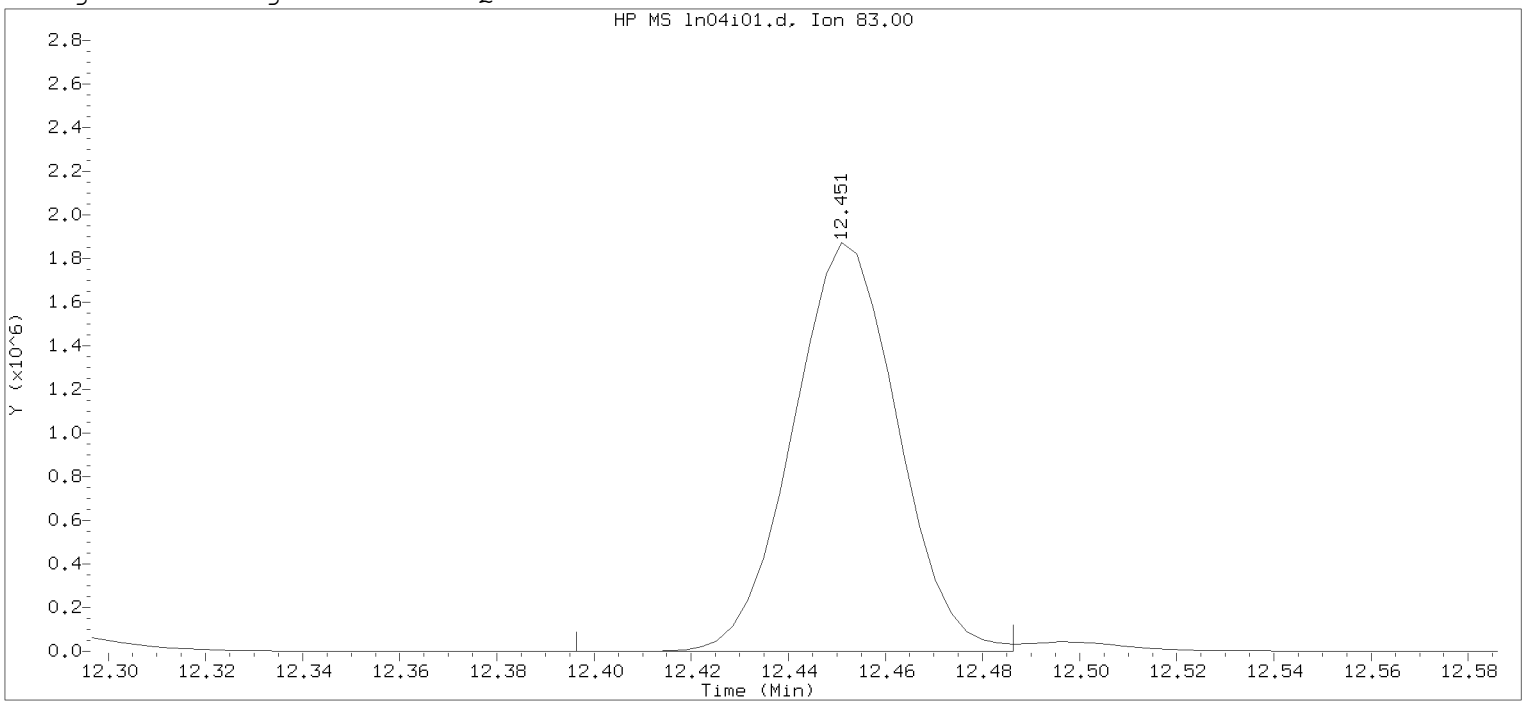
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

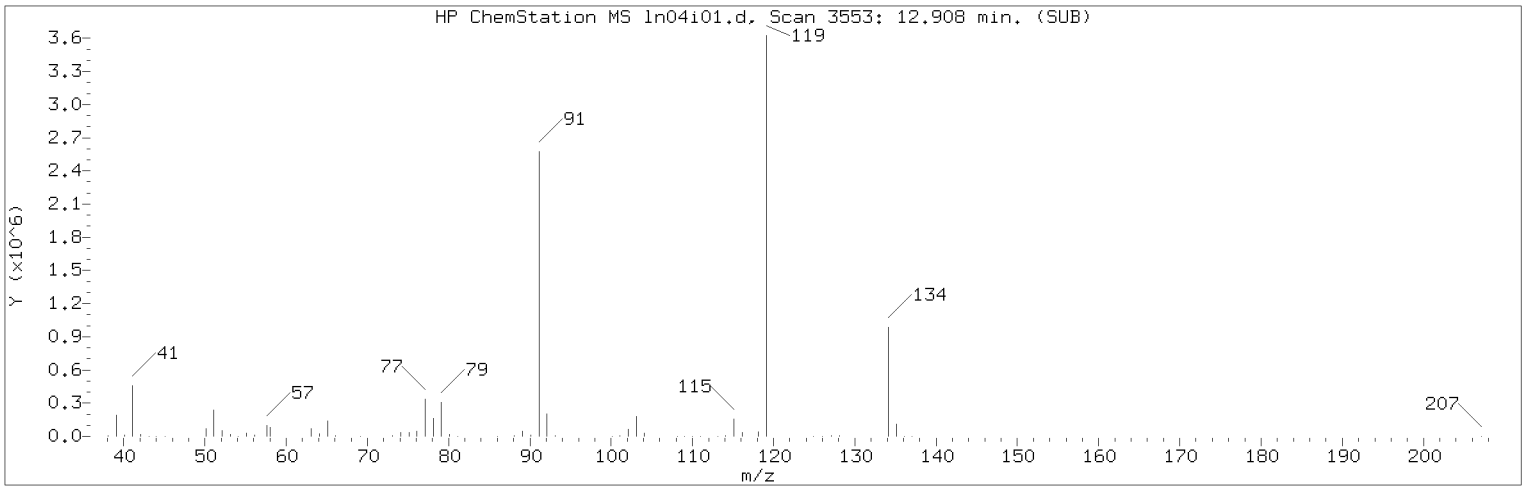
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

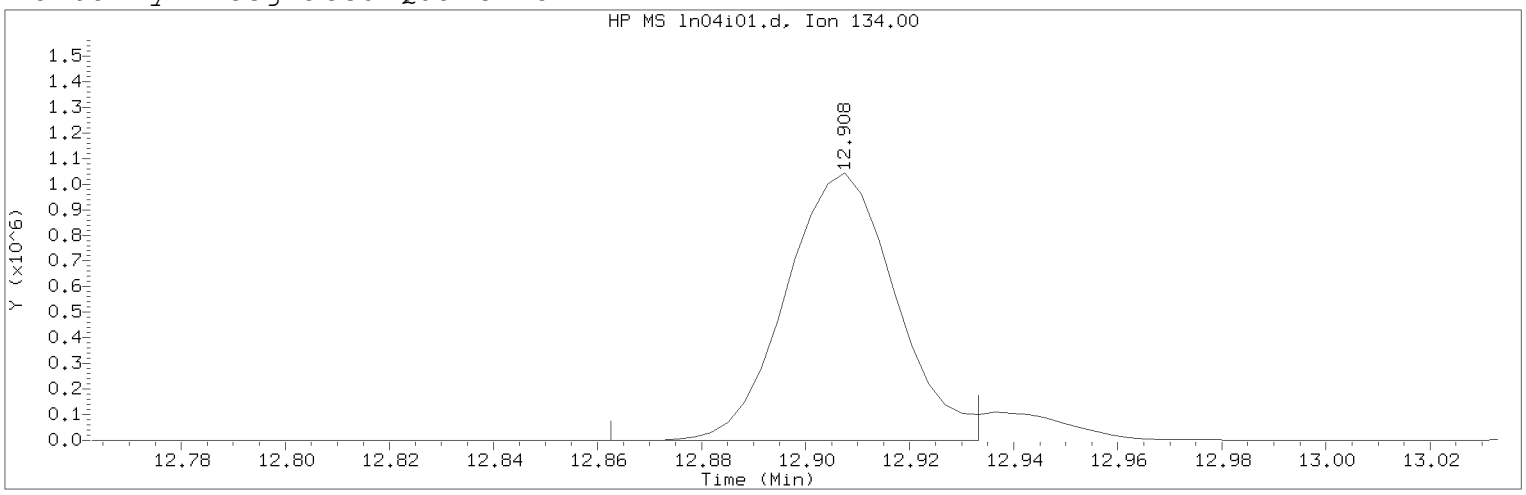
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 2797364
On-column Amount (ng) : 294.0638
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

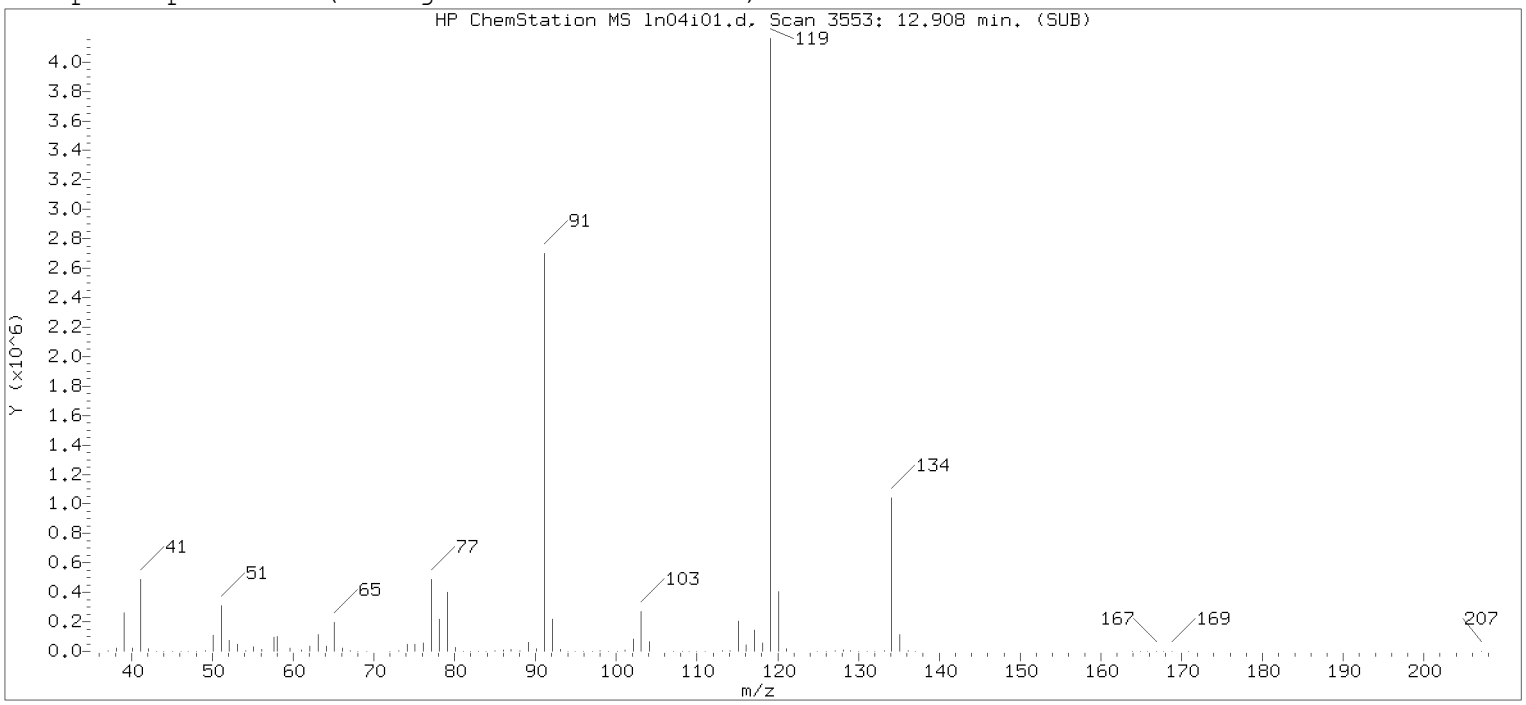
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area (flag) : 1524421M
On-Column Amount (ng) : 323.7167
Integration start scan : 3538 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

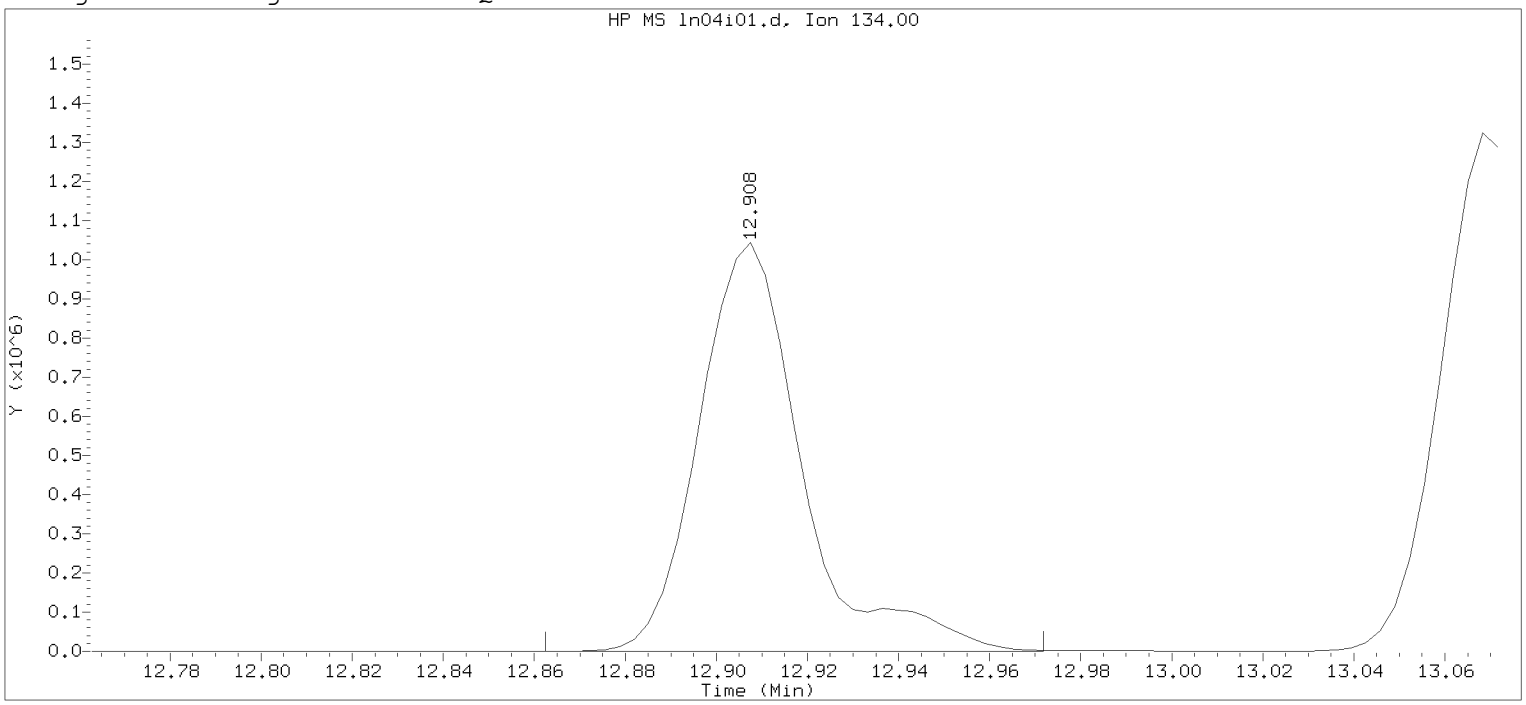
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



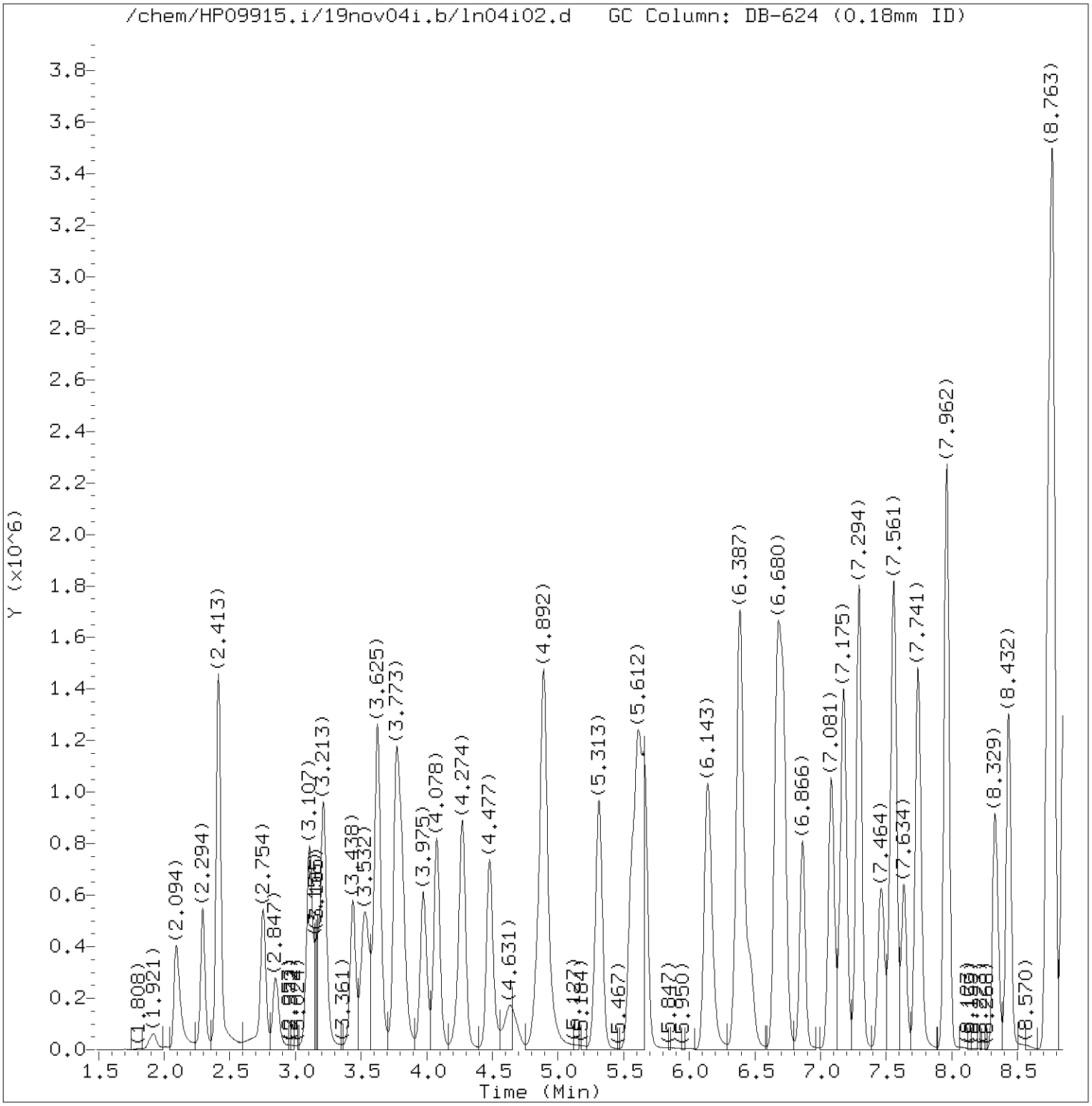
Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area : 1639624
On-column Amount (ng) : 313.1253
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

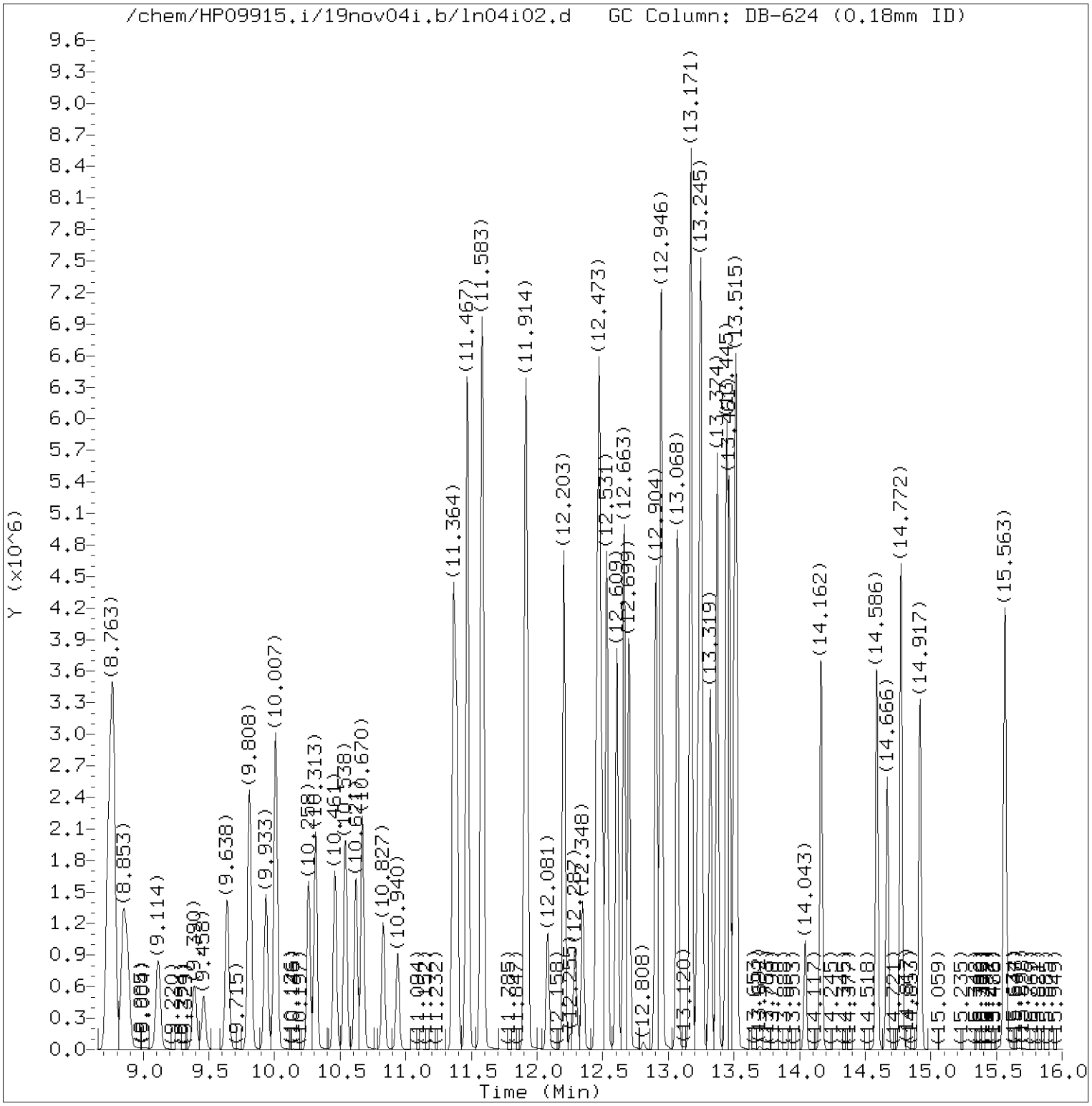
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.094	85	857961M	103.943
4) Chloromethane	(2)	2.294	50	784780	98.650
5) 1,3-Butadiene	(2)	2.413	39	618713M	93.669
6) Vinyl Chloride	(2)	2.416	62	781267	98.400
8) Bromomethane	(2)	2.754	94	539686	94.824
9) Chloroethane	(2)	2.847	64	418524	95.919
10) Dichlorofluoromethane	(2)	3.104	67	992796M	94.678
12) Trichlorofluoromethane	(2)	3.162	101	860893	100.714
11) n-Pentane	(2)	3.217	43	1002713	99.263
14) Ethyl ether	(2)	3.435	59	550266	99.622
15) Freon 123a	(2)	3.532	67	679642	98.841
16) Acrolein	(1)	3.625	56	2075331	1040.029
17) 1,1-Dichloroethene	(2)	3.763	96	510815	101.811
17) 1,1-Dichloroethene	(2)	3.766	63	250669	99.655
19) Freon 113	(2)	3.799	101	594686	103.888
18) Acetone	(1)	3.805	58	181313	202.676
22) Methyl Iodide	(2)	3.972	142	1051103	101.097
21) 2-Propanol	(1)	4.001	45	343390	533.946
23) Carbon Disulfide	(2)	4.078	76	1957296	103.520
27) Methyl Acetate	(2)	4.252	43	630892	97.630
25) Allyl Chloride	(2)	4.274	41	894091	99.337
28) Methylene Chloride	(2)	4.477	84	596882	99.952
29)*t-Butyl alcohol-d10	(1)	4.509	65	265971M	250.000
30) t-Butyl alcohol	(1)	4.631	59	619917	553.614
31) Acrylonitrile	(2)	4.837	53	359403	103.376
33) Methyl Tertiary Butyl Ether	(2)	4.889	73	1901626	99.813
32) trans-1,2-Dichloroethene	(2)	4.892	96	586662	101.076
34) n-Hexane	(2)	5.313	57	974442M	107.908
36) 1,1-Dichloroethane	(2)	5.557	63	1029230	101.649
38) di-Isopropyl ether	(2)	5.609	45	1986383	101.717
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	947614	104.312
40) Ethyl t-butyl ether	(2)	6.143	59	1910218	100.794
43) 1,2-Dichloroethene (Total)	(2)		96	1240957	201.508
44) 2-Butanone	(2)	6.364	43	920731	206.310
42) cis-1,2-Dichloroethene	(2)	6.384	96	654295	100.432
45) 2,2-Dichloropropane	(2)	6.400	77	813782	103.388
47) Propionitrile	(1)	6.464	54	725632	520.085
48) Methacrylonitrile	(2)	6.676	67	966183	257.629

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	349204	101.088
50) Tetrahydrofuran	(1)	6.721	71	261419	207.429
51) Chloroform	(2)	6.866	83	989698	102.195
52)$Dibromofluoromethane	(2)	7.078	113	292391	50.529
52)$Dibromofluoromethane	(2)	7.078	111	297764	50.467
53) 1,1,1-Trichloroethane	(2)	7.088	97	860519	104.109
54) Cyclohexane	(2)	7.175	56	1170449	105.893
54) Cyclohexane	(2)	7.181	84	1022362	106.481
54) Cyclohexane	(2)	7.175	69	362451	106.017
56) Carbon Tetrachloride	(2)	7.290	117	751477	107.196
55) 1,1-Dichloropropene	(2)	7.297	75	823627	102.878
58) Isobutyl Alcohol	(1)	7.461	41	528441	1402.358
57)$1,2-Dichloroethane-d4	(2)	7.535	102	74158	50.284
57)$1,2-Dichloroethane-d4	(2)	7.535	65	331294	50.408
57)$1,2-Dichloroethane-d4	(2)	7.535	104	47551	50.479
60) Benzene	(2)	7.561	78	2423634	100.668
61) 1,2-Dichloroethane	(2)	7.638	62	757974	97.883
61) 1,2-Dichloroethane	(2)	7.641	98	76152	99.373
65) t-Amyl methyl ether	(2)	7.741	73	1946110	102.306
67) n-Heptane	(2)	7.962	43	911962MA	108.104
66)*Fluorobenzene	(2)	7.962	96	1183605	50.000
69) n-Butanol	(1)	8.329	56	944383M	2911.812
71) Trichloroethene	(2)	8.432	95	618983	102.110
72) Methylcyclohexane	(2)	8.734	83	1164174	103.516
72) Methylcyclohexane	(2)	8.734	98	527428	103.640
73) 1,2-Dichloropropane	(2)	8.773	63	625914	102.385
76) Methyl Methacrylate	(2)	8.847	69	640445A	108.334
75) 1,4-Dioxane	(1)	8.856	88	117817M	1321.647
74) Dibromomethane	(2)	8.882	93	410059	103.668
78) Bromodichloromethane	(2)	9.114	83	770805	108.595
79) 2-Nitropropane	(2)	9.390	41	488862	227.388
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	284759	108.454
81) cis-1,3-Dichloropropene	(2)	9.638	75	1026055	108.840
82) 4-Methyl-2-pentanone	(2)	9.808	43	1972651	209.410
83)$Toluene-d8	(3)	9.933	98	1216793	49.703
83)$Toluene-d8	(3)	9.933	100	789846	49.806
88) Toluene	(3)	10.007	92	1555339	101.336
90) 1,3-Dichloropropene (total)	(3)		100	1994775	220.026

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	968720	111.186
91) Ethyl Methacrylate	(3)	10.313	69	1159403	109.496
92) 1,1,2-Trichloroethane	(3)	10.461	97	606132	104.163
93) Tetrachloroethene	(3)	10.541	166	663260	102.036
94) 1,3-Dichloropropane	(3)	10.621	76	1023947	103.060
96) 2-Hexanone	(3)	10.670	43	1457165	206.170
97) Dibromochloromethane	(3)	10.827	129	678552	113.835
99) 1,2-Dibromoethane	(3)	10.940	107	665574	105.331
100)*Chlorobenzene-d5	(3)	11.361	117	935628	50.000
101) 1-Chlorohexane	(3)	11.364	91	826713	100.265
102) Chlorobenzene	(3)	11.387	112	1760002	101.404
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	622547	108.864
104) Ethylbenzene	(3)	11.470	91	3015086	102.779
106) m+p-Xylene	(3)	11.583	106	2388845	206.999
108) Xylene (Total)	(3)		106	3566525	310.313
107) o-Xylene	(3)	11.908	106	1177680	103.314
109) Styrene	(3)	11.924	104	1996461	105.988
110) Bromoform	(3)	12.081	173	502388	112.791
111) Isopropylbenzene	(3)	12.203	105	2980812	104.258
112) Cyclohexanone	(1)	12.287	55	431750	1236.644
114)$4-Bromofluorobenzene	(3)	12.348	95	458263	49.435
114)$4-Bromofluorobenzene	(3)	12.348	174	380301	49.485
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	995972M	105.317
115) Bromobenzene	(4)	12.464	156	778170	103.423
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	790040	270.837
117) 1,2,3-Trichloropropane	(4)	12.496	110	303037	104.425
119) n-Propylbenzene	(4)	12.531	91	3409679	103.724
120) 2-Chlorotoluene	(4)	12.609	126	718635	102.905
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	2528195	105.828
121) 4-Chlorotoluene	(4)	12.699	126	737830	101.502
124) tert-Butylbenzene	(4)	12.904	134	526781M	106.622
125) Pentachloroethane	(4)	12.940	167	474988	111.651
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	2664001	105.806
127) sec-Butylbenzene	(4)	13.068	105	3153429	106.963
129) 1,3-Dichlorobenzene	(4)	13.168	146	1407080	101.768
130) p-Isopropyltoluene	(4)	13.171	119	2746850	107.698
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	500629	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	1451933	101.297

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	2711349	101.660
135) Benzyl Chloride	(4)	13.319	91	2226905	110.280
136) 1,3-Diethylbenzene	(4)	13.374	119	1705244	102.734
141) Diethylbenzene (total)	(4)		100	4934627	307.371
137) 1,4-Diethylbenzene	(4)	13.445	119	1791059	101.846
139) n-Butylbenzene	(4)	13.464	92	1355994	103.980
138) 1,2-Dichlorobenzene	(4)	13.502	146	1381717	101.273
140) 1,2-Diethylbenzene	(4)	13.518	119	1438324	102.791
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	224965	108.669
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	1074198	102.479
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	1034842	101.533
147) Hexachlorobutadiene	(4)	14.666	225	430531	89.465
148) Naphthalene	(4)	14.772	128	3428000	104.621
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	1010801	101.922
150) 2-Methylnaphthalene	(4)	15.563	142	2117626	104.952

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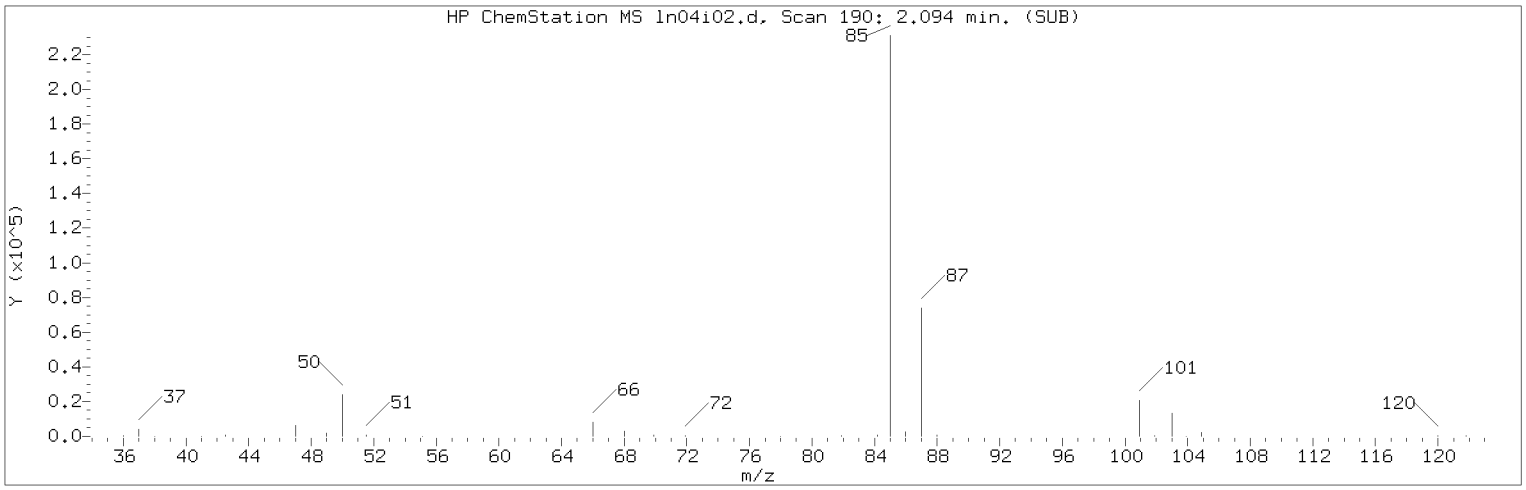
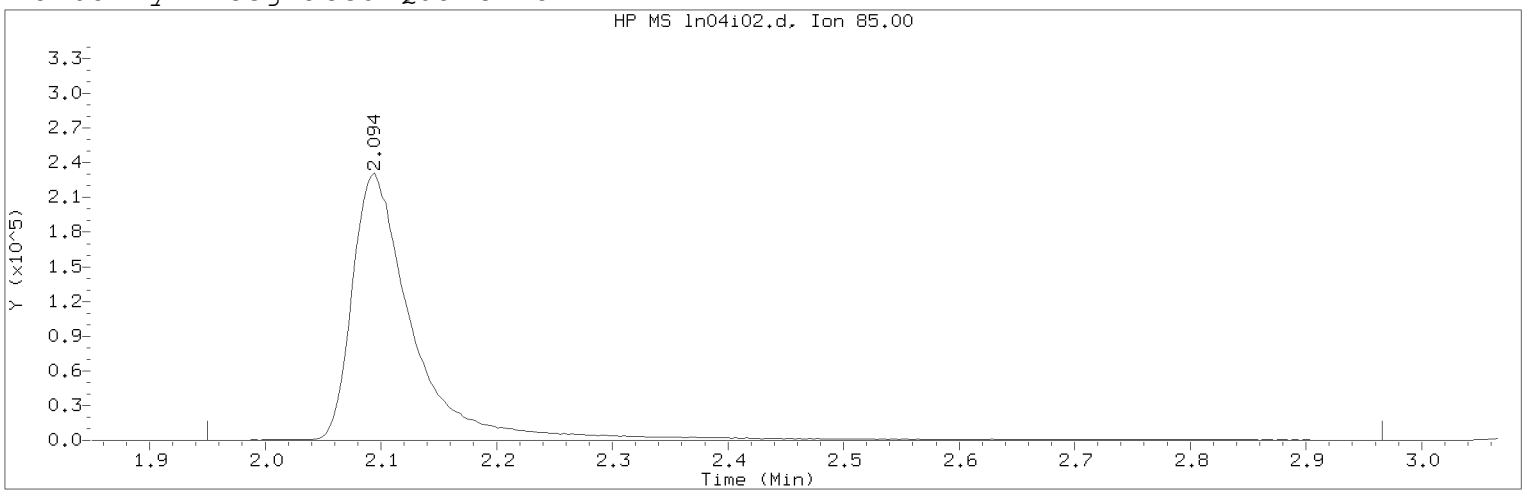
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

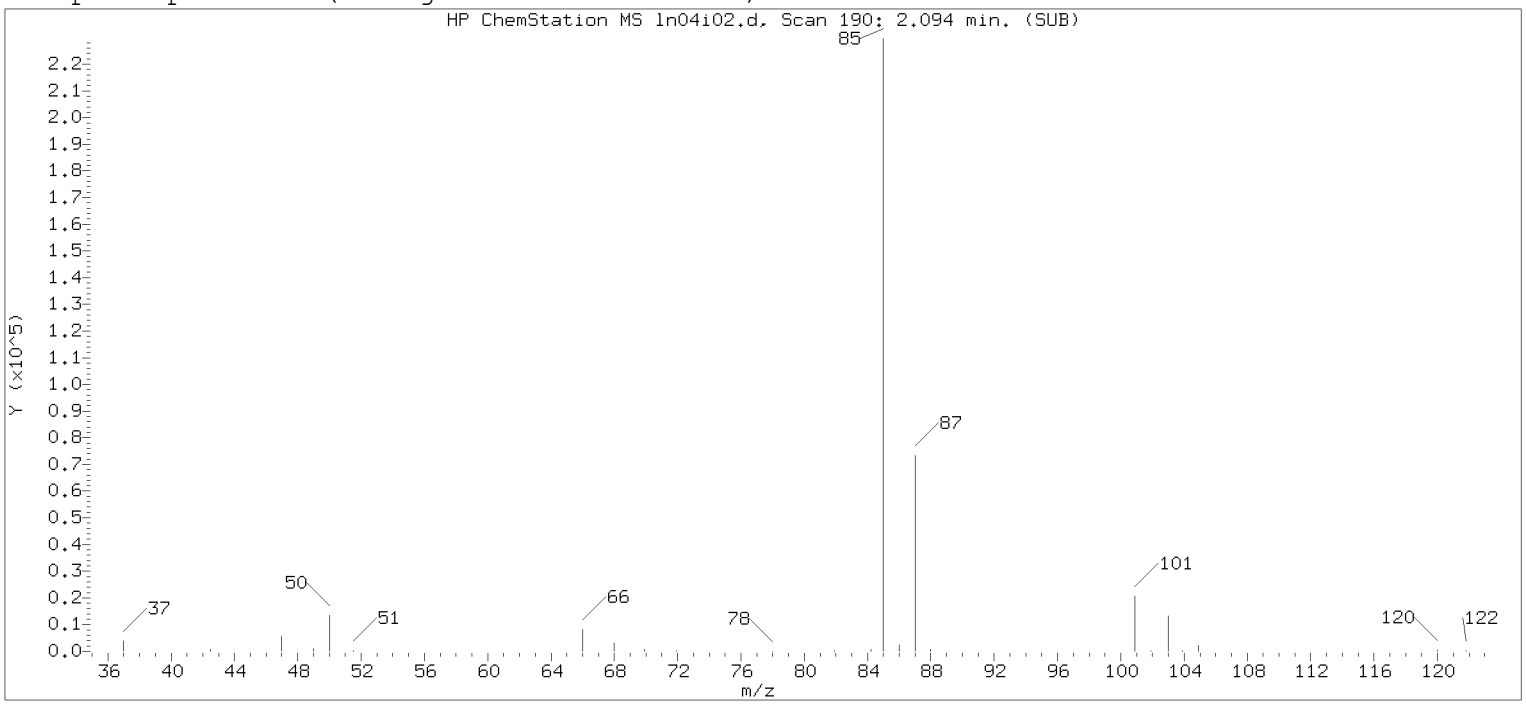
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area (flag) : 857961M
On-Column Amount (ng) : 103.9433
Integration start scan : 144 Integration stop scan: 460
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

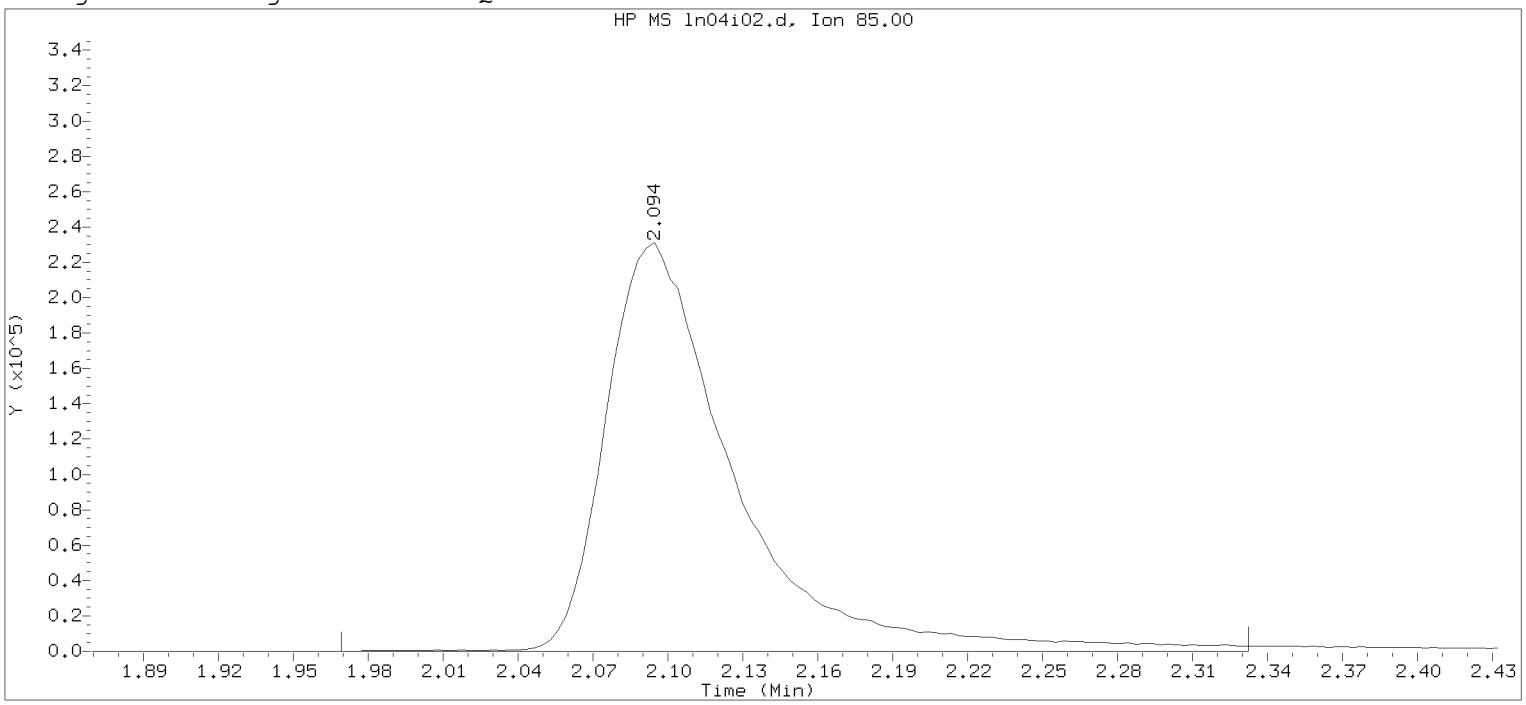
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area : 824639
On-column Amount (ng) : 94.4157
Integration start scan : 150 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

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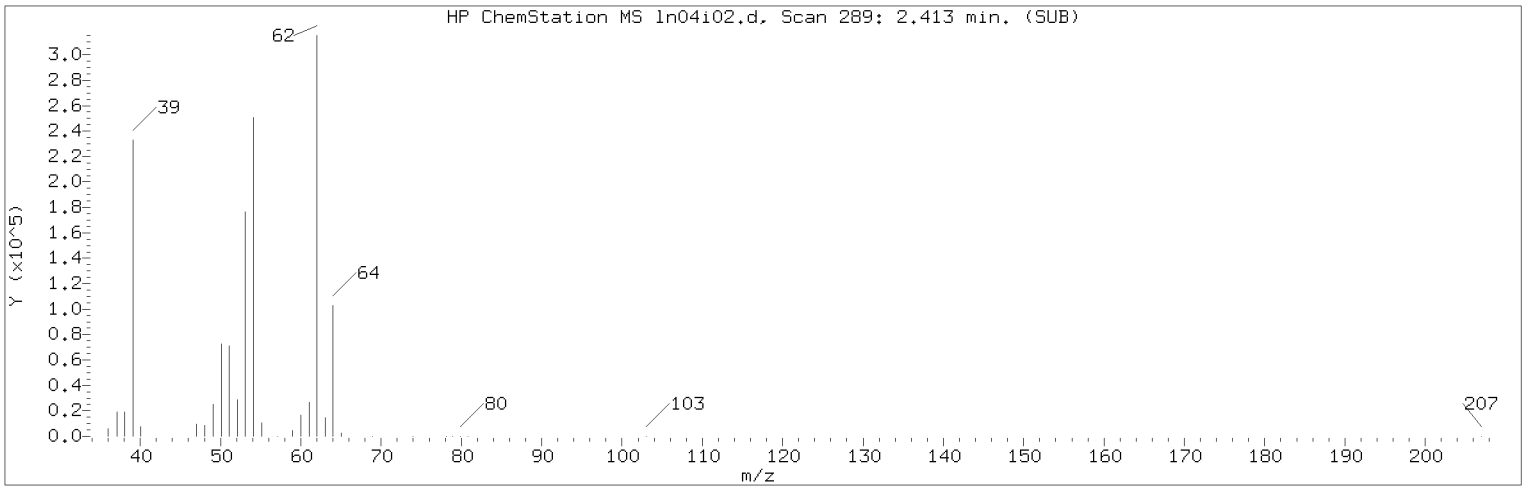
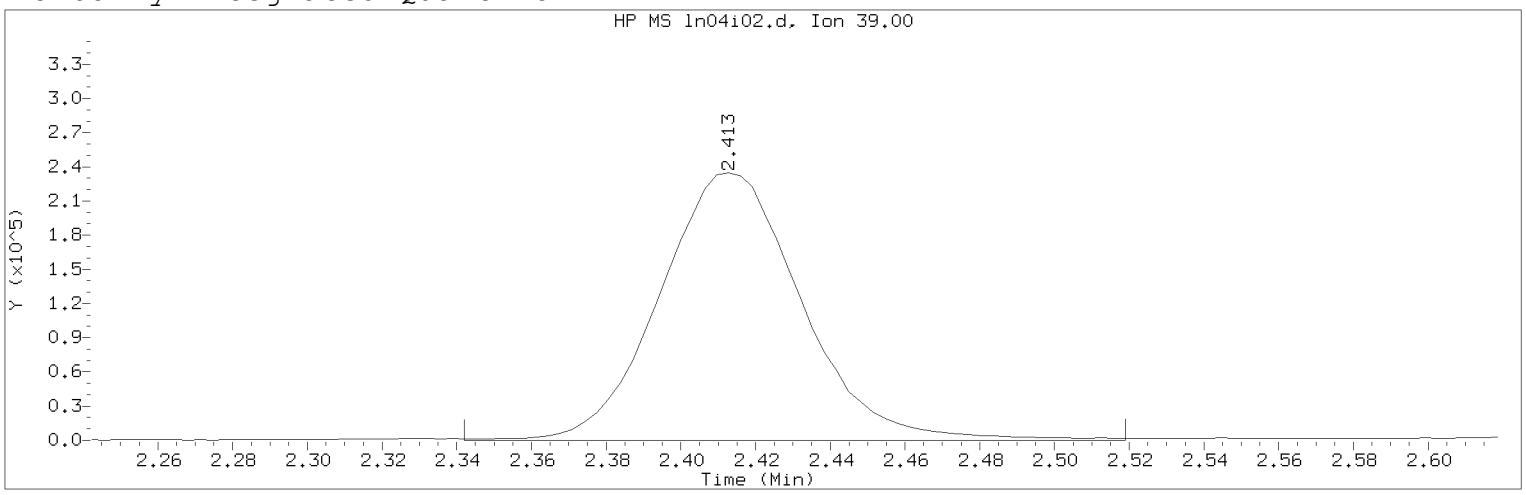
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

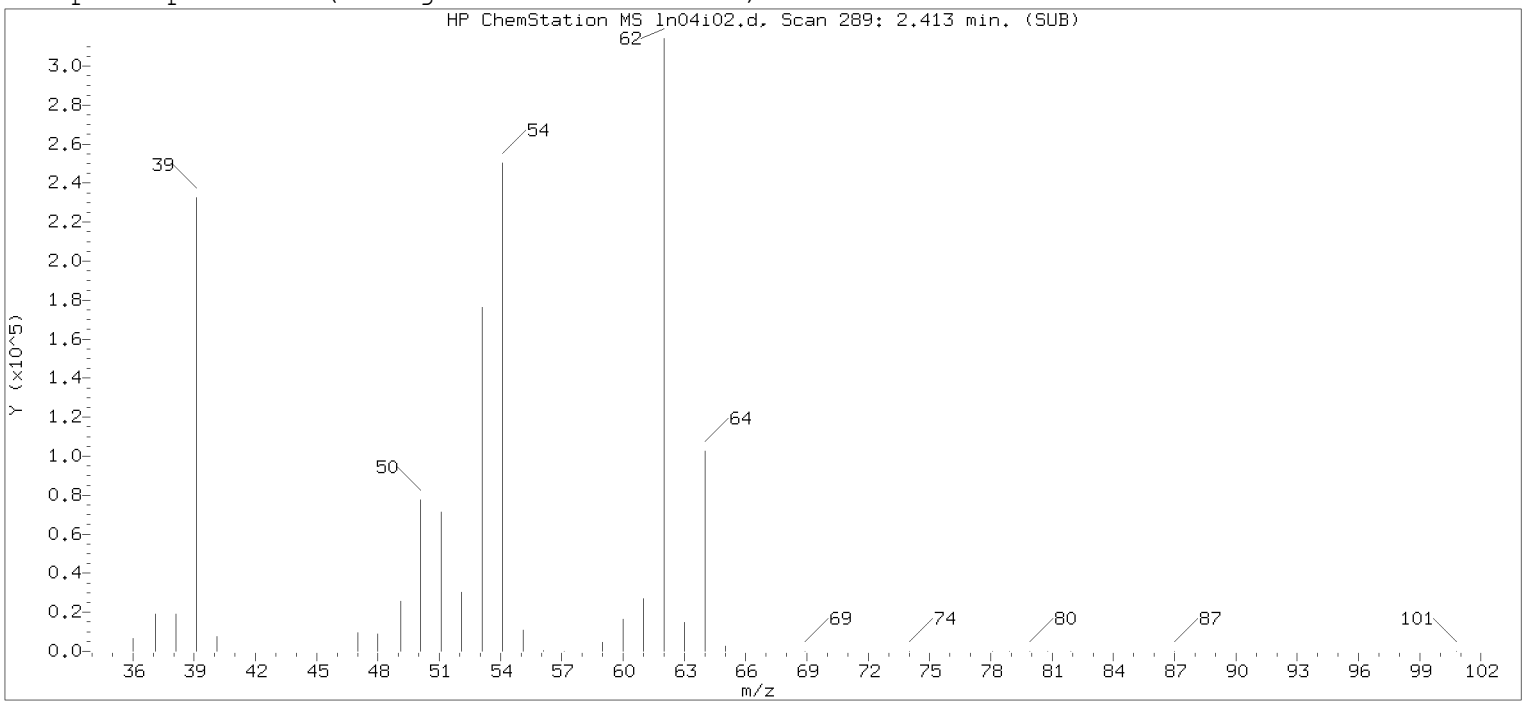
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area (flag) : 618713M
On-Column Amount (ng) : 93.6685
Integration start scan : 266 Integration stop scan: 321
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

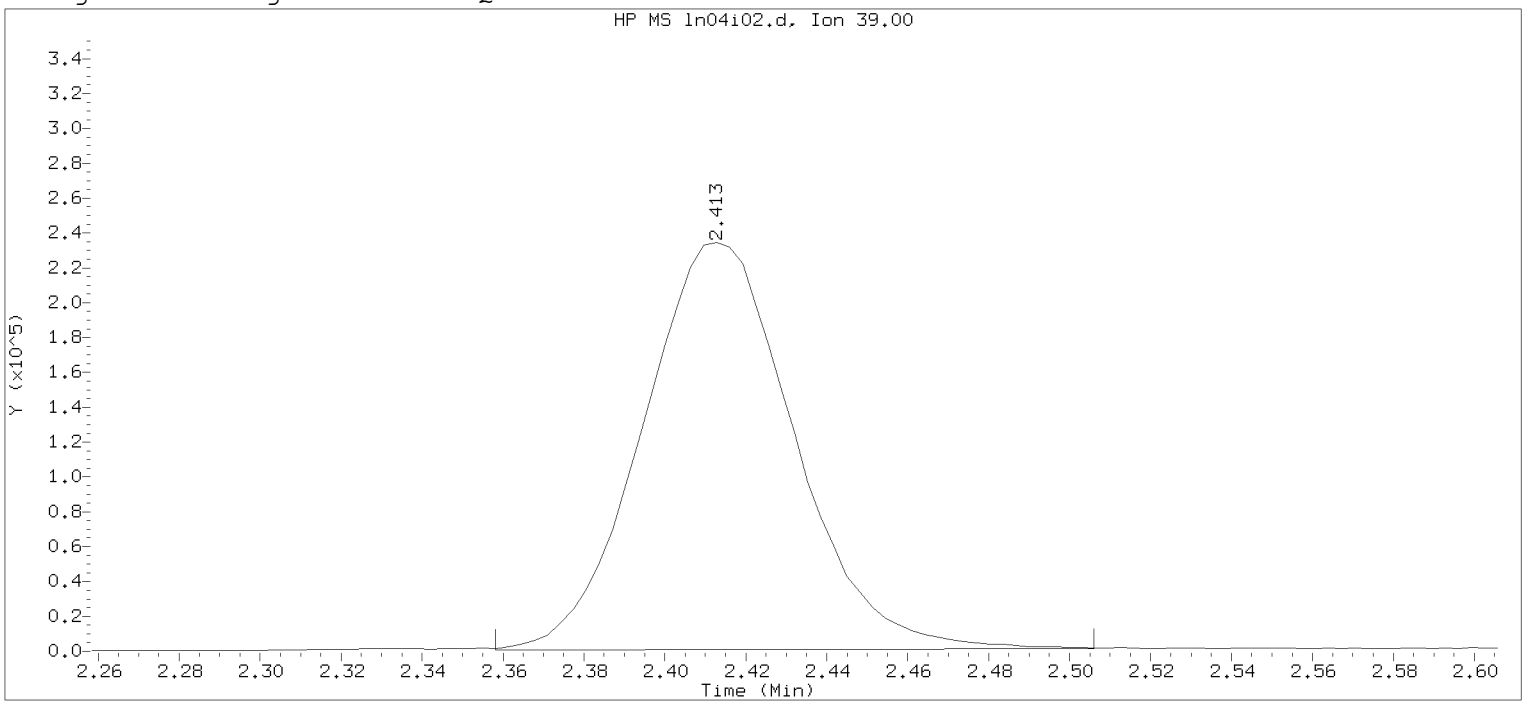
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area : 605602
On-column Amount (ng) : 97.5651
Integration start scan : 271 Integration stop scan: 317
Y at integration start : 806 Y at integration end: 1441

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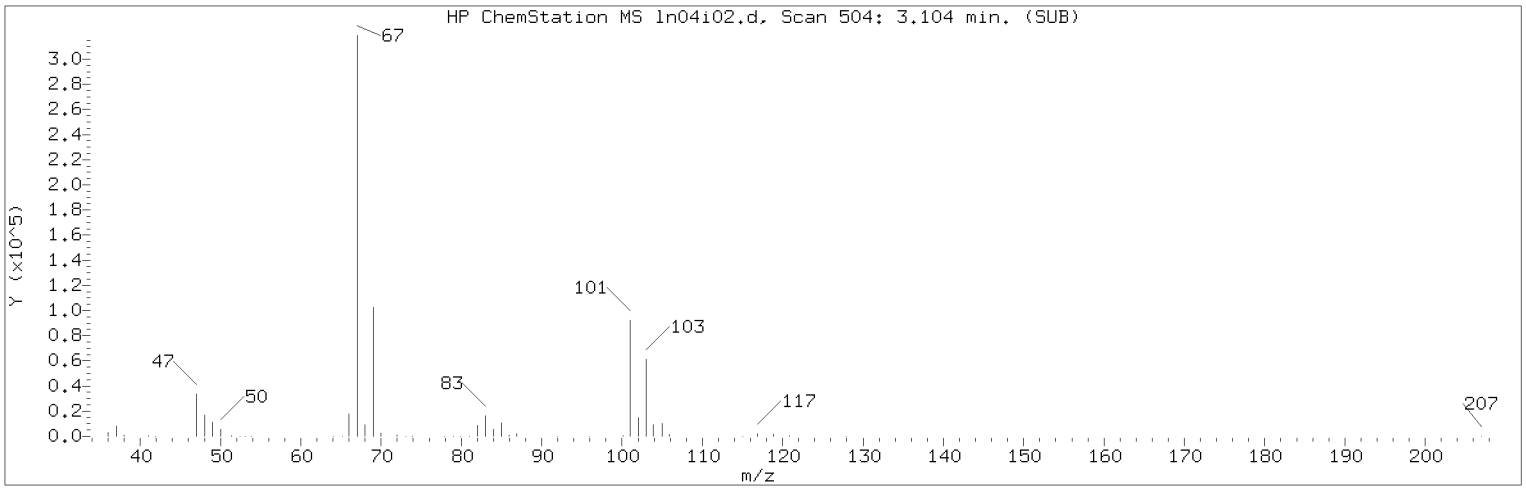
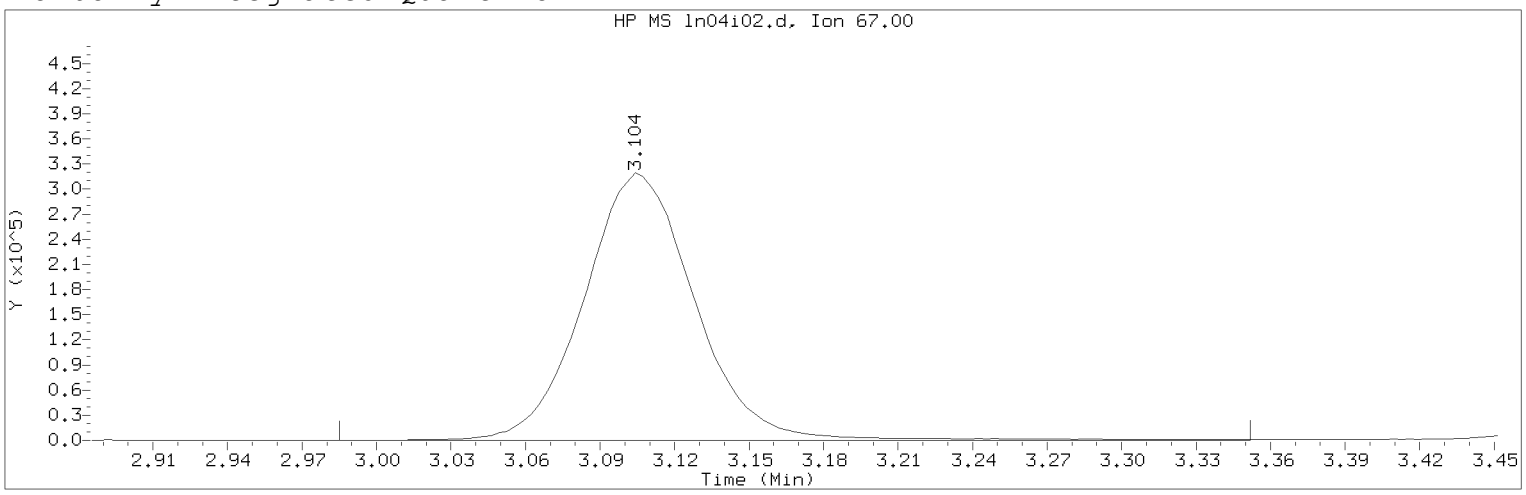
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

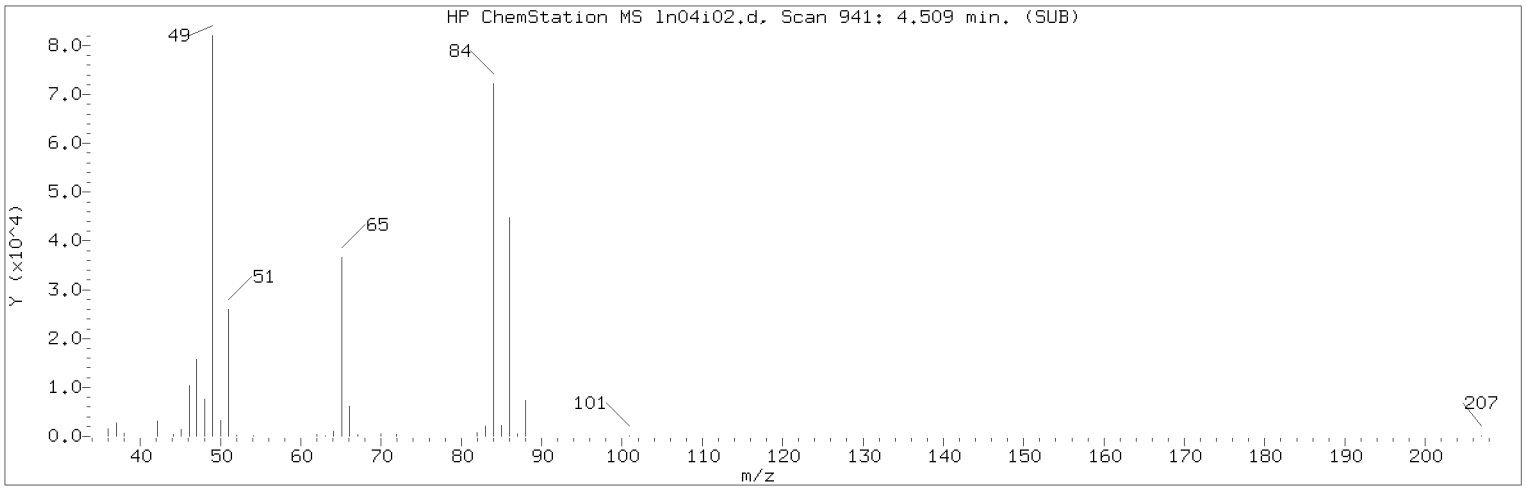
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 504
Retention Time (minutes): 3.104
Quant Ion : 67.00
Area (flag) : 992796M
On-Column Amount (ng) : 94.6777
Integration start scan : 466 Integration stop scan: 580
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

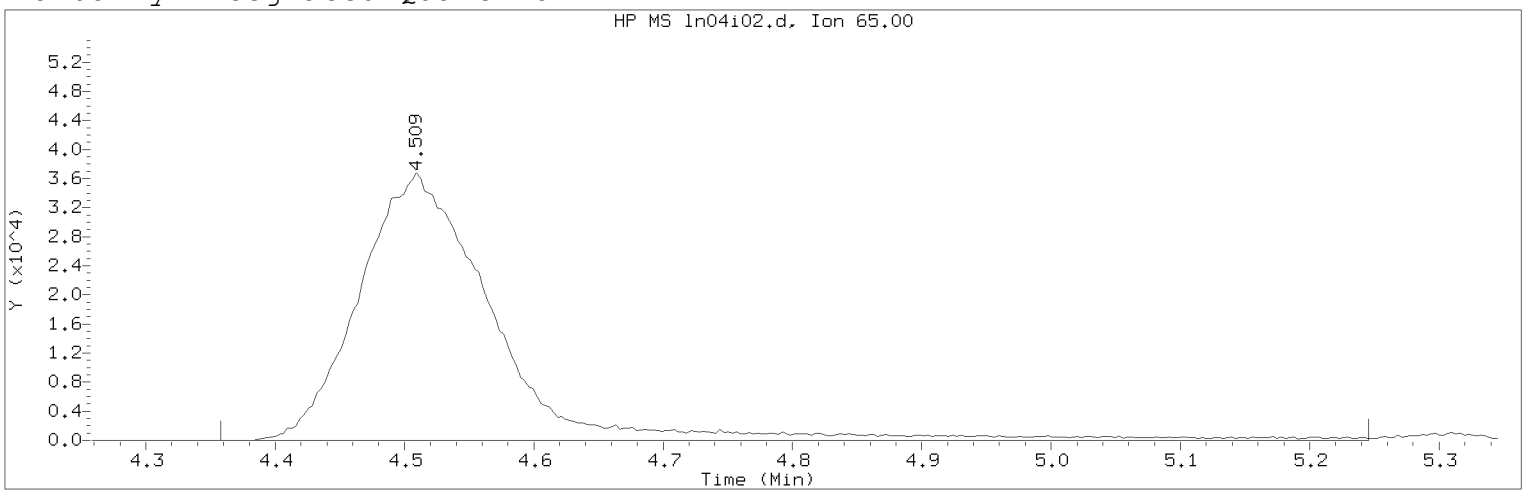
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

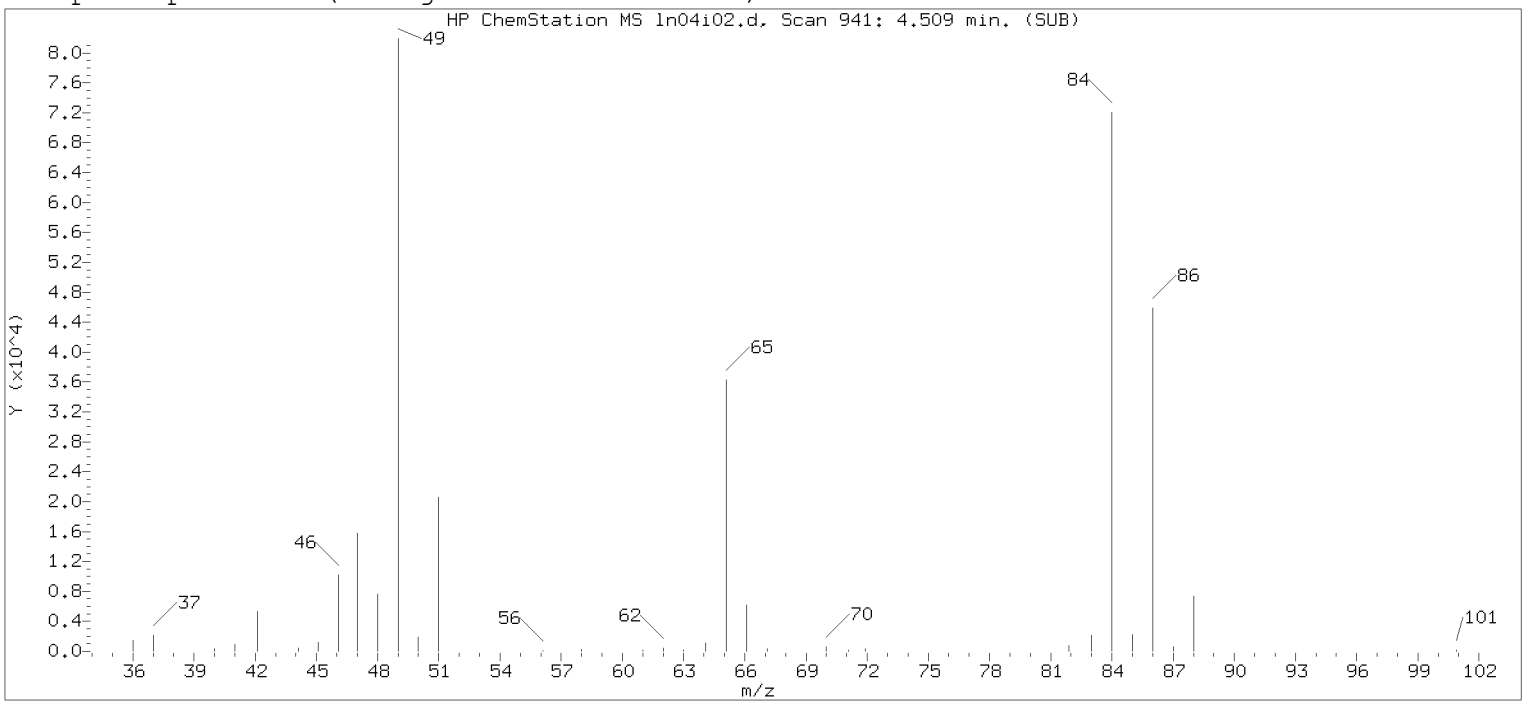
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 265971M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1169
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

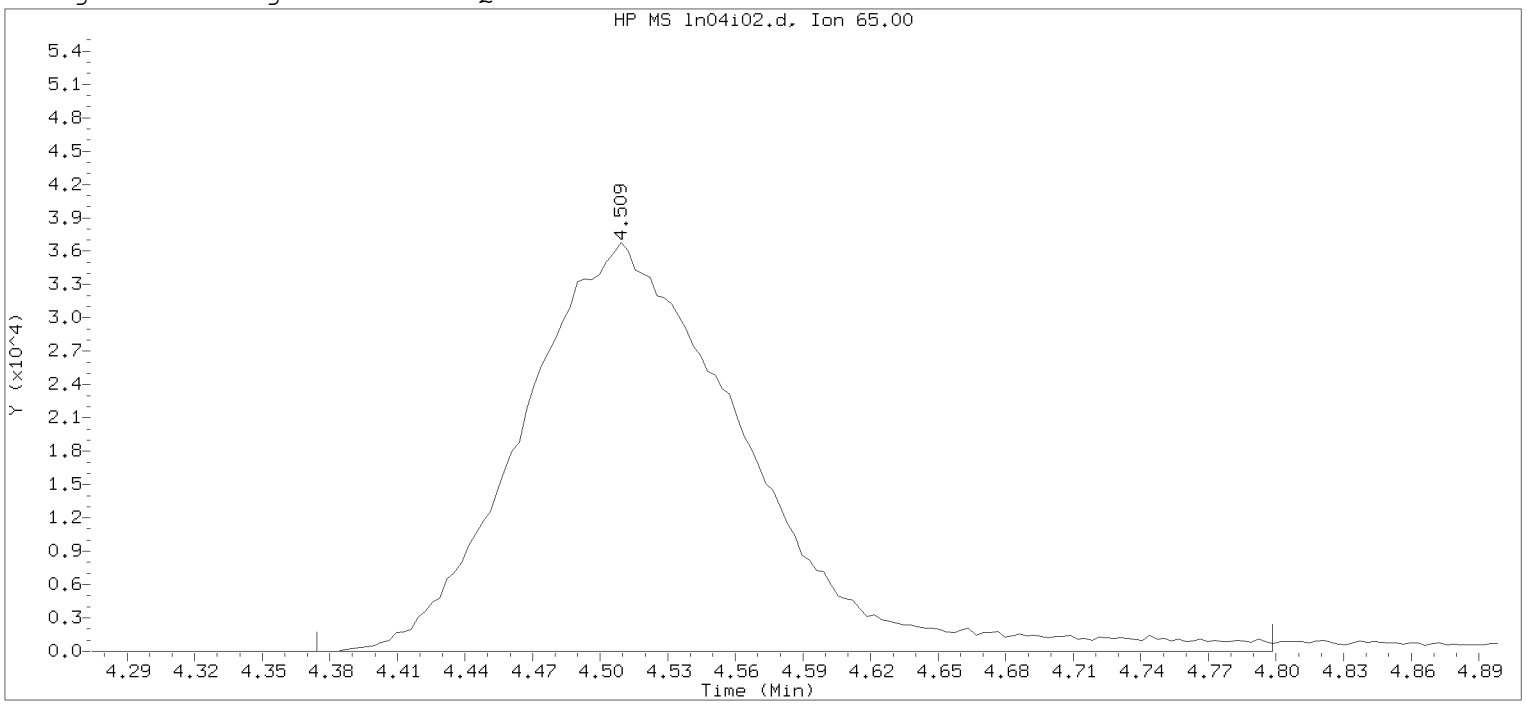
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

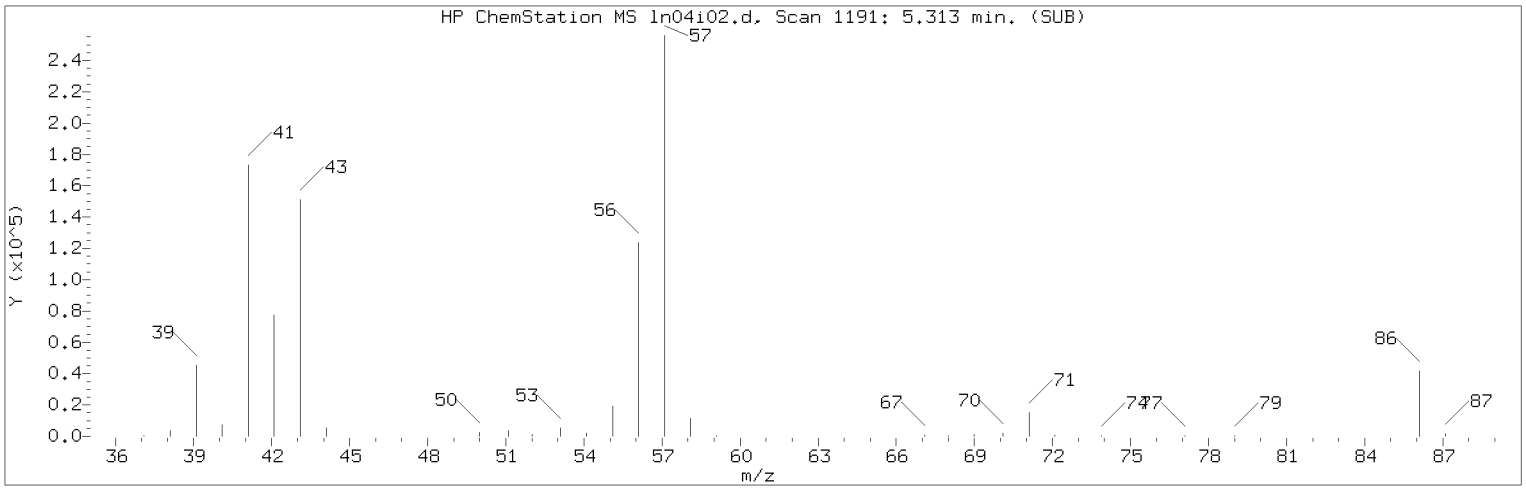
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

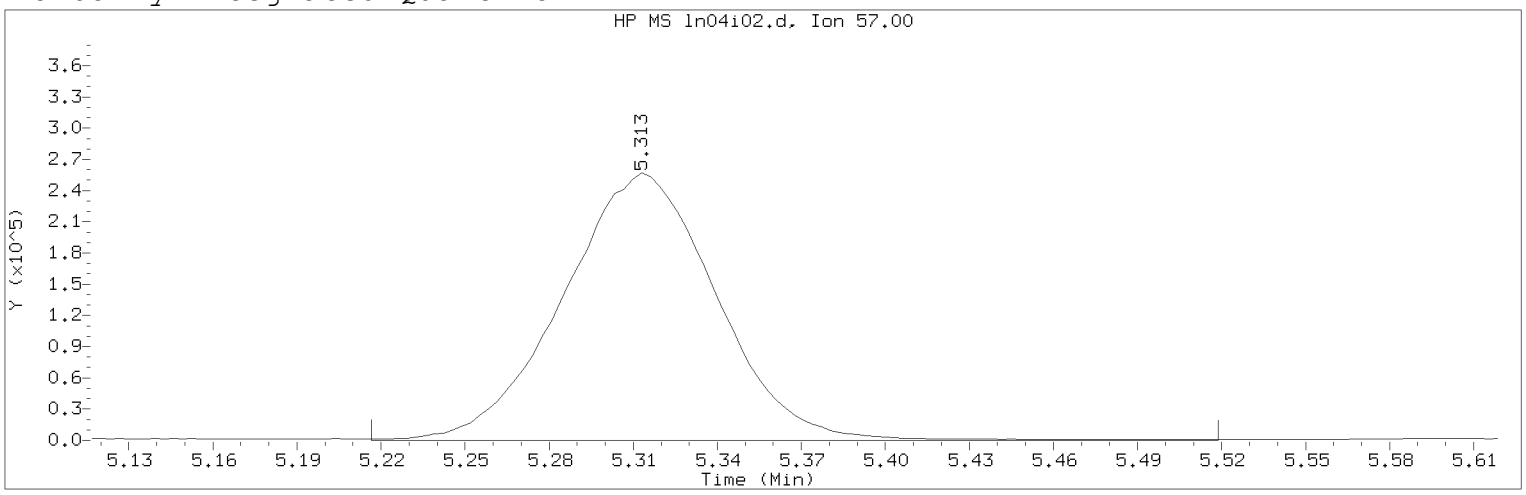
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 252632
On-column Amount (ng) : 250.0000
Integration start scan : 898 Integration stop scan: 1030
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

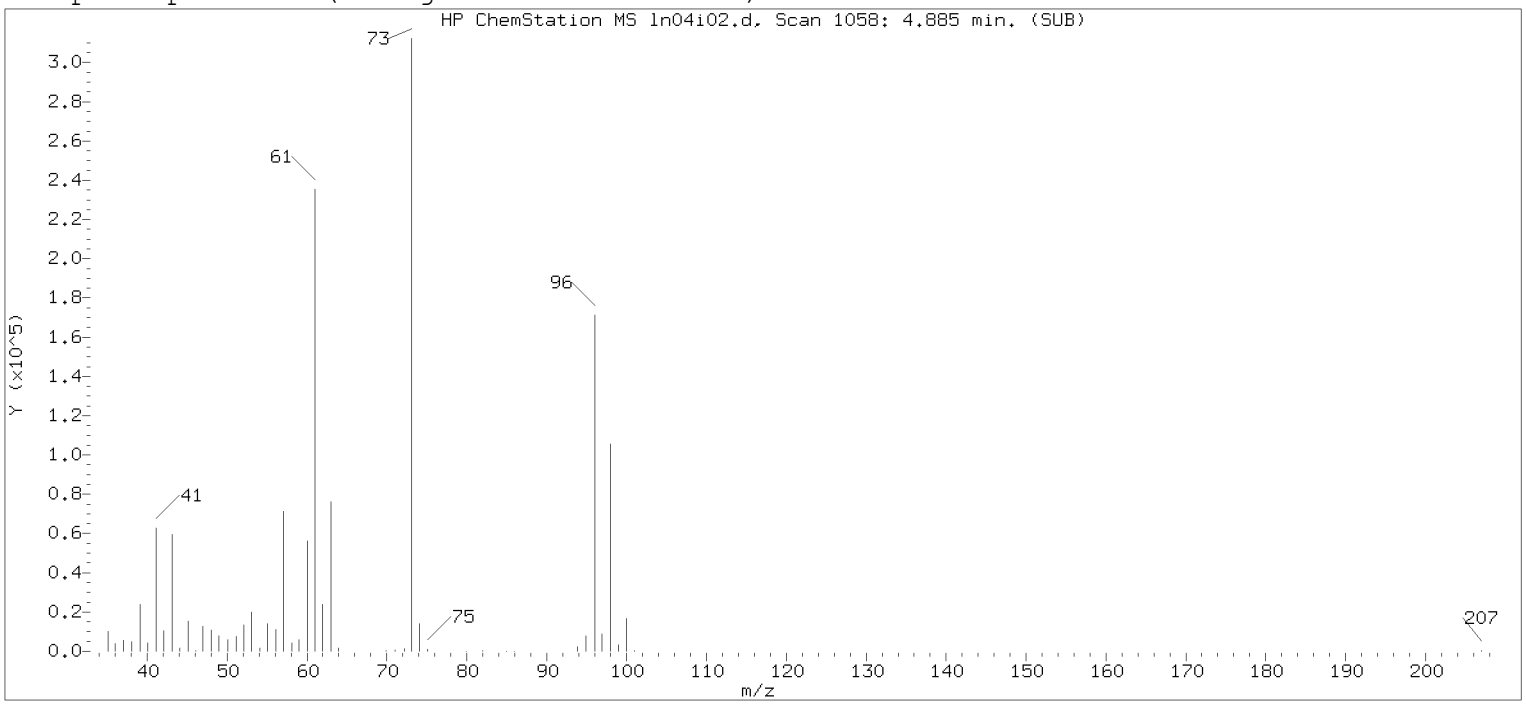
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1191
Retention Time (minutes): 5.313
Quant Ion : 57.00
Area (flag) : 974442M
On-Column Amount (ng) : 107.9083
Integration start scan : 1160 Integration stop scan: 1254
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

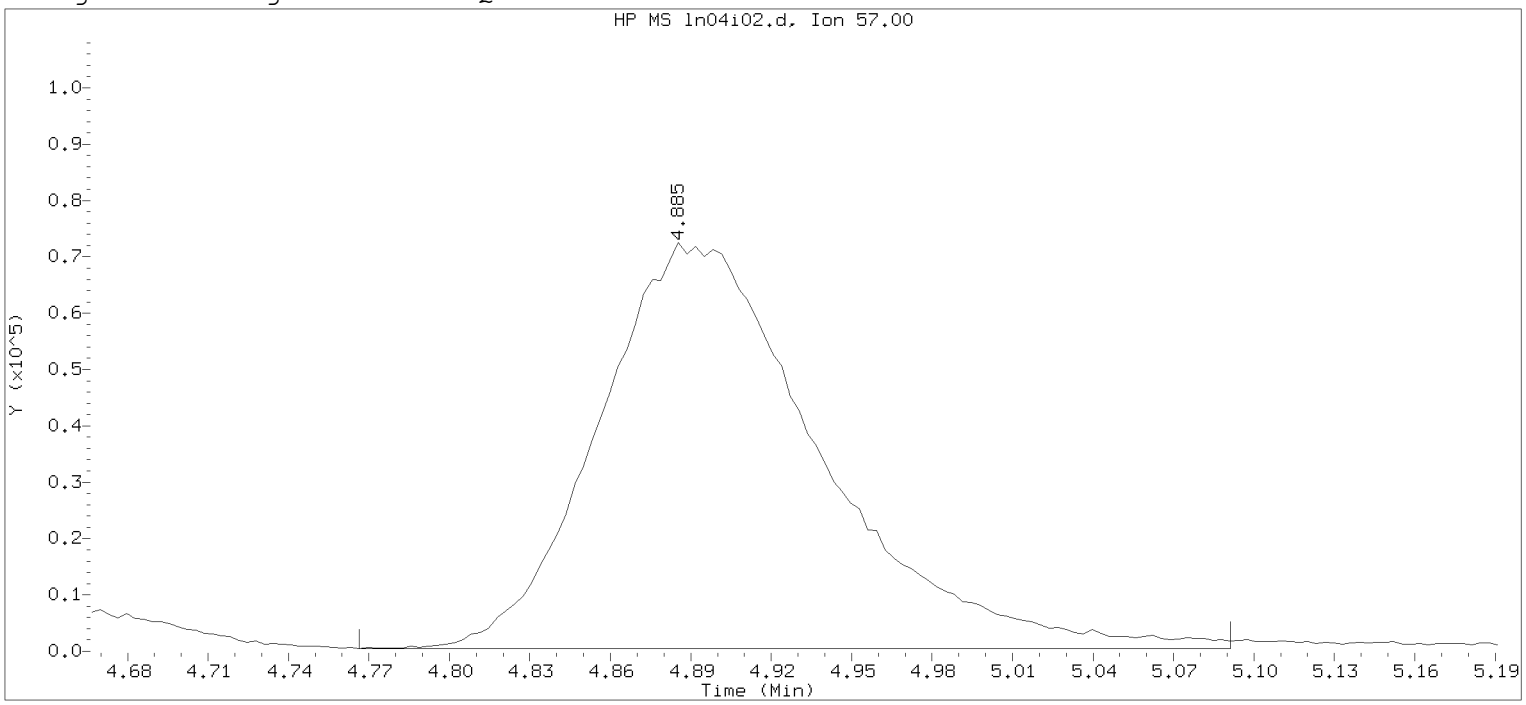
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

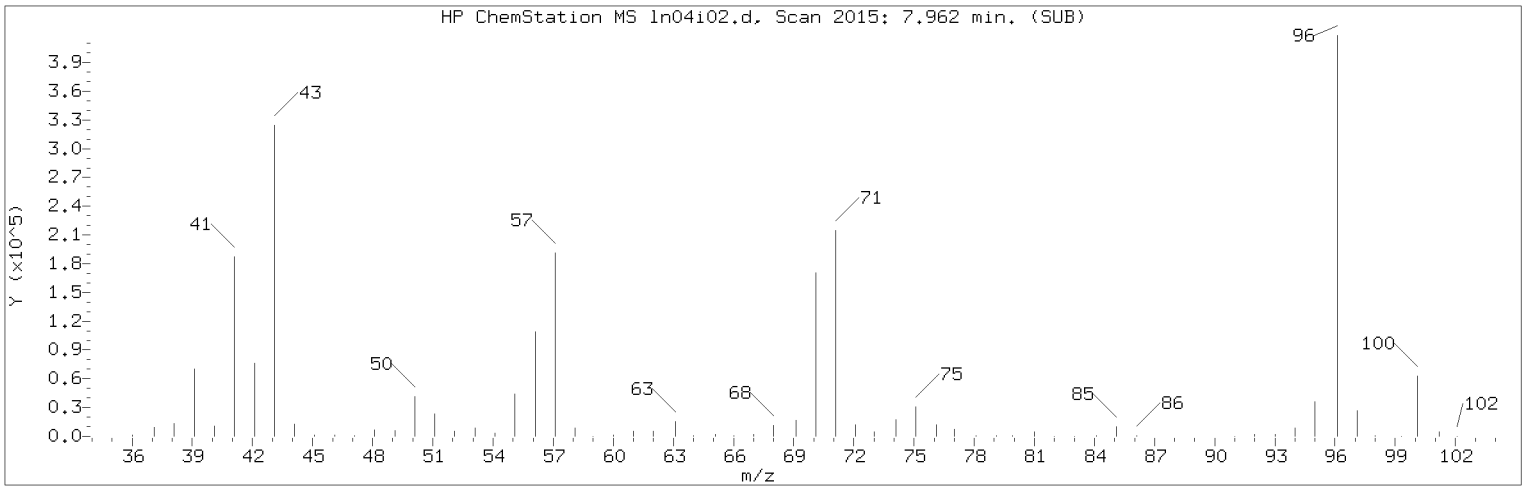
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

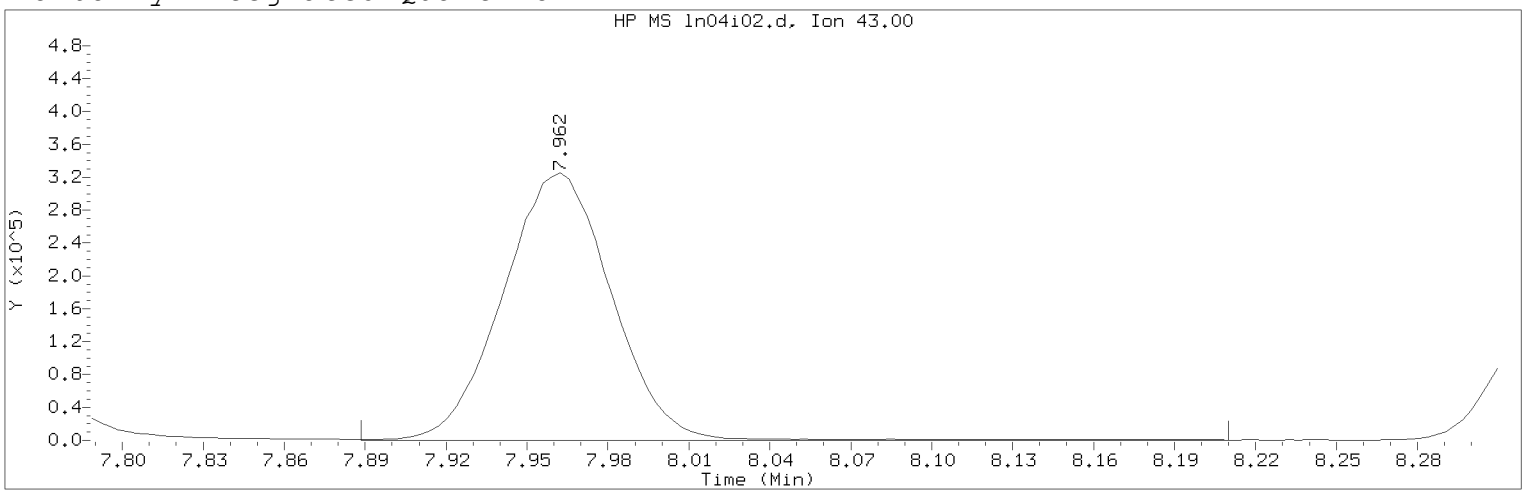
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1058
Retention Time (minutes): 4.885
Quant Ion : 57.00
Area : 414312
On-column Amount (ng) : 98.9070
Integration start scan : 1020 Integration stop scan: 1121
Y at integration start : 485 Y at integration end: 485

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

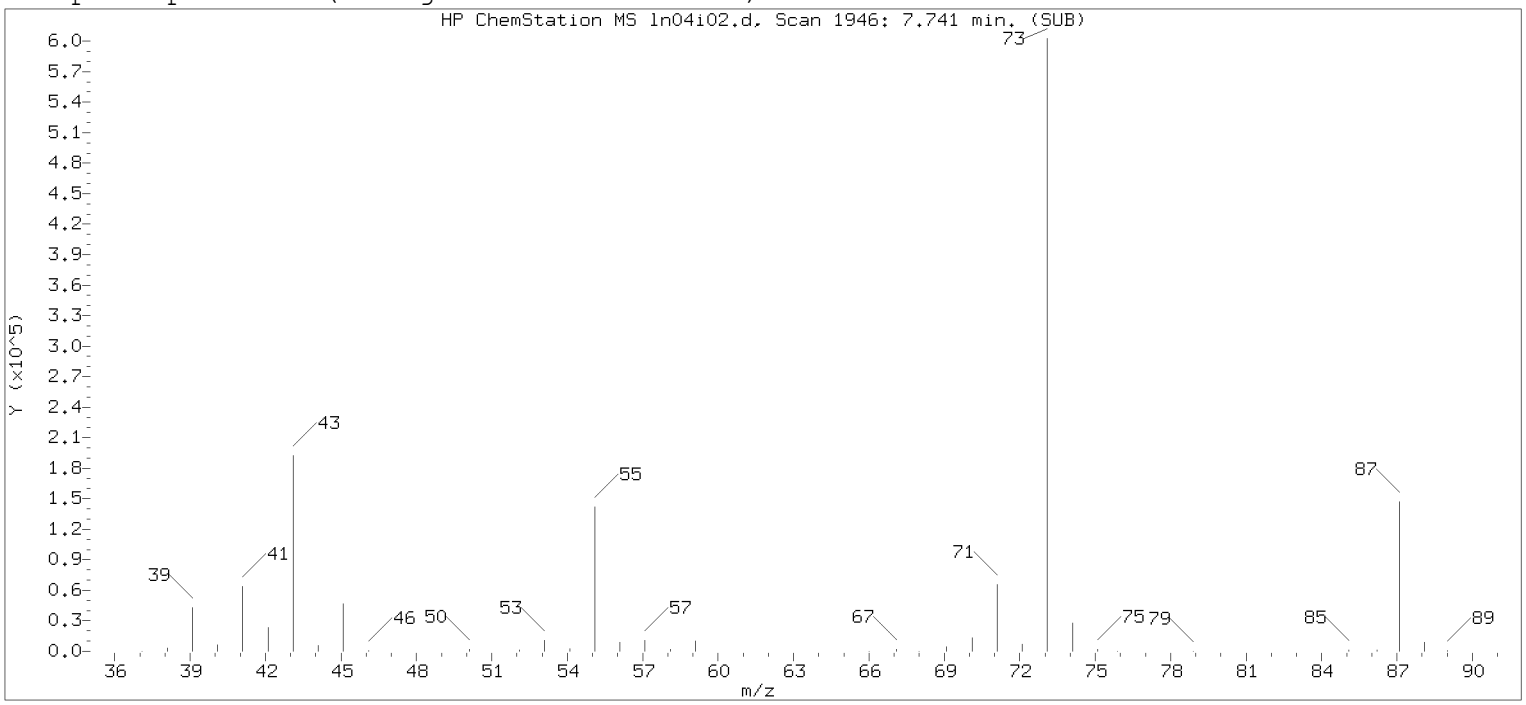
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2015
Retention Time (minutes): 7.962
Quant Ion : 43.00
Area (flag) : 911962MA
On-Column Amount (ng) : 108.1037
Integration start scan : 1991 Integration stop scan: 2091
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

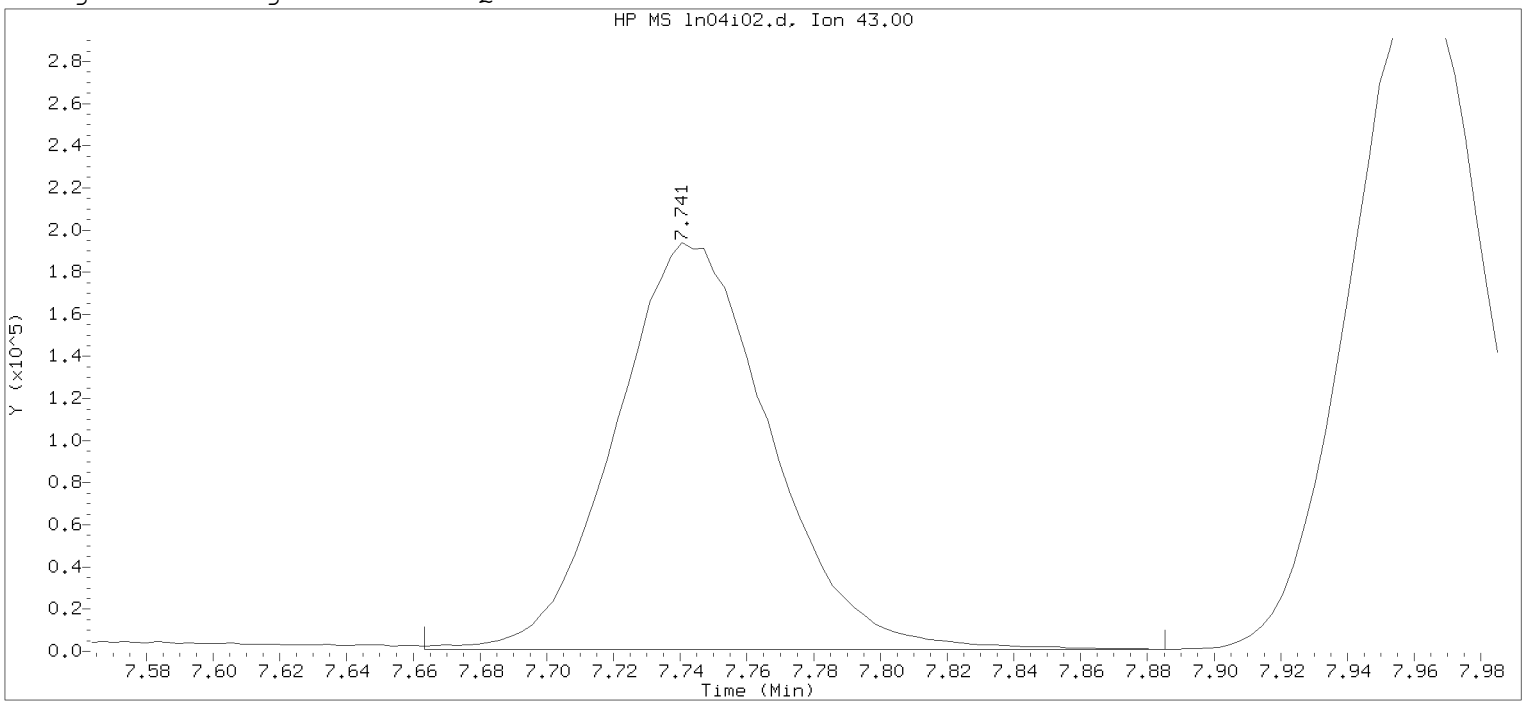
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

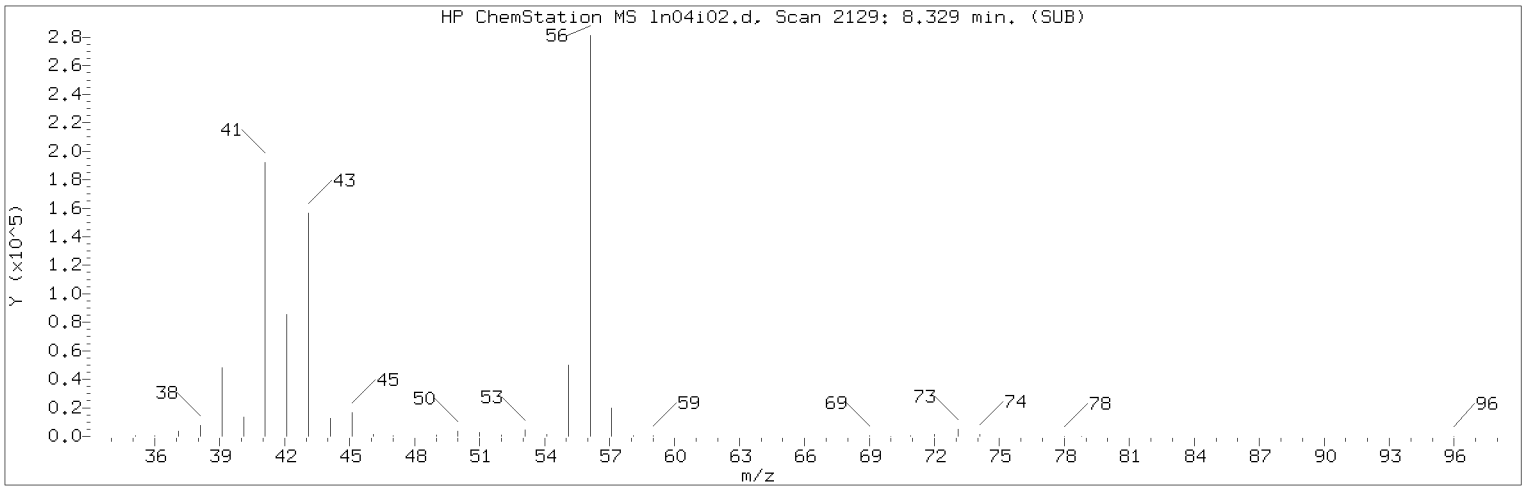
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

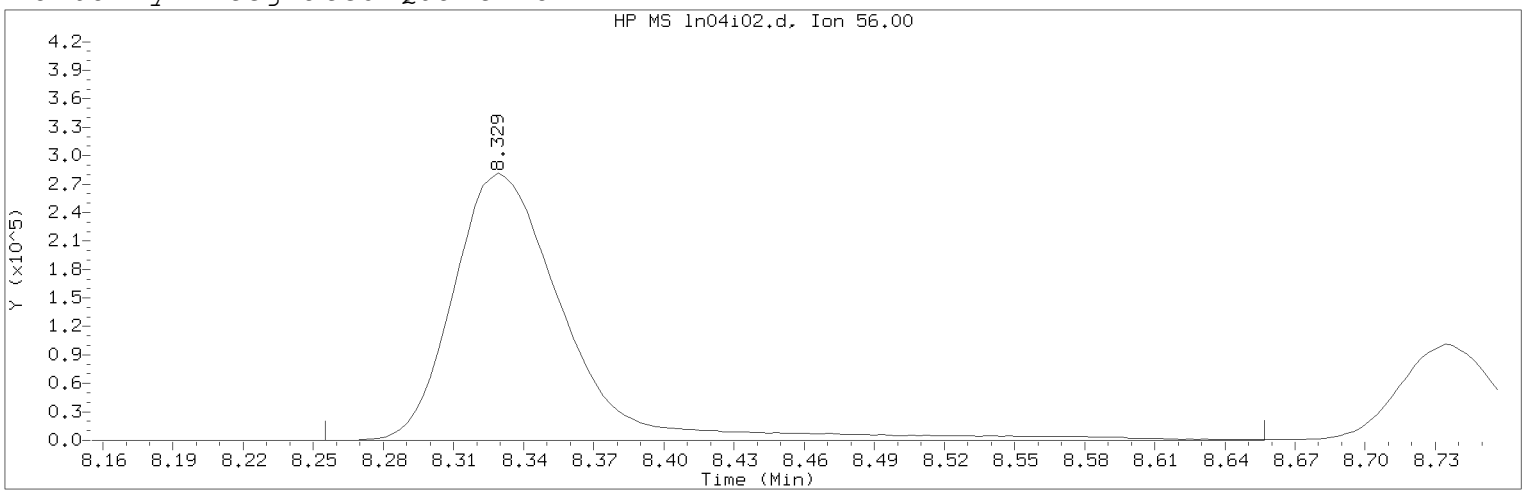
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.741
Quant Ion : 43.00
Area : 623358
On-column Amount (ng) : 101.3435
Integration start scan : 1921 Integration stop scan: 1990
Y at integration start : 845 Y at integration end: 845

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

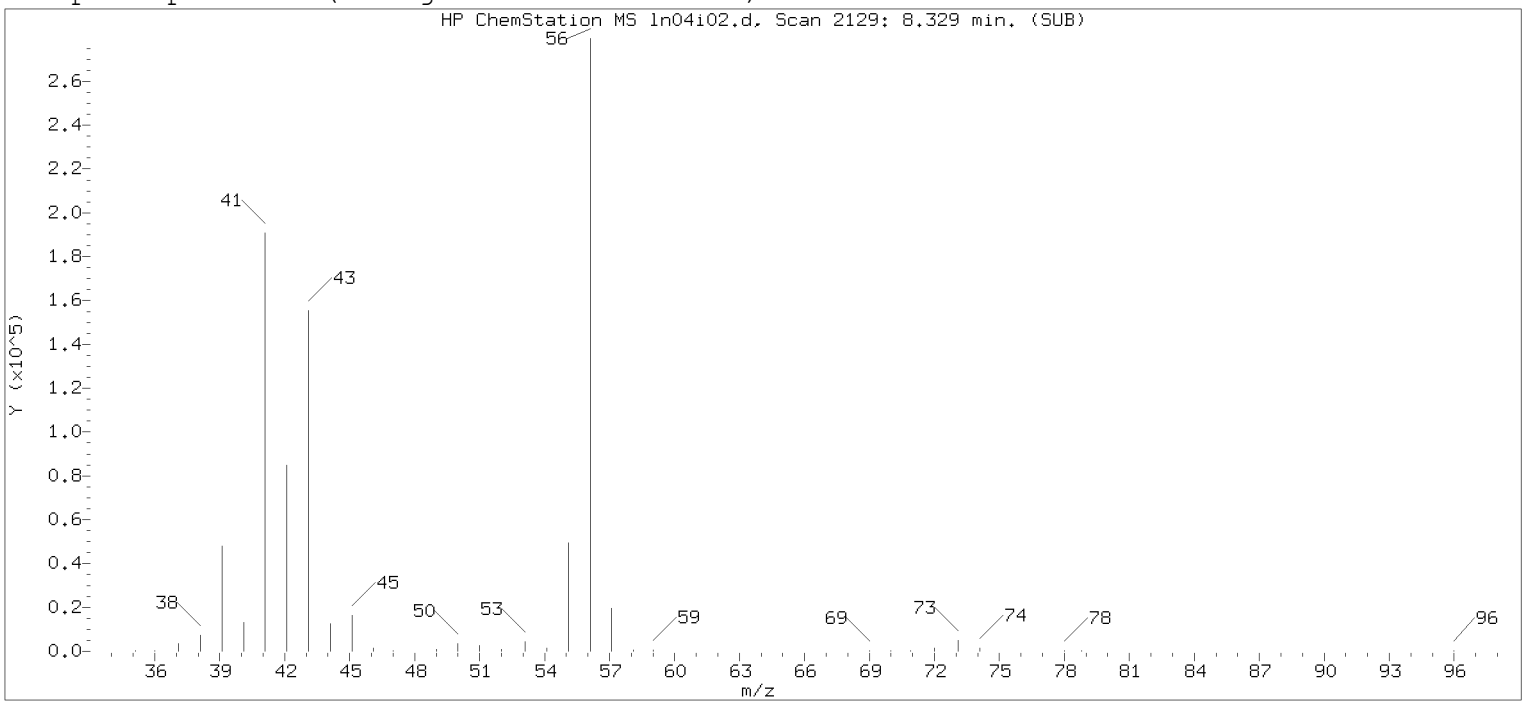
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area (flag) : 944383M
On-Column Amount (ng) : 2911.8124
Integration start scan : 2105 Integration stop scan: 2230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

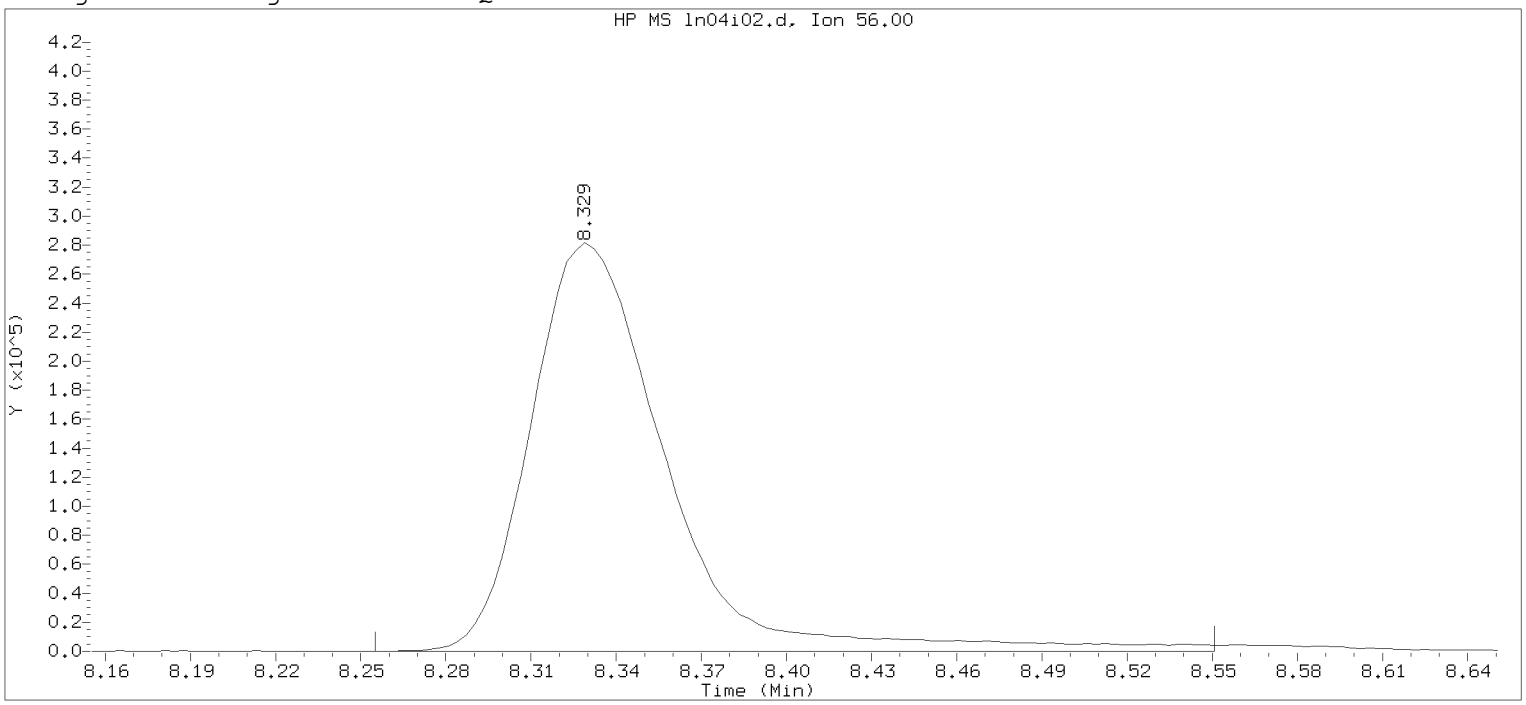
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

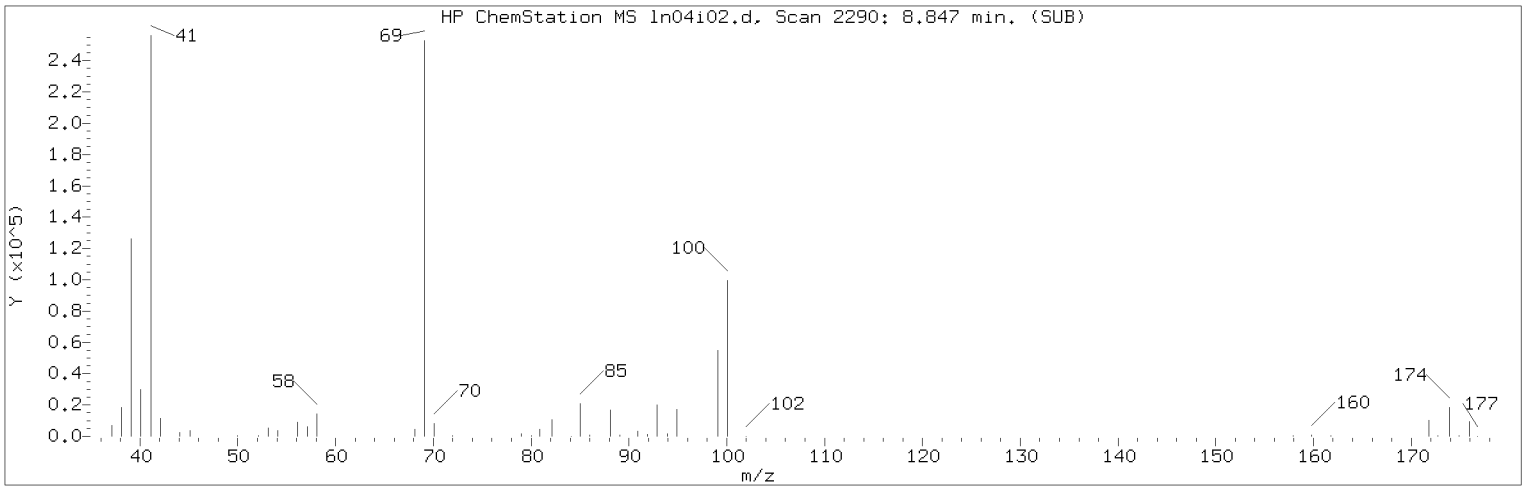
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

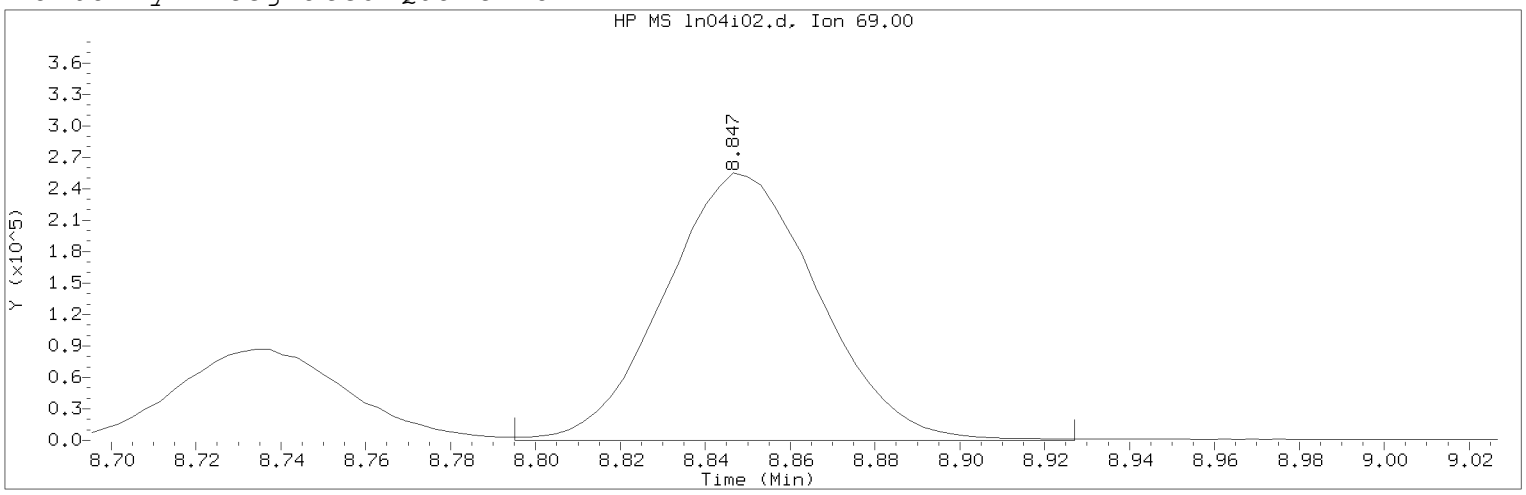
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area : 929615
On-column Amount (ng) : 2668.2803
Integration start scan : 2105 Integration stop scan: 2197
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

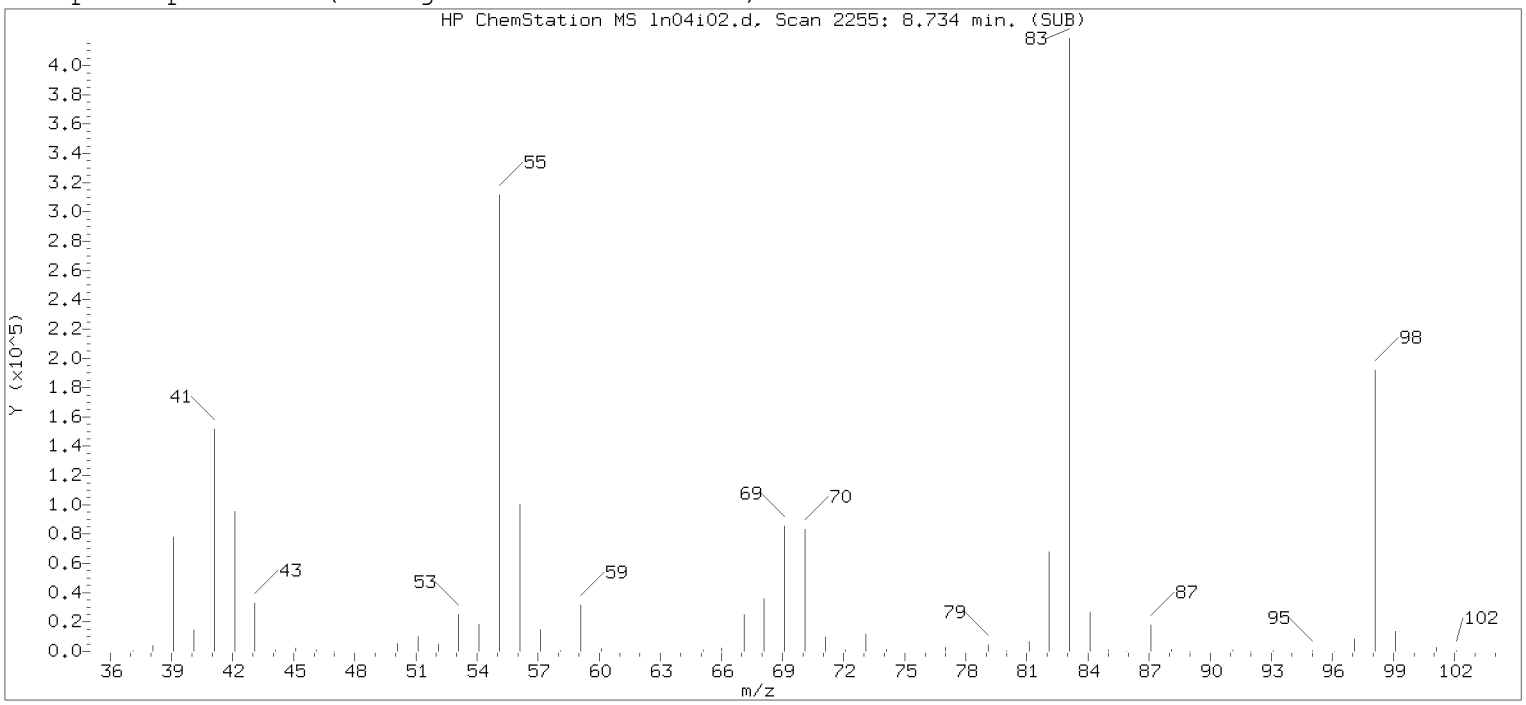
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2290
Retention Time (minutes): 8.847
Quant Ion : 69.00
Area (flag) : 640445A
On-Column Amount (ng) : 108.3344
Integration start scan : 2273 Integration stop scan: 2314
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

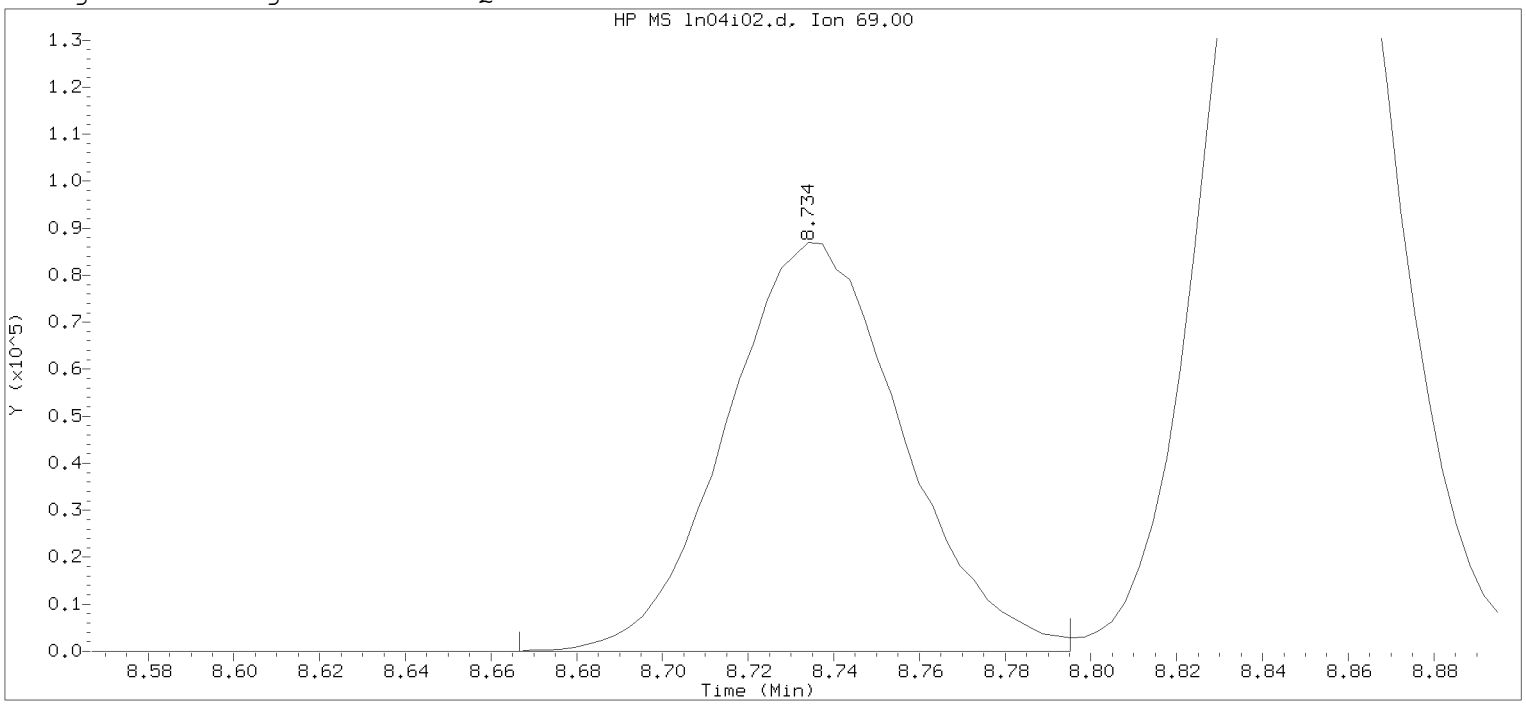
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

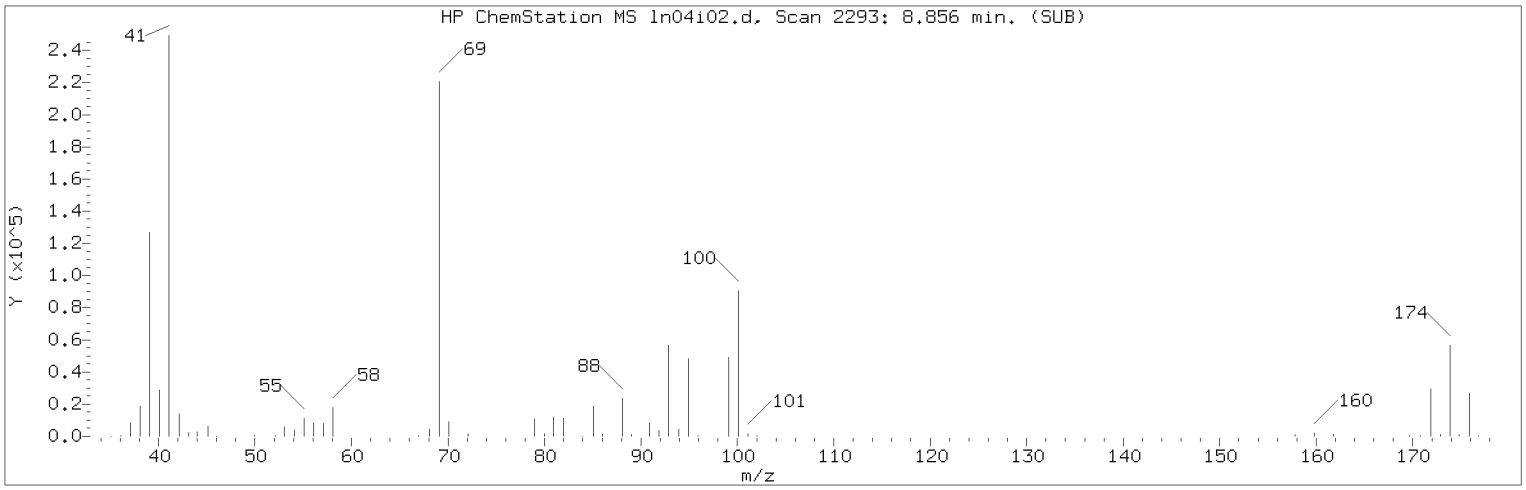
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

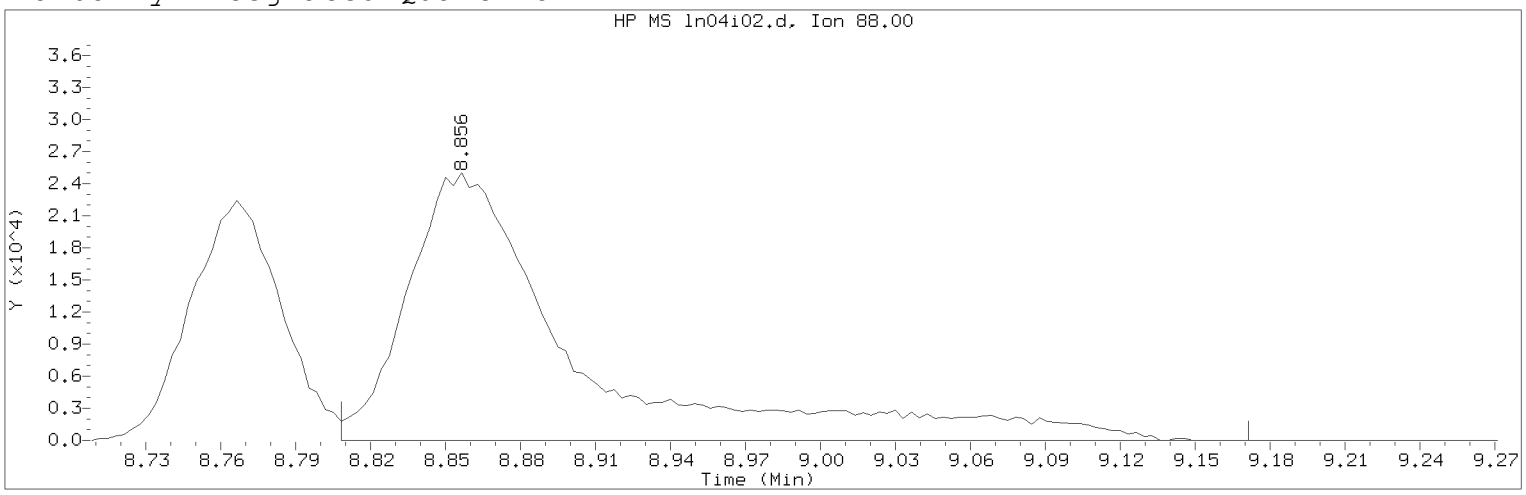
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 247190
On-column Amount (ng) : 97.8749
Integration start scan : 2233 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

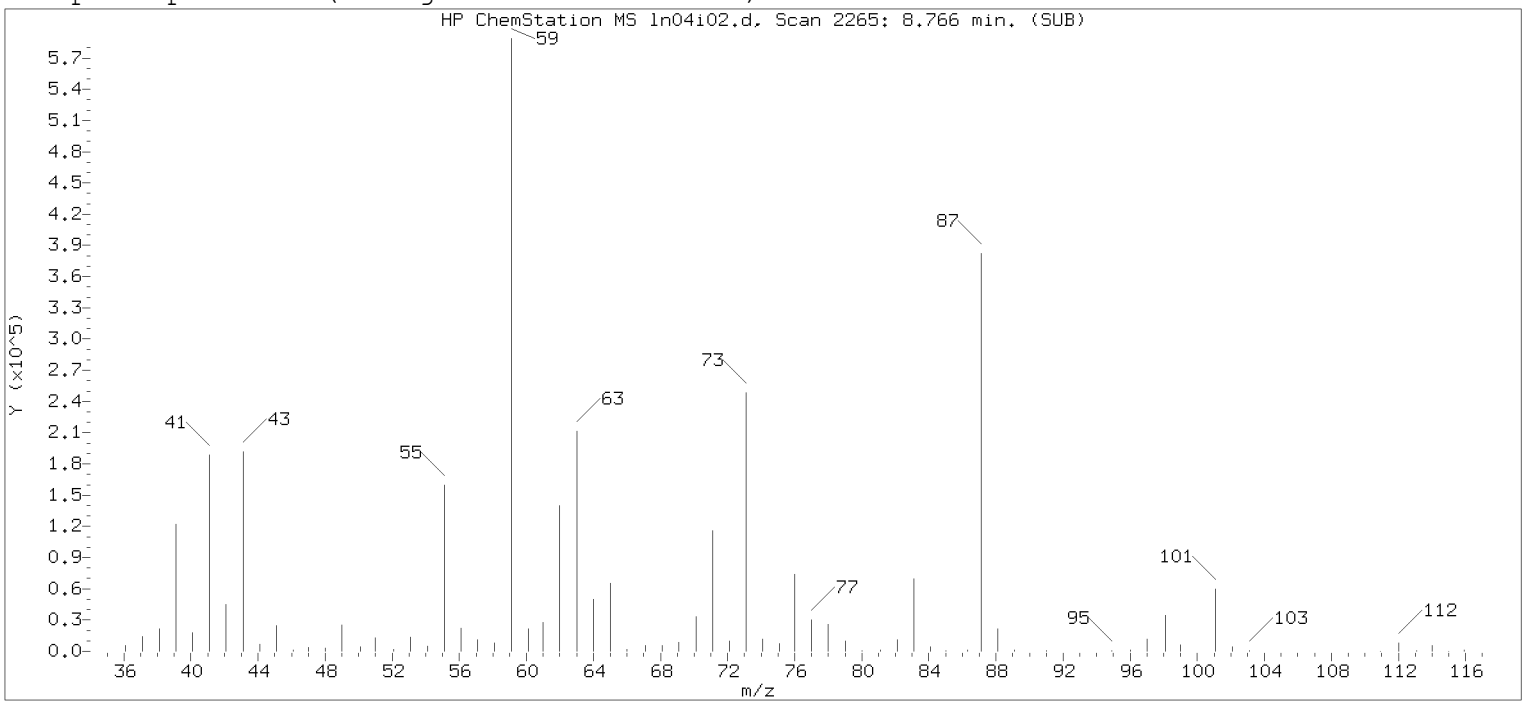
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 117817M
On-Column Amount (ng) : 1321.6466
Integration start scan : 2277 Integration stop scan: 2390
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

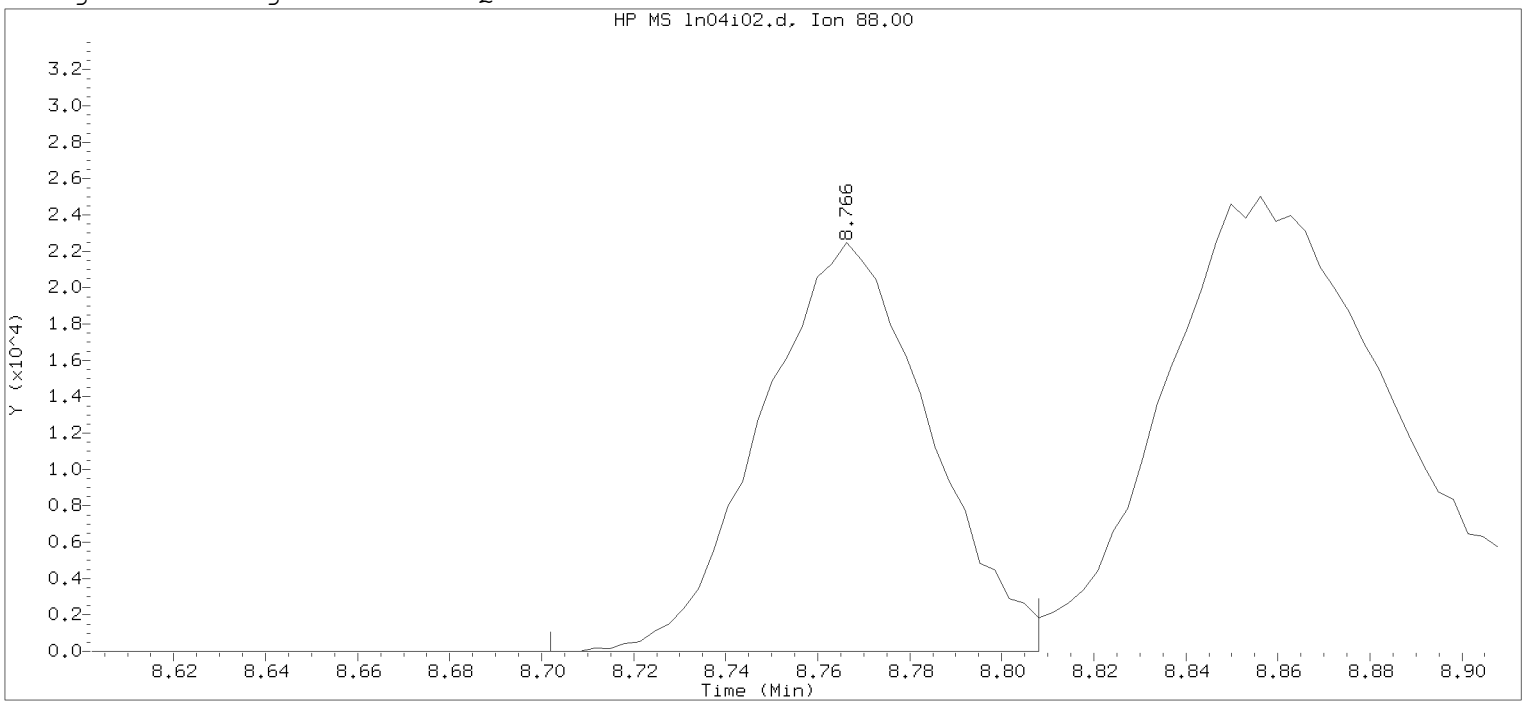
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

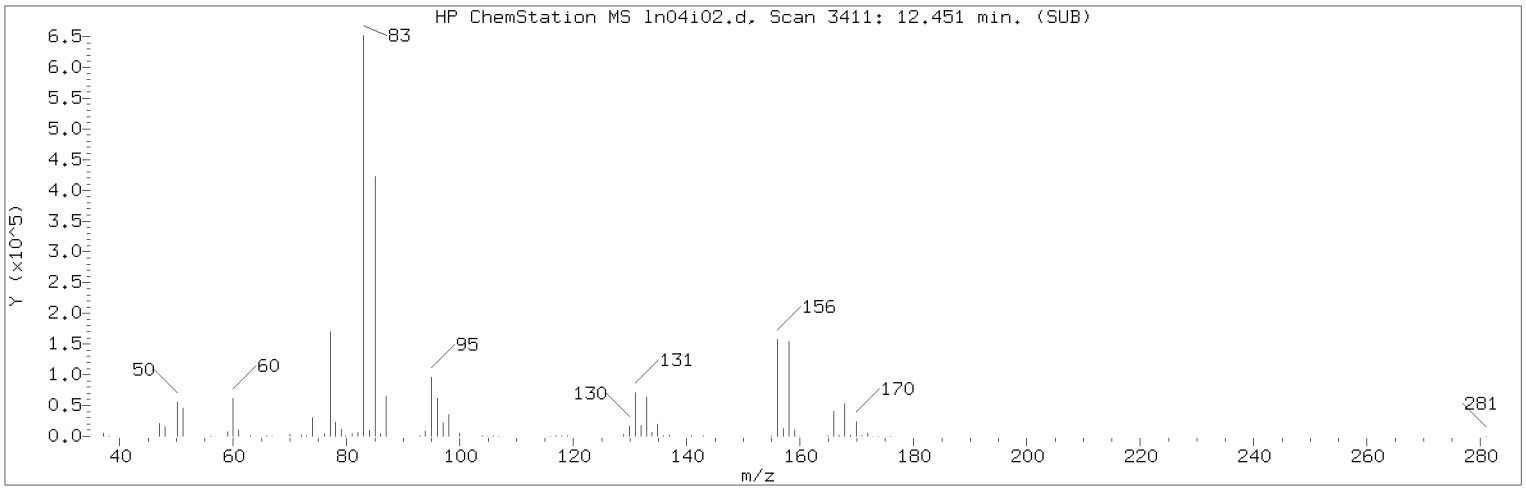
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

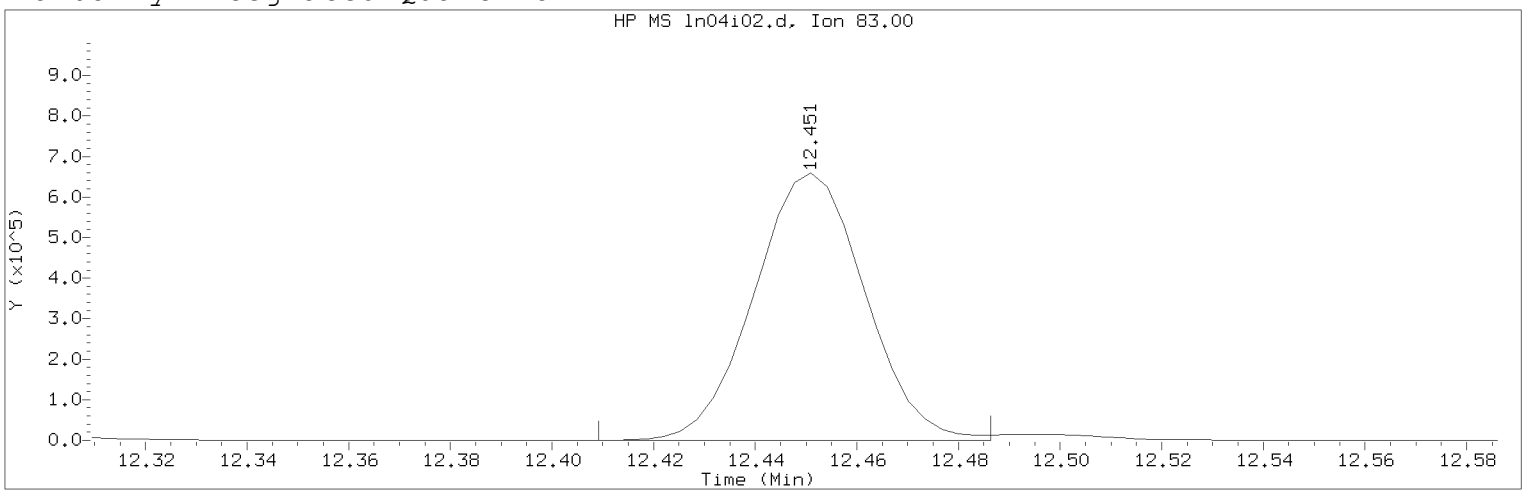
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2265
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area : 56534
On-column Amount (ng) : 746.2694
Integration start scan : 2244 Integration stop scan: 2277
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

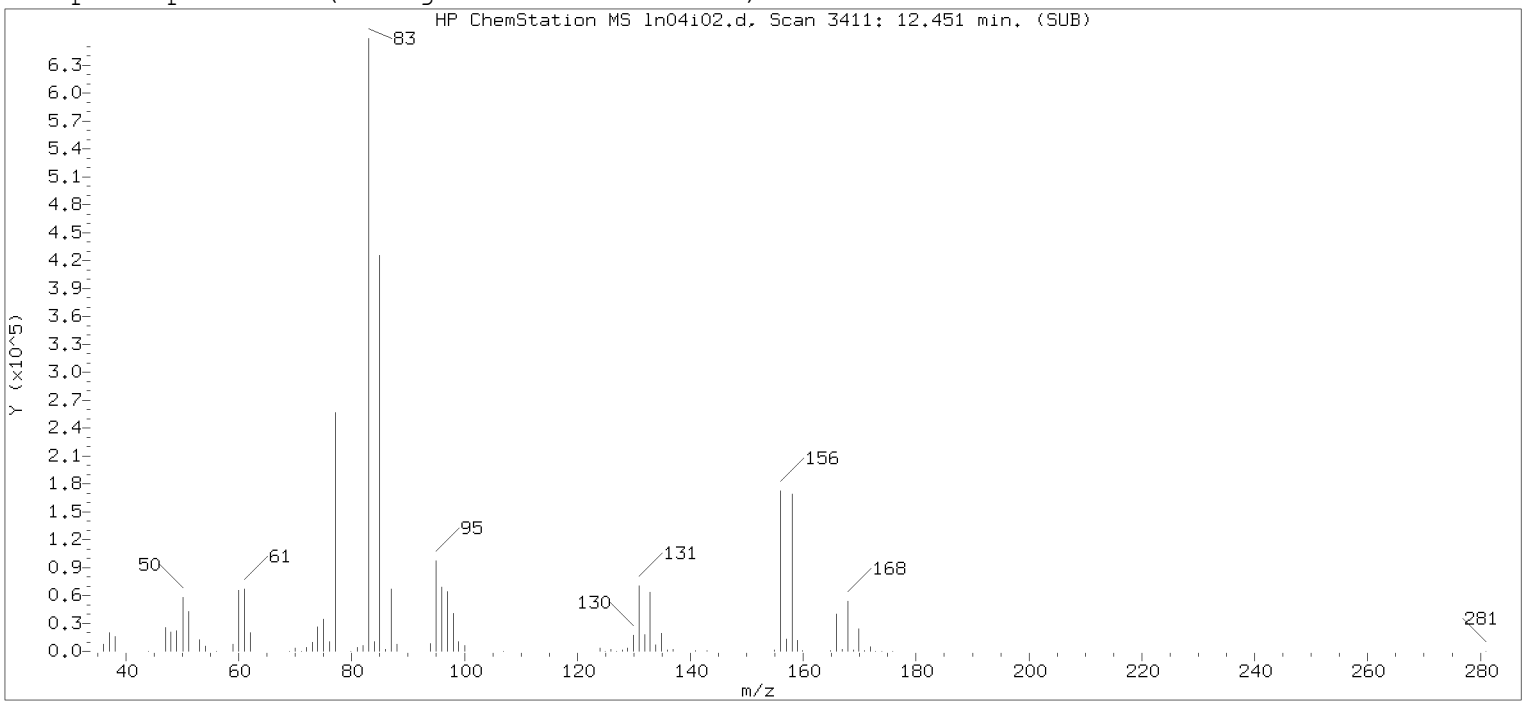
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 995972M
On-Column Amount (ng) : 105.3166
Integration start scan : 3397 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

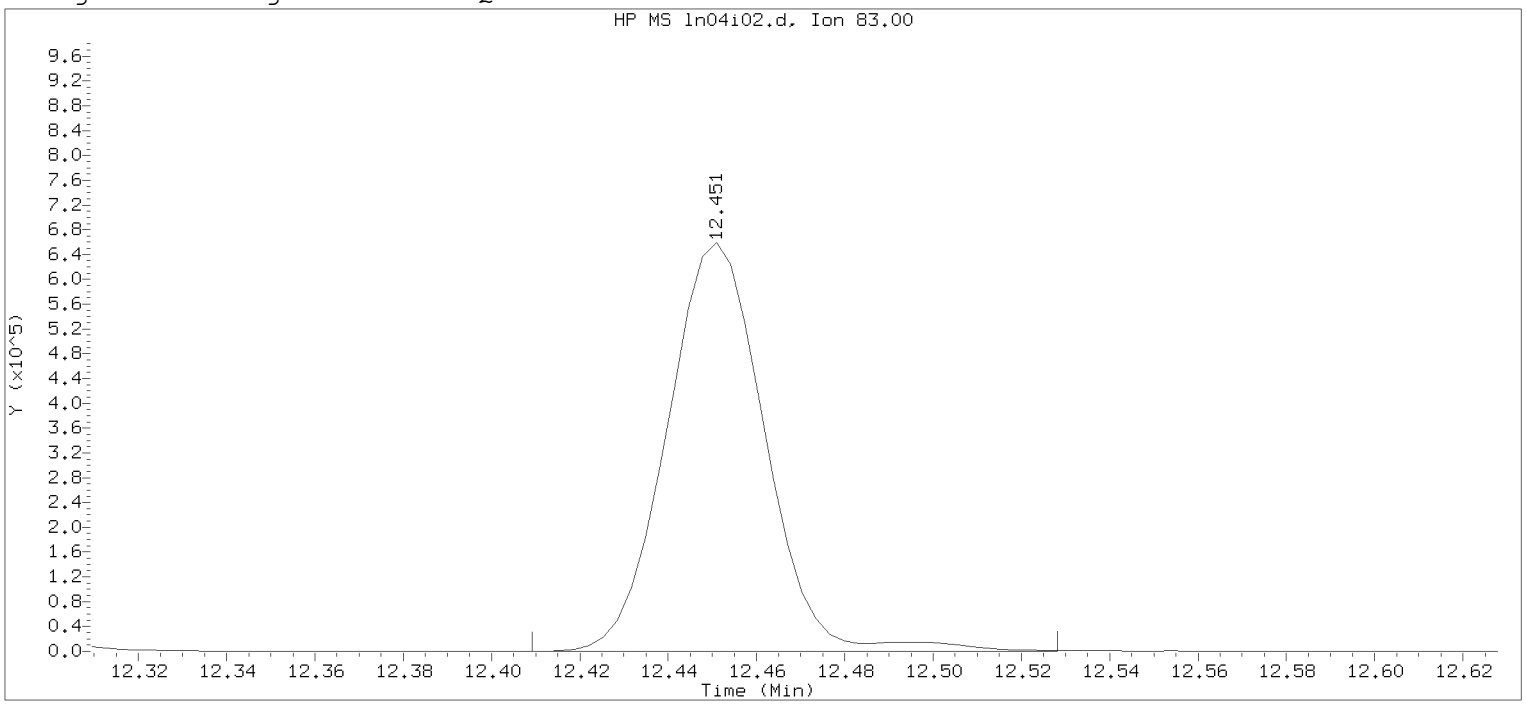
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

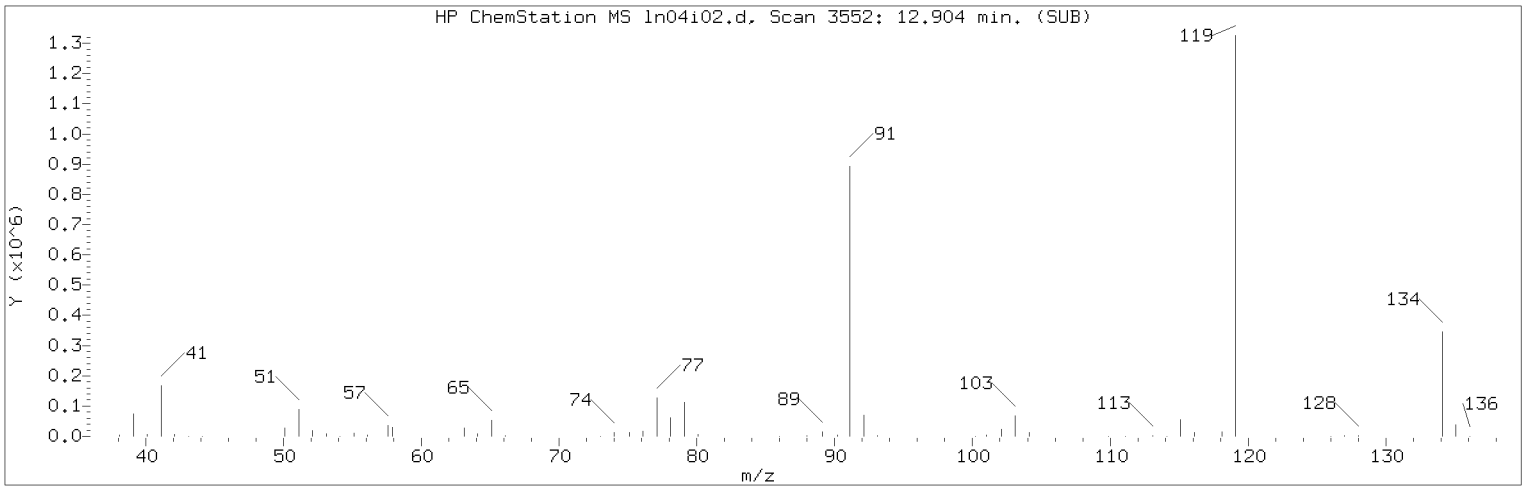
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

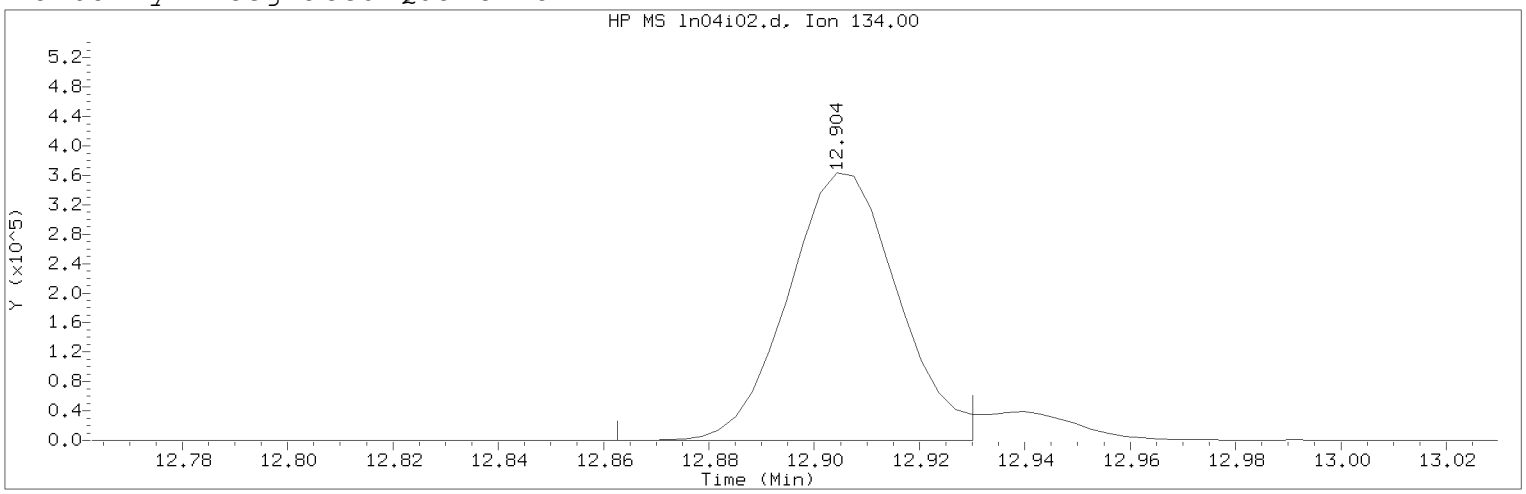
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 1015846
On-column Amount (ng) : 101.1821
Integration start scan : 3397 Integration stop scan: 3434
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

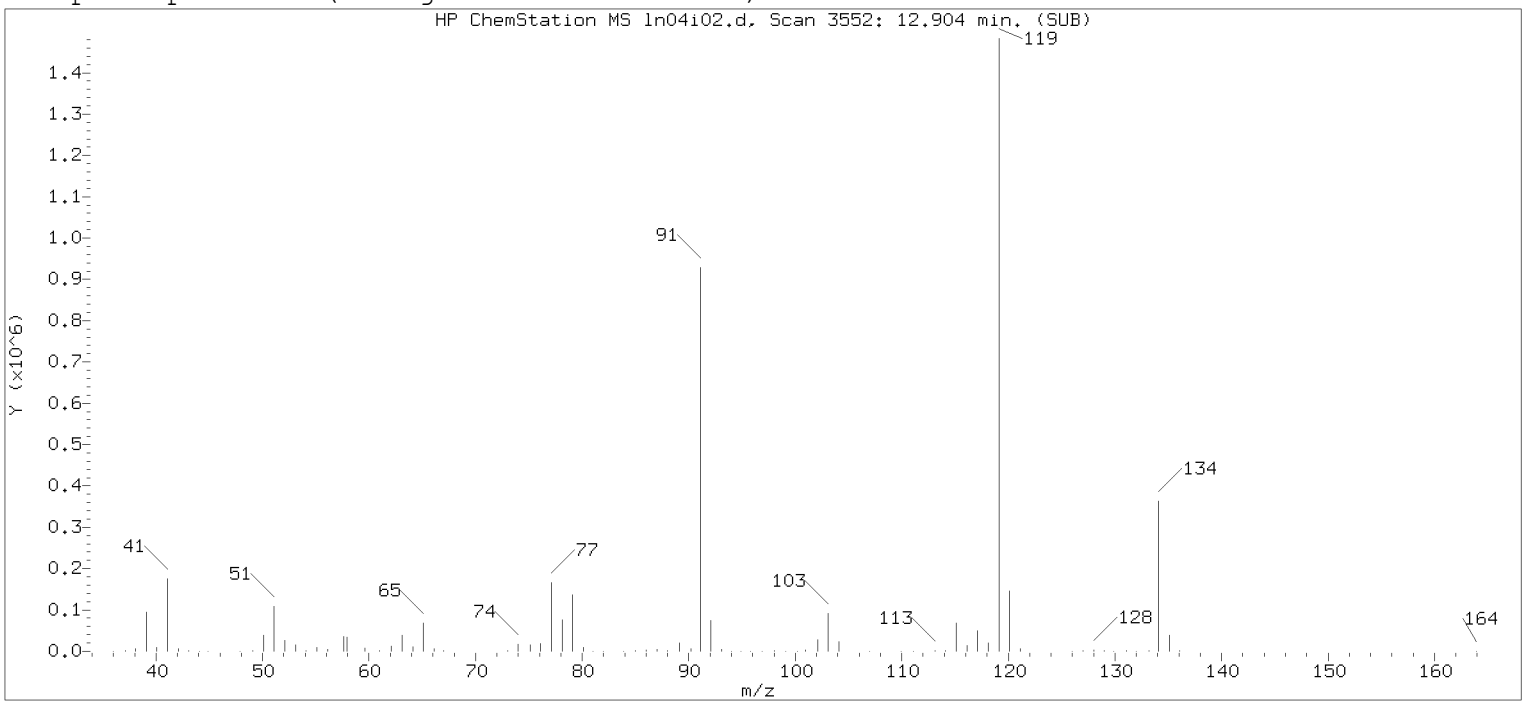
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 526781M
On-Column Amount (ng) : 106.6224
Integration start scan : 3538 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

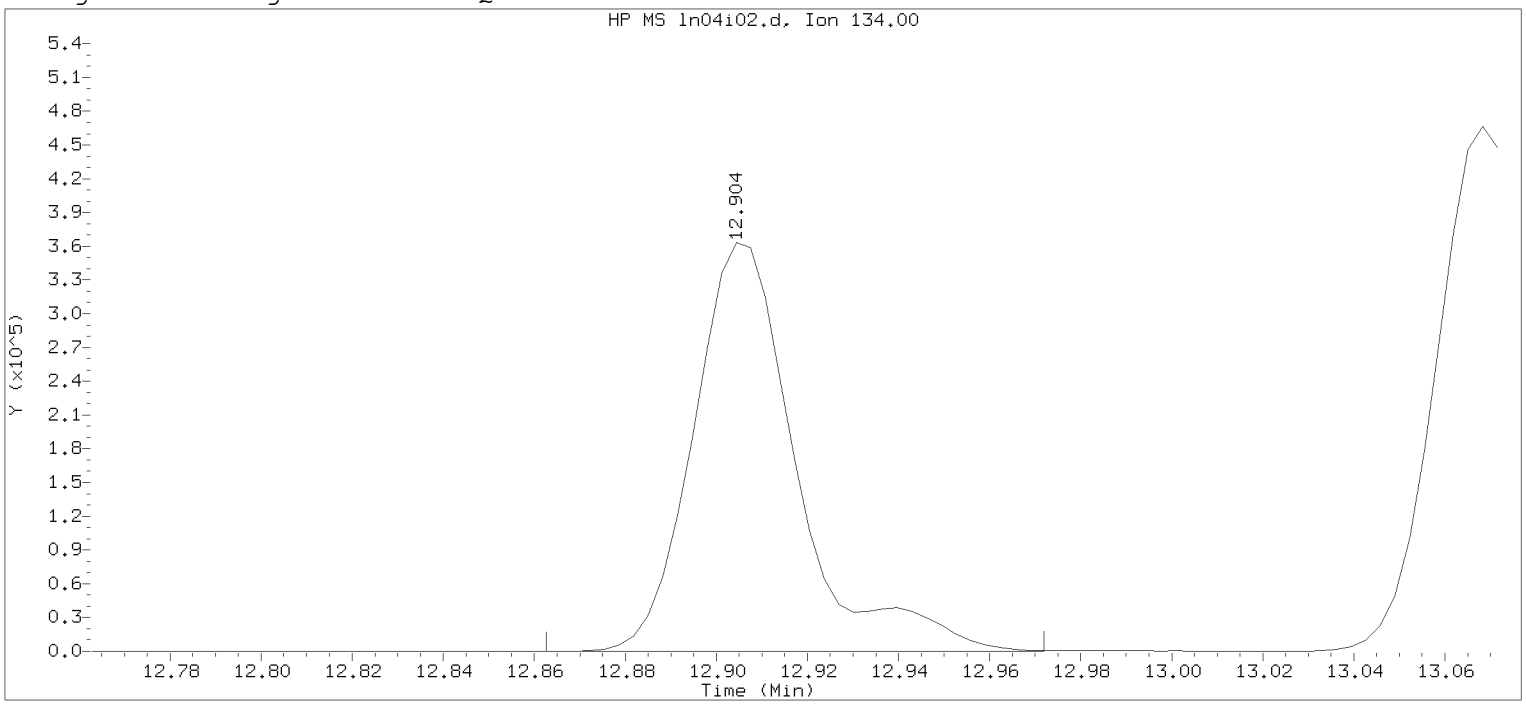
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



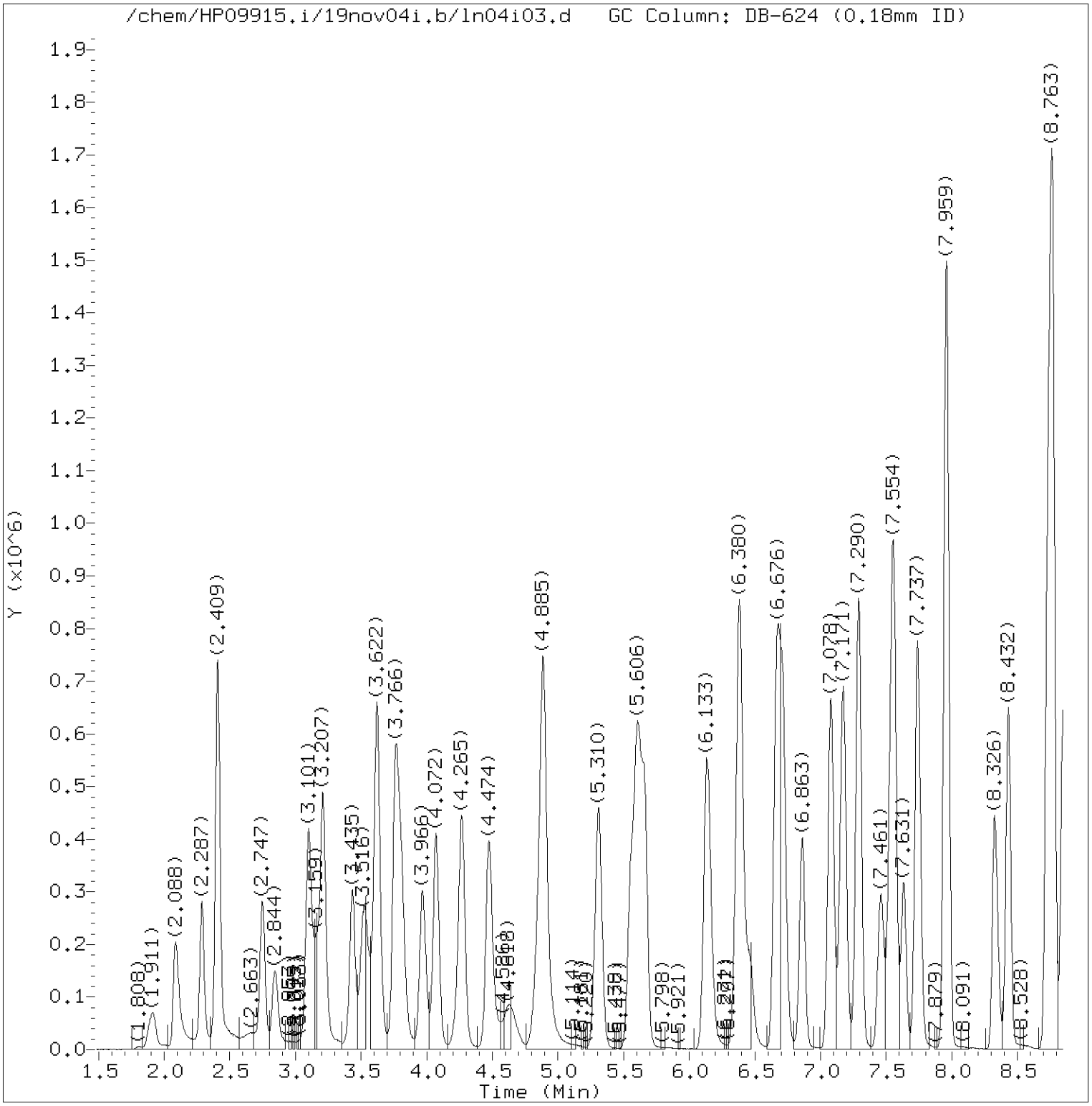
Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 572341
On-column Amount (ng) : 102.7487
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

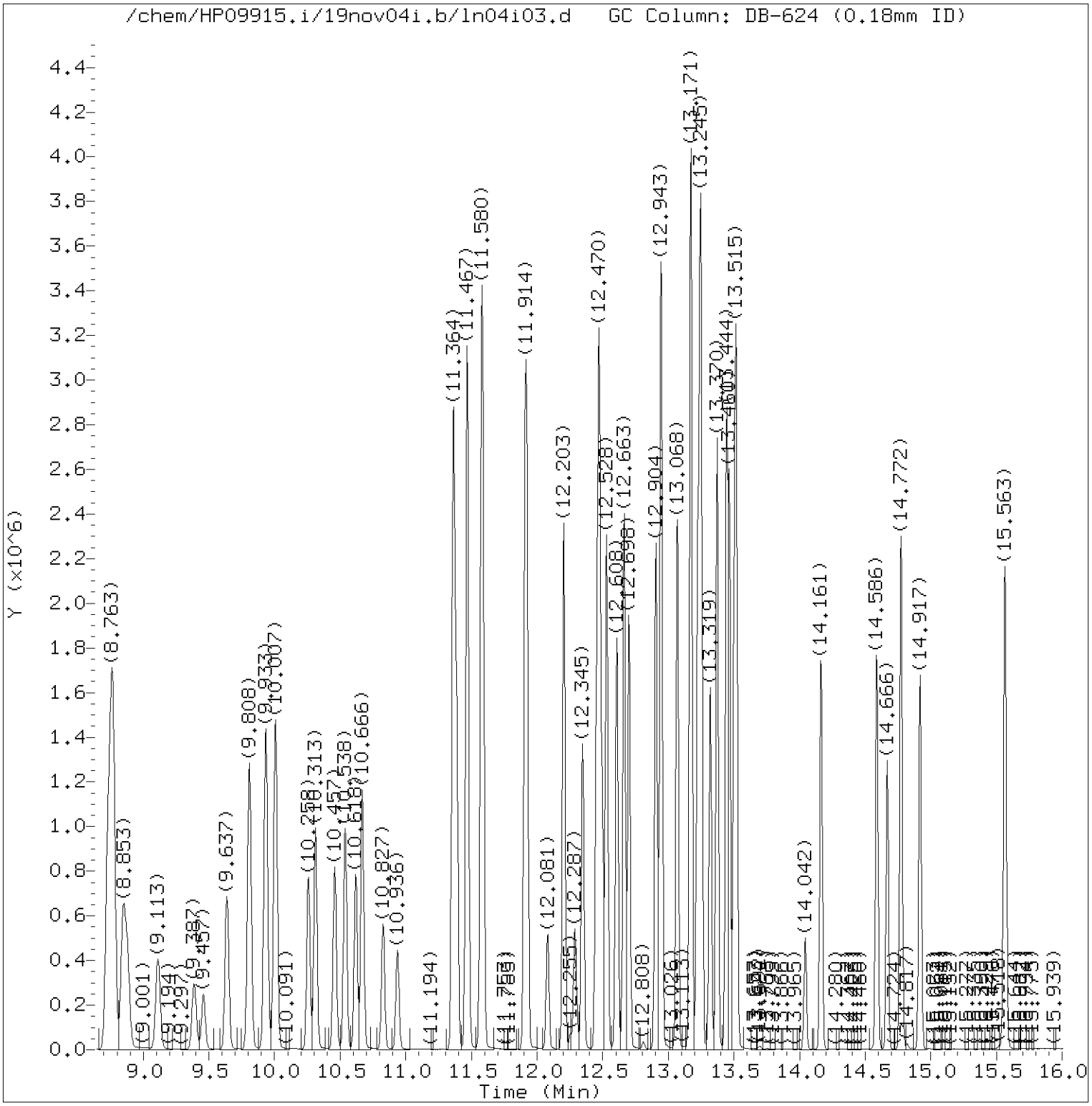
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.088	85	427538M	52.817
4) Chloromethane	(2)	2.287	50	390734	50.084
5) 1,3-Butadiene	(2)	2.406	39	311095M	48.025
6) Vinyl Chloride	(2)	2.409	62	387720	49.794
8) Bromomethane	(2)	2.747	94	272873	48.888
9) Chloroethane	(2)	2.844	64	212325	49.620
10) Dichlorofluoromethane	(2)	3.098	67	509913MA	49.515
12) Trichlorofluoromethane	(2)	3.152	101	433881	51.758
11) n-Pentane	(2)	3.207	43	489872	49.449
14) Ethyl ether	(2)	3.432	59	285731	52.748
15) Freon 123a	(2)	3.525	67	337192	50.003
16) Acrolein	(1)	3.622	56	1052176	519.843
17) 1,1-Dichloroethene	(2)	3.760	96	251911	51.197
17) 1,1-Dichloroethene	(2)	3.760	63	123343	50.001
19) Freon 113	(2)	3.795	101	289343	51.541
18) Acetone	(1)	3.802	58	91161	100.464
22) Methyl Iodide	(2)	3.966	142	518954	50.897
21) 2-Propanol	(1)	3.998	45	165875M	254.283
23) Carbon Disulfide	(2)	4.072	76	956902	51.606
27) Methyl Acetate	(2)	4.245	43	314348	49.603
25) Allyl Chloride	(2)	4.271	41	438915	49.725
28) Methylene Chloride	(2)	4.474	84	295055	50.382
29)*t-Butyl alcohol-d10	(1)	4.509	65	269779M	250.000
30) t-Butyl alcohol	(1)	4.625	59	291988	257.078
31) Acrylonitrile	(2)	4.834	53	175969	51.611
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	957096	51.225
32) trans-1,2-Dichloroethene	(2)	4.888	96	287617	50.529
34) n-Hexane	(2)	5.313	57	463732M	52.364
36) 1,1-Dichloroethane	(2)	5.551	63	505667	50.924
38) di-Isopropyl ether	(2)	5.609	45	985238	51.444
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	462216	51.882
40) Ethyl t-butyl ether	(2)	6.133	59	965104	51.927
43) 1,2-Dichloroethene (Total)	(2)		96	610267	101.029
44) 2-Butanone	(2)	6.361	43	453665	103.655
42) cis-1,2-Dichloroethene	(2)	6.380	96	322650	50.501
45) 2,2-Dichloropropane	(2)	6.400	77	400546	51.890
47) Propionitrile	(1)	6.464	54	357876	252.881
48) Methacrylonitrile	(2)	6.670	67	475036	129.160

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	173386	51.180
50) Tetrahydrofuran	(1)	6.721	71	126019	98.581
51) Chloroform	(2)	6.859	83	484828	51.048
52)$Dibromofluoromethane	(2)	7.075	113	282824	49.838
52)$Dibromofluoromethane	(2)	7.075	111	289462	50.026
53) 1,1,1-Trichloroethane	(2)	7.085	97	420986	51.935
54) Cyclohexane	(2)	7.171	56	567043	52.311
54) Cyclohexane	(2)	7.175	84	491699	52.219
54) Cyclohexane	(2)	7.175	69	175289	52.282
56) Carbon Tetrachloride	(2)	7.284	117	361443	52.574
55) 1,1-Dichloropropene	(2)	7.294	75	401799	51.176
58) Isobutyl Alcohol	(1)	7.461	41	242114	633.444
57)$1,2-Dichloroethane-d4	(2)	7.528	102	72846	50.367
57)$1,2-Dichloroethane-d4	(2)	7.531	65	321603	49.897
57)$1,2-Dichloroethane-d4	(2)	7.531	104	46134	49.939
60) Benzene	(2)	7.557	78	1202424	50.927
61) 1,2-Dichloroethane	(2)	7.638	62	372805	49.091
61) 1,2-Dichloroethane	(2)	7.634	98	37850	50.364
65) t-Amyl methyl ether	(2)	7.737	73	971399	52.071
67) n-Heptane	(2)	7.956	43	432248MA	52.247
66)*Fluorobenzene	(2)	7.959	96	1160755	50.000
69) n-Butanol	(1)	8.326	56	438437M	1332.750
71) Trichloroethene	(2)	8.432	95	302634	50.906
72) Methylcyclohexane	(2)	8.734	83	574135	52.056
72) Methylcyclohexane	(2)	8.731	98	260583	52.213
73) 1,2-Dichloropropane	(2)	8.773	63	306937	51.196
76) Methyl Methacrylate	(2)	8.847	69	306086A	52.795
75) 1,4-Dioxane	(1)	8.853	88	59876M	662.196
74) Dibromomethane	(2)	8.879	93	199498	51.428
78) Bromodichloromethane	(2)	9.113	83	366892	52.707
79) 2-Nitropropane	(2)	9.390	41	235097	111.505
80) 2-Chloroethyl Vinyl Ether	(2)	9.457	63	134015	52.046
81) cis-1,3-Dichloropropene	(2)	9.637	75	495055	53.547
82) 4-Methyl-2-pentanone	(2)	9.808	43	1004831	108.769
83)$Toluene-d8	(3)	9.933	98	1189125	50.240
83)$Toluene-d8	(3)	9.933	100	767119	50.033
88) Toluene	(3)	10.007	92	764927	51.549
90) 1,3-Dichloropropene (total)	(3)		100	956669	108.348

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	461614	54.801
91) Ethyl Methacrylate	(3)	10.313	69	554039	54.121
92) 1,1,2-Trichloroethane	(3)	10.461	97	291480	51.810
93) Tetrachloroethene	(3)	10.538	166	321895	51.220
94) 1,3-Dichloropropane	(3)	10.618	76	494204	51.449
96) 2-Hexanone	(3)	10.670	43	761734	111.475
97) Dibromochloromethane	(3)	10.827	129	315765	54.792
99) 1,2-Dibromoethane	(3)	10.936	107	319699	52.331
100)*Chlorobenzene-d5	(3)	11.361	117	904578	50.000
101) 1-Chlorohexane	(3)	11.364	91	399510	50.116
102) Chlorobenzene	(3)	11.387	112	864419	51.514
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	299375	54.148
104) Ethylbenzene	(3)	11.467	91	1475718	52.031
106) m+p-Xylene	(3)	11.580	106	1167470	104.636
108) Xylene (Total)	(3)		106	1748839	157.389
107) o-Xylene	(3)	11.907	106	581369	52.752
109) Styrene	(3)	11.924	104	981189	53.877
110) Bromoform	(3)	12.081	173	229903	53.387
111) Isopropylbenzene	(3)	12.203	105	1456789	52.702
112) Cyclohexanone	(1)	12.287	55	231776	654.496
114)$4-Bromofluorobenzene	(3)	12.345	95	446156	49.781
114)$4-Bromofluorobenzene	(3)	12.348	174	370576	49.875
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	482004M	52.727
115) Bromobenzene	(4)	12.464	156	378400	52.027
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	383692	136.075
117) 1,2,3-Trichloropropane	(4)	12.496	110	145151	51.744
119) n-Propylbenzene	(4)	12.528	91	1662625	52.323
120) 2-Chlorotoluene	(4)	12.608	126	350943	51.988
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	1225419	53.065
121) 4-Chlorotoluene	(4)	12.698	126	361669	51.471
124) tert-Butylbenzene	(4)	12.904	134	253906M	53.165
125) Pentachloroethane	(4)	12.940	167	227064	55.216
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	1291883	53.080
127) sec-Butylbenzene	(4)	13.068	105	1512547	53.076
129) 1,3-Dichlorobenzene	(4)	13.168	146	693790	51.911
130) p-Isopropyltoluene	(4)	13.174	119	1315828	53.371
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	483927	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	714495	51.569

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134)	1,2,3-Trimethylbenzene	(4)	13.251	105	1342367	52.068
135)	Benzyl Chloride	(4)	13.319	91	1059398	54.274
136)	1,3-Diethylbenzene	(4)	13.370	119	832647	51.895
141)	Diethylbenzene (total)	(4)		100	2415817	155.686
137)	1,4-Diethylbenzene	(4)	13.441	119	877553	51.623
139)	n-Butylbenzene	(4)	13.464	92	652599	51.769
138)	1,2-Dichlorobenzene	(4)	13.502	146	682120	51.722
140)	1,2-Diethylbenzene	(4)	13.518	119	705617	52.168
142)	1,2-Dibromo-3-chloropropane	(4)	14.042	75	108388	54.164
144)	1,3,5-Trichlorobenzene	(4)	14.165	180	516839	51.009
146)	1,2,4-Trichlorobenzene	(4)	14.586	180	503797	51.136
147)	Hexachlorobutadiene	(4)	14.666	225	217236	46.700
148)	Naphthalene	(4)	14.772	128	1689758	53.350
149)	1,2,3-Trichlorobenzene	(4)	14.917	180	498430	51.993
150)	2-Methylnaphthalene	(4)	15.563	142	1079055	55.325

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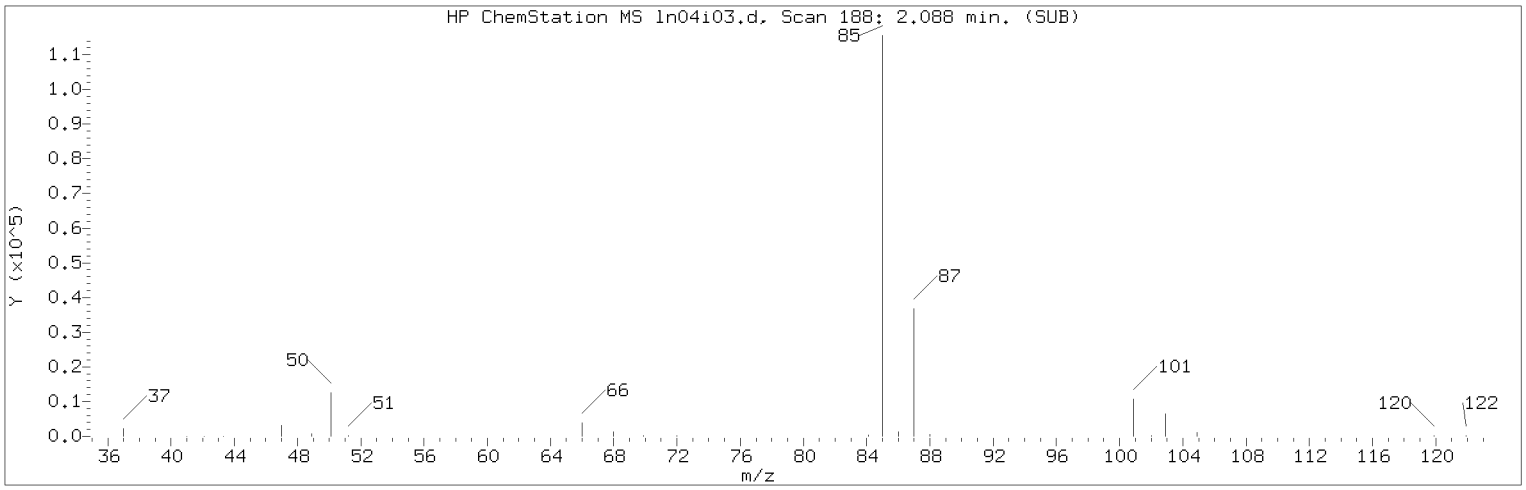
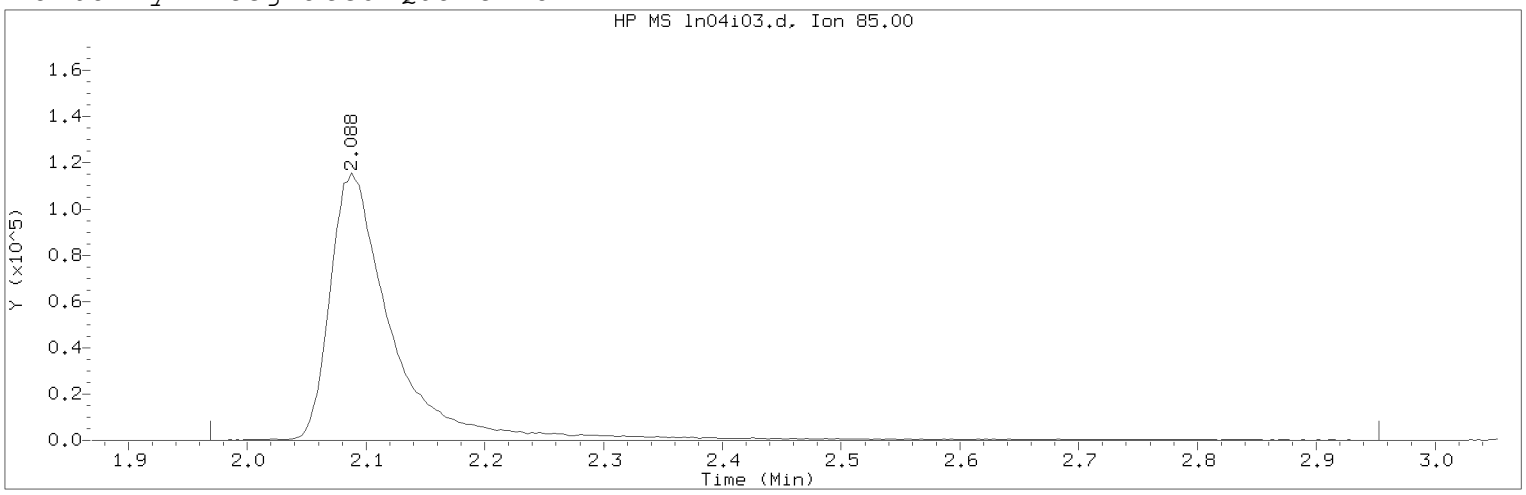
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

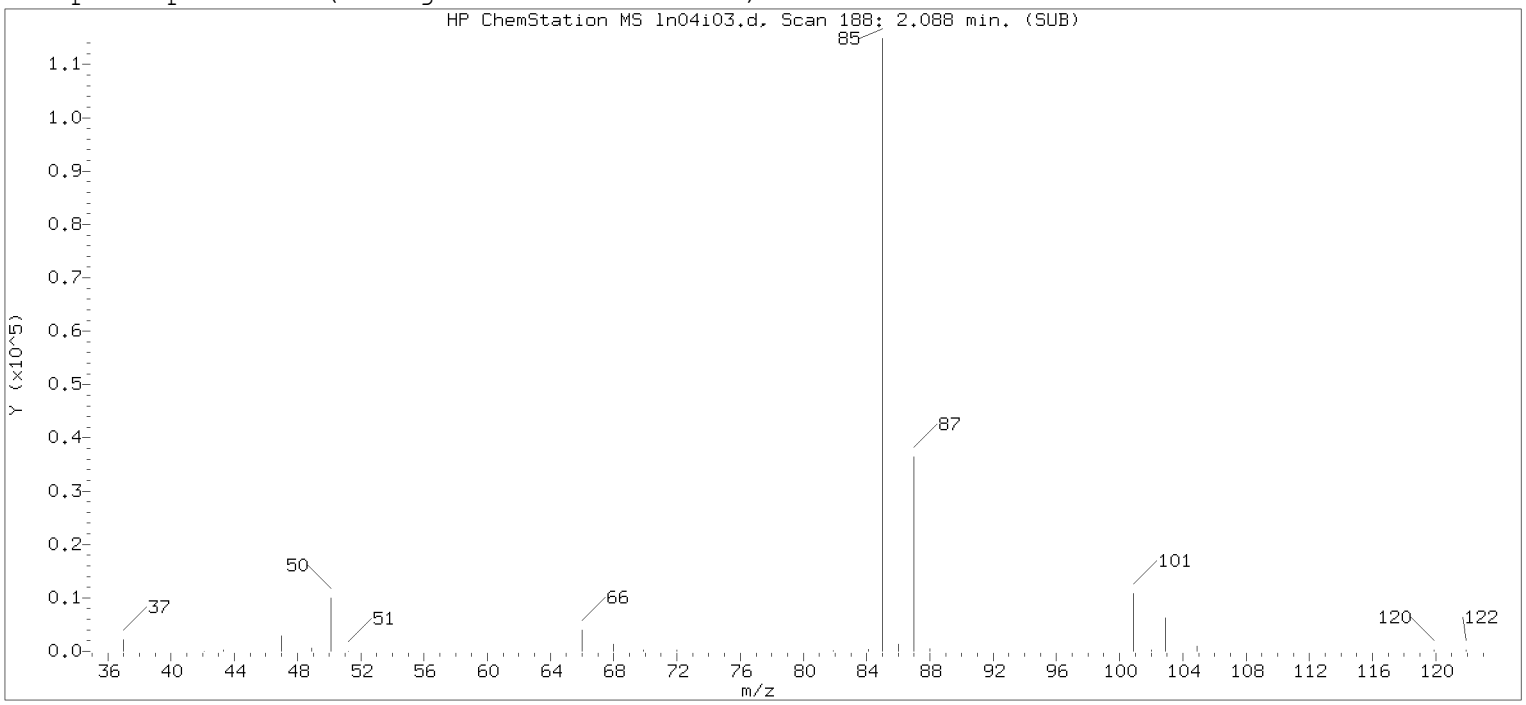
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 188
Retention Time (minutes): 2.088
Quant Ion : 85.00
Area (flag) : 427538M
On-Column Amount (ng) : 52.8165
Integration start scan : 150 Integration stop scan: 456
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

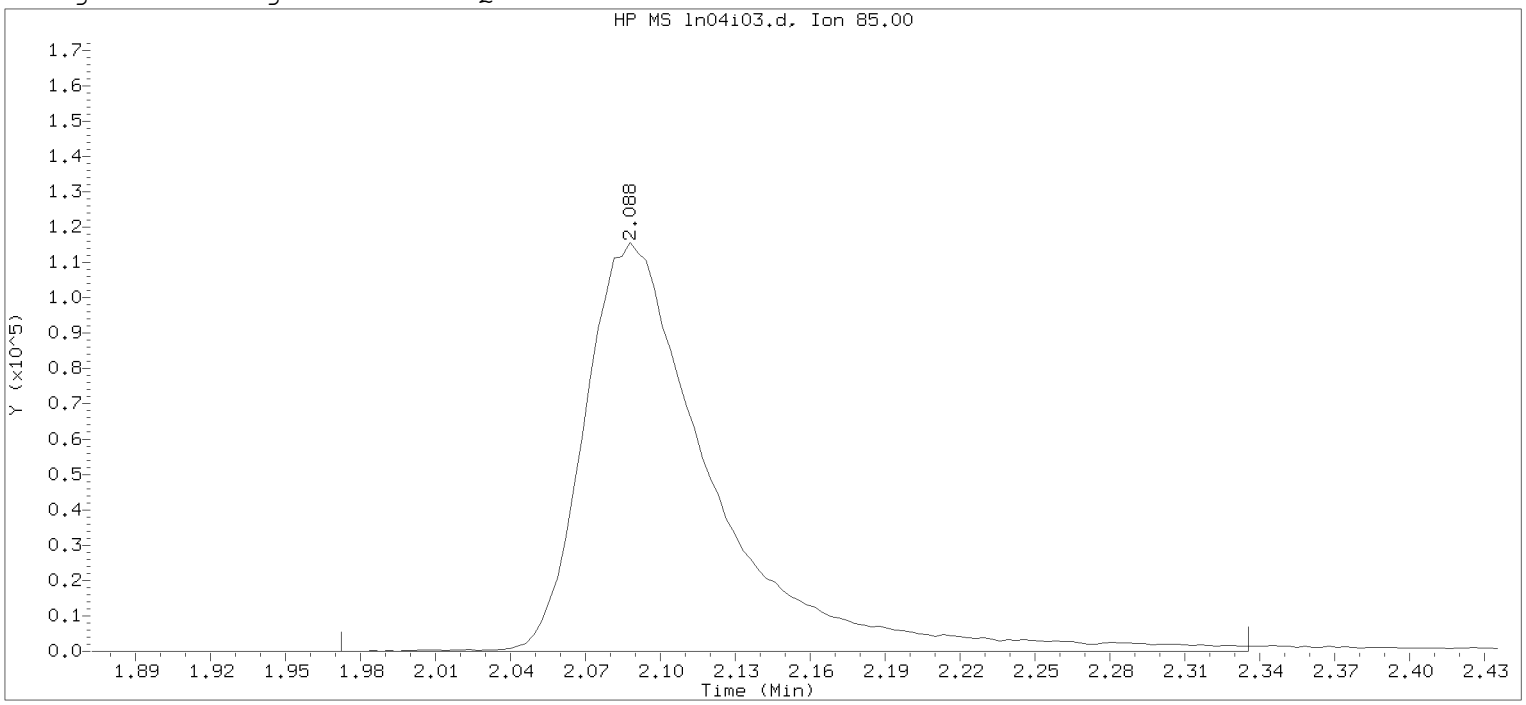
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

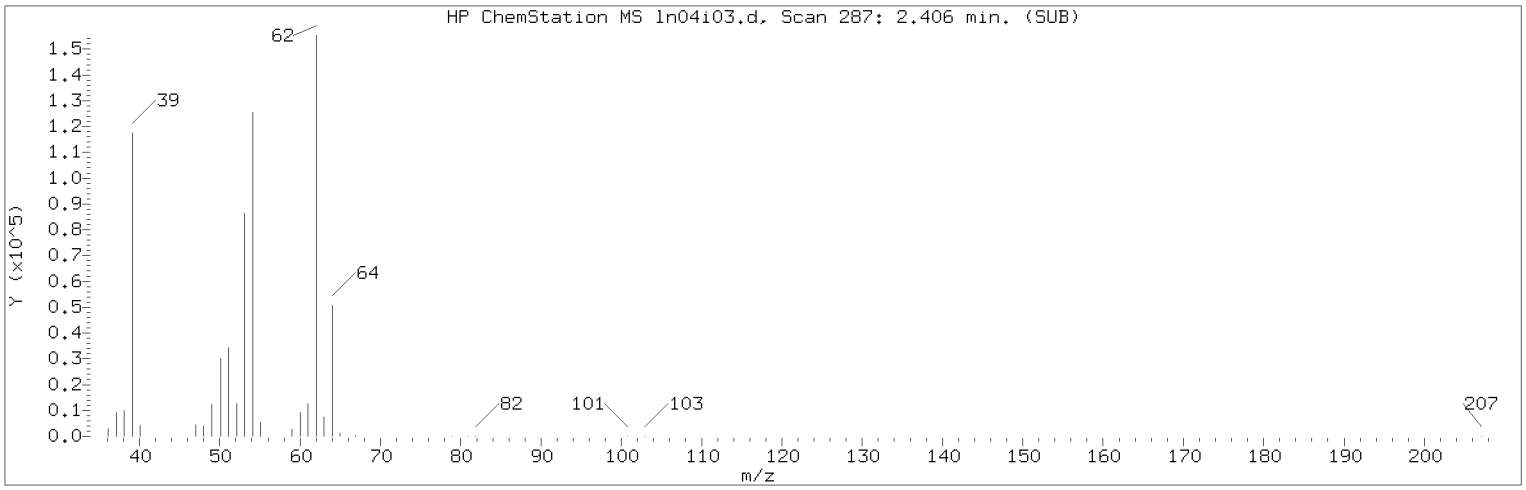
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

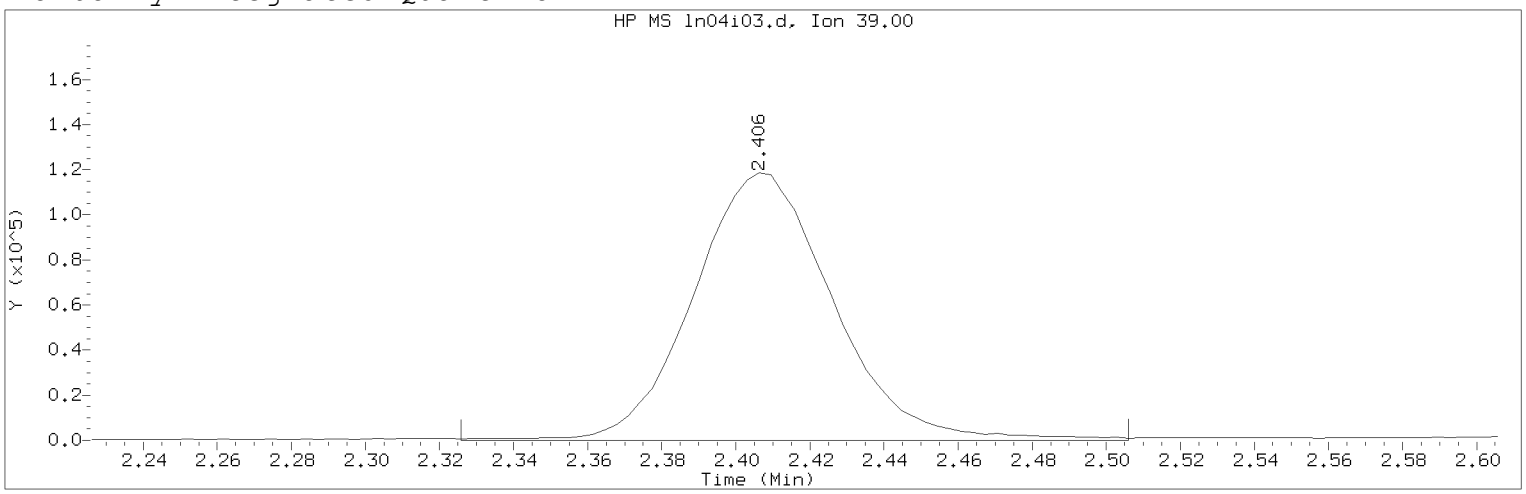
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 188
Retention Time (minutes): 2.088
Quant Ion : 85.00
Area : 411065
On-column Amount (ng) : 48.5918
Integration start scan : 151 Integration stop scan: 264
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

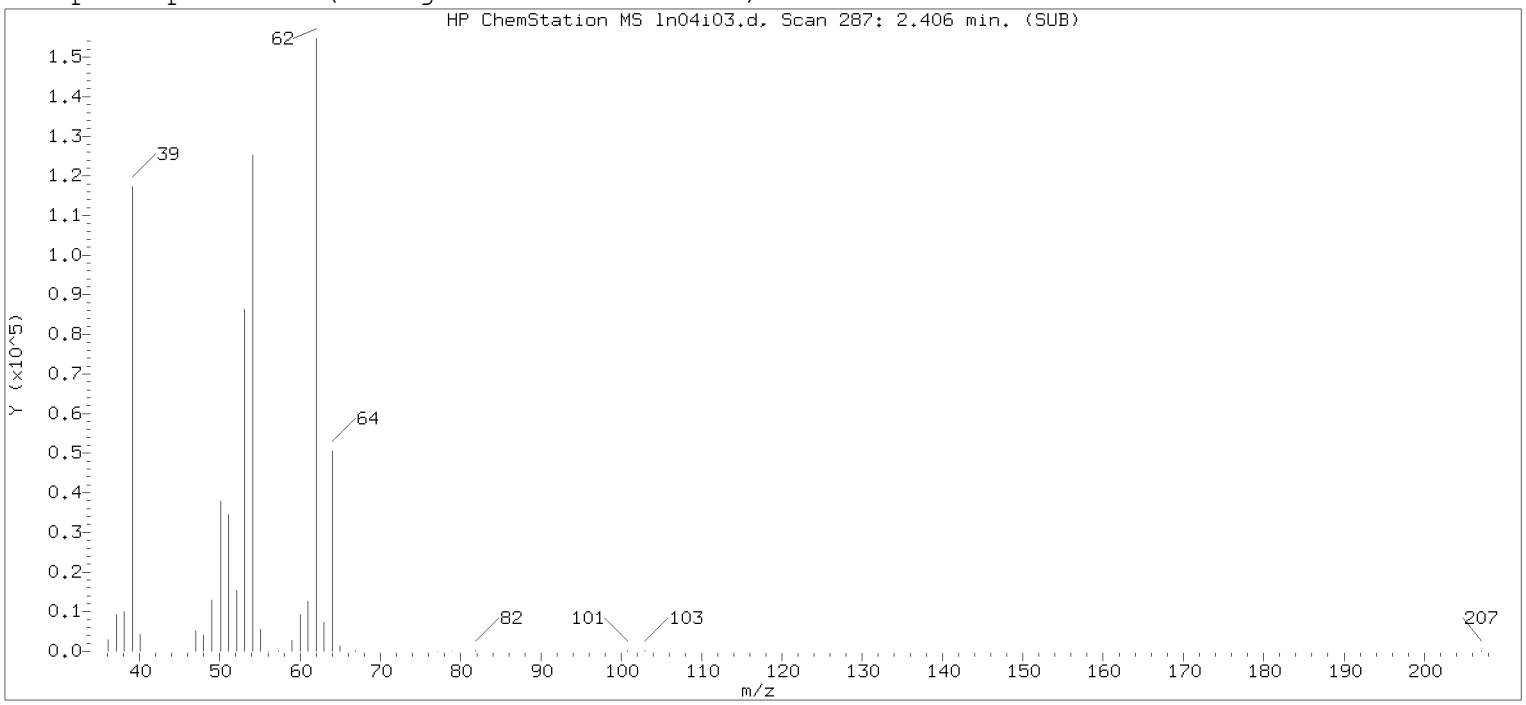
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 311095M
On-Column Amount (ng) : 48.0246
Integration start scan : 261 Integration stop scan: 317
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

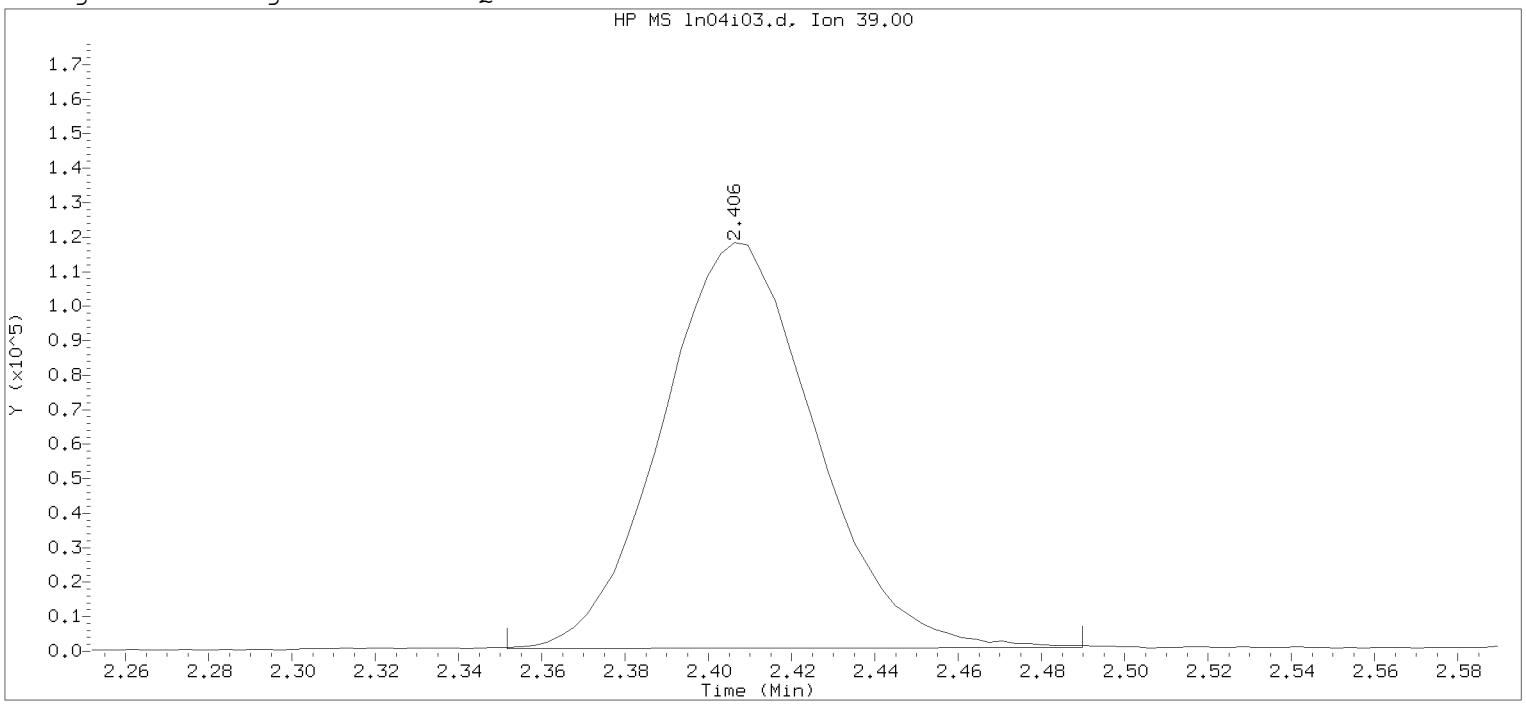
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 300667
On-column Amount (ng) : 50.0756
Integration start scan : 269 Integration stop scan: 312
Y at integration start : 752 Y at integration end: 1063

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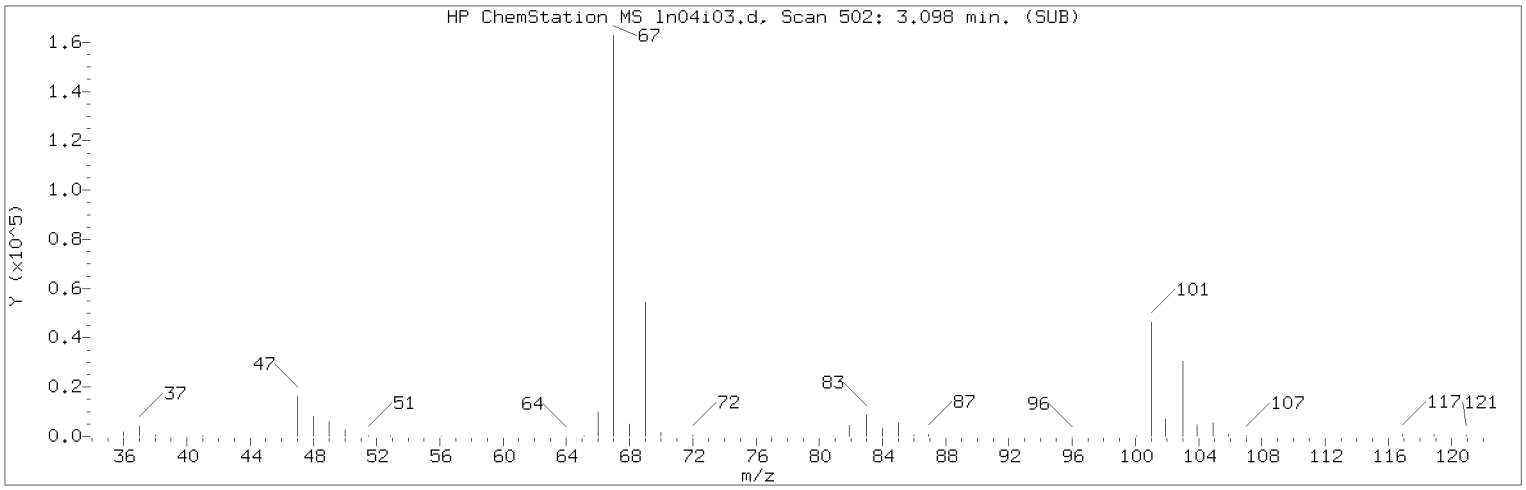
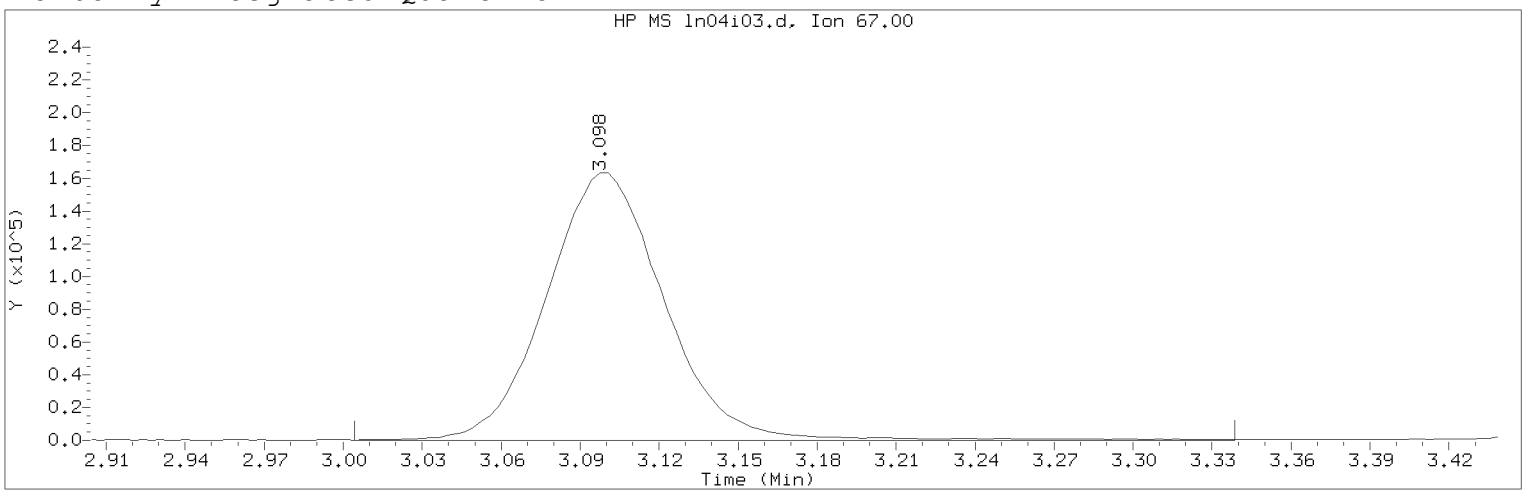
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

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Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

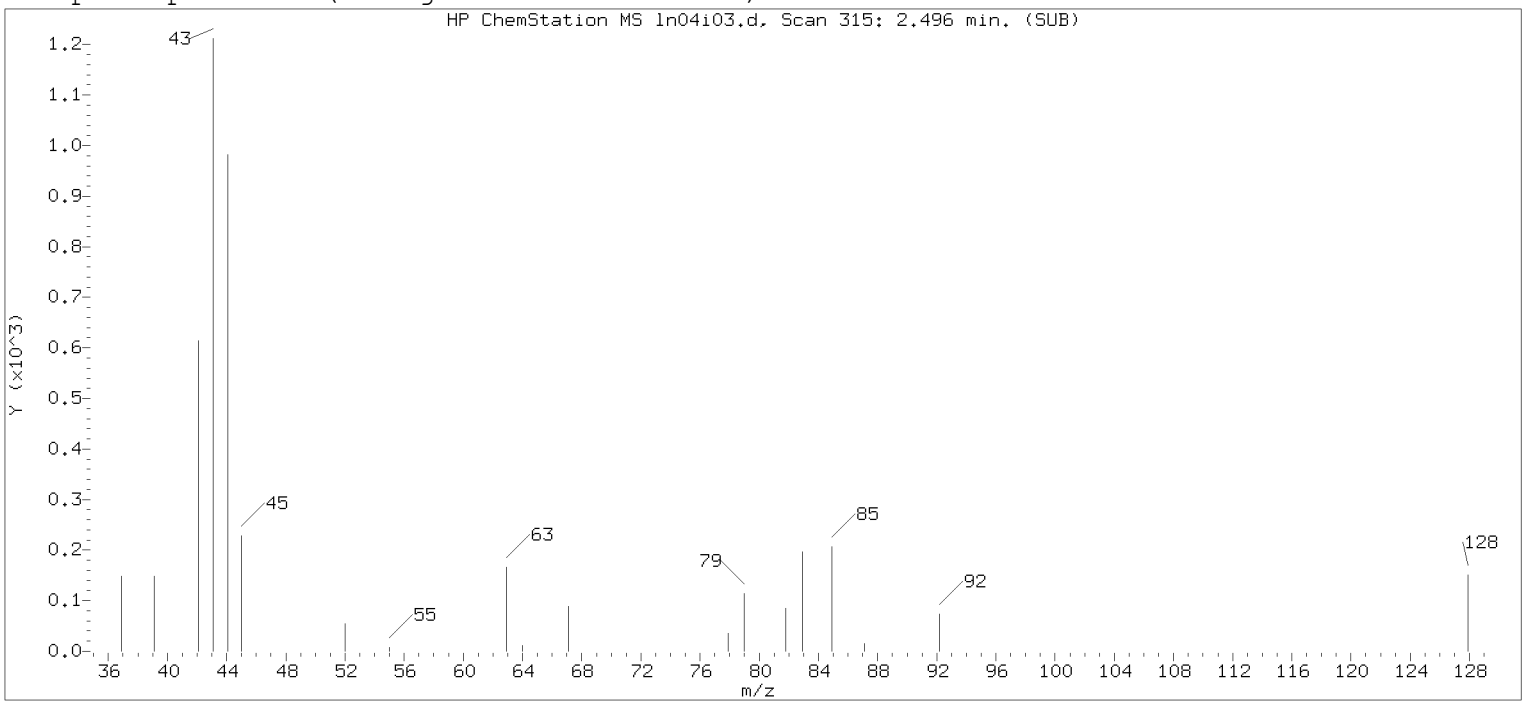
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 502
Retention Time (minutes): 3.098
Quant Ion : 67.00
Area (flag) : 509913MA
On-Column Amount (ng) : 49.5150
Integration start scan : 472 Integration stop scan: 576
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

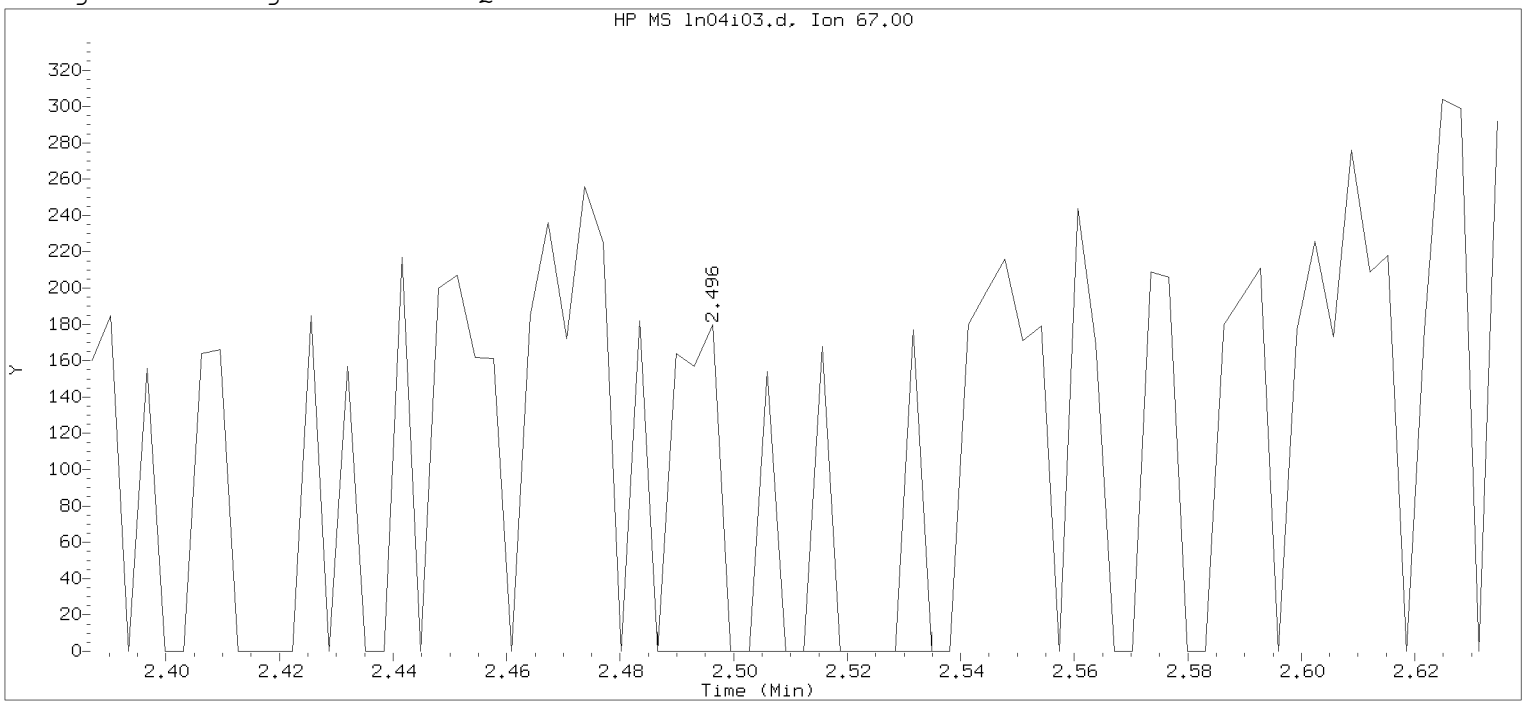
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

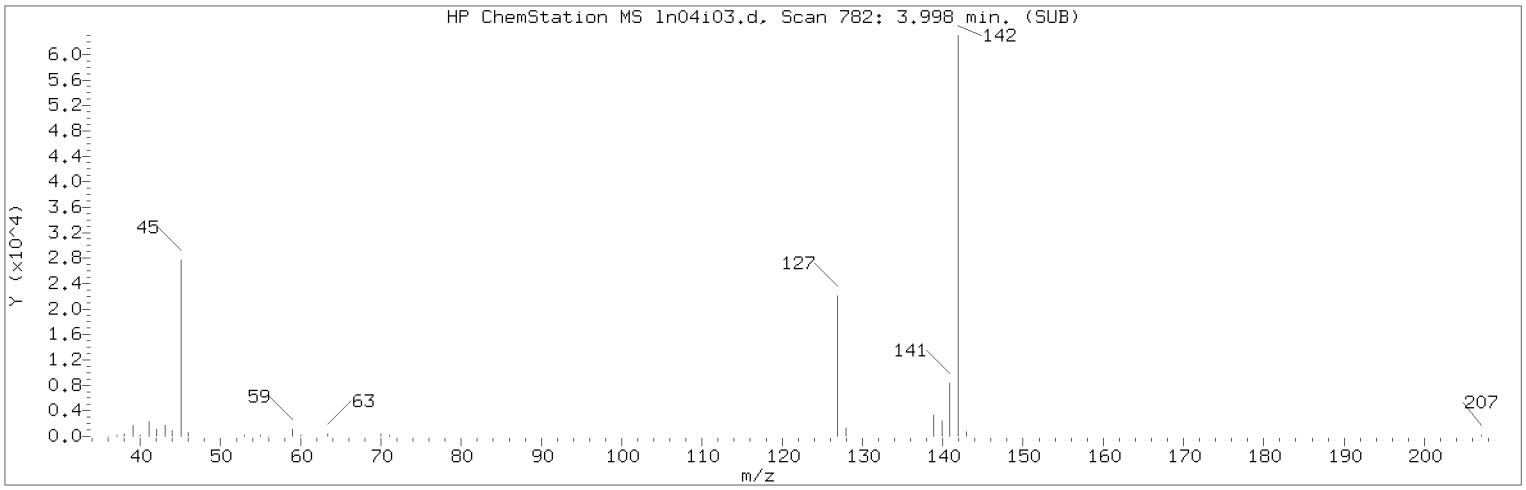
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

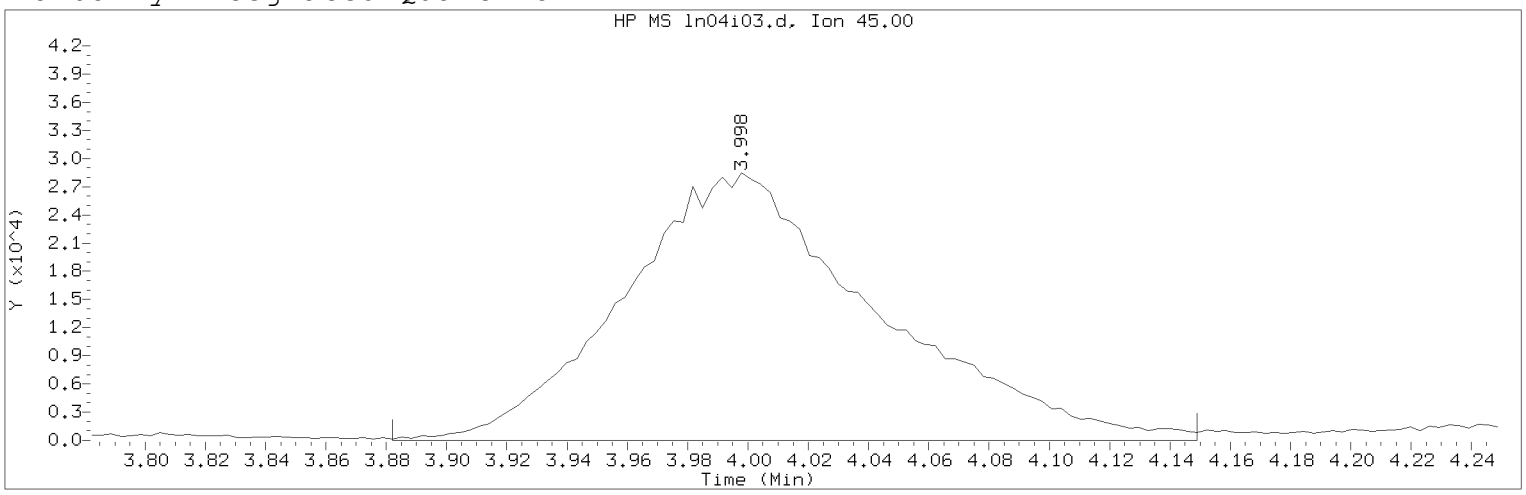
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 315
Retention Time (minutes): 2.496
Quant Ion : 67.00
Area : 192
On-column Amount (ng) : 0.0562
Integration start scan : 311 Integration stop scan: 326
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

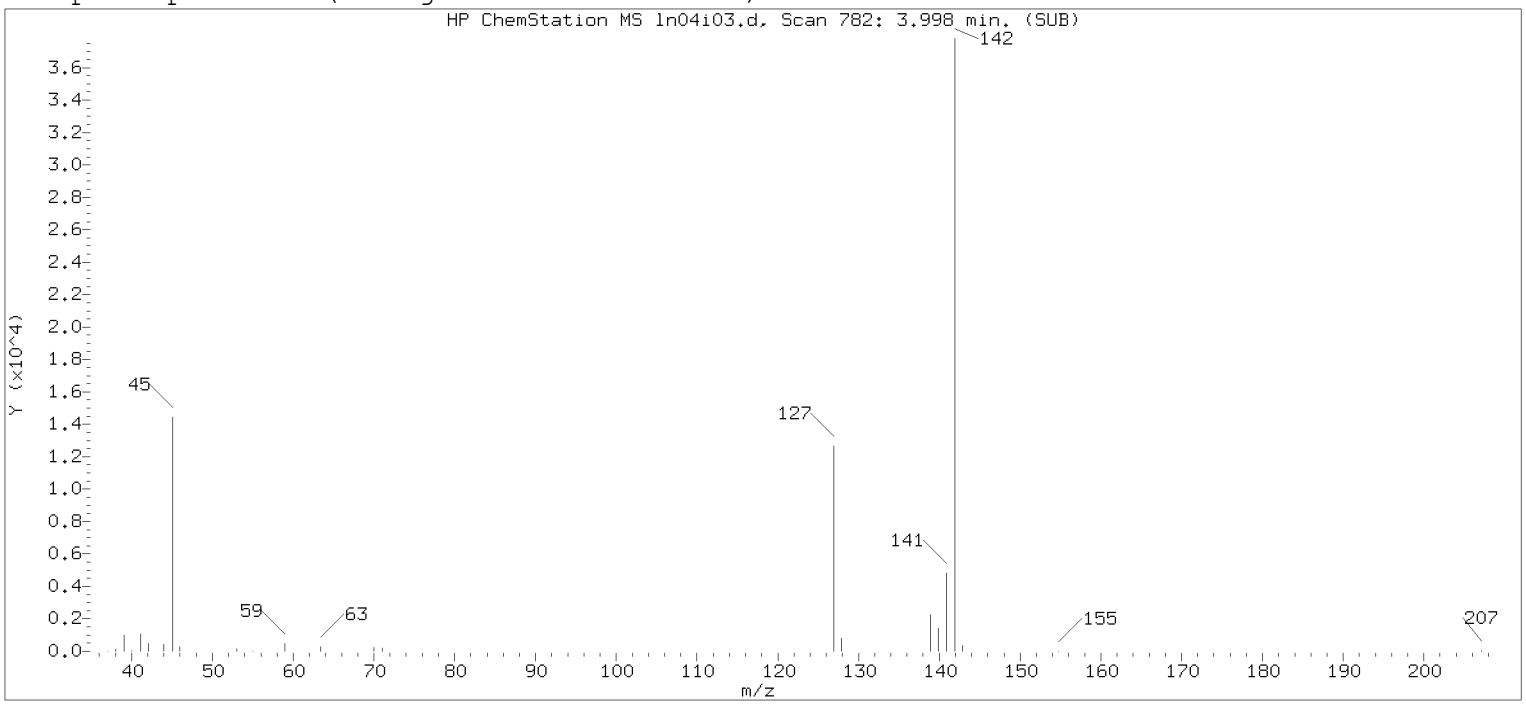
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 782
Retention Time (minutes): 3.998
Quant Ion : 45.00
Area (flag) : 165875M
On-Column Amount (ng) : 254.2825
Integration start scan : 745 Integration stop scan: 828
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

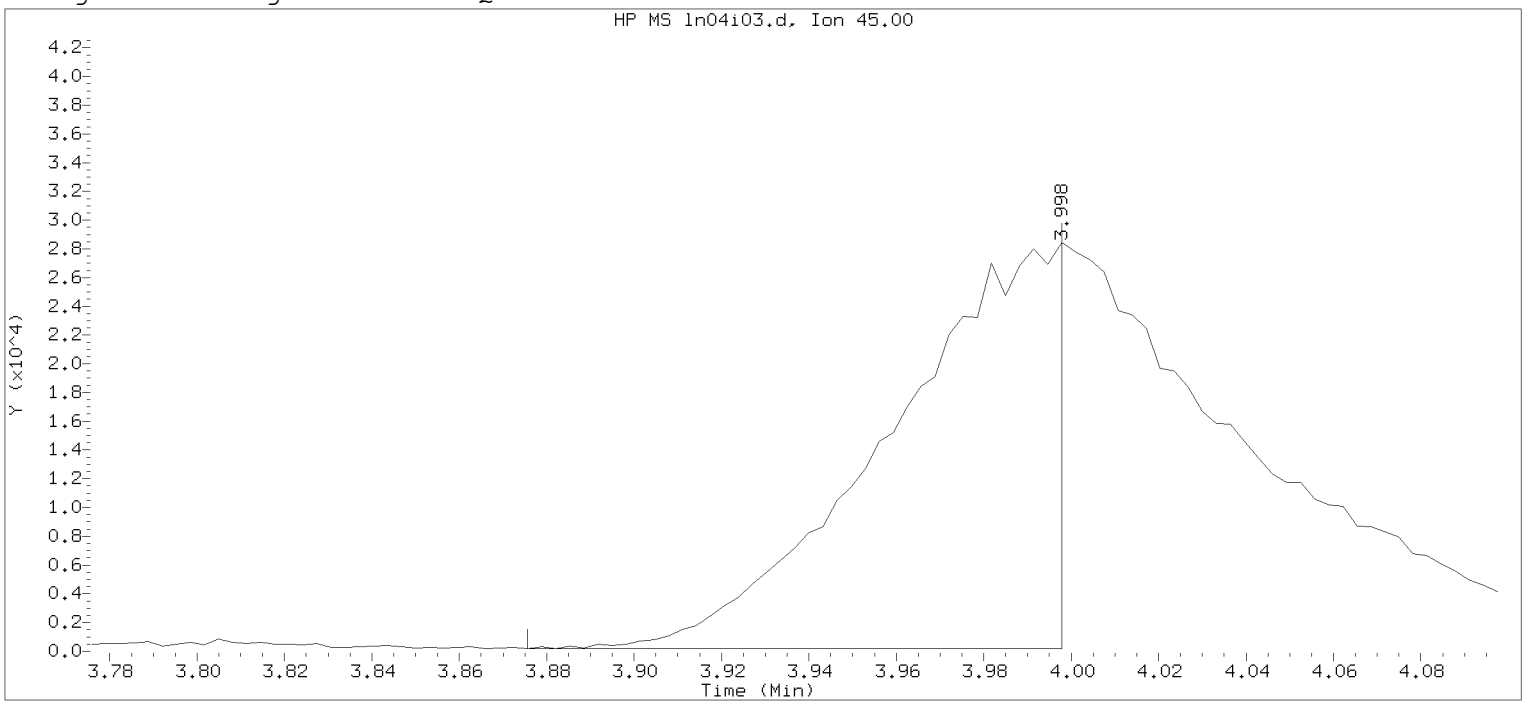
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

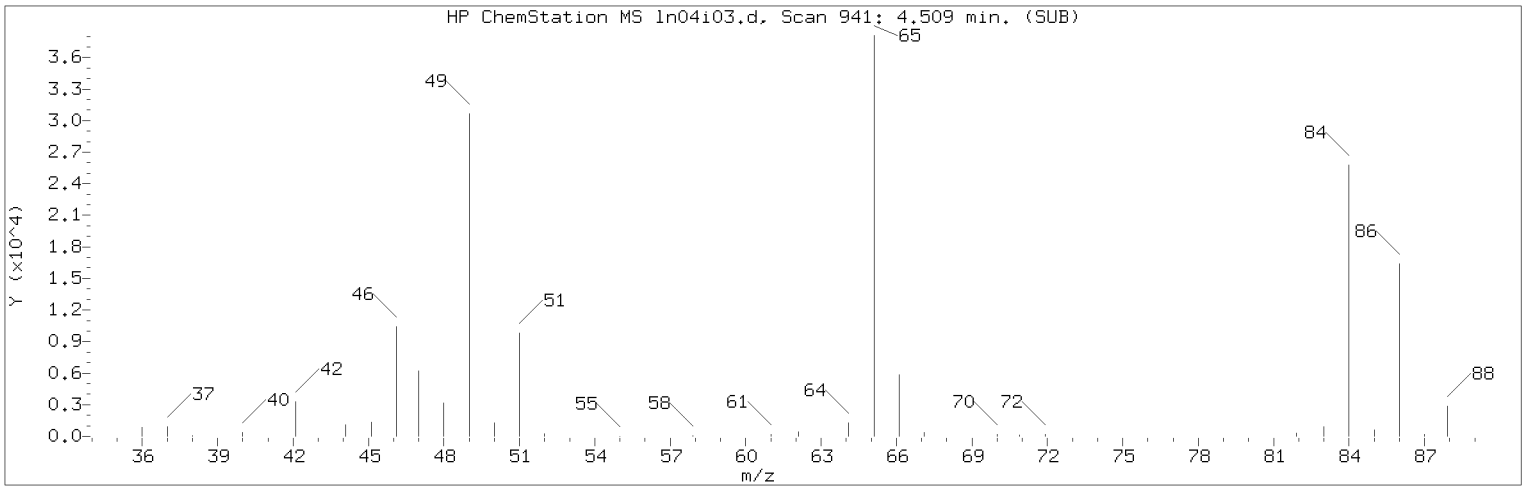
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

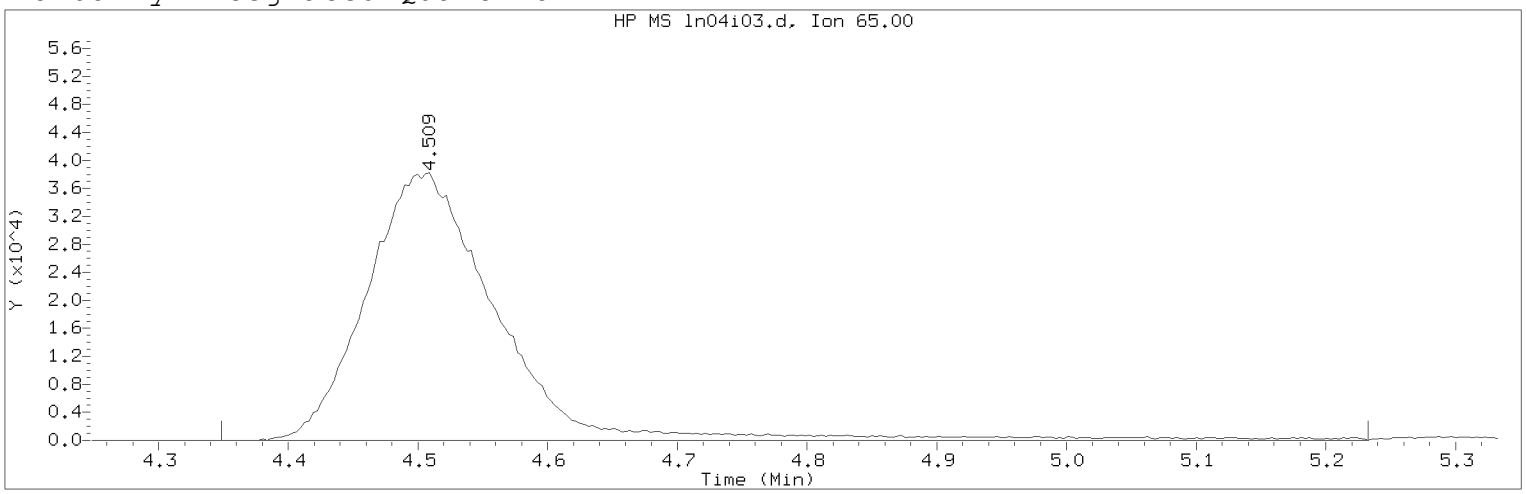
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 782
Retention Time (minutes): 3.998
Quant Ion : 45.00
Area : 74713
On-column Amount (ng) : 135.4026
Integration start scan : 743 Integration stop scan: 781
Y at integration start : 167 Y at integration end: 167

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

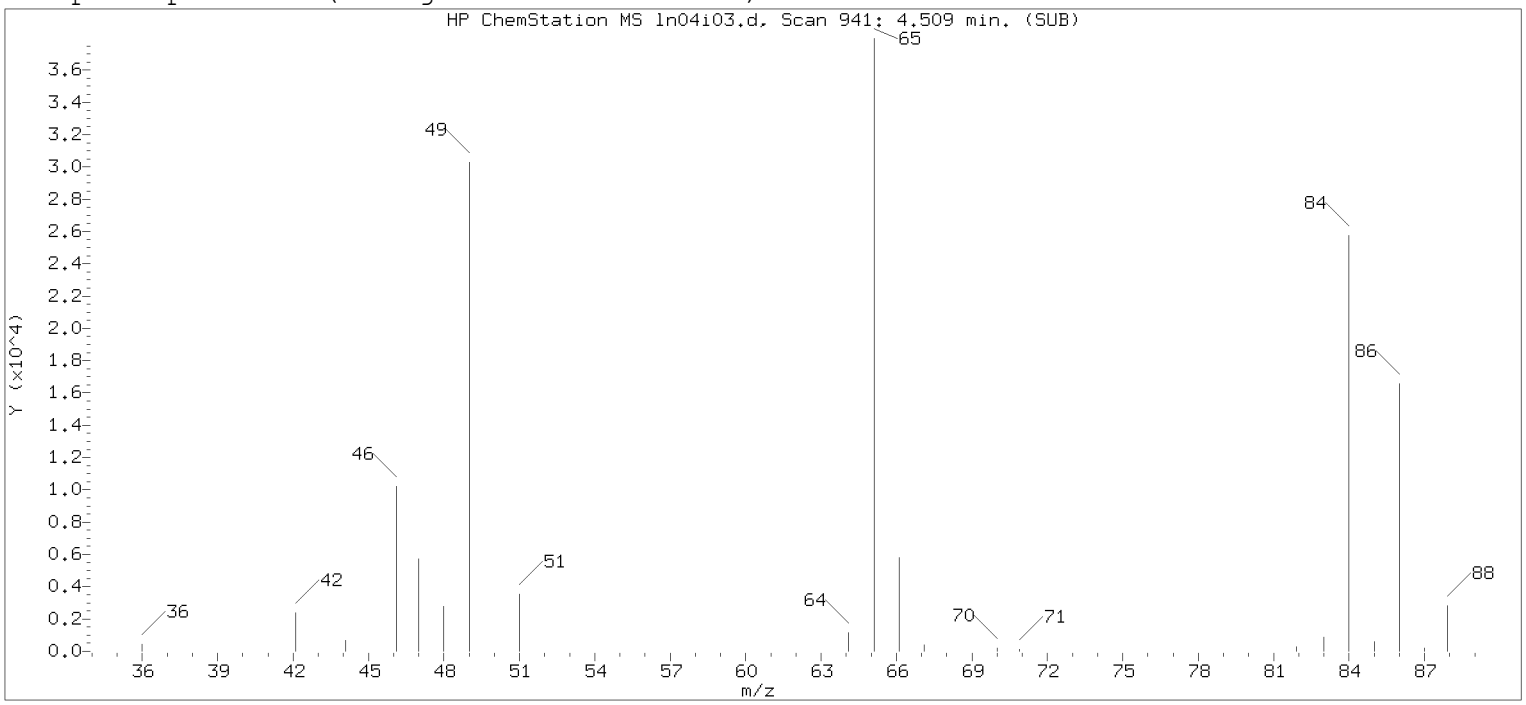
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 269779M
On-Column Amount (ng) : 250.0000
Integration start scan : 890 Integration stop scan: 1165
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

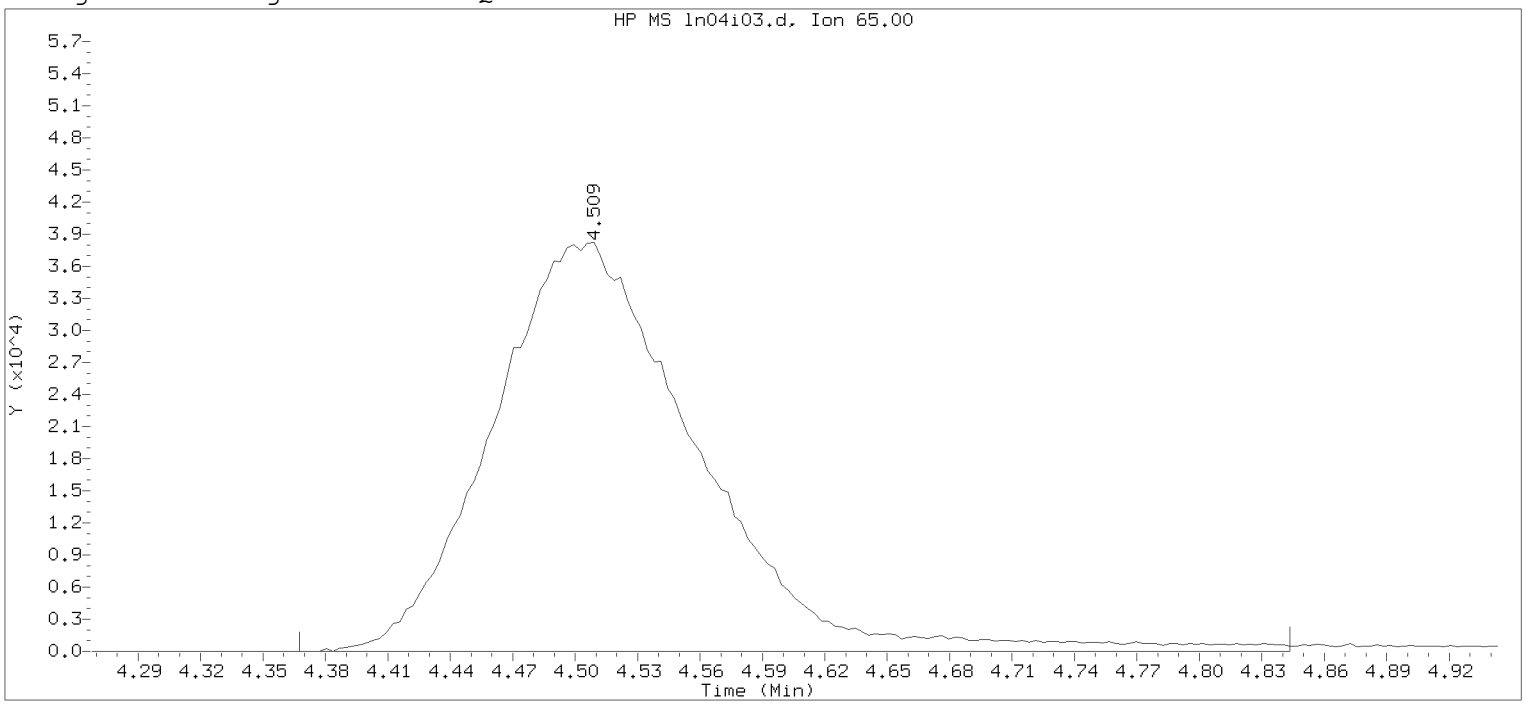
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

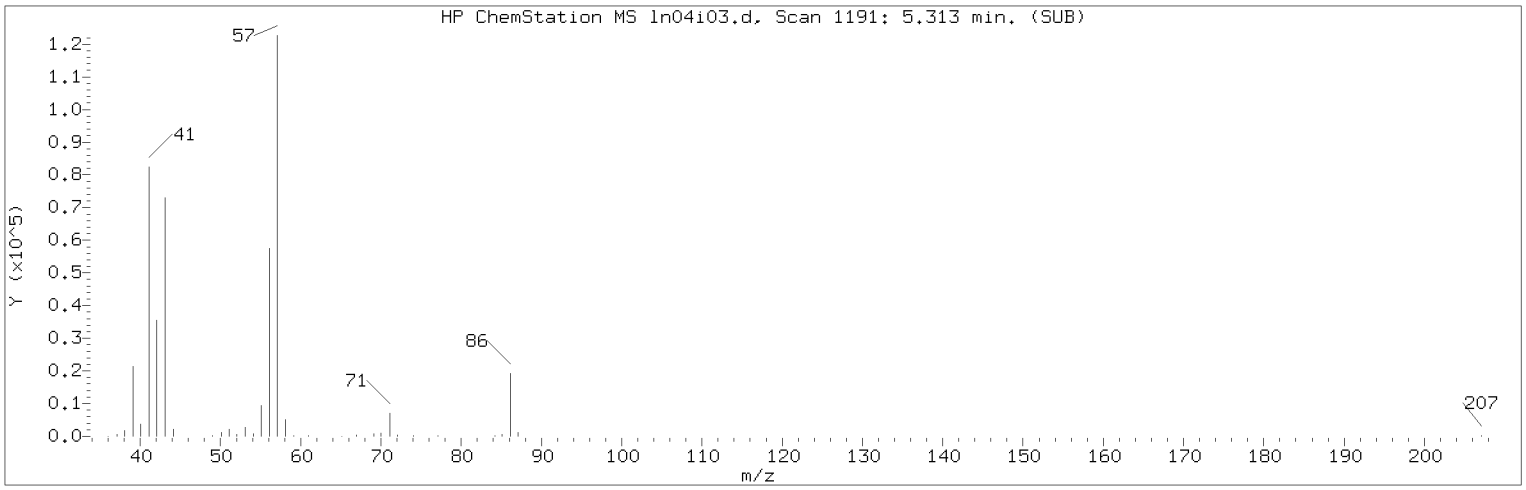
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

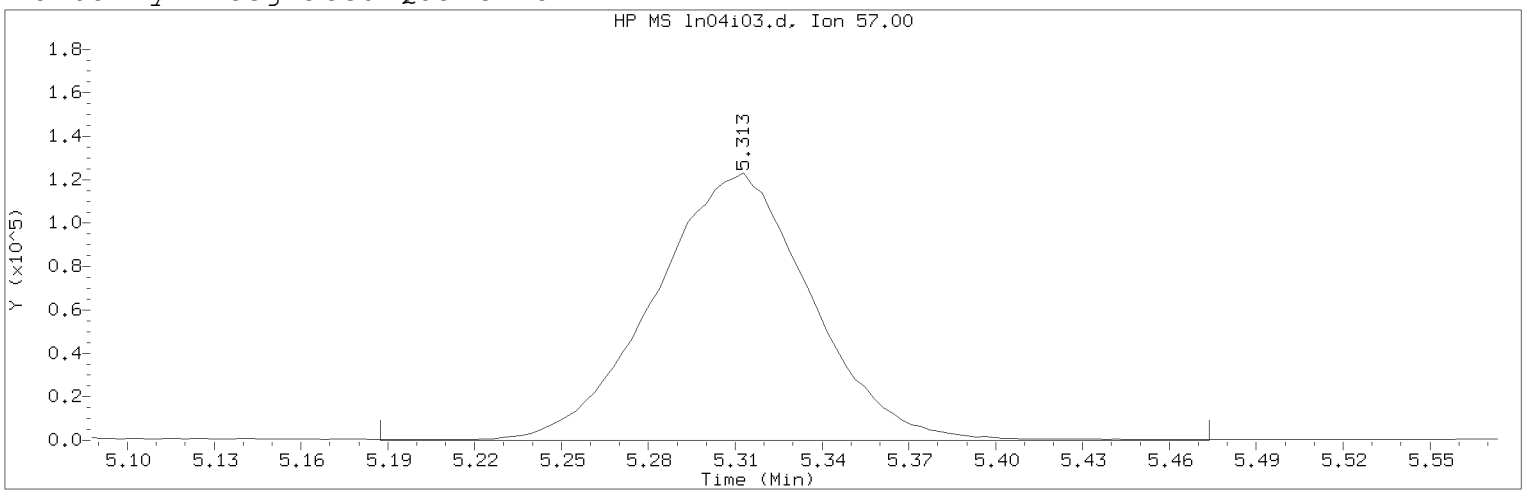
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 261144
On-column Amount (ng) : 250.0000
Integration start scan : 896 Integration stop scan: 1044
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

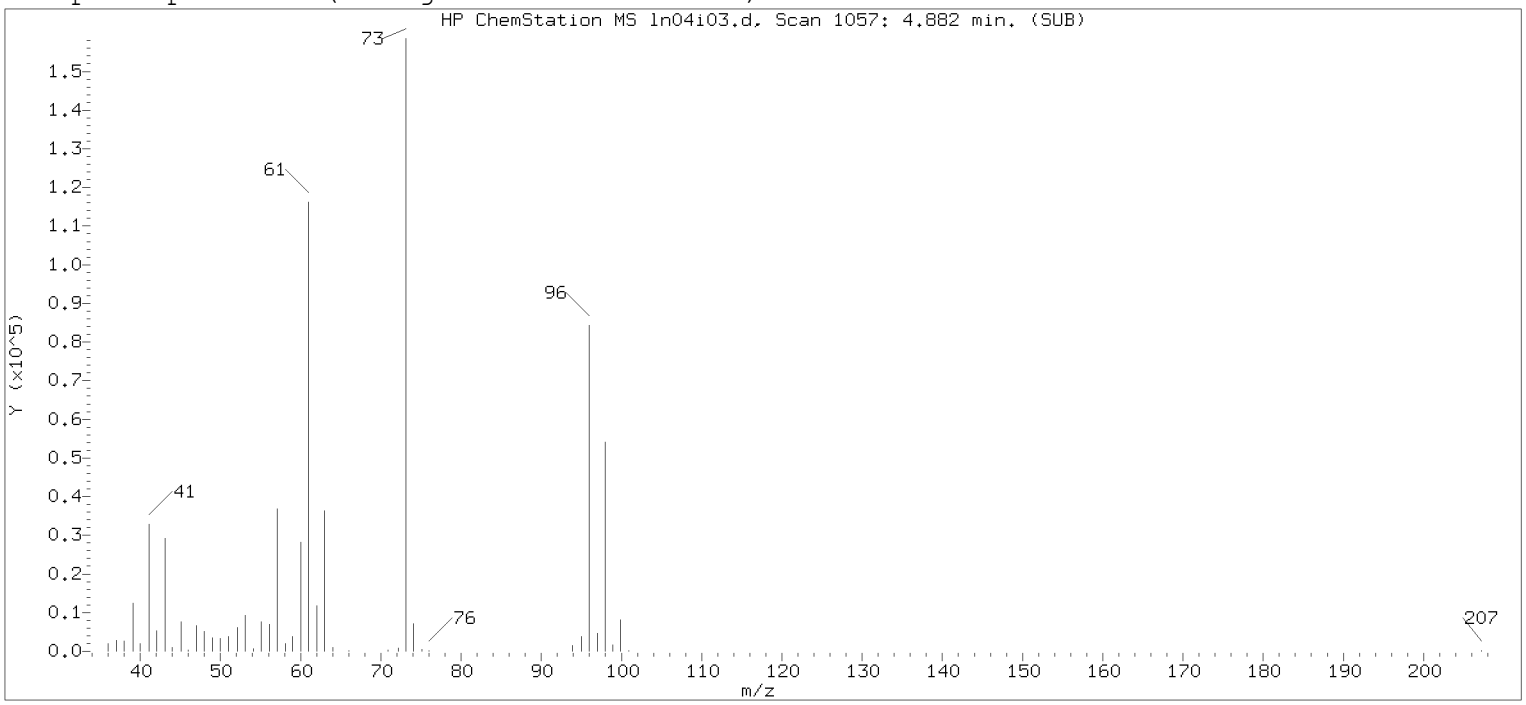
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1191
Retention Time (minutes): 5.313
Quant Ion : 57.00
Area (flag) : 463732M
On-Column Amount (ng) : 52.3639
Integration start scan : 1151 Integration stop scan: 1240
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

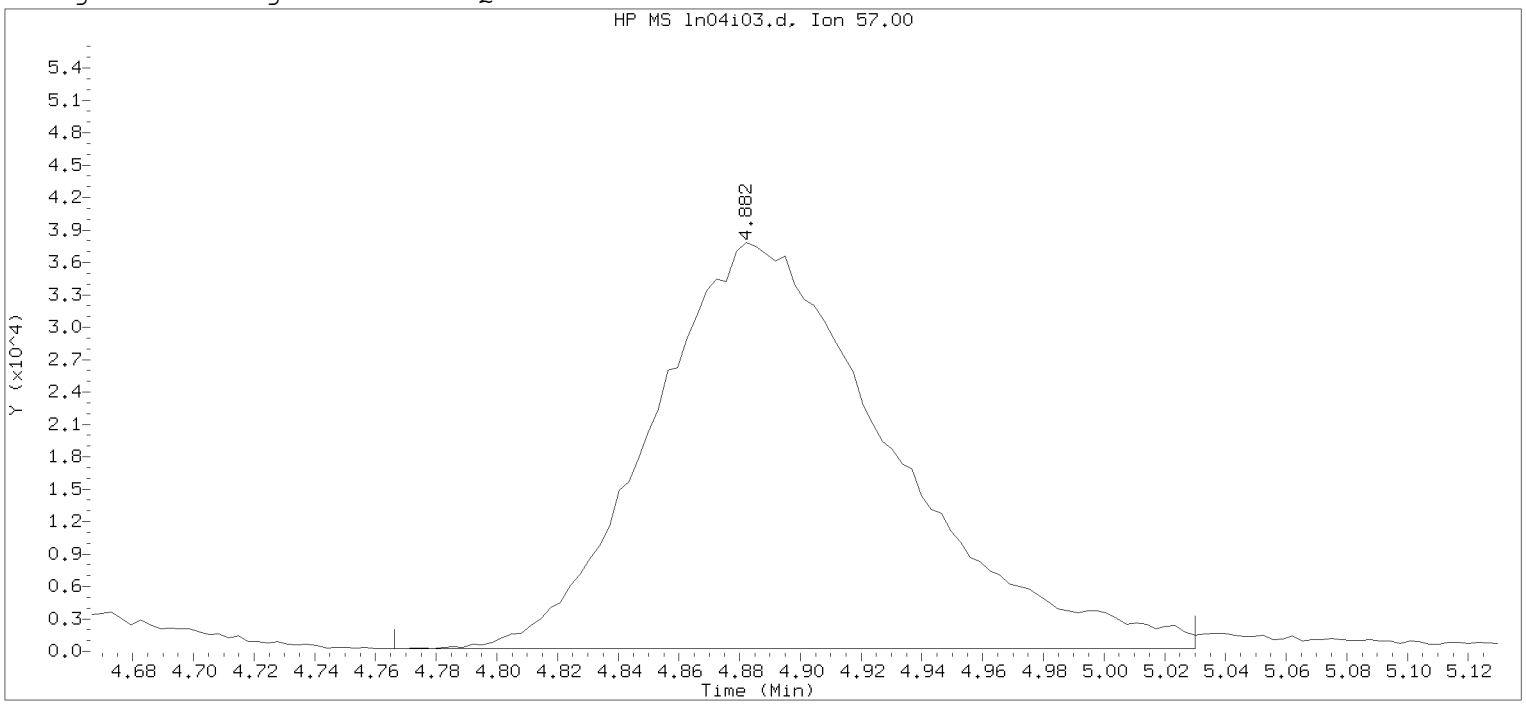
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

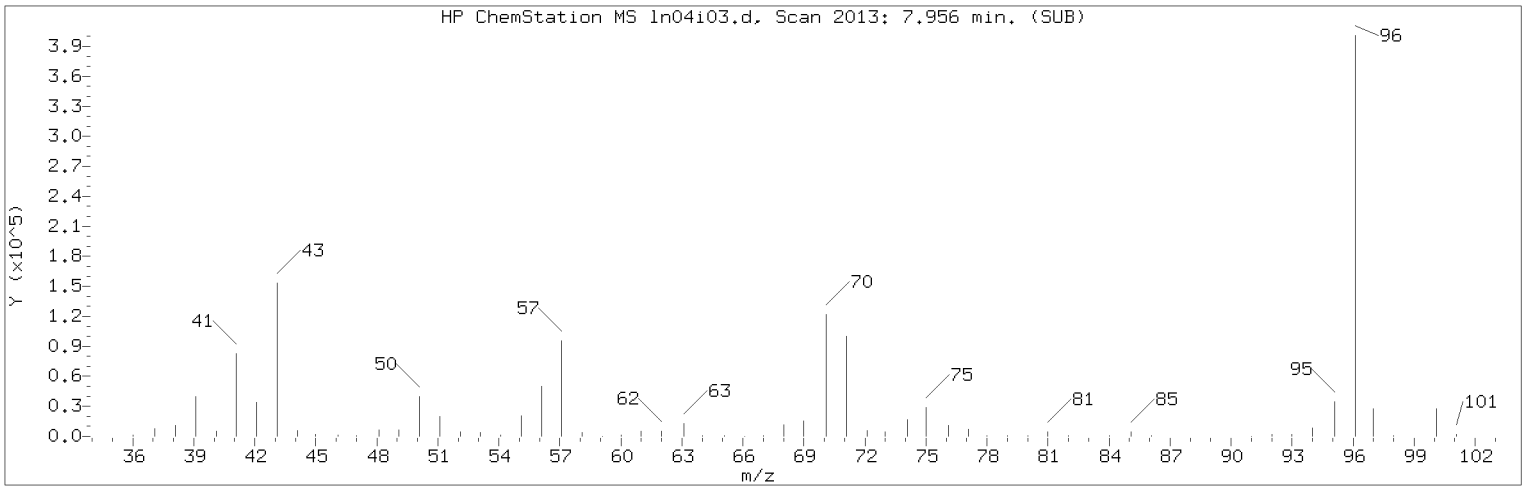
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

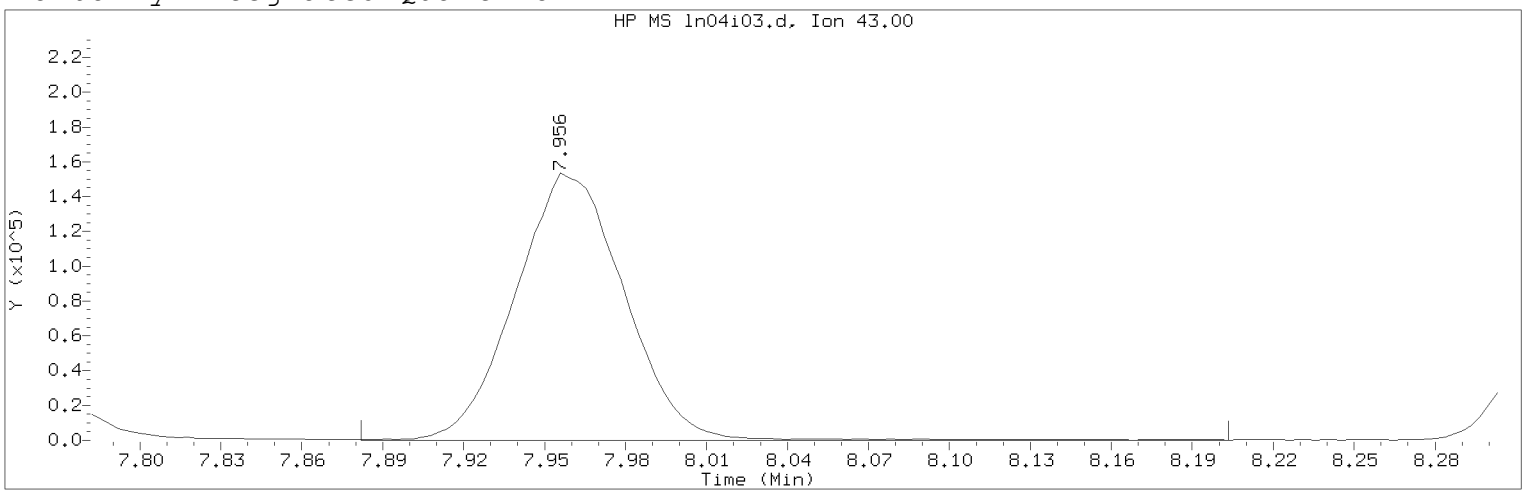
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1057
Retention Time (minutes): 4.882
Quant Ion : 57.00
Area : 205522
On-column Amount (ng) : 50.0557
Integration start scan : 1020 Integration stop scan: 1102
Y at integration start : 228 Y at integration end: 228

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

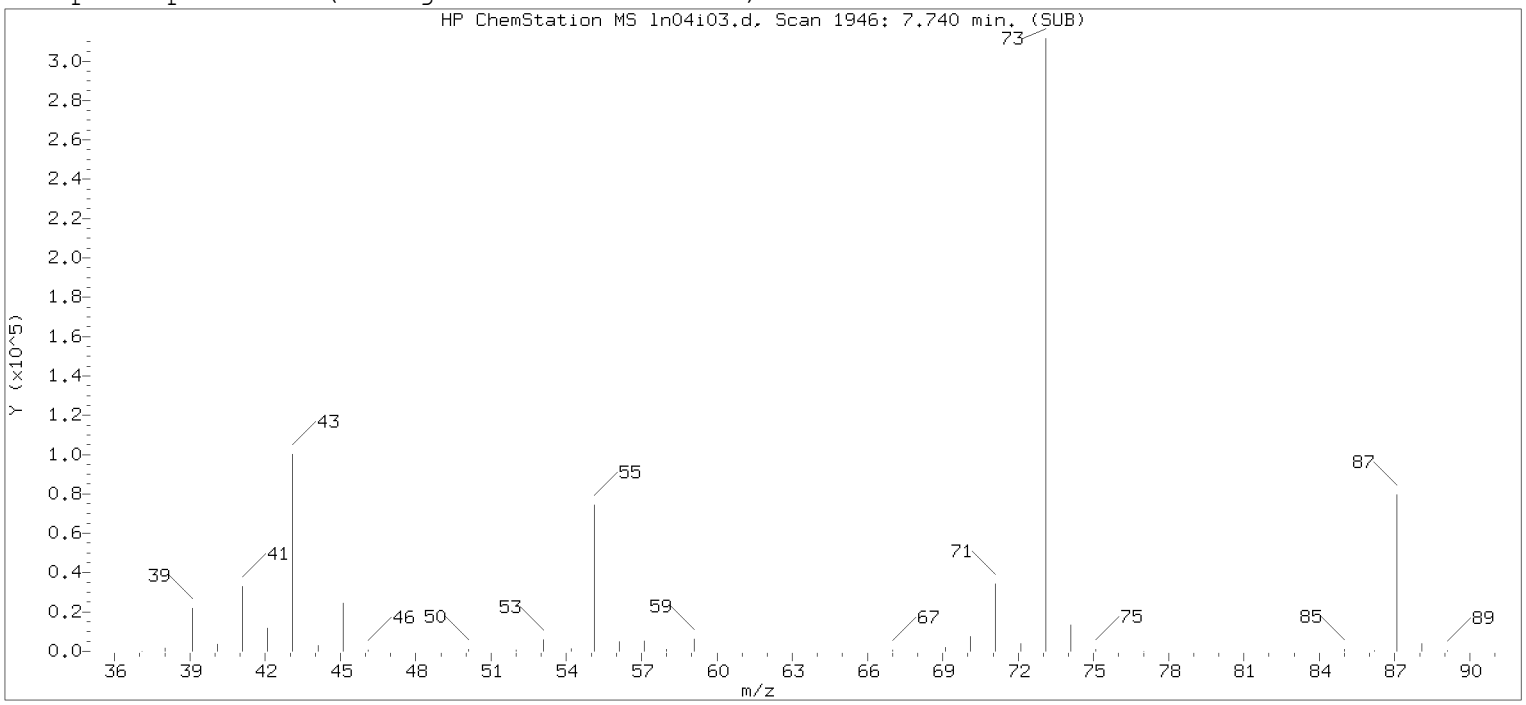
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2013
Retention Time (minutes): 7.956
Quant Ion : 43.00
Area (flag) : 432248MA
On-Column Amount (ng) : 52.2472
Integration start scan : 1989 Integration stop scan: 2089
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

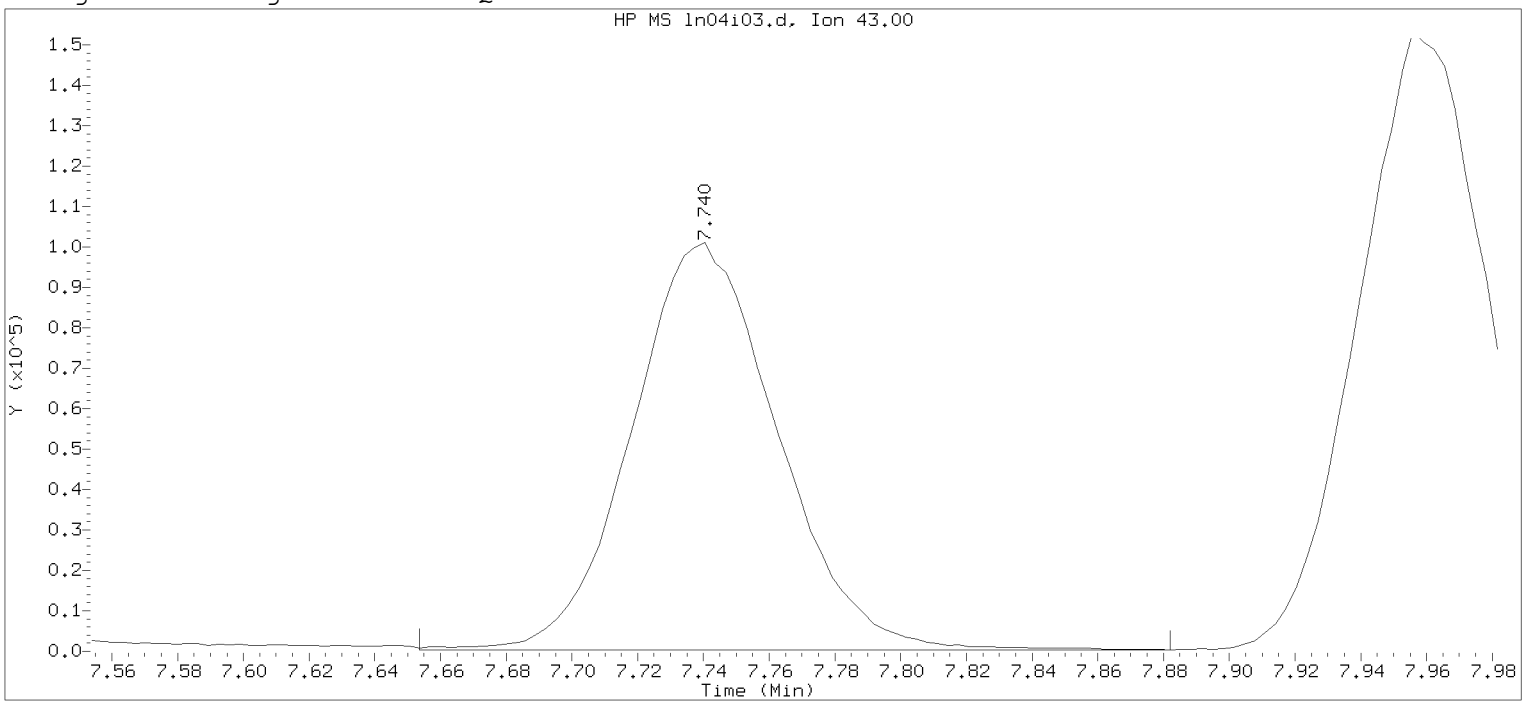
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.740
Quant Ion : 43.00
Area : 311136
On-column Amount (ng) : 51.5793
Integration start scan : 1918 Integration stop scan: 1989
Y at integration start : 288 Y at integration end: 288

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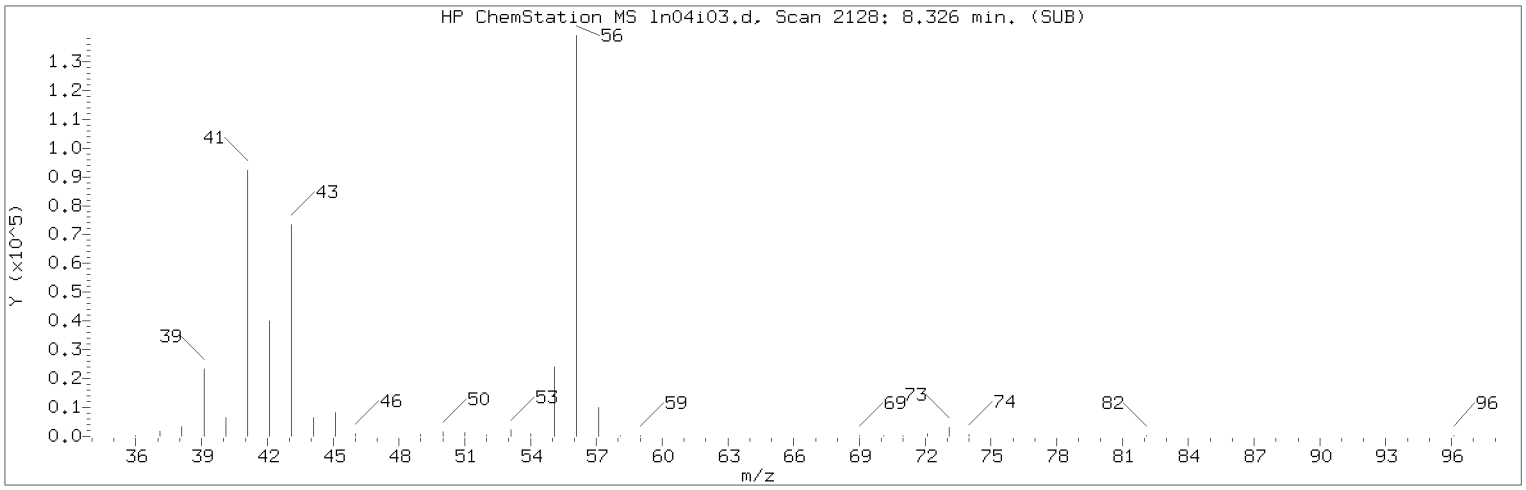
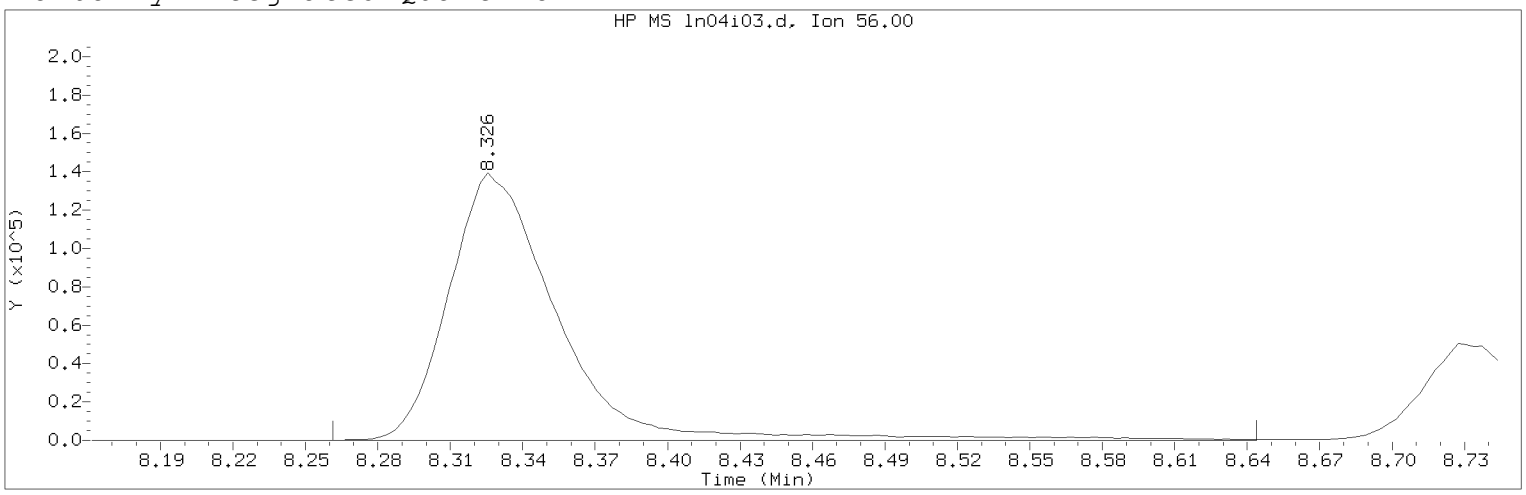
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

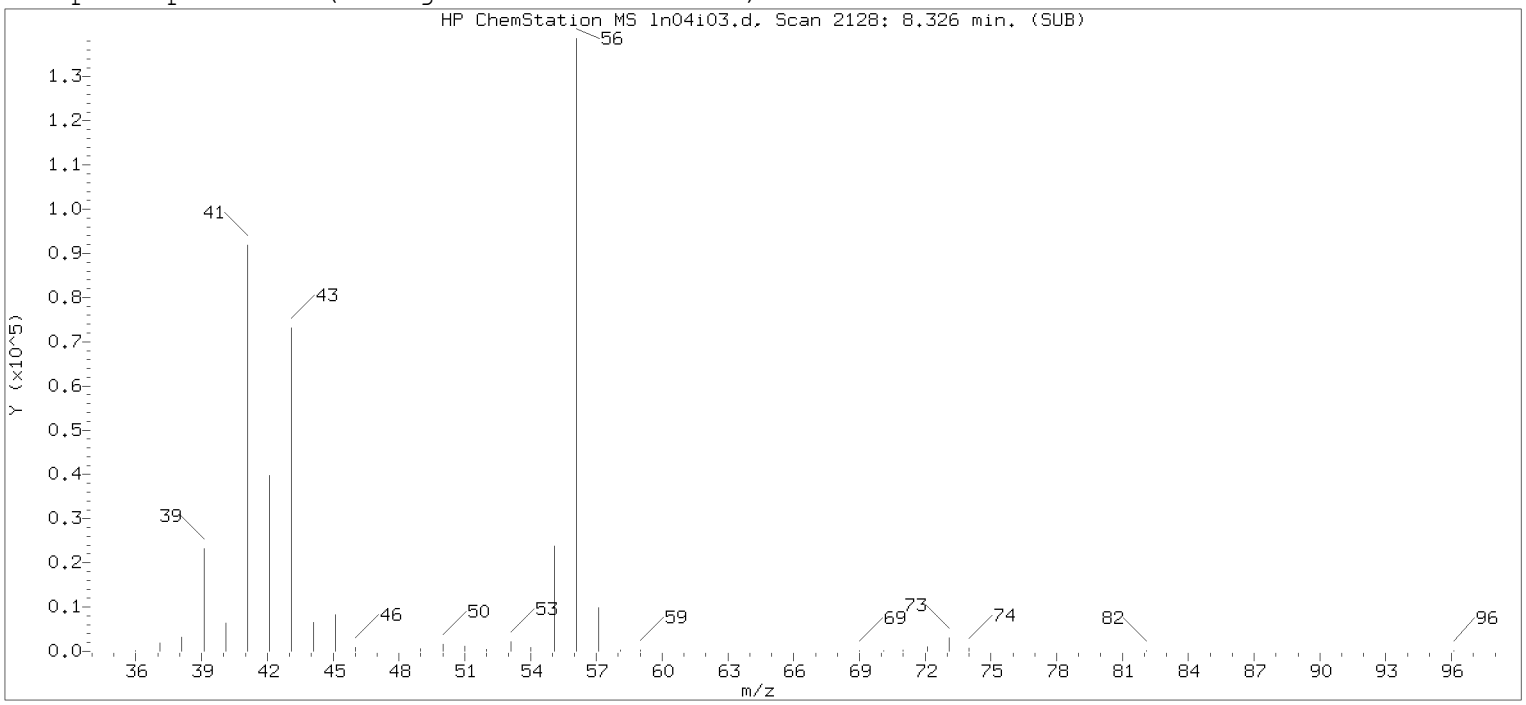
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area (flag) : 438437M
On-Column Amount (ng) : 1332.7496
Integration start scan : 2107 Integration stop scan: 2226
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

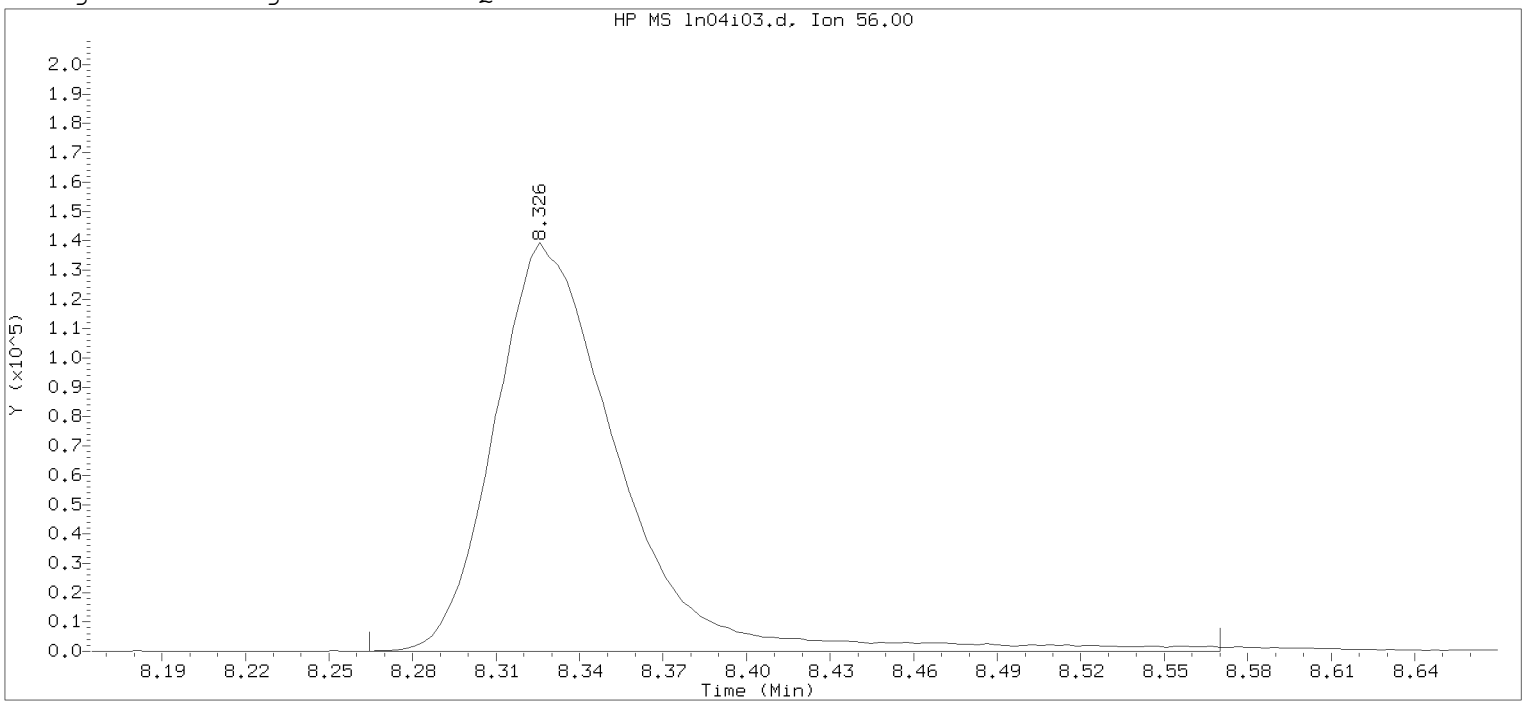
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

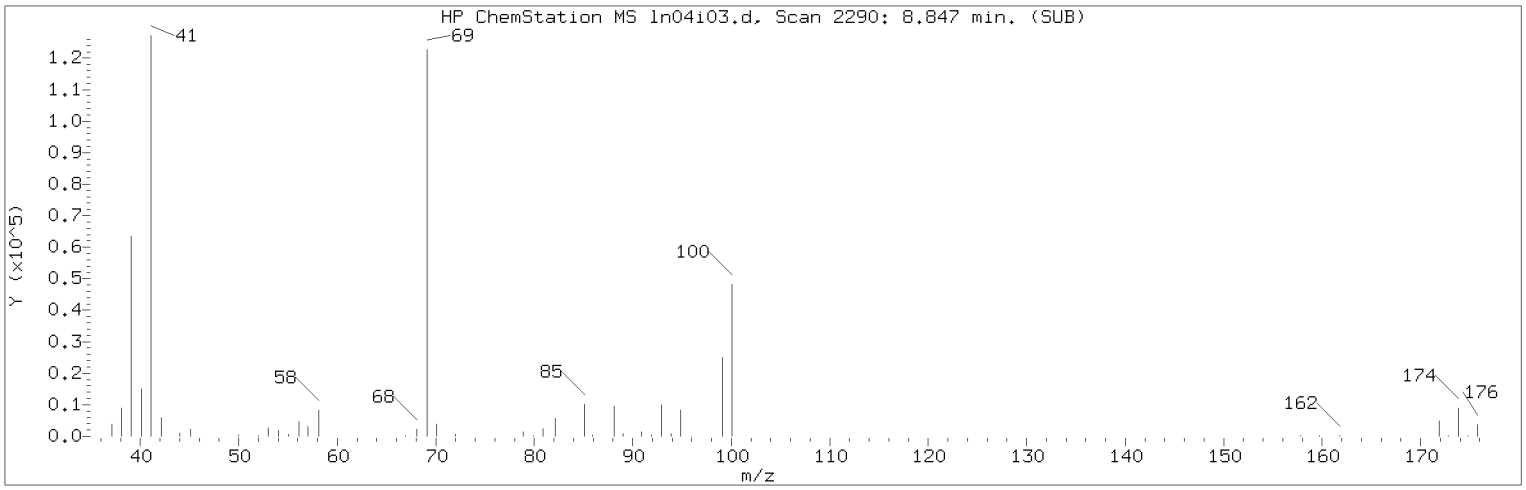
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

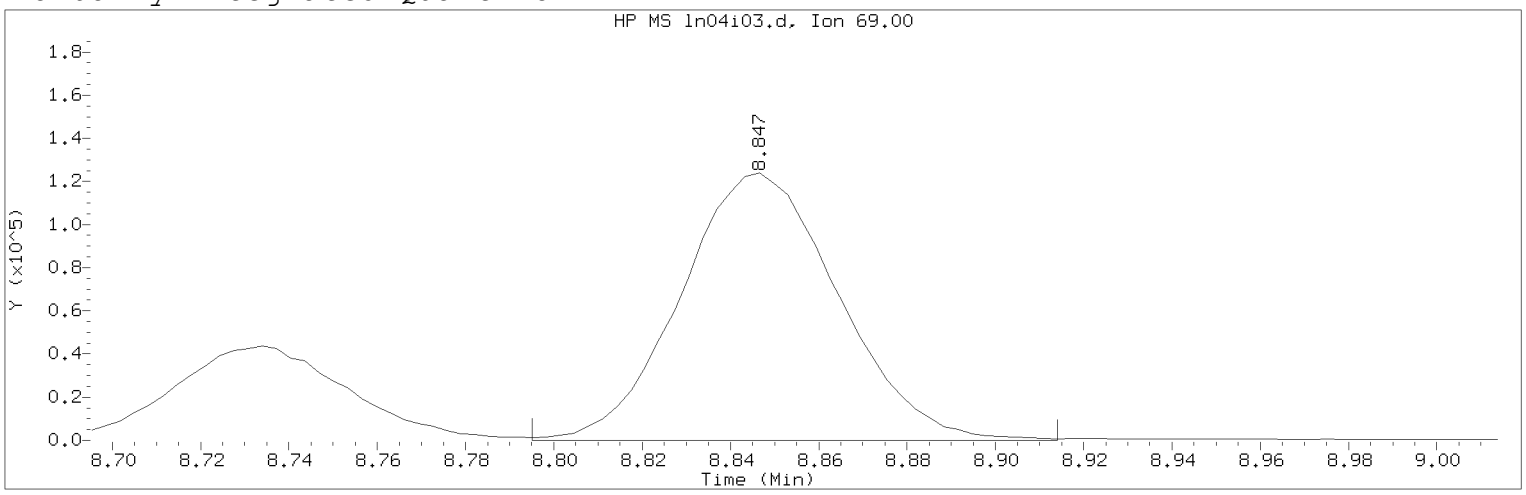
Compound Number	: 69		
Compound Name	: n-Butanol		
Scan Number	: 2128		
Retention Time (minutes)	: 8.326		
Quant Ion	: 56.00		
Area	: 434385		
On-column Amount (ng)	: 1223.8707		
Integration start scan	: 2108	Integration stop scan:	2203
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

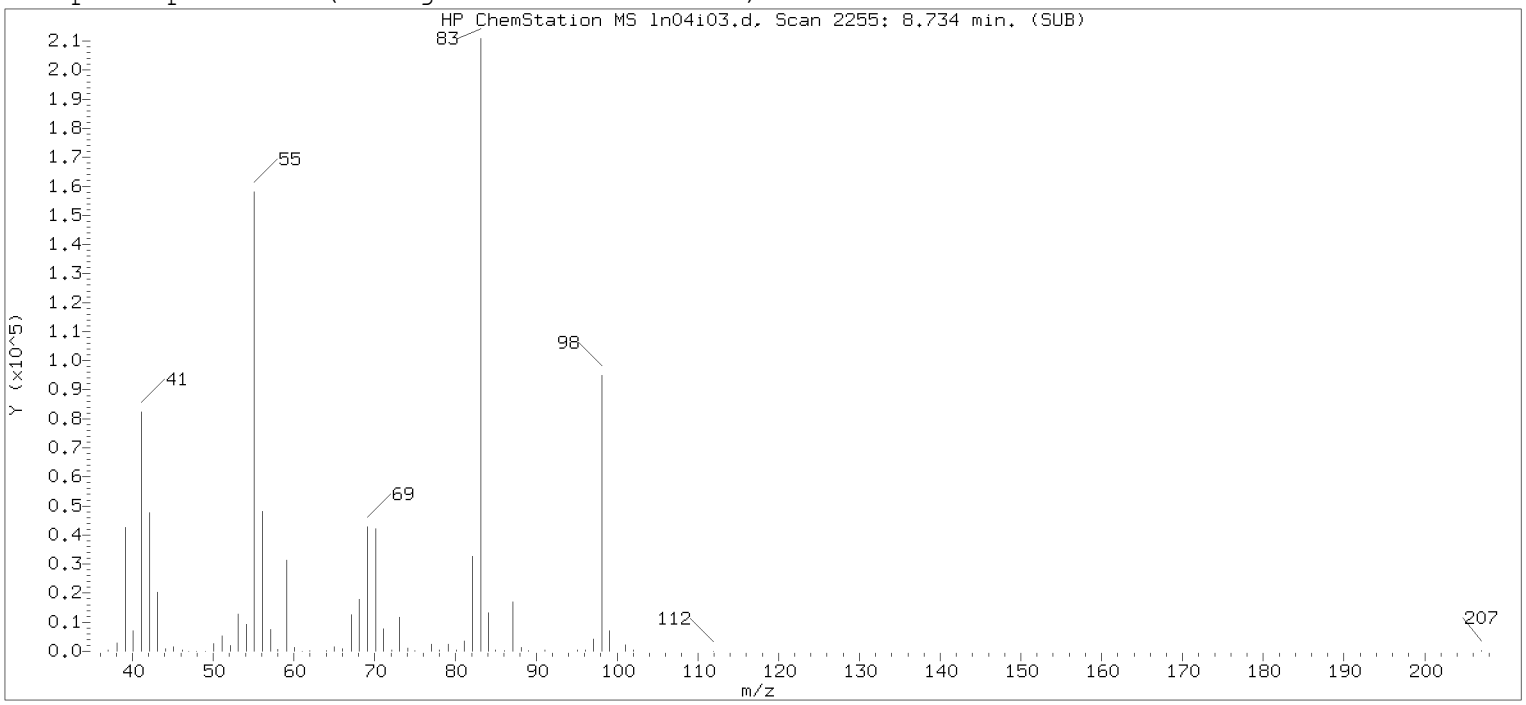
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2290
Retention Time (minutes): 8.847
Quant Ion : 69.00
Area (flag) : 306086A
On-Column Amount (ng) : 52.7952
Integration start scan : 2273 Integration stop scan: 2310
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

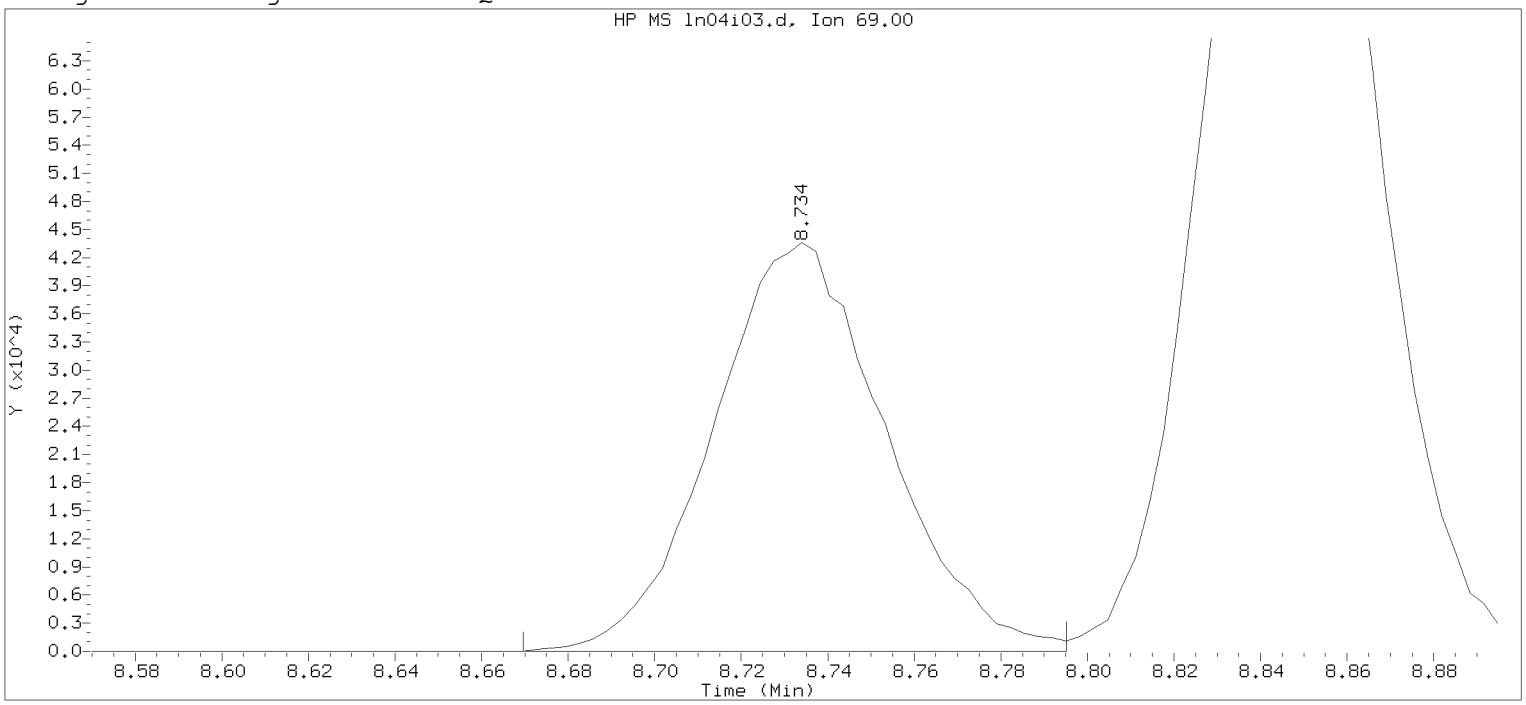
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

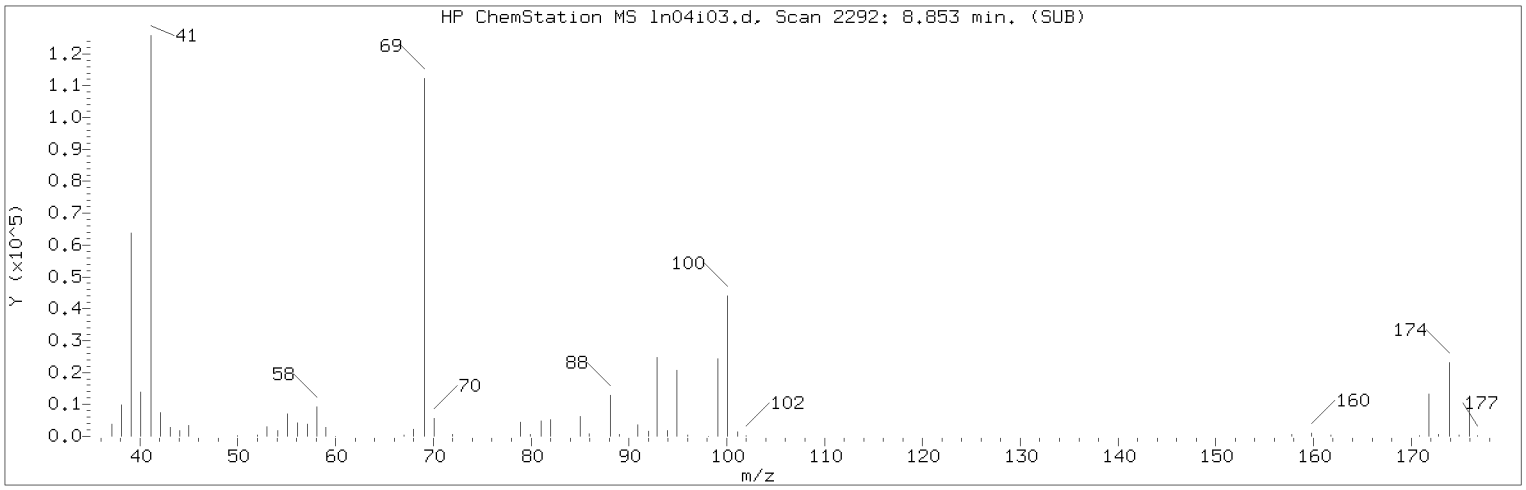
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

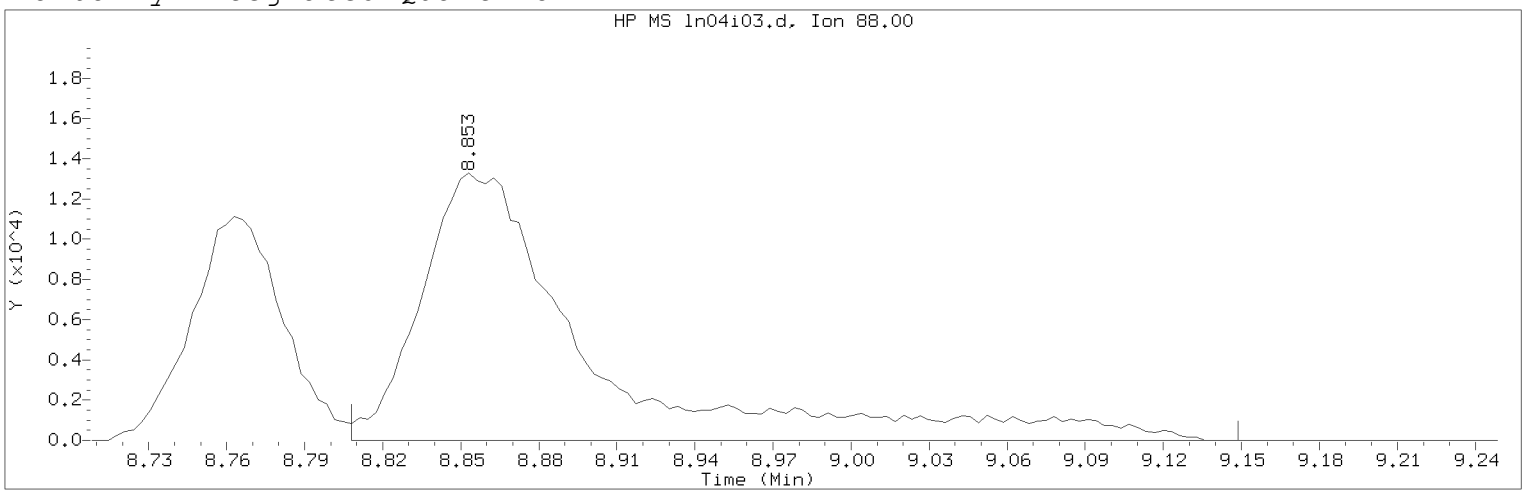
Compound Number	: 76		
Compound Name	: Methyl Methacrylate		
Scan Number	: 2255		
Retention Time (minutes)	: 8.734		
Quant Ion	: 69.00		
Area	: 120511		
On-column Amount (ng)	: 48.6556		
Integration start scan	: 2234	Integration stop scan:	2273
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

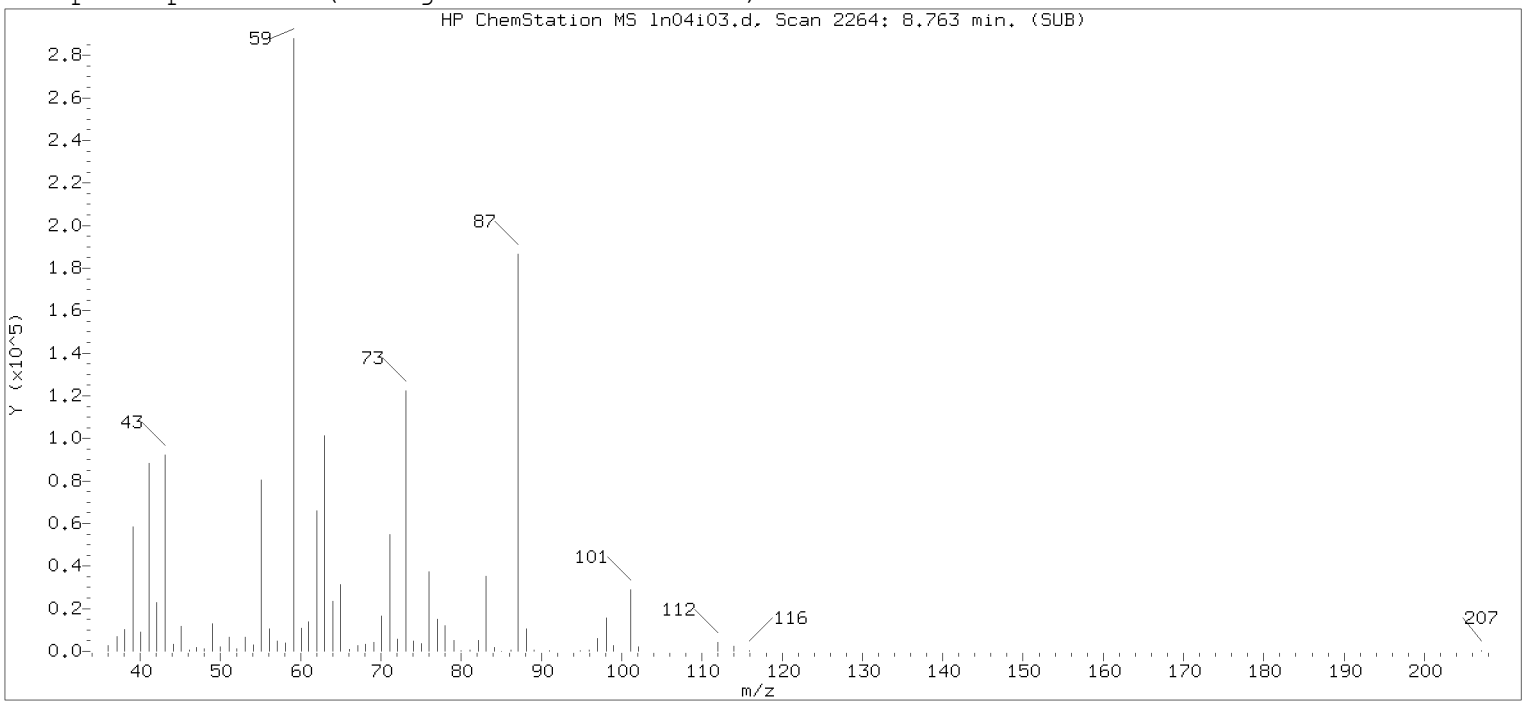
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area (flag) : 59876M
On-Column Amount (ng) : 662.1956
Integration start scan : 2277 Integration stop scan: 2383
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

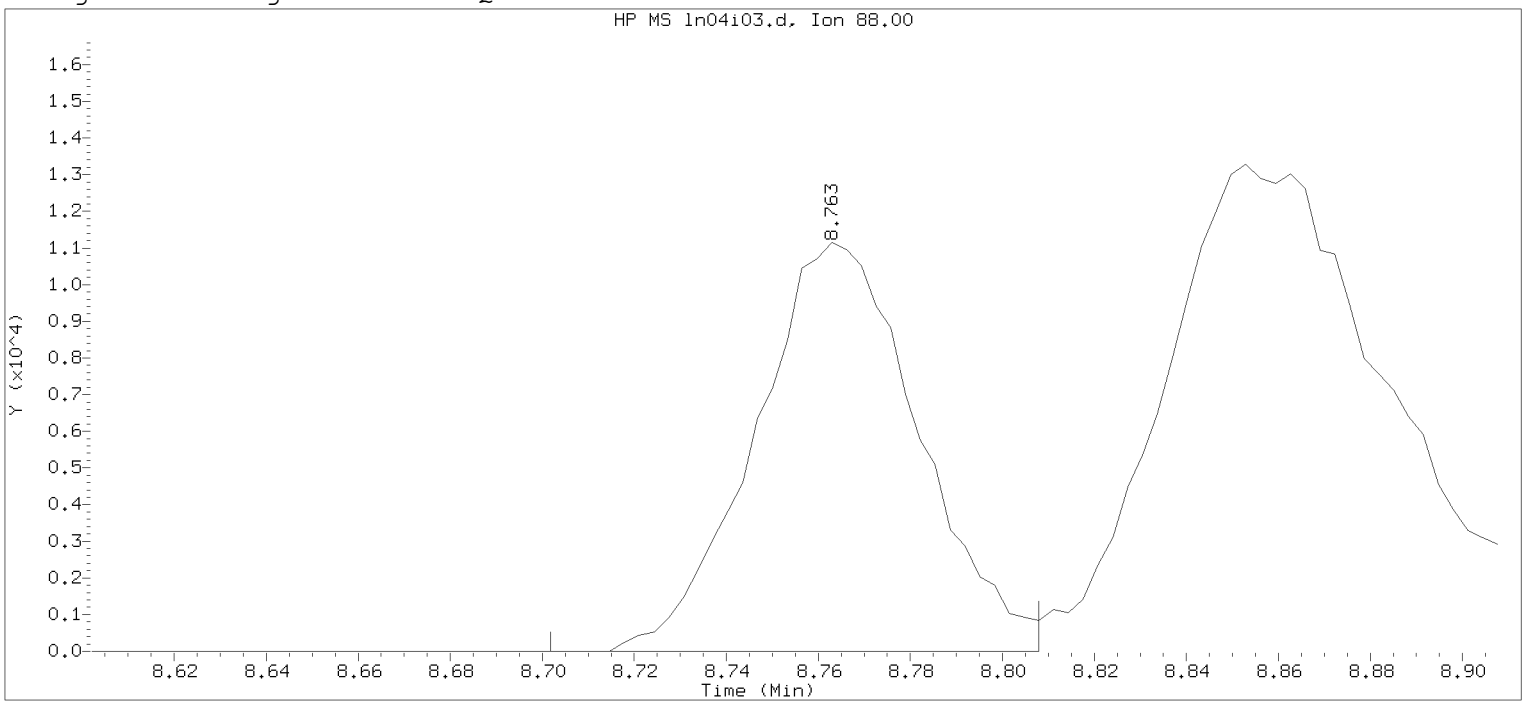
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

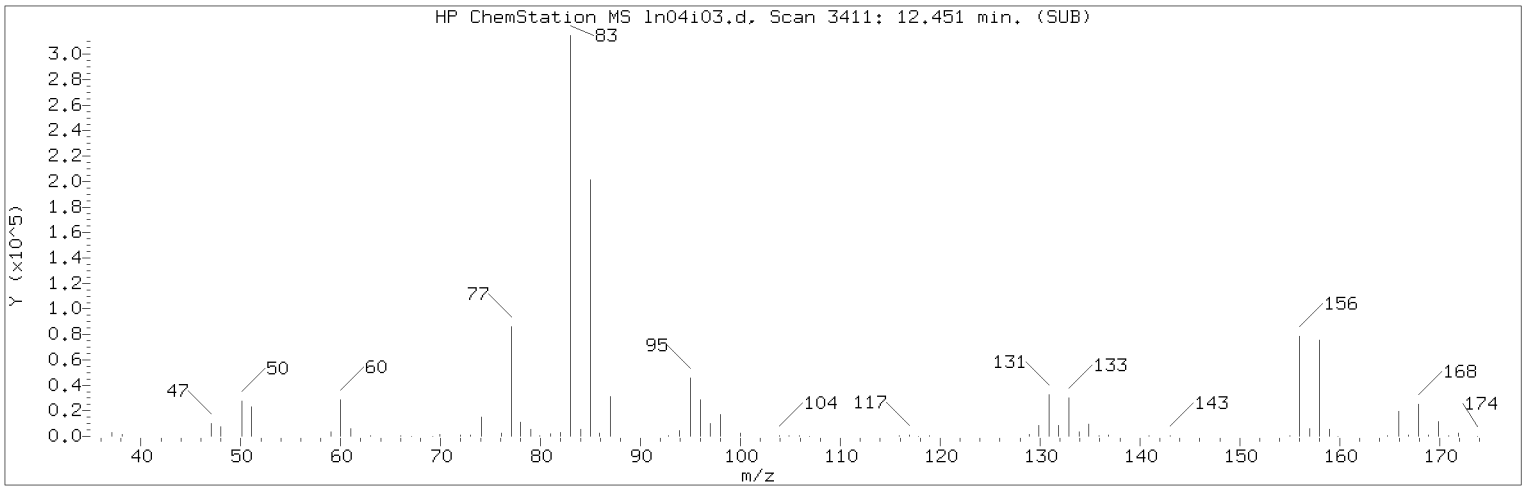
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

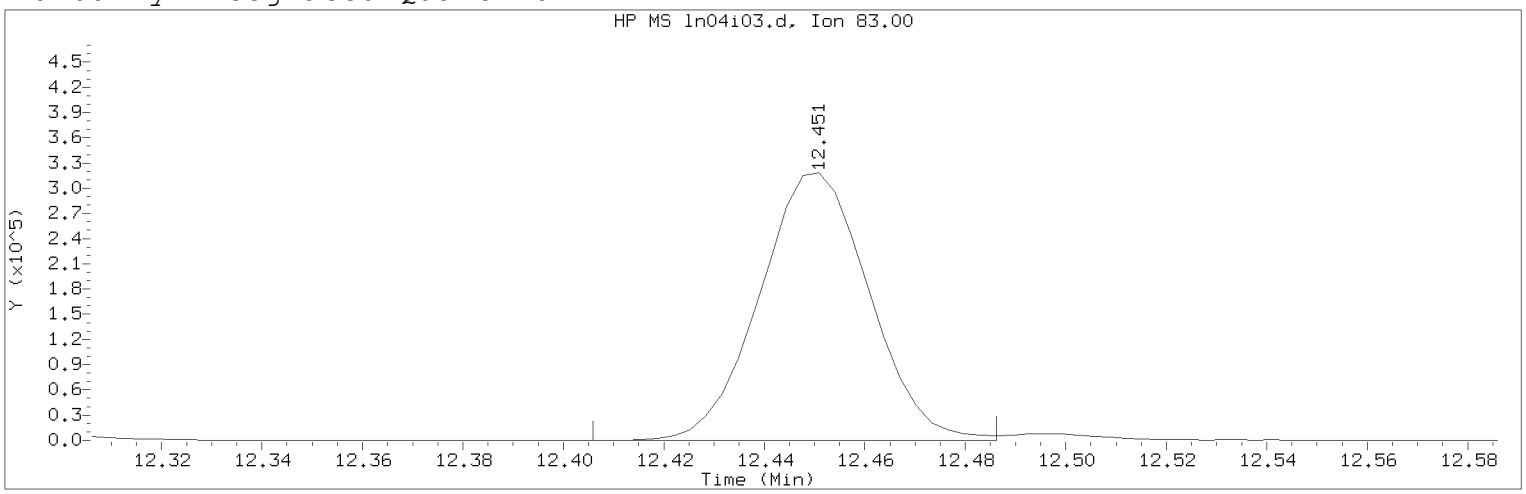
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2264		
Retention Time (minutes)	: 8.763		
Quant Ion	: 88.00		
Area	: 27334		
On-column Amount (ng)	: 447.5530		
Integration start scan	: 2244	Integration stop scan:	2277
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

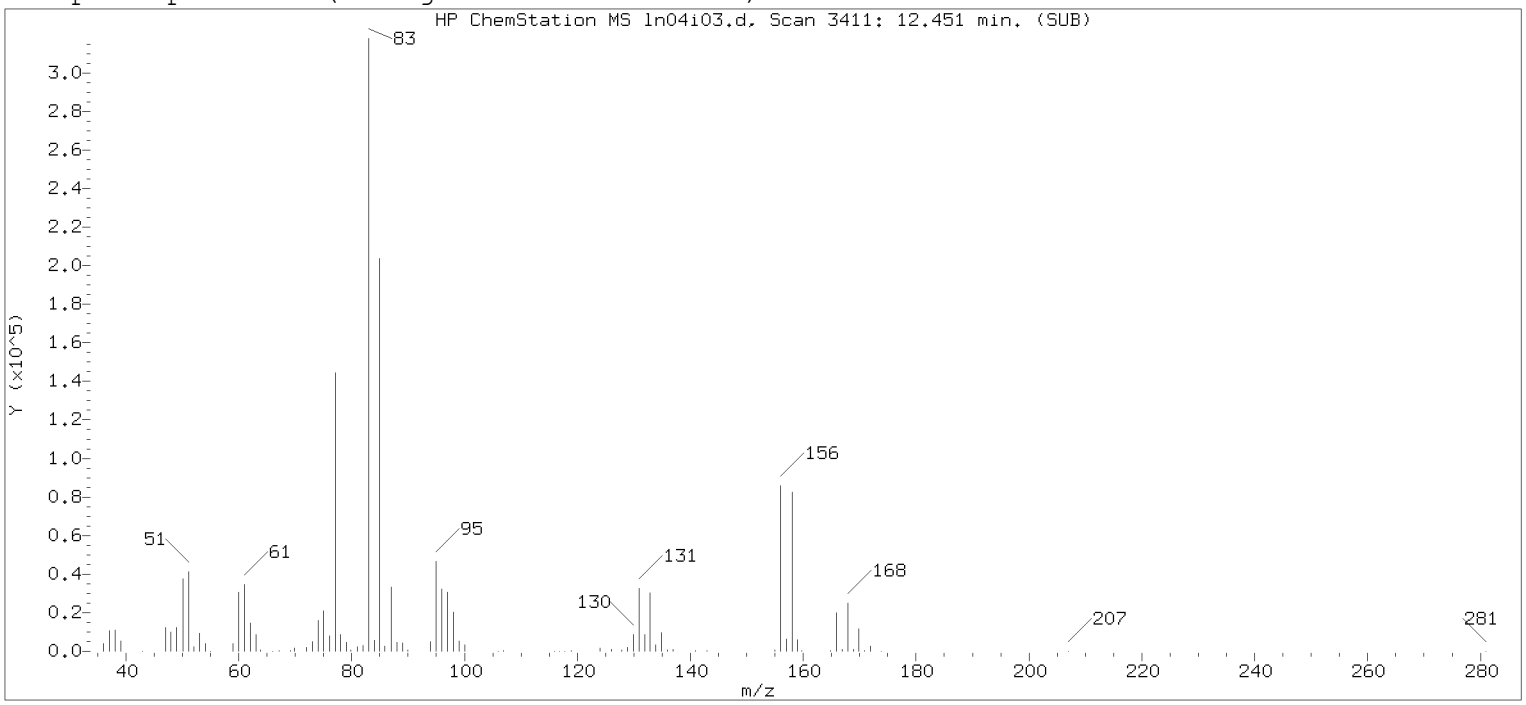
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 482004M
On-Column Amount (ng) : 52.7274
Integration start scan : 3396 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

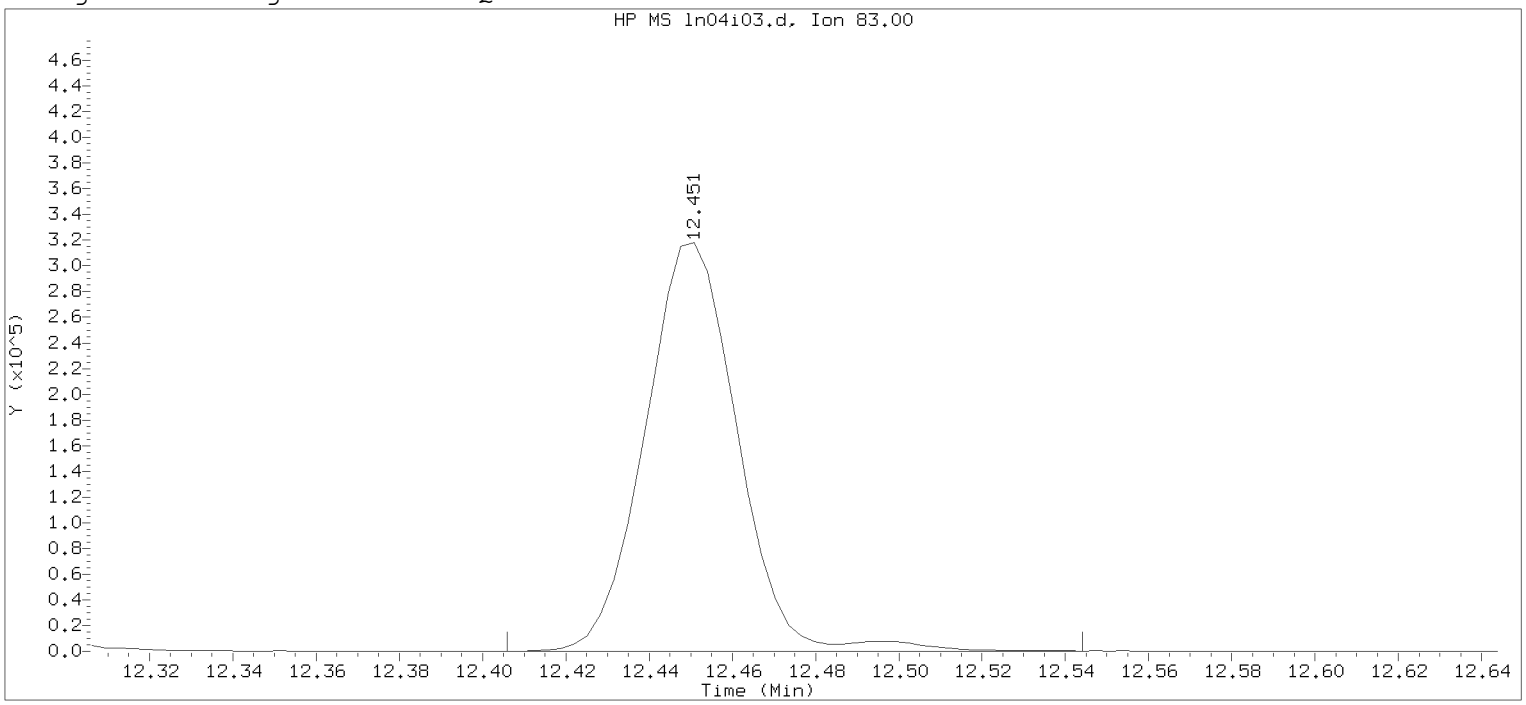
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

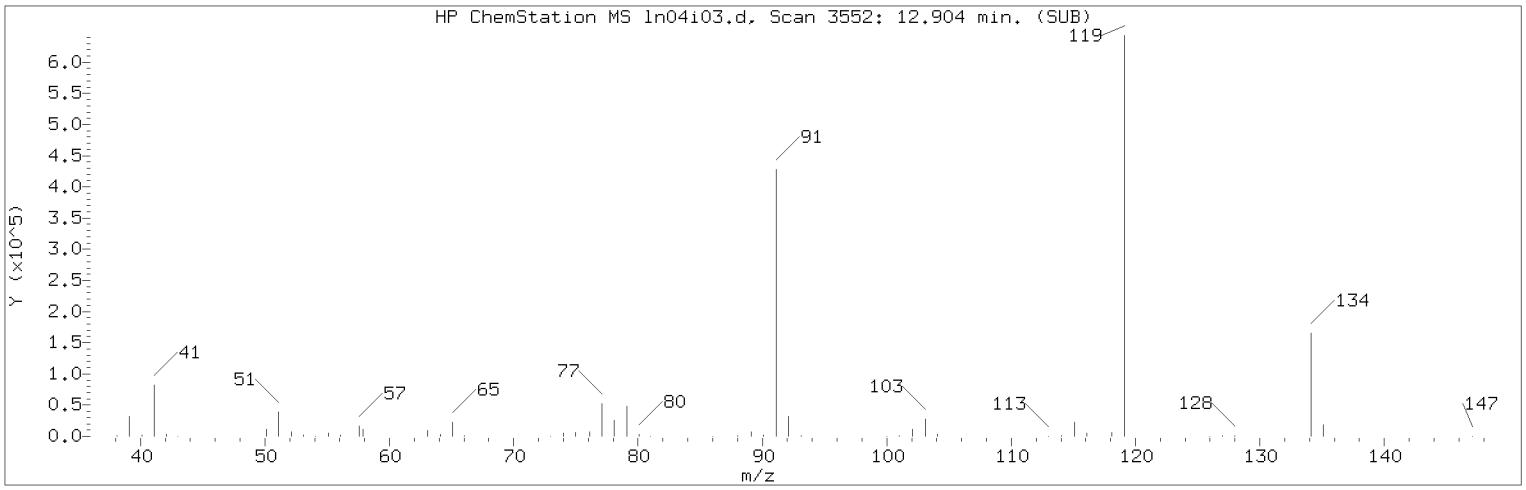
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

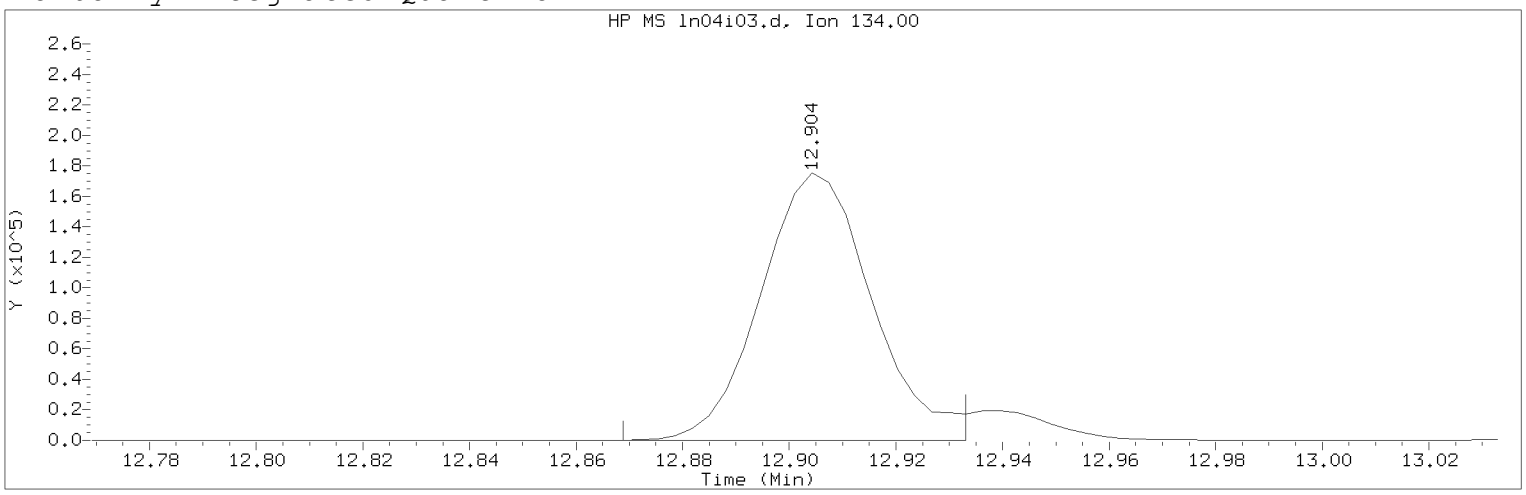
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 491918
On-column Amount (ng) : 50.7154
Integration start scan : 3396 Integration stop scan: 3439
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

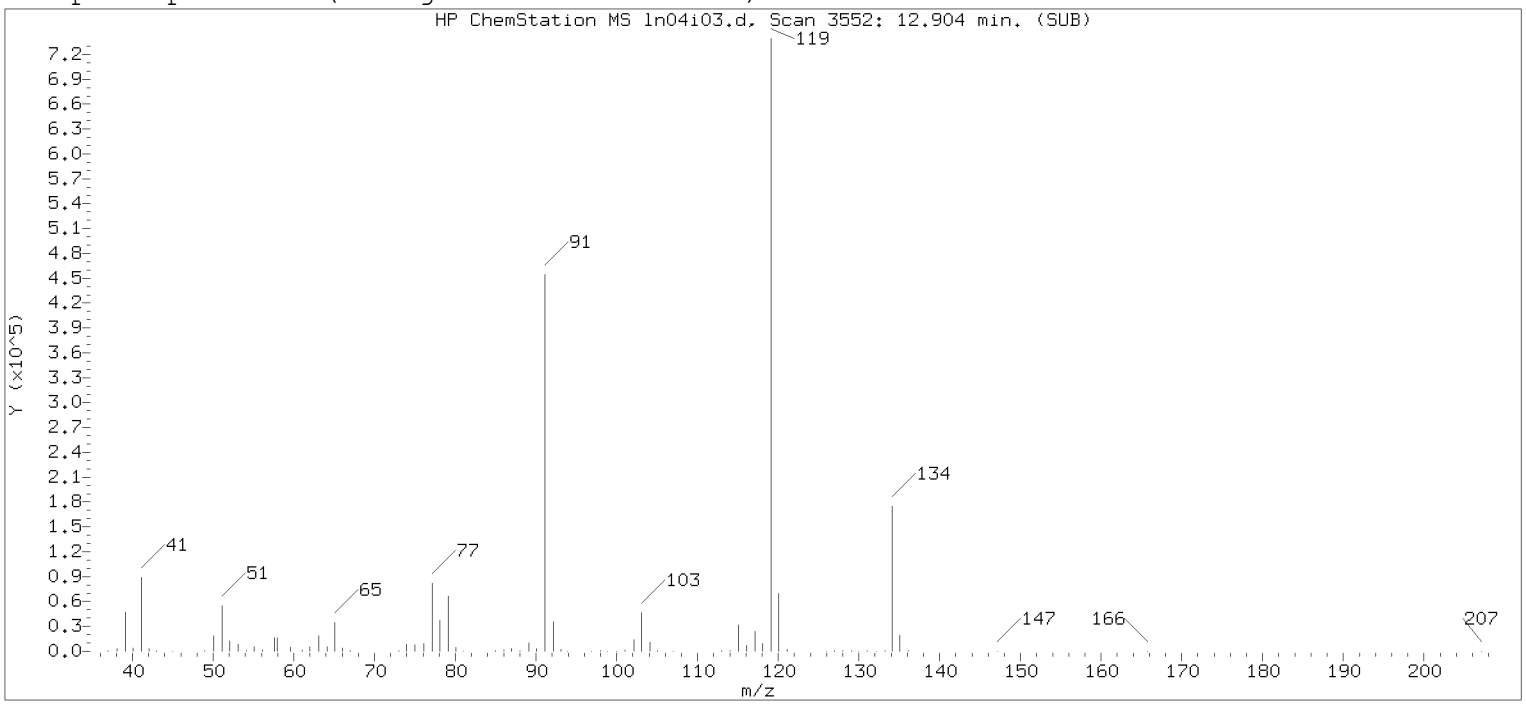
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 253906M
On-Column Amount (ng) : 53.1652
Integration start scan : 3540 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

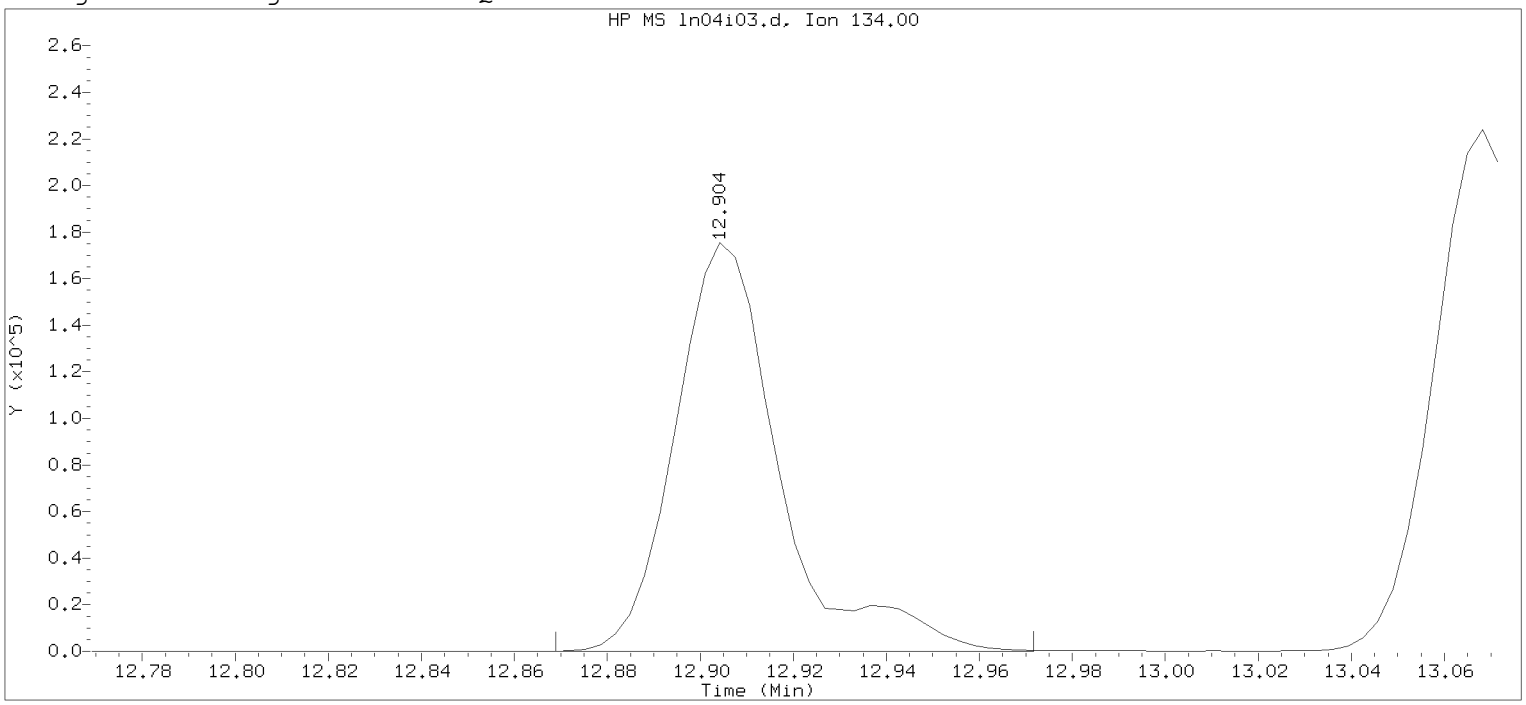
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



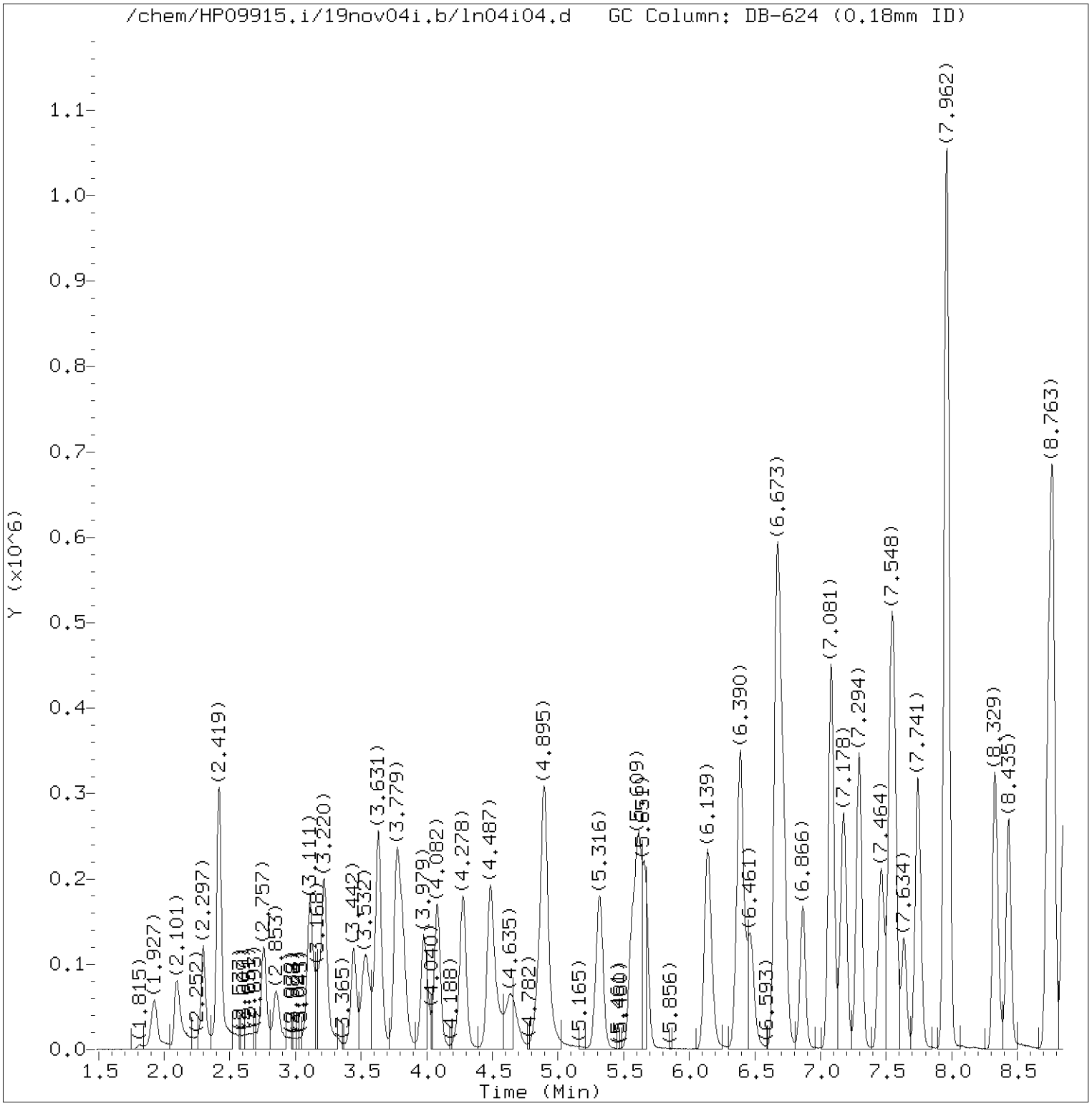
Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 273047
On-column Amount (ng) : 50.7591
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: me20254



Total Ion Chromatogram (TIC)

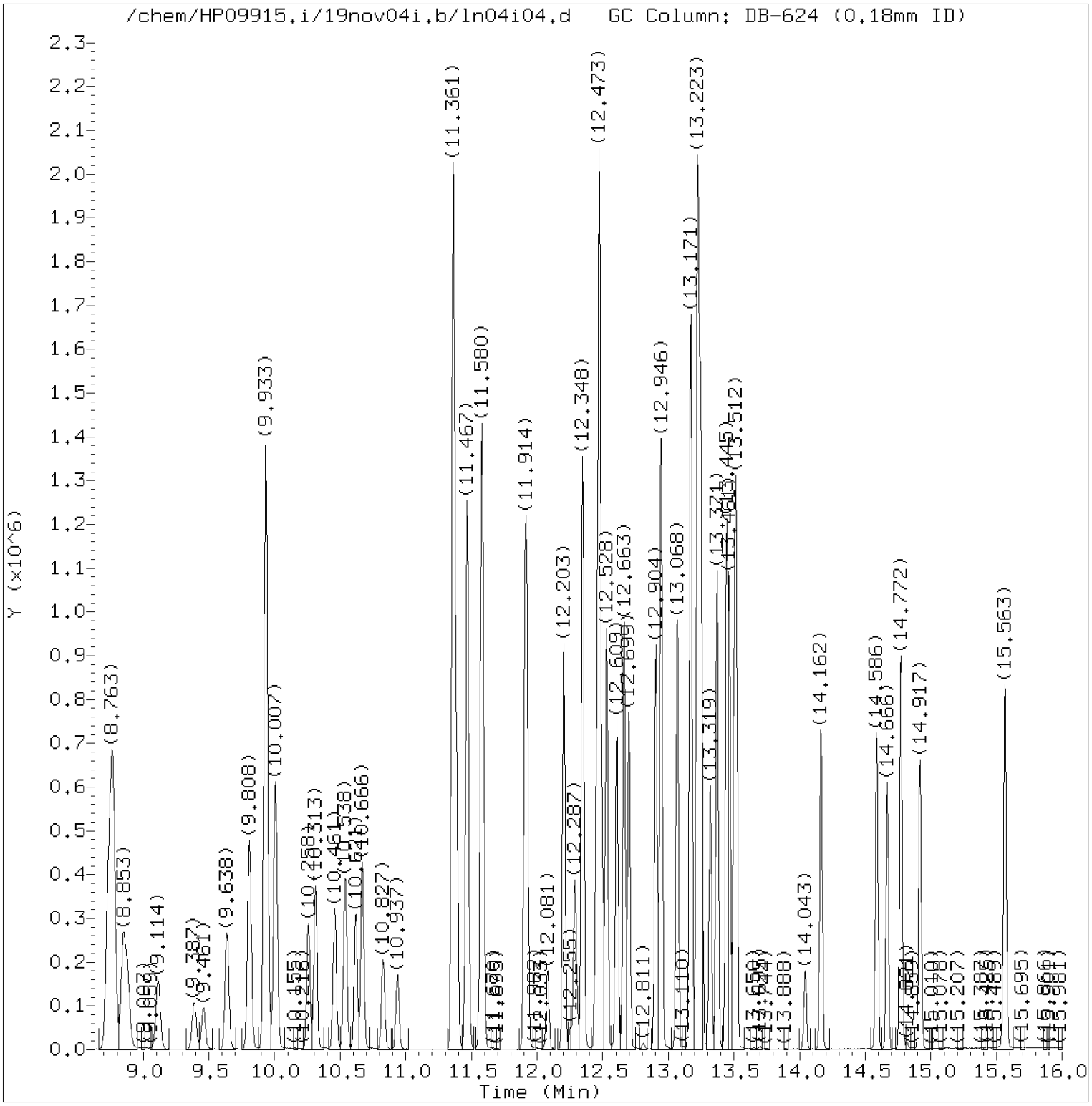
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.095	85	161054M	20.460
4) Chloromethane	(2)	2.297	50	155347	20.477
5) 1,3-Butadiene	(2)	2.416	39	127826M	20.292
6) Vinyl Chloride	(2)	2.419	62	156255	20.637
8) Bromomethane	(2)	2.757	94	109945	20.257
9) Chloroethane	(2)	2.853	64	85938	20.653
10) Dichlorofluoromethane	(2)	3.111	67	205276M	20.838
12) Trichlorofluoromethane	(2)	3.168	101	166167	20.384
11) n-Pentane	(2)	3.220	43	195074	20.250
14) Ethyl ether	(2)	3.442	59	108665	20.629
15) Freon 123a	(2)	3.532	67	137784	21.012
16) Acrolein	(1)	3.631	56	399615	206.403
17) 1,1-Dichloroethene	(2)	3.773	96	101858	21.288
17) 1,1-Dichloroethene	(2)	3.773	63	50444	21.029
19) Freon 113	(2)	3.805	101	115335	21.128
18) Acetone	(1)	3.815	58	36001	41.477
22) Methyl Iodide	(2)	3.979	142	212163	21.398
21) 2-Propanol	(1)	4.004	45	120851	193.676
23) Carbon Disulfide	(2)	4.082	76	388574	21.550
27) Methyl Acetate	(2)	4.255	43	121876	19.777
25) Allyl Chloride	(2)	4.281	41	173950	20.266
28) Methylene Chloride	(2)	4.483	84	119344	20.956
29)*t-Butyl alcohol-d10	(1)	4.512	65	258058M	250.000
30) t-Butyl alcohol	(1)	4.644	59	213903	196.882
31) Acrylonitrile	(2)	4.844	53	69677	21.016
32) trans-1,2-Dichloroethene	(2)	4.898	96	117516	21.231
33) Methyl Tertiary Butyl Ether	(2)	4.898	73	384426	21.159
34) n-Hexane	(2)	5.323	57	185314M	21.519
36) 1,1-Dichloroethane	(2)	5.561	63	203176	21.041
38) di-Isopropyl ether	(2)	5.615	45	399314	21.442
39) 2-Chloro-1,3-butadiene	(2)	5.670	53	184546	21.302
40) Ethyl t-butyl ether	(2)	6.146	59	392243	21.703
43) 1,2-Dichloroethene (Total)	(2)		96	248665	42.340
44) 2-Butanone	(2)	6.371	43	174937	41.104
42) cis-1,2-Dichloroethene	(2)	6.390	96	131149	21.109
45) 2,2-Dichloropropane	(2)	6.397	77	160123	21.332
47) Propionitrile	(1)	6.471	54	279106	206.179
48) Methacrylonitrile	(2)	6.673	67	377980	105.686

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	68547	20.807
50) Tetrahydrofuran	(1)	6.728	71	49905	40.813
51) Chloroform	(2)	6.863	83	198842	21.530
52)$Dibromofluoromethane	(2)	7.078	113	277983	50.374
52)$Dibromofluoromethane	(2)	7.081	111	283696	50.420
53) 1,1,1-Trichloroethane	(2)	7.081	97	168285	21.349
54) Cyclohexane	(2)	7.178	56	226762	21.513
54) Cyclohexane	(2)	7.178	84	195470	21.348
54) Cyclohexane	(2)	7.171	69	69608	21.350
56) Carbon Tetrachloride	(2)	7.290	117	141234	21.126
55) 1,1-Dichloropropene	(2)	7.297	75	161608	21.167
58) Isobutyl Alcohol	(1)	7.464	41	176564	482.927
57)$1,2-Dichloroethane-d4	(2)	7.535	102	71029	50.503
57)$1,2-Dichloroethane-d4	(2)	7.532	65	318244	50.776
57)$1,2-Dichloroethane-d4	(2)	7.535	104	46070	51.284
60) Benzene	(2)	7.561	78	489494	21.320
61) 1,2-Dichloroethane	(2)	7.634	62	150643	20.399
61) 1,2-Dichloroethane	(2)	7.634	98	15487	21.192
65) t-Amyl methyl ether	(2)	7.744	73	391674	21.591
67) n-Heptane	(2)	7.962	43	173500MA	21.566
66)*Fluorobenzene	(2)	7.962	96	1128743	50.000
69) n-Butanol	(1)	8.329	56	312189M	992.087
71) Trichloroethene	(2)	8.435	95	122357	21.166
72) Methylcyclohexane	(2)	8.737	83	221554	20.658
72) Methylcyclohexane	(2)	8.737	98	99234	20.447
73) 1,2-Dichloropropane	(2)	8.769	63	123290	21.148
76) Methyl Methacrylate	(2)	8.850	69	117550A	20.851
75) 1,4-Dioxane	(1)	8.856	88	44376M	513.065
74) Dibromomethane	(2)	8.879	93	79643	21.113
78) Bromodichloromethane	(2)	9.114	83	142226	21.011
79) 2-Nitropropane	(2)	9.390	41	82517M	40.247
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	51005	20.370
81) cis-1,3-Dichloropropene	(2)	9.634	75	192808	21.446
82) 4-Methyl-2-pentanone	(2)	9.808	43	377728	42.047
83)$Toluene-d8	(3)	9.933	98	1159273	50.160
83)$Toluene-d8	(3)	9.933	100	751601	50.203
88) Toluene	(3)	10.007	92	308466	21.289
90) 1,3-Dichloropropene (total)	(3)		100	367273	42.658

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	174465	21.211
91) Ethyl Methacrylate	(3)	10.313	69	210882	21.096
92) 1,1,2-Trichloroethane	(3)	10.461	97	114106	20.771
93) Tetrachloroethene	(3)	10.538	166	130358	21.243
94) 1,3-Dichloropropane	(3)	10.618	76	196136	20.911
96) 2-Hexanone	(3)	10.666	43	276801	41.485
97) Dibromochloromethane	(3)	10.827	129	117920	20.955
99) 1,2-Dibromoethane	(3)	10.940	107	124981	20.951
100)*Chlorobenzene-d5	(3)	11.361	117	883281	50.000
101) 1-Chlorohexane	(3)	11.364	91	162552	20.883
102) Chlorobenzene	(3)	11.387	112	347116	21.185
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	116096	21.505
104) Ethylbenzene	(3)	11.467	91	593614	21.434
106) m+p-Xylene	(3)	11.580	106	474524	43.555
108) Xylene (Total)	(3)		106	707354	65.191
107) o-Xylene	(3)	11.908	106	232830	21.636
109) Styrene	(3)	11.924	104	387652	21.799
110) Bromoform	(3)	12.081	173	81670	19.422
111) Isopropylbenzene	(3)	12.203	105	589458	21.839
112) Cyclohexanone	(1)	12.287	55	167626	494.847
114)$4-Bromofluorobenzene	(3)	12.348	95	438766	50.137
114)$4-Bromofluorobenzene	(3)	12.348	174	363757	50.138
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	186119M	20.690
115) Bromobenzene	(4)	12.464	156	150208	20.987
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	295707	106.569
117) 1,2,3-Trichloropropane	(4)	12.499	110	56899	20.612
119) n-Propylbenzene	(4)	12.528	91	680502	21.762
120) 2-Chlorotoluene	(4)	12.609	126	141675	21.327
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	498486	21.936
121) 4-Chlorotoluene	(4)	12.699	126	147463	21.326
124) tert-Butylbenzene	(4)	12.904	134	101571M	21.612
125) Pentachloroethane	(4)	12.940	167	85065	21.020
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	522495	21.816
127) sec-Butylbenzene	(4)	13.068	105	620603	22.130
129) 1,3-Dichlorobenzene	(4)	13.168	146	280954	21.362
130) p-Isopropyltoluene	(4)	13.171	119	539497	22.237
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	476218	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	288857	21.186

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

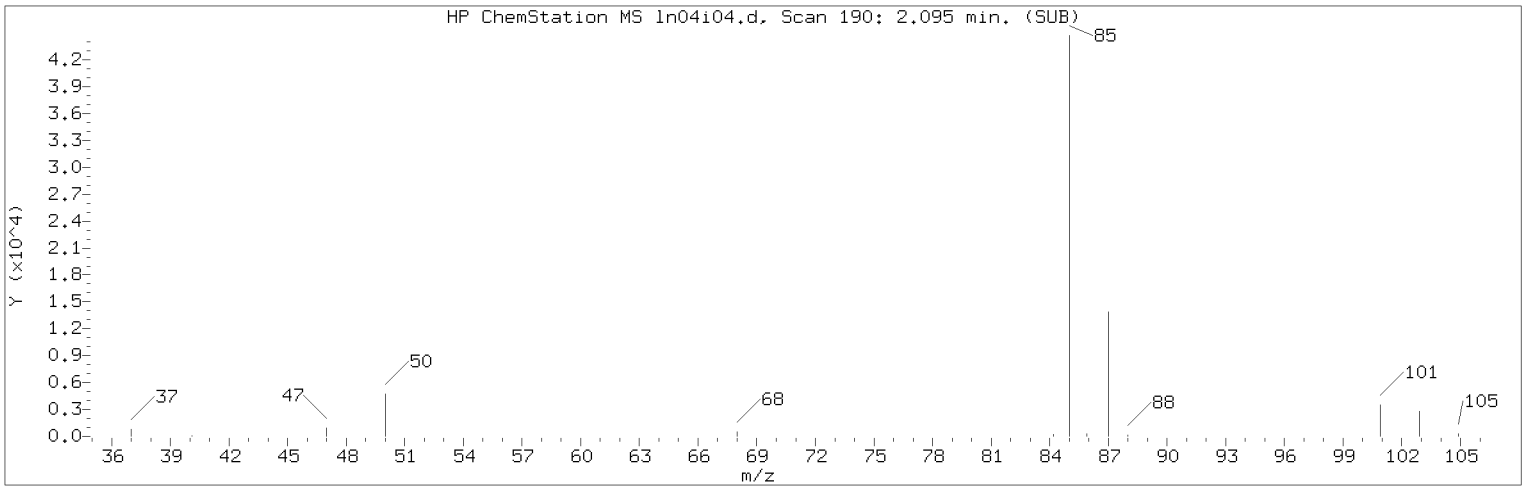
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

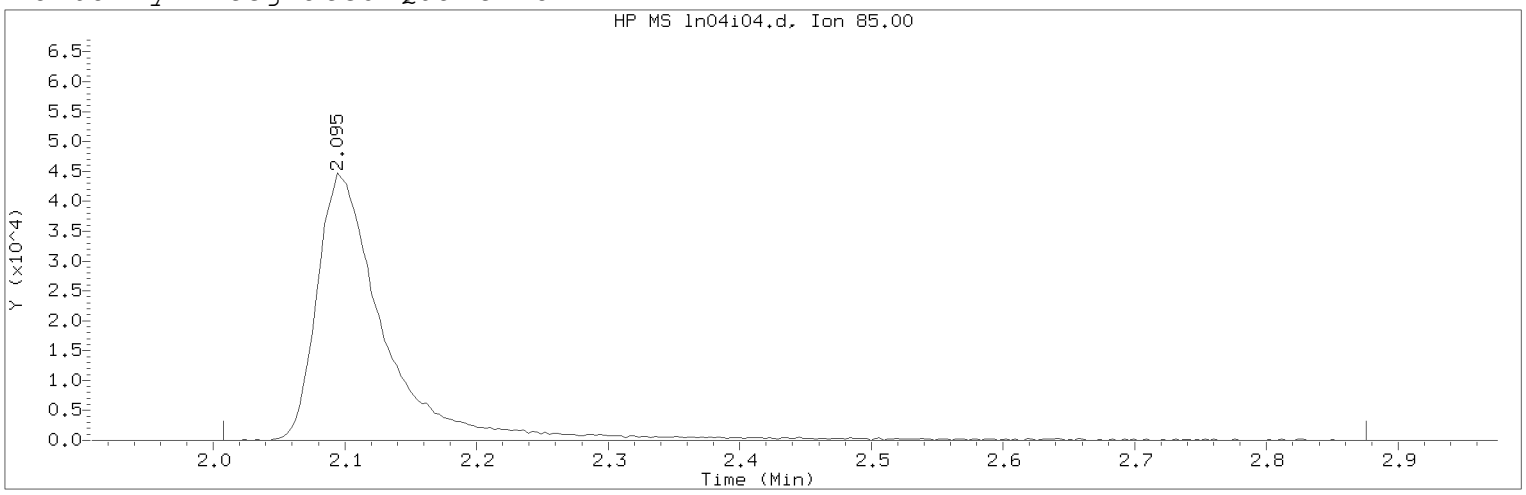
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	529814	20.883
135) Benzyl Chloride	(4)	13.319	91	386244	20.108
136) 1,3-Diethylbenzene	(4)	13.371	119	333696	21.134
141) Diethylbenzene (total)	(4)		100	968804	63.411
137) 1,4-Diethylbenzene	(4)	13.445	119	354305	21.180
139) n-Butylbenzene	(4)	13.464	92	270790	21.829
138) 1,2-Dichlorobenzene	(4)	13.502	146	274435	21.146
140) 1,2-Diethylbenzene	(4)	13.518	119	280803	21.097
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	40583	20.608
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	215108	21.573
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	206700	21.320
147) Hexachlorobutadiene	(4)	14.666	225	101324	22.135
148) Naphthalene	(4)	14.772	128	665482	21.351
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	203518	21.573
150) 2-Methylnaphthalene	(4)	15.563	142	423056	22.042

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

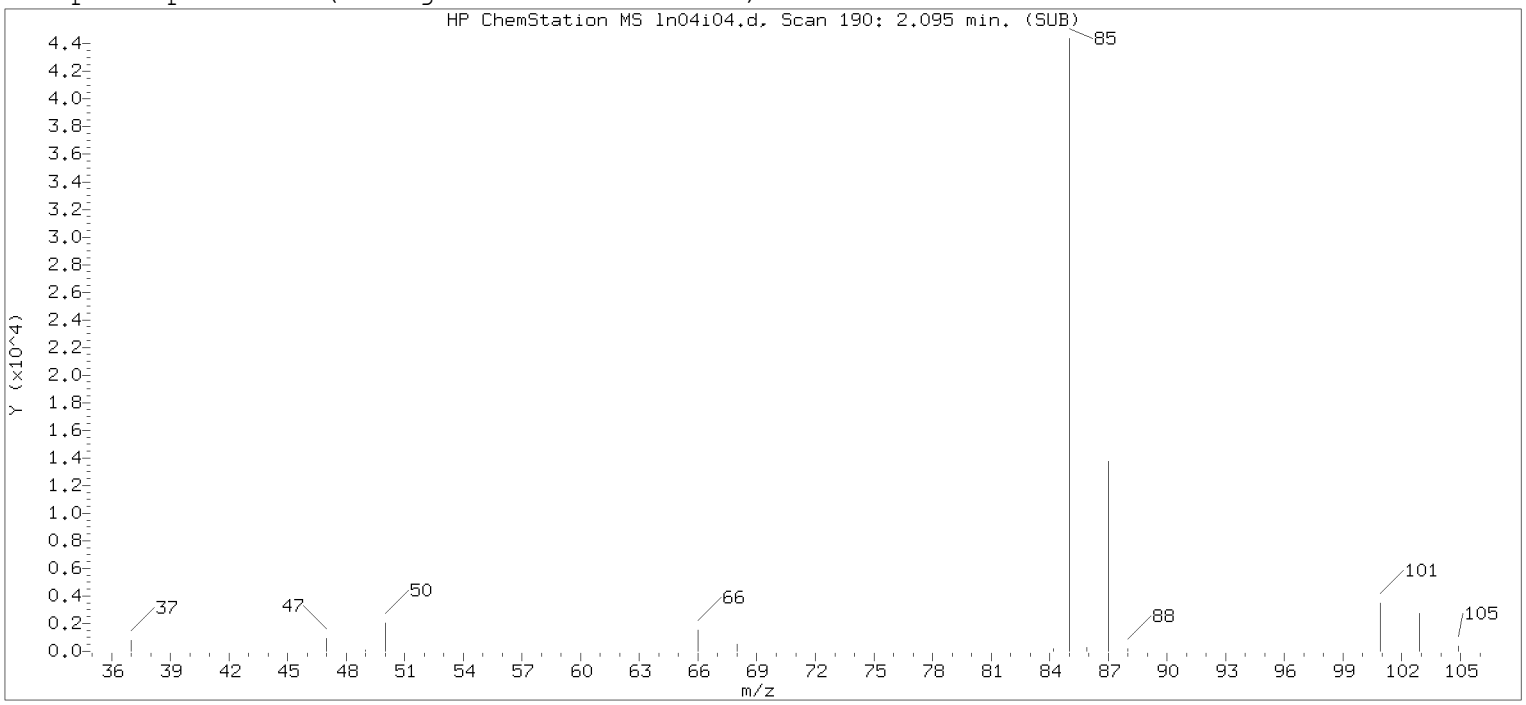
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.095
Quant Ion : 85.00
Area (flag) : 161054M
On-Column Amount (ng) : 20.4603
Integration start scan : 162 Integration stop scan: 432
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

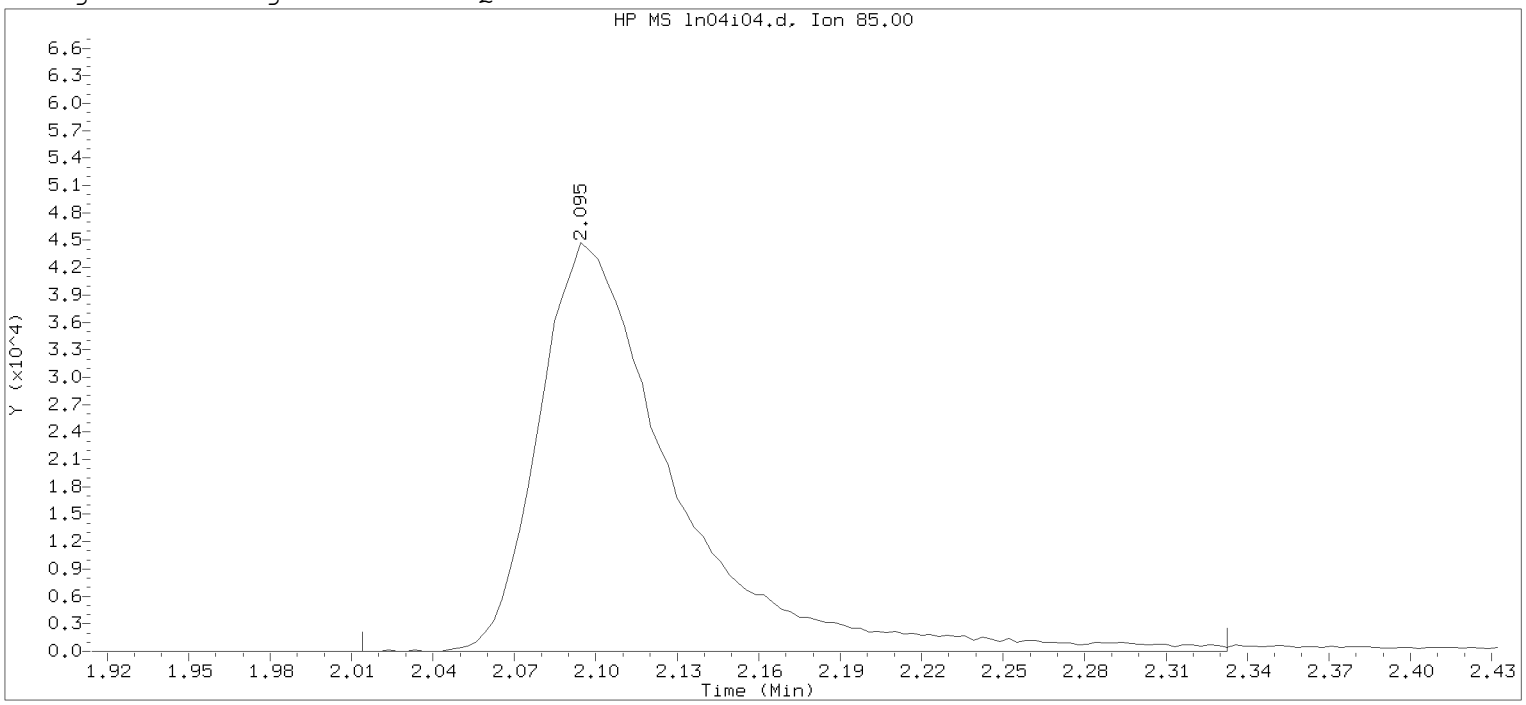
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

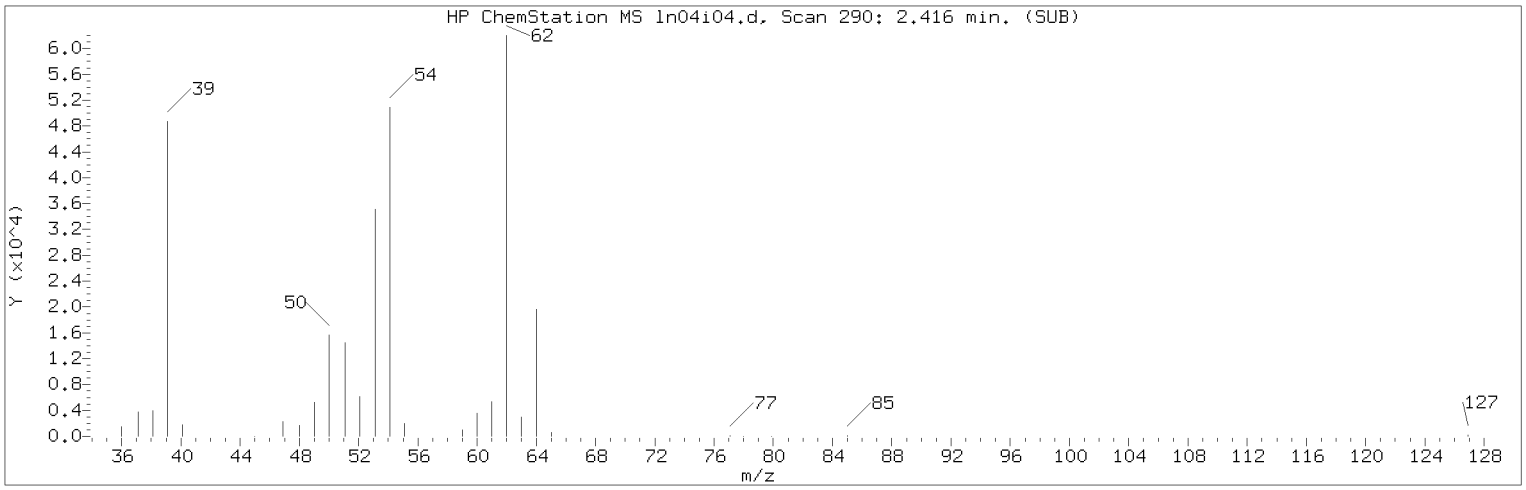
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

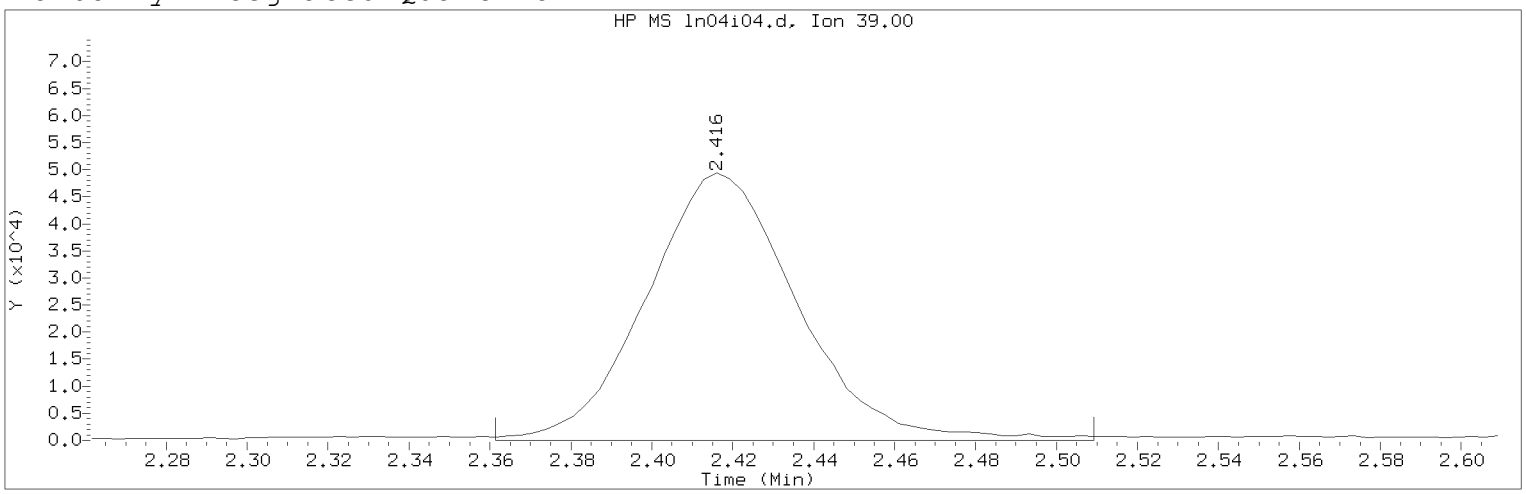
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.095
Quant Ion : 85.00
Area : 154796
On-column Amount (ng) : 18.9193
Integration start scan : 164 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

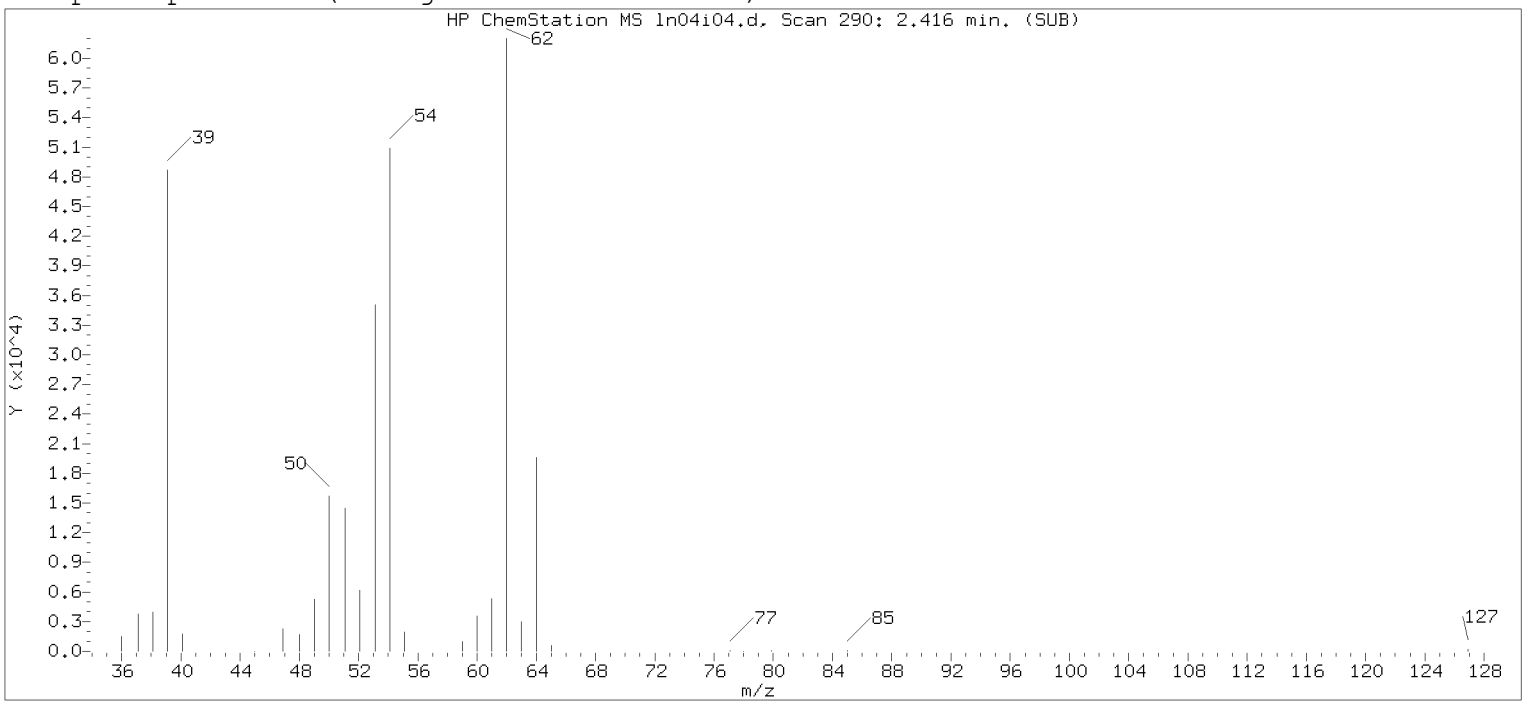
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 290
Retention Time (minutes): 2.416
Quant Ion : 39.00
Area (flag) : 127826M
On-Column Amount (ng) : 20.2925
Integration start scan : 272 Integration stop scan: 318
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

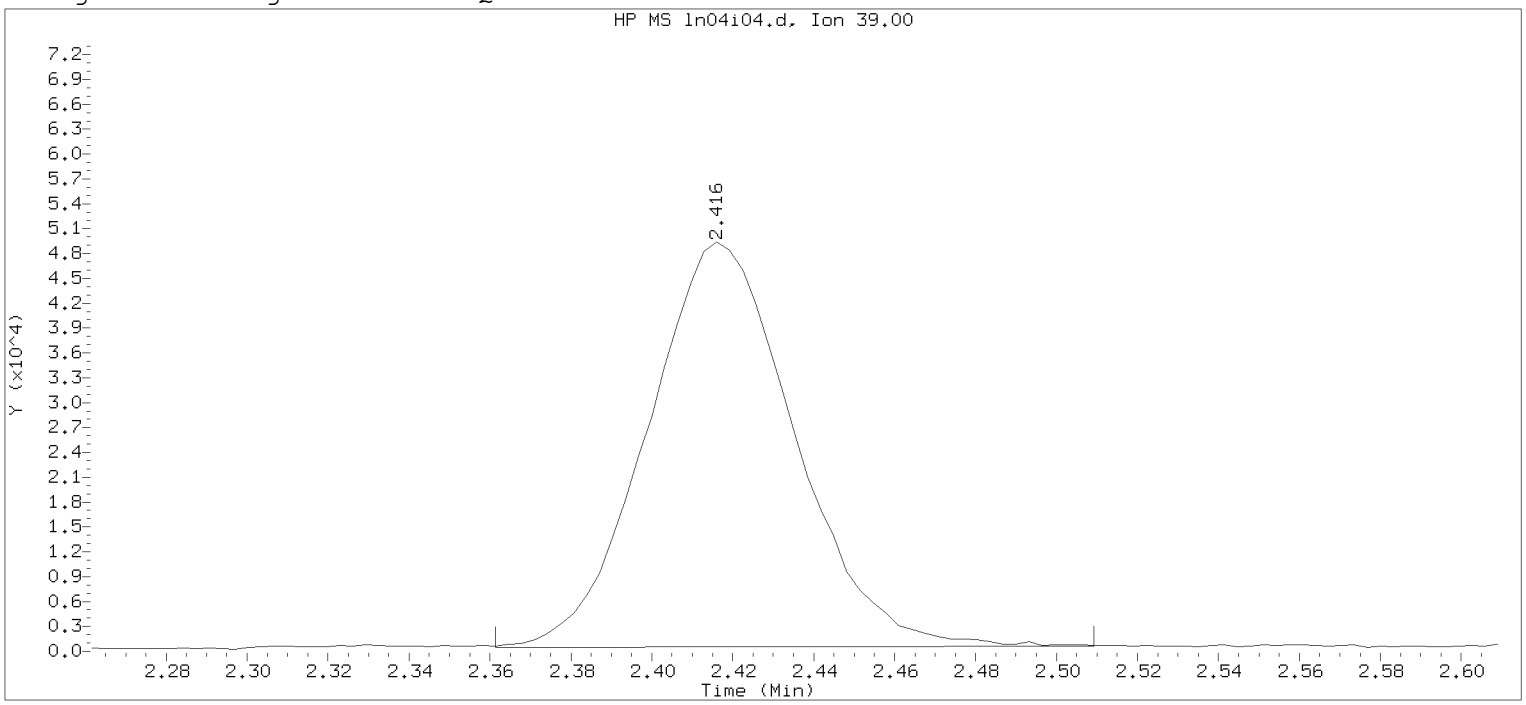
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

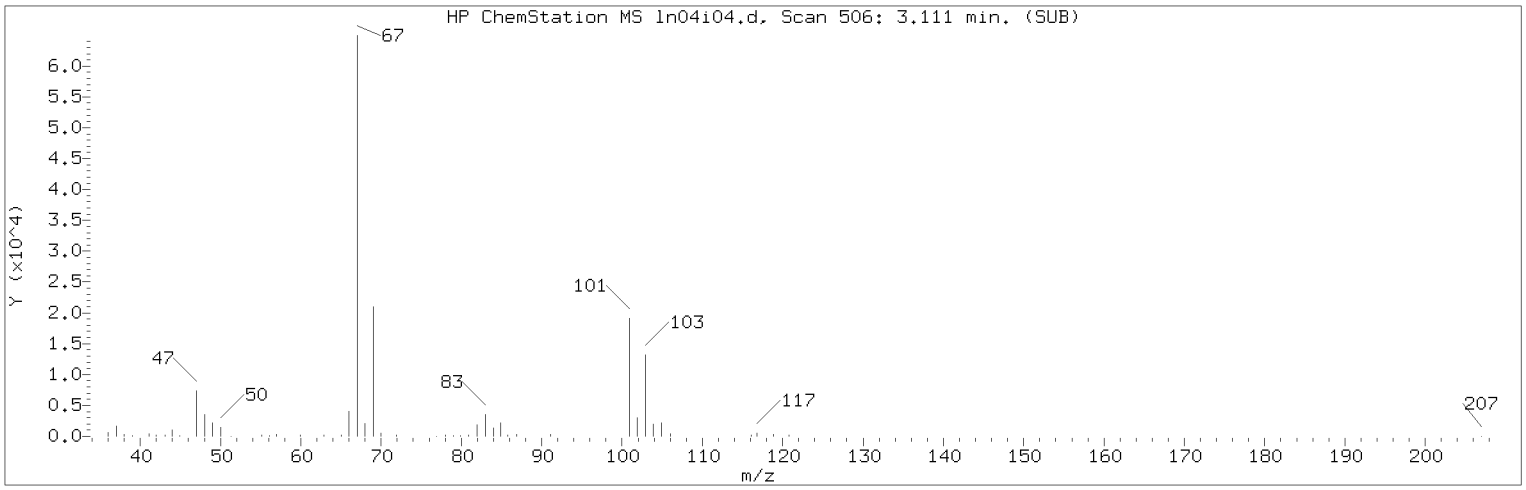
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

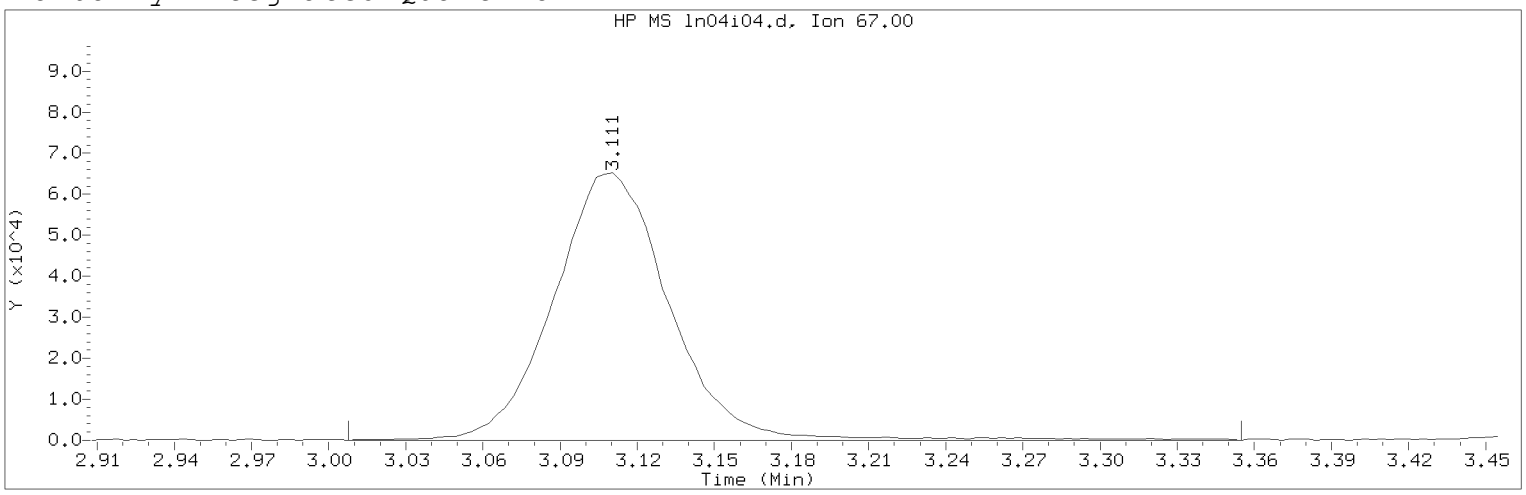
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 290
Retention Time (minutes): 2.416
Quant Ion : 39.00
Area : 122801
On-column Amount (ng) : 20.5539
Integration start scan : 272 Integration stop scan: 318
Y at integration start : 477 Y at integration end: 628

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

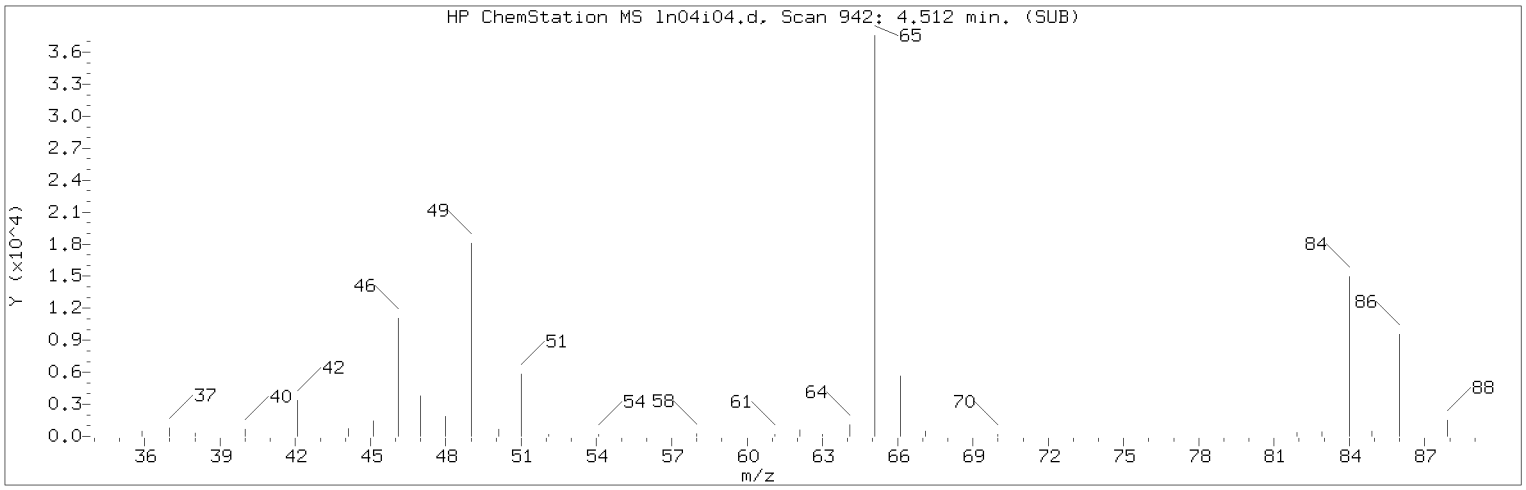
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 506
Retention Time (minutes): 3.111
Quant Ion : 67.00
Area (flag) : 205276M
On-Column Amount (ng) : 20.8381
Integration start scan : 473 Integration stop scan: 581
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

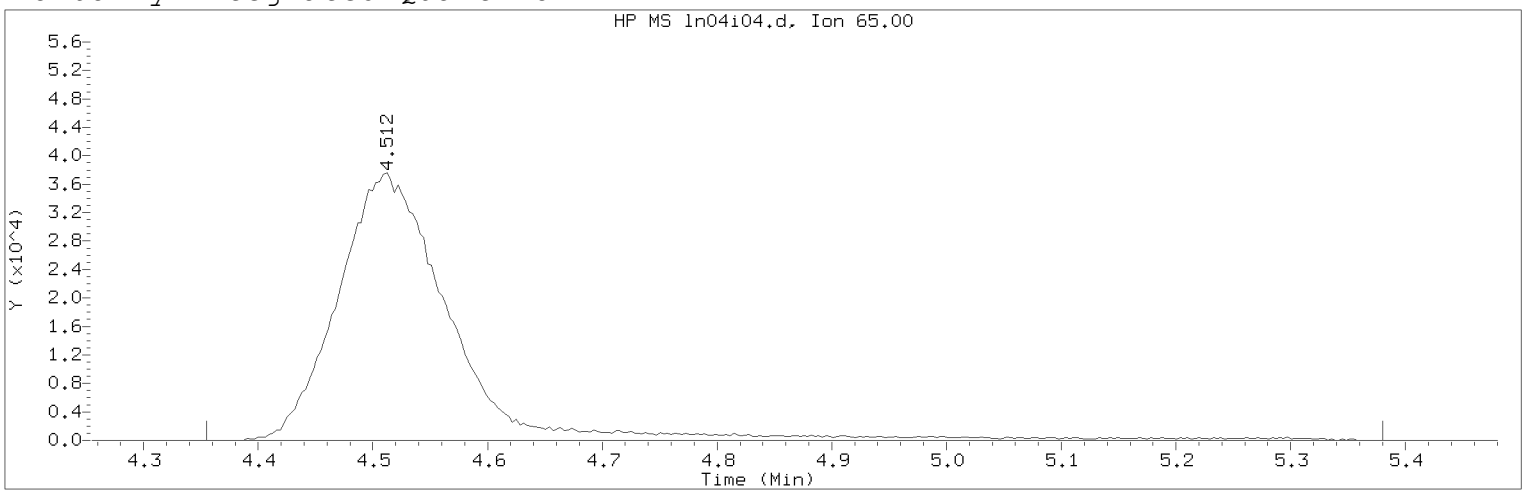
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

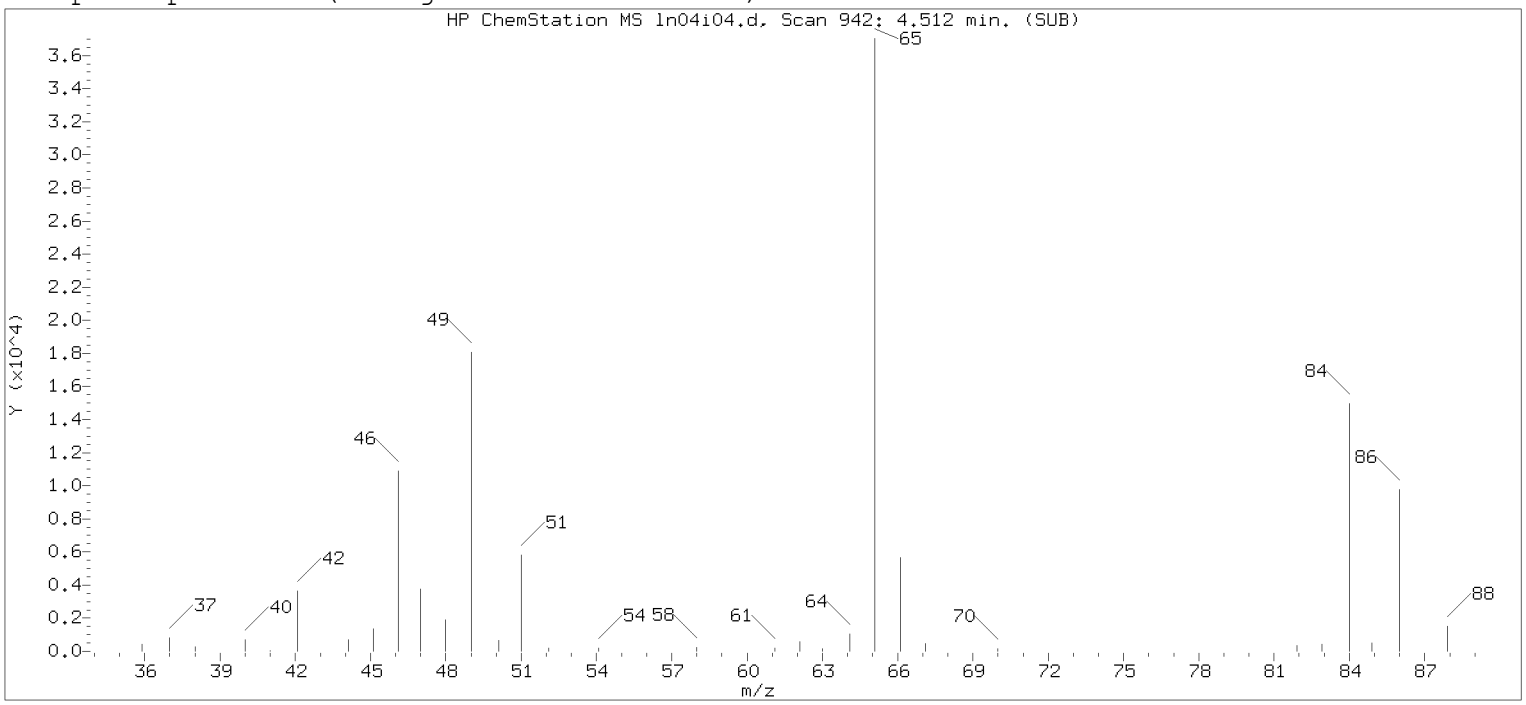
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area (flag) : 258058M
On-Column Amount (ng) : 250.0000
Integration start scan : 892 Integration stop scan: 1211
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

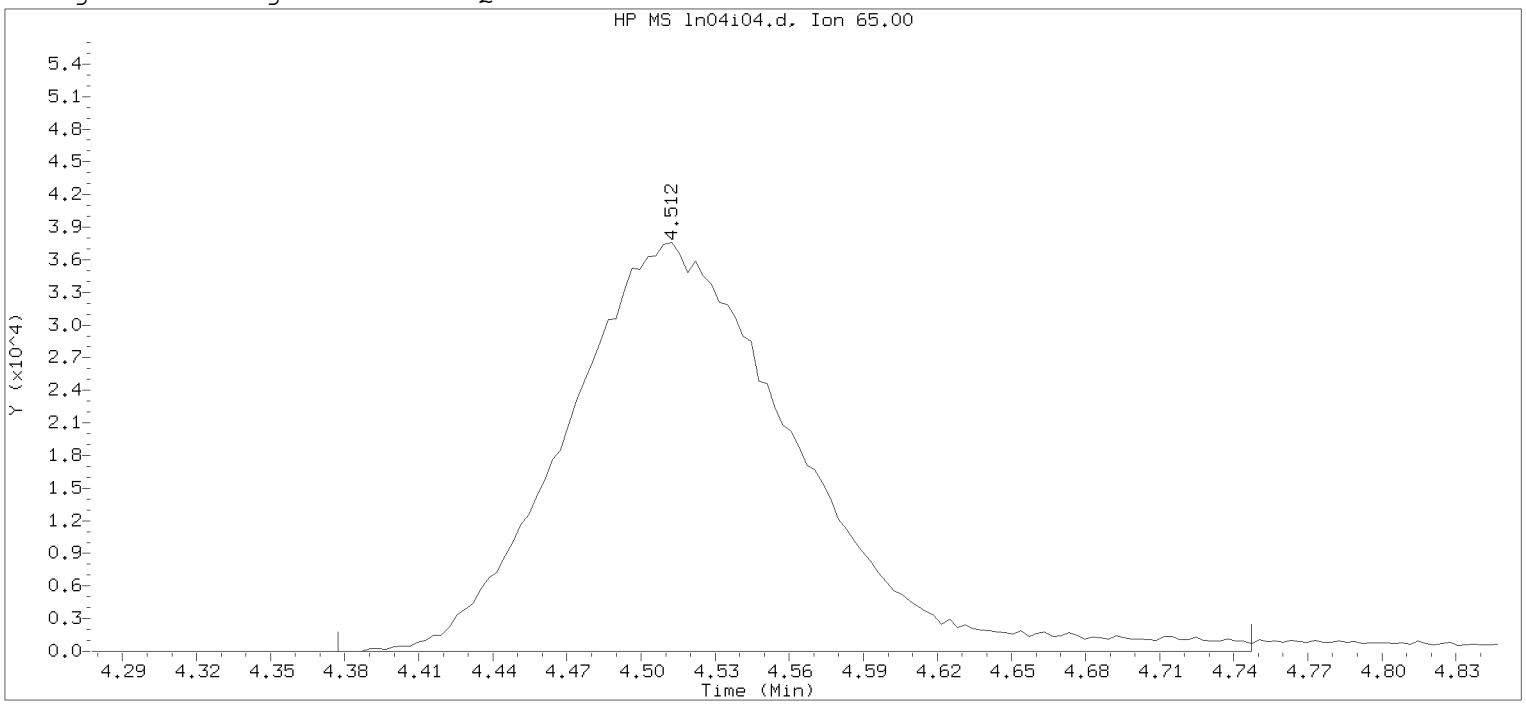
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

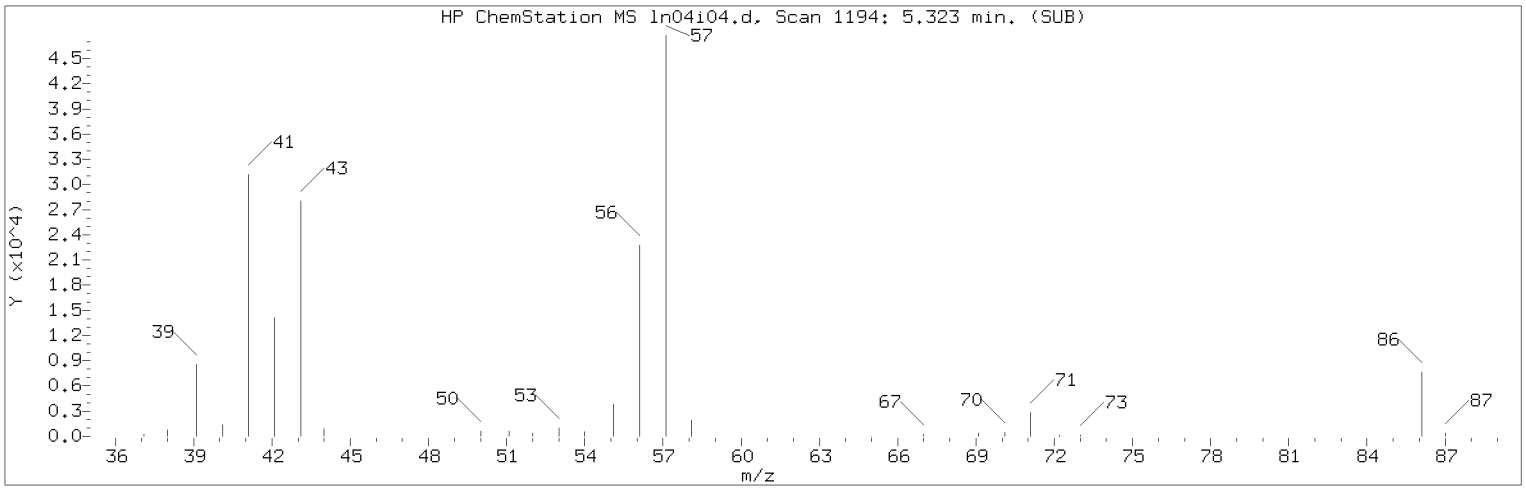
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

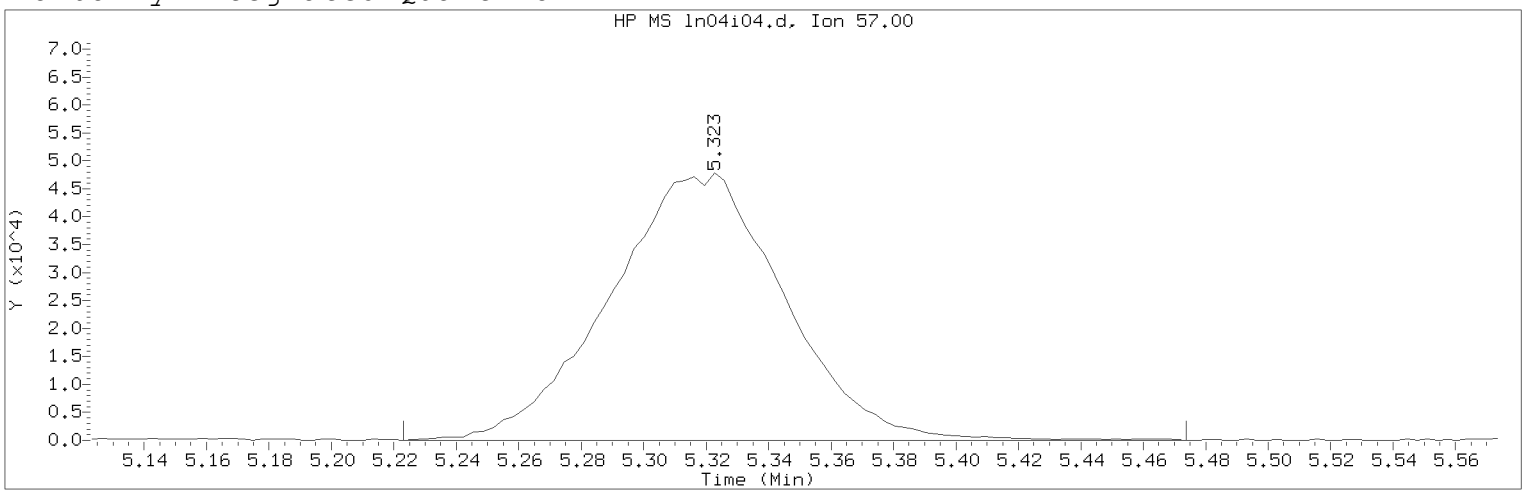
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area : 242565
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

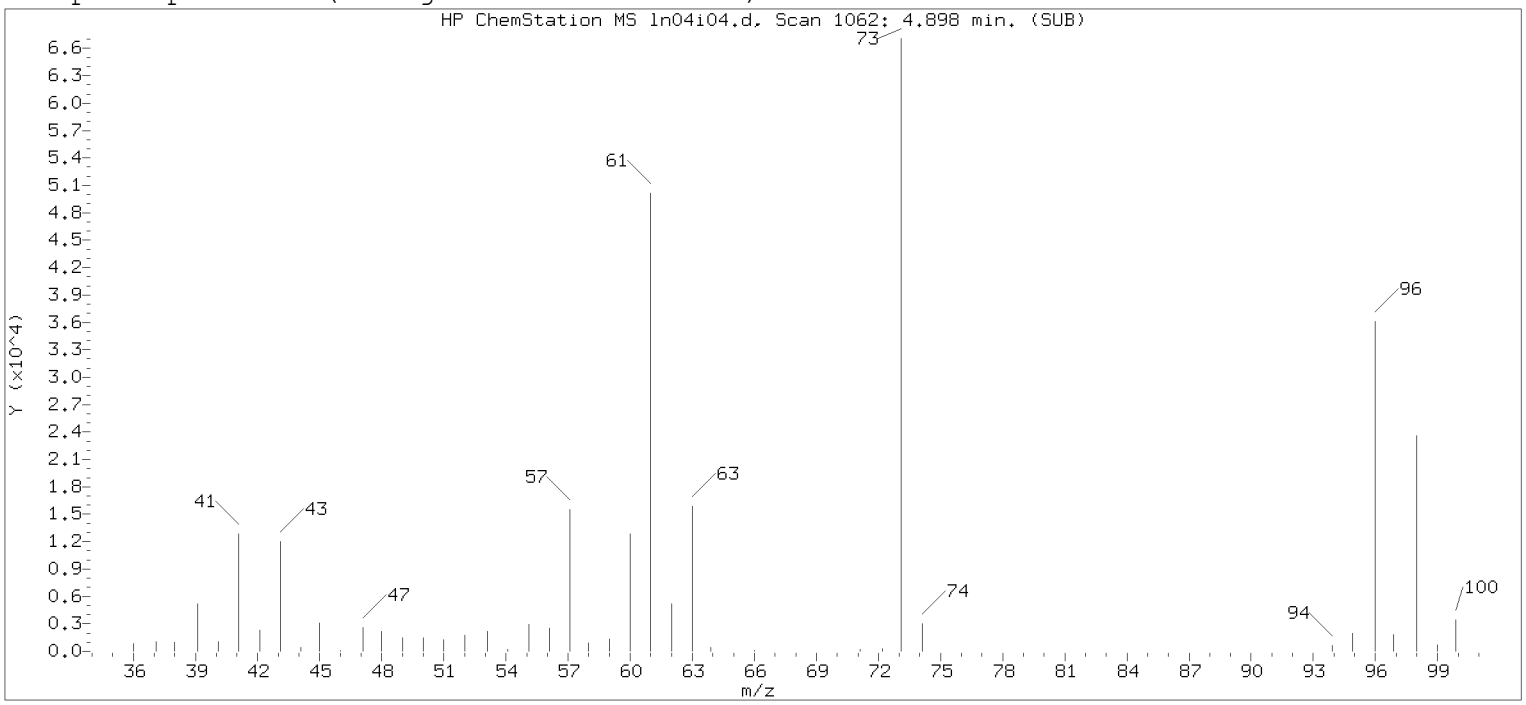
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1194
Retention Time (minutes): 5.323
Quant Ion : 57.00
Area (flag) : 185314M
On-Column Amount (ng) : 21.5188
Integration start scan : 1162 Integration stop scan: 1240
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

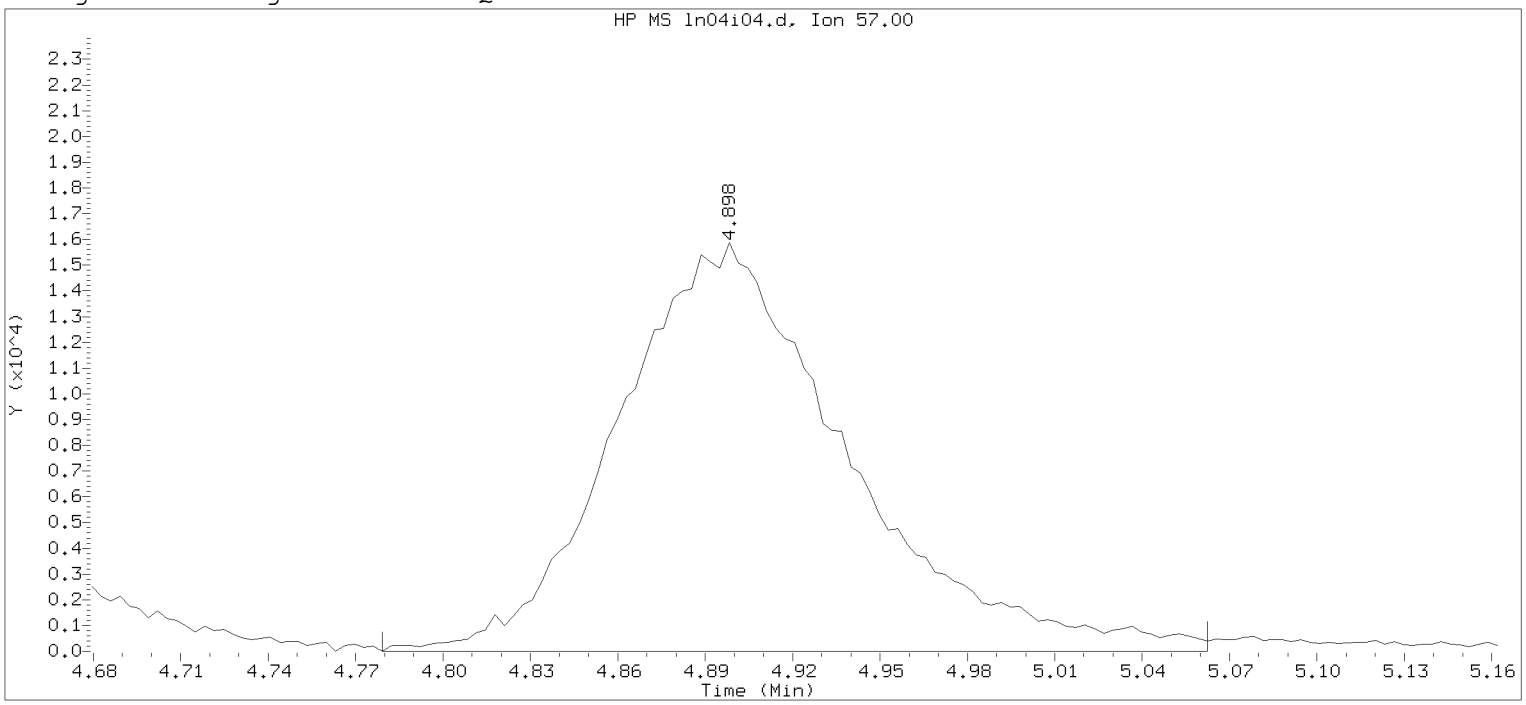
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

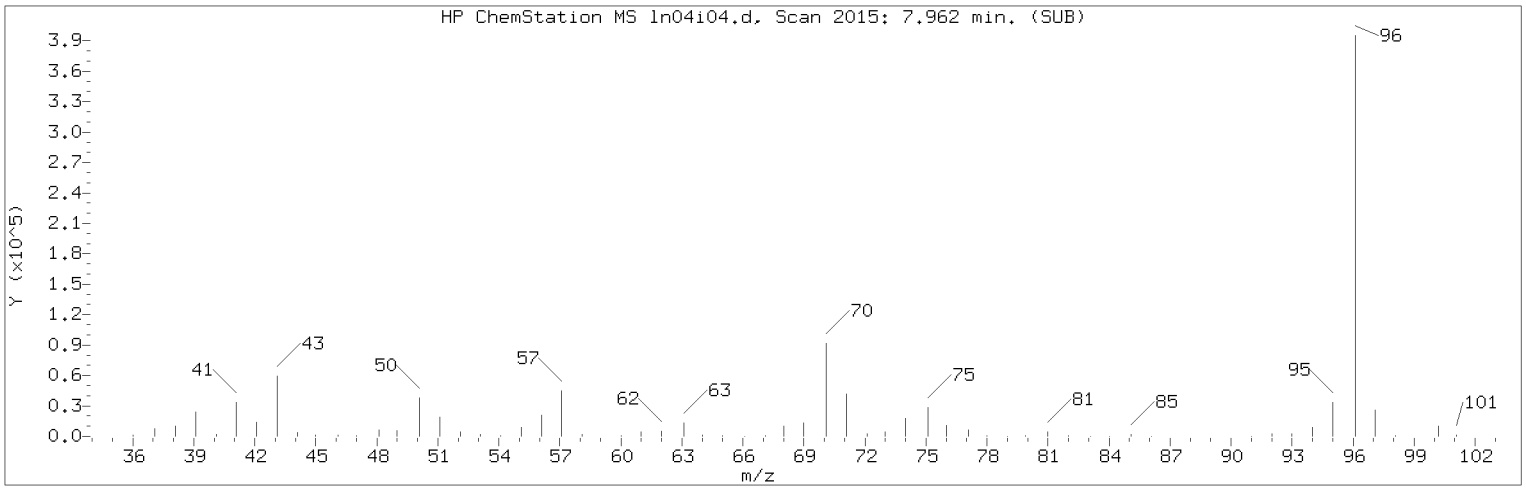
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

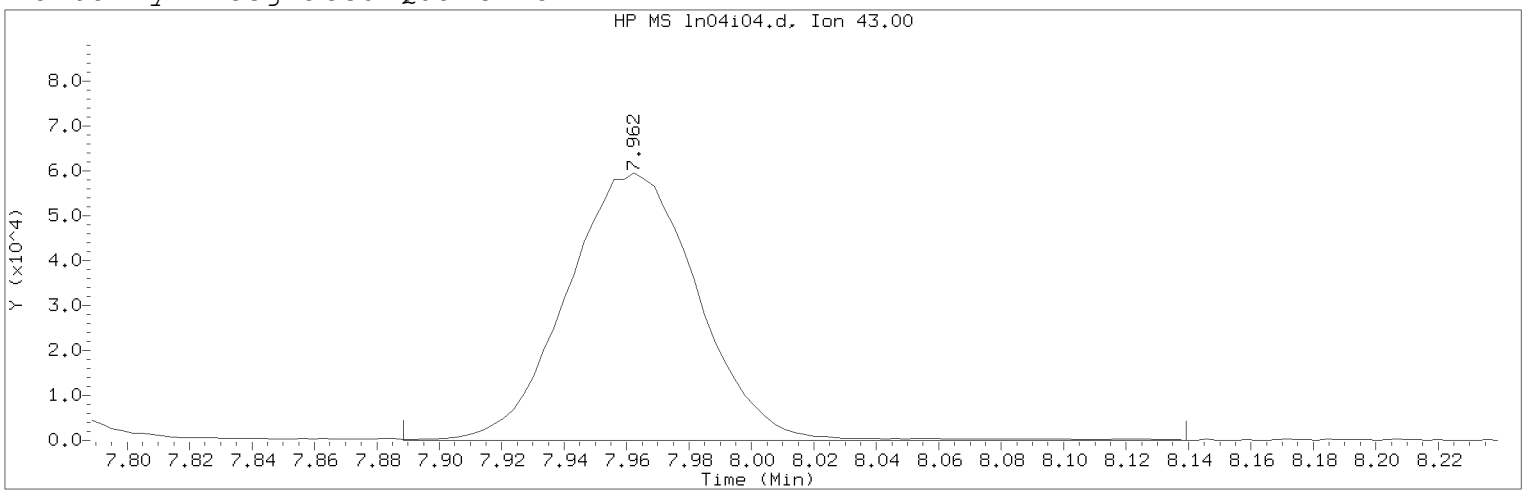
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1062
Retention Time (minutes): 4.898
Quant Ion : 57.00
Area : 86496
On-column Amount (ng) : 21.2144
Integration start scan : 1024 Integration stop scan: 1112
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

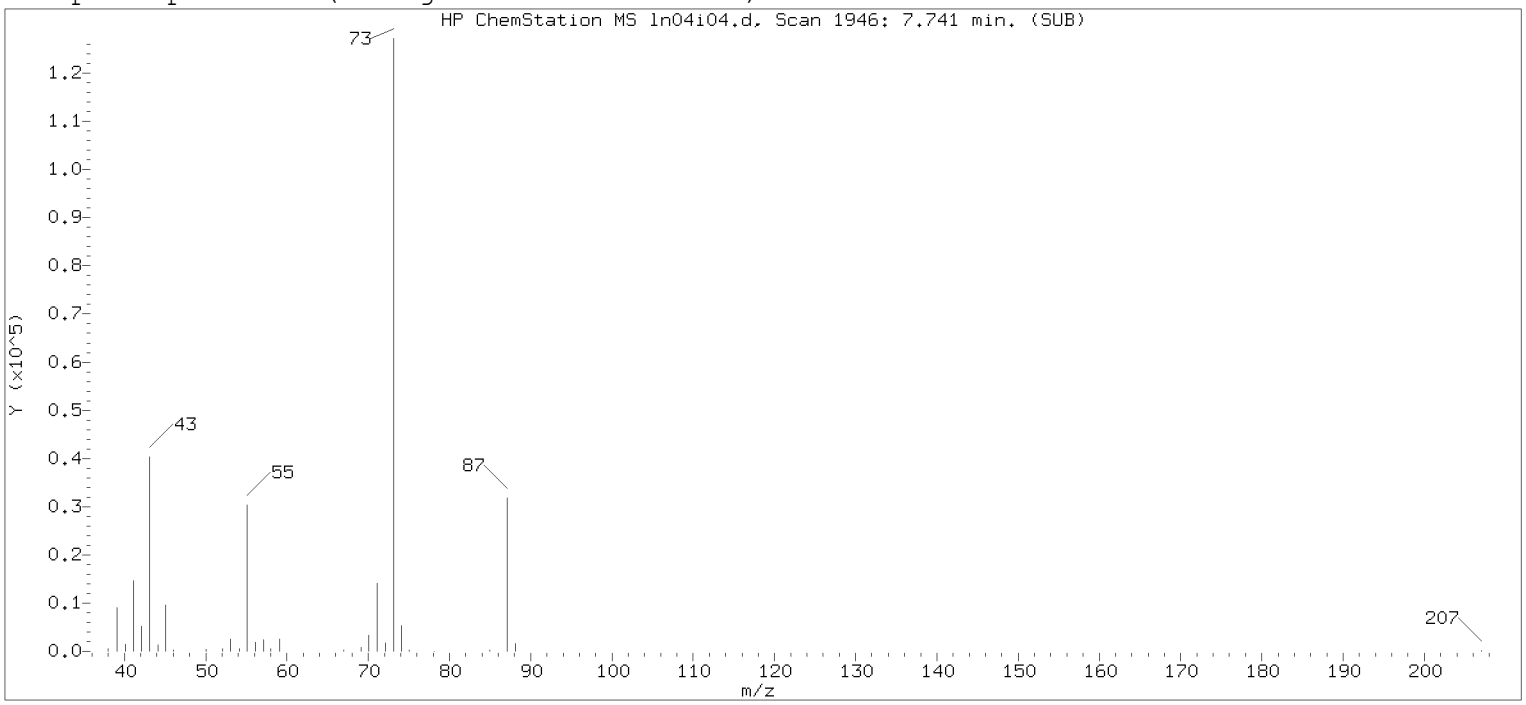
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2015
Retention Time (minutes): 7.962
Quant Ion : 43.00
Area (flag) : 173500MA
On-Column Amount (ng) : 21.5663
Integration start scan : 1991 Integration stop scan: 2069
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

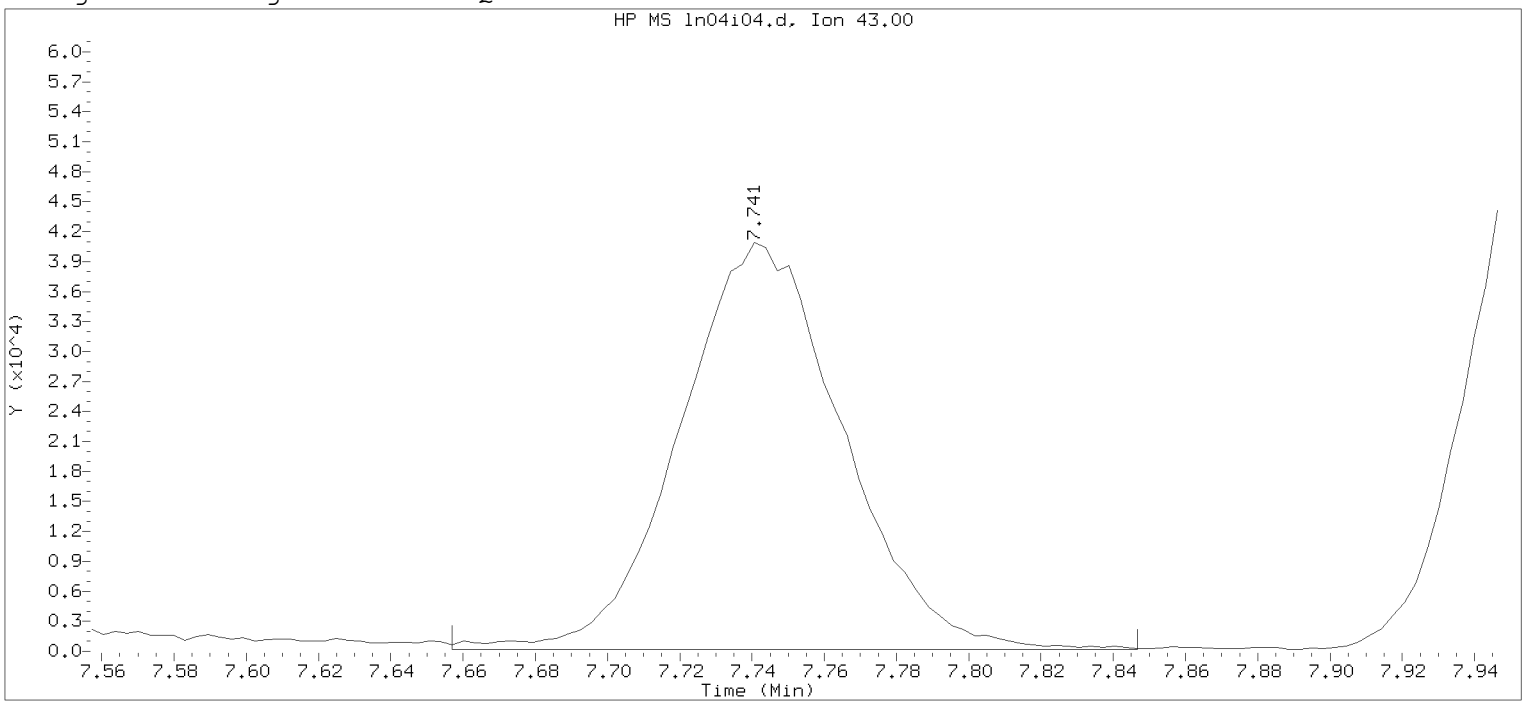
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

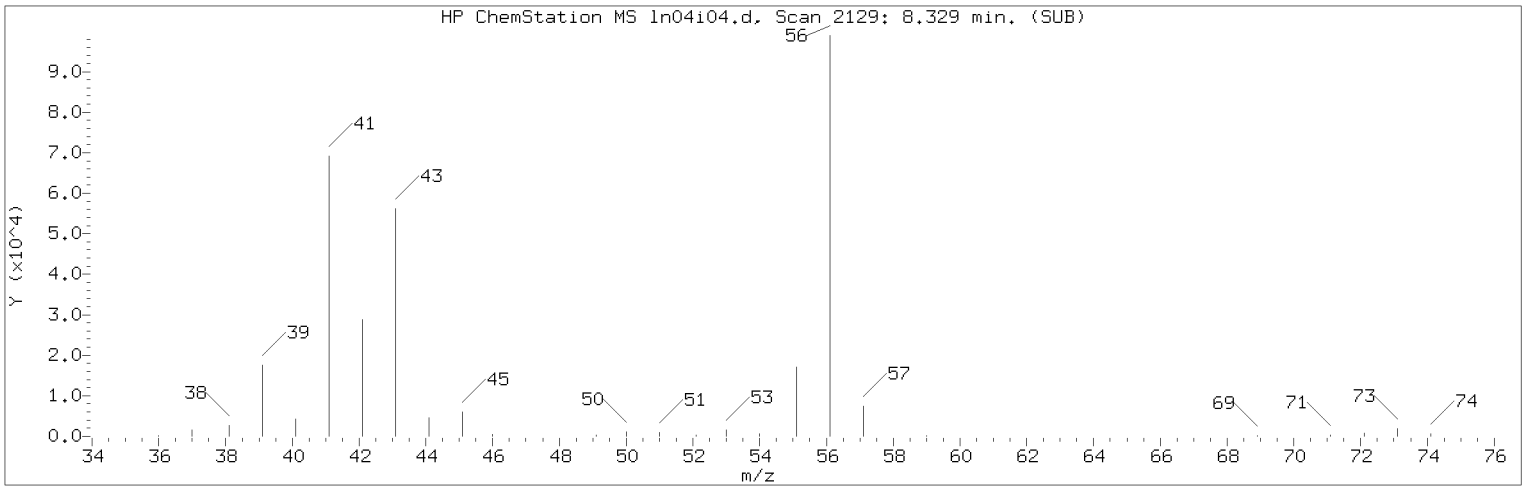
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

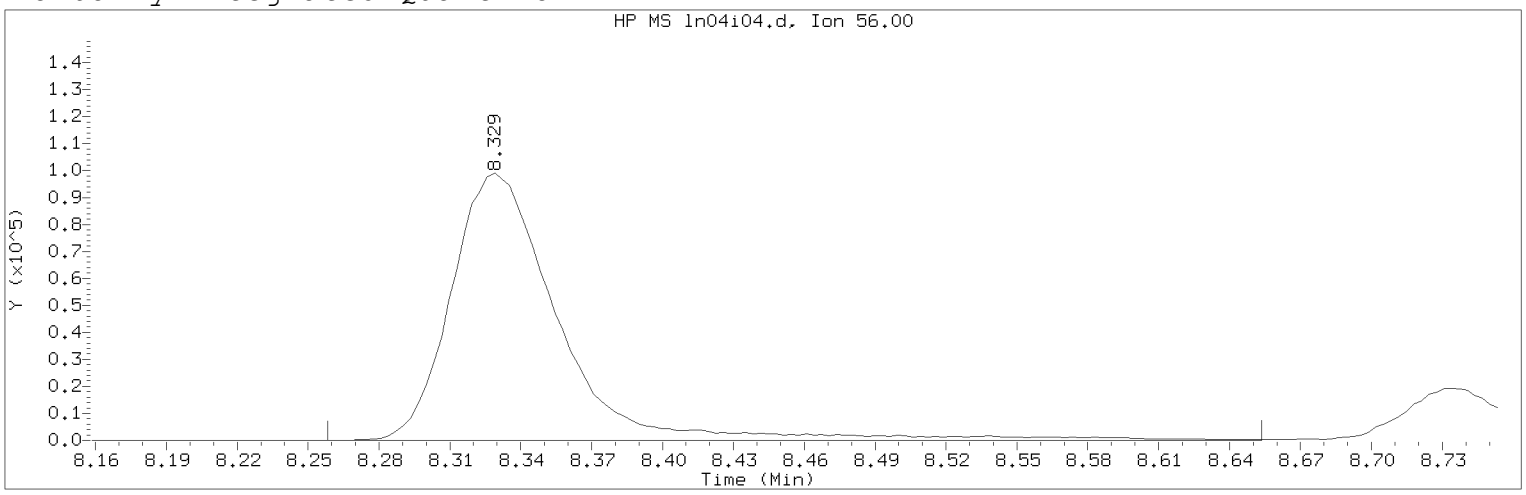
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.741
Quant Ion : 43.00
Area : 127386
On-column Amount (ng) : 21.2604
Integration start scan : 1919 Integration stop scan: 1978
Y at integration start : 203 Y at integration end: 203

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

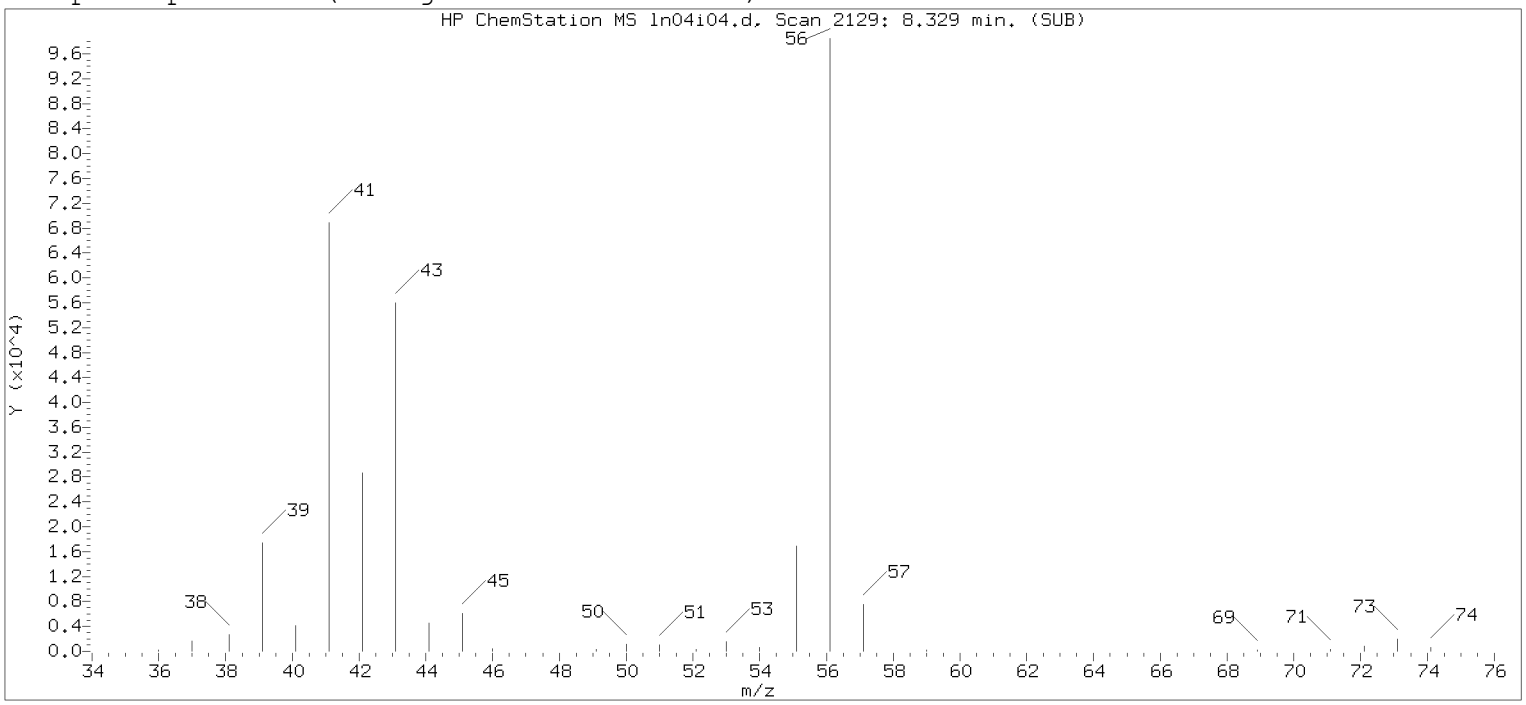
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area (flag) : 312189M
On-Column Amount (ng) : 992.0871
Integration start scan : 2106 Integration stop scan: 2229
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

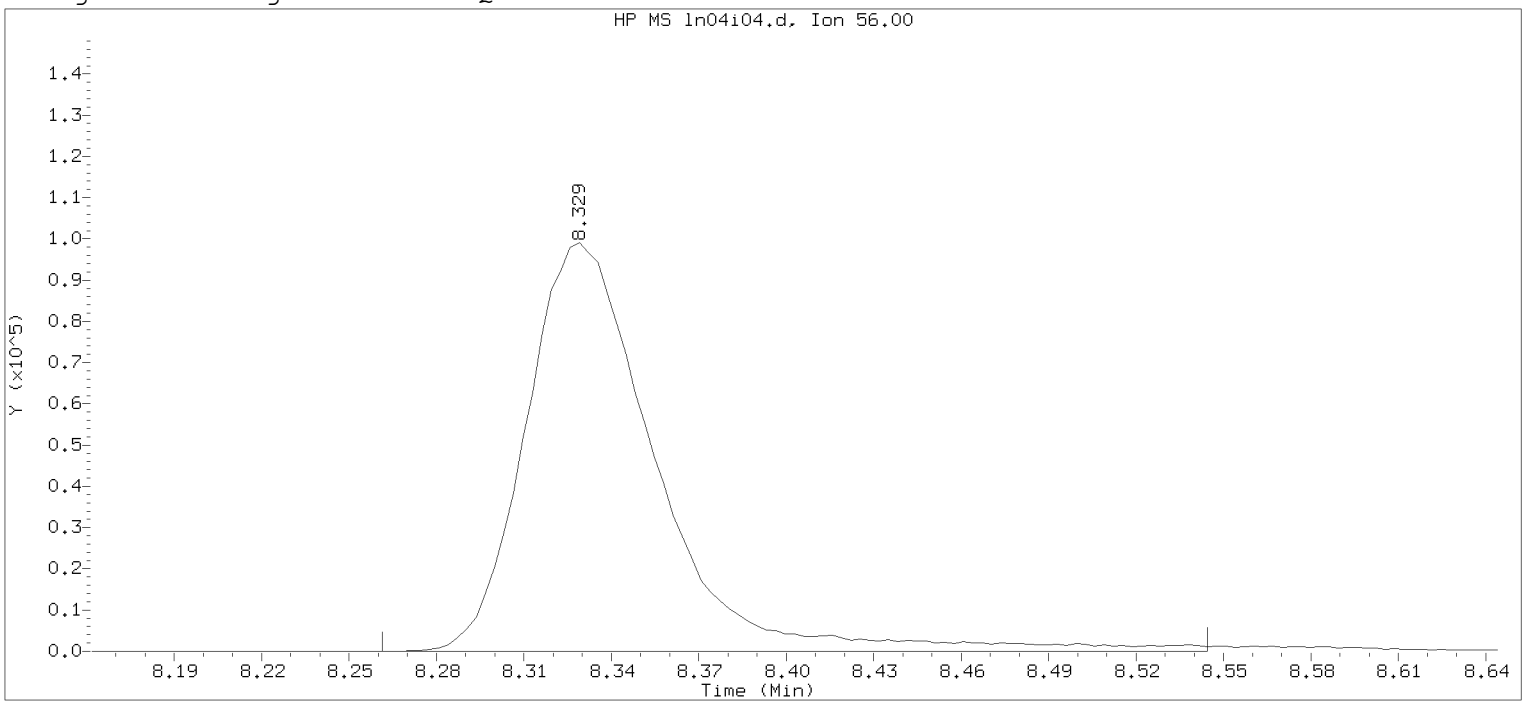
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

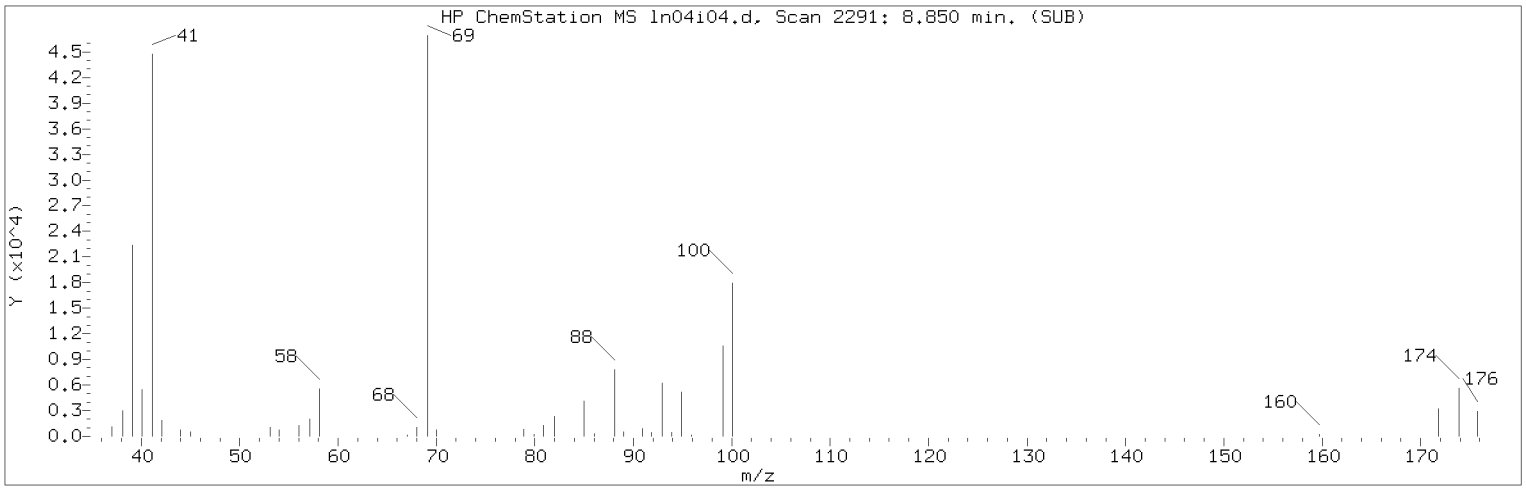
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

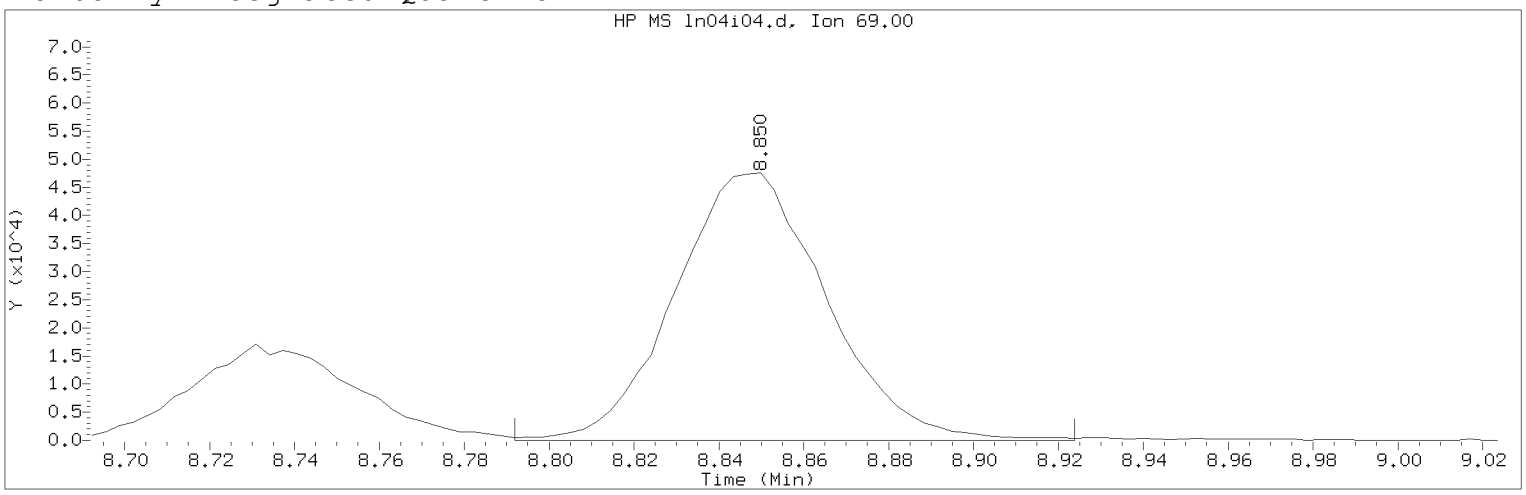
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area : 307443
On-column Amount (ng) : 938.0571
Integration start scan : 2107 Integration stop scan: 2195
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

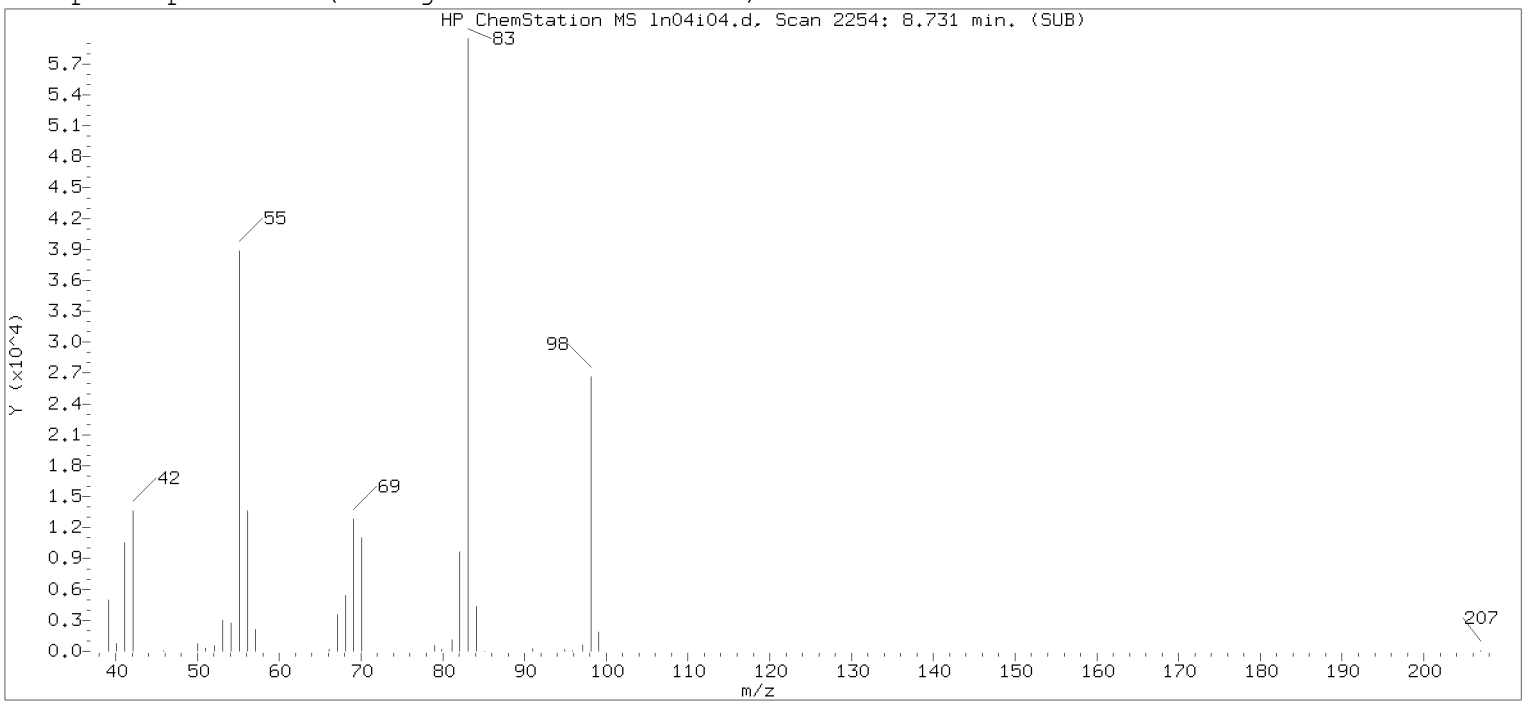
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2291
Retention Time (minutes): 8.850
Quant Ion : 69.00
Area (flag) : 117550A
On-Column Amount (ng) : 20.8506
Integration start scan : 2272 Integration stop scan: 2313
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

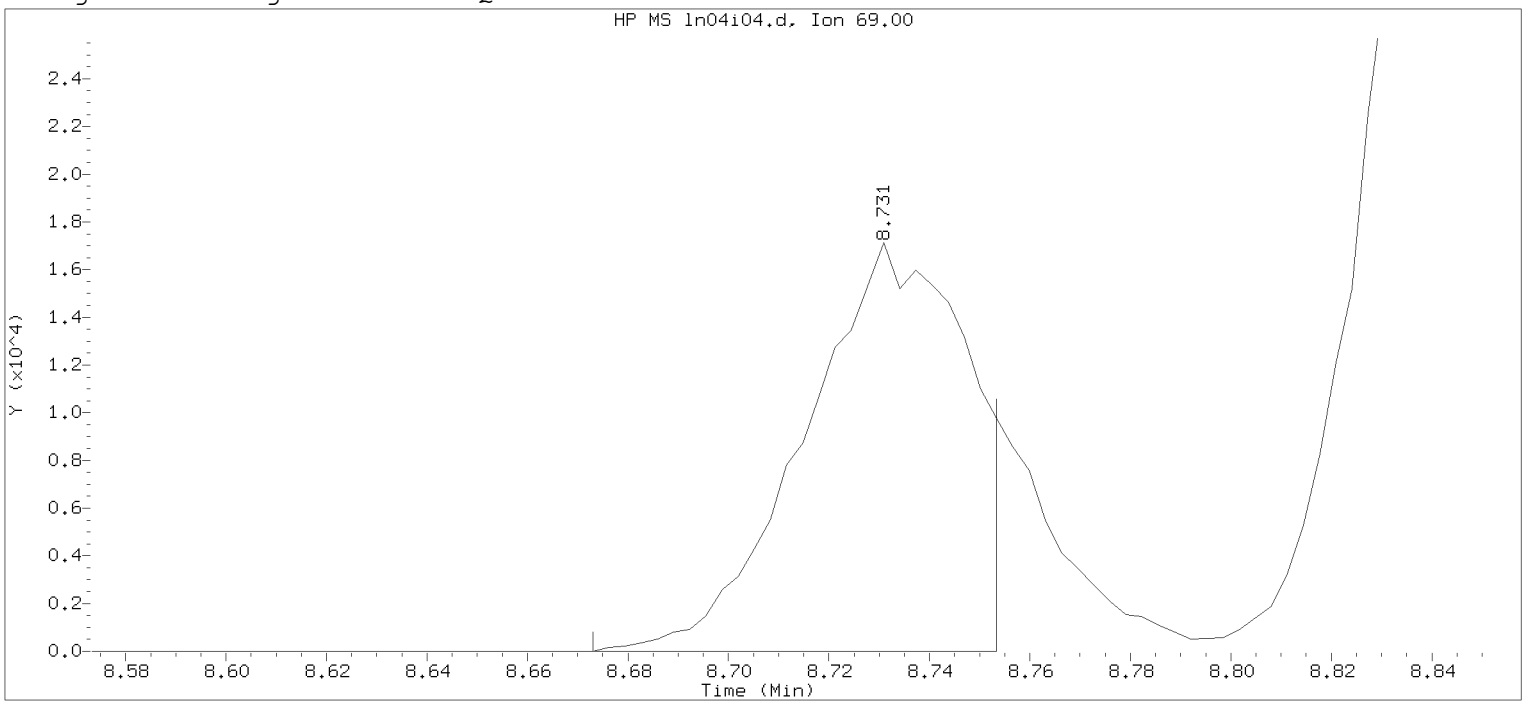
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

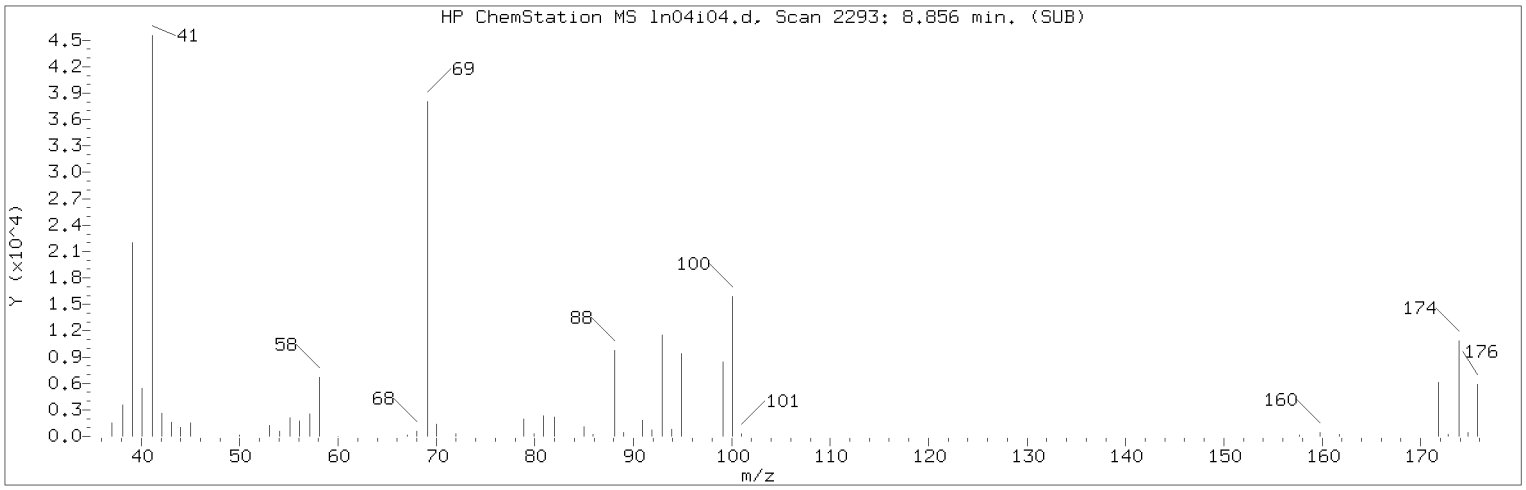
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

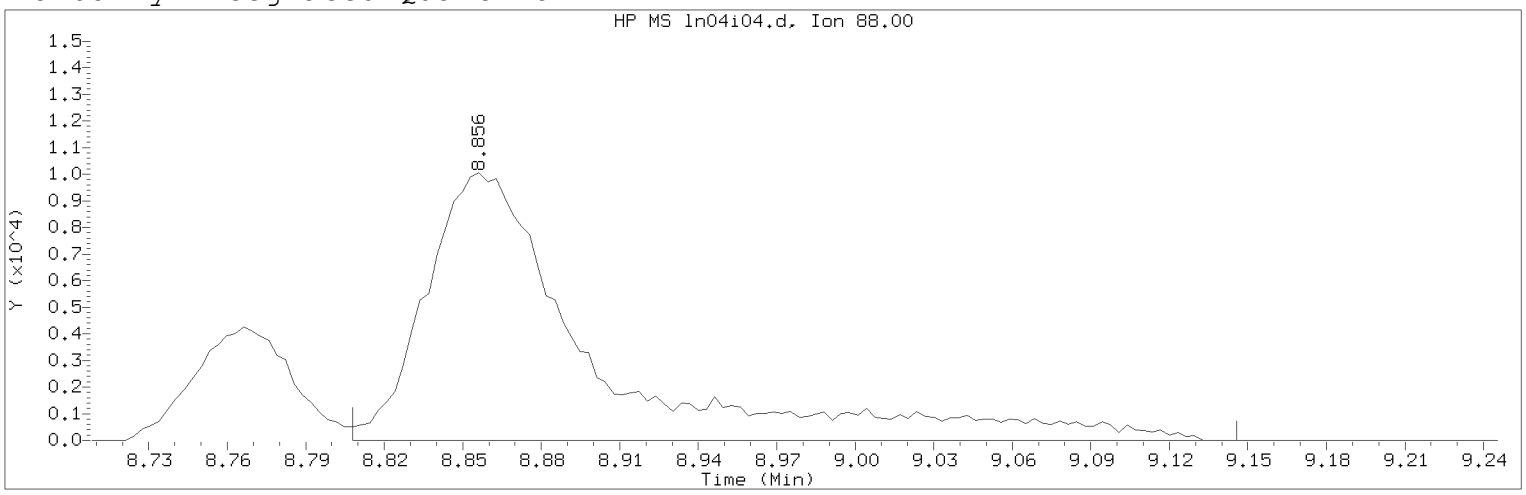
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2254
Retention Time (minutes): 8.731
Quant Ion : 69.00
Area : 37815
On-column Amount (ng) : 16.5923
Integration start scan : 2235 Integration stop scan: 2260
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

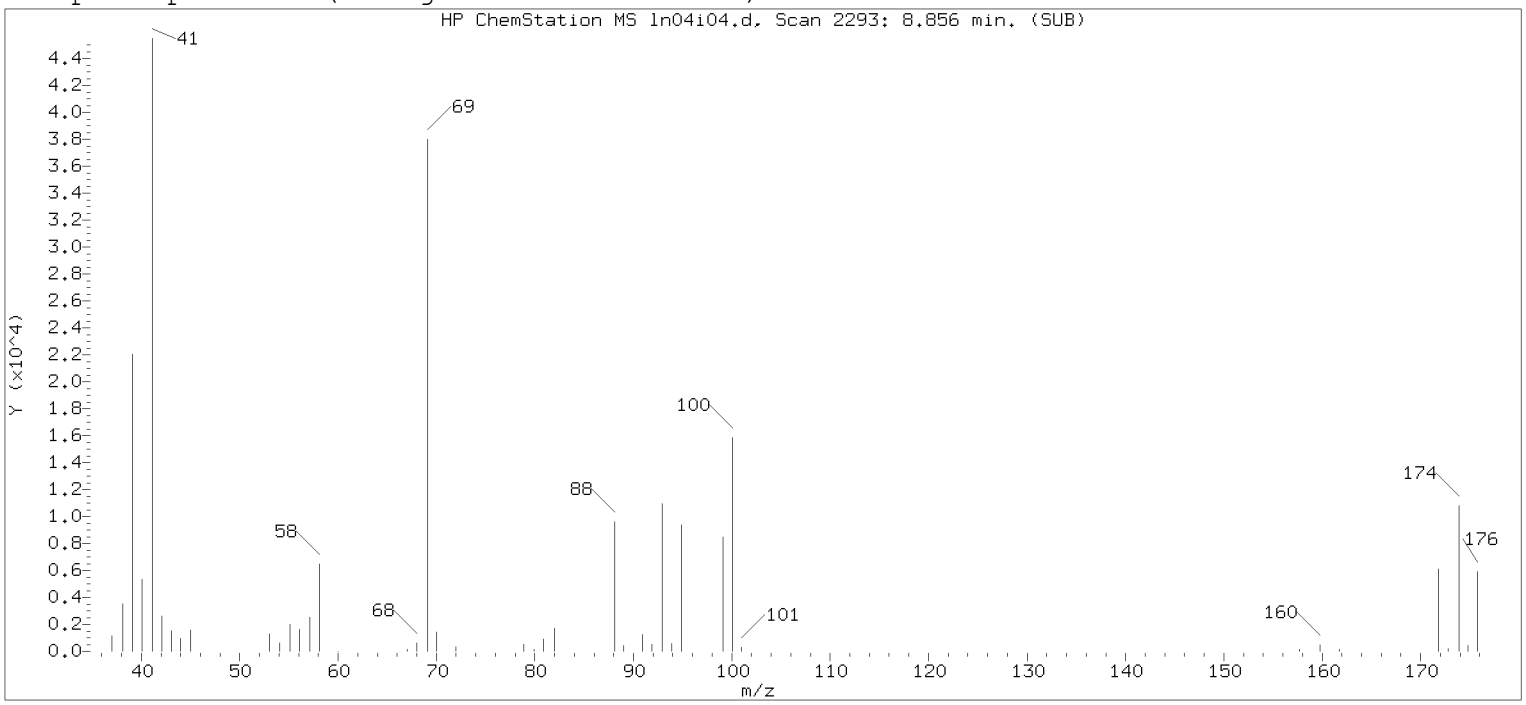
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 44376M
On-Column Amount (ng) : 513.0651
Integration start scan : 2277 Integration stop scan: 2382
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

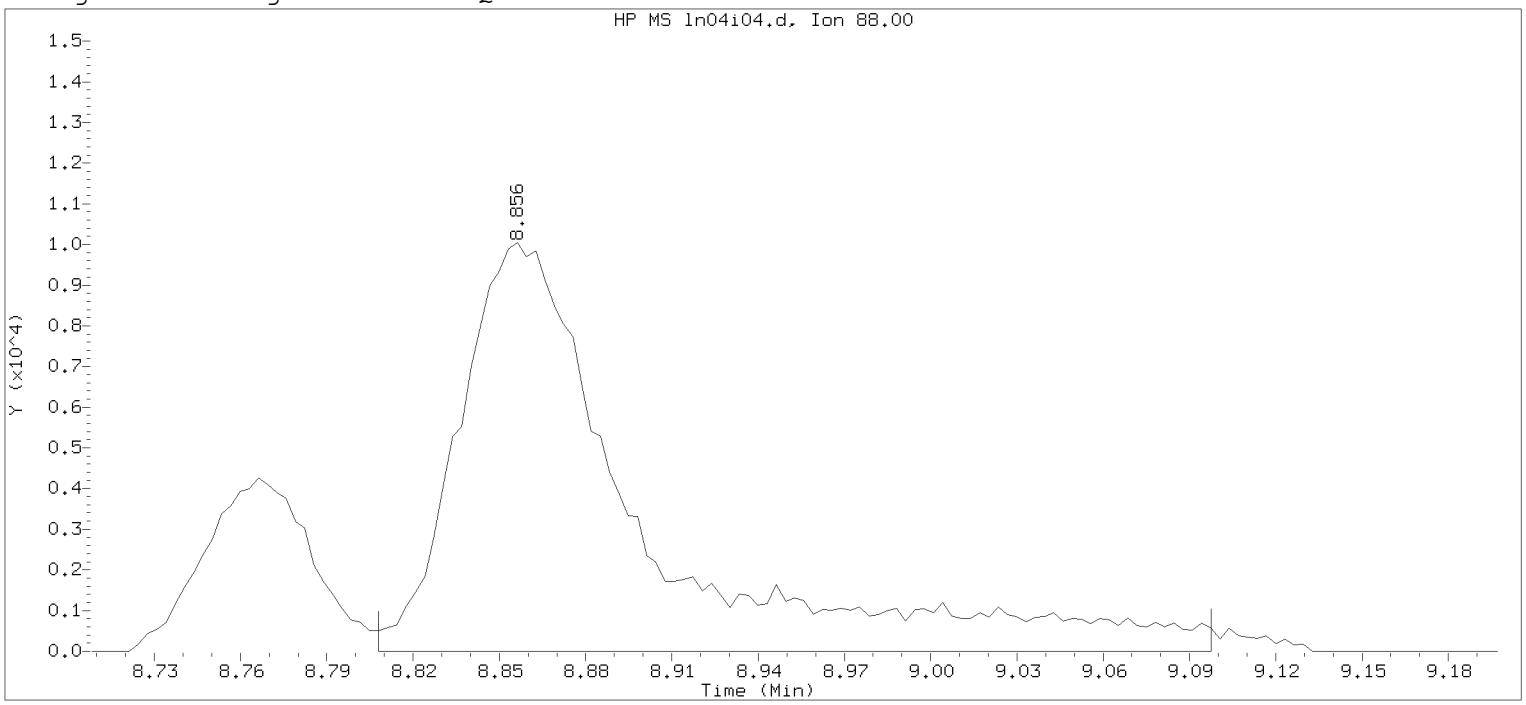
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

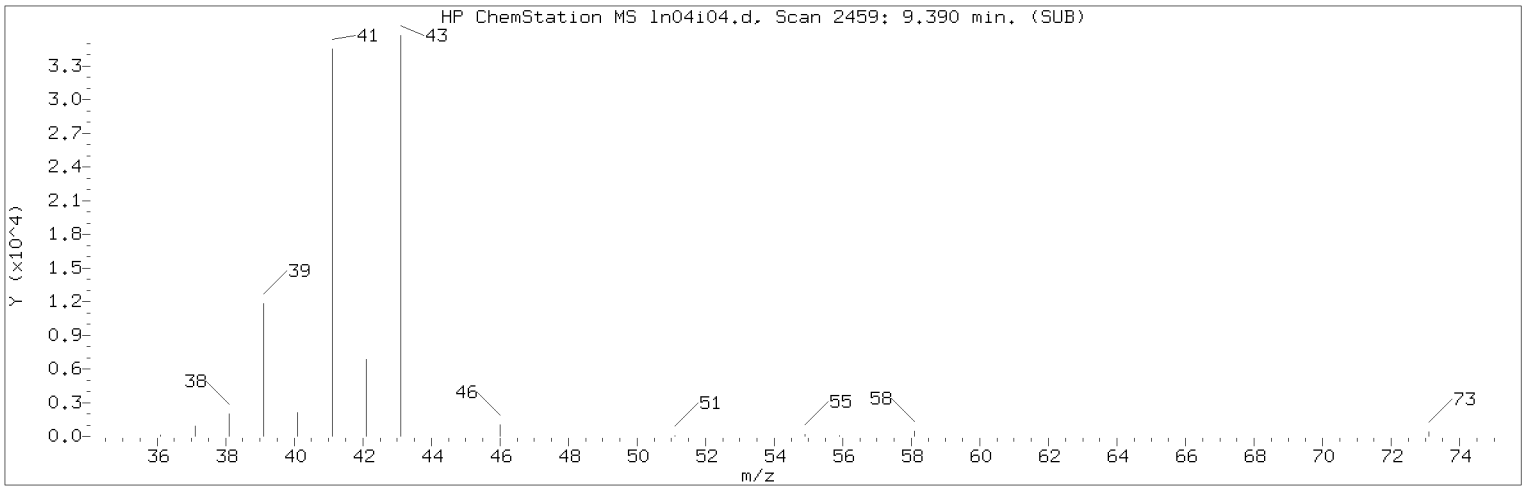
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

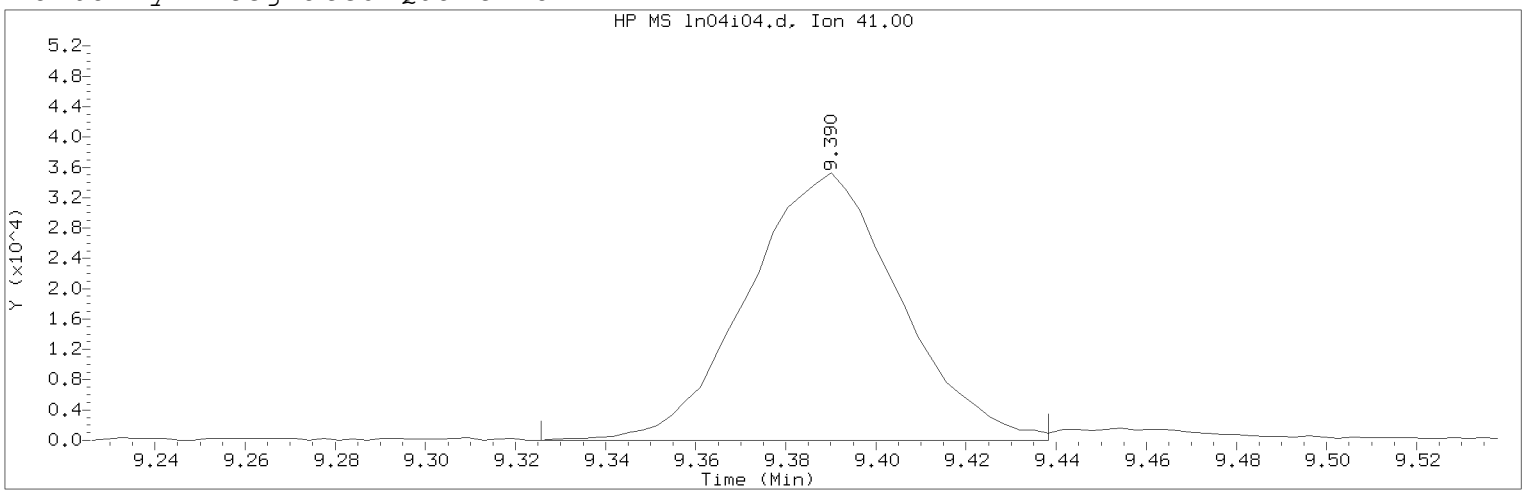
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area : 43671
On-column Amount (ng) : 571.7062
Integration start scan : 2277 Integration stop scan: 2367
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

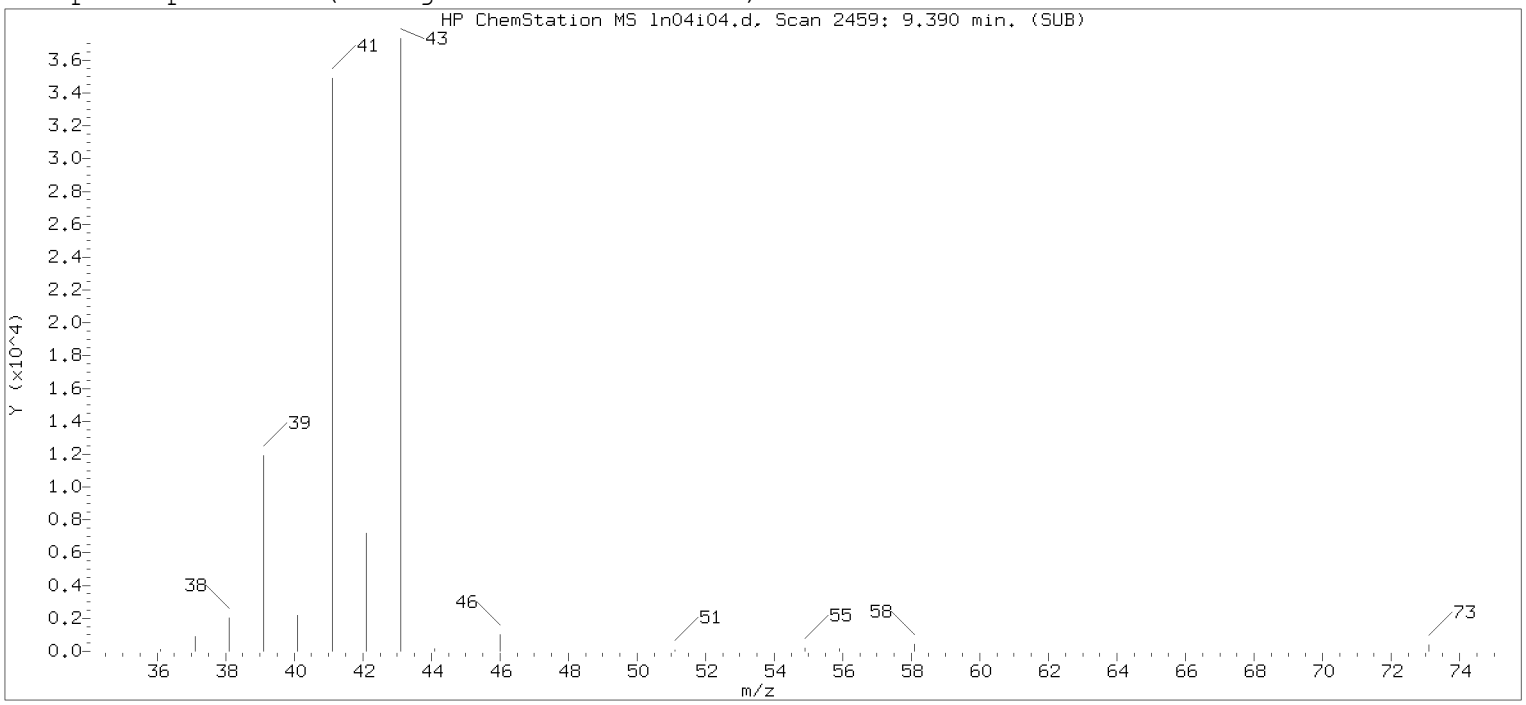
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2459
Retention Time (minutes): 9.390
Quant Ion : 41.00
Area (flag) : 82517M
On-Column Amount (ng) : 40.2472
Integration start scan : 2438 Integration stop scan: 2473
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

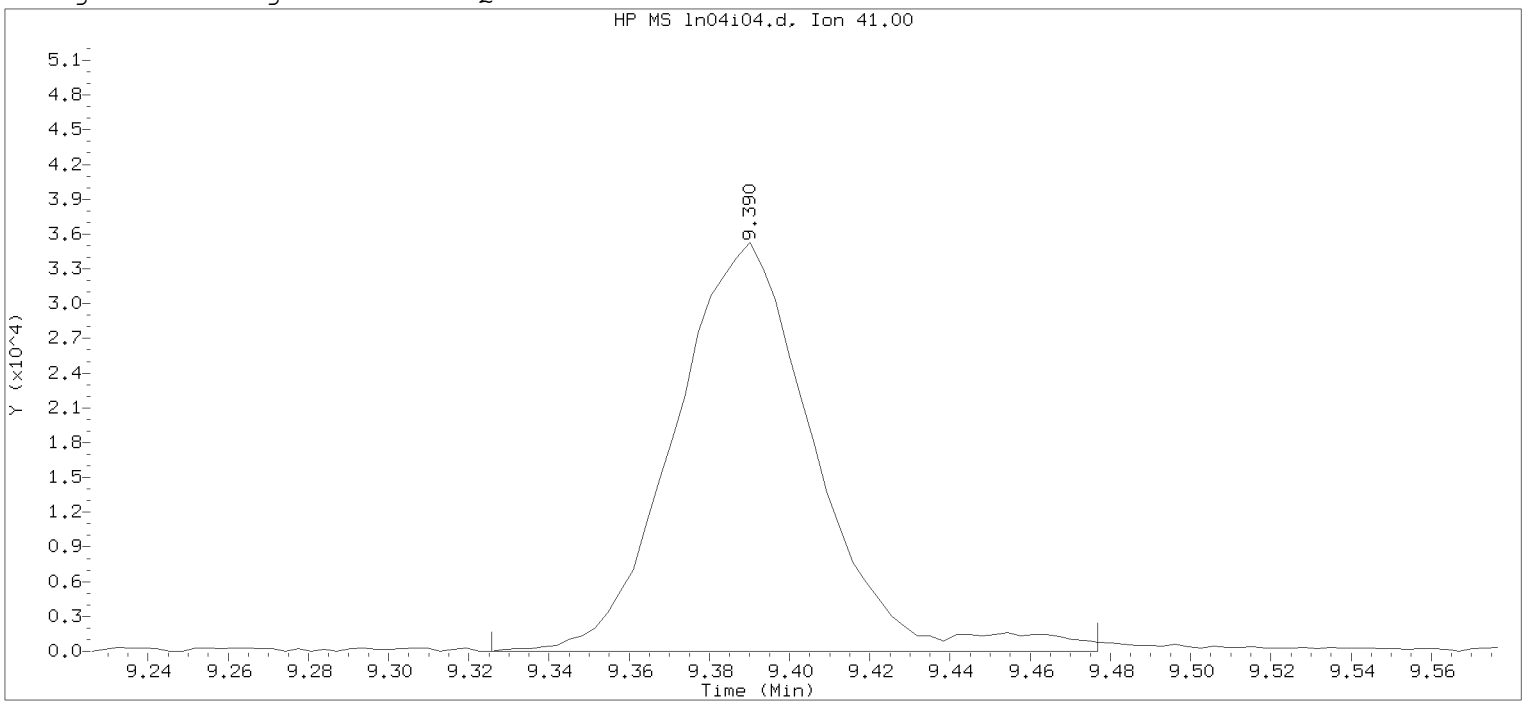
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

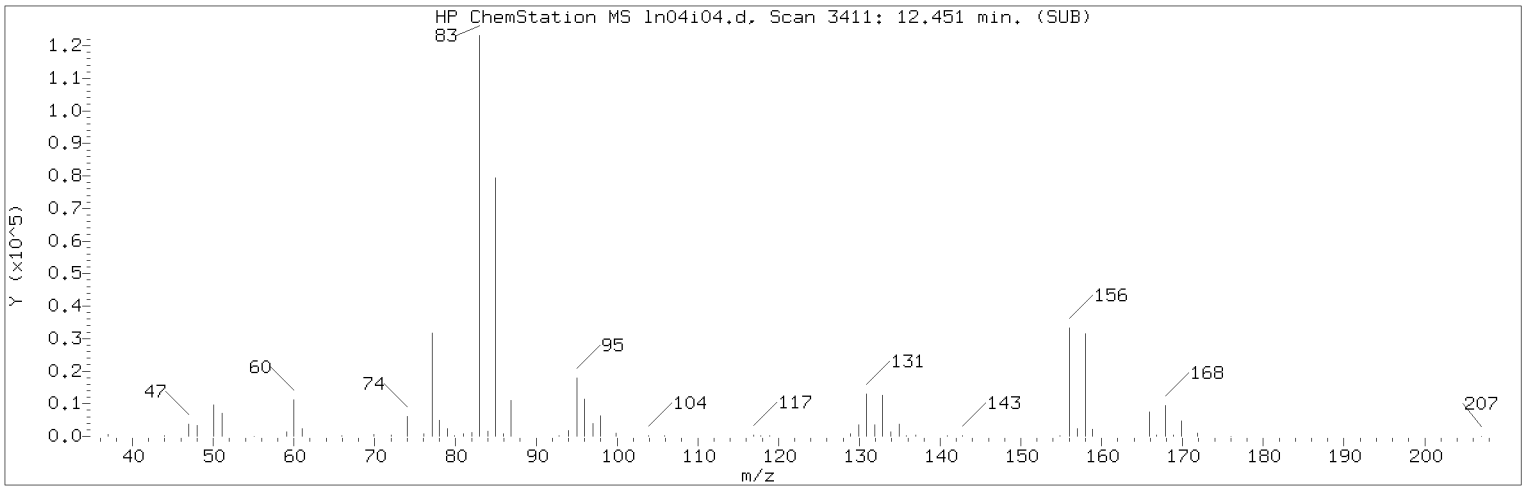
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

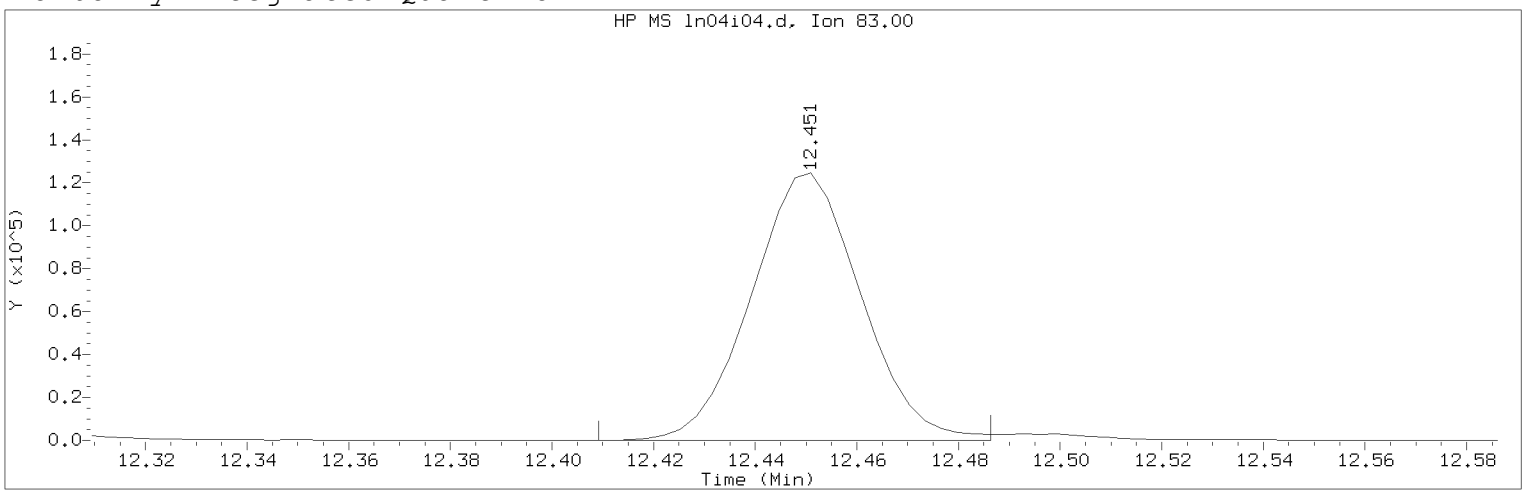
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2459
Retention Time (minutes): 9.390
Quant Ion : 41.00
Area : 85427
On-column Amount (ng) : 37.2727
Integration start scan : 2438 Integration stop scan: 2485
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

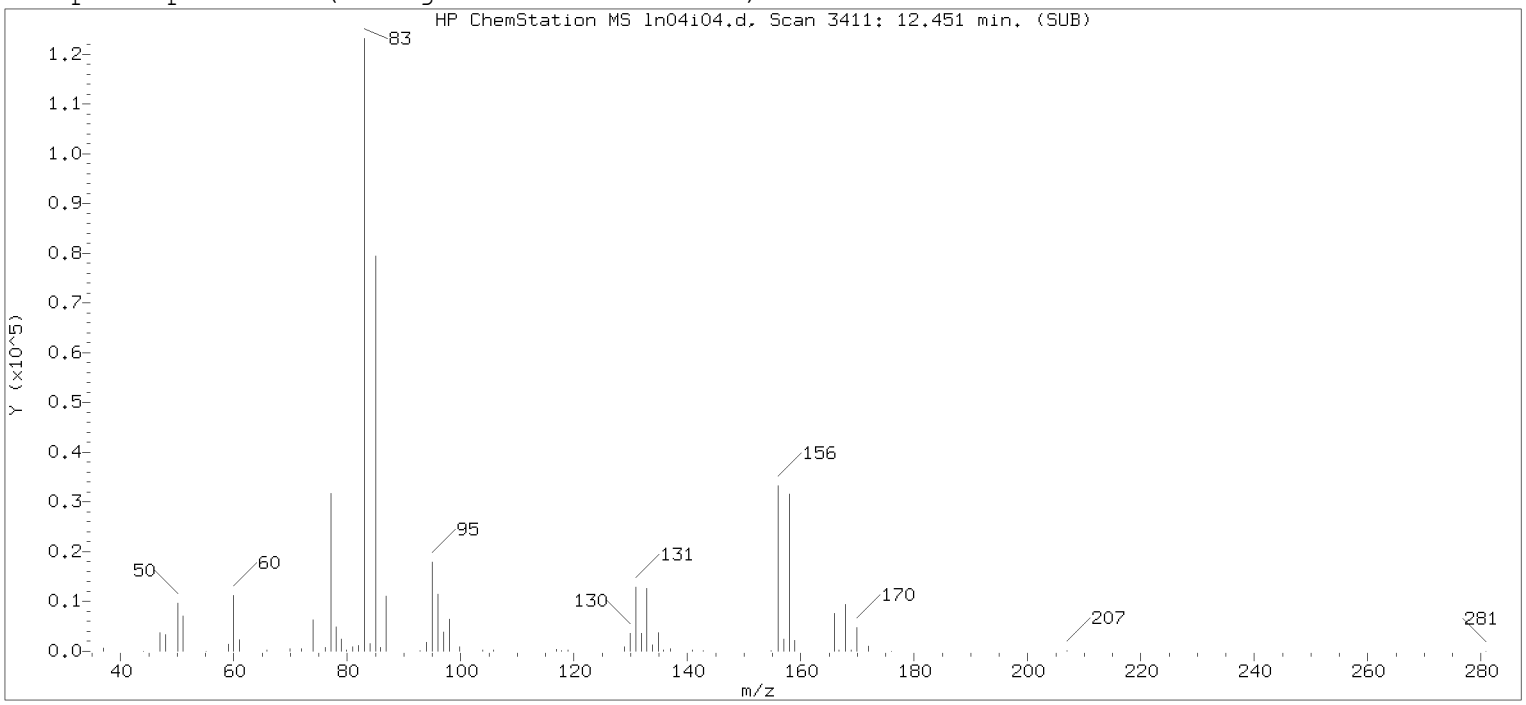
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 186119M
On-Column Amount (ng) : 20.6895
Integration start scan : 3397 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

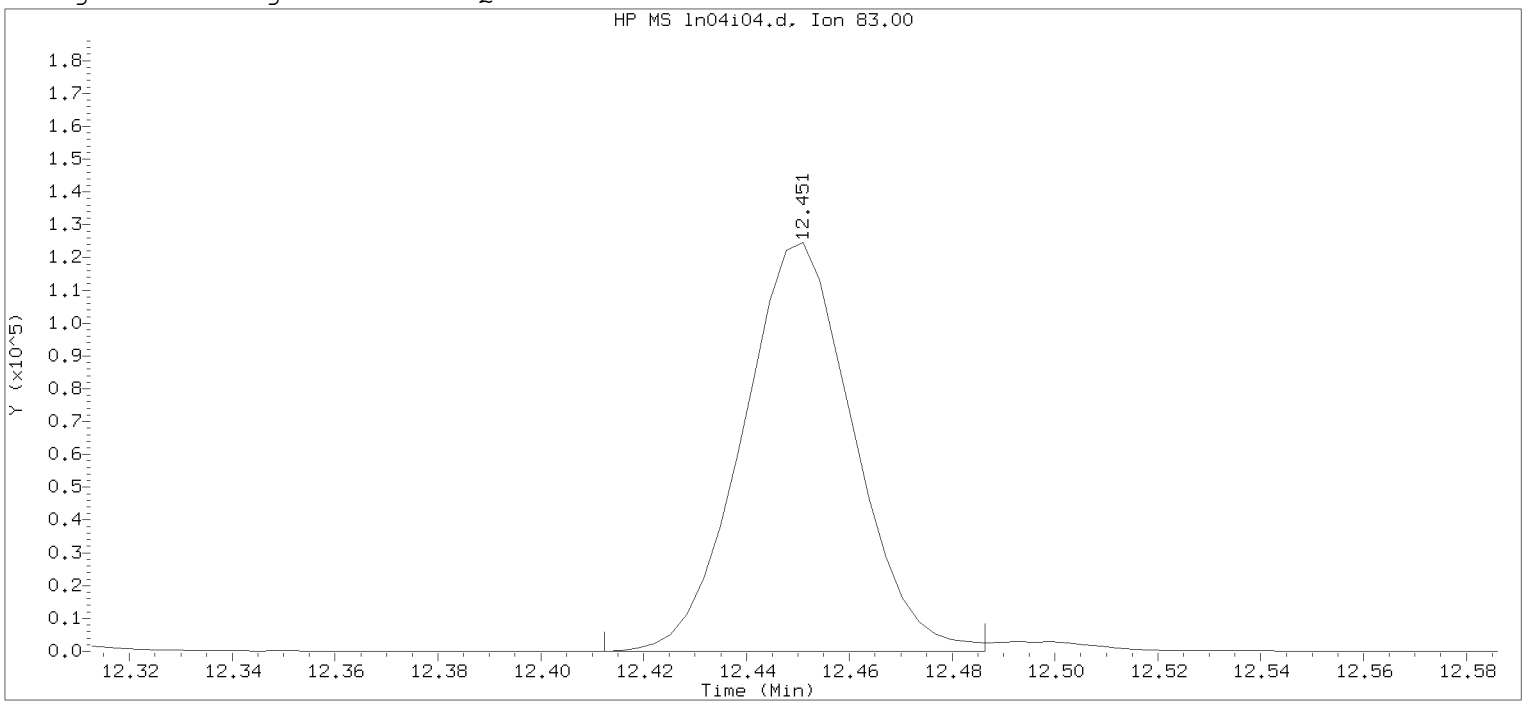
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

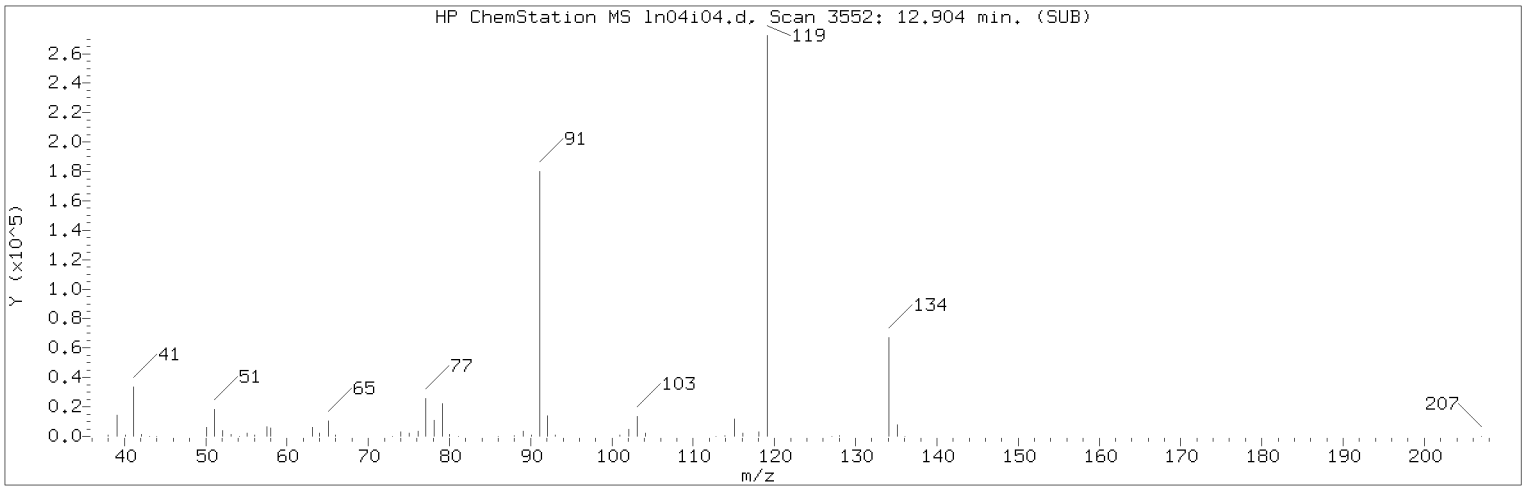
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

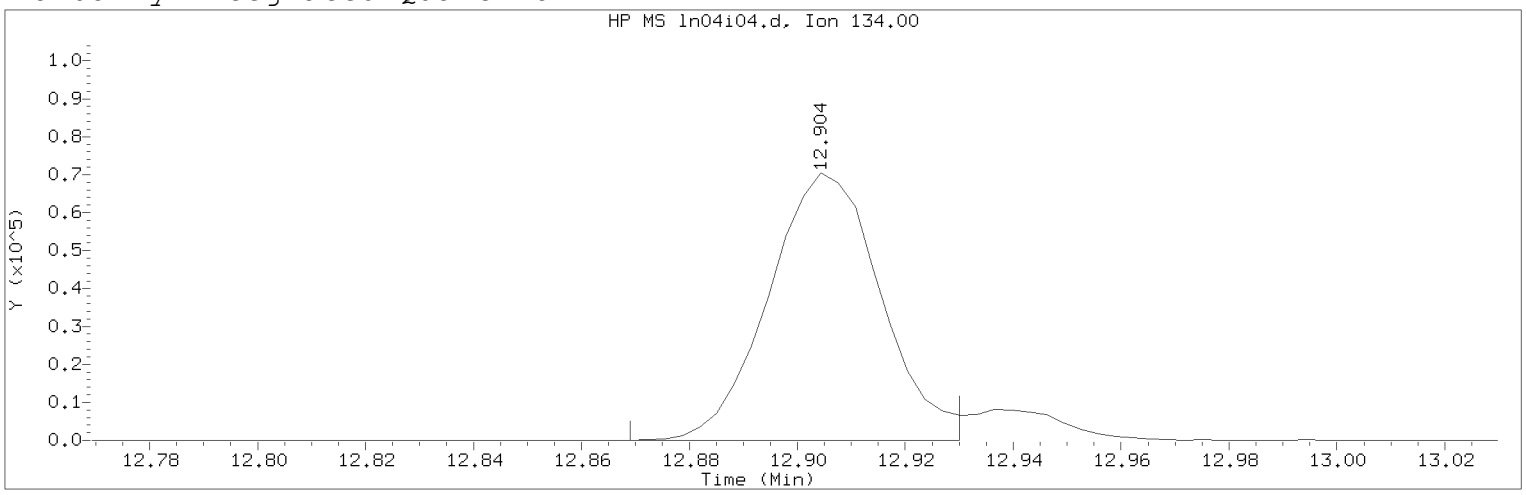
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 185866
On-column Amount (ng) : 19.5938
Integration start scan : 3398 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

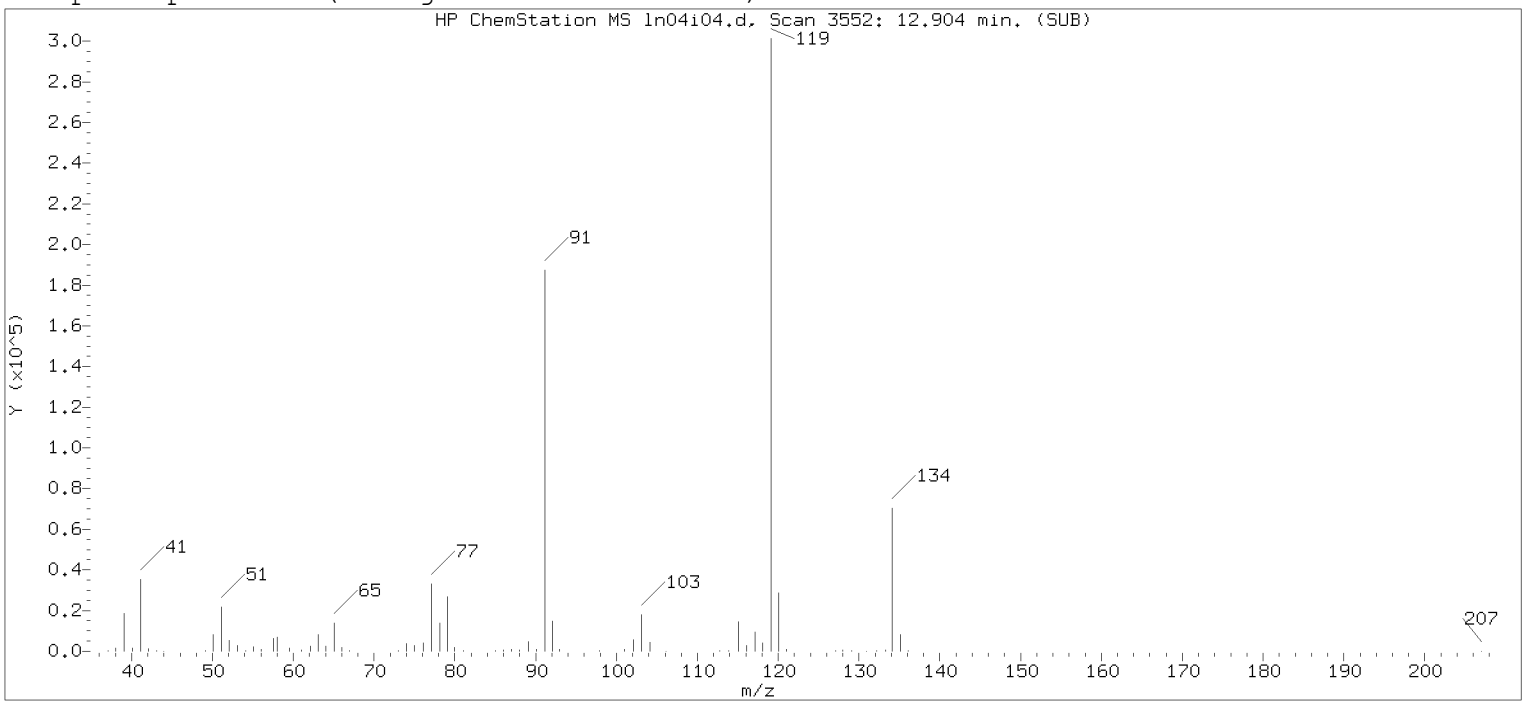
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 101571M
On-Column Amount (ng) : 21.6122
Integration start scan : 3540 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

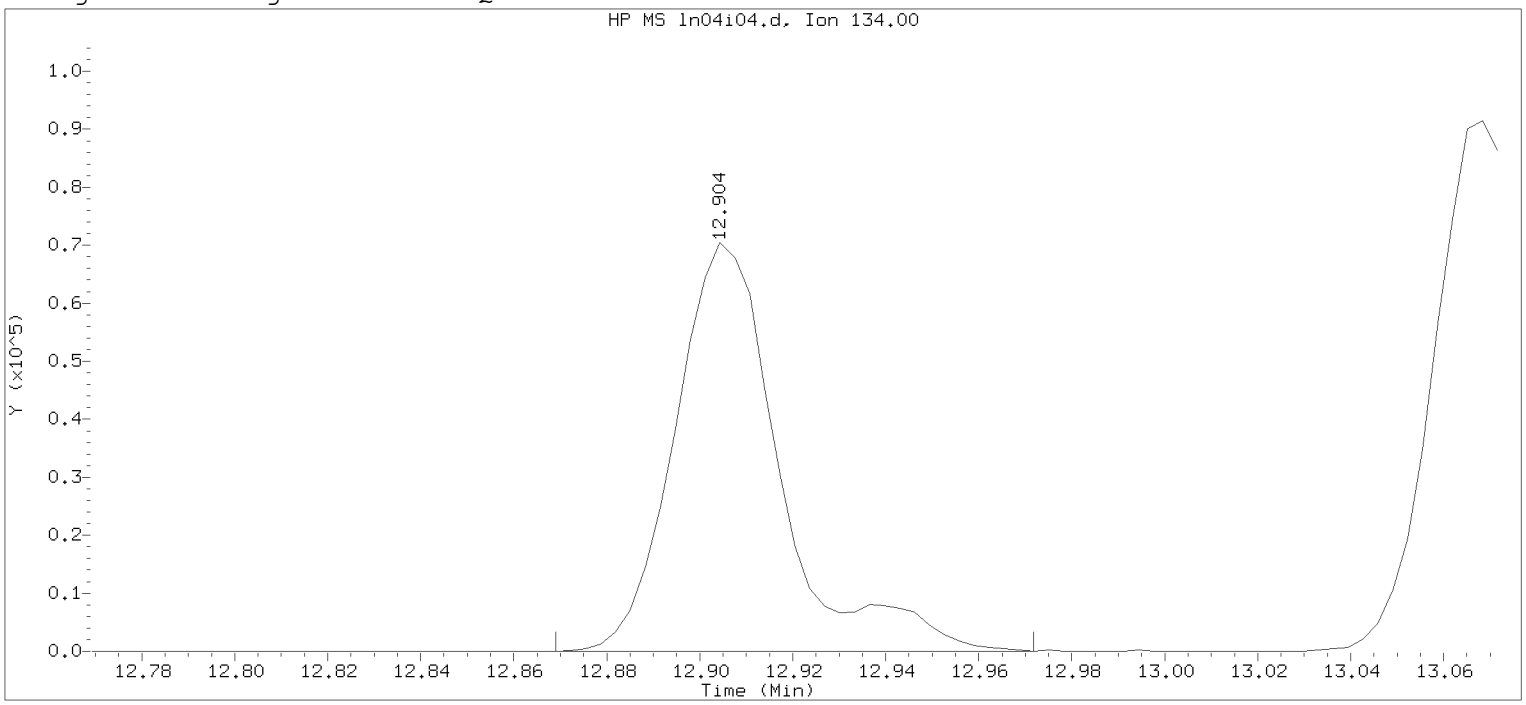
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



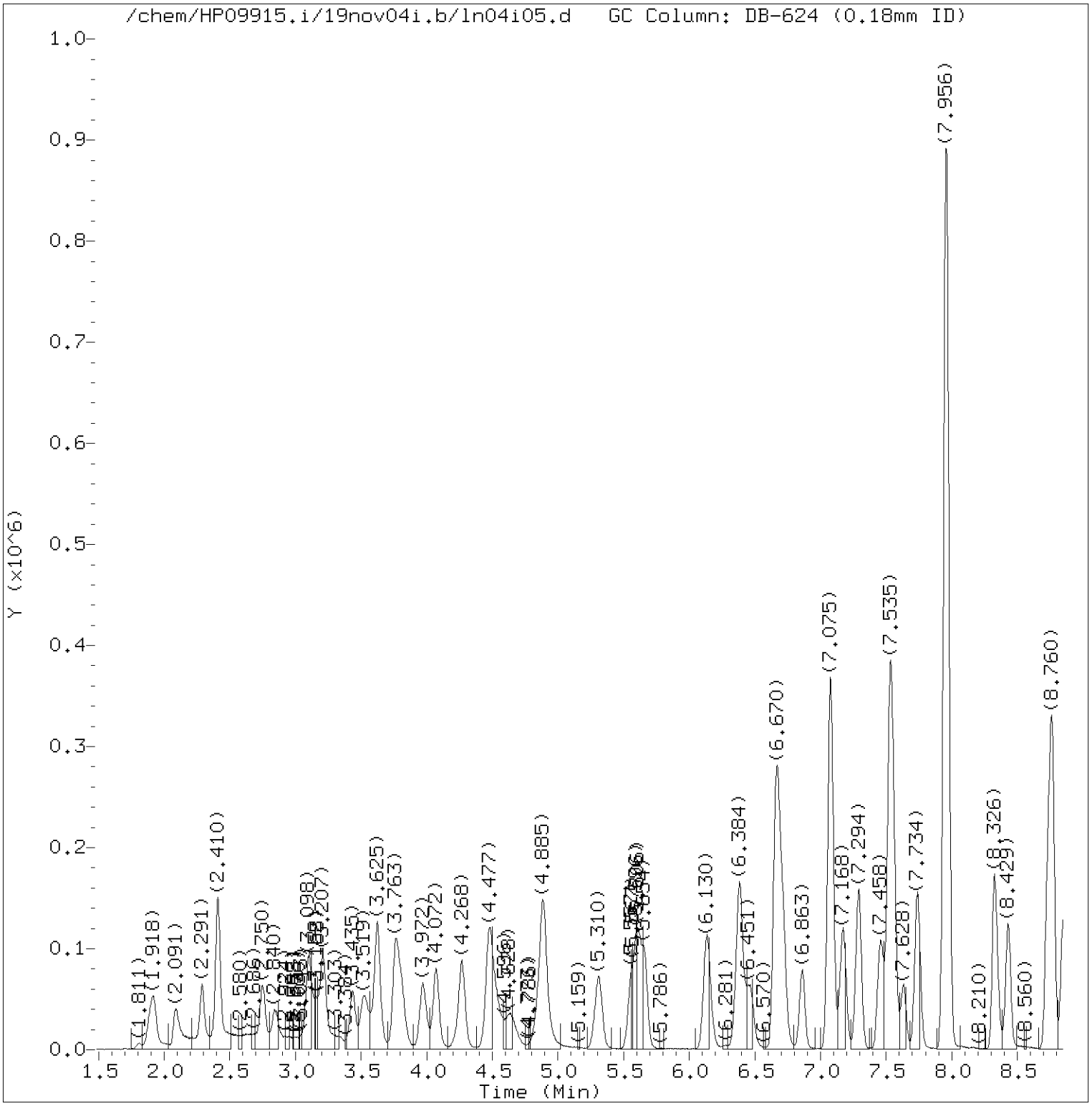
Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 110902
On-column Amount (ng) : 20.6897
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

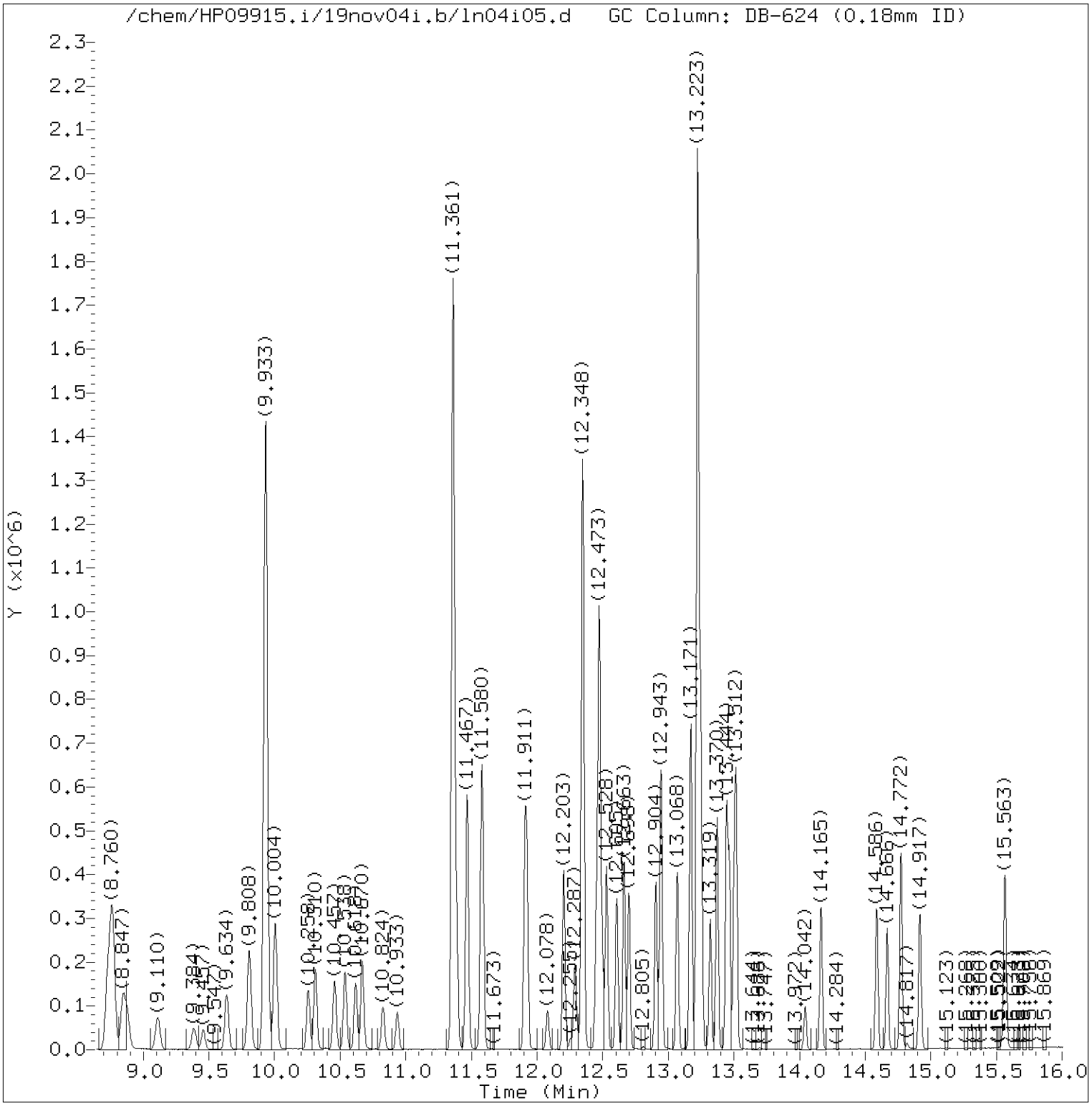
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.091	85	76947M	9.526
4) Chloromethane	(2)	2.291	50	76659	9.847
5) 1,3-Butadiene	(2)	2.406	39	60141M	9.304
6) Vinyl Chloride	(2)	2.413	62	76016	9.784
8) Bromomethane	(2)	2.750	94	54155	9.723
9) Chloroethane	(2)	2.853	64	42303	9.907
10) Dichlorofluoromethane	(2)	3.104	67	106956M	10.459
12) Trichlorofluoromethane	(2)	3.152	101	80624	9.638
11) n-Pentane	(2)	3.213	43	86389	8.739
14) Ethyl ether	(2)	3.438	59	52079	9.635
15) Freon 123a	(2)	3.519	67	65806	9.780
16) Acrolein	(1)	3.625	56	197662	100.013
17) 1,1-Dichloroethene	(2)	3.763	96	48467	9.871
17) 1,1-Dichloroethene	(2)	3.763	63	24200	9.831
19) Freon 113	(2)	3.792	101	51923	9.269
18) Acetone	(1)	3.805	58	17383	19.619
22) Methyl Iodide	(2)	3.969	142	101688	9.995
21) 2-Propanol	(1)	4.001	45	63841	100.227
23) Carbon Disulfide	(2)	4.075	76	179738	9.714
27) Methyl Acetate	(2)	4.245	43	62026	9.809
25) Allyl Chloride	(2)	4.268	41	86653	9.838
28) Methylene Chloride	(2)	4.474	84	58140	9.949
29)*t-Butyl alcohol-d10	(1)	4.509	65	263427M	250.000
30) t-Butyl alcohol	(1)	4.644	59	111005	100.090
31) Acrylonitrile	(2)	4.840	53	34130	10.032
33) Methyl Tertiary Butyl Ether	(2)	4.882	73	189173	10.147
32) trans-1,2-Dichloroethene	(2)	4.889	96	56133	9.883
34) n-Hexane	(2)	5.306	57	75187M	8.508
36) 1,1-Dichloroethane	(2)	5.557	63	99074	9.999
38) di-Isopropyl ether	(2)	5.606	45	191363	10.014
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	84906	9.551
40) Ethyl t-butyl ether	(2)	6.136	59	188350	10.156
43) 1,2-Dichloroethene (Total)	(2)		96	118698	19.696
44) 2-Butanone	(2)	6.364	43	85445	19.565
42) cis-1,2-Dichloroethene	(2)	6.387	96	62565	9.814
45) 2,2-Dichloropropane	(2)	6.396	77	74849	9.717
47) Propionitrile	(1)	6.464	54	136751	98.961
48) Methacrylonitrile	(2)	6.663	67	181171	49.366

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	34163	10.106
50) Tetrahydrofuran	(1)	6.724	71	24588	19.698
51) Chloroform	(2)	6.863	83	93507	9.867
52)$Dibromofluoromethane	(2)	7.072	113	280960	49.616
52)$Dibromofluoromethane	(2)	7.075	111	286315	49.589
53) 1,1,1-Trichloroethane	(2)	7.078	97	77742	9.611
54) Cyclohexane	(2)	7.175	56	96567	8.928
54) Cyclohexane	(2)	7.175	84	84021	8.942
54) Cyclohexane	(2)	7.175	69	29917	8.942
56) Carbon Tetrachloride	(2)	7.287	117	63638	9.276
55) 1,1-Dichloropropene	(2)	7.294	75	75943	9.694
58) Isobutyl Alcohol	(1)	7.458	41	94699	253.736
57)$1,2-Dichloroethane-d4	(2)	7.532	102	72410	50.173
57)$1,2-Dichloroethane-d4	(2)	7.528	65	317862	49.423
57)$1,2-Dichloroethane-d4	(2)	7.528	104	46131	50.043
60) Benzene	(2)	7.557	78	235083	9.978
61) 1,2-Dichloroethane	(2)	7.634	62	74555	9.839
61) 1,2-Dichloroethane	(2)	7.634	98	7256	9.676
65) t-Amyl methyl ether	(2)	7.740	73	187995	10.099
66)*Fluorobenzene	(2)	7.956	96	1158257	50.000
67) n-Heptane	(2)	7.959	43	65347MA	7.916
69) n-Butanol	(1)	8.326	56	166674M	518.868
71) Trichloroethene	(2)	8.425	95	57378	9.672
72) Methylcyclohexane	(2)	8.731	83	104101	9.459
72) Methylcyclohexane	(2)	8.731	98	46774	9.392
73) 1,2-Dichloropropane	(2)	8.766	63	59459	9.939
76) Methyl Methacrylate	(2)	8.843	69	56123	9.701
75) 1,4-Dioxane	(1)	8.859	88	22251M	252.018
74) Dibromomethane	(2)	8.875	93	37949	9.804
78) Bromodichloromethane	(2)	9.110	83	66403	9.560
79) 2-Nitropropane	(2)	9.387	41	38245M	18.178
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	24083	9.373
81) cis-1,3-Dichloropropene	(2)	9.638	75	89740	9.728
82) 4-Methyl-2-pentanone	(2)	9.808	43	182101	19.754
83)$Toluene-d8	(3)	9.933	98	1179588	50.250
83)$Toluene-d8	(3)	9.933	100	766795	50.427
88) Toluene	(3)	10.004	92	146792	9.974
90) 1,3-Dichloropropene (total)	(3)		100	170602	19.407

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.255	75	80862	9.679
91) Ethyl Methacrylate	(3)	10.310	69	101774	10.024
92) 1,1,2-Trichloroethane	(3)	10.457	97	55397	9.928
93) Tetrachloroethene	(3)	10.538	166	57668	9.252
94) 1,3-Dichloropropane	(3)	10.615	76	95319	10.005
96) 2-Hexanone	(3)	10.670	43	134577	19.858
97) Dibromochloromethane	(3)	10.824	129	54317	9.503
99) 1,2-Dibromoethane	(3)	10.937	107	59349	9.795
100)*Chlorobenzene-d5	(3)	11.358	117	897139	50.000
101) 1-Chlorohexane	(3)	11.364	91	68517	8.666
102) Chlorobenzene	(3)	11.383	112	167497	10.065
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	53804	9.812
104) Ethylbenzene	(3)	11.467	91	273085	9.708
106) m+p-Xylene	(3)	11.583	106	214450	19.380
108) Xylene (Total)	(3)		106	321712	29.193
107) o-Xylene	(3)	11.908	106	107262	9.813
109) Styrene	(3)	11.924	104	181265	10.036
110) Bromoform	(3)	12.078	173	38599	9.038
111) Isopropylbenzene	(3)	12.203	105	257704	9.400
112) Cyclohexanone	(1)	12.290	55	84173	243.422
114)$4-Bromofluorobenzene	(3)	12.348	95	448980	50.511
114)$4-Bromofluorobenzene	(3)	12.348	174	372460	50.544
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	99221M	10.583
115) Bromobenzene	(4)	12.464	156	73059	9.795
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	144573	49.994
117) 1,2,3-Trichloropropane	(4)	12.496	110	30082	10.457
119) n-Propylbenzene	(4)	12.528	91	295857	9.079
120) 2-Chlorotoluene	(4)	12.608	126	64871	9.370
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	216905	9.159
121) 4-Chlorotoluene	(4)	12.698	126	68187	9.462
124) tert-Butylbenzene	(4)	12.907	134	42119M	8.599
125) Pentachloroethane	(4)	12.936	167	40747	9.662
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	231031	9.256
127) sec-Butylbenzene	(4)	13.068	105	254340	8.702
129) 1,3-Dichlorobenzene	(4)	13.168	146	133435	9.735
130) p-Isopropyltoluene	(4)	13.171	119	222820	8.812
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	496298	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	137520	9.678

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	263873	9.980
135) Benzyl Chloride	(4)	13.319	91	189013	9.442
136) 1,3-Diethylbenzene	(4)	13.370	119	162518	9.876
141) Diethylbenzene (total)	(4)		100	469676	29.503
137) 1,4-Diethylbenzene	(4)	13.444	119	170802	9.797
139) n-Butylbenzene	(4)	13.464	92	112696	8.717
138) 1,2-Dichlorobenzene	(4)	13.502	146	133767	9.890
140) 1,2-Diethylbenzene	(4)	13.518	119	136356	9.830
142) 1,2-Dibromo-3-chloropropane	(4)	14.042	75	21471	10.462
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	94358	9.080
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	93971	9.300
147) Hexachlorobutadiene	(4)	14.666	225	44299	9.286
148) Naphthalene	(4)	14.772	128	328233	10.105
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	92049	9.363
150) 2-Methylnaphthalene	(4)	15.563	142	202392	10.118

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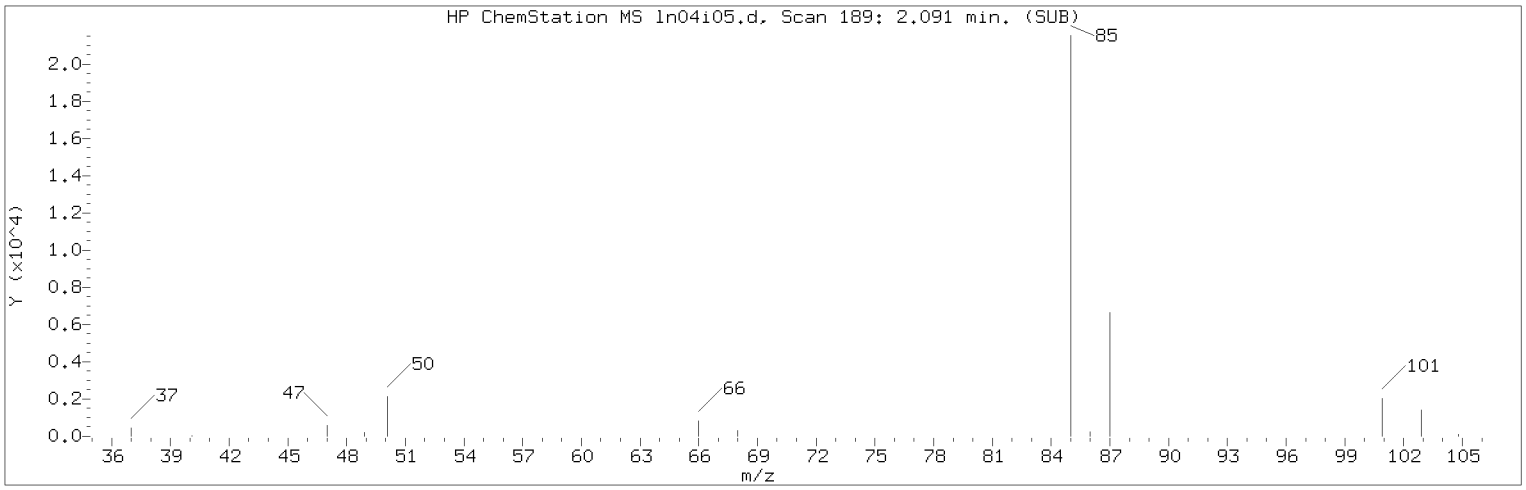
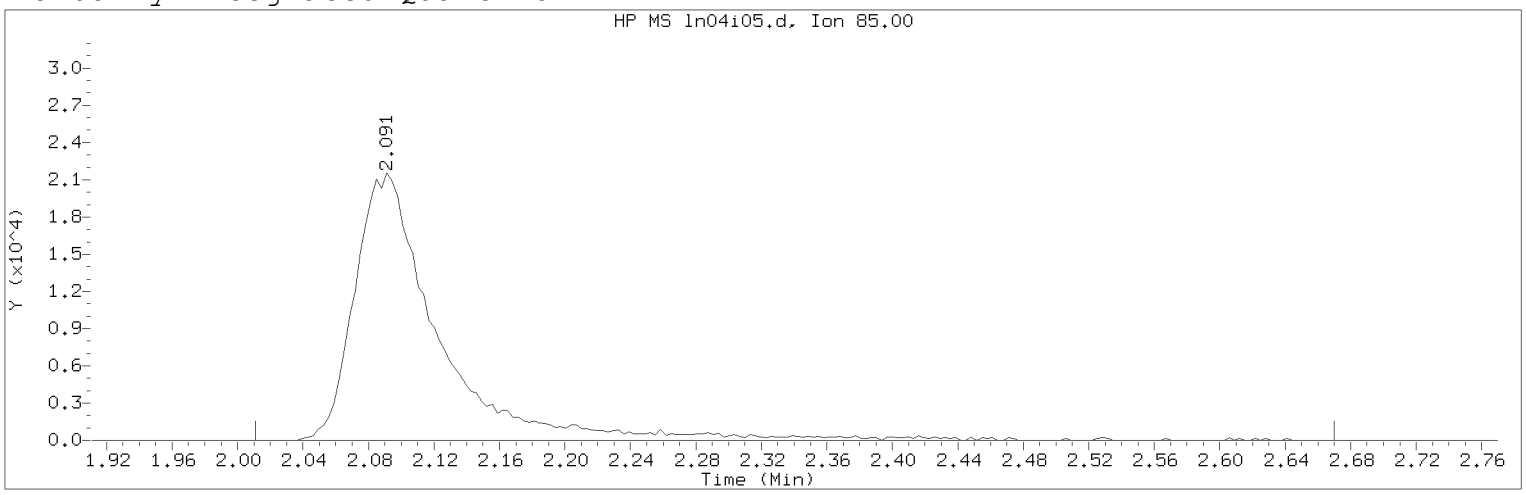
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

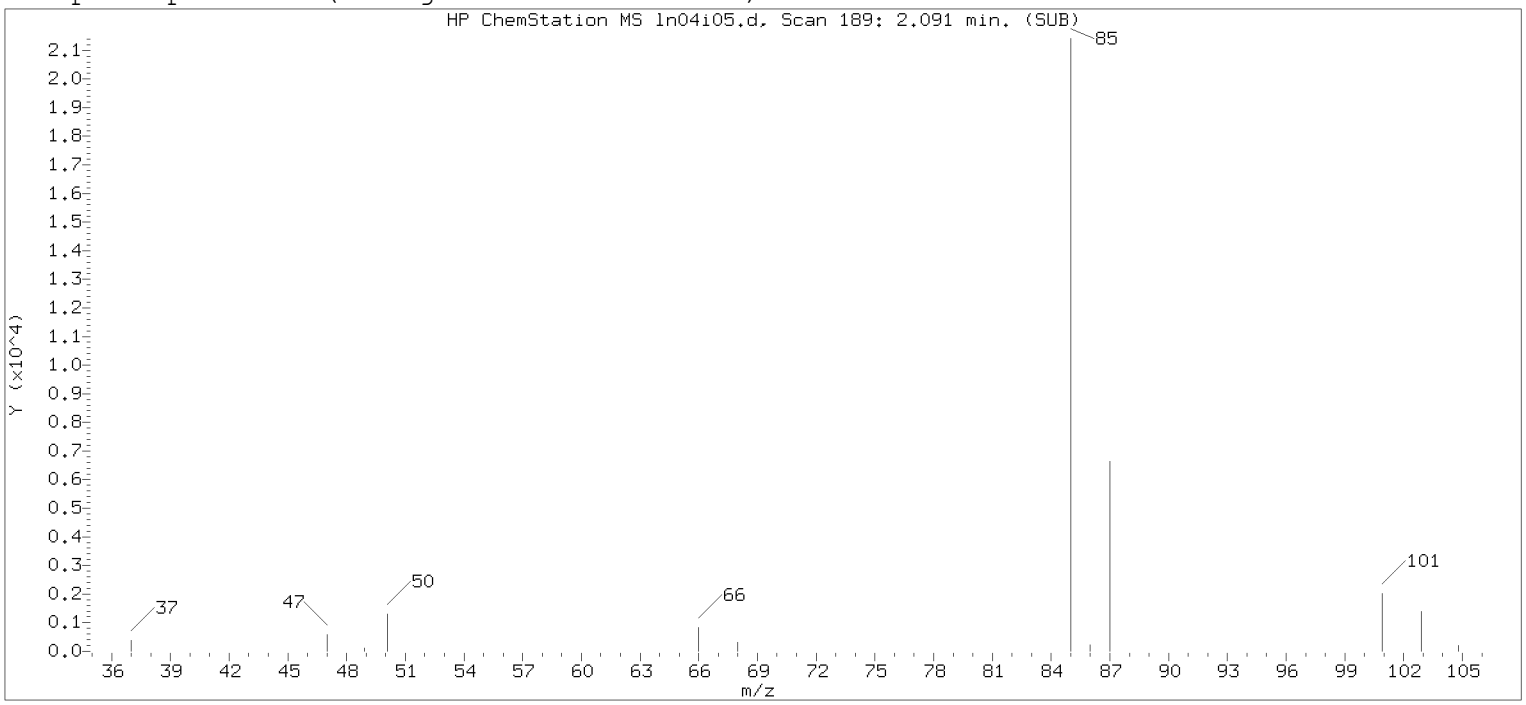
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 189
Retention Time (minutes): 2.091
Quant Ion : 85.00
Area (flag) : 76947M
On-Column Amount (ng) : 9.5263
Integration start scan : 163 Integration stop scan: 368
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

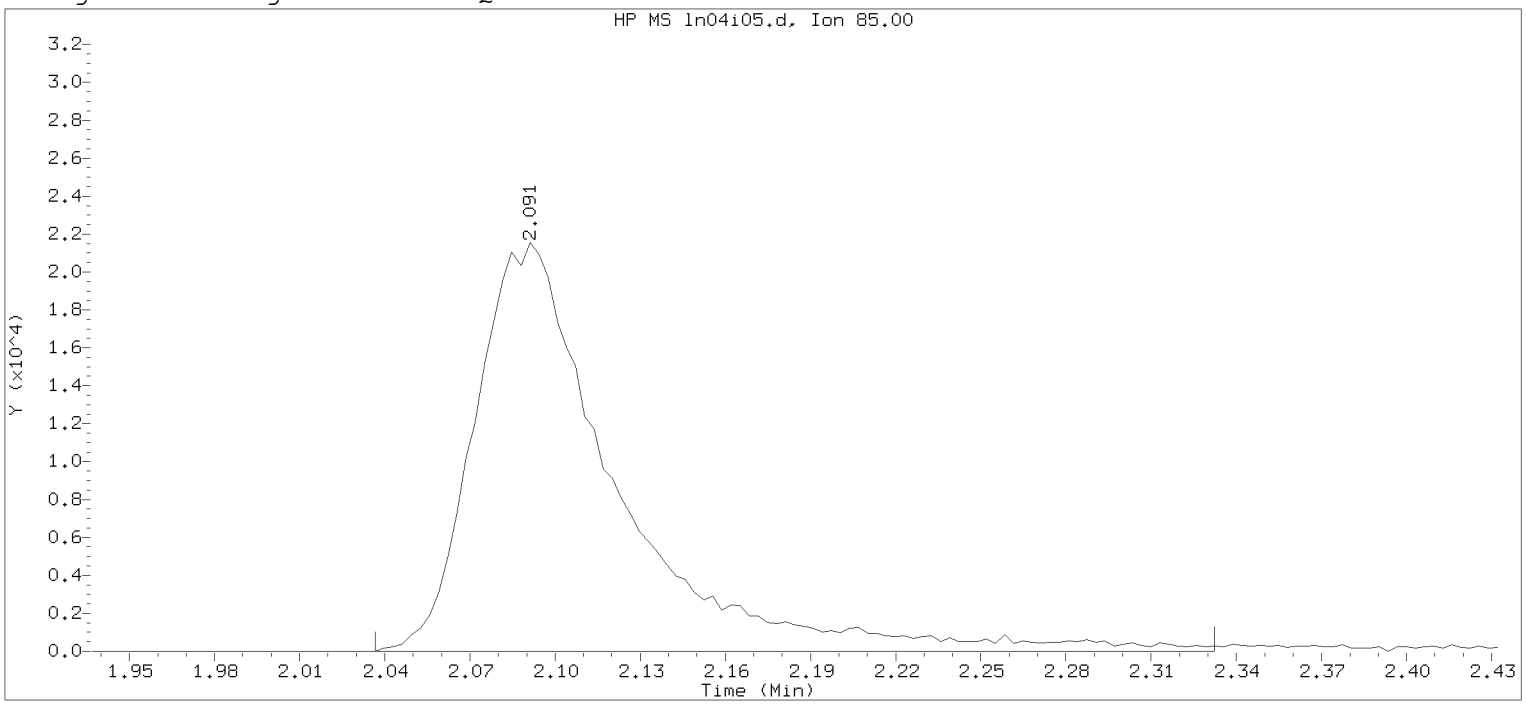
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

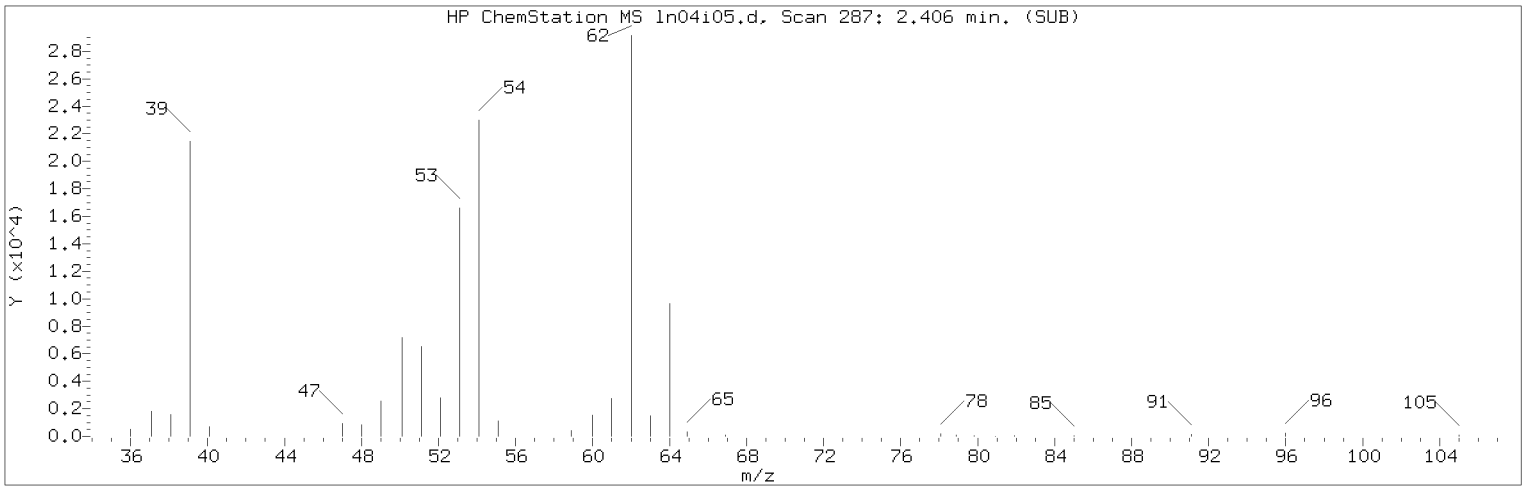
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

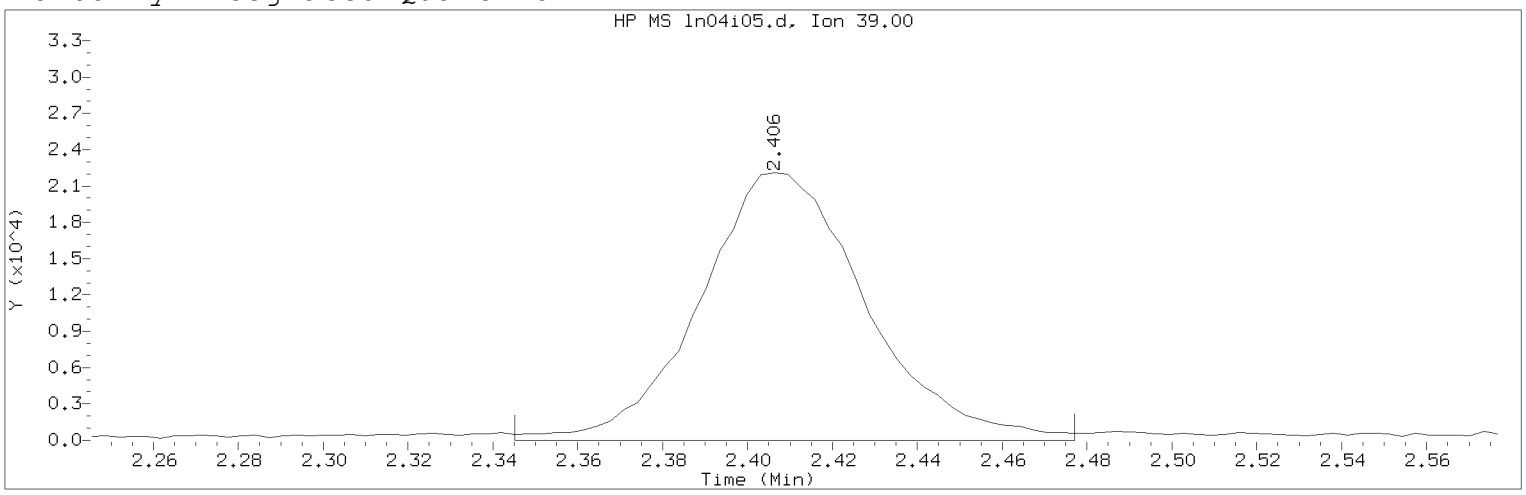
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 189
Retention Time (minutes): 2.091
Quant Ion : 85.00
Area : 74877
On-column Amount (ng) : 9.3136
Integration start scan : 171 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

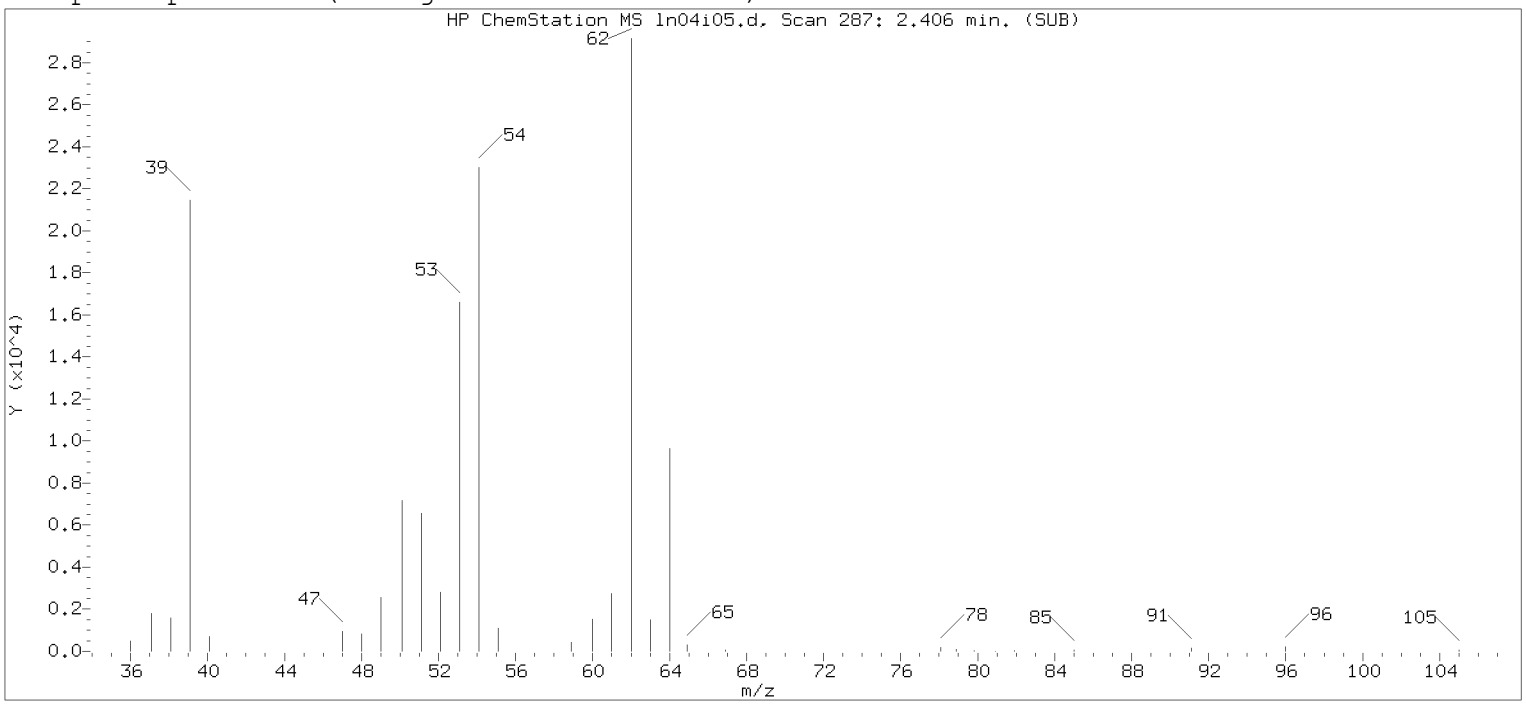
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 60141M
On-Column Amount (ng) : 9.3042
Integration start scan : 267 Integration stop scan: 308
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

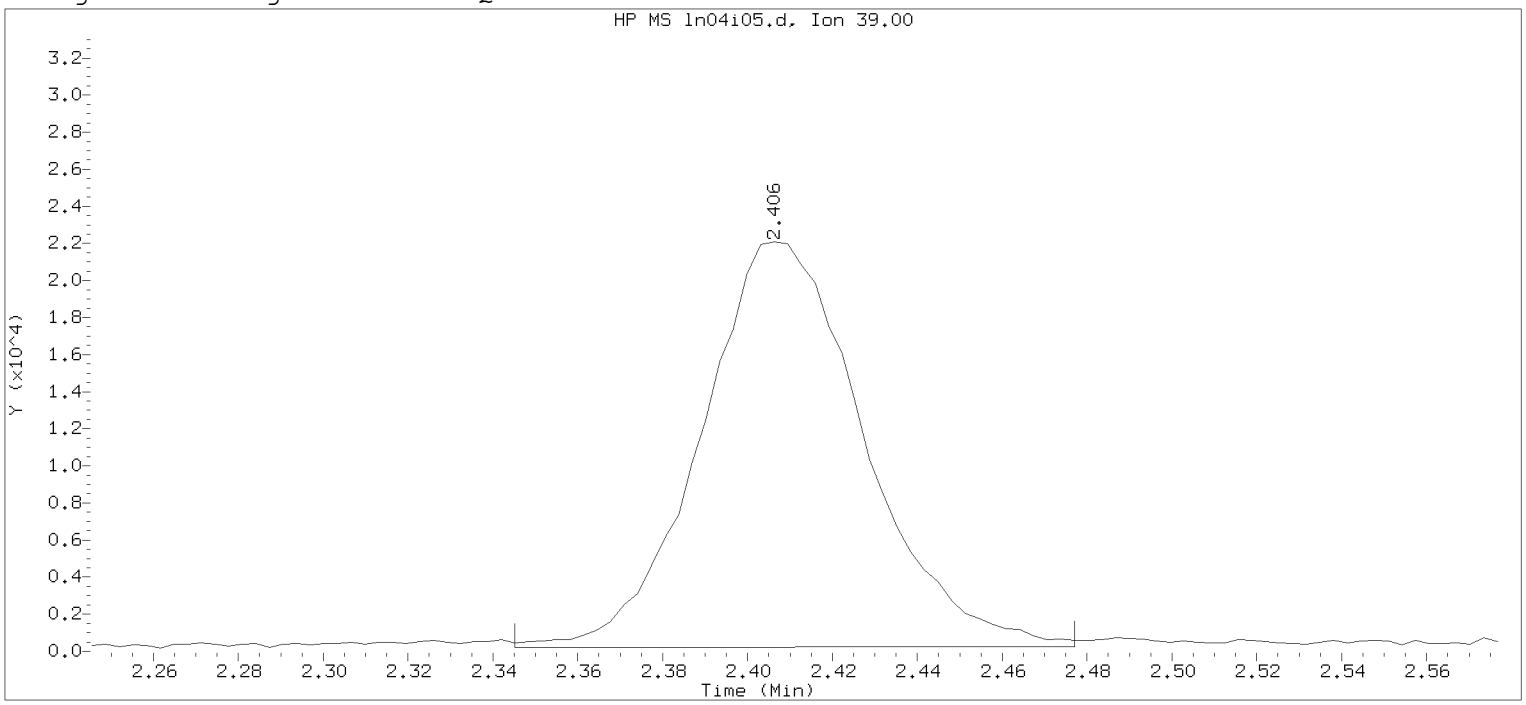
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 58240
On-column Amount (ng) : 9.5707
Integration start scan : 267 Integration stop scan: 308
Y at integration start : 206 Y at integration end: 250

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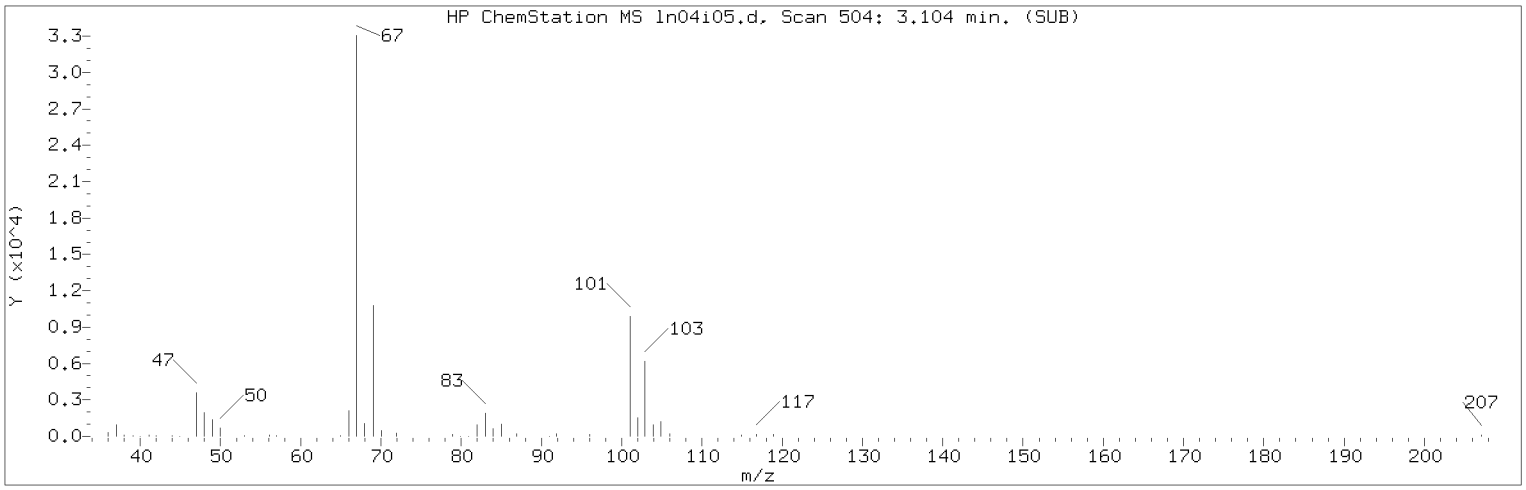
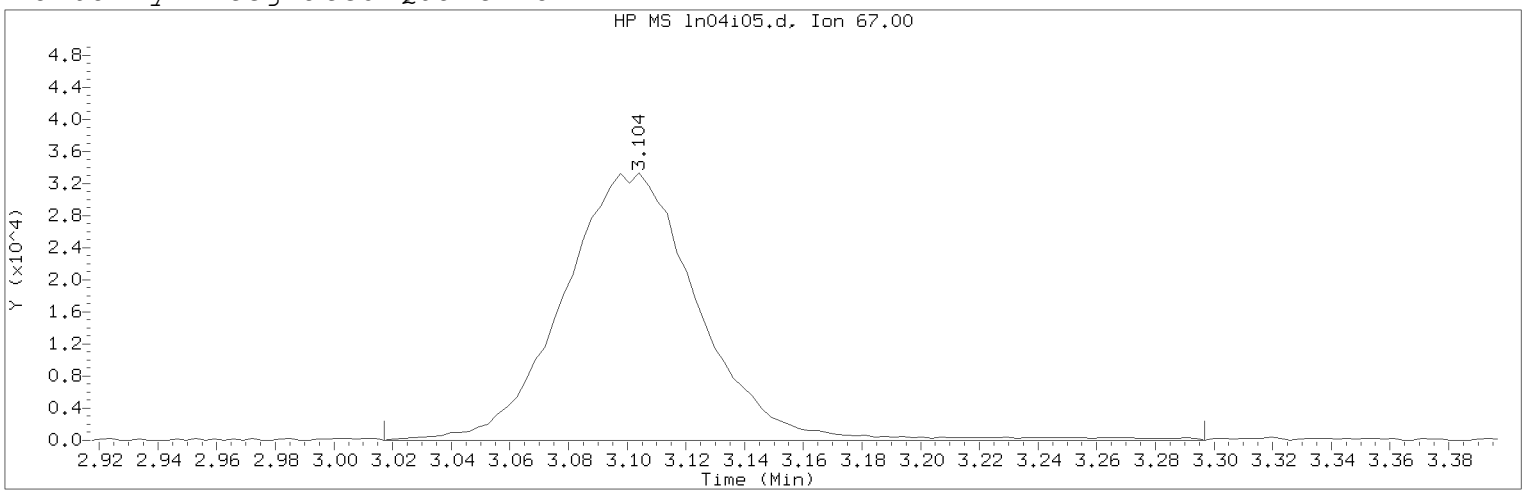
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

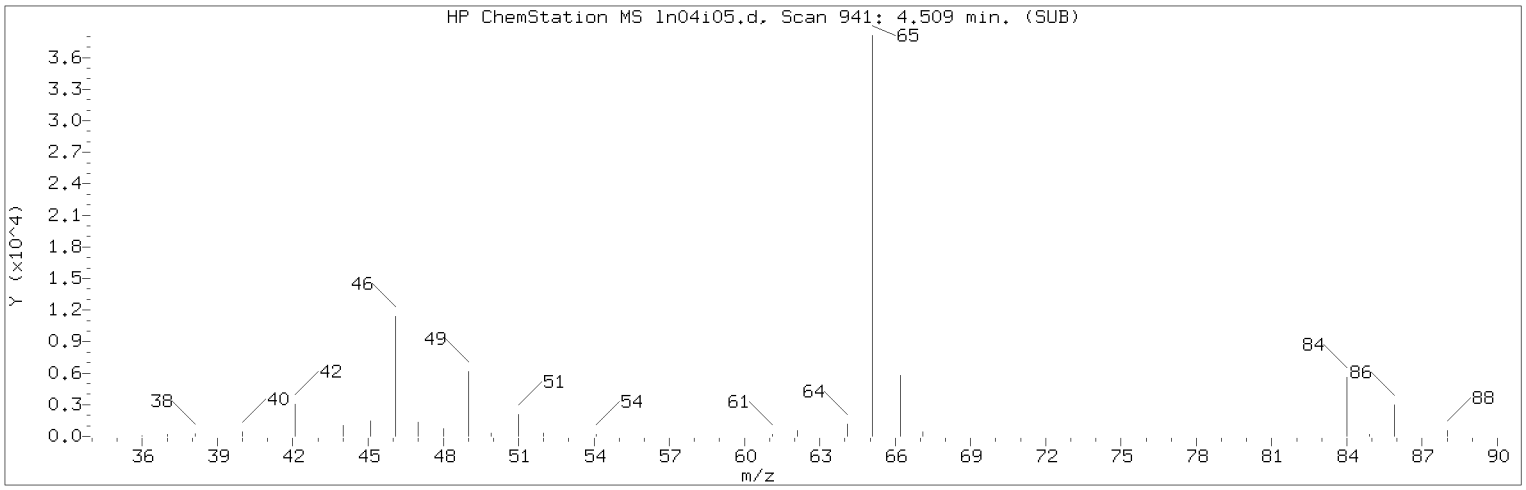
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 504
Retention Time (minutes): 3.104
Quant Ion : 67.00
Area (flag) : 106956M
On-Column Amount (ng) : 10.4593
Integration start scan : 476 Integration stop scan: 563
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

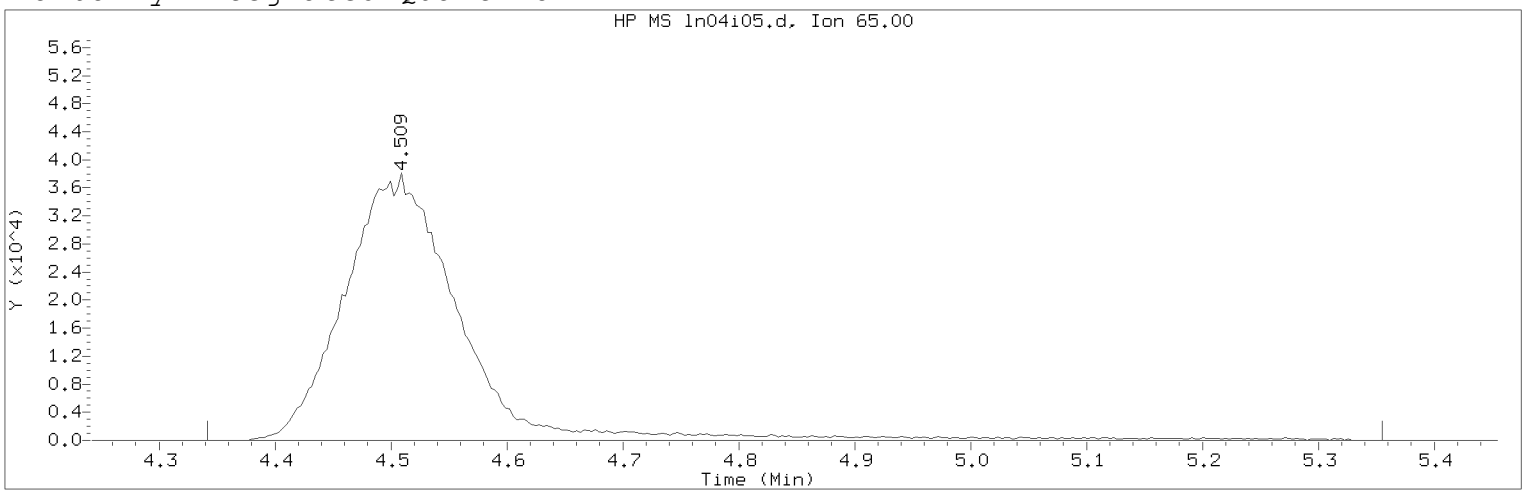
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

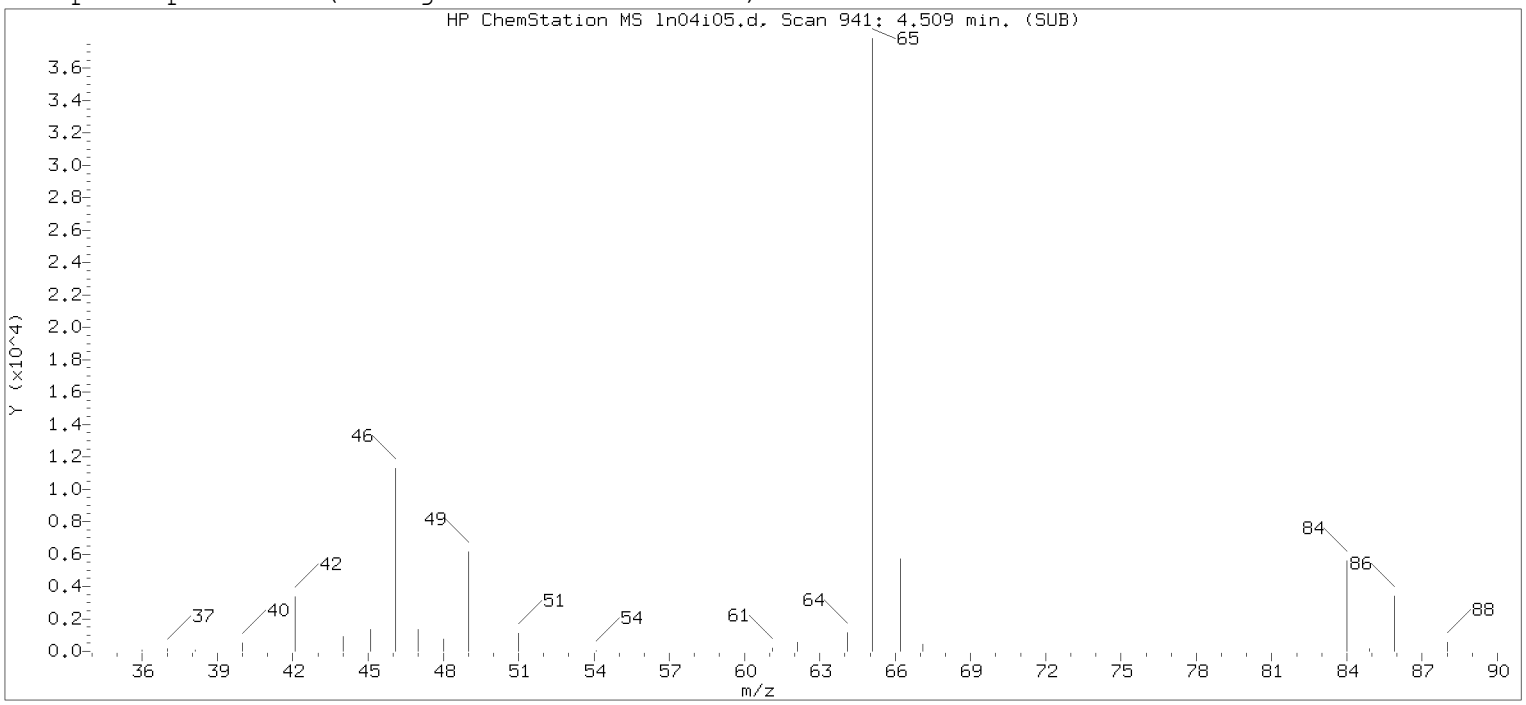
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 263427M
On-Column Amount (ng) : 250.0000
Integration start scan : 888 Integration stop scan: 1203
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

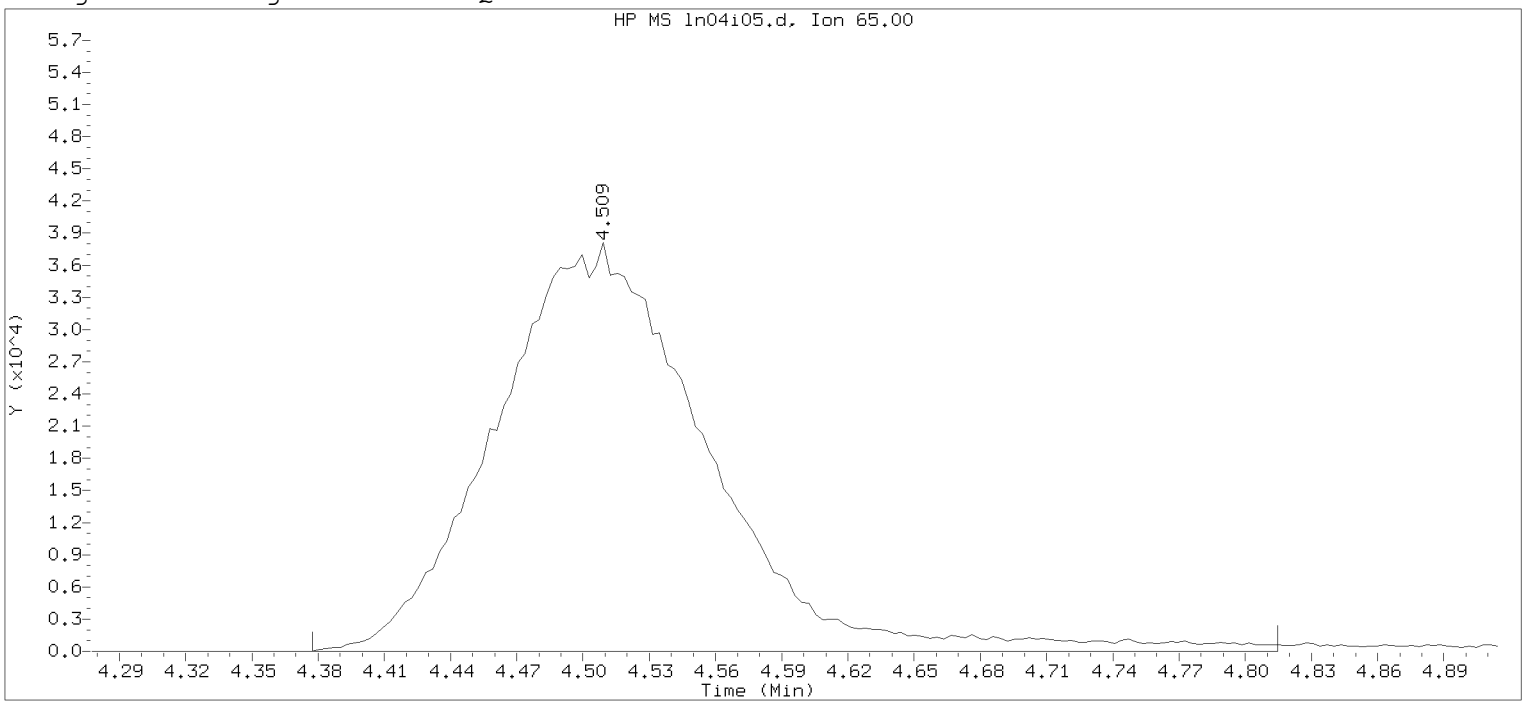
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

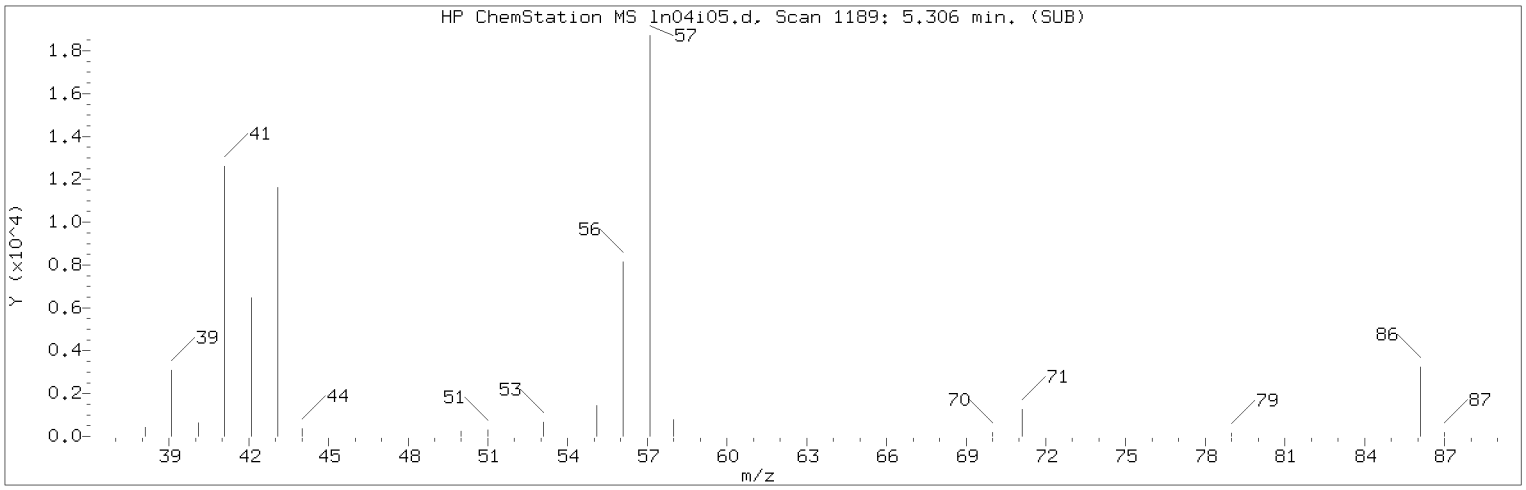
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

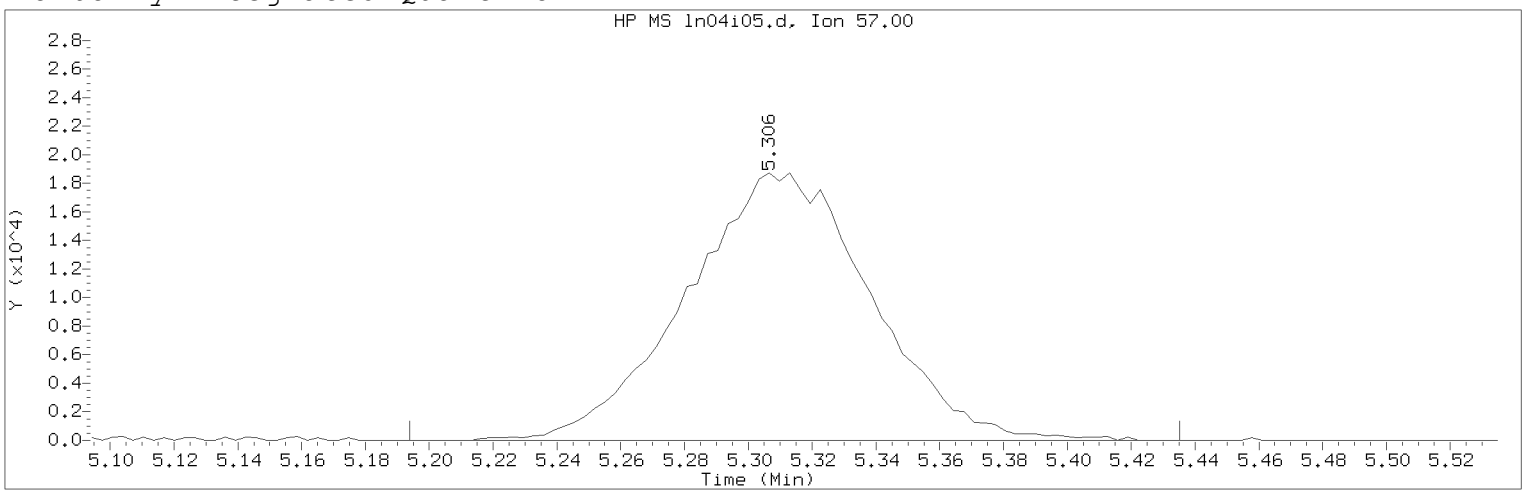
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 253092
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1035
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

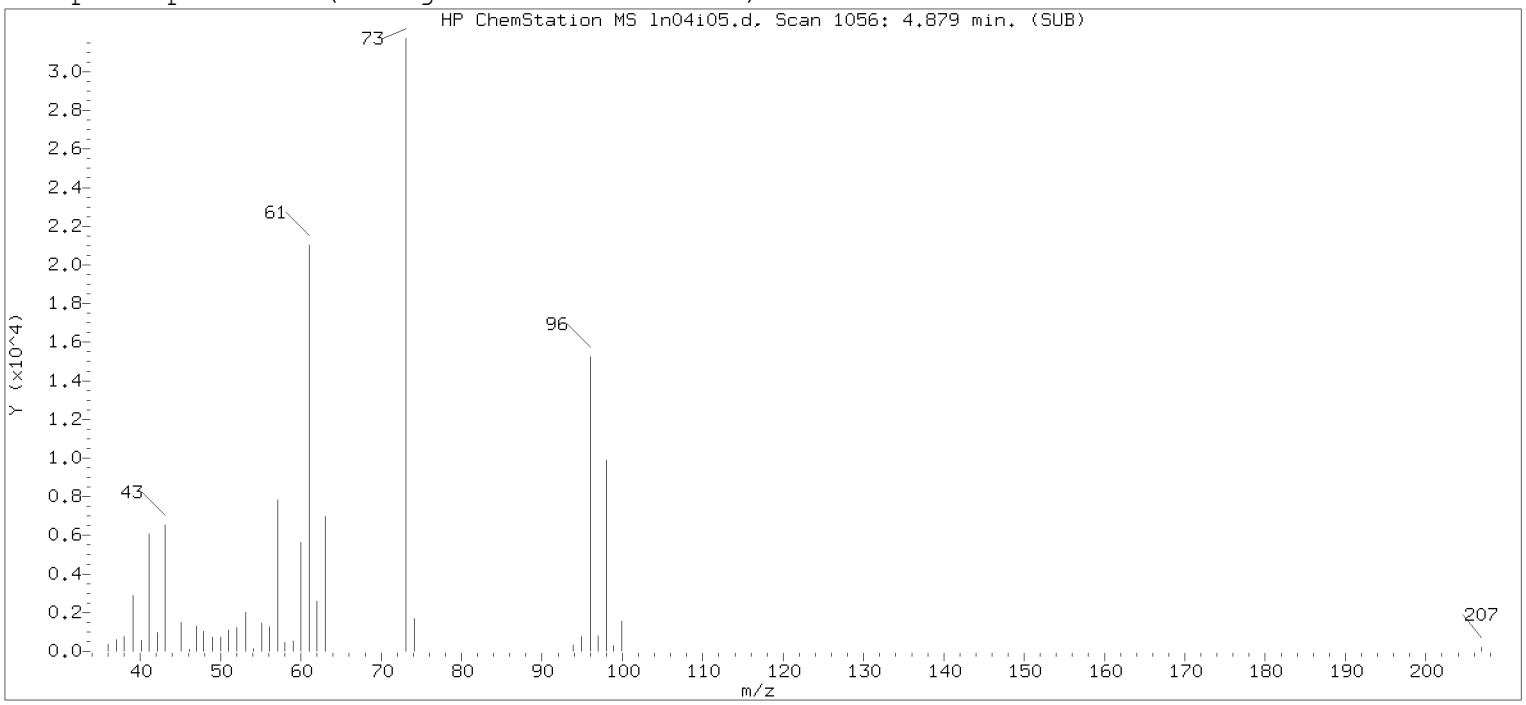
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1189
Retention Time (minutes): 5.306
Quant Ion : 57.00
Area (flag) : 75187M
On-Column Amount (ng) : 8.5083
Integration start scan : 1153 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

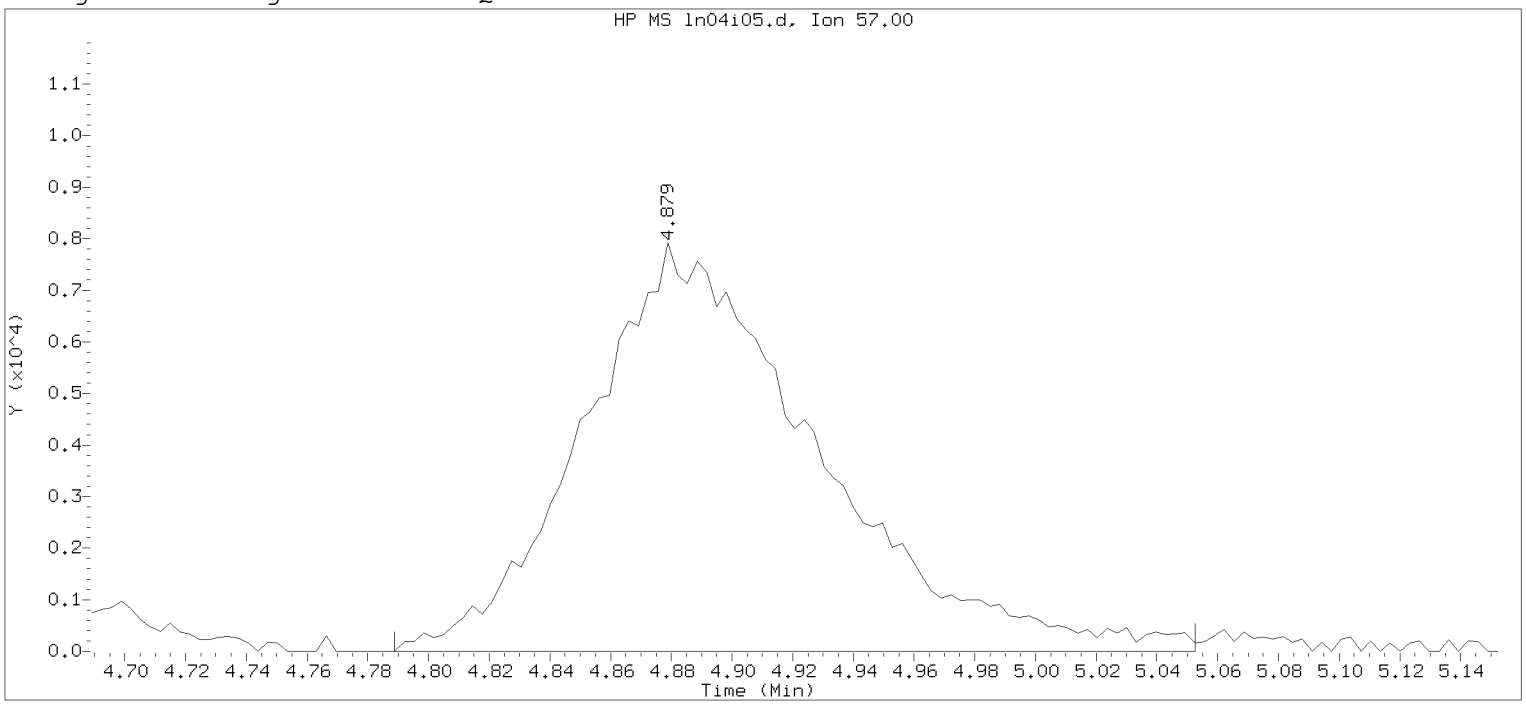
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

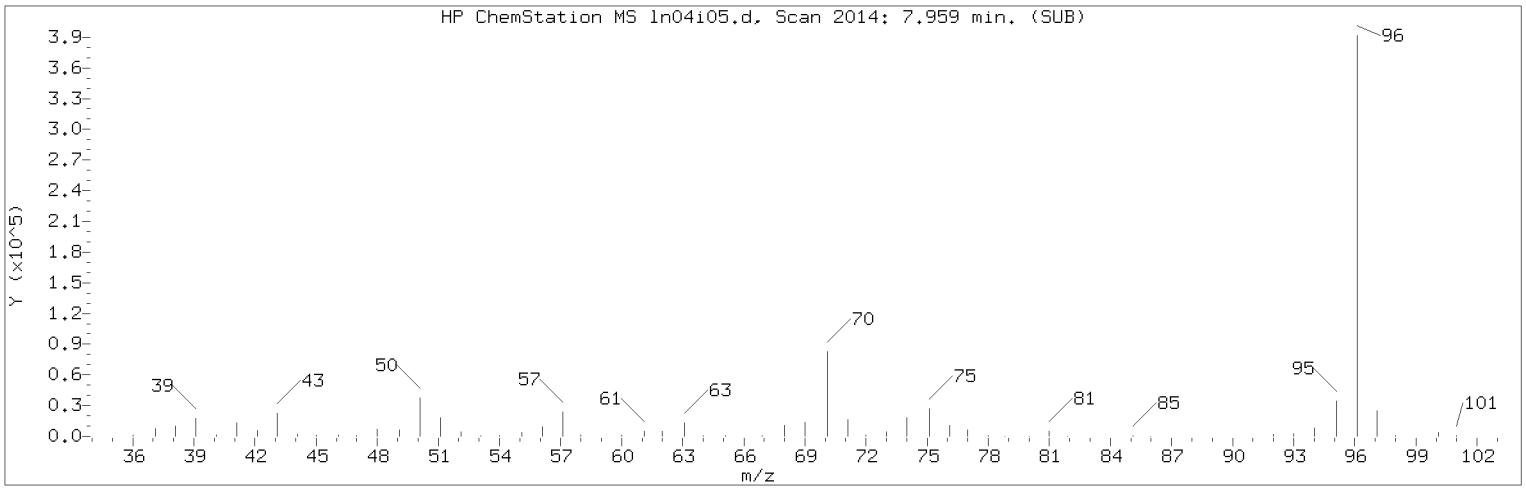
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

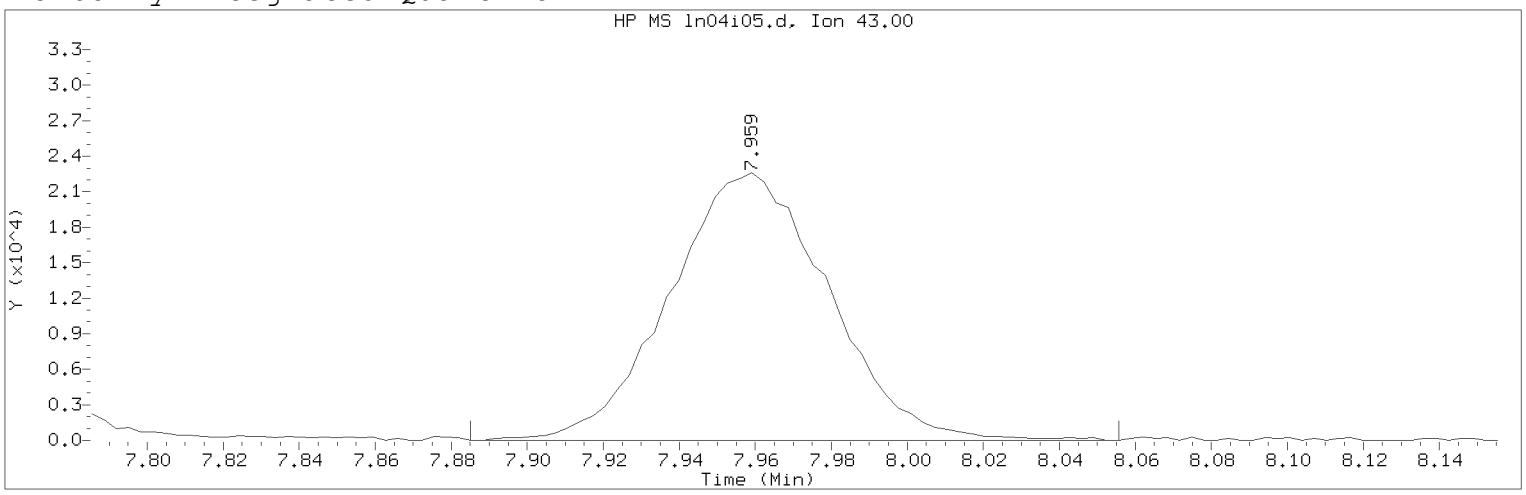
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1056
Retention Time (minutes): 4.879
Quant Ion : 57.00
Area : 42116
On-column Amount (ng) : 11.5193
Integration start scan : 1027 Integration stop scan: 1109
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

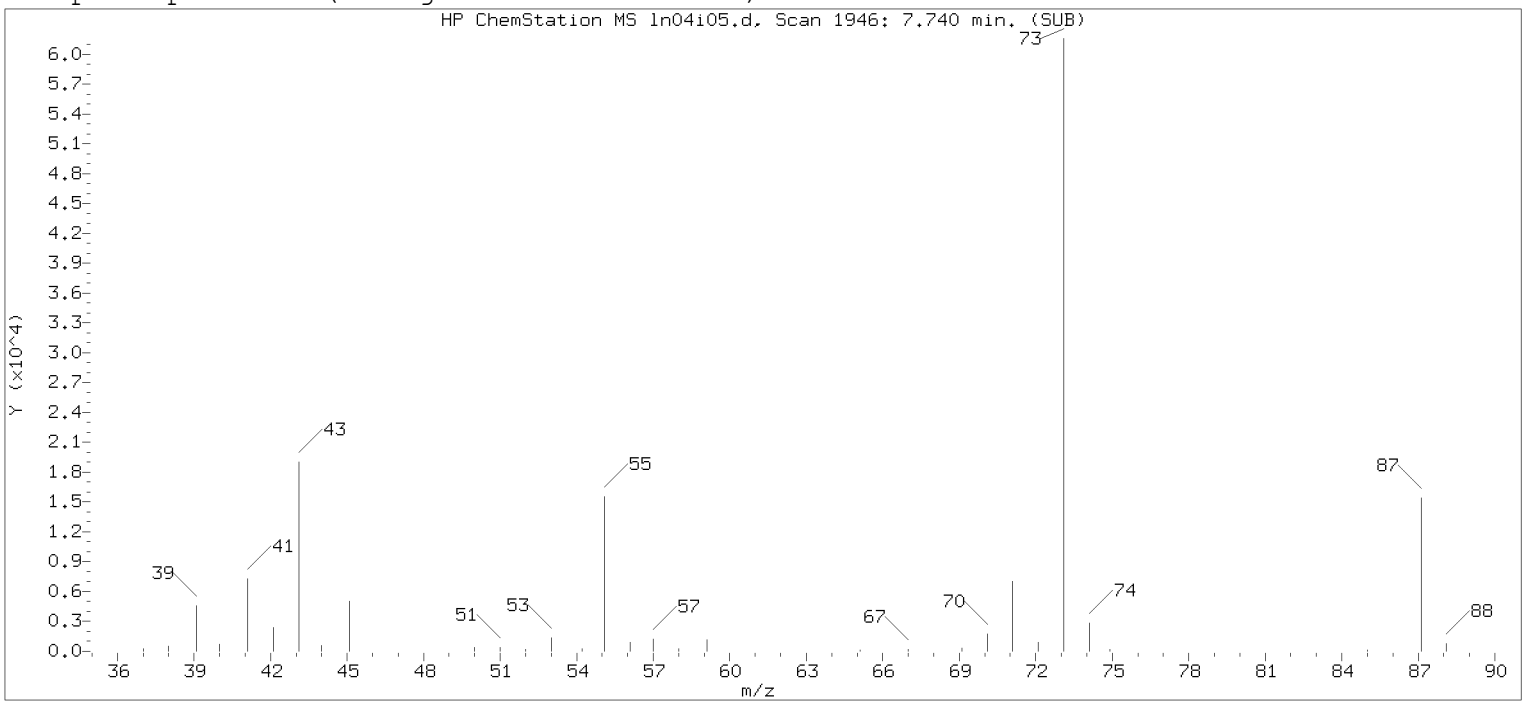
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2014
Retention Time (minutes): 7.959
Quant Ion : 43.00
Area (flag) : 65347MA
On-Column Amount (ng) : 7.9157
Integration start scan : 1990 Integration stop scan: 2043
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

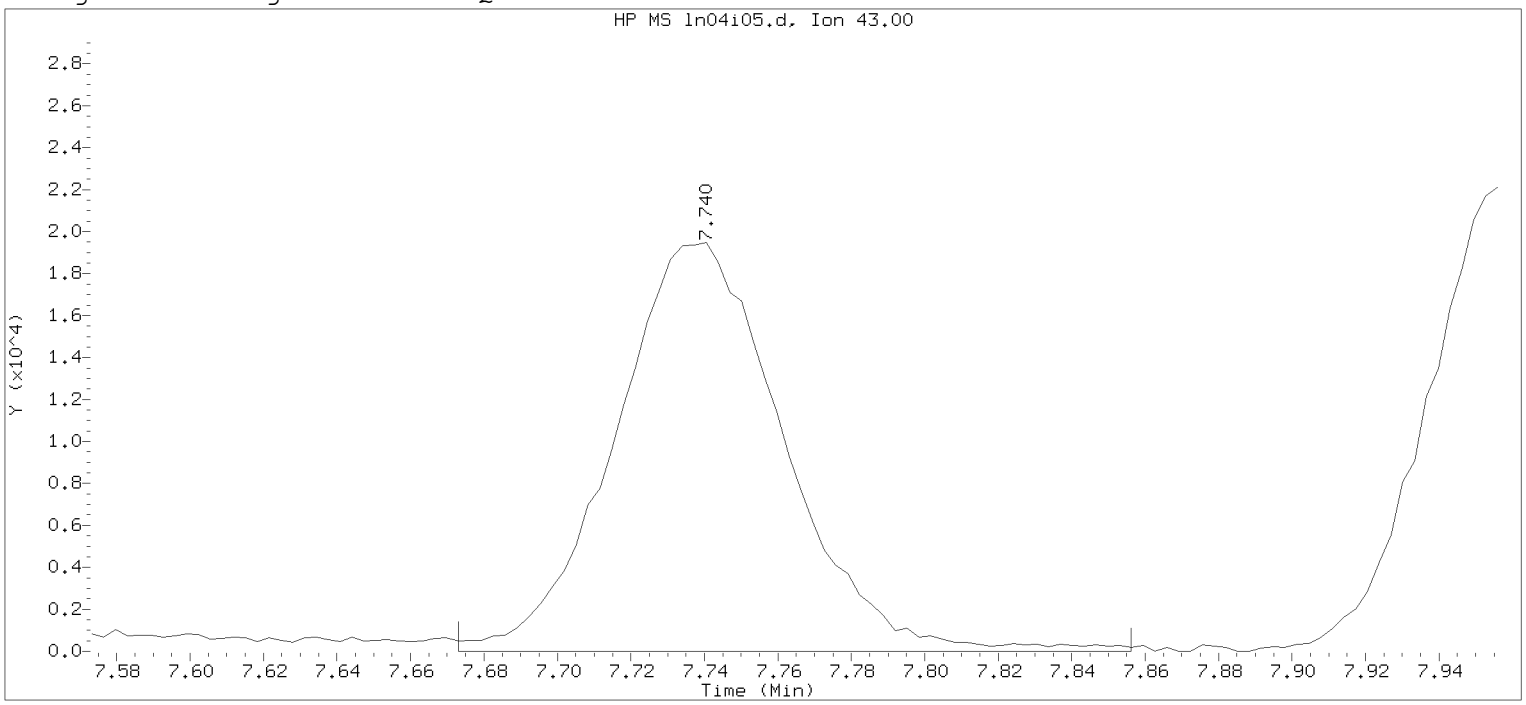
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

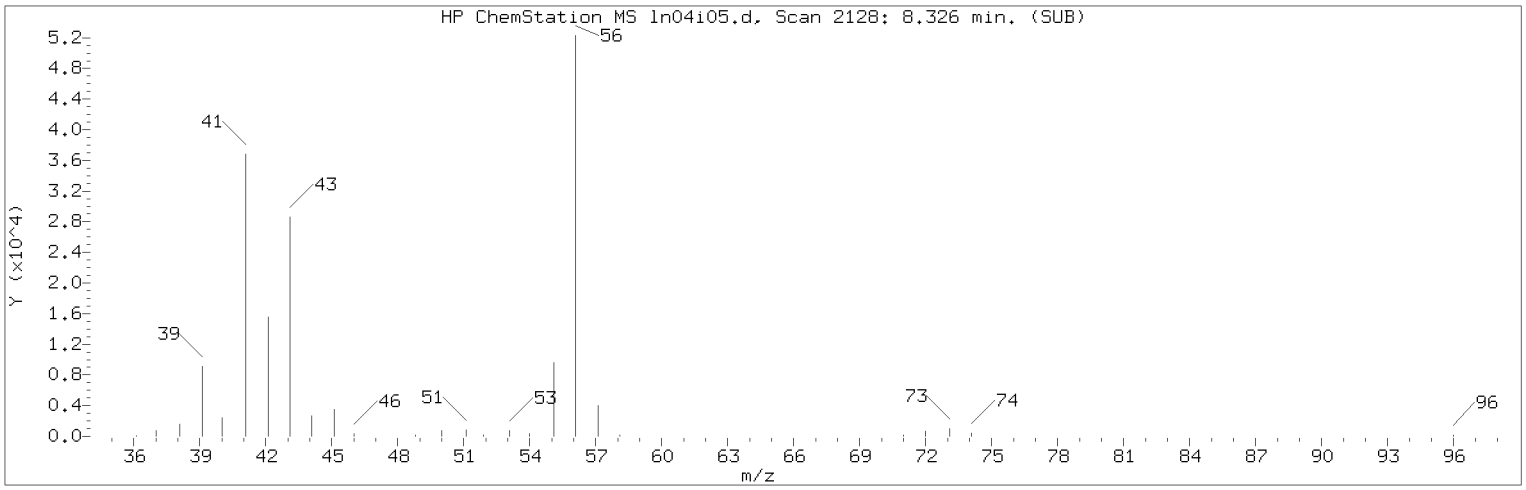
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

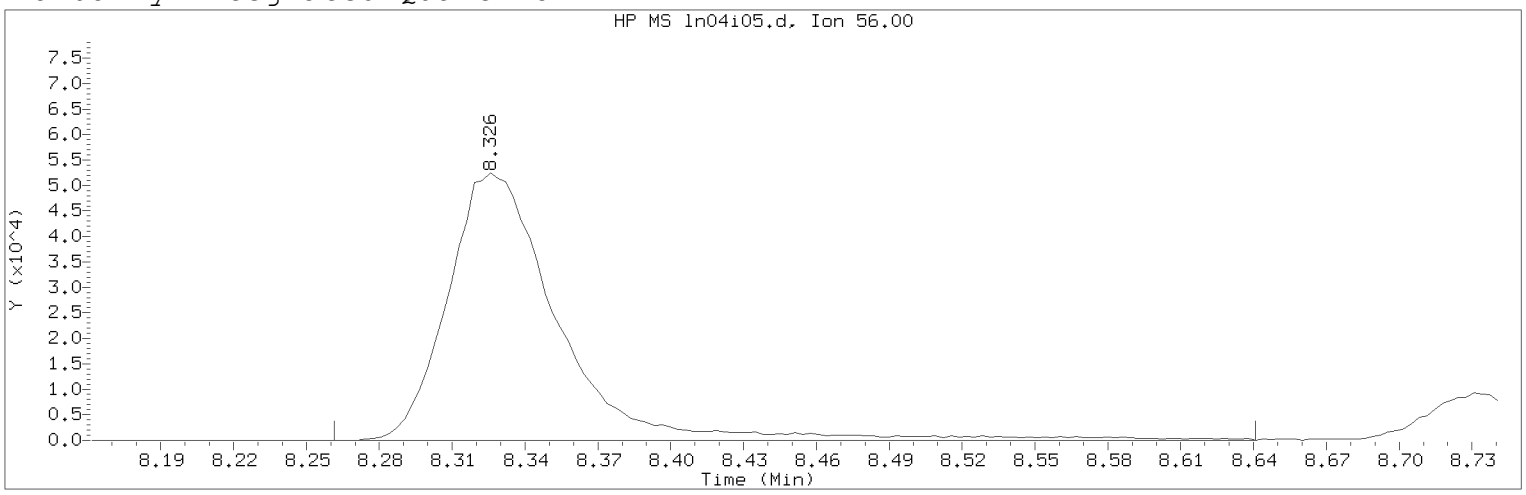
Compound Number	: 67		
Compound Name	: n-Heptane		
Scan Number	: 1946		
Retention Time (minutes)	: 7.740		
Quant Ion	: 43.00		
Area	: 62104		
On-column Amount (ng)	: 10.1613		
Integration start scan	: 1924	Integration stop scan:	1981
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

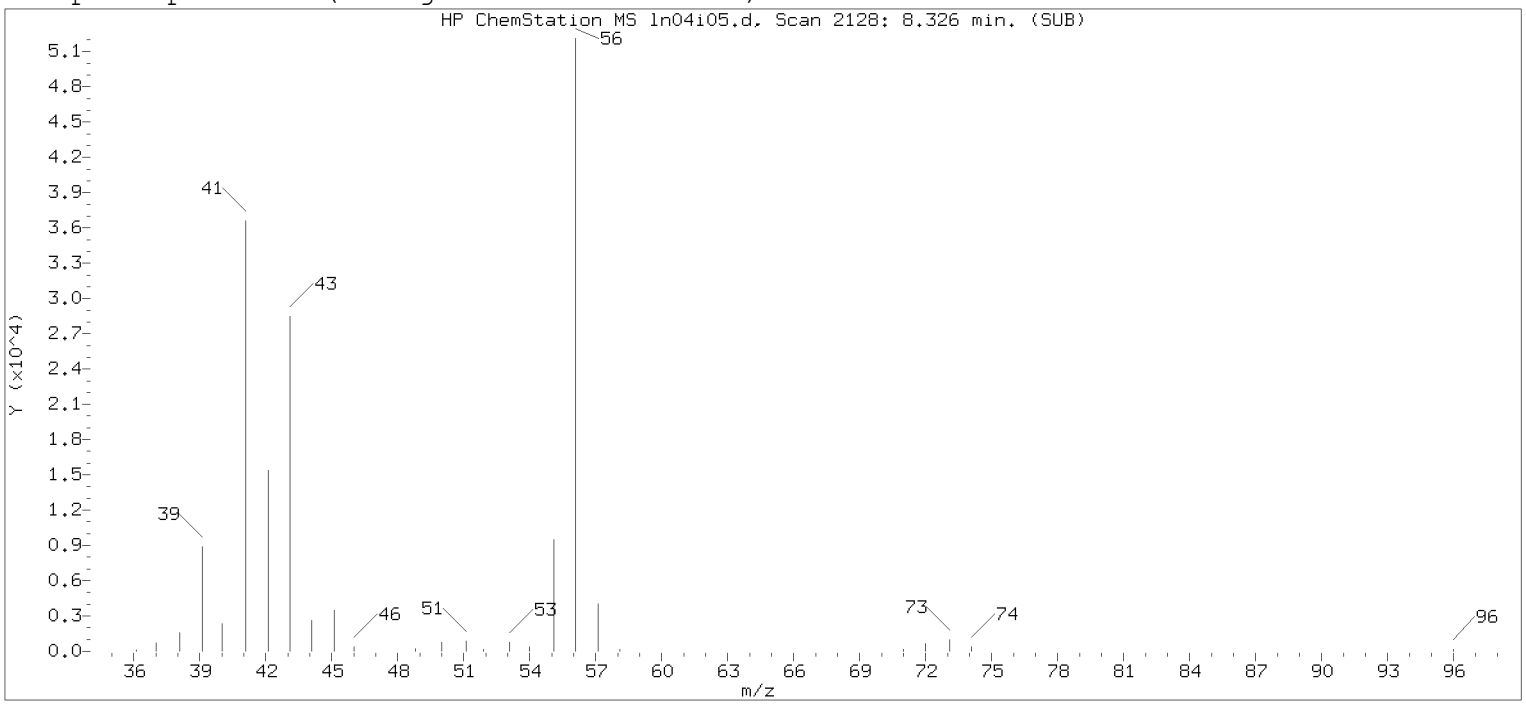
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area (flag) : 166674M
On-Column Amount (ng) : 518.8682
Integration start scan : 2107 Integration stop scan: 2225
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

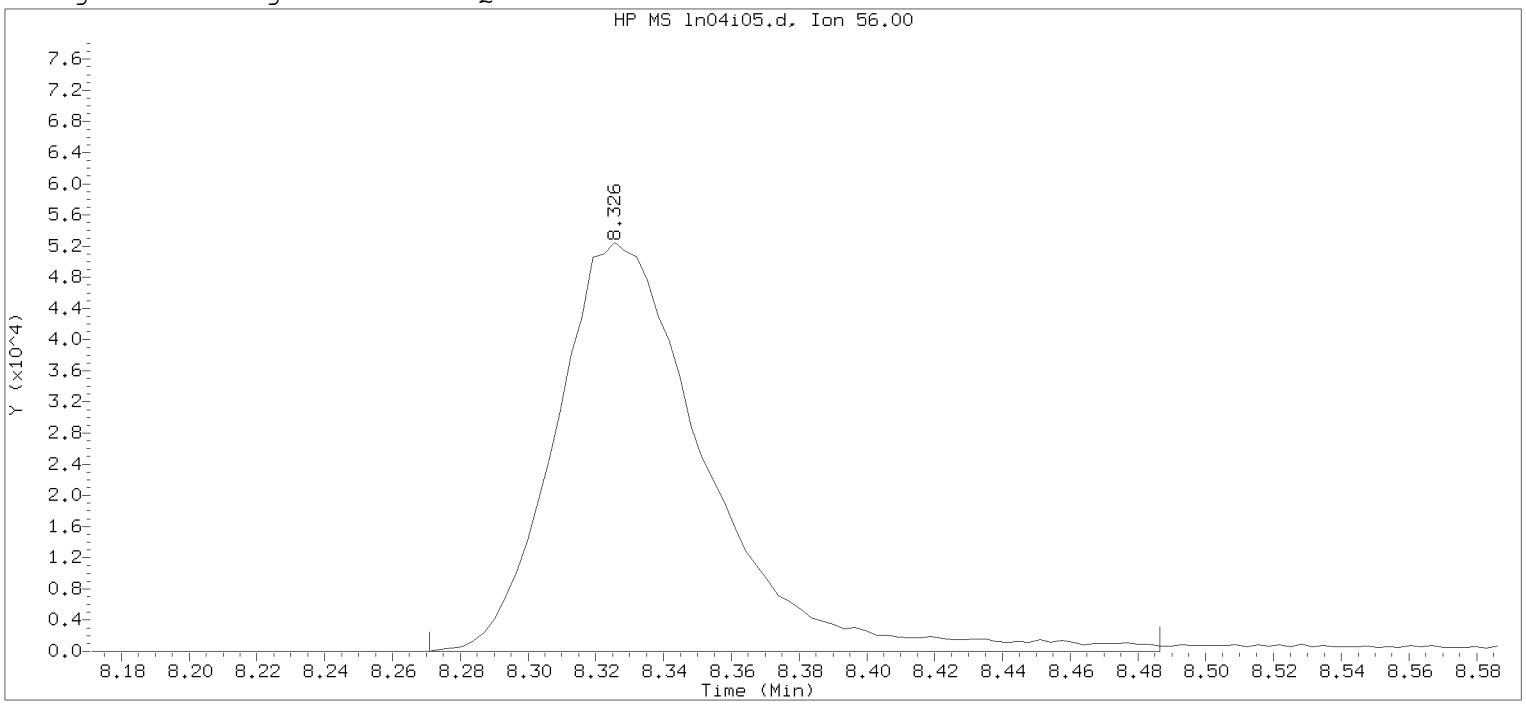
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

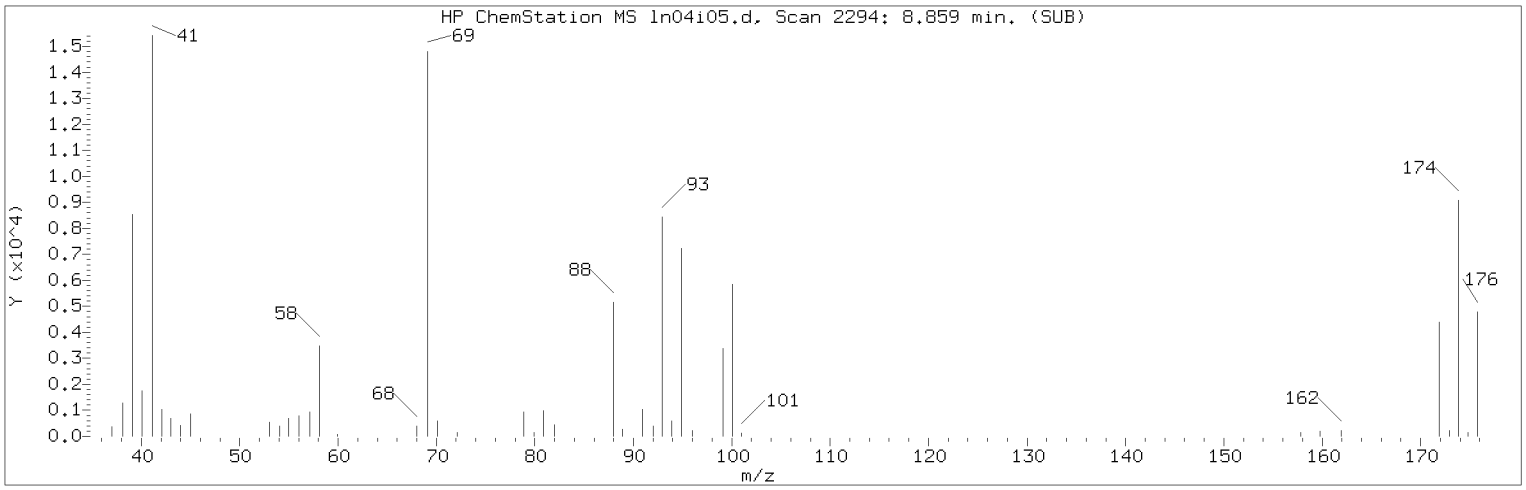
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

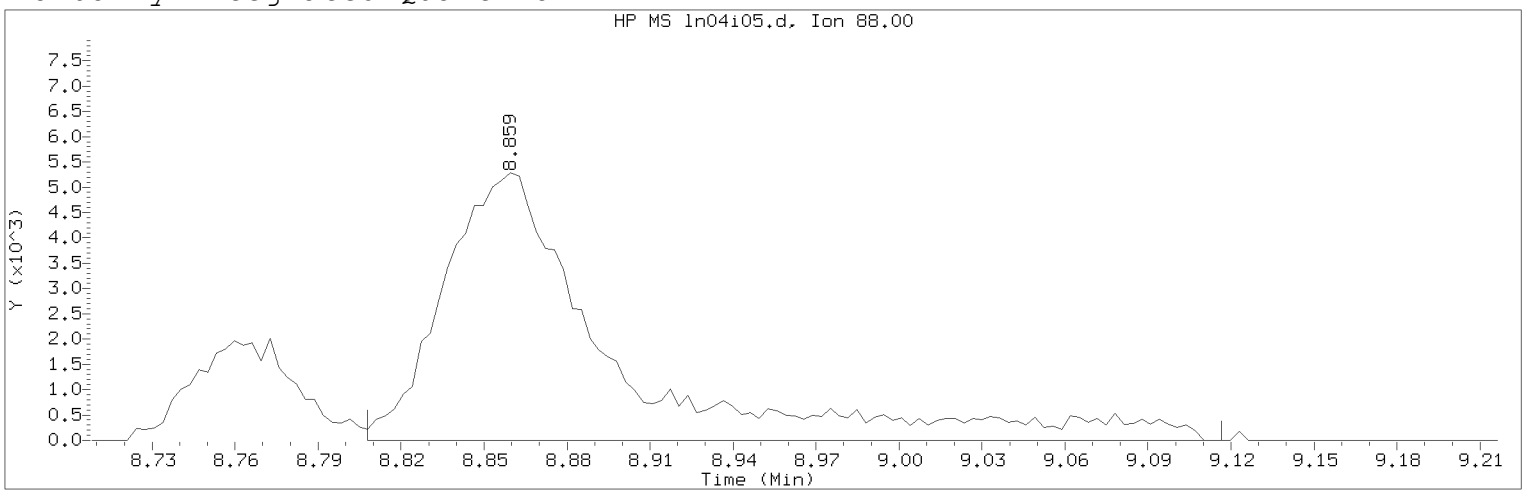
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area : 161642
On-column Amount (ng) : 524.2963
Integration start scan : 2110 Integration stop scan: 2177
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

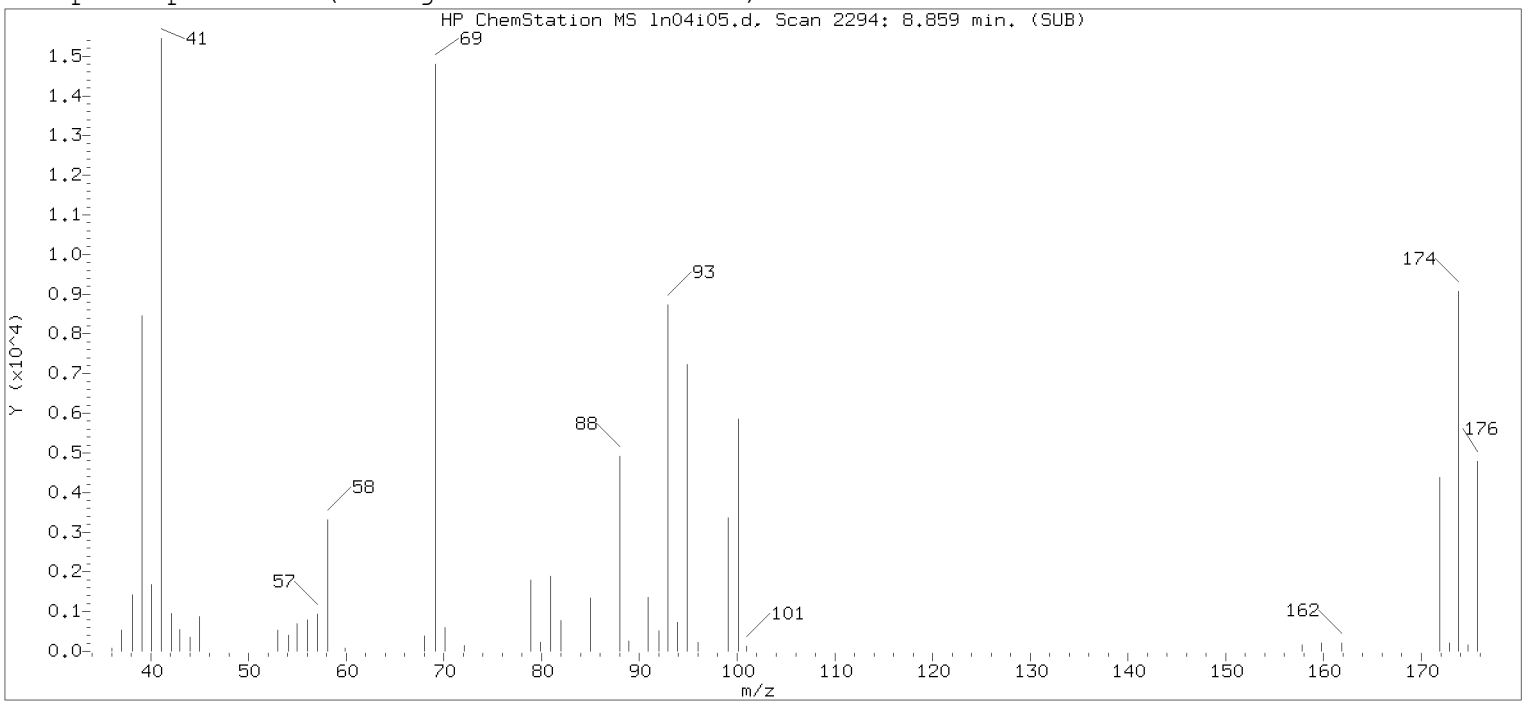
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2294
Retention Time (minutes): 8.859
Quant Ion : 88.00
Area (flag) : 22251M
On-Column Amount (ng) : 252.0176
Integration start scan : 2277 Integration stop scan: 2373
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

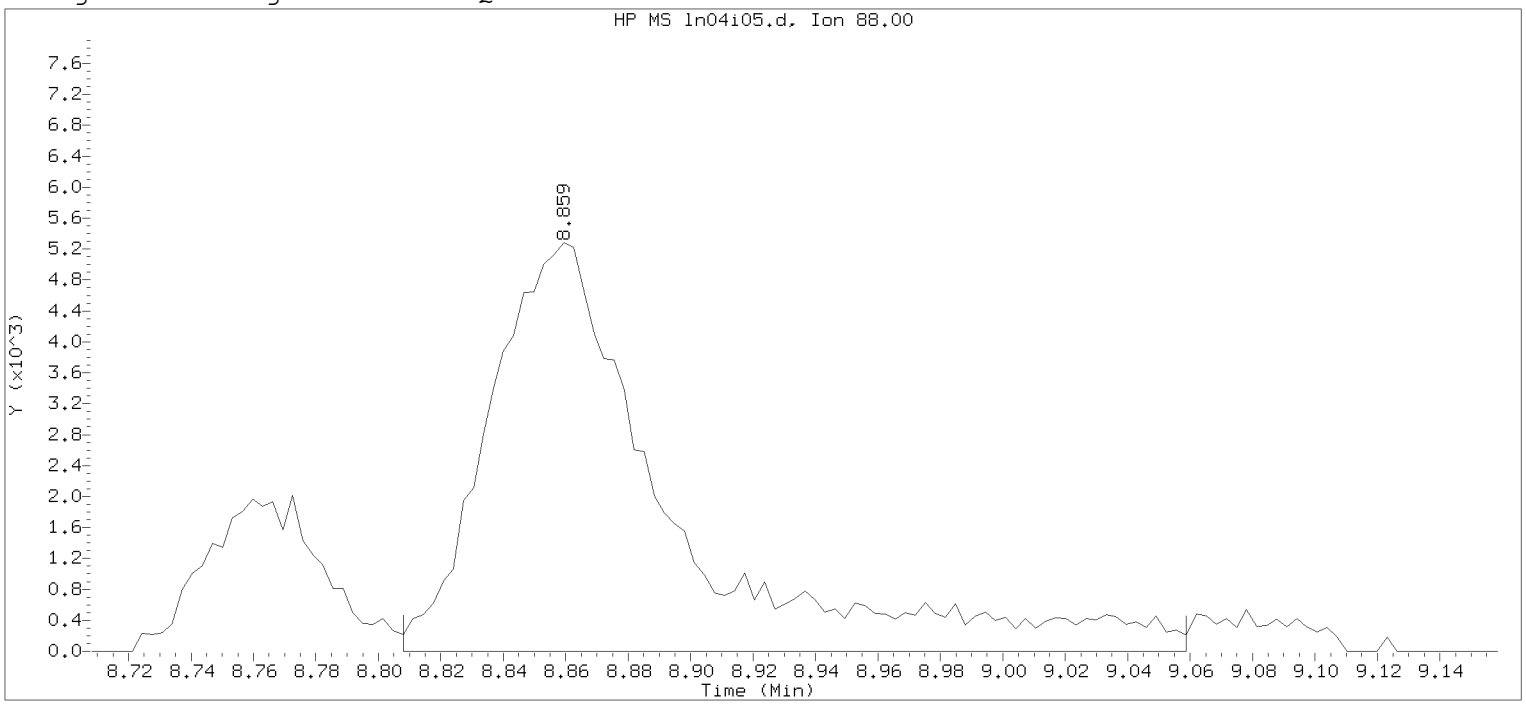
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

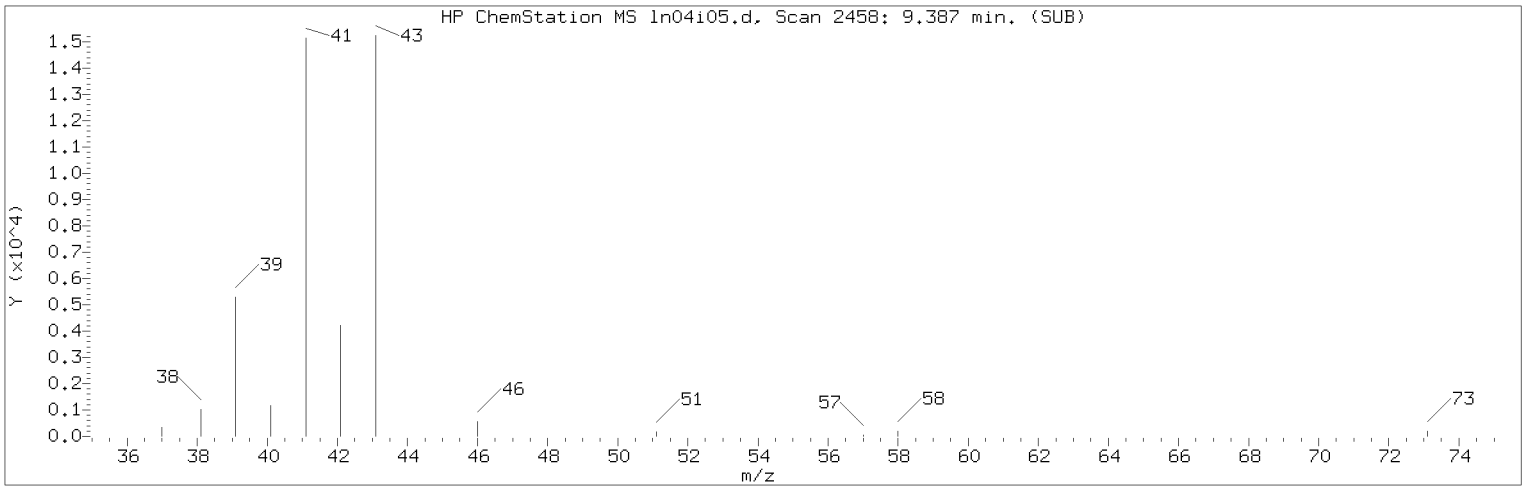
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

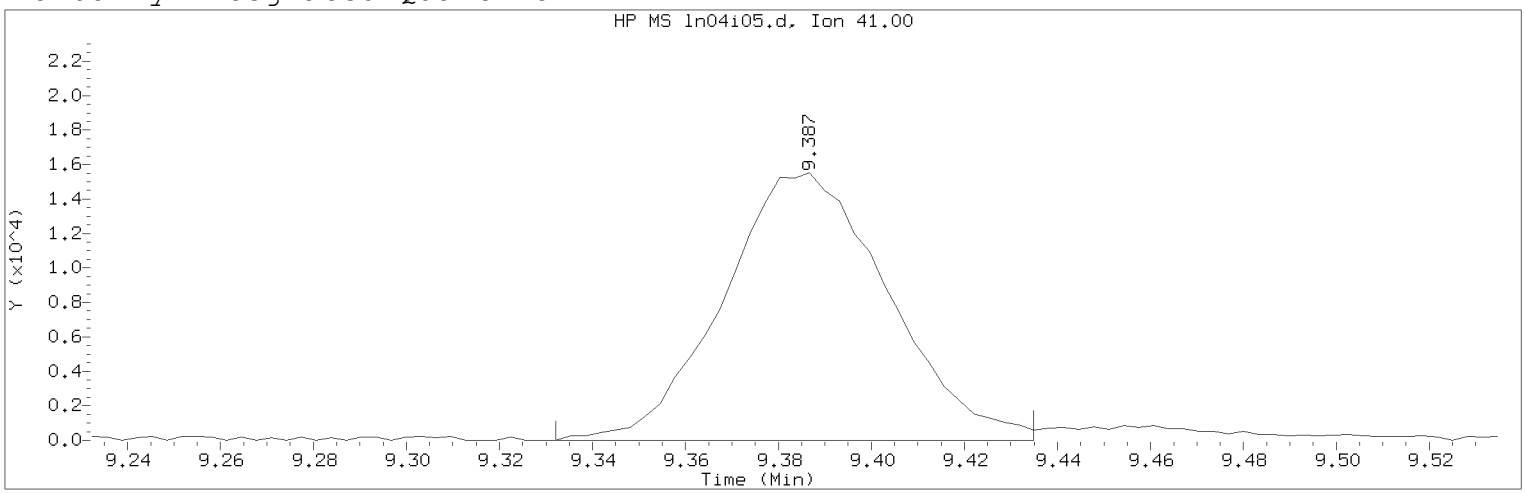
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2294
Retention Time (minutes): 8.859
Quant Ion : 88.00
Area : 21165
On-column Amount (ng) : 248.6410
Integration start scan : 2277 Integration stop scan: 2355
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

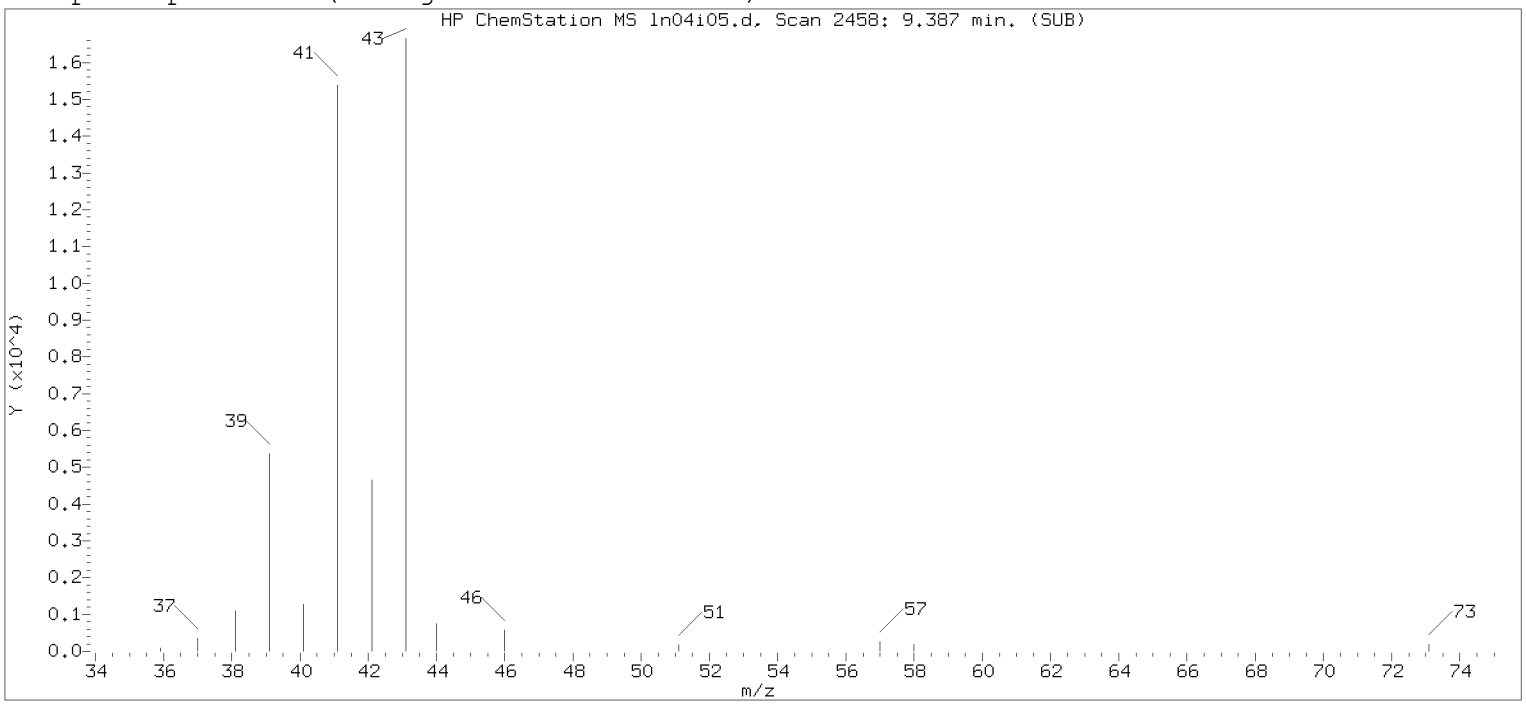
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2458
Retention Time (minutes): 9.387
Quant Ion : 41.00
Area (flag) : 38245M
On-Column Amount (ng) : 18.1785
Integration start scan : 2440 Integration stop scan: 2472
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

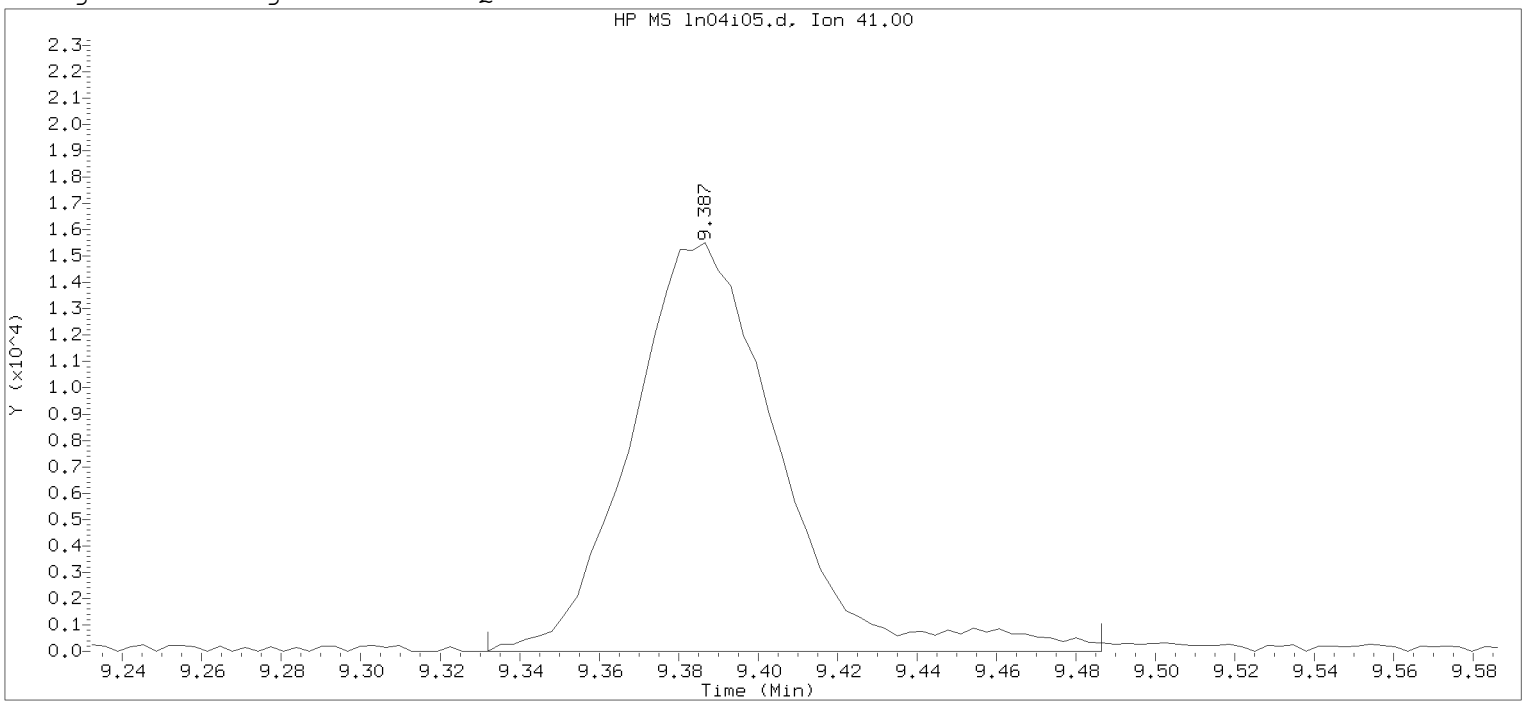
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

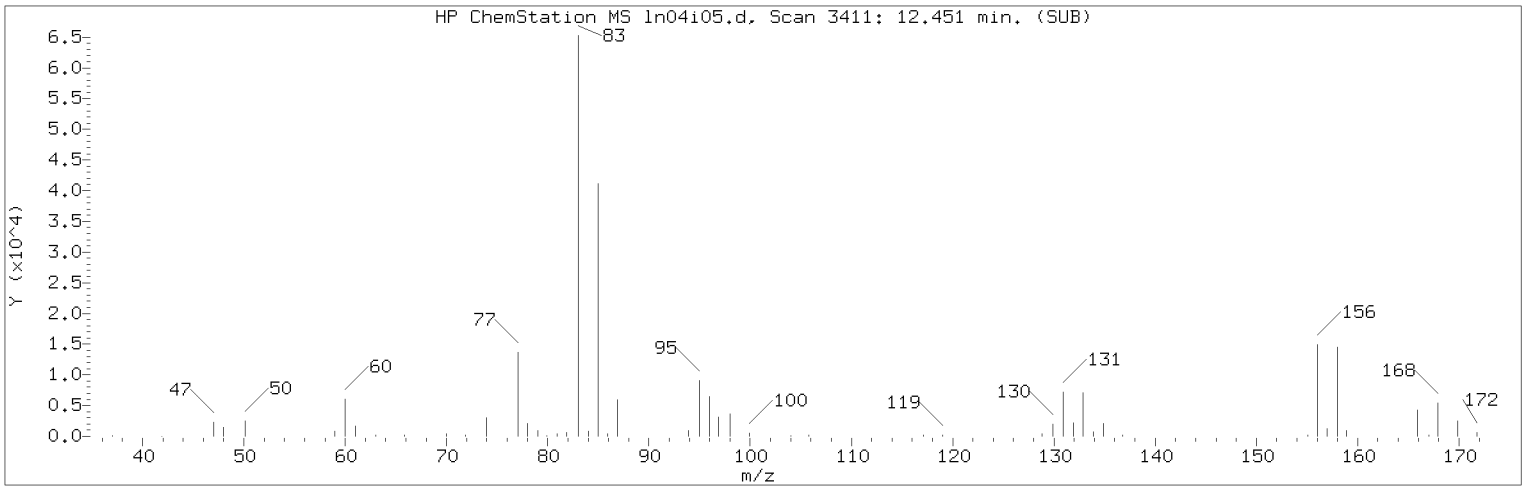
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

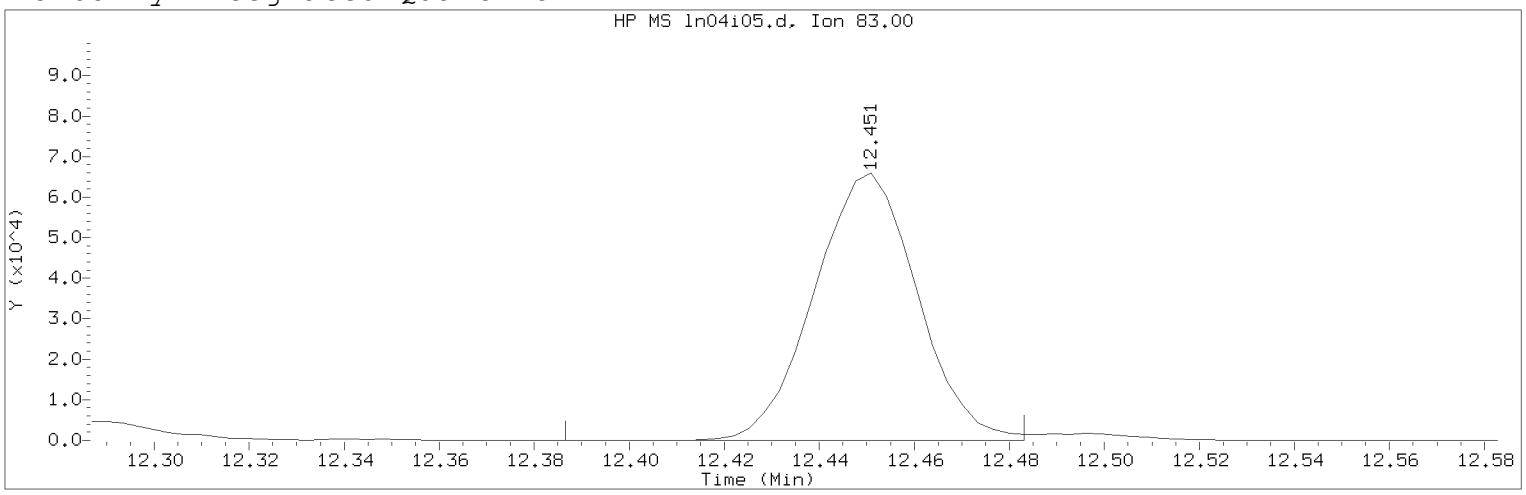
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2458
Retention Time (minutes): 9.387
Quant Ion : 41.00
Area : 40127
On-column Amount (ng) : 18.9522
Integration start scan : 2440 Integration stop scan: 2488
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

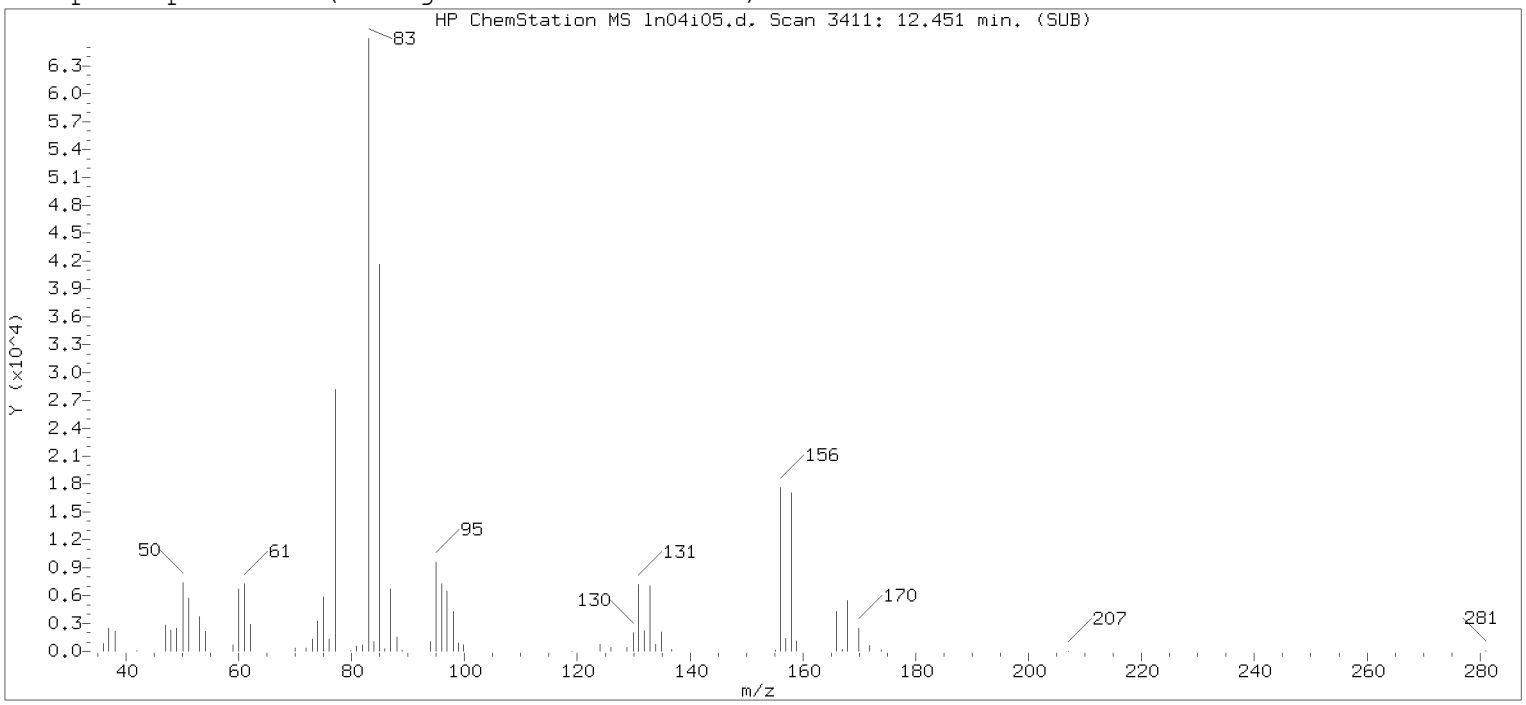
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 99221M
On-Column Amount (ng) : 10.5834
Integration start scan : 3390 Integration stop scan: 3420
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

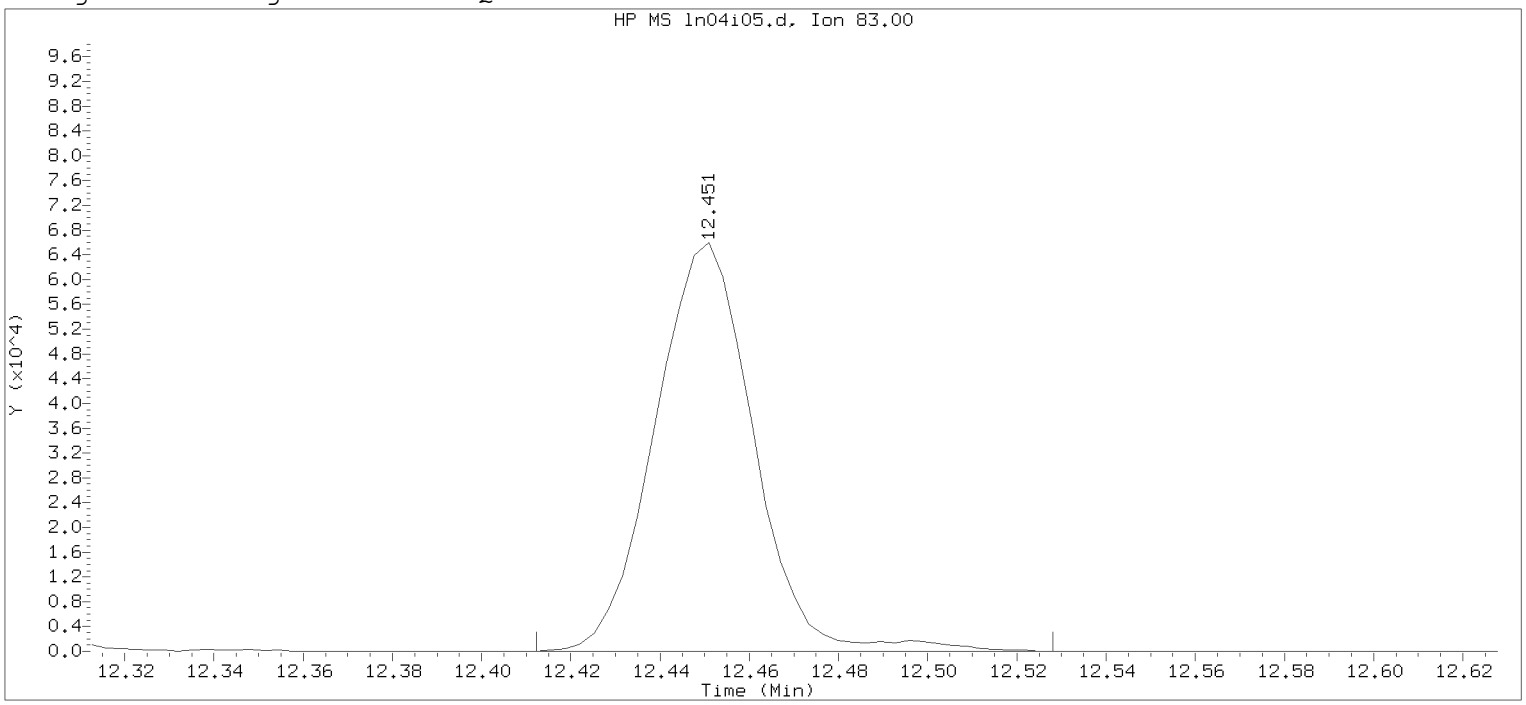
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

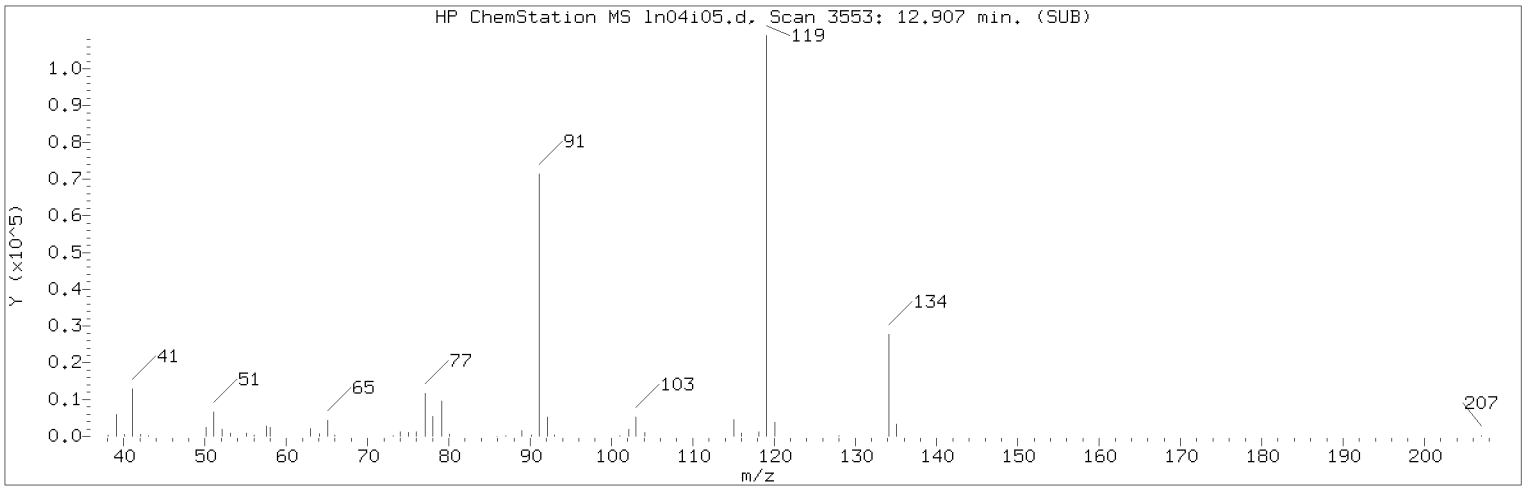
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

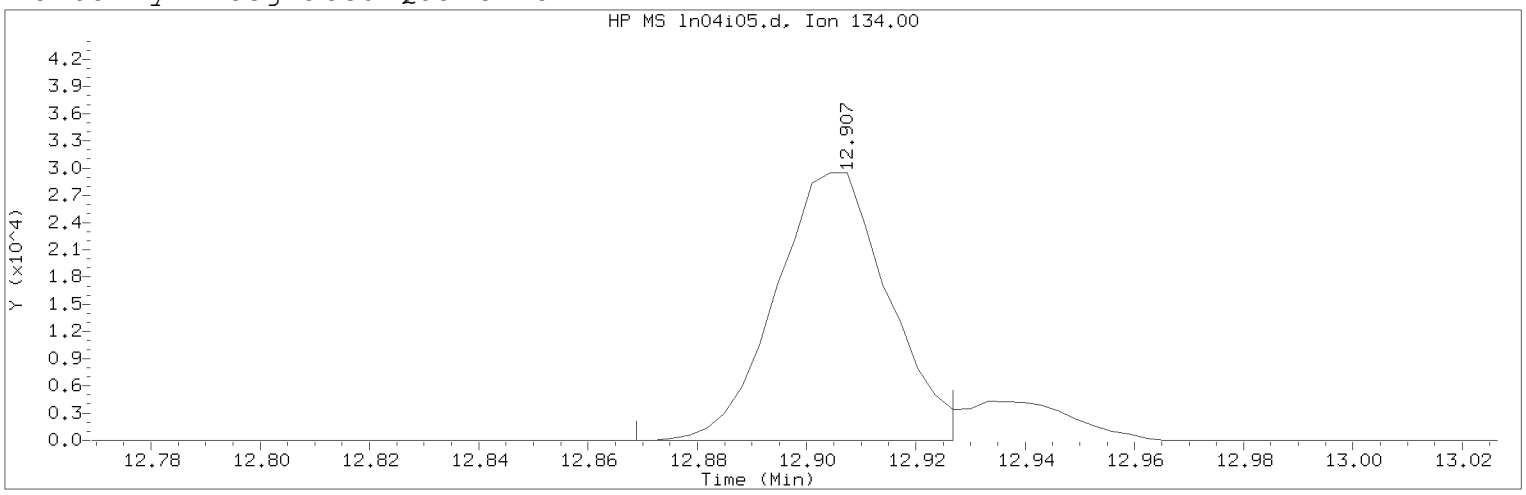
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 101487
On-column Amount (ng) : 10.6325
Integration start scan : 3398 Integration stop scan: 3434
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

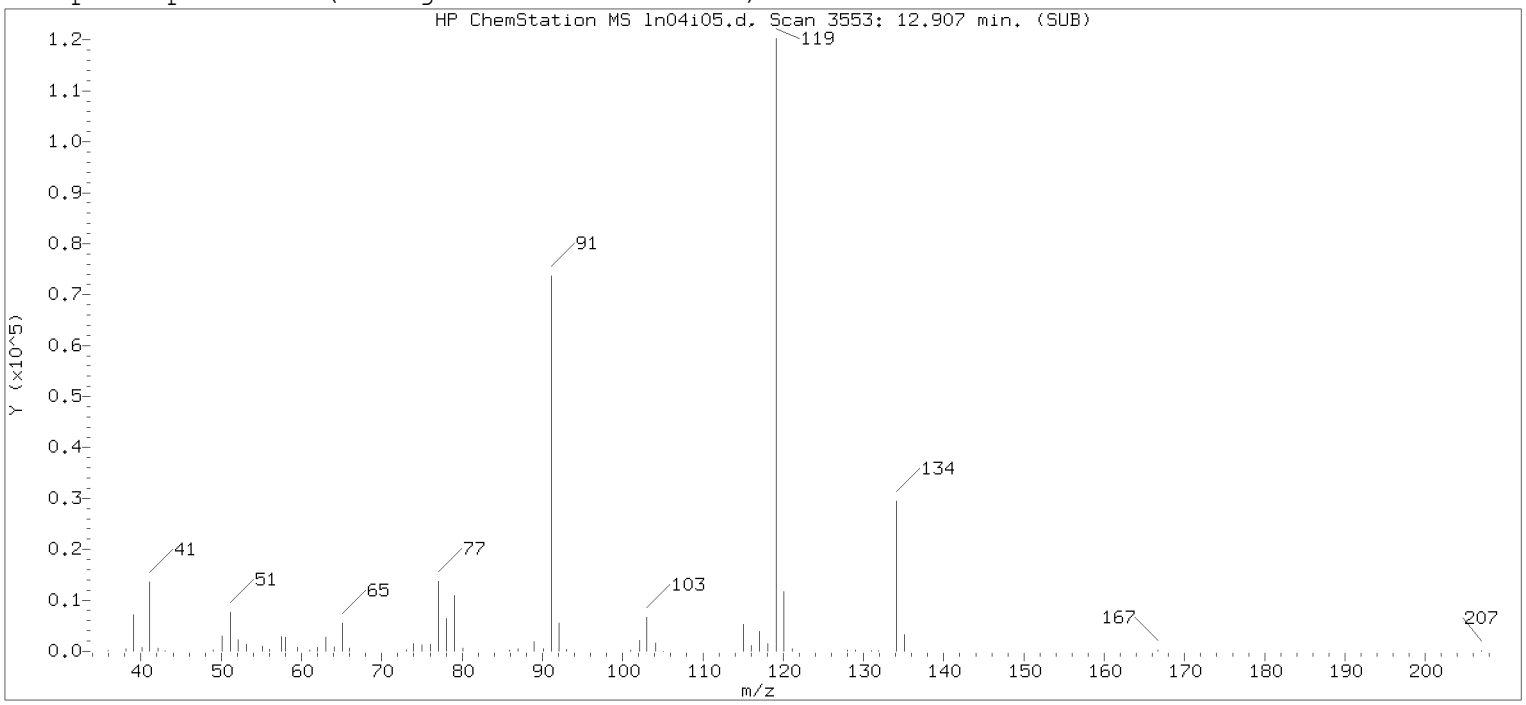
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area (flag) : 42119M
On-Column Amount (ng) : 8.5994
Integration start scan : 3540 Integration stop scan: 3558
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

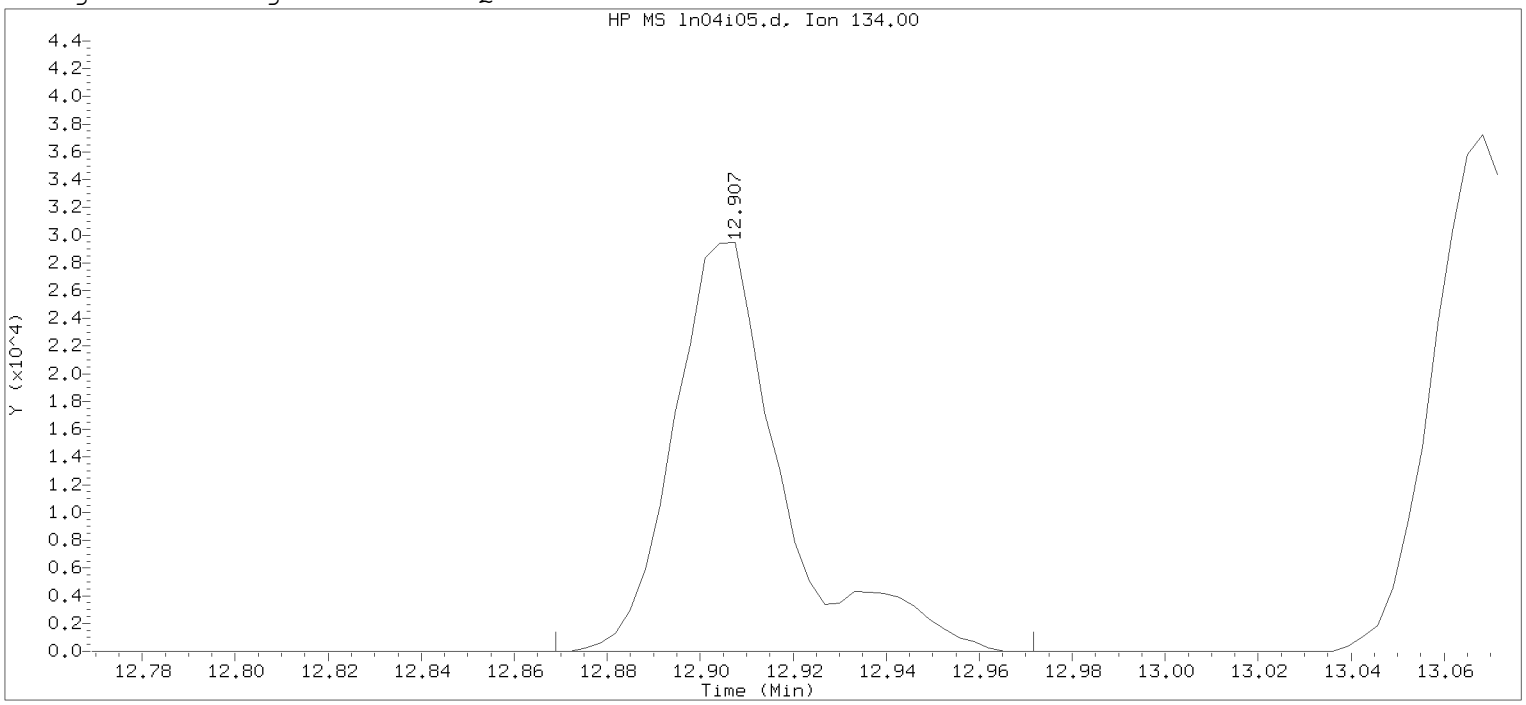
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



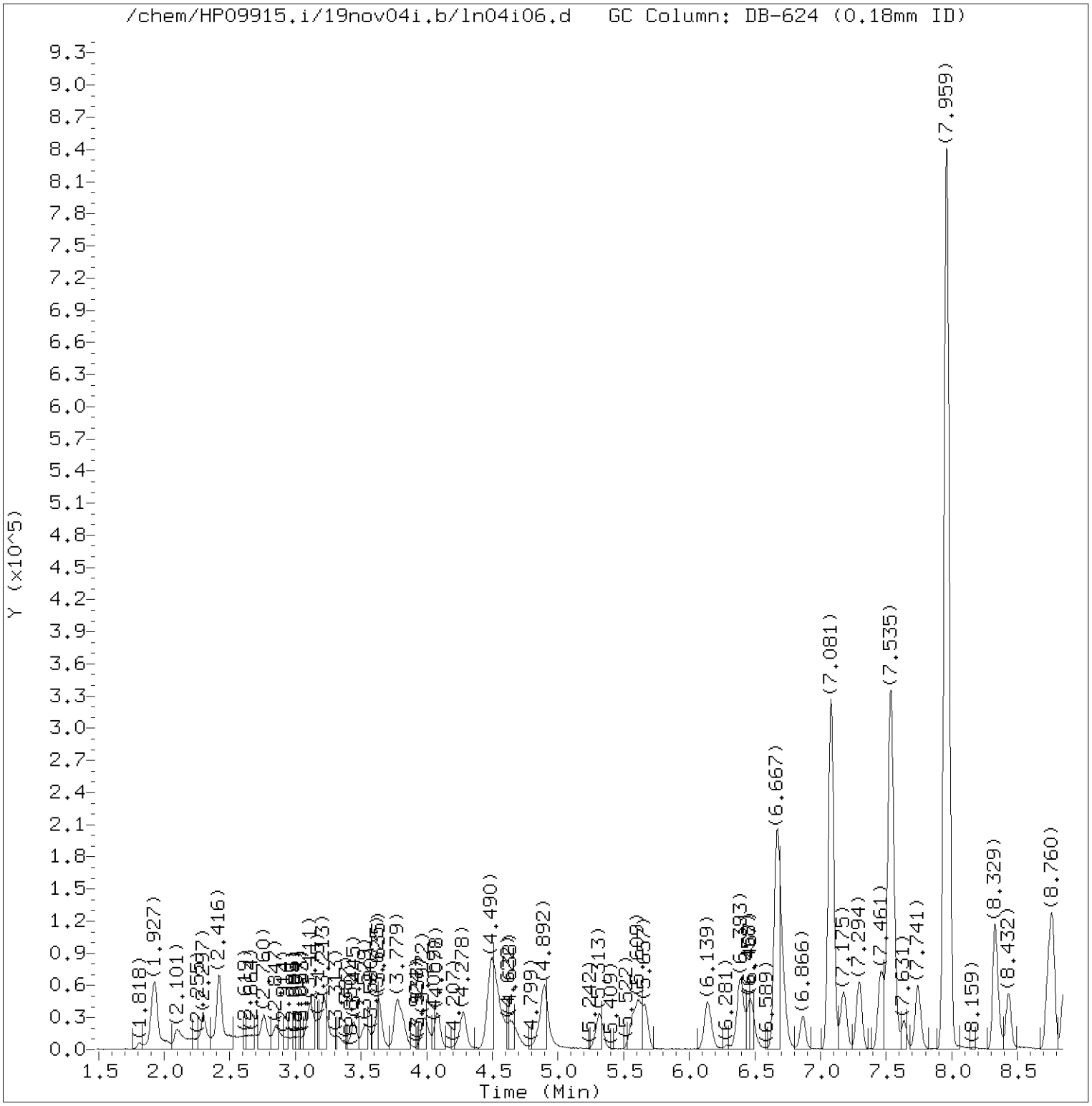
Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area : 47747
On-column Amount (ng) : 9.3569
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

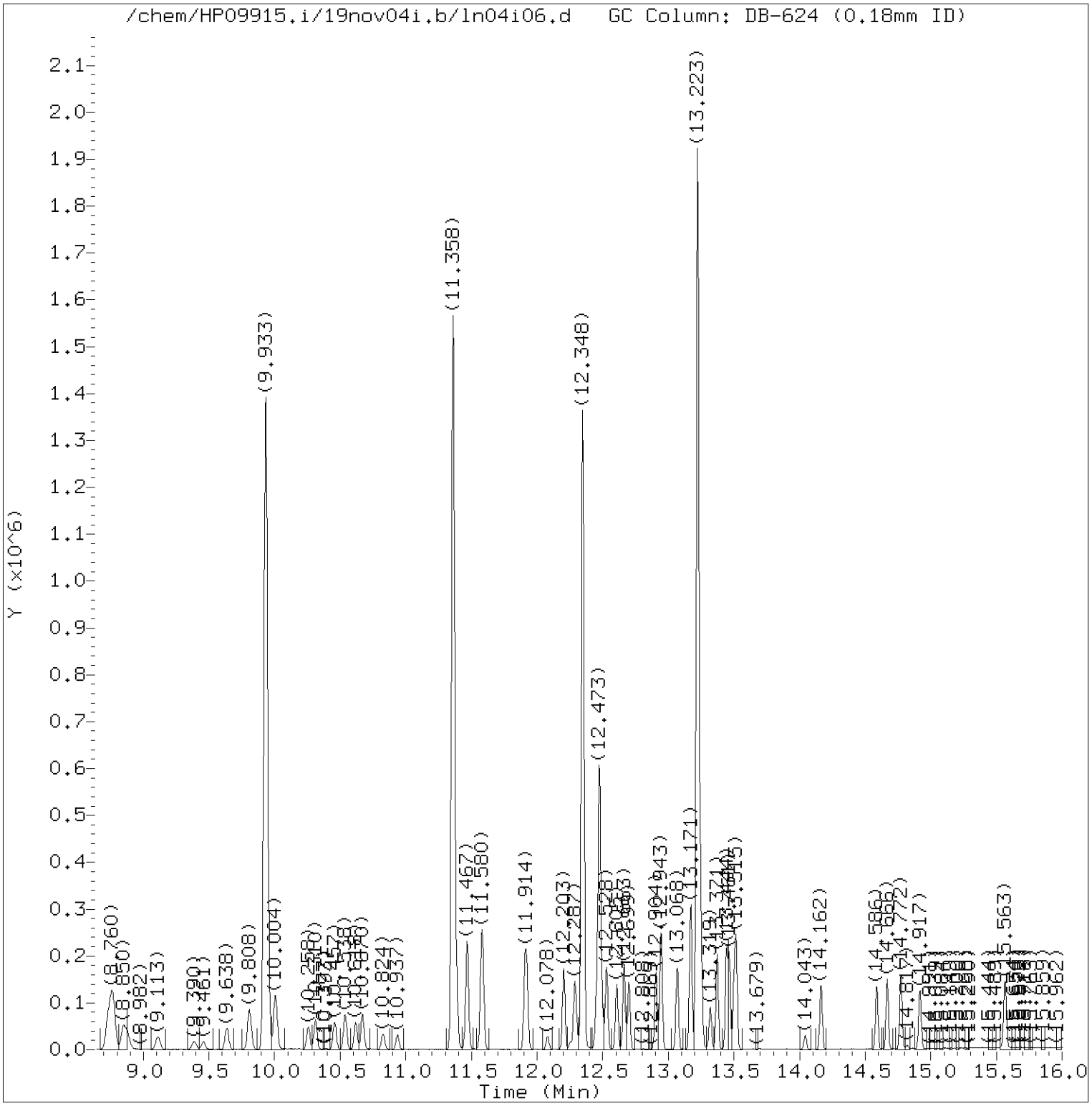
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.098	85	31217M	3.898
4) Chloromethane	(2)	2.297	50	32031	4.150
6) Vinyl Chloride	(2)	2.416	62	30864	4.006
5) 1,3-Butadiene	(2)	2.419	39	27249M	4.252
8) Bromomethane	(2)	2.760	94	23202	4.202
9) Chloroethane	(2)	2.860	64	17298	4.086
10) Dichlorofluoromethane	(2)	3.107	67	40740M	4.015
12) Trichlorofluoromethane	(2)	3.168	101	33532	4.043
11) n-Pentane	(2)	3.223	43	42826M	4.369
14) Ethyl ether	(2)	3.445	59	21059	3.929
15) Freon 123a	(2)	3.538	67	27312	4.094
16) Acrolein	(1)	3.635	56	72021	36.633
17) 1,1-Dichloroethene	(2)	3.773	96	19372	3.979
17) 1,1-Dichloroethene	(2)	3.773	63	9734	3.988
19) Freon 113	(2)	3.805	101	22601	4.069
18) Acetone	(1)	3.815	58	6763M	7.673
22) Methyl Iodide	(2)	3.972	142	39671	3.933
21) 2-Propanol	(1)	4.004	45	45871	72.395
23) Carbon Disulfide	(2)	4.082	76	71681	3.907
27) Methyl Acetate	(2)	4.258	43	24928M	3.976
25) Allyl Chloride	(2)	4.281	41	34775	3.982
28) Methylene Chloride	(2)	4.477	84	22693	3.917
29)*t-Butyl alcohol-d10	(1)	4.512	65	262044M	250.000
30) t-Butyl alcohol	(1)	4.638	59	80219	72.713
31) Acrylonitrile	(2)	4.840	53	12699	3.765
32) trans-1,2-Dichloroethene	(2)	4.901	96	22231	3.947
33) Methyl Tertiary Butyl Ether	(2)	4.901	73	71515	3.869
34) n-Hexane	(2)	5.323	57	33969M	3.877
36) 1,1-Dichloroethane	(2)	5.564	63	39317	4.002
38) di-Isopropyl ether	(2)	5.615	45	72628	3.833
39) 2-Chloro-1,3-butadiene	(2)	5.663	53	34190	3.879
40) Ethyl t-butyl ether	(2)	6.139	59	70845	3.853
43) 1,2-Dichloroethene (Total)	(2)		96	47253	7.906
44) 2-Butanone	(2)	6.371	43	32547	7.516
42) cis-1,2-Dichloroethene	(2)	6.390	96	25022	3.958
45) 2,2-Dichloropropane	(2)	6.400	77	29877	3.912
47) Propionitrile	(1)	6.467	54	100934	73.427
48) Methacrylonitrile	(2)	6.670	67	134092	36.850

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.718	128	12879	3.842
50) Tetrahydrofuran	(1)	6.734	71	9128	7.351
51) Chloroform	(2)	6.869	83	36176	3.850
52)$Dibromofluoromethane	(2)	7.081	113	280667	49.988
52)$Dibromofluoromethane	(2)	7.078	111	287593	50.237
53) 1,1,1-Trichloroethane	(2)	7.091	97	31167	3.886
54) Cyclohexane	(2)	7.178	56	42347	3.949
54) Cyclohexane	(2)	7.175	84	36627	3.932
54) Cyclohexane	(2)	7.181	69	13119	3.955
56) Carbon Tetrachloride	(2)	7.287	117	25509	3.750
55) 1,1-Dichloropropene	(2)	7.297	75	30762	3.960
58) Isobutyl Alcohol	(1)	7.464	41	65125	175.416
57)$1,2-Dichloroethane-d4	(2)	7.532	102	72246	50.488
57)$1,2-Dichloroethane-d4	(2)	7.535	65	323654	50.754
57)$1,2-Dichloroethane-d4	(2)	7.538	104	45694	49.994
60) Benzene	(2)	7.564	78	92488	3.959
61) 1,2-Dichloroethane	(2)	7.638	62	29321	3.902
61) 1,2-Dichloroethane	(2)	7.628	98	2899	3.899
65) t-Amyl methyl ether	(2)	7.744	73	70267	3.807
66)*Fluorobenzene	(2)	7.959	96	1148427	50.000
67) n-Heptane	(2)	7.962	43	32502MA	3.971
69) n-Butanol	(1)	8.329	56	110027M	344.330
71) Trichloroethene	(2)	8.435	95	22766	3.871
72) Methylcyclohexane	(2)	8.737	83	42437	3.889
72) Methylcyclohexane	(2)	8.731	98	19822	4.014
73) 1,2-Dichloropropane	(2)	8.773	63	22762	3.837
76) Methyl Methacrylate	(2)	8.843	69	20713M	3.611
75) 1,4-Dioxane	(1)	8.850	88	16188	184.315
74) Dibromomethane	(2)	8.879	93	14634	3.813
78) Bromodichloromethane	(2)	9.110	83	24167	3.509
79) 2-Nitropropane	(2)	9.387	41	14154	6.785
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	8979	3.525
81) cis-1,3-Dichloropropene	(2)	9.638	75	32112	3.511
82) 4-Methyl-2-pentanone	(2)	9.808	43	67922	7.431
83)$Toluene-d8	(3)	9.933	98	1152733	49.832
83)$Toluene-d8	(3)	9.933	100	745821	49.773
88) Toluene	(3)	10.004	92	56092	3.868
90) 1,3-Dichloropropene (total)	(3)		100	60153	6.917

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	28041	3.406
91) Ethyl Methacrylate	(3)	10.310	69	34660	3.464
92) 1,1,2-Trichloroethane	(3)	10.457	97	20516	3.731
93) Tetrachloroethene	(3)	10.538	166	24234	3.946
94) 1,3-Dichloropropane	(3)	10.618	76	34762	3.703
96) 2-Hexanone	(3)	10.670	43	50570	7.572
97) Dibromochloromethane	(3)	10.824	129	18906	3.357
99) 1,2-Dibromoethane	(3)	10.937	107	21586	3.615
100)*Chlorobenzene-d5	(3)	11.358	117	884065	50.000
101) 1-Chlorohexane	(3)	11.364	91	31055	3.986
102) Chlorobenzene	(3)	11.387	112	63883	3.895
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	19618	3.631
104) Ethylbenzene	(3)	11.467	91	109318	3.944
106) m+p-Xylene	(3)	11.580	106	85093	7.804
108) Xylene (Total)	(3)		106	126157	11.616
107) o-Xylene	(3)	11.908	106	41064	3.813
109) Styrene	(3)	11.924	104	65784	3.696
110) Bromoform	(3)	12.078	173	12196	2.898
111) Isopropylbenzene	(3)	12.203	105	107056	3.963
112) Cyclohexanone	(1)	12.287	55	63391	184.289
114)$4-Bromofluorobenzene	(3)	12.348	95	440415	50.280
114)$4-Bromofluorobenzene	(3)	12.348	174	367241	50.573
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	33170M	3.658
115) Bromobenzene	(4)	12.467	156	27559	3.820
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	101806	36.395
117) 1,2,3-Trichloropropane	(4)	12.496	110	10208	3.668
119) n-Propylbenzene	(4)	12.528	91	126543	4.014
120) 2-Chlorotoluene	(4)	12.609	126	25381	3.790
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	89290	3.898
121) 4-Chlorotoluene	(4)	12.699	126	27169	3.898
124) tert-Butylbenzene	(4)	12.904	134	18608M	3.928
125) Pentachloroethane	(4)	12.940	167	14303	3.506
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	93258	3.863
127) sec-Butylbenzene	(4)	13.068	105	111847	3.956
129) 1,3-Dichlorobenzene	(4)	13.168	146	51597	3.892
130) p-Isopropyltoluene	(4)	13.174	119	96571	3.948
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	480071	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	53736	3.910

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	99398	3.886
135) Benzyl Chloride	(4)	13.319	91	57244	2.956
136) 1,3-Diethylbenzene	(4)	13.371	119	61603	3.870
141) Diethylbenzene (total)	(4)		100	179922	11.677
137) 1,4-Diethylbenzene	(4)	13.444	119	66423	3.939
139) n-Butylbenzene	(4)	13.464	92	51213	4.095
138) 1,2-Dichlorobenzene	(4)	13.502	146	50972	3.896
140) 1,2-Diethylbenzene	(4)	13.518	119	51896	3.868
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	6542	3.295
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	39801	3.960
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	38013	3.889
147) Hexachlorobutadiene	(4)	14.670	225	23904	5.180
148) Naphthalene	(4)	14.772	128	115354	3.671
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	37152	3.907
150) 2-Methylnaphthalene	(4)	15.563	142	72506	3.747

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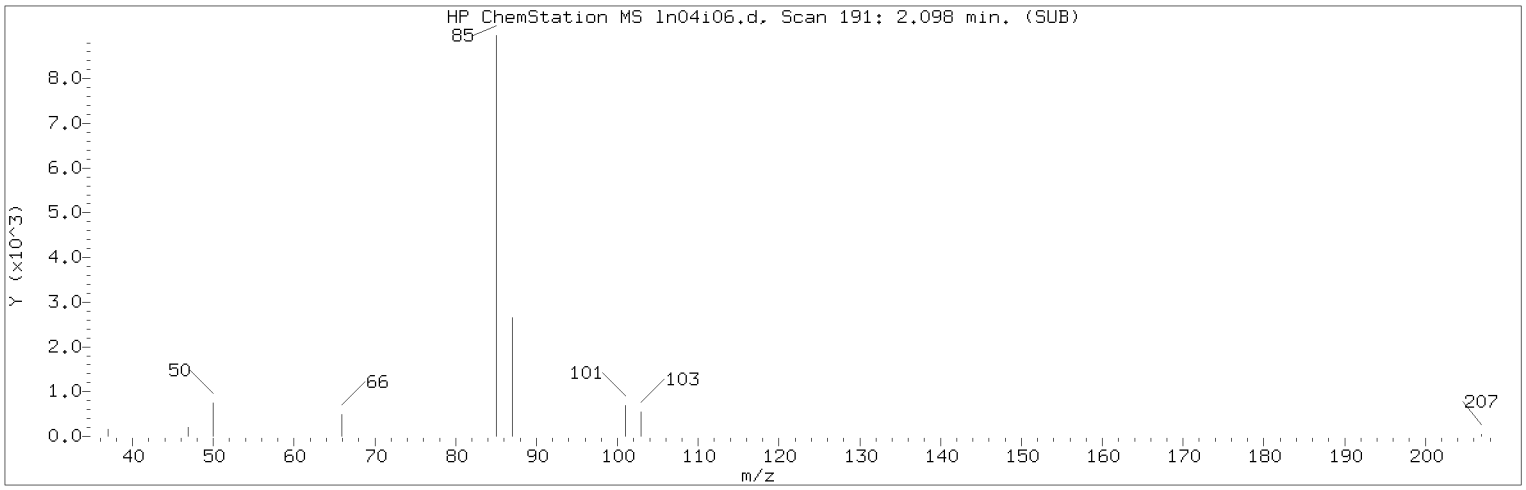
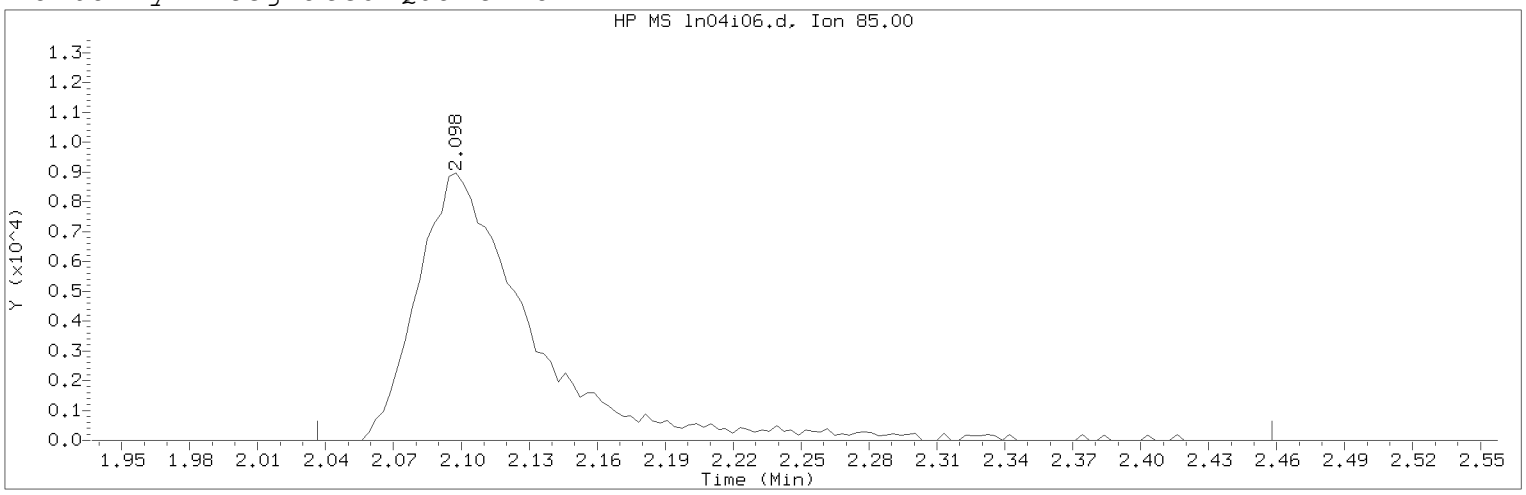
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

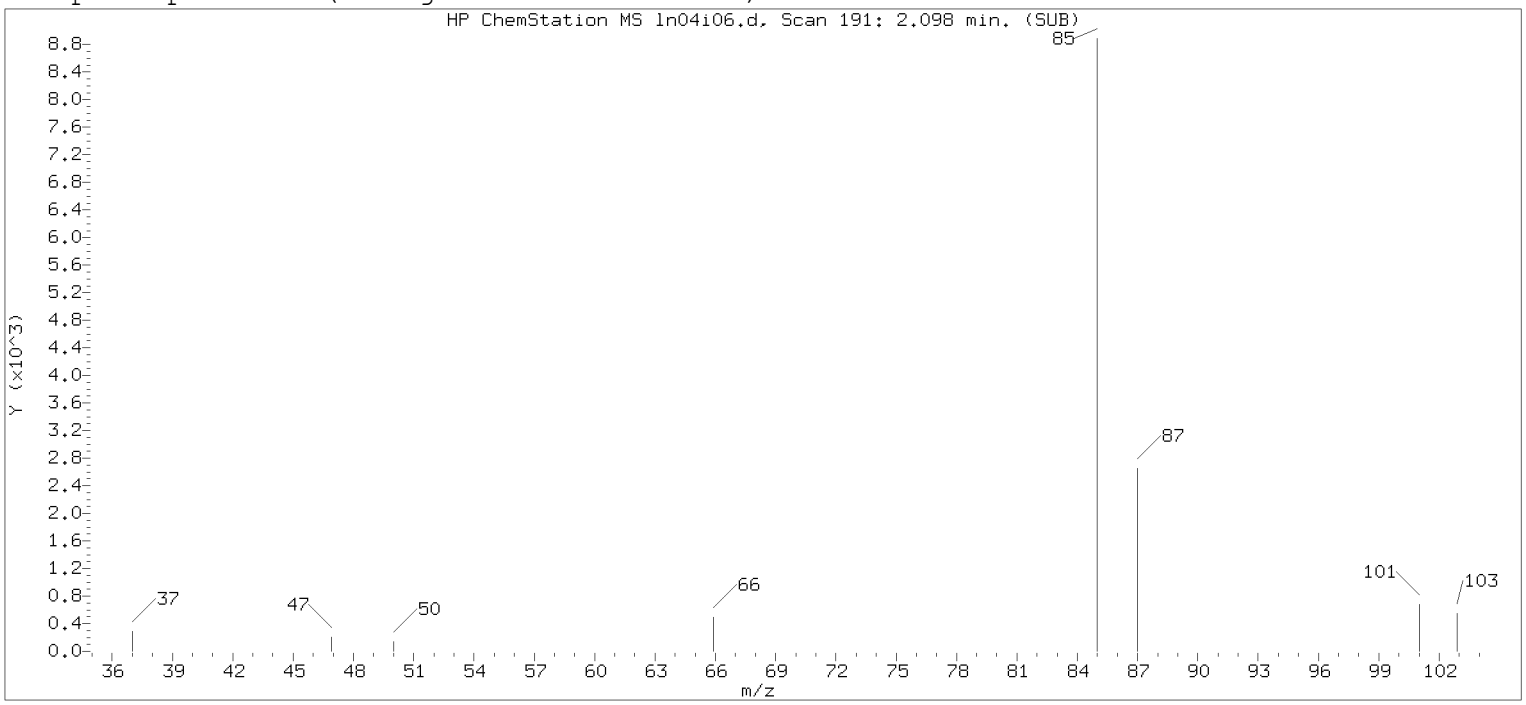
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 191
Retention Time (minutes): 2.098
Quant Ion : 85.00
Area (flag) : 31217M
On-Column Amount (ng) : 3.8978
Integration start scan : 171 Integration stop scan: 302
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

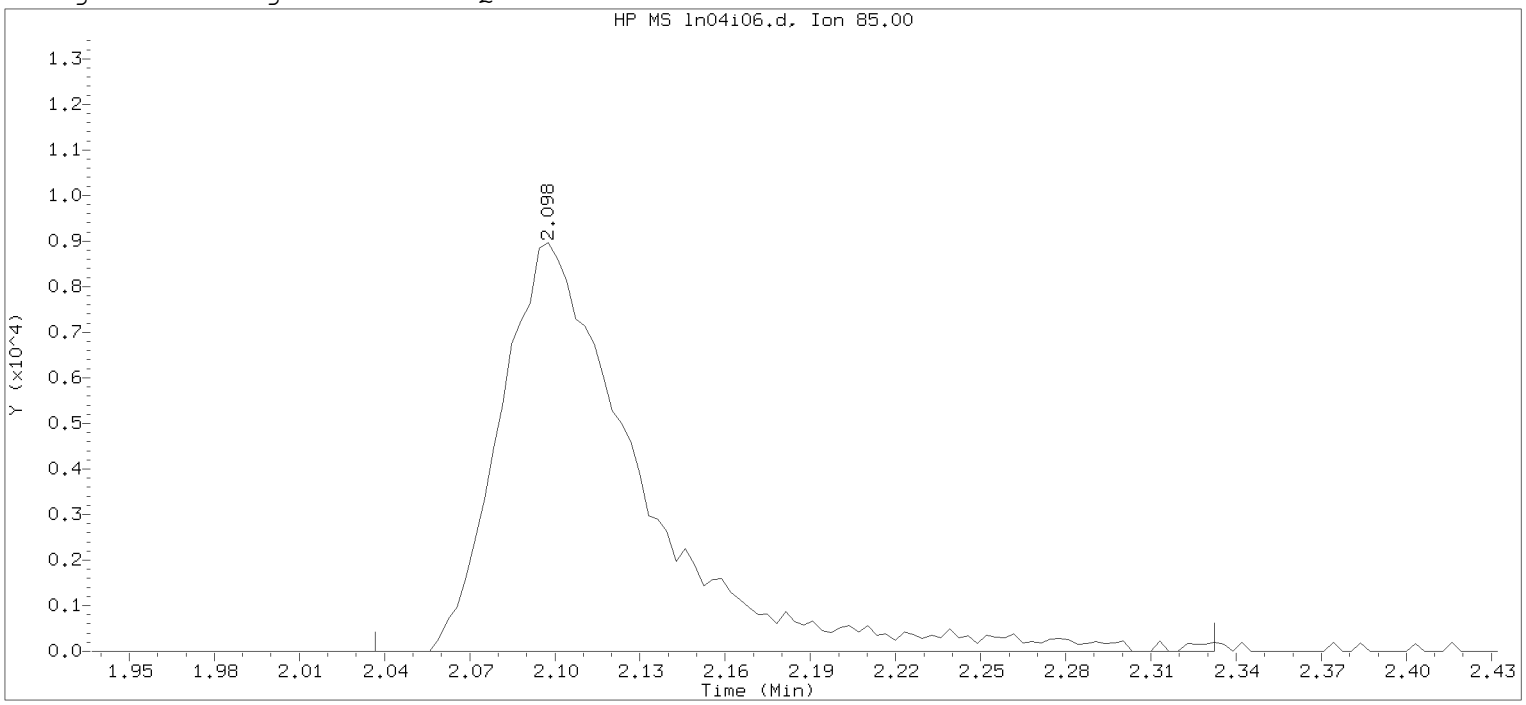
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

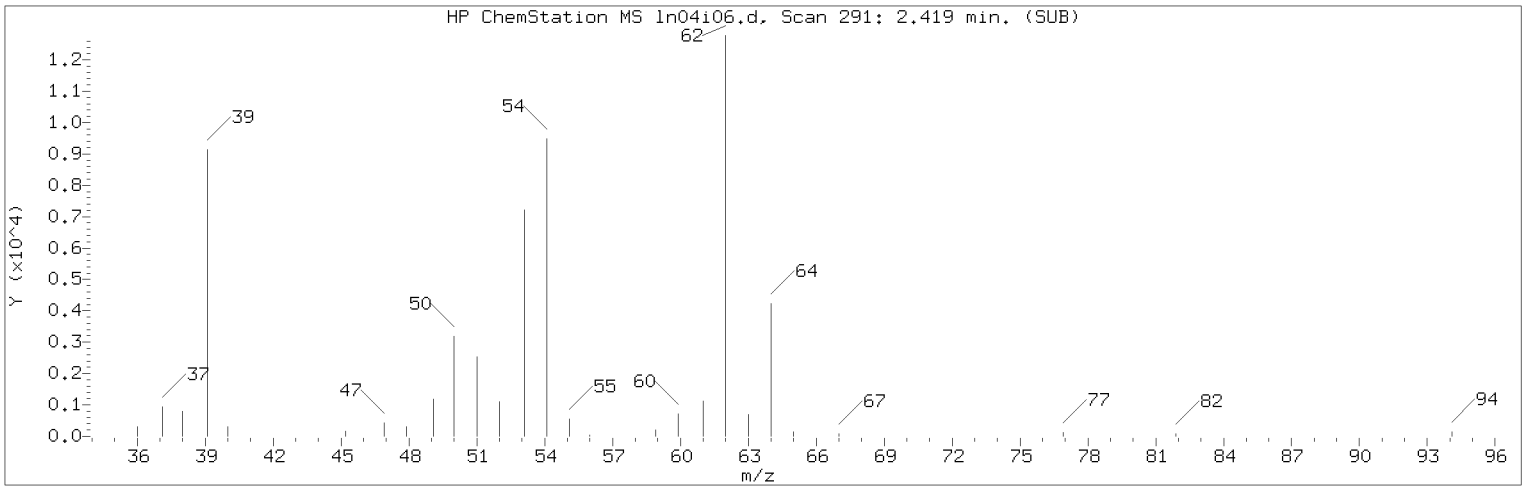
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

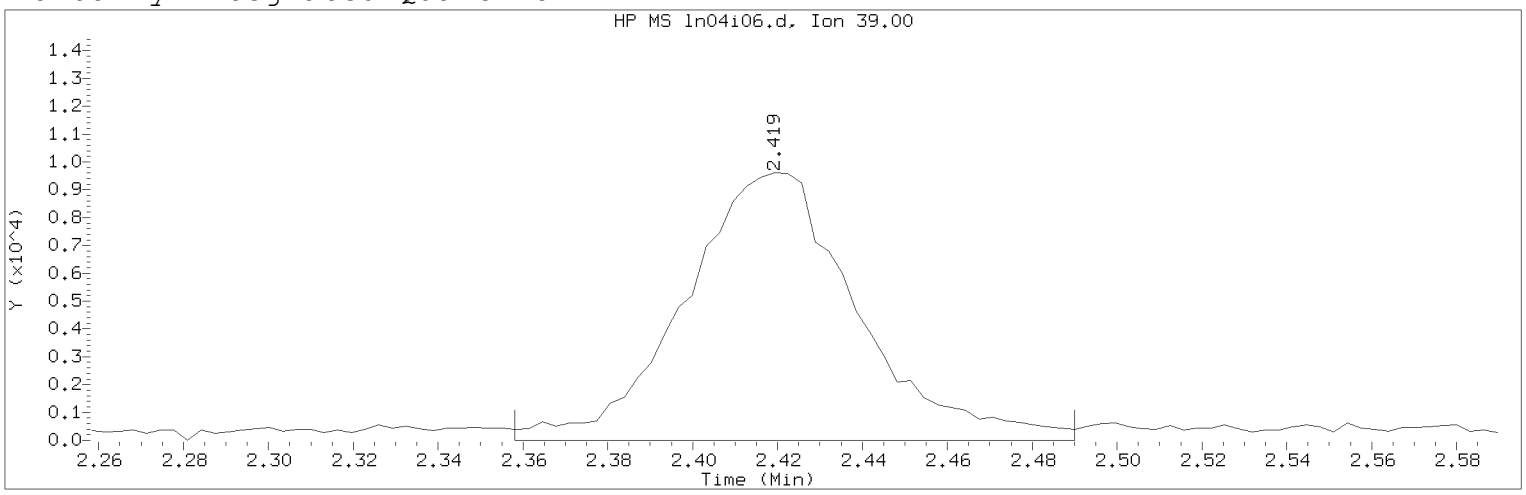
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 191
Retention Time (minutes): 2.098
Quant Ion : 85.00
Area : 30987
On-column Amount (ng) : 3.8874
Integration start scan : 171 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

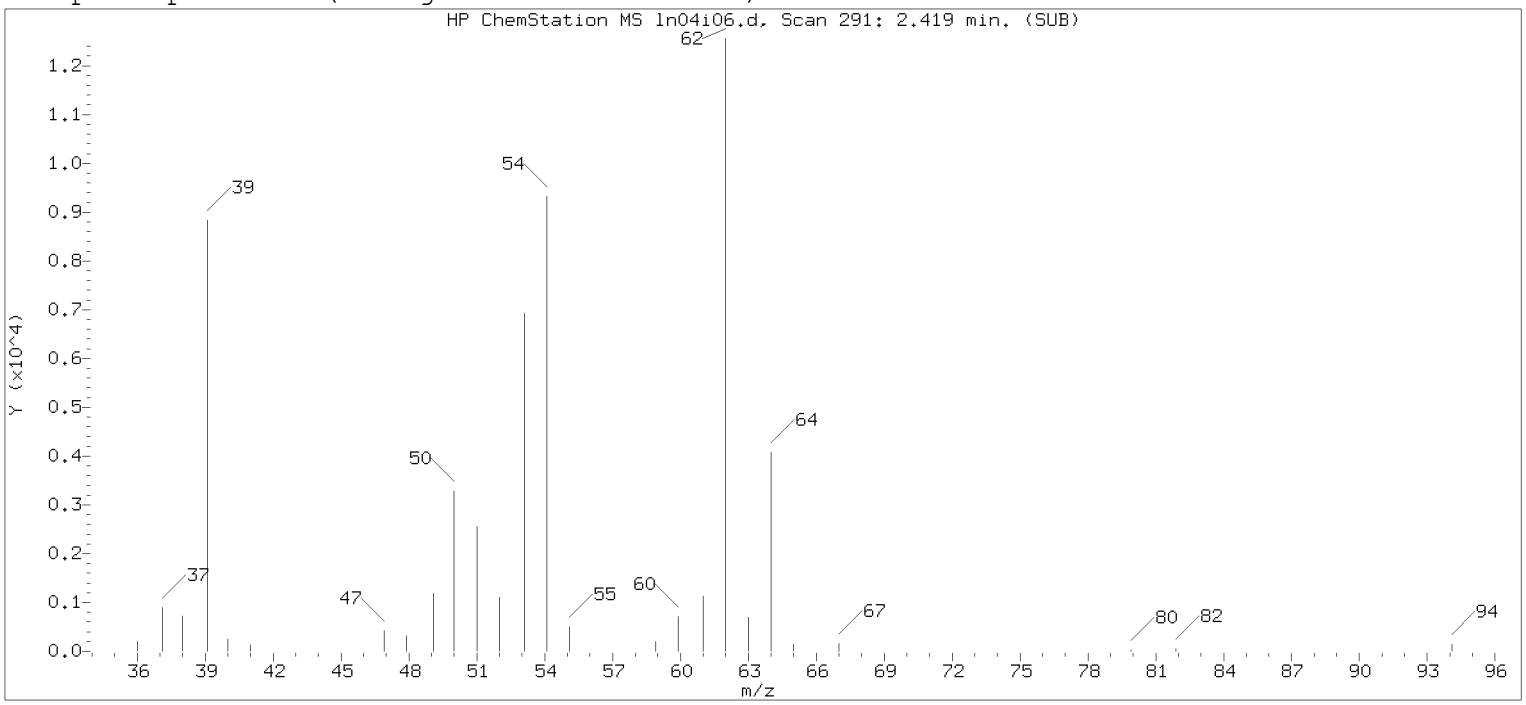
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 291
Retention Time (minutes): 2.419
Quant Ion : 39.00
Area (flag) : 27249M
On-Column Amount (ng) : 4.2517
Integration start scan : 271 Integration stop scan: 312
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

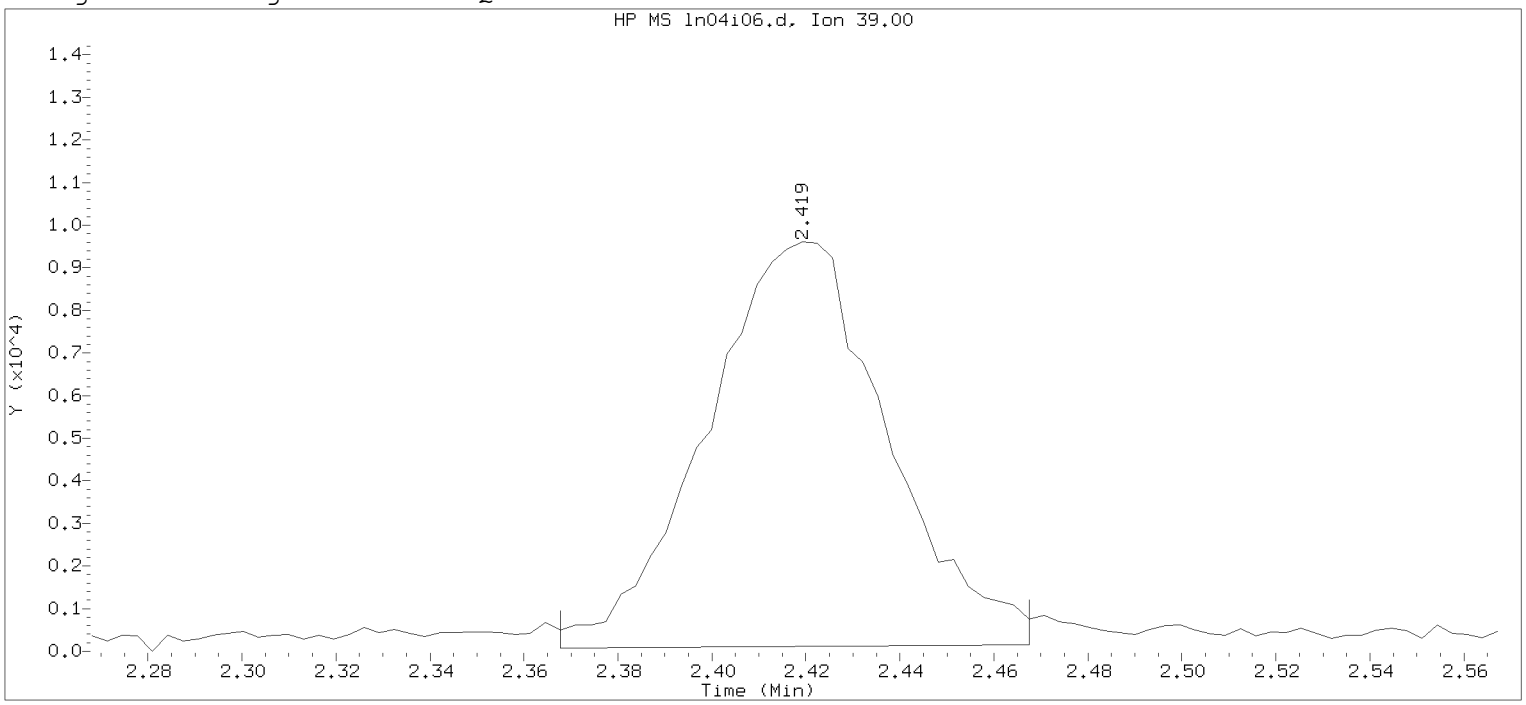
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

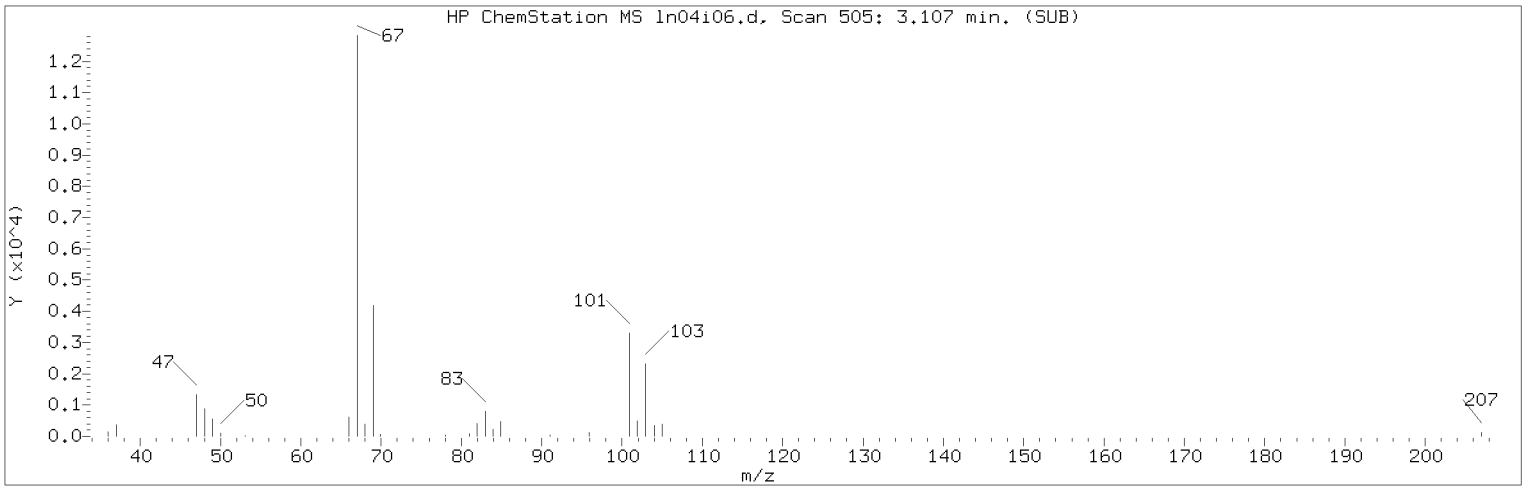
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

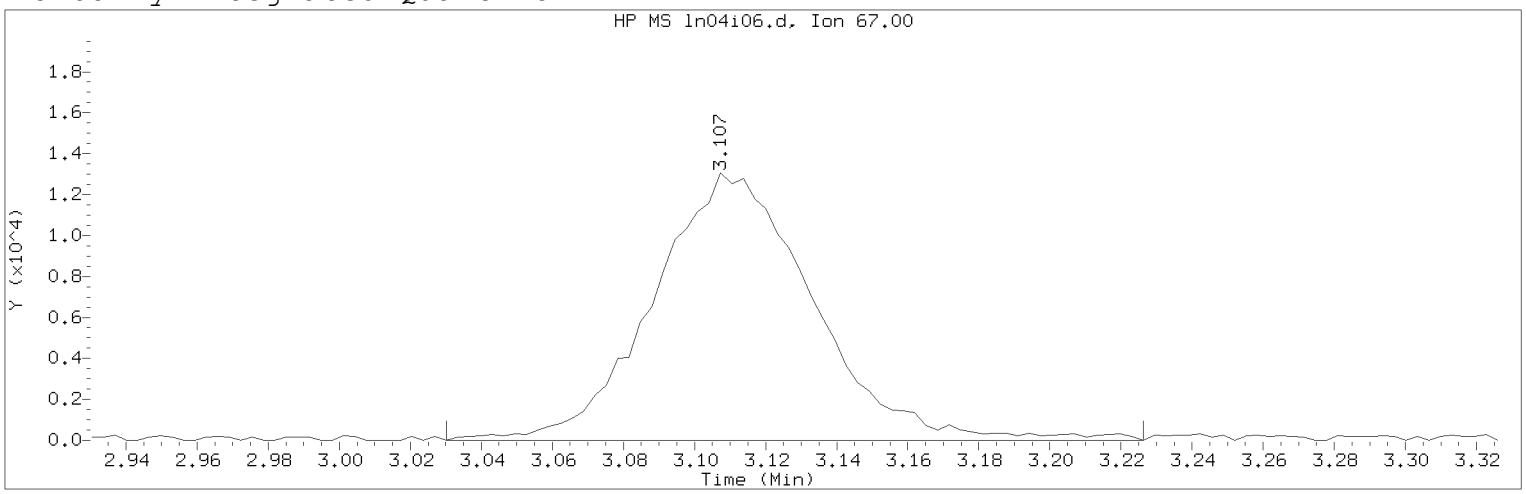
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 291
Retention Time (minutes): 2.419
Quant Ion : 39.00
Area : 25391
On-column Amount (ng) : 4.2082
Integration start scan : 274 Integration stop scan: 305
Y at integration start : 76 Y at integration end: 147

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

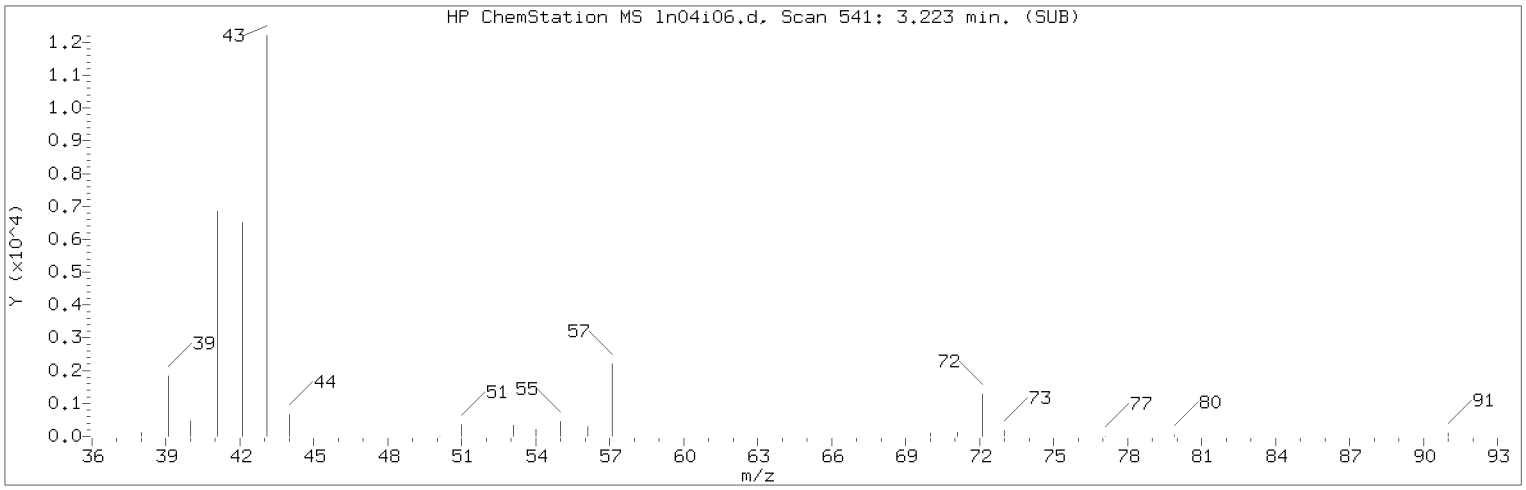
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 505
Retention Time (minutes): 3.107
Quant Ion : 67.00
Area (flag) : 40740M
On-Column Amount (ng) : 4.0151
Integration start scan : 480 Integration stop scan: 541
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

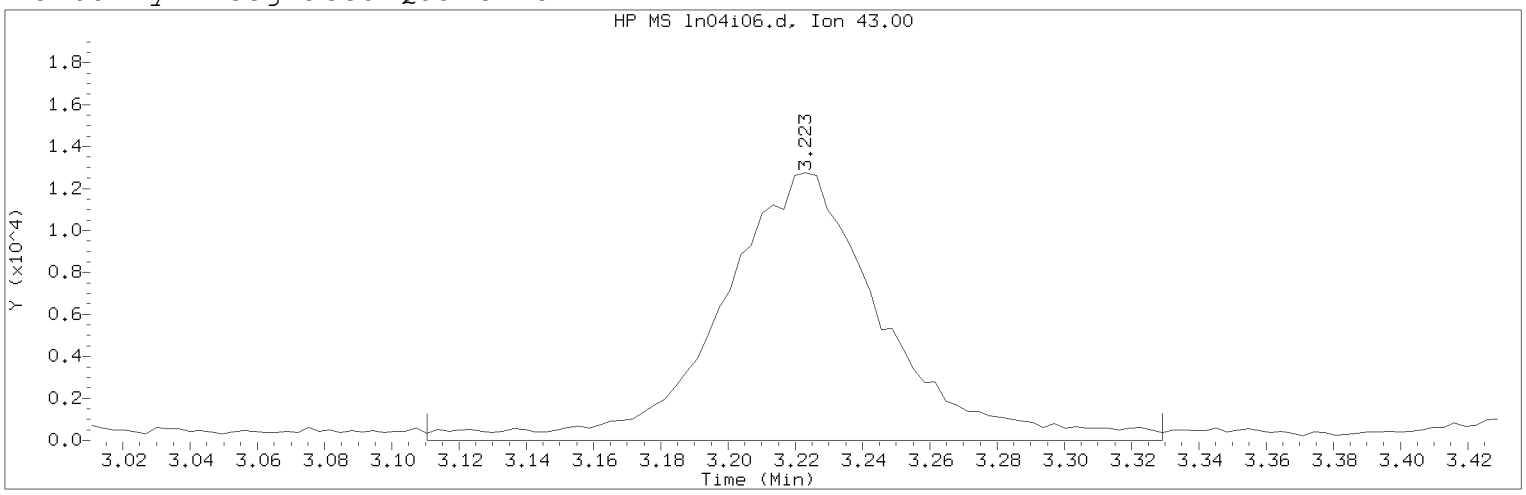
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

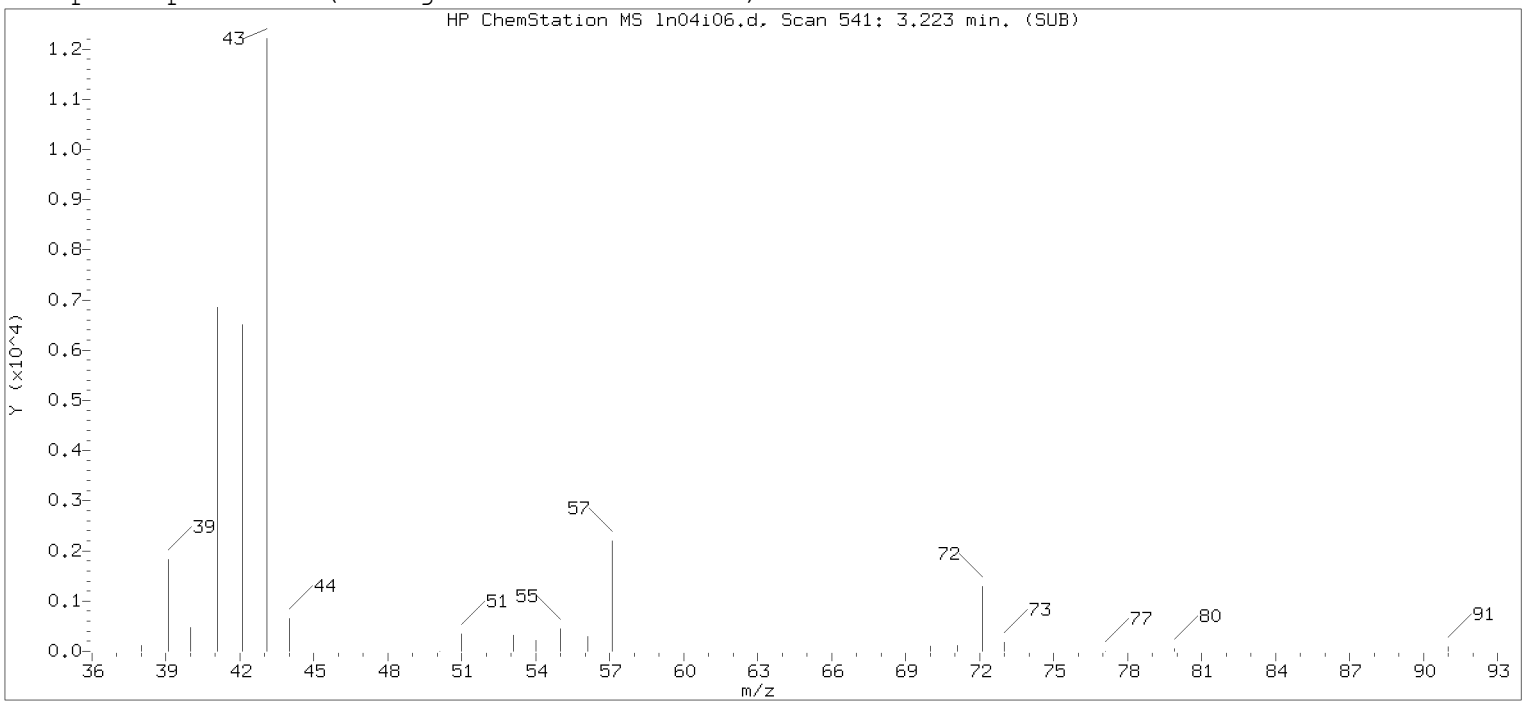
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 541
Retention Time (minutes): 3.223
Quant Ion : 43.00
Area (flag) : 42826M
On-Column Amount (ng) : 4.3694
Integration start scan : 505 Integration stop scan: 573
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

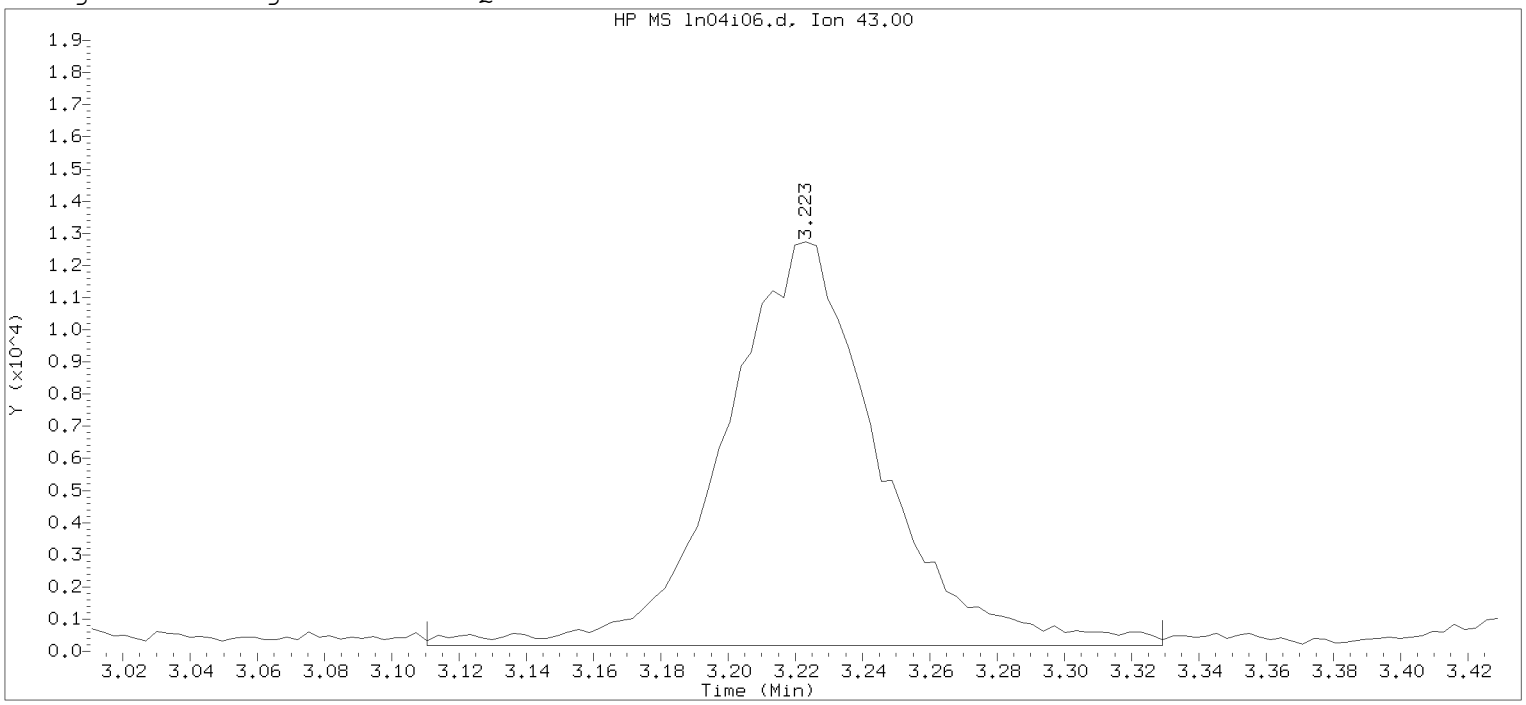
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

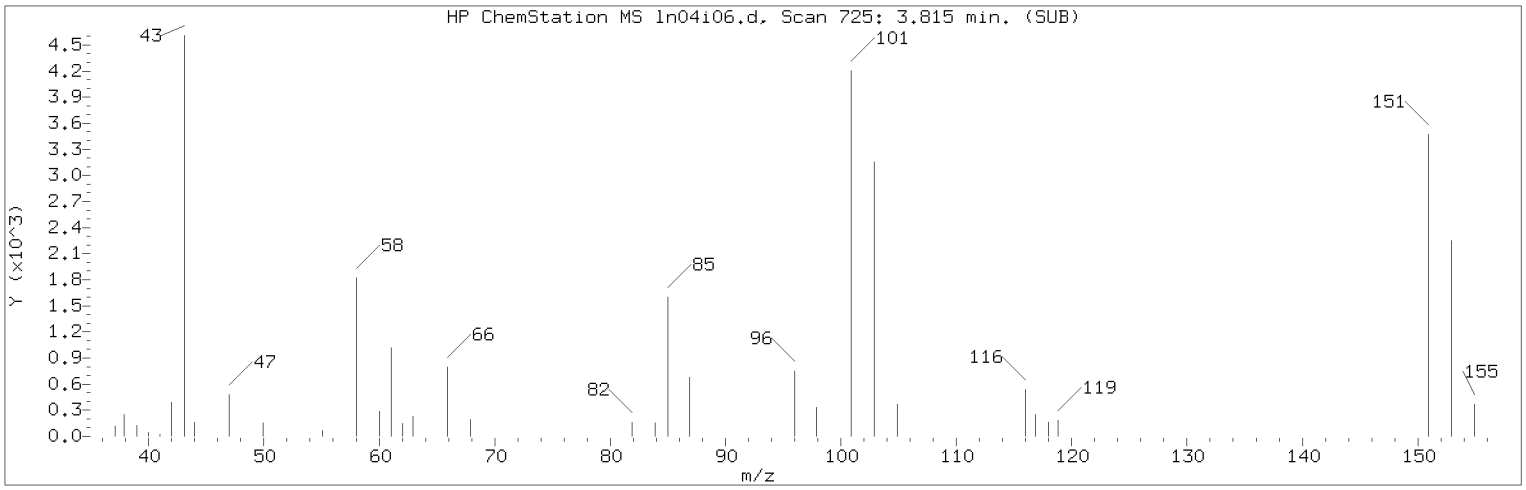
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

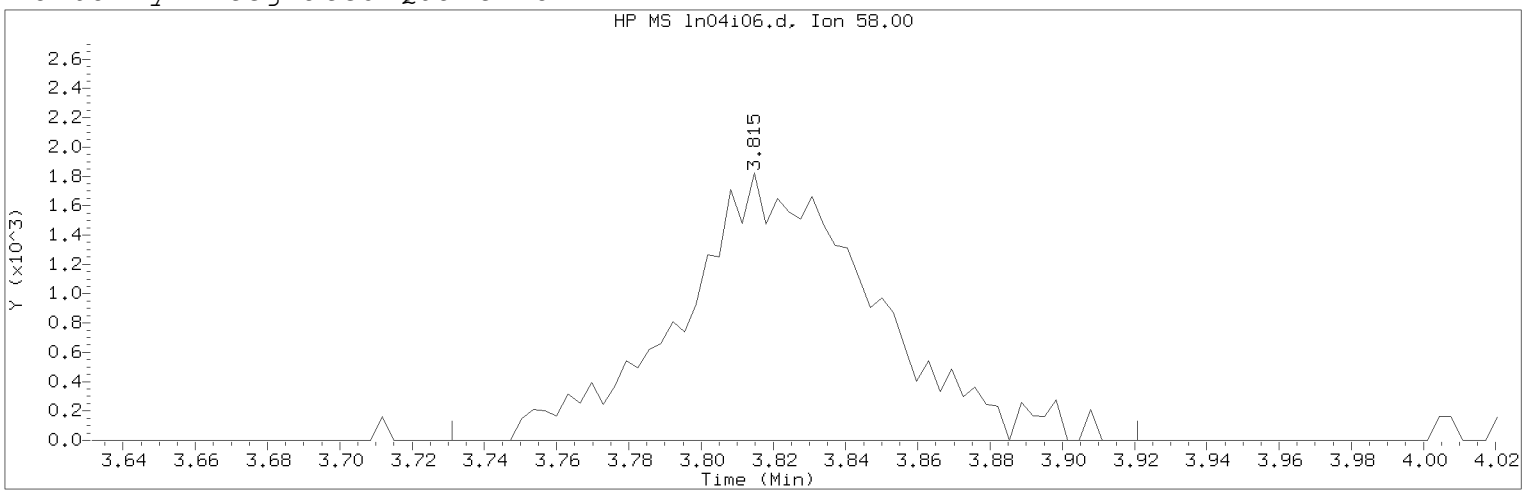
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 541
Retention Time (minutes): 3.223
Quant Ion : 43.00
Area : 40359
On-column Amount (ng) : 4.1550
Integration start scan : 505 Integration stop scan: 573
Y at integration start : 183 Y at integration end: 183

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

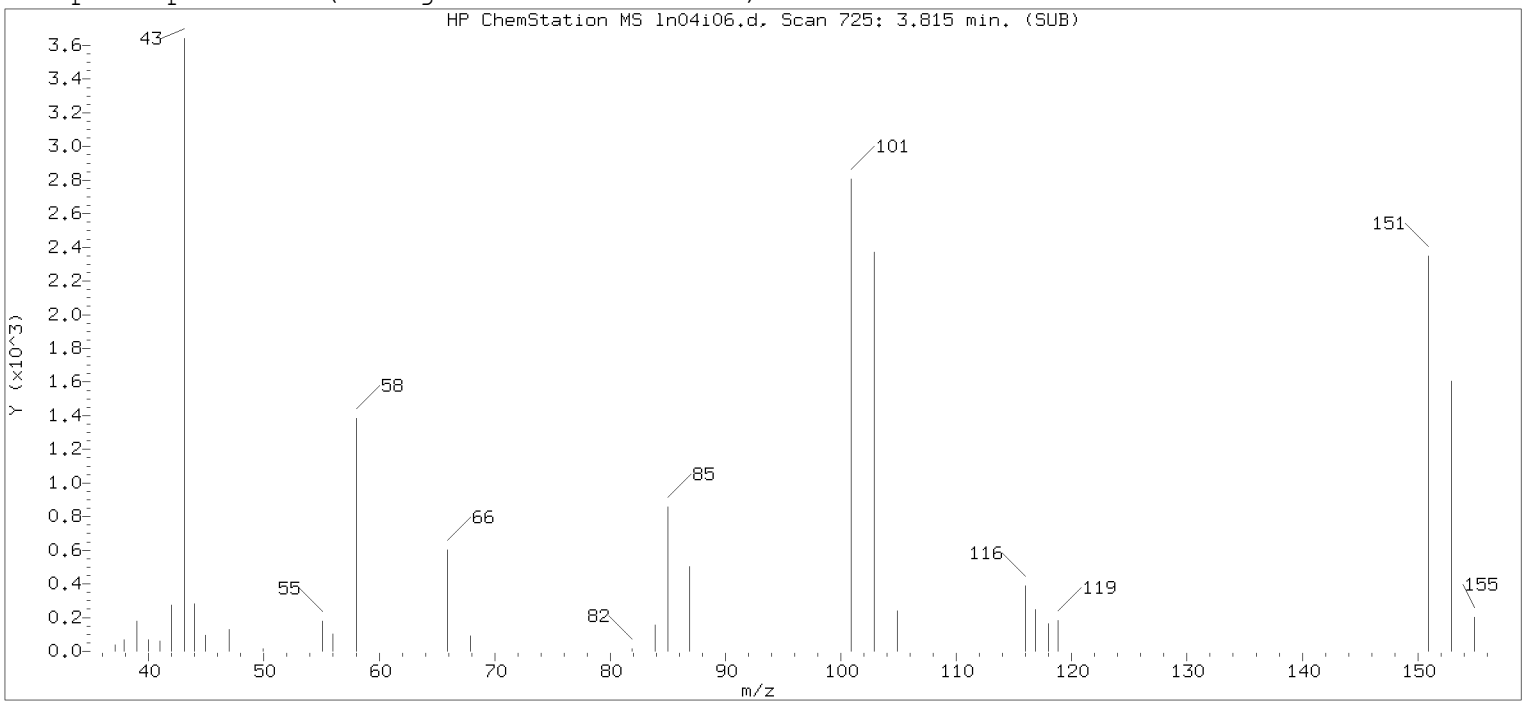
Compound Number : 18
Compound Name : Acetone
Scan Number : 725
Retention Time (minutes): 3.815
Quant Ion : 58.00
Area (flag) : 6763M
On-Column Amount (ng) : 7.6731
Integration start scan : 698 Integration stop scan: 757
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

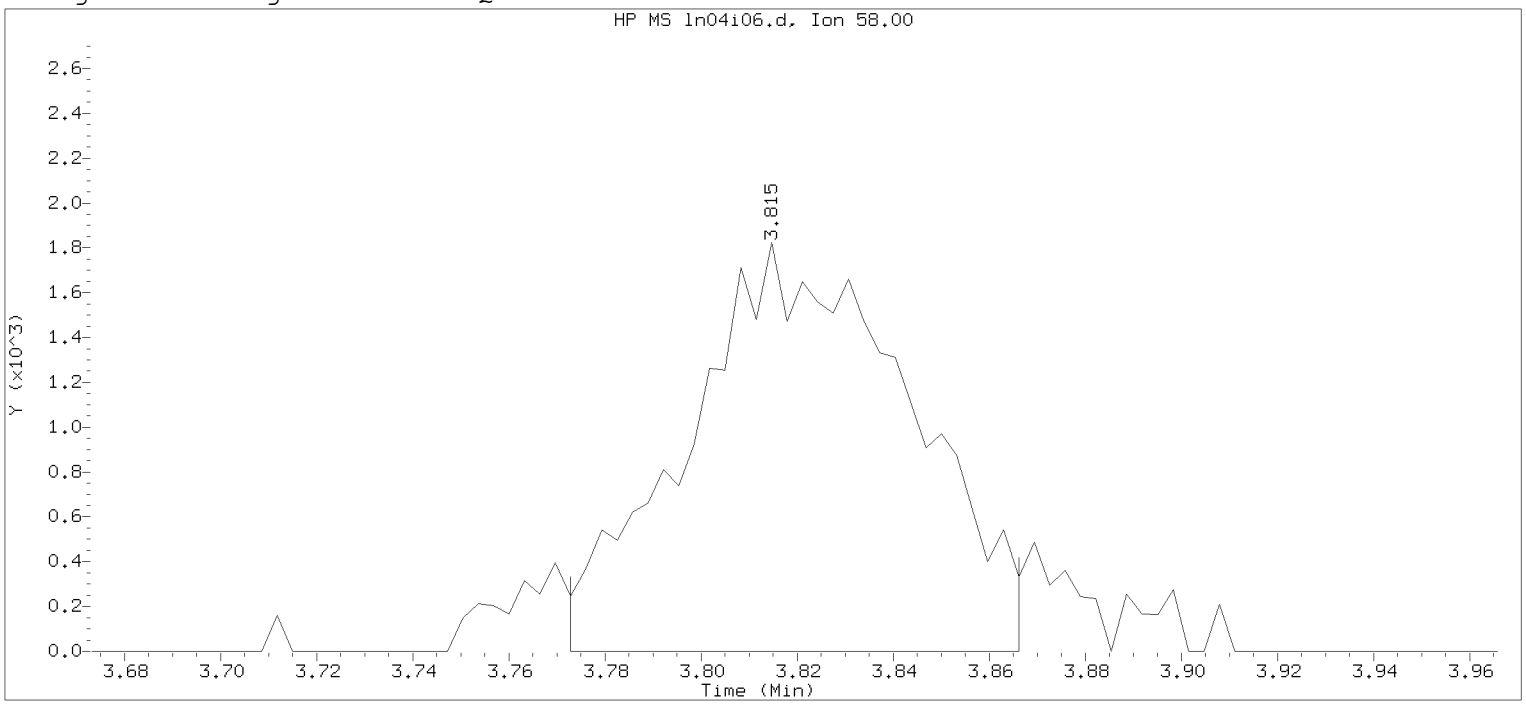
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

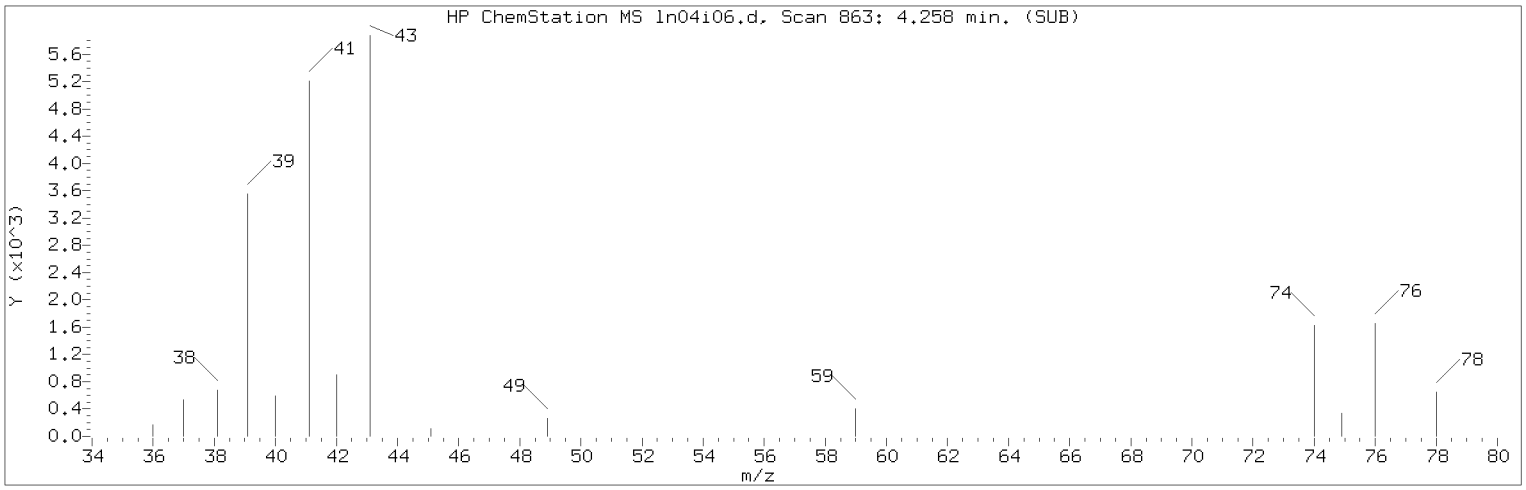
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

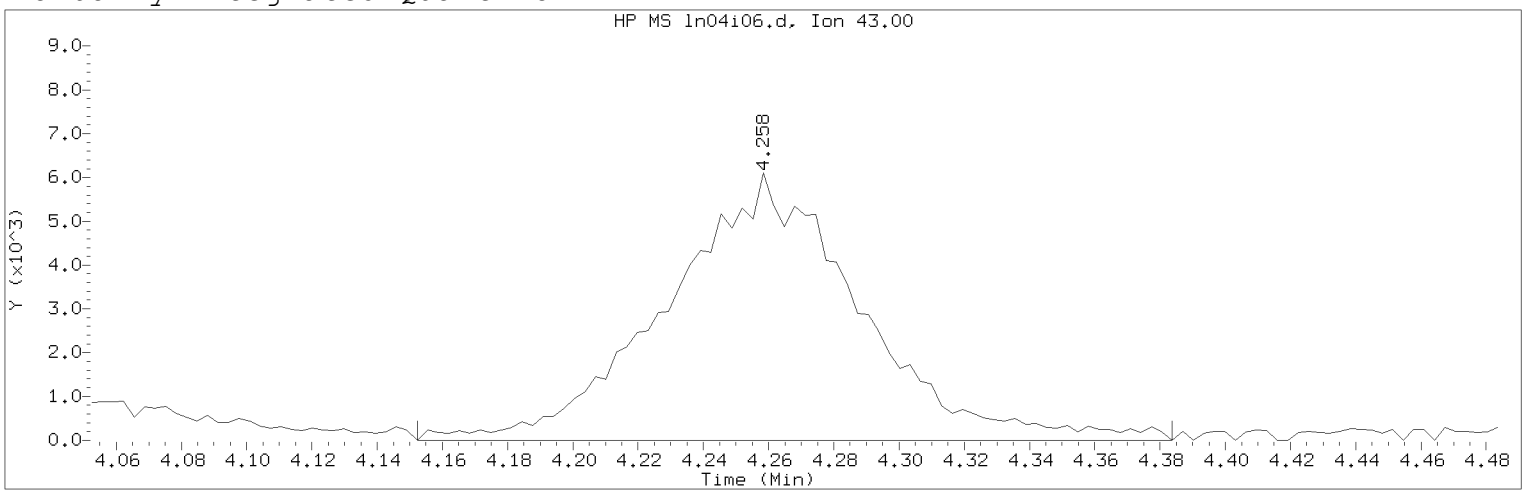
Compound Number : 18
Compound Name : Acetone
Scan Number : 725
Retention Time (minutes): 3.815
Quant Ion : 58.00
Area : 5862
On-column Amount (ng) : 7.7134
Integration start scan : 711 Integration stop scan: 740
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

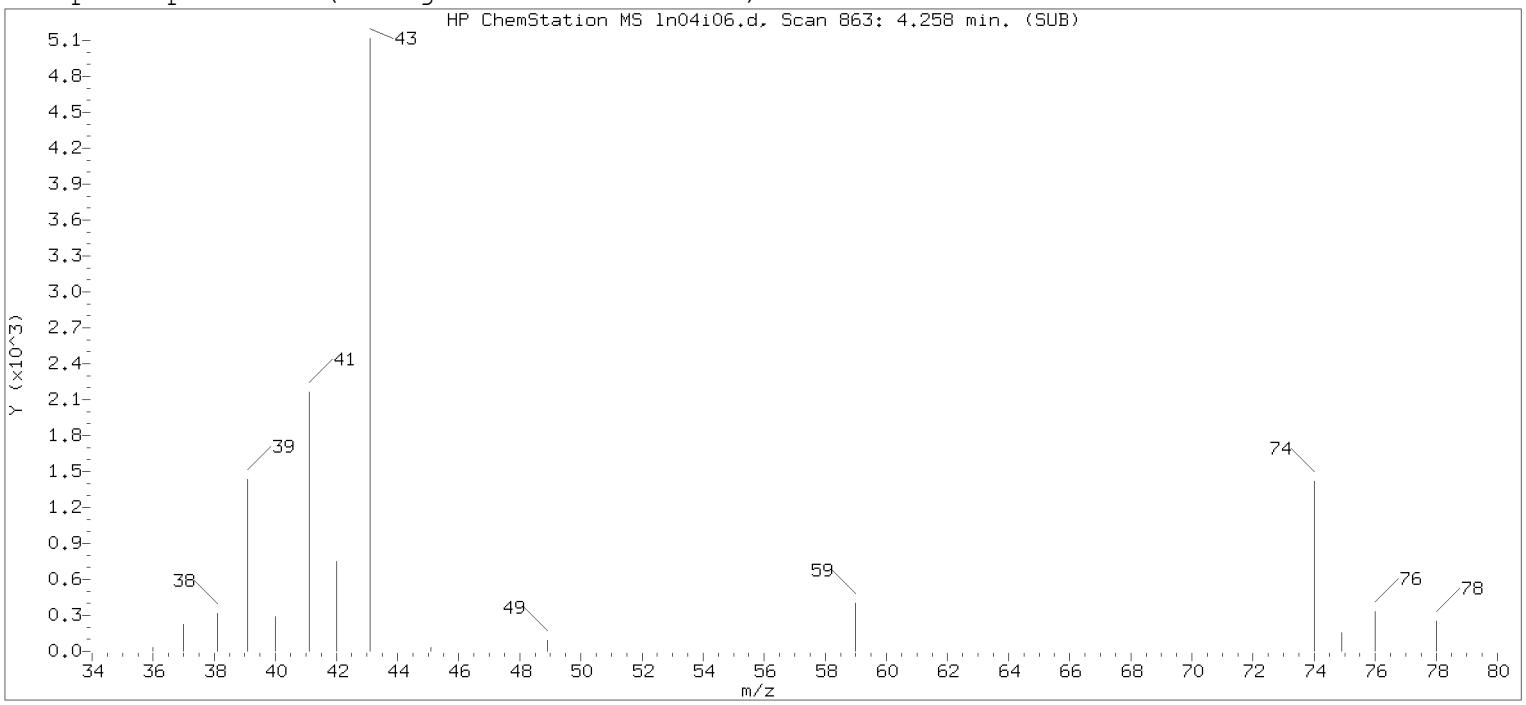
Compound Number	: 27		
Compound Name	: Methyl Acetate		
Scan Number	: 863		
Retention Time (minutes)	: 4.258		
Quant Ion	: 43.00		
Area (flag)	: 24928M		
On-Column Amount (ng)	: 3.9757		
Integration start scan	: 829	Integration stop scan:	901
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

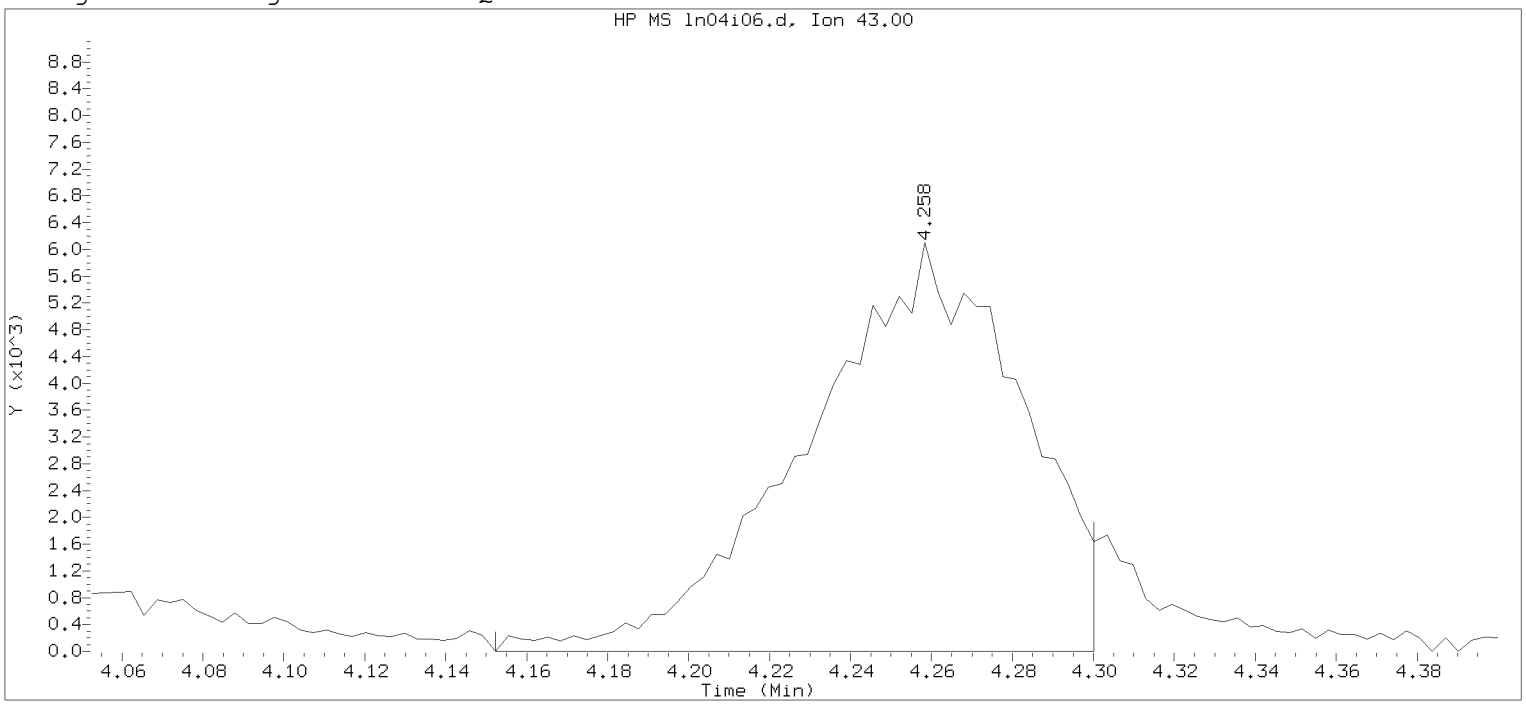
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

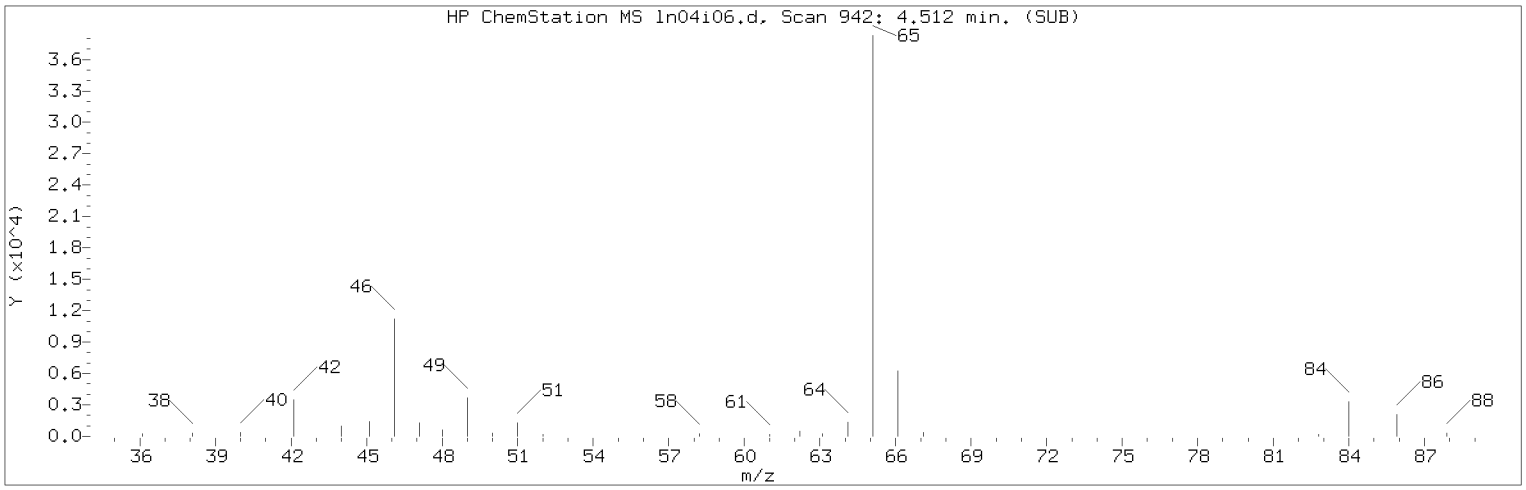
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

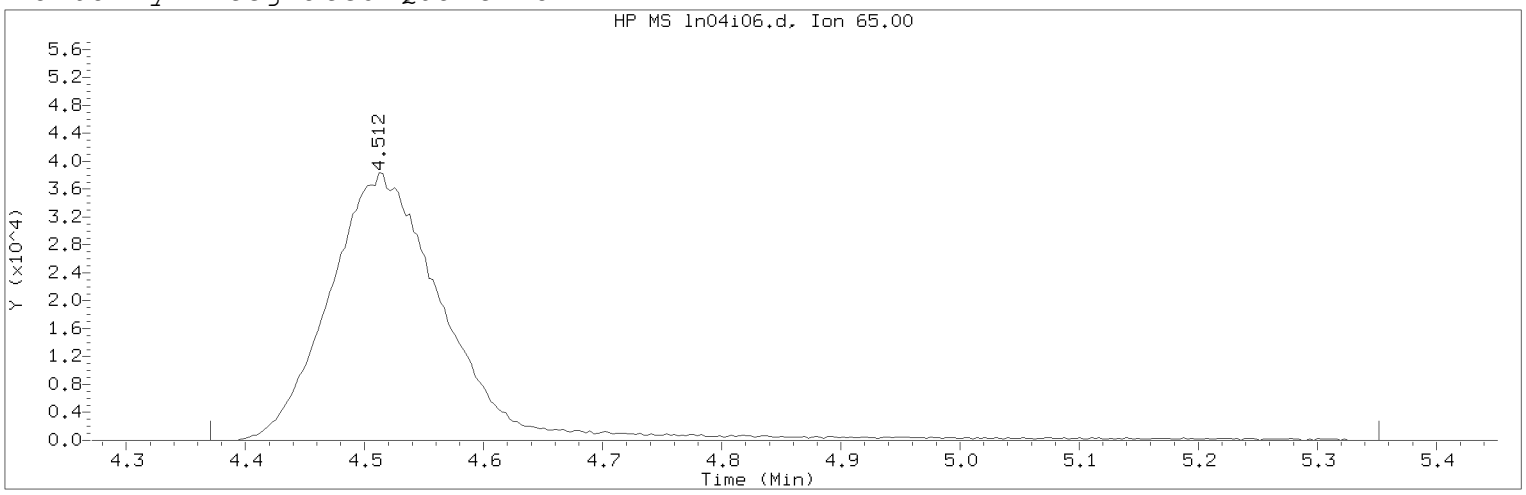
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 863
Retention Time (minutes): 4.258
Quant Ion : 43.00
Area : 22302
On-column Amount (ng) : 3.7243
Integration start scan : 829 Integration stop scan: 875
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

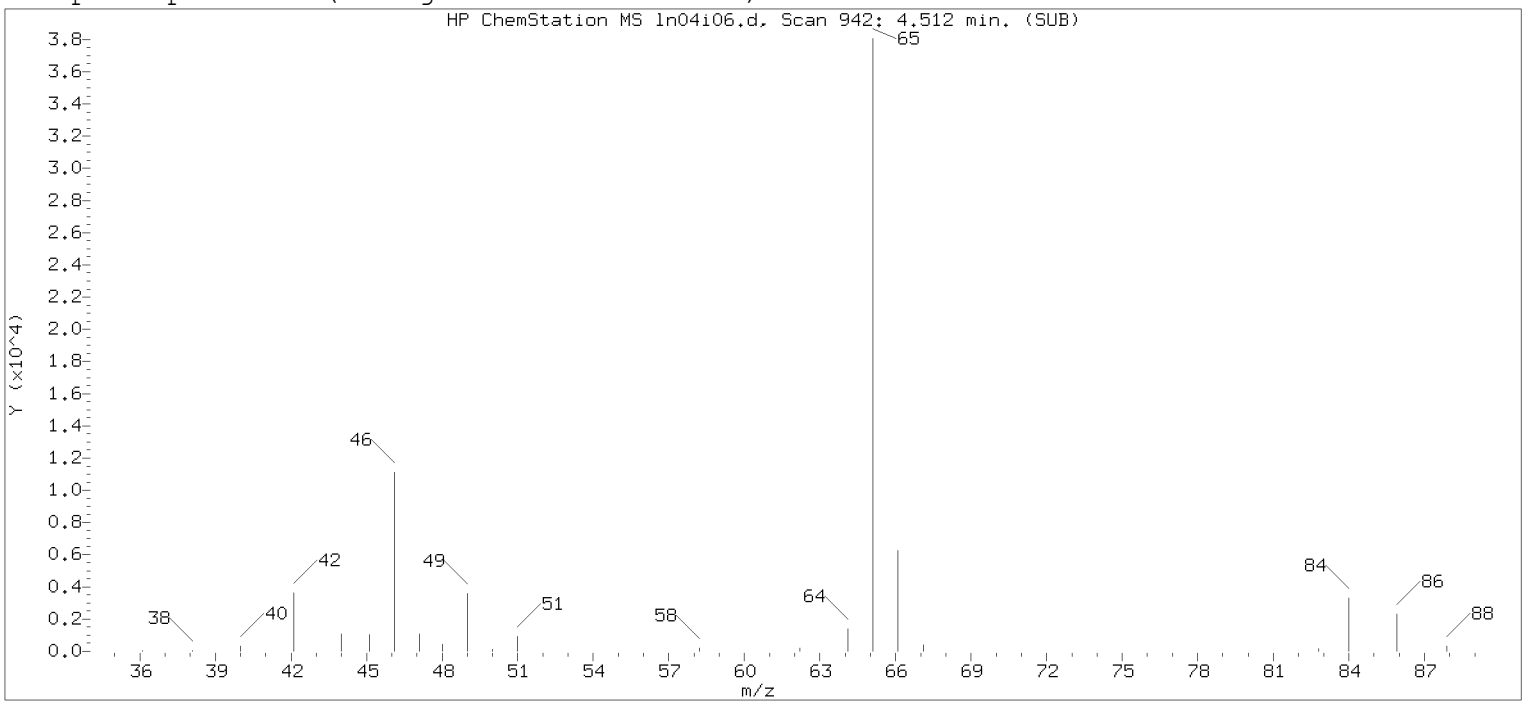
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area (flag) : 262044M
On-Column Amount (ng) : 250.0000
Integration start scan : 897 Integration stop scan: 1202
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

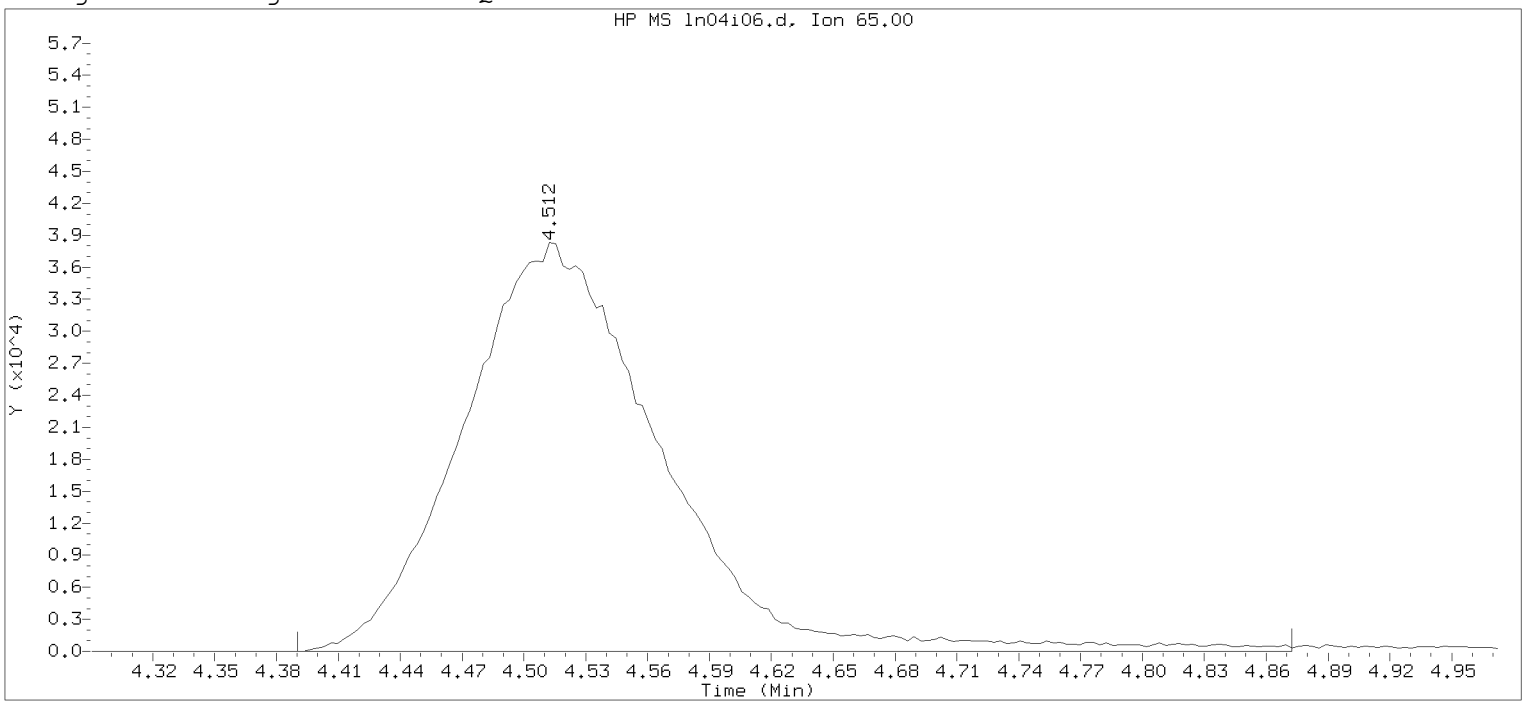
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

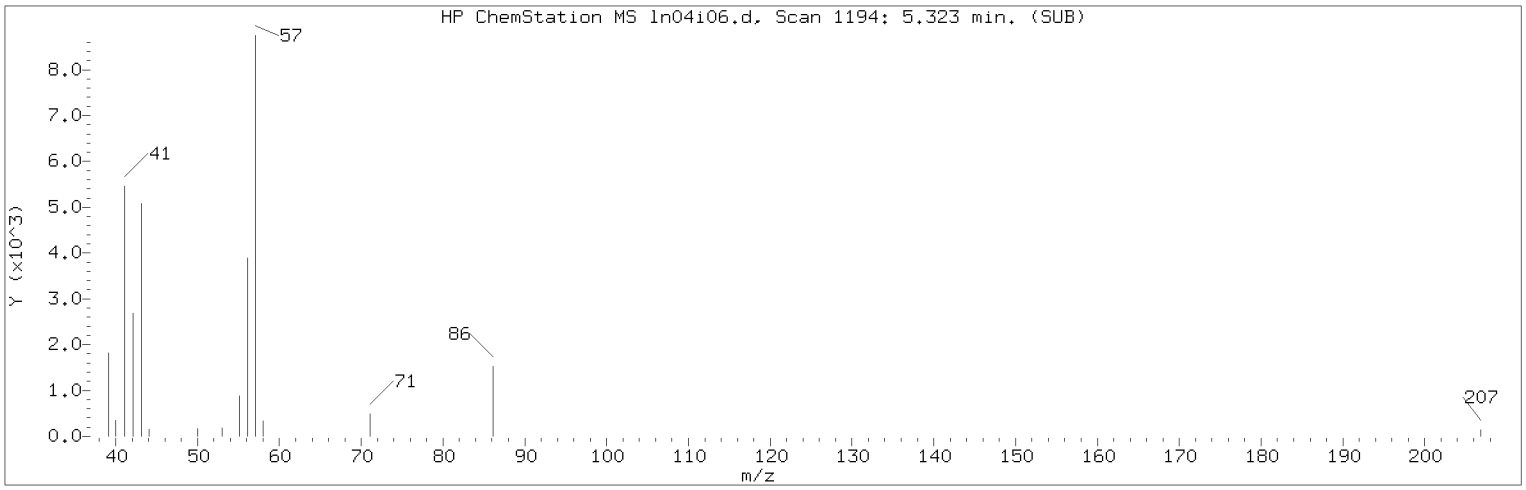
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

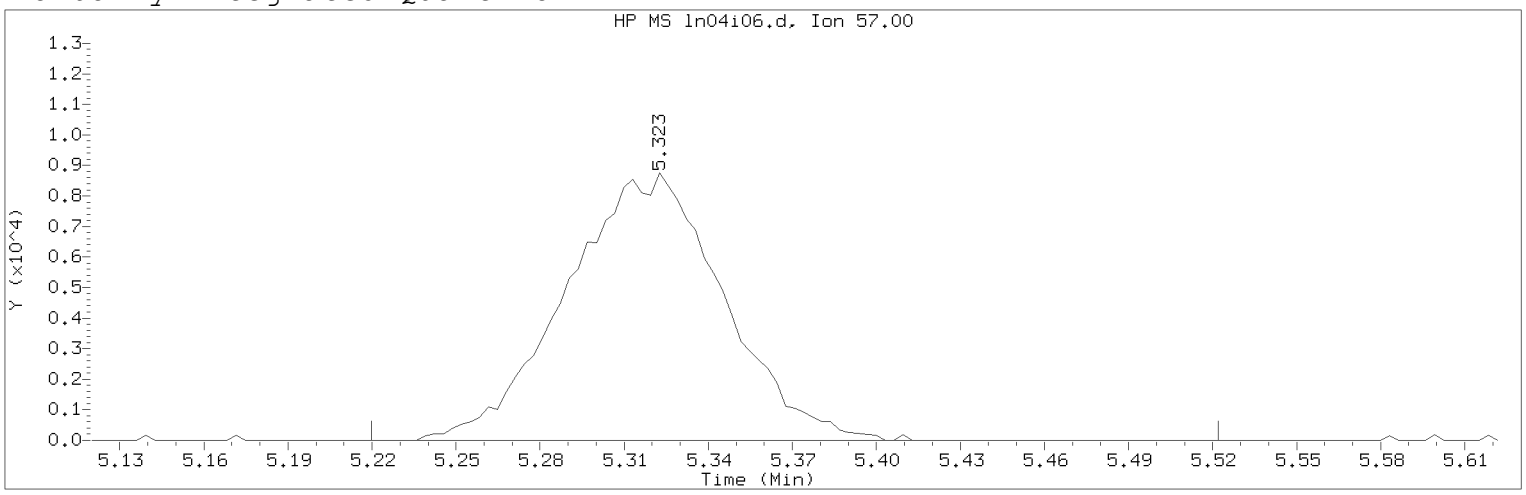
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area : 254362
On-column Amount (ng) : 250.0000
Integration start scan : 903 Integration stop scan: 1053
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

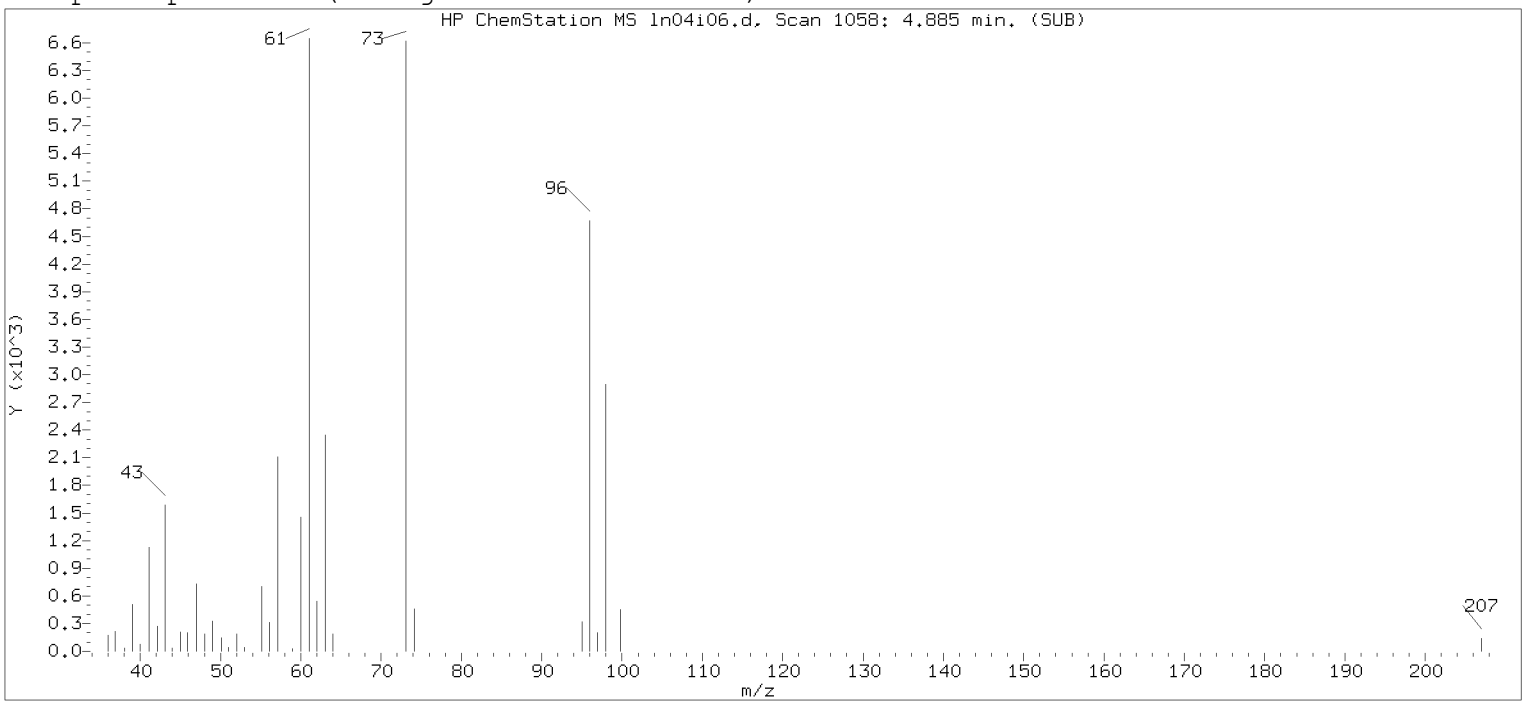
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1194
Retention Time (minutes): 5.323
Quant Ion : 57.00
Area (flag) : 33969M
On-Column Amount (ng) : 3.8769
Integration start scan : 1161 Integration stop scan: 1255
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

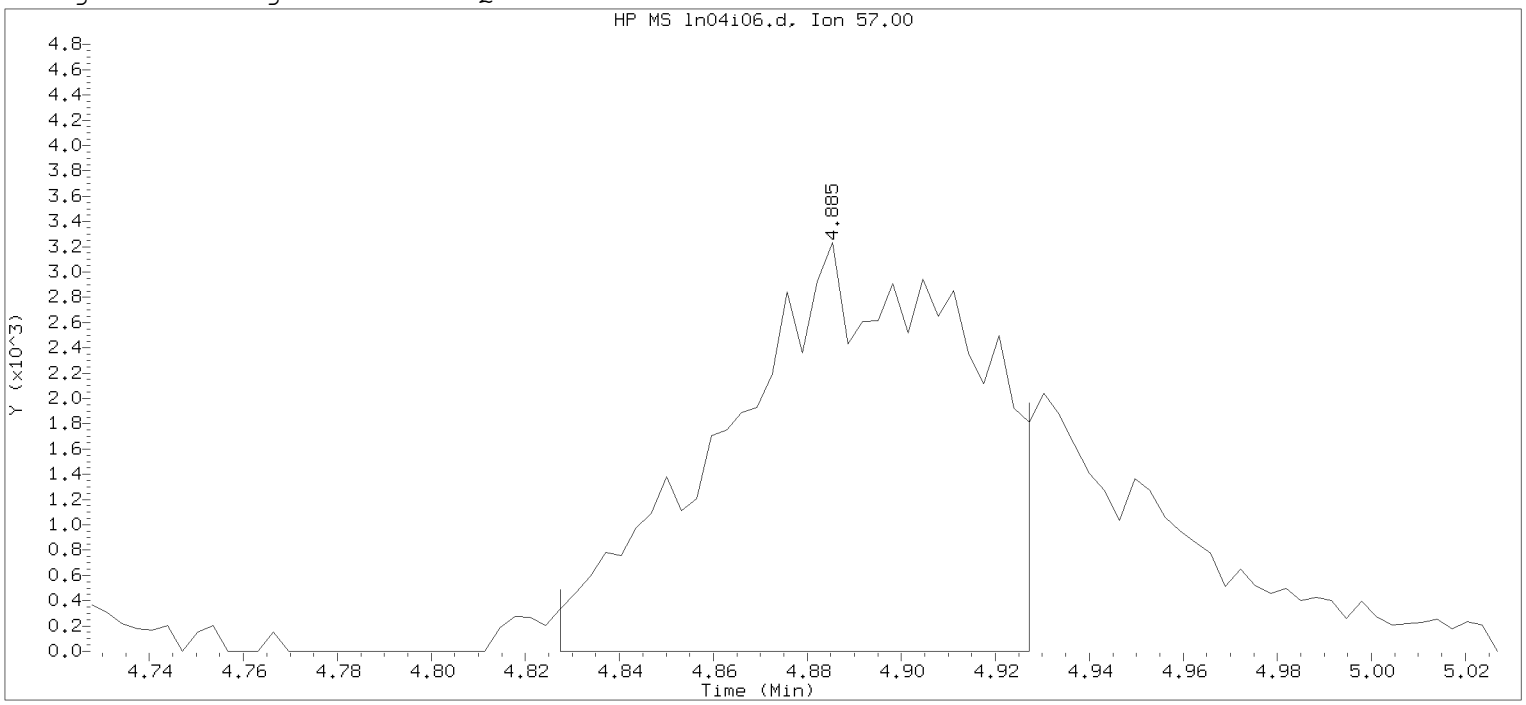
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

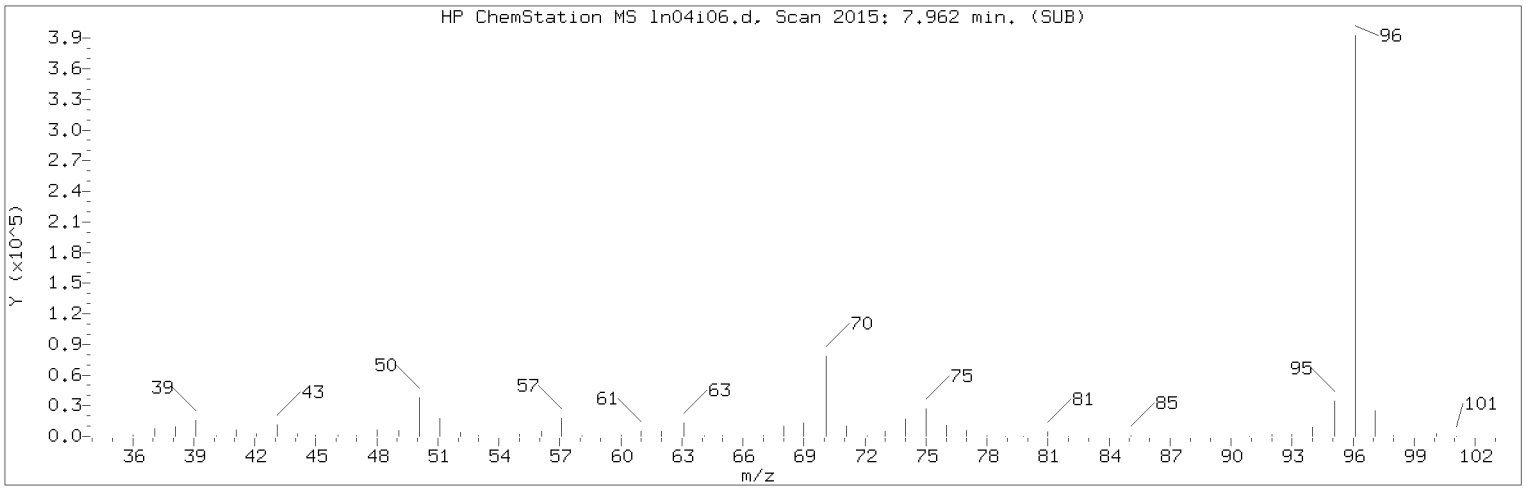
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

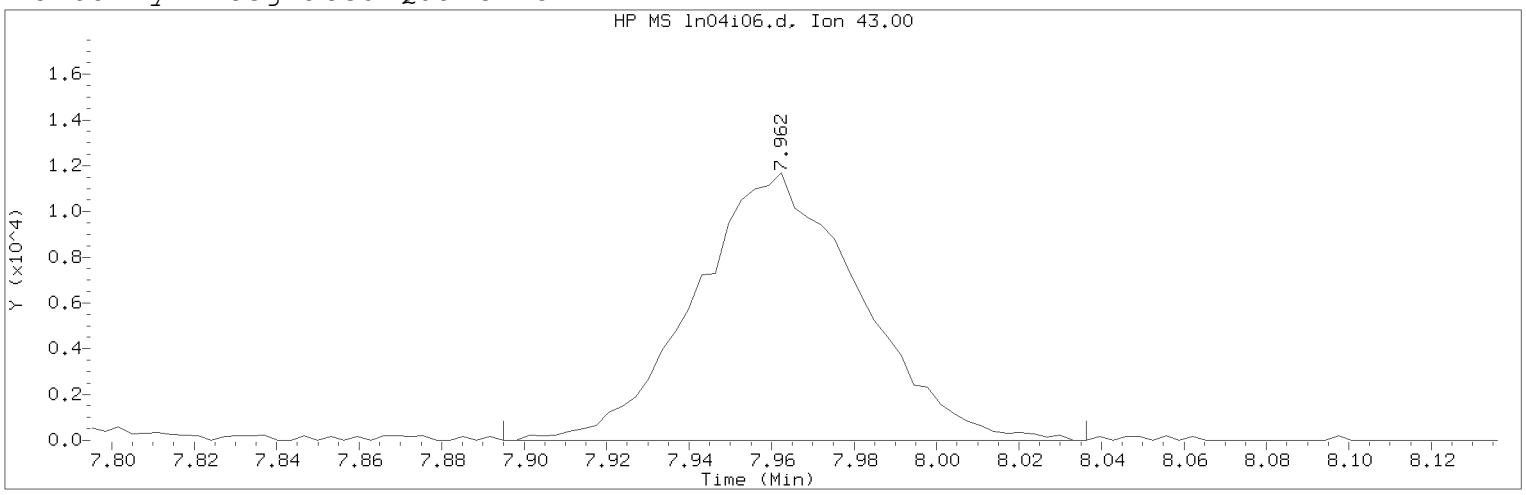
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1058
Retention Time (minutes): 4.885
Quant Ion : 57.00
Area : 11708
On-column Amount (ng) : 3.2297
Integration start scan : 1039 Integration stop scan: 1070
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

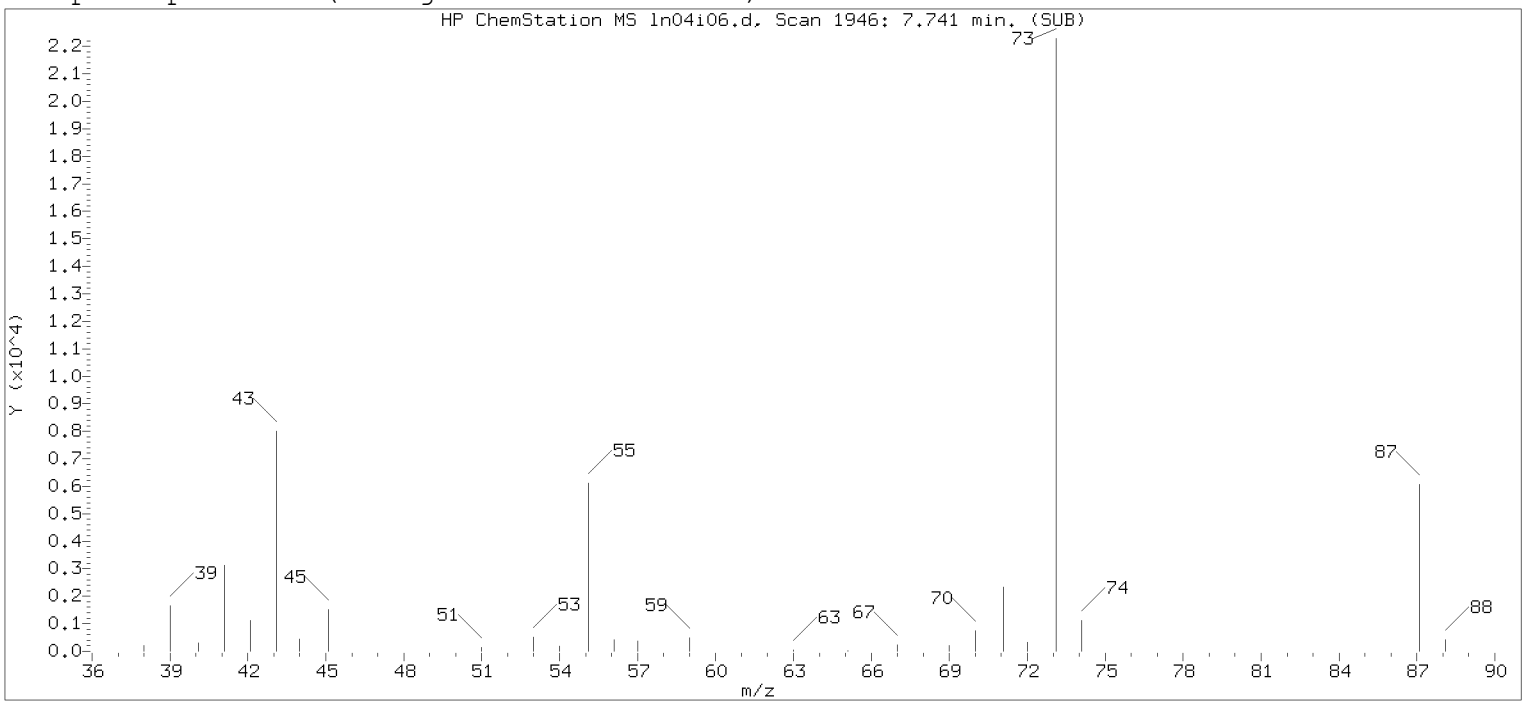
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2015
Retention Time (minutes): 7.962
Quant Ion : 43.00
Area (flag) : 32502MA
On-Column Amount (ng) : 3.9708
Integration start scan : 1993 Integration stop scan: 2037
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

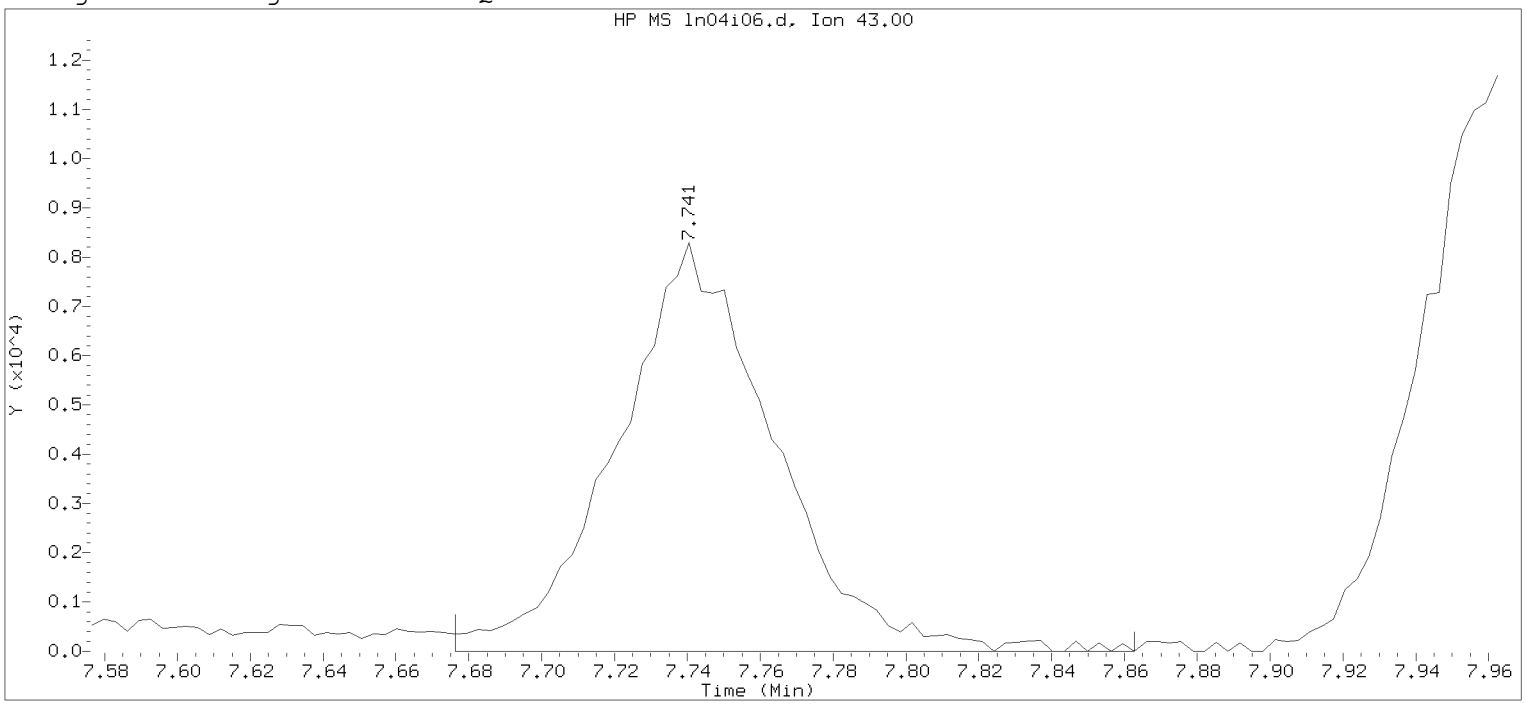
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

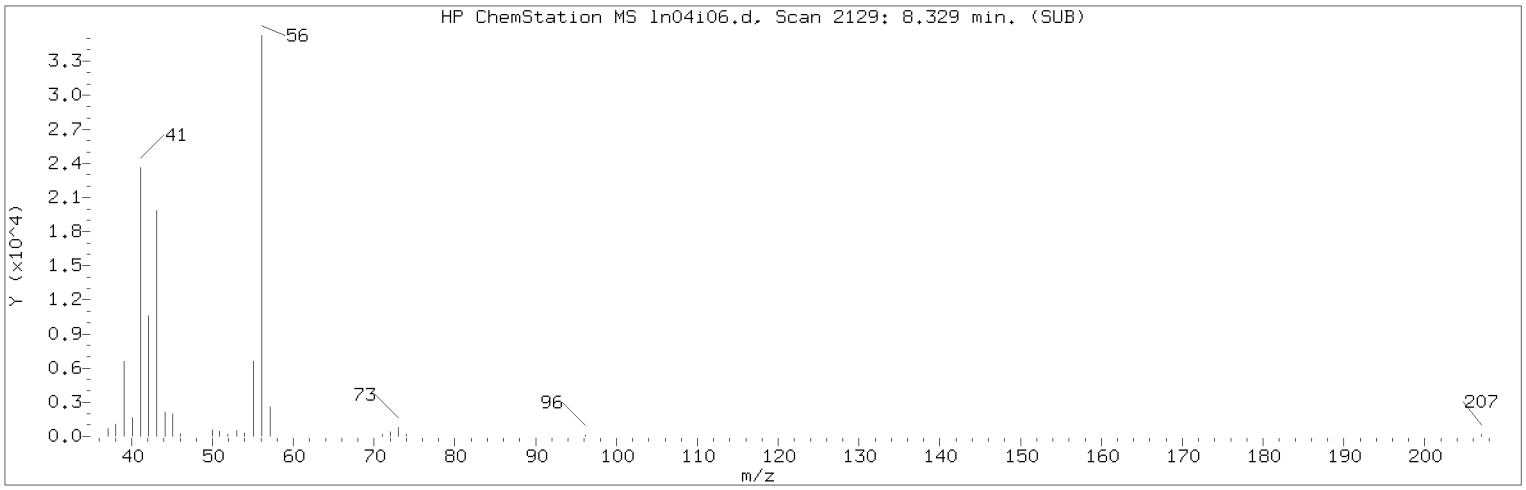
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

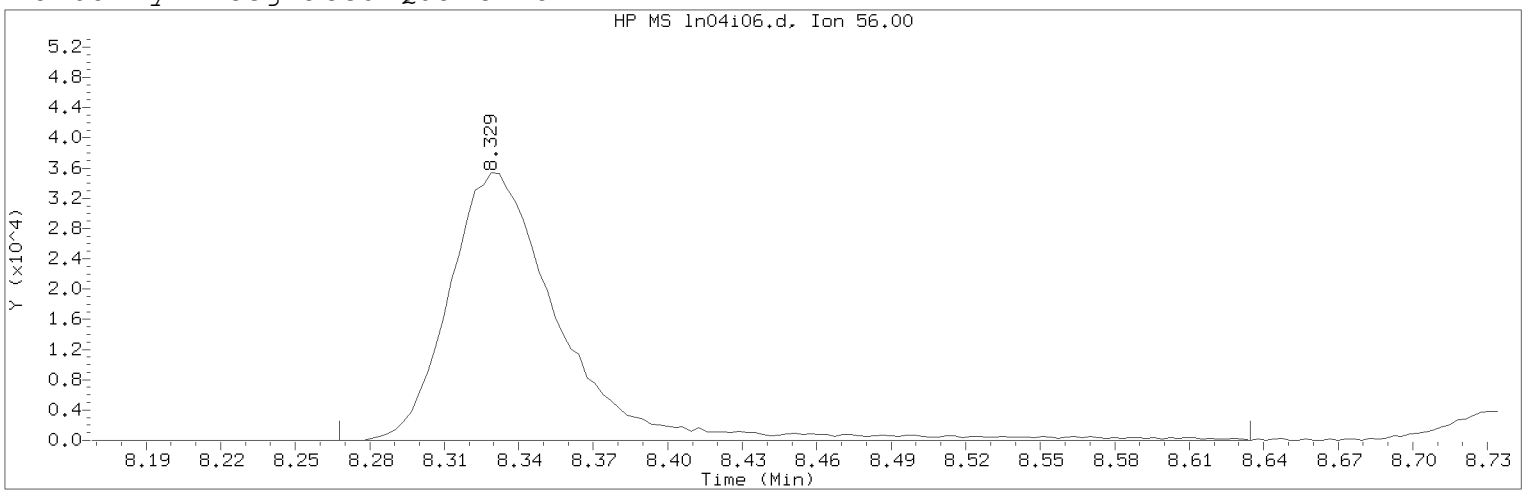
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.741
Quant Ion : 43.00
Area : 24793
On-column Amount (ng) : 4.0913
Integration start scan : 1925 Integration stop scan: 1983
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

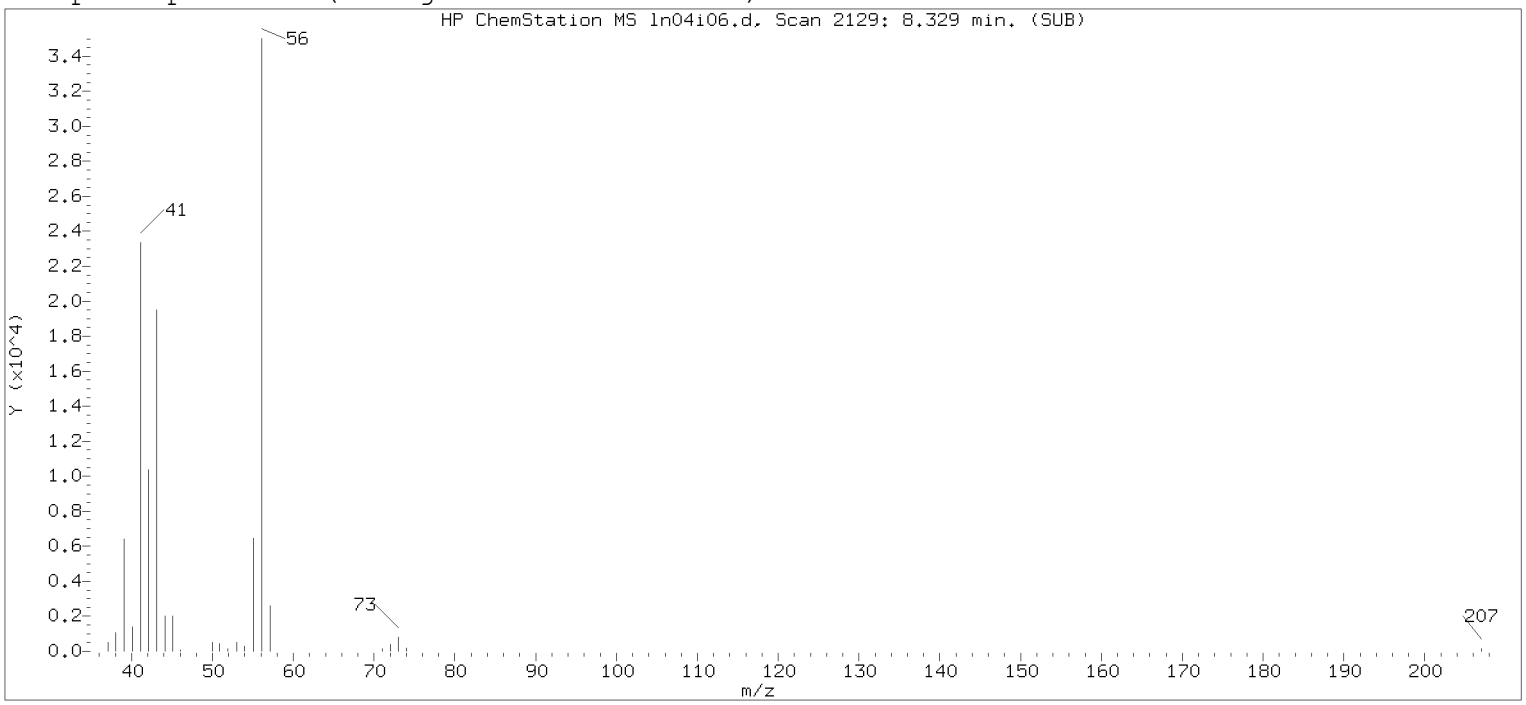
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area (flag) : 110027M
On-Column Amount (ng) : 344.3298
Integration start scan : 2109 Integration stop scan: 2223
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

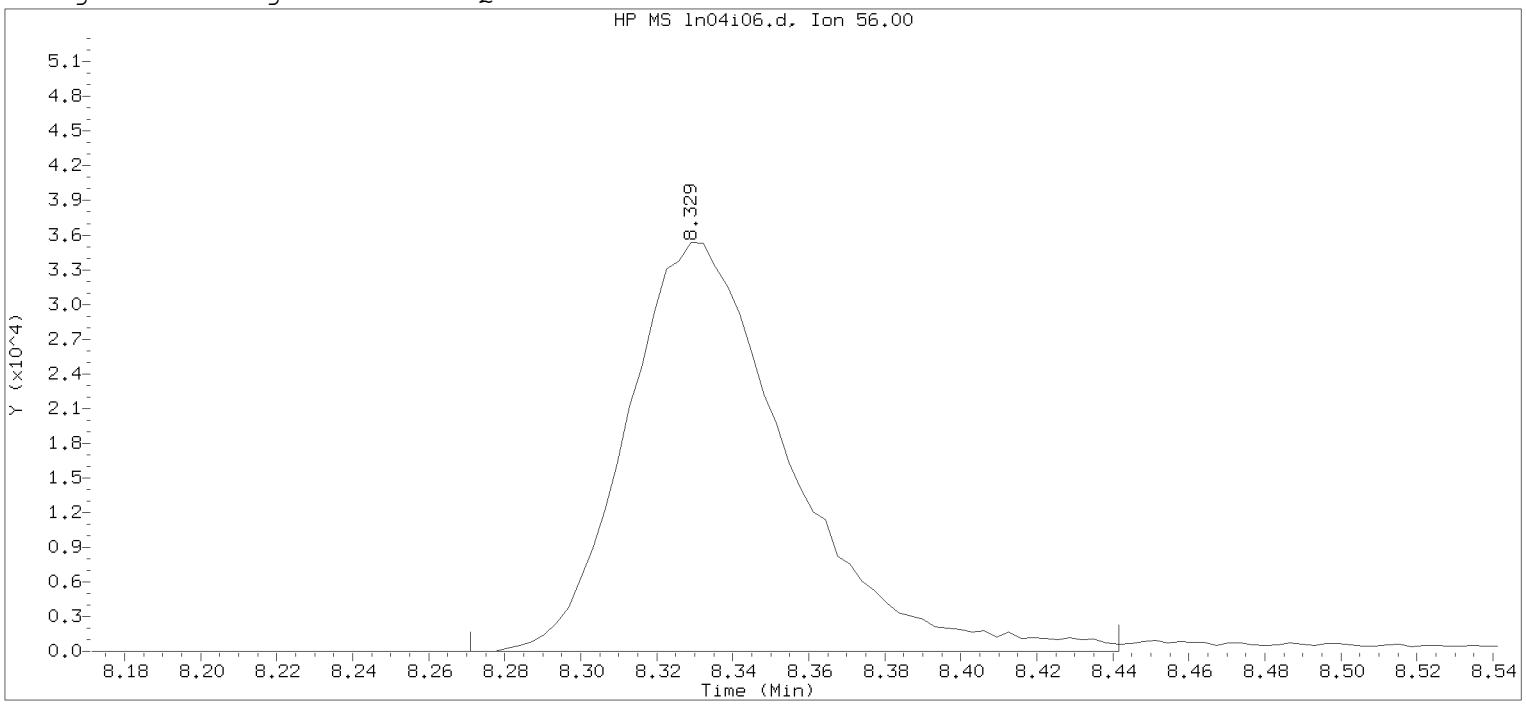
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

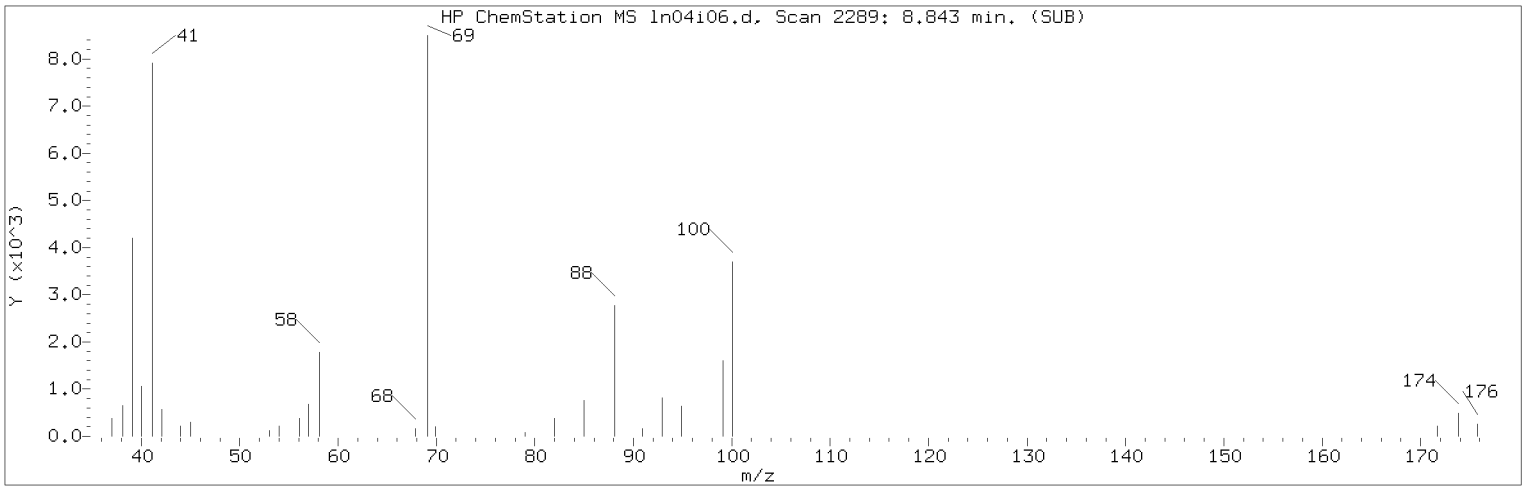
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

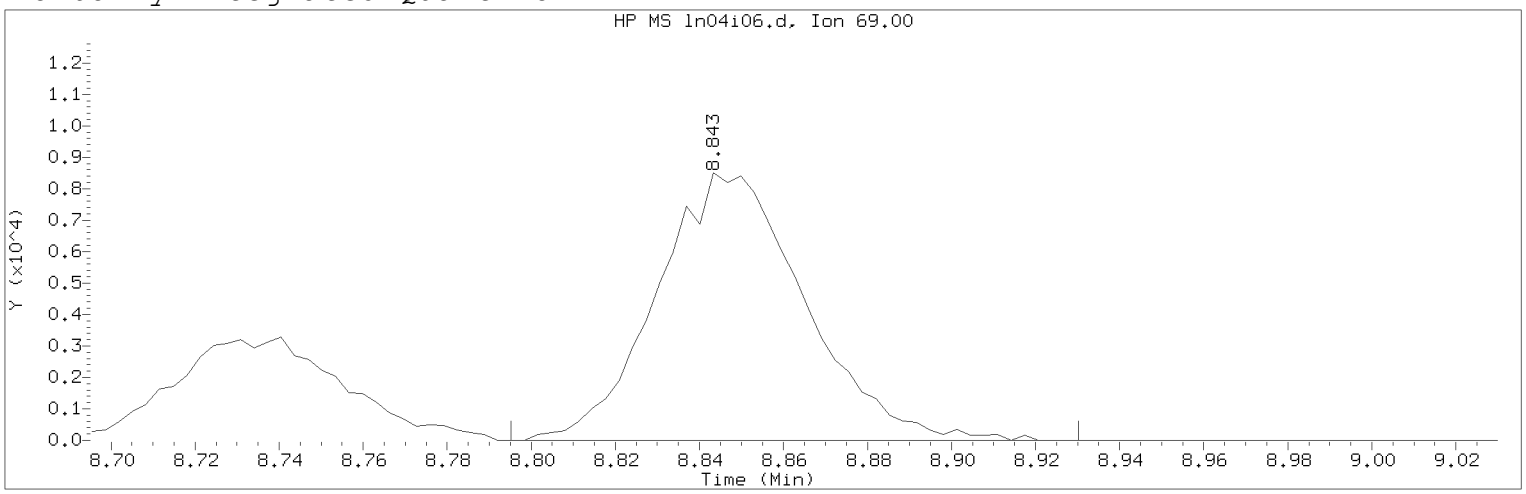
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area : 104688
On-column Amount (ng) : 337.8676
Integration start scan : 2110 Integration stop scan: 2163
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

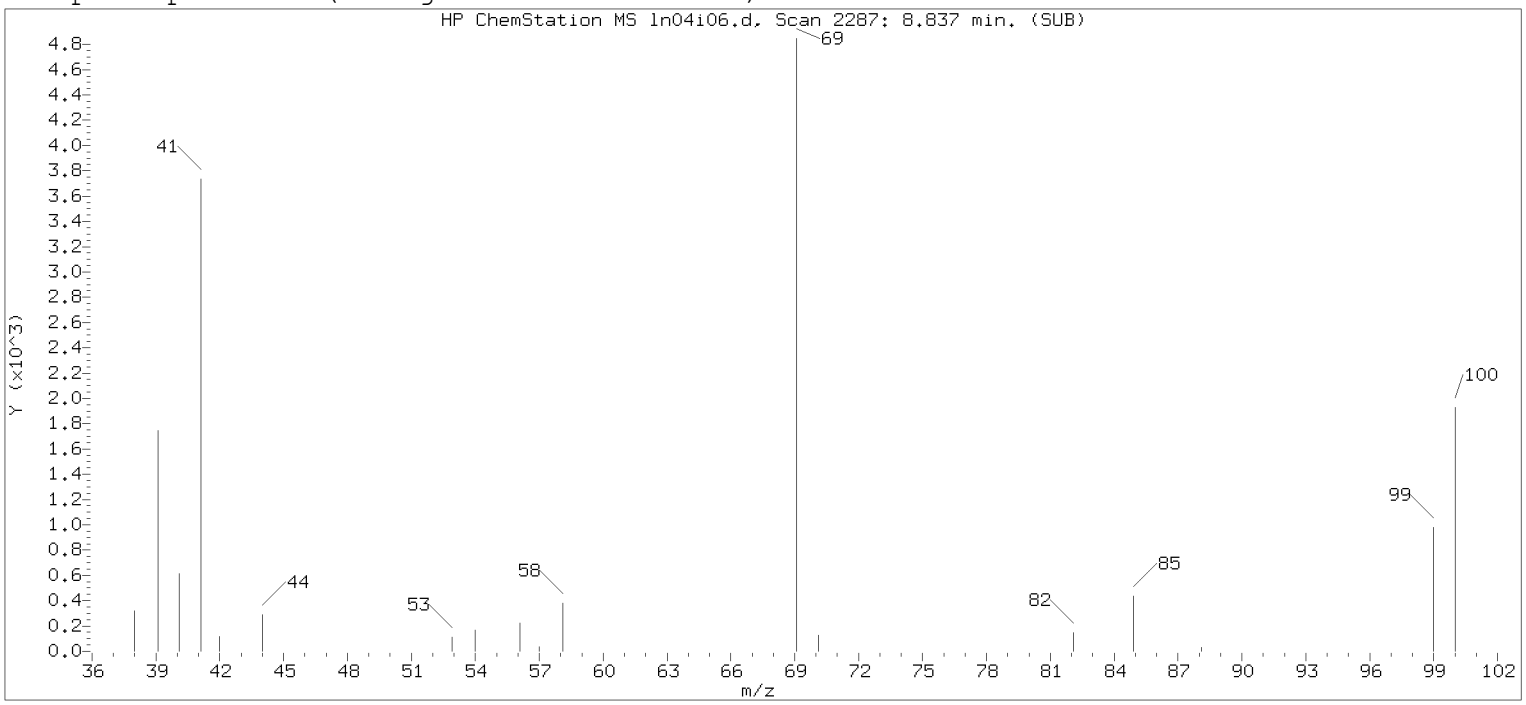
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2289
Retention Time (minutes): 8.843
Quant Ion : 69.00
Area (flag) : 20713M
On-Column Amount (ng) : 3.6110
Integration start scan : 2273 Integration stop scan: 2315
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

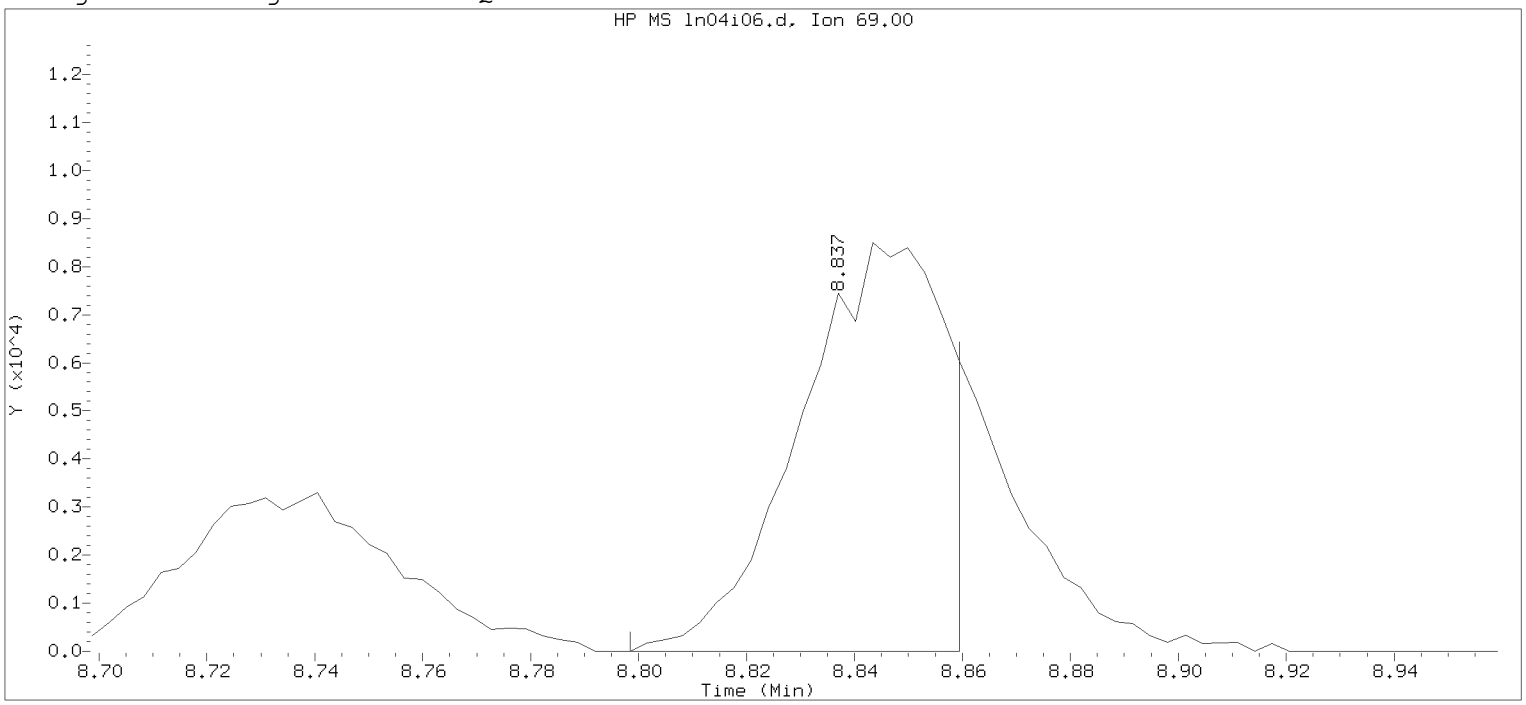
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

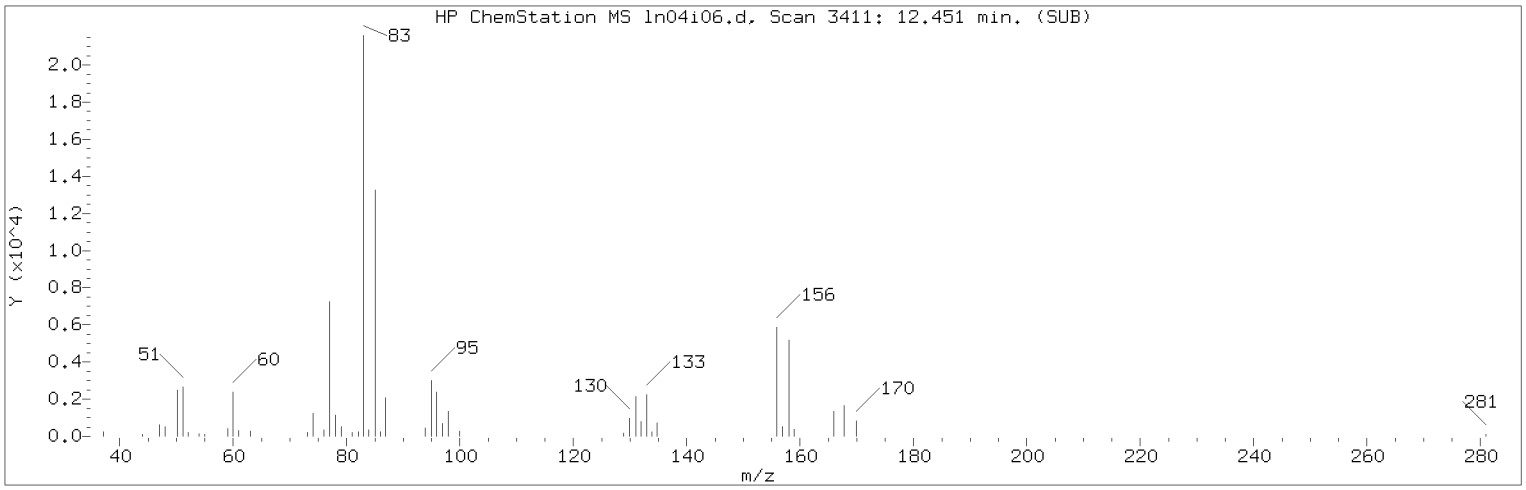
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

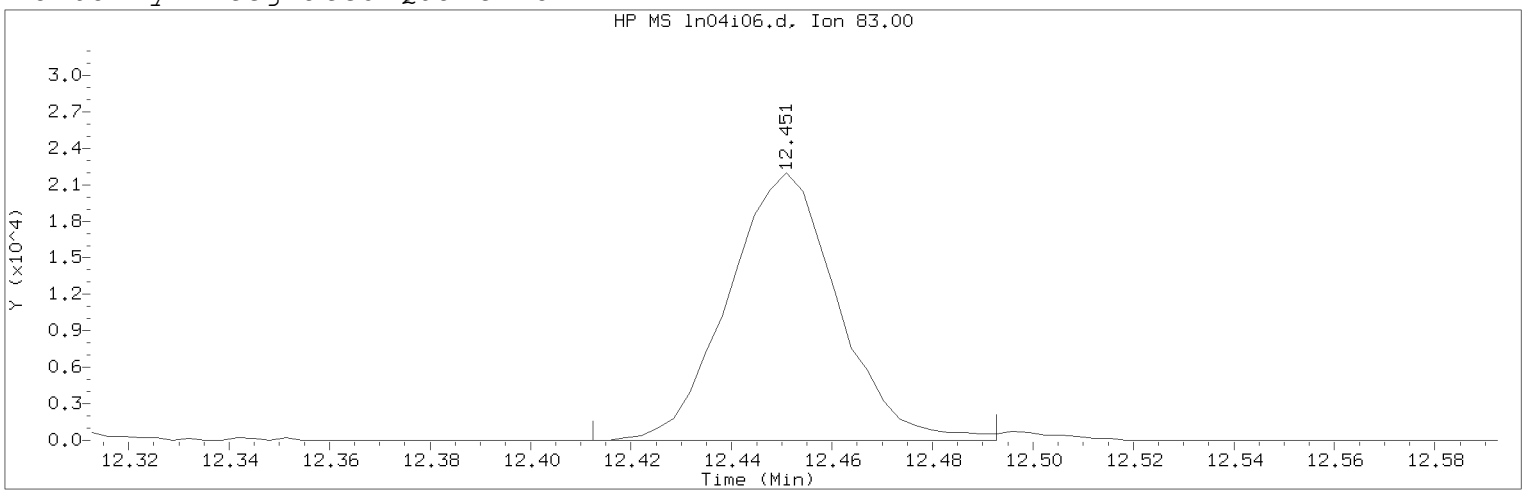
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2287
Retention Time (minutes): 8.837
Quant Ion : 69.00
Area : 15546
On-column Amount (ng) : 2.8548
Integration start scan : 2274 Integration stop scan: 2293
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

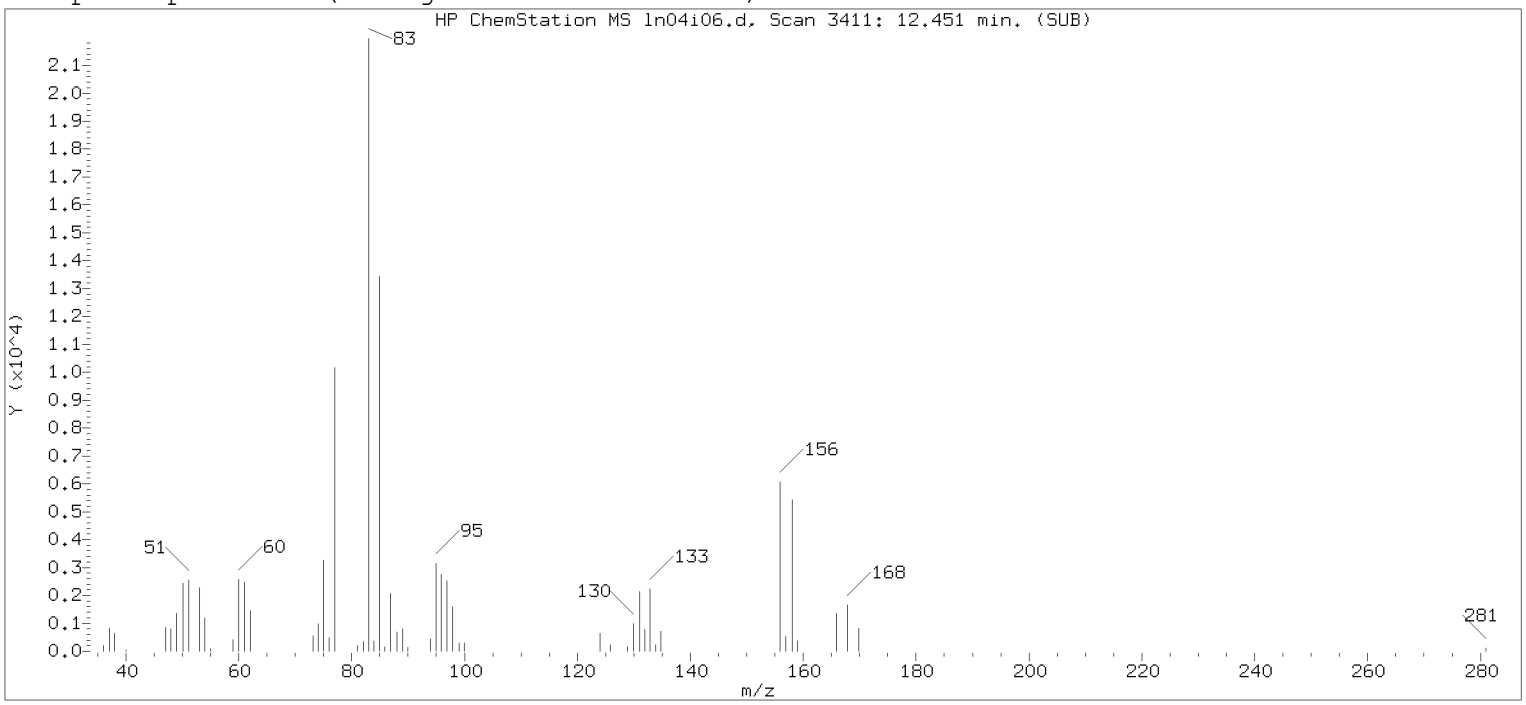
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 33170M
On-Column Amount (ng) : 3.6577
Integration start scan : 3398 Integration stop scan: 3423
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

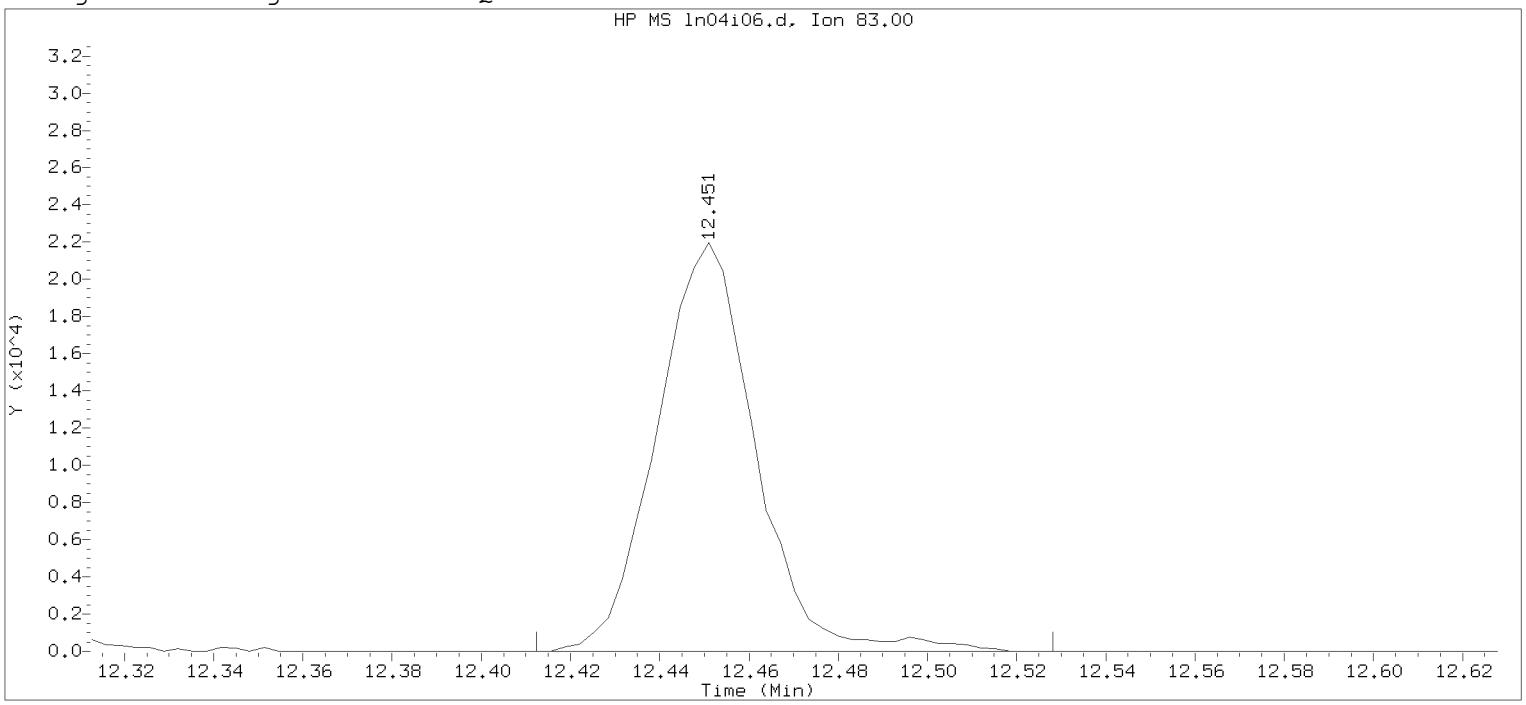
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

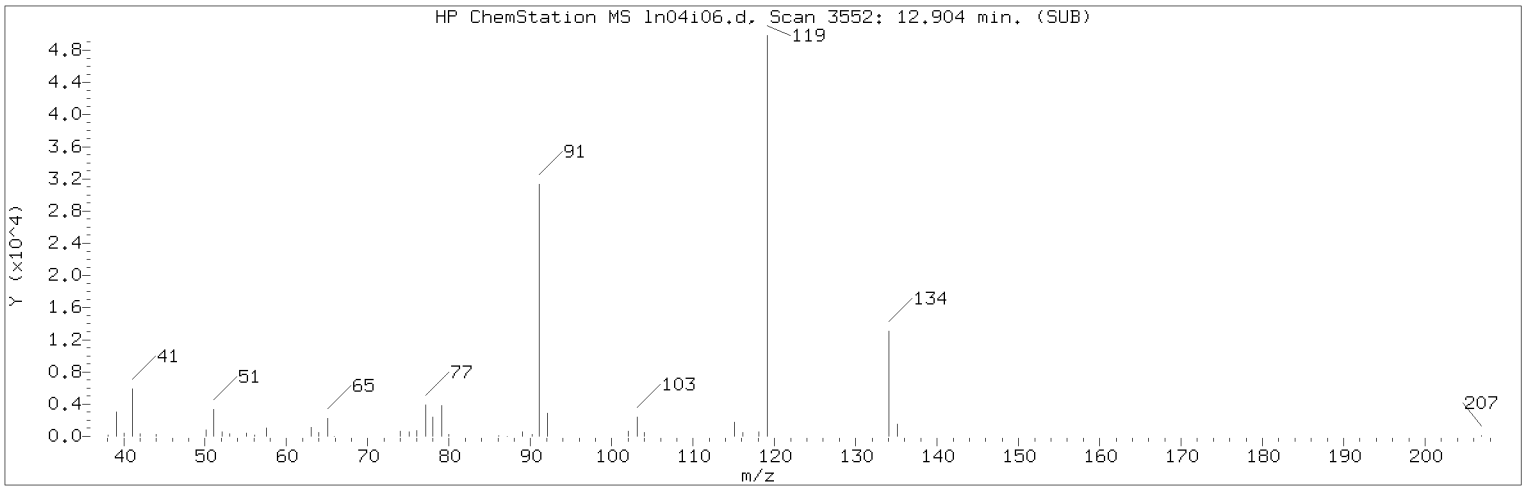
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

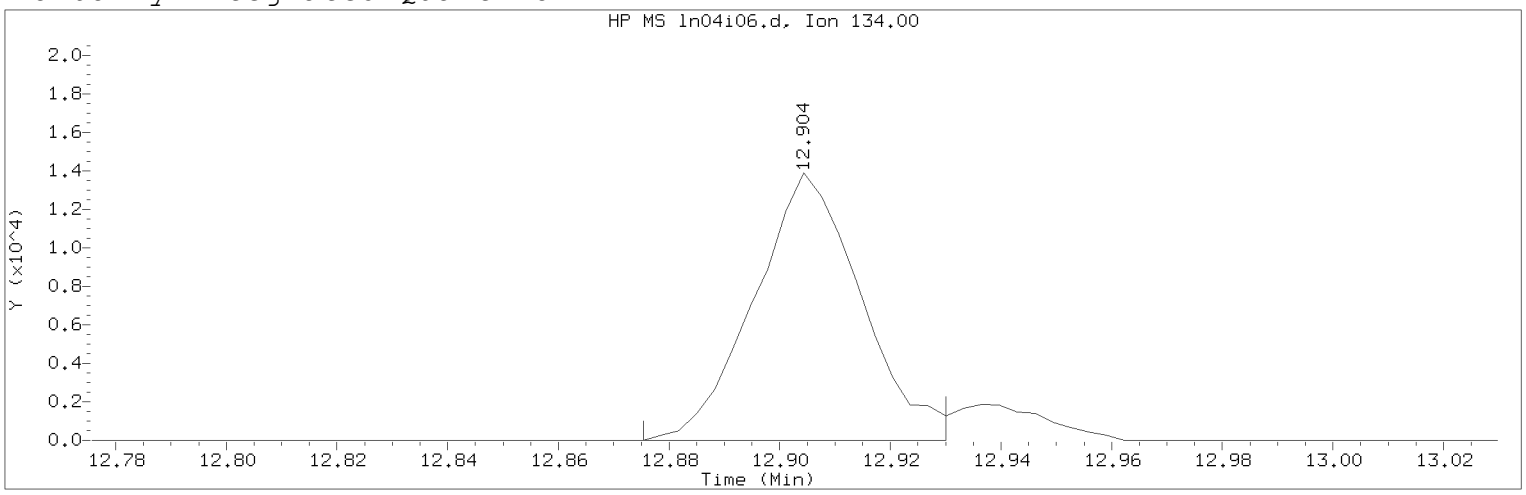
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 33718
On-column Amount (ng) : 3.6520
Integration start scan : 3398 Integration stop scan: 3434
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

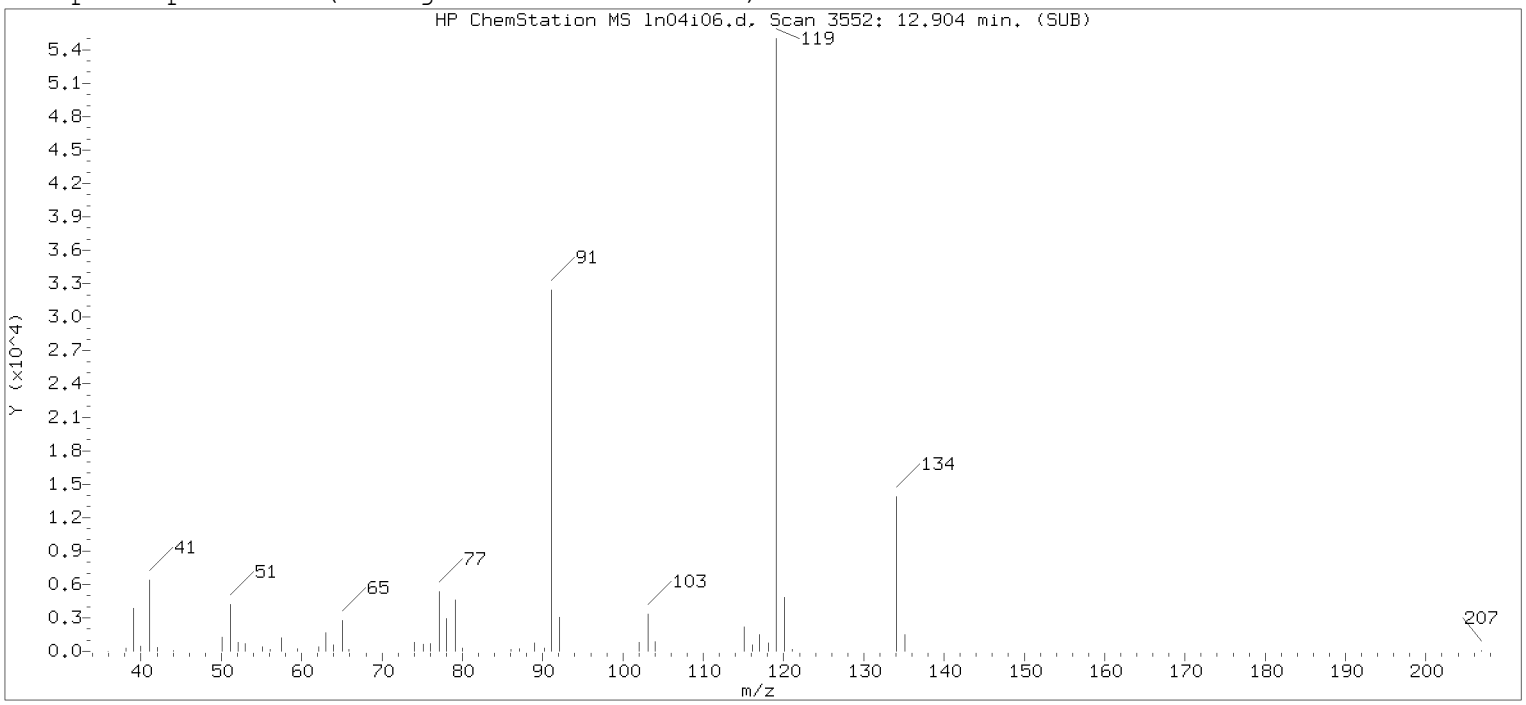
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 18608M
On-Column Amount (ng) : 3.9276
Integration start scan : 3542 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

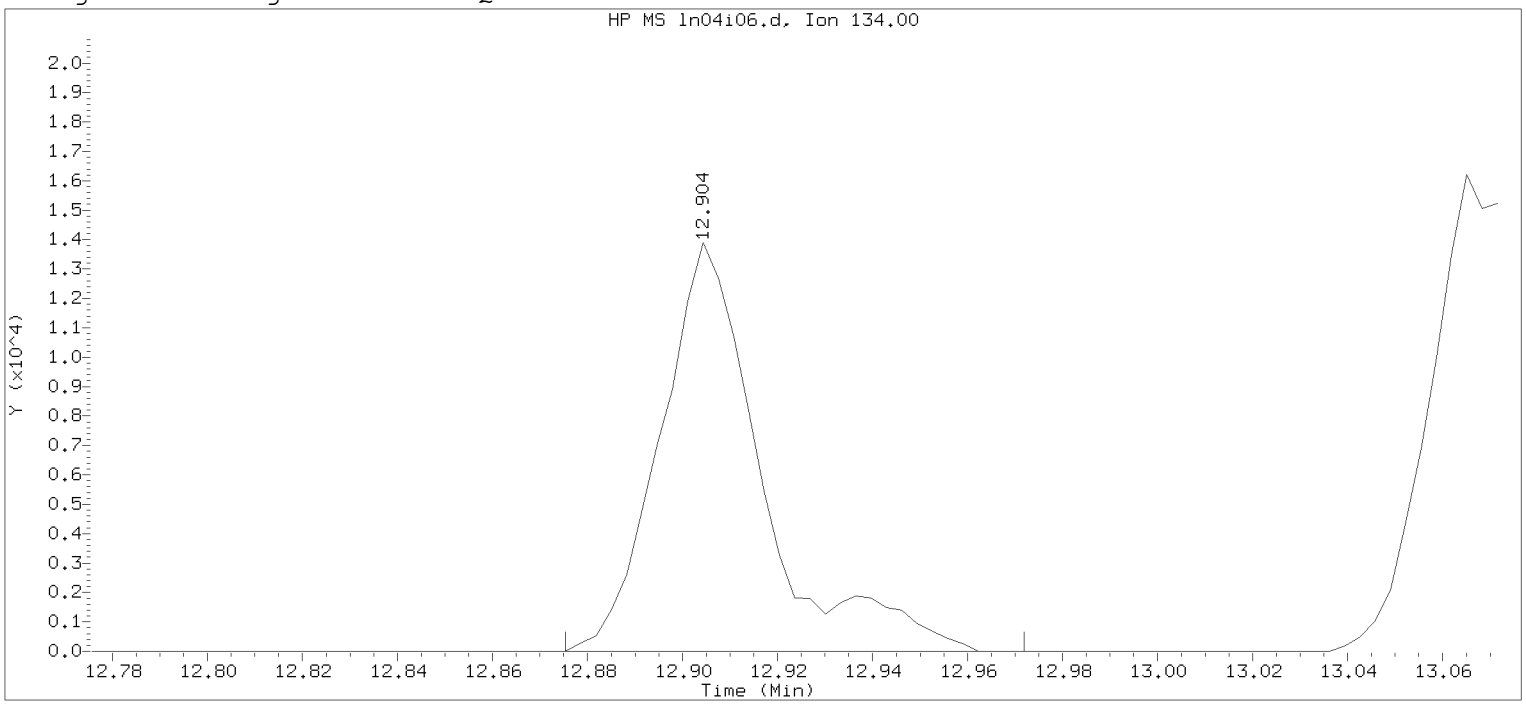
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

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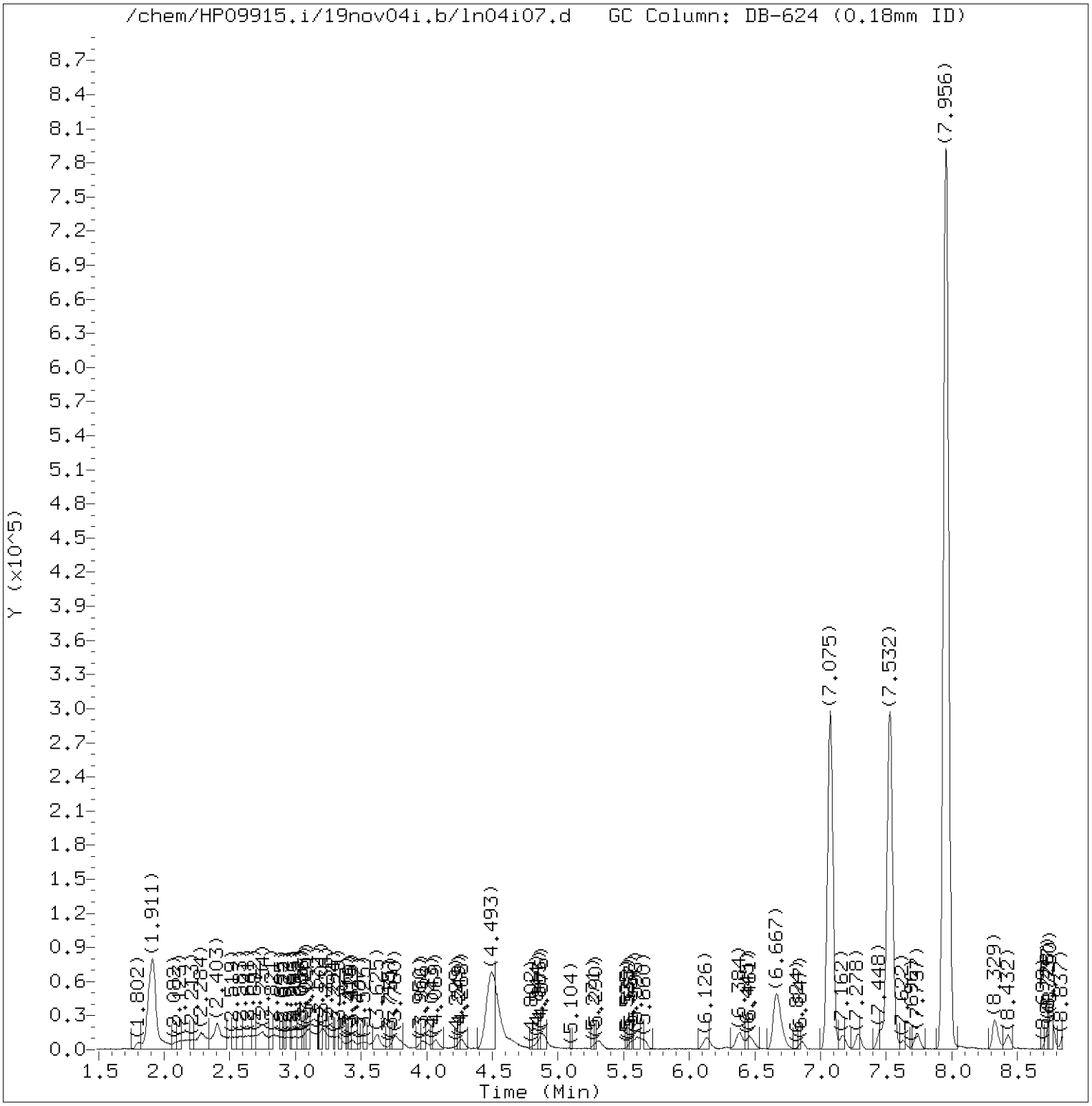
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 20636
On-column Amount (ng) : 4.1808
Integration start scan : 3542 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

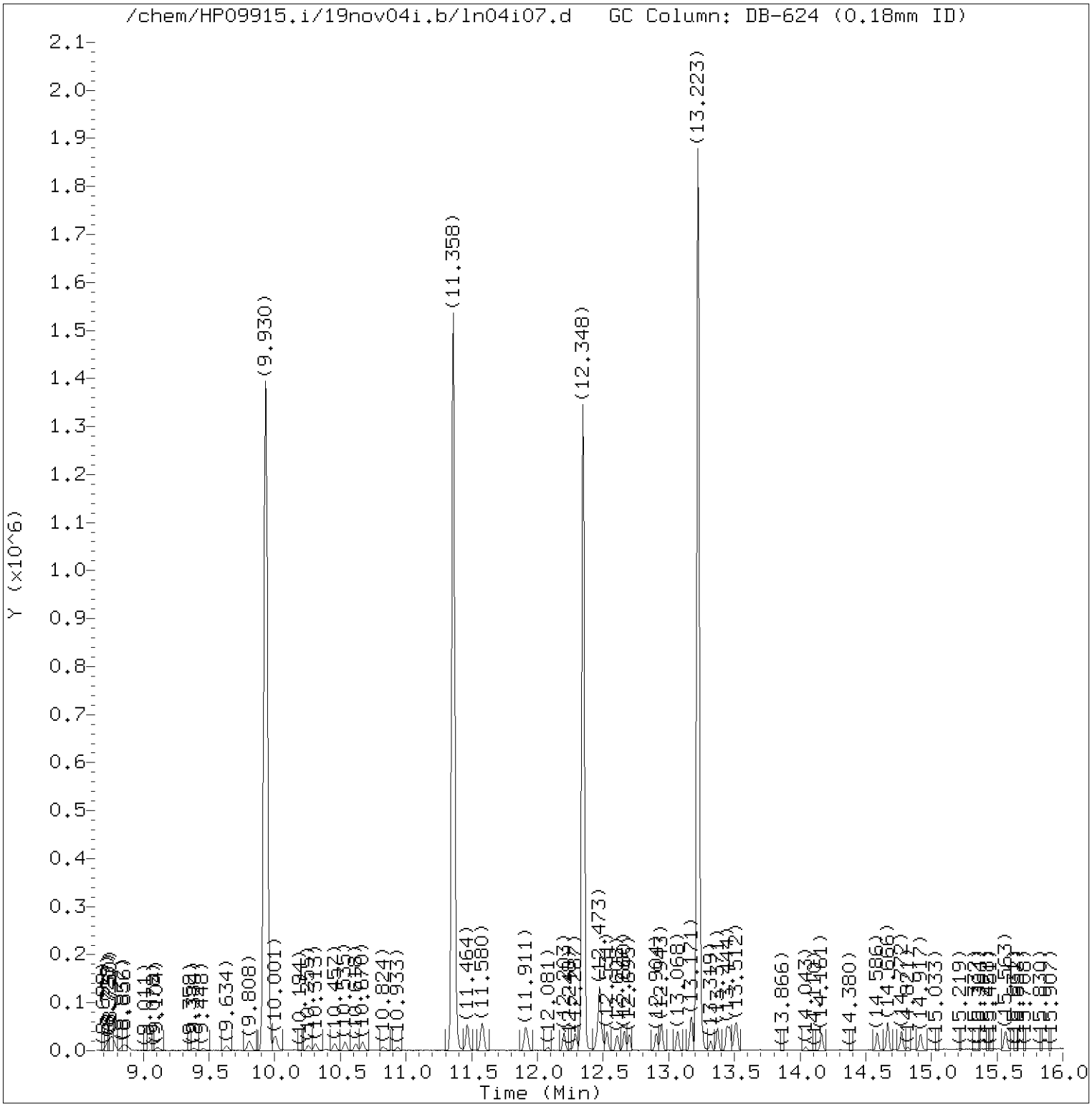
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
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Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.078	85	6299	0.794
4) Chloromethane	(2)	2.284	50	6896	0.902
5) 1,3-Butadiene	(2)	2.403	39	7255M	1.143
6) Vinyl Chloride	(2)	2.410	62	7160	0.939
8) Bromomethane	(2)	2.744	94	5605	1.025
9) Chloroethane	(2)	2.840	64	4160M	0.992
10) Dichlorofluoromethane	(2)	3.094	67	10094M	1.004
12) Trichlorofluoromethane	(2)	3.146	101	7129	0.868
11) n-Pentane	(2)	3.204	43	10269	1.058
14) Ethyl ether	(2)	3.429	59	4640M	0.874
15) Freon 123a	(2)	3.516	67	6210	0.940
16) Acrolein	(1)	3.622	56	17644	9.654
17) 1,1-Dichloroethene	(2)	3.750	96	4176	0.866
17) 1,1-Dichloroethene	(2)	3.754	63	2326	0.963
19) Freon 113	(2)	3.779	101	4754	0.864
18) Acetone	(1)	3.831	58	1588M	1.938
22) Methyl Iodide	(2)	3.966	142	8860	0.887
21) 2-Propanol	(1)	4.011	45	12063	20.480
23) Carbon Disulfide	(2)	4.075	76	15443	0.850
27) Methyl Acetate	(2)	4.255	43	6274M	1.011
25) Allyl Chloride	(2)	4.271	41	8168	0.945
28) Methylene Chloride	(2)	4.474	84	5404	0.942
29)*t-Butyl alcohol-d10	(1)	4.496	65	243591	250.000
30) t-Butyl alcohol	(1)	4.622	59	19461	18.976
31) Acrylonitrile	(2)	4.856	53	2960	0.886
33) Methyl Tertiary Butyl Ether	(2)	4.879	73	16848	0.920
32) trans-1,2-Dichloroethene	(2)	4.885	96	5035	0.903
34) n-Hexane	(2)	5.316	57	7475M	0.862
36) 1,1-Dichloroethane	(2)	5.548	63	8436	0.867
38) di-Isopropyl ether	(2)	5.606	45	16654	0.888
39) 2-Chloro-1,3-butadiene	(2)	5.663	53	7448	0.853
40) Ethyl t-butyl ether	(2)	6.126	59	16060	0.882
43) 1,2-Dichloroethene (Total)	(2)		96	10762	1.818
44) 2-Butanone	(2)	6.361	43	8098	1.889
42) cis-1,2-Dichloroethene	(2)	6.377	96	5727	0.915
45) 2,2-Dichloropropane	(2)	6.390	77	6419M	0.849
47) Propionitrile	(1)	6.461	54	24221	18.955
48) Methacrylonitrile	(2)	6.670	67	32346	8.977

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	2849	0.858
50) Tetrahydrofuran	(1)	6.728	71	2319	2.009
51) Chloroform	(2)	6.860	83	8108	0.871
52)$Dibromofluoromethane	(2)	7.075	113	273696	49.231
52)$Dibromofluoromethane	(2)	7.075	111	279412	49.293
53) 1,1,1-Trichloroethane	(2)	7.078	97	6588	0.830
54) Cyclohexane	(2)	7.171	56	8997	0.847
54) Cyclohexane	(2)	7.178	84	7859	0.852
54) Cyclohexane	(2)	7.178	69	2772	0.844
56) Carbon Tetrachloride	(2)	7.284	117	5549	0.824
55) 1,1-Dichloropropene	(2)	7.287	75	6611	0.860
58) Isobutyl Alcohol	(1)	7.458	41	16978	49.195
57)$1,2-Dichloroethane-d4	(2)	7.528	102	69641	49.151
57)$1,2-Dichloroethane-d4	(2)	7.528	65	311703	49.366
57)$1,2-Dichloroethane-d4	(2)	7.535	104	44286	48.935
60) Benzene	(2)	7.551	78	20445	0.884
61) 1,2-Dichloroethane	(2)	7.631	62	7810	1.050
61) 1,2-Dichloroethane	(2)	7.631	98	696	0.945
65) t-Amyl methyl ether	(2)	7.741	73	16286	0.891
67) n-Heptane	(2)	7.956	43	7535M	0.930
66)*Fluorobenzene	(2)	7.959	96	1137124	50.000
69) n-Butanol	(1)	8.329	56	24322	81.882
71) Trichloroethene	(2)	8.432	95	5231	0.898
72) Methylcyclohexane	(2)	8.737	83	9247	0.856
72) Methylcyclohexane	(2)	8.731	98	4032	0.825
73) 1,2-Dichloropropane	(2)	8.760	63	5229	0.890
76) Methyl Methacrylate	(2)	8.837	69	4607M	0.811
75) 1,4-Dioxane	(1)	8.856	88	3548M	43.457
74) Dibromomethane	(2)	8.866	93	3298	0.868
78) Bromodichloromethane	(2)	9.107	83	5648	0.828
79) 2-Nitropropane	(2)	9.384	41	3333	1.614
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	2007	0.796
81) cis-1,3-Dichloropropene	(2)	9.638	75	6973	0.770
82) 4-Methyl-2-pentanone	(2)	9.808	43	16006	1.769
83)$Toluene-d8	(3)	9.930	98	1156948	50.253
83)$Toluene-d8	(3)	9.930	100	746174	50.033
88) Toluene	(3)	10.007	92	12902	0.894
90) 1,3-Dichloropropene (total)	(3)		100	13101	1.518

M = Compound was manually integrated.
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Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.255	75	6128	0.748
91) Ethyl Methacrylate	(3)	10.313	69	7873	0.791
92) 1,1,2-Trichloroethane	(3)	10.461	97	4897	0.895
93) Tetrachloroethene	(3)	10.538	166	5565	0.910
94) 1,3-Dichloropropane	(3)	10.618	76	8504	0.910
96) 2-Hexanone	(3)	10.670	43	11811	1.777
97) Dibromochloromethane	(3)	10.827	129	4109	0.733
99) 1,2-Dibromoethane	(3)	10.937	107	5163	0.869
100)*Chlorobenzene-d5	(3)	11.358	117	879875	50.000
101) 1-Chlorohexane	(3)	11.361	91	8103	1.045
102) Chlorobenzene	(3)	11.383	112	14367	0.880
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	4138	0.769
104) Ethylbenzene	(3)	11.464	91	24192	0.877
106) m+p-Xylene	(3)	11.583	106	18914	1.743
108) Xylene (Total)	(3)		106	28415	2.629
107) o-Xylene	(3)	11.908	106	9501	0.886
109) Styrene	(3)	11.917	104	14106	0.796
110) Bromoform	(3)	12.081	173	2729	0.652
111) Isopropylbenzene	(3)	12.203	105	22719	0.845
112) Cyclohexanone	(1)	12.287	55	15983	49.985
114)$4-Bromofluorobenzene	(3)	12.348	95	436282	50.046
114)$4-Bromofluorobenzene	(3)	12.348	174	360511	49.883
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	7596	0.849
115) Bromobenzene	(4)	12.461	156	6426	0.903
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	22650	8.211
117) 1,2,3-Trichloropropane	(4)	12.496	110	2425	0.884
119) n-Propylbenzene	(4)	12.528	91	27655	0.890
120) 2-Chlorotoluene	(4)	12.612	126	6138M	0.929
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	18836	0.834
121) 4-Chlorotoluene	(4)	12.702	126	6403M	0.931
124) tert-Butylbenzene	(4)	12.904	134	4060M	0.869
125) Pentachloroethane	(4)	12.940	167	2751	0.684
126) 1,2,4-Trimethylbenzene	(4)	12.943	105	20498	0.861
127) sec-Butylbenzene	(4)	13.065	105	24344	0.873
129) 1,3-Dichlorobenzene	(4)	13.165	146	12468	0.954
130) p-Isopropyltoluene	(4)	13.174	119	21126	0.876
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	473433	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	13174	0.972

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on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

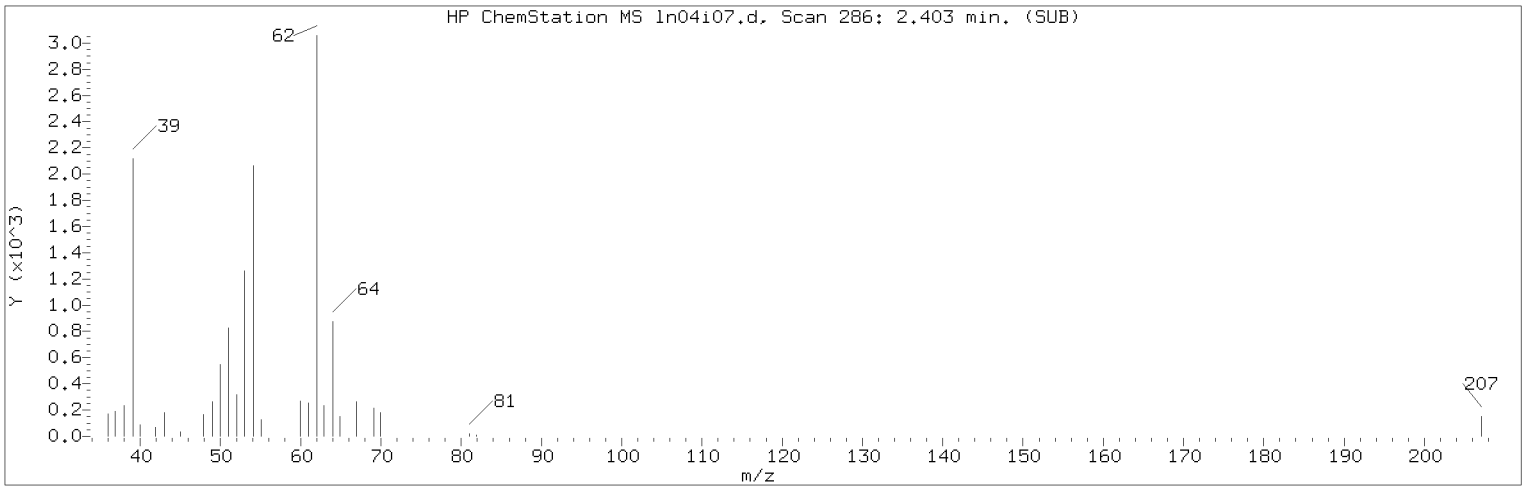
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	22457	0.890
135) Benzyl Chloride	(4)	13.319	91	11494	0.602
136) 1,3-Diethylbenzene	(4)	13.374	119	13985	0.891
141) Diethylbenzene (total)	(4)		100	41423	2.726
137) 1,4-Diethylbenzene	(4)	13.441	119	15446	0.929
139) n-Butylbenzene	(4)	13.464	92	11964M	0.970
138) 1,2-Dichlorobenzene	(4)	13.502	146	12171	0.943
140) 1,2-Diethylbenzene	(4)	13.515	119	11992	0.906
142) 1,2-Dibromo-3-chloropropane	(4)	14.046	75	1565	0.799
144) 1,3,5-Trichlorobenzene	(4)	14.161	180	10166	1.026
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	10347	1.074
147) Hexachlorobutadiene	(4)	14.666	225	9370	2.059
148) Naphthalene	(4)	14.772	128	28210	0.910
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	10052	1.072
150) 2-Methylnaphthalene	(4)	15.567	142	18783M	0.984

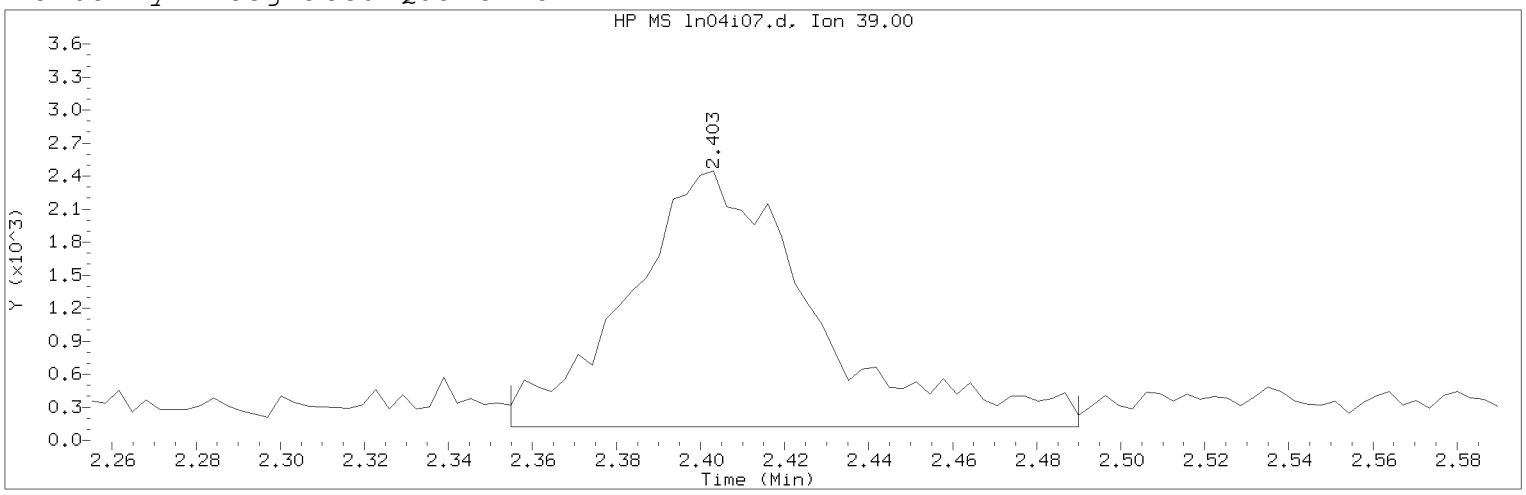
M = Compound was manually integrated.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

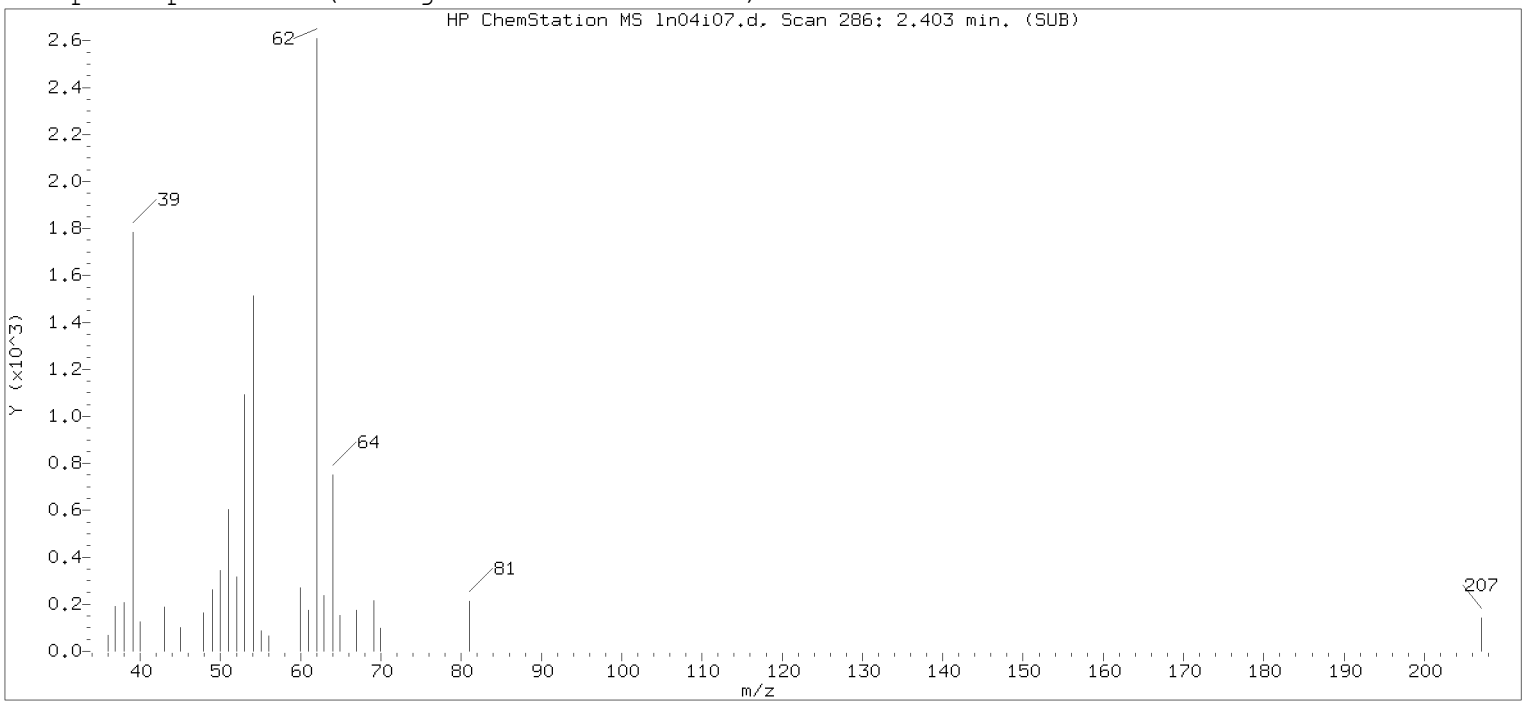
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 286
Retention Time (minutes): 2.403
Quant Ion : 39.00
Area (flag) : 7255M
On-Column Amount (ng) : 1.1432
Integration start scan : 270 Integration stop scan: 312
Y at integration start : 120 Y at integration end: 120

Reason for manual integration: improper integration

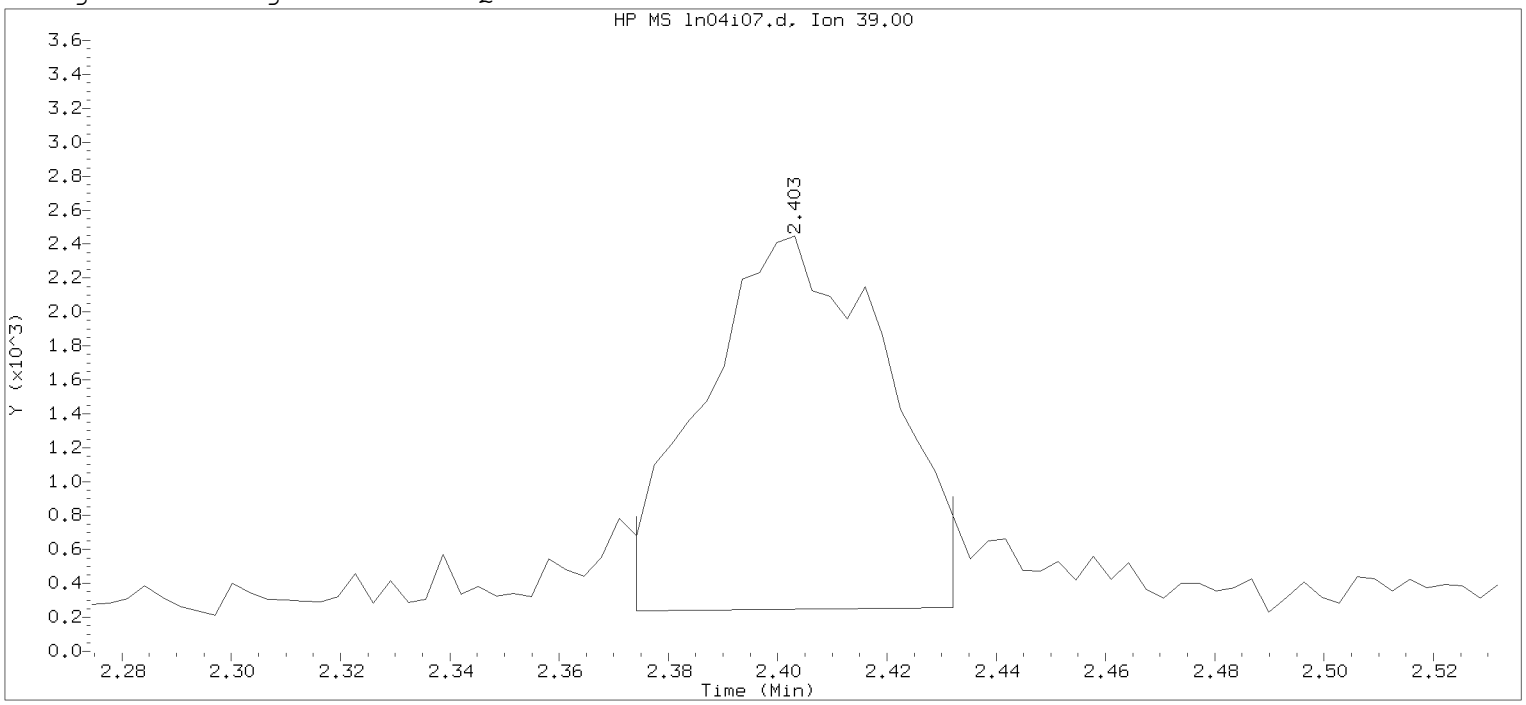
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 286
Retention Time (minutes): 2.403
Quant Ion : 39.00
Area : 5073
On-column Amount (ng) : 0.8493
Integration start scan : 276 Integration stop scan: 294
Y at integration start : 239 Y at integration end: 258

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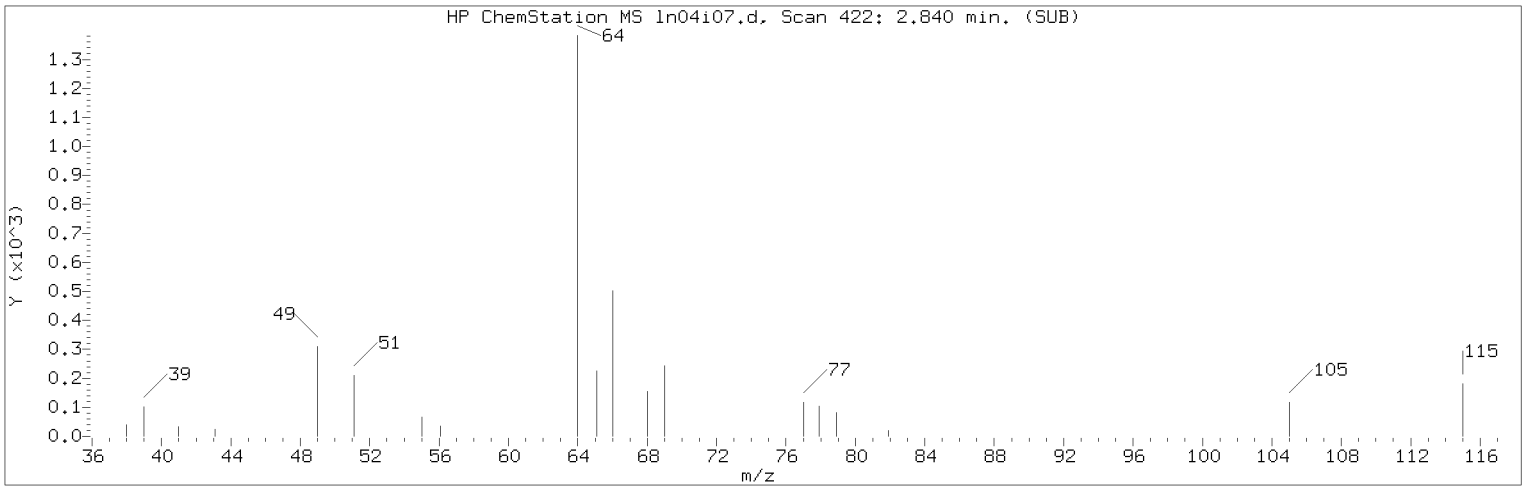
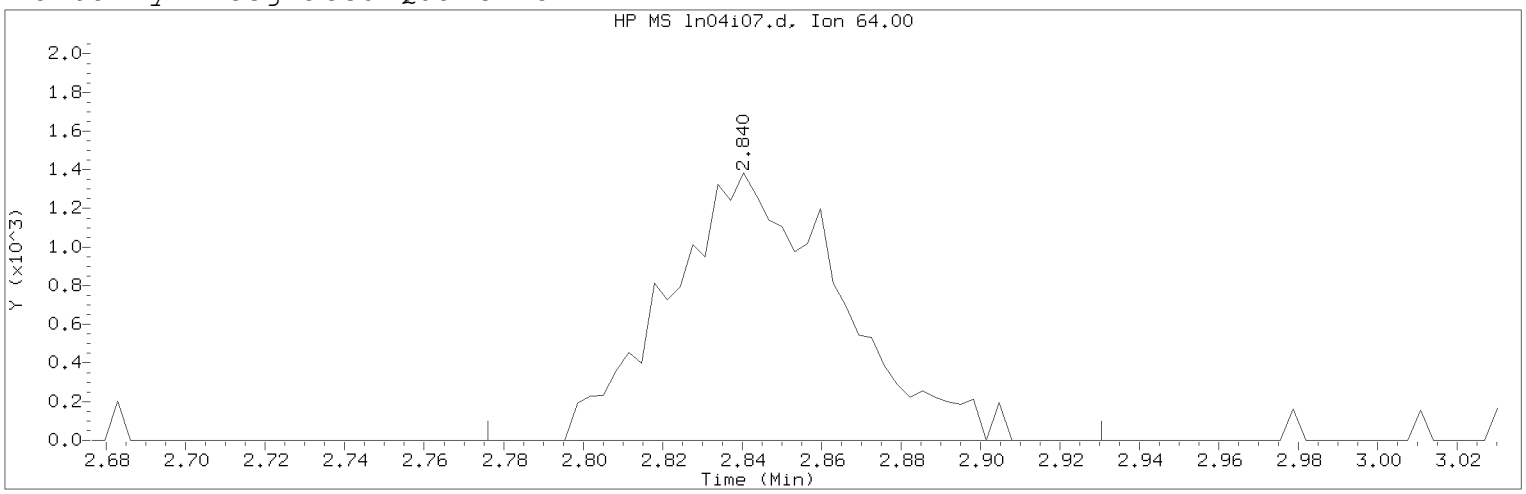
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

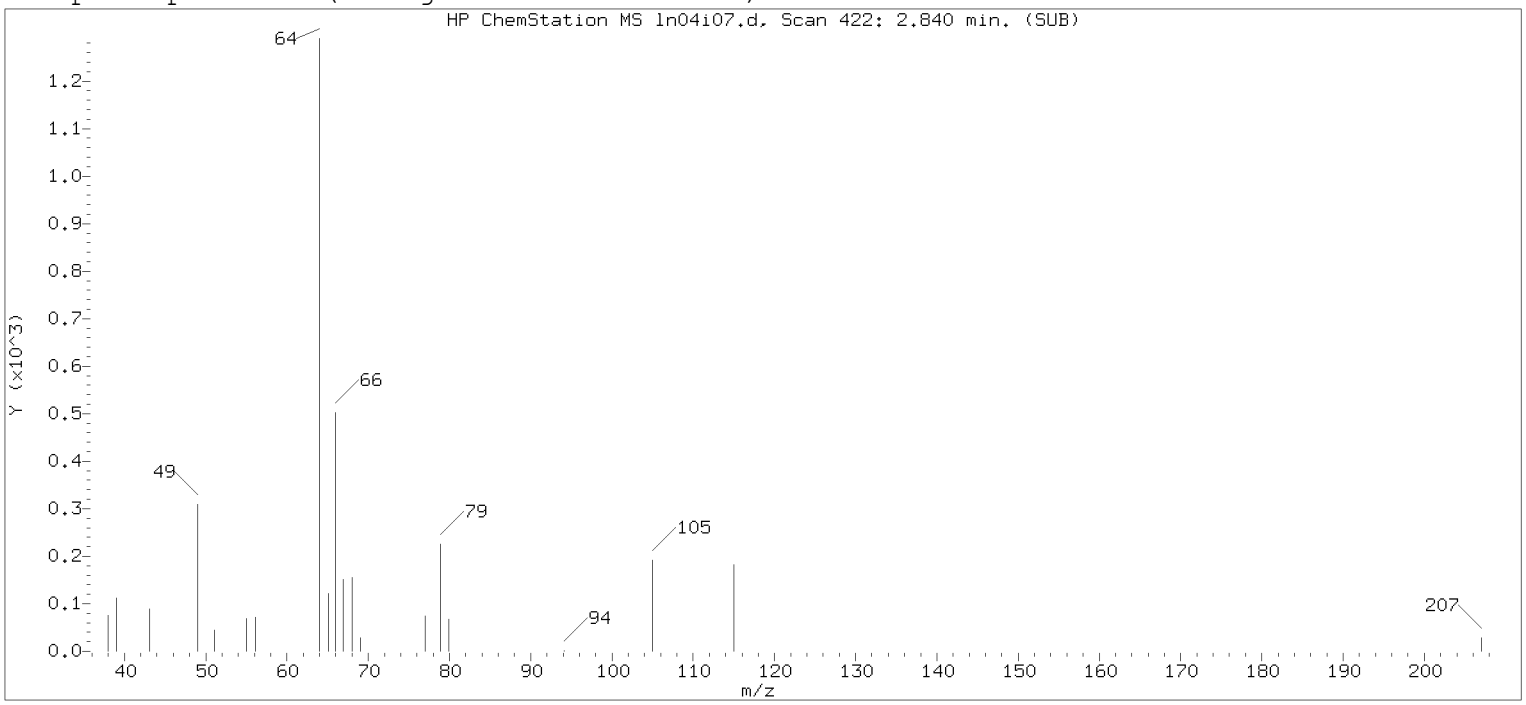
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 422
Retention Time (minutes): 2.840
Quant Ion : 64.00
Area (flag) : 4160M
On-Column Amount (ng) : 0.9924
Integration start scan : 401 Integration stop scan: 449
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

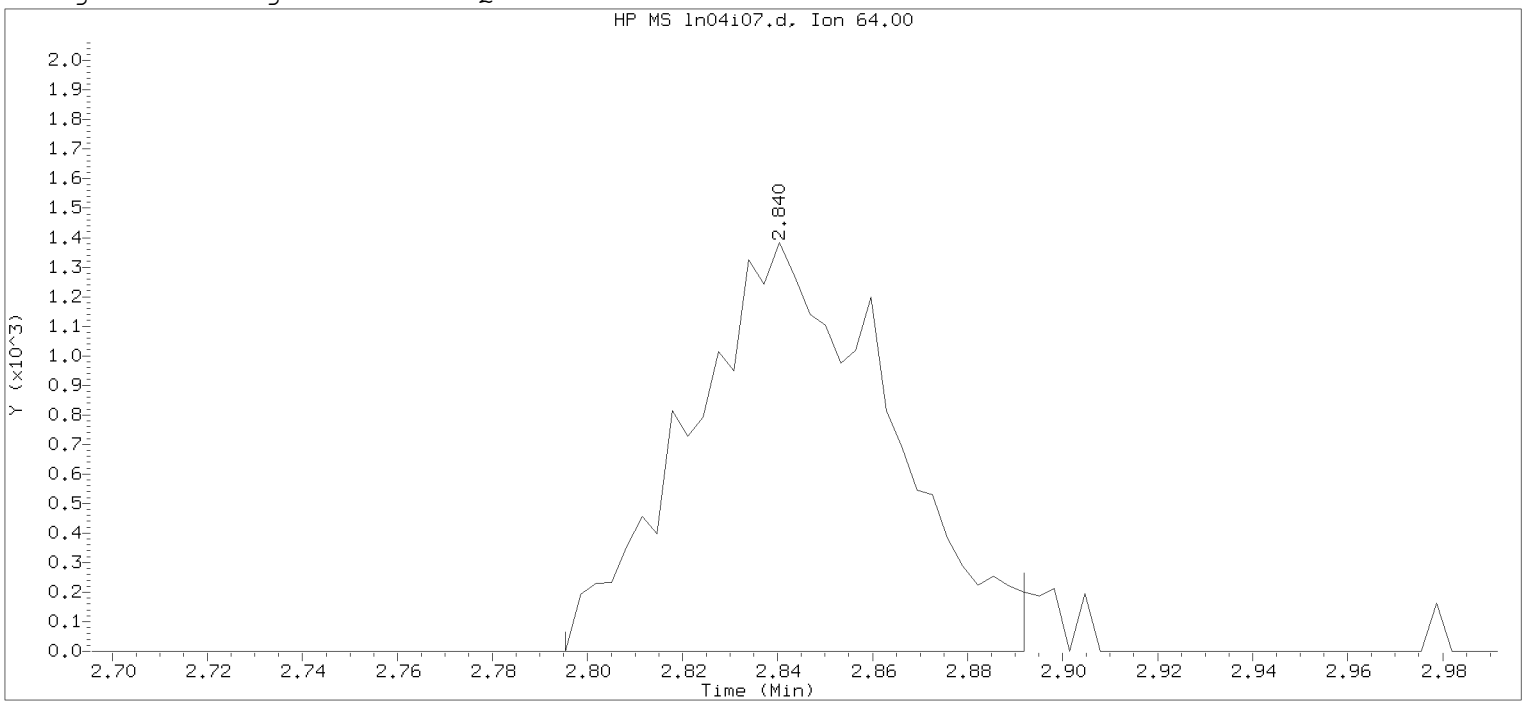
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

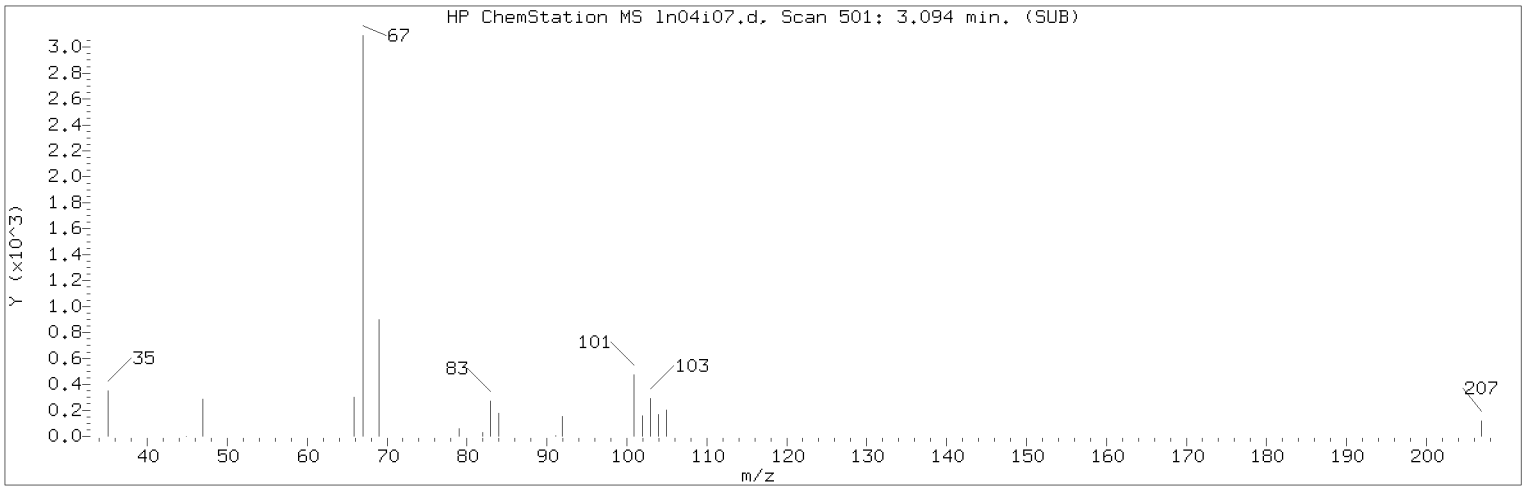
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

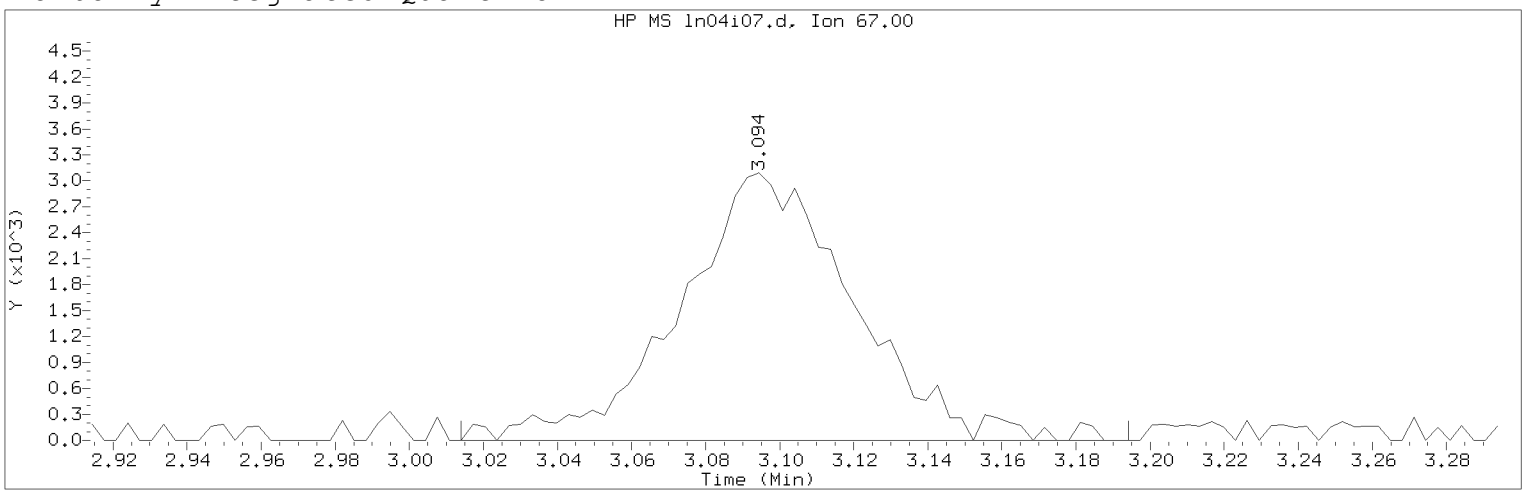
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 422
Retention Time (minutes): 2.840
Quant Ion : 64.00
Area : 4026
On-column Amount (ng) : 0.9650
Integration start scan : 407 Integration stop scan: 437
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

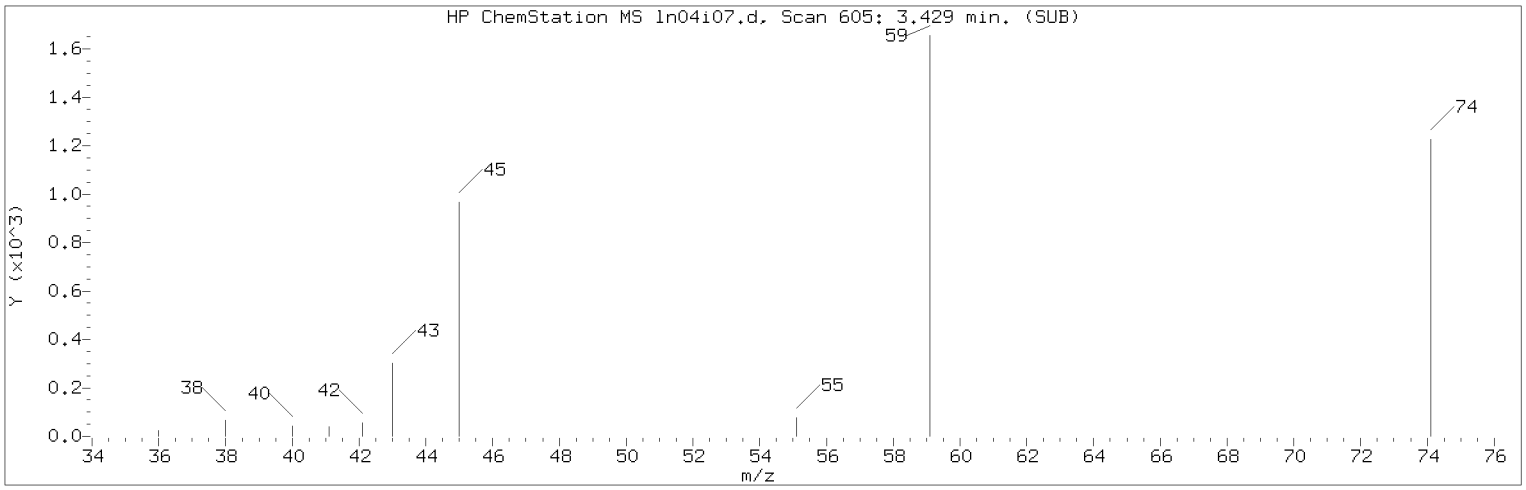
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 501
Retention Time (minutes): 3.094
Quant Ion : 67.00
Area (flag) : 10094M
On-Column Amount (ng) : 1.0040
Integration start scan : 475 Integration stop scan: 531
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

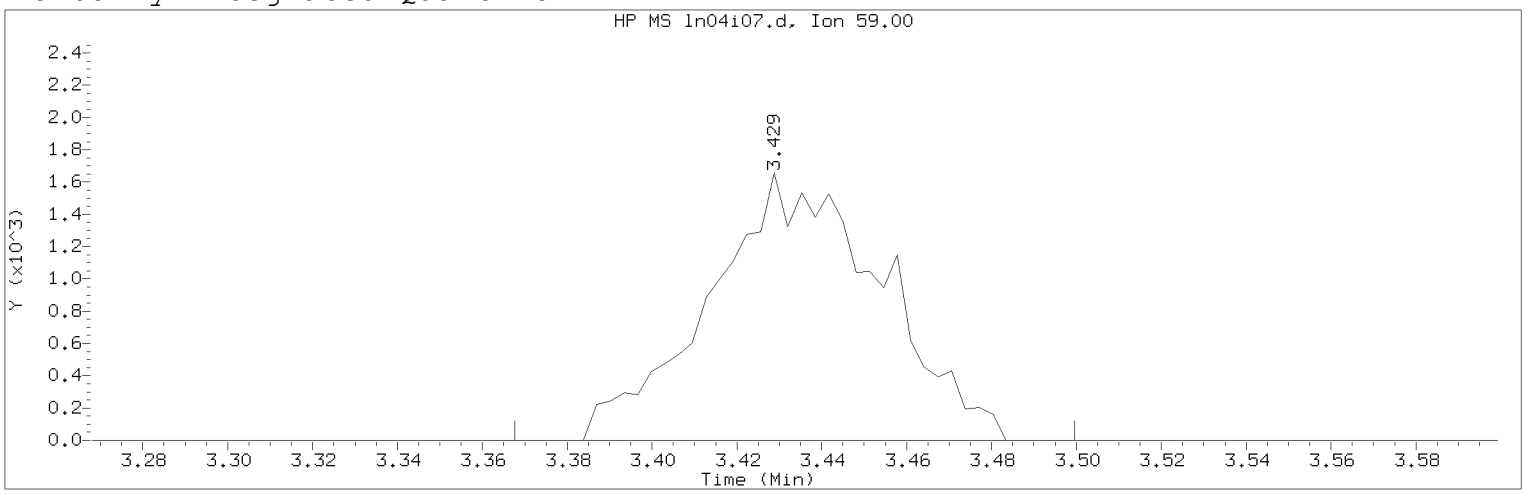
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

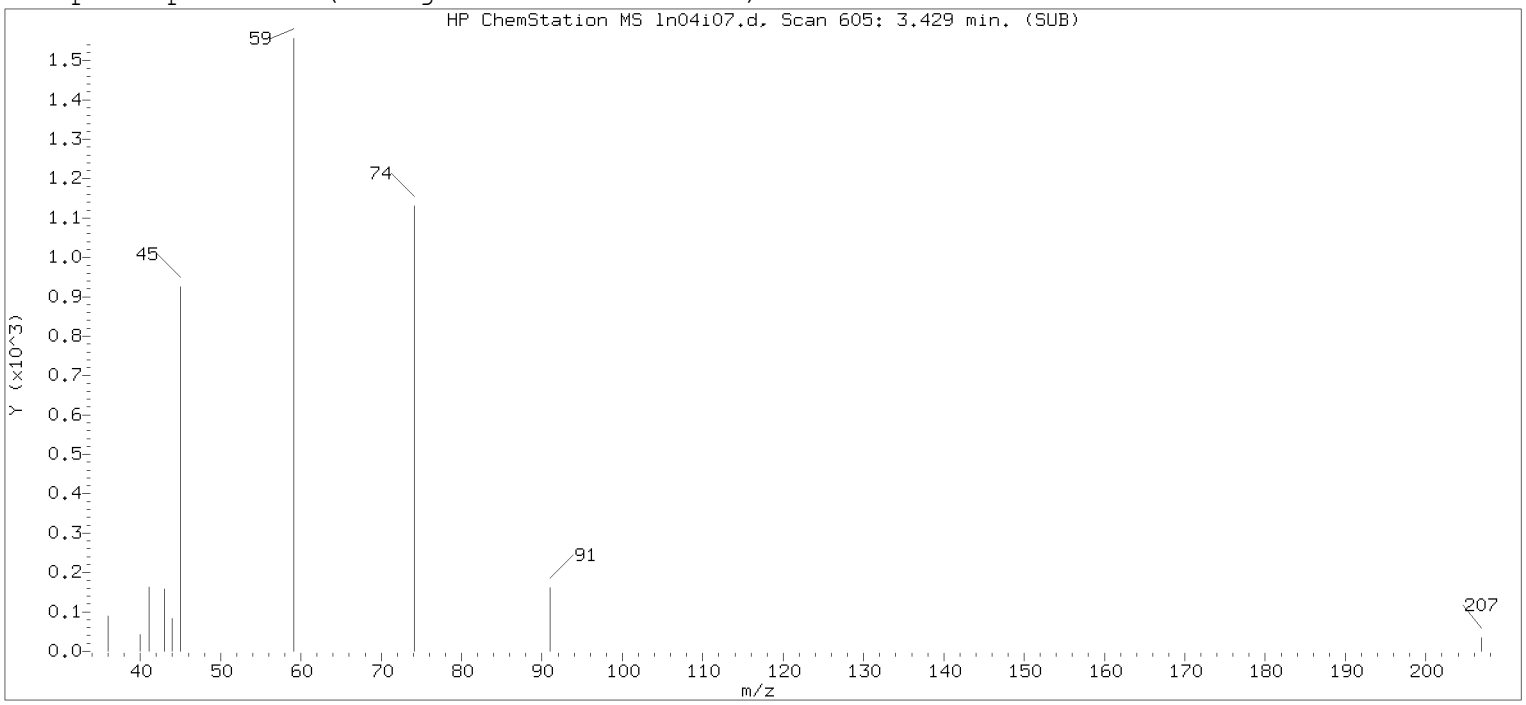
Compound Number : 14
Compound Name : Ethyl ether
Scan Number : 605
Retention Time (minutes): 3.429
Quant Ion : 59.00
Area (flag) : 4640M
On-Column Amount (ng) : 0.8744
Integration start scan : 585 Integration stop scan: 626
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

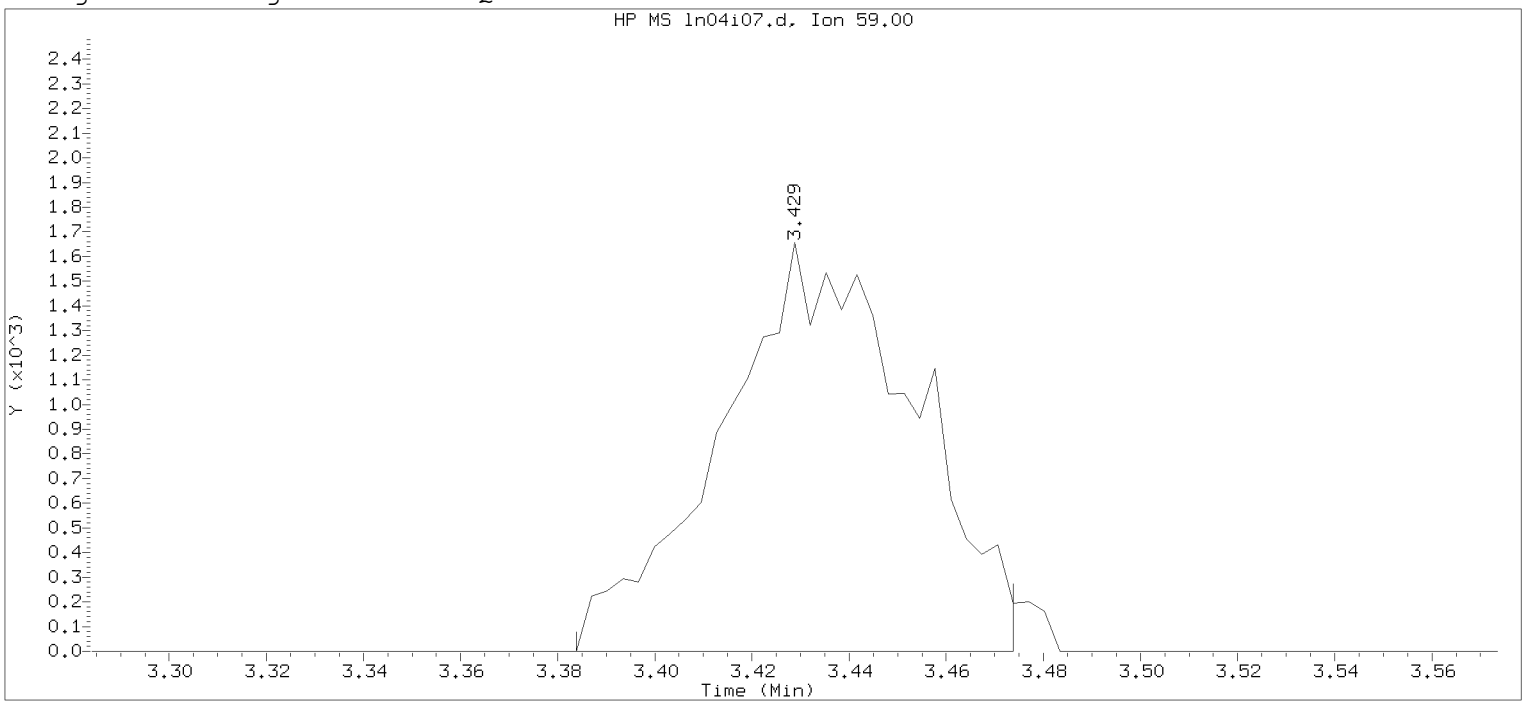
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

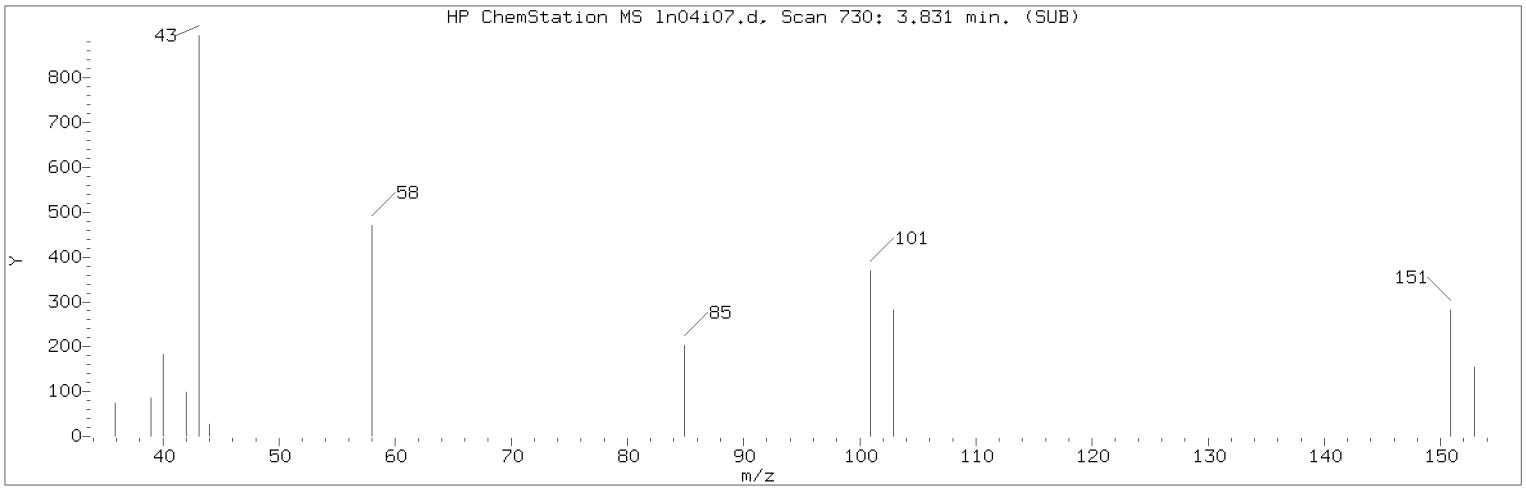
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

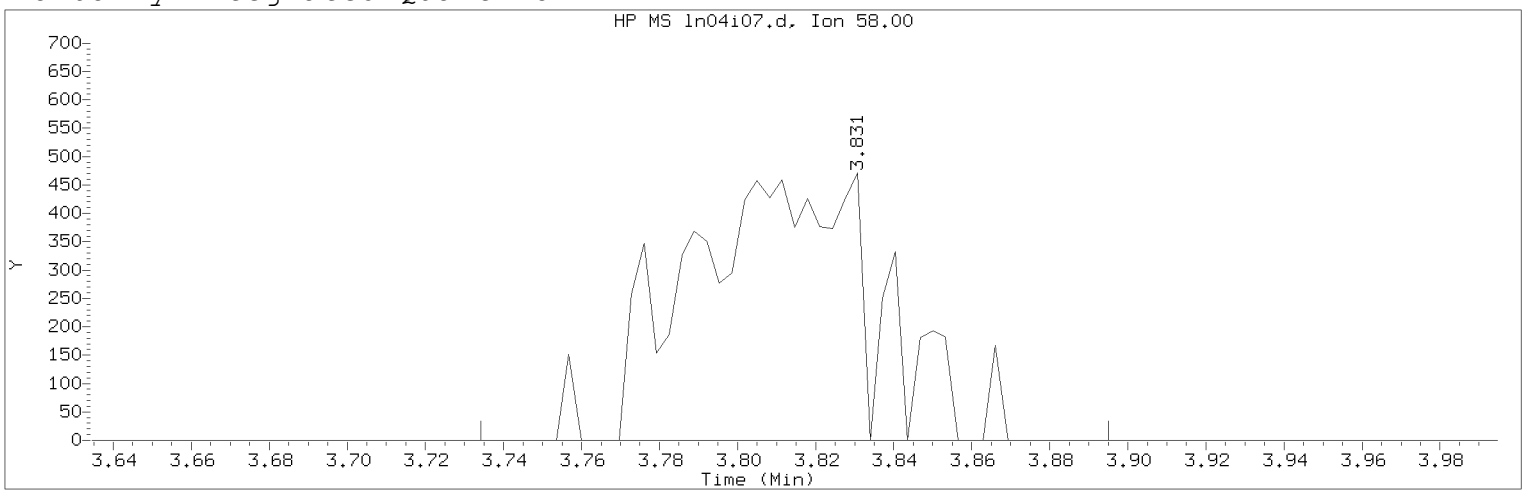
Compound Number : 14
Compound Name : Ethyl ether
Scan Number : 605
Retention Time (minutes): 3.429
Quant Ion : 59.00
Area : 4552
On-column Amount (ng) : 0.8599
Integration start scan : 590 Integration stop scan: 618
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

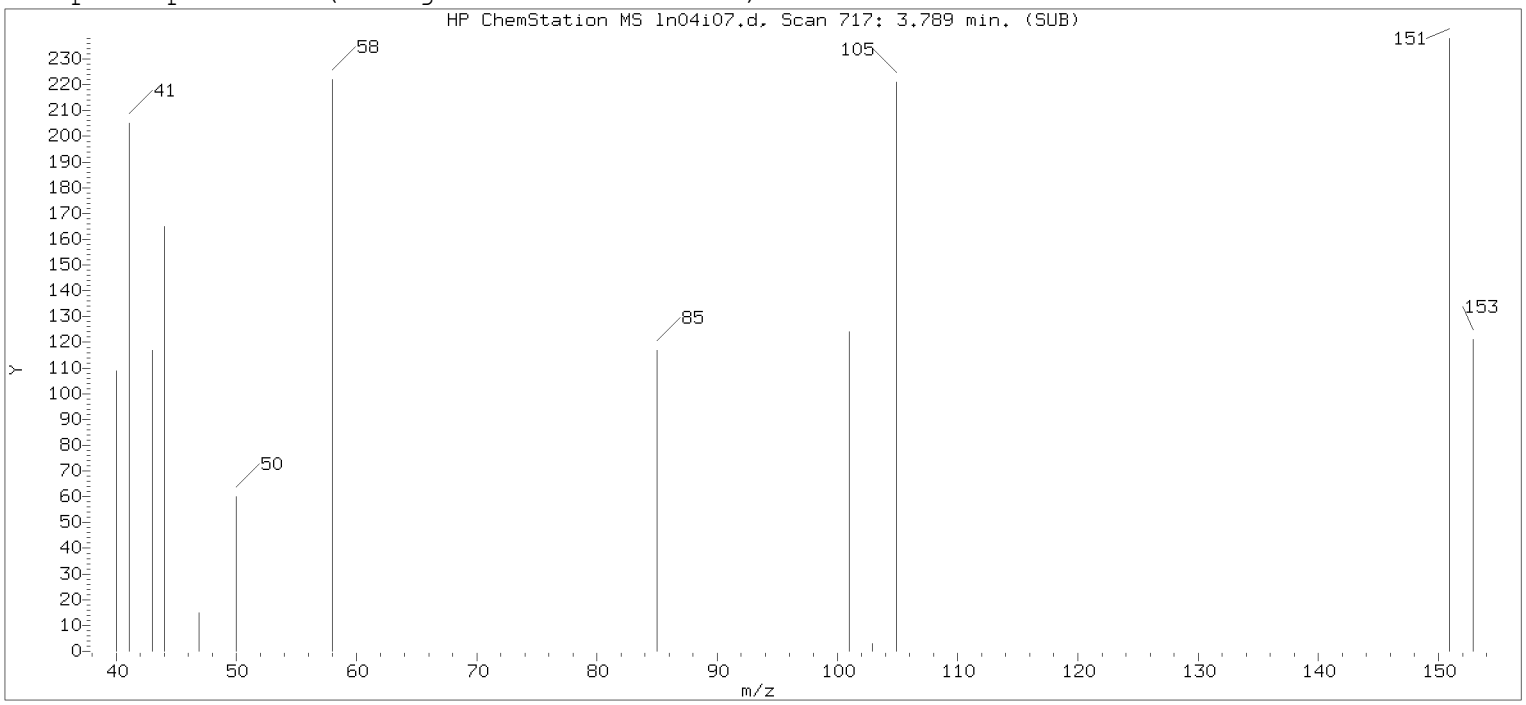
Compound Number : 18
Compound Name : Acetone
Scan Number : 730
Retention Time (minutes): 3.831
Quant Ion : 58.00
Area (flag) : 1588M
On-Column Amount (ng) : 1.9382
Integration start scan : 699 Integration stop scan: 749
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

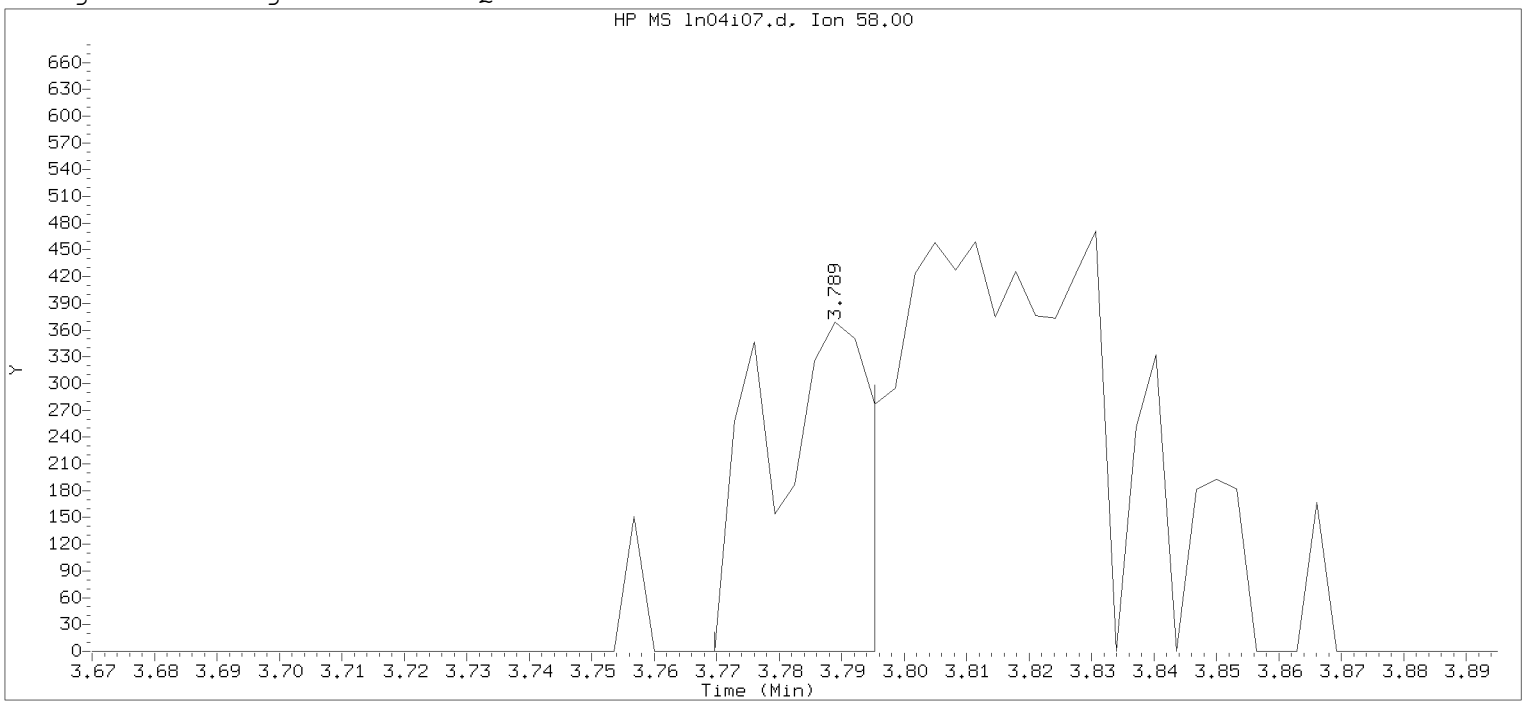
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

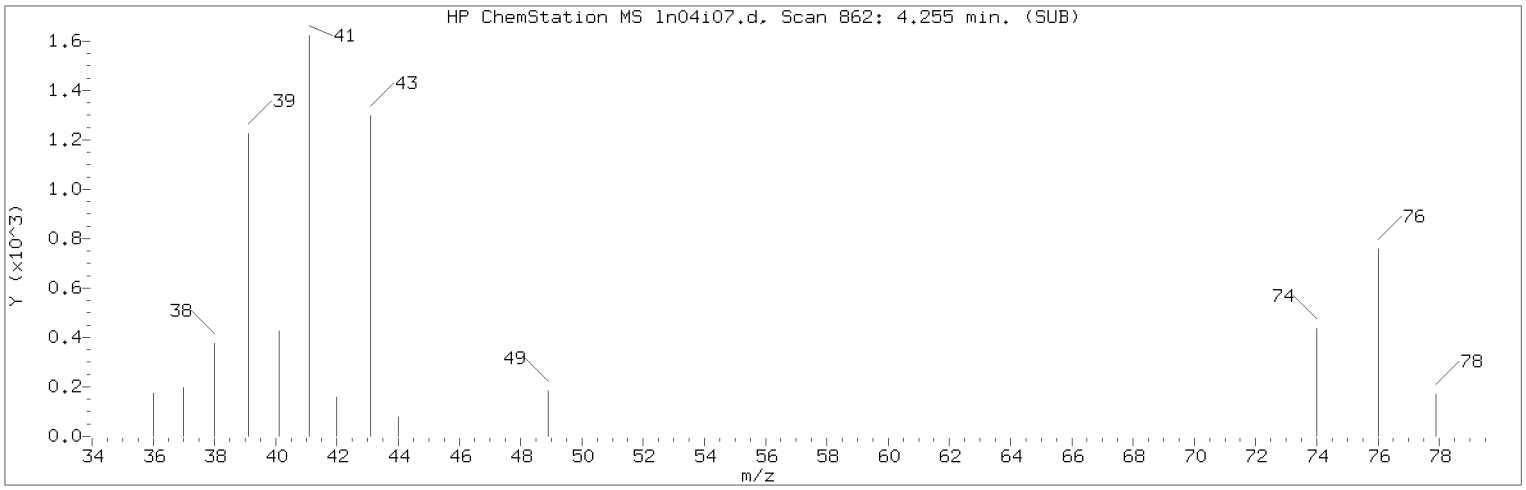
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

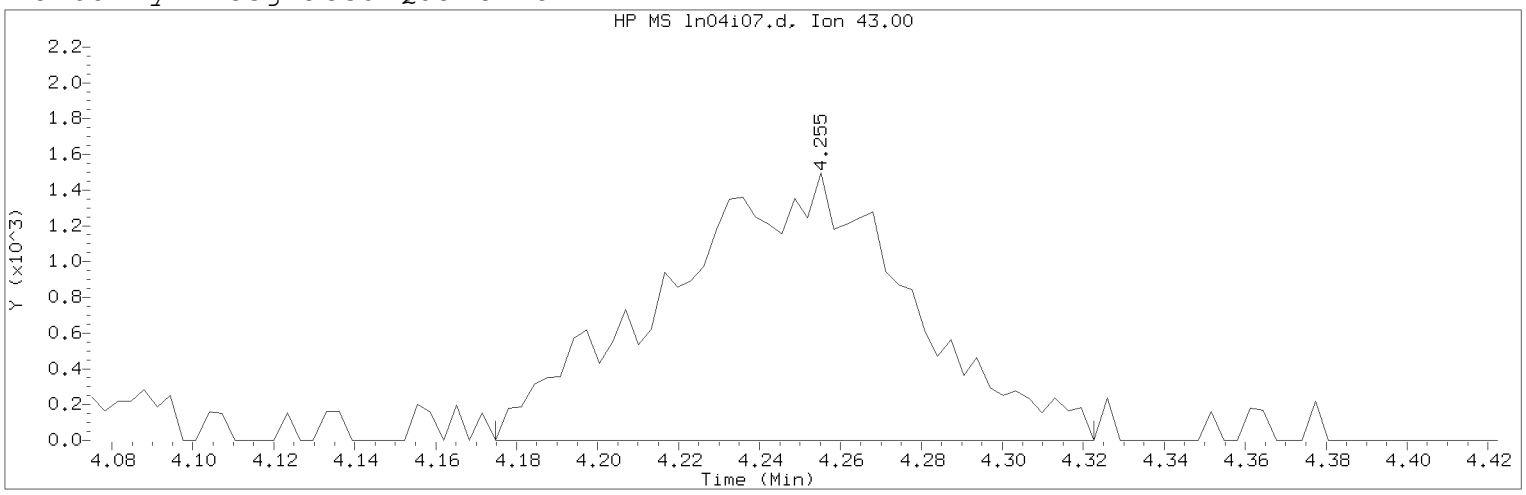
Compound Number : 18
Compound Name : Acetone
Scan Number : 717
Retention Time (minutes): 3.789
Quant Ion : 58.00
Area : 410
On-column Amount (ng) : 0.5644
Integration start scan : 710 Integration stop scan: 718
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

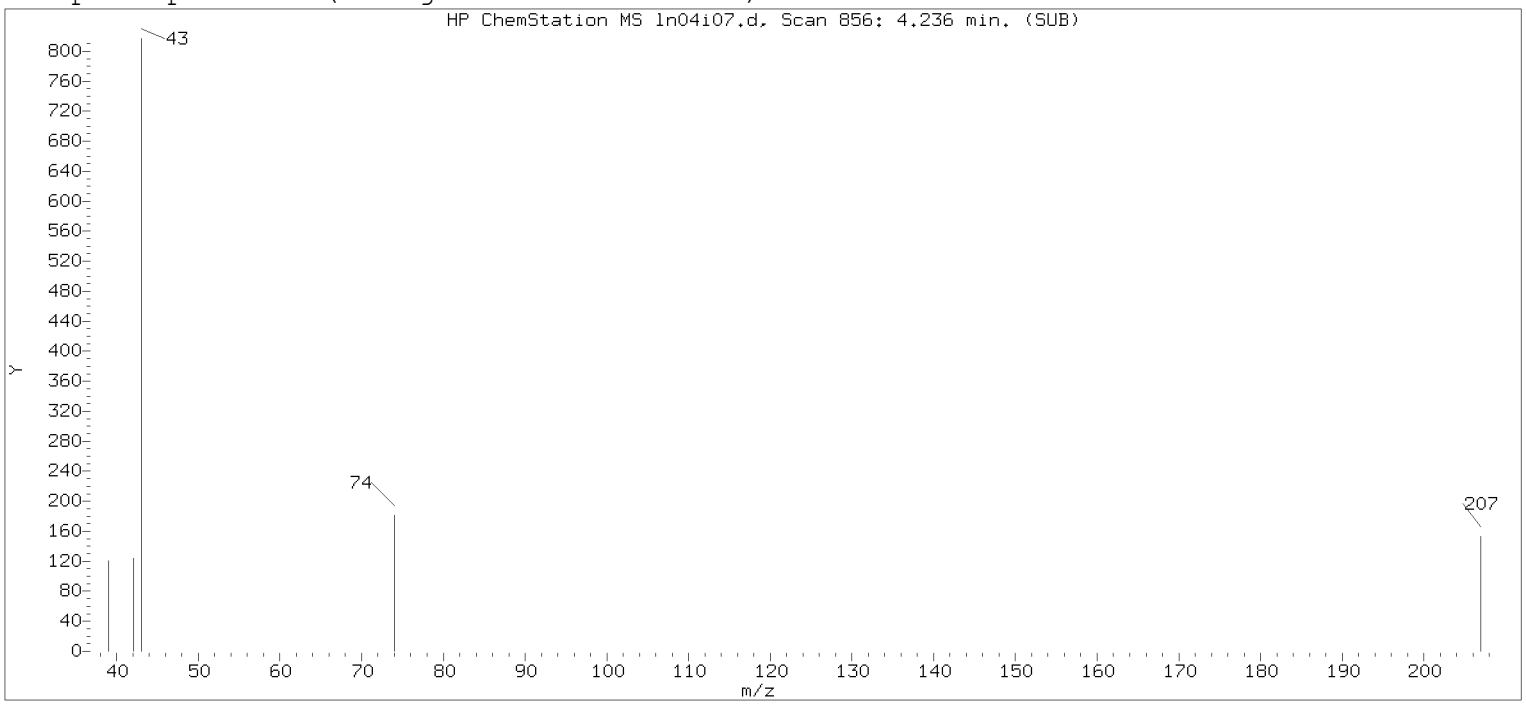
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 862
Retention Time (minutes): 4.255
Quant Ion : 43.00
Area (flag) : 6274M
On-Column Amount (ng) : 1.0106
Integration start scan : 836 Integration stop scan: 882
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

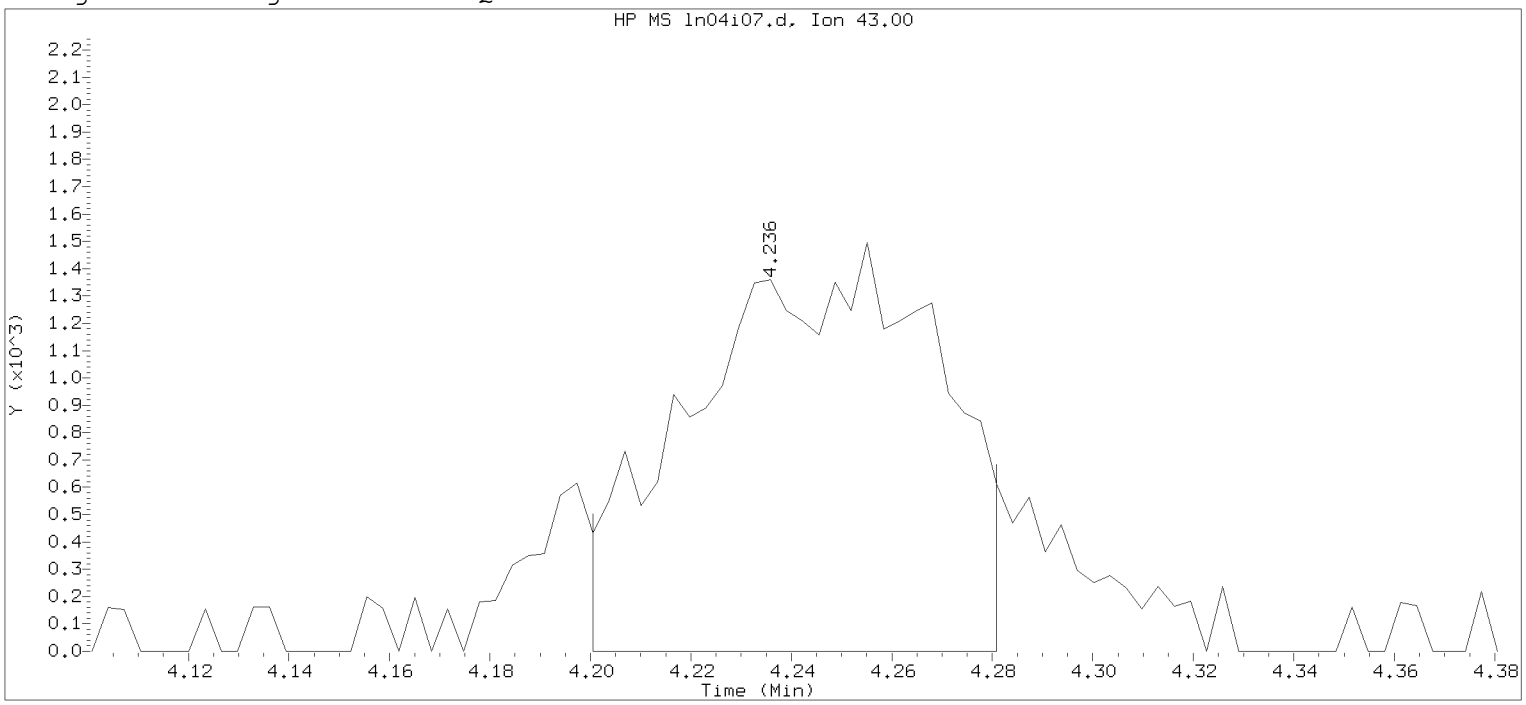
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

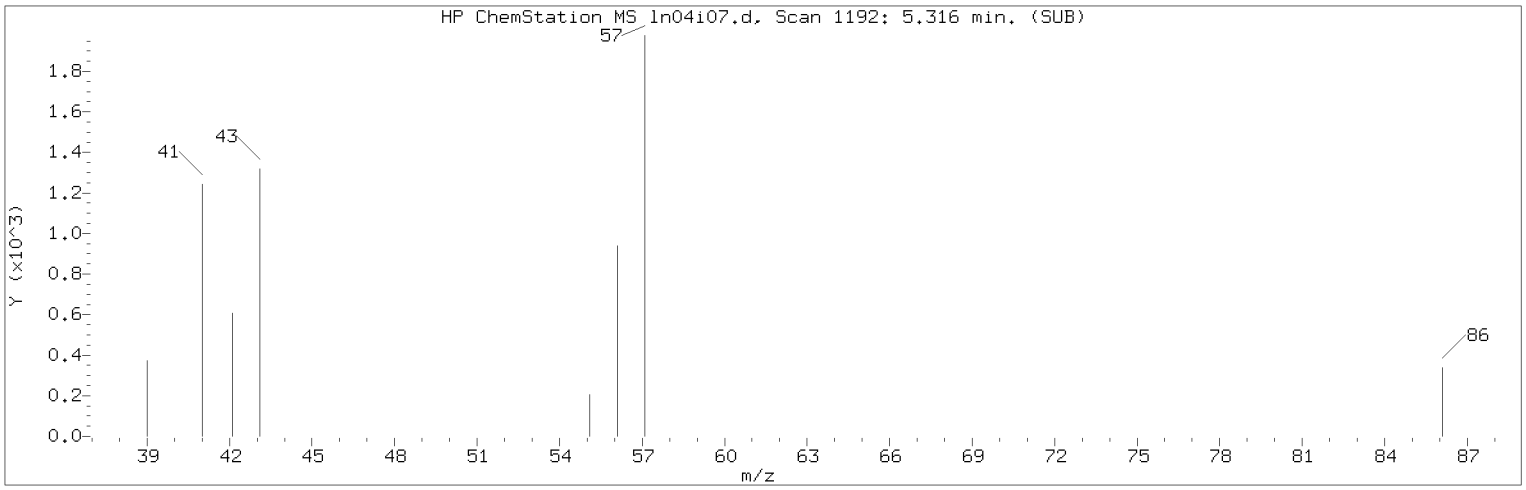
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

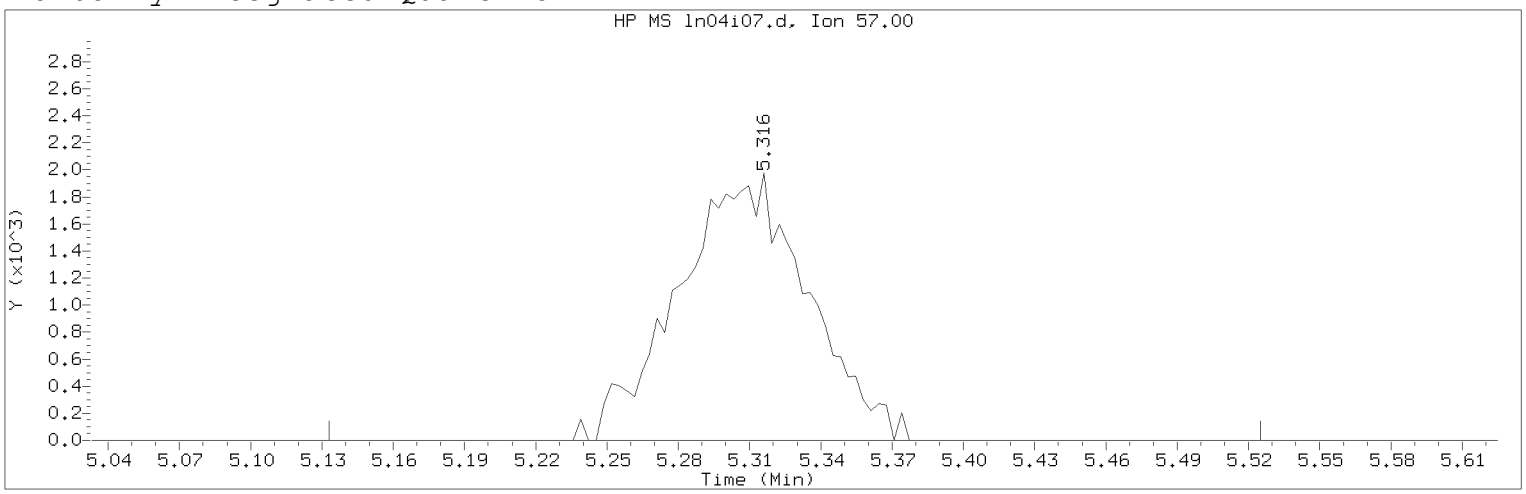
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 856
Retention Time (minutes): 4.236
Quant Ion : 43.00
Area : 4972
On-column Amount (ng) : 0.8386
Integration start scan : 844 Integration stop scan: 869
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

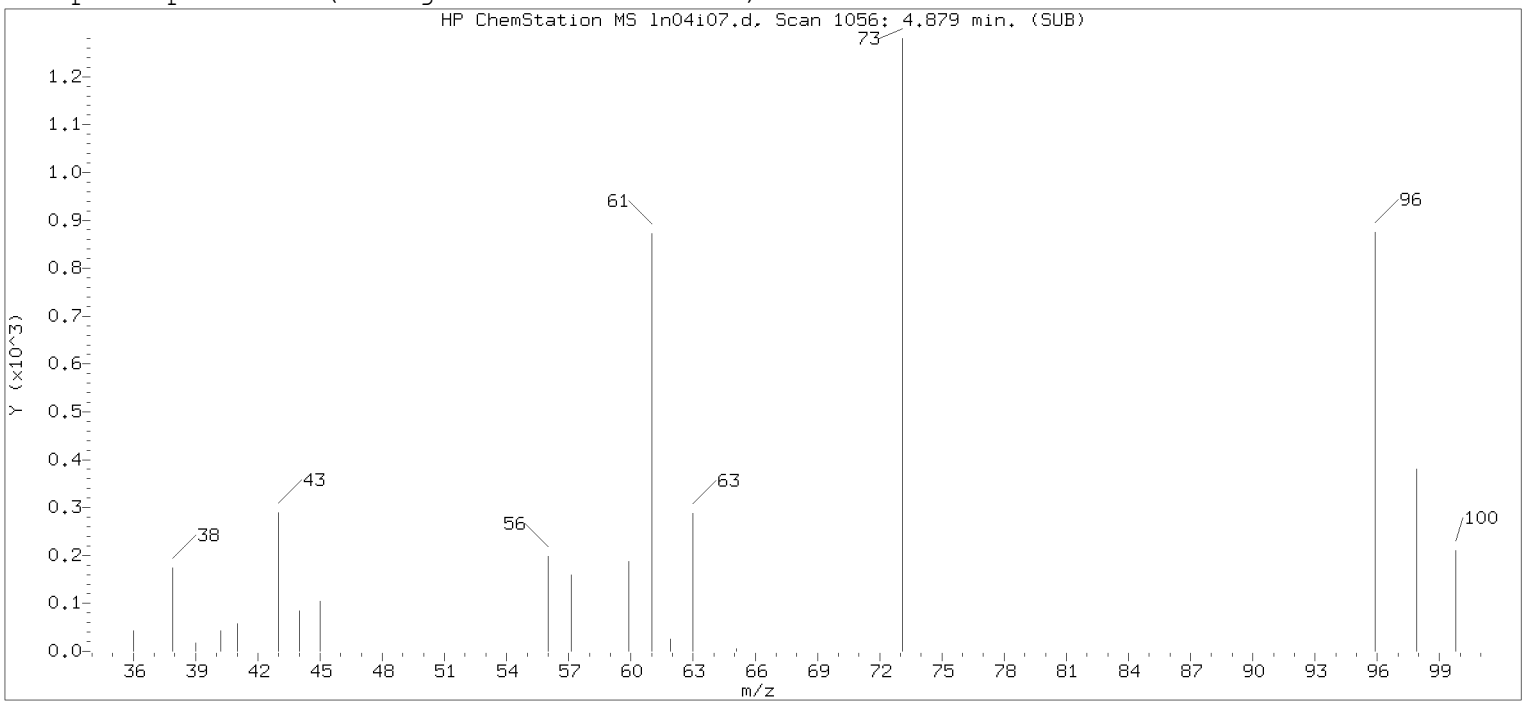
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1192
Retention Time (minutes): 5.316
Quant Ion : 57.00
Area (flag) : 7475M
On-Column Amount (ng) : 0.8616
Integration start scan : 1134 Integration stop scan: 1256
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

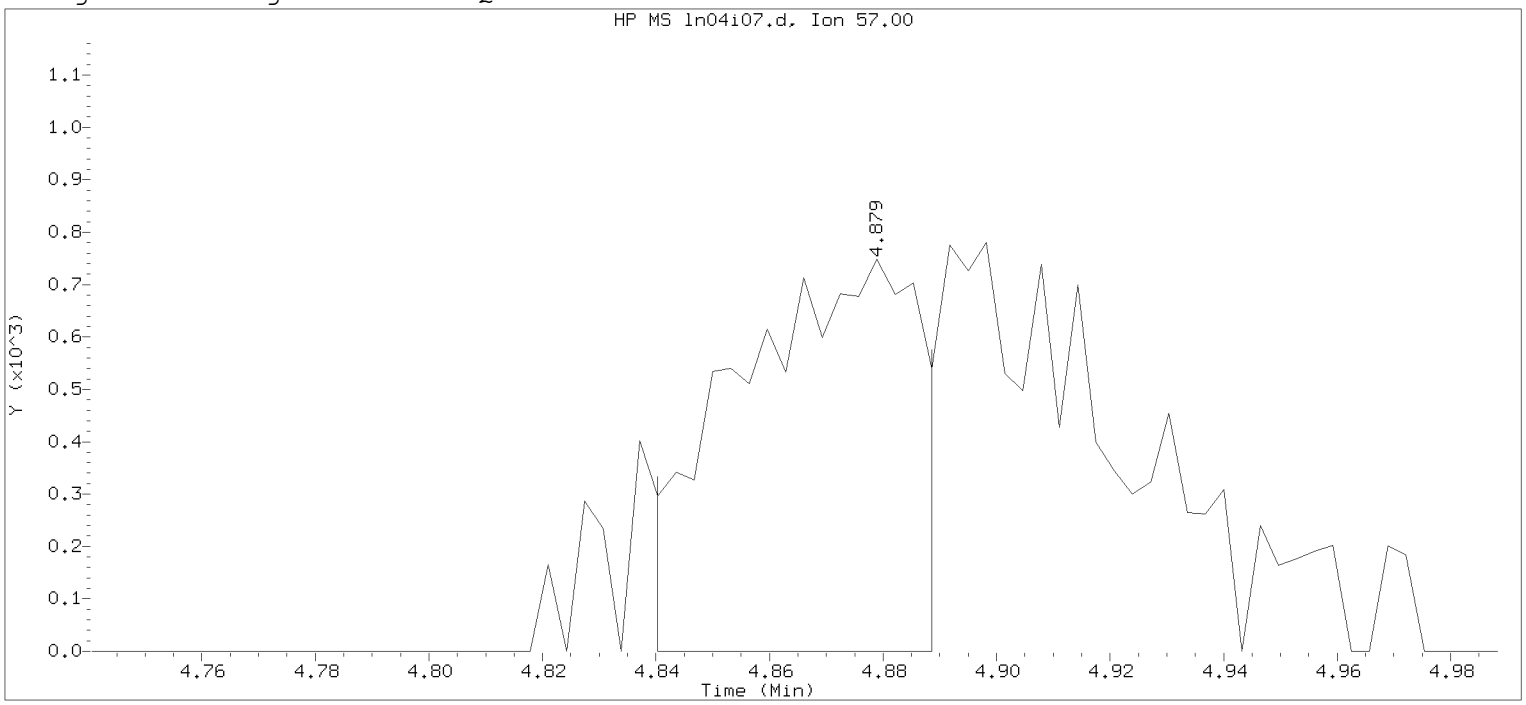
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

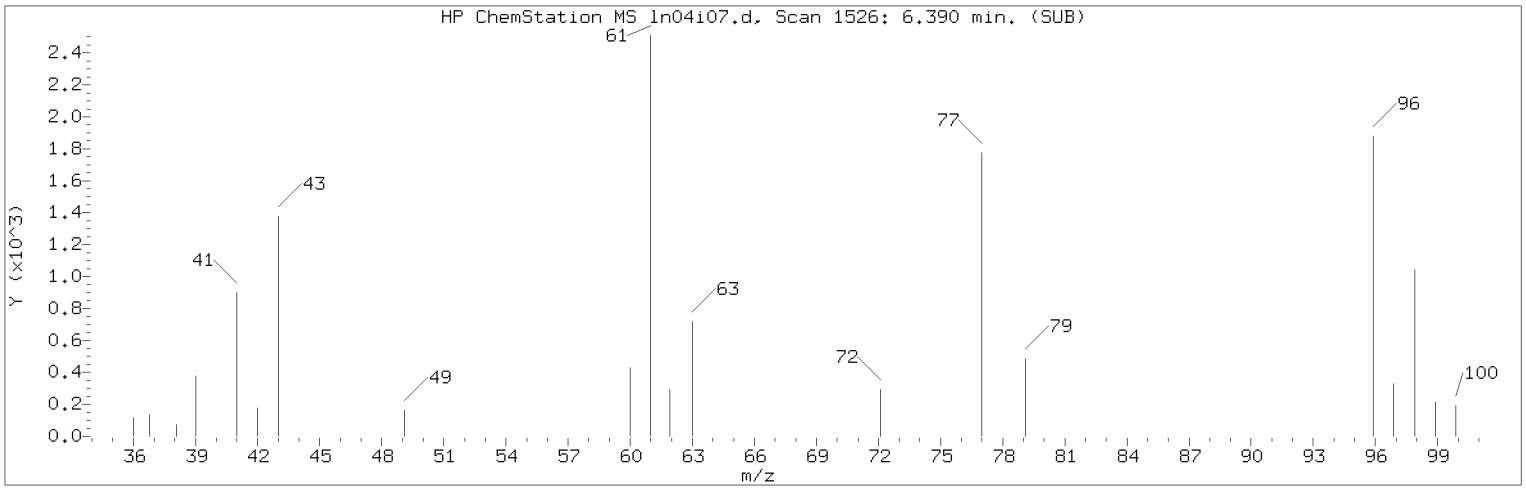
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

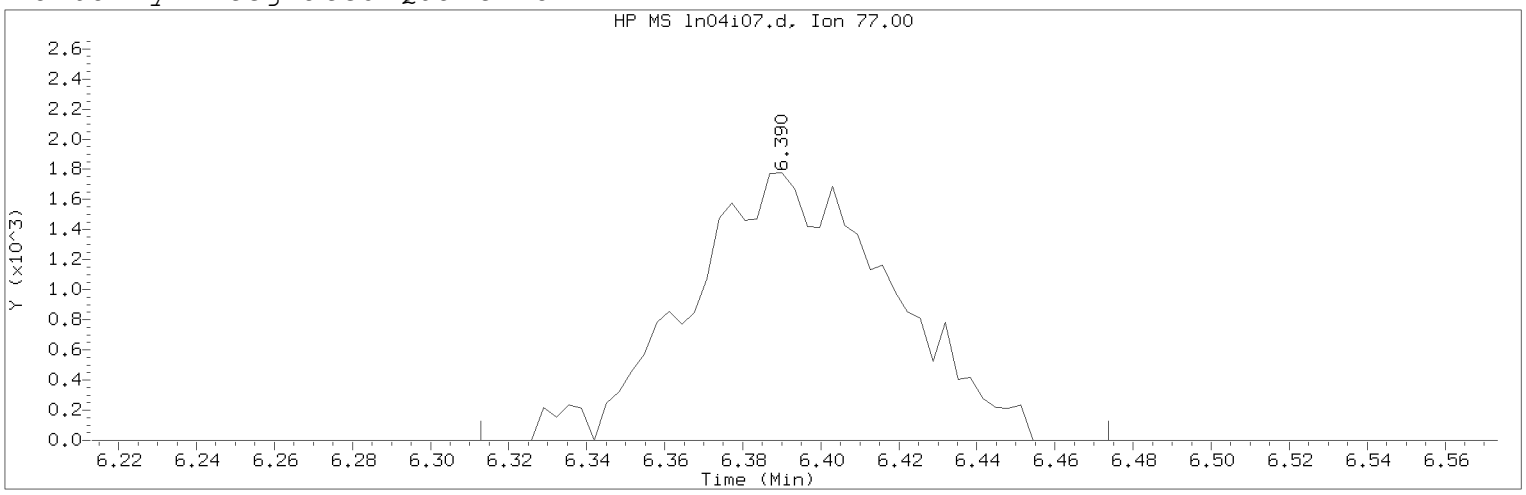
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1056
Retention Time (minutes): 4.879
Quant Ion : 57.00
Area : 1663
On-column Amount (ng) : 0.4635
Integration start scan : 1043 Integration stop scan: 1058
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

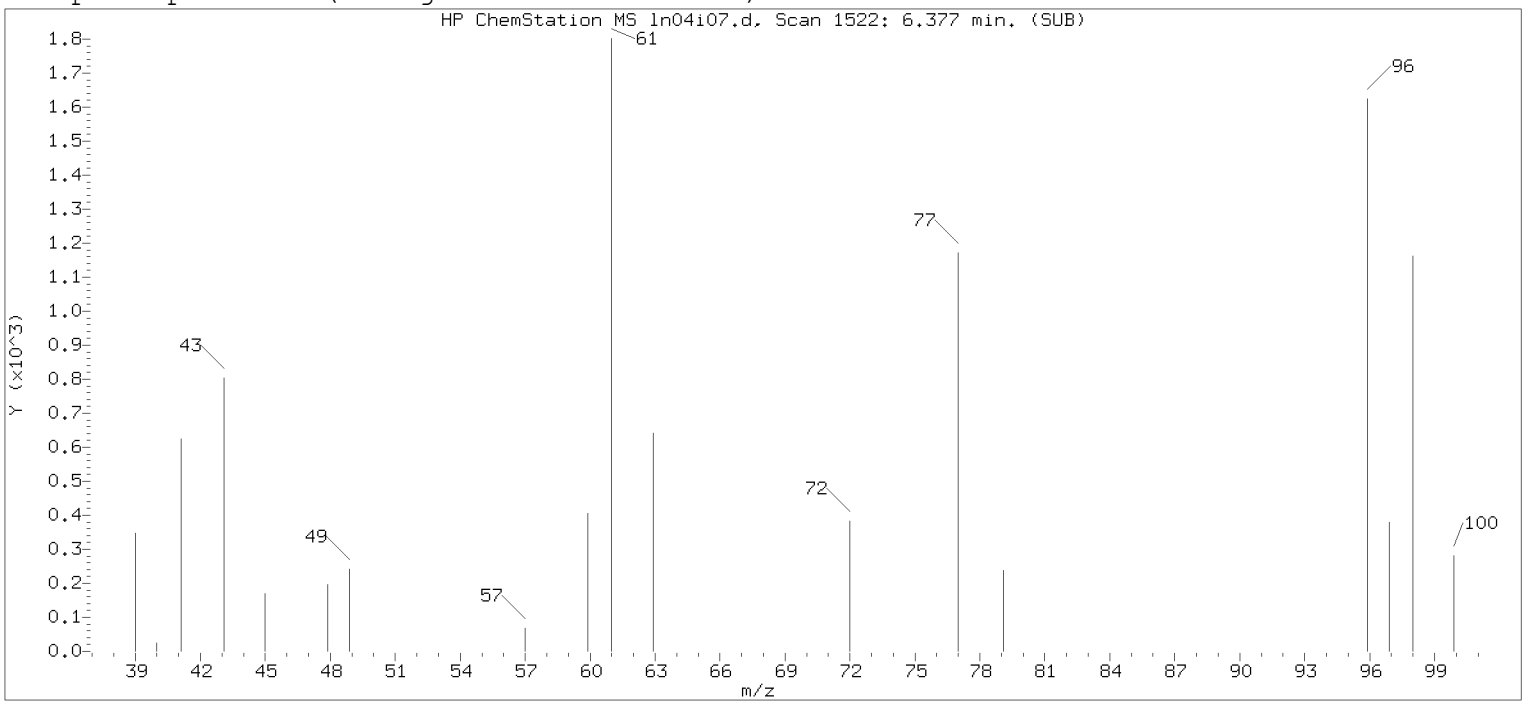
Compound Number : 45
Compound Name : 2,2-Dichloropropane
Scan Number : 1526
Retention Time (minutes): 6.390
Quant Ion : 77.00
Area (flag) : 6419M
On-Column Amount (ng) : 0.8488
Integration start scan : 1501 Integration stop scan: 1551
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

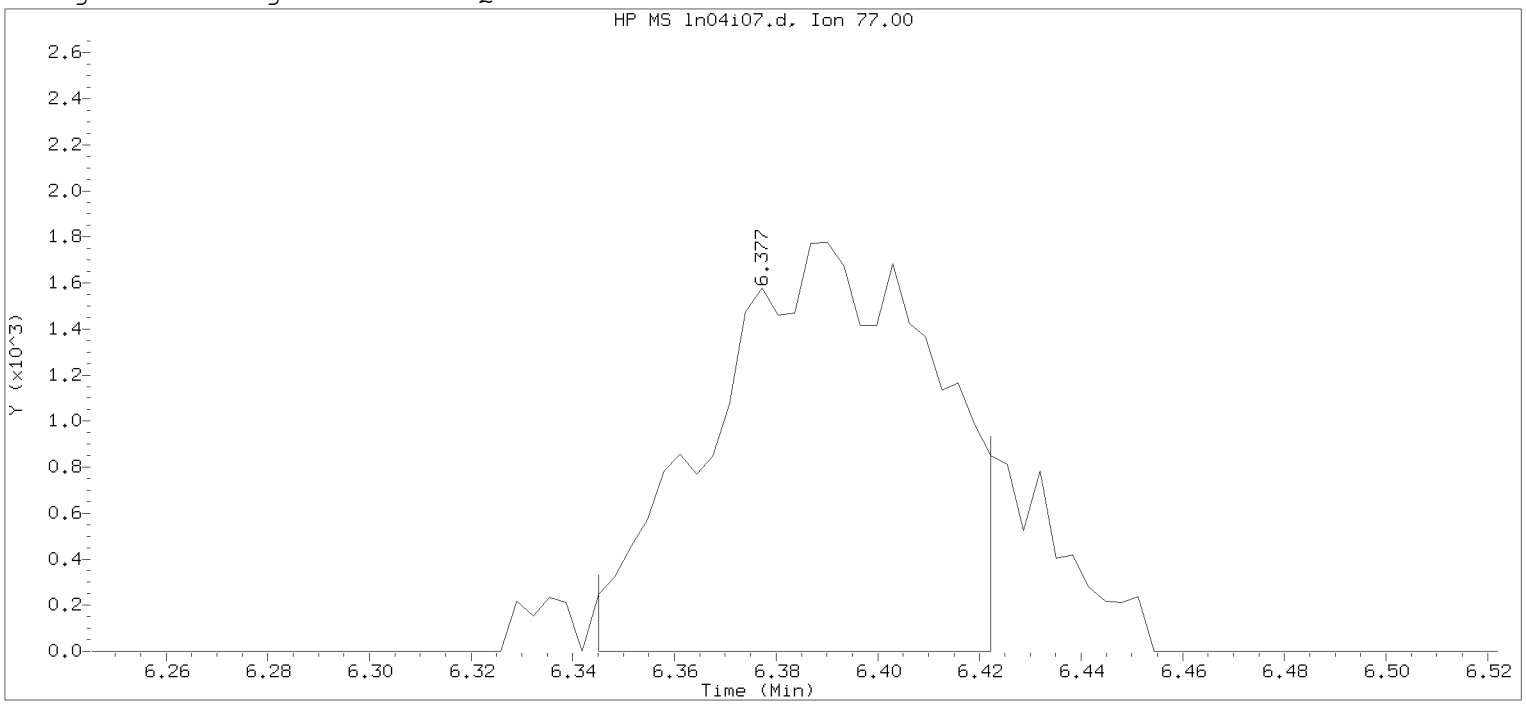
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

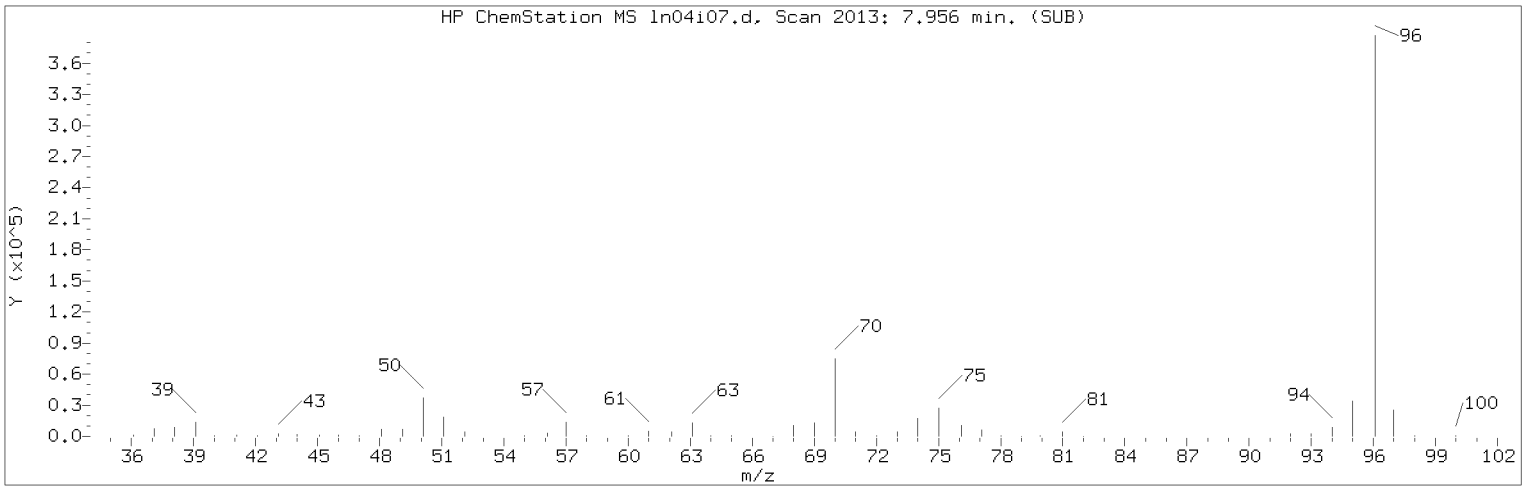
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

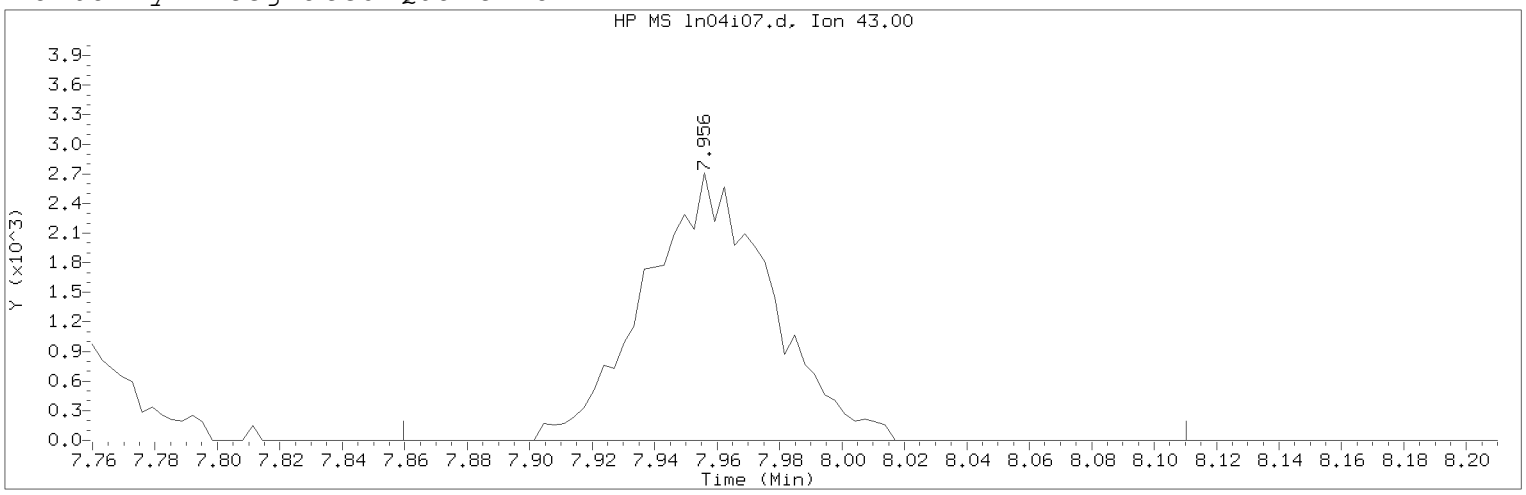
Compound Number : 45
Compound Name : 2,2-Dichloropropane
Scan Number : 1522
Retention Time (minutes): 6.377
Quant Ion : 77.00
Area : 5406
On-column Amount (ng) : 0.7289
Integration start scan : 1511 Integration stop scan: 1535
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

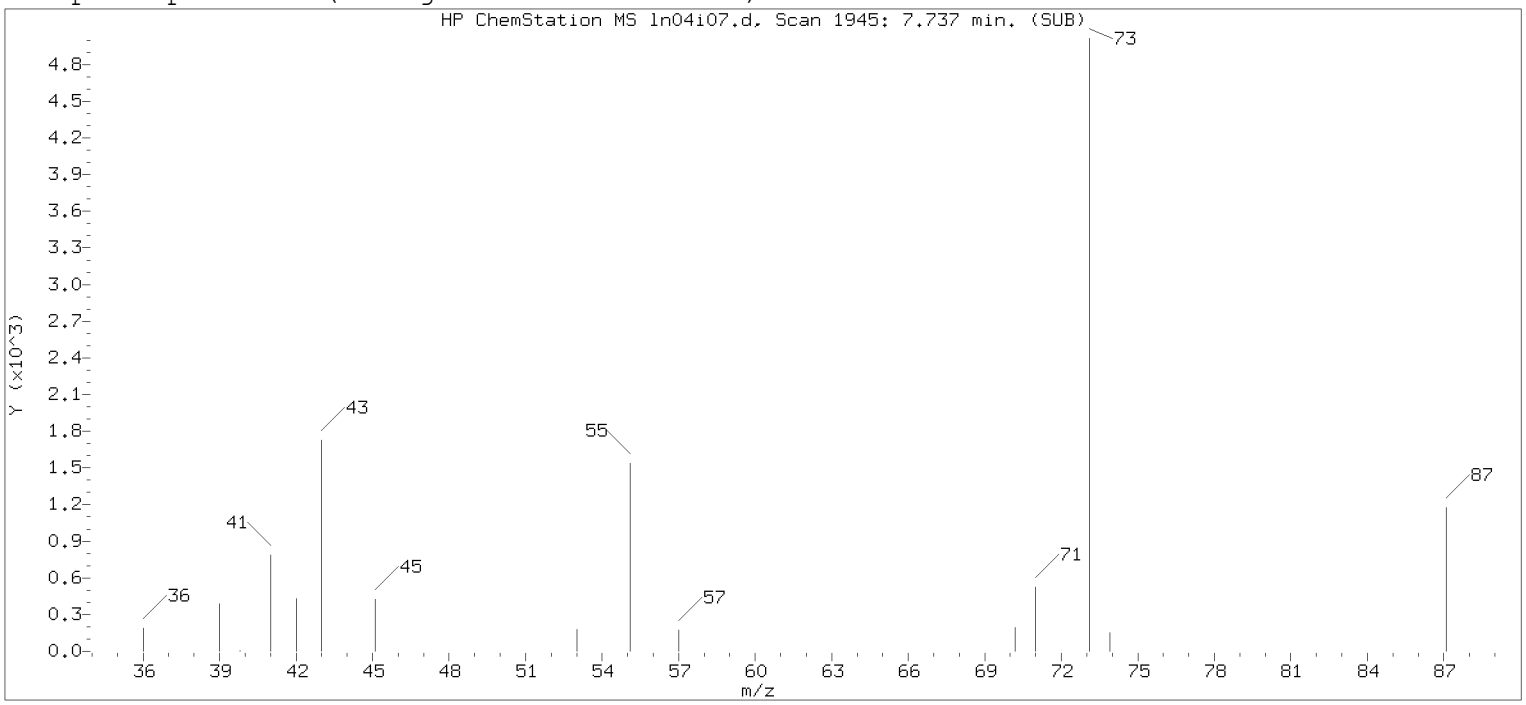
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2013
Retention Time (minutes): 7.956
Quant Ion : 43.00
Area (flag) : 7535M
On-Column Amount (ng) : 0.9297
Integration start scan : 1982 Integration stop scan: 2060
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

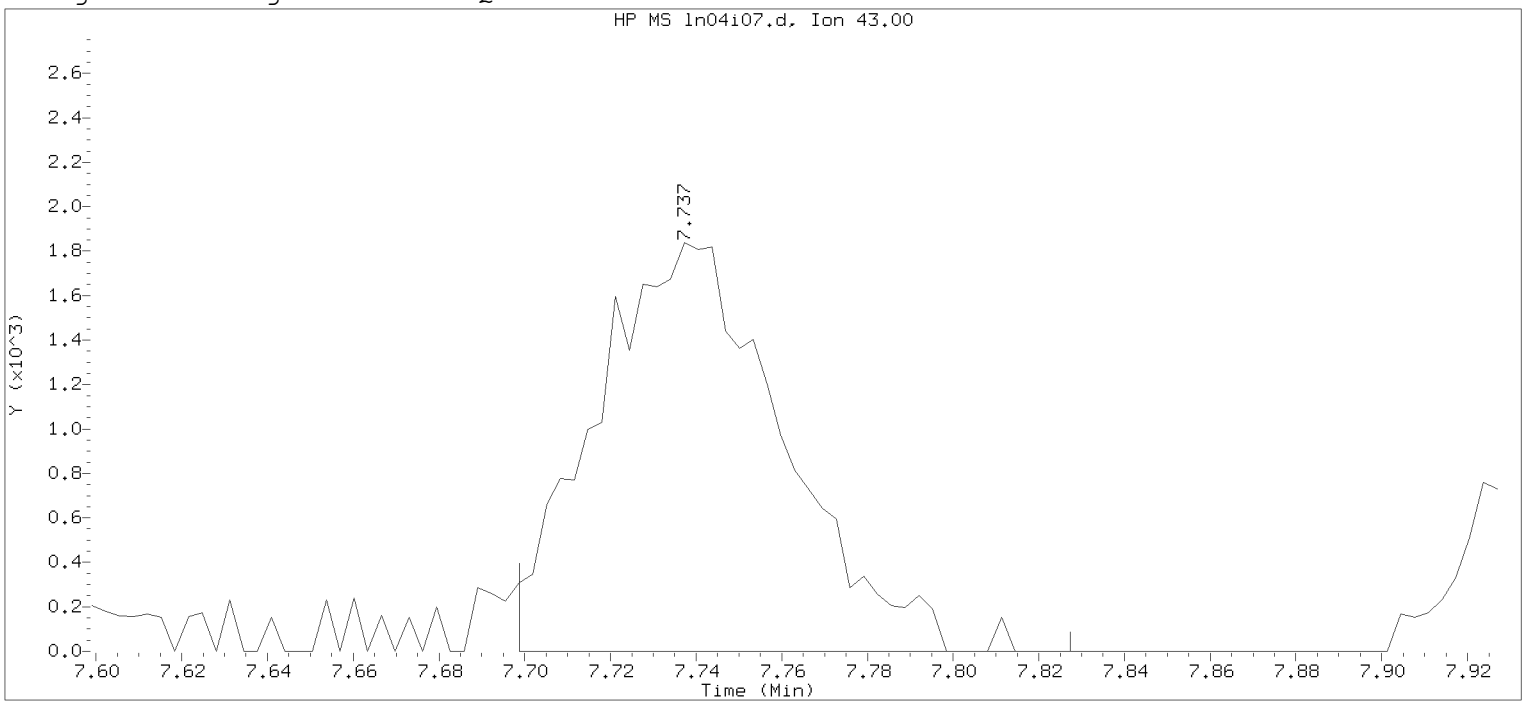
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

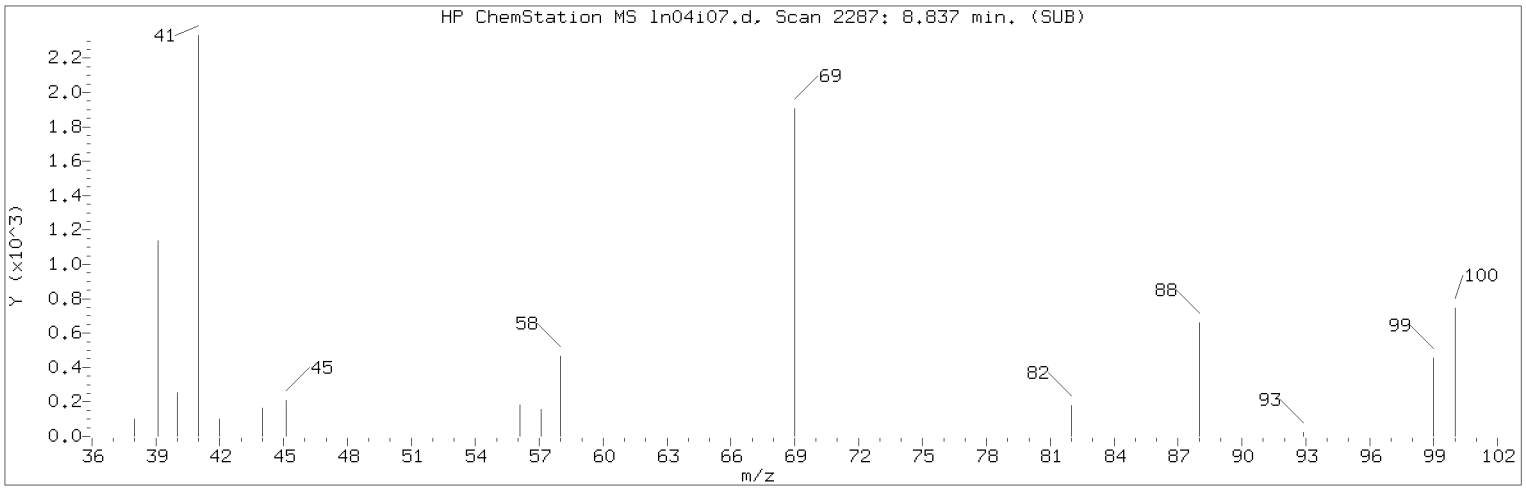
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

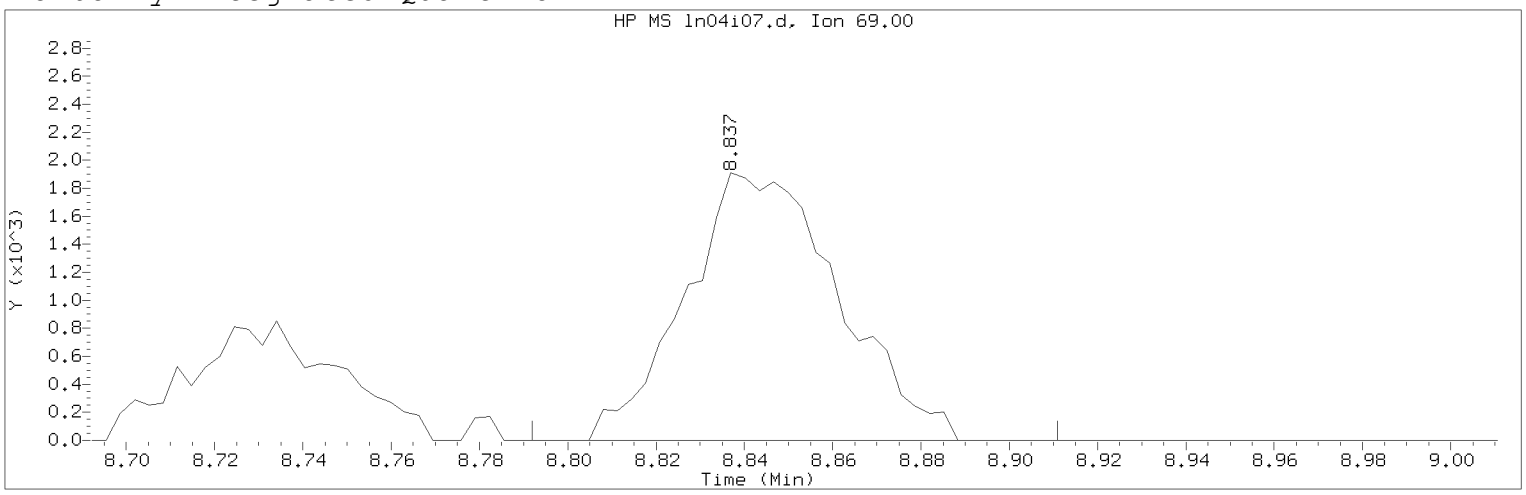
Compound Number	: 67		
Compound Name	: n-Heptane		
Scan Number	: 1945		
Retention Time (minutes)	: 7.737		
Quant Ion	: 43.00		
Area	: 5623		
On-column Amount (ng)	: 0.9372		
Integration start scan	: 1932	Integration stop scan:	1972
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

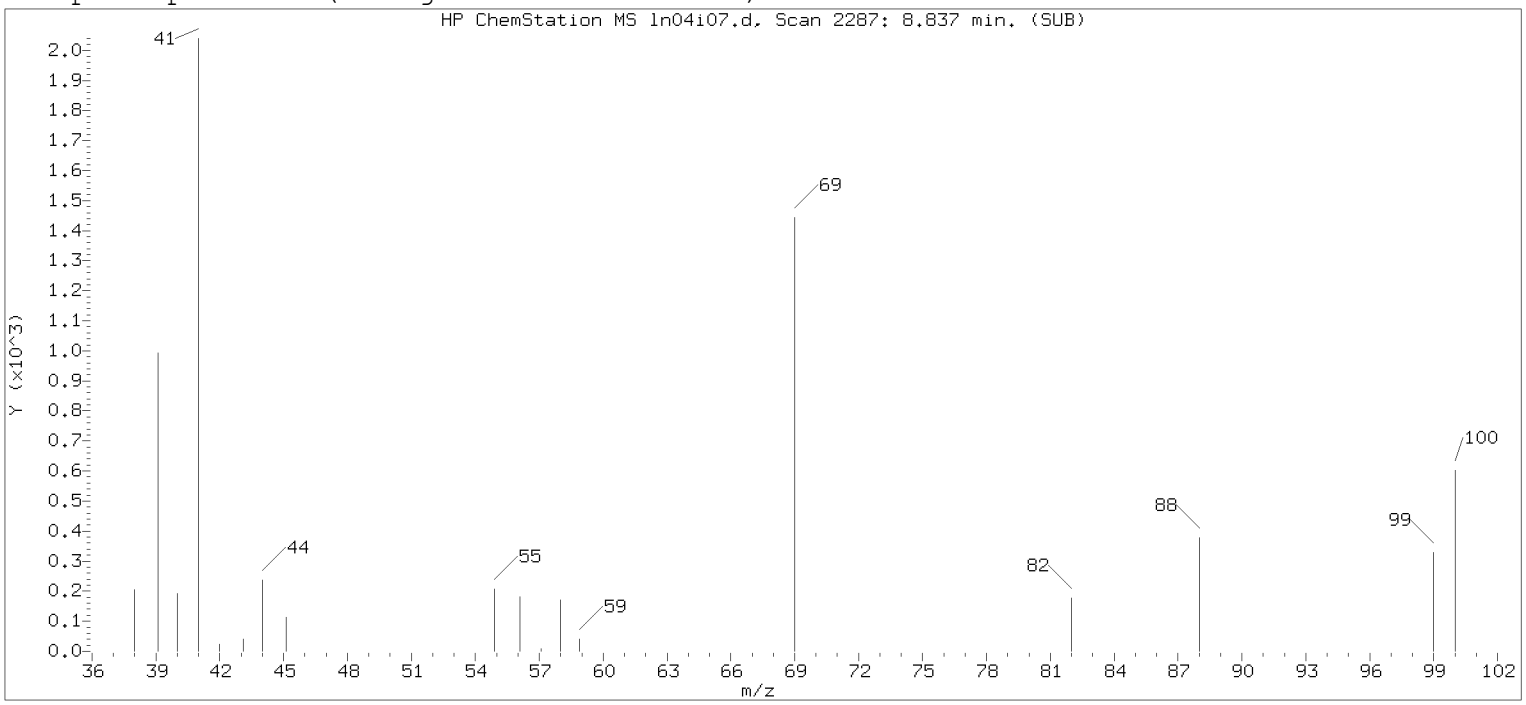
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2287
Retention Time (minutes): 8.837
Quant Ion : 69.00
Area (flag) : 4607M
On-Column Amount (ng) : 0.8112
Integration start scan : 2272 Integration stop scan: 2309
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

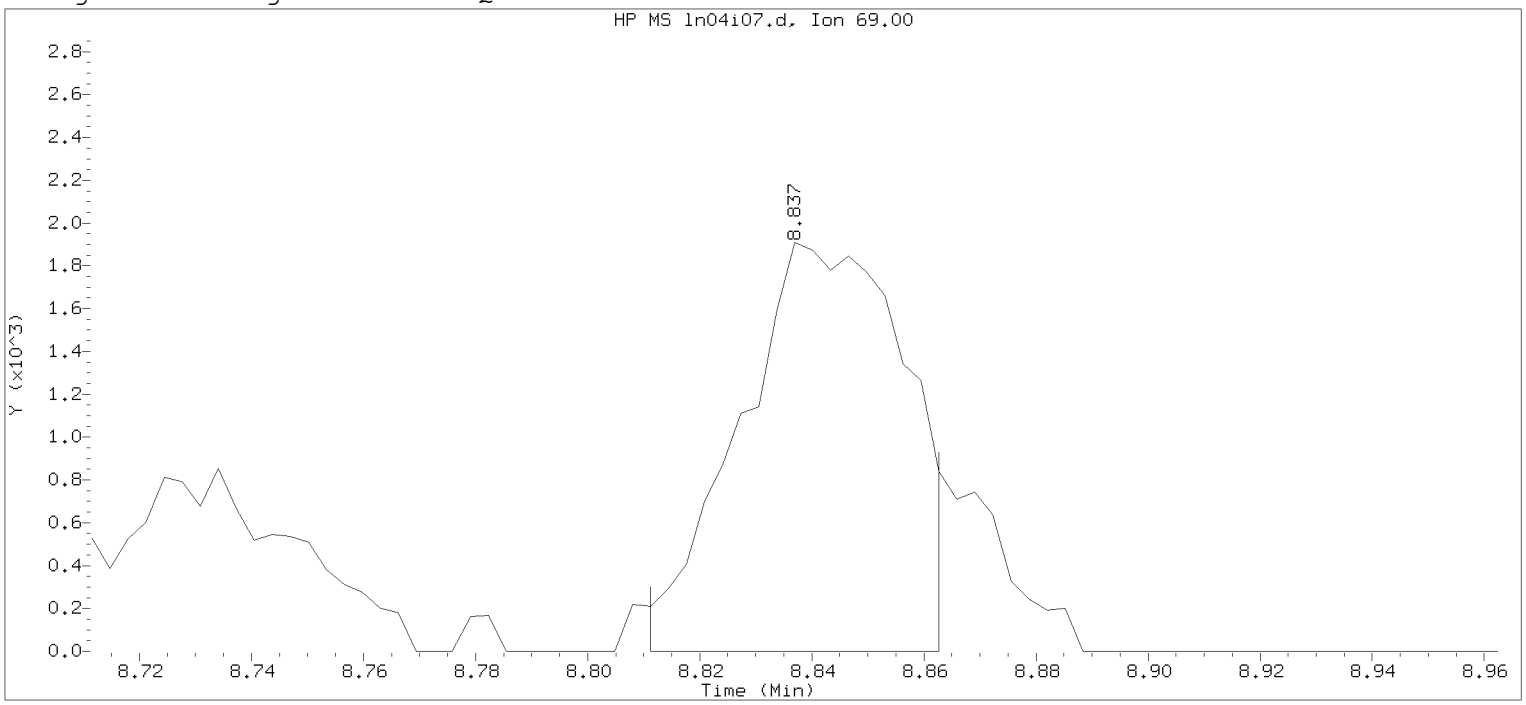
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

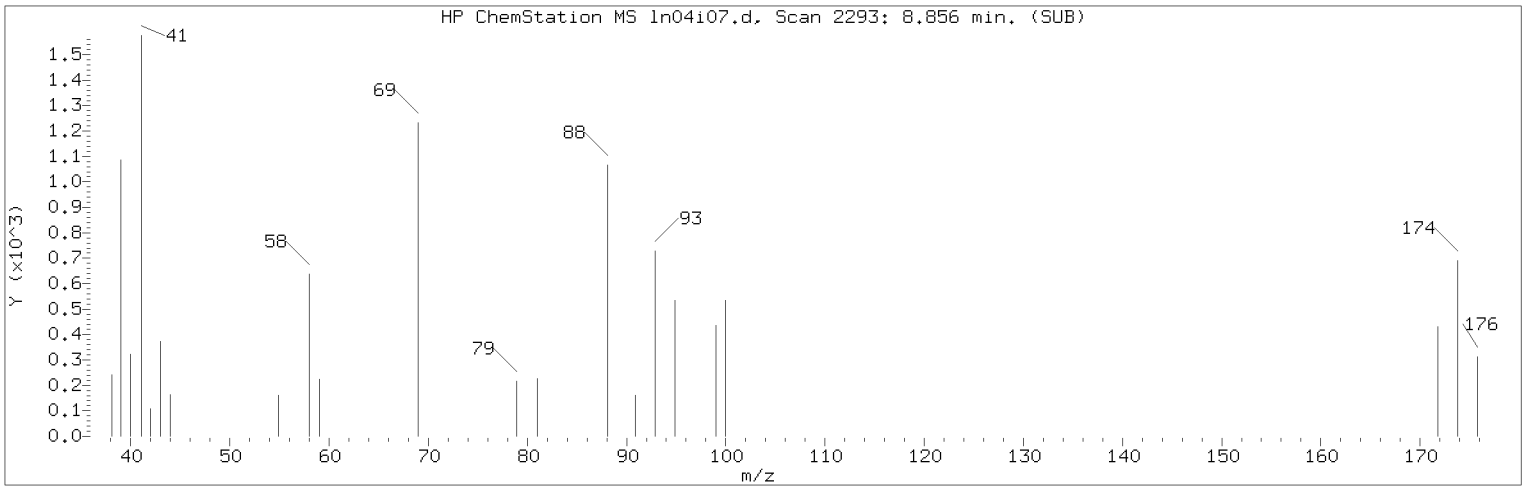
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

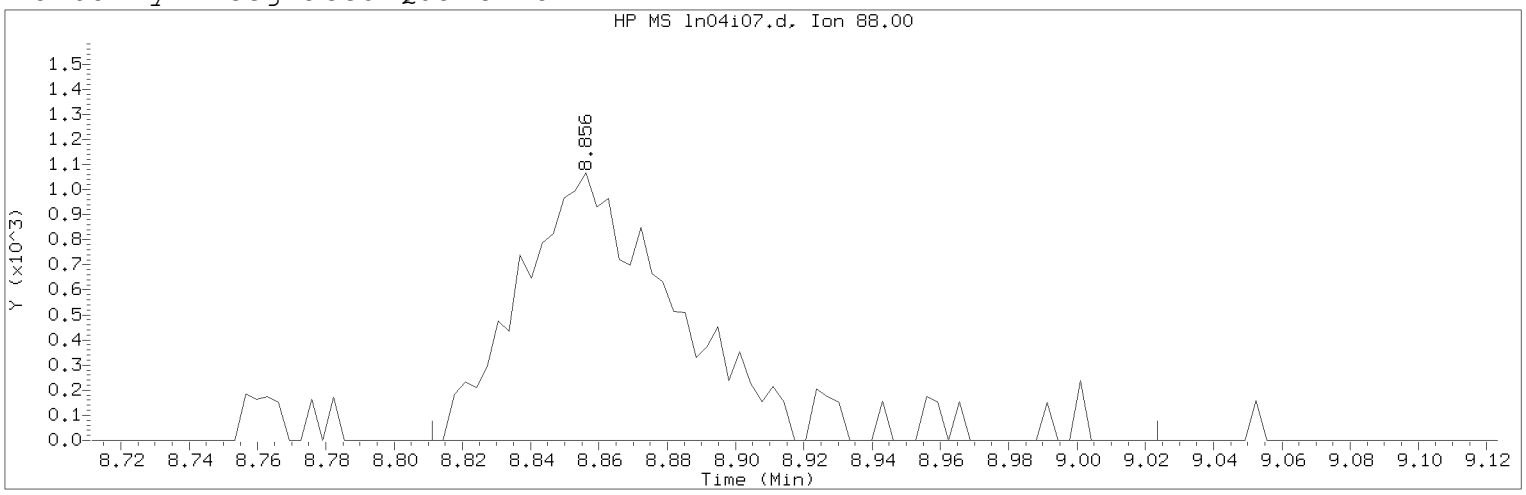
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2287
Retention Time (minutes): 8.837
Quant Ion : 69.00
Area : 3874
On-column Amount (ng) : 0.7186
Integration start scan : 2278 Integration stop scan: 2294
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

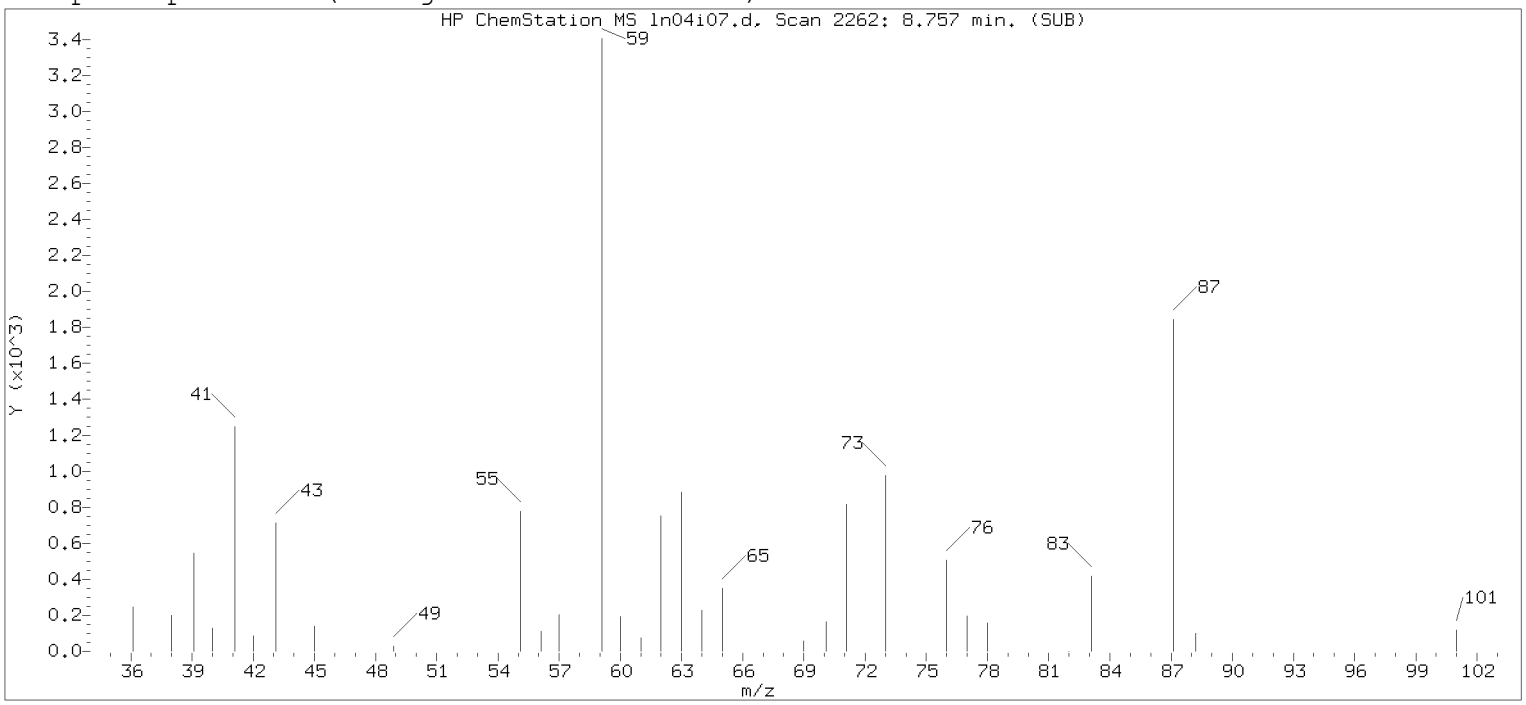
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 3548M
On-Column Amount (ng) : 43.4574
Integration start scan : 2278 Integration stop scan: 2344
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

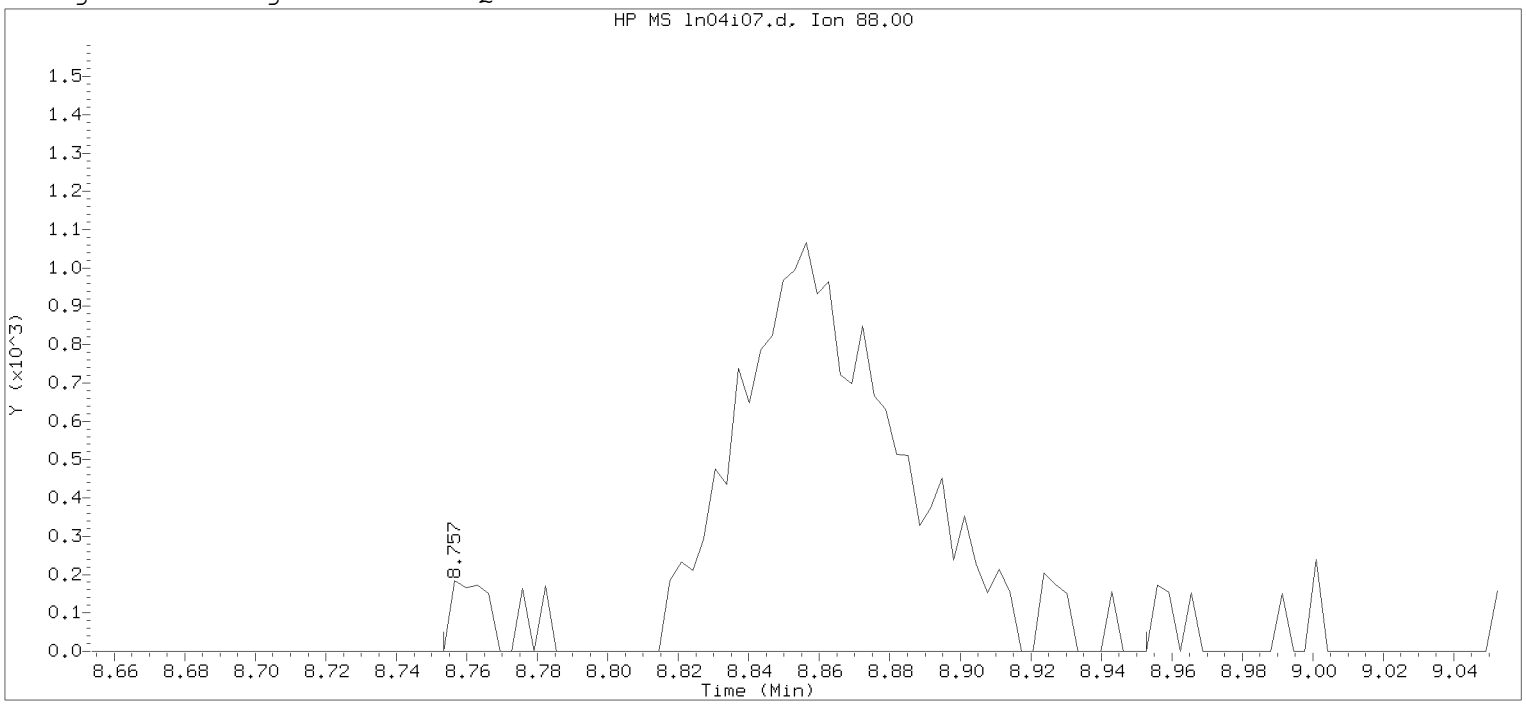
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

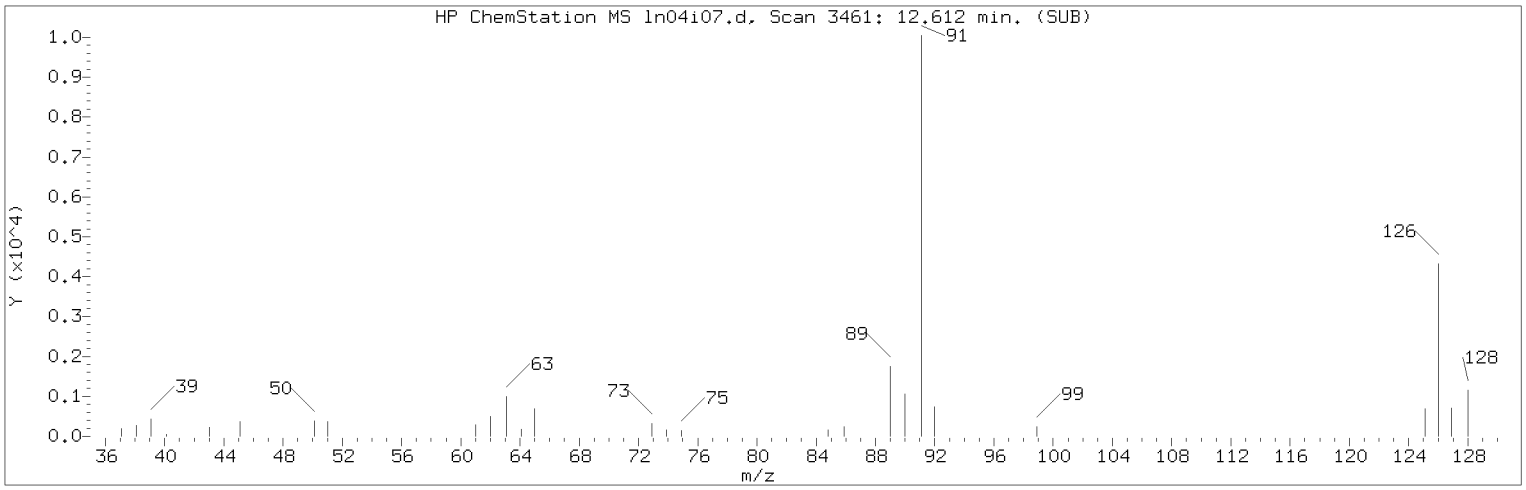
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

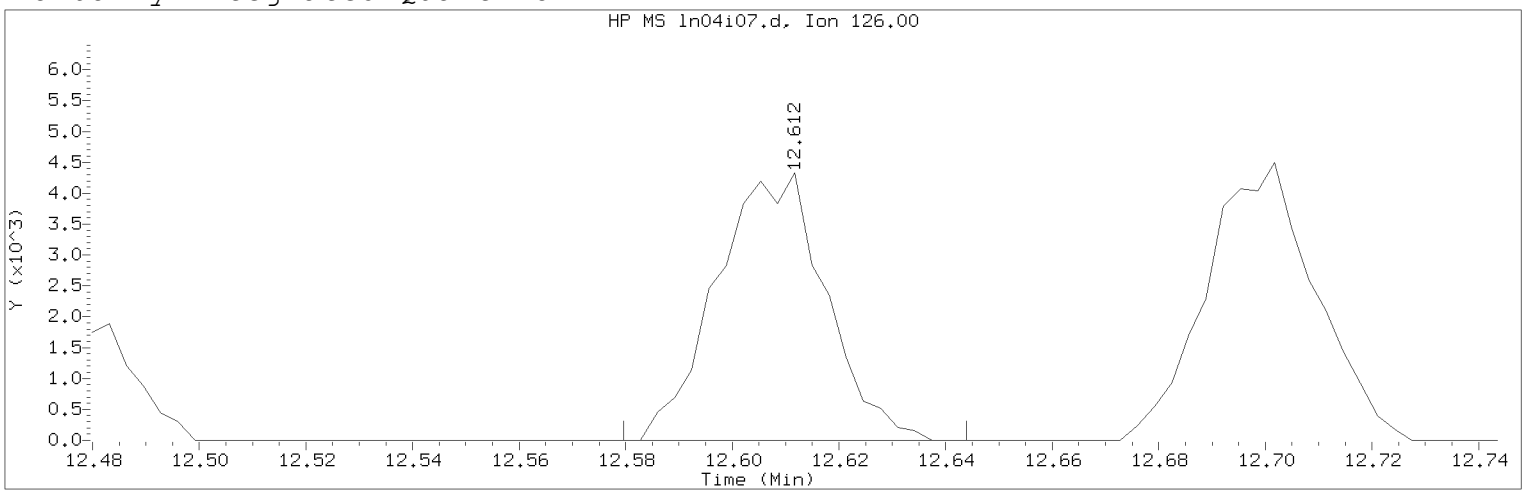
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2262		
Retention Time (minutes)	: 8.757		
Quant Ion	: 88.00		
Area	: 3575		
On-column Amount (ng)	: 43.6406		
Integration start scan	: 2260	Integration stop scan	: 2322
Y at integration start	: 0	Y at integration end	: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

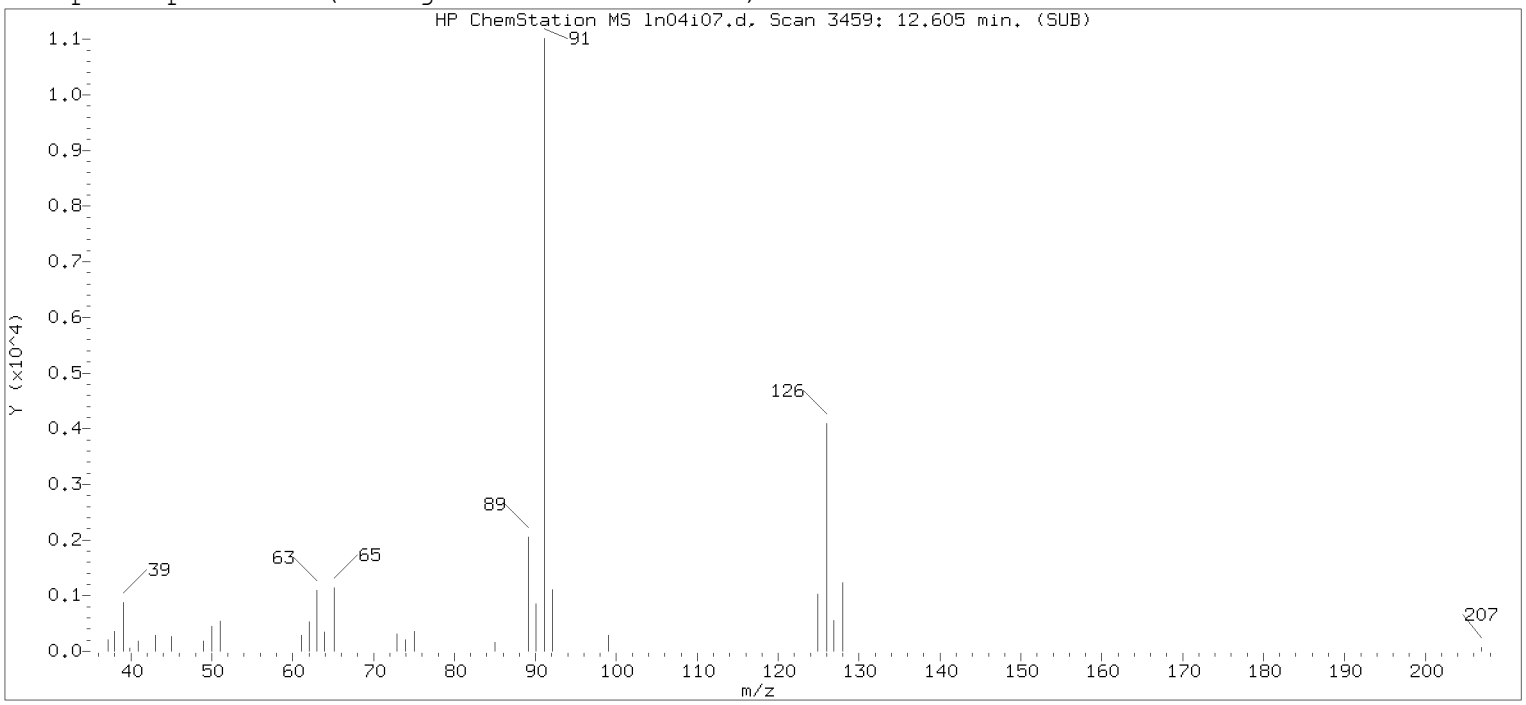
Compound Number : 120
Compound Name : 2-Chlorotoluene
Scan Number : 3461
Retention Time (minutes): 12.612
Quant Ion : 126.00
Area (flag) : 6138M
On-Column Amount (ng) : 0.9294
Integration start scan : 3450 Integration stop scan: 3470
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

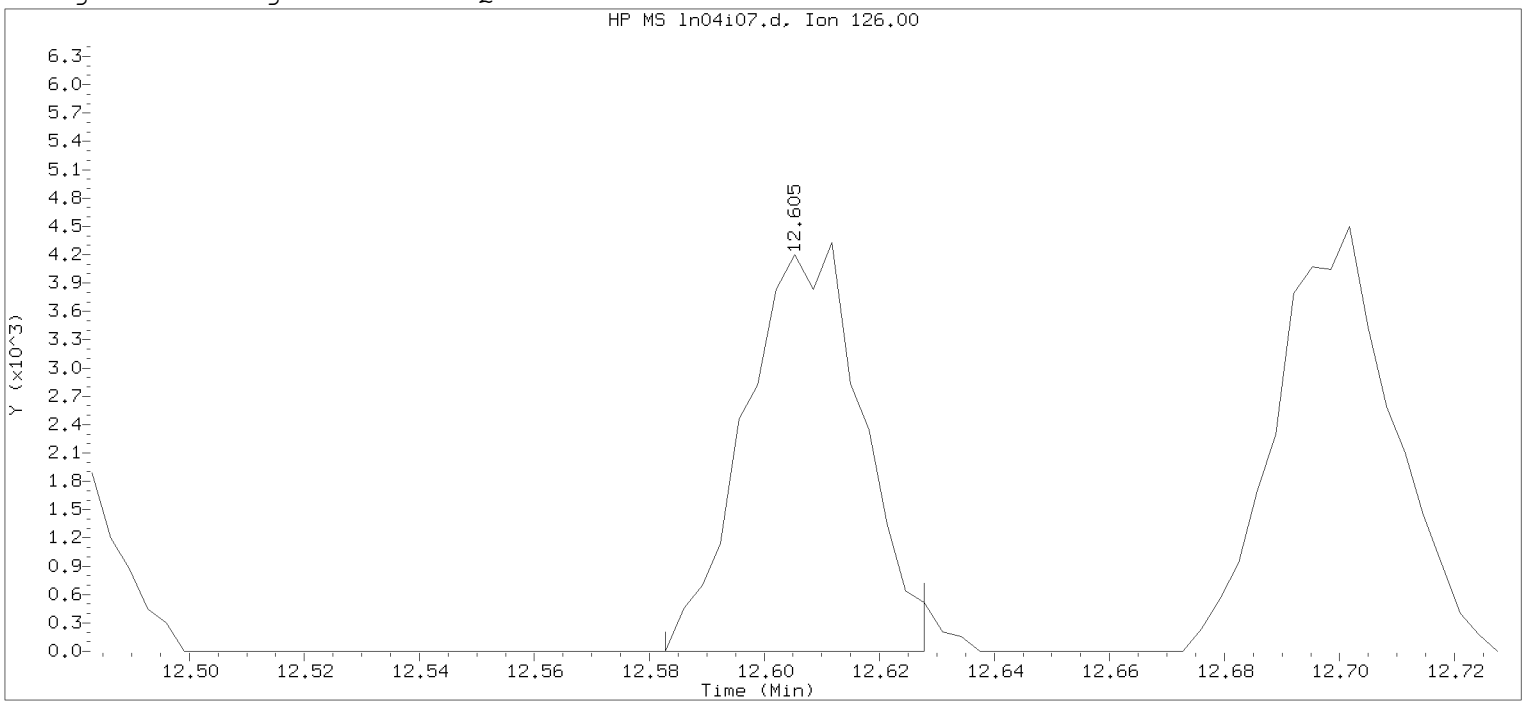
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

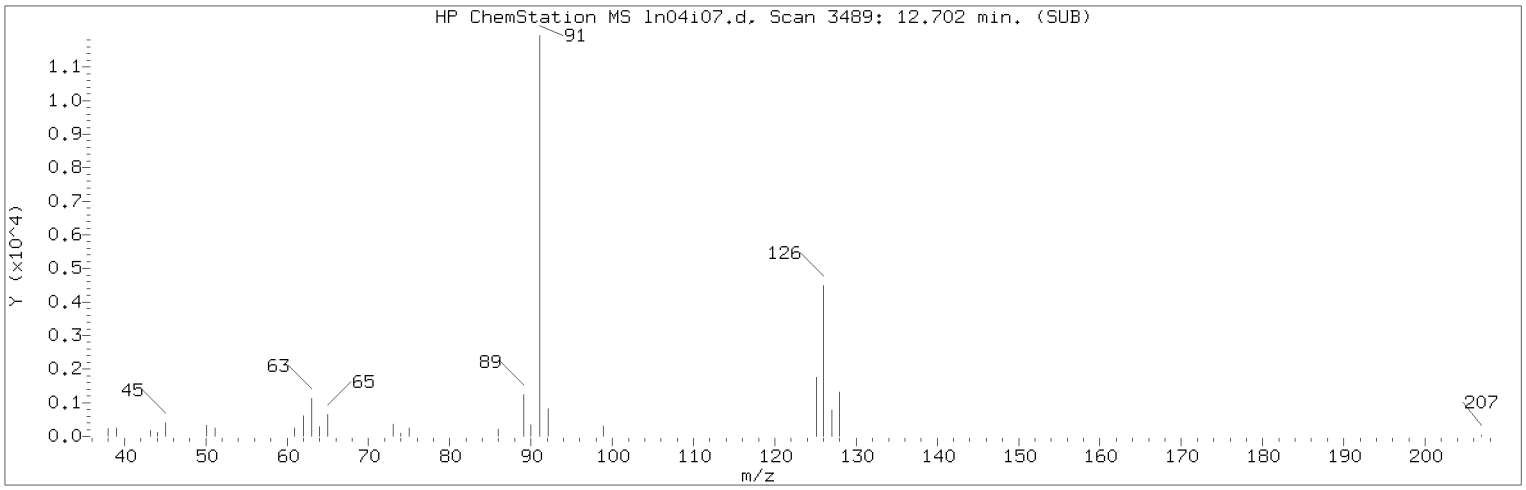
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

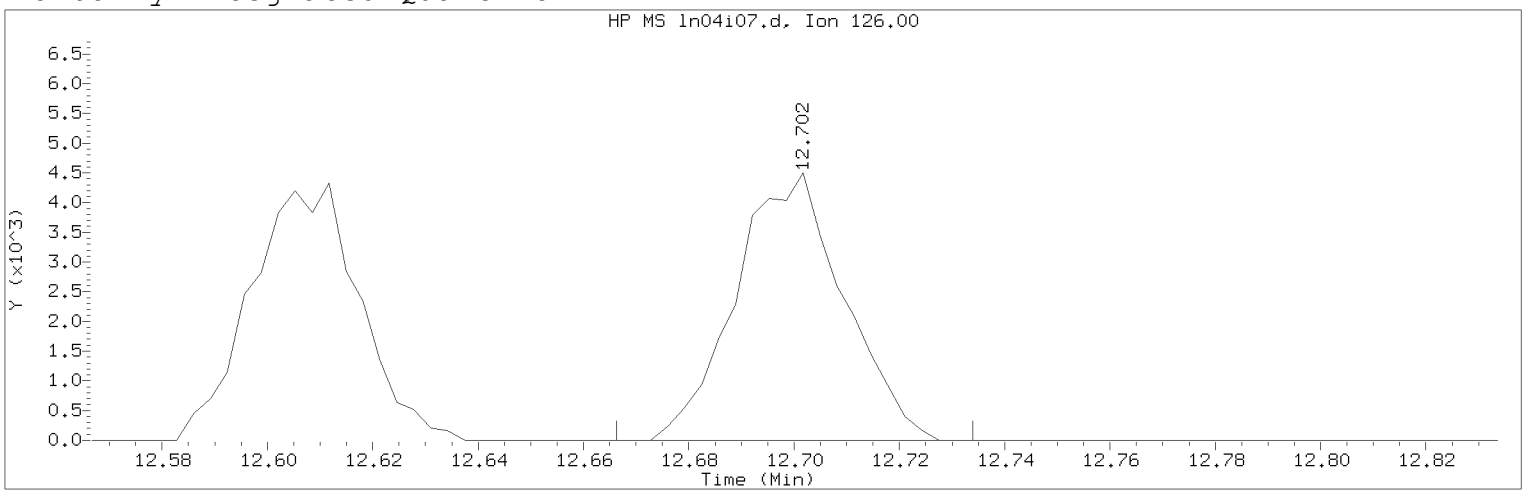
Compound Number : 120
Compound Name : 2-Chlorotoluene
Scan Number : 3459
Retention Time (minutes): 12.605
Quant Ion : 126.00
Area : 6018
On-column Amount (ng) : 0.9136
Integration start scan : 3451 Integration stop scan: 3465
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

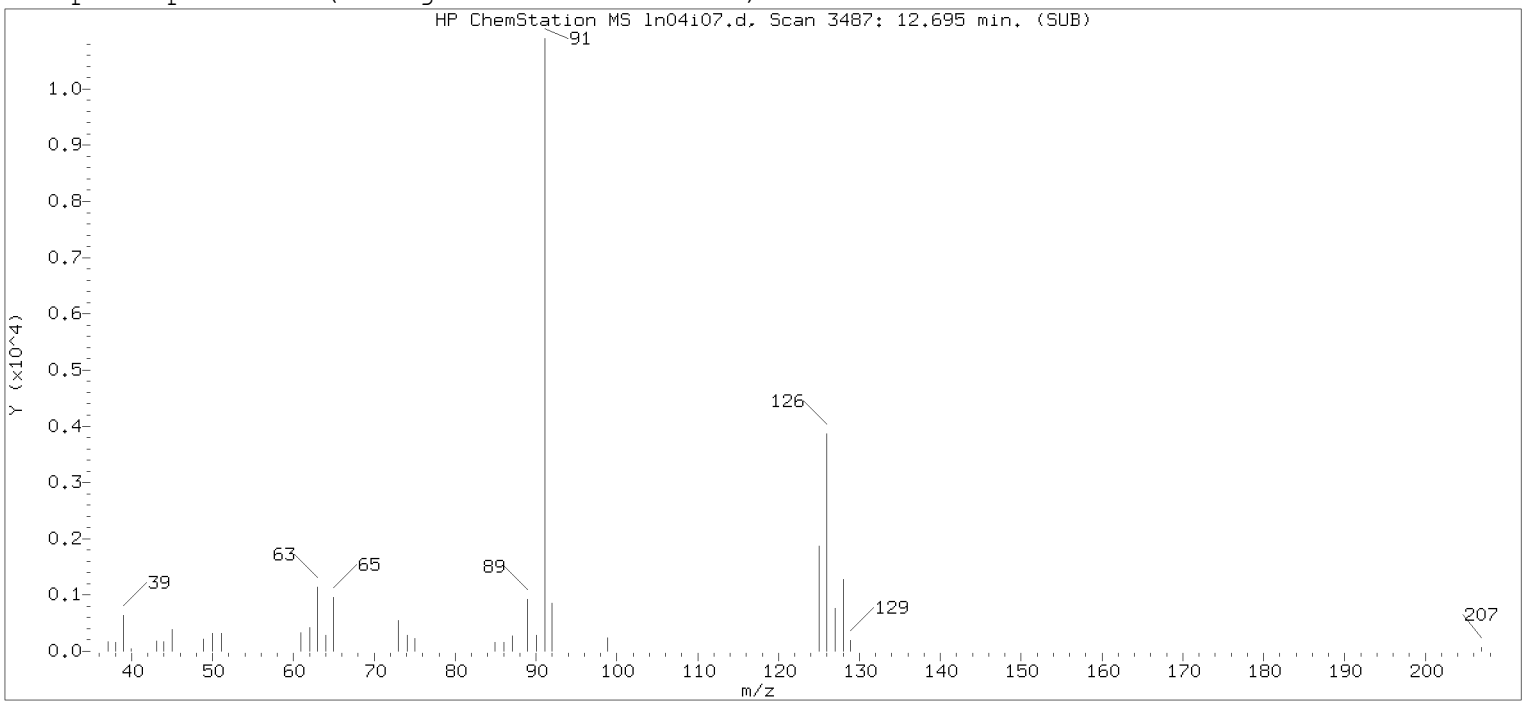
Compound Number : 121
Compound Name : 4-Chlorotoluene
Scan Number : 3489
Retention Time (minutes): 12.702
Quant Ion : 126.00
Area (flag) : 6403M
On-Column Amount (ng) : 0.9314
Integration start scan : 3477 Integration stop scan: 3498
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

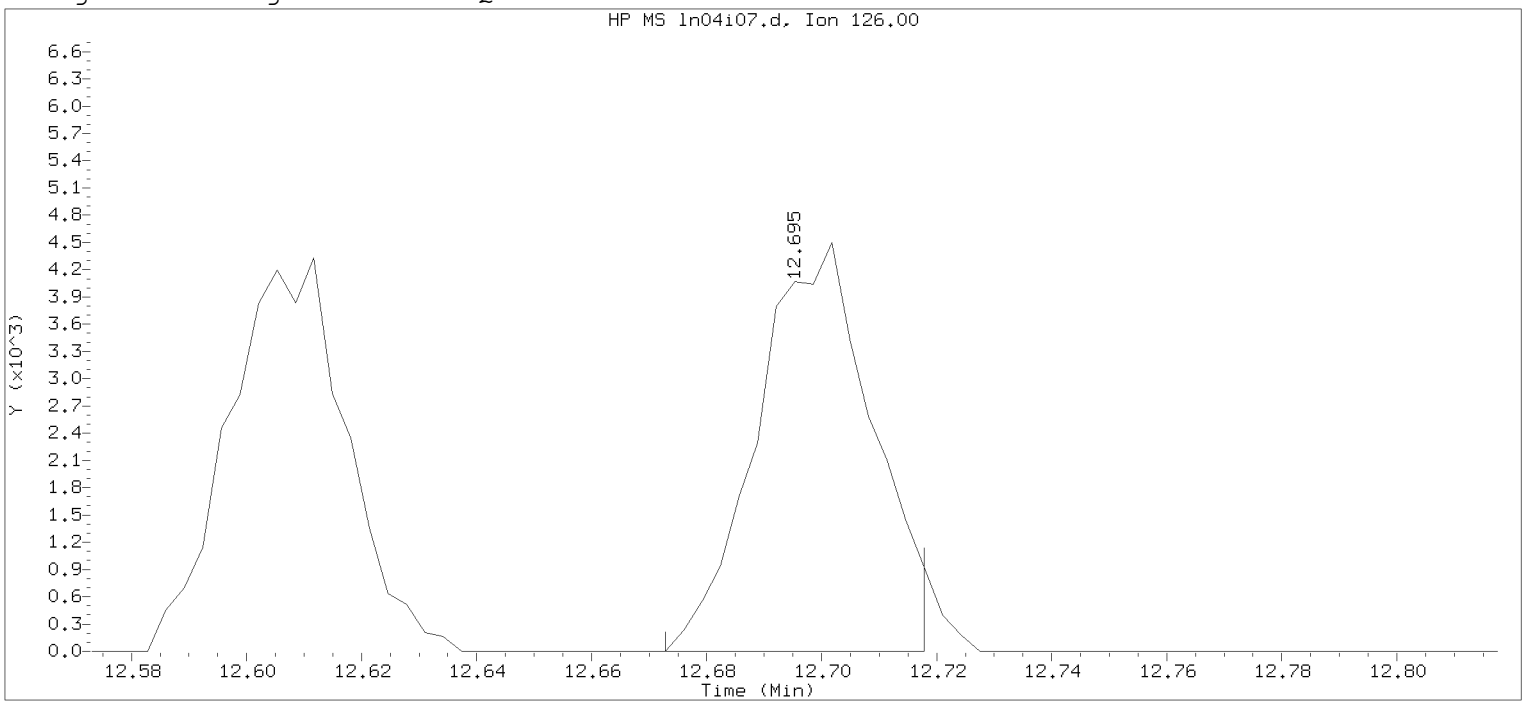
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

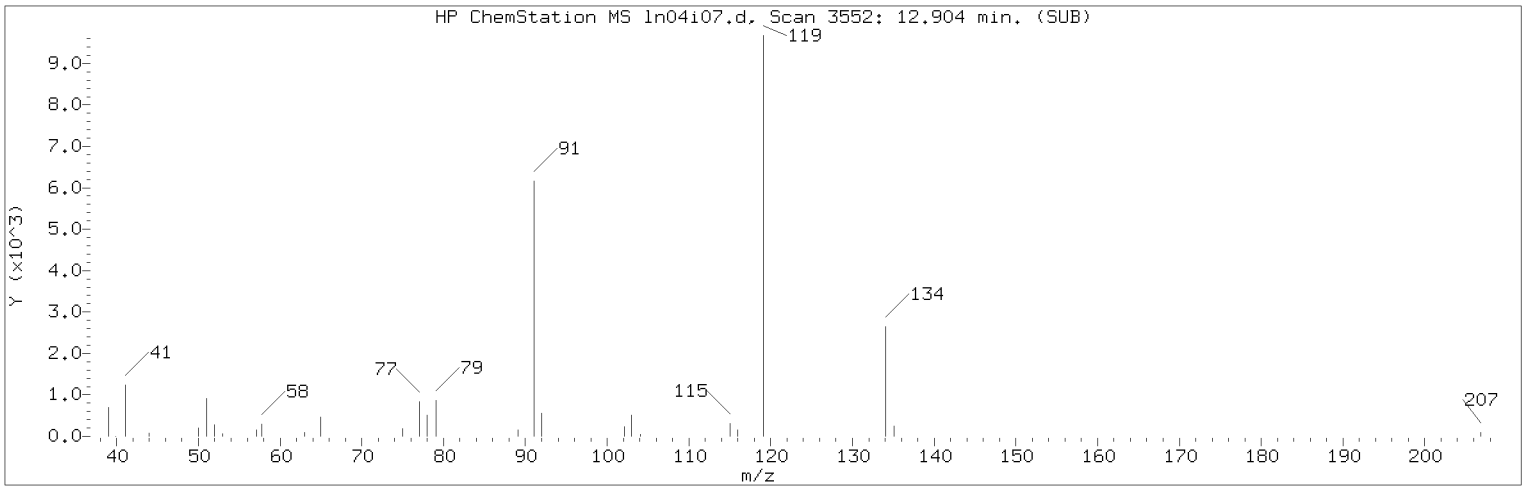
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

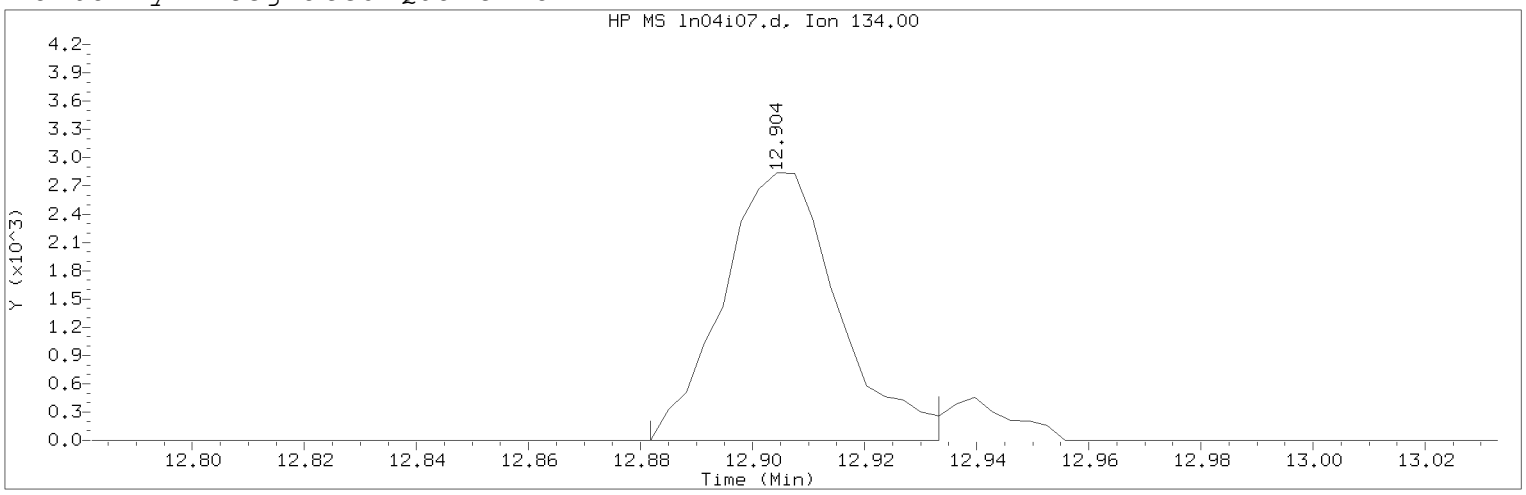
Compound Number : 121
Compound Name : 4-Chlorotoluene
Scan Number : 3487
Retention Time (minutes): 12.695
Quant Ion : 126.00
Area : 6203
On-column Amount (ng) : 0.9062
Integration start scan : 3479 Integration stop scan: 3493
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

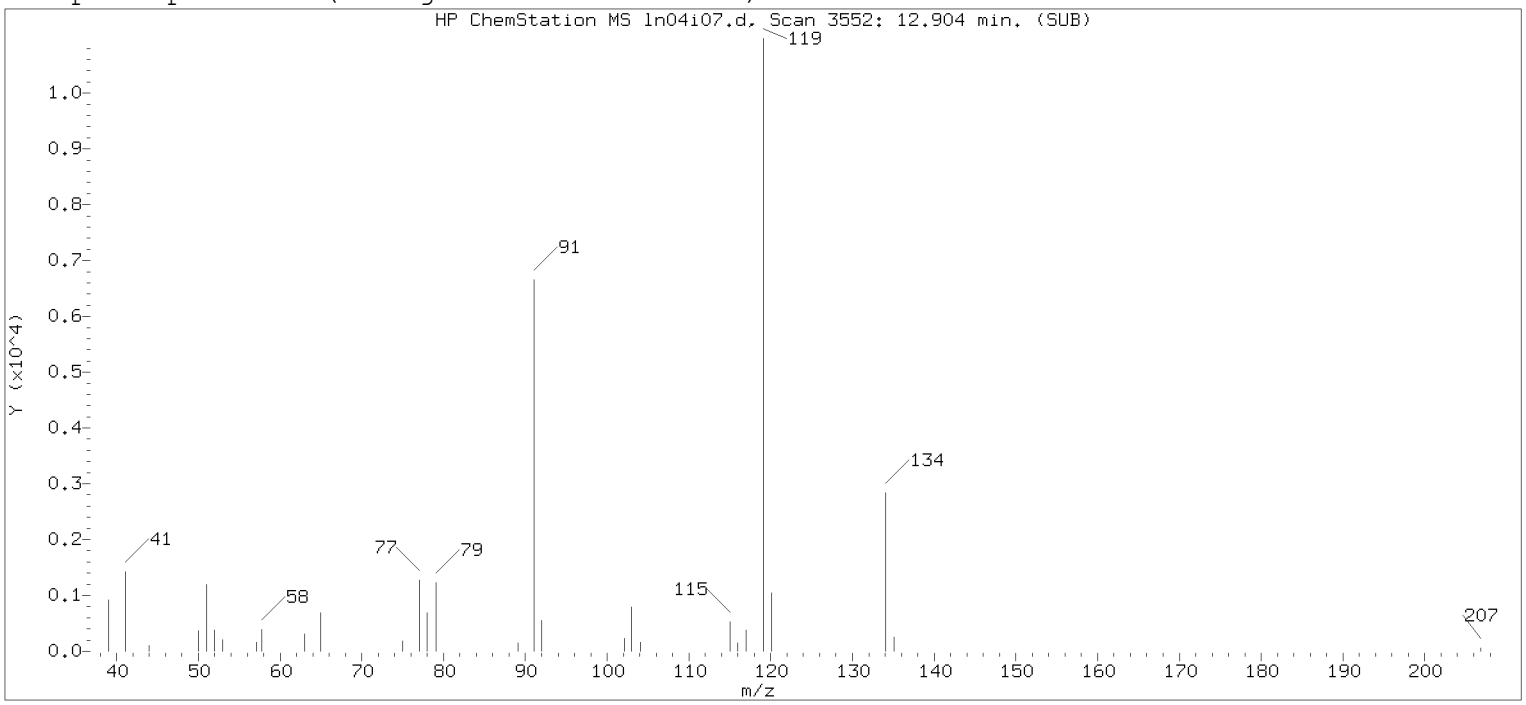
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 4060M
On-Column Amount (ng) : 0.8690
Integration start scan : 3544 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

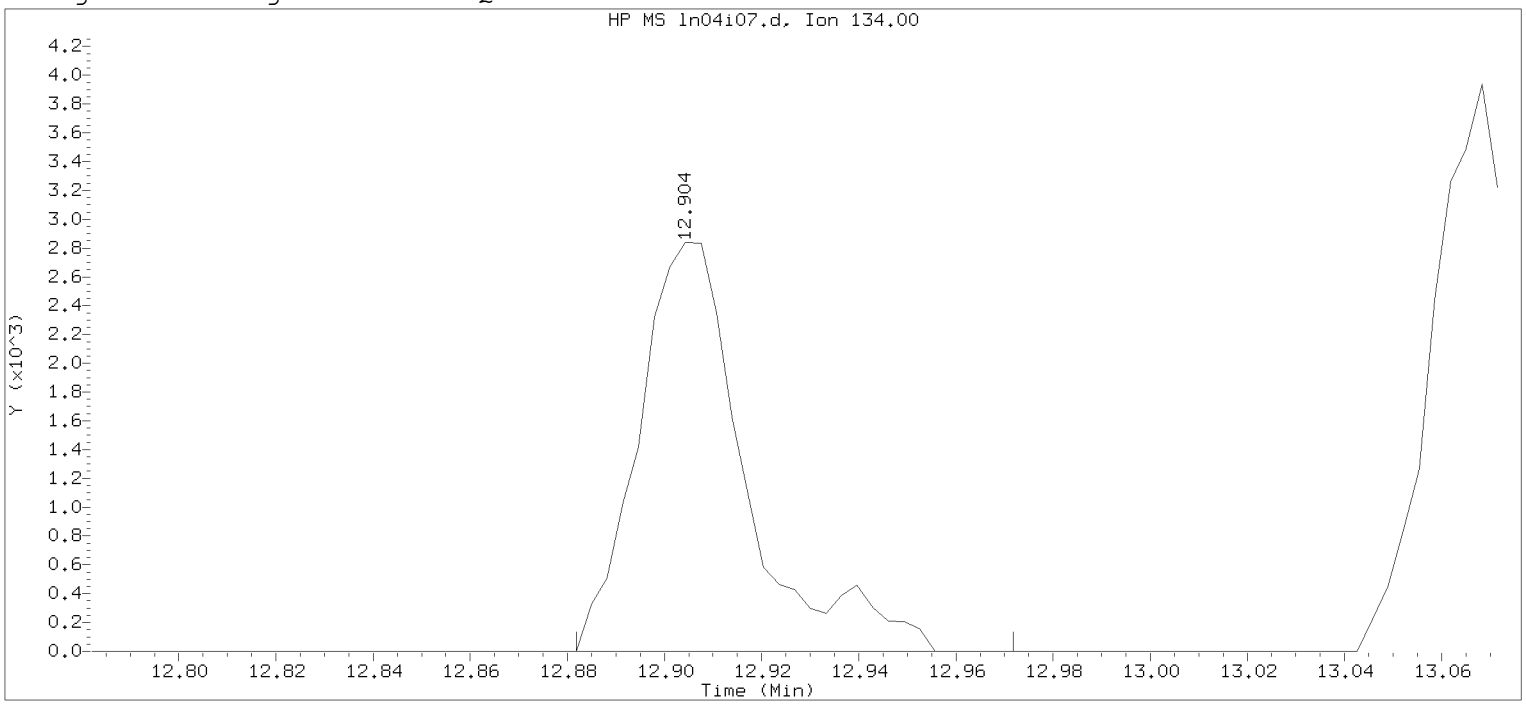
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

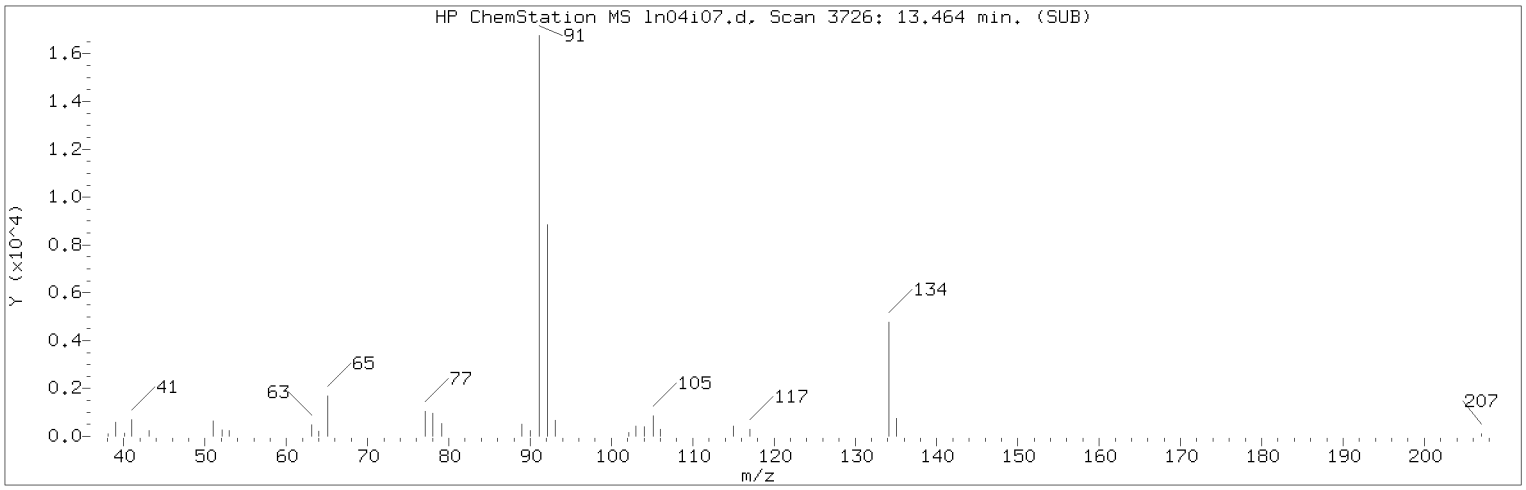
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

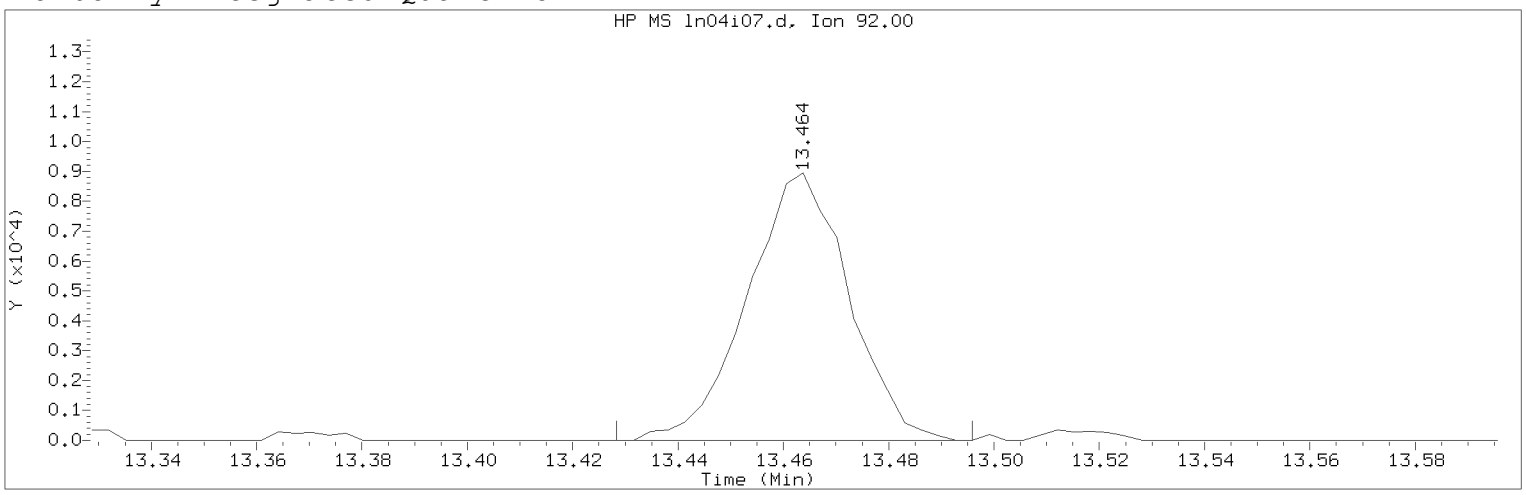
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 4392
On-column Amount (ng) : 0.9024
Integration start scan : 3544 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

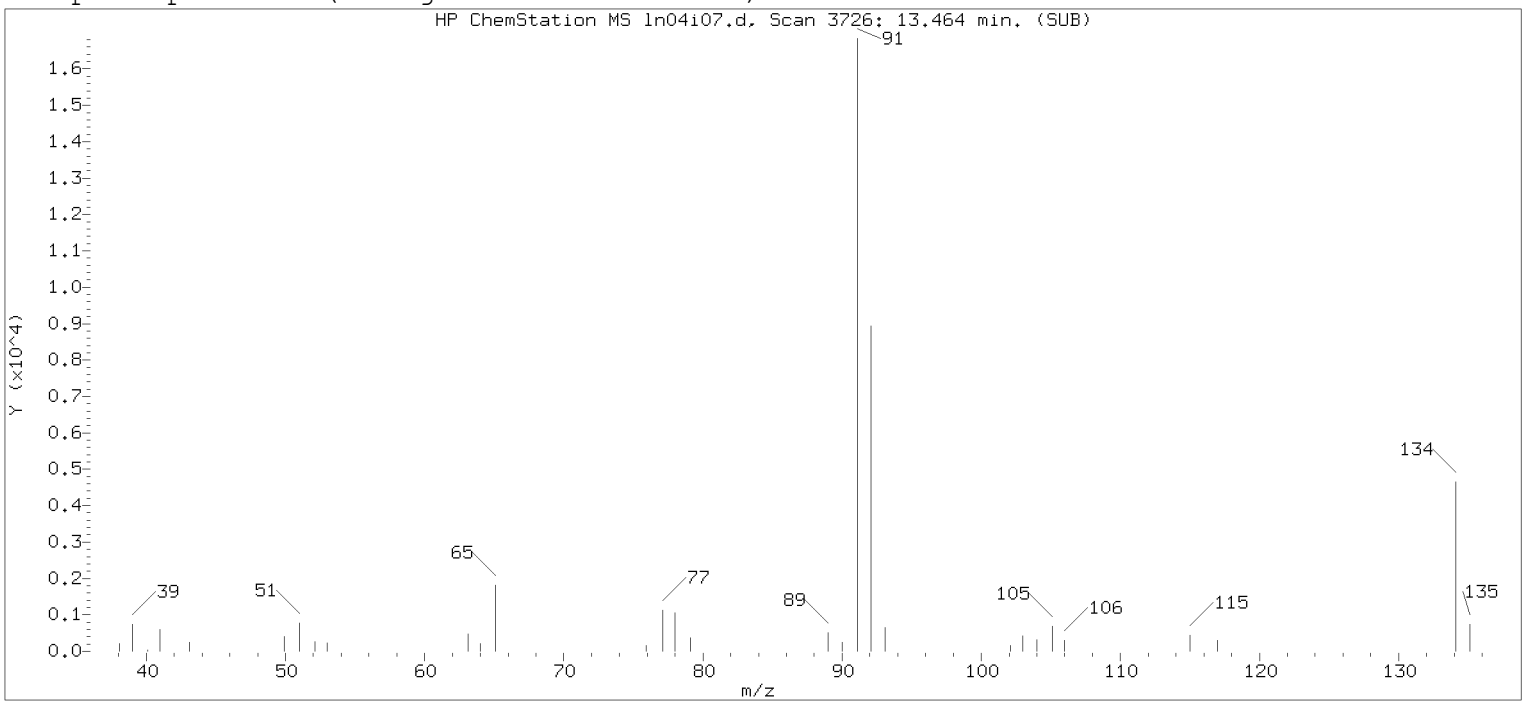
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 3726
Retention Time (minutes): 13.464
Quant Ion : 92.00
Area (flag) : 11964M
On-Column Amount (ng) : 0.9701
Integration start scan : 3714 Integration stop scan: 3735
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

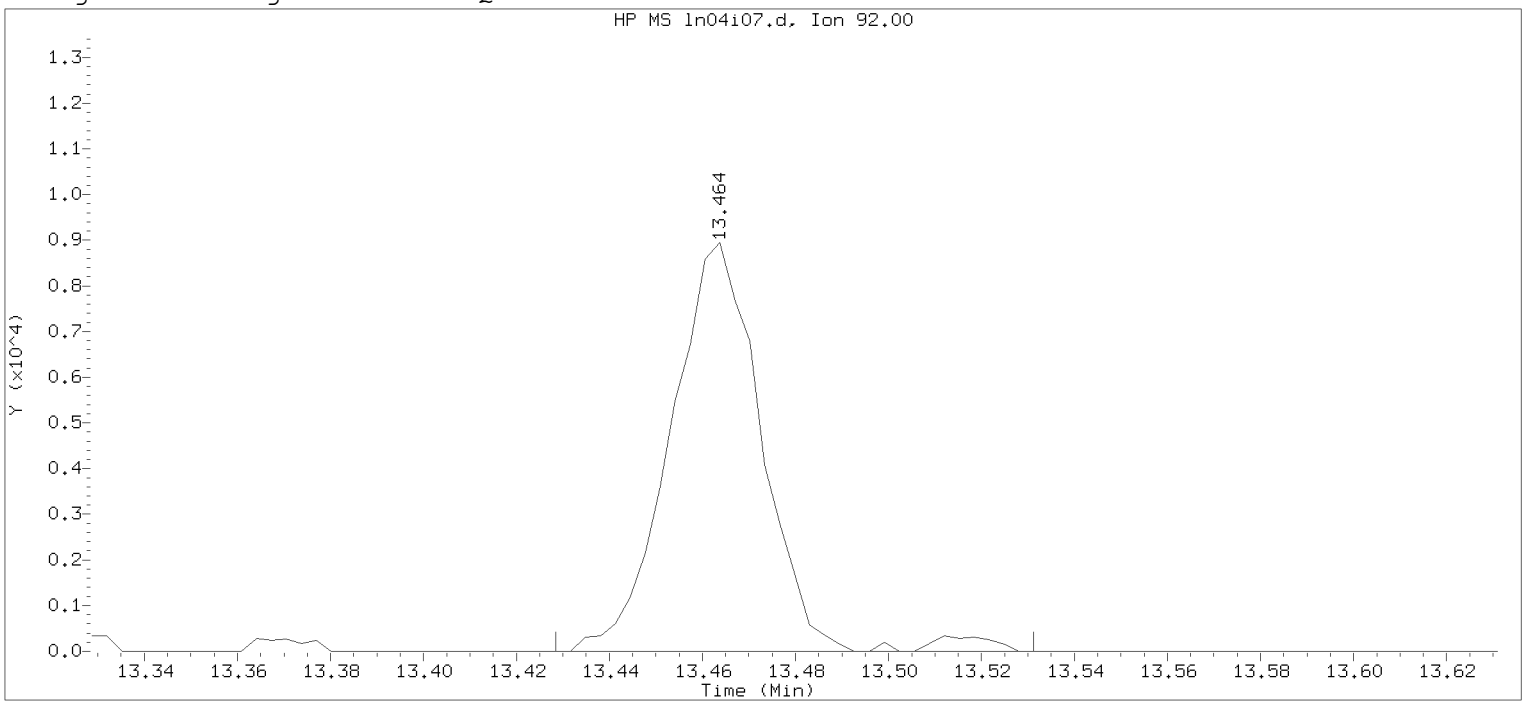
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

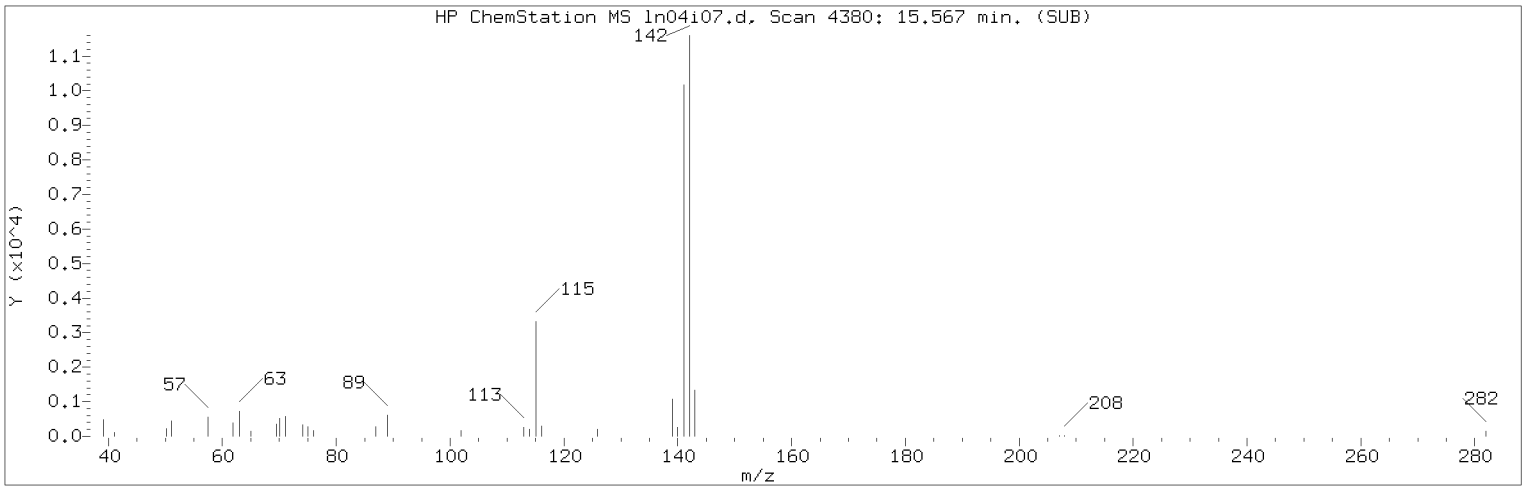
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

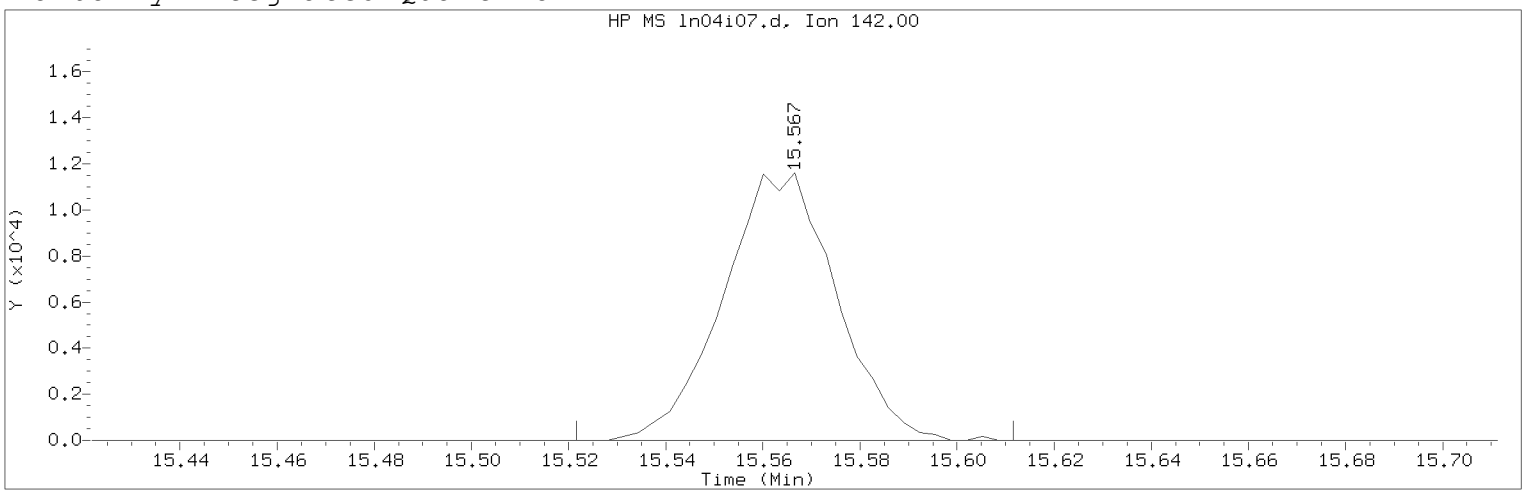
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 3726
Retention Time (minutes): 13.464
Quant Ion : 92.00
Area : 12291
On-column Amount (ng) : 0.9929
Integration start scan : 3714 Integration stop scan: 3746
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

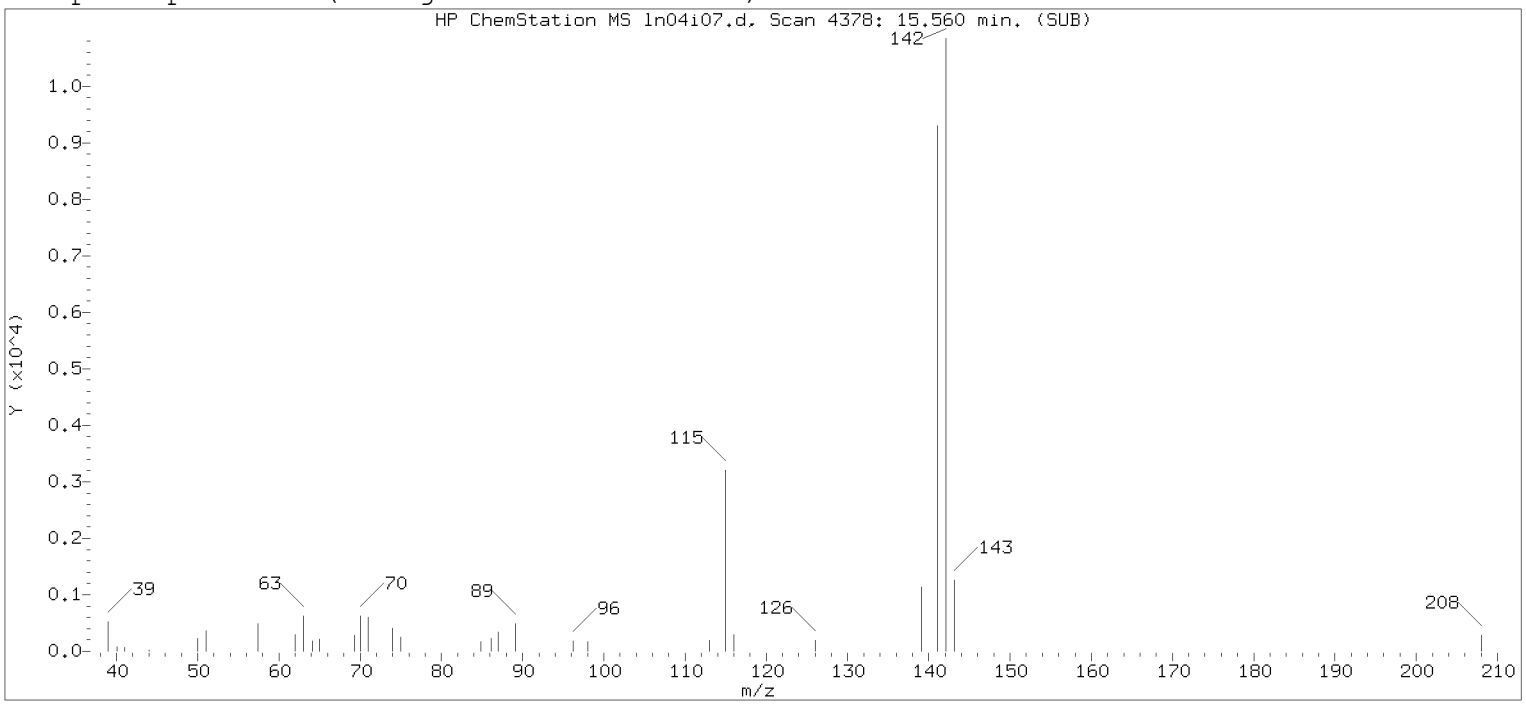
Compound Number : 150
Compound Name : 2-Methylnaphthalene
Scan Number : 4380
Retention Time (minutes): 15.567
Quant Ion : 142.00
Area (flag) : 18783M
On-Column Amount (ng) : 0.9844
Integration start scan : 4365 Integration stop scan: 4393
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

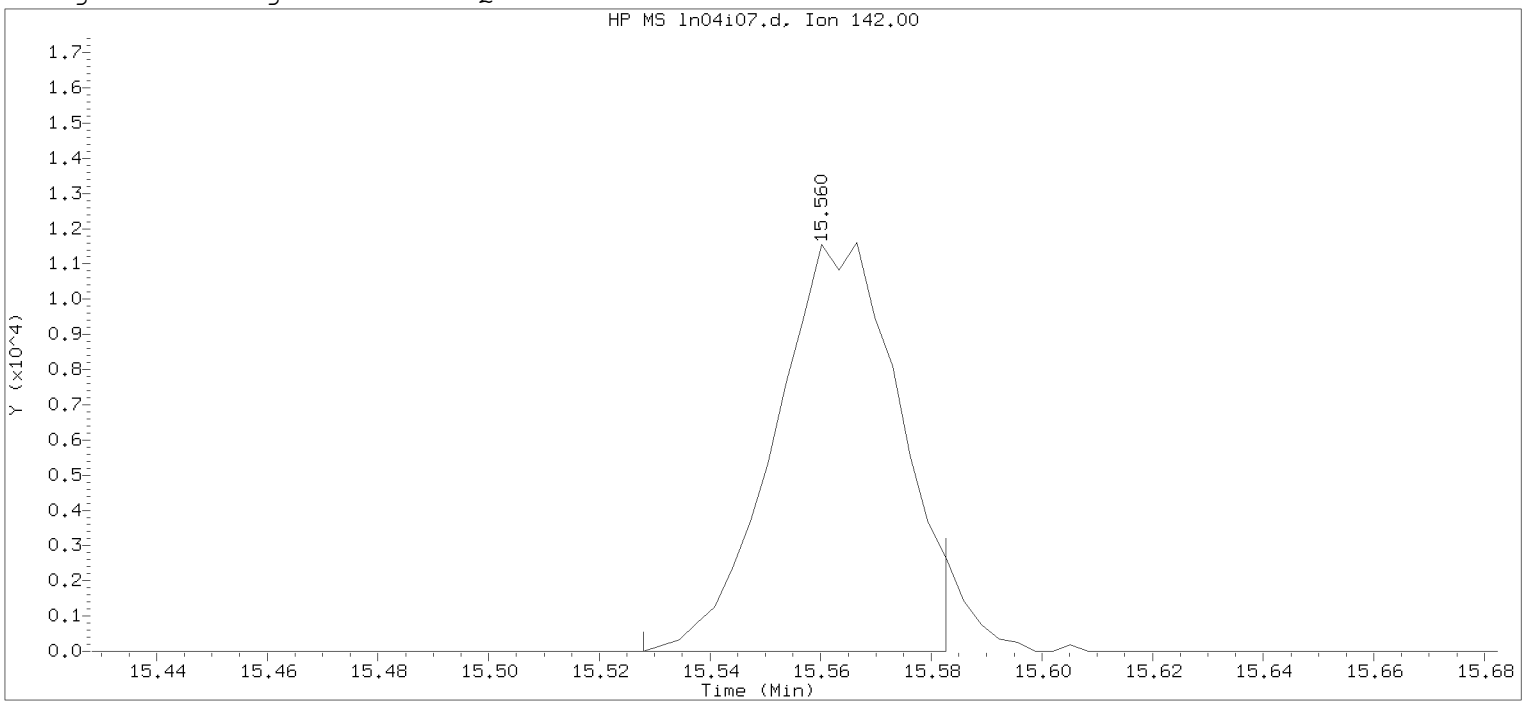
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



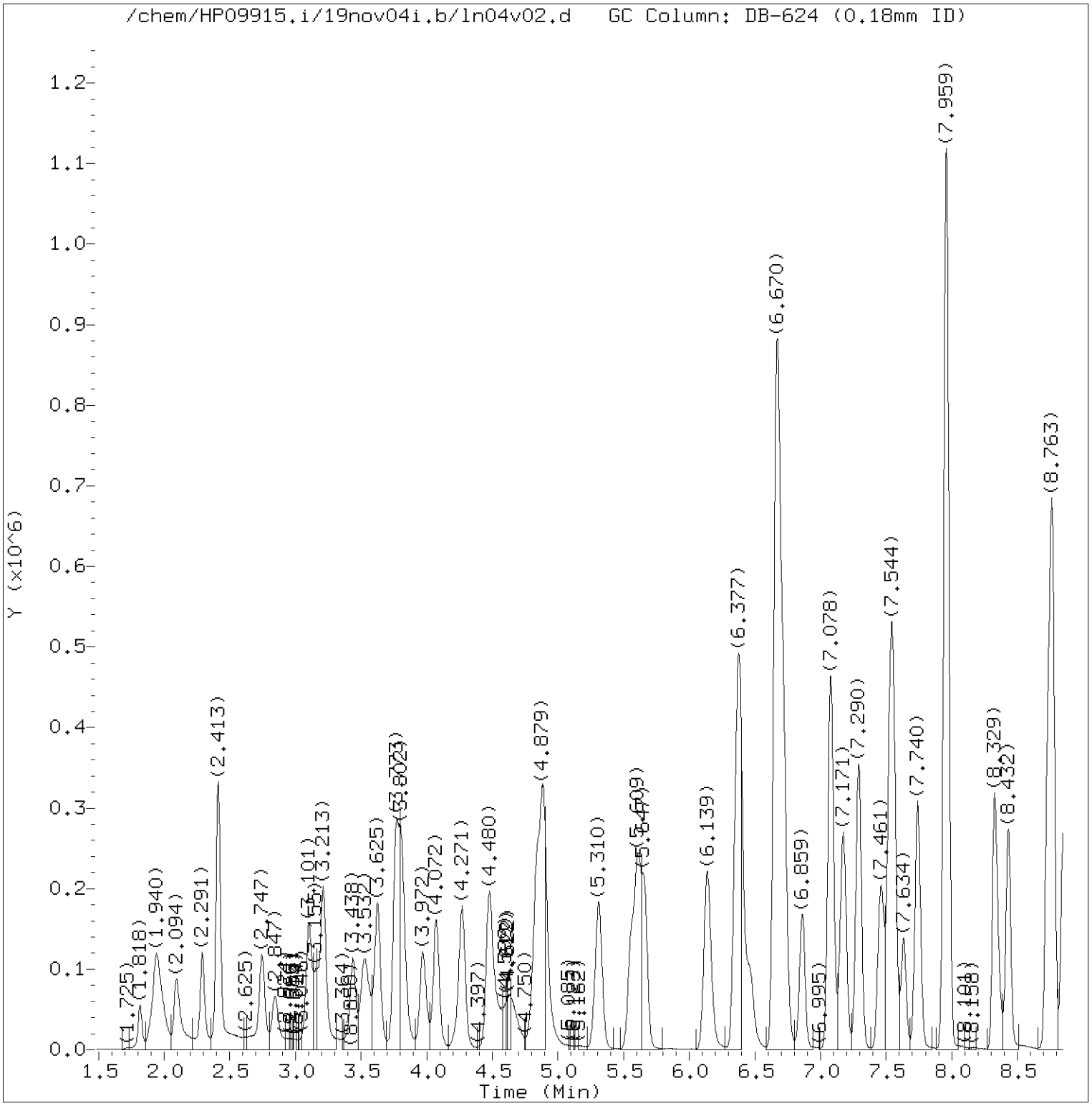
Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 150
Compound Name : 2-Methylnaphthalene
Scan Number : 4378
Retention Time (minutes): 15.560
Quant Ion : 142.00
Area : 17962
On-column Amount (ng) : 0.9472
Integration start scan : 4367 Integration stop scan: 4384
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

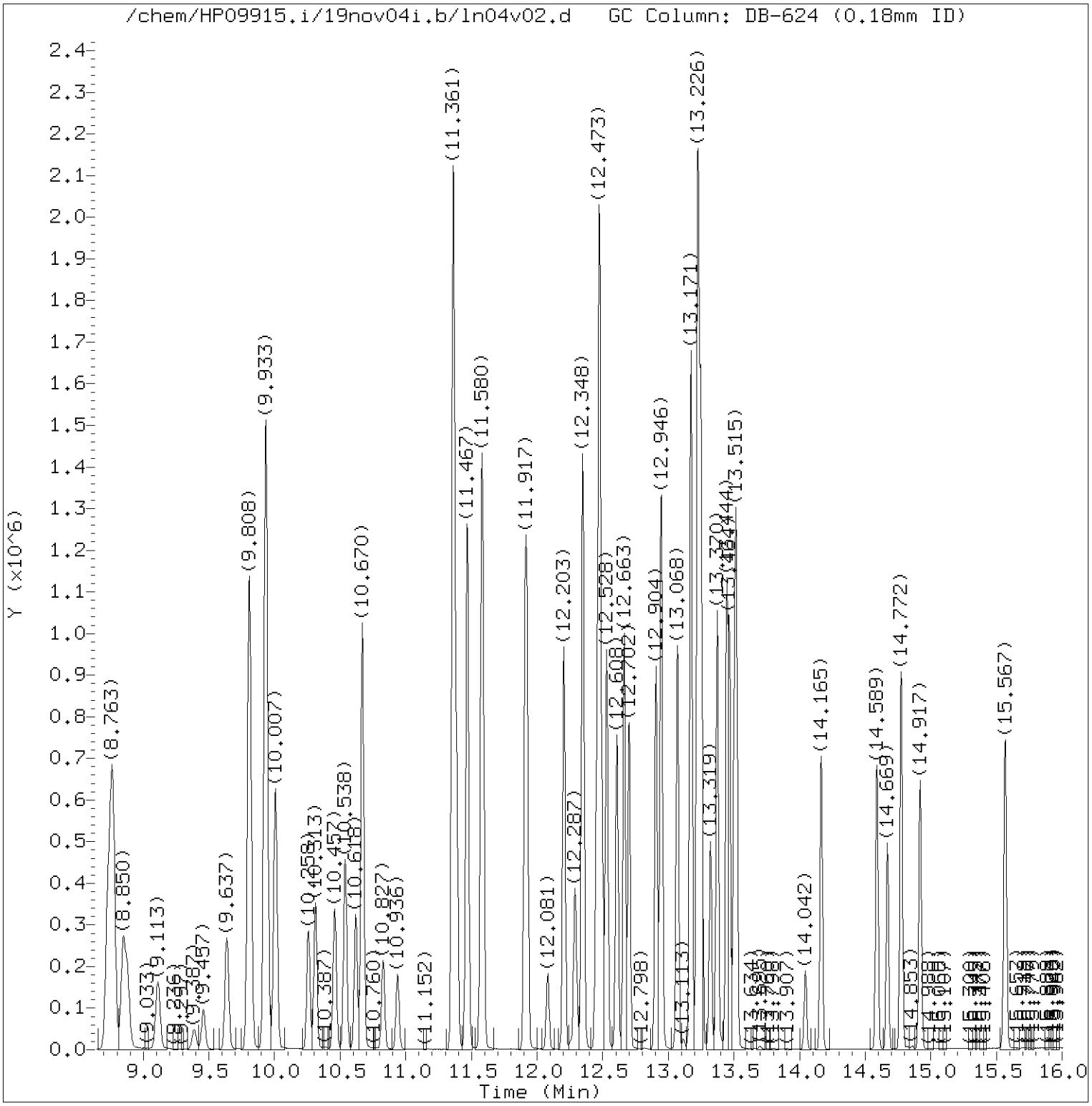
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.094	85	158021M	18.732
4) Chloromethane	(2)	2.291	50	153886	18.927
5) 1,3-Butadiene	(2)	2.413	39	132622M	19.645
6) Vinyl Chloride	(2)	2.413	62	157013	19.349
8) Bromomethane	(2)	2.747	94	104324	17.935
9) Chloroethane	(2)	2.847	64	82467	18.493
10) Dichlorofluoromethane	(2)	3.101	67	174118M	16.224
12) Trichlorofluoromethane	(2)	3.159	101	181238	20.746
11) n-Pentane	(2)	3.213	43	196297	19.014
14) Ethyl ether	(2)	3.438	59	93832	16.622
15) Freon 123a	(2)	3.528	67	136689	19.450
16) Acrolein	(1)	3.625	56	286690	135.125
17) 1,1-Dichloroethene	(2)	3.766	96	107244	20.914
19) Freon 113	(2)	3.795	101	115842	19.801
18) Acetone	(1)	3.805	58	130076	136.752
22) Methyl Iodide	(2)	3.969	142	197263	18.564
21) 2-Propanol	(1)	4.008	45	98510	144.063
23) Carbon Disulfide	(2)	4.075	76	360582	18.660
27) Methyl Acetate	(2)	4.249	43	126109	19.095
25) Allyl Chloride	(2)	4.271	41	171048	18.595
28) Methylene Chloride	(2)	4.474	84	124367	20.377
29)*t-Butyl alcohol-d10	(1)	4.503	65	282794M	250.000
30) t-Butyl alcohol	(1)	4.641	59	227283	190.899
31) Acrylonitrile	(2)	4.834	53	337483	94.980
32) trans-1,2-Dichloroethene	(2)	4.888	96	118658	20.003
33) Methyl Tertiary Butyl Ether	(2)	4.892	73	367523	18.875
34) n-Hexane	(2)	5.310	57	185206M	20.067
36) 1,1-Dichloroethane	(2)	5.554	63	201428	19.465
38) di-Isopropyl ether	(2)	5.609	45	380712	19.075
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	177031	19.067
40) Ethyl t-butyl ether	(2)	6.139	59	369375	19.070
43) 1,2-Dichloroethene (Total)	(2)		96	258427	40.995
44) 2-Butanone	(2)	6.361	43	651073	142.743
42) cis-1,2-Dichloroethene	(2)	6.384	96	139769	20.992
45) 2,2-Dichloropropane	(2)	6.396	77	163413	20.314
47) Propionitrile	(1)	6.461	54	209265	141.065
48) Methacrylonitrile	(2)	6.670	67	556962	145.312
49) Bromochloromethane	(2)	6.712	128	66215	18.755

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.721	71	123960	92.508
51) Chloroform	(2)	6.866	83	199497	20.156
52)$Dibromofluoromethane	(2)	7.075	113	293558	49.637
53) 1,1,1-Trichloroethane	(2)	7.081	97	172182	20.382
54) Cyclohexane	(2)	7.171	56	214913	19.025
56) Carbon Tetrachloride	(2)	7.287	117	143405	20.016
55) 1,1-Dichloropropene	(2)	7.294	75	164177	20.065
58) Isobutyl Alcohol	(1)	7.461	41	180862	451.413
57)$1,2-Dichloroethane-d4	(2)	7.531	102	74610	49.500
60) Benzene	(2)	7.560	78	492012	19.996
61) 1,2-Dichloroethane	(2)	7.638	62	163231	20.625
65) t-Amyl methyl ether	(2)	7.740	73	369180	18.989
67) n-Heptane	(2)	7.956	43	163362M	18.948
66)*Fluorobenzene	(2)	7.959	96	1209671	50.000
69) n-Butanol	(1)	8.326	56	314470M	911.924
71) Trichloroethene	(2)	8.429	95	124893	20.159
72) Methylcyclohexane	(2)	8.731	83	222042	19.318
73) 1,2-Dichloropropane	(2)	8.769	63	127774	20.450
76) Methyl Methacrylate	(2)	8.847	69	115569	19.128
75) 1,4-Dioxane	(1)	8.853	88	47747M	503.753
74) Dibromomethane	(2)	8.879	93	80909	20.014
78) Bromodichloromethane	(2)	9.113	83	144408	19.907
79) 2-Nitropropane	(2)	9.383	41	35869	16.324
80) 2-Chloroethyl Vinyl Ether	(2)	9.457	63	51088	19.038
81) cis-1,3-Dichloropropene	(2)	9.637	75	191486	19.874
82) 4-Methyl-2-pentanone	(2)	9.808	43	893533	92.810
83)$Toluene-d8	(3)	9.933	98	1243931	50.214
88) Toluene	(3)	10.007	92	314091	20.224
90) 1,3-Dichloropropene (total)	(3)		100	360855	39.085
89) trans-1,3-Dichloropropene	(3)	10.258	75	169369	19.211
91) Ethyl Methacrylate	(3)	10.313	69	194593	18.162
92) 1,1,2-Trichloroethane	(3)	10.457	97	120085	20.394
93) Tetrachloroethene	(3)	10.538	166	145489	22.119
94) 1,3-Dichloropropane	(3)	10.618	76	197817	19.676
96) 2-Hexanone	(3)	10.670	43	659041	92.150
97) Dibromochloromethane	(3)	10.827	129	119169	19.757
99) 1,2-Dibromoethane	(3)	10.936	107	127100	19.878
100)*Chlorobenzene-d5	(3)	11.361	117	946755	50.000

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) 1-Chlorohexane	(3)	11.364	91	162531	19.480
102) Chlorobenzene	(3)	11.387	112	355167	20.223
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	114709	19.823
104) Ethylbenzene	(3)	11.470	91	602093	20.283
106) m+p-Xylene	(3)	11.583	106	478306	40.959
108) Xylene (Total)	(3)		106	712690	61.279
107) o-Xylene	(3)	11.908	106	234384	20.320
109) Styrene	(3)	11.924	104	391950	20.563
110) Bromoform	(3)	12.081	173	80910	17.952
111) Isopropylbenzene	(3)	12.203	105	603598	20.864
112) Cyclohexanone	(1)	12.287	55	166810	449.364
114)$4-Bromofluorobenzene	(3)	12.348	95	469009	49.999
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	188446M	19.576
115) Bromobenzene	(4)	12.467	156	151805	19.821
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	290498	97.834
117) 1,2,3-Trichloropropane	(4)	12.496	110	58902M	19.940
119) n-Propylbenzene	(4)	12.531	91	694916	20.768
120) 2-Chlorotoluene	(4)	12.608	126	143440	20.178
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	499772	20.552
121) 4-Chlorotoluene	(4)	12.702	126	148830	20.114
124) tert-Butylbenzene	(4)	12.907	134	103762M	20.632
125) Pentachloroethane	(4)	12.943	167	74538	17.213
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	511834	19.971
127) sec-Butylbenzene	(4)	13.068	105	616554	20.545
129) 1,3-Dichlorobenzene	(4)	13.168	146	282424	20.067
130) p-Isopropyltoluene	(4)	13.174	119	533278	20.541
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	509597	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	298831	20.482
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	539562	19.874
135) Benzyl Chloride	(4)	13.319	91	329267	16.019
136) 1,3-Diethylbenzene	(4)	13.374	119	322622	19.095
141) Diethylbenzene (total)	(4)		100	935720	57.258
137) 1,4-Diethylbenzene	(4)	13.444	119	340230	19.006
139) n-Butylbenzene	(4)	13.464	92	258920	19.505
138) 1,2-Dichlorobenzene	(4)	13.502	146	282807	20.364
140) 1,2-Diethylbenzene	(4)	13.518	119	272868	19.158
142) 1,2-Dibromo-3-chloropropane	(4)	14.042	75	40654	19.292
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	203102	19.035

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Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

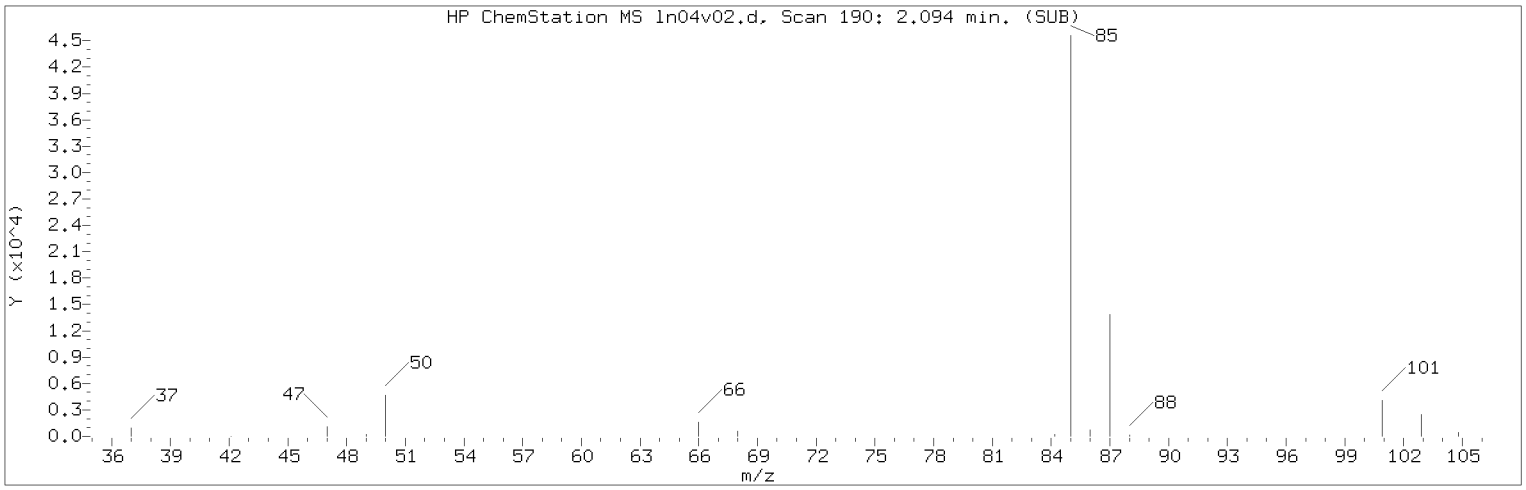
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

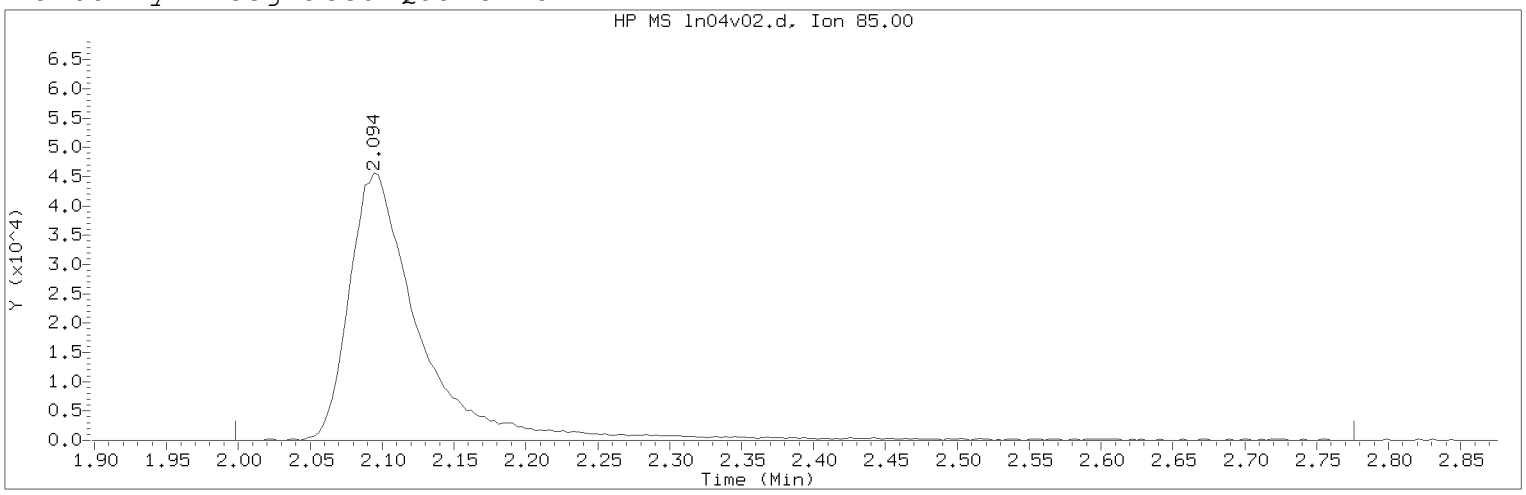
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	199046	19.186
147) Hexachlorobutadiene	(4)	14.666	225	82991	16.942
148) Naphthalene	(4)	14.772	128	666056	19.970
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	192487	19.067
150) 2-Methylnaphthalene	(4)	15.567	142	374385	18.228

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

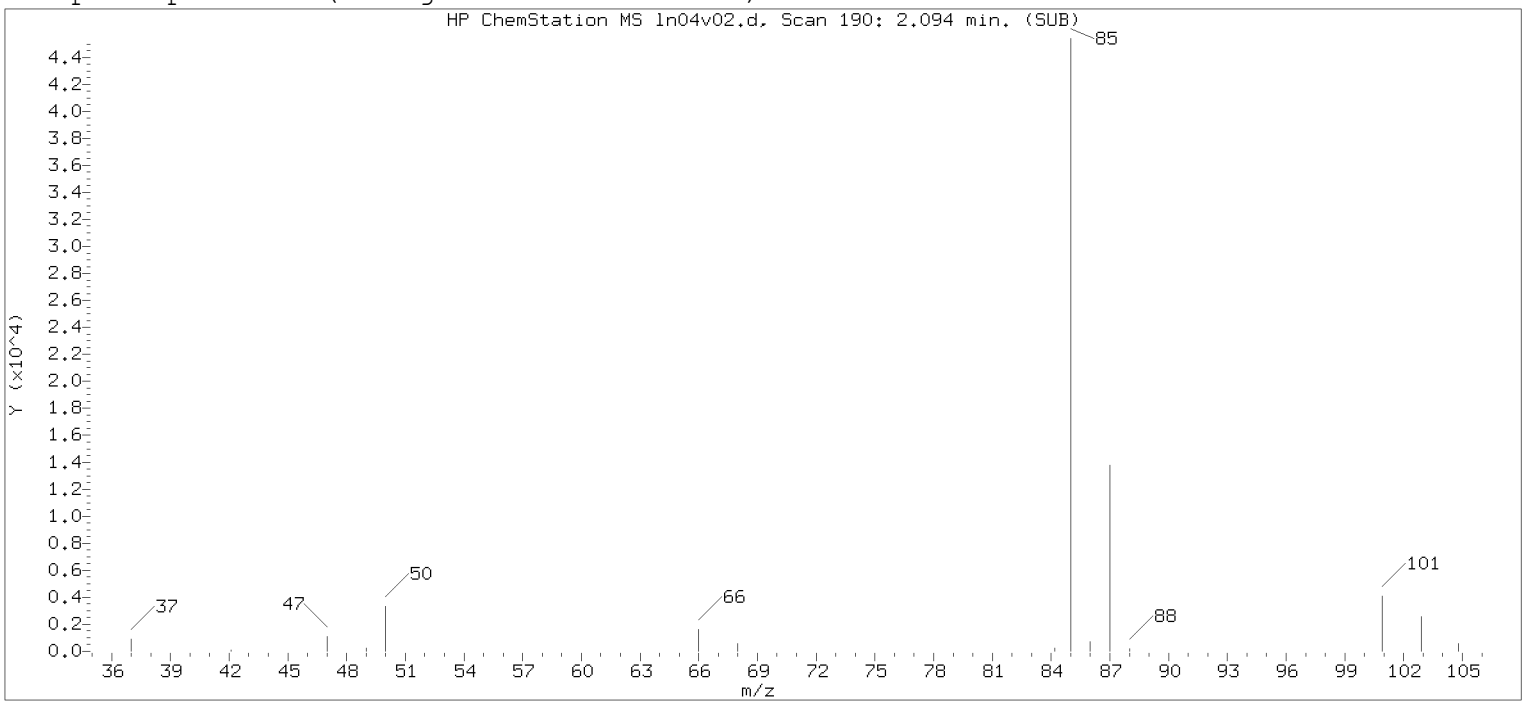
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area (flag) : 158021M
On-Column Amount (ng) : 18.7320
Integration start scan : 159 Integration stop scan: 401
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

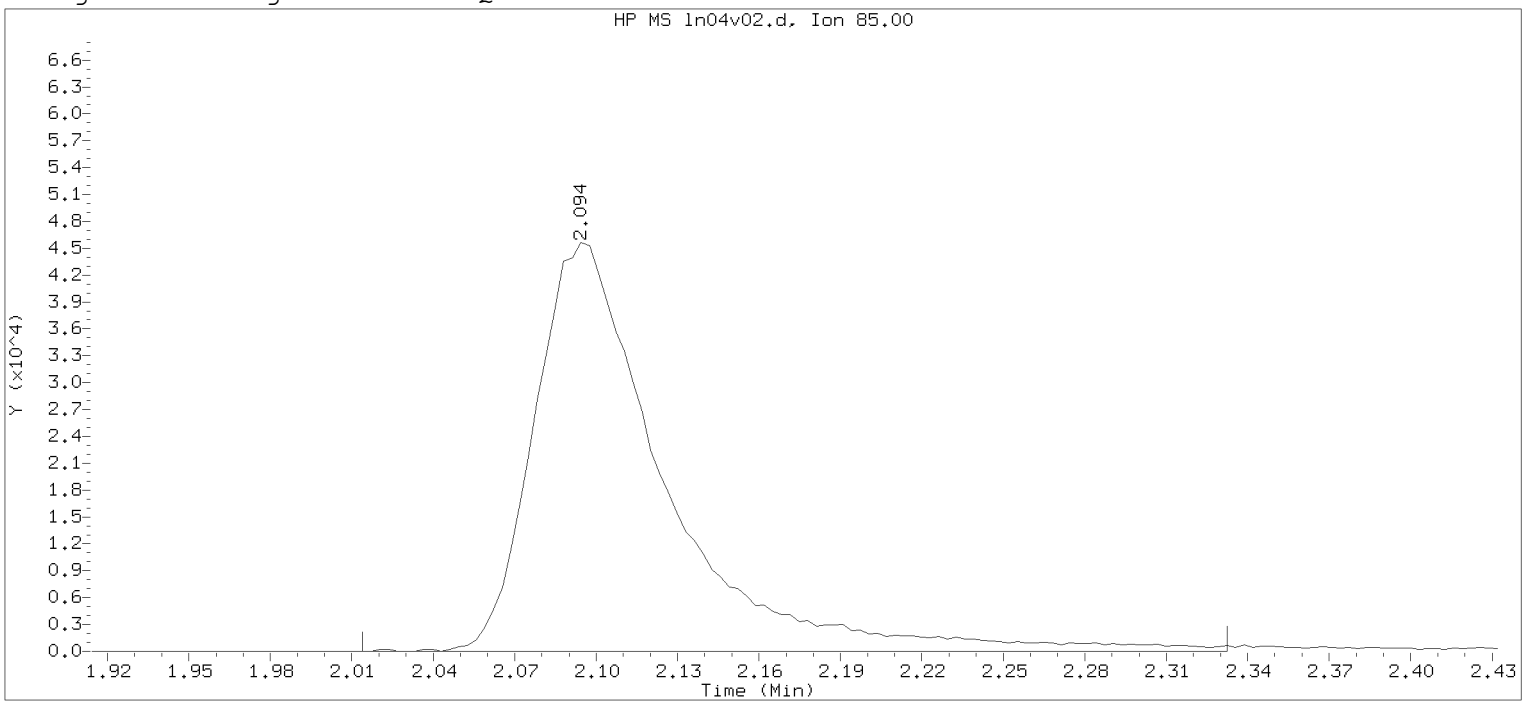
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

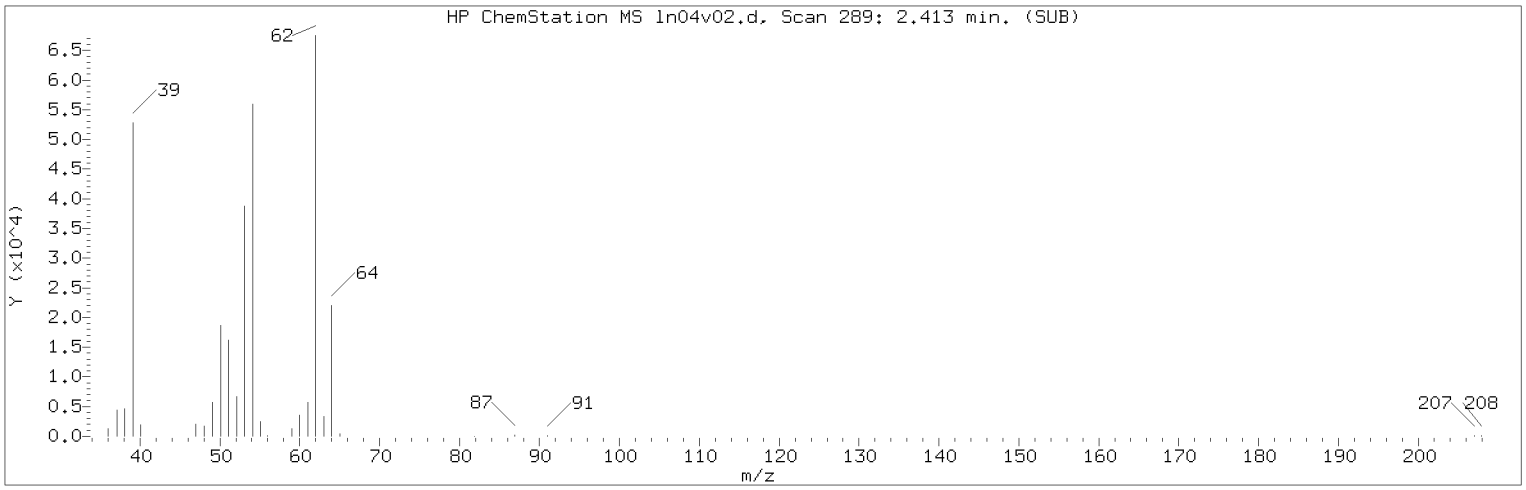
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

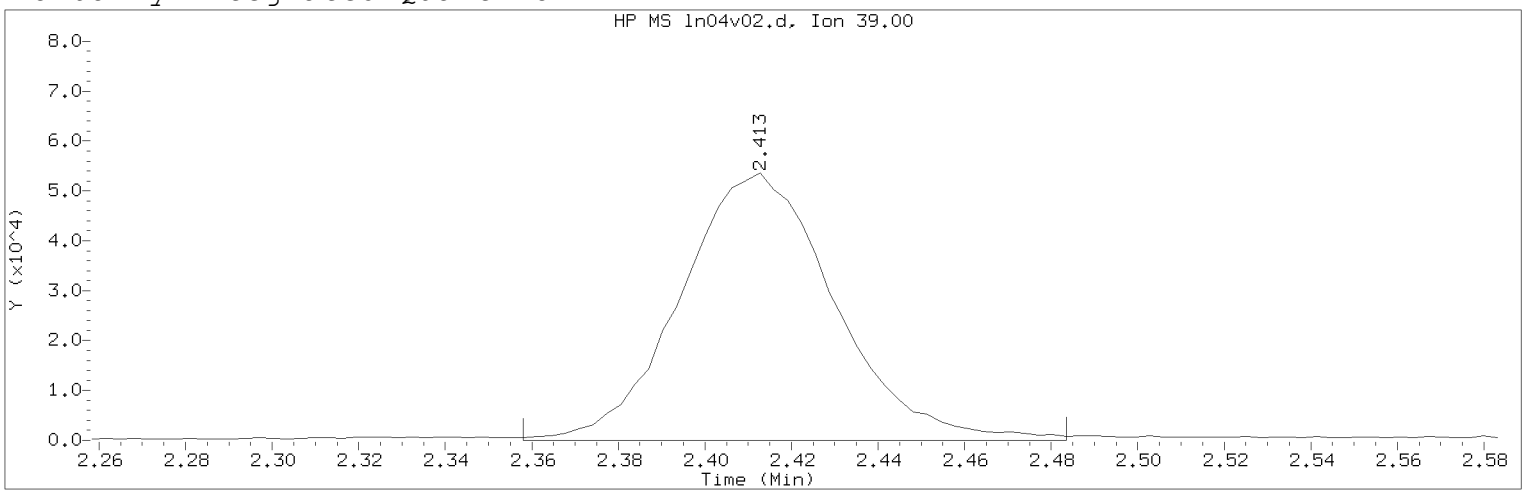
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area : 152845
On-column Amount (ng) : 18.1184
Integration start scan : 164 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

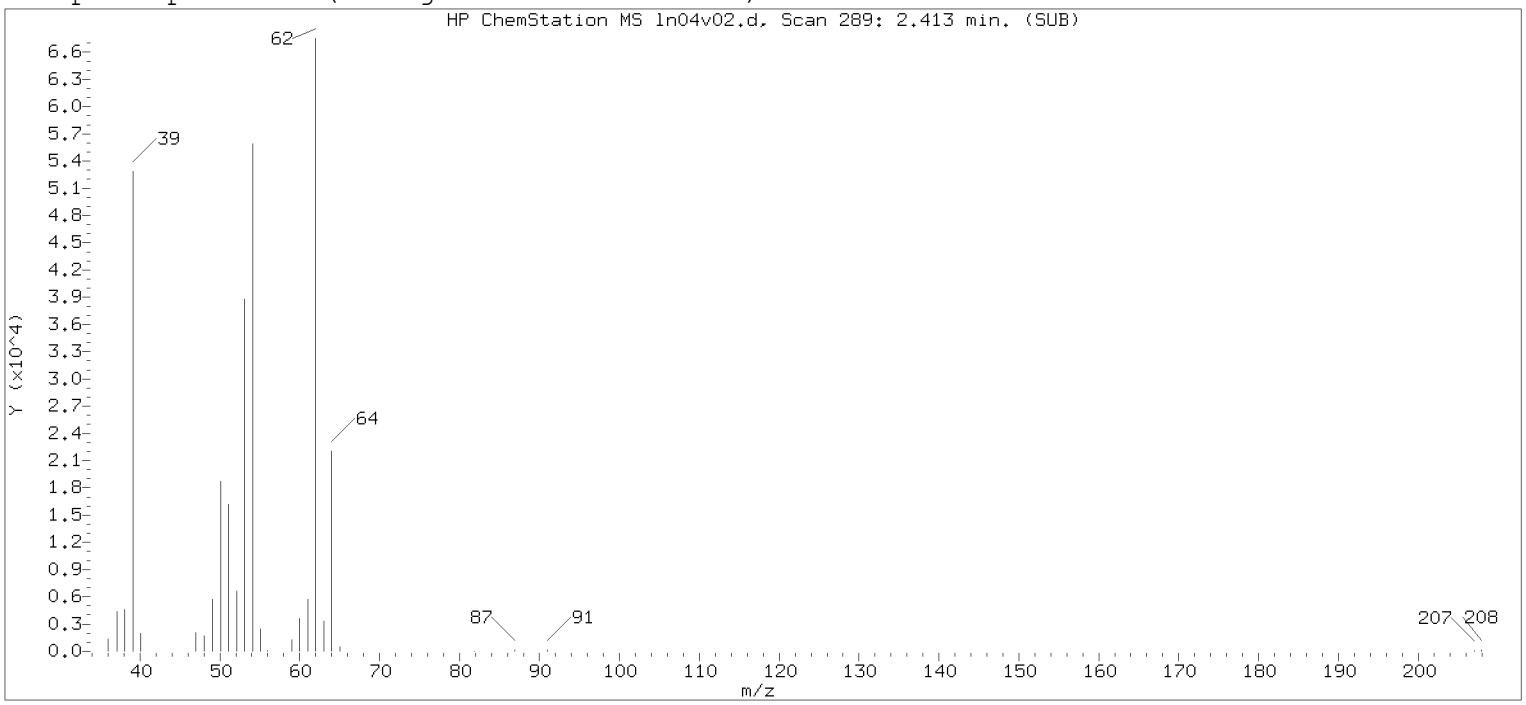
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area (flag) : 132622M
On-Column Amount (ng) : 19.6453
Integration start scan : 271 Integration stop scan: 310
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

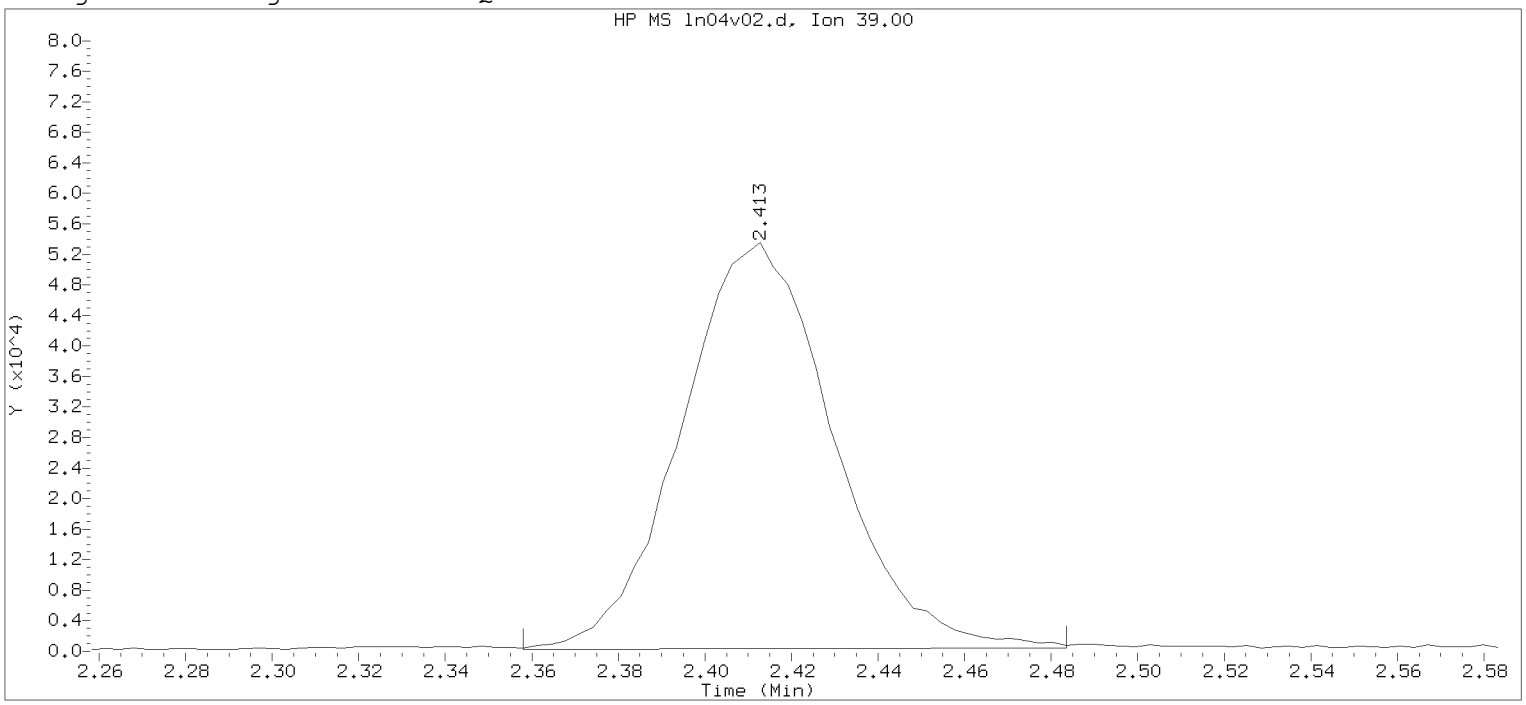
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

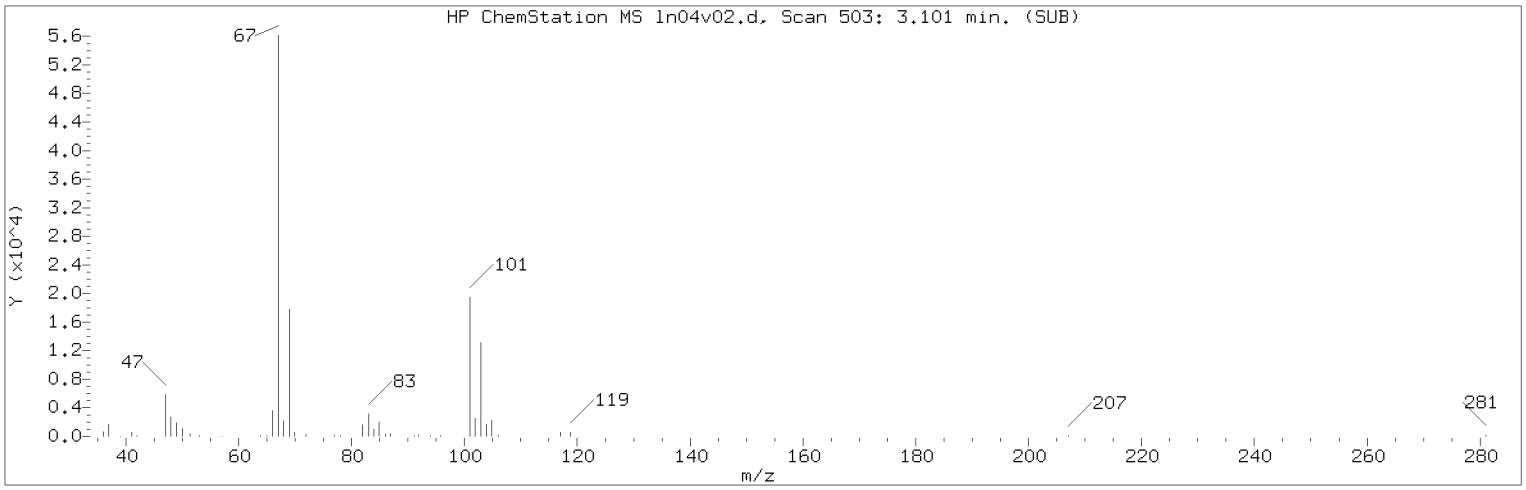
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

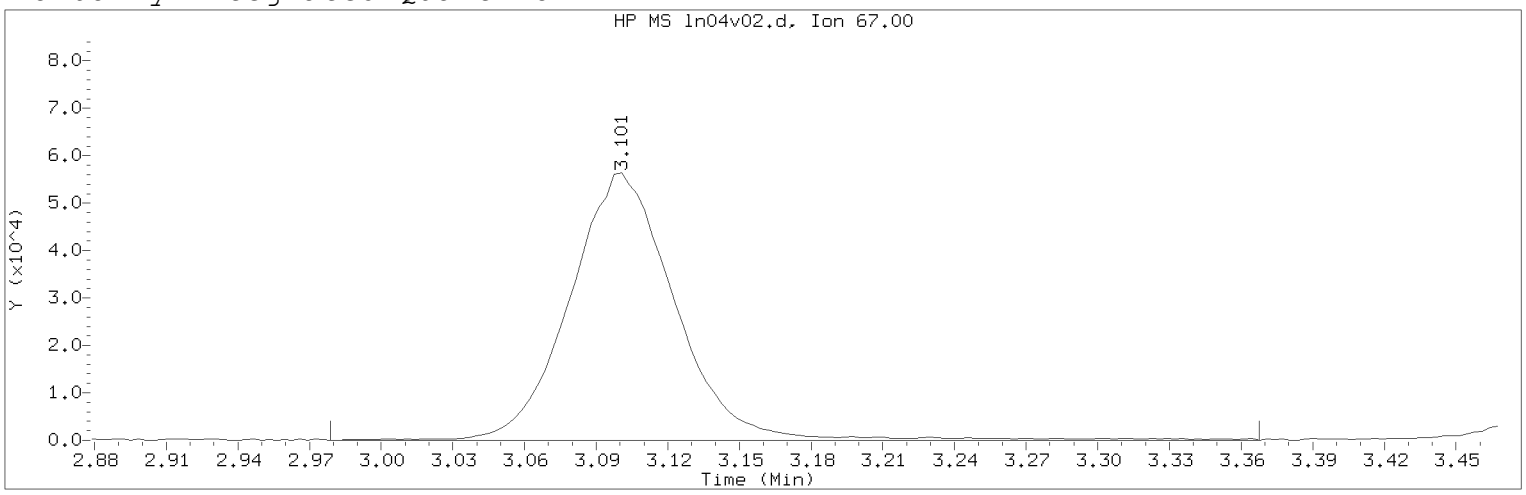
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area : 129885
On-column Amount (ng) : 19.2400
Integration start scan : 271 Integration stop scan: 310
Y at integration start : 283 Y at integration end: 414

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

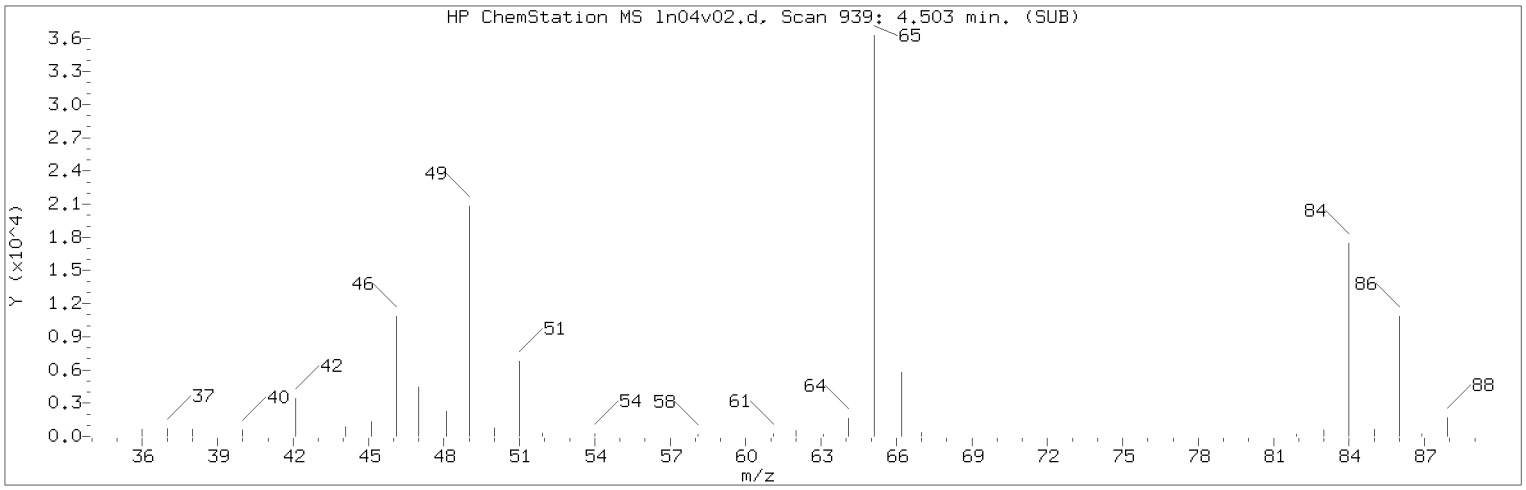
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 503
Retention Time (minutes): 3.101
Quant Ion : 67.00
Area (flag) : 174118M
On-Column Amount (ng) : 16.2240
Integration start scan : 464 Integration stop scan: 585
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

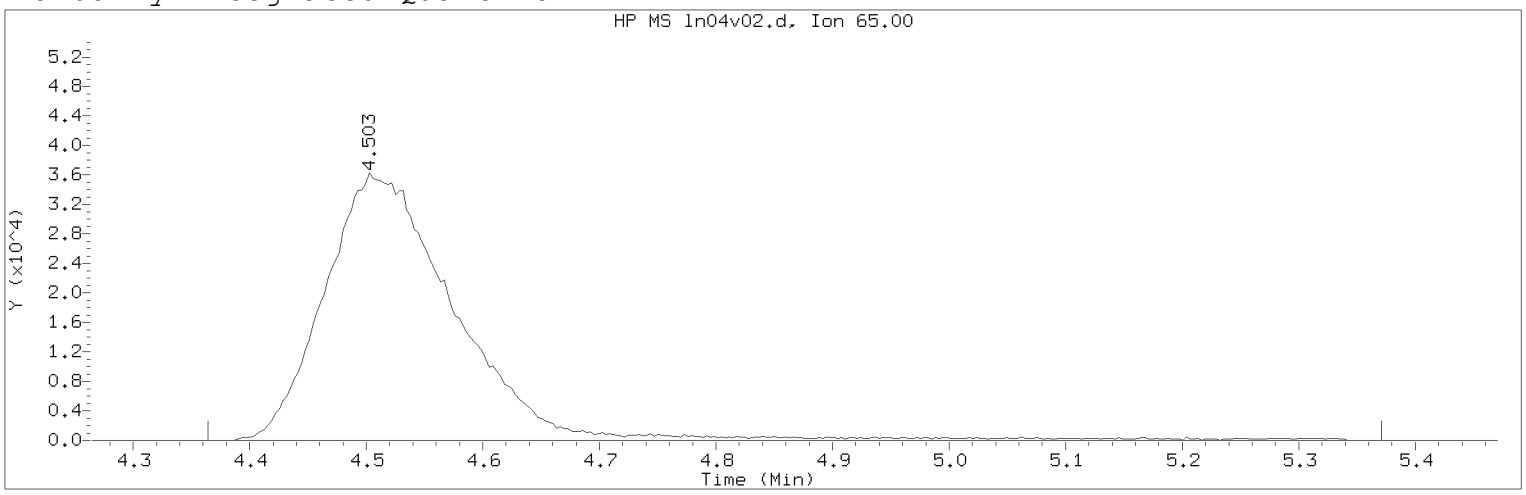
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

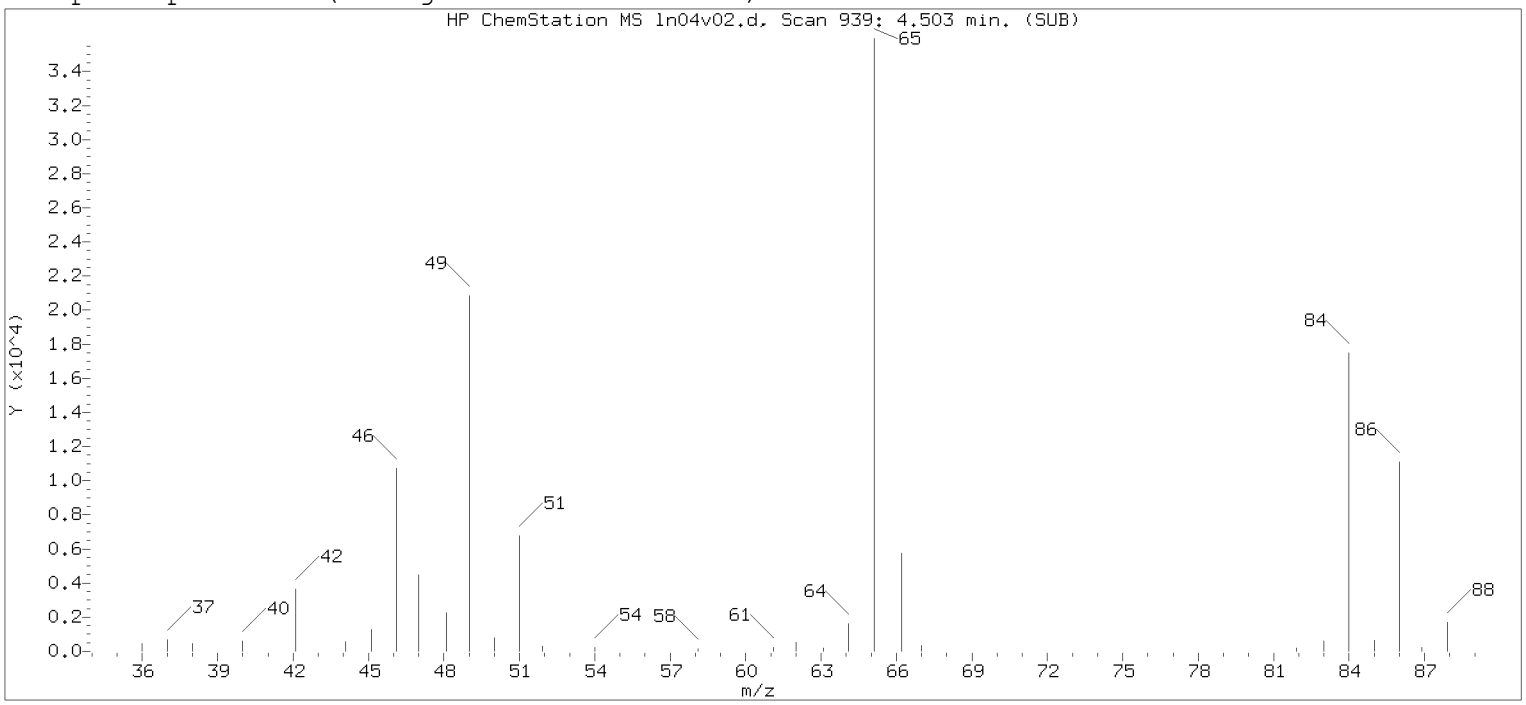
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area (flag) : 282794M
On-Column Amount (ng) : 250.0000
Integration start scan : 895 Integration stop scan: 1208
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

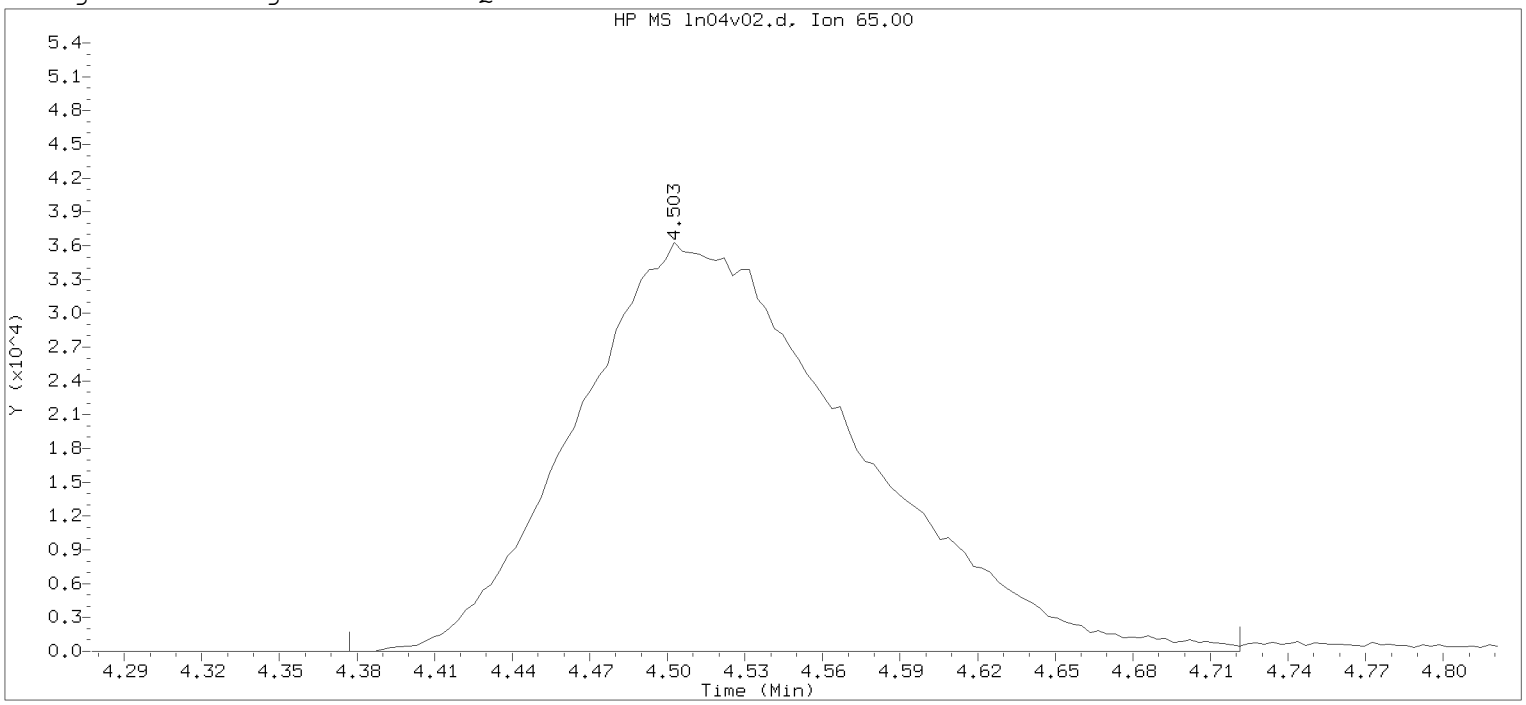
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

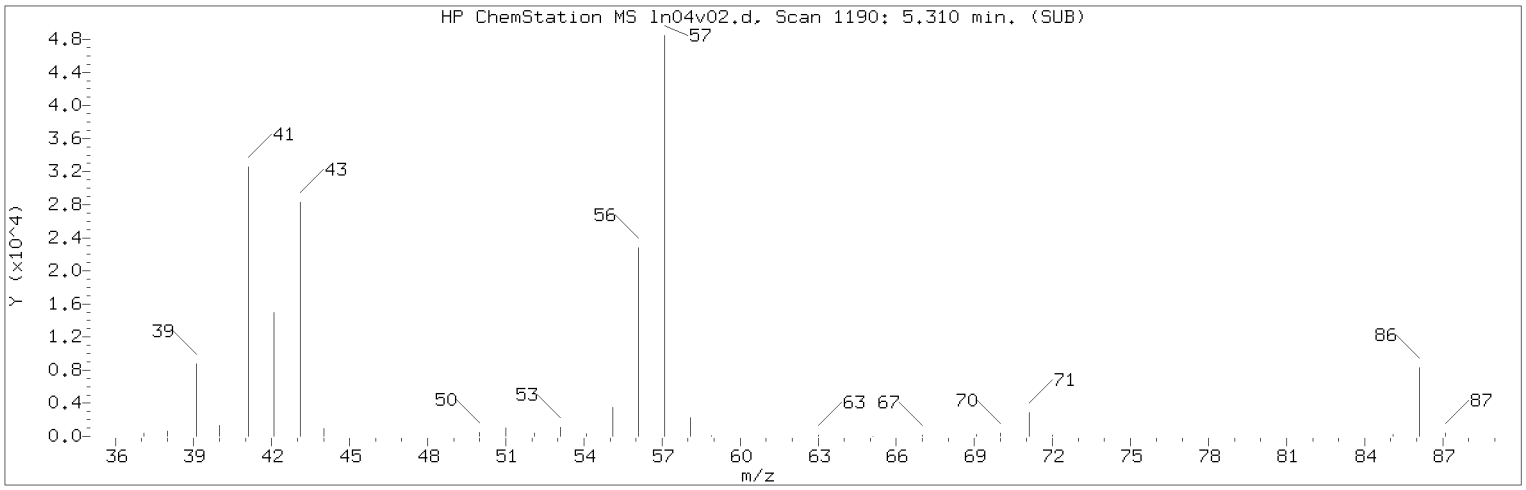
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

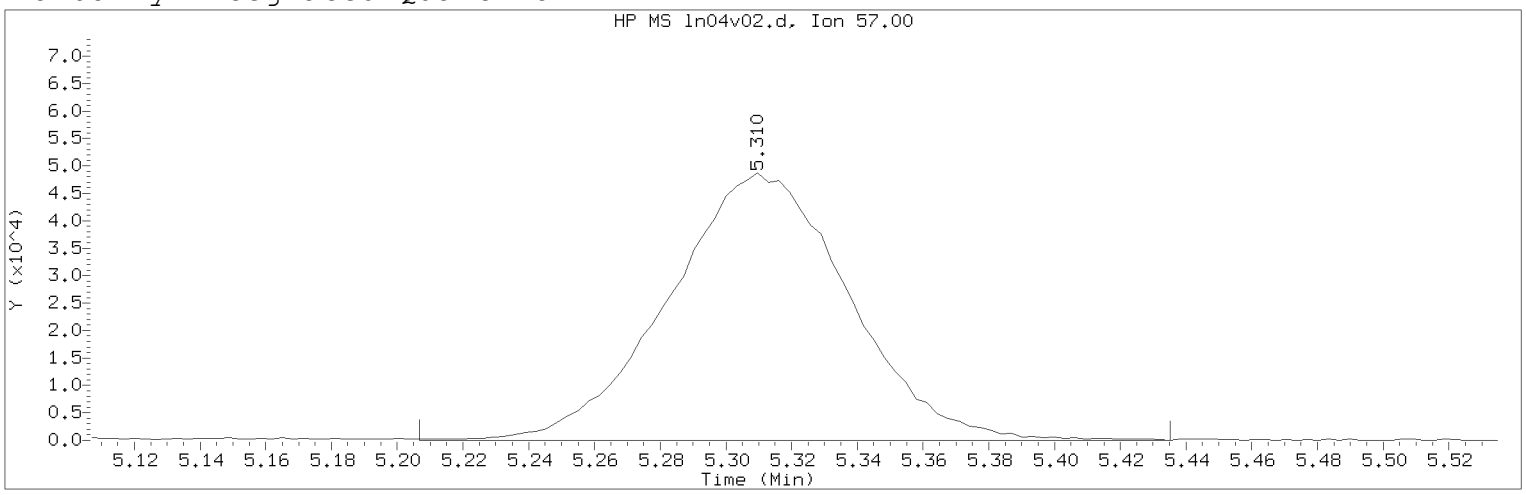
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area : 270950
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1006
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

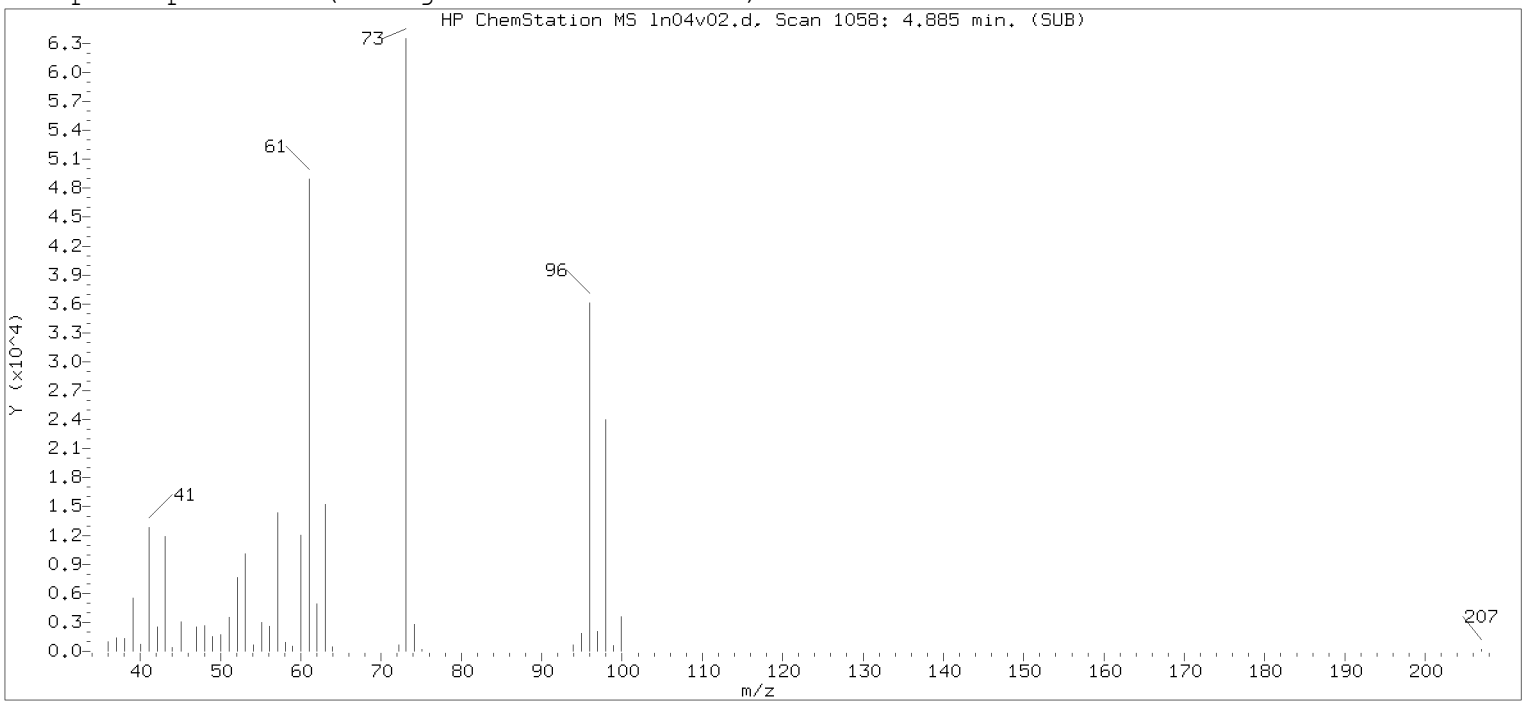
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1190
Retention Time (minutes): 5.310
Quant Ion : 57.00
Area (flag) : 185206M
On-Column Amount (ng) : 20.0675
Integration start scan : 1157 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

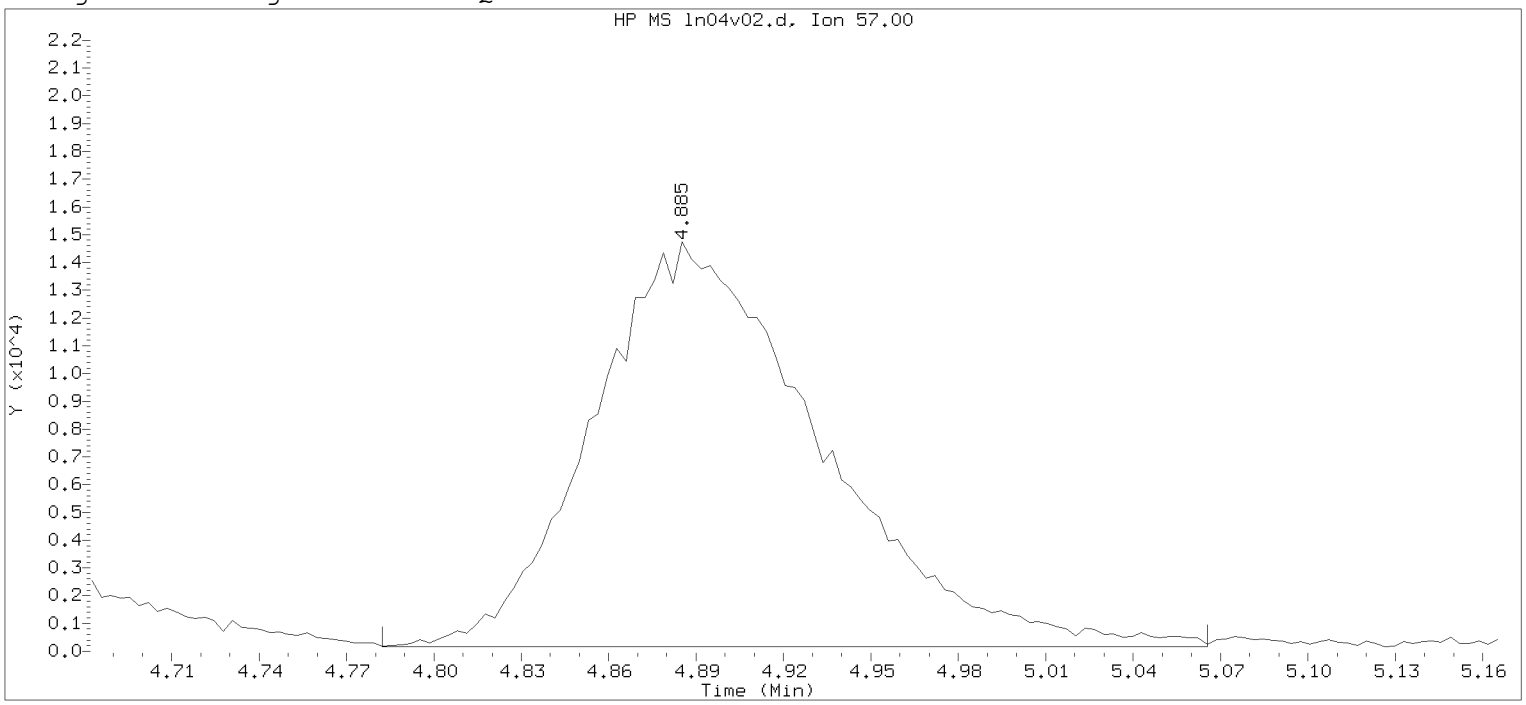
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

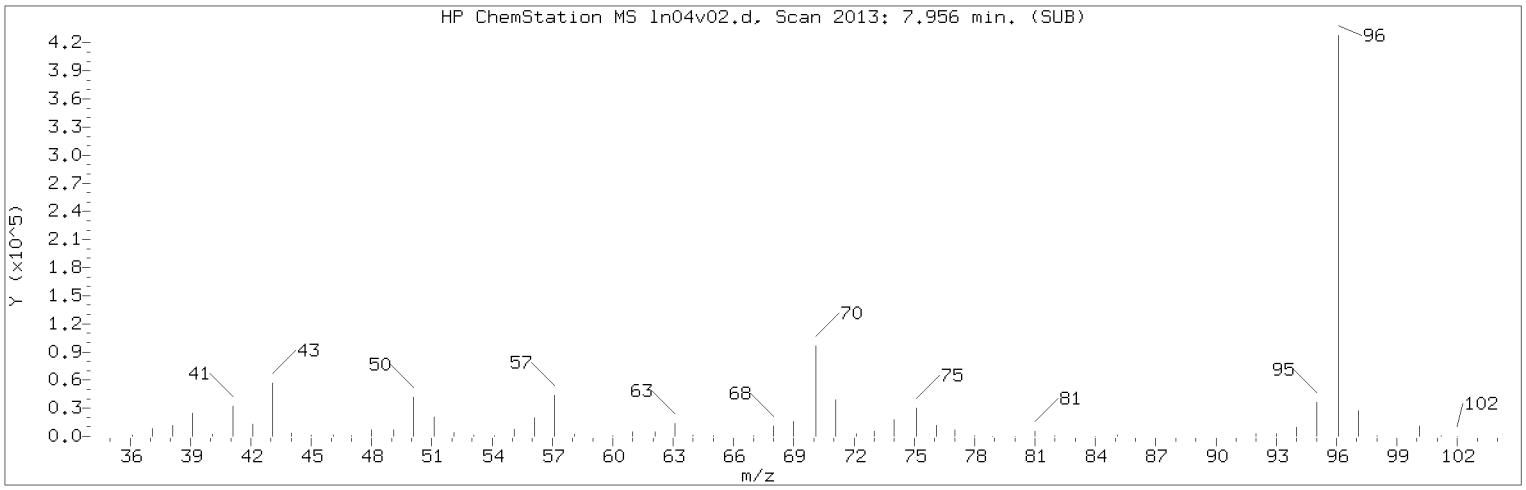
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

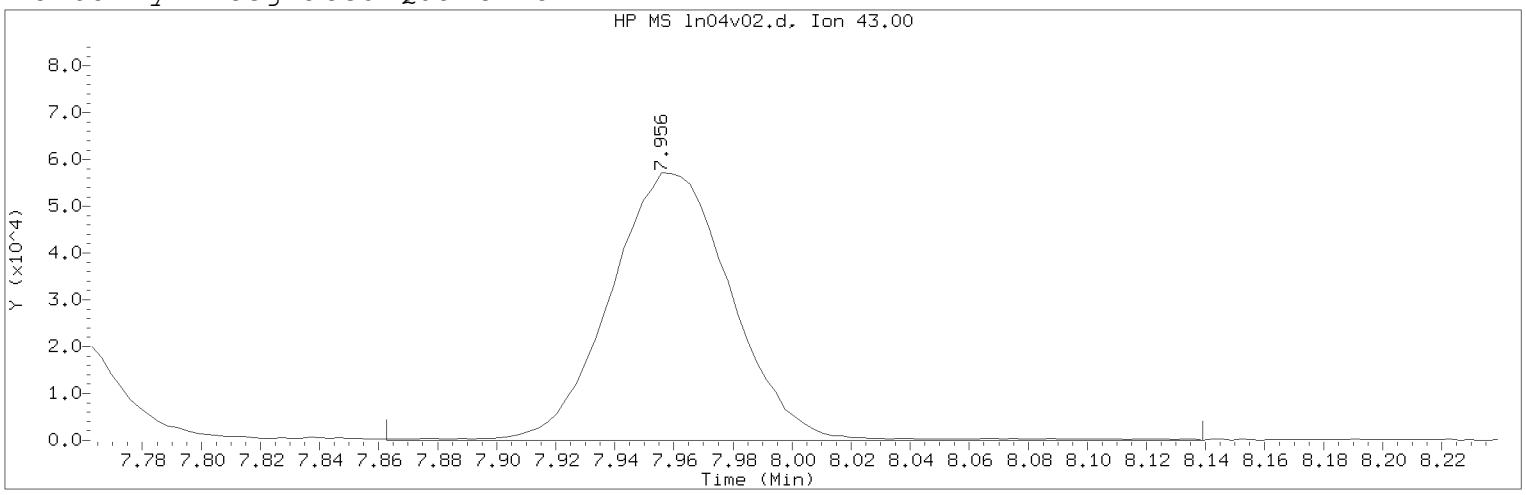
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1058
Retention Time (minutes): 4.885
Quant Ion : 57.00
Area : 79381
On-column Amount (ng) : 18.4374
Integration start scan : 1025 Integration stop scan: 1113
Y at integration start : 160 Y at integration end: 160

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

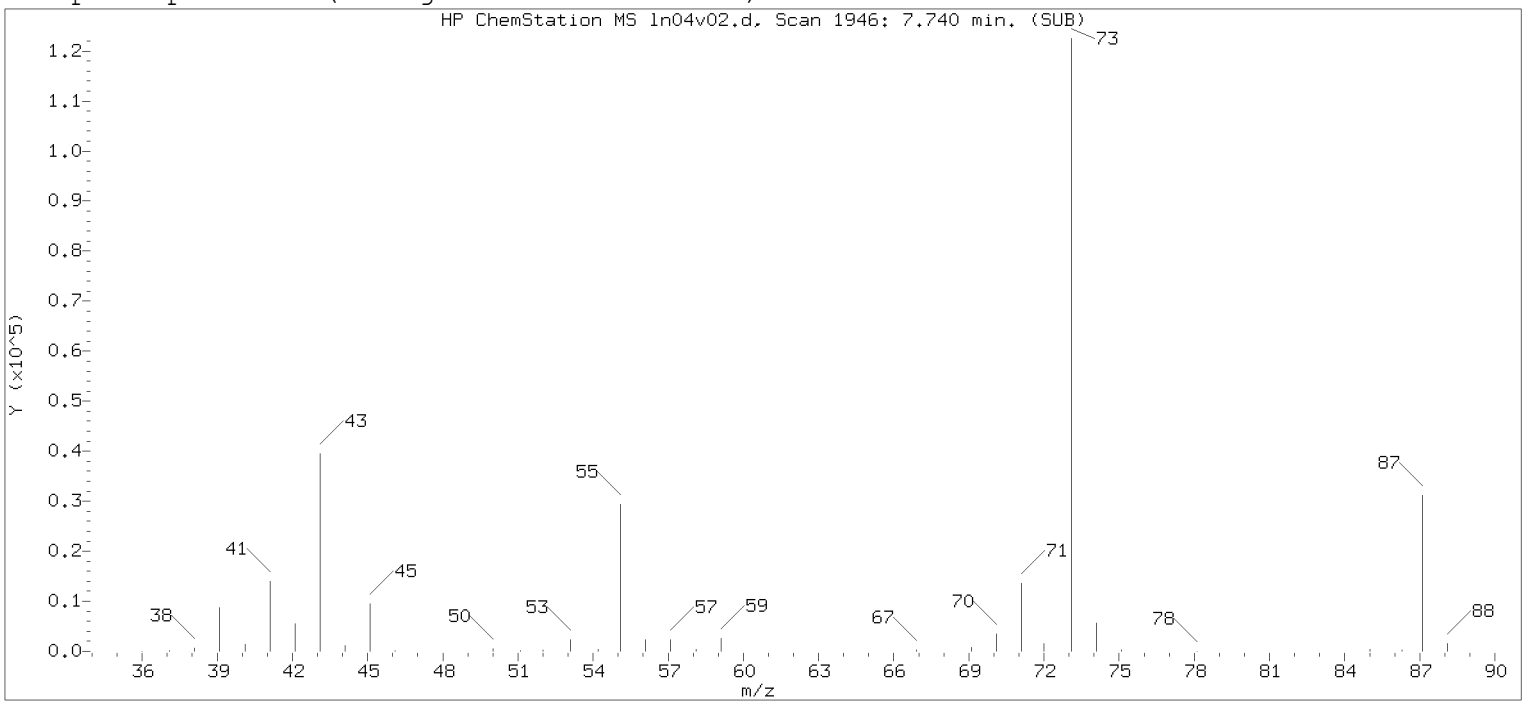
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2013
Retention Time (minutes): 7.956
Quant Ion : 43.00
Area (flag) : 163362M
On-Column Amount (ng) : 18.9476
Integration start scan : 1983 Integration stop scan: 2069
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

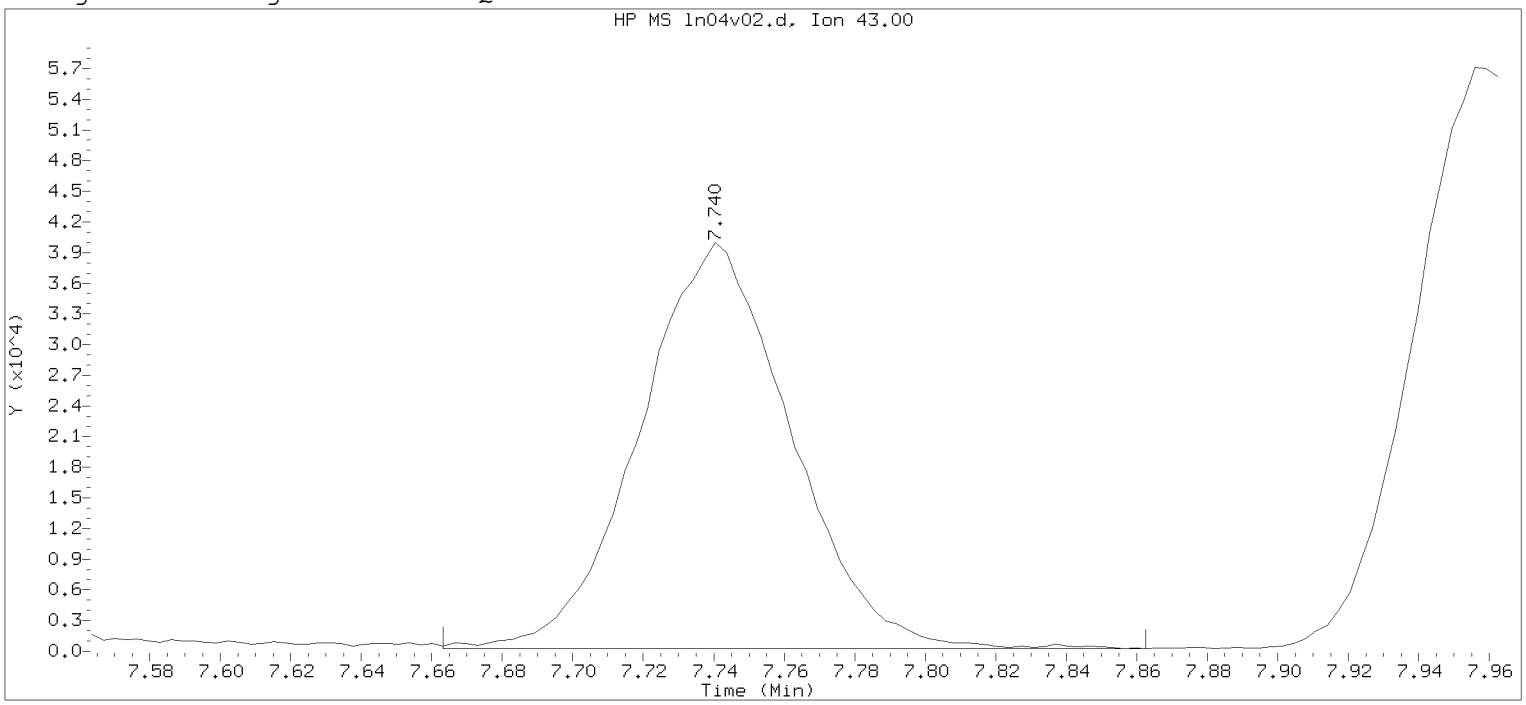
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

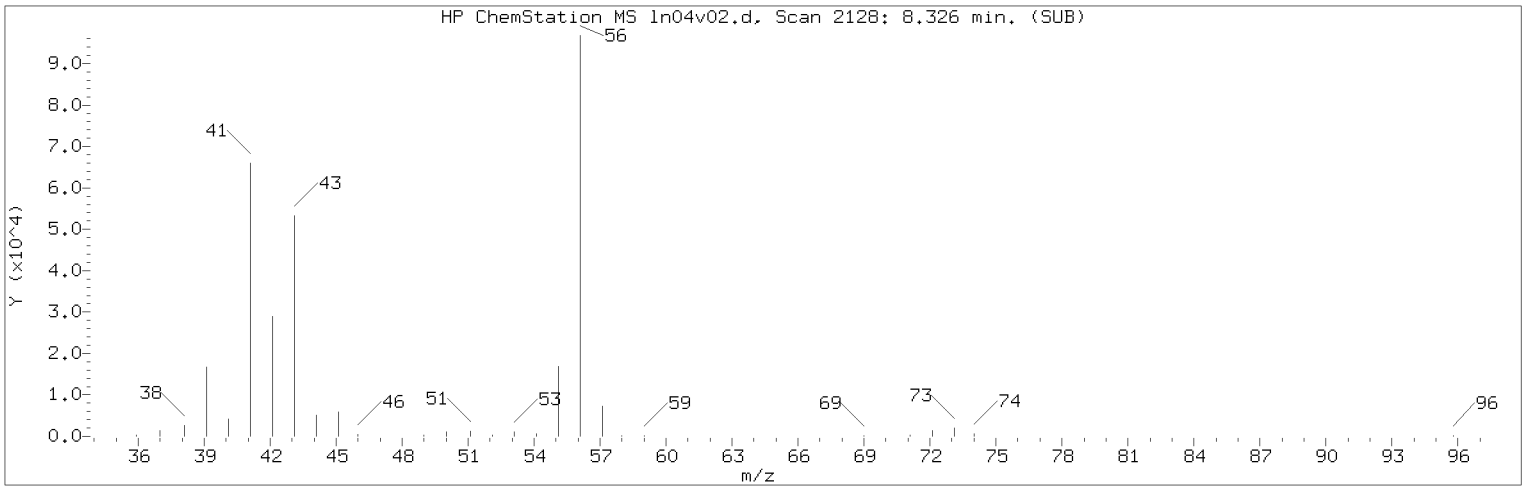
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

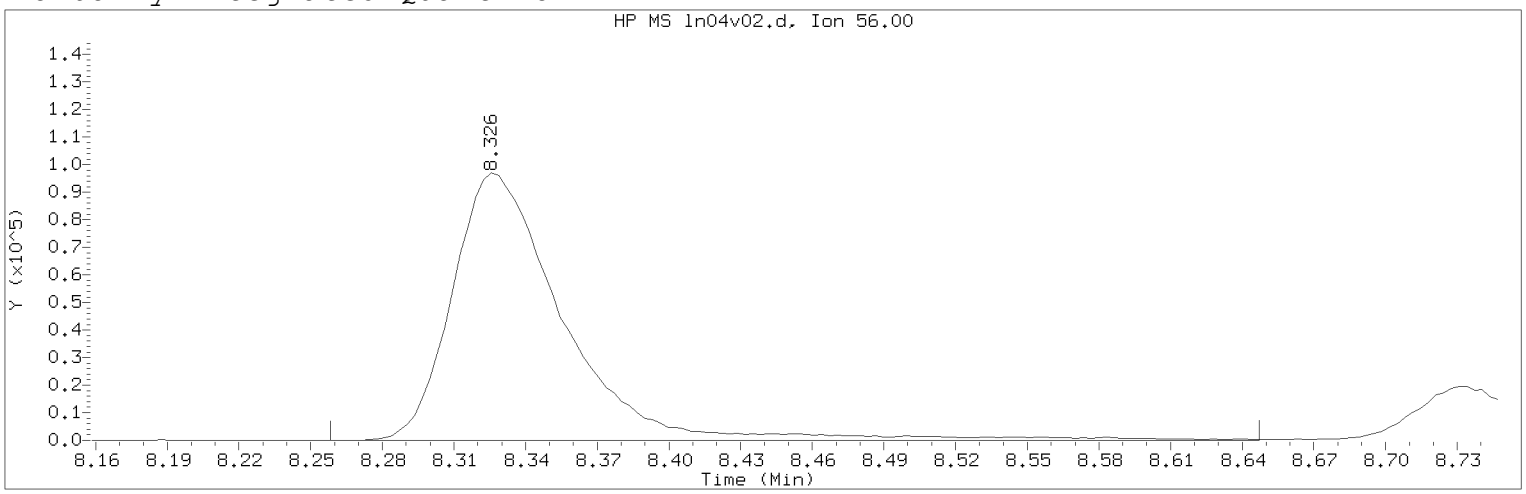
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.740
Quant Ion : 43.00
Area : 118529
On-column Amount (ng) : 18.5036
Integration start scan : 1921 Integration stop scan: 1983
Y at integration start : 255 Y at integration end: 255

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

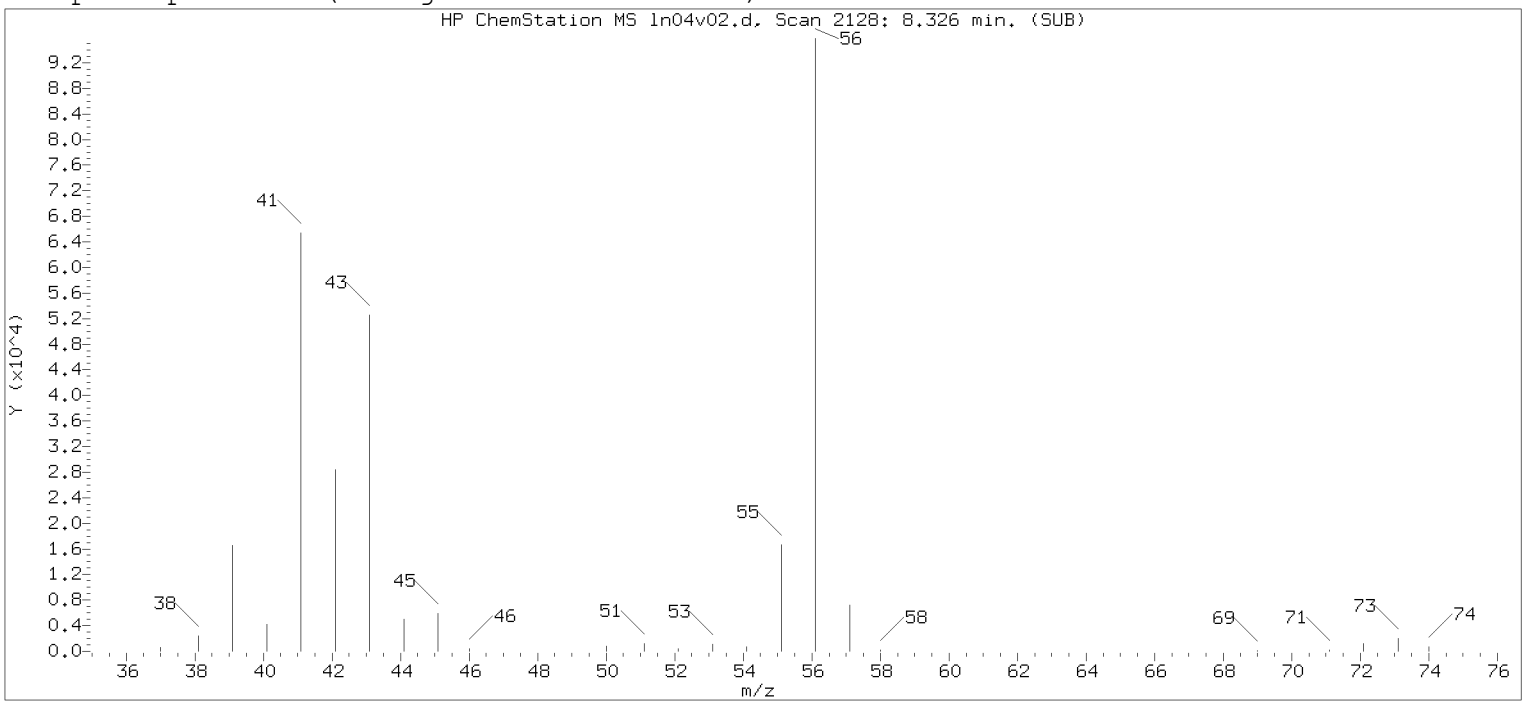
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area (flag) : 314470M
On-Column Amount (ng) : 911.9238
Integration start scan : 2106 Integration stop scan: 2227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

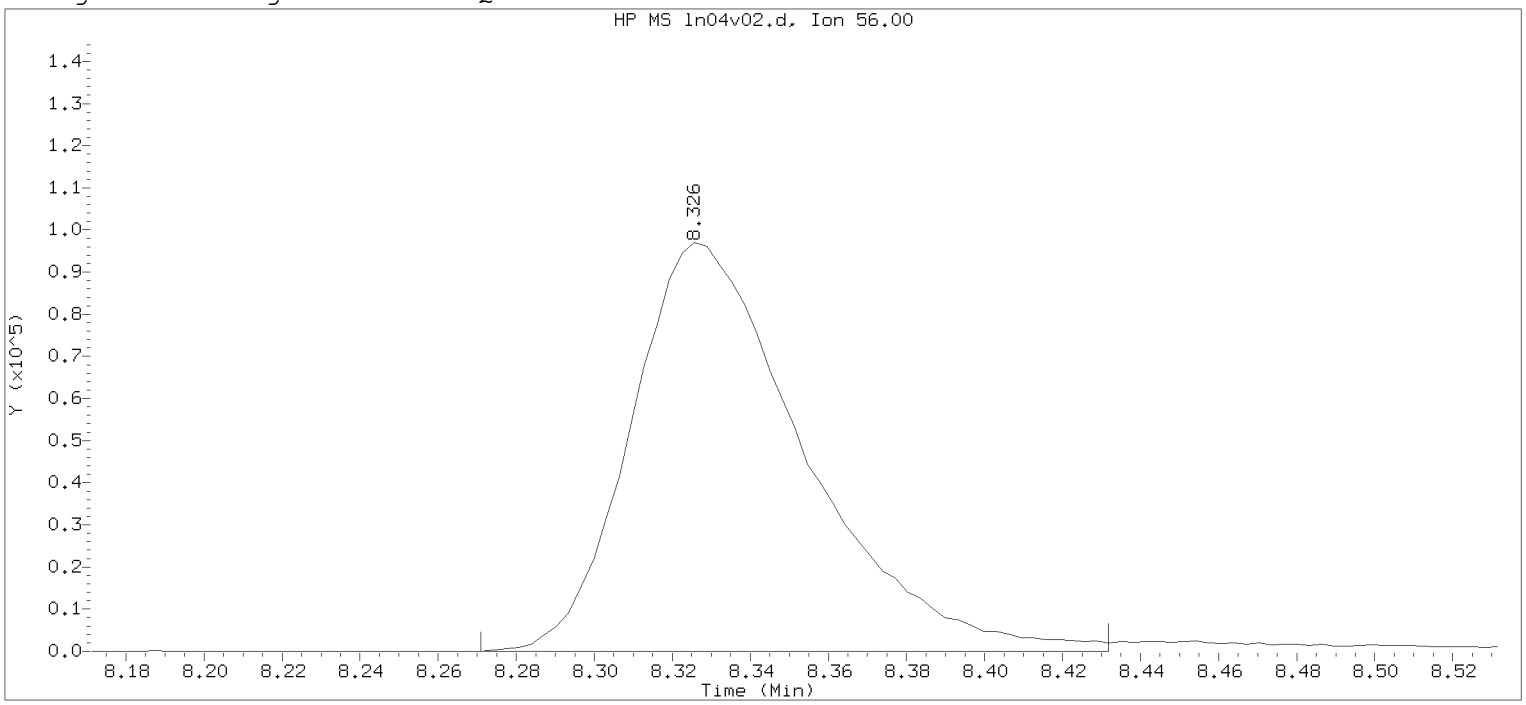
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

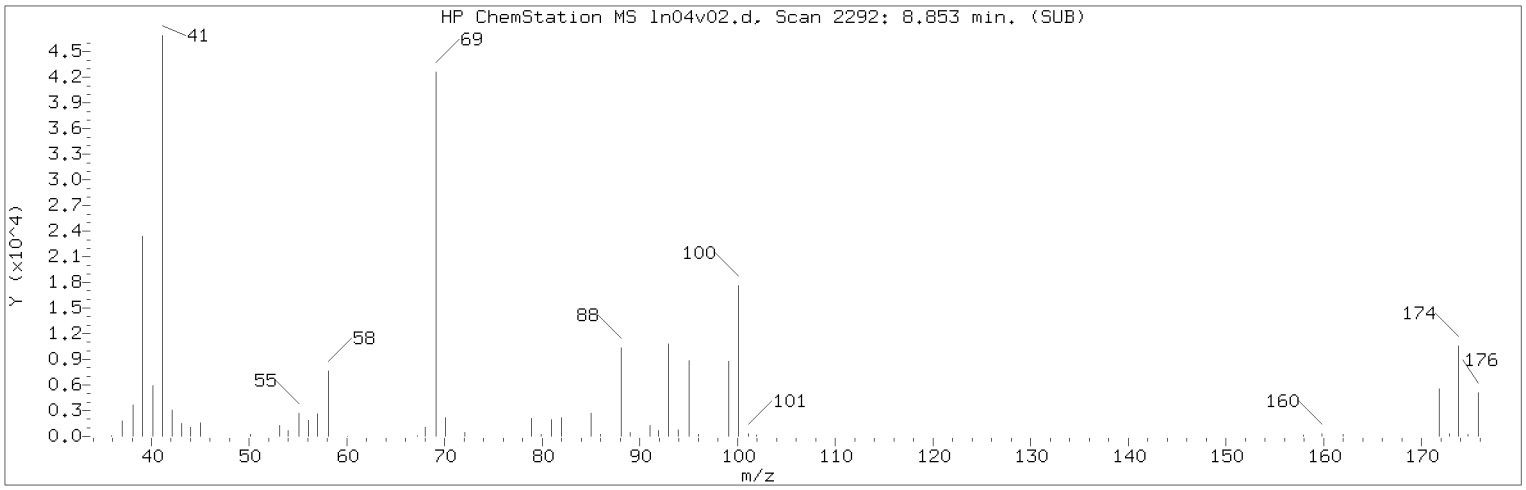
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

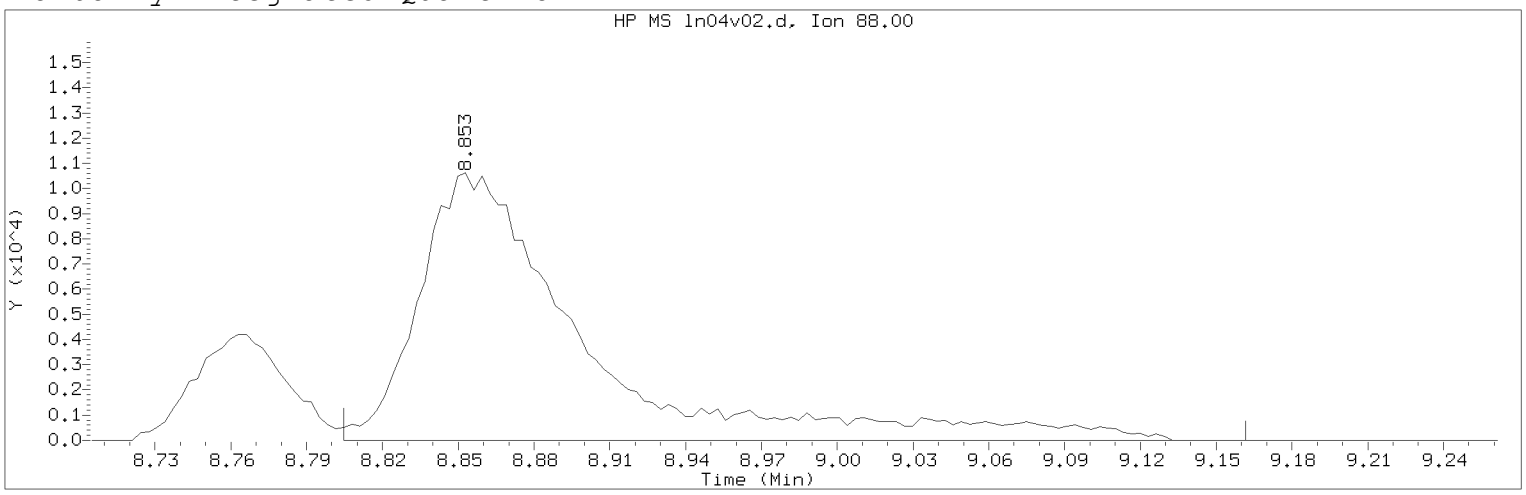
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area : 299611
On-column Amount (ng) : 906.8122
Integration start scan : 2110 Integration stop scan: 2160
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

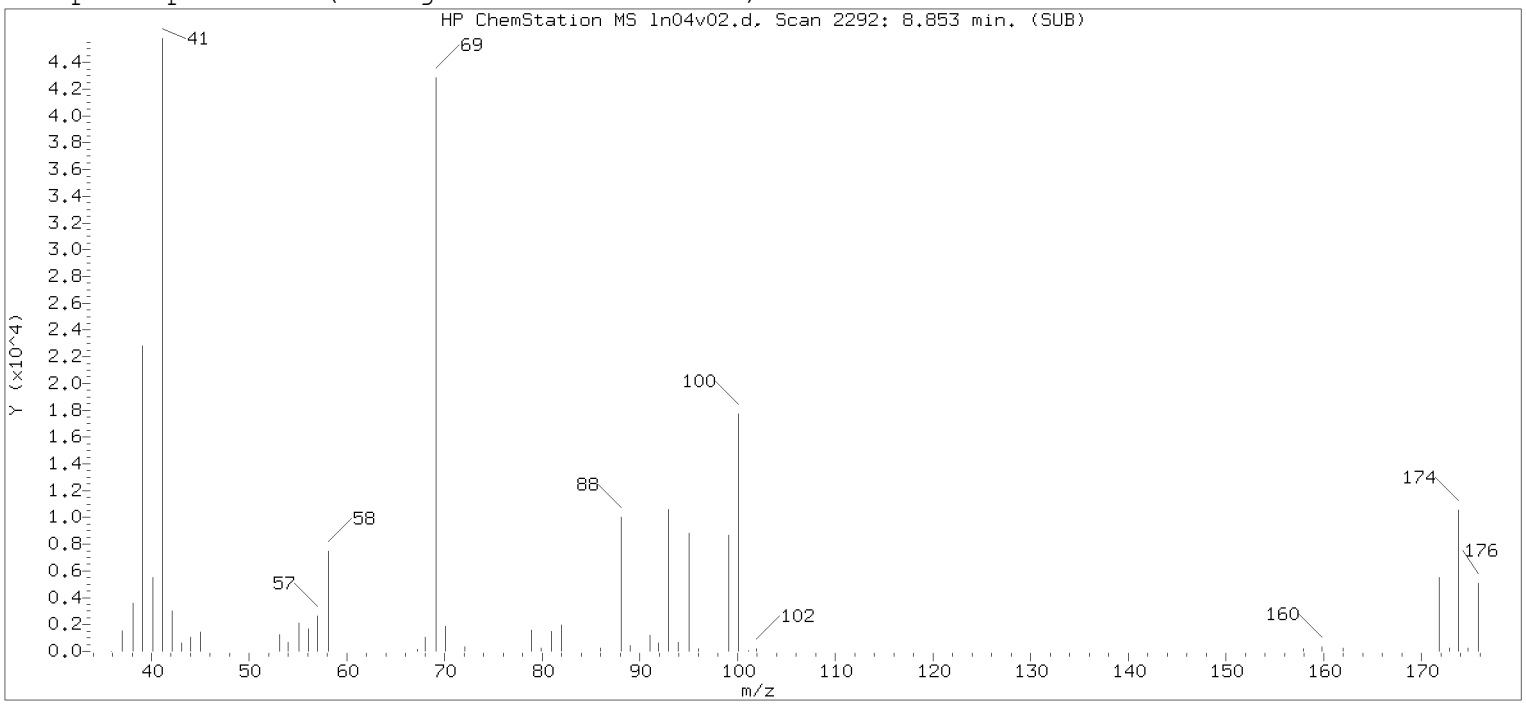
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area (flag) : 47747M
On-Column Amount (ng) : 503.7529
Integration start scan : 2276 Integration stop scan: 2387
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

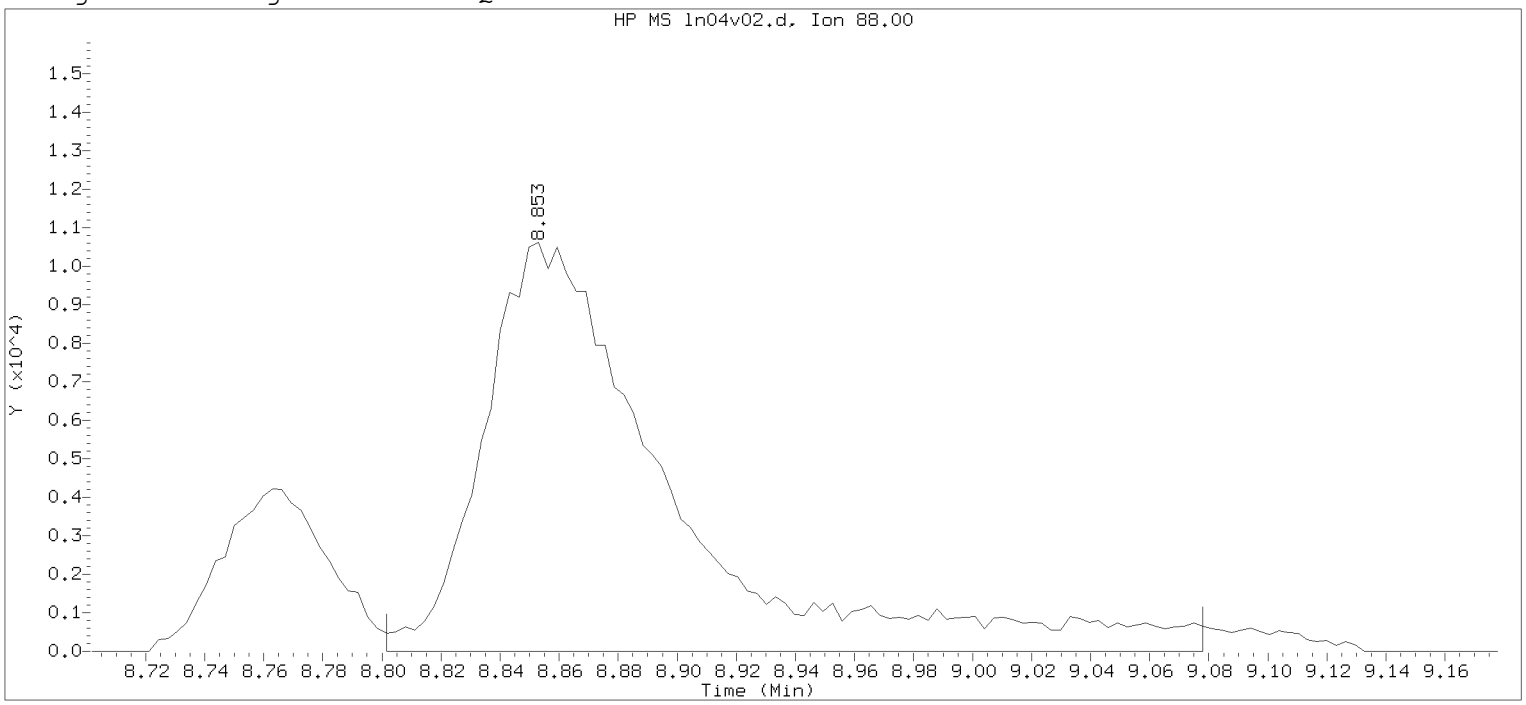
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

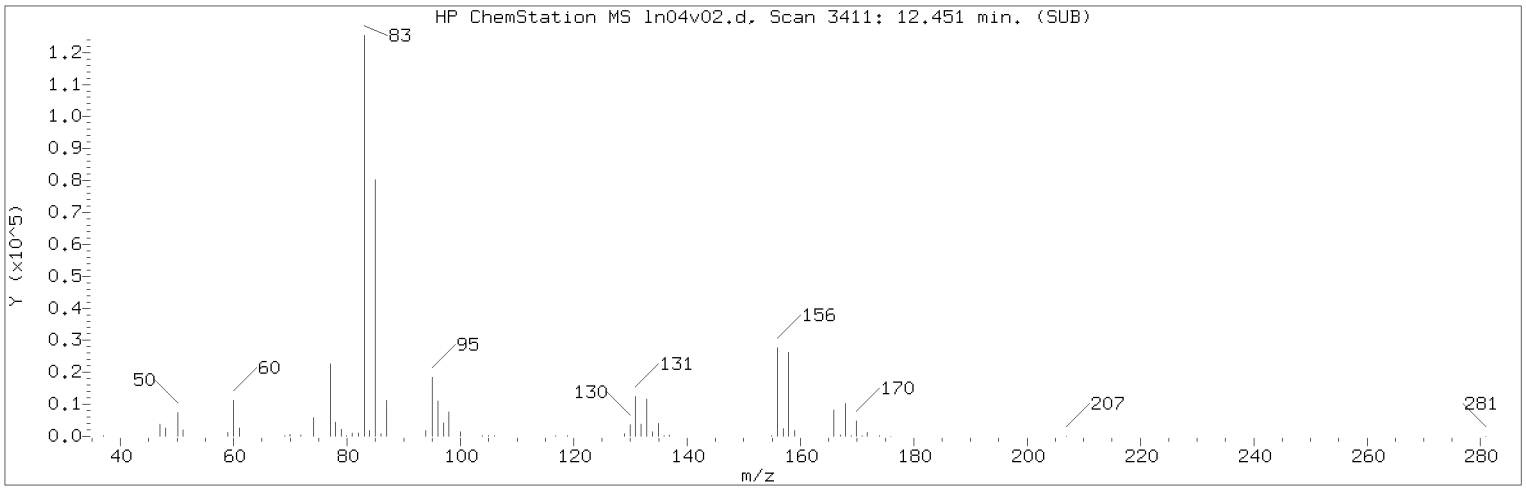
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

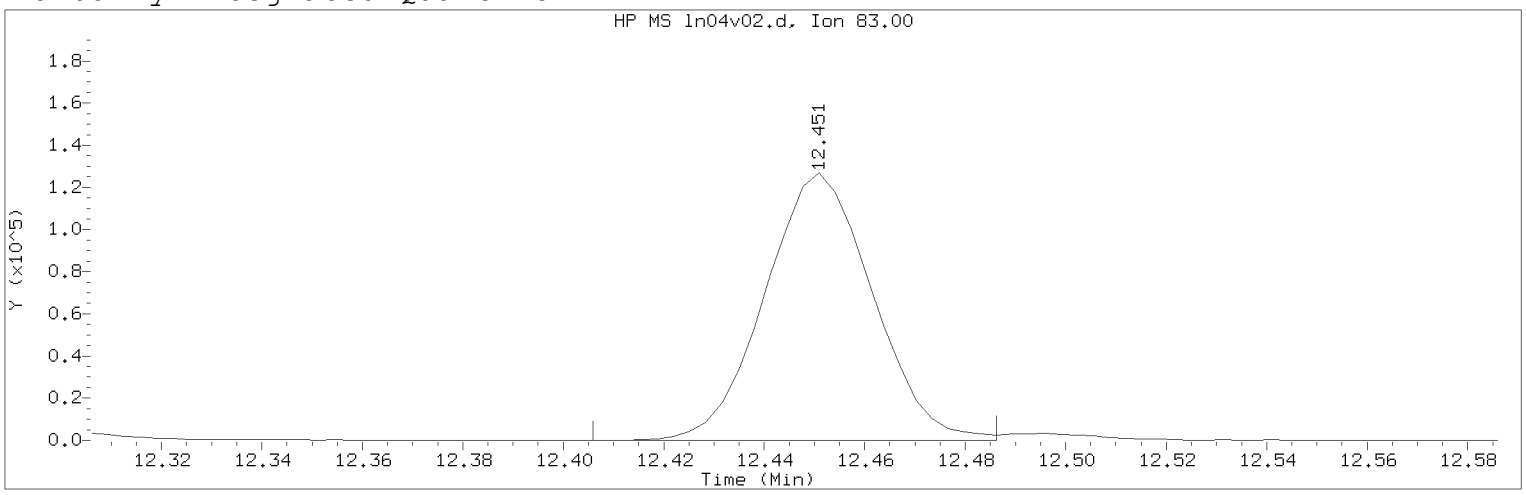
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area : 46453
On-column Amount (ng) : 511.5262
Integration start scan : 2275 Integration stop scan: 2361
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

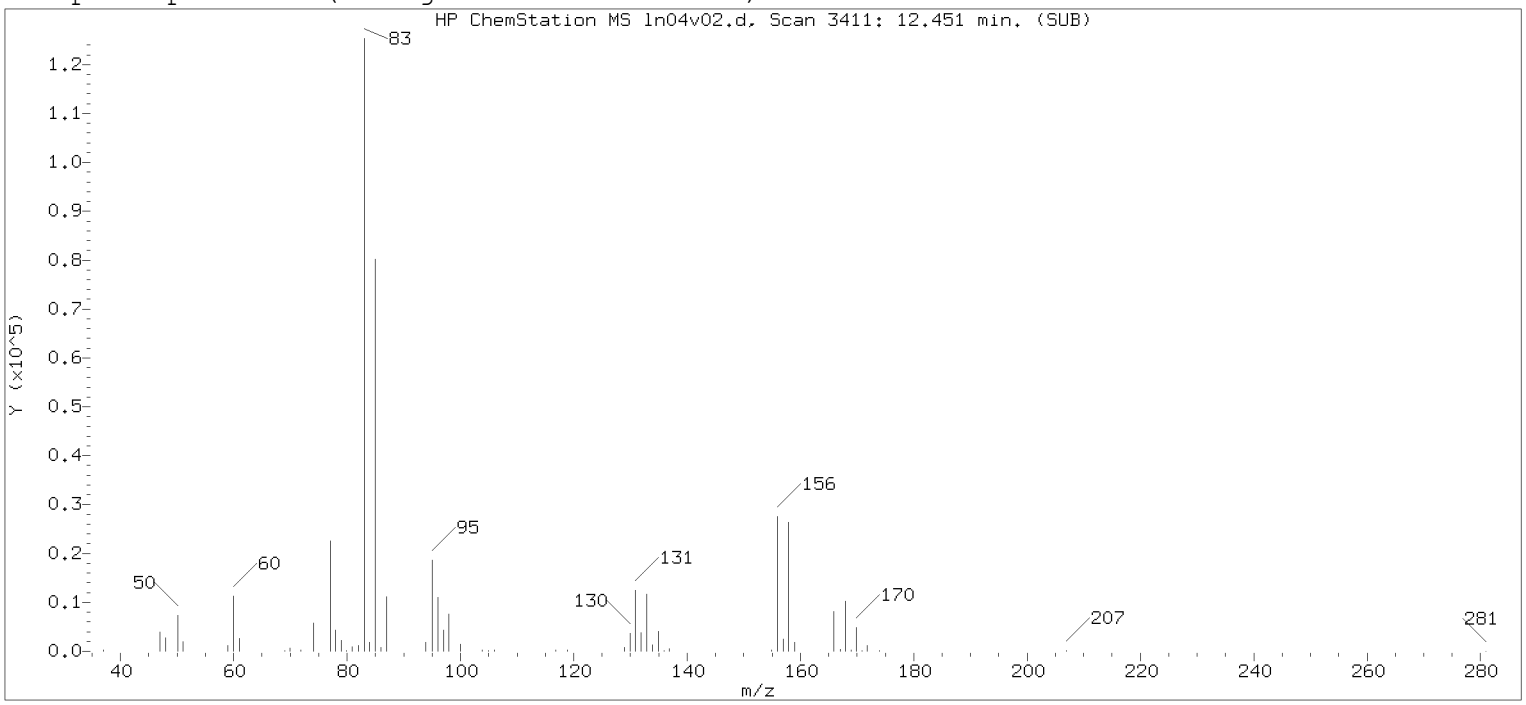
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 188446M
On-Column Amount (ng) : 19.5761
Integration start scan : 3396 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

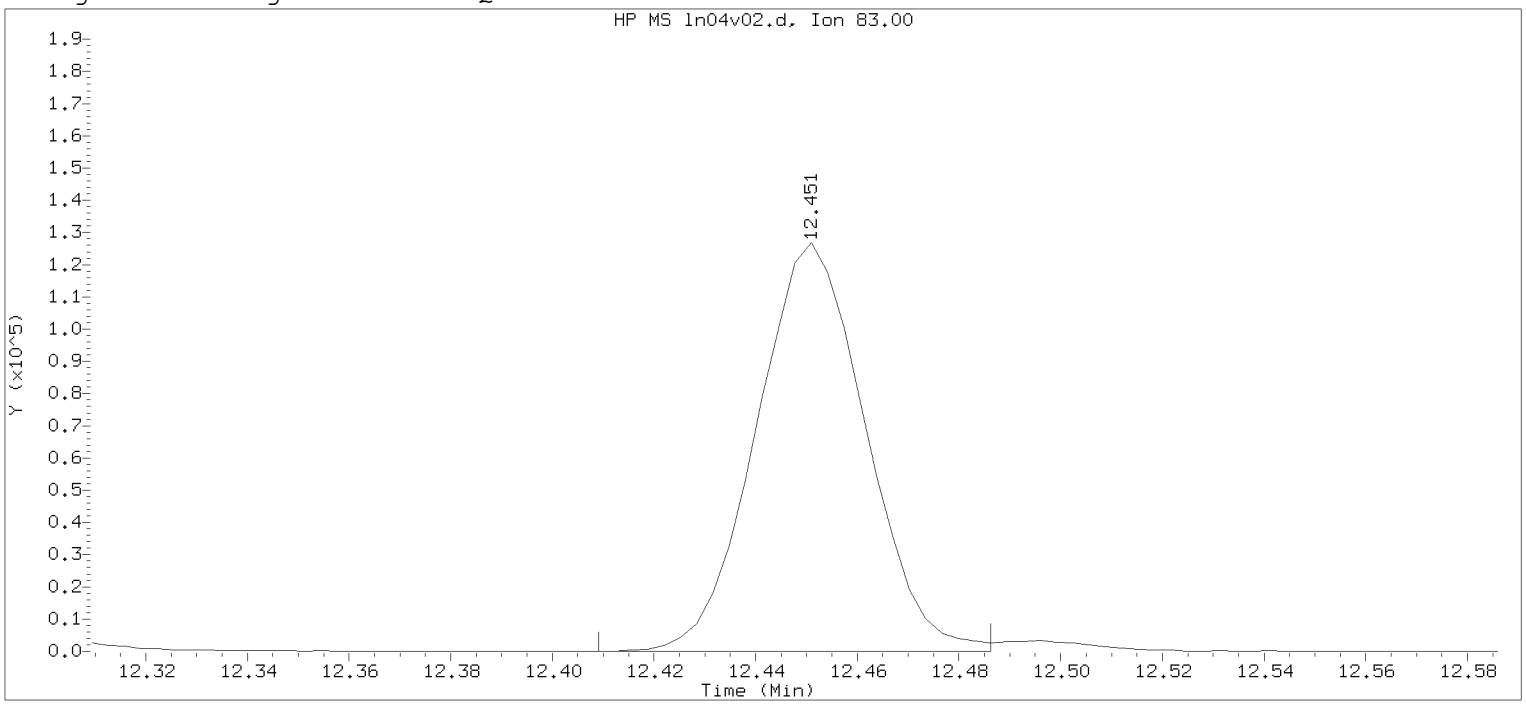
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

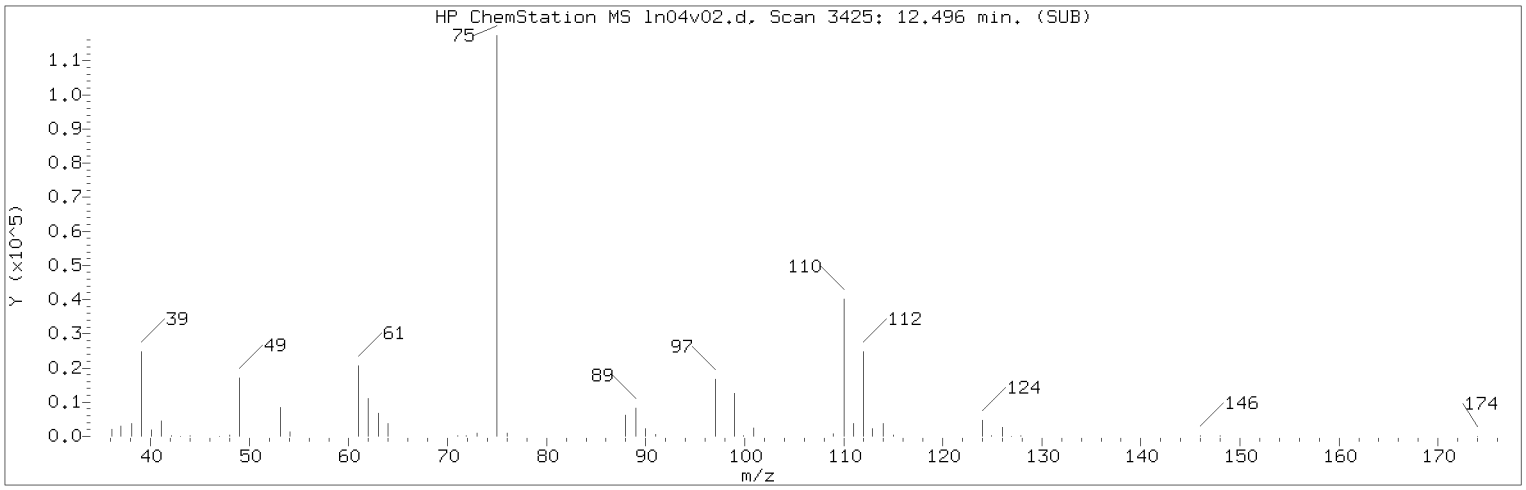
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

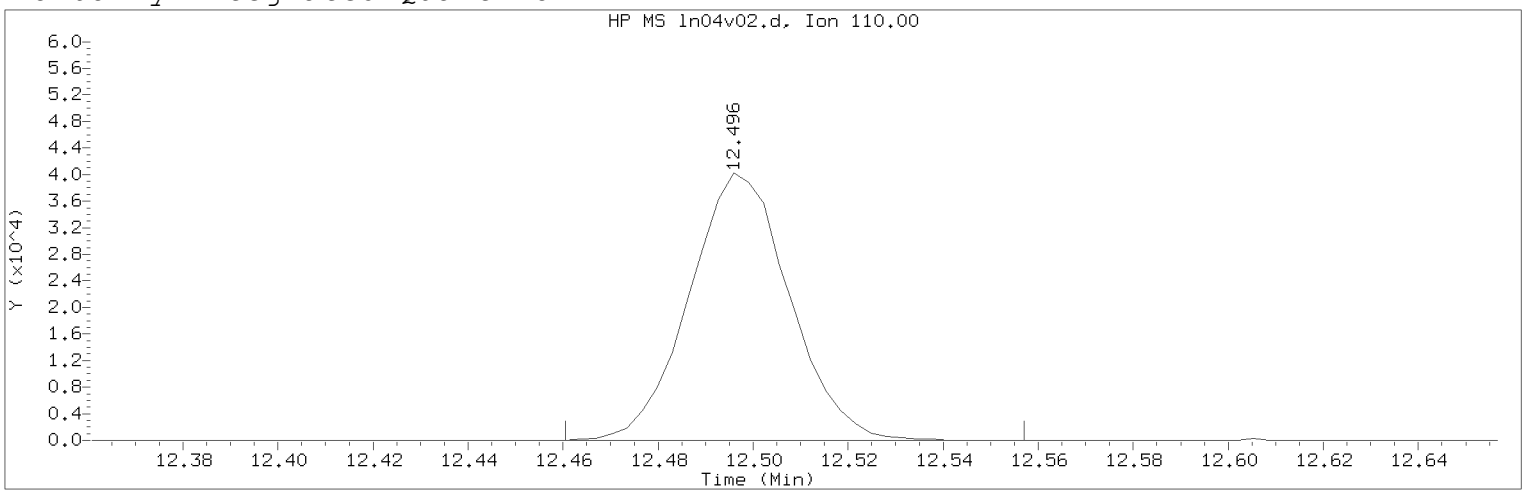
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 188196
On-column Amount (ng) : 19.2022
Integration start scan : 3397 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

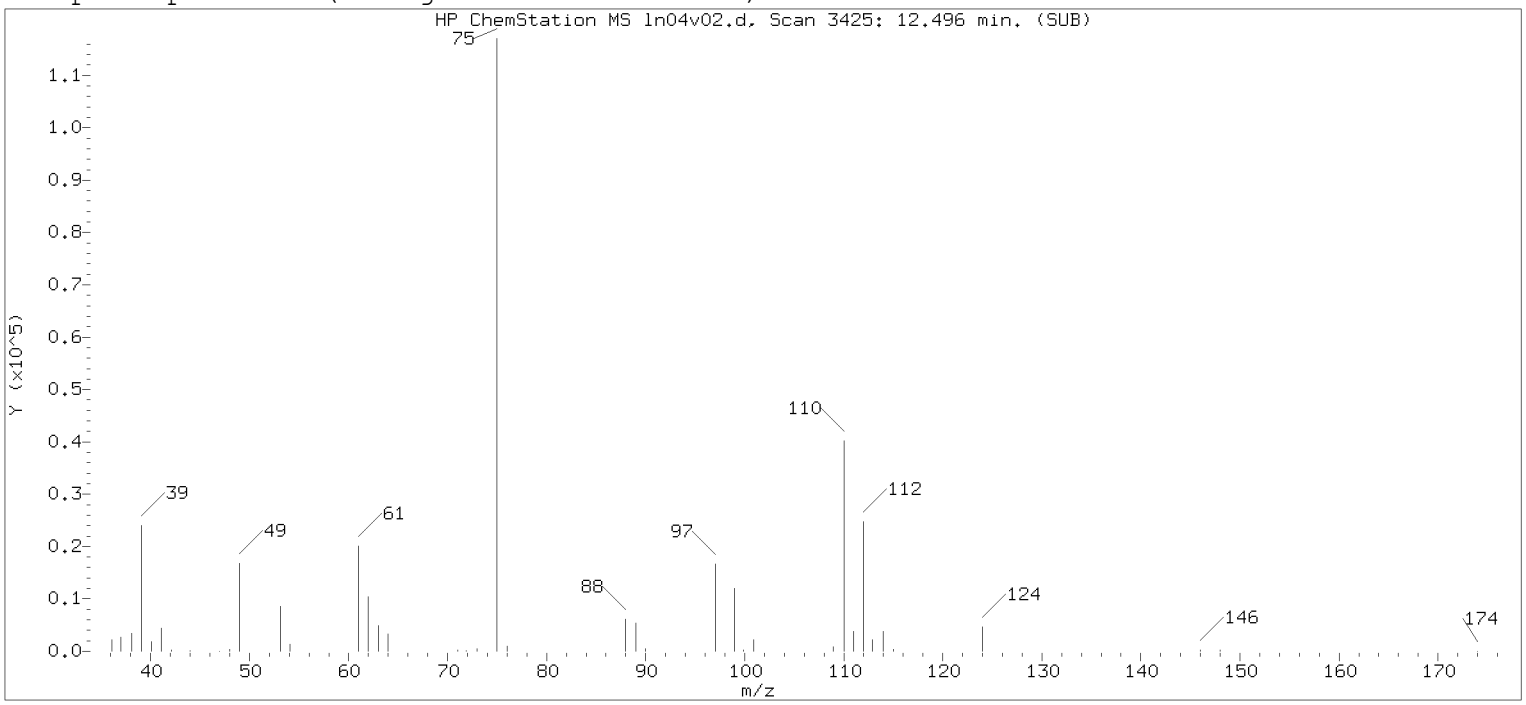
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 3425
Retention Time (minutes): 12.496
Quant Ion : 110.00
Area (flag) : 58902M
On-Column Amount (ng) : 19.9401
Integration start scan : 3413 Integration stop scan: 3443
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

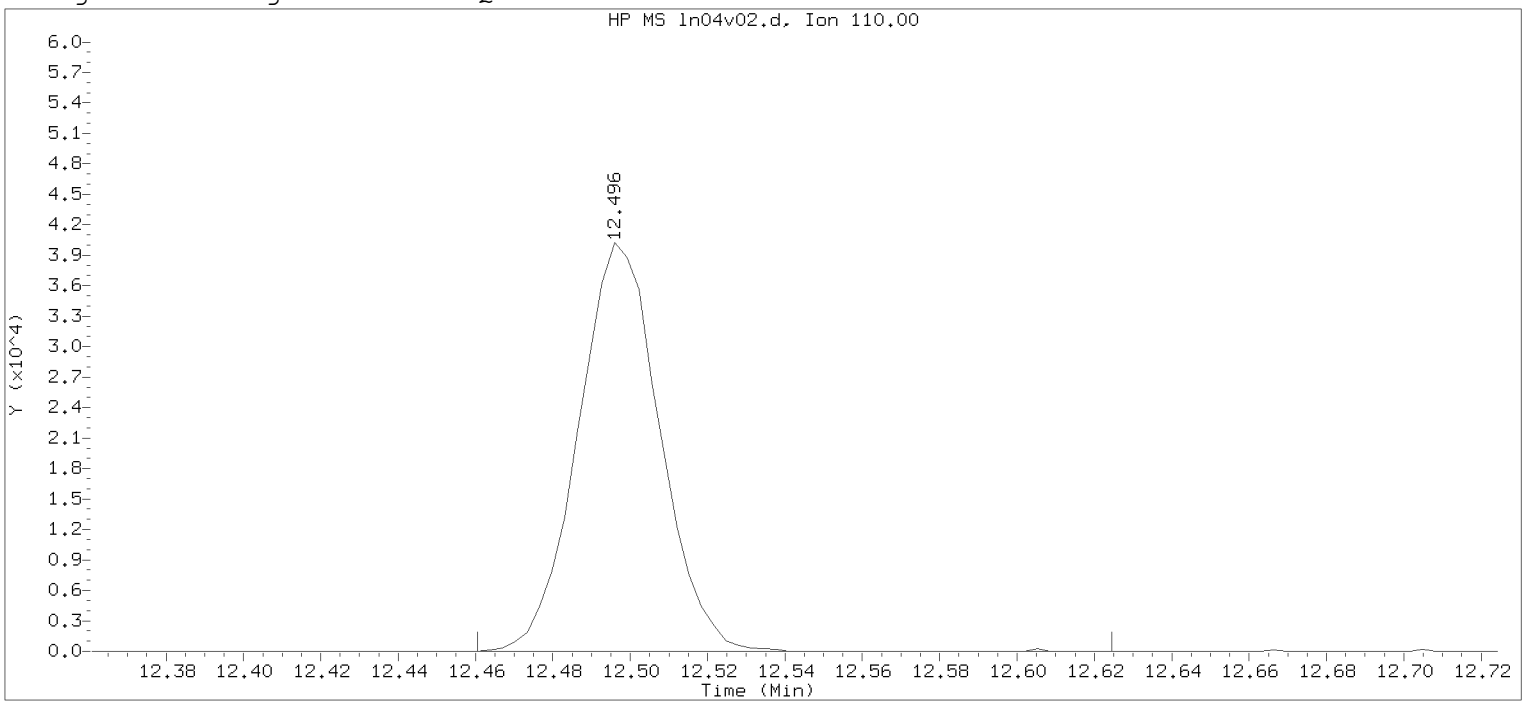
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

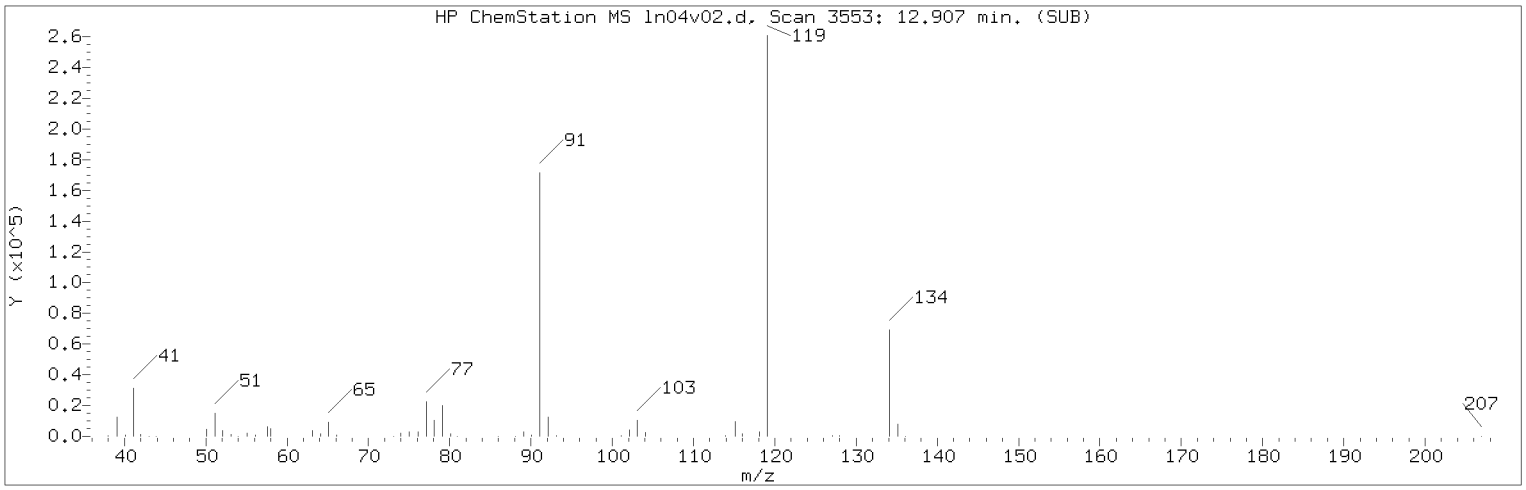
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

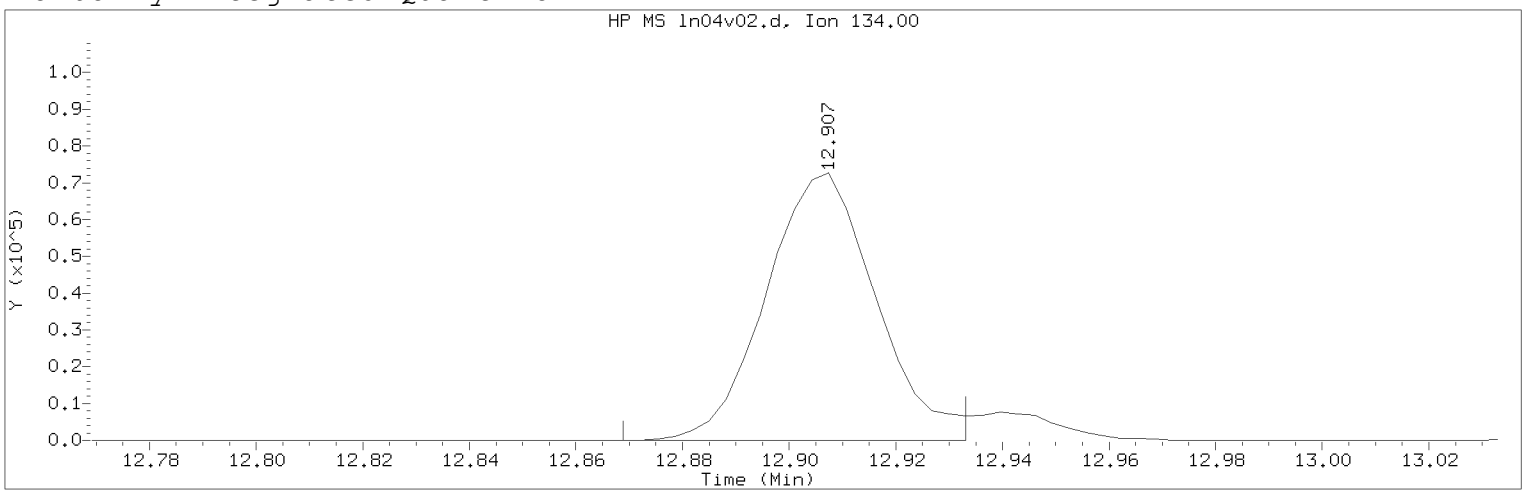
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 3425
Retention Time (minutes): 12.496
Quant Ion : 110.00
Area : 58948
On-column Amount (ng) : 19.9559
Integration start scan : 3413 Integration stop scan: 3464
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASPOSITO@

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

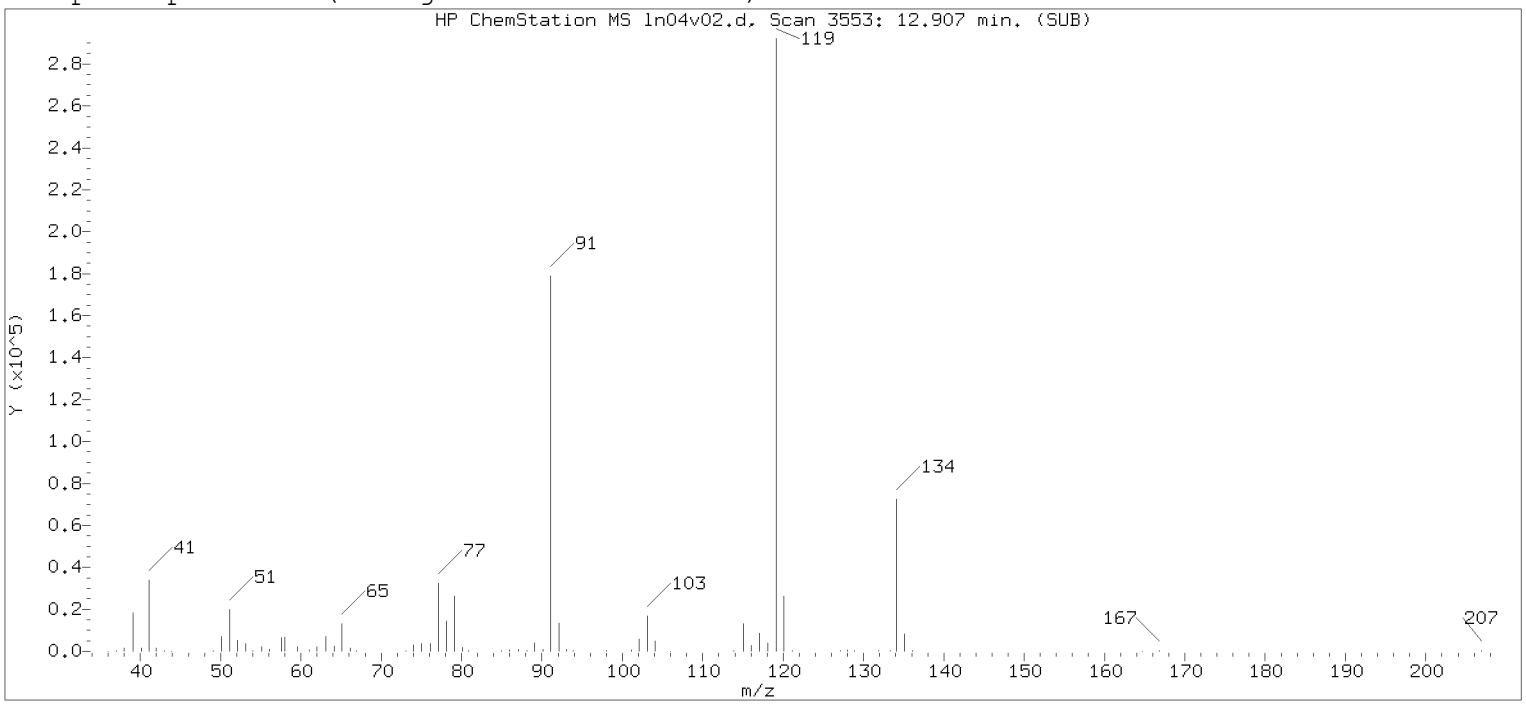
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area (flag) : 103762M
On-Column Amount (ng) : 20.6322
Integration start scan : 3540 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

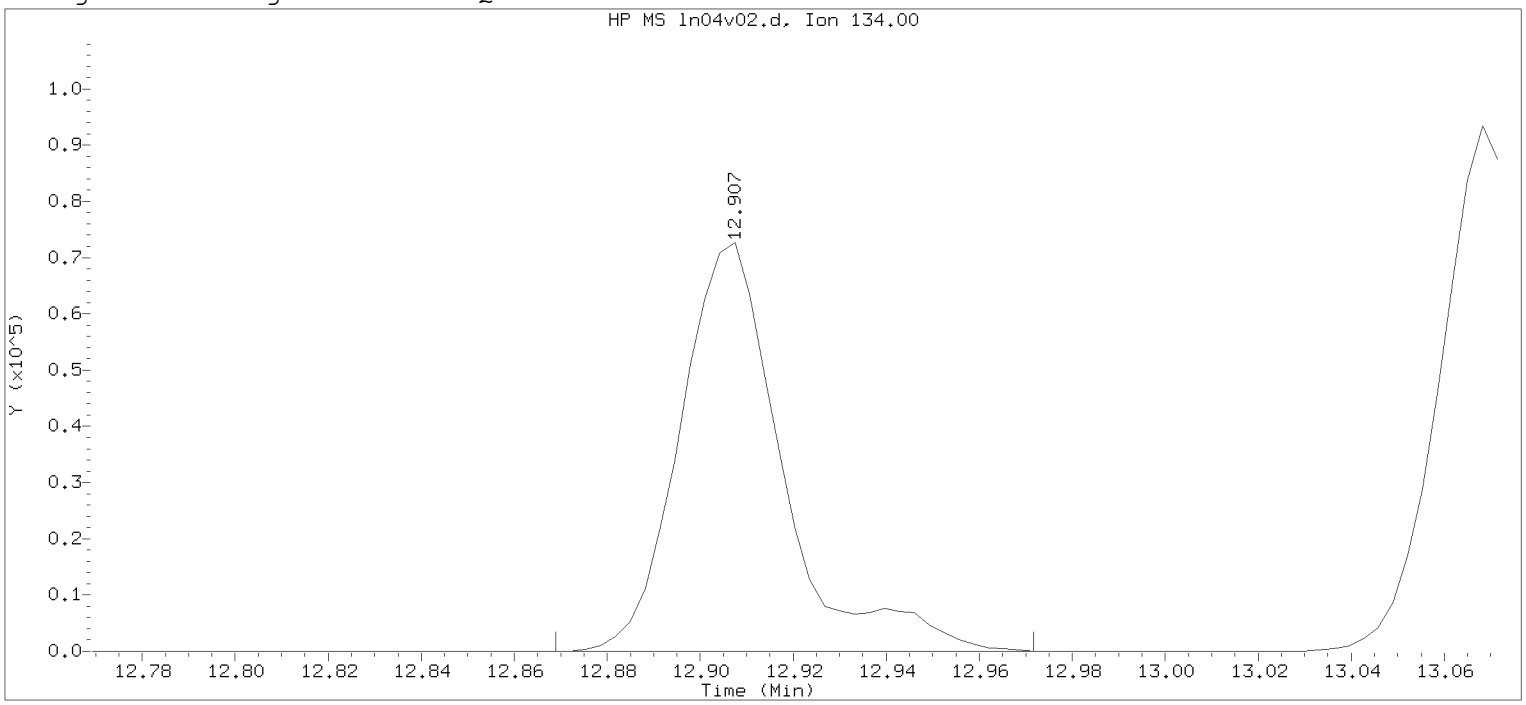
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area : 111654
On-column Amount (ng) : 22.2016
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASposito

Data File: /chem/HP09915.i/19nov20a.b/ln20t01.d

Date : 20-NOV-2019 08:00

Client ID: AUG02-19

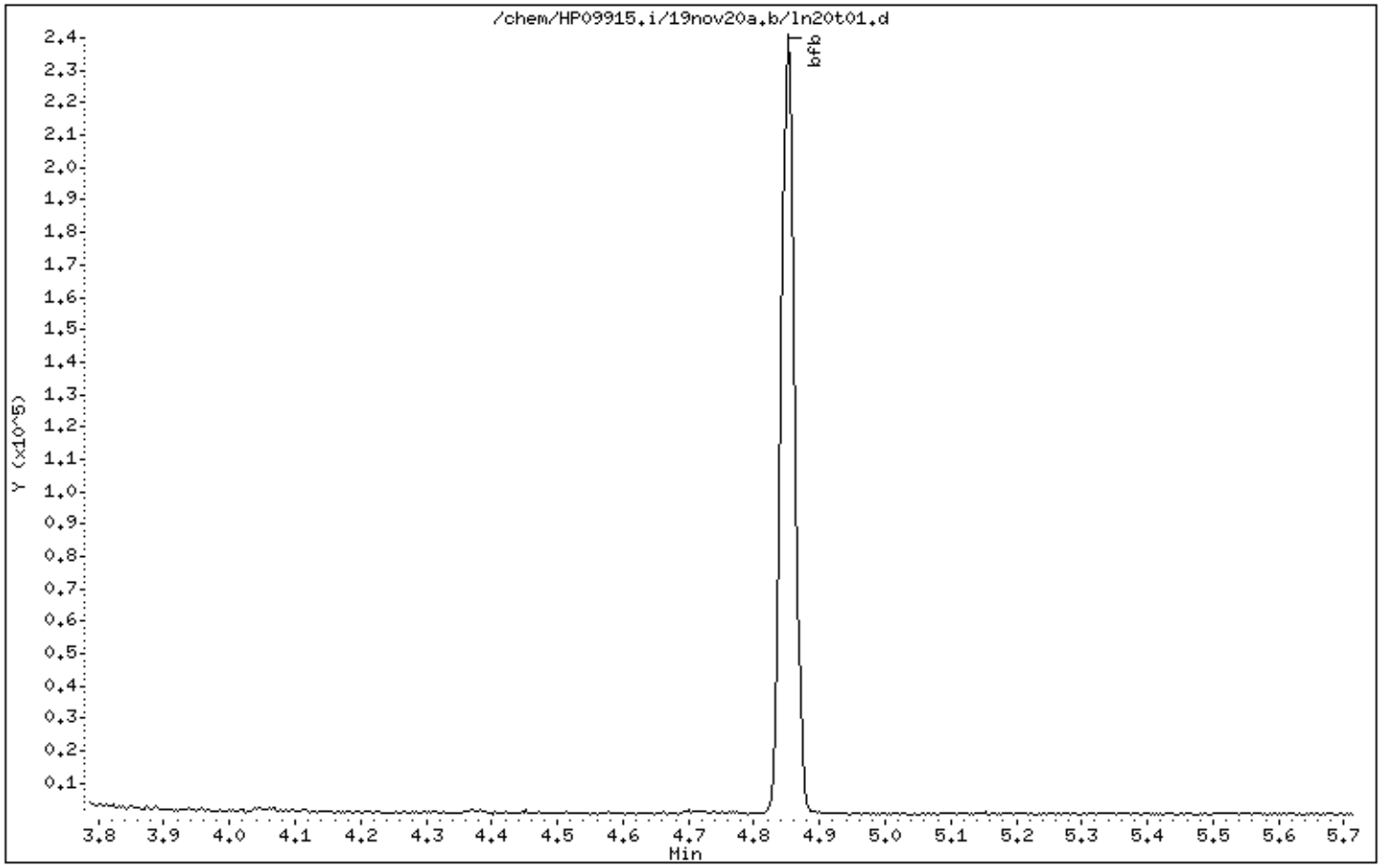
Instrument: HP09915.i

Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KKM02078

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem/HP09915.i/19nov20a.b/ln20t01.d

Date : 20-NOV-2019 08:00

Client ID: AUG02-19

Instrument: HP09915.i

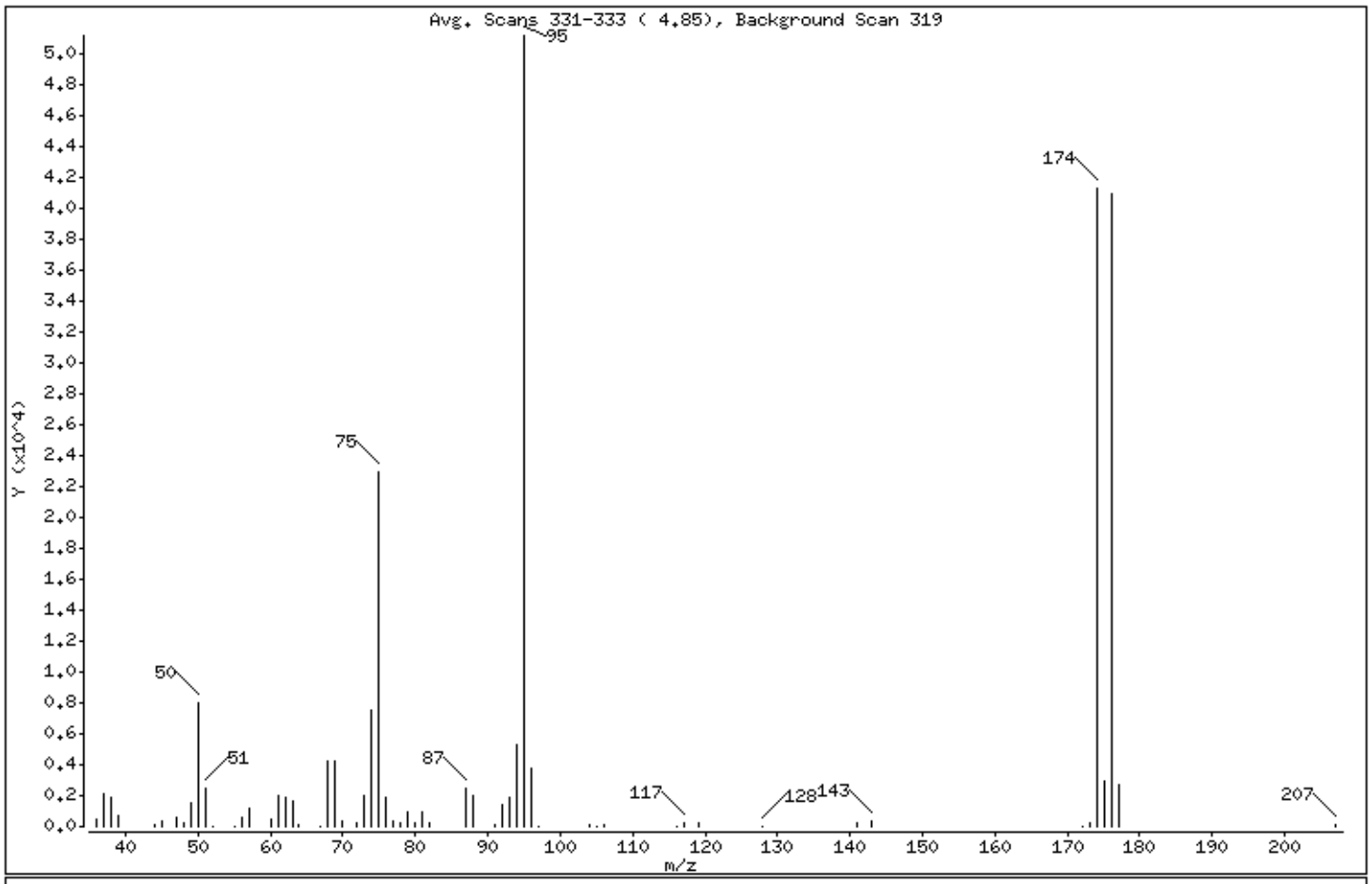
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KKM02078

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.52
75	30.00 - 60.00% of mass 95	44.88
96	5.00 - 9.00% of mass 95	7.35
173	Less than 2.00% of mass 174	0.43 (0.54)
174	50.00 - 100.00% of mass 95	80.67
175	5.00 - 9.00% of mass 174	5.73 (7.10)
176	95.00 - 101.00% of mass 174	79.93 (99.08)
177	5.00 - 9.00% of mass 176	5.28 (6.60)

Date : 20-NOV-2019 08:00

Client ID: AUG02-19 Instrument: HP09915.i

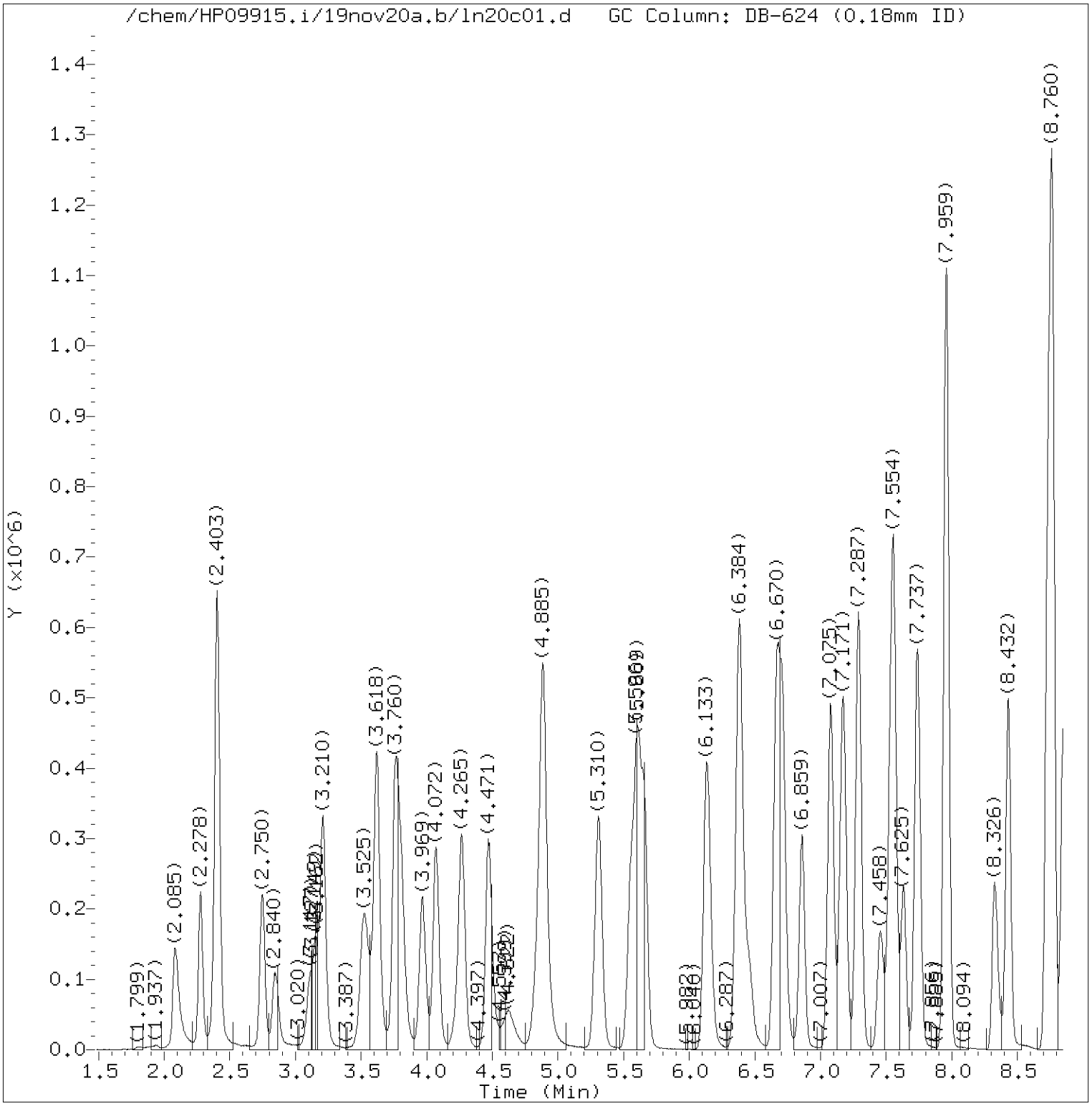
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KKM02078

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: ln20t01.d
Spectrum: Avg. Scans 331-333 (4.85), Background Scan 319
Location of Maximum: 95.00
Number of points: 60

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	451	61.00	2034	80.00	255	117.00	288
37.00	2069	62.00	1895	81.00	973	119.00	215
38.00	1837	63.00	1592	82.00	221	128.00	55
39.00	714	64.00	109	87.00	2453	141.00	259
44.00	148	67.00	54	88.00	2042	143.00	338
45.00	332	68.00	4194	91.00	65	172.00	57
47.00	626	69.00	4272	92.00	1374	173.00	222
48.00	227	70.00	356	93.00	1841	174.00	41256
49.00	1528	72.00	207	94.00	5326	175.00	2929
50.00	7940	73.00	1995	95.00	51144	176.00	40880
51.00	2515	74.00	7474	96.00	3757	177.00	2698
52.00	57	75.00	22952	97.00	57	207.00	105
55.00	55	76.00	1909	104.00	65		
56.00	578	77.00	397	105.00	57		
57.00	1121	78.00	194	106.00	138		
60.00	445	79.00	979	116.00	52		



Total Ion Chromatogram (TIC)

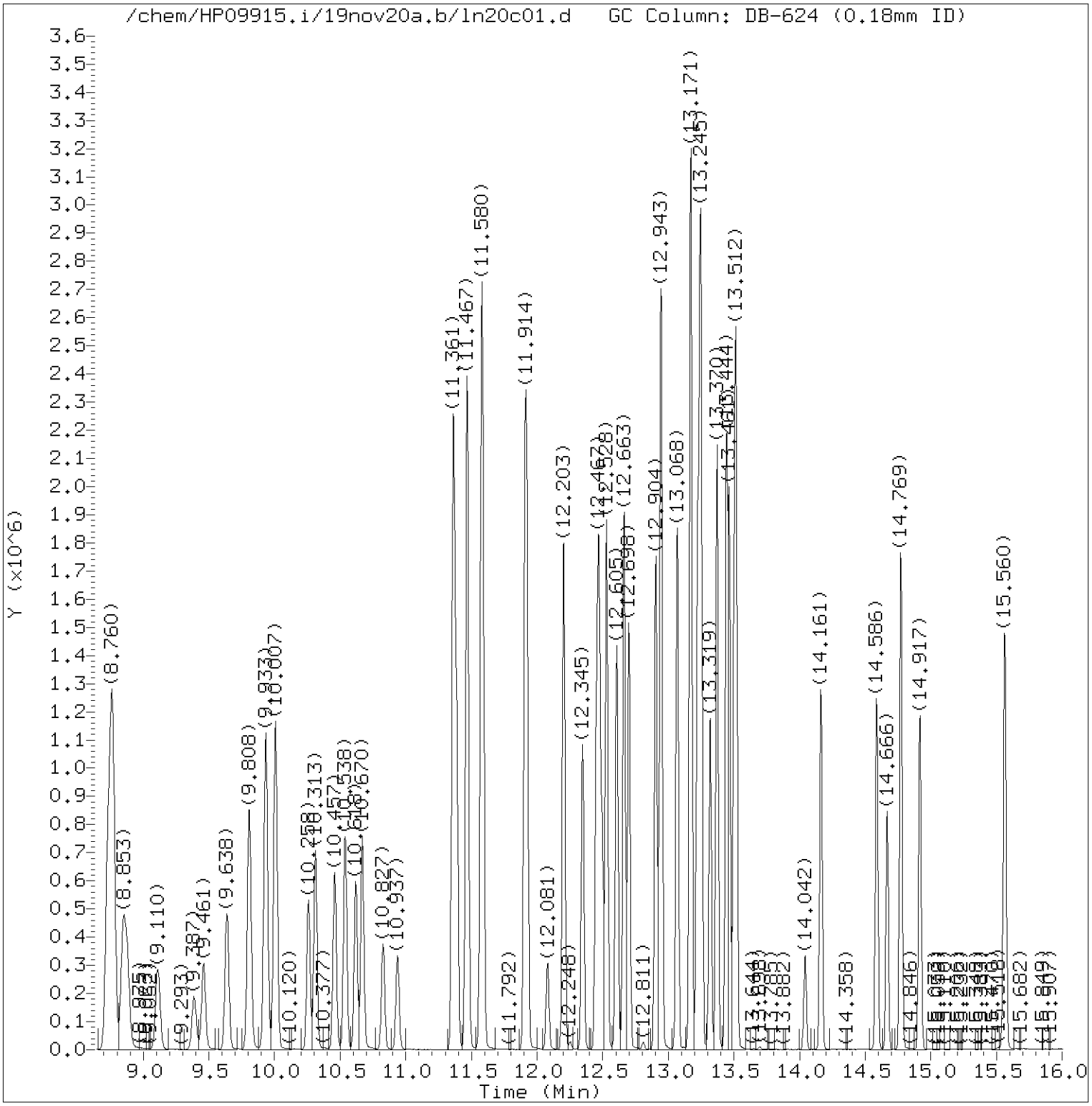
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:16 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:16 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:16 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.082	85	326259	52.519
4) Chloromethane	(2)	2.278	50	316444	52.853
6) Vinyl Chloride	(2)	2.400	62	310090	51.893
5) 1,3-Butadiene	(2)	2.403	39	342004	68.796
8) Bromomethane	(2)	2.750	94	225079	52.546
9) Chloroethane	(2)	2.847	64	171656	52.272
12) Trichlorofluoromethane	(2)	3.155	101	346477	53.857
11) n-Pentane	(2)	3.210	43	339598	44.668
15) Freon 123a	(2)	3.528	67	260250	50.289
16) Acrolein	(1)	3.622	56	696670	605.502
17) 1,1-Dichloroethene	(2)	3.760	96	190636	50.485
17) 1,1-Dichloroethene	(2)	3.760	63	91479	48.322
18) Acetone	(1)	3.802	58	59413	115.182
19) Freon 113	(2)	3.802	101	221782	51.479
22) Methyl Iodide	(2)	3.966	142	389119	49.728
21) 2-Propanol	(1)	3.991	45	92104	248.381
23) Carbon Disulfide	(2)	4.072	76	709012	49.825
27) Methyl Acetate	(2)	4.242	43	218317	44.889
25) Allyl Chloride	(2)	4.271	41	306394	45.231
28) Methylene Chloride	(2)	4.471	84	229802	51.131
29)*t-Butyl alcohol-d10	(1)	4.493	65	153357	250.000
30) t-Butyl alcohol	(1)	4.628	59	163799	253.697
31) Acrylonitrile	(2)	4.827	53	127627	48.776
32) trans-1,2-Dichloroethene	(2)	4.885	96	222145	50.853
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	671832	46.854
34) n-Hexane	(2)	5.306	57	339215	49.911
36) 1,1-Dichloroethane	(2)	5.551	63	374755	49.177
38) di-Isopropyl ether	(2)	5.609	45	708930	48.235
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	338915	49.570
40) Ethyl t-butyl ether	(2)	6.136	59	675454	47.356
43) 1,2-Dichloroethene (Total)	(2)		96	470427	101.490
44) 2-Butanone	(2)	6.364	43	304853	90.762
42) cis-1,2-Dichloroethene	(2)	6.380	96	248282	50.637
45) 2,2-Dichloropropane	(2)	6.393	77	287579	48.545
47) Propionitrile	(1)	6.458	54	245407	305.053
48) Methacrylonitrile	(2)	6.663	67	351520	124.540
49) Bromochloromethane	(2)	6.712	128	133209	51.236
50) Tetrahydrofuran	(1)	6.724	71	89717	123.464

* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:16 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	6.859	83	370227	50.795
52)$Dibromofluoromethane	(2)	7.075	113	209125	48.018
52)$Dibromofluoromethane	(2)	7.075	111	213900	48.170
53) 1,1,1-Trichloroethane	(2)	7.085	97	310121	49.852
54) Cyclohexane	(2)	7.171	56	418800	50.344
54) Cyclohexane	(2)	7.171	84	367688	50.883
54) Cyclohexane	(2)	7.175	69	129970	50.512
56) Carbon Tetrachloride	(2)	7.284	117	261805	49.621
55) 1,1-Dichloropropene	(2)	7.290	75	300302	49.840
58) Isobutyl Alcohol	(1)	7.458	41	149273	687.028
57)$1,2-Dichloroethane-d4	(2)	7.528	102	54261	48.886
57)$1,2-Dichloroethane-d4	(2)	7.528	65	244295	49.389
57)$1,2-Dichloroethane-d4	(2)	7.528	104	34257	48.320
60) Benzene	(2)	7.557	78	934647	51.582
61) 1,2-Dichloroethane	(2)	7.631	62	283247	48.601
61) 1,2-Dichloroethane	(2)	7.634	98	29562	51.256
65) t-Amyl methyl ether	(2)	7.737	73	690174	48.208
66)*Fluorobenzene	(2)	7.959	96	890803	50.000
67) n-Heptane	(2)	7.959	43	311764	49.104
69) n-Butanol	(1)	8.326	56	252927	1352.512
71) Trichloroethene	(2)	8.432	95	238980	52.381
72) Methylcyclohexane	(2)	8.728	83	418062	49.392
72) Methylcyclohexane	(2)	8.731	98	188938	49.330
73) 1,2-Dichloropropane	(2)	8.769	63	230555	50.109
76) Methyl Methacrylate	(2)	8.843	69	224994M	50.569
75) 1,4-Dioxane	(1)	8.872	88	43859	853.290
74) Dibromomethane	(2)	8.879	93	153782	51.657
78) Bromodichloromethane	(2)	9.107	83	268825	50.322
79) 2-Nitropropane	(2)	9.383	41	146917	90.798
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	171958	87.020
81) cis-1,3-Dichloropropene	(2)	9.638	75	353528	49.827
82) 4-Methyl-2-pentanone	(2)	9.808	43	667553	94.158
83)$Toluene-d8	(3)	9.933	98	930752	49.047
83)$Toluene-d8	(3)	9.933	100	598016	48.648
88) Toluene	(3)	10.007	92	602456	50.638
90) 1,3-Dichloropropene (total)	(3)		100	675260	97.466
89) trans-1,3-Dichloropropene	(3)	10.258	75	321732	47.639
91) Ethyl Methacrylate	(3)	10.313	69	408379	49.756

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:16 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) 1,1,2-Trichloroethane	(3)	10.457	97	229790	50.944
93) Tetrachloroethene	(3)	10.541	166	252685	50.149
94) 1,3-Dichloropropane	(3)	10.618	76	382898	49.718
96) 2-Hexanone	(3)	10.670	43	493410	90.061
97) Dibromochloromethane	(3)	10.827	129	215215	46.578
99) 1,2-Dibromoethane	(3)	10.937	107	249836	51.007
100)*Chlorobenzene-d5	(3)	11.361	117	725253	50.000
101) 1-Chlorohexane	(3)	11.364	91	310183	48.532
102) Chlorobenzene	(3)	11.387	112	674501	50.135
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	218017	49.183
104) Ethylbenzene	(3)	11.467	91	1165468	51.253
106) m+p-Xylene	(3)	11.580	106	917792	102.598
108) Xylene (Total)	(3)		106	1367612	153.505
107) o-Xylene	(3)	11.908	106	449820	50.908
109) Styrene	(3)	11.924	104	760046	52.053
110) Bromoform	(3)	12.081	173	138157	40.015
111) Isopropylbenzene	(3)	12.203	105	1144466	51.641
114)$4-Bromofluorobenzene	(3)	12.348	95	359000	49.960
114)$4-Bromofluorobenzene	(3)	12.348	174	297621	49.960
116) 1,1,2,2-Tetrachloroethane	(4)	12.448	83	364836	49.330
115) Bromobenzene	(4)	12.464	156	293923	49.950
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	166445	72.961
117) 1,2,3-Trichloropropane	(4)	12.496	110	110400	48.645
119) n-Propylbenzene	(4)	12.528	91	1338544	52.066
120) 2-Chlorotoluene	(4)	12.608	126	272469	49.889
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	977290	52.309
121) 4-Chlorotoluene	(4)	12.698	126	283874	49.935
124) tert-Butylbenzene	(4)	12.904	134	195300M	50.545
125) Pentachloroethane	(4)	12.936	167	166872	50.156
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	1031308	52.375
127) sec-Butylbenzene	(4)	13.068	105	1179214	51.145
129) 1,3-Dichlorobenzene	(4)	13.168	146	545887	50.484
130) p-Isopropyltoluene	(4)	13.171	119	1013128	50.792
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	391522	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	557732	49.755
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	1061978	50.914
135) Benzyl Chloride	(4)	13.319	91	765038	48.444
136) 1,3-Diethylbenzene	(4)	13.370	119	643709	49.588

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

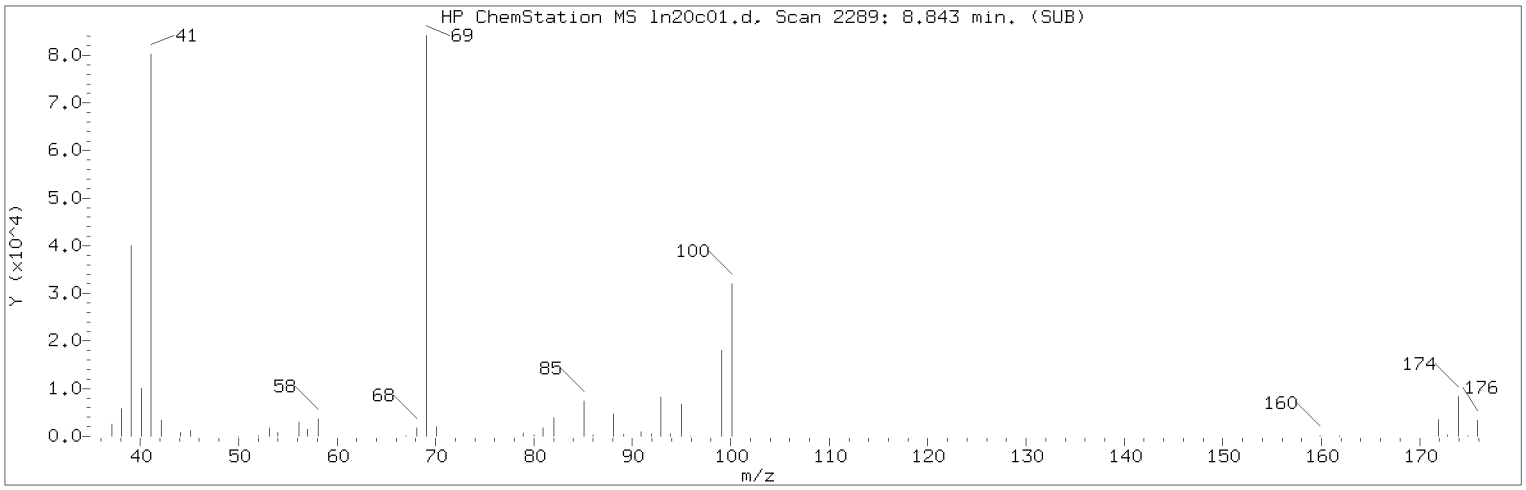
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:16 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

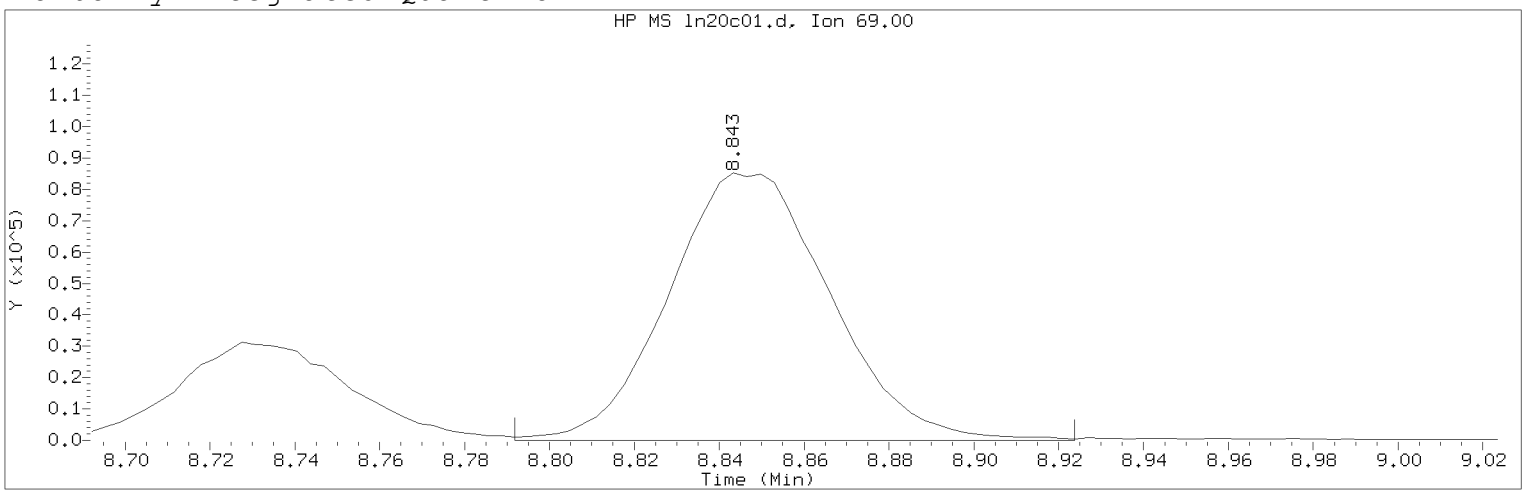
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
141) Diethylbenzene (total)	(4)		100	1854289	147.711
137) 1,4-Diethylbenzene	(4)	13.441	119	669574	48.685
139) n-Butylbenzene	(4)	13.464	92	501730	49.195
138) 1,2-Dichlorobenzene	(4)	13.502	146	534076	50.054
140) 1,2-Diethylbenzene	(4)	13.515	119	541006	49.438
142) 1,2-Dibromo-3-chloropropane	(4)	14.042	75	73070	45.132
144) 1,3,5-Trichlorobenzene	(4)	14.161	180	375618	45.820
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	359555	45.108
147) Hexachlorobutadiene	(4)	14.666	225	144831	38.483
148) Naphthalene	(4)	14.769	128	1284725	50.136
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	351680	45.343
150) 2-Methylnaphthalene	(4)	15.563	142	727887	46.128

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:16 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

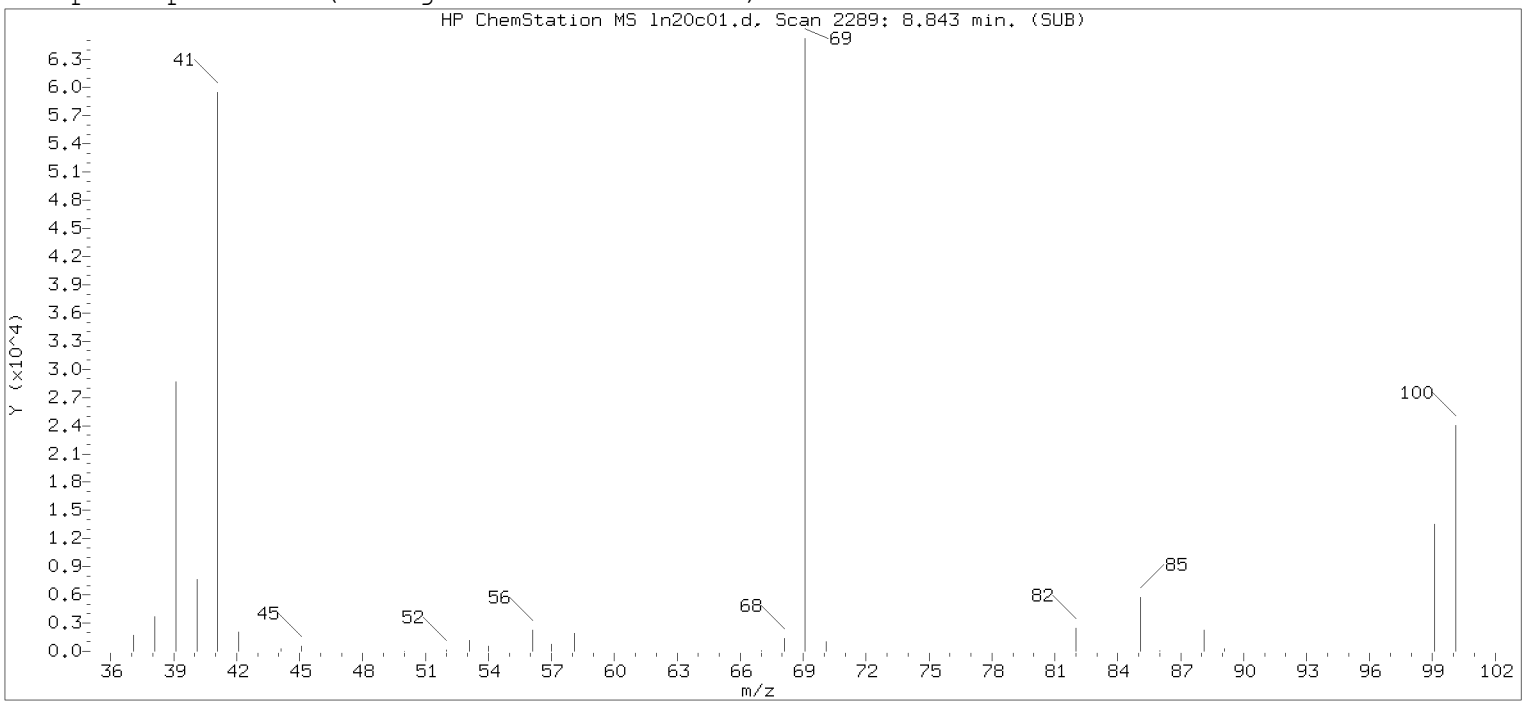
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2289
Retention Time (minutes): 8.843
Quant Ion : 69.00
Area (flag) : 224994M
On-Column Amount (ng) : 50.5687
Integration start scan : 2272 Integration stop scan: 2313
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

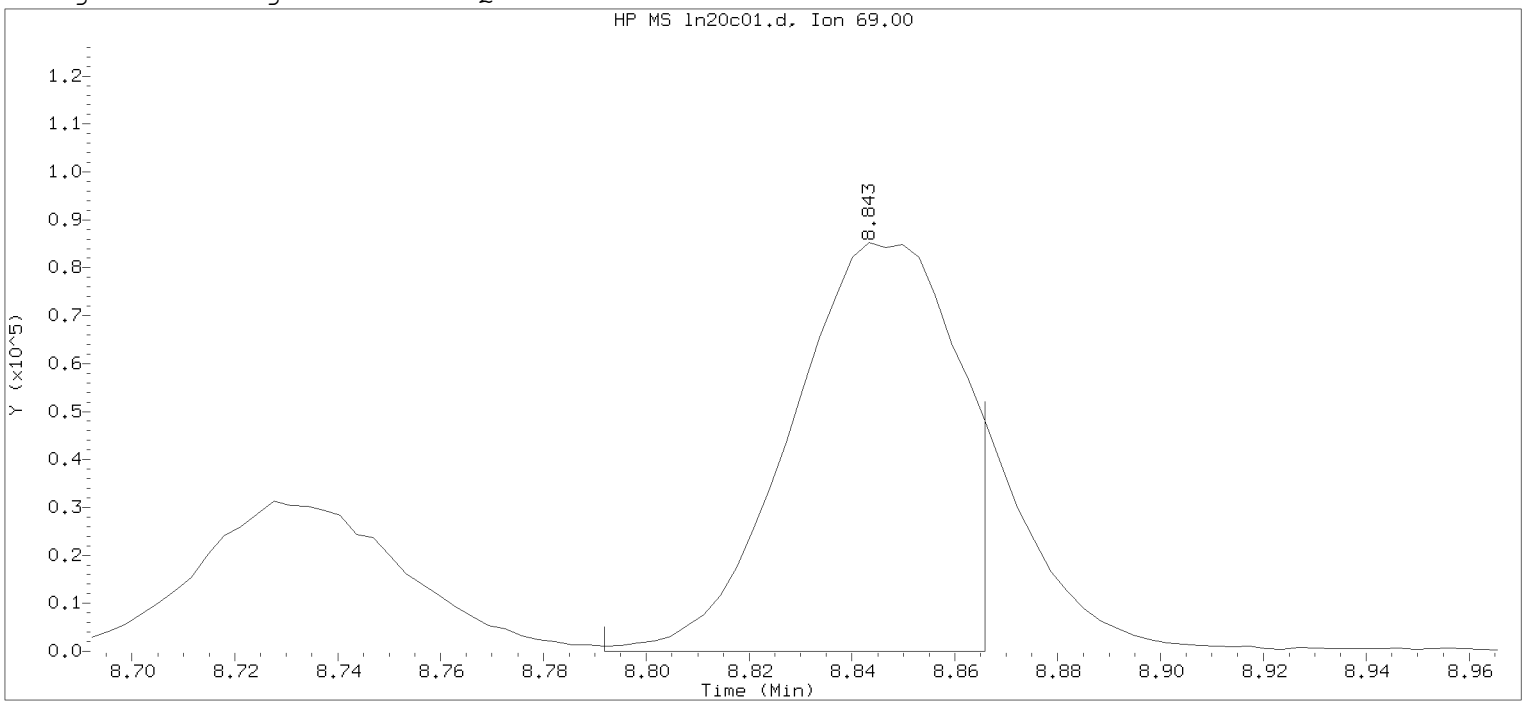
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:50.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

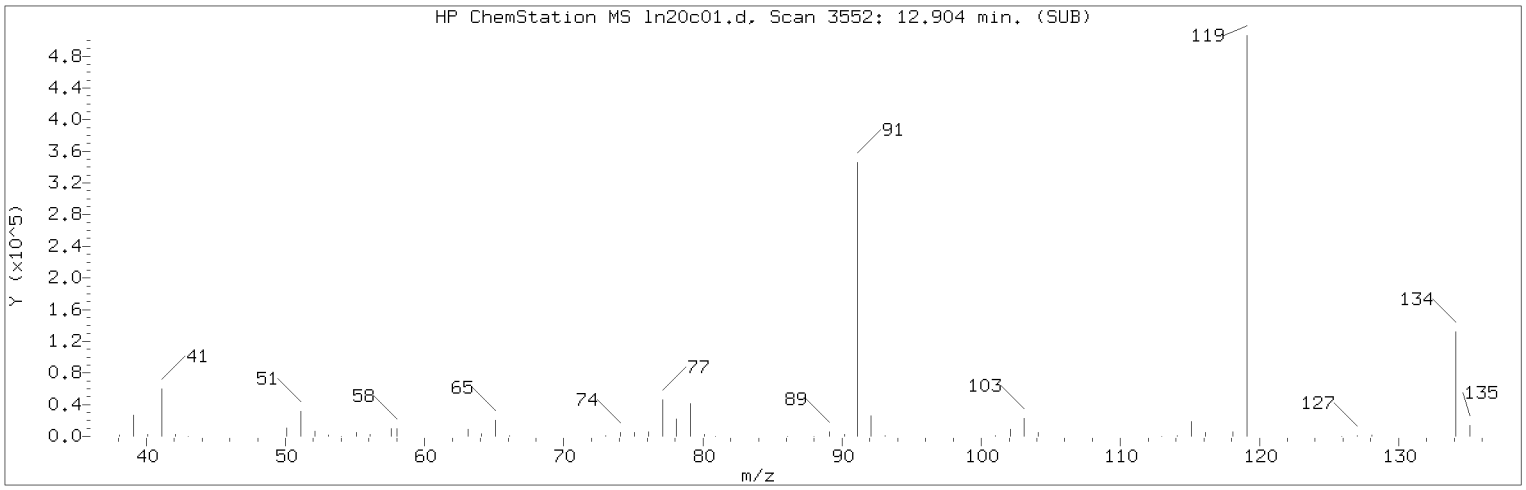
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:14 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

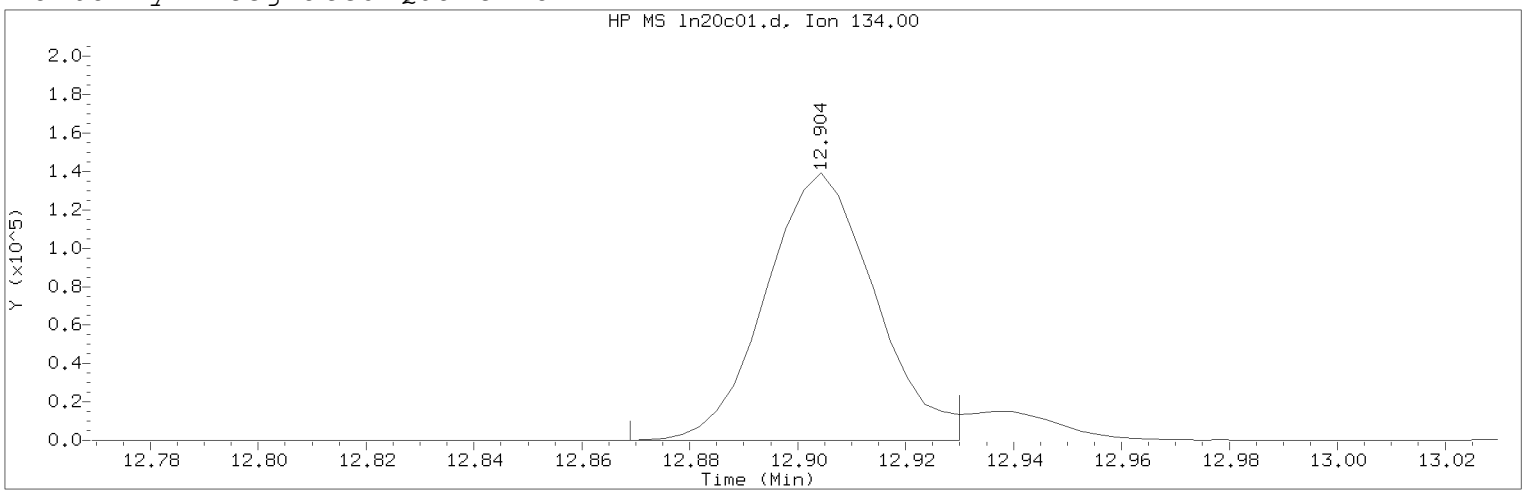
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2289
Retention Time (minutes): 8.843
Quant Ion : 69.00
Area : 190388
On-column Amount (ng) : 42.7908
Integration start scan : 2272 Integration stop scan: 2295
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/20/2019 at 22:29.
Target 3.5 esignature user id: dviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:16 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

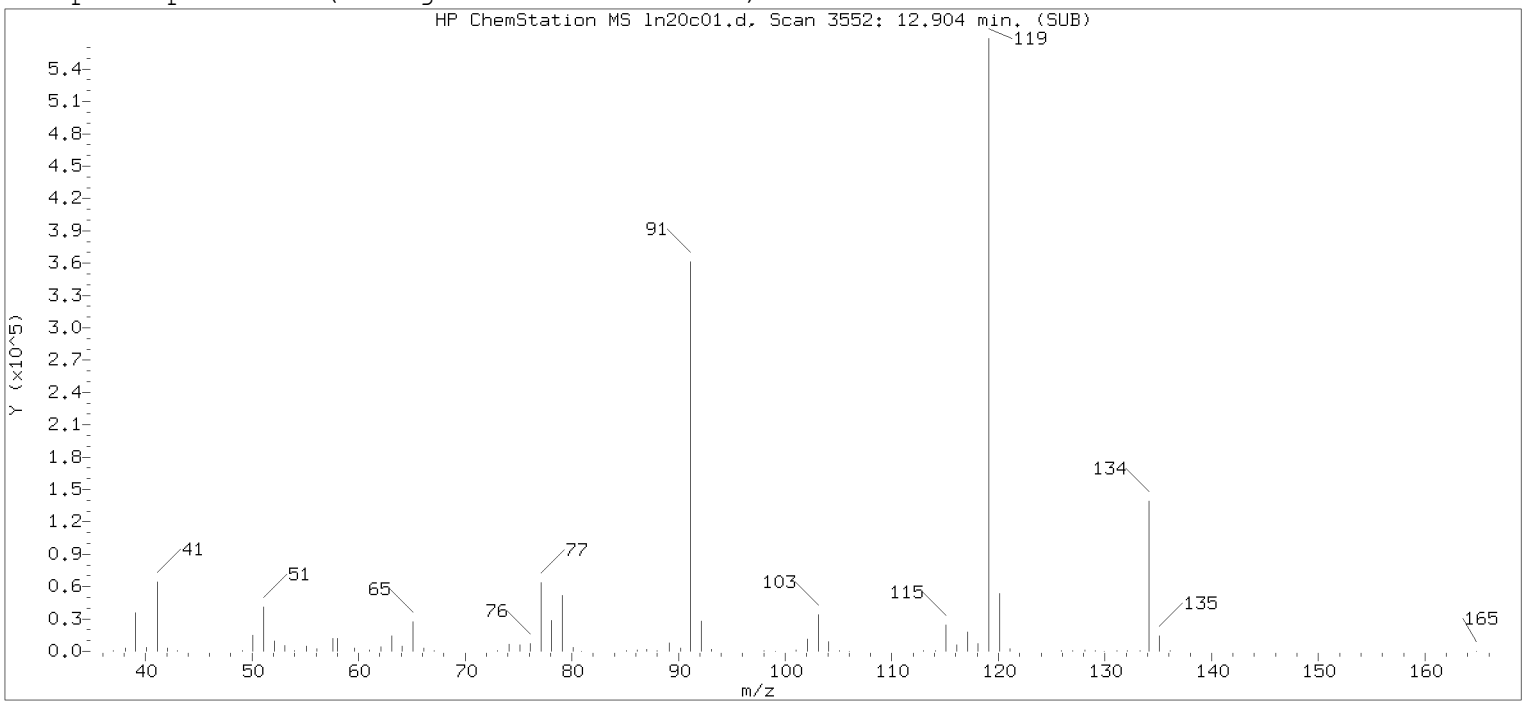
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 195300M
On-Column Amount (ng) : 50.5455
Integration start scan : 3540 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

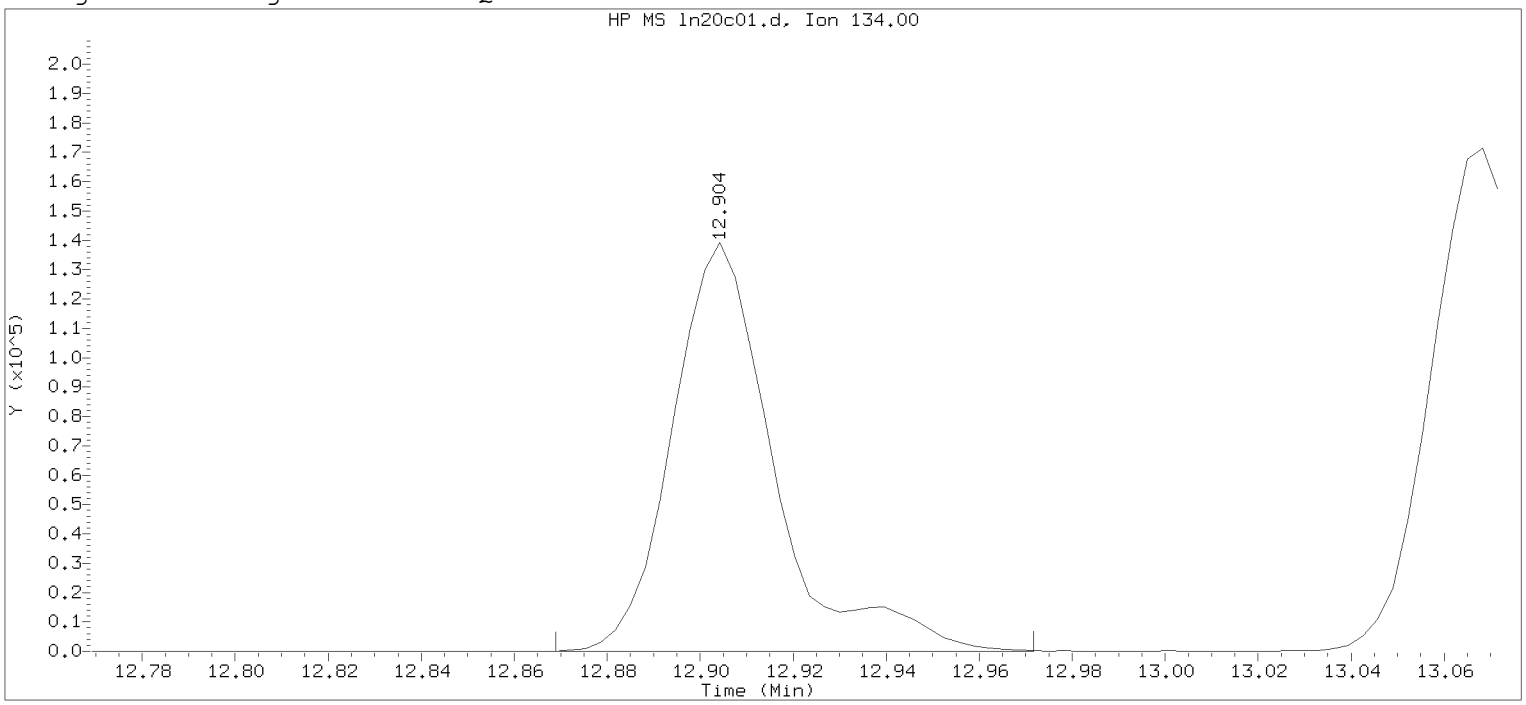
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:50.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:14 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 212024
On-column Amount (ng) : 54.8736
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/20/2019 at 22:29.
Target 3.5 esignature user id: dviray

Data File: /chem/HP09915.i/19nov21a.b/ln21t02.d

Date : 21-NOV-2019 07:42

Client ID: AUG02-19

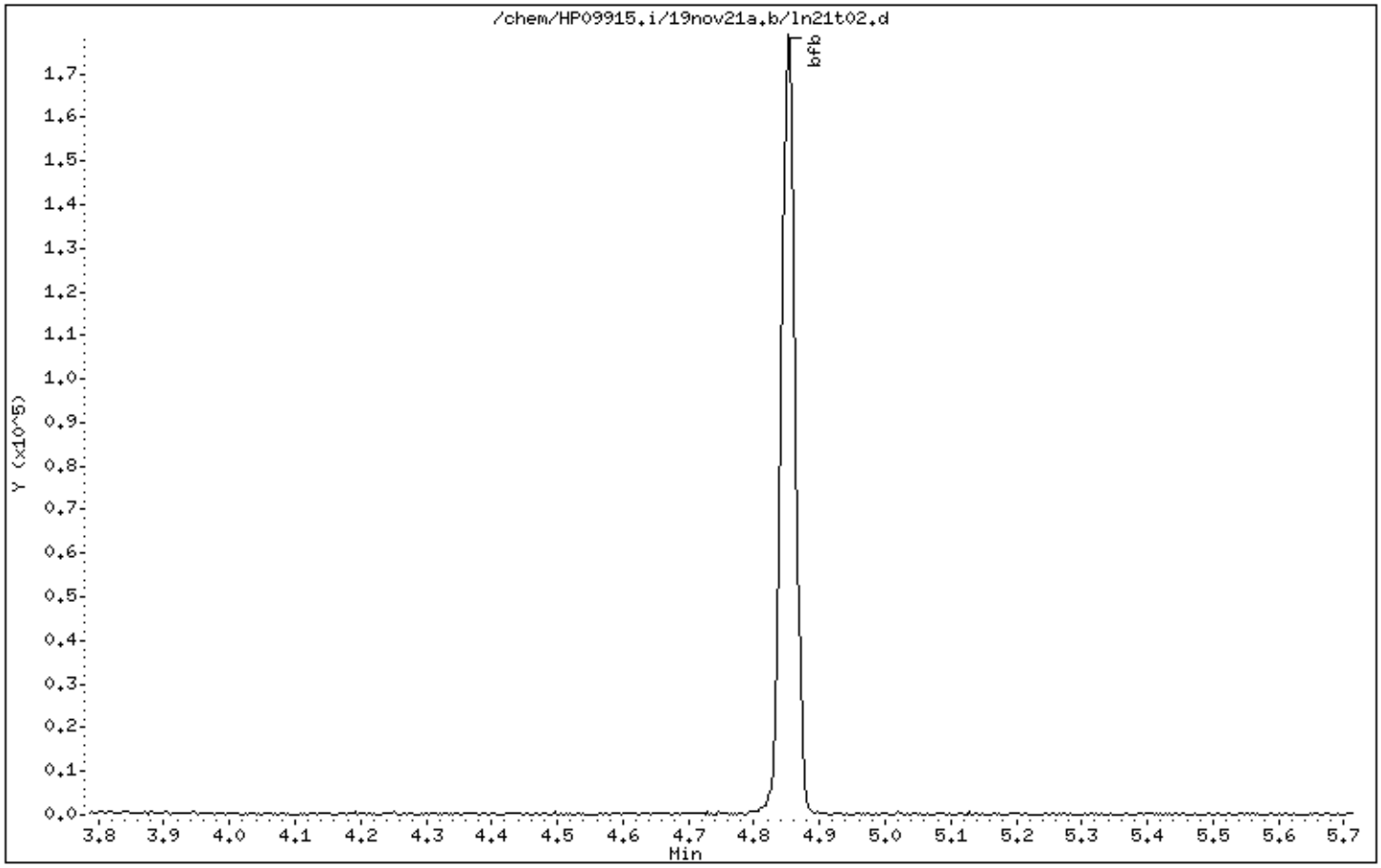
Instrument: HP09915.i

Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: lcp00895

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem/HP09915.i/19nov21a.b/ln21t02.d

Date : 21-NOV-2019 07:42

Client ID: AUG02-19

Instrument: HP09915.i

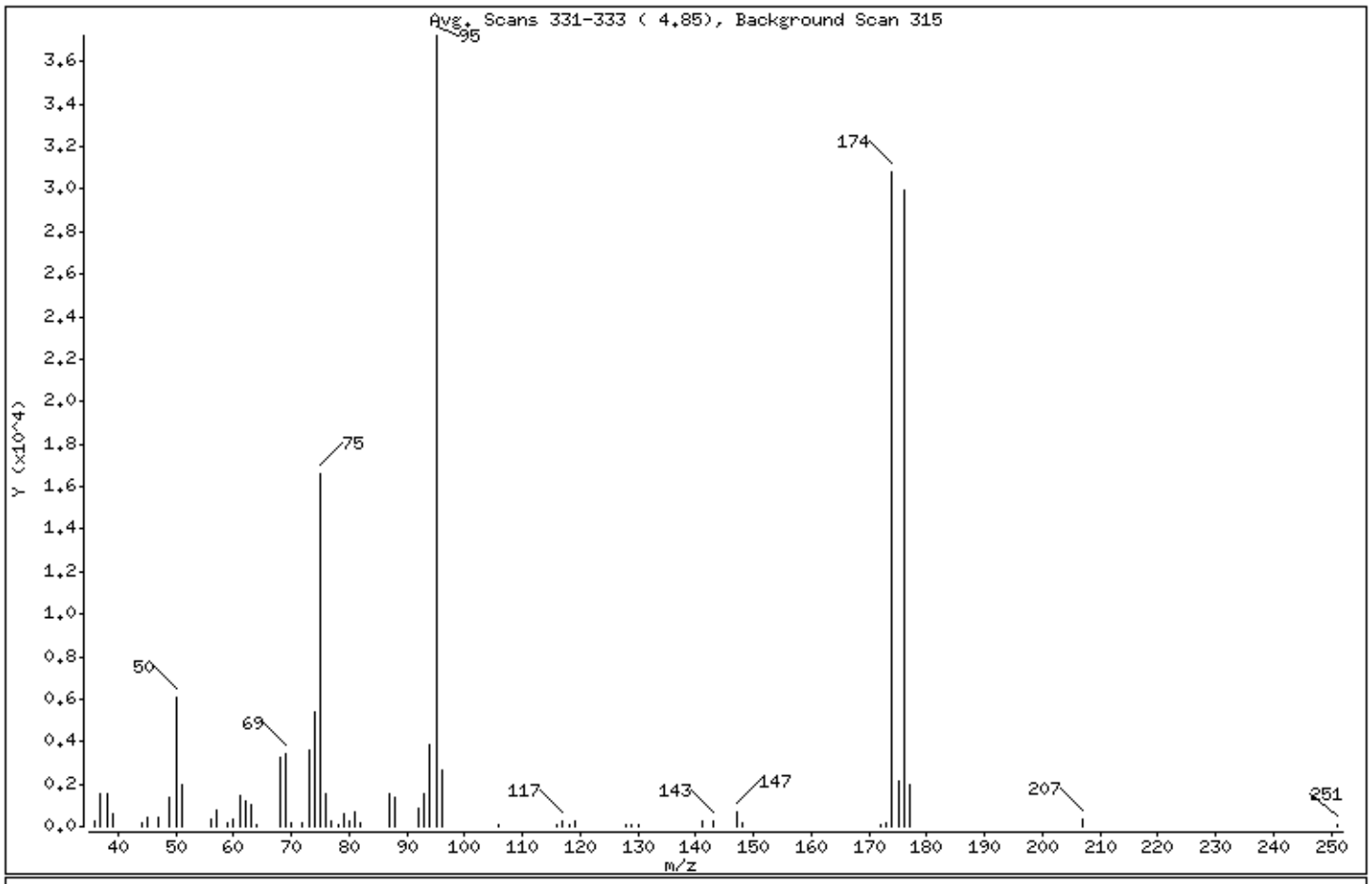
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: lcp00895

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.38
75	30.00 - 60.00% of mass 95	44.70
96	5.00 - 9.00% of mass 95	7.06
173	Less than 2.00% of mass 174	0.40 (0.48)
174	50.00 - 100.00% of mass 95	82.72
175	5.00 - 9.00% of mass 174	5.73 (6.92)
176	95.00 - 101.00% of mass 174	80.53 (97.35)
177	5.00 - 9.00% of mass 176	5.22 (6.48)

Data File: /chem/HP09915.i/19nov21a.b/ln21t02.d

Date : 21-NOV-2019 07:42

Client ID: AUG02-19

Instrument: HP09915.i

Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

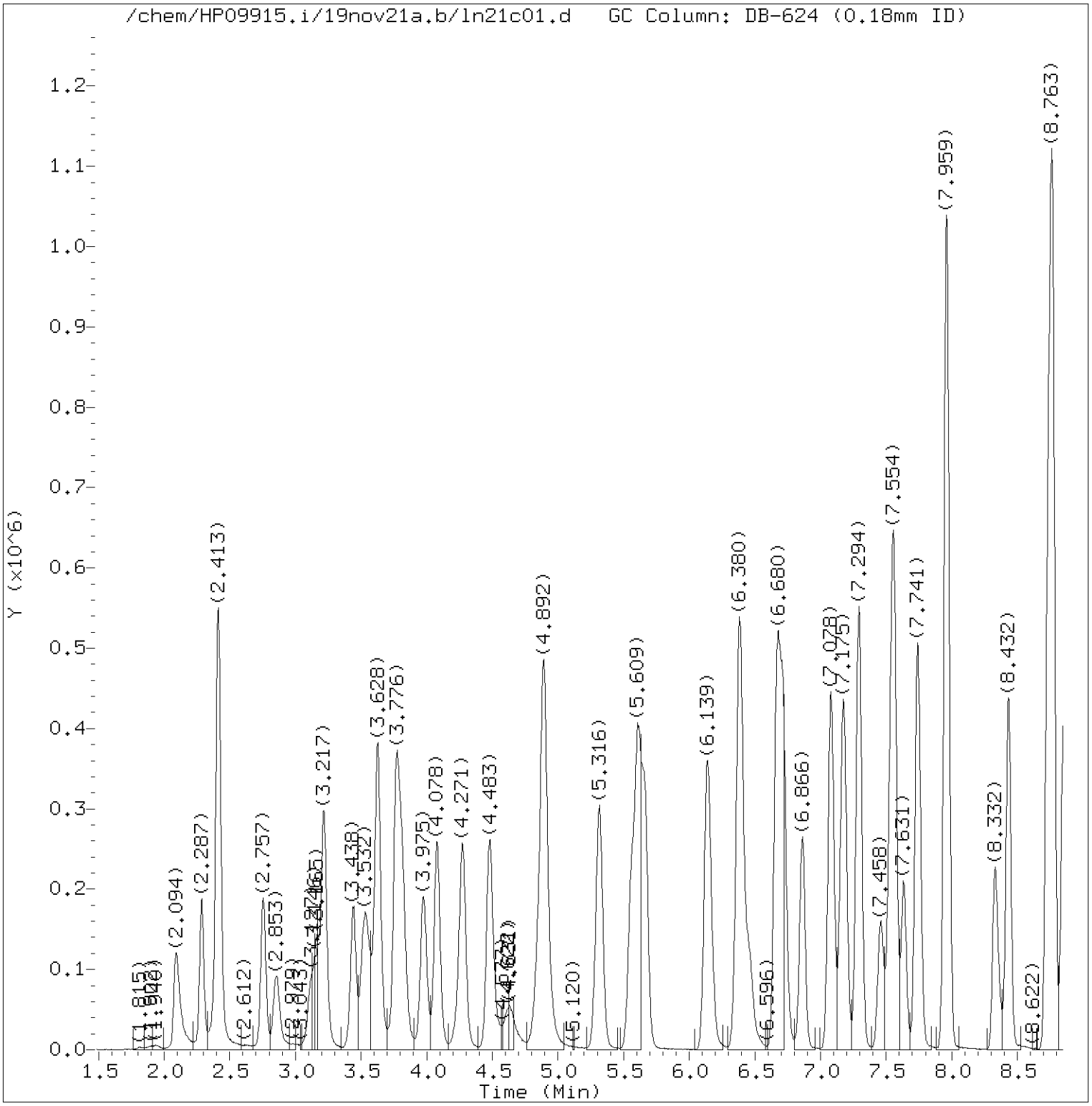
Operator: lcp00895

Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: ln21t02.d
Spectrum: Avg. Scans 331-333 (4.85), Background Scan 315
Location of Maximum: 95.00
Number of points: 59

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	266	62.00	1237	81.00	704	129.00	55
37.00	1507	63.00	1057	82.00	134	130.00	50
38.00	1559	64.00	58	87.00	1579	141.00	232
39.00	563	68.00	3215	88.00	1366	143.00	261
44.00	205	69.00	3403	92.00	837	147.00	710
45.00	424	70.00	180	93.00	1531	148.00	131
47.00	411	72.00	185	94.00	3863	172.00	83
49.00	1346	73.00	3567	95.00	37224	173.00	148
50.00	6099	74.00	5365	96.00	2628	174.00	30792
51.00	1983	75.00	16640	106.00	61	175.00	2132
56.00	333	76.00	1498	116.00	50	176.00	29976
57.00	804	77.00	232	117.00	254	177.00	1942
59.00	179	78.00	72	118.00	61	207.00	371
60.00	309	79.00	604	119.00	246	251.00	50
61.00	1481	80.00	229	128.00	59		



Total Ion Chromatogram (TIC)

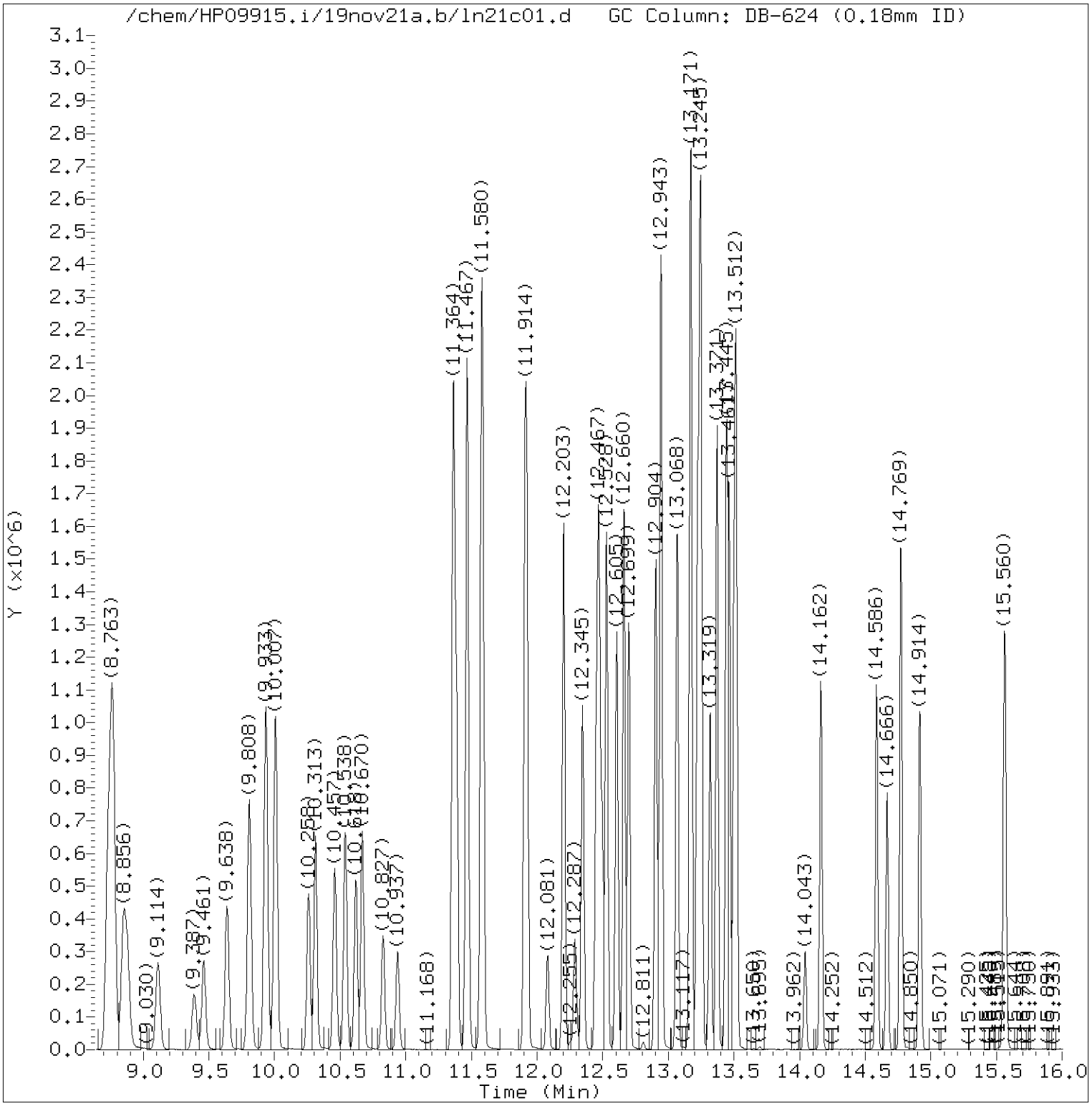
Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:48 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Linda C. Pape
on 11/21/2019 at 08:49.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:48 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Linda C. Pape
on 11/21/2019 at 08:49.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:48 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.091	85	269500	45.890
4) Chloromethane	(2)	2.287	50	266206	47.032
6) Vinyl Chloride	(2)	2.410	62	257324	45.552
5) 1,3-Butadiene	(2)	2.416	39	296686	63.129
8) Bromomethane	(2)	2.754	94	189066	46.690
9) Chloroethane	(2)	2.857	64	142003	45.742
12) Trichlorofluoromethane	(2)	3.162	101	286217	47.061
11) n-Pentane	(2)	3.217	43	302331	42.065
14) Ethyl ether	(2)	3.445	59	171366	43.605
15) Freon 123a	(2)	3.532	67	227759	46.554
16) Acrolein	(1)	3.628	56	616439	535.139
17) 1,1-Dichloroethene	(2)	3.763	96	167149	46.823
17) 1,1-Dichloroethene	(2)	3.770	63	80865	45.184
19) Freon 113	(2)	3.799	101	196955	48.358
18) Acetone	(1)	3.808	58	54264	105.076
22) Methyl Iodide	(2)	3.975	142	342801	46.341
21) 2-Propanol	(1)	3.998	45	91337	246.022
23) Carbon Disulfide	(2)	4.078	76	626326	46.558
27) Methyl Acetate	(2)	4.249	43	188364	40.969
25) Allyl Chloride	(2)	4.274	41	250788	39.162
28) Methylene Chloride	(2)	4.477	84	199725	47.007
29)*t-Butyl alcohol-d10	(1)	4.493	65	153538	250.000
30) t-Butyl alcohol	(1)	4.631	59	154437	238.915
31) Acrylonitrile	(2)	4.837	53	111178	44.946
33) Methyl Tertiary Butyl Ether	(2)	4.882	73	592117	43.681
32) trans-1,2-Dichloroethene	(2)	4.892	96	192144	46.528
34) n-Hexane	(2)	5.316	57	297489	46.302
36) 1,1-Dichloroethane	(2)	5.554	63	324254	45.009
38) di-Isopropyl ether	(2)	5.609	45	611174	43.987
39) 2-Chloro-1,3-butadiene	(2)	5.663	53	296084	45.809
40) Ethyl t-butyl ether	(2)	6.136	59	588145	43.618
43) 1,2-Dichloroethene (Total)	(2)		96	406684	92.812
44) 2-Butanone	(2)	6.364	43	272523	85.826
42) cis-1,2-Dichloroethene	(2)	6.380	96	214540	46.285
45) 2,2-Dichloropropane	(2)	6.397	77	248547	44.381
47) Propionitrile	(1)	6.458	54	226363	281.049
48) Methacrylonitrile	(2)	6.667	67	309152	115.861
49) Bromochloromethane	(2)	6.708	128	113854	46.323

* = Compound is an internal standard.

Digitally signed by Linda C. Pape
on 11/21/2019 at 08:49.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:48 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.718	71	80126	110.135
51) Chloroform	(2)	6.863	83	326006	47.313
52)$Dibromofluoromethane	(2)	7.075	113	197988	48.089
52)$Dibromofluoromethane	(2)	7.078	111	203853	48.561
53) 1,1,1-Trichloroethane	(2)	7.088	97	272281	46.299
54) Cyclohexane	(2)	7.171	56	359166	45.671
54) Cyclohexane	(2)	7.178	84	315259	46.149
54) Cyclohexane	(2)	7.178	69	111017	45.640
56) Carbon Tetrachloride	(2)	7.287	117	227872	45.686
55) 1,1-Dichloropropene	(2)	7.294	75	259369	45.534
58) Isobutyl Alcohol	(1)	7.464	41	137942	634.129
57)$1,2-Dichloroethane-d4	(2)	7.528	102	51359	48.946
57)$1,2-Dichloroethane-d4	(2)	7.532	65	232643	49.752
57)$1,2-Dichloroethane-d4	(2)	7.535	104	32790	48.924
60) Benzene	(2)	7.561	78	811232	47.359
61) 1,2-Dichloroethane	(2)	7.631	62	251951	45.729
61) 1,2-Dichloroethane	(2)	7.638	98	25548	46.857
65) t-Amyl methyl ether	(2)	7.741	73	601832	44.467
66)*Fluorobenzene	(2)	7.959	96	842128	50.000
67) n-Heptane	(2)	7.962	43	277613	46.252
69) n-Butanol	(1)	8.332	56	235235	1256.422
71) Trichloroethene	(2)	8.429	95	206241	47.818
72) Methylcyclohexane	(2)	8.734	83	363539	45.433
72) Methylcyclohexane	(2)	8.731	98	165844	45.803
73) 1,2-Dichloropropane	(2)	8.769	63	202513	46.559
76) Methyl Methacrylate	(2)	8.850	69	199229	47.366
75) 1,4-Dioxane	(1)	8.859	88	45382M	881.892
74) Dibromomethane	(2)	8.879	93	135467	48.135
78) Bromodichloromethane	(2)	9.114	83	239567	47.437
79) 2-Nitropropane	(2)	9.387	41	135200	88.386
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	150329	80.471
81) cis-1,3-Dichloropropene	(2)	9.638	75	312935	46.655
82) 4-Methyl-2-pentanone	(2)	9.808	43	593356	88.530
83)$Toluene-d8	(3)	9.933	98	873852	48.424
83)$Toluene-d8	(3)	9.933	100	563295	48.187
88) Toluene	(3)	10.007	92	526302	46.519
90) 1,3-Dichloropropene (total)	(3)		100	605159	92.157
89) trans-1,3-Dichloropropene	(3)	10.258	75	292224	45.502

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/21/2019 at 08:49.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:48 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	10.313	69	356547	45.682
92) 1,1,2-Trichloroethane	(3)	10.461	97	201587	46.997
93) Tetrachloroethene	(3)	10.538	166	218124	45.523
94) 1,3-Dichloropropane	(3)	10.621	76	336408	45.935
96) 2-Hexanone	(3)	10.670	43	432748	83.064
97) Dibromochloromethane	(3)	10.824	129	198248	45.119
99) 1,2-Dibromoethane	(3)	10.937	107	219712	47.171
100)*Chlorobenzene-d5	(3)	11.361	117	689674	50.000
101) 1-Chlorohexane	(3)	11.364	91	265174	43.630
102) Chlorobenzene	(3)	11.387	112	591870	46.262
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	193478	45.899
104) Ethylbenzene	(3)	11.467	91	1004961	46.474
106) m+p-Xylene	(3)	11.580	106	798833	93.906
108) Xylene (Total)	(3)		106	1187719	140.188
107) o-Xylene	(3)	11.908	106	388886	46.282
109) Styrene	(3)	11.924	104	662866	47.740
110) Bromoform	(3)	12.081	173	130378	39.710
111) Isopropylbenzene	(3)	12.203	105	991541	47.048
112) Cyclohexanone	(1)	12.287	55	143181	710.422
114)$4-Bromofluorobenzene	(3)	12.345	95	340502	49.831
114)$4-Bromofluorobenzene	(3)	12.348	174	281616	49.713
116) 1,1,2,2-Tetrachloroethane	(4)	12.448	83	328297	46.779
115) Bromobenzene	(4)	12.464	156	258502	46.296
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	151011	69.759
117) 1,2,3-Trichloropropane	(4)	12.496	110	97849	45.436
119) n-Propylbenzene	(4)	12.528	91	1157970	47.468
120) 2-Chlorotoluene	(4)	12.605	126	236208	45.578
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	846397	47.742
121) 4-Chlorotoluene	(4)	12.699	126	245639	45.536
124) tert-Butylbenzene	(4)	12.904	134	170518M	46.508
125) Pentachloroethane	(4)	12.940	167	147178	46.618
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	883458	47.282
127) sec-Butylbenzene	(4)	13.068	105	1026258	46.907
129) 1,3-Dichlorobenzene	(4)	13.168	146	473678	46.165
130) p-Isopropyltoluene	(4)	13.171	119	879731	46.479
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	371519	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	488046	45.882
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	937888	47.386

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/21/2019 at 08:49.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:48 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.319	91	673087	44.916
136) 1,3-Diethylbenzene	(4)	13.371	119	564691	45.843
141) Diethylbenzene (total)	(4)		100	1635457	137.370
137) 1,4-Diethylbenzene	(4)	13.441	119	588988	45.131
139) n-Butylbenzene	(4)	13.464	92	431653	44.603
138) 1,2-Dichlorobenzene	(4)	13.499	146	466125	46.038
140) 1,2-Diethylbenzene	(4)	13.515	119	481778	46.396
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	66725	43.432
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	329988	42.421
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	313458	41.443
147) Hexachlorobutadiene	(4)	14.666	225	129620	36.296
148) Naphthalene	(4)	14.772	128	1124833	46.259
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	308707	41.945
150) 2-Methylnaphthalene	(4)	15.560	142	637684	42.587

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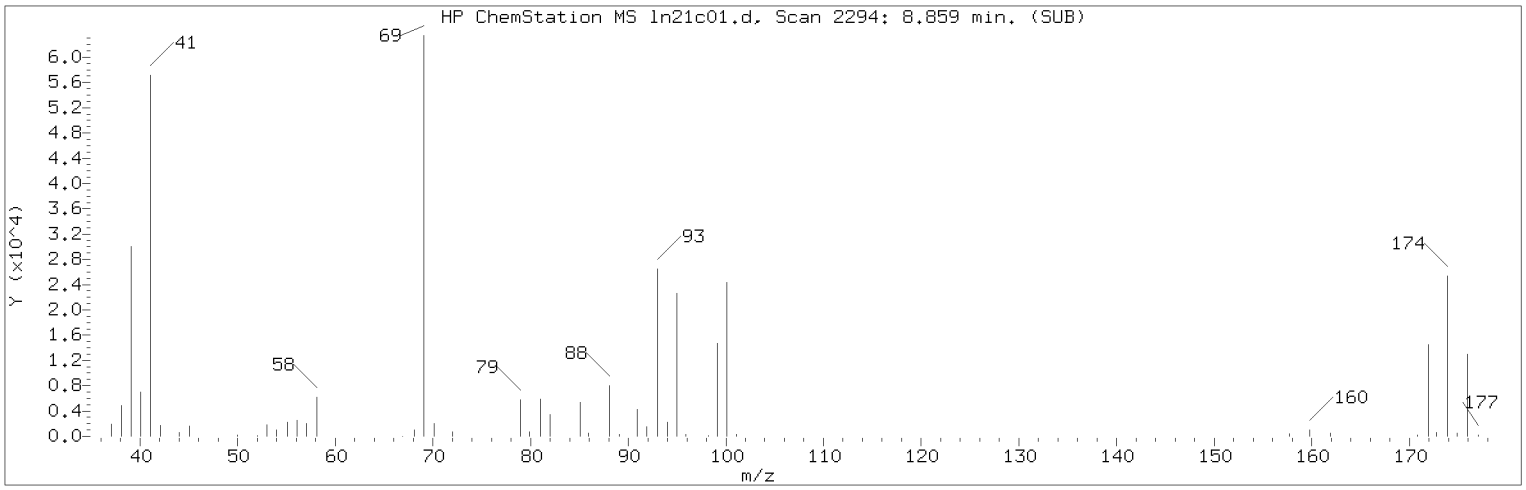
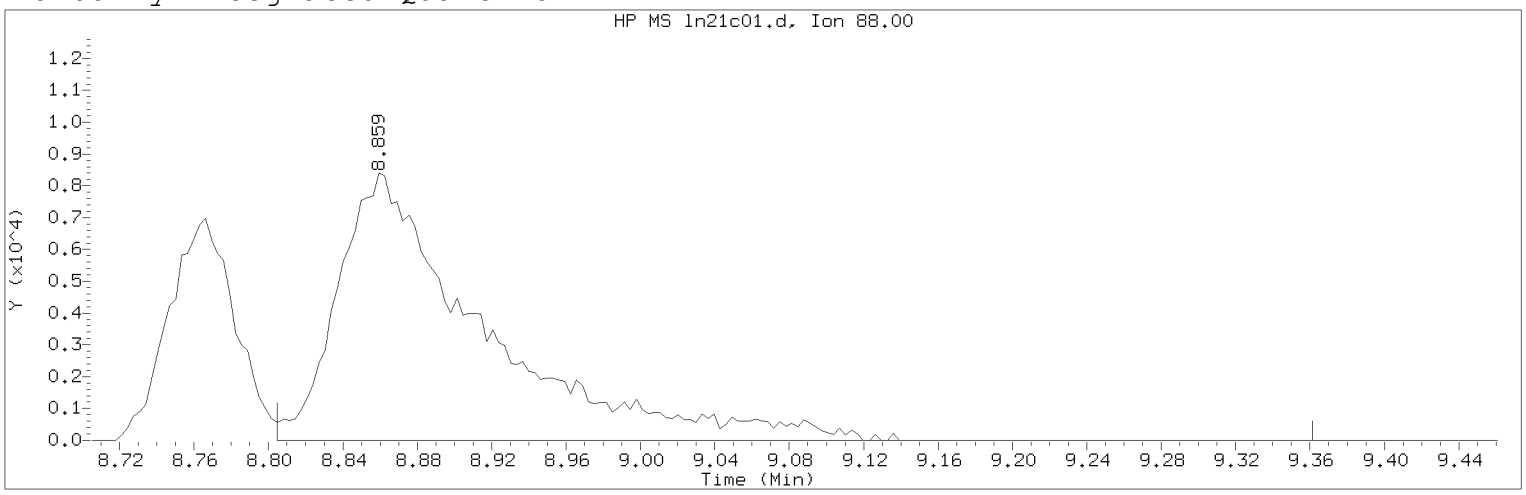
on 11/21/2019 at 08:49.
Target 3.5 esignature user ID: lcp00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:48 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

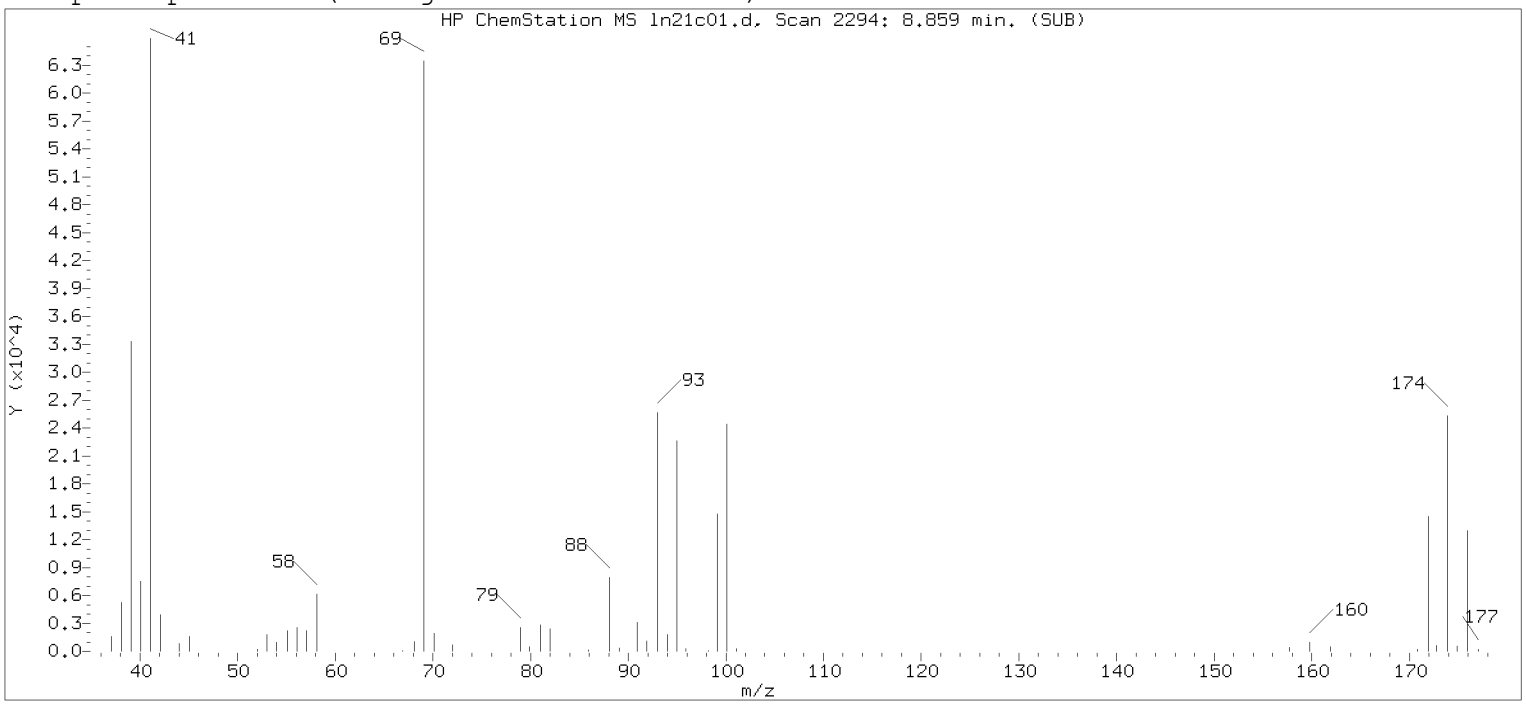
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2294
Retention Time (minutes): 8.859
Quant Ion : 88.00
Area (flag) : 45382M
On-Column Amount (ng) : 881.8916
Integration start scan : 2276 Integration stop scan: 2449
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

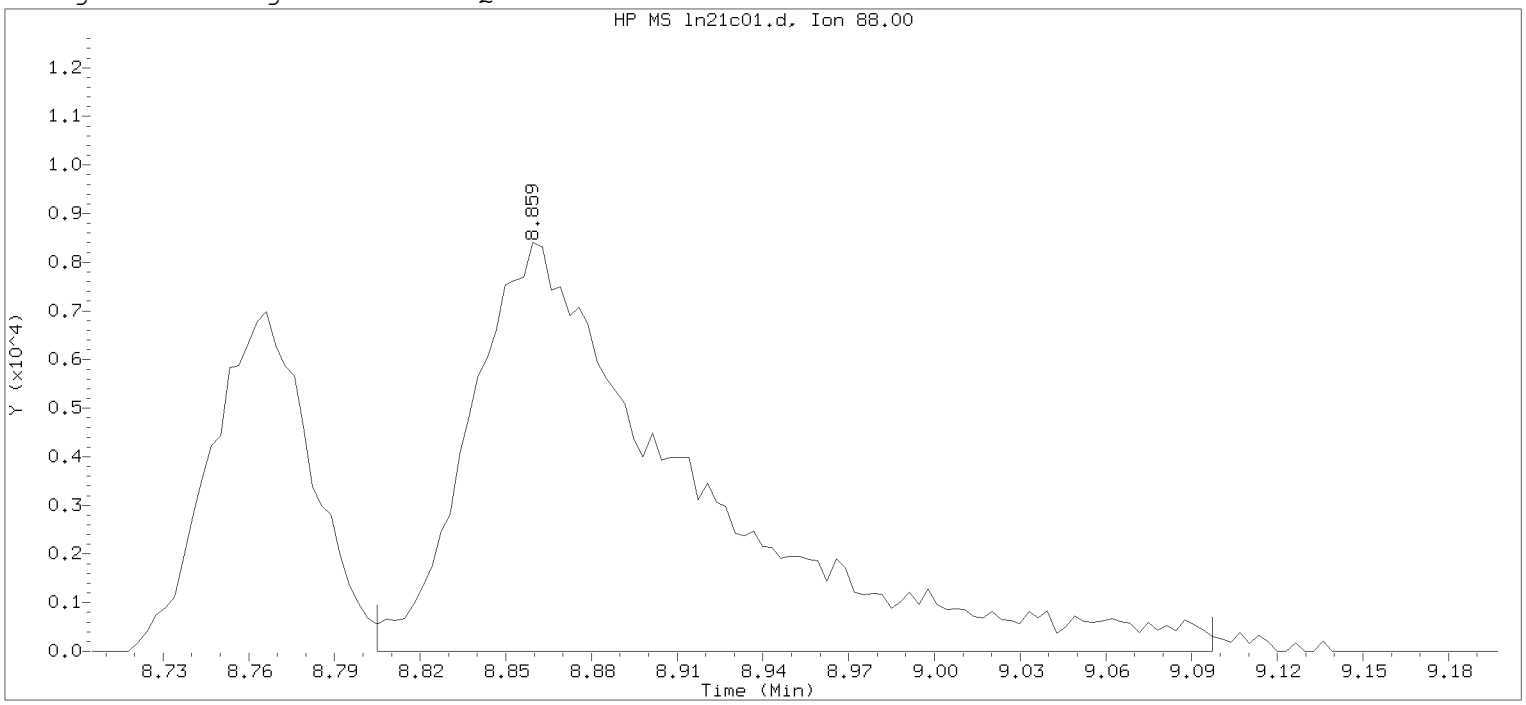
Analyst responsible for change: Digitally signed by Linda C. Pape
on 11/21/2019 at 08:49.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:40.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

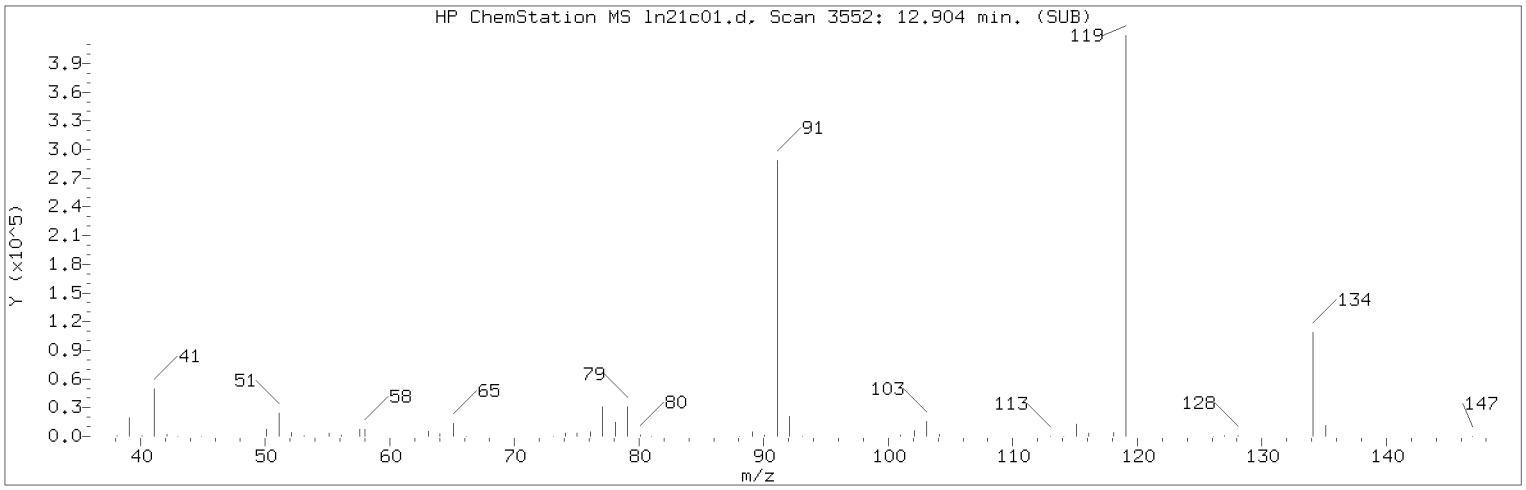
Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:46 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

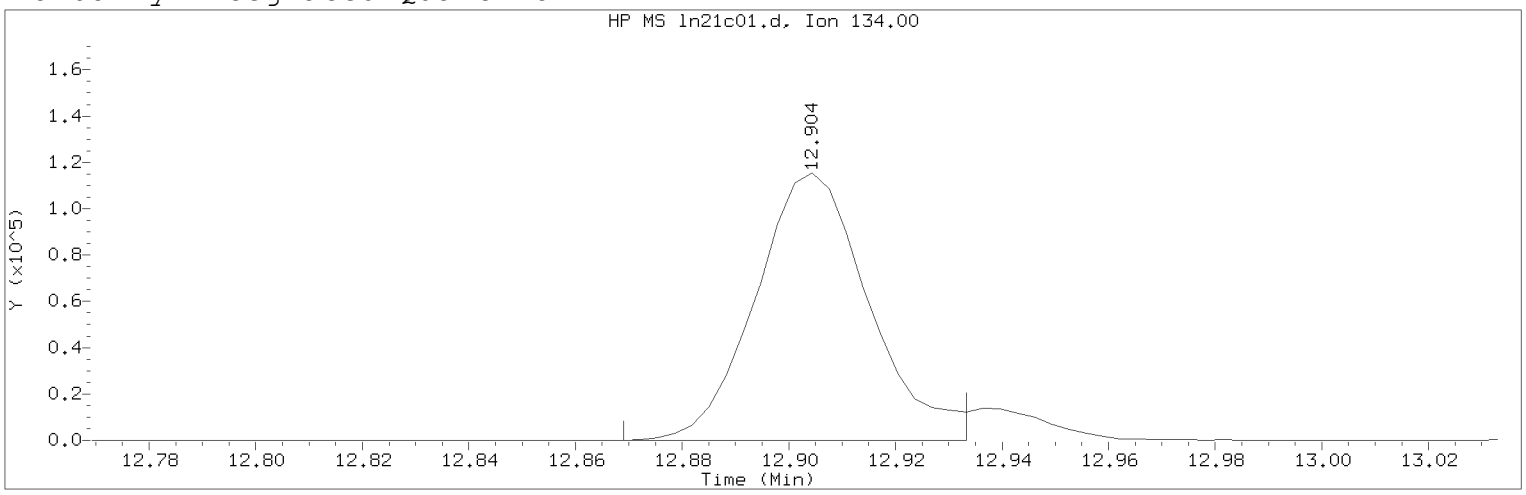
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2294
Retention Time (minutes): 8.859
Quant Ion : 88.00
Area : 44934
On-column Amount (ng) : 873.1754
Integration start scan : 2276 Integration stop scan: 2367
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 11/21/2019 at 08:49.
Target 3.5 esignature user ID: LCP00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:48 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

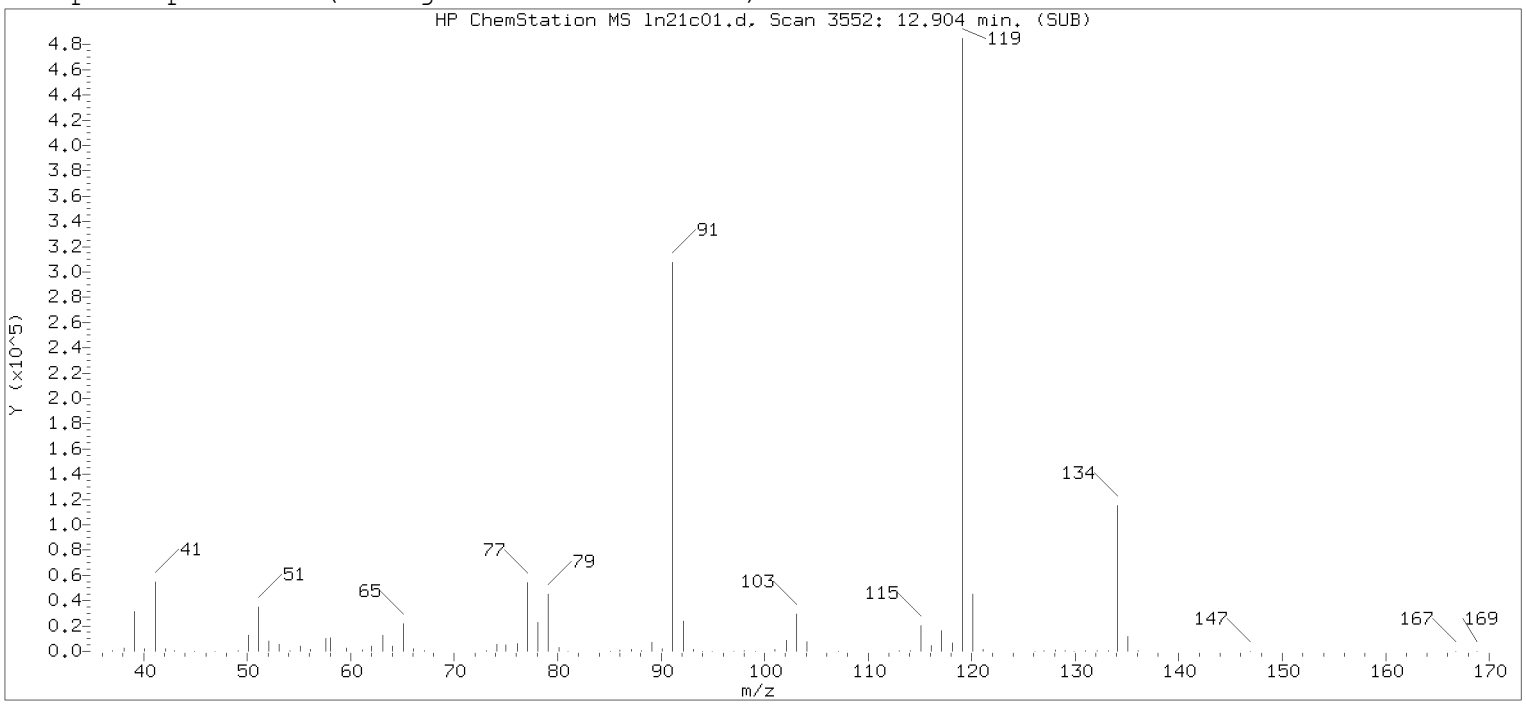
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 170518M
On-Column Amount (ng) : 46.5076
Integration start scan : 3540 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

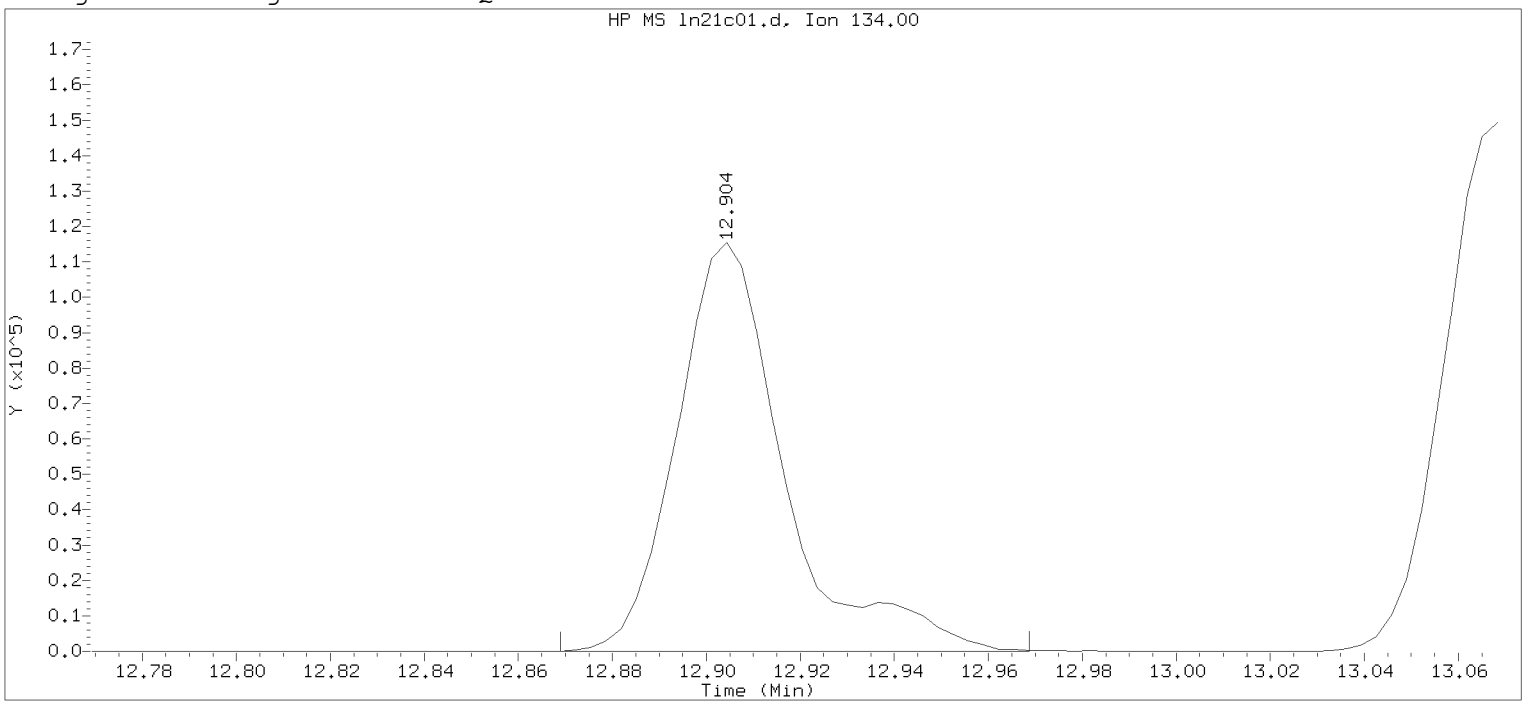
Analyst responsible for change: Digitally signed by Linda C. Pape
on 11/21/2019 at 08:49.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:40.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:46 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 183305
On-column Amount (ng) : 49.9951
Integration start scan : 3540 Integration stop scan: 3571
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 11/21/2019 at 08:49.
Target 3.5 esignature user: LCP00895

RLVL83 Lancaster Laboratories RVLL83
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov21a.b/ln21r01.d Injection date and time: **21-NOV-2019 09:02**
Data file Sample Info. Line: RLVL83;RVLL83;1;3;MDL/LOQ;;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 10:16 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **MDLY325**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	Qlon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493	(0.000)	936	65	163145	(6)	250.00	
66) Fluorobenzene	7.956	(0.003)	2013	96	871784	(4)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	717899	(4)	50.00	
131) 1,4-Dichlorobenzene-d4	13.220	(0.003)	3650	152	380162	(2)	50.00	

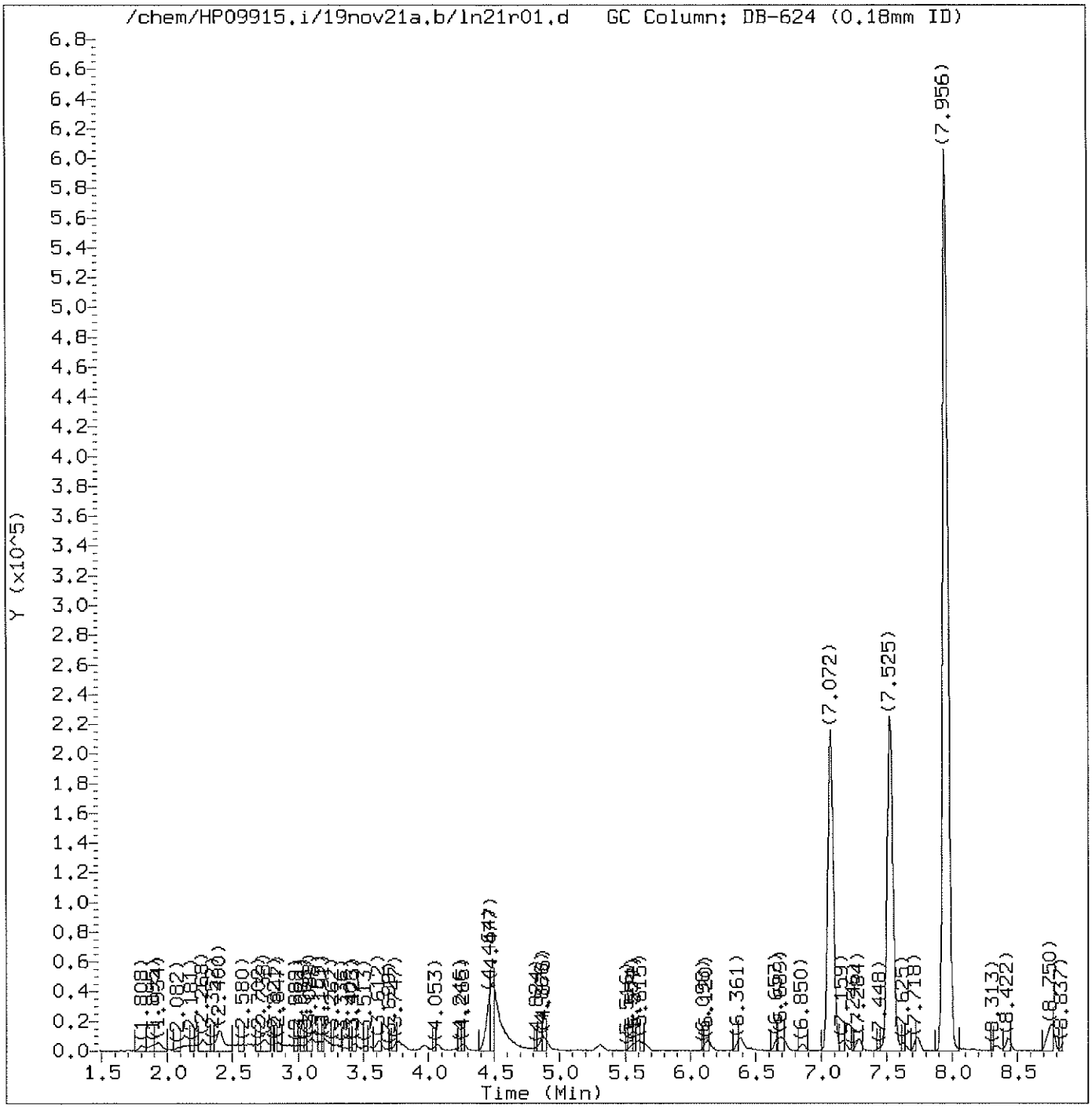
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072	(0.000)	113	203622	47.775	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.529	(0.000)	102	55485	51.080	102%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	901116	47.972	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	348356	48.976	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
110) Bromoform	(3)	12.078	(-0.000)	173	1568	0.459	0.46		J	1	4

Total number of targets = 1

Digitally signed by Linda C. Pape on 11/21/2019 at 10:16. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:40. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

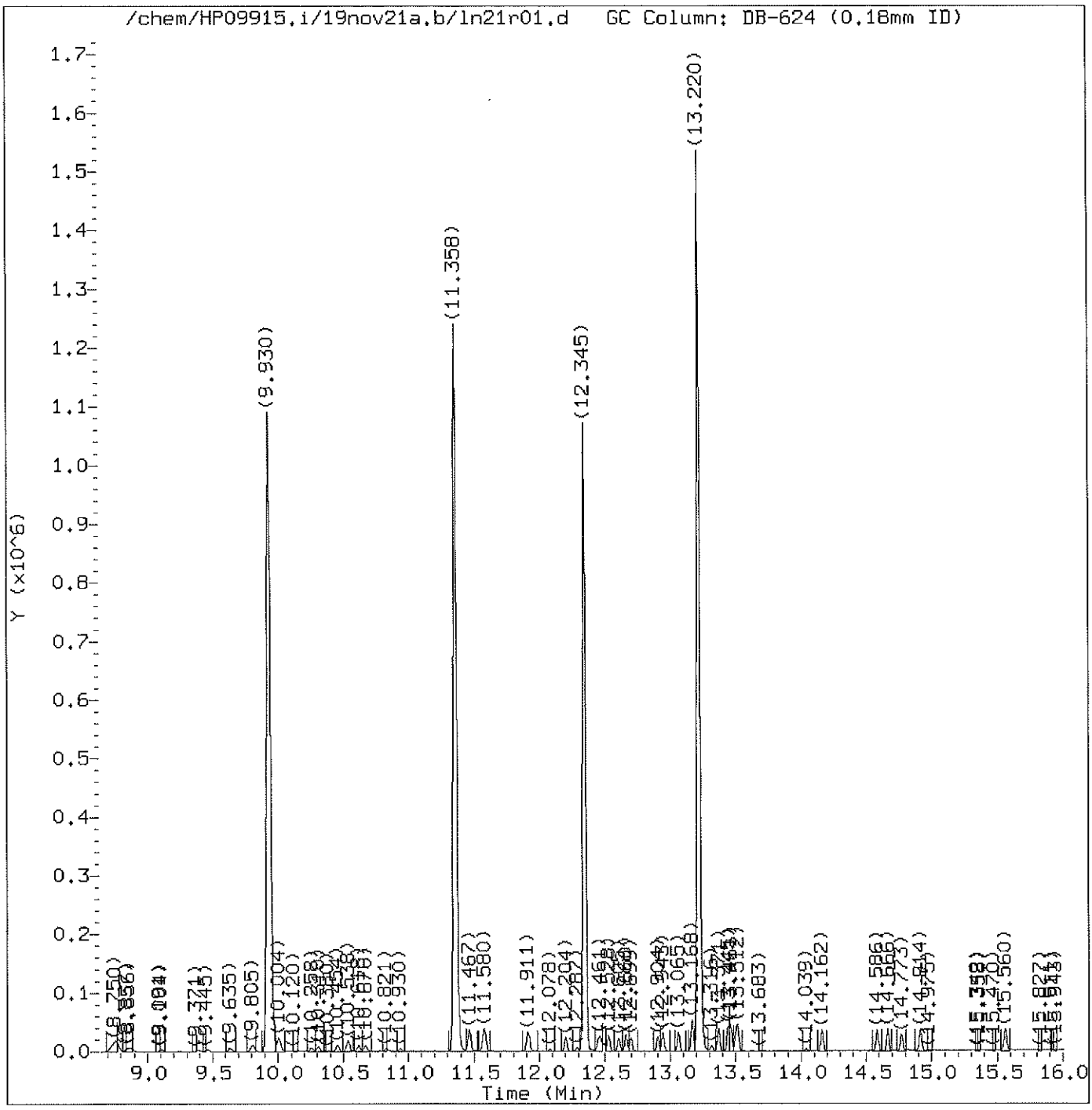
Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/1n21r01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:02 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: MDLY325
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 10:16 lcp00895

Sample Name: RLVL83 Lab Sample ID: RVLL83

Digitally signed by Linda C. Pape
on 11/21/2019 at 10:16.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21r01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:02 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: MDLY325
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 10:16 lcp00895

Sample Name: RLVL83 Lab Sample ID: RVLL83

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on 11/21/2019 at 10:16.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21r01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:02 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: MDLY325
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 10:16 lcp00895

Sample Name: RLVL83 Lab Sample ID: RVLL83

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.493	65	163145	250.000
52)$Dibromofluoromethane	(2)	7.072	113	203622	47.775
57)$1,2-Dichloroethane-d4	(2)	7.529	102	55485	51.080
66)*Fluorobenzene	(2)	7.956	96	871784	50.000
83)$Toluene-d8	(3)	9.930	98	901116	47.972
100)*Chlorobenzene-d5	(3)	11.358	117	717899	50.000
110) Bromoform	(3)	12.078	173	1568	0.459
114)$4-Bromofluorobenzene	(3)	12.345	95	348356	48.976
131)*1,4-Dichlorobenzene-d4	(4)	13.220	152	380162	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/21/2019 at 10:16.
Target 3.5 esignature user ID: lcp00895

Raw QC Data

Volatiles by GC/MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKL80

Data file: /chem/HP09915.i/19nov20a.b/ln20b01.d
Data file Sample Info. Line: VBLKL80;VBLKL80;1;3;;;;;;
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Injection date and time: **20-NOV-2019 09:35**
Instrument ID: **HP09915.i** Batch: **L193241AA**

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.496	(-0.003)	937	65	162533	(6)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	913789	(3)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	734830	(1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	395483	(1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(0.000)	113	207995	46.557	93%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(0.000)	102	55854	49.055	98%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	928523	48.292	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	356385	48.950	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov20a.b/ln20b01.d Injection date and time: **20-NOV-2019 09:35**
Data file Sample Info. Line: VBLKL80;VBLKL80;1;3;;;;;; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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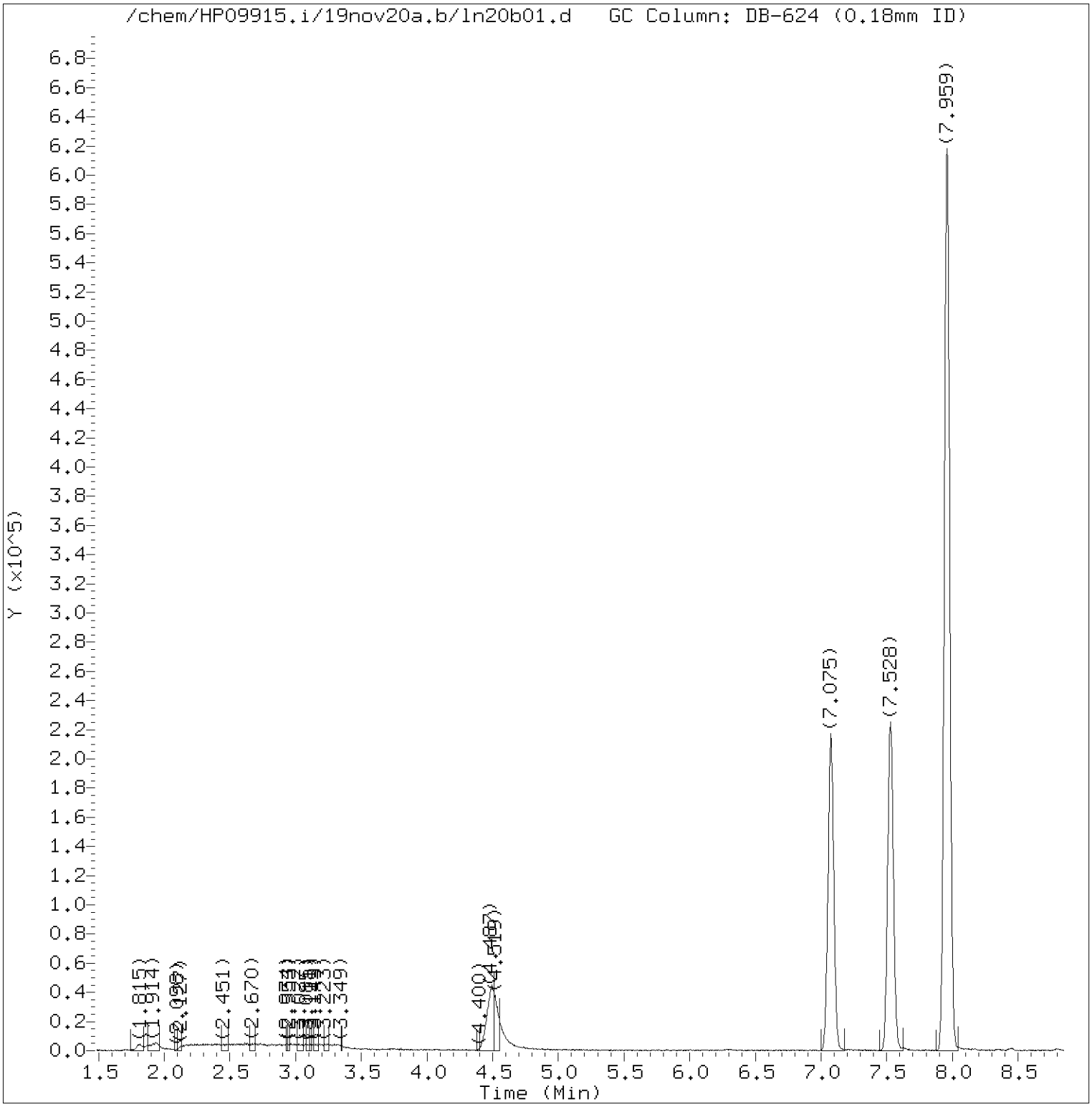
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 11/20/2019 at 22:29. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:50. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

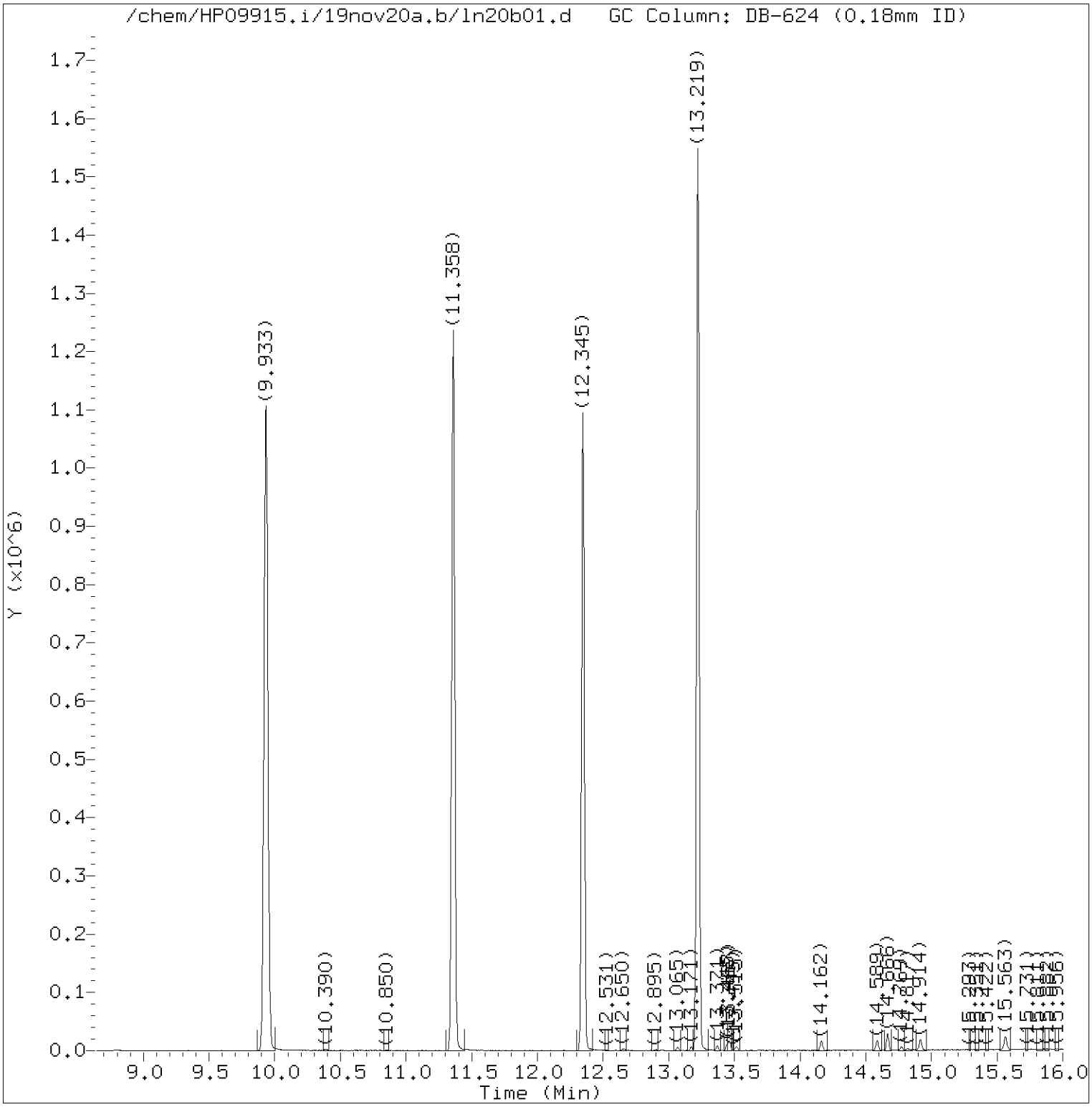
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20b01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 09:35 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Sample Name: VBLKL80 Lab Sample ID: VBLKL80

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20b01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 09:35 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Sample Name: VBLKL80 Lab Sample ID: VBLKL80

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20b01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 09:35 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Sample Name: VBLKL80 Lab Sample ID: VBLKL80

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.496	65	162533	250.000
52)$Dibromofluoromethane	(2)	7.075	113	207995	46.557
57)$1,2-Dichloroethane-d4	(2)	7.528	102	55854	49.055
66)*Fluorobenzene	(2)	7.959	96	913789	50.000
83)$Toluene-d8	(3)	9.933	98	928523	48.292
100)*Chlorobenzene-d5	(3)	11.358	117	734830	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	356385	48.950
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	395483	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKL83

Data file: /chem/HP09915.i/19nov21a.b/ln21b01.d
Injection date and time: **21-NOV-2019 09:24**
Data file Sample Info. Line: VBLKL83;VBLKL83;1;3;;;;;;
Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 09:41 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 21-NOV-2019 08:49
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.509	(-0.016)	941	65	158112	(3)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	860082	(2)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	701132	(2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	371721	(0)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.078	(0.000)	113	199192	47.371	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.535	(-0.001)	102	54120	50.501	101%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	879921	47.963	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	336566	48.450	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)				Not Detected					0.2	1
4) Chloromethane	(2)				Not Detected					0.2	1
5) 1,3-Butadiene	(2)				Not Detected					1	3
6) Vinyl Chloride	(2)				Not Detected					0.2	1
8) Bromomethane	(2)				Not Detected					0.3	1
9) Chloroethane	(2)				Not Detected					0.2	1
11) n-Pentane	(2)				Not Detected					0.4	10
12) Trichlorofluoromethane	(2)				Not Detected					0.2	1
14) Ethyl ether	(2)				Not Detected					0.2	5
15) Freon 123a	(2)				Not Detected					0.4	5
16) Acrolein	(1)				Not Detected					2	100
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
21) 2-Propanol	(1)				Not Detected					18	100
22) Methyl Iodide	(2)				Not Detected					0.2	1
23) Carbon Disulfide	(2)				Not Detected					0.2	5
25) Allyl Chloride	(2)				Not Detected					0.3	5
27) Methyl Acetate	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
30) t-Butyl alcohol	(1)				Not Detected					12	50
31) Acrylonitrile	(2)				Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.2	1
34) n-Hexane	(2)				Not Detected					2	5
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
38) di-Isopropyl ether	(2)				Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)				Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)				Not Detected					0.4	2

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov21a.b/ln21b01.d Injection date and time: **21-NOV-2019 09:24**
Data file Sample Info. Line: VBLKL83;VBLKL83;1;3;;;;;; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 09:41 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 21-NOV-2019 08:49
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)				Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					1	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
72) Methylcyclohexane	(2)				Not Detected					0.5	5
73) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
74) Dibromomethane	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
76) Methyl Methacrylate	(2)				Not Detected					0.2	5
78) Bromodichloromethane	(2)				Not Detected					0.2	1
79) 2-Nitropropane	(2)				Not Detected					0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
81) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
82) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
88) Toluene	(3)				Not Detected					0.2	1
89) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
90) 1,3-Dichloropropene (total)	(3)				Not Detected					0.4	2
91) Ethyl Methacrylate	(3)				Not Detected					0.2	5
92) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
94) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
96) 2-Hexanone	(3)				Not Detected					0.3	10
97) Dibromochloromethane	(3)				Not Detected					0.2	1
99) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
101) 1-Chlorohexane	(3)				Not Detected					0.3	5
102) Chlorobenzene	(3)				Not Detected					0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
109) Styrene	(3)				Not Detected					0.2	5
110) Bromoform	(3)				Not Detected					1	4
111) Isopropylbenzene	(3)				Not Detected					0.2	5
112) Cyclohexanone	(1)				Not Detected					25	100
115) Bromobenzene	(4)				Not Detected					0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
117) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
118) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50
119) n-Propylbenzene	(4)				Not Detected					0.2	5

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov21a.b/ln21b01.d Injection date and time: **21-NOV-2019 09:24**
Data file Sample Info. Line: VBLKL83;VBLKL83;1;3;;;;;; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 09:41 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 21-NOV-2019 08:49
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

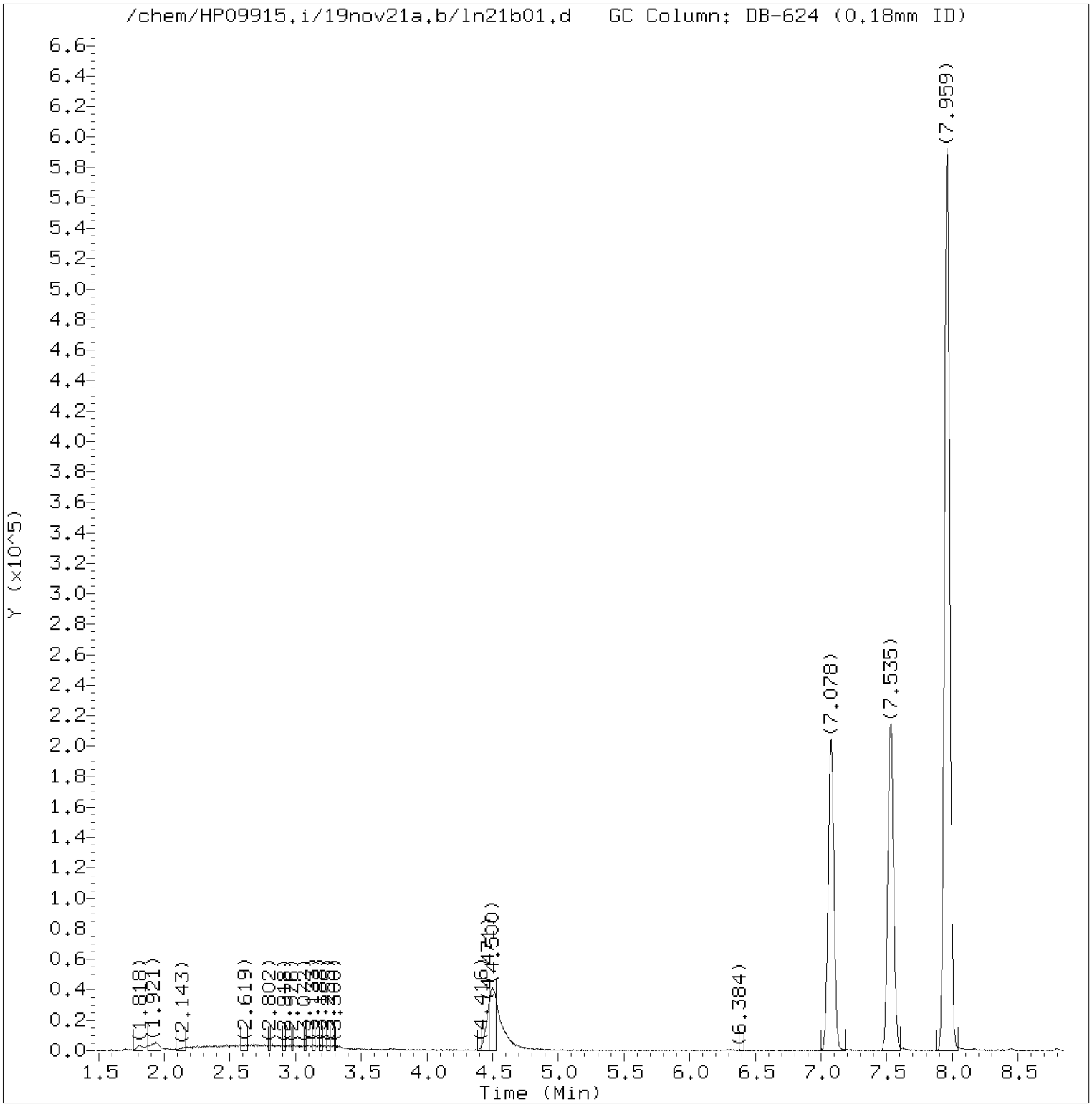
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)				Not Detected					0.2	5
121) 4-Chlorotoluene	(4)				Not Detected					0.2	5
122) 1,3,5-Trimethylbenzene	(4)				Not Detected					0.3	5
124) tert-Butylbenzene	(4)				Not Detected					0.3	5
125) Pentachloroethane	(4)				Not Detected					0.2	5
126) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5
127) sec-Butylbenzene	(4)				Not Detected					0.2	5
129) 1,3-Dichlorobenzene	(4)				Not Detected					0.2	5
130) p-Isopropyltoluene	(4)				Not Detected					0.2	5
133) 1,4-Dichlorobenzene	(4)				Not Detected					0.2	5
134) 1,2,3-Trimethylbenzene	(4)				Not Detected					0.3	5
135) Benzyl Chloride	(4)				Not Detected					1	5
136) 1,3-Diethylbenzene	(4)				Not Detected					0.2	5
137) 1,4-Diethylbenzene	(4)				Not Detected					0.2	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
139) n-Butylbenzene	(4)				Not Detected					0.2	5
140) 1,2-Diethylbenzene	(4)				Not Detected					0.2	5
141) Diethylbenzene (total)	(4)				Not Detected					0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.3	5
144) 1,3,5-Trichlorobenzene	(4)				Not Detected					0.2	5
146) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	5
147) Hexachlorobutadiene	(4)				Not Detected					2	5
148) Naphthalene	(4)				Not Detected					1	5
149) 1,2,3-Trichlorobenzene	(4)				Not Detected					0.4	5
150) 2-Methylnaphthalene	(4)				Not Detected					2	4

Total number of targets = 110

Digitally signed by Linda C. Pape on 11/21/2019 at 10:13. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:40. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

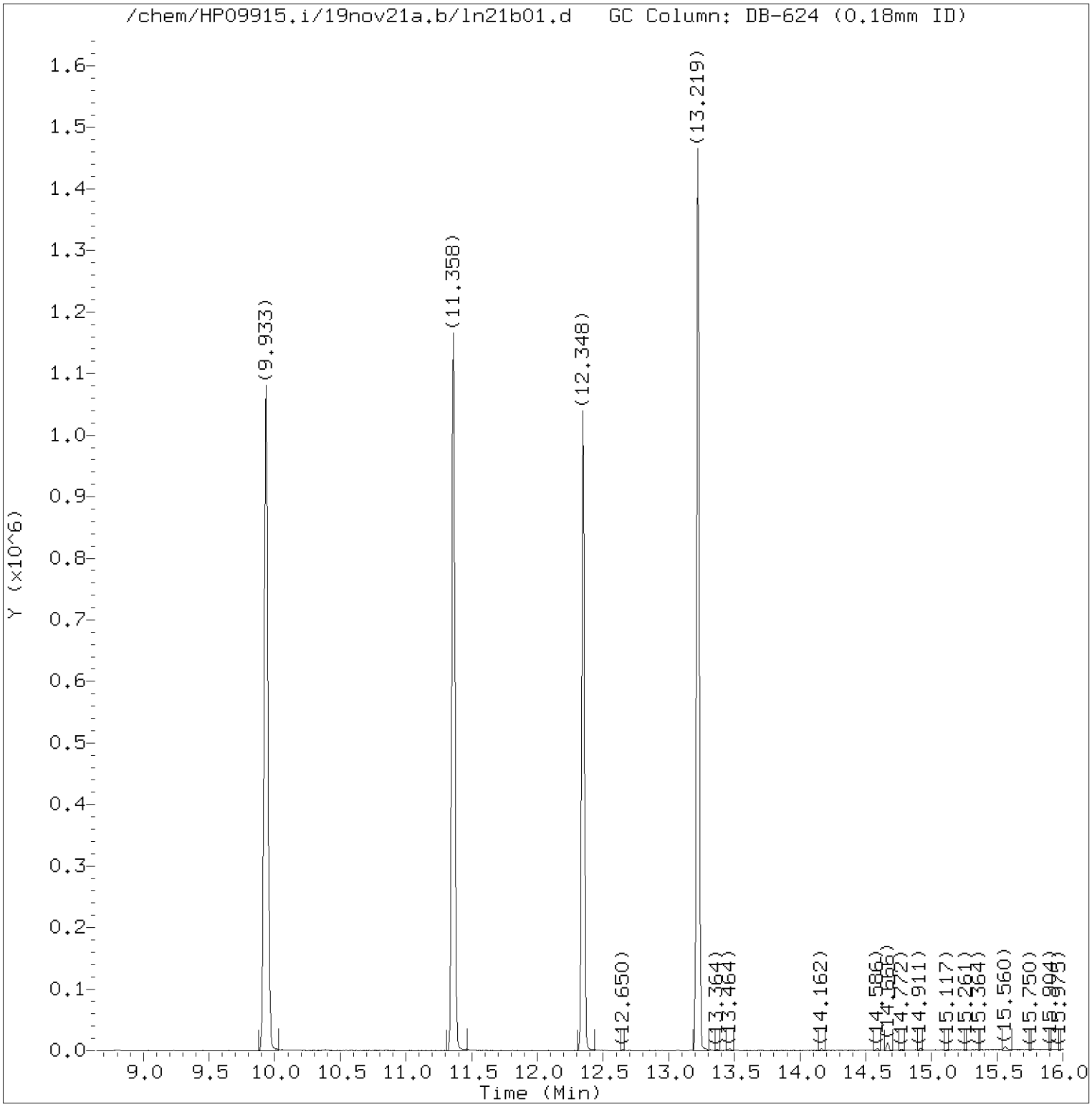
Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21b01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:24 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 09:41 Automation

Sample Name: VBLKL83 Lab Sample ID: VBLKL83

Digitally signed by Linda C. Pape
on 11/21/2019 at 10:13.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21b01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:24 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 09:41 Automation

Sample Name: VBLKL83 Lab Sample ID: VBLKL83

Digitally signed by Linda C. Pape
on 11/21/2019 at 10:13.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21b01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:24 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 09:41 Automation

Sample Name: VBLKL83 Lab Sample ID: VBLKL83

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.509	65	158112	250.000
52)$Dibromofluoromethane	(2)	7.078	113	199192	47.371
57)$1,2-Dichloroethane-d4	(2)	7.535	102	54120	50.501
66)*Fluorobenzene	(2)	7.959	96	860082	50.000
83)$Toluene-d8	(3)	9.933	98	879921	47.963
100)*Chlorobenzene-d5	(3)	11.358	117	701132	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	336566	48.450
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	371721	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/21/2019 at 10:13.
Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W1803MS

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202287

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov21a.b/ln21s04.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	20	
75-35-4	1,1-Dichloroethene	21	
67-64-1	Acetone	140	
76-13-1	Freon 113	20	
75-15-0	Carbon Disulfide	17	
75-09-2	Methylene Chloride	20	
156-60-5	trans-1,2-Dichloroethene	21	
75-34-3	1,1-Dichloroethane	20	
156-59-2	cis-1,2-Dichloroethene	22	
78-93-3	2-Butanone	130	
67-66-3	Chloroform	21	
71-55-6	1,1,1-Trichloroethane	22	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	20	
79-01-6	Trichloroethene	24	
123-91-1	1,4-Dioxane	600	
108-88-3	Toluene	21	
127-18-4	Tetrachloroethene	26	
100-41-4	Ethylbenzene	21	
1330-20-7	Xylene (Total)	64	
95-50-1	1,2-Dichlorobenzene	21	
91-20-3	Naphthalene	19	

FORM I VOA

^

W1803MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1202287MS

Data file: /chem/HP09915.i/19nov21a.b/ln21s04.d Injection date and time: **21-NOV-2019 11:43**
Data file Sample Info. Line: W1803MS;1202287MS;1;3;MS;JCW18;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 22:42 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.509	(-0.016)	941	65	171692M	(12)	250.00	
66) Fluorobenzene	7.962	(-0.003)	2015	96	862571	(2)	50.00	
100) Chlorobenzene-d5	11.361	(0.000)	3072	117	705149	(2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	381480	(3)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.078	(0.000)	113	203075	48.155	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.531	(0.000)	102	54519	50.726	101%		80 - 120
83) Toluene-d8	(3)	9.937	(0.000)	98	895657	48.543	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.348	(0.000)	95	350754	50.205	100%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
6) Vinyl Chloride	(2)	2.406	(0.000)	62	117709	20.343	20.34			0.2	1
17) 1,1-Dichloroethene	(2)	3.763	(0.000)	96	78592	21.494	21.49			0.2	1
18) Acetone	(1)	3.811	(0.002)	58	78173	135.367	135.37			0.7	20
19) Freon 113	(2)	3.805	(-0.000)	101	84420	20.236	20.24			0.2	10
23) Carbon Disulfide	(2)	4.072	(0.001)	76	236206	17.142	17.14			0.2	5
28) Methylene Chloride	(2)	4.474	(0.000)	84	89068	20.466	20.47			0.3	1
32) trans-1,2-Dichloroethene	(2)	4.892	(0.000)	96	87960	20.795	20.79			0.2	1
36) 1,1-Dichloroethane	(2)	5.557	(-0.000)	63	148055	20.064	20.06			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.387	(-0.000)	96	106032	22.333	22.33			0.2	1
44) 2-Butanone	(2)	6.364	(0.000)	43	418587	128.702	128.70			0.3	10
51) Chloroform	(2)	6.863	(0.000)	83	148892	21.097	21.10			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.088	(0.000)	97	132047	21.921	21.92			0.3	1
60) Benzene	(2)	7.557	(0.000)	78	371269	21.161	21.16			0.2	1
61) 1,2-Dichloroethane	(2)	7.634	(-0.000)	62	114280	20.250	20.25			0.3	1
71) Trichloroethene	(2)	8.432	(0.000)	95	105556	23.894	23.89			0.2	1
75) 1,4-Dioxane	(1)	8.856	(0.007)	88	34347	596.871	596.87			29	250
88) Toluene	(3)	10.007	(-0.000)	92	241137	20.846	20.85			0.2	1
93) Tetrachloroethene	(3)	10.541	(-0.000)	166	127844	26.096	26.10			0.2	1
104) Ethylbenzene	(3)	11.467	(-0.000)	91	468056	21.170	21.17			0.4	1
106) m+p-Xylene	(3)	11.580	(-0.000)	106	371697	42.736	42.74			1	5
107) o-Xylene	(3)	11.908	(-0.000)	106	178846	20.818	20.82			0.4	1
108) Xylene (Total)	(3)			106	550543	63.553	63.55			1	6
138) 1,2-Dichlorobenzene	(4)	13.502	(-0.000)	146	219387	21.102	21.10			0.2	5
148) Naphthalene	(4)	14.772	(-0.000)	128	483219	19.354	19.35			1	5

Digitally signed by Don V. Viray on 11/21/2019 at 22:42. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov21a.b/ln21s04.d Injection date and time: **21-NOV-2019 11:43**
Data file Sample Info. Line: W1803MS;1202287MS;1;3;MS;JCW18;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 22:42 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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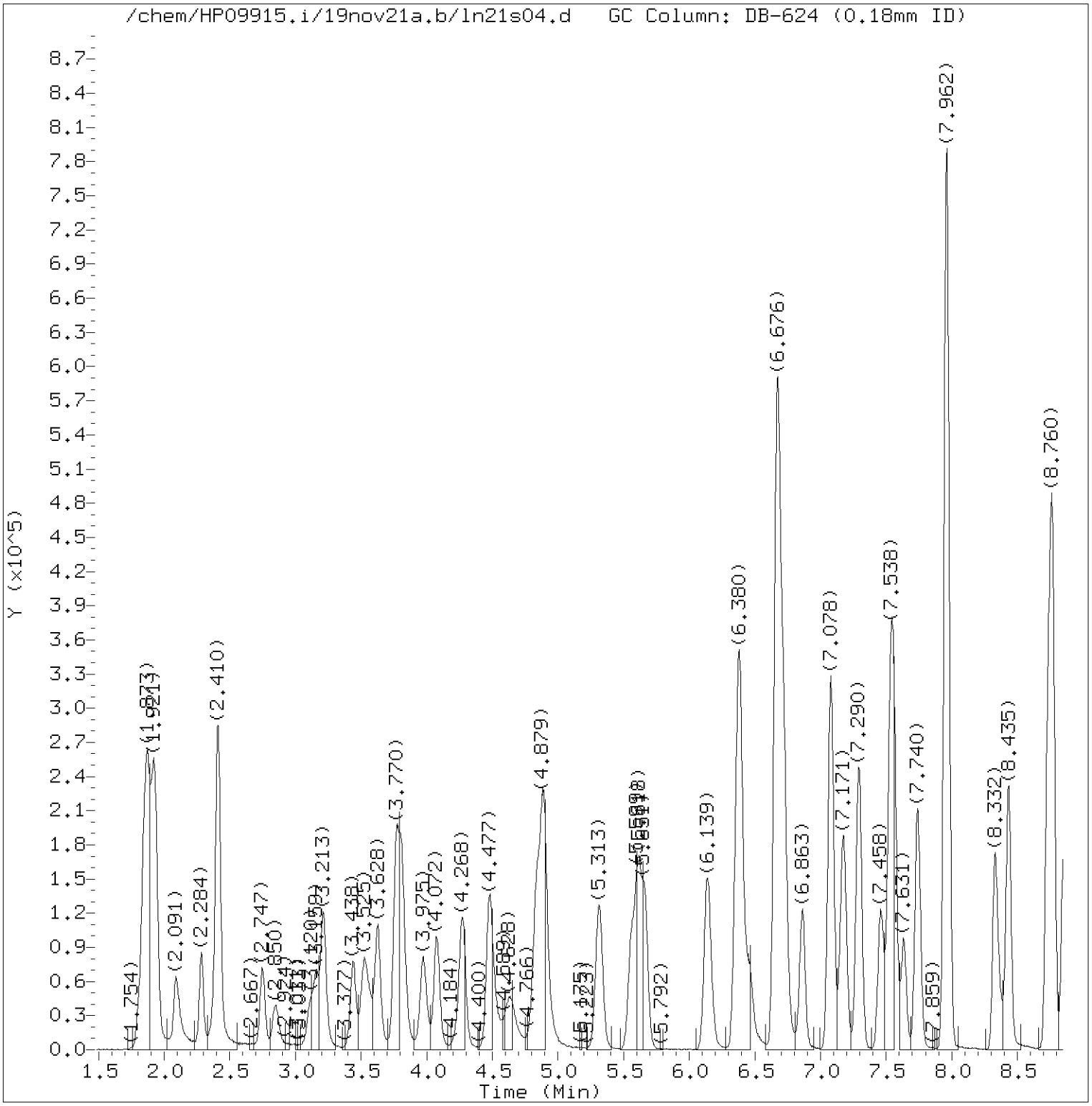
Total number of targets = 24

Digitally signed by Don V. Viray on 11/21/2019 at 22:42. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:42. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

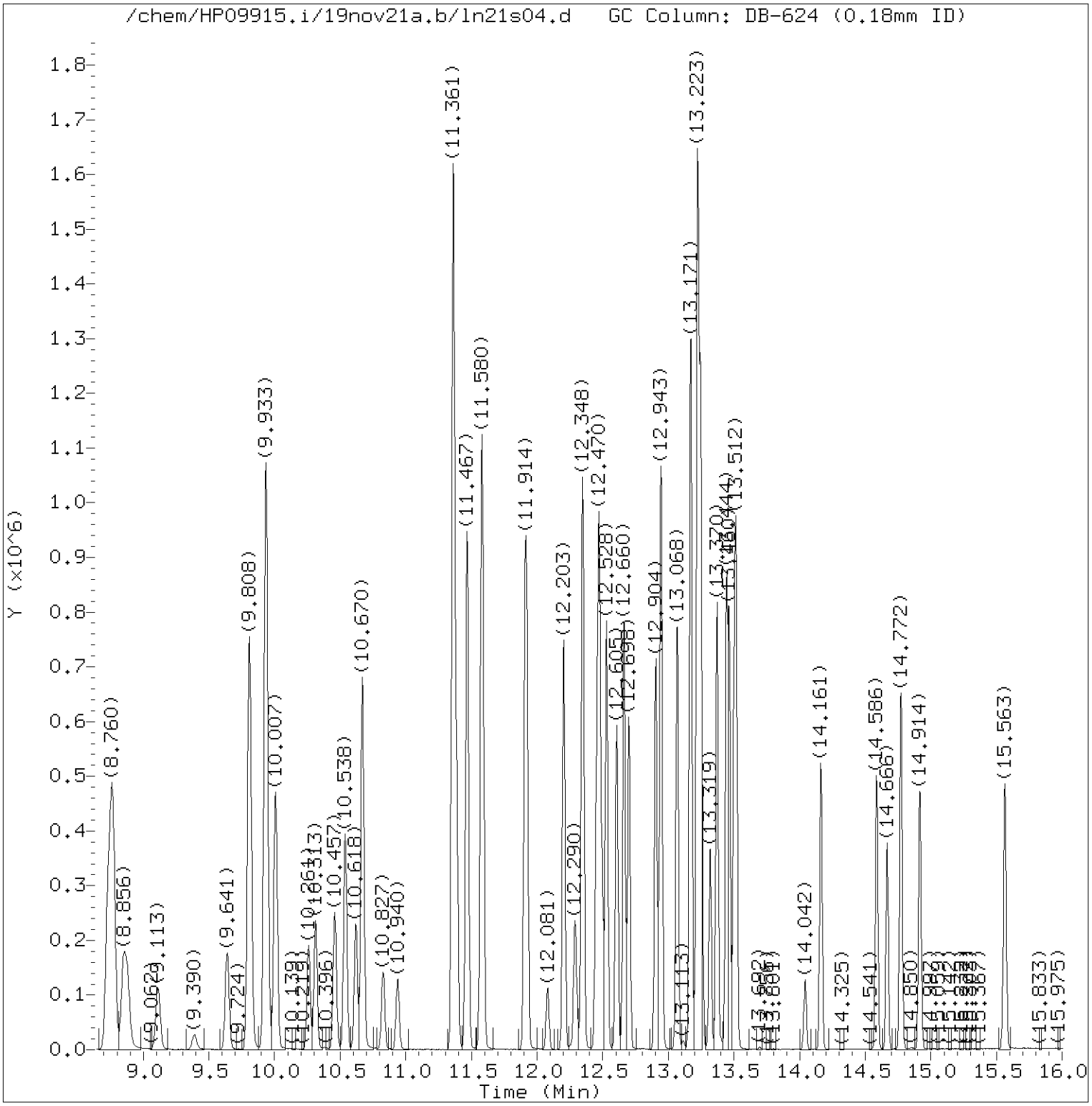
Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s04.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 11:43 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 22:42 dvv10203

Sample Name: W1803MS Lab Sample ID: 1202287MS

Digitally signed by Don V. Viray
on 11/21/2019 at 22:42.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s04.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 11:43 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 22:42 dvv10203

Sample Name: W1803MS Lab Sample ID: 1202287MS

Digitally signed by Don V. Viray
on 11/21/2019 at 22:42.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s04.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 11:43 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 22:42 dvv10203

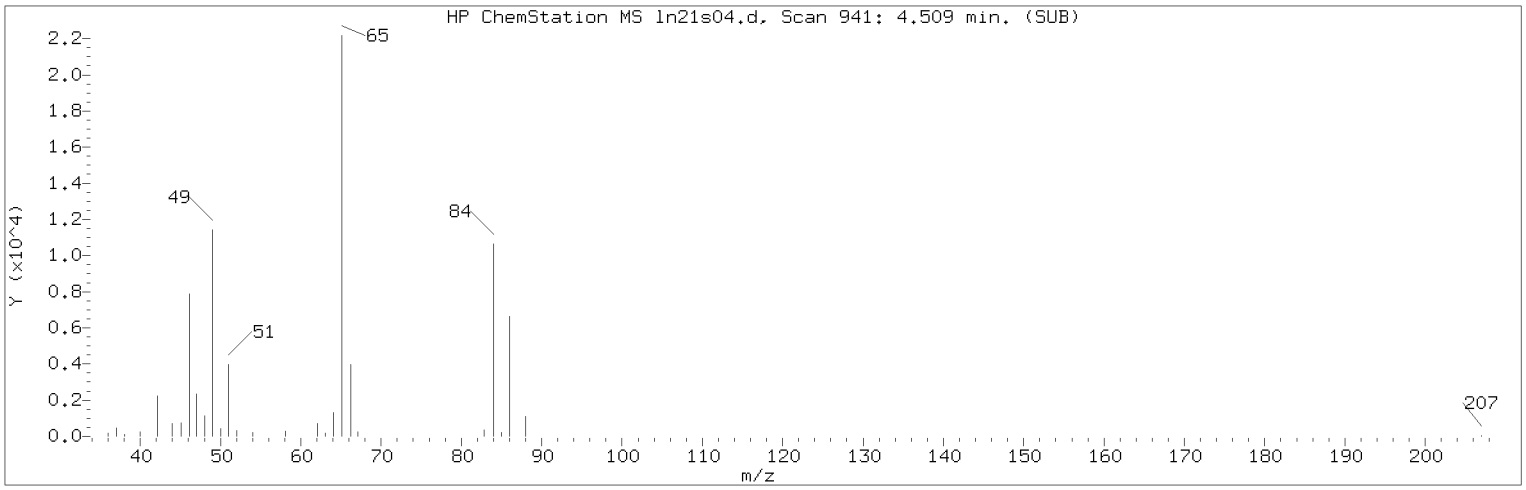
Sample Name: W1803MS Lab Sample ID: 1202287MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	2.406	62	117709	20.343
17) 1,1-Dichloroethene	(2)	3.763	96	78592	21.494
19) Freon 113	(2)	3.805	101	84420	20.236
18) Acetone	(1)	3.811	58	78173	135.367
23) Carbon Disulfide	(2)	4.072	76	236206	17.142
28) Methylene Chloride	(2)	4.474	84	89068	20.466
29)*t-Butyl alcohol-d10	(1)	4.509	65	171692M	250.000
32) trans-1,2-Dichloroethene	(2)	4.892	96	87960	20.795
36) 1,1-Dichloroethane	(2)	5.557	63	148055	20.064
44) 2-Butanone	(2)	6.364	43	418587	128.702
42) cis-1,2-Dichloroethene	(2)	6.387	96	106032	22.333
51) Chloroform	(2)	6.863	83	148892	21.097
52)$Dibromofluoromethane	(2)	7.078	113	203075	48.155
53) 1,1,1-Trichloroethane	(2)	7.088	97	132047	21.921
57)$1,2-Dichloroethane-d4	(2)	7.531	102	54519	50.726
60) Benzene	(2)	7.557	78	371269	21.161
61) 1,2-Dichloroethane	(2)	7.634	62	114280	20.250
66)*Fluorobenzene	(2)	7.962	96	862571	50.000
71) Trichloroethene	(2)	8.432	95	105556	23.894
75) 1,4-Dioxane	(1)	8.856	88	34347	596.871
83)$Toluene-d8	(3)	9.937	98	895657	48.543
88) Toluene	(3)	10.007	92	241137	20.846
93) Tetrachloroethene	(3)	10.541	166	127844	26.096
100)*Chlorobenzene-d5	(3)	11.361	117	705149	50.000
104) Ethylbenzene	(3)	11.467	91	468056	21.170
106) m+p-Xylene	(3)	11.580	106	371697	42.736
108) Xylene (Total)	(3)		106	550543	63.553
107) o-Xylene	(3)	11.908	106	178846	20.818
114)$4-Bromofluorobenzene	(3)	12.348	95	350754	50.205
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	381480	50.000
138) 1,2-Dichlorobenzene	(4)	13.502	146	219387	21.102
148) Naphthalene	(4)	14.772	128	483219	19.354

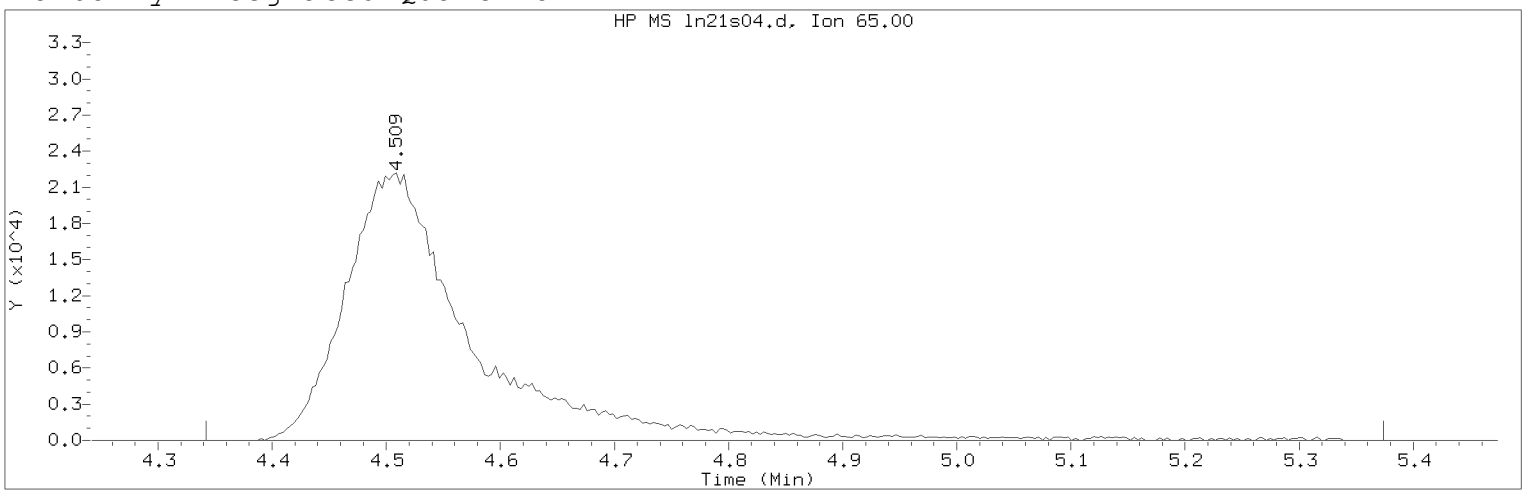
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/21/2019 at 22:42.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov21a.b/ln21s04.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 11:43 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 22:42 dvv10203

Sample Name: W1803MS Lab Sample ID: 1202287MS

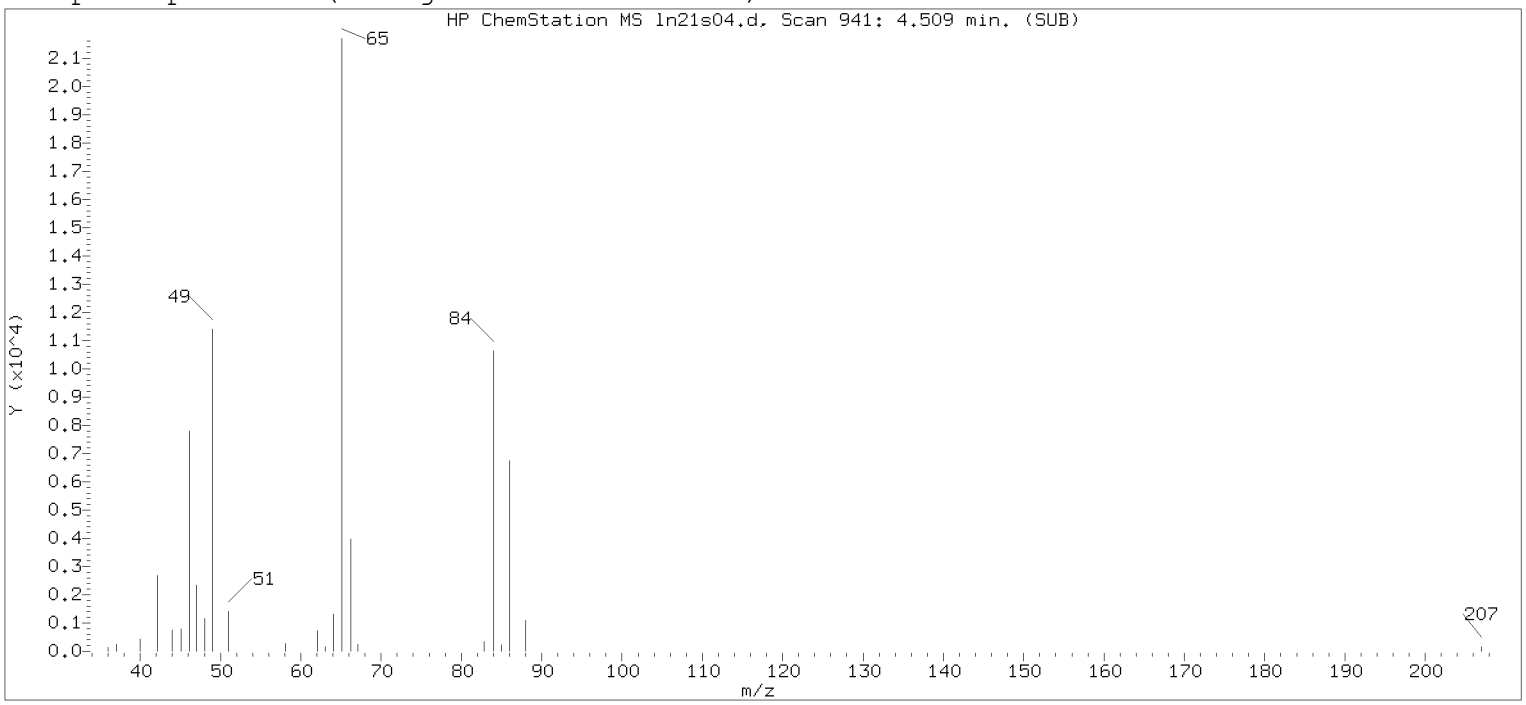
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 171692M
On-Column Amount (ng) : 250.0000
Integration start scan : 888 Integration stop scan: 1209
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

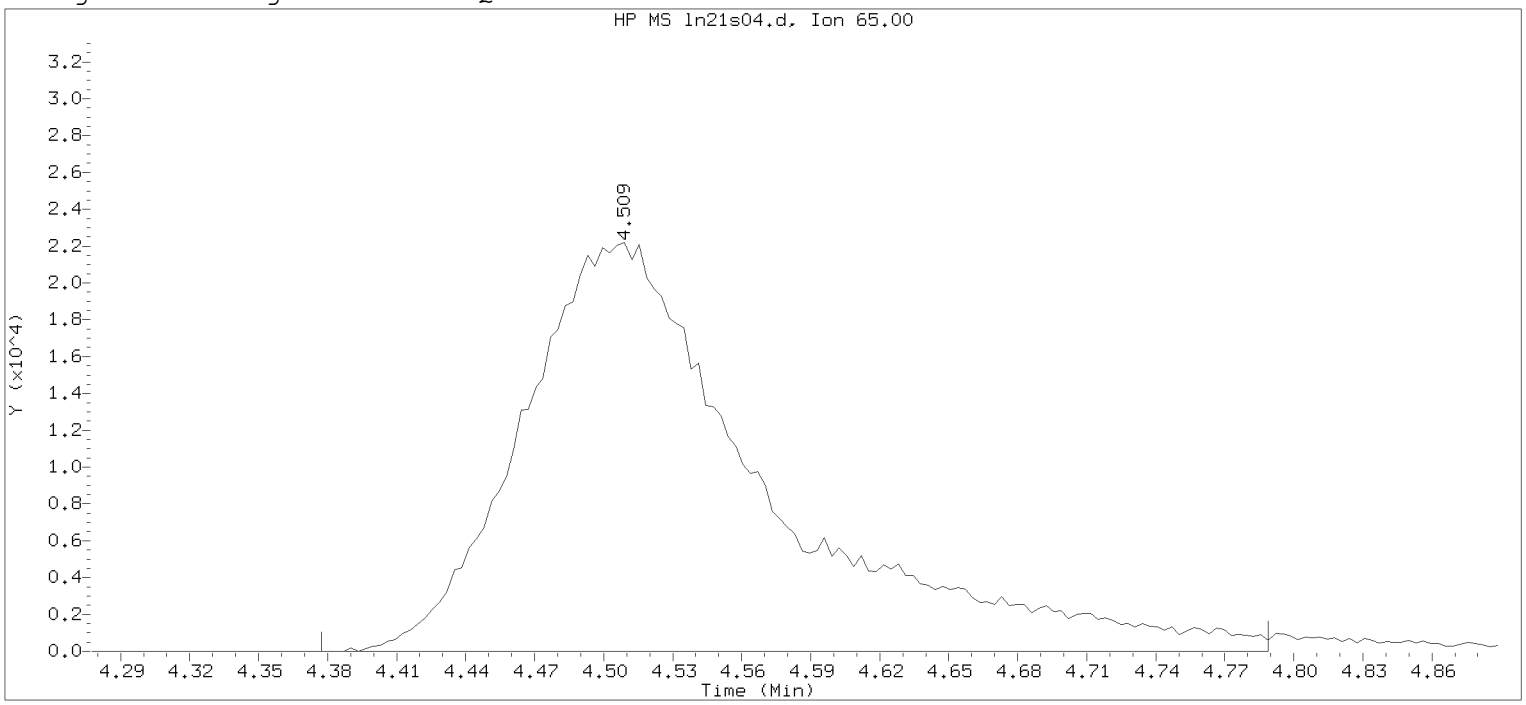
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/21/2019 at 22:42.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:42.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov21a.b/ln21s04.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 11:43 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 12:00 Automation

Sample Name: W1803MS Lab Sample ID: 1202287MS

Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 163348
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1027
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/21/2019 at 22:42.
Target 3.5 esignature user ID: dvv10263

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W1803MSD

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202288

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov21a.b/ln21s05.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	20	
75-35-4	1,1-Dichloroethene	21	
67-64-1	Acetone	140	
76-13-1	Freon 113	20	
75-15-0	Carbon Disulfide	17	
75-09-2	Methylene Chloride	21	
156-60-5	trans-1,2-Dichloroethene	21	
75-34-3	1,1-Dichloroethane	20	
156-59-2	cis-1,2-Dichloroethene	22	
78-93-3	2-Butanone	130	
67-66-3	Chloroform	21	
71-55-6	1,1,1-Trichloroethane	22	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	20	
79-01-6	Trichloroethene	24	
123-91-1	1,4-Dioxane	610	
108-88-3	Toluene	21	
127-18-4	Tetrachloroethene	25	
100-41-4	Ethylbenzene	21	
1330-20-7	Xylene (Total)	65	
95-50-1	1,2-Dichlorobenzene	21	
91-20-3	Naphthalene	20	

W1803MSD

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1202288MSD

Data file: /chem/HP09915.i/19nov21a.b/ln21s05.d Injection date and time: **21-NOV-2019 12:04**
Data file Sample Info. Line: W1803MSD;1202288MSD;1;3;MSD;JCW18;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 22:42 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.506(-0.013)	940	65	172012M (12)	250.00	
66) Fluorobenzene	7.962(-0.003)	2015	96	873696 (4)	50.00	
100) Chlorobenzene-d5	11.361(0.000)	3072	117	703392 (2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223(0.000)	3651	152	376918 (1)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075(0.000)	113	200663	46.977	94%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.535(0.000)	102	53473	49.119	98%		80 - 120
83) Toluene-d8	(3)	9.933(0.000)	98	906702	49.265	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345(0.000)	95	351636	50.456	101%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
6) Vinyl Chloride	(2)	2.403(0.000)	62	119648	20.415	20.41			0.2	1
17) 1,1-Dichloroethene	(2)	3.763(0.000)	96	78317	21.146	21.15			0.2	1
18) Acetone	(1)	3.808(0.002)	58	78881	136.339	136.34			0.7	20
19) Freon 113	(2)	3.802(-0.000)	101	83975	19.873	19.87			0.2	10
23) Carbon Disulfide	(2)	4.072(0.001)	76	240112	17.204	17.20			0.2	5
28) Methylene Chloride	(2)	4.477(0.000)	84	91267	20.705	20.70			0.3	1
32) trans-1,2-Dichloroethene	(2)	4.892(0.000)	96	89448	20.877	20.88			0.2	1
36) 1,1-Dichloroethane	(2)	5.557(-0.000)	63	150532	20.140	20.14			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.384(-0.000)	96	107535	22.361	22.36			0.2	1
44) 2-Butanone	(2)	6.364(0.000)	43	423465	128.544	128.54			0.3	10
51) Chloroform	(2)	6.860(0.000)	83	148792	20.814	20.81			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.081(0.001)	97	132168	21.662	21.66			0.3	1
60) Benzene	(2)	7.560(0.000)	78	374452	21.070	21.07			0.2	1
61) 1,2-Dichloroethane	(2)	7.634(-0.000)	62	115080	20.132	20.13			0.3	1
71) Trichloroethene	(2)	8.429(0.000)	95	105837	23.652	23.65			0.2	1
75) 1,4-Dioxane	(1)	8.859(0.005)	88	35360	613.331	613.33			29	250
88) Toluene	(3)	10.007(-0.000)	92	244305	21.173	21.17			0.2	1
93) Tetrachloroethene	(3)	10.538(0.000)	166	122619	25.092	25.09			0.2	1
104) Ethylbenzene	(3)	11.467(-0.000)	91	472905	21.443	21.44			0.4	1
106) m+p-Xylene	(3)	11.580(-0.000)	106	377882	43.555	43.56			1	5
107) o-Xylene	(3)	11.908(-0.000)	106	181118	21.135	21.13			0.4	1
108) Xylene (Total)	(3)		106	559000	64.690	64.69			1	6
138) 1,2-Dichlorobenzene	(4)	13.499(-0.000)	146	219670	21.385	21.39			0.2	5
148) Naphthalene	(4)	14.772(-0.000)	128	494681	20.053	20.05			1	5

Digitally signed by Don V. Viray on 11/21/2019 at 22:42. Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov21a.b/ln21s05.d Injection date and time: **21-NOV-2019 12:04**
Data file Sample Info. Line: W1803MSD;1202288MSD;1;3;MSD;JCW18;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 22:42 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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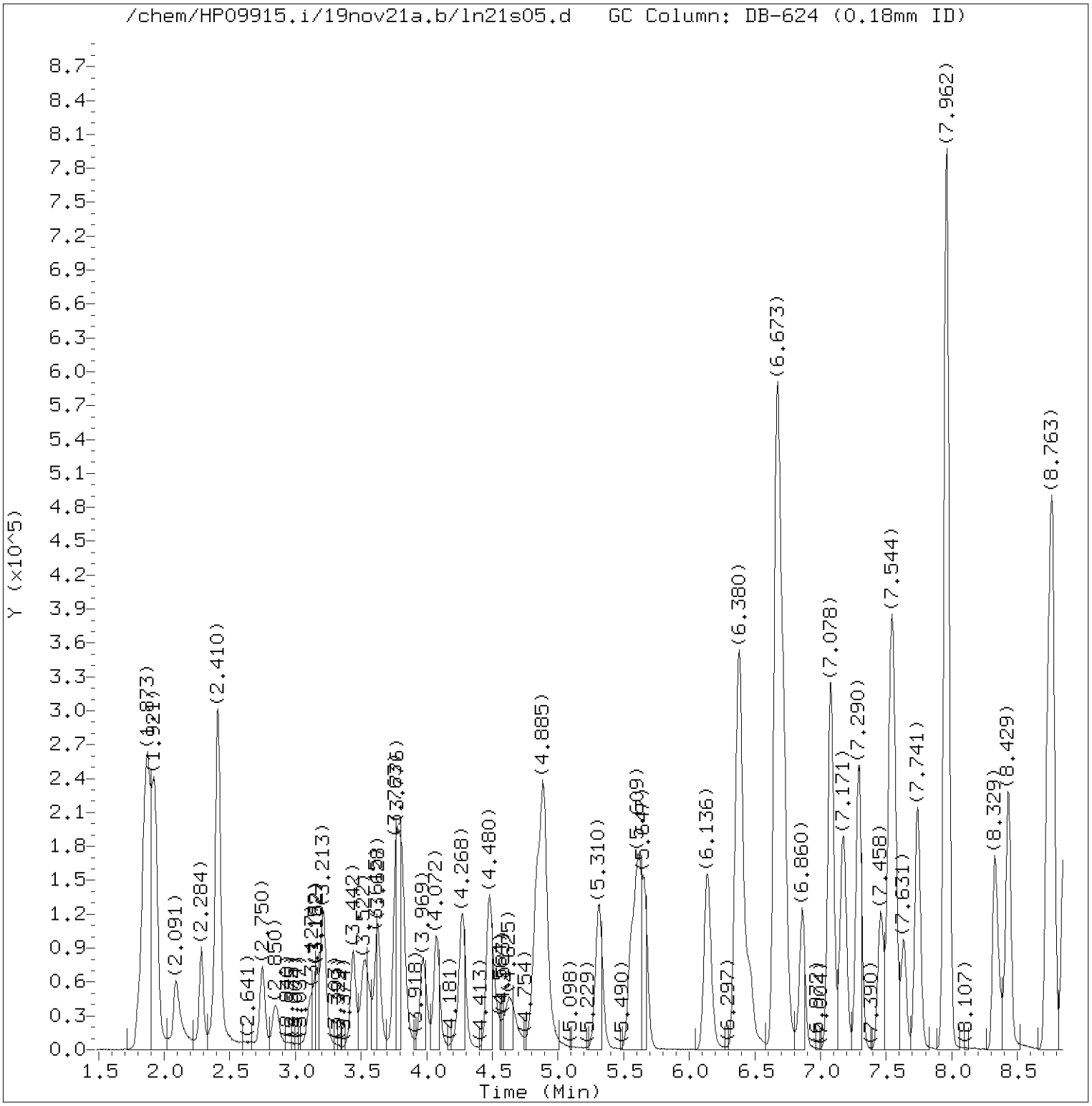
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 11/21/2019 at 22:42. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:42. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

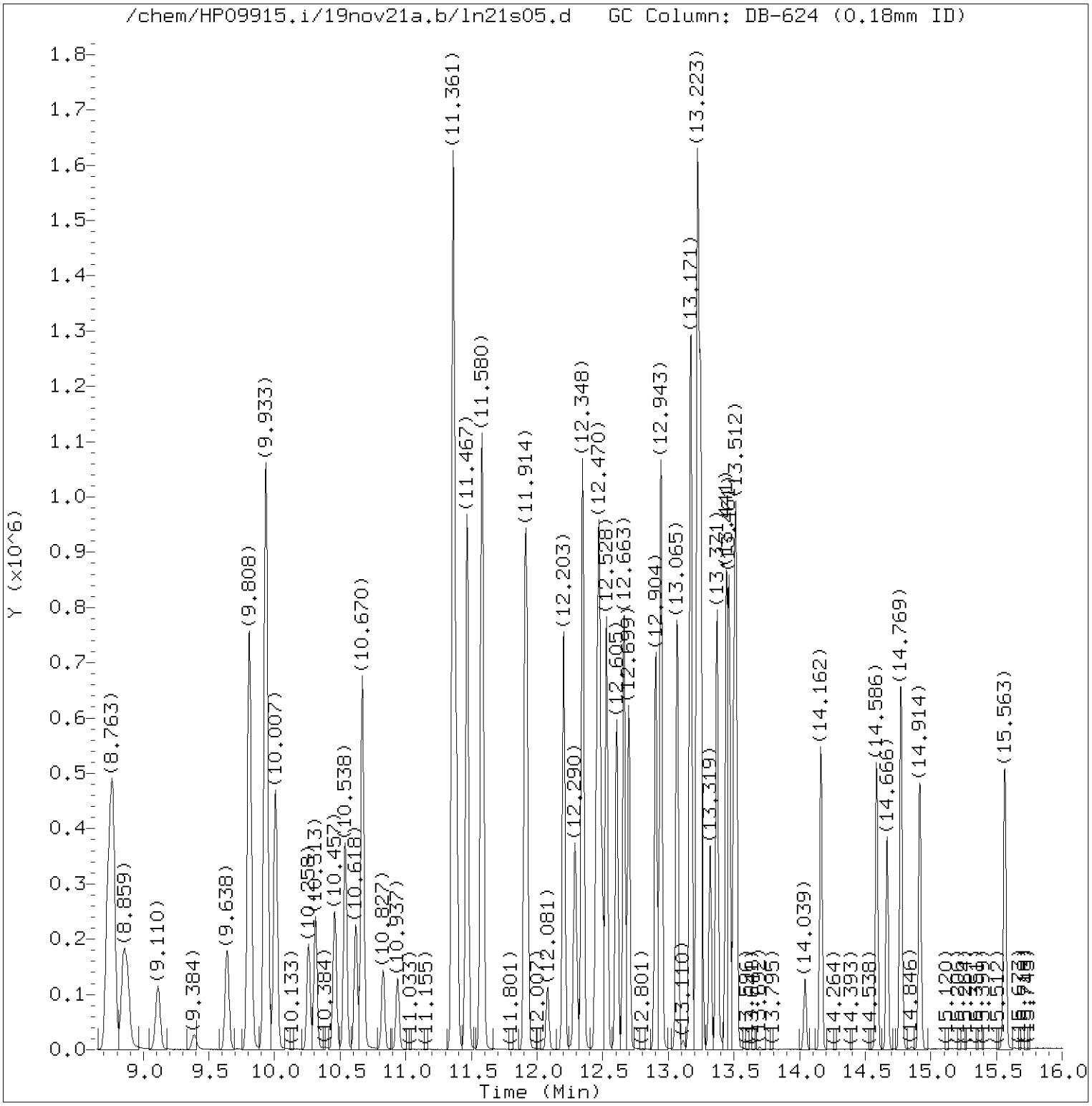
Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s05.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 12:04 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 22:42 dvv10203

Sample Name: W1803MSD Lab Sample ID: 1202288MSD

Digitally signed by Don V. Viray
on 11/21/2019 at 22:42.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s05.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 12:04 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 22:42 dvv10203

Sample Name: W1803MSD Lab Sample ID: 1202288MSD

Digitally signed by Don V. Viray
on 11/21/2019 at 22:42.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s05.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 12:04 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 22:42 dvv10203

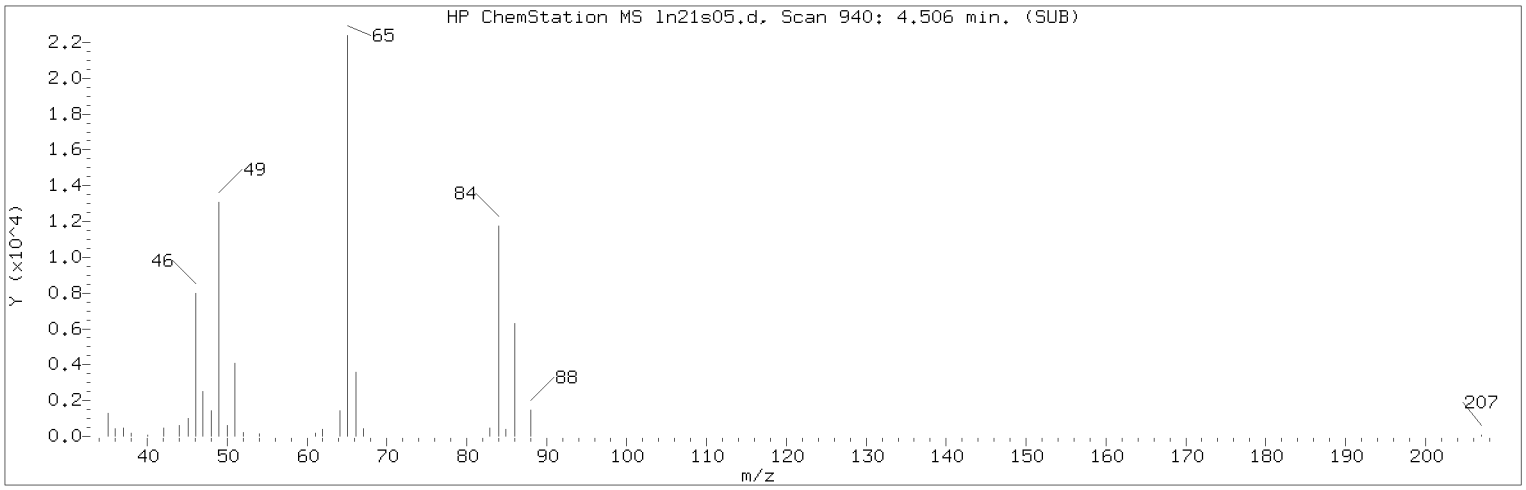
Sample Name: W1803MSD Lab Sample ID: 1202288MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	2.403	62	119648	20.415
17) 1,1-Dichloroethene	(2)	3.763	96	78317	21.146
19) Freon 113	(2)	3.802	101	83975	19.873
18) Acetone	(1)	3.808	58	78881	136.339
23) Carbon Disulfide	(2)	4.072	76	240112	17.204
28) Methylene Chloride	(2)	4.477	84	91267	20.705
29)*t-Butyl alcohol-d10	(1)	4.506	65	172012M	250.000
32) trans-1,2-Dichloroethene	(2)	4.892	96	89448	20.877
36) 1,1-Dichloroethane	(2)	5.557	63	150532	20.140
44) 2-Butanone	(2)	6.364	43	423465	128.544
42) cis-1,2-Dichloroethene	(2)	6.384	96	107535	22.361
51) Chloroform	(2)	6.860	83	148792	20.814
52)$Dibromofluoromethane	(2)	7.075	113	200663	46.977
53) 1,1,1-Trichloroethane	(2)	7.081	97	132168	21.662
57)$1,2-Dichloroethane-d4	(2)	7.535	102	53473	49.119
60) Benzene	(2)	7.560	78	374452	21.070
61) 1,2-Dichloroethane	(2)	7.634	62	115080	20.132
66)*Fluorobenzene	(2)	7.962	96	873696	50.000
71) Trichloroethene	(2)	8.429	95	105837	23.652
75) 1,4-Dioxane	(1)	8.859	88	35360	613.331
83)$Toluene-d8	(3)	9.933	98	906702	49.265
88) Toluene	(3)	10.007	92	244305	21.173
93) Tetrachloroethene	(3)	10.538	166	122619	25.092
100)*Chlorobenzene-d5	(3)	11.361	117	703392	50.000
104) Ethylbenzene	(3)	11.467	91	472905	21.443
106) m+p-Xylene	(3)	11.580	106	377882	43.555
108) Xylene (Total)	(3)		106	559000	64.690
107) o-Xylene	(3)	11.908	106	181118	21.135
114)$4-Bromofluorobenzene	(3)	12.345	95	351636	50.456
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	376918	50.000
138) 1,2-Dichlorobenzene	(4)	13.499	146	219670	21.385
148) Naphthalene	(4)	14.772	128	494681	20.053

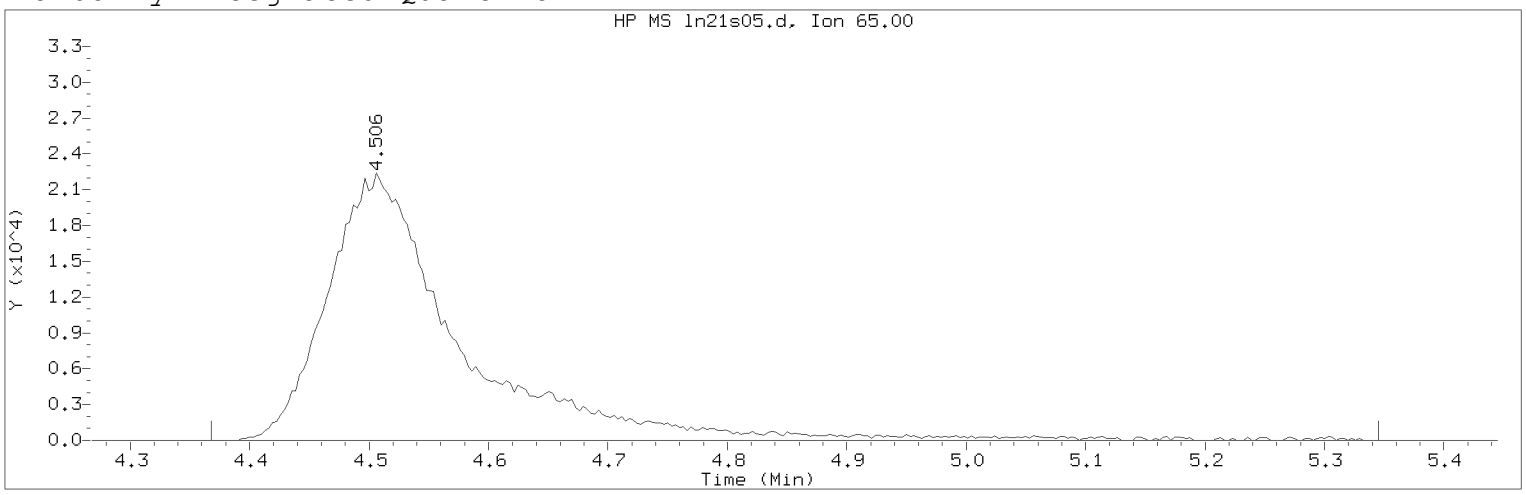
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/21/2019 at 22:42.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov21a.b/ln21s05.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 12:04 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 22:42 dvv10203

Sample Name: W1803MSD Lab Sample ID: 1202288MSD

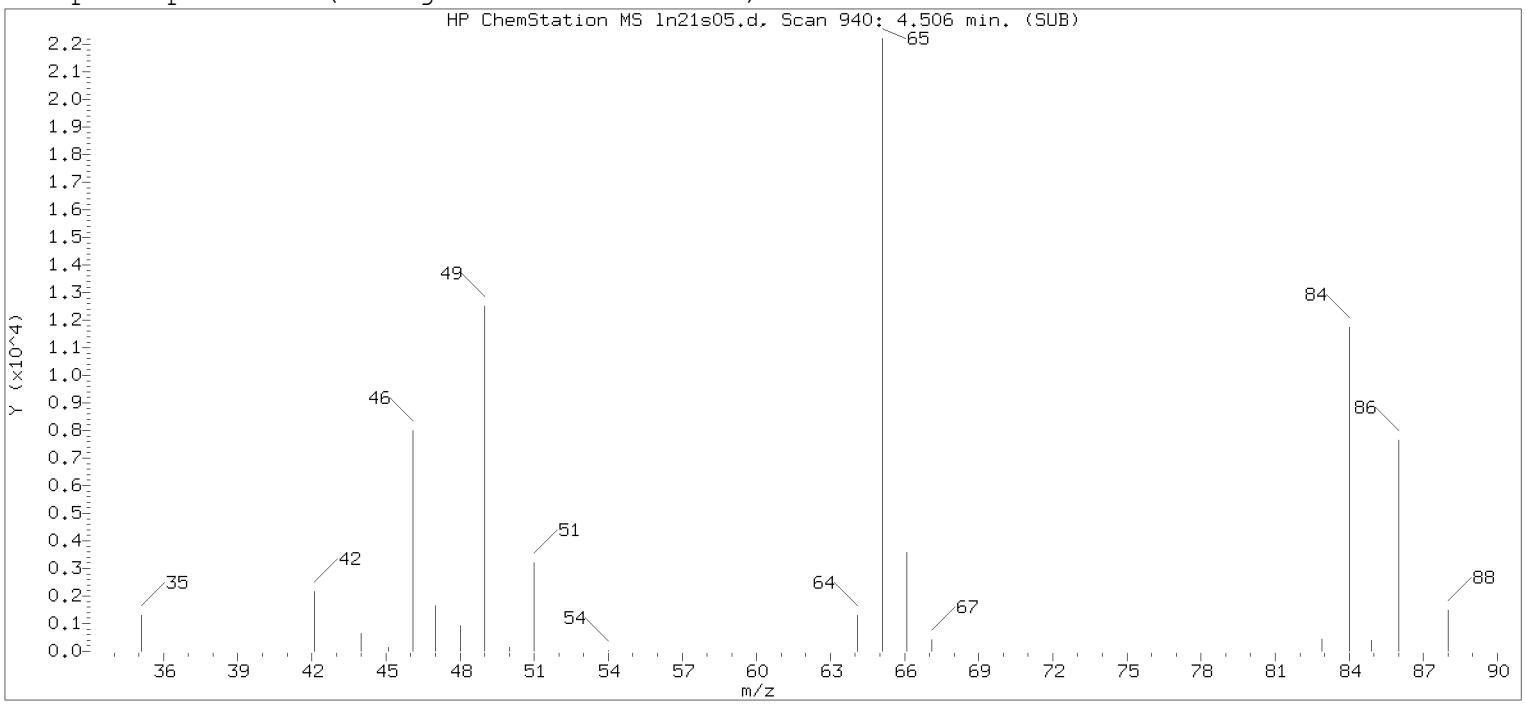
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 940
Retention Time (minutes): 4.506
Quant Ion : 65.00
Area (flag) : 172012M
On-Column Amount (ng) : 250.0000
Integration start scan : 896 Integration stop scan: 1200
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

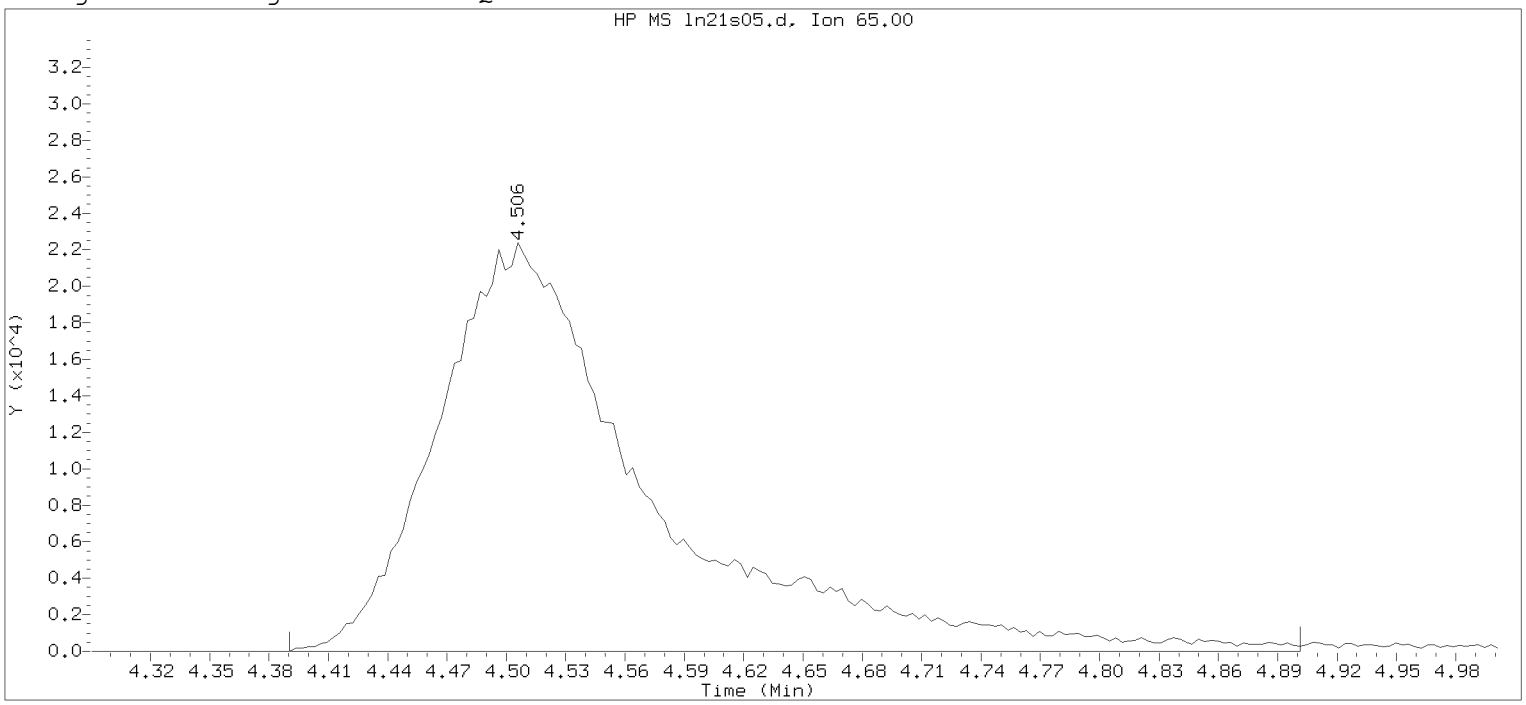
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/21/2019 at 22:42.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:42.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov21a.b/ln21s05.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 12:04 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 12:22 Automation

Sample Name: W1803MSD Lab Sample ID: 1202288MSD

Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 940
Retention Time (minutes): 4.506
Quant Ion : 65.00
Area : 167011
On-column Amount (ng) : 250.0000
Integration start scan : 903 Integration stop scan: 1062
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/21/2019 at 22:42.
Target 3.5 esignature user ID: dvv10268

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL80

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL80

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov20a.b/ln20l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	20	
75-35-4	1,1-Dichloroethene	20	
67-64-1	Acetone	160	
76-13-1	Freon 113	19	
75-15-0	Carbon Disulfide	17	
75-09-2	Methylene Chloride	21	
156-60-5	trans-1,2-Dichloroethene	20	
75-34-3	1,1-Dichloroethane	20	
156-59-2	cis-1,2-Dichloroethene	21	
78-93-3	2-Butanone	130	
67-66-3	Chloroform	20	
71-55-6	1,1,1-Trichloroethane	20	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	20	
79-01-6	Trichloroethene	21	
123-91-1	1,4-Dioxane	640	
108-88-3	Toluene	20	
127-18-4	Tetrachloroethene	20	
100-41-4	Ethylbenzene	20	
179601-23-1	m+p-Xylene	41	
95-47-6	o-Xylene	20	
1330-20-7	Xylene (Total)	62	
95-50-1	1,2-Dichlorobenzene	21	
91-20-3	Naphthalene	20	

FORM I VOA

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov20a.b/ln20101.d Injection date and time: **20-NOV-2019 09:13**
Data file Sample Info. Line: LCSL80;LCSL80;1;3;LCS;;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.516	(-0.022)	943	65	168087	(10)	250.00	
66) Fluorobenzene	7.962	(-0.003)	2015	96	923804	(4)	50.00	
100) Chlorobenzene-d5	11.361	(0.000)	3072	117	756463	(4)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	402949	(3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.078	(0.000)	113	216175	47.864	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.535	(0.000)	102	57092	49.599	99%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	960737	48.538	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.348	(0.000)	95	372288	49.672	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)	2.406	(-0.000)	62	122924	19.836	19.84			0.2	1
17) 1,1-Dichloroethene	(2)	3.770	(-0.001)	96	79383	20.271	20.27			0.2	1
18) Acetone	(1)	3.808	(0.002)	58	88894	157.234	157.23			0.7	20
19) Freon 113	(2)	3.805	(-0.000)	101	84393	18.889	18.89			0.2	10
23) Carbon Disulfide	(2)	4.078	(-0.000)	76	247183	16.750	16.75			0.2	5
28) Methylene Chloride	(2)	4.483	(-0.001)	84	96028	20.603	20.60			0.3	1
32) trans-1,2-Dichloroethene	(2)	4.895	(-0.000)	96	91810	20.266	20.27			0.2	1
36) 1,1-Dichloroethane	(2)	5.560	(-0.000)	63	155286	19.649	19.65			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.384	(-0.000)	96	108658	21.369	21.37			0.2	1
44) 2-Butanone	(2)	6.368	(-0.000)	43	453248	130.122	130.12			0.3	10
51) Chloroform	(2)	6.863	(-0.000)	83	154156	20.395	20.39			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.088	(-0.000)	97	128442	19.910	19.91			0.3	1
60) Benzene	(2)	7.560	(-0.000)	78	389052	20.704	20.70			0.2	1
61) 1,2-Dichloroethane	(2)	7.634	(-0.000)	62	121733	20.141	20.14			0.3	1
71) Trichloroethene	(2)	8.435	(0.000)	95	97941	20.700	20.70			0.2	1
75) 1,4-Dioxane	(1)	8.856	(0.013)	88	36202	642.599	642.60			29	250
88) Toluene	(3)	10.007	(-0.000)	92	253800	20.452	20.45			0.2	1
93) Tetrachloroethene	(3)	10.541	(0.000)	166	104969	19.973	19.97			0.2	1
104) Ethylbenzene	(3)	11.467	(-0.000)	91	482617	20.348	20.35			0.4	1
106) m+p-Xylene	(3)	11.580	(-0.000)	106	387000	41.477	41.48			1	5
107) o-Xylene	(3)	11.908	(-0.000)	106	185853	20.166	20.17			0.4	1
108) Xylene (Total)	(3)			106	572853	61.643	61.64			1	6
138) 1,2-Dichlorobenzene	(4)	13.502	(-0.000)	146	225904	20.572	20.57			0.2	5
148) Naphthalene	(4)	14.772	(-0.000)	128	528621	20.044	20.04			1	5

Digitally signed by Don V. Viray on 11/20/2019 at 22:29. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov20a.b/ln20101.d Injection date and time: **20-NOV-2019 09:13**
Data file Sample Info. Line: LCSL80;LCSL80;1;3;LCS;;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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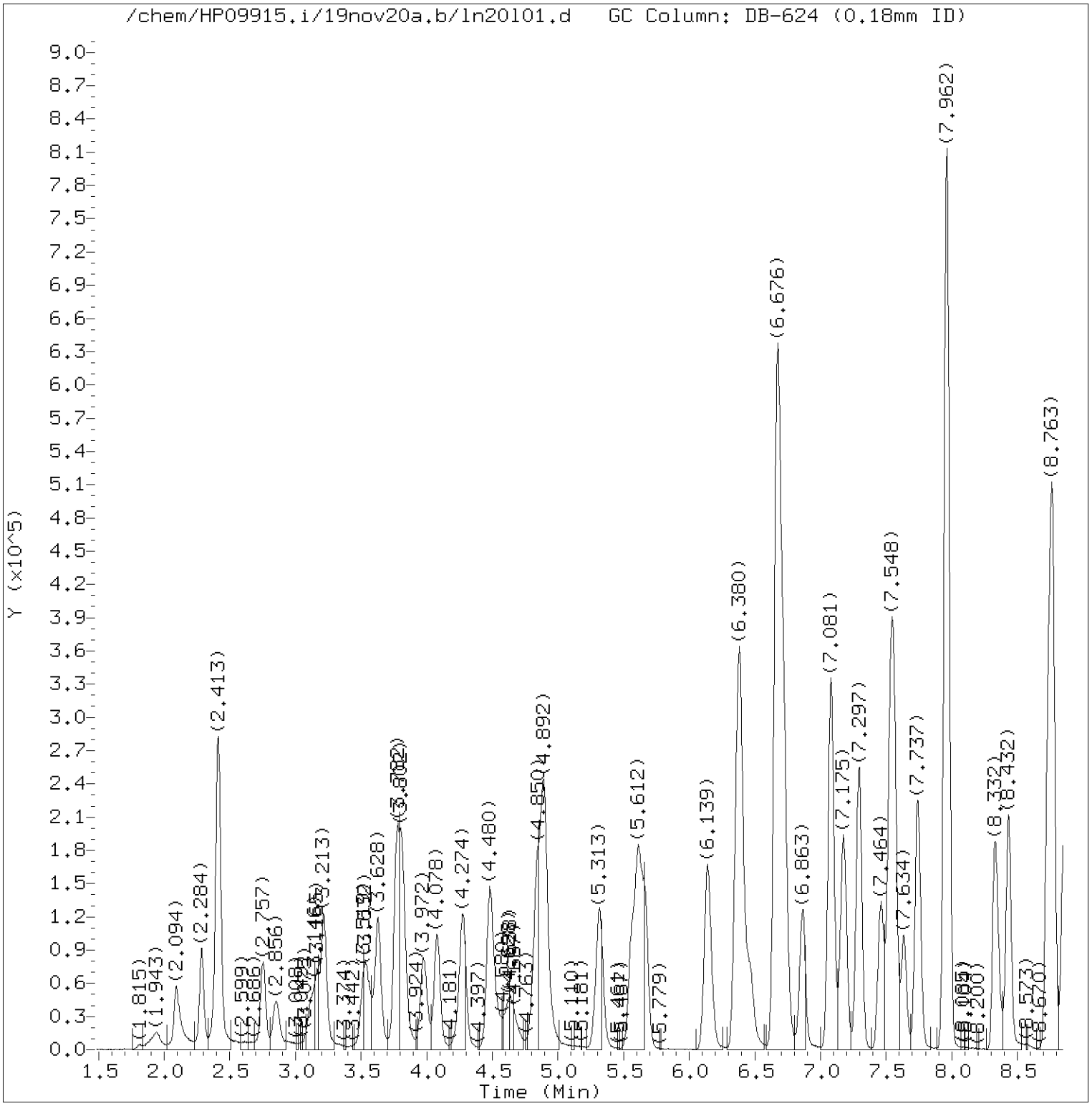
Total number of targets = 24

Digitally signed by Don V. Viray on 11/20/2019 at 22:29. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:50. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

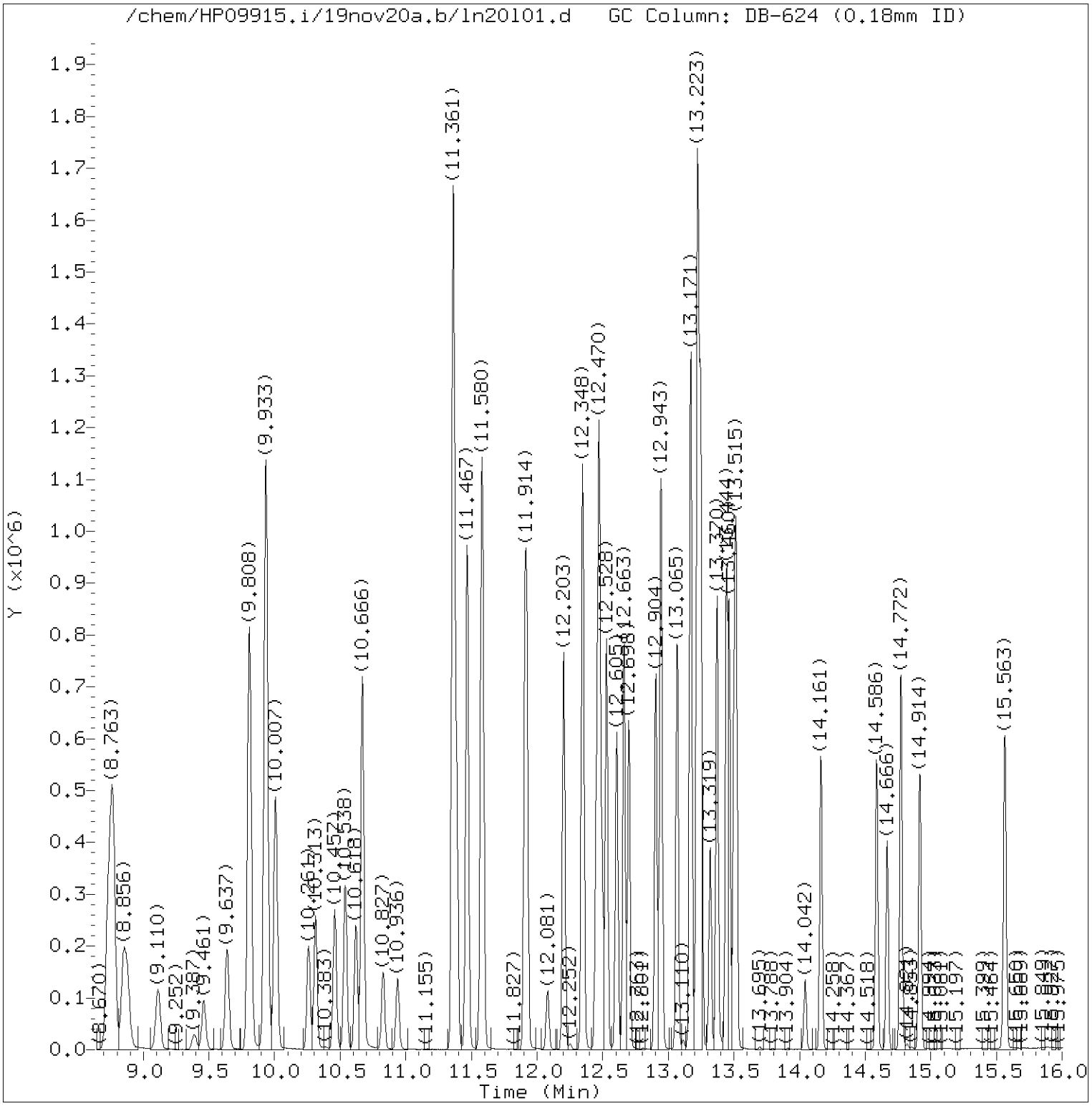
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20l01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 09:13 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Sample Name: LCSL80 Lab Sample ID: LCSL80

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20l01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 09:13 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Sample Name: LCSL80 Lab Sample ID: LCSL80

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20l01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 09:13 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Sample Name: LCSL80 Lab Sample ID: LCSL80

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	2.406	62	122924	19.836
17) 1,1-Dichloroethene	(2)	3.770	96	79383	20.271
19) Freon 113	(2)	3.805	101	84393	18.889
18) Acetone	(1)	3.808	58	88894	157.234
23) Carbon Disulfide	(2)	4.078	76	247183	16.750
28) Methylene Chloride	(2)	4.483	84	96028	20.603
29)*t-Butyl alcohol-d10	(1)	4.516	65	168087	250.000
32) trans-1,2-Dichloroethene	(2)	4.895	96	91810	20.266
36) 1,1-Dichloroethane	(2)	5.561	63	155286	19.649
44) 2-Butanone	(2)	6.368	43	453248	130.122
42) cis-1,2-Dichloroethene	(2)	6.384	96	108658	21.369
51) Chloroform	(2)	6.863	83	154156	20.395
52)$Dibromofluoromethane	(2)	7.078	113	216175	47.864
53) 1,1,1-Trichloroethane	(2)	7.088	97	128442	19.910
57)$1,2-Dichloroethane-d4	(2)	7.535	102	57092	49.599
60) Benzene	(2)	7.560	78	389052	20.704
61) 1,2-Dichloroethane	(2)	7.634	62	121733	20.141
66)*Fluorobenzene	(2)	7.962	96	923804	50.000
71) Trichloroethene	(2)	8.435	95	97941	20.700
75) 1,4-Dioxane	(1)	8.856	88	36202	642.599
83)$Toluene-d8	(3)	9.933	98	960737	48.538
88) Toluene	(3)	10.007	92	253800	20.452
93) Tetrachloroethene	(3)	10.541	166	104969	19.973
100)*Chlorobenzene-d5	(3)	11.361	117	756463	50.000
104) Ethylbenzene	(3)	11.467	91	482617	20.348
106) m+p-Xylene	(3)	11.580	106	387000	41.477
108) Xylene (Total)	(3)		106	572853	61.643
107) o-Xylene	(3)	11.908	106	185853	20.166
114)$4-Bromofluorobenzene	(3)	12.348	95	372288	49.672
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	402949	50.000
138) 1,2-Dichlorobenzene	(4)	13.502	146	225904	20.572
148) Naphthalene	(4)	14.772	128	528621	20.044

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL83

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL83

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov21a.b/ln21l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	19	
74-87-3	Chloromethane	19	
106-99-0	1,3-Butadiene	29	
75-01-4	Vinyl Chloride	19	
74-83-9	Bromomethane	16	
75-00-3	Chloroethane	17	
109-66-0	n-Pentane	15	
75-69-4	Trichlorofluoromethane	21	
60-29-7	Ethyl ether	20	
354-23-4	Freon 123a	19	
107-02-8	Acrolein	150	
75-35-4	1,1-Dichloroethene	19	
67-64-1	Acetone	150	
76-13-1	Freon 113	18	
67-63-0	2-Propanol	140	
74-88-4	Methyl Iodide	17	
75-15-0	Carbon Disulfide	16	
107-05-1	Allyl Chloride	17	
79-20-9	Methyl Acetate	18	
75-09-2	Methylene Chloride	20	
75-65-0	t-Butyl alcohol	190	
107-13-1	Acrylonitrile	89	
156-60-5	trans-1,2-Dichloroethene	19	
1634-04-4	Methyl Tertiary Butyl Ether	18	
110-54-3	n-Hexane	18	
75-34-3	1,1-Dichloroethane	19	
108-20-3	di-Isopropyl ether	18	
126-99-8	2-Chloro-1,3-butadiene	17	
637-92-3	Ethyl t-butyl ether	18	
156-59-2	cis-1,2-Dichloroethene	21	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL83

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL83

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov21a.b/ln21l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	40	
78-93-3	2-Butanone	130	
594-20-7	2,2-Dichloropropane	19	
107-12-0	Propionitrile	160	
126-98-7	Methacrylonitrile	140	
74-97-5	Bromochloromethane	19	
109-99-9	Tetrahydrofuran	110	
67-66-3	Chloroform	20	
71-55-6	1,1,1-Trichloroethane	19	
110-82-7	Cyclohexane	17	
563-58-6	1,1-Dichloropropene	19	
56-23-5	Carbon Tetrachloride	18	
78-83-1	Isobutyl Alcohol	500	
71-43-2	Benzene	20	
107-06-2	1,2-Dichloroethane	20	
994-05-8	t-Amyl methyl ether	18	
142-82-5	n-Heptane	17	
71-36-3	n-Butanol	960	
79-01-6	Trichloroethene	20	
108-87-2	Methylcyclohexane	19	
78-87-5	1,2-Dichloropropane	20	
74-95-3	Dibromomethane	20	
123-91-1	1,4-Dioxane	620	
80-62-6	Methyl Methacrylate	18	
75-27-4	Bromodichloromethane	19	
79-46-9	2-Nitropropane	14	
110-75-8	2-Chloroethyl Vinyl Ether	30	
10061-01-5	cis-1,3-Dichloropropene	19	
108-10-1	4-Methyl-2-pentanone	87	
108-88-3	Toluene	20	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL83

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL83

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov21a.b/ln21l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	18	
542-75-6	1,3-Dichloropropene (total)	37	
97-63-2	Ethyl Methacrylate	17	
79-00-5	1,1,2-Trichloroethane	21	
127-18-4	Tetrachloroethene	20	
142-28-9	1,3-Dichloropropane	19	
591-78-6	2-Hexanone	85	
124-48-1	Dibromochloromethane	18	
106-93-4	1,2-Dibromoethane	20	
544-10-5	1-Chlorohexane	19	
108-90-7	Chlorobenzene	20	
630-20-6	1,1,1,2-Tetrachloroethane	19	
100-41-4	Ethylbenzene	20	
179601-23-1	m+p-Xylene	42	
95-47-6	o-Xylene	20	
1330-20-7	Xylene (Total)	62	
100-42-5	Styrene	20	
75-25-2	Bromoform	15	
98-82-8	Isopropylbenzene	21	
108-94-1	Cyclohexanone	480	
108-86-1	Bromobenzene	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	
96-18-4	1,2,3-Trichloropropane	19	
110-57-6	trans-1,4-Dichloro-2-butene	58	
103-65-1	n-Propylbenzene	21	
95-49-8	2-Chlorotoluene	20	
106-43-4	4-Chlorotoluene	20	
108-67-8	1,3,5-Trimethylbenzene	21	
98-06-6	tert-Butylbenzene	20	
76-01-7	Pentachloroethane	18	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL83

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL83

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov21a.b/ln21l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
95-63-6	1,2,4-Trimethylbenzene	20	
135-98-8	sec-Butylbenzene	20	
541-73-1	1,3-Dichlorobenzene	20	
99-87-6	p-Isopropyltoluene	20	
106-46-7	1,4-Dichlorobenzene	21	
526-73-8	1,2,3-Trimethylbenzene	20	
100-44-7	Benzyl Chloride	15	
141-93-5	1,3-Diethylbenzene	19	
105-05-5	1,4-Diethylbenzene	19	
95-50-1	1,2-Dichlorobenzene	20	
104-51-8	n-Butylbenzene	20	
135-01-3	1,2-Diethylbenzene	19	
25340-17-4	Diethylbenzene (total)	56	
96-12-8	1,2-Dibromo-3-chloropropane	18	
108-70-3	1,3,5-Trichlorobenzene	19	
120-82-1	1,2,4-Trichlorobenzene	18	
87-68-3	Hexachlorobutadiene	16	
91-20-3	Naphthalene	19	
87-61-6	1,2,3-Trichlorobenzene	18	
91-57-6	2-Methylnaphthalene	16	

Data file: /chem/HP09915.i/19nov21a.b/ln21l01.d Injection date and time: **21-NOV-2019 09:50**
Data file Sample Info. Line: LCSL83;LCSL83;1;3;LCS;;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 21-NOV-2019 08:49
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.496(-0.003)	937	65	170757 (11)	250.00	
66) Fluorobenzene	7.959(0.000)	2014	96	895510 (6)	50.00	
100) Chlorobenzene-d5	11.361(0.000)	3072	117	731089 (6)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223(0.000)	3651	152	395685 (7)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075(0.000)	113	208873	47.708	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.529(0.000)	102	55217	49.486	99%		80 - 120
83) Toluene-d8	(3)	9.934(0.000)	98	926555	48.436	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345(0.000)	95	362022	49.979	100%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	2.088(0.000)	85	118879	19.036	19.04			0.2	1
4) Chloromethane	(2)	2.281(0.000)	50	113496	18.857	18.86			0.2	1
5) 1,3-Butadiene	(2)	2.413(0.000)	39	146875	29.389	29.39			1	3
6) Vinyl Chloride	(2)	2.403(0.000)	62	113623	18.915	18.91			0.2	1
8) Bromomethane	(2)	2.747(0.000)	94	67718	15.726	15.73			0.3	1
9) Chloroethane	(2)	2.847(0.001)	64	55454	16.798	16.80			0.2	1
11) n-Pentane	(2)	3.210(0.000)	43	112271	14.690	14.69			0.4	10
12) Trichlorofluoromethane	(2)	3.156(0.000)	101	133402	20.627	20.63			0.2	1
14) Ethyl ether	(2)	3.435(0.001)	59	84003	20.101	20.10			0.2	5
15) Freon 123a	(2)	3.525(0.000)	67	99452	19.116	19.12			0.4	5
16) Acrolein	(1)	3.625(0.001)	56	190688	148.846	148.85			2	100
17) 1,1-Dichloroethene	(2)	3.767(-0.000)	96	73082	19.252	19.25			0.2	1
18) Acetone	(1)	3.805(0.001)	58	83980	146.219	146.22			0.7	20
19) Freon 113	(2)	3.802(-0.000)	101	77803	17.964	17.96			0.2	10
21) 2-Propanol	(1)	3.992(0.002)	45	56775	137.506	137.51			18	100
22) Methyl Iodide	(2)	3.969(0.000)	142	131428	16.708	16.71			0.2	1
23) Carbon Disulfide	(2)	4.075(0.000)	76	225161	15.740	15.74			0.2	5
25) Allyl Chloride	(2)	4.268(0.000)	41	118427	17.391	17.39			0.3	5
27) Methyl Acetate	(2)	4.249(-0.000)	43	88270	18.054	18.05			0.2	5
28) Methylene Chloride	(2)	4.471(0.000)	84	90359	19.999	20.00			0.3	1
30) t-Butyl alcohol	(1)	4.638(-0.000)	59	137540	191.319	191.32			12	50
31) Acrylonitrile	(2)	4.831(0.000)	53	234895	89.300	89.30			0.3	20
32) trans-1,2-Dichloroethene	(2)	4.889(0.000)	96	85560	19.483	19.48			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	4.882(-0.000)	73	257047	17.832	17.83			0.2	1
34) n-Hexane	(2)	5.313(0.000)	57	119870	17.545	17.54			2	5
36) 1,1-Dichloroethane	(2)	5.548(0.000)	63	143445	18.725	18.72			0.2	1
38) di-Isopropyl ether	(2)	5.612(-0.000)	45	261090	17.671	17.67			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	5.657(0.000)	53	118366	17.221	17.22			0.2	5
40) Ethyl t-butyl ether	(2)	6.133(0.000)	59	253354	17.669	17.67			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.384(-0.000)	96	102179	20.730	20.73			0.2	1
43) 1,2-Dichloroethene (Total)	(2)		96	187739	40.213	40.21			0.4	2

Digitally signed by Linda C. Pape on 11/21/2019 at 10:30. Target 3.5 esignature user ID: lcp00895

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov21a.b/ln21l01.d Injection date and time: **21-NOV-2019 09:50**
Data file Sample Info. Line: LCSL83;LCSL83;1;3;LCS;;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 21-NOV-2019 08:49
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	6.361(0.000)	43	442351	131.006	131.01			0.3	10
45) 2,2-Dichloropropane	(2)	6.394(0.000)	77	111627	18.744	18.74			0.3	1
47) Propionitrile	(1)	6.461(0.000)	54	146275	163.299	163.30			14	100
48) Methacrylonitrile	(2)	6.667(-0.000)	67	400873	141.279	141.28			6	50
49) Bromochloromethane	(2)	6.709(-0.000)	128	49407	18.904	18.90			0.2	5
50) Tetrahydrofuran	(1)	6.721(0.000)	71	87199	107.771	107.77			0.7	10
51) Chloroform	(2)	6.860(0.000)	83	146586	20.006	20.01			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.082(0.000)	97	119018	19.032	19.03			0.3	1
54) Cyclohexane	(2)	7.178(-0.000)	56	141265	16.892	16.89			1	5
55) 1,1-Dichloropropene	(2)	7.294(-0.000)	75	116105	19.168	19.17			0.2	5
56) Carbon Tetrachloride	(2)	7.284(0.000)	117	97222	18.330	18.33			0.2	1
58) Isobutyl Alcohol	(1)	7.454(0.003)	41	121599	502.630	502.63			36	250
60) Benzene	(2)	7.561(0.000)	78	367758	20.189	20.19			0.2	1
61) 1,2-Dichloroethane	(2)	7.631(0.000)	62	119034	20.317	20.32			0.3	1
65) t-Amyl methyl ether	(2)	7.738(0.000)	73	254601	17.690	17.69			0.8	5
67) n-Heptane	(2)	7.956(0.000)	43	109713	17.189	17.19			2	5
69) n-Butanol	(1)	8.326(0.002)	56	199622	958.693	958.69			61	250
71) Trichloroethene	(2)	8.429(0.000)	95	92501	20.168	20.17			0.2	1
72) Methylcyclohexane	(2)	8.731(0.000)	83	160259	18.834	18.83			0.5	5
73) 1,2-Dichloropropane	(2)	8.766(0.000)	63	92469	19.992	19.99			0.2	1
74) Dibromomethane	(2)	8.876(0.000)	93	59478	19.874	19.87			0.2	1
75) 1,4-Dioxane	(1)	8.853(0.002)	88	35274	616.336	616.34			29	250
76) Methyl Methacrylate	(2)	8.847(0.000)	69	82115	18.359	18.36			0.2	5
78) Bromodichloromethane	(2)	9.107(0.000)	83	103992	19.364	19.36			0.2	1
79) 2-Nitropropane	(2)	9.384(0.000)	41	23405	14.389	14.39			0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)	9.458(0.000)	63	60340	30.375	30.37			0.2	10
81) cis-1,3-Dichloropropene	(2)	9.638(0.000)	75	135603	19.012	19.01			0.2	1
82) 4-Methyl-2-pentanone	(2)	9.808(0.000)	43	621984	87.269	87.27			0.5	10
88) Toluene	(3)	10.004(0.000)	92	241061	20.100	20.10			0.2	1
89) trans-1,3-Dichloropropene	(3)	10.258(-0.000)	75	120804	17.745	17.74			0.2	1
90) 1,3-Dichloropropene (total)	(3)		100	256407	36.756	36.76			0.4	2
91) Ethyl Methacrylate	(3)	10.313(0.000)	69	140443	16.975	16.97			0.2	5
92) 1,1,2-Trichloroethane	(3)	10.458(0.000)	97	93560	20.576	20.58			0.2	1
93) Tetrachloroethene	(3)	10.538(0.000)	166	99925	19.673	19.67			0.2	1
94) 1,3-Dichloropropane	(3)	10.618(0.000)	76	149885	19.307	19.31			0.2	1
96) 2-Hexanone	(3)	10.670(-0.000)	43	469593	85.030	85.03			0.3	10
97) Dibromochloromethane	(3)	10.827(-0.000)	129	83867	18.006	18.01			0.2	1
99) 1,2-Dibromoethane	(3)	10.937(0.000)	107	97408	19.728	19.73			0.2	1
101) 1-Chlorohexane	(3)	11.364(0.000)	91	121373	18.839	18.84			0.3	5
102) Chlorobenzene	(3)	11.387(0.000)	112	270985	19.981	19.98			0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)	11.464(0.000)	131	82916	18.556	18.56			0.2	1
104) Ethylbenzene	(3)	11.467(0.000)	91	466291	20.342	20.34			0.4	1
106) m+p-Xylene	(3)	11.580(0.000)	106	374583	41.539	41.54			1	5
107) o-Xylene	(3)	11.904(0.000)	106	180611	20.277	20.28			0.4	1
108) Xylene (Total)	(3)		106	555194	61.817	61.82			1	6
109) Styrene	(3)	11.921(0.000)	104	297281	20.197	20.20			0.2	5
110) Bromoform	(3)	12.078(0.000)	173	51595	14.824	14.82			1	4
111) Isopropylbenzene	(3)	12.204(0.000)	105	464963	20.813	20.81			0.2	5
112) Cyclohexanone	(1)	12.287(0.002)	55	108072	482.149	482.15			25	100
115) Bromobenzene	(4)	12.464(-0.000)	156	118387	19.907	19.91			0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	12.448(-0.000)	83	145855	19.514	19.51			0.2	1
117) 1,2,3-Trichloropropane	(4)	12.496(-0.000)	110	44405	19.360	19.36			0.2	5
118) trans-1,4-Dichloro-2-butene	(4)	12.474(-0.000)	53	133192	57.770	57.77			6	50
119) n-Propylbenzene	(4)	12.528(-0.000)	91	548025	21.093	21.09			0.2	5

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov21a.b/ln21l01.d Injection date and time: **21-NOV-2019 09:50**
Data file Sample Info. Line: LCSL83;LCSL83;1;3;LCS;;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 21-NOV-2019 08:49
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)	12.605(-0.000)	126	109908	19.912	19.91			0.2	5
121) 4-Chlorotoluene	(4)	12.699(-0.000)	126	113526	19.760	19.76			0.2	5
122) 1,3,5-Trimethylbenzene	(4)	12.663(-0.000)	105	393837	20.858	20.86			0.3	5
124) tert-Butylbenzene	(4)	12.904(-0.000)	134	77963M	19.965	19.97			0.3	5
125) Pentachloroethane	(4)	12.940(-0.000)	167	60994	18.140	18.14			0.2	5
126) 1,2,4-Trimethylbenzene	(4)	12.946(-0.000)	105	407466	20.475	20.48			1	5
127) sec-Butylbenzene	(4)	13.065(0.000)	105	474978	20.384	20.38			0.2	5
129) 1,3-Dichlorobenzene	(4)	13.168(-0.000)	146	223060	20.412	20.41			0.2	5
130) p-Isopropyltoluene	(4)	13.171(-0.000)	119	410287	20.353	20.35			0.2	5
133) 1,4-Dichlorobenzene	(4)	13.239(-0.000)	146	232976	20.565	20.56			0.2	5
134) 1,2,3-Trimethylbenzene	(4)	13.248(-0.000)	105	419667	19.908	19.91			0.3	5
135) Benzyl Chloride	(4)	13.319(-0.000)	91	247243	15.491	15.49			1	5
136) 1,3-Diethylbenzene	(4)	13.371(0.000)	119	245308	18.698	18.70			0.2	5
137) 1,4-Diethylbenzene	(4)	13.441(-0.000)	119	257150	18.501	18.50			0.2	5
138) 1,2-Dichlorobenzene	(4)	13.499(0.000)	146	220908	20.486	20.49			0.2	5
139) n-Butylbenzene	(4)	13.464(-0.000)	92	201574	19.557	19.56			0.2	5
140) 1,2-Diethylbenzene	(4)	13.515(-0.000)	119	206983	18.715	18.72			0.2	5
141) Diethylbenzene (total)	(4)		100	709441	55.914	55.91			0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)	14.039(0.000)	75	28853	17.634	17.63			0.3	5
144) 1,3,5-Trichlorobenzene	(4)	14.162(0.000)	180	153703	18.552	18.55			0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.586(-0.000)	180	146410	18.175	18.17			0.3	5
147) Hexachlorobutadiene	(4)	14.666(-0.000)	225	60761	15.975	15.98			2	5
148) Naphthalene	(4)	14.769(0.000)	128	503848	19.456	19.46			1	5
149) 1,2,3-Trichlorobenzene	(4)	14.914(0.000)	180	143184	18.267	18.27			0.4	5
150) 2-Methylnaphthalene	(4)	15.560(0.000)	142	248524	15.584	15.58			2	4

M = Compound was manually integrated.

Total number of targets = 110

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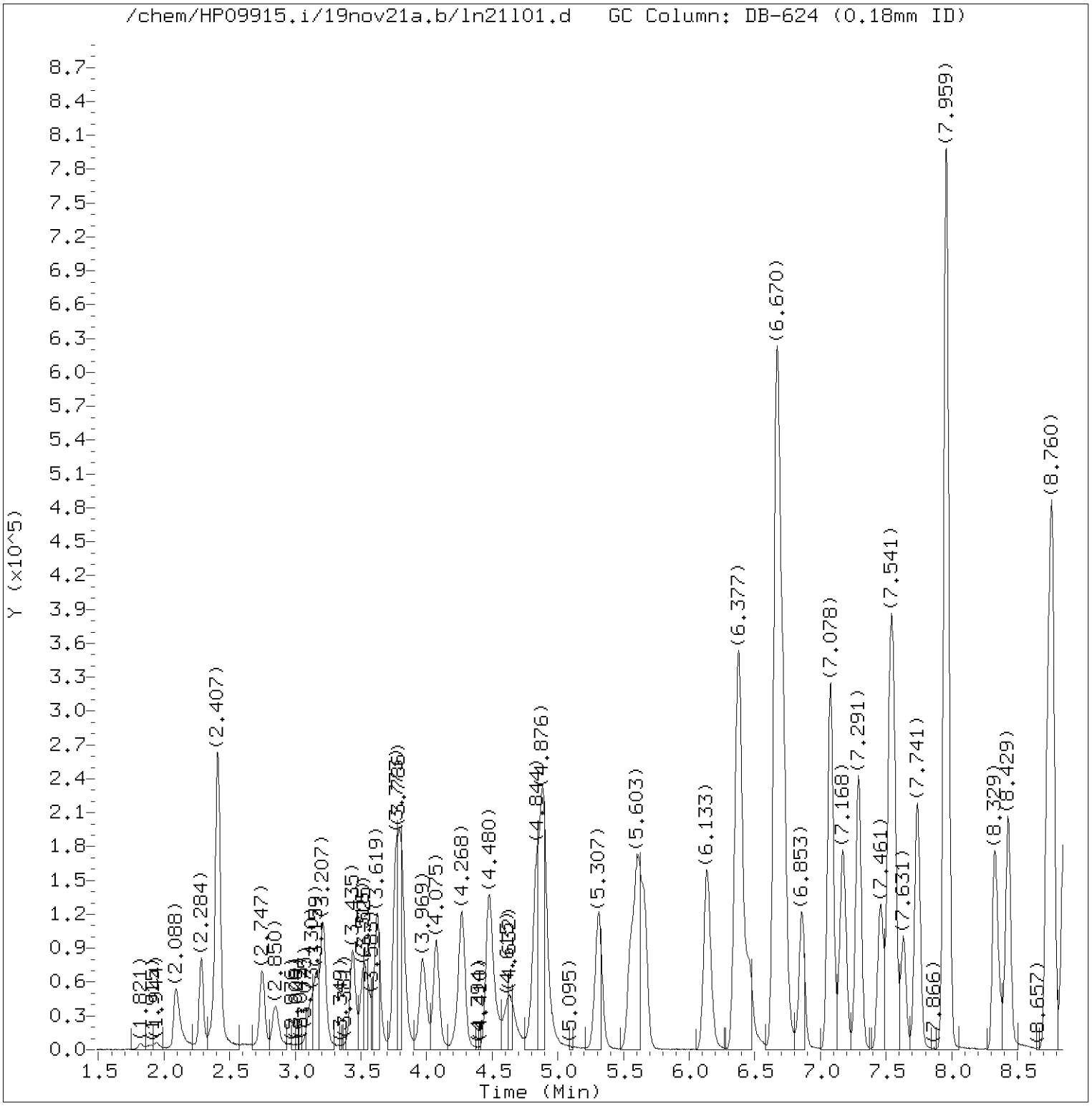
Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:40. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21l01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:50 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Sample Name: LCSL83 Lab Sample ID: LCSL83

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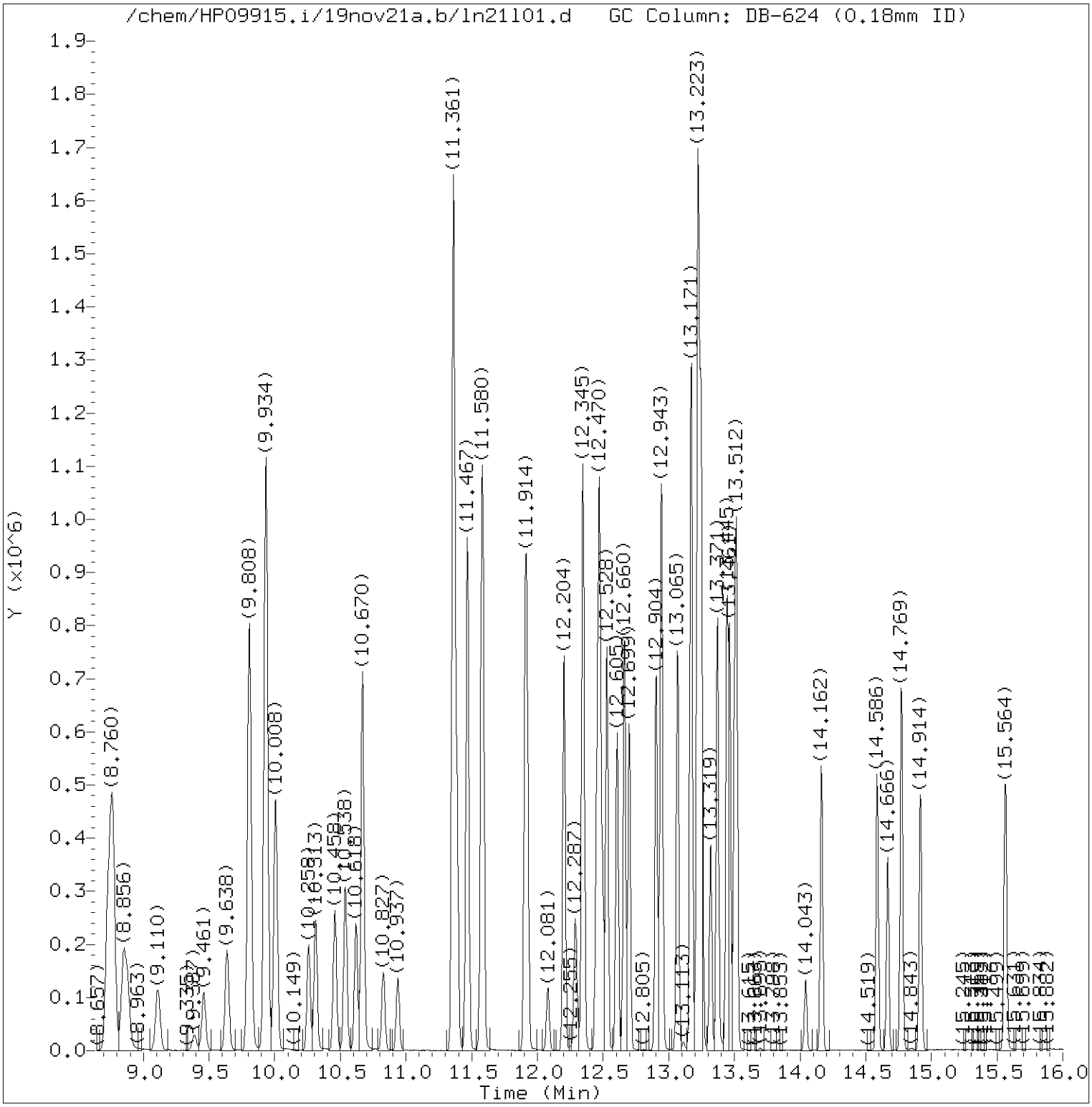
on 11/21/2019 at 10:30.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21l01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:50 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Sample Name: LCSL83 Lab Sample ID: LCSL83

Digitally signed by Linda C. Pape
on 11/21/2019 at 10:30.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21l01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:50 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Sample Name: LCSL83 Lab Sample ID: LCSL83

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.088	85	118879	19.036
4) Chloromethane	(2)	2.281	50	113496	18.857
6) Vinyl Chloride	(2)	2.403	62	113623	18.915
5) 1,3-Butadiene	(2)	2.413	39	146875	29.389
8) Bromomethane	(2)	2.747	94	67718	15.726
9) Chloroethane	(2)	2.847	64	55454	16.798
12) Trichlorofluoromethane	(2)	3.156	101	133402	20.627
11) n-Pentane	(2)	3.210	43	112271	14.690
14) Ethyl ether	(2)	3.435	59	84003	20.101
15) Freon 123a	(2)	3.525	67	99452	19.116
16) Acrolein	(1)	3.625	56	190688	148.846
17) 1,1-Dichloroethene	(2)	3.767	96	73082	19.252
19) Freon 113	(2)	3.802	101	77803	17.964
18) Acetone	(1)	3.805	58	83980	146.219
22) Methyl Iodide	(2)	3.969	142	131428	16.708
21) 2-Propanol	(1)	3.992	45	56775	137.506
23) Carbon Disulfide	(2)	4.075	76	225161	15.740
27) Methyl Acetate	(2)	4.249	43	88270	18.054
25) Allyl Chloride	(2)	4.268	41	118427	17.391
28) Methylene Chloride	(2)	4.471	84	90359	19.999
29)*t-Butyl alcohol-d10	(1)	4.496	65	170757	250.000
30) t-Butyl alcohol	(1)	4.638	59	137540	191.319
31) Acrylonitrile	(2)	4.831	53	234895	89.300
33) Methyl Tertiary Butyl Ether	(2)	4.882	73	257047	17.832
32) trans-1,2-Dichloroethene	(2)	4.889	96	85560	19.483
34) n-Hexane	(2)	5.313	57	119870	17.545
36) 1,1-Dichloroethane	(2)	5.548	63	143445	18.725
38) di-Isopropyl ether	(2)	5.612	45	261090	17.671
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	118366	17.221
40) Ethyl t-butyl ether	(2)	6.133	59	253354	17.669
43) 1,2-Dichloroethene (Total)	(2)		96	187739	40.213
44) 2-Butanone	(2)	6.361	43	442351	131.006
42) cis-1,2-Dichloroethene	(2)	6.384	96	102179	20.730
45) 2,2-Dichloropropane	(2)	6.394	77	111627	18.744
47) Propionitrile	(1)	6.461	54	146275	163.299
48) Methacrylonitrile	(2)	6.667	67	400873	141.279
49) Bromochloromethane	(2)	6.709	128	49407	18.904
50) Tetrahydrofuran	(1)	6.721	71	87199	107.771

* = Compound is an internal standard.

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on 11/21/2019 at 10:30.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21l01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:50 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Sample Name: LCSL83 Lab Sample ID: LCSL83

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	6.860	83	146586	20.006
52)$Dibromofluoromethane	(2)	7.075	113	208873	47.708
53) 1,1,1-Trichloroethane	(2)	7.082	97	119018	19.032
54) Cyclohexane	(2)	7.178	56	141265	16.892
56) Carbon Tetrachloride	(2)	7.284	117	97222	18.330
55) 1,1-Dichloropropene	(2)	7.294	75	116105	19.168
58) Isobutyl Alcohol	(1)	7.455	41	121599	502.630
57)$1,2-Dichloroethane-d4	(2)	7.529	102	55217	49.486
60) Benzene	(2)	7.561	78	367758	20.189
61) 1,2-Dichloroethane	(2)	7.631	62	119034	20.317
65) t-Amyl methyl ether	(2)	7.737	73	254601	17.690
67) n-Heptane	(2)	7.956	43	109713	17.189
66)*Fluorobenzene	(2)	7.959	96	895510	50.000
69) n-Butanol	(1)	8.326	56	199622	958.693
71) Trichloroethene	(2)	8.429	95	92501	20.168
72) Methylcyclohexane	(2)	8.731	83	160259	18.834
73) 1,2-Dichloropropane	(2)	8.766	63	92469	19.992
76) Methyl Methacrylate	(2)	8.847	69	82115	18.359
75) 1,4-Dioxane	(1)	8.853	88	35274	616.336
74) Dibromomethane	(2)	8.876	93	59478	19.874
78) Bromodichloromethane	(2)	9.107	83	103992	19.364
79) 2-Nitropropane	(2)	9.384	41	23405	14.389
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	60340	30.375
81) cis-1,3-Dichloropropene	(2)	9.638	75	135603	19.012
82) 4-Methyl-2-pentanone	(2)	9.808	43	621984	87.269
83)$Toluene-d8	(3)	9.934	98	926555	48.436
88) Toluene	(3)	10.004	92	241061	20.100
90) 1,3-Dichloropropene (total)	(3)		100	256407	36.756
89) trans-1,3-Dichloropropene	(3)	10.258	75	120804	17.745
91) Ethyl Methacrylate	(3)	10.313	69	140443	16.975
92) 1,1,2-Trichloroethane	(3)	10.458	97	93560	20.576
93) Tetrachloroethene	(3)	10.538	166	99925	19.673
94) 1,3-Dichloropropane	(3)	10.618	76	149885	19.307
96) 2-Hexanone	(3)	10.670	43	469593	85.030
97) Dibromochloromethane	(3)	10.827	129	83867	18.006
99) 1,2-Dibromoethane	(3)	10.937	107	97408	19.728
100)*Chlorobenzene-d5	(3)	11.361	117	731089	50.000
101) 1-Chlorohexane	(3)	11.364	91	121373	18.839

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/21/2019 at 10:30.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21l01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:50 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Sample Name: LCSL83 Lab Sample ID: LCSL83

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
102) Chlorobenzene	(3)	11.387	112	270985	19.981
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	82916	18.556
104) Ethylbenzene	(3)	11.467	91	466291	20.342
106) m+p-Xylene	(3)	11.580	106	374583	41.539
108) Xylene (Total)	(3)		106	555194	61.817
107) o-Xylene	(3)	11.905	106	180611	20.277
109) Styrene	(3)	11.921	104	297281	20.197
110) Bromoform	(3)	12.078	173	51595	14.824
111) Isopropylbenzene	(3)	12.204	105	464963	20.813
112) Cyclohexanone	(1)	12.287	55	108072	482.149
114)$4-Bromofluorobenzene	(3)	12.345	95	362022	49.979
116) 1,1,2,2-Tetrachloroethane	(4)	12.448	83	145855	19.514
115) Bromobenzene	(4)	12.464	156	118387	19.907
118) trans-1,4-Dichloro-2-butene	(4)	12.474	53	133192	57.770
117) 1,2,3-Trichloropropane	(4)	12.496	110	44405	19.360
119) n-Propylbenzene	(4)	12.528	91	548025	21.093
120) 2-Chlorotoluene	(4)	12.605	126	109908	19.912
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	393837	20.858
121) 4-Chlorotoluene	(4)	12.699	126	113526	19.760
124) tert-Butylbenzene	(4)	12.904	134	77963M	19.965
125) Pentachloroethane	(4)	12.940	167	60994	18.140
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	407466	20.475
127) sec-Butylbenzene	(4)	13.065	105	474978	20.384
129) 1,3-Dichlorobenzene	(4)	13.168	146	223060	20.412
130) p-Isopropyltoluene	(4)	13.171	119	410287	20.353
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	395685	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	232976	20.565
134) 1,2,3-Trimethylbenzene	(4)	13.249	105	419667	19.908
135) Benzyl Chloride	(4)	13.319	91	247243	15.491
136) 1,3-Diethylbenzene	(4)	13.371	119	245308	18.698
141) Diethylbenzene (total)	(4)		100	709441	55.914
137) 1,4-Diethylbenzene	(4)	13.441	119	257150	18.501
139) n-Butylbenzene	(4)	13.464	92	201574	19.557
138) 1,2-Dichlorobenzene	(4)	13.499	146	220908	20.486
140) 1,2-Diethylbenzene	(4)	13.515	119	206983	18.715
142) 1,2-Dibromo-3-chloropropane	(4)	14.039	75	28853	17.634
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	153703	18.552
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	146410	18.175

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/21/2019 at 10:30.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21l01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:50 Analyst ID: LCP00895

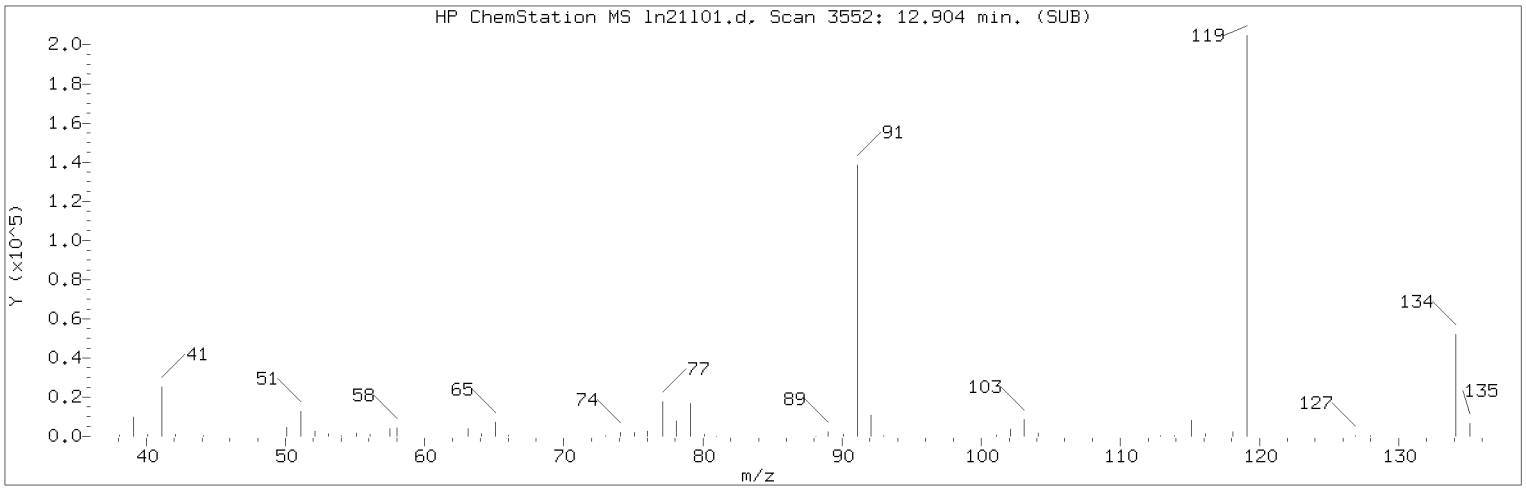
Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Sample Name: LCSL83 Lab Sample ID: LCSL83

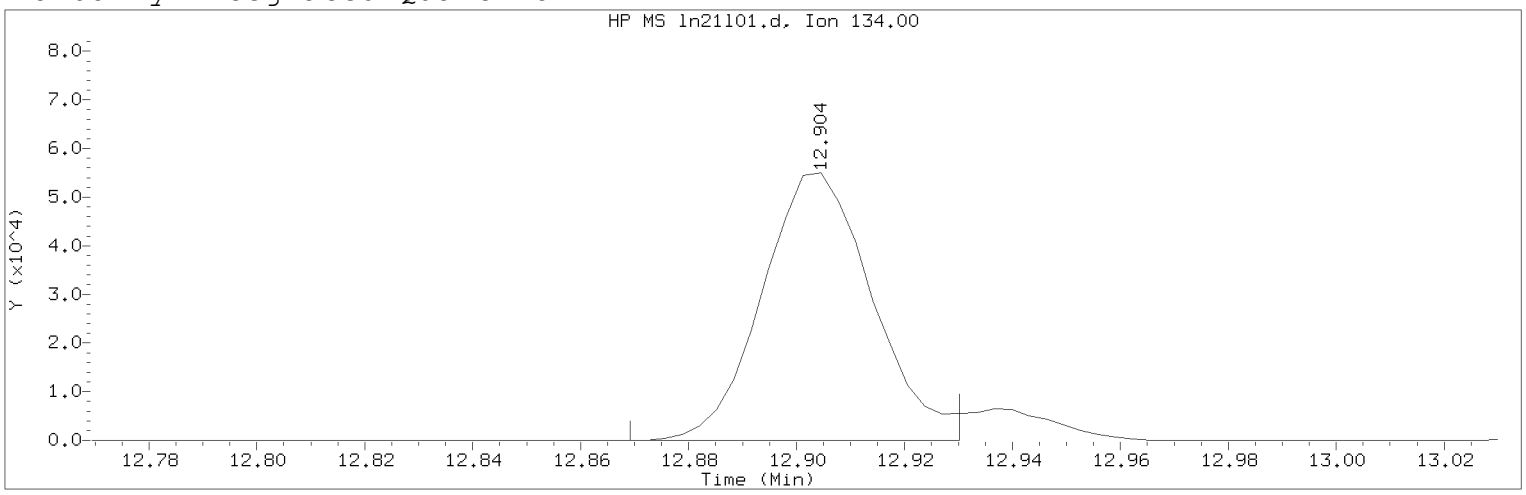
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Hexachlorobutadiene	(4)	14.666	225	60761	15.975
148) Naphthalene	(4)	14.769	128	503848	19.456
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	143184	18.267
150) 2-Methylnaphthalene	(4)	15.560	142	248524	15.584

Digitally signed by Linda C. Pape
on 11/21/2019 at 10:30.
Target 3.5 esignature user ID: lcp00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov21a.b/ln21101.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:50 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Sample Name: LCSL83 Lab Sample ID: LCSL83

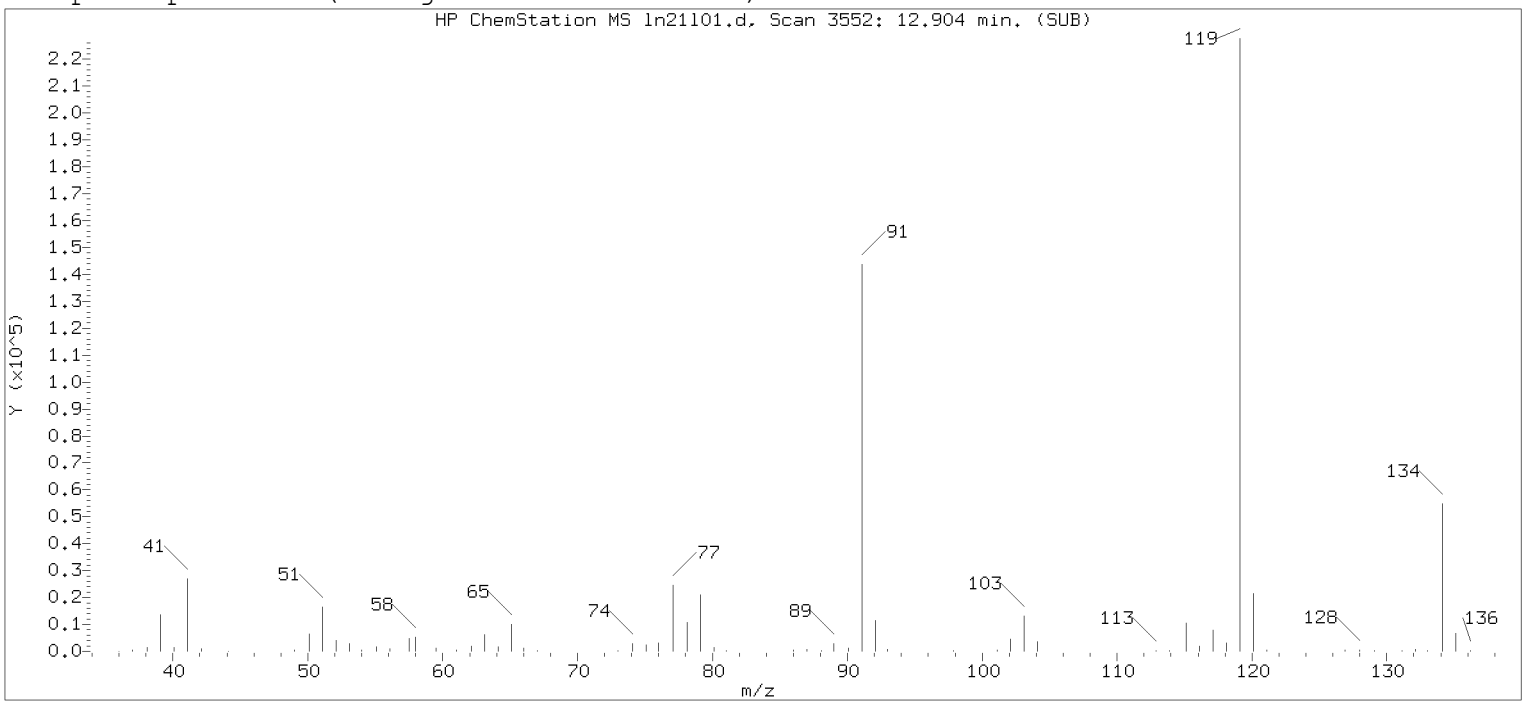
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 77963M
On-Column Amount (ng) : 19.9653
Integration start scan : 3540 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

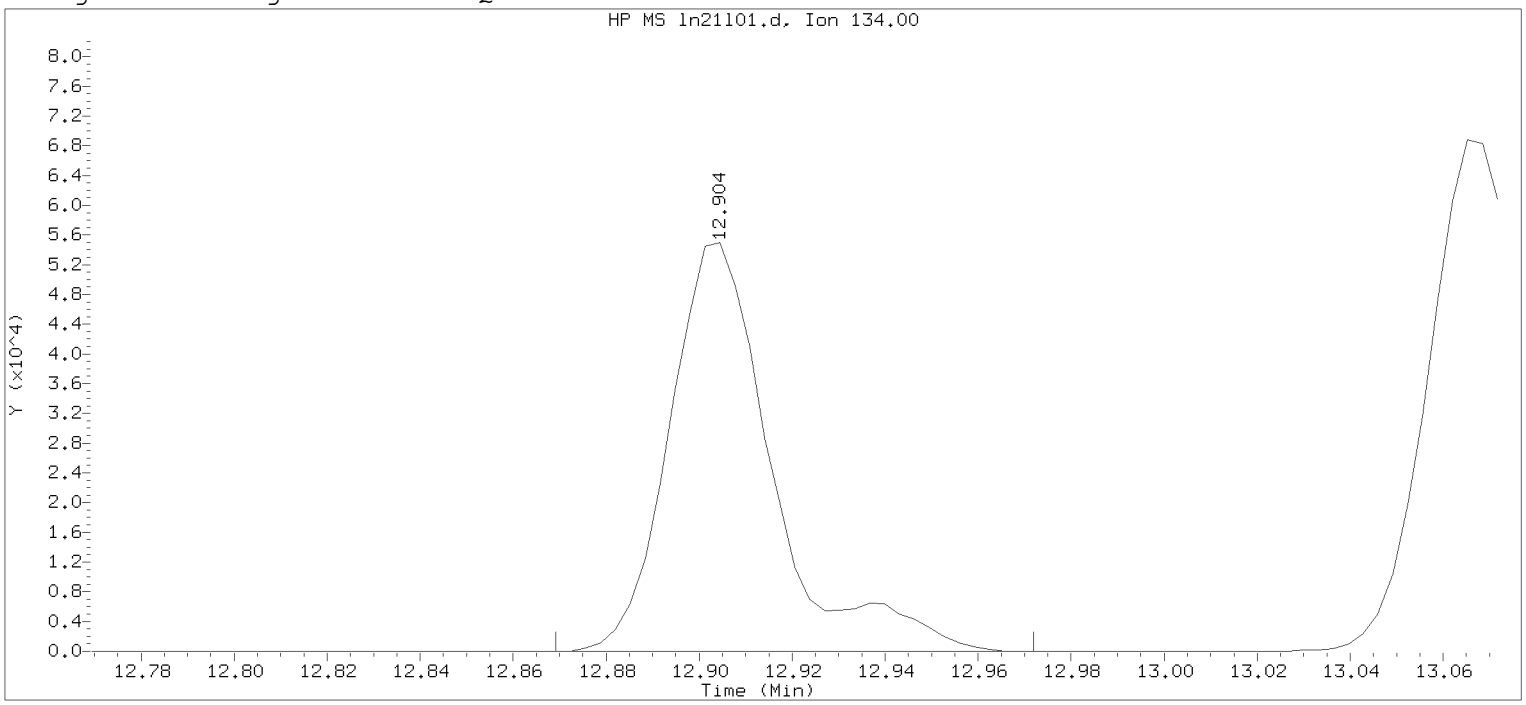
Analyst responsible for change: Digitally signed by Linda C. Pape
on 11/21/2019 at 10:30.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:40.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov21a.b/ln21101.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:50 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 10:07 Automation

Sample Name: LCSL83 Lab Sample ID: LCSL83

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 84738
On-column Amount (ng) : 21.7003
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 11/21/2019 at 10:30.
Target 3.5 esignature user ID: LCP00895

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NYSDEC ASP Category B Data Package

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Project: AD-New Windsor, NY
Surface Water Samples
Collected on 11/11/19-11/12/19

SDG# JCW19

GROUP	SAMPLE NUMBERS
2074775	1202296-1202307

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-18-27
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M. Kauffman **Date:** **12/12/2019**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Katherine Klinefelter at (717) 556-7256.

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Sample Reference List for SDG Number JCW19
with a Data Package Type of NYSDEC B

06556 - The Johnson Company, Inc.

Project: AD-New Windsor, NY

Lab Sample Number	Client Sample ID	Collection Date	Date Received	Lab Sample Code
1202296	RS-03	11/12/2019 12:30	11/14/2019 10:55	W1901
1202297	RS-03 MS	11/12/2019 12:30	11/14/2019 10:55	W1901
1202298	RS-03 MSD	11/12/2019 12:30	11/14/2019 10:55	W1901
1202299	RS-DUP	11/12/2019 10:00	11/14/2019 10:55	W1902
1202300	RS-10	11/12/2019 12:45	11/14/2019 10:55	W1903
1202301	RS-02	11/12/2019 12:55	11/14/2019 10:55	W1904
1202302	RS-11	11/12/2019 13:10	11/14/2019 10:55	W1905
1202303	RS-08	11/11/2019 14:50	11/14/2019 10:55	W1906
1202304	RS-07	11/11/2019 15:09	11/14/2019 10:55	W1907
1202305	RS-14	11/11/2019 15:12	11/14/2019 10:55	W1908
1202306	RS-15	11/11/2019 15:30	11/14/2019 10:55	W1909
1202307	RS-04	11/11/2019 15:40	11/14/2019 10:55	W1910

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Sample pH Log

SDG: JCW19

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
1202296	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/20/2019 10:26:16PM	10203
1202297	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/20/2019 10:26:16PM	10203
1202298	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/20/2019 10:26:16PM	10203
1202299	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/20/2019 10:26:16PM	10203
1202300	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/20/2019 10:26:16PM	10203
1202301	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/20/2019 10:26:16PM	10203
1202302	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/20/2019 10:26:16PM	10203
1202303	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/20/2019 10:26:16PM	10203
1202304	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/20/2019 10:26:16PM	10203
1202305	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/20/2019 10:26:16PM	10203
1202306	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/20/2019 10:26:16PM	10203
1202307	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/20/2019 10:26:16PM	10203

*pH Check Code Key	**Chlorine Present Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added) **PA** = Original container checked - pH adjusted to correct range. (Preservative was added) **PV** = Volatile container checked **PC** = pH checked (unpreserved container) **SPK** = Subsampled from an original container. Original container checked - pH is within correct range **SPA** = Subsampled from an original container. Subsample container checked - pH adjusted to correct range. **SPC** = Subsampled from an original container. pH checked (unpreserved container). **SUP** = Subsampled from original container. Unable to be preserved due to the matrix of the sample. **UP** = Unable to preserve due to matrix of the sample. **NA** = Not applicable	**NA** = Chlorine Not Checked **Y** = Chlorine Present **N** = Chlorine Not Present

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11997 VOCs- 5ml Water by 8260C/D

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Report Date: November 24, 2019 11:30

Project: AD-New Windsor, NY

Account #: 06556
Group Number: 2074775
SDG: JCW19
PO Number: 1-0145-05
Release Number: 58300.00
State of Sample Origin: NY

Electronic Copy To	The Johnson Company, Inc.	Attn: Tristan Hardy
Electronic Copy To	The Johnson Company, Inc.	Attn: George Lester
Electronic Copy To	VHB	Attn: Quinn Ledak

Respectfully Submitted,

Katherine A. Klinefelter

Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
RS-03 Grab Surface Water	11/12/2019 12:30	1202296
RS-03 MS Grab Surface Water	11/12/2019 12:30	1202297
RS-03 MSD Grab Surface Water	11/12/2019 12:30	1202298
RS-DUP Grab Surface Water	11/12/2019 10:00	1202299
RS-10 Grab Surface Water	11/12/2019 12:45	1202300
RS-02 Grab Surface Water	11/12/2019 12:55	1202301
RS-11 Grab Surface Water	11/12/2019 13:10	1202302
RS-08 Grab Surface Water	11/11/2019 14:50	1202303
RS-07 Grab Surface Water	11/11/2019 15:09	1202304
RS-14 Grab Surface Water	11/11/2019 15:12	1202305
RS-15 Grab Surface Water	11/11/2019 15:30	1202306
RS-04 Grab Surface Water	11/11/2019 15:40	1202307

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **RS-03 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/12/2019 12:30
SDG#: JCW19-01BKG

The Johnson Company, Inc.
ELLE Sample #: WW 1202296
ELLE Group #: 2074775
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.8 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	0.3 J	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	1 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	1	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	3	0.3	1	1
11997	Trichloroethene	79-01-6	12	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193241AA	11/20/2019 11:25	Kathrine K Muramatsu	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193241AA	11/20/2019 11:24	Kathrine K Muramatsu	1

*=This limit was used in the evaluation of the final result

Sample Description: **RS-03 MS Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/12/2019 12:30
SDG#: JCW19-01MS

The Johnson Company, Inc.
ELLE Sample #: WW 1202297
ELLE Group #: 2074775
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	150	0.7	20	1
11997	Benzene	71-43-2	21	0.2	1	1
11997	2-Butanone	78-93-3	120	0.3	10	1
11997	Carbon Disulfide	75-15-0	18	0.2	5	1
11997	Chloroform	67-66-3	21	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	21	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	21	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	20	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	22	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	23	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	21	0.2	1	1
11997	1,4-Dioxane	123-91-1	580	29	250	1
11997	Ethylbenzene	100-41-4	21	0.4	1	1
11997	Freon 113	76-13-1	21	0.2	10	1
11997	Methylene Chloride	75-09-2	21	0.3	1	1
11997	Naphthalene	91-20-3	19	1	5	1
11997	Tetrachloroethene	127-18-4	22	0.2	1	1
11997	Toluene	108-88-3	21	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	23	0.3	1	1
11997	Trichloroethene	79-01-6	33	0.2	1	1
11997	Vinyl Chloride	75-01-4	19	0.2	1	1
11997	Xylene (Total)	1330-20-7	63	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193241AA	11/20/2019 11:52	Kathrine K Muramatsu	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193241AA	11/20/2019 11:51	Kathrine K Muramatsu	1

*=This limit was used in the evaluation of the final result

Sample Description: **RS-03 MSD Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/12/2019 12:30
SDG#: JCW19-01MSD

The Johnson Company, Inc.
ELLE Sample #: WW 1202298
ELLE Group #: 2074775
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	140	0.7	20	1
11997	Benzene	71-43-2	22	0.2	1	1
11997	2-Butanone	78-93-3	130	0.3	10	1
11997	Carbon Disulfide	75-15-0	19	0.2	5	1
11997	Chloroform	67-66-3	21	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	20	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	21	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	20	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	23	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	23	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	22	0.2	1	1
11997	1,4-Dioxane	123-91-1	580	29	250	1
11997	Ethylbenzene	100-41-4	21	0.4	1	1
11997	Freon 113	76-13-1	21	0.2	10	1
11997	Methylene Chloride	75-09-2	21	0.3	1	1
11997	Naphthalene	91-20-3	19	1	5	1
11997	Tetrachloroethene	127-18-4	22	0.2	1	1
11997	Toluene	108-88-3	21	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	24	0.3	1	1
11997	Trichloroethene	79-01-6	34	0.2	1	1
11997	Vinyl Chloride	75-01-4	12	0.2	1	1
11997	Xylene (Total)	1330-20-7	63	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193241AA	11/20/2019 12:14	Kathrine K Muramatsu	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193241AA	11/20/2019 12:13	Kathrine K Muramatsu	1

*=This limit was used in the evaluation of the final result

Sample Description: **RS-DUP Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/12/2019 10:00
SDG#: JCW19-02FD

The Johnson Company, Inc.
ELLE Sample #: WW 1202299
ELLE Group #: 2074775
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.8 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	0.3 J	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	1 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	1	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	2	0.3	1	1
11997	Trichloroethene	79-01-6	10	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193241AA	11/20/2019 12:36	Kathrine K Muramatsu	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193241AA	11/20/2019 12:35	Kathrine K Muramatsu	1

*=This limit was used in the evaluation of the final result

Sample Description: **RS-10 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/12/2019 12:45
SDG#: JCW19-03

The Johnson Company, Inc.
ELLE Sample #: WW 1202300
ELLE Group #: 2074775
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	0.9 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.2 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	0.2 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	0.2 J	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	0.6 J	0.3	1	1
11997	Trichloroethene	79-01-6	3	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193241AA	11/20/2019 12:58	Kathrine K Muramatsu	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193241AA	11/20/2019 12:57	Kathrine K Muramatsu	1

*=This limit was used in the evaluation of the final result

Sample Description: **RS-02 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/12/2019 12:55
SDG#: JCW19-04

The Johnson Company, Inc.
ELLE Sample #: WW 1202301
ELLE Group #: 2074775
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	0.6 J	0.3	1	1
11997	Trichloroethene	79-01-6	2	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193241AA	11/20/2019 13:20	Kathrine K Muramatsu	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193241AA	11/20/2019 13:19	Kathrine K Muramatsu	1

*=This limit was used in the evaluation of the final result

Sample Description: **RS-11 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/12/2019 13:10
SDG#: JCW19-05

The Johnson Company, Inc.
ELLE Sample #: WW 1202302
ELLE Group #: 2074775
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	8 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	1 J	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	0.4 J	0.3	1	1
11997	Trichloroethene	79-01-6	2	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193241AA	11/20/2019 13:42	Kathrine K Muramatsu	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193241AA	11/20/2019 13:41	Kathrine K Muramatsu	1

*=This limit was used in the evaluation of the final result

Sample Description: **RS-08 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/11/2019 14:50
SDG#: JCW19-06

The Johnson Company, Inc.
ELLE Sample #: WW 1202303
ELLE Group #: 2074775
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193241AA	11/20/2019 14:04	Kathrine K Muramatsu	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193241AA	11/20/2019 14:03	Kathrine K Muramatsu	1

*=This limit was used in the evaluation of the final result

Sample Description: **RS-07 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/11/2019 15:09
SDG#: JCW19-07

The Johnson Company, Inc.
ELLE Sample #: WW 1202304
ELLE Group #: 2074775
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.7 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	2	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	0.4 J	0.3	1	1
11997	Trichloroethene	79-01-6	1	0.2	1	1
11997	Vinyl Chloride	75-01-4	0.6 J	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193241AA	11/20/2019 14:26	Kathrine K Muramatsu	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193241AA	11/20/2019 14:25	Kathrine K Muramatsu	1

*=This limit was used in the evaluation of the final result

Sample Description: **RS-14 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/11/2019 15:12
SDG#: JCW19-08

The Johnson Company, Inc.
ELLE Sample #: WW 1202305
ELLE Group #: 2074775
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193241AA	11/20/2019 14:48	Kathrine K Muramatsu	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193241AA	11/20/2019 14:47	Kathrine K Muramatsu	1

*=This limit was used in the evaluation of the final result

Sample Description: **RS-15 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/11/2019 15:30
SDG#: JCW19-09

The Johnson Company, Inc.
ELLE Sample #: WW 1202306
ELLE Group #: 2074775
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.5 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	2	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193241AA	11/20/2019 15:10	Kathrine K Muramatsu	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193241AA	11/20/2019 15:09	Kathrine K Muramatsu	1

*=This limit was used in the evaluation of the final result

Sample Description: **RS-04 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/11/2019 15:40
SDG#: JCW19-10

The Johnson Company, Inc.
ELLE Sample #: WW 1202307
ELLE Group #: 2074775
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	3 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.8 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	0.5 J	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	0.8 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	0.2 J	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	6	0.3	1	1
11997	Trichloroethene	79-01-6	22	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193241AA	11/20/2019 15:32	Kathrine K Muramatsu	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193241AA	11/20/2019 15:31	Kathrine K Muramatsu	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2074775
Reported: 11/24/2019 11:30

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: L193241AA	Sample number(s): 1202296-1202307		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	6

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: L193241AA	Sample number(s): 1202296-1202307								
Acetone	150	157.23			105		54-157		
Benzene	20	20.7			104		80-120		
2-Butanone	150	130.12			87		59-135		
Carbon Disulfide	20	16.75			84		65-128		
Chloroform	20	20.39			102		80-120		
1,2-Dichlorobenzene	20	20.57			103		80-120		
1,1-Dichloroethane	20	19.65			98		80-120		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2074775
Reported: 11/24/2019 11:30

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,2-Dichloroethane	20	20.14			101		73-124		
1,1-Dichloroethene	20	20.27			101		80-131		
cis-1,2-Dichloroethene	20	21.37			107		80-125		
trans-1,2-Dichloroethene	20	20.27			101		80-126		
1,4-Dioxane	500	642.6			129		63-146		
Ethylbenzene	20	20.35			102		80-120		
Freon 113	20	18.89			94		73-139		
Methylene Chloride	20	20.6			103		80-120		
Naphthalene	20	20.04			100		53-124		
Tetrachloroethene	20	19.97			100		80-120		
Toluene	20	20.45			102		80-120		
1,1,1-Trichloroethane	20	19.91			100		67-126		
Trichloroethene	20	20.7			104		80-120		
Vinyl Chloride	20	19.84			99		56-120		
Xylene (Total)	60	61.64			103		80-120		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: L193241AA	Sample number(s): 1202296-1202307 UNSPK: 1202296									
Acetone	N.D.	150	145.12	150	138.99	97	93	54-157	4	30
Benzene	N.D.	20	21.22	20	21.51	106	108	80-120	1	30
2-Butanone	N.D.	150	124.98	150	129	83	86	59-135	3	30
Carbon Disulfide	N.D.	20	18.31	20	18.56	92	93	65-128	1	30
Chloroform	N.D.	20	20.82	20	21.06	104	105	80-120	1	30
1,2-Dichlorobenzene	N.D.	20	20.66	20	20.45	103	102	80-120	1	30
1,1-Dichloroethane	0.812	20	20.64	20	21.07	99	101	80-120	2	30
1,2-Dichloroethane	N.D.	20	20.17	20	20.17	101	101	73-124	0	30
1,1-Dichloroethene	0.256	20	22.48	20	22.63	111	112	80-131	1	30
cis-1,2-Dichloroethene	0.975	20	22.63	20	23.21	108	111	80-120	3	30
trans-1,2-Dichloroethene	N.D.	20	21.06	20	21.5	105	108	80-120	2	30
1,4-Dioxane	N.D.	500	581.54	500	576.84	116	115	63-146	1	30
Ethylbenzene	N.D.	20	21.06	20	21.18	105	106	80-120	1	30
Freon 113	N.D.	20	20.93	20	20.92	105	105	73-139	0	30
Methylene Chloride	N.D.	20	21.08	20	21.09	105	105	80-120	0	30
Naphthalene	N.D.	20	18.82	20	19.04	94	95	53-124	1	30
Tetrachloroethene	1.14	20	22.39	20	22.49	106	107	80-120	0	30
Toluene	N.D.	20	20.75	20	21.17	104	106	80-120	2	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2074775
Reported: 11/24/2019 11:30

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
1,1,1-Trichloroethane	2.60	20	23.43	20	23.83	104	106	67-126	2	30
Trichloroethene	11.85	20	32.94	20	34.27	105	112	80-120	4	30
Vinyl Chloride	N.D.	20	19.45	20	11.53	97	58	56-120	51*	30
Xylene (Total)	N.D.	60	63.31	60	63.32	106	106	80-120	0	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: L193241AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1202296	95	101	96	97
1202297	95	98	98	97
1202298	95	101	98	99
1202299	95	99	97	97
1202300	94	101	96	97
1202301	95	101	96	97
1202302	96	100	96	96
1202303	96	100	96	96
1202304	96	99	97	96
1202305	96	101	96	97
1202306	96	100	96	96
1202307	97	98	96	96
Blank	93	98	97	98
LCS	96	99	97	99
MS	95	98	98	97
MSD	95	101	98	99
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 6556 | For Eurofins Lancaster Laboratories Environmental use only: Group # 2074775 Sample # 120 2296-307

COC # 596345

Client Information

Client: VHB / The Johnson Company	Acct. #: 06556
Project Name/#: AD-New Windsor / 58300	PWSID #:
Project Manager: George Lester	P.O. #:
Sampler: Adam Robtoy	Quote #:
State where samples were collected: NY	For Compliance: Yes ☐ No ☒

Matrix: ☐ Soil ☐ Sediment ☐ Tissue | ☐ Potable ☐ Ground ☒ Surface Water ☐ NPDES | Other: ____

Analysis Requested — Preservation and Filtration Codes

For Lab Use Only
FSC: ____
SCR#: ____

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	H	826oC-VOCs	Remarks
RS-03	11/12/19	1230	X		9	X		MS/MSD
RS-Dup	11/12/19	1000	X		3	X		
RS-10	11/12/19	1245	X		3	X		
RS-02	11/12/19	1255	X		3	X		
RS-11	11/12/19	1310	X		3	X		
RS-08	11/11/19	1450	X		3	X		
RS-07	11/11/19	1509	X		3	X		
RS-14	11/11/19	1512	X		3	X		
RS-15	11/11/19	1530	X		3	X		
RS-04	11/11/19	1540	X		3	X		

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: ____

E-mail address: Glester@vhb.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	11/12/19	1645			
				11/14/19	1055

EDD Required? Yes No
If yes, format: Excel

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ____ Other ____

Temperature upon receipt 1.3 °C

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Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 266478

Group Number(s): 2074775

Client: VHB THE JOHNSON COMPANY

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	11/14/2019
Number of Packages:	1	Number of Projects:	3
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	0
Samples Chilled:	Yes	Air Quality Samples Present:	No
Paperwork Enclosed:	Yes		
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Christopher Stief

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192050133	1.3	IR	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T 717-656-2300
F 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCW19

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
1202296	RS-03	X		1	Unspiked
1202297	RS-03 MS	X		1	Matrix Spike
1202298	RS-03 MSD	X		1	Matrix Spike Duplicate
1202299	RS-DUP	X		1	Field Duplicate Sample
1202300	RS-10	X		1	
1202301	RS-02	X		1	
1202302	RS-11	X		1	
1202303	RS-08	X		1	
1202304	RS-07	X		1	
1202305	RS-14	X		1	
1202306	RS-15	X		1	
1202307	RS-04	X		1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Batch#: L193241AA (Sample number(s): 1202296-1202307, UNSPK: 1202296)

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCW19

GC/MS Volatiles

Fraction: Volatiles by GC/MS

The relative percent difference(s) for the following analyte(s) in the MS/MSD is outside the acceptance window: Vinyl Chloride

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

1. Relative Response Factor (RRF)

$$RRF = \frac{AX}{Ais} \times \frac{Cis}{Cx}$$

Where:

Ax = Area of the characteristic ion for the compound to be measured
Ais = Area of the characteristic ion for the specific internal standard to be measured
Cis = Concentration of the internal standard
Cx = Concentration of the compound to be measured

2. % Relative Standard Deviation (%RSD)

$$\%RSD = \frac{standard\ deviation}{Mean} \times 100$$

3. % Difference

$$\%D = \frac{RRFc - RRFi}{RRFi} \times 100$$

Where:

RRFc = Relative response factor from the continuing calibration standard
RRFi = Mean relative response factor from the initial calibration

4. Concentration

$$Concentration\ (\mu g/L) = \frac{(Ax)(Is)(Df)}{(Ais)(RRF)}$$

Where:

Ax, Ais, and RRF are as given in 1. above
Is = Amount of internal standard added in parts per billion (µg/L)
Df = Dilution factor

5. % Recovery (% Rec)

$$\%Rec = \frac{SSR - SR}{SA} \times 100$$

Where:

SSR = Spiked sample result
SR = Sample result
SA = Spike added

6. Relative Percent Difference (RPD)

$$RPD = \frac{(MSR - MSRD)}{(1/2)(MSR + MSRD)} \times 100$$

Where:

MSR = Matrix spike recovery
MSRD = Matrix spike recovery duplicate

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: The Johnson Company, Inc.
SDG: JCW19

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
VOCs- 5ml Water by 8260C/D	L193241AA	VBLKL80	11/20/2019 09:35
		LCSL80	11/20/2019 09:13
		1202296 UNSPK	11/20/2019 11:25
		1202297 MS	11/20/2019 11:52
		1202298 MSD	11/20/2019 12:14
		1202299	11/20/2019 12:36
		1202300	11/20/2019 12:58
		1202301	11/20/2019 13:20
		1202302	11/20/2019 13:42
		1202303	11/20/2019 14:04
		1202304	11/20/2019 14:26
		1202305	11/20/2019 14:48
		1202306	11/20/2019 15:10
		1202307	11/20/2019 15:32

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: JCW19
Matrix: LIQUID

Fraction: Volatiles by GC/MS

L193241AA / VBLKL80 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	11/20/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	11/20/19	N.D.	ug/l	0.2	1
Acetone	11/20/19	N.D.	ug/l	0.7	20
Freon 113	11/20/19	N.D.	ug/l	0.2	10
Carbon Disulfide	11/20/19	N.D.	ug/l	0.2	5
Methylene Chloride	11/20/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	11/20/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	11/20/19	N.D.	ug/l	0.2	1
2-Butanone	11/20/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	11/20/19	N.D.	ug/l	0.2	1
Chloroform	11/20/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	11/20/19	N.D.	ug/l	0.3	1
Benzene	11/20/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	11/20/19	N.D.	ug/l	0.3	1
Trichloroethene	11/20/19	N.D.	ug/l	0.2	1
1,4-Dioxane	11/20/19	N.D.	ug/l	29	250
Toluene	11/20/19	N.D.	ug/l	0.2	1
Tetrachloroethene	11/20/19	N.D.	ug/l	0.2	1
Ethylbenzene	11/20/19	N.D.	ug/l	0.4	1
Xylene (Total)	11/20/19	N.D.	ug/l	1	6
1,2-Dichlorobenzene	11/20/19	N.D.	ug/l	0.2	5
Naphthalene	11/20/19	N.D.	ug/l	1	5

Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: JCW19
Matrix: LIQUID

Fraction: Volatiles by GC/MS

L193241AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKL80	98	80 - 120	98	80 - 120	93	80 - 120	97	80 - 120
LCSL80	99	80 - 120	99	80 - 120	96	80 - 120	97	80 - 120
1202296 UNSPK	101	80 - 120	97	80 - 120	95	80 - 120	96	80 - 120
1202297 MS	98	80 - 120	97	80 - 120	95	80 - 120	98	80 - 120
1202298 MSD	101	80 - 120	99	80 - 120	95	80 - 120	98	80 - 120
1202299	99	80 - 120	97	80 - 120	95	80 - 120	97	80 - 120
1202300	101	80 - 120	97	80 - 120	94	80 - 120	96	80 - 120
1202301	101	80 - 120	97	80 - 120	95	80 - 120	96	80 - 120
1202302	100	80 - 120	96	80 - 120	96	80 - 120	96	80 - 120
1202303	100	80 - 120	96	80 - 120	96	80 - 120	96	80 - 120
1202304	99	80 - 120	96	80 - 120	96	80 - 120	97	80 - 120
1202305	101	80 - 120	97	80 - 120	96	80 - 120	96	80 - 120
1202306	100	80 - 120	96	80 - 120	96	80 - 120	96	80 - 120
1202307	98	80 - 120	96	80 - 120	97	80 - 120	96	80 - 120

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 1202296 MS: 1202297 MSD: 1202298 **Analyte**	Batch: **L193241AA** (Sample number(s): 1202296-1202307)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	N.D.	19.45	11.53	97	58	56-120	51 *	30
1,1-Dichloroethene	20	0.256 J	22.48	22.63	111	112	80-131	1	30
Acetone	150	N.D.	145.12	138.99	97	93	54-157	4	30
Freon 113	20	N.D.	20.93	20.92	105	105	73-139	0	30
Carbon Disulfide	20	N.D.	18.31	18.56	92	93	65-128	1	30
Methylene Chloride	20	N.D.	21.08	21.09	105	105	80-120	0	30
trans-1,2-Dichloroethene	20	N.D.	21.06	21.5	105	108	80-120	2	30
1,1-Dichloroethane	20	0.812 J	20.64	21.07	99	101	80-120	2	30
2-Butanone	150	N.D.	124.98	129.	83	86	59-135	3	30
cis-1,2-Dichloroethene	20	0.975 J	22.63	23.21	108	111	80-120	3	30
1,1,1-Trichloroethane	20	2.60	23.43	23.83	104	106	67-126	2	30
Chloroform	20	N.D.	20.82	21.06	104	105	80-120	1	30
1,2-Dichloroethane	20	N.D.	20.17	20.17	101	101	73-124	0	30
Benzene	20	N.D.	21.22	21.51	106	108	80-120	1	30
Trichloroethene	20	11.85	32.94	34.27	105	112	80-120	4	30
1,4-Dioxane	500	N.D.	581.54	576.84	116	115	63-146	1	30
Toluene	20	N.D.	20.75	21.17	104	106	80-120	2	30
Tetrachloroethene	20	1.14	22.39	22.49	106	107	80-120	0	30
Ethylbenzene	20	N.D.	21.06	21.18	105	106	80-120	1	30
Xylene (Total)	60	N.D.	63.31	63.32	106	106	80-120	0	30
1,2-Dichlorobenzene	20	N.D.	20.66	20.45	103	102	80-120	1	30
Naphthalene	20	N.D.	18.82	19.04	94	95	53-124	1	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSL80	Batch: **L193241AA** (Sample number(s): 1202296-1202307)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	19.84	NA	99	NA	56-120	NA	NA
1,1-Dichloroethene	20	20.27	NA	101	NA	80-131	NA	NA
Acetone	150	157.23	NA	105	NA	54-157	NA	NA
Freon 113	20	18.89	NA	94	NA	73-139	NA	NA
Carbon Disulfide	20	16.75	NA	84	NA	65-128	NA	NA
Methylene Chloride	20	20.6	NA	103	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	20.27	NA	101	NA	80-126	NA	NA
1,1-Dichloroethane	20	19.65	NA	98	NA	80-120	NA	NA
2-Butanone	150	130.12	NA	87	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	21.37	NA	107	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	19.91	NA	100	NA	67-126	NA	NA
Chloroform	20	20.39	NA	102	NA	80-120	NA	NA
1,2-Dichloroethane	20	20.14	NA	101	NA	73-124	NA	NA
Benzene	20	20.7	NA	104	NA	80-120	NA	NA
Trichloroethene	20	20.7	NA	104	NA	80-120	NA	NA
1,4-Dioxane	500	642.6	NA	129	NA	63-146	NA	NA
Toluene	20	20.45	NA	102	NA	80-120	NA	NA
Tetrachloroethene	20	19.97	NA	100	NA	80-120	NA	NA
Ethylbenzene	20	20.35	NA	102	NA	80-120	NA	NA
Xylene (Total)	60	61.64	NA	103	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	20.57	NA	103	NA	80-120	NA	NA
Naphthalene	20	20.04	NA	100	NA	53-124	NA	NA

Fraction: Volatiles by GC/MS

11997: VOCs- 5ml Water by 8260C/D Analyte Name	Default MDL	Default LOQ	Units
Vinyl Chloride	0.2	1	ug/l
1,1-Dichloroethene	0.2	1	ug/l
Acetone	0.7	20	ug/l
Freon 113	0.2	10	ug/l
Carbon Disulfide	0.2	5	ug/l
Methylene Chloride	0.3	1	ug/l
trans-1,2-Dichloroethene	0.2	1	ug/l
1,1-Dichloroethane	0.2	1	ug/l
2-Butanone	0.3	10	ug/l
cis-1,2-Dichloroethene	0.2	1	ug/l
Chloroform	0.2	1	ug/l
1,1,1-Trichloroethane	0.3	1	ug/l
Benzene	0.2	1	ug/l
1,2-Dichloroethane	0.3	1	ug/l
Trichloroethene	0.2	1	ug/l
1,4-Dioxane	29	250	ug/l
Toluene	0.2	1	ug/l
Tetrachloroethene	0.2	1	ug/l
Ethylbenzene	0.4	1	ug/l
Xylene (Total)	1	6	ug/l
1,2-Dichlorobenzene	0.2	5	ug/l
Naphthalene	1	5	ug/l

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln04t06.d BFB Injection Date: 11/04/19

Instrument ID: HP09915 BFB Injection Time: 14:18

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.48
75	30.0 - 60.0% of mass 95	44.65
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.22
173	Less than 2.0% of mass 174	0.51 (0.61)1
174	Greater than 50.0% of mass 95	83.73
175	5.0 - 9.0% of mass 174	5.92 (7.07)1
176	Greater than 95.0%, but less than 101.0% of mass 174	82.66 (98.72)1
177	5.0 - 9.0% of mass 176	5.37 (6.49)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	ln04i01.d	11/04/19	14:51
02	VSTD100	ln04i02.d	11/04/19	15:13
03	VSTD50	ln04i03.d	11/04/19	15:35
04	VSTD20	ln04i04.d	11/04/19	15:57
05	VSTD10	ln04i05.d	11/04/19	16:19
06	VSTD4	ln04i06.d	11/04/19	16:41
07	VSTD1	ln04i07.d	11/04/19	17:03
08	ICVLLG	ln04v02.d	11/04/19	18:42

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln20t01.d BFB Injection Date: 11/20/19

Instrument ID: HP09915 BFB Injection Time: 08:00

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.52
75	30.0 - 60.0% of mass 95	44.88
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.35
173	Less than 2.0% of mass 174	0.43 (0.54)1
174	Greater than 50.0% of mass 95	80.67
175	5.0 - 9.0% of mass 174	5.73 (7.10)1
176	Greater than 95.0%, but less than 101.0% of mass 174	79.93 (99.08)1
177	5.0 - 9.0% of mass 176	5.28 (6.60)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	ln20c01.d	11/20/19	08:51
02	LCSL80	ln20l01.d	11/20/19	09:13
03	VBLKL80	ln20b01.d	11/20/19	09:35
04	1202295	ln20s01.d	11/20/19	09:57
05	1202314	ln20s02.d	11/20/19	10:19
06	1202284	ln20s03.d	11/20/19	10:41
07	1202285	ln20s04.d	11/20/19	11:03
08	1202296	ln20s05.d	11/20/19	11:25
09	1202297MS	ln20s06.d	11/20/19	11:52
10	1202298MSD	ln20s07.d	11/20/19	12:14
11	1202299	ln20s08.d	11/20/19	12:36
12	1202300	ln20s09.d	11/20/19	12:58
13	1202301	ln20s10.d	11/20/19	13:20
14	1202302	ln20s11.d	11/20/19	13:42
15	1202303	ln20s12.d	11/20/19	14:04
16	1202304	ln20s13.d	11/20/19	14:26
17	1202305	ln20s14.d	11/20/19	14:48
18	1202306	ln20s15.d	11/20/19	15:10
19	1202307	ln20s16.d	11/20/19	15:32
20	1202315	ln20s17.d	11/20/19	15:54
21	1202316	ln20s18.d	11/20/19	16:16
22	1202317	ln20s19.d	11/20/19	16:38

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln20t01.d BFB Injection Date: 11/20/19

Instrument ID: HP09915 BFB Injection Time: 08:00

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.52
75	30.0 - 60.0% of mass 95	44.88
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.35
173	Less than 2.0% of mass 174	0.43 (0.54)1
174	Greater than 50.0% of mass 95	80.67
175	5.0 - 9.0% of mass 174	5.73 (7.10)1
176	Greater than 95.0%, but less than 101.0% of mass 174	79.93 (99.08)1
177	5.0 - 9.0% of mass 176	5.28 (6.60)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1202318	ln20s20.d	11/20/19	17:00
24	1202319	ln20s21.d	11/20/19	17:22
25	1202320	ln20s22.d	11/20/19	17:44

FORM V VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 11/04/19 11/04/19

Heated Purge: (Y/N) Y Calibration Times: 14:51 17:03

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ln04i07.d RRF 4 = ln04i06.d RRF 10= ln04i05.d
RRF 20= ln04i04.d RRF 50= ln04i03.d RRF100= ln04i02.d RRF300= ln04i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
Dichlorodifluoromethane	#0.2770	0.3398	0.3322	0.3567	0.3683	0.3624	0.4044	0.3487	11	AVG	#
Chloromethane	#0.3032	0.3486	0.3309	0.3441	0.3366	0.3315	0.3574	0.3361	5	AVG	#
1,3-Butadiene	0.3190	0.2966	0.2596	0.2831	0.2680	0.2614	0.2655	0.2790	8	AVG	
Vinyl Chloride	#0.3148	0.3359	0.3281	0.3461	0.3340	0.3300	0.3588	0.3354	4	AVG	#
Bromomethane	#0.2465	0.2525	0.2338	0.2435	0.2351	0.2280	0.2436	0.2404	4	AVG	#
Chloroethane	#0.1829	0.1883	0.1826	0.1903	0.1829	0.1768	0.1864	0.1843	2	AVG	#
Dichlorofluoromethane	0.4438	0.4434	0.4617	0.4547	0.4393	0.4194	0.4429	0.4436	3	AVG	
n-Pentane	0.4515	0.4661	0.3729	0.4321	0.4220	0.4236	0.4188	0.4267	7	AVG	
Trichlorofluoromethane	#0.3135	0.3650	0.3480	0.3680	0.3738	0.3637	0.3957	0.3611	7	AVG	#
Ethyl ether	0.2040	0.2292	0.2248	0.2407	0.2462	0.2325	0.2560	0.2333	7	AVG	
Freon 123a	0.2731	0.2973	0.2841	0.3052	0.2905	0.2871	0.2961	0.2905	4	AVG	
Acrolein	1.8108	1.7178	1.8759	1.9357	1.9501	1.9507	1.8885	1.8756	5	AVG	
1,1-Dichloroethene	#0.1836	0.2109	0.2092	0.2256	0.2170	0.2158	0.2215	0.2120	6	AVG	#
1,1-Dichloroethene(2)	#0.1023	0.1059	0.1045	0.1117	0.1063	0.1059	0.1072	0.1063	3	AVG	#
Acetone	#0.8149	0.8065	0.8248	0.8719	0.8448	0.8521	0.8711	0.8409	3	AVG	#
Freon 113	#0.2090	0.2460	0.2241	0.2555	0.2493	0.2512	0.2576	0.2418	8	AVG	#
2-Propanol	0.6190	0.5470	0.6059	0.5854	0.6149	0.6455	0.6138	0.6045	5	AVG	
Methyl Iodide	0.3896	0.4318	0.4390	0.4699	0.4471	0.4440	0.4531	0.4392	6	AVG	
Carbon Disulfide	#0.6790	0.7802	0.7759	0.8606	0.8244	0.8268	0.8441	0.7987	8	AVG	#
Allyl Chloride	0.3592	0.3785	0.3741	0.3853	0.3781	0.3777	0.4087	0.3802	4	AVG	
Methyl Acetate	#0.2759	0.2713	0.2678	0.2699	0.2708	0.2665	0.2887	0.2730	3	AVG	#
Methylene Chloride	#0.2376	0.2470	0.2510	0.2643	0.2542	0.2521	0.2596	0.2523	3	AVG	#
t-Butyl alcohol	0.9987	0.9567	1.0535	1.0361	1.0823	1.1654	1.0751	1.0525	6	AVG	
Acrylonitrile	0.1302	0.1382	0.1473	0.1543	0.1516	0.1518	0.1546	0.1469	6	AVG	
trans-1,2-Dichloroethene	#0.2214	0.2420	0.2423	0.2603	0.2478	0.2478	0.2548	0.2452	5	AVG	#
Methyl Tertiary Butyl Ether	#0.7408	0.7784	0.8166	0.8514	0.8245	0.8033	0.8186	0.8048	4	AVG	#
n-Hexane	0.3287	0.3697	0.3246	0.4104	0.3995	0.4116	0.4257	0.3815	11	AVG	
1,1-Dichloroethane	#0.3709	0.4279	0.4277	0.4500	0.4356	0.4348	0.4472	0.4277	6	AVG	#
di-Isopropyl ether	0.7323	0.7905	0.8261	0.8844	0.8488	0.8391	0.8535	0.8250	6	AVG	
2-Chloro-1,3-butadiene	0.3275	0.3721	0.3665	0.4087	0.3982	0.4003	0.4129	0.3838	8	AVG	
Ethyl t-butyl ether	0.7062	0.7711	0.8131	0.8688	0.8314	0.8069	0.8067	0.8006	6	AVG	
cis-1,2-Dichloroethene	#0.2518	0.2724	0.2701	0.2905	0.2780	0.2764	0.2874	0.2752	5	AVG	#
2-Butanone	#0.1780	0.1771	0.1844	0.1937	0.1954	0.1945	0.1965	0.1885	4	AVG	#
2,2-Dichloropropane	0.2822	0.3252	0.3231	0.3546	0.3451	0.3438	0.3535	0.3325	8	AVG	
Propionitrile	1.2429	1.2037	1.2978	1.3520	1.3266	1.3641	1.3930	1.3114	5	AVG	
Methacrylonitrile	0.1422	0.1460	0.1564	0.1674	0.1637	0.1633	0.1700	0.1584	7	AVG	
Bromochloromethane	0.1253	0.1402	0.1475	0.1518	0.1494	0.1475	0.1599	0.1459	7	AVG	
Tetrahydrofuran	1.1900	1.0886	1.1667	1.2087	1.1678	1.2286	1.2418	1.1846	4	AVG	
Chloroform	#0.3565	0.3938	0.4037	0.4404	0.4177	0.4181	0.4336	0.4091	7	AVG	#
1,1,1-Trichloroethane	#0.2897	0.3392	0.3356	0.3727	0.3627	0.3635	0.3807	0.3492	9	AVG	#
Cyclohexane	#0.3956	0.4609	0.4169	0.5022	0.4885	0.4944	0.5099	0.4669	10	AVG	#
Cyclohexane(2)	#0.3456	0.3987	0.3627	0.4329	0.4236	0.4319	0.4438	0.4056	9	AVG	#
Cyclohexane(3)	#0.1219	0.1428	0.1291	0.1542	0.1510	0.1531	0.1588	0.1444	10	AVG	#
1,1-Dichloropropene	0.2907	0.3348	0.3278	0.3579	0.3462	0.3479	0.3620	0.3382	7	AVG	
Carbon Tetrachloride	#0.2440	0.2777	0.2747	0.3128	0.3114	0.3175	0.3350	0.2961	11	AVG	#
Isobutyl Alcohol	0.3485	0.3107	0.3595	0.3421	0.3590	0.3974	0.3623	0.3542	7	AVG	
Benzene	#0.8990	1.0067	1.0148	1.0842	1.0359	1.0238	1.0549	1.0170	6	AVG	#
1,2-Dichloroethane	#0.3434	0.3191	0.3218	0.3337	0.3212	0.3202	0.3304	0.3271	3	AVG	#
1,2-Dichloroethane(2)	#0.0306	0.0316	0.0313	0.0343	0.0326	0.0322	0.0340	0.0324	4	AVG	#<-
t-Amyl methyl ether	0.7161	0.7648	0.8115	0.8675	0.8369	0.8221	0.8061	0.8036	6	AVG	
n-Heptane	0.3313	0.3538	0.2821	0.3843	0.3724	0.3852	0.3855	0.3564	11	AVG	
n-Butanol	0.2496	0.2624	0.3164	0.3024	0.3250	0.3551	0.3230	0.3049	12	AVG	

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 11/04/19 11/04/19

Heated Purge: (Y/N) Y Calibration Times: 14:51 17:03

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ln04i07.d RRF 4 = ln04i06.d RRF 10= ln04i05.d
RRF 20= ln04i04.d RRF 50= ln04i03.d RRF100= ln04i02.d RRF300= ln04i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Trichloroethene	#0.2300	0.2478	0.2477	0.2710	0.2607	0.2615	0.2739	0.2561	6	AVG #
Methylcyclohexane	#0.4066	0.4619	0.4494	0.4907	0.4946	0.4918	0.5306	0.4751	8	AVG #
Methylcyclohexane(2)	#0.1773	0.2158	0.2019	0.2198	0.2245	0.2228	0.2428	0.2150	10	AVG #
1,2-Dichloropropane	#0.2299	0.2478	0.2567	0.2731	0.2644	0.2644	0.2715	0.2582	6	AVG #
Dibromomethane	0.1450	0.1593	0.1638	0.1764	0.1719	0.1732	0.1801	0.1671	7	AVG
1,4-Dioxane	0.0728	0.0772	0.0845	0.0860	0.0888	0.0886	0.0887	0.0838	8	AVG
Methyl Methacrylate	0.2026	0.2254	0.2423	0.2604	0.2637	0.2705	0.2832	0.2497	11	AVG
Bromodichloromethane	#0.2483	0.2630	0.2867	0.3150	0.3161	0.3256	0.3442	0.2998	12	AVG #
2-Nitropropane	0.0733	0.0770	0.0825	0.0914	0.1013	0.1033	0.1070	0.0908	15	AVG
2-Chloroethyl Vinyl Ether	0.0882	0.0977	0.1040	0.1130	0.1155	0.1203	0.1378	0.1109	15	AVG
cis-1,3-Dichloropropene	#0.3066	0.3495	0.3874	0.4270	0.4265	0.4334	0.4572	0.3982	13	AVG #
4-Methyl-2-pentanone	#0.3519	0.3696	0.3930	0.4183	0.4328	0.4167	0.4032	0.3979	7	AVG #
Toluene	#0.7332	0.7931	0.8181	0.8731	0.8456	0.8312	0.8473	0.8202	6	AVG #
trans-1,3-Dichloropropene	#0.3482	0.3965	0.4507	0.4938	0.5103	0.5177	0.5421	0.4656	15	AVG #
Ethyl Methacrylate	0.4474	0.4901	0.5672	0.5969	0.6125	0.6196	0.6273	0.5659	12	AVG
1,1,2-Trichloroethane	#0.2783	0.2901	0.3087	0.3230	0.3222	0.3239	0.3306	0.3110	6	AVG #
Tetrachloroethene	#0.3162	0.3426	0.3214	0.3690	0.3559	0.3544	0.3721	0.3474	6	AVG #
1,3-Dichloropropane	0.4832	0.4915	0.5312	0.5551	0.5463	0.5472	0.5620	0.5309	6	AVG
2-Hexanone	#0.3356	0.3575	0.3750	0.3917	0.4210	0.3894	0.3737	0.3777	7	AVG #
Dibromochloromethane	#0.2335	0.2673	0.3027	0.3338	0.3491	0.3626	0.3808	0.3185	17	AVG #
1,2-Dibromoethane	#0.2934	0.3052	0.3308	0.3537	0.3534	0.3557	0.3715	0.3377	9	AVG #
1-Chlorohexane	0.4605	0.4391	0.3819	0.4601	0.4417	0.4418	0.4594	0.4406	6	AVG
Chlorobenzene	#0.8164	0.9033	0.9335	0.9825	0.9556	0.9405	0.9609	0.9275	6	AVG #
1,1,1,2-Tetrachloroethane	0.2351	0.2774	0.2999	0.3286	0.3310	0.3327	0.3346	0.3056	12	AVG
Ethylbenzene	#1.3747	1.5457	1.5220	1.6801	1.6314	1.6113	1.6087	1.5677	6	AVG #
m+p-Xylene	#0.5374	0.6016	0.5976	0.6715	0.6453	0.6383	0.6253	0.6167	7	AVG #
o-Xylene	#0.5399	0.5806	0.5978	0.6590	0.6427	0.6294	0.6148	0.6092	7	AVG #
Styrene	#0.8016	0.9301	1.0102	1.0972	1.0847	1.0669	1.0557	1.0066	11	AVG #
Bromoform	#	0.1724	0.2151	0.2312	0.2542	0.2685	0.2868	0.2380	17	AVG #
Isopropylbenzene	#1.2910	1.5137	1.4363	1.6684	1.6105	1.5929	1.5825	1.5279	8	AVG #
Cyclohexanone	0.3281	0.3024	0.3195	0.3248	0.3437	0.3247	0.3541	0.3282	5	AVG
Bromobenzene	0.6787	0.7176	0.7360	0.7885	0.7819	0.7772	0.7803	0.7515	6	AVG
1,1,2,2-Tetrachloroethane	#0.8022	0.8637	0.9996	0.9771	0.9960	0.9947	0.9782	0.9445	8	AVG #
1,2,3-Trichloropropane	0.2561	0.2658	0.3031	0.2987	0.2999	0.3027	0.3026	0.2898	7	AVG
trans-1,4-Dichloro-2-butene	0.2392	0.2651	0.2913	0.3105	0.3171	0.3156	0.3005	0.2913	10	AVG
n-Propylbenzene	2.9207	3.2949	2.9806	3.5724	3.4357	3.4054	3.3722	3.2831	7	AVG
2-Chlorotoluene	0.6482	0.6609	0.6535	0.7438	0.7252	0.7177	0.7330	0.6975	6	AVG
4-Chlorotoluene	0.6762	0.7074	0.6870	0.7741	0.7474	0.7369	0.7530	0.7260	5	AVG
1,3,5-Trimethylbenzene	1.9893	2.3249	2.1852	2.6169	2.5322	2.5250	2.5281	2.3860	10	AVG
tert-Butylbenzene	0.4288	0.4845	0.4243	0.5332	0.5247	0.5261	0.5325	0.4934	10	AVG
Pentachloroethane	0.2905	0.3724	0.4105	0.4466	0.4692	0.4744	0.5106	0.4249	18	AVG
1,2,4-Trimethylbenzene	2.1648	2.4282	2.3275	2.7429	2.6696	2.6607	2.6088	2.5147	8	AVG
sec-Butylbenzene	2.5710	2.9123	2.5624	3.2580	3.1256	3.1495	3.0325	2.9444	9	AVG
1,3-Dichlorobenzene	#1.3168	1.3435	1.3443	1.4749	1.4337	1.4053	1.3479	1.3809	4	AVG #
p-Isopropyltoluene	2.2311	2.5145	2.2448	2.8322	2.7191	2.7434	2.5461	2.5473	9	AVG
1,4-Dichlorobenzene	#1.3913	1.3992	1.3855	1.5164	1.4765	1.4501	1.4018	1.4315	4	AVG #
1,2,3-Trimethylbenzene	2.3717	2.5881	2.6584	2.7814	2.7739	2.7079	2.7646	2.6637	6	AVG
Benzyl Chloride		1.4905	1.9042	2.0277	2.1892	2.2241	2.2651	2.0168	14	AVG
1,3-Diethylbenzene	1.4770	1.6040	1.6373	1.7518	1.7206	1.7031	1.7107	1.6578	6	AVG
1,4-Diethylbenzene	1.6313	1.7295	1.7208	1.8600	1.8134	1.7888	1.7510	1.7564	4	AVG
1,2-Dichlorobenzene	#1.2854	1.3272	1.3476	1.4407	1.4096	1.3800	1.3479	1.3626	4	AVG #
n-Butylbenzene	1.2635	1.3335	1.1354	1.4216	1.3485	1.3543	1.2604	1.3024	7	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 11/04/19 11/04/19

Heated Purge: (Y/N) Y Calibration Times: 14:51 17:03

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ln04i07.d RRF 4 = ln04i06.d RRF 10= ln04i05.d
RRF 20= ln04i04.d RRF 50= ln04i03.d RRF100= ln04i02.d RRF300= ln04i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
1,2-Diethylbenzene	1.2665	1.3513	1.3737	1.4741	1.4581	1.4365	1.4223	1.3975	5	AVG
1,2-Dibromo-3-chloropropane#	0.1653	0.1703	0.2163	0.2130	0.2240	0.2247	0.2337	0.2068	13	AVG #
1,3,5-Trichlorobenzene	1.0736	1.0363	0.9506	1.1293	1.0680	1.0728	0.9975	1.0469	6	AVG
1,2,4-Trichlorobenzene #	1.0928	0.9898	0.9467	1.0851	1.0411	1.0335	0.9366	1.0179	6	AVG #
Hexachlorobutadiene		0.6224	0.4463	0.5319	0.4489	0.4300	0.4042	0.4806	17	AVG
Naphthalene	2.9793	3.0036	3.3068	3.4936	3.4918	3.4237	3.2086	3.2725	7	AVG
1,2,3-Trichlorobenzene	1.0616	0.9674	0.9274	1.0684	1.0300	1.0095	0.8692	0.9905	7	AVG
2-Methylnaphthalene	1.9837	1.8879	2.0390	2.2209	2.2298	2.1150	1.6300	2.0152	10	AVG
Dibromofluoromethane	0.2407	0.2444	0.2426	0.2463	0.2437	0.2470	0.2465	0.2445	1	AVG
Dibromofluoromethane(2)	0.2457	0.2504	0.2472	0.2513	0.2494	0.2516	0.2491	0.2492	1	AVG
1,2-Dichloroethane-d4	0.0612	0.0629	0.0625	0.0629	0.0628	0.0627	0.0611	0.0623	1	AVG
1,2-Dichloroethane-d4(2)	0.2741	0.2818	0.2744	0.2819	0.2771	0.2799	0.2742	0.2776	1	AVG
1,2-Dichloroethane-d4(3)	0.0389	0.0398	0.0398	0.0408	0.0397	0.0402	0.0393	0.0398	2	AVG
Toluene-d8	1.3149	1.3039	1.3148	1.3125	1.3146	1.3005	1.2968	1.3083	1	AVG
Toluene-d8(2)	0.8480	0.8436	0.8547	0.8509	0.8480	0.8442	0.8428	0.8475	1	AVG
4-Bromofluorobenzene	0.4958	0.4982	0.5005	0.4967	0.4932	0.4898	0.4935	0.4954	1	AVG
4-Bromofluorobenzene(2)	0.4097	0.4154	0.4152	0.4118	0.4097	0.4065	0.4066	0.4107	1	AVG

Average %RSD 7

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

FORM VI VOA

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP09915.i/19nov04i.b/ln04i01.d	VSTD300
/chem/HP09915.i/19nov04i.b/ln04i02.d	VSTD100
/chem/HP09915.i/19nov04i.b/ln04i03.d	VSTD050
/chem/HP09915.i/19nov04i.b/ln04i04.d	VSTD020
/chem/HP09915.i/19nov04i.b/ln04i05.d	VSTD010
/chem/HP09915.i/19nov04i.b/ln04i06.d	VSTD004
/chem/HP09915.i/19nov04i.b/ln04i07.d	VSTD001

Area Summary

File ID:

Internal Standard Name	ln04i01.d	ln04i02.d	ln04i03.d	ln04i04.d	ln04i05.d	ln04i06.d	ln04i07.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	254406	265971	269779	258058	263427	262044	243591	259611	3	Yes
Fluorobenzene	1120873	1183605	1160755	1128743	1158257	1148427	1137124	1148255	2	Yes
Chlorobenzene-d5	891668	935628	904578	883281	897139	884065	879875	896605	2	Yes
1,4-Dichlorobenzene-d4	477171	500629	483927	476218	496298	480071	473433	483964	2	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	ln04i01.d	ln04i02.d	ln04i03.d	ln04i04.d	ln04i05.d	ln04i06.d	ln04i07.d	Avg. RT
t-Butyl alcohol-d10	4.503	4.509	4.509	4.512	4.509	4.512	4.496	4.507
Fluorobenzene	7.959	7.962	7.959	7.962	7.956	7.959	7.959	7.960
Chlorobenzene-d5	11.361	11.361	11.361	11.361	11.358	11.358	11.358	11.360
1,4-Dichlorobenzene-d4	13.223	13.223	13.223	13.223	13.223	13.223	13.223	13.223

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 11/05/2019 at 16:07.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 11/04/19 Time: 18:42

Lab File ID: ln04v02.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3487	0.3266	18.73	20	-6	#
# Chloromethane	0.3361	0.3180	18.93	20	-5	#
1,3-Butadiene	0.2790	0.2741	19.65	20	-2	
# Vinyl Chloride	0.3354	0.3245	19.35	20	-3	#
# Bromomethane	0.2404	0.2156	17.93	20	-10	#
# Chloroethane	0.1843	0.1704	18.49	20	-8	#
Dichlorofluoromethane	0.4436	0.3598	16.22	20	-19	
n-Pentane	0.4267	0.4057	19.01	20	-5	
# Trichlorofluoromethane	0.3611	0.3746	20.75	20	4	#
Ethyl ether	0.2333	0.1939	16.62	20	-17	
Freon 123a	0.2905	0.2825	19.45	20	-3	
Acrolein	1.8756	1.6896	135.12	150	-10	
# 1,1-Dichloroethene	0.2120	0.2216	20.91	20	5	#
# Acetone	0.8409	0.7666	136.75	150	-9	#
# Freon 113	0.2418	0.2394	19.80	20	-1	#
2-Propanol	0.6045	0.5806	144.06	150	-4	
Methyl Iodide	0.4392	0.4077	18.56	20	-7	
# Carbon Disulfide	0.7987	0.7452	18.66	20	-7	#
Allyl Chloride	0.3802	0.3535	18.59	20	-7	
# Methyl Acetate	0.2730	0.2606	19.09	20	-5	#
# Methylene Chloride	0.2523	0.2570	20.38	20	2	#
t-Butyl alcohol	1.0525	1.0046	190.90	200	-5	
Acrylonitrile	0.1469	0.1395	94.98	100	-5	
# trans-1,2-Dichloroethene	0.2452	0.2452	20.00	20	0	#
# Methyl Tertiary Butyl Ether	0.8048	0.7596	18.87	20	-6	#
n-Hexane	0.3815	0.3828	20.07	20	0	
# 1,1-Dichloroethane	0.4277	0.4163	19.46	20	-3	#
di-Isopropyl ether	0.8250	0.7868	19.08	20	-5	
2-Chloro-1,3-butadiene	0.3838	0.3659	19.07	20	-5	
Ethyl t-butyl ether	0.8006	0.7634	19.07	20	-5	
# cis-1,2-Dichloroethene	0.2752	0.2889	20.99	20	5	#
# 2-Butanone	0.1885	0.1794	142.74	150	-5	#
2,2-Dichloropropane	0.3325	0.3377	20.31	20	2	
Propionitrile	1.3114	1.2333	141.06	150	-6	
Methacrylonitrile	0.1584	0.1535	145.31	150	-3	
Bromochloromethane	0.1459	0.1368	18.75	20	-6	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 11/04/19 Time: 18:42

Lab File ID: ln04v02.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Tetrahydrofuran	1.1846	1.0959	92.51	100	-7	
#	Chloroform	0.4091	0.4123	20.16	20	1	#
#	1,1,1-Trichloroethane	0.3492	0.3558	20.38	20	2	#
#	Cyclohexane	0.4669	0.4442	19.02	20	-5	#
	1,1-Dichloropropene	0.3382	0.3393	20.07	20	0	
#	Carbon Tetrachloride	0.2961	0.2964	20.02	20	0	#
	Isobutyl Alcohol	0.3542	0.3198	451.41	500	-10	
#	Benzene	1.0170	1.0168	20.00	20	0	#
#	1,2-Dichloroethane	0.3271	0.3373	20.62	20	3	#
	t-Amyl methyl ether	0.8036	0.7630	18.99	20	-5	
	n-Heptane	0.3564	0.3376	18.95	20	-5	
	n-Butanol	0.3049	0.2780	911.92	1000	-9	
#	Trichloroethene	0.2561	0.2581	20.16	20	1	#
#	Methylcyclohexane	0.4751	0.4589	19.32	20	-3	#
#	1,2-Dichloropropane	0.2582	0.2641	20.45	20	2	#
	Dibromomethane	0.1671	0.1672	20.01	20	0	
	1,4-Dioxane	0.0838	0.0844	503.75	500	1	
	Methyl Methacrylate	0.2497	0.2388	19.13	20	-4	
#	Bromodichloromethane	0.2998	0.2984	19.91	20	0	#
	2-Nitropropane	0.0908	0.0741	16.32	20	-18	
	2-Chloroethyl Vinyl Ether	0.1109	0.1056	19.04	20	-5	
#	cis-1,3-Dichloropropene	0.3982	0.3957	19.87	20	-1	#
#	4-Methyl-2-pentanone	0.3979	0.3693	92.81	100	-7	#
#	Toluene	0.8202	0.8294	20.22	20	1	#
#	trans-1,3-Dichloropropene	0.4656	0.4472	19.21	20	-4	#
	Ethyl Methacrylate	0.5659	0.5138	18.16	20	-9	
#	1,1,2-Trichloroethane	0.3110	0.3171	20.39	20	2	#
#	Tetrachloroethene	0.3474	0.3842	22.12	20	11	#
	1,3-Dichloropropane	0.5309	0.5224	19.68	20	-2	
#	2-Hexanone	0.3777	0.3481	92.15	100	-8	#
#	Dibromochloromethane	0.3185	0.3147	19.76	20	-1	#
#	1,2-Dibromoethane	0.3377	0.3356	19.88	20	-1	#
	1-Chlorohexane	0.4406	0.4292	19.48	20	-3	
#	Chlorobenzene	0.9275	0.9379	20.22	20	1	#
	1,1,1,2-Tetrachloroethane	0.3056	0.3029	19.82	20	-1	
#	Ethylbenzene	1.5677	1.5899	20.28	20	1	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 11/04/19 Time: 18:42

Lab File ID: ln04v02.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	m+p-Xylene	0.6167	0.6315	40.96	40	2	#
#	o-Xylene	0.6092	0.6189	20.32	20	2	#
#	Styrene	1.0066	1.0350	20.56	20	3	#
#	Bromoform	0.2380	0.2137	17.95	20	-10	#
#	Isopropylbenzene	1.5279	1.5939	20.86	20	4	#
	Cyclohexanone	0.3282	0.2949	449.36	500	-10	
	Bromobenzene	0.7515	0.7447	19.82	20	-1	
#	1,1,2,2-Tetrachloroethane	0.9445	0.9245	19.58	20	-2	#
	1,2,3-Trichloropropane	0.2898	0.2890	19.94	20	0	
	trans-1,4-Dichloro-2-butene	0.2913	0.2850	97.83	100	-2	
	n-Propylbenzene	3.2831	3.4091	20.77	20	4	
	2-Chlorotoluene	0.6975	0.7037	20.18	20	1	
	4-Chlorotoluene	0.7260	0.7301	20.11	20	1	
	1,3,5-Trimethylbenzene	2.3860	2.4518	20.55	20	3	
	tert-Butylbenzene	0.4934	0.5090	20.63	20	3	
	Pentachloroethane	0.4249	0.3657	17.21	20	-14	
	1,2,4-Trimethylbenzene	2.5147	2.5110	19.97	20	0	
	sec-Butylbenzene	2.9444	3.0247	20.55	20	3	
#	1,3-Dichlorobenzene	1.3809	1.3855	20.07	20	0	#
	p-Isopropyltoluene	2.5473	2.6162	20.54	20	3	
#	1,4-Dichlorobenzene	1.4315	1.4660	20.48	20	2	#
	1,2,3-Trimethylbenzene	2.6637	2.6470	19.87	20	-1	
	Benzyl Chloride	2.0168	1.6153	16.02	20	-20	
	1,3-Diethylbenzene	1.6578	1.5827	19.09	20	-5	
	1,4-Diethylbenzene	1.7564	1.6691	19.01	20	-5	
#	1,2-Dichlorobenzene	1.3626	1.3874	20.36	20	2	#
	n-Butylbenzene	1.3024	1.2702	19.50	20	-2	
	1,2-Diethylbenzene	1.3975	1.3386	19.16	20	-4	
#	1,2-Dibromo-3-chloropropane	0.2068	0.1994	19.29	20	-4	#
	1,3,5-Trichlorobenzene	1.0469	0.9964	19.04	20	-5	
#	1,2,4-Trichlorobenzene	1.0179	0.9765	19.19	20	-4	#
	Hexachlorobutadiene	0.4806	0.4071	16.94	20	-15	
	Naphthalene	3.2725	3.2676	19.97	20	0	
	1,2,3-Trichlorobenzene	0.9905	0.9443	19.07	20	-5	
	2-Methylnaphthalene	2.0152	1.8367	18.23	20	-9	

Average %Drift 5

Compounds with required minimum RRF.
Maximum % Drift = 30 %

^

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem/HP09915.i/19nov04i.b/ln04i07.d
/chem/HP09915.i/19nov04i.b/ln04i06.d
/chem/HP09915.i/19nov04i.b/ln04i05.d
/chem/HP09915.i/19nov04i.b/ln04i04.d
/chem/HP09915.i/19nov04i.b/ln04i03.d
/chem/HP09915.i/19nov04i.b/ln04i02.d
/chem/HP09915.i/19nov04i.b/ln04i01.d

File /chem/HP09915.i/19nov04i.b/ln04i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem/HP09915.i/19nov20a.b/ln20c01.d

RT Summary

Internal Standard Name	File ID: ln20c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	4.493	4.509	Yes
Fluorobenzene	7.959	7.959	Yes
Chlorobenzene-d5	11.361	11.361	Yes
1,4-Dichlorobenzene-d4	13.223	13.223	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: ln20c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	153357	269779	134890	539558	Yes
Fluorobenzene	890803	1160755	580378	2321510	Yes
Chlorobenzene-d5	725253	904578	452289	1809156	Yes
1,4-Dichlorobenzene-d4	391522	483927	241964	967854	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 11/20/2019 at 09:17

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/20/19 Time: 08:51

Lab File ID: ln20c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	$\overline{RRF}$	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Dichlorodifluoromethane	0.3487	0.3663	52.52	50	5	#
#	Chloromethane	0.3361	0.3552	52.85	50	6	#
	1,3-Butadiene	0.2790	0.3839	68.80	50	38	<-
#	Vinyl Chloride	0.3354	0.3481	51.89	50	4	#
#	Bromomethane	0.2404	0.2527	52.55	50	5	#
#	Chloroethane	0.1843	0.1927	52.27	50	5	#
	n-Pentane	0.4267	0.3812	44.67	50	-11	
#	Trichlorofluoromethane	0.3611	0.3889	53.86	50	8	#
	Freon 123a	0.2905	0.2922	50.29	50	1	
	Acrolein	1.8756	2.2714	605.50	500	21	<-
#	1,1-Dichloroethene	0.2120	0.2140	50.48	50	1	#
#	1,1-Dichloroethene(2)	0.1063	0.1027	48.32	50	-3	#
#	Acetone	0.8409	0.9685	115.18	100	15	#
#	Freon 113	0.2418	0.2490	51.48	50	3	#
	2-Propanol	0.6045	0.6006	248.38	250	-1	
	Methyl Iodide	0.4392	0.4368	49.73	50	-1	
#	Carbon Disulfide	0.7987	0.7959	49.82	50	0	#
	Allyl Chloride	0.3802	0.3440	45.23	50	-10	
#	Methyl Acetate	0.2730	0.2451	44.89	50	-10	#
#	Methylene Chloride	0.2523	0.2580	51.13	50	2	#
	t-Butyl alcohol	1.0525	1.0681	253.70	250	1	
	Acrylonitrile	0.1469	0.1433	48.78	50	-2	
#	trans-1,2-Dichloroethene	0.2452	0.2494	50.85	50	2	#
#	Methyl Tertiary Butyl Ether	0.8048	0.7542	46.85	50	-6	#
	n-Hexane	0.3815	0.3808	49.91	50	0	
#	1,1-Dichloroethane	0.4277	0.4207	49.18	50	-2	#
	di-Isopropyl ether	0.8250	0.7958	48.23	50	-4	
	2-Chloro-1,3-butadiene	0.3838	0.3805	49.57	50	-1	
	Ethyl t-butyl ether	0.8006	0.7583	47.36	50	-5	
#	cis-1,2-Dichloroethene	0.2752	0.2787	50.64	50	1	#
#	2-Butanone	0.1885	0.1711	90.76	100	-9	#
	2,2-Dichloropropane	0.3325	0.3228	48.54	50	-3	
	Propionitrile	1.3114	1.6002	305.05	250	22	<-
	Methacrylonitrile	0.1584	0.1578	124.54	125	0	
	Bromochloromethane	0.1459	0.1495	51.24	50	2	
	Tetrahydrofuran	1.1846	1.4626	123.46	100	23	<-

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/20/19 Time: 08:51

Lab File ID: ln20c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Chloroform	0.4091	0.4156	50.80	50	2	#
#	1,1,1-Trichloroethane	0.3492	0.3481	49.85	50	0	#
#	Cyclohexane	0.4669	0.4701	50.34	50	1	#
#	Cyclohexane(2)	0.4056	0.4128	50.88	50	2	#
#	Cyclohexane(3)	0.1444	0.1459	50.51	50	1	#
	1,1-Dichloropropene	0.3382	0.3371	49.84	50	0	
#	Carbon Tetrachloride	0.2961	0.2939	49.62	50	-1	#
	Isobutyl Alcohol	0.3542	0.3893	687.03	625	10	
#	Benzene	1.0170	1.0492	51.58	50	3	#
#	1,2-Dichloroethane	0.3271	0.3180	48.60	50	-3	#
#	1,2-Dichloroethane(2)	0.0324	0.0332	51.26	50	3	#<-
	t-Amyl methyl ether	0.8036	0.7748	48.21	50	-4	
	n-Heptane	0.3564	0.3500	49.10	50	-2	
	n-Butanol	0.3049	0.3299	1352.51	1250	8	
#	Trichloroethene	0.2561	0.2683	52.38	50	5	#
#	Methylcyclohexane	0.4751	0.4693	49.39	50	-1	#
#	Methylcyclohexane(2)	0.2150	0.2121	49.33	50	-1	#
#	1,2-Dichloropropane	0.2582	0.2588	50.11	50	0	#
	Dibromomethane	0.1671	0.1726	51.66	50	3	
	1,4-Dioxane	0.0838	0.1144	853.29	625	37	<-
	Methyl Methacrylate	0.2497	0.2526	50.57	50	1	
#	Bromodichloromethane	0.2998	0.3018	50.32	50	1	#
	2-Nitropropane	0.0908	0.0825	90.80	100	-9	
	2-Chloroethyl Vinyl Ether	0.1109	0.1930	87.02	50	74	<-
#	cis-1,3-Dichloropropene	0.3982	0.3969	49.83	50	0	#
#	4-Methyl-2-pentanone	0.3979	0.3747	94.16	100	-6	#
#	Toluene	0.8202	0.8307	50.64	50	1	#
#	trans-1,3-Dichloropropene	0.4656	0.4436	47.64	50	-5	#
	Ethyl Methacrylate	0.5659	0.5631	49.76	50	0	
#	1,1,2-Trichloroethane	0.3110	0.3168	50.94	50	2	#
#	Tetrachloroethene	0.3474	0.3484	50.15	50	0	#
	1,3-Dichloropropane	0.5309	0.5280	49.72	50	-1	
#	2-Hexanone	0.3777	0.3402	90.06	100	-10	#
#	Dibromochloromethane	0.3185	0.2967	46.58	50	-7	#
#	1,2-Dibromoethane	0.3377	0.3445	51.01	50	2	#
	1-Chlorohexane	0.4406	0.4277	48.53	50	-3	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/20/19 Time: 08:51

Lab File ID: ln20c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Chlorobenzene	0.9275	0.9300	50.13	50	0	#
	1,1,1,2-Tetrachloroethane	0.3056	0.3006	49.18	50	-2	
#	Ethylbenzene	1.5677	1.6070	51.25	50	3	#
#	m+p-Xylene	0.6167	0.6327	102.60	100	3	#
#	o-Xylene	0.6092	0.6202	50.91	50	2	#
#	Styrene	1.0066	1.0480	52.05	50	4	#
#	Bromoform	0.2380	0.1905	40.01	50	-20	#
#	Isopropylbenzene	1.5279	1.5780	51.64	50	3	#
	Bromobenzene	0.7515	0.7507	49.95	50	0	
#	1,1,2,2-Tetrachloroethane	0.9445	0.9318	49.33	50	-1	#
	1,2,3-Trichloropropane	0.2898	0.2820	48.64	50	-3	
	trans-1,4-Dichloro-2-butene	0.2913	0.1700	72.96	125	-42	<-
	n-Propylbenzene	3.2831	3.4188	52.07	50	4	
	2-Chlorotoluene	0.6975	0.6959	49.89	50	0	
	4-Chlorotoluene	0.7260	0.7251	49.93	50	0	
	1,3,5-Trimethylbenzene	2.3860	2.4961	52.31	50	5	
	tert-Butylbenzene	0.4934	0.4988	50.55	50	1	
	Pentachloroethane	0.4249	0.4262	50.16	50	0	
	1,2,4-Trimethylbenzene	2.5147	2.6341	52.37	50	5	
	sec-Butylbenzene	2.9444	3.0119	51.14	50	2	
#	1,3-Dichlorobenzene	1.3809	1.3943	50.48	50	1	#
	p-Isopropyltoluene	2.5473	2.5877	50.79	50	2	
#	1,4-Dichlorobenzene	1.4315	1.4245	49.75	50	0	#
	1,2,3-Trimethylbenzene	2.6637	2.7124	50.91	50	2	
	Benzyl Chloride	2.0168	1.9540	48.44	50	-3	
	1,3-Diethylbenzene	1.6578	1.6441	49.59	50	-1	
	1,4-Diethylbenzene	1.7564	1.7102	48.68	50	-3	
#	1,2-Dichlorobenzene	1.3626	1.3641	50.05	50	0	#
	n-Butylbenzene	1.3024	1.2815	49.19	50	-2	
	1,2-Diethylbenzene	1.3975	1.3818	49.44	50	-1	
#	1,2-Dibromo-3-chloropropane	0.2068	0.1866	45.13	50	-10	#
	1,3,5-Trichlorobenzene	1.0469	0.9594	45.82	50	-8	
#	1,2,4-Trichlorobenzene	1.0179	0.9184	45.11	50	-10	#
	Hexachlorobutadiene	0.4806	0.3699	38.48	50	-23	<-
	Naphthalene	3.2725	3.2814	50.14	50	0	
	1,2,3-Trichlorobenzene	0.9905	0.8982	45.34	50	-9	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/20/19 Time: 08:51

Lab File ID: ln20c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	$\overline{RRF}$	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
2-Methylnaphthalene	2.0152	1.8591	46.13	50	-8
Dibromofluoromethane	0.2445	0.2348	48.02	50	-4
Dibromofluoromethane(2)	0.2492	0.2401	48.17	50	-4
1,2-Dichloroethane-d4	0.0623	0.0609	48.89	50	-2
1,2-Dichloroethane-d4(2)	0.2776	0.2742	49.39	50	-1
1,2-Dichloroethane-d4(3)	0.0398	0.0385	48.32	50	-3
Toluene-d8	1.3083	1.2833	49.05	50	-2
Toluene-d8(2)	0.8475	0.8246	48.65	50	-3
4-Bromofluorobenzene	0.4954	0.4950	49.96	50	0
4-Bromofluorobenzene(2)	0.4107	0.4104	49.96	50	0

Average %Drift 5

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

page 4 of 4

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ln20c01.d Date Analyzed: 11/20/19

Instrument ID: HP09915 Time Analyzed: 08:51

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	153357	4.493	890803	7.959	725253	11.361	391522	13.222
UPPER LIMIT	306714	4.993	1781606	8.459	1450506	11.861	783044	13.722
LOWER LIMIT	76678	3.993	445402	7.459	362626	10.861	195761	12.722
LAB SAMPLE ID								
01 LCSL80	168087	4.516	923804	7.962	756463	11.361	402949	13.222
02 VBLKL80	162533	4.496	913789	7.959	734830	11.358	395483	13.223
03 1202295	156140	4.487	904207	7.956	729832	11.358	390781	13.223
04 1202314	159398	4.500	895343	7.959	721900	11.361	387240	13.219
05 1202284	157544	4.490	883856	7.956	716251	11.361	379191	13.219
06 1202285	154791	4.490	865108	7.959	706277	11.358	377485	13.223
07 1202296	146194	4.493	869235	7.959	707177	11.358	381477	13.219
08 1202297MS	169394	4.500	914986	7.959	738299	11.358	397756	13.219
09 1202298MSD	177410	4.493	893439	7.956	724388	11.358	385924	13.223
10 1202299	172141	4.499	902148	7.962	726877	11.358	389170	13.222
11 1202300	172523	4.496	901563	7.956	733643	11.361	386696	13.222
12 1202301	155204	4.496	883077	7.959	718457	11.358	379474	13.223
13 1202302	157932	4.496	869741	7.959	711550	11.361	380015	13.220
14 1202303	158597	4.500	875434	7.962	708598	11.361	377448	13.219
15 1202304	157315	4.486	877236	7.956	709324	11.358	382620	13.222
16 1202305	143509	4.496	845285	7.959	691126	11.358	371262	13.219
17 1202306	147376	4.496	854788	7.962	692345	11.358	370267	13.223
18 1202307	154257	4.500	845869	7.962	695063	11.361	370586	13.223
19 1202315	147174	4.496	846942	7.956	689587	11.361	367930	13.222
20 1202316	148761	4.493	838211	7.959	689898	11.358	371294	13.223
21 1202317	150545	4.487	847494	7.959	691987	11.358	372909	13.223
22 1202318	139721	4.490	817772	7.959	674532	11.358	363582	13.223

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ln20c01.d Date Analyzed: 11/20/19

Instrument ID: HP09915 Time Analyzed: 08:51

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA) AREA #	RT #	IS2(FBZ) AREA #	RT #	IS3(CBZ) AREA #	RT #	IS4(DCB) AREA #	RT #
12 HOUR STD	153357	4.493	890803	7.959	725253	11.361	391522	13.222
UPPER LIMIT	306714	4.993	1781606	8.459	1450506	11.861	783044	13.722
LOWER LIMIT	76678	3.993	445402	7.459	362626	10.861	195761	12.722
LAB SAMPLE ID								
23 1202319	141822	4.493	822195	7.959	678476	11.361	363942	13.223
24 1202320	147376	4.496	819786	7.959	672667	11.361	356658	13.223

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

page 2 of 2

FORM VIII VOA

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Sample Data

Volatiles by GC/MS

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
W1901

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202296

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov20a.b/ln20s05.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	0.3	J
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.8	J
156-59-2	cis-1,2-Dichloroethene	1	J
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	3	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	12	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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W1901 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1202296

Data file: /chem/HP09915.i/19nov20a.b/ln20s05.d Injection date and time: **20-NOV-2019 11:25**
Data file Sample Info. Line: W1901;1202296;1;0;;JCW19;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 11:42 Automation

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493	(0.000)	936	65	146194	(-5)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	869235	(-2)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	707177	(-2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.219	(0.003)	3650	152	381477	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(0.000)	113	201574	47.433	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(0.000)	102	54492	50.312	101%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	890088	48.103	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	340235	48.559	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	3.754	(0.000)	96	944	0.256	0.26		J	0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.560	(-0.001)	63	6039	0.812	0.81		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	6.371	(0.001)	96	4666	0.975	0.98		J	0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	7.078	(0.000)	97	15753	2.595	2.60			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.429	(0.000)	95	52753	11.850	11.85			0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)	10.541	(-0.000)	166	5619	1.144	1.14			0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

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Data file: /chem/HP09915.i/19nov20a.b/ln20s05.d Injection date and time: **20-NOV-2019 11:25**
Data file Sample Info. Line: W1901;1202296;1;0;;JCW19;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 11:42 Automation

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

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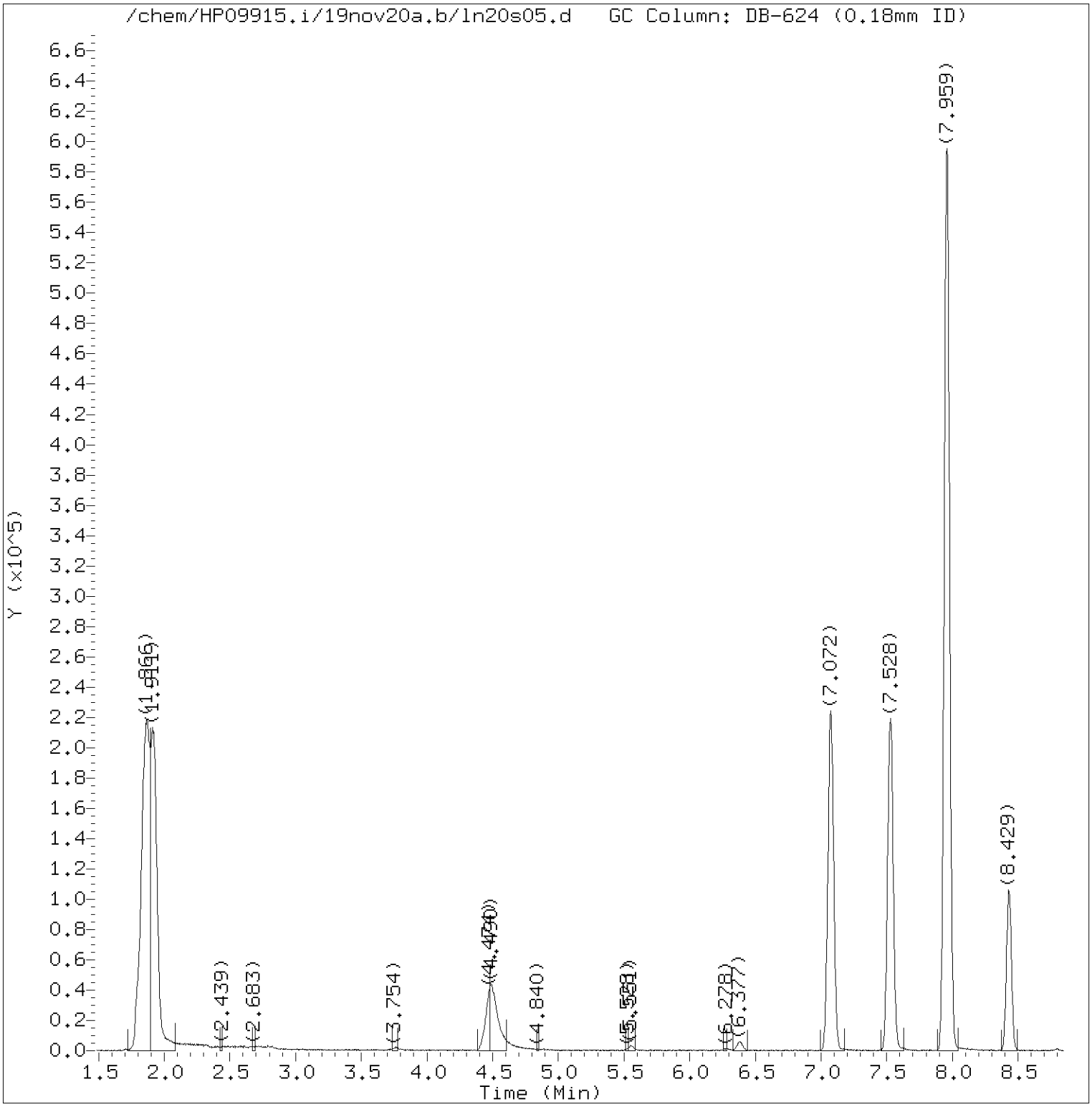
Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:50. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

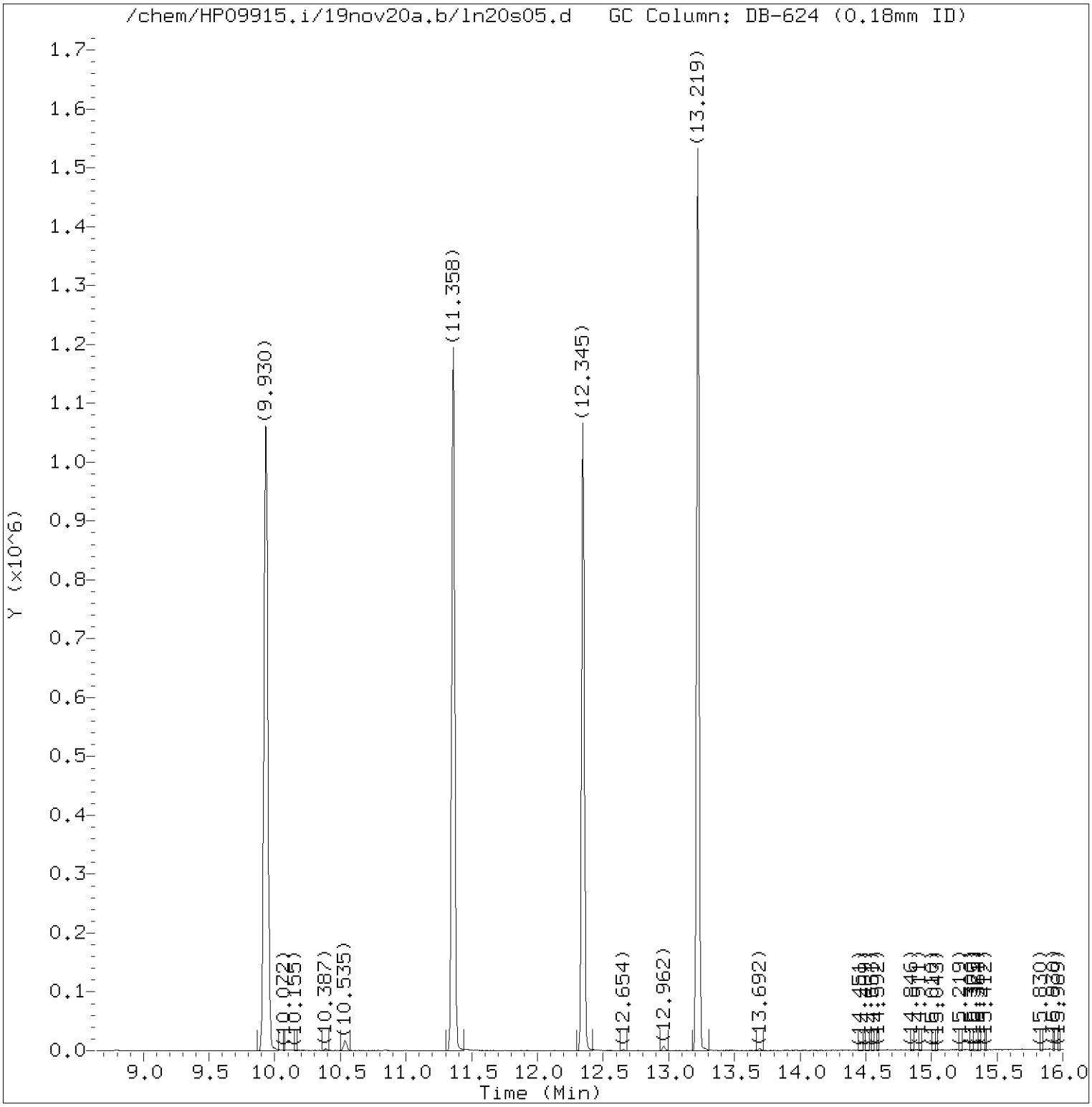
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s05.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 11:25 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:42 Automation

Sample Name: W1901 Lab Sample ID: 1202296

Digitally signed by Don V. Viray
on 11/20/2019 at 18:21.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s05.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 11:25 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:42 Automation

Sample Name: W1901 Lab Sample ID: 1202296

Digitally signed by Don V. Viray
on 11/20/2019 at 18:21.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s05.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 11:25 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:42 Automation

Sample Name: W1901 Lab Sample ID: 1202296

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	3.754	96	944	0.256
29)*t-Butyl alcohol-d10	(1)	4.493	65	146194	250.000
36) 1,1-Dichloroethane	(2)	5.561	63	6039	0.812
42) cis-1,2-Dichloroethene	(2)	6.371	96	4666	0.975
52)$Dibromofluoromethane	(2)	7.075	113	201574	47.433
53) 1,1,1-Trichloroethane	(2)	7.078	97	15753	2.595
57)$1,2-Dichloroethane-d4	(2)	7.528	102	54492	50.312
66)*Fluorobenzene	(2)	7.959	96	869235	50.000
71) Trichloroethene	(2)	8.429	95	52753	11.850
83)$Toluene-d8	(3)	9.933	98	890088	48.103
93) Tetrachloroethene	(3)	10.541	166	5619	1.144
100)*Chlorobenzene-d5	(3)	11.358	117	707177	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	340235	48.559
131)*1,4-Dichlorobenzene-d4	(4)	13.219	152	381477	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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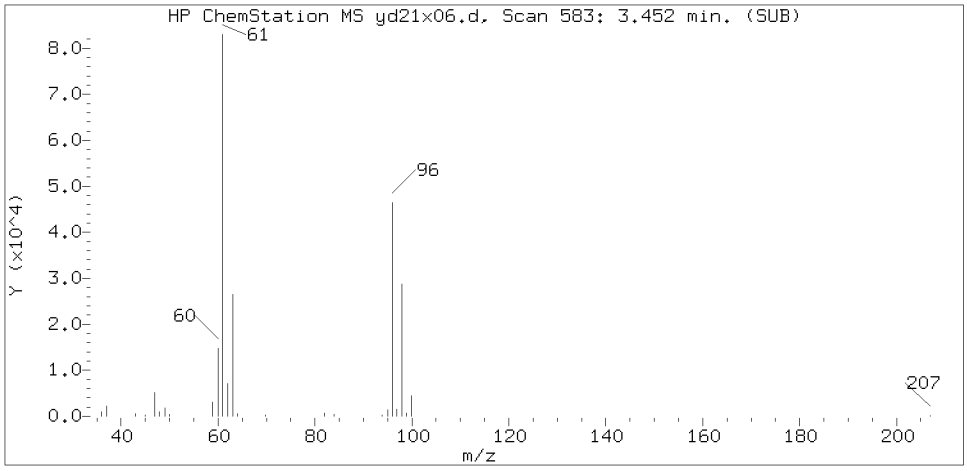
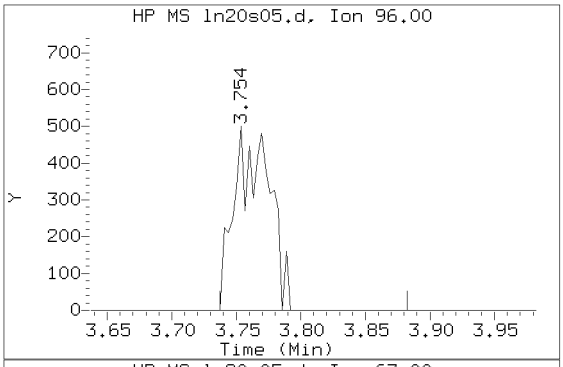
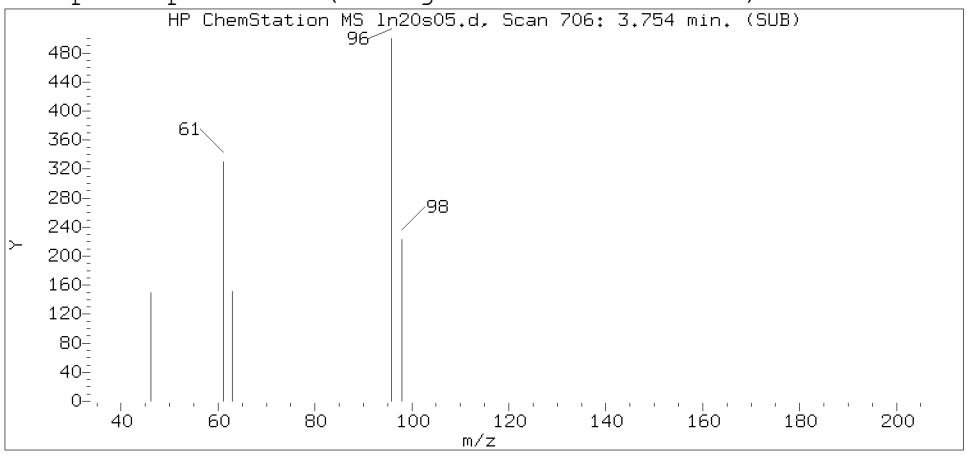
on 11/20/2019 at 18:21.
Target 3.5 esignature user ID: dvv10203

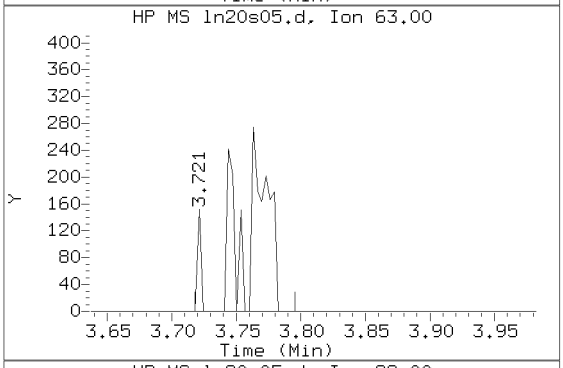
Reference Standard Spectrum for 1,1-Dichloroethene

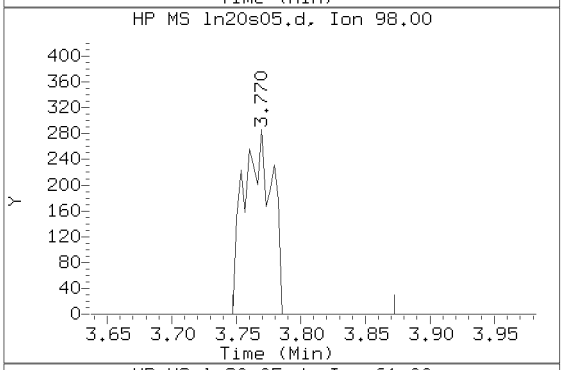




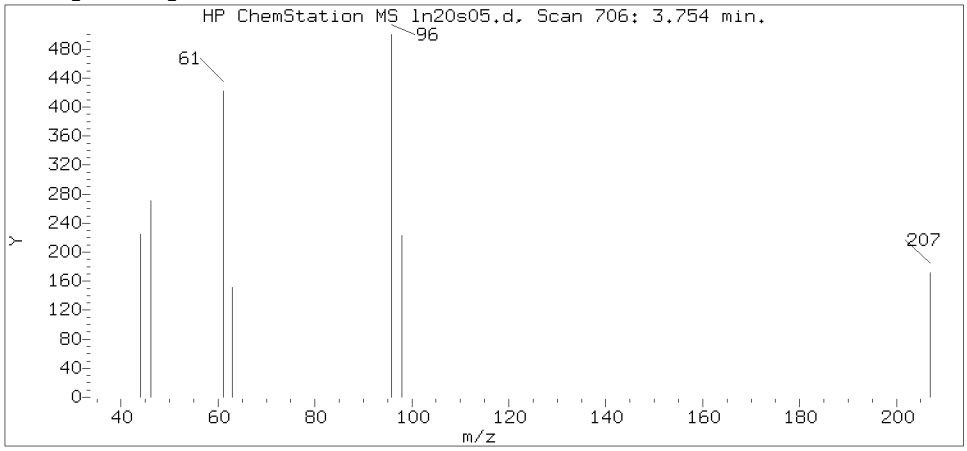
Sample Spectrum (Background Subtracted)

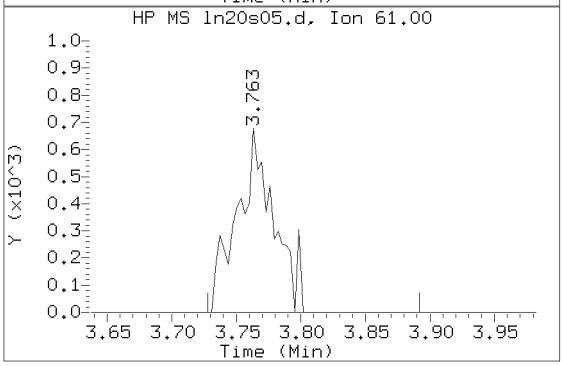






Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov20a.b/ln20s05.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 11:25 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:42 Automation

Sample Name: W1901 Lab Sample ID: 1202296

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 706
Retention Time (minutes): 3.754
Relative Retention Time : 0.00080
Quant Ion : 96.00
Area (flag) : 944
On-Column Amount (ng) : 0.2563

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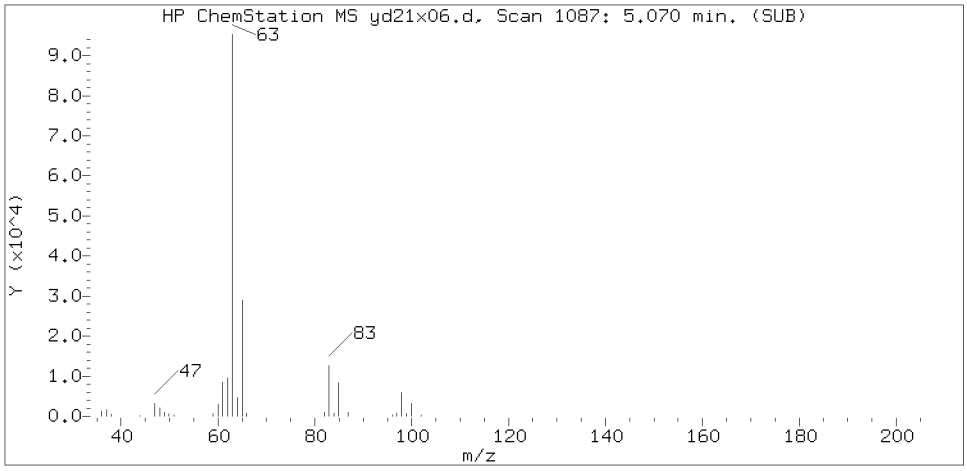
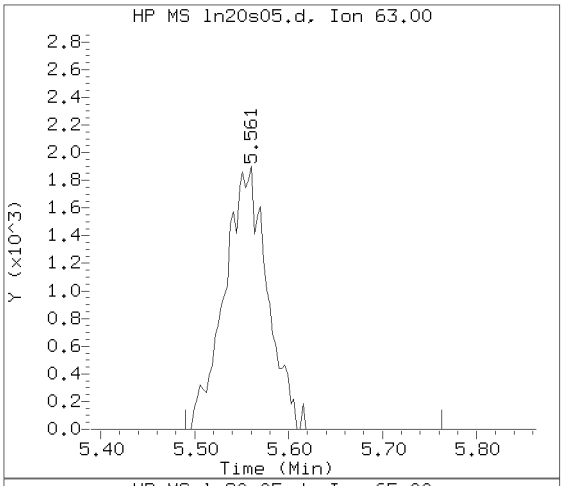
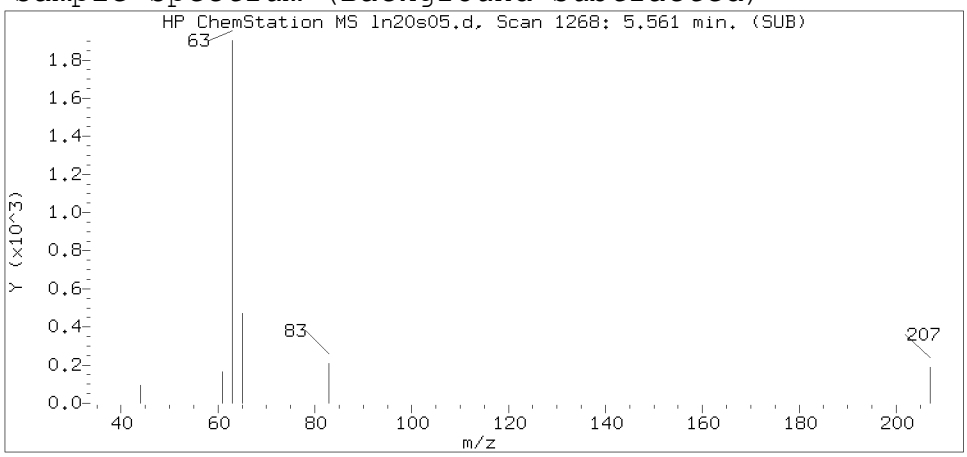
Target 3.5 esignature user ID: dvv10203

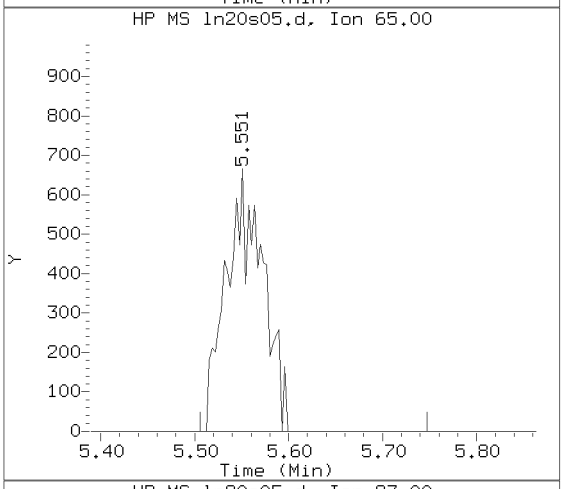
Reference Standard Spectrum for 1,1-Dichloroethane



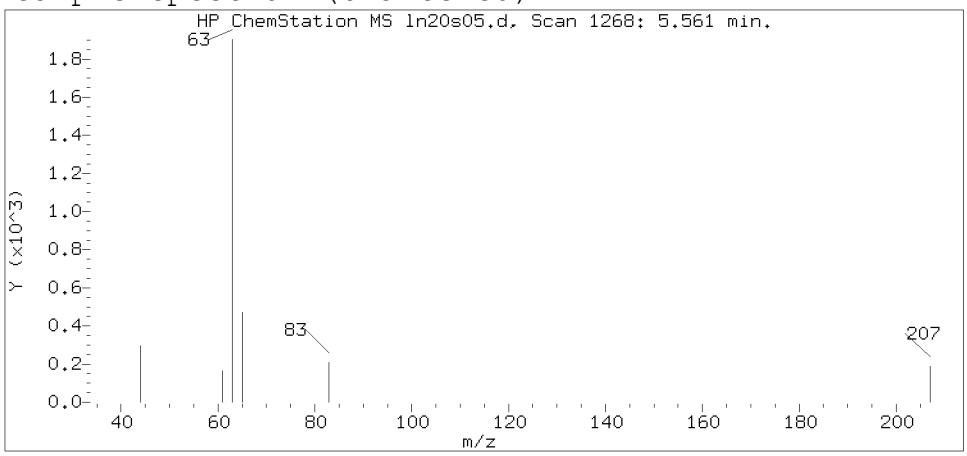


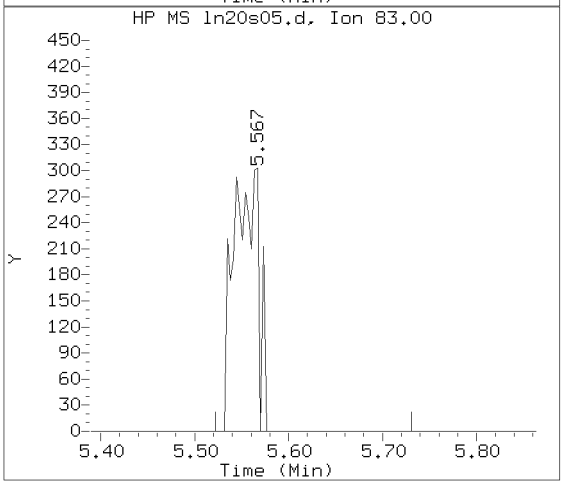
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov20a.b/ln20s05.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 11:25 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:42 Automation

Sample Name: W1901 Lab Sample ID: 1202296

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 1268
Retention Time (minutes): 5.561
Relative Retention Time :-0.00121
Quant Ion : 63.00
Area (flag) : 6039
On-Column Amount (ng) : 0.8122

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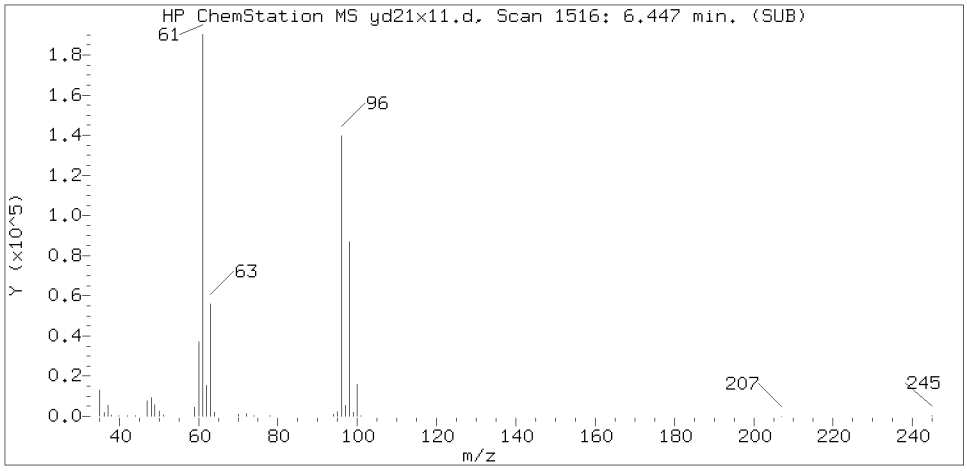
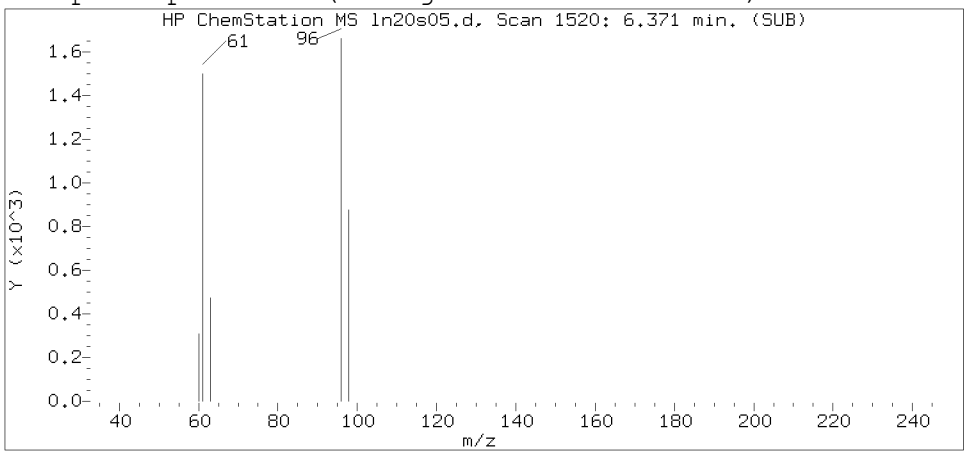
Target 3.5 esignature user ID: dvv10203

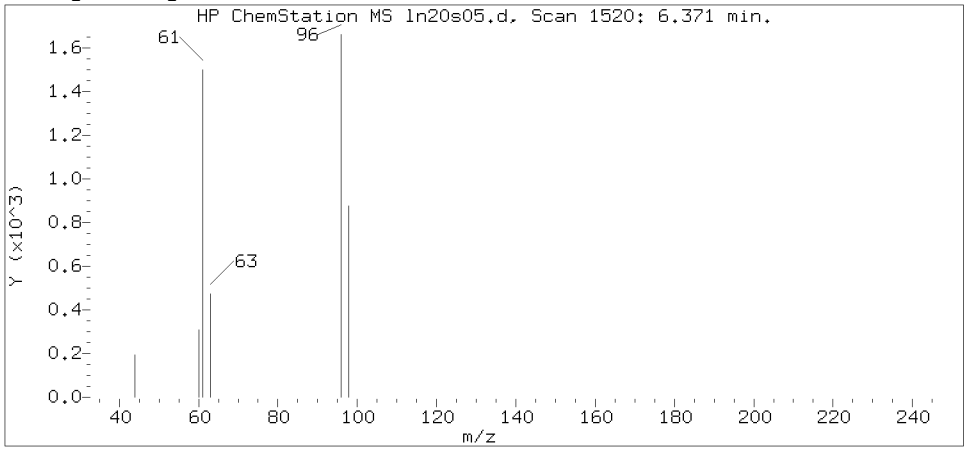
Reference Standard Spectrum for cis-1,2-Dichloroethene

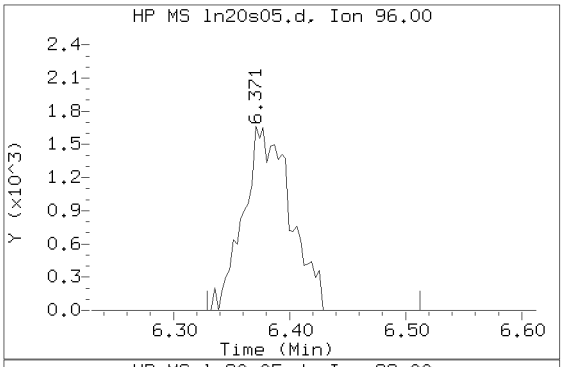


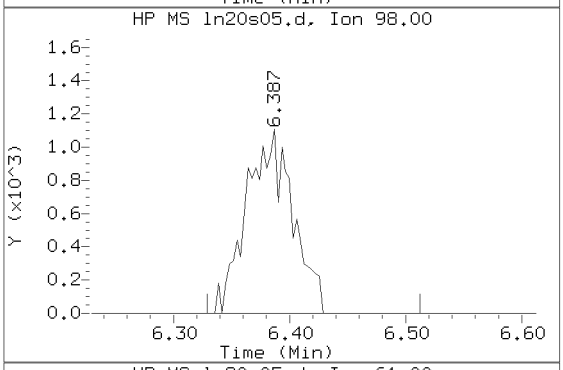
Sample Spectrum (Background Subtracted)

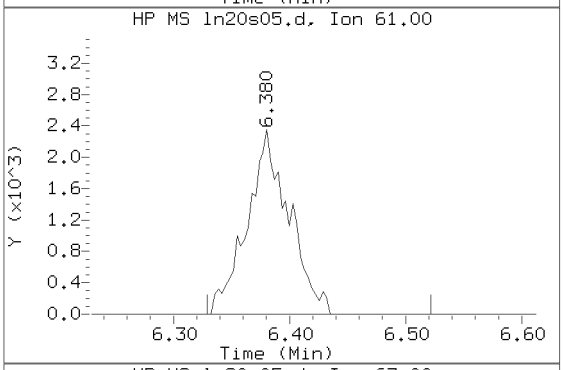


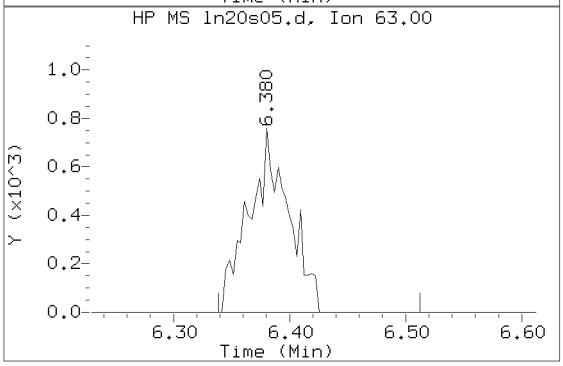
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov20a.b/ln20s05.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 11:25 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:42 Automation

Sample Name: W1901 Lab Sample ID: 1202296

Compound Number	: 42
Compound Name	: cis-1,2-Dichloroethene
Scan Number	: 1520
Retention Time (minutes)	: 6.371
Relative Retention Time	: 0.00121
Quant Ion	: 96.00
Area (flag)	: 4666
On-Column Amount (ng)	: 0.9754

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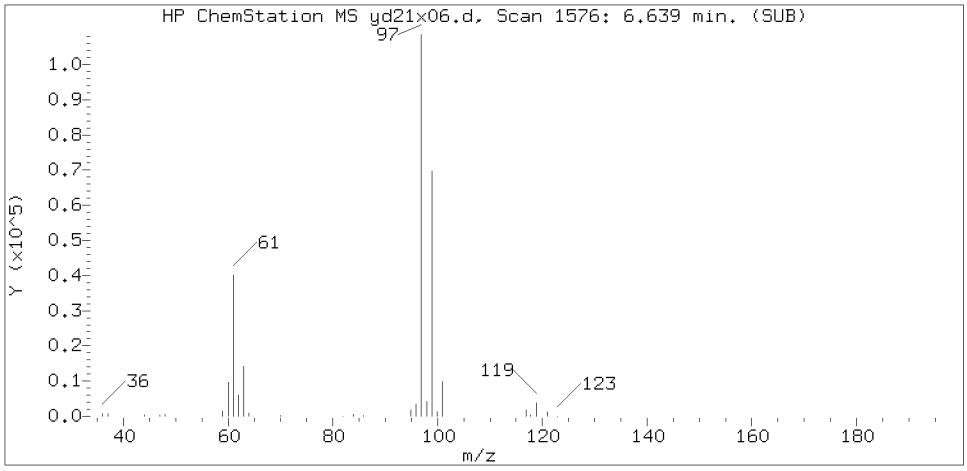
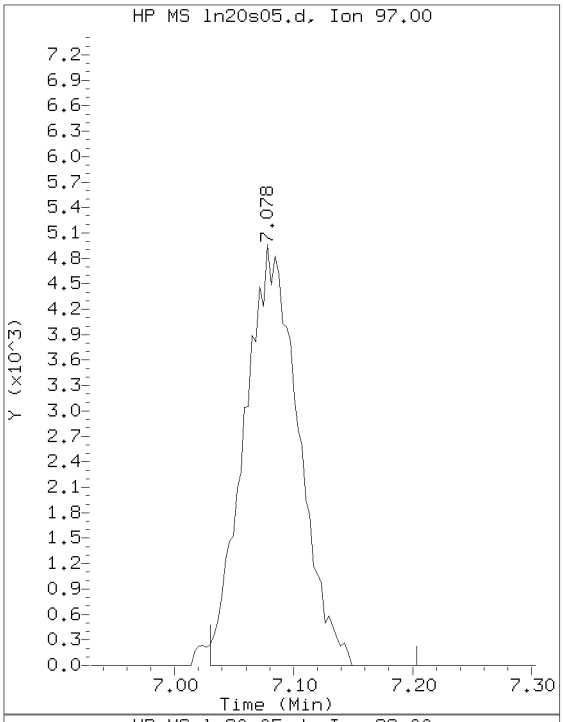
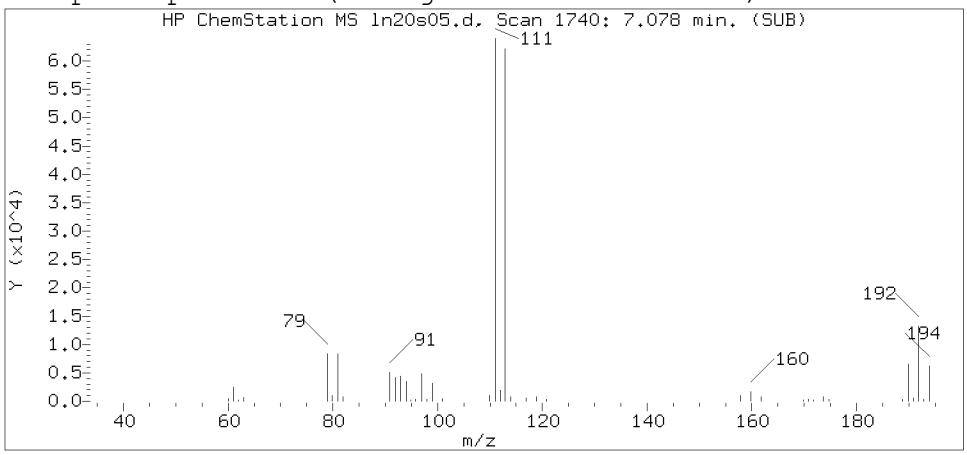
Target 3.5 esignature user ID: dvv10203

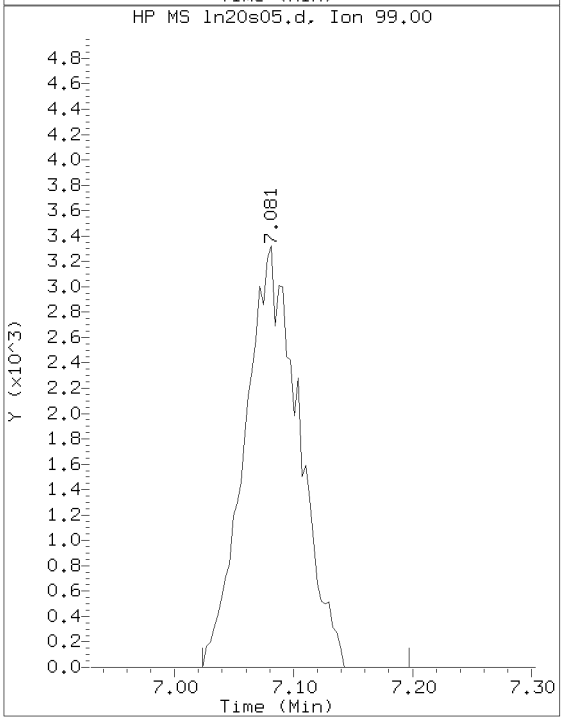
Reference Standard Spectrum for 1,1,1-Trichloroethane



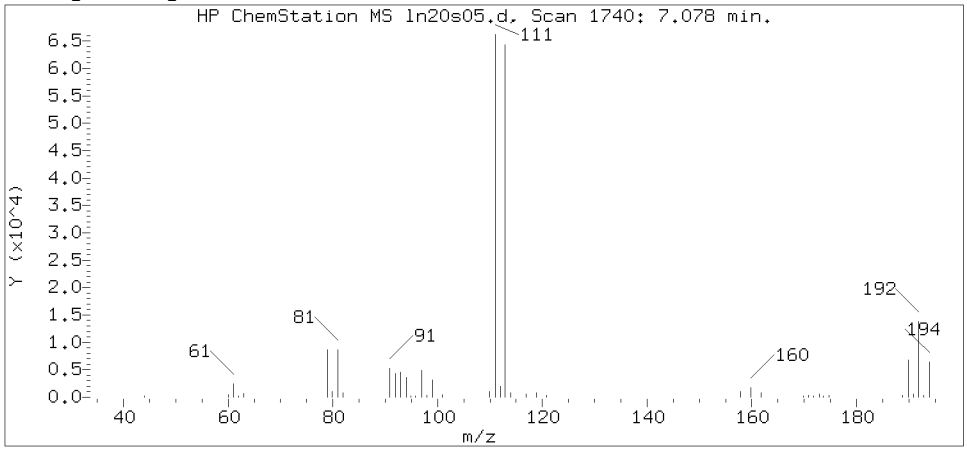


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov20a.b/ln20s05.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 11:25 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:42 Automation

Sample Name: W1901 Lab Sample ID: 1202296

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1740
Retention Time (minutes)	: 7.078
Relative Retention Time	: 0.00081
Quant Ion	: 97.00
Area (flag)	: 15753
On-Column Amount (ng)	: 2.5952

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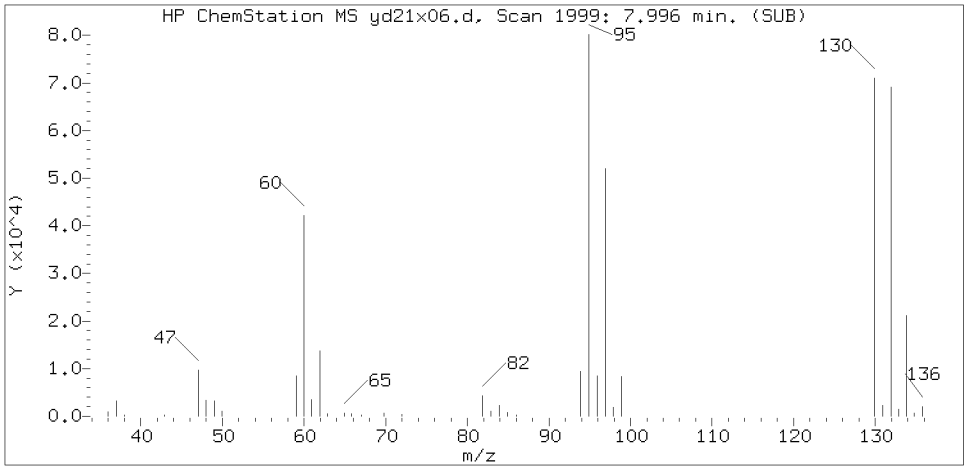
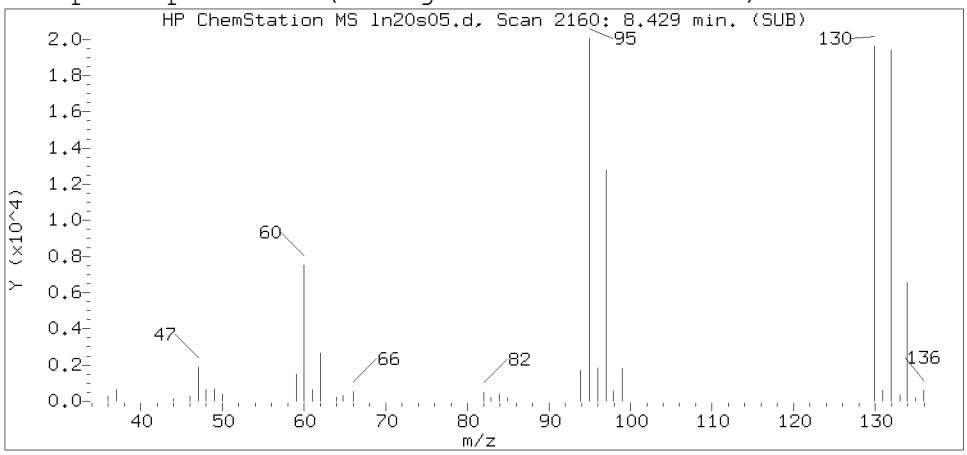
Target 3.5 esignature user ID: dvv10203

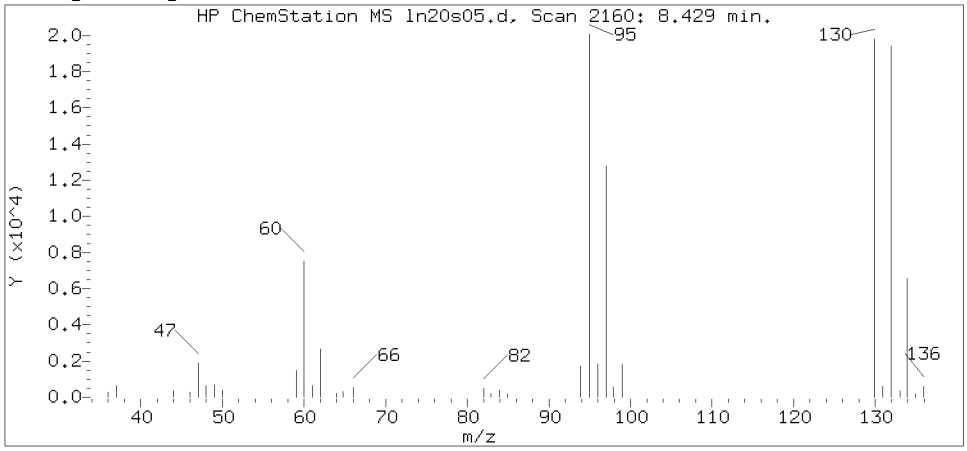
Reference Standard Spectrum for Trichloroethene

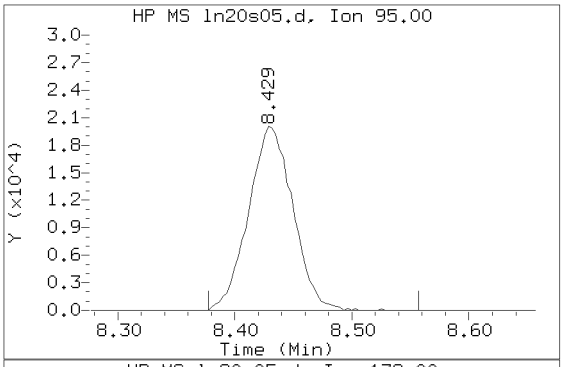


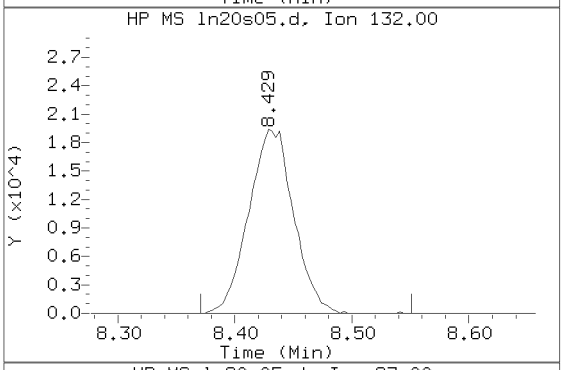
Sample Spectrum (Background Subtracted)

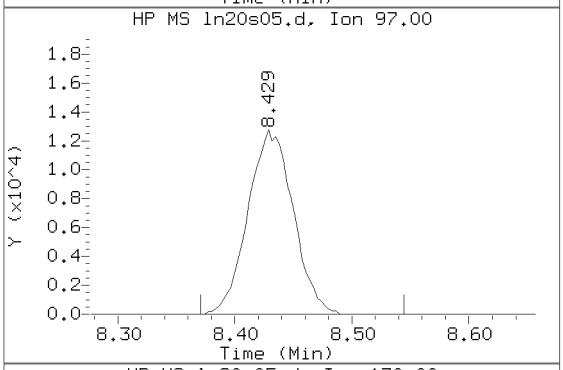


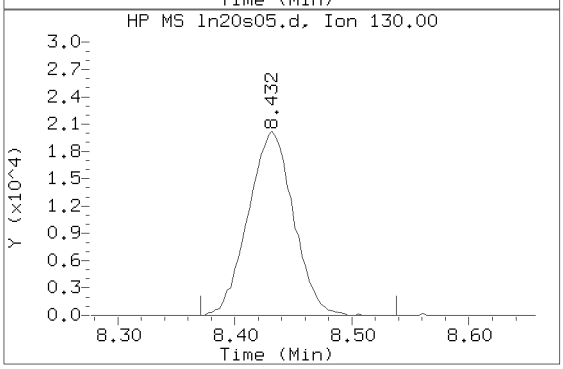
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov20a.b/ln20s05.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 11:25 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:42 Automation

Sample Name: W1901 Lab Sample ID: 1202296

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 2160
Retention Time (minutes)	: 8.429
Relative Retention Time	: 0.00040
Quant Ion	: 95.00
Area (flag)	: 52753
On-Column Amount (ng)	: 11.8498

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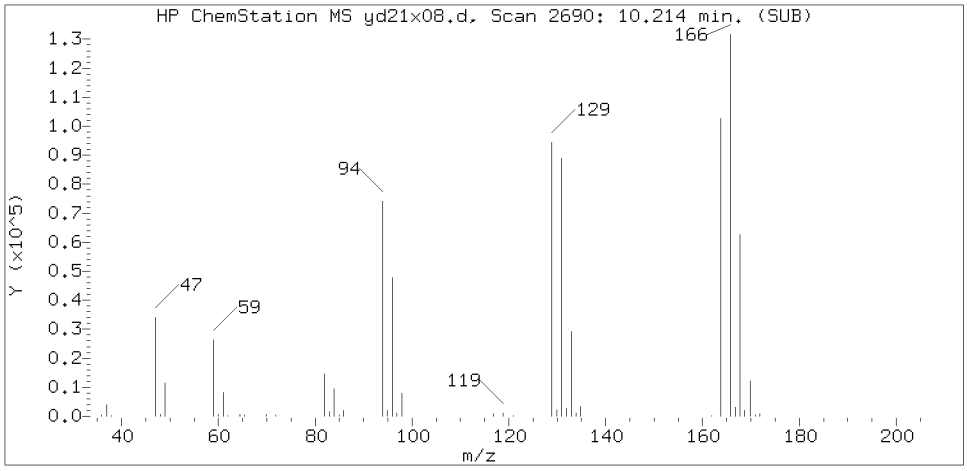
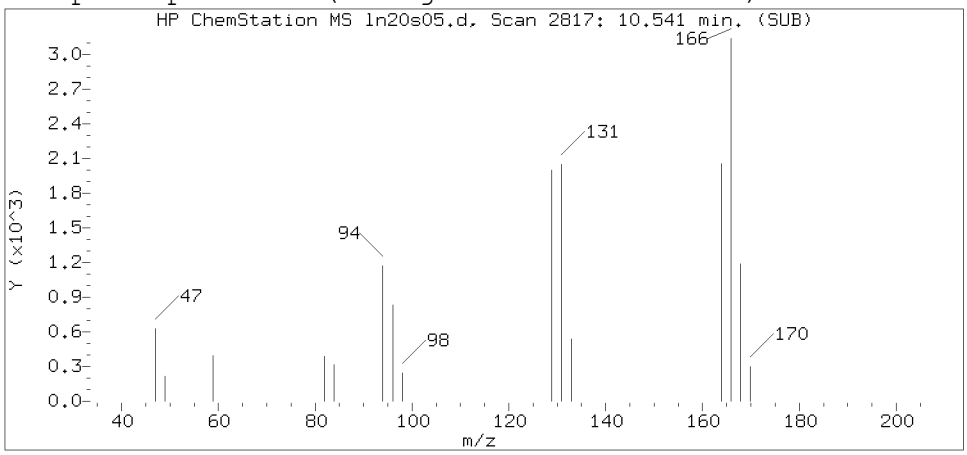
Target 3.5 esignature user ID: dvv10293

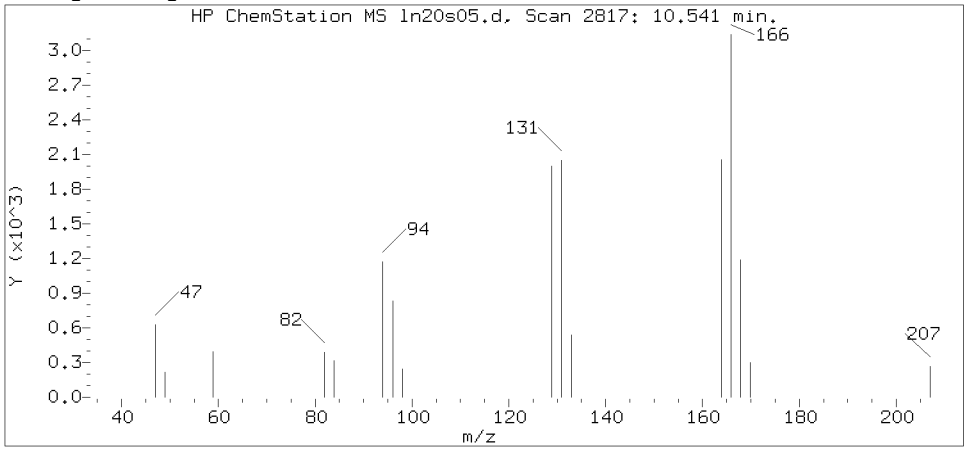
Reference Standard Spectrum for Tetrachloroethene

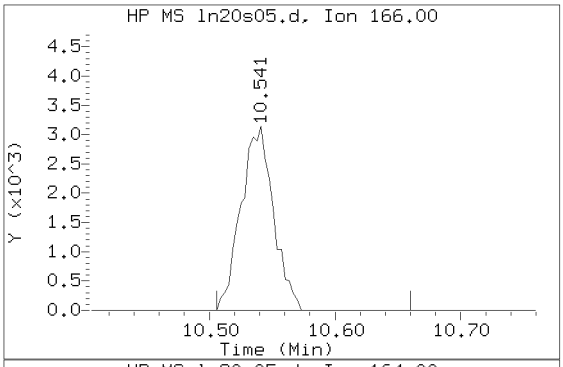


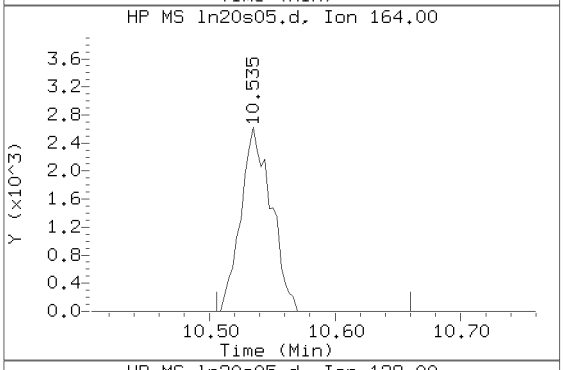
Sample Spectrum (Background Subtracted)

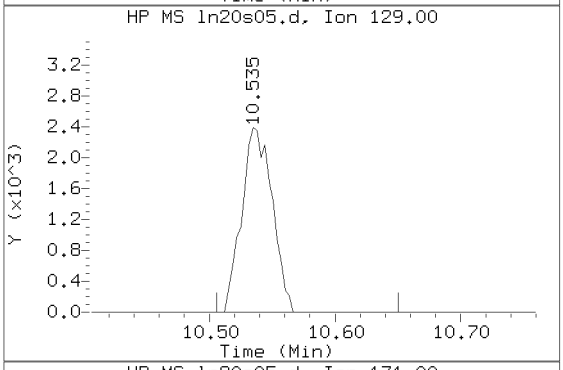


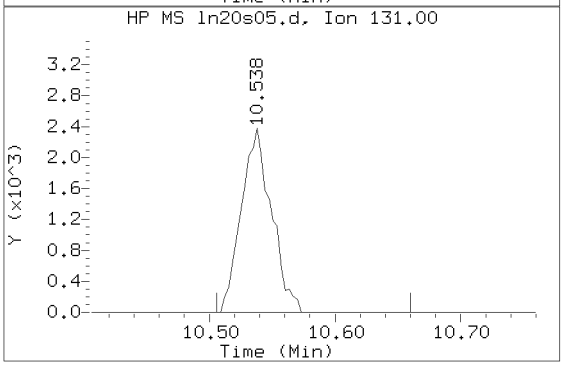
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov20a.b/ln20s05.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 11:25 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:42 Automation

Sample Name: W1901 Lab Sample ID: 1202296

Compound Number : 93
Compound Name : Tetrachloroethene
Scan Number : 2817
Retention Time (minutes): 10.541
Relative Retention Time :-0.00026
Quant Ion : 166.00
Area (flag) : 5619
On-Column Amount (ng) : 1.1437

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Target 3.5 esignature user ID: dvv10293

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W1902

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202299

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov20a.b/ln20s08.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	0.3	J
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.8	J
156-59-2	cis-1,2-Dichloroethene	1	J
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	2	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	10	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

^

W1902 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202299

Data file: /chem/HP09915.i/19nov20a.b/ln20s08.d Injection date and time: **20-NOV-2019 12:36**
Data file Sample Info. Line: W1902;1202299;1;0;;JCW19;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 12:53 Automation

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.499	(-0.006)	938	65	172141	(12)	250.00	
66) Fluorobenzene	7.962	(-0.003)	2015	96	902148	(1)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	726877	(0)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	389170	(-1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(0.000)	113	208597	47.295	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.532	(0.000)	102	55537	49.407	99%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	918267	48.281	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.348	(0.000)	95	350328	48.645	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	3.773	(-0.001)	96	975	0.255	0.26		J	0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.567	(-0.001)	63	6218	0.806	0.81		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	6.390	(-0.000)	96	4895	0.986	0.99		J	0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	7.088	(-0.000)	97	14829	2.354	2.35			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.435	(0.000)	95	48482	10.493	10.49			0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)	10.538	(0.000)	166	5070	1.004	1.00			0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 11/20/2019 at 21:19. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov20a.b/ln20s08.d Injection date and time: **20-NOV-2019 12:36**
Data file Sample Info. Line: W1902;1202299;1;0;;JCW19;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 12:53 Automation

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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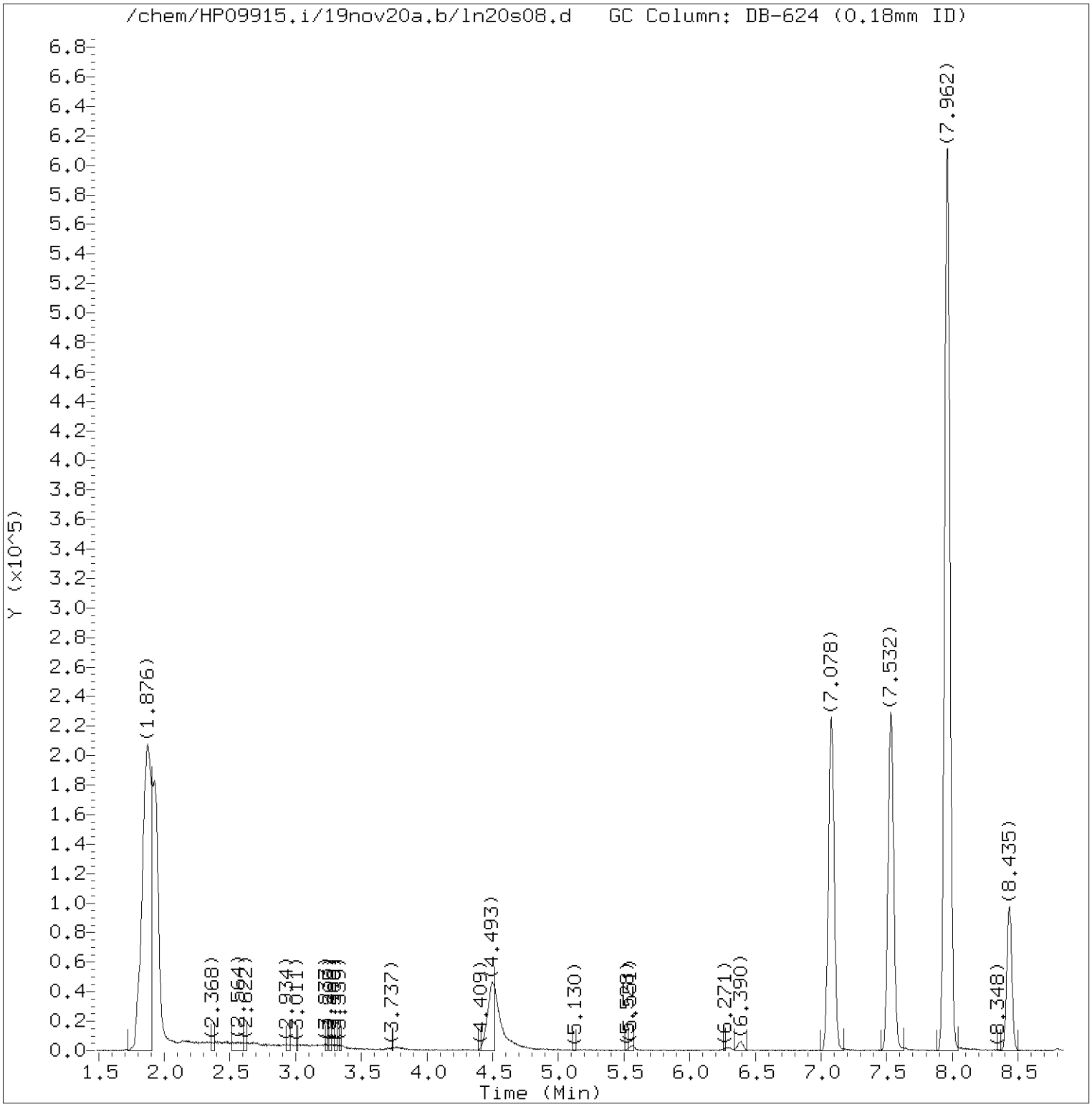
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 11/20/2019 at 21:19. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

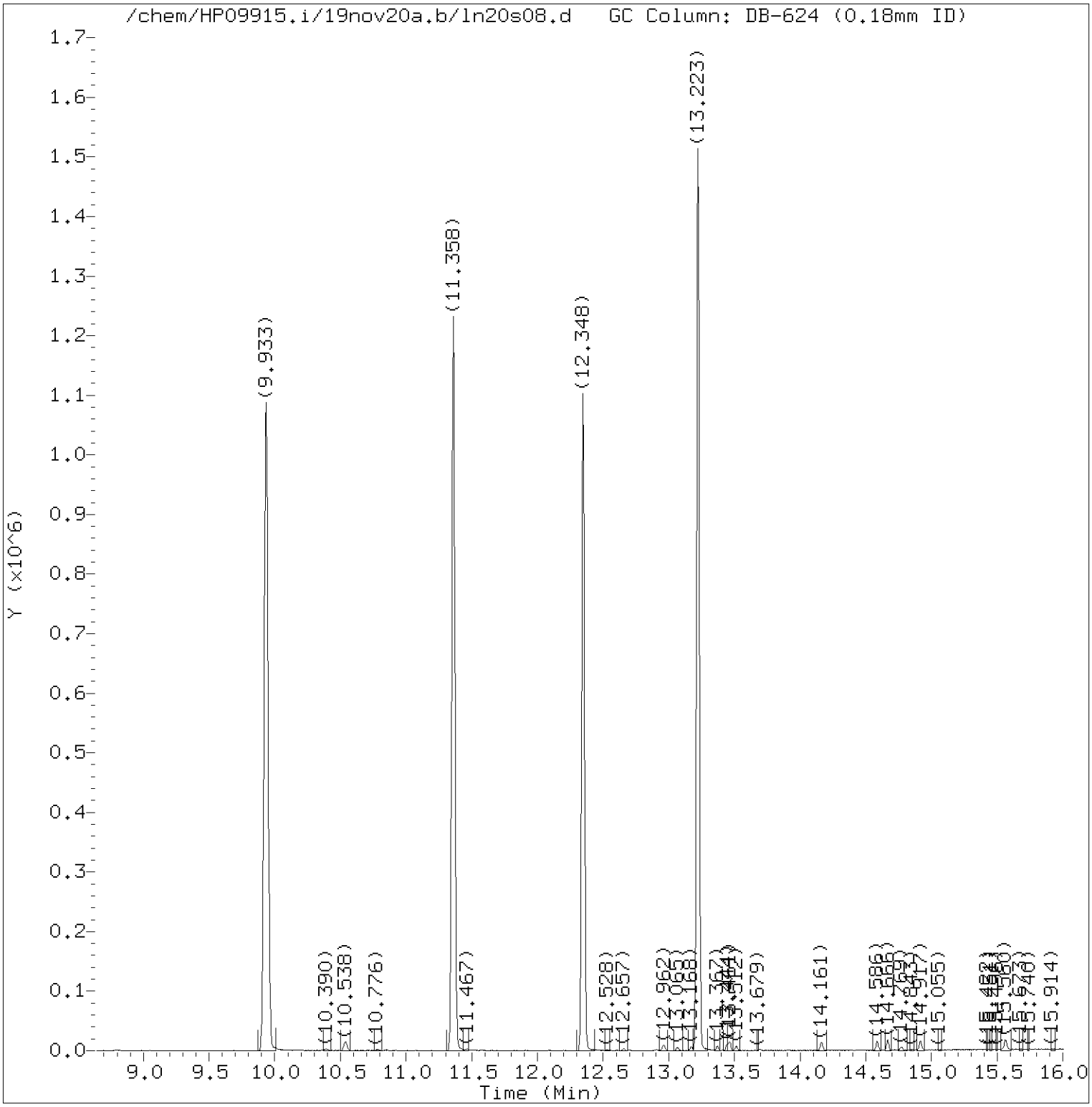
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s08.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:36 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 12:53 Automation

Sample Name: W1902 Lab Sample ID: 1202299

Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s08.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:36 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 12:53 Automation

Sample Name: W1902 Lab Sample ID: 1202299

Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s08.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:36 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 12:53 Automation

Sample Name: W1902 Lab Sample ID: 1202299

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	3.773	96	975	0.255
29)*t-Butyl alcohol-d10	(1)	4.499	65	172141	250.000
36) 1,1-Dichloroethane	(2)	5.567	63	6218	0.806
42) cis-1,2-Dichloroethene	(2)	6.390	96	4895	0.986
52)$Dibromofluoromethane	(2)	7.075	113	208597	47.295
53) 1,1,1-Trichloroethane	(2)	7.088	97	14829	2.354
57)$1,2-Dichloroethane-d4	(2)	7.532	102	55537	49.407
66)*Fluorobenzene	(2)	7.962	96	902148	50.000
71) Trichloroethene	(2)	8.435	95	48482	10.493
83)$Toluene-d8	(3)	9.933	98	918267	48.281
93) Tetrachloroethene	(3)	10.538	166	5070	1.004
100)*Chlorobenzene-d5	(3)	11.358	117	726877	50.000
114)$4-Bromofluorobenzene	(3)	12.348	95	350328	48.645
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	389170	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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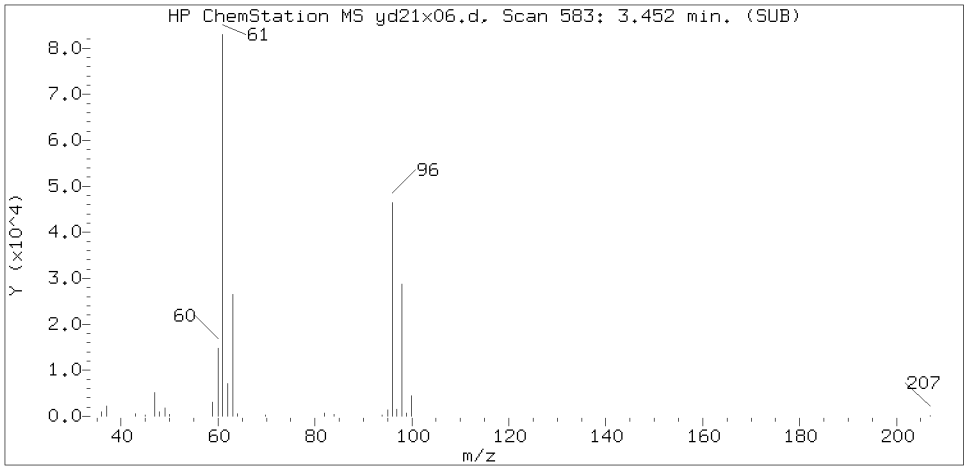
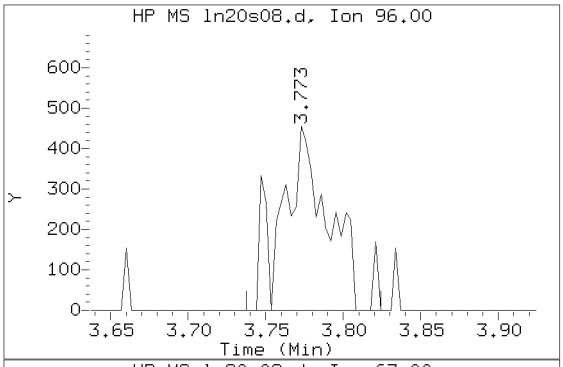
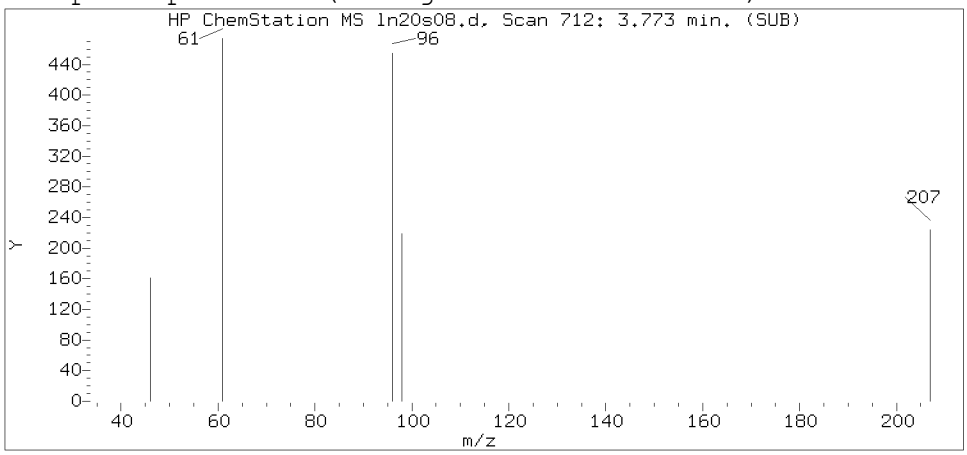
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

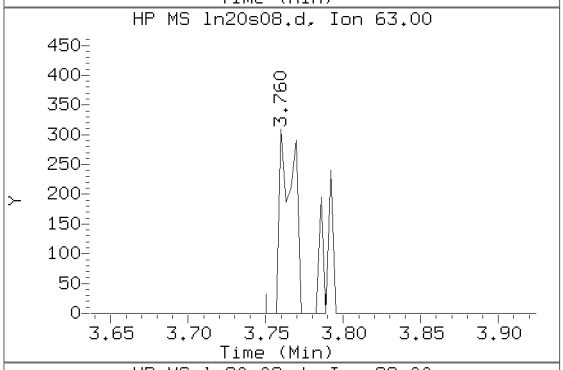
Reference Standard Spectrum for 1,1-Dichloroethene



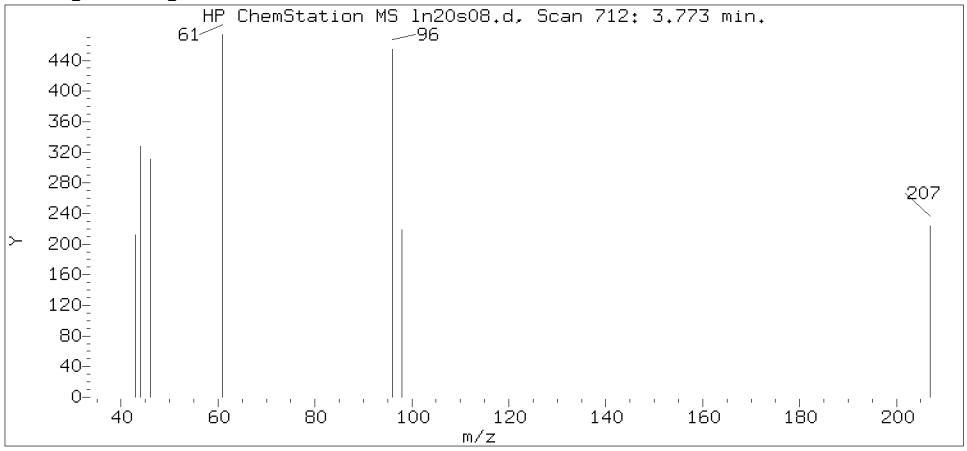


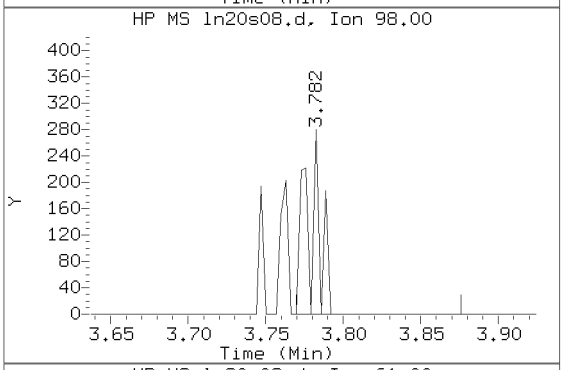
Sample Spectrum (Background Subtracted)

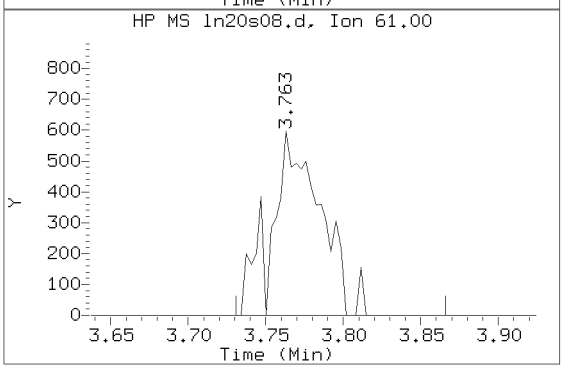




Sample Spectrum (Unaltered)







Data File: /chem/HP09915.i/19nov20a.b/ln20s08.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:36 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 12:53 Automation

Sample Name: W1902 Lab Sample ID: 1202299

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 712
Retention Time (minutes): 3.773
Relative Retention Time :-0.00143
Quant Ion : 96.00
Area (flag) : 975
On-Column Amount (ng) : 0.2552

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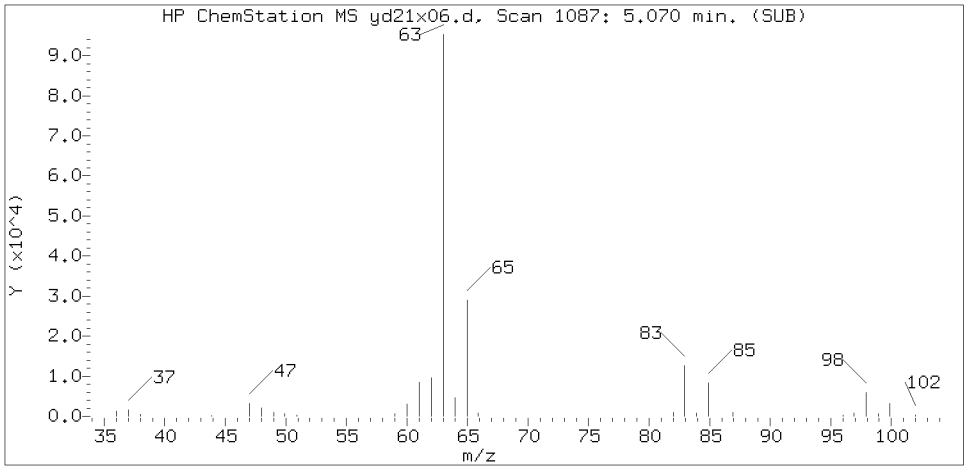
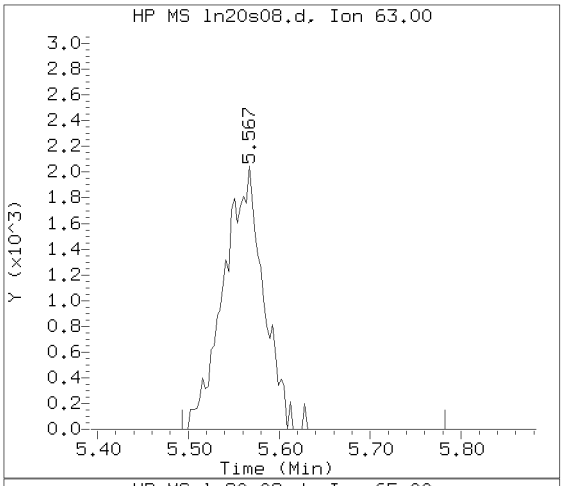
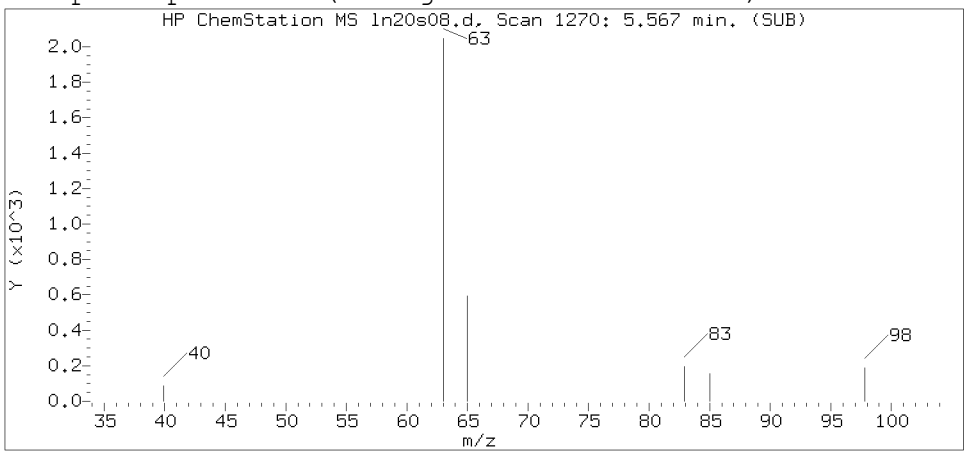
Target 3.5 esignature user ID: dvv10293

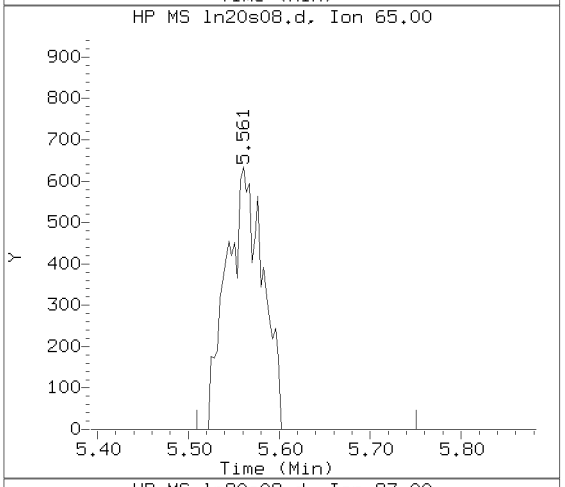
Reference Standard Spectrum for 1,1-Dichloroethane



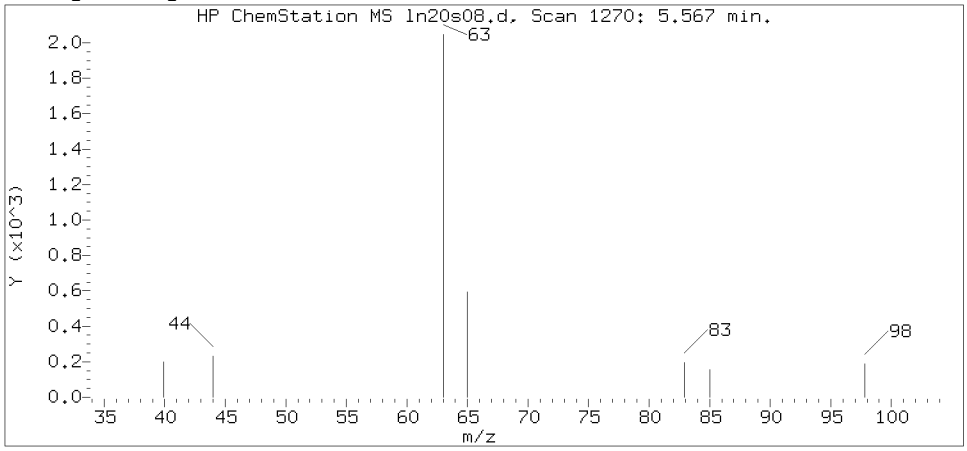


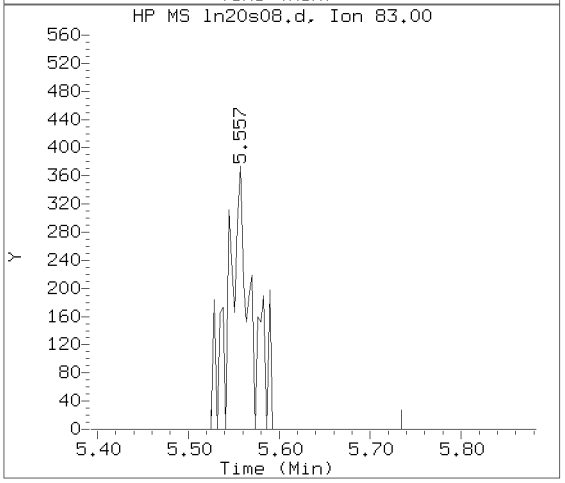
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov20a.b/ln20s08.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:36 Analyst ID: KKM02078

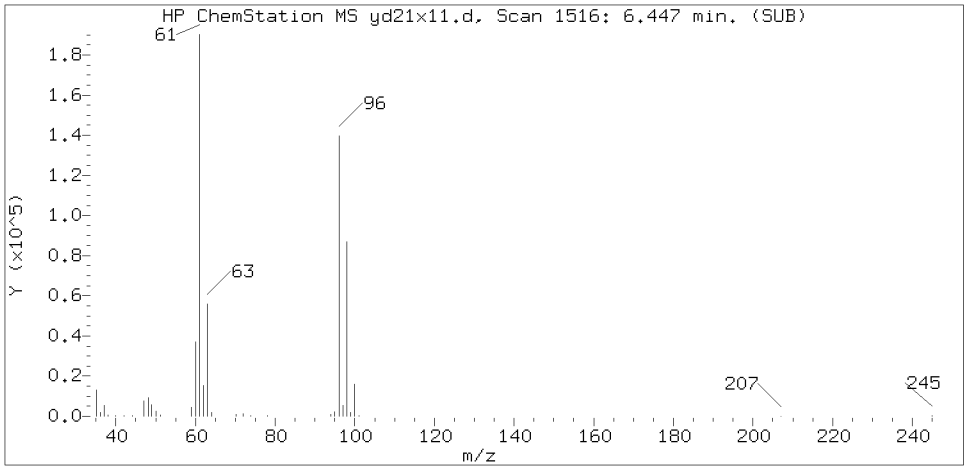
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 12:53 Automation

Sample Name: W1902 Lab Sample ID: 1202299

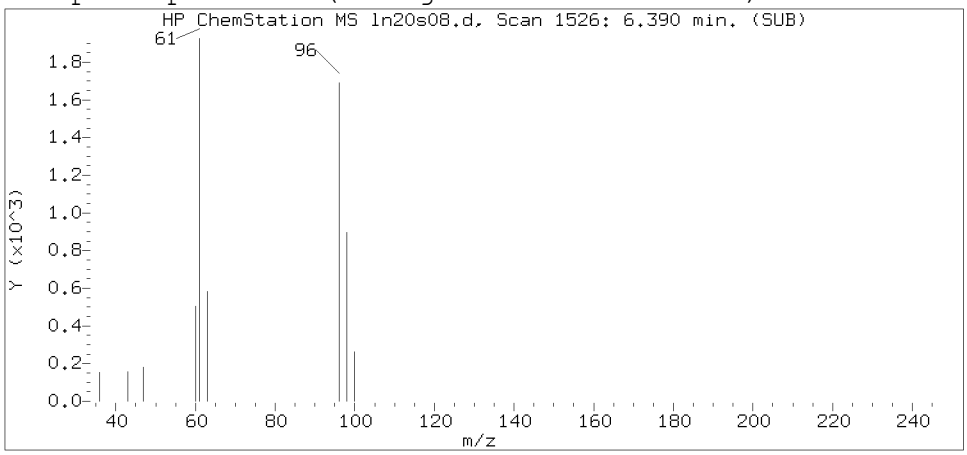
Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 1270
Retention Time (minutes): 5.567
Relative Retention Time :-0.00174
Quant Ion : 63.00
Area (flag) : 6218
On-Column Amount (ng) : 0.8058

Digitally signed by Don V. Viray on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10293

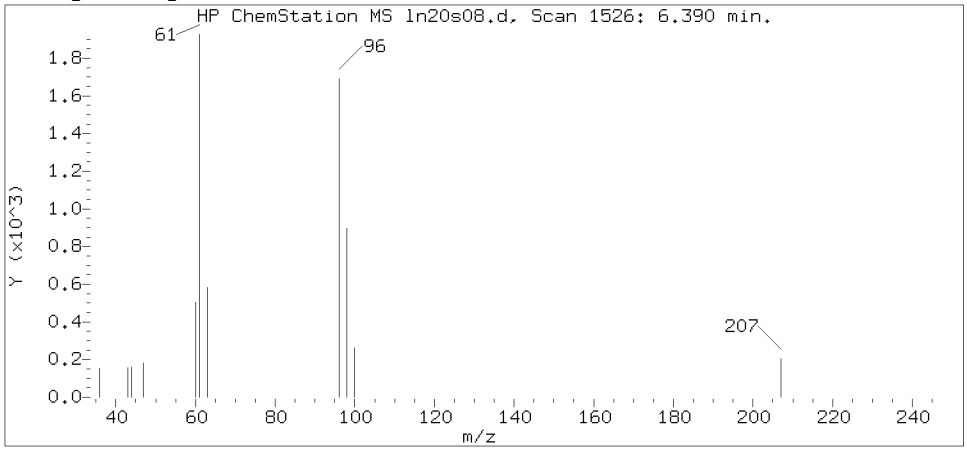
Reference Standard Spectrum for cis-1,2-Dichloroethene

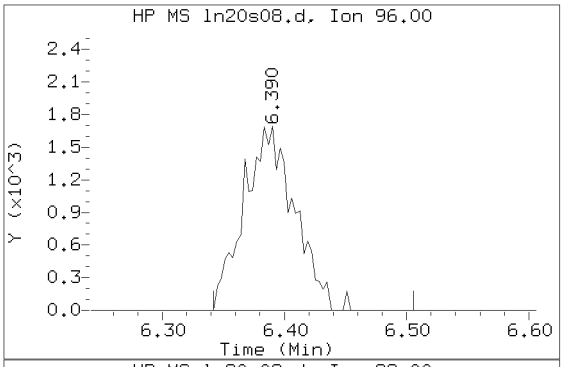


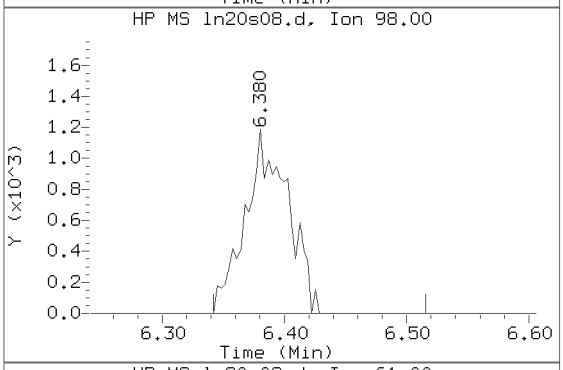
Sample Spectrum (Background Subtracted)

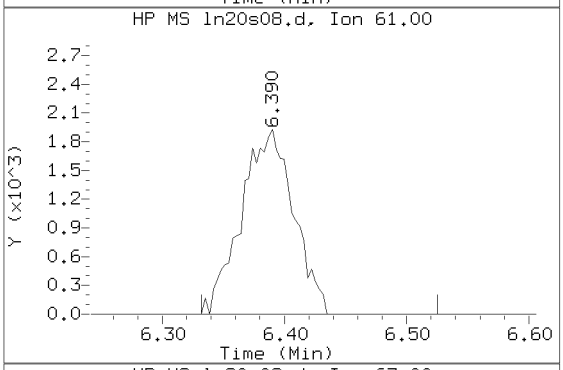


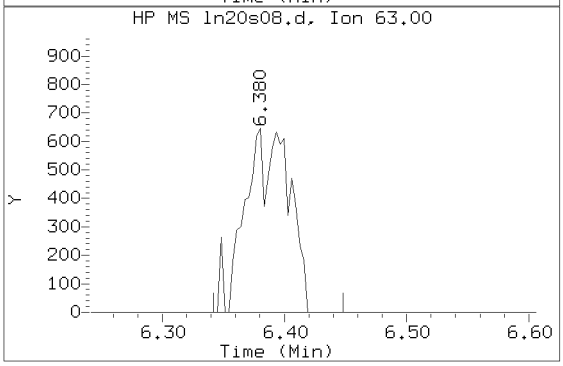
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov20a.b/ln20s08.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:36 Analyst ID: KKM02078

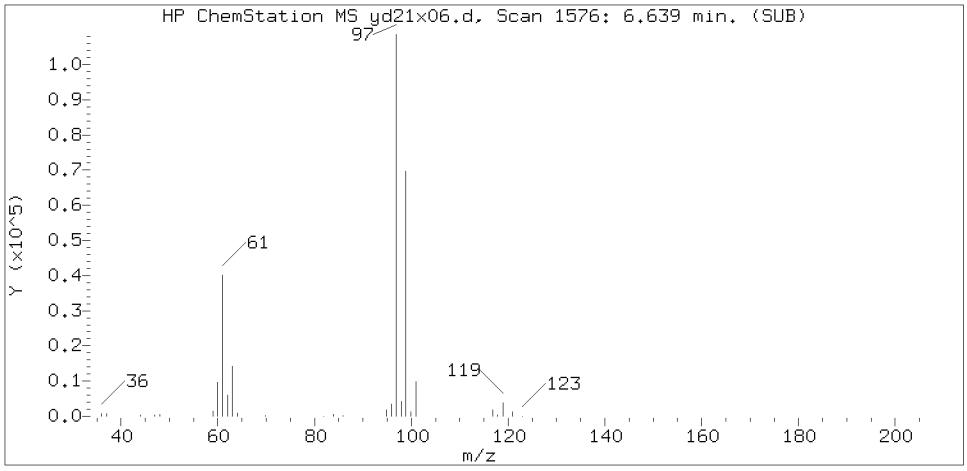
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 12:53 Automation

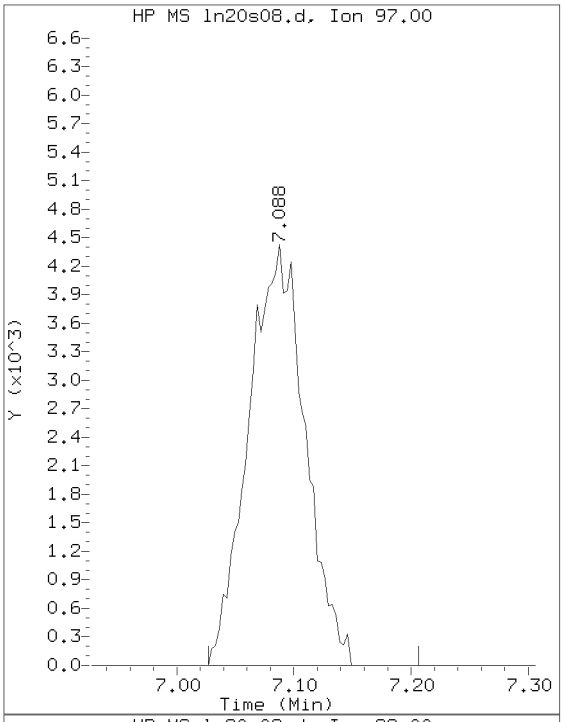
Sample Name: W1902 Lab Sample ID: 1202299

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 1526
Retention Time (minutes): 6.390
Relative Retention Time :-0.00089
Quant Ion : 96.00
Area (flag) : 4895
On-Column Amount (ng) : 0.9858

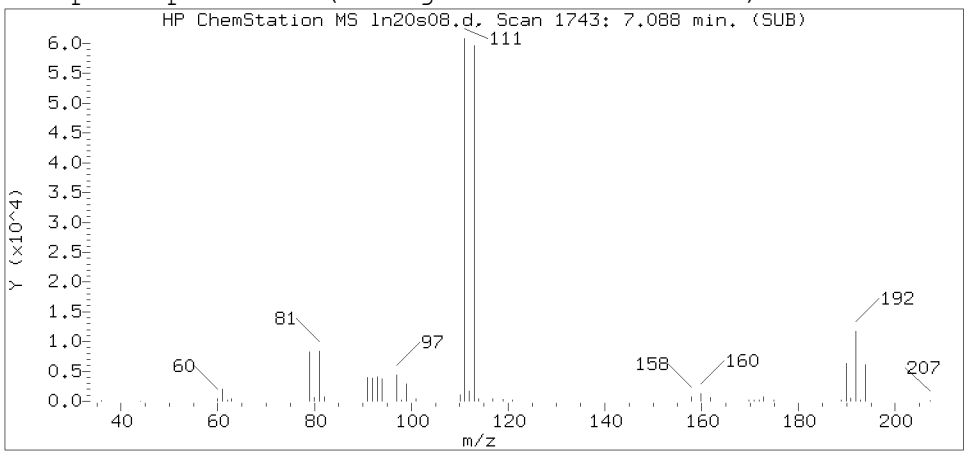
Digitally signed by Don V. Viray on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

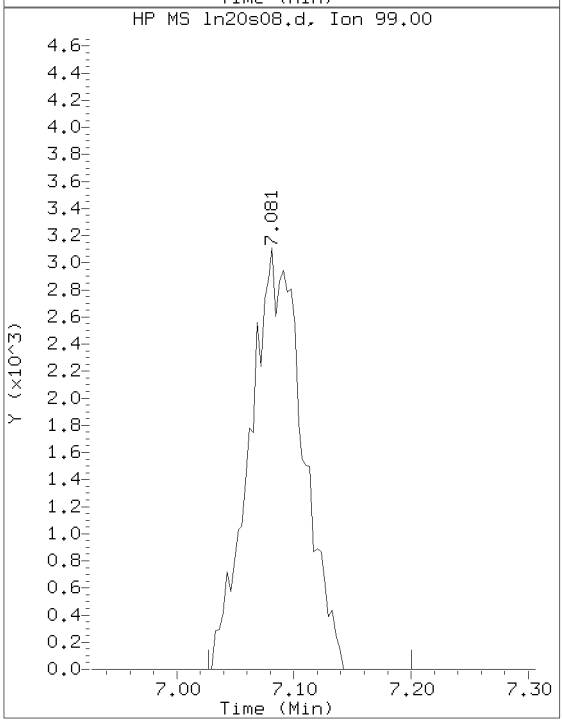
Reference Standard Spectrum for 1,1,1-Trichloroethane



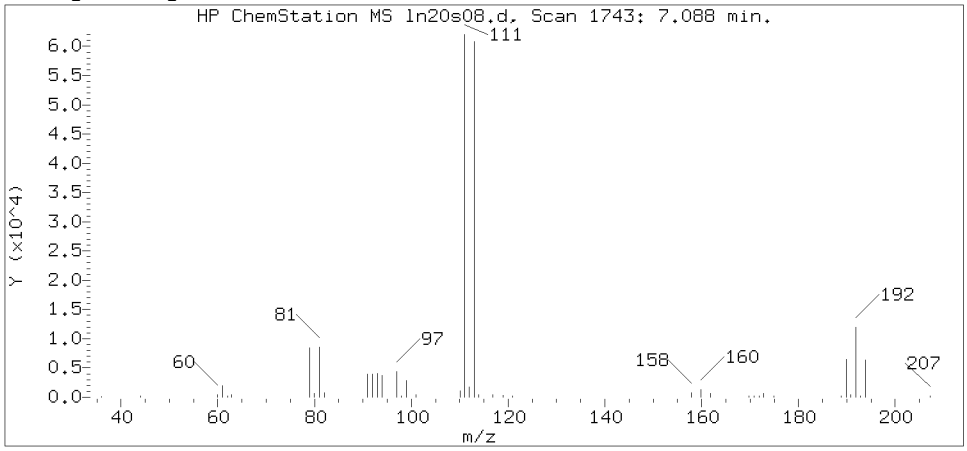


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov20a.b/ln20s08.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:36 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 12:53 Automation

Sample Name: W1902 Lab Sample ID: 1202299

Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 1743
Retention Time (minutes): 7.088
Relative Retention Time :-0.00004
Quant Ion : 97.00
Area (flag) : 14829
On-Column Amount (ng) : 2.3538

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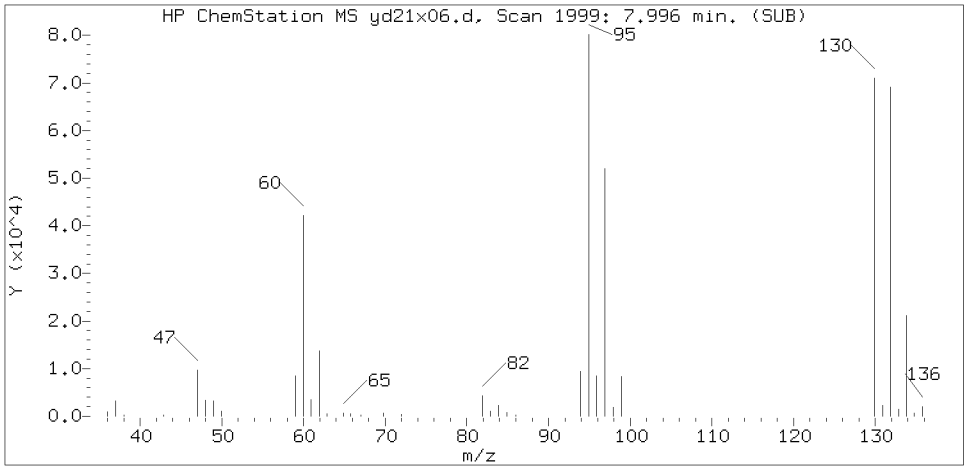
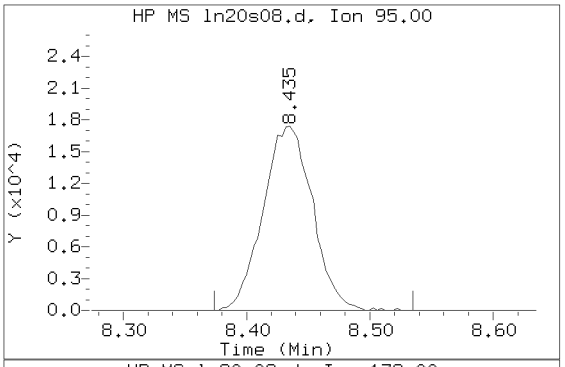
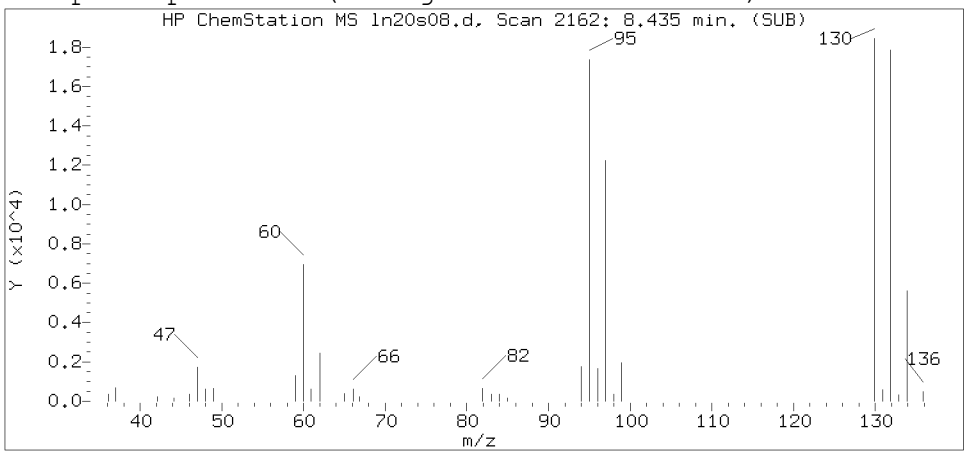
Target 3.5 esignature user ID: dvv10203

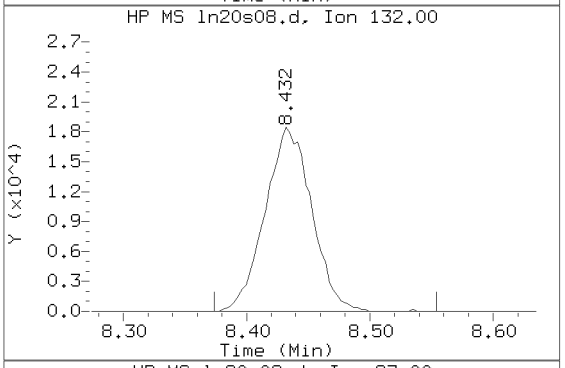
Reference Standard Spectrum for Trichloroethene

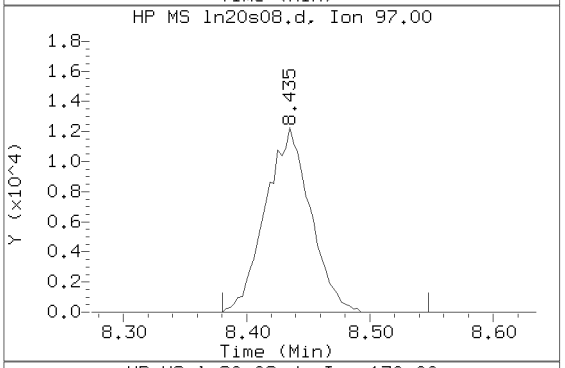




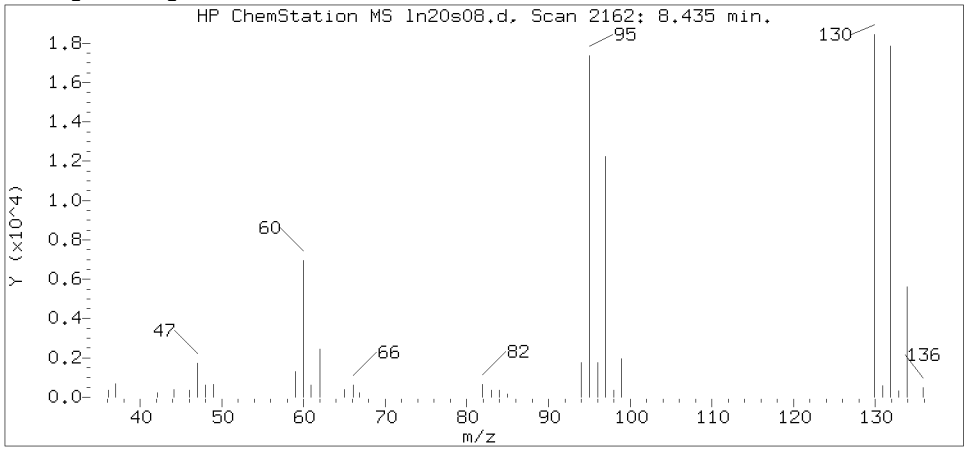
Sample Spectrum (Background Subtracted)

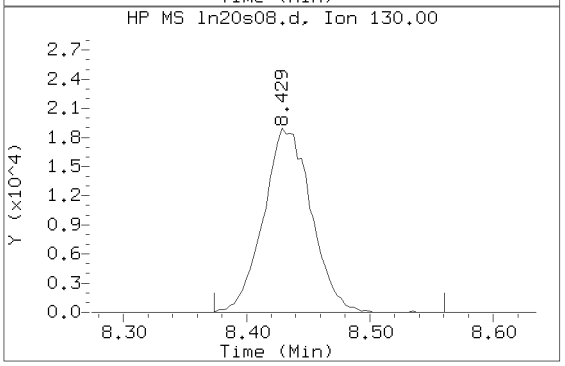






Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov20a.b/ln20s08.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:36 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 12:53 Automation

Sample Name: W1902 Lab Sample ID: 1202299

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 2162
Retention Time (minutes)	: 8.435
Relative Retention Time	: 0.00002
Quant Ion	: 95.00
Area (flag)	: 48482
On-Column Amount (ng)	: 10.4930

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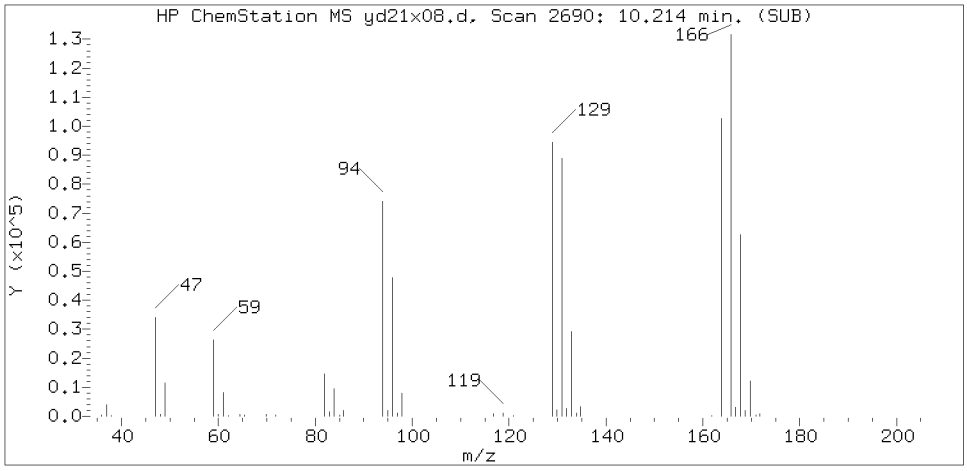
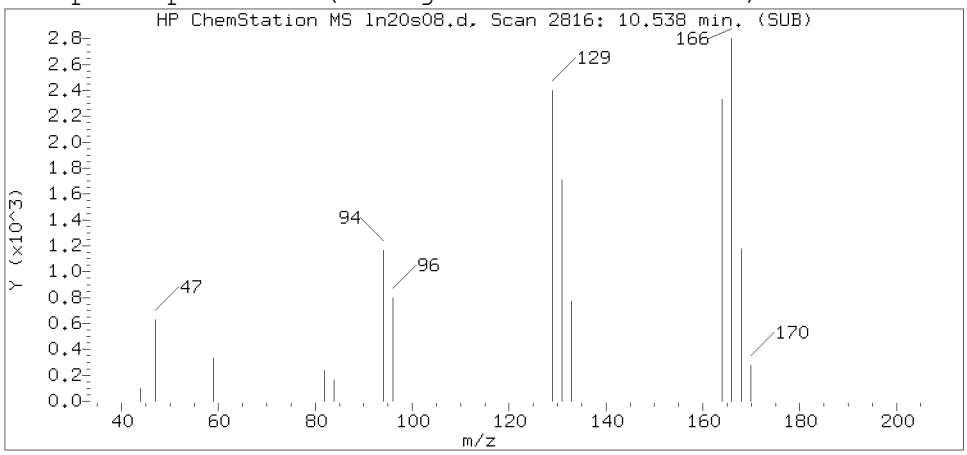
Target 3.5 esignature user ID: dvv10203

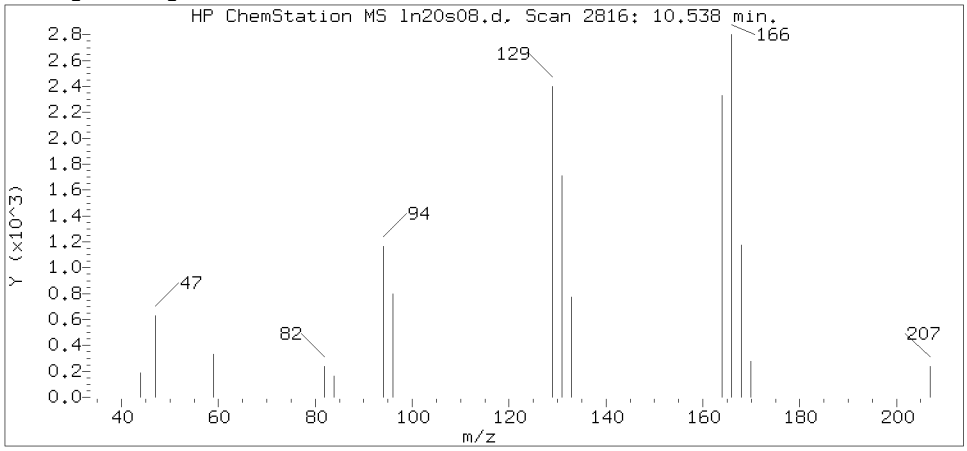
Reference Standard Spectrum for Tetrachloroethene

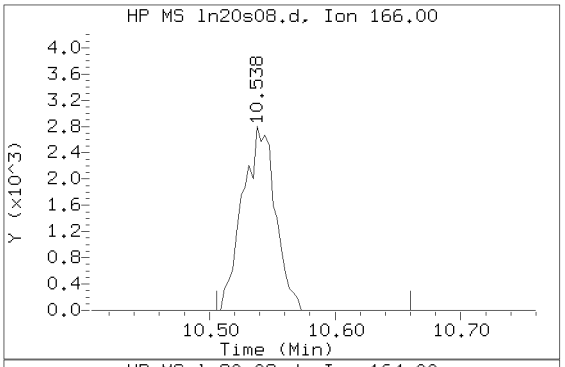


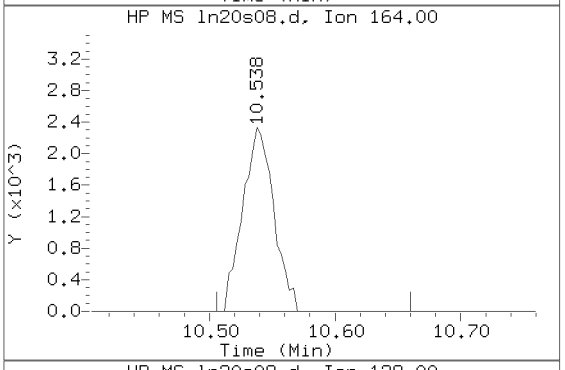
Sample Spectrum (Background Subtracted)

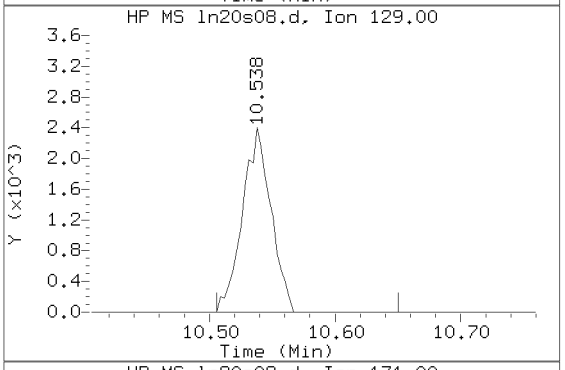


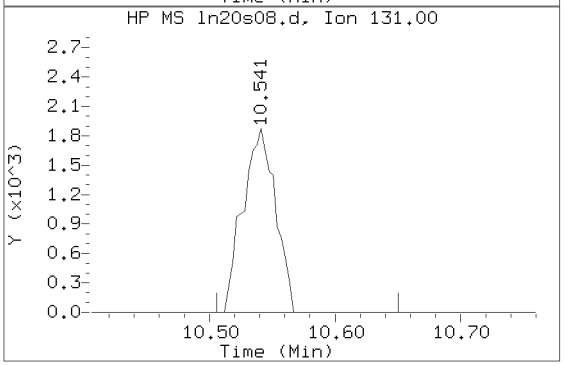
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov20a.b/ln20s08.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:36 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 12:53 Automation

Sample Name: W1902 Lab Sample ID: 1202299

Compound Number	: 93
Compound Name	: Tetrachloroethene
Scan Number	: 2816
Retention Time (minutes)	: 10.538
Relative Retention Time	: 0.00002
Quant Ion	: 166.00
Area (flag)	: 5070
On-Column Amount (ng)	: 1.0040

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Target 3.5 esignature user ID: dvv10203

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
W1903

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202300

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov20a.b/ln20s09.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	0.9	J
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.2	J
156-59-2	cis-1,2-Dichloroethene	0.2	J
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	0.6	J
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	3	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	0.2	J
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

^

W1903 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202300

Data file: /chem/HP09915.i/19nov20a.b/ln20s09.d Injection date and time: **20-NOV-2019 12:58**
Data file Sample Info. Line: W1903;1202300;1;0;;JCW19;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 21:12 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.496	(-0.003)	937	65	172523M	(12)	250.00	
66) Fluorobenzene	7.956	(0.003)	2013	96	901563	(1)	50.00	
100) Chlorobenzene-d5	11.361	(0.000)	3072	117	733643	(1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	386696	(-1)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072	(0.000)	113	208090	47.210	94%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	56560	50.349	101%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	918784	47.863	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	350802	48.261	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)	3.805	(-0.000)	58	544M	0.938	0.94		J	0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.564	(-0.001)	63	1812	0.235	0.23		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	6.380	(-0.000)	96	1201	0.242	0.24		J	0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	7.081	(0.000)	97	3650M	0.580	0.58		J	0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.432	(-0.000)	95	11700	2.534	2.53			0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)	10.538	(0.000)	166	1101	0.216	0.22		J	0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

M = Compound was manually integrated.

Digitally signed by Don V. Viray on 11/20/2019 at 21:19. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov20a.b/ln20s09.d Injection date and time: **20-NOV-2019 12:58**
Data file Sample Info. Line: W1903;1202300;1;0;;JCW19;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 21:12 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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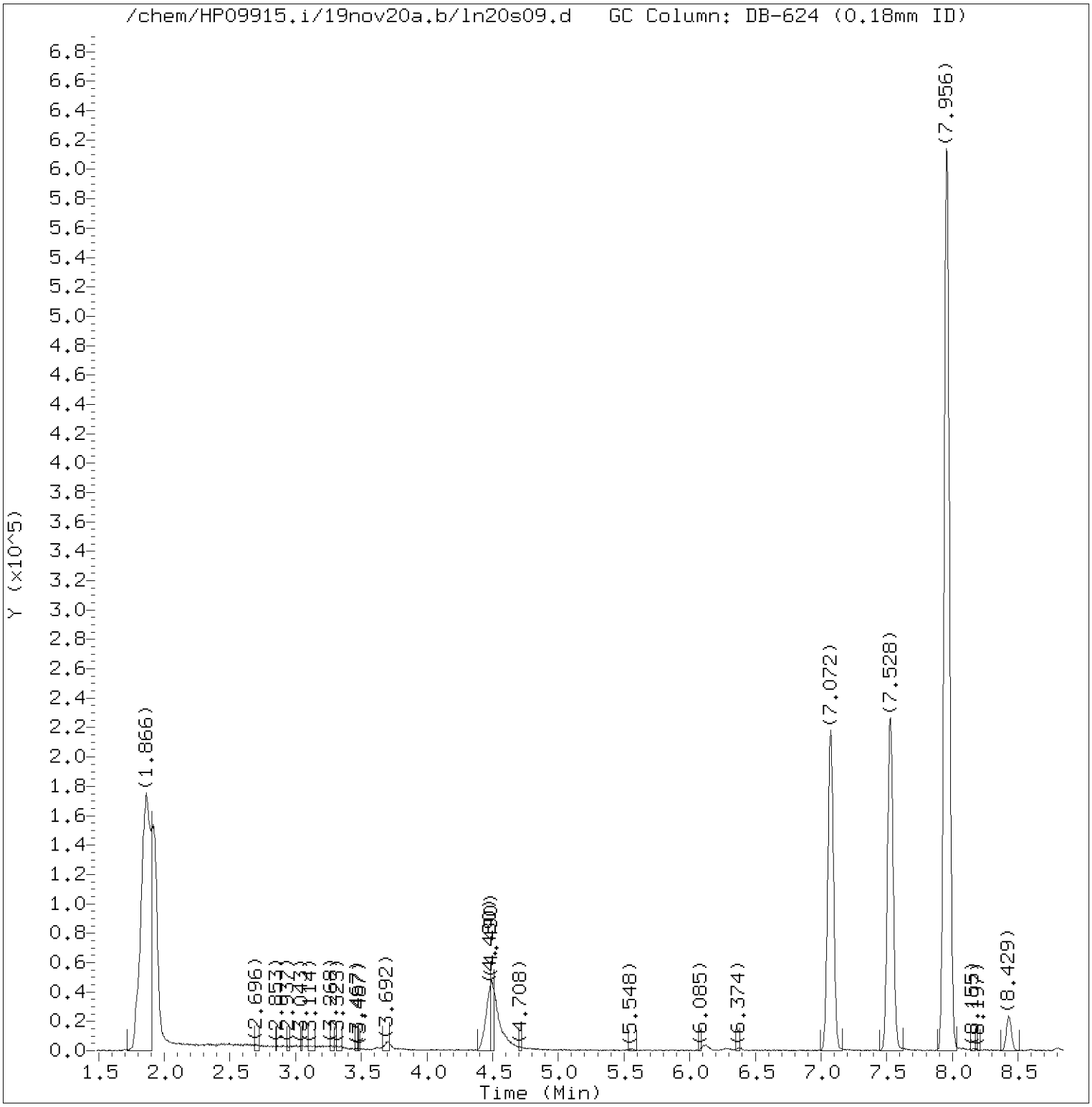
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 11/20/2019 at 21:19. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

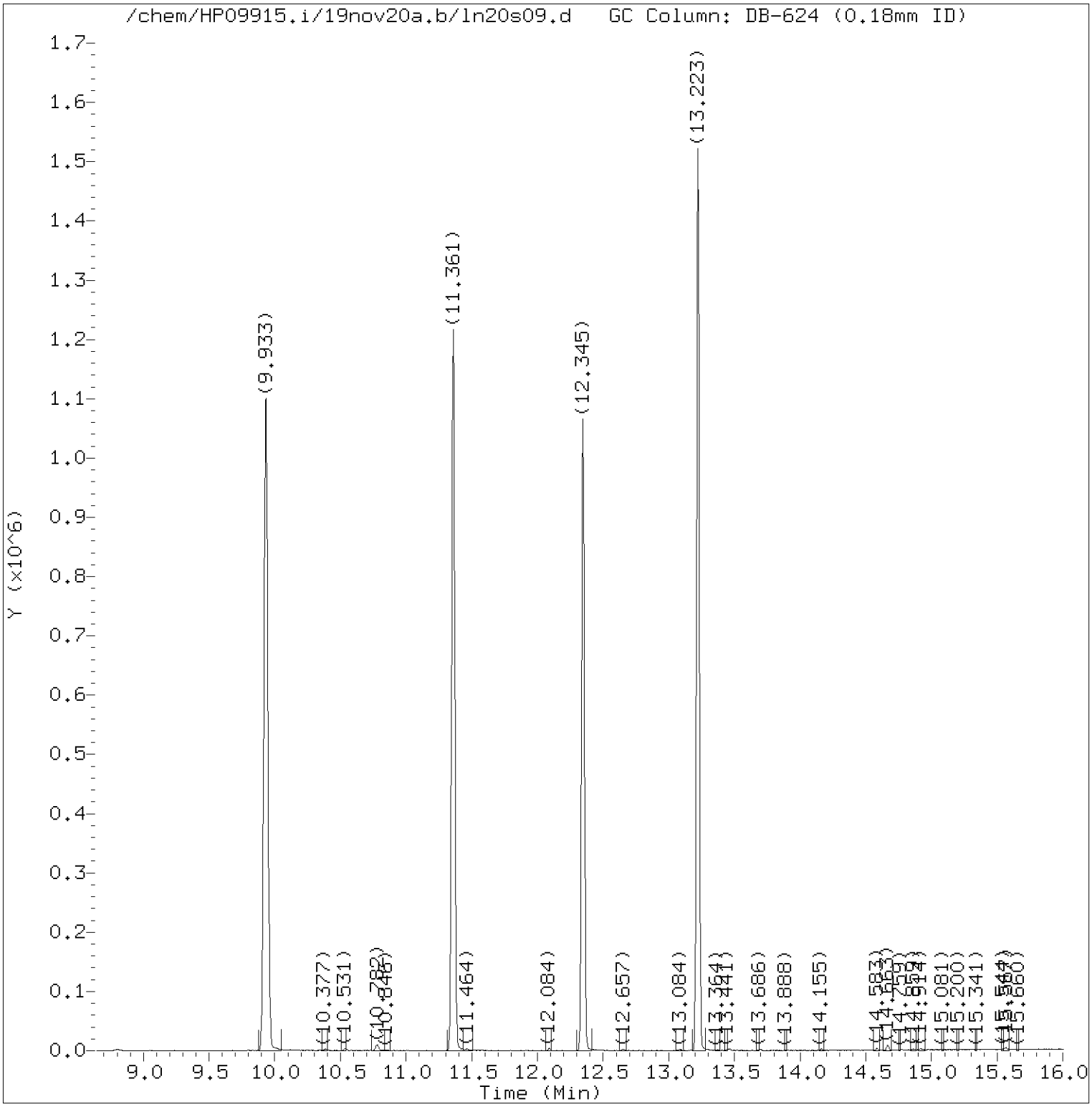
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s09.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:58 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:12 dvv10203

Sample Name: W1903 Lab Sample ID: 1202300

Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s09.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:58 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:12 dvv10203

Sample Name: W1903 Lab Sample ID: 1202300

Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s09.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:58 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:12 dvv10203

Sample Name: W1903 Lab Sample ID: 1202300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
18) Acetone	(1)	3.805	58	544M	0.938
29)*t-Butyl alcohol-d10	(1)	4.496	65	172523M	250.000
36) 1,1-Dichloroethane	(2)	5.564	63	1812	0.235
42) cis-1,2-Dichloroethene	(2)	6.380	96	1201	0.242
52)$Dibromofluoromethane	(2)	7.072	113	208090	47.210
53) 1,1,1-Trichloroethane	(2)	7.081	97	3650M	0.580
57)$1,2-Dichloroethane-d4	(2)	7.525	102	56560	50.349
66)*Fluorobenzene	(2)	7.956	96	901563	50.000
71) Trichloroethene	(2)	8.432	95	11700	2.534
83)$Toluene-d8	(3)	9.933	98	918784	47.863
93) Tetrachloroethene	(3)	10.538	166	1101	0.216
100)*Chlorobenzene-d5	(3)	11.361	117	733643	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	350802	48.261
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	386696	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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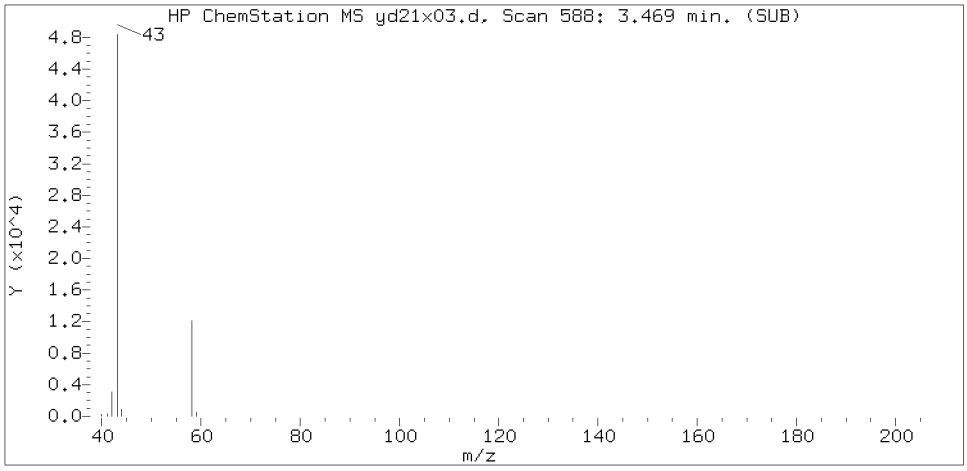
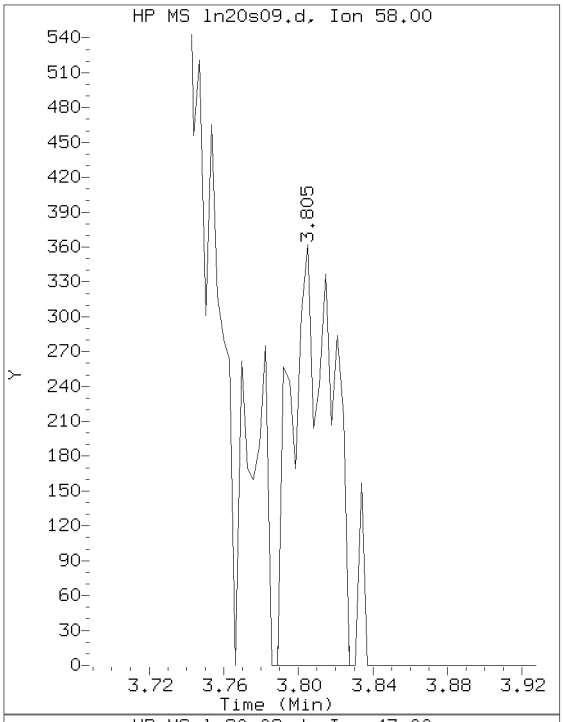
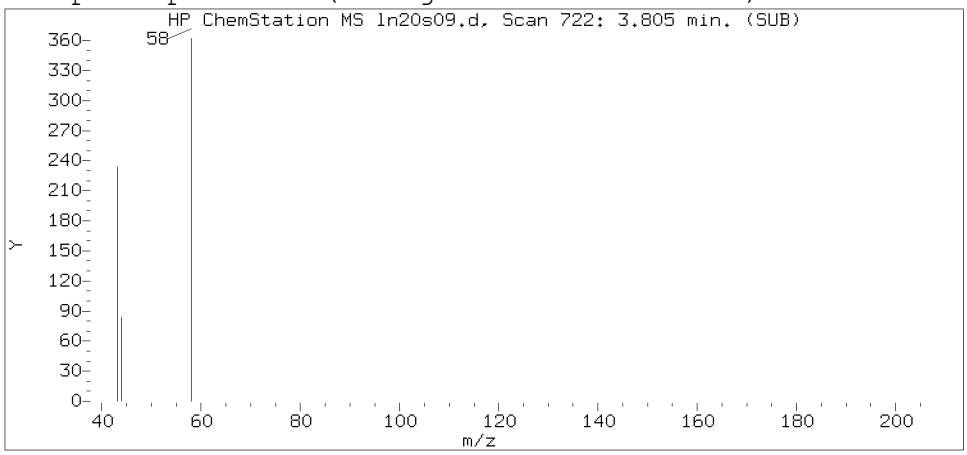
Target 3.5 esignature user ID: dvv10203

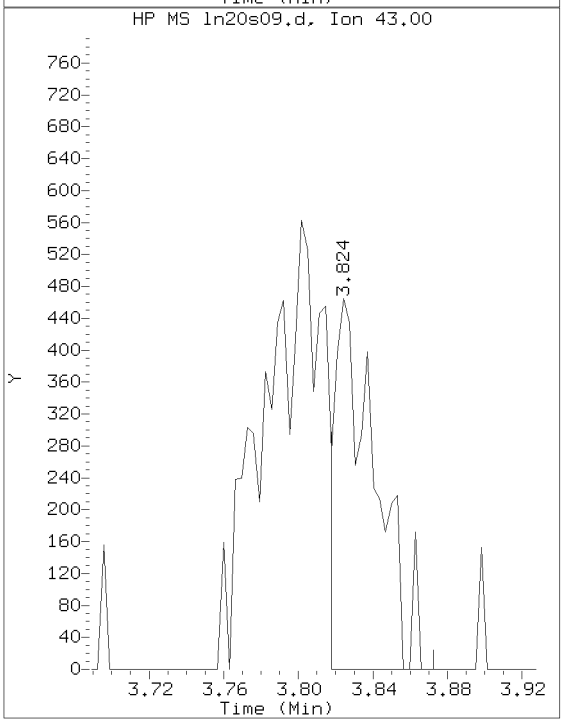
Reference Standard Spectrum for Acetone



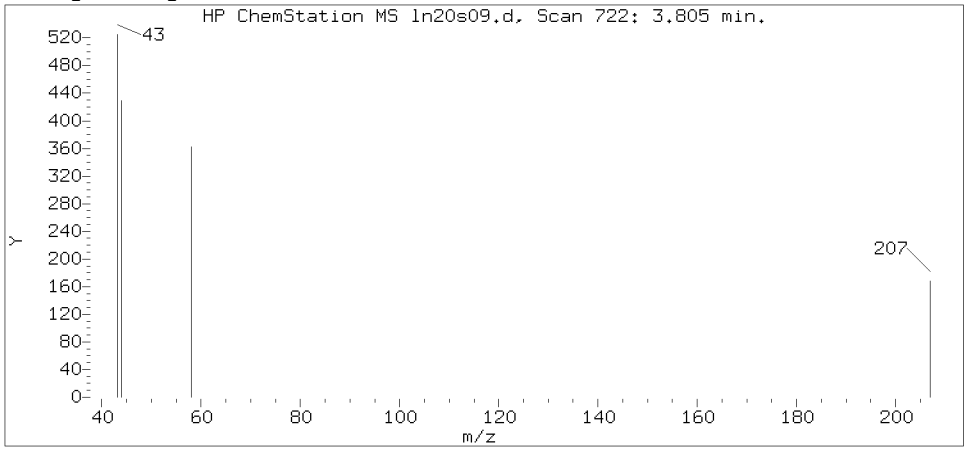


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov20a.b/ln20s09.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:58 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:12 dvv10203

Sample Name: W1903 Lab Sample ID: 1202300

Compound Number	: 18
Compound Name	: Acetone
Scan Number	: 722
Retention Time (minutes)	: 3.805
Relative Retention Time	:-0.00011
Quant Ion	: 58.00
Area (flag)	: 544M
On-Column Amount (ng)	: 0.9379

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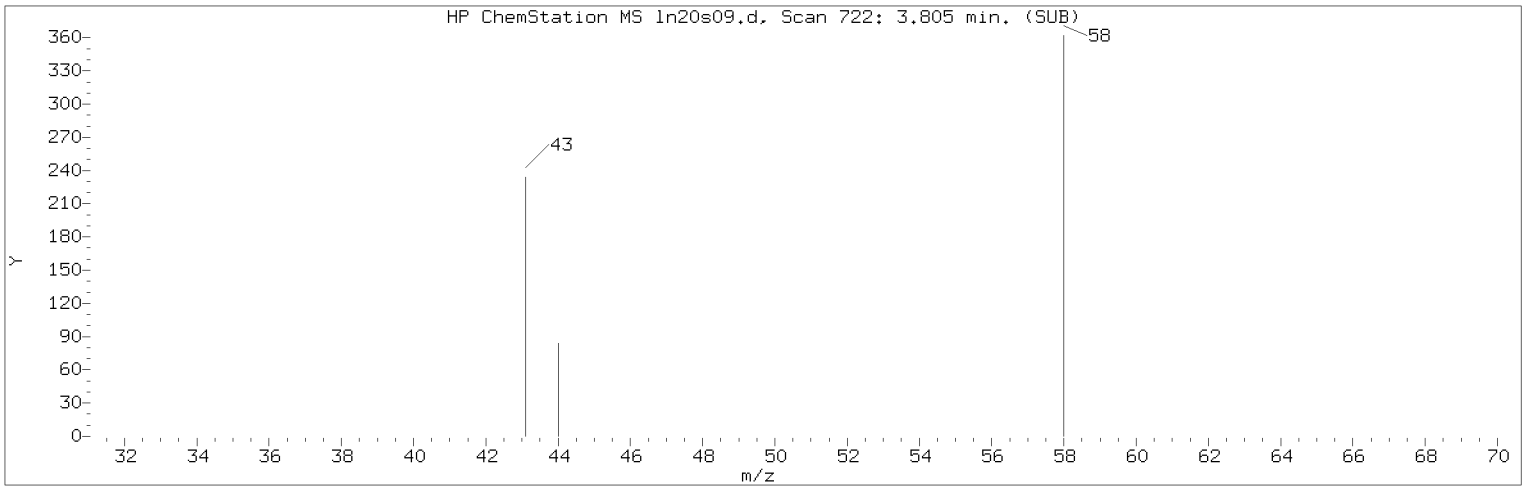
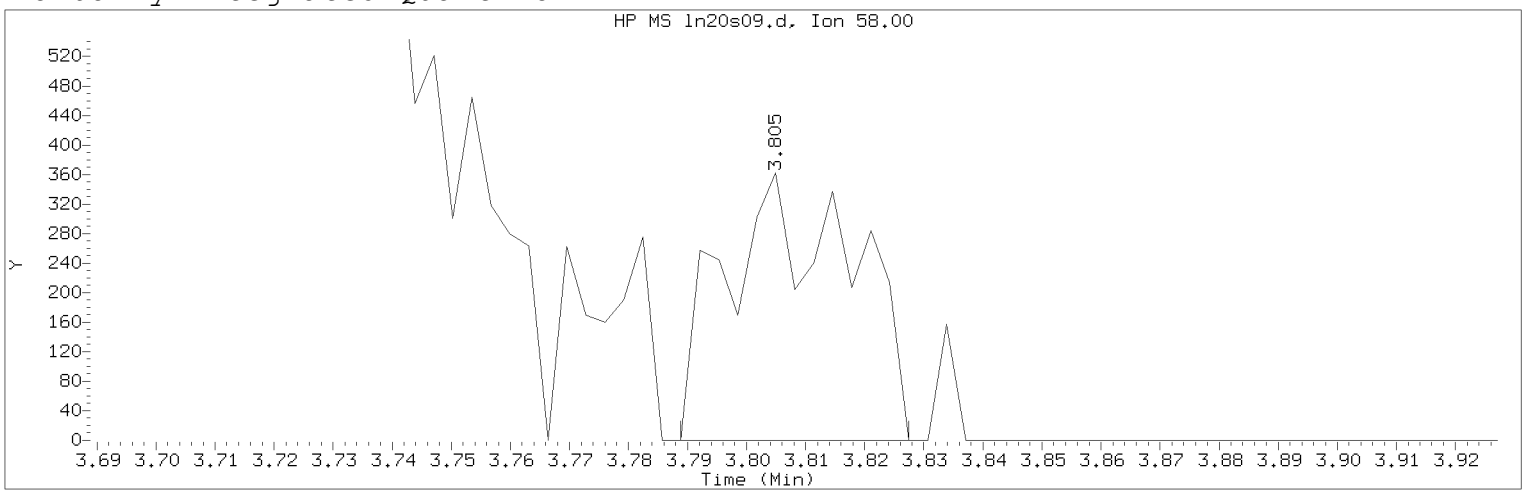
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s09.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:58 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:12 dvv10203

Sample Name: W1903 Lab Sample ID: 1202300

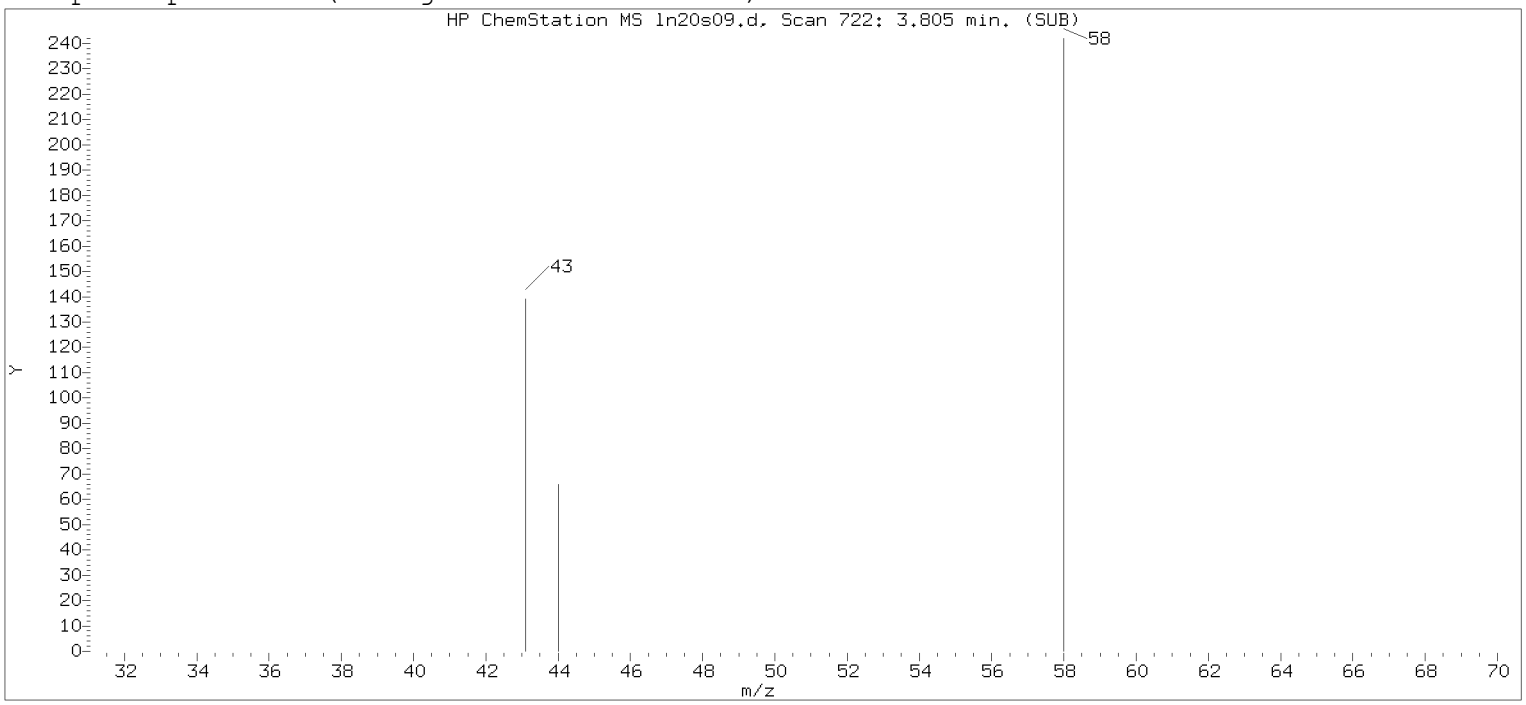
Compound Number : 18
Compound Name : Acetone
Scan Number : 722
Retention Time (minutes): 3.805
Quant Ion : 58.00
Area (flag) : 544M
On-Column Amount (ng) : 0.9379
Integration start scan : 716 Integration stop scan: 728
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

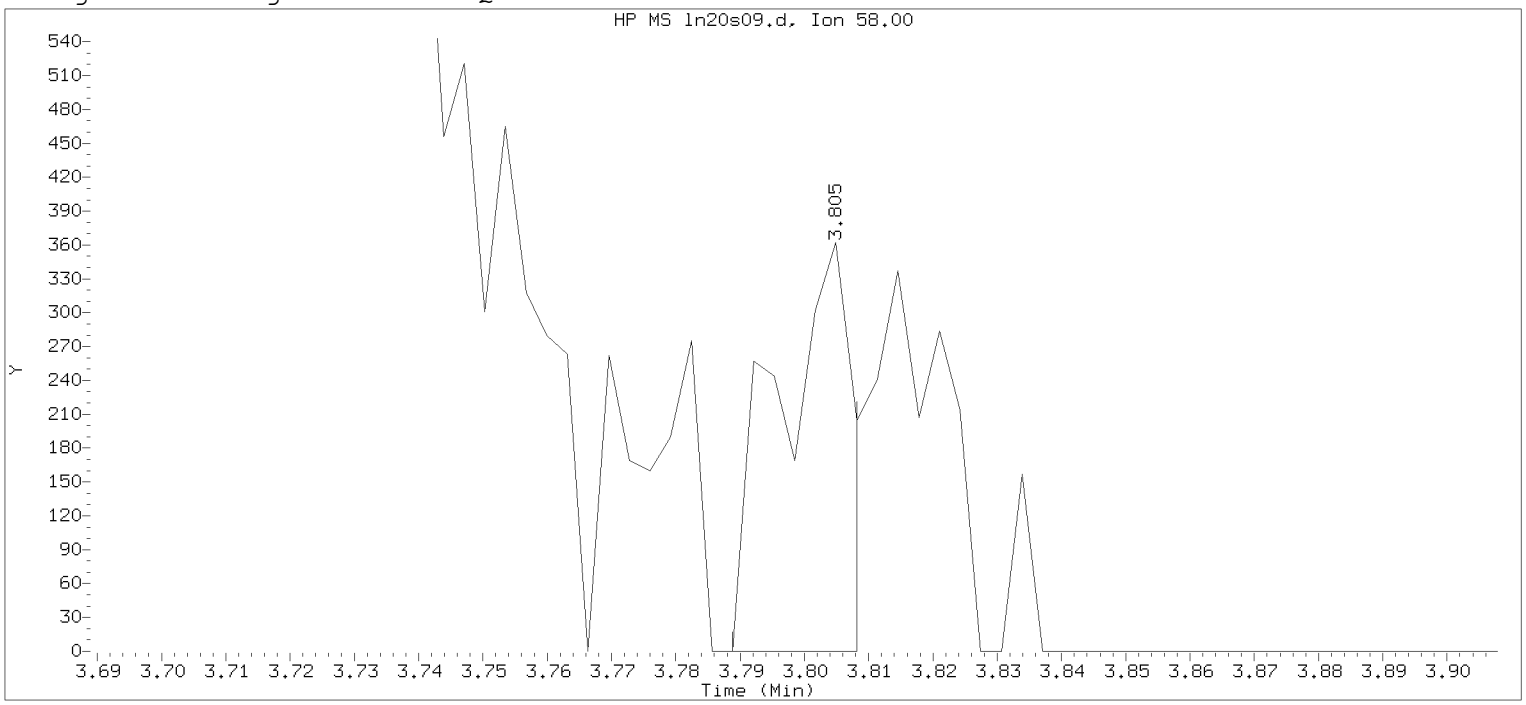
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:53.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s09.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:58 Analyst ID: KKM02078

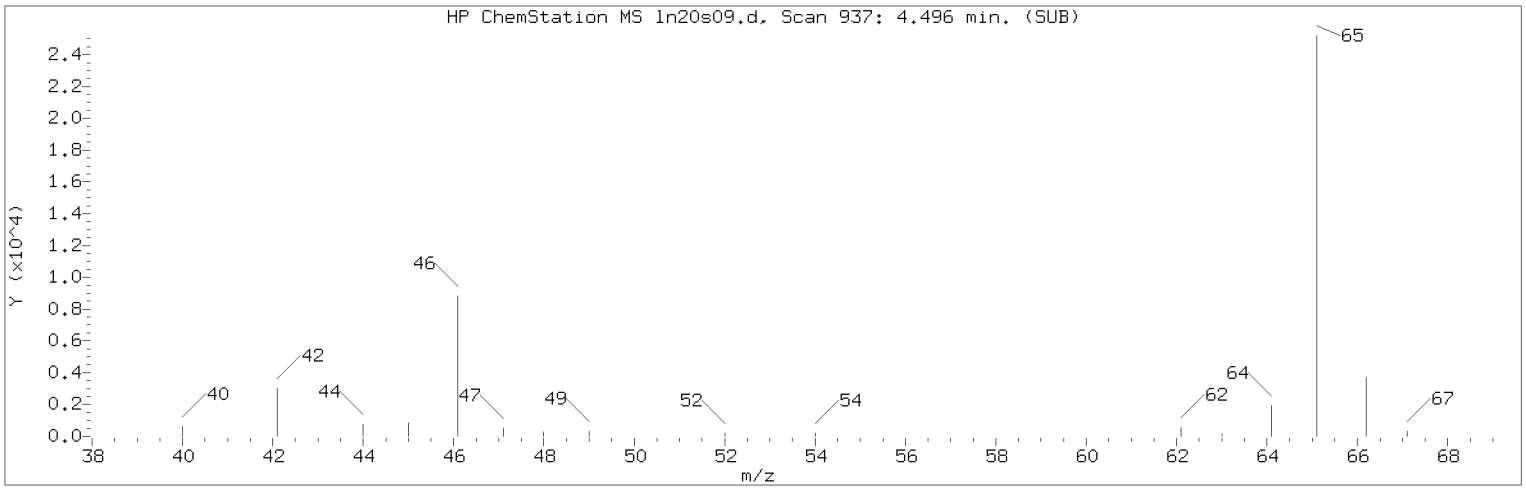
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 13:15 Automation

Sample Name: W1903 Lab Sample ID: 1202300

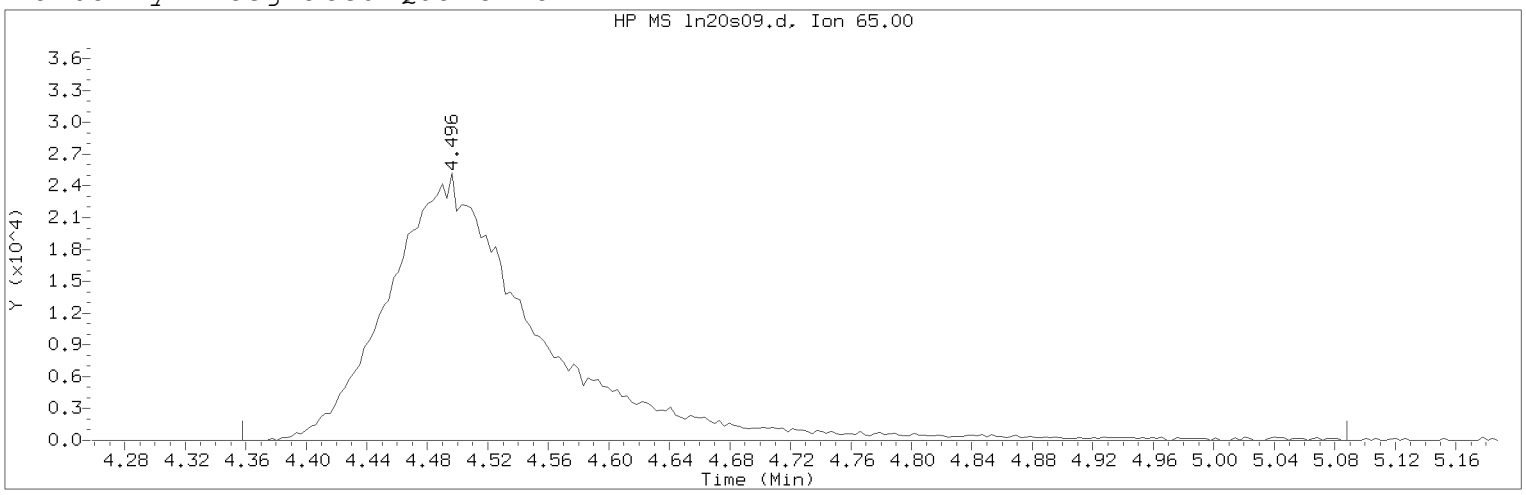
Compound Number : 18
Compound Name : Acetone
Scan Number : 722
Retention Time (minutes): 3.805
Quant Ion : 58.00
Area : 277
On-column Amount (ng) : 0.4921
Integration start scan : 716 Integration stop scan: 722
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: DVIRAY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s09.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:58 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:12 dvv10203

Sample Name: W1903 Lab Sample ID: 1202300

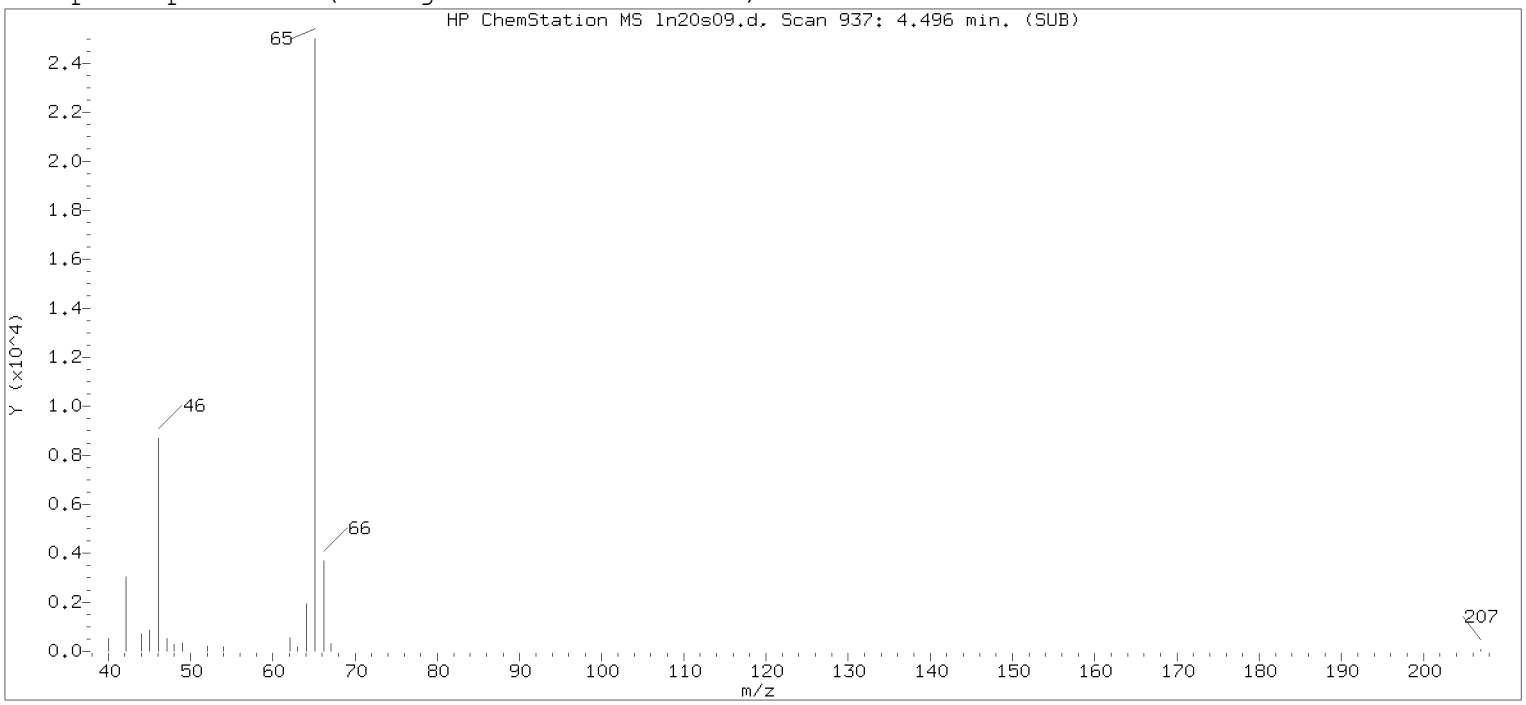
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 937
Retention Time (minutes): 4.496
Quant Ion : 65.00
Area (flag) : 172523M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1120
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

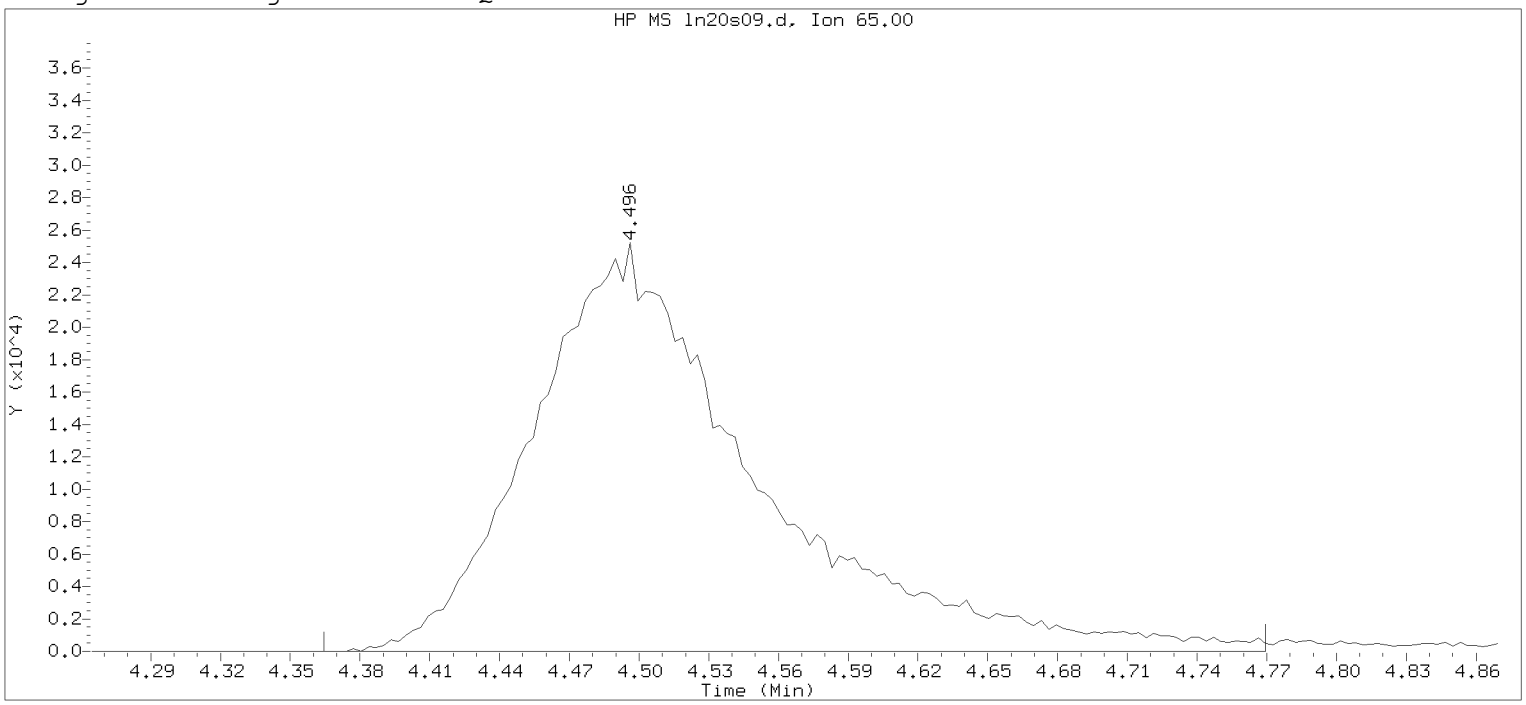
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:53.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s09.d Instrument ID: HP09915.i
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Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 13:15 Automation

Sample Name: W1903 Lab Sample ID: 1202300

Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 937
Retention Time (minutes): 4.496
Quant Ion : 65.00
Area : 167379
On-column Amount (ng) : 250.0000
Integration start scan : 895 Integration stop scan: 1021
Y at integration start : 0 Y at integration end: 0

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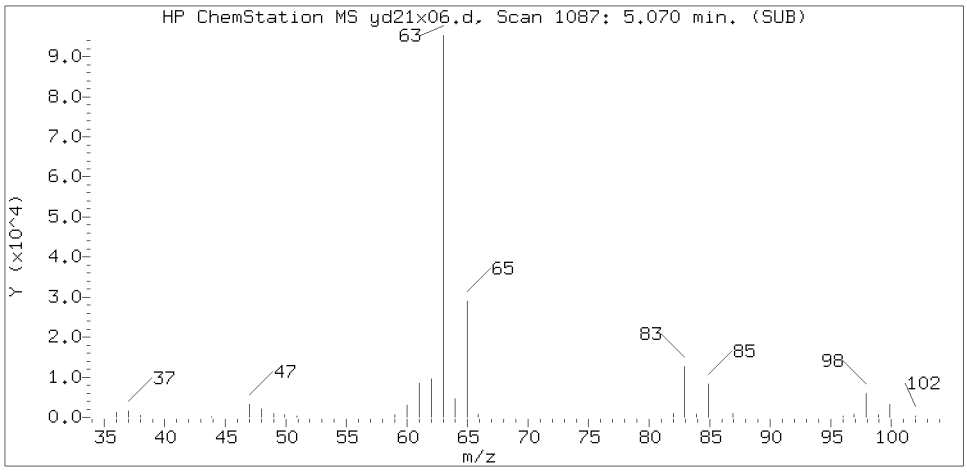
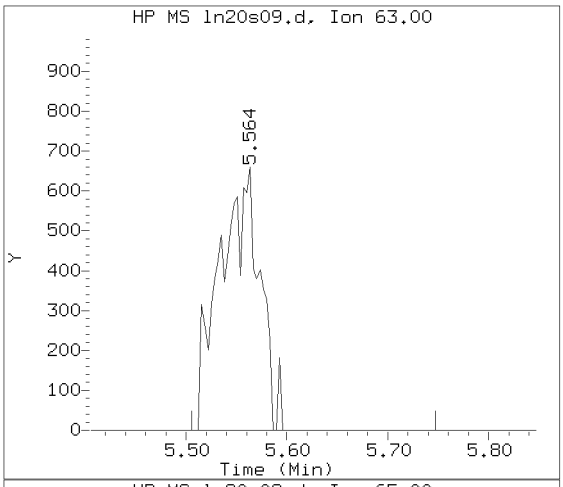
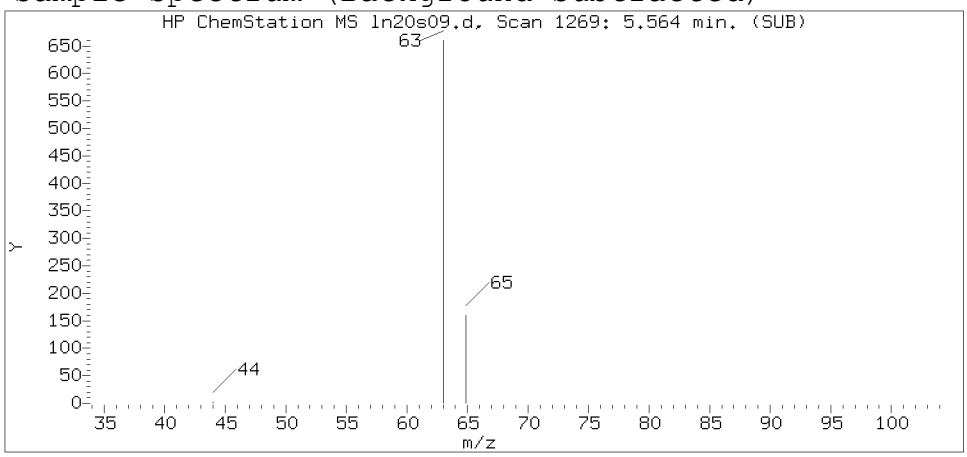
Target 3.5 esignature user: Don V. Viray

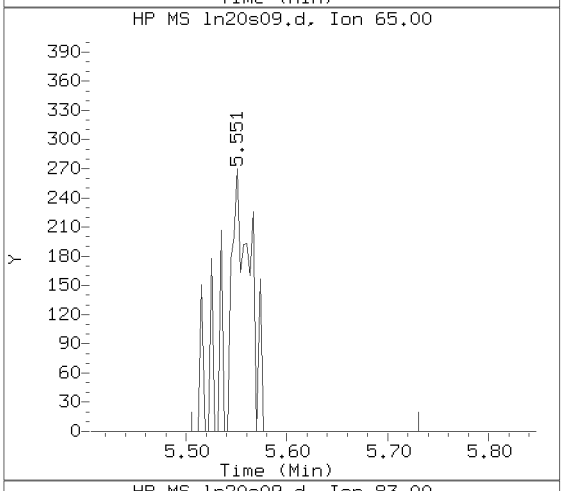
Reference Standard Spectrum for 1,1-Dichloroethane



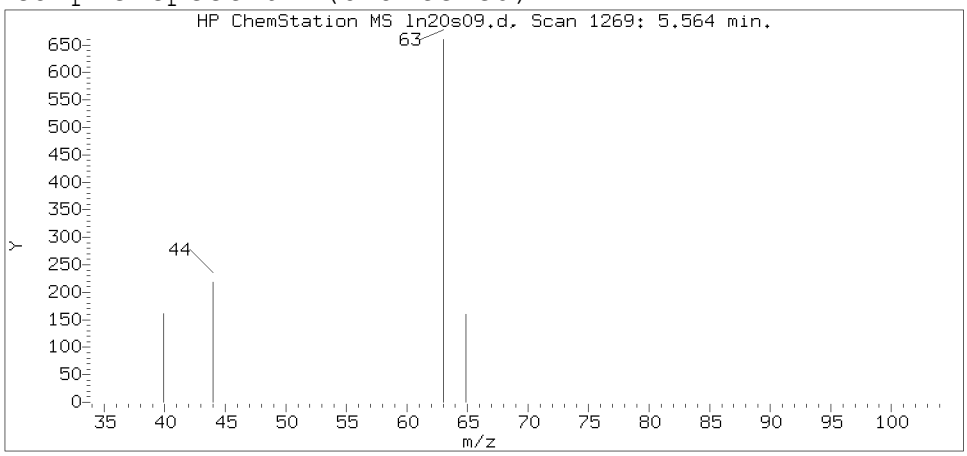


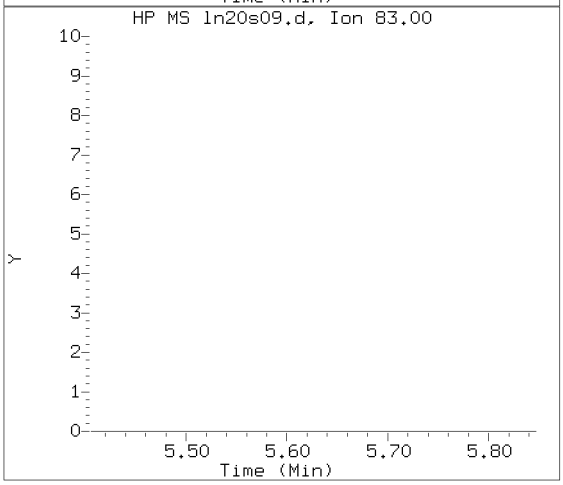
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov20a.b/ln20s09.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:58 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:12 dvv10203

Sample Name: W1903 Lab Sample ID: 1202300

Compound Number	: 36
Compound Name	: 1,1-Dichloroethane
Scan Number	: 1269
Retention Time (minutes)	: 5.564
Relative Retention Time	:-0.00190
Quant Ion	: 63.00
Area (flag)	: 1812
On-Column Amount (ng)	: 0.2349

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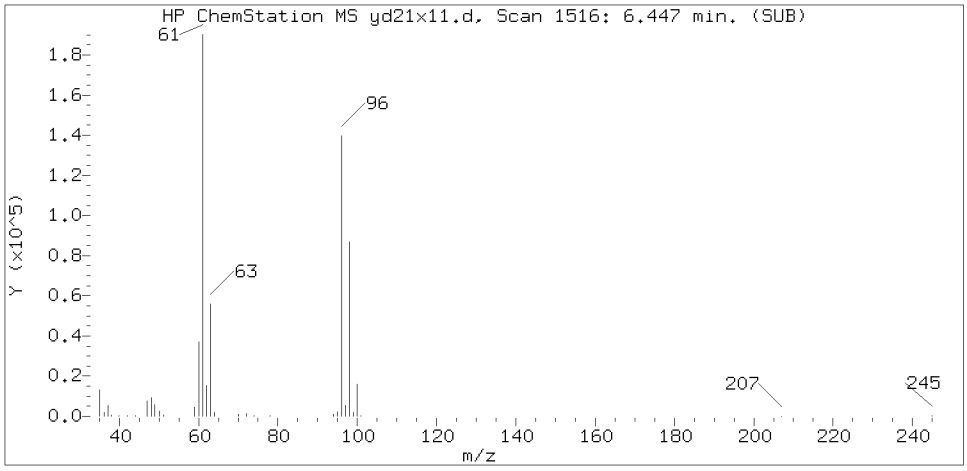
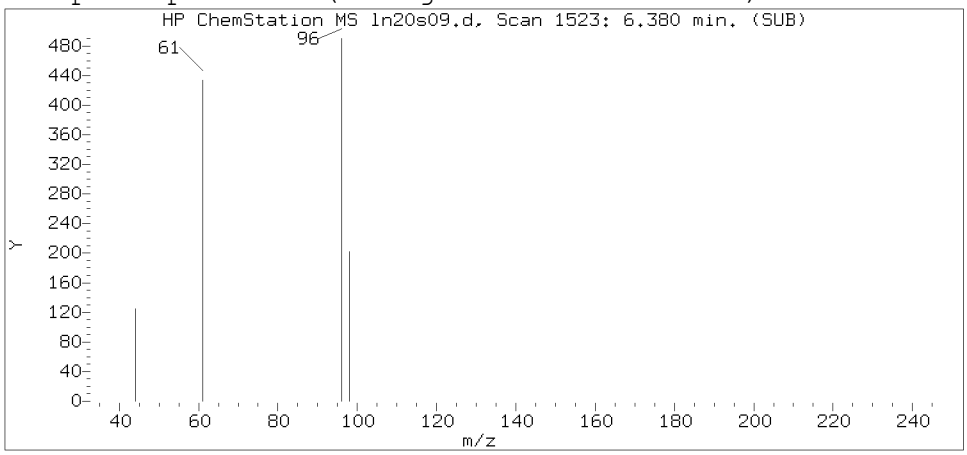
Target 3.5 esignature user ID: dvv10203

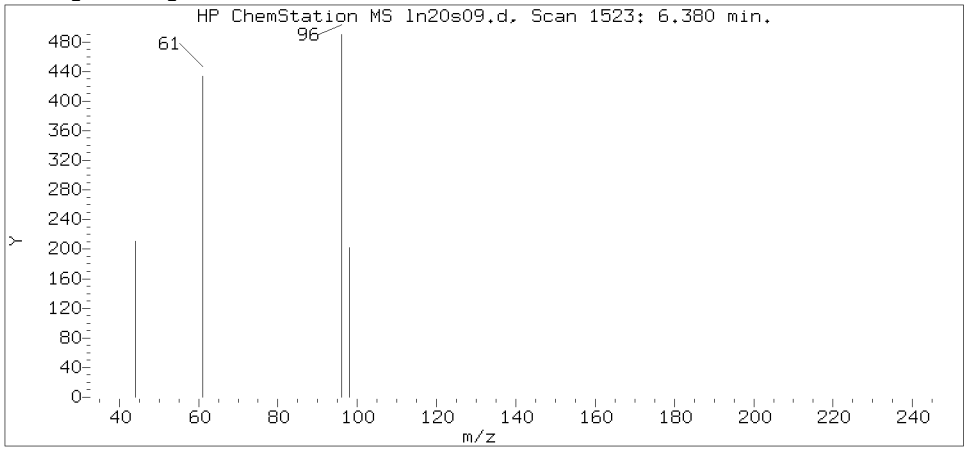
Reference Standard Spectrum for cis-1,2-Dichloroethene

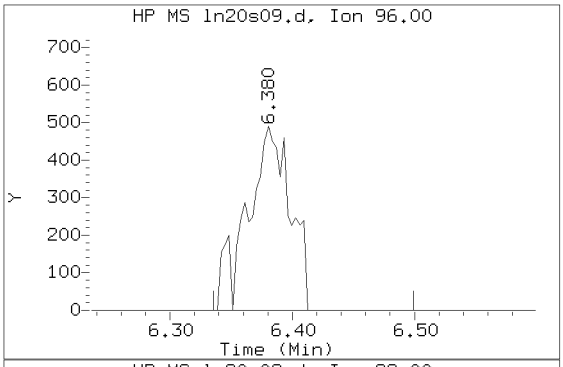


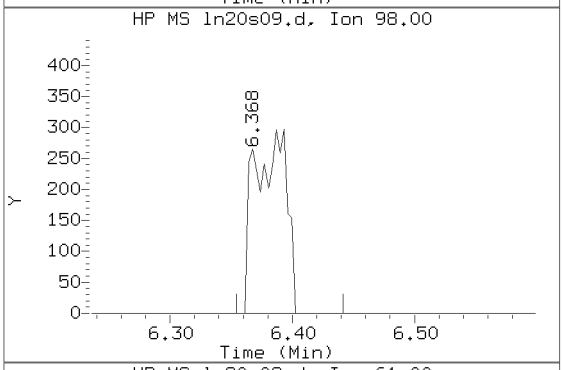
Sample Spectrum (Background Subtracted)

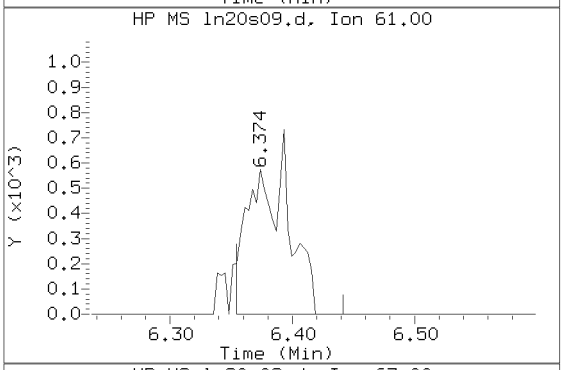


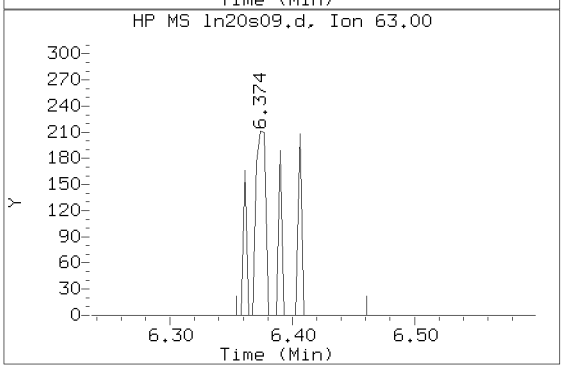
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov20a.b/ln20s09.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:58 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:12 dvv10203

Sample Name: W1903 Lab Sample ID: 1202300

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 1523
Retention Time (minutes): 6.380
Relative Retention Time :-0.00032
Quant Ion : 96.00
Area (flag) : 1201
On-Column Amount (ng) : 0.2420

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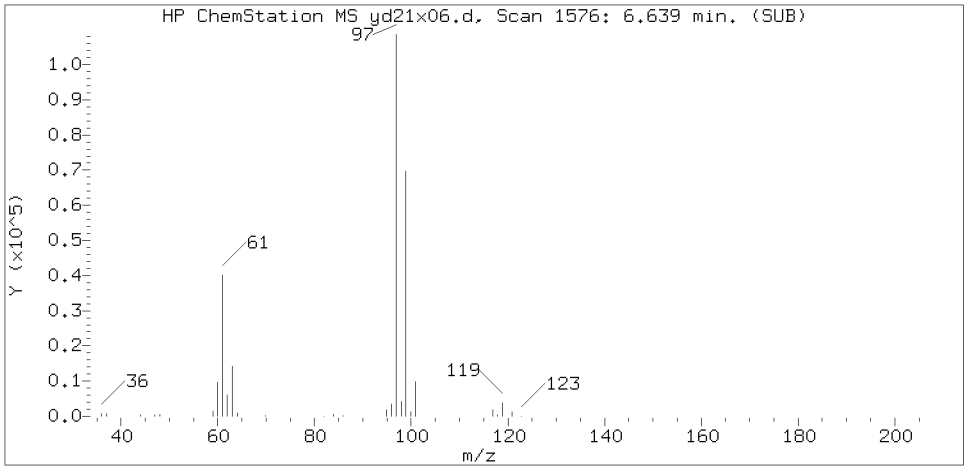
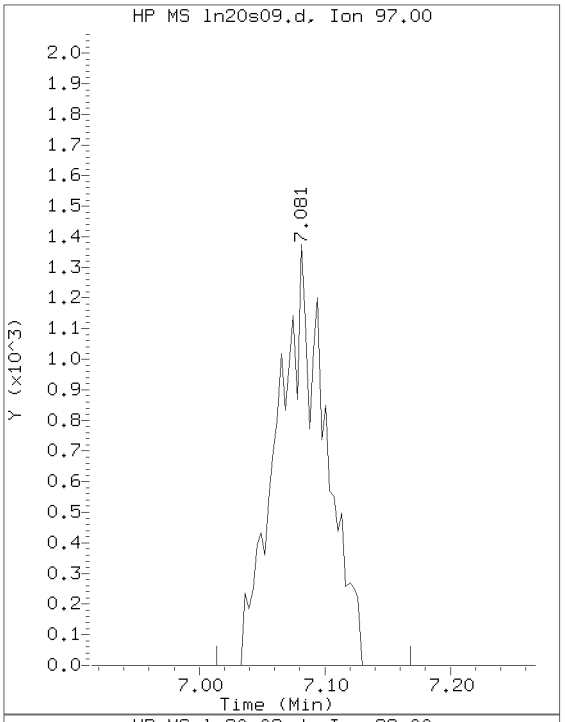
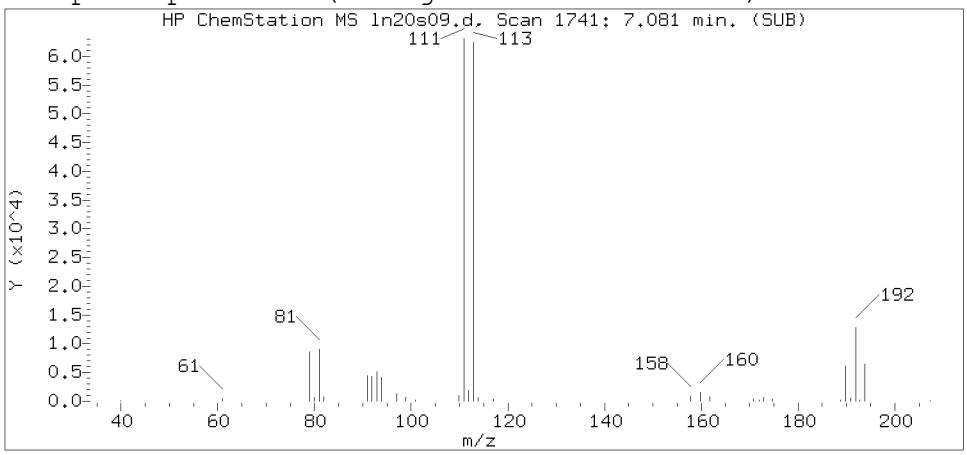
Target 3.5 esignature user ID: dvv10203

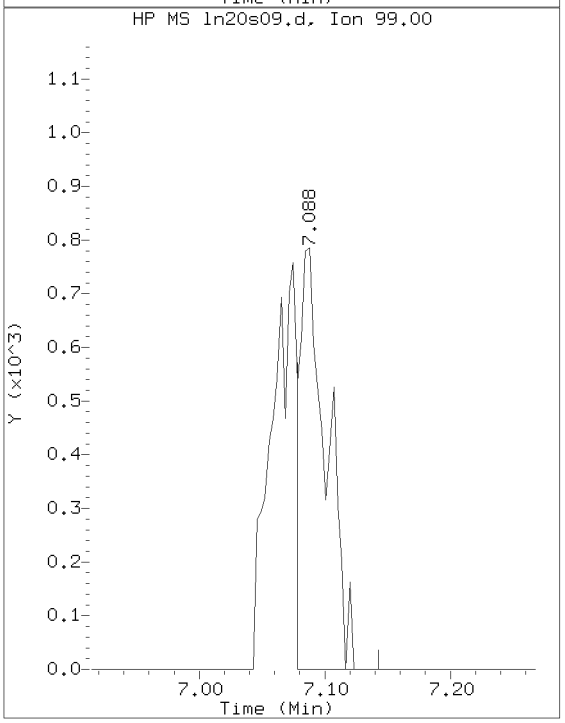
Reference Standard Spectrum for 1,1,1-Trichloroethane



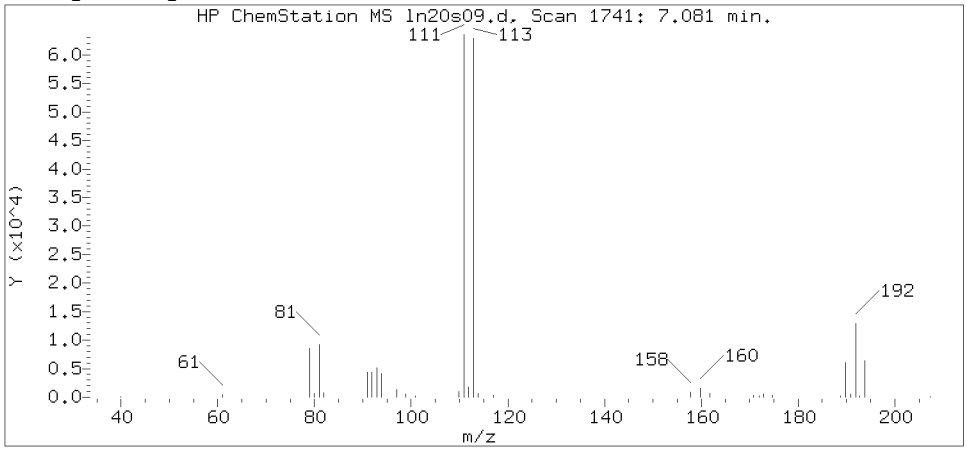


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov20a.b/ln20s09.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:58 Analyst ID: KKM02078

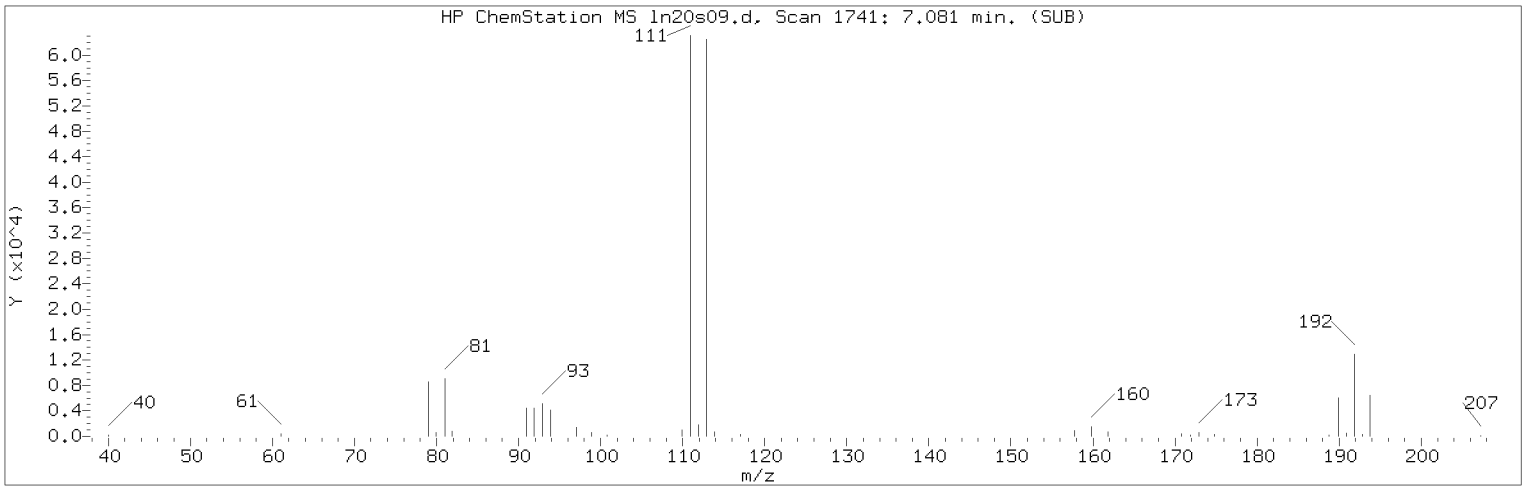
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:12 dvv10203

Sample Name: W1903 Lab Sample ID: 1202300

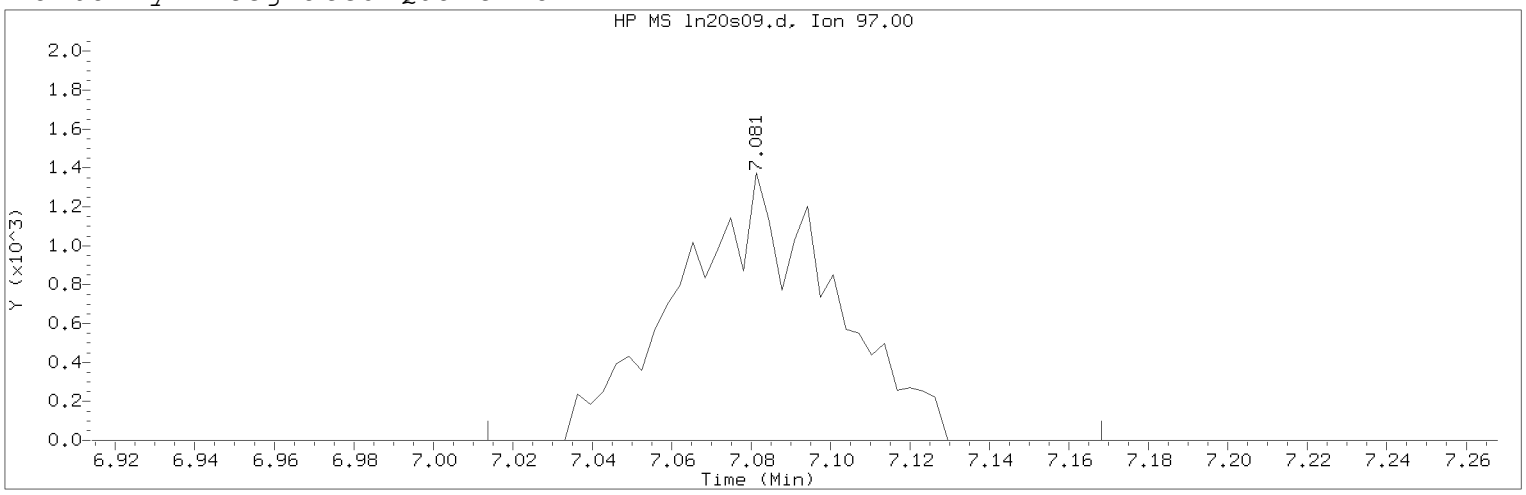
Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1741
Retention Time (minutes)	: 7.081
Relative Retention Time	: 0.00004
Quant Ion	: 97.00
Area (flag)	: 3650M
On-Column Amount (ng)	: 0.5798

Digitally signed by Don V. Viray on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s09.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:58 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
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Date, time and analyst ID of latest file update: 20-Nov-2019 21:12 dvv10203

Sample Name: W1903 Lab Sample ID: 1202300

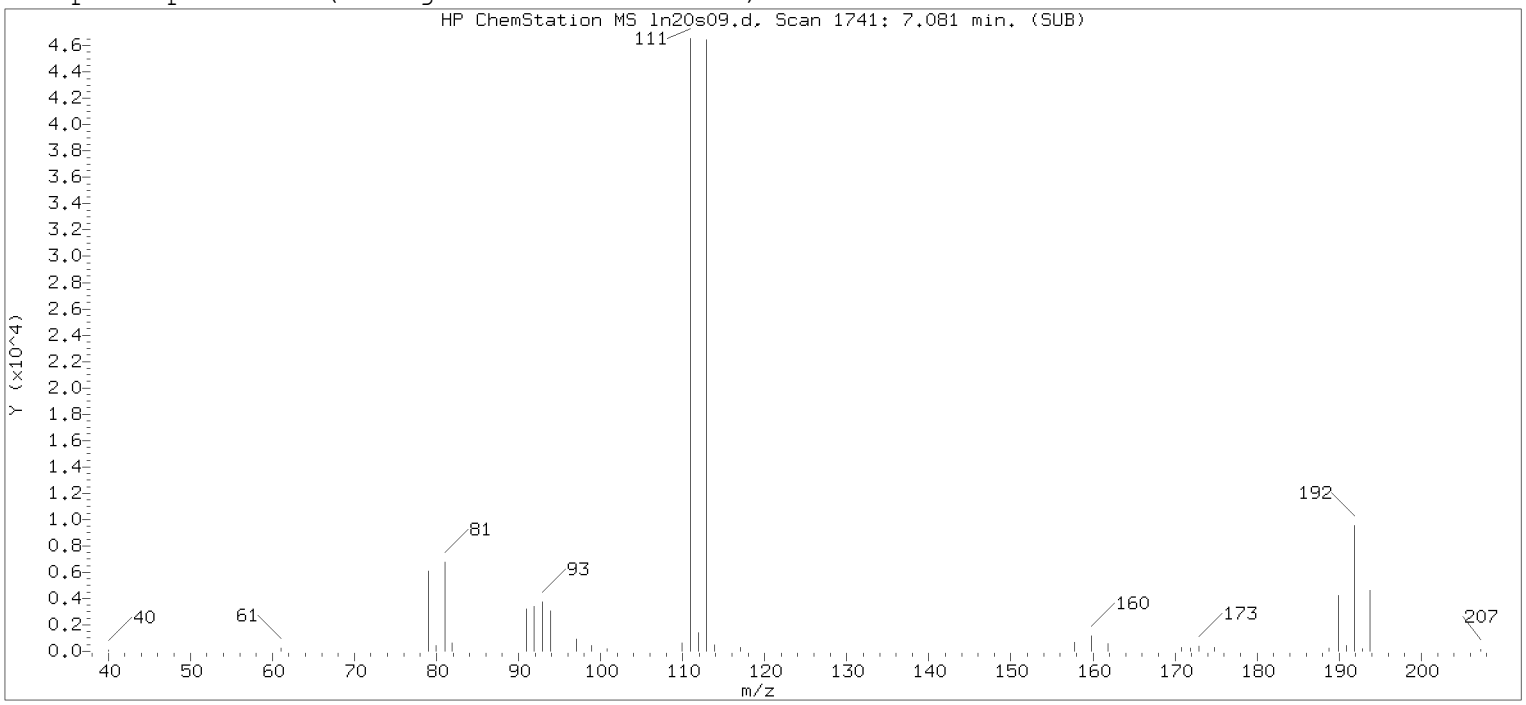
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 1741
Retention Time (minutes): 7.081
Quant Ion : 97.00
Area (flag) : 3650M
On-Column Amount (ng) : 0.5798
Integration start scan : 1719 Integration stop scan: 1767
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

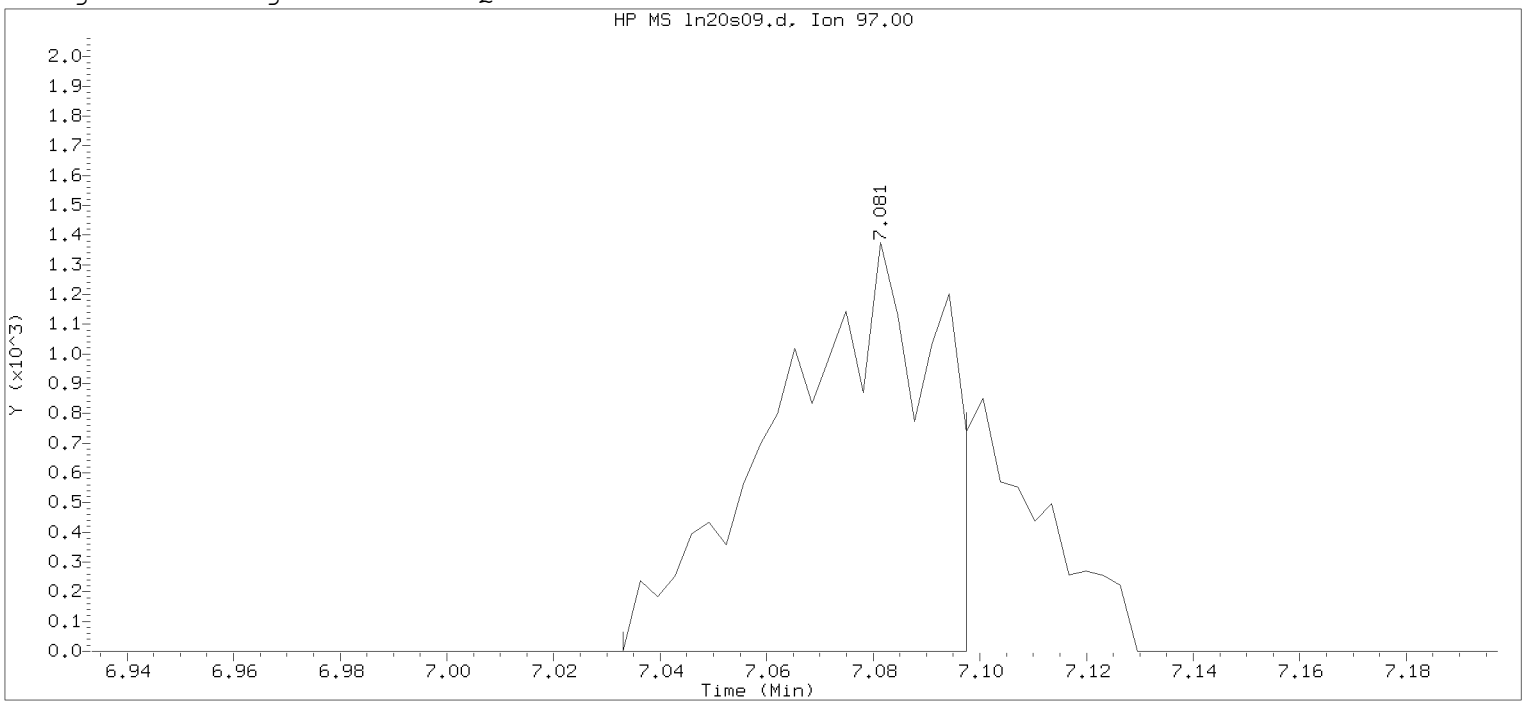
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:53.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s09.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:58 Analyst ID: KKM02078

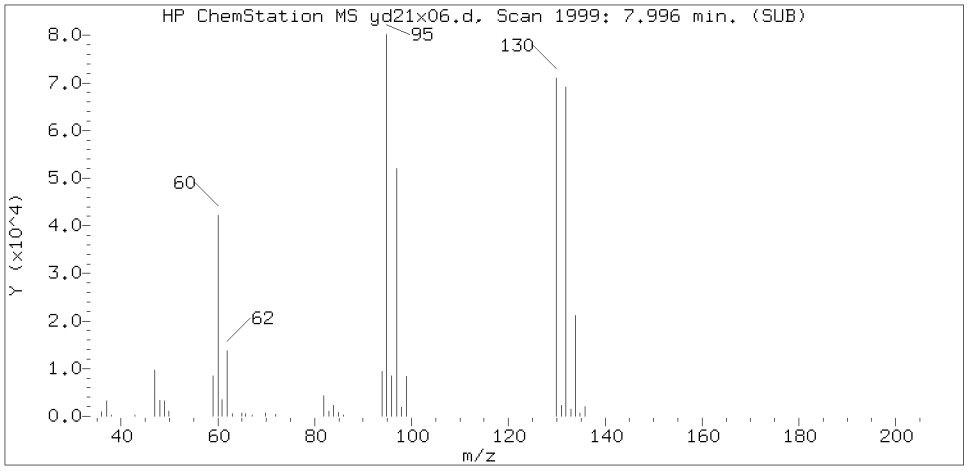
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 13:15 Automation

Sample Name: W1903 Lab Sample ID: 1202300

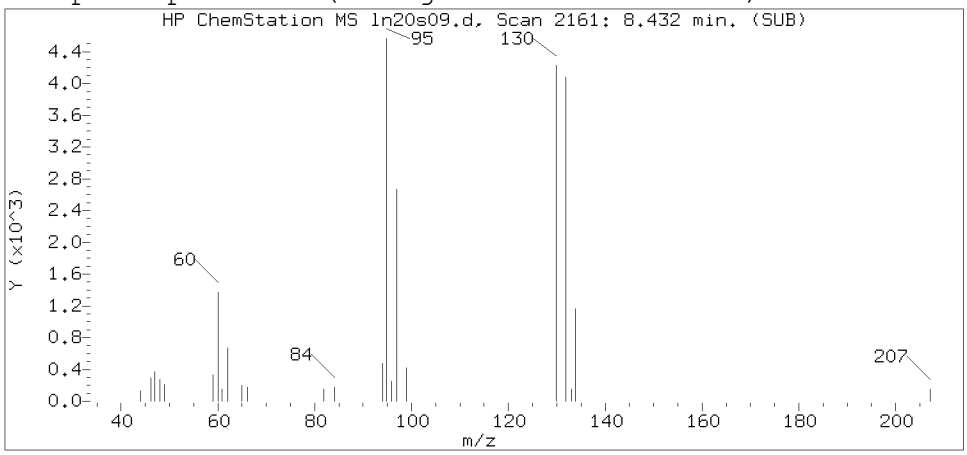
Compound Number	: 53		
Compound Name	: 1,1,1-Trichloroethane		
Scan Number	: 1741		
Retention Time (minutes)	: 7.081		
Quant Ion	: 97.00		
Area	: 2825		
On-column Amount (ng)	: 0.4487		
Integration start scan	: 1725	Integration stop scan:	1745
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: DVIRAY

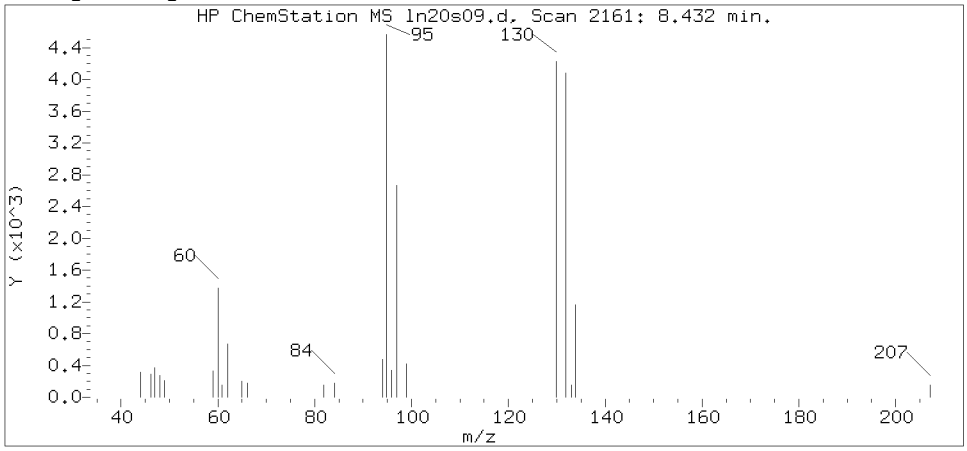
Reference Standard Spectrum for Trichloroethene

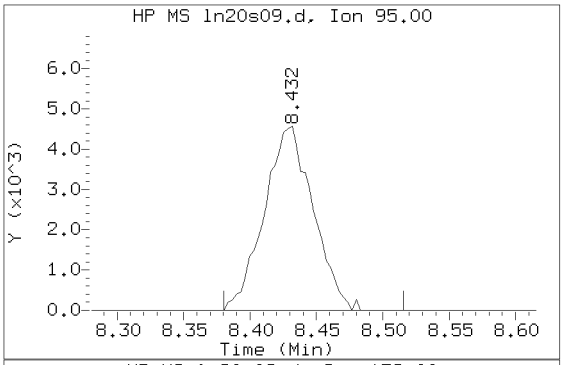


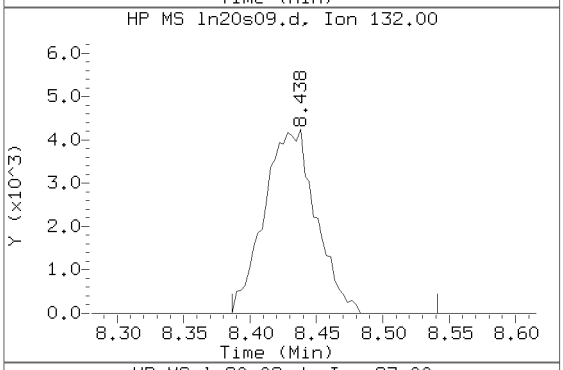
Sample Spectrum (Background Subtracted)

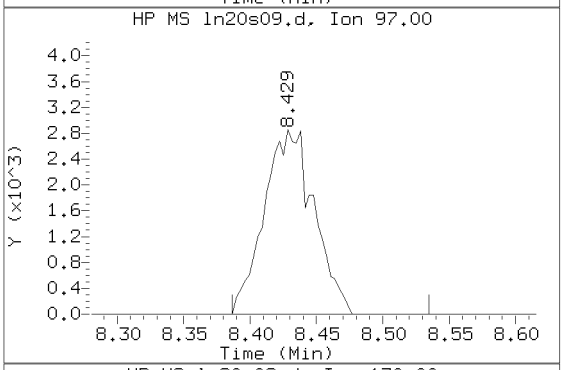


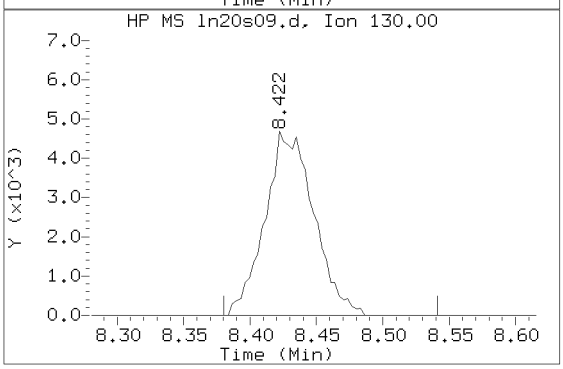
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov20a.b/ln20s09.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:58 Analyst ID: KKM02078

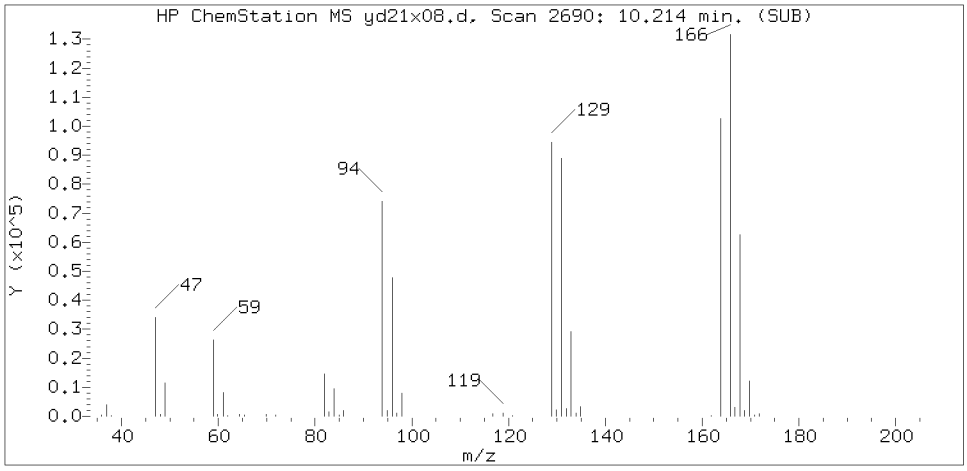
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:12 dvv10203

Sample Name: W1903 Lab Sample ID: 1202300

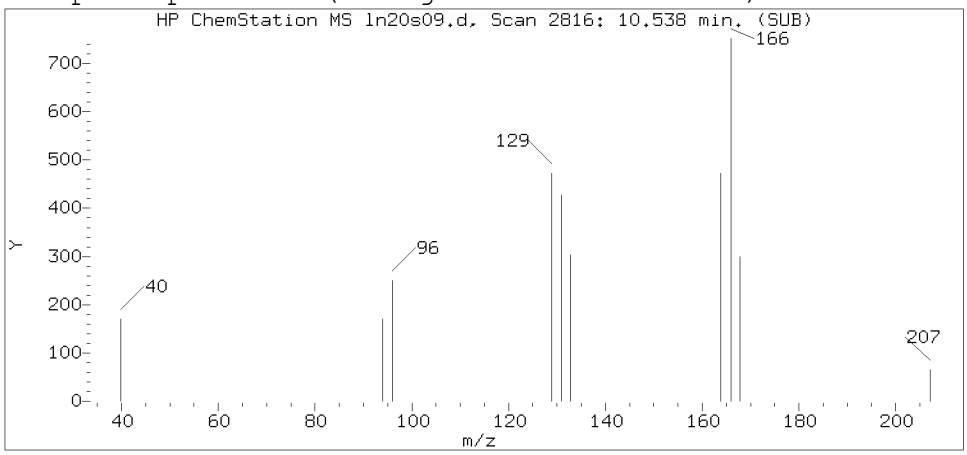
Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 2161
Retention Time (minutes): 8.432
Relative Retention Time :-0.00043
Quant Ion : 95.00
Area (flag) : 11700
On-Column Amount (ng) : 2.5339

Digitally signed by Don V. Viray on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

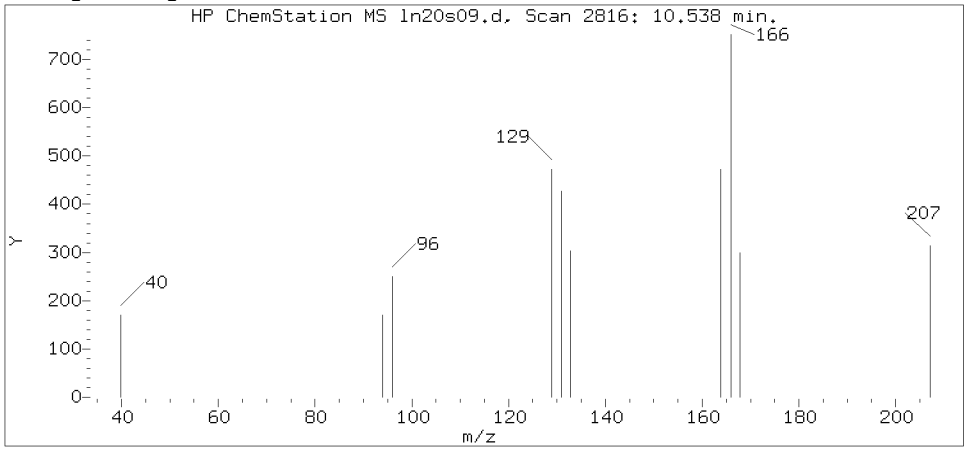
Reference Standard Spectrum for Tetrachloroethene

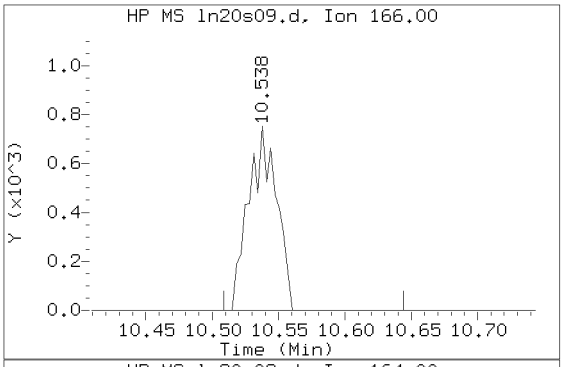


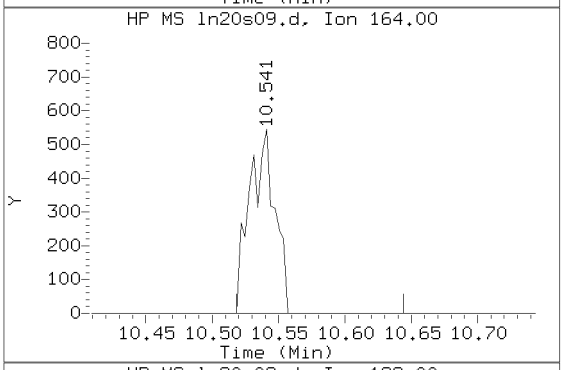
Sample Spectrum (Background Subtracted)

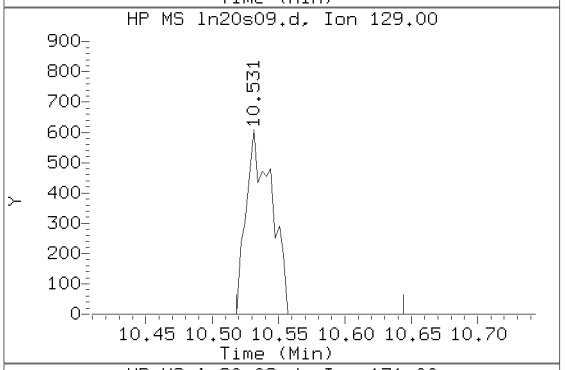


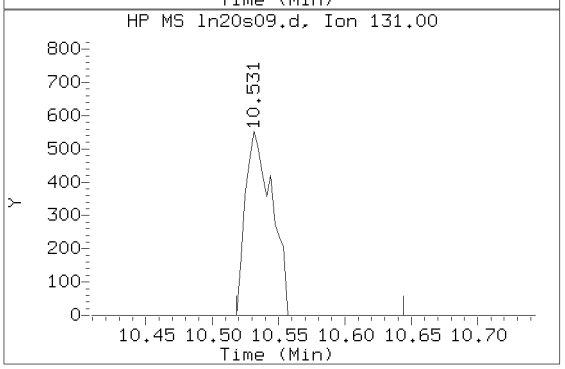
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov20a.b/ln20s09.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:58 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:12 dvv10203

Sample Name: W1903 Lab Sample ID: 1202300

Compound Number	: 93
Compound Name	: Tetrachloroethene
Scan Number	: 2816
Retention Time (minutes)	: 10.538
Relative Retention Time	: 0.00028
Quant Ion	: 166.00
Area (flag)	: 1101
On-Column Amount (ng)	: 0.2160

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Target 3.5 esignature user ID: dvv10203

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
W1904

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202301

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov20a.b/ln20s10.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	0.6	J
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	2	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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W1904 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202301

Data file: /chem/HP09915.i/19nov20a.b/ln20s10.d Injection date and time: **20-NOV-2019 13:20**
Data file Sample Info. Line: W1904;1202301;1;0;;JCW19;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 13:37 Automation

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.496	(-0.003)	937	65	155204	(1)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	883077	(-1)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	718457	(-1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	379474	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(0.000)	113	205130	47.513	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.532	(0.000)	102	55521	50.459	101%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	906090	48.199	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	343610	48.271	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	7.081	(0.000)	97	3800	0.616	0.62		J	0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.432	(0.000)	95	10316	2.281	2.28			0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 11/20/2019 at 21:19. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov20a.b/ln20s10.d Injection date and time: **20-NOV-2019 13:20**
Data file Sample Info. Line: W1904;1202301;1;0;;JCW19;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 13:37 Automation

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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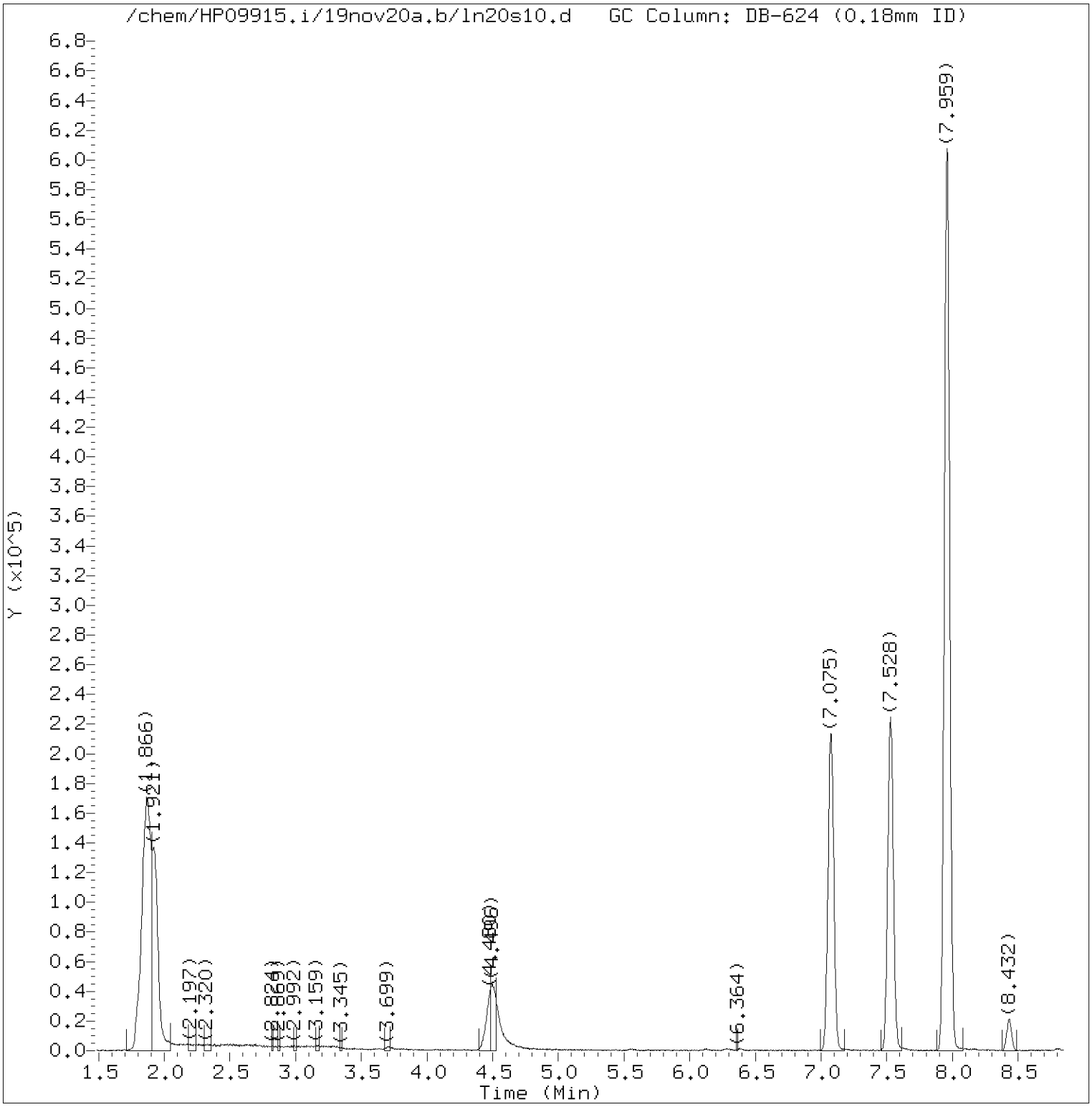
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 11/20/2019 at 21:19. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

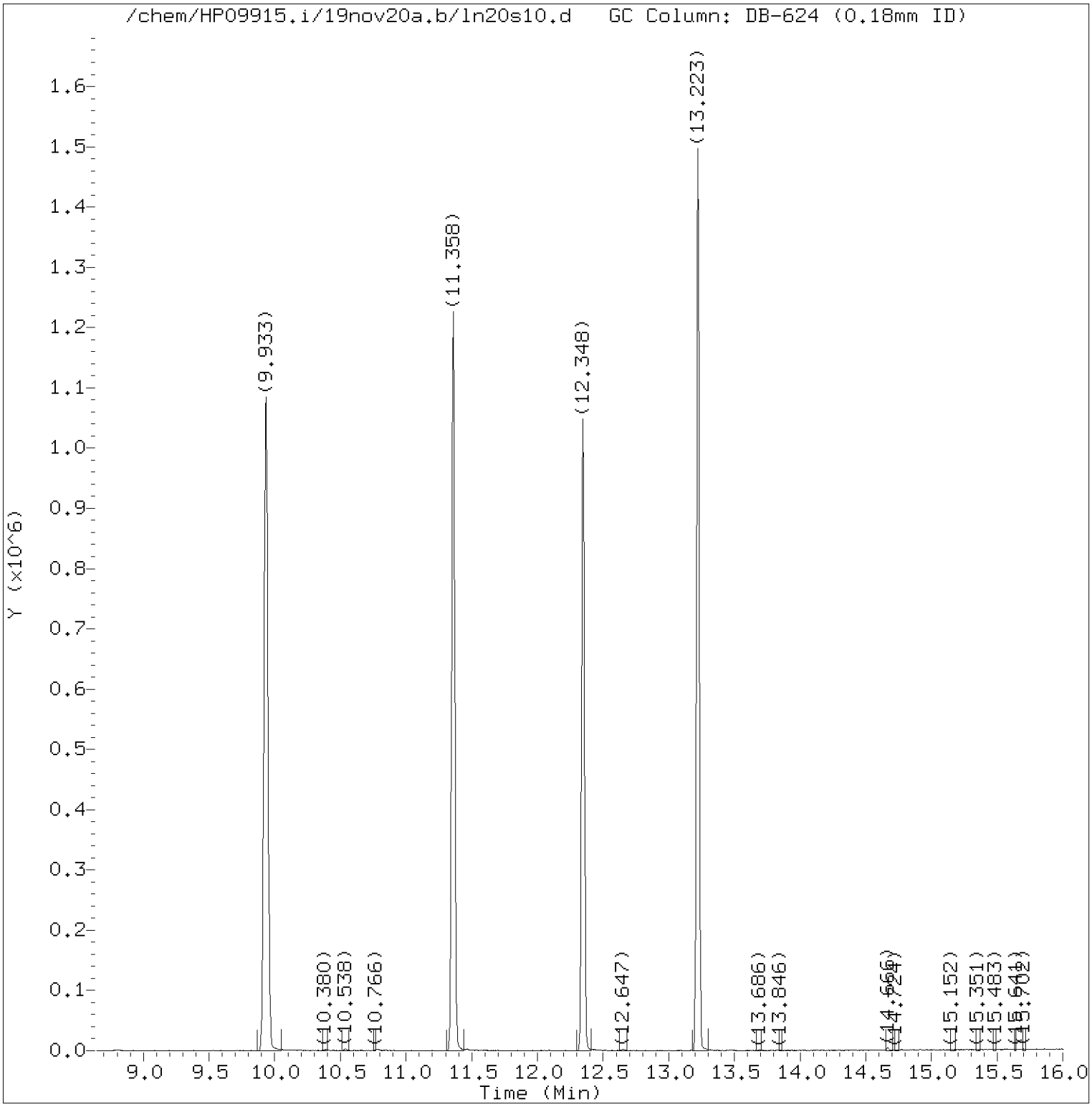
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s10.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 13:20 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 13:37 Automation

Sample Name: W1904 Lab Sample ID: 1202301

Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s10.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 13:20 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 13:37 Automation

Sample Name: W1904 Lab Sample ID: 1202301

Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s10.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 13:20 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 13:37 Automation

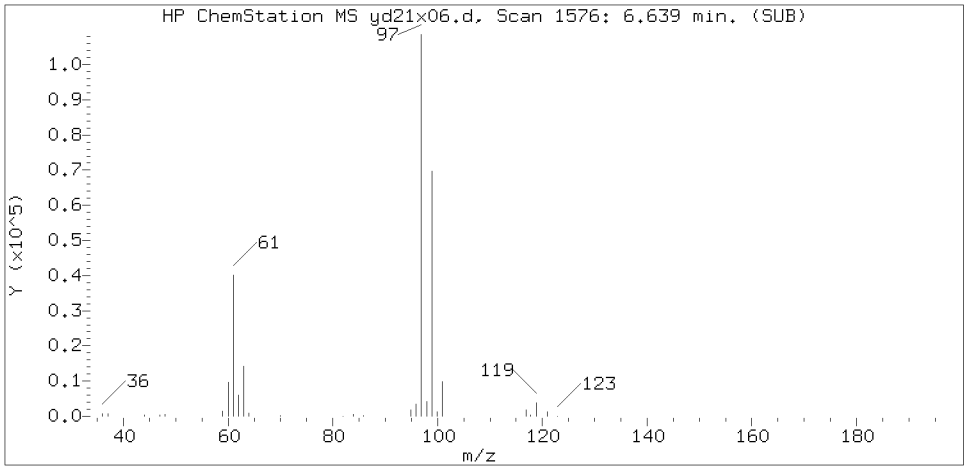
Sample Name: W1904 Lab Sample ID: 1202301

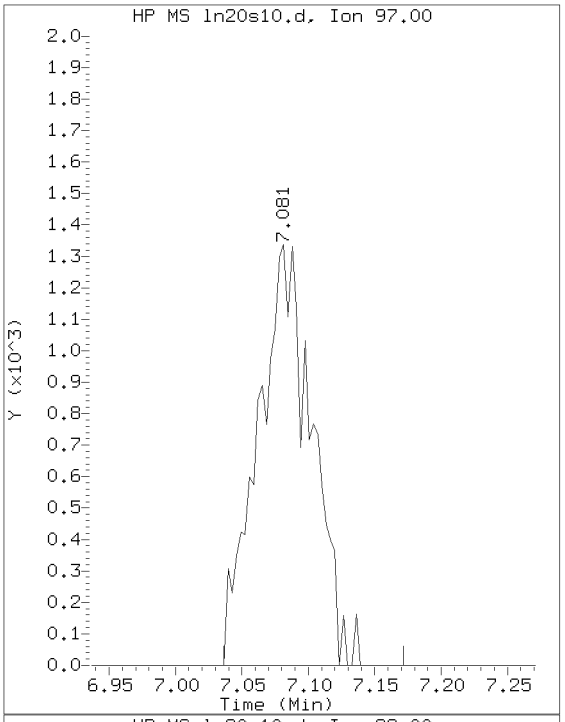
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.496	65	155204	250.000
52)$Dibromofluoromethane	(2)	7.075	113	205130	47.513
53) 1,1,1-Trichloroethane	(2)	7.081	97	3800	0.616
57)$1,2-Dichloroethane-d4	(2)	7.532	102	55521	50.459
66)*Fluorobenzene	(2)	7.959	96	883077	50.000
71) Trichloroethene	(2)	8.432	95	10316	2.281
83)$Toluene-d8	(3)	9.933	98	906090	48.199
100)*Chlorobenzene-d5	(3)	11.358	117	718457	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	343610	48.271
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	379474	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

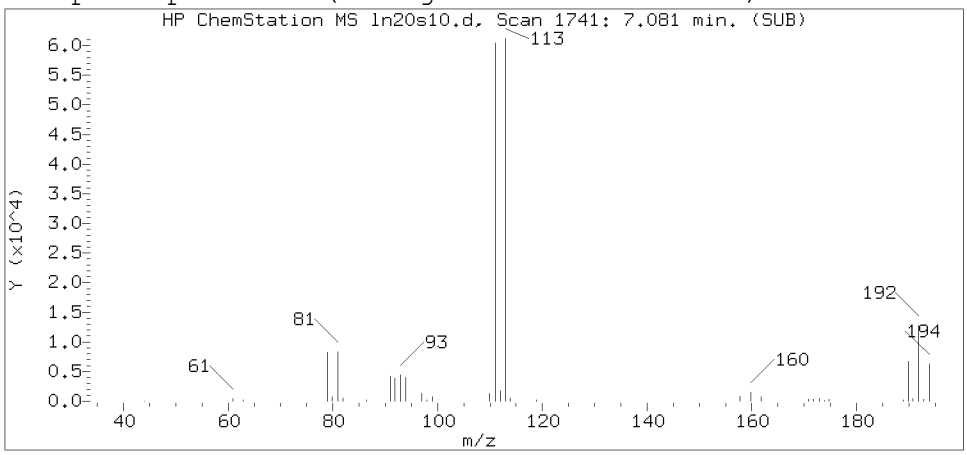
Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

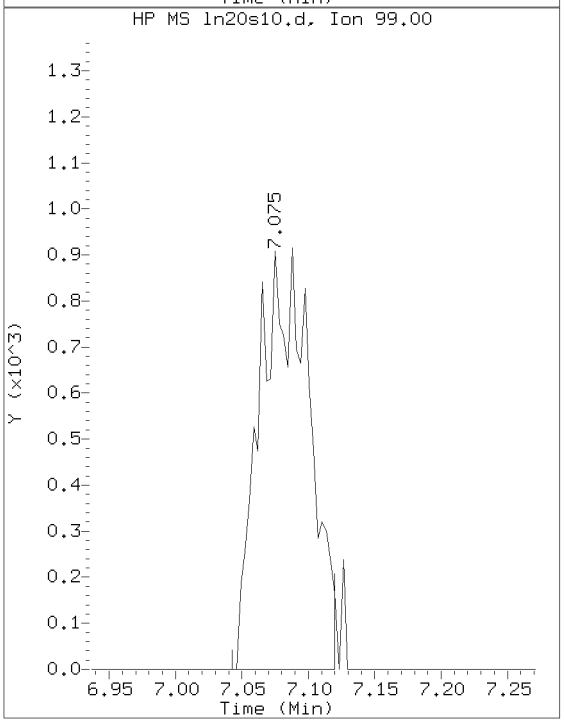
Reference Standard Spectrum for 1,1,1-Trichloroethane



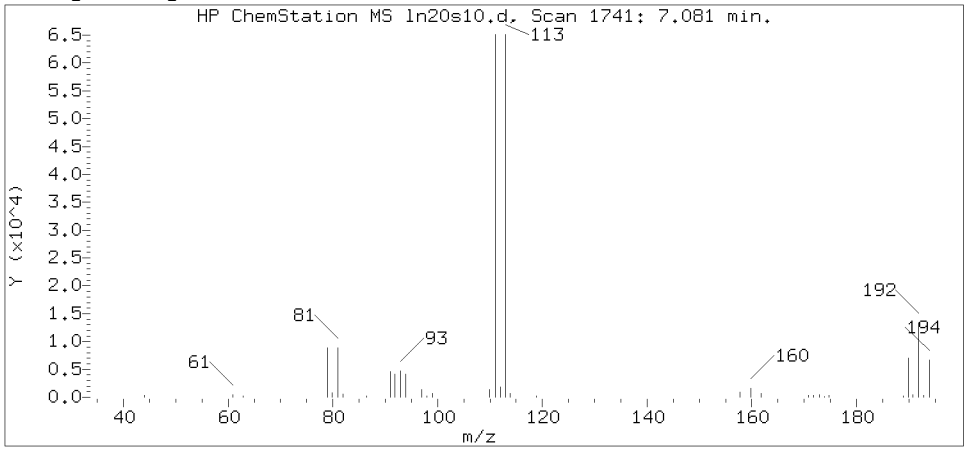


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov20a.b/ln20s10.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 13:20 Analyst ID: KKM02078

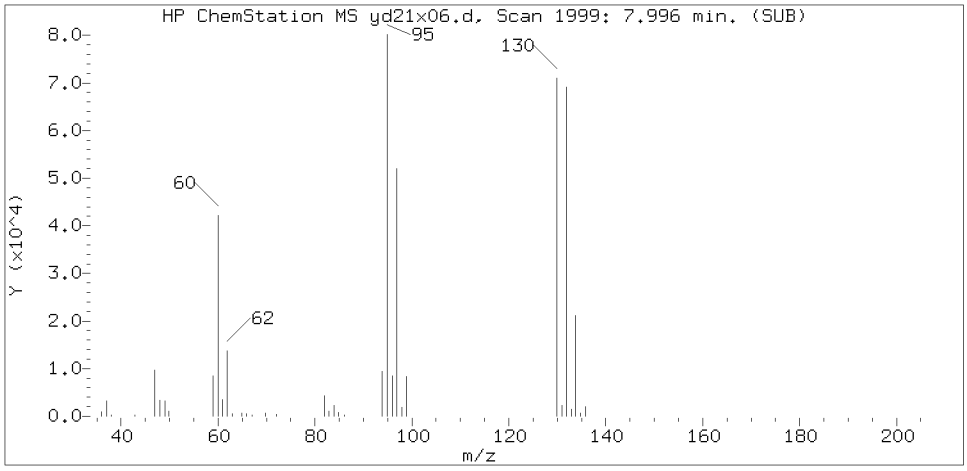
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 13:37 Automation

Sample Name: W1904 Lab Sample ID: 1202301

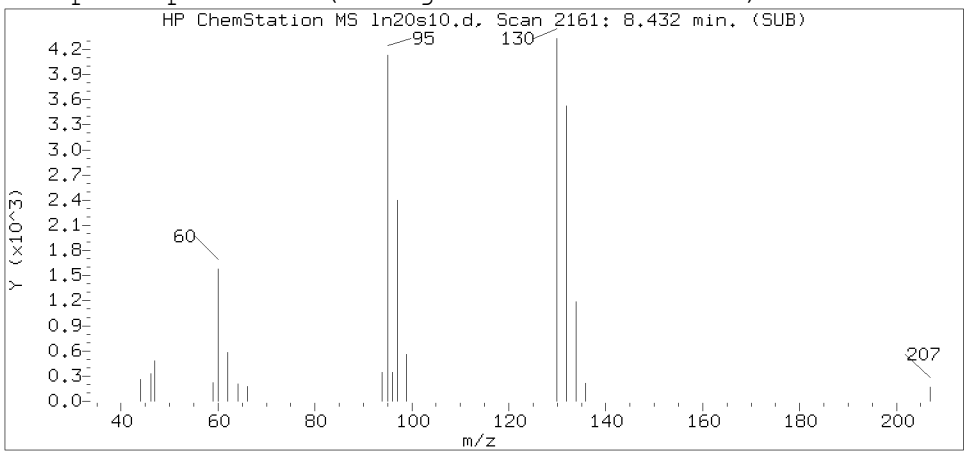
Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1741
Retention Time (minutes)	: 7.081
Relative Retention Time	: 0.00040
Quant Ion	: 97.00
Area (flag)	: 3800
On-Column Amount (ng)	: 0.6163

Digitally signed by Don V. Viray on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

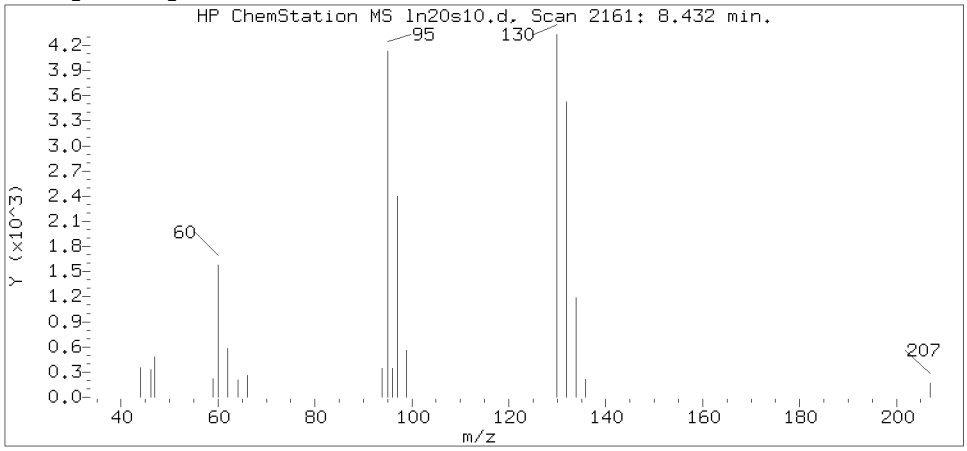
Reference Standard Spectrum for Trichloroethene

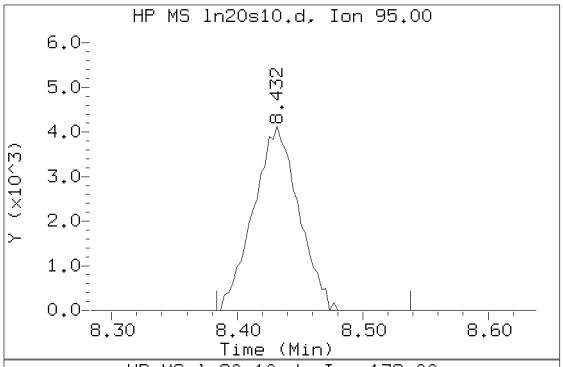


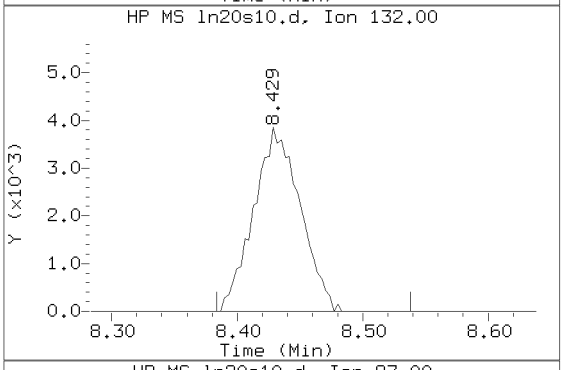
Sample Spectrum (Background Subtracted)

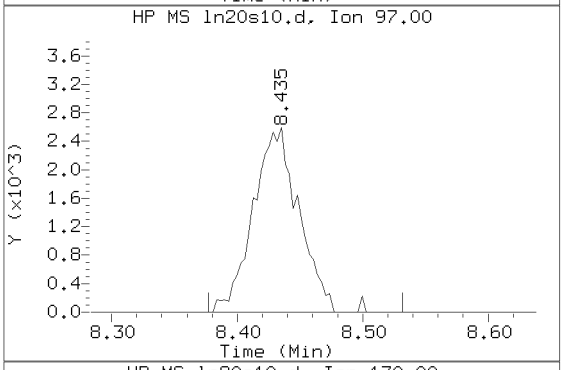


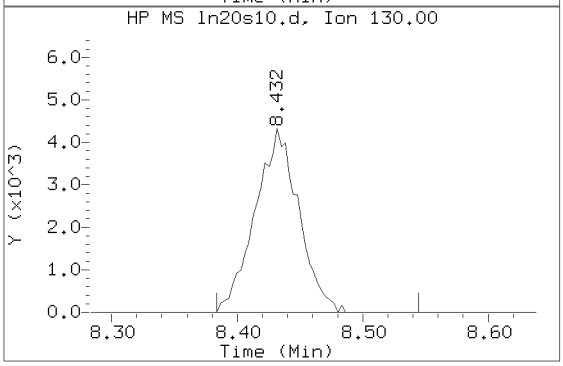
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov20a.b/ln20s10.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 13:20 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 13:37 Automation

Sample Name: W1904 Lab Sample ID: 1202301

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 2161
Retention Time (minutes)	: 8.432
Relative Retention Time	: 0.00000
Quant Ion	: 95.00
Area (flag)	: 10316
On-Column Amount (ng)	: 2.2810

Digitally signed by Don V. Viray on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
W1905

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202302

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov20a.b/ln20s11.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	8	J
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	1	J
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	0.4	J
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	2	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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W1905 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1202302

Data file: /chem/HP09915.i/19nov20a.b/ln20s11.d Injection date and time: **20-NOV-2019 13:42**
Data file Sample Info. Line: W1905;1202302;1;0;;JCW19;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 21:13 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.496	(-0.003)	937	65	157932M	(3)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	869741	(-2)	50.00	
100) Chlorobenzene-d5	11.361	(0.000)	3072	117	711550	(-2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.220	(0.003)	3650	152	380015	(-3)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(0.000)	113	203098	47.764	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.532	(0.000)	102	54408	50.206	100%		80 - 120
83) Toluene-d8	(3)	9.934	(0.000)	98	894395	48.039	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	339313	48.130	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)	3.805	(-0.000)	58	4062	7.647	7.65		J	0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)	6.364	(-0.000)	43	4081	1.244	1.24		J	0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	7.085	(-0.000)	97	2418	0.398	0.40		J	0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.432	(0.000)	95	8510	1.910	1.91			0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 11/20/2019 at 21:19. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov20a.b/ln20s11.d Injection date and time: **20-NOV-2019 13:42**
Data file Sample Info. Line: W1905;1202302;1;0;;JCW19;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 21:13 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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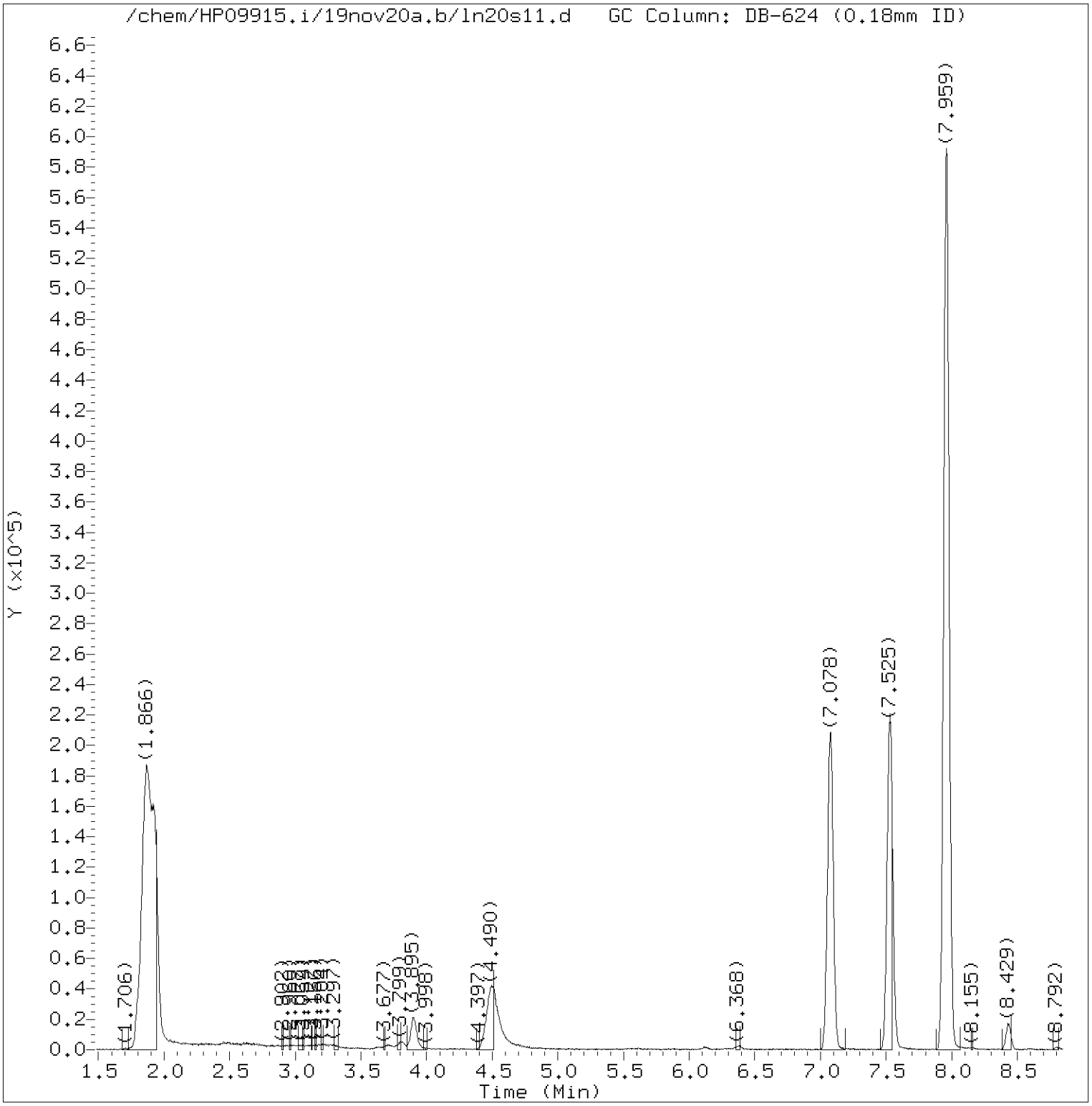
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 11/20/2019 at 21:19. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

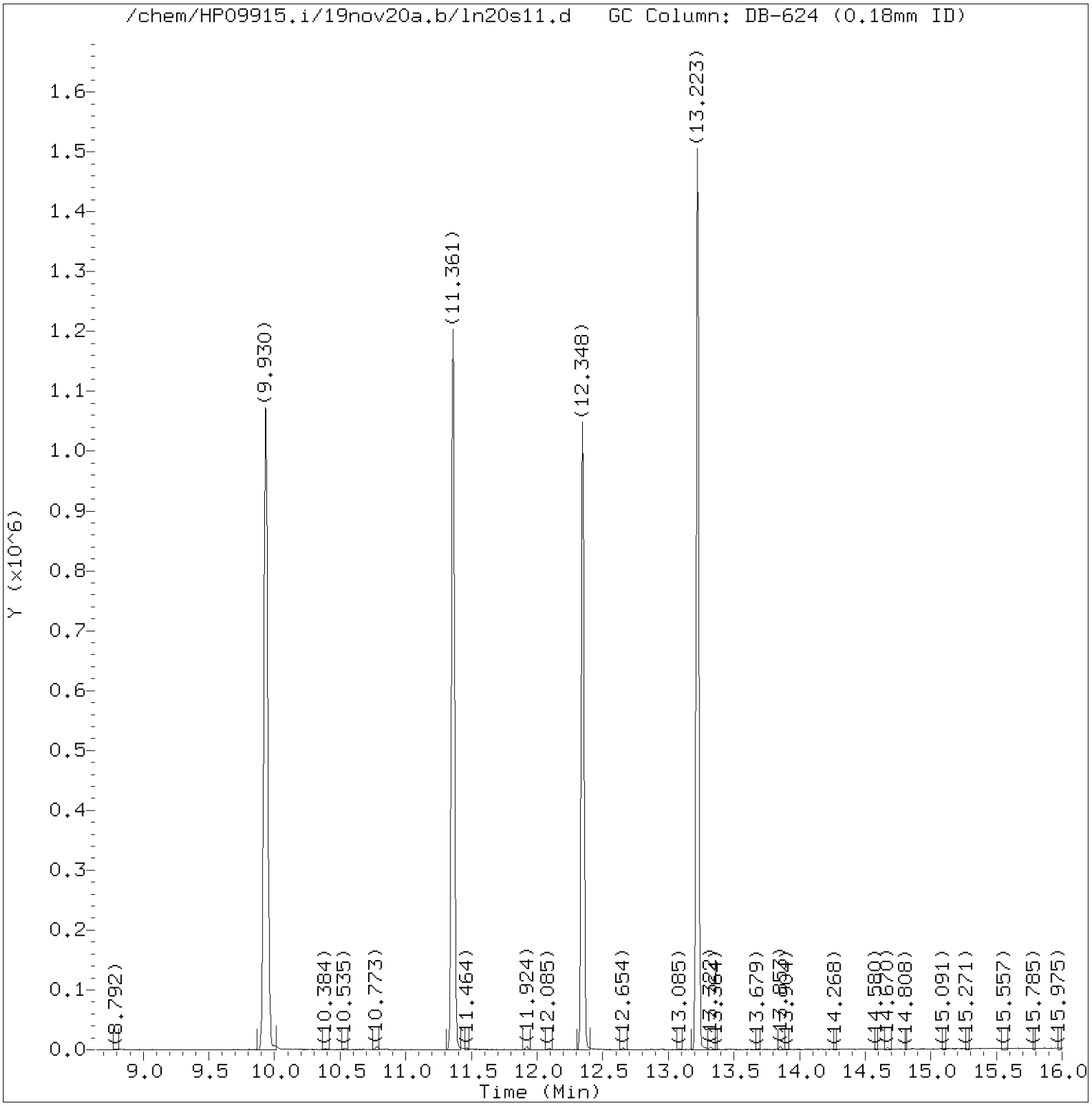
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s11.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 13:42 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:13 dvv10203

Sample Name: W1905 Lab Sample ID: 1202302

Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s11.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 13:42 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:13 dvv10203

Sample Name: W1905 Lab Sample ID: 1202302

Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s11.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 13:42 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:13 dvv10203

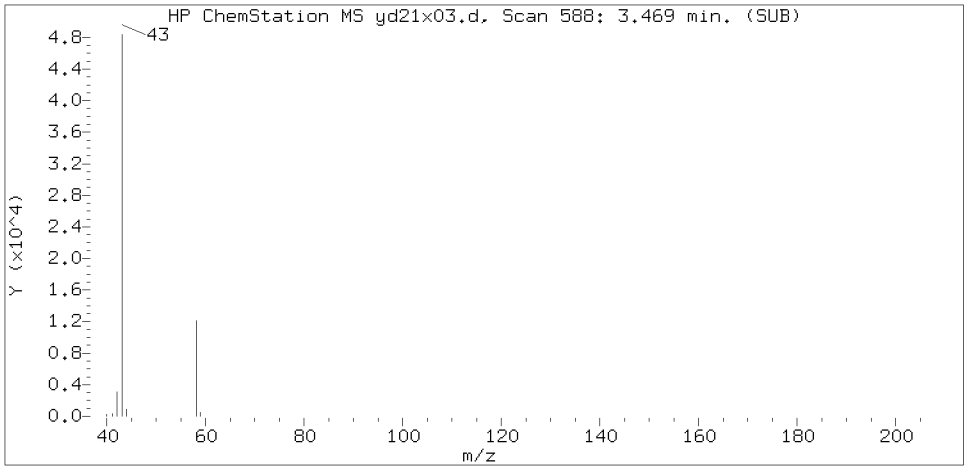
Sample Name: W1905 Lab Sample ID: 1202302

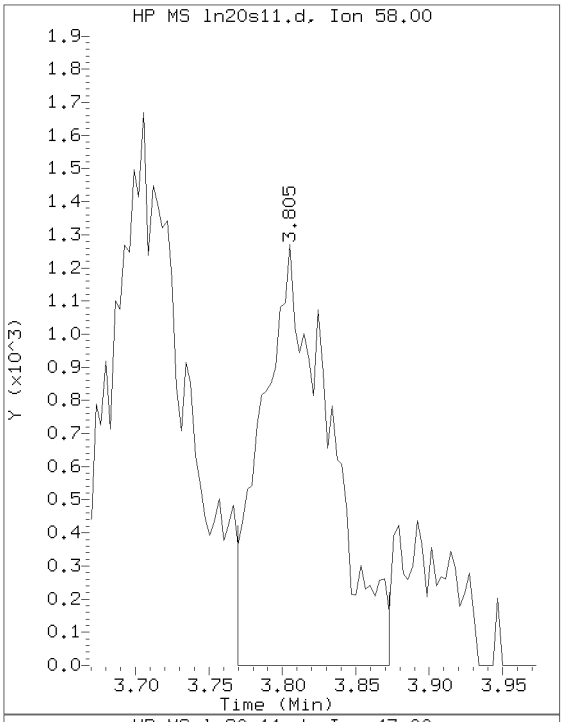
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
18) Acetone	(1)	3.805	58	4062	7.647
29)*t-Butyl alcohol-d10	(1)	4.496	65	157932M	250.000
44) 2-Butanone	(2)	6.365	43	4081	1.244
52)$Dibromofluoromethane	(2)	7.075	113	203098	47.764
53) 1,1,1-Trichloroethane	(2)	7.085	97	2418	0.398
57)$1,2-Dichloroethane-d4	(2)	7.532	102	54408	50.206
66)*Fluorobenzene	(2)	7.959	96	869741	50.000
71) Trichloroethene	(2)	8.432	95	8510	1.910
83)$Toluene-d8	(3)	9.934	98	894395	48.039
100)*Chlorobenzene-d5	(3)	11.361	117	711550	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	339313	48.130
131)*1,4-Dichlorobenzene-d4	(4)	13.220	152	380015	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

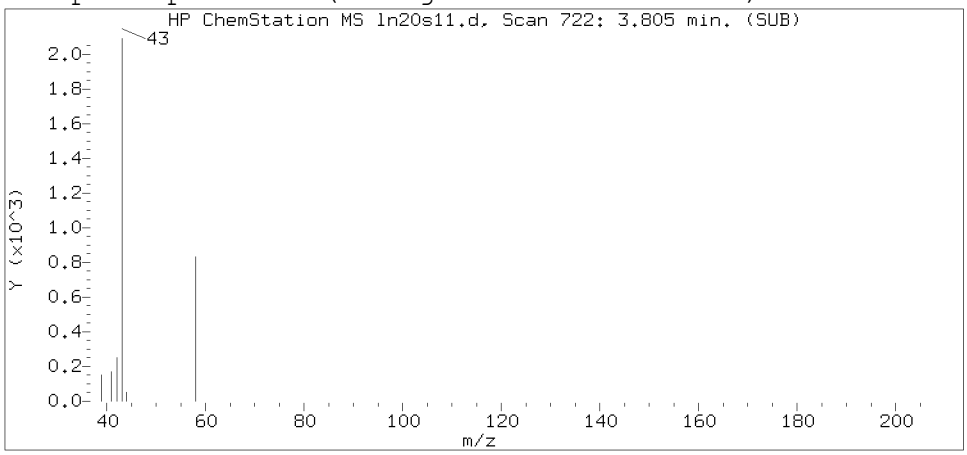
Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

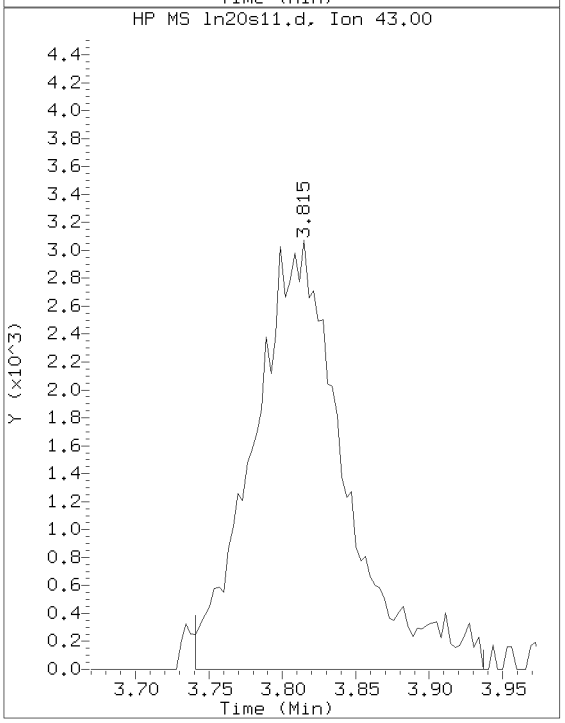
Reference Standard Spectrum for Acetone



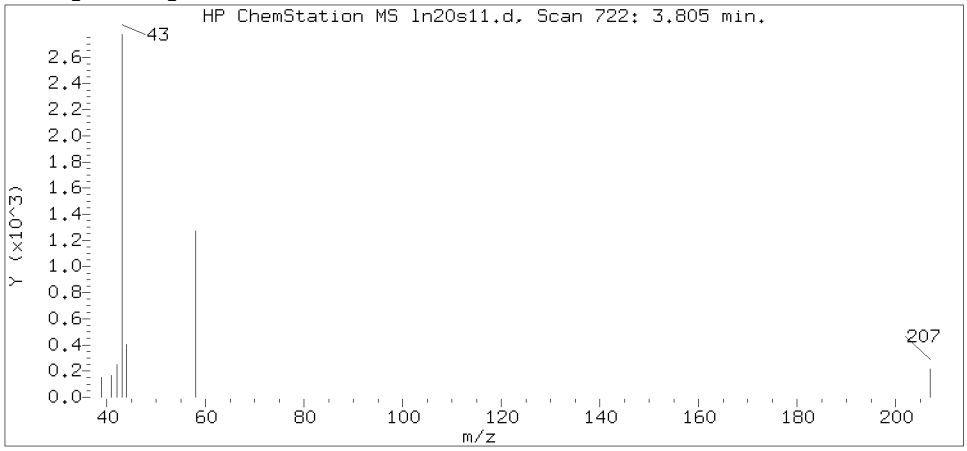


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov20a.b/ln20s11.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 13:42 Analyst ID: KKM02078

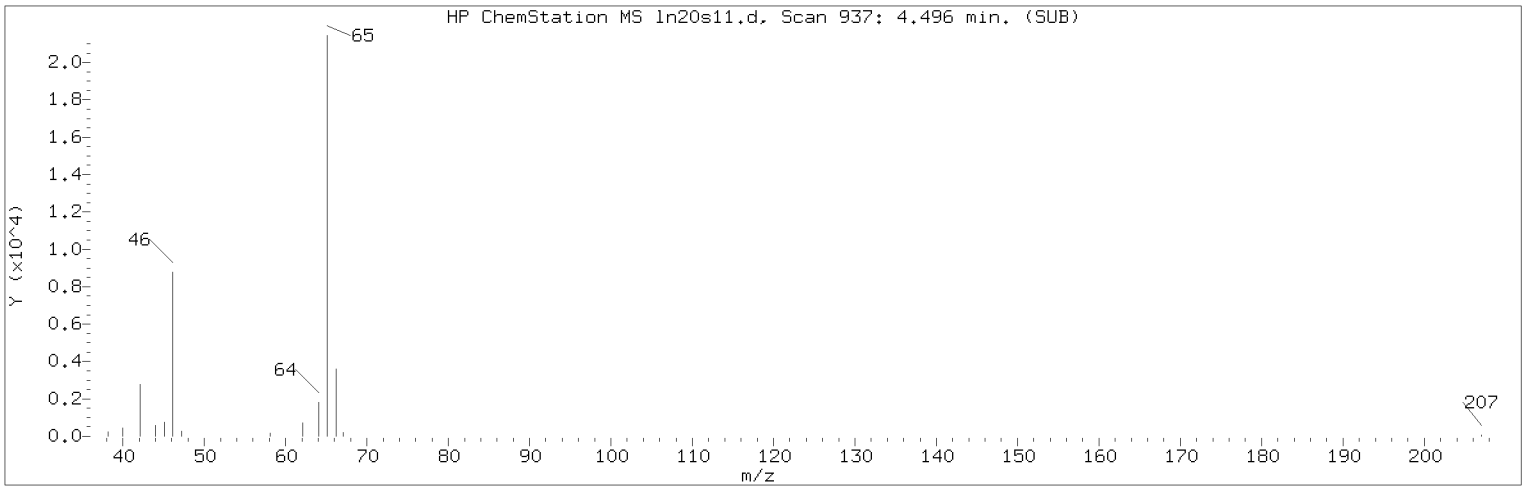
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:13 dvv10203

Sample Name: W1905 Lab Sample ID: 1202302

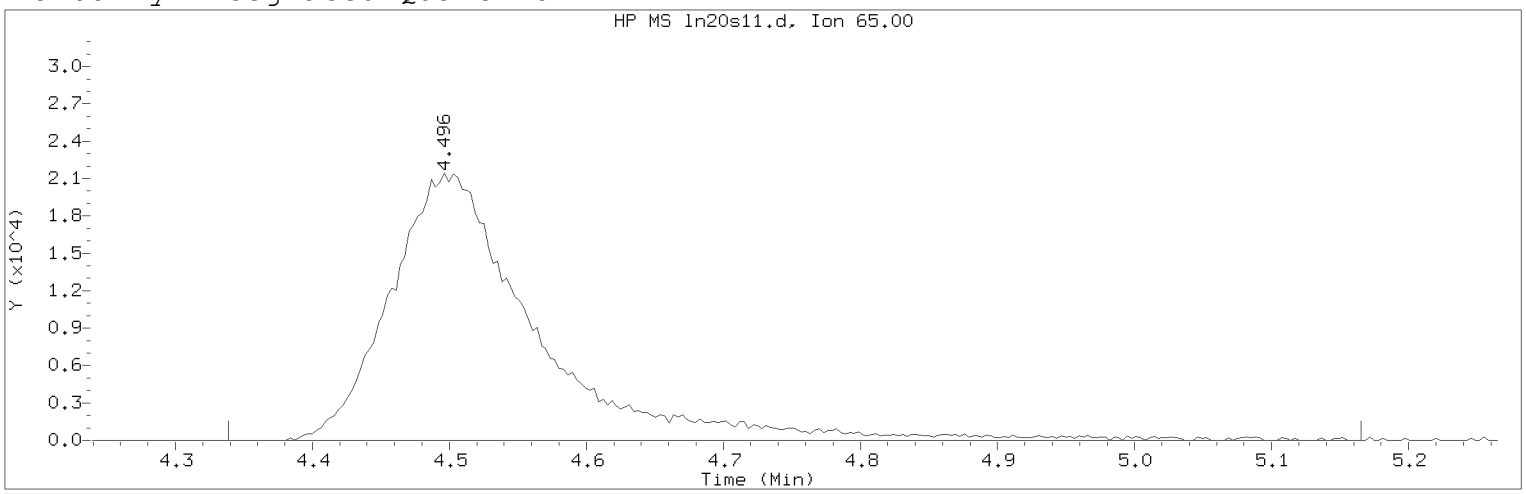
Compound Number	: 18
Compound Name	: Acetone
Scan Number	: 722
Retention Time (minutes)	: 3.805
Relative Retention Time	:-0.00012
Quant Ion	: 58.00
Area (flag)	: 4062
On-Column Amount (ng)	: 7.6468

Digitally signed by Don V. Viray on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s11.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 13:42 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:13 dvv10203

Sample Name: W1905 Lab Sample ID: 1202302

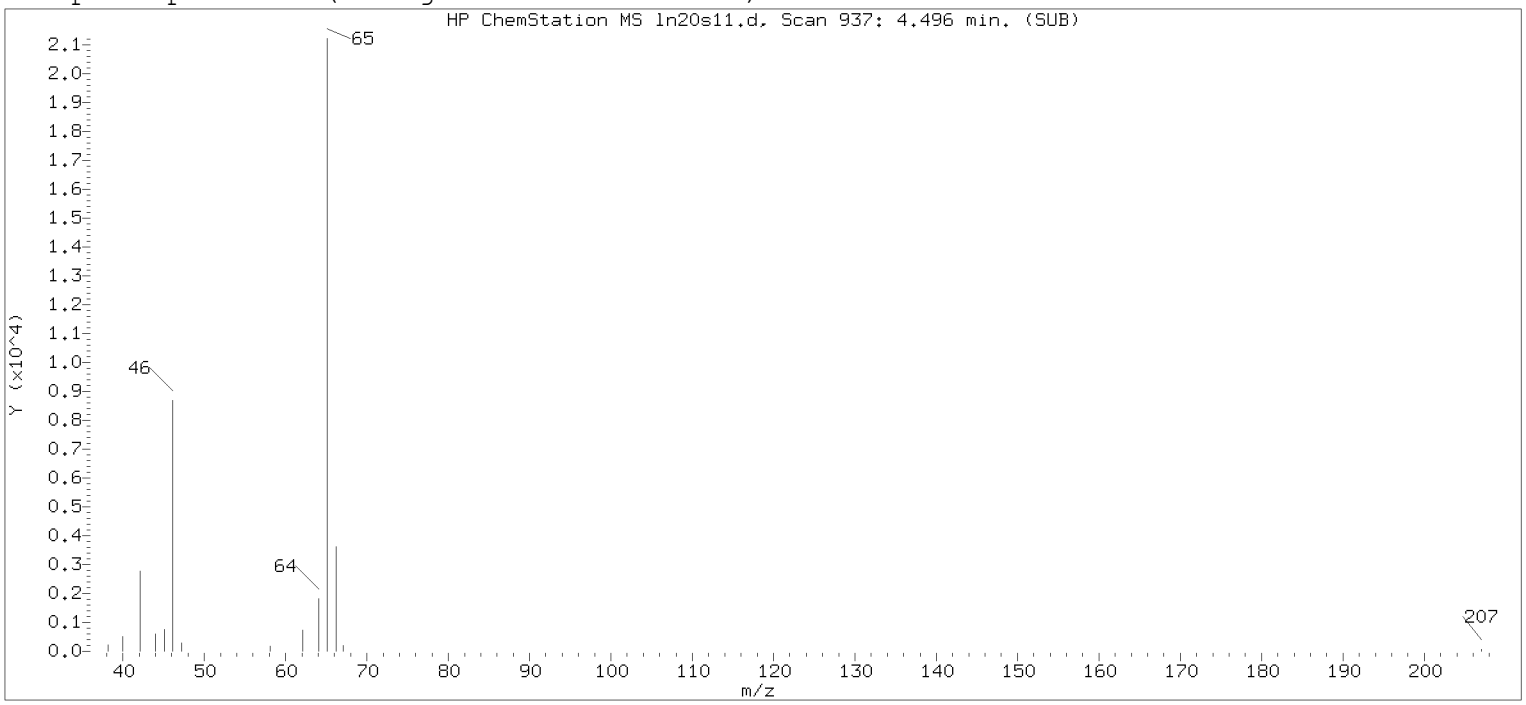
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 937
Retention Time (minutes): 4.496
Quant Ion : 65.00
Area (flag) : 157932M
On-Column Amount (ng) : 250.0000
Integration start scan : 887 Integration stop scan: 1144
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

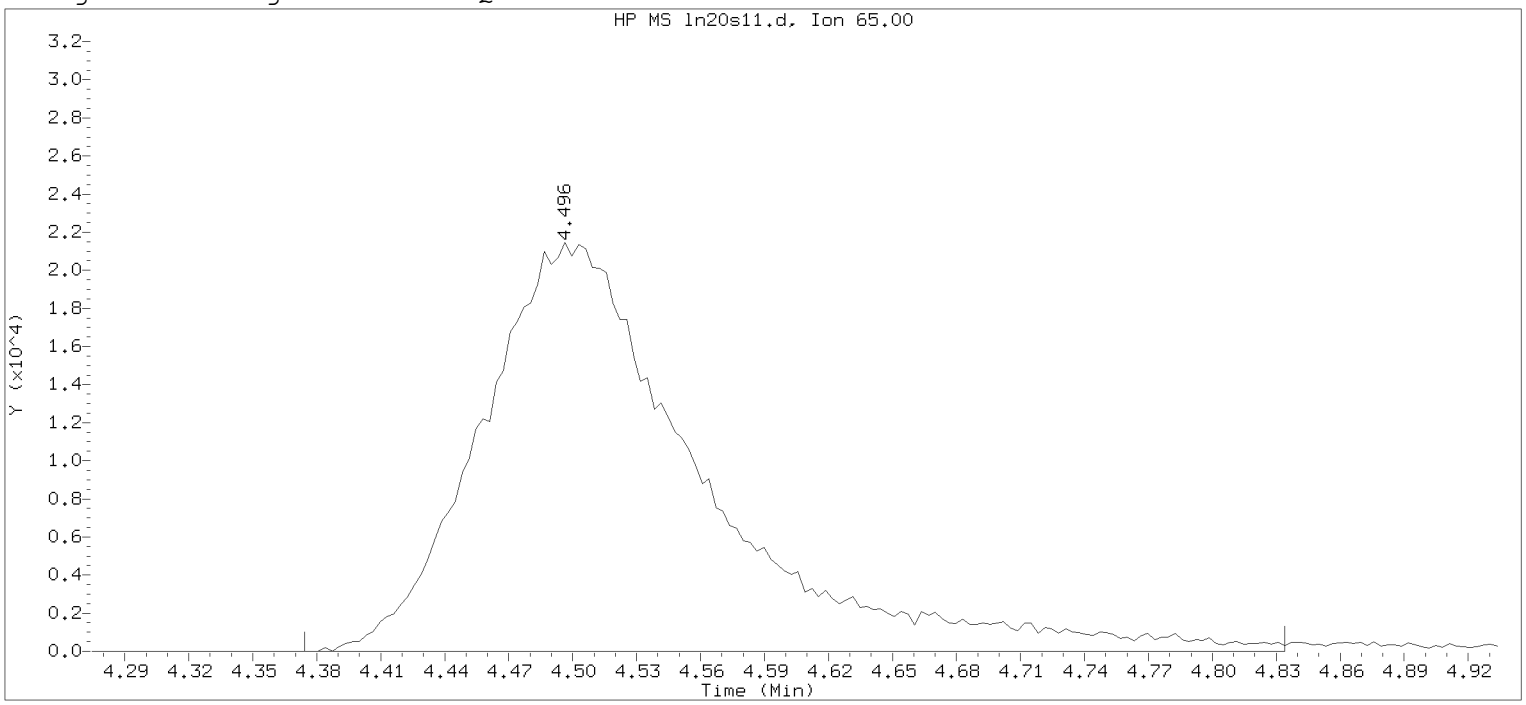
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:53.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s11.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 13:42 Analyst ID: KKM02078

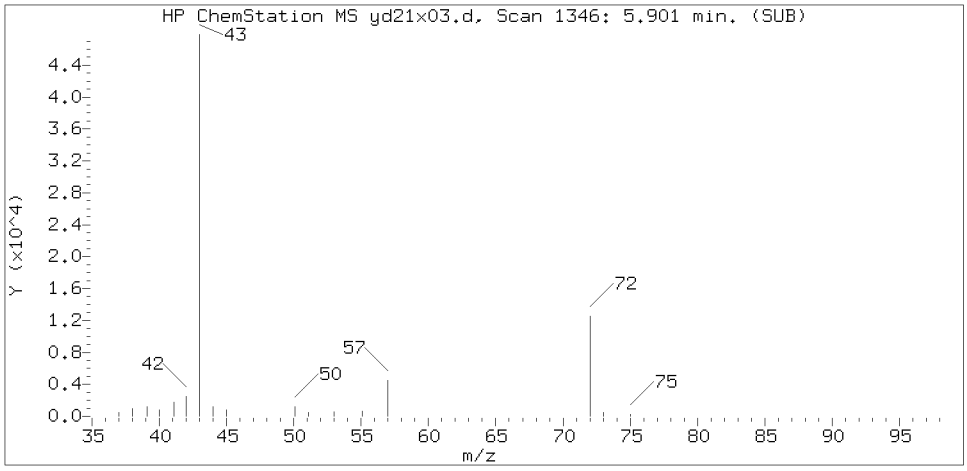
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 14:00 Automation

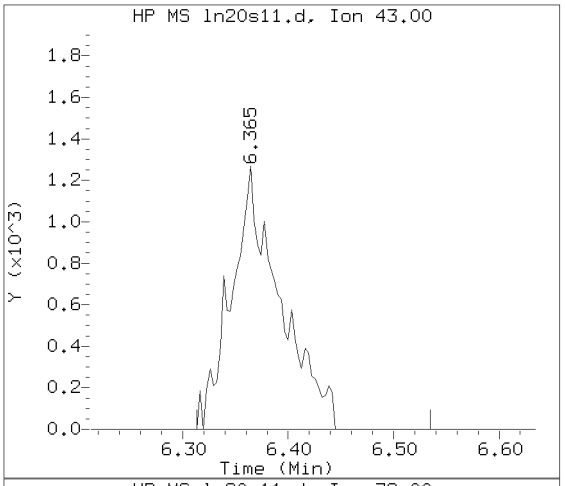
Sample Name: W1905 Lab Sample ID: 1202302

Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 937
Retention Time (minutes): 4.496
Quant Ion : 65.00
Area : 153879
On-column Amount (ng) : 250.0000
Integration start scan : 898 Integration stop scan: 1041
Y at integration start : 0 Y at integration end: 0

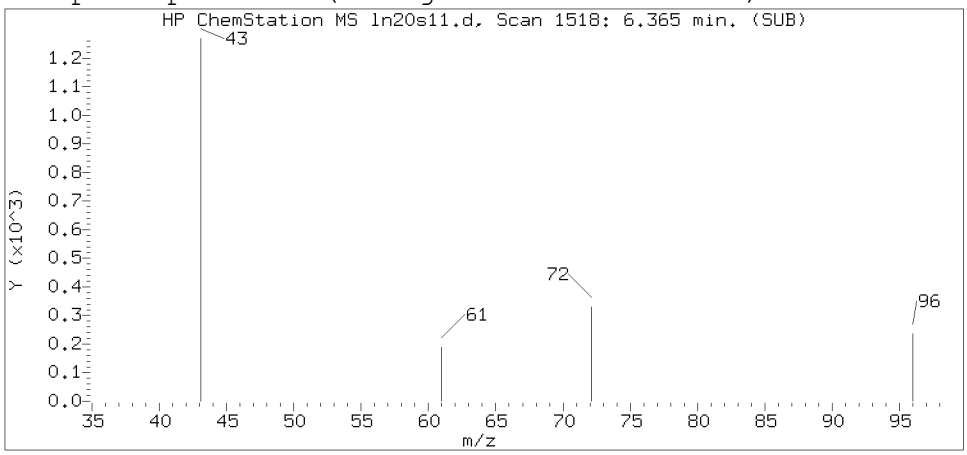
Digitally signed by Don V. Viray on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: DVIRAY

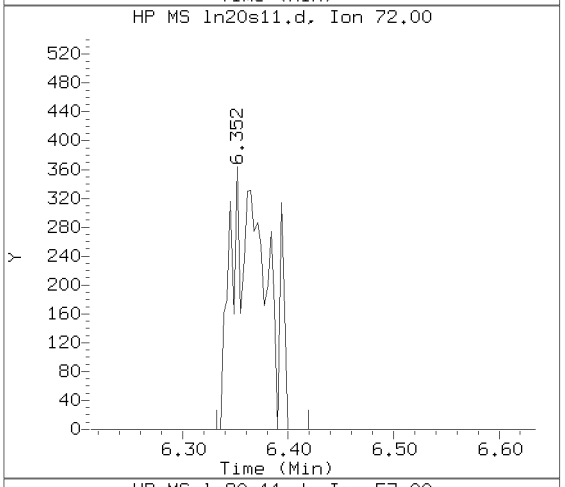
Reference Standard Spectrum for 2-Butanone



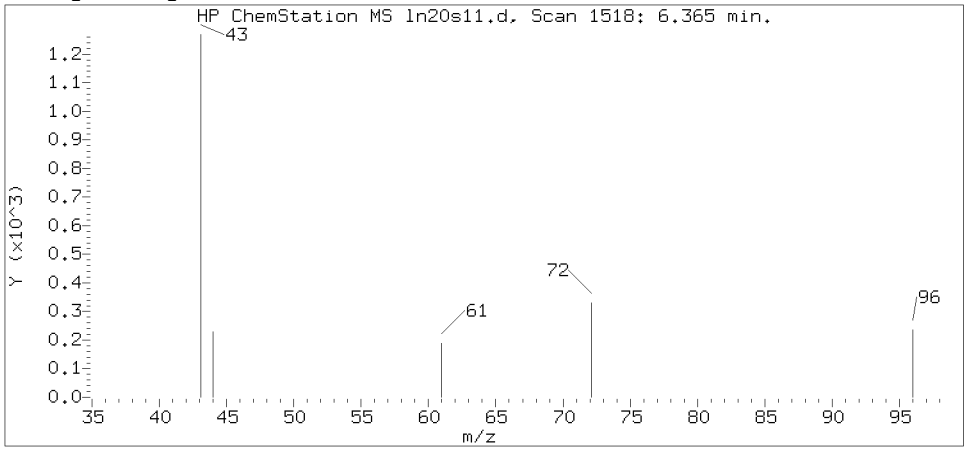


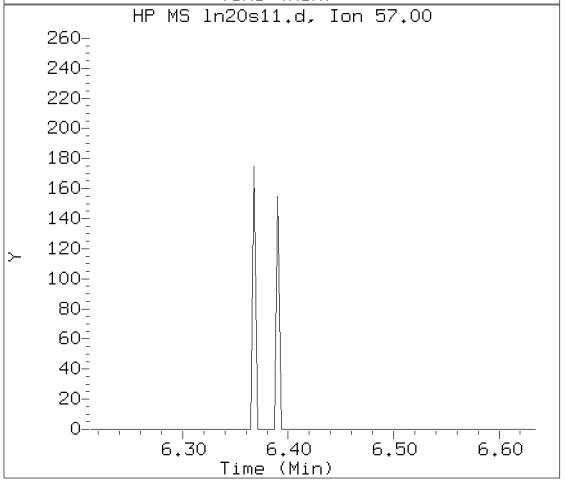
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov20a.b/ln20s11.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 13:42 Analyst ID: KKM02078

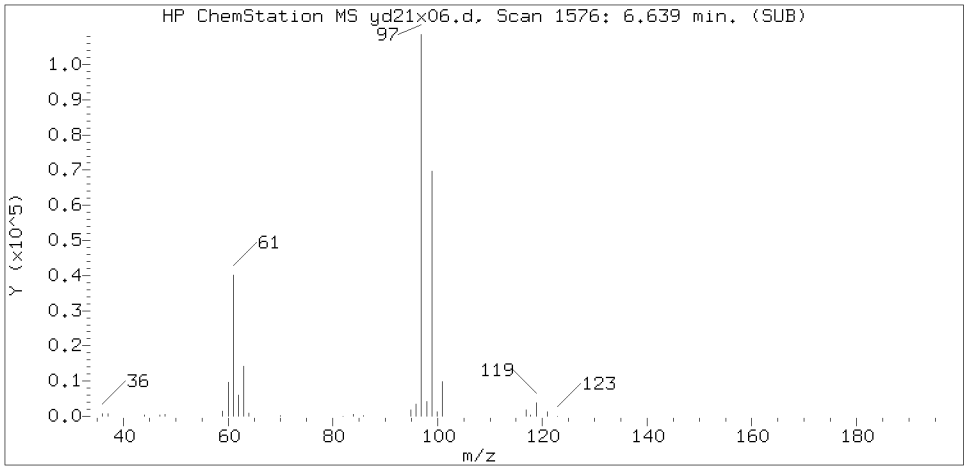
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:13 dvv10203

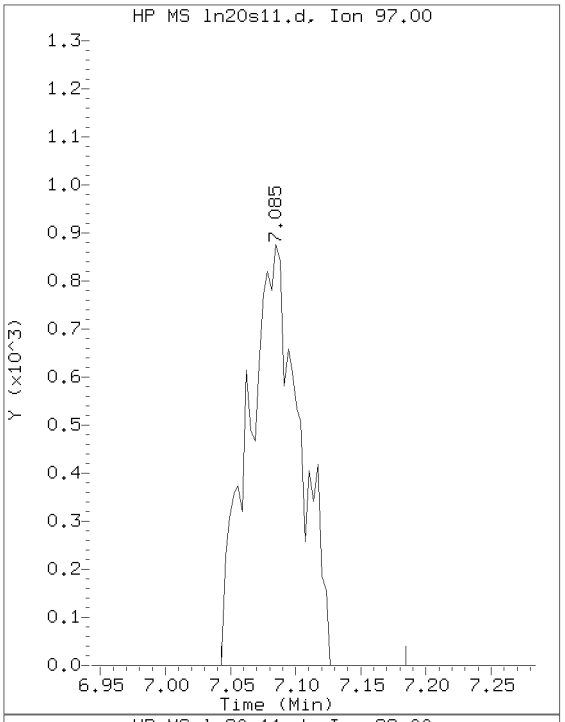
Sample Name: W1905 Lab Sample ID: 1202302

Compound Number : 44
Compound Name : 2-Butanone
Scan Number : 1518
Retention Time (minutes): 6.365
Relative Retention Time :-0.00001
Quant Ion : 43.00
Area (flag) : 4081
On-Column Amount (ng) : 1.2444

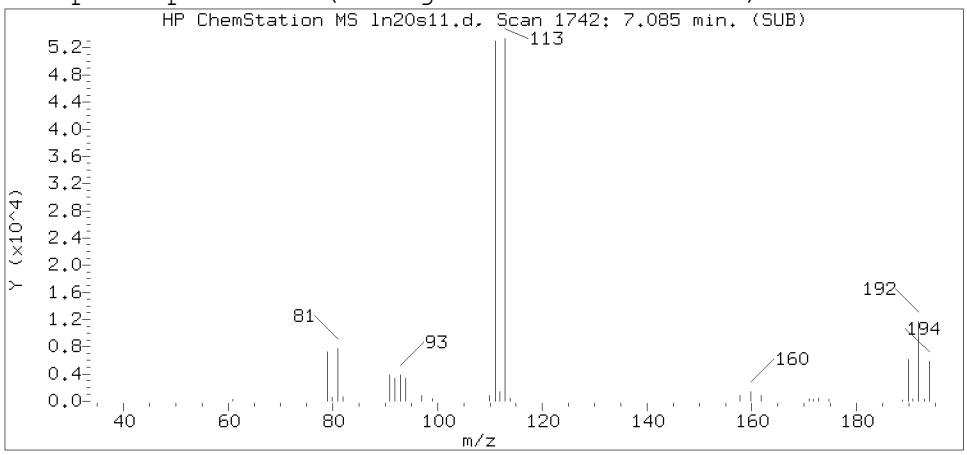
Digitally signed by Don V. Viray on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

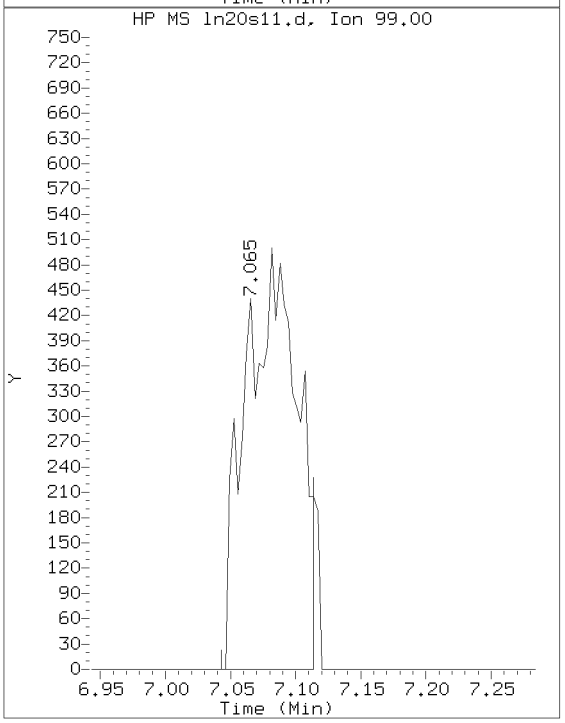
Reference Standard Spectrum for 1,1,1-Trichloroethane



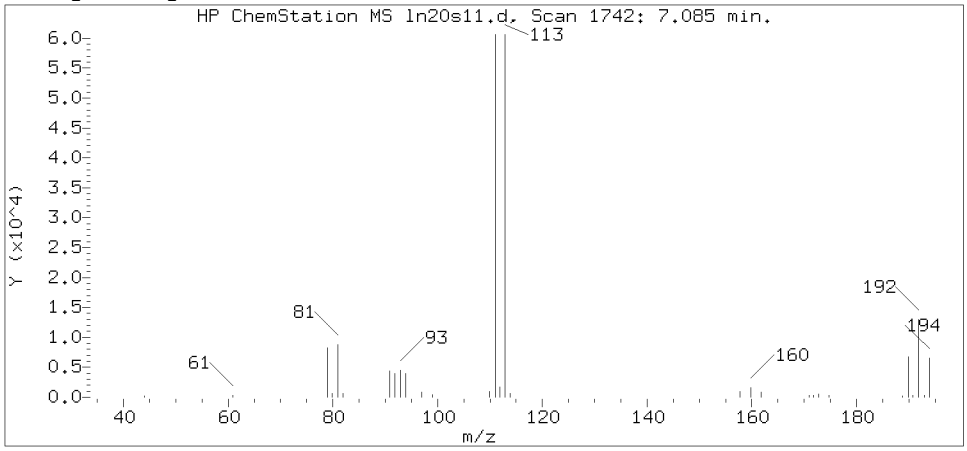


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov20a.b/ln20s11.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 13:42 Analyst ID: KKM02078

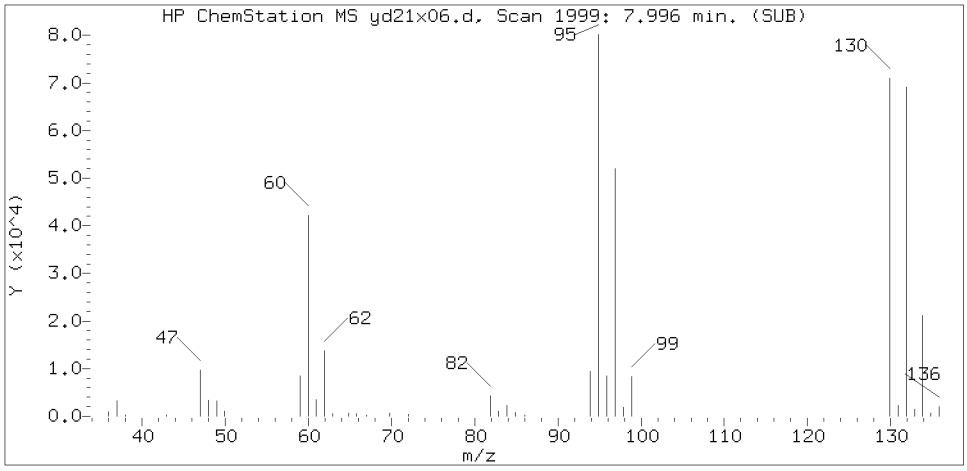
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:13 dvv10203

Sample Name: W1905 Lab Sample ID: 1202302

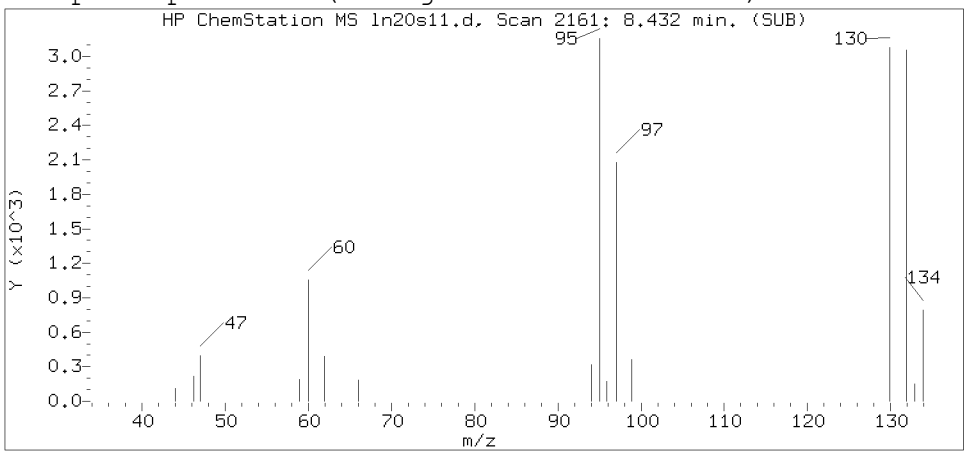
Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1742
Retention Time (minutes)	: 7.085
Relative Retention Time	:-0.00000
Quant Ion	: 97.00
Area (flag)	: 2418
On-Column Amount (ng)	: 0.3981

Digitally signed by Don V. Viray on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

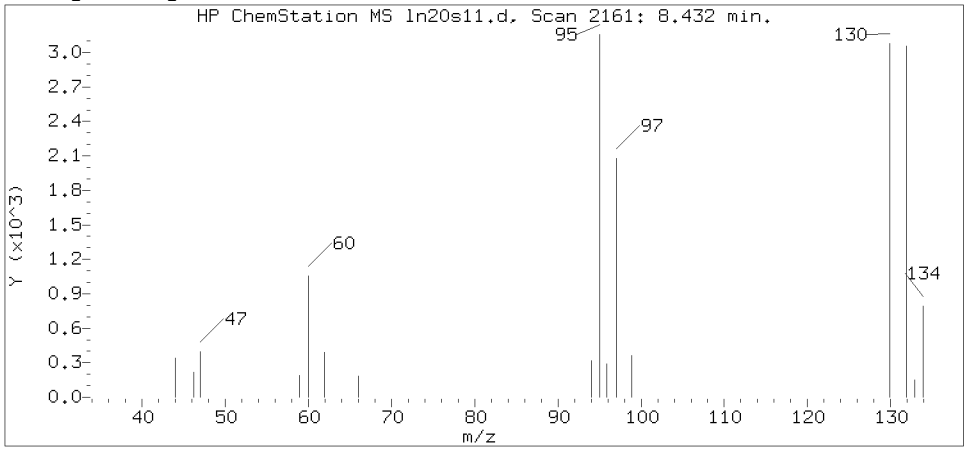
Reference Standard Spectrum for Trichloroethene

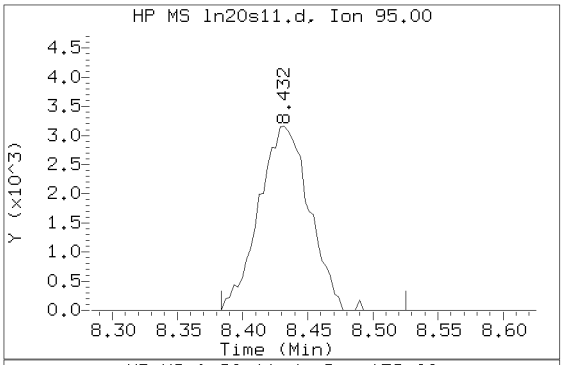


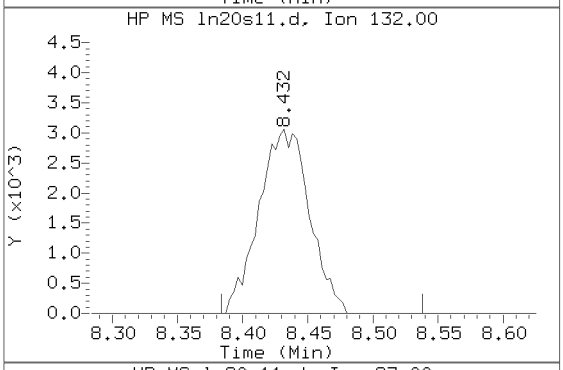
Sample Spectrum (Background Subtracted)

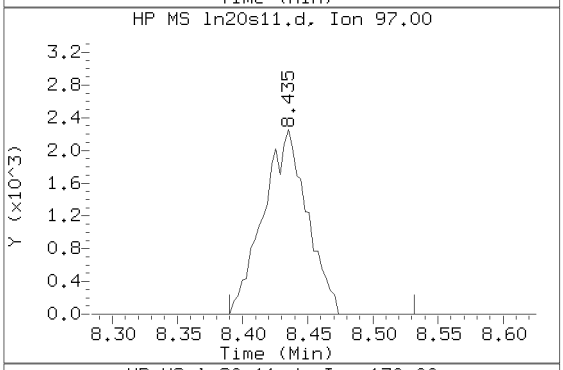


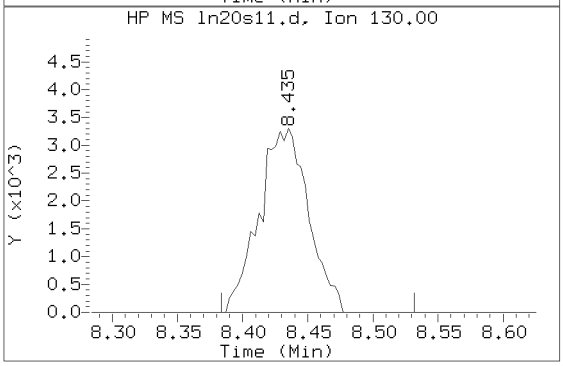
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov20a.b/ln20s11.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 13:42 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:13 dvv10203

Sample Name: W1905 Lab Sample ID: 1202302

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 2161
Retention Time (minutes)	: 8.432
Relative Retention Time	: 0.00000
Quant Ion	: 95.00
Area (flag)	: 8510
On-Column Amount (ng)	: 1.9104

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Target 3.5 esignature user ID: dvv10203

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
W1906

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202303

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov20a.b/ln20s12.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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W1906 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202303

Data file: /chem/HP09915.i/19nov20a.b/ln20s12.d Injection date and time: **20-NOV-2019 14:04**
Data file Sample Info. Line: W1906;1202303;1;0;;JCW19;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 21:13 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.500	(-0.007)	938	65	158597	(3)	250.00	
66) Fluorobenzene	7.962	(-0.003)	2015	96	875434	(-2)	50.00	
100) Chlorobenzene-d5	11.361	(0.000)	3072	117	708598	(-2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.219	(0.003)	3650	152	377448	(-4)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(0.000)	113	205216	47.948	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.532	(0.000)	102	54660	50.110	100%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	890076	48.006	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	338530	48.219	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 11/20/2019 at 21:19. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov20a.b/ln20s12.d Injection date and time: **20-NOV-2019 14:04**
Data file Sample Info. Line: W1906;1202303;1;0;;JCW19;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 21:13 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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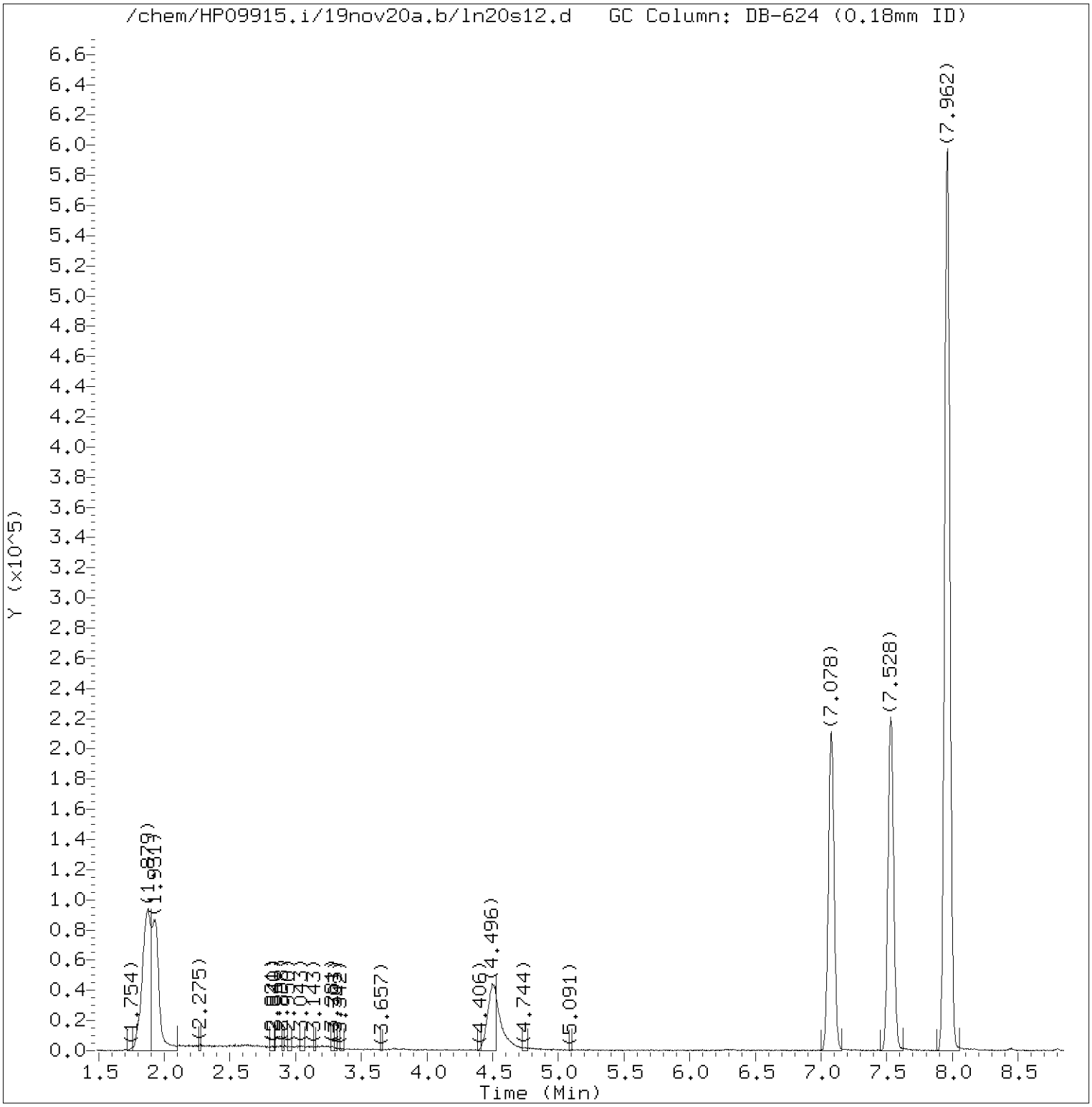
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 11/20/2019 at 21:19. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

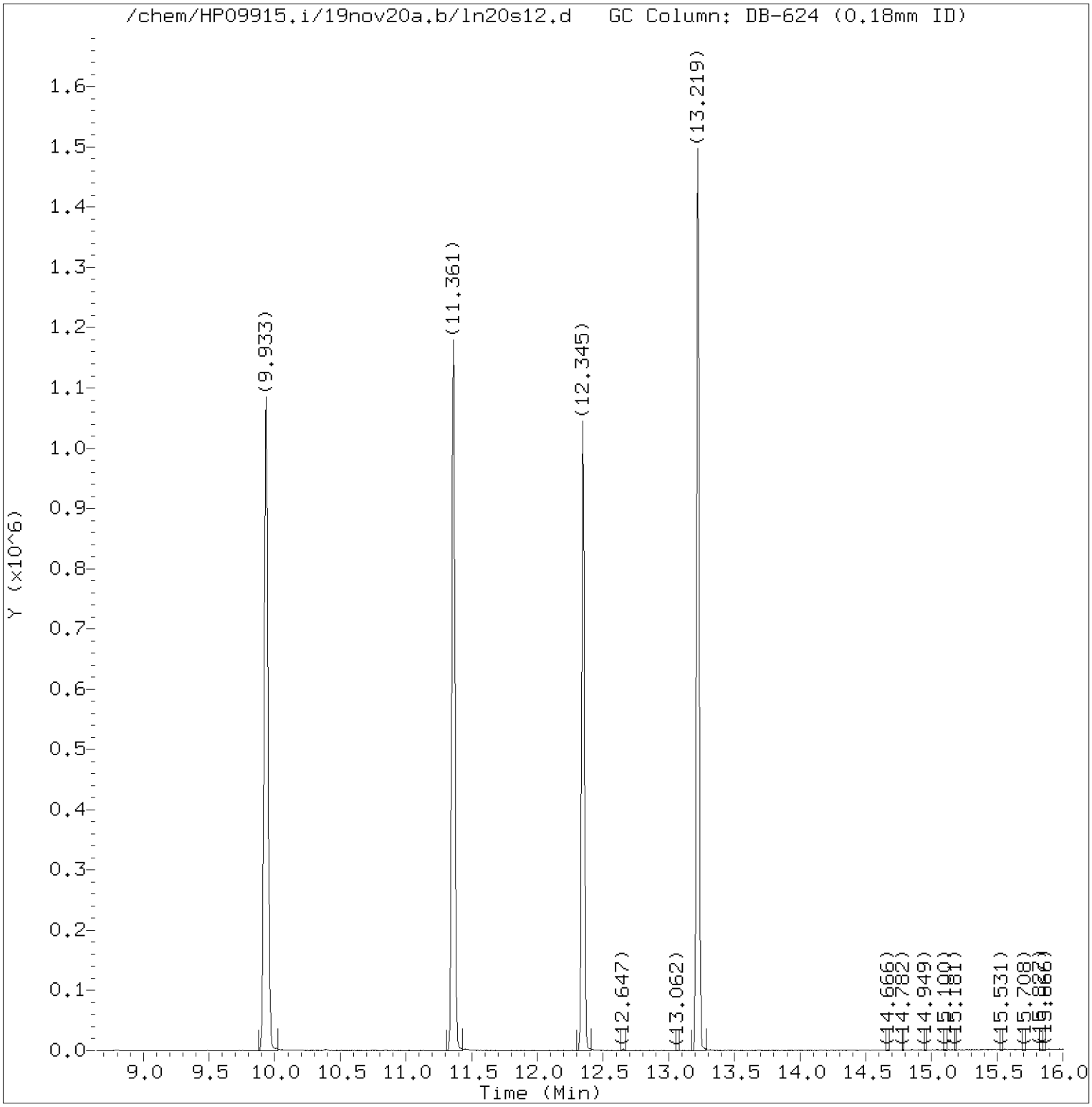
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s12.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 14:04 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:13 dvv10203

Sample Name: W1906 Lab Sample ID: 1202303

Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s12.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 14:04 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:13 dvv10203

Sample Name: W1906 Lab Sample ID: 1202303

Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s12.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 14:04 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:13 dvv10203

Sample Name: W1906 Lab Sample ID: 1202303

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.500	65	158597	250.000
52)$Dibromofluoromethane	(2)	7.075	113	205216	47.948
57)$1,2-Dichloroethane-d4	(2)	7.532	102	54660	50.110
66)*Fluorobenzene	(2)	7.962	96	875434	50.000
83)$Toluene-d8	(3)	9.933	98	890076	48.006
100)*Chlorobenzene-d5	(3)	11.361	117	708598	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	338530	48.219
131)*1,4-Dichlorobenzene-d4	(4)	13.219	152	377448	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W1907

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202304

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov20a.b/ln20s13.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	0.6	J
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.7	J
156-59-2	cis-1,2-Dichloroethene	2	
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	0.4	J
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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W1907 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202304

Data file: /chem/HP09915.i/19nov20a.b/ln20s13.d Injection date and time: **20-NOV-2019 14:26**
Data file Sample Info. Line: W1907;1202304;1;0;;JCW19;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 14:44 Automation

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.487	(0.006)	934	65	157315	(3)	250.00	
66) Fluorobenzene	7.956	(0.003)	2013	96	877236	(-2)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	709324	(-2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	382620	(-2)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072	(0.000)	113	204923	47.781	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.522	(0.000)	102	54133	49.525	99%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	896840	48.321	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.348	(0.000)	95	338707	48.195	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)	2.393	(0.000)	62	3522	0.599	0.60		J	0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.541	(0.000)	63	5234	0.698	0.70		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	6.374	(0.000)	96	9439	1.955	1.95			0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	7.072	(0.001)	97	2670	0.436	0.44		J	0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.432	(-0.000)	95	6698	1.491	1.49			0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

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Data file: /chem/HP09915.i/19nov20a.b/ln20s13.d Injection date and time: **20-NOV-2019 14:26**
Data file Sample Info. Line: W1907;1202304;1;0;;JCW19;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 14:44 Automation

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

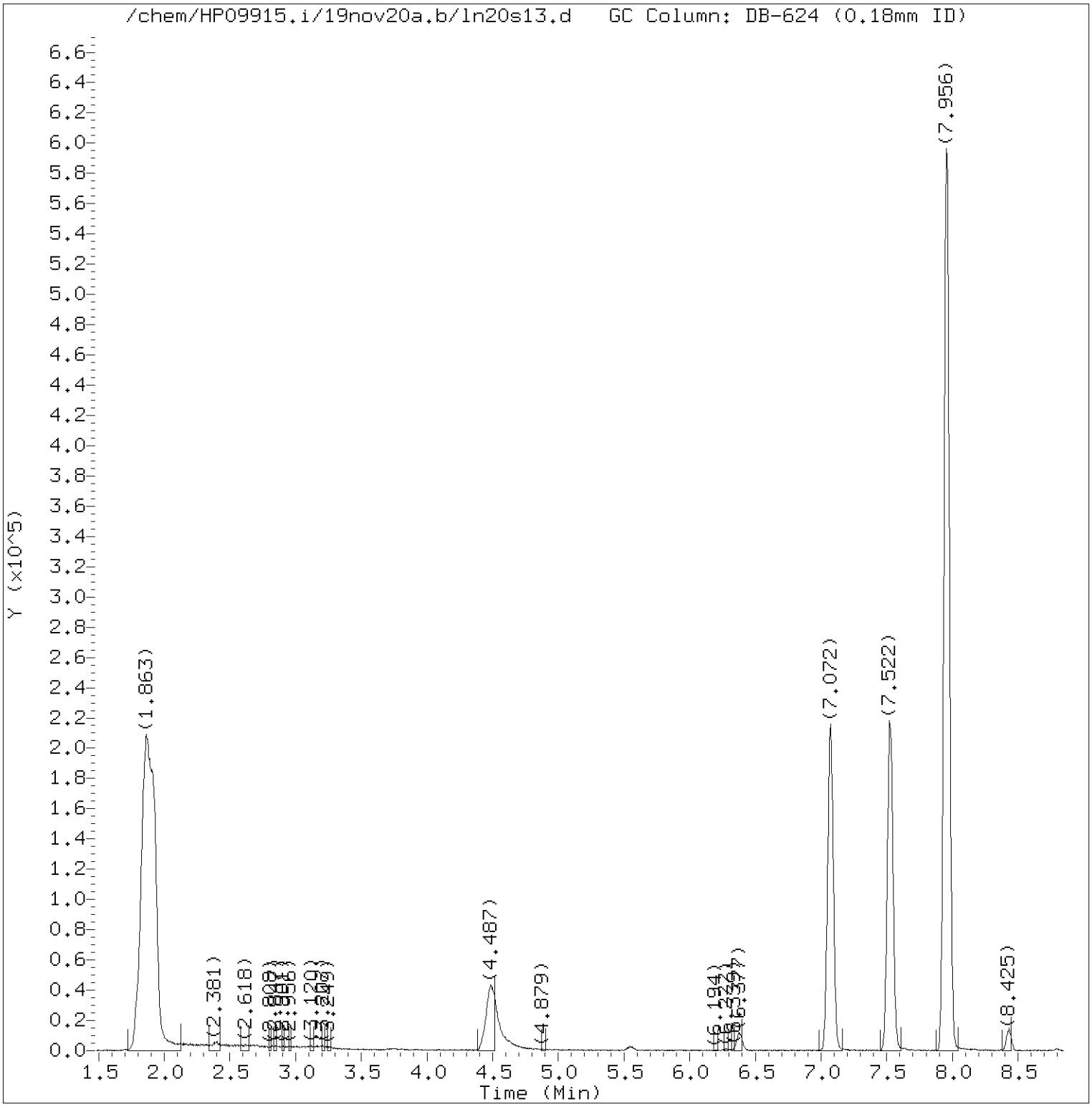
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 11/20/2019 at 21:19. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

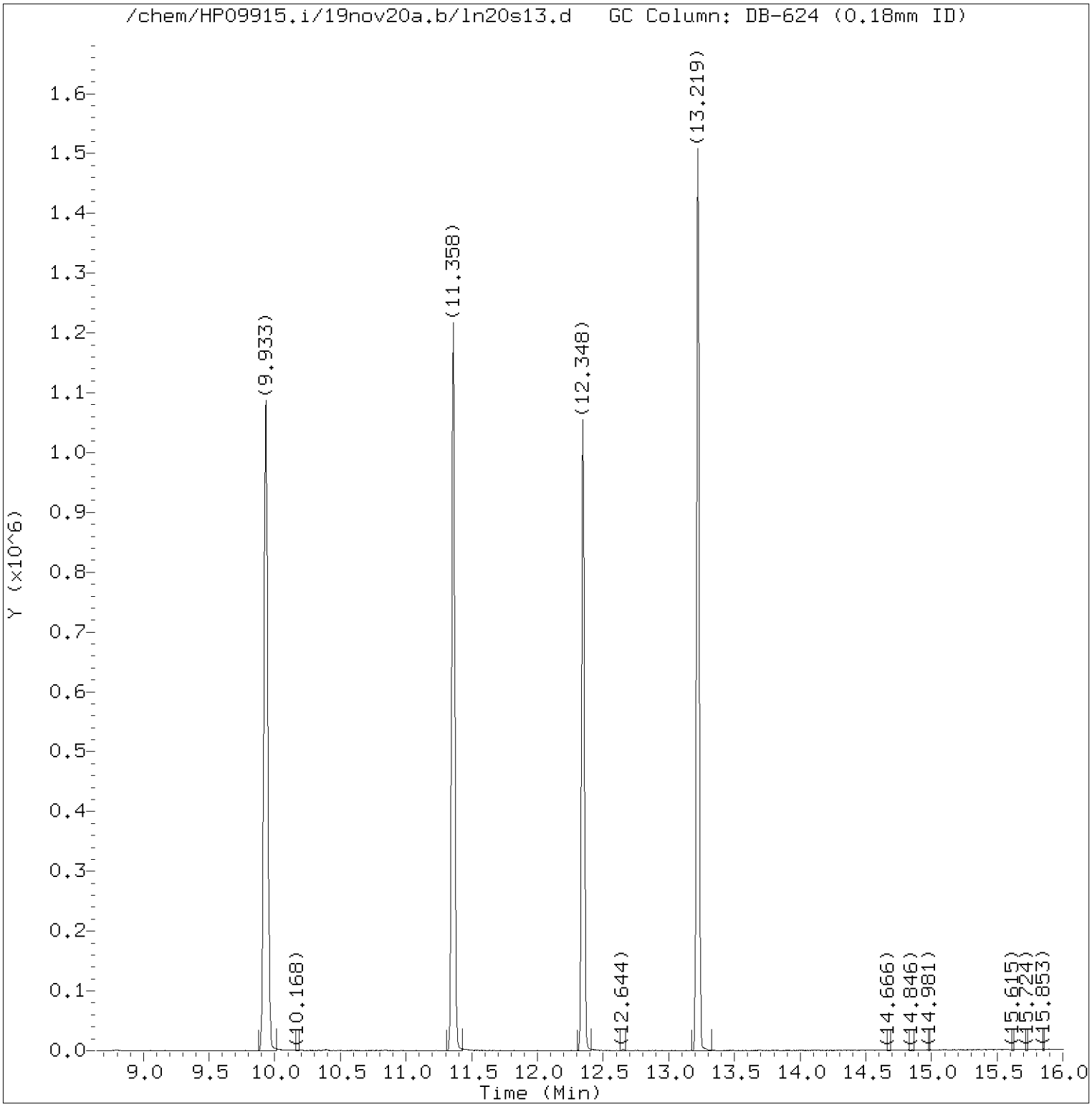
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s13.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 14:26 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 14:44 Automation

Sample Name: W1907 Lab Sample ID: 1202304

Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s13.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 14:26 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 14:44 Automation

Sample Name: W1907 Lab Sample ID: 1202304

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on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s13.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 14:26 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 14:44 Automation

Sample Name: W1907 Lab Sample ID: 1202304

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	2.393	62	3522	0.599
29)*t-Butyl alcohol-d10	(1)	4.487	65	157315	250.000
36) 1,1-Dichloroethane	(2)	5.541	63	5234	0.698
42) cis-1,2-Dichloroethene	(2)	6.374	96	9439	1.955
53) 1,1,1-Trichloroethane	(2)	7.072	97	2670	0.436
52)$Dibromofluoromethane	(2)	7.072	113	204923	47.781
57)$1,2-Dichloroethane-d4	(2)	7.522	102	54133	49.525
66)*Fluorobenzene	(2)	7.956	96	877236	50.000
71) Trichloroethene	(2)	8.432	95	6698	1.491
83)$Toluene-d8	(3)	9.933	98	896840	48.321
100)*Chlorobenzene-d5	(3)	11.358	117	709324	50.000
114)$4-Bromofluorobenzene	(3)	12.348	95	338707	48.195
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	382620	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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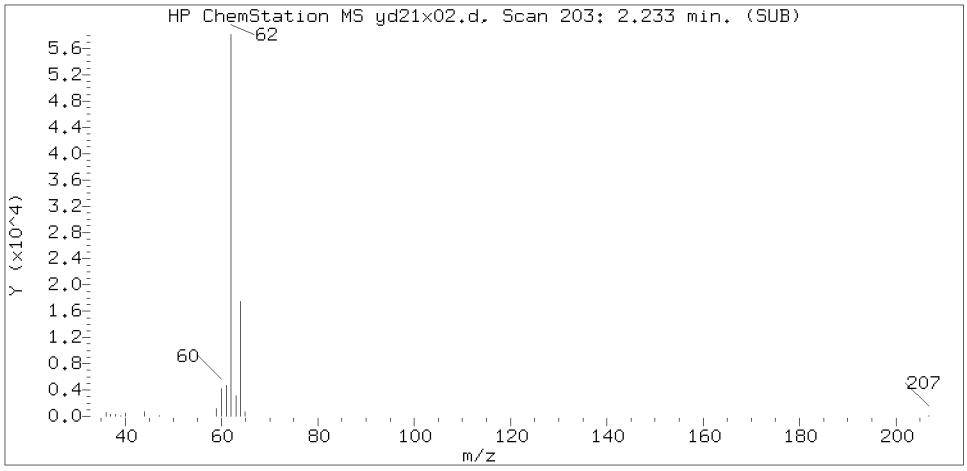
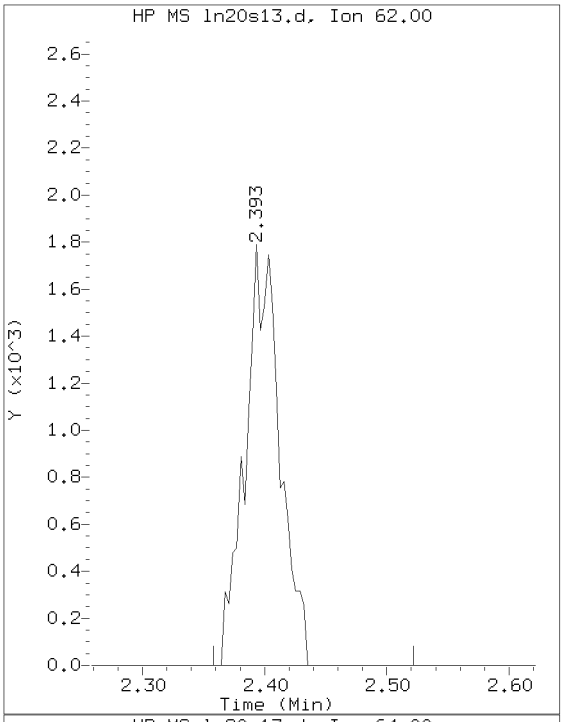
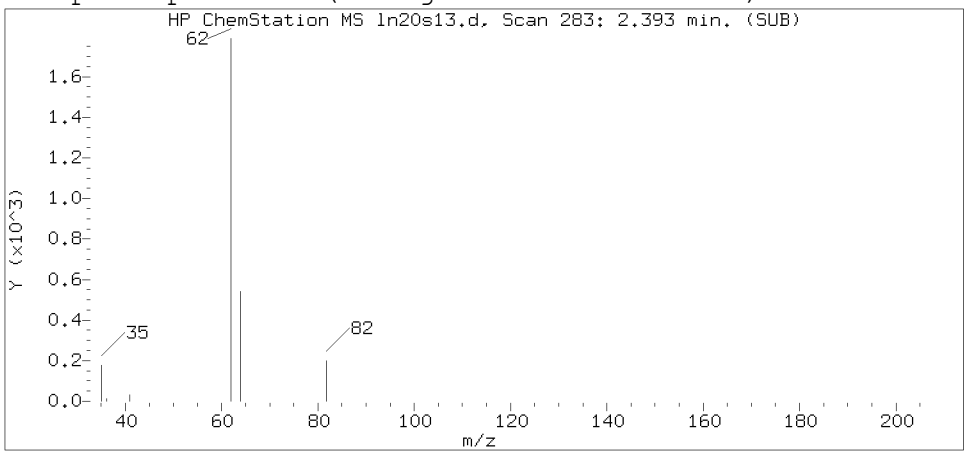
Target 3.5 esignature user ID: dvv10203

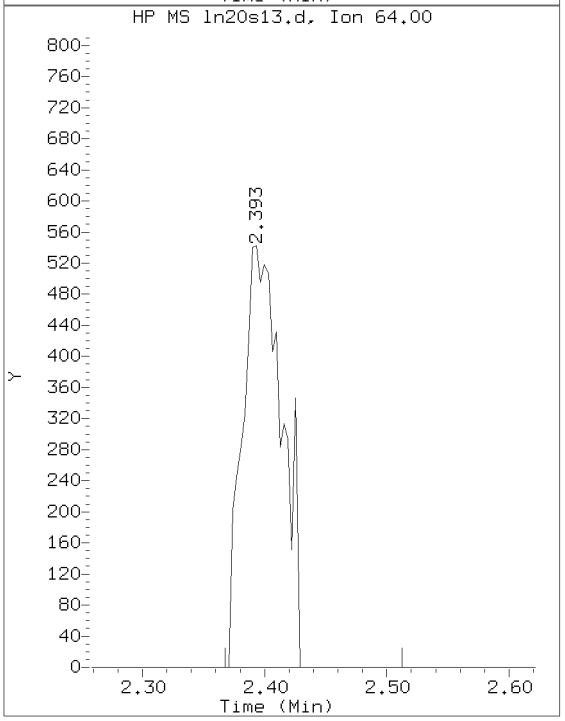
Reference Standard Spectrum for Vinyl Chloride



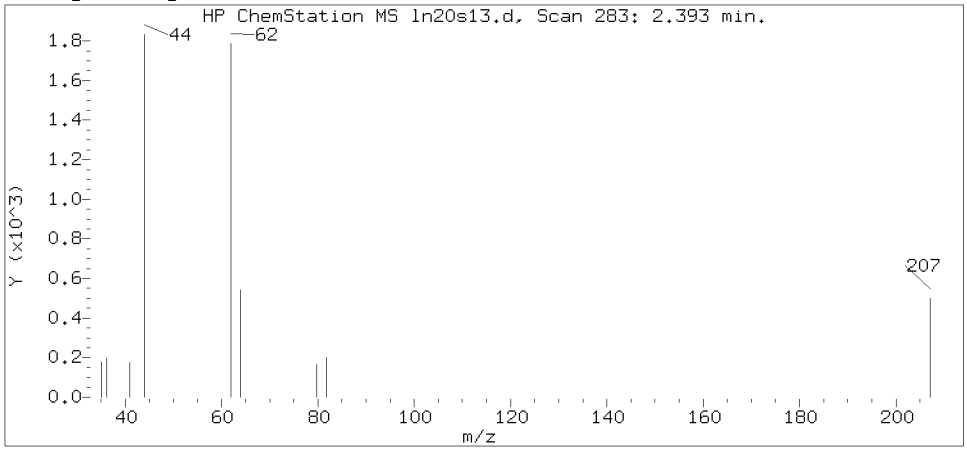


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov20a.b/ln20s13.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 14:26 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 14:44 Automation

Sample Name: W1907 Lab Sample ID: 1202304

Compound Number	: 6
Compound Name	: Vinyl Chloride
Scan Number	: 283
Retention Time (minutes)	: 2.393
Relative Retention Time	: 0.00069
Quant Ion	: 62.00
Area (flag)	: 3522
On-Column Amount (ng)	: 0.5986

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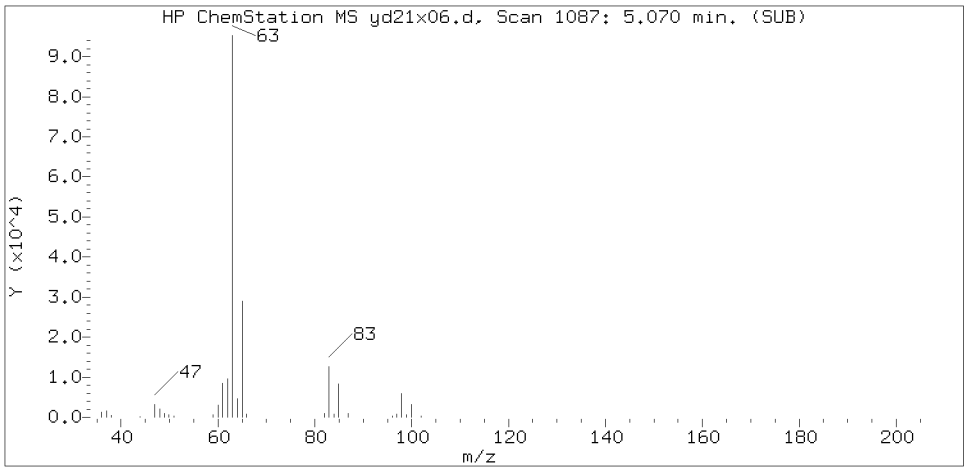
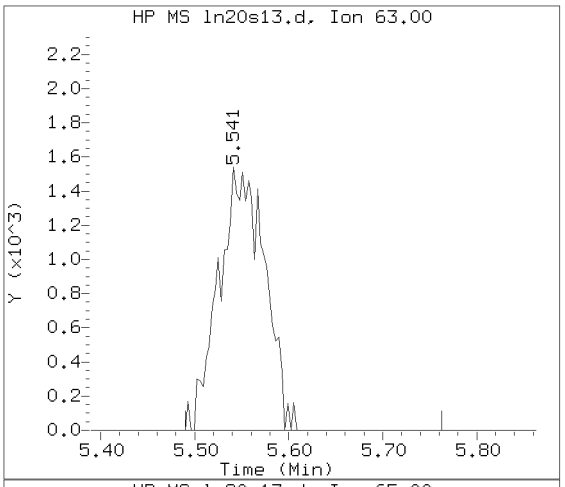
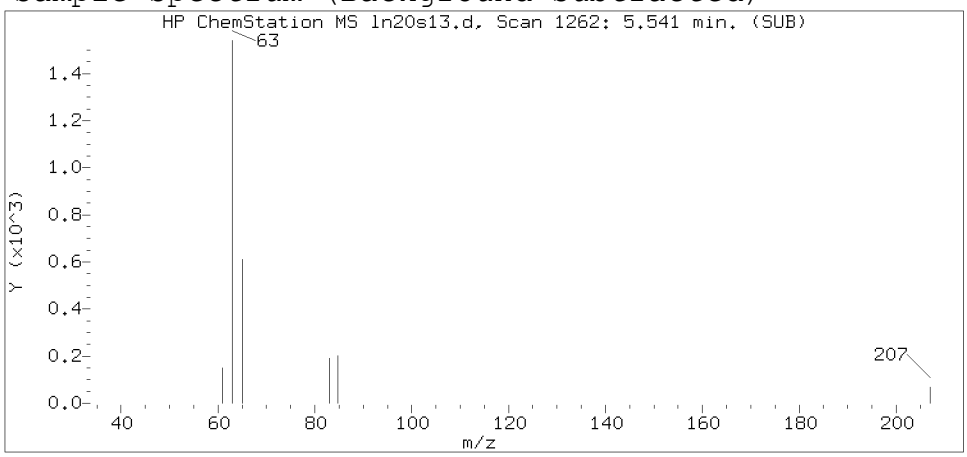
Target 3.5 esignature user ID: dvv10203

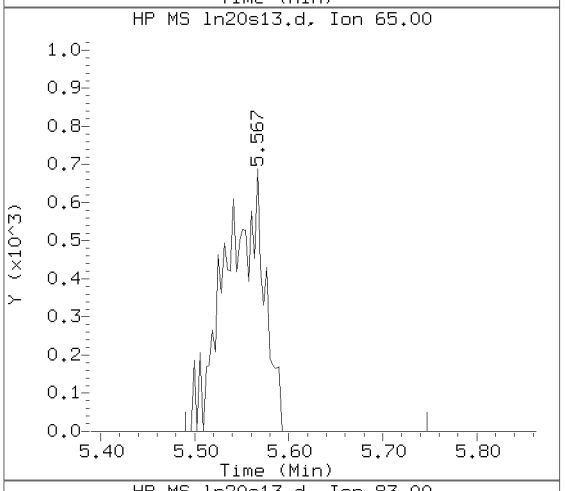
Reference Standard Spectrum for 1,1-Dichloroethane



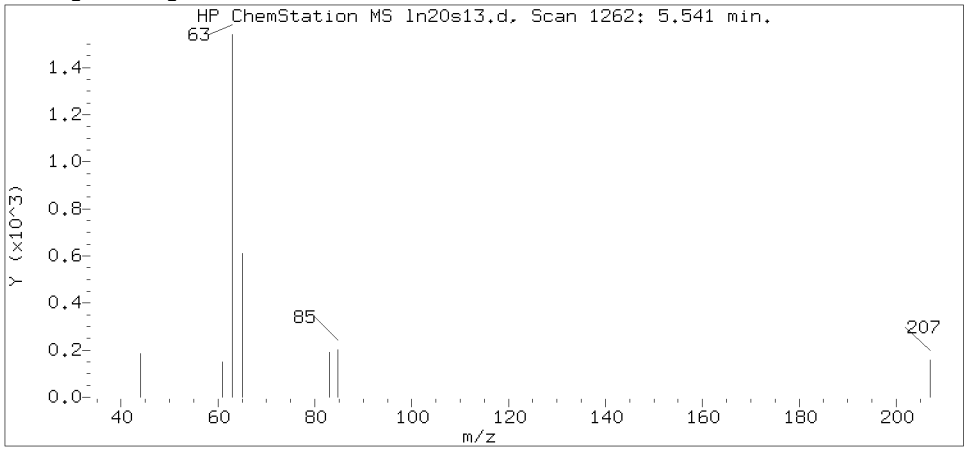


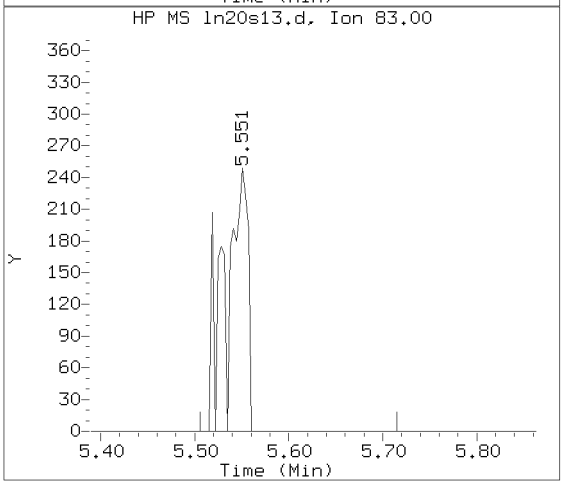
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov20a.b/ln20s13.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 14:26 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 14:44 Automation

Sample Name: W1907 Lab Sample ID: 1202304

Compound Number	: 36
Compound Name	: 1,1-Dichloroethane
Scan Number	: 1262
Retention Time (minutes)	: 5.541
Relative Retention Time	: 0.00093
Quant Ion	: 63.00
Area (flag)	: 5234
On-Column Amount (ng)	: 0.6975

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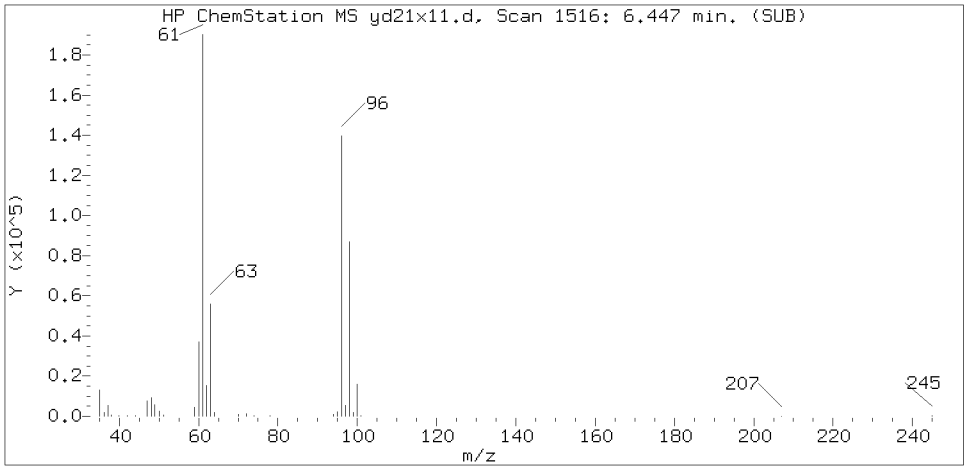
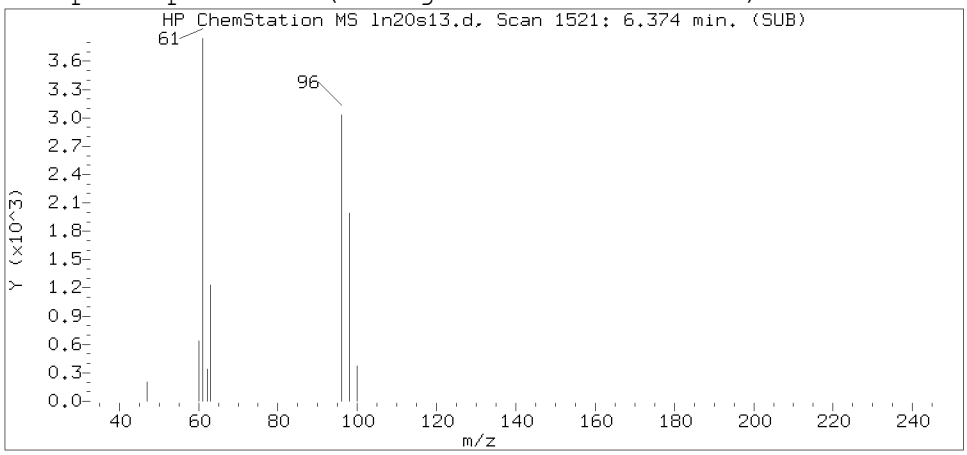
Target 3.5 esignature user ID: dvv10203

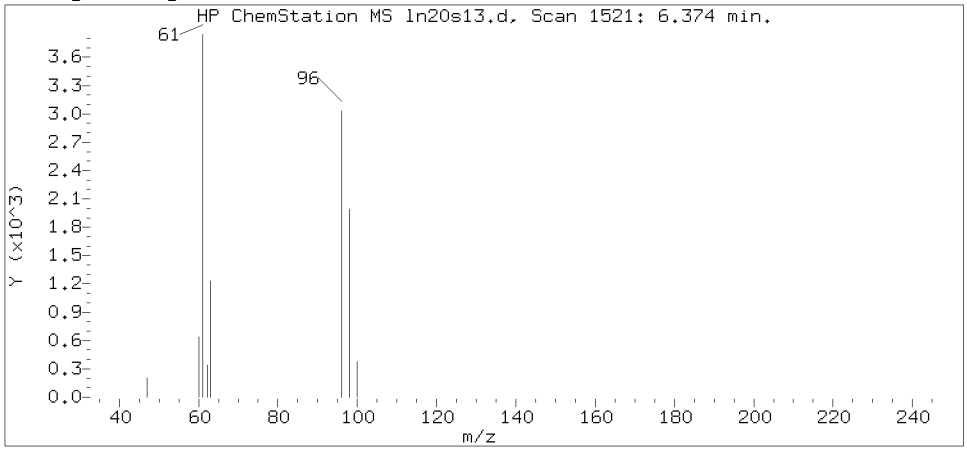
Reference Standard Spectrum for cis-1,2-Dichloroethene

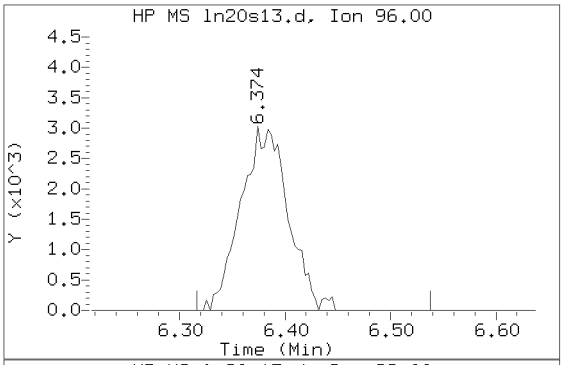


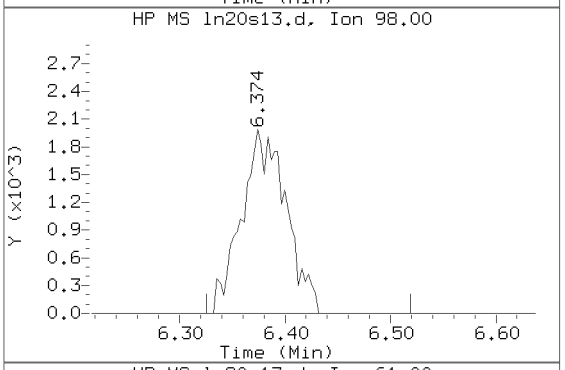
Sample Spectrum (Background Subtracted)

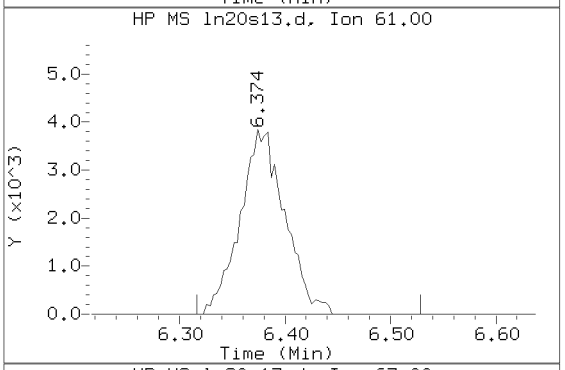


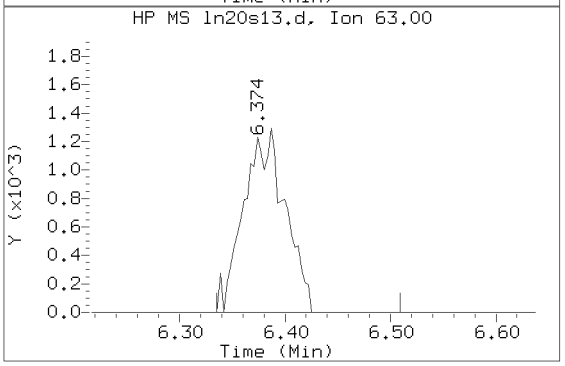
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov20a.b/ln20s13.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 14:26 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 14:44 Automation

Sample Name: W1907 Lab Sample ID: 1202304

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 1521
Retention Time (minutes): 6.374
Relative Retention Time : 0.00048
Quant Ion : 96.00
Area (flag) : 9439
On-Column Amount (ng) : 1.9549

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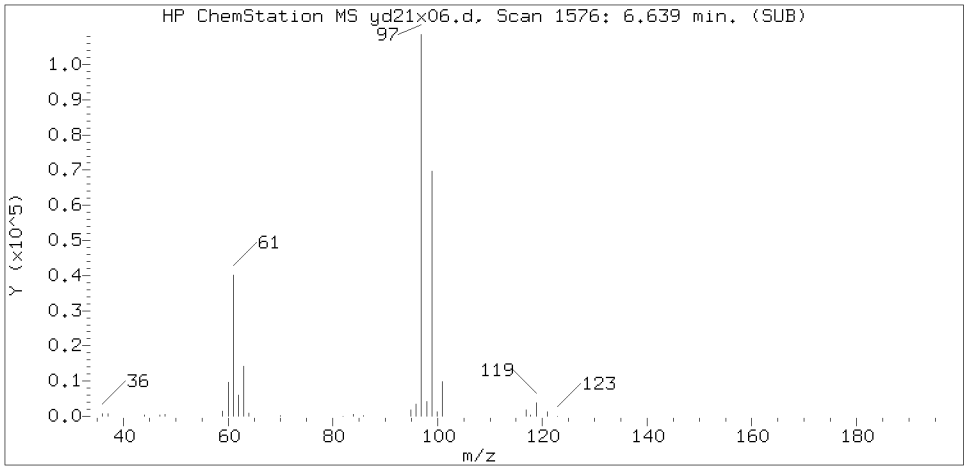
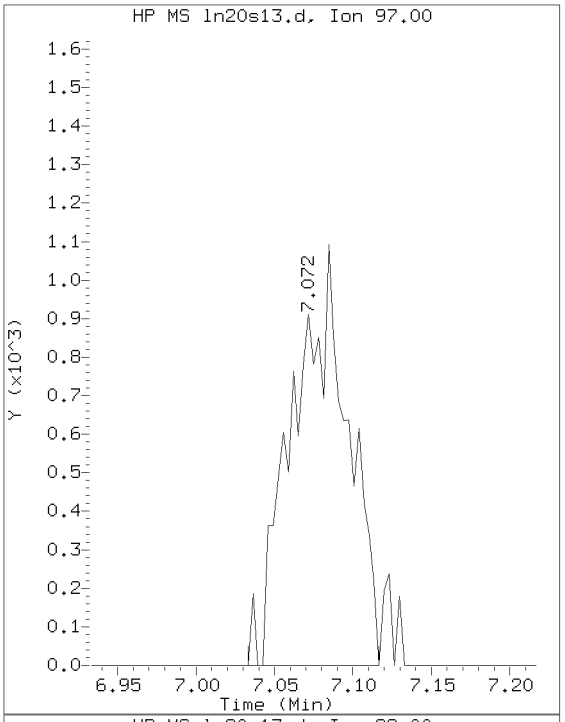
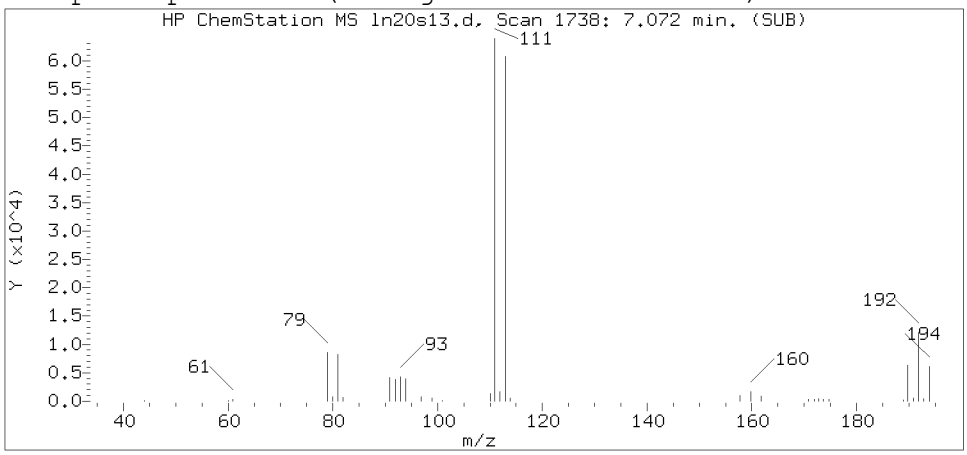
Target 3.5 esignature user ID: dvv10203

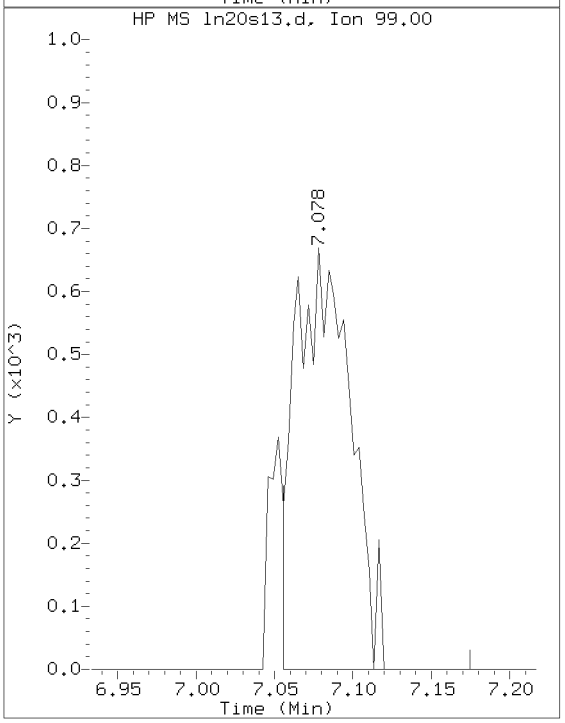
Reference Standard Spectrum for 1,1,1-Trichloroethane



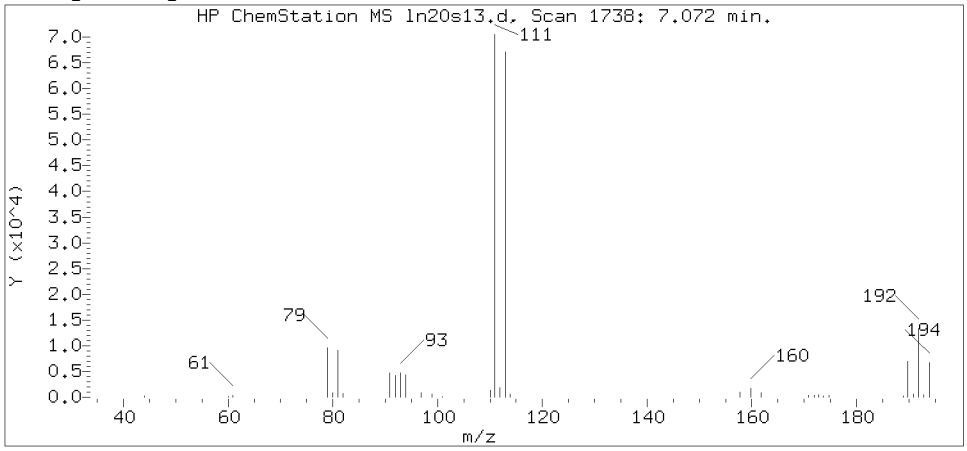


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov20a.b/ln20s13.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 14:26 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 14:44 Automation

Sample Name: W1907 Lab Sample ID: 1202304

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1738
Retention Time (minutes)	: 7.072
Relative Retention Time	: 0.00126
Quant Ion	: 97.00
Area (flag)	: 2670
On-Column Amount (ng)	: 0.4359

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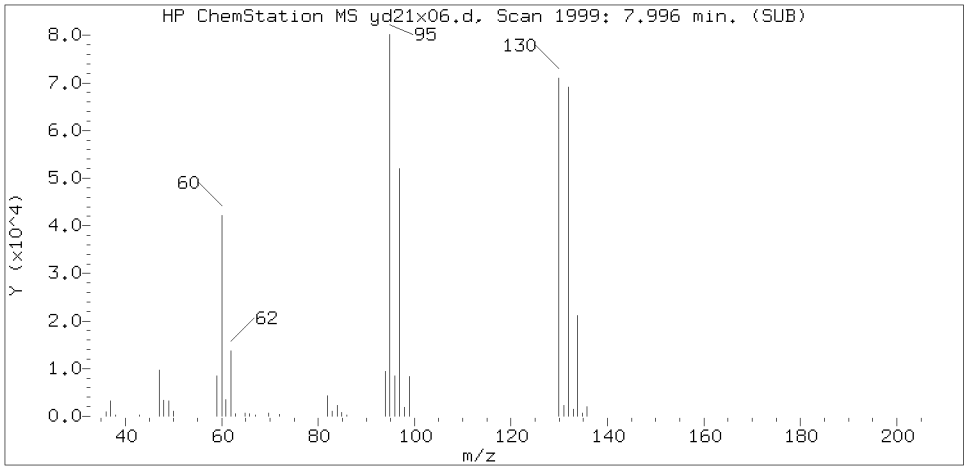
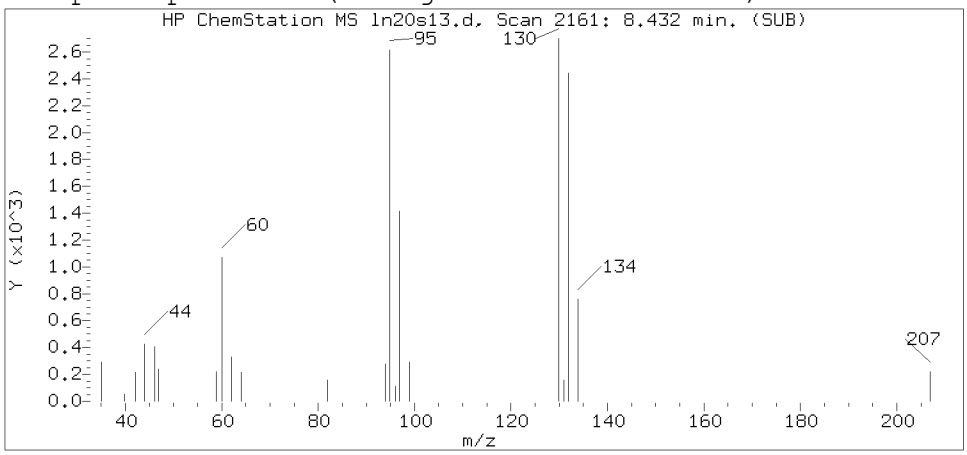
Target 3.5 esignature user ID: dvv10203

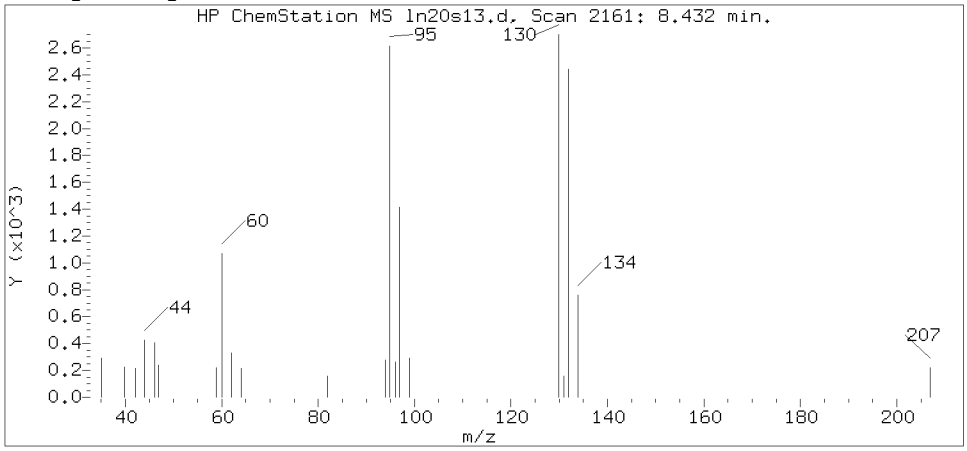
Reference Standard Spectrum for Trichloroethene

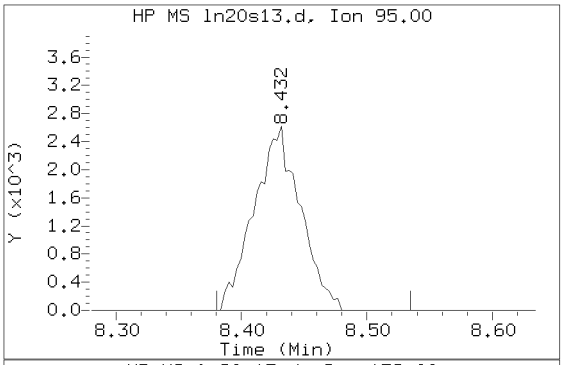


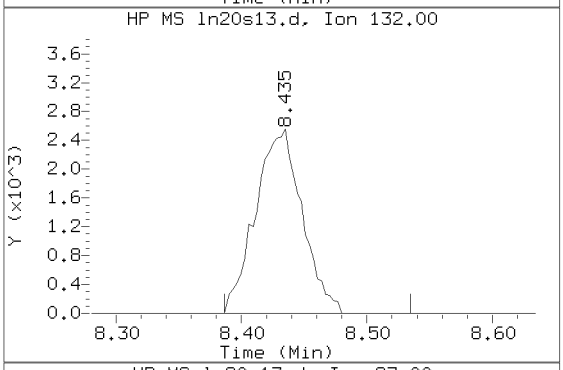
Sample Spectrum (Background Subtracted)

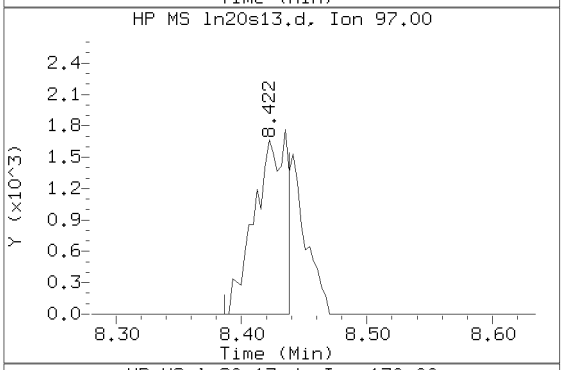


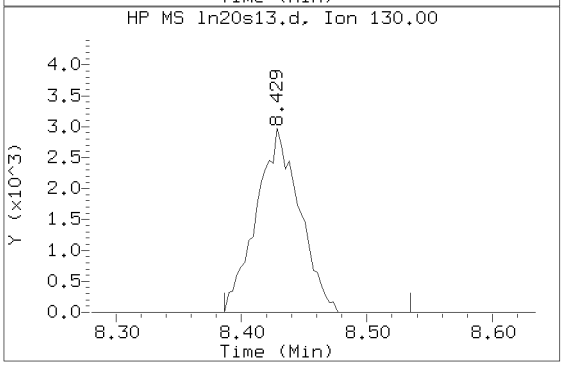
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov20a.b/ln20s13.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 14:26 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 14:44 Automation

Sample Name: W1907 Lab Sample ID: 1202304

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 2161
Retention Time (minutes)	: 8.432
Relative Retention Time	:-0.00043
Quant Ion	: 95.00
Area (flag)	: 6698
On-Column Amount (ng)	: 1.4910

Digitally signed by Don V. Viray on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
W1908

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202305

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov20a.b/ln20s14.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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W1908 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202305

Data file: /chem/HP09915.i/19nov20a.b/ln20s14.d Injection date and time: **20-NOV-2019 14:48**
Data file Sample Info. Line: W1908;1202305;1;0;;JCW19;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 15:06 Automation

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.496	(-0.003)	937	65	143509	(-6)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	845285	(-5)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	691126	(-5)	50.00	
131) 1,4-Dichlorobenzene-d4	13.219	(0.003)	3650	152	371262	(-5)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072	(0.000)	113	198708	48.083	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.532	(0.000)	102	53436	50.736	101%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	866653	47.924	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	331703	48.441	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 11/20/2019 at 21:19. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov20a.b/ln20s14.d Injection date and time: **20-NOV-2019 14:48**
Data file Sample Info. Line: W1908;1202305;1;0;;JCW19;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 15:06 Automation

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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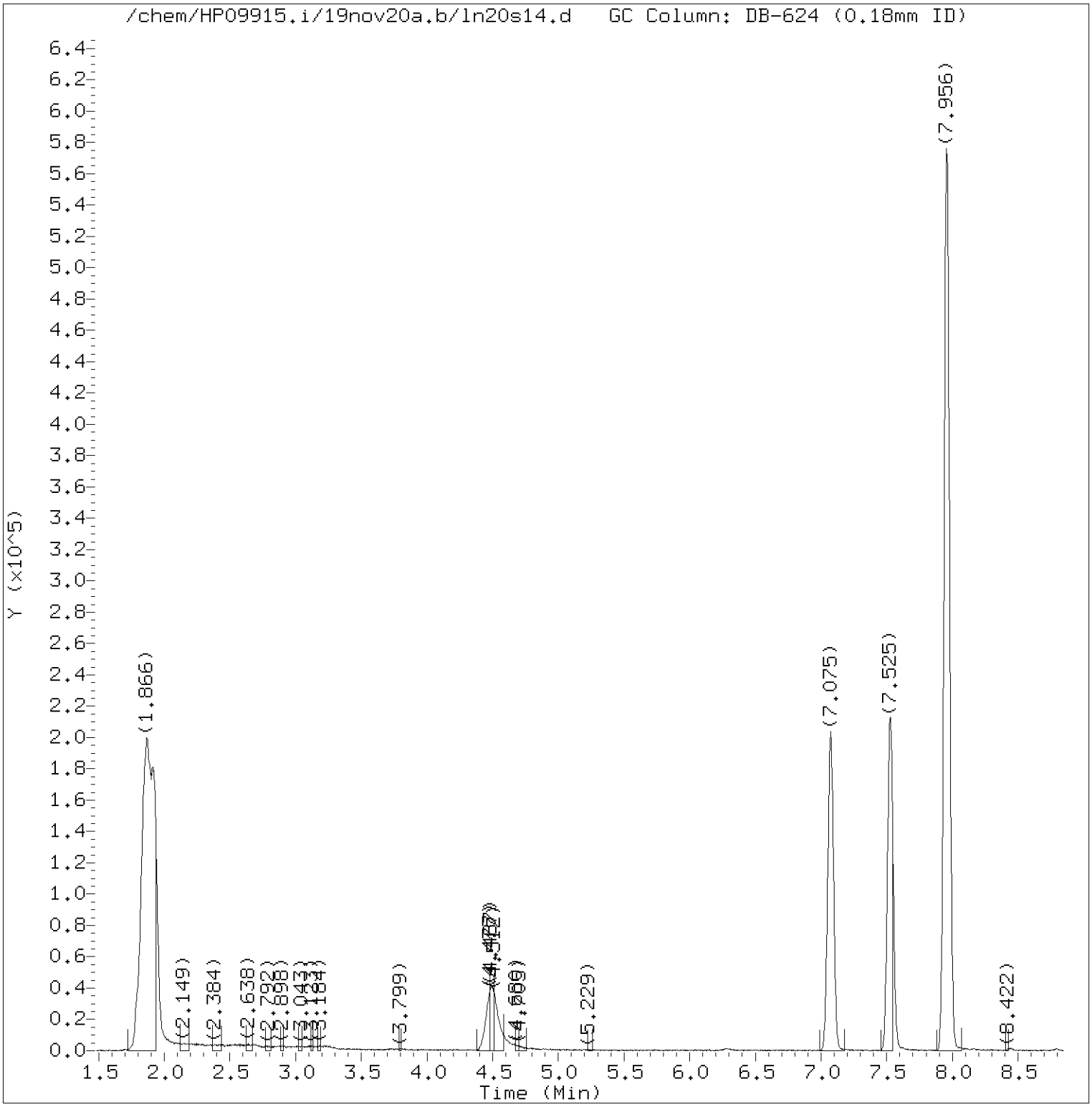
Total number of targets = 24

Digitally signed by Don V. Viray on 11/20/2019 at 21:19. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

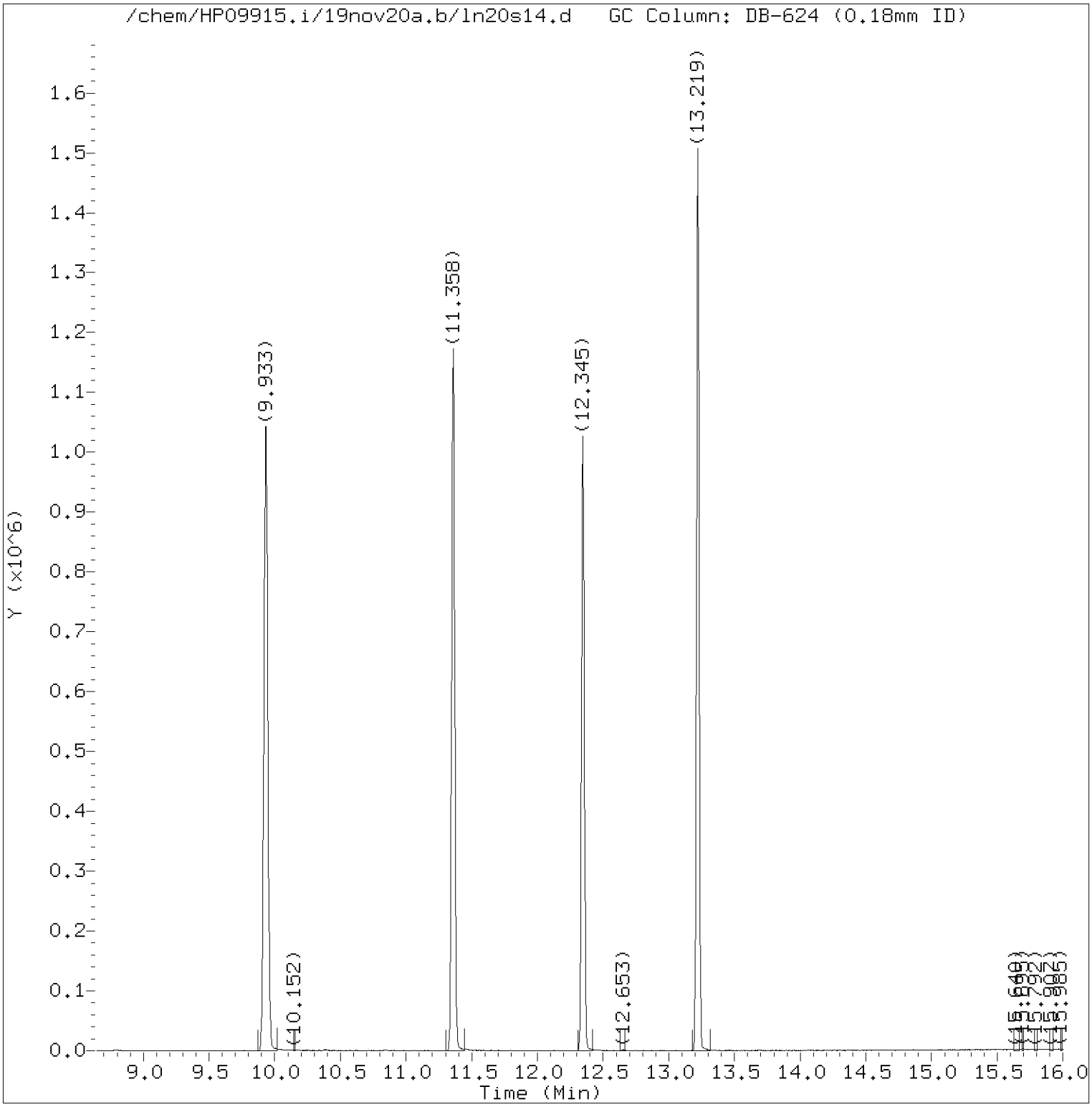
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s14.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 14:48 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 15:06 Automation

Sample Name: W1908 Lab Sample ID: 1202305

Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s14.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 14:48 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 15:06 Automation

Sample Name: W1908 Lab Sample ID: 1202305

Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s14.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 14:48 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 15:06 Automation

Sample Name: W1908 Lab Sample ID: 1202305

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.496	65	143509	250.000
52)$Dibromofluoromethane	(2)	7.072	113	198708	48.083
57)$1,2-Dichloroethane-d4	(2)	7.532	102	53436	50.736
66)*Fluorobenzene	(2)	7.959	96	845285	50.000
83)$Toluene-d8	(3)	9.930	98	866653	47.924
100)*Chlorobenzene-d5	(3)	11.358	117	691126	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	331703	48.441
131)*1,4-Dichlorobenzene-d4	(4)	13.219	152	371262	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W1909

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202306

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov20a.b/ln20s15.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.5	J
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	2	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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W1909 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202306

Data file: /chem/HP09915.i/19nov20a.b/ln20s15.d Injection date and time: **20-NOV-2019 15:10**
Data file Sample Info. Line: W1909;1202306;1;0;;JCW19;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 21:14 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.496	(-0.003)	937	65	147376	(-4)	250.00	
66) Fluorobenzene	7.962	(-0.003)	2015	96	854788	(-4)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	692345	(-5)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	370267	(-5)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.081	(0.000)	113	199593	47.760	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(0.000)	102	53328	50.070	100%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	871683	48.117	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	329229	47.995	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.560	(-0.000)	63	3478	0.476	0.48		J	0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	7.091	(-0.000)	97	9118M	1.528	1.53			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

M = Compound was manually integrated.

Digitally signed by Don V. Viray on 11/20/2019 at 21:19. Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov20a.b/ln20s15.d Injection date and time: **20-NOV-2019 15:10**
Data file Sample Info. Line: W1909;1202306;1;0;;JCW19;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 21:14 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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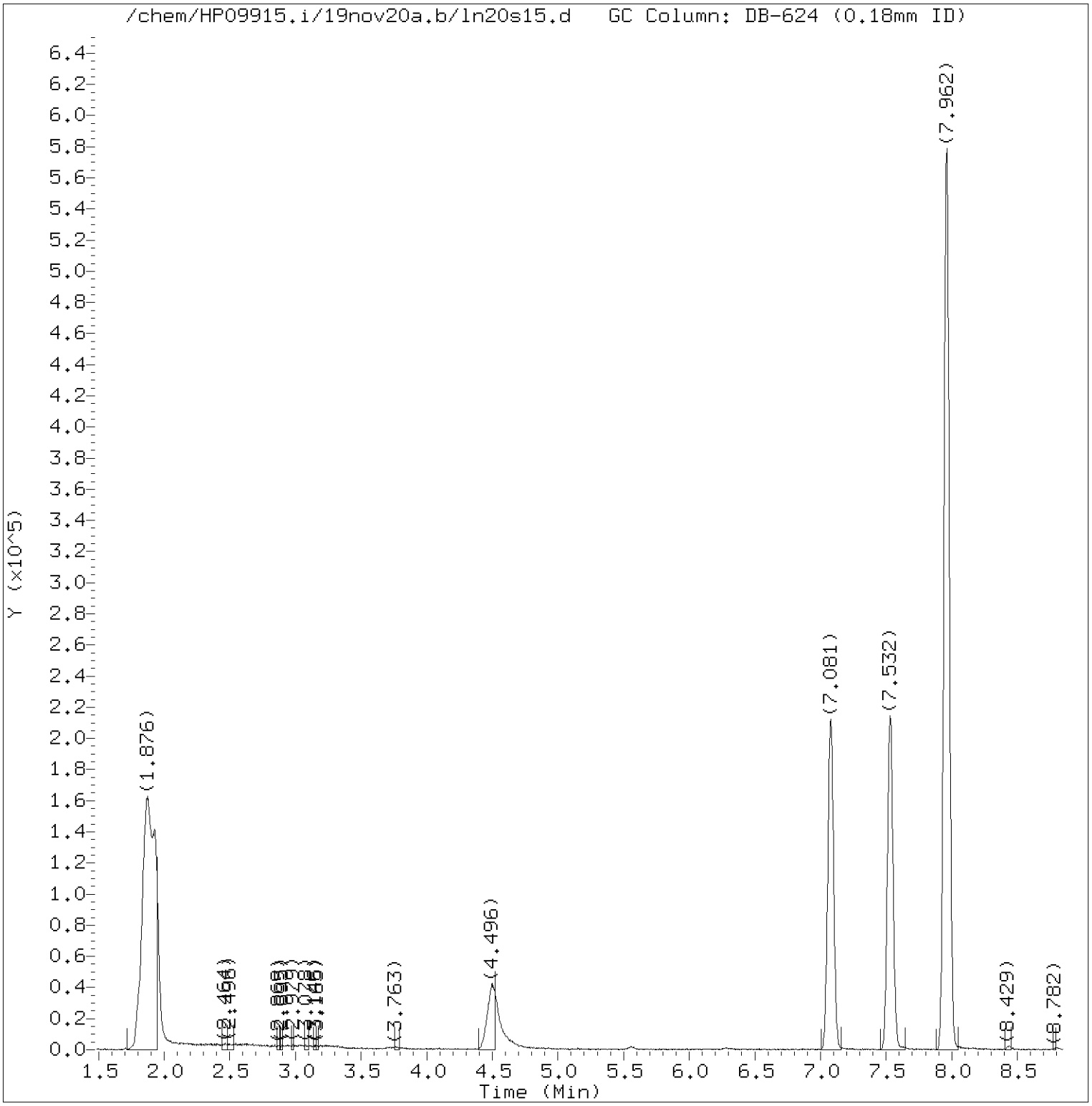
Total number of targets = 24

Digitally signed by Don V. Viray on 11/20/2019 at 21:19. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

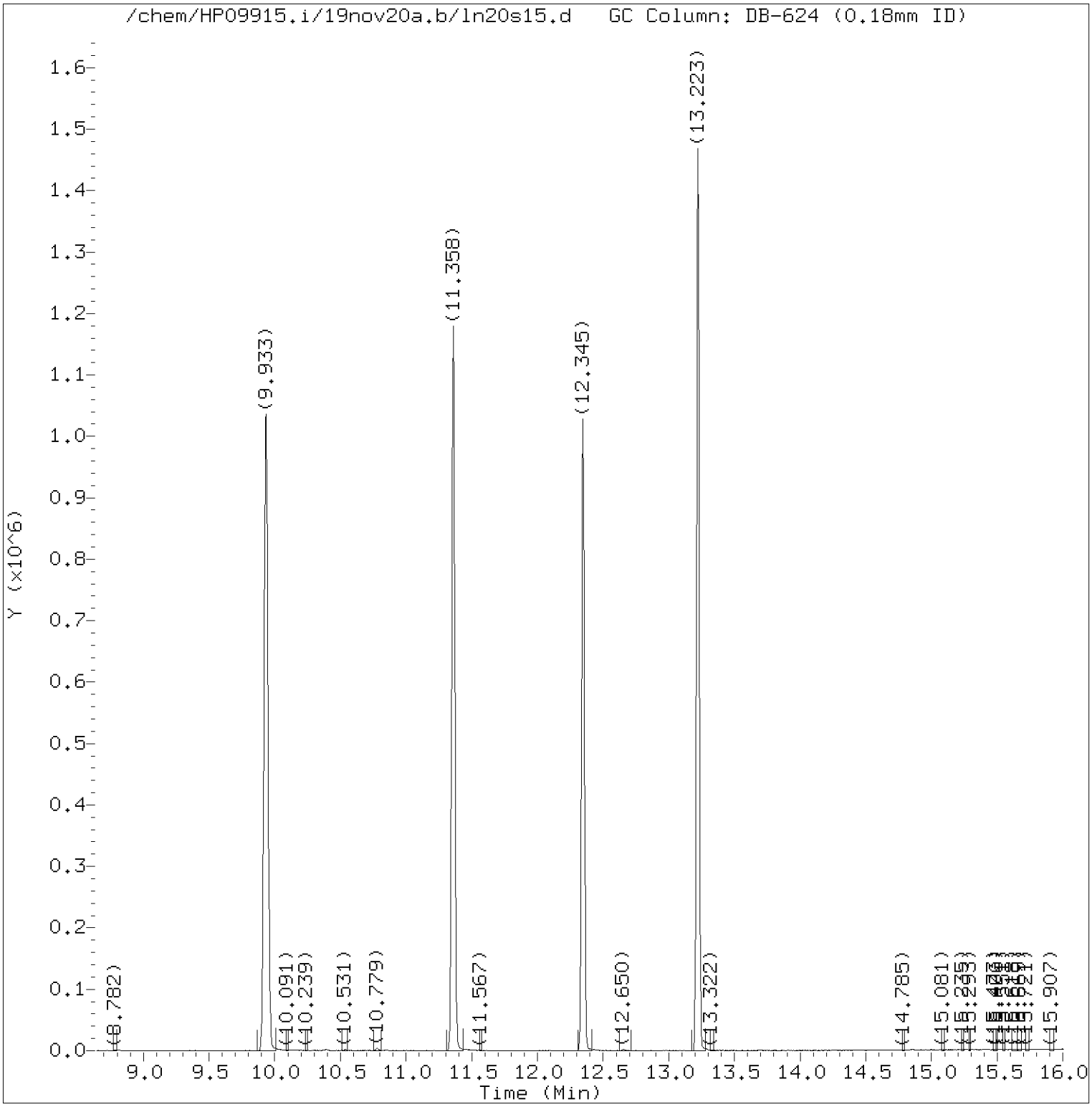
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s15.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 15:10 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:14 dvv10203

Sample Name: W1909 Lab Sample ID: 1202306

Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s15.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 15:10 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:14 dvv10203

Sample Name: W1909 Lab Sample ID: 1202306

Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s15.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 15:10 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:14 dvv10203

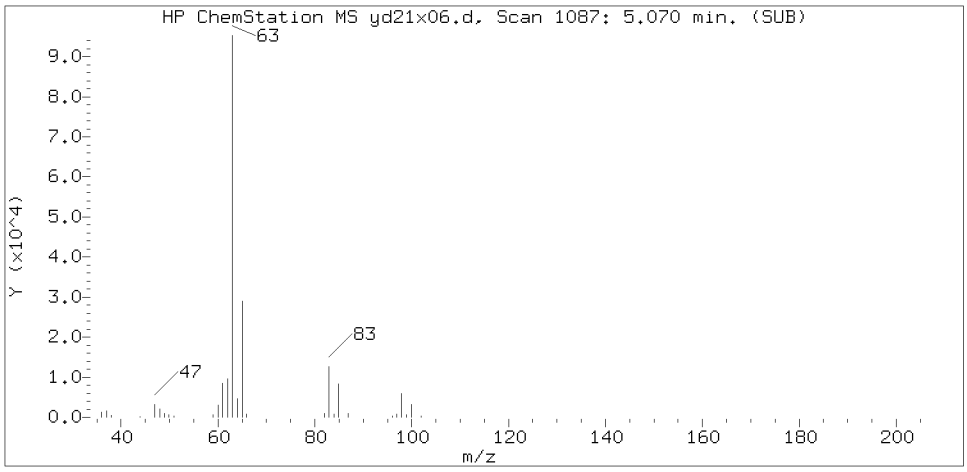
Sample Name: W1909 Lab Sample ID: 1202306

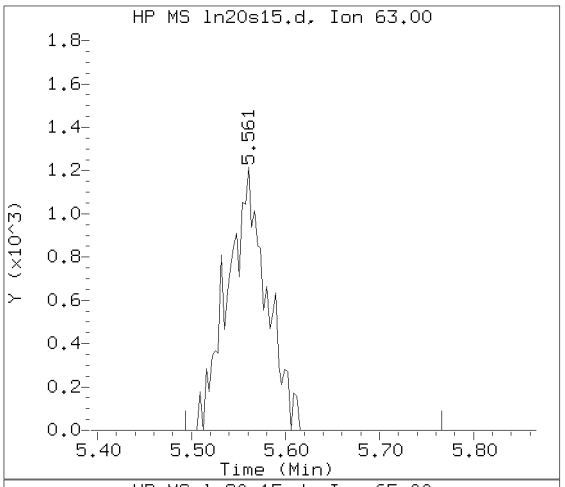
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.496	65	147376	250.000
36) 1,1-Dichloroethane	(2)	5.561	63	3478	0.476
52)$Dibromofluoromethane	(2)	7.081	113	199593	47.760
53) 1,1,1-Trichloroethane	(2)	7.091	97	9118M	1.528
57)$1,2-Dichloroethane-d4	(2)	7.528	102	53328	50.070
66)*Fluorobenzene	(2)	7.962	96	854788	50.000
83)$Toluene-d8	(3)	9.933	98	871683	48.117
100)*Chlorobenzene-d5	(3)	11.358	117	692345	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	329229	47.995
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	370267	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

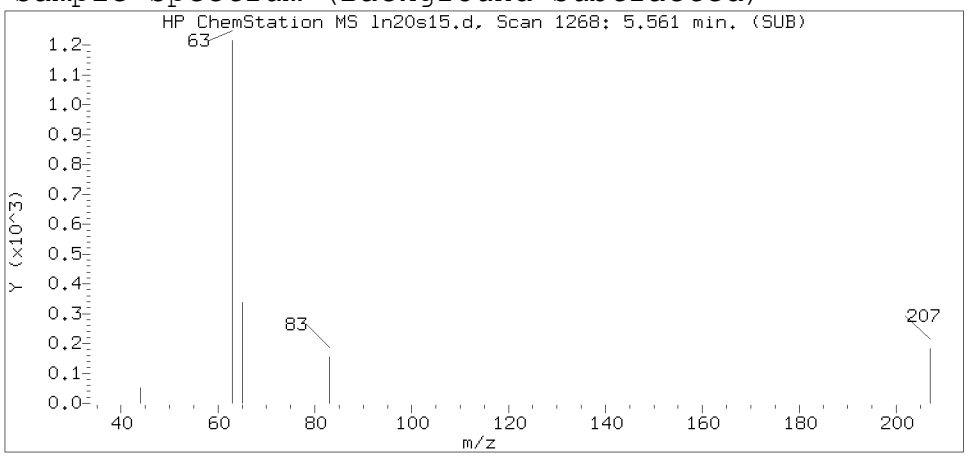
Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

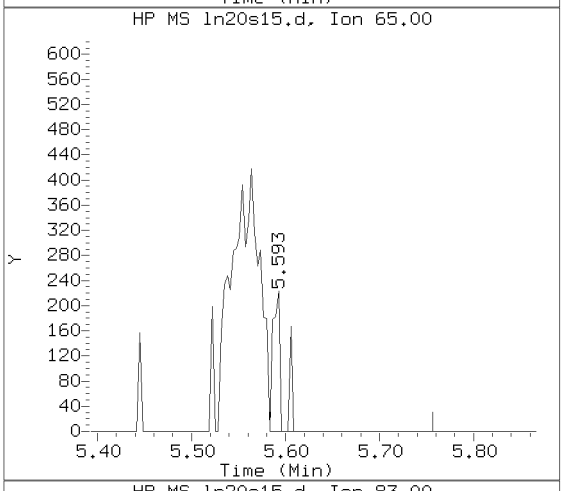
Reference Standard Spectrum for 1,1-Dichloroethane



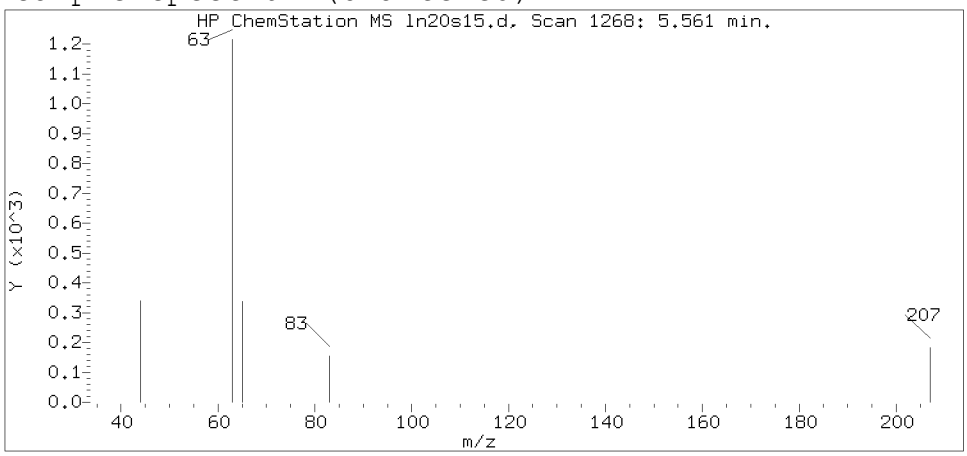


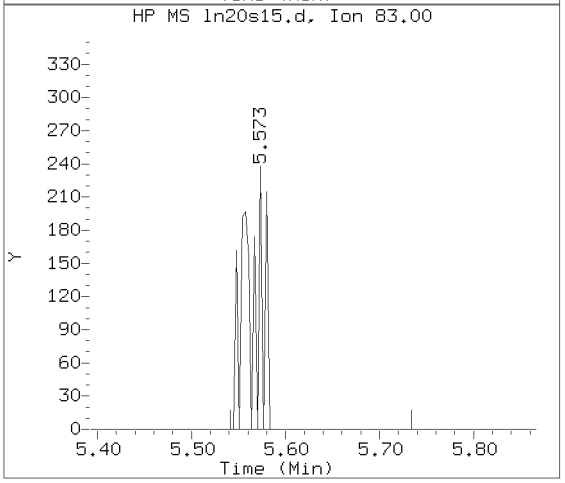
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov20a.b/ln20s15.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 15:10 Analyst ID: KKM02078

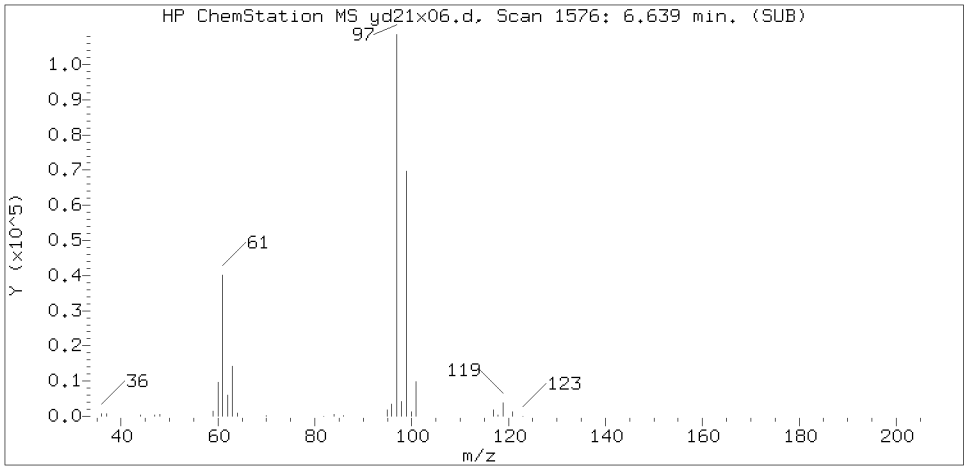
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:14 dvv10203

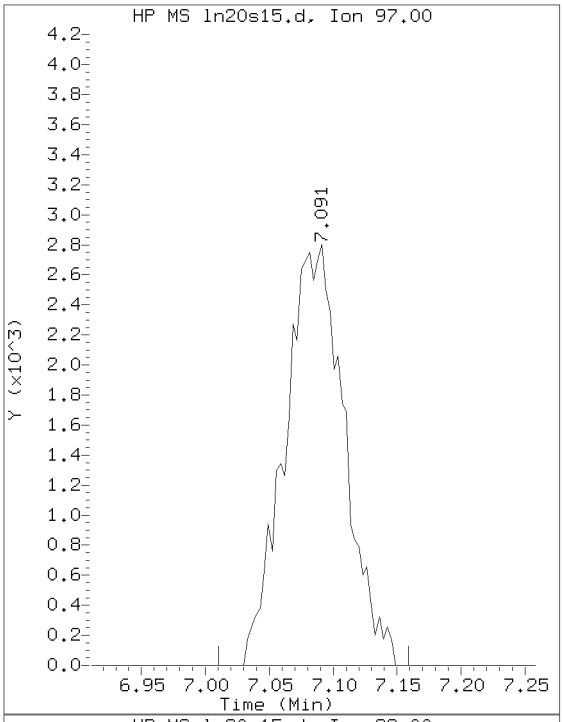
Sample Name: W1909 Lab Sample ID: 1202306

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 1268
Retention Time (minutes): 5.561
Relative Retention Time :-0.00093
Quant Ion : 63.00
Area (flag) : 3478
On-Column Amount (ng) : 0.4756

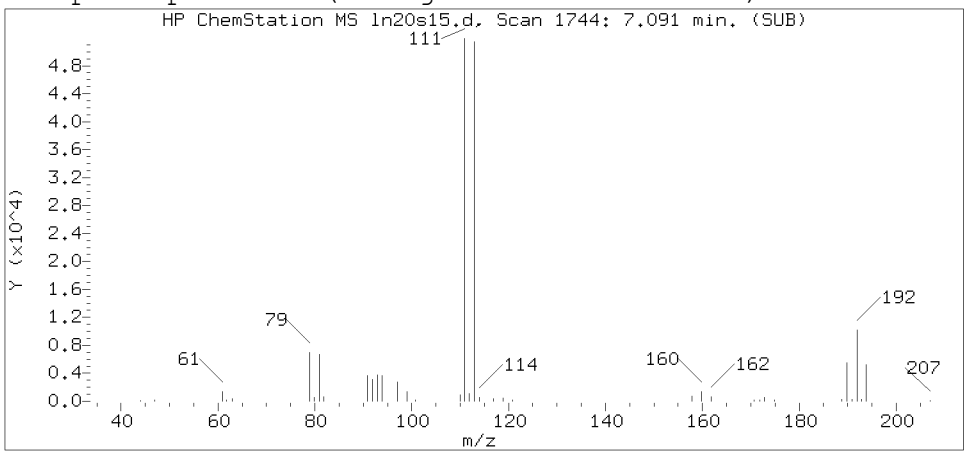
Digitally signed by Don V. Viray on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

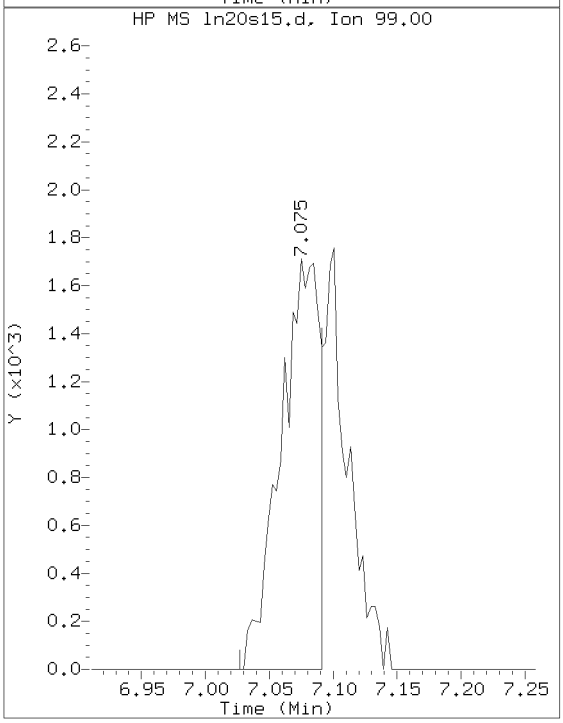
Reference Standard Spectrum for 1,1,1-Trichloroethane



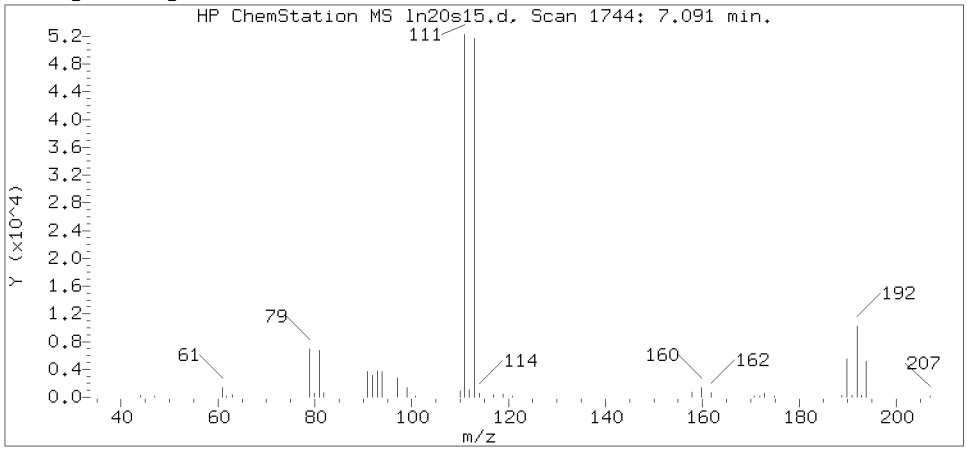


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov20a.b/ln20s15.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 15:10 Analyst ID: KKM02078

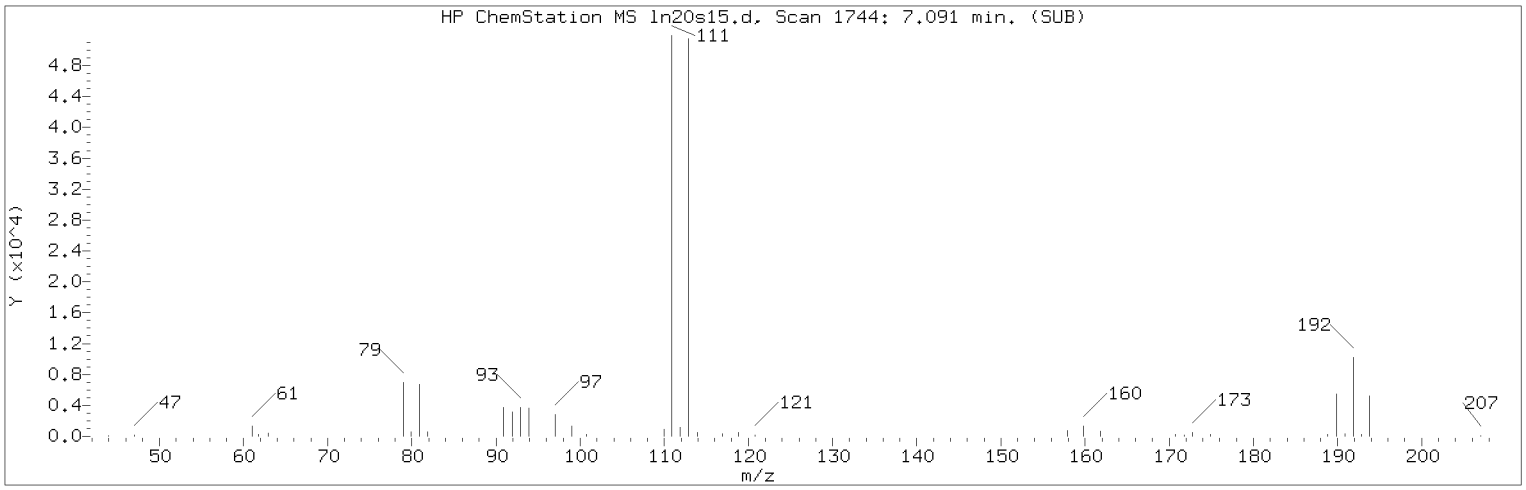
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:14 dvv10203

Sample Name: W1909 Lab Sample ID: 1202306

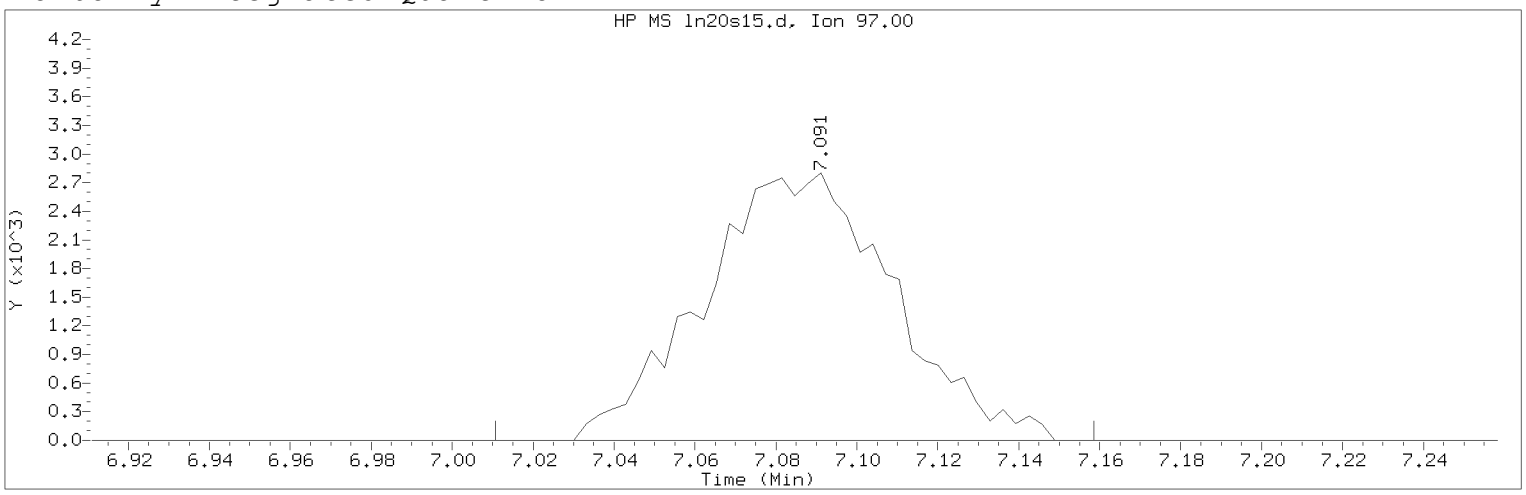
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 1744
Retention Time (minutes): 7.091
Relative Retention Time :-0.00045
Quant Ion : 97.00
Area (flag) : 9118M
On-Column Amount (ng) : 1.5276

Digitally signed by Don V. Viray on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s15.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 15:10 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:14 dvv10203

Sample Name: W1909 Lab Sample ID: 1202306

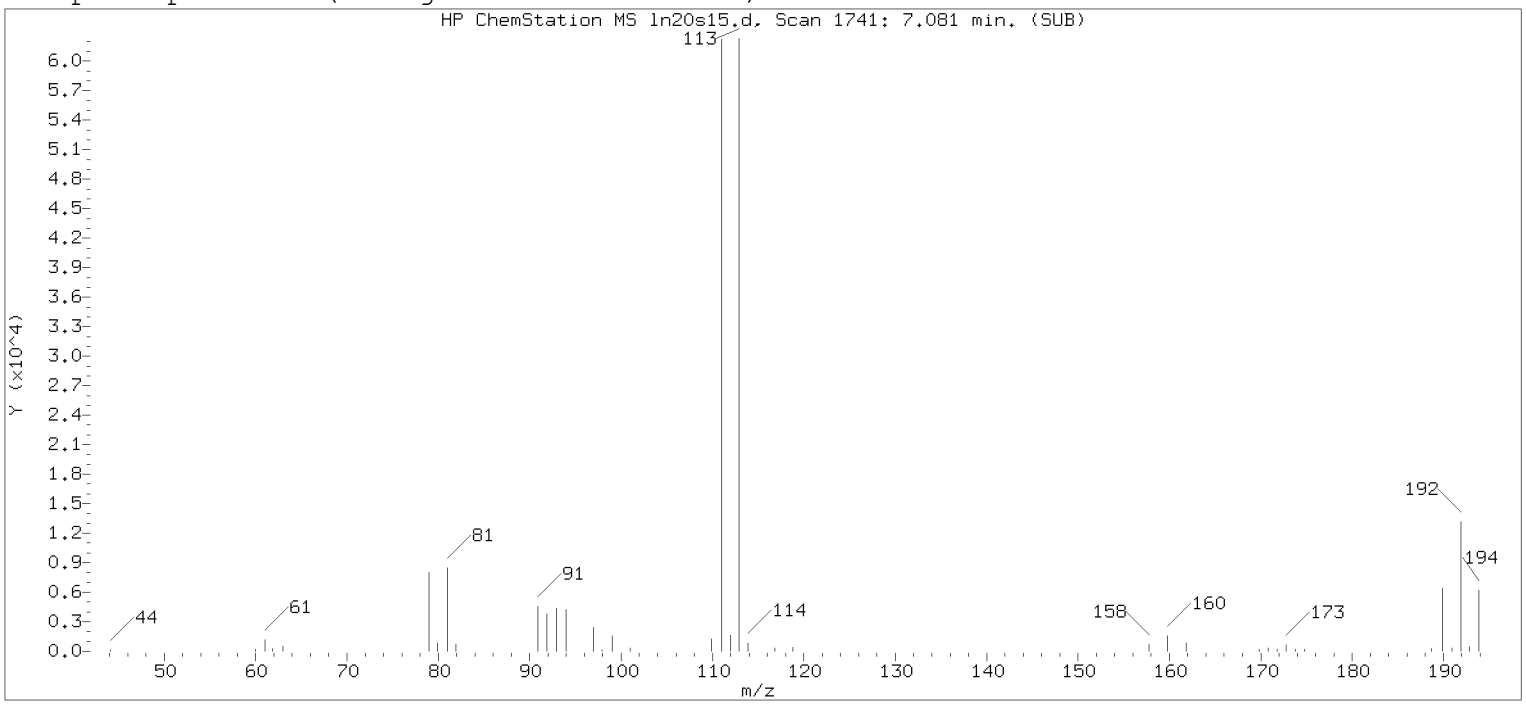
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 1744
Retention Time (minutes): 7.091
Quant Ion : 97.00
Area (flag) : 9118M
On-Column Amount (ng) : 1.5276
Integration start scan : 1718 Integration stop scan: 1764
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

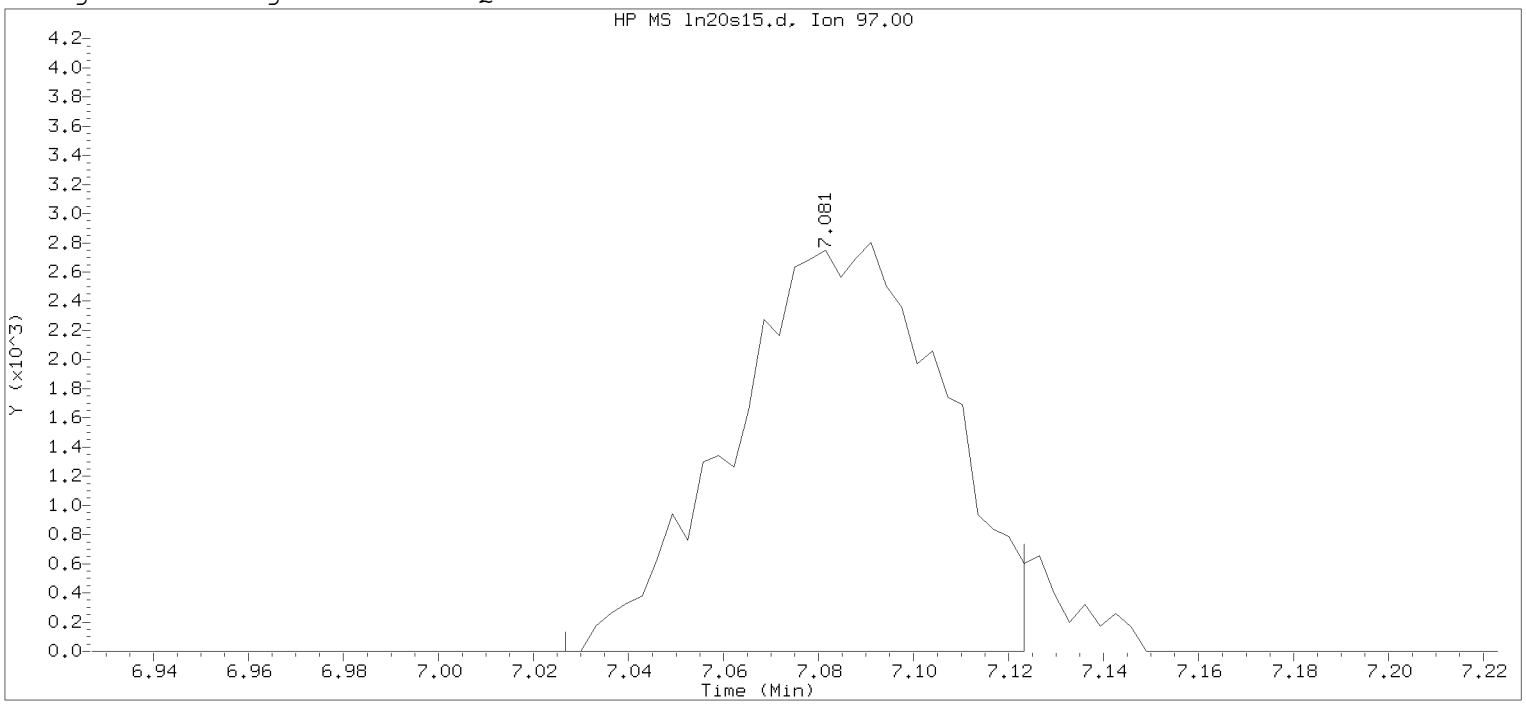
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:53.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s15.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 15:10 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 15:28 Automation

Sample Name: W1909 Lab Sample ID: 1202306

Compound Number	: 53		
Compound Name	: 1,1,1-Trichloroethane		
Scan Number	: 1741		
Retention Time (minutes)	: 7.081		
Quant Ion	: 97.00		
Area	: 8640		
On-column Amount (ng)	: 1.4476		
Integration start scan	: 1723	Integration stop scan:	1753
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: DVIRAY

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
W1910

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202307

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov20a.b/ln20s16.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L		Q
75-01-4	Vinyl Chloride		1	U
75-35-4	1,1-Dichloroethene		0.5	J
67-64-1	Acetone		3	J
76-13-1	Freon 113		10	U
75-15-0	Carbon Disulfide		5	U
75-09-2	Methylene Chloride		1	U
156-60-5	trans-1,2-Dichloroethene		0.2	J
75-34-3	1,1-Dichloroethane		0.8	J
156-59-2	cis-1,2-Dichloroethene		0.8	J
78-93-3	2-Butanone		10	U
67-66-3	Chloroform		1	U
71-55-6	1,1,1-Trichloroethane		6	
71-43-2	Benzene		1	U
107-06-2	1,2-Dichloroethane		1	U
79-01-6	Trichloroethene		22	
123-91-1	1,4-Dioxane		250	U
108-88-3	Toluene		1	U
127-18-4	Tetrachloroethene		1	U
100-41-4	Ethylbenzene		1	U
1330-20-7	Xylene (Total)		6	U
95-50-1	1,2-Dichlorobenzene		5	U
91-20-3	Naphthalene		5	U

FORM I VOA

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W1910 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1202307

Data file: /chem/HP09915.i/19nov20a.b/ln20s16.d Injection date and time: **20-NOV-2019 15:32**
Data file Sample Info. Line: W1910;1202307;1;0;;JCW19;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 21:16 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.500	(-0.007)	938	65	154257M	(1)	250.00	
66) Fluorobenzene	7.962	(-0.003)	2015	96	845869	(-5)	50.00	
100) Chlorobenzene-d5	11.361	(0.000)	3072	117	695063	(-4)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	370586	(-5)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.078	(0.000)	113	199984	48.359	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(0.000)	102	51904	49.247	98%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	869105	47.788	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	329878	47.902	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	3.763	(-0.000)	96	1908	0.532	0.53		J	0.2	1
18) Acetone	(1)	3.808	(-0.000)	58	1564M	3.015	3.01		J	0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)	4.895	(-0.000)	96	950	0.229	0.23		J	0.2	1
36) 1,1-Dichloroethane	(2)	5.570	(-0.002)	63	5672	0.784	0.78		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	6.397	(-0.001)	96	3898	0.837	0.84		J	0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	7.085	(0.000)	97	38093	6.449	6.45			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.435	(0.000)	95	93797	21.651	21.65			0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

M = Compound was manually integrated.

Digitally signed by Don V. Viray on 11/20/2019 at 21:19. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov20a.b/ln20s16.d Injection date and time: **20-NOV-2019 15:32**
Data file Sample Info. Line: W1910;1202307;1;0;;JCW19;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 21:16 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

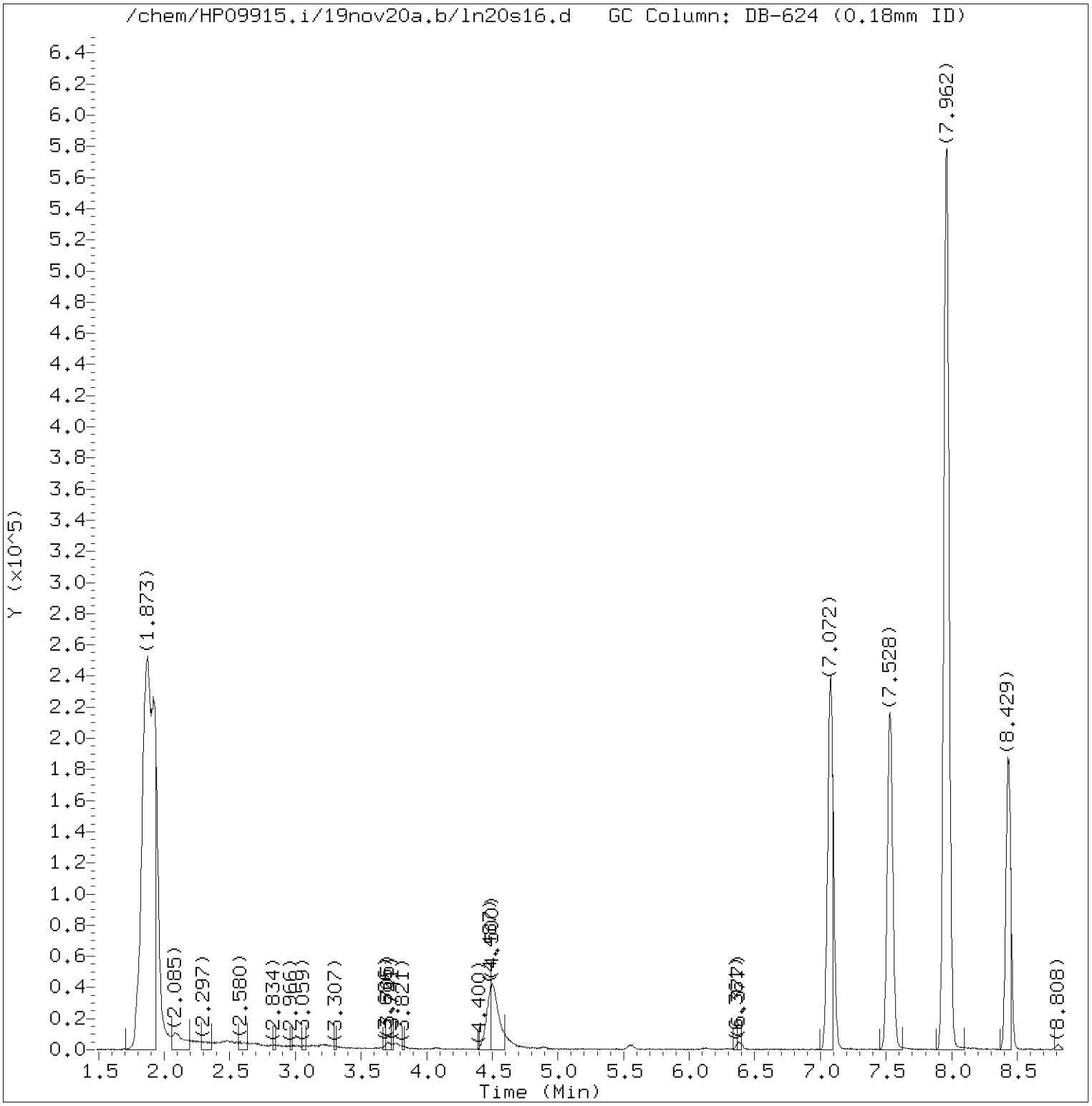
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 11/20/2019 at 21:19. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

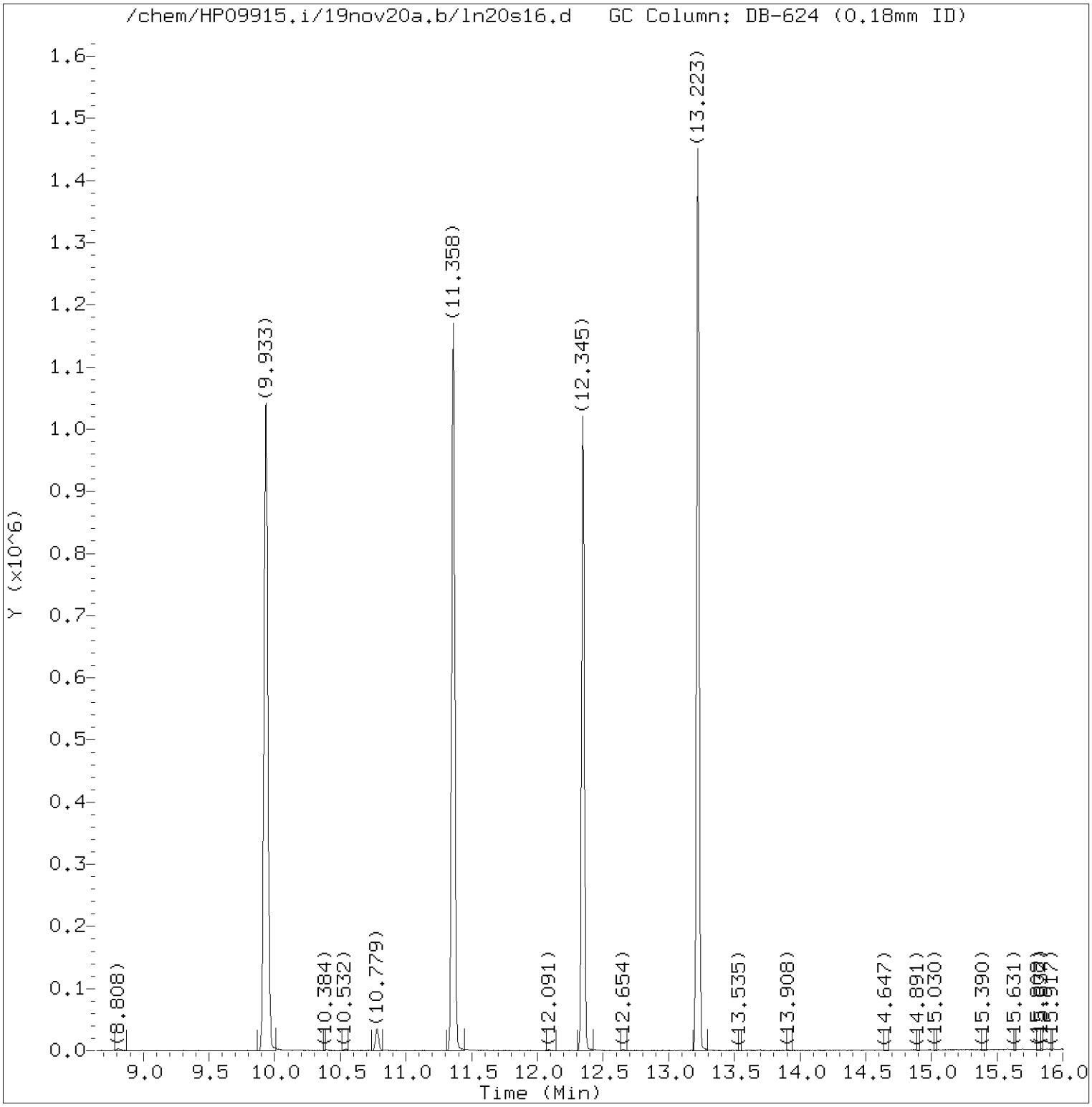
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s16.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 15:32 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:16 dvv10203

Sample Name: W1910 Lab Sample ID: 1202307

Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s16.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 15:32 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:16 dvv10203

Sample Name: W1910 Lab Sample ID: 1202307

Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s16.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 15:32 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:16 dvv10203

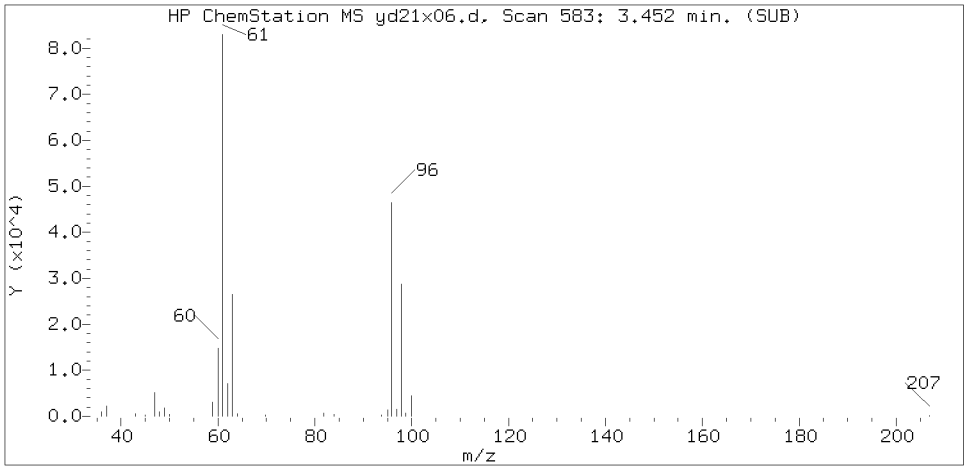
Sample Name: W1910 Lab Sample ID: 1202307

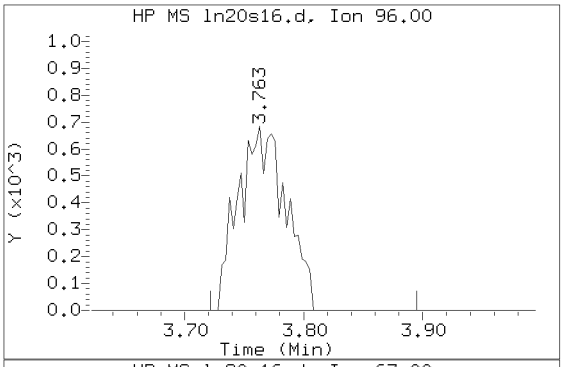
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	3.763	96	1908	0.532
18) Acetone	(1)	3.808	58	1564M	3.015
29)*t-Butyl alcohol-d10	(1)	4.500	65	154257M	250.000
32) trans-1,2-Dichloroethene	(2)	4.895	96	950	0.229
36) 1,1-Dichloroethane	(2)	5.570	63	5672	0.784
42) cis-1,2-Dichloroethene	(2)	6.397	96	3898	0.837
52)$Dibromofluoromethane	(2)	7.078	113	199984	48.359
53) 1,1,1-Trichloroethane	(2)	7.085	97	38093	6.449
57)$1,2-Dichloroethane-d4	(2)	7.528	102	51904	49.247
66)*Fluorobenzene	(2)	7.962	96	845869	50.000
71) Trichloroethene	(2)	8.435	95	93797	21.651
83)$Toluene-d8	(3)	9.933	98	869105	47.788
100)*Chlorobenzene-d5	(3)	11.361	117	695063	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	329878	47.902
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	370586	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

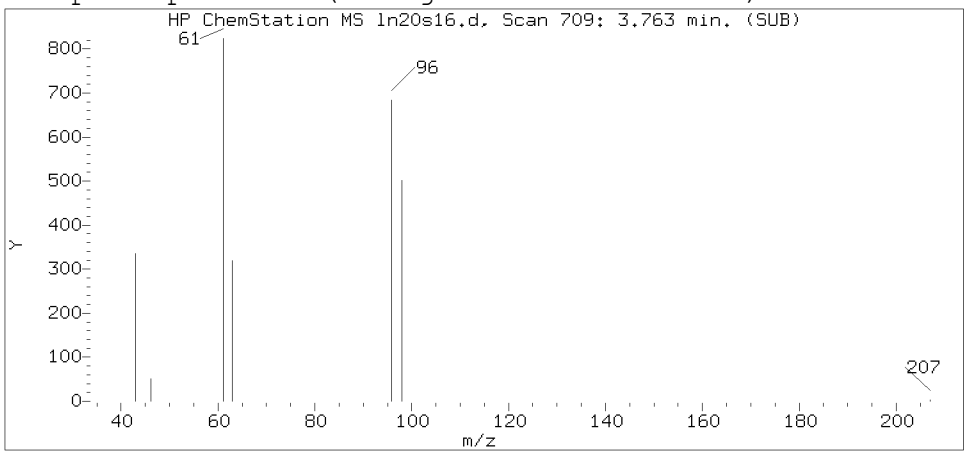
Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

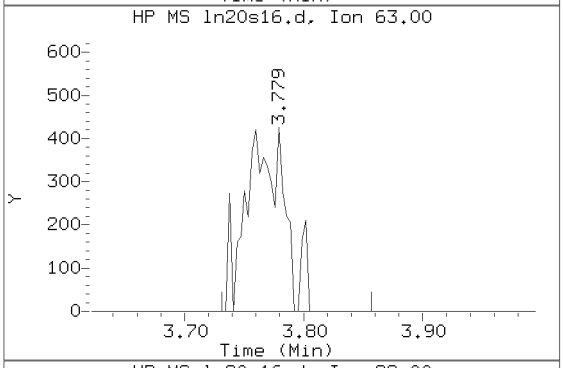
Reference Standard Spectrum for 1,1-Dichloroethene

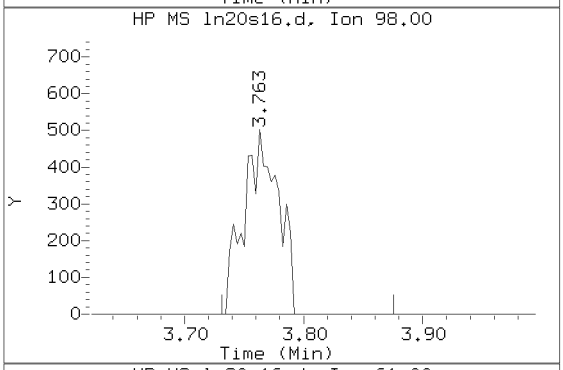




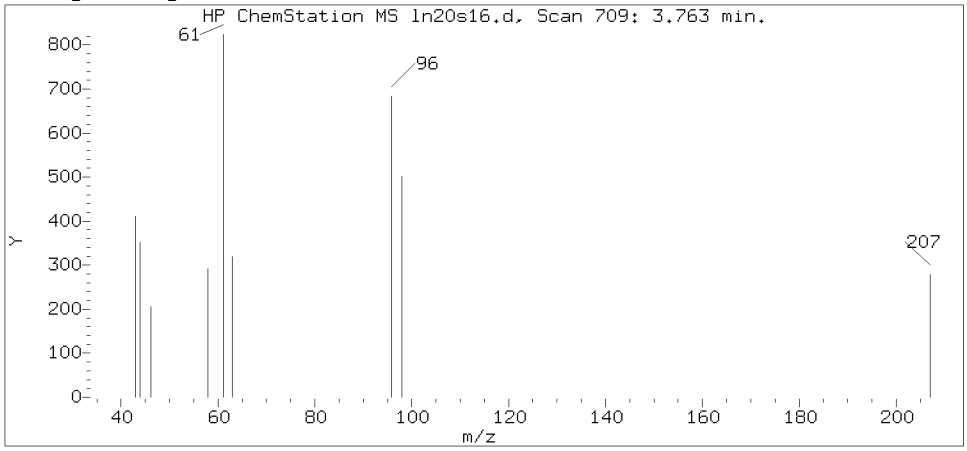
Sample Spectrum (Background Subtracted)

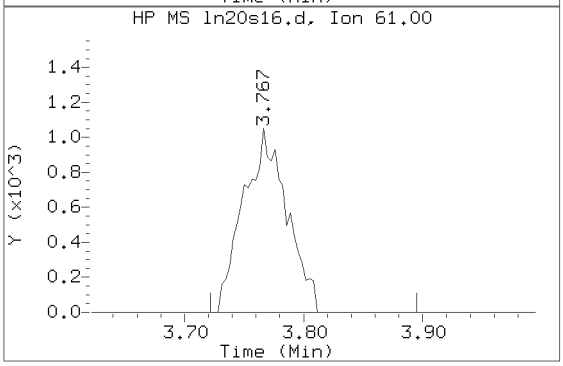






Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov20a.b/ln20s16.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 15:32 Analyst ID: KKM02078

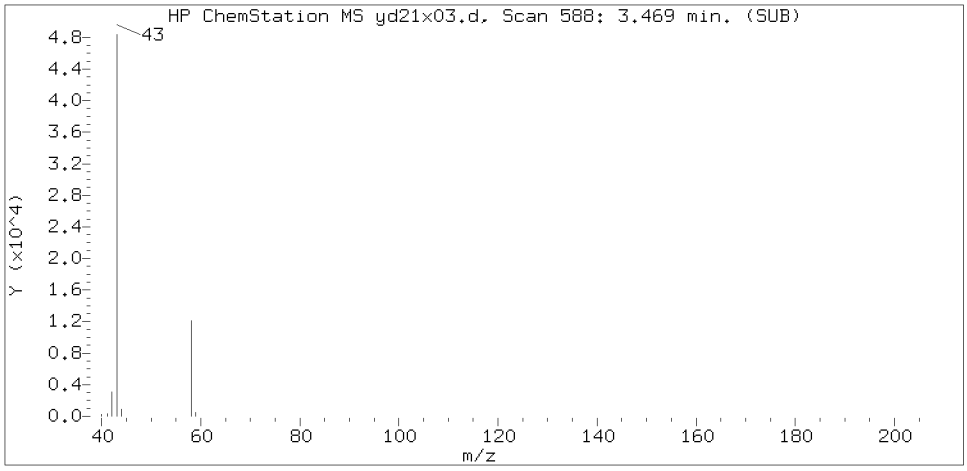
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:16 dvv10203

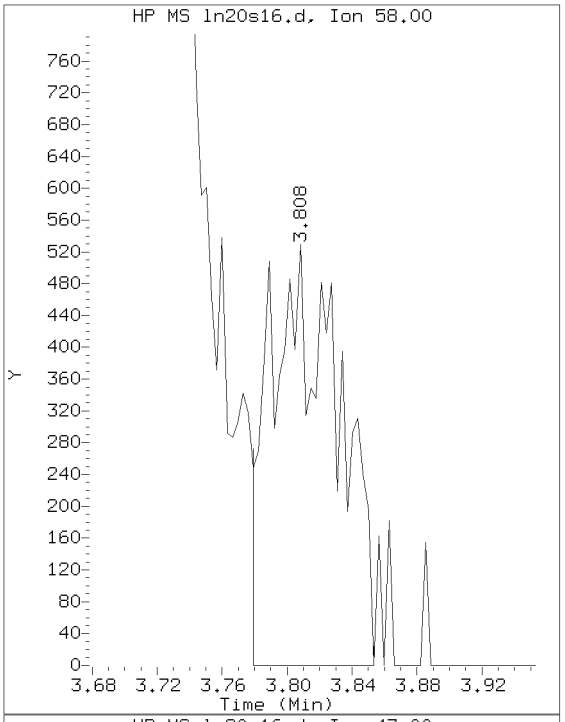
Sample Name: W1910 Lab Sample ID: 1202307

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 709
Retention Time (minutes): 3.763
Relative Retention Time :-0.00022
Quant Ion : 96.00
Area (flag) : 1908
On-Column Amount (ng) : 0.5321

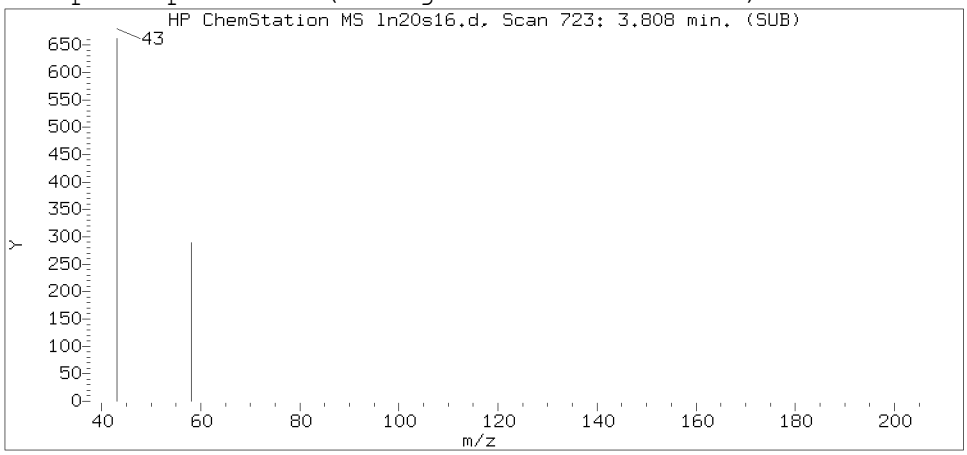
Digitally signed by Don V. Viray on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

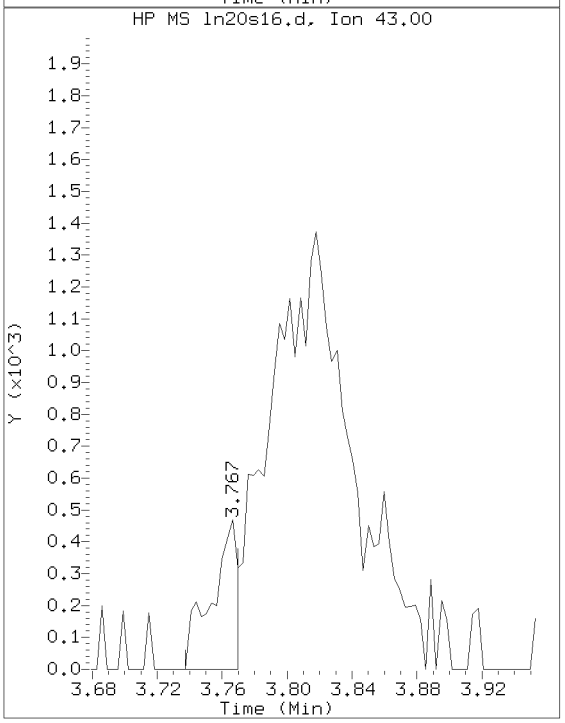
Reference Standard Spectrum for Acetone



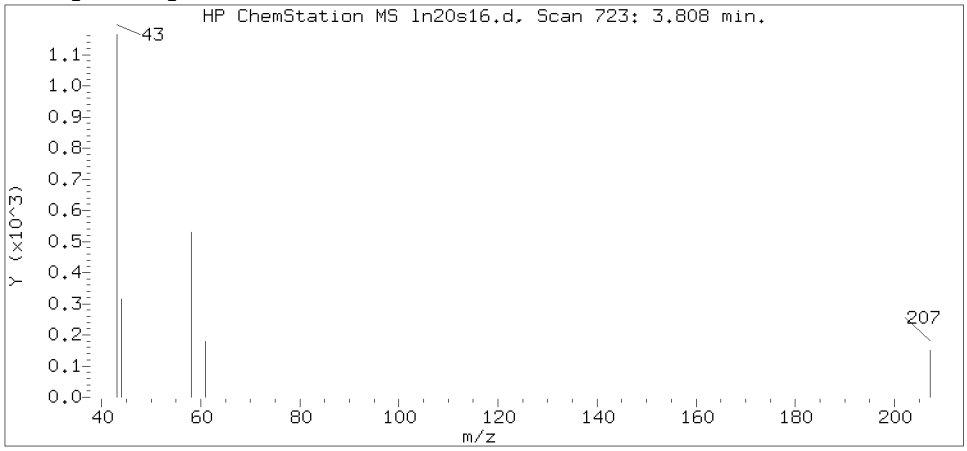


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov20a.b/ln20s16.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 15:32 Analyst ID: KKM02078

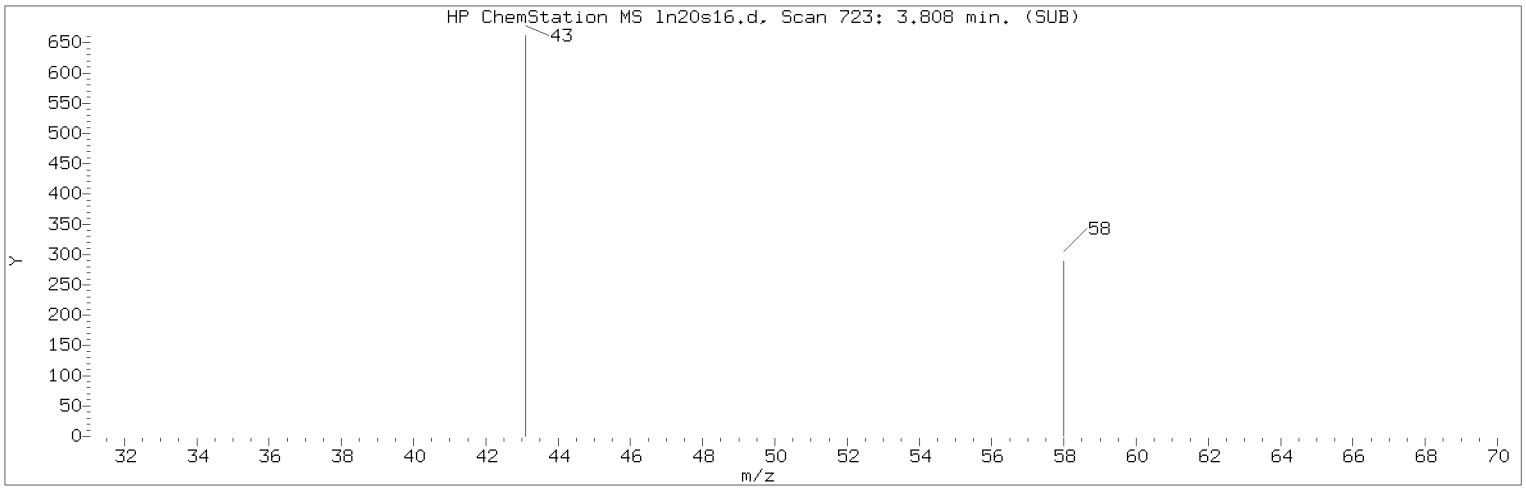
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:16 dvv10203

Sample Name: W1910 Lab Sample ID: 1202307

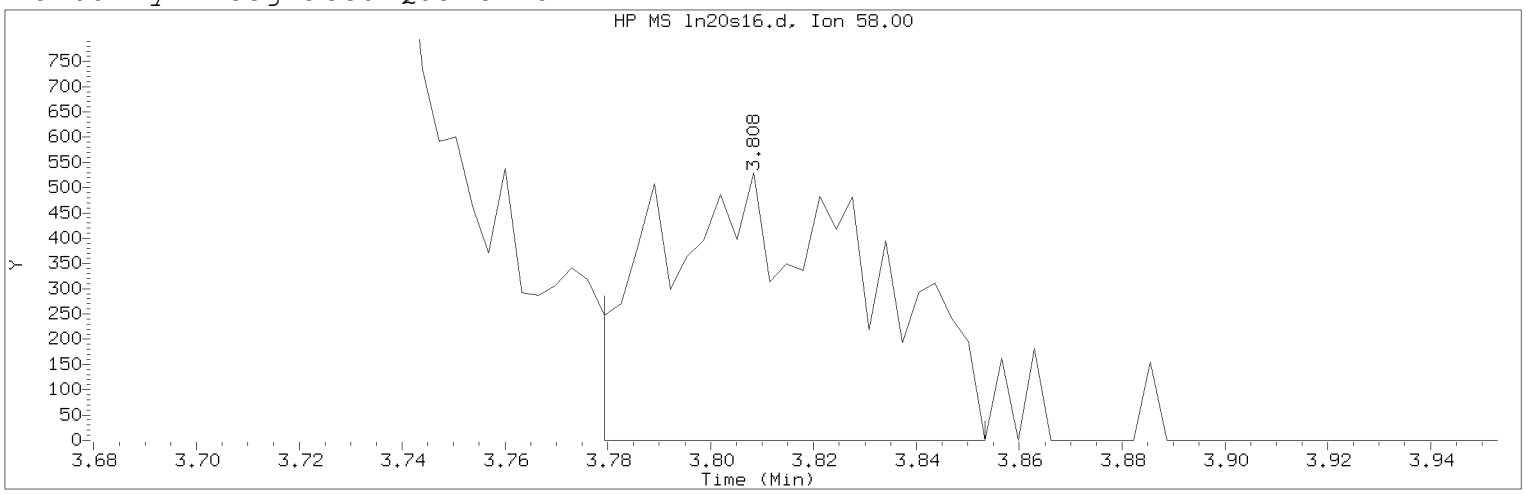
Compound Number	: 18
Compound Name	: Acetone
Scan Number	: 723
Retention Time (minutes)	: 3.808
Relative Retention Time	:-0.00023
Quant Ion	: 58.00
Area (flag)	: 1564M
On-Column Amount (ng)	: 3.0147

Digitally signed by Don V. Viray on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s16.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 15:32 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:16 dvv10203

Sample Name: W1910 Lab Sample ID: 1202307

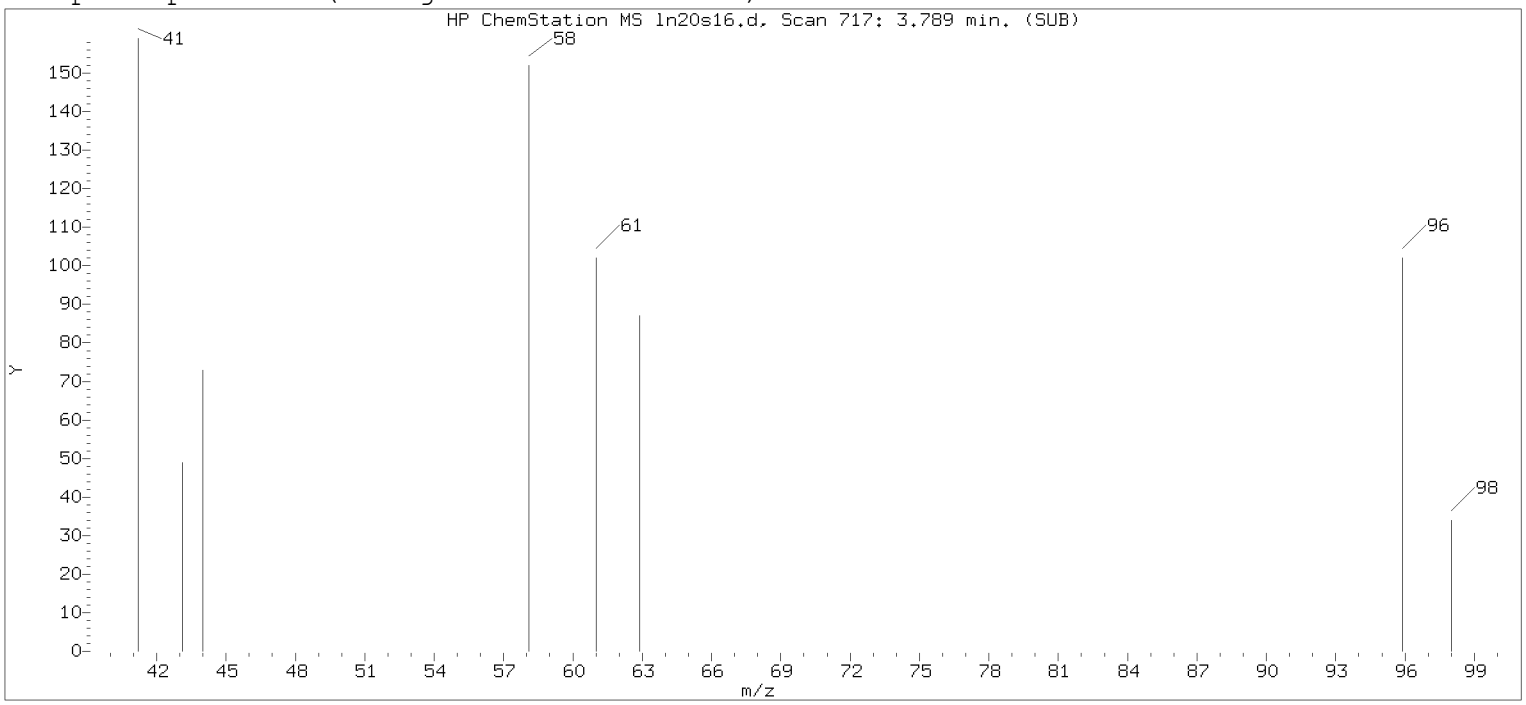
Compound Number : 18
Compound Name : Acetone
Scan Number : 723
Retention Time (minutes): 3.808
Quant Ion : 58.00
Area (flag) : 1564M
On-Column Amount (ng) : 3.0147
Integration start scan : 713 Integration stop scan: 736
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

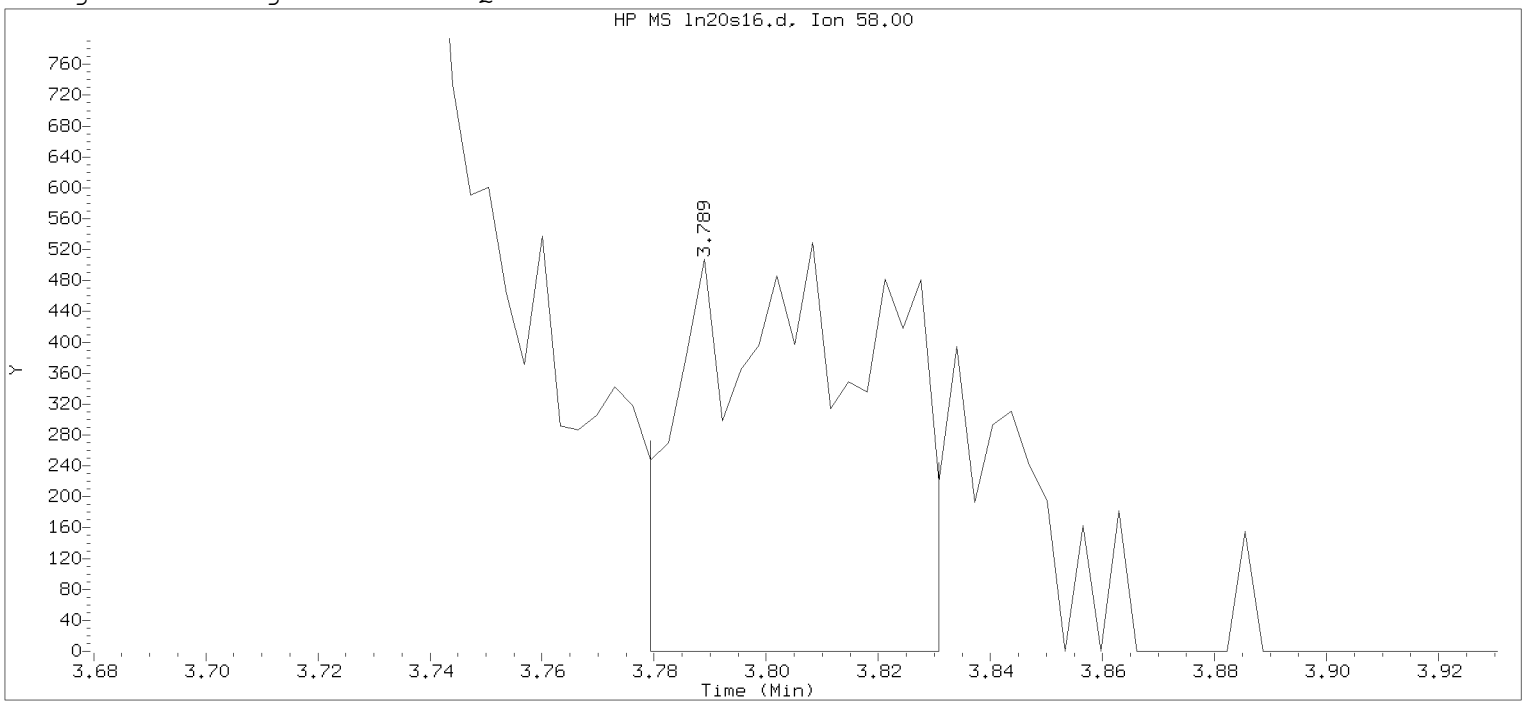
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:53.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s16.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 15:32 Analyst ID: KKM02078

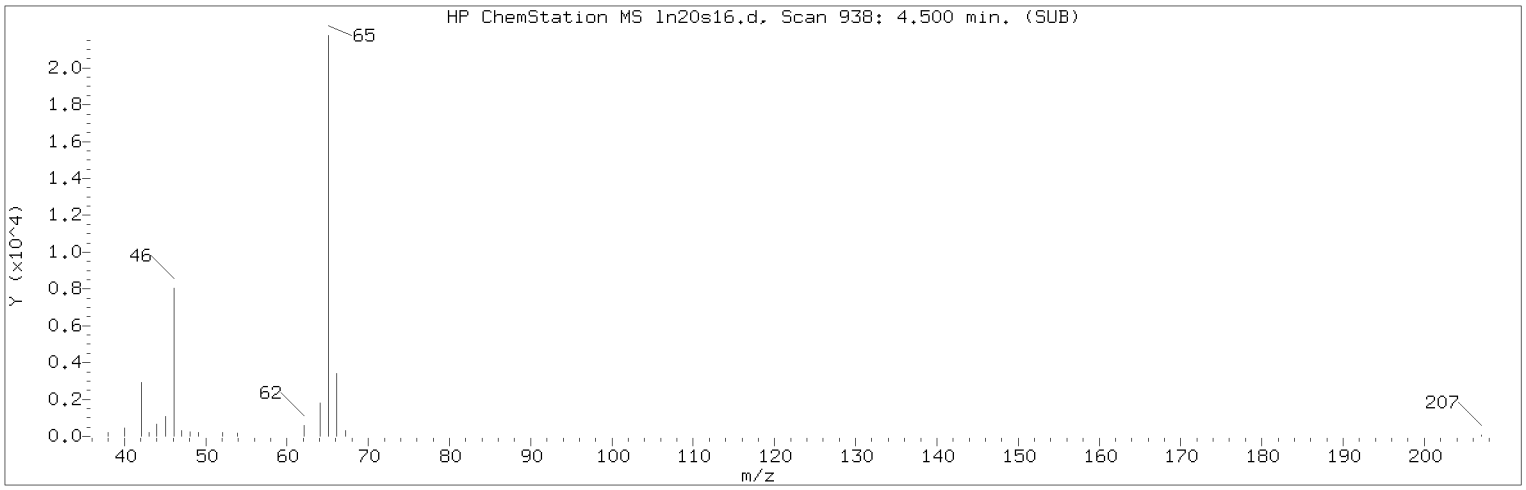
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 15:50 Automation

Sample Name: W1910 Lab Sample ID: 1202307

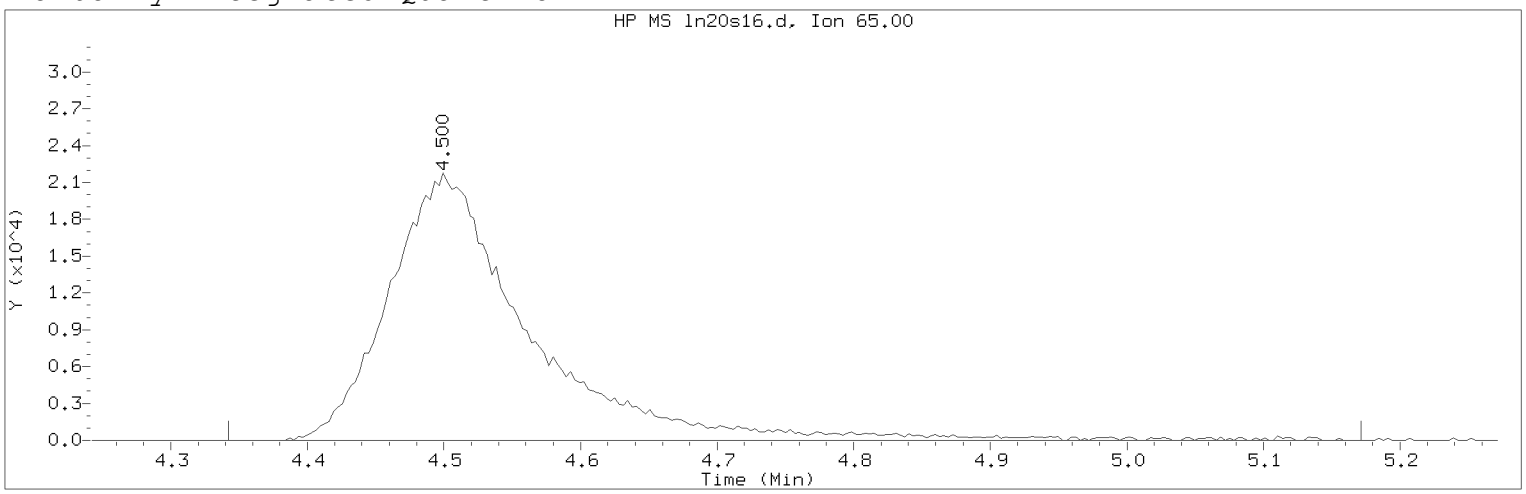
Compound Number	: 18		
Compound Name	: Acetone		
Scan Number	: 717		
Retention Time (minutes)	: 3.789		
Quant Ion	: 58.00		
Area	: 1205		
On-column Amount (ng)	: 2.3747		
Integration start scan	: 713	Integration stop scan:	729
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 11/20/2019 at 21:19.
Target 3.5 esignature user id: DVIRAY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s16.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 15:32 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:16 dvv10203

Sample Name: W1910 Lab Sample ID: 1202307

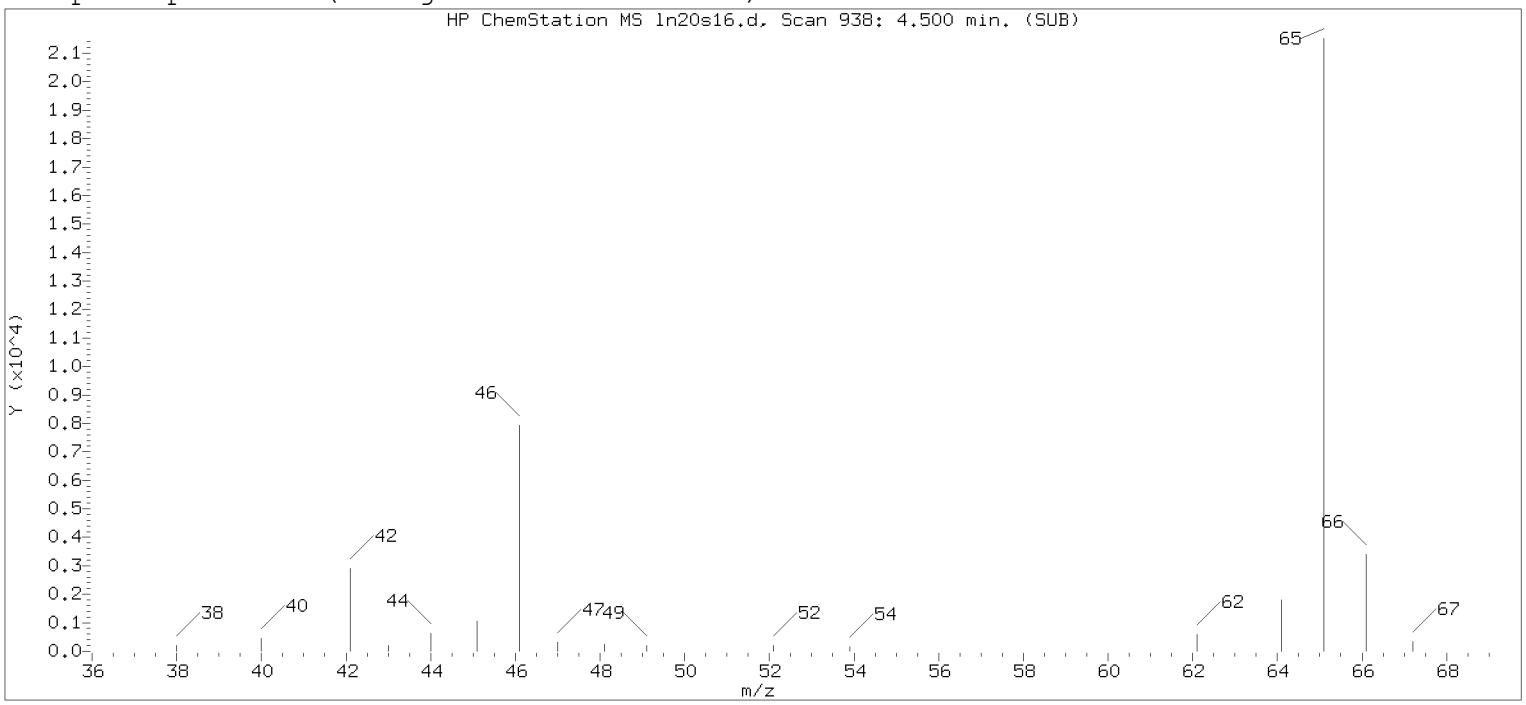
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 938
Retention Time (minutes): 4.500
Quant Ion : 65.00
Area (flag) : 154257M
On-Column Amount (ng) : 250.0000
Integration start scan : 888 Integration stop scan: 1146
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

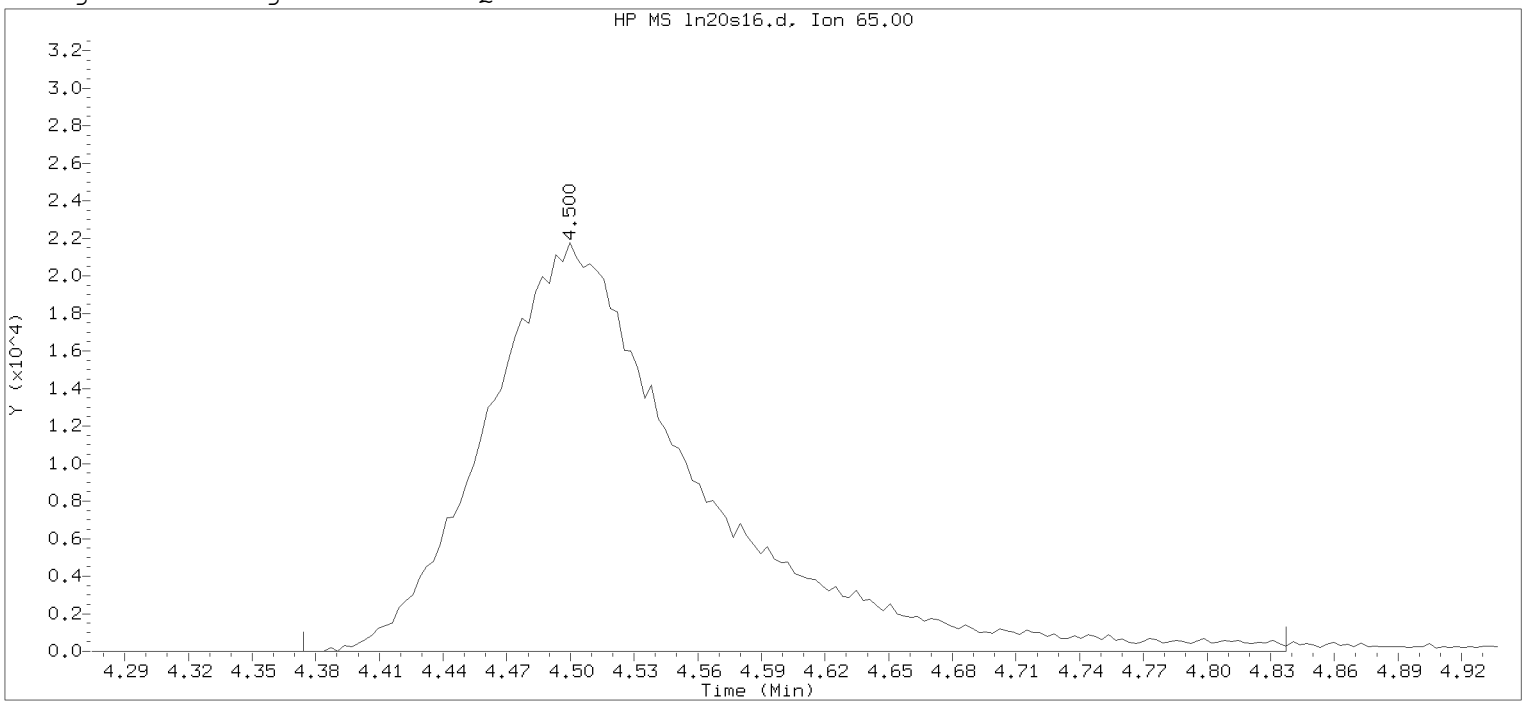
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:53.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s16.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 15:32 Analyst ID: KKM02078

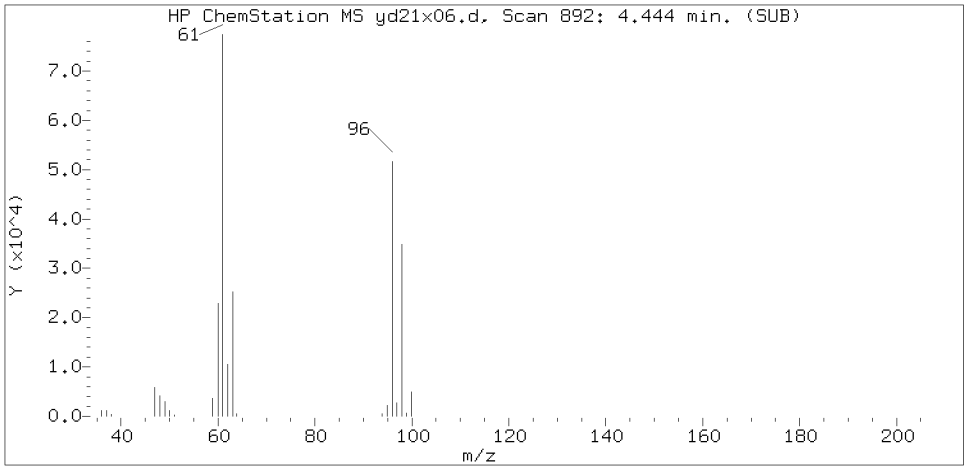
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 15:50 Automation

Sample Name: W1910 Lab Sample ID: 1202307

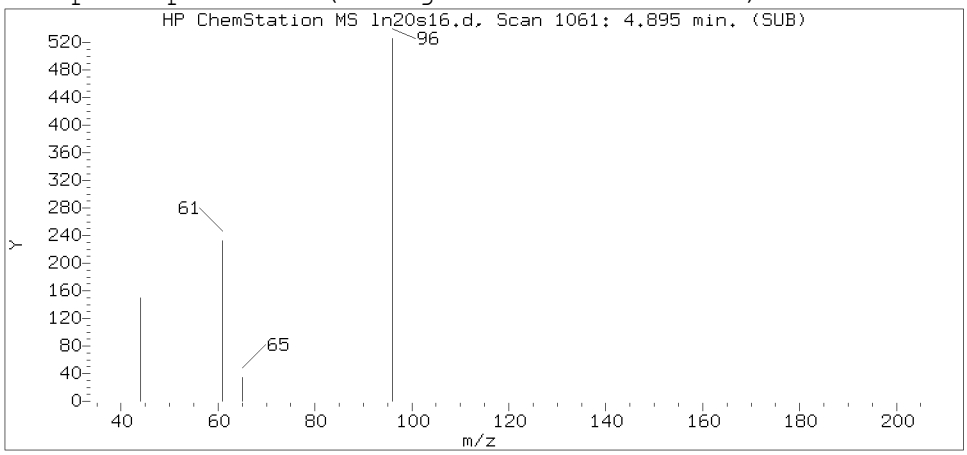
Compound Number	: 29		
Compound Name	: t-Butyl alcohol-d10		
Scan Number	: 938		
Retention Time (minutes)	: 4.500		
Quant Ion	: 65.00		
Area	: 150873		
On-column Amount (ng)	: 250.0000		
Integration start scan	: 898	Integration stop scan:	1042
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 11/20/2019 at 21:19.
Target 3.5 esignature user id: dviray

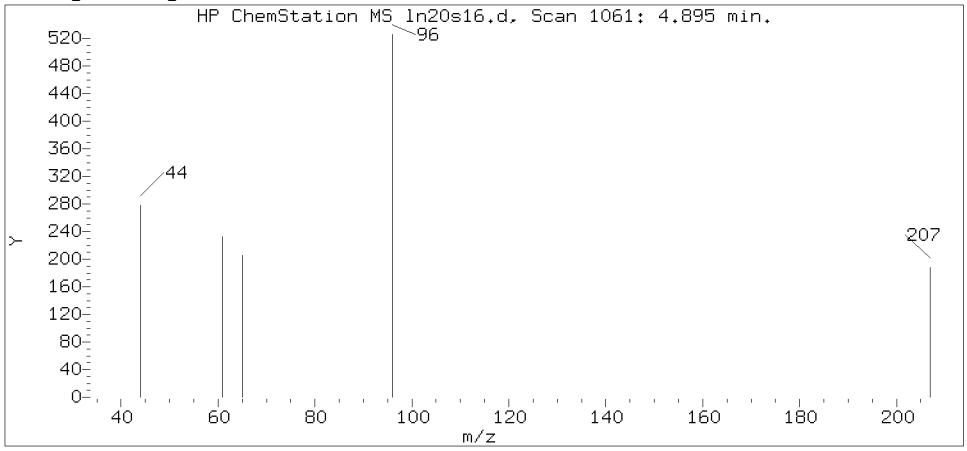
Reference Standard Spectrum for trans-1,2-Dichloroethene

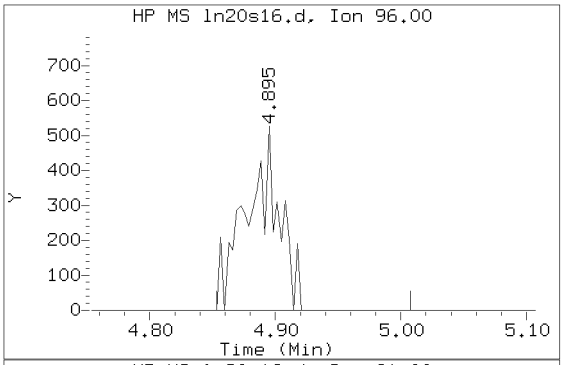


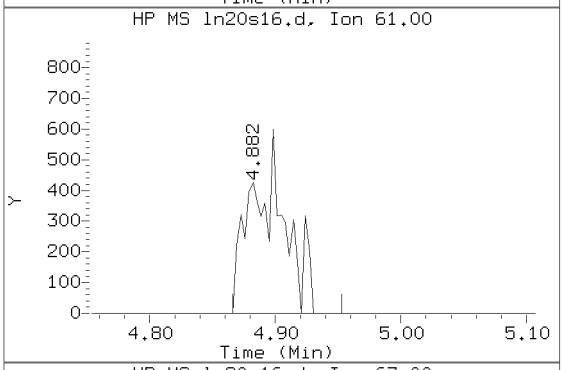
Sample Spectrum (Background Subtracted)

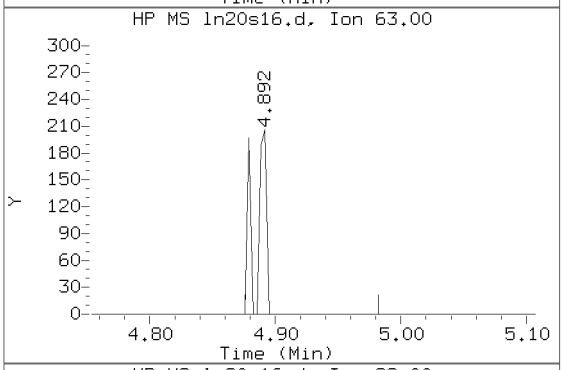


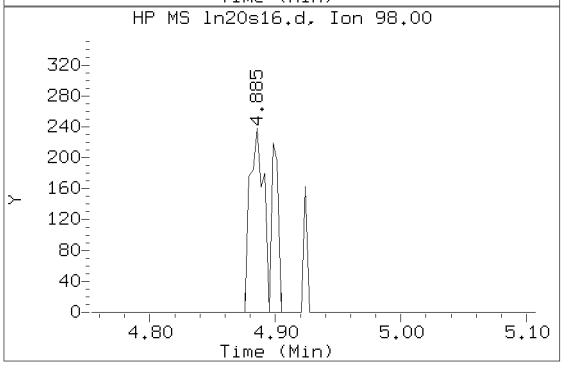
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov20a.b/ln20s16.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 15:32 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:16 dvv10203

Sample Name: W1910 Lab Sample ID: 1202307

Compound Number : 32
Compound Name : trans-1,2-Dichloroethene
Scan Number : 1061
Retention Time (minutes): 4.895
Relative Retention Time :-0.00097
Quant Ion : 96.00
Area (flag) : 950
On-Column Amount (ng) : 0.2290

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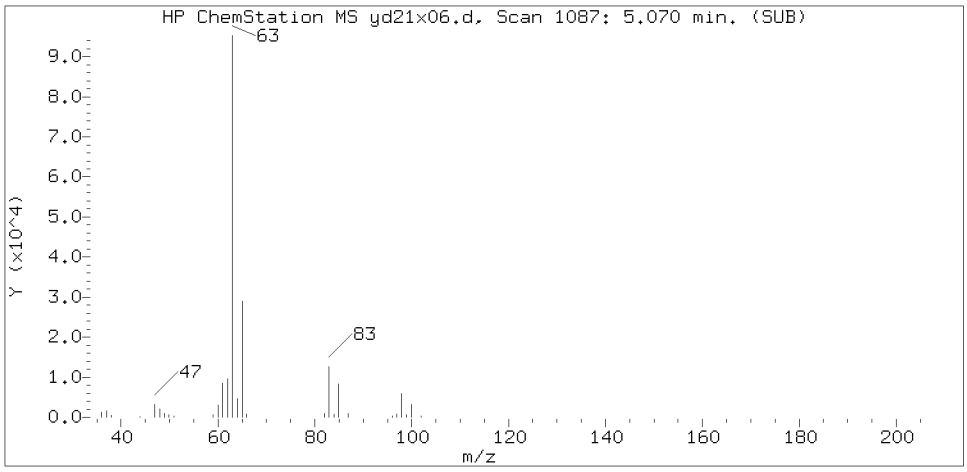
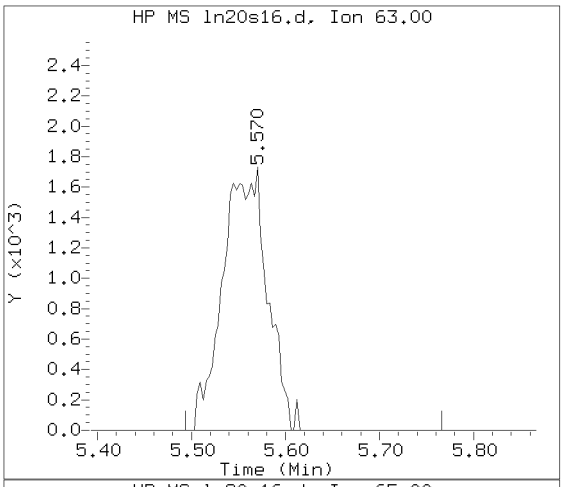
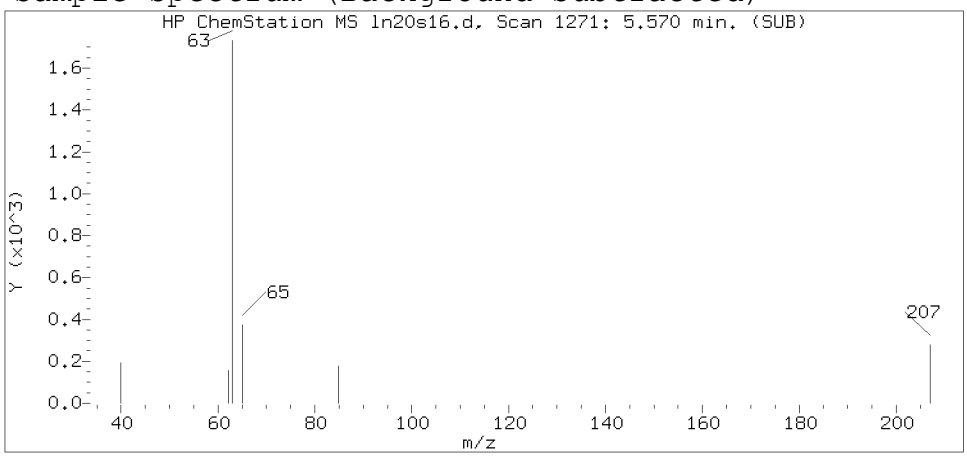
Target 3.5 esignature user ID: dvv10203

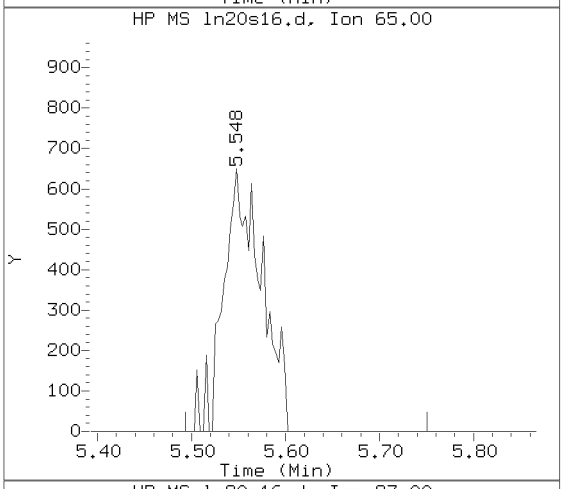
Reference Standard Spectrum for 1,1-Dichloroethane



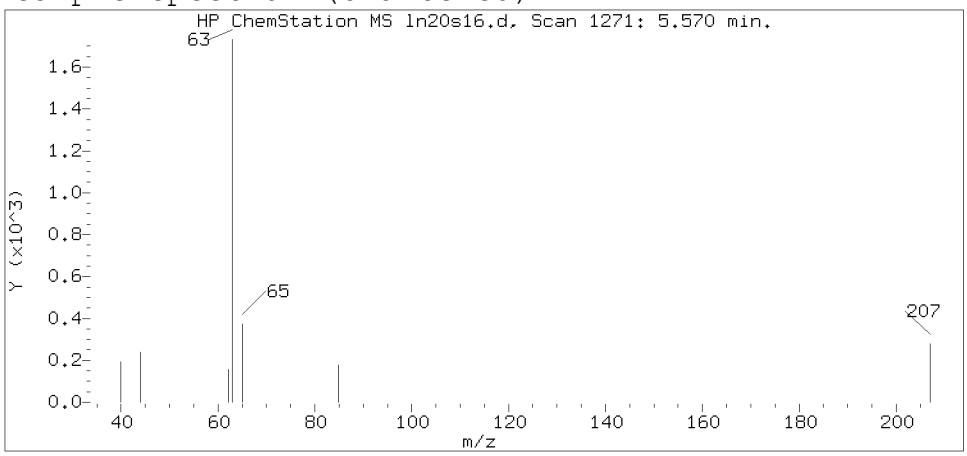


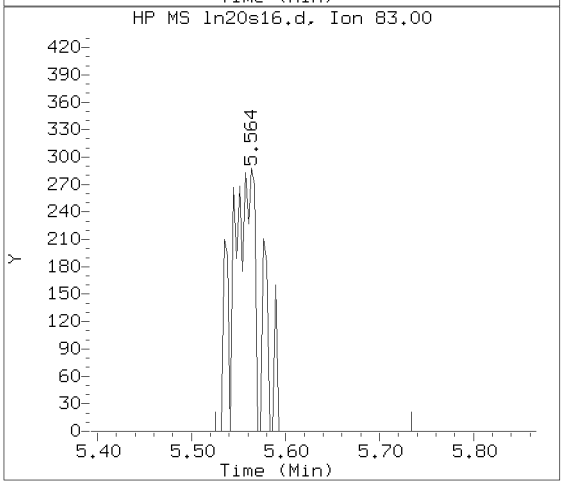
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov20a.b/ln20s16.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 15:32 Analyst ID: KKM02078

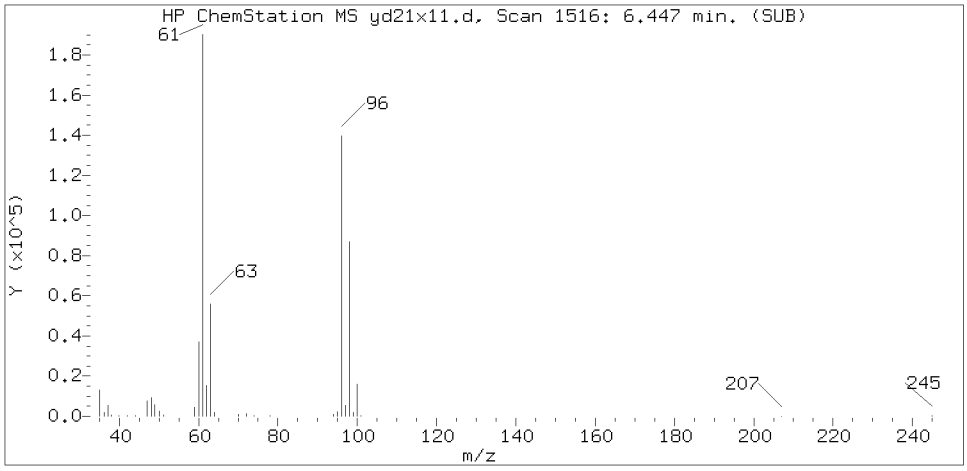
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:16 dvv10203

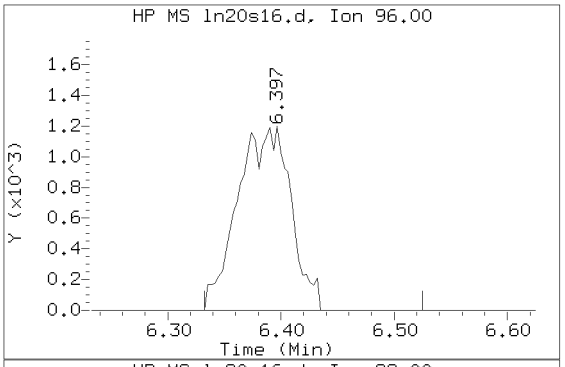
Sample Name: W1910 Lab Sample ID: 1202307

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 1271
Retention Time (minutes): 5.570
Relative Retention Time :-0.00215
Quant Ion : 63.00
Area (flag) : 5672
On-Column Amount (ng) : 0.7838

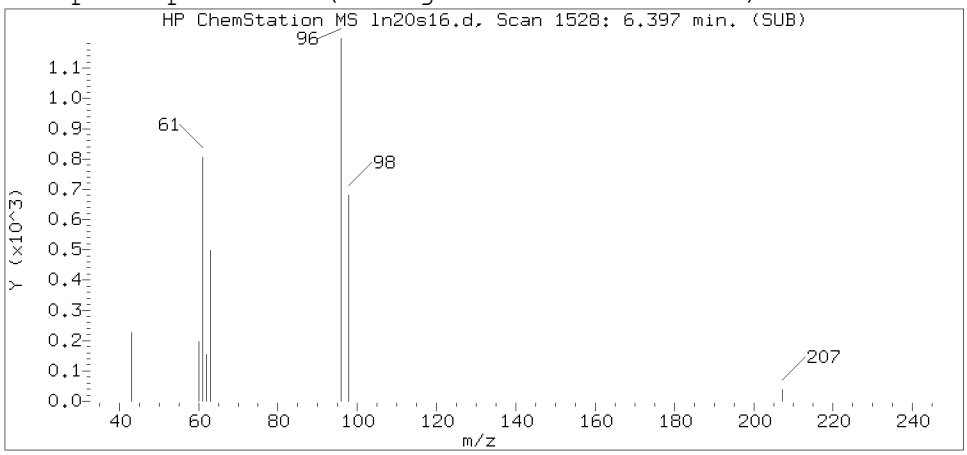
Digitally signed by Don V. Viray on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

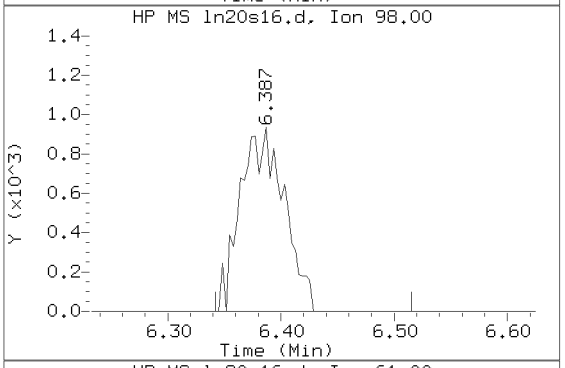
Reference Standard Spectrum for cis-1,2-Dichloroethene

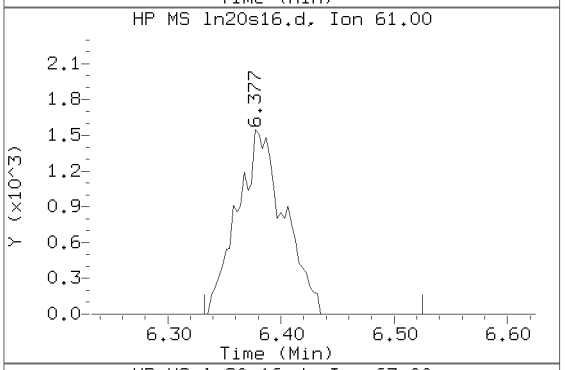




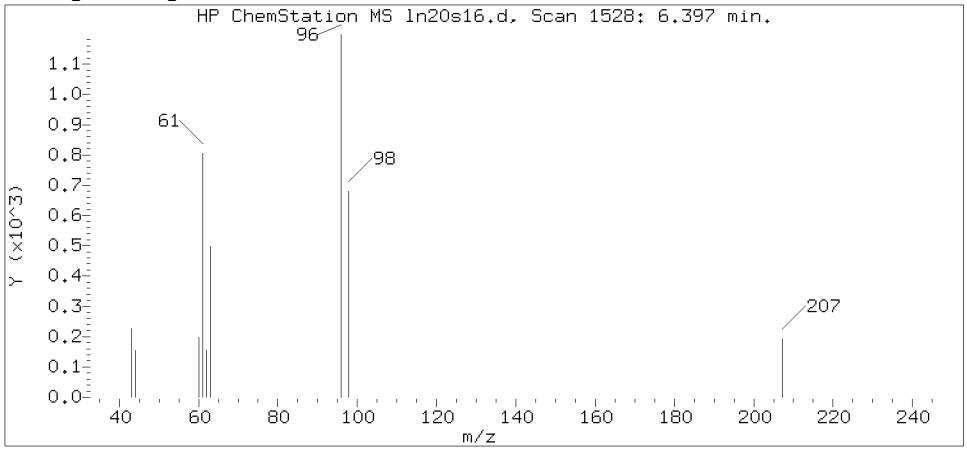
Sample Spectrum (Background Subtracted)

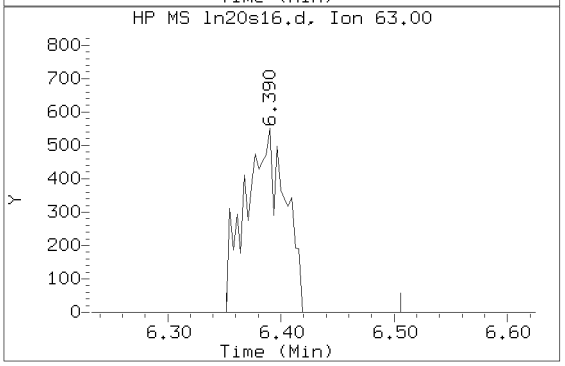






Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov20a.b/ln20s16.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 15:32 Analyst ID: KKM02078

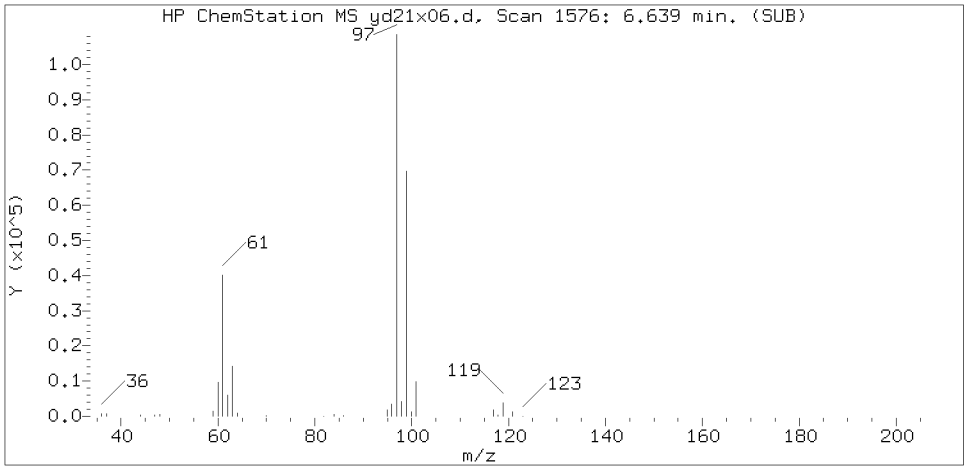
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:16 dvv10203

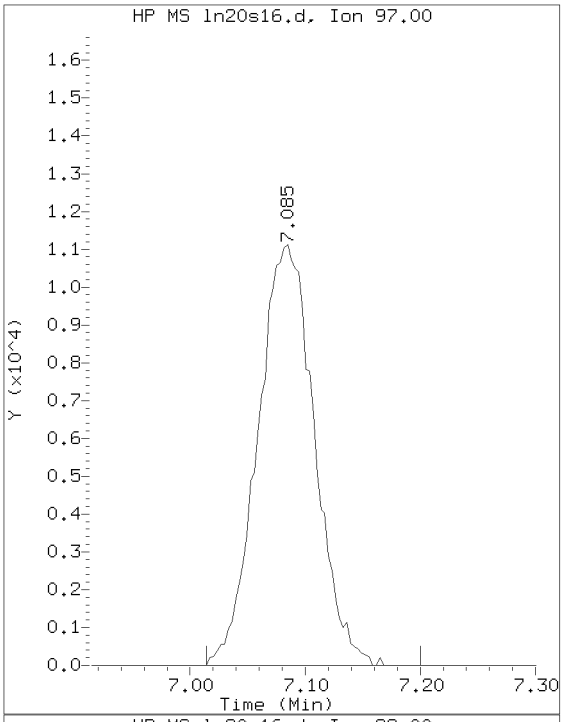
Sample Name: W1910 Lab Sample ID: 1202307

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 1528
Retention Time (minutes): 6.397
Relative Retention Time :-0.00170
Quant Ion : 96.00
Area (flag) : 3898
On-Column Amount (ng) : 0.8372

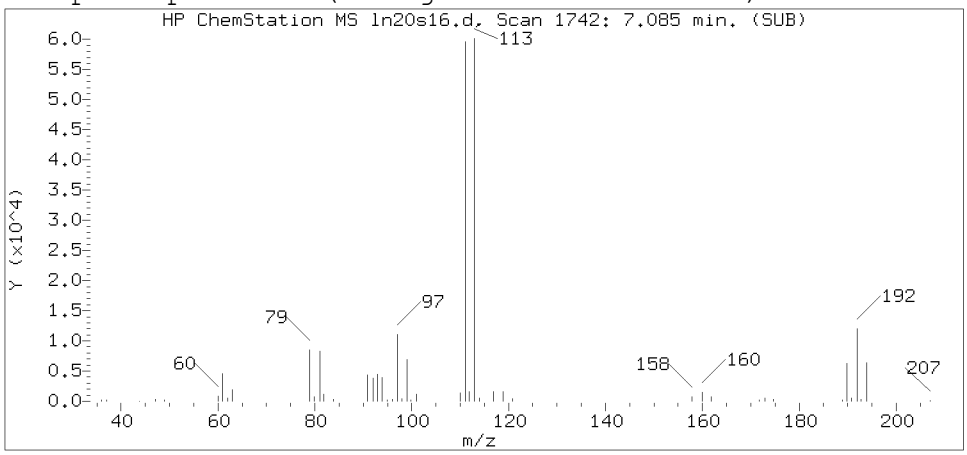
Digitally signed by Don V. Viray on 11/20/2019 at 21:19.
Target 3.5 esignature user ID: dvv10203

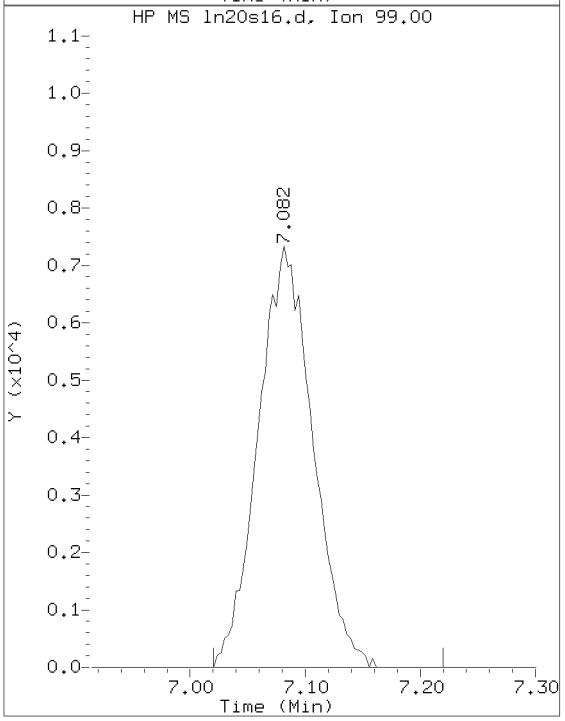
Reference Standard Spectrum for 1,1,1-Trichloroethane



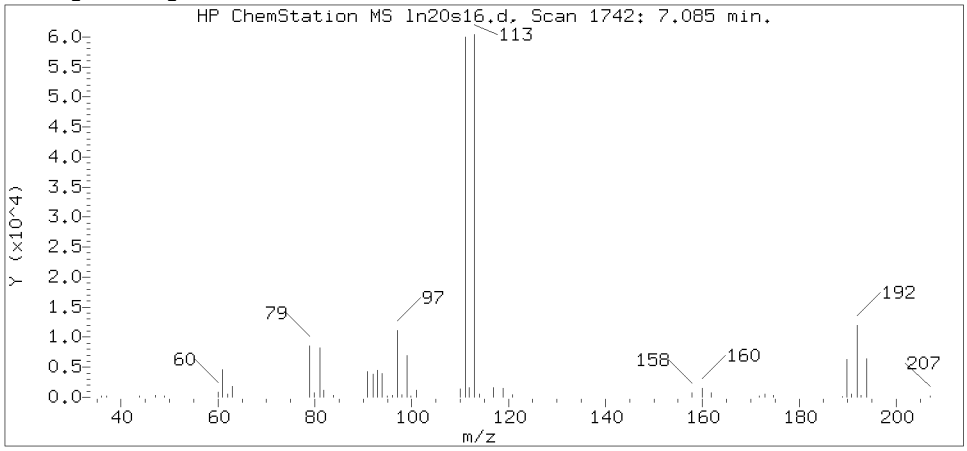


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov20a.b/ln20s16.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 15:32 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:16 dvv10203

Sample Name: W1910 Lab Sample ID: 1202307

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1742
Retention Time (minutes)	: 7.085
Relative Retention Time	: 0.00036
Quant Ion	: 97.00
Area (flag)	: 38093
On-Column Amount (ng)	: 6.4488

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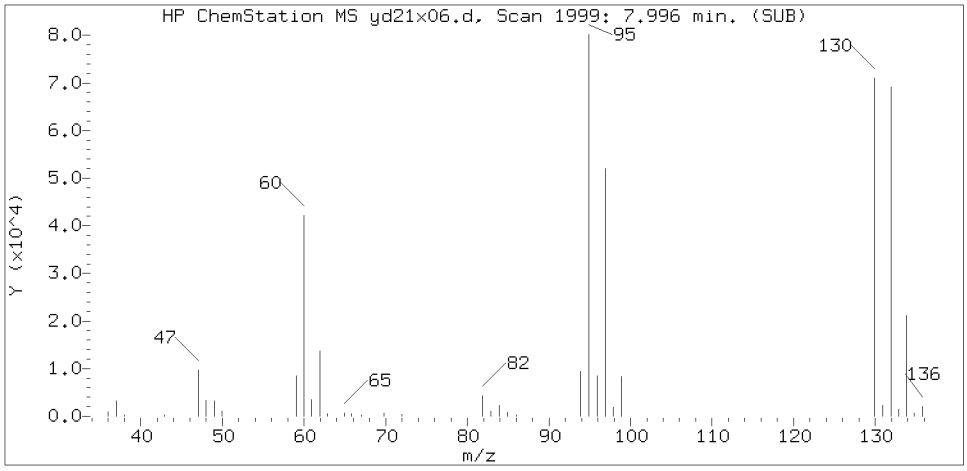
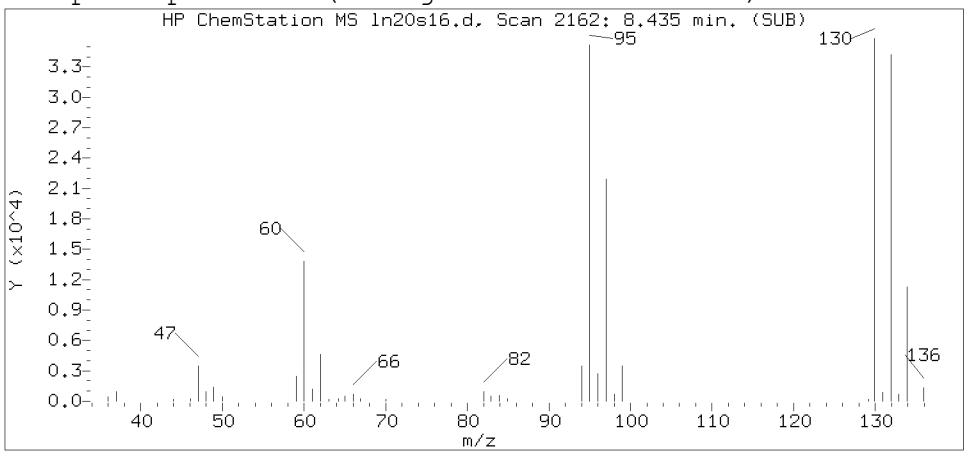
Target 3.5 esignature user ID: dvv10203

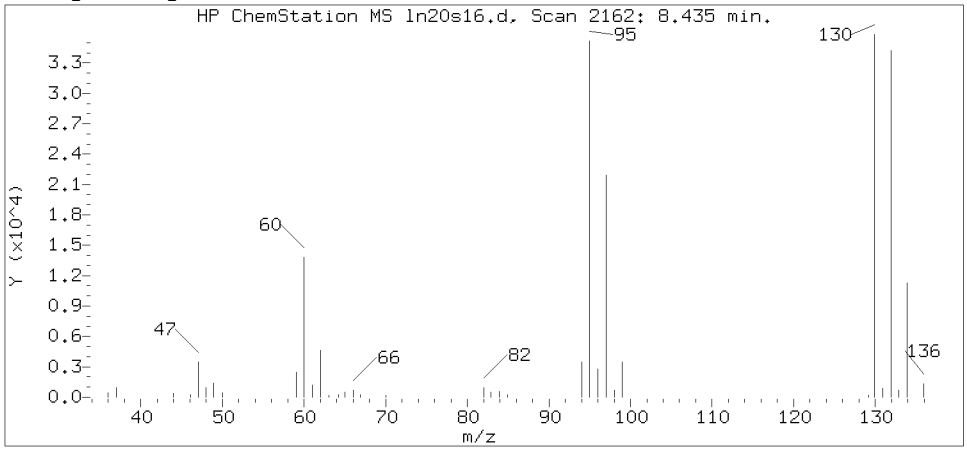
Reference Standard Spectrum for Trichloroethene

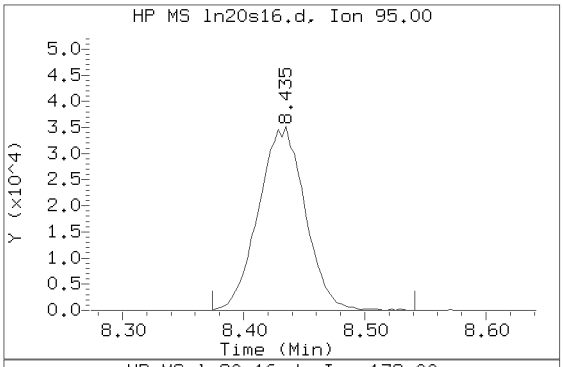


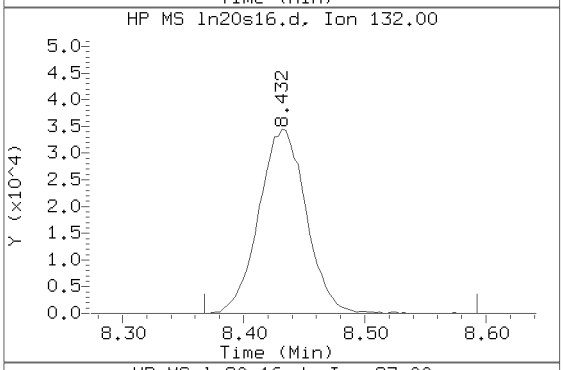
Sample Spectrum (Background Subtracted)

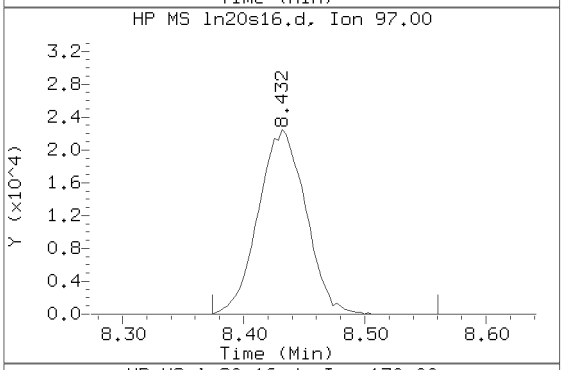


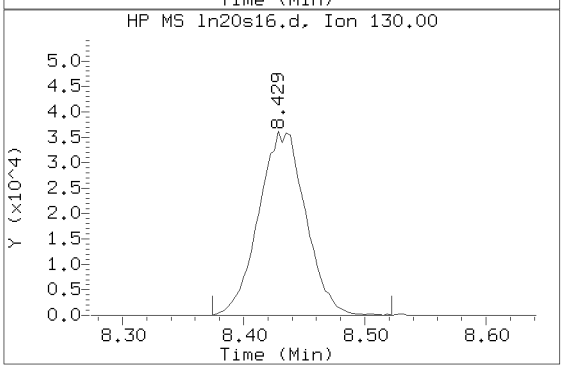
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov20a.b/ln20s16.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 15:32 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:16 dvv10203

Sample Name: W1910 Lab Sample ID: 1202307

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 2162
Retention Time (minutes)	: 8.435
Relative Retention Time	: 0.00002
Quant Ion	: 95.00
Area (flag)	: 93797
On-Column Amount (ng)	: 21.6512

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Target 3.5 esignature user ID: dvv10203

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\19nov04i\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
KAS02648	LN04T01.D	50NGBFB	11/04/2019	12:52	L191821AA	
KAS02648	LN04T02.D	50NGBFB	11/04/2019	13:05	L191821AA	
KAS02648	LN04T03.D	50NGBFB	11/04/2019	13:27	L191821AA	
KAS02648	LN04T04.D	50NGBFB	11/04/2019	13:45	L191821AA	
KAS02648	LN04T05.D	50NGBFB	11/04/2019	14:07	L191821AA	
KAS02648	LN04T06.D	50NGBFB	11/04/2019	14:18	L191821AA	
KAS02648	LN04X01.D	CLNBLK	11/04/2019	14:29		
KAS02648	LN04I01.D	VSTD300	11/04/2019	14:51		
KAS02648	LN04I02.D	VSTD100	11/04/2019	15:13		
KAS02648	LN04I03.D	VSTD050	11/04/2019	15:35		
KAS02648	LN04I04.D	VSTD020	11/04/2019	15:57		
KAS02648	LN04I05.D	VSTD010	11/04/2019	16:19		
KAS02648	LN04I06.D	VSTD004	11/04/2019	16:41		
KAS02648	LN04I07.D	VSTD001	11/04/2019	17:03		
KAS02648	LN04V01.D	ICVLLG	11/04/2019	17:25		
KAS02648	LN04V02.D	ICVLLG	11/04/2019	18:42		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\19NOV20A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
KKM02078	LN20T01.D	50NGBFB	11/20/2019	08:00	L191821AA	
KKM02078	LN20X01.D	VBLKL80	11/20/2019	08:29	L193241AA	
KKM02078	LN20C01.D	VSTD050	11/20/2019	08:51	L193241AA	
KKM02078	LN20L01.D	LCSL80	11/20/2019	09:13	L193241AA	
KKM02078	LN20B01.D	VBLKL80	11/20/2019	09:35	L193241AA	
KKM02078	LN20S01.D	1202295	11/20/2019	09:57	L193241AA	
KKM02078	LN20S02.D	1202314	11/20/2019	10:19	L193241AA	
KKM02078	LN20S03.D	1202284	11/20/2019	10:41	L193241AA	
KKM02078	LN20S04.D	1202285	11/20/2019	11:03	L193241AA	
KKM02078	LN20S05.D	1202296	11/20/2019	11:25	L193241AA	
KKM02078	LN20S06.D	1202297MS	11/20/2019	11:52	L193241AA	
KKM02078	LN20S07.D	1202298MSD	11/20/2019	12:14	L193241AA	
KKM02078	LN20S08.D	1202299	11/20/2019	12:36	L193241AA	
KKM02078	LN20S09.D	1202300	11/20/2019	12:58	L193241AA	
KKM02078	LN20S10.D	1202301	11/20/2019	13:20	L193241AA	
KKM02078	LN20S11.D	1202302	11/20/2019	13:42	L193241AA	
KKM02078	LN20S12.D	1202303	11/20/2019	14:04	L193241AA	
KKM02078	LN20S13.D	1202304	11/20/2019	14:26	L193241AA	
KKM02078	LN20S14.D	1202305	11/20/2019	14:48	L193241AA	
KKM02078	LN20S15.D	1202306	11/20/2019	15:10	L193241AA	
KKM02078	LN20S16.D	1202307	11/20/2019	15:32	L193241AA	
KKM02078	LN20S17.D	1202315	11/20/2019	15:54	L193241AA	
KKM02078	LN20S18.D	1202316	11/20/2019	16:16	L193241AA	
KKM02078	LN20S19.D	1202317	11/20/2019	16:38	L193241AA	
KKM02078	LN20S20.D	1202318	11/20/2019	17:00	L193241AA	
KKM02078	LN20S21.D	1202319	11/20/2019	17:22	L193241AA	
KKM02078	LN20S22.D	1202320	11/20/2019	17:44	L193241AA	

Data File: /chem/HP09915.i/19nov04i.b/ln04t06.d

Date : 04-NOV-2019 14:18

Client ID: AUG02-19

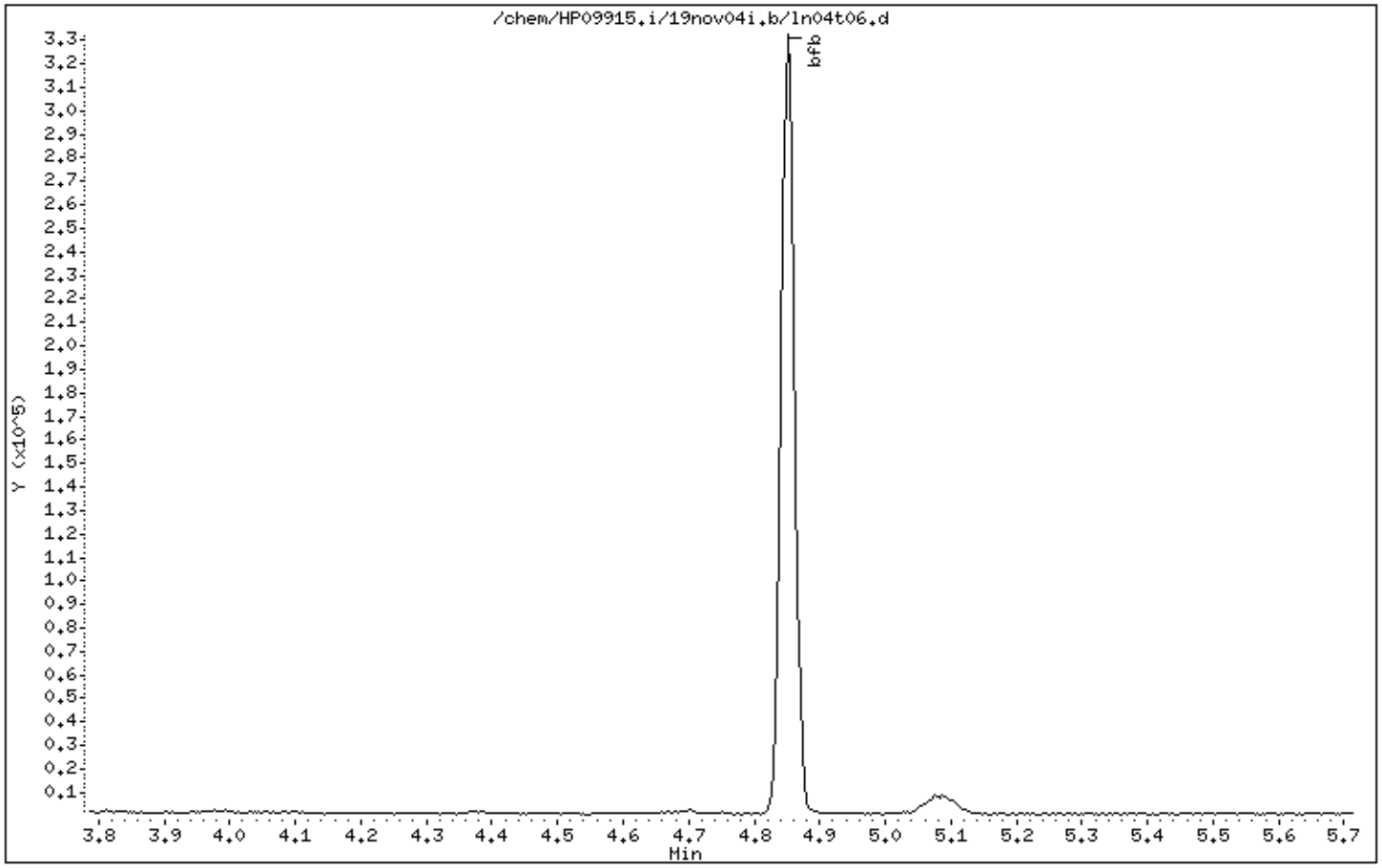
Instrument: HP09915.i

Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem/HP09915.i/19nov04i.b/ln04t06.d

Date : 04-NOV-2019 14:18

Client ID: AUG02-19

Instrument: HP09915.i

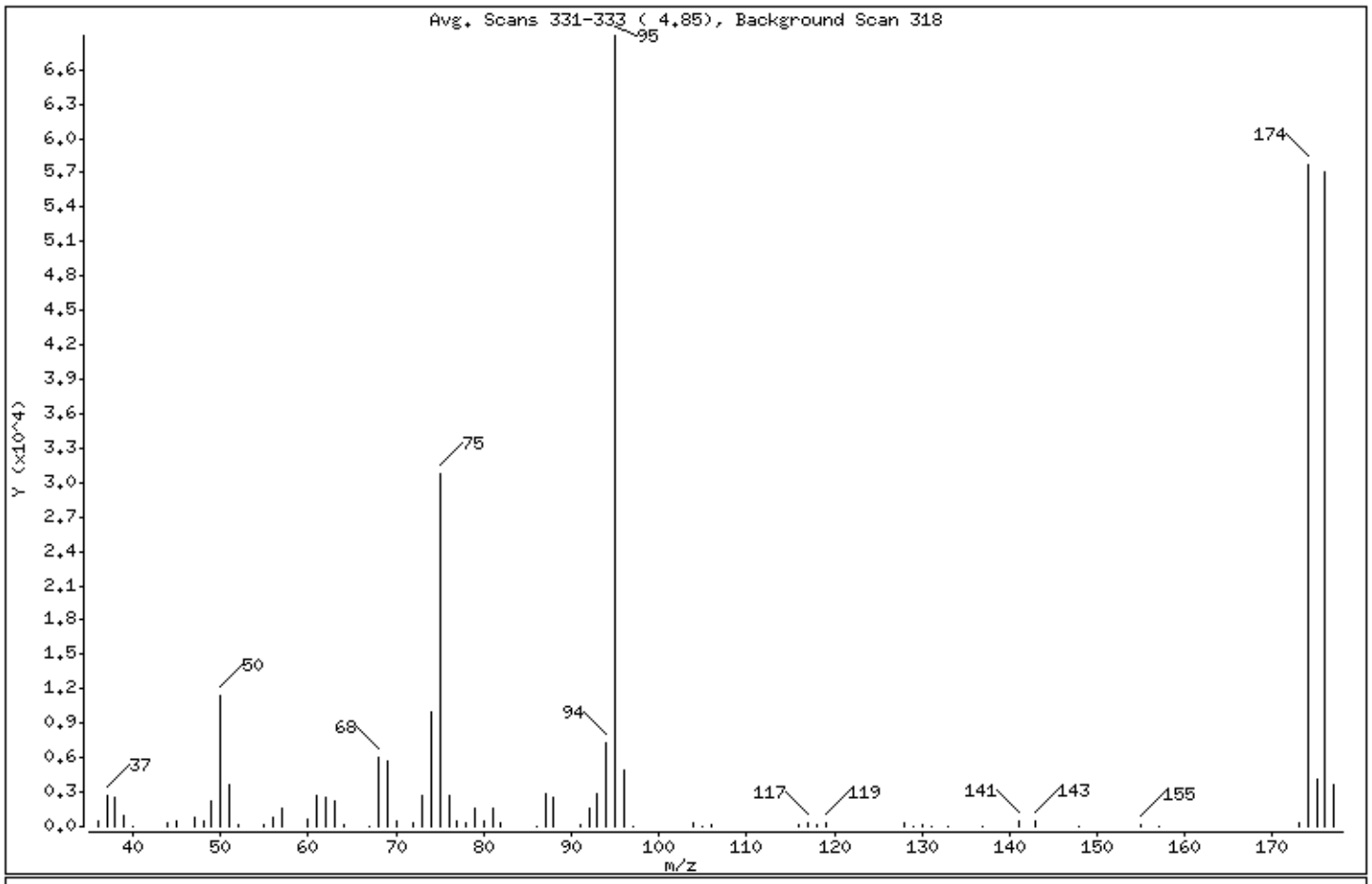
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.48
75	30.00 - 60.00% of mass 95	44.65
96	5.00 - 9.00% of mass 95	7.22
173	Less than 2.00% of mass 174	0.51 (0.61)
174	50.00 - 100.00% of mass 95	83.73
175	5.00 - 9.00% of mass 174	5.92 (7.07)
176	95.00 - 101.00% of mass 174	82.66 (98.72)
177	5.00 - 9.00% of mass 176	5.37 (6.49)

Date : 04-NOV-2019 14:18

Client ID: AUG02-19 Instrument: HP09915.i

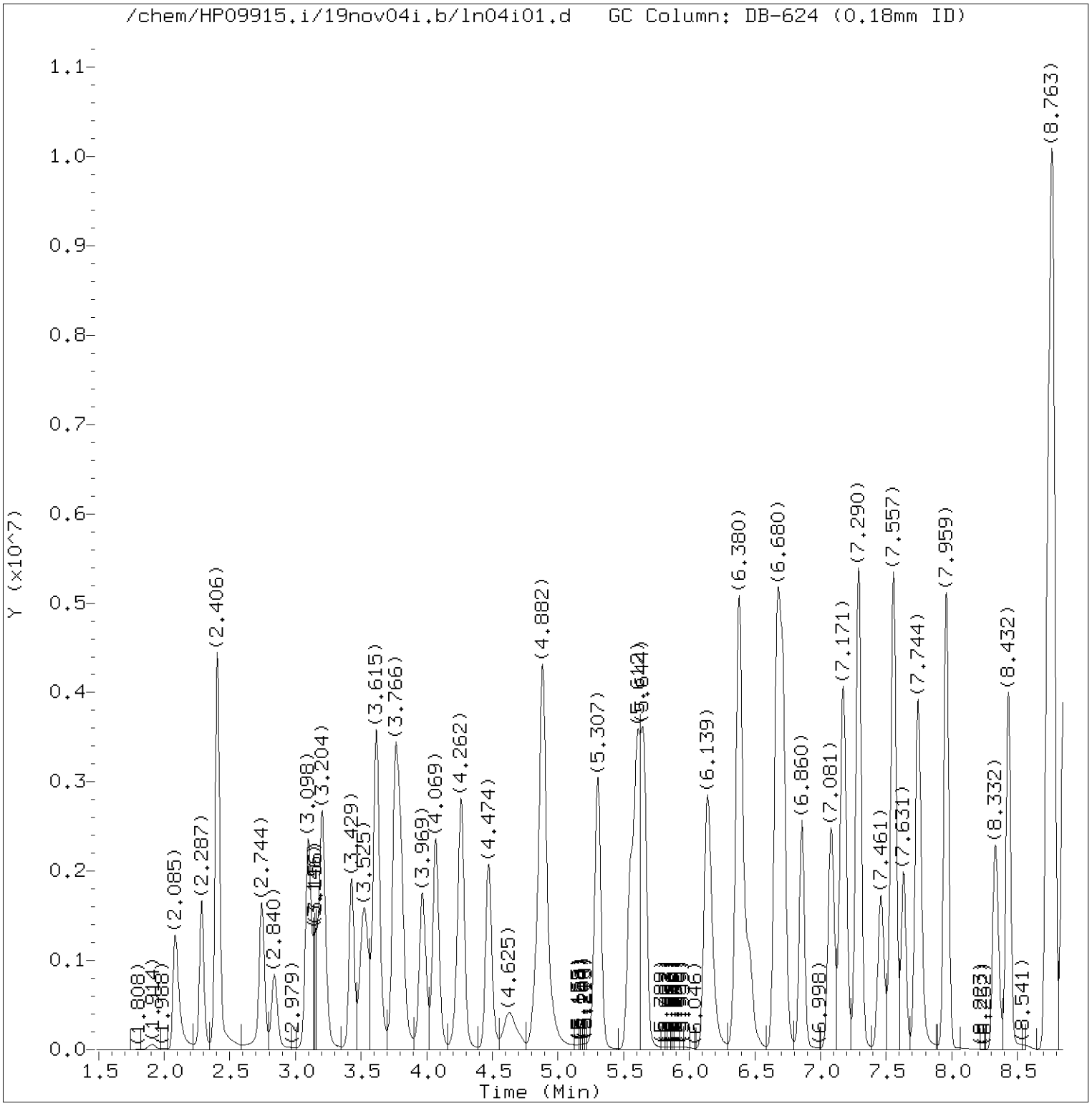
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: ln04t06.d
Spectrum: Avg. Scans 331-333 (4.85), Background Scan 318
Location of Maximum: 95.00
Number of points: 69

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	529	62.00	2498	86.00	55	129.00	53
37.00	2736	63.00	2218	87.00	2840	130.00	112
38.00	2557	64.00	150	88.00	2593	131.00	53
39.00	971	67.00	71	91.00	144	133.00	52
40.00	22	68.00	6076	92.00	1588	137.00	53
44.00	270	69.00	5647	93.00	2845	141.00	538
45.00	457	70.00	476	94.00	7275	143.00	484
47.00	784	72.00	322	95.00	68968	148.00	77
48.00	424	73.00	2656	96.00	4977	155.00	162
49.00	2292	74.00	10024	97.00	62	157.00	63
50.00	11364	75.00	30792	104.00	284	173.00	350
51.00	3586	76.00	2712	105.00	50	174.00	57744
52.00	134	77.00	405	106.00	233	175.00	4082
55.00	217	78.00	267	116.00	189	176.00	57008
56.00	871	79.00	1601	117.00	348	177.00	3701
57.00	1629	80.00	440	118.00	231		
60.00	555	81.00	1543	119.00	348		
61.00	2700	82.00	307	128.00	239		



Total Ion Chromatogram (TIC)

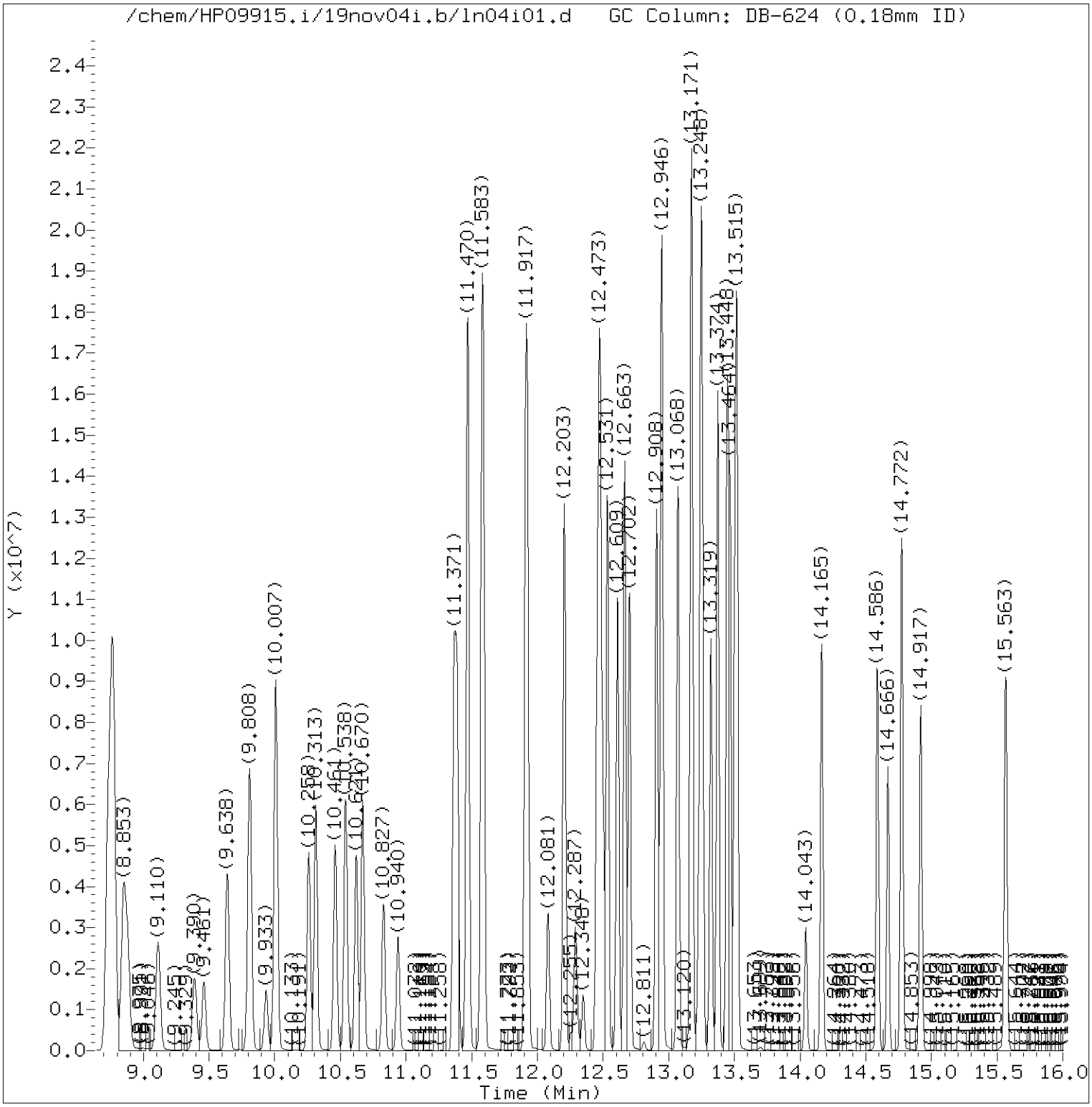
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.085	85	2719746M	347.943
4) Chloromethane	(2)	2.287	50	2403581	319.051
5) 1,3-Butadiene	(2)	2.406	39	1785787M	285.486
6) Vinyl Chloride	(2)	2.406	62	2412855	320.904
8) Bromomethane	(2)	2.744	94	1638575	304.015
9) Chloroethane	(2)	2.837	64	1253478	303.356
12) Trichlorofluoromethane	(2)	3.152	101	2661050	328.734
11) n-Pentane	(2)	3.204	43	2816823	294.455
14) Ethyl ether	(2)	3.429	59	1721693	329.146
15) Freon 123a	(2)	3.525	67	1991616	305.852
16) Acrolein	(1)	3.615	56	5765354	3020.583
17) 1,1-Dichloroethene	(2)	3.760	96	1489890	313.570
17) 1,1-Dichloroethene	(2)	3.757	63	721205	302.767
19) Freon 113	(2)	3.792	101	1732433	319.583
18) Acetone	(1)	3.802	58	531845	621.534
22) Methyl Iodide	(2)	3.966	142	3047145	309.483
21) 2-Propanol	(1)	3.995	45	936919	1523.065
23) Carbon Disulfide	(2)	4.069	76	5676465	317.027
27) Methyl Acetate	(2)	4.239	43	1941315	317.230
25) Allyl Chloride	(2)	4.265	41	2748698	322.482
28) Methylene Chloride	(2)	4.474	84	1745840	308.716
29)*t-Butyl alcohol-d10	(1)	4.503	65	254406M	250.000
30) t-Butyl alcohol	(1)	4.638	59	1641037	1532.140
31) Acrylonitrile	(2)	4.827	53	1039800	315.820
32) trans-1,2-Dichloroethene	(2)	4.885	96	1713357	311.714
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	5505439	305.143
34) n-Hexane	(2)	5.307	57	2863189M	334.811
36) 1,1-Dichloroethane	(2)	5.548	63	3007196	313.618
38) di-Isopropyl ether	(2)	5.609	45	5739955	310.377
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	2776921	322.788
40) Ethyl t-butyl ether	(2)	6.139	59	5425034	302.275
43) 1,2-Dichloroethene (Total)	(2)		96	3646040	624.977
44) 2-Butanone	(2)	6.364	43	2642793	625.317
42) cis-1,2-Dichloroethene	(2)	6.380	96	1932683	313.263
45) 2,2-Dichloropropane	(2)	6.397	77	2377411	318.945
47) Propionitrile	(1)	6.458	54	2126389	1593.336
48) Methacrylonitrile	(2)	6.670	67	2858148	804.768
49) Bromochloromethane	(2)	6.708	128	1075154	328.655

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.718	71	758236	628.991
51) Chloroform	(2)	6.860	83	2916299	317.988
52)$Dibromofluoromethane	(2)	7.075	113	276322	50.424
52)$Dibromofluoromethane	(2)	7.075	111	279197	49.969
53) 1,1,1-Trichloroethane	(2)	7.081	97	2560601	327.130
54) Cyclohexane	(2)	7.171	56	3429211	327.611
54) Cyclohexane	(2)	7.171	84	2984908	328.282
54) Cyclohexane	(2)	7.171	69	1068201	329.937
56) Carbon Tetrachloride	(2)	7.287	117	2252864	339.350
55) 1,1-Dichloropropene	(2)	7.294	75	2434619	321.125
58) Isobutyl Alcohol	(1)	7.461	41	1382486	3835.573
57)$1,2-Dichloroethane-d4	(2)	7.528	102	68480	49.033
57)$1,2-Dichloroethane-d4	(2)	7.532	65	307306	49.375
57)$1,2-Dichloroethane-d4	(2)	7.528	104	44002	49.326
60) Benzene	(2)	7.557	78	7094466	311.169
61) 1,2-Dichloroethane	(2)	7.634	62	2222342	303.049
61) 1,2-Dichloroethane	(2)	7.634	98	228988	315.535
65) t-Amyl methyl ether	(2)	7.744	73	5421278	300.945
67) n-Heptane	(2)	7.959	43	2592531MA	324.518
66)*Fluorobenzene	(2)	7.959	96	1120873	50.000
69) n-Butanol	(1)	8.332	56	2465385M	7947.068
71) Trichloroethene	(2)	8.432	95	1841720	320.821
72) Methylcyclohexane	(2)	8.734	83	3568410	335.054
72) Methylcyclohexane	(2)	8.734	98	1632993	338.844
73) 1,2-Dichloropropane	(2)	8.769	63	1825943	315.397
76) Methyl Methacrylate	(2)	8.850	69	1904896A	340.256
75) 1,4-Dioxane	(1)	8.856	88	338379M	3968.421
74) Dibromomethane	(2)	8.879	93	1210939	323.274
78) Bromodichloromethane	(2)	9.113	83	2314651	344.351
79) 2-Nitropropane	(2)	9.390	41	1438925	706.755
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	926413	372.584
81) cis-1,3-Dichloropropene	(2)	9.638	75	3074664	344.402
82) 4-Methyl-2-pentanone	(2)	9.808	43	5422938	607.899
83)$Toluene-d8	(3)	9.933	98	1156351	49.563
83)$Toluene-d8	(3)	9.933	100	751534	49.726
88) Toluene	(3)	10.007	92	4532879	309.894
90) 1,3-Dichloropropene (total)	(3)		100	5974636	693.659
89) trans-1,3-Dichloropropene	(3)	10.258	75	2899972	349.257

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	10.313	69	3356305	332.603
92) 1,1,2-Trichloroethane	(3)	10.461	97	1768710	318.935
93) Tetrachloroethene	(3)	10.541	166	1990565	321.327
94) 1,3-Dichloropropane	(3)	10.621	76	3006585	317.532
96) 2-Hexanone	(3)	10.670	43	3998423	593.616
97) Dibromochloromethane	(3)	10.827	129	2037523	358.670
99) 1,2-Dibromoethane	(3)	10.940	107	1987783	330.088
100)*Chlorobenzene-d5	(3)	11.361	117	891668	50.000
101) 1-Chlorohexane	(3)	11.364	91	2458057	312.814
102) Chlorobenzene	(3)	11.387	112	5140609	310.783
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	1789998	328.446
104) Ethylbenzene	(3)	11.470	91	8606821	307.854
106) m+p-Xylene	(3)	11.583	106	6690837	608.359
108) Xylene (Total)	(3)		106	9979970	911.130
107) o-Xylene	(3)	11.908	106	3289133	302.771
109) Styrene	(3)	11.924	104	5647939	314.619
110) Bromoform	(3)	12.081	173	1534520	361.500
111) Isopropylbenzene	(3)	12.203	105	8466138	310.714
112) Cyclohexanone	(1)	12.287	55	1351186	4046.080
114)$4-Bromofluorobenzene	(3)	12.348	95	440049	49.810
114)$4-Bromofluorobenzene	(3)	12.348	174	362553	49.502
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	2800639M	310.705
115) Bromobenzene	(4)	12.467	156	2234066	311.517
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	2150976	773.637
117) 1,2,3-Trichloropropane	(4)	12.499	110	866230	313.172
119) n-Propylbenzene	(4)	12.531	91	9654812	308.142
120) 2-Chlorotoluene	(4)	12.609	126	2098494	315.266
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	7238022	317.873
121) 4-Chlorotoluene	(4)	12.702	126	2155793	311.148
124) tert-Butylbenzene	(4)	12.908	134	1524421M	323.717
125) Pentachloroethane	(4)	12.940	167	1461833	360.511
126) 1,2,4-Trimethylbenzene	(4)	12.949	105	7469187	311.236
127) sec-Butylbenzene	(4)	13.068	105	8682126	308.971
129) 1,3-Dichlorobenzene	(4)	13.168	146	3858953	292.822
130) p-Isopropyltoluene	(4)	13.174	119	7289488	299.854
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	477171	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	4013510	293.777
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	7915203	311.364

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.319	91	6484944	336.931
136) 1,3-Diethylbenzene	(4)	13.374	119	4897725	309.573
141) Diethylbenzene (total)	(4)		100	13982971	913.975
137) 1,4-Diethylbenzene	(4)	13.444	119	5013123	299.077
139) n-Butylbenzene	(4)	13.467	92	3608595	290.316
138) 1,2-Dichlorobenzene	(4)	13.502	146	3859125	296.761
140) 1,2-Diethylbenzene	(4)	13.518	119	4072123	305.325
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	669008	339.050
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	2855960	285.855
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	2681523	276.030
147) Hexachlorobutadiene	(4)	14.670	225	1157297	252.311
148) Naphthalene	(4)	14.772	128	9186333	294.145
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	2488608	263.270
150) 2-Methylnaphthalene	(4)	15.563	142	4666682	242.655

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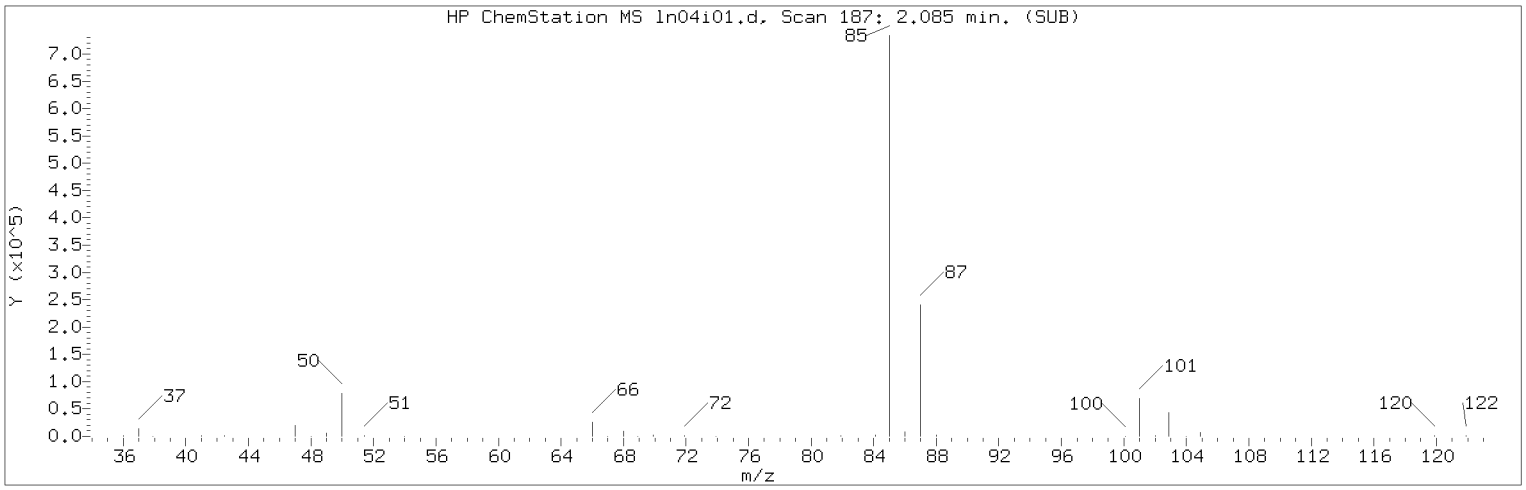
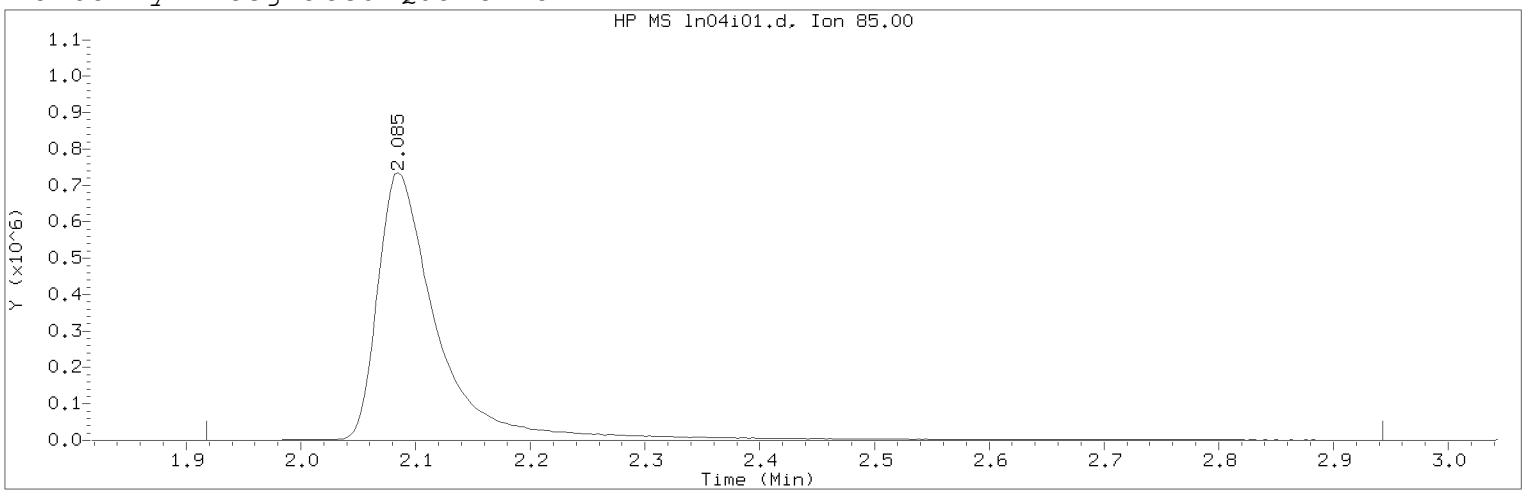
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

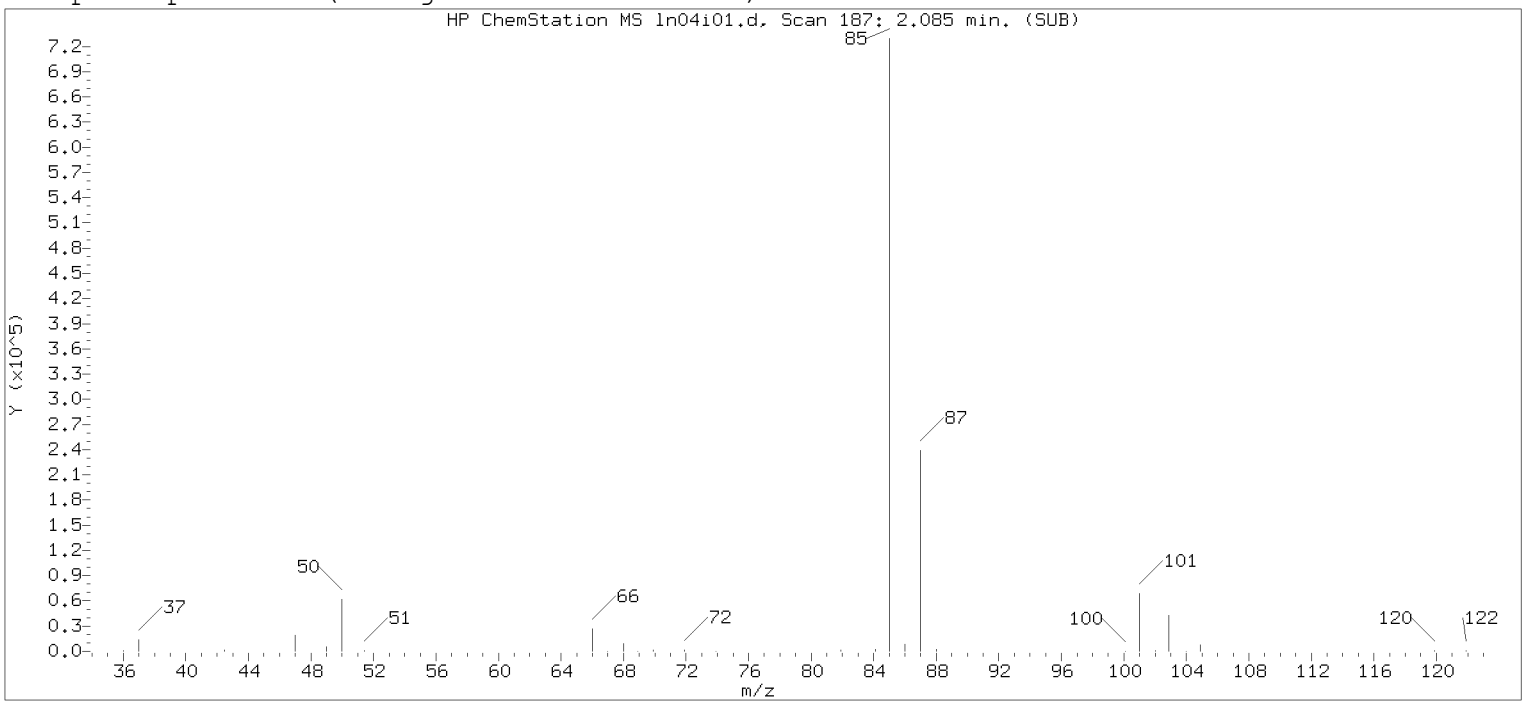
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area (flag) : 2719746M
On-Column Amount (ng) : 347.9426
Integration start scan : 134 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

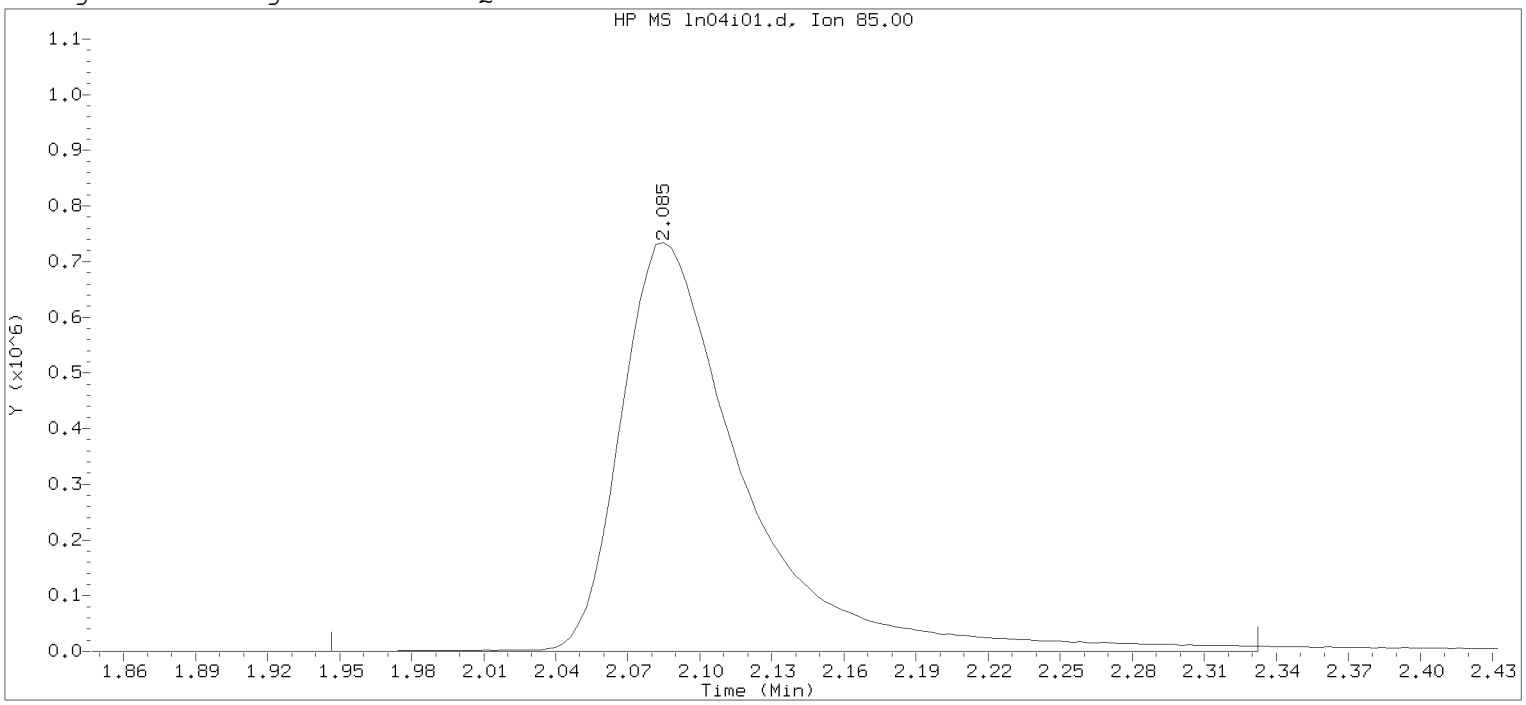
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

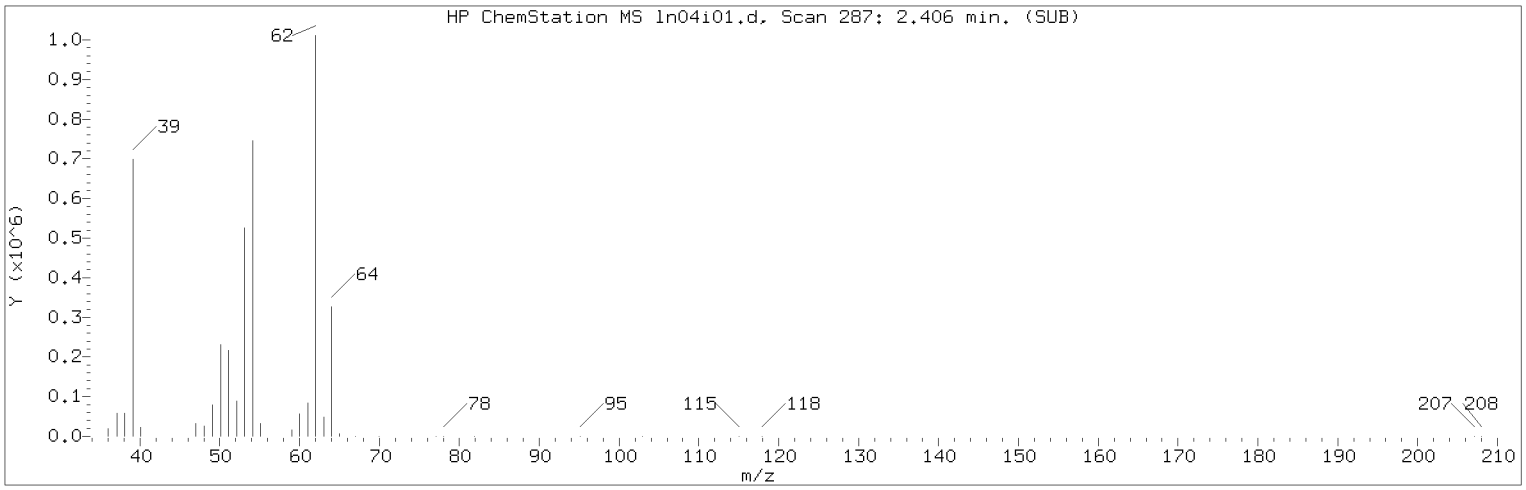
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

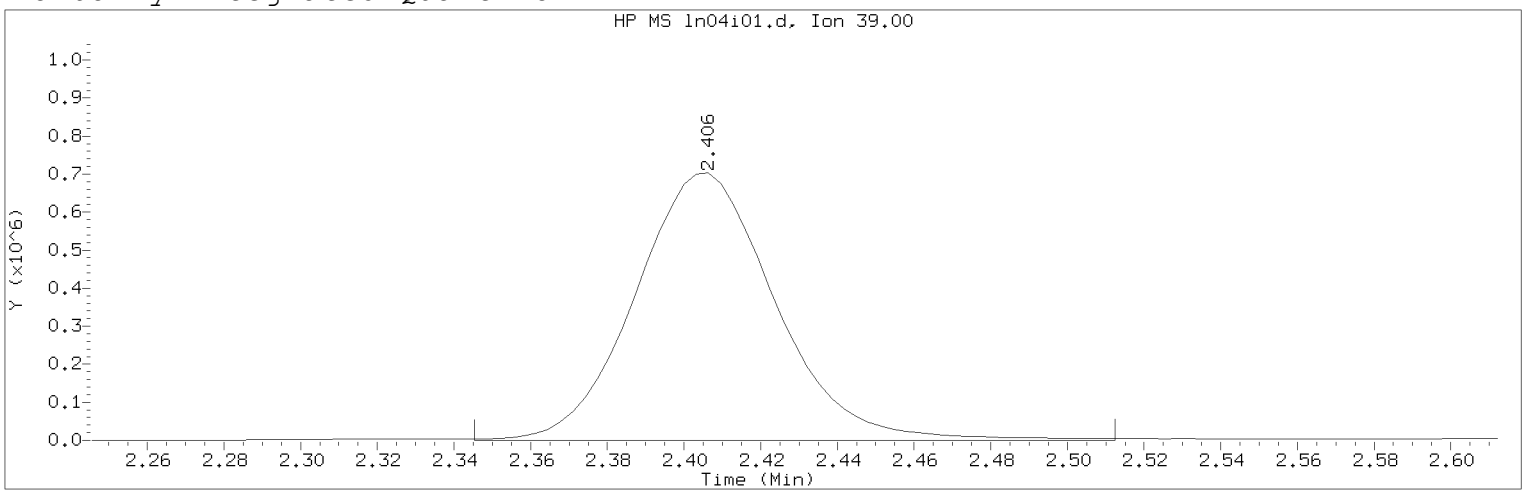
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area : 2624212
On-column Amount (ng) : 308.6520
Integration start scan : 143 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

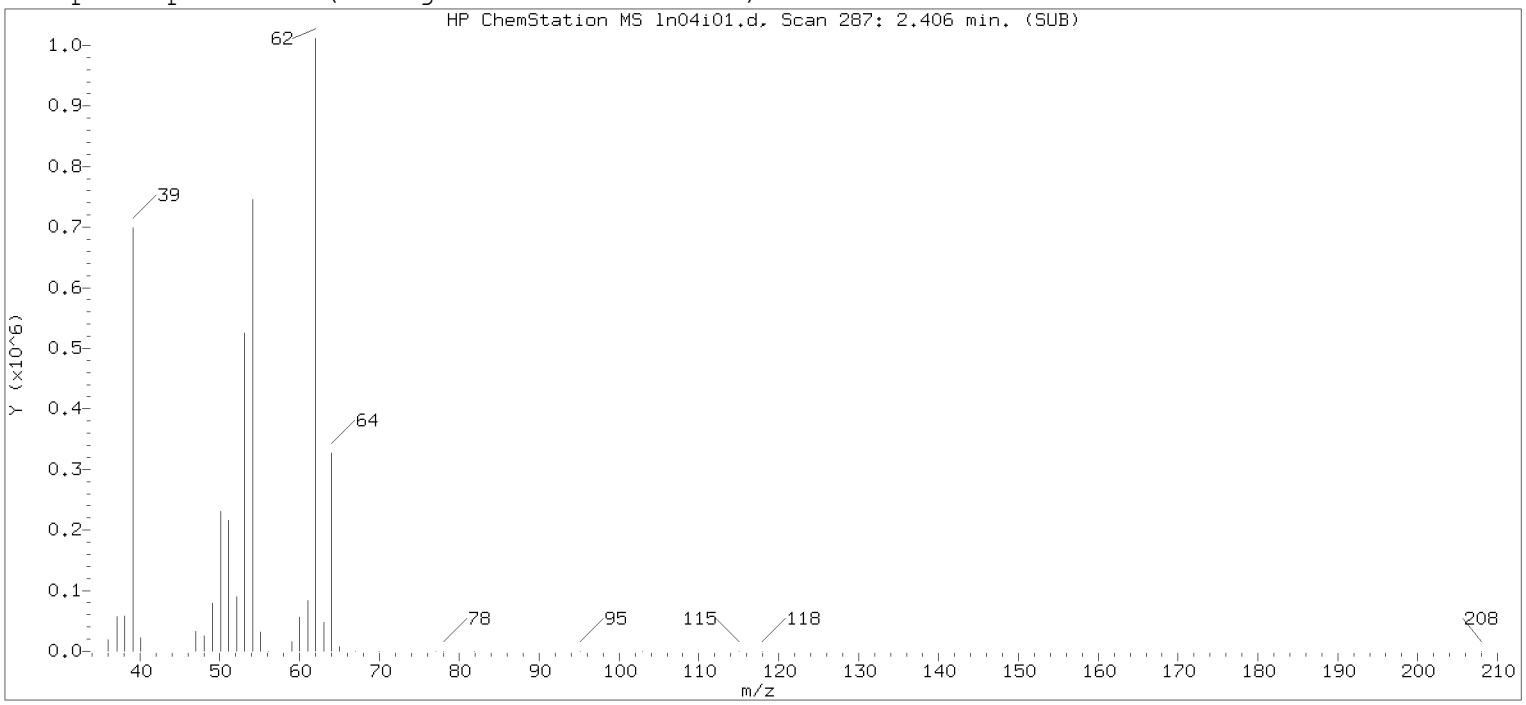
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 1785787M
On-Column Amount (ng) : 285.4858
Integration start scan : 267 Integration stop scan: 319
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

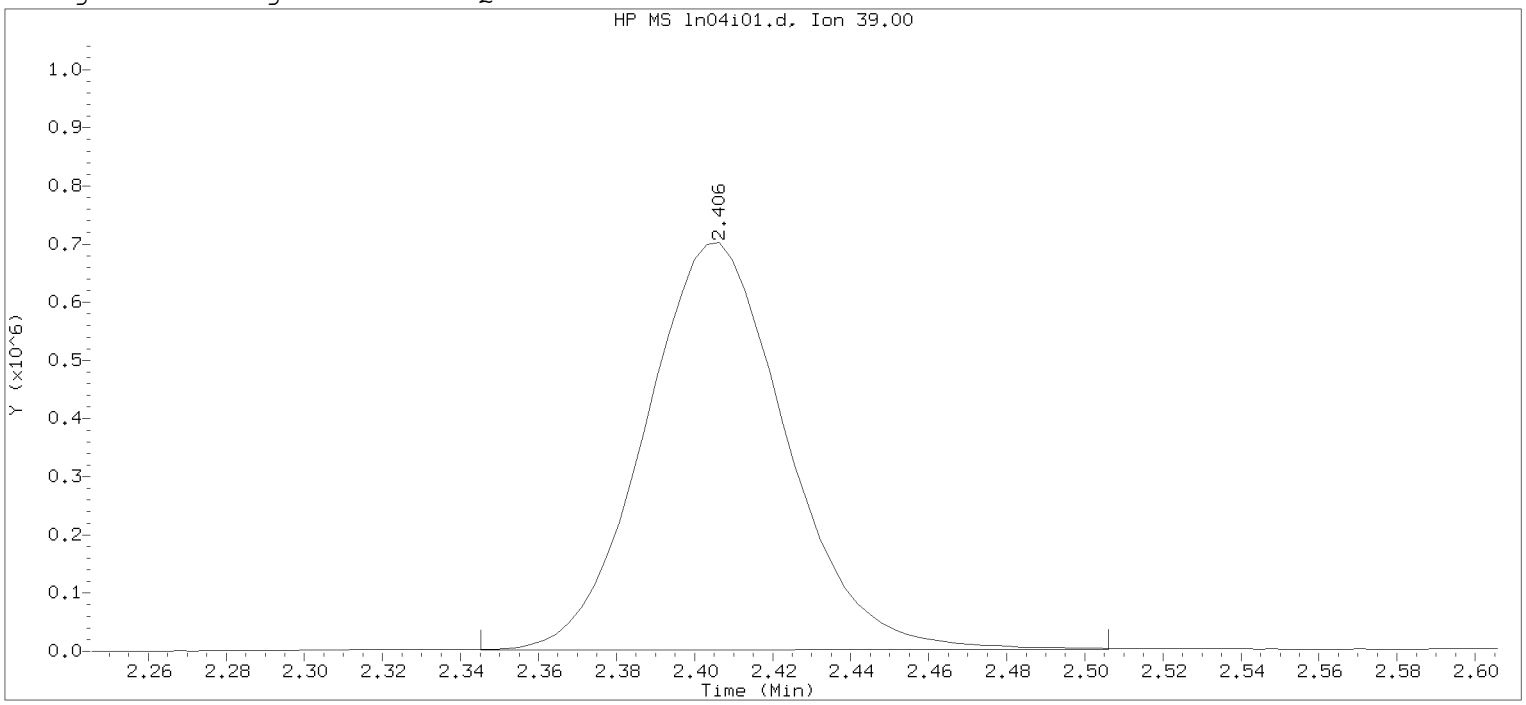
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 1755596
On-column Amount (ng) : 295.0708
Integration start scan : 267 Integration stop scan: 317
Y at integration start : 2196 Y at integration end: 3553

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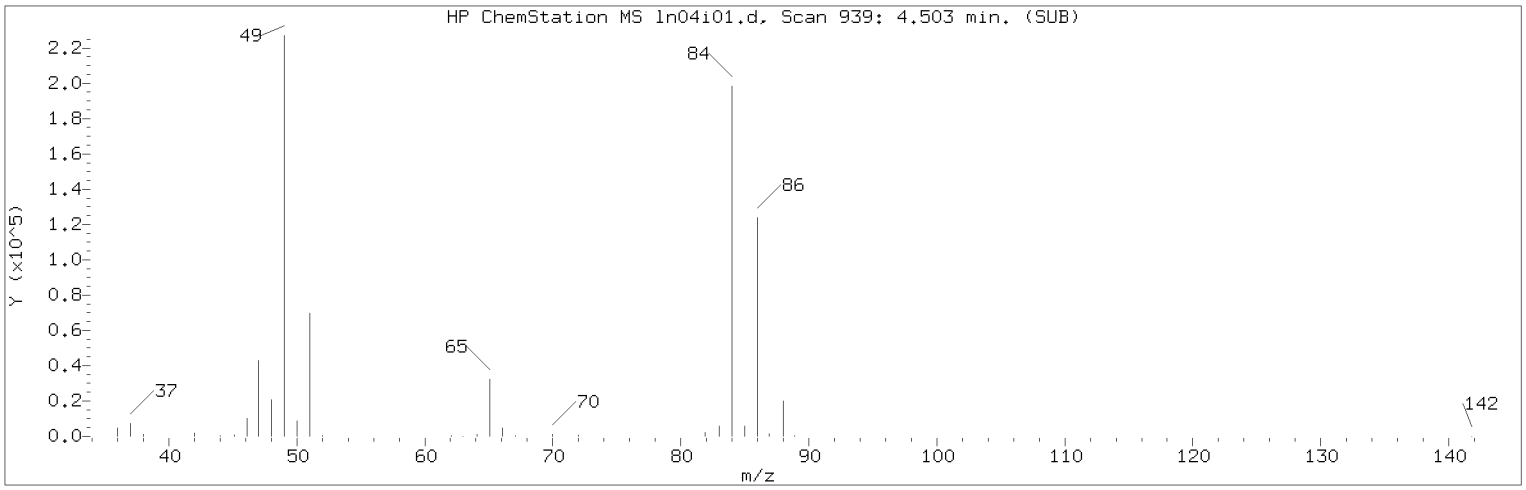
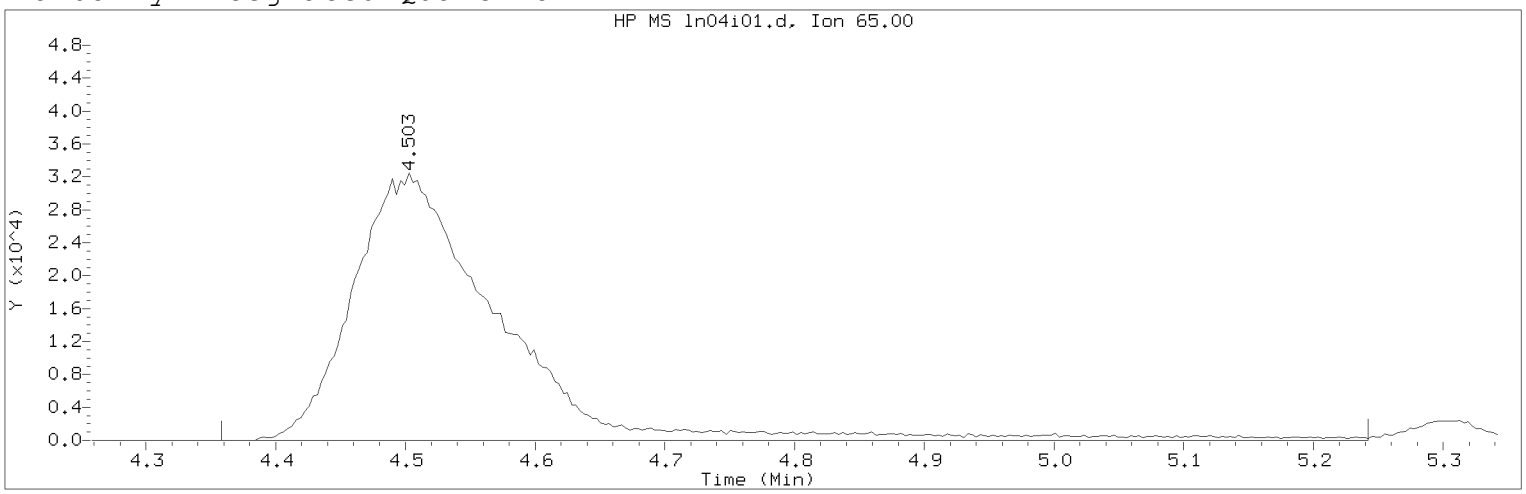
Target 3.5 esignature user ID: jkh0002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

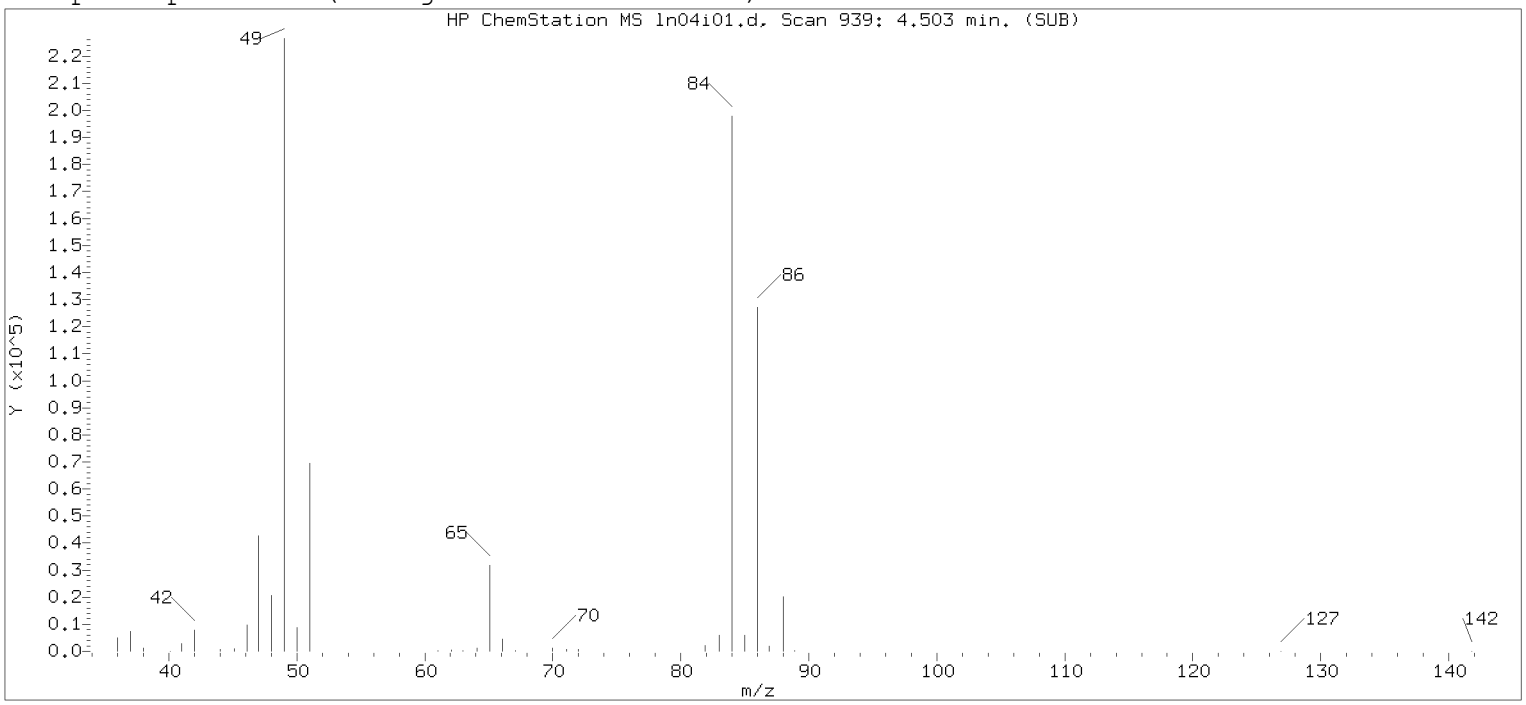
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area (flag) : 254406M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1168
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

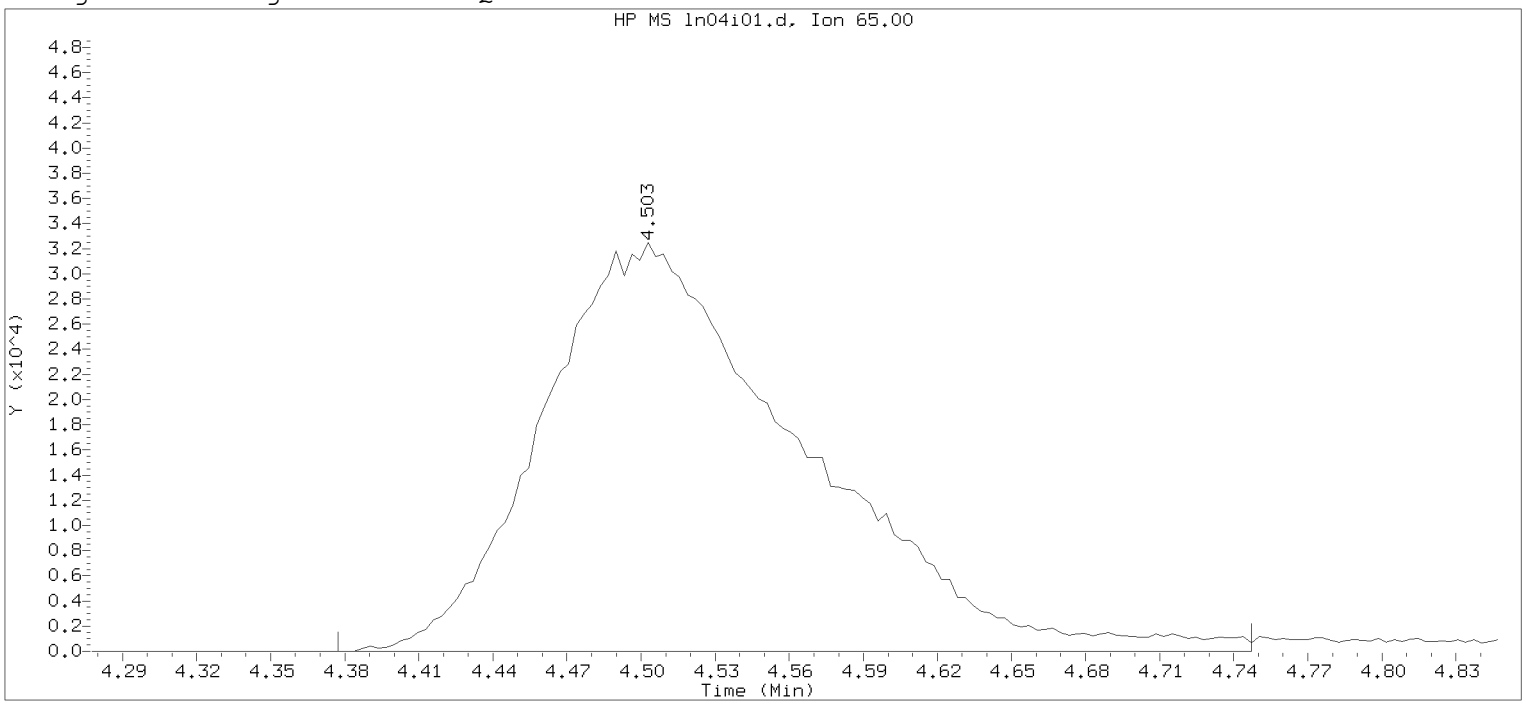
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

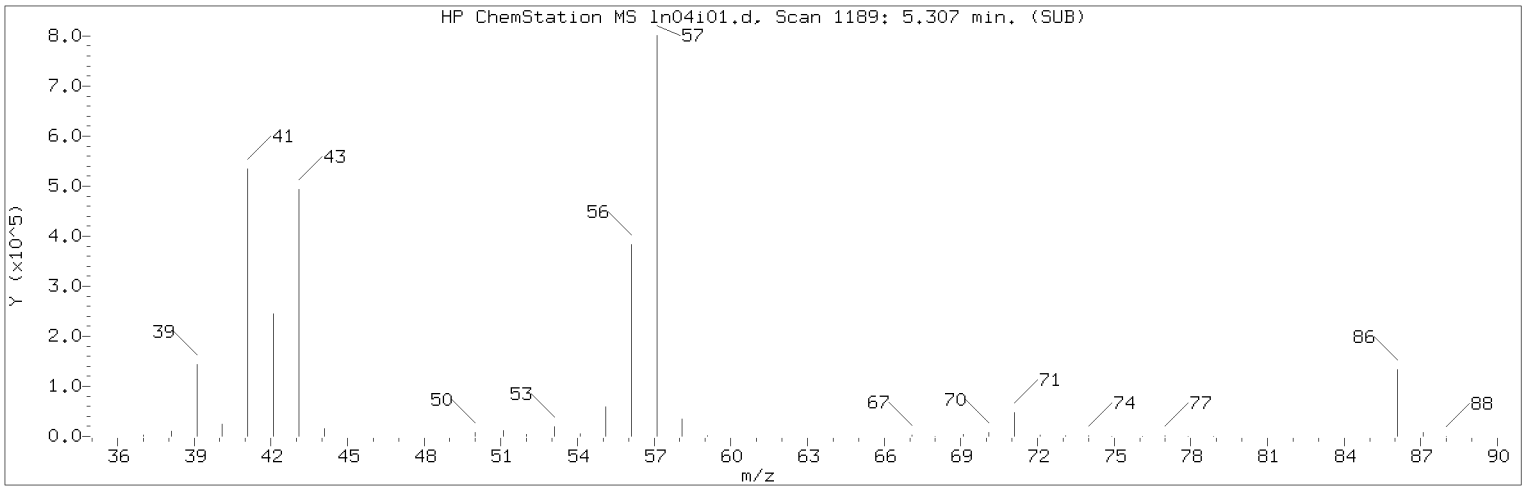
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

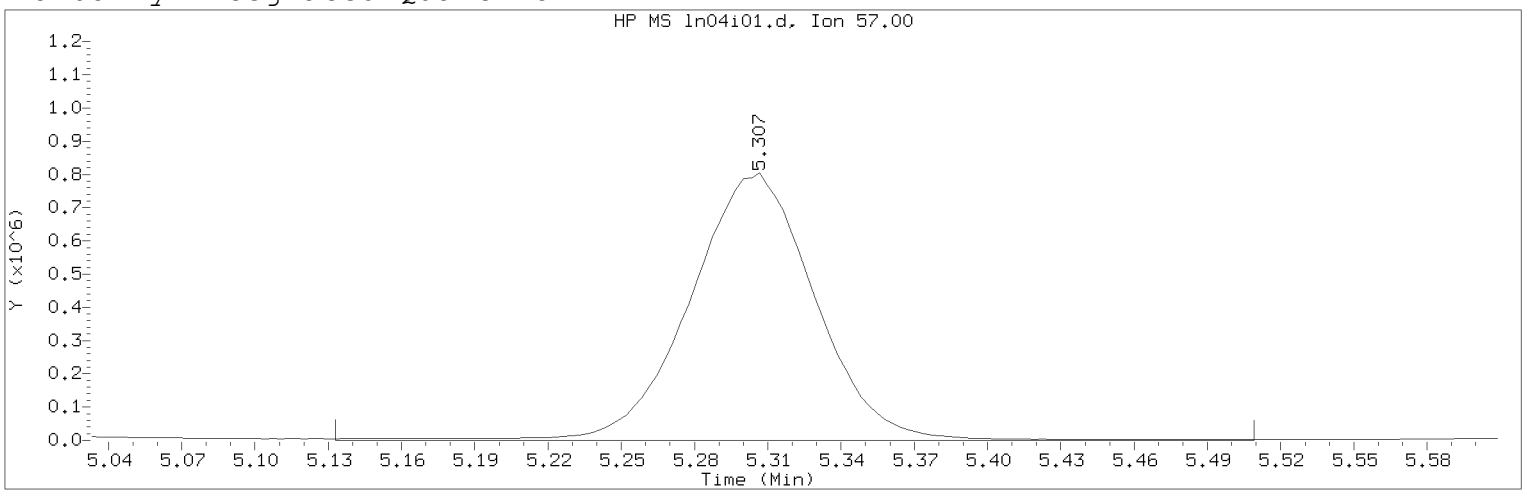
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area : 237264
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user JKHowe01

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

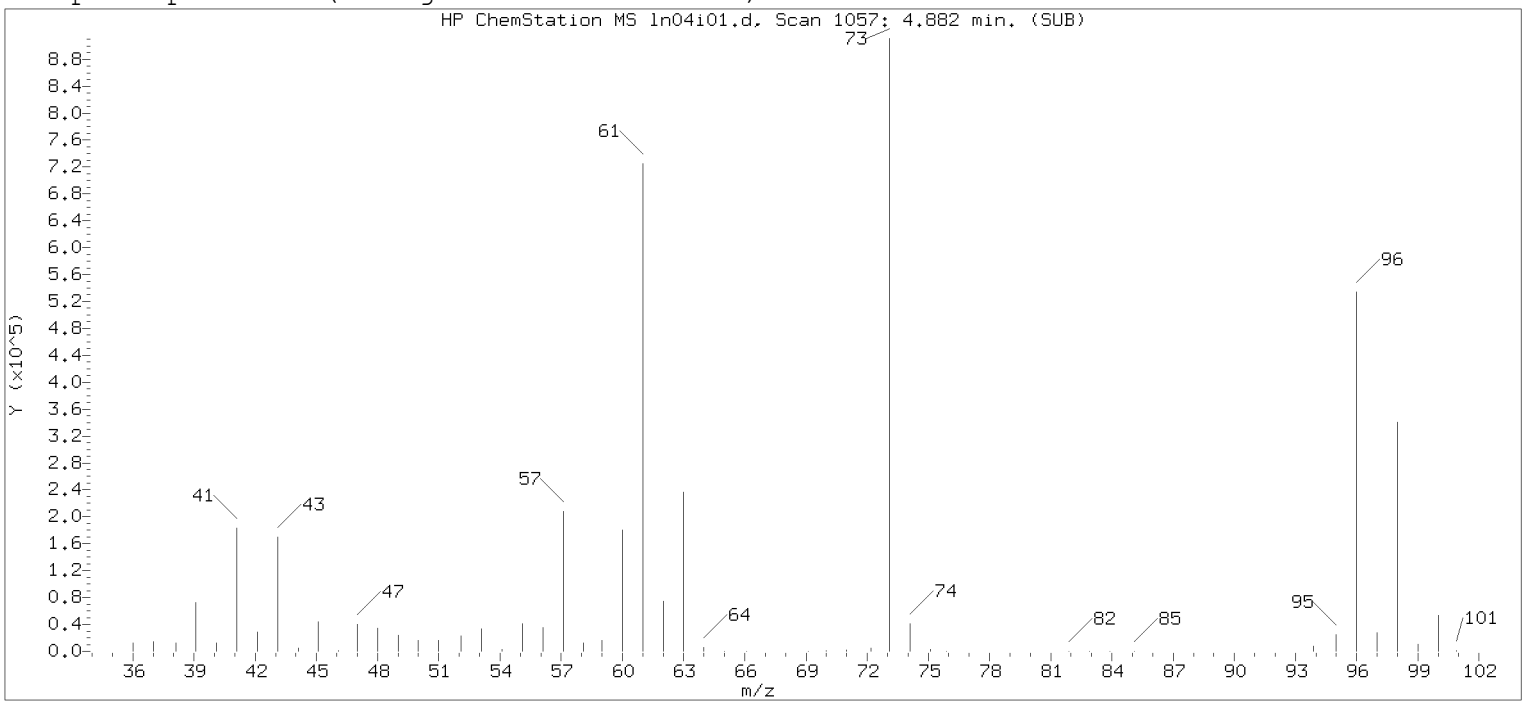
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1189
Retention Time (minutes): 5.307
Quant Ion : 57.00
Area (flag) : 2863189M
On-Column Amount (ng) : 334.8105
Integration start scan : 1134 Integration stop scan: 1251
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

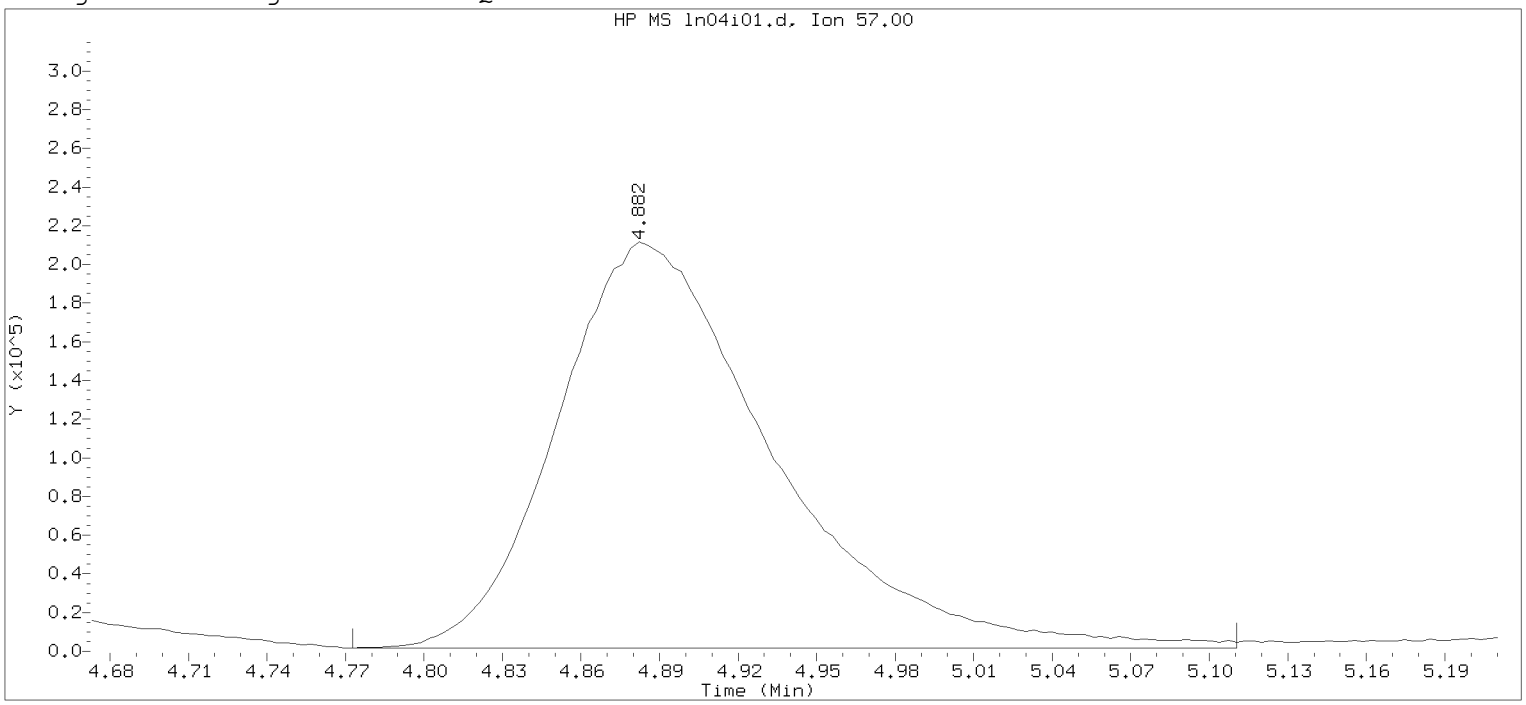
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

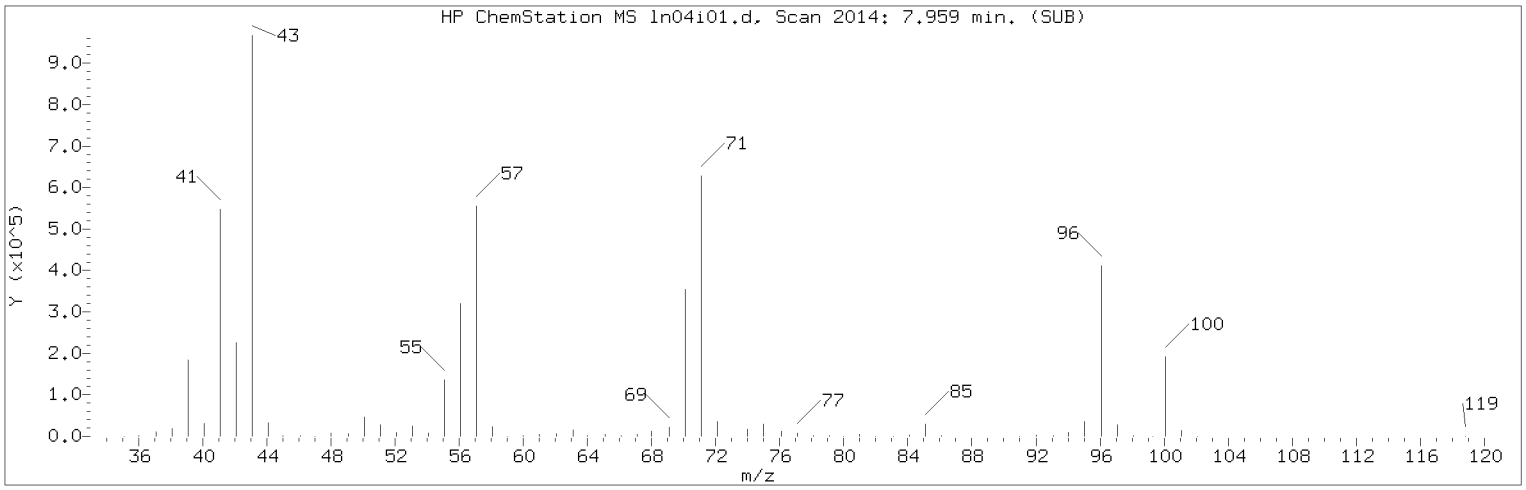
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

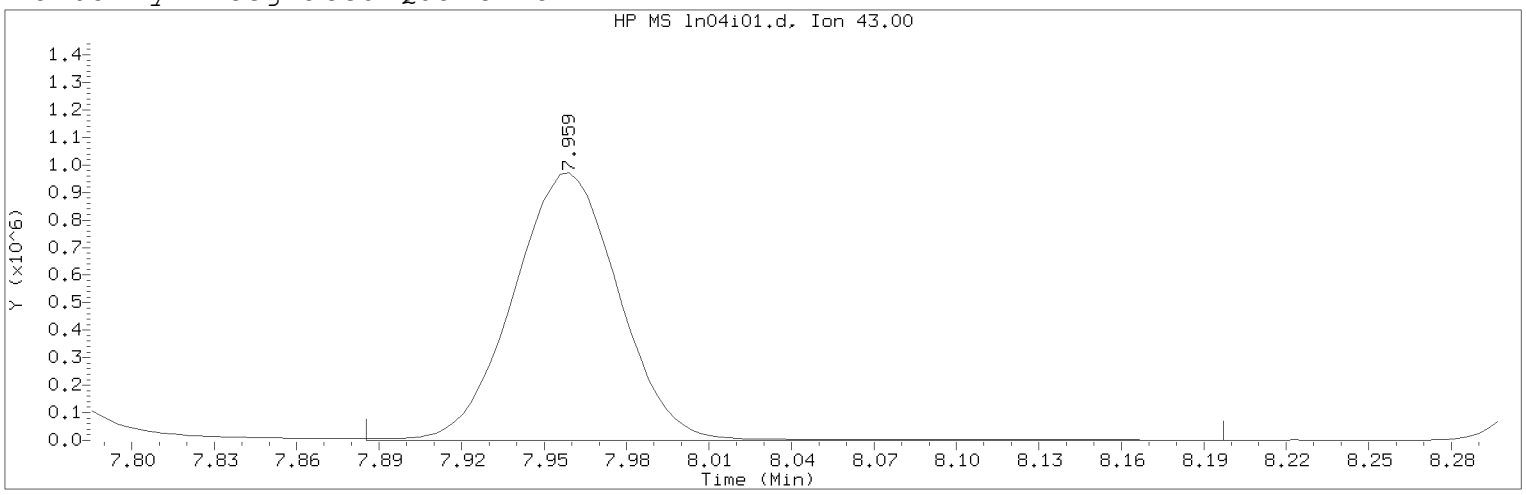
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1057
Retention Time (minutes): 4.882
Quant Ion : 57.00
Area : 1202378
On-column Amount (ng) : 301.4561
Integration start scan : 1022 Integration stop scan: 1127
Y at integration start : 1806 Y at integration end: 1806

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user JKHowe01

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

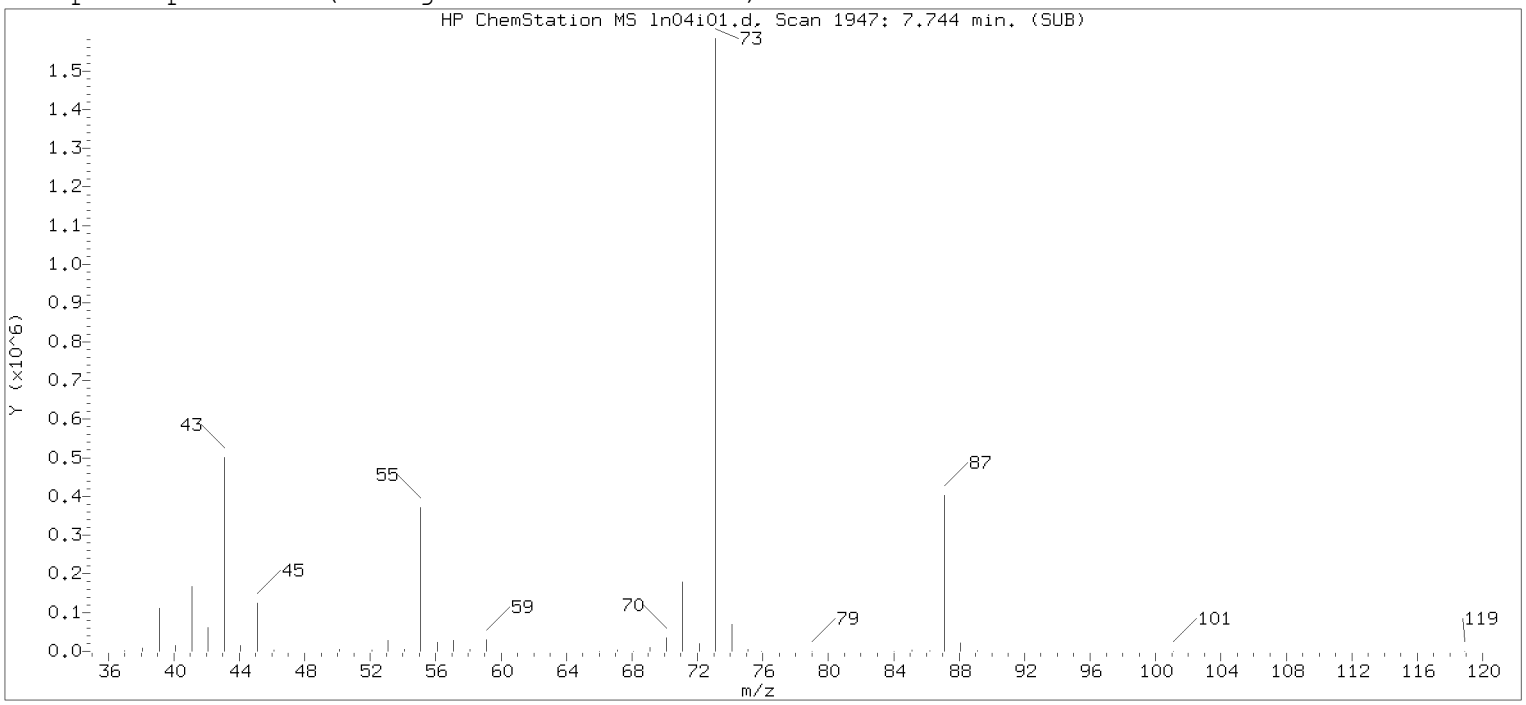
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2014
Retention Time (minutes): 7.959
Quant Ion : 43.00
Area (flag) : 2592531MA
On-Column Amount (ng) : 324.5176
Integration start scan : 1990 Integration stop scan: 2087
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

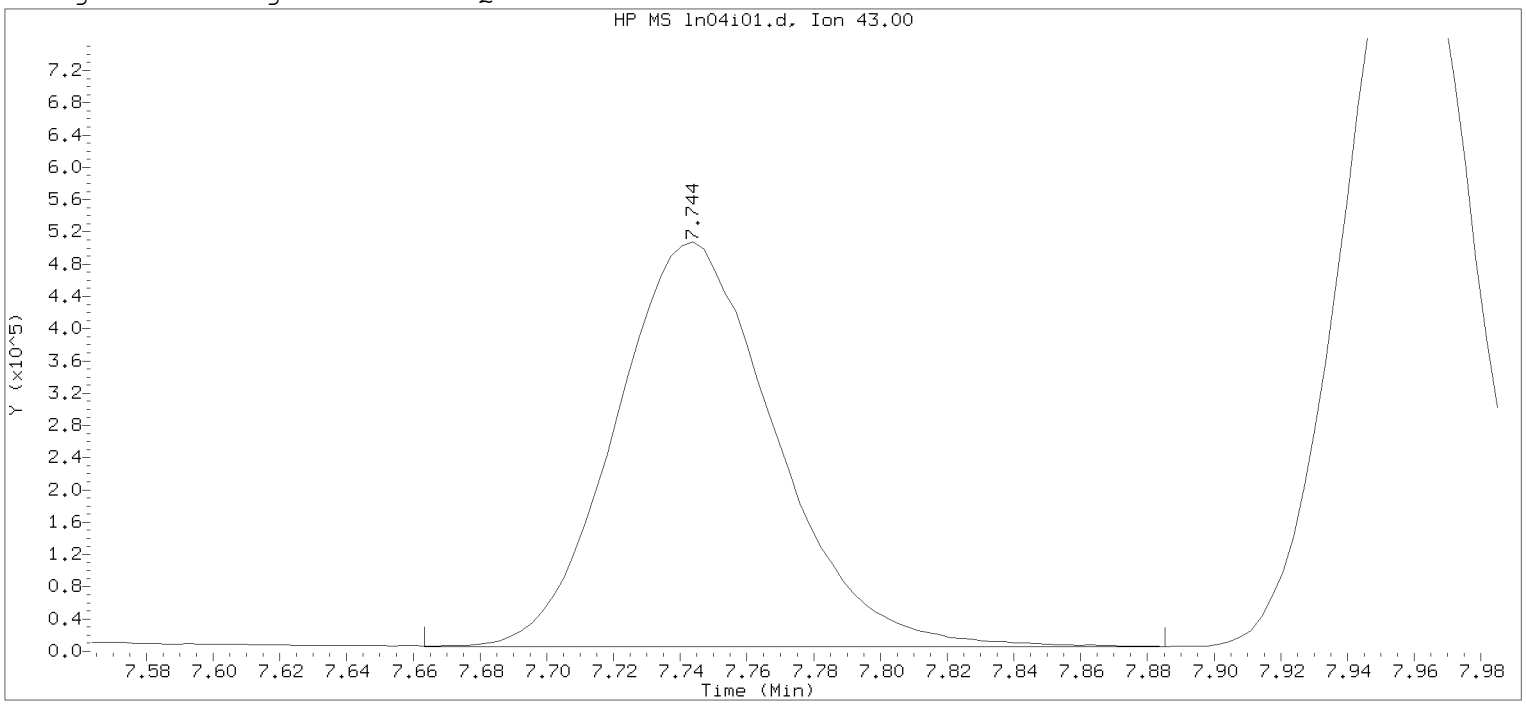
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

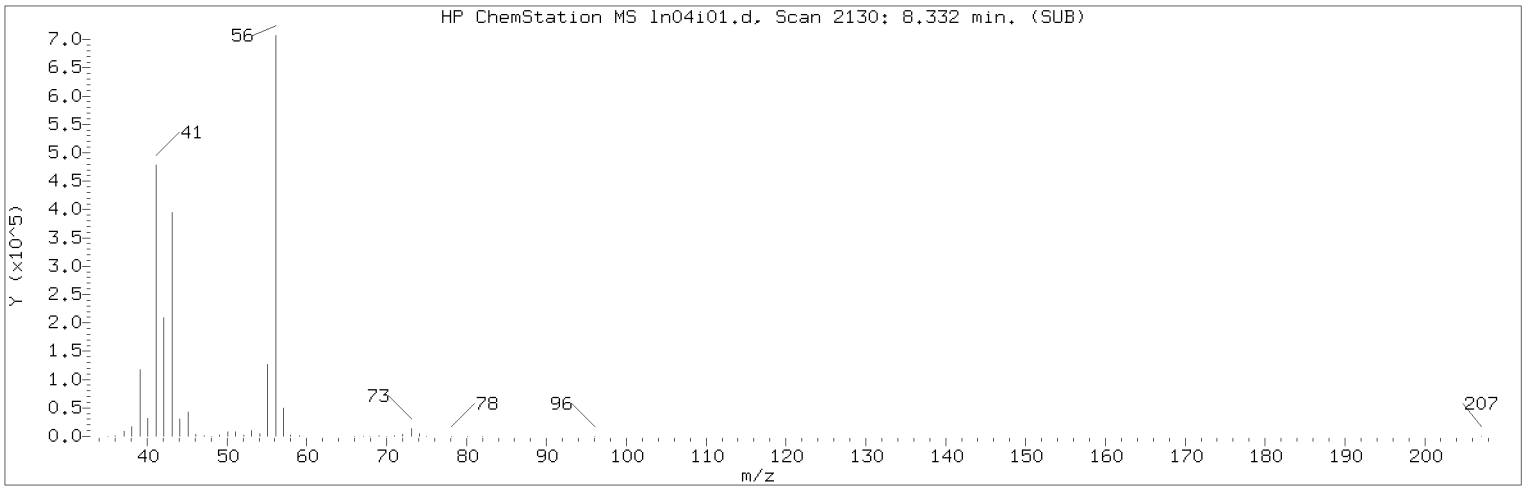
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

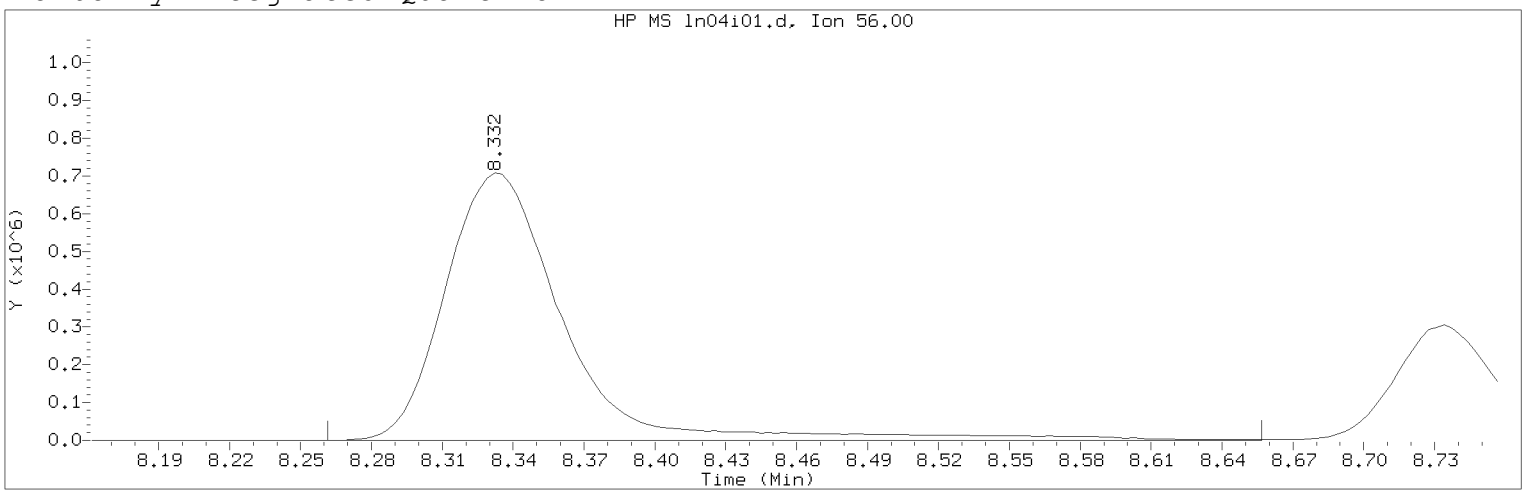
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1947
Retention Time (minutes): 7.744
Quant Ion : 43.00
Area : 1668813
On-column Amount (ng) : 288.4319
Integration start scan : 1921 Integration stop scan: 1990
Y at integration start : 5866 Y at integration end: 5866

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

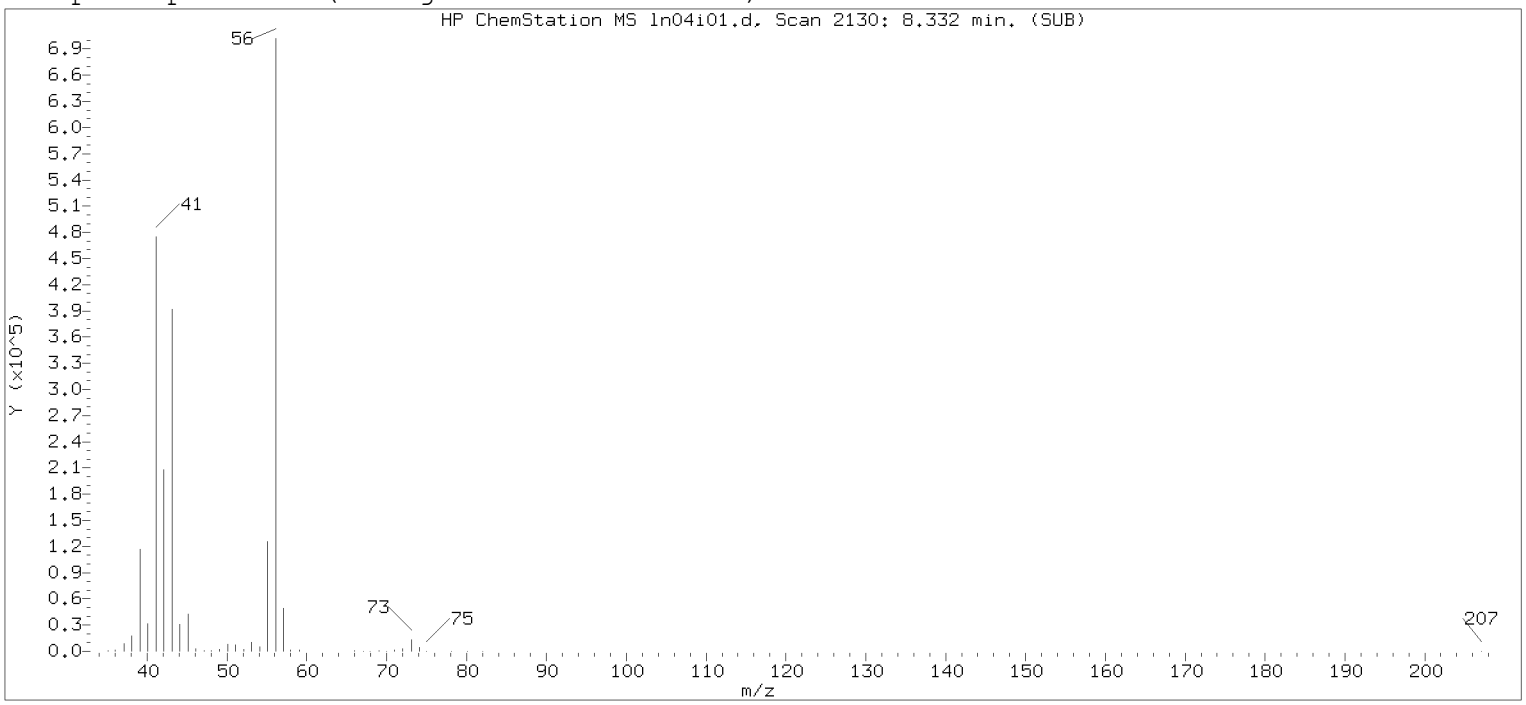
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area (flag) : 2465385M
On-Column Amount (ng) : 7947.0678
Integration start scan : 2107 Integration stop scan: 2230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

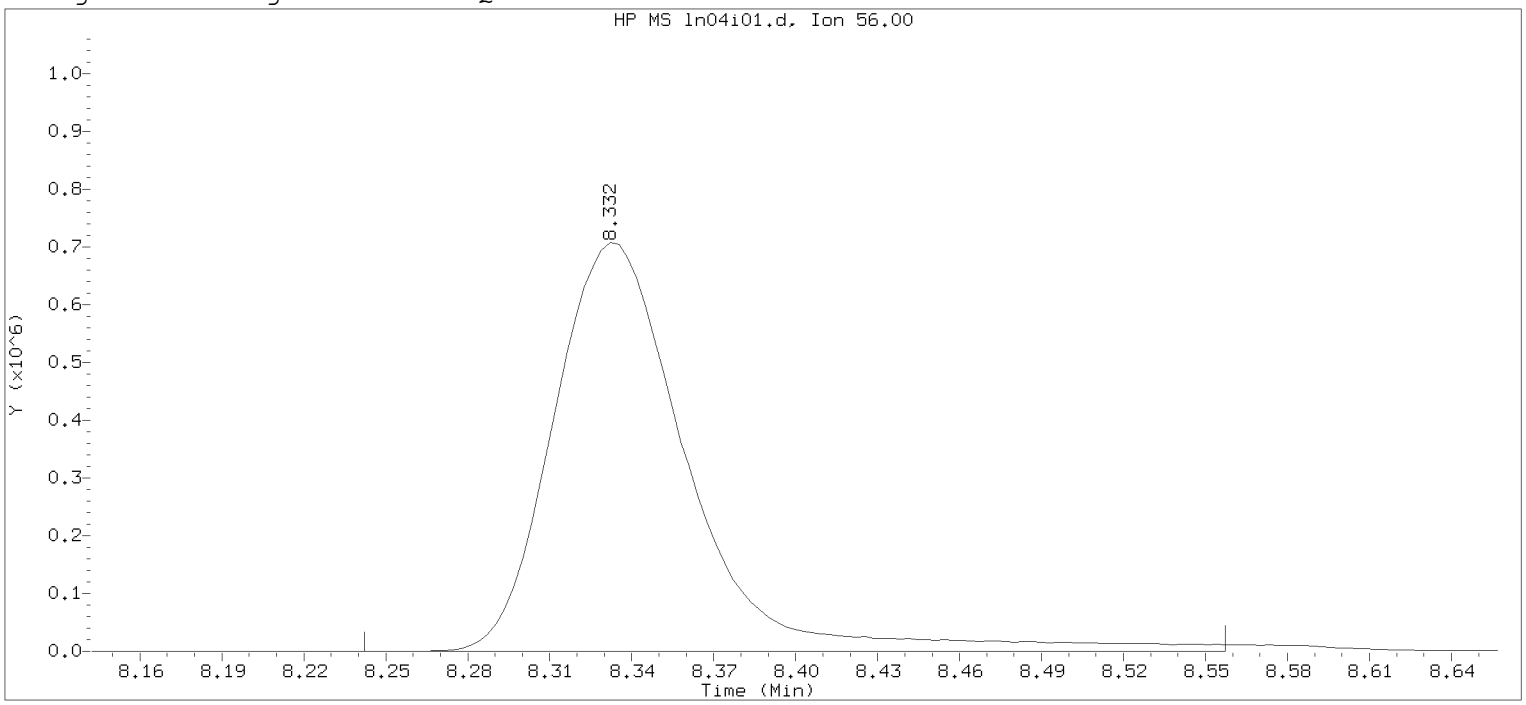
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

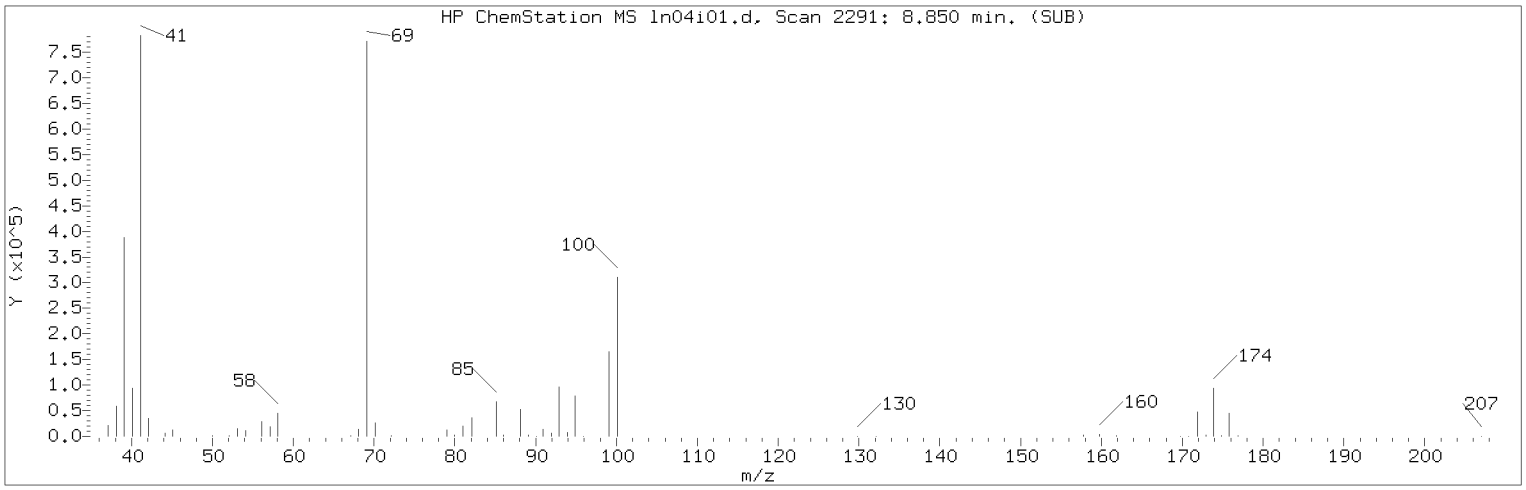
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

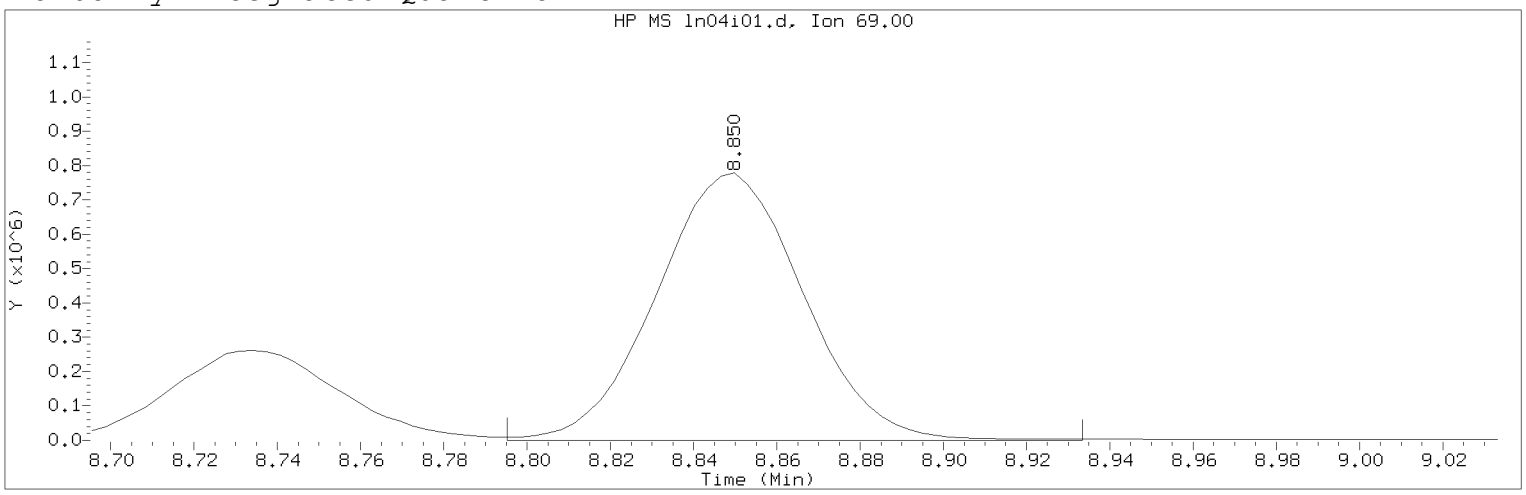
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area : 2429255
On-column Amount (ng) : 7682.9381
Integration start scan : 2101 Integration stop scan: 2199
Y at integration start : 176 Y at integration end: 176

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

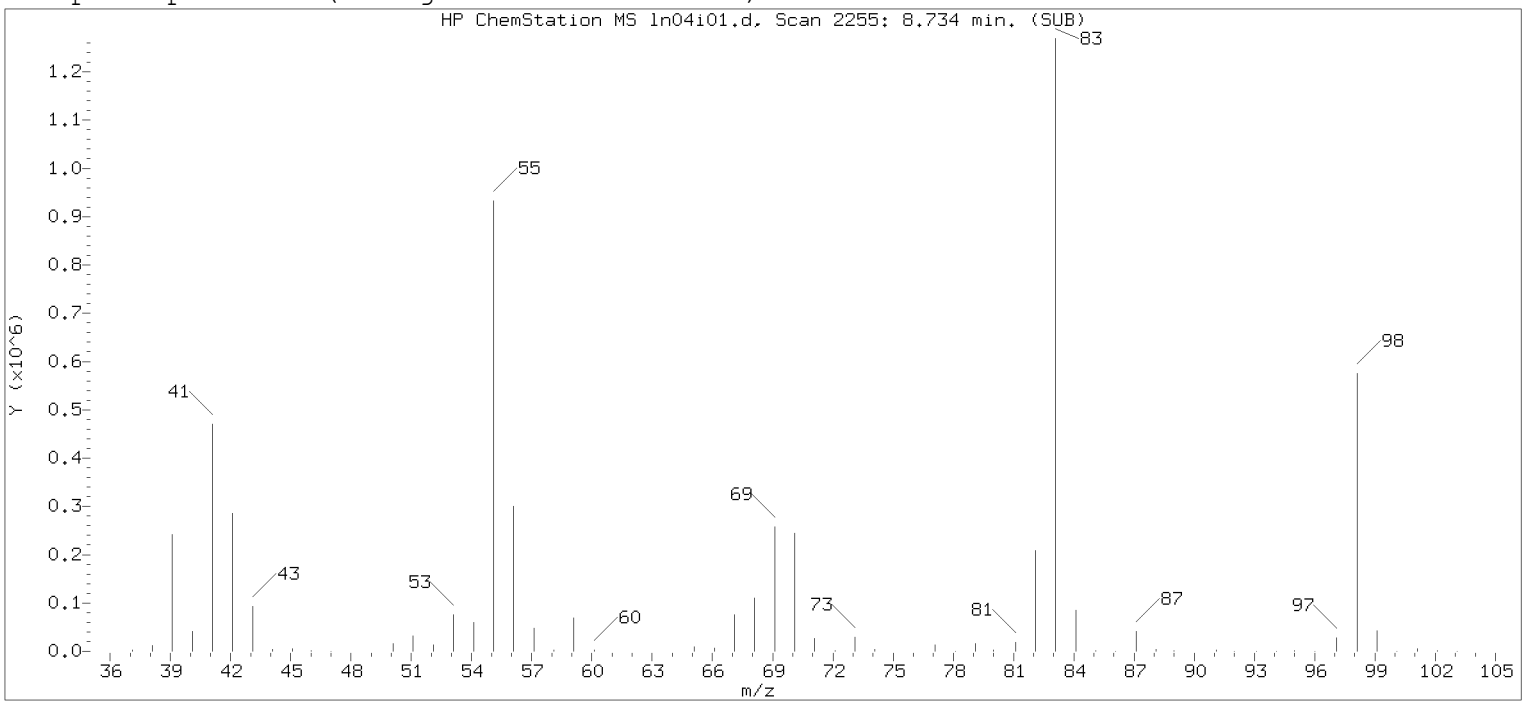
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2291
Retention Time (minutes): 8.850
Quant Ion : 69.00
Area (flag) : 1904896A
On-Column Amount (ng) : 340.2564
Integration start scan : 2273 Integration stop scan: 2316
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

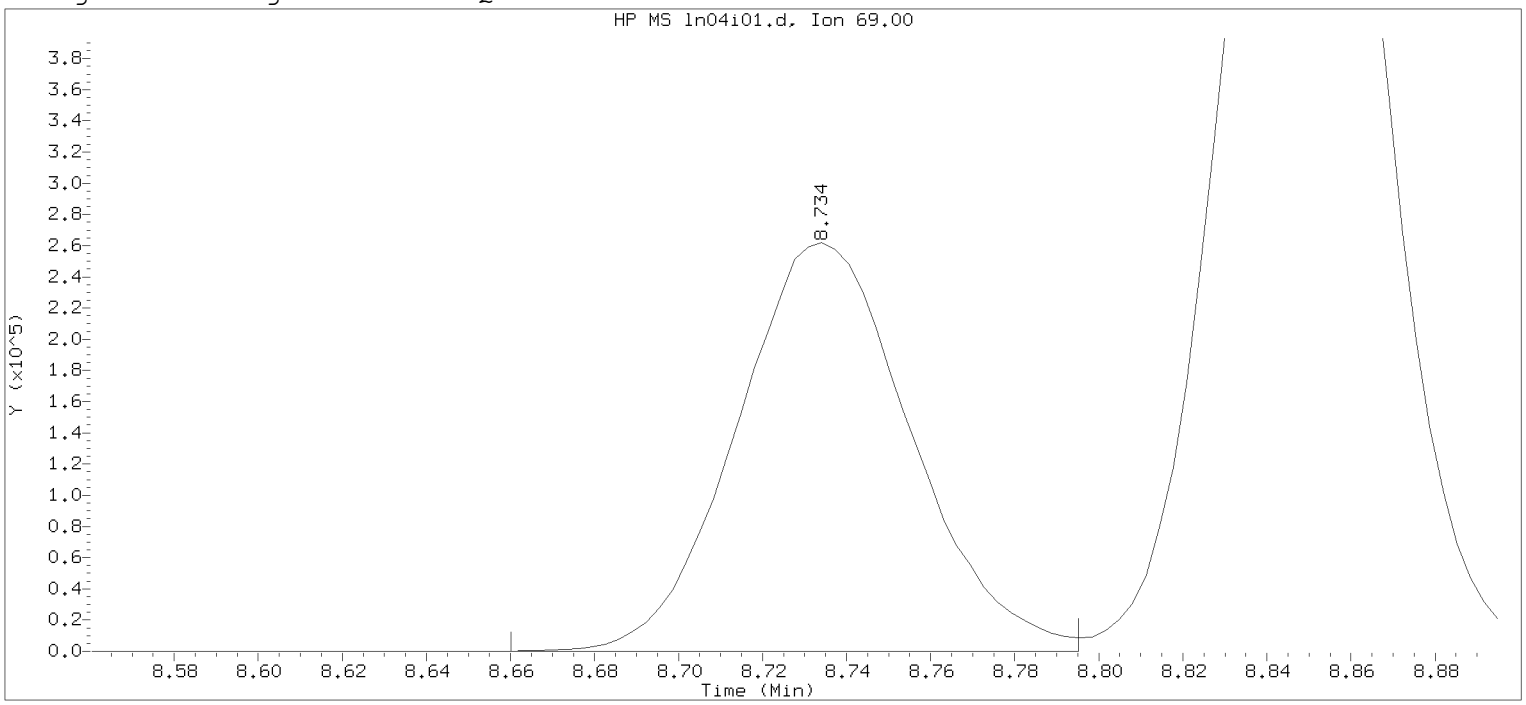
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

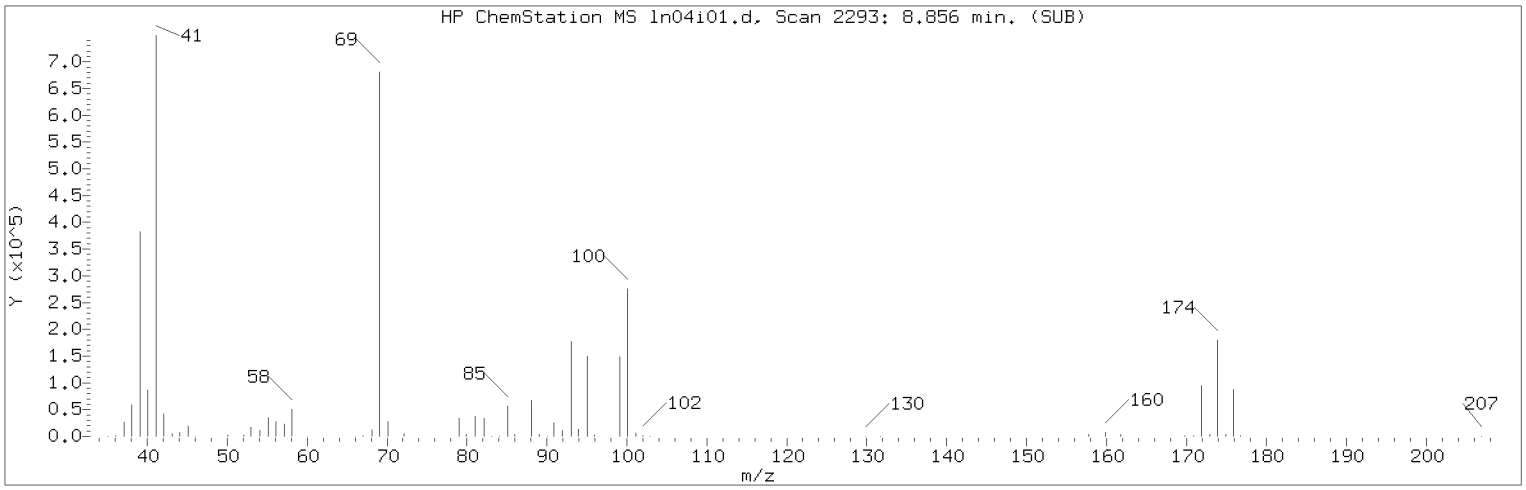
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

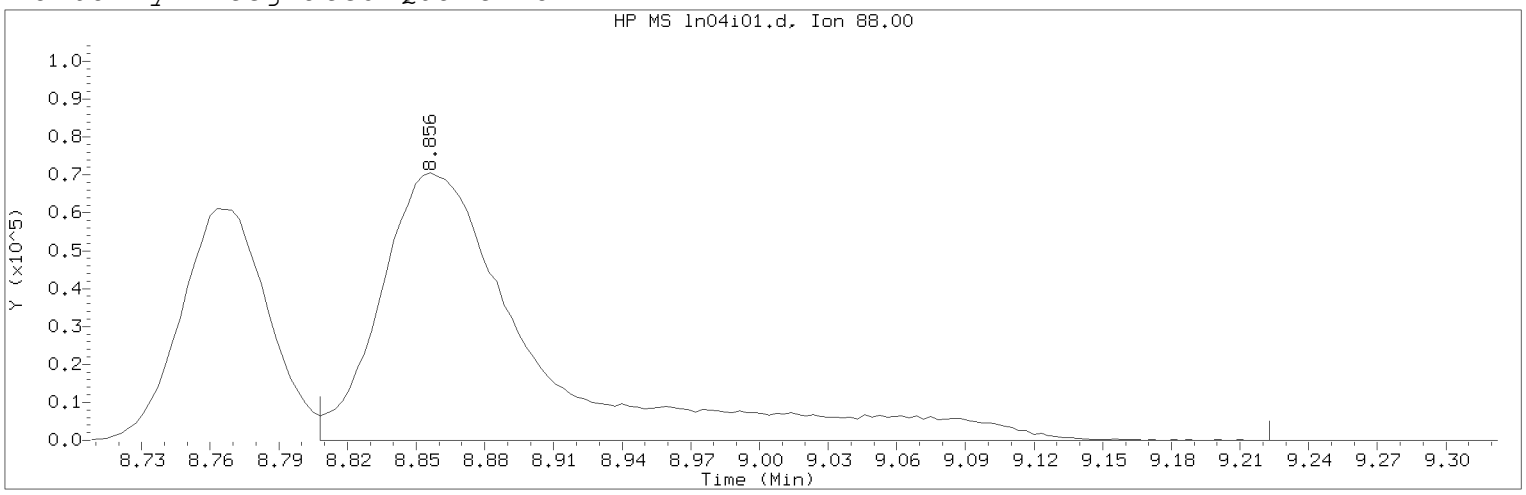
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 752058
On-column Amount (ng) : 311.1363
Integration start scan : 2231 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

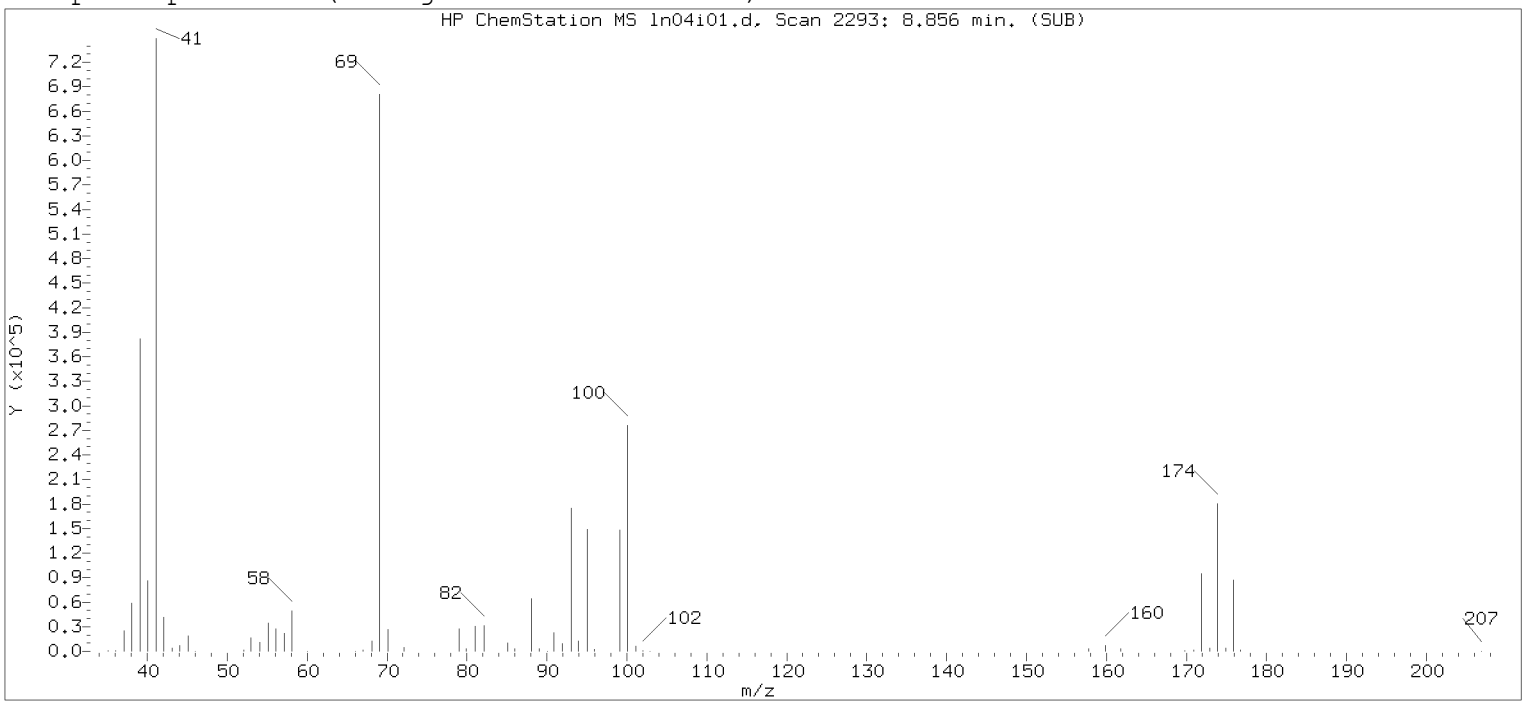
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 338379M
On-Column Amount (ng) : 3968.4208
Integration start scan : 2277 Integration stop scan: 2406
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

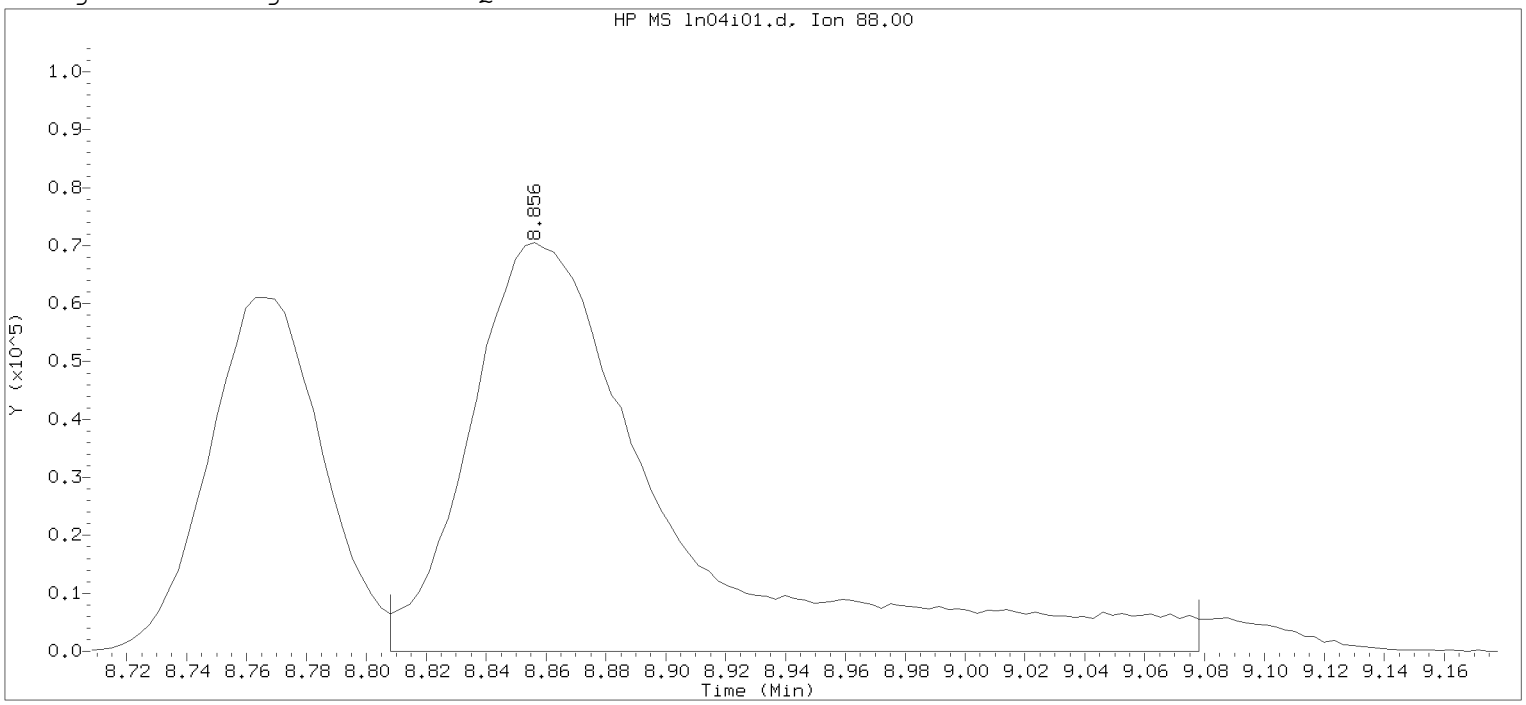
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

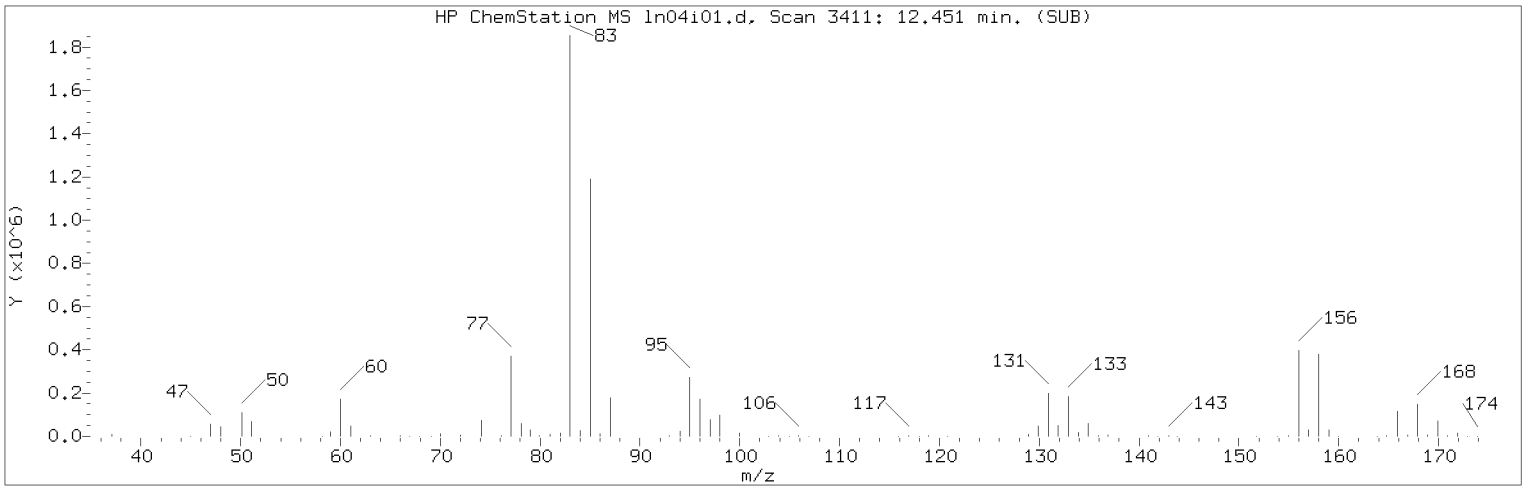
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

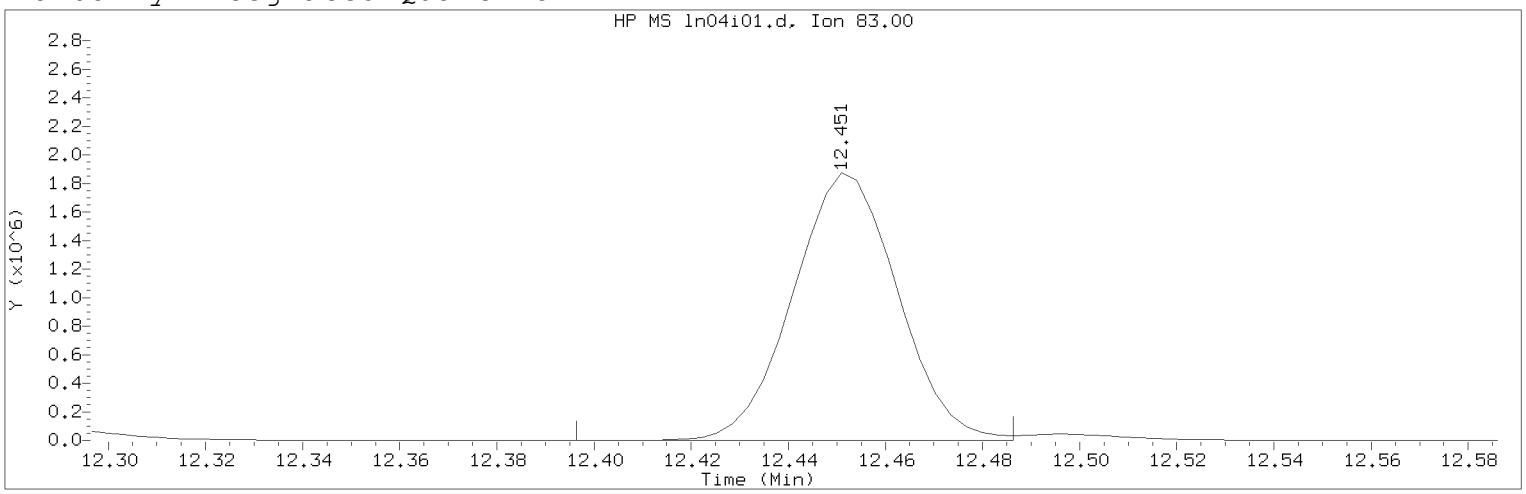
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area : 325164
On-column Amount (ng) : 3803.8575
Integration start scan : 2277 Integration stop scan: 2361
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh00052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

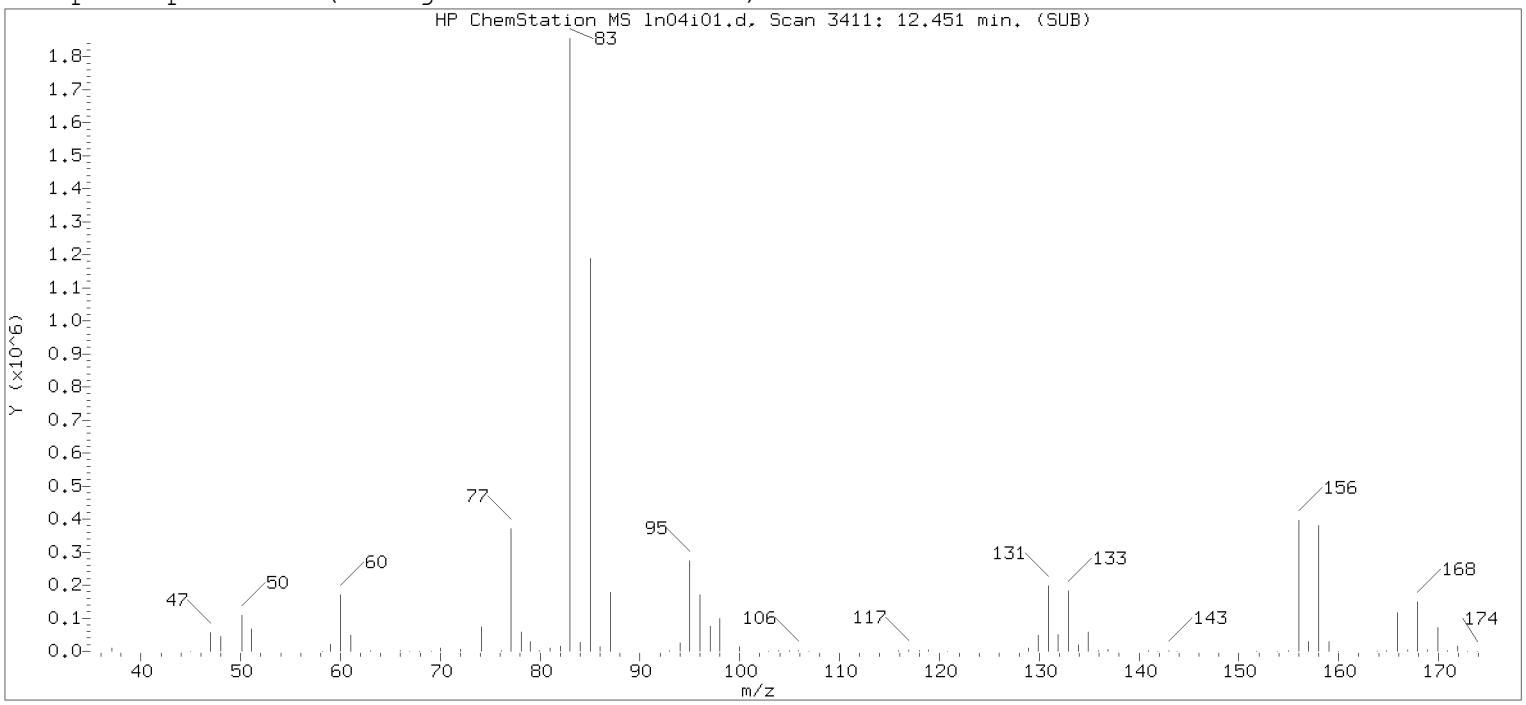
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 2800639M
On-Column Amount (ng) : 310.7054
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

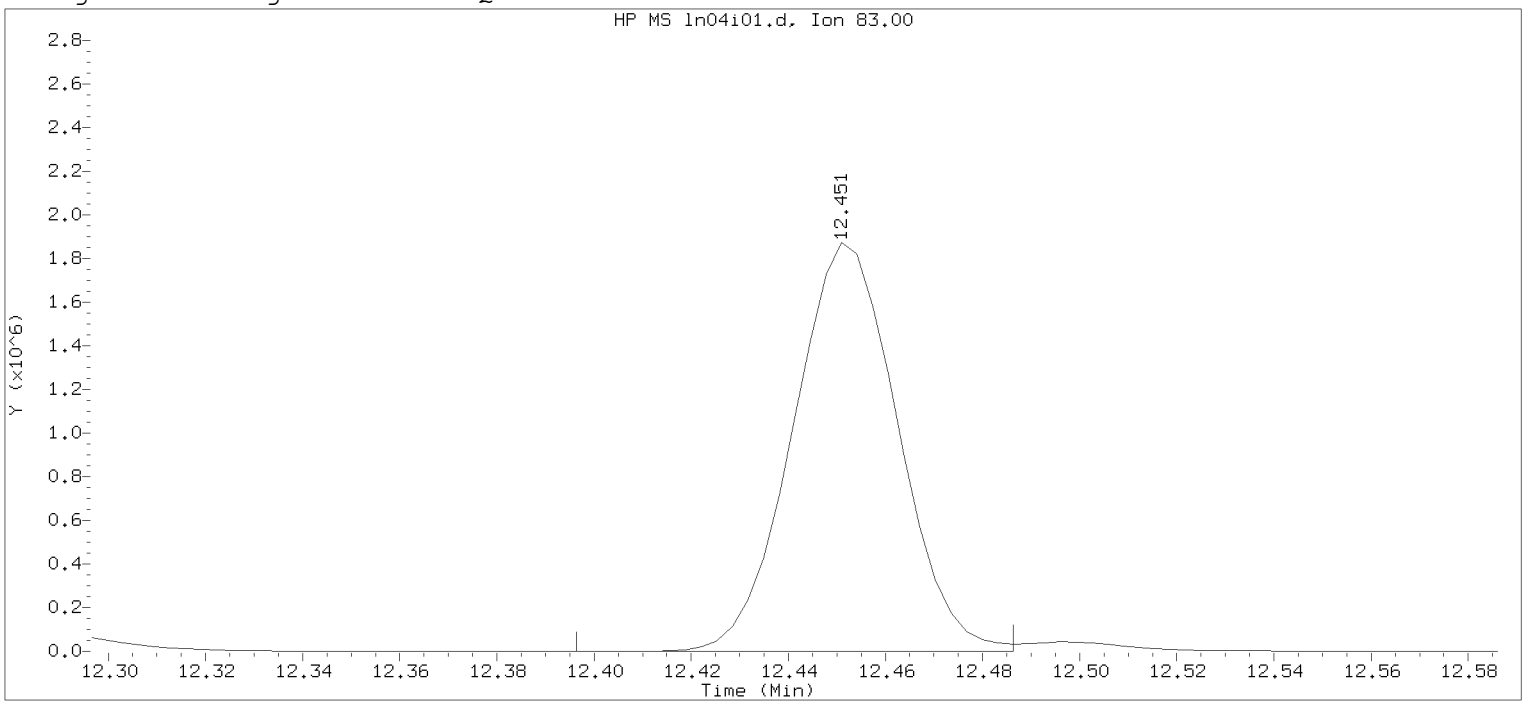
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

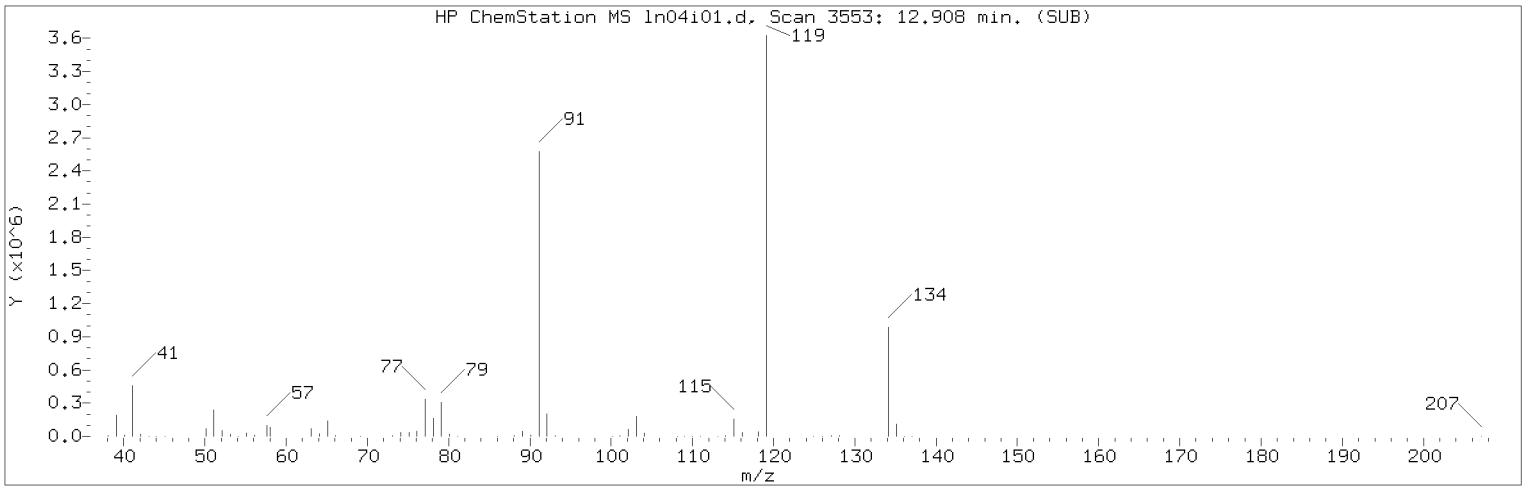
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

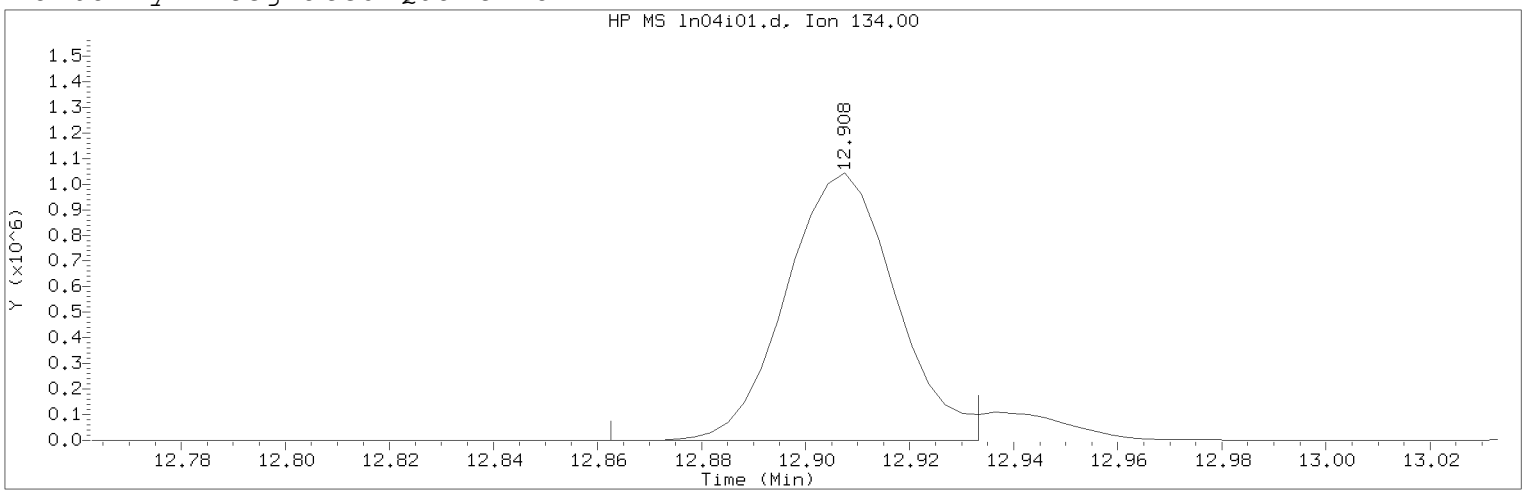
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 2797364
On-column Amount (ng) : 294.0638
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

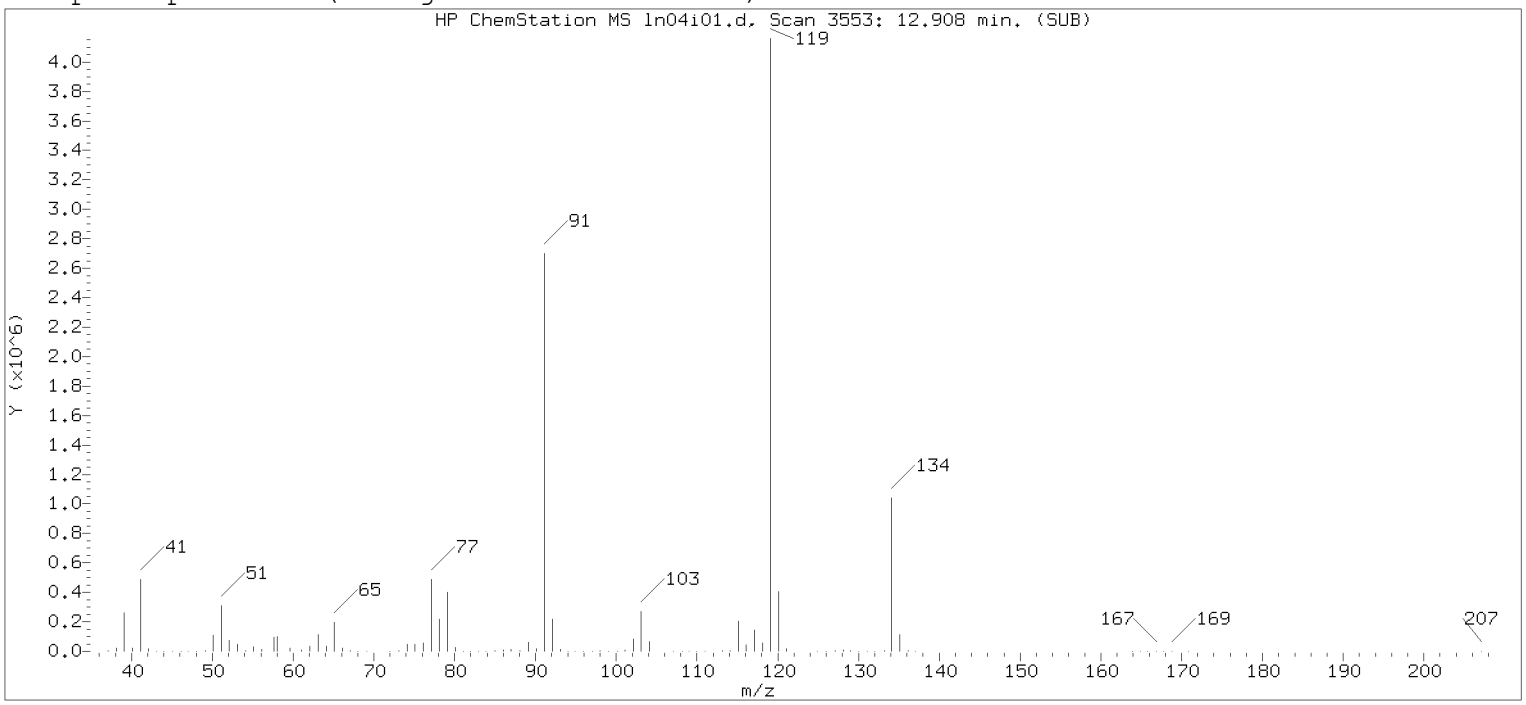
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area (flag) : 1524421M
On-Column Amount (ng) : 323.7167
Integration start scan : 3538 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

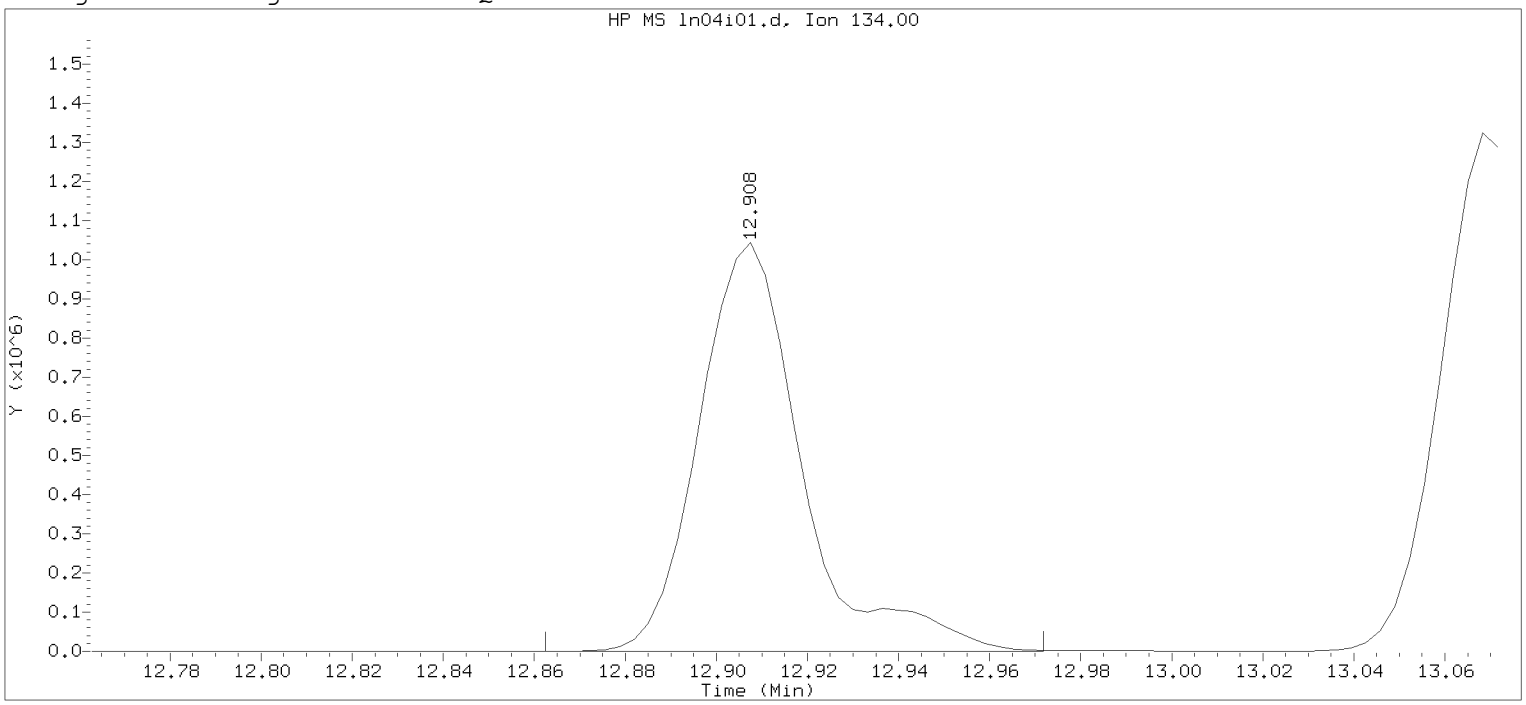
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



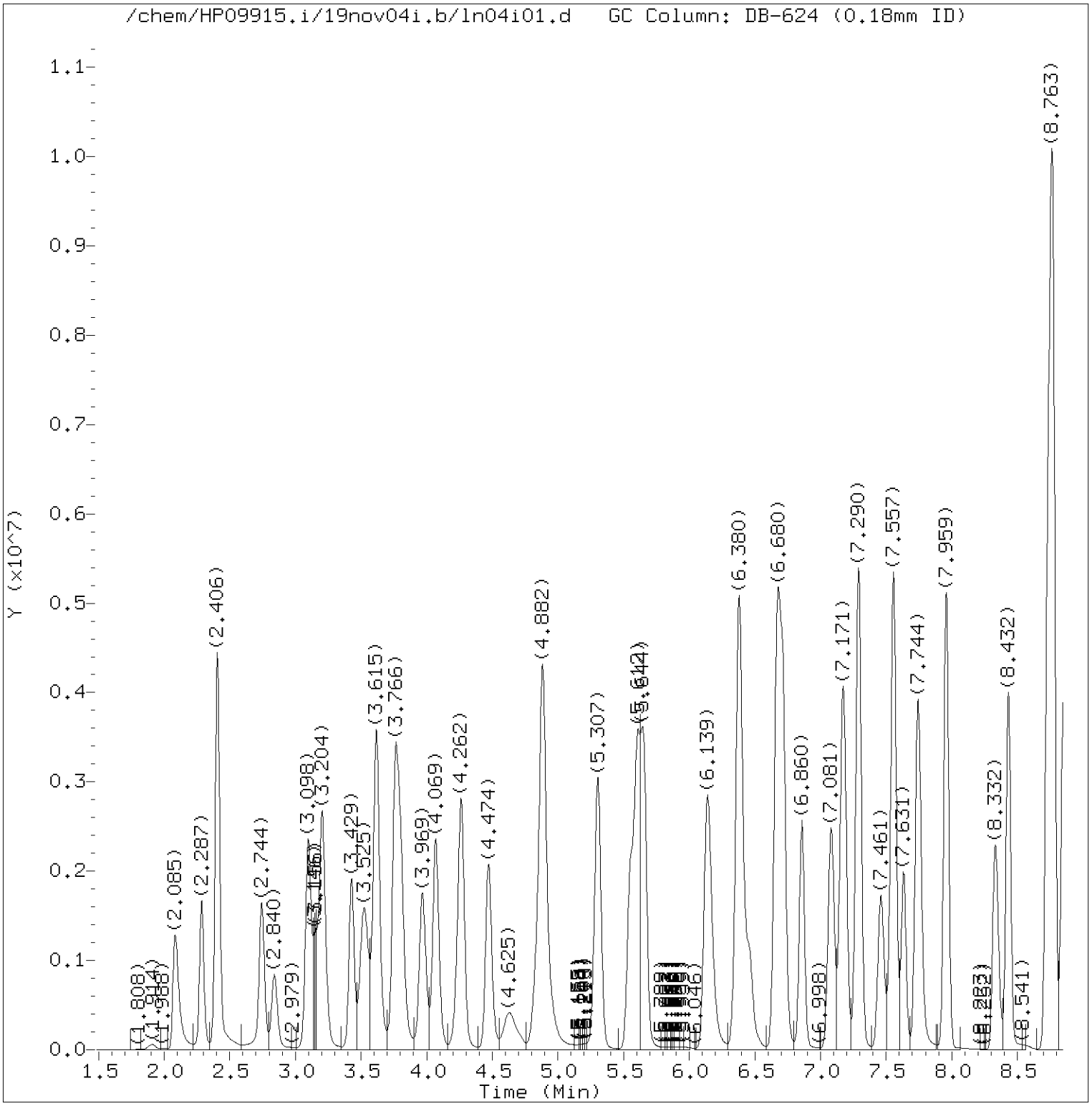
Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area : 1639624
On-column Amount (ng) : 313.1253
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkhowe



Total Ion Chromatogram (TIC)

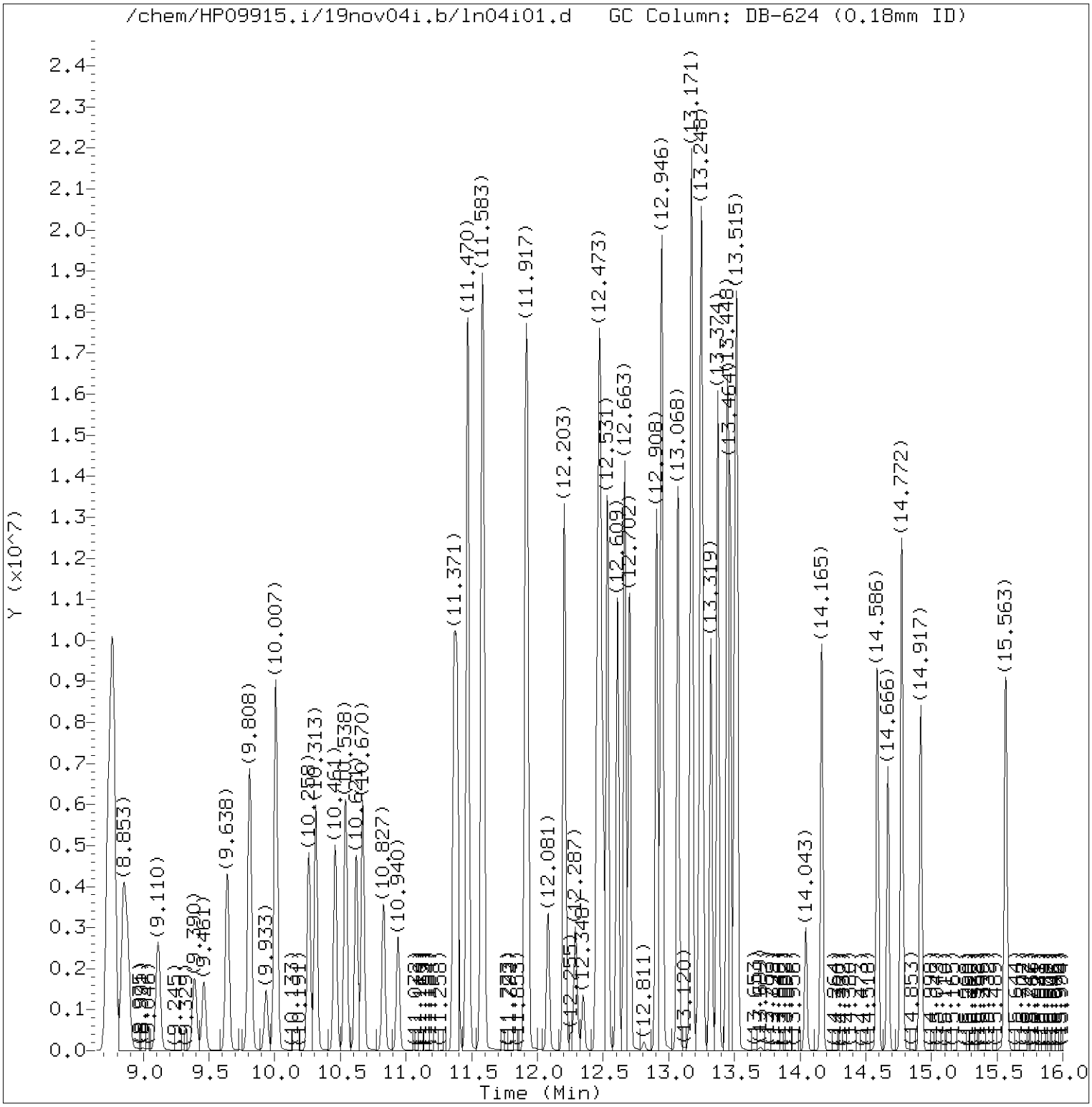
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.085	85	2719746M	347.943
4) Chloromethane	(2)	2.287	50	2403581	319.051
5) 1,3-Butadiene	(2)	2.406	39	1785787M	285.486
6) Vinyl Chloride	(2)	2.406	62	2412855	320.904
8) Bromomethane	(2)	2.744	94	1638575	304.015
9) Chloroethane	(2)	2.837	64	1253478	303.356
10) Dichlorofluoromethane	(2)	3.098	67	2978303M	300.258
12) Trichlorofluoromethane	(2)	3.152	101	2661050	328.734
11) n-Pentane	(2)	3.204	43	2816823	294.455
14) Ethyl ether	(2)	3.429	59	1721693	329.146
15) Freon 123a	(2)	3.525	67	1991616	305.852
16) Acrolein	(1)	3.615	56	5765354	3020.583
17) 1,1-Dichloroethene	(2)	3.760	96	1489890	313.570
17) 1,1-Dichloroethene	(2)	3.757	63	721205	302.767
19) Freon 113	(2)	3.792	101	1732433	319.583
18) Acetone	(1)	3.802	58	531845	621.534
22) Methyl Iodide	(2)	3.966	142	3047145	309.483
21) 2-Propanol	(1)	3.995	45	936919	1523.065
23) Carbon Disulfide	(2)	4.069	76	5676465	317.027
27) Methyl Acetate	(2)	4.239	43	1941315	317.230
25) Allyl Chloride	(2)	4.265	41	2748698	322.482
28) Methylene Chloride	(2)	4.474	84	1745840	308.716
29)*t-Butyl alcohol-d10	(1)	4.503	65	254406M	250.000
30) t-Butyl alcohol	(1)	4.638	59	1641037	1532.140
31) Acrylonitrile	(2)	4.827	53	1039800	315.820
32) trans-1,2-Dichloroethene	(2)	4.885	96	1713357	311.714
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	5505439	305.143
34) n-Hexane	(2)	5.307	57	2863189M	334.811
36) 1,1-Dichloroethane	(2)	5.548	63	3007196	313.618
38) di-Isopropyl ether	(2)	5.609	45	5739955	310.377
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	2776921	322.788
40) Ethyl t-butyl ether	(2)	6.139	59	5425034	302.275
43) 1,2-Dichloroethene (Total)	(2)		96	3646040	624.977
44) 2-Butanone	(2)	6.364	43	2642793	625.317
42) cis-1,2-Dichloroethene	(2)	6.380	96	1932683	313.263
45) 2,2-Dichloropropane	(2)	6.397	77	2377411	318.945
47) Propionitrile	(1)	6.458	54	2126389	1593.336
48) Methacrylonitrile	(2)	6.670	67	2858148	804.768

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.708	128	1075154	328.655
50) Tetrahydrofuran	(1)	6.718	71	758236	628.991
51) Chloroform	(2)	6.860	83	2916299	317.988
52)$Dibromofluoromethane	(2)	7.075	113	276322	50.424
52)$Dibromofluoromethane	(2)	7.075	111	279197	49.969
53) 1,1,1-Trichloroethane	(2)	7.081	97	2560601	327.130
54) Cyclohexane	(2)	7.171	56	3429211	327.611
54) Cyclohexane	(2)	7.171	84	2984908	328.282
54) Cyclohexane	(2)	7.171	69	1068201	329.937
56) Carbon Tetrachloride	(2)	7.287	117	2252864	339.350
55) 1,1-Dichloropropene	(2)	7.294	75	2434619	321.125
58) Isobutyl Alcohol	(1)	7.461	41	1382486	3835.573
57)$1,2-Dichloroethane-d4	(2)	7.528	102	68480	49.033
57)$1,2-Dichloroethane-d4	(2)	7.532	65	307306	49.375
57)$1,2-Dichloroethane-d4	(2)	7.528	104	44002	49.326
60) Benzene	(2)	7.557	78	7094466	311.169
61) 1,2-Dichloroethane	(2)	7.634	62	2222342	303.049
61) 1,2-Dichloroethane	(2)	7.634	98	228988	315.535
65) t-Amyl methyl ether	(2)	7.744	73	5421278	300.945
67) n-Heptane	(2)	7.959	43	2592531MA	324.518
66)*Fluorobenzene	(2)	7.959	96	1120873	50.000
69) n-Butanol	(1)	8.332	56	2465385M	7947.068
71) Trichloroethene	(2)	8.432	95	1841720	320.821
72) Methylcyclohexane	(2)	8.734	83	3568410	335.054
72) Methylcyclohexane	(2)	8.734	98	1632993	338.844
73) 1,2-Dichloropropane	(2)	8.769	63	1825943	315.397
76) Methyl Methacrylate	(2)	8.850	69	1904896A	340.256
75) 1,4-Dioxane	(1)	8.856	88	338379M	3968.421
74) Dibromomethane	(2)	8.879	93	1210939	323.274
78) Bromodichloromethane	(2)	9.113	83	2314651	344.351
79) 2-Nitropropane	(2)	9.390	41	1438925	706.755
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	926413	372.584
81) cis-1,3-Dichloropropene	(2)	9.638	75	3074664	344.402
82) 4-Methyl-2-pentanone	(2)	9.808	43	5422938	607.899
83)$Toluene-d8	(3)	9.933	98	1156351	49.563
83)$Toluene-d8	(3)	9.933	100	751534	49.726
88) Toluene	(3)	10.007	92	4532879	309.894
90) 1,3-Dichloropropene (total)	(3)		100	5974636	693.659

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	2899972	349.257
91) Ethyl Methacrylate	(3)	10.313	69	3356305	332.603
92) 1,1,2-Trichloroethane	(3)	10.461	97	1768710	318.935
93) Tetrachloroethene	(3)	10.541	166	1990565	321.327
94) 1,3-Dichloropropane	(3)	10.621	76	3006585	317.532
96) 2-Hexanone	(3)	10.670	43	3998423	593.616
97) Dibromochloromethane	(3)	10.827	129	2037523	358.670
99) 1,2-Dibromoethane	(3)	10.940	107	1987783	330.088
100)*Chlorobenzene-d5	(3)	11.361	117	891668	50.000
101) 1-Chlorohexane	(3)	11.364	91	2458057	312.814
102) Chlorobenzene	(3)	11.387	112	5140609	310.783
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	1789998	328.446
104) Ethylbenzene	(3)	11.470	91	8606821	307.854
106) m+p-Xylene	(3)	11.583	106	6690837	608.359
108) Xylene (Total)	(3)		106	9979970	911.130
107) o-Xylene	(3)	11.908	106	3289133	302.771
109) Styrene	(3)	11.924	104	5647939	314.619
110) Bromoform	(3)	12.081	173	1534520	361.500
111) Isopropylbenzene	(3)	12.203	105	8466138	310.714
112) Cyclohexanone	(1)	12.287	55	1351186	4046.080
114)$4-Bromofluorobenzene	(3)	12.348	95	440049	49.810
114)$4-Bromofluorobenzene	(3)	12.348	174	362553	49.502
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	2800639M	310.705
115) Bromobenzene	(4)	12.467	156	2234066	311.517
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	2150976	773.637
117) 1,2,3-Trichloropropane	(4)	12.499	110	866230	313.172
119) n-Propylbenzene	(4)	12.531	91	9654812	308.142
120) 2-Chlorotoluene	(4)	12.609	126	2098494	315.266
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	7238022	317.873
121) 4-Chlorotoluene	(4)	12.702	126	2155793	311.148
124) tert-Butylbenzene	(4)	12.908	134	1524421M	323.717
125) Pentachloroethane	(4)	12.940	167	1461833	360.511
126) 1,2,4-Trimethylbenzene	(4)	12.949	105	7469187	311.236
127) sec-Butylbenzene	(4)	13.068	105	8682126	308.971
129) 1,3-Dichlorobenzene	(4)	13.168	146	3858953	292.822
130) p-Isopropyltoluene	(4)	13.174	119	7289488	299.854
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	477171	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	4013510	293.777

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	7915203	311.364
135) Benzyl Chloride	(4)	13.319	91	6484944	336.931
136) 1,3-Diethylbenzene	(4)	13.374	119	4897725	309.573
141) Diethylbenzene (total)	(4)		100	13982971	913.975
137) 1,4-Diethylbenzene	(4)	13.444	119	5013123	299.077
139) n-Butylbenzene	(4)	13.467	92	3608595	290.316
138) 1,2-Dichlorobenzene	(4)	13.502	146	3859125	296.761
140) 1,2-Diethylbenzene	(4)	13.518	119	4072123	305.325
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	669008	339.050
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	2855960	285.855
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	2681523	276.030
147) Hexachlorobutadiene	(4)	14.670	225	1157297	252.311
148) Naphthalene	(4)	14.772	128	9186333	294.145
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	2488608	263.270
150) 2-Methylnaphthalene	(4)	15.563	142	4666682	242.655

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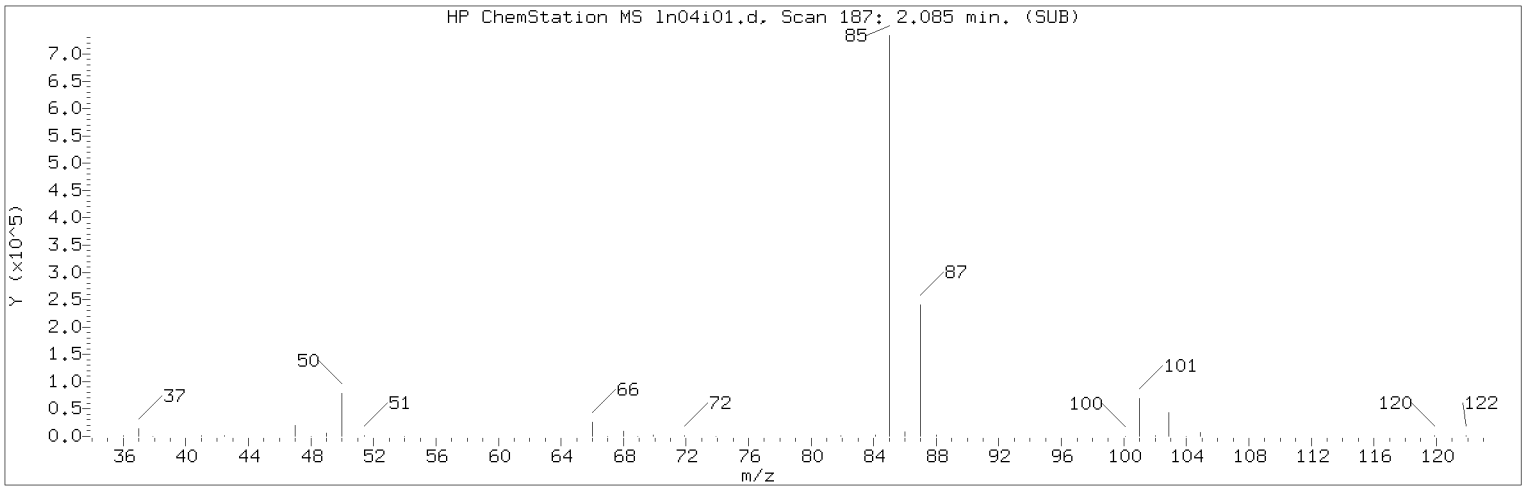
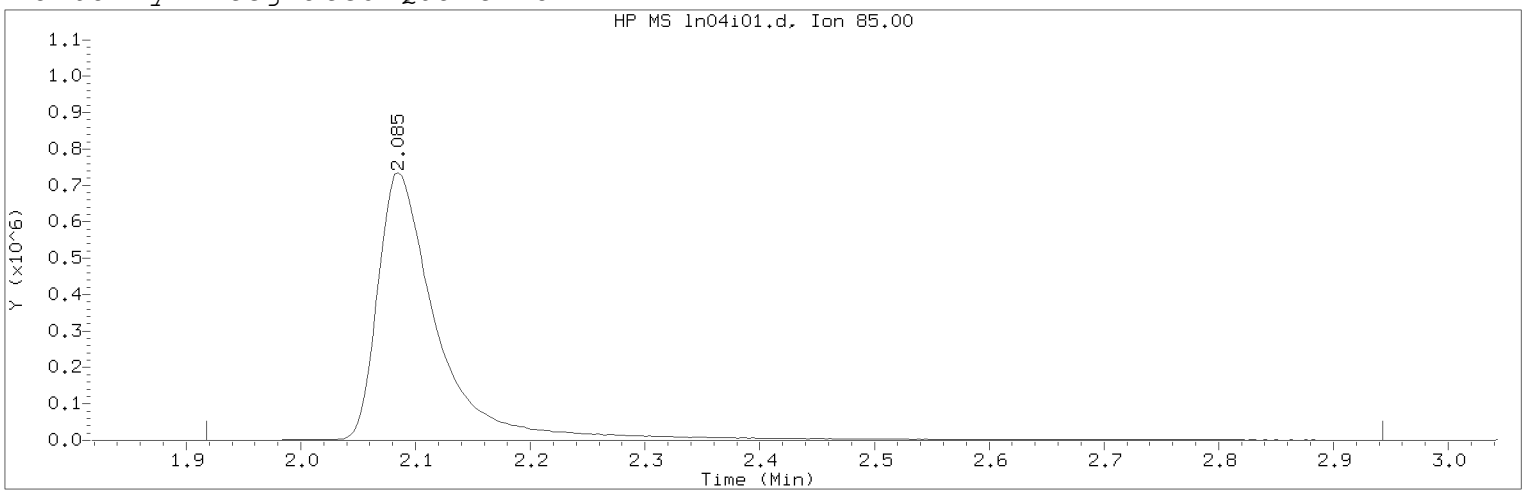
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

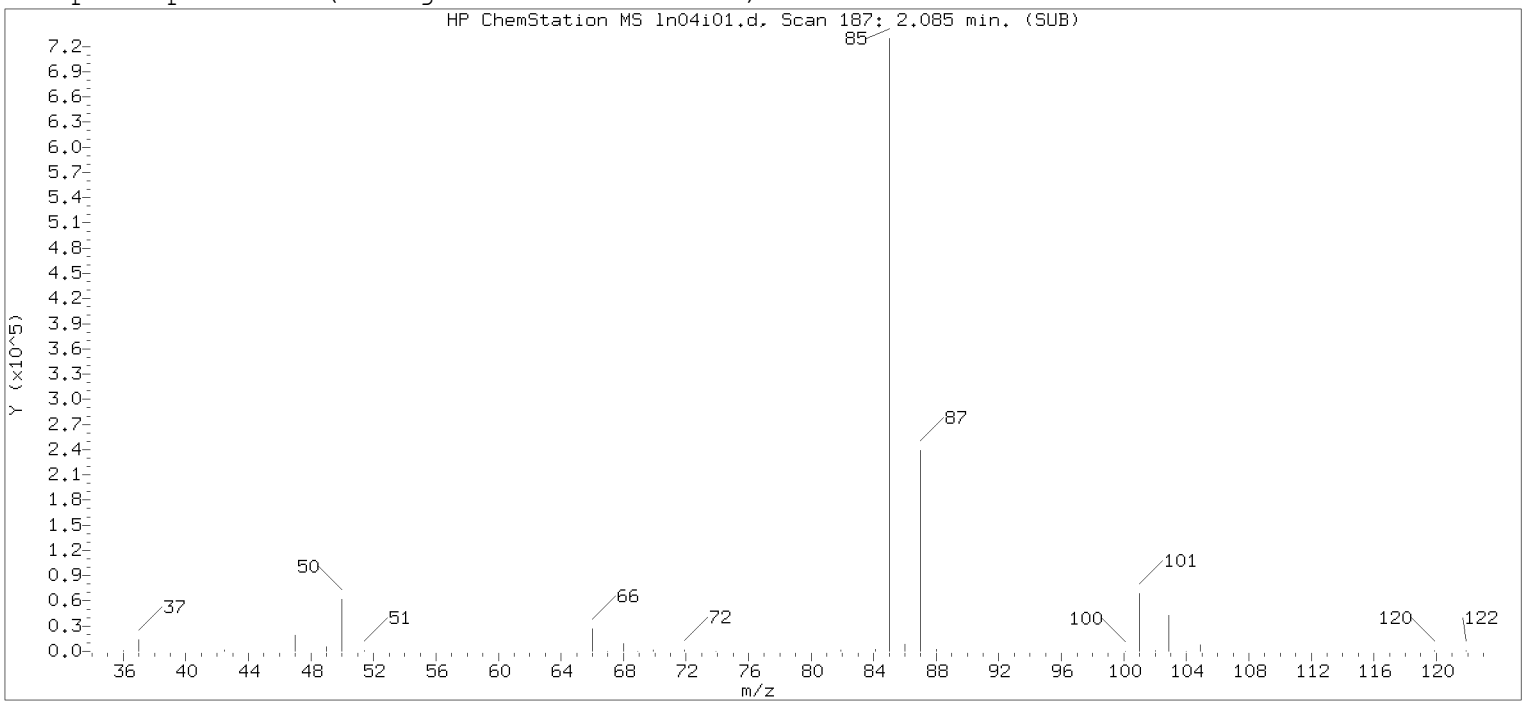
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area (flag) : 2719746M
On-Column Amount (ng) : 347.9426
Integration start scan : 134 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

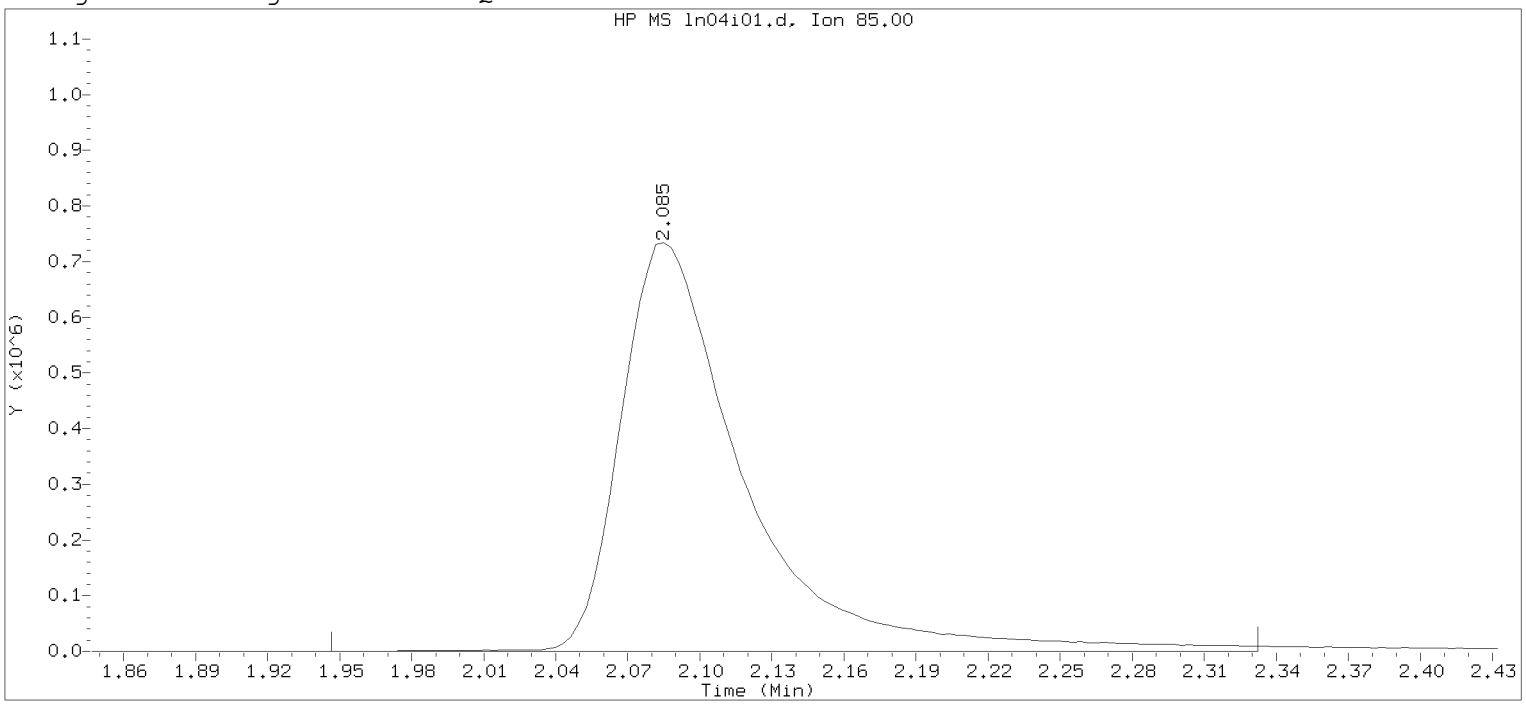
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

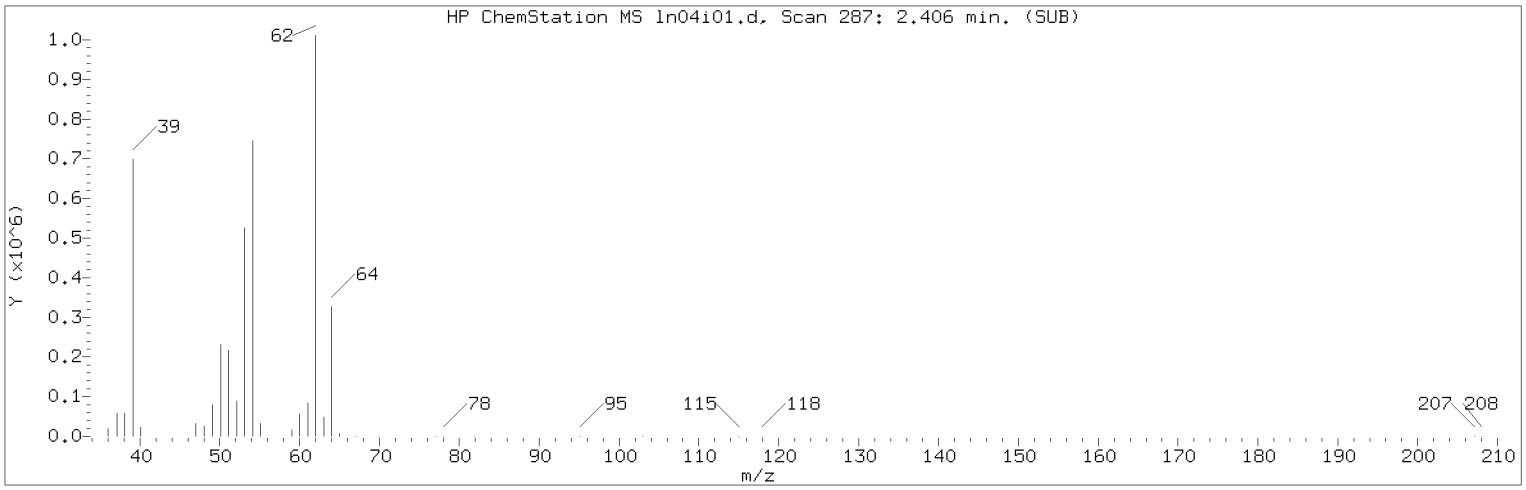
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

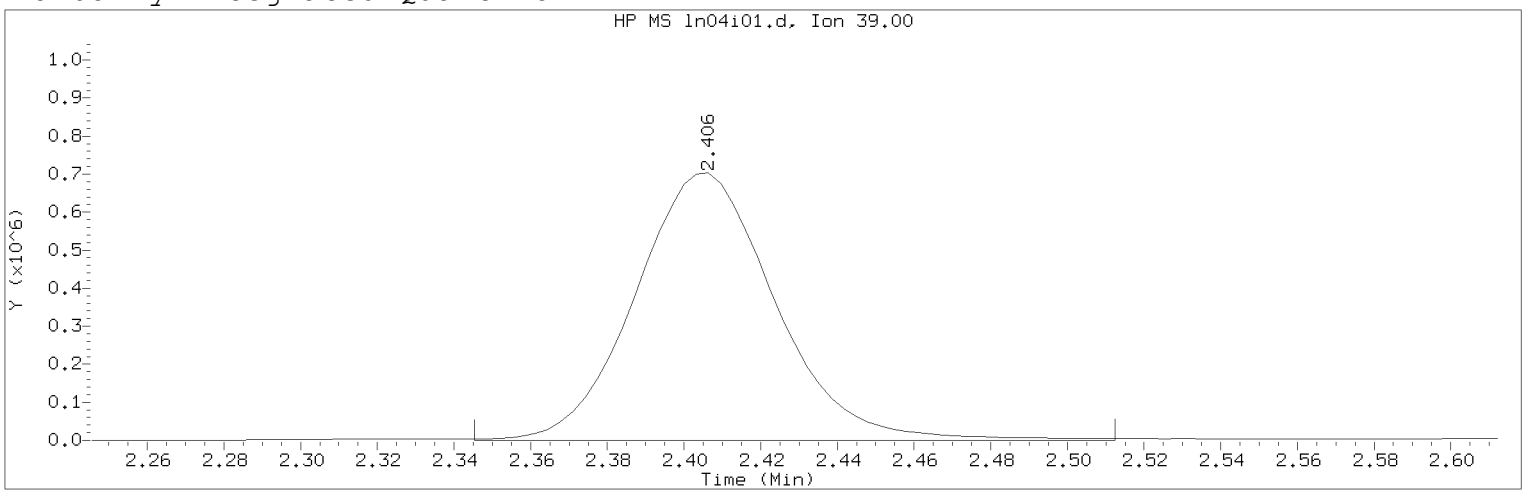
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area : 2624212
On-column Amount (ng) : 308.6520
Integration start scan : 143 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

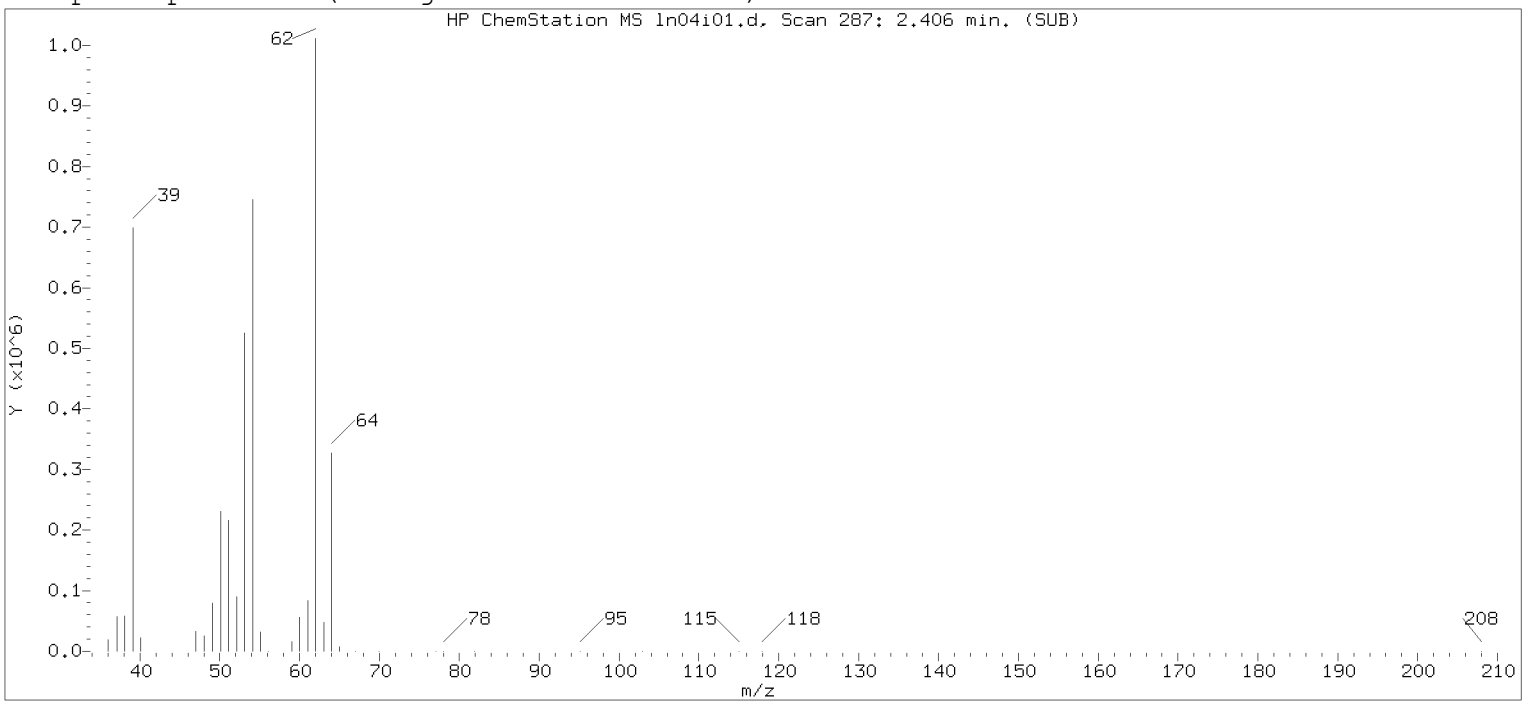
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 1785787M
On-Column Amount (ng) : 285.4858
Integration start scan : 267 Integration stop scan: 319
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

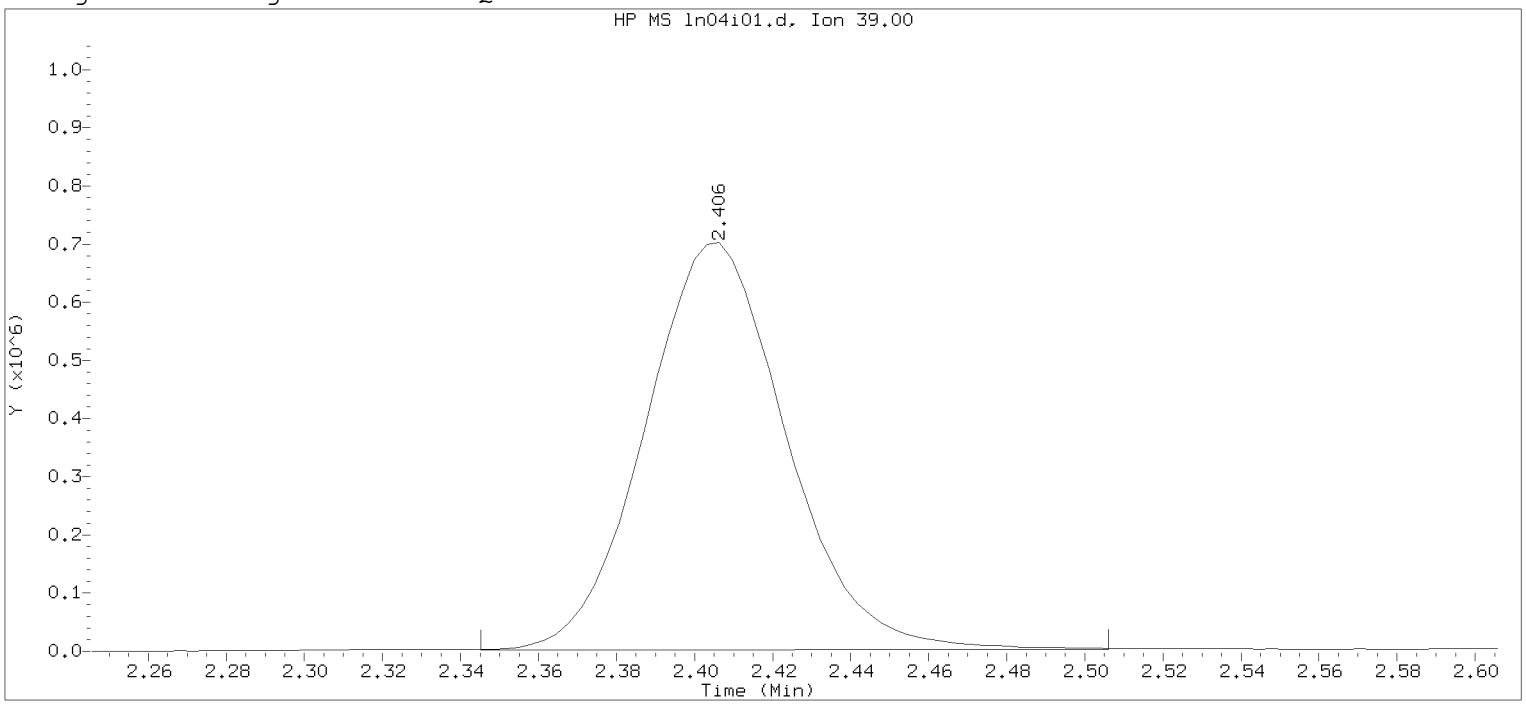
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 1755596
On-column Amount (ng) : 295.0708
Integration start scan : 267 Integration stop scan: 317
Y at integration start : 2196 Y at integration end: 3553

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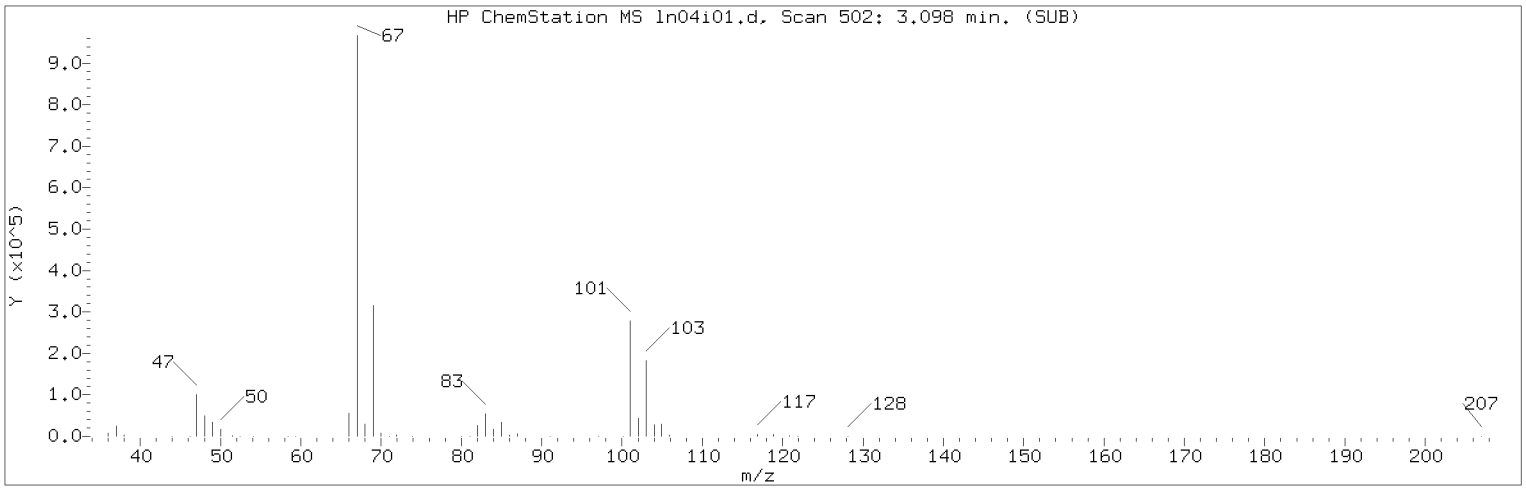
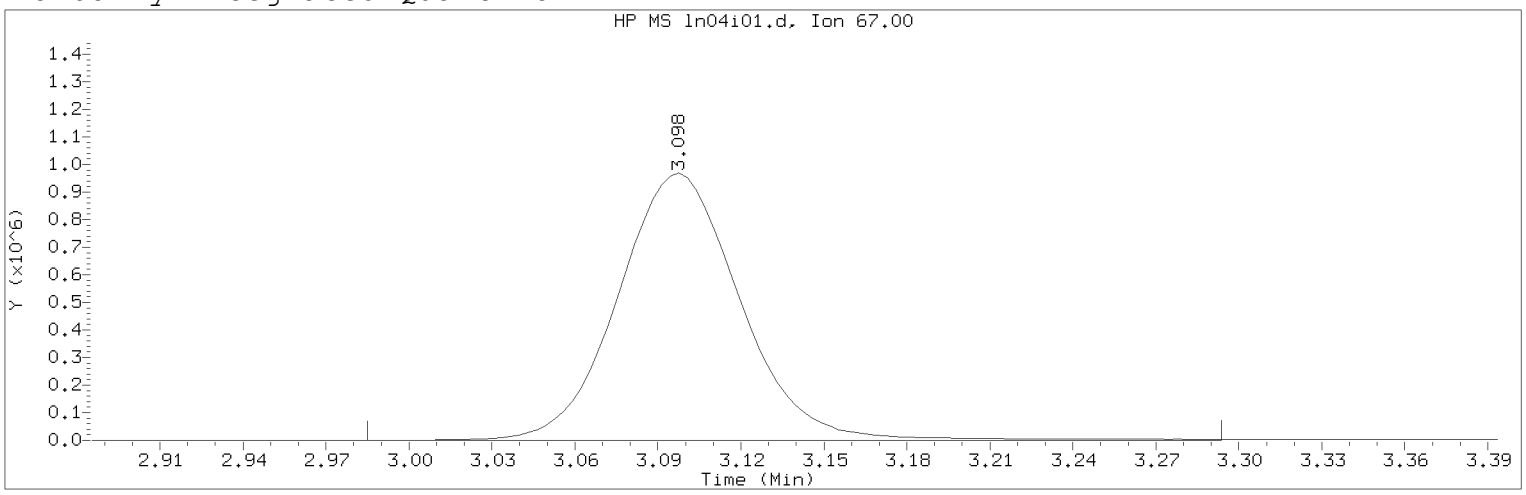
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

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Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

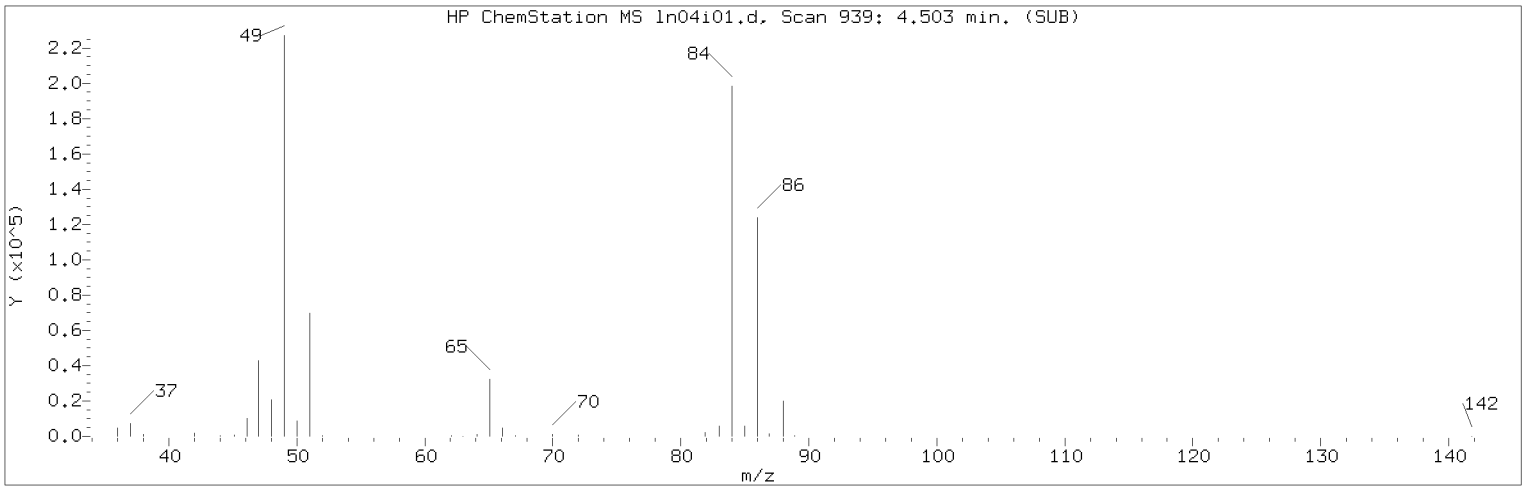
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 502
Retention Time (minutes): 3.098
Quant Ion : 67.00
Area (flag) : 2978303M
On-Column Amount (ng) : 300.2583
Integration start scan : 466 Integration stop scan: 562
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

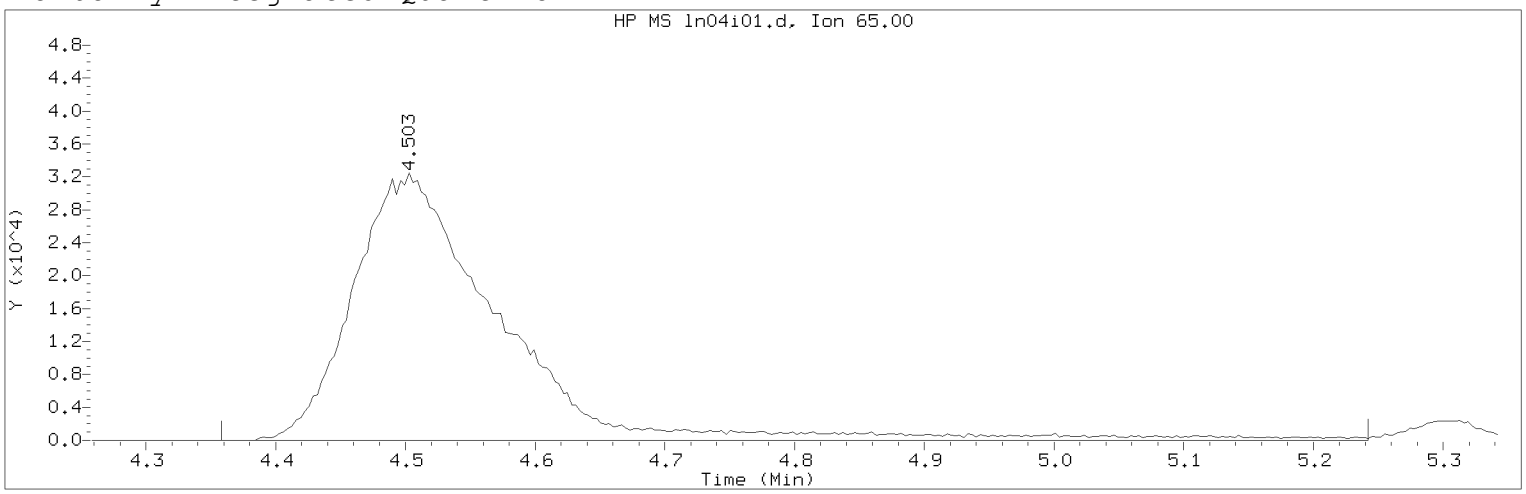
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

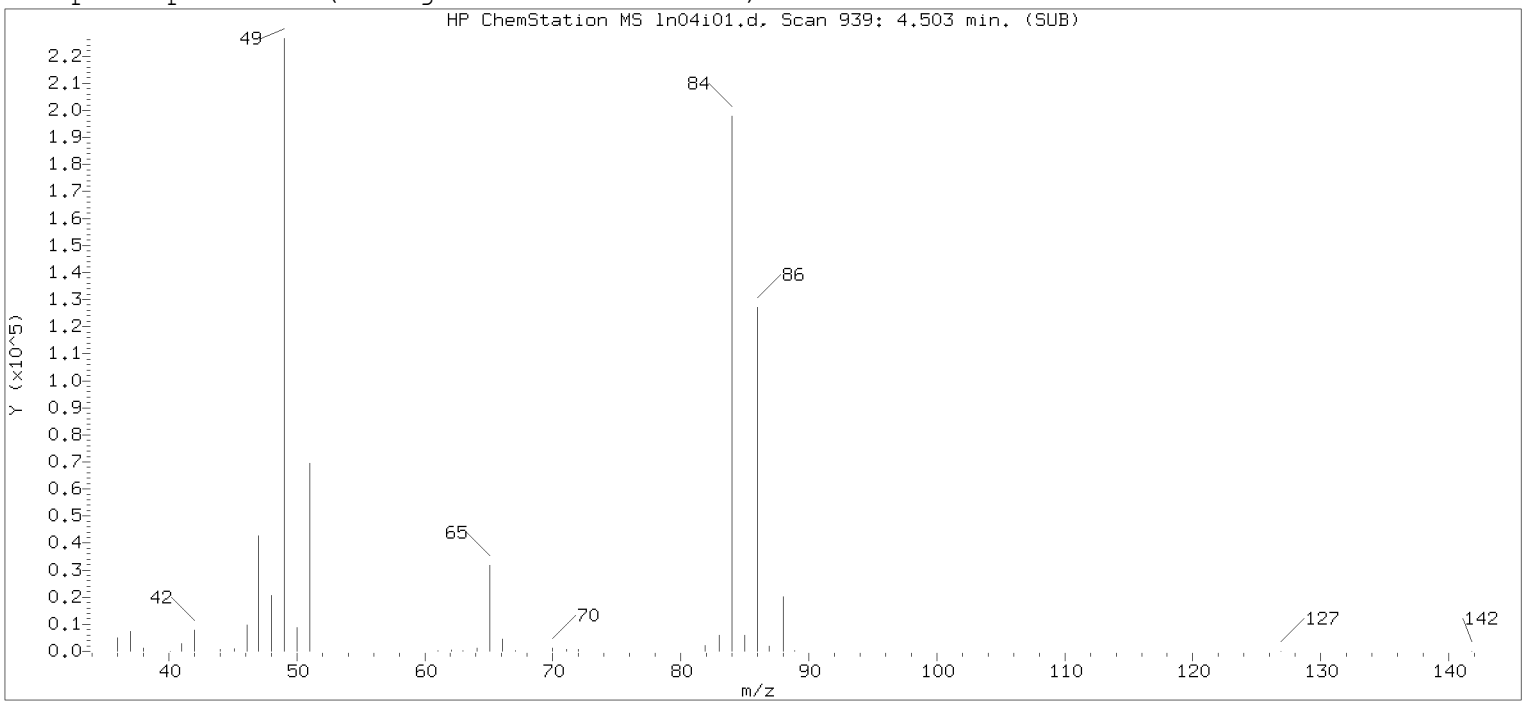
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area (flag) : 254406M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1168
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

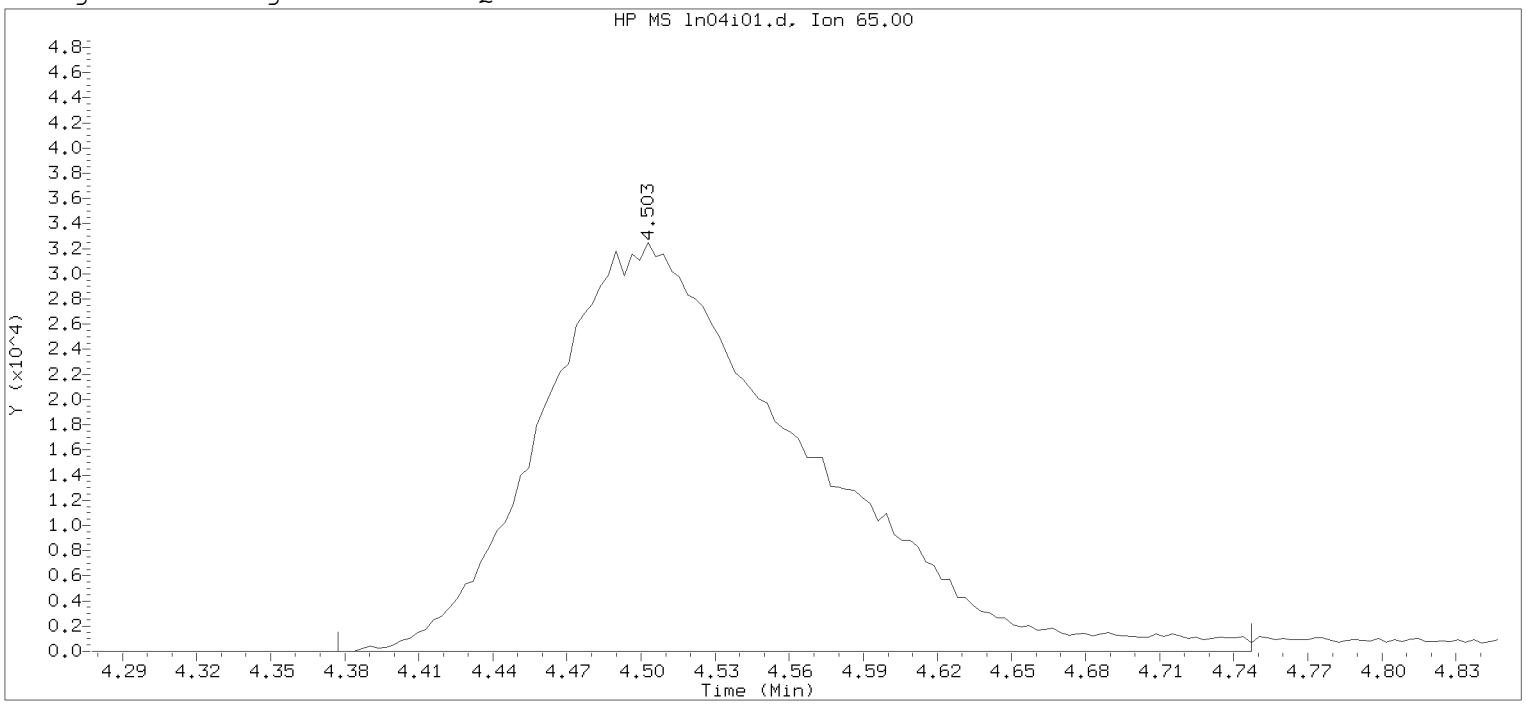
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

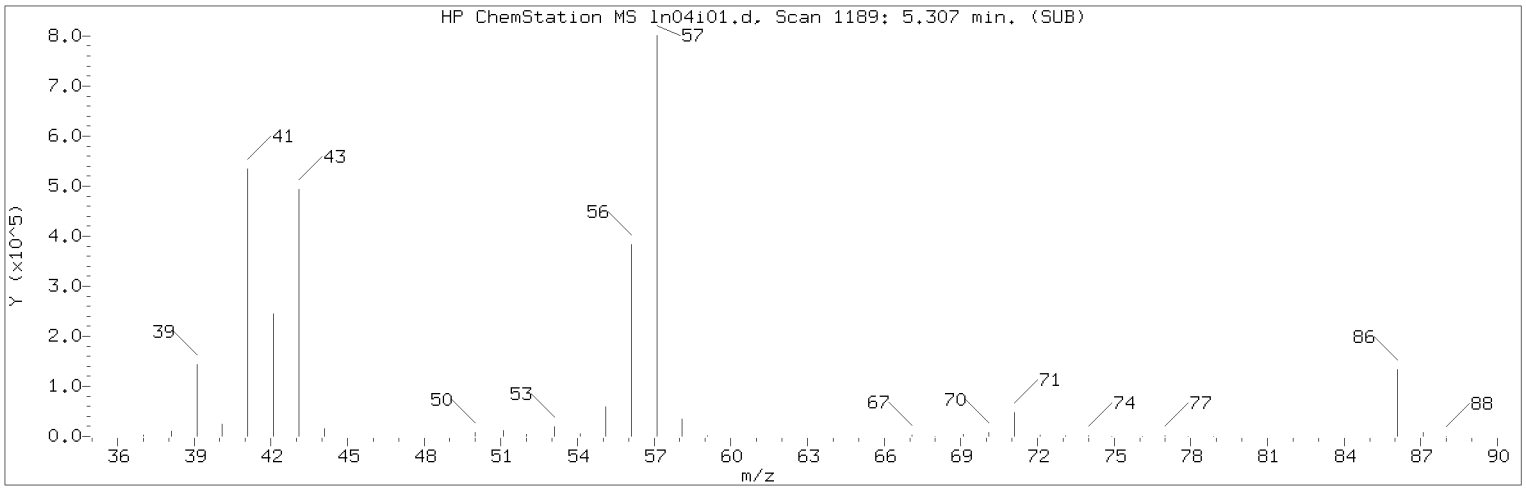
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

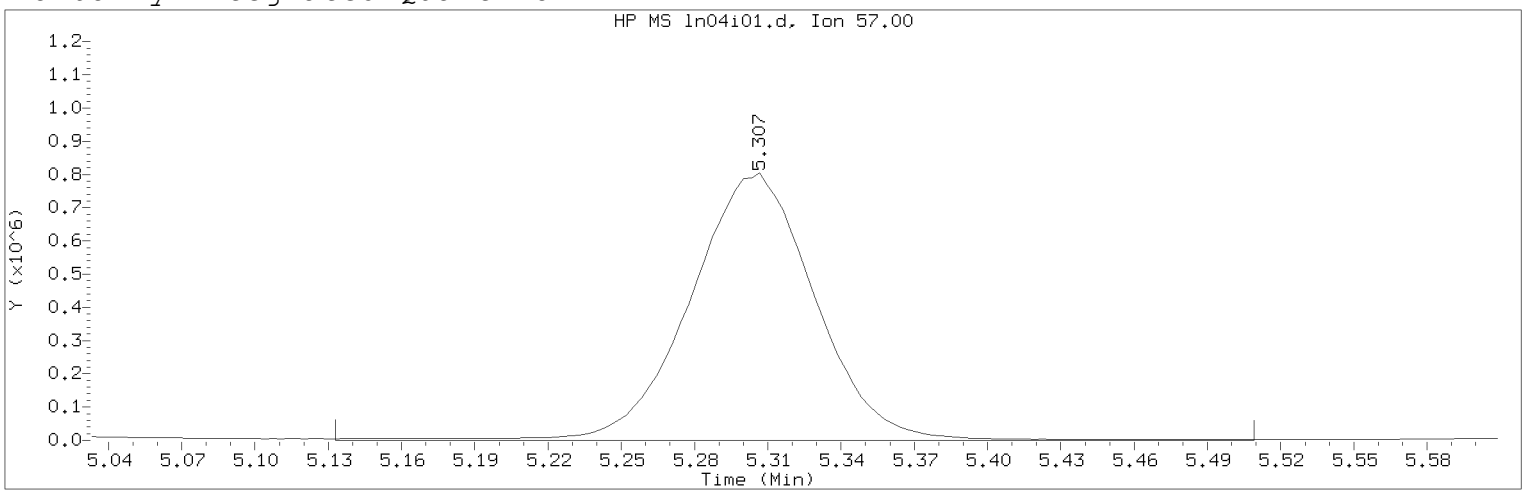
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area : 237264
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

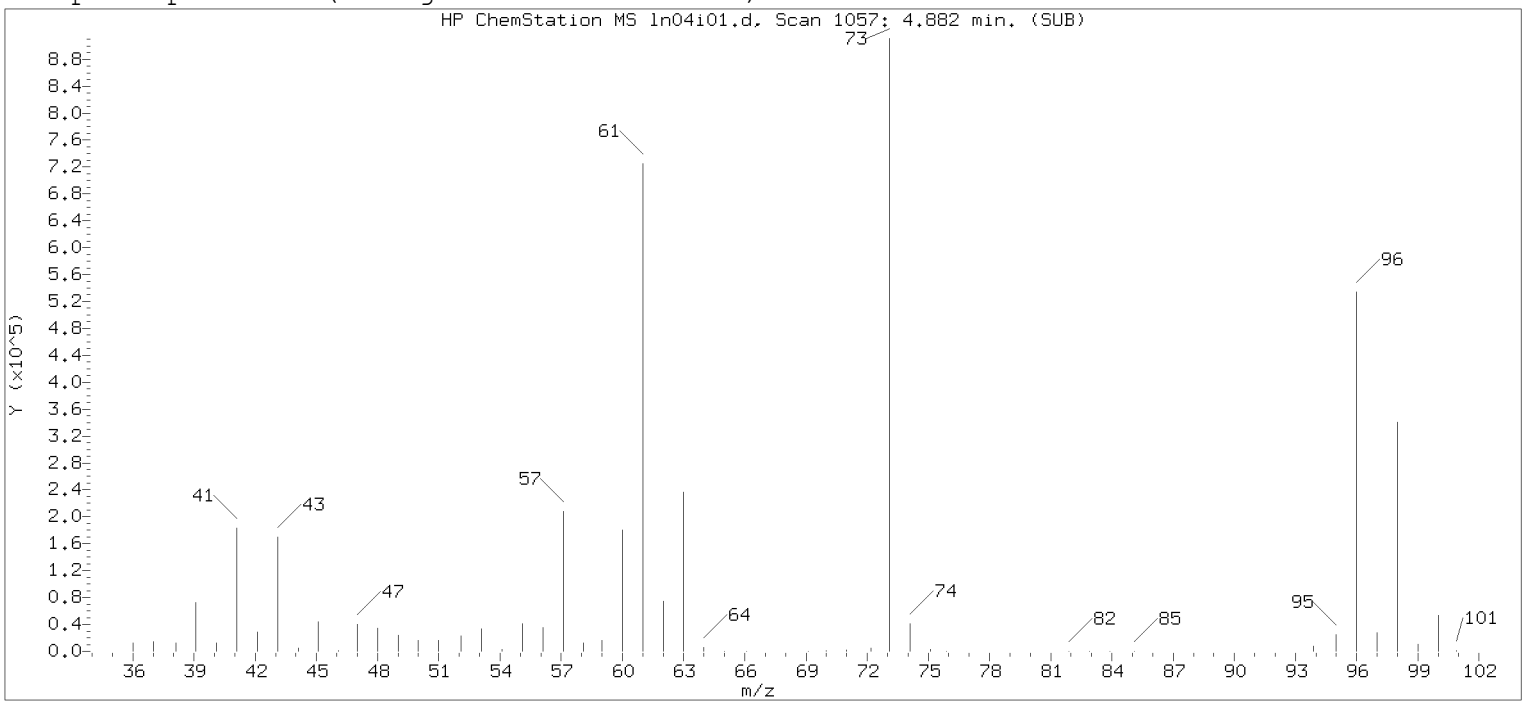
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1189
Retention Time (minutes): 5.307
Quant Ion : 57.00
Area (flag) : 2863189M
On-Column Amount (ng) : 334.8105
Integration start scan : 1134 Integration stop scan: 1251
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

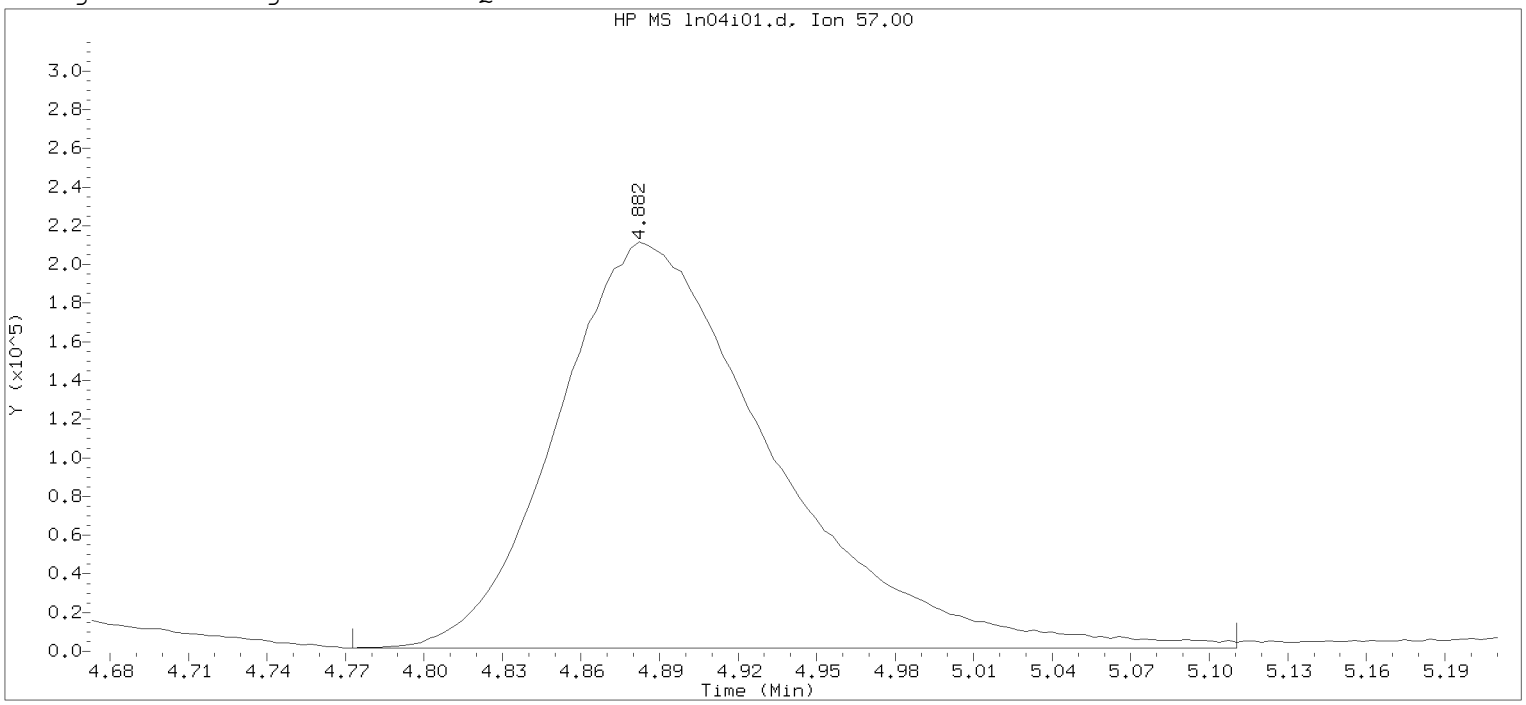
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

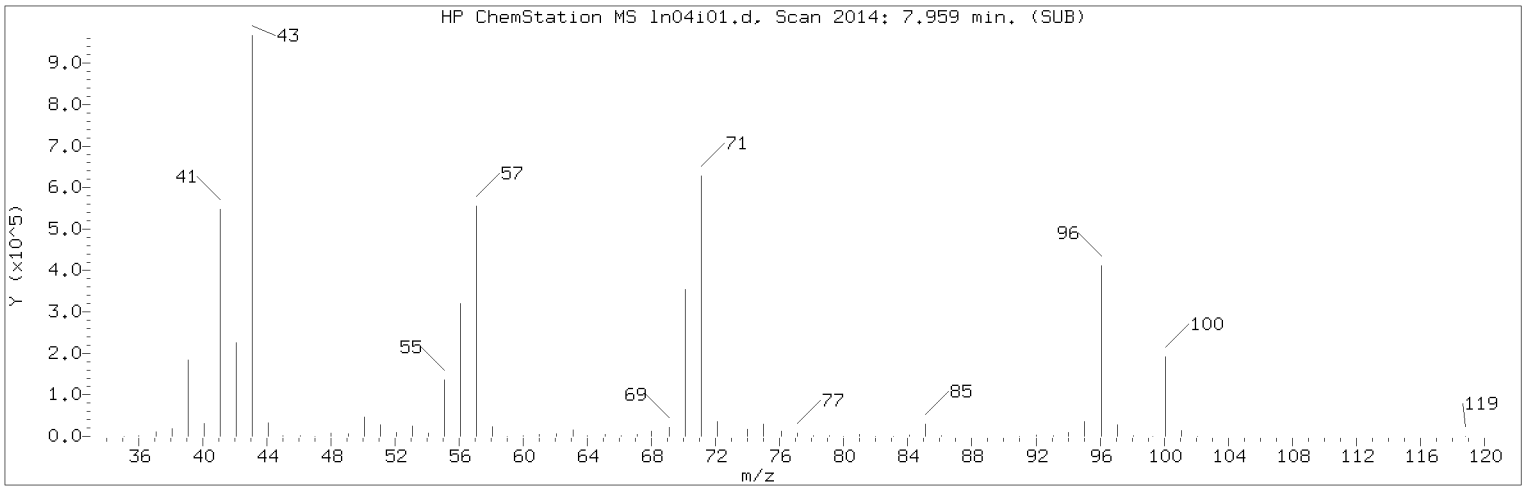
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

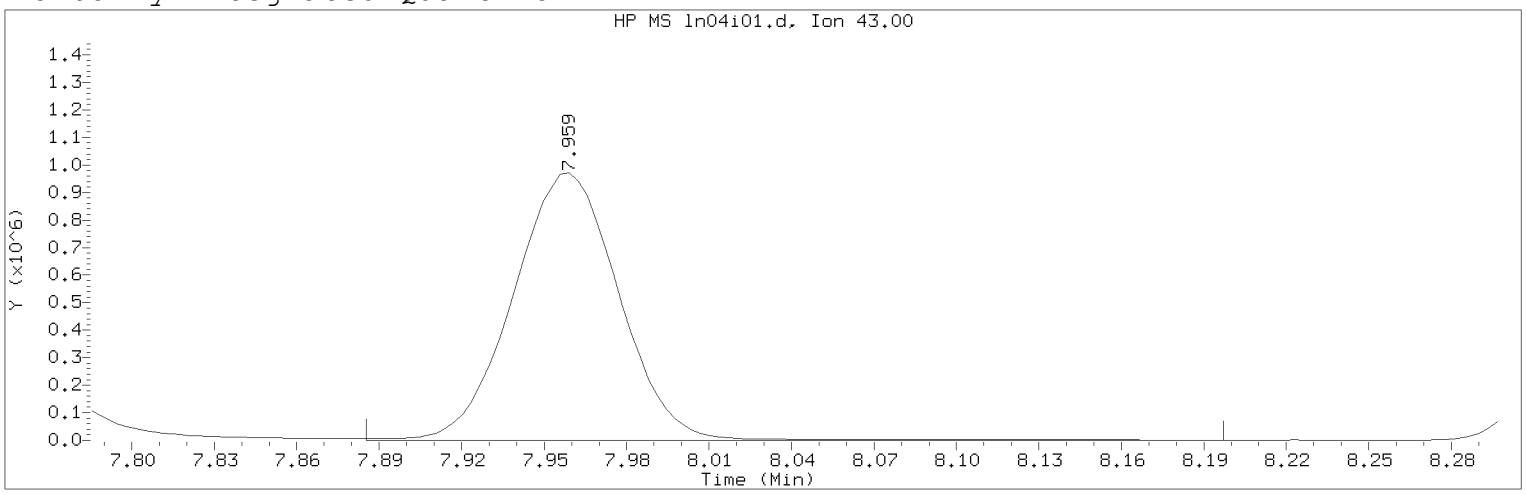
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1057
Retention Time (minutes): 4.882
Quant Ion : 57.00
Area : 1202378
On-column Amount (ng) : 301.4561
Integration start scan : 1022 Integration stop scan: 1127
Y at integration start : 1806 Y at integration end: 1806

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

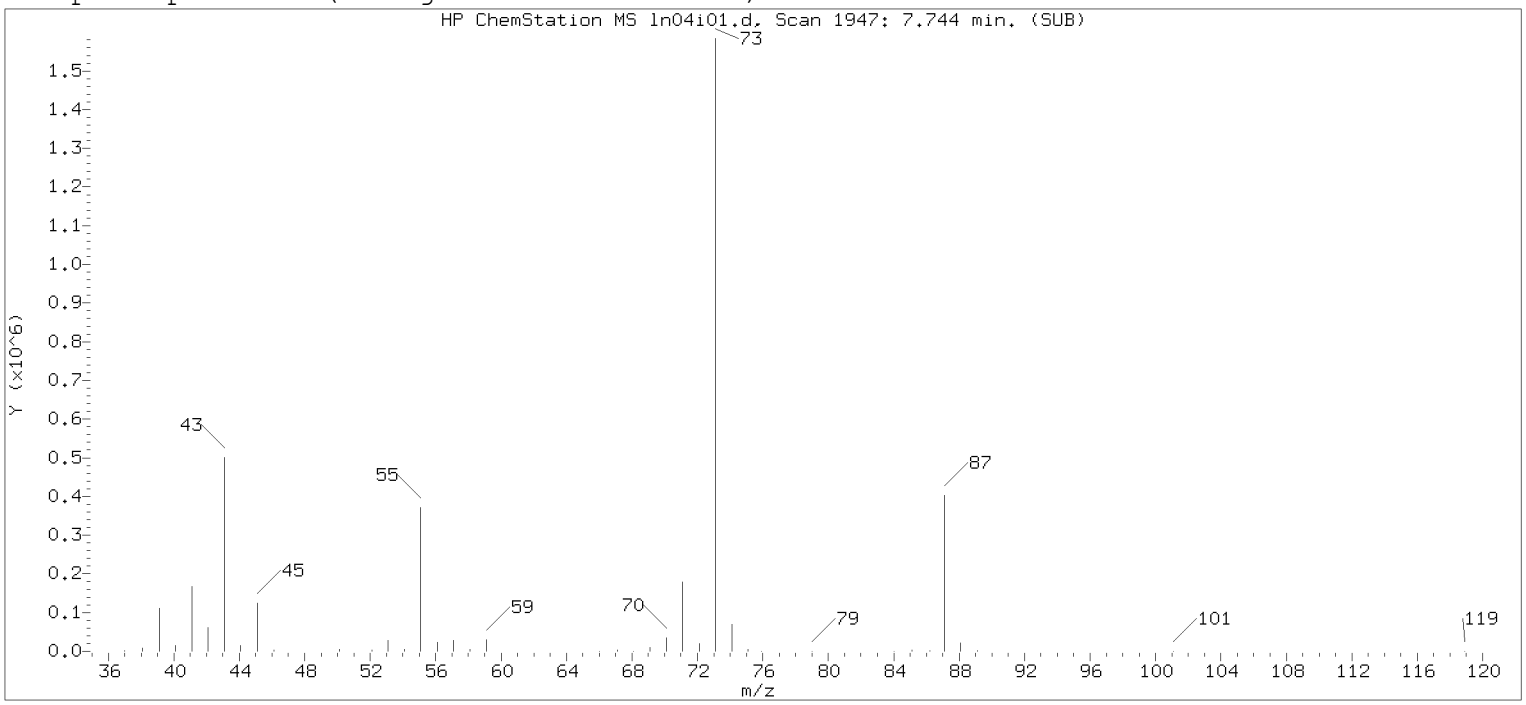
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2014
Retention Time (minutes): 7.959
Quant Ion : 43.00
Area (flag) : 2592531MA
On-Column Amount (ng) : 324.5176
Integration start scan : 1990 Integration stop scan: 2087
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

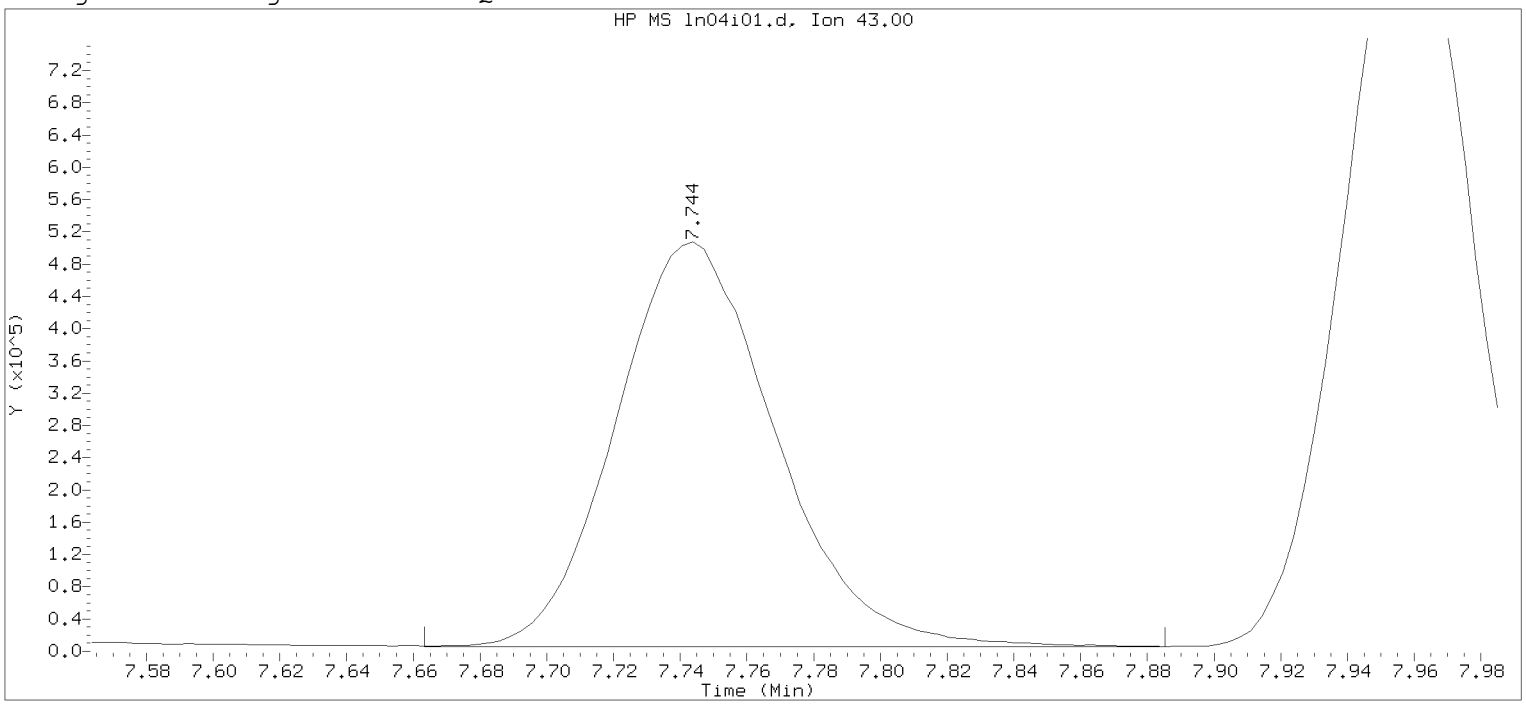
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

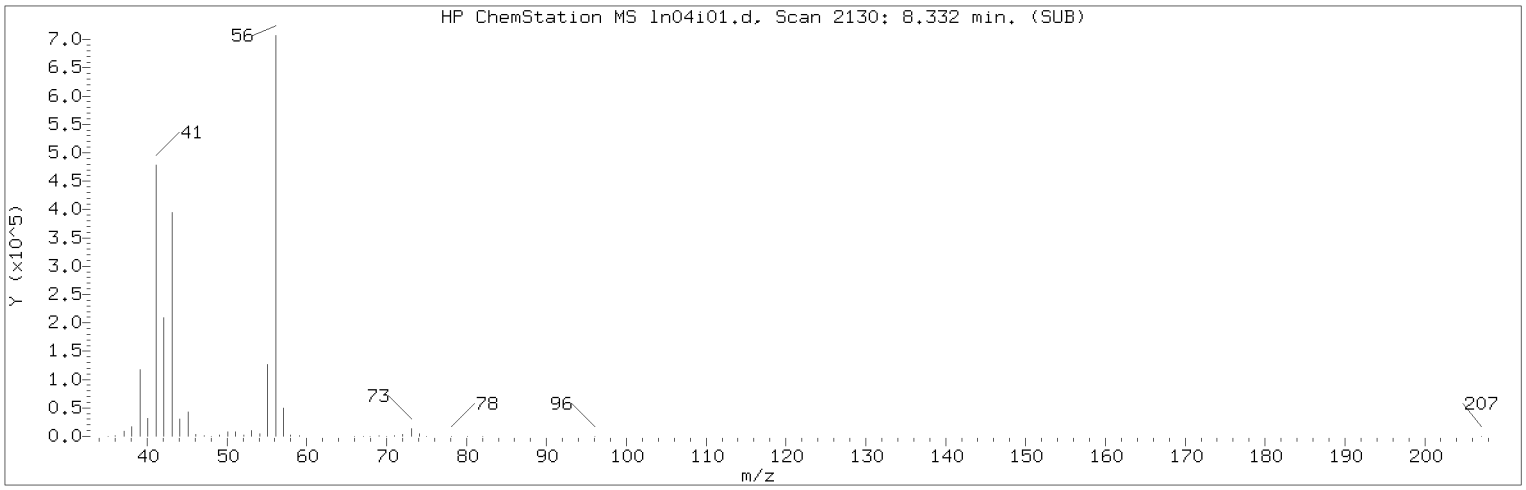
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

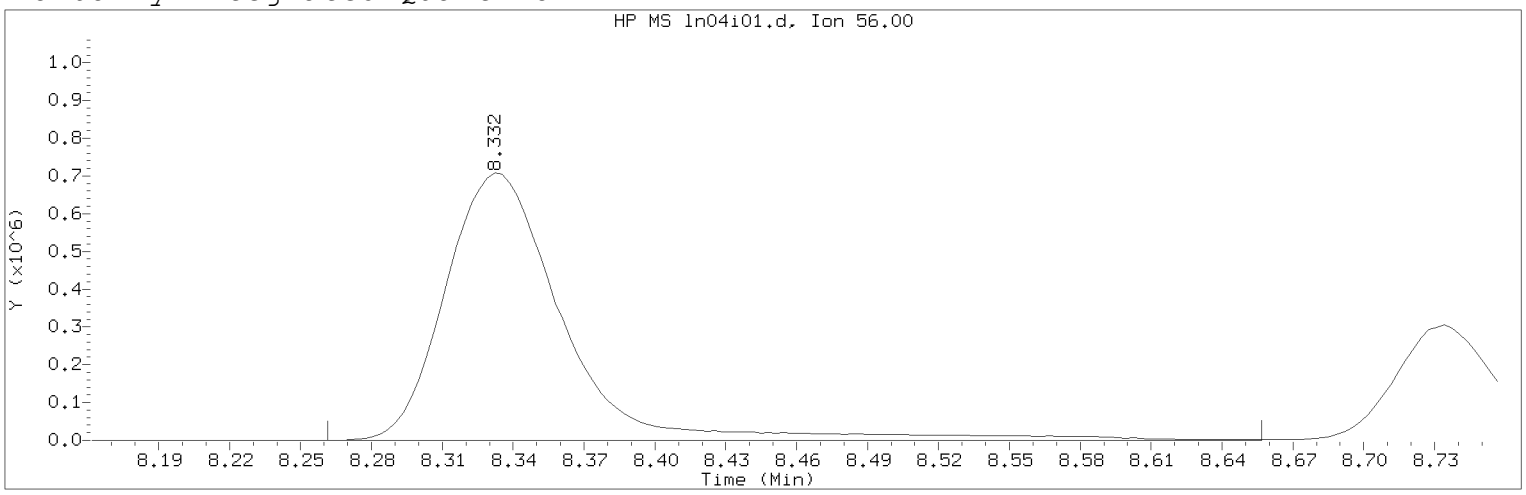
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1947
Retention Time (minutes): 7.744
Quant Ion : 43.00
Area : 1668813
On-column Amount (ng) : 288.4319
Integration start scan : 1921 Integration stop scan: 1990
Y at integration start : 5866 Y at integration end: 5866

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

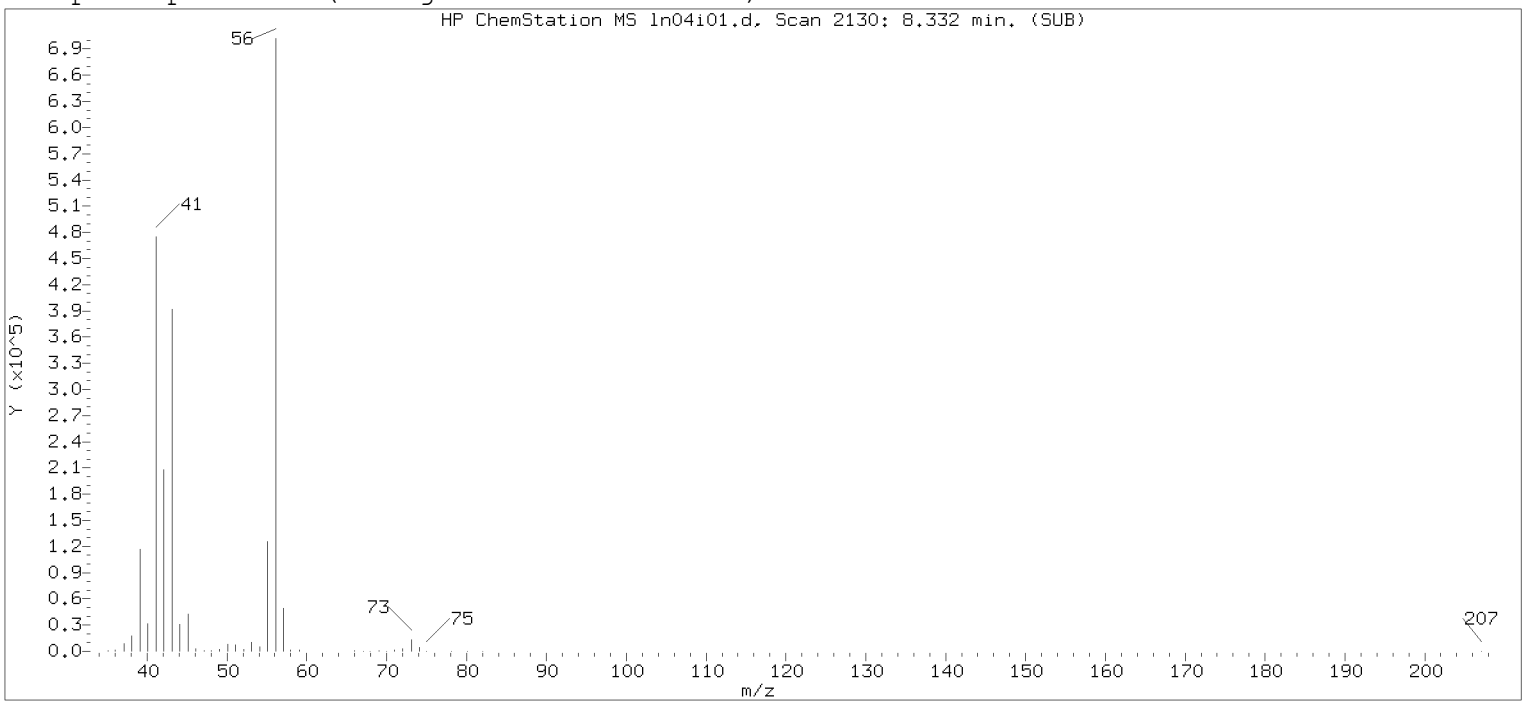
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area (flag) : 2465385M
On-Column Amount (ng) : 7947.0678
Integration start scan : 2107 Integration stop scan: 2230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

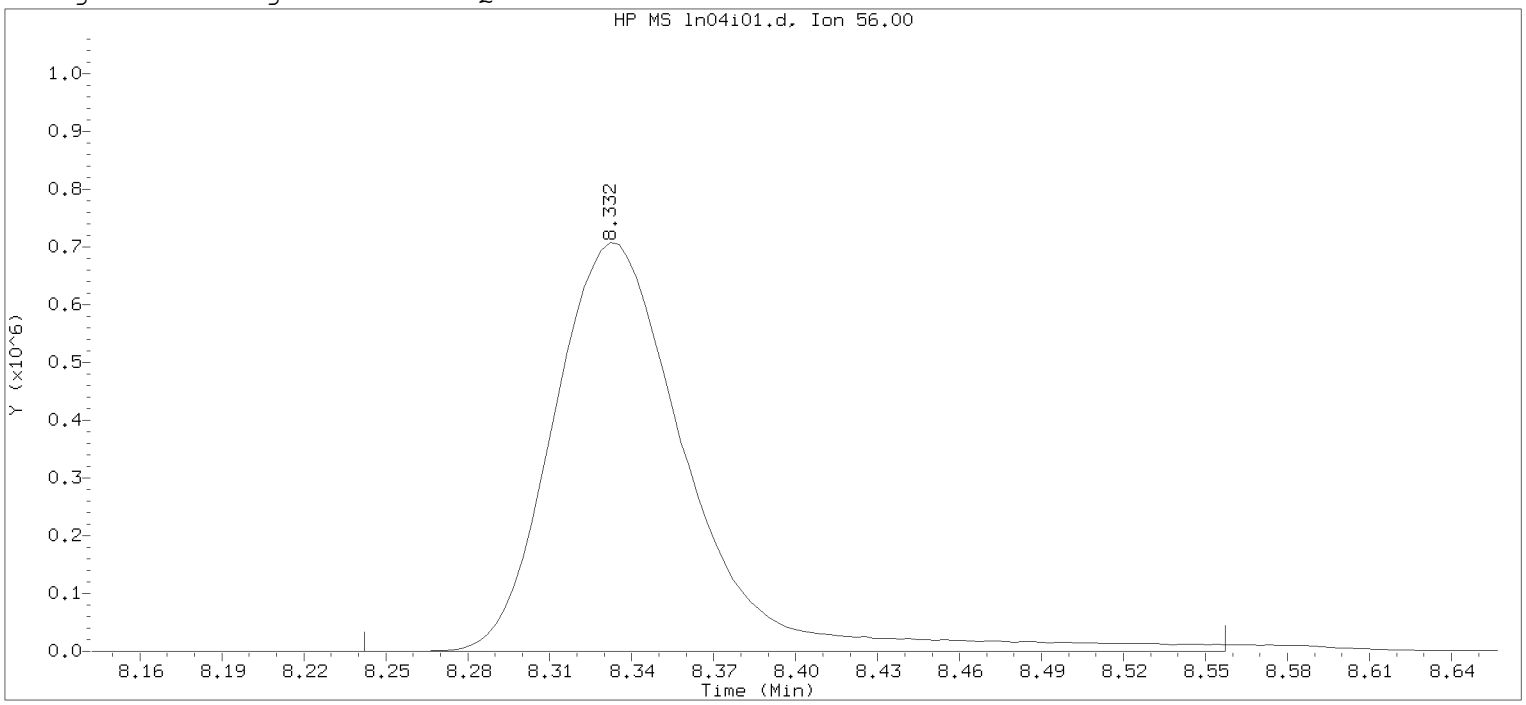
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

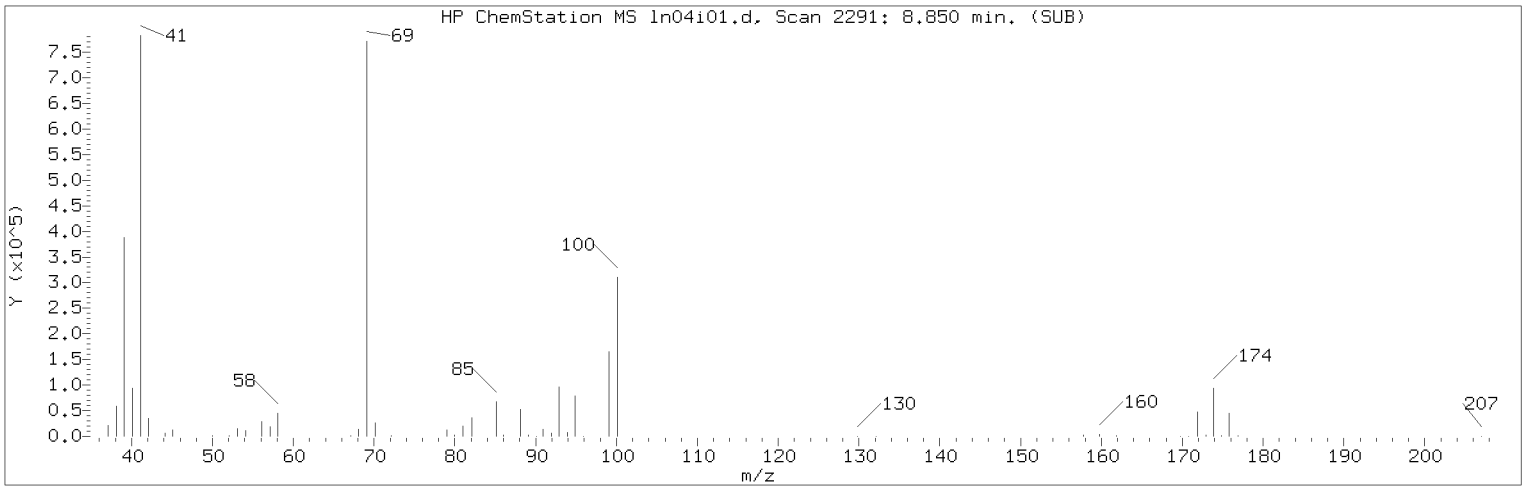
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

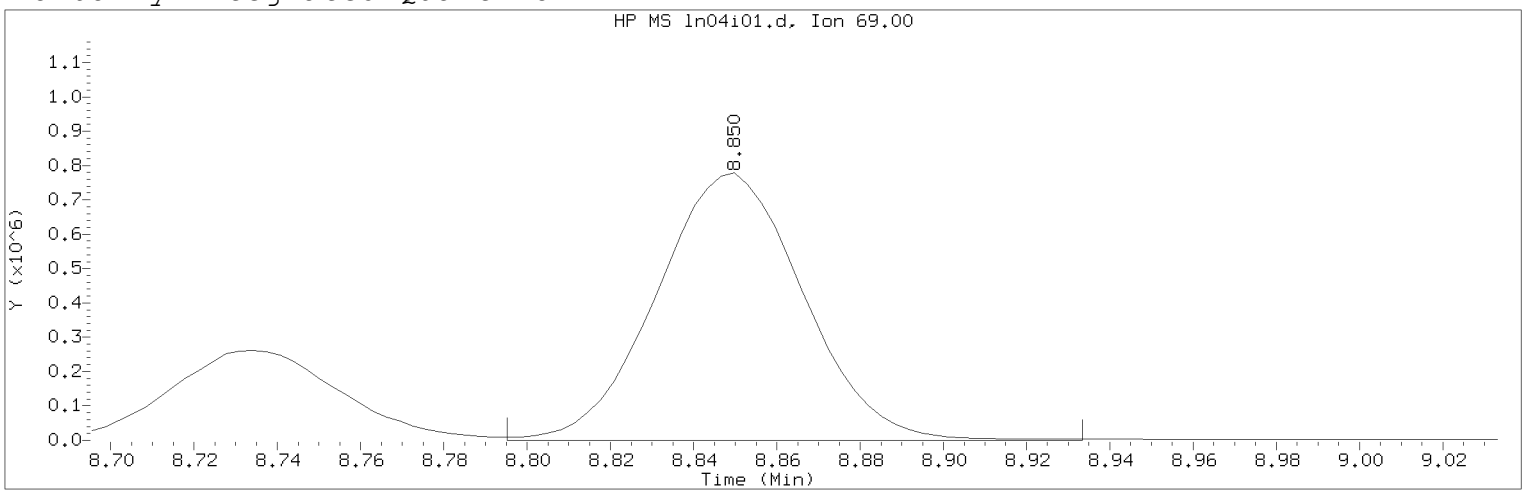
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area : 2429255
On-column Amount (ng) : 7682.9381
Integration start scan : 2101 Integration stop scan: 2199
Y at integration start : 176 Y at integration end: 176

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

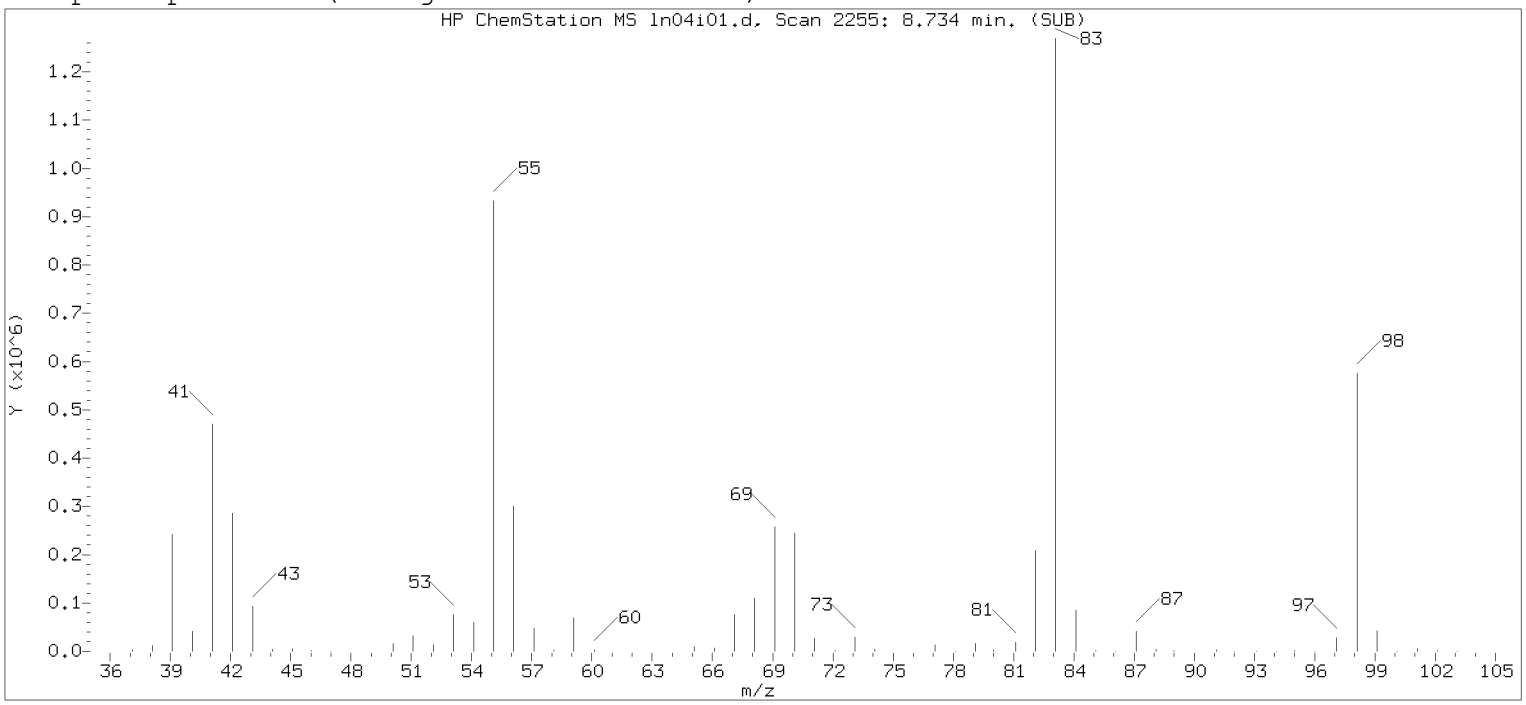
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2291
Retention Time (minutes): 8.850
Quant Ion : 69.00
Area (flag) : 1904896A
On-Column Amount (ng) : 340.2564
Integration start scan : 2273 Integration stop scan: 2316
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

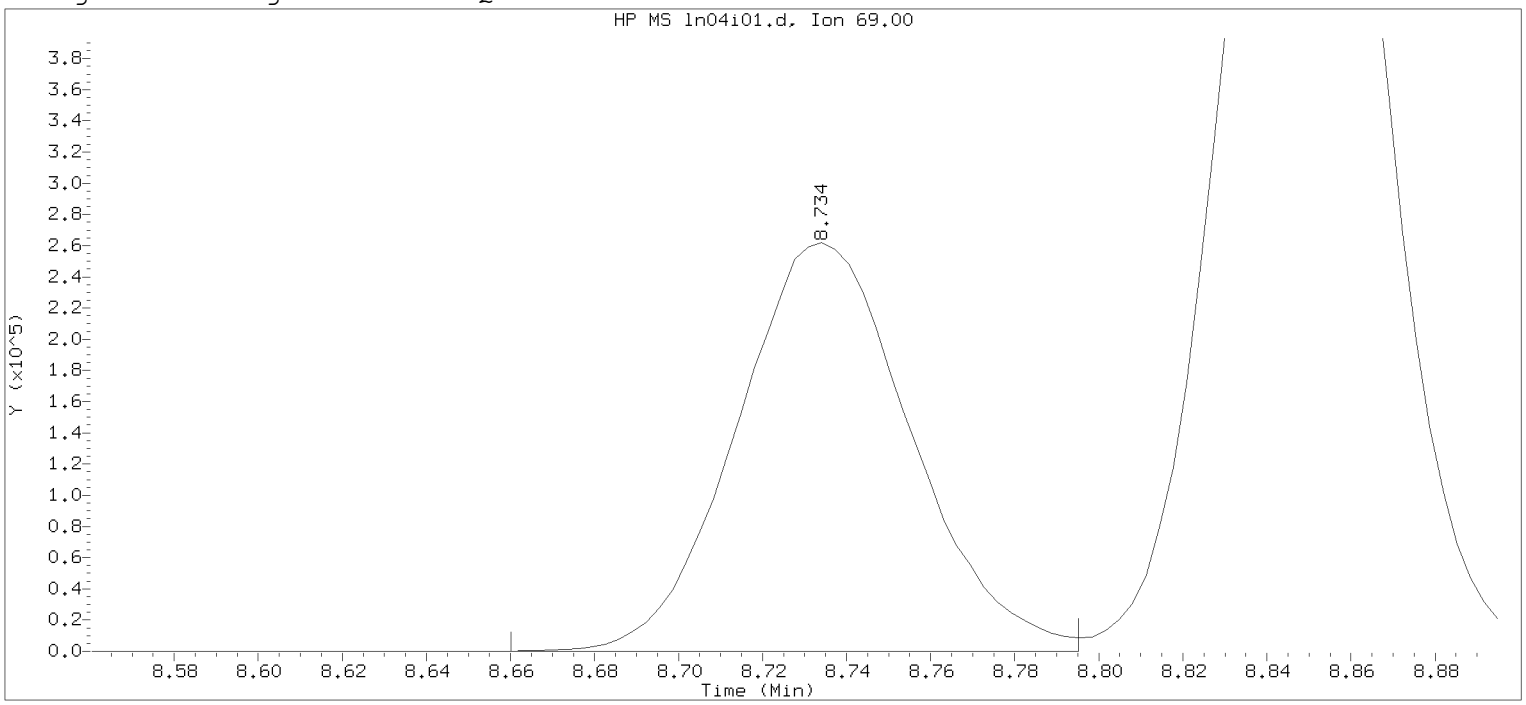
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

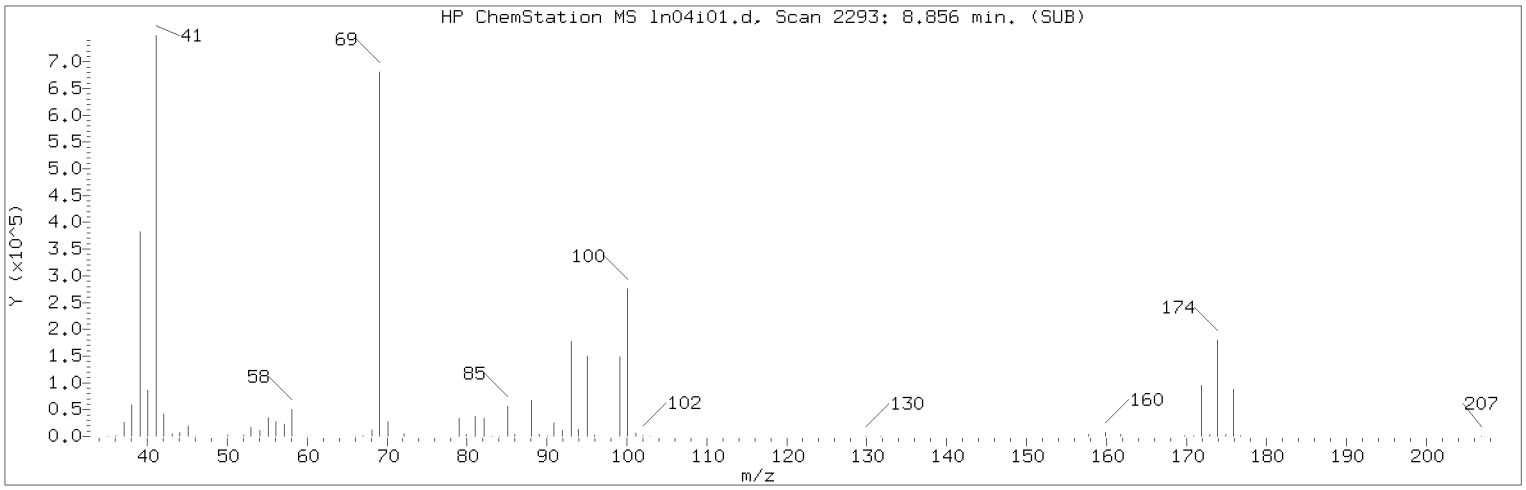
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

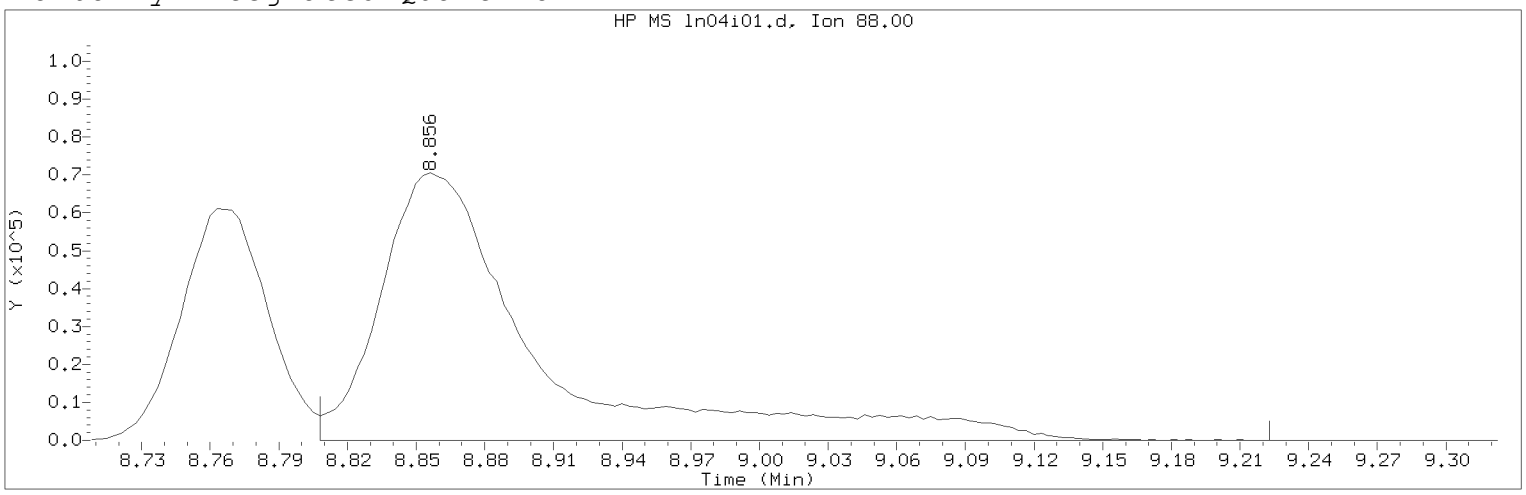
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 752058
On-column Amount (ng) : 311.1363
Integration start scan : 2231 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

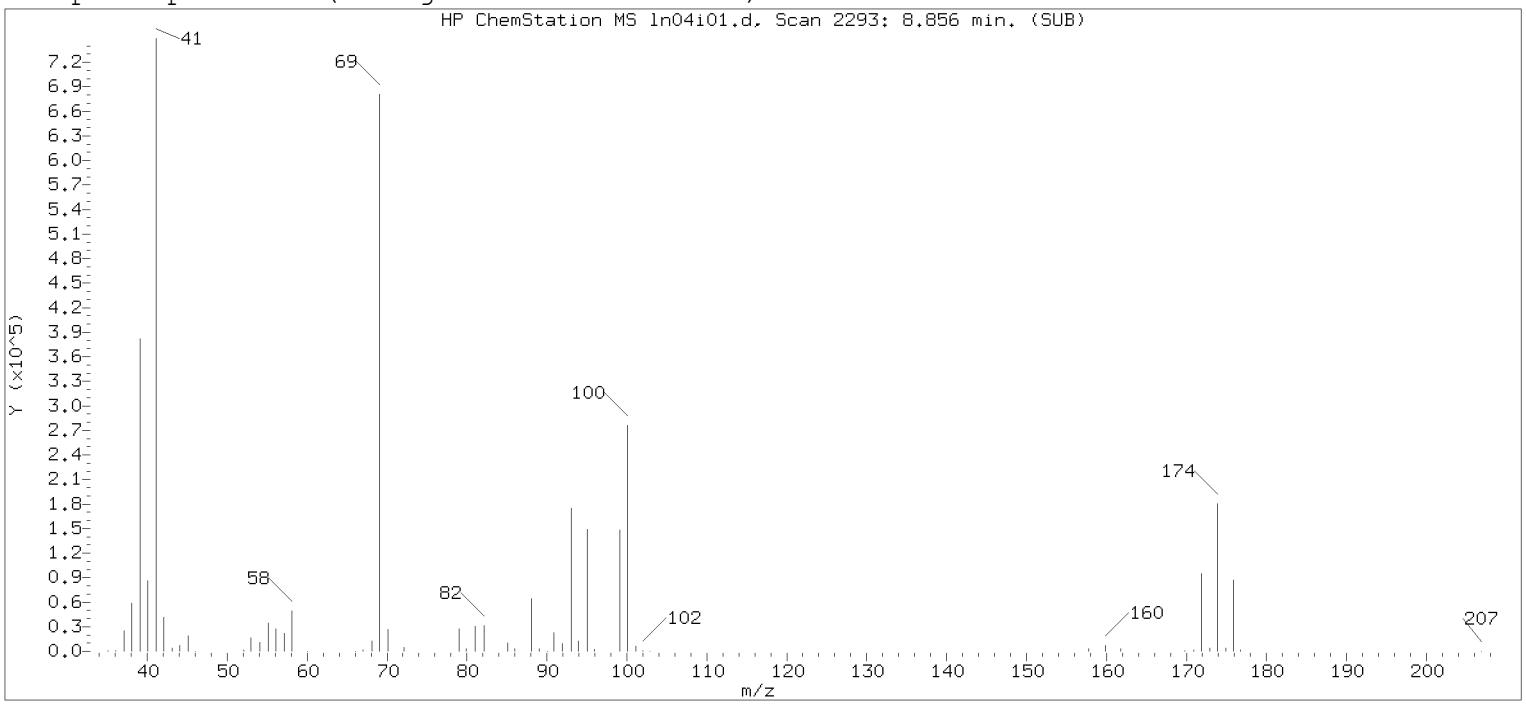
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 338379M
On-Column Amount (ng) : 3968.4208
Integration start scan : 2277 Integration stop scan: 2406
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

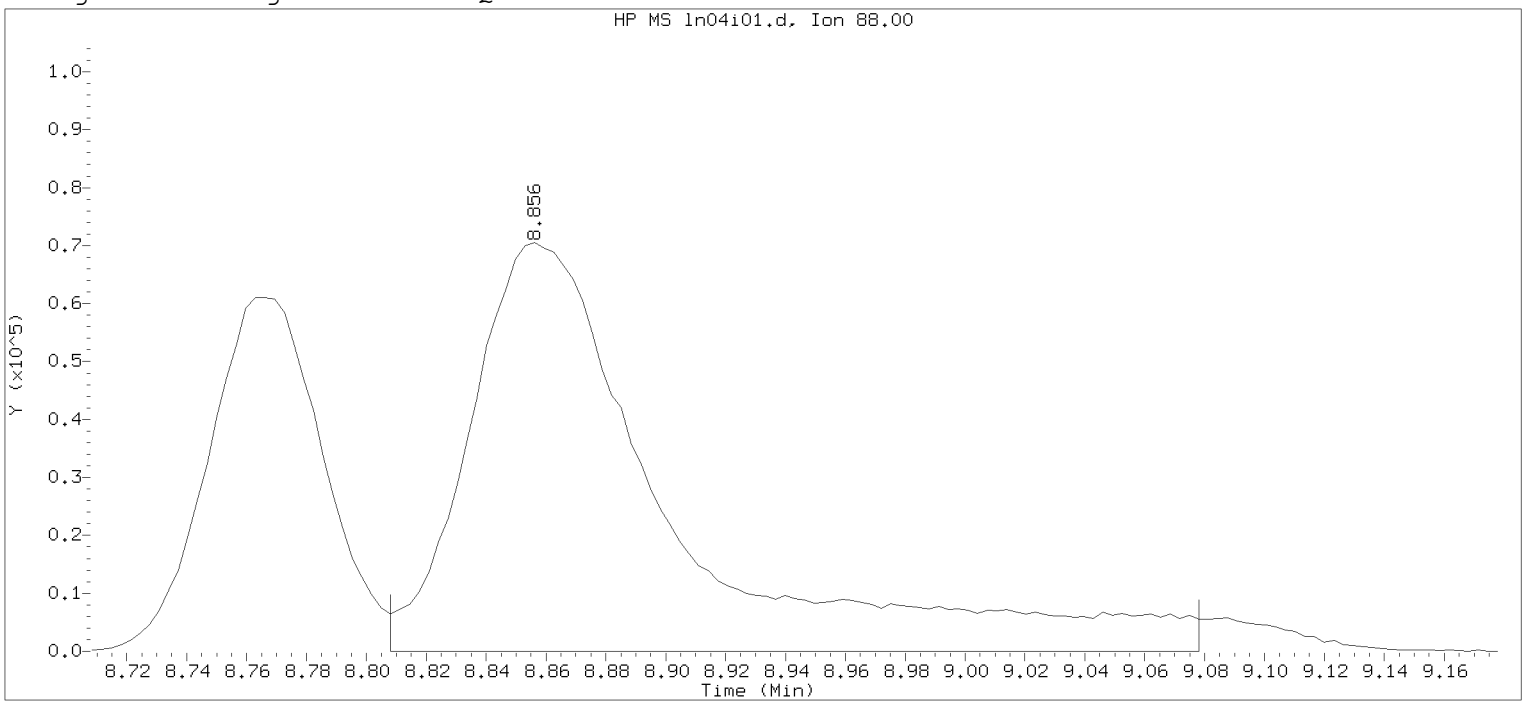
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

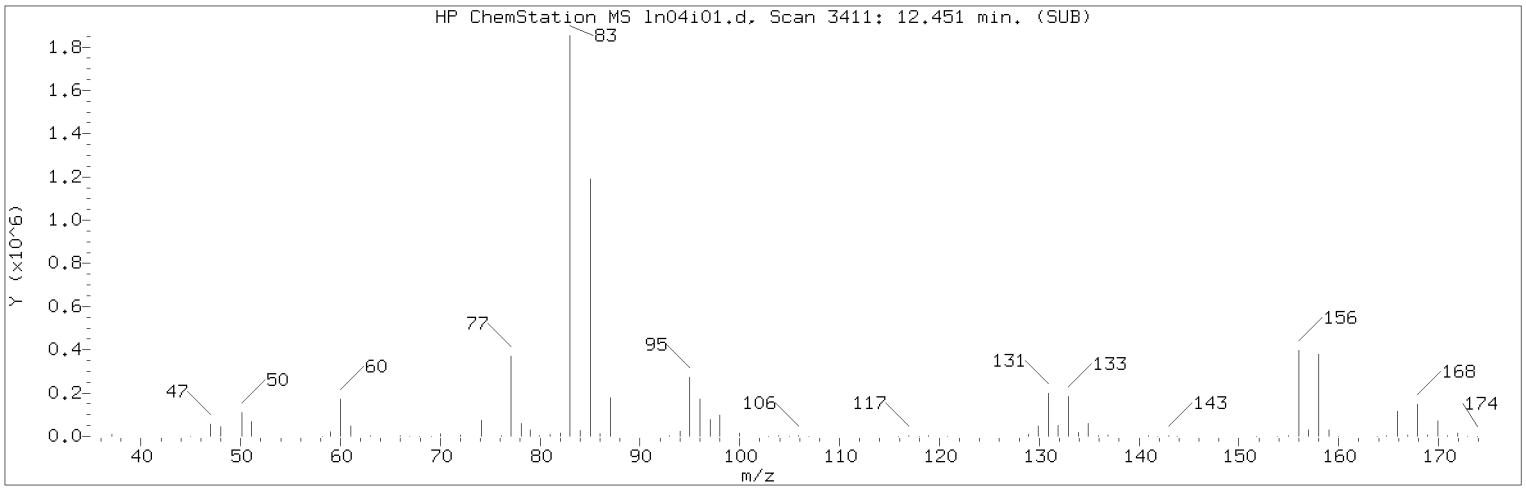
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

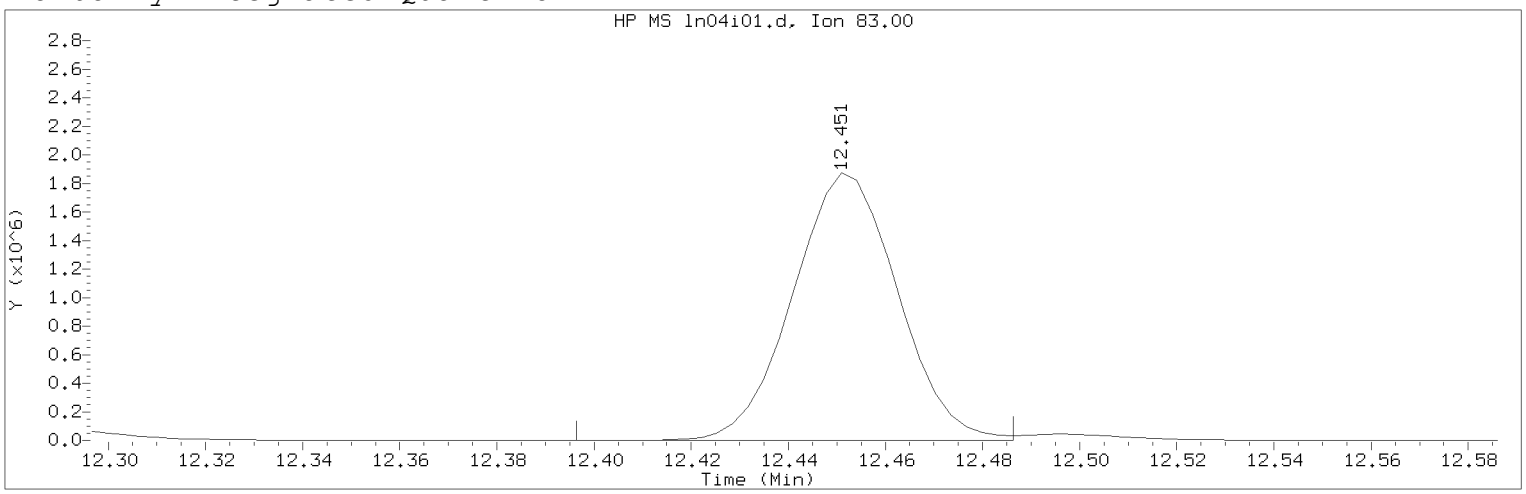
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2293		
Retention Time (minutes)	: 8.856		
Quant Ion	: 88.00		
Area	: 325164		
On-column Amount (ng)	: 3803.8575		
Integration start scan	: 2277	Integration stop scan:	2361
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

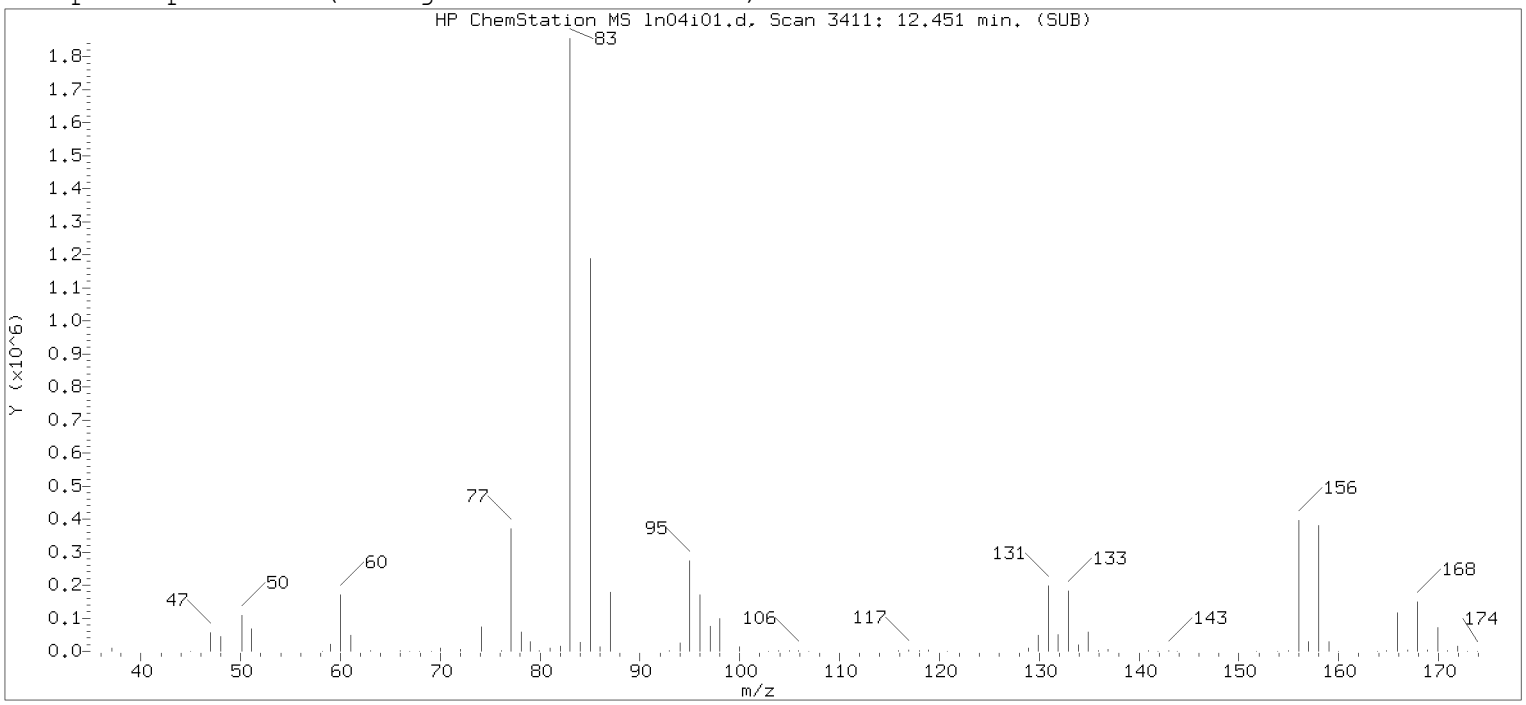
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 2800639M
On-Column Amount (ng) : 310.7054
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

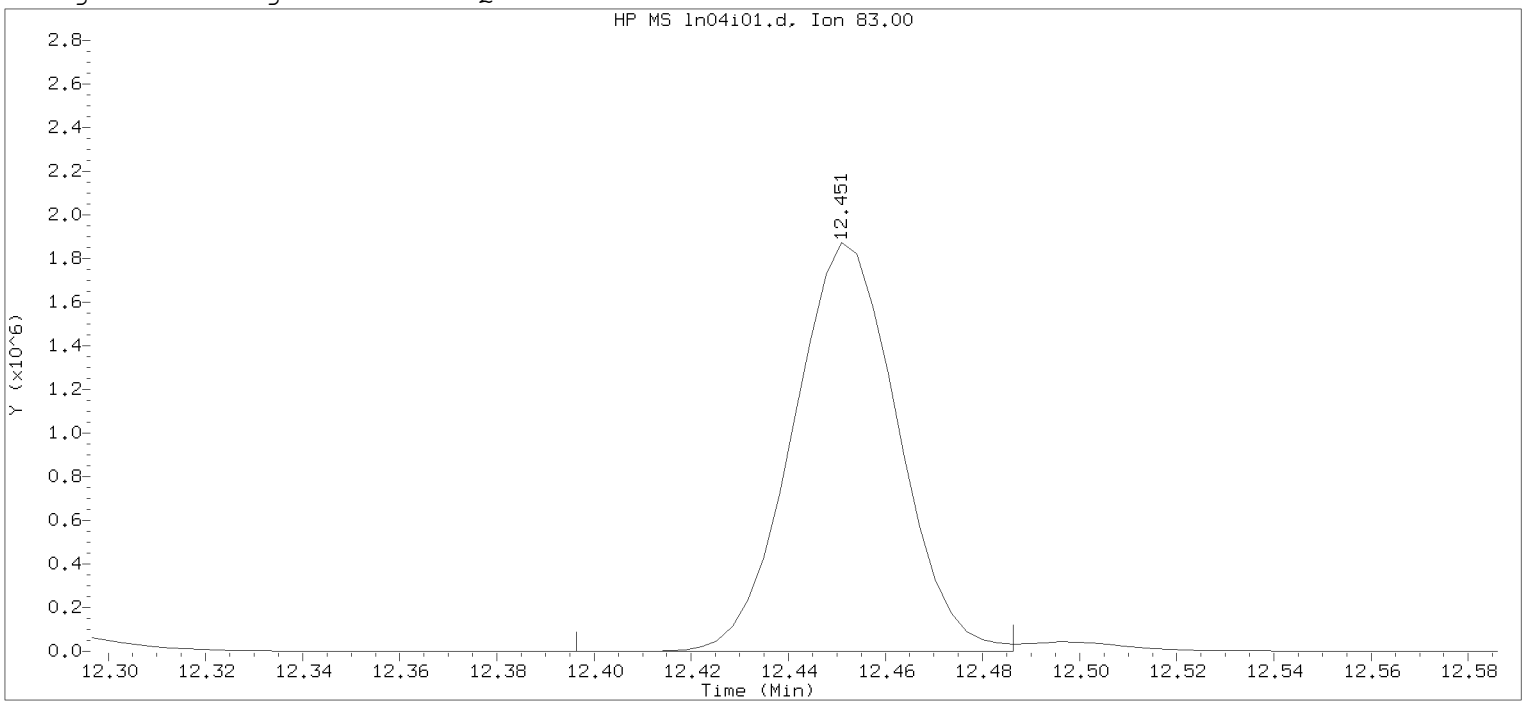
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

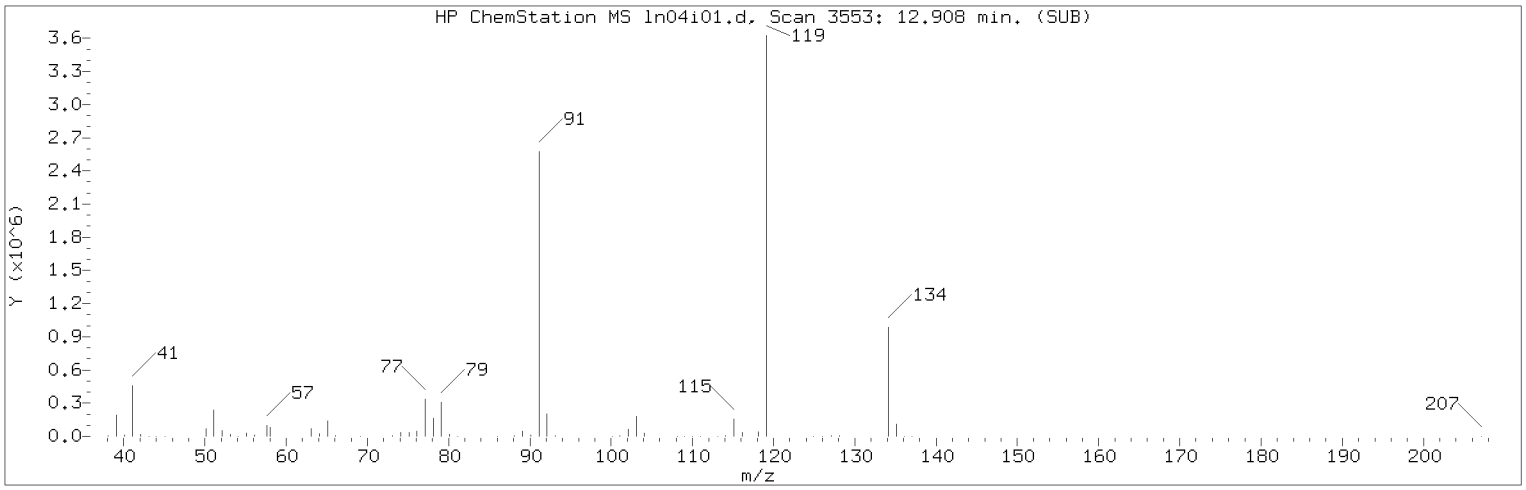
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

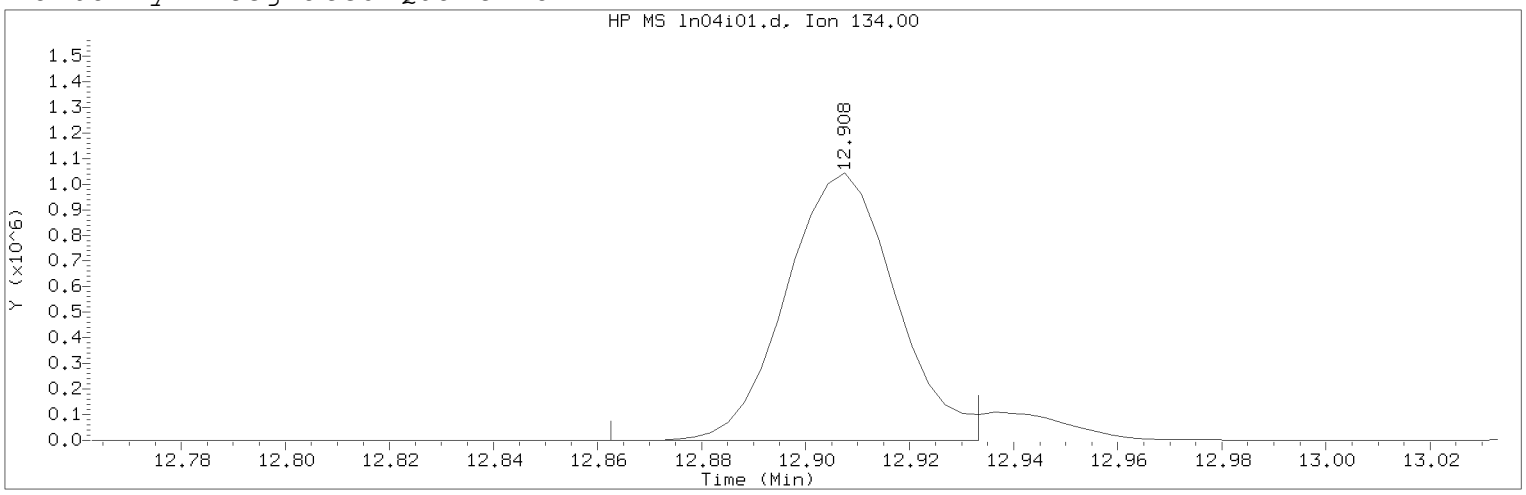
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 2797364
On-column Amount (ng) : 294.0638
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

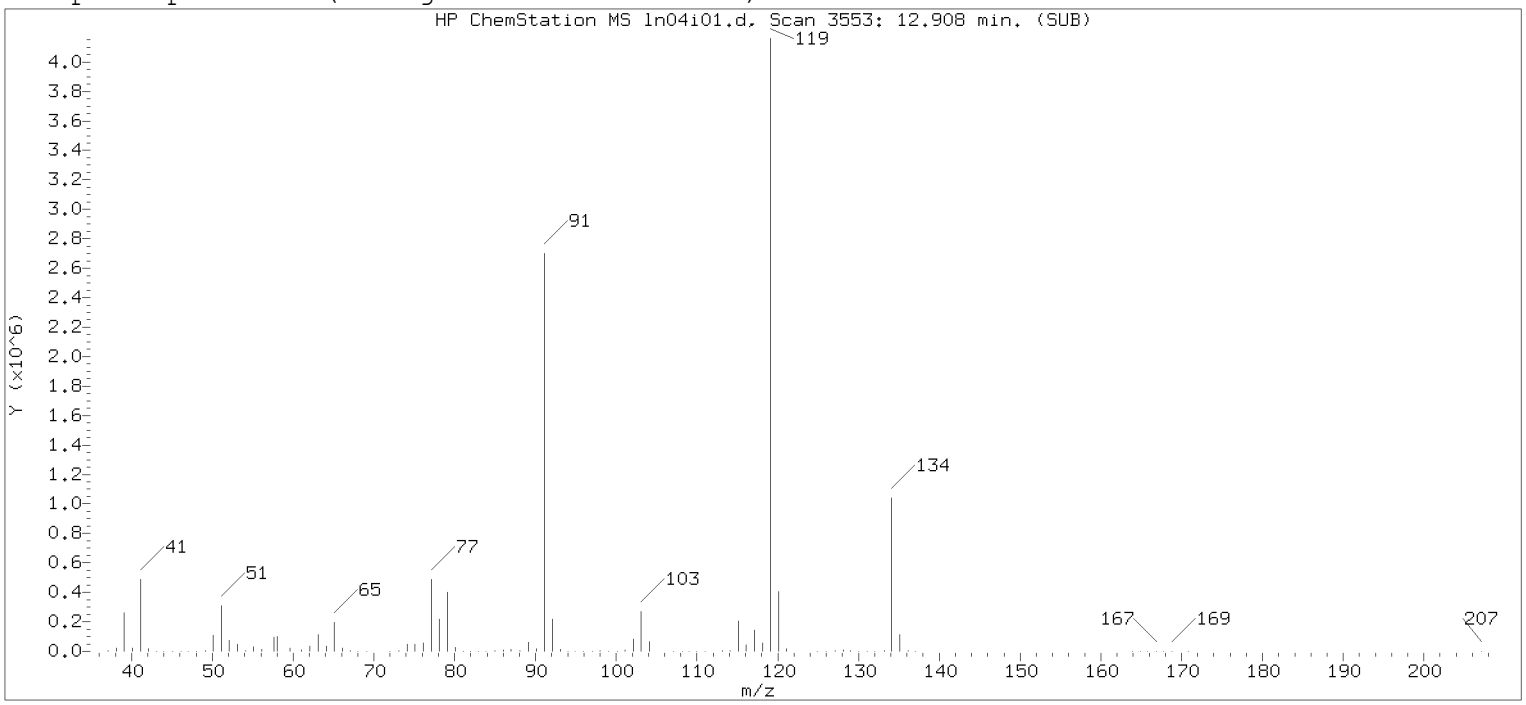
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area (flag) : 1524421M
On-Column Amount (ng) : 323.7167
Integration start scan : 3538 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

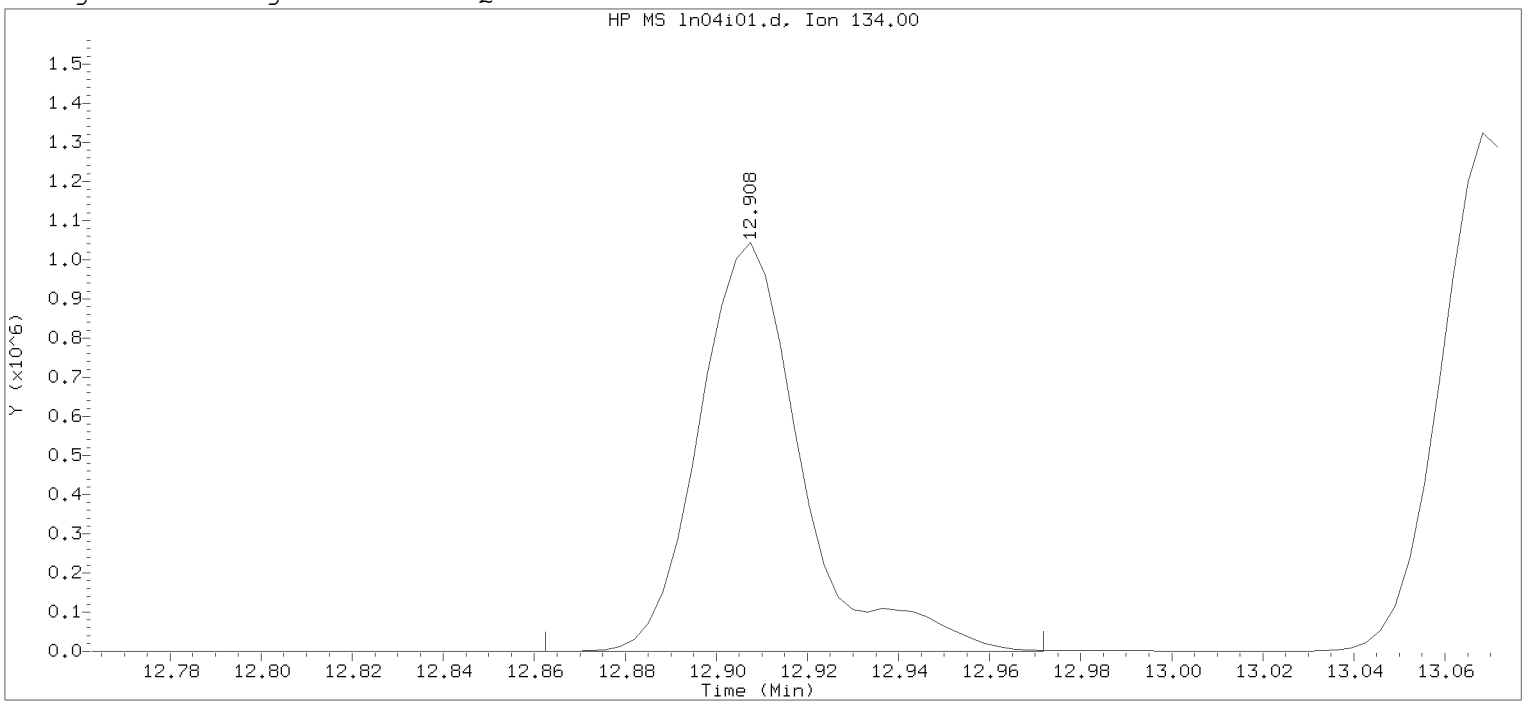
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



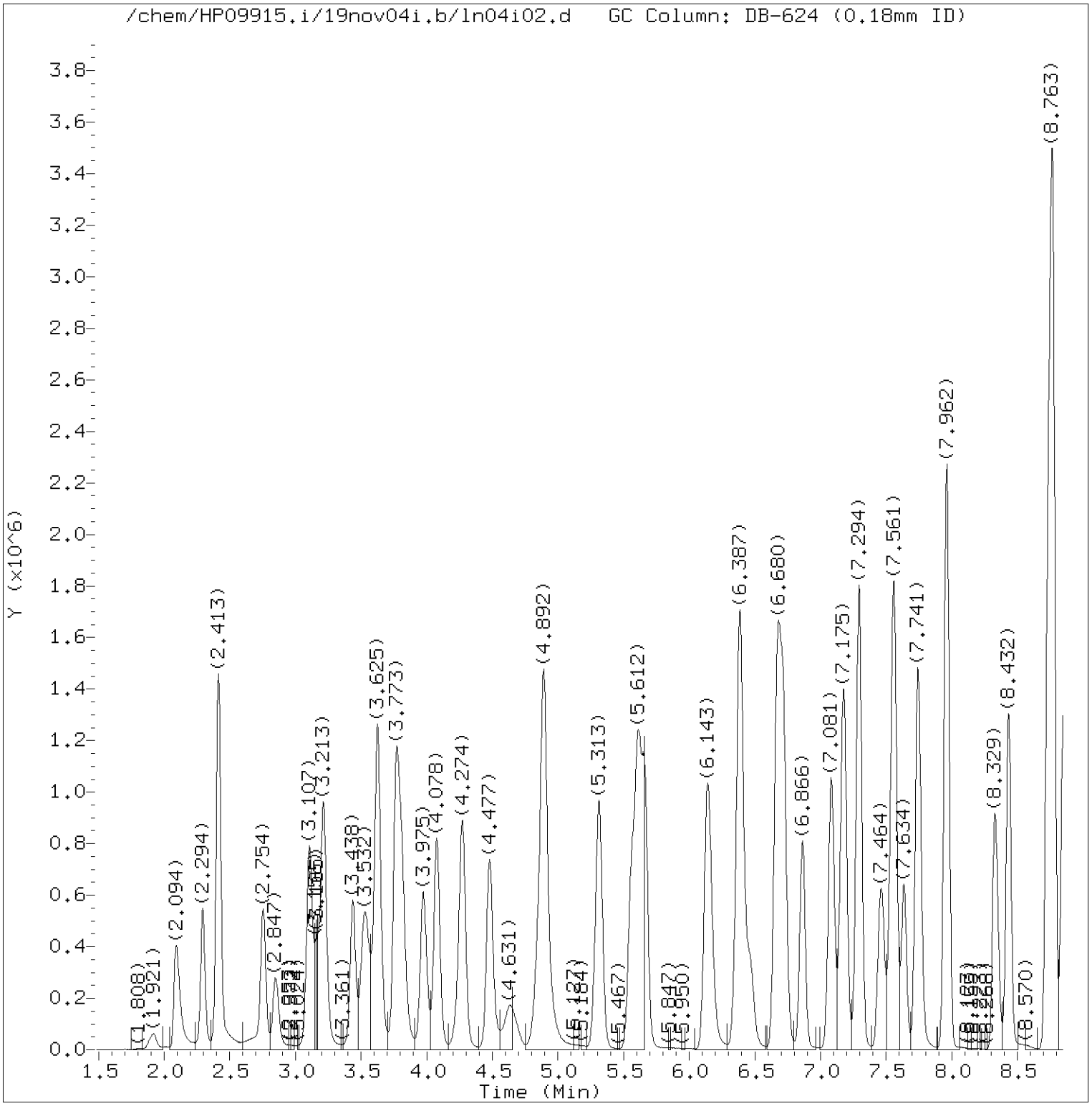
Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area : 1639624
On-column Amount (ng) : 313.1253
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

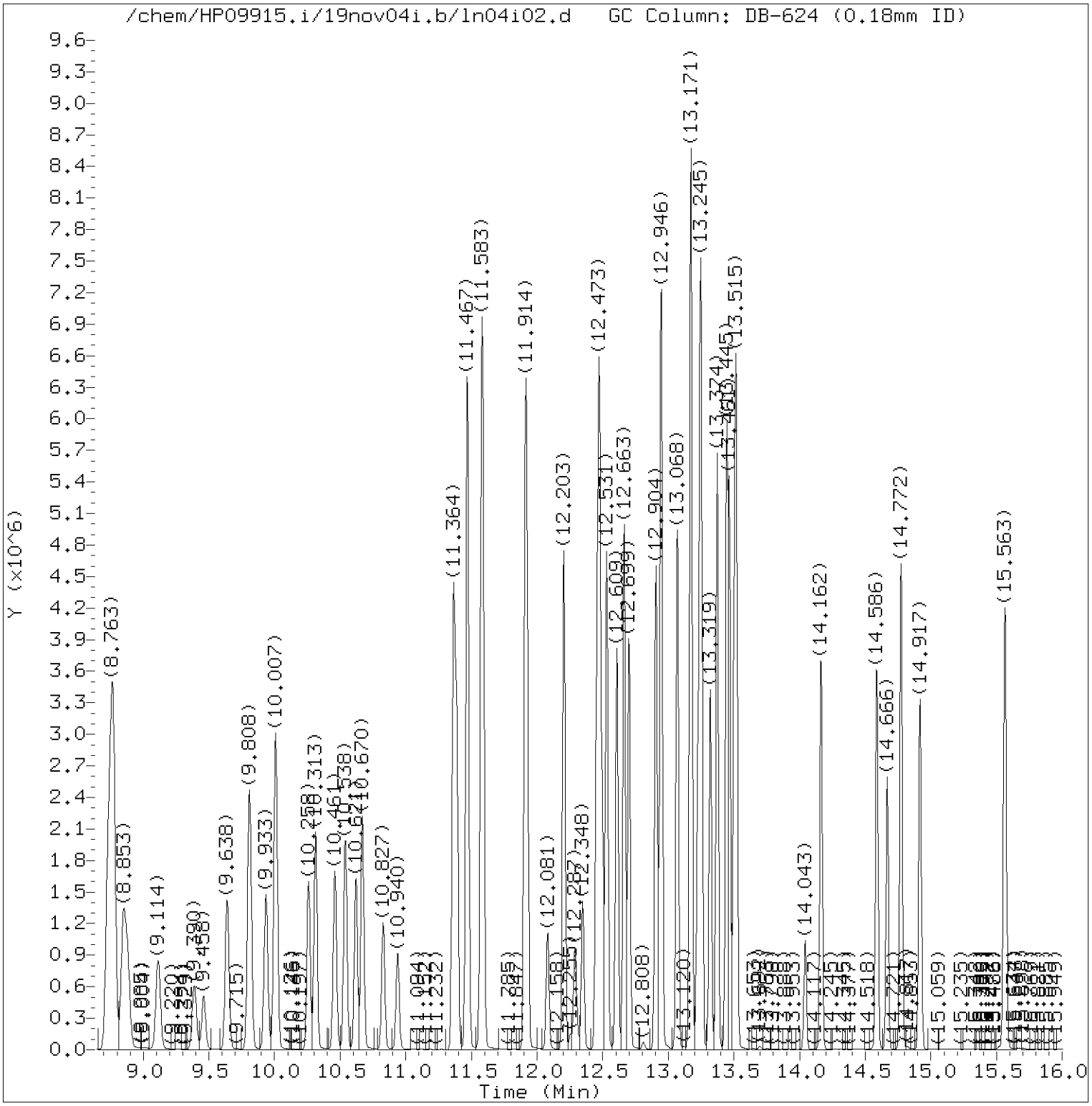
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.094	85	857961M	103.943
4) Chloromethane	(2)	2.294	50	784780	98.650
5) 1,3-Butadiene	(2)	2.413	39	618713M	93.669
6) Vinyl Chloride	(2)	2.416	62	781267	98.400
8) Bromomethane	(2)	2.754	94	539686	94.824
9) Chloroethane	(2)	2.847	64	418524	95.919
10) Dichlorofluoromethane	(2)	3.104	67	992796M	94.678
12) Trichlorofluoromethane	(2)	3.162	101	860893	100.714
11) n-Pentane	(2)	3.217	43	1002713	99.263
14) Ethyl ether	(2)	3.435	59	550266	99.622
15) Freon 123a	(2)	3.532	67	679642	98.841
16) Acrolein	(1)	3.625	56	2075331	1040.029
17) 1,1-Dichloroethene	(2)	3.763	96	510815	101.811
17) 1,1-Dichloroethene	(2)	3.766	63	250669	99.655
19) Freon 113	(2)	3.799	101	594686	103.888
18) Acetone	(1)	3.805	58	181313	202.676
22) Methyl Iodide	(2)	3.972	142	1051103	101.097
21) 2-Propanol	(1)	4.001	45	343390	533.946
23) Carbon Disulfide	(2)	4.078	76	1957296	103.520
27) Methyl Acetate	(2)	4.252	43	630892	97.630
25) Allyl Chloride	(2)	4.274	41	894091	99.337
28) Methylene Chloride	(2)	4.477	84	596882	99.952
29)*t-Butyl alcohol-d10	(1)	4.509	65	265971M	250.000
30) t-Butyl alcohol	(1)	4.631	59	619917	553.614
31) Acrylonitrile	(2)	4.837	53	359403	103.376
33) Methyl Tertiary Butyl Ether	(2)	4.889	73	1901626	99.813
32) trans-1,2-Dichloroethene	(2)	4.892	96	586662	101.076
34) n-Hexane	(2)	5.313	57	974442M	107.908
36) 1,1-Dichloroethane	(2)	5.557	63	1029230	101.649
38) di-Isopropyl ether	(2)	5.609	45	1986383	101.717
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	947614	104.312
40) Ethyl t-butyl ether	(2)	6.143	59	1910218	100.794
43) 1,2-Dichloroethene (Total)	(2)		96	1240957	201.508
44) 2-Butanone	(2)	6.364	43	920731	206.310
42) cis-1,2-Dichloroethene	(2)	6.384	96	654295	100.432
45) 2,2-Dichloropropane	(2)	6.400	77	813782	103.388
47) Propionitrile	(1)	6.464	54	725632	520.085
48) Methacrylonitrile	(2)	6.676	67	966183	257.629

M = Compound was manually integrated.
* = Compound is an internal standard.

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Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	349204	101.088
50) Tetrahydrofuran	(1)	6.721	71	261419	207.429
51) Chloroform	(2)	6.866	83	989698	102.195
52)$Dibromofluoromethane	(2)	7.078	113	292391	50.529
52)$Dibromofluoromethane	(2)	7.078	111	297764	50.467
53) 1,1,1-Trichloroethane	(2)	7.088	97	860519	104.109
54) Cyclohexane	(2)	7.175	56	1170449	105.893
54) Cyclohexane	(2)	7.181	84	1022362	106.481
54) Cyclohexane	(2)	7.175	69	362451	106.017
56) Carbon Tetrachloride	(2)	7.290	117	751477	107.196
55) 1,1-Dichloropropene	(2)	7.297	75	823627	102.878
58) Isobutyl Alcohol	(1)	7.461	41	528441	1402.358
57)$1,2-Dichloroethane-d4	(2)	7.535	102	74158	50.284
57)$1,2-Dichloroethane-d4	(2)	7.535	65	331294	50.408
57)$1,2-Dichloroethane-d4	(2)	7.535	104	47551	50.479
60) Benzene	(2)	7.561	78	2423634	100.668
61) 1,2-Dichloroethane	(2)	7.638	62	757974	97.883
61) 1,2-Dichloroethane	(2)	7.641	98	76152	99.373
65) t-Amyl methyl ether	(2)	7.741	73	1946110	102.306
67) n-Heptane	(2)	7.962	43	911962MA	108.104
66)*Fluorobenzene	(2)	7.962	96	1183605	50.000
69) n-Butanol	(1)	8.329	56	944383M	2911.812
71) Trichloroethene	(2)	8.432	95	618983	102.110
72) Methylcyclohexane	(2)	8.734	83	1164174	103.516
72) Methylcyclohexane	(2)	8.734	98	527428	103.640
73) 1,2-Dichloropropane	(2)	8.773	63	625914	102.385
76) Methyl Methacrylate	(2)	8.847	69	640445A	108.334
75) 1,4-Dioxane	(1)	8.856	88	117817M	1321.647
74) Dibromomethane	(2)	8.882	93	410059	103.668
78) Bromodichloromethane	(2)	9.114	83	770805	108.595
79) 2-Nitropropane	(2)	9.390	41	488862	227.388
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	284759	108.454
81) cis-1,3-Dichloropropene	(2)	9.638	75	1026055	108.840
82) 4-Methyl-2-pentanone	(2)	9.808	43	1972651	209.410
83)$Toluene-d8	(3)	9.933	98	1216793	49.703
83)$Toluene-d8	(3)	9.933	100	789846	49.806
88) Toluene	(3)	10.007	92	1555339	101.336
90) 1,3-Dichloropropene (total)	(3)		100	1994775	220.026

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	968720	111.186
91) Ethyl Methacrylate	(3)	10.313	69	1159403	109.496
92) 1,1,2-Trichloroethane	(3)	10.461	97	606132	104.163
93) Tetrachloroethene	(3)	10.541	166	663260	102.036
94) 1,3-Dichloropropane	(3)	10.621	76	1023947	103.060
96) 2-Hexanone	(3)	10.670	43	1457165	206.170
97) Dibromochloromethane	(3)	10.827	129	678552	113.835
99) 1,2-Dibromoethane	(3)	10.940	107	665574	105.331
100)*Chlorobenzene-d5	(3)	11.361	117	935628	50.000
101) 1-Chlorohexane	(3)	11.364	91	826713	100.265
102) Chlorobenzene	(3)	11.387	112	1760002	101.404
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	622547	108.864
104) Ethylbenzene	(3)	11.470	91	3015086	102.779
106) m+p-Xylene	(3)	11.583	106	2388845	206.999
108) Xylene (Total)	(3)		106	3566525	310.313
107) o-Xylene	(3)	11.908	106	1177680	103.314
109) Styrene	(3)	11.924	104	1996461	105.988
110) Bromoform	(3)	12.081	173	502388	112.791
111) Isopropylbenzene	(3)	12.203	105	2980812	104.258
112) Cyclohexanone	(1)	12.287	55	431750	1236.644
114)$4-Bromofluorobenzene	(3)	12.348	95	458263	49.435
114)$4-Bromofluorobenzene	(3)	12.348	174	380301	49.485
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	995972M	105.317
115) Bromobenzene	(4)	12.464	156	778170	103.423
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	790040	270.837
117) 1,2,3-Trichloropropane	(4)	12.496	110	303037	104.425
119) n-Propylbenzene	(4)	12.531	91	3409679	103.724
120) 2-Chlorotoluene	(4)	12.609	126	718635	102.905
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	2528195	105.828
121) 4-Chlorotoluene	(4)	12.699	126	737830	101.502
124) tert-Butylbenzene	(4)	12.904	134	526781M	106.622
125) Pentachloroethane	(4)	12.940	167	474988	111.651
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	2664001	105.806
127) sec-Butylbenzene	(4)	13.068	105	3153429	106.963
129) 1,3-Dichlorobenzene	(4)	13.168	146	1407080	101.768
130) p-Isopropyltoluene	(4)	13.171	119	2746850	107.698
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	500629	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	1451933	101.297

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

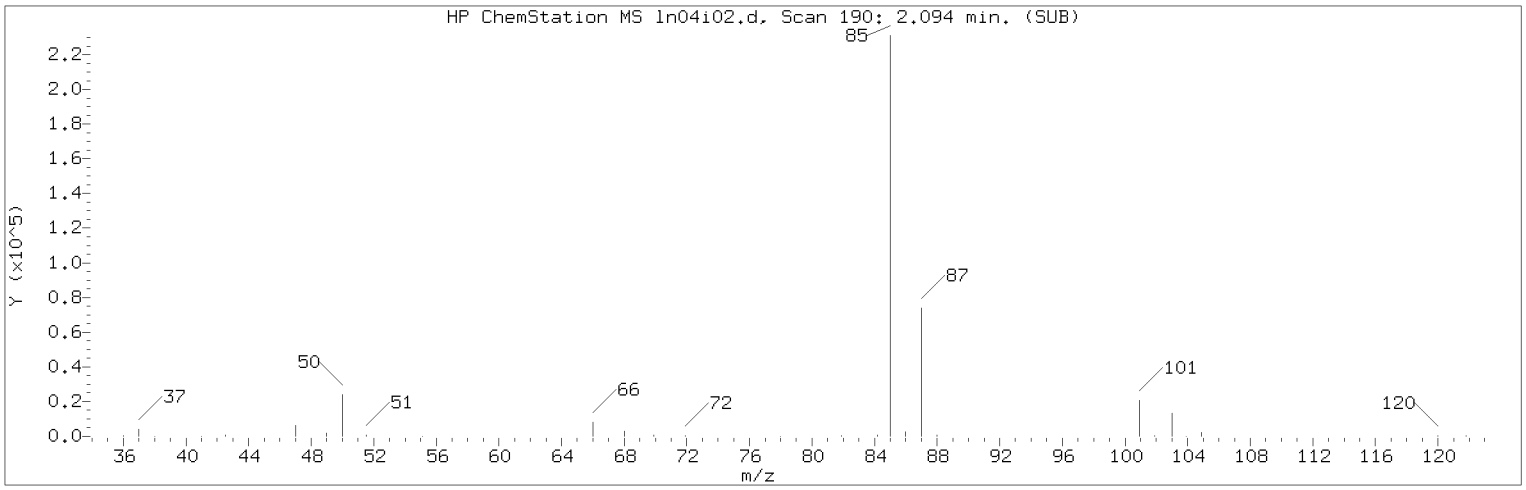
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

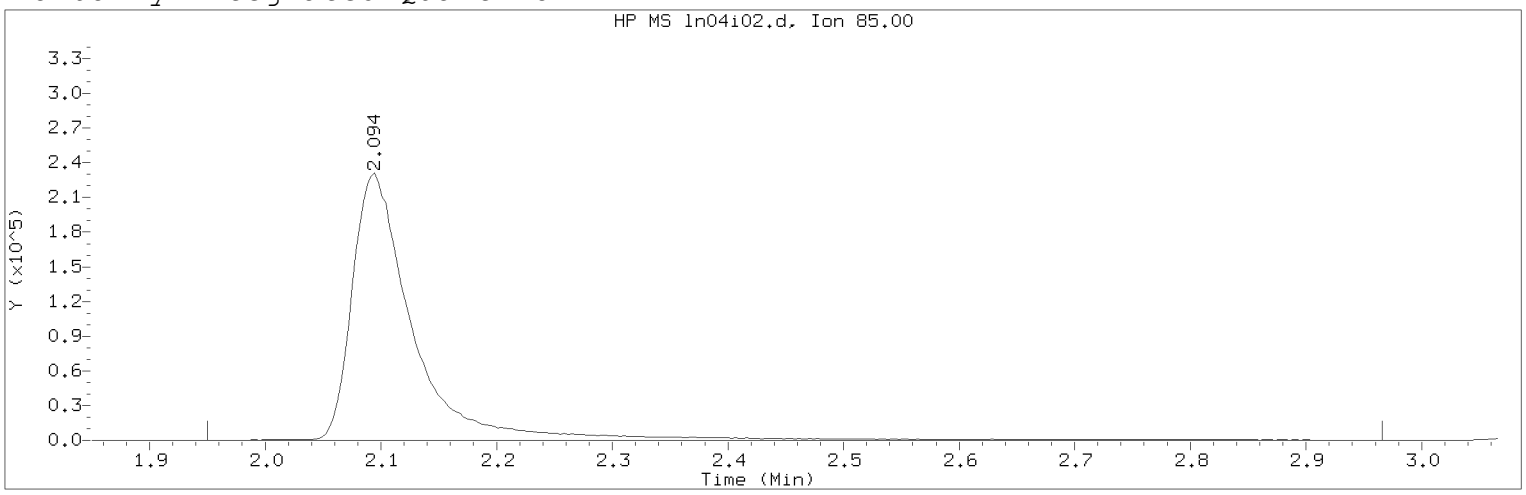
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	2711349	101.660
135) Benzyl Chloride	(4)	13.319	91	2226905	110.280
136) 1,3-Diethylbenzene	(4)	13.374	119	1705244	102.734
141) Diethylbenzene (total)	(4)		100	4934627	307.371
137) 1,4-Diethylbenzene	(4)	13.445	119	1791059	101.846
139) n-Butylbenzene	(4)	13.464	92	1355994	103.980
138) 1,2-Dichlorobenzene	(4)	13.502	146	1381717	101.273
140) 1,2-Diethylbenzene	(4)	13.518	119	1438324	102.791
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	224965	108.669
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	1074198	102.479
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	1034842	101.533
147) Hexachlorobutadiene	(4)	14.666	225	430531	89.465
148) Naphthalene	(4)	14.772	128	3428000	104.621
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	1010801	101.922
150) 2-Methylnaphthalene	(4)	15.563	142	2117626	104.952

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

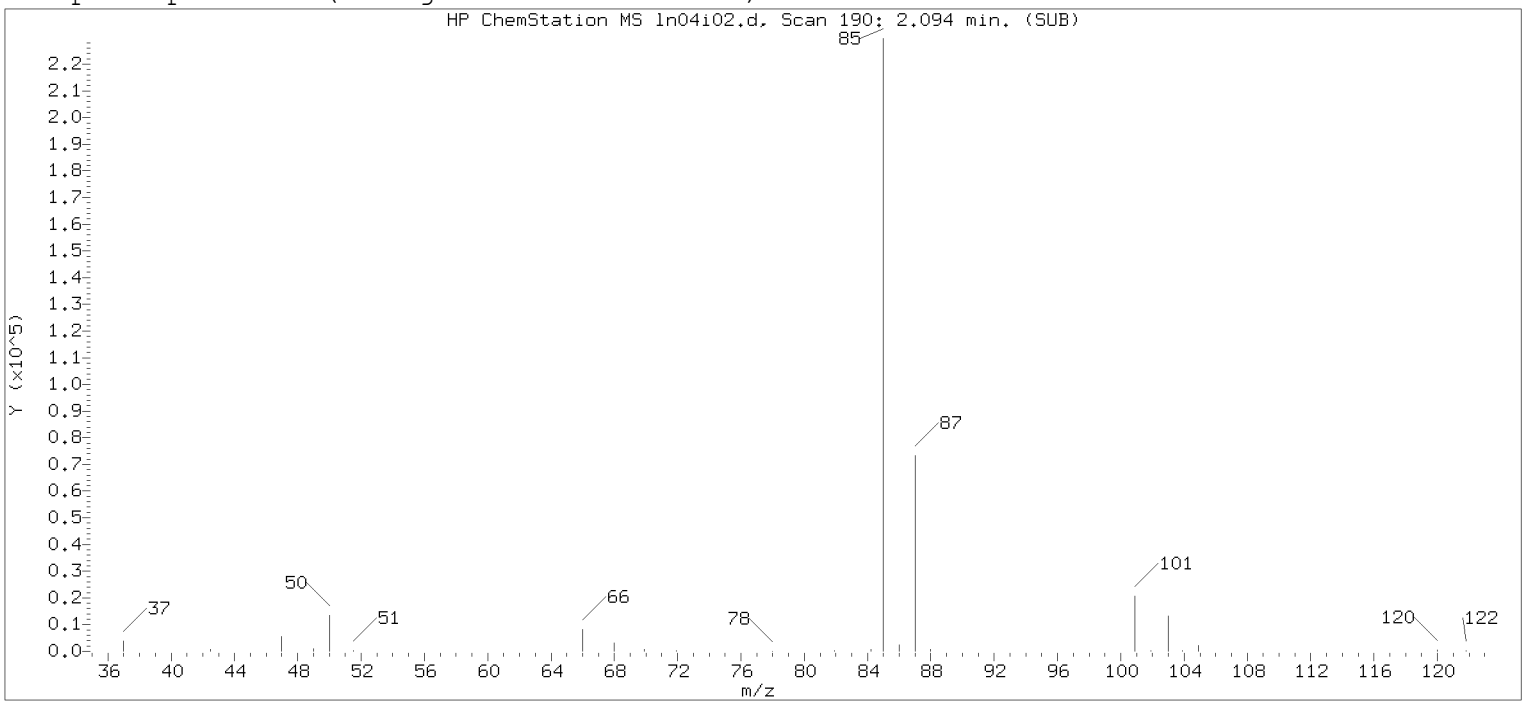
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area (flag) : 857961M
On-Column Amount (ng) : 103.9433
Integration start scan : 144 Integration stop scan: 460
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

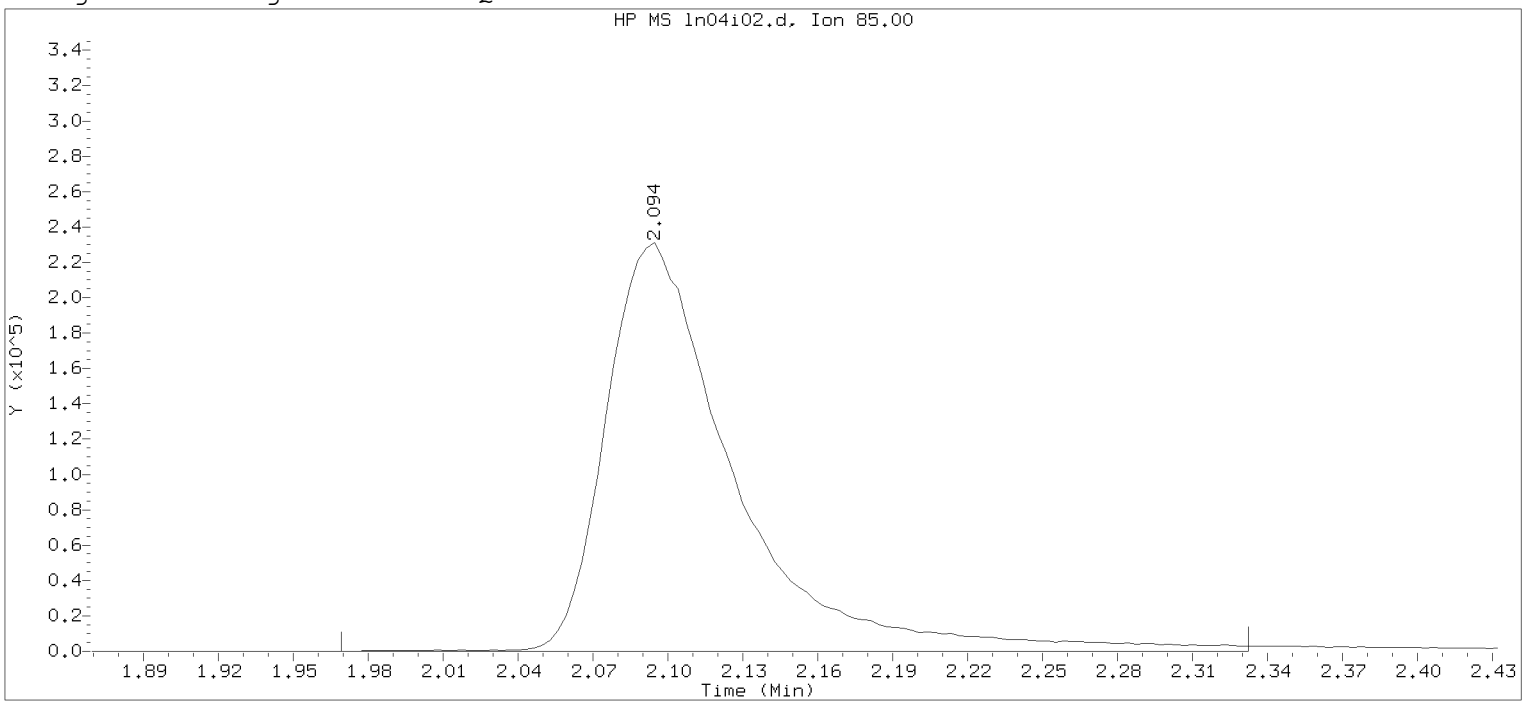
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

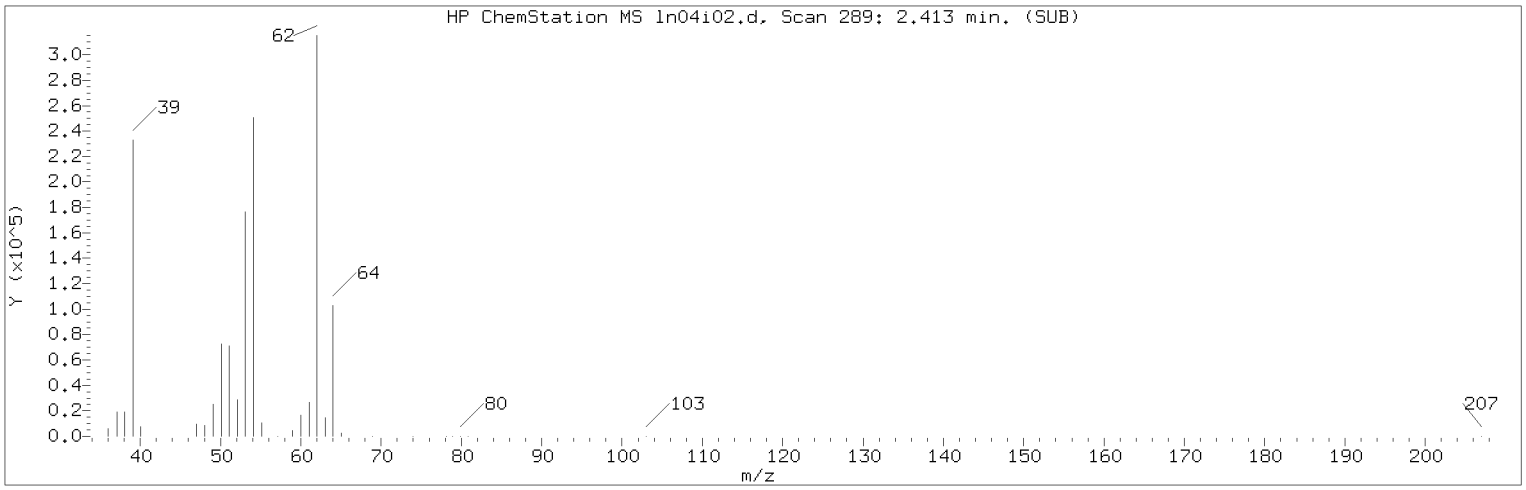
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

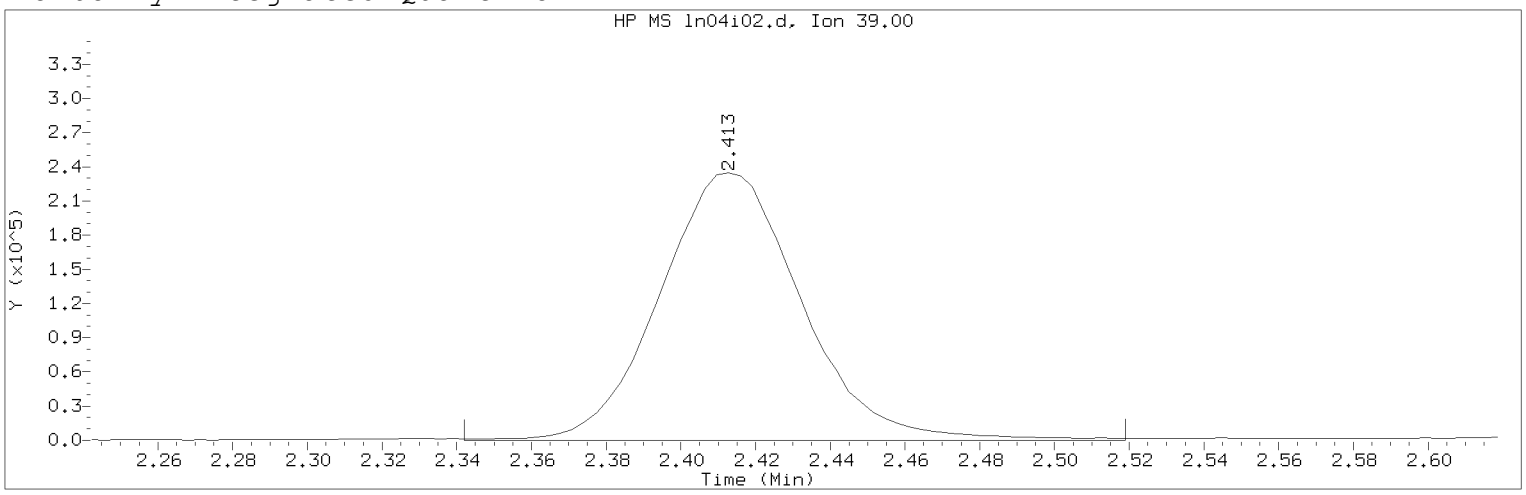
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area : 824639
On-column Amount (ng) : 94.4157
Integration start scan : 150 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

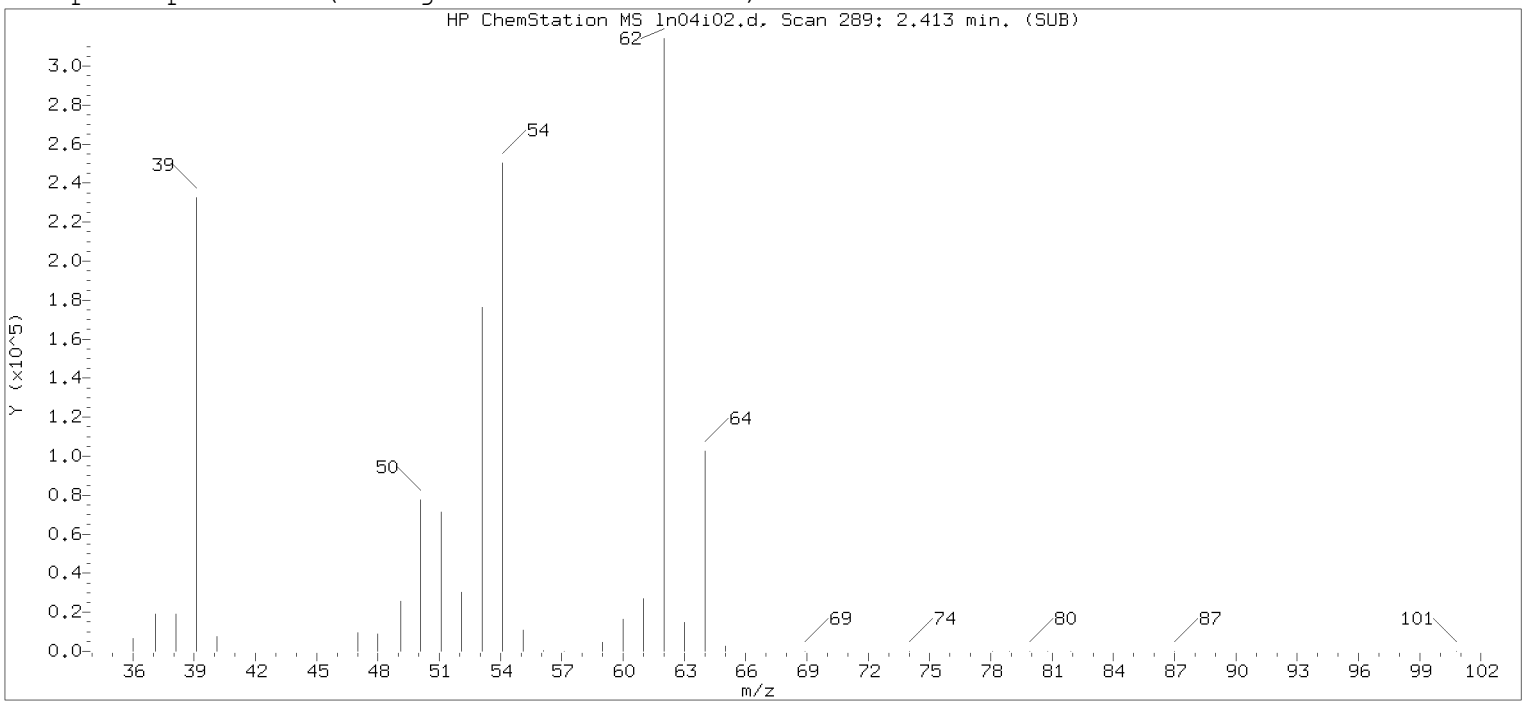
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area (flag) : 618713M
On-Column Amount (ng) : 93.6685
Integration start scan : 266 Integration stop scan: 321
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

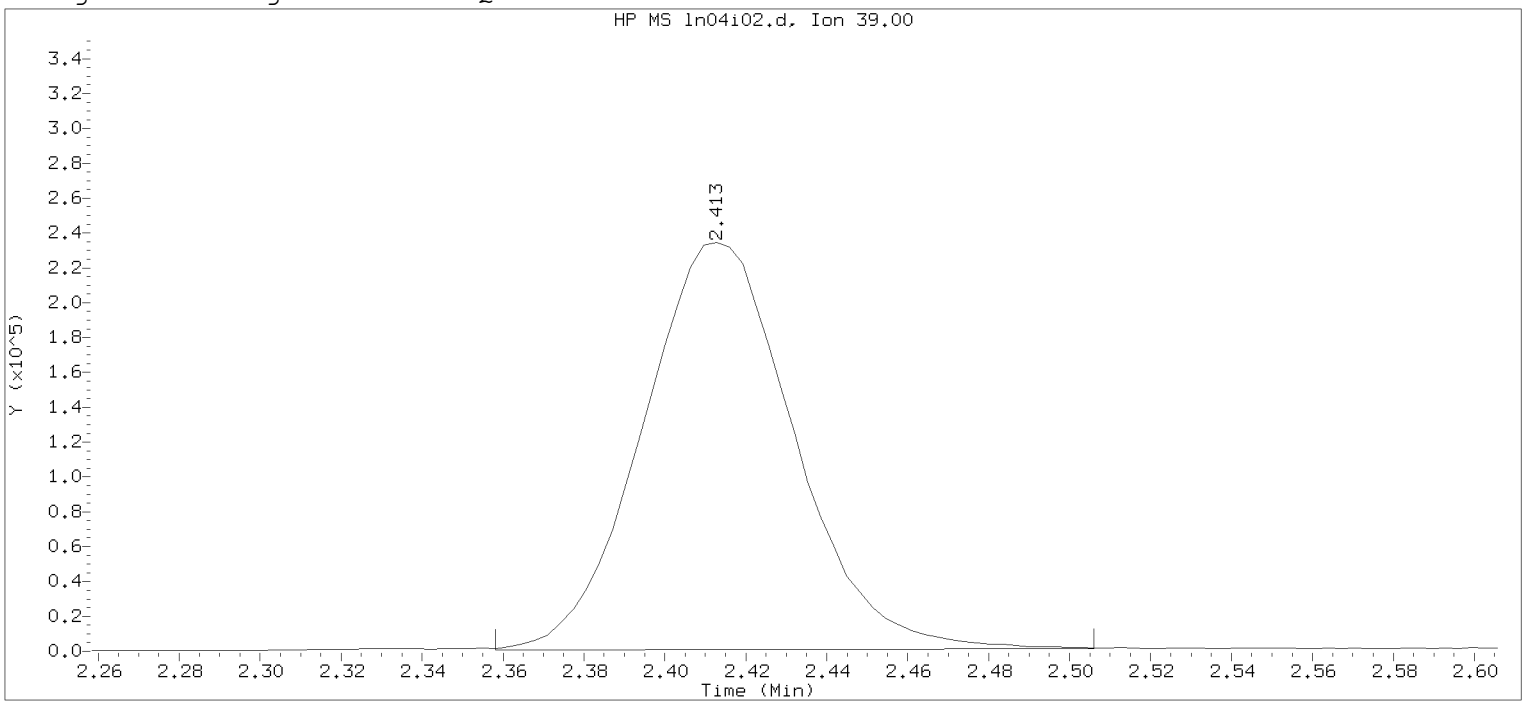
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

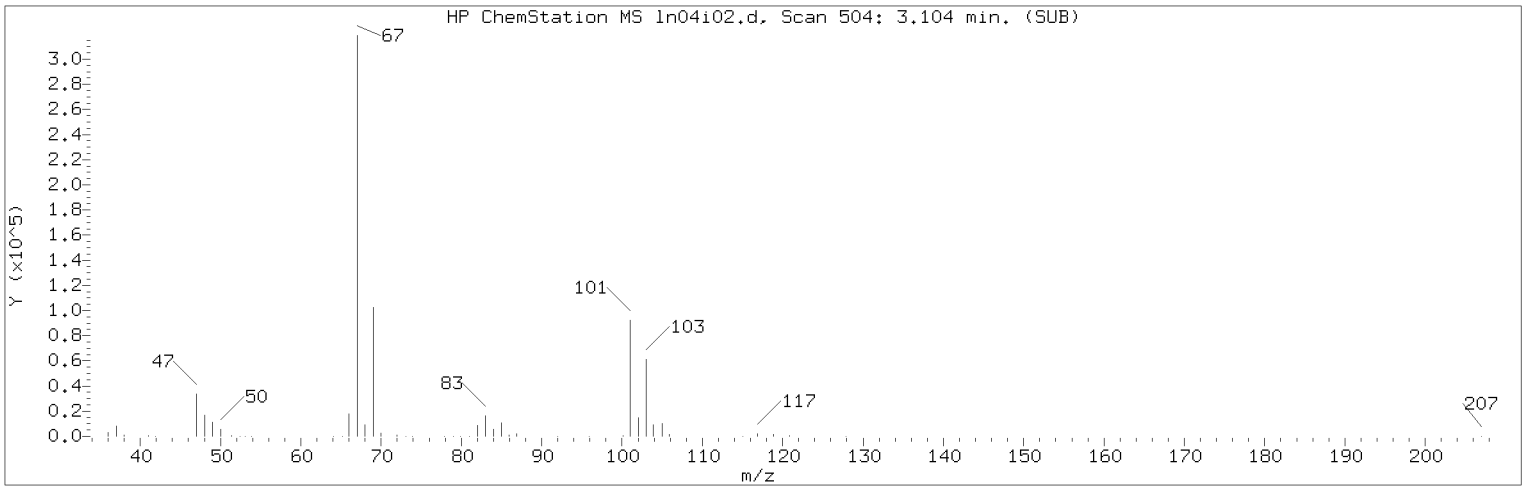
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

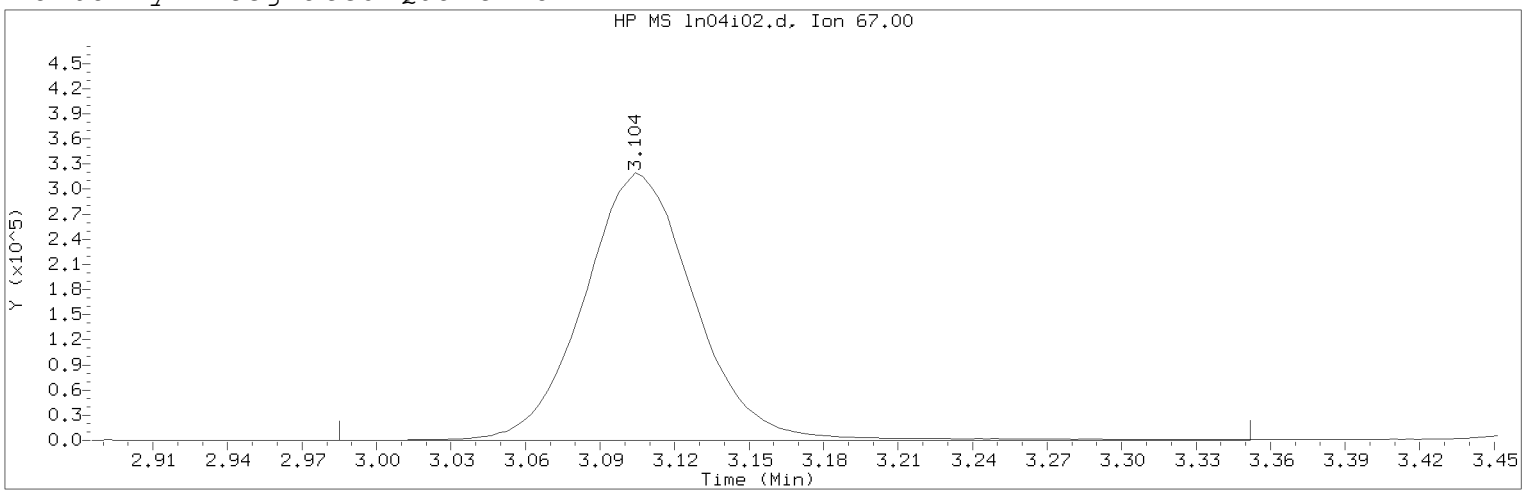
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area : 605602
On-column Amount (ng) : 97.5651
Integration start scan : 271 Integration stop scan: 317
Y at integration start : 806 Y at integration end: 1441

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

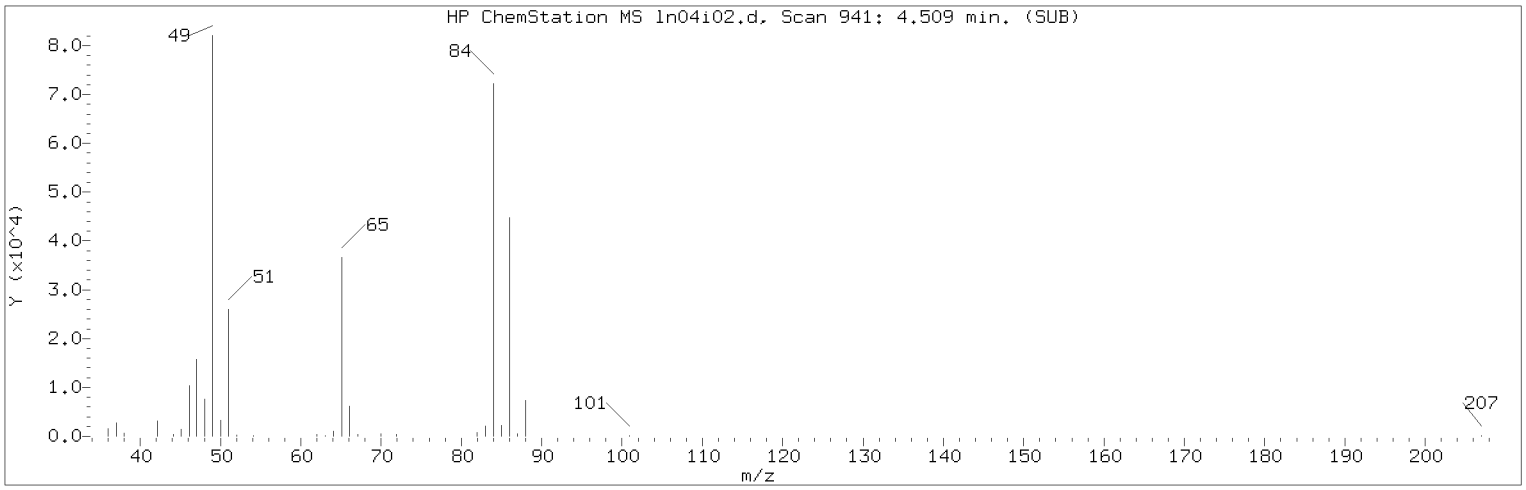
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 504
Retention Time (minutes): 3.104
Quant Ion : 67.00
Area (flag) : 992796M
On-Column Amount (ng) : 94.6777
Integration start scan : 466 Integration stop scan: 580
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

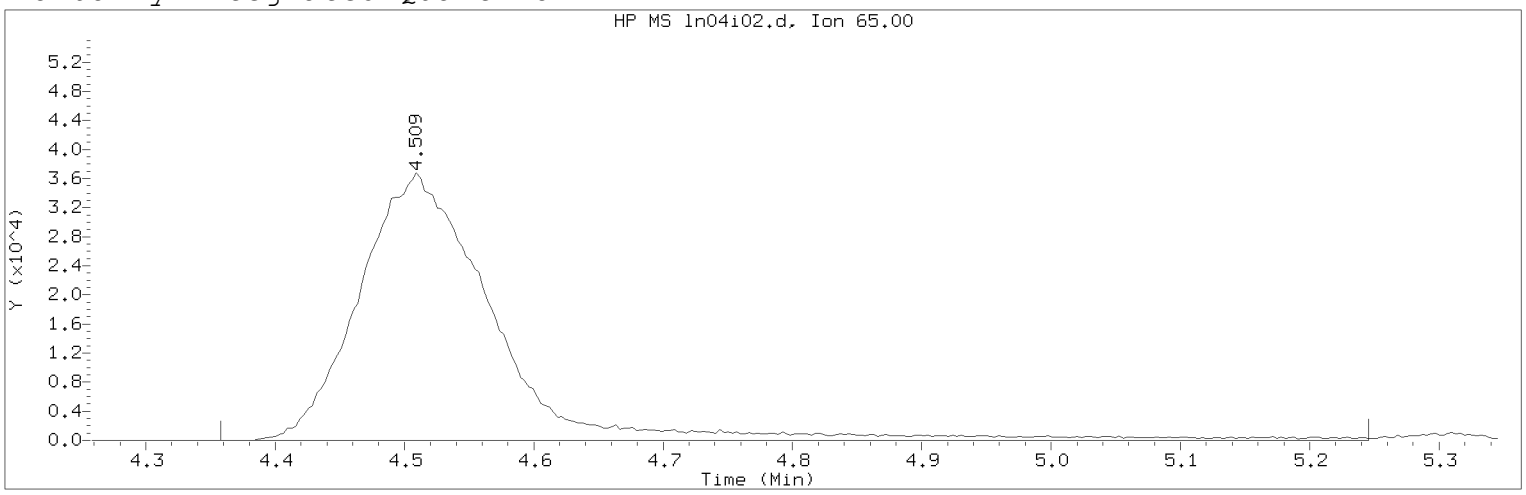
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

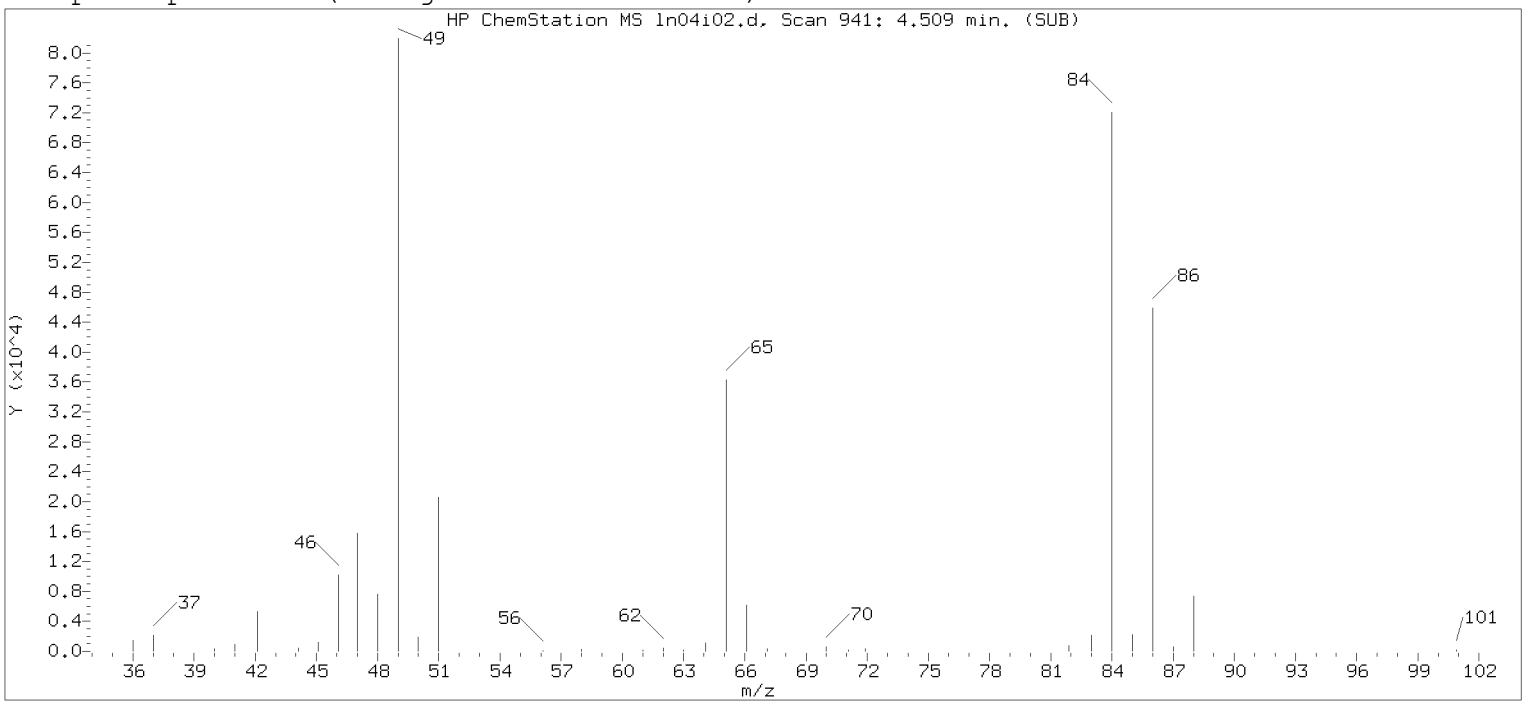
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 265971M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1169
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

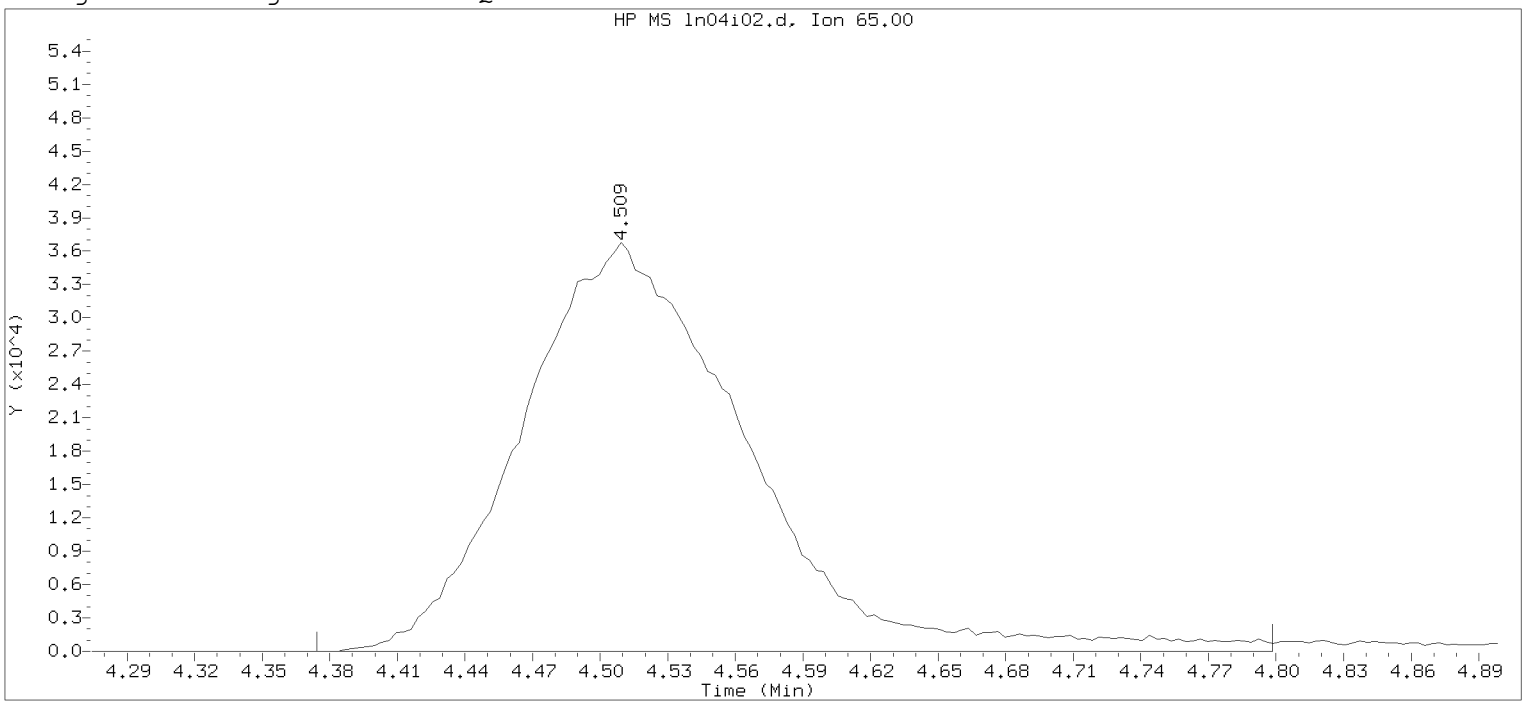
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

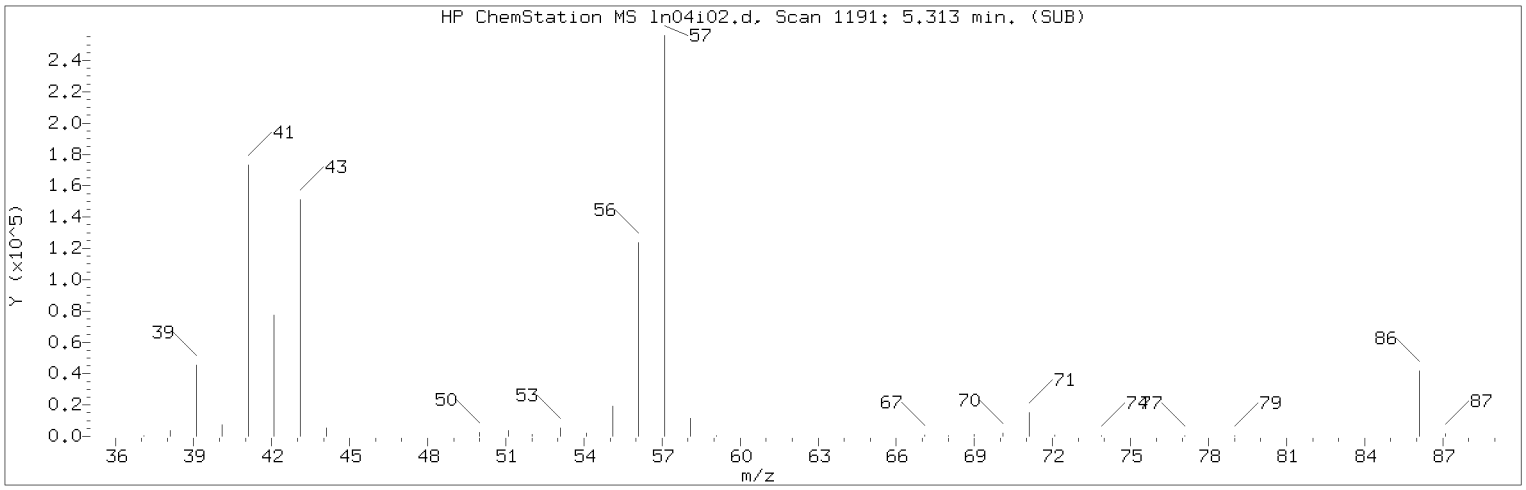
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

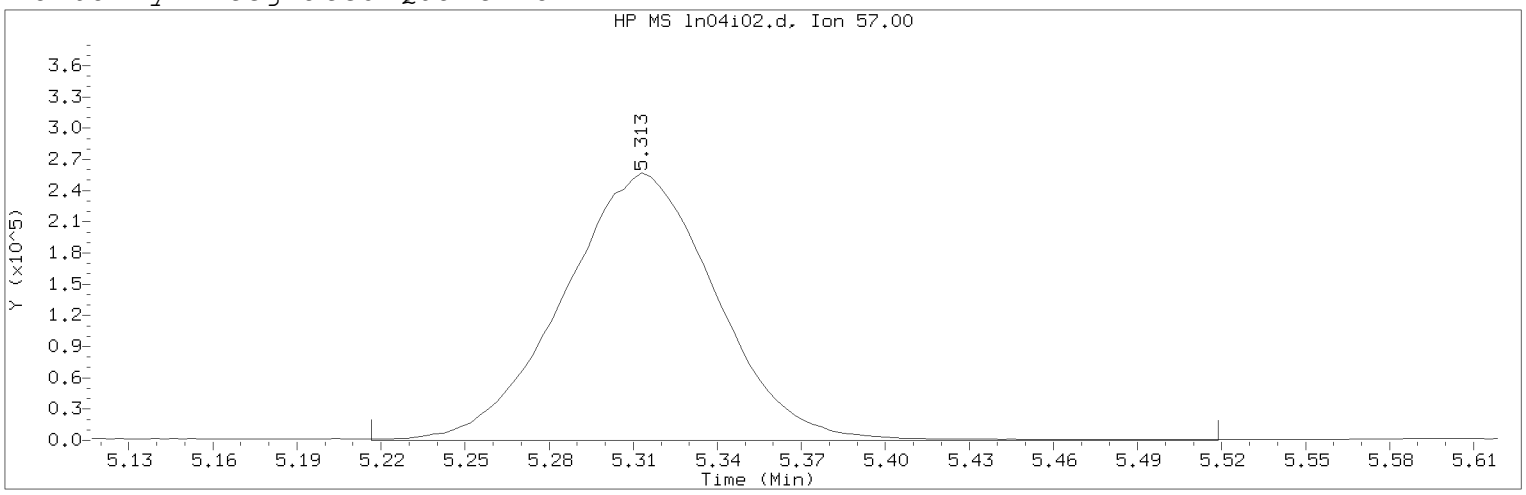
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 252632
On-column Amount (ng) : 250.0000
Integration start scan : 898 Integration stop scan: 1030
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

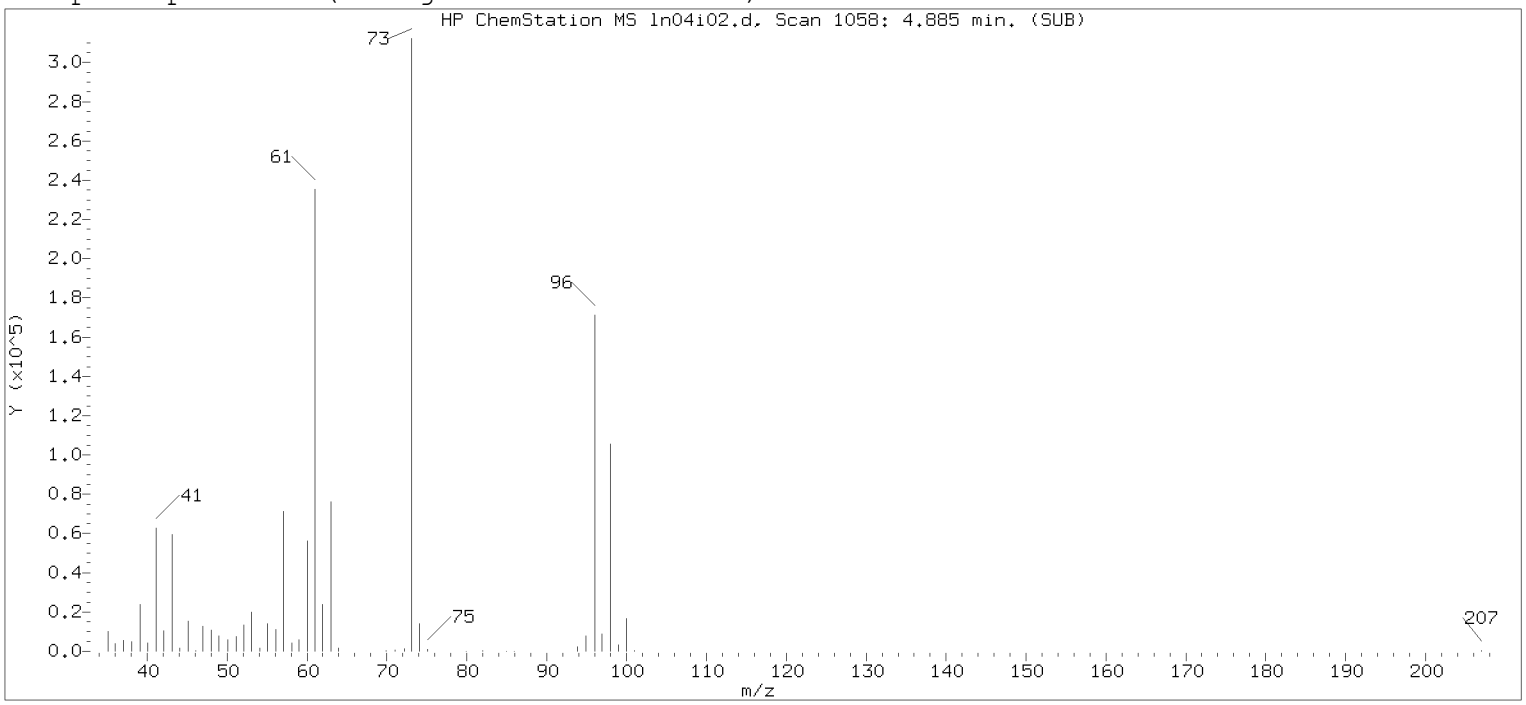
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1191
Retention Time (minutes): 5.313
Quant Ion : 57.00
Area (flag) : 974442M
On-Column Amount (ng) : 107.9083
Integration start scan : 1160 Integration stop scan: 1254
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

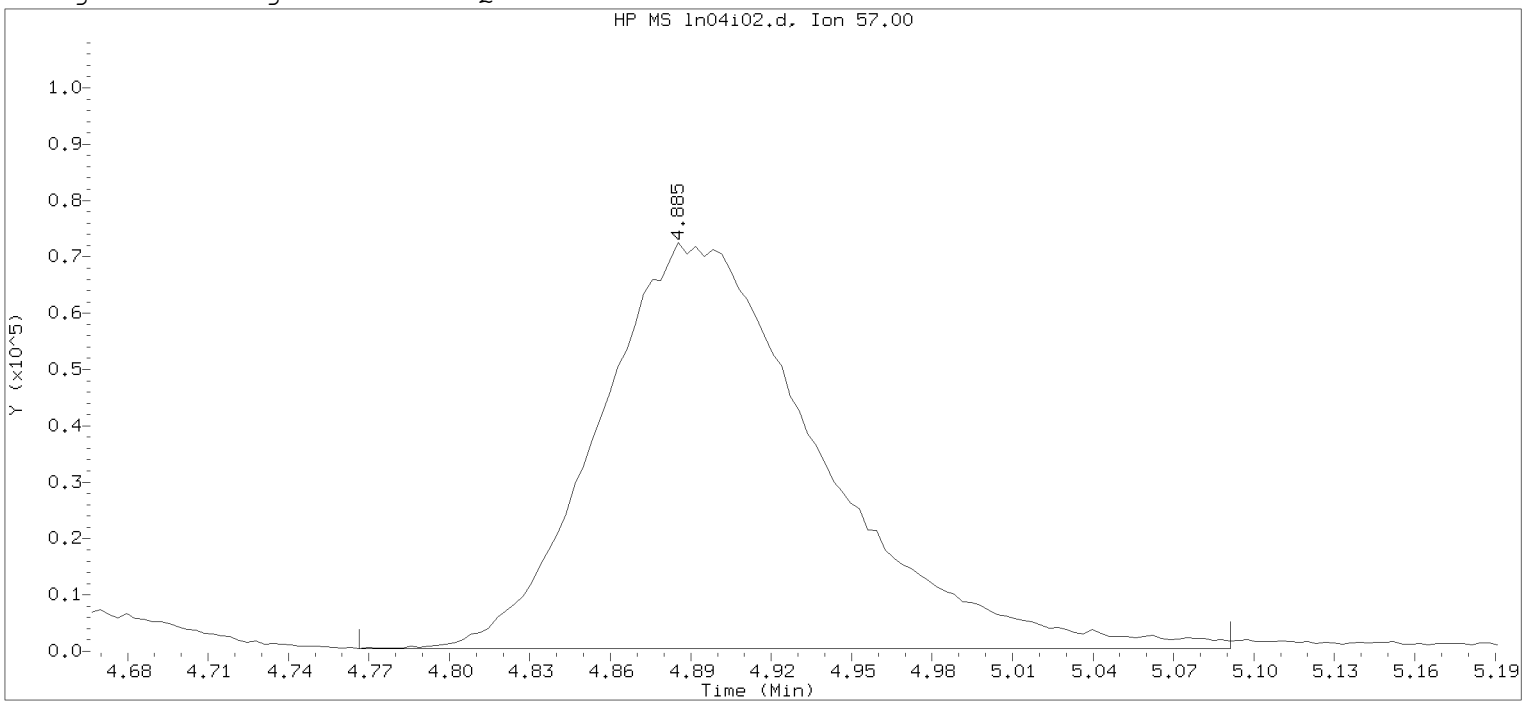
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

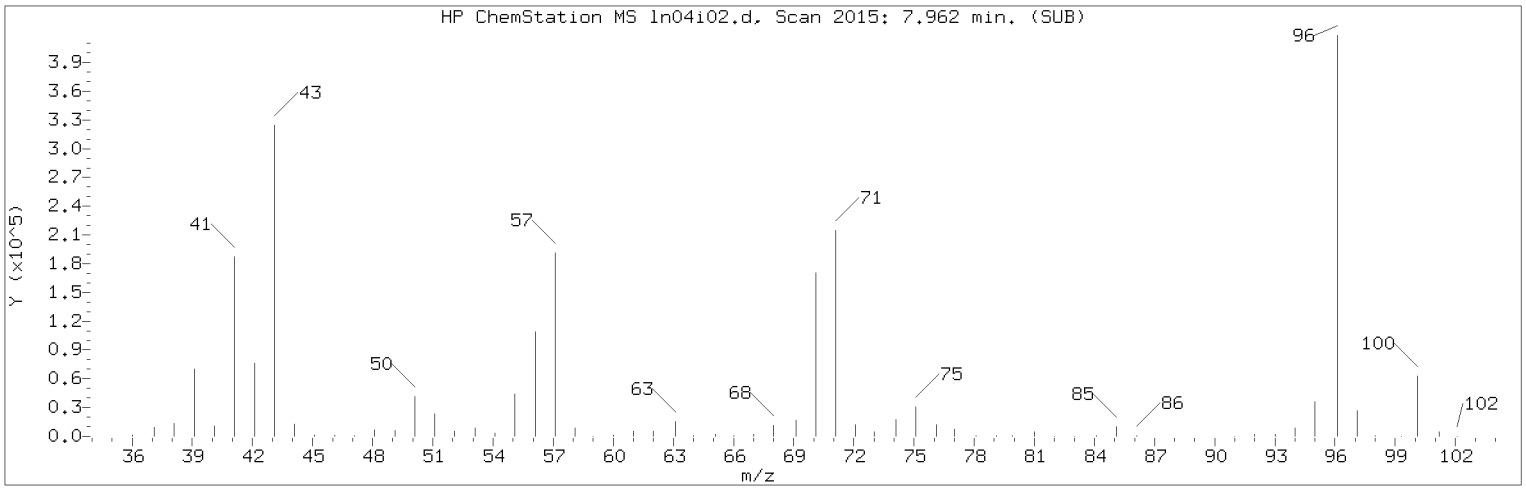
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

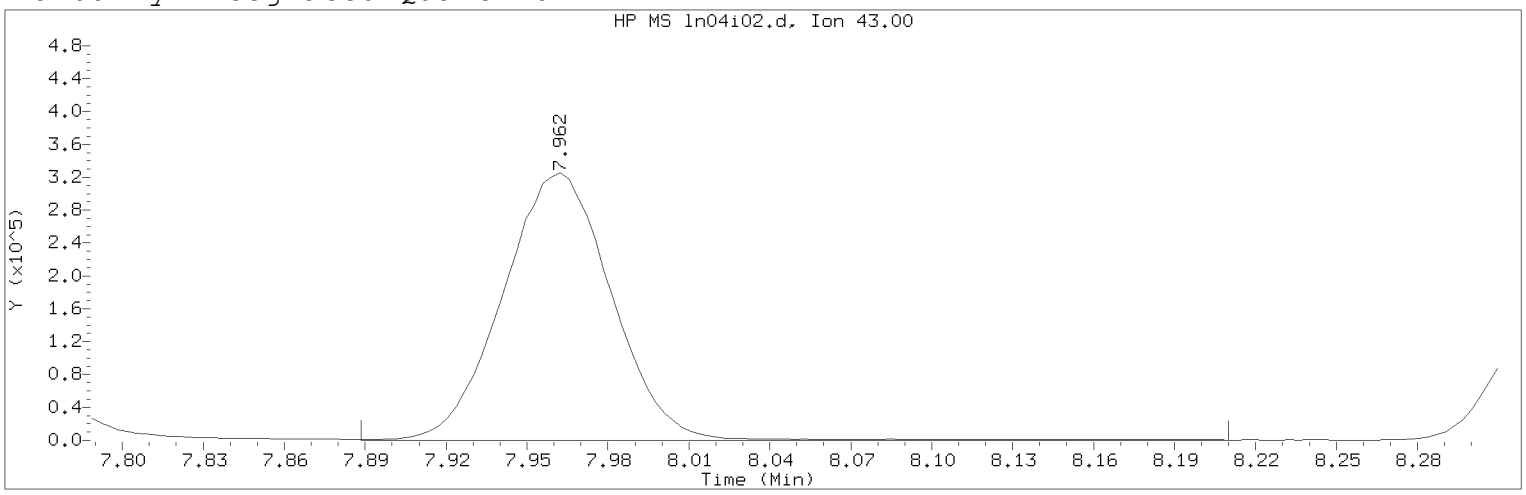
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1058
Retention Time (minutes): 4.885
Quant Ion : 57.00
Area : 414312
On-column Amount (ng) : 98.9070
Integration start scan : 1020 Integration stop scan: 1121
Y at integration start : 485 Y at integration end: 485

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

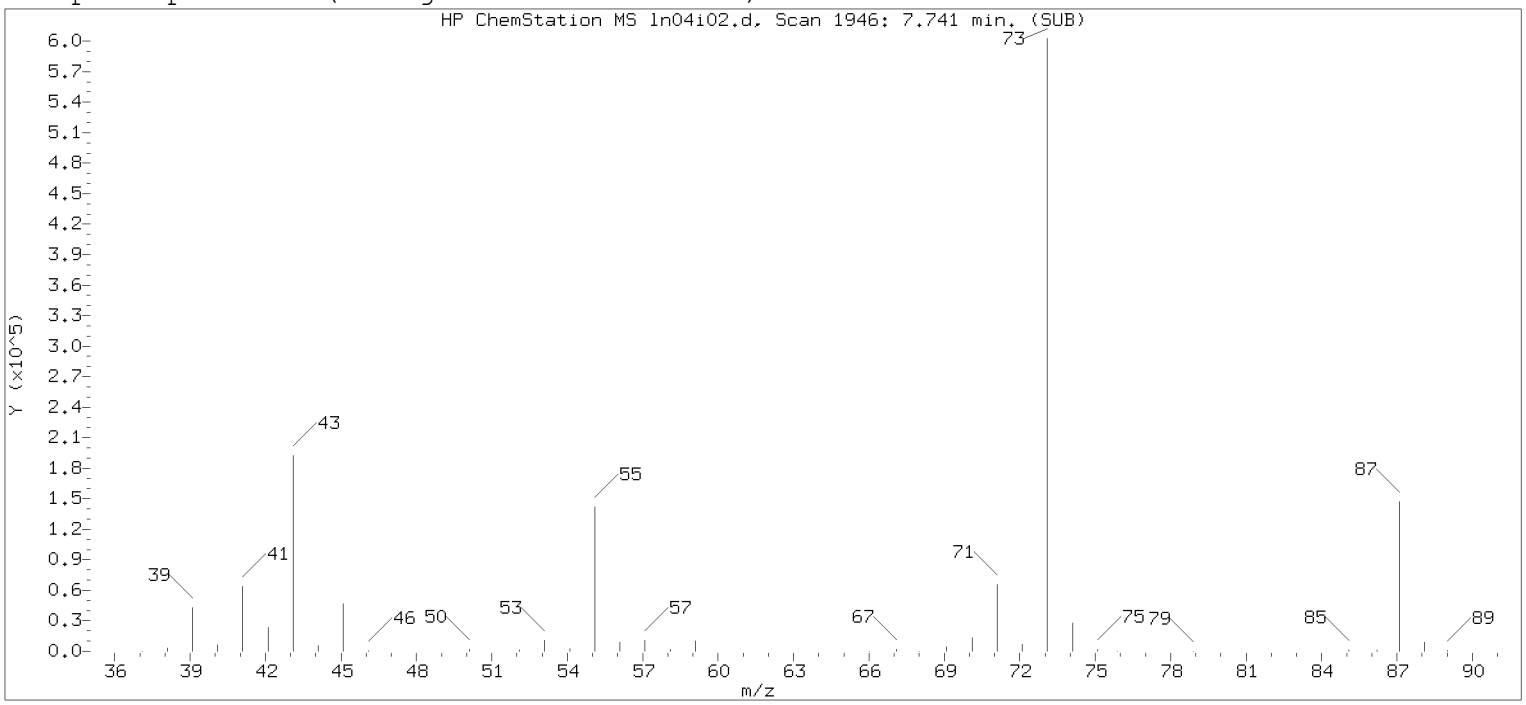
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2015
Retention Time (minutes): 7.962
Quant Ion : 43.00
Area (flag) : 911962MA
On-Column Amount (ng) : 108.1037
Integration start scan : 1991 Integration stop scan: 2091
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

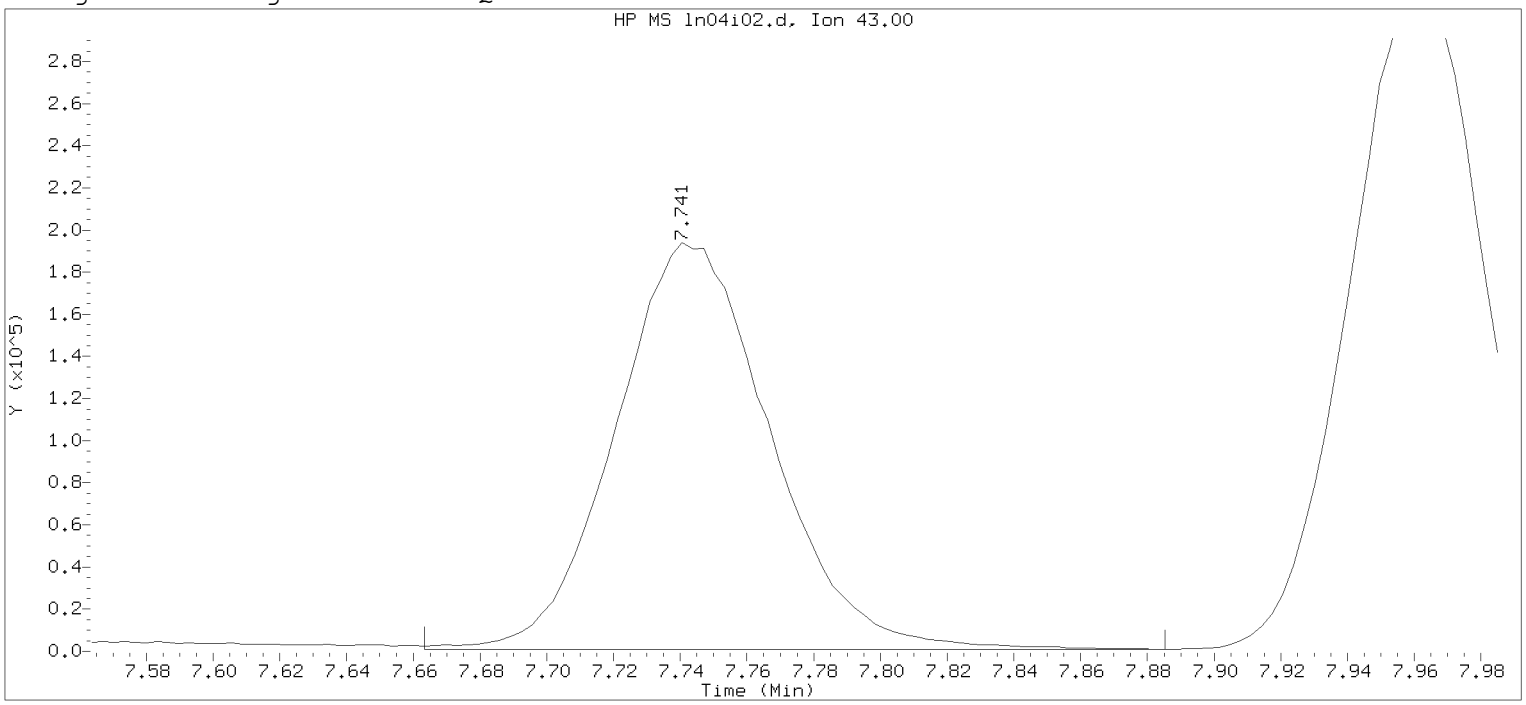
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

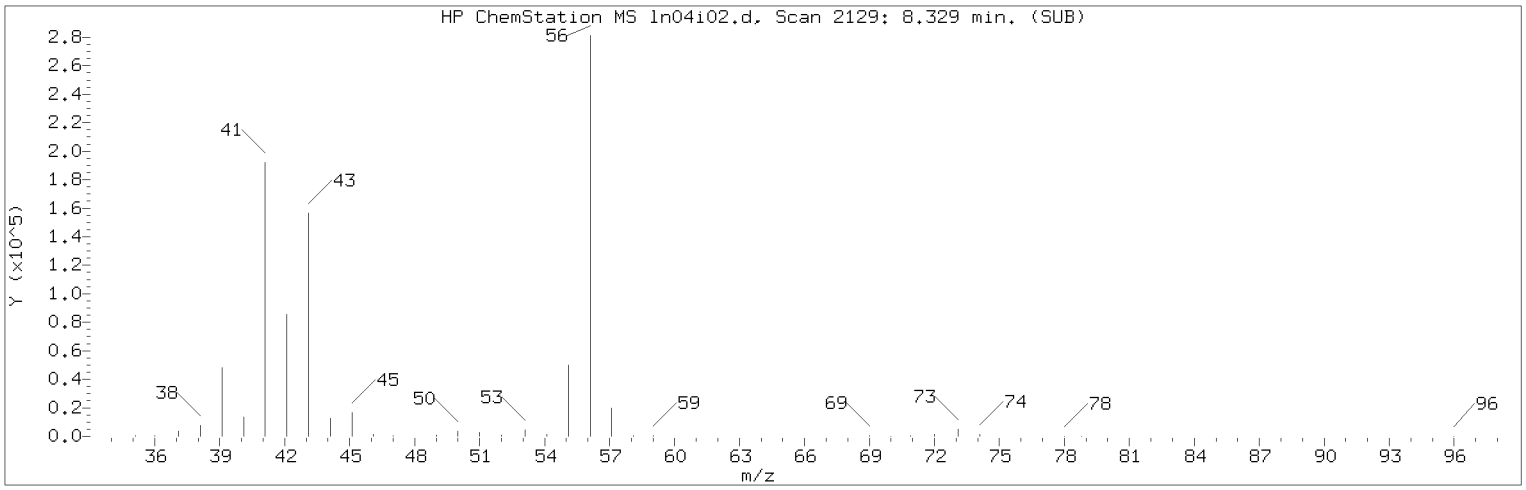
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

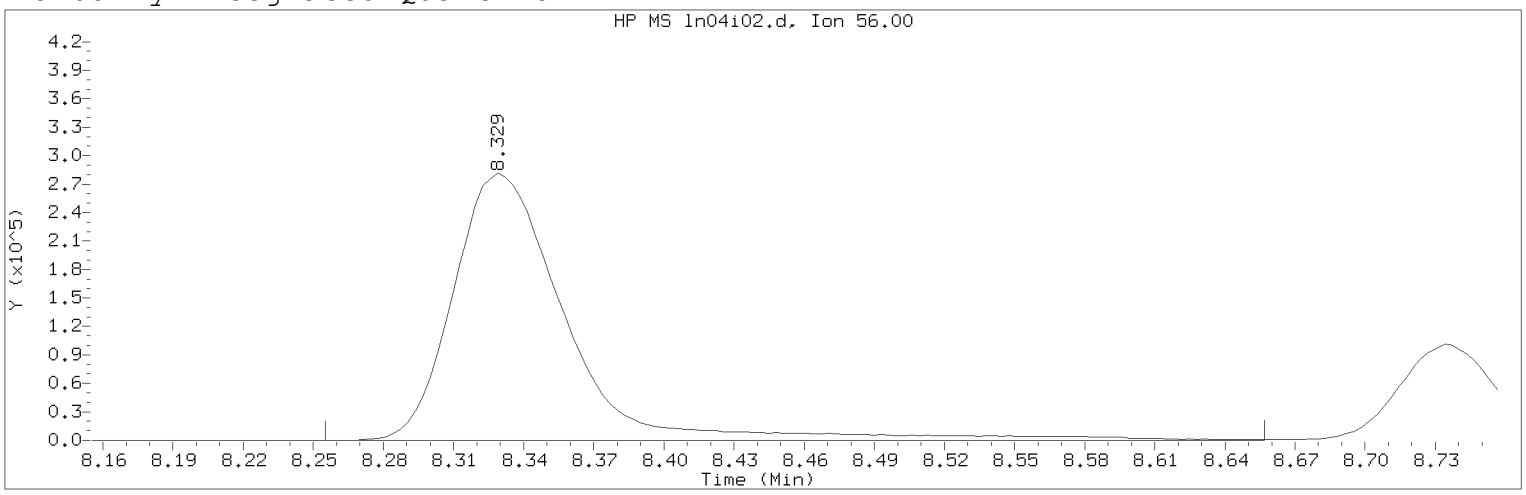
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.741
Quant Ion : 43.00
Area : 623358
On-column Amount (ng) : 101.3435
Integration start scan : 1921 Integration stop scan: 1990
Y at integration start : 845 Y at integration end: 845

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

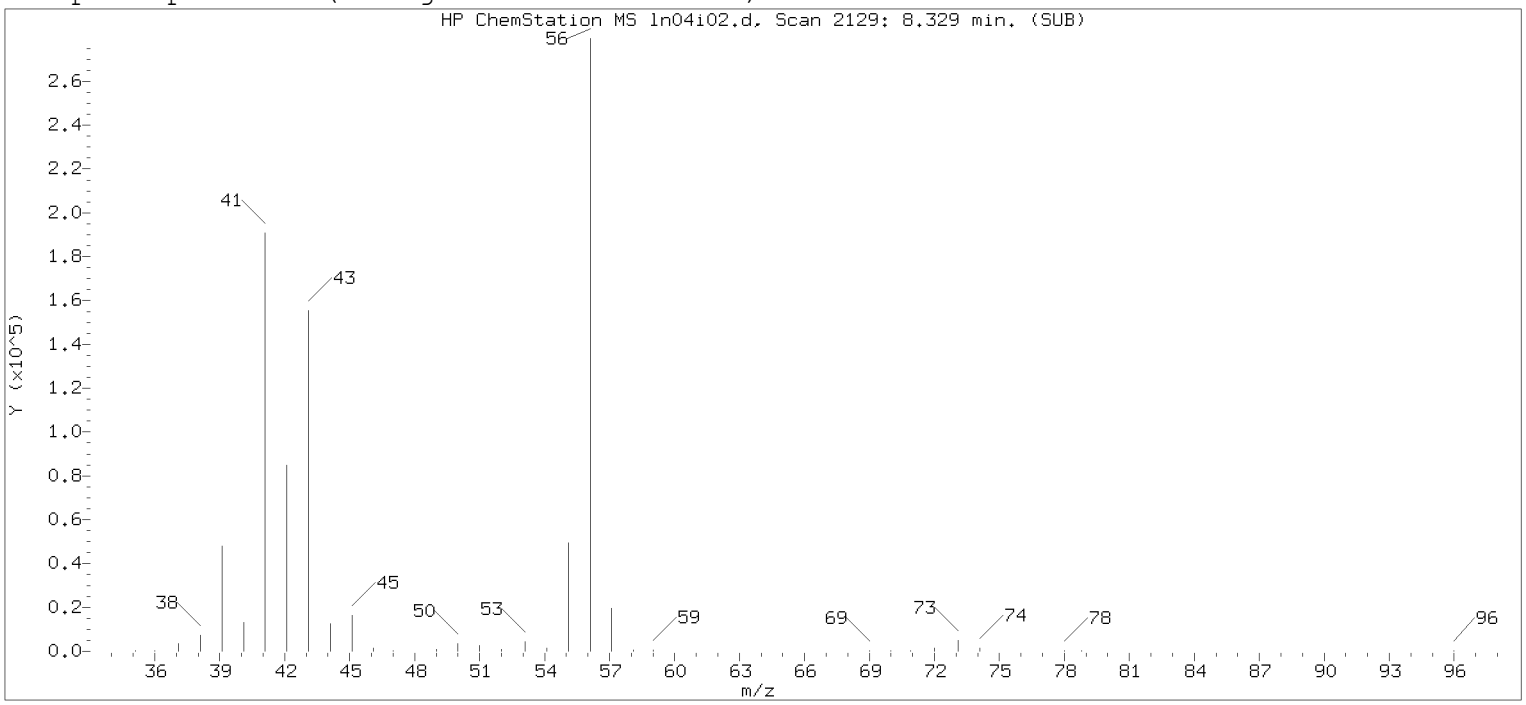
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area (flag) : 944383M
On-Column Amount (ng) : 2911.8124
Integration start scan : 2105 Integration stop scan: 2230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

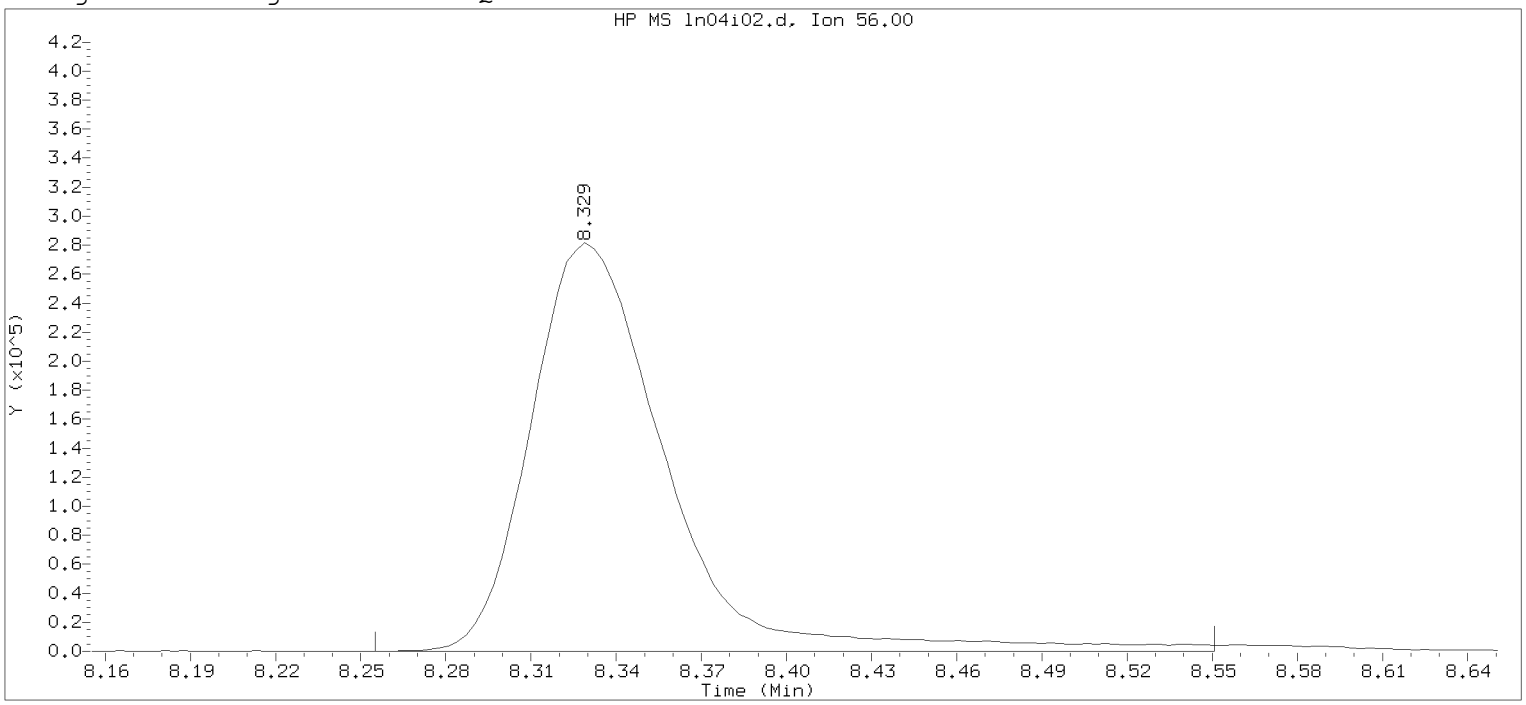
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

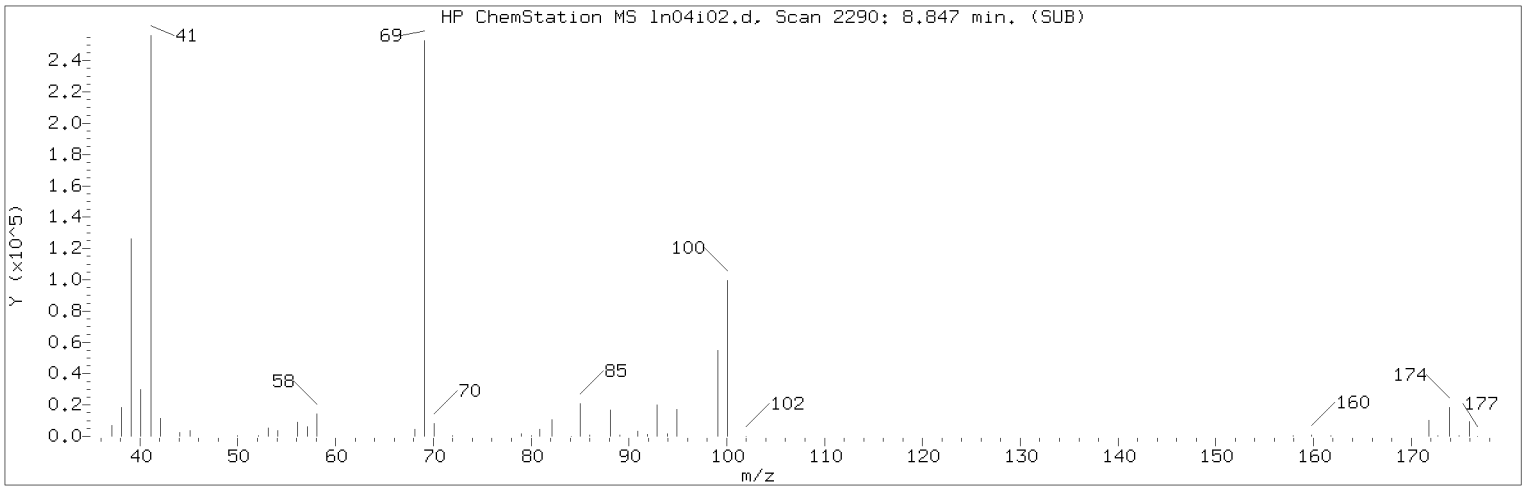
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

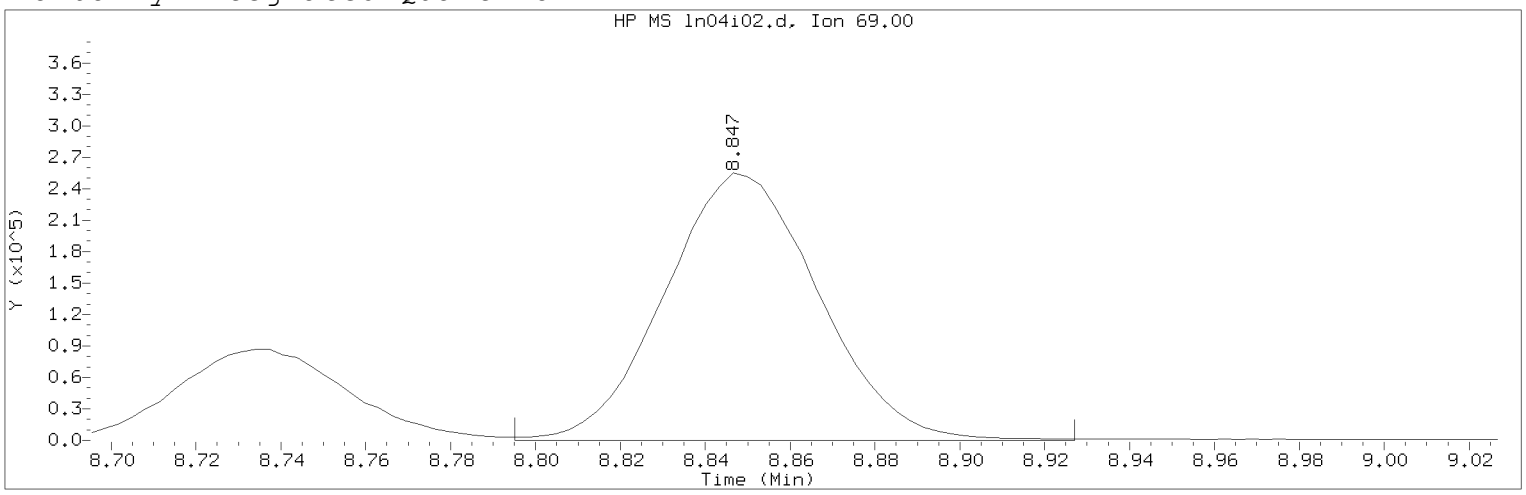
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area : 929615
On-column Amount (ng) : 2668.2803
Integration start scan : 2105 Integration stop scan: 2197
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

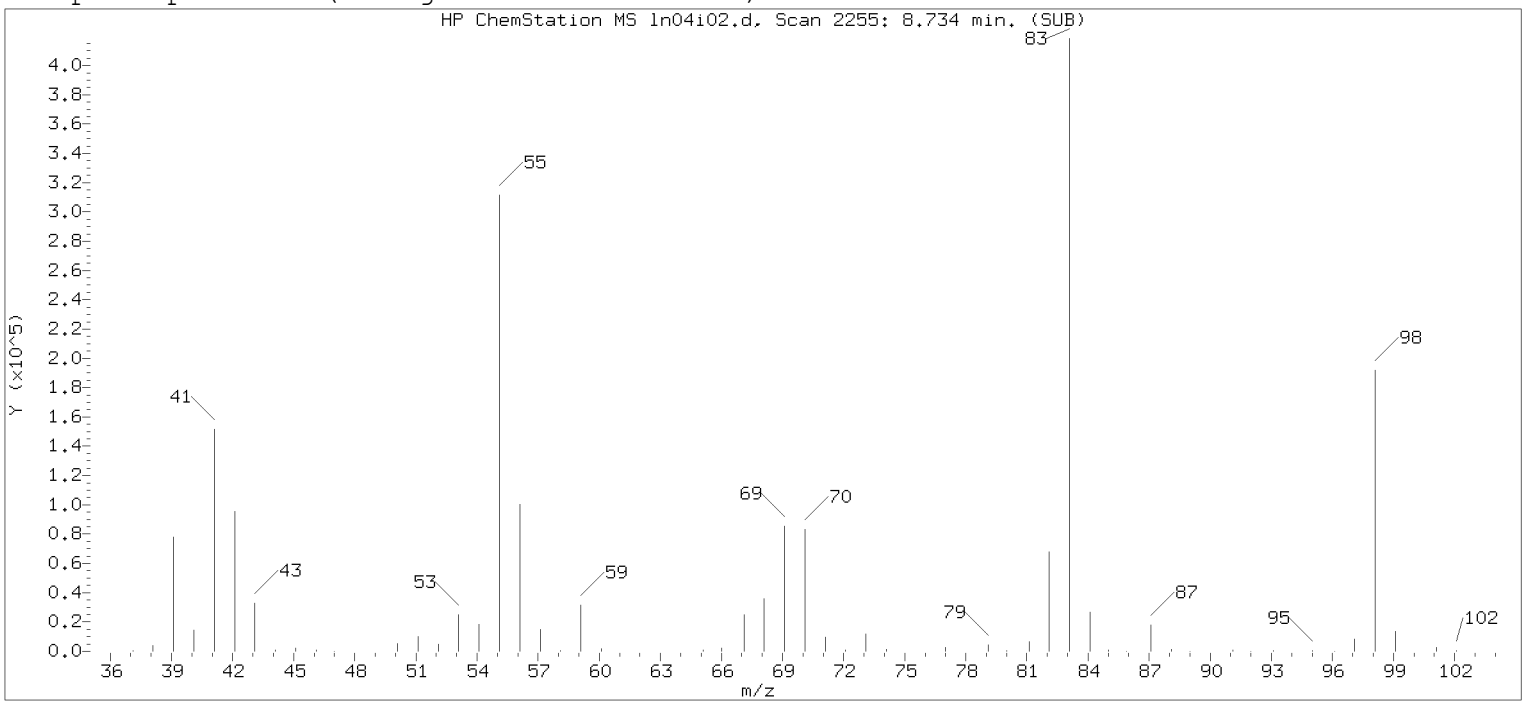
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2290
Retention Time (minutes): 8.847
Quant Ion : 69.00
Area (flag) : 640445A
On-Column Amount (ng) : 108.3344
Integration start scan : 2273 Integration stop scan: 2314
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

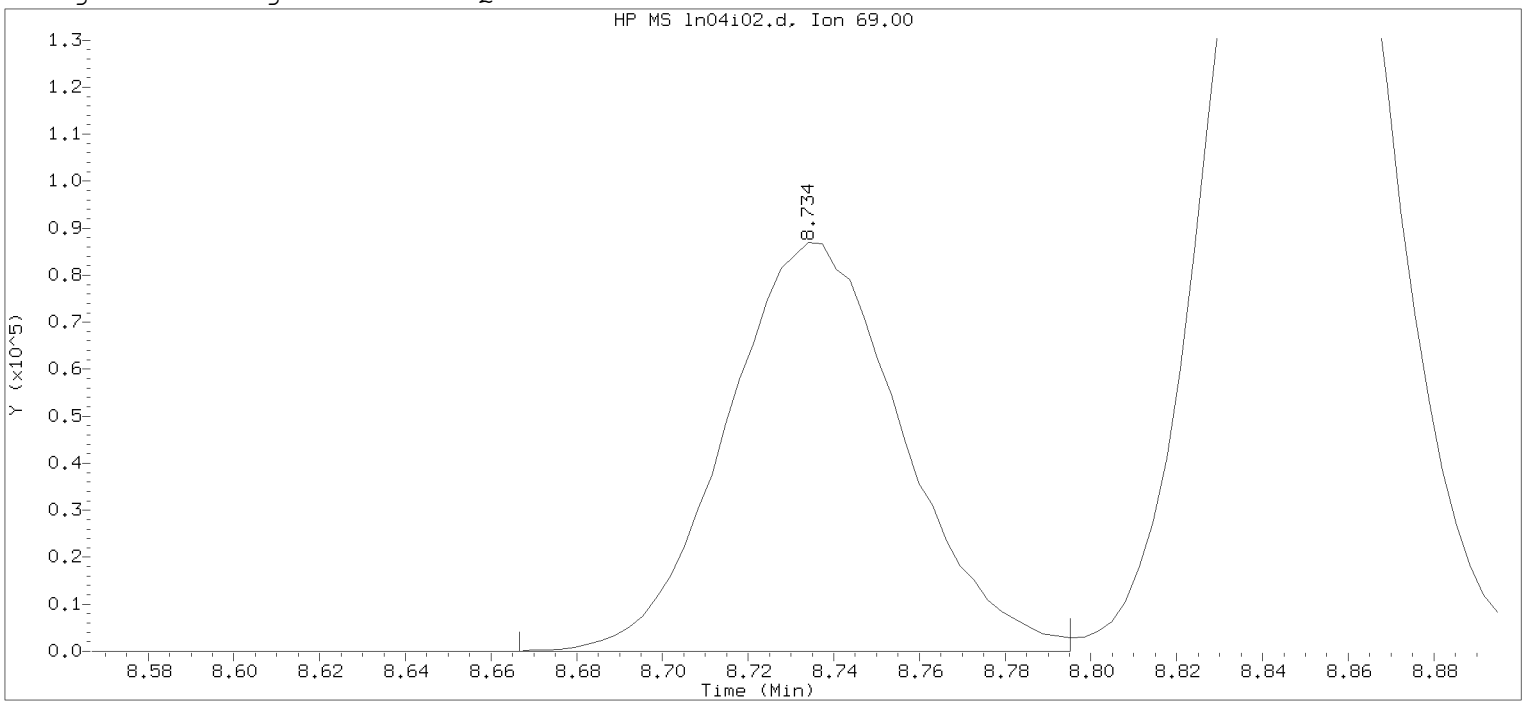
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

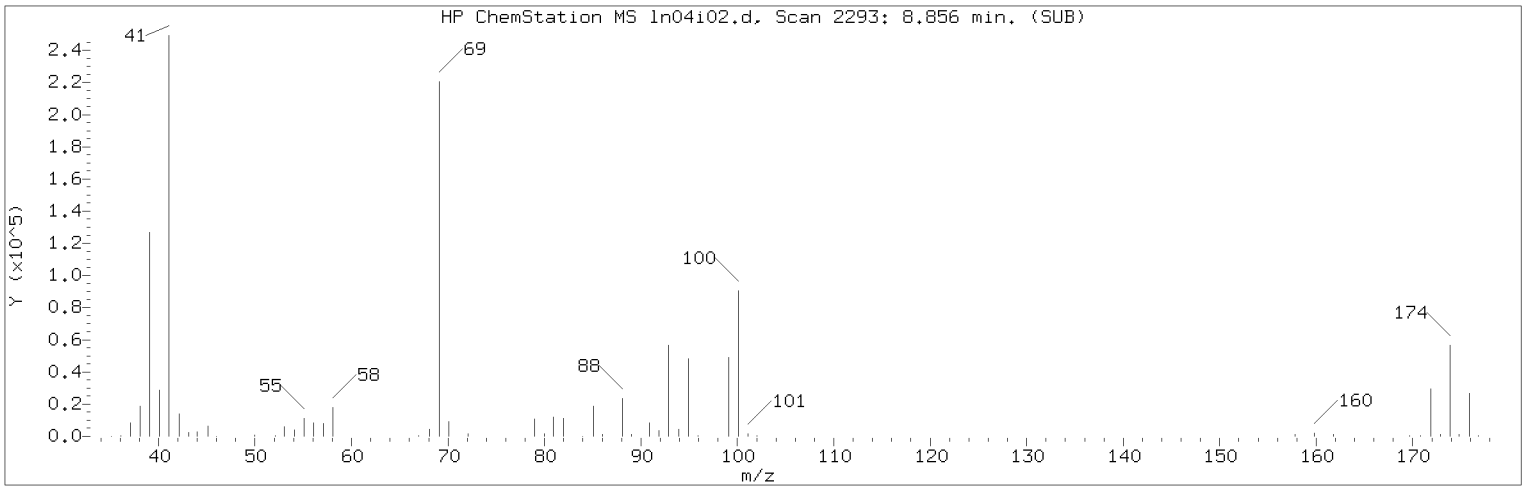
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

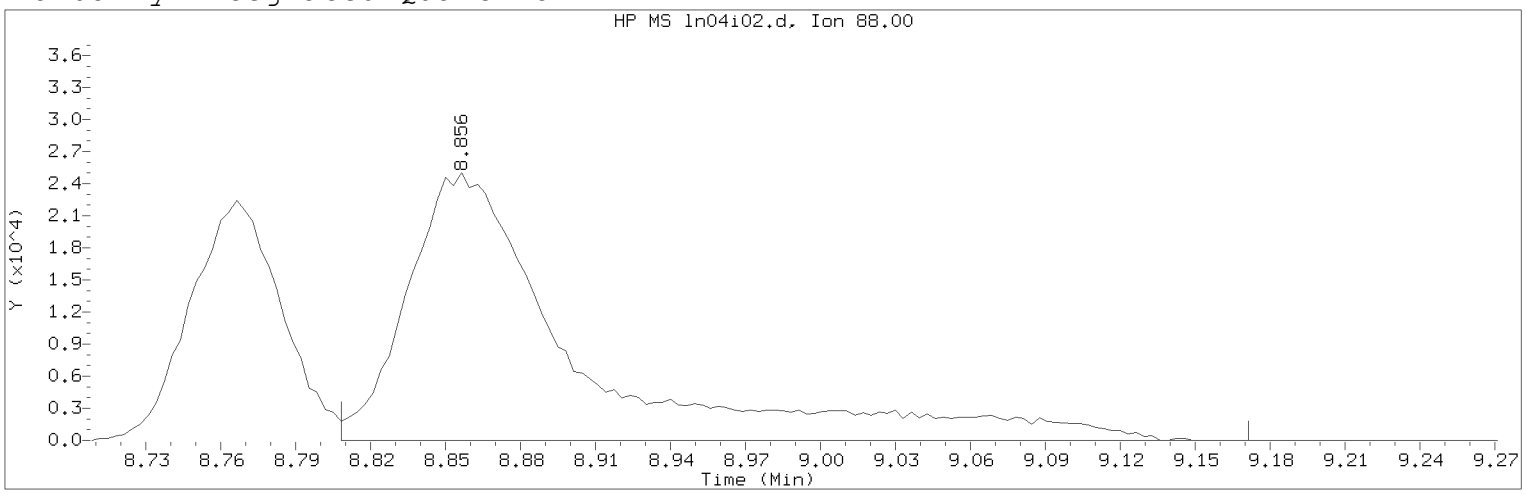
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 247190
On-column Amount (ng) : 97.8749
Integration start scan : 2233 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

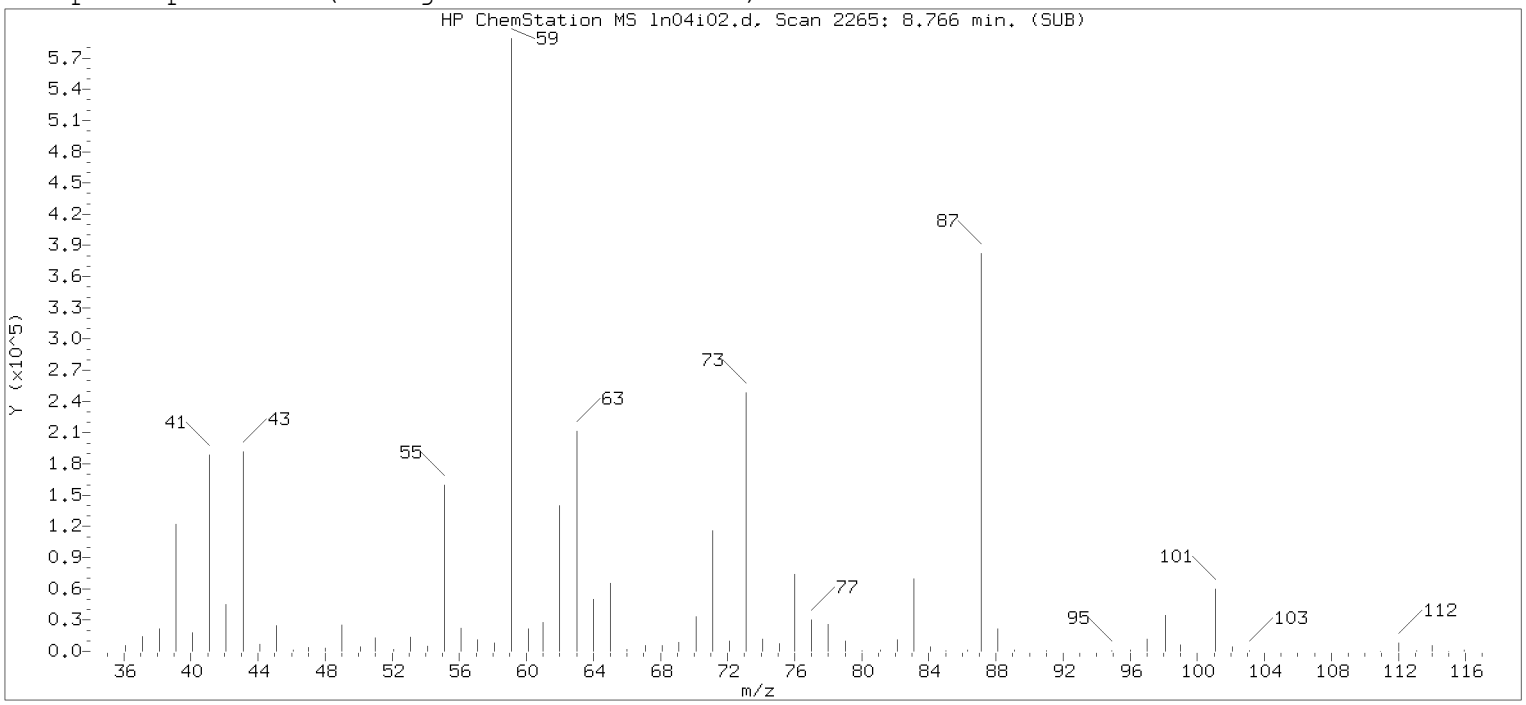
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 117817M
On-Column Amount (ng) : 1321.6466
Integration start scan : 2277 Integration stop scan: 2390
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

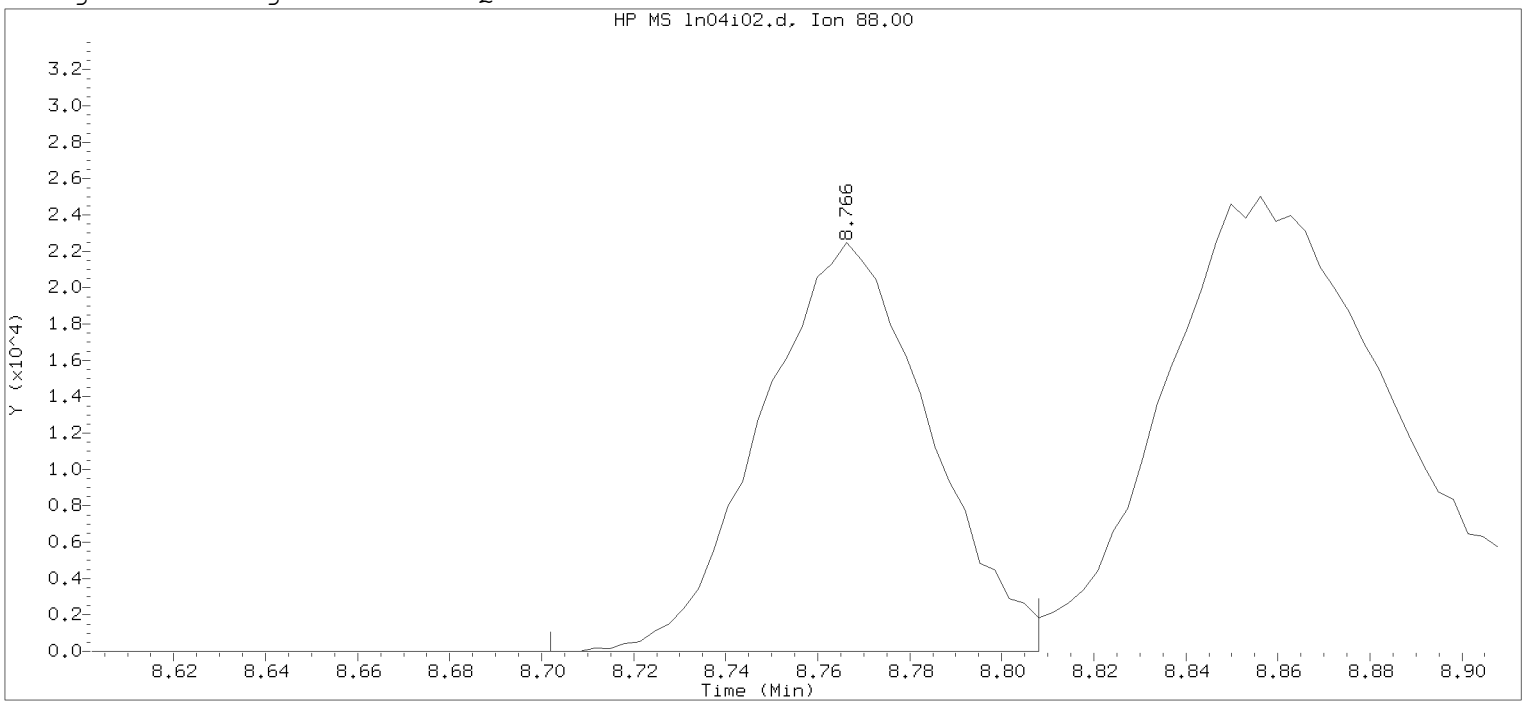
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

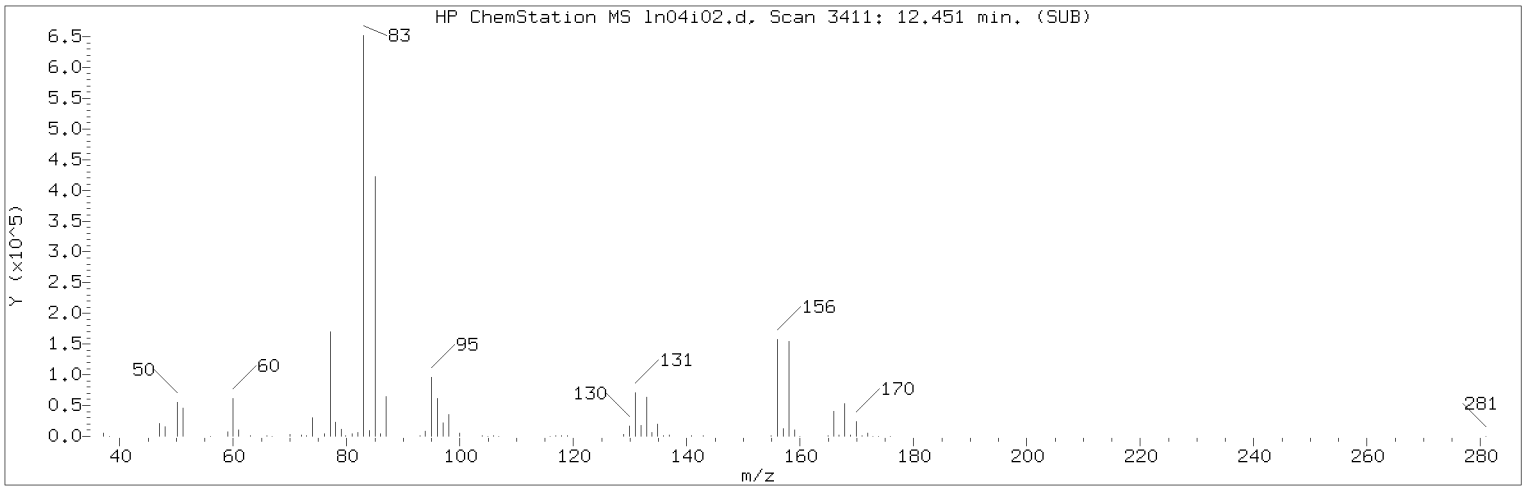
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

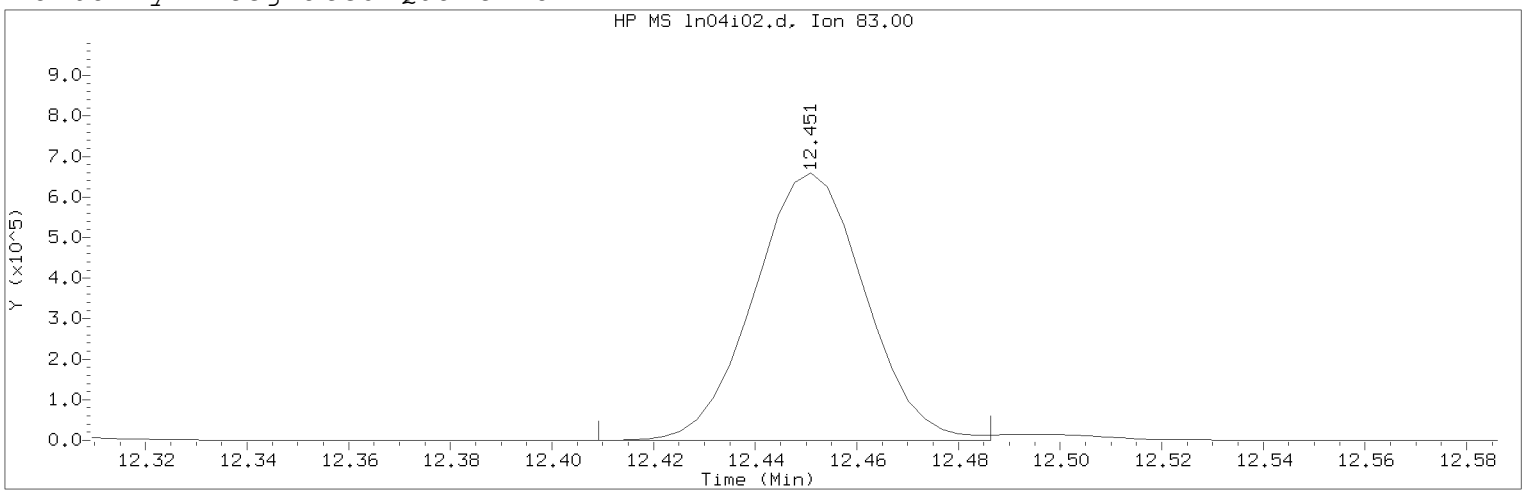
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2265
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area : 56534
On-column Amount (ng) : 746.2694
Integration start scan : 2244 Integration stop scan: 2277
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

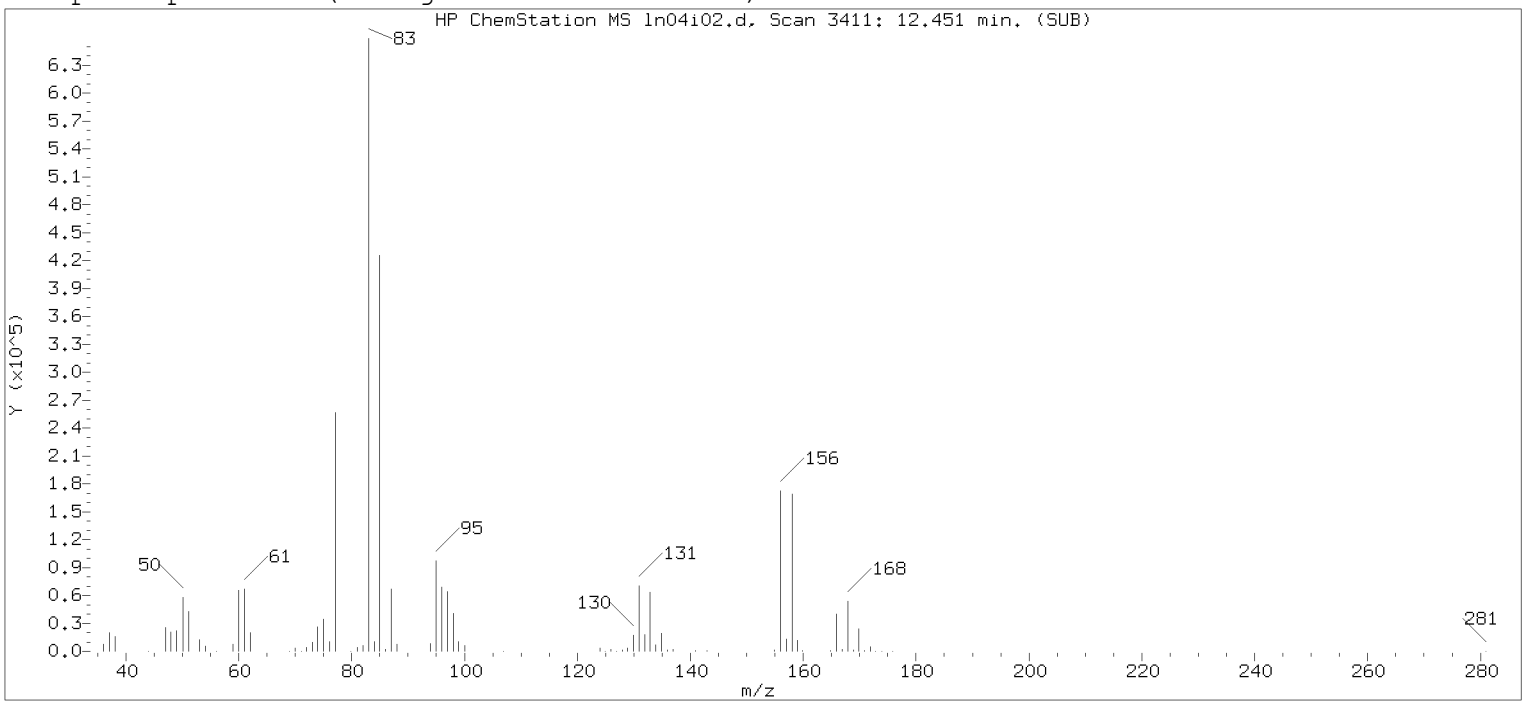
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 995972M
On-Column Amount (ng) : 105.3166
Integration start scan : 3397 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

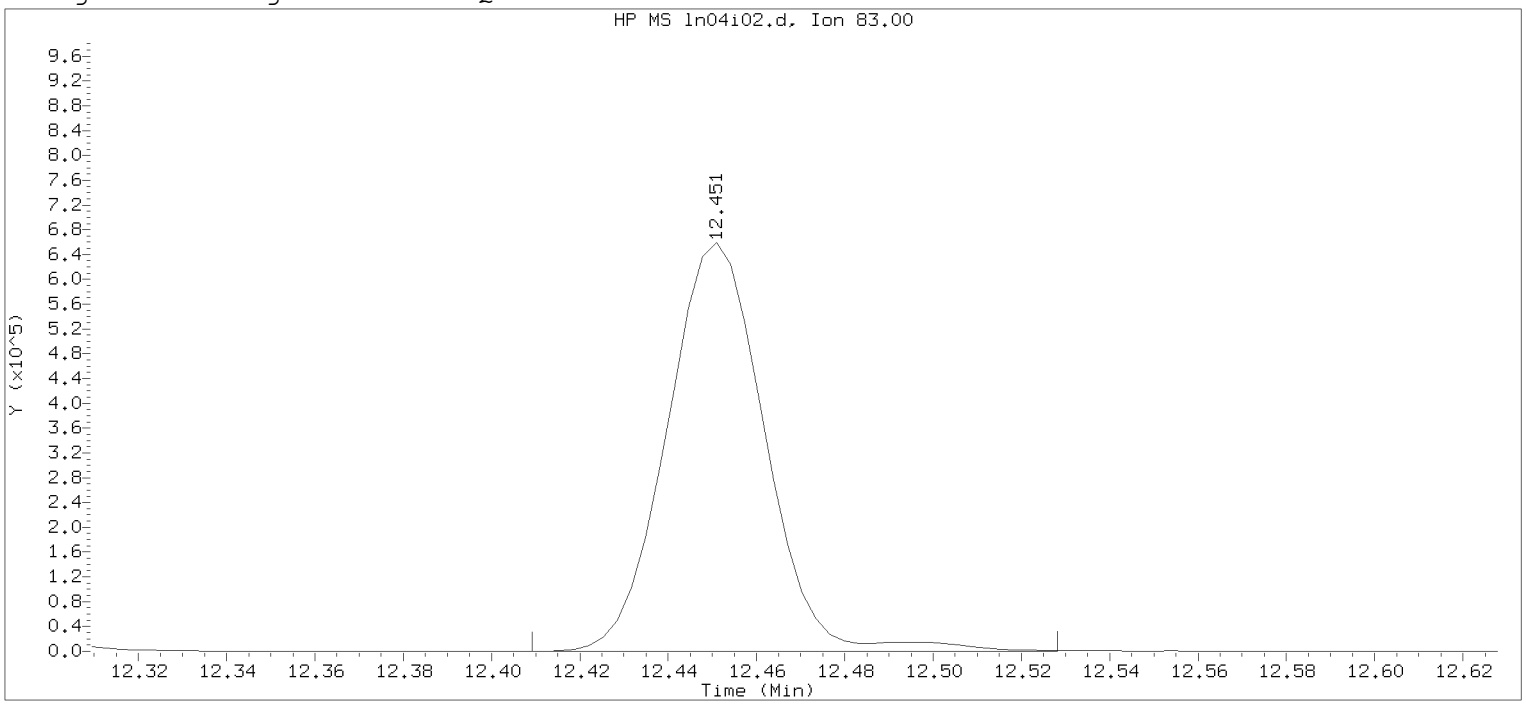
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

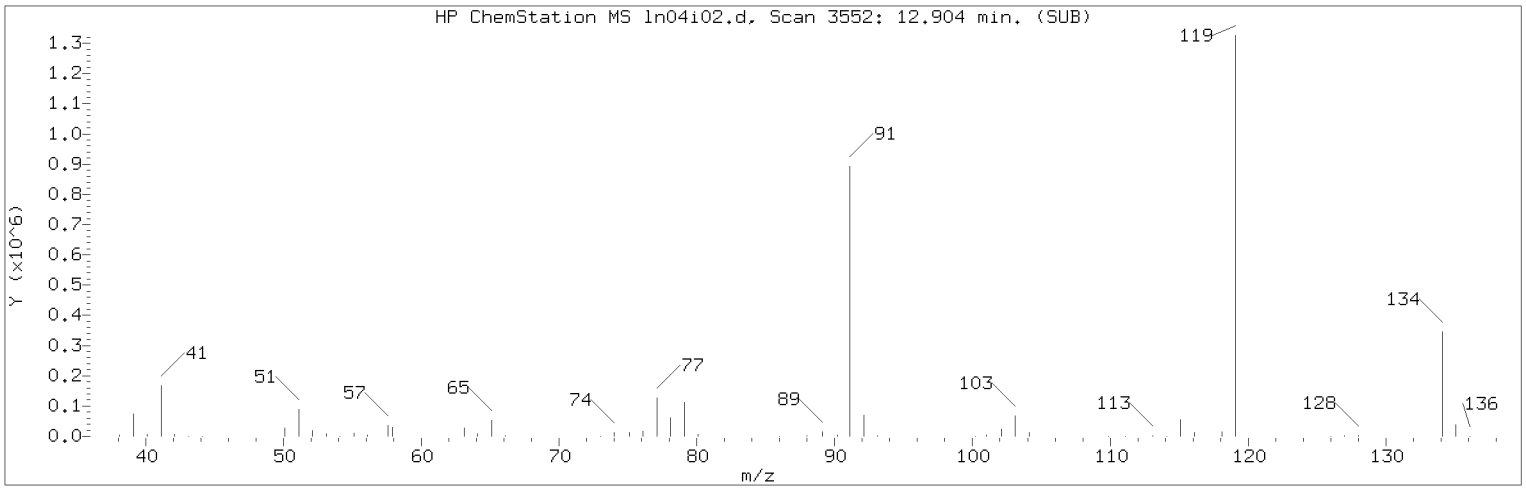
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

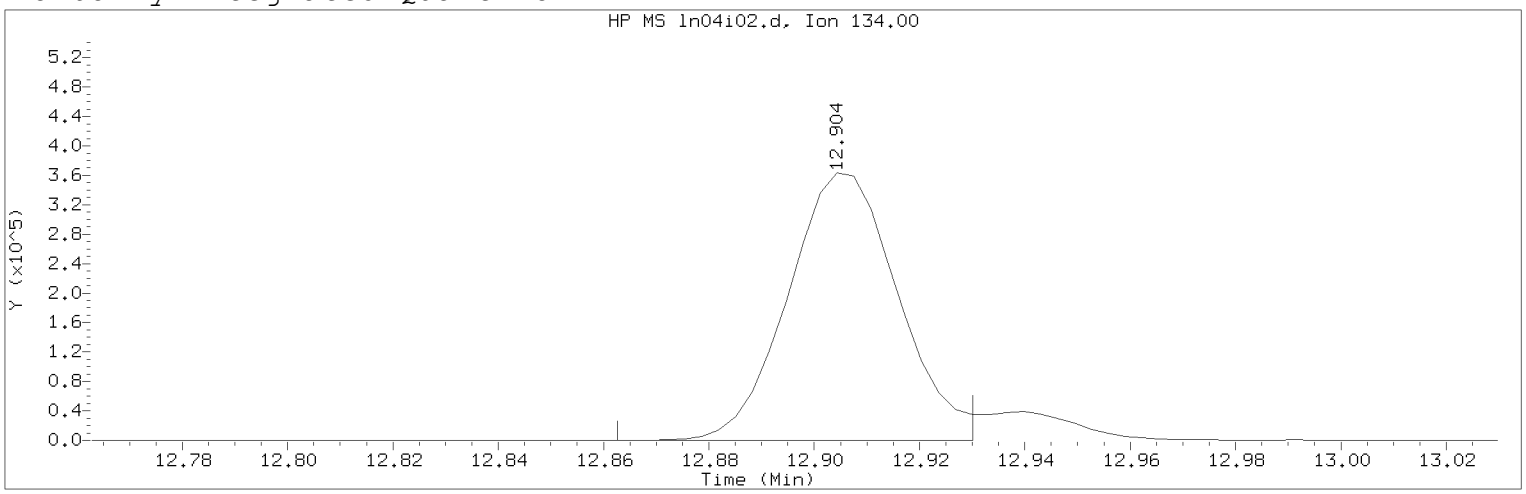
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 1015846
On-column Amount (ng) : 101.1821
Integration start scan : 3397 Integration stop scan: 3434
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

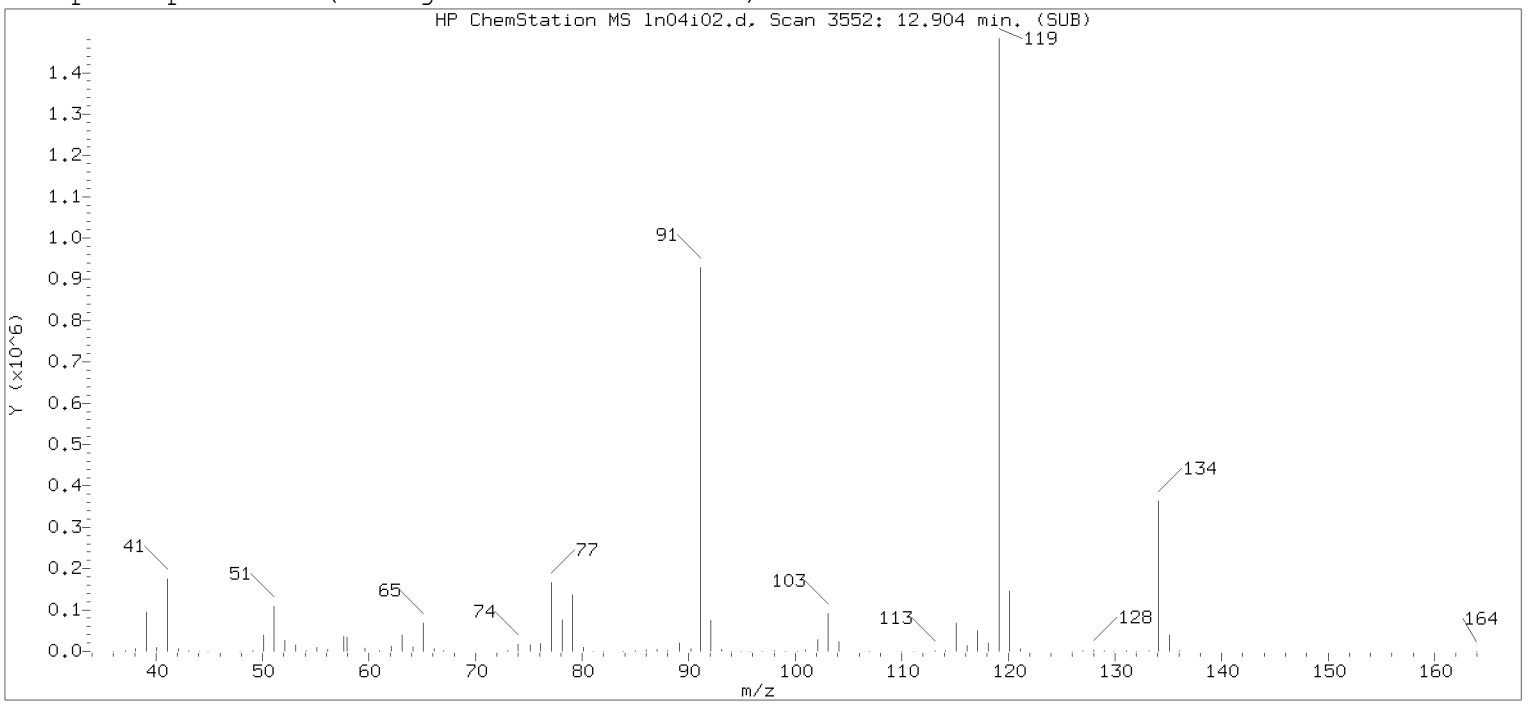
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 526781M
On-Column Amount (ng) : 106.6224
Integration start scan : 3538 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

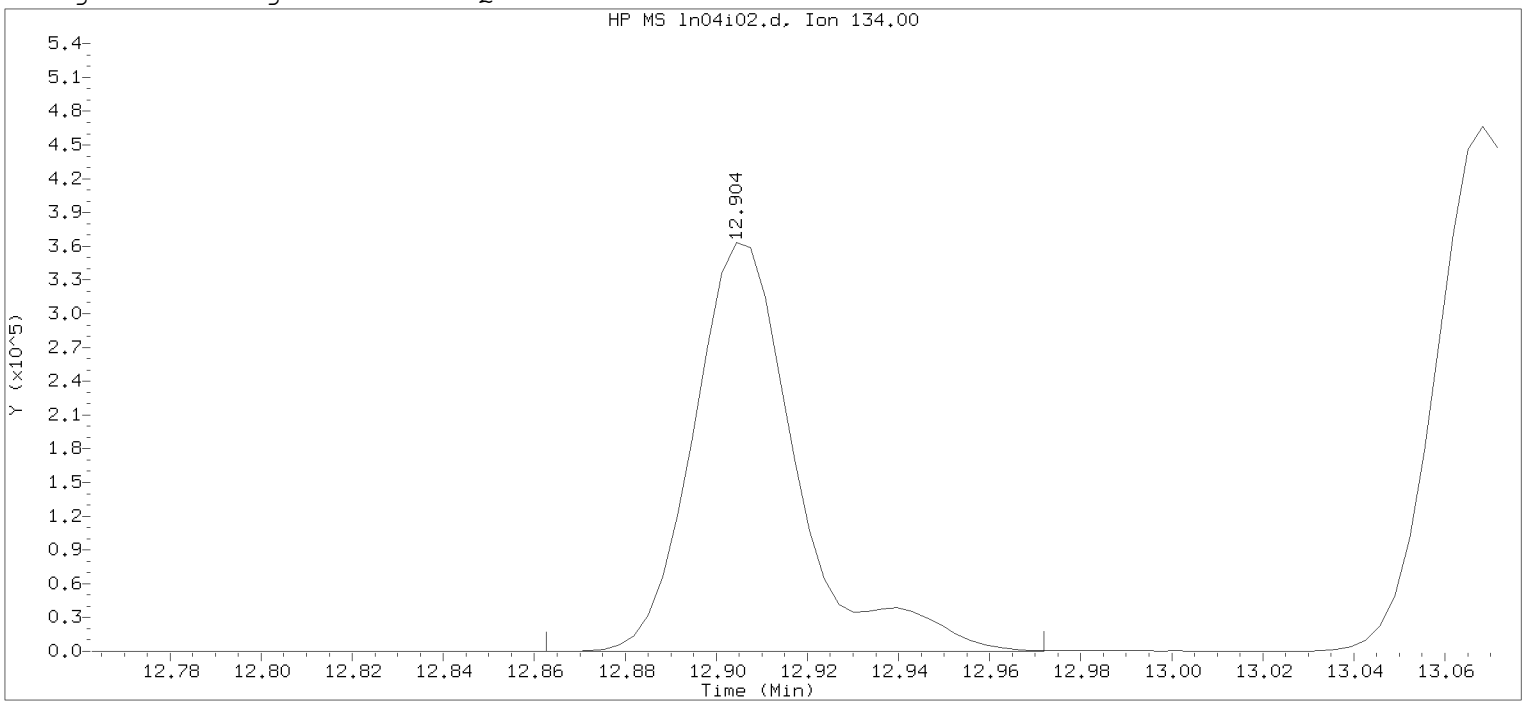
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



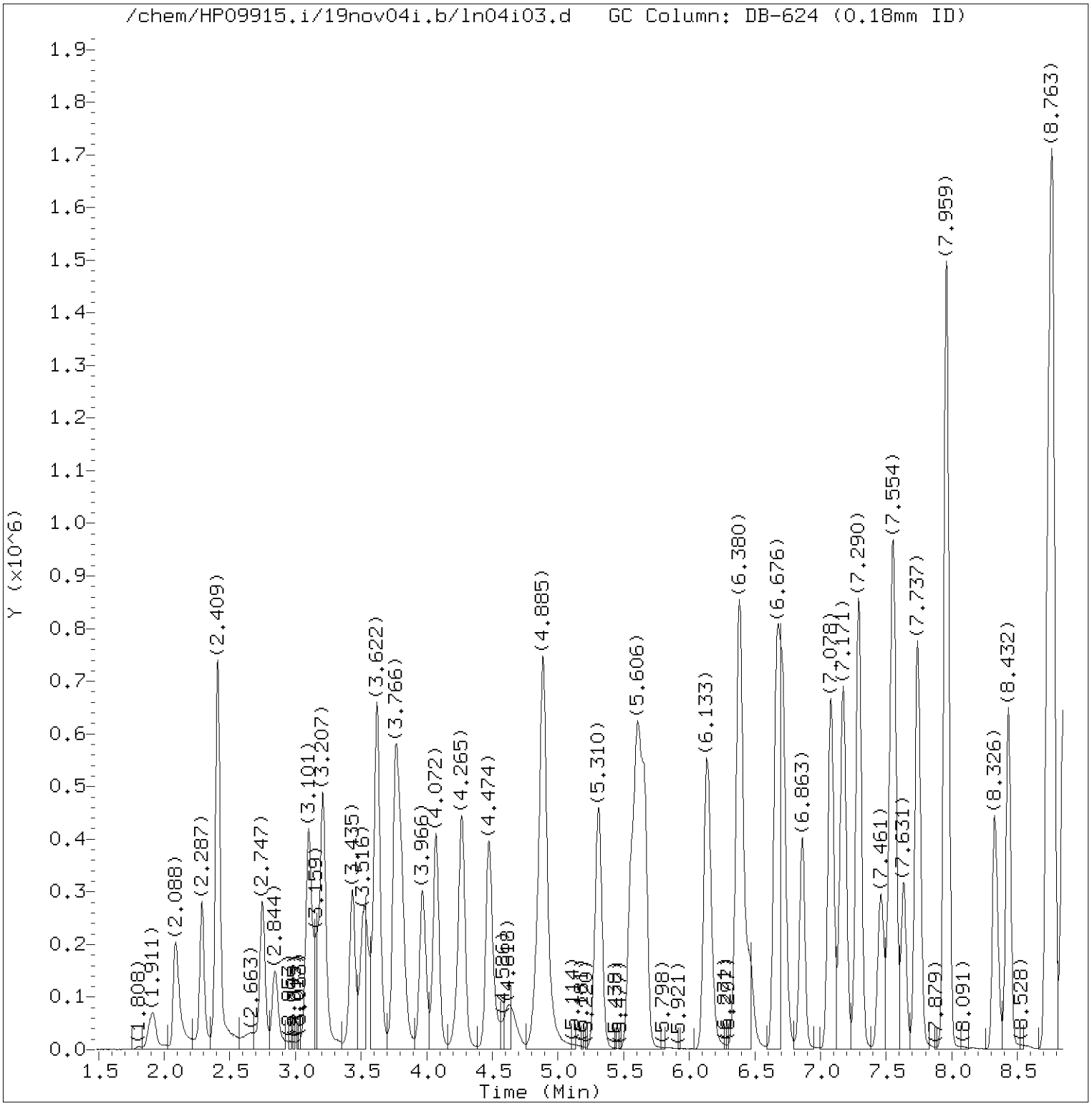
Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 572341
On-column Amount (ng) : 102.7487
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

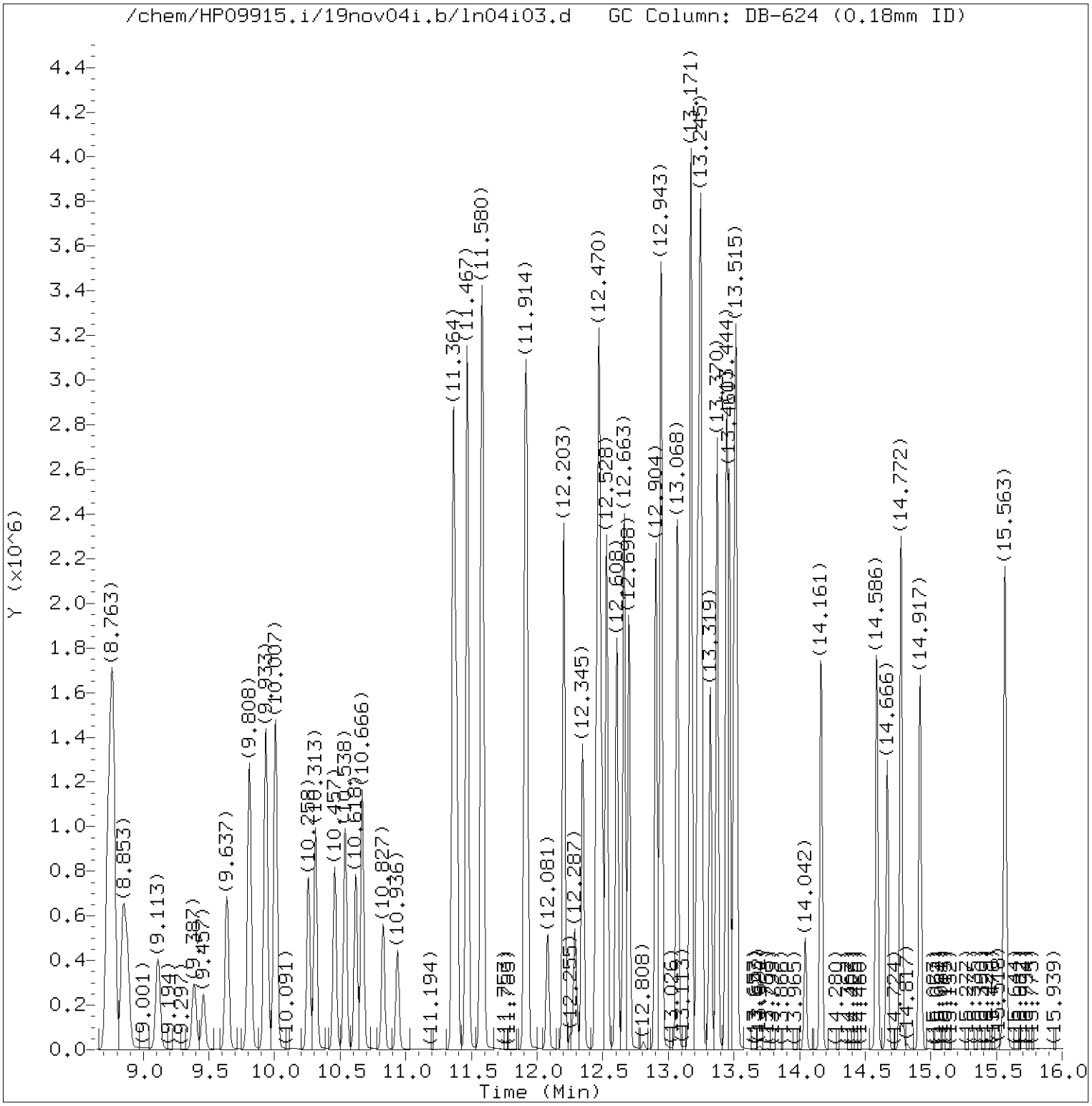
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.088	85	427538M	52.817
4) Chloromethane	(2)	2.287	50	390734	50.084
5) 1,3-Butadiene	(2)	2.406	39	311095M	48.025
6) Vinyl Chloride	(2)	2.409	62	387720	49.794
8) Bromomethane	(2)	2.747	94	272873	48.888
9) Chloroethane	(2)	2.844	64	212325	49.620
10) Dichlorofluoromethane	(2)	3.098	67	509913MA	49.515
12) Trichlorofluoromethane	(2)	3.152	101	433881	51.758
11) n-Pentane	(2)	3.207	43	489872	49.449
14) Ethyl ether	(2)	3.432	59	285731	52.748
15) Freon 123a	(2)	3.525	67	337192	50.003
16) Acrolein	(1)	3.622	56	1052176	519.843
17) 1,1-Dichloroethene	(2)	3.760	96	251911	51.197
17) 1,1-Dichloroethene	(2)	3.760	63	123343	50.001
19) Freon 113	(2)	3.795	101	289343	51.541
18) Acetone	(1)	3.802	58	91161	100.464
22) Methyl Iodide	(2)	3.966	142	518954	50.897
21) 2-Propanol	(1)	3.998	45	165875M	254.283
23) Carbon Disulfide	(2)	4.072	76	956902	51.606
27) Methyl Acetate	(2)	4.245	43	314348	49.603
25) Allyl Chloride	(2)	4.271	41	438915	49.725
28) Methylene Chloride	(2)	4.474	84	295055	50.382
29)*t-Butyl alcohol-d10	(1)	4.509	65	269779M	250.000
30) t-Butyl alcohol	(1)	4.625	59	291988	257.078
31) Acrylonitrile	(2)	4.834	53	175969	51.611
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	957096	51.225
32) trans-1,2-Dichloroethene	(2)	4.888	96	287617	50.529
34) n-Hexane	(2)	5.313	57	463732M	52.364
36) 1,1-Dichloroethane	(2)	5.551	63	505667	50.924
38) di-Isopropyl ether	(2)	5.609	45	985238	51.444
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	462216	51.882
40) Ethyl t-butyl ether	(2)	6.133	59	965104	51.927
43) 1,2-Dichloroethene (Total)	(2)		96	610267	101.029
44) 2-Butanone	(2)	6.361	43	453665	103.655
42) cis-1,2-Dichloroethene	(2)	6.380	96	322650	50.501
45) 2,2-Dichloropropane	(2)	6.400	77	400546	51.890
47) Propionitrile	(1)	6.464	54	357876	252.881
48) Methacrylonitrile	(2)	6.670	67	475036	129.160

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	173386	51.180
50) Tetrahydrofuran	(1)	6.721	71	126019	98.581
51) Chloroform	(2)	6.859	83	484828	51.048
52)$Dibromofluoromethane	(2)	7.075	113	282824	49.838
52)$Dibromofluoromethane	(2)	7.075	111	289462	50.026
53) 1,1,1-Trichloroethane	(2)	7.085	97	420986	51.935
54) Cyclohexane	(2)	7.171	56	567043	52.311
54) Cyclohexane	(2)	7.175	84	491699	52.219
54) Cyclohexane	(2)	7.175	69	175289	52.282
56) Carbon Tetrachloride	(2)	7.284	117	361443	52.574
55) 1,1-Dichloropropene	(2)	7.294	75	401799	51.176
58) Isobutyl Alcohol	(1)	7.461	41	242114	633.444
57)$1,2-Dichloroethane-d4	(2)	7.528	102	72846	50.367
57)$1,2-Dichloroethane-d4	(2)	7.531	65	321603	49.897
57)$1,2-Dichloroethane-d4	(2)	7.531	104	46134	49.939
60) Benzene	(2)	7.557	78	1202424	50.927
61) 1,2-Dichloroethane	(2)	7.638	62	372805	49.091
61) 1,2-Dichloroethane	(2)	7.634	98	37850	50.364
65) t-Amyl methyl ether	(2)	7.737	73	971399	52.071
67) n-Heptane	(2)	7.956	43	432248MA	52.247
66)*Fluorobenzene	(2)	7.959	96	1160755	50.000
69) n-Butanol	(1)	8.326	56	438437M	1332.750
71) Trichloroethene	(2)	8.432	95	302634	50.906
72) Methylcyclohexane	(2)	8.734	83	574135	52.056
72) Methylcyclohexane	(2)	8.731	98	260583	52.213
73) 1,2-Dichloropropane	(2)	8.773	63	306937	51.196
76) Methyl Methacrylate	(2)	8.847	69	306086A	52.795
75) 1,4-Dioxane	(1)	8.853	88	59876M	662.196
74) Dibromomethane	(2)	8.879	93	199498	51.428
78) Bromodichloromethane	(2)	9.113	83	366892	52.707
79) 2-Nitropropane	(2)	9.390	41	235097	111.505
80) 2-Chloroethyl Vinyl Ether	(2)	9.457	63	134015	52.046
81) cis-1,3-Dichloropropene	(2)	9.637	75	495055	53.547
82) 4-Methyl-2-pentanone	(2)	9.808	43	1004831	108.769
83)$Toluene-d8	(3)	9.933	98	1189125	50.240
83)$Toluene-d8	(3)	9.933	100	767119	50.033
88) Toluene	(3)	10.007	92	764927	51.549
90) 1,3-Dichloropropene (total)	(3)		100	956669	108.348

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	461614	54.801
91) Ethyl Methacrylate	(3)	10.313	69	554039	54.121
92) 1,1,2-Trichloroethane	(3)	10.461	97	291480	51.810
93) Tetrachloroethene	(3)	10.538	166	321895	51.220
94) 1,3-Dichloropropane	(3)	10.618	76	494204	51.449
96) 2-Hexanone	(3)	10.670	43	761734	111.475
97) Dibromochloromethane	(3)	10.827	129	315765	54.792
99) 1,2-Dibromoethane	(3)	10.936	107	319699	52.331
100)*Chlorobenzene-d5	(3)	11.361	117	904578	50.000
101) 1-Chlorohexane	(3)	11.364	91	399510	50.116
102) Chlorobenzene	(3)	11.387	112	864419	51.514
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	299375	54.148
104) Ethylbenzene	(3)	11.467	91	1475718	52.031
106) m+p-Xylene	(3)	11.580	106	1167470	104.636
108) Xylene (Total)	(3)		106	1748839	157.389
107) o-Xylene	(3)	11.907	106	581369	52.752
109) Styrene	(3)	11.924	104	981189	53.877
110) Bromoform	(3)	12.081	173	229903	53.387
111) Isopropylbenzene	(3)	12.203	105	1456789	52.702
112) Cyclohexanone	(1)	12.287	55	231776	654.496
114)$4-Bromofluorobenzene	(3)	12.345	95	446156	49.781
114)$4-Bromofluorobenzene	(3)	12.348	174	370576	49.875
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	482004M	52.727
115) Bromobenzene	(4)	12.464	156	378400	52.027
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	383692	136.075
117) 1,2,3-Trichloropropane	(4)	12.496	110	145151	51.744
119) n-Propylbenzene	(4)	12.528	91	1662625	52.323
120) 2-Chlorotoluene	(4)	12.608	126	350943	51.988
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	1225419	53.065
121) 4-Chlorotoluene	(4)	12.698	126	361669	51.471
124) tert-Butylbenzene	(4)	12.904	134	253906M	53.165
125) Pentachloroethane	(4)	12.940	167	227064	55.216
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	1291883	53.080
127) sec-Butylbenzene	(4)	13.068	105	1512547	53.076
129) 1,3-Dichlorobenzene	(4)	13.168	146	693790	51.911
130) p-Isopropyltoluene	(4)	13.174	119	1315828	53.371
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	483927	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	714495	51.569

M = Compound was manually integrated.
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Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

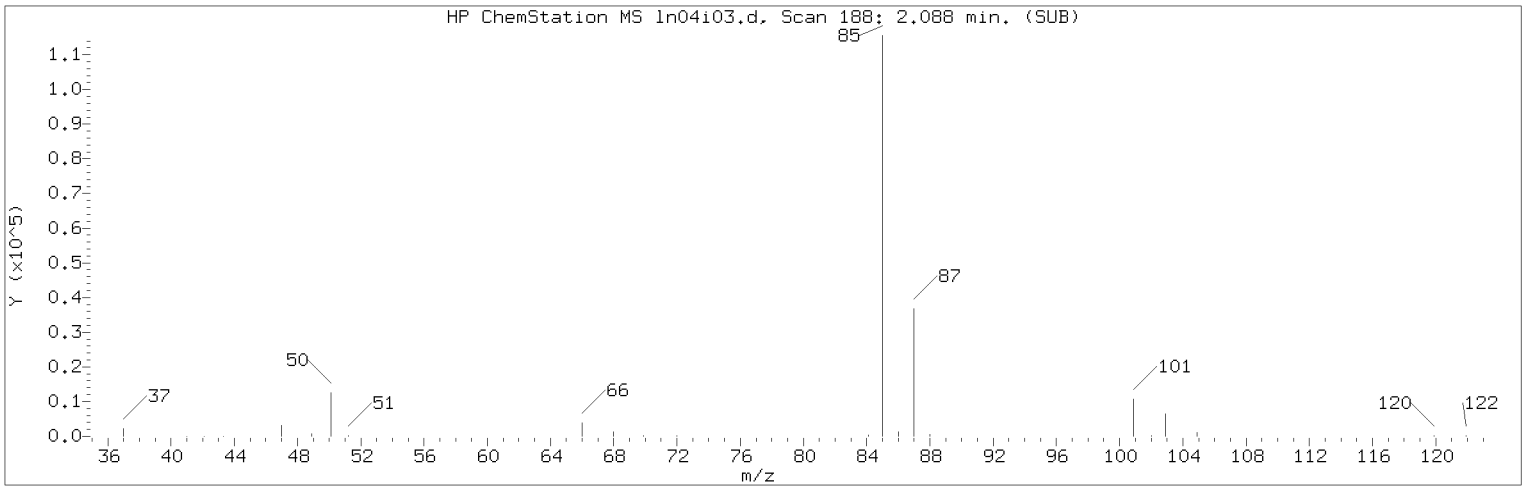
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

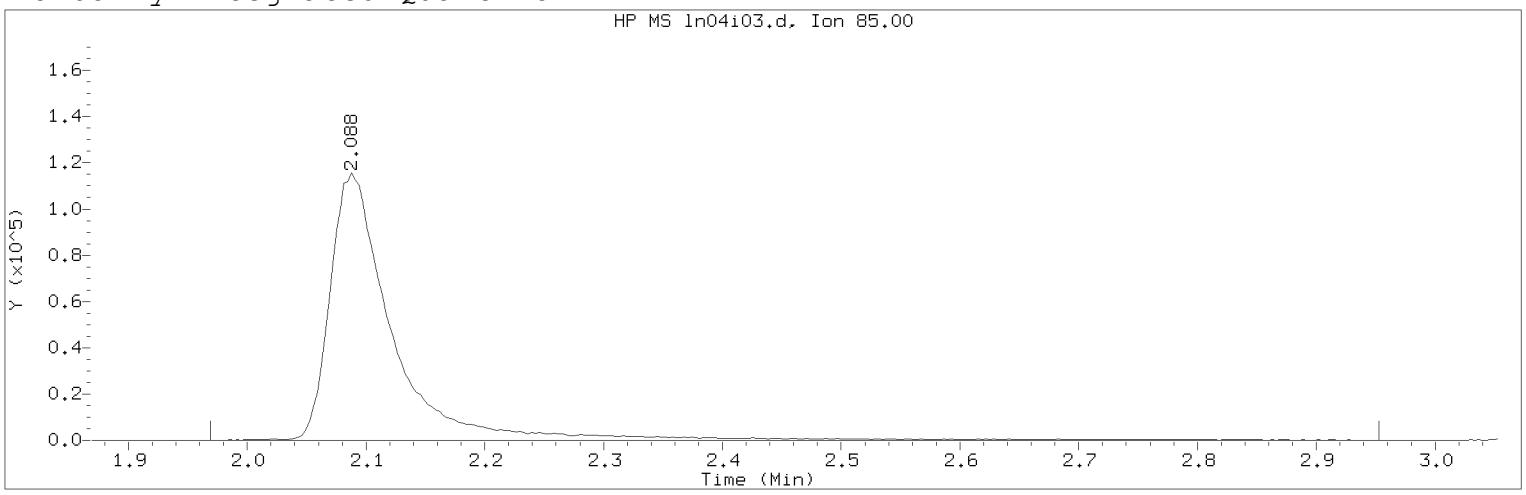
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.251	105	1342367	52.068
135) Benzyl Chloride	(4)	13.319	91	1059398	54.274
136) 1,3-Diethylbenzene	(4)	13.370	119	832647	51.895
141) Diethylbenzene (total)	(4)		100	2415817	155.686
137) 1,4-Diethylbenzene	(4)	13.441	119	877553	51.623
139) n-Butylbenzene	(4)	13.464	92	652599	51.769
138) 1,2-Dichlorobenzene	(4)	13.502	146	682120	51.722
140) 1,2-Diethylbenzene	(4)	13.518	119	705617	52.168
142) 1,2-Dibromo-3-chloropropane	(4)	14.042	75	108388	54.164
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	516839	51.009
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	503797	51.136
147) Hexachlorobutadiene	(4)	14.666	225	217236	46.700
148) Naphthalene	(4)	14.772	128	1689758	53.350
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	498430	51.993
150) 2-Methylnaphthalene	(4)	15.563	142	1079055	55.325

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

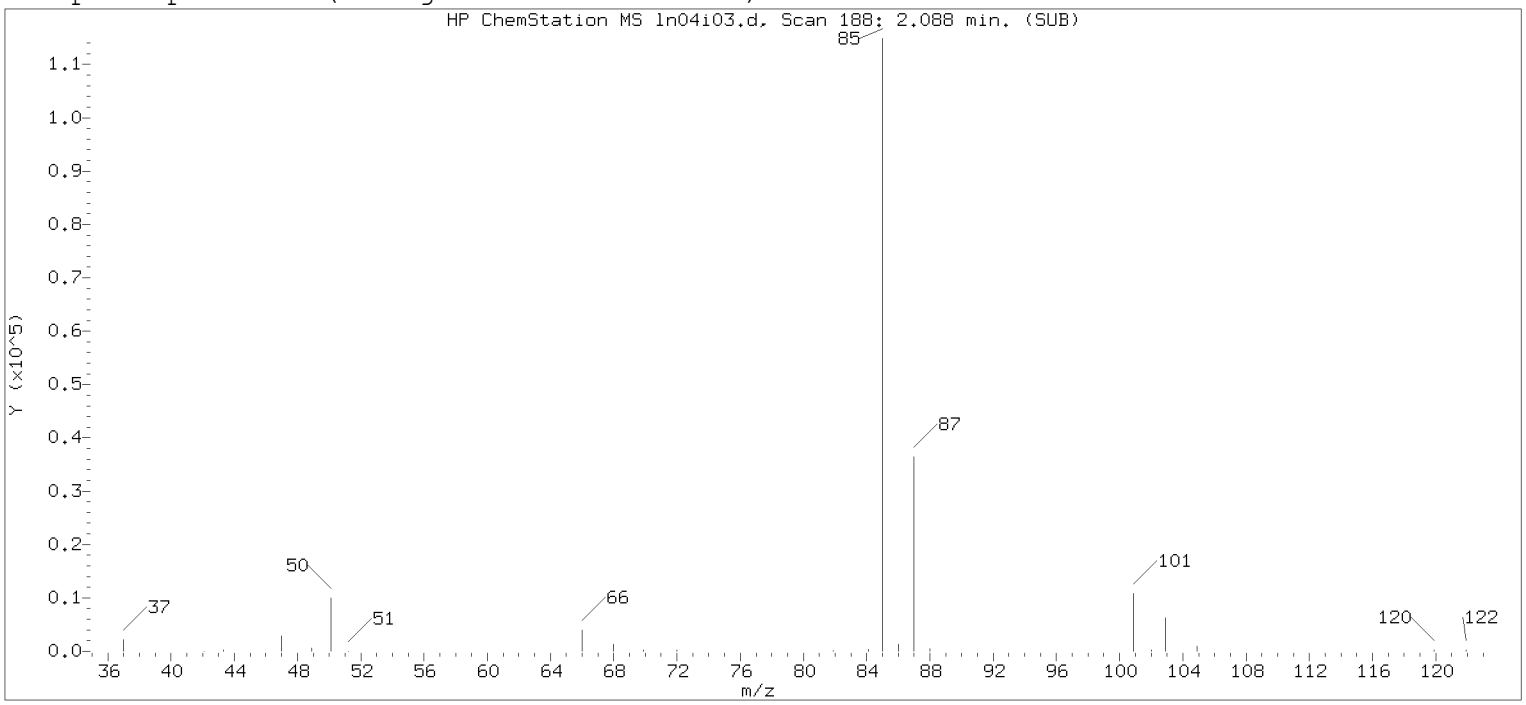
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 188
Retention Time (minutes): 2.088
Quant Ion : 85.00
Area (flag) : 427538M
On-Column Amount (ng) : 52.8165
Integration start scan : 150 Integration stop scan: 456
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

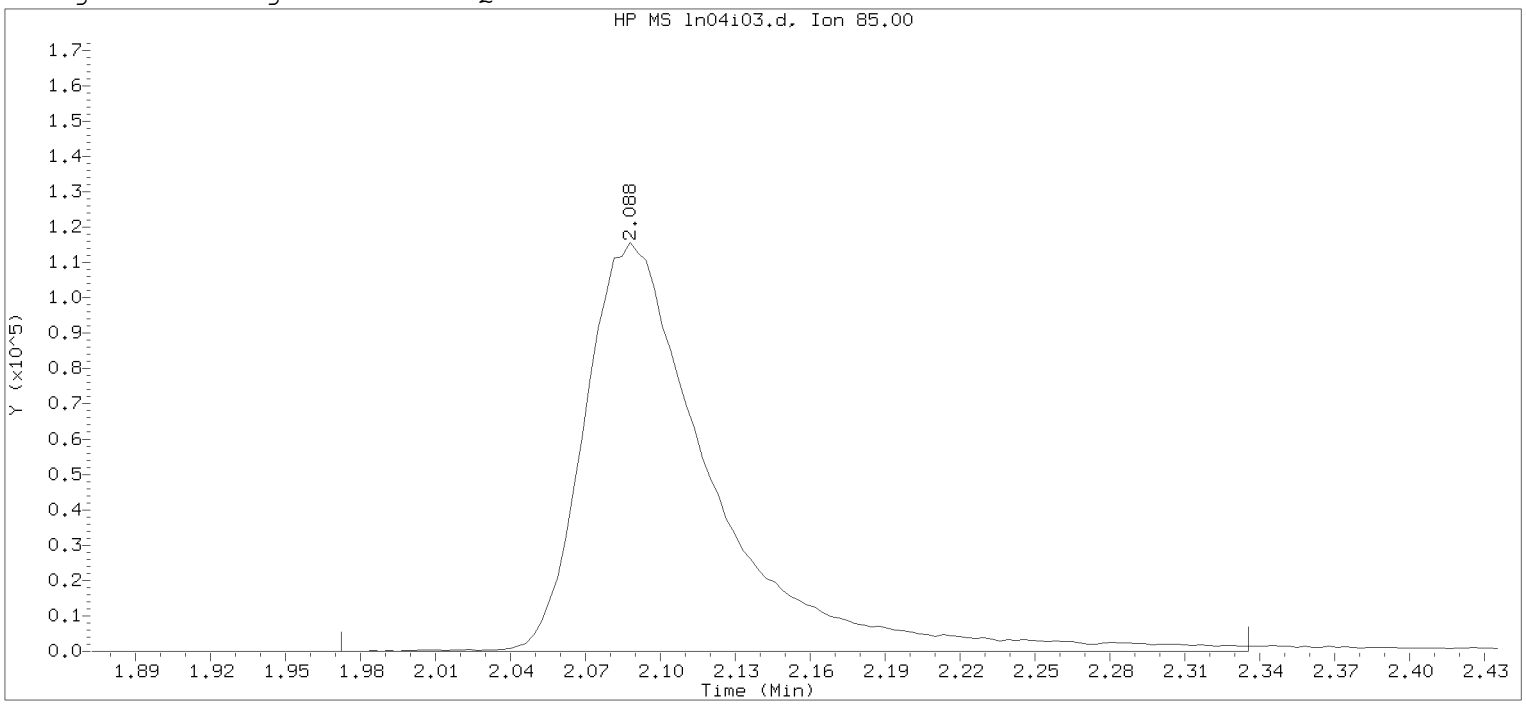
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

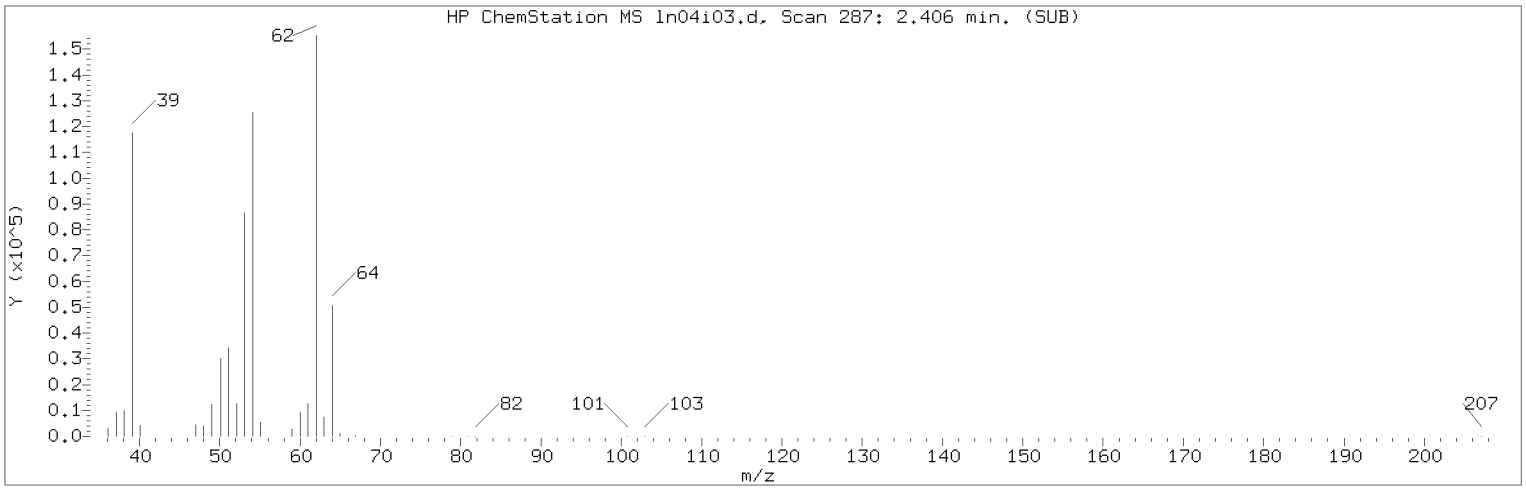
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

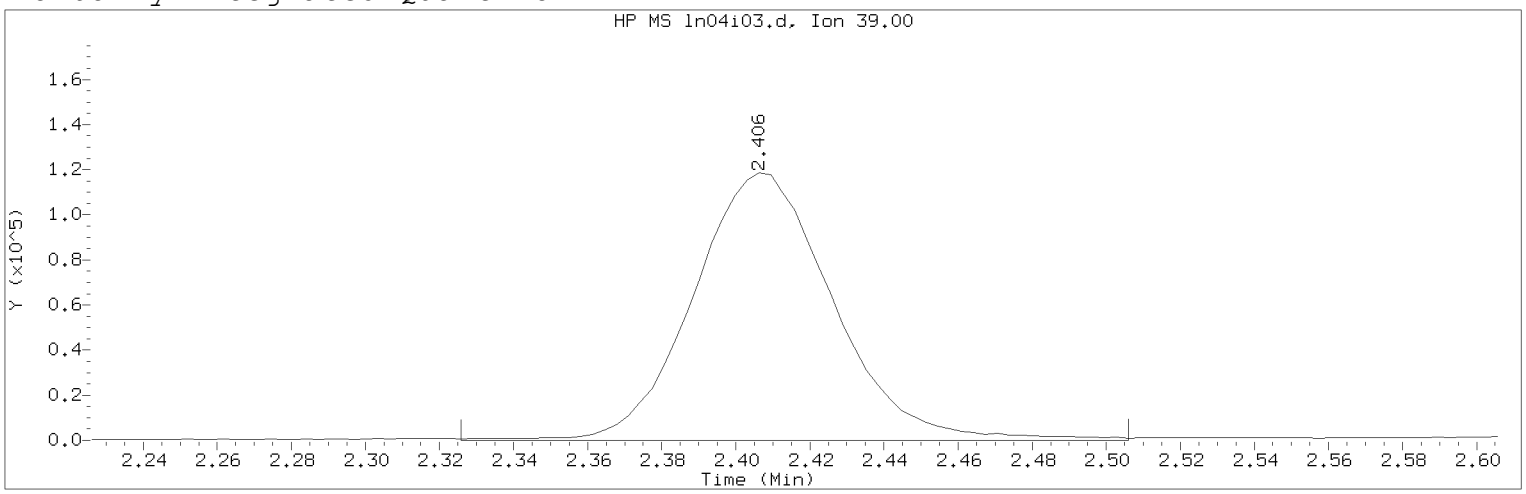
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 188
Retention Time (minutes): 2.088
Quant Ion : 85.00
Area : 411065
On-column Amount (ng) : 48.5918
Integration start scan : 151 Integration stop scan: 264
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mecm2265

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

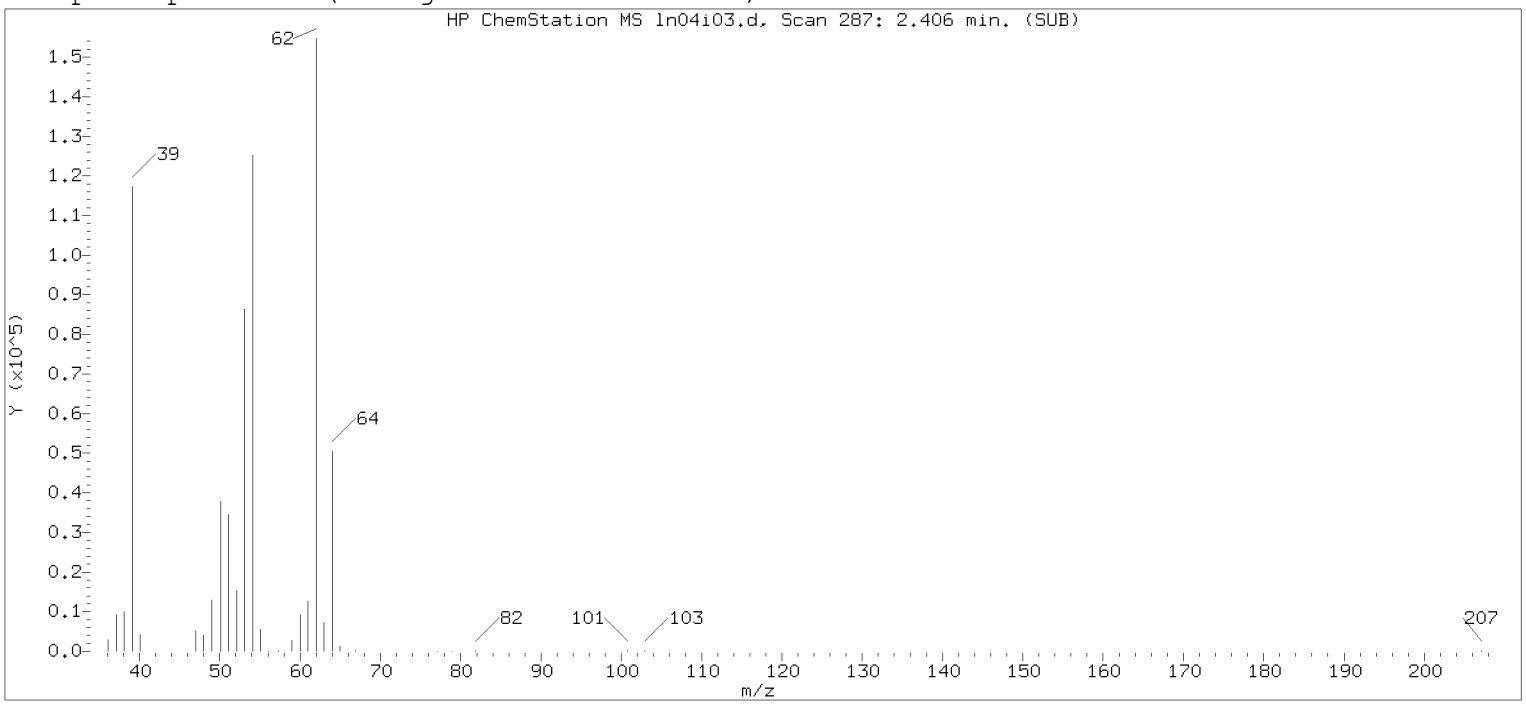
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 311095M
On-Column Amount (ng) : 48.0246
Integration start scan : 261 Integration stop scan: 317
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

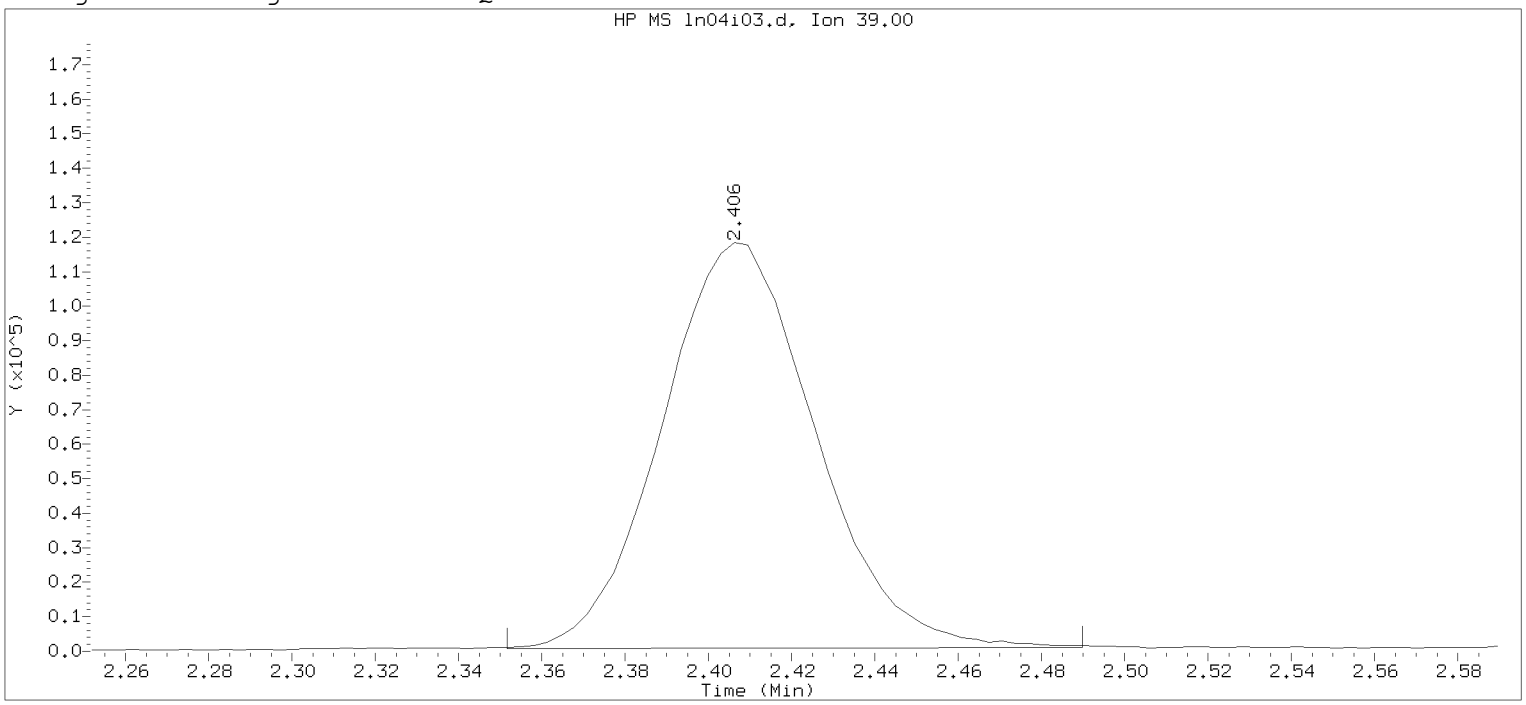
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

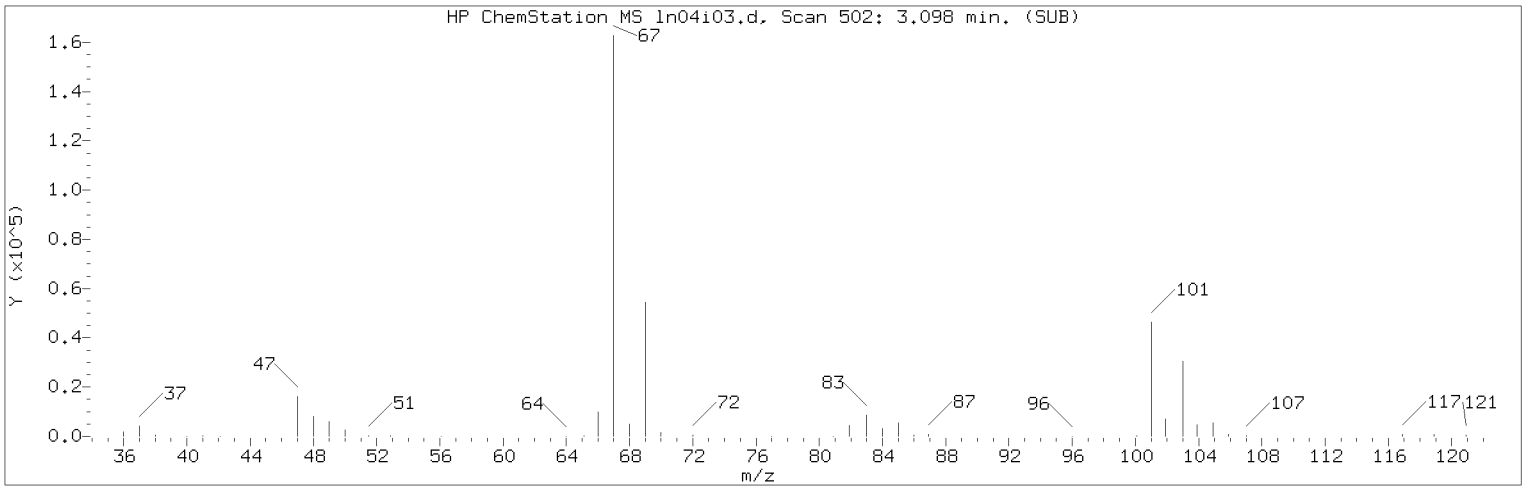
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

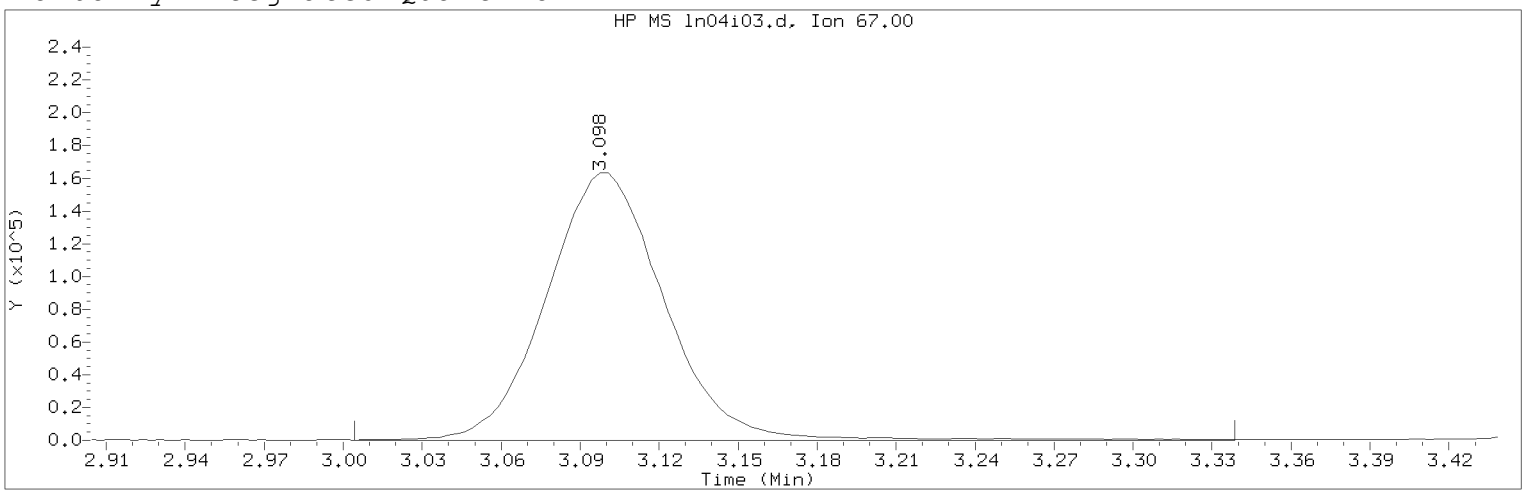
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 300667
On-column Amount (ng) : 50.0756
Integration start scan : 269 Integration stop scan: 312
Y at integration start : 752 Y at integration end: 1063

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

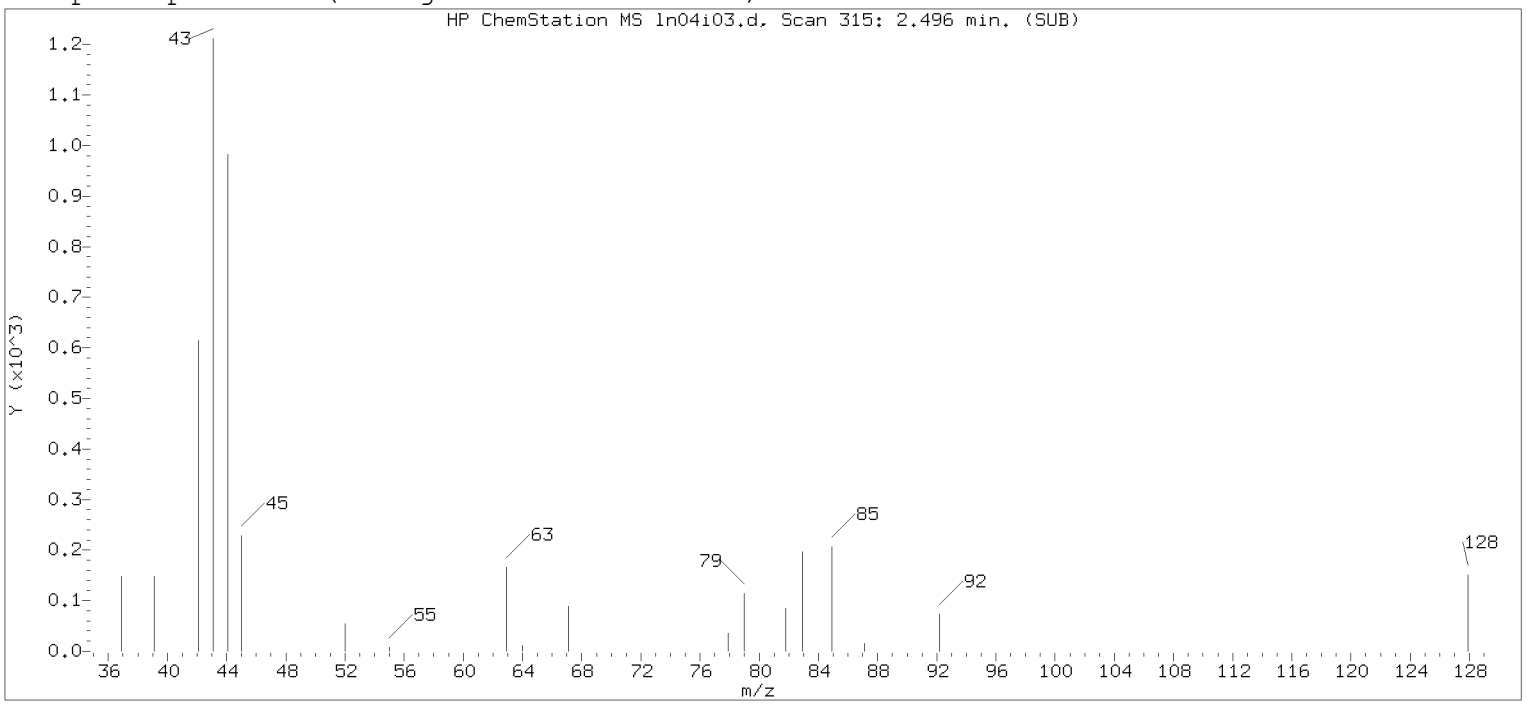
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 502
Retention Time (minutes): 3.098
Quant Ion : 67.00
Area (flag) : 509913MA
On-Column Amount (ng) : 49.5150
Integration start scan : 472 Integration stop scan: 576
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

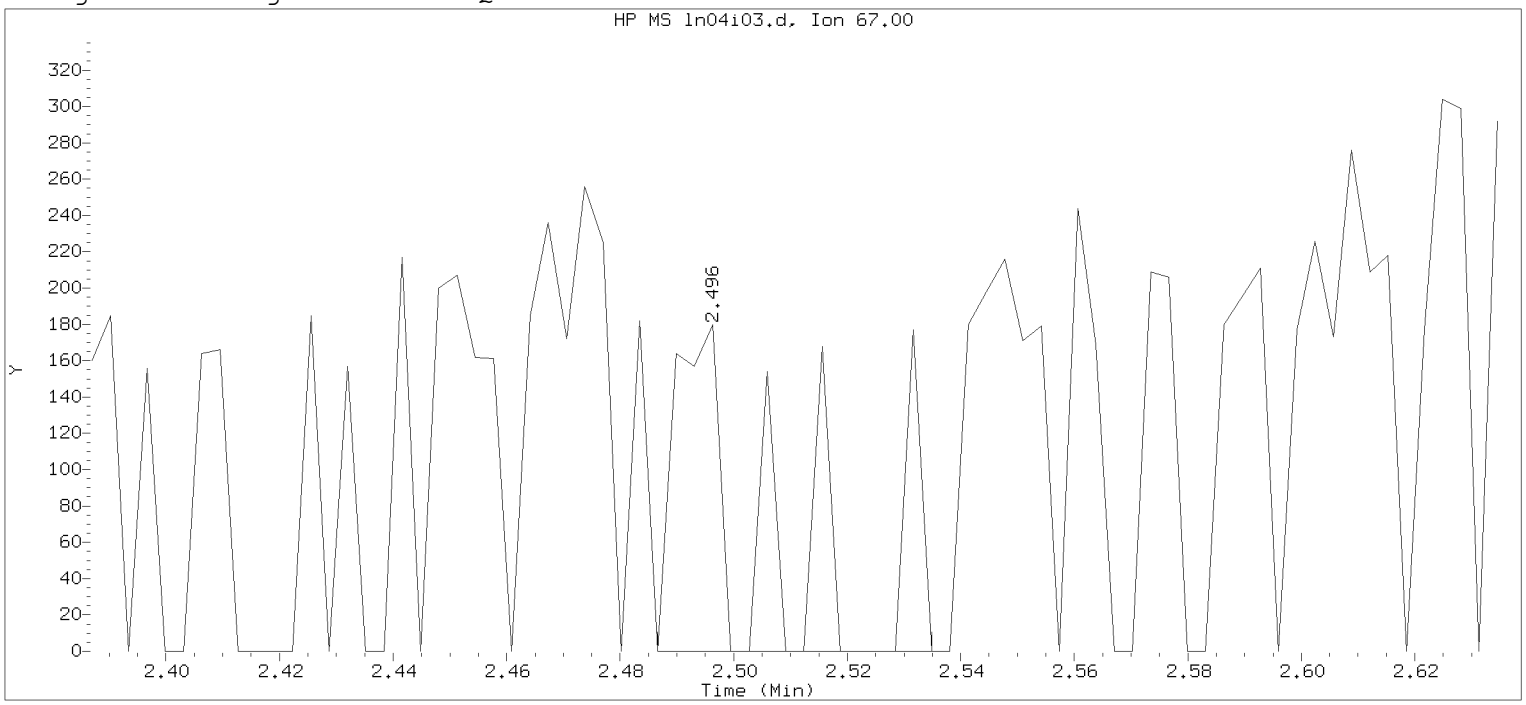
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

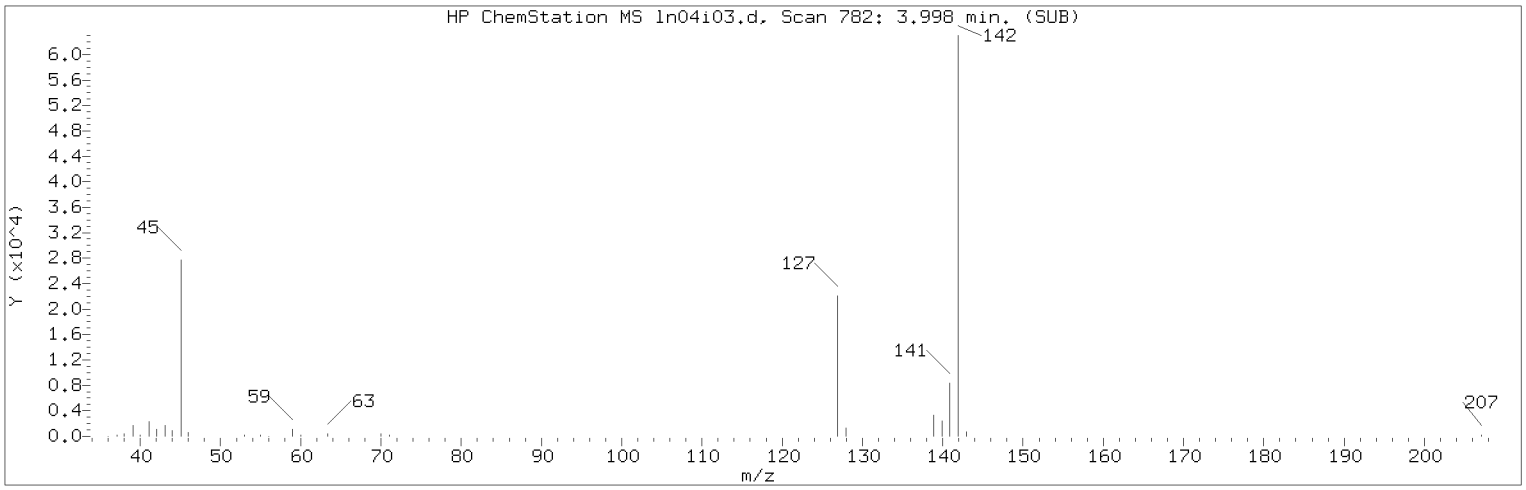
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

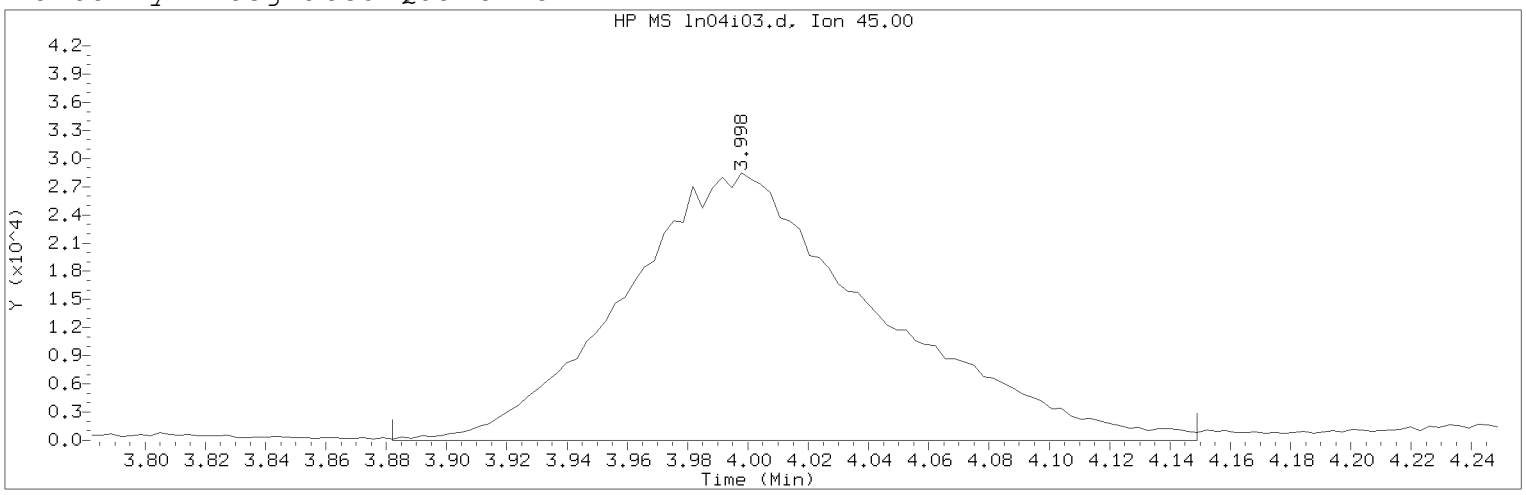
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 315
Retention Time (minutes): 2.496
Quant Ion : 67.00
Area : 192
On-column Amount (ng) : 0.0562
Integration start scan : 311 Integration stop scan: 326
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

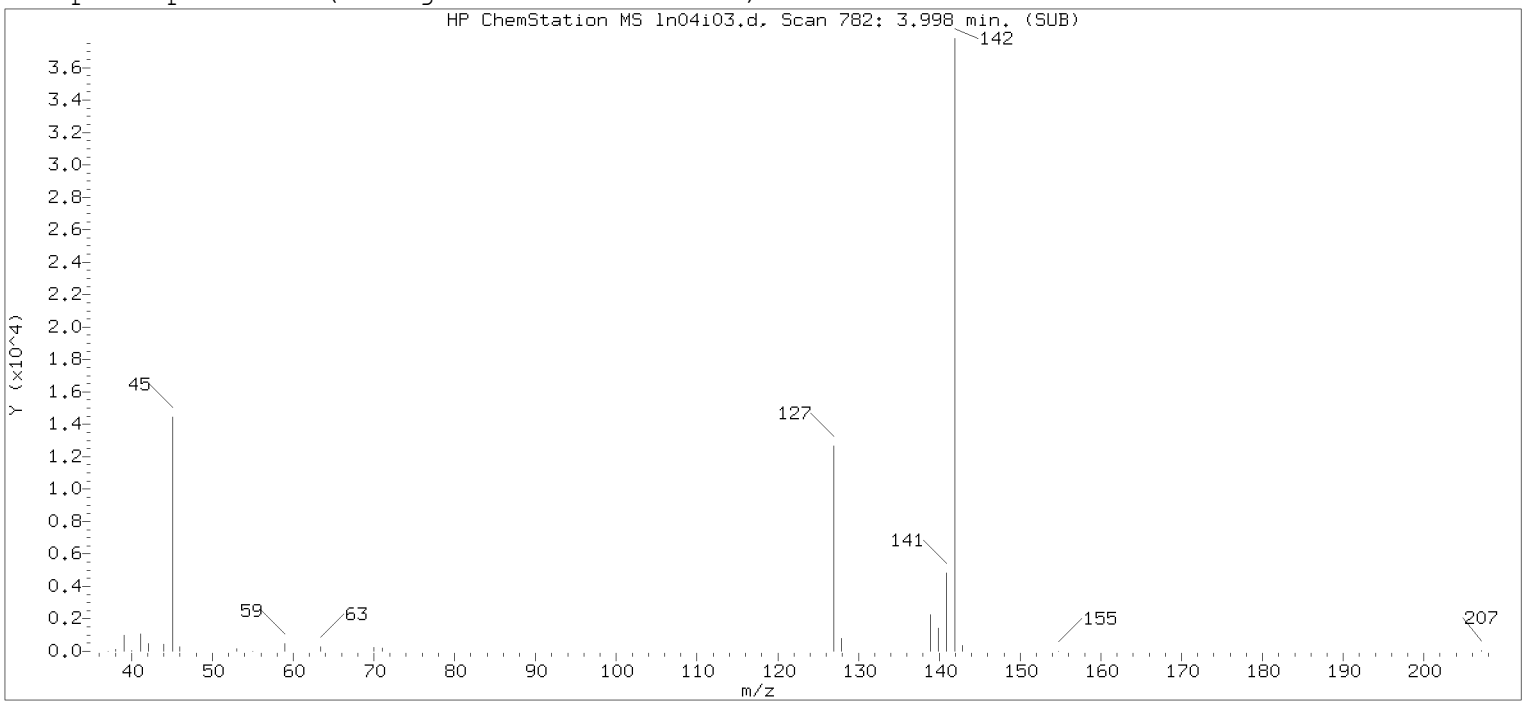
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 782
Retention Time (minutes): 3.998
Quant Ion : 45.00
Area (flag) : 165875M
On-Column Amount (ng) : 254.2825
Integration start scan : 745 Integration stop scan: 828
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

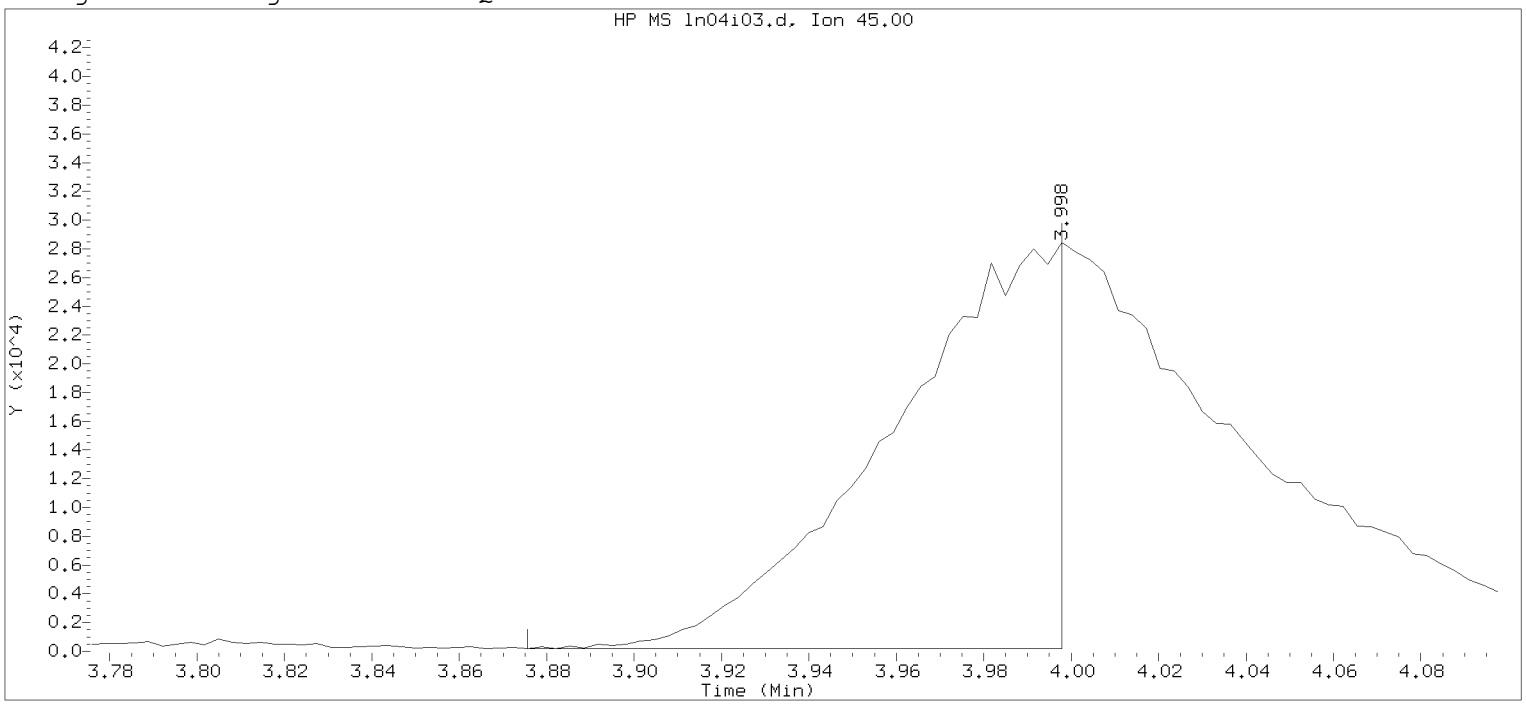
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

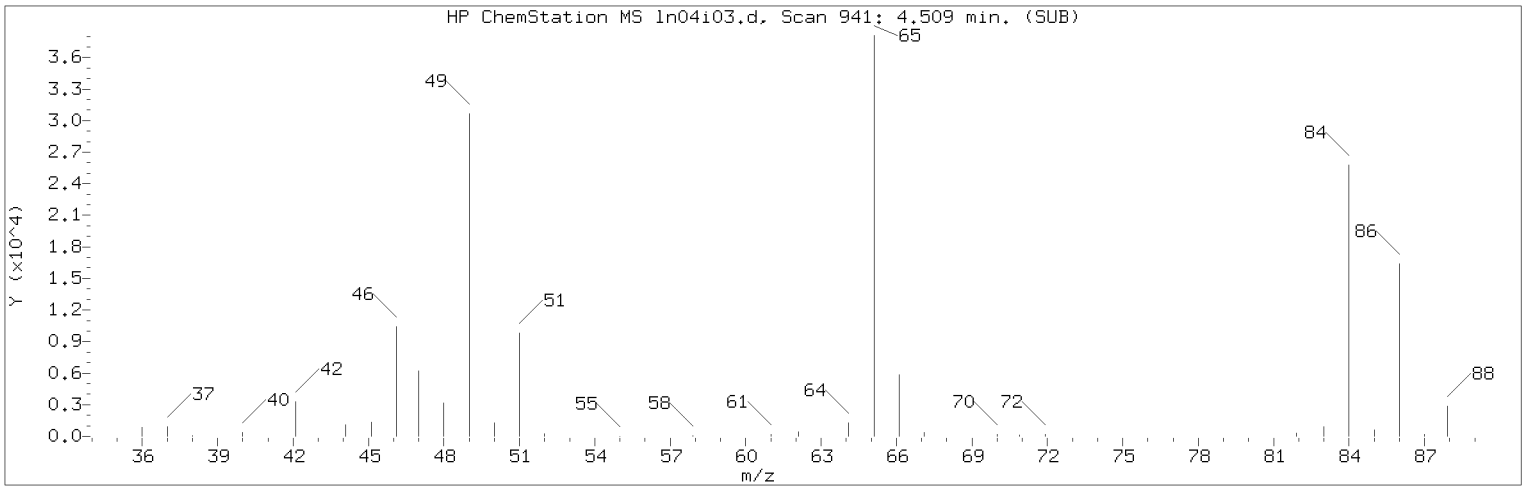
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

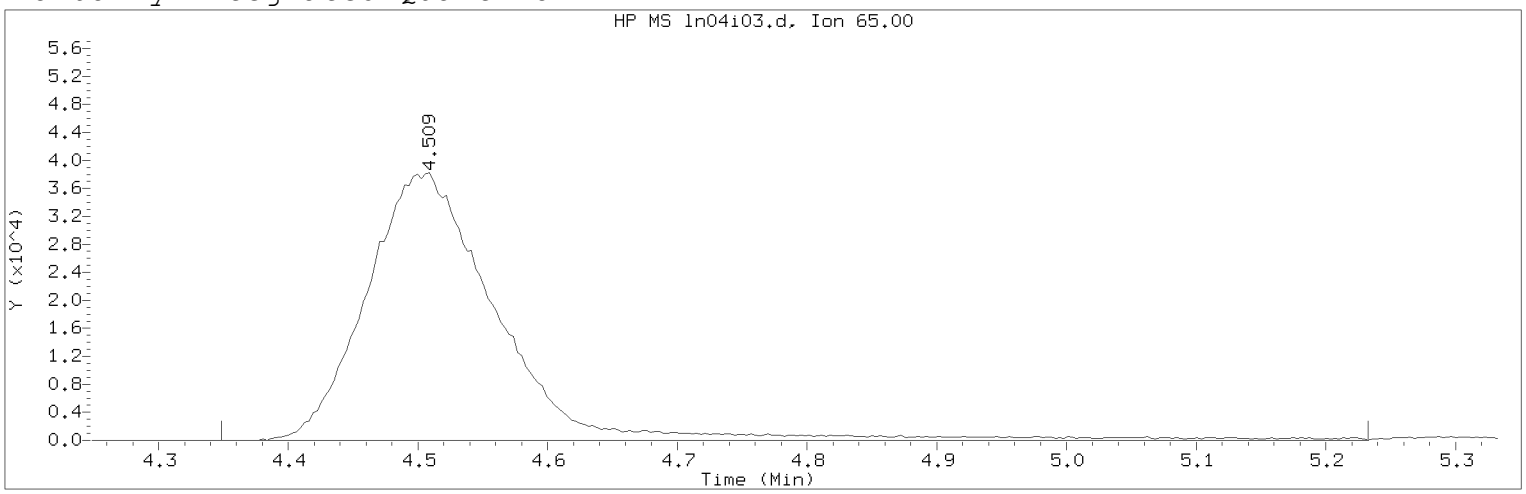
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 782
Retention Time (minutes): 3.998
Quant Ion : 45.00
Area : 74713
On-column Amount (ng) : 135.4026
Integration start scan : 743 Integration stop scan: 781
Y at integration start : 167 Y at integration end: 167

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

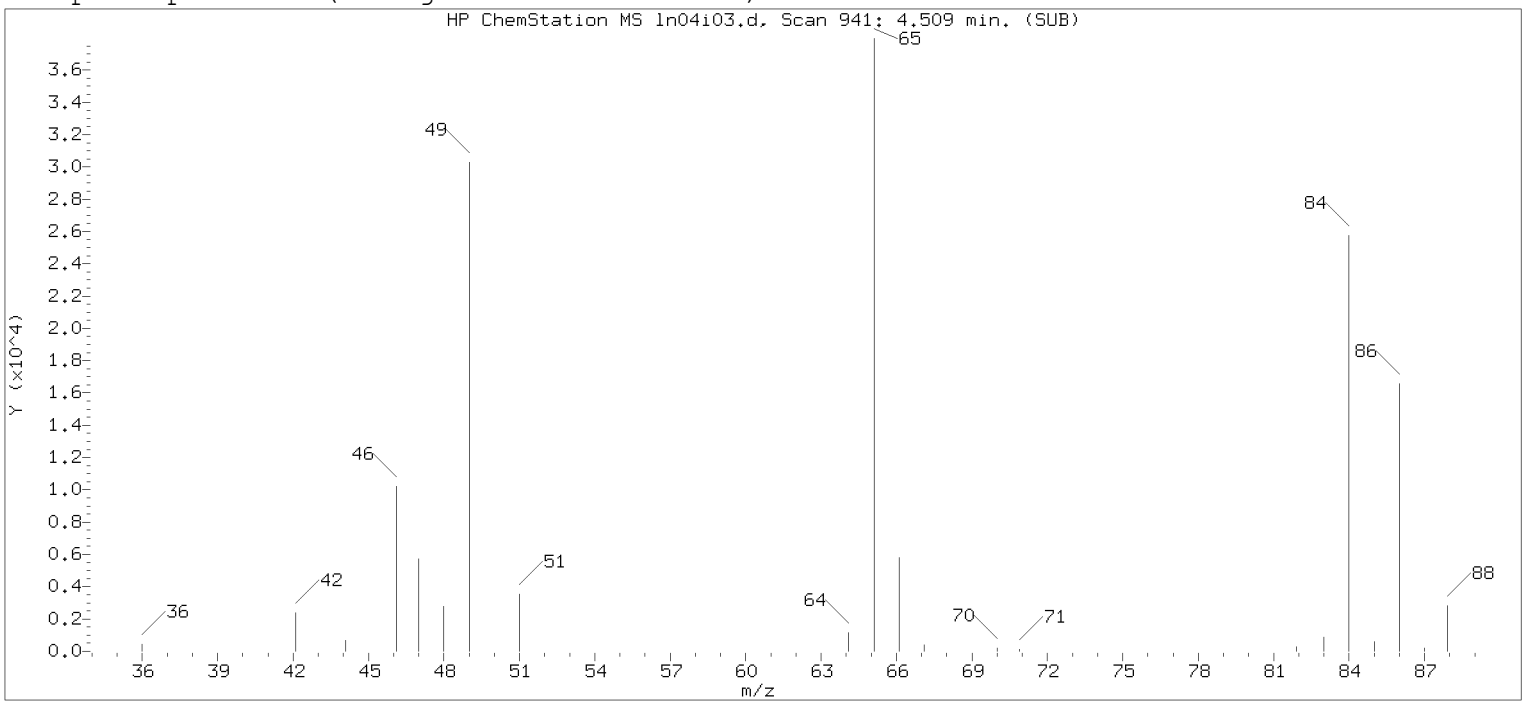
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 269779M
On-Column Amount (ng) : 250.0000
Integration start scan : 890 Integration stop scan: 1165
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

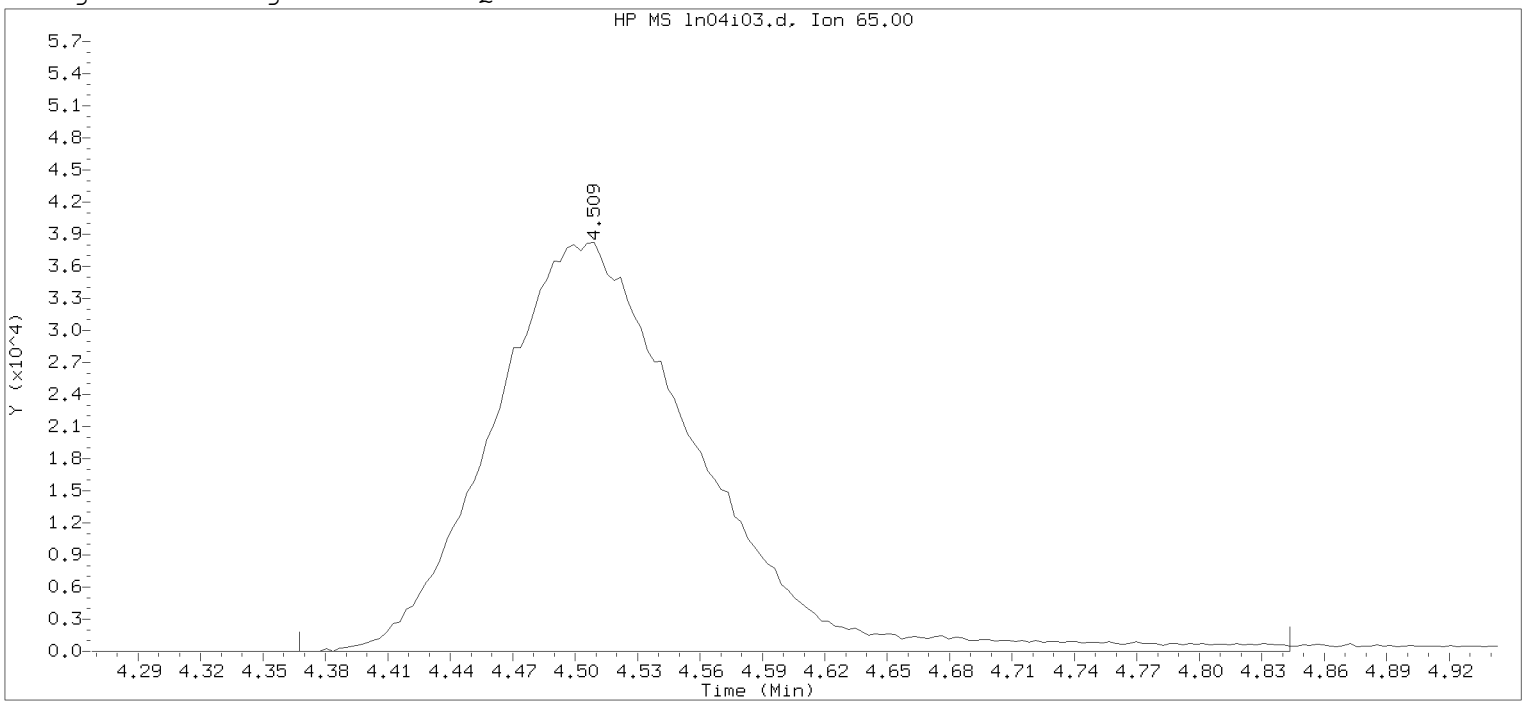
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

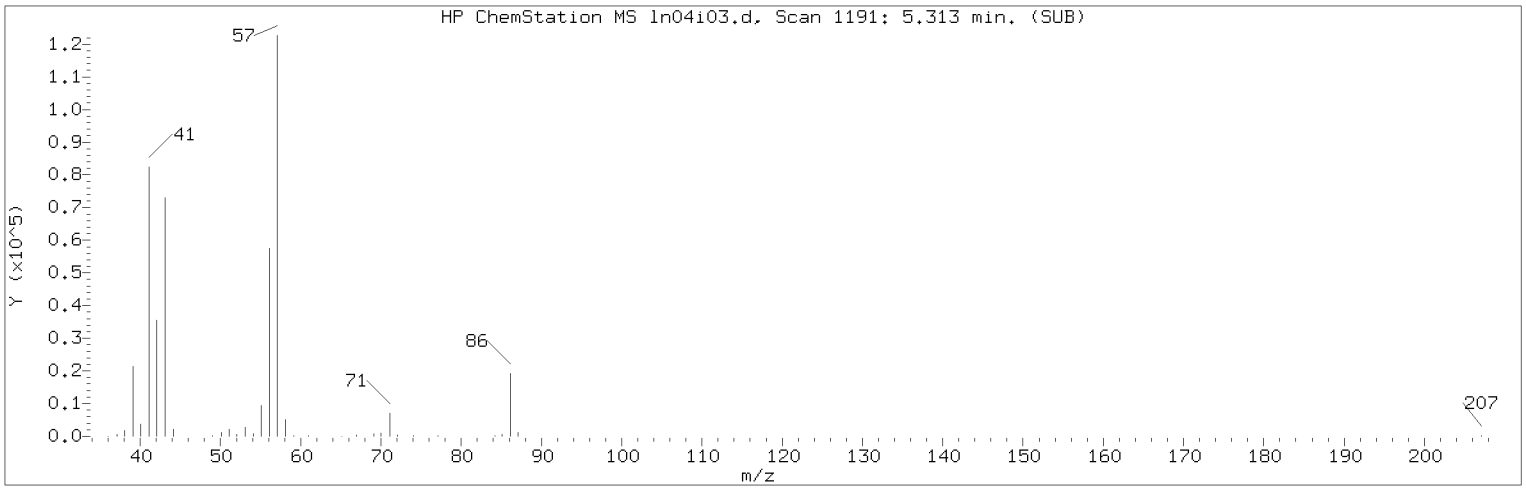
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

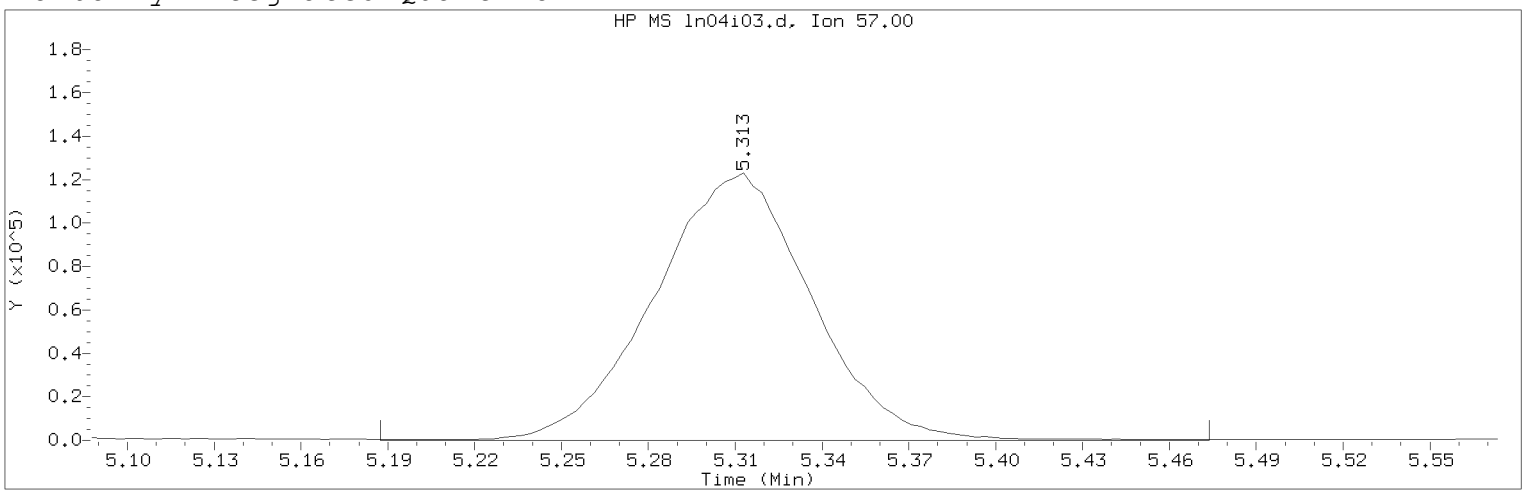
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 261144
On-column Amount (ng) : 250.0000
Integration start scan : 896 Integration stop scan: 1044
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

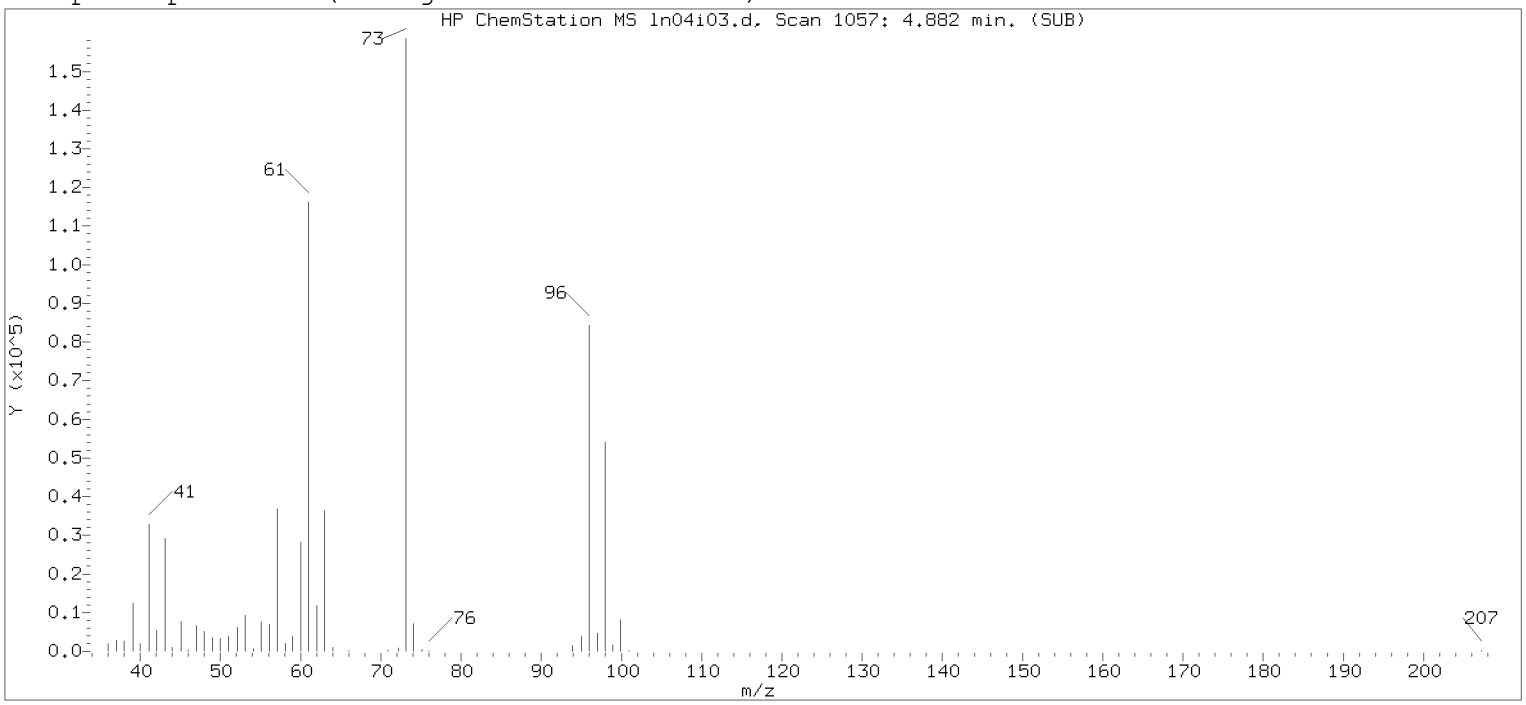
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1191
Retention Time (minutes): 5.313
Quant Ion : 57.00
Area (flag) : 463732M
On-Column Amount (ng) : 52.3639
Integration start scan : 1151 Integration stop scan: 1240
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

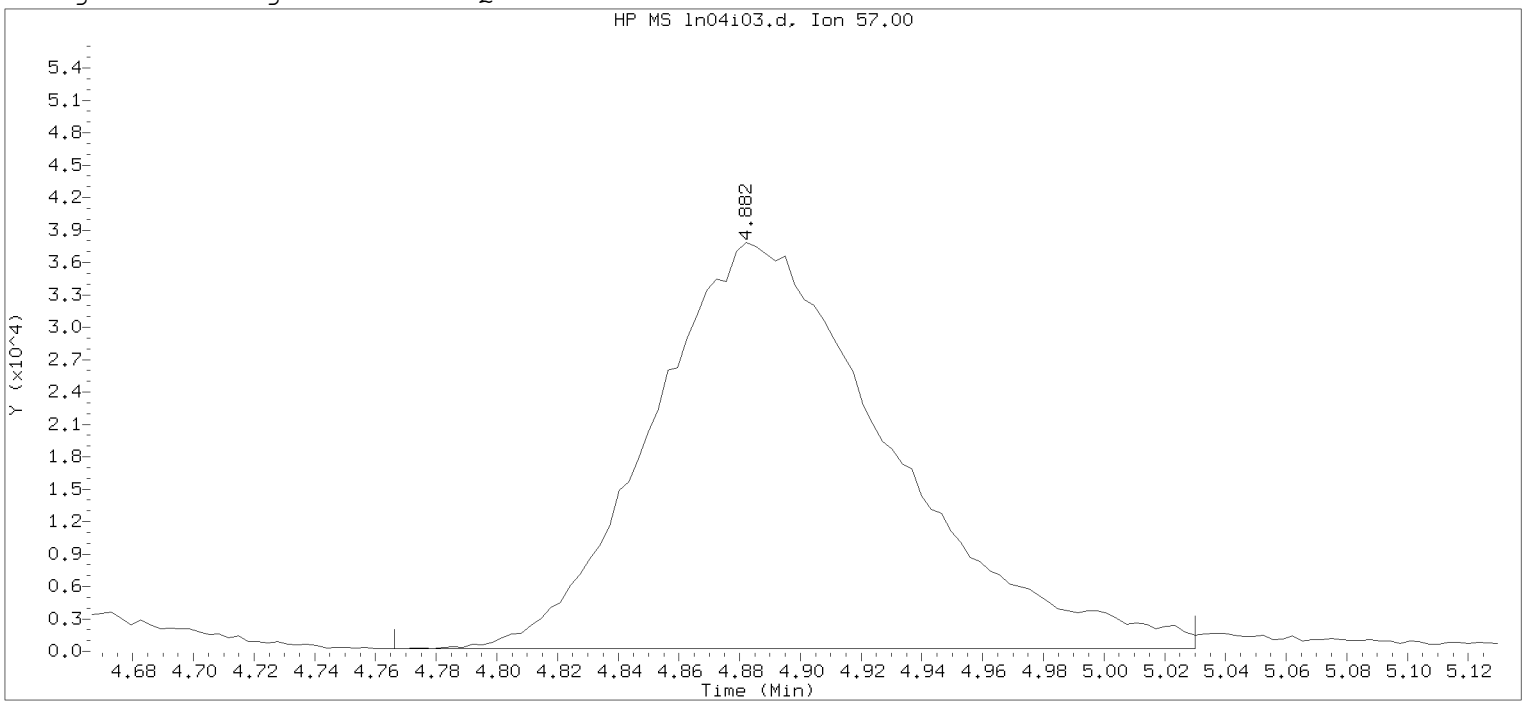
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

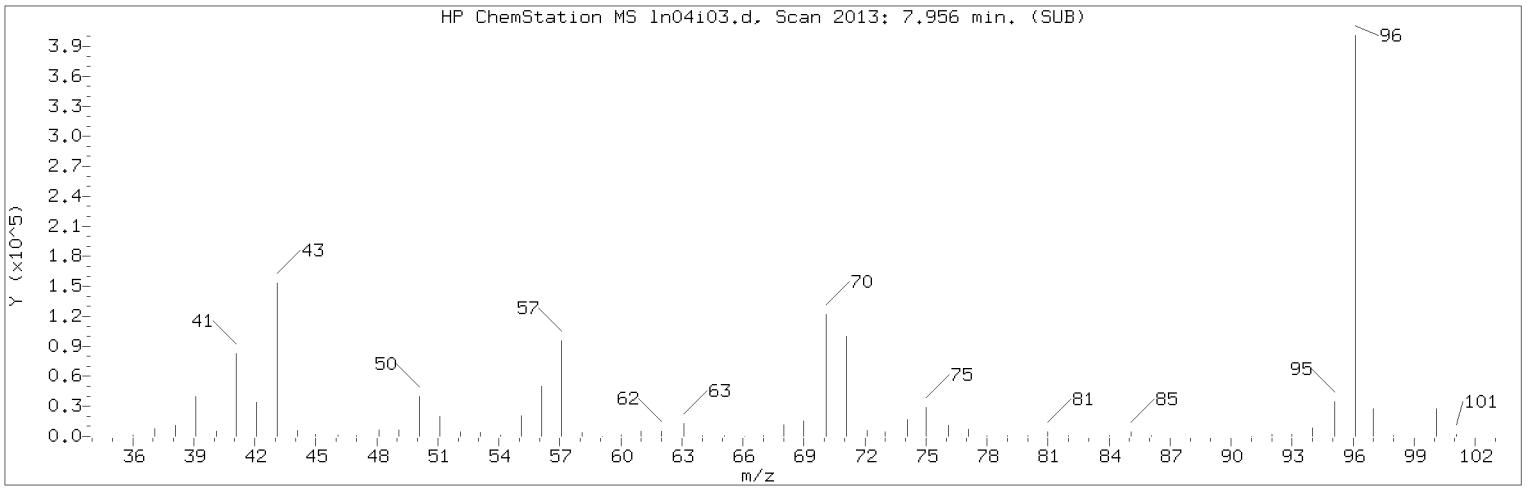
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

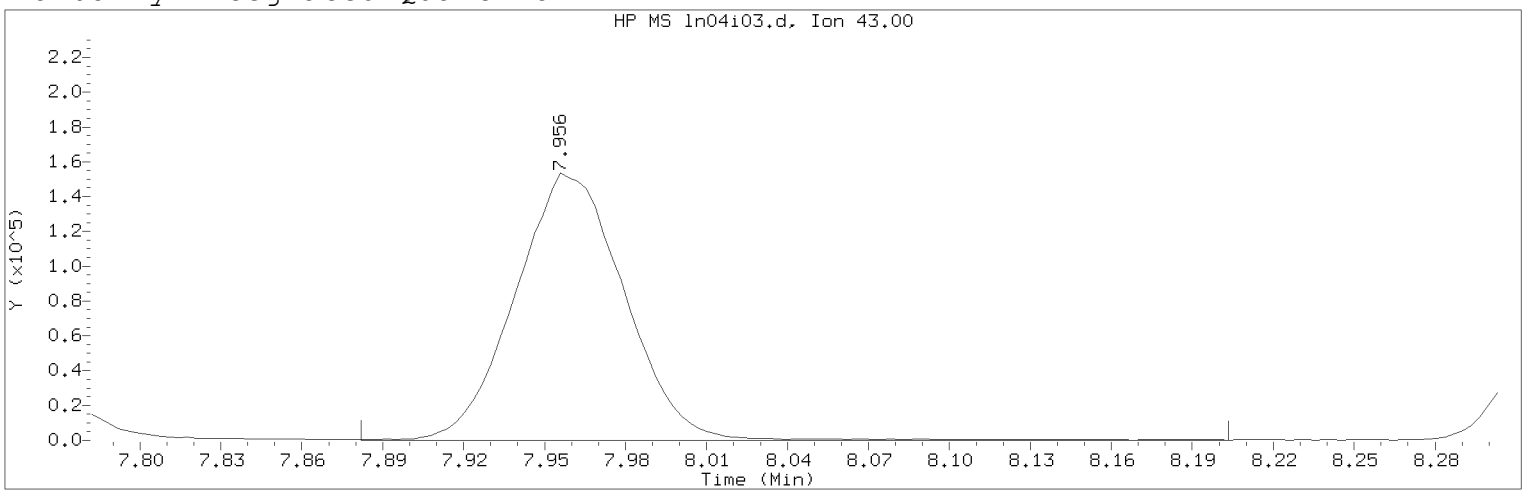
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1057		
Retention Time (minutes)	: 4.882		
Quant Ion	: 57.00		
Area	: 205522		
On-column Amount (ng)	: 50.0557		
Integration start scan	: 1020	Integration stop scan:	1102
Y at integration start	: 228	Y at integration end:	228

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

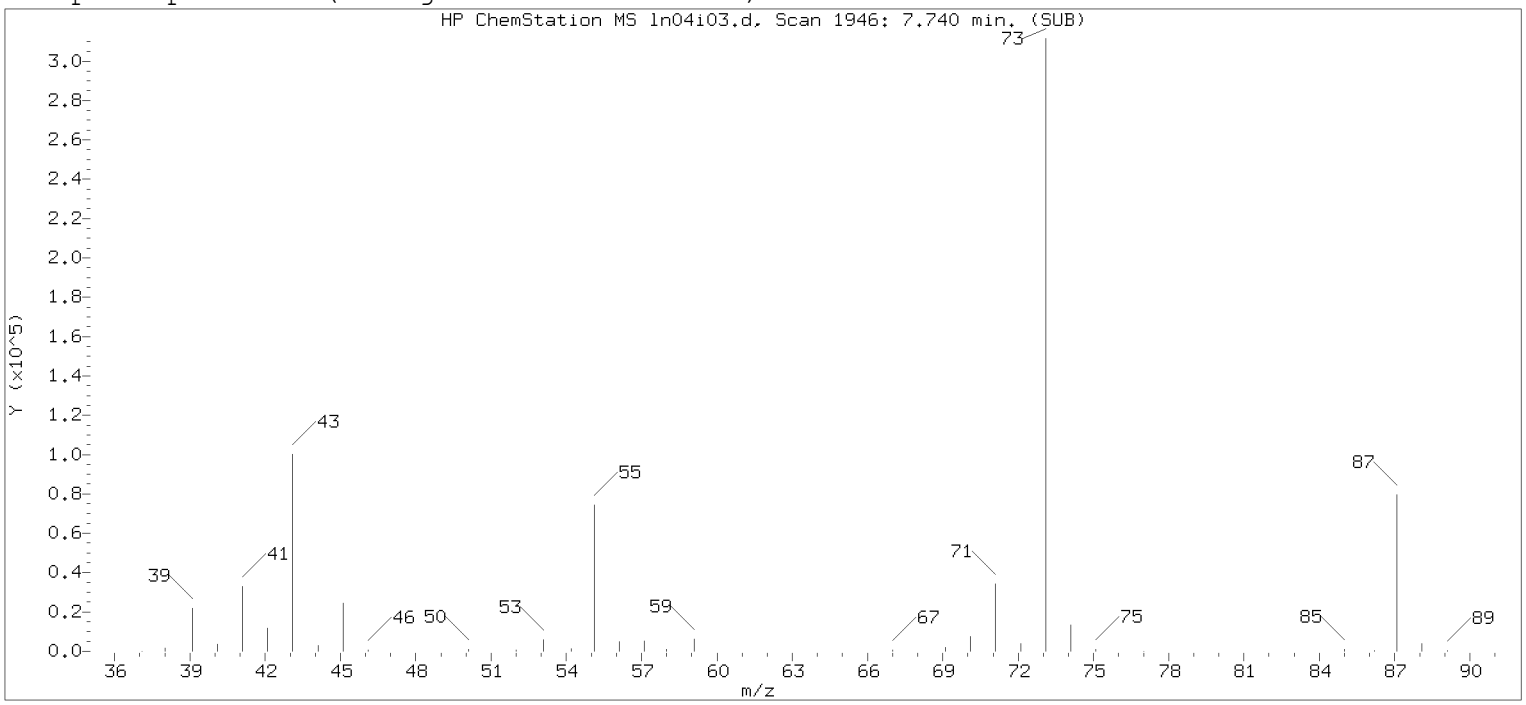
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2013
Retention Time (minutes): 7.956
Quant Ion : 43.00
Area (flag) : 432248MA
On-Column Amount (ng) : 52.2472
Integration start scan : 1989 Integration stop scan: 2089
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

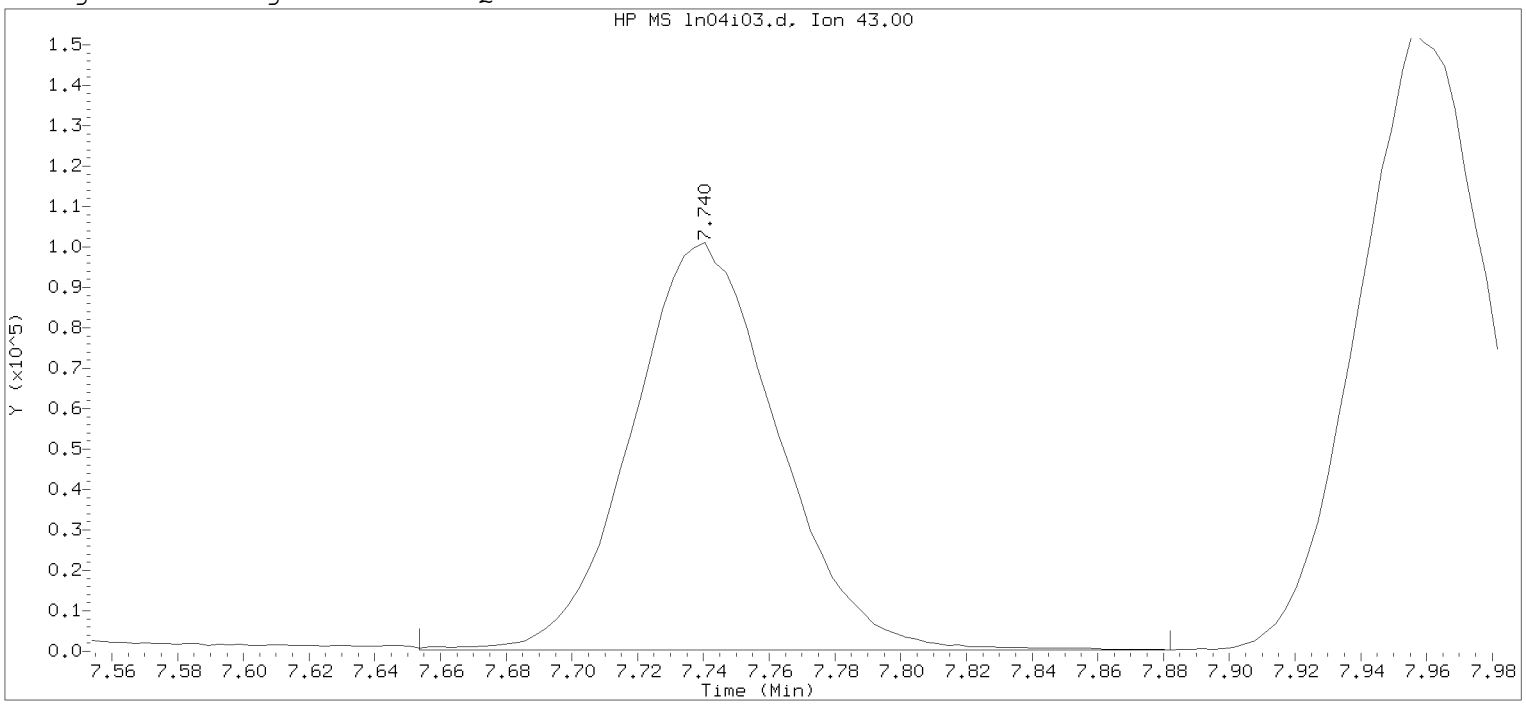
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

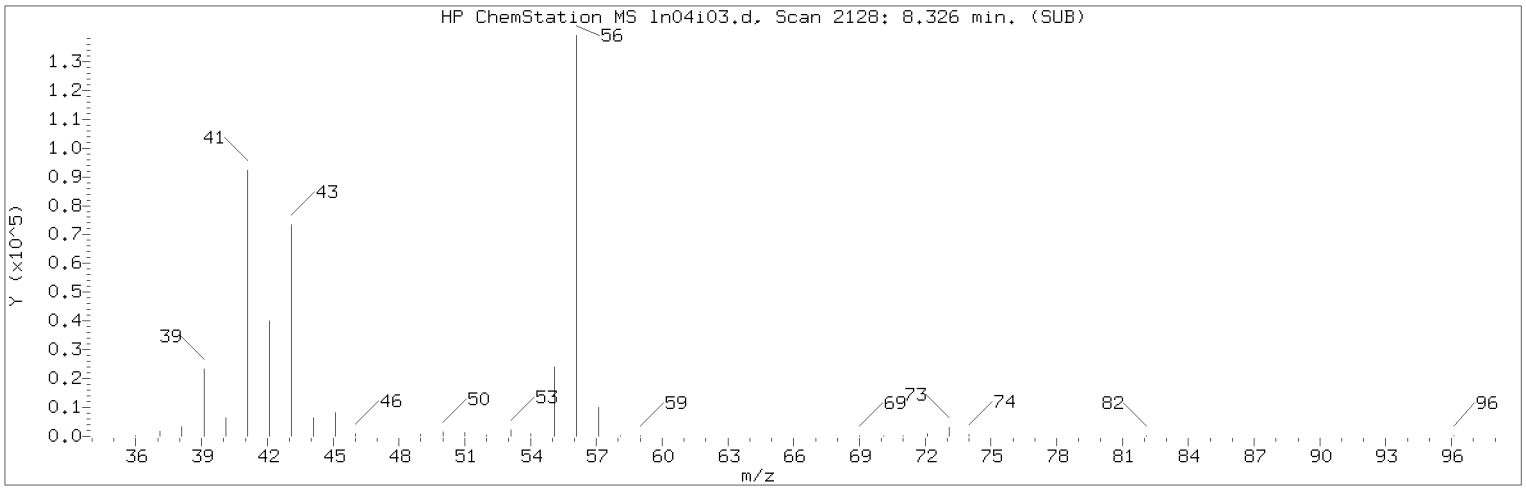
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

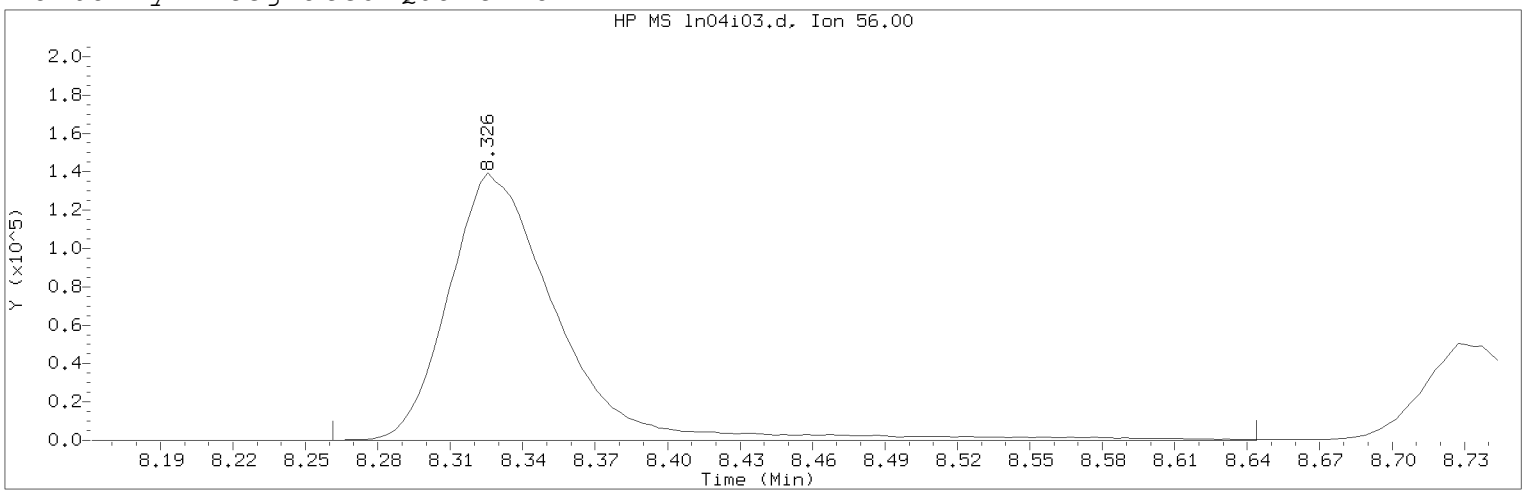
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.740
Quant Ion : 43.00
Area : 311136
On-column Amount (ng) : 51.5793
Integration start scan : 1918 Integration stop scan: 1989
Y at integration start : 288 Y at integration end: 288

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

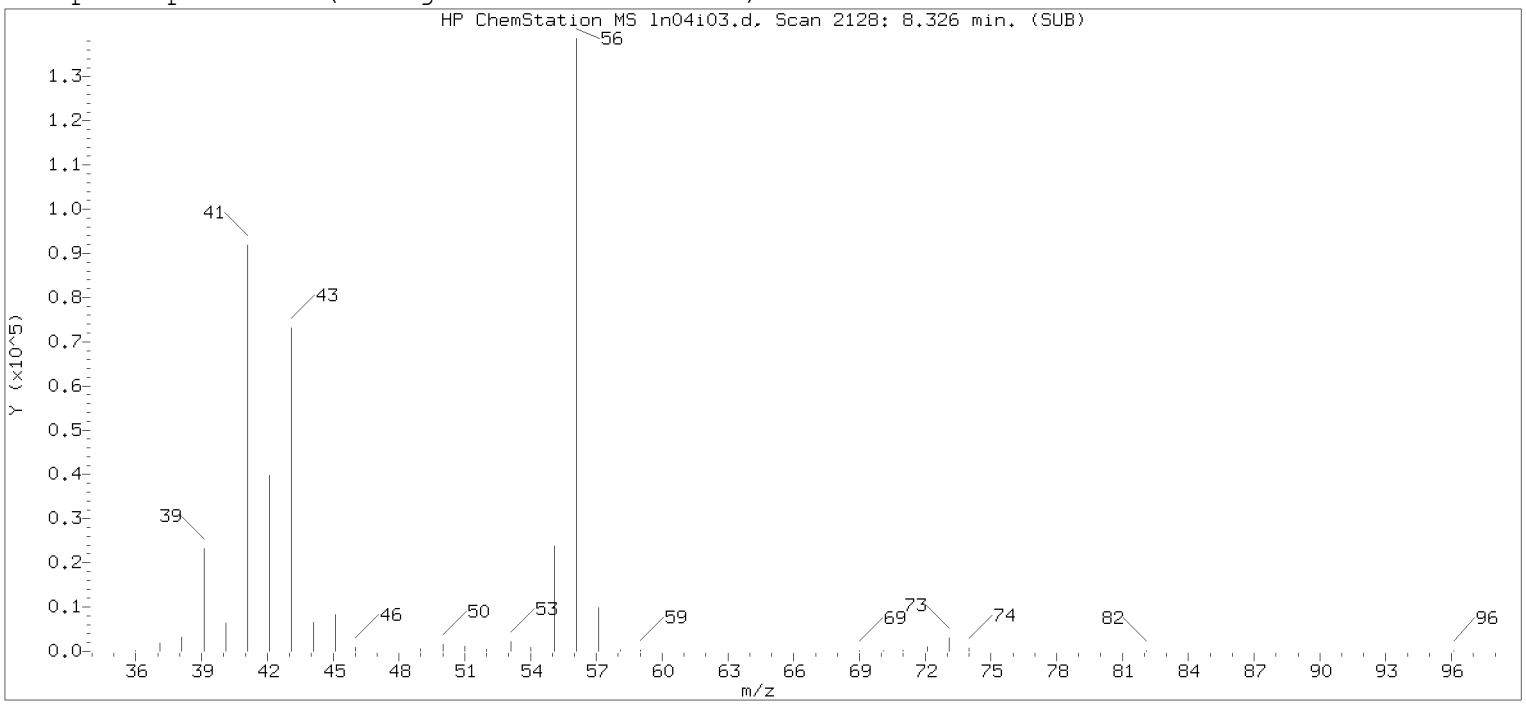
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area (flag) : 438437M
On-Column Amount (ng) : 1332.7496
Integration start scan : 2107 Integration stop scan: 2226
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

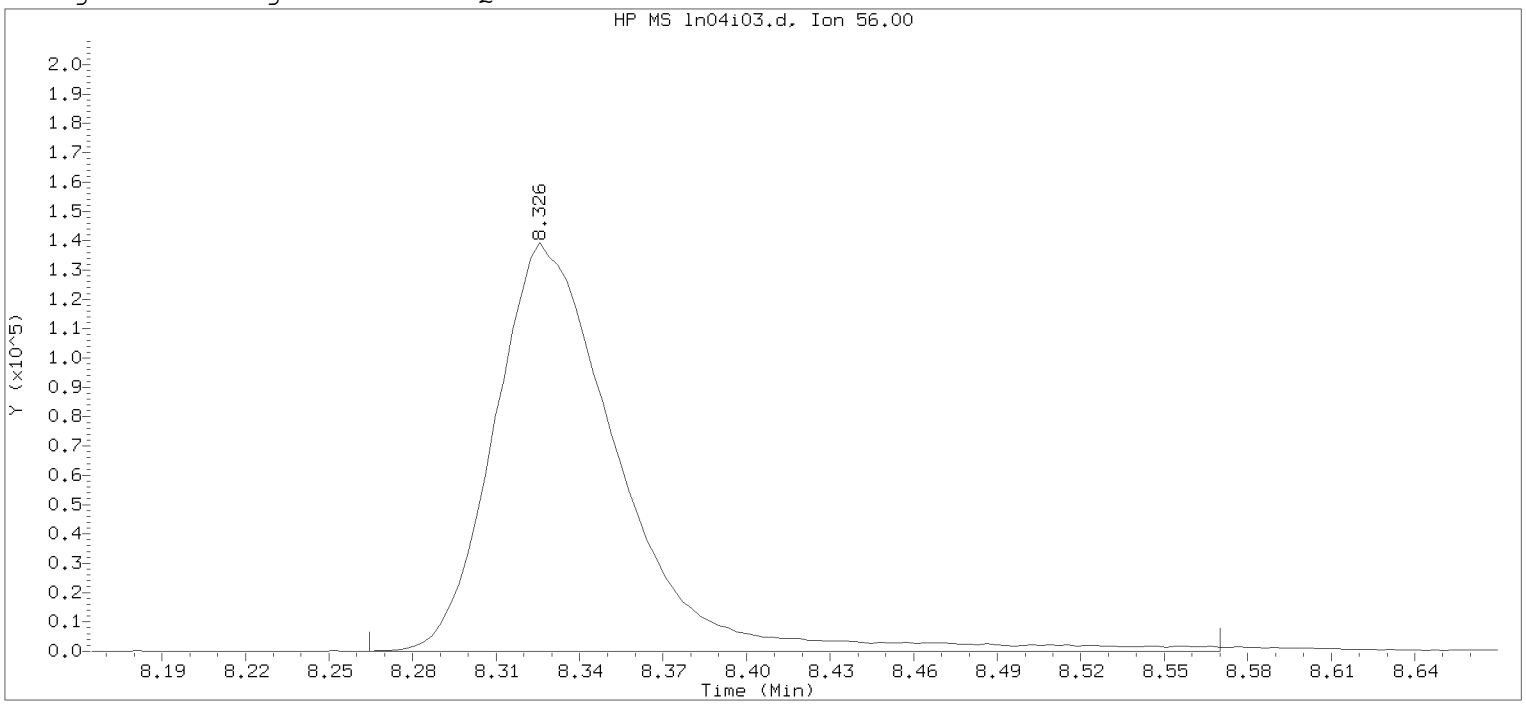
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

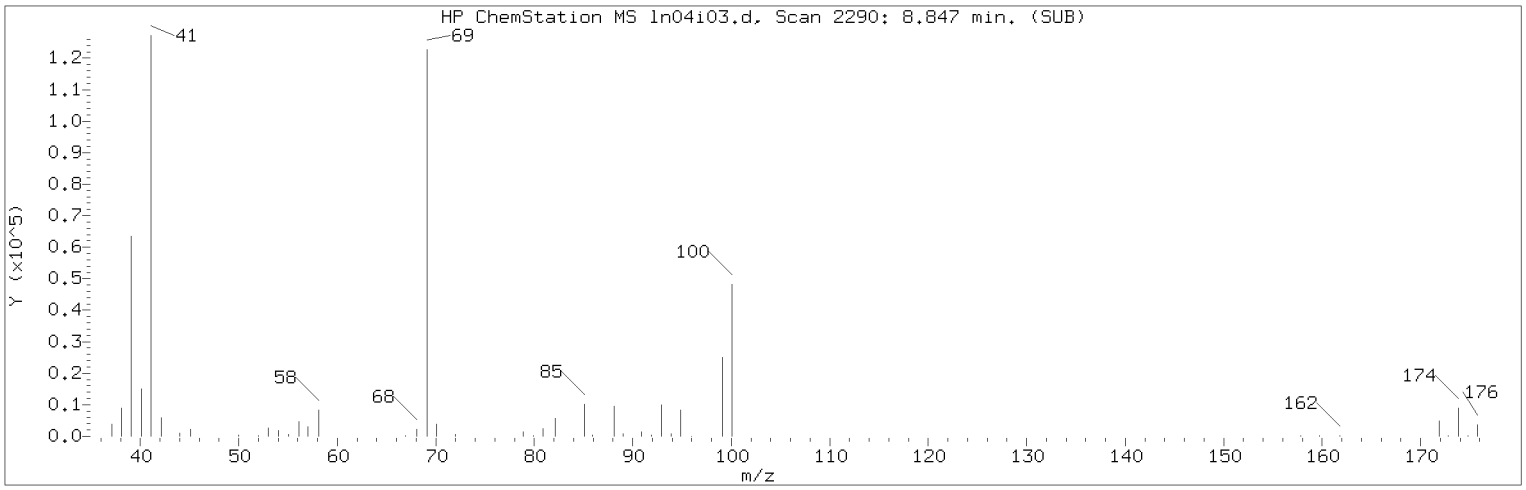
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

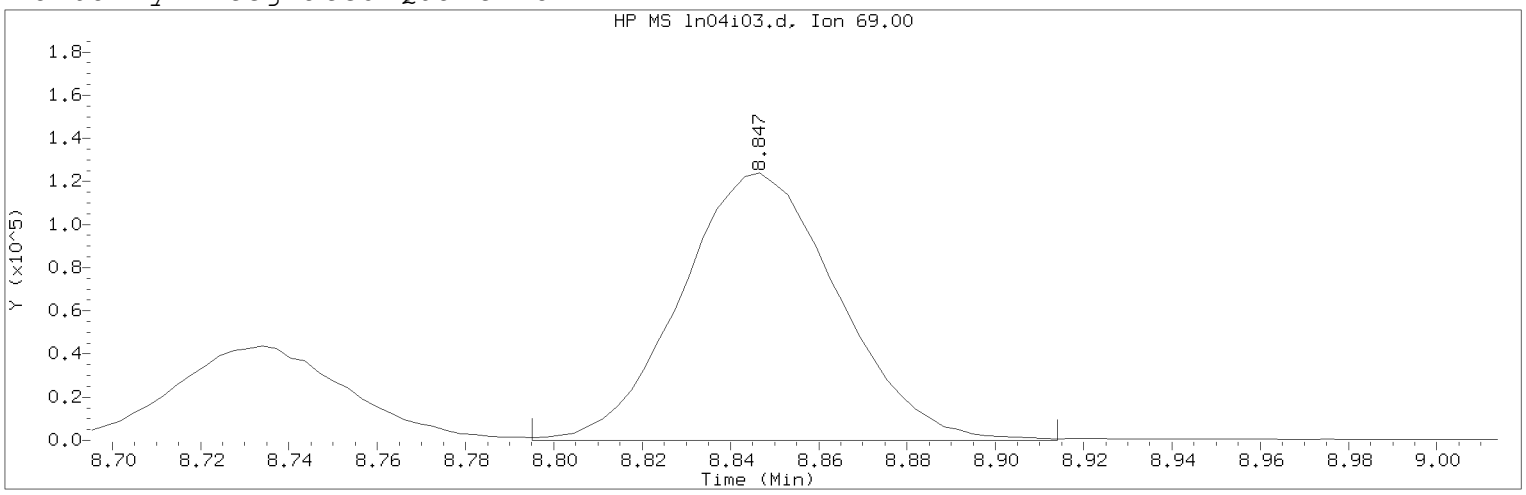
Compound Number	: 69
Compound Name	: n-Butanol
Scan Number	: 2128
Retention Time (minutes)	: 8.326
Quant Ion	: 56.00
Area	: 434385
On-column Amount (ng)	: 1223.8707
Integration start scan	: 2108 Integration stop scan: 2203
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

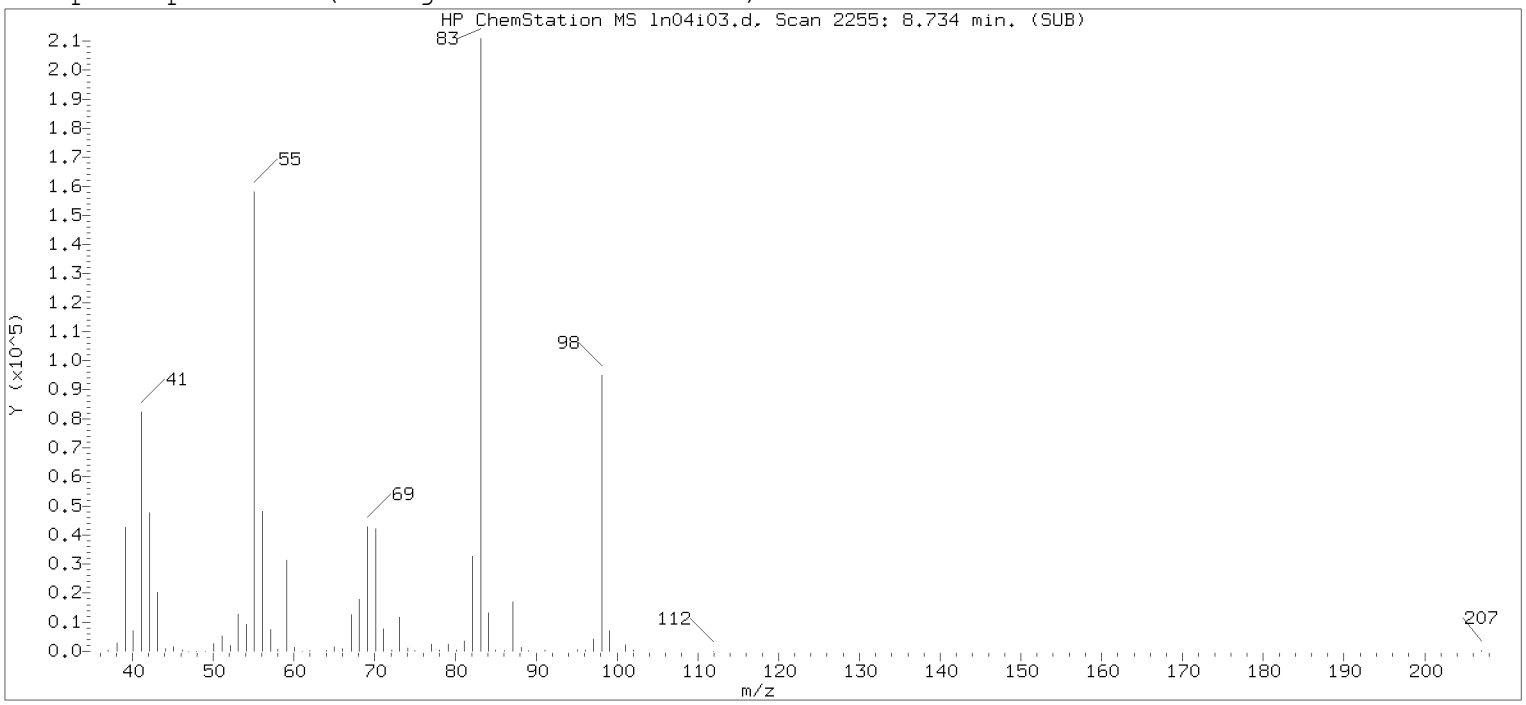
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2290
Retention Time (minutes): 8.847
Quant Ion : 69.00
Area (flag) : 306086A
On-Column Amount (ng) : 52.7952
Integration start scan : 2273 Integration stop scan: 2310
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

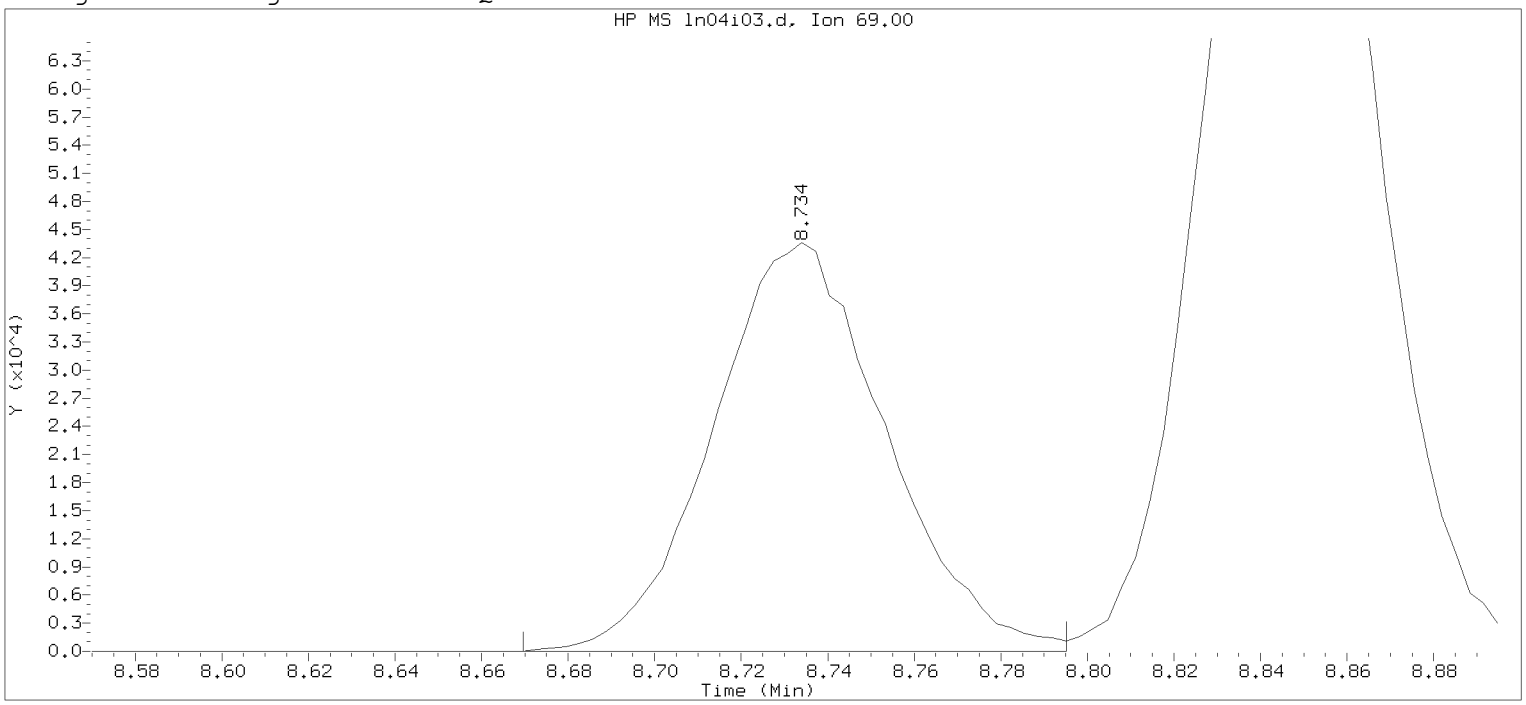
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

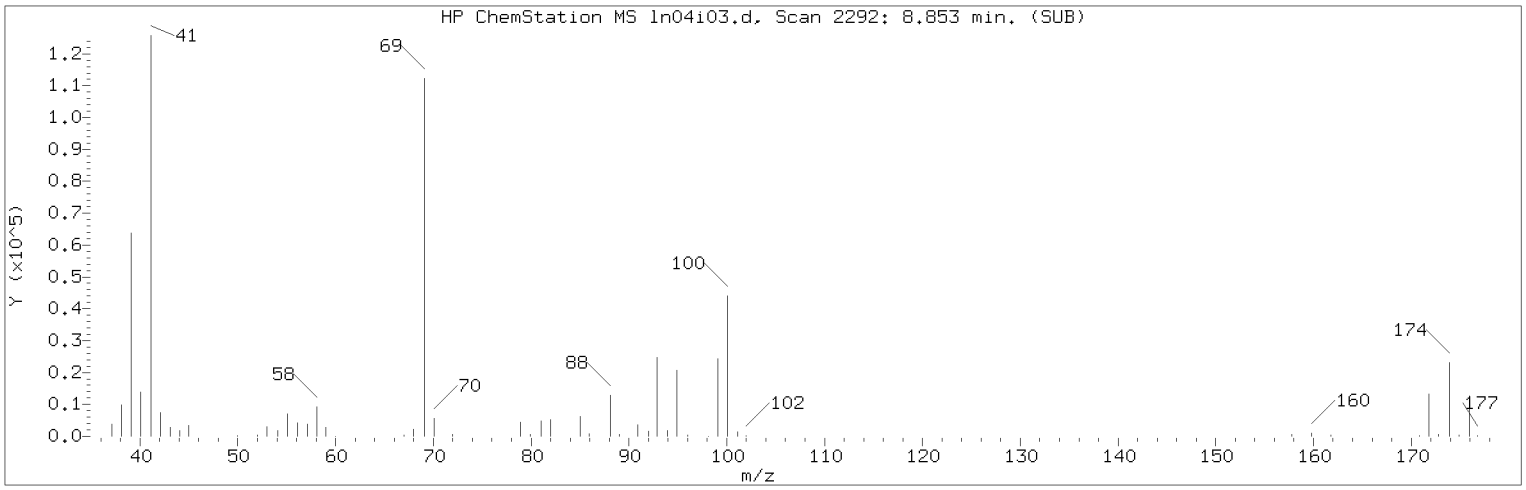
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

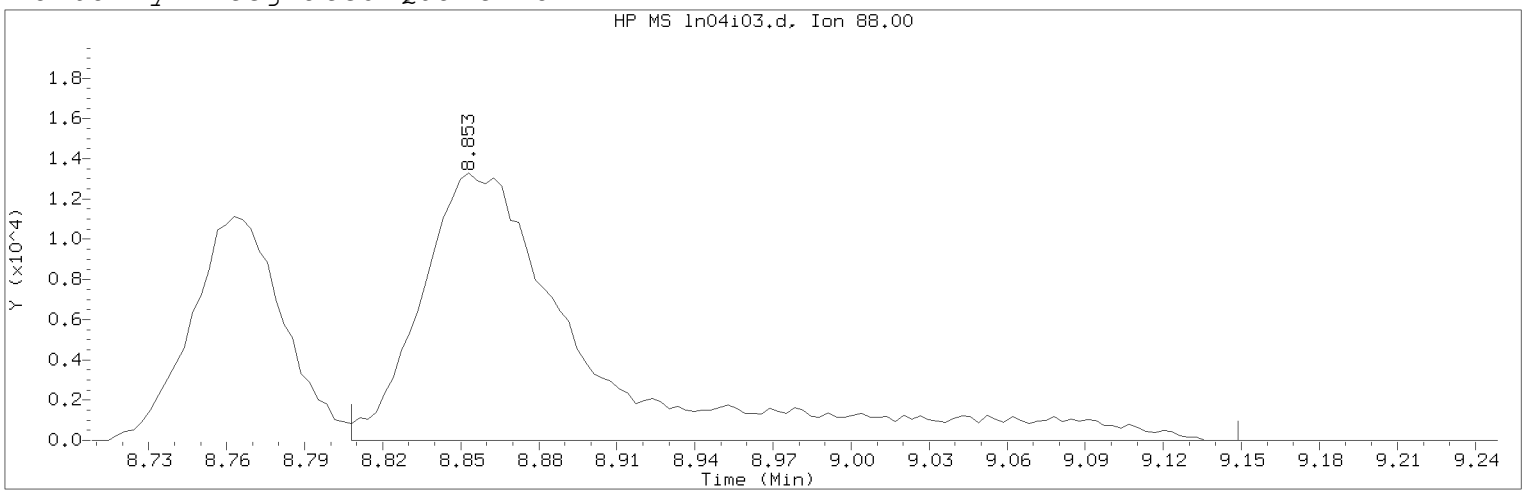
Compound Number	: 76		
Compound Name	: Methyl Methacrylate		
Scan Number	: 2255		
Retention Time (minutes)	: 8.734		
Quant Ion	: 69.00		
Area	: 120511		
On-column Amount (ng)	: 48.6556		
Integration start scan	: 2234	Integration stop scan:	2273
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

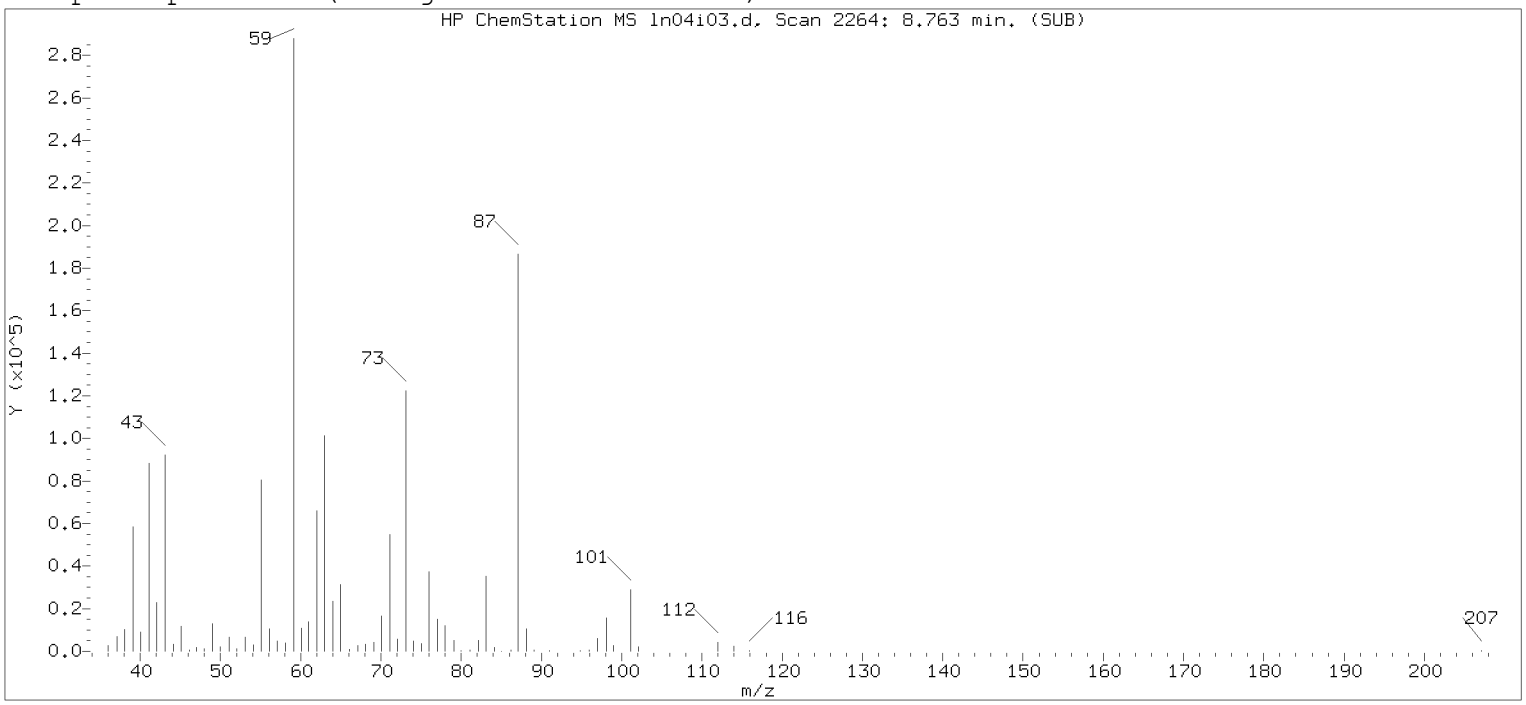
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area (flag) : 59876M
On-Column Amount (ng) : 662.1956
Integration start scan : 2277 Integration stop scan: 2383
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

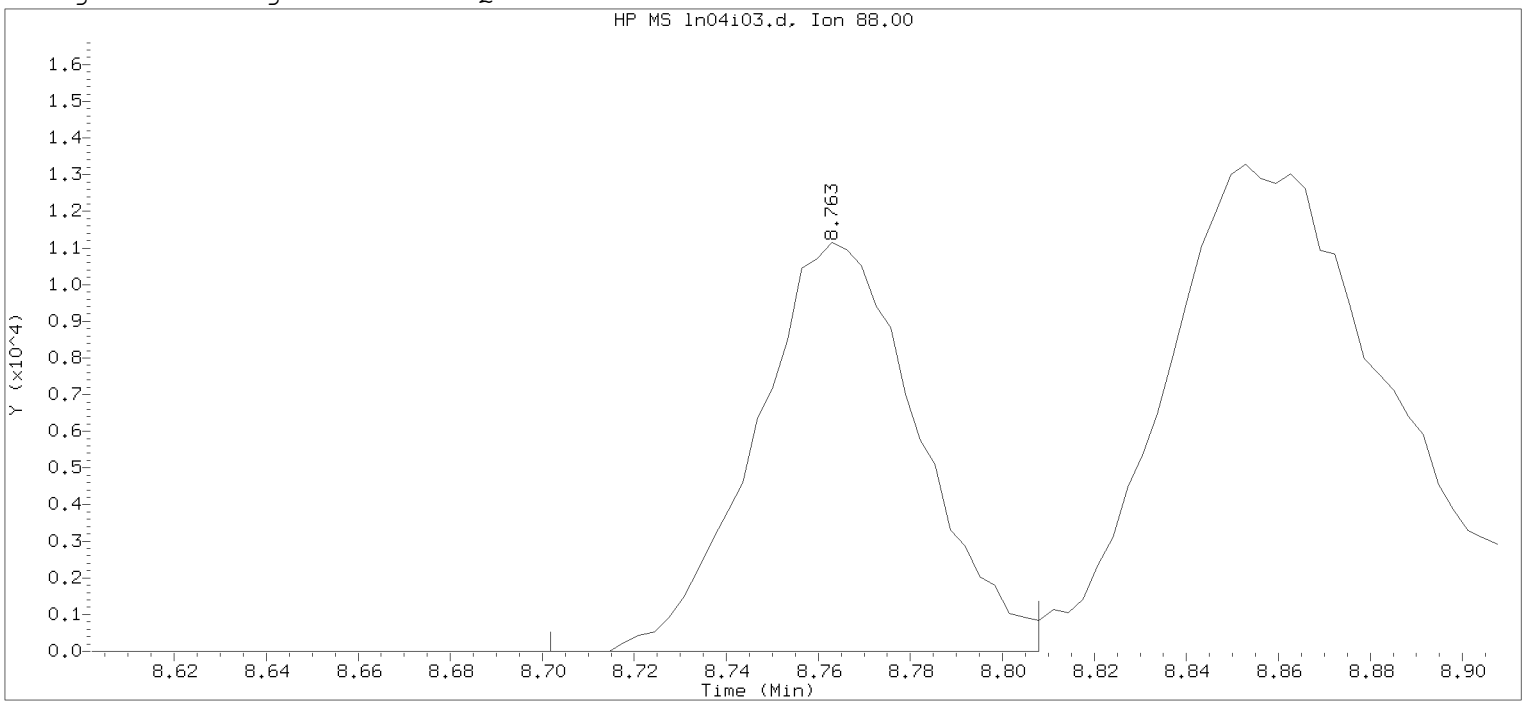
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

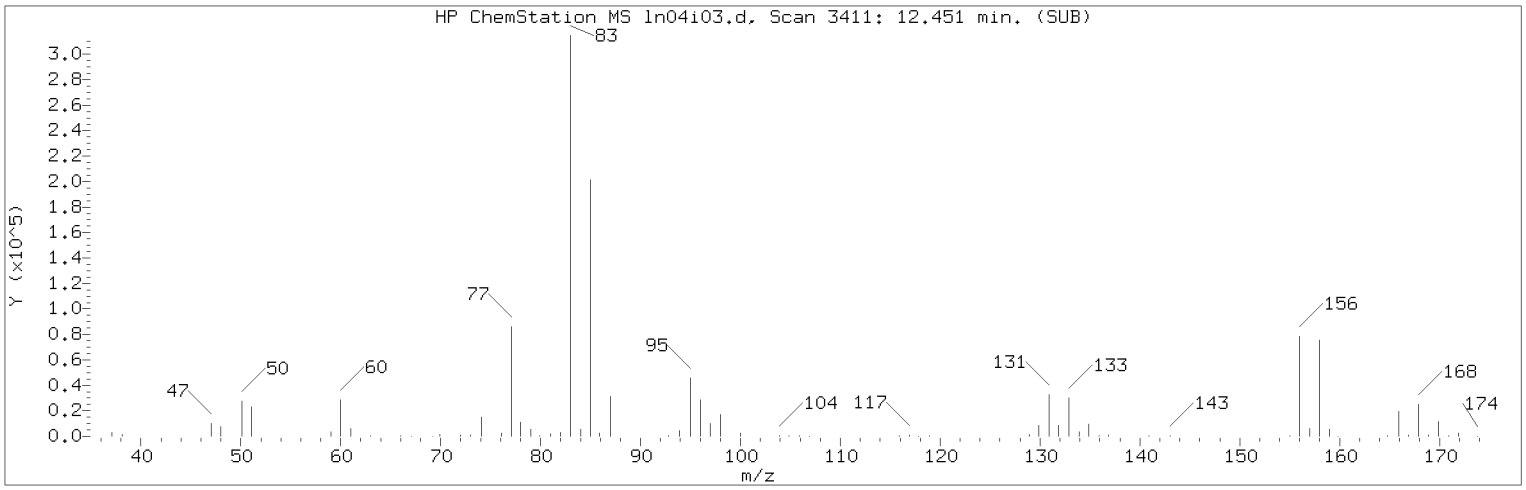
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

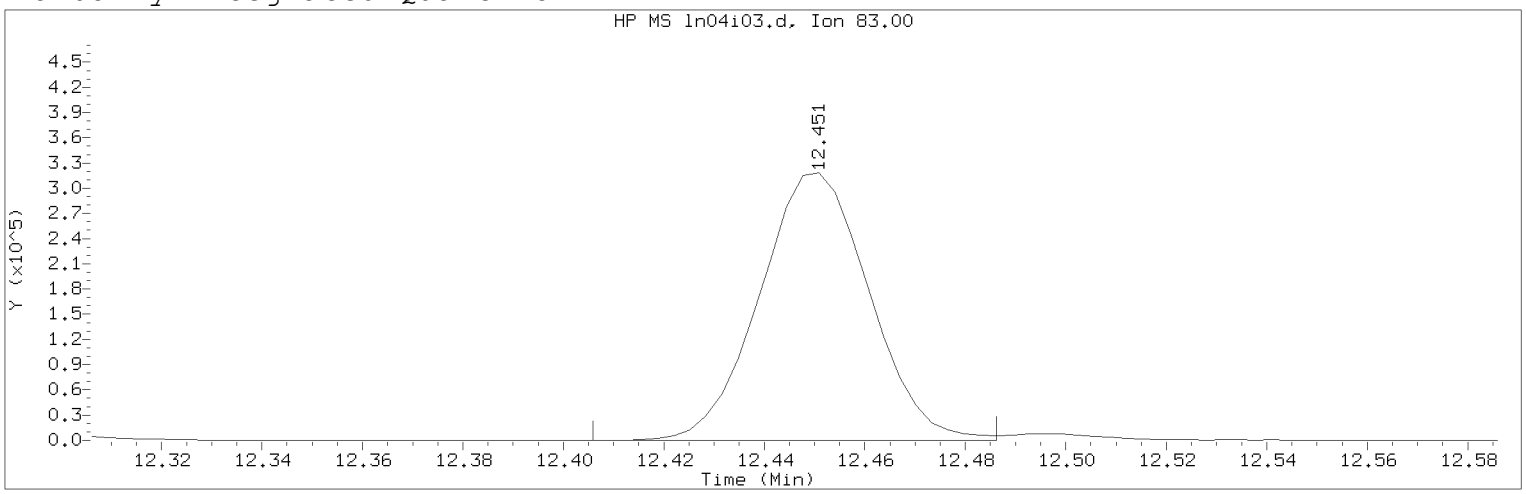
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2264		
Retention Time (minutes)	: 8.763		
Quant Ion	: 88.00		
Area	: 27334		
On-column Amount (ng)	: 447.5530		
Integration start scan	: 2244	Integration stop scan:	2277
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

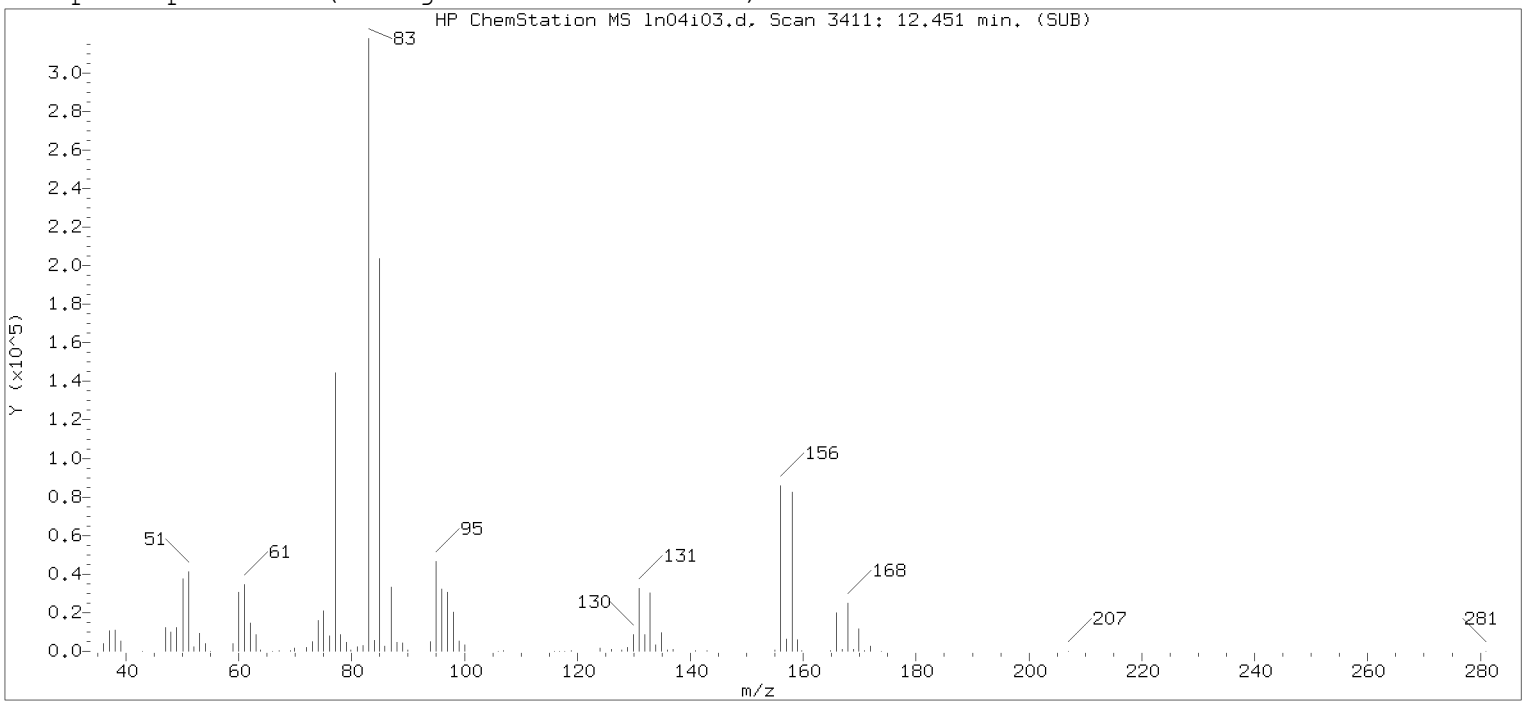
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 482004M
On-Column Amount (ng) : 52.7274
Integration start scan : 3396 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

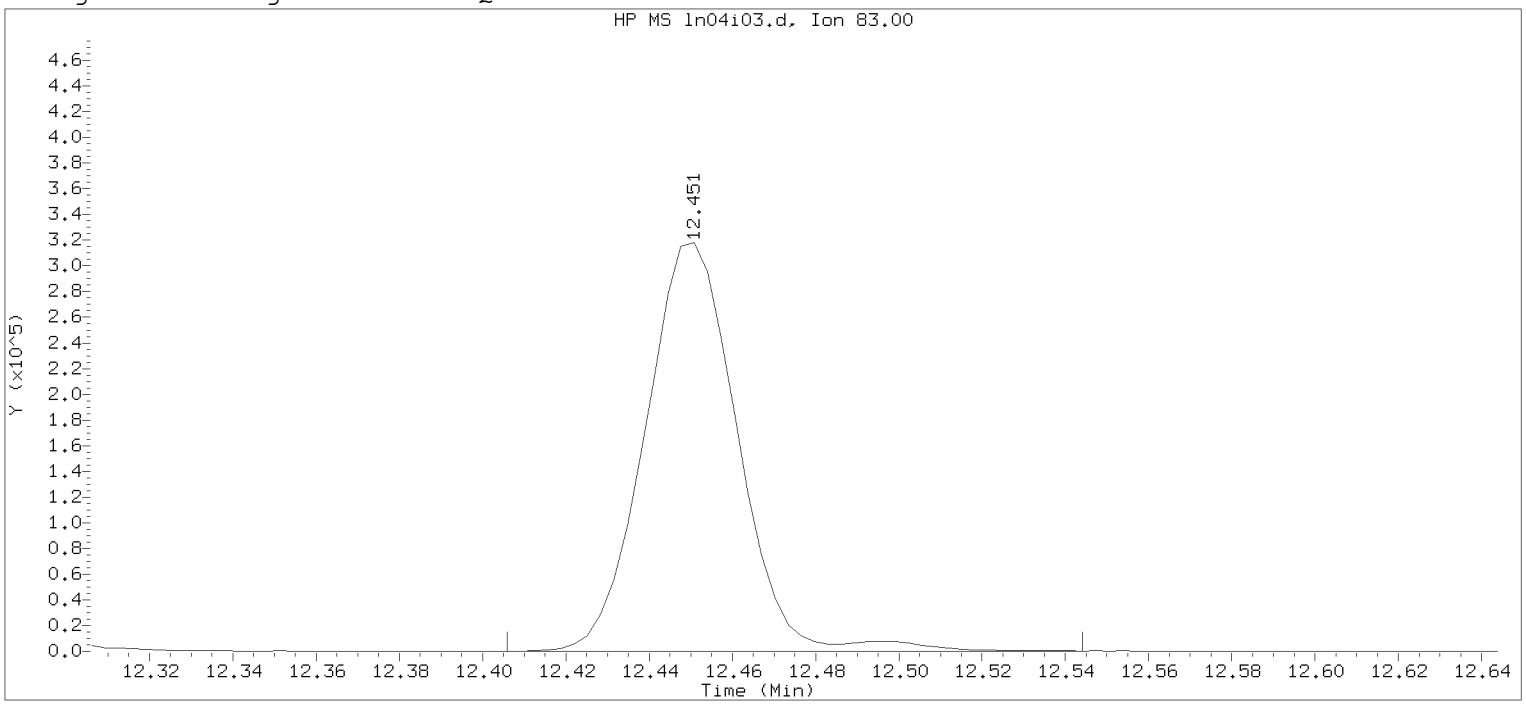
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

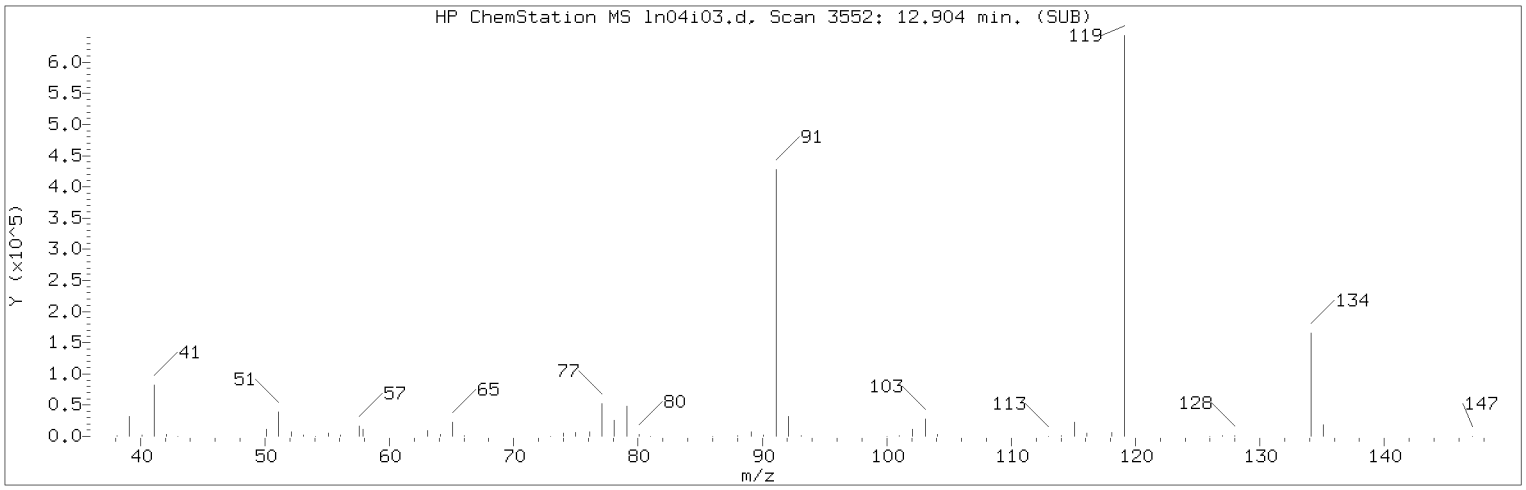
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

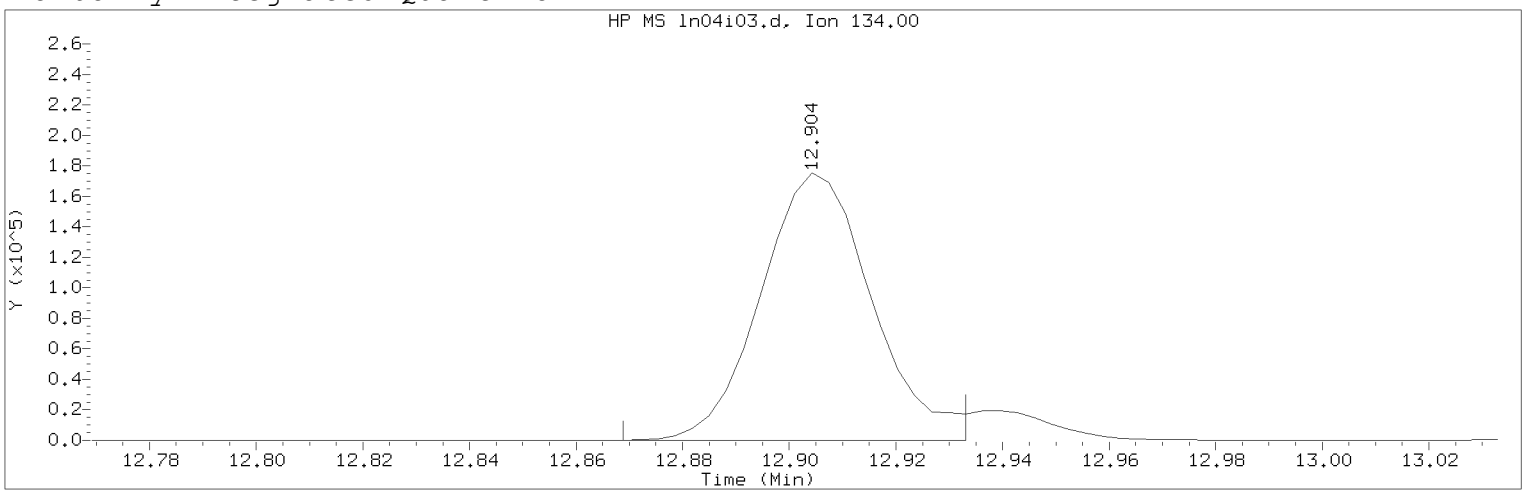
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 491918
On-column Amount (ng) : 50.7154
Integration start scan : 3396 Integration stop scan: 3439
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

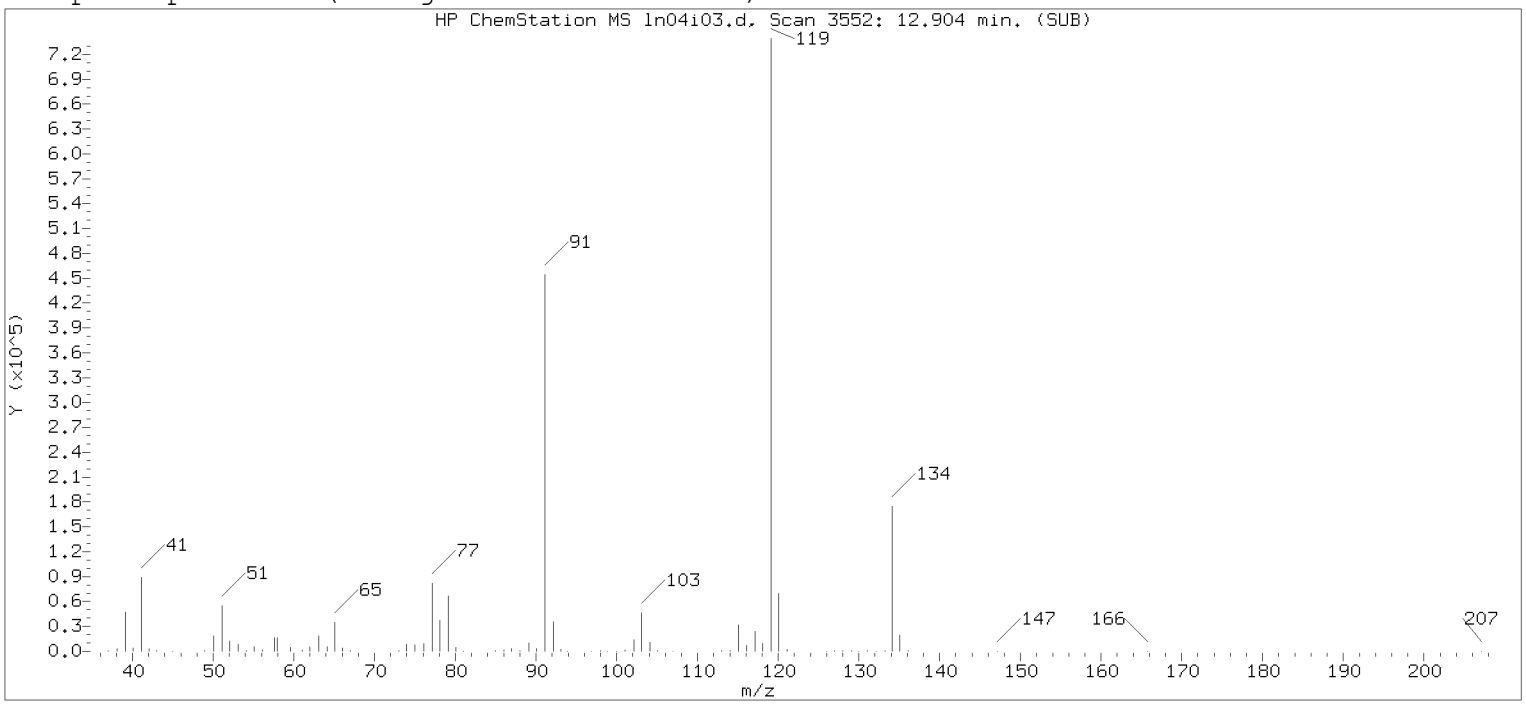
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 253906M
On-Column Amount (ng) : 53.1652
Integration start scan : 3540 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

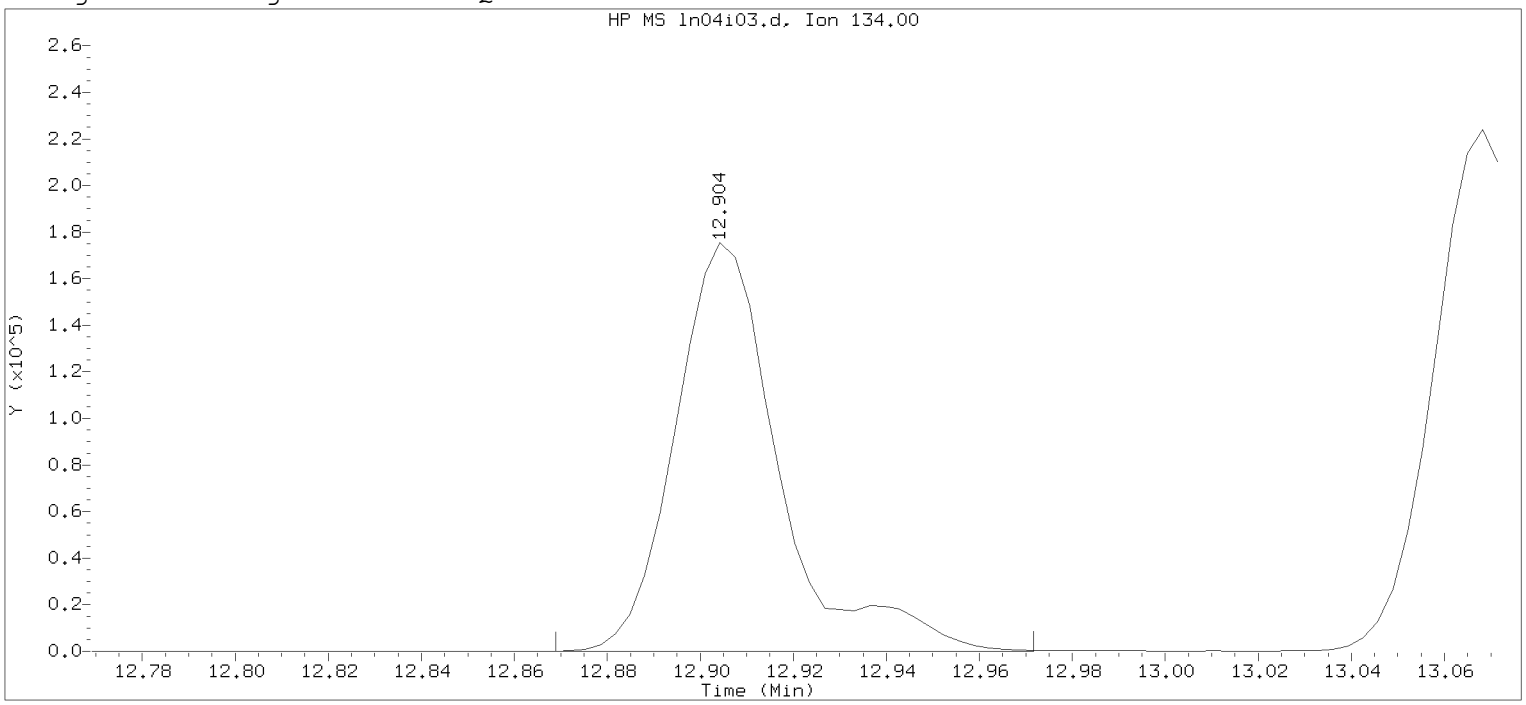
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



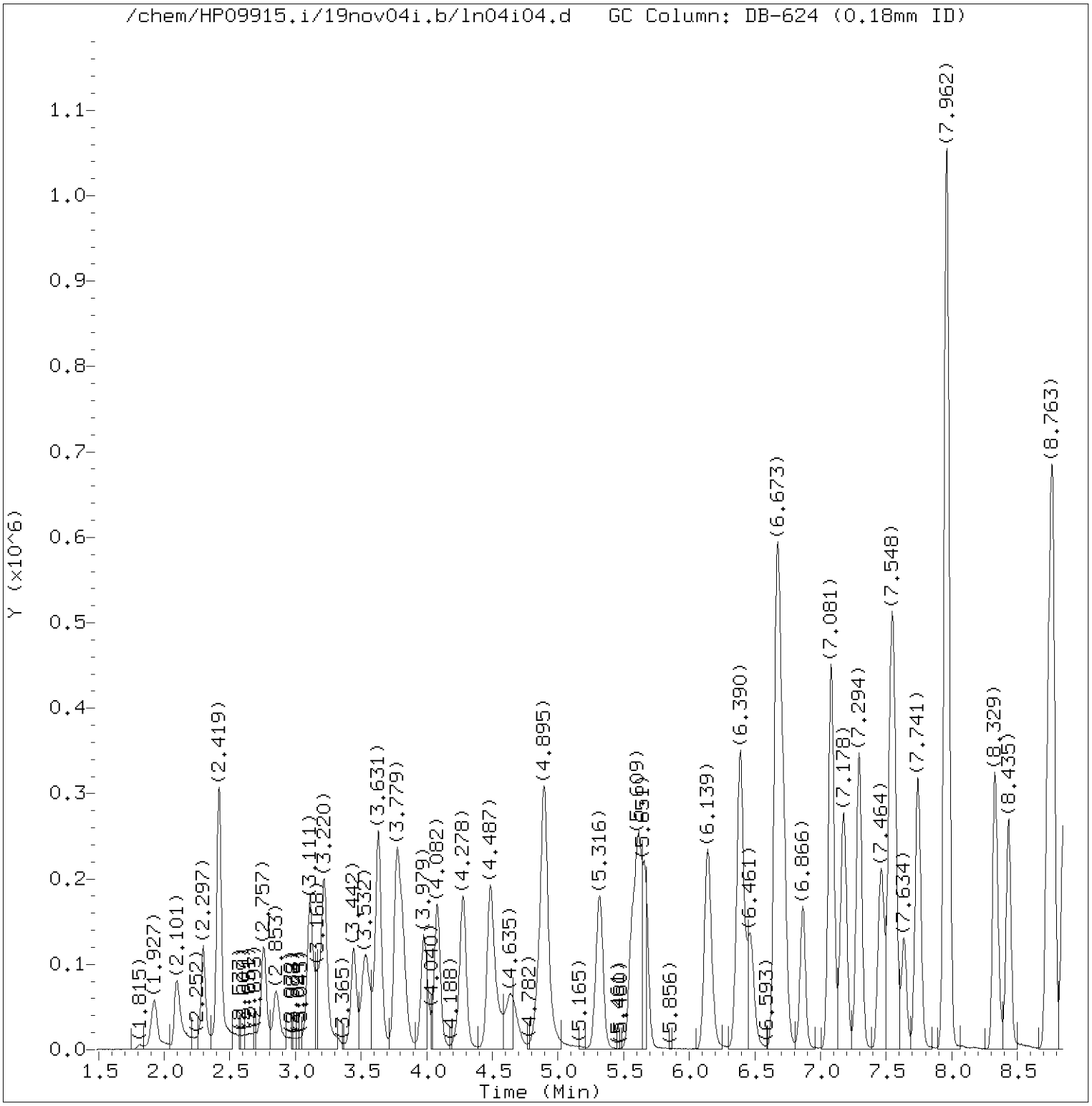
Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 273047
On-column Amount (ng) : 50.7591
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell



Total Ion Chromatogram (TIC)

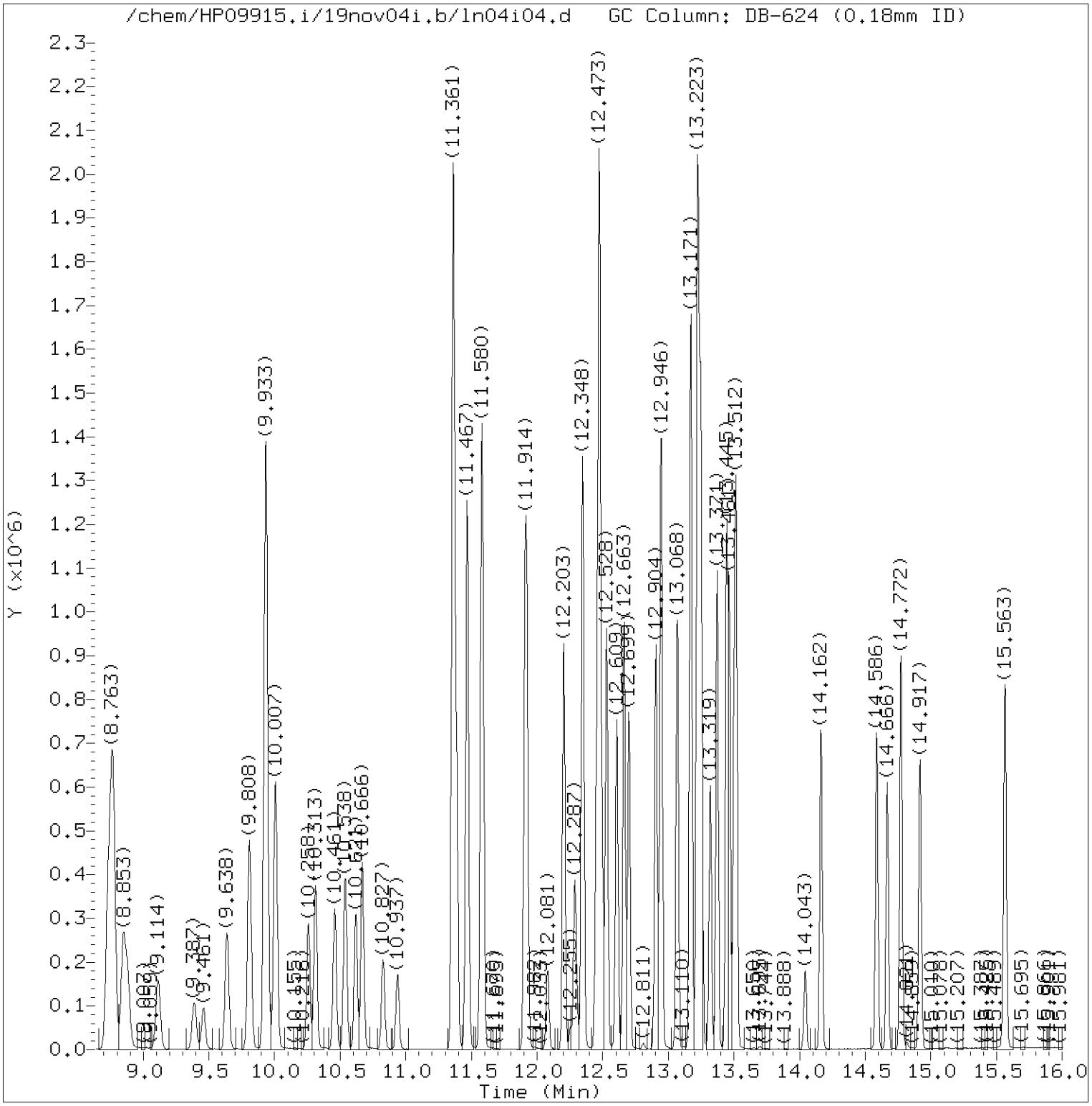
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.095	85	161054M	20.460
4) Chloromethane	(2)	2.297	50	155347	20.477
5) 1,3-Butadiene	(2)	2.416	39	127826M	20.292
6) Vinyl Chloride	(2)	2.419	62	156255	20.637
8) Bromomethane	(2)	2.757	94	109945	20.257
9) Chloroethane	(2)	2.853	64	85938	20.653
10) Dichlorofluoromethane	(2)	3.111	67	205276M	20.838
12) Trichlorofluoromethane	(2)	3.168	101	166167	20.384
11) n-Pentane	(2)	3.220	43	195074	20.250
14) Ethyl ether	(2)	3.442	59	108665	20.629
15) Freon 123a	(2)	3.532	67	137784	21.012
16) Acrolein	(1)	3.631	56	399615	206.403
17) 1,1-Dichloroethene	(2)	3.773	96	101858	21.288
17) 1,1-Dichloroethene	(2)	3.773	63	50444	21.029
19) Freon 113	(2)	3.805	101	115335	21.128
18) Acetone	(1)	3.815	58	36001	41.477
22) Methyl Iodide	(2)	3.979	142	212163	21.398
21) 2-Propanol	(1)	4.004	45	120851	193.676
23) Carbon Disulfide	(2)	4.082	76	388574	21.550
27) Methyl Acetate	(2)	4.255	43	121876	19.777
25) Allyl Chloride	(2)	4.281	41	173950	20.266
28) Methylene Chloride	(2)	4.483	84	119344	20.956
29)*t-Butyl alcohol-d10	(1)	4.512	65	258058M	250.000
30) t-Butyl alcohol	(1)	4.644	59	213903	196.882
31) Acrylonitrile	(2)	4.844	53	69677	21.016
32) trans-1,2-Dichloroethene	(2)	4.898	96	117516	21.231
33) Methyl Tertiary Butyl Ether	(2)	4.898	73	384426	21.159
34) n-Hexane	(2)	5.323	57	185314M	21.519
36) 1,1-Dichloroethane	(2)	5.561	63	203176	21.041
38) di-Isopropyl ether	(2)	5.615	45	399314	21.442
39) 2-Chloro-1,3-butadiene	(2)	5.670	53	184546	21.302
40) Ethyl t-butyl ether	(2)	6.146	59	392243	21.703
43) 1,2-Dichloroethene (Total)	(2)		96	248665	42.340
44) 2-Butanone	(2)	6.371	43	174937	41.104
42) cis-1,2-Dichloroethene	(2)	6.390	96	131149	21.109
45) 2,2-Dichloropropane	(2)	6.397	77	160123	21.332
47) Propionitrile	(1)	6.471	54	279106	206.179
48) Methacrylonitrile	(2)	6.673	67	377980	105.686

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	68547	20.807
50) Tetrahydrofuran	(1)	6.728	71	49905	40.813
51) Chloroform	(2)	6.863	83	198842	21.530
52)$Dibromofluoromethane	(2)	7.078	113	277983	50.374
52)$Dibromofluoromethane	(2)	7.081	111	283696	50.420
53) 1,1,1-Trichloroethane	(2)	7.081	97	168285	21.349
54) Cyclohexane	(2)	7.178	56	226762	21.513
54) Cyclohexane	(2)	7.178	84	195470	21.348
54) Cyclohexane	(2)	7.171	69	69608	21.350
56) Carbon Tetrachloride	(2)	7.290	117	141234	21.126
55) 1,1-Dichloropropene	(2)	7.297	75	161608	21.167
58) Isobutyl Alcohol	(1)	7.464	41	176564	482.927
57)$1,2-Dichloroethane-d4	(2)	7.535	102	71029	50.503
57)$1,2-Dichloroethane-d4	(2)	7.532	65	318244	50.776
57)$1,2-Dichloroethane-d4	(2)	7.535	104	46070	51.284
60) Benzene	(2)	7.561	78	489494	21.320
61) 1,2-Dichloroethane	(2)	7.634	62	150643	20.399
61) 1,2-Dichloroethane	(2)	7.634	98	15487	21.192
65) t-Amyl methyl ether	(2)	7.744	73	391674	21.591
67) n-Heptane	(2)	7.962	43	173500MA	21.566
66)*Fluorobenzene	(2)	7.962	96	1128743	50.000
69) n-Butanol	(1)	8.329	56	312189M	992.087
71) Trichloroethene	(2)	8.435	95	122357	21.166
72) Methylcyclohexane	(2)	8.737	83	221554	20.658
72) Methylcyclohexane	(2)	8.737	98	99234	20.447
73) 1,2-Dichloropropane	(2)	8.769	63	123290	21.148
76) Methyl Methacrylate	(2)	8.850	69	117550A	20.851
75) 1,4-Dioxane	(1)	8.856	88	44376M	513.065
74) Dibromomethane	(2)	8.879	93	79643	21.113
78) Bromodichloromethane	(2)	9.114	83	142226	21.011
79) 2-Nitropropane	(2)	9.390	41	82517M	40.247
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	51005	20.370
81) cis-1,3-Dichloropropene	(2)	9.634	75	192808	21.446
82) 4-Methyl-2-pentanone	(2)	9.808	43	377728	42.047
83)$Toluene-d8	(3)	9.933	98	1159273	50.160
83)$Toluene-d8	(3)	9.933	100	751601	50.203
88) Toluene	(3)	10.007	92	308466	21.289
90) 1,3-Dichloropropene (total)	(3)		100	367273	42.658

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	174465	21.211
91) Ethyl Methacrylate	(3)	10.313	69	210882	21.096
92) 1,1,2-Trichloroethane	(3)	10.461	97	114106	20.771
93) Tetrachloroethene	(3)	10.538	166	130358	21.243
94) 1,3-Dichloropropane	(3)	10.618	76	196136	20.911
96) 2-Hexanone	(3)	10.666	43	276801	41.485
97) Dibromochloromethane	(3)	10.827	129	117920	20.955
99) 1,2-Dibromoethane	(3)	10.940	107	124981	20.951
100)*Chlorobenzene-d5	(3)	11.361	117	883281	50.000
101) 1-Chlorohexane	(3)	11.364	91	162552	20.883
102) Chlorobenzene	(3)	11.387	112	347116	21.185
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	116096	21.505
104) Ethylbenzene	(3)	11.467	91	593614	21.434
106) m+p-Xylene	(3)	11.580	106	474524	43.555
108) Xylene (Total)	(3)		106	707354	65.191
107) o-Xylene	(3)	11.908	106	232830	21.636
109) Styrene	(3)	11.924	104	387652	21.799
110) Bromoform	(3)	12.081	173	81670	19.422
111) Isopropylbenzene	(3)	12.203	105	589458	21.839
112) Cyclohexanone	(1)	12.287	55	167626	494.847
114)$4-Bromofluorobenzene	(3)	12.348	95	438766	50.137
114)$4-Bromofluorobenzene	(3)	12.348	174	363757	50.138
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	186119M	20.690
115) Bromobenzene	(4)	12.464	156	150208	20.987
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	295707	106.569
117) 1,2,3-Trichloropropane	(4)	12.499	110	56899	20.612
119) n-Propylbenzene	(4)	12.528	91	680502	21.762
120) 2-Chlorotoluene	(4)	12.609	126	141675	21.327
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	498486	21.936
121) 4-Chlorotoluene	(4)	12.699	126	147463	21.326
124) tert-Butylbenzene	(4)	12.904	134	101571M	21.612
125) Pentachloroethane	(4)	12.940	167	85065	21.020
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	522495	21.816
127) sec-Butylbenzene	(4)	13.068	105	620603	22.130
129) 1,3-Dichlorobenzene	(4)	13.168	146	280954	21.362
130) p-Isopropyltoluene	(4)	13.171	119	539497	22.237
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	476218	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	288857	21.186

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	529814	20.883
135) Benzyl Chloride	(4)	13.319	91	386244	20.108
136) 1,3-Diethylbenzene	(4)	13.371	119	333696	21.134
141) Diethylbenzene (total)	(4)		100	968804	63.411
137) 1,4-Diethylbenzene	(4)	13.445	119	354305	21.180
139) n-Butylbenzene	(4)	13.464	92	270790	21.829
138) 1,2-Dichlorobenzene	(4)	13.502	146	274435	21.146
140) 1,2-Diethylbenzene	(4)	13.518	119	280803	21.097
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	40583	20.608
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	215108	21.573
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	206700	21.320
147) Hexachlorobutadiene	(4)	14.666	225	101324	22.135
148) Naphthalene	(4)	14.772	128	665482	21.351
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	203518	21.573
150) 2-Methylnaphthalene	(4)	15.563	142	423056	22.042

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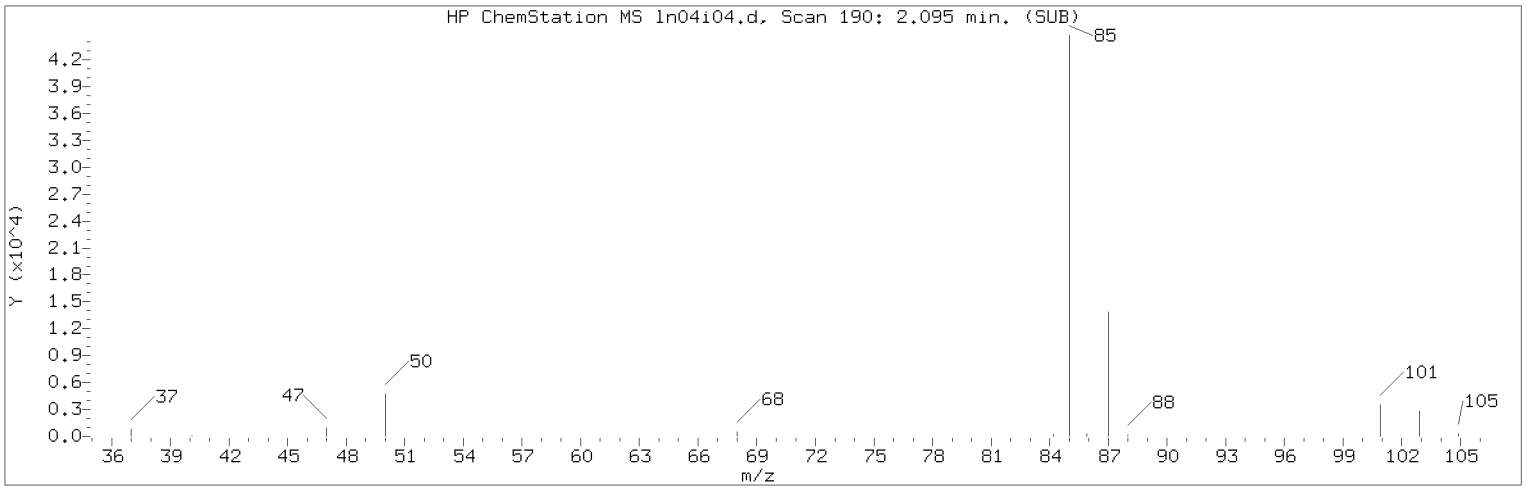
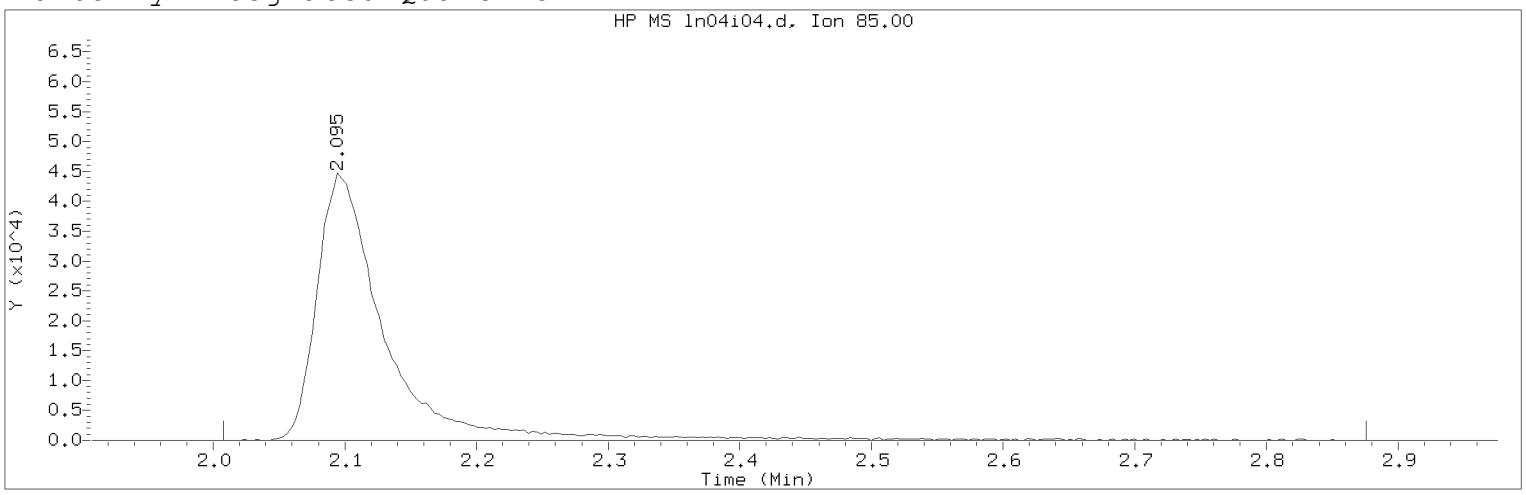
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

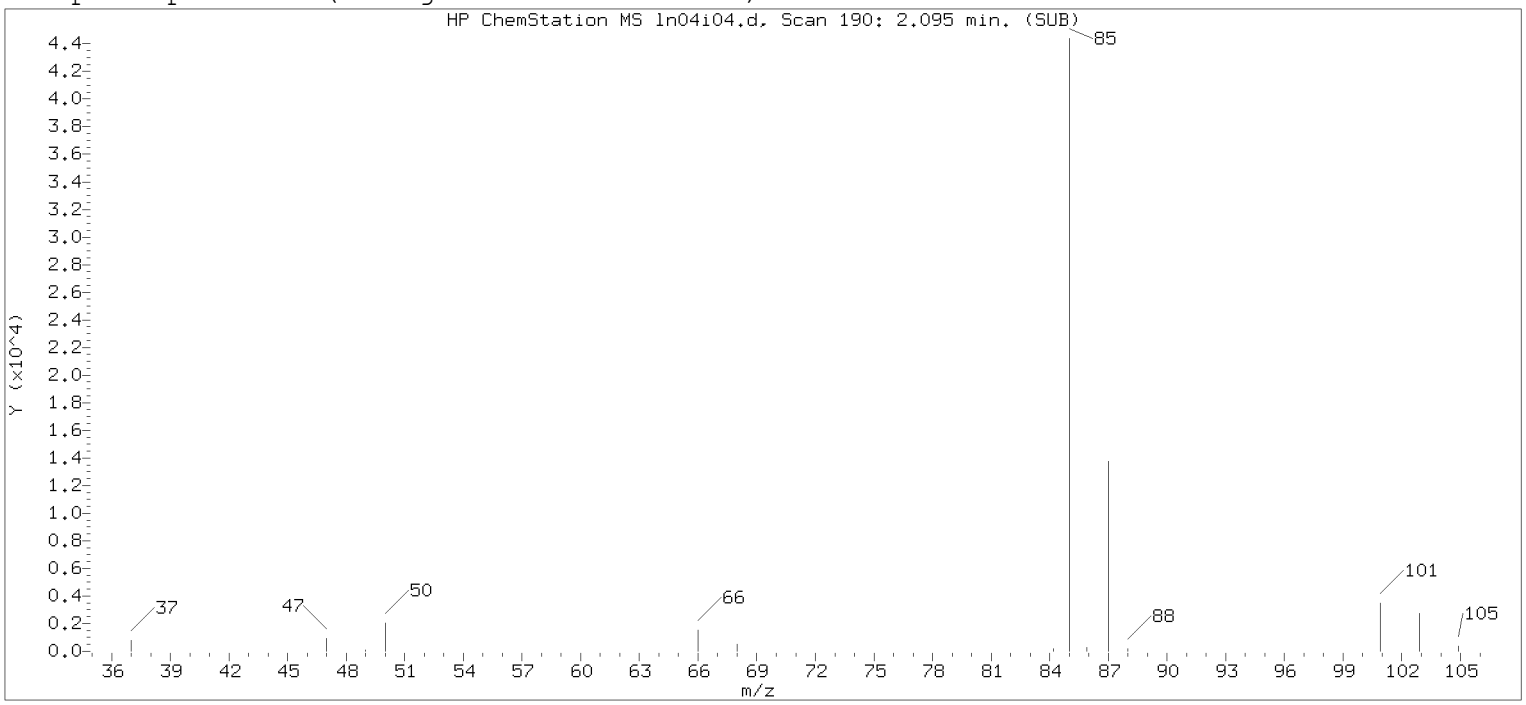
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.095
Quant Ion : 85.00
Area (flag) : 161054M
On-Column Amount (ng) : 20.4603
Integration start scan : 162 Integration stop scan: 432
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

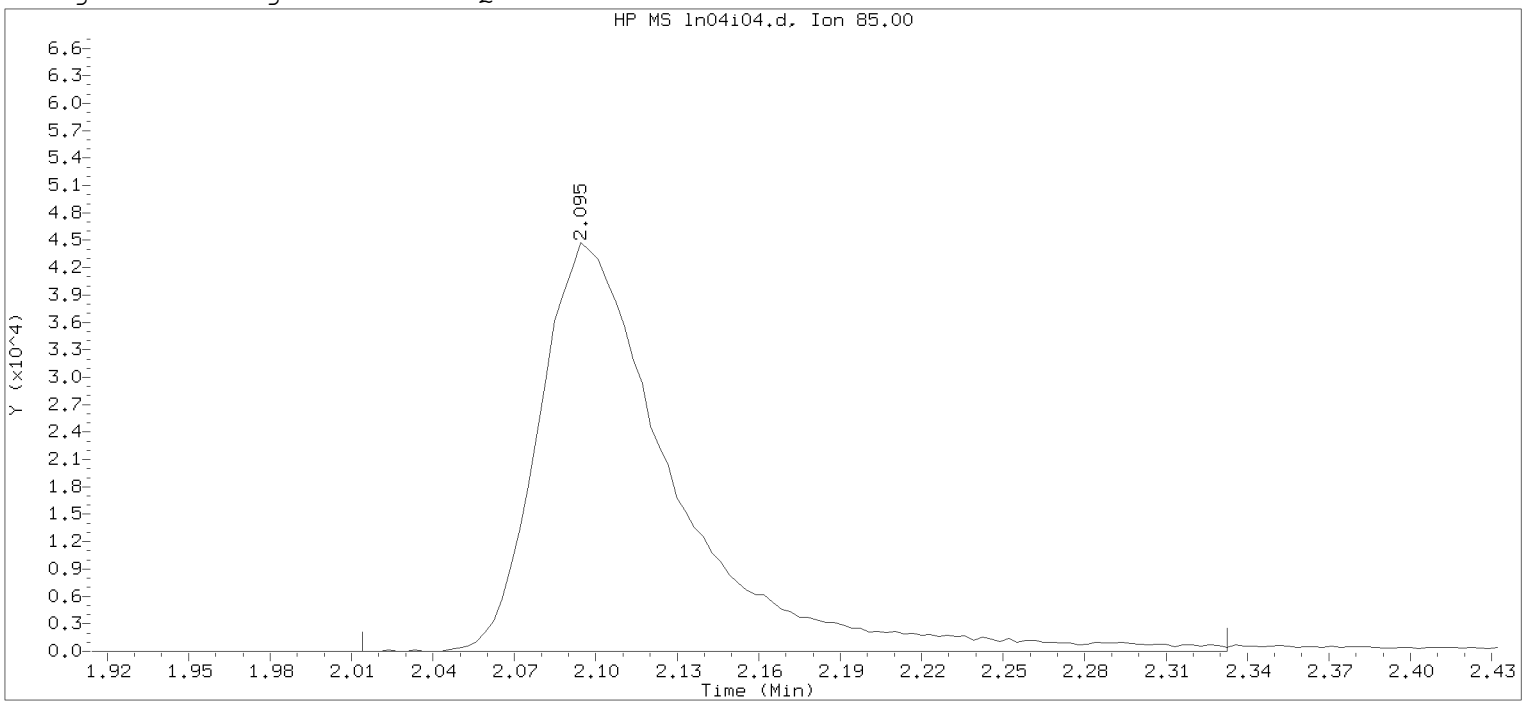
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

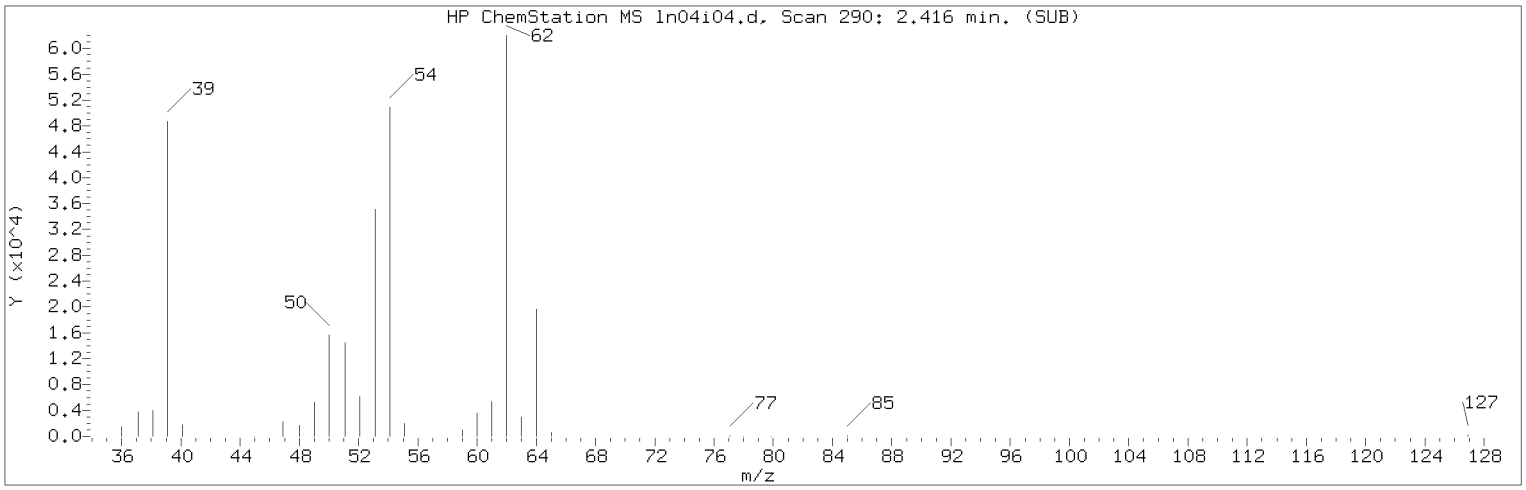
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

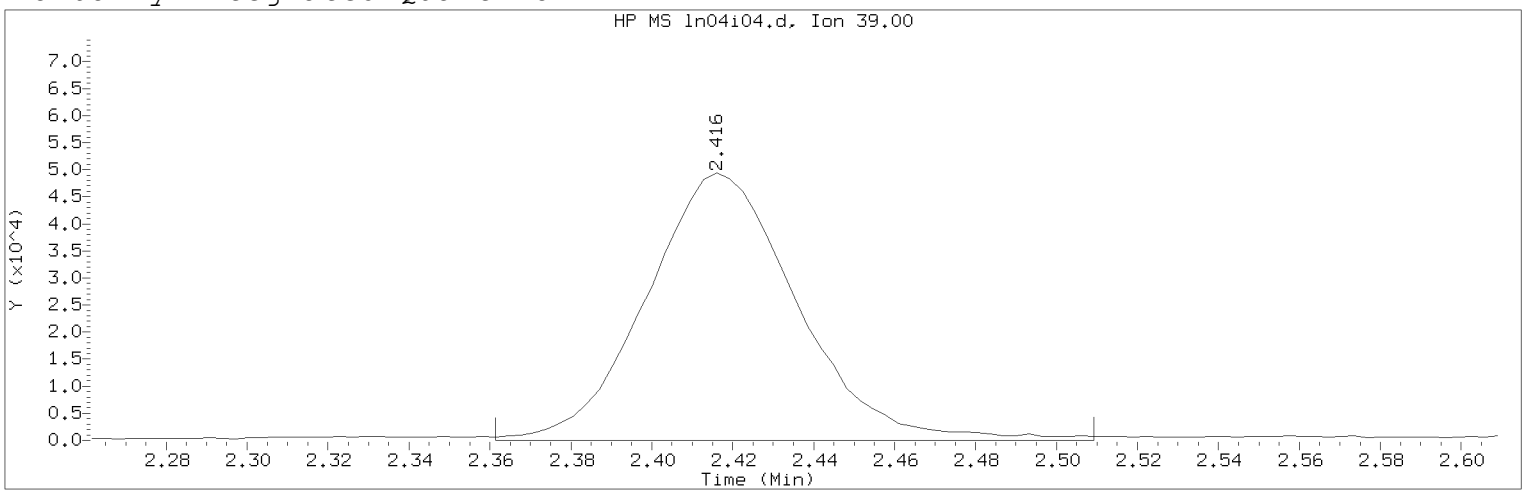
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.095
Quant Ion : 85.00
Area : 154796
On-column Amount (ng) : 18.9193
Integration start scan : 164 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

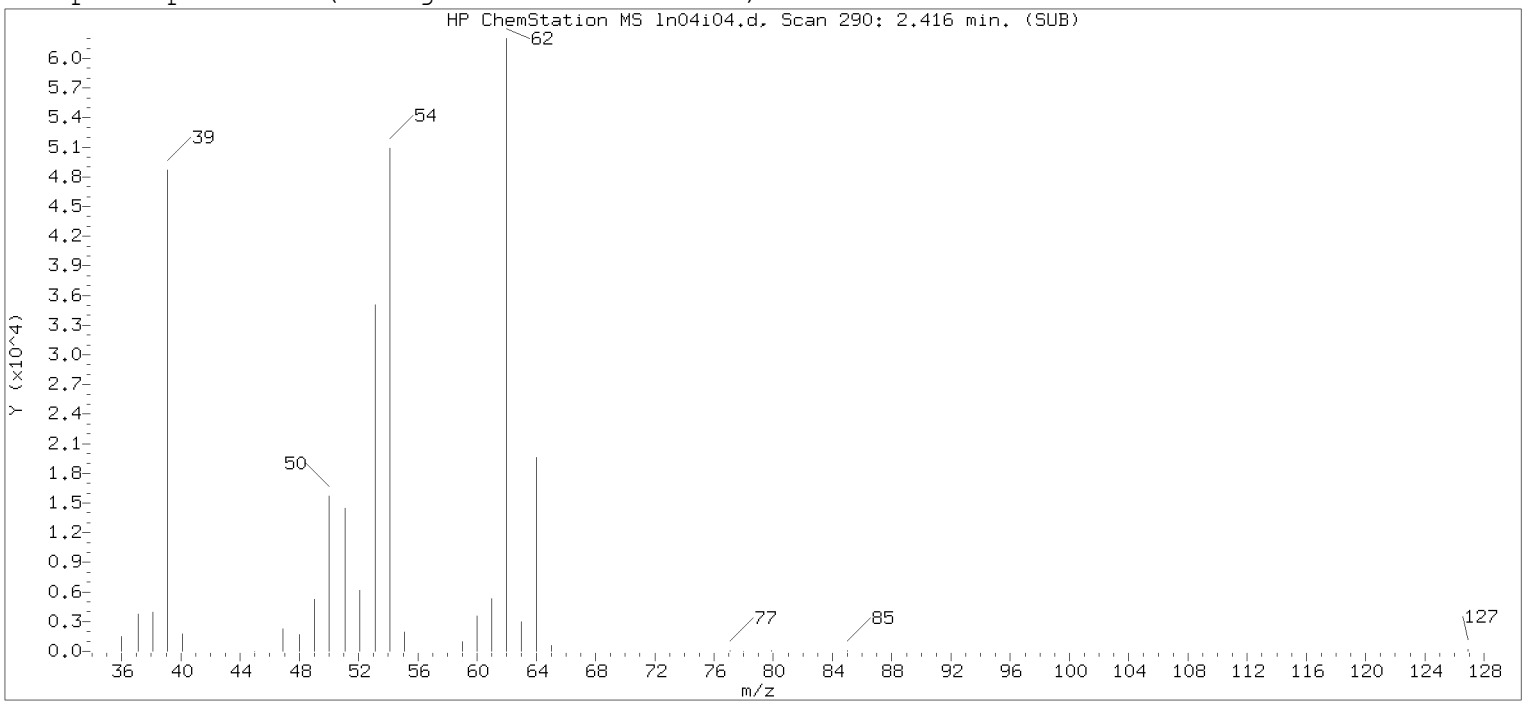
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 290
Retention Time (minutes): 2.416
Quant Ion : 39.00
Area (flag) : 127826M
On-Column Amount (ng) : 20.2925
Integration start scan : 272 Integration stop scan: 318
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

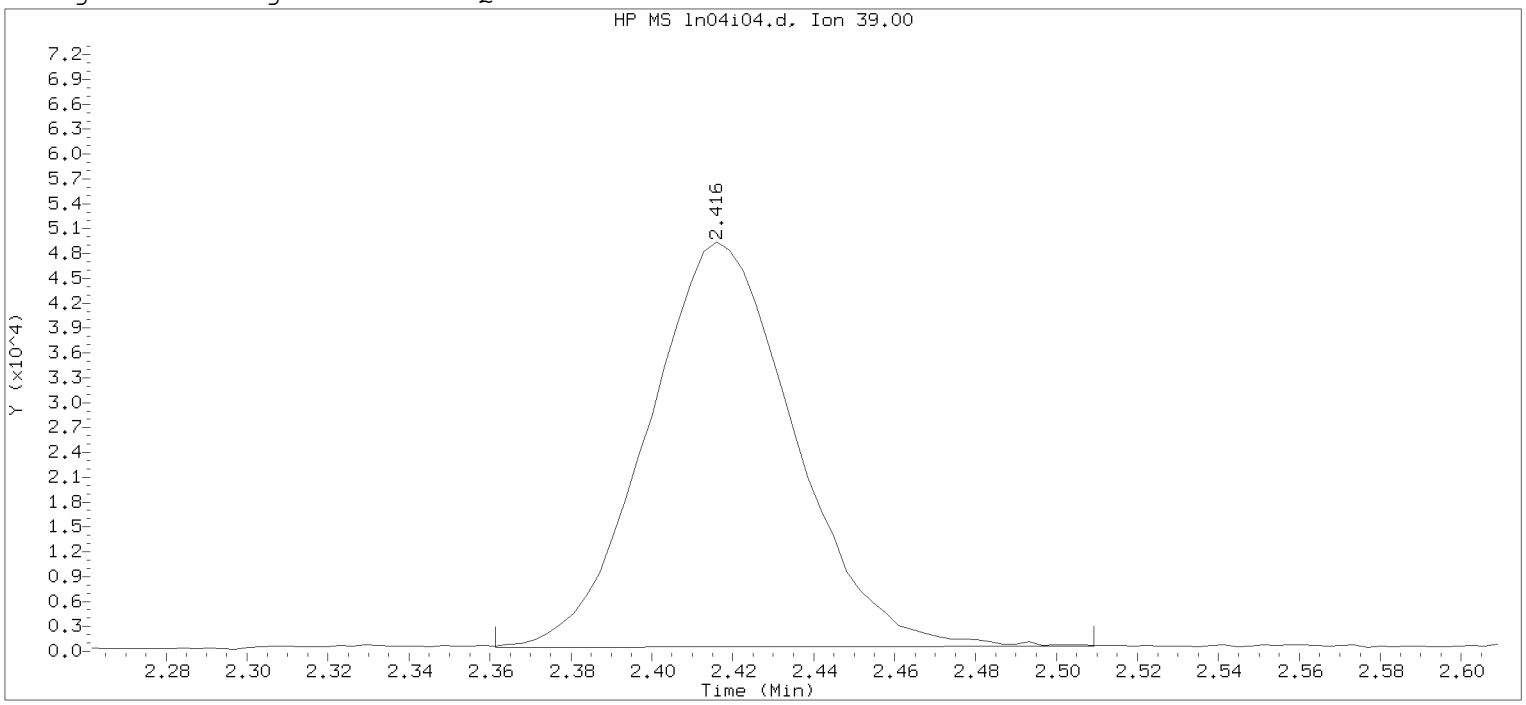
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

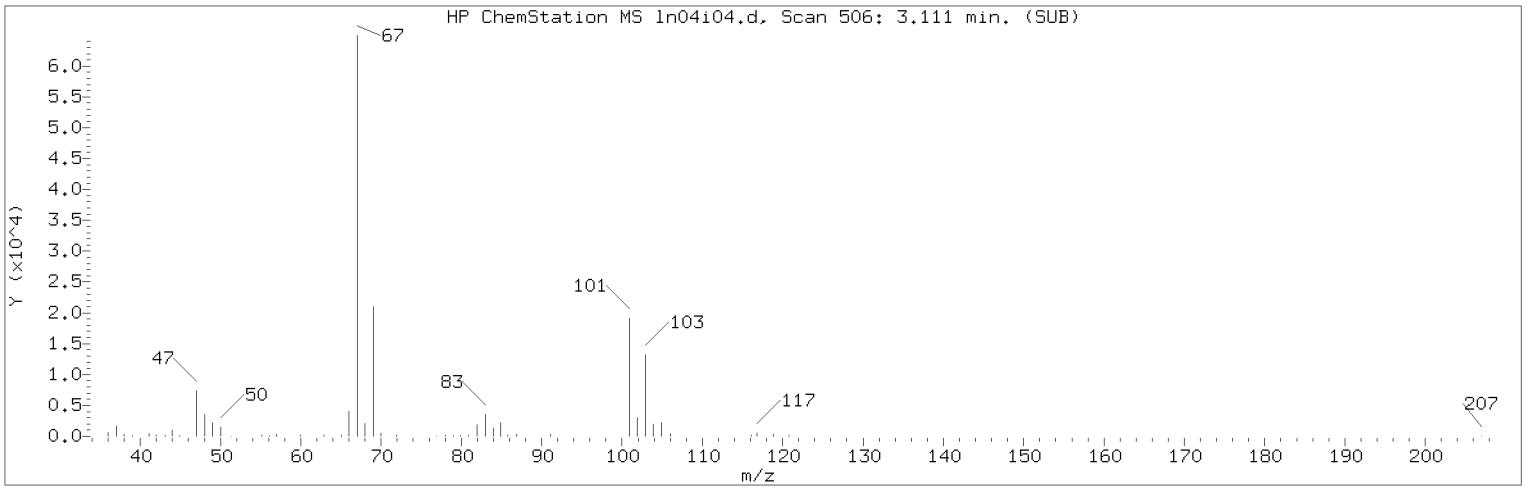
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

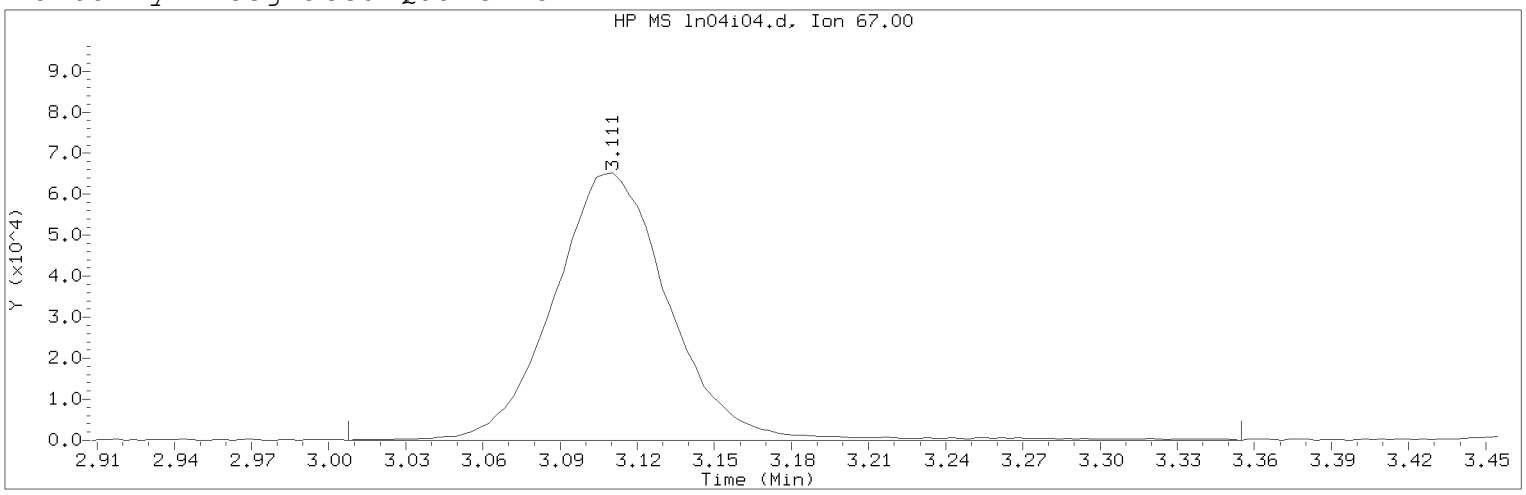
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 290
Retention Time (minutes): 2.416
Quant Ion : 39.00
Area : 122801
On-column Amount (ng) : 20.5539
Integration start scan : 272 Integration stop scan: 318
Y at integration start : 477 Y at integration end: 628

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

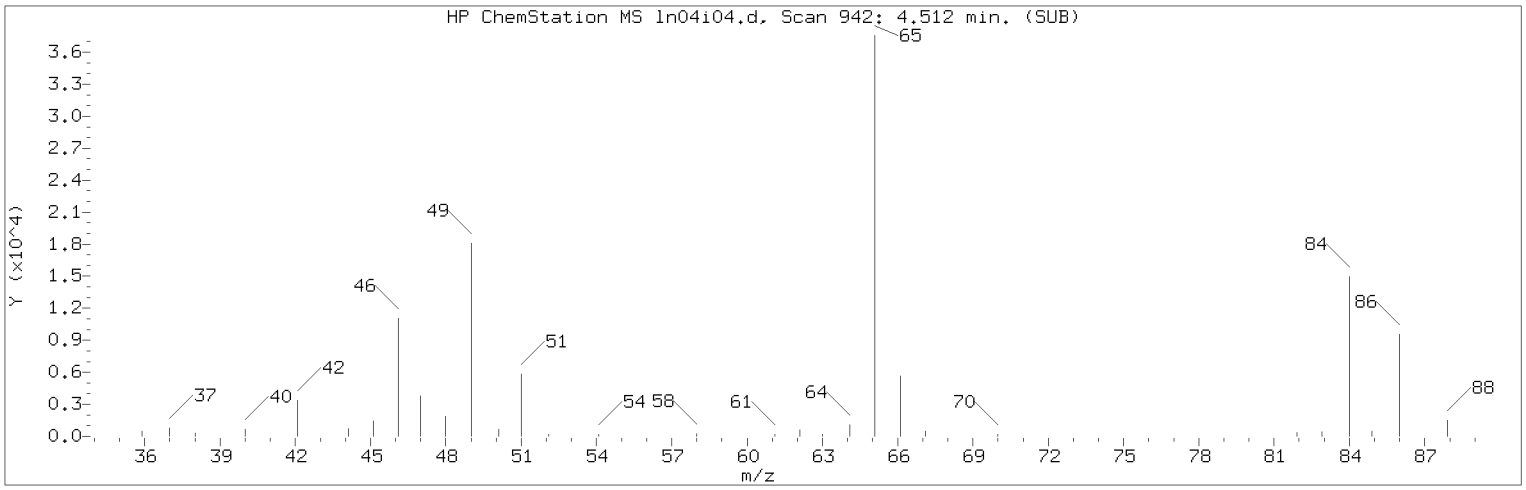
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 506
Retention Time (minutes): 3.111
Quant Ion : 67.00
Area (flag) : 205276M
On-Column Amount (ng) : 20.8381
Integration start scan : 473 Integration stop scan: 581
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

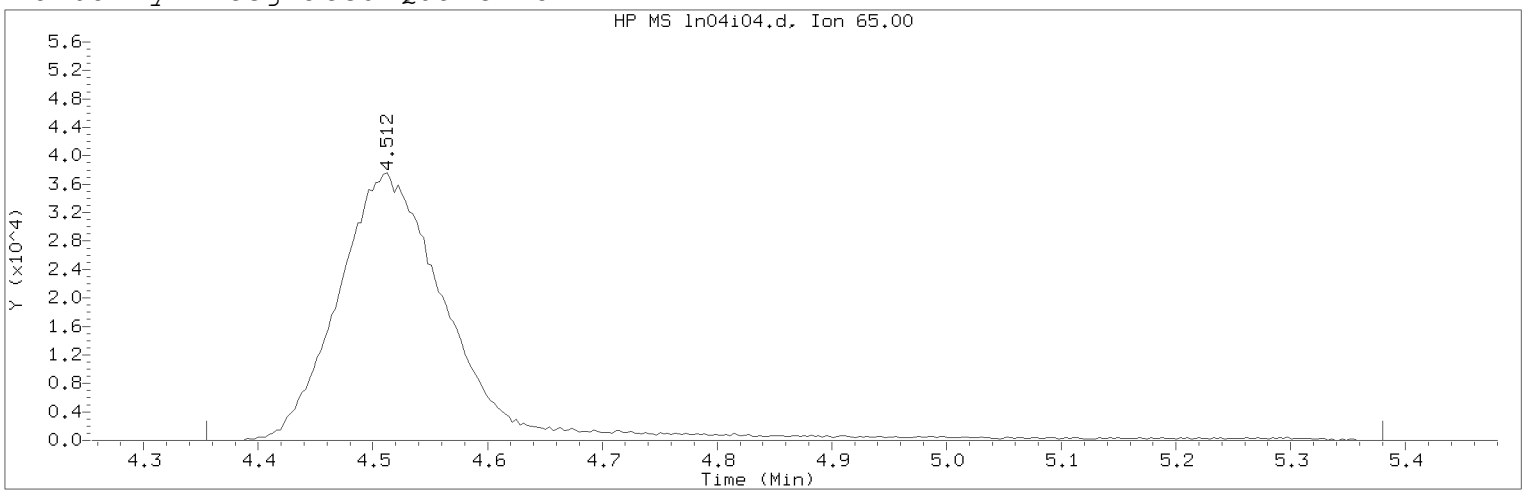
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

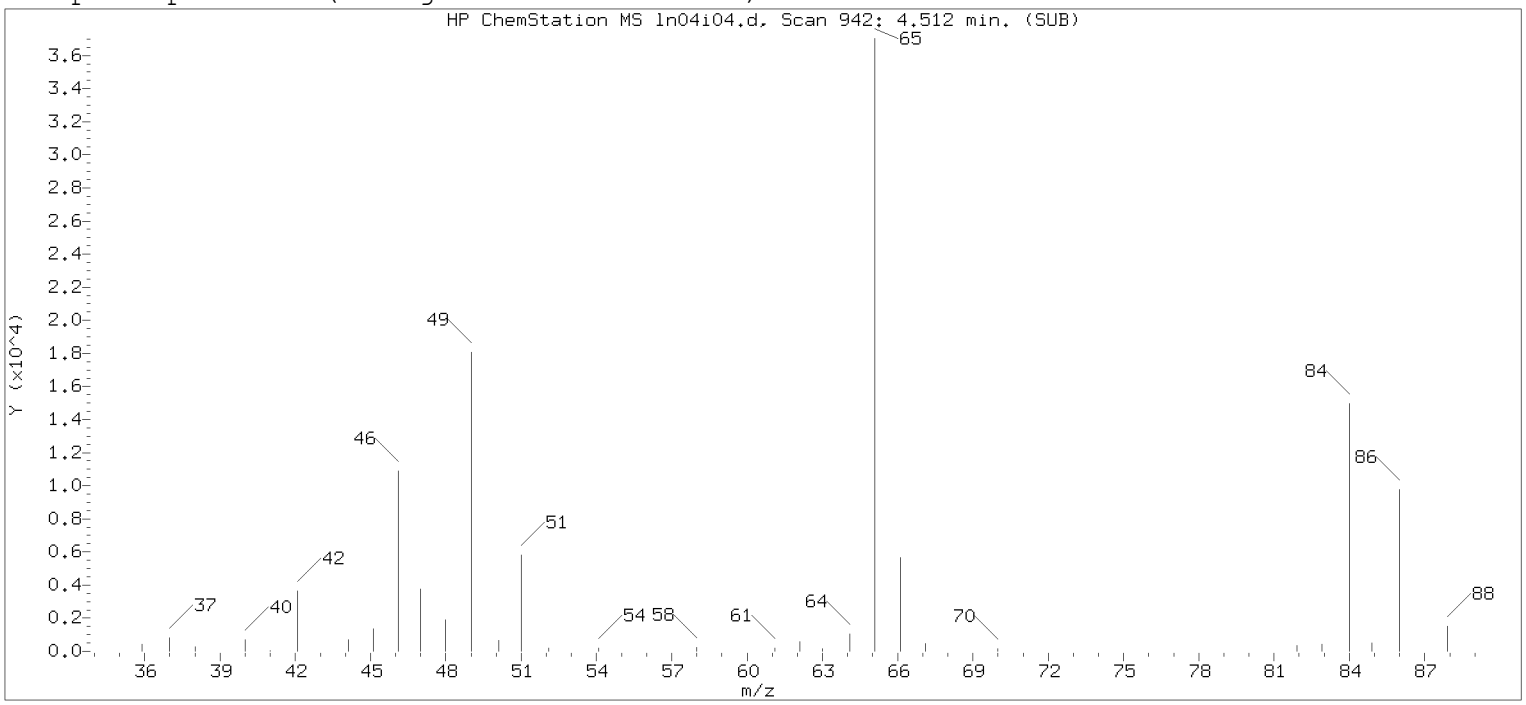
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area (flag) : 258058M
On-Column Amount (ng) : 250.0000
Integration start scan : 892 Integration stop scan: 1211
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

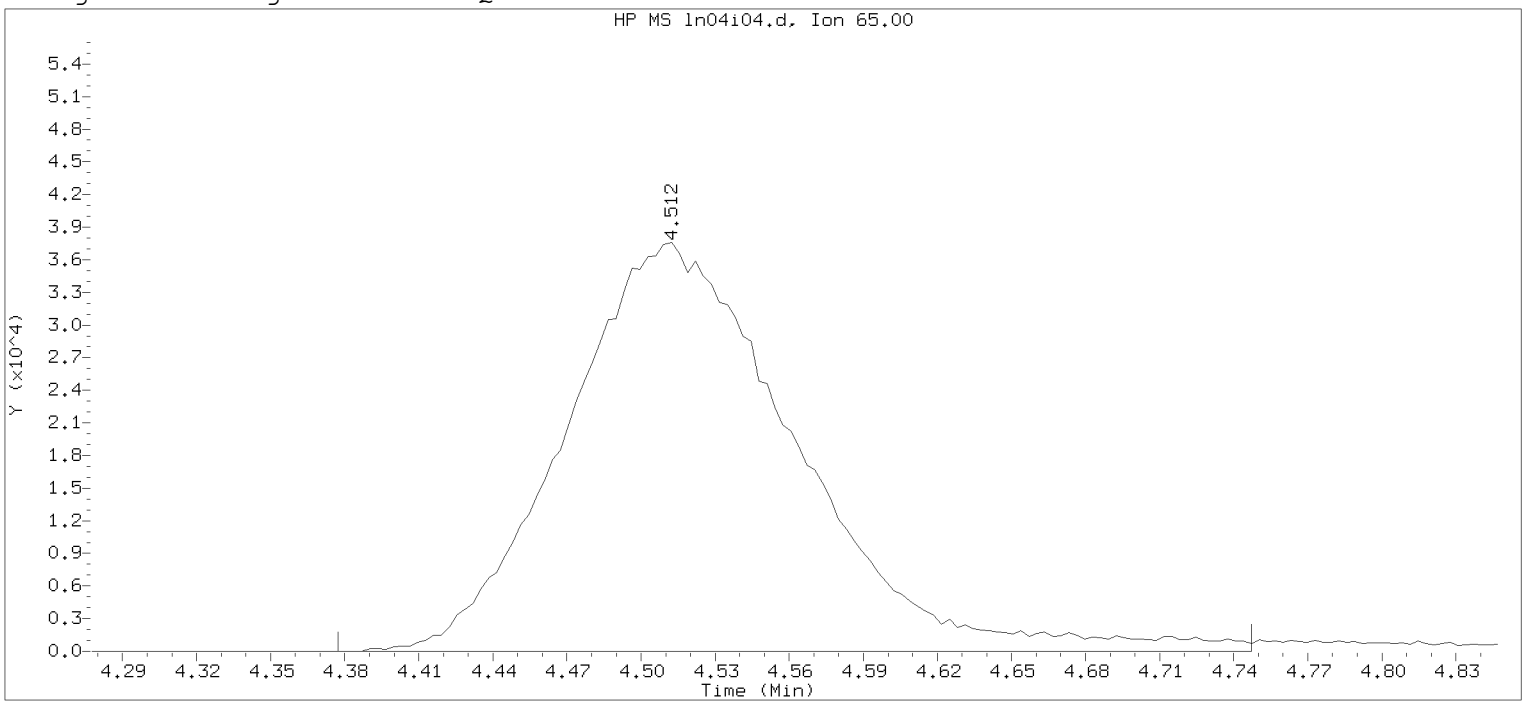
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

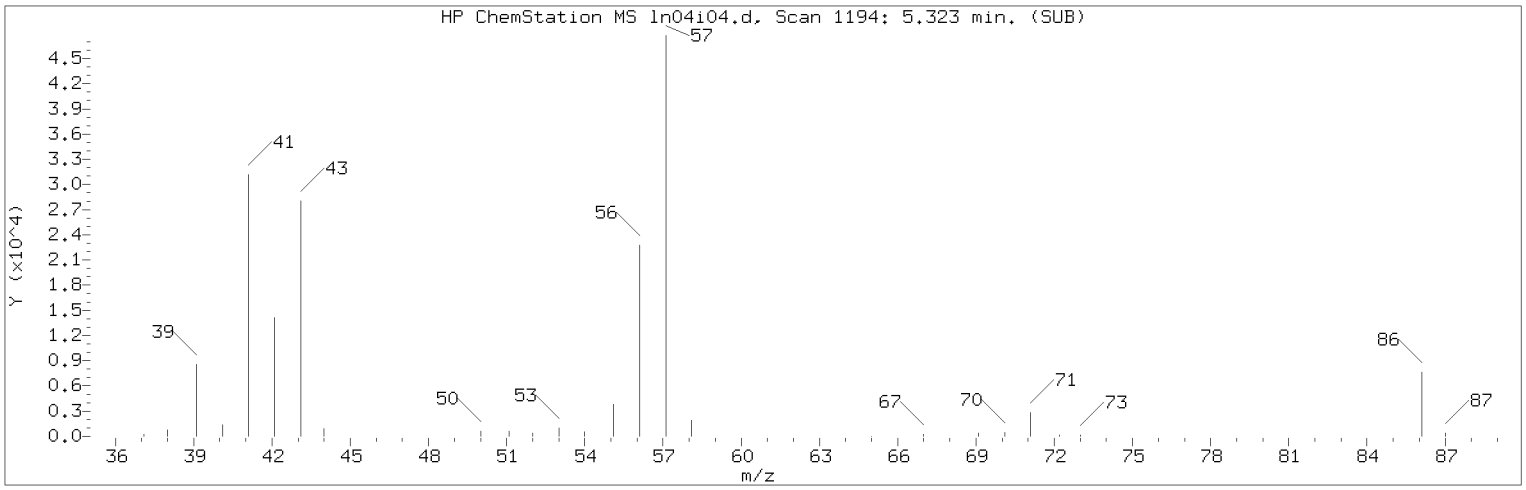
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

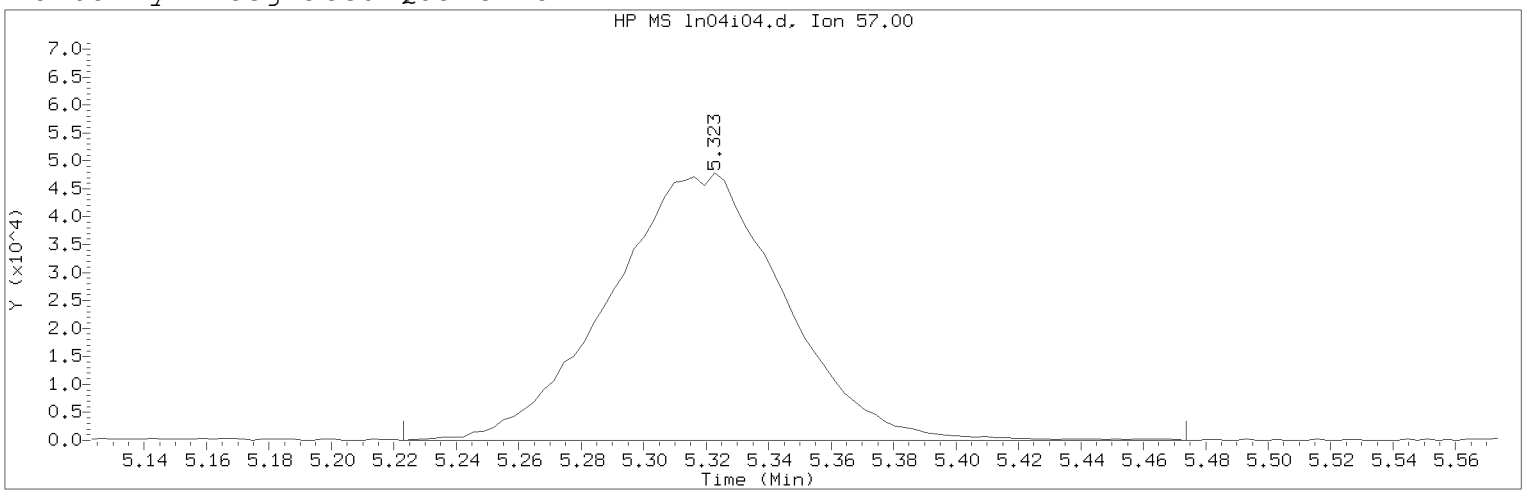
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area : 242565
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

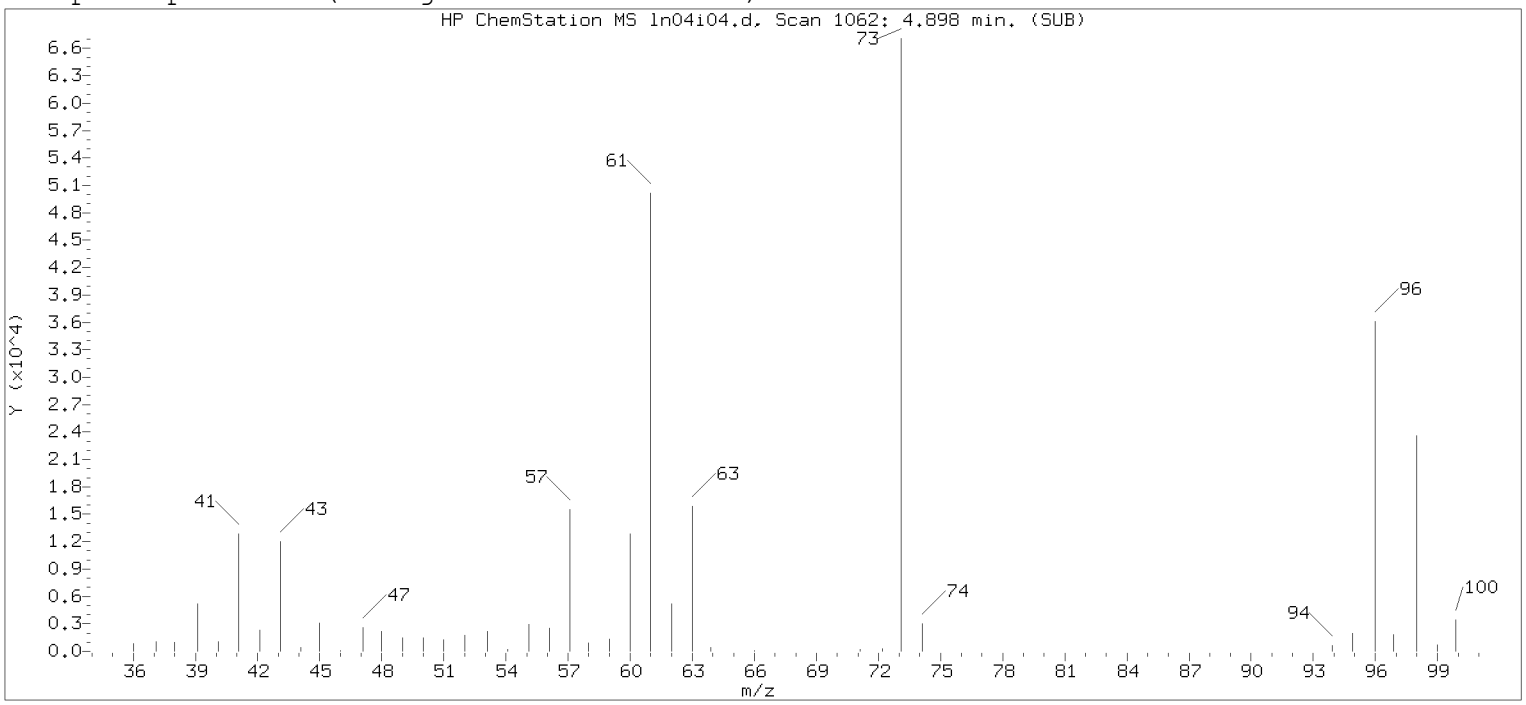
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1194
Retention Time (minutes): 5.323
Quant Ion : 57.00
Area (flag) : 185314M
On-Column Amount (ng) : 21.5188
Integration start scan : 1162 Integration stop scan: 1240
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

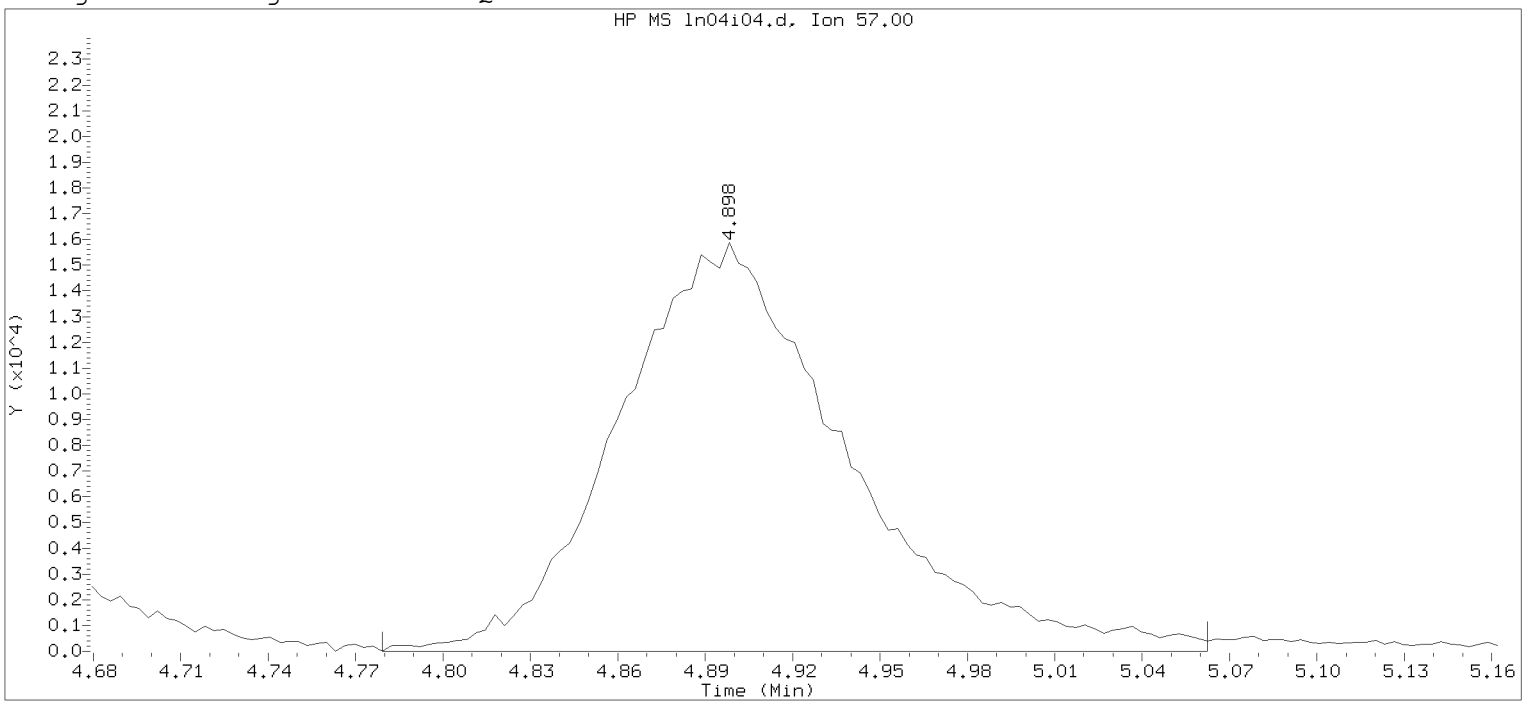
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

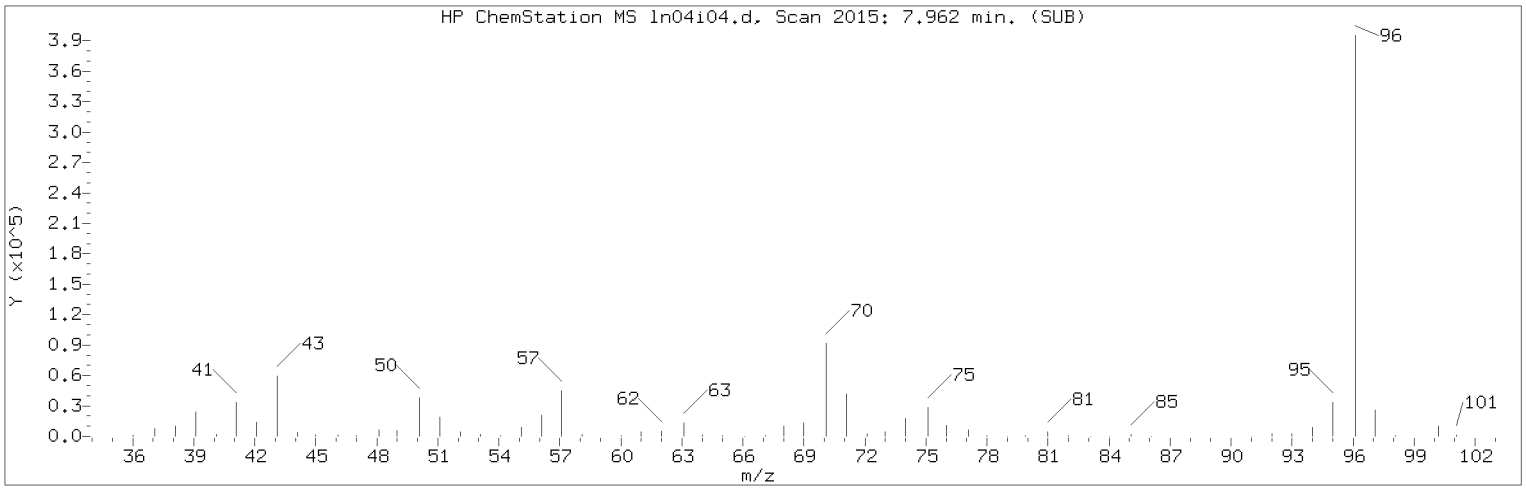
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

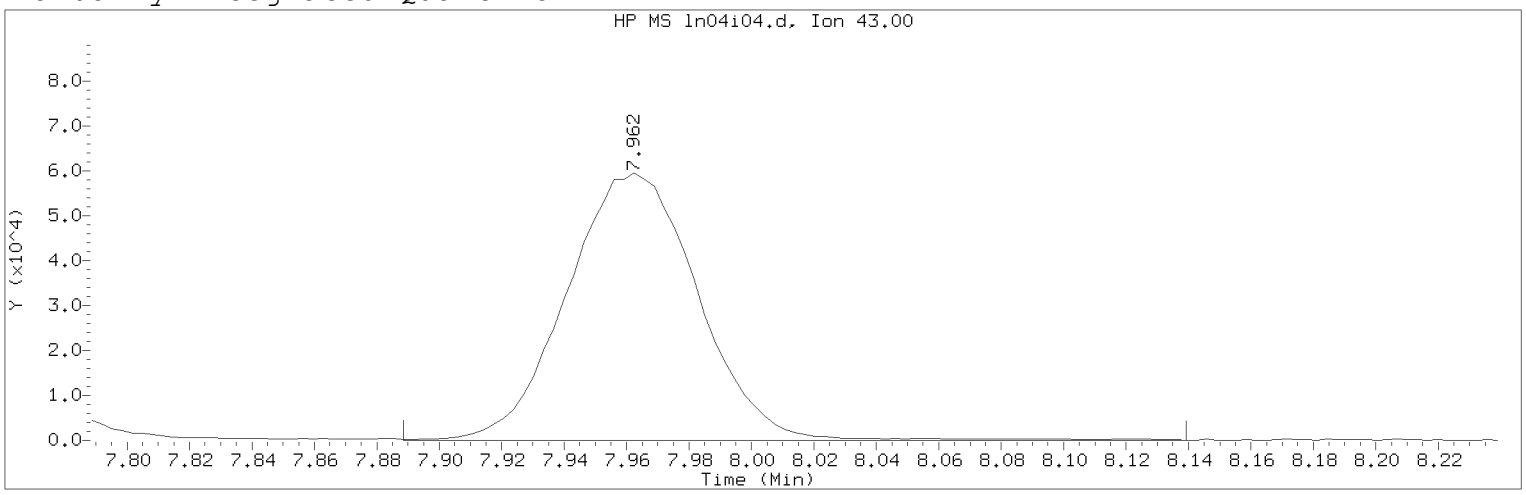
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1062
Retention Time (minutes): 4.898
Quant Ion : 57.00
Area : 86496
On-column Amount (ng) : 21.2144
Integration start scan : 1024 Integration stop scan: 1112
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

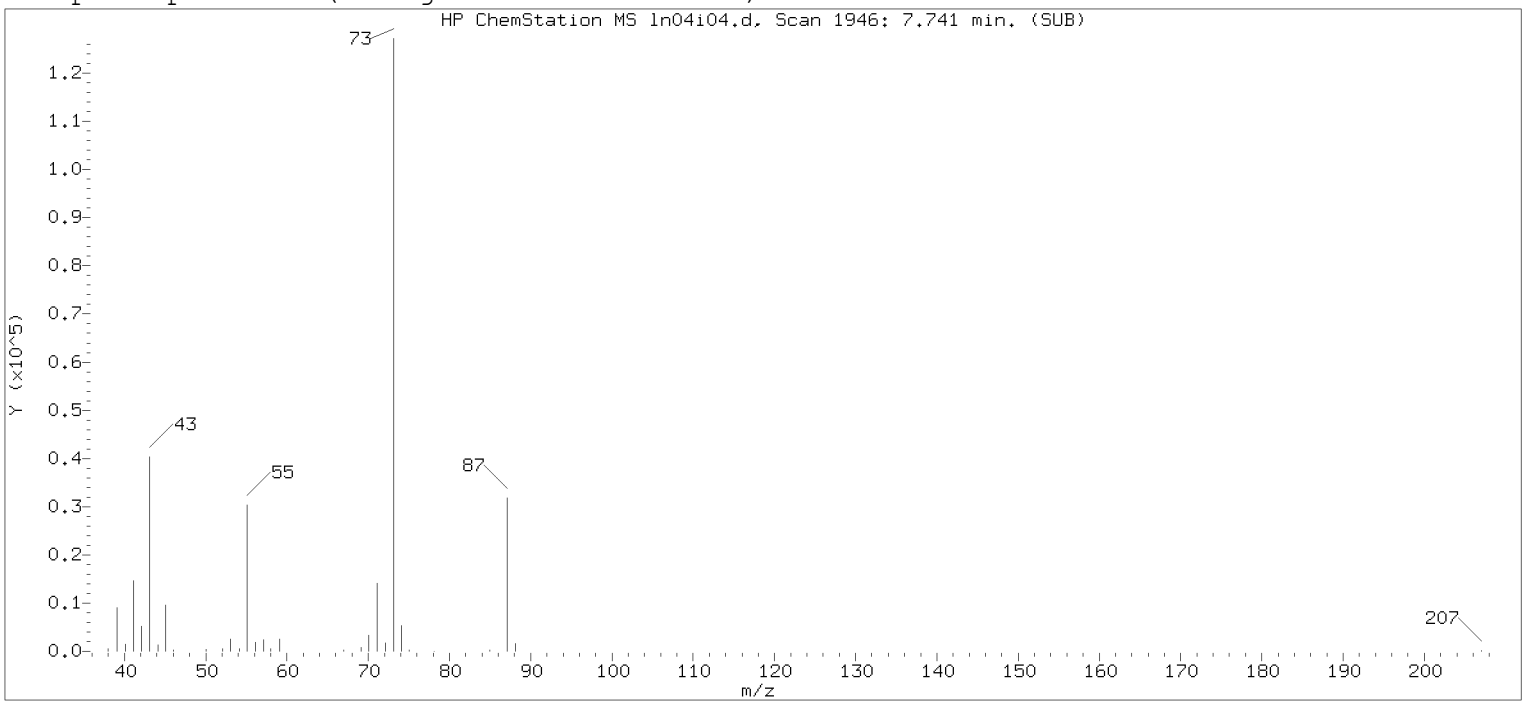
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2015
Retention Time (minutes): 7.962
Quant Ion : 43.00
Area (flag) : 173500MA
On-Column Amount (ng) : 21.5663
Integration start scan : 1991 Integration stop scan: 2069
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

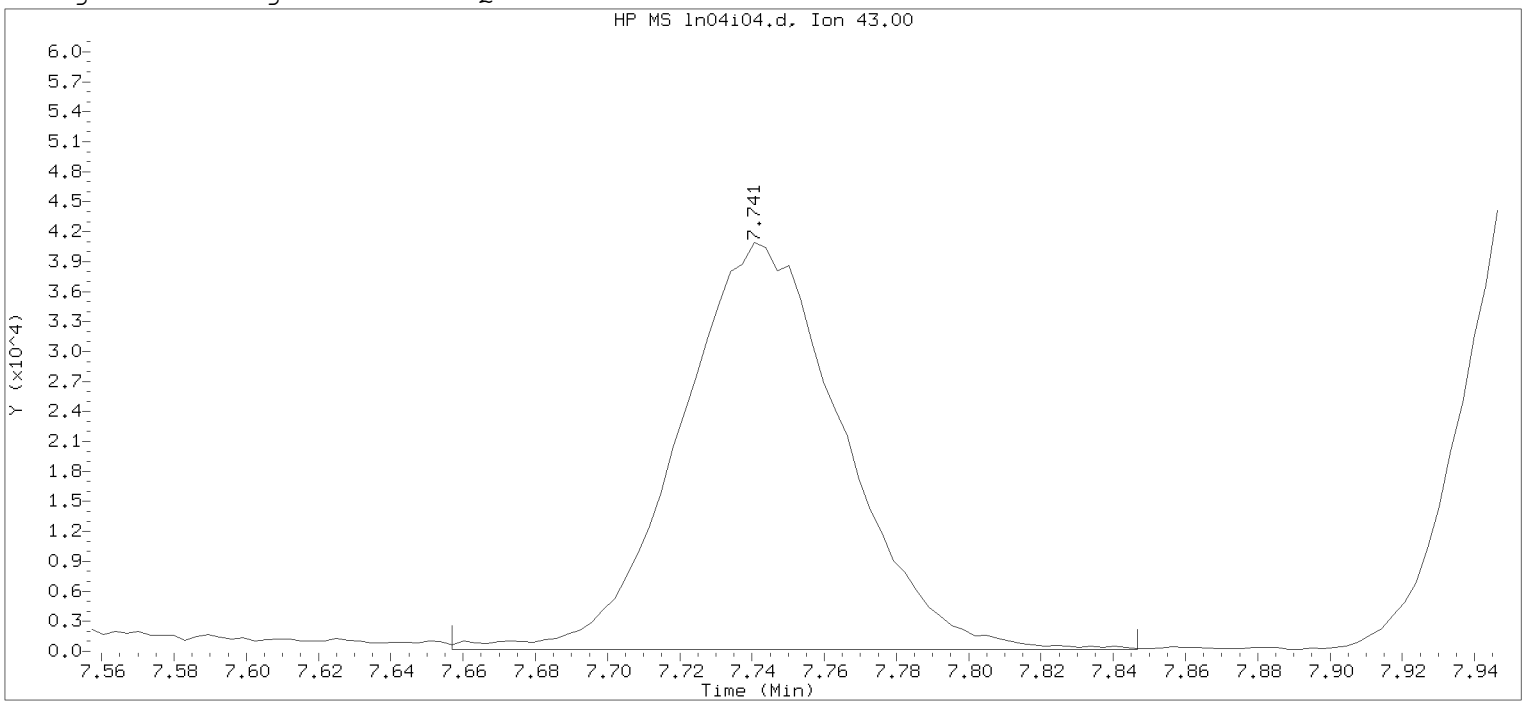
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

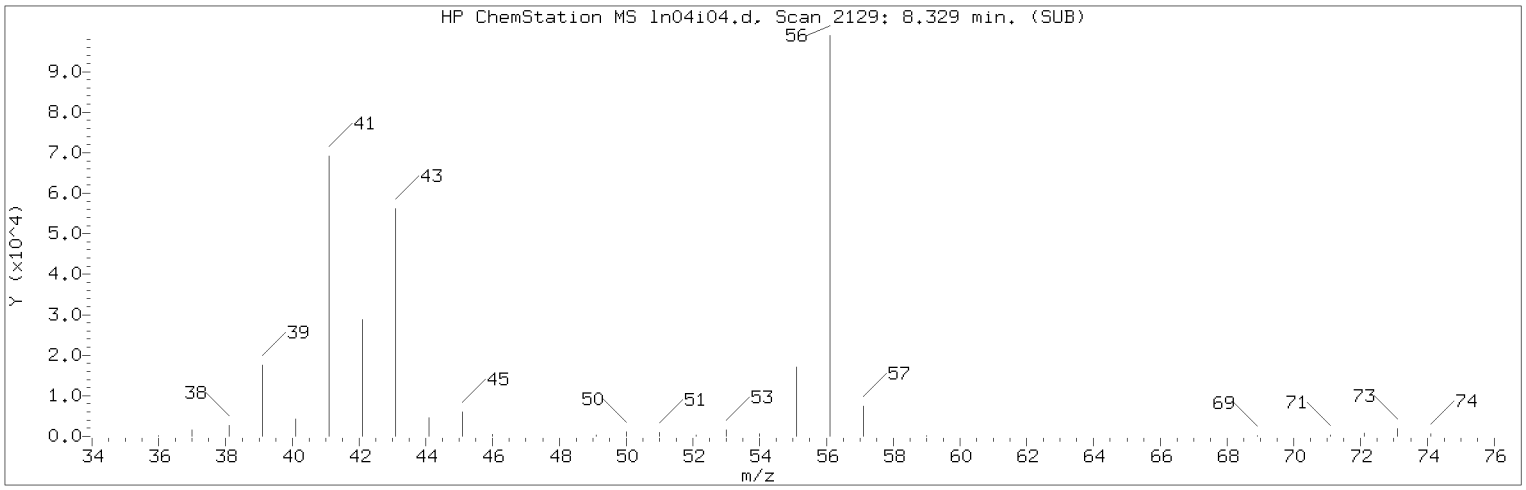
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

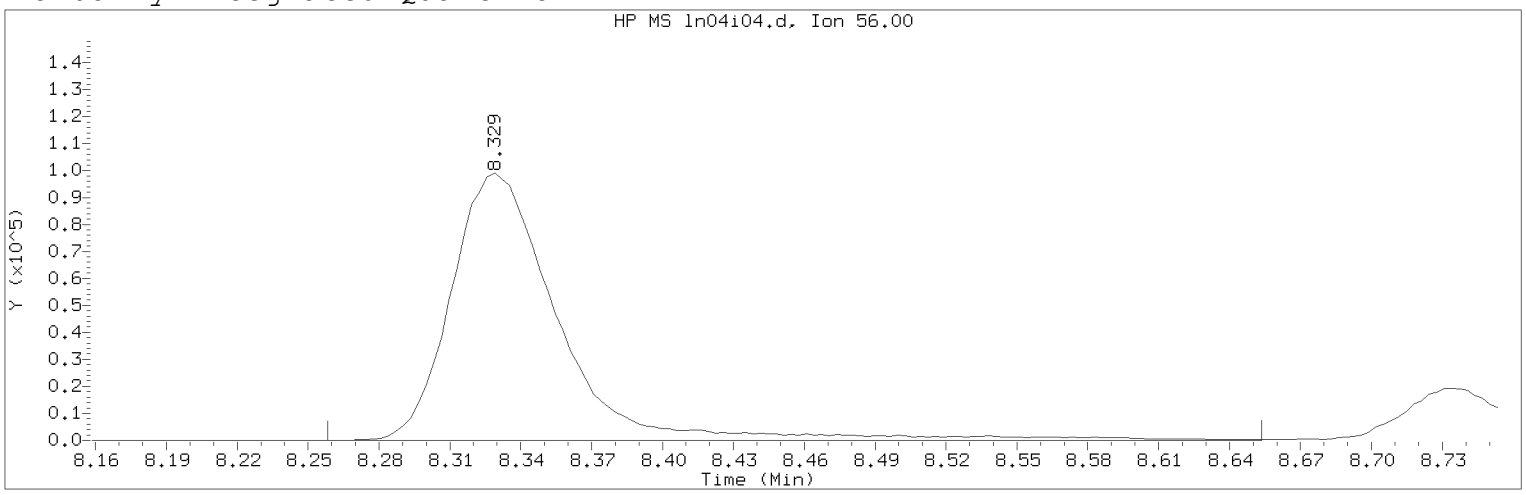
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.741
Quant Ion : 43.00
Area : 127386
On-column Amount (ng) : 21.2604
Integration start scan : 1919 Integration stop scan: 1978
Y at integration start : 203 Y at integration end: 203

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

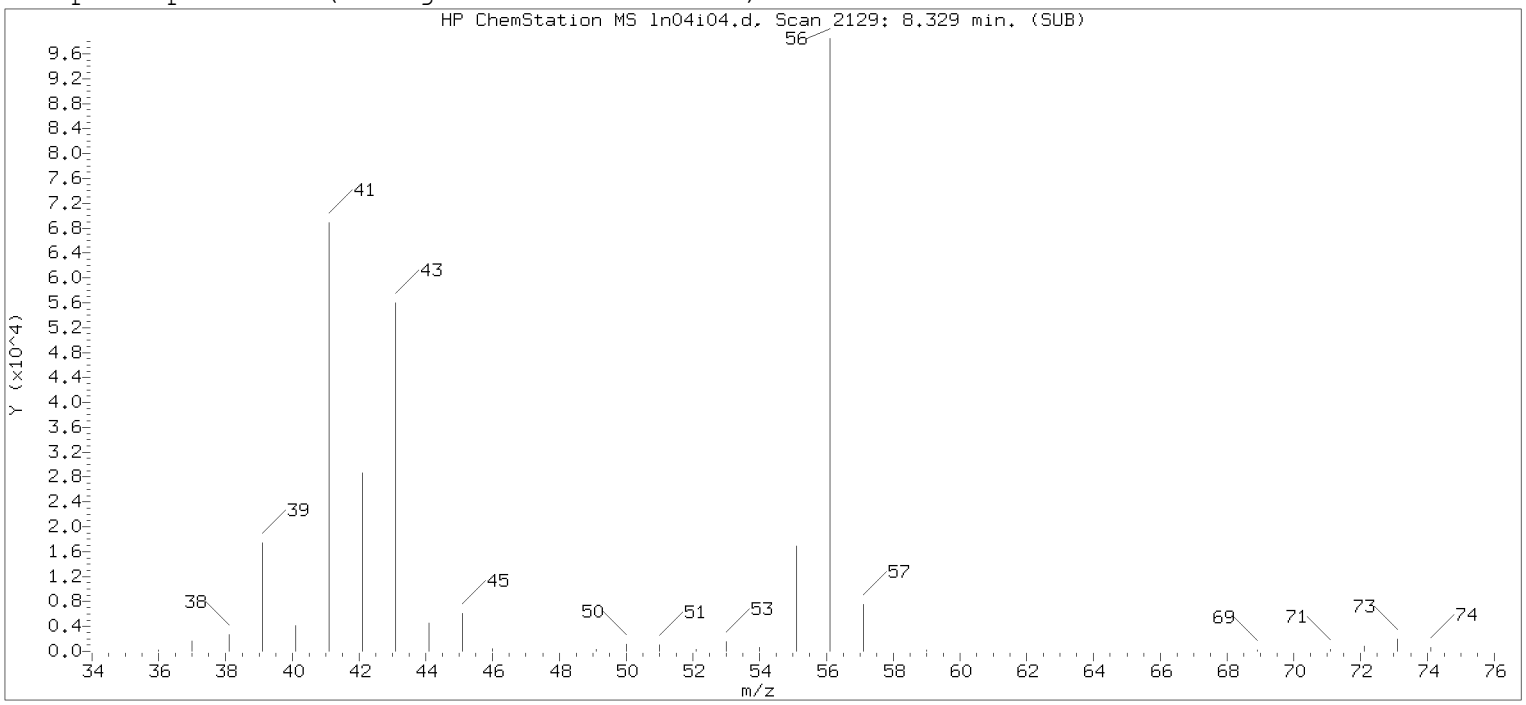
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area (flag) : 312189M
On-Column Amount (ng) : 992.0871
Integration start scan : 2106 Integration stop scan: 2229
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

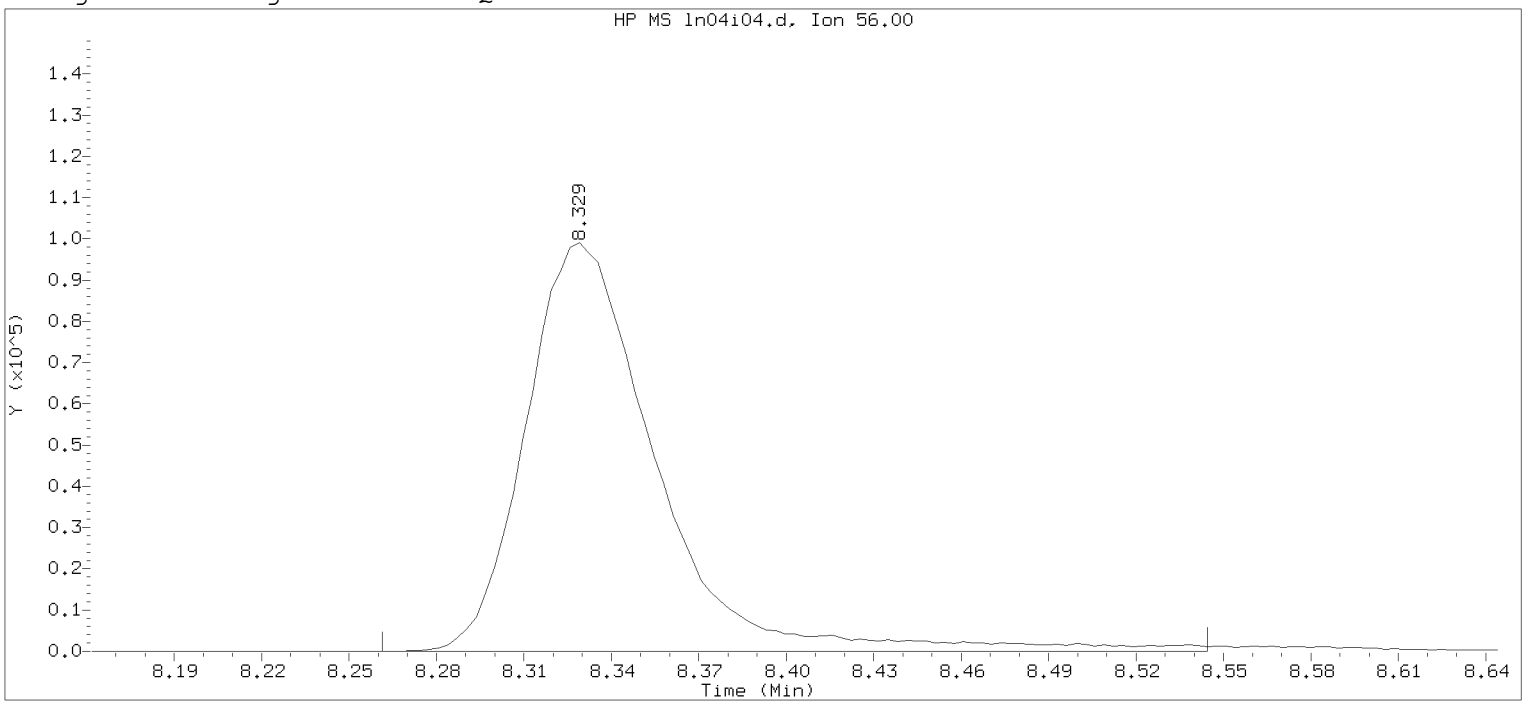
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

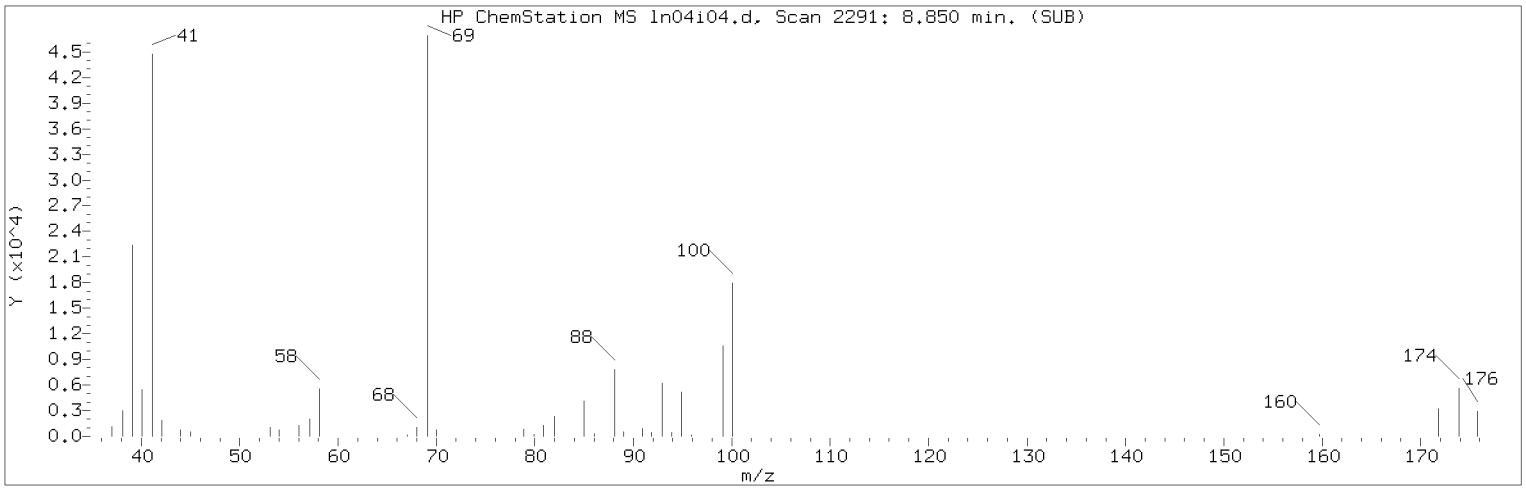
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

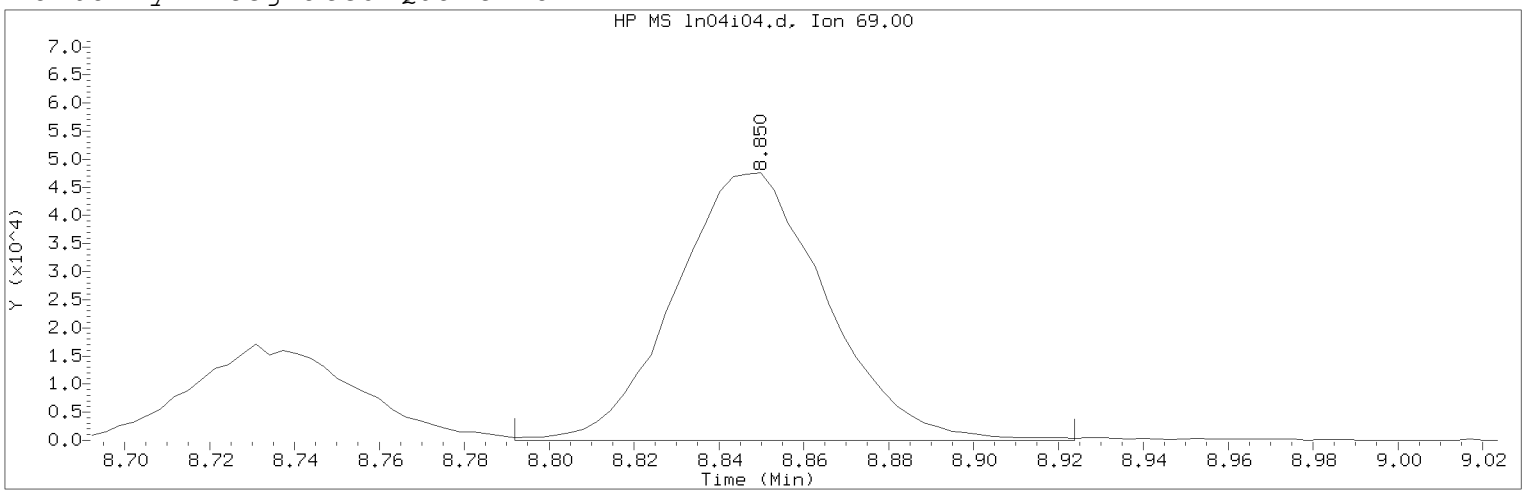
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area : 307443
On-column Amount (ng) : 938.0571
Integration start scan : 2107 Integration stop scan: 2195
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

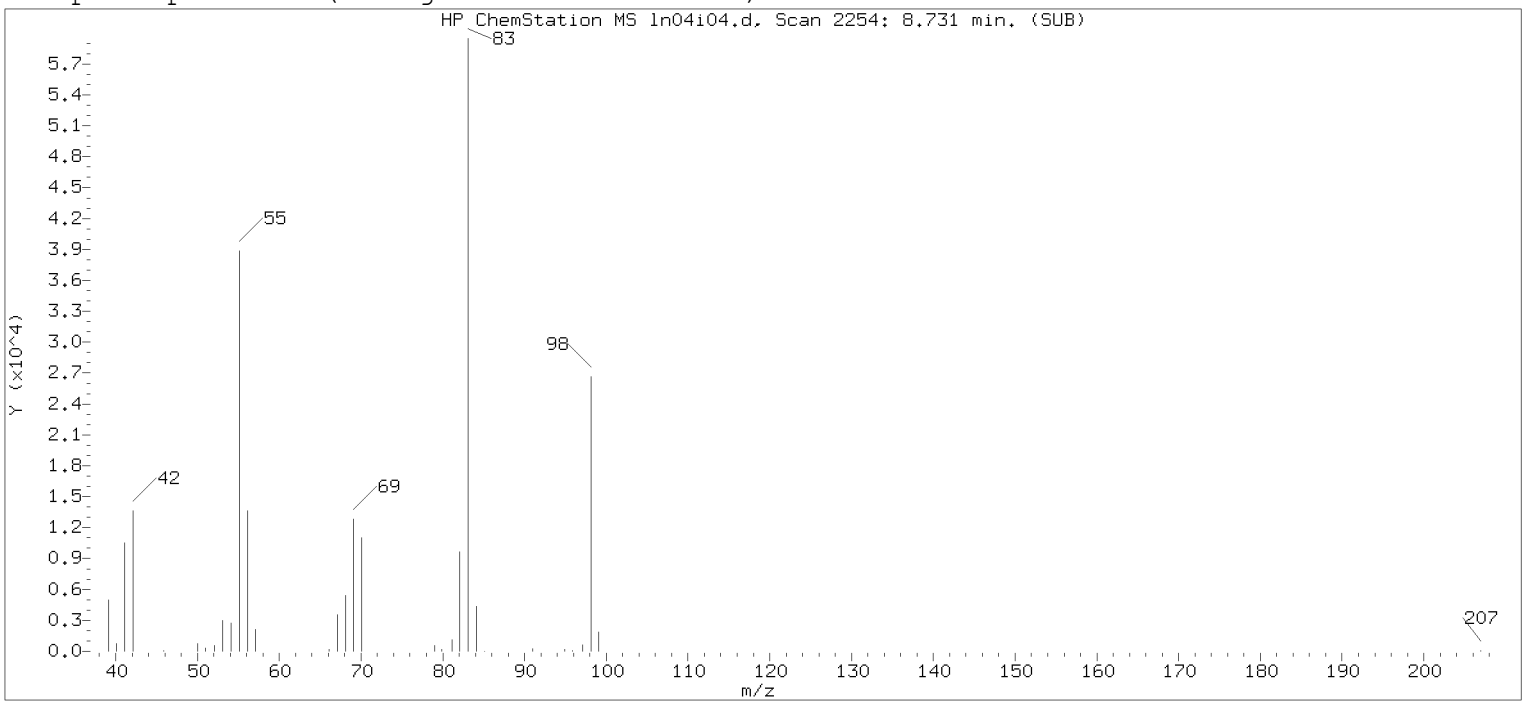
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2291
Retention Time (minutes): 8.850
Quant Ion : 69.00
Area (flag) : 117550A
On-Column Amount (ng) : 20.8506
Integration start scan : 2272 Integration stop scan: 2313
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

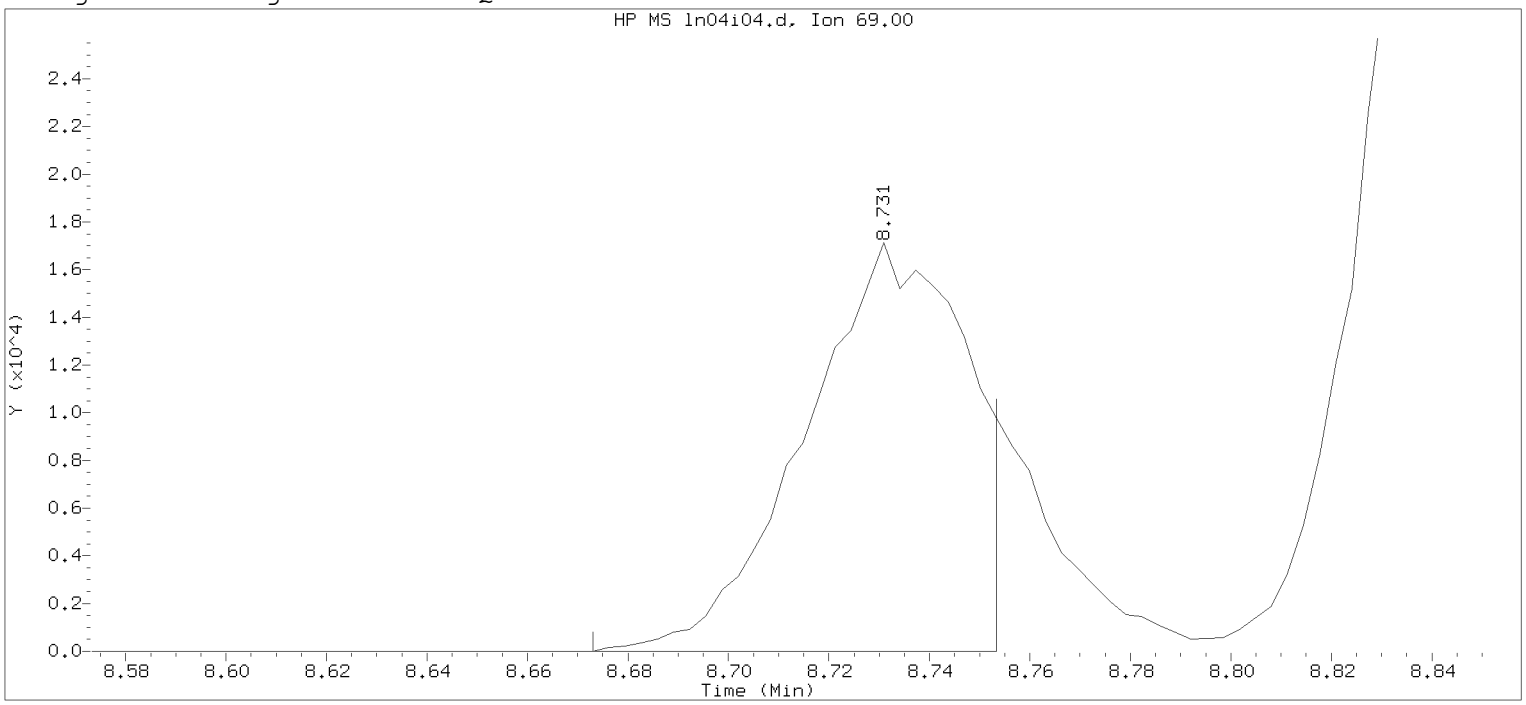
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

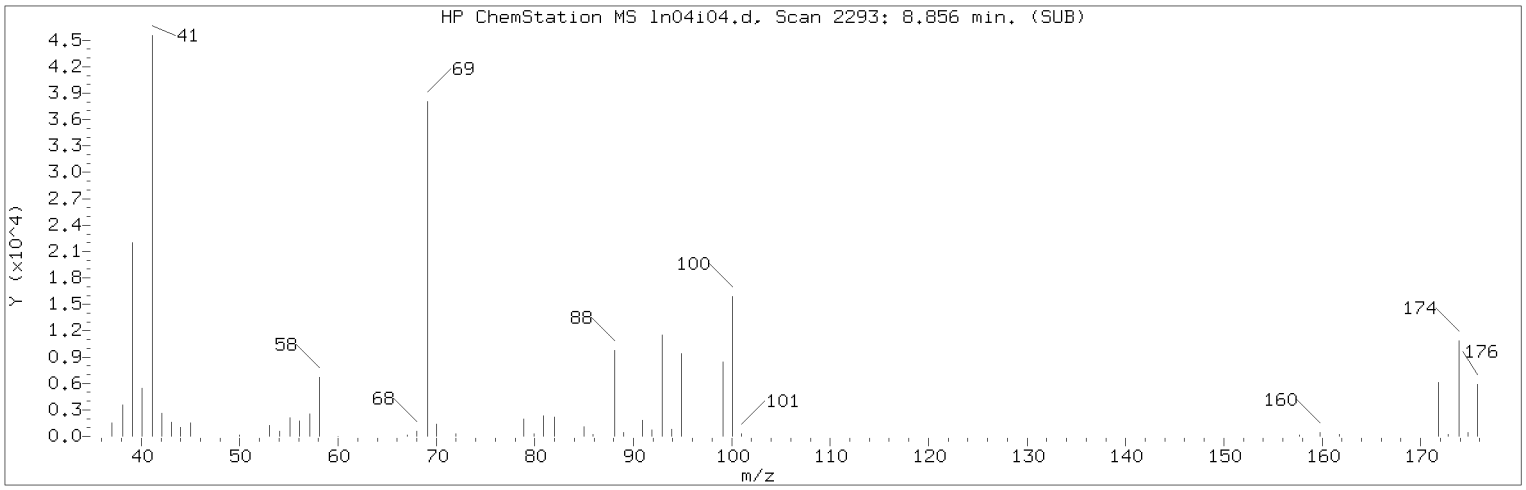
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

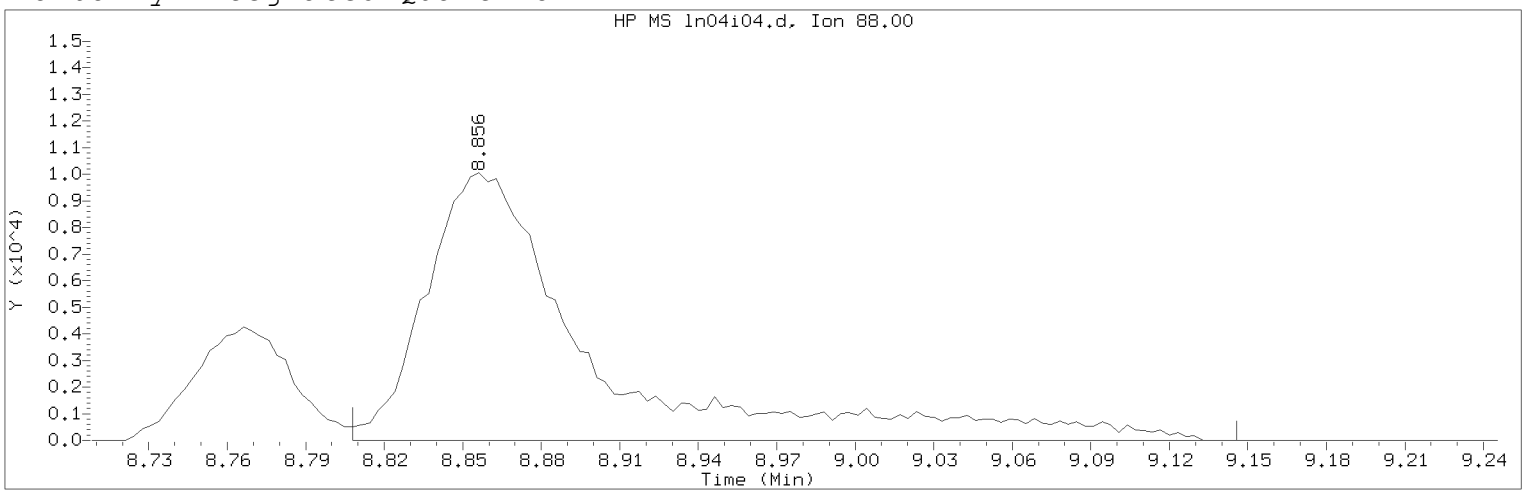
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2254
Retention Time (minutes): 8.731
Quant Ion : 69.00
Area : 37815
On-column Amount (ng) : 16.5923
Integration start scan : 2235 Integration stop scan: 2260
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

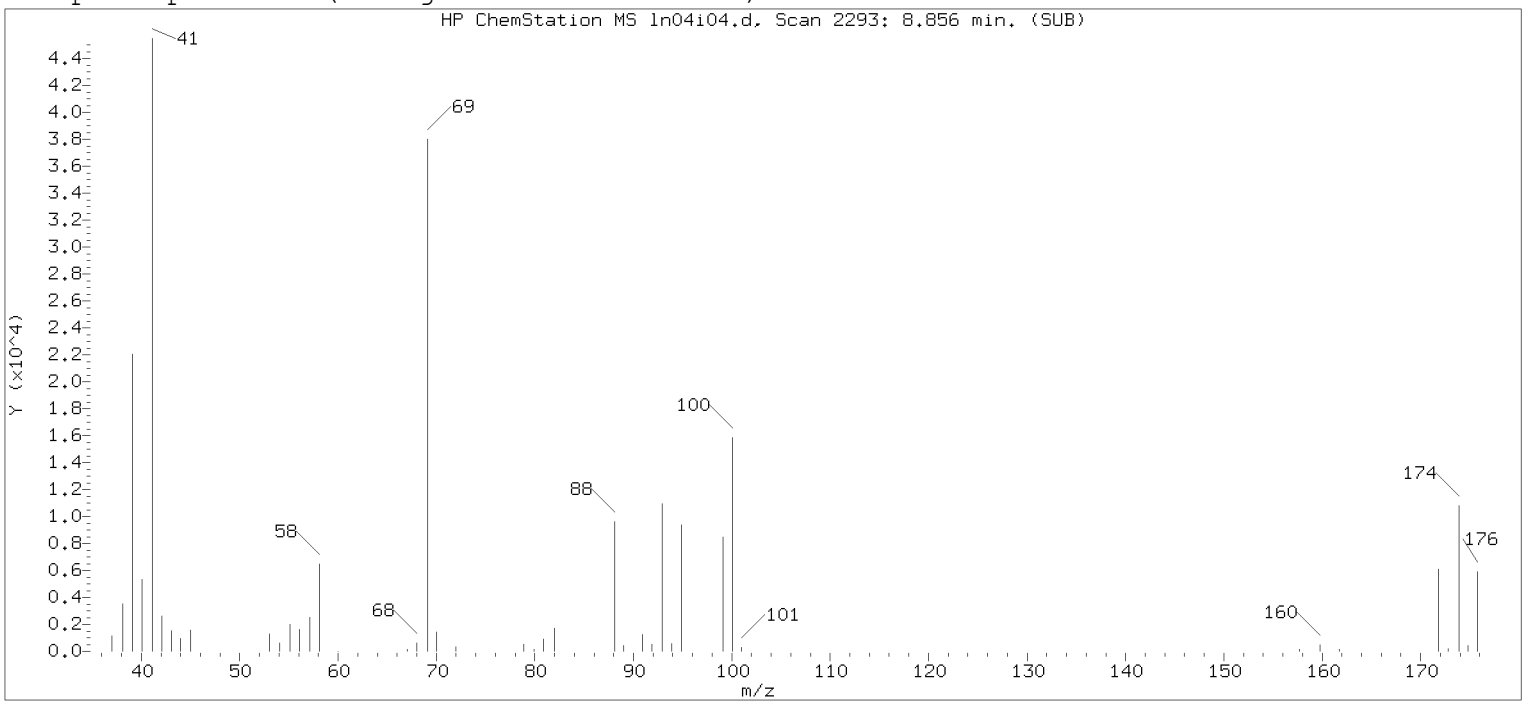
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 44376M
On-Column Amount (ng) : 513.0651
Integration start scan : 2277 Integration stop scan: 2382
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

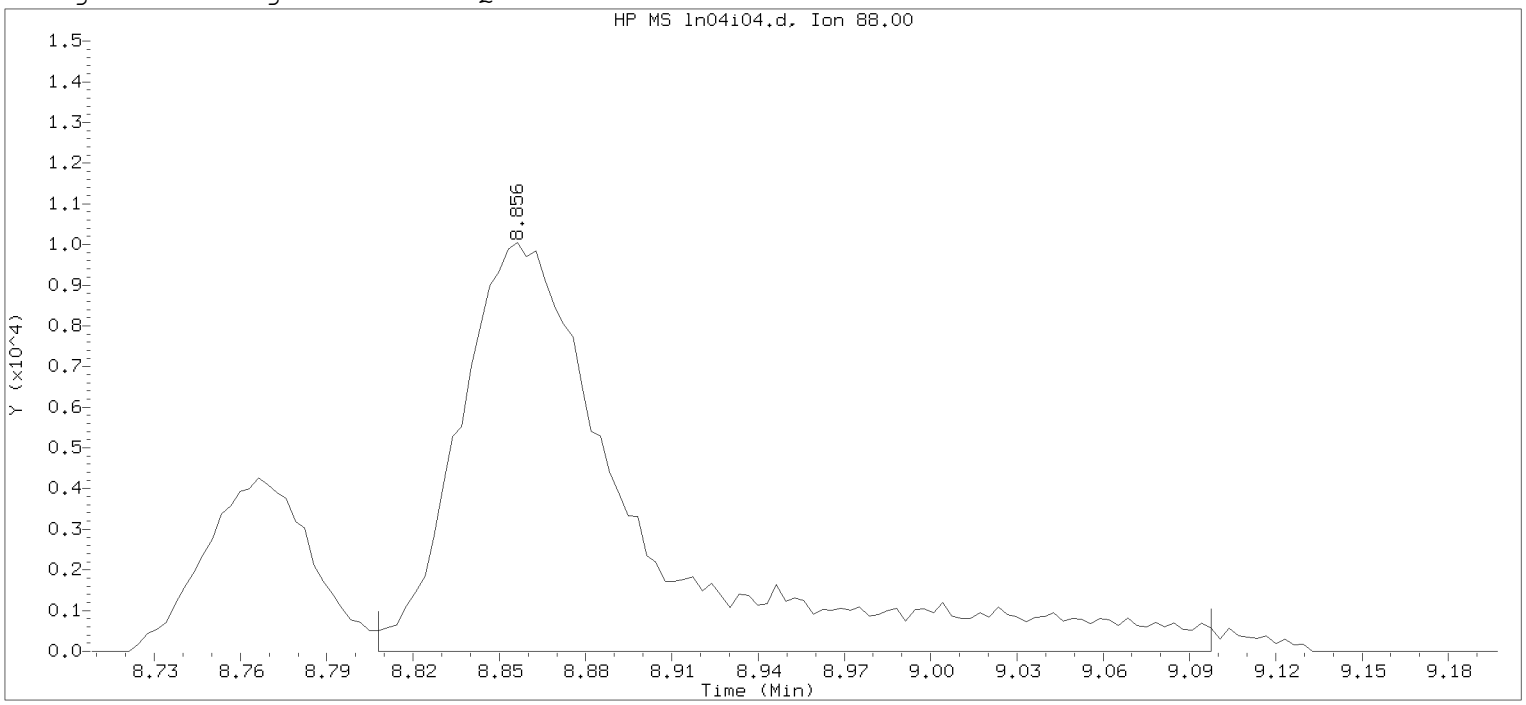
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

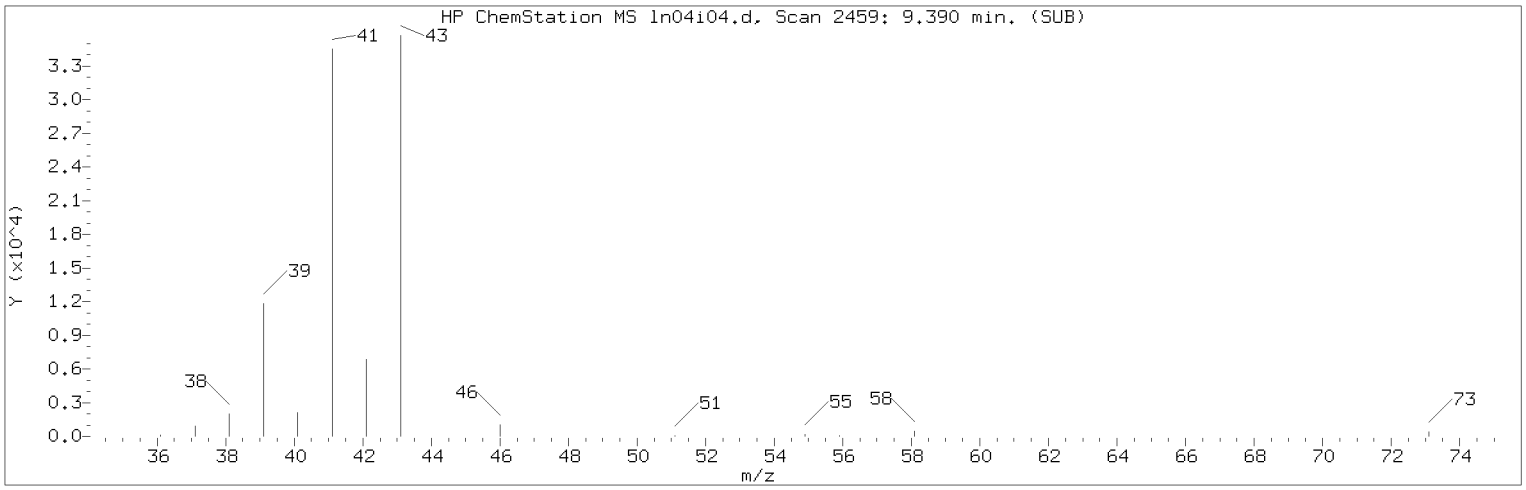
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

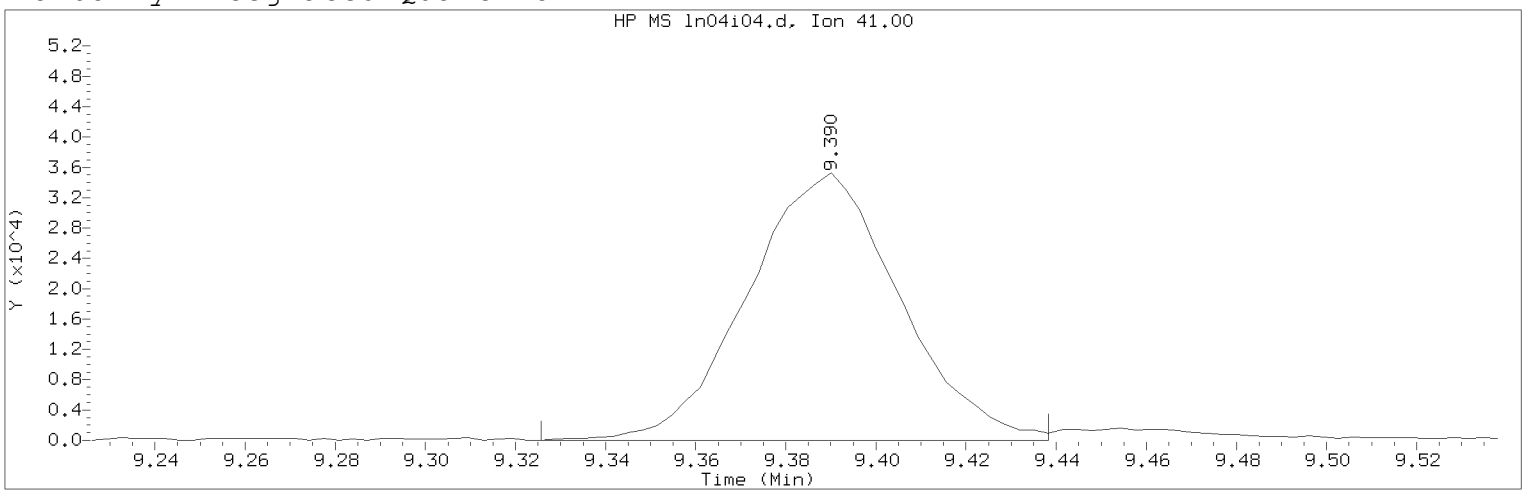
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area : 43671
On-column Amount (ng) : 571.7062
Integration start scan : 2277 Integration stop scan: 2367
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

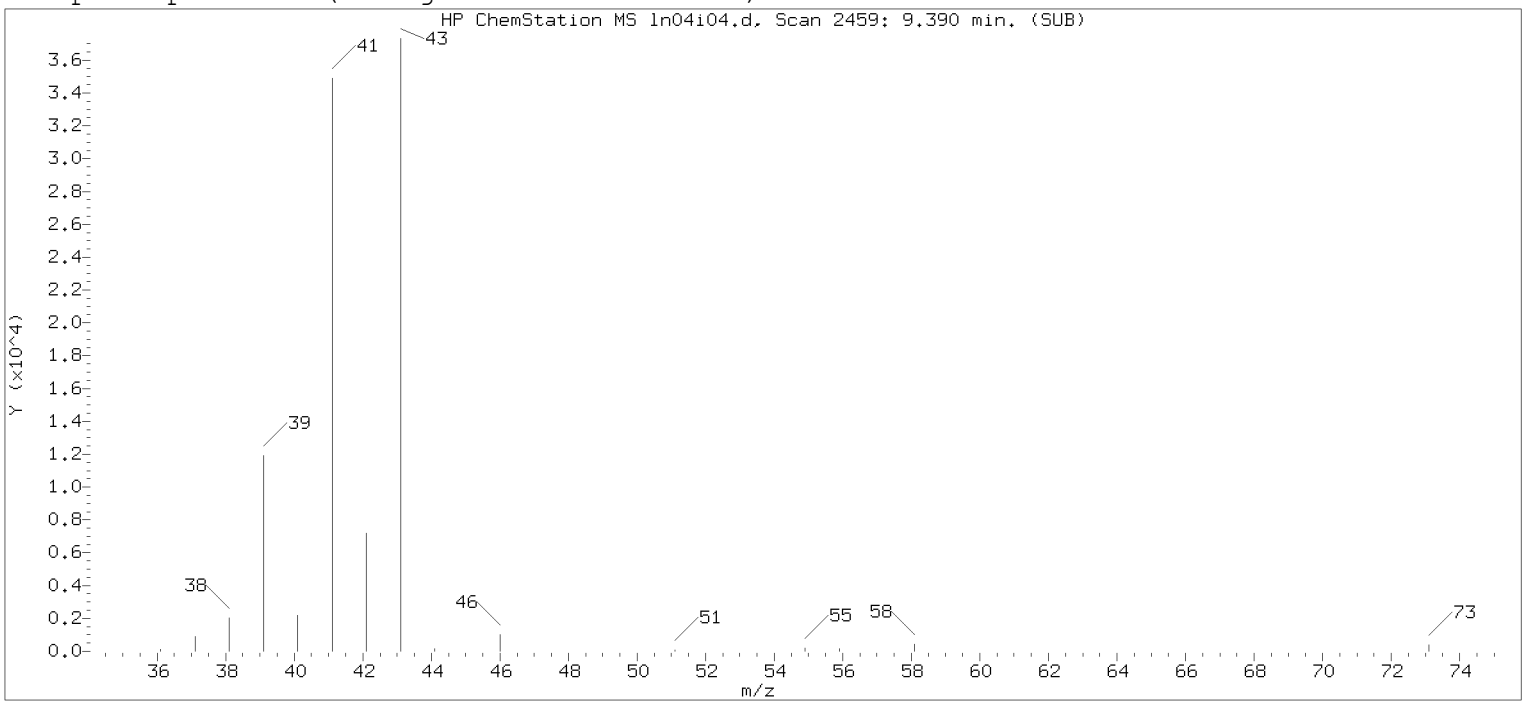
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2459
Retention Time (minutes): 9.390
Quant Ion : 41.00
Area (flag) : 82517M
On-Column Amount (ng) : 40.2472
Integration start scan : 2438 Integration stop scan: 2473
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

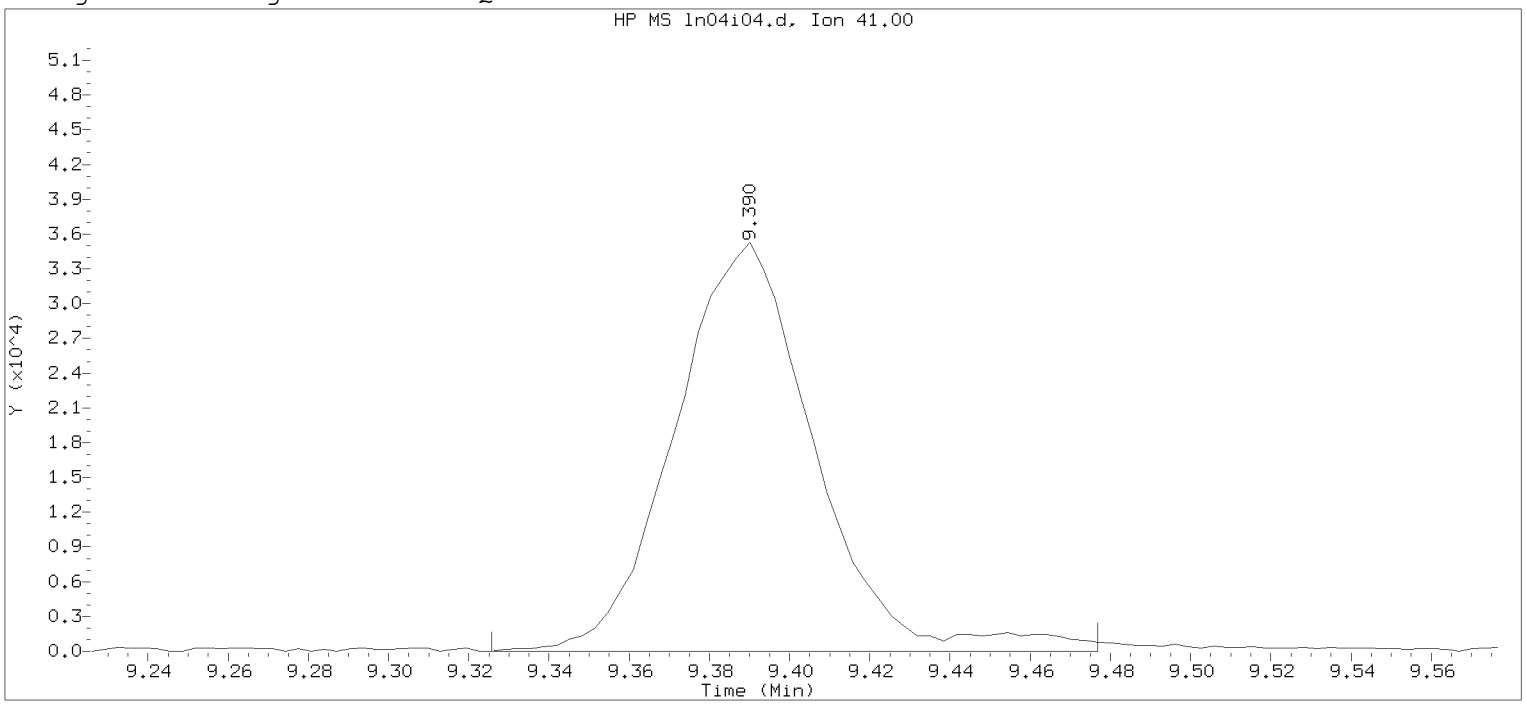
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

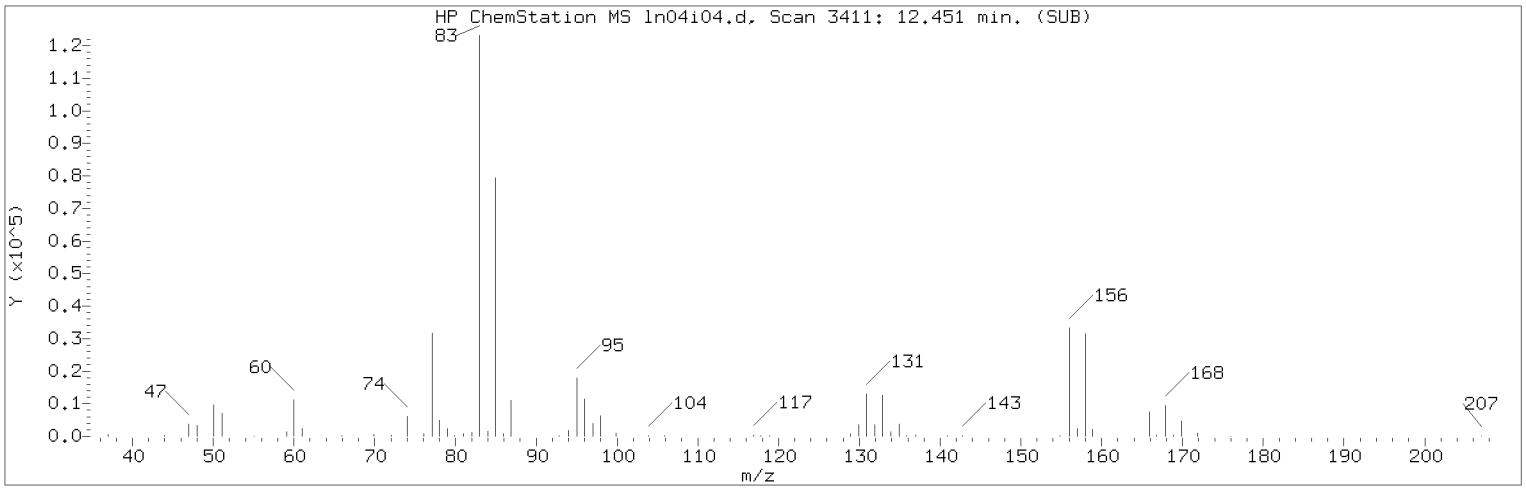
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

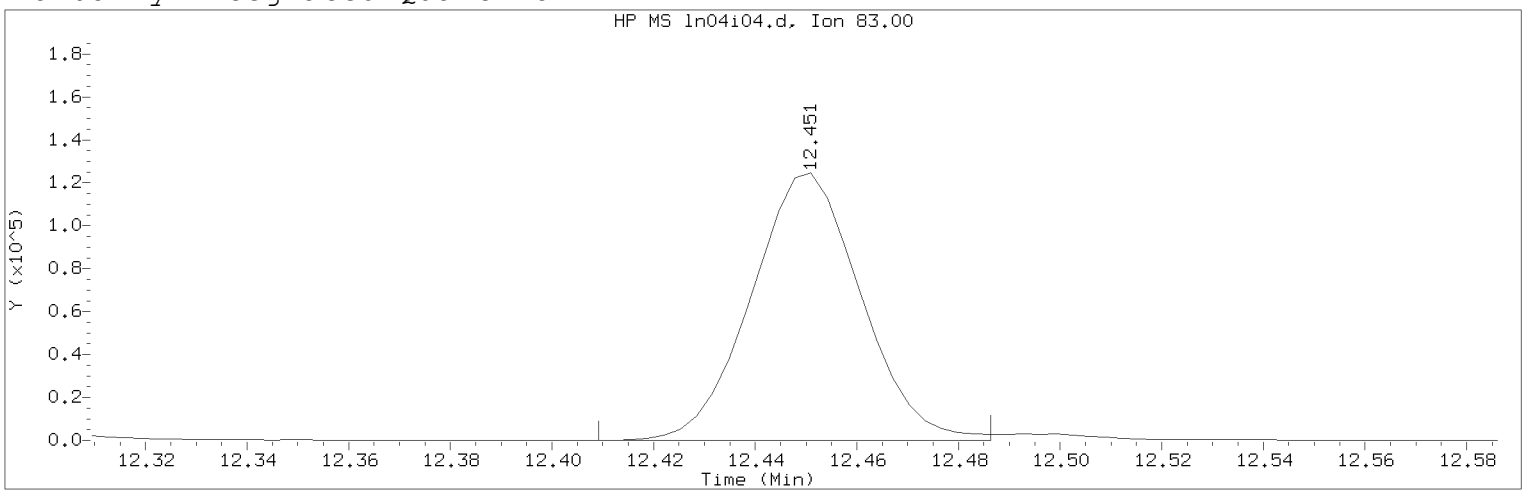
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2459
Retention Time (minutes): 9.390
Quant Ion : 41.00
Area : 85427
On-column Amount (ng) : 37.2727
Integration start scan : 2438 Integration stop scan: 2485
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

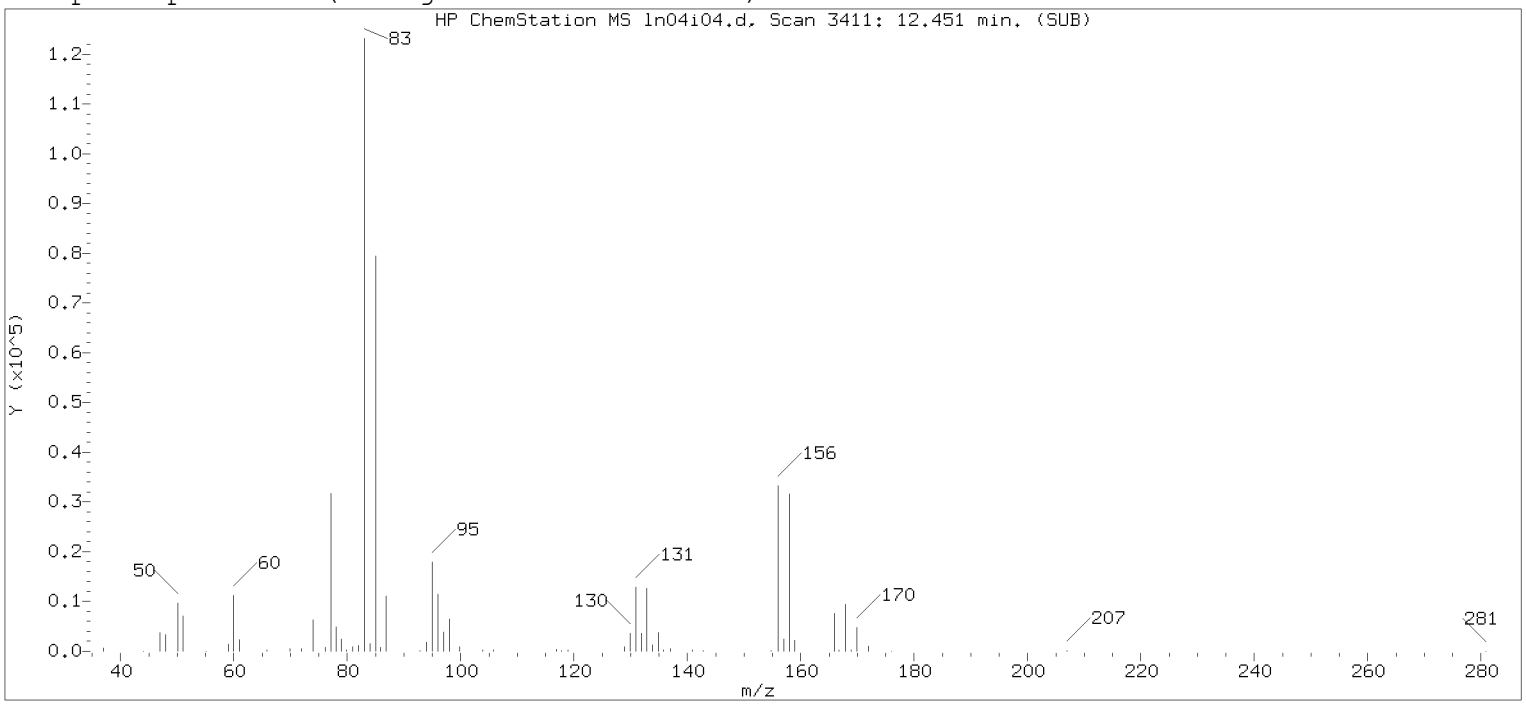
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 186119M
On-Column Amount (ng) : 20.6895
Integration start scan : 3397 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

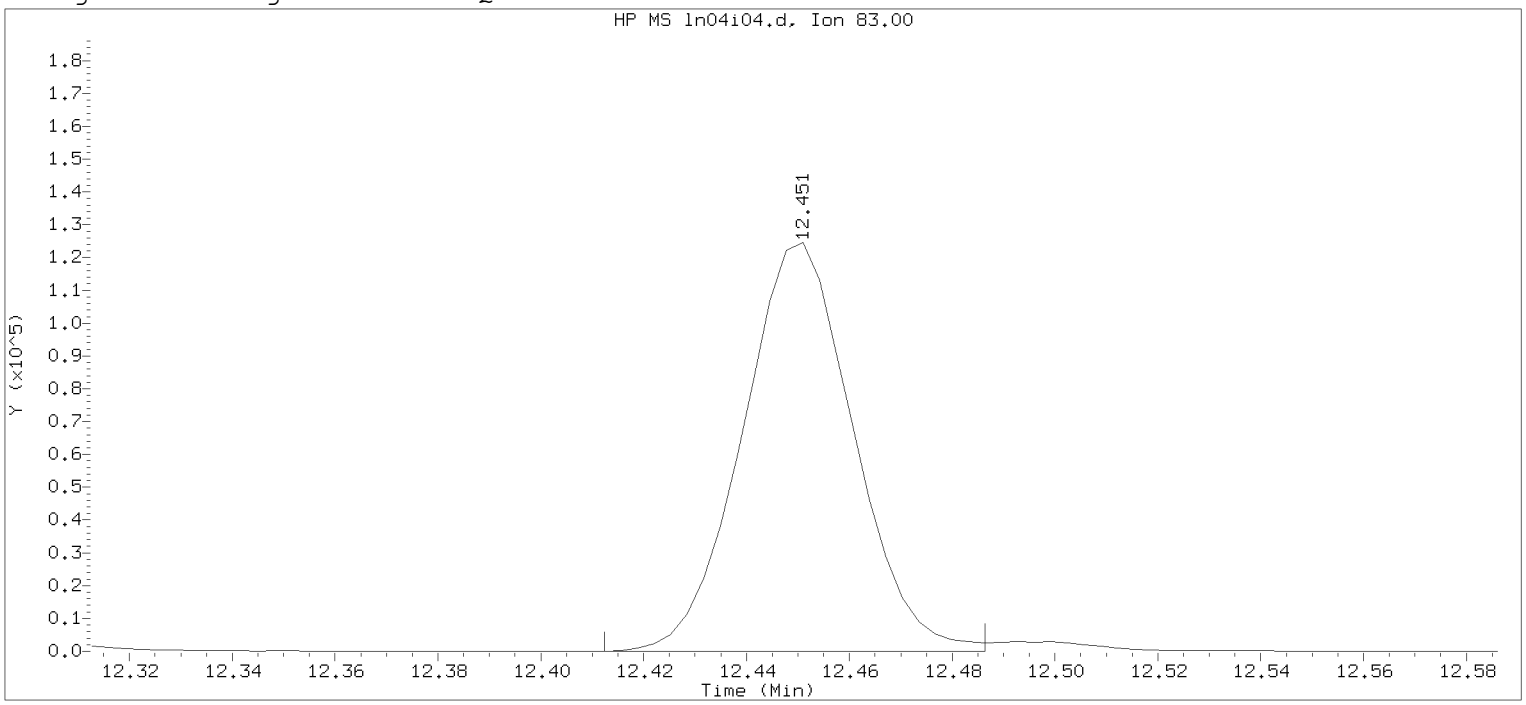
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

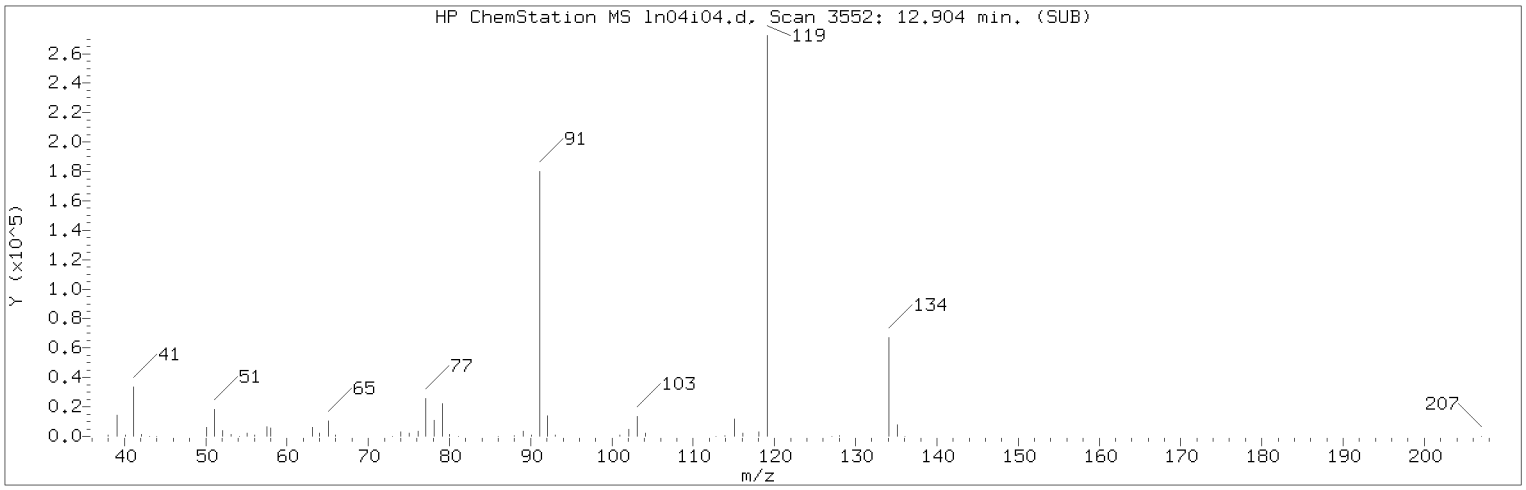
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

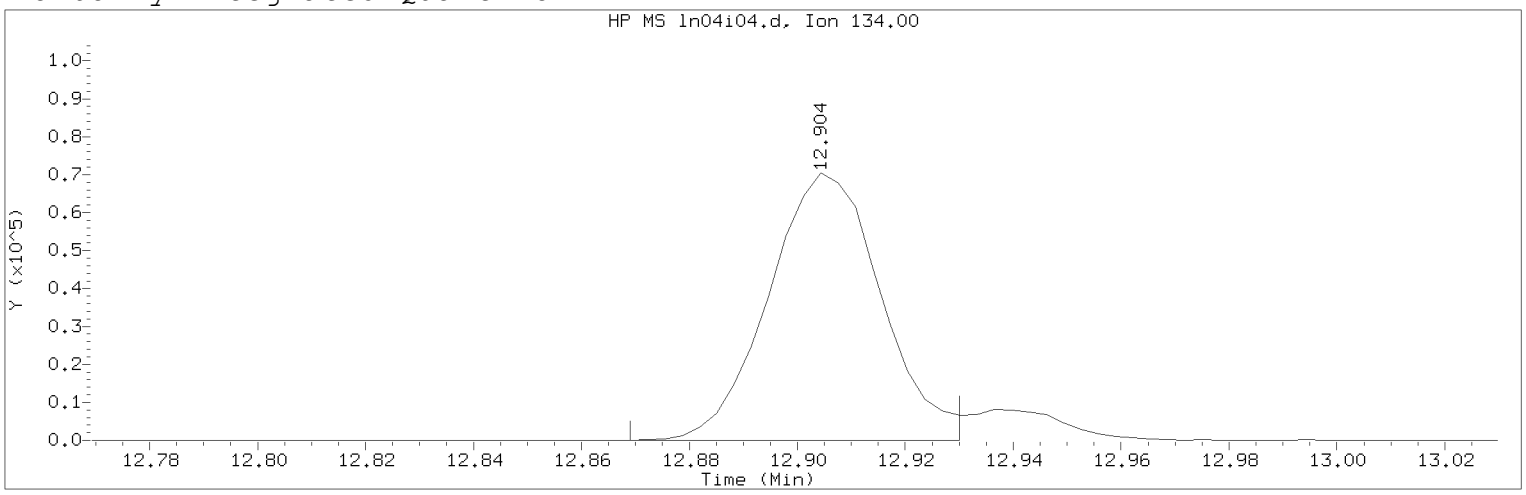
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 185866
On-column Amount (ng) : 19.5938
Integration start scan : 3398 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

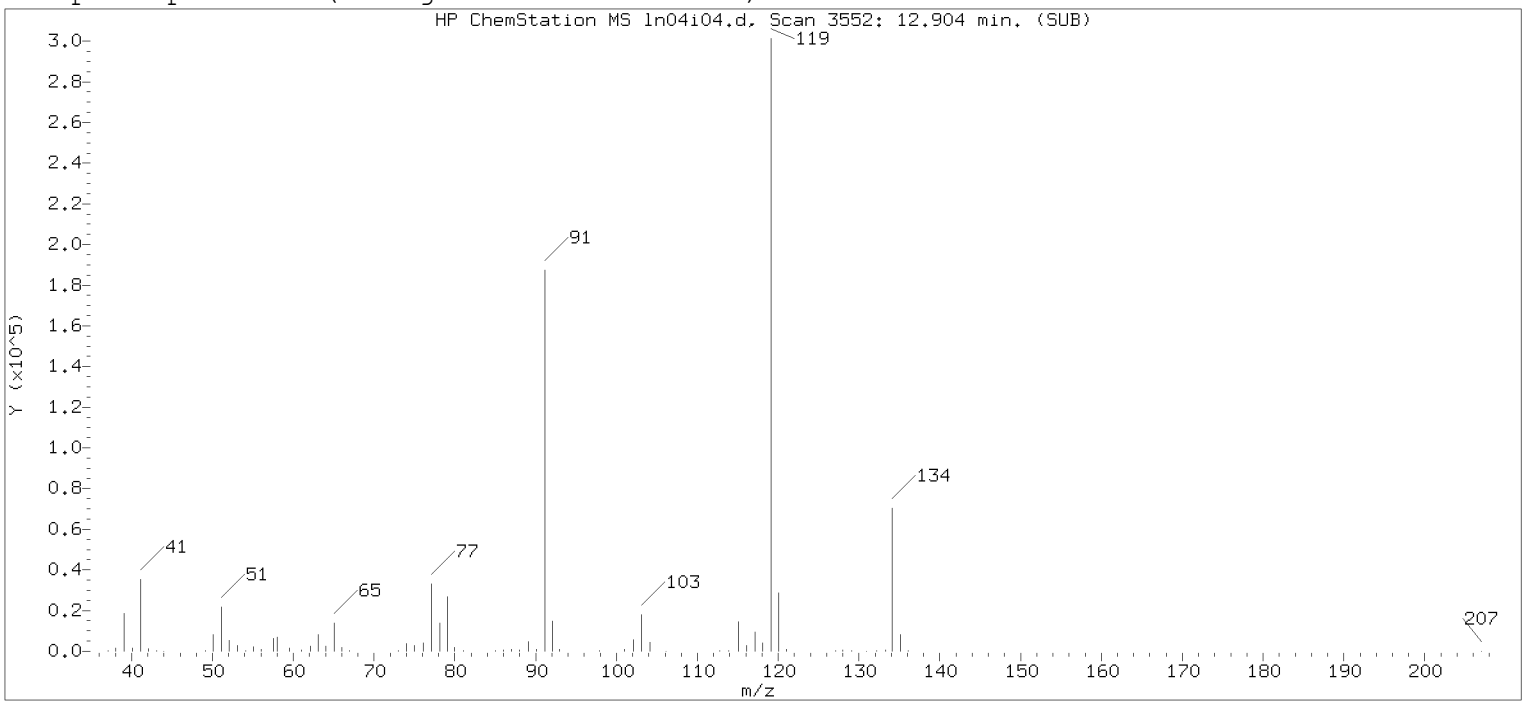
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 101571M
On-Column Amount (ng) : 21.6122
Integration start scan : 3540 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

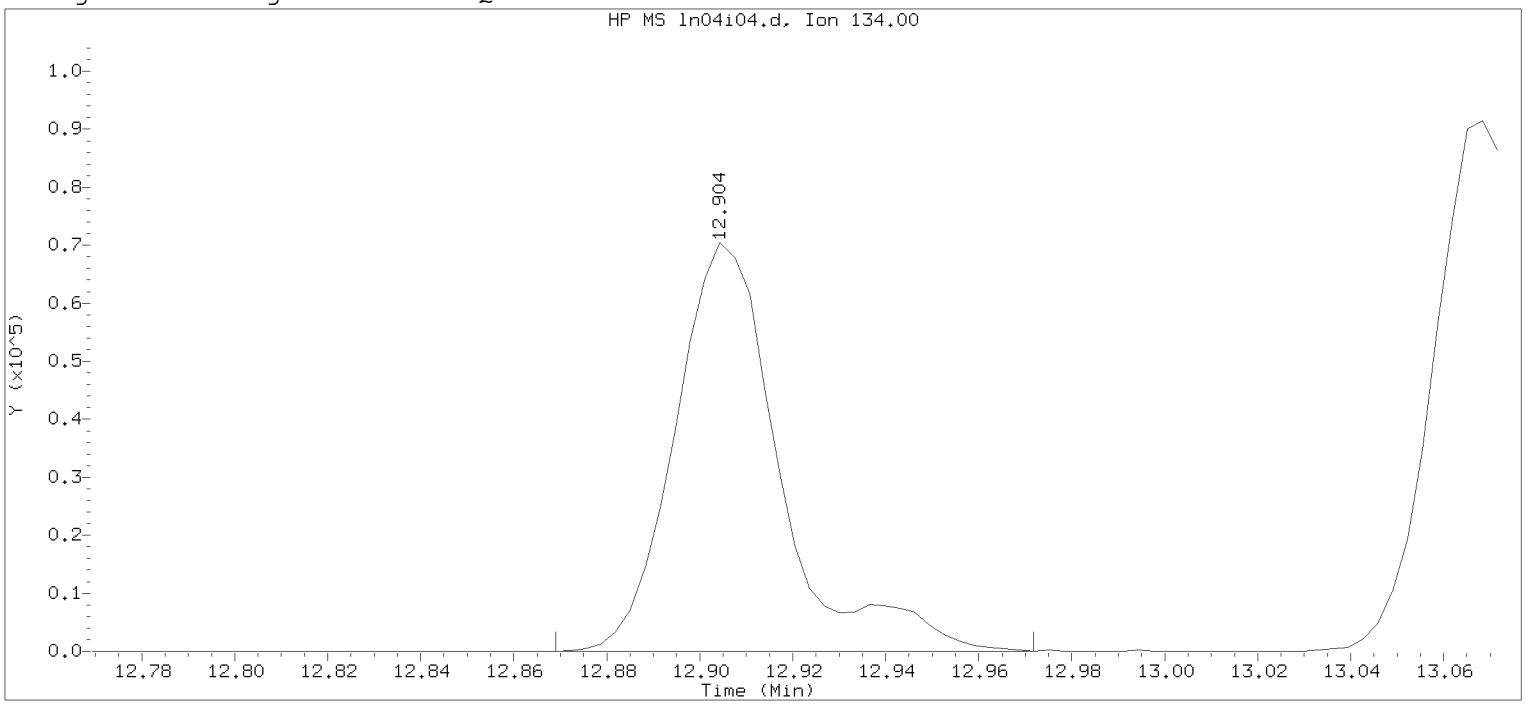
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



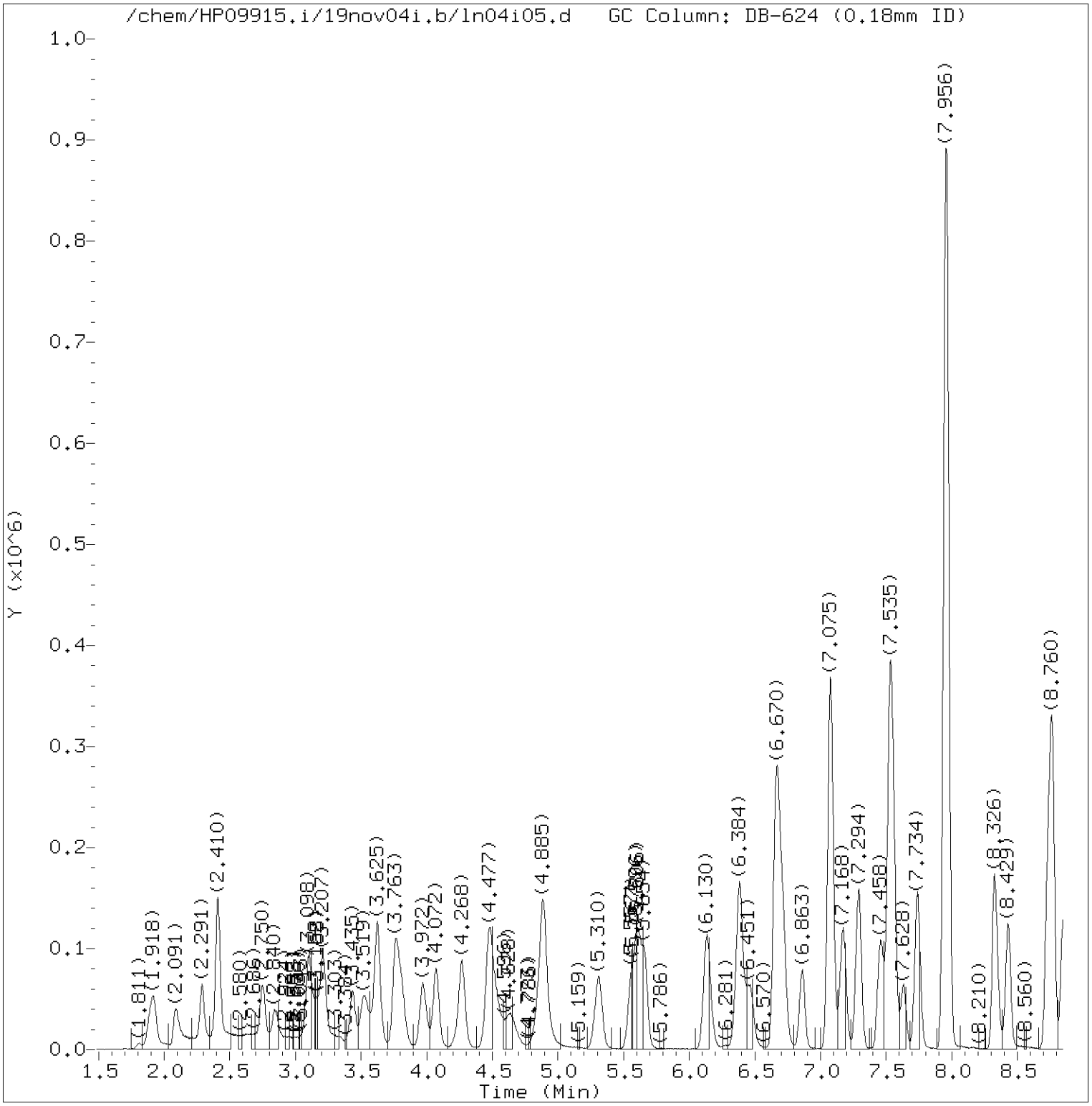
Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 110902
On-column Amount (ng) : 20.6897
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

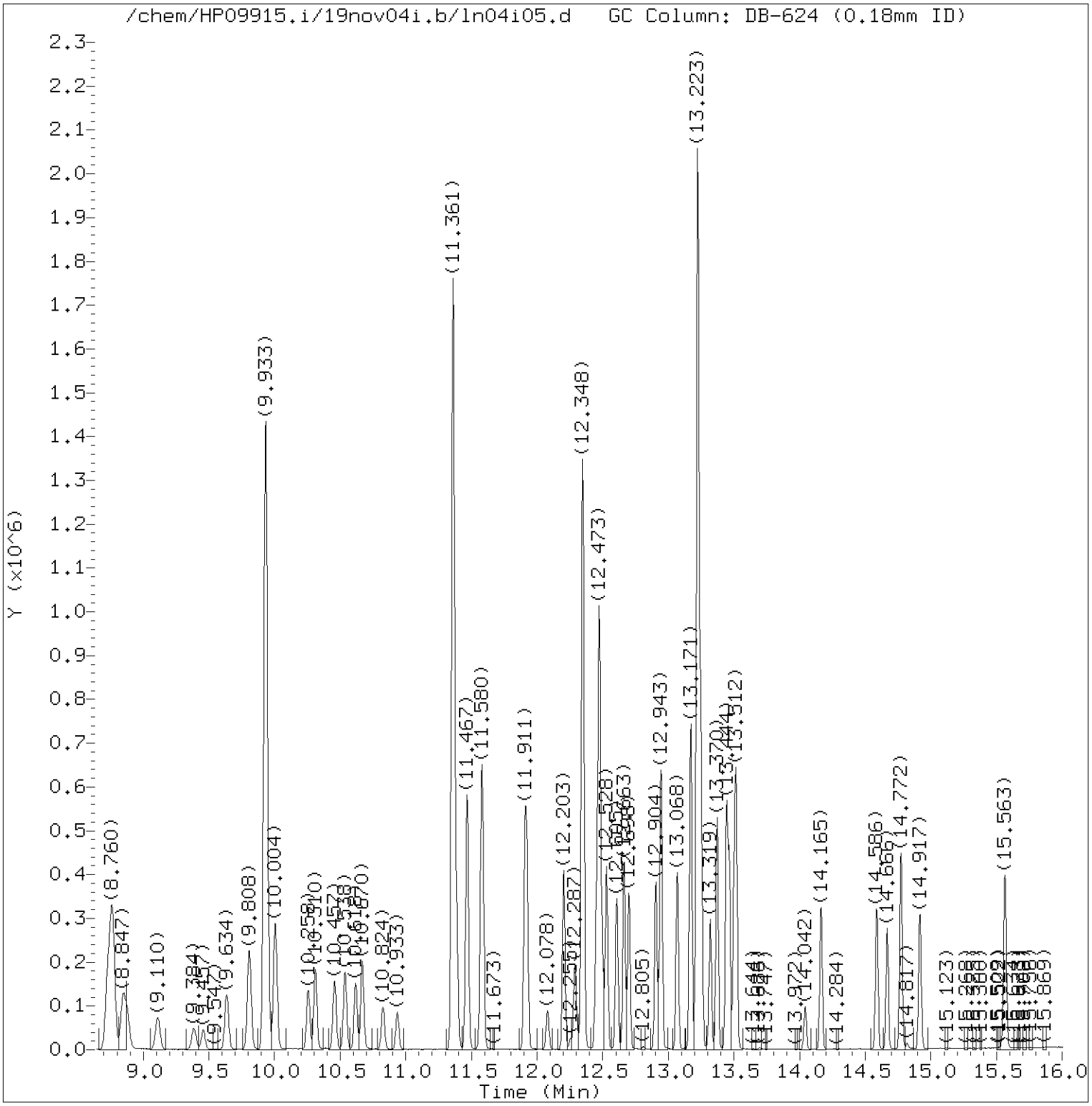
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.091	85	76947M	9.526
4) Chloromethane	(2)	2.291	50	76659	9.847
5) 1,3-Butadiene	(2)	2.406	39	60141M	9.304
6) Vinyl Chloride	(2)	2.413	62	76016	9.784
8) Bromomethane	(2)	2.750	94	54155	9.723
9) Chloroethane	(2)	2.853	64	42303	9.907
10) Dichlorofluoromethane	(2)	3.104	67	106956M	10.459
12) Trichlorofluoromethane	(2)	3.152	101	80624	9.638
11) n-Pentane	(2)	3.213	43	86389	8.739
14) Ethyl ether	(2)	3.438	59	52079	9.635
15) Freon 123a	(2)	3.519	67	65806	9.780
16) Acrolein	(1)	3.625	56	197662	100.013
17) 1,1-Dichloroethene	(2)	3.763	96	48467	9.871
17) 1,1-Dichloroethene	(2)	3.763	63	24200	9.831
19) Freon 113	(2)	3.792	101	51923	9.269
18) Acetone	(1)	3.805	58	17383	19.619
22) Methyl Iodide	(2)	3.969	142	101688	9.995
21) 2-Propanol	(1)	4.001	45	63841	100.227
23) Carbon Disulfide	(2)	4.075	76	179738	9.714
27) Methyl Acetate	(2)	4.245	43	62026	9.809
25) Allyl Chloride	(2)	4.268	41	86653	9.838
28) Methylene Chloride	(2)	4.474	84	58140	9.949
29)*t-Butyl alcohol-d10	(1)	4.509	65	263427M	250.000
30) t-Butyl alcohol	(1)	4.644	59	111005	100.090
31) Acrylonitrile	(2)	4.840	53	34130	10.032
33) Methyl Tertiary Butyl Ether	(2)	4.882	73	189173	10.147
32) trans-1,2-Dichloroethene	(2)	4.889	96	56133	9.883
34) n-Hexane	(2)	5.306	57	75187M	8.508
36) 1,1-Dichloroethane	(2)	5.557	63	99074	9.999
38) di-Isopropyl ether	(2)	5.606	45	191363	10.014
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	84906	9.551
40) Ethyl t-butyl ether	(2)	6.136	59	188350	10.156
43) 1,2-Dichloroethene (Total)	(2)		96	118698	19.696
44) 2-Butanone	(2)	6.364	43	85445	19.565
42) cis-1,2-Dichloroethene	(2)	6.387	96	62565	9.814
45) 2,2-Dichloropropane	(2)	6.396	77	74849	9.717
47) Propionitrile	(1)	6.464	54	136751	98.961
48) Methacrylonitrile	(2)	6.663	67	181171	49.366

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	34163	10.106
50) Tetrahydrofuran	(1)	6.724	71	24588	19.698
51) Chloroform	(2)	6.863	83	93507	9.867
52)$Dibromofluoromethane	(2)	7.072	113	280960	49.616
52)$Dibromofluoromethane	(2)	7.075	111	286315	49.589
53) 1,1,1-Trichloroethane	(2)	7.078	97	77742	9.611
54) Cyclohexane	(2)	7.175	56	96567	8.928
54) Cyclohexane	(2)	7.175	84	84021	8.942
54) Cyclohexane	(2)	7.175	69	29917	8.942
56) Carbon Tetrachloride	(2)	7.287	117	63638	9.276
55) 1,1-Dichloropropene	(2)	7.294	75	75943	9.694
58) Isobutyl Alcohol	(1)	7.458	41	94699	253.736
57)$1,2-Dichloroethane-d4	(2)	7.532	102	72410	50.173
57)$1,2-Dichloroethane-d4	(2)	7.528	65	317862	49.423
57)$1,2-Dichloroethane-d4	(2)	7.528	104	46131	50.043
60) Benzene	(2)	7.557	78	235083	9.978
61) 1,2-Dichloroethane	(2)	7.634	62	74555	9.839
61) 1,2-Dichloroethane	(2)	7.634	98	7256	9.676
65) t-Amyl methyl ether	(2)	7.740	73	187995	10.099
66)*Fluorobenzene	(2)	7.956	96	1158257	50.000
67) n-Heptane	(2)	7.959	43	65347MA	7.916
69) n-Butanol	(1)	8.326	56	166674M	518.868
71) Trichloroethene	(2)	8.425	95	57378	9.672
72) Methylcyclohexane	(2)	8.731	83	104101	9.459
72) Methylcyclohexane	(2)	8.731	98	46774	9.392
73) 1,2-Dichloropropane	(2)	8.766	63	59459	9.939
76) Methyl Methacrylate	(2)	8.843	69	56123	9.701
75) 1,4-Dioxane	(1)	8.859	88	22251M	252.018
74) Dibromomethane	(2)	8.875	93	37949	9.804
78) Bromodichloromethane	(2)	9.110	83	66403	9.560
79) 2-Nitropropane	(2)	9.387	41	38245M	18.178
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	24083	9.373
81) cis-1,3-Dichloropropene	(2)	9.638	75	89740	9.728
82) 4-Methyl-2-pentanone	(2)	9.808	43	182101	19.754
83)$Toluene-d8	(3)	9.933	98	1179588	50.250
83)$Toluene-d8	(3)	9.933	100	766795	50.427
88) Toluene	(3)	10.004	92	146792	9.974
90) 1,3-Dichloropropene (total)	(3)		100	170602	19.407

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.255	75	80862	9.679
91) Ethyl Methacrylate	(3)	10.310	69	101774	10.024
92) 1,1,2-Trichloroethane	(3)	10.457	97	55397	9.928
93) Tetrachloroethene	(3)	10.538	166	57668	9.252
94) 1,3-Dichloropropane	(3)	10.615	76	95319	10.005
96) 2-Hexanone	(3)	10.670	43	134577	19.858
97) Dibromochloromethane	(3)	10.824	129	54317	9.503
99) 1,2-Dibromoethane	(3)	10.937	107	59349	9.795
100)*Chlorobenzene-d5	(3)	11.358	117	897139	50.000
101) 1-Chlorohexane	(3)	11.364	91	68517	8.666
102) Chlorobenzene	(3)	11.383	112	167497	10.065
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	53804	9.812
104) Ethylbenzene	(3)	11.467	91	273085	9.708
106) m+p-Xylene	(3)	11.583	106	214450	19.380
108) Xylene (Total)	(3)		106	321712	29.193
107) o-Xylene	(3)	11.908	106	107262	9.813
109) Styrene	(3)	11.924	104	181265	10.036
110) Bromoform	(3)	12.078	173	38599	9.038
111) Isopropylbenzene	(3)	12.203	105	257704	9.400
112) Cyclohexanone	(1)	12.290	55	84173	243.422
114)$4-Bromofluorobenzene	(3)	12.348	95	448980	50.511
114)$4-Bromofluorobenzene	(3)	12.348	174	372460	50.544
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	99221M	10.583
115) Bromobenzene	(4)	12.464	156	73059	9.795
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	144573	49.994
117) 1,2,3-Trichloropropane	(4)	12.496	110	30082	10.457
119) n-Propylbenzene	(4)	12.528	91	295857	9.079
120) 2-Chlorotoluene	(4)	12.608	126	64871	9.370
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	216905	9.159
121) 4-Chlorotoluene	(4)	12.698	126	68187	9.462
124) tert-Butylbenzene	(4)	12.907	134	42119M	8.599
125) Pentachloroethane	(4)	12.936	167	40747	9.662
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	231031	9.256
127) sec-Butylbenzene	(4)	13.068	105	254340	8.702
129) 1,3-Dichlorobenzene	(4)	13.168	146	133435	9.735
130) p-Isopropyltoluene	(4)	13.171	119	222820	8.812
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	496298	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	137520	9.678

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

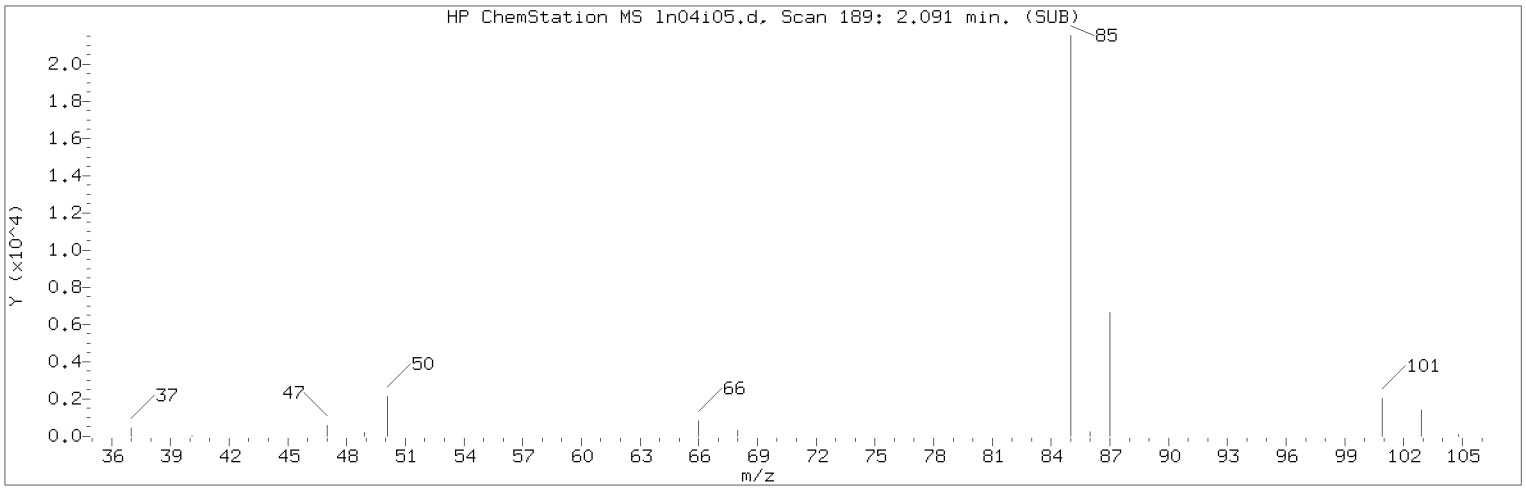
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

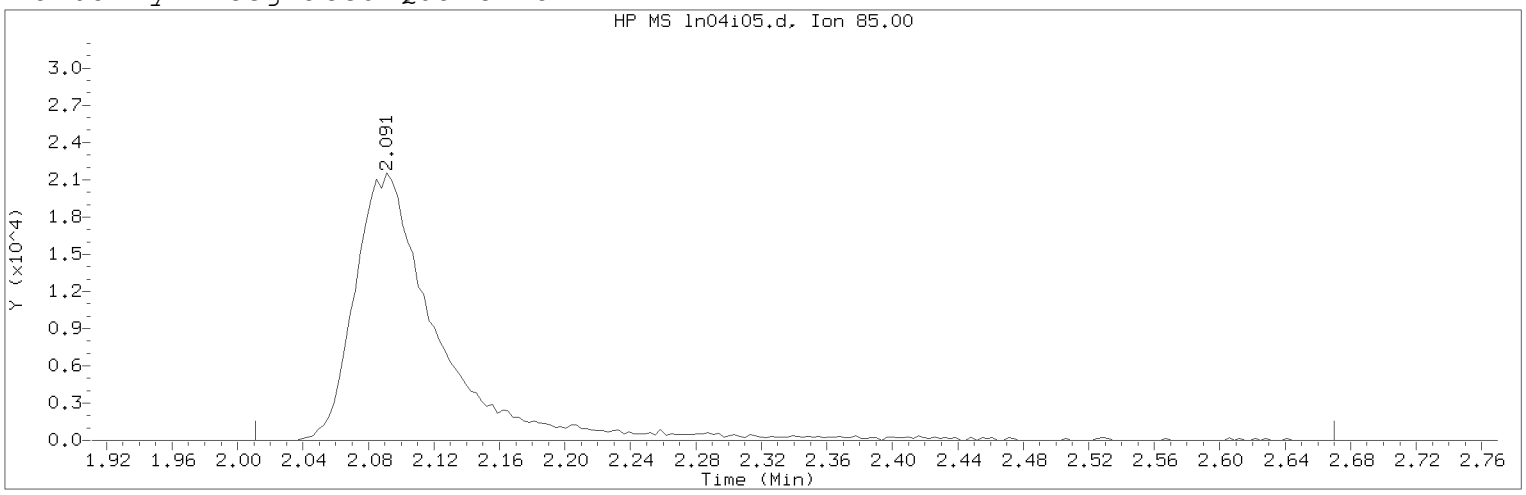
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	263873	9.980
135) Benzyl Chloride	(4)	13.319	91	189013	9.442
136) 1,3-Diethylbenzene	(4)	13.370	119	162518	9.876
141) Diethylbenzene (total)	(4)		100	469676	29.503
137) 1,4-Diethylbenzene	(4)	13.444	119	170802	9.797
139) n-Butylbenzene	(4)	13.464	92	112696	8.717
138) 1,2-Dichlorobenzene	(4)	13.502	146	133767	9.890
140) 1,2-Diethylbenzene	(4)	13.518	119	136356	9.830
142) 1,2-Dibromo-3-chloropropane	(4)	14.042	75	21471	10.462
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	94358	9.080
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	93971	9.300
147) Hexachlorobutadiene	(4)	14.666	225	44299	9.286
148) Naphthalene	(4)	14.772	128	328233	10.105
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	92049	9.363
150) 2-Methylnaphthalene	(4)	15.563	142	202392	10.118

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

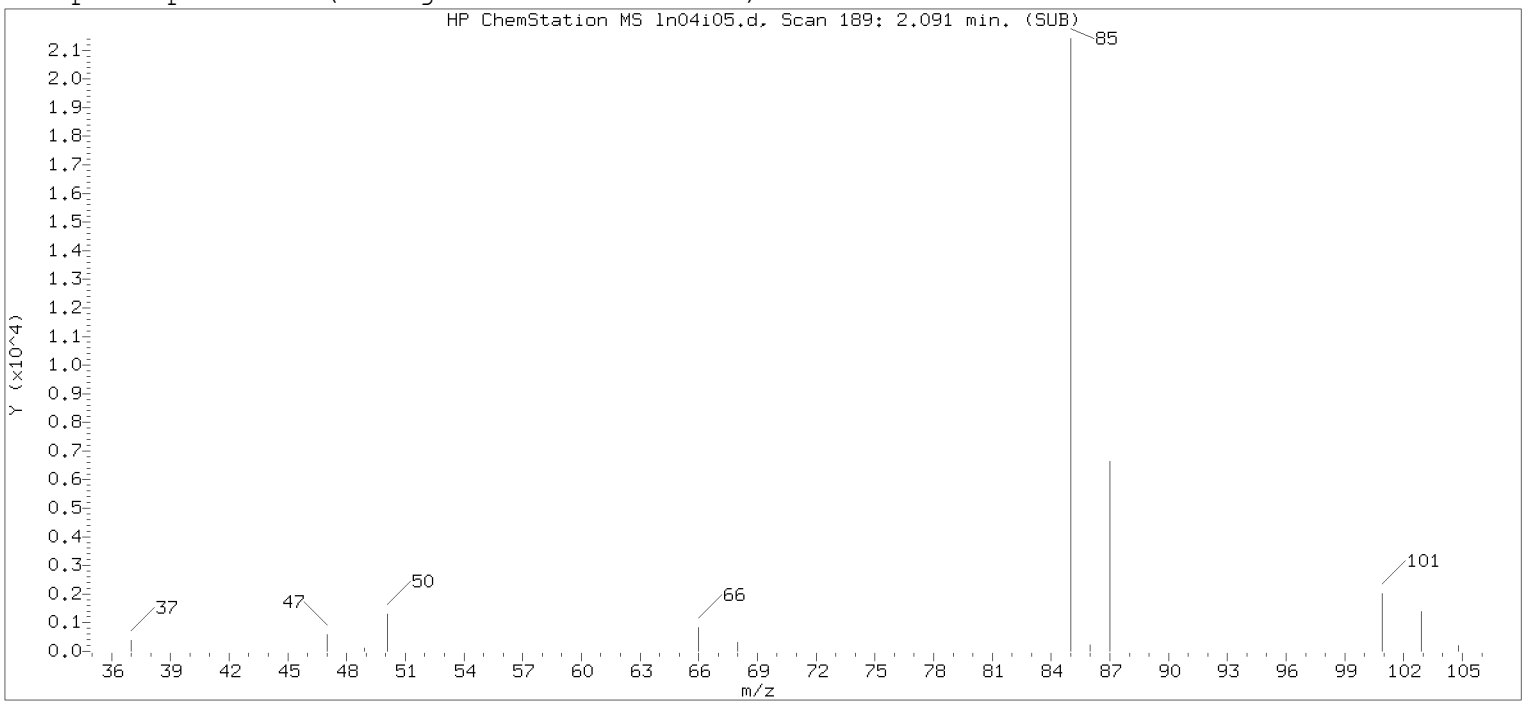
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 189
Retention Time (minutes): 2.091
Quant Ion : 85.00
Area (flag) : 76947M
On-Column Amount (ng) : 9.5263
Integration start scan : 163 Integration stop scan: 368
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

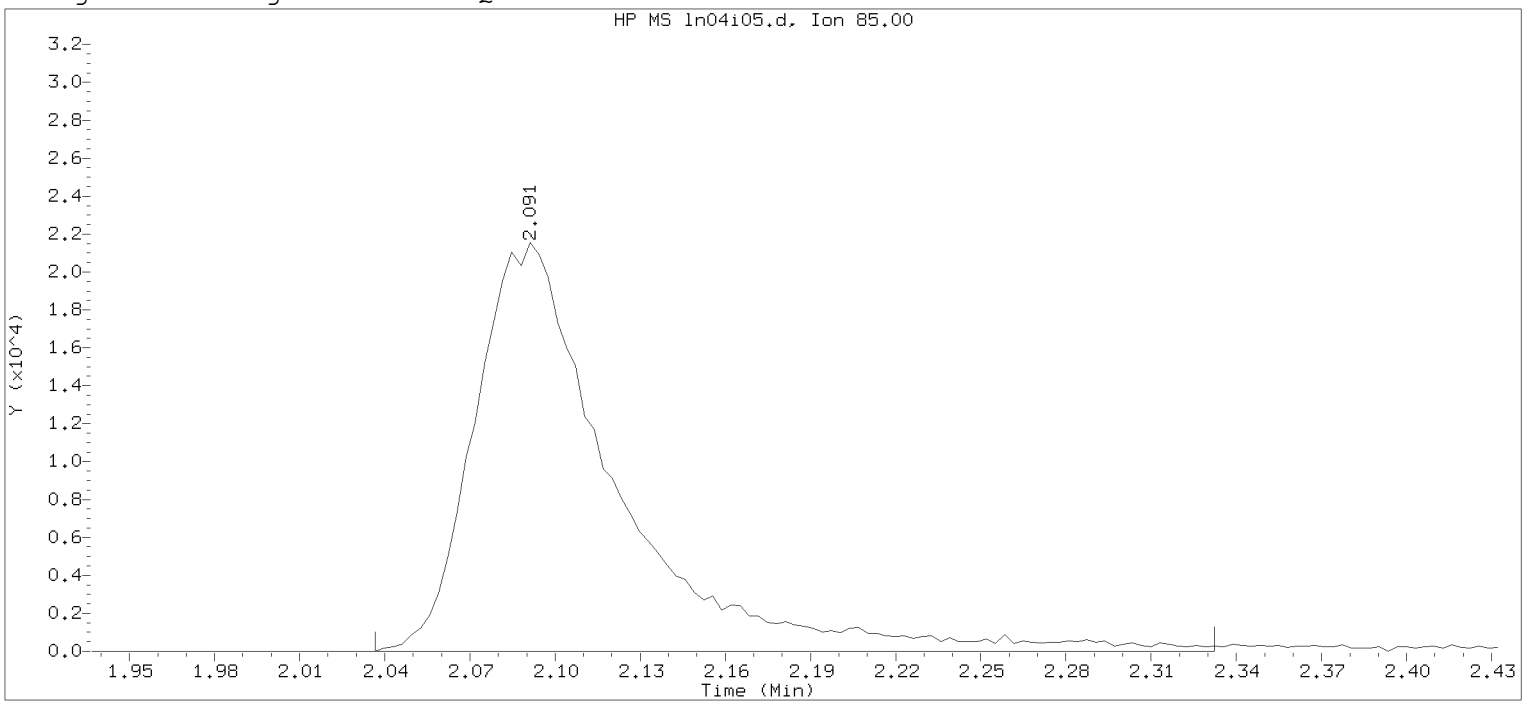
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

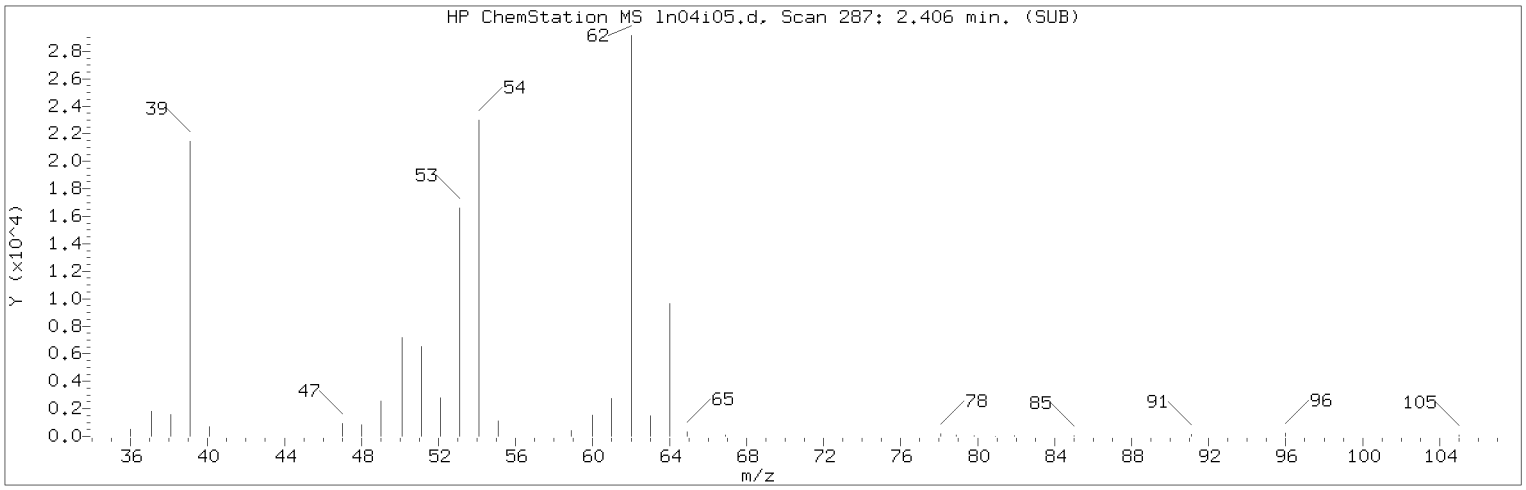
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

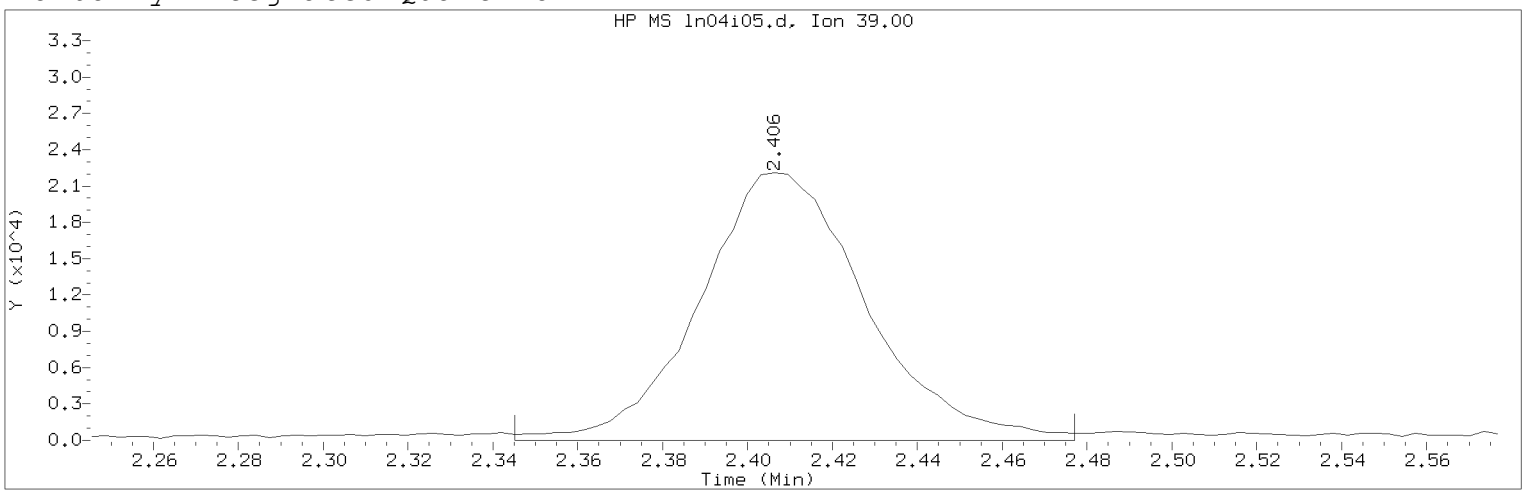
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 189
Retention Time (minutes): 2.091
Quant Ion : 85.00
Area : 74877
On-column Amount (ng) : 9.3136
Integration start scan : 171 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

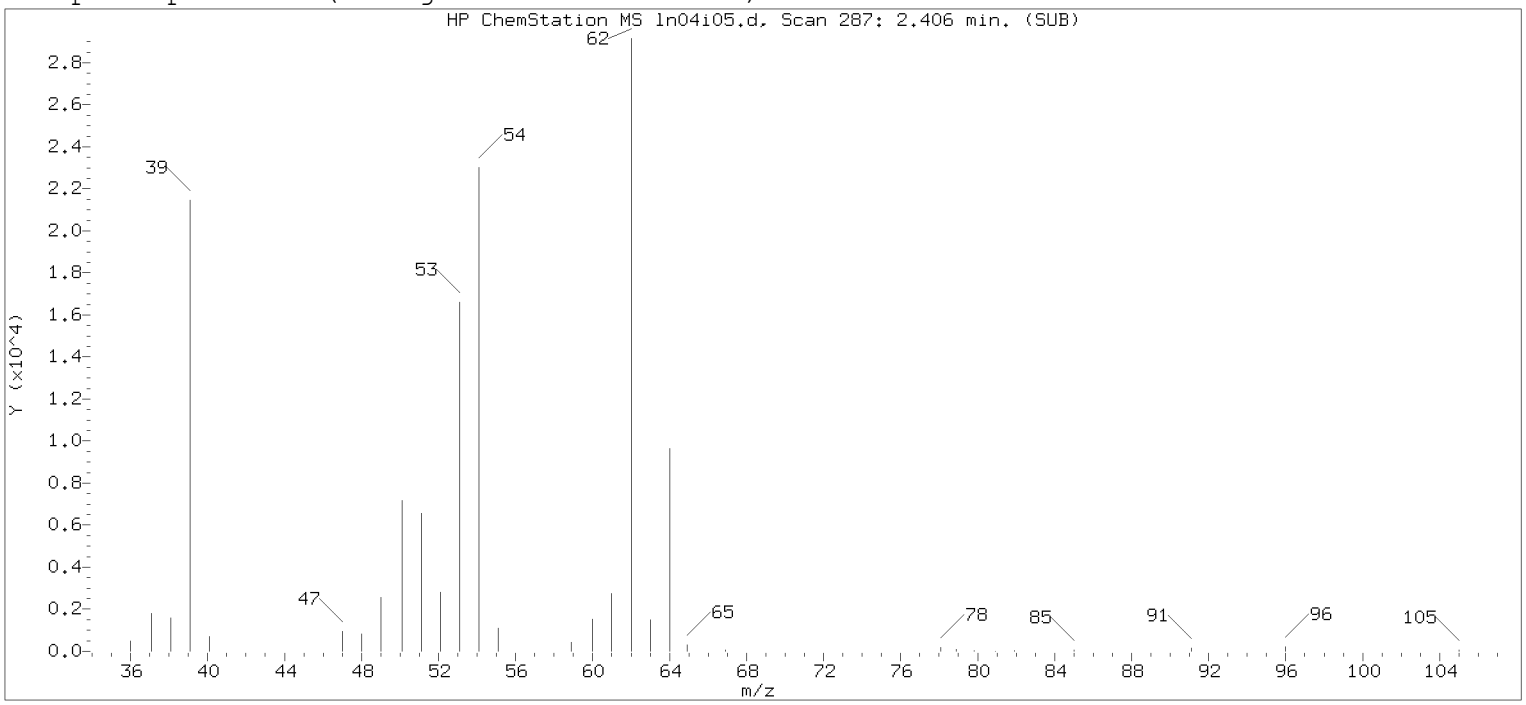
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 60141M
On-Column Amount (ng) : 9.3042
Integration start scan : 267 Integration stop scan: 308
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

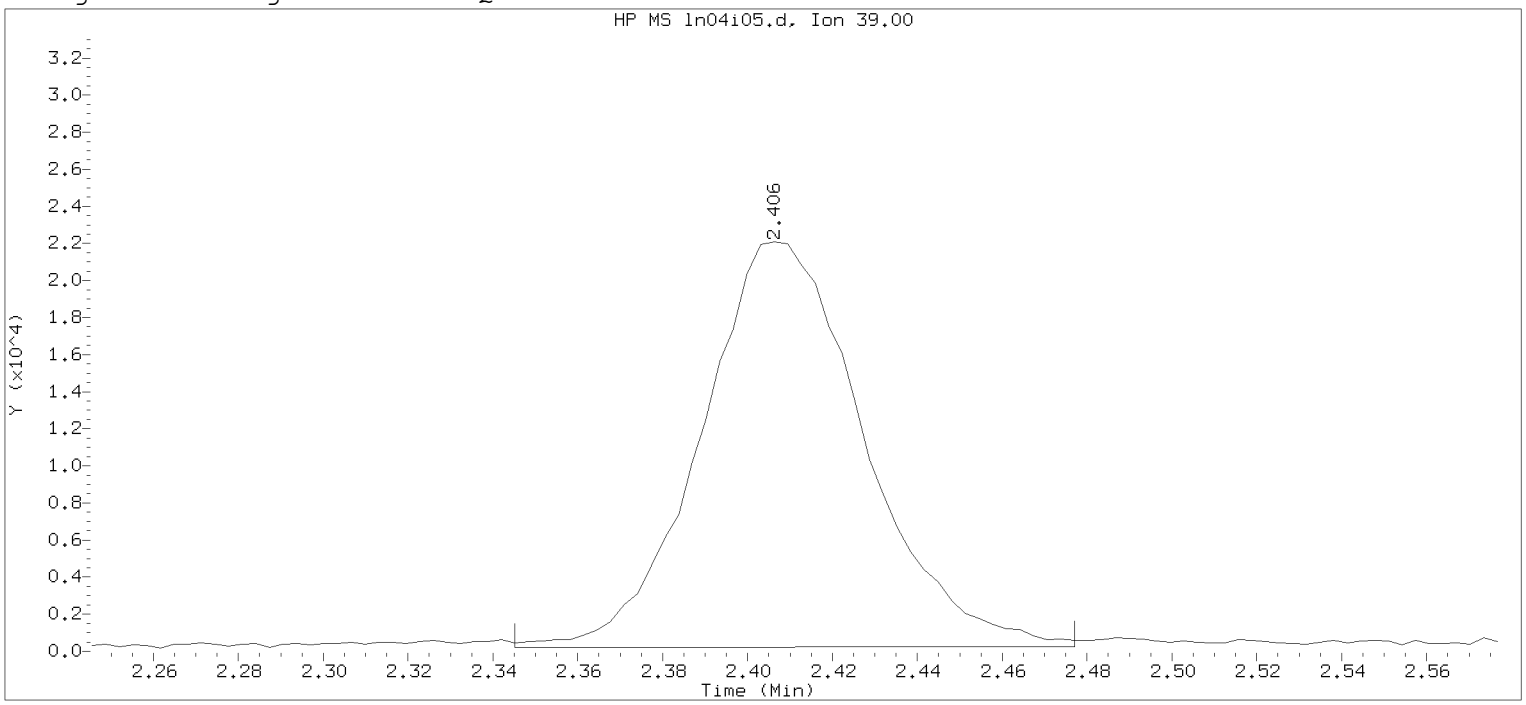
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

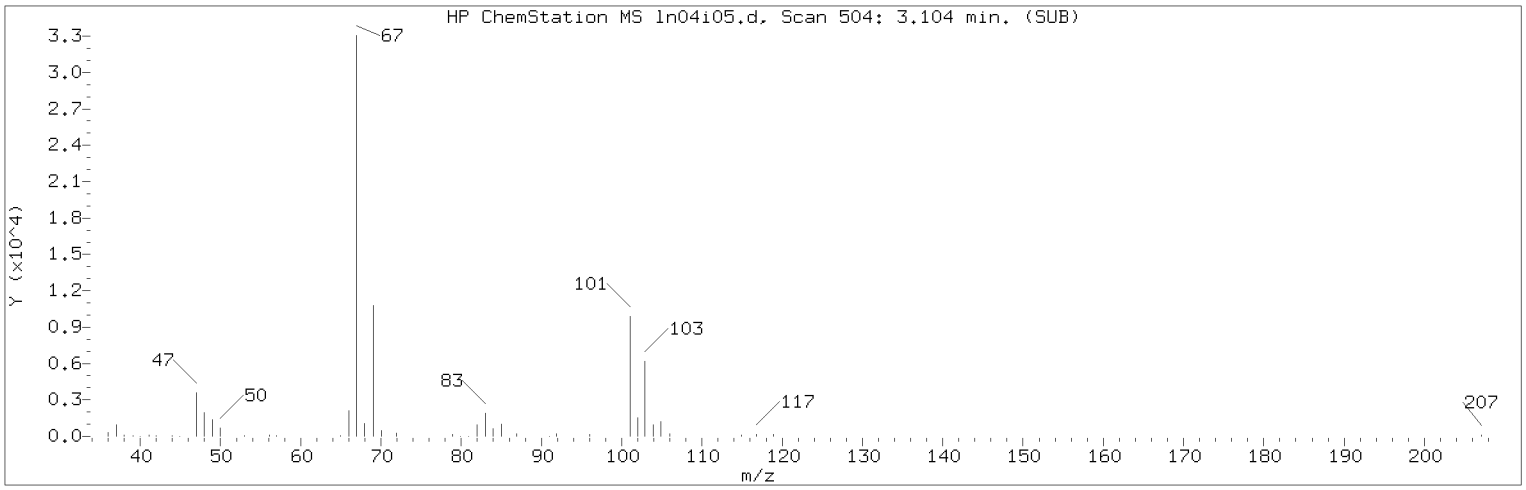
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

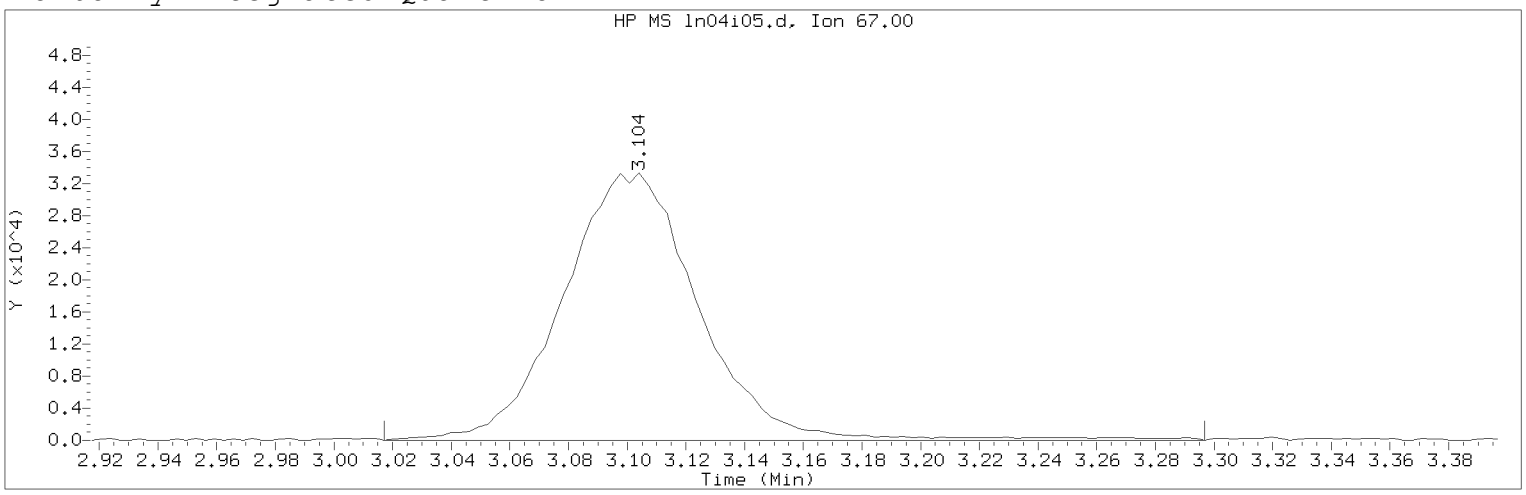
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 58240
On-column Amount (ng) : 9.5707
Integration start scan : 267 Integration stop scan: 308
Y at integration start : 206 Y at integration end: 250

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

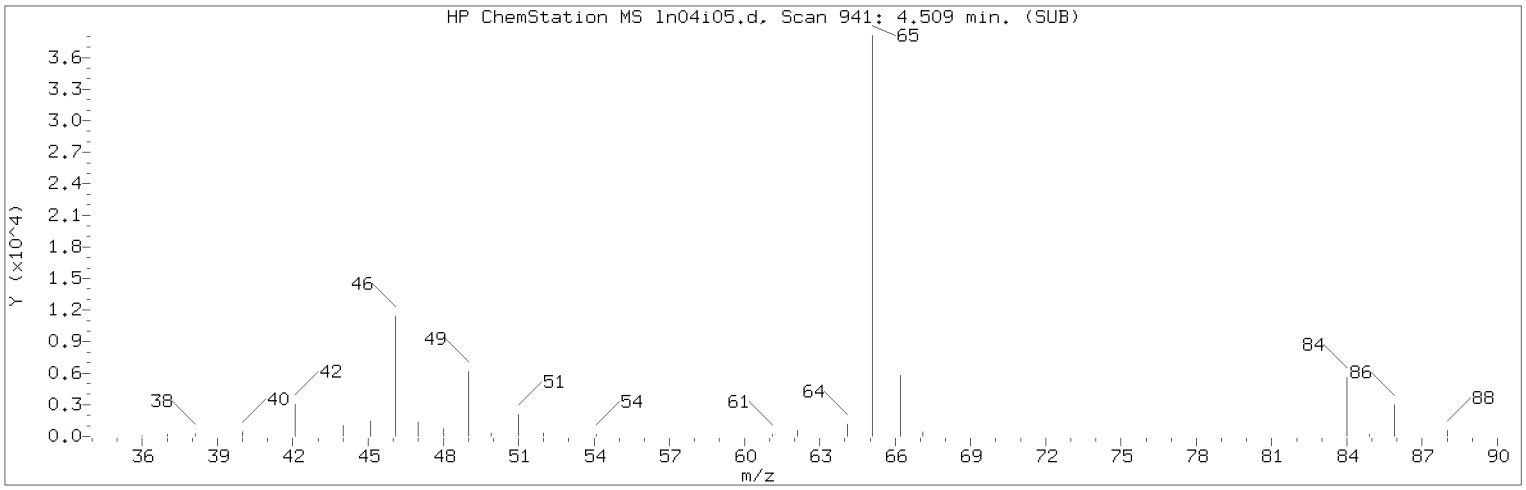
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 504
Retention Time (minutes): 3.104
Quant Ion : 67.00
Area (flag) : 106956M
On-Column Amount (ng) : 10.4593
Integration start scan : 476 Integration stop scan: 563
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

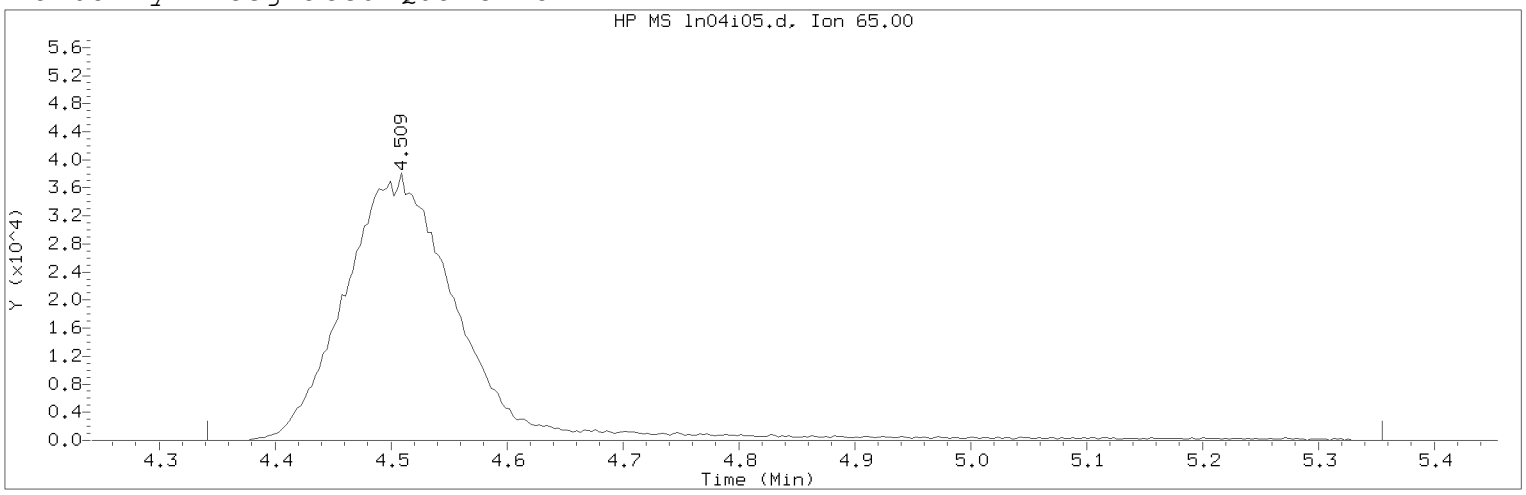
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

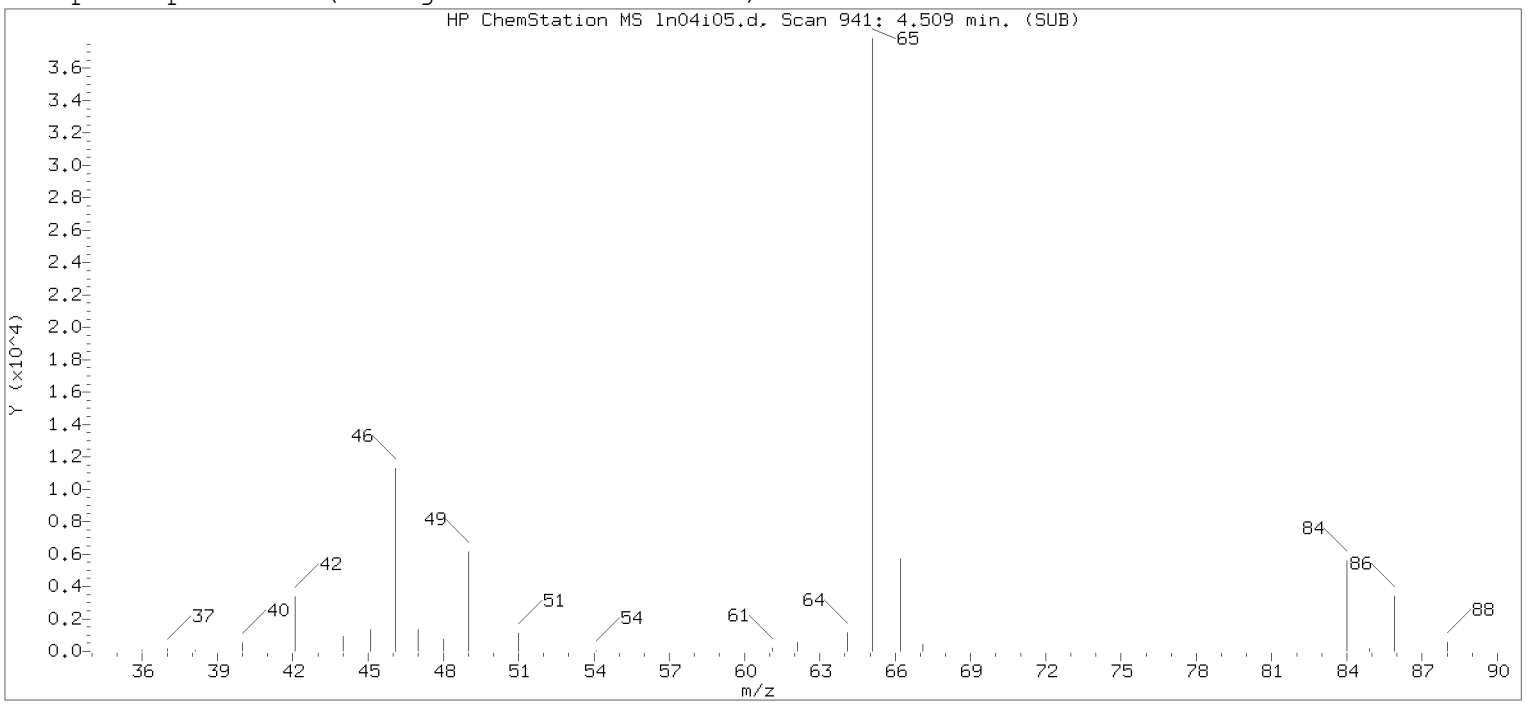
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 263427M
On-Column Amount (ng) : 250.0000
Integration start scan : 888 Integration stop scan: 1203
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

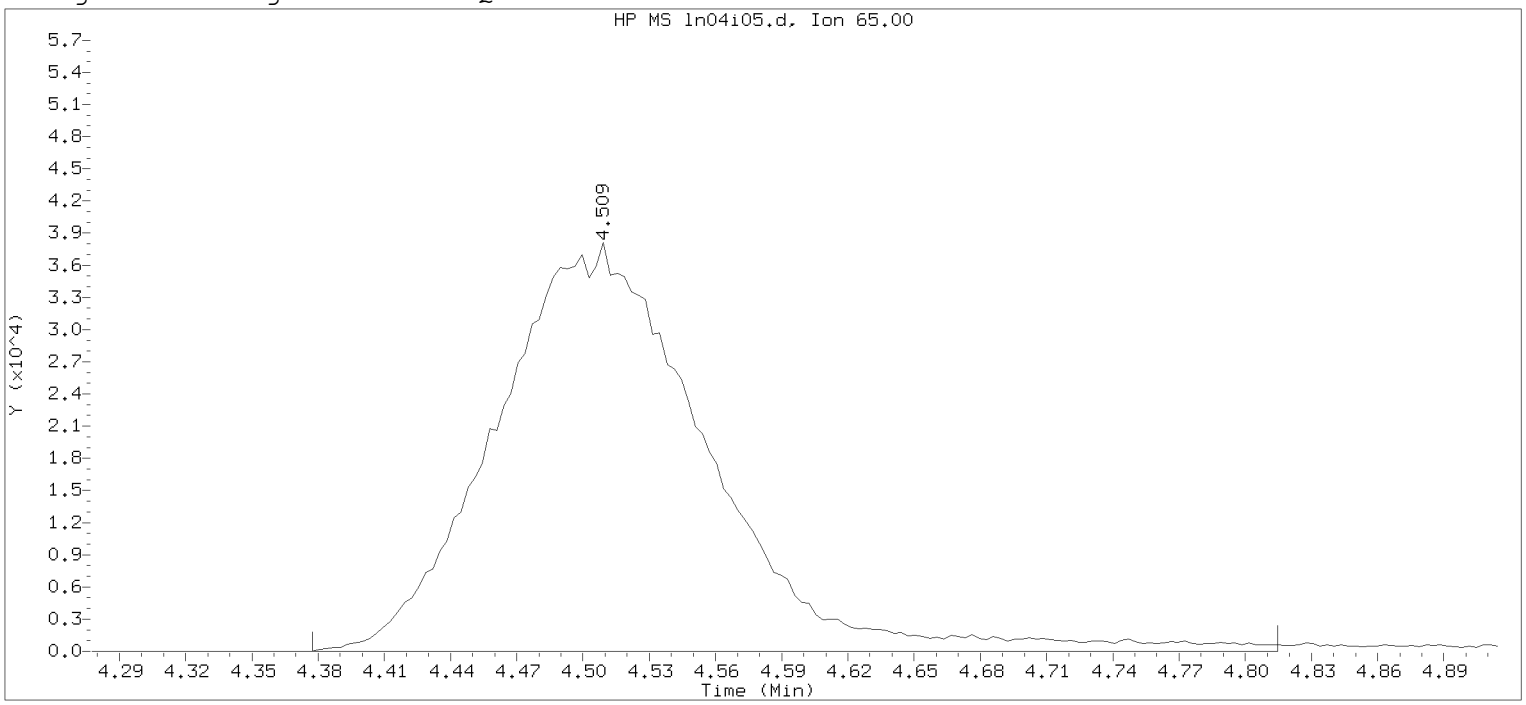
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

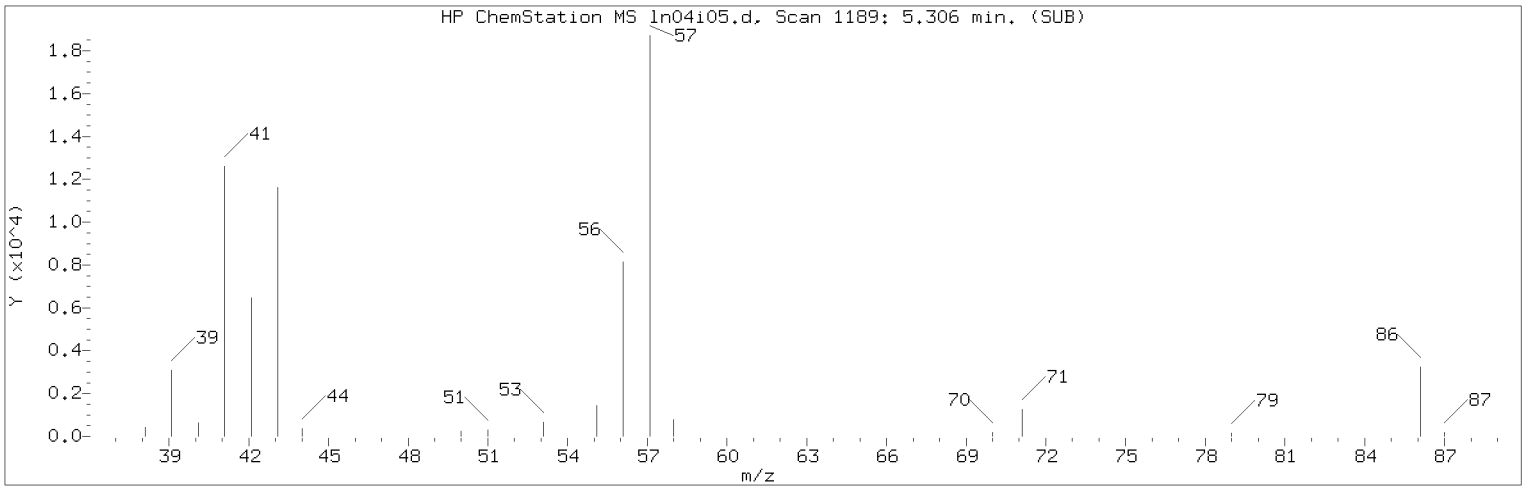
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

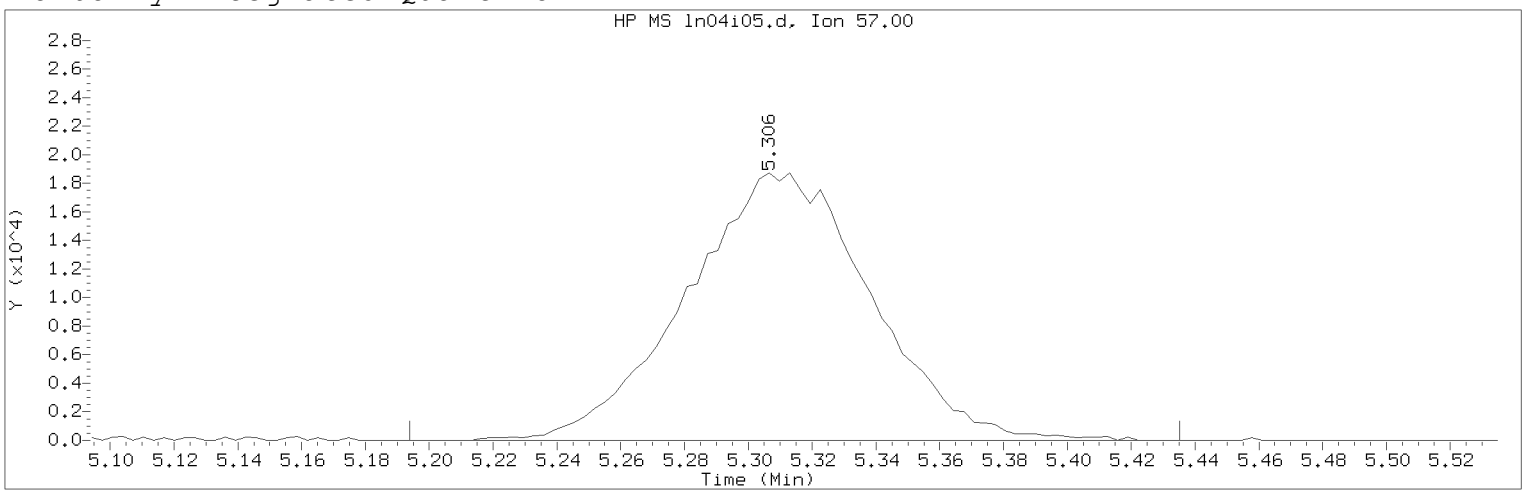
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 253092
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1035
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

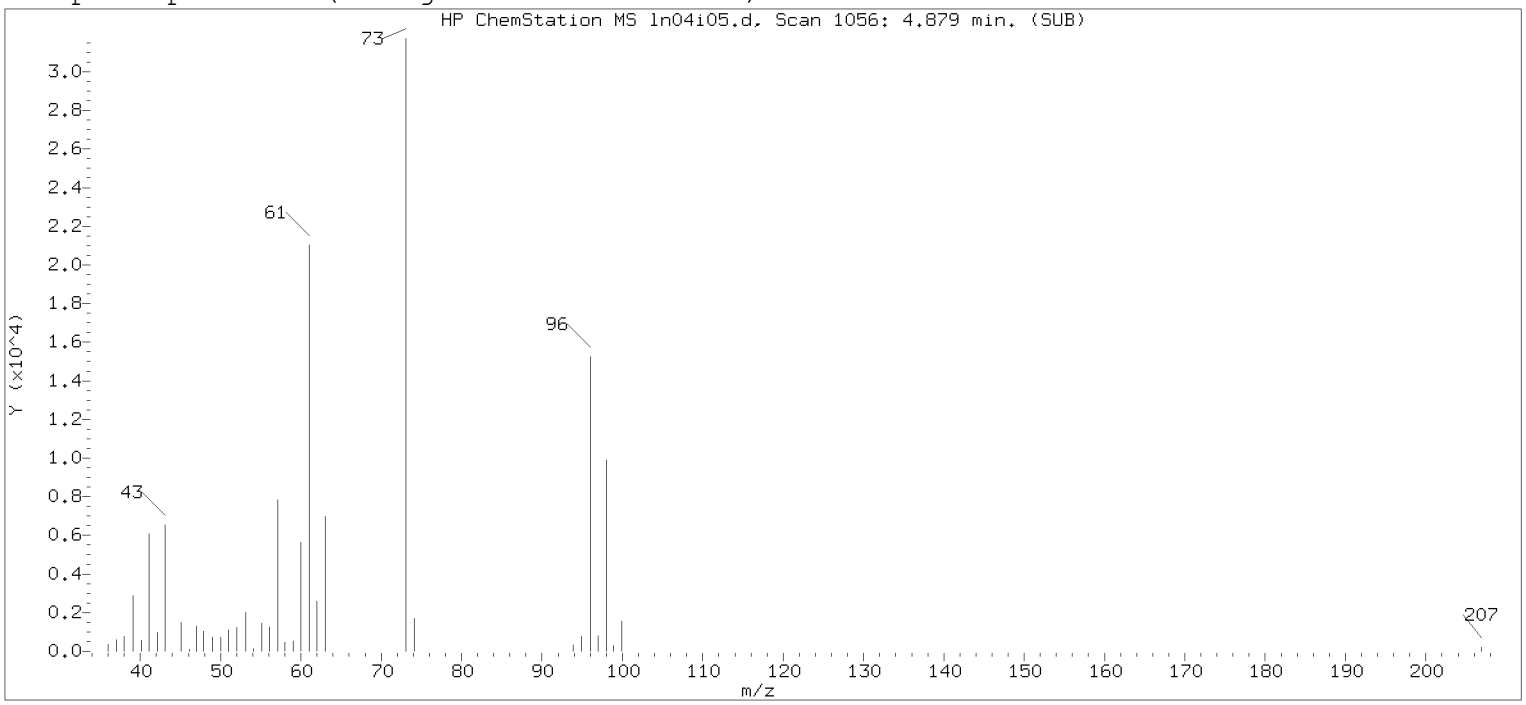
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1189
Retention Time (minutes): 5.306
Quant Ion : 57.00
Area (flag) : 75187M
On-Column Amount (ng) : 8.5083
Integration start scan : 1153 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

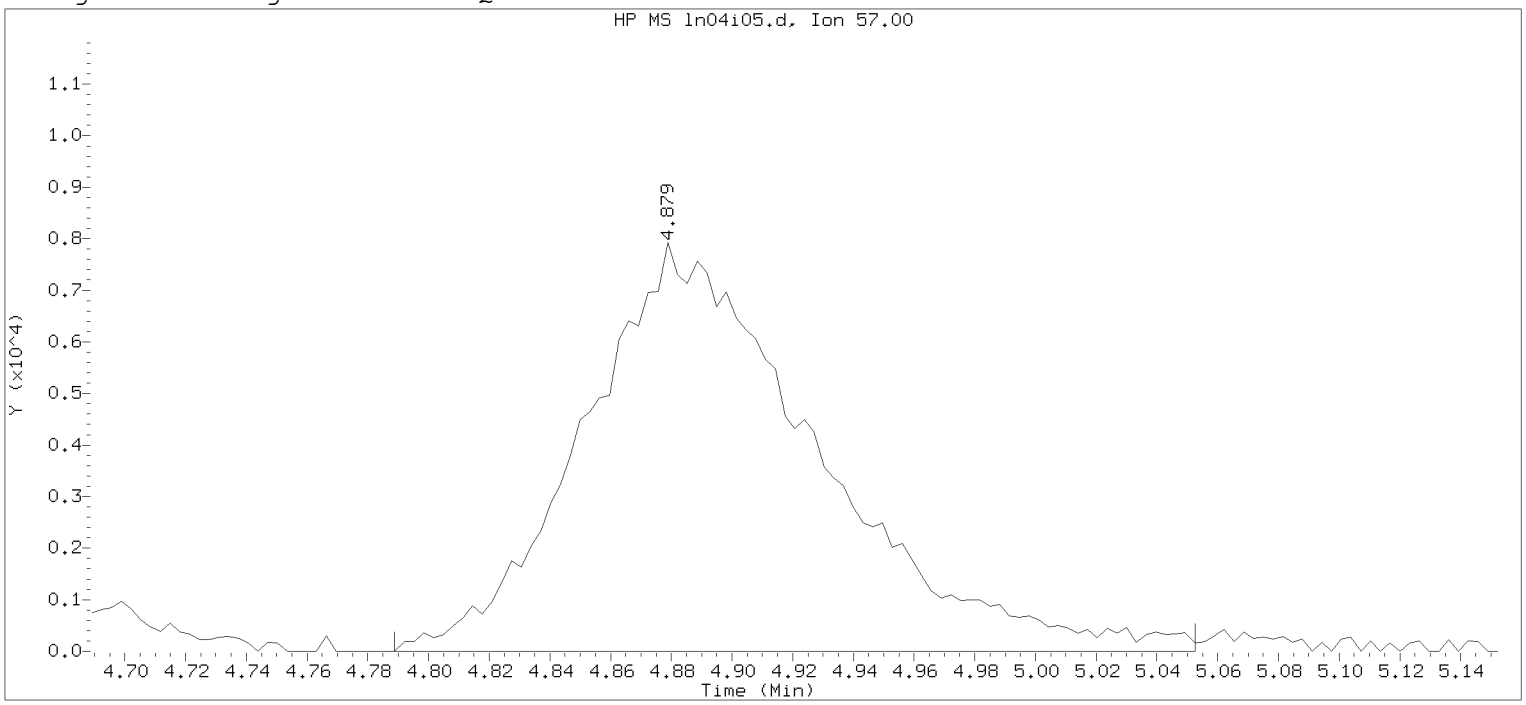
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

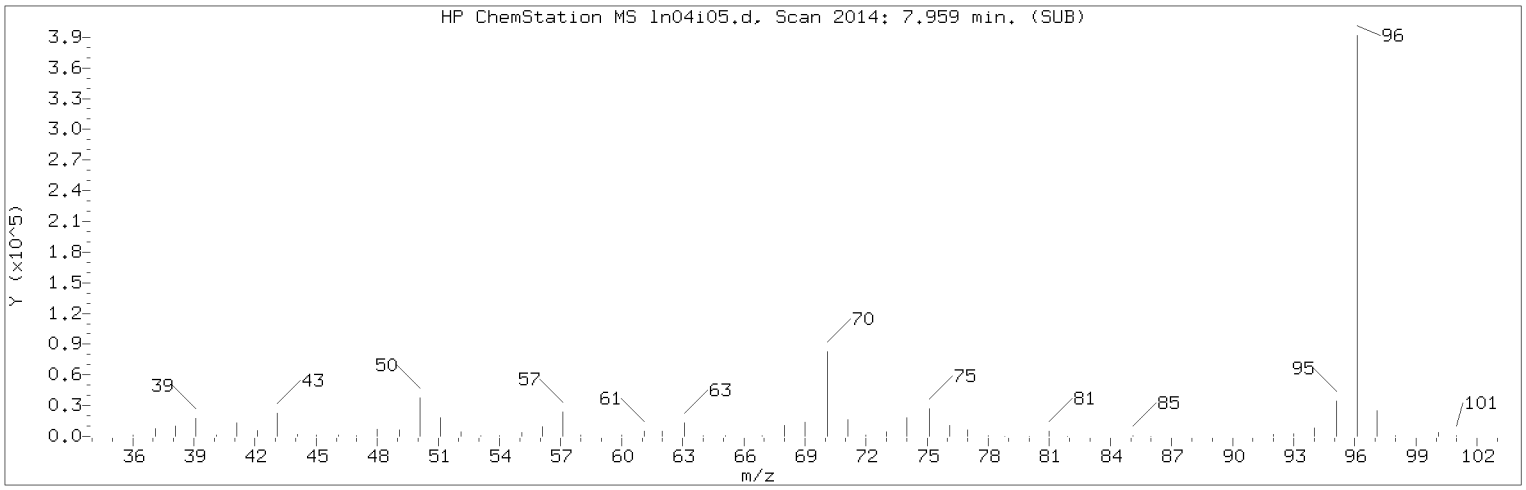
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

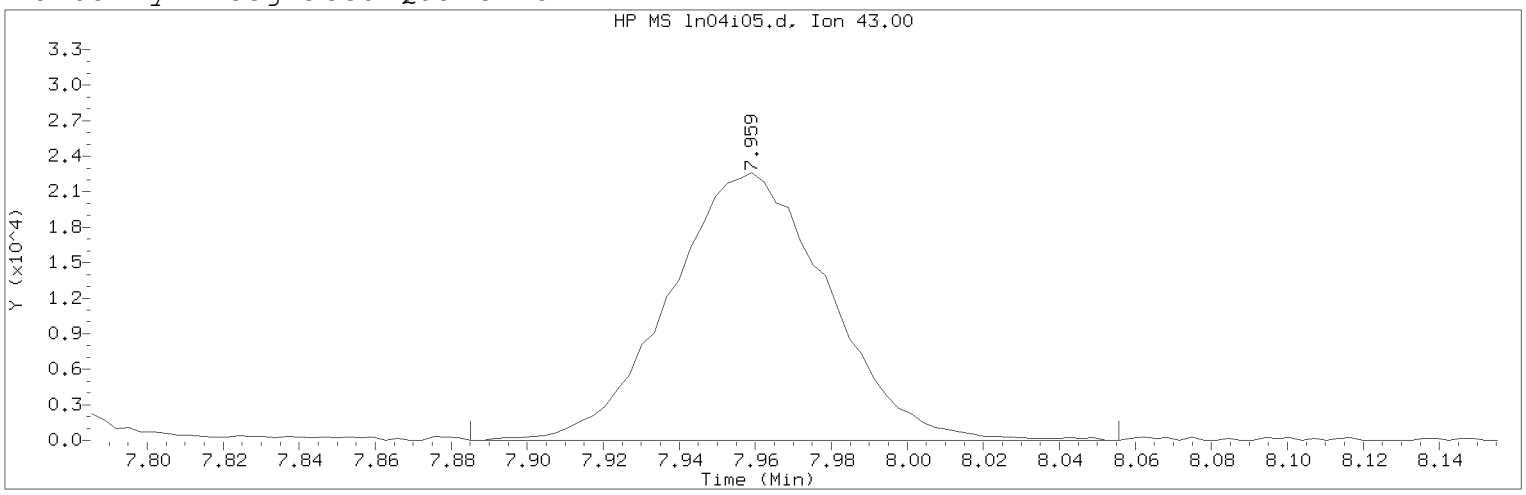
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1056		
Retention Time (minutes)	: 4.879		
Quant Ion	: 57.00		
Area	: 42116		
On-column Amount (ng)	: 11.5193		
Integration start scan	: 1027	Integration stop scan:	1109
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

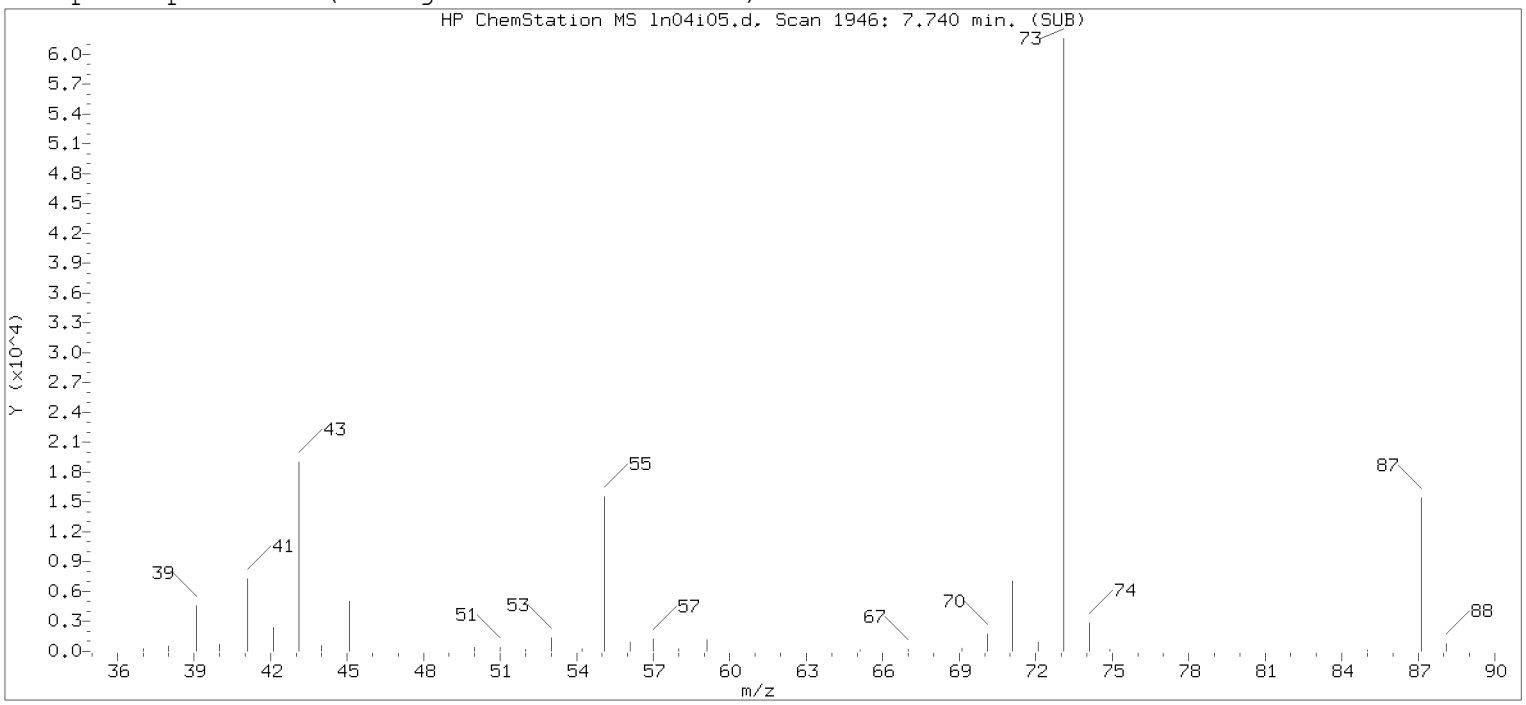
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2014
Retention Time (minutes): 7.959
Quant Ion : 43.00
Area (flag) : 65347MA
On-Column Amount (ng) : 7.9157
Integration start scan : 1990 Integration stop scan: 2043
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

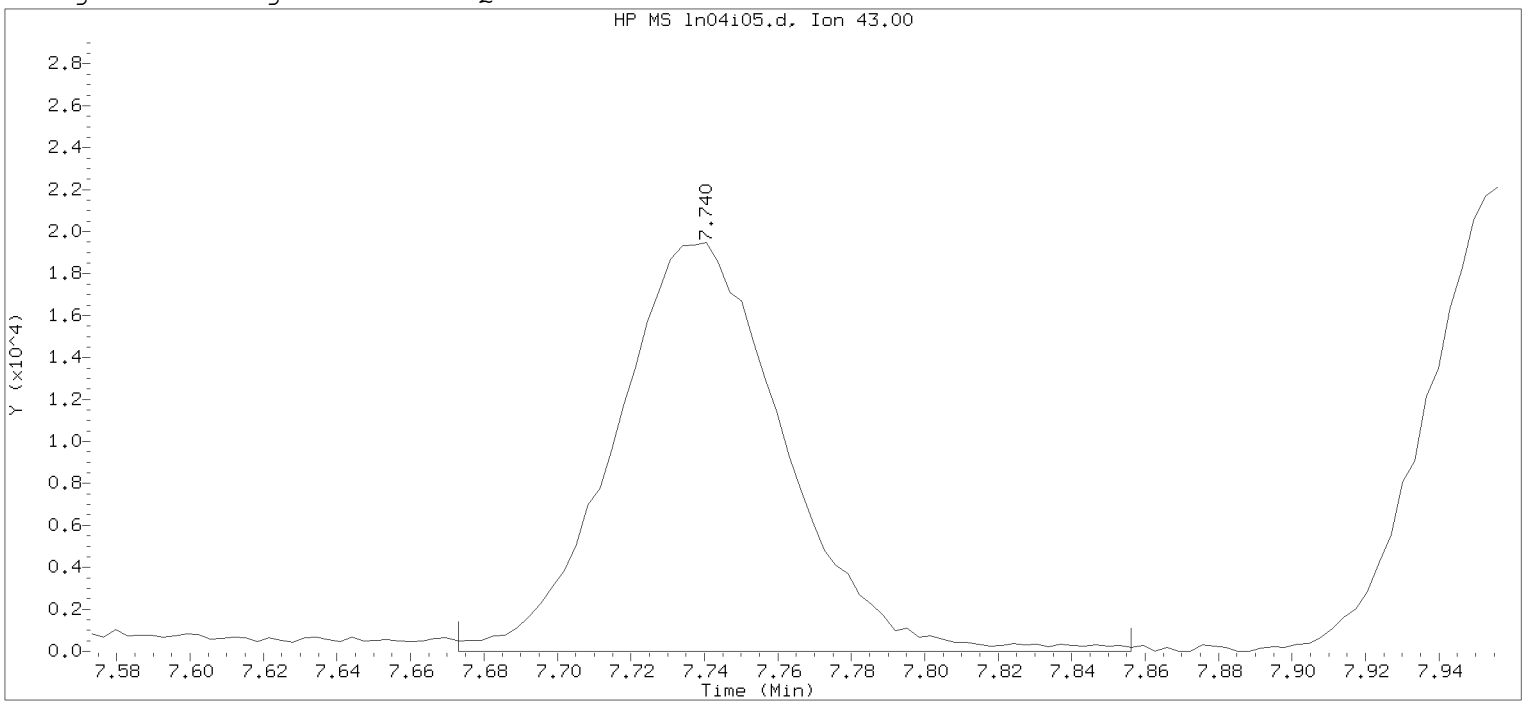
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

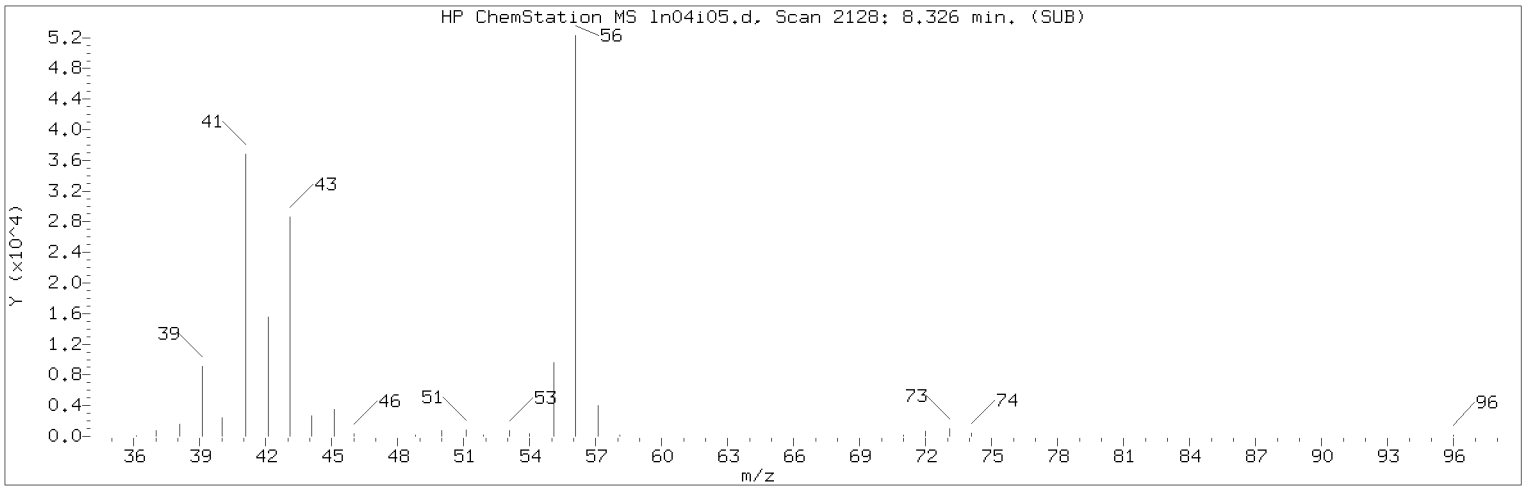
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

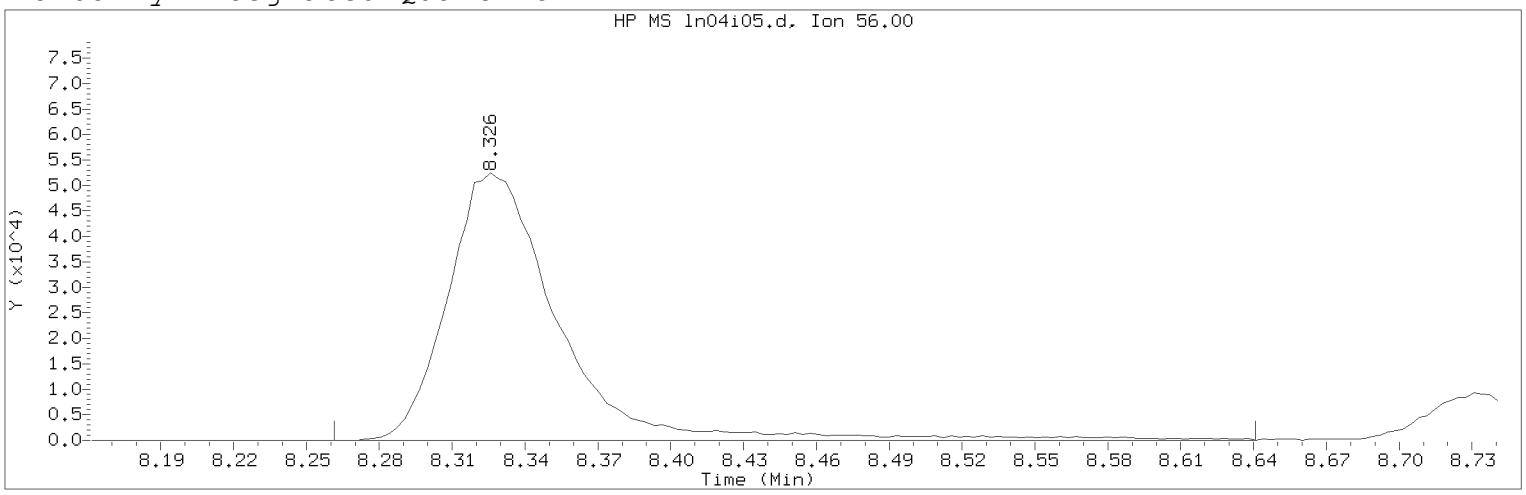
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.740
Quant Ion : 43.00
Area : 62104
On-column Amount (ng) : 10.1613
Integration start scan : 1924 Integration stop scan: 1981
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

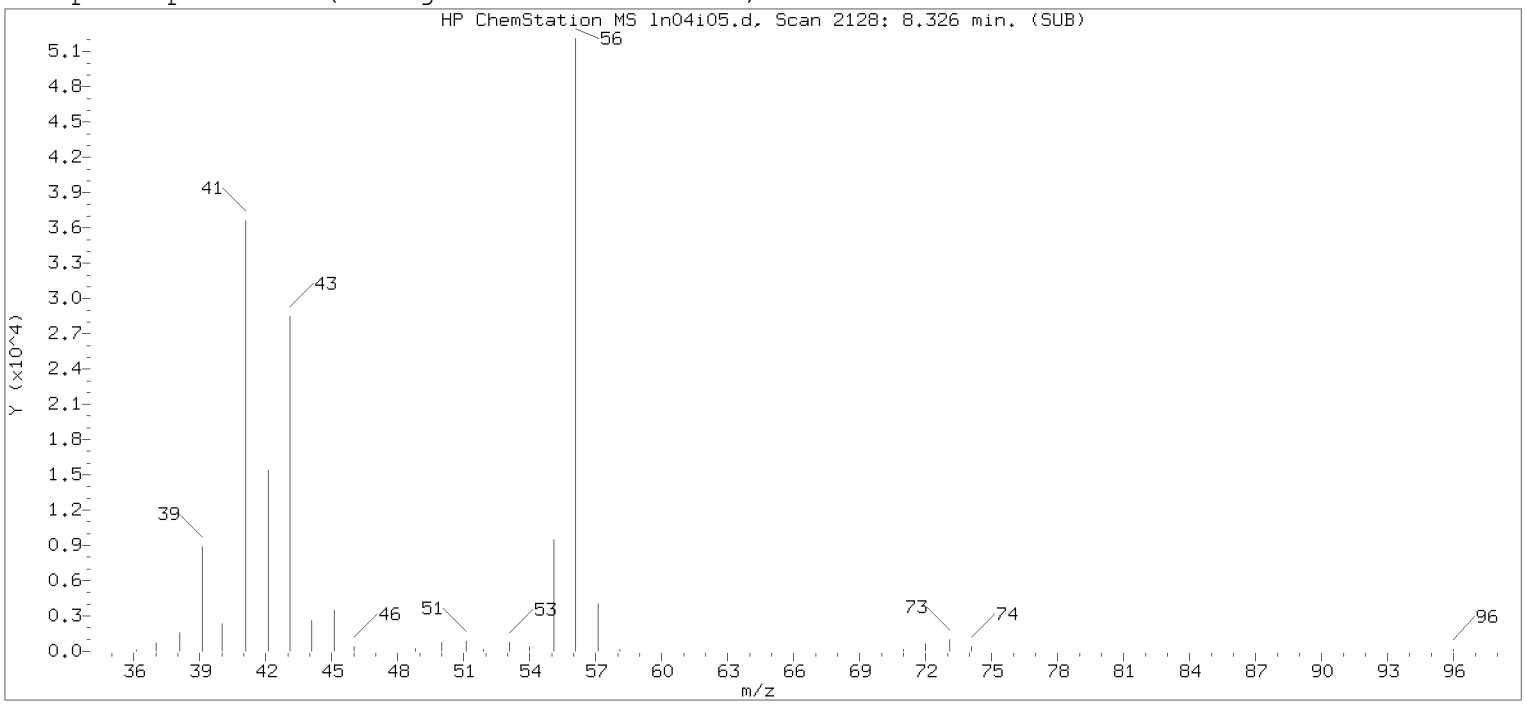
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area (flag) : 166674M
On-Column Amount (ng) : 518.8682
Integration start scan : 2107 Integration stop scan: 2225
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

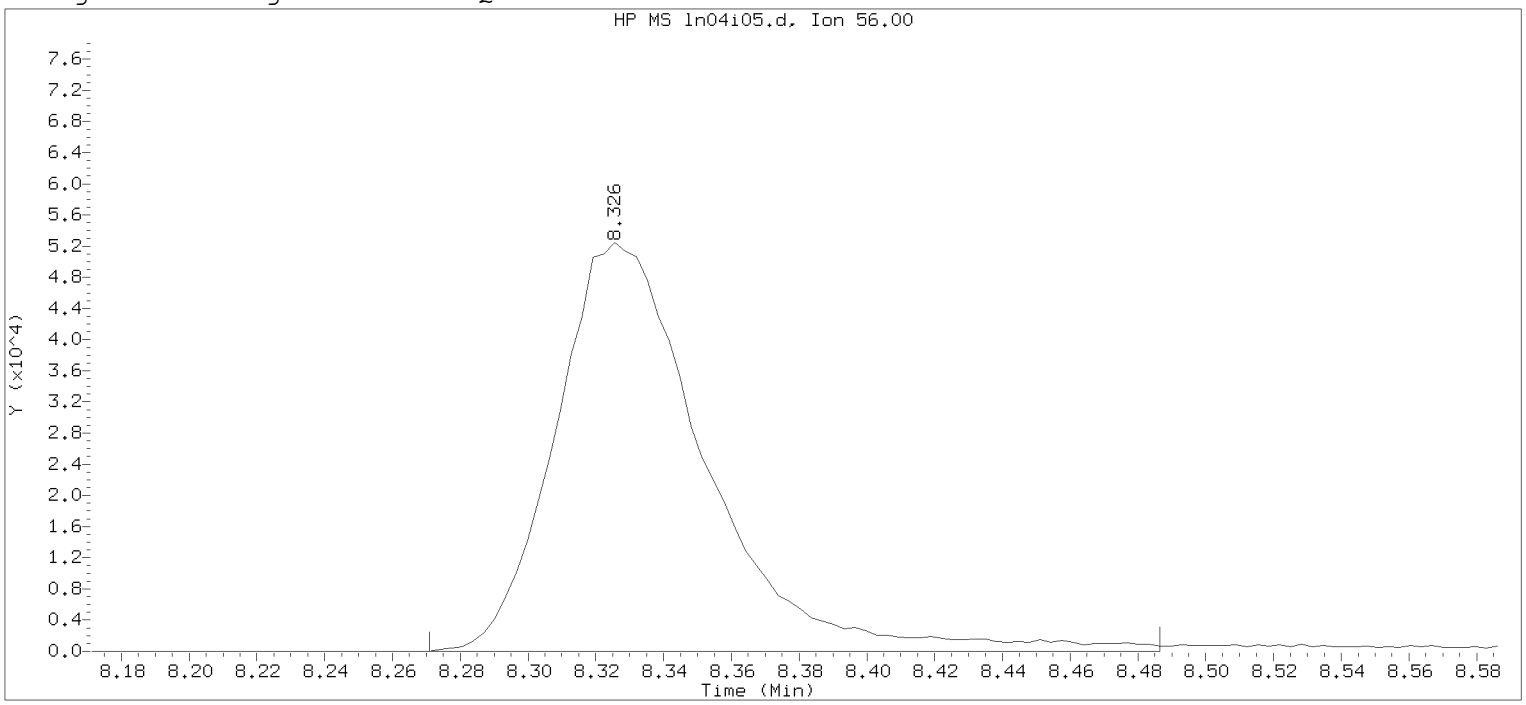
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

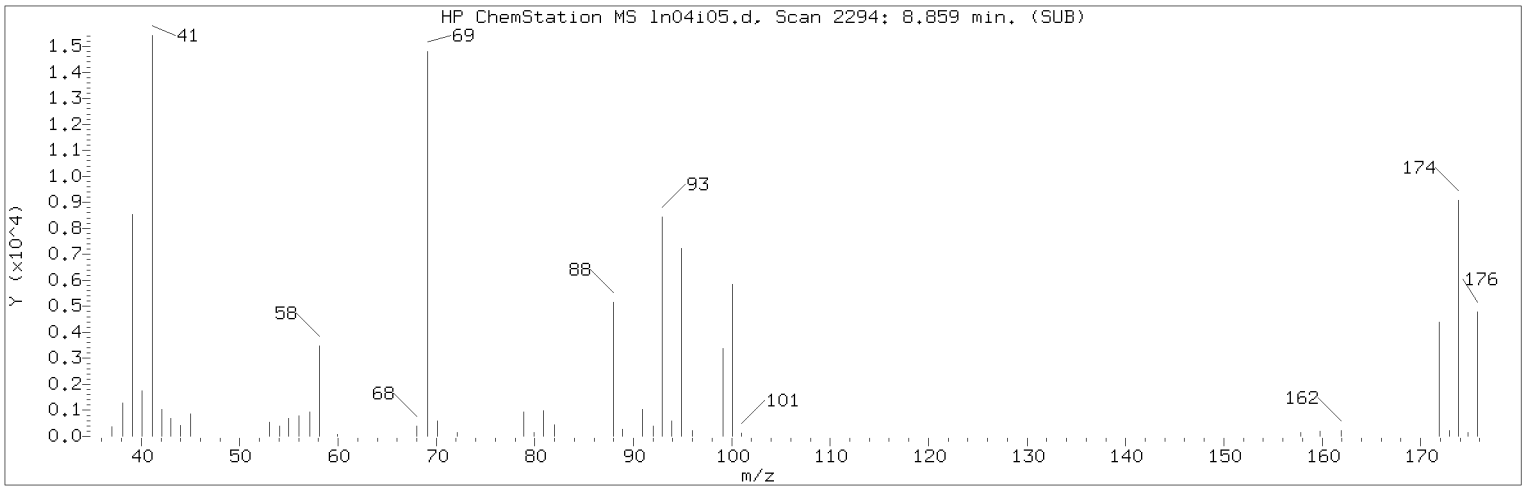
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

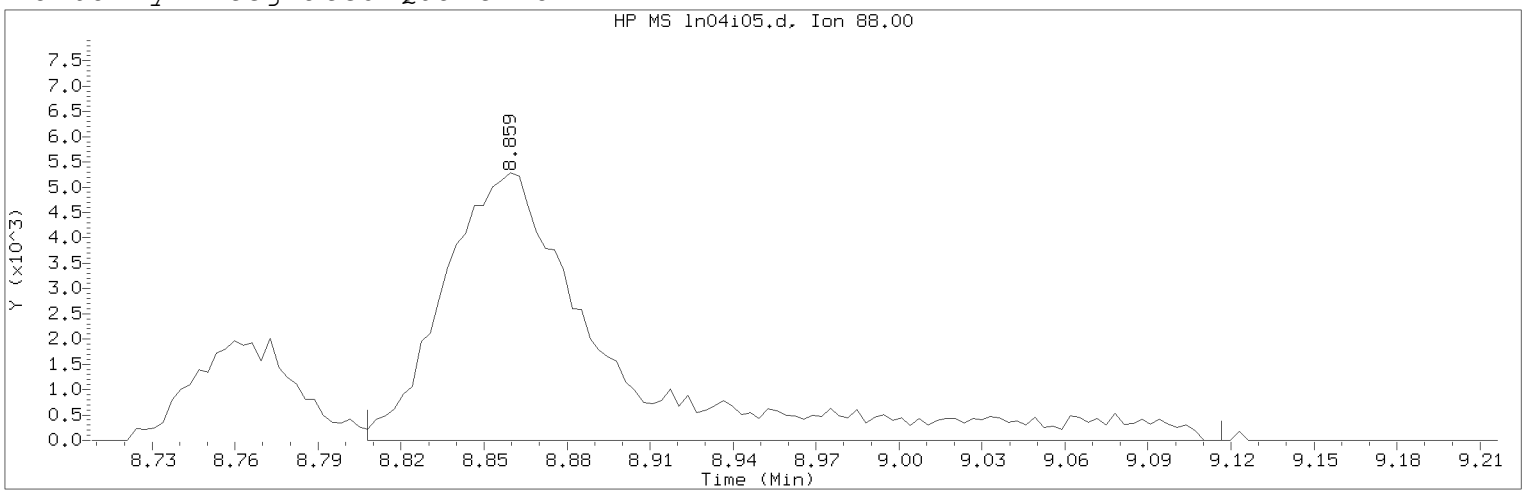
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area : 161642
On-column Amount (ng) : 524.2963
Integration start scan : 2110 Integration stop scan: 2177
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

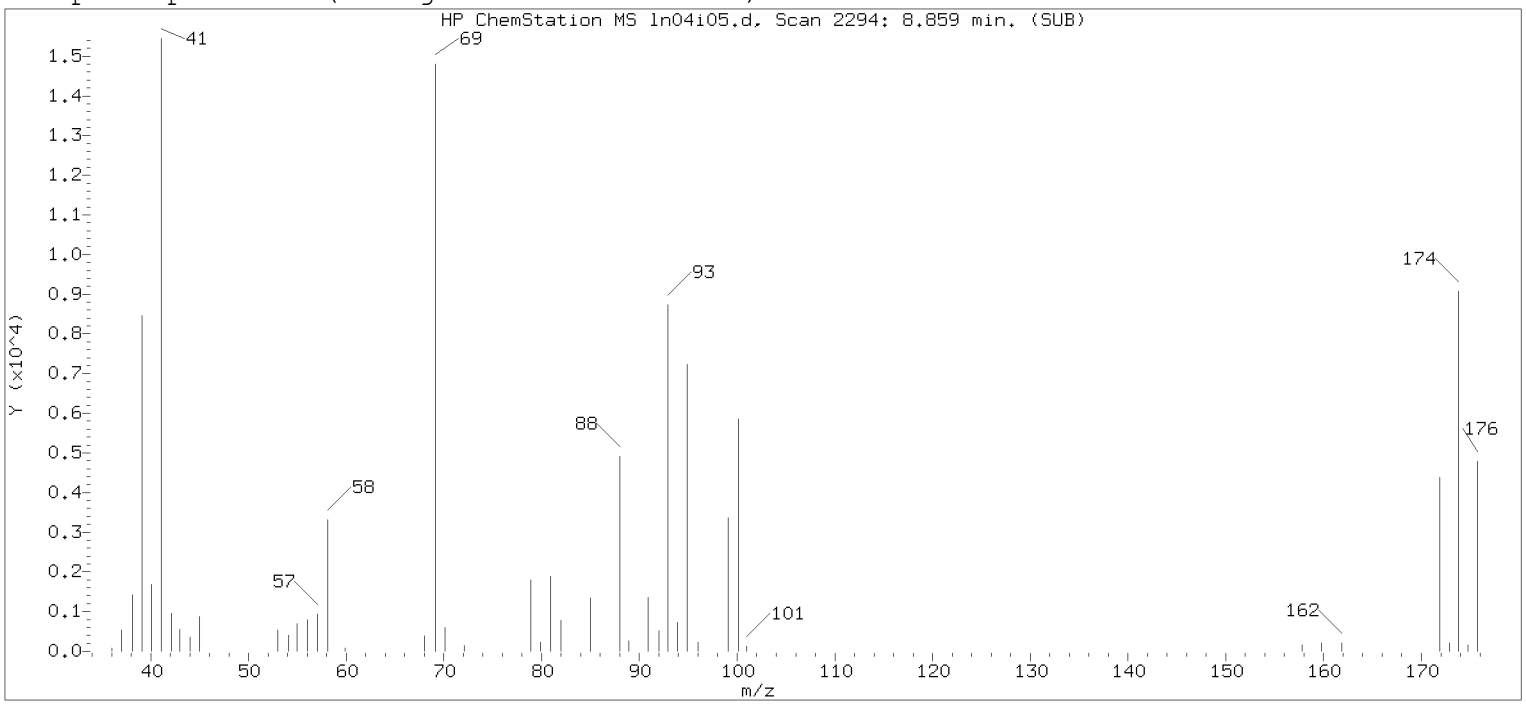
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2294
Retention Time (minutes): 8.859
Quant Ion : 88.00
Area (flag) : 22251M
On-Column Amount (ng) : 252.0176
Integration start scan : 2277 Integration stop scan: 2373
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

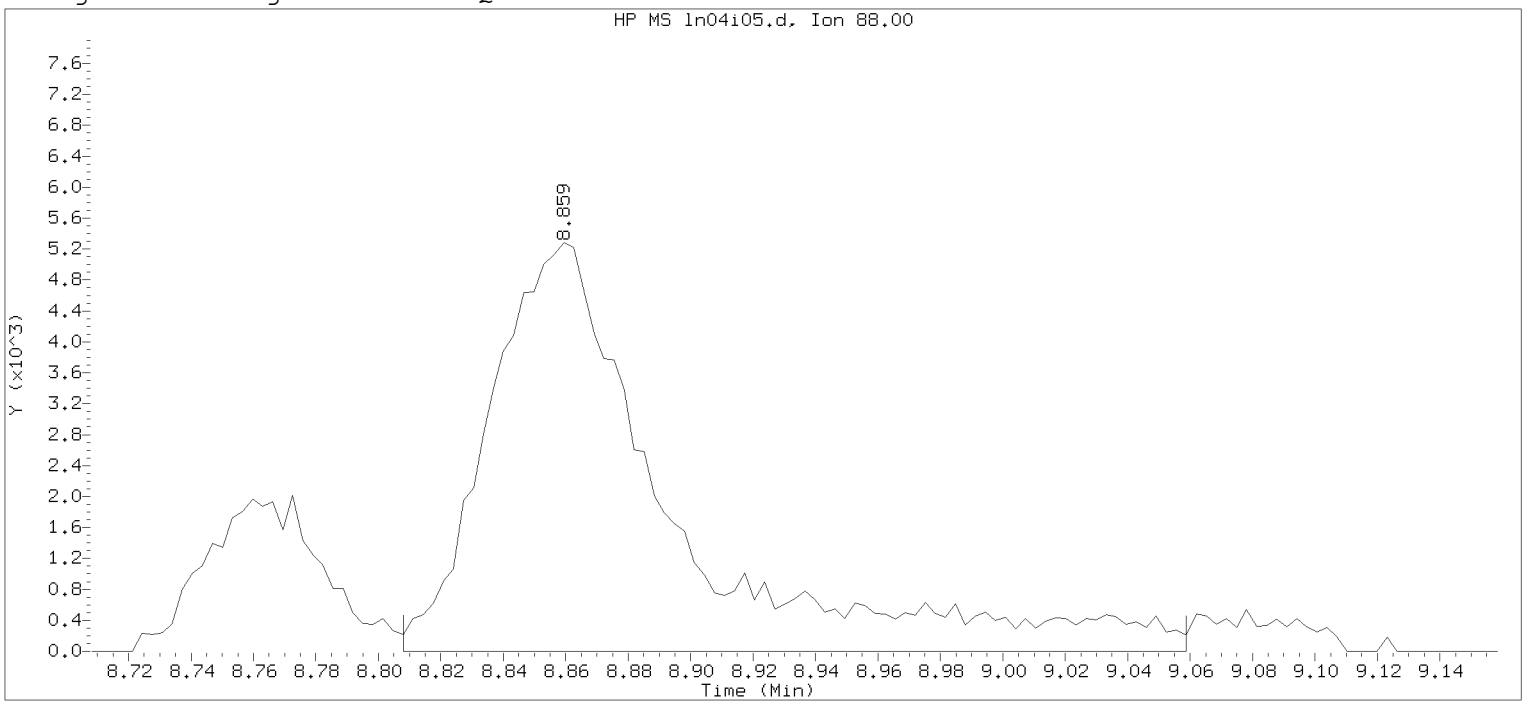
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

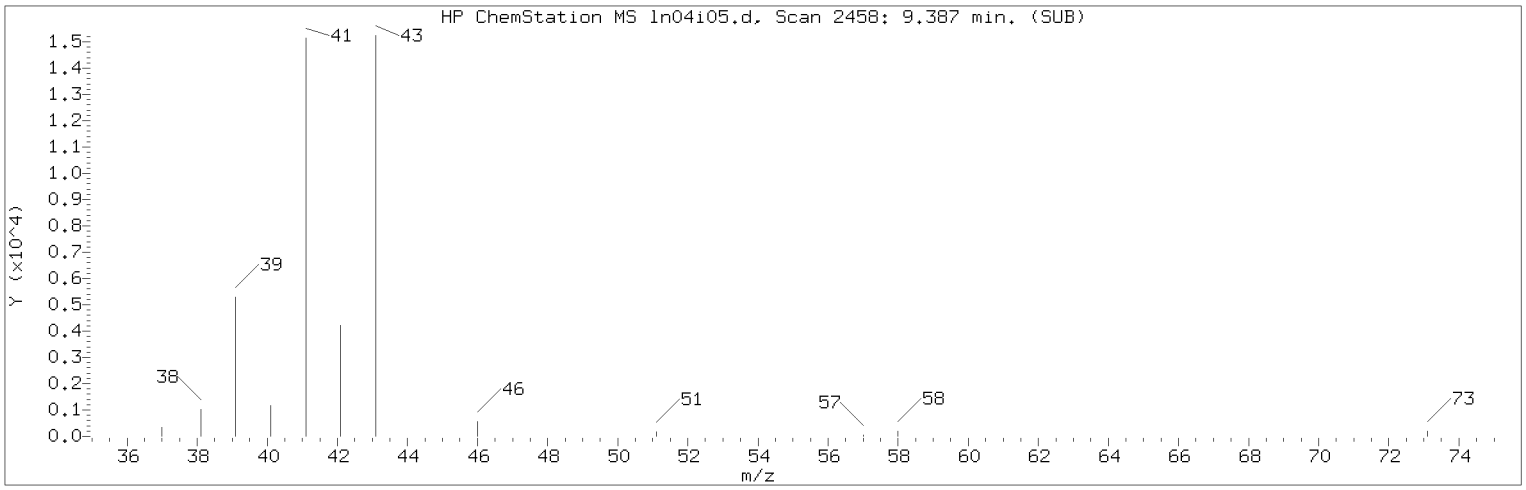
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

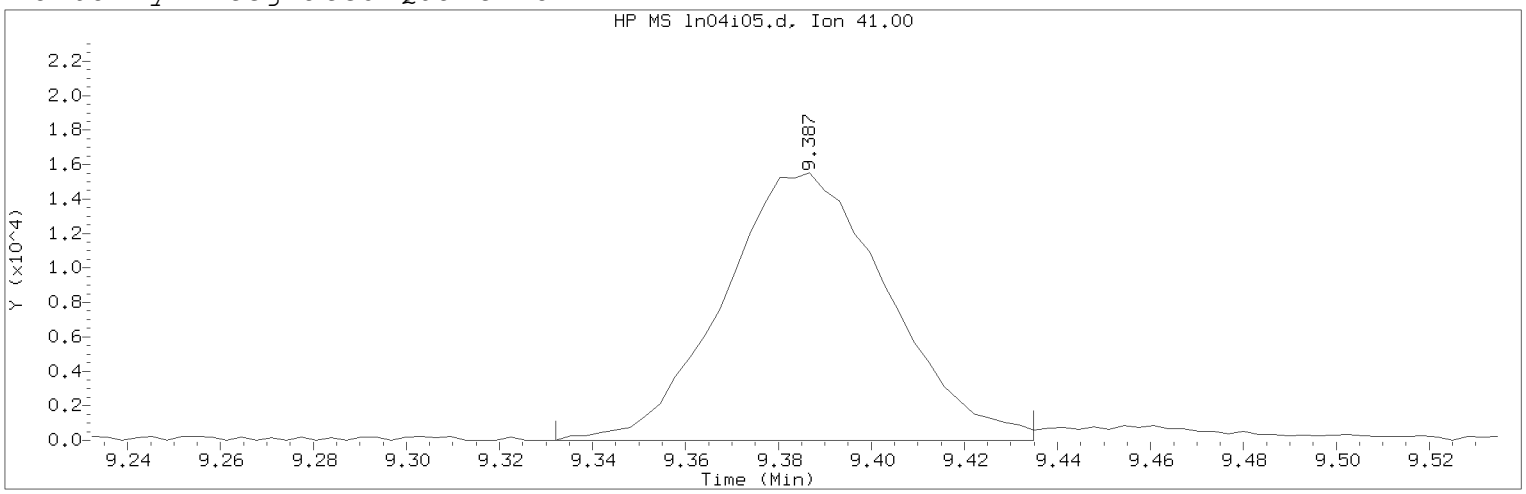
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2294
Retention Time (minutes): 8.859
Quant Ion : 88.00
Area : 21165
On-column Amount (ng) : 248.6410
Integration start scan : 2277 Integration stop scan: 2355
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

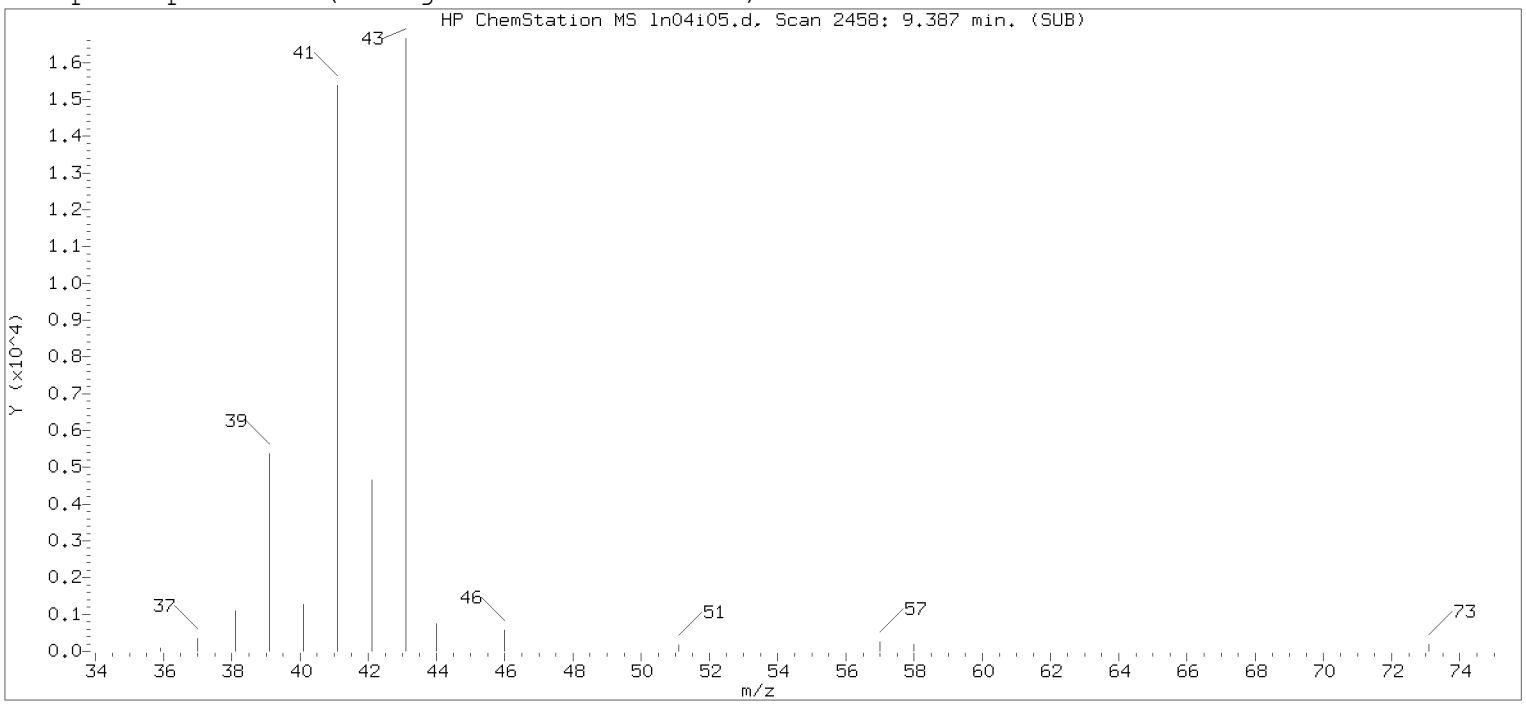
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2458
Retention Time (minutes): 9.387
Quant Ion : 41.00
Area (flag) : 38245M
On-Column Amount (ng) : 18.1785
Integration start scan : 2440 Integration stop scan: 2472
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

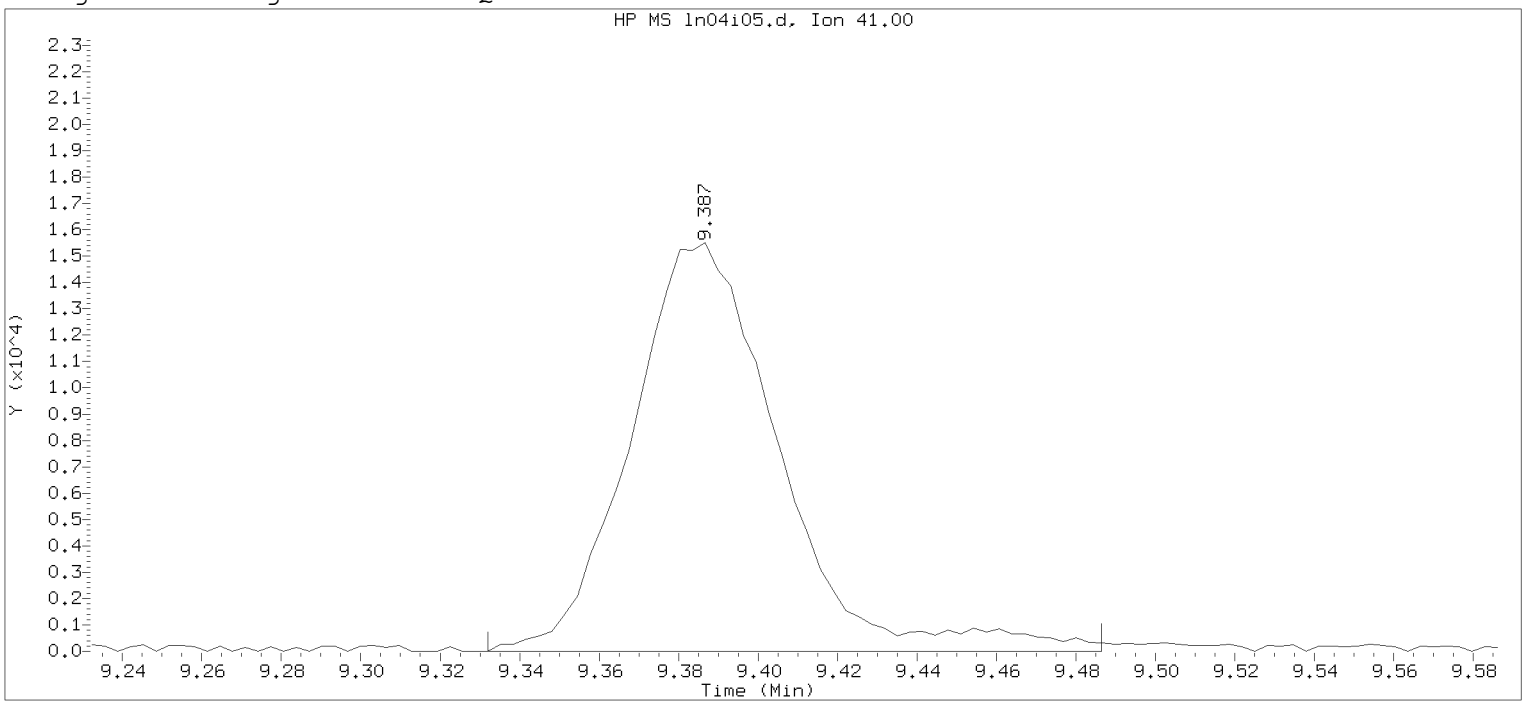
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

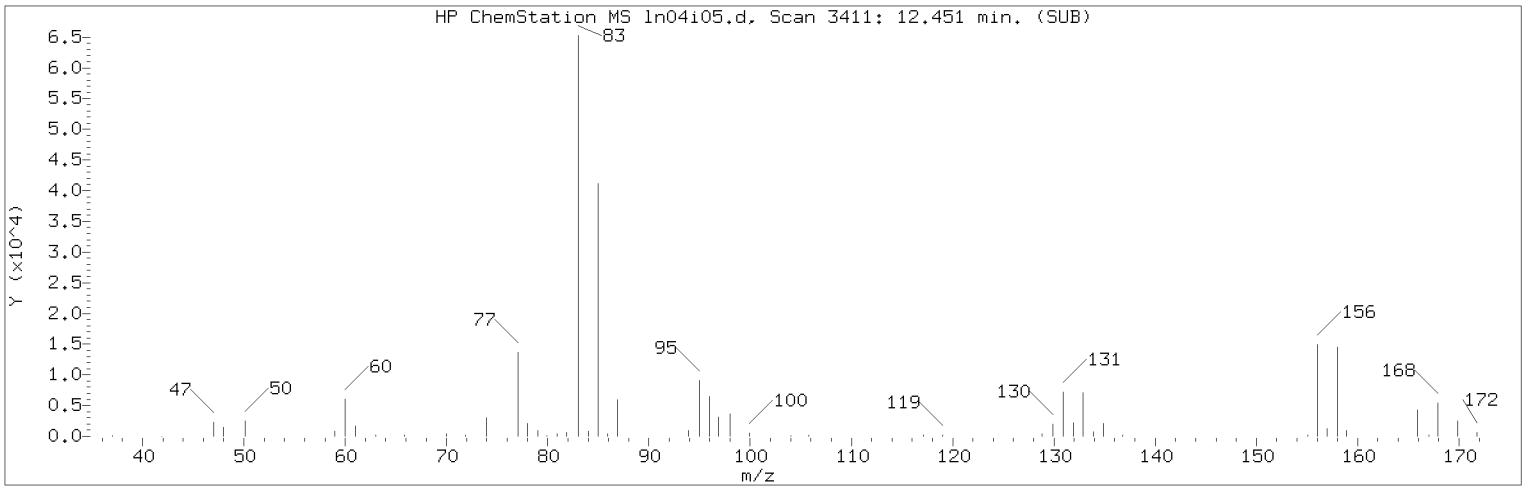
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

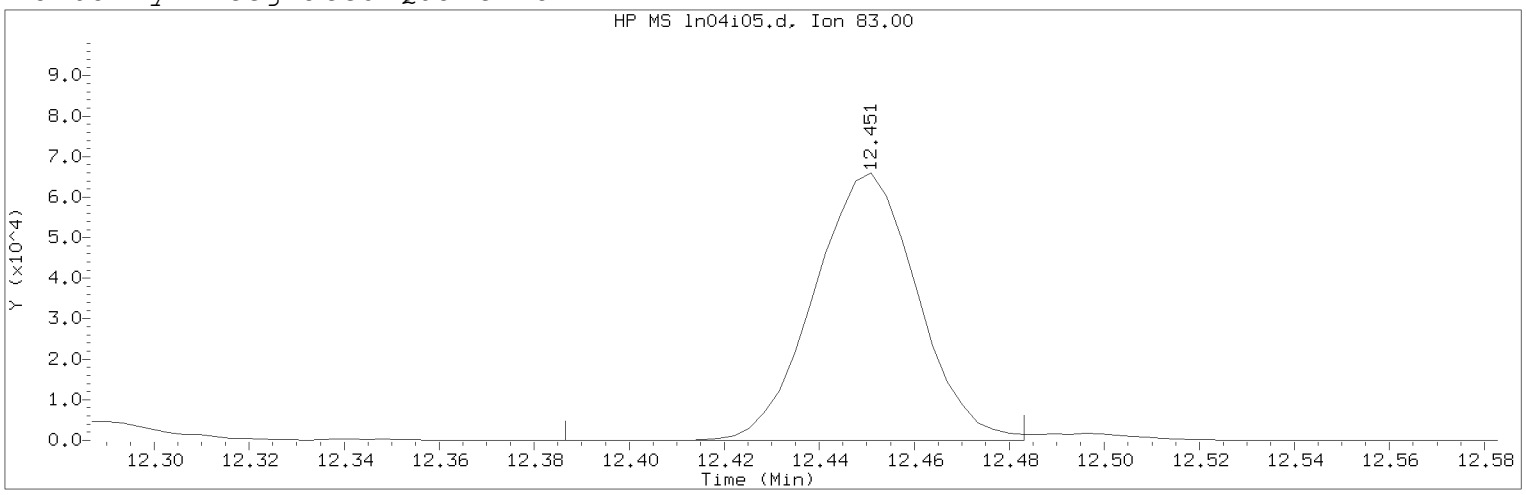
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2458
Retention Time (minutes): 9.387
Quant Ion : 41.00
Area : 40127
On-column Amount (ng) : 18.9522
Integration start scan : 2440 Integration stop scan: 2488
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

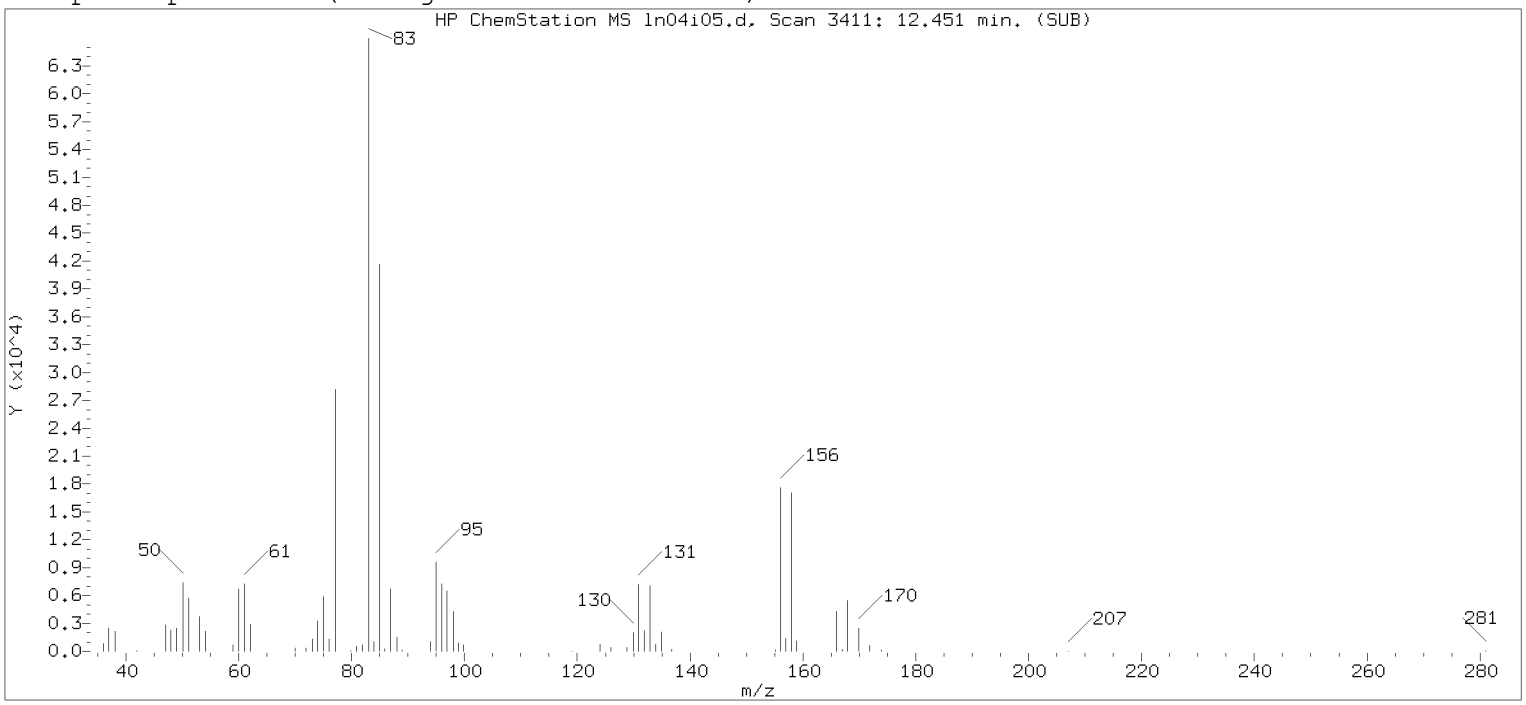
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 99221M
On-Column Amount (ng) : 10.5834
Integration start scan : 3390 Integration stop scan: 3420
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

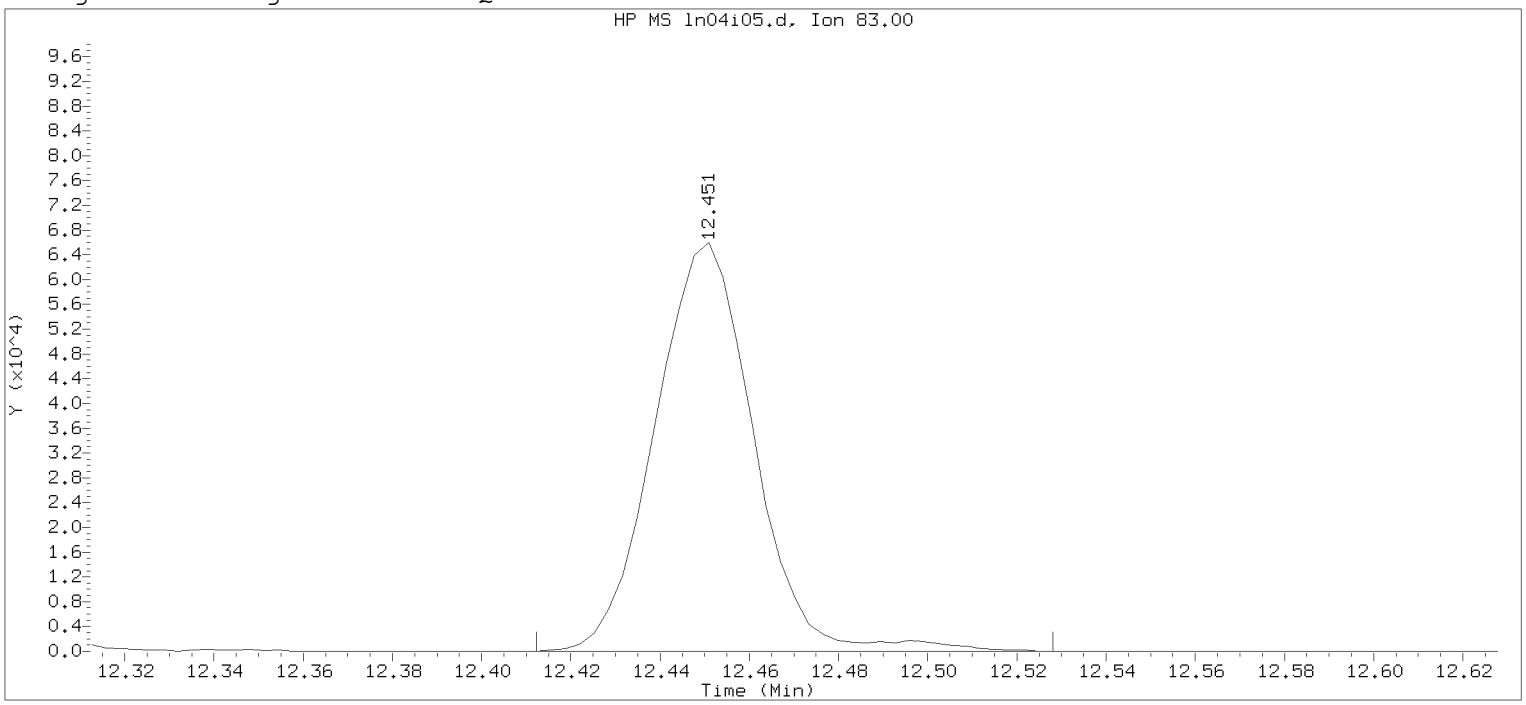
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

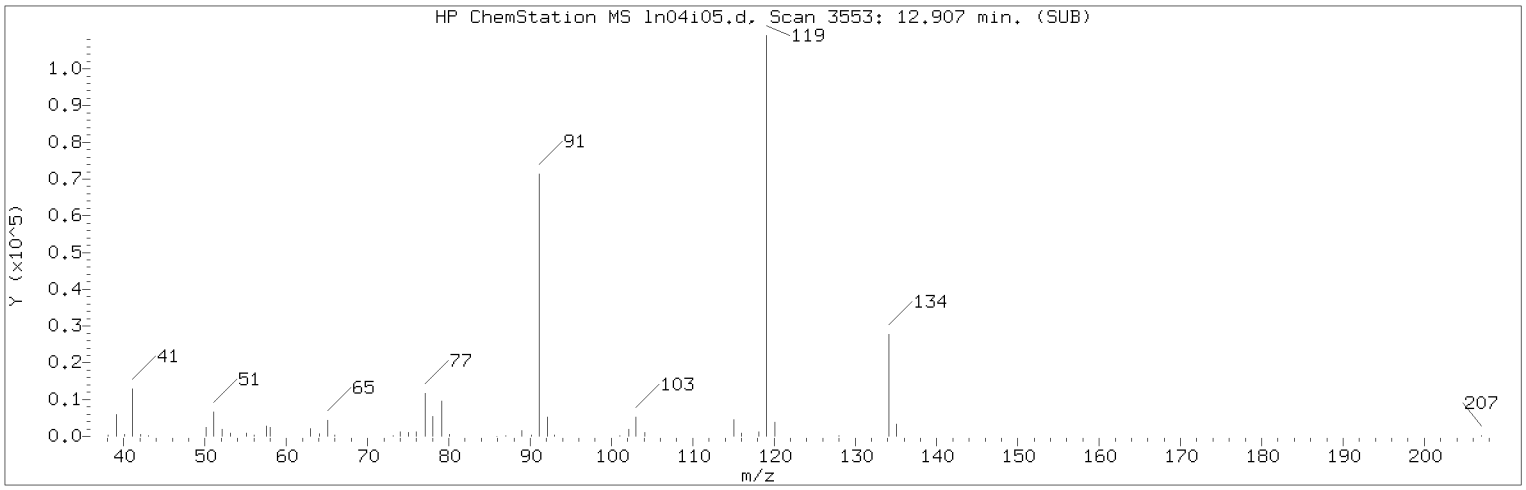
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

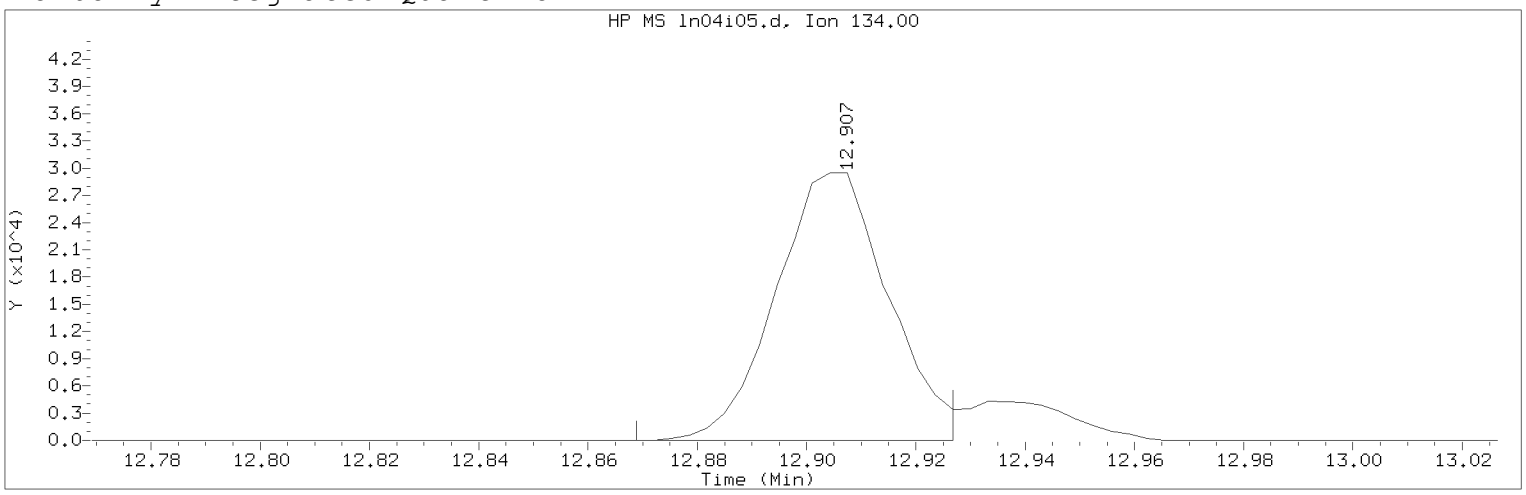
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 101487
On-column Amount (ng) : 10.6325
Integration start scan : 3398 Integration stop scan: 3434
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

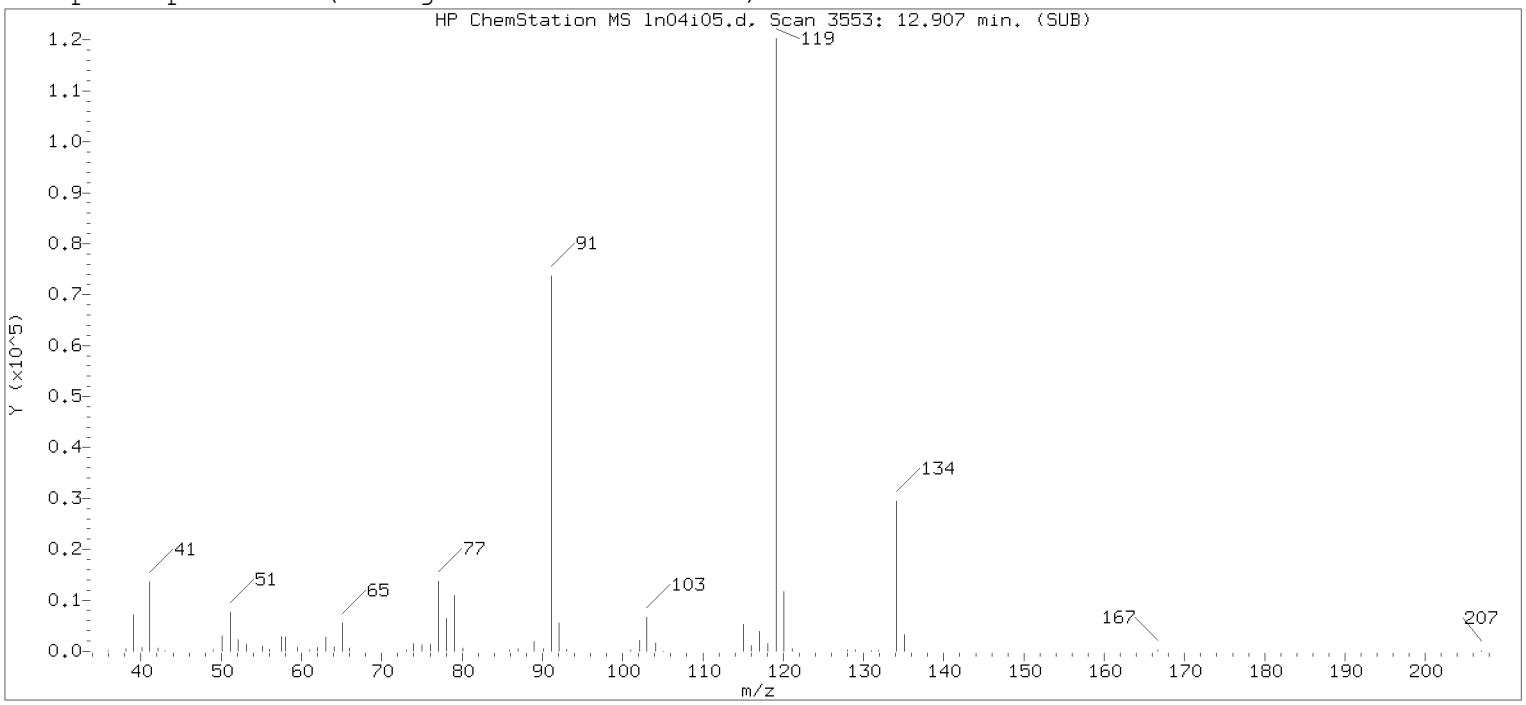
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area (flag) : 42119M
On-Column Amount (ng) : 8.5994
Integration start scan : 3540 Integration stop scan: 3558
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

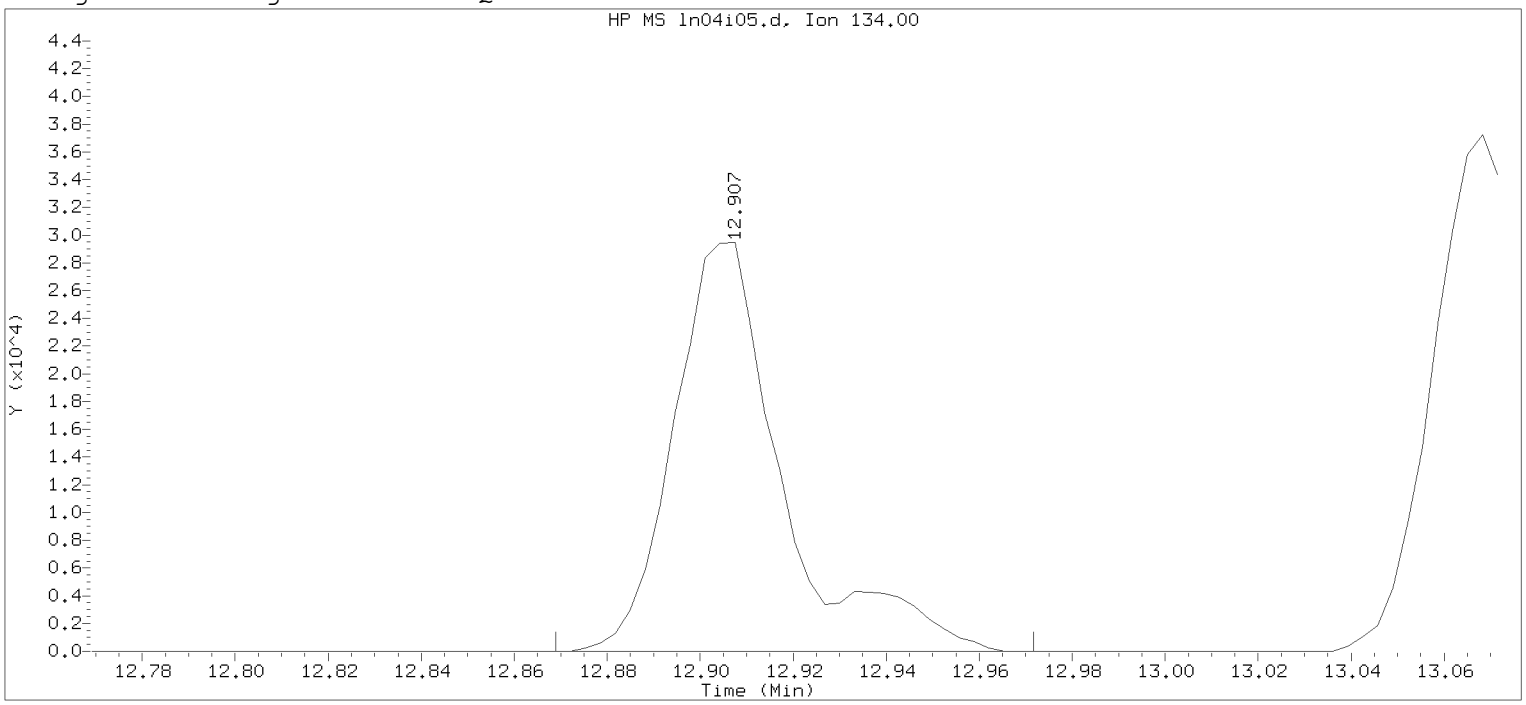
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



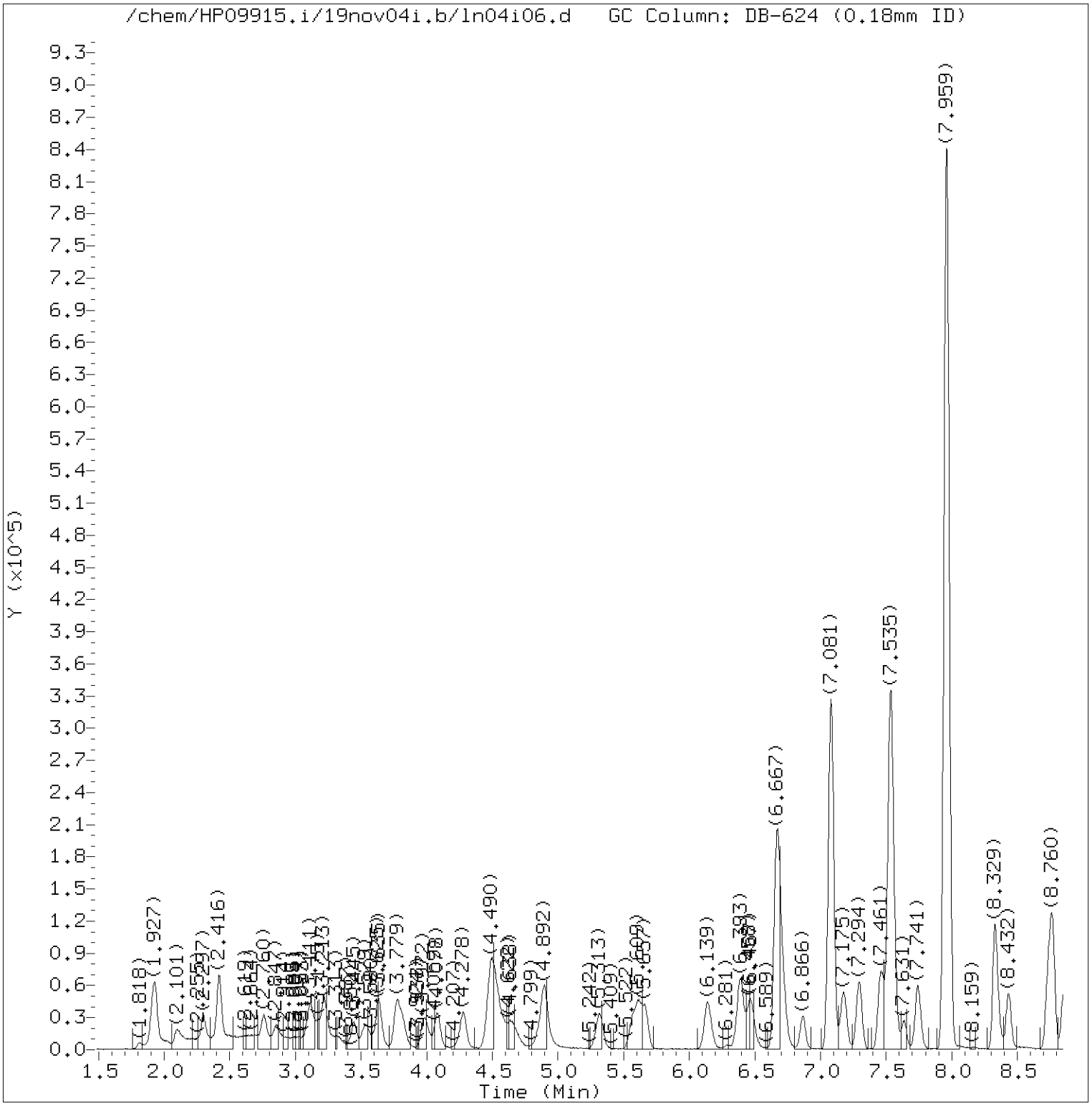
Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area : 47747
On-column Amount (ng) : 9.3569
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

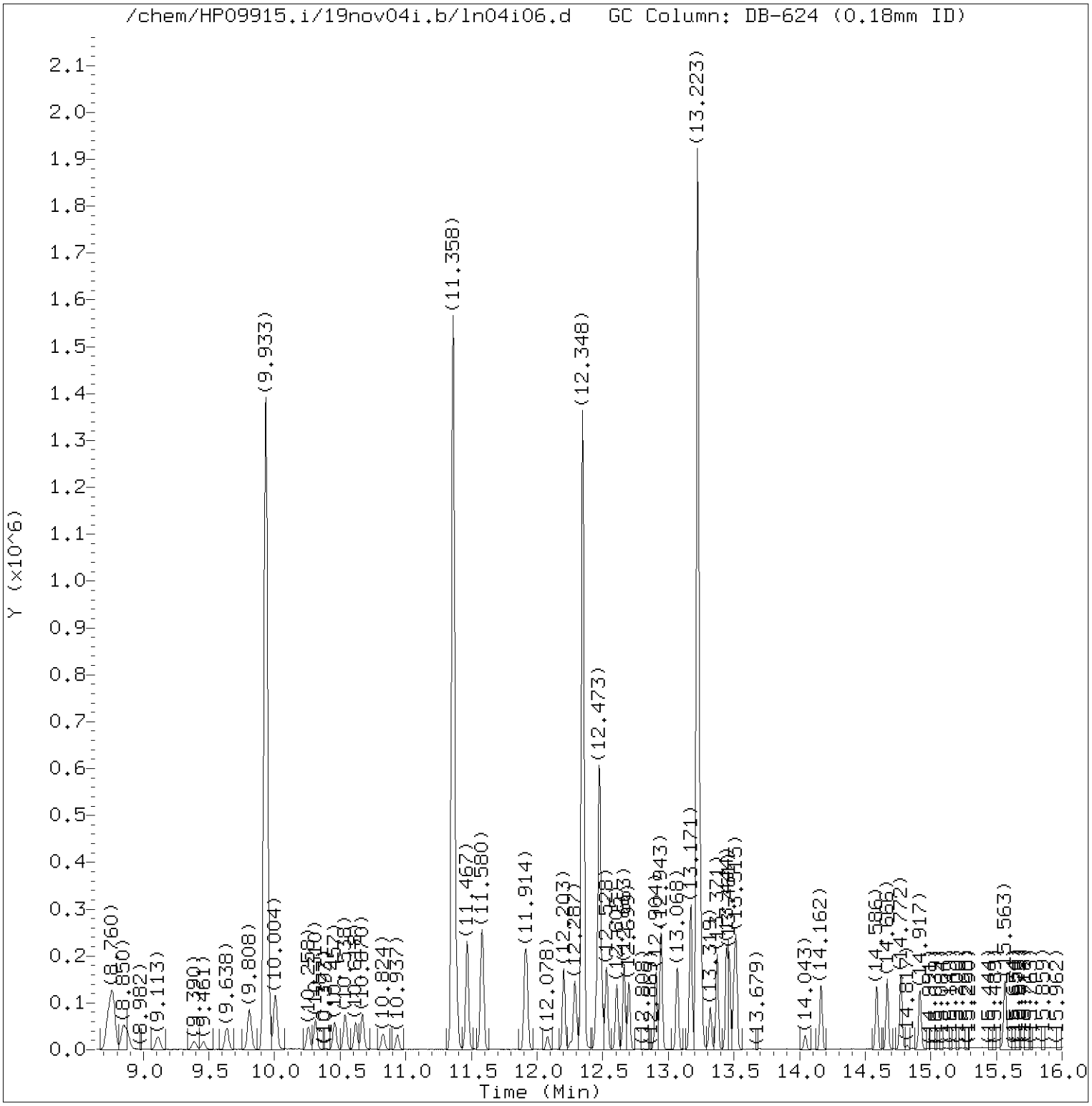
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.098	85	31217M	3.898
4) Chloromethane	(2)	2.297	50	32031	4.150
6) Vinyl Chloride	(2)	2.416	62	30864	4.006
5) 1,3-Butadiene	(2)	2.419	39	27249M	4.252
8) Bromomethane	(2)	2.760	94	23202	4.202
9) Chloroethane	(2)	2.860	64	17298	4.086
10) Dichlorofluoromethane	(2)	3.107	67	40740M	4.015
12) Trichlorofluoromethane	(2)	3.168	101	33532	4.043
11) n-Pentane	(2)	3.223	43	42826M	4.369
14) Ethyl ether	(2)	3.445	59	21059	3.929
15) Freon 123a	(2)	3.538	67	27312	4.094
16) Acrolein	(1)	3.635	56	72021	36.633
17) 1,1-Dichloroethene	(2)	3.773	96	19372	3.979
17) 1,1-Dichloroethene	(2)	3.773	63	9734	3.988
19) Freon 113	(2)	3.805	101	22601	4.069
18) Acetone	(1)	3.815	58	6763M	7.673
22) Methyl Iodide	(2)	3.972	142	39671	3.933
21) 2-Propanol	(1)	4.004	45	45871	72.395
23) Carbon Disulfide	(2)	4.082	76	71681	3.907
27) Methyl Acetate	(2)	4.258	43	24928M	3.976
25) Allyl Chloride	(2)	4.281	41	34775	3.982
28) Methylene Chloride	(2)	4.477	84	22693	3.917
29)*t-Butyl alcohol-d10	(1)	4.512	65	262044M	250.000
30) t-Butyl alcohol	(1)	4.638	59	80219	72.713
31) Acrylonitrile	(2)	4.840	53	12699	3.765
32) trans-1,2-Dichloroethene	(2)	4.901	96	22231	3.947
33) Methyl Tertiary Butyl Ether	(2)	4.901	73	71515	3.869
34) n-Hexane	(2)	5.323	57	33969M	3.877
36) 1,1-Dichloroethane	(2)	5.564	63	39317	4.002
38) di-Isopropyl ether	(2)	5.615	45	72628	3.833
39) 2-Chloro-1,3-butadiene	(2)	5.663	53	34190	3.879
40) Ethyl t-butyl ether	(2)	6.139	59	70845	3.853
43) 1,2-Dichloroethene (Total)	(2)		96	47253	7.906
44) 2-Butanone	(2)	6.371	43	32547	7.516
42) cis-1,2-Dichloroethene	(2)	6.390	96	25022	3.958
45) 2,2-Dichloropropane	(2)	6.400	77	29877	3.912
47) Propionitrile	(1)	6.467	54	100934	73.427
48) Methacrylonitrile	(2)	6.670	67	134092	36.850

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.718	128	12879	3.842
50) Tetrahydrofuran	(1)	6.734	71	9128	7.351
51) Chloroform	(2)	6.869	83	36176	3.850
52)$Dibromofluoromethane	(2)	7.081	113	280667	49.988
52)$Dibromofluoromethane	(2)	7.078	111	287593	50.237
53) 1,1,1-Trichloroethane	(2)	7.091	97	31167	3.886
54) Cyclohexane	(2)	7.178	56	42347	3.949
54) Cyclohexane	(2)	7.175	84	36627	3.932
54) Cyclohexane	(2)	7.181	69	13119	3.955
56) Carbon Tetrachloride	(2)	7.287	117	25509	3.750
55) 1,1-Dichloropropene	(2)	7.297	75	30762	3.960
58) Isobutyl Alcohol	(1)	7.464	41	65125	175.416
57)$1,2-Dichloroethane-d4	(2)	7.532	102	72246	50.488
57)$1,2-Dichloroethane-d4	(2)	7.535	65	323654	50.754
57)$1,2-Dichloroethane-d4	(2)	7.538	104	45694	49.994
60) Benzene	(2)	7.564	78	92488	3.959
61) 1,2-Dichloroethane	(2)	7.638	62	29321	3.902
61) 1,2-Dichloroethane	(2)	7.628	98	2899	3.899
65) t-Amyl methyl ether	(2)	7.744	73	70267	3.807
66)*Fluorobenzene	(2)	7.959	96	1148427	50.000
67) n-Heptane	(2)	7.962	43	32502MA	3.971
69) n-Butanol	(1)	8.329	56	110027M	344.330
71) Trichloroethene	(2)	8.435	95	22766	3.871
72) Methylcyclohexane	(2)	8.737	83	42437	3.889
72) Methylcyclohexane	(2)	8.731	98	19822	4.014
73) 1,2-Dichloropropane	(2)	8.773	63	22762	3.837
76) Methyl Methacrylate	(2)	8.843	69	20713M	3.611
75) 1,4-Dioxane	(1)	8.850	88	16188	184.315
74) Dibromomethane	(2)	8.879	93	14634	3.813
78) Bromodichloromethane	(2)	9.110	83	24167	3.509
79) 2-Nitropropane	(2)	9.387	41	14154	6.785
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	8979	3.525
81) cis-1,3-Dichloropropene	(2)	9.638	75	32112	3.511
82) 4-Methyl-2-pentanone	(2)	9.808	43	67922	7.431
83)$Toluene-d8	(3)	9.933	98	1152733	49.832
83)$Toluene-d8	(3)	9.933	100	745821	49.773
88) Toluene	(3)	10.004	92	56092	3.868
90) 1,3-Dichloropropene (total)	(3)		100	60153	6.917

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	28041	3.406
91) Ethyl Methacrylate	(3)	10.310	69	34660	3.464
92) 1,1,2-Trichloroethane	(3)	10.457	97	20516	3.731
93) Tetrachloroethene	(3)	10.538	166	24234	3.946
94) 1,3-Dichloropropane	(3)	10.618	76	34762	3.703
96) 2-Hexanone	(3)	10.670	43	50570	7.572
97) Dibromochloromethane	(3)	10.824	129	18906	3.357
99) 1,2-Dibromoethane	(3)	10.937	107	21586	3.615
100)*Chlorobenzene-d5	(3)	11.358	117	884065	50.000
101) 1-Chlorohexane	(3)	11.364	91	31055	3.986
102) Chlorobenzene	(3)	11.387	112	63883	3.895
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	19618	3.631
104) Ethylbenzene	(3)	11.467	91	109318	3.944
106) m+p-Xylene	(3)	11.580	106	85093	7.804
108) Xylene (Total)	(3)		106	126157	11.616
107) o-Xylene	(3)	11.908	106	41064	3.813
109) Styrene	(3)	11.924	104	65784	3.696
110) Bromoform	(3)	12.078	173	12196	2.898
111) Isopropylbenzene	(3)	12.203	105	107056	3.963
112) Cyclohexanone	(1)	12.287	55	63391	184.289
114)$4-Bromofluorobenzene	(3)	12.348	95	440415	50.280
114)$4-Bromofluorobenzene	(3)	12.348	174	367241	50.573
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	33170M	3.658
115) Bromobenzene	(4)	12.467	156	27559	3.820
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	101806	36.395
117) 1,2,3-Trichloropropane	(4)	12.496	110	10208	3.668
119) n-Propylbenzene	(4)	12.528	91	126543	4.014
120) 2-Chlorotoluene	(4)	12.609	126	25381	3.790
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	89290	3.898
121) 4-Chlorotoluene	(4)	12.699	126	27169	3.898
124) tert-Butylbenzene	(4)	12.904	134	18608M	3.928
125) Pentachloroethane	(4)	12.940	167	14303	3.506
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	93258	3.863
127) sec-Butylbenzene	(4)	13.068	105	111847	3.956
129) 1,3-Dichlorobenzene	(4)	13.168	146	51597	3.892
130) p-Isopropyltoluene	(4)	13.174	119	96571	3.948
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	480071	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	53736	3.910

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

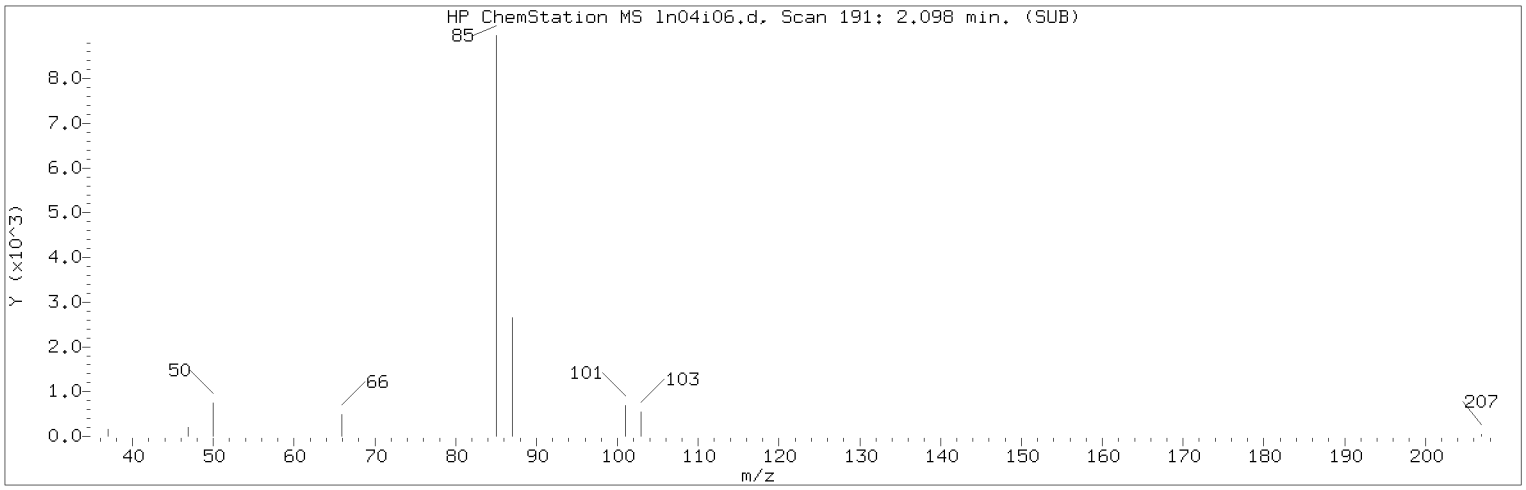
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

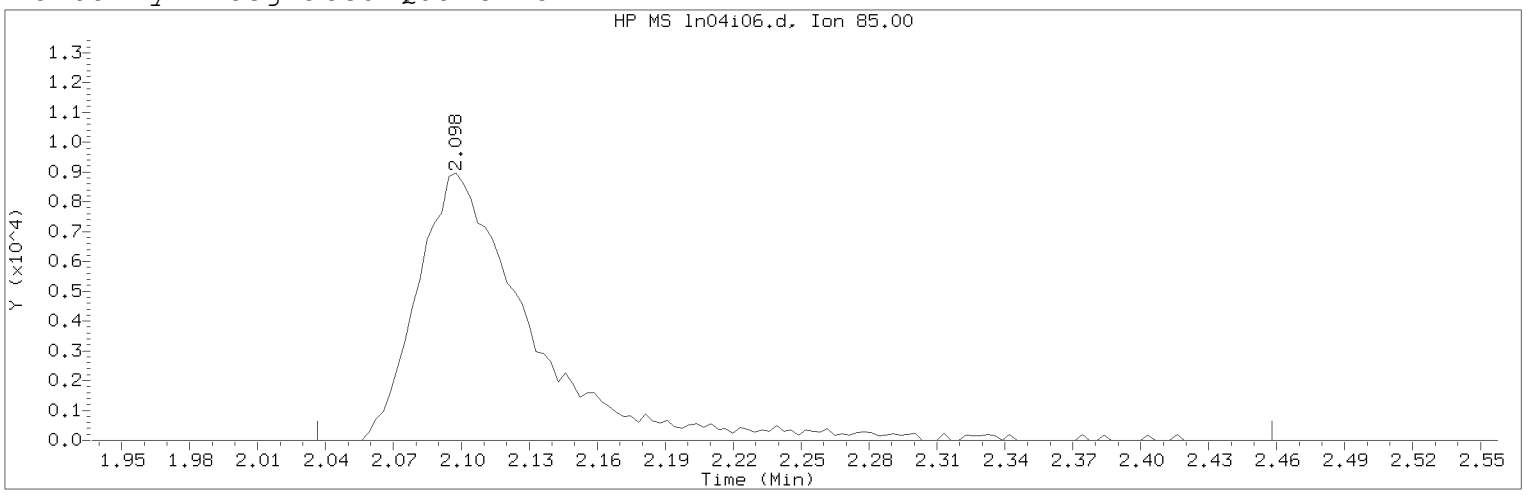
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	99398	3.886
135) Benzyl Chloride	(4)	13.319	91	57244	2.956
136) 1,3-Diethylbenzene	(4)	13.371	119	61603	3.870
141) Diethylbenzene (total)	(4)		100	179922	11.677
137) 1,4-Diethylbenzene	(4)	13.444	119	66423	3.939
139) n-Butylbenzene	(4)	13.464	92	51213	4.095
138) 1,2-Dichlorobenzene	(4)	13.502	146	50972	3.896
140) 1,2-Diethylbenzene	(4)	13.518	119	51896	3.868
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	6542	3.295
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	39801	3.960
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	38013	3.889
147) Hexachlorobutadiene	(4)	14.670	225	23904	5.180
148) Naphthalene	(4)	14.772	128	115354	3.671
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	37152	3.907
150) 2-Methylnaphthalene	(4)	15.563	142	72506	3.747

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

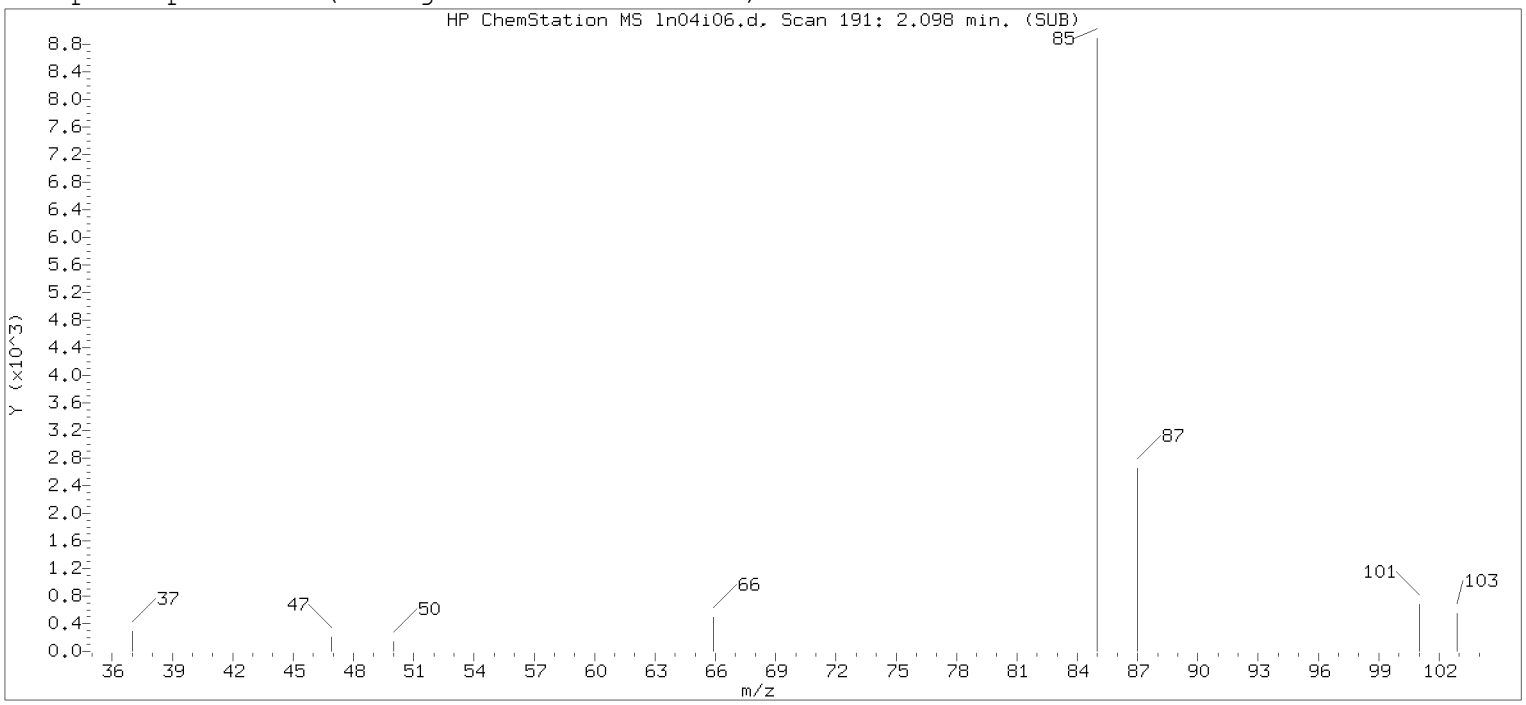
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 191
Retention Time (minutes): 2.098
Quant Ion : 85.00
Area (flag) : 31217M
On-Column Amount (ng) : 3.8978
Integration start scan : 171 Integration stop scan: 302
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

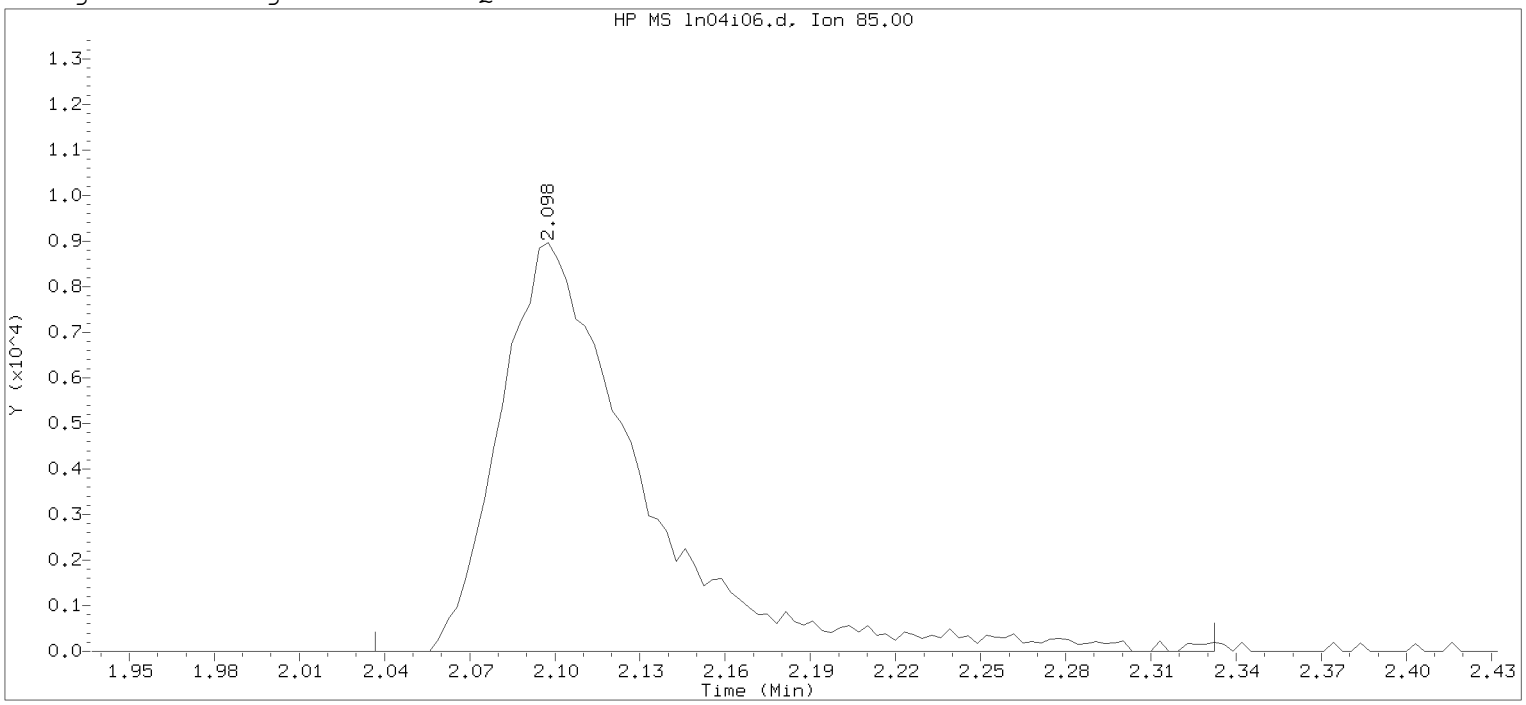
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

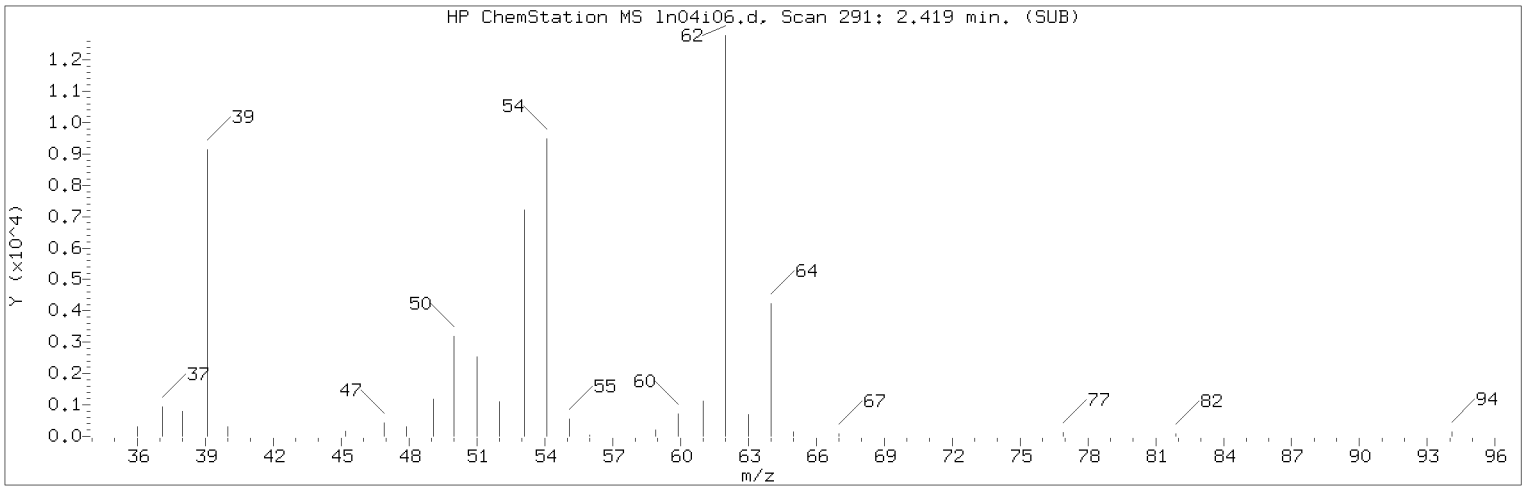
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

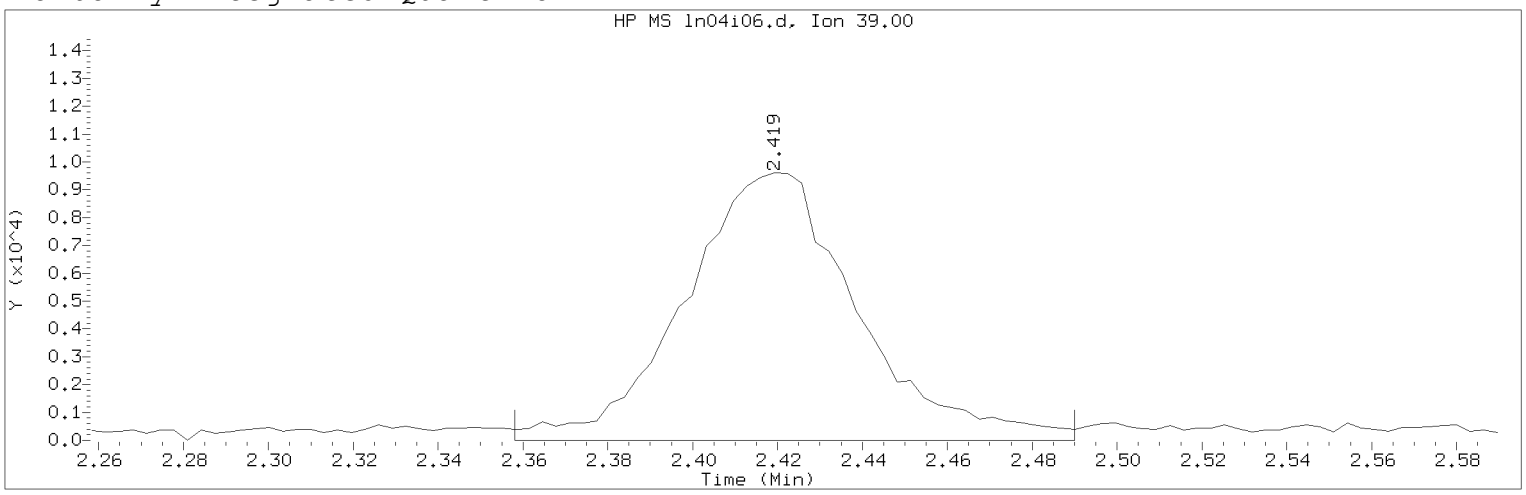
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 191
Retention Time (minutes): 2.098
Quant Ion : 85.00
Area : 30987
On-column Amount (ng) : 3.8874
Integration start scan : 171 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

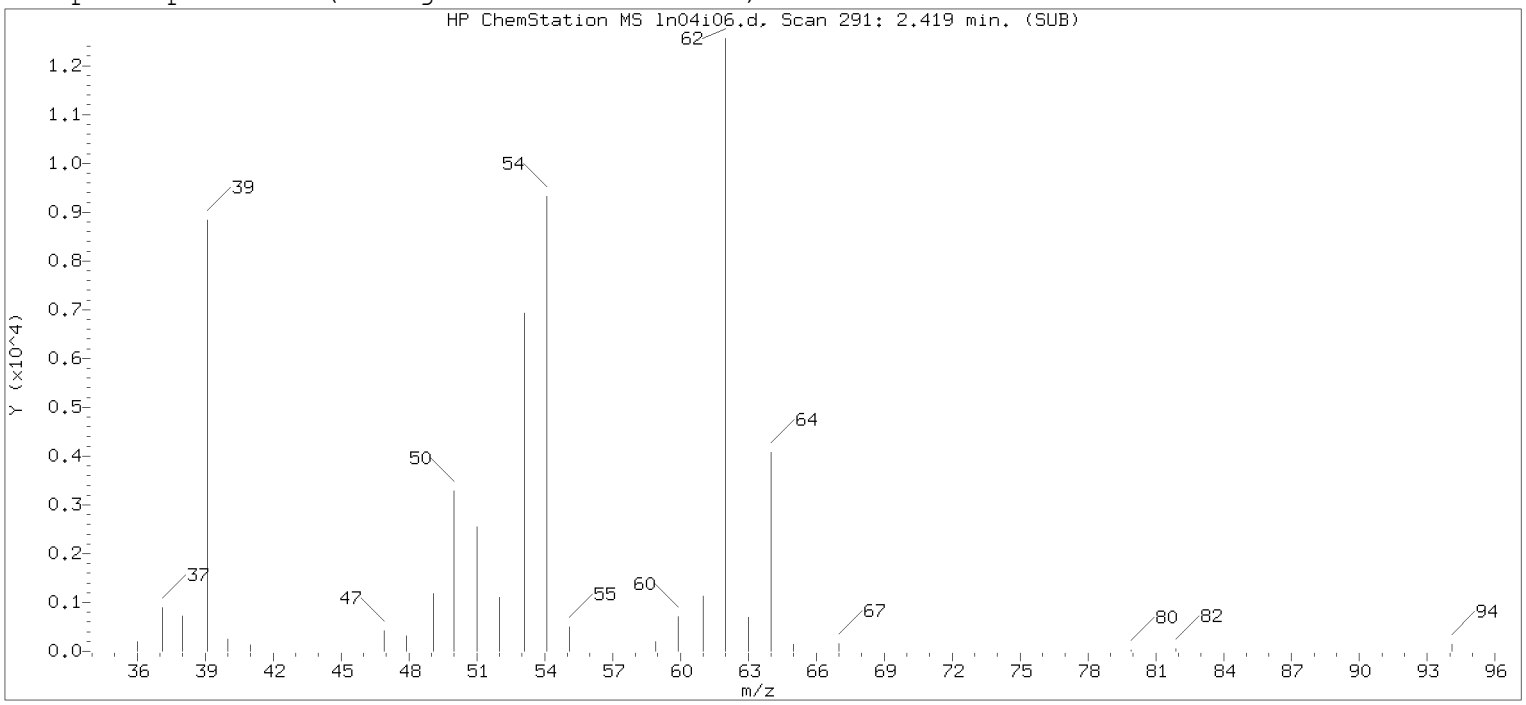
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 291
Retention Time (minutes): 2.419
Quant Ion : 39.00
Area (flag) : 27249M
On-Column Amount (ng) : 4.2517
Integration start scan : 271 Integration stop scan: 312
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

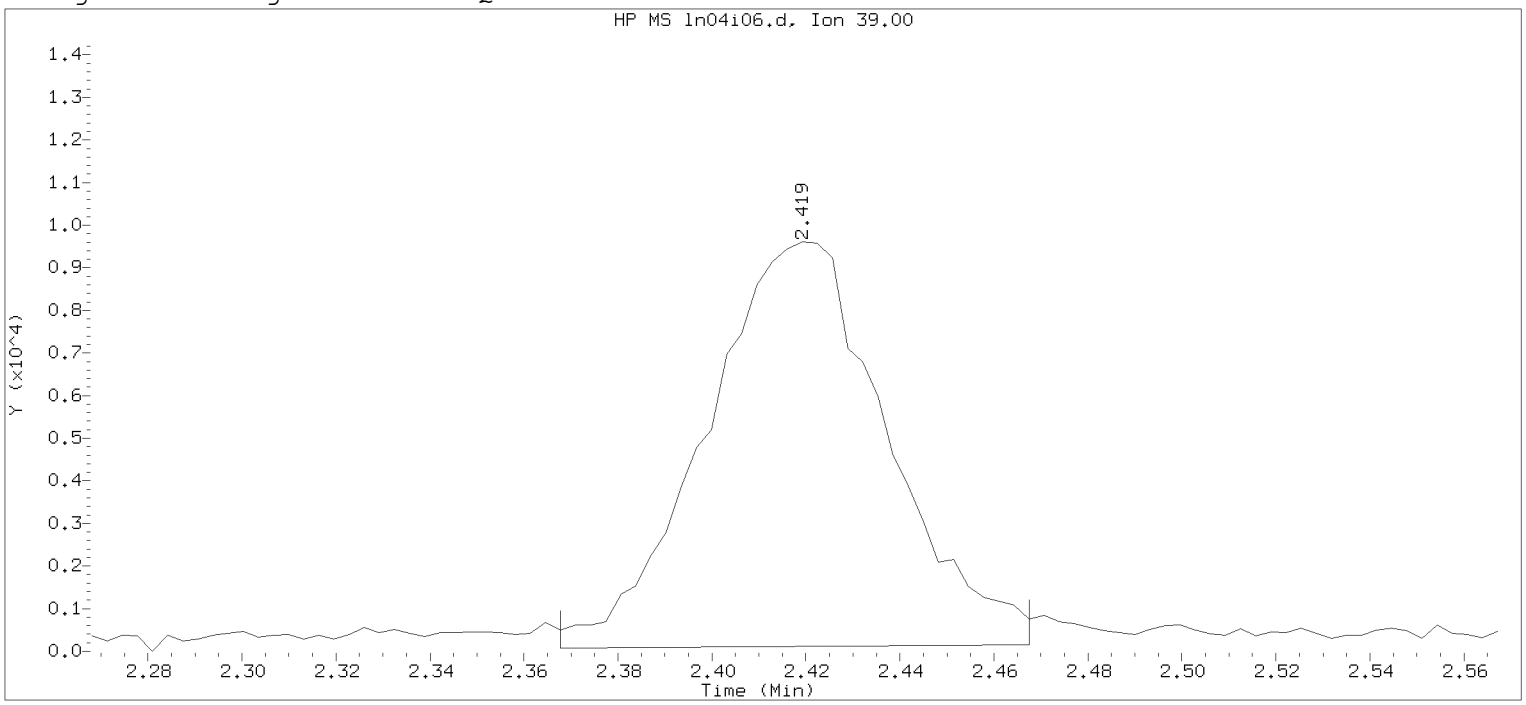
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

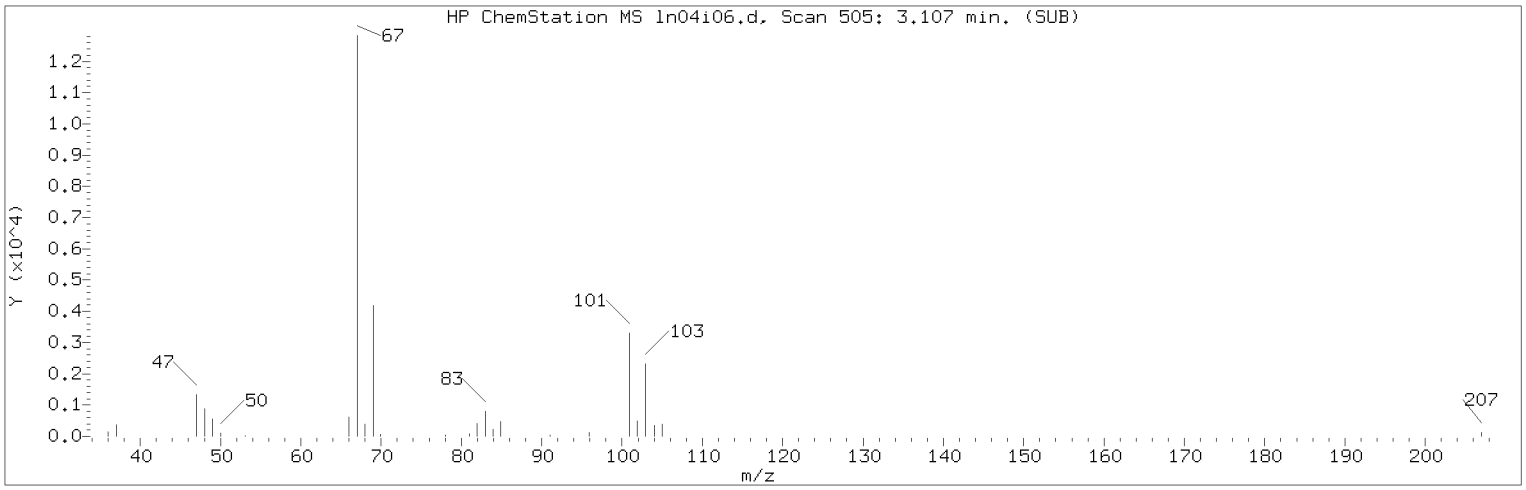
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

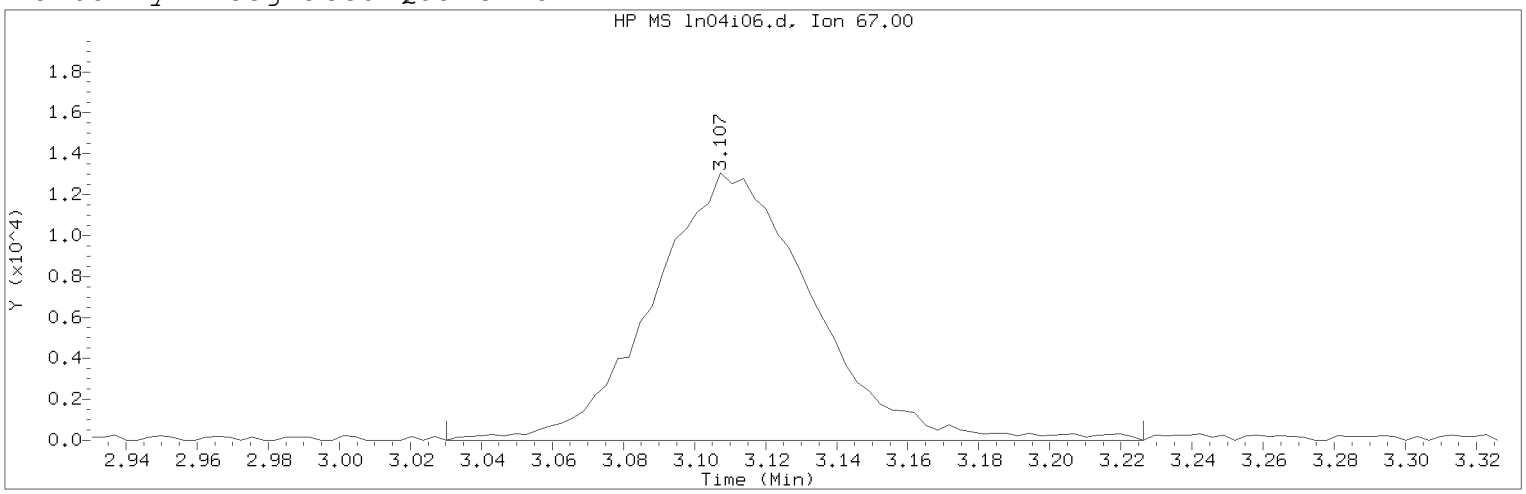
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 291
Retention Time (minutes): 2.419
Quant Ion : 39.00
Area : 25391
On-column Amount (ng) : 4.2082
Integration start scan : 274 Integration stop scan: 305
Y at integration start : 76 Y at integration end: 147

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

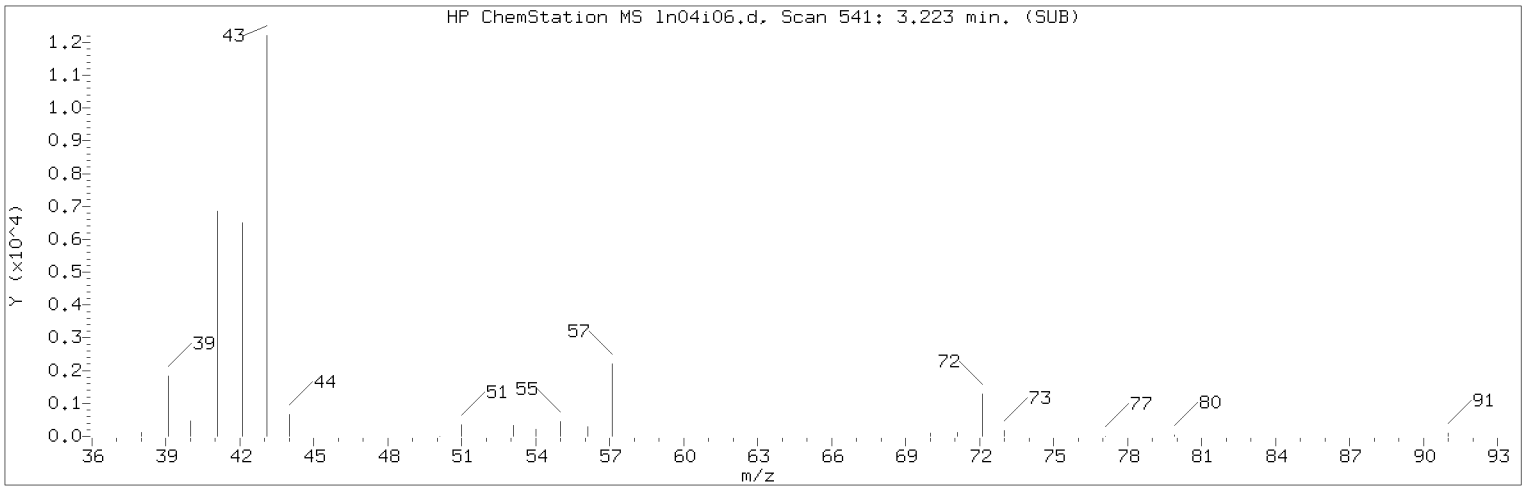
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 505
Retention Time (minutes): 3.107
Quant Ion : 67.00
Area (flag) : 40740M
On-Column Amount (ng) : 4.0151
Integration start scan : 480 Integration stop scan: 541
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

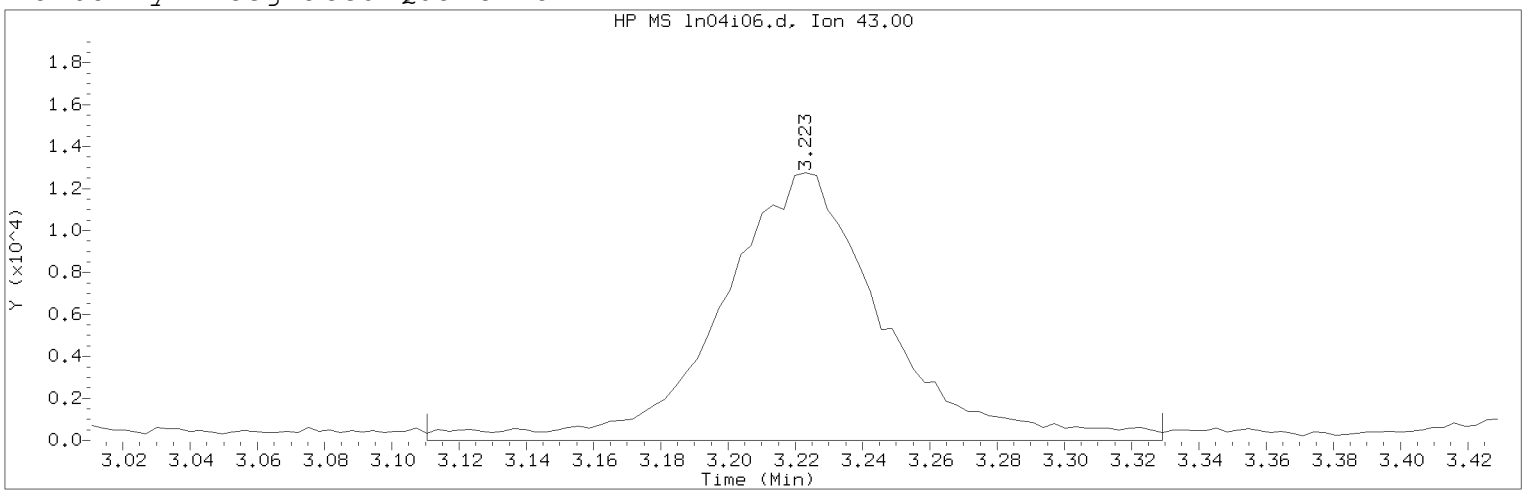
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

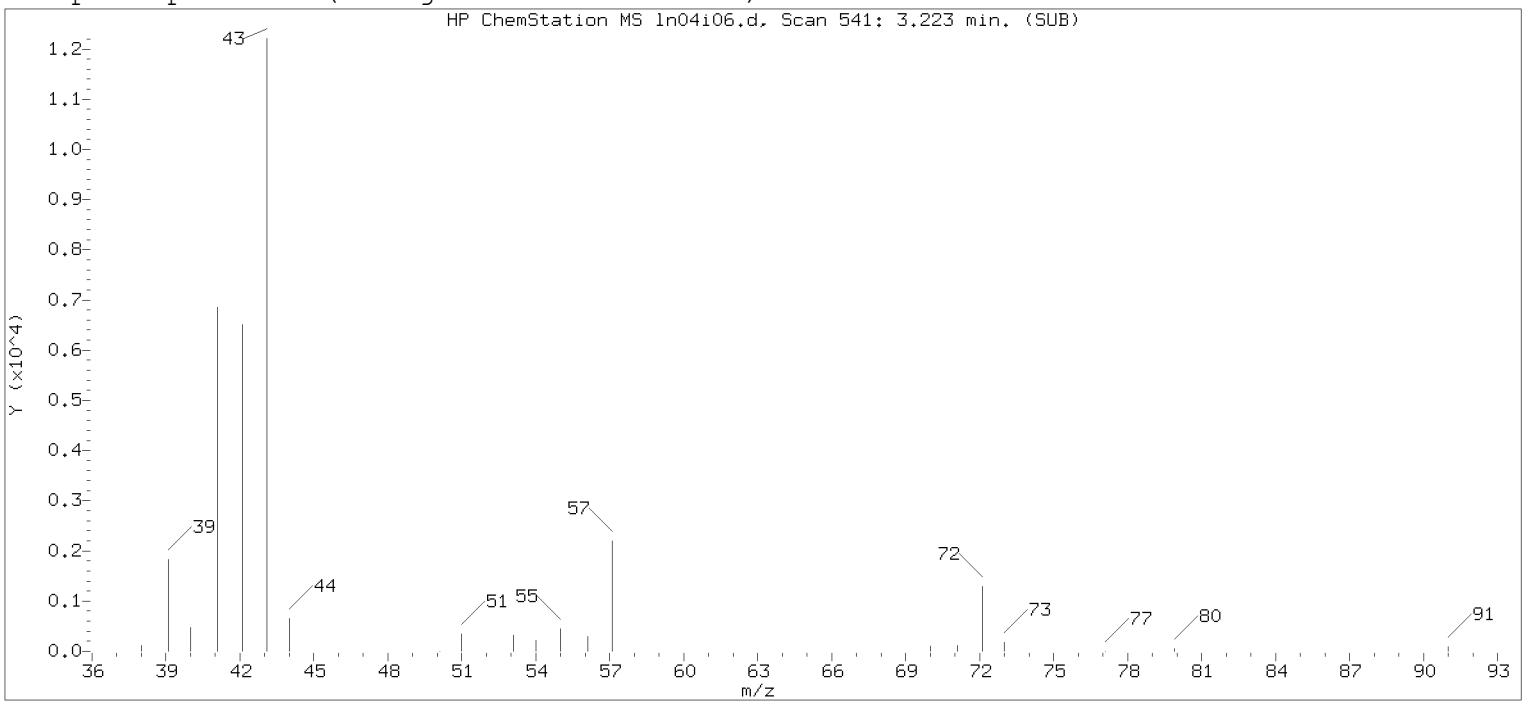
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 541
Retention Time (minutes): 3.223
Quant Ion : 43.00
Area (flag) : 42826M
On-Column Amount (ng) : 4.3694
Integration start scan : 505 Integration stop scan: 573
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

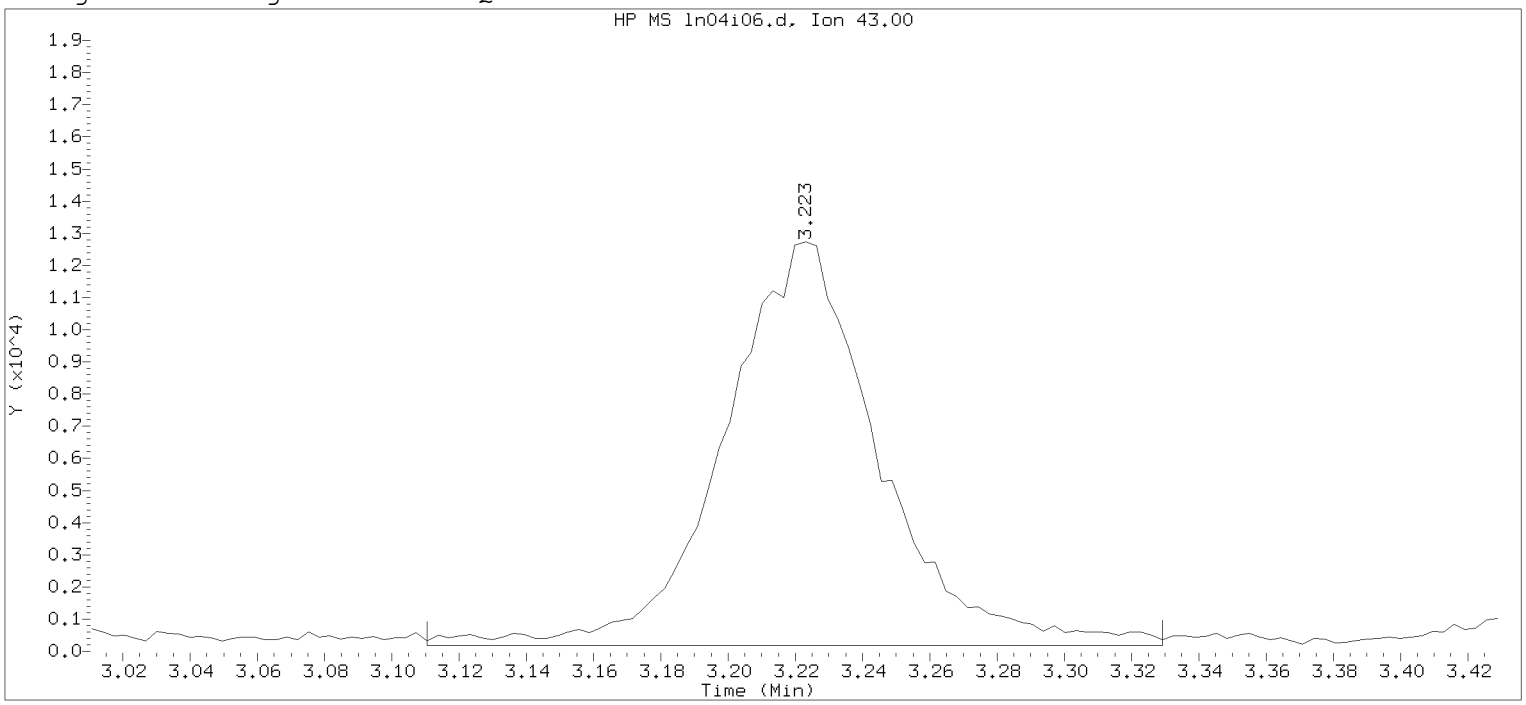
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

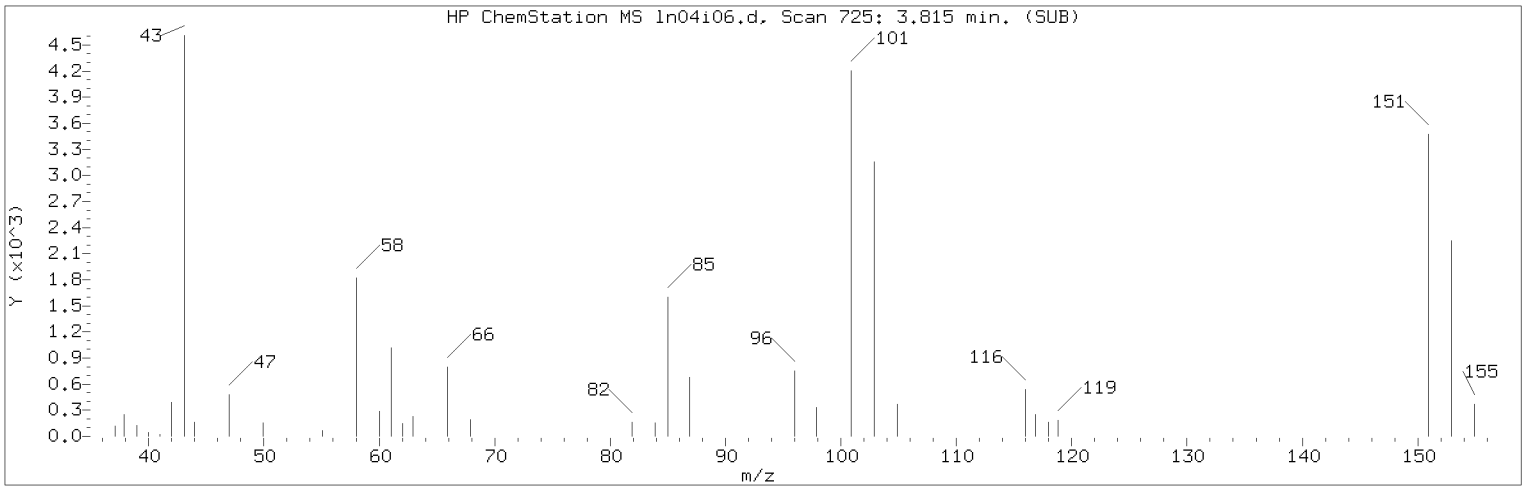
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

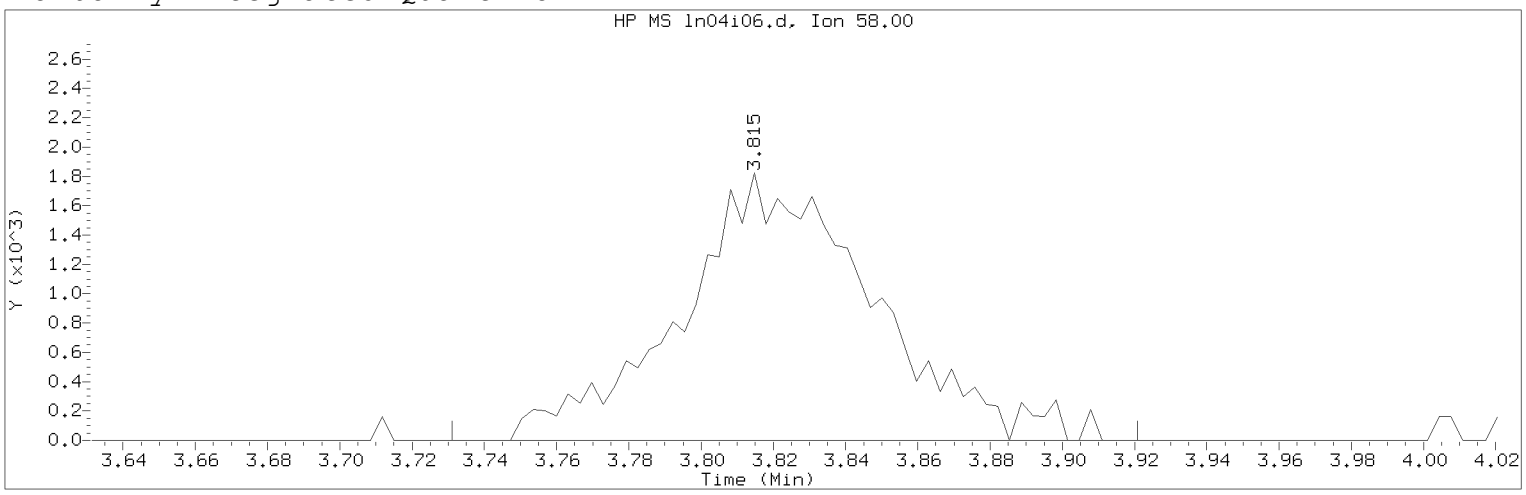
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 541
Retention Time (minutes): 3.223
Quant Ion : 43.00
Area : 40359
On-column Amount (ng) : 4.1550
Integration start scan : 505 Integration stop scan: 573
Y at integration start : 183 Y at integration end: 183

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

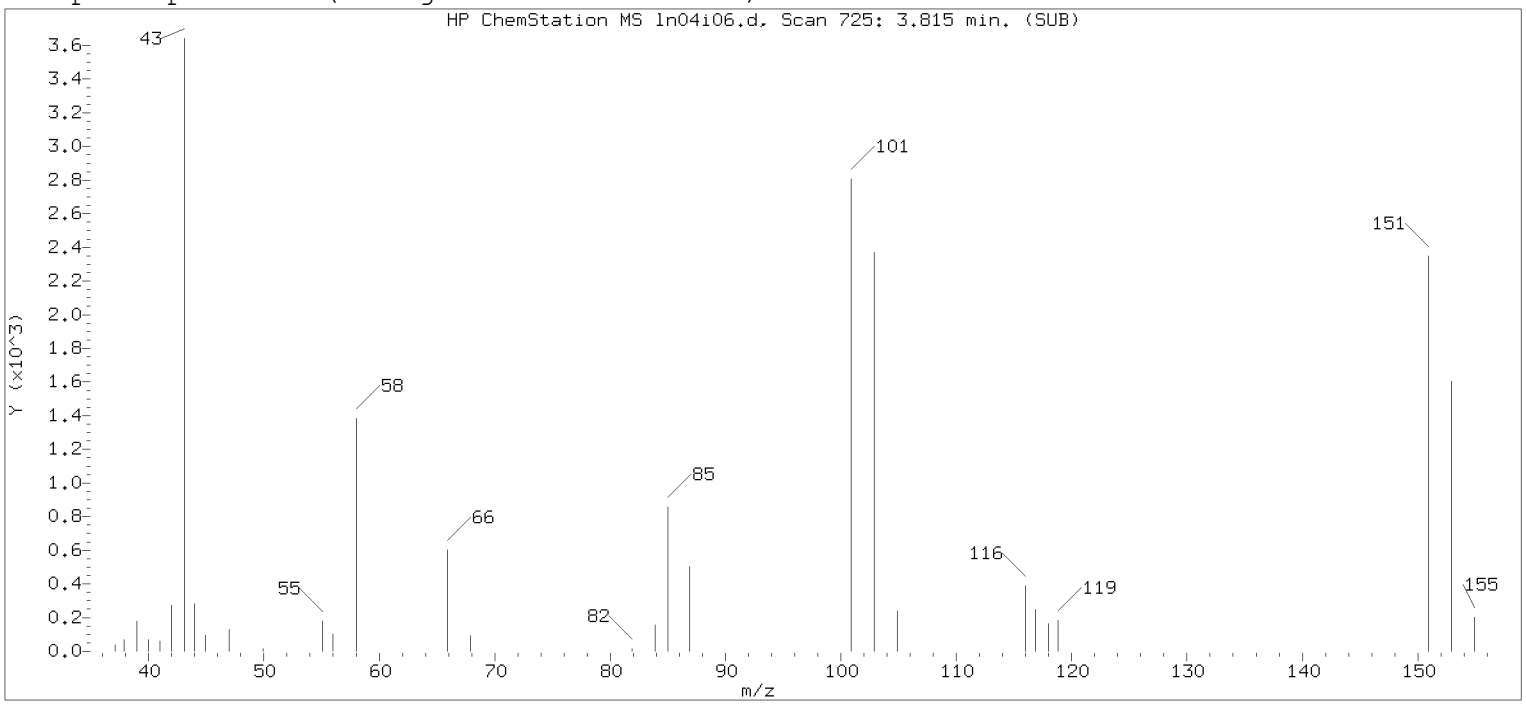
Compound Number : 18
Compound Name : Acetone
Scan Number : 725
Retention Time (minutes): 3.815
Quant Ion : 58.00
Area (flag) : 6763M
On-Column Amount (ng) : 7.6731
Integration start scan : 698 Integration stop scan: 757
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

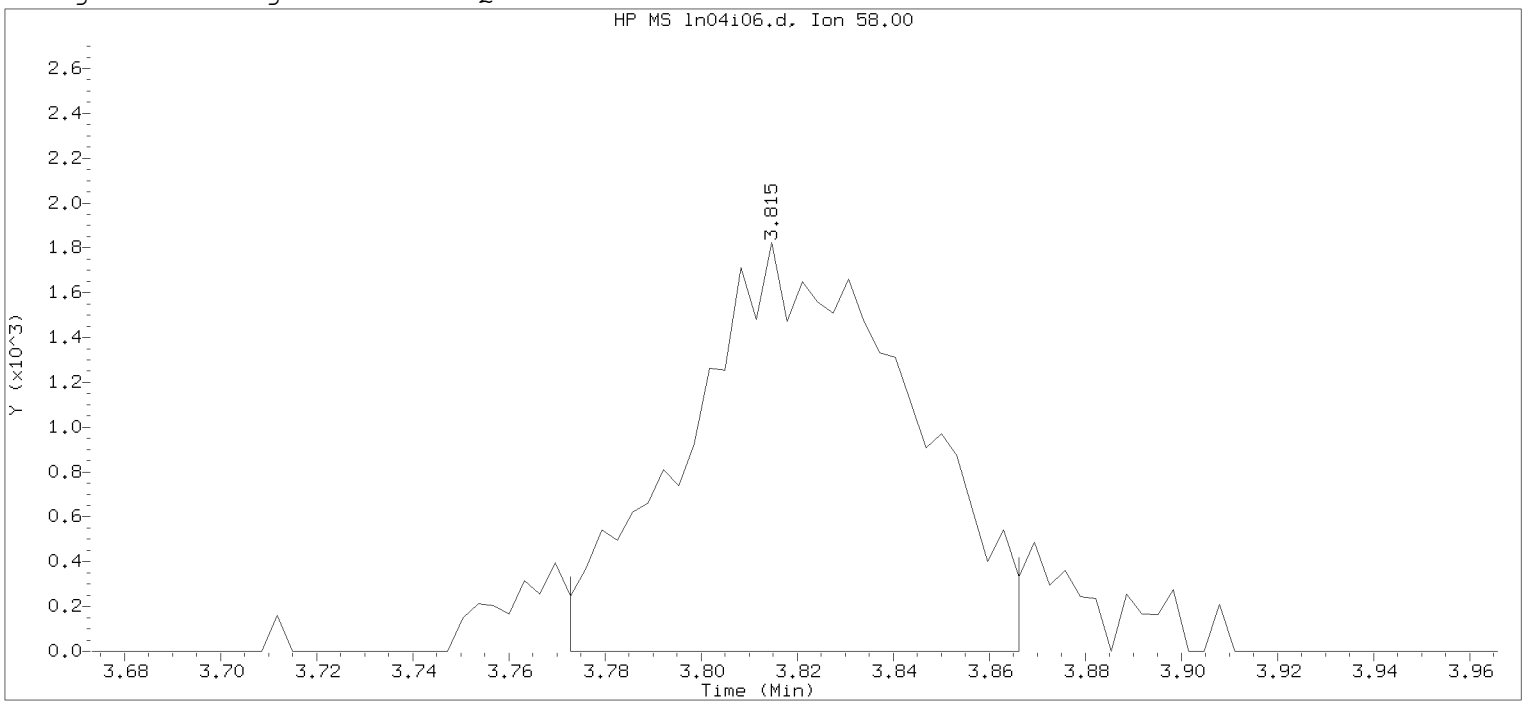
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

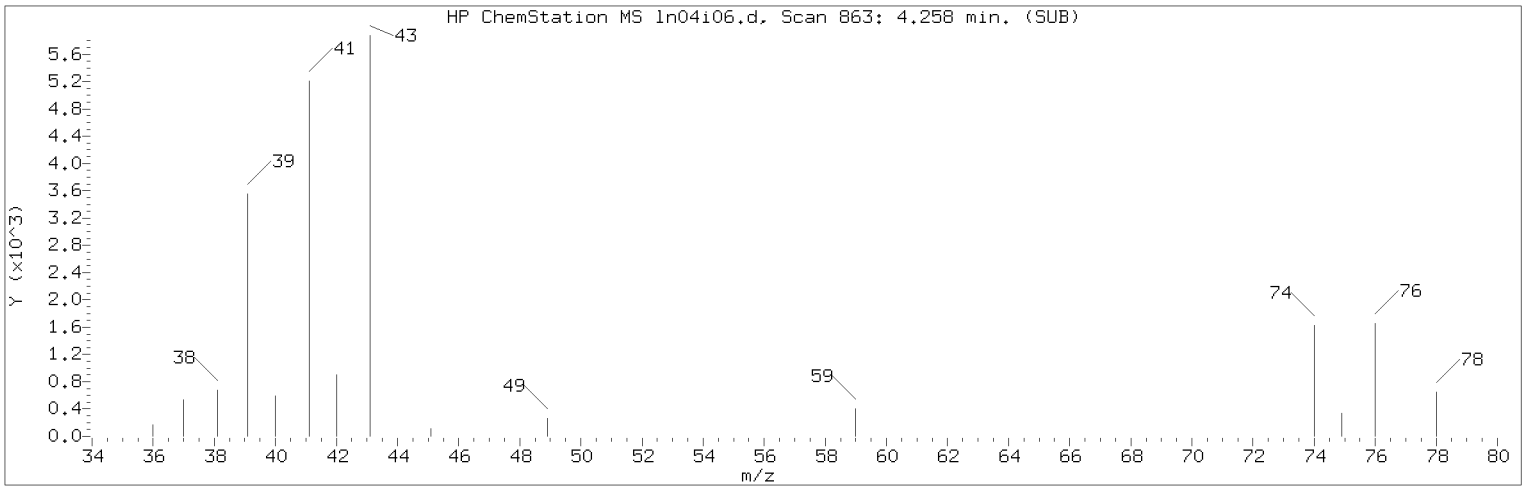
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

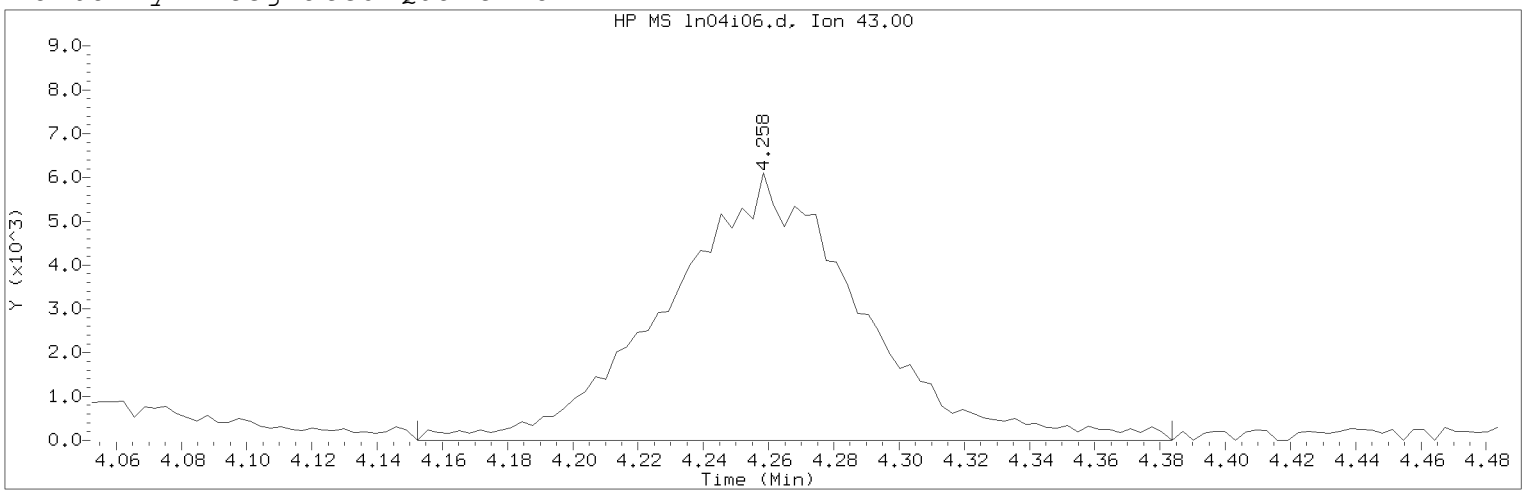
Compound Number	: 18		
Compound Name	: Acetone		
Scan Number	: 725		
Retention Time (minutes)	: 3.815		
Quant Ion	: 58.00		
Area	: 5862		
On-column Amount (ng)	: 7.7134		
Integration start scan	: 711	Integration stop scan:	740
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

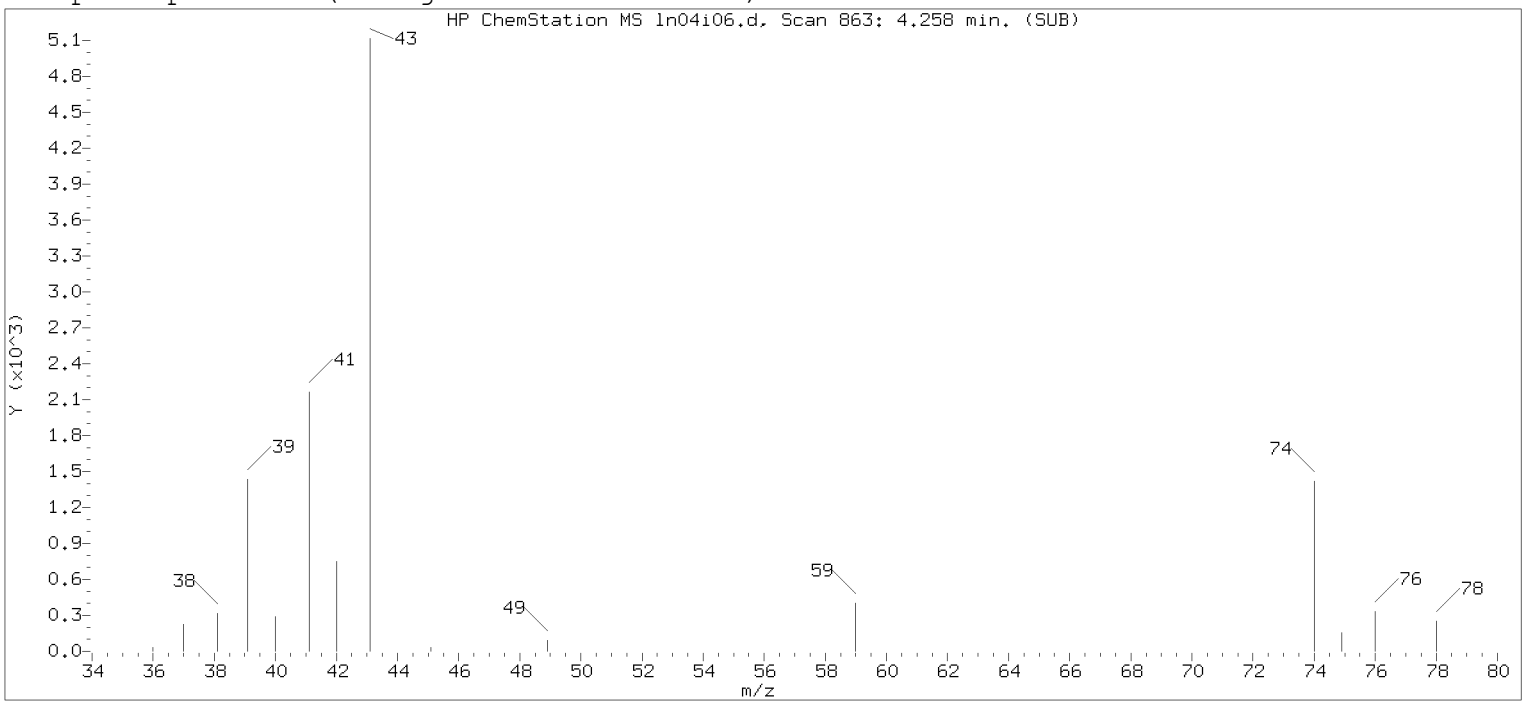
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 863
Retention Time (minutes): 4.258
Quant Ion : 43.00
Area (flag) : 24928M
On-Column Amount (ng) : 3.9757
Integration start scan : 829 Integration stop scan: 901
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

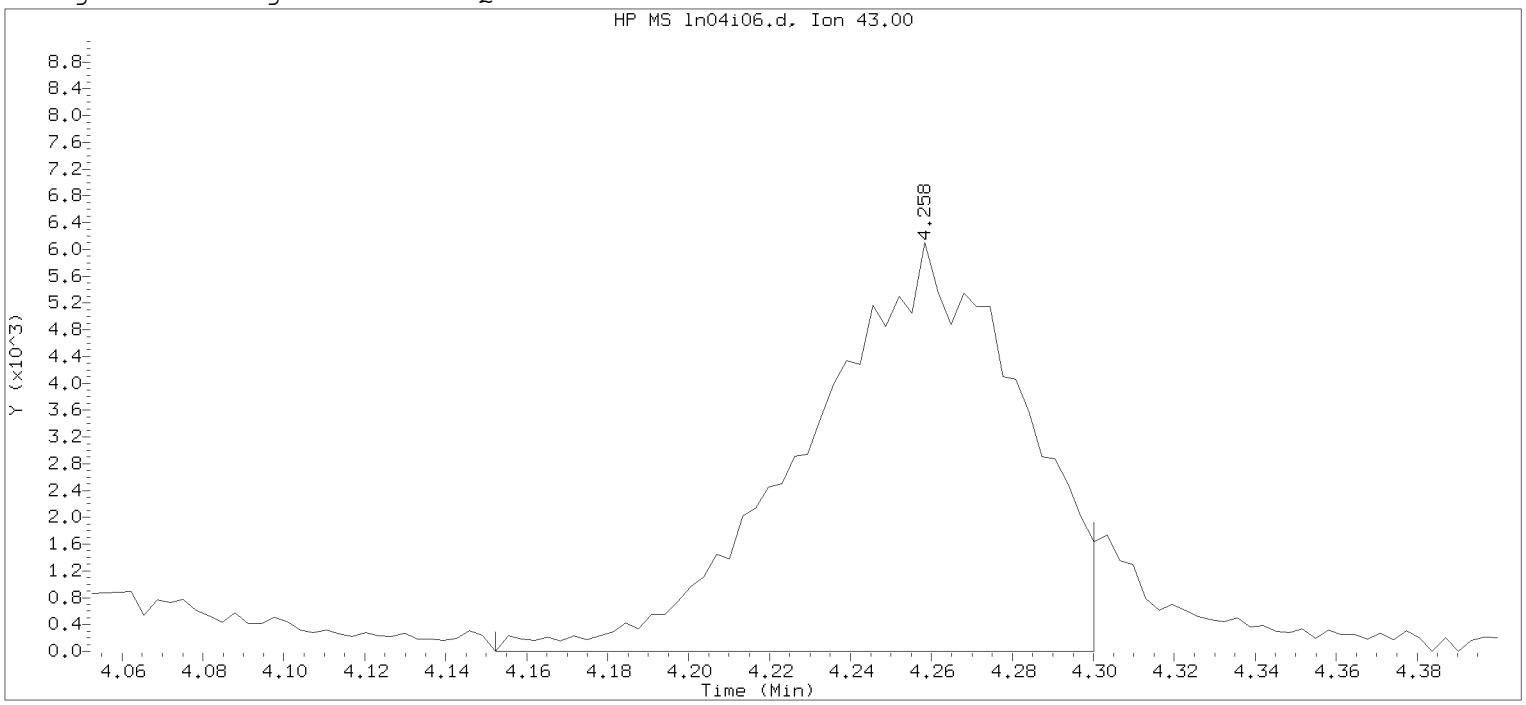
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

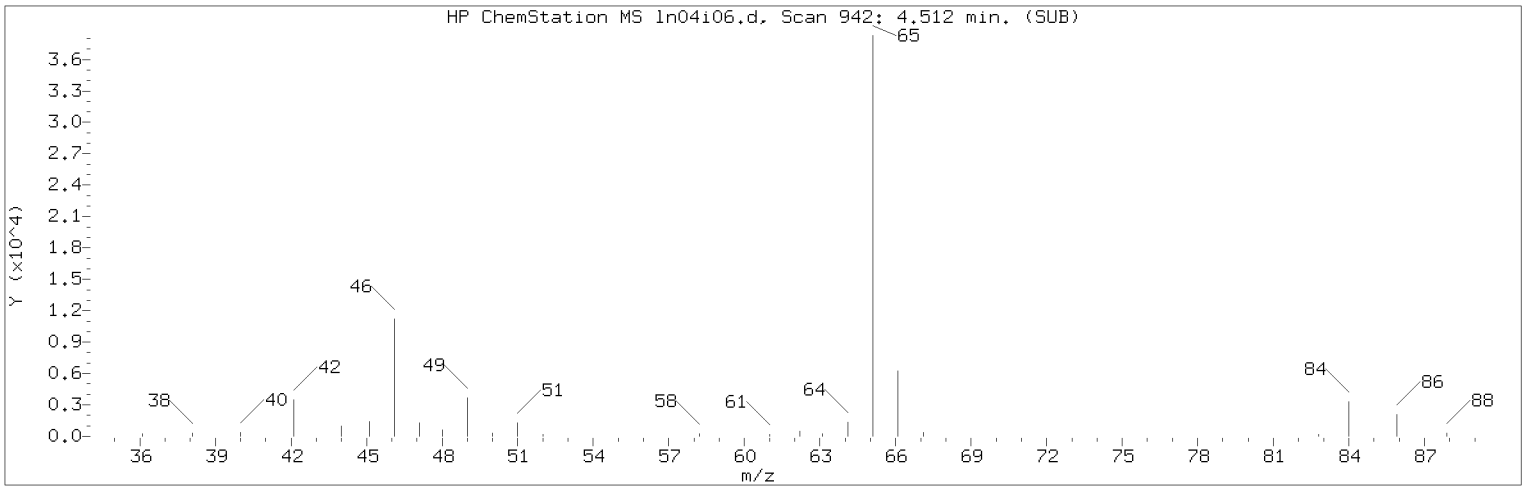
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

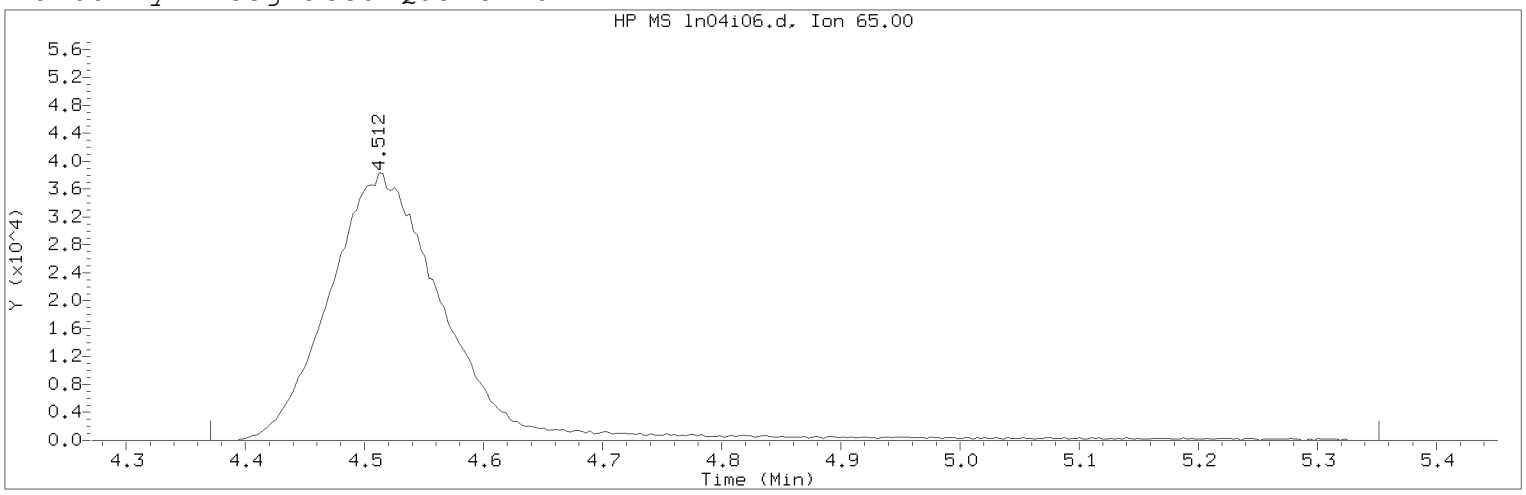
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 863
Retention Time (minutes): 4.258
Quant Ion : 43.00
Area : 22302
On-column Amount (ng) : 3.7243
Integration start scan : 829 Integration stop scan: 875
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

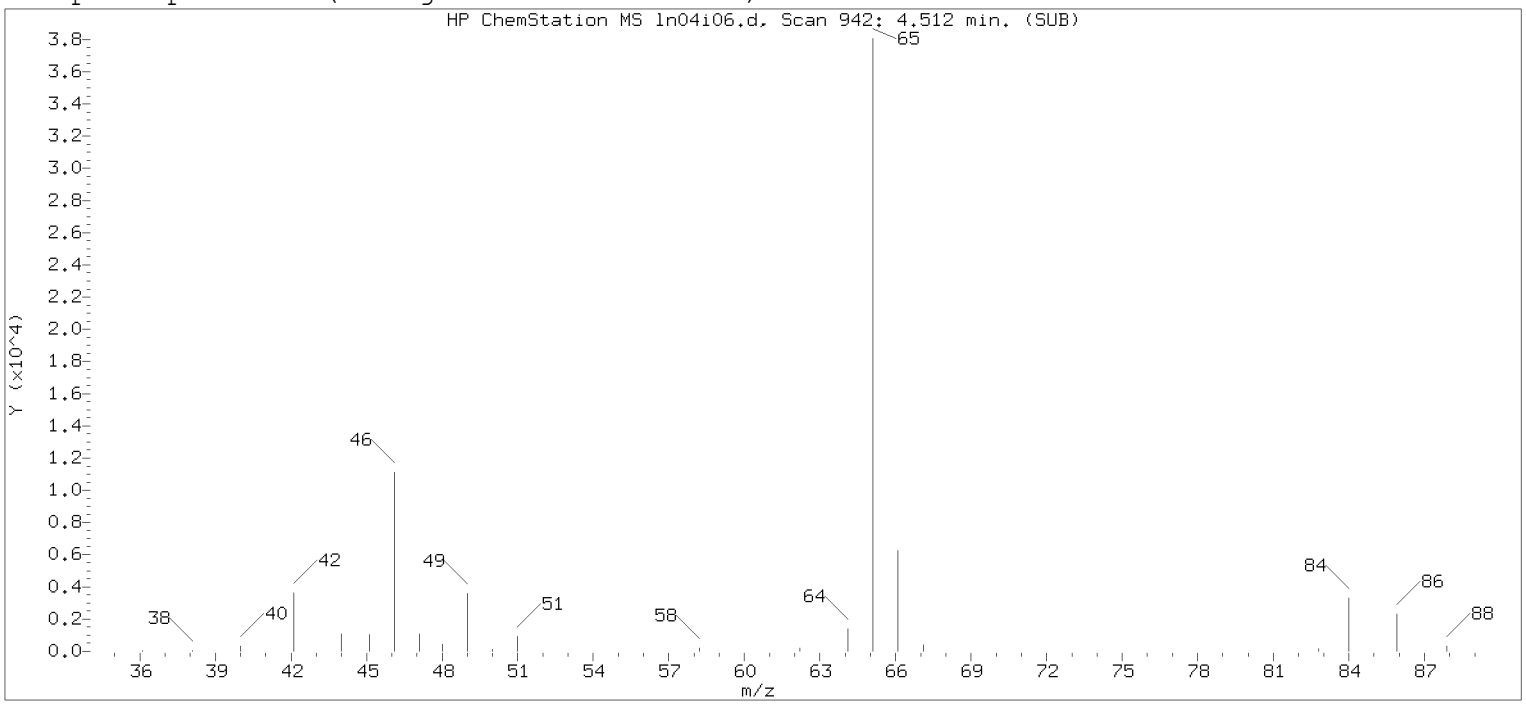
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area (flag) : 262044M
On-Column Amount (ng) : 250.0000
Integration start scan : 897 Integration stop scan: 1202
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

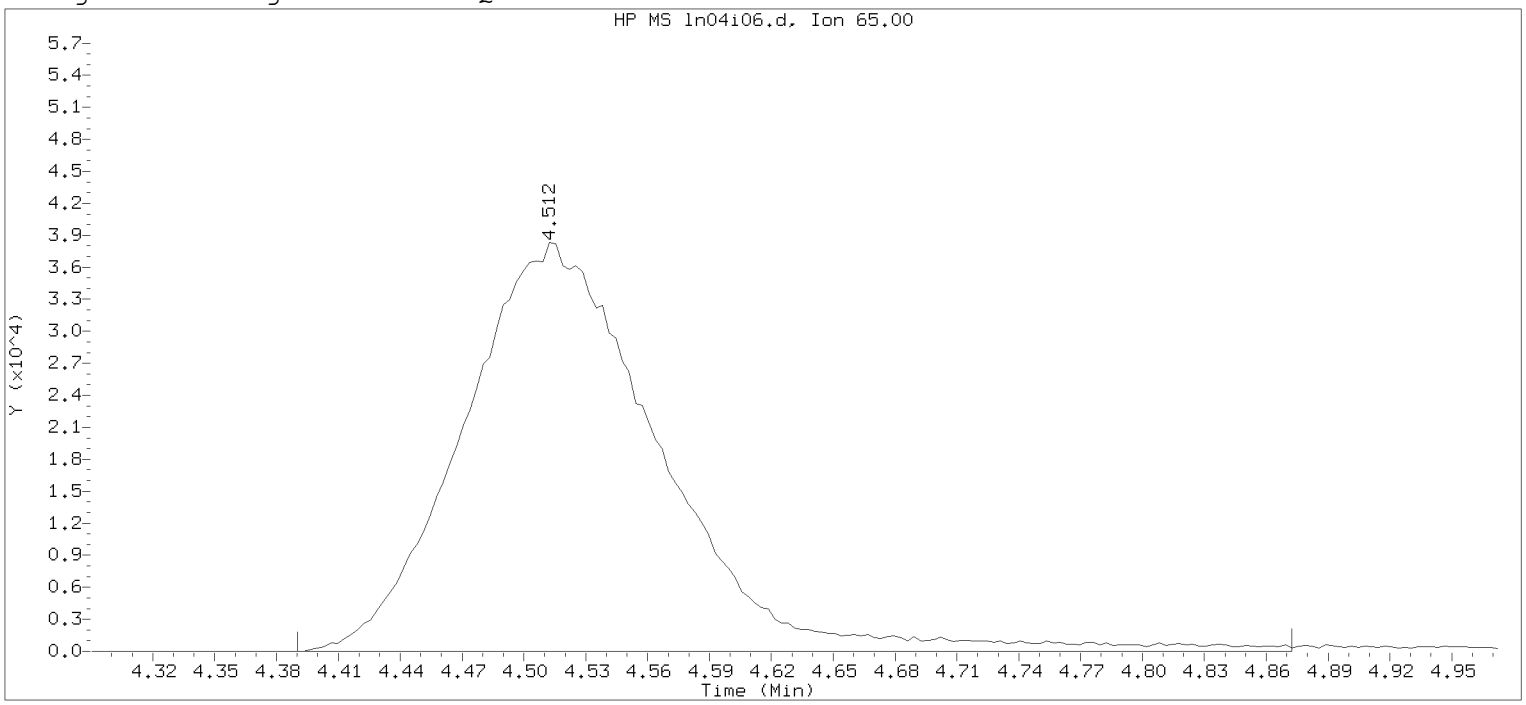
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

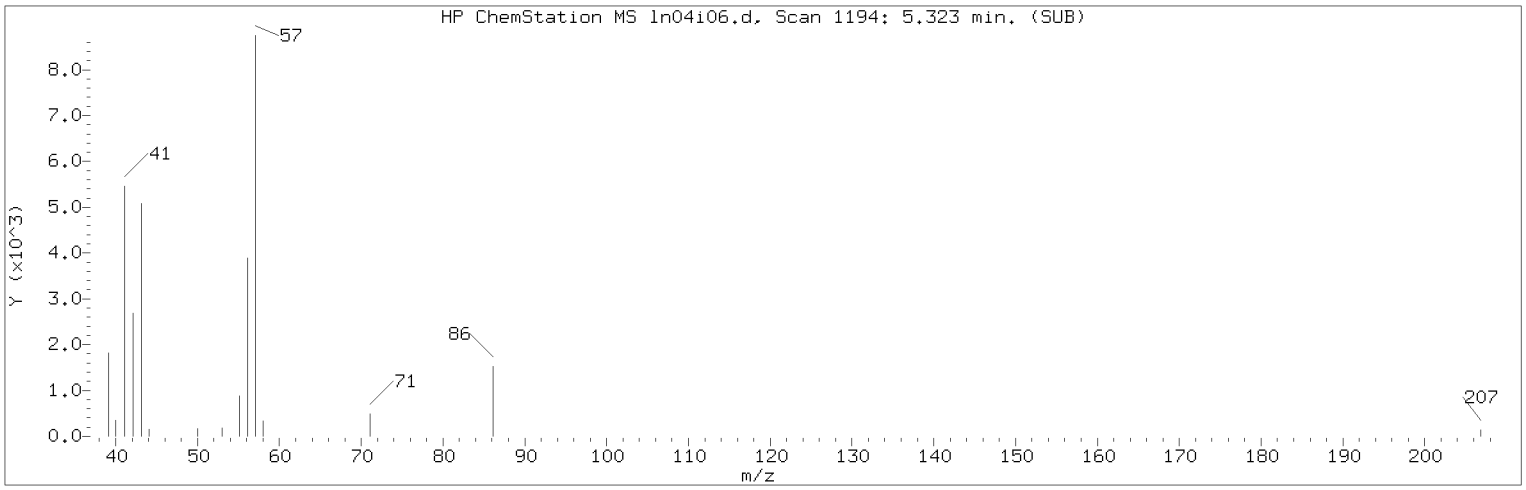
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

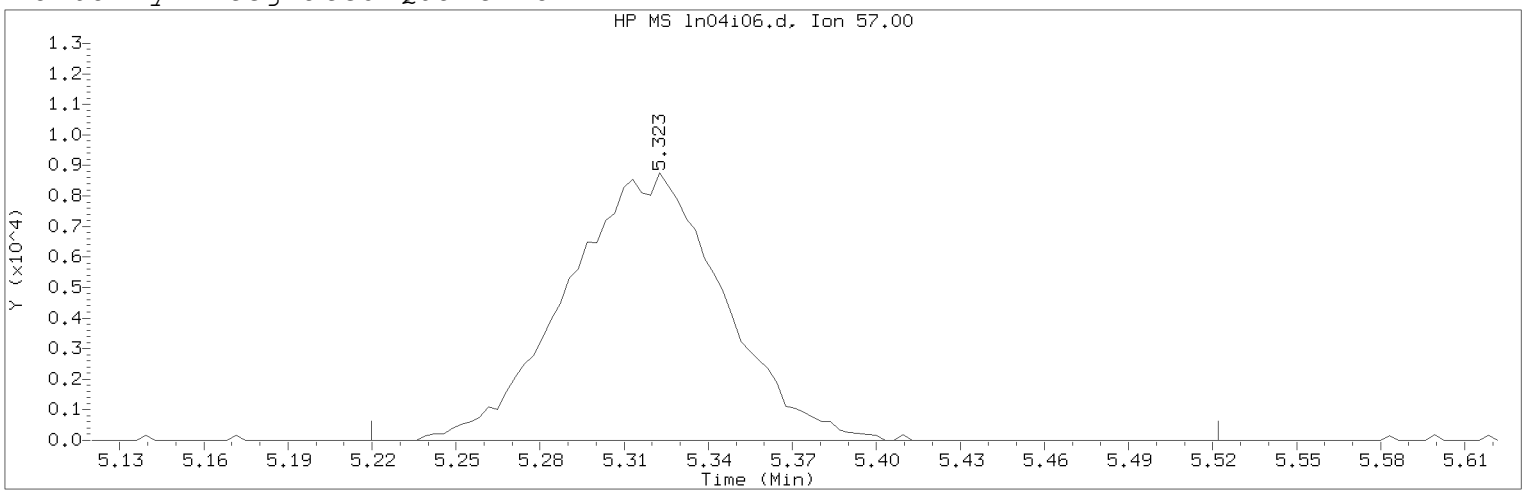
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area : 254362
On-column Amount (ng) : 250.0000
Integration start scan : 903 Integration stop scan: 1053
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

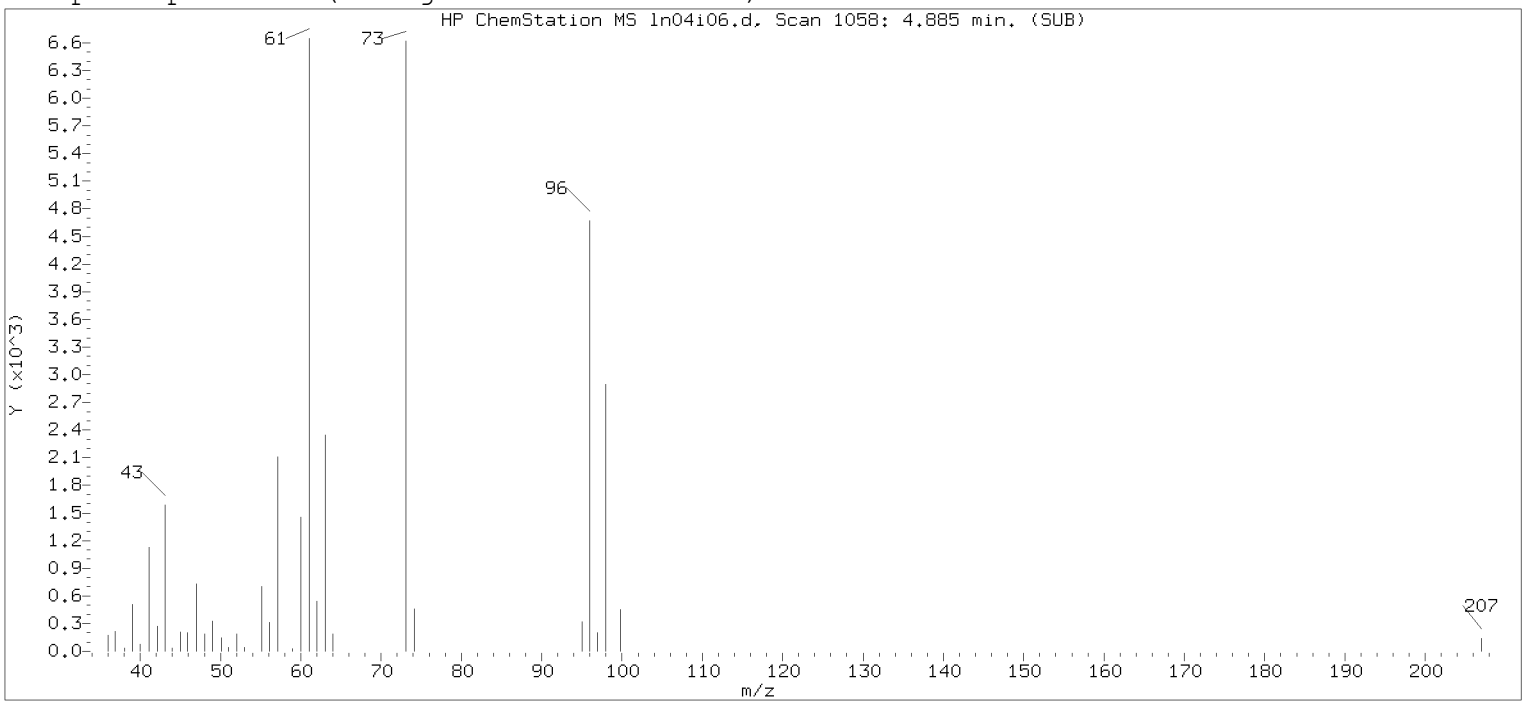
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1194
Retention Time (minutes): 5.323
Quant Ion : 57.00
Area (flag) : 33969M
On-Column Amount (ng) : 3.8769
Integration start scan : 1161 Integration stop scan: 1255
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

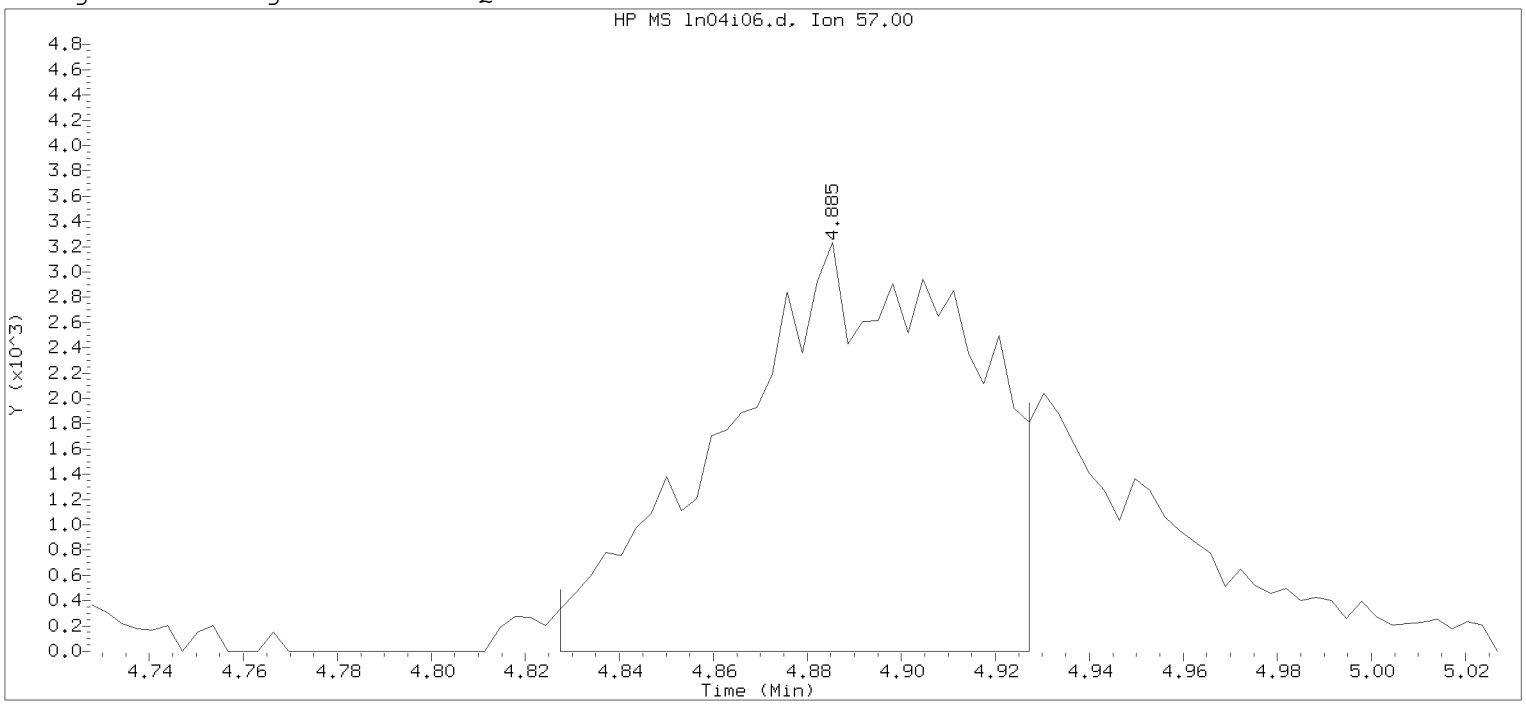
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

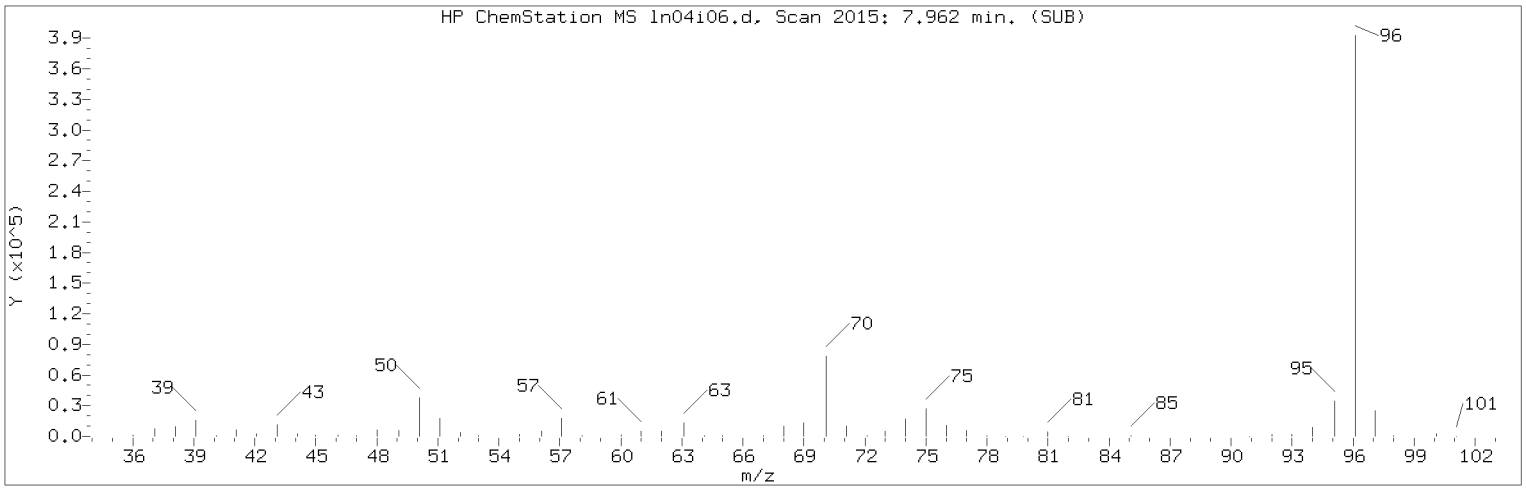
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

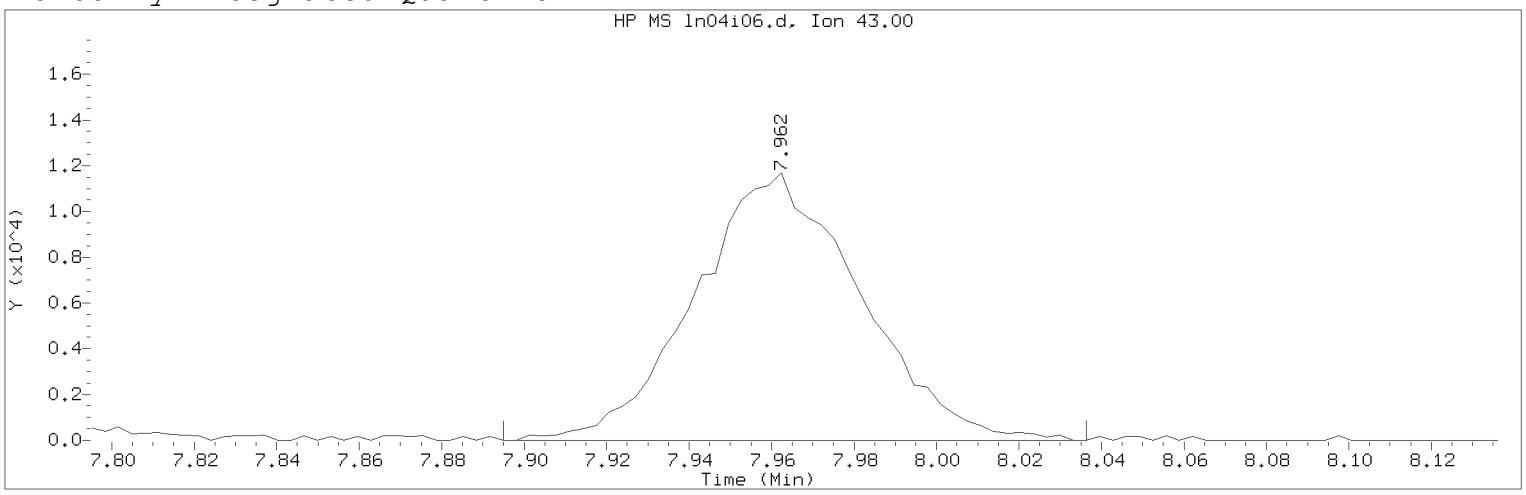
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1058
Retention Time (minutes): 4.885
Quant Ion : 57.00
Area : 11708
On-column Amount (ng) : 3.2297
Integration start scan : 1039 Integration stop scan: 1070
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

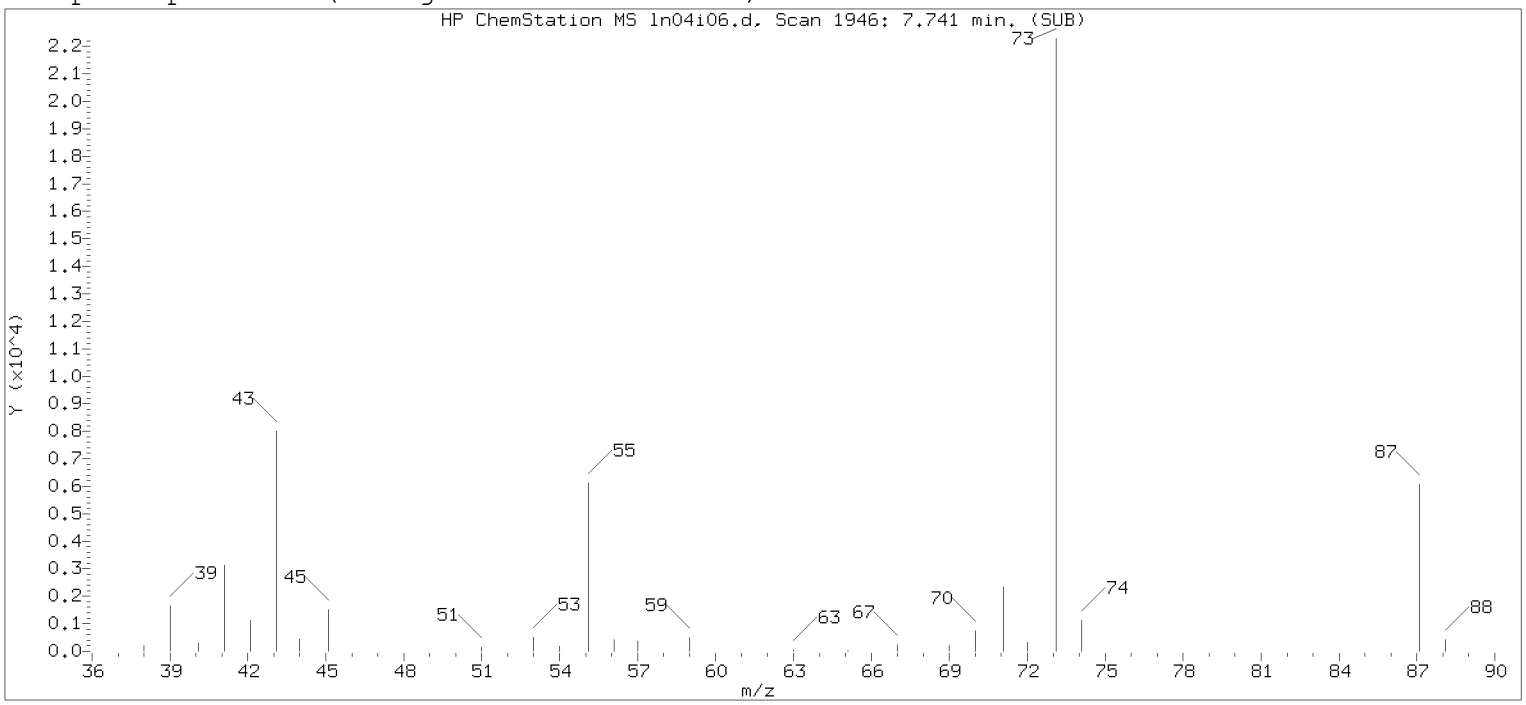
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2015
Retention Time (minutes): 7.962
Quant Ion : 43.00
Area (flag) : 32502MA
On-Column Amount (ng) : 3.9708
Integration start scan : 1993 Integration stop scan: 2037
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

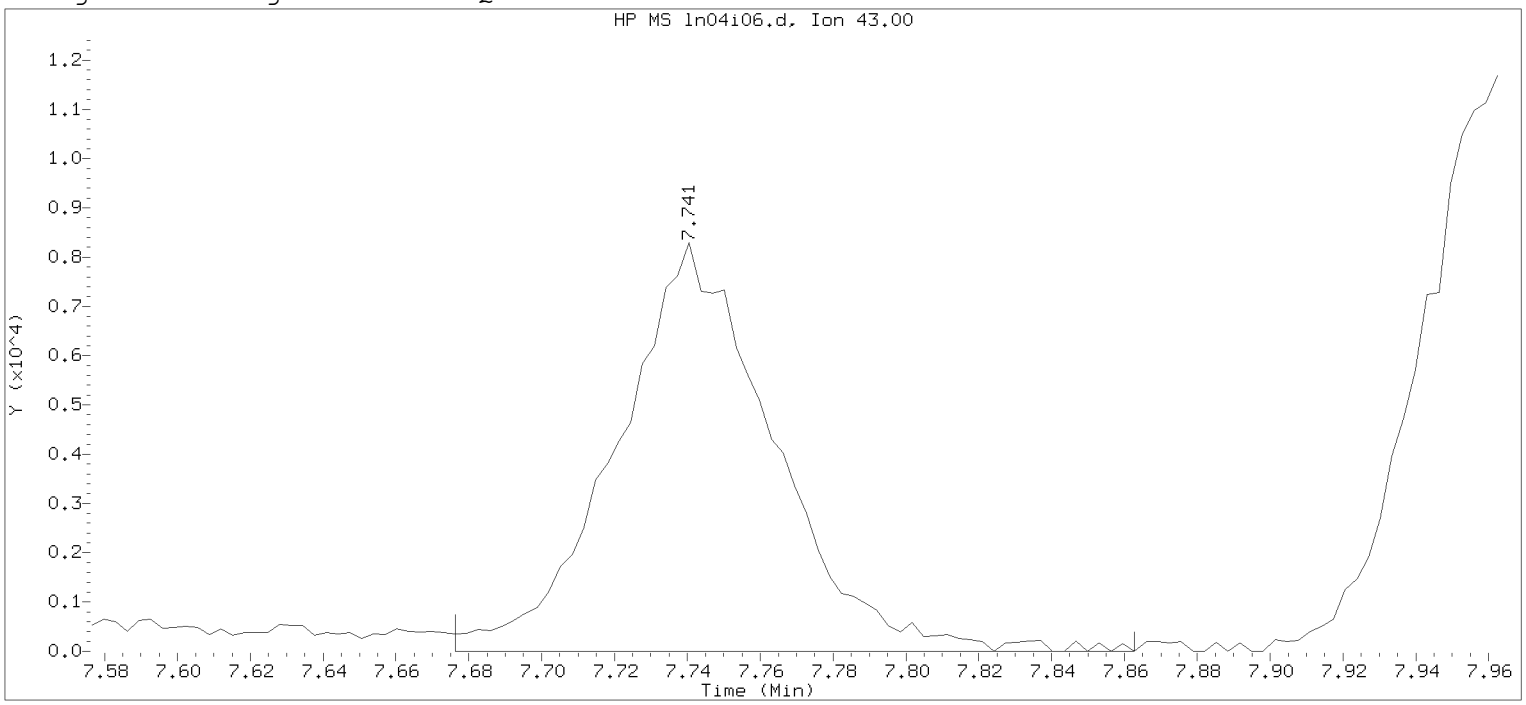
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

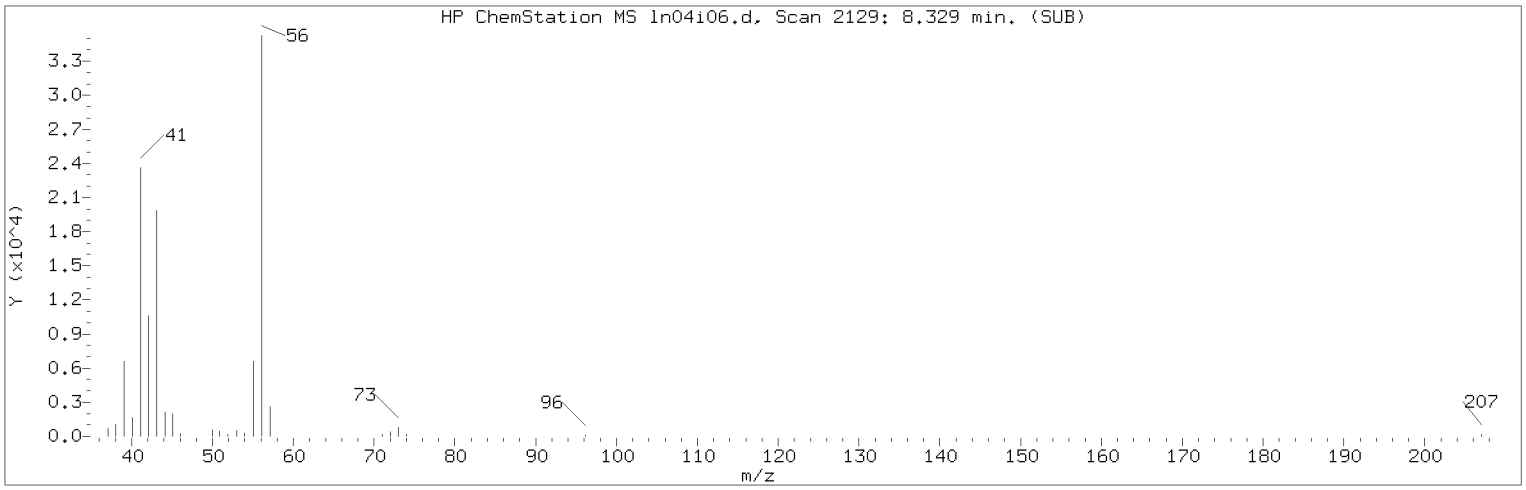
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

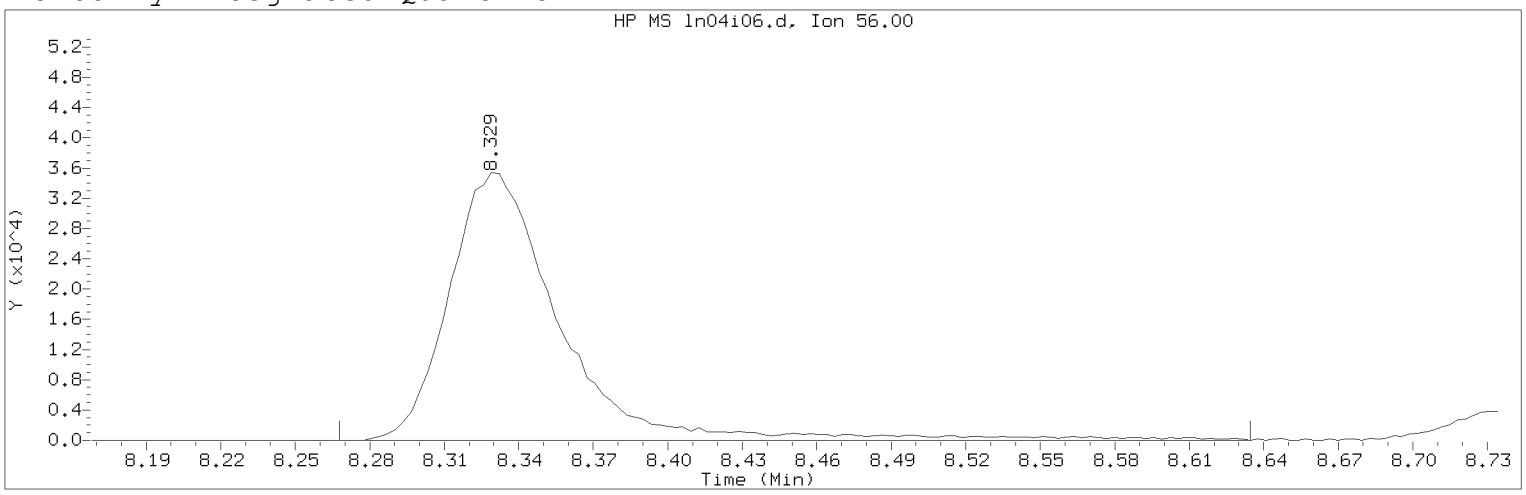
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.741
Quant Ion : 43.00
Area : 24793
On-column Amount (ng) : 4.0913
Integration start scan : 1925 Integration stop scan: 1983
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

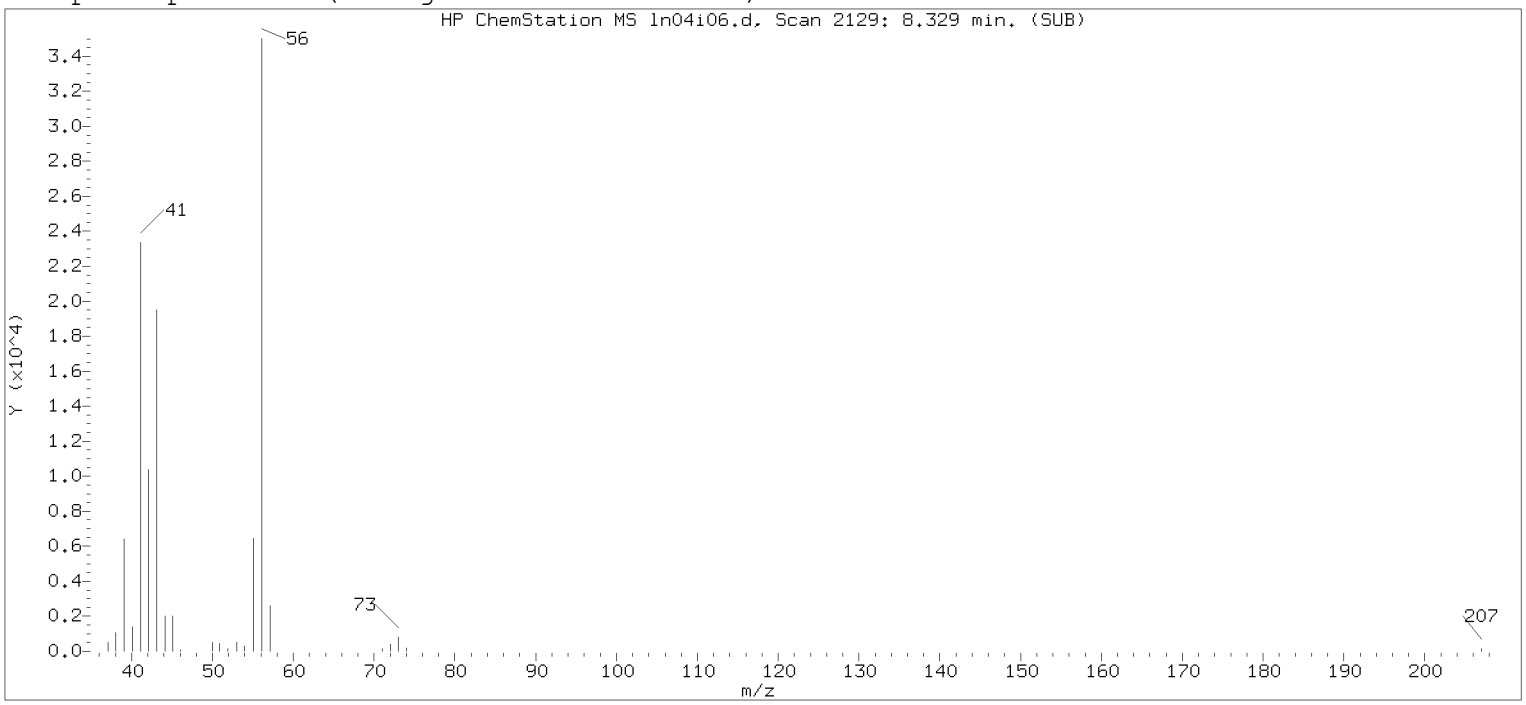
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area (flag) : 110027M
On-Column Amount (ng) : 344.3298
Integration start scan : 2109 Integration stop scan: 2223
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

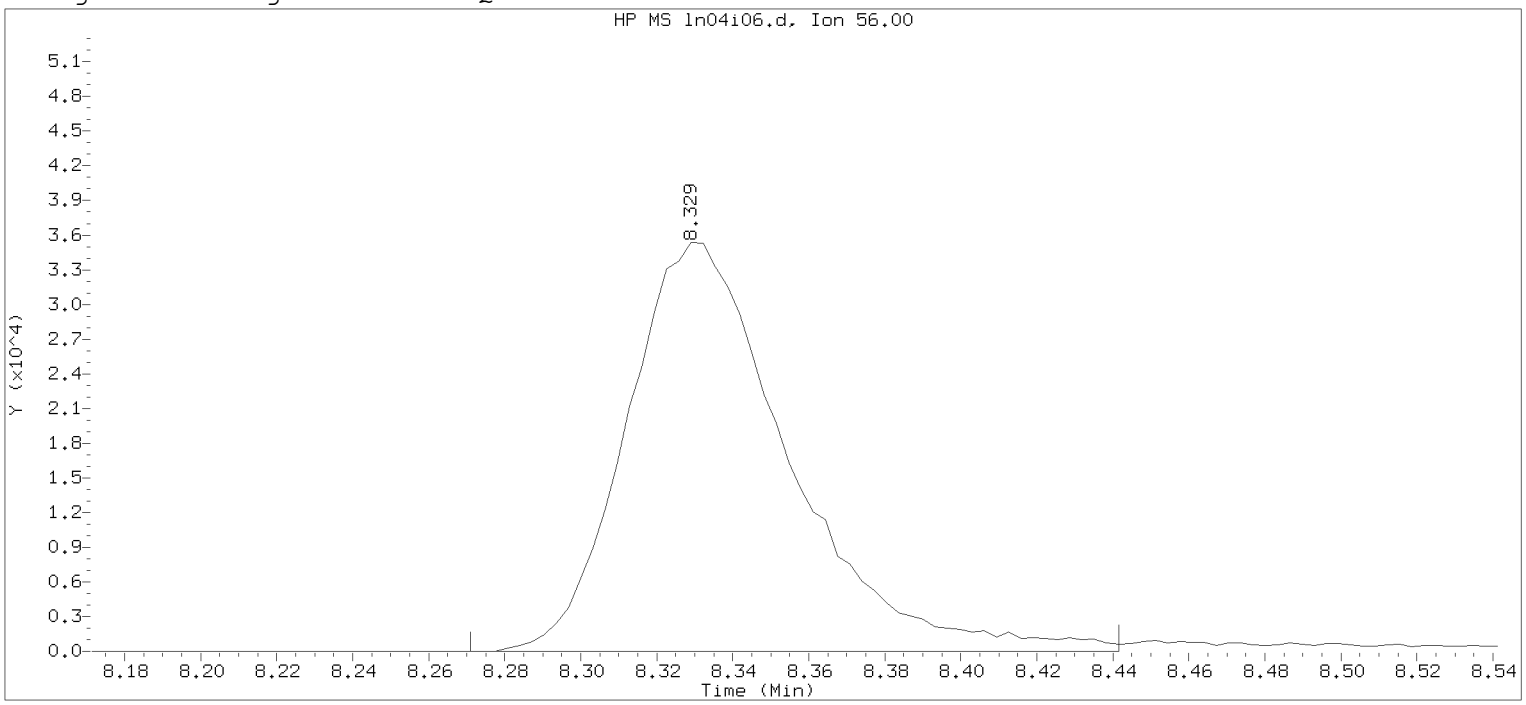
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

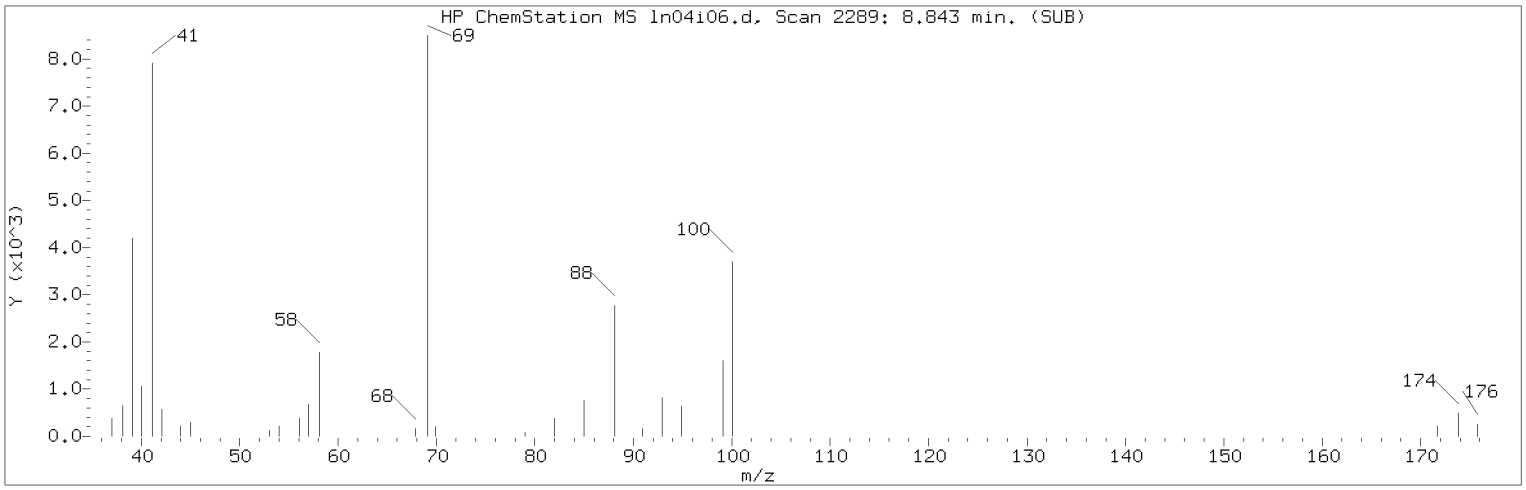
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

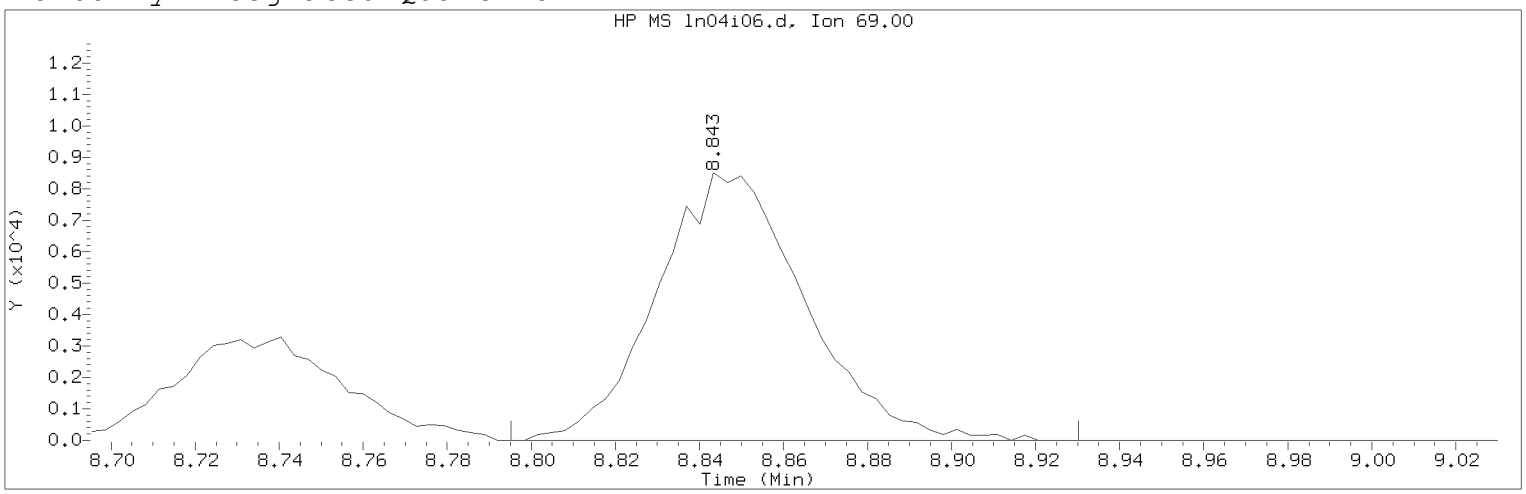
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area : 104688
On-column Amount (ng) : 337.8676
Integration start scan : 2110 Integration stop scan: 2163
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

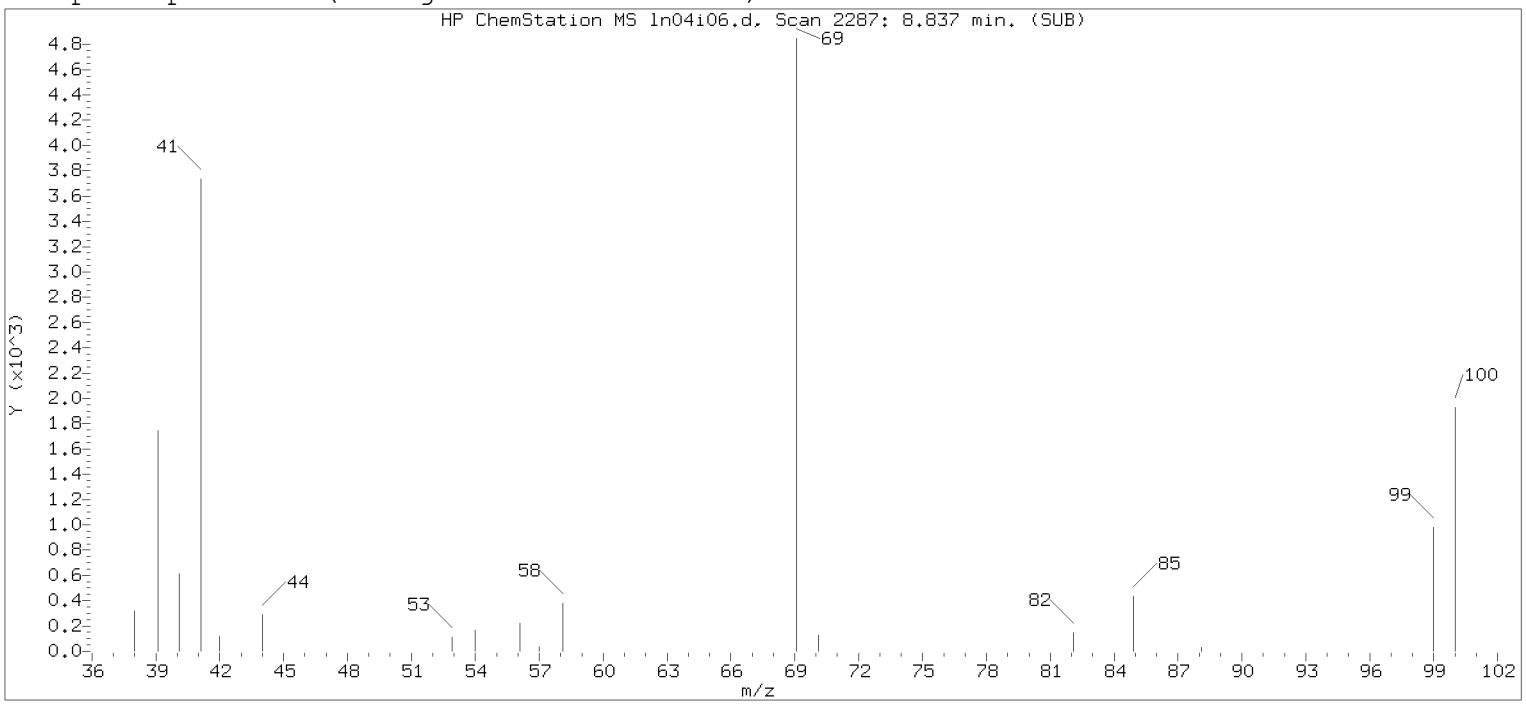
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2289
Retention Time (minutes): 8.843
Quant Ion : 69.00
Area (flag) : 20713M
On-Column Amount (ng) : 3.6110
Integration start scan : 2273 Integration stop scan: 2315
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

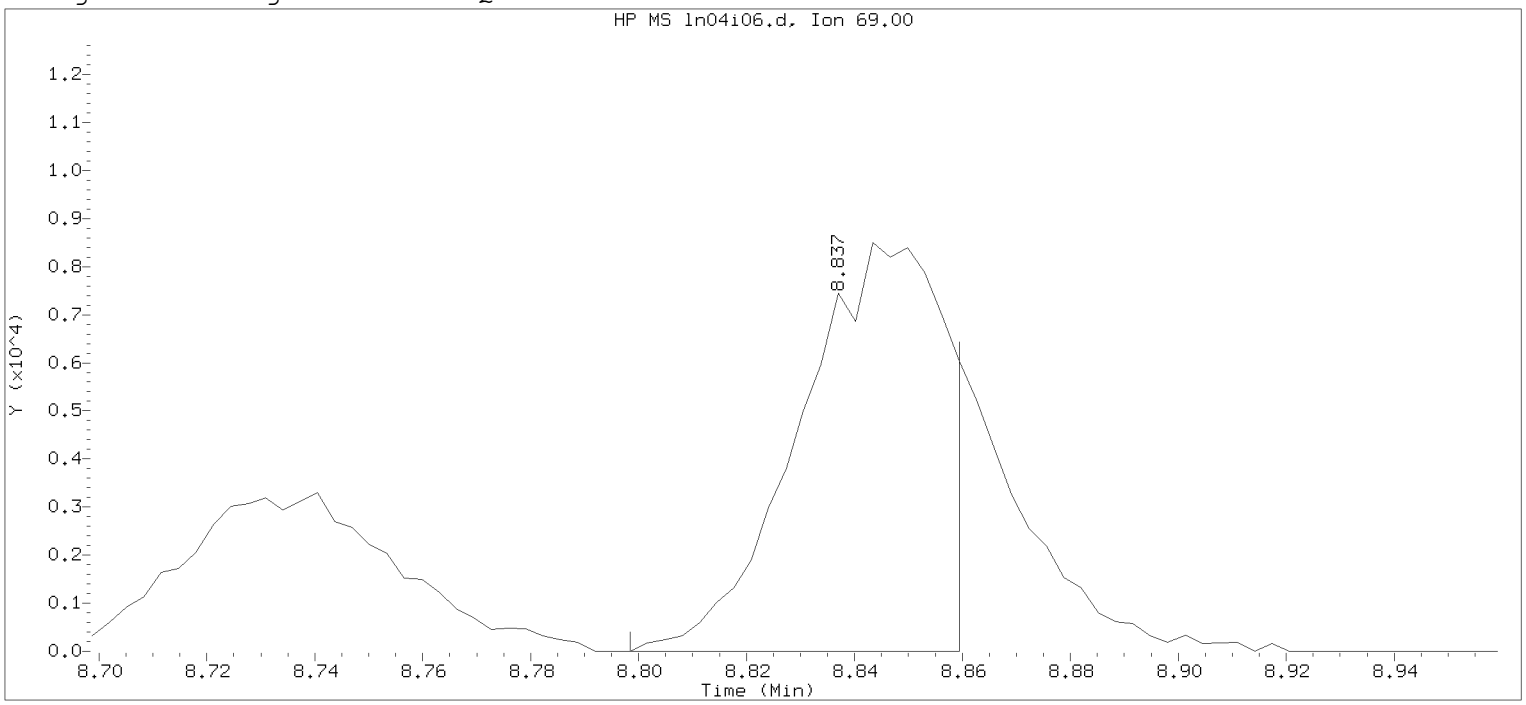
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

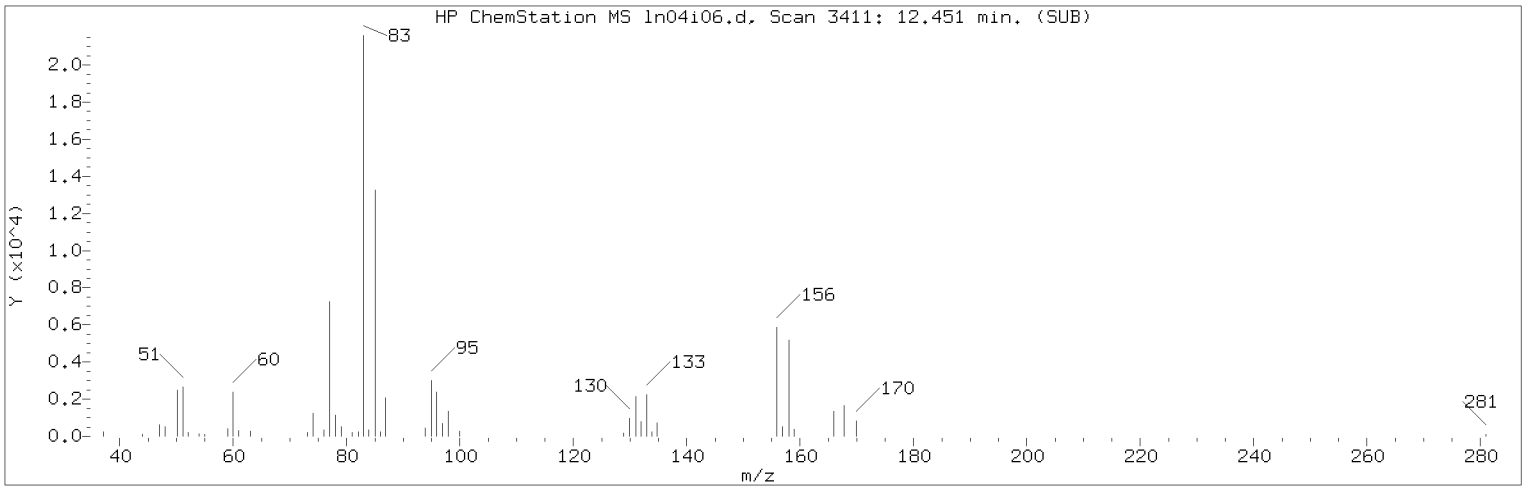
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

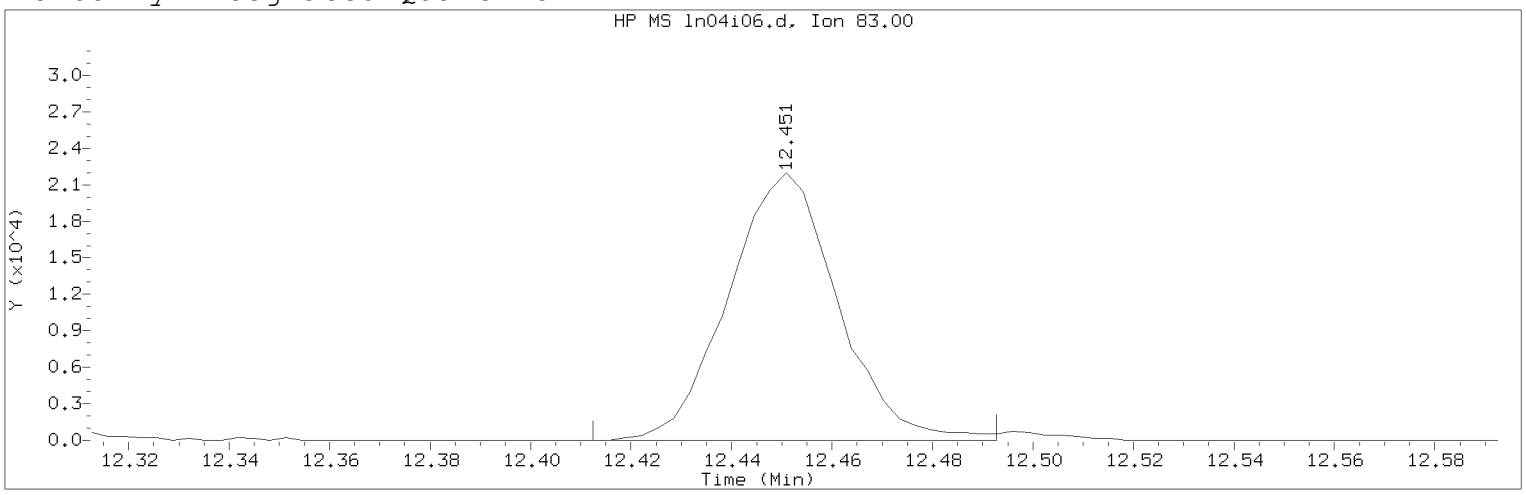
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2287
Retention Time (minutes): 8.837
Quant Ion : 69.00
Area : 15546
On-column Amount (ng) : 2.8548
Integration start scan : 2274 Integration stop scan: 2293
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

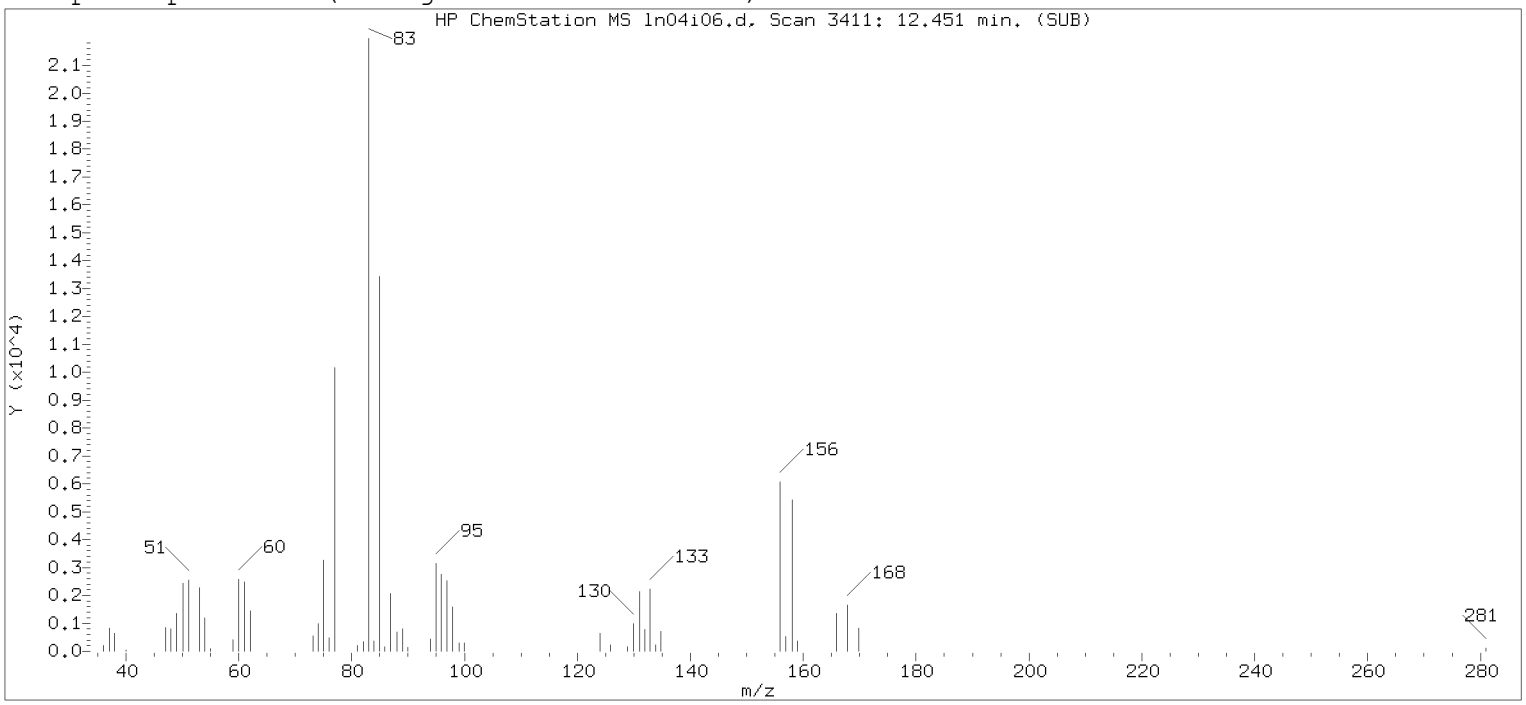
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 33170M
On-Column Amount (ng) : 3.6577
Integration start scan : 3398 Integration stop scan: 3423
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

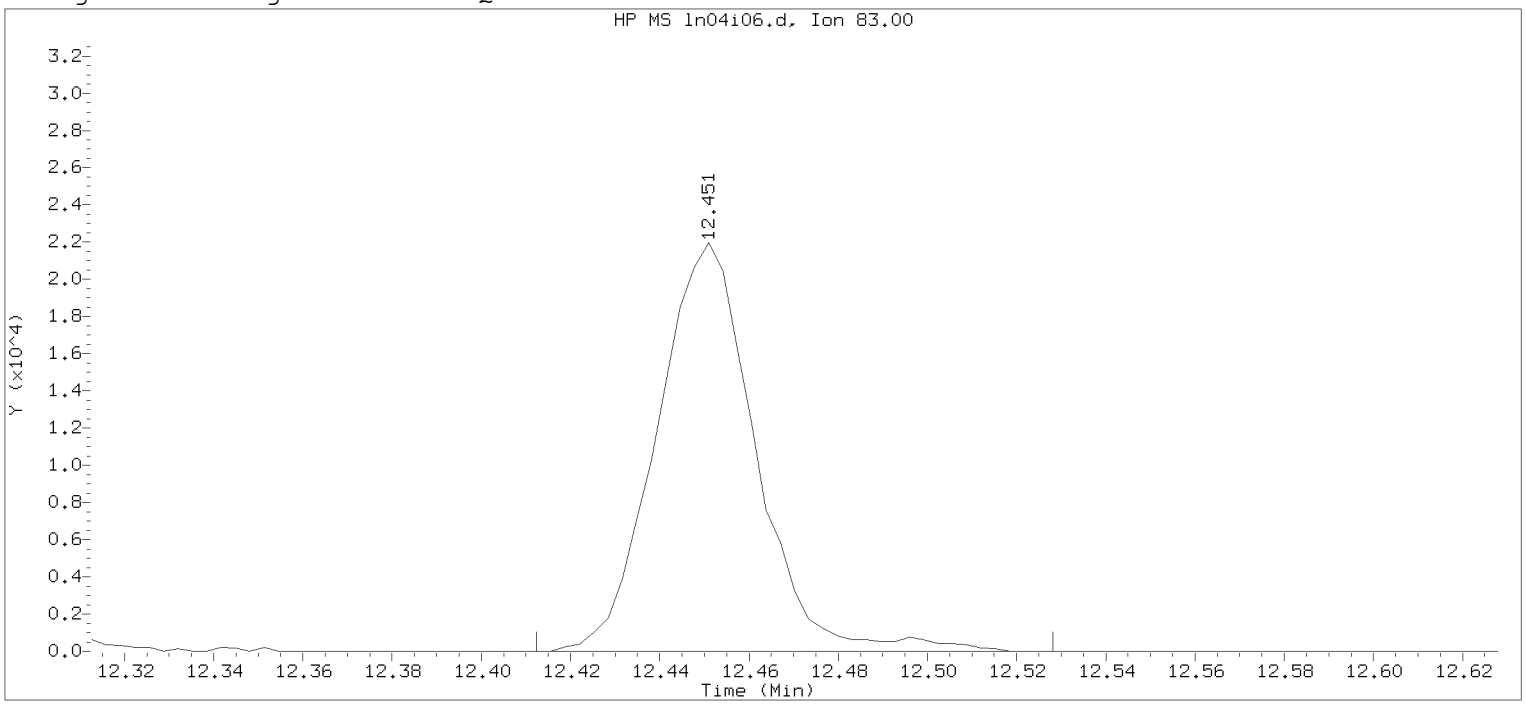
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

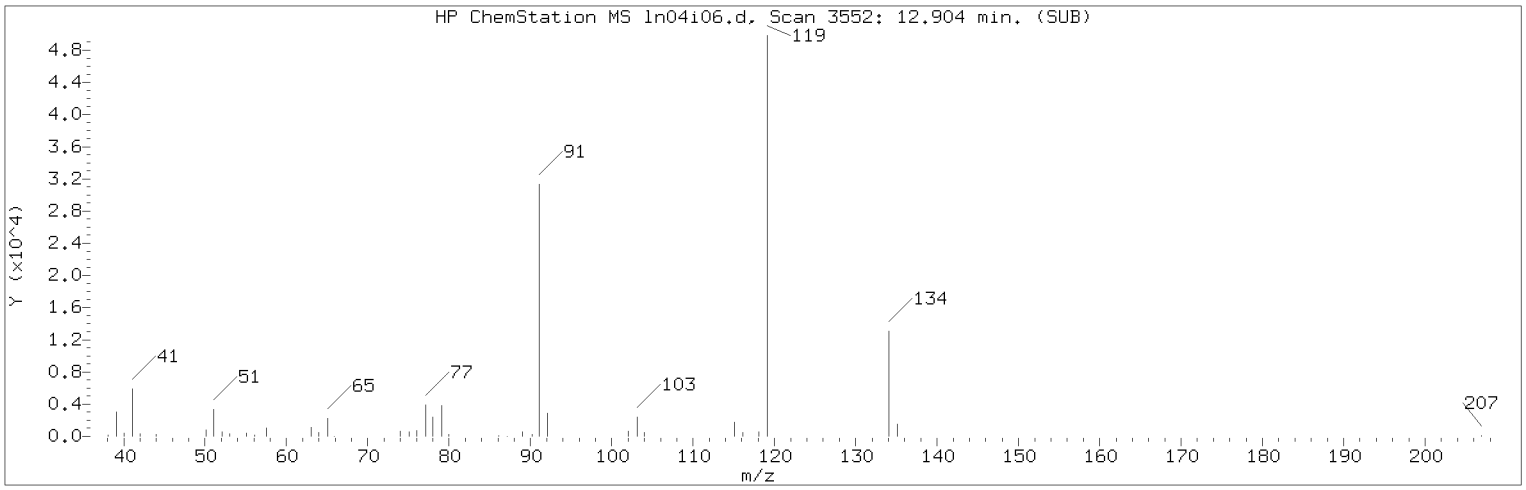
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

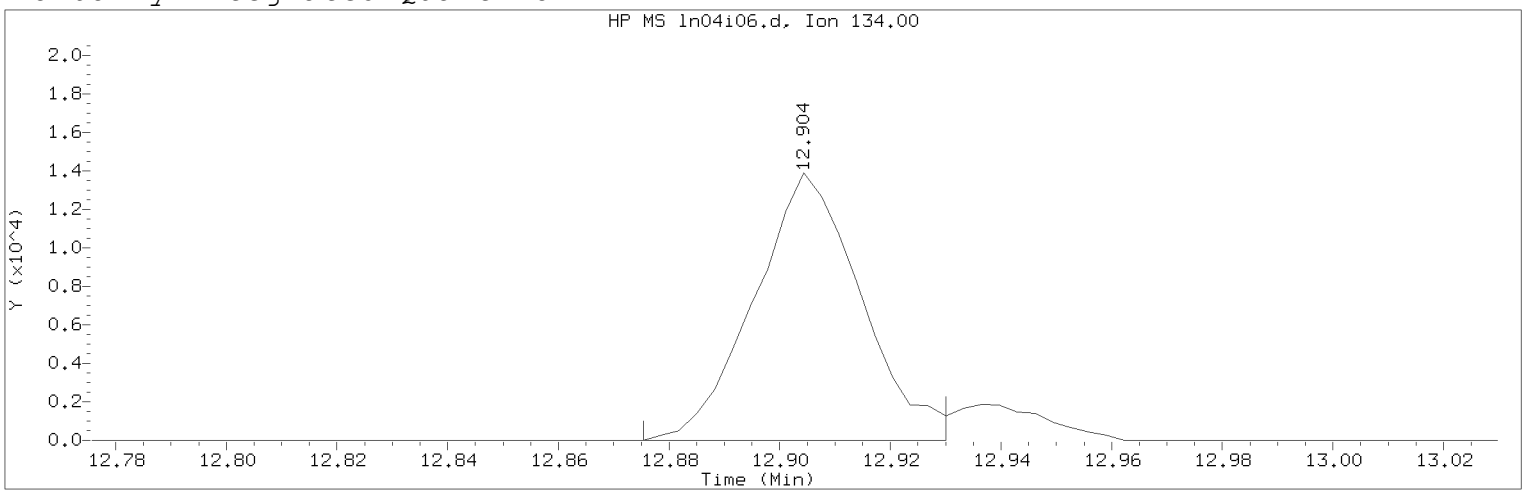
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 33718
On-column Amount (ng) : 3.6520
Integration start scan : 3398 Integration stop scan: 3434
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

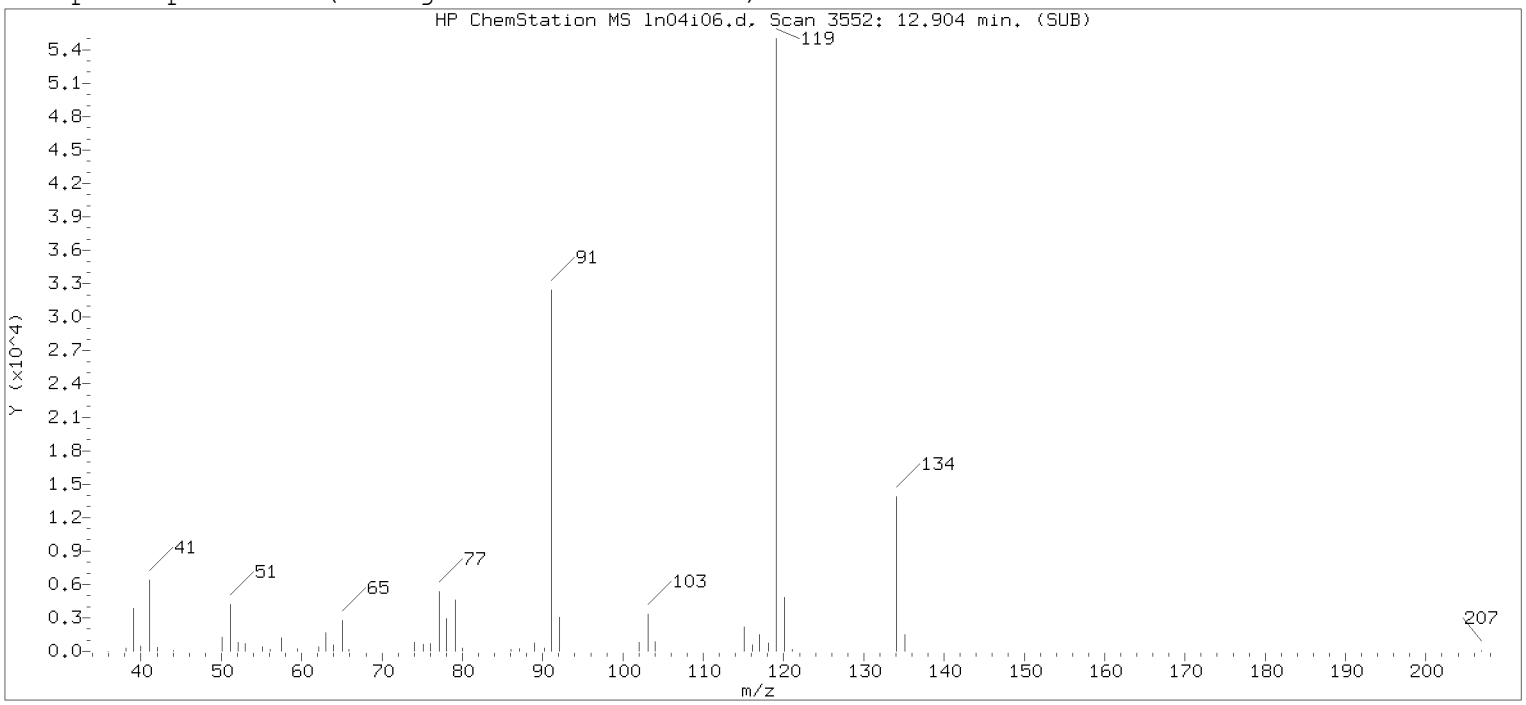
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 18608M
On-Column Amount (ng) : 3.9276
Integration start scan : 3542 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

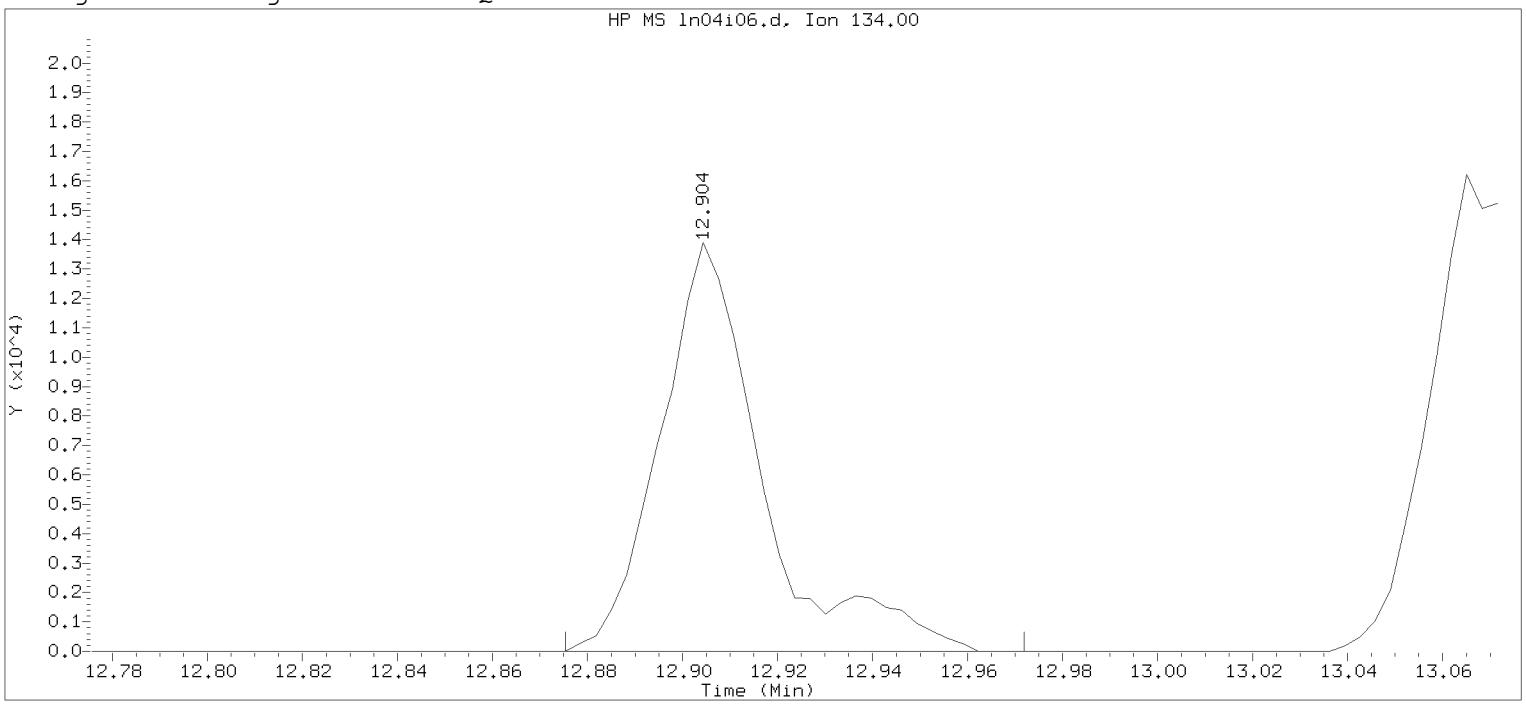
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



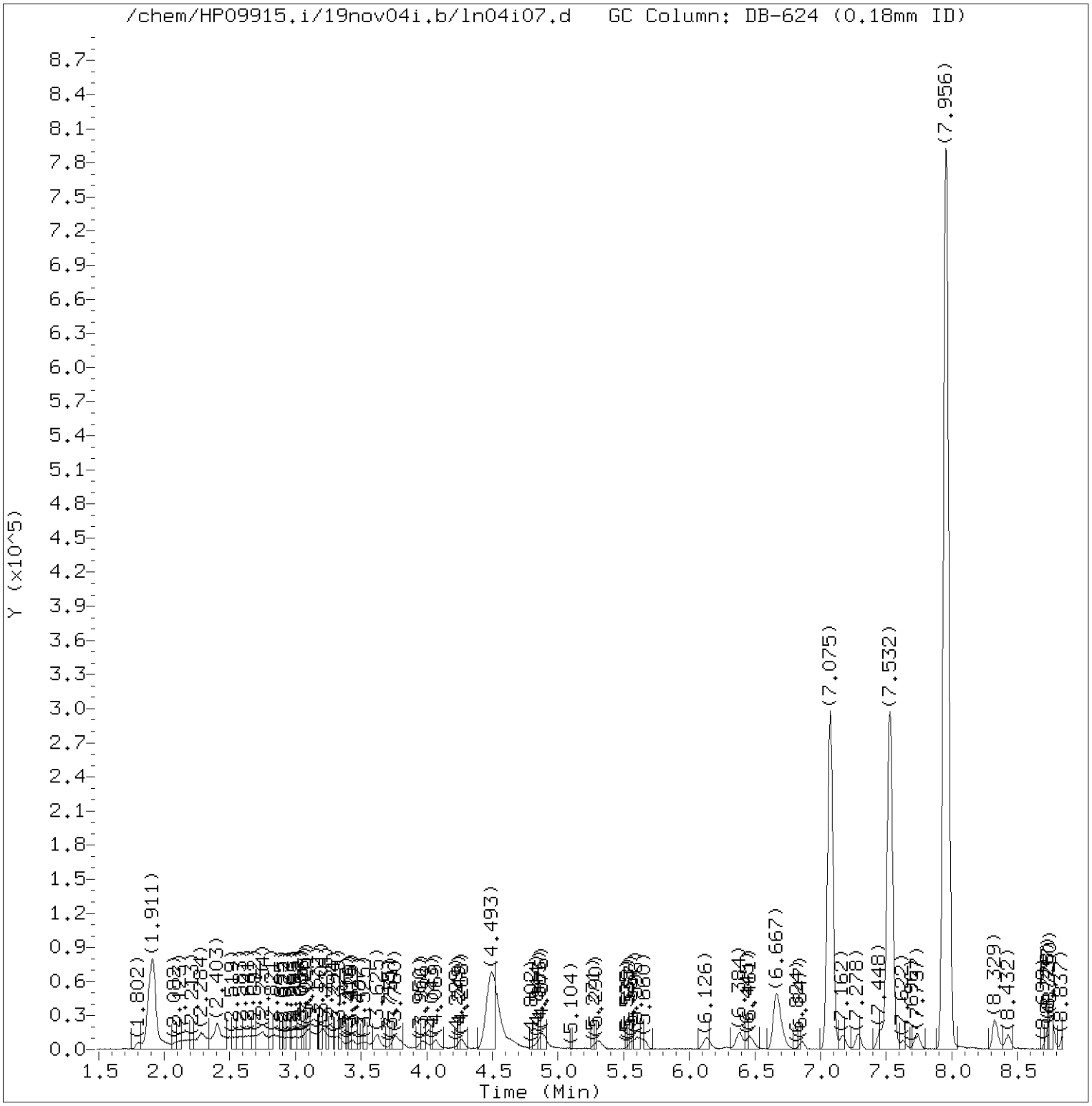
Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 20636
On-column Amount (ng) : 4.1808
Integration start scan : 3542 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

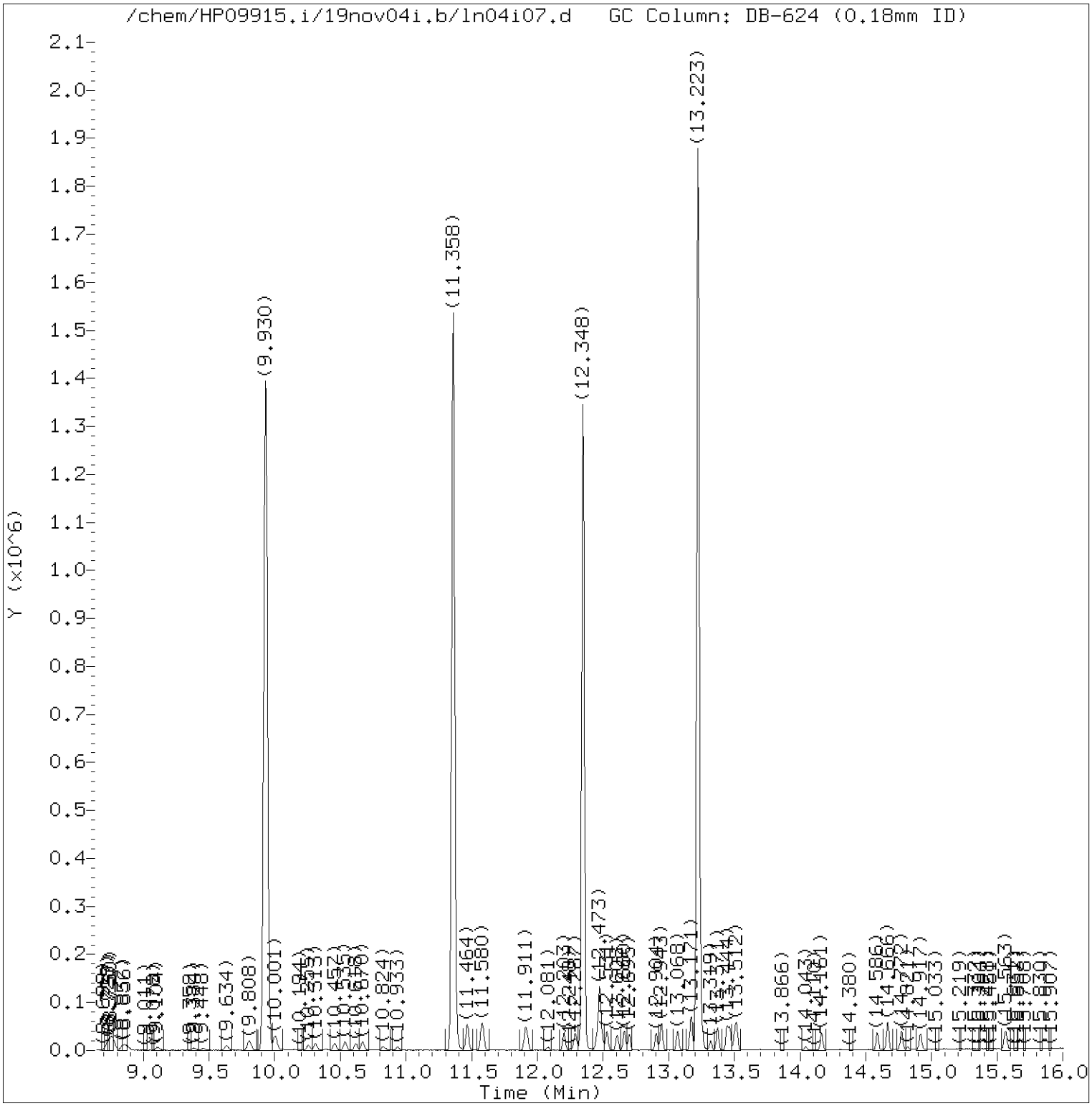
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.078	85	6299	0.794
4) Chloromethane	(2)	2.284	50	6896	0.902
5) 1,3-Butadiene	(2)	2.403	39	7255M	1.143
6) Vinyl Chloride	(2)	2.410	62	7160	0.939
8) Bromomethane	(2)	2.744	94	5605	1.025
9) Chloroethane	(2)	2.840	64	4160M	0.992
10) Dichlorofluoromethane	(2)	3.094	67	10094M	1.004
12) Trichlorofluoromethane	(2)	3.146	101	7129	0.868
11) n-Pentane	(2)	3.204	43	10269	1.058
14) Ethyl ether	(2)	3.429	59	4640M	0.874
15) Freon 123a	(2)	3.516	67	6210	0.940
16) Acrolein	(1)	3.622	56	17644	9.654
17) 1,1-Dichloroethene	(2)	3.750	96	4176	0.866
17) 1,1-Dichloroethene	(2)	3.754	63	2326	0.963
19) Freon 113	(2)	3.779	101	4754	0.864
18) Acetone	(1)	3.831	58	1588M	1.938
22) Methyl Iodide	(2)	3.966	142	8860	0.887
21) 2-Propanol	(1)	4.011	45	12063	20.480
23) Carbon Disulfide	(2)	4.075	76	15443	0.850
27) Methyl Acetate	(2)	4.255	43	6274M	1.011
25) Allyl Chloride	(2)	4.271	41	8168	0.945
28) Methylene Chloride	(2)	4.474	84	5404	0.942
29)*t-Butyl alcohol-d10	(1)	4.496	65	243591	250.000
30) t-Butyl alcohol	(1)	4.622	59	19461	18.976
31) Acrylonitrile	(2)	4.856	53	2960	0.886
33) Methyl Tertiary Butyl Ether	(2)	4.879	73	16848	0.920
32) trans-1,2-Dichloroethene	(2)	4.885	96	5035	0.903
34) n-Hexane	(2)	5.316	57	7475M	0.862
36) 1,1-Dichloroethane	(2)	5.548	63	8436	0.867
38) di-Isopropyl ether	(2)	5.606	45	16654	0.888
39) 2-Chloro-1,3-butadiene	(2)	5.663	53	7448	0.853
40) Ethyl t-butyl ether	(2)	6.126	59	16060	0.882
43) 1,2-Dichloroethene (Total)	(2)		96	10762	1.818
44) 2-Butanone	(2)	6.361	43	8098	1.889
42) cis-1,2-Dichloroethene	(2)	6.377	96	5727	0.915
45) 2,2-Dichloropropane	(2)	6.390	77	6419M	0.849
47) Propionitrile	(1)	6.461	54	24221	18.955
48) Methacrylonitrile	(2)	6.670	67	32346	8.977

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	2849	0.858
50) Tetrahydrofuran	(1)	6.728	71	2319	2.009
51) Chloroform	(2)	6.860	83	8108	0.871
52)$Dibromofluoromethane	(2)	7.075	113	273696	49.231
52)$Dibromofluoromethane	(2)	7.075	111	279412	49.293
53) 1,1,1-Trichloroethane	(2)	7.078	97	6588	0.830
54) Cyclohexane	(2)	7.171	56	8997	0.847
54) Cyclohexane	(2)	7.178	84	7859	0.852
54) Cyclohexane	(2)	7.178	69	2772	0.844
56) Carbon Tetrachloride	(2)	7.284	117	5549	0.824
55) 1,1-Dichloropropene	(2)	7.287	75	6611	0.860
58) Isobutyl Alcohol	(1)	7.458	41	16978	49.195
57)$1,2-Dichloroethane-d4	(2)	7.528	102	69641	49.151
57)$1,2-Dichloroethane-d4	(2)	7.528	65	311703	49.366
57)$1,2-Dichloroethane-d4	(2)	7.535	104	44286	48.935
60) Benzene	(2)	7.551	78	20445	0.884
61) 1,2-Dichloroethane	(2)	7.631	62	7810	1.050
61) 1,2-Dichloroethane	(2)	7.631	98	696	0.945
65) t-Amyl methyl ether	(2)	7.741	73	16286	0.891
67) n-Heptane	(2)	7.956	43	7535M	0.930
66)*Fluorobenzene	(2)	7.959	96	1137124	50.000
69) n-Butanol	(1)	8.329	56	24322	81.882
71) Trichloroethene	(2)	8.432	95	5231	0.898
72) Methylcyclohexane	(2)	8.737	83	9247	0.856
72) Methylcyclohexane	(2)	8.731	98	4032	0.825
73) 1,2-Dichloropropane	(2)	8.760	63	5229	0.890
76) Methyl Methacrylate	(2)	8.837	69	4607M	0.811
75) 1,4-Dioxane	(1)	8.856	88	3548M	43.457
74) Dibromomethane	(2)	8.866	93	3298	0.868
78) Bromodichloromethane	(2)	9.107	83	5648	0.828
79) 2-Nitropropane	(2)	9.384	41	3333	1.614
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	2007	0.796
81) cis-1,3-Dichloropropene	(2)	9.638	75	6973	0.770
82) 4-Methyl-2-pentanone	(2)	9.808	43	16006	1.769
83)$Toluene-d8	(3)	9.930	98	1156948	50.253
83)$Toluene-d8	(3)	9.930	100	746174	50.033
88) Toluene	(3)	10.007	92	12902	0.894
90) 1,3-Dichloropropene (total)	(3)		100	13101	1.518

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Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.255	75	6128	0.748
91) Ethyl Methacrylate	(3)	10.313	69	7873	0.791
92) 1,1,2-Trichloroethane	(3)	10.461	97	4897	0.895
93) Tetrachloroethene	(3)	10.538	166	5565	0.910
94) 1,3-Dichloropropane	(3)	10.618	76	8504	0.910
96) 2-Hexanone	(3)	10.670	43	11811	1.777
97) Dibromochloromethane	(3)	10.827	129	4109	0.733
99) 1,2-Dibromoethane	(3)	10.937	107	5163	0.869
100)*Chlorobenzene-d5	(3)	11.358	117	879875	50.000
101) 1-Chlorohexane	(3)	11.361	91	8103	1.045
102) Chlorobenzene	(3)	11.383	112	14367	0.880
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	4138	0.769
104) Ethylbenzene	(3)	11.464	91	24192	0.877
106) m+p-Xylene	(3)	11.583	106	18914	1.743
108) Xylene (Total)	(3)		106	28415	2.629
107) o-Xylene	(3)	11.908	106	9501	0.886
109) Styrene	(3)	11.917	104	14106	0.796
110) Bromoform	(3)	12.081	173	2729	0.652
111) Isopropylbenzene	(3)	12.203	105	22719	0.845
112) Cyclohexanone	(1)	12.287	55	15983	49.985
114)$4-Bromofluorobenzene	(3)	12.348	95	436282	50.046
114)$4-Bromofluorobenzene	(3)	12.348	174	360511	49.883
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	7596	0.849
115) Bromobenzene	(4)	12.461	156	6426	0.903
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	22650	8.211
117) 1,2,3-Trichloropropane	(4)	12.496	110	2425	0.884
119) n-Propylbenzene	(4)	12.528	91	27655	0.890
120) 2-Chlorotoluene	(4)	12.612	126	6138M	0.929
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	18836	0.834
121) 4-Chlorotoluene	(4)	12.702	126	6403M	0.931
124) tert-Butylbenzene	(4)	12.904	134	4060M	0.869
125) Pentachloroethane	(4)	12.940	167	2751	0.684
126) 1,2,4-Trimethylbenzene	(4)	12.943	105	20498	0.861
127) sec-Butylbenzene	(4)	13.065	105	24344	0.873
129) 1,3-Dichlorobenzene	(4)	13.165	146	12468	0.954
130) p-Isopropyltoluene	(4)	13.174	119	21126	0.876
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	473433	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	13174	0.972

M = Compound was manually integrated.
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Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	22457	0.890
135) Benzyl Chloride	(4)	13.319	91	11494	0.602
136) 1,3-Diethylbenzene	(4)	13.374	119	13985	0.891
141) Diethylbenzene (total)	(4)		100	41423	2.726
137) 1,4-Diethylbenzene	(4)	13.441	119	15446	0.929
139) n-Butylbenzene	(4)	13.464	92	11964M	0.970
138) 1,2-Dichlorobenzene	(4)	13.502	146	12171	0.943
140) 1,2-Diethylbenzene	(4)	13.515	119	11992	0.906
142) 1,2-Dibromo-3-chloropropane	(4)	14.046	75	1565	0.799
144) 1,3,5-Trichlorobenzene	(4)	14.161	180	10166	1.026
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	10347	1.074
147) Hexachlorobutadiene	(4)	14.666	225	9370	2.059
148) Naphthalene	(4)	14.772	128	28210	0.910
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	10052	1.072
150) 2-Methylnaphthalene	(4)	15.567	142	18783M	0.984

M = Compound was manually integrated.

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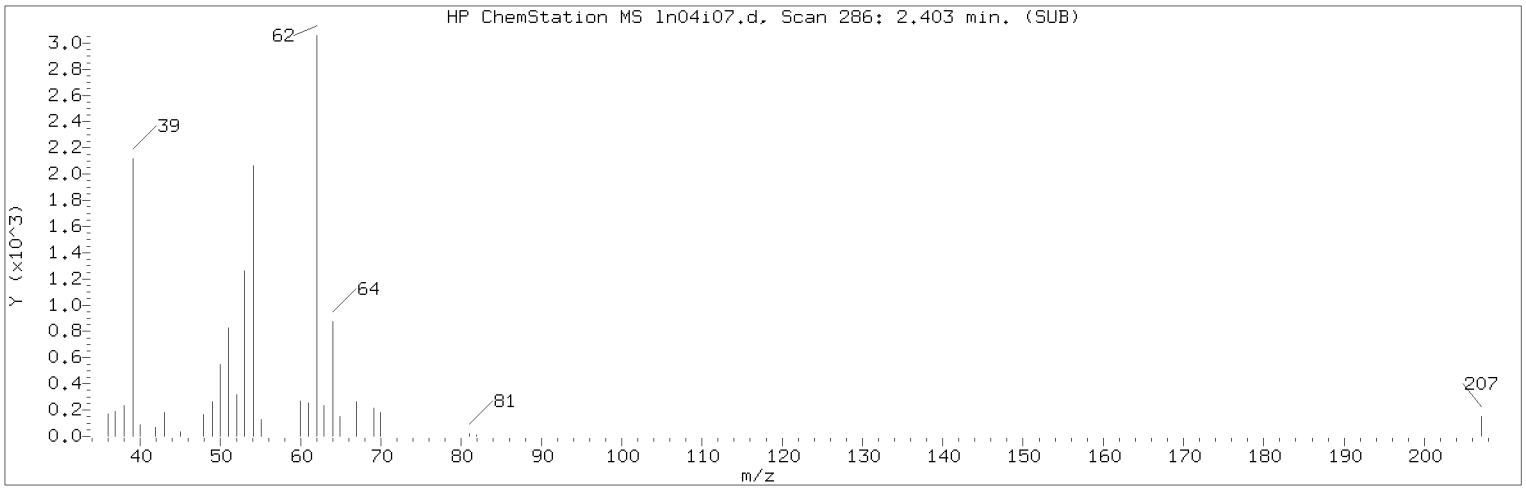
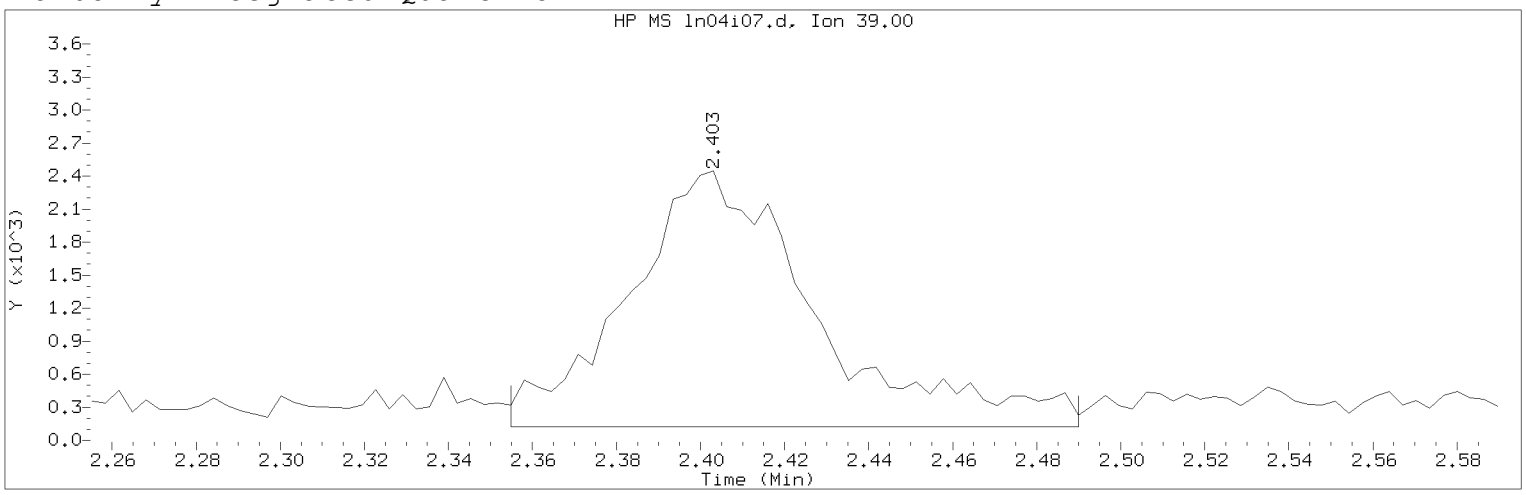
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

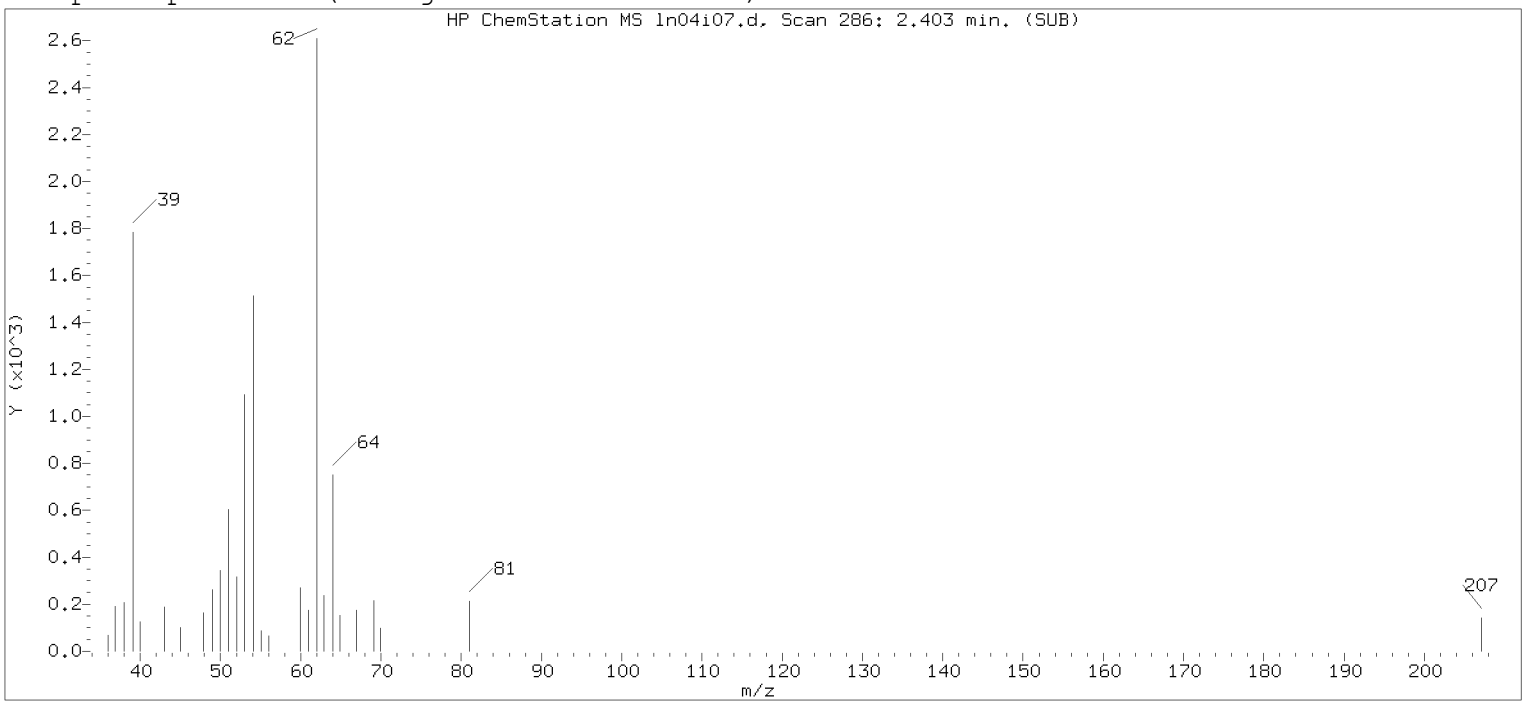
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 286
Retention Time (minutes): 2.403
Quant Ion : 39.00
Area (flag) : 7255M
On-Column Amount (ng) : 1.1432
Integration start scan : 270 Integration stop scan: 312
Y at integration start : 120 Y at integration end: 120

Reason for manual integration: improper integration

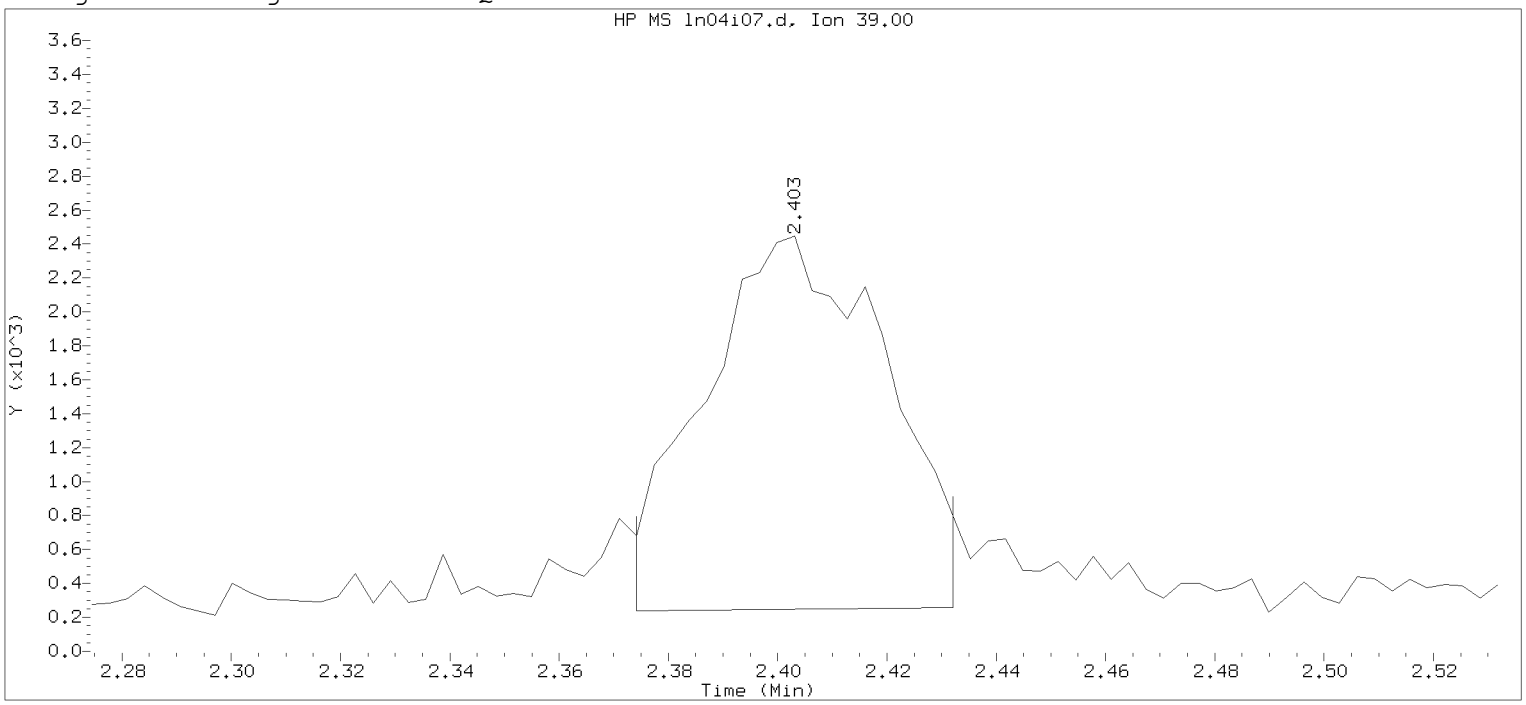
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

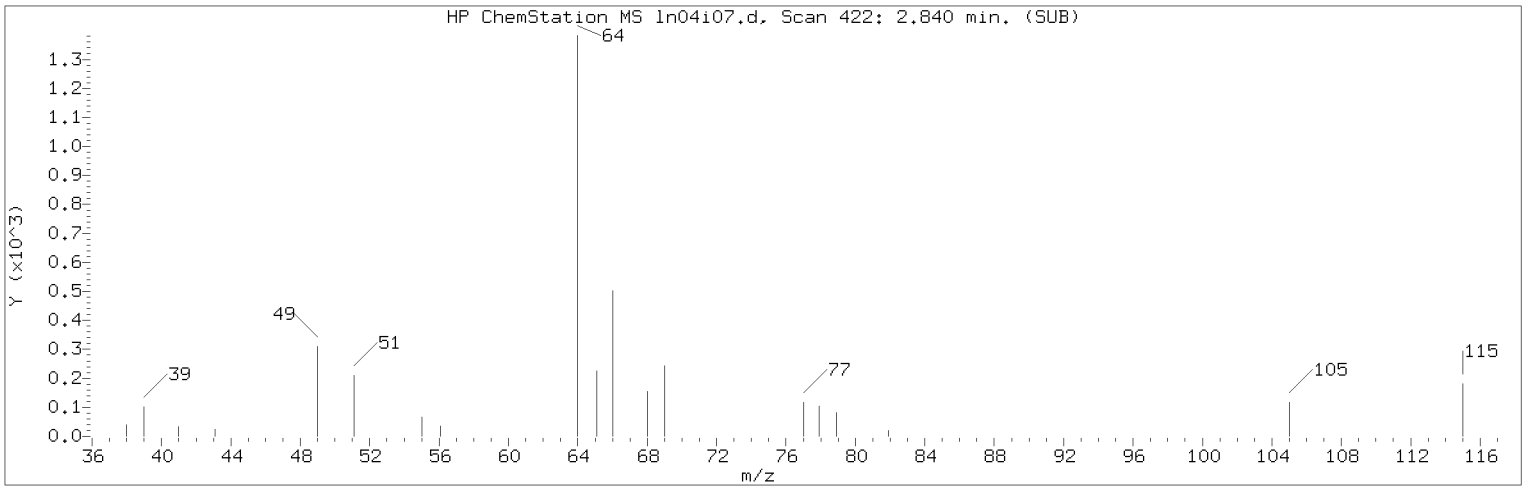
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

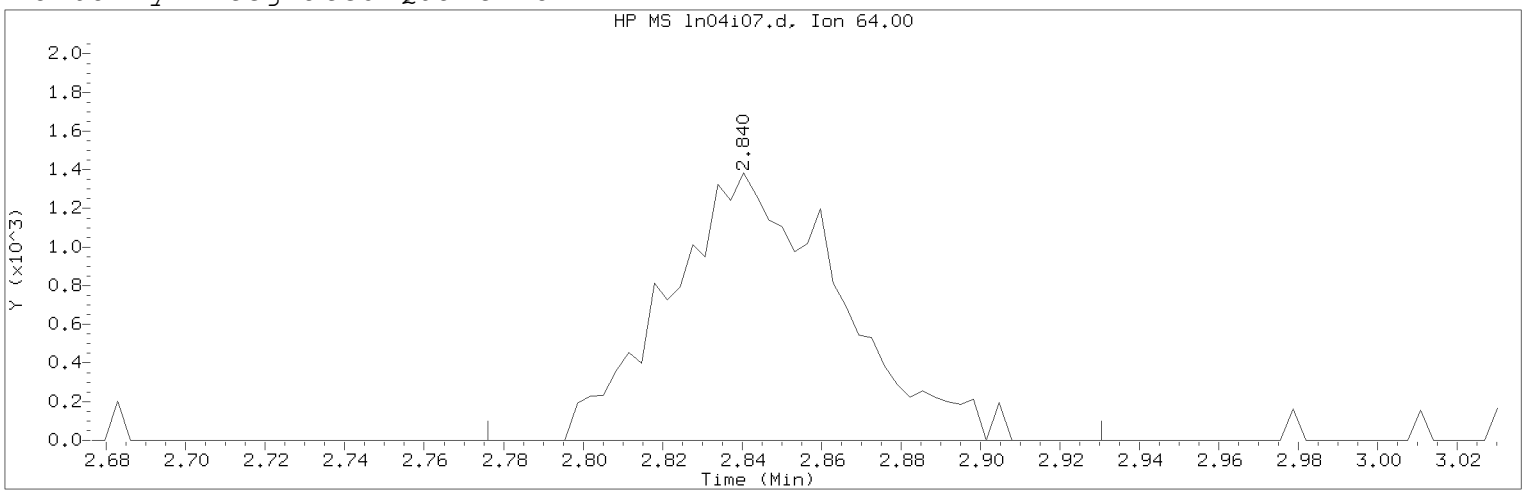
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 286
Retention Time (minutes): 2.403
Quant Ion : 39.00
Area : 5073
On-column Amount (ng) : 0.8493
Integration start scan : 276 Integration stop scan: 294
Y at integration start : 239 Y at integration end: 258

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

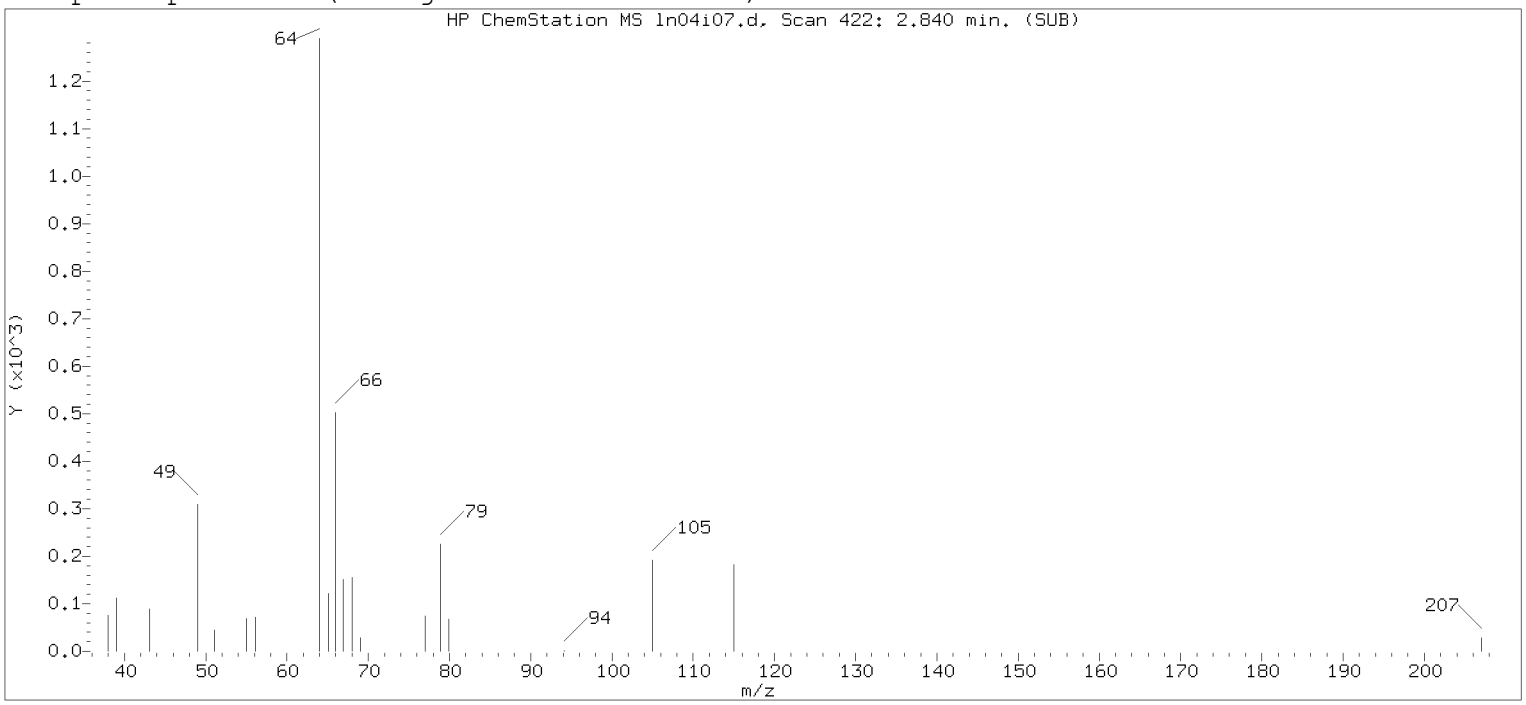
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 422
Retention Time (minutes): 2.840
Quant Ion : 64.00
Area (flag) : 4160M
On-Column Amount (ng) : 0.9924
Integration start scan : 401 Integration stop scan: 449
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

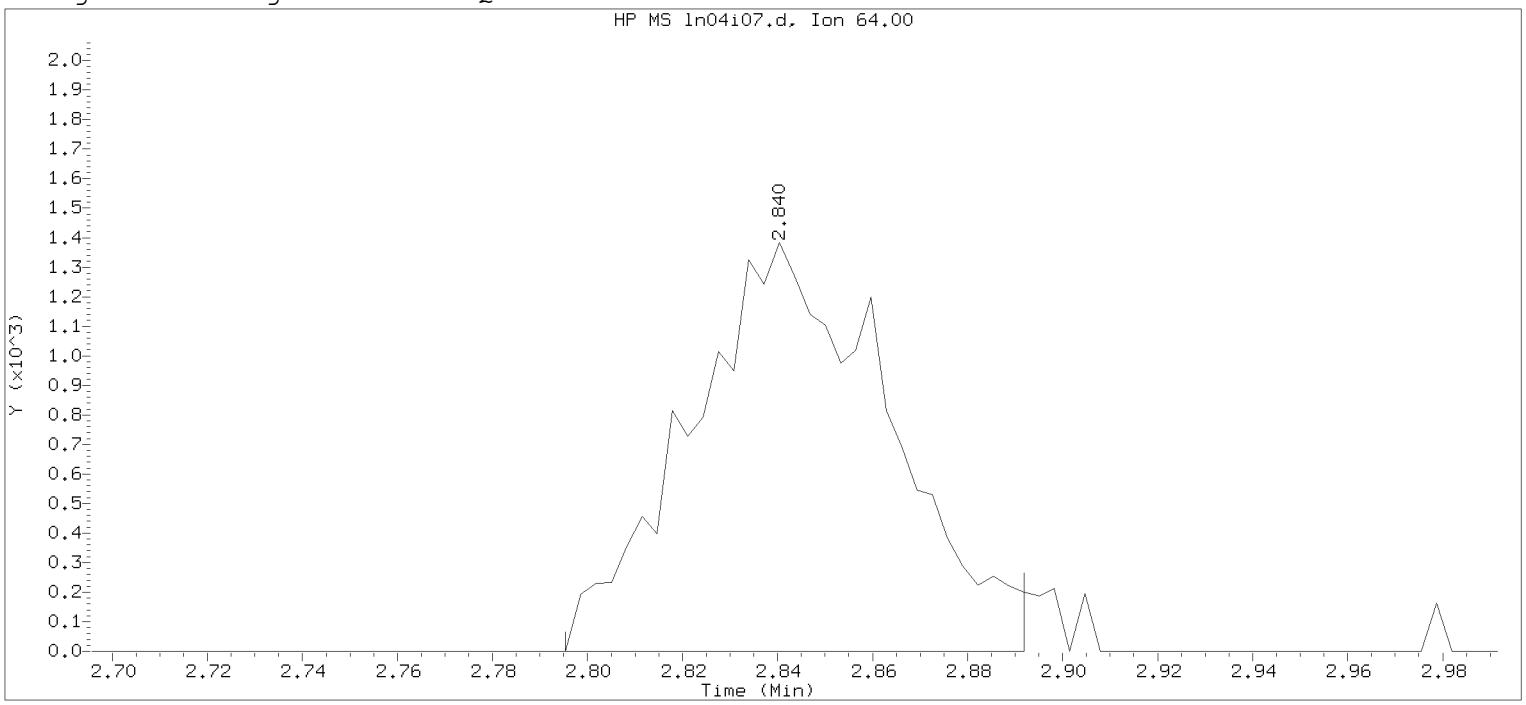
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

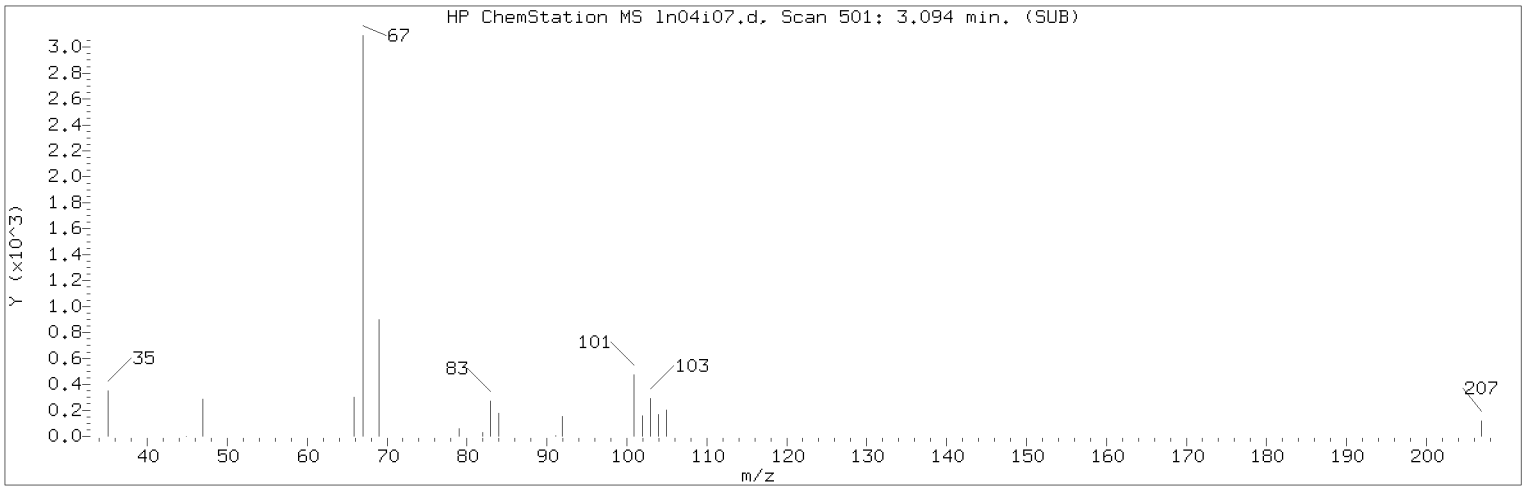
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

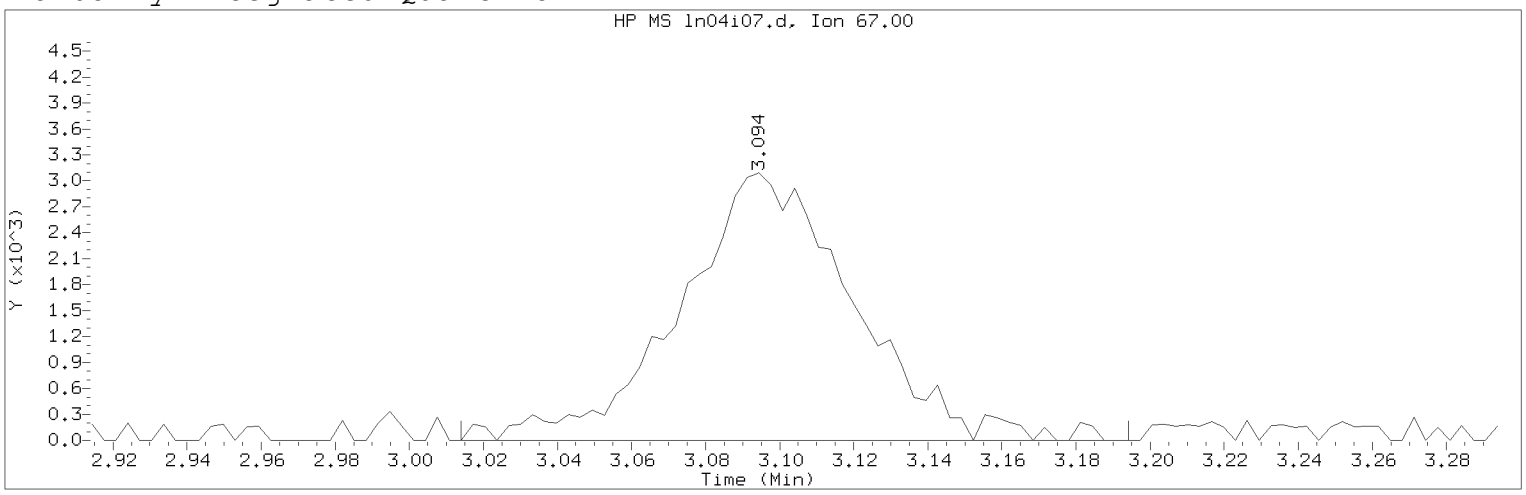
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 422
Retention Time (minutes): 2.840
Quant Ion : 64.00
Area : 4026
On-column Amount (ng) : 0.9650
Integration start scan : 407 Integration stop scan: 437
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

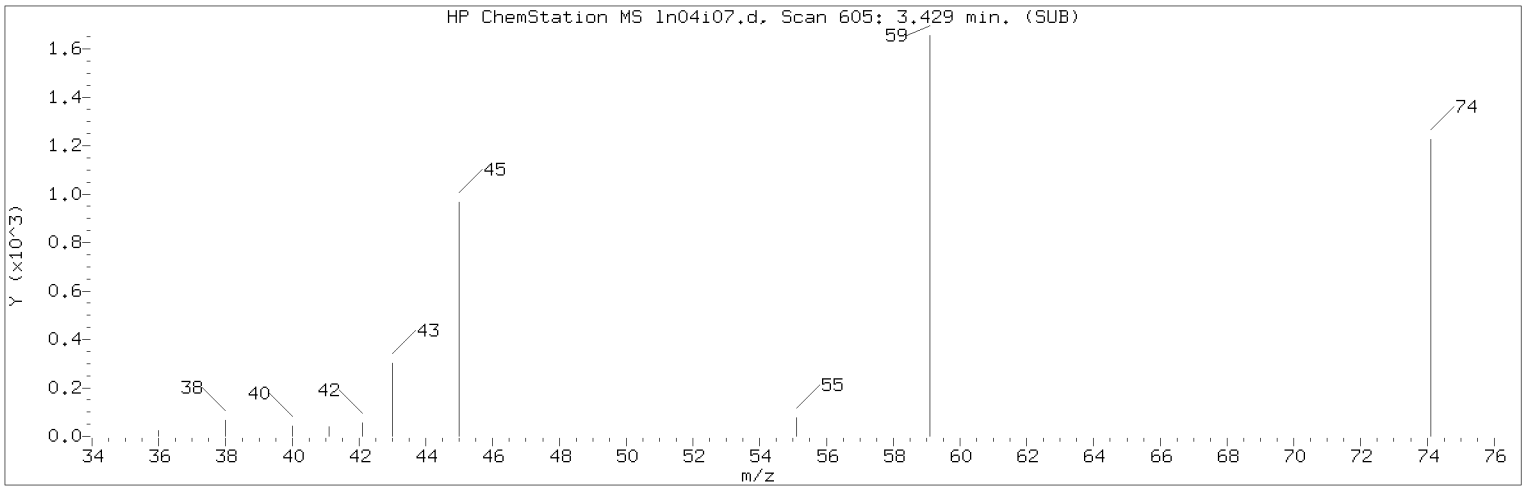
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 501
Retention Time (minutes): 3.094
Quant Ion : 67.00
Area (flag) : 10094M
On-Column Amount (ng) : 1.0040
Integration start scan : 475 Integration stop scan: 531
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

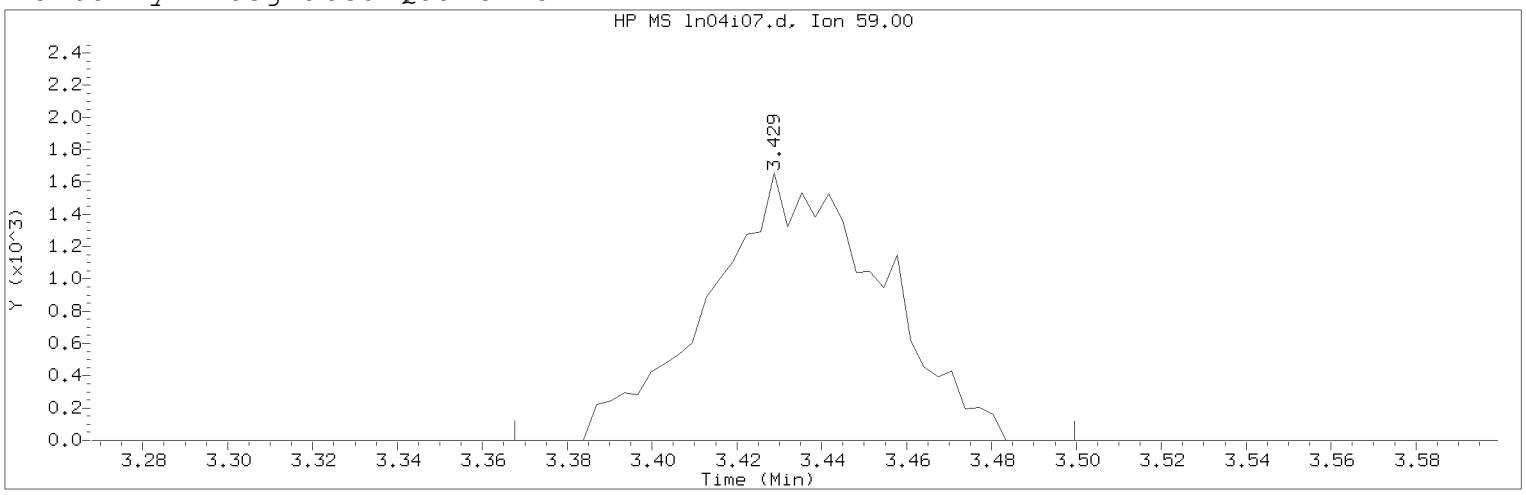
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

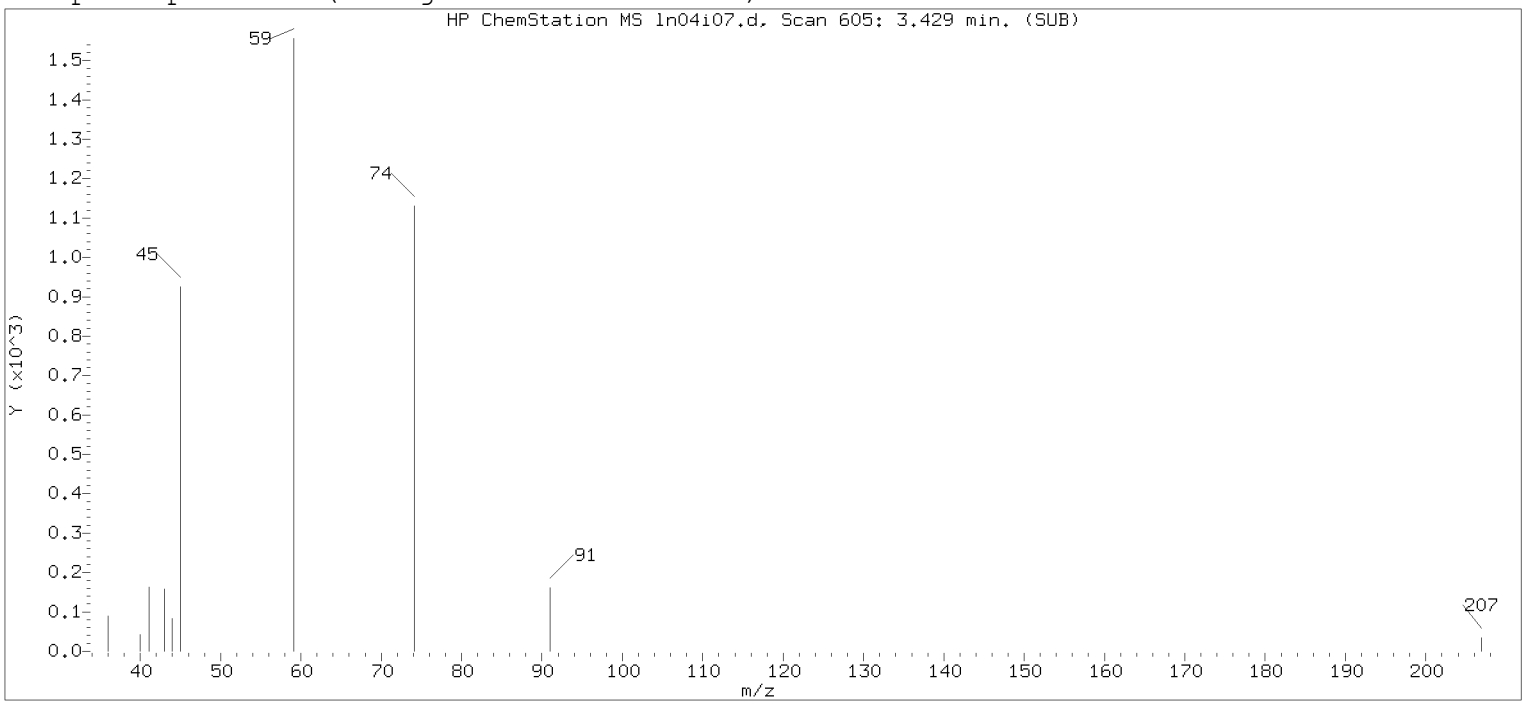
Compound Number : 14
Compound Name : Ethyl ether
Scan Number : 605
Retention Time (minutes): 3.429
Quant Ion : 59.00
Area (flag) : 4640M
On-Column Amount (ng) : 0.8744
Integration start scan : 585 Integration stop scan: 626
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

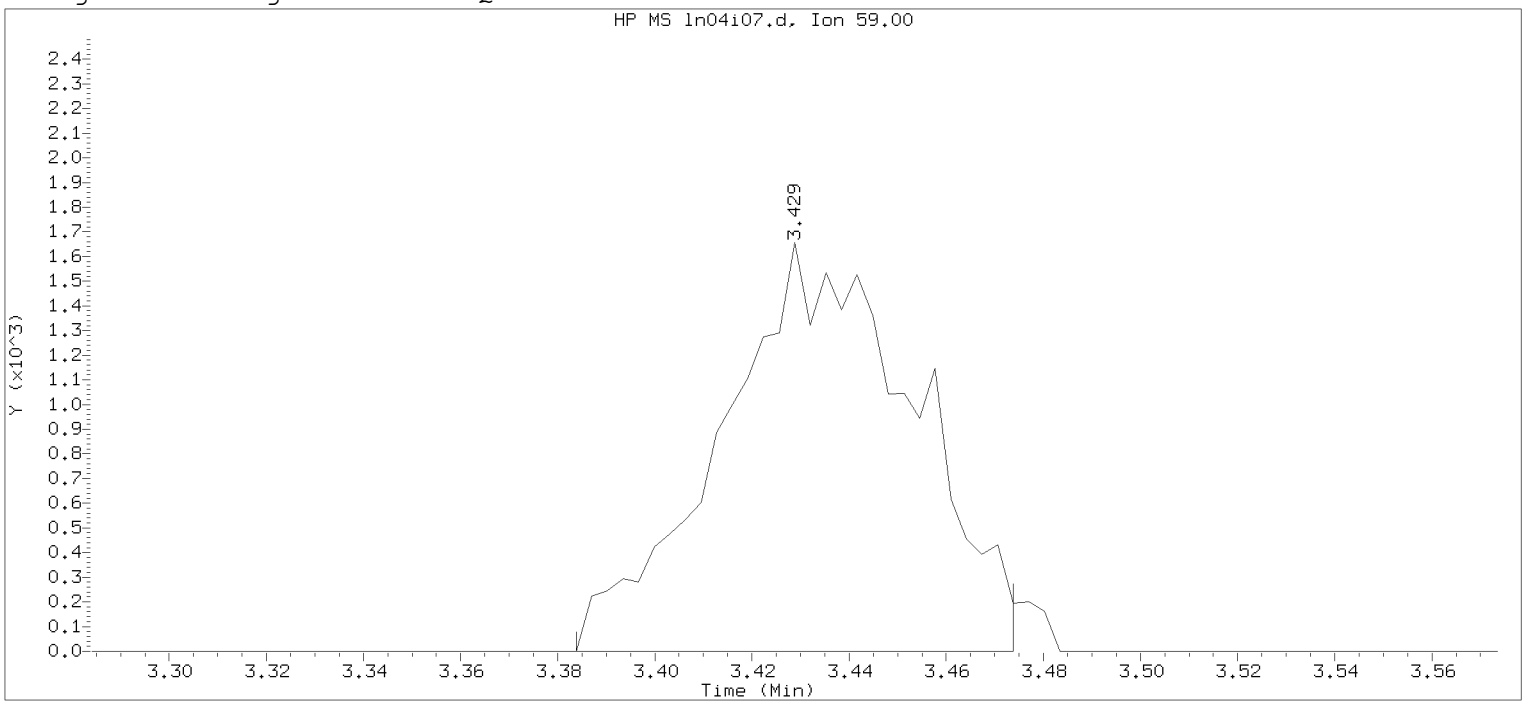
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

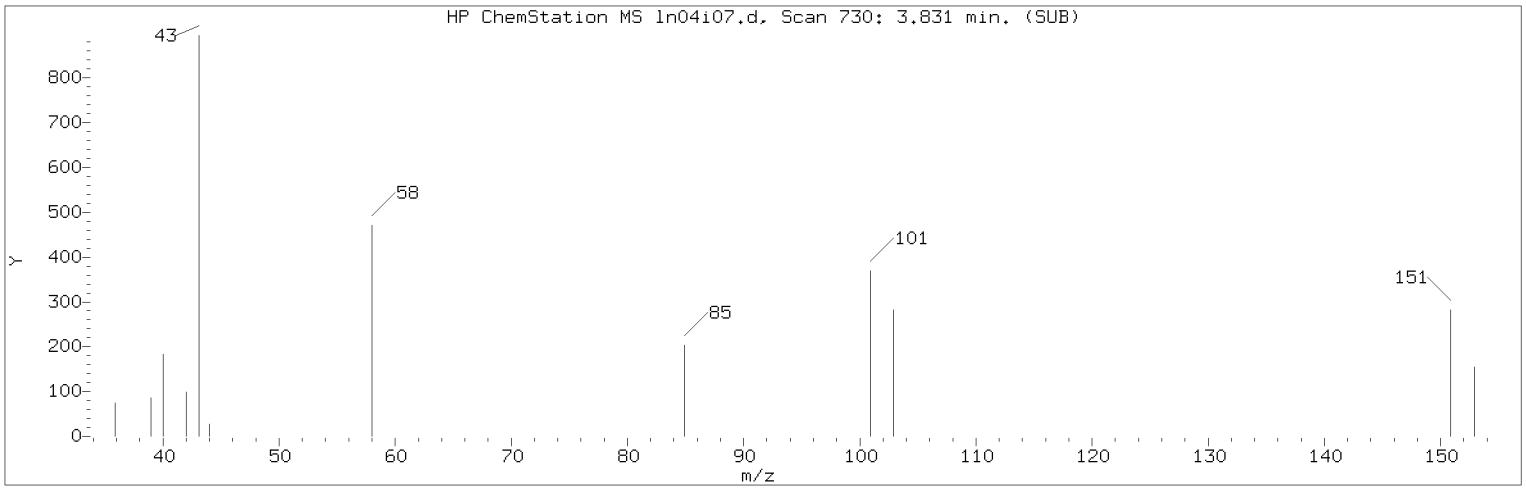
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

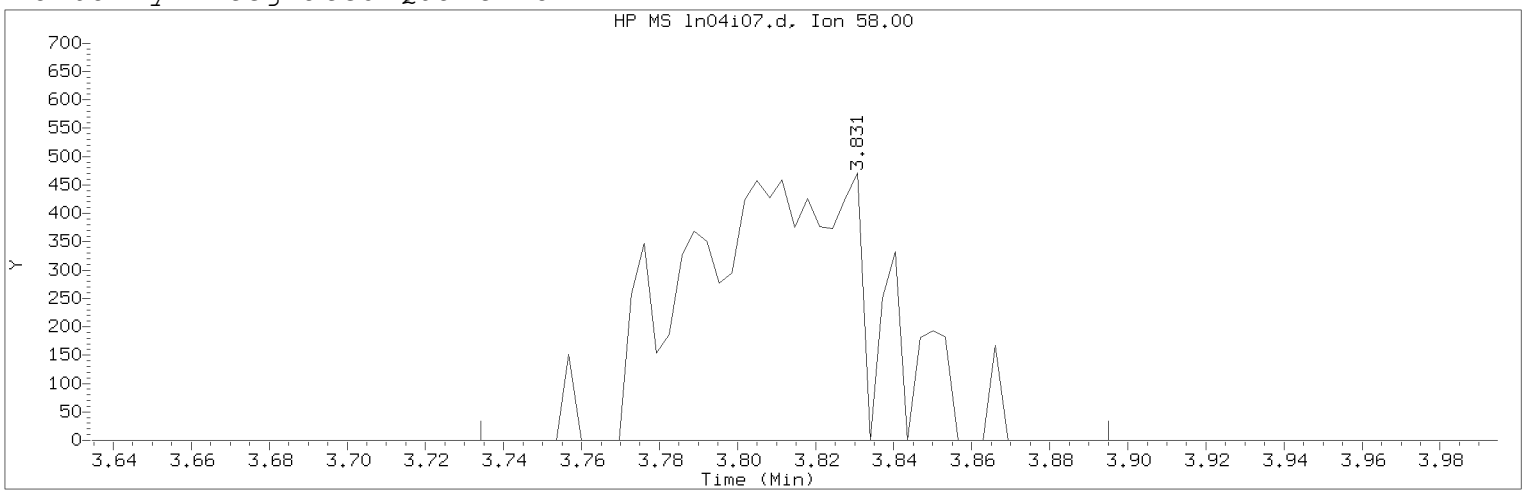
Compound Number : 14
Compound Name : Ethyl ether
Scan Number : 605
Retention Time (minutes): 3.429
Quant Ion : 59.00
Area : 4552
On-column Amount (ng) : 0.8599
Integration start scan : 590 Integration stop scan: 618
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

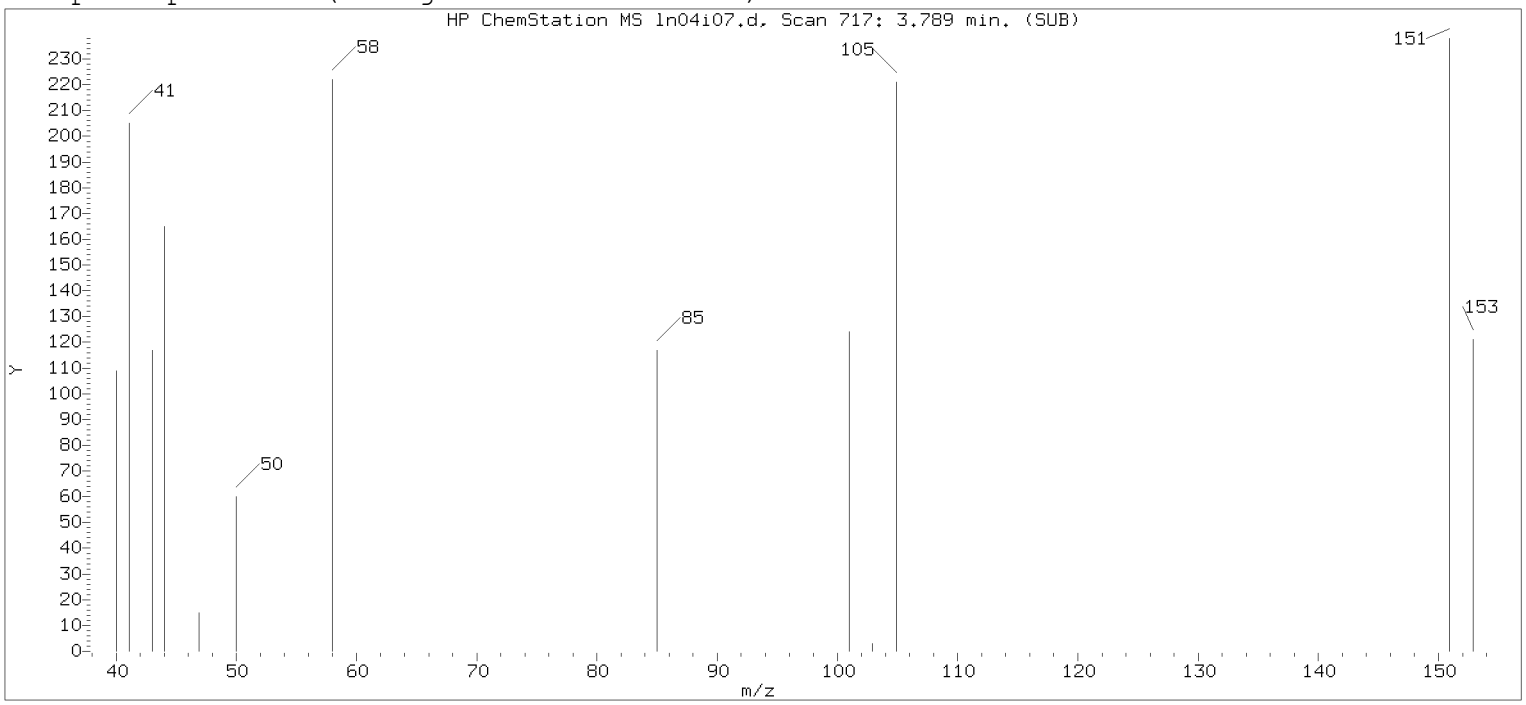
Compound Number : 18
Compound Name : Acetone
Scan Number : 730
Retention Time (minutes): 3.831
Quant Ion : 58.00
Area (flag) : 1588M
On-Column Amount (ng) : 1.9382
Integration start scan : 699 Integration stop scan: 749
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

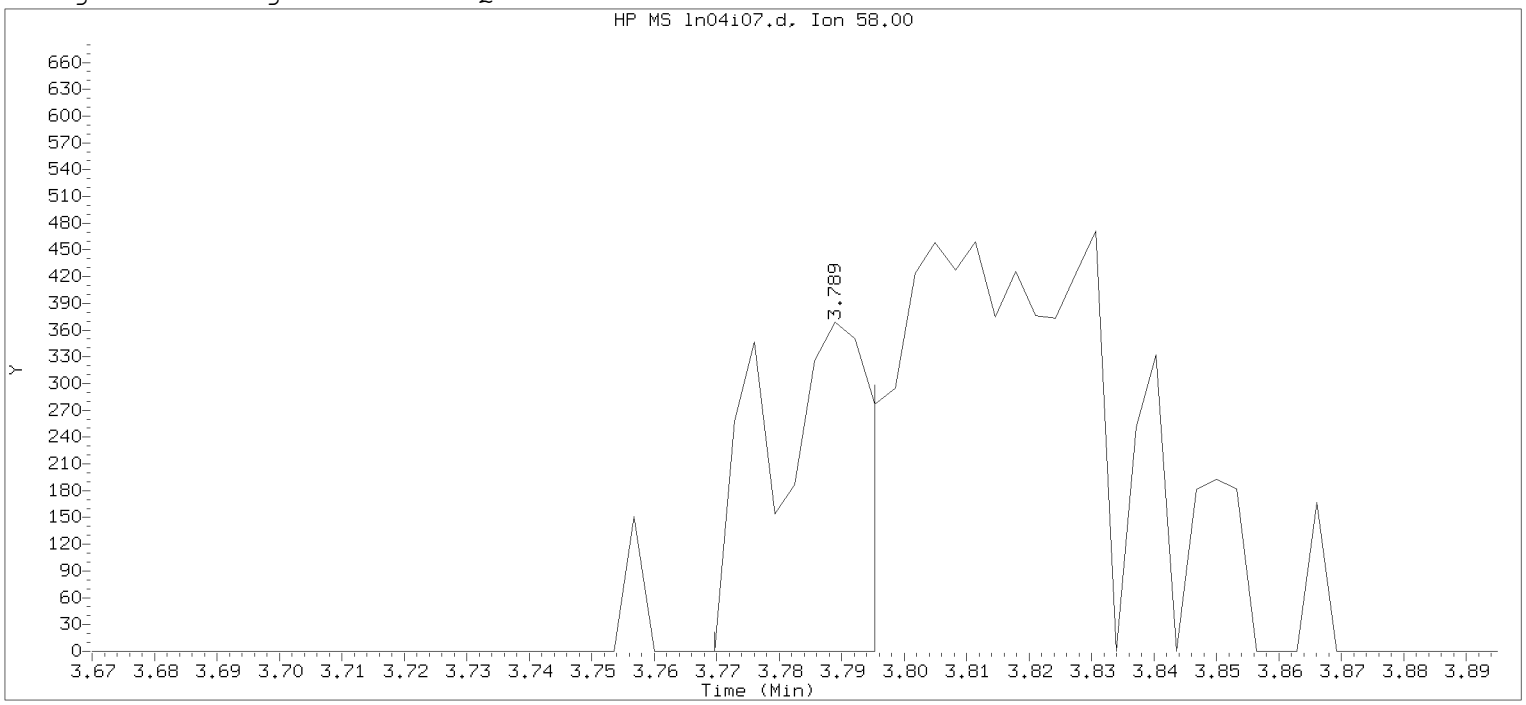
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

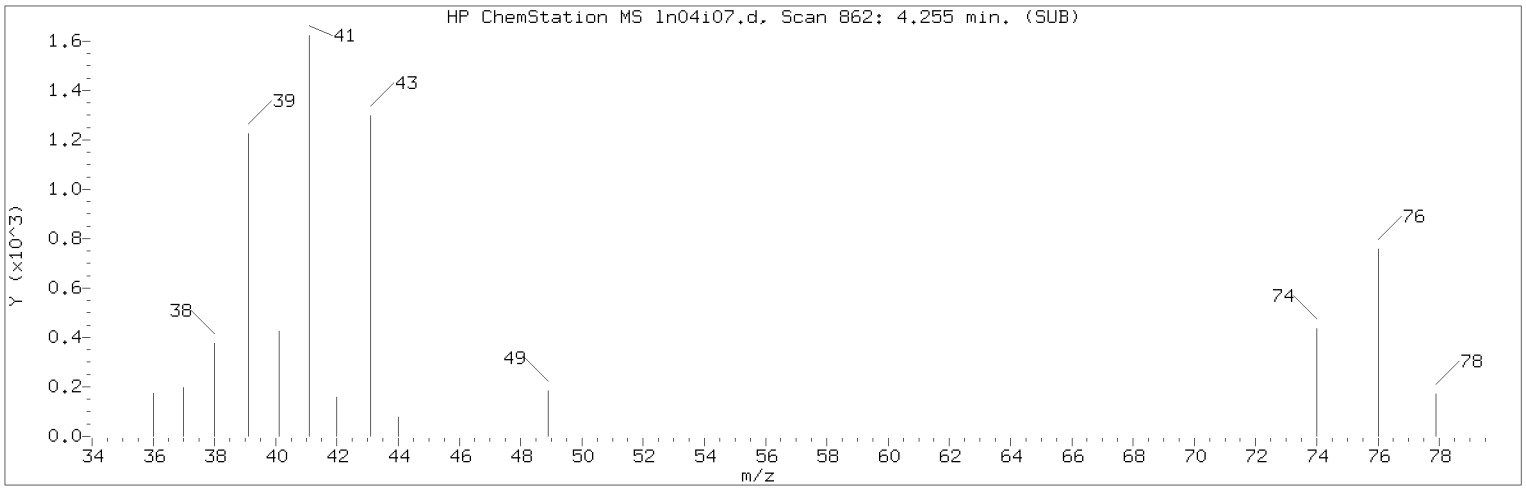
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

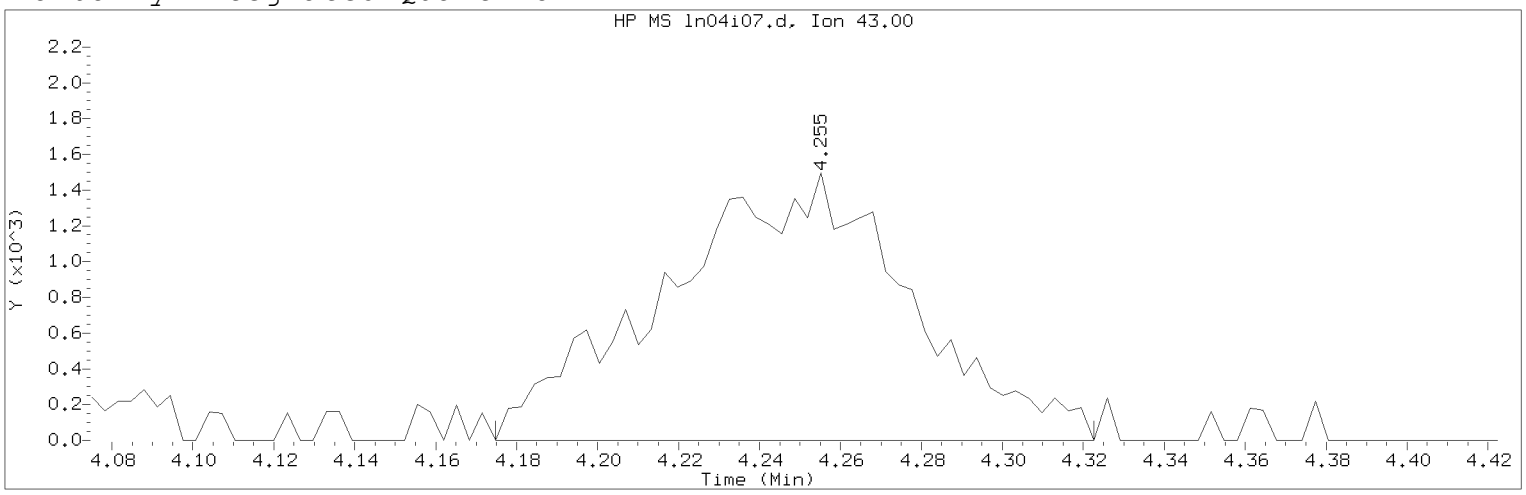
Compound Number : 18
Compound Name : Acetone
Scan Number : 717
Retention Time (minutes): 3.789
Quant Ion : 58.00
Area : 410
On-column Amount (ng) : 0.5644
Integration start scan : 710 Integration stop scan: 718
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

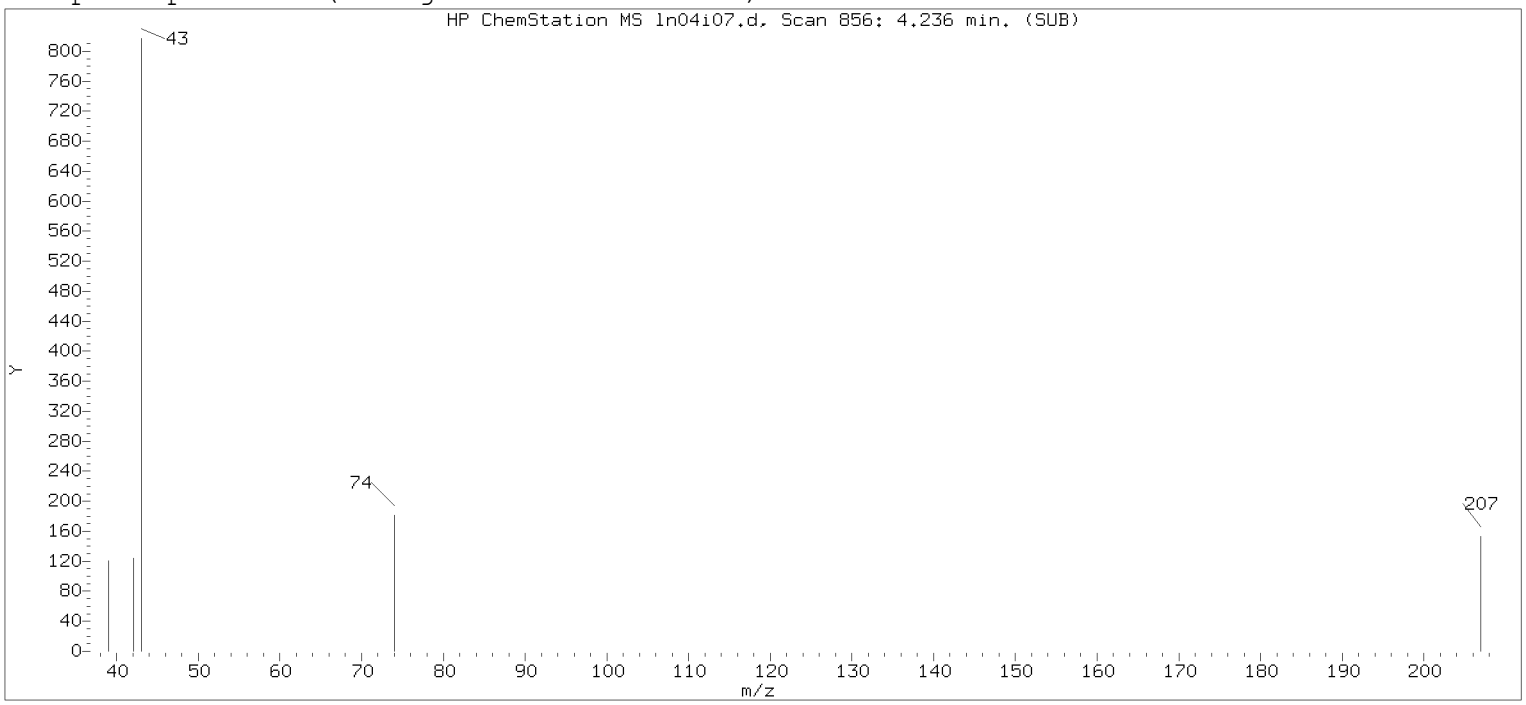
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 862
Retention Time (minutes): 4.255
Quant Ion : 43.00
Area (flag) : 6274M
On-Column Amount (ng) : 1.0106
Integration start scan : 836 Integration stop scan: 882
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

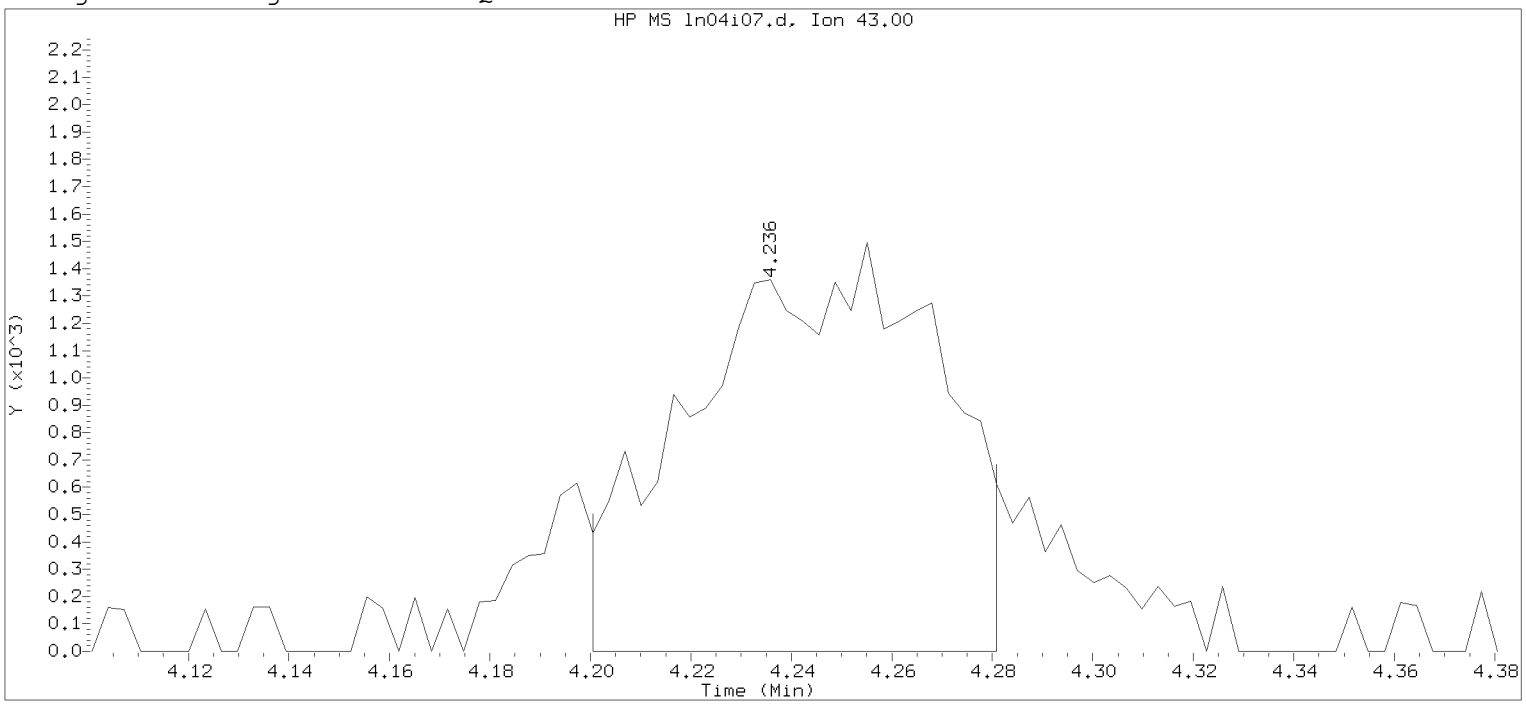
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

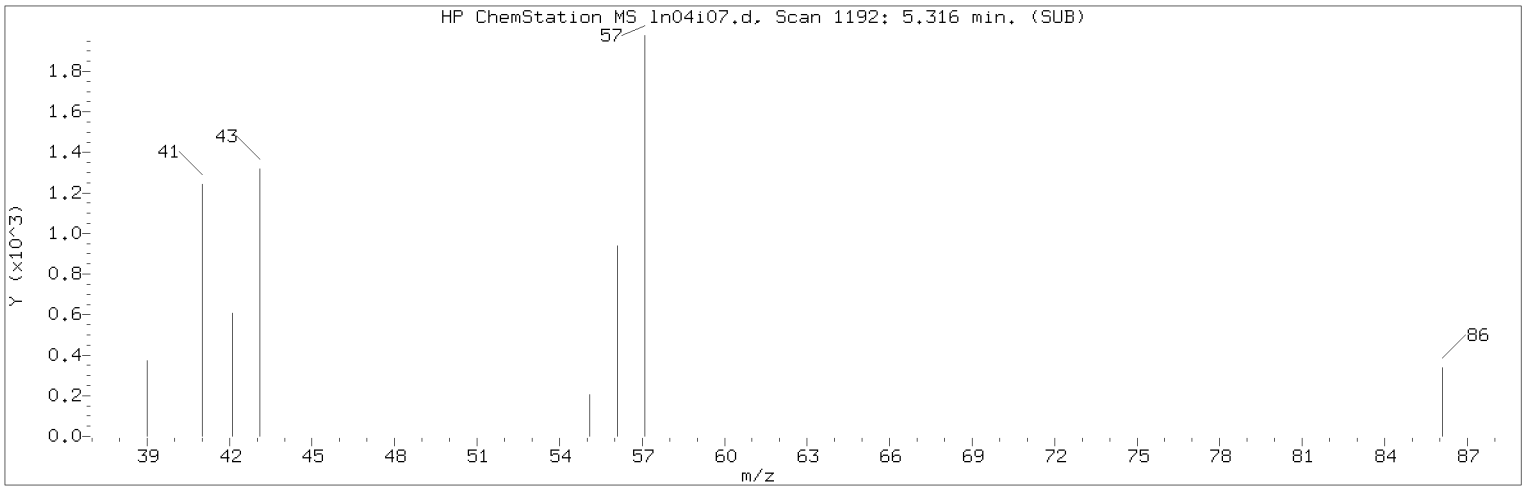
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

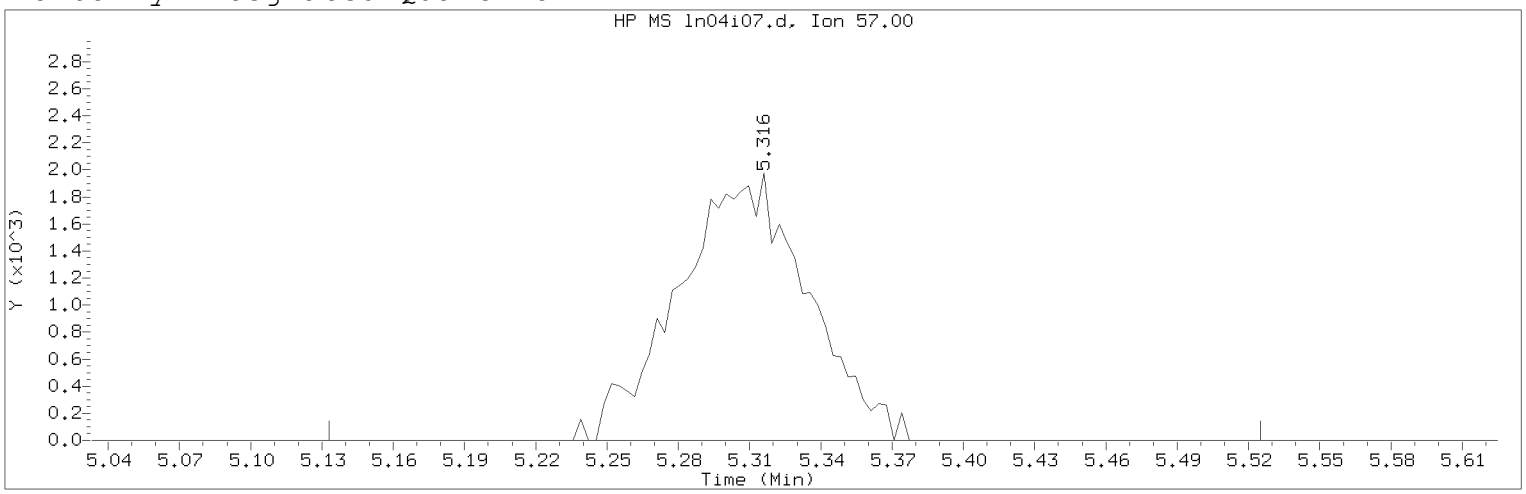
Compound Number	: 27		
Compound Name	: Methyl Acetate		
Scan Number	: 856		
Retention Time (minutes)	: 4.236		
Quant Ion	: 43.00		
Area	: 4972		
On-column Amount (ng)	: 0.8386		
Integration start scan	: 844	Integration stop scan:	869
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

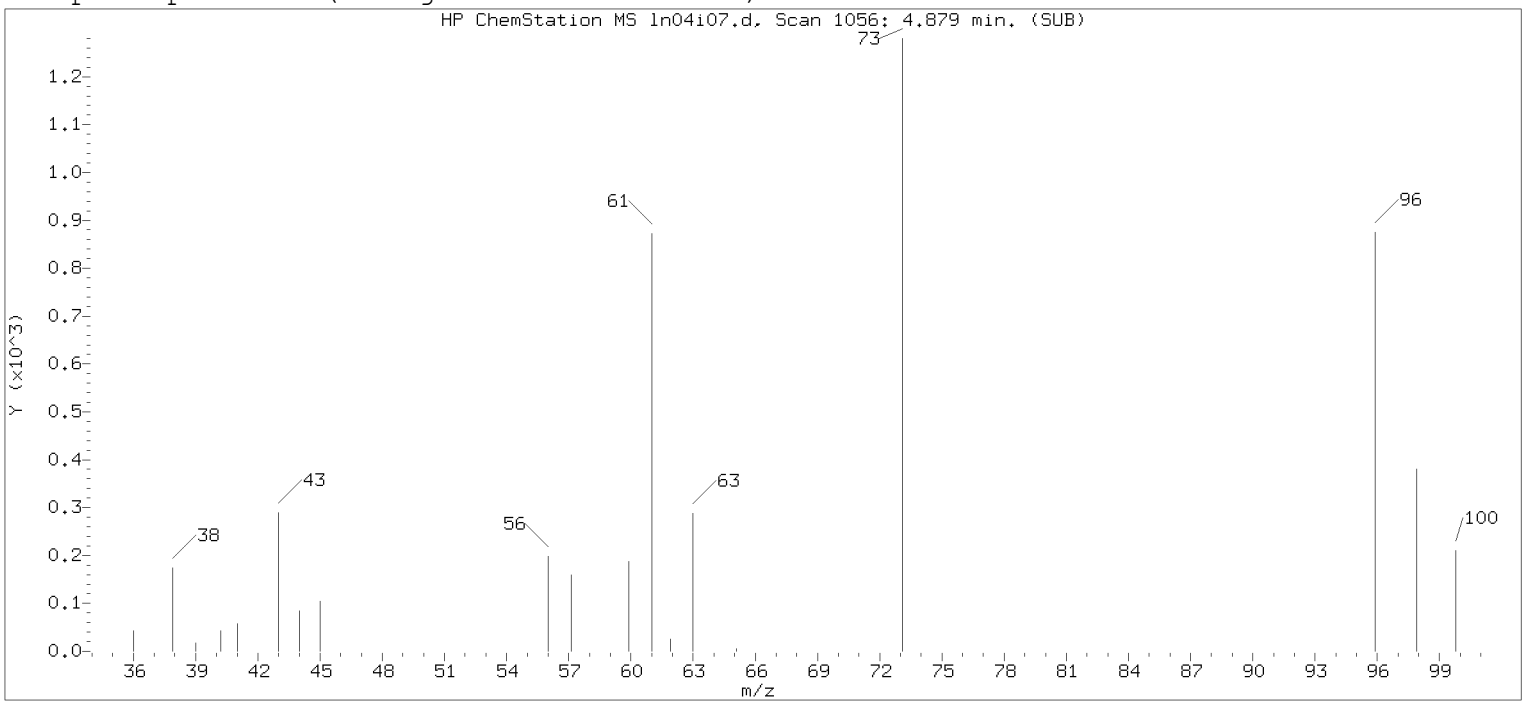
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1192
Retention Time (minutes): 5.316
Quant Ion : 57.00
Area (flag) : 7475M
On-Column Amount (ng) : 0.8616
Integration start scan : 1134 Integration stop scan: 1256
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

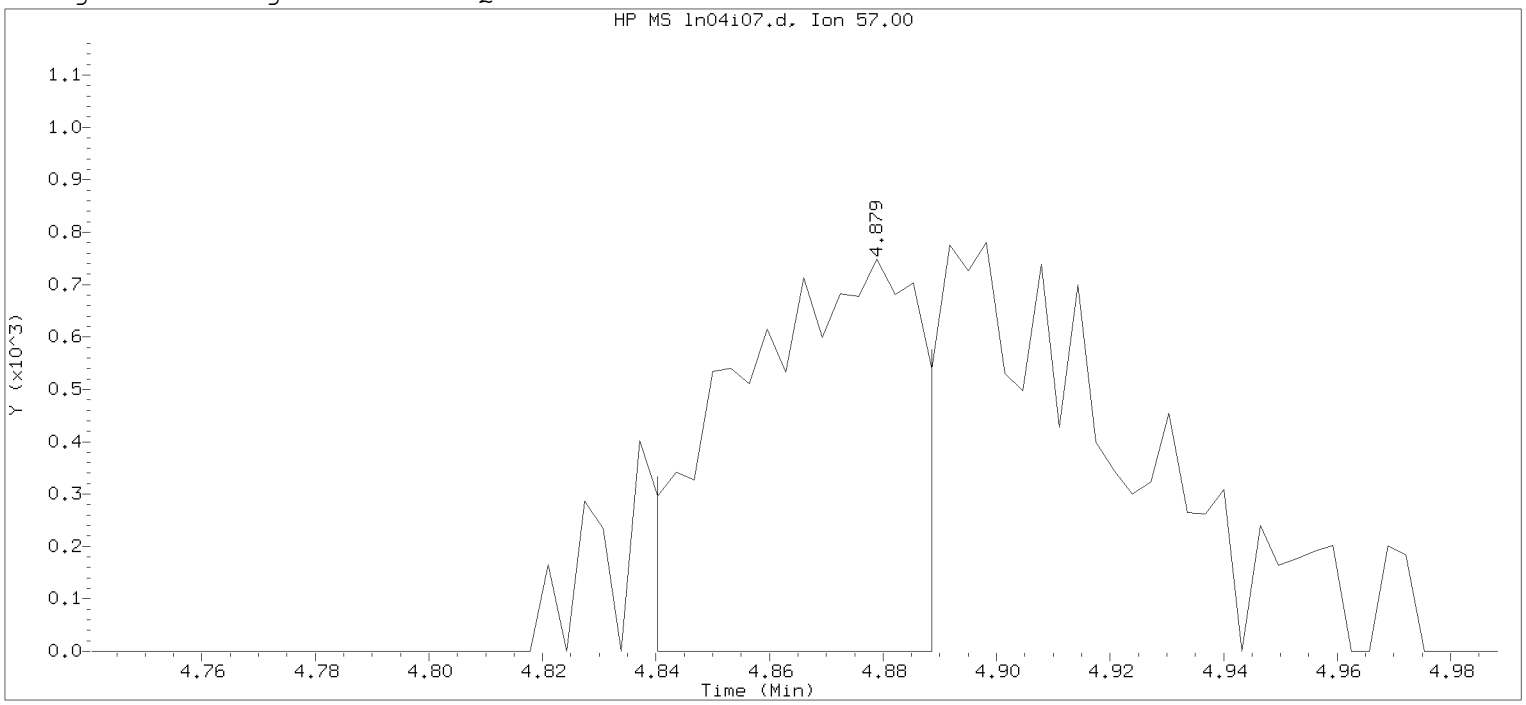
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

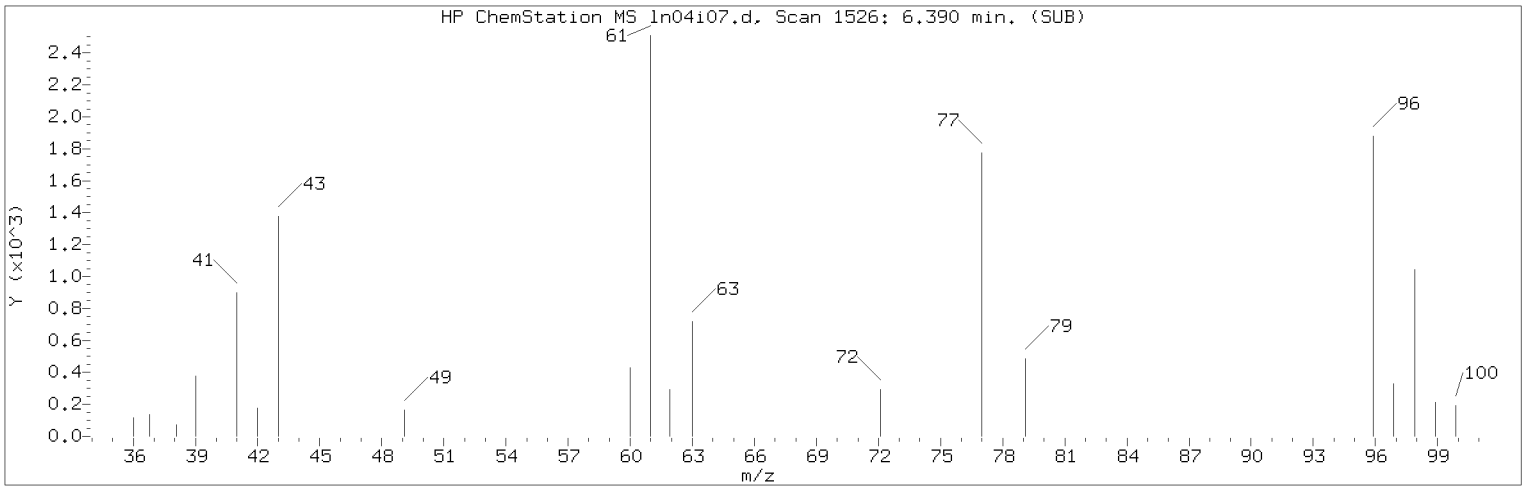
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

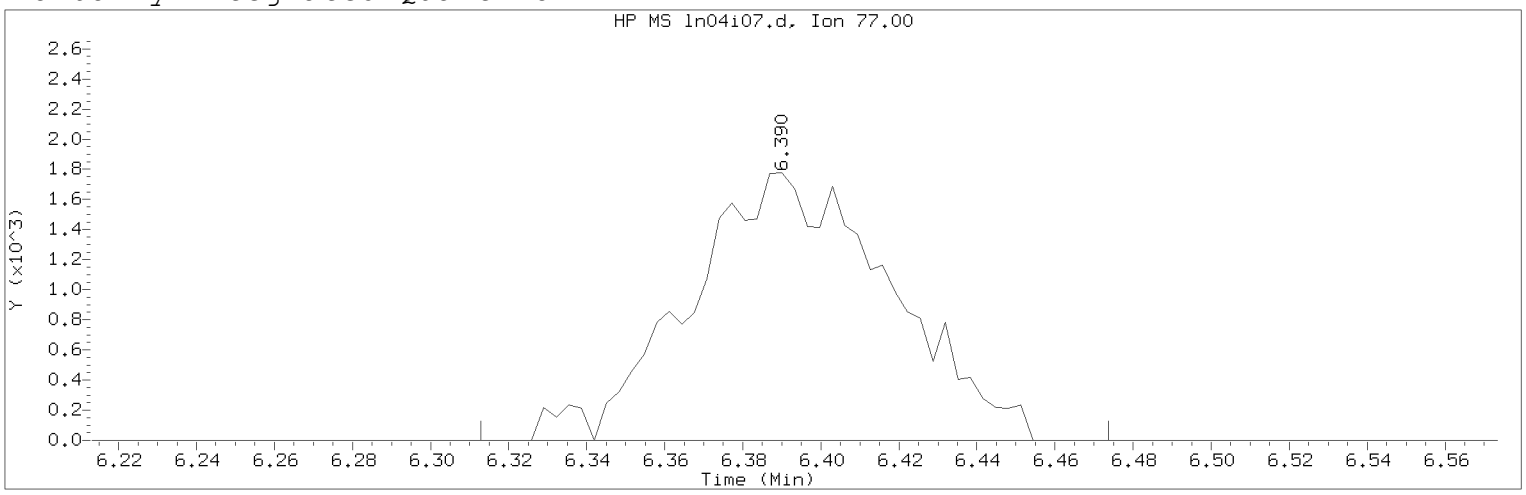
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1056		
Retention Time (minutes)	: 4.879		
Quant Ion	: 57.00		
Area	: 1663		
On-column Amount (ng)	: 0.4635		
Integration start scan	: 1043	Integration stop scan:	1058
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

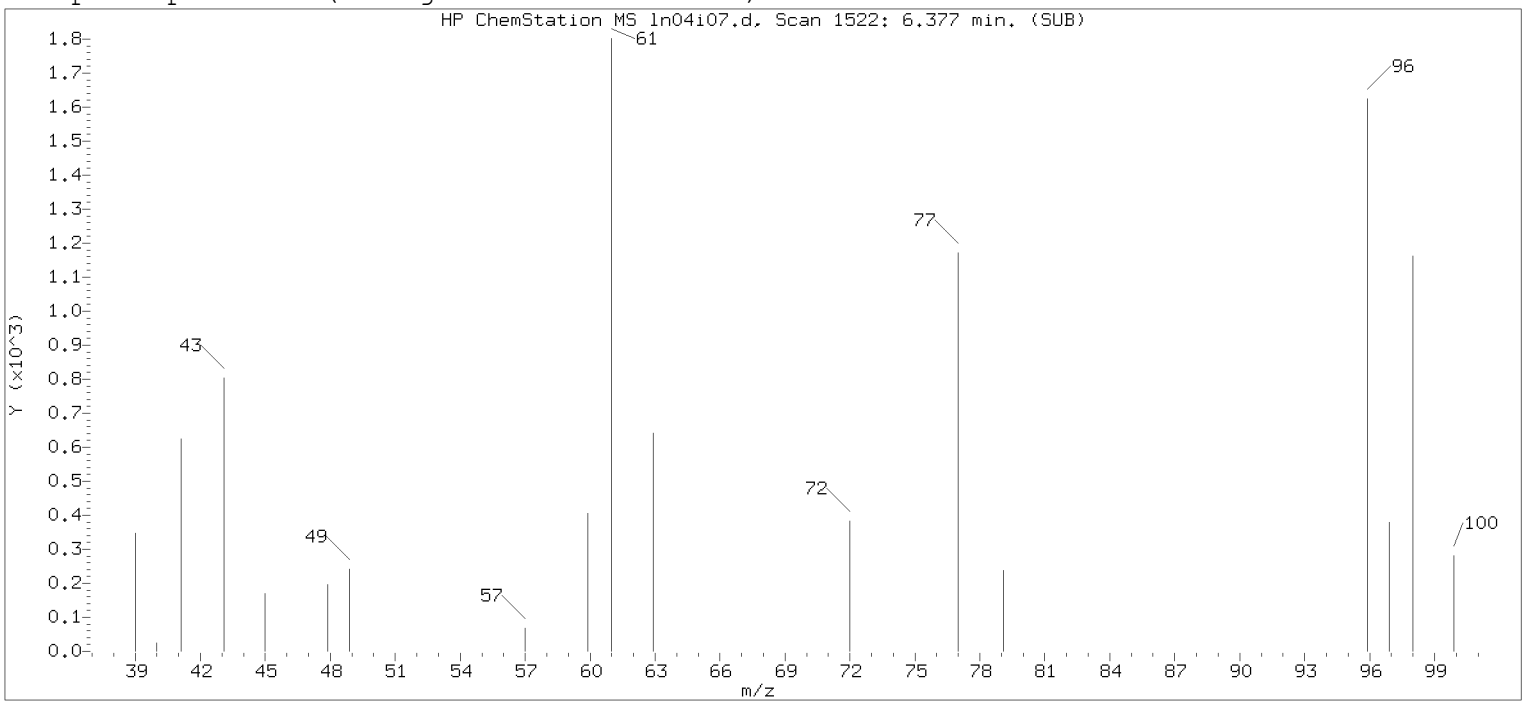
Compound Number : 45
Compound Name : 2,2-Dichloropropane
Scan Number : 1526
Retention Time (minutes): 6.390
Quant Ion : 77.00
Area (flag) : 6419M
On-Column Amount (ng) : 0.8488
Integration start scan : 1501 Integration stop scan: 1551
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

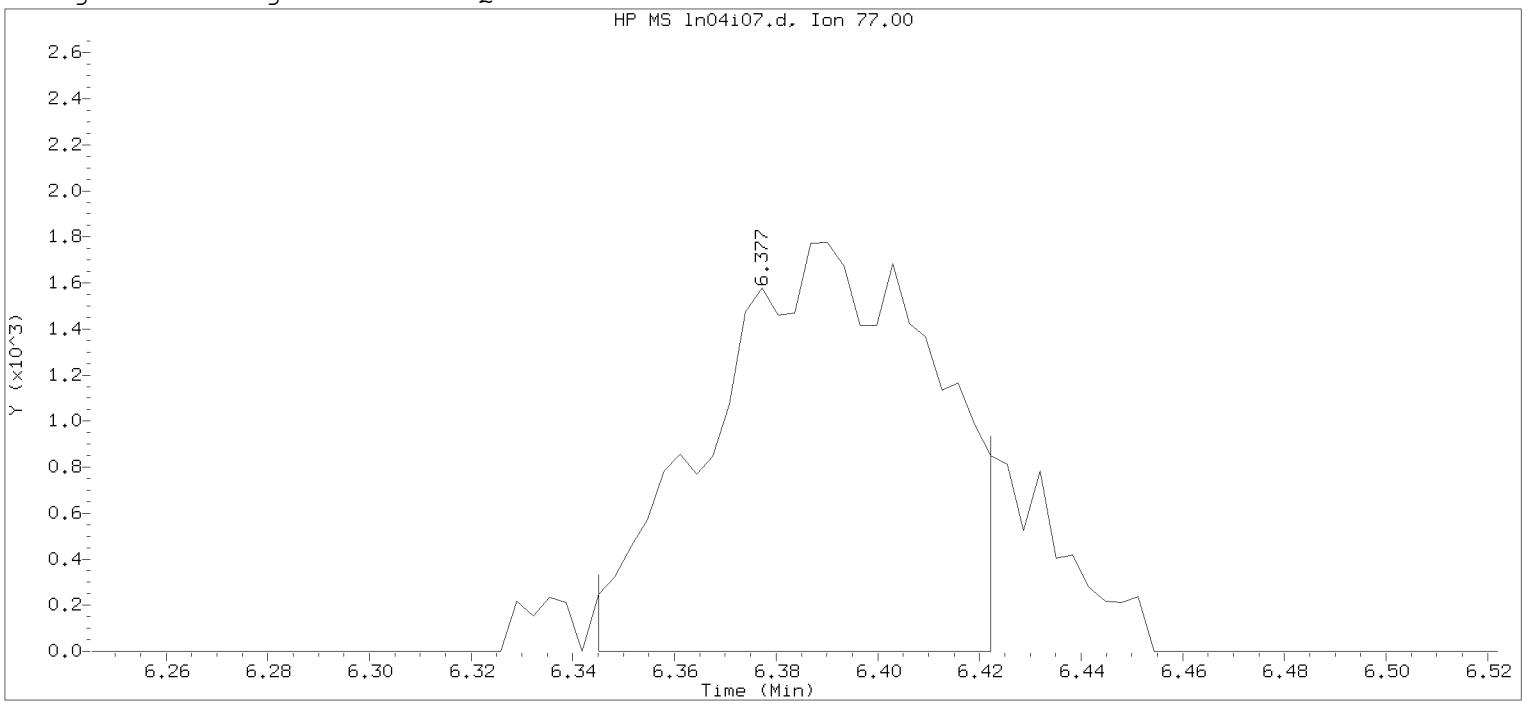
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

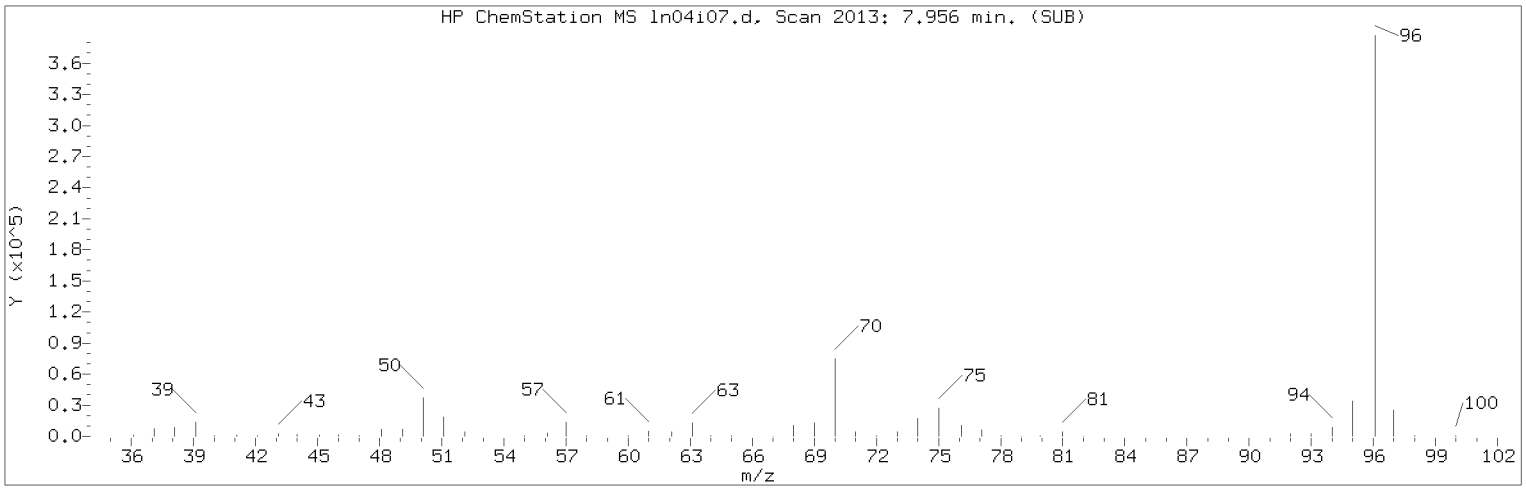
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

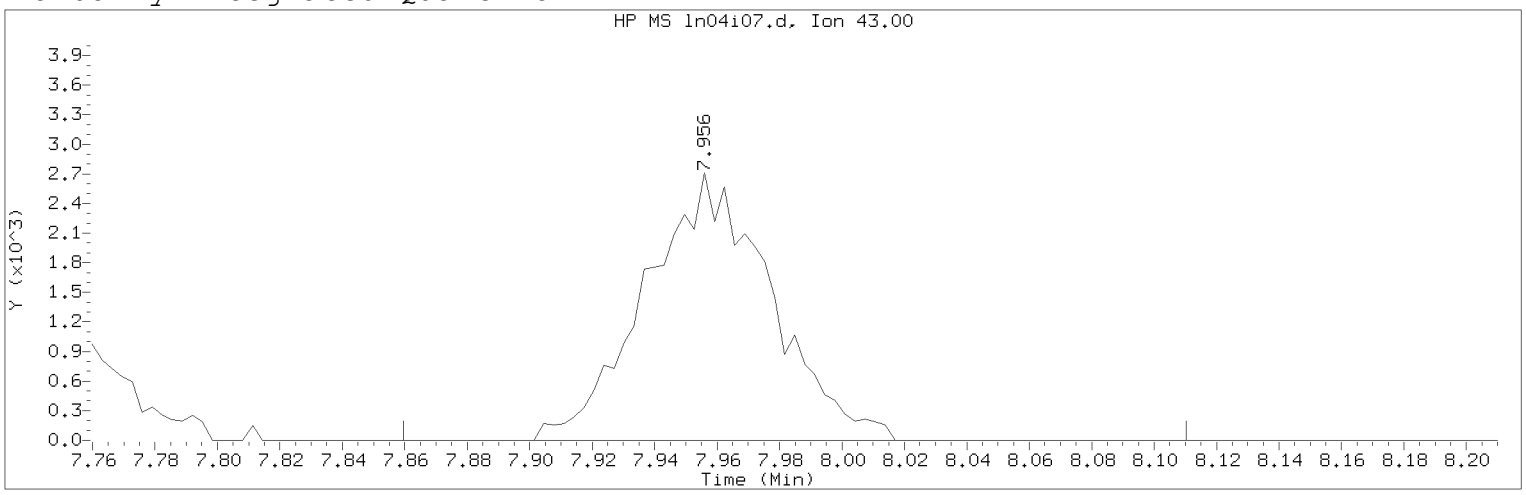
Compound Number : 45
Compound Name : 2,2-Dichloropropane
Scan Number : 1522
Retention Time (minutes): 6.377
Quant Ion : 77.00
Area : 5406
On-column Amount (ng) : 0.7289
Integration start scan : 1511 Integration stop scan: 1535
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

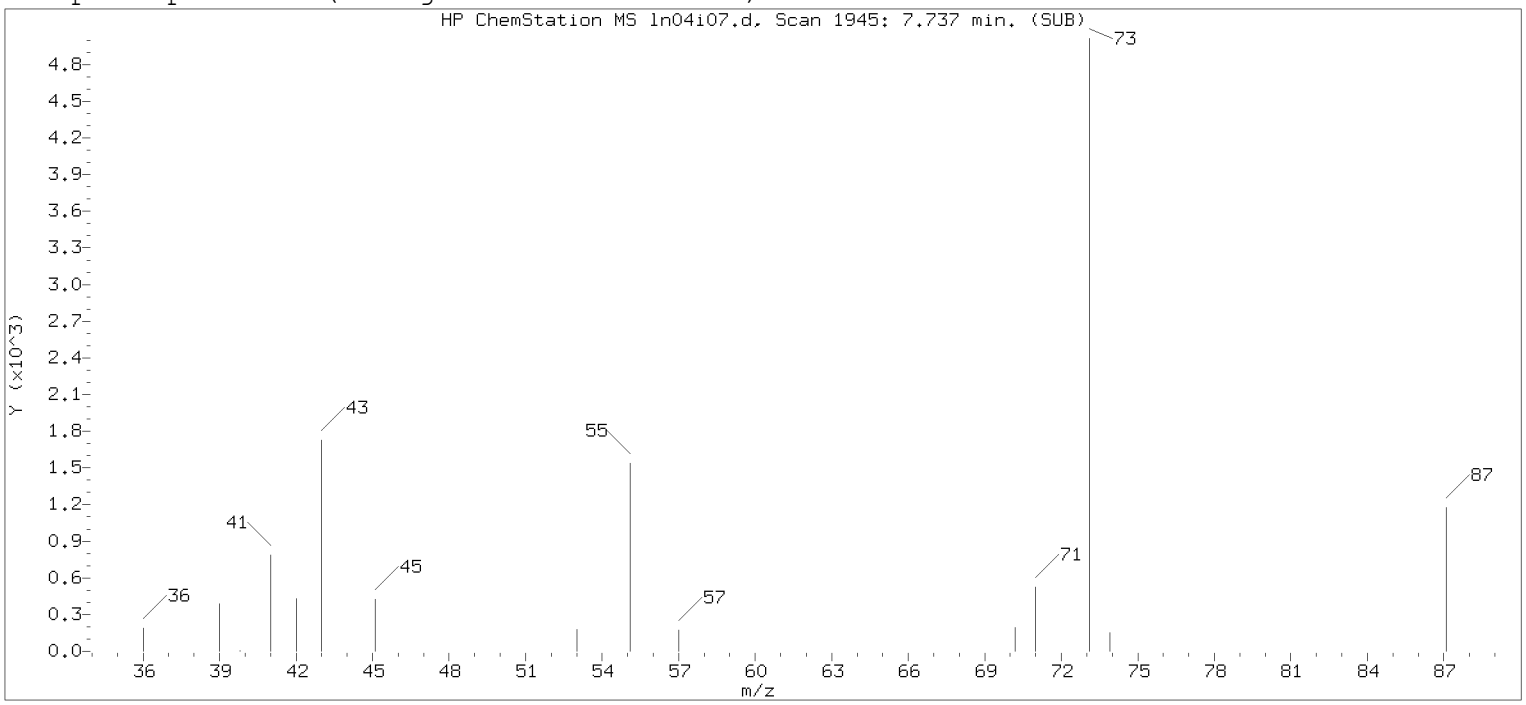
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2013
Retention Time (minutes): 7.956
Quant Ion : 43.00
Area (flag) : 7535M
On-Column Amount (ng) : 0.9297
Integration start scan : 1982 Integration stop scan: 2060
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

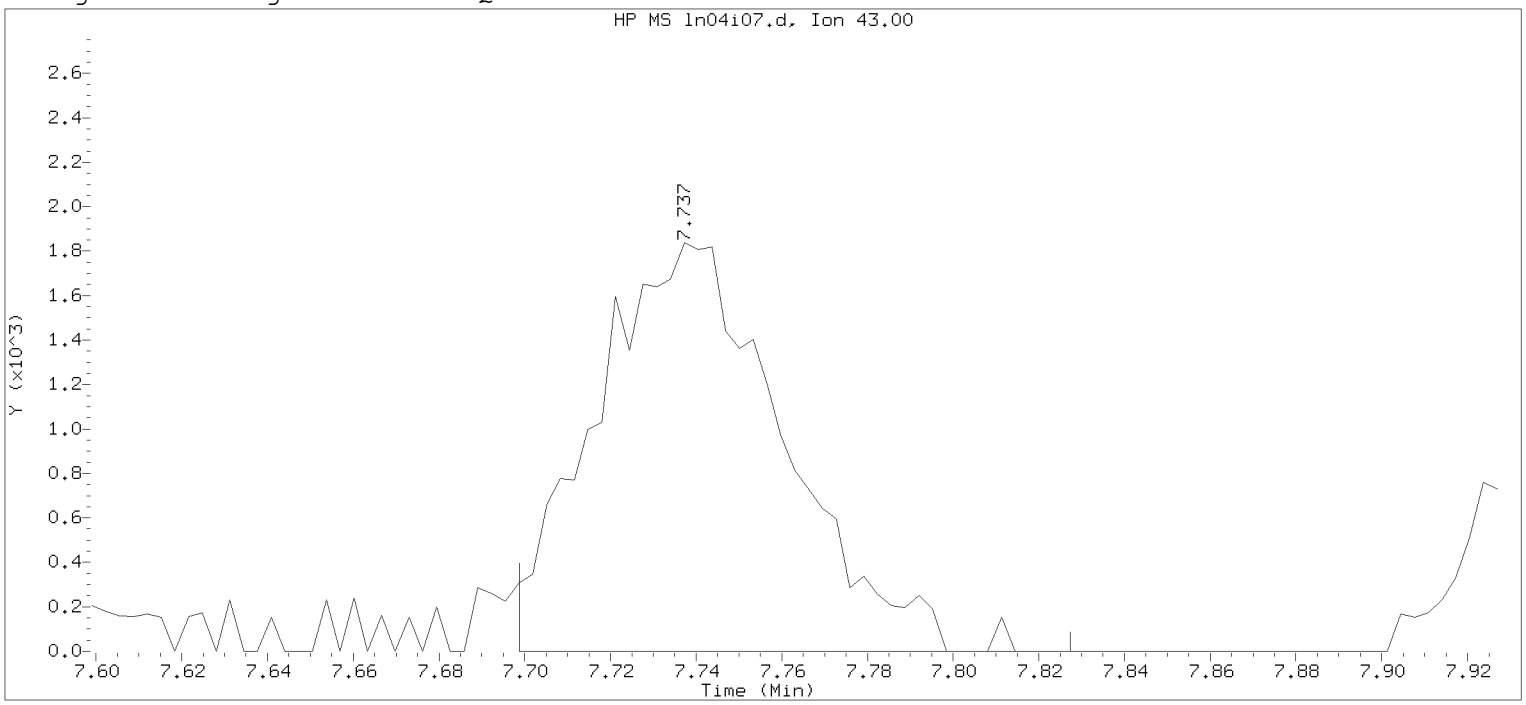
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

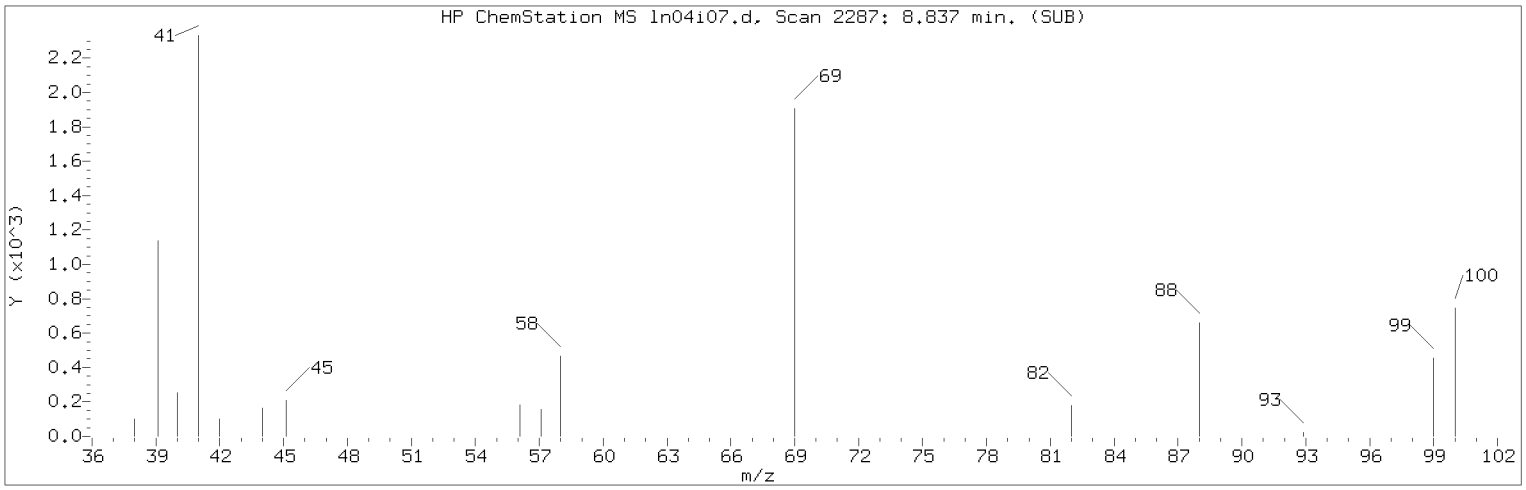
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

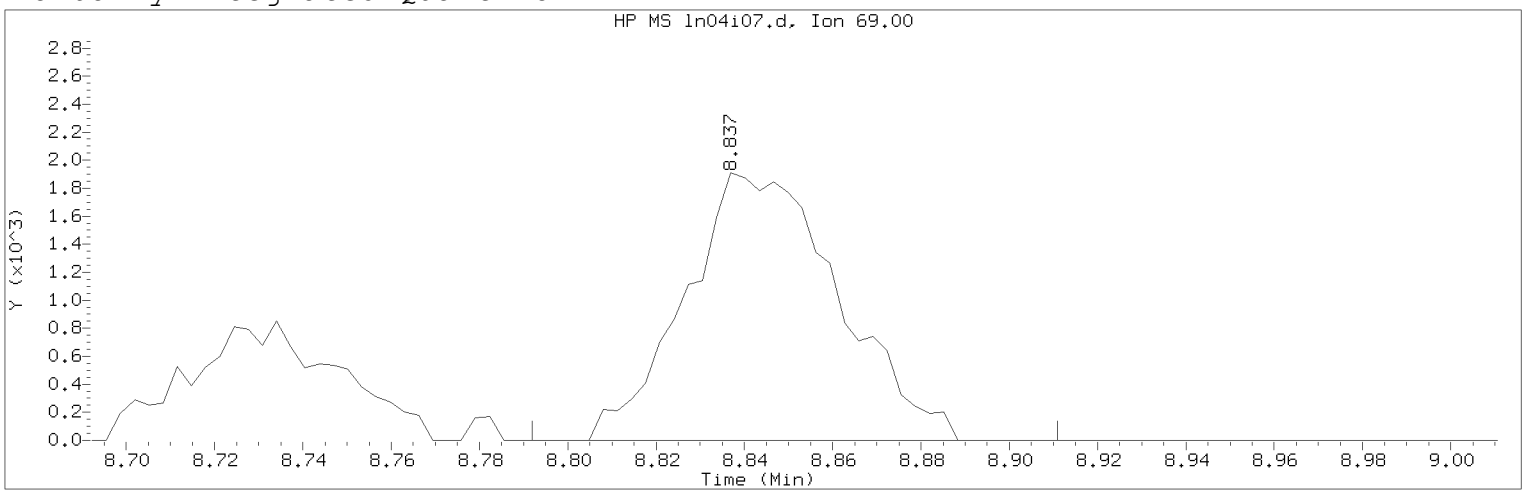
Compound Number	: 67		
Compound Name	: n-Heptane		
Scan Number	: 1945		
Retention Time (minutes)	: 7.737		
Quant Ion	: 43.00		
Area	: 5623		
On-column Amount (ng)	: 0.9372		
Integration start scan	: 1932	Integration stop scan:	1972
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

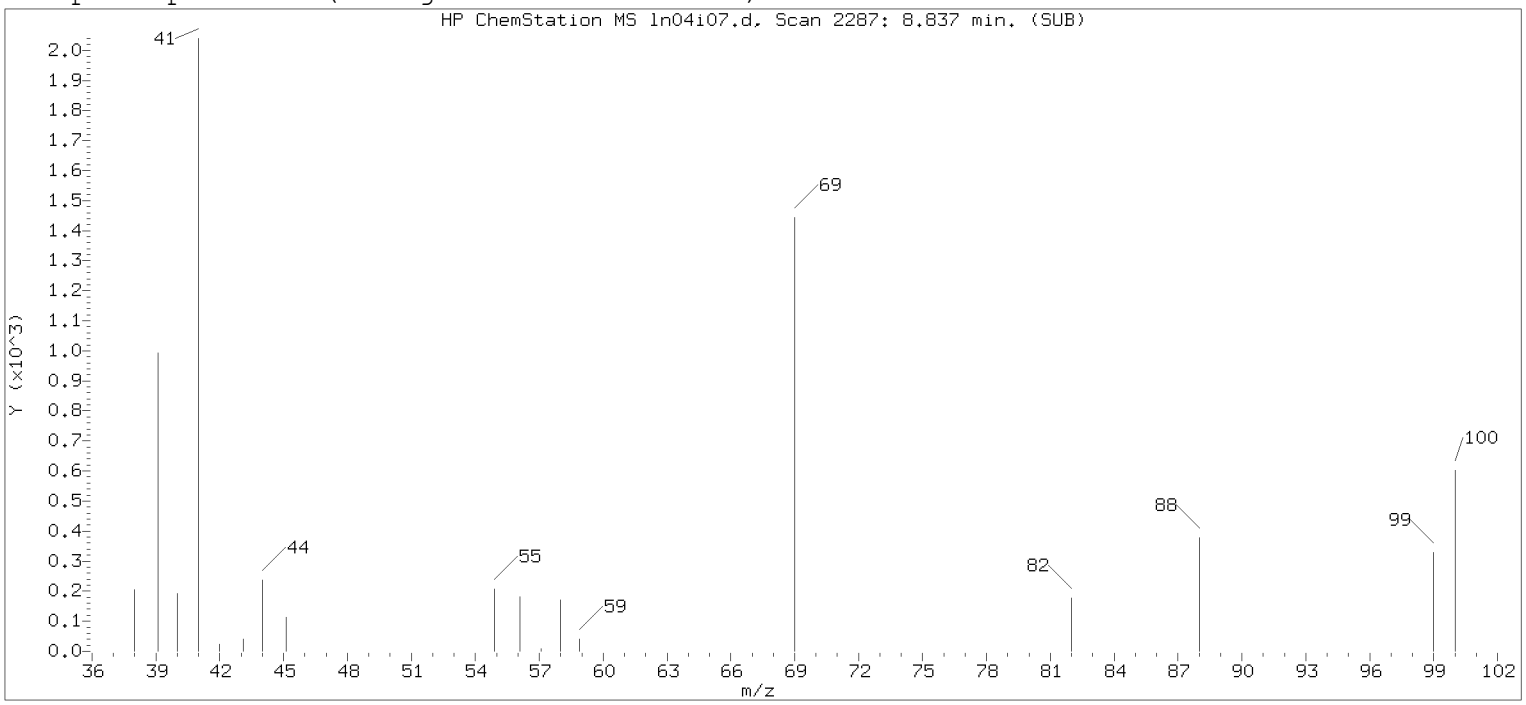
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2287
Retention Time (minutes): 8.837
Quant Ion : 69.00
Area (flag) : 4607M
On-Column Amount (ng) : 0.8112
Integration start scan : 2272 Integration stop scan: 2309
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

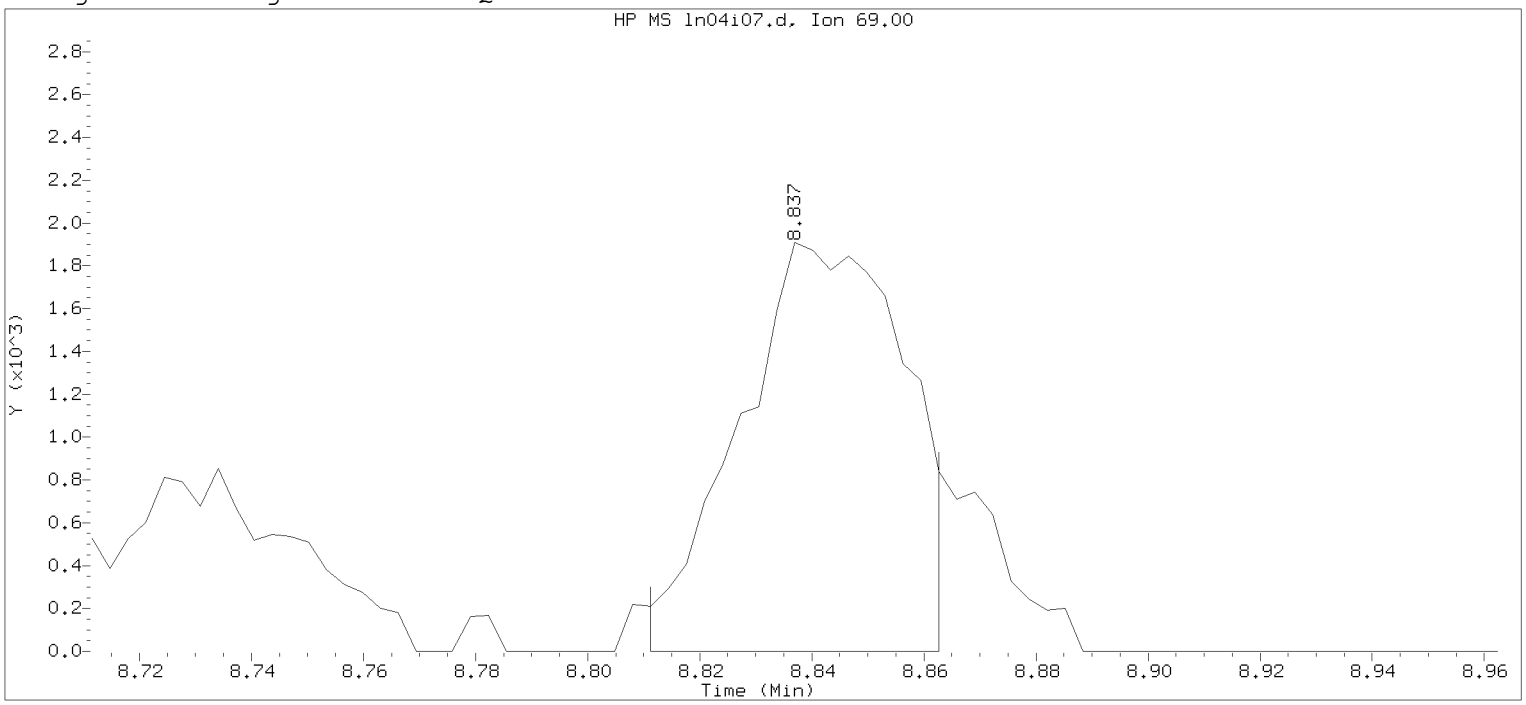
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

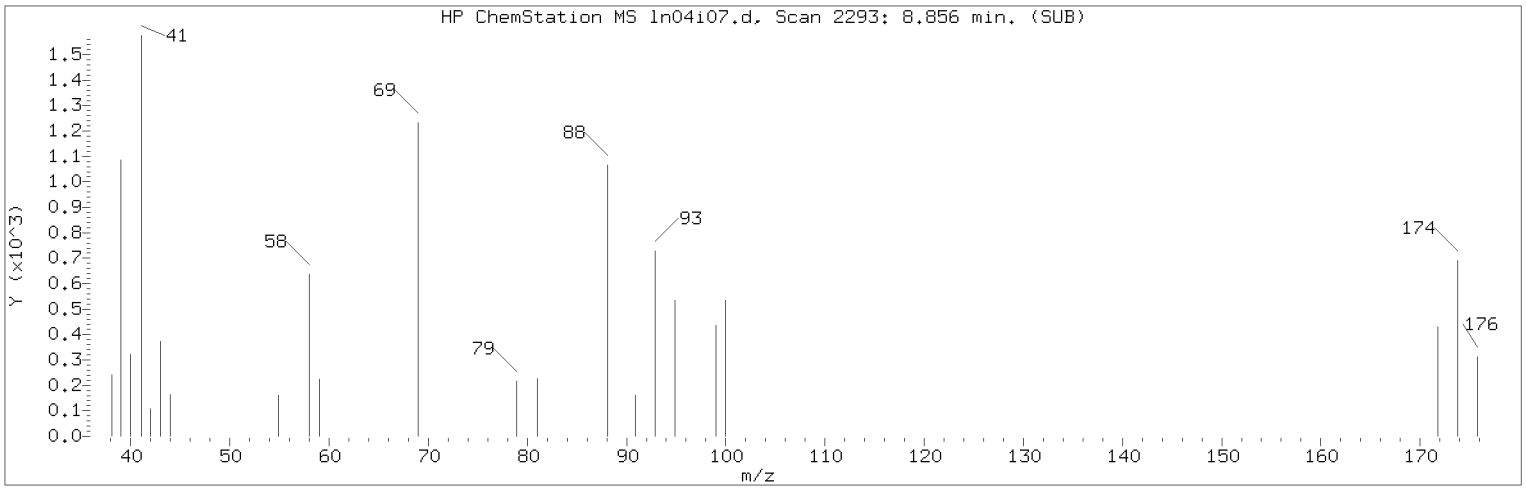
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

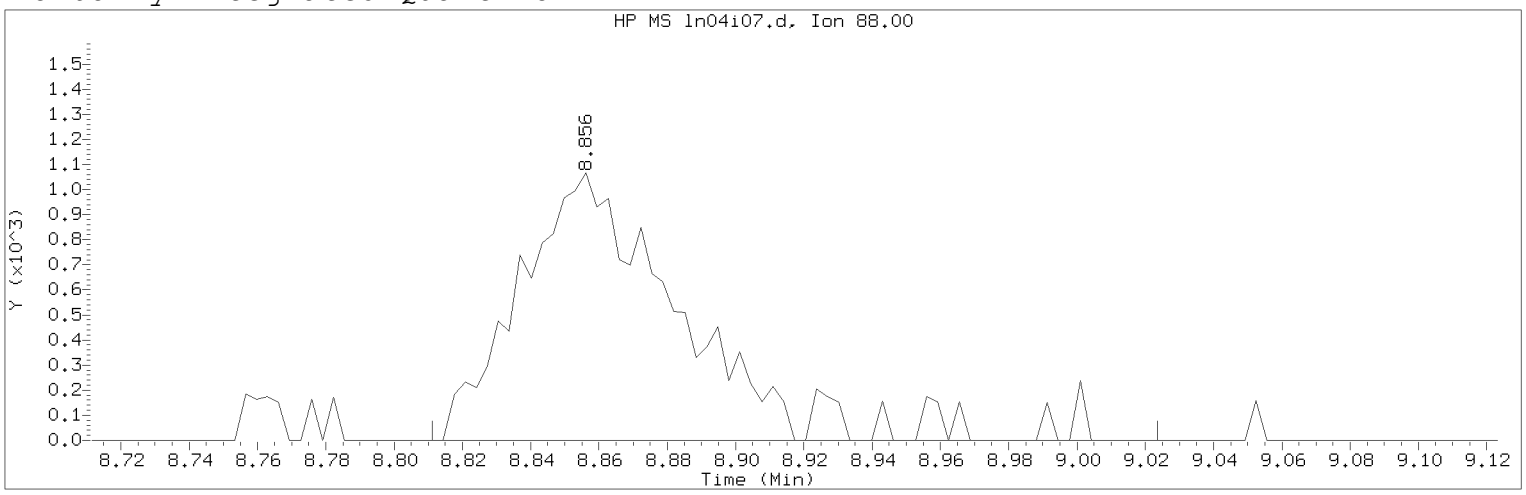
Compound Number	: 76		
Compound Name	: Methyl Methacrylate		
Scan Number	: 2287		
Retention Time (minutes)	: 8.837		
Quant Ion	: 69.00		
Area	: 3874		
On-column Amount (ng)	: 0.7186		
Integration start scan	: 2278	Integration stop scan:	2294
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

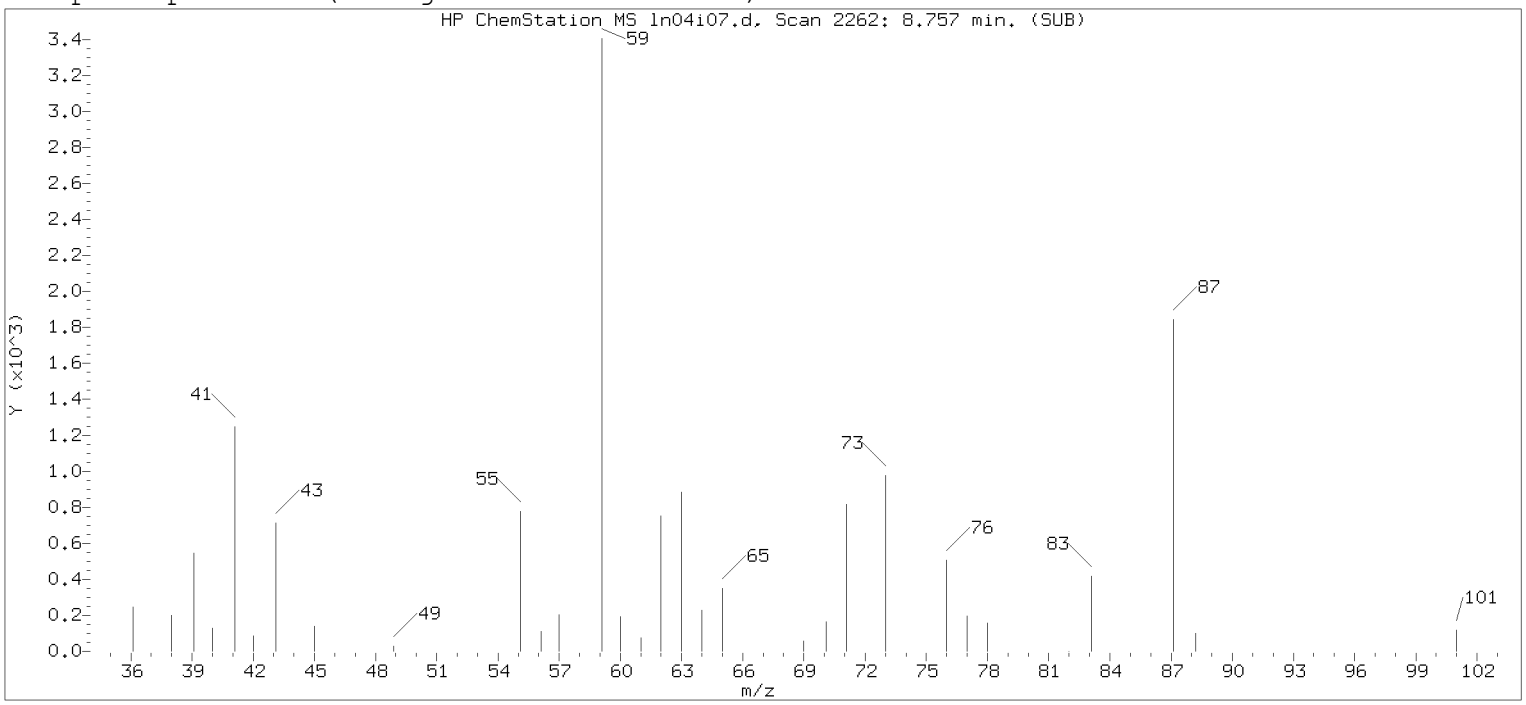
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 3548M
On-Column Amount (ng) : 43.4574
Integration start scan : 2278 Integration stop scan: 2344
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

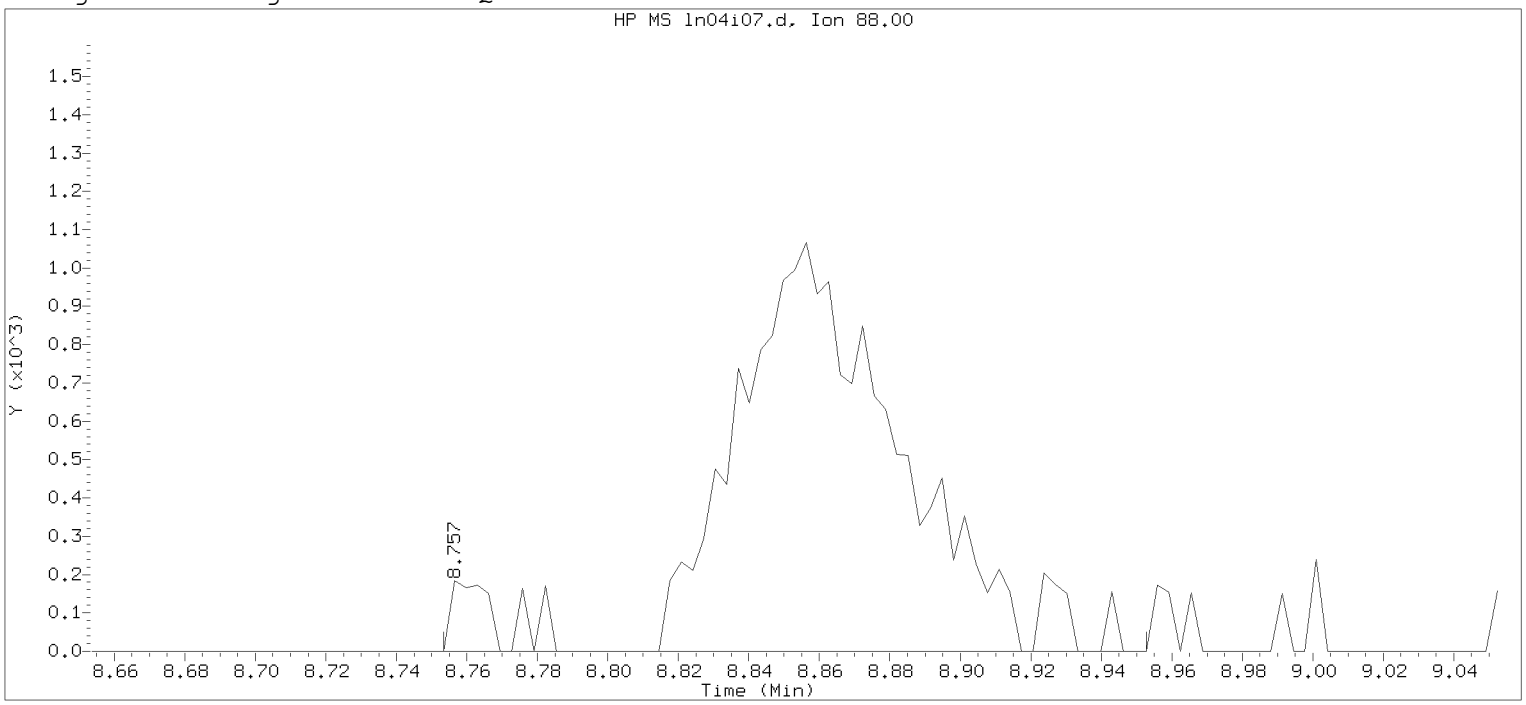
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

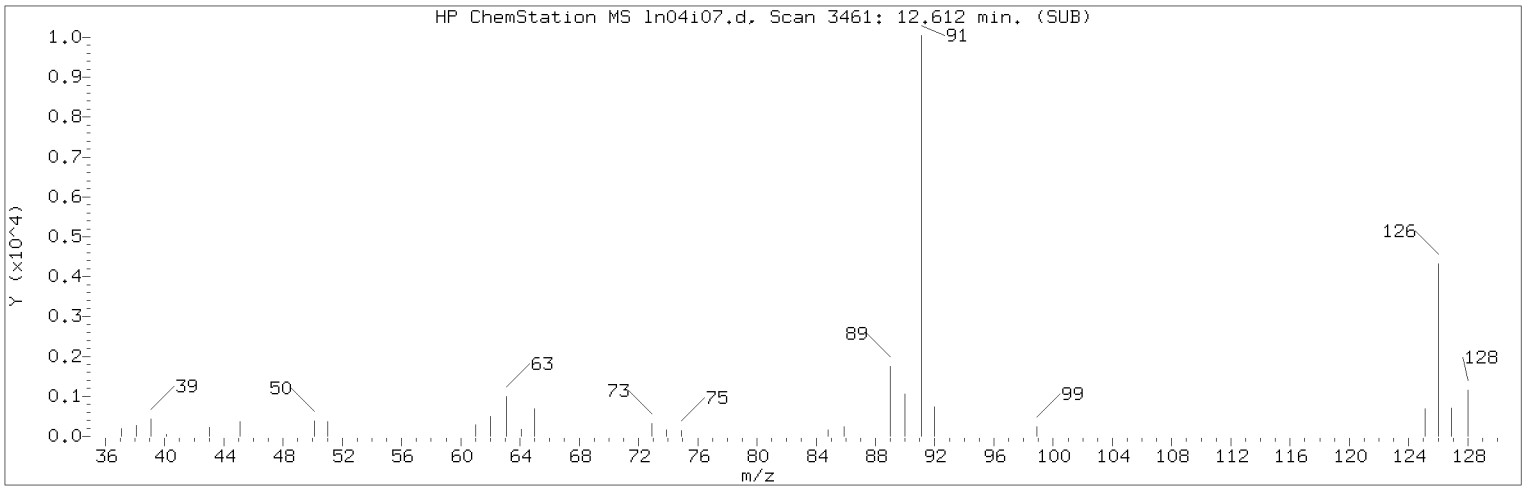
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

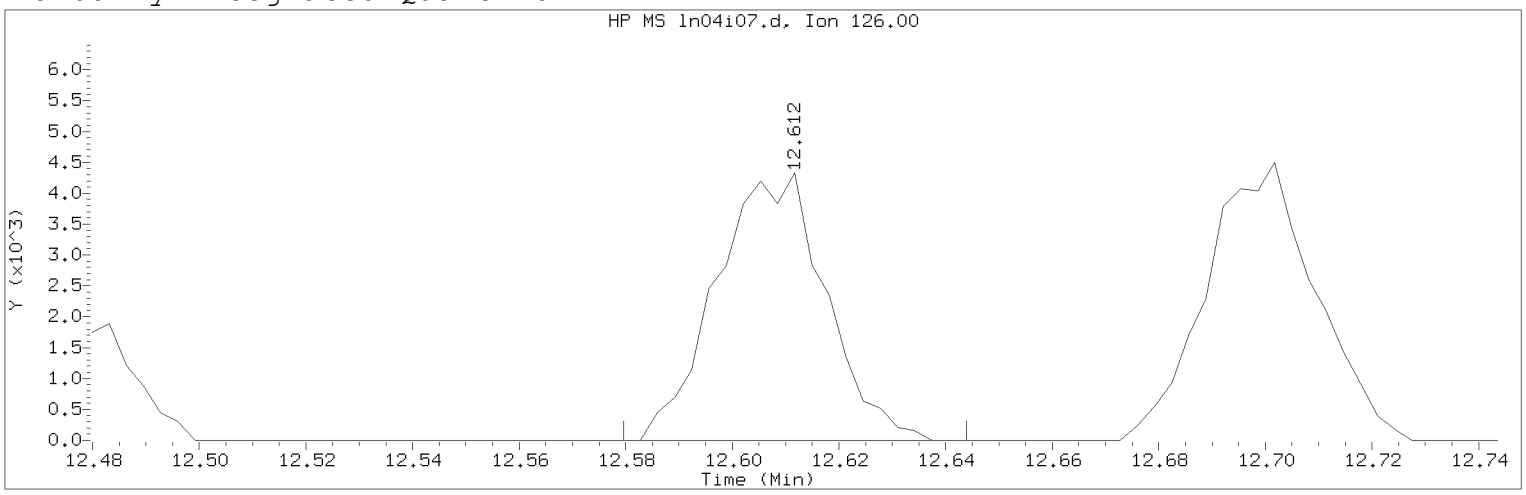
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2262
Retention Time (minutes): 8.757
Quant Ion : 88.00
Area : 3575
On-column Amount (ng) : 43.6406
Integration start scan : 2260 Integration stop scan: 2322
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

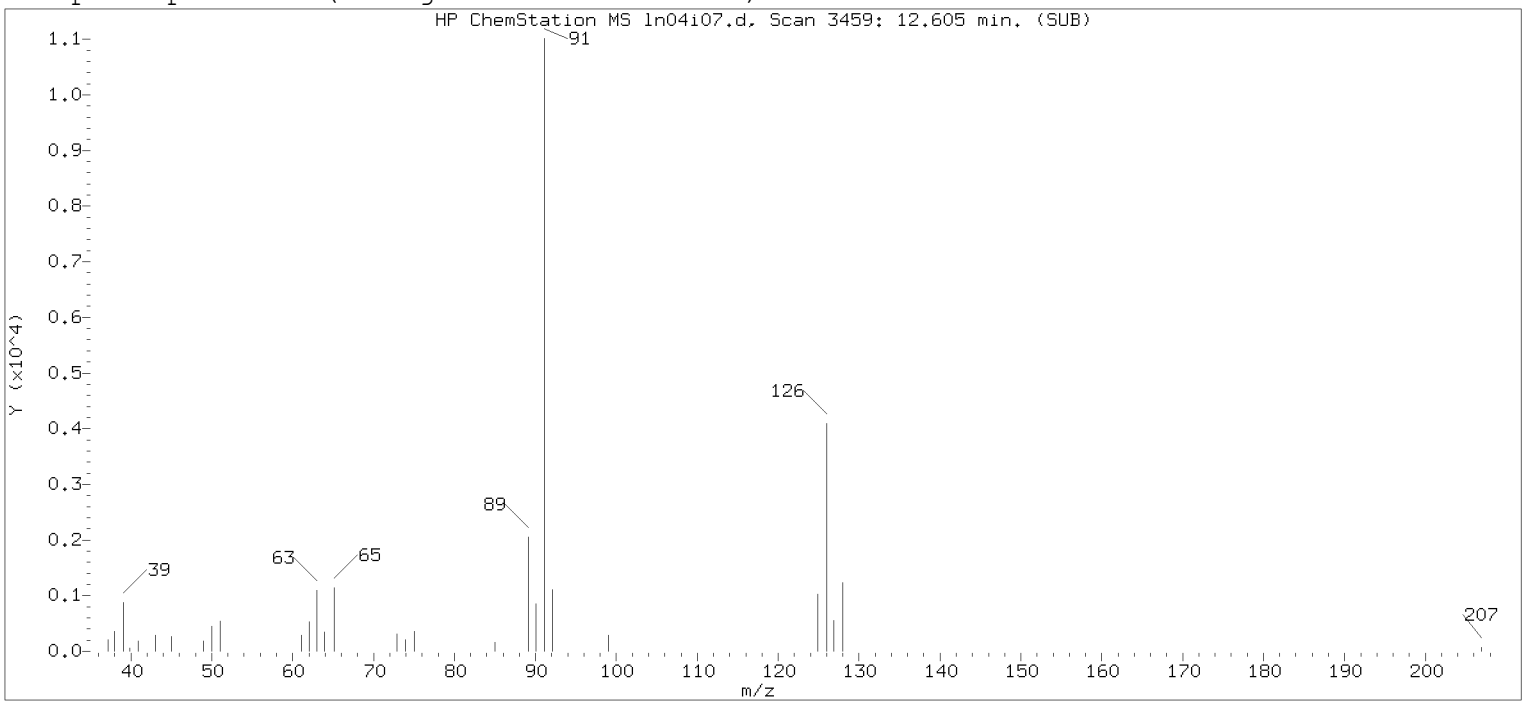
Compound Number : 120
Compound Name : 2-Chlorotoluene
Scan Number : 3461
Retention Time (minutes): 12.612
Quant Ion : 126.00
Area (flag) : 6138M
On-Column Amount (ng) : 0.9294
Integration start scan : 3450 Integration stop scan: 3470
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

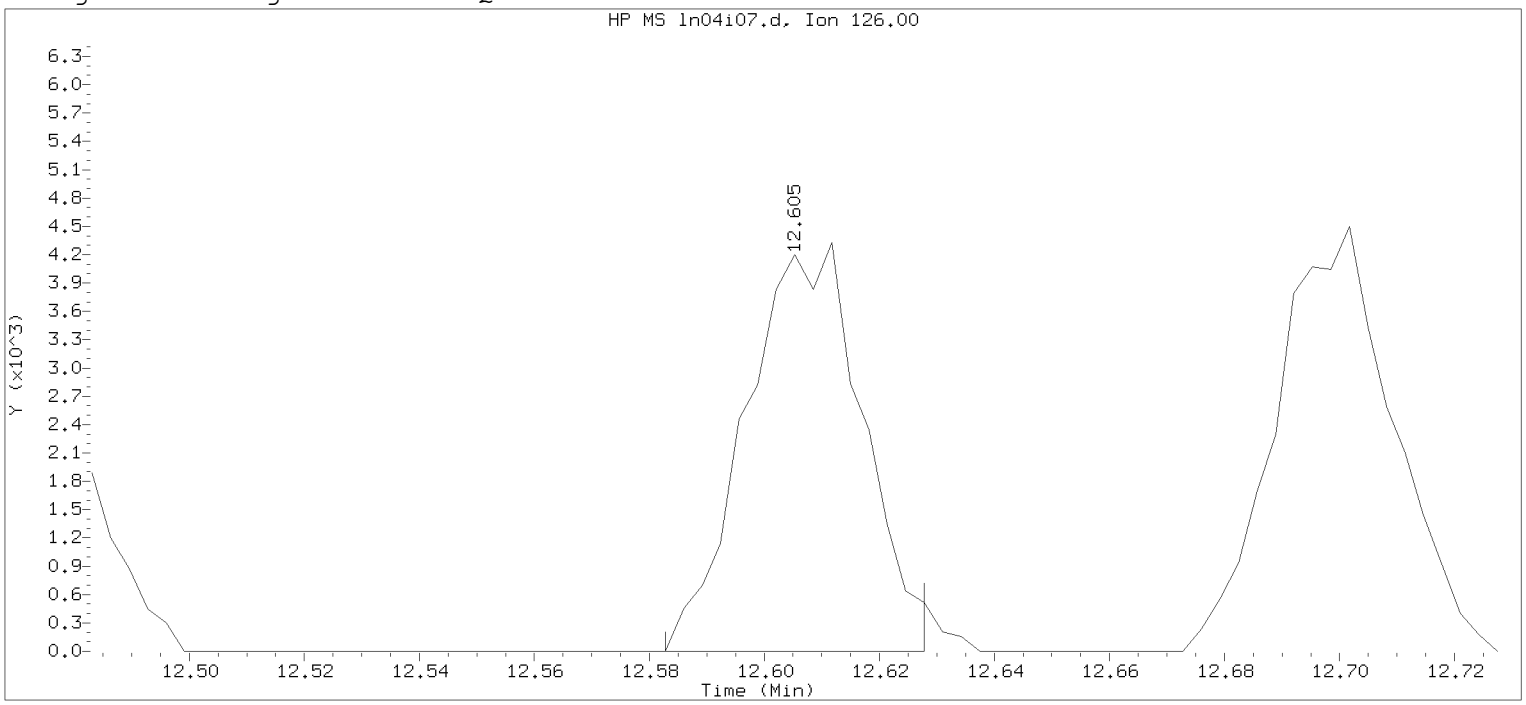
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

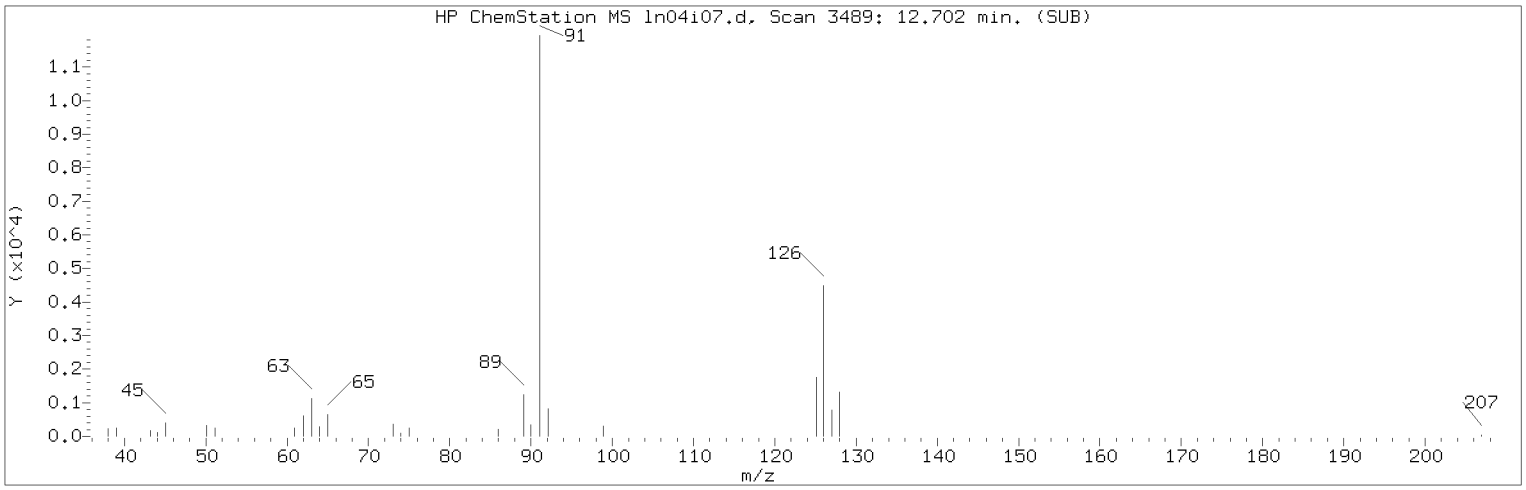
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

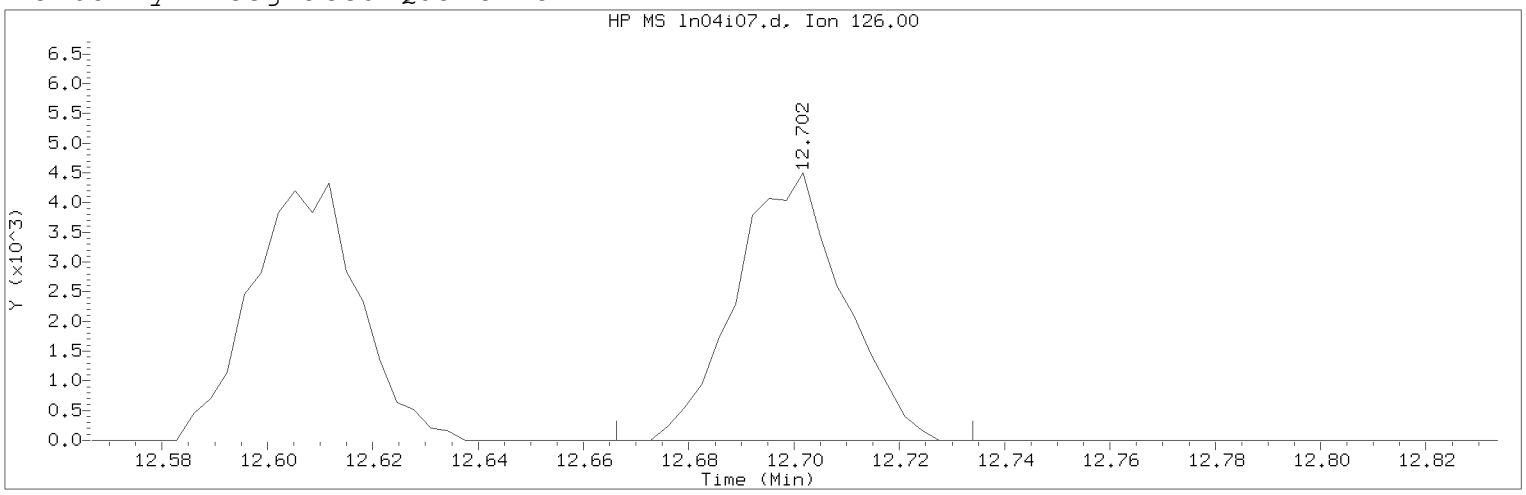
Compound Number : 120
Compound Name : 2-Chlorotoluene
Scan Number : 3459
Retention Time (minutes): 12.605
Quant Ion : 126.00
Area : 6018
On-column Amount (ng) : 0.9136
Integration start scan : 3451 Integration stop scan: 3465
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

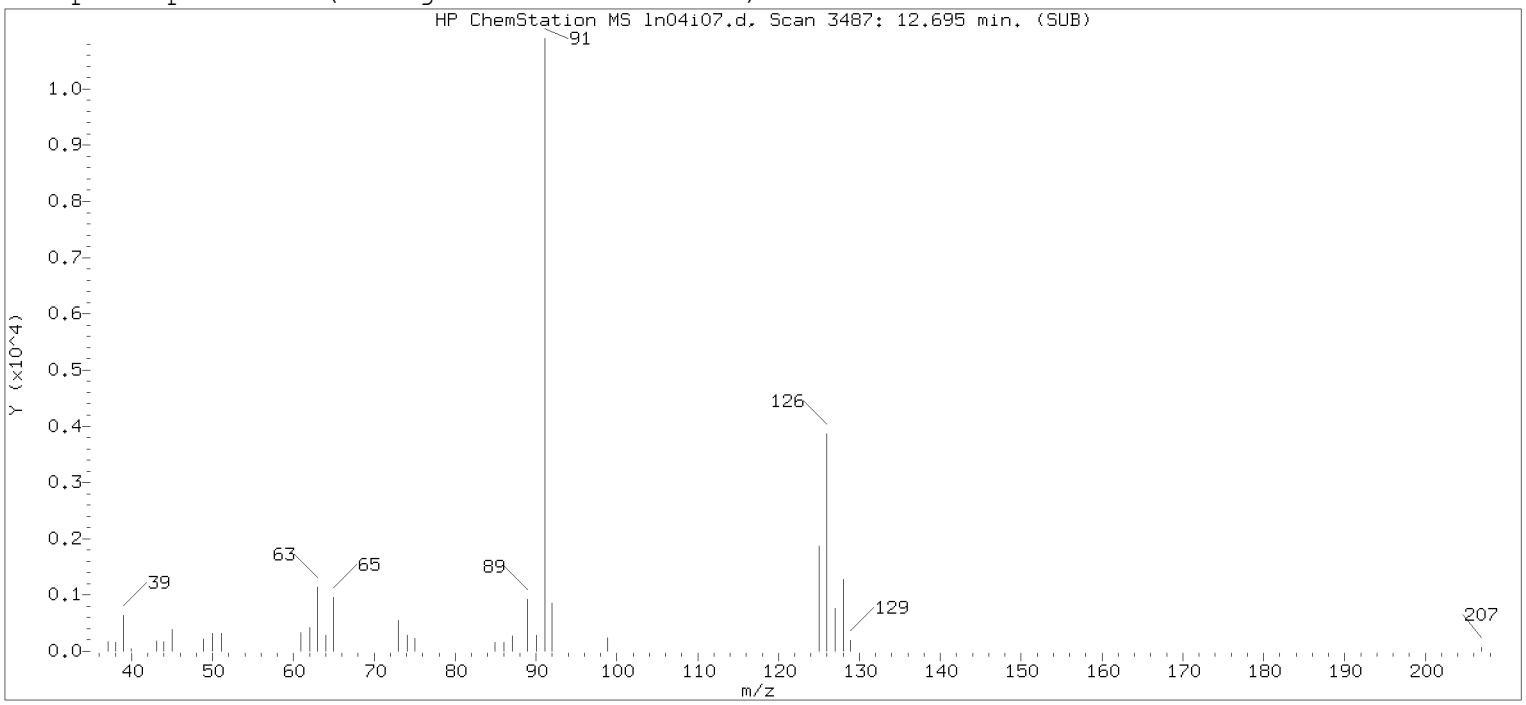
Compound Number : 121
Compound Name : 4-Chlorotoluene
Scan Number : 3489
Retention Time (minutes): 12.702
Quant Ion : 126.00
Area (flag) : 6403M
On-Column Amount (ng) : 0.9314
Integration start scan : 3477 Integration stop scan: 3498
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

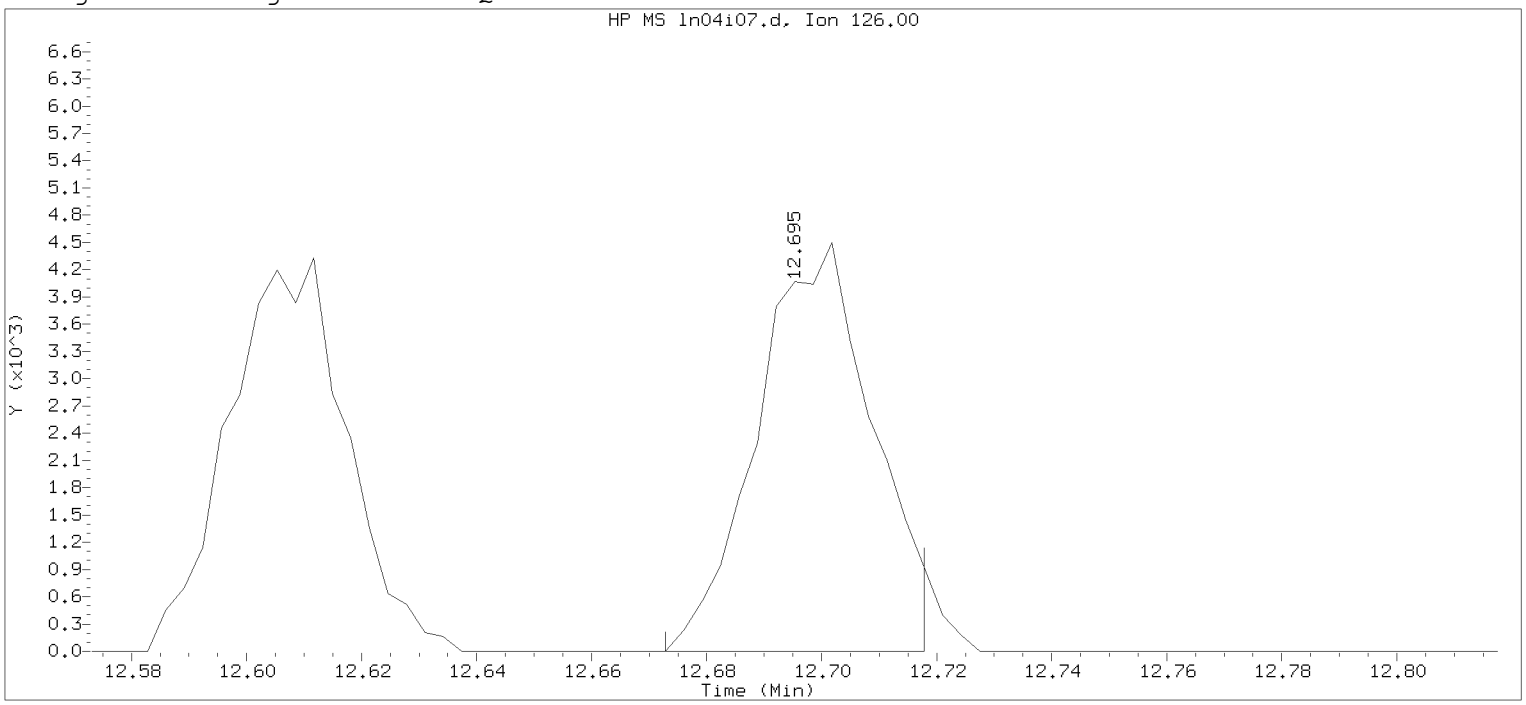
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

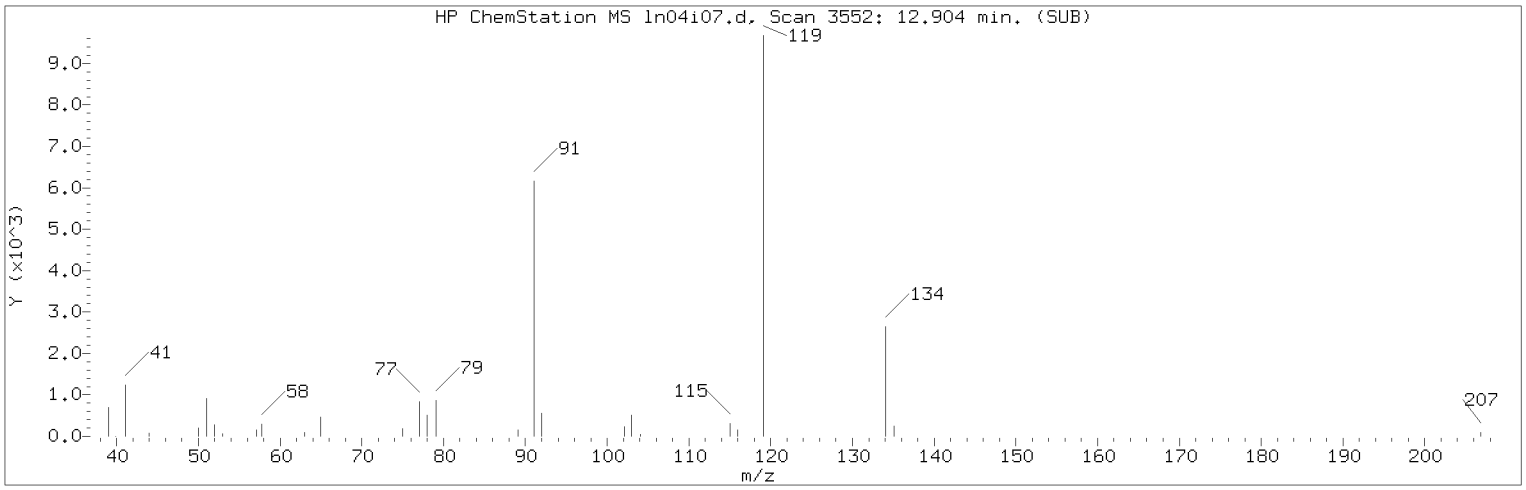
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

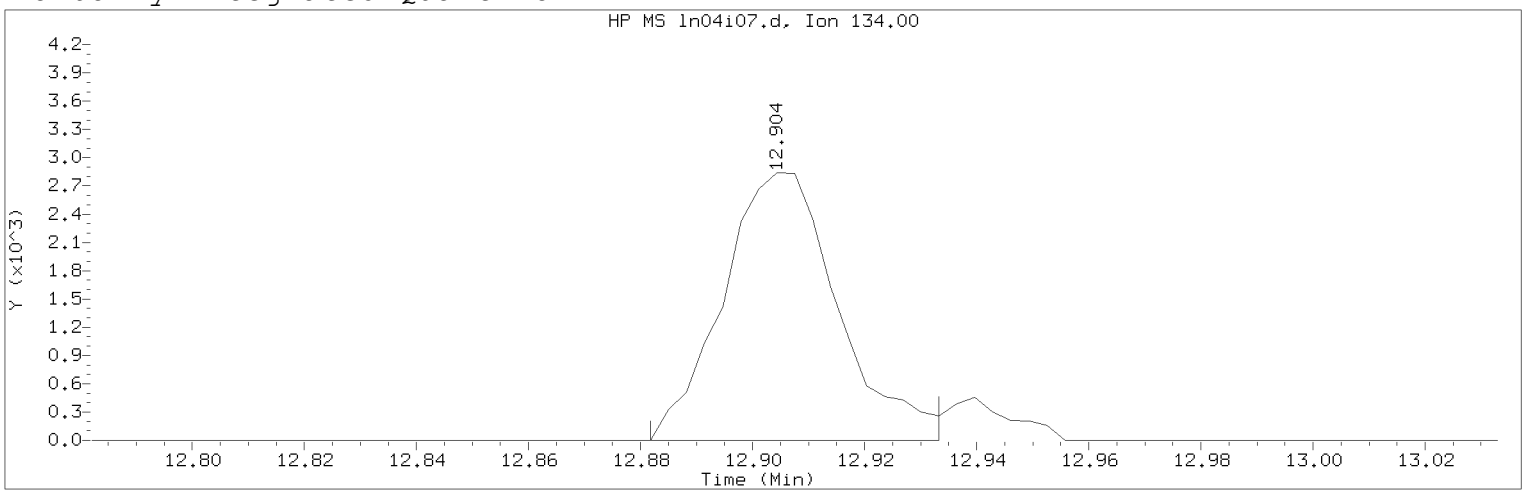
Compound Number : 121
Compound Name : 4-Chlorotoluene
Scan Number : 3487
Retention Time (minutes): 12.695
Quant Ion : 126.00
Area : 6203
On-column Amount (ng) : 0.9062
Integration start scan : 3479 Integration stop scan: 3493
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

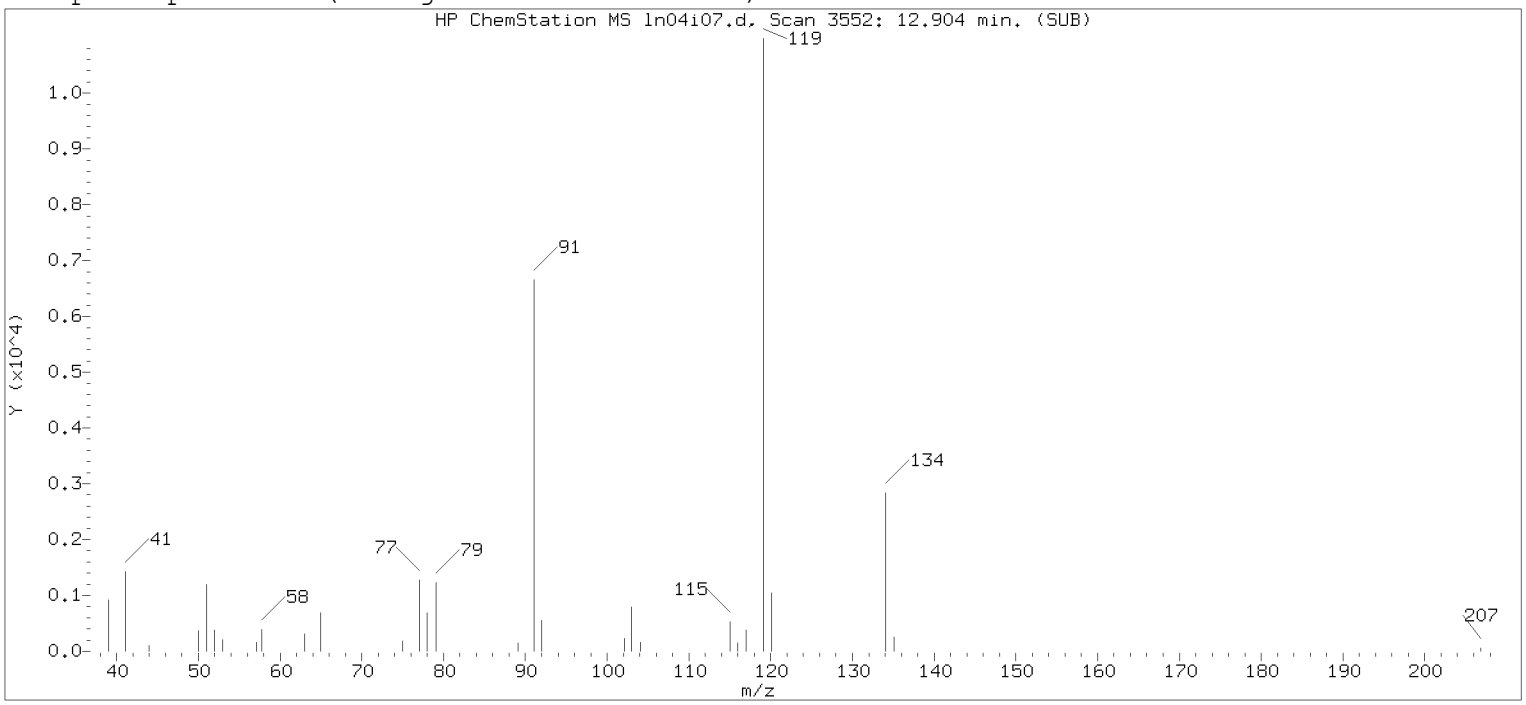
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 4060M
On-Column Amount (ng) : 0.8690
Integration start scan : 3544 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

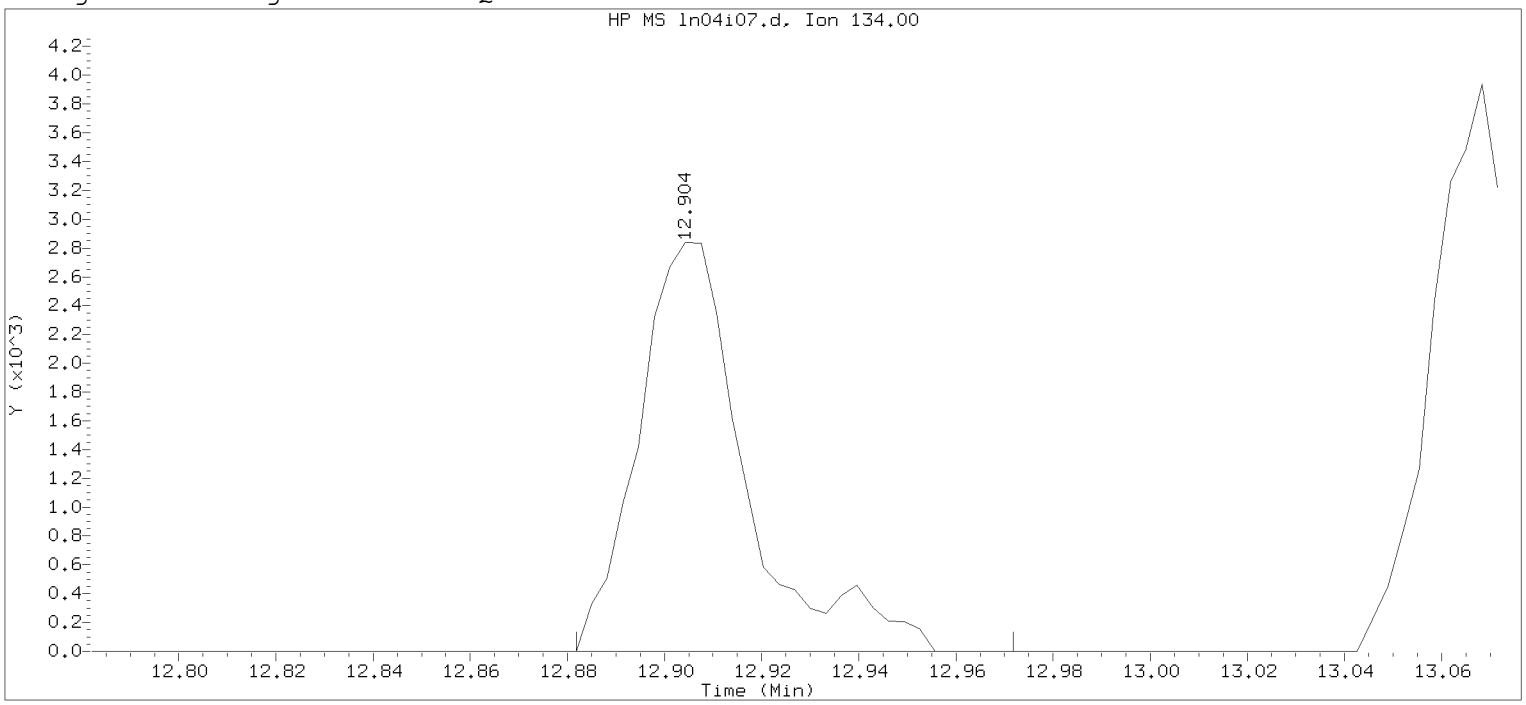
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

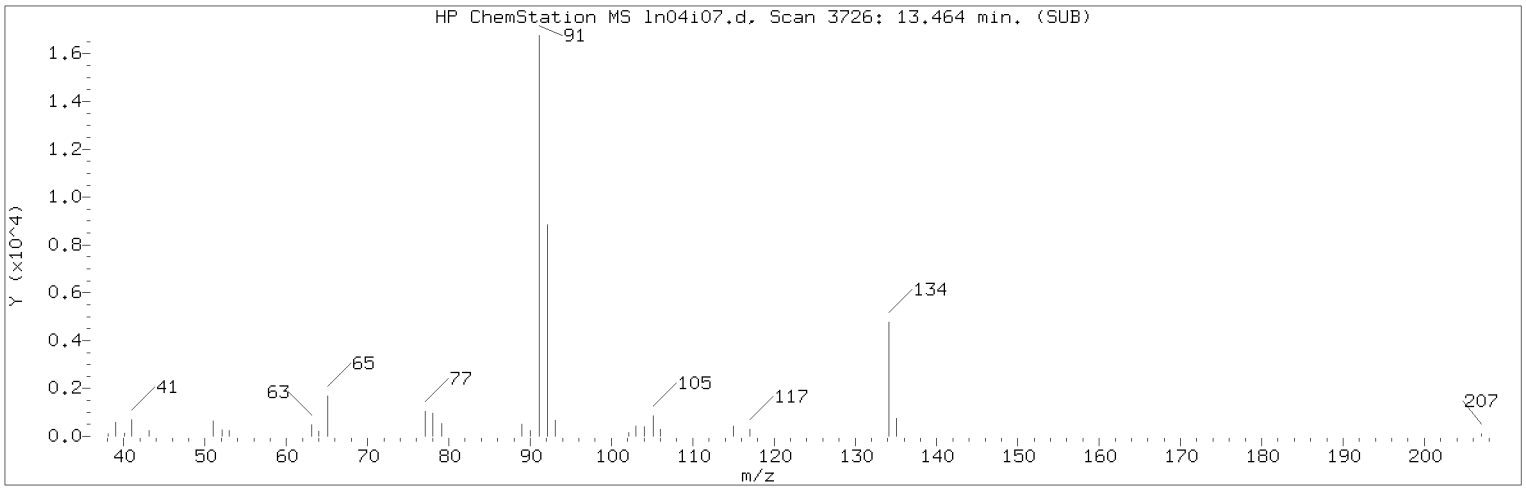
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

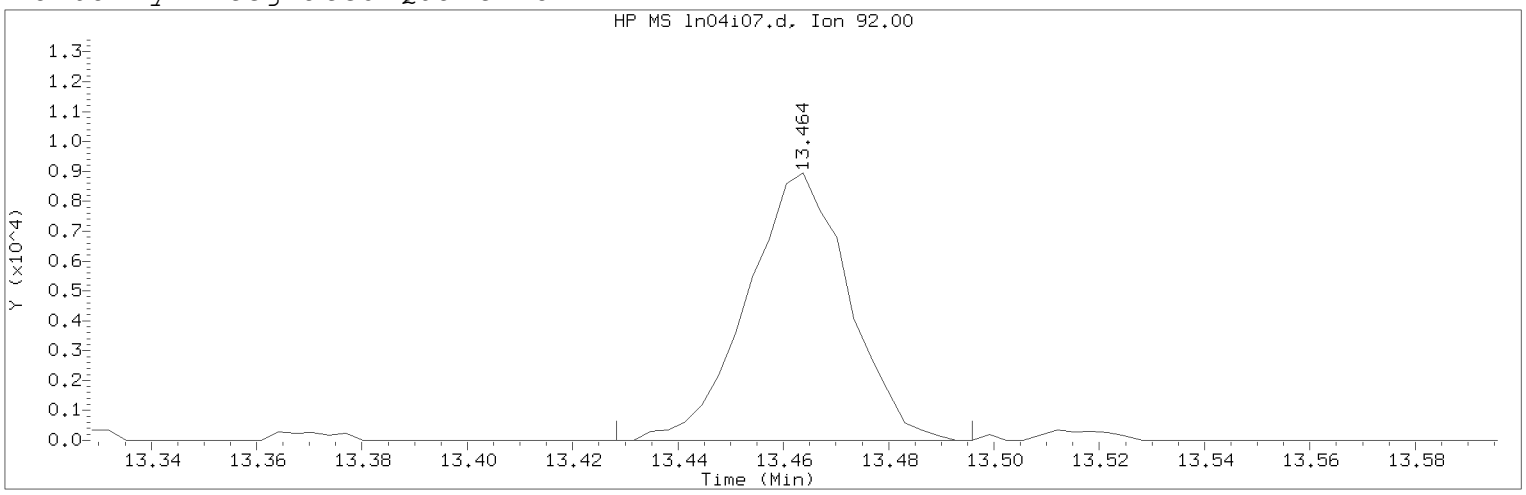
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 4392
On-column Amount (ng) : 0.9024
Integration start scan : 3544 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

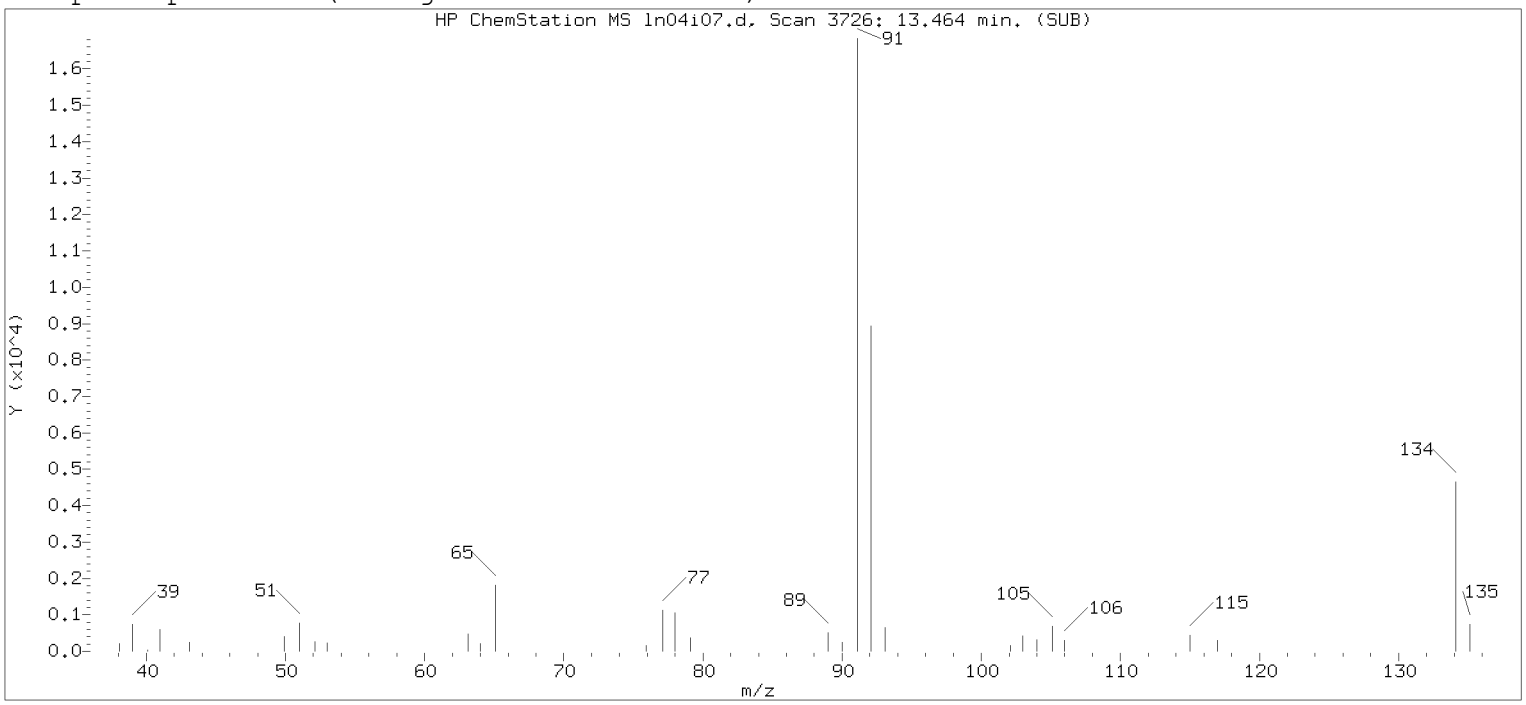
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 3726
Retention Time (minutes): 13.464
Quant Ion : 92.00
Area (flag) : 11964M
On-Column Amount (ng) : 0.9701
Integration start scan : 3714 Integration stop scan: 3735
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

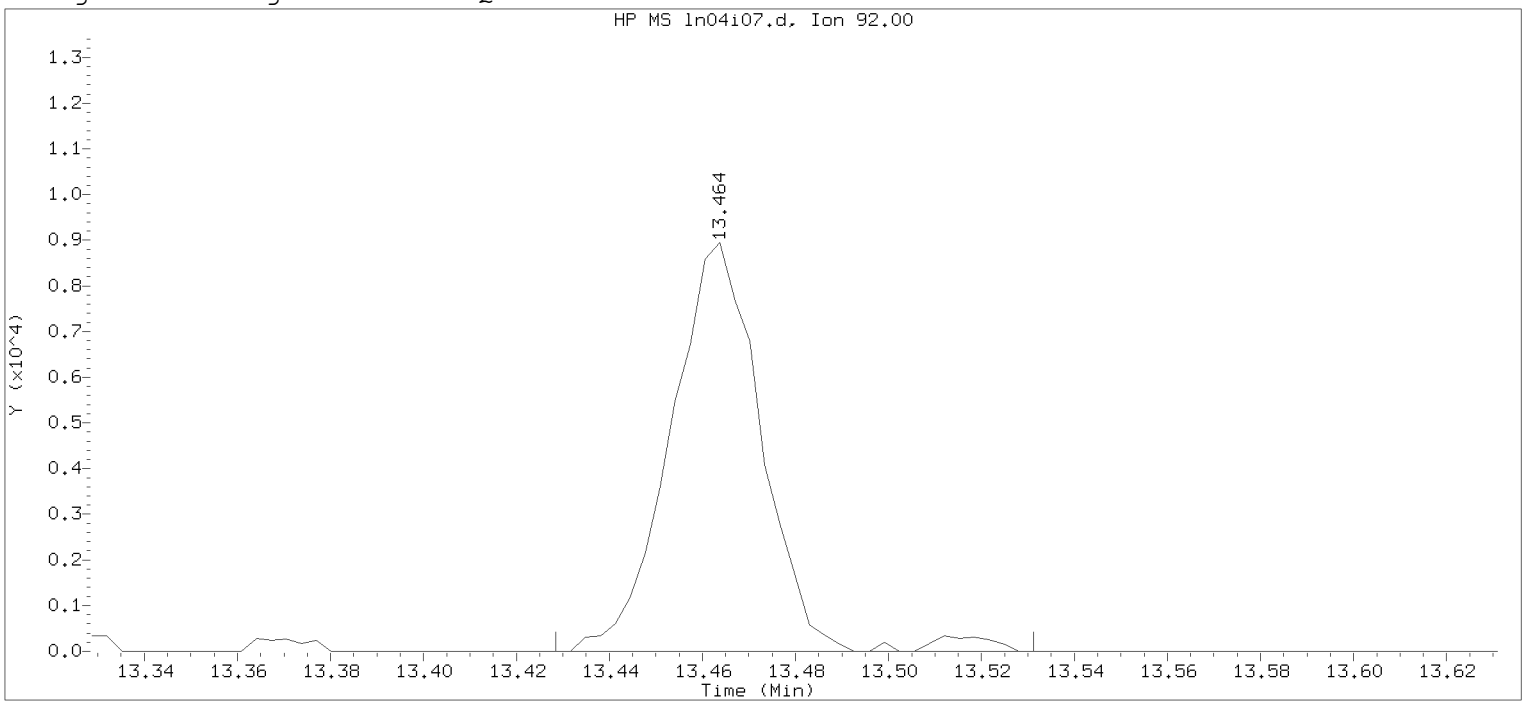
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

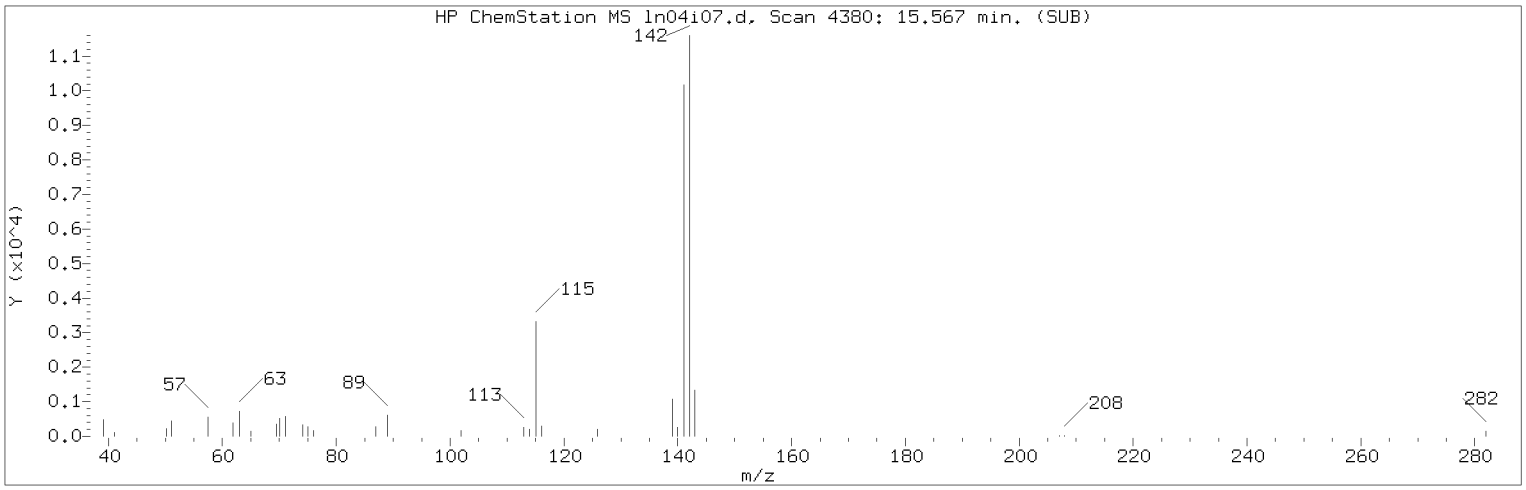
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

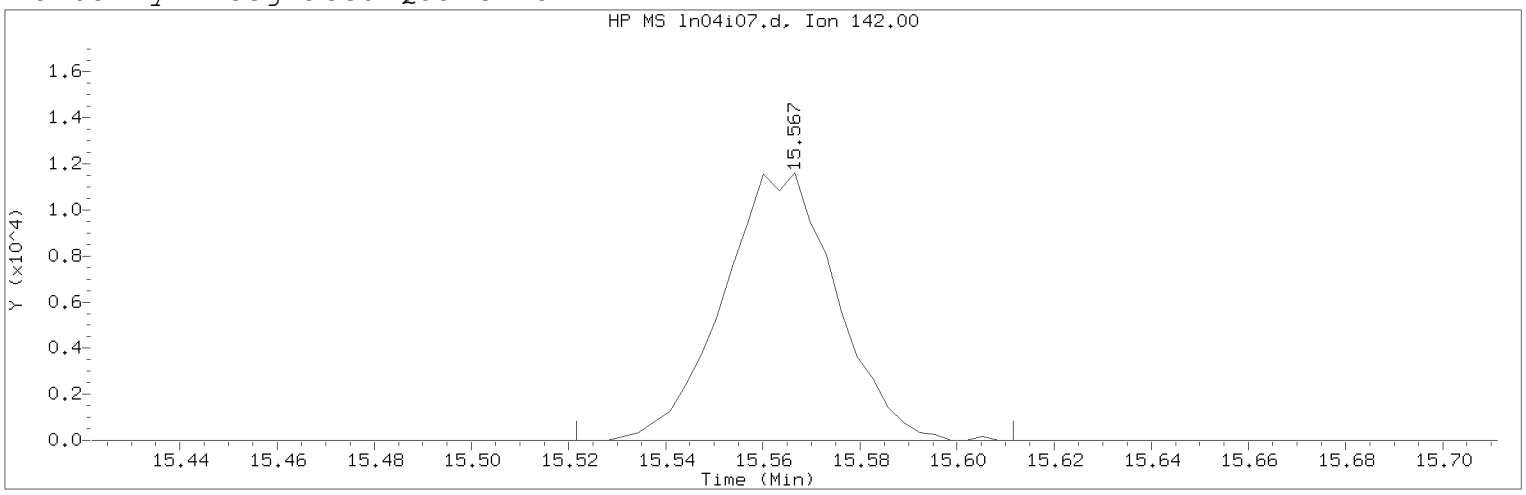
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 3726
Retention Time (minutes): 13.464
Quant Ion : 92.00
Area : 12291
On-column Amount (ng) : 0.9929
Integration start scan : 3714 Integration stop scan: 3746
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

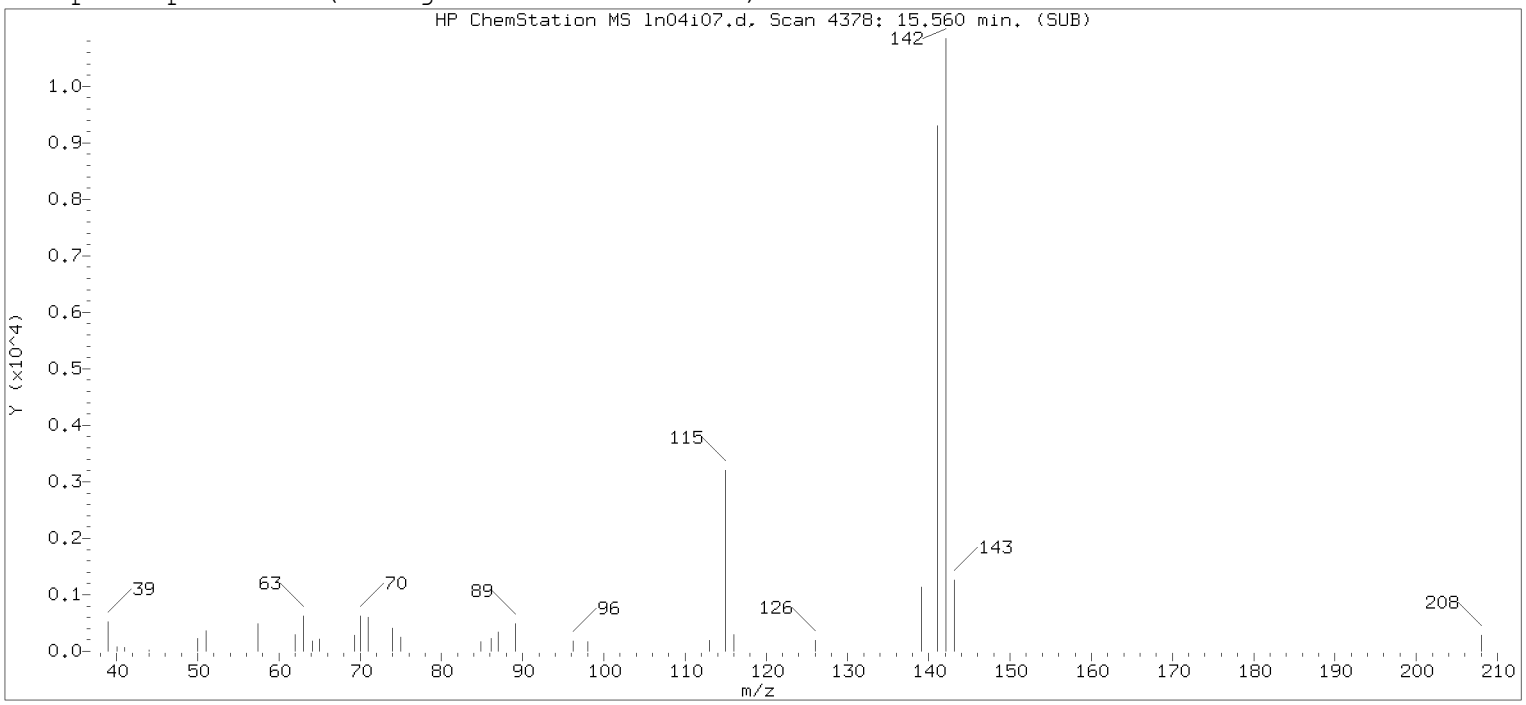
Compound Number : 150
Compound Name : 2-Methylnaphthalene
Scan Number : 4380
Retention Time (minutes): 15.567
Quant Ion : 142.00
Area (flag) : 18783M
On-Column Amount (ng) : 0.9844
Integration start scan : 4365 Integration stop scan: 4393
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

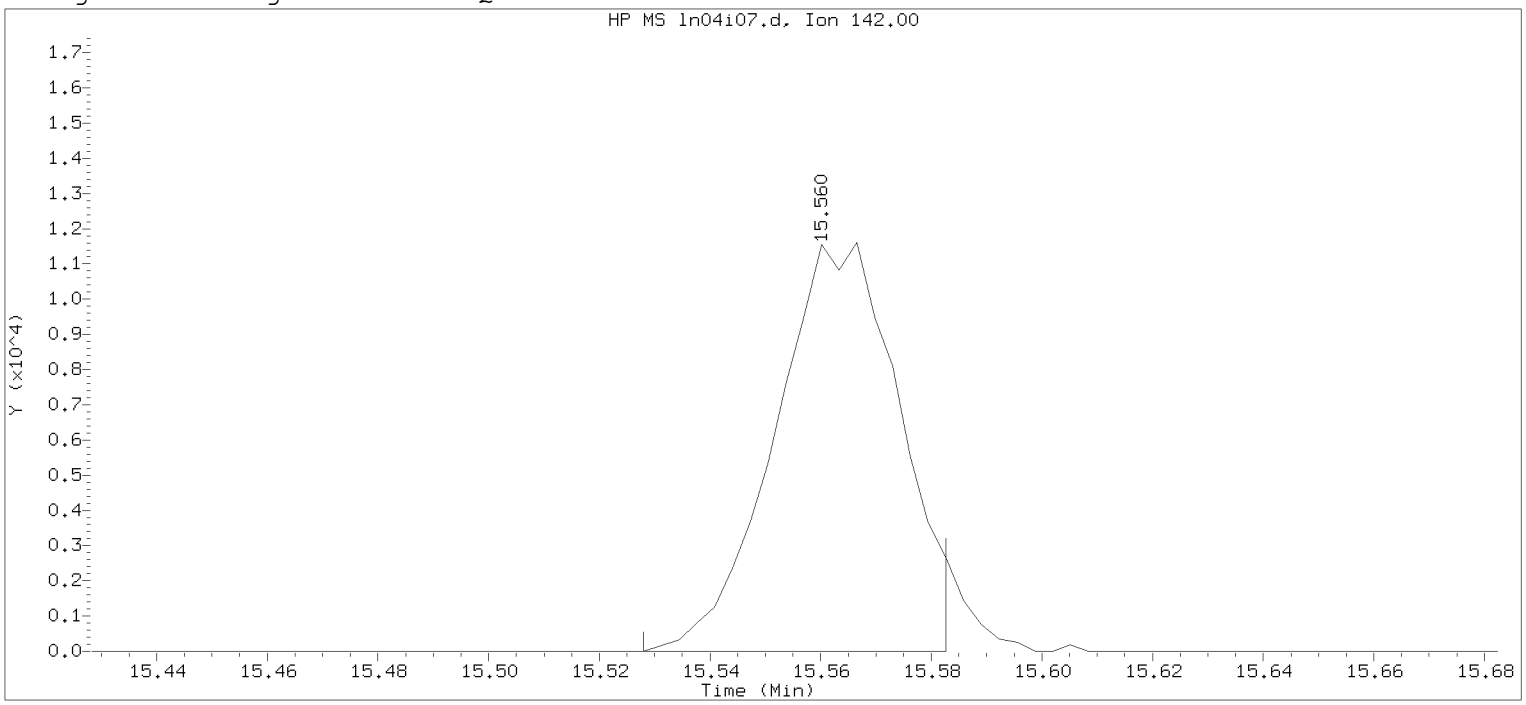
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



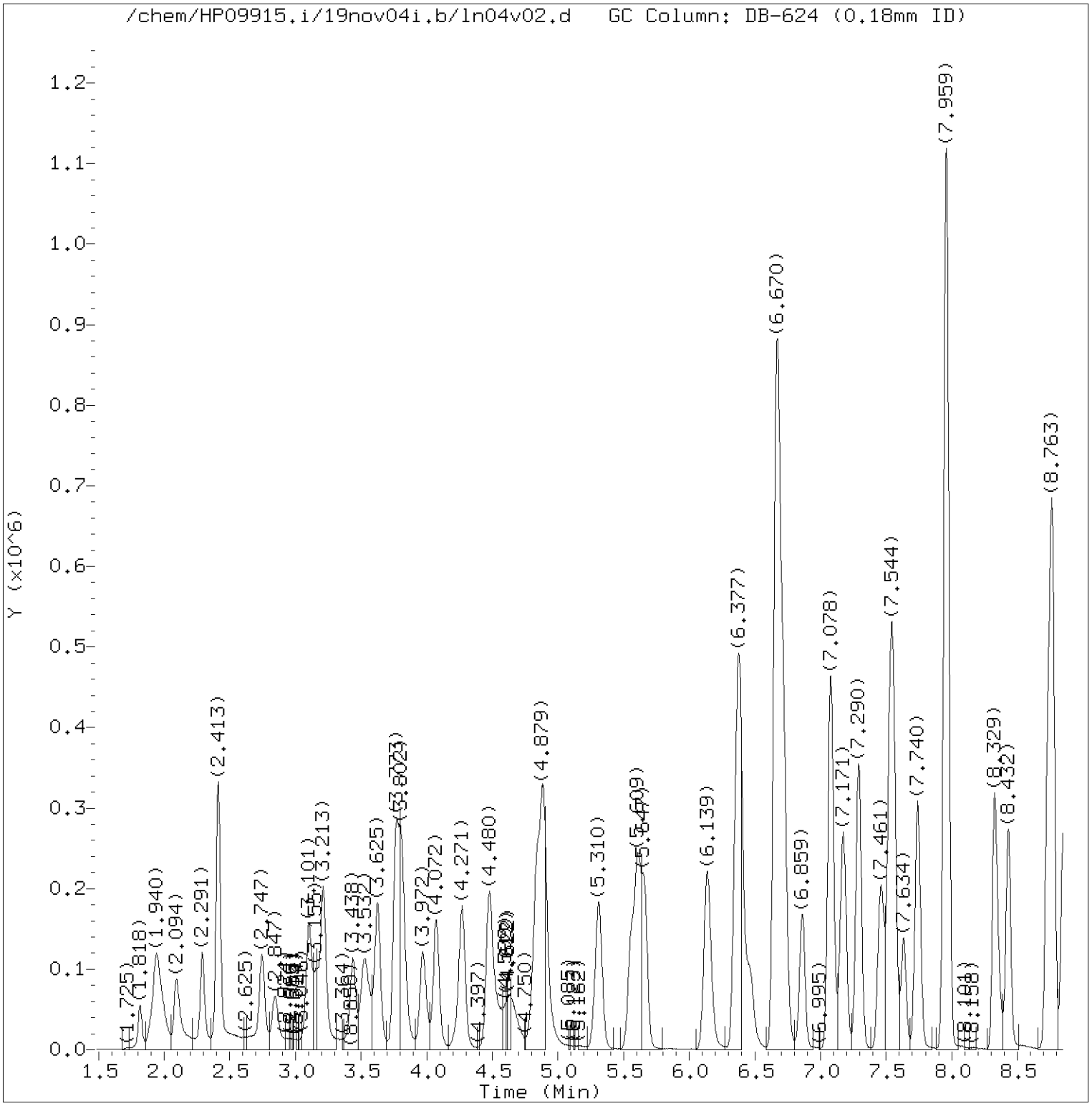
Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 150
Compound Name : 2-Methylnaphthalene
Scan Number : 4378
Retention Time (minutes): 15.560
Quant Ion : 142.00
Area : 17962
On-column Amount (ng) : 0.9472
Integration start scan : 4367 Integration stop scan: 4384
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

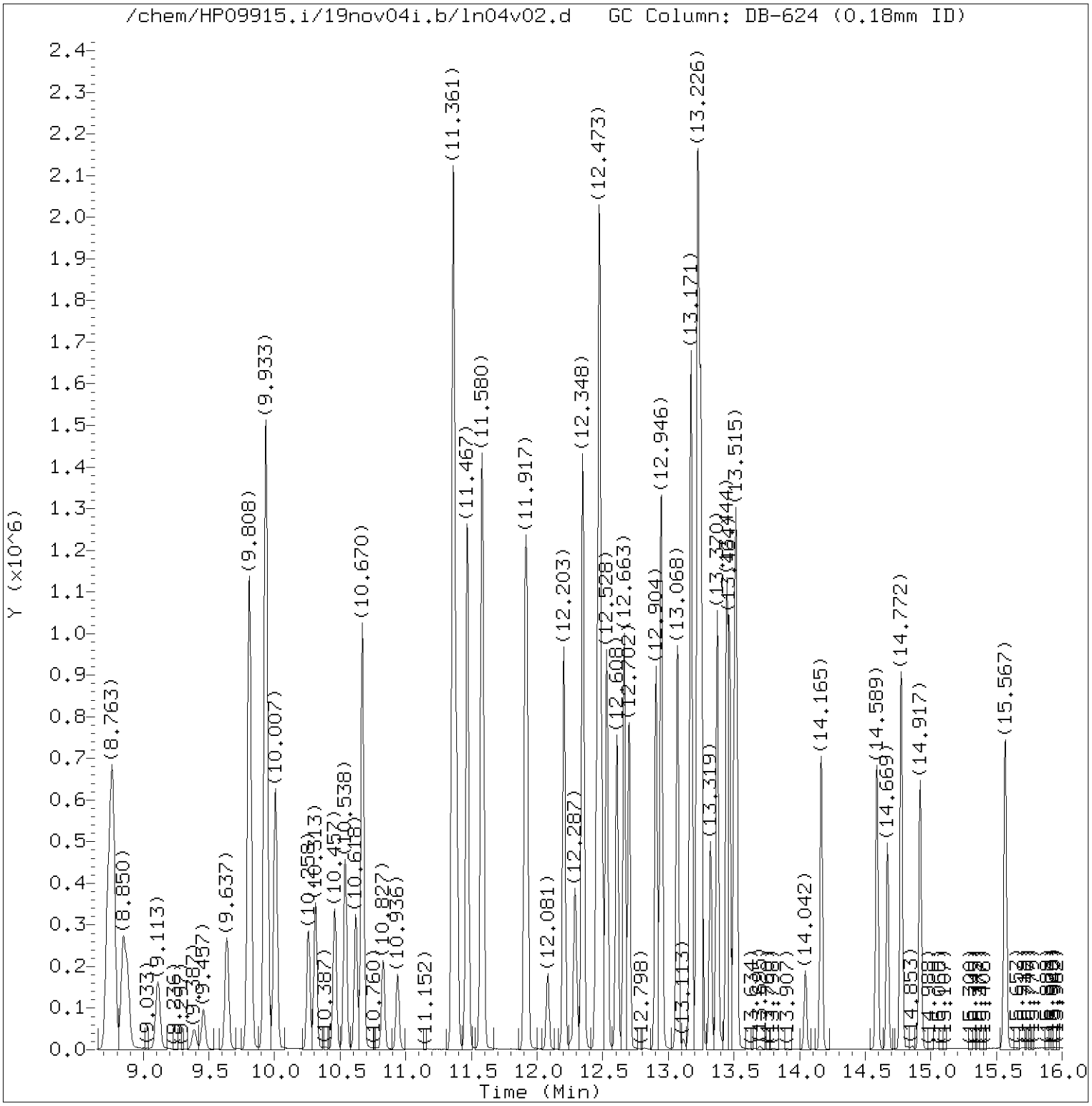
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.094	85	158021M	18.732
4) Chloromethane	(2)	2.291	50	153886	18.927
5) 1,3-Butadiene	(2)	2.413	39	132622M	19.645
6) Vinyl Chloride	(2)	2.413	62	157013	19.349
8) Bromomethane	(2)	2.747	94	104324	17.935
9) Chloroethane	(2)	2.847	64	82467	18.493
10) Dichlorofluoromethane	(2)	3.101	67	174118M	16.224
12) Trichlorofluoromethane	(2)	3.159	101	181238	20.746
11) n-Pentane	(2)	3.213	43	196297	19.014
14) Ethyl ether	(2)	3.438	59	93832	16.622
15) Freon 123a	(2)	3.528	67	136689	19.450
16) Acrolein	(1)	3.625	56	286690	135.125
17) 1,1-Dichloroethene	(2)	3.766	96	107244	20.914
19) Freon 113	(2)	3.795	101	115842	19.801
18) Acetone	(1)	3.805	58	130076	136.752
22) Methyl Iodide	(2)	3.969	142	197263	18.564
21) 2-Propanol	(1)	4.008	45	98510	144.063
23) Carbon Disulfide	(2)	4.075	76	360582	18.660
27) Methyl Acetate	(2)	4.249	43	126109	19.095
25) Allyl Chloride	(2)	4.271	41	171048	18.595
28) Methylene Chloride	(2)	4.474	84	124367	20.377
29)*t-Butyl alcohol-d10	(1)	4.503	65	282794M	250.000
30) t-Butyl alcohol	(1)	4.641	59	227283	190.899
31) Acrylonitrile	(2)	4.834	53	337483	94.980
32) trans-1,2-Dichloroethene	(2)	4.888	96	118658	20.003
33) Methyl Tertiary Butyl Ether	(2)	4.892	73	367523	18.875
34) n-Hexane	(2)	5.310	57	185206M	20.067
36) 1,1-Dichloroethane	(2)	5.554	63	201428	19.465
38) di-Isopropyl ether	(2)	5.609	45	380712	19.075
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	177031	19.067
40) Ethyl t-butyl ether	(2)	6.139	59	369375	19.070
43) 1,2-Dichloroethene (Total)	(2)		96	258427	40.995
44) 2-Butanone	(2)	6.361	43	651073	142.743
42) cis-1,2-Dichloroethene	(2)	6.384	96	139769	20.992
45) 2,2-Dichloropropane	(2)	6.396	77	163413	20.314
47) Propionitrile	(1)	6.461	54	209265	141.065
48) Methacrylonitrile	(2)	6.670	67	556962	145.312
49) Bromochloromethane	(2)	6.712	128	66215	18.755

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.721	71	123960	92.508
51) Chloroform	(2)	6.866	83	199497	20.156
52)$Dibromofluoromethane	(2)	7.075	113	293558	49.637
53) 1,1,1-Trichloroethane	(2)	7.081	97	172182	20.382
54) Cyclohexane	(2)	7.171	56	214913	19.025
56) Carbon Tetrachloride	(2)	7.287	117	143405	20.016
55) 1,1-Dichloropropene	(2)	7.294	75	164177	20.065
58) Isobutyl Alcohol	(1)	7.461	41	180862	451.413
57)$1,2-Dichloroethane-d4	(2)	7.531	102	74610	49.500
60) Benzene	(2)	7.560	78	492012	19.996
61) 1,2-Dichloroethane	(2)	7.638	62	163231	20.625
65) t-Amyl methyl ether	(2)	7.740	73	369180	18.989
67) n-Heptane	(2)	7.956	43	163362M	18.948
66)*Fluorobenzene	(2)	7.959	96	1209671	50.000
69) n-Butanol	(1)	8.326	56	314470M	911.924
71) Trichloroethene	(2)	8.429	95	124893	20.159
72) Methylcyclohexane	(2)	8.731	83	222042	19.318
73) 1,2-Dichloropropane	(2)	8.769	63	127774	20.450
76) Methyl Methacrylate	(2)	8.847	69	115569	19.128
75) 1,4-Dioxane	(1)	8.853	88	47747M	503.753
74) Dibromomethane	(2)	8.879	93	80909	20.014
78) Bromodichloromethane	(2)	9.113	83	144408	19.907
79) 2-Nitropropane	(2)	9.383	41	35869	16.324
80) 2-Chloroethyl Vinyl Ether	(2)	9.457	63	51088	19.038
81) cis-1,3-Dichloropropene	(2)	9.637	75	191486	19.874
82) 4-Methyl-2-pentanone	(2)	9.808	43	893533	92.810
83)$Toluene-d8	(3)	9.933	98	1243931	50.214
88) Toluene	(3)	10.007	92	314091	20.224
90) 1,3-Dichloropropene (total)	(3)		100	360855	39.085
89) trans-1,3-Dichloropropene	(3)	10.258	75	169369	19.211
91) Ethyl Methacrylate	(3)	10.313	69	194593	18.162
92) 1,1,2-Trichloroethane	(3)	10.457	97	120085	20.394
93) Tetrachloroethene	(3)	10.538	166	145489	22.119
94) 1,3-Dichloropropane	(3)	10.618	76	197817	19.676
96) 2-Hexanone	(3)	10.670	43	659041	92.150
97) Dibromochloromethane	(3)	10.827	129	119169	19.757
99) 1,2-Dibromoethane	(3)	10.936	107	127100	19.878
100)*Chlorobenzene-d5	(3)	11.361	117	946755	50.000

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on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) 1-Chlorohexane	(3)	11.364	91	162531	19.480
102) Chlorobenzene	(3)	11.387	112	355167	20.223
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	114709	19.823
104) Ethylbenzene	(3)	11.470	91	602093	20.283
106) m+p-Xylene	(3)	11.583	106	478306	40.959
108) Xylene (Total)	(3)		106	712690	61.279
107) o-Xylene	(3)	11.908	106	234384	20.320
109) Styrene	(3)	11.924	104	391950	20.563
110) Bromoform	(3)	12.081	173	80910	17.952
111) Isopropylbenzene	(3)	12.203	105	603598	20.864
112) Cyclohexanone	(1)	12.287	55	166810	449.364
114)$4-Bromofluorobenzene	(3)	12.348	95	469009	49.999
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	188446M	19.576
115) Bromobenzene	(4)	12.467	156	151805	19.821
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	290498	97.834
117) 1,2,3-Trichloropropane	(4)	12.496	110	58902M	19.940
119) n-Propylbenzene	(4)	12.531	91	694916	20.768
120) 2-Chlorotoluene	(4)	12.608	126	143440	20.178
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	499772	20.552
121) 4-Chlorotoluene	(4)	12.702	126	148830	20.114
124) tert-Butylbenzene	(4)	12.907	134	103762M	20.632
125) Pentachloroethane	(4)	12.943	167	74538	17.213
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	511834	19.971
127) sec-Butylbenzene	(4)	13.068	105	616554	20.545
129) 1,3-Dichlorobenzene	(4)	13.168	146	282424	20.067
130) p-Isopropyltoluene	(4)	13.174	119	533278	20.541
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	509597	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	298831	20.482
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	539562	19.874
135) Benzyl Chloride	(4)	13.319	91	329267	16.019
136) 1,3-Diethylbenzene	(4)	13.374	119	322622	19.095
141) Diethylbenzene (total)	(4)		100	935720	57.258
137) 1,4-Diethylbenzene	(4)	13.444	119	340230	19.006
139) n-Butylbenzene	(4)	13.464	92	258920	19.505
138) 1,2-Dichlorobenzene	(4)	13.502	146	282807	20.364
140) 1,2-Diethylbenzene	(4)	13.518	119	272868	19.158
142) 1,2-Dibromo-3-chloropropane	(4)	14.042	75	40654	19.292
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	203102	19.035

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on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146)	1,2,4-Trichlorobenzene	(4)	14.589	180	199046	19.186
147)	Hexachlorobutadiene	(4)	14.666	225	82991	16.942
148)	Naphthalene	(4)	14.772	128	666056	19.970
149)	1,2,3-Trichlorobenzene	(4)	14.917	180	192487	19.067
150)	2-Methylnaphthalene	(4)	15.567	142	374385	18.228

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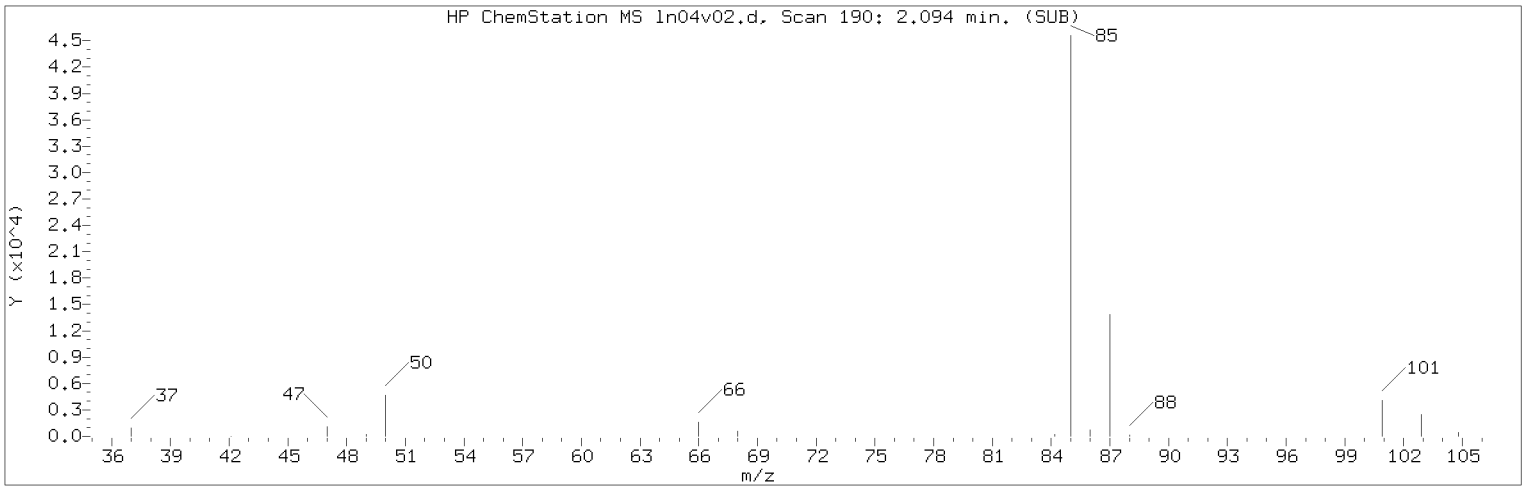
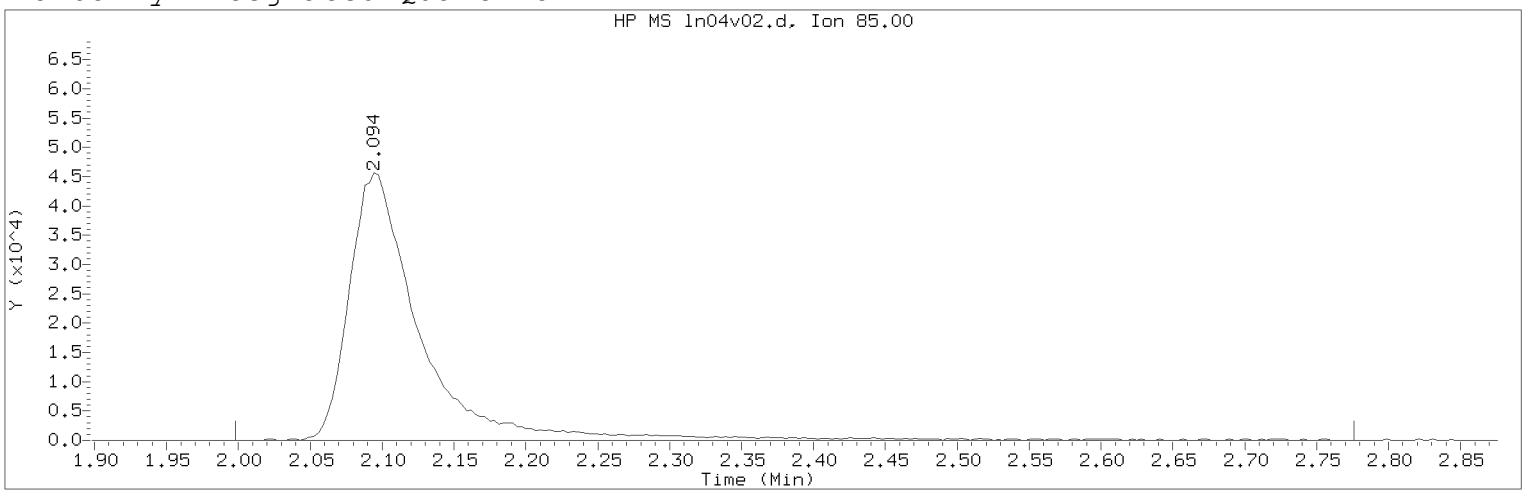
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

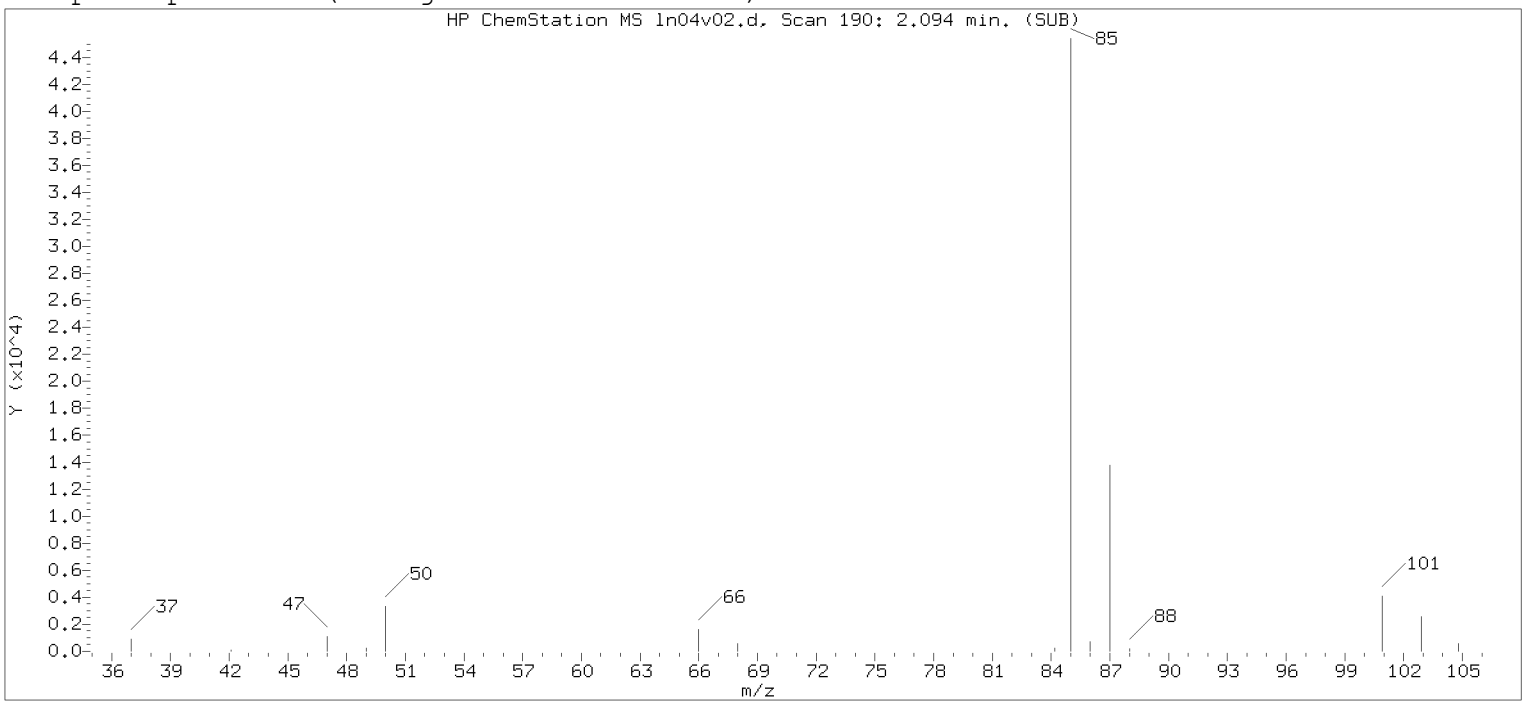
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area (flag) : 158021M
On-Column Amount (ng) : 18.7320
Integration start scan : 159 Integration stop scan: 401
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

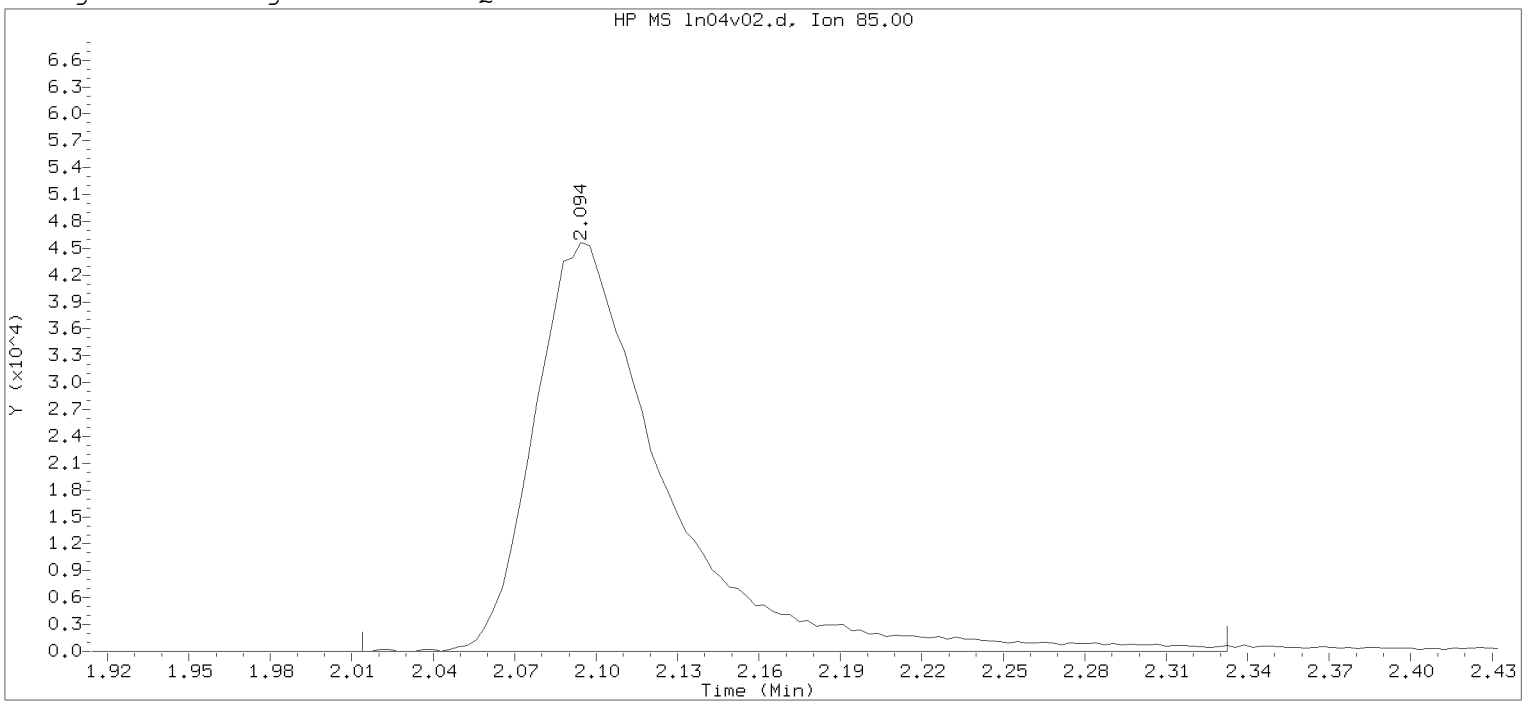
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area : 152845
On-column Amount (ng) : 18.1184
Integration start scan : 164 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

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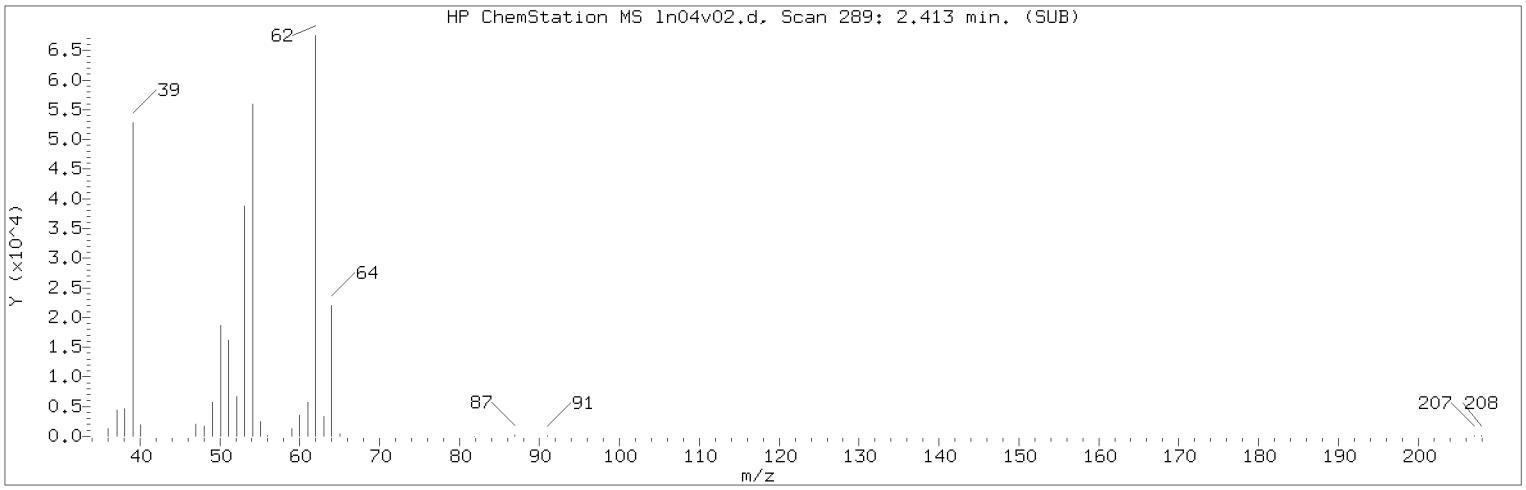
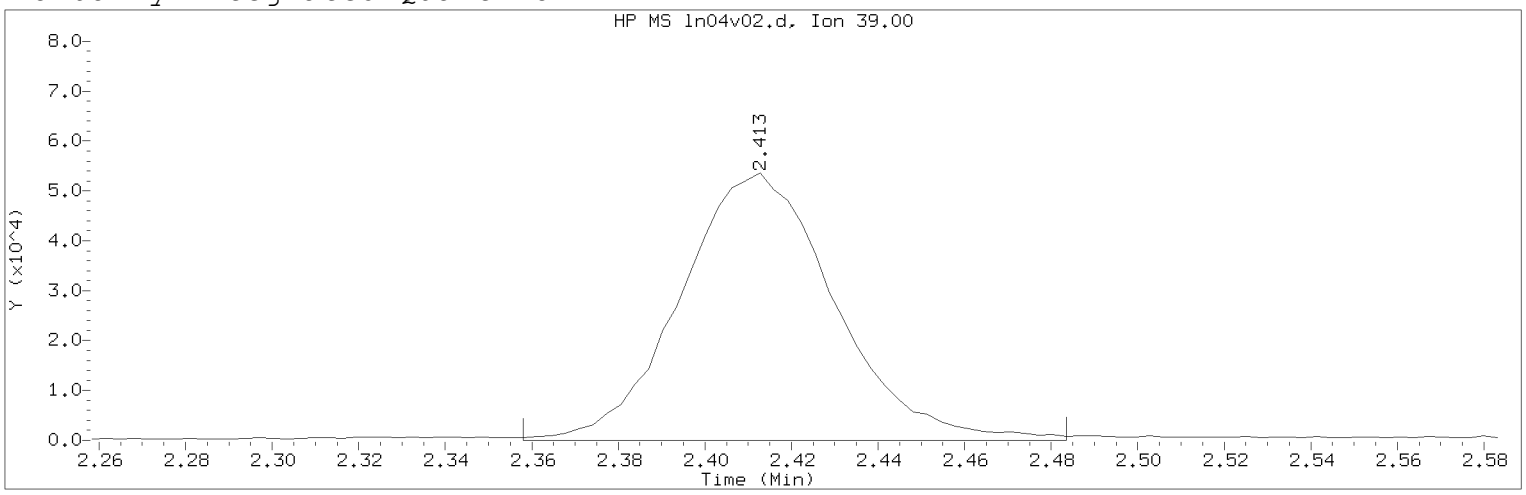
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

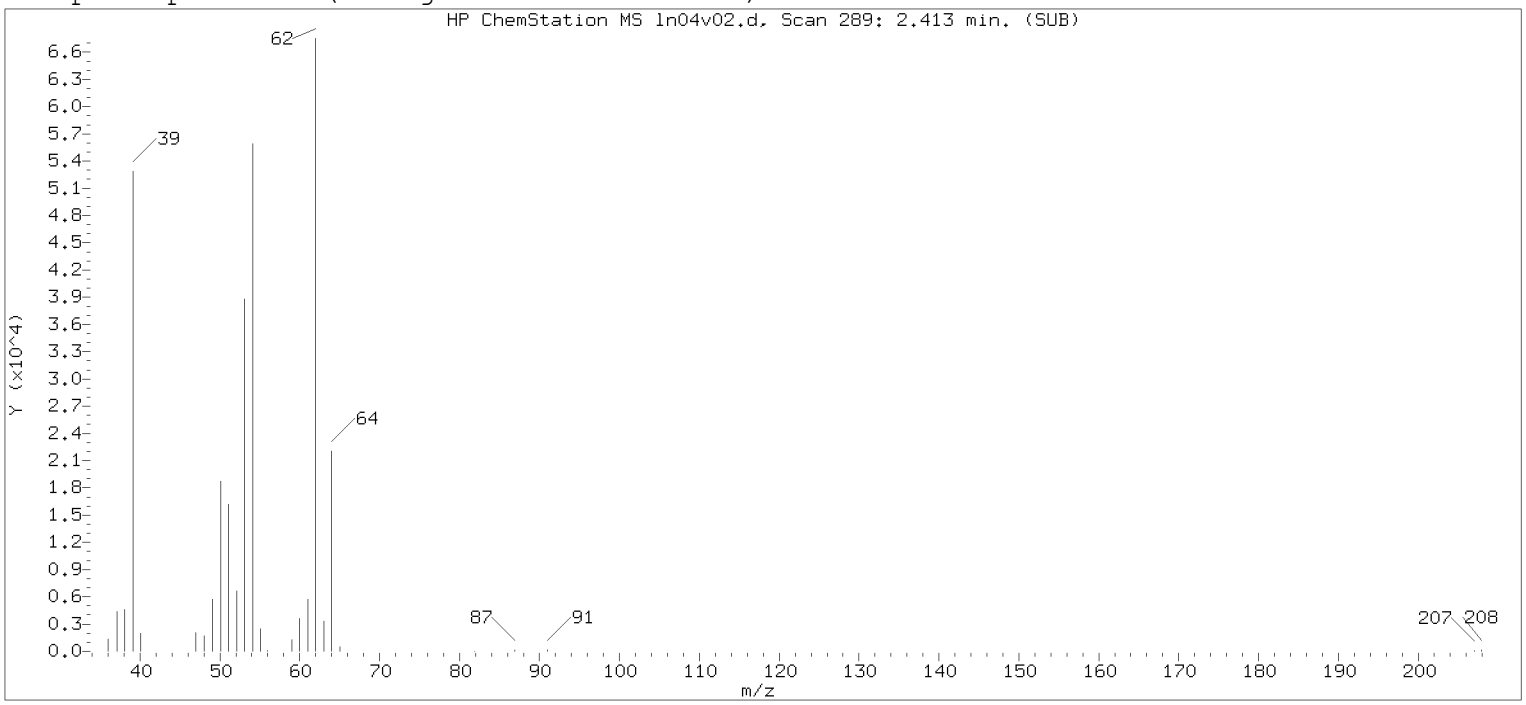
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area (flag) : 132622M
On-Column Amount (ng) : 19.6453
Integration start scan : 271 Integration stop scan: 310
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

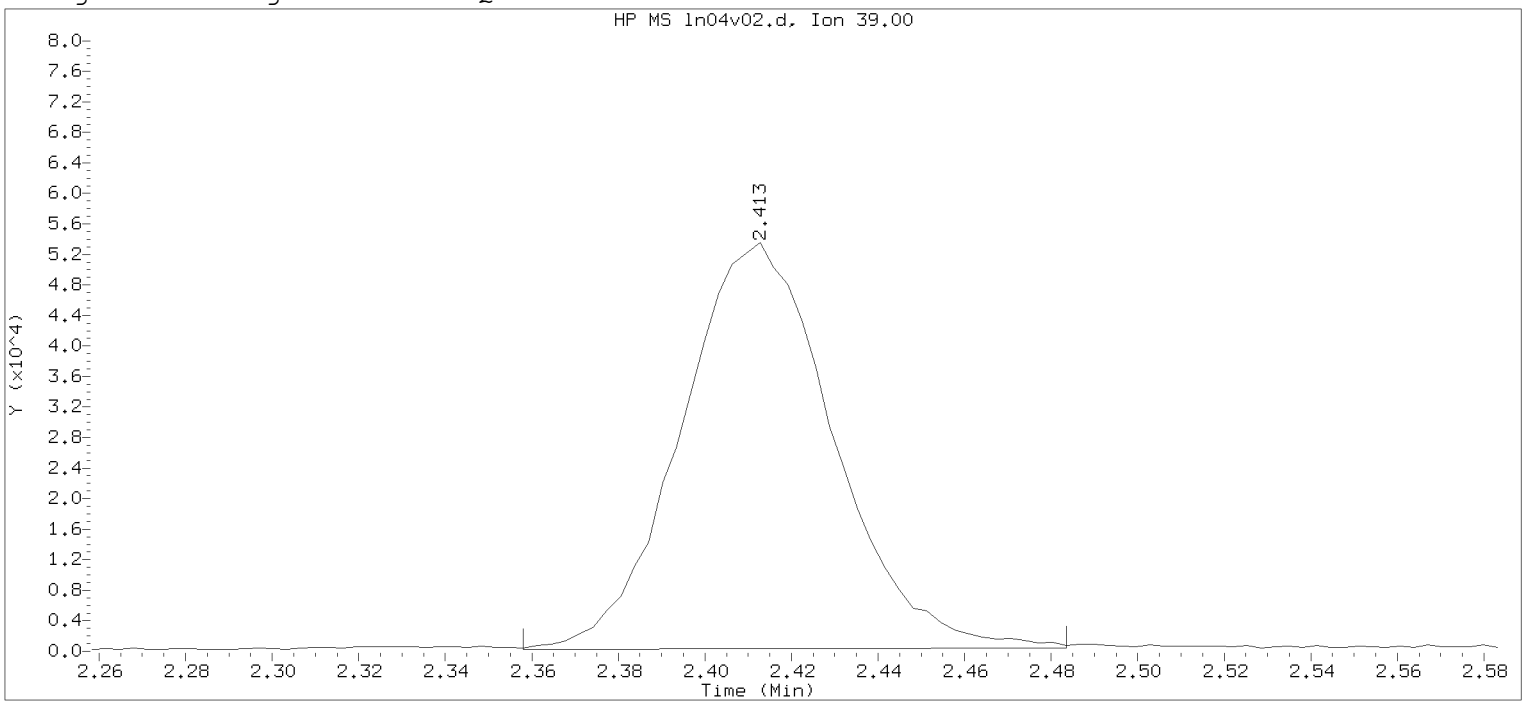
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area : 129885
On-column Amount (ng) : 19.2400
Integration start scan : 271 Integration stop scan: 310
Y at integration start : 283 Y at integration end: 414

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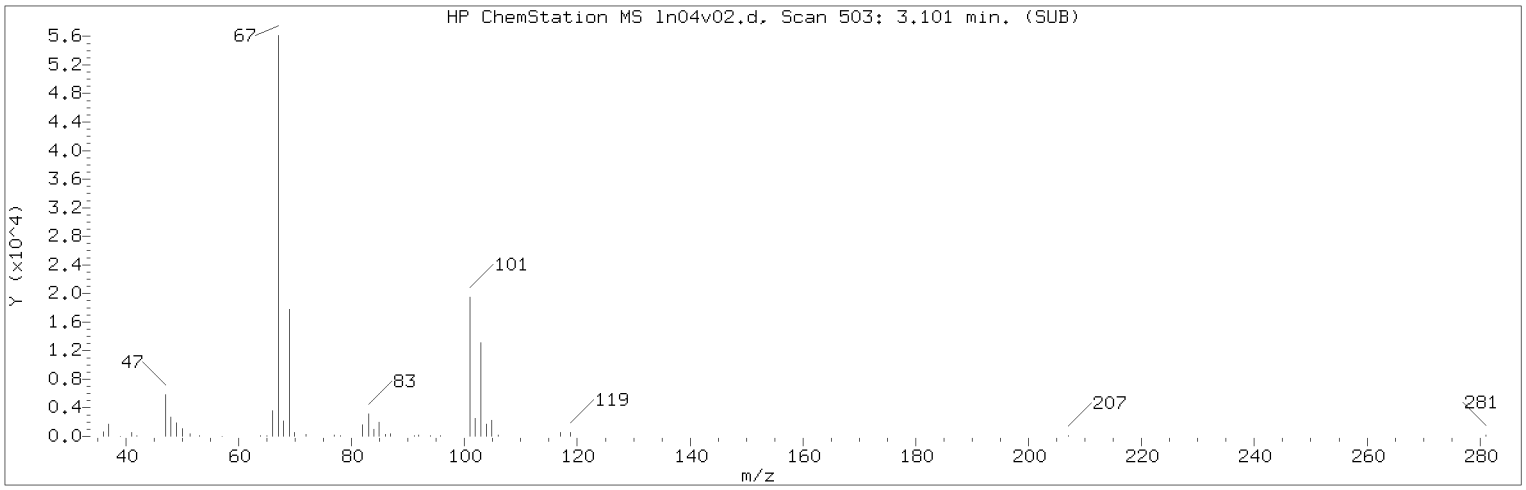
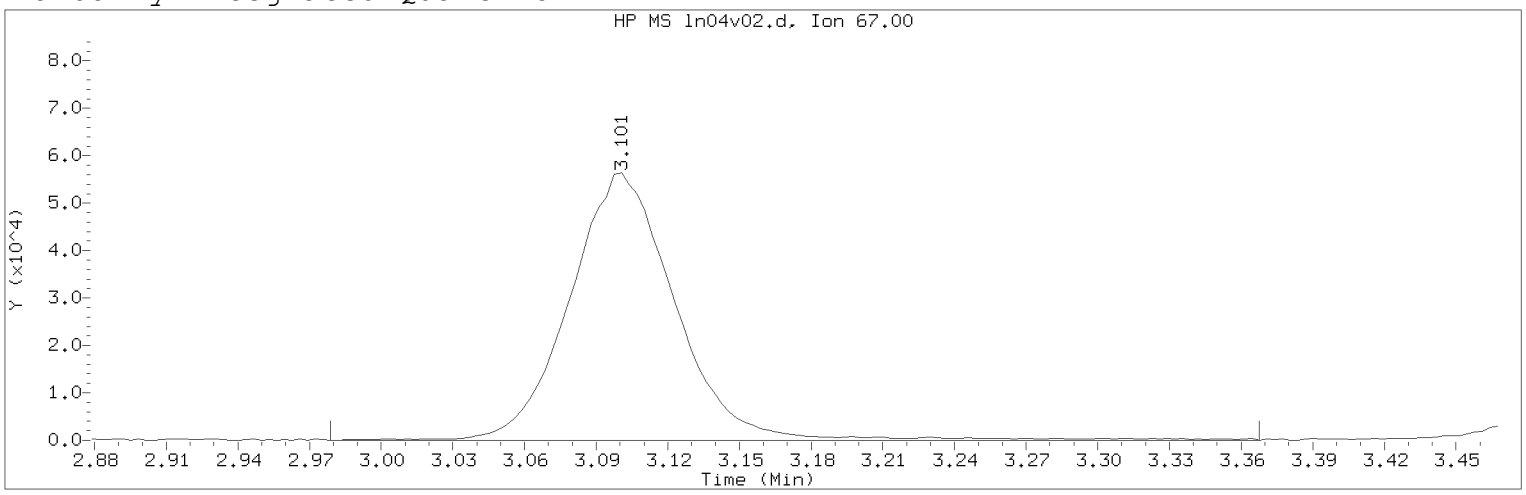
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

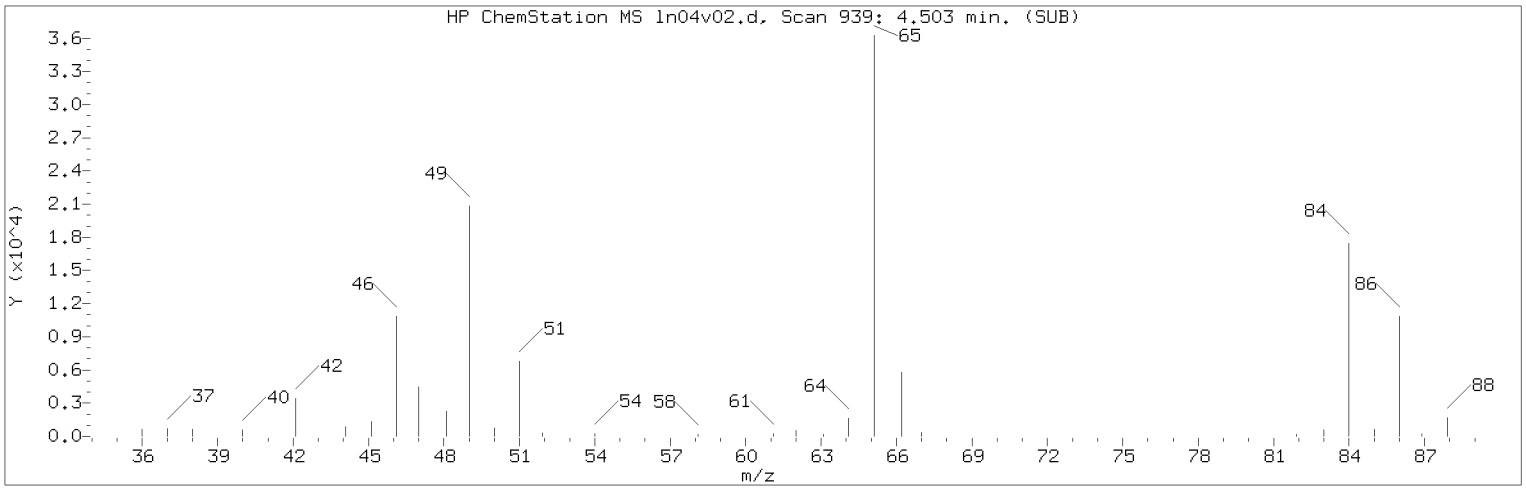
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 503
Retention Time (minutes): 3.101
Quant Ion : 67.00
Area (flag) : 174118M
On-Column Amount (ng) : 16.2240
Integration start scan : 464 Integration stop scan: 585
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

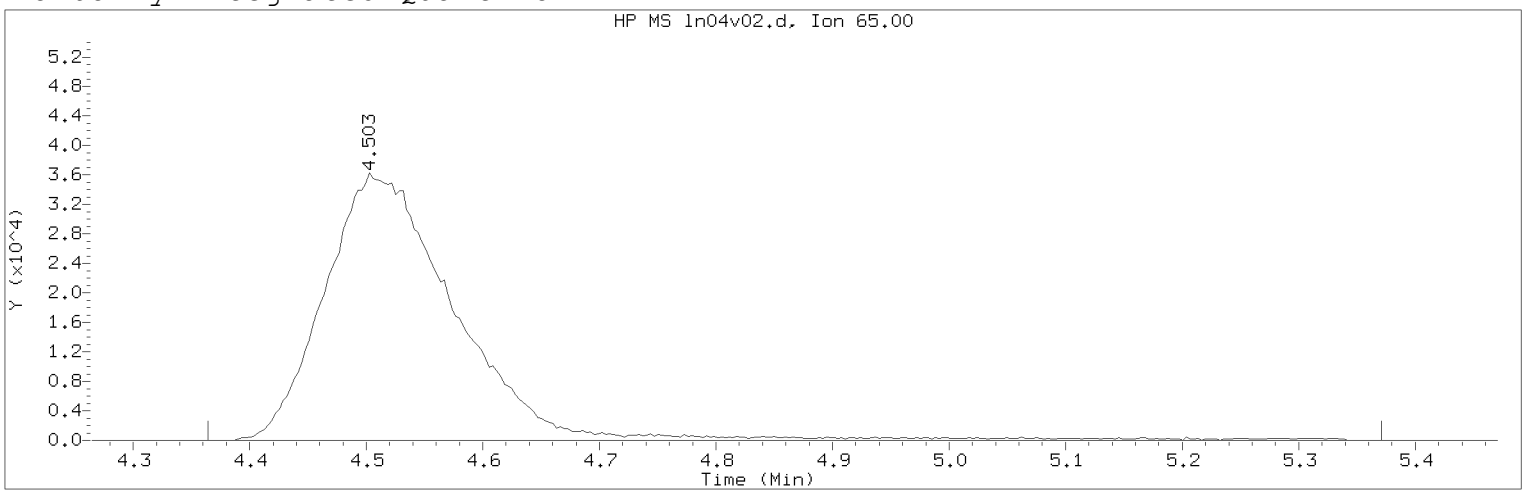
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

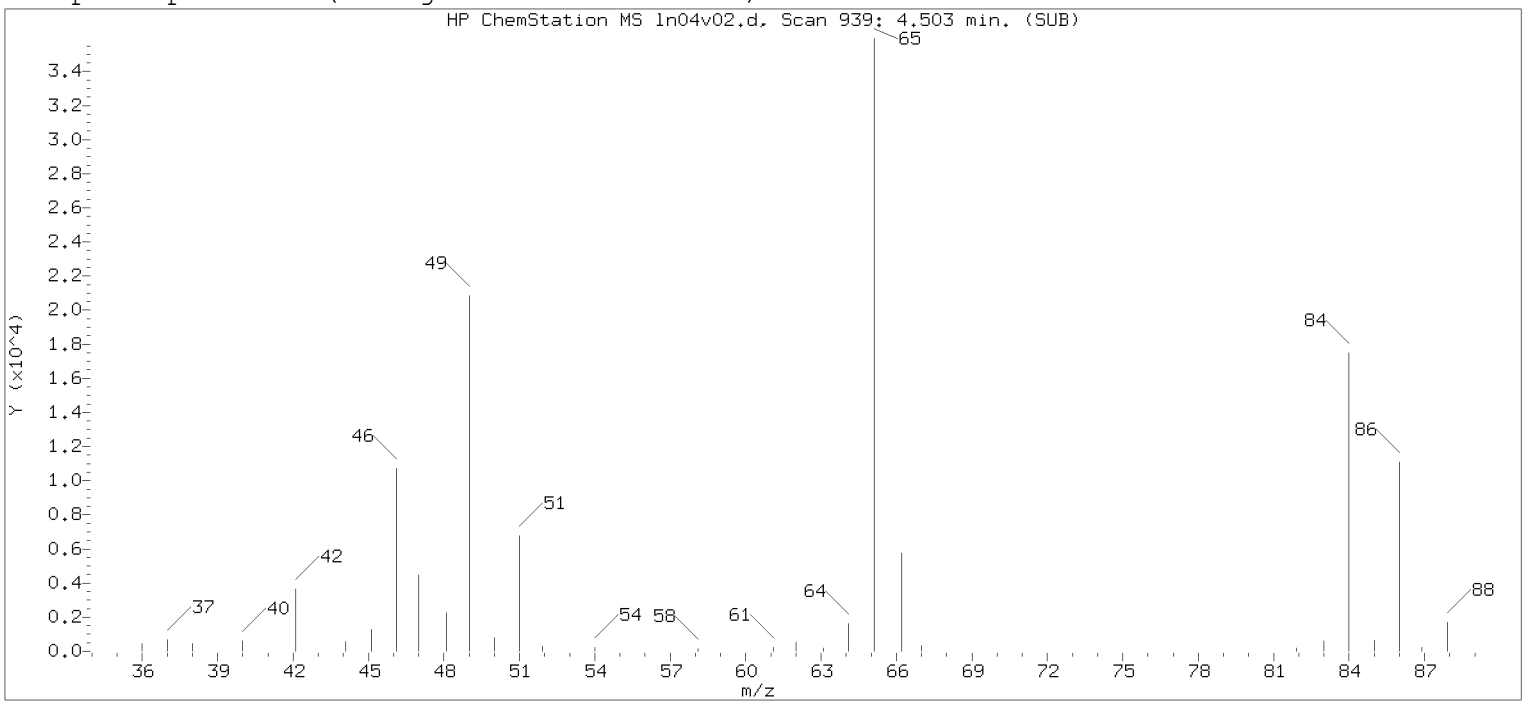
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area (flag) : 282794M
On-Column Amount (ng) : 250.0000
Integration start scan : 895 Integration stop scan: 1208
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

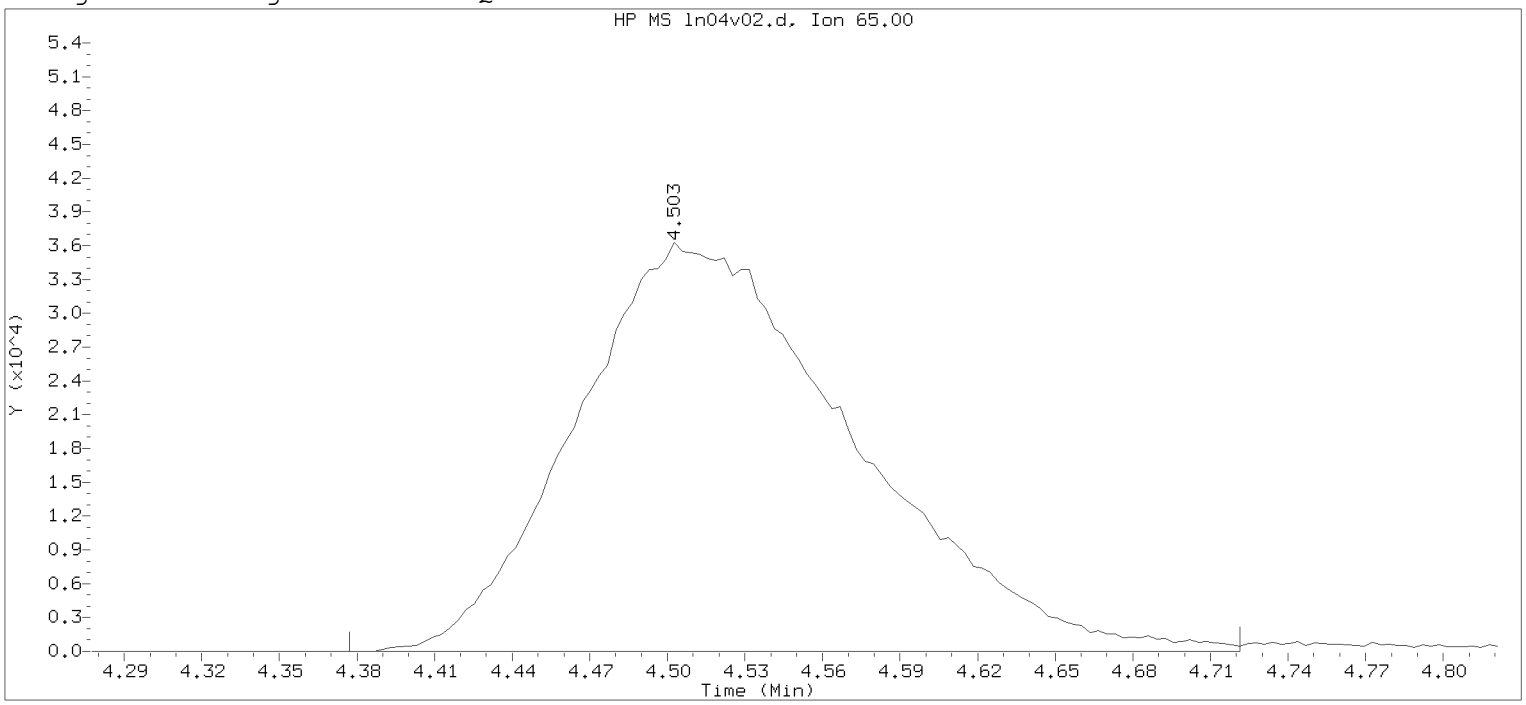
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

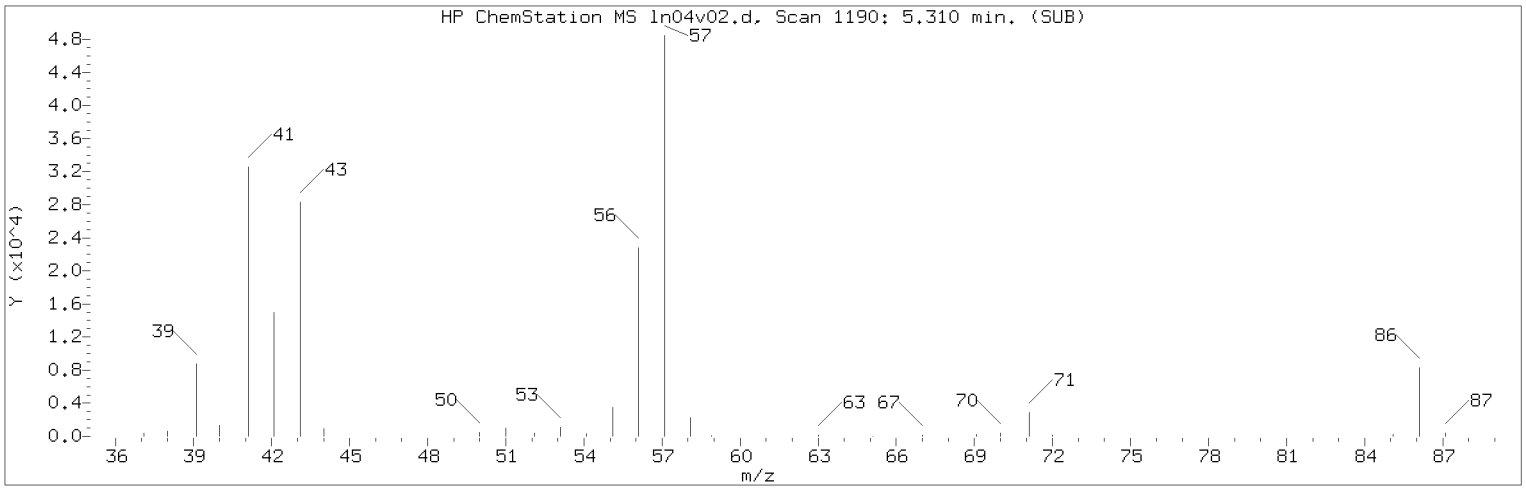
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

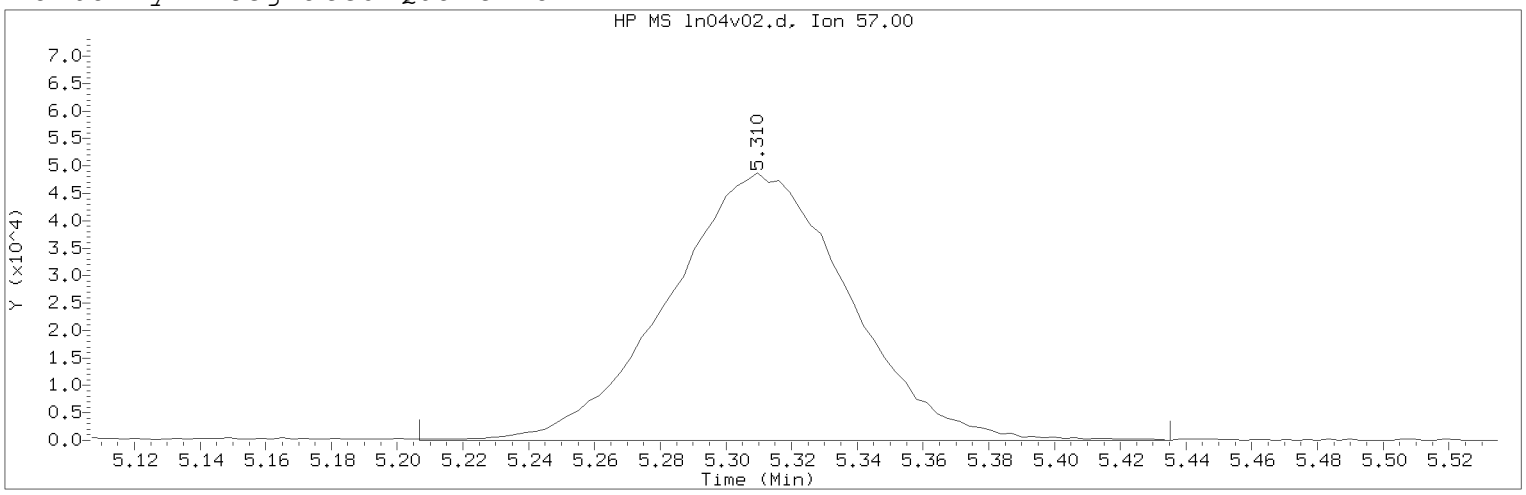
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area : 270950
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1006
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

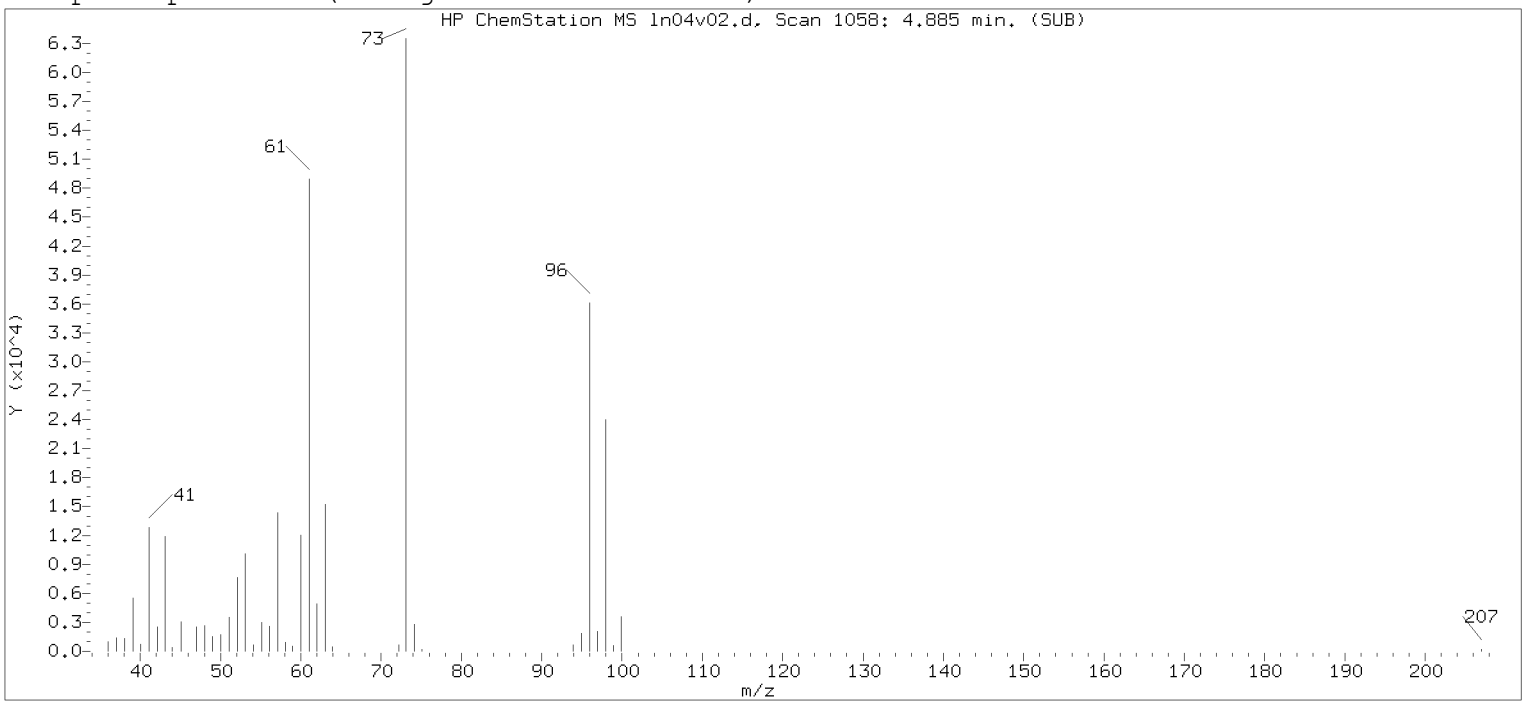
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1190
Retention Time (minutes): 5.310
Quant Ion : 57.00
Area (flag) : 185206M
On-Column Amount (ng) : 20.0675
Integration start scan : 1157 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

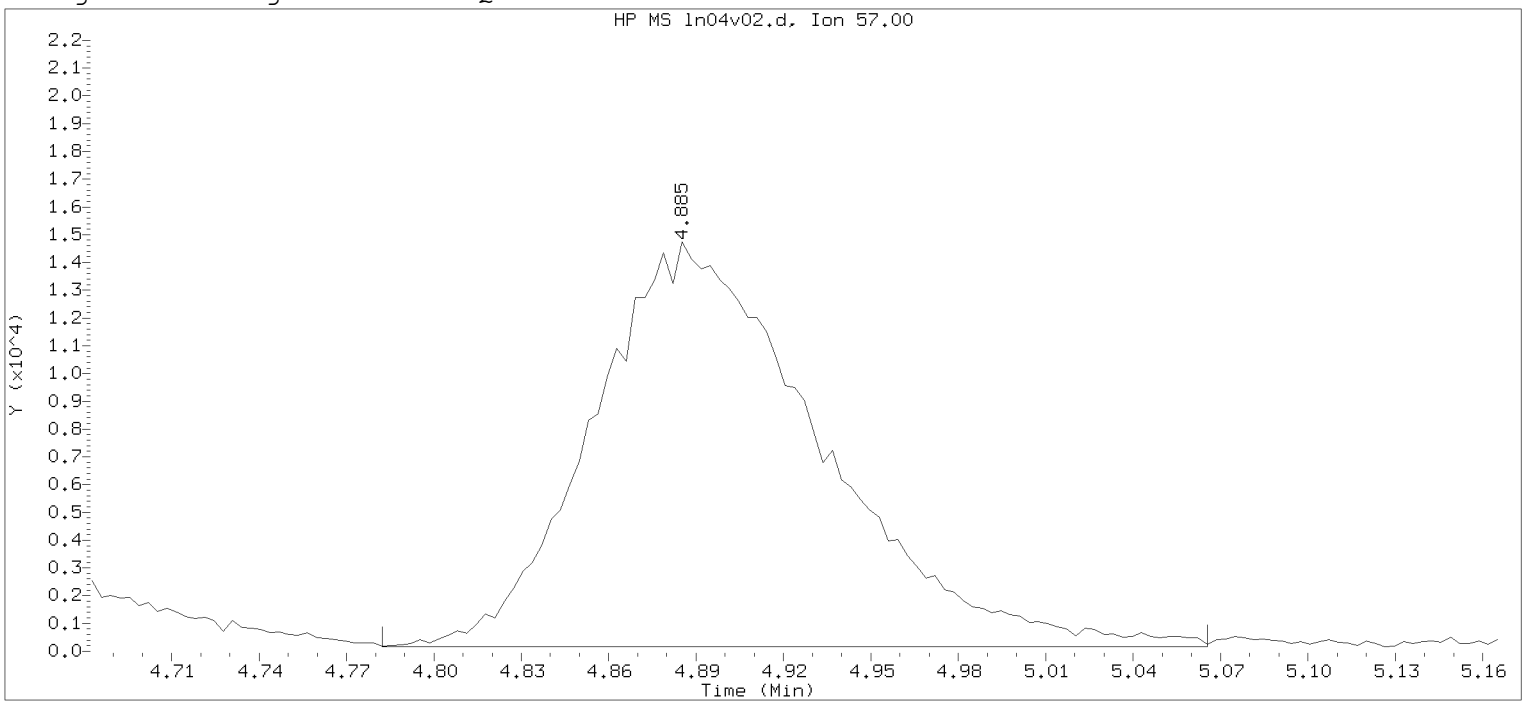
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

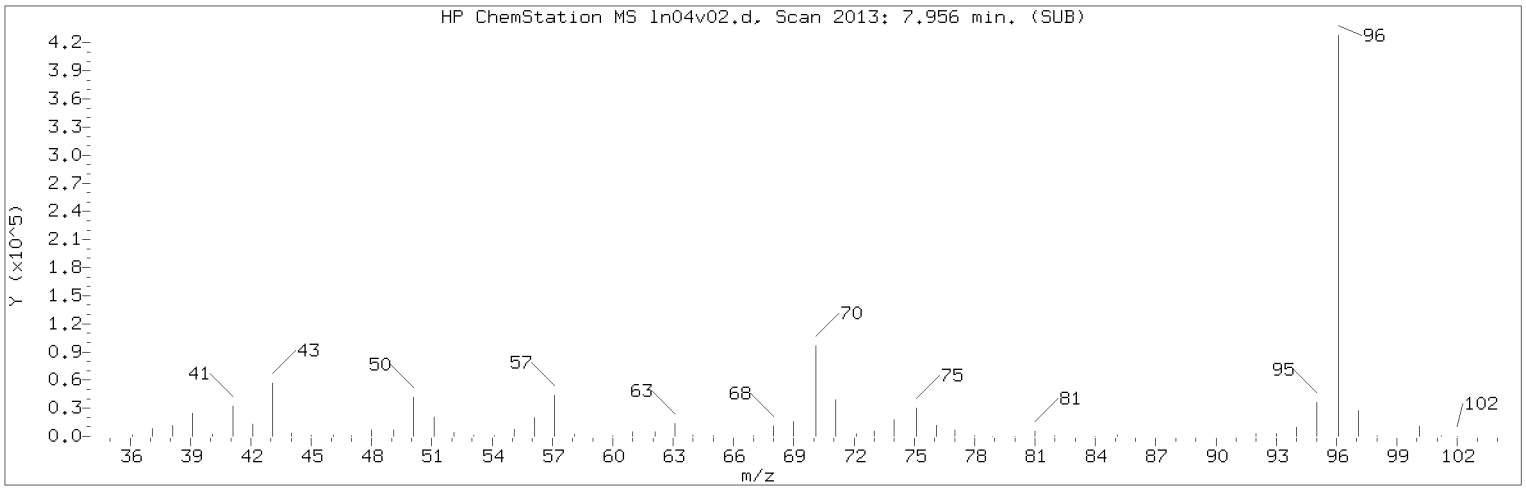
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

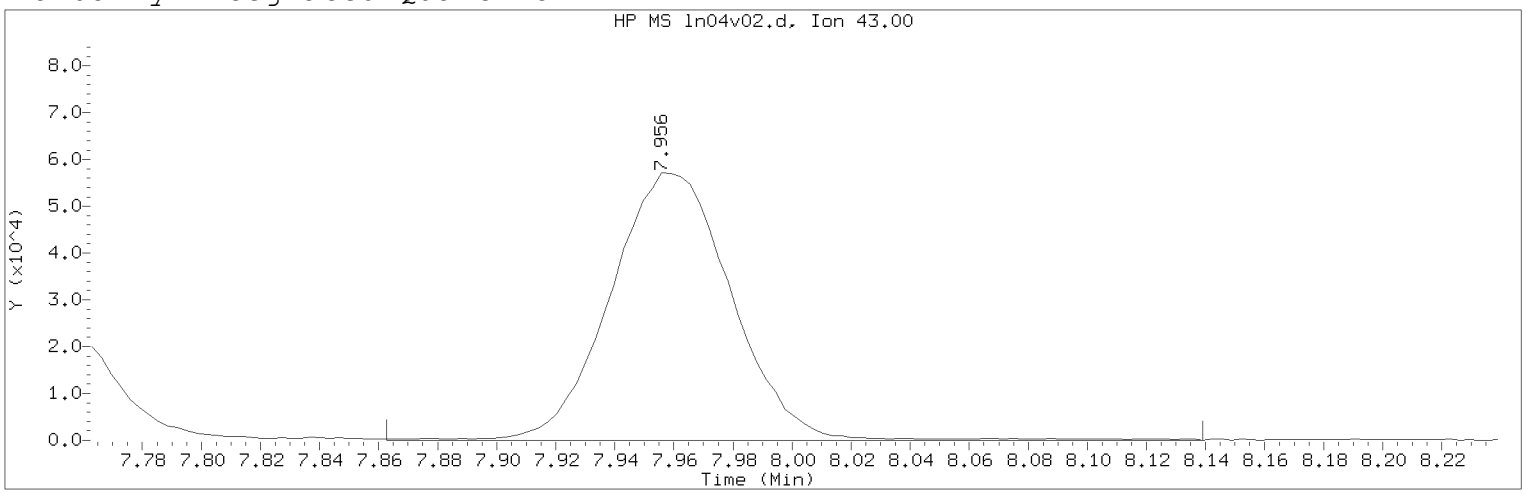
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1058
Retention Time (minutes): 4.885
Quant Ion : 57.00
Area : 79381
On-column Amount (ng) : 18.4374
Integration start scan : 1025 Integration stop scan: 1113
Y at integration start : 160 Y at integration end: 160

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

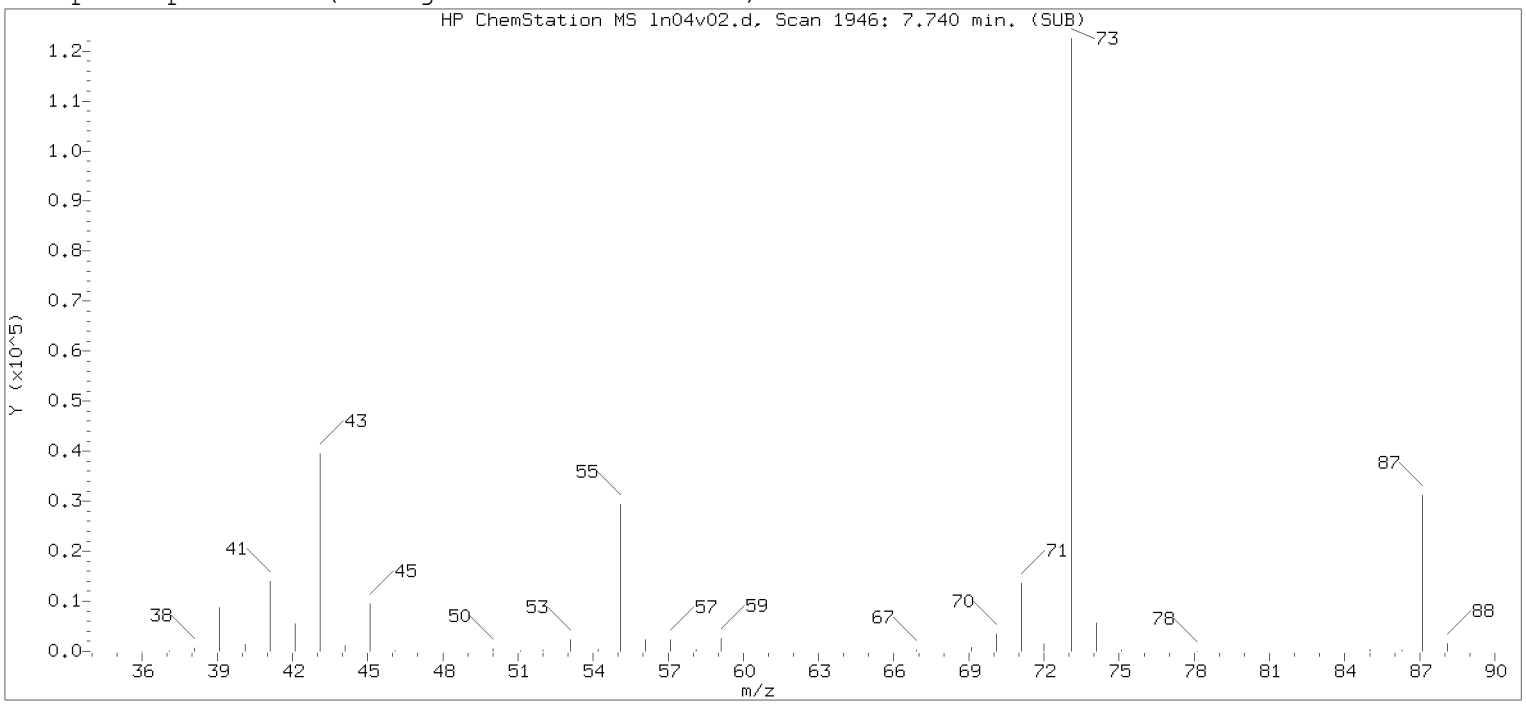
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2013
Retention Time (minutes): 7.956
Quant Ion : 43.00
Area (flag) : 163362M
On-Column Amount (ng) : 18.9476
Integration start scan : 1983 Integration stop scan: 2069
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

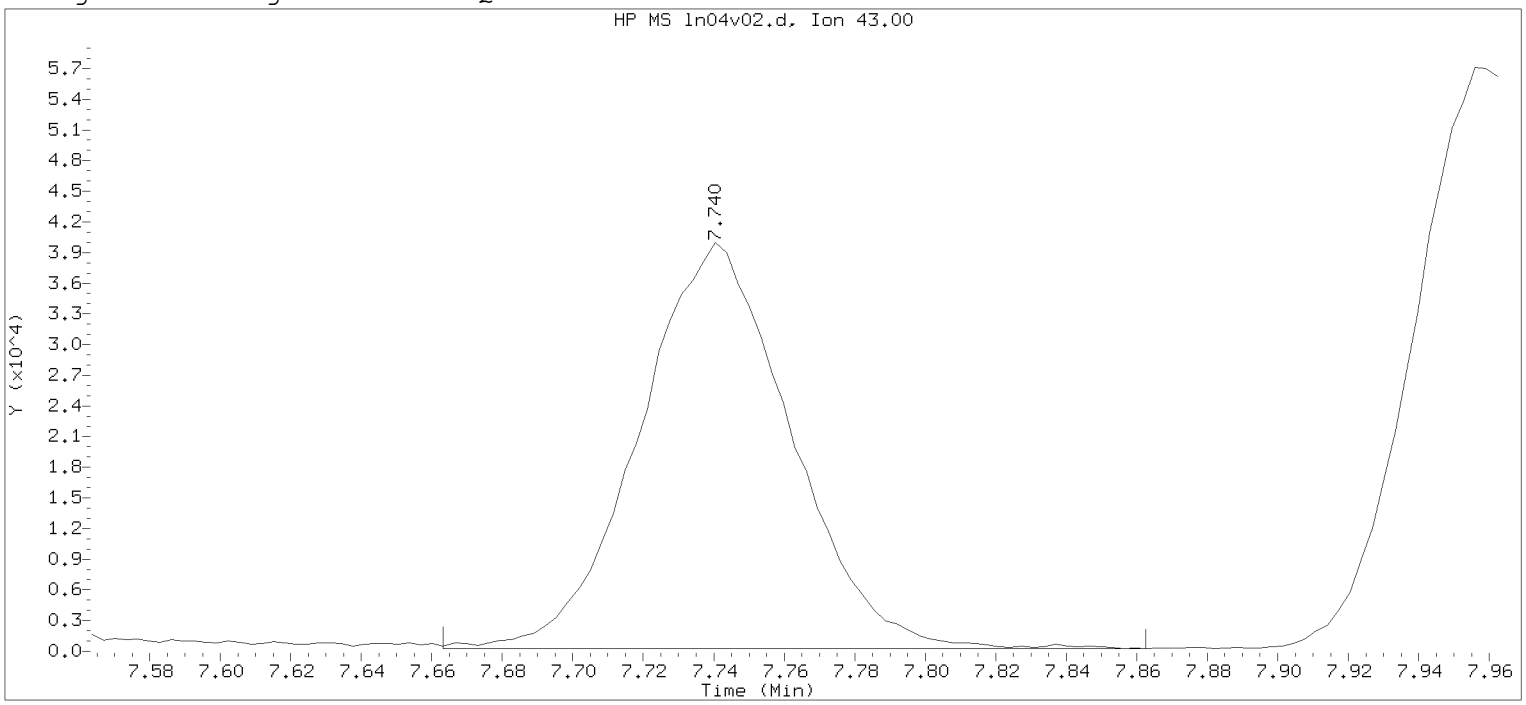
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

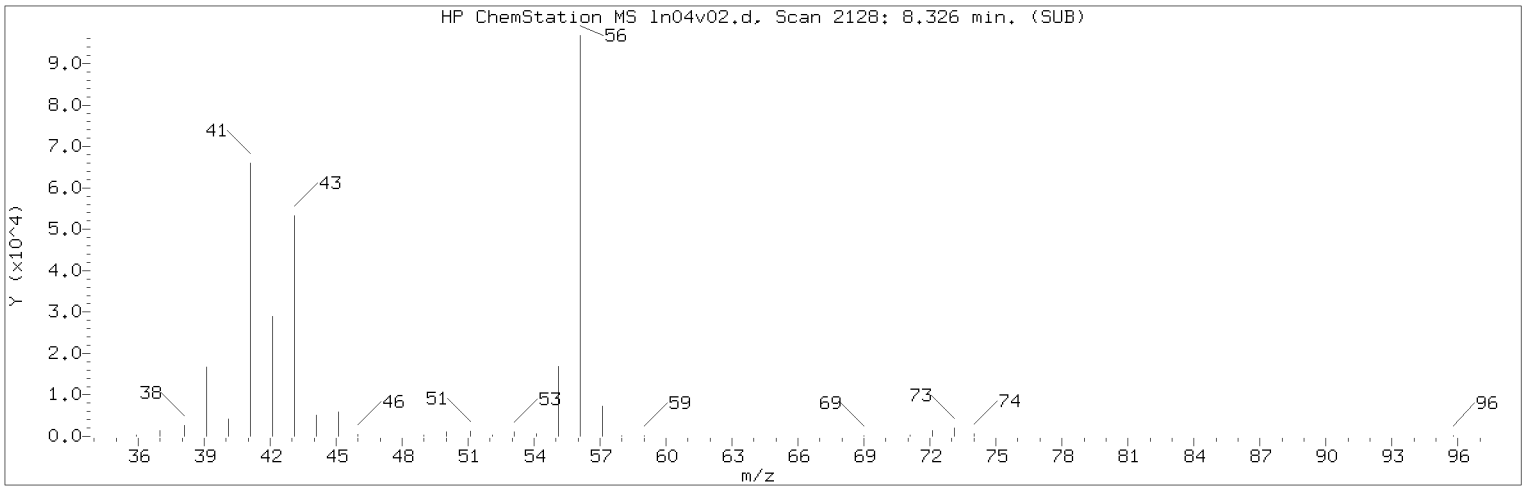
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

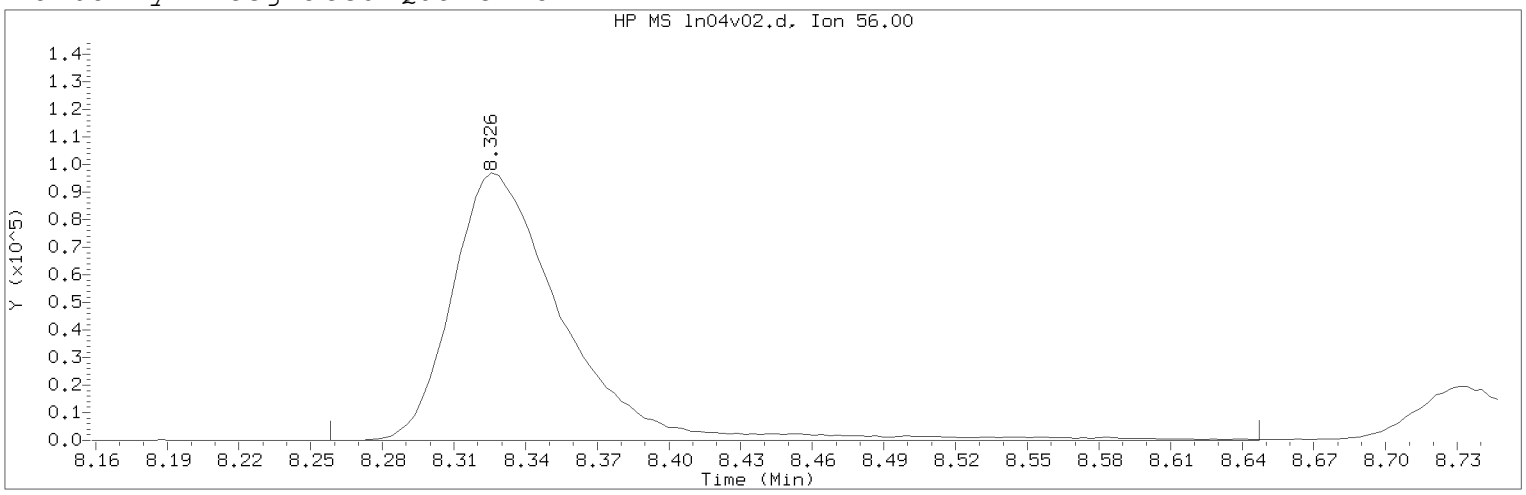
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.740
Quant Ion : 43.00
Area : 118529
On-column Amount (ng) : 18.5036
Integration start scan : 1921 Integration stop scan: 1983
Y at integration start : 255 Y at integration end: 255

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

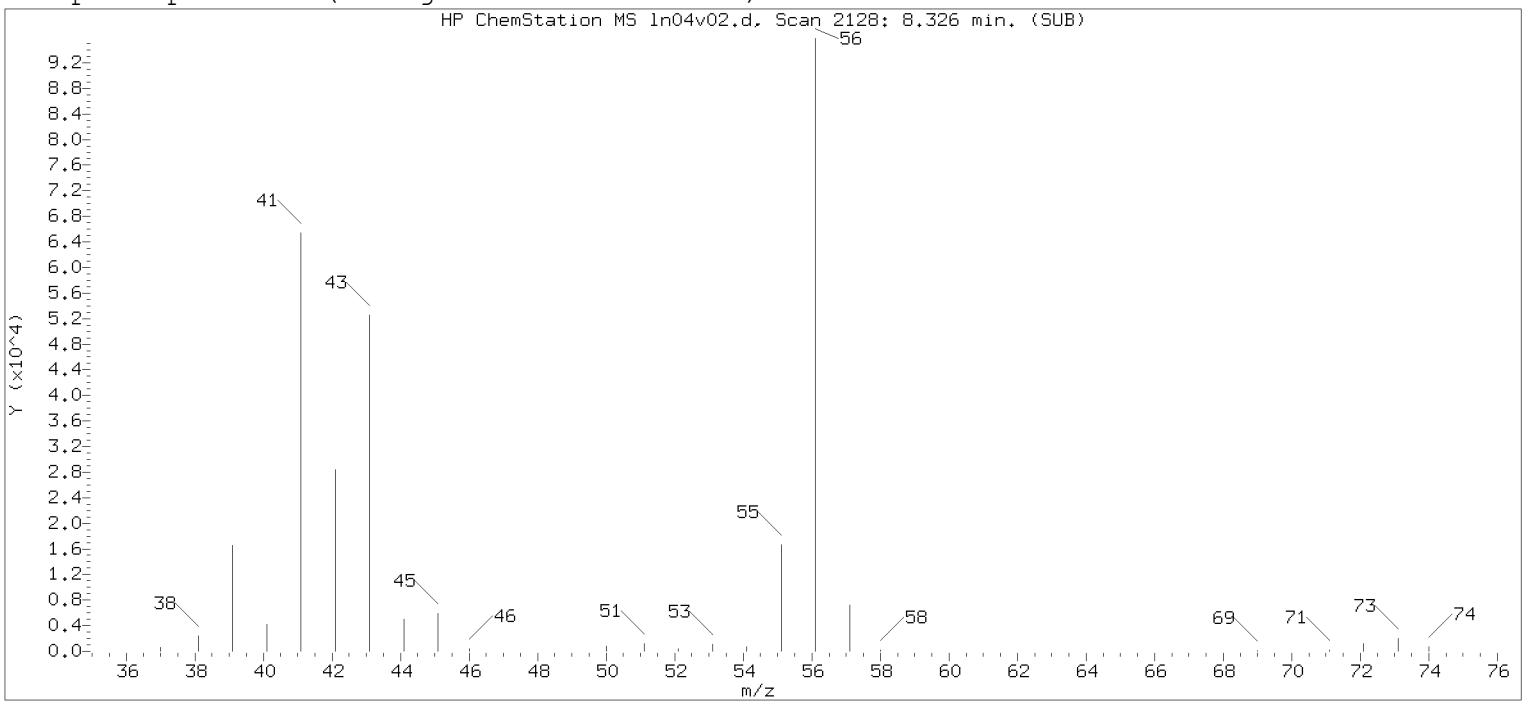
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area (flag) : 314470M
On-Column Amount (ng) : 911.9238
Integration start scan : 2106 Integration stop scan: 2227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

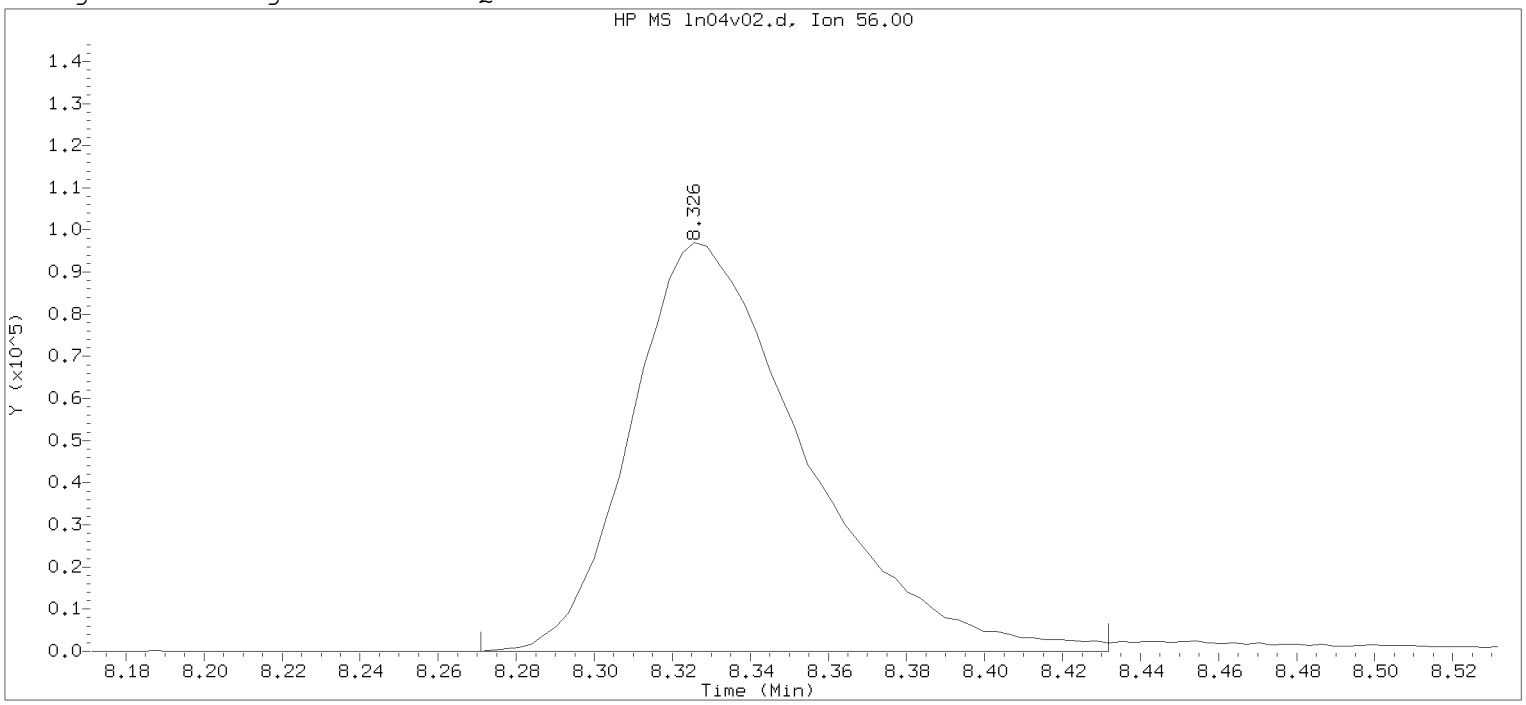
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

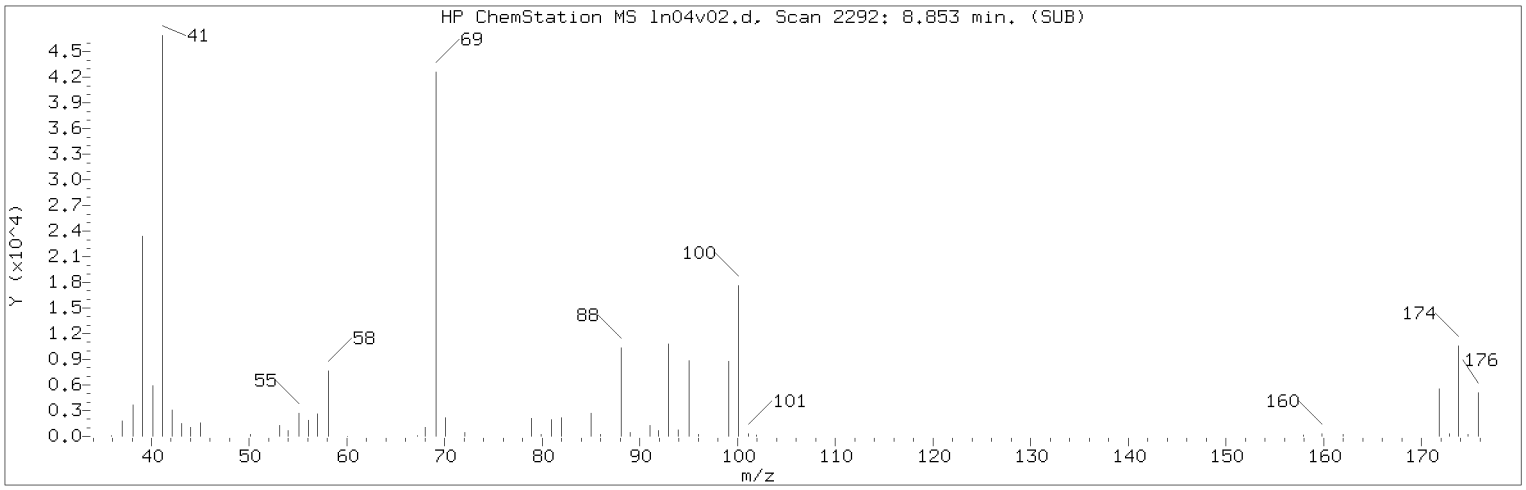
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

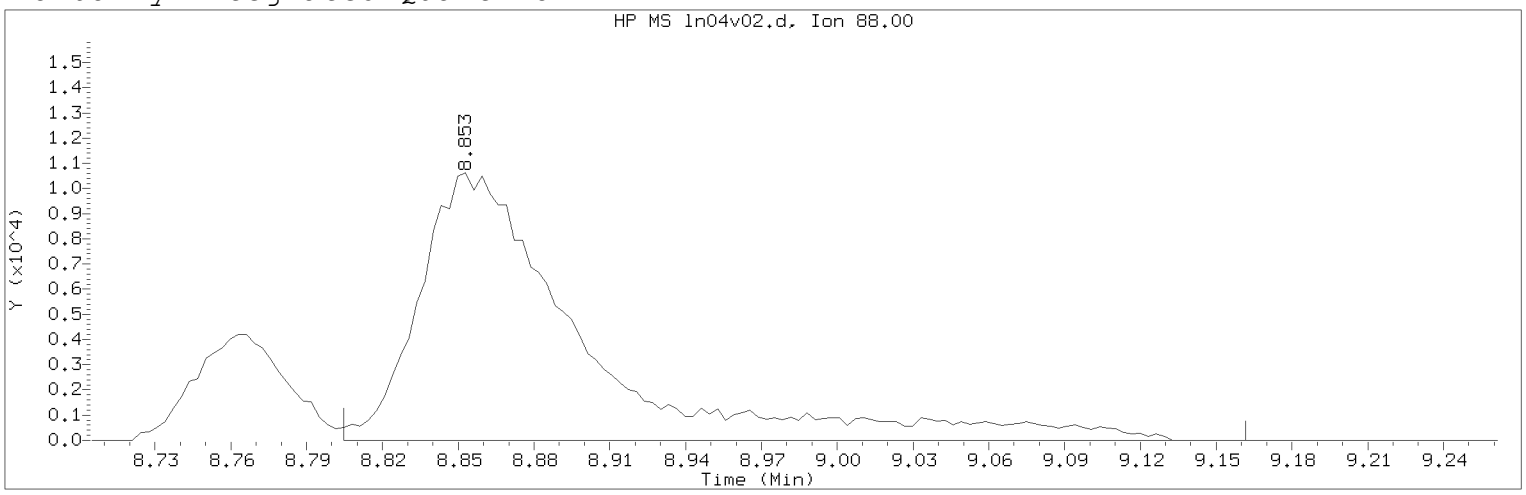
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area : 299611
On-column Amount (ng) : 906.8122
Integration start scan : 2110 Integration stop scan: 2160
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

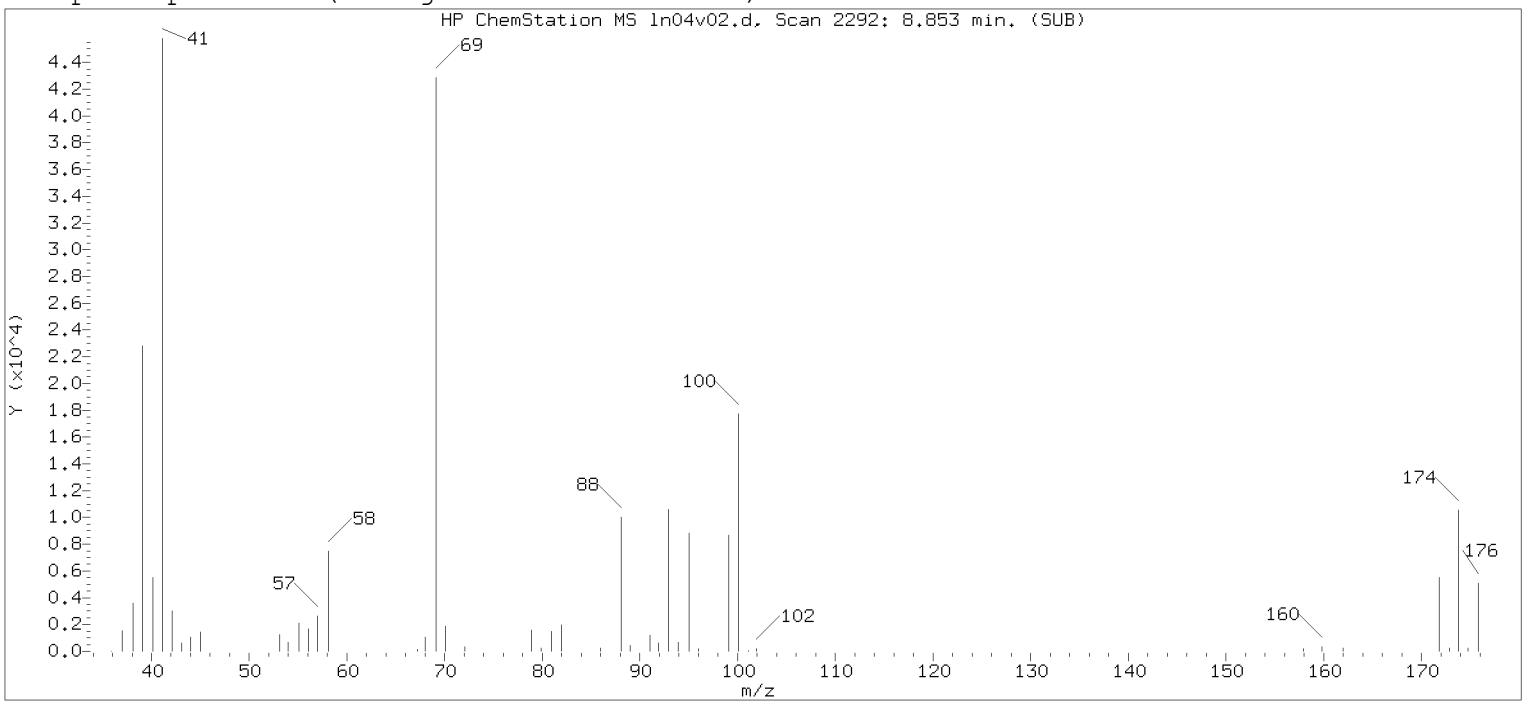
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area (flag) : 47747M
On-Column Amount (ng) : 503.7529
Integration start scan : 2276 Integration stop scan: 2387
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

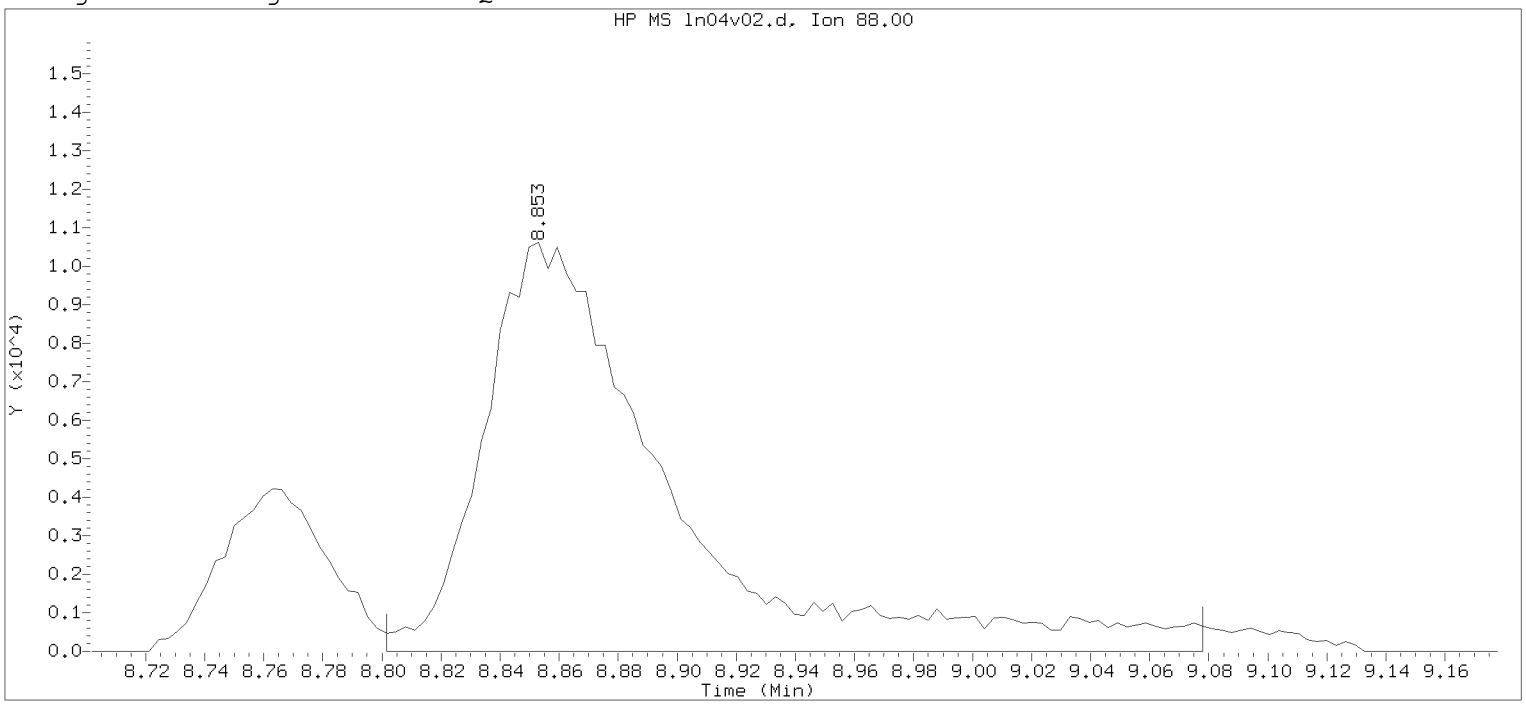
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

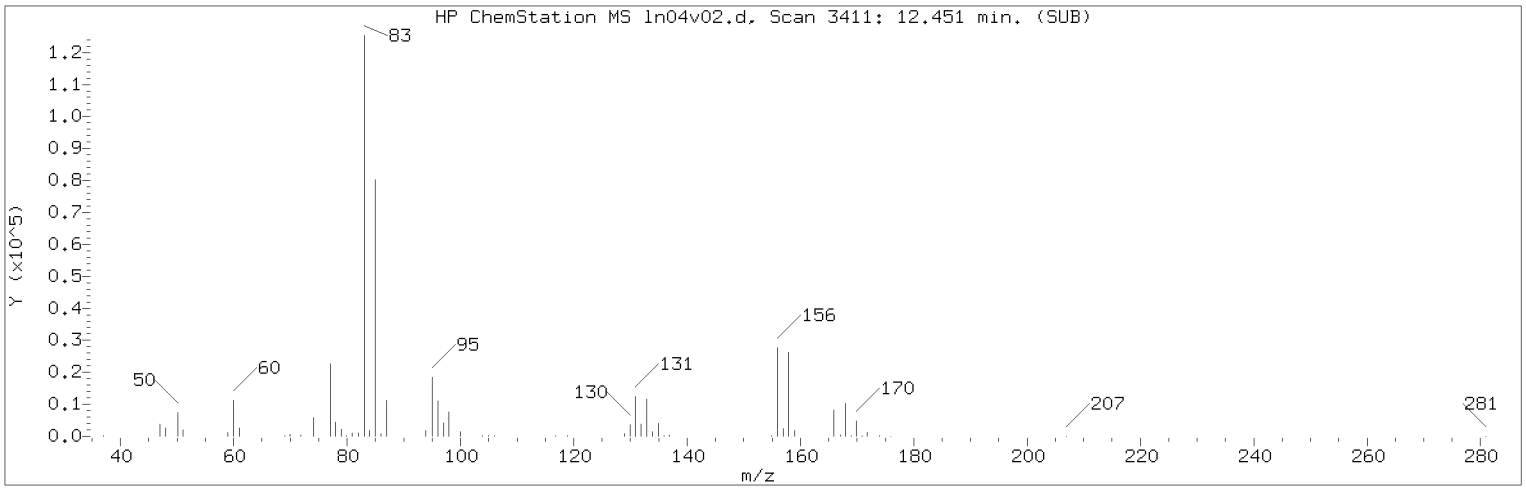
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

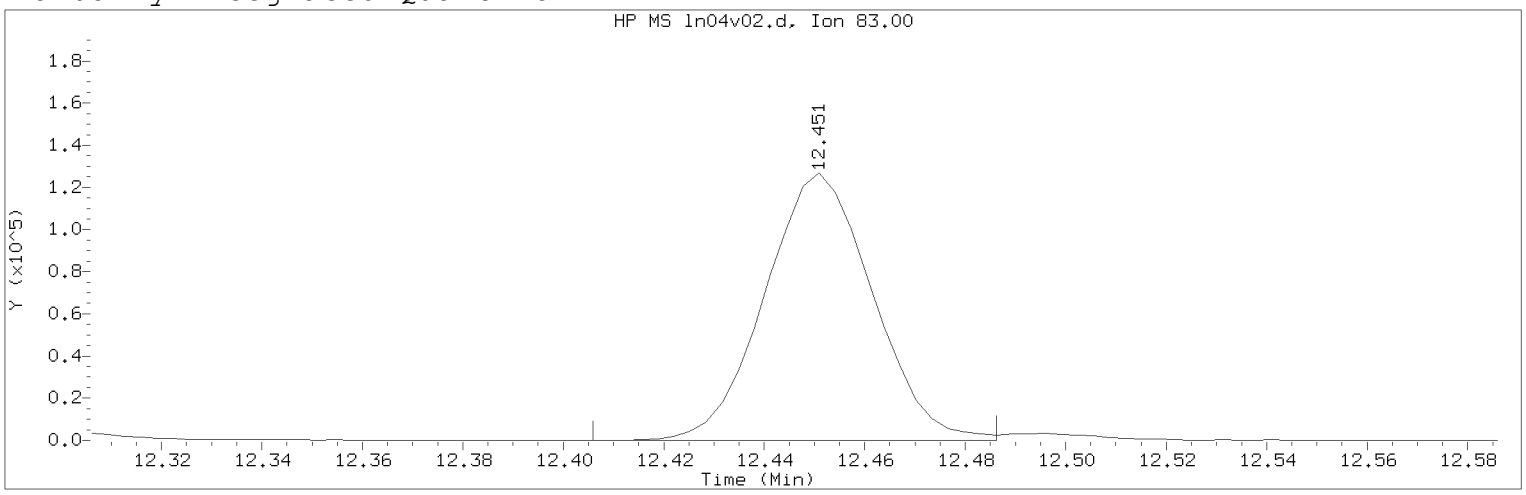
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area : 46453
On-column Amount (ng) : 511.5262
Integration start scan : 2275 Integration stop scan: 2361
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

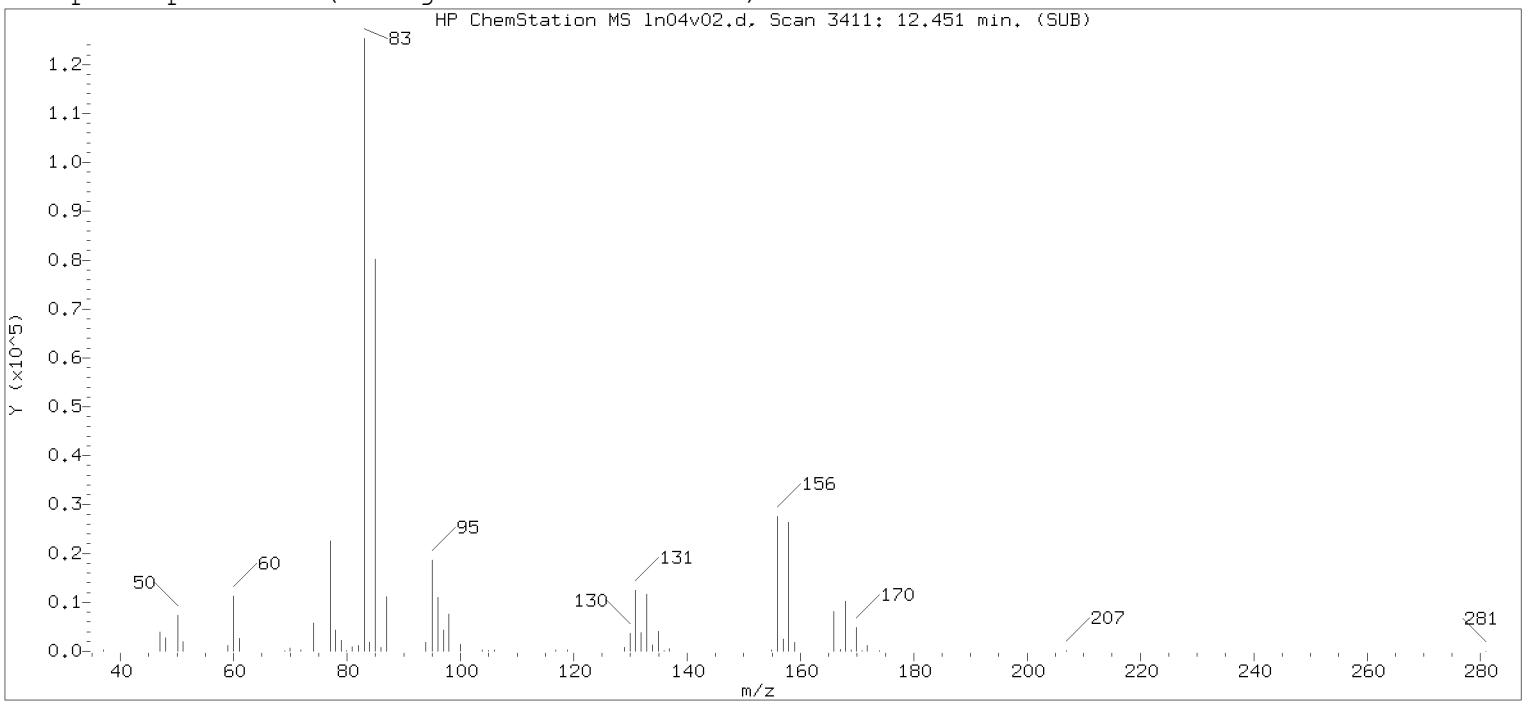
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 188446M
On-Column Amount (ng) : 19.5761
Integration start scan : 3396 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

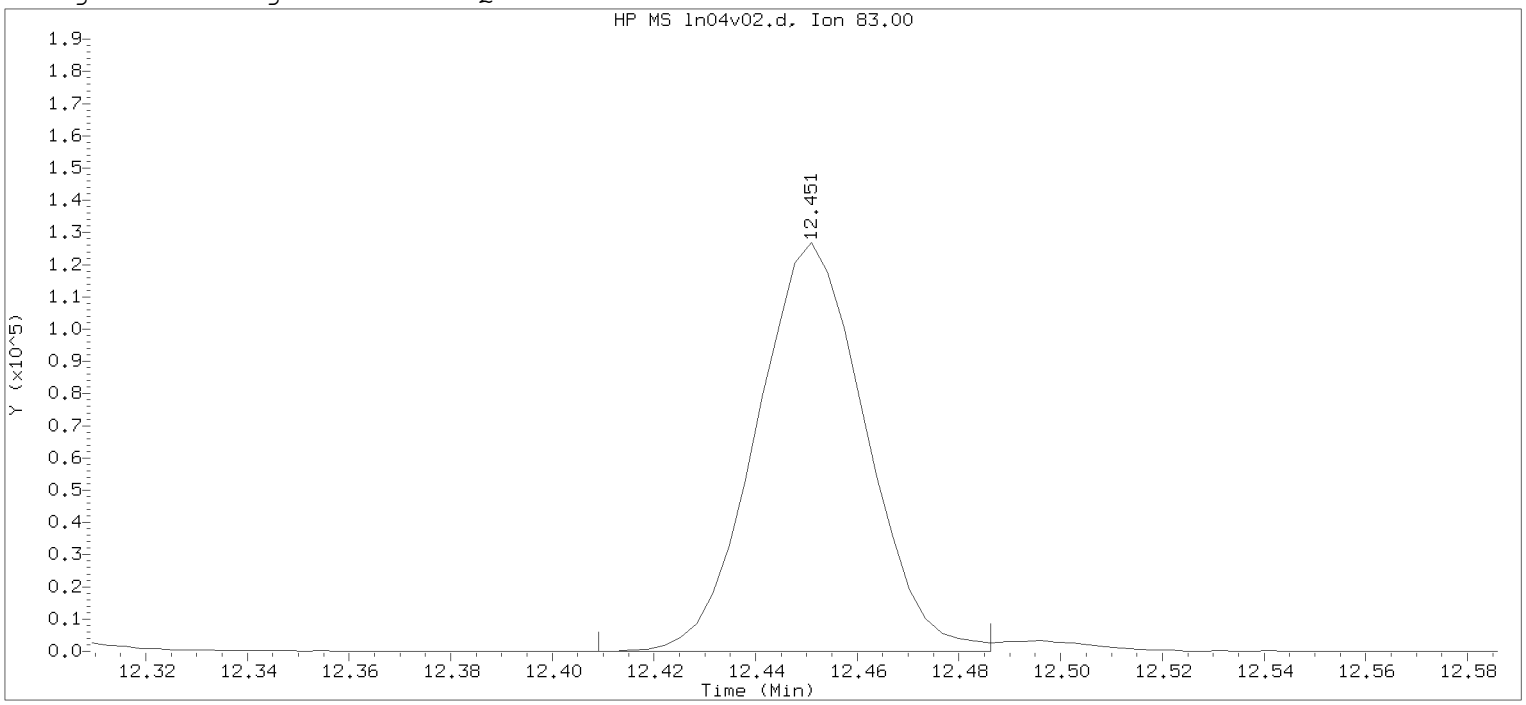
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

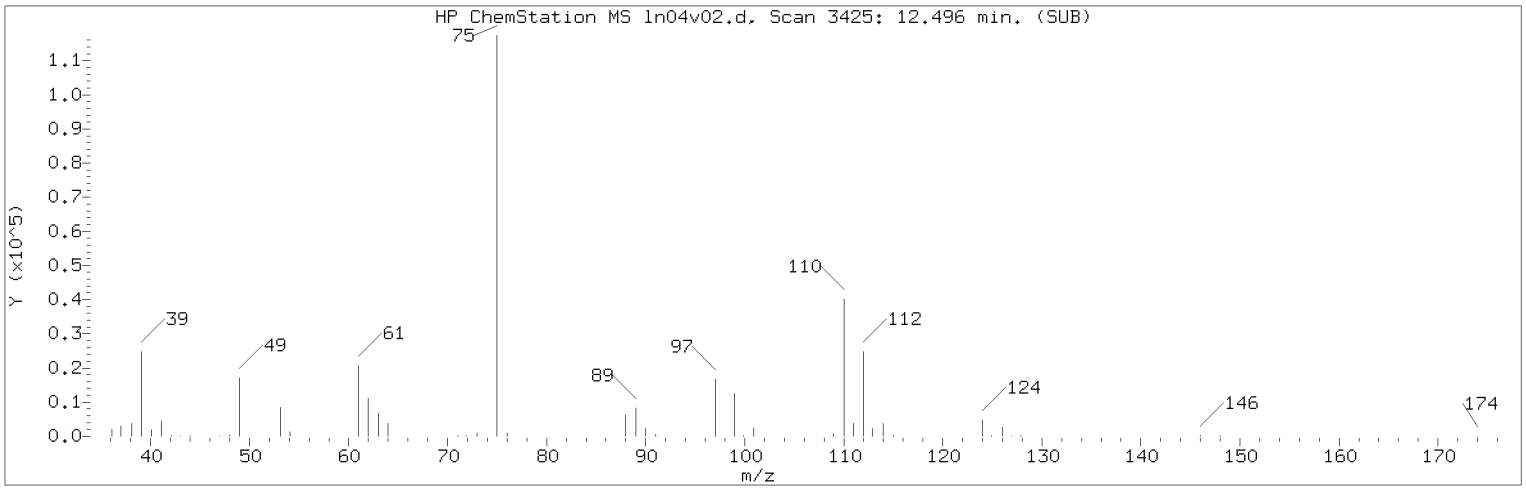
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

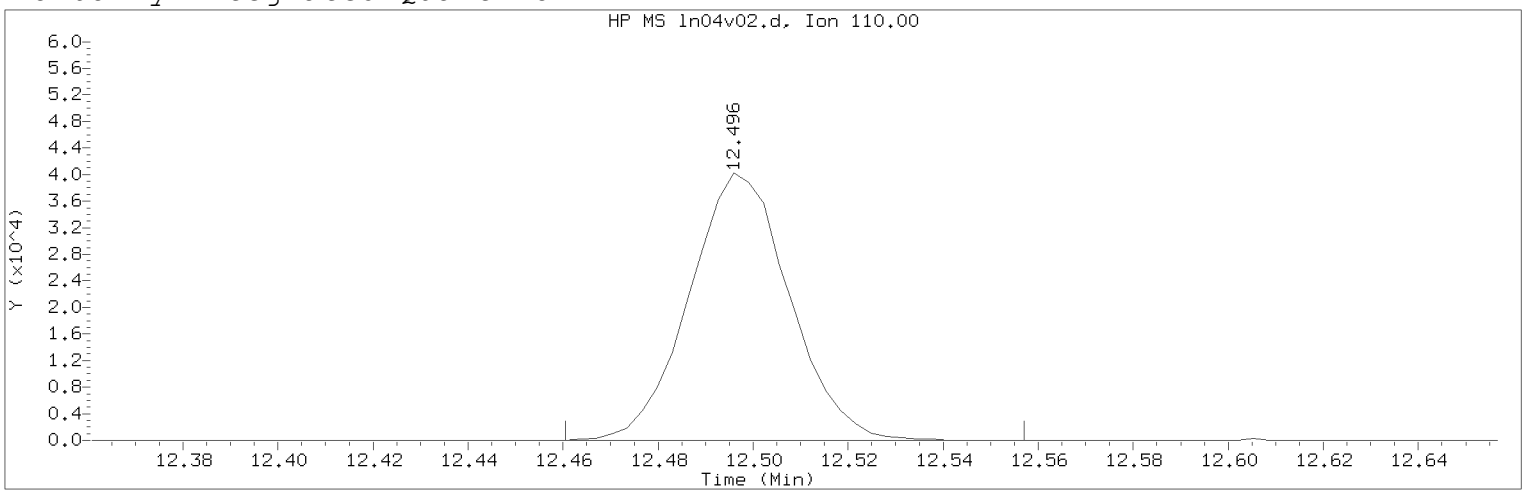
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 188196
On-column Amount (ng) : 19.2022
Integration start scan : 3397 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

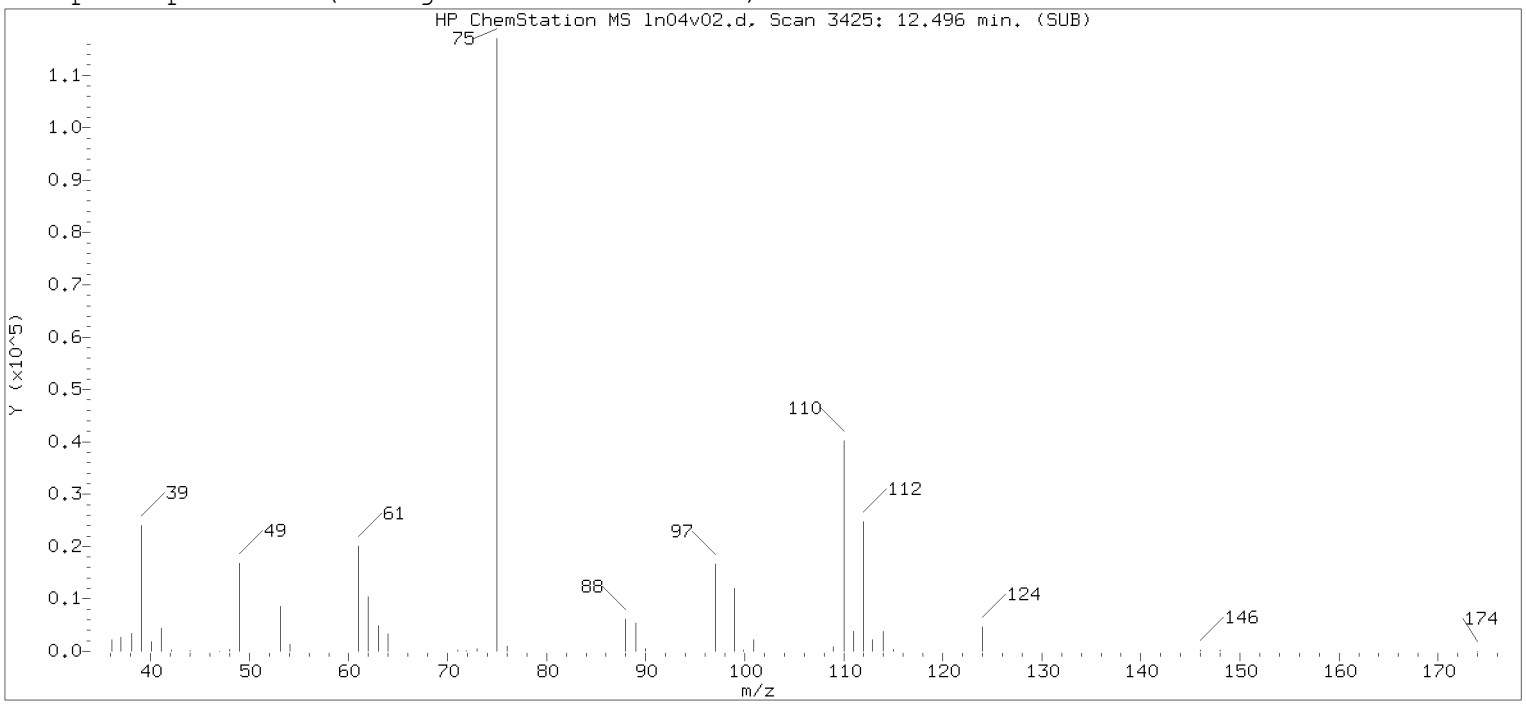
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 3425
Retention Time (minutes): 12.496
Quant Ion : 110.00
Area (flag) : 58902M
On-Column Amount (ng) : 19.9401
Integration start scan : 3413 Integration stop scan: 3443
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

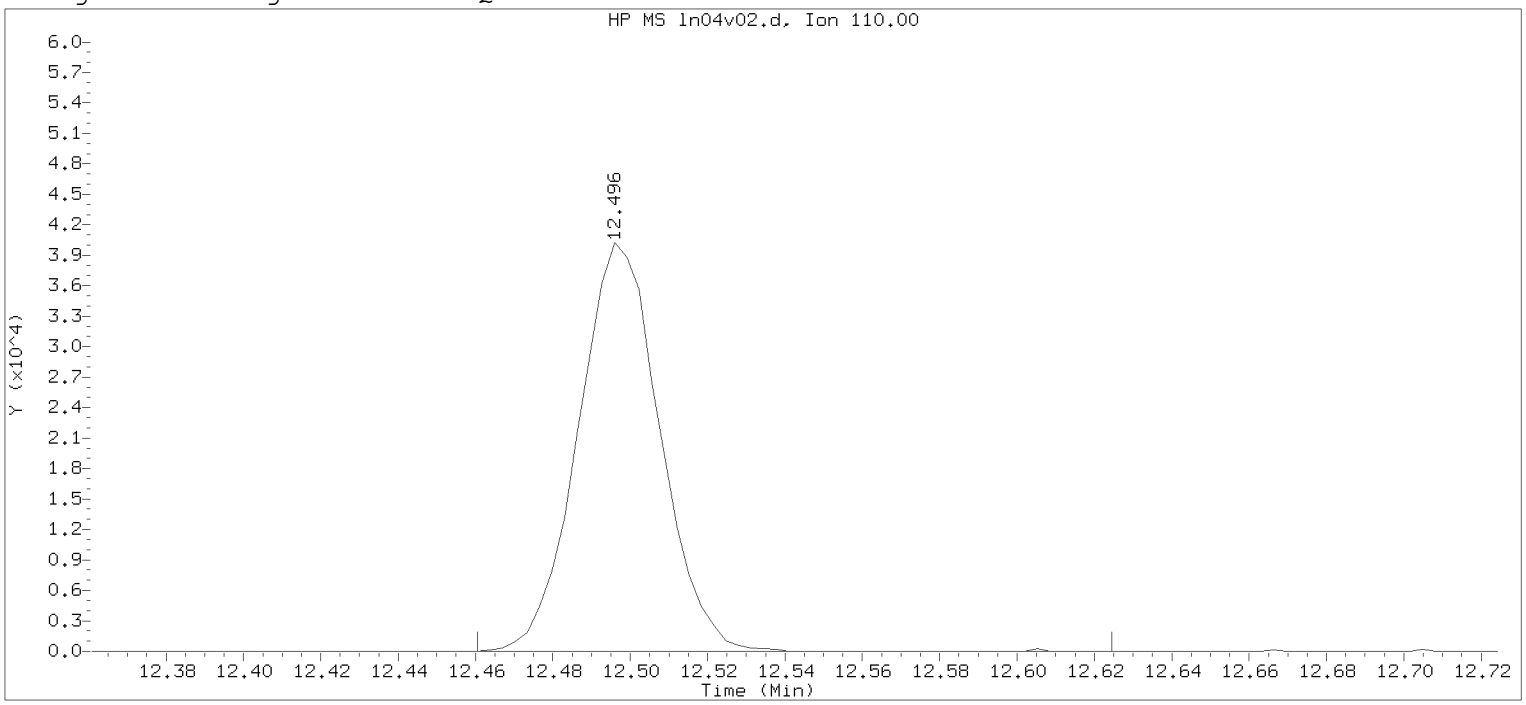
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

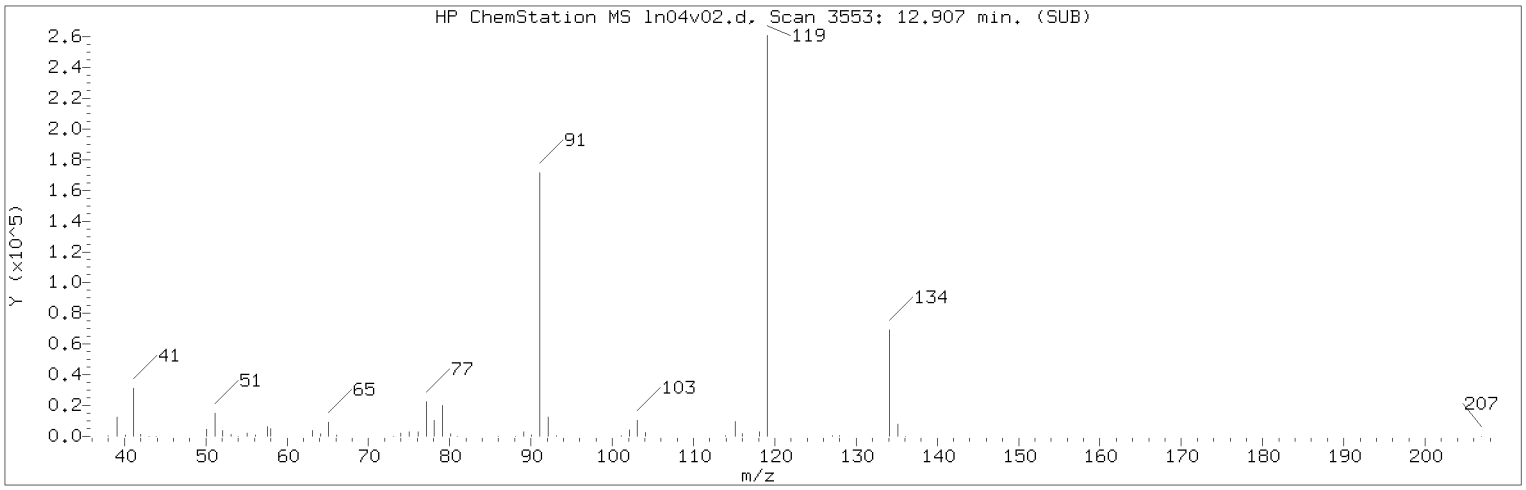
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

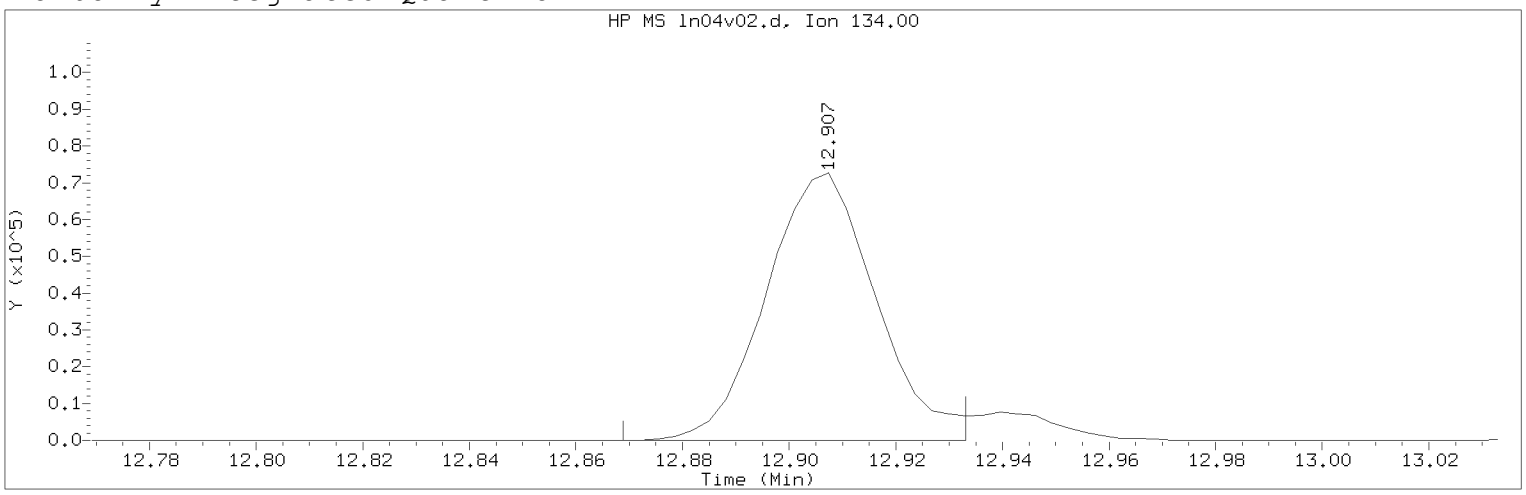
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 3425
Retention Time (minutes): 12.496
Quant Ion : 110.00
Area : 58948
On-column Amount (ng) : 19.9559
Integration start scan : 3413 Integration stop scan: 3464
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

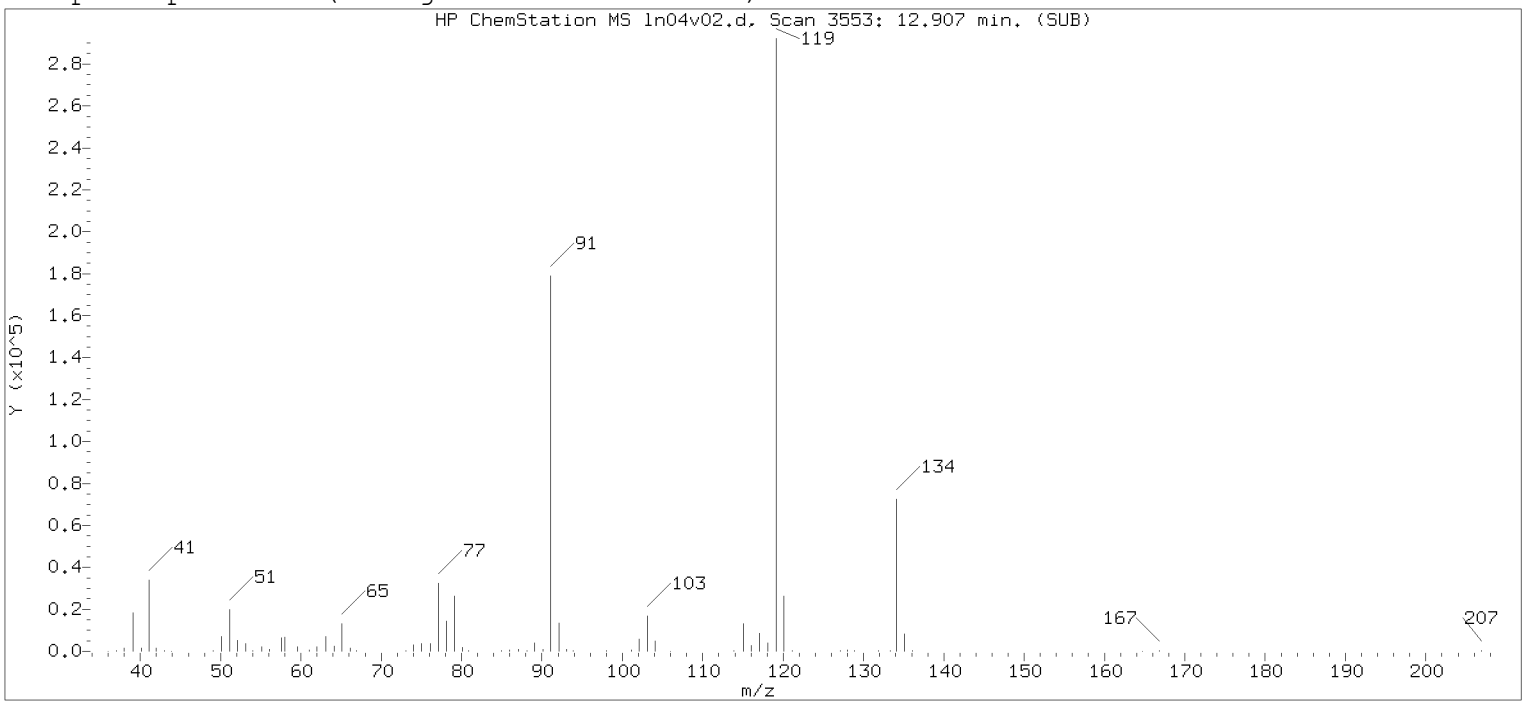
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area (flag) : 103762M
On-Column Amount (ng) : 20.6322
Integration start scan : 3540 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

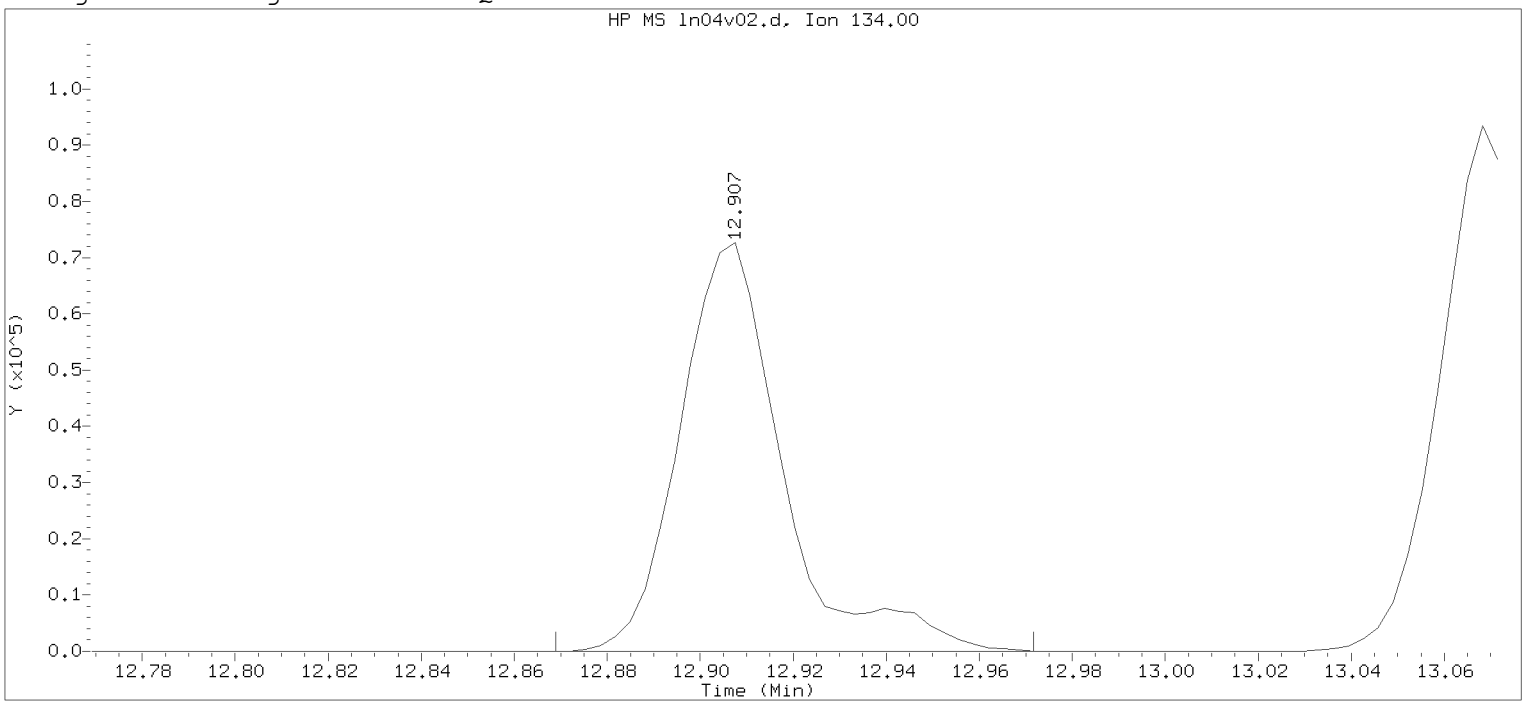
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area : 111654
On-column Amount (ng) : 22.2016
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Data File: /chem/HP09915.i/19nov20a.b/ln20t01.d

Date : 20-NOV-2019 08:00

Client ID: AUG02-19

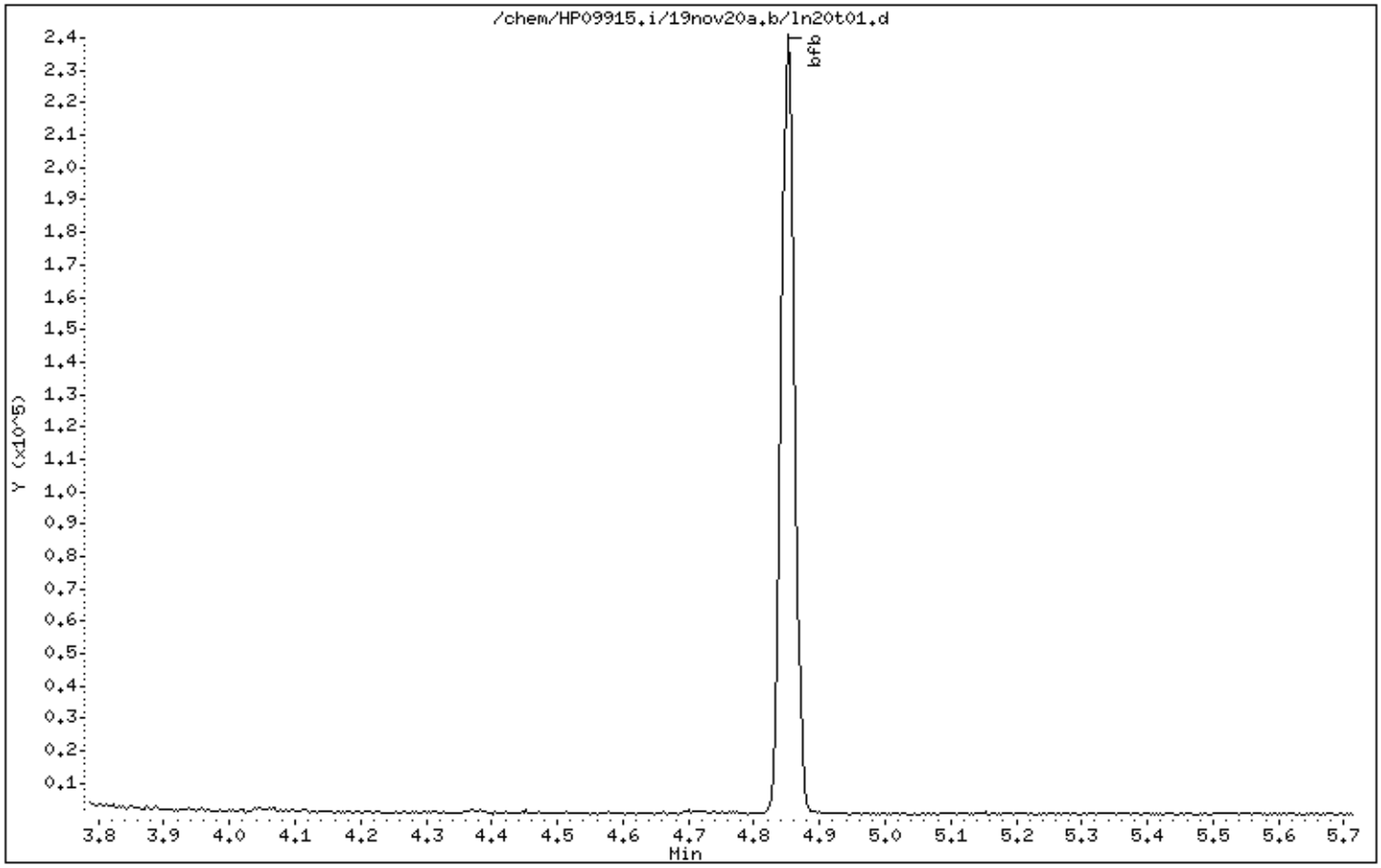
Instrument: HP09915.i

Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KKM02078

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem/HP09915.i/19nov20a.b/ln20t01.d

Date : 20-NOV-2019 08:00

Client ID: AUG02-19

Instrument: HP09915.i

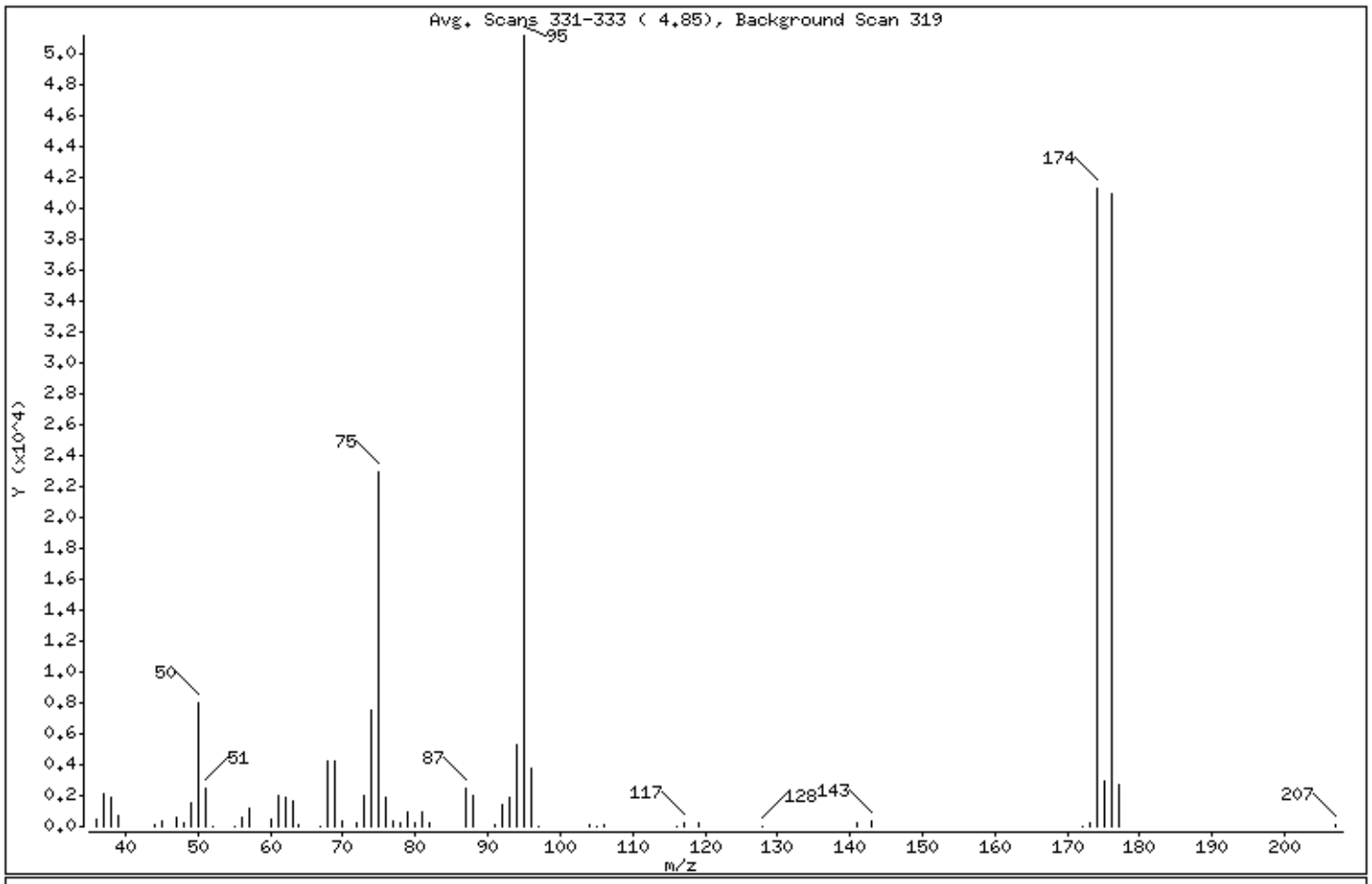
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KKM02078

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.52
75	30.00 - 60.00% of mass 95	44.88
96	5.00 - 9.00% of mass 95	7.35
173	Less than 2.00% of mass 174	0.43 (0.54)
174	50.00 - 100.00% of mass 95	80.67
175	5.00 - 9.00% of mass 174	5.73 (7.10)
176	95.00 - 101.00% of mass 174	79.93 (99.08)
177	5.00 - 9.00% of mass 176	5.28 (6.60)

Date : 20-NOV-2019 08:00

Client ID: AUG02-19 Instrument: HP09915.i

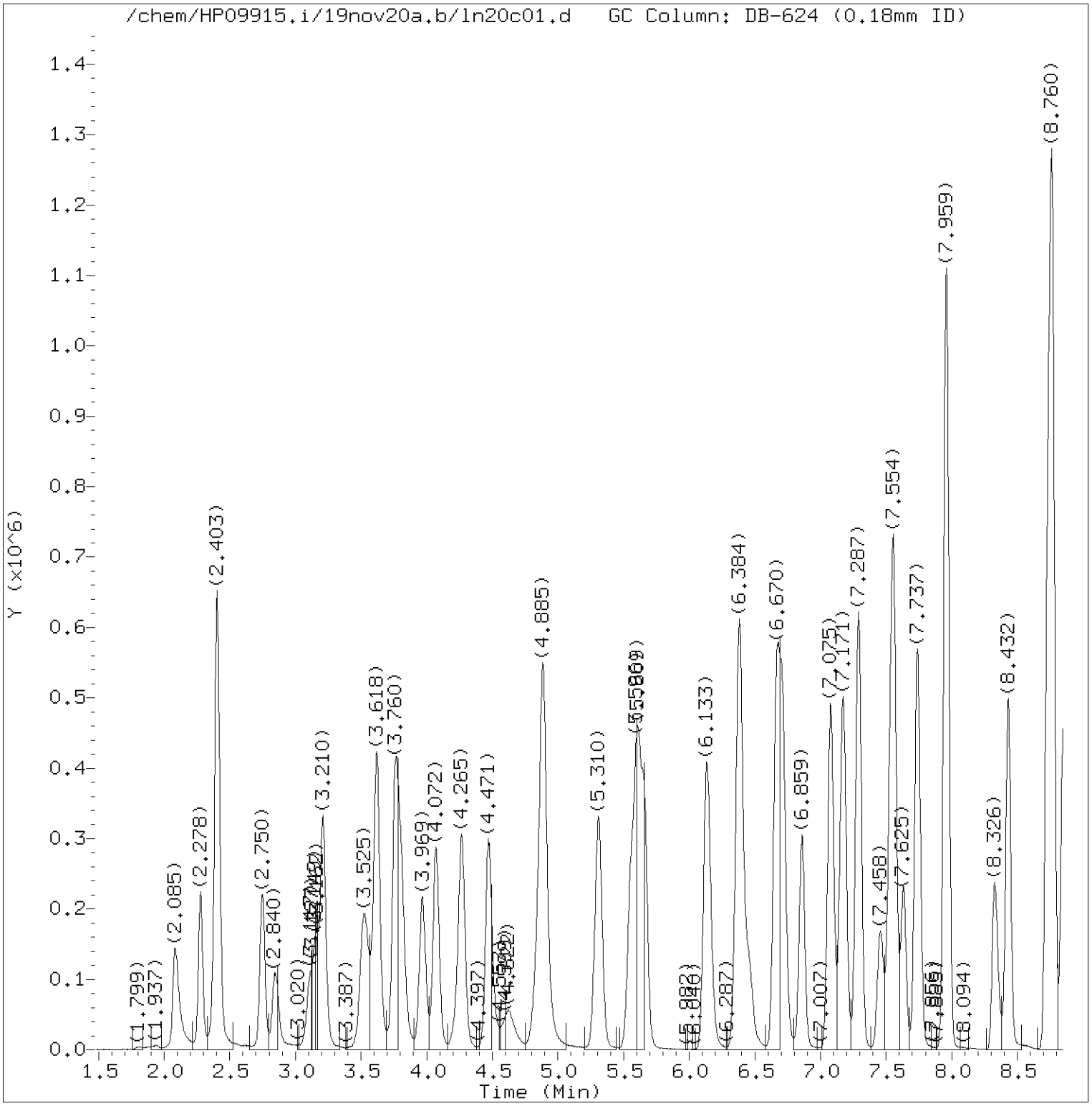
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KKM02078

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: ln20t01.d
Spectrum: Avg. Scans 331-333 (4.85), Background Scan 319
Location of Maximum: 95.00
Number of points: 60

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	451	61.00	2034	80.00	255	117.00	288
37.00	2069	62.00	1895	81.00	973	119.00	215
38.00	1837	63.00	1592	82.00	221	128.00	55
39.00	714	64.00	109	87.00	2453	141.00	259
44.00	148	67.00	54	88.00	2042	143.00	338
45.00	332	68.00	4194	91.00	65	172.00	57
47.00	626	69.00	4272	92.00	1374	173.00	222
48.00	227	70.00	356	93.00	1841	174.00	41256
49.00	1528	72.00	207	94.00	5326	175.00	2929
50.00	7940	73.00	1995	95.00	51144	176.00	40880
51.00	2515	74.00	7474	96.00	3757	177.00	2698
52.00	57	75.00	22952	97.00	57	207.00	105
55.00	55	76.00	1909	104.00	65		
56.00	578	77.00	397	105.00	57		
57.00	1121	78.00	194	106.00	138		
60.00	445	79.00	979	116.00	52		



Total Ion Chromatogram (TIC)

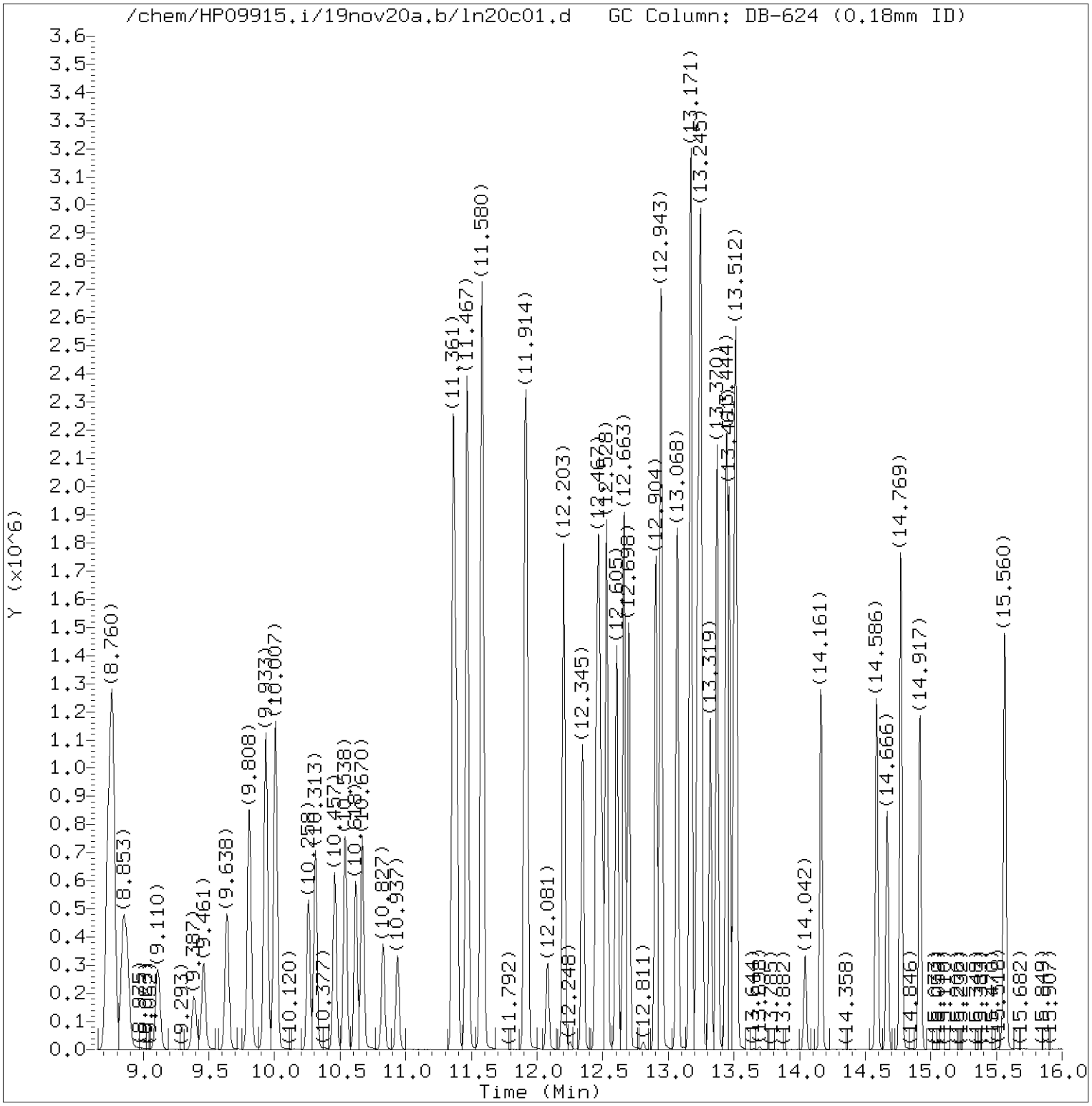
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:16 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:16 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:16 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.082	85	326259	52.519
4) Chloromethane	(2)	2.278	50	316444	52.853
6) Vinyl Chloride	(2)	2.400	62	310090	51.893
5) 1,3-Butadiene	(2)	2.403	39	342004	68.796
8) Bromomethane	(2)	2.750	94	225079	52.546
9) Chloroethane	(2)	2.847	64	171656	52.272
12) Trichlorofluoromethane	(2)	3.155	101	346477	53.857
11) n-Pentane	(2)	3.210	43	339598	44.668
15) Freon 123a	(2)	3.528	67	260250	50.289
16) Acrolein	(1)	3.622	56	696670	605.502
17) 1,1-Dichloroethene	(2)	3.760	96	190636	50.485
17) 1,1-Dichloroethene	(2)	3.760	63	91479	48.322
18) Acetone	(1)	3.802	58	59413	115.182
19) Freon 113	(2)	3.802	101	221782	51.479
22) Methyl Iodide	(2)	3.966	142	389119	49.728
21) 2-Propanol	(1)	3.991	45	92104	248.381
23) Carbon Disulfide	(2)	4.072	76	709012	49.825
27) Methyl Acetate	(2)	4.242	43	218317	44.889
25) Allyl Chloride	(2)	4.271	41	306394	45.231
28) Methylene Chloride	(2)	4.471	84	229802	51.131
29)*t-Butyl alcohol-d10	(1)	4.493	65	153357	250.000
30) t-Butyl alcohol	(1)	4.628	59	163799	253.697
31) Acrylonitrile	(2)	4.827	53	127627	48.776
32) trans-1,2-Dichloroethene	(2)	4.885	96	222145	50.853
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	671832	46.854
34) n-Hexane	(2)	5.306	57	339215	49.911
36) 1,1-Dichloroethane	(2)	5.551	63	374755	49.177
38) di-Isopropyl ether	(2)	5.609	45	708930	48.235
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	338915	49.570
40) Ethyl t-butyl ether	(2)	6.136	59	675454	47.356
43) 1,2-Dichloroethene (Total)	(2)		96	470427	101.490
44) 2-Butanone	(2)	6.364	43	304853	90.762
42) cis-1,2-Dichloroethene	(2)	6.380	96	248282	50.637
45) 2,2-Dichloropropane	(2)	6.393	77	287579	48.545
47) Propionitrile	(1)	6.458	54	245407	305.053
48) Methacrylonitrile	(2)	6.663	67	351520	124.540
49) Bromochloromethane	(2)	6.712	128	133209	51.236
50) Tetrahydrofuran	(1)	6.724	71	89717	123.464

* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:16 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	6.859	83	370227	50.795
52)$Dibromofluoromethane	(2)	7.075	113	209125	48.018
52)$Dibromofluoromethane	(2)	7.075	111	213900	48.170
53) 1,1,1-Trichloroethane	(2)	7.085	97	310121	49.852
54) Cyclohexane	(2)	7.171	56	418800	50.344
54) Cyclohexane	(2)	7.171	84	367688	50.883
54) Cyclohexane	(2)	7.175	69	129970	50.512
56) Carbon Tetrachloride	(2)	7.284	117	261805	49.621
55) 1,1-Dichloropropene	(2)	7.290	75	300302	49.840
58) Isobutyl Alcohol	(1)	7.458	41	149273	687.028
57)$1,2-Dichloroethane-d4	(2)	7.528	102	54261	48.886
57)$1,2-Dichloroethane-d4	(2)	7.528	65	244295	49.389
57)$1,2-Dichloroethane-d4	(2)	7.528	104	34257	48.320
60) Benzene	(2)	7.557	78	934647	51.582
61) 1,2-Dichloroethane	(2)	7.631	62	283247	48.601
61) 1,2-Dichloroethane	(2)	7.634	98	29562	51.256
65) t-Amyl methyl ether	(2)	7.737	73	690174	48.208
66)*Fluorobenzene	(2)	7.959	96	890803	50.000
67) n-Heptane	(2)	7.959	43	311764	49.104
69) n-Butanol	(1)	8.326	56	252927	1352.512
71) Trichloroethene	(2)	8.432	95	238980	52.381
72) Methylcyclohexane	(2)	8.728	83	418062	49.392
72) Methylcyclohexane	(2)	8.731	98	188938	49.330
73) 1,2-Dichloropropane	(2)	8.769	63	230555	50.109
76) Methyl Methacrylate	(2)	8.843	69	224994M	50.569
75) 1,4-Dioxane	(1)	8.872	88	43859	853.290
74) Dibromomethane	(2)	8.879	93	153782	51.657
78) Bromodichloromethane	(2)	9.107	83	268825	50.322
79) 2-Nitropropane	(2)	9.383	41	146917	90.798
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	171958	87.020
81) cis-1,3-Dichloropropene	(2)	9.638	75	353528	49.827
82) 4-Methyl-2-pentanone	(2)	9.808	43	667553	94.158
83)$Toluene-d8	(3)	9.933	98	930752	49.047
83)$Toluene-d8	(3)	9.933	100	598016	48.648
88) Toluene	(3)	10.007	92	602456	50.638
90) 1,3-Dichloropropene (total)	(3)		100	675260	97.466
89) trans-1,3-Dichloropropene	(3)	10.258	75	321732	47.639
91) Ethyl Methacrylate	(3)	10.313	69	408379	49.756

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:16 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) 1,1,2-Trichloroethane	(3)	10.457	97	229790	50.944
93) Tetrachloroethene	(3)	10.541	166	252685	50.149
94) 1,3-Dichloropropane	(3)	10.618	76	382898	49.718
96) 2-Hexanone	(3)	10.670	43	493410	90.061
97) Dibromochloromethane	(3)	10.827	129	215215	46.578
99) 1,2-Dibromoethane	(3)	10.937	107	249836	51.007
100)*Chlorobenzene-d5	(3)	11.361	117	725253	50.000
101) 1-Chlorohexane	(3)	11.364	91	310183	48.532
102) Chlorobenzene	(3)	11.387	112	674501	50.135
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	218017	49.183
104) Ethylbenzene	(3)	11.467	91	1165468	51.253
106) m+p-Xylene	(3)	11.580	106	917792	102.598
108) Xylene (Total)	(3)		106	1367612	153.505
107) o-Xylene	(3)	11.908	106	449820	50.908
109) Styrene	(3)	11.924	104	760046	52.053
110) Bromoform	(3)	12.081	173	138157	40.015
111) Isopropylbenzene	(3)	12.203	105	1144466	51.641
114)$4-Bromofluorobenzene	(3)	12.348	95	359000	49.960
114)$4-Bromofluorobenzene	(3)	12.348	174	297621	49.960
116) 1,1,2,2-Tetrachloroethane	(4)	12.448	83	364836	49.330
115) Bromobenzene	(4)	12.464	156	293923	49.950
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	166445	72.961
117) 1,2,3-Trichloropropane	(4)	12.496	110	110400	48.645
119) n-Propylbenzene	(4)	12.528	91	1338544	52.066
120) 2-Chlorotoluene	(4)	12.608	126	272469	49.889
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	977290	52.309
121) 4-Chlorotoluene	(4)	12.698	126	283874	49.935
124) tert-Butylbenzene	(4)	12.904	134	195300M	50.545
125) Pentachloroethane	(4)	12.936	167	166872	50.156
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	1031308	52.375
127) sec-Butylbenzene	(4)	13.068	105	1179214	51.145
129) 1,3-Dichlorobenzene	(4)	13.168	146	545887	50.484
130) p-Isopropyltoluene	(4)	13.171	119	1013128	50.792
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	391522	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	557732	49.755
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	1061978	50.914
135) Benzyl Chloride	(4)	13.319	91	765038	48.444
136) 1,3-Diethylbenzene	(4)	13.370	119	643709	49.588

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

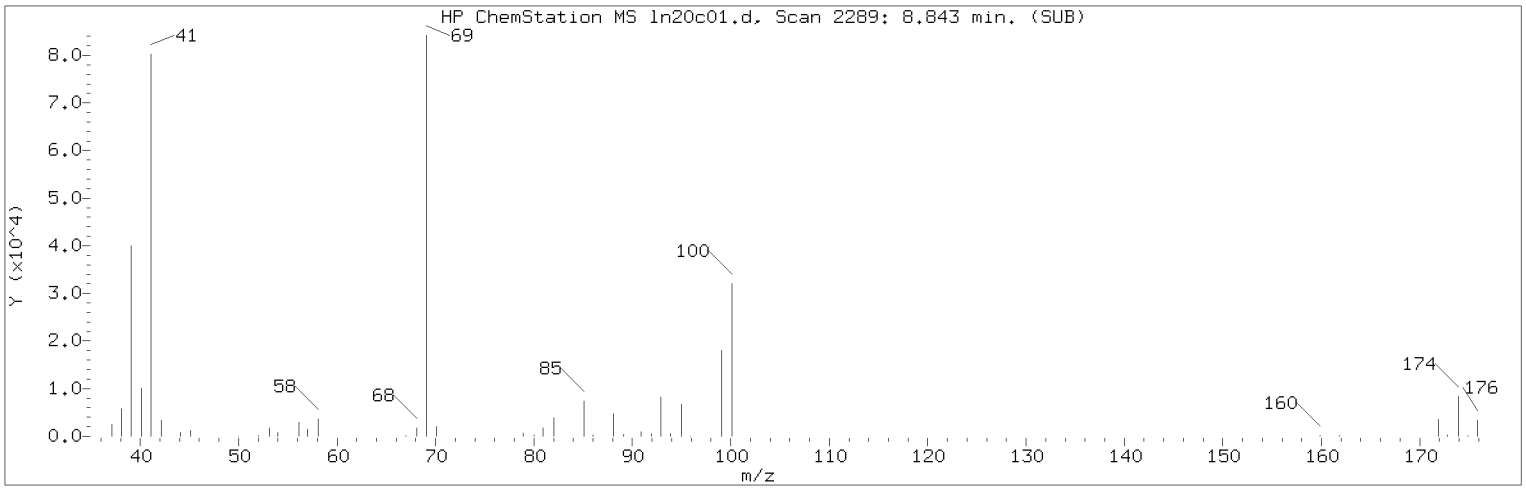
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:16 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

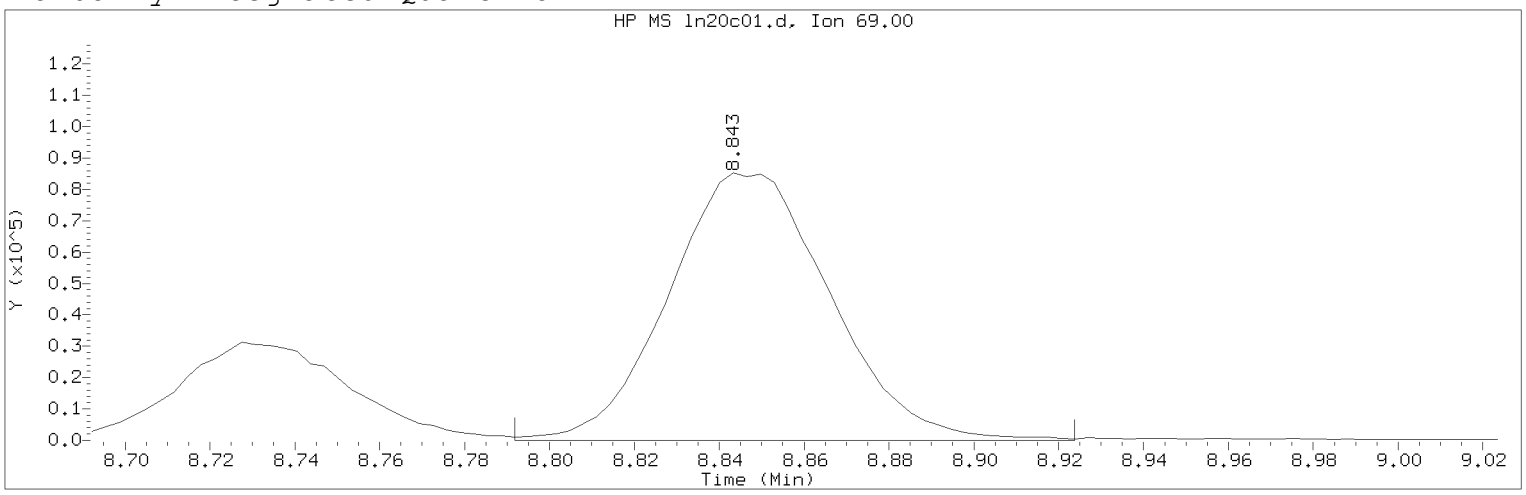
	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
141)	Diethylbenzene (total)	(4)		100	1854289	147.711
137)	1,4-Diethylbenzene	(4)	13.441	119	669574	48.685
139)	n-Butylbenzene	(4)	13.464	92	501730	49.195
138)	1,2-Dichlorobenzene	(4)	13.502	146	534076	50.054
140)	1,2-Diethylbenzene	(4)	13.515	119	541006	49.438
142)	1,2-Dibromo-3-chloropropane	(4)	14.042	75	73070	45.132
144)	1,3,5-Trichlorobenzene	(4)	14.161	180	375618	45.820
146)	1,2,4-Trichlorobenzene	(4)	14.586	180	359555	45.108
147)	Hexachlorobutadiene	(4)	14.666	225	144831	38.483
148)	Naphthalene	(4)	14.769	128	1284725	50.136
149)	1,2,3-Trichlorobenzene	(4)	14.917	180	351680	45.343
150)	2-Methylnaphthalene	(4)	15.563	142	727887	46.128

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:16 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

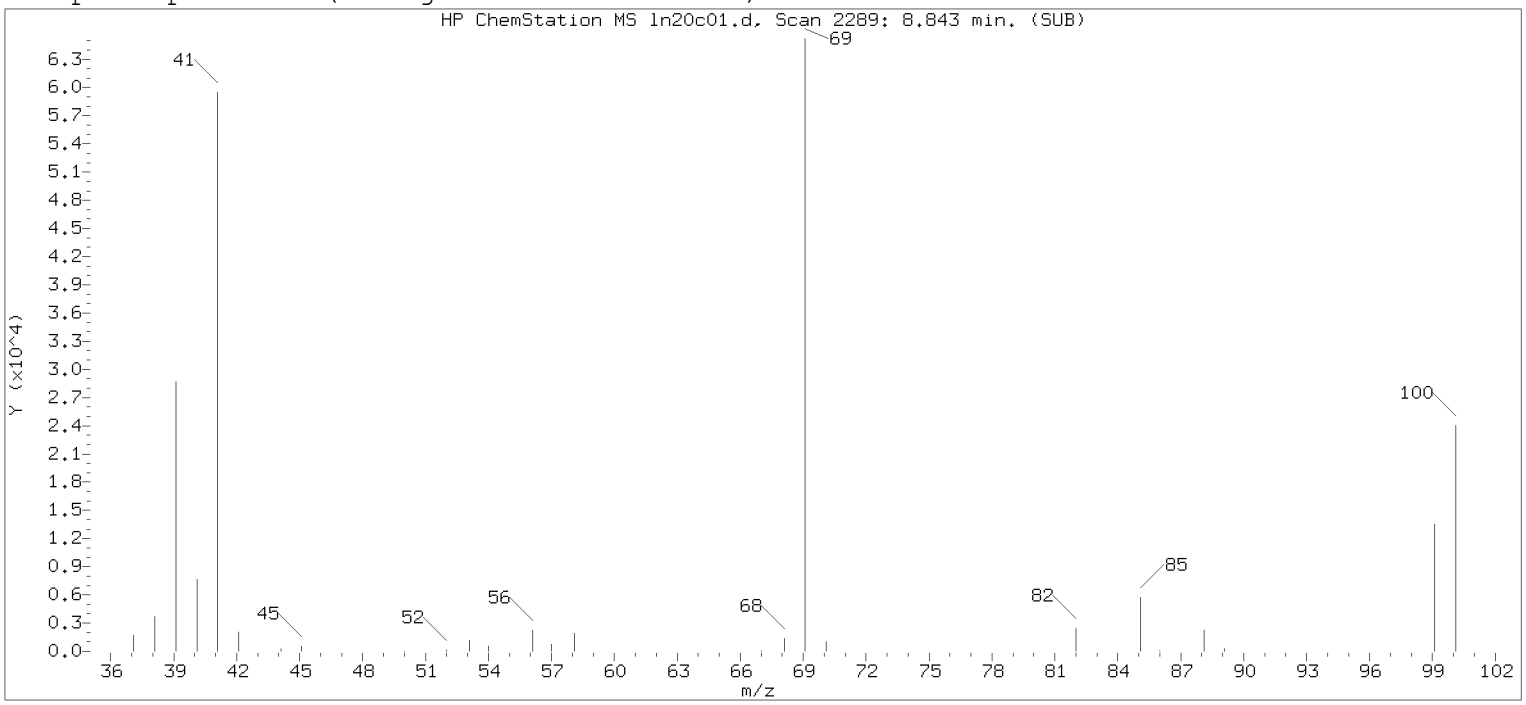
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2289
Retention Time (minutes): 8.843
Quant Ion : 69.00
Area (flag) : 224994M
On-Column Amount (ng) : 50.5687
Integration start scan : 2272 Integration stop scan: 2313
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

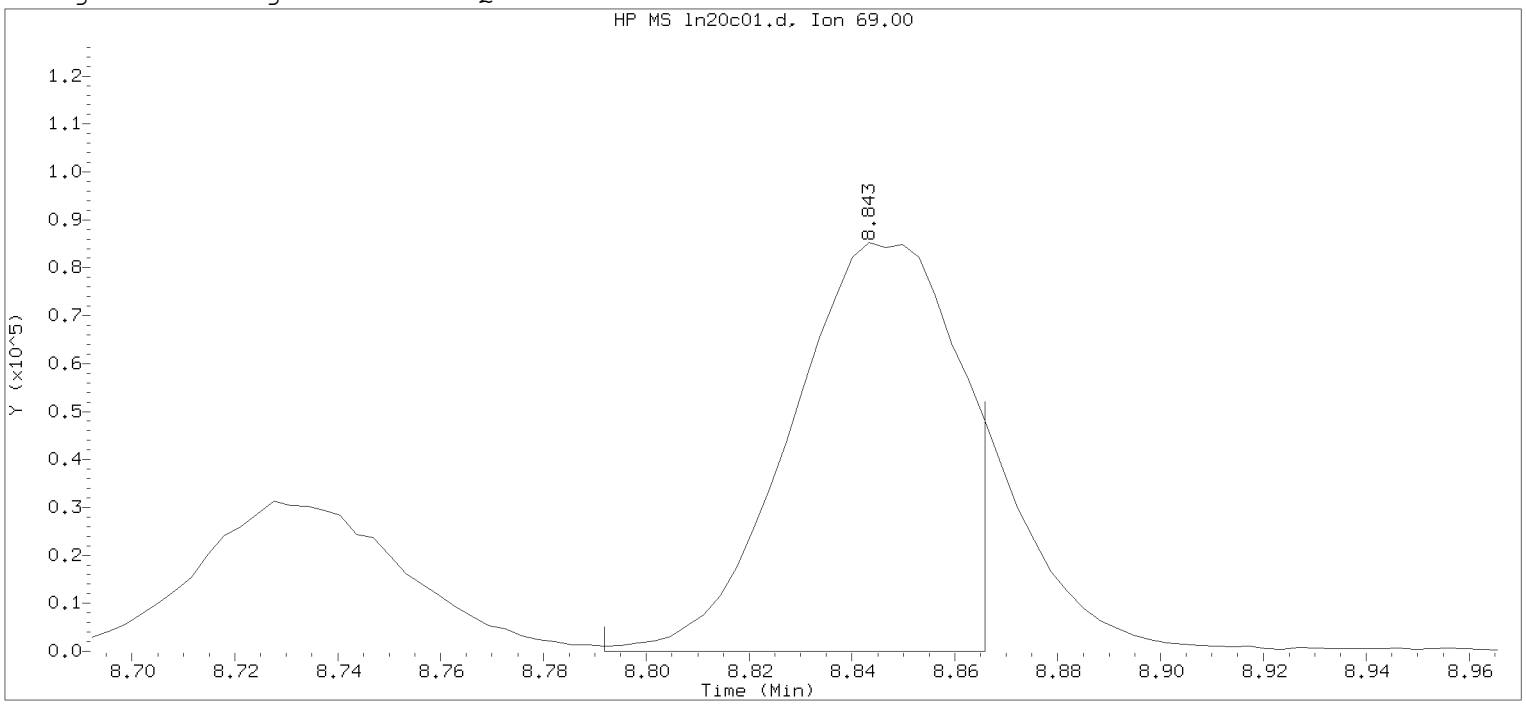
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:50.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

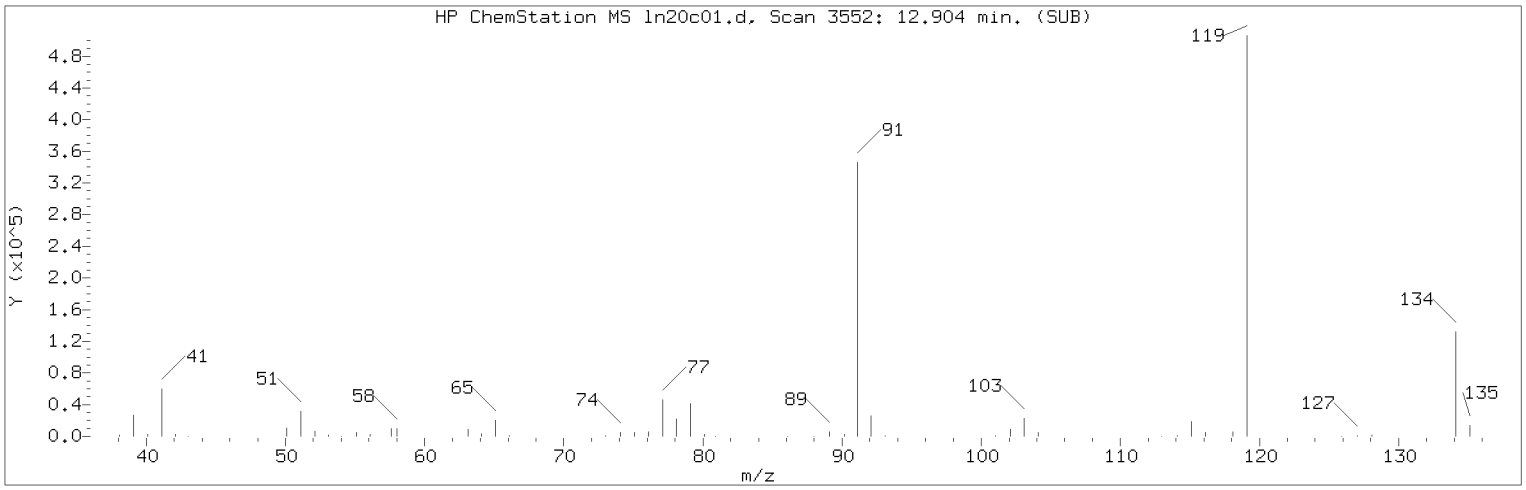
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:14 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

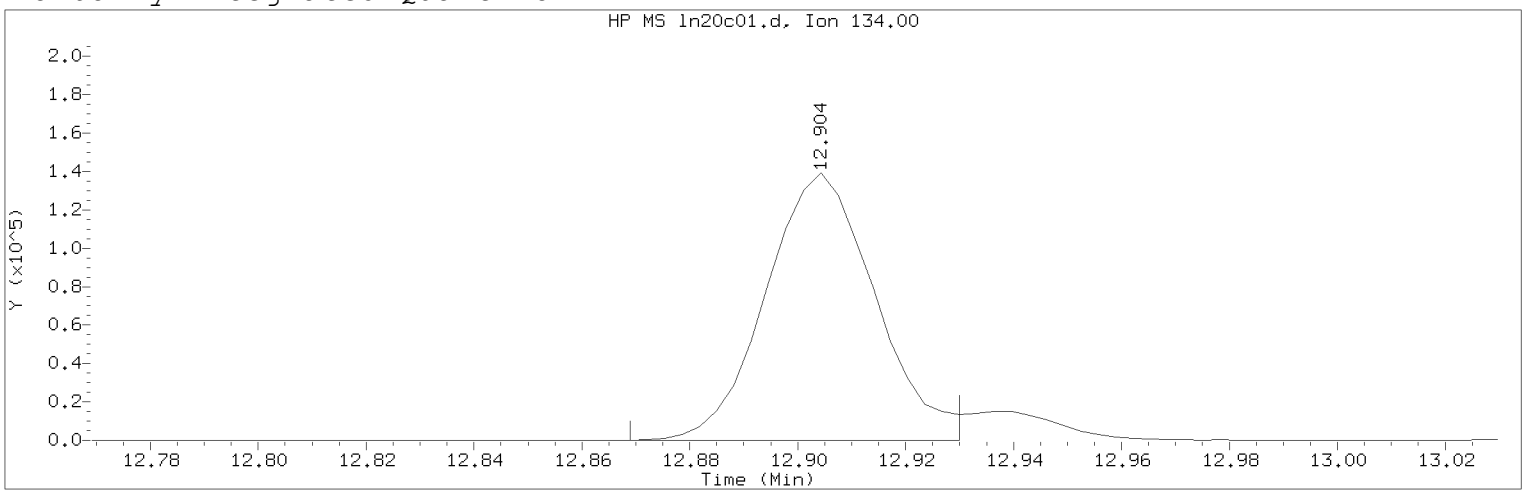
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2289
Retention Time (minutes): 8.843
Quant Ion : 69.00
Area : 190388
On-column Amount (ng) : 42.7908
Integration start scan : 2272 Integration stop scan: 2295
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10249

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:16 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

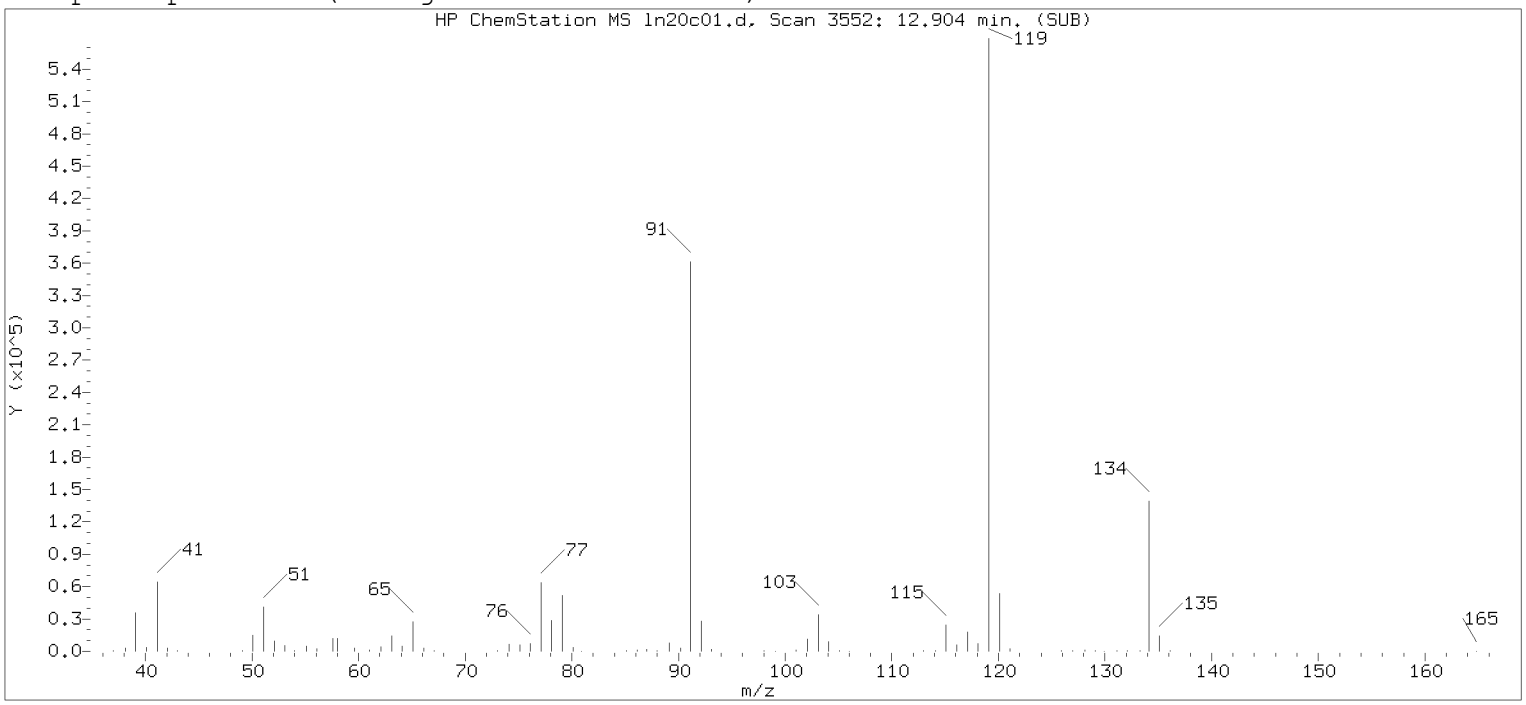
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 195300M
On-Column Amount (ng) : 50.5455
Integration start scan : 3540 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

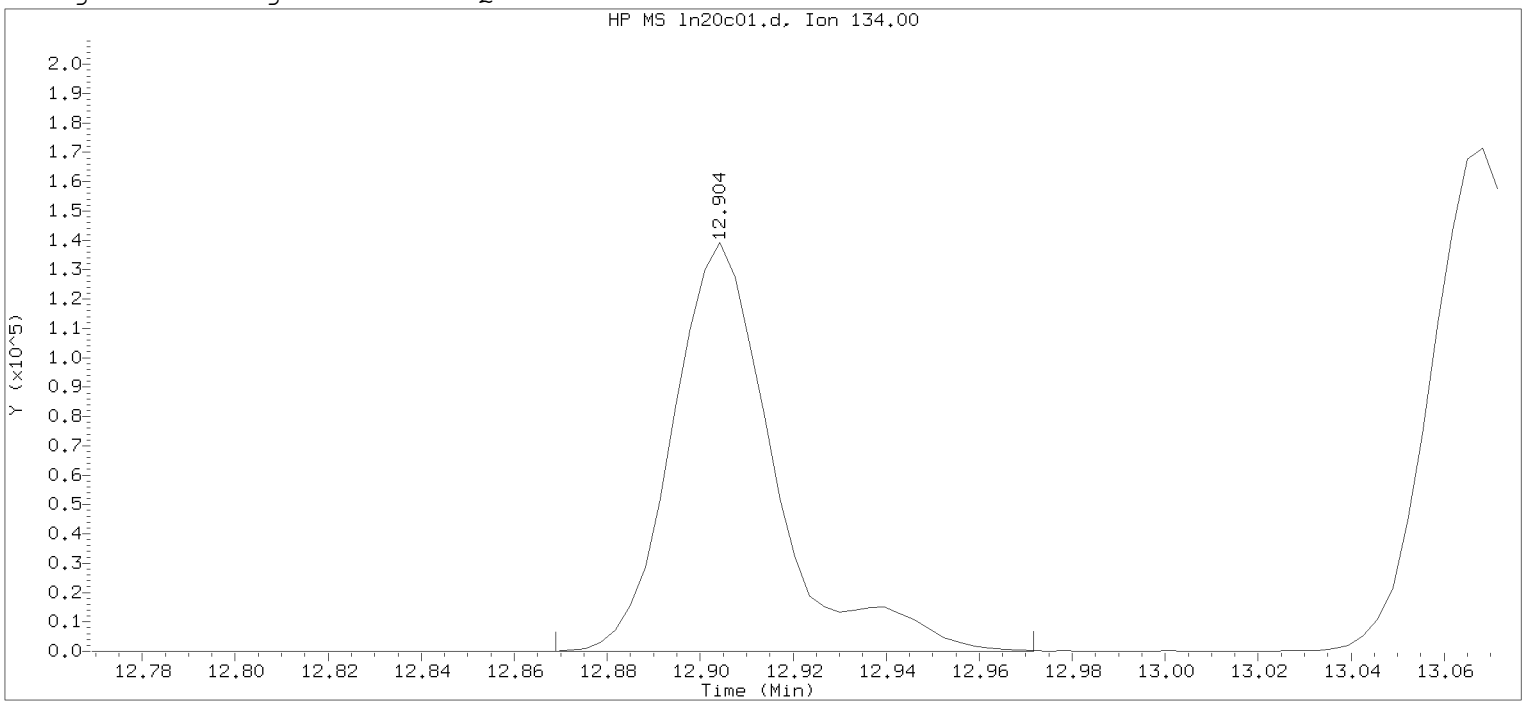
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:50.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:14 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 212024
On-column Amount (ng) : 54.8736
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/20/2019 at 22:29.
Target 3.5 esignature user id: dviray0251

Raw QC Data

Volatiles by GC/MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKL80

Data file: /chem/HP09915.i/19nov20a.b/ln20b01.d
Data file Sample Info. Line: VBLKL80;VBLKL80;1;3;;;;;;
Injection date and time: **20-NOV-2019 09:35**
Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.496	(-0.003)	937	65	162533	(6)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	913789	(3)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	734830	(1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	395483	(1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(0.000)	113	207995	46.557	93%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(0.000)	102	55854	49.055	98%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	928523	48.292	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	356385	48.950	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 11/20/2019 at 22:29. Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov20a.b/ln20b01.d Injection date and time: **20-NOV-2019 09:35**
Data file Sample Info. Line: VBLKL80;VBLKL80;1;3;;;;;; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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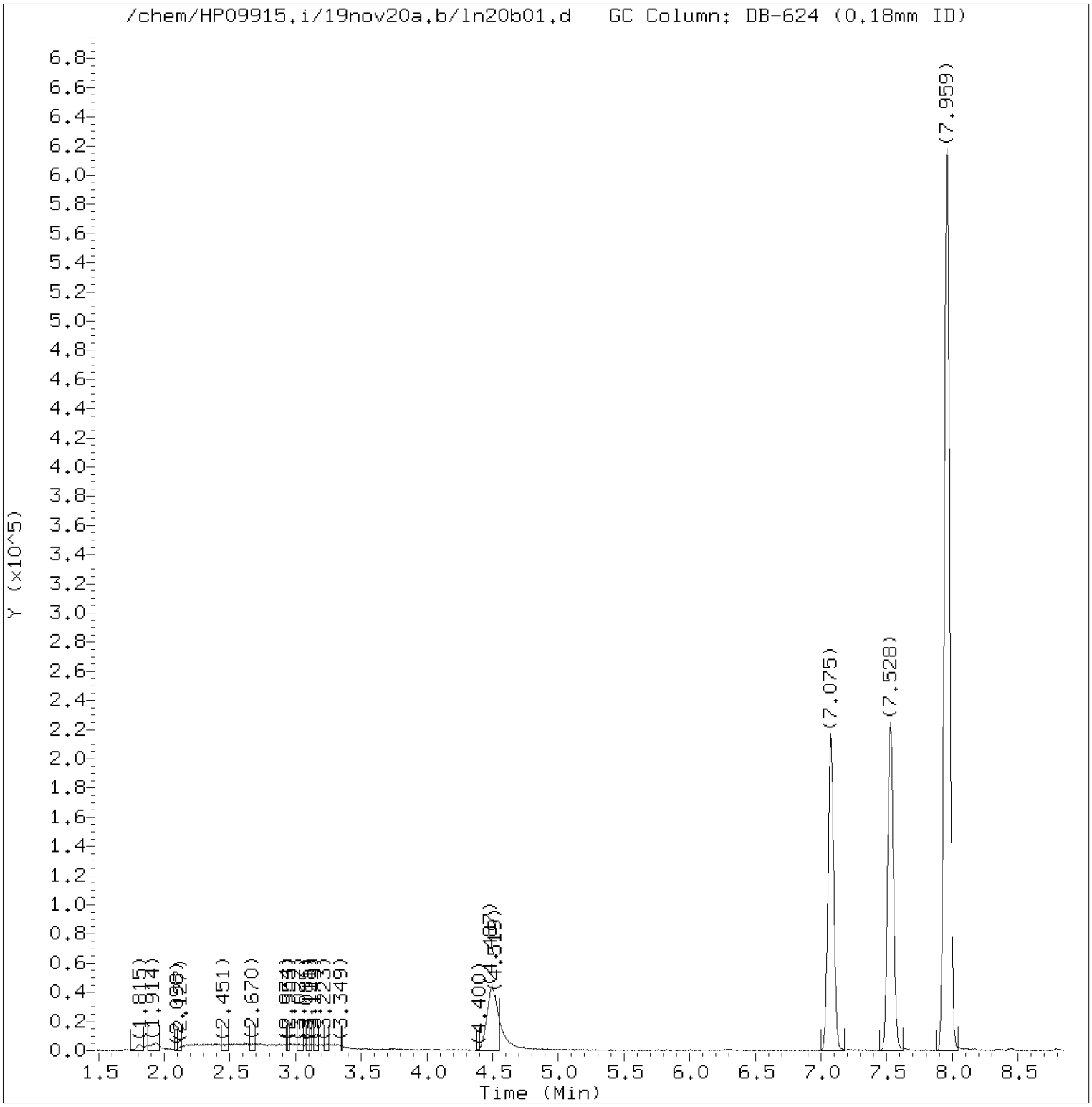
Total number of targets = 24

Digitally signed by Don V. Viray on 11/20/2019 at 22:29. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:50. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

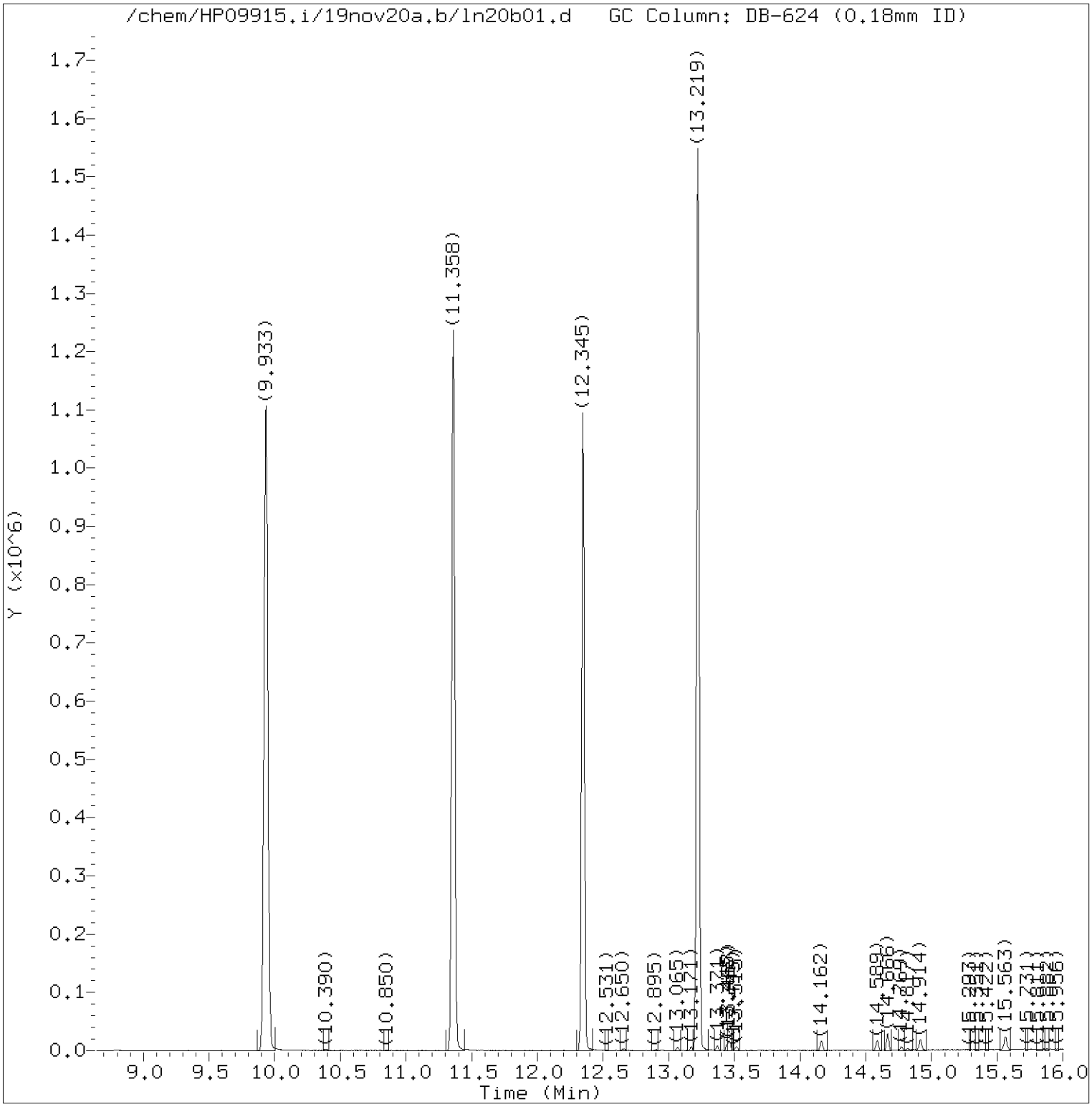
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20b01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 09:35 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Sample Name: VBLKL80 Lab Sample ID: VBLKL80

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20b01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 09:35 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Sample Name: VBLKL80 Lab Sample ID: VBLKL80

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20b01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 09:35 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Sample Name: VBLKL80 Lab Sample ID: VBLKL80

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.496	65	162533	250.000
52)$Dibromofluoromethane	(2)	7.075	113	207995	46.557
57)$1,2-Dichloroethane-d4	(2)	7.528	102	55854	49.055
66)*Fluorobenzene	(2)	7.959	96	913789	50.000
83)$Toluene-d8	(3)	9.933	98	928523	48.292
100)*Chlorobenzene-d5	(3)	11.358	117	734830	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	356385	48.950
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	395483	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W1901MS

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202297

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov20a.b/ln20s06.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	19	
75-35-4	1,1-Dichloroethene	22	
67-64-1	Acetone	150	
76-13-1	Freon 113	21	
75-15-0	Carbon Disulfide	18	
75-09-2	Methylene Chloride	21	
156-60-5	trans-1,2-Dichloroethene	21	
75-34-3	1,1-Dichloroethane	21	
156-59-2	cis-1,2-Dichloroethene	23	
78-93-3	2-Butanone	120	
67-66-3	Chloroform	21	
71-55-6	1,1,1-Trichloroethane	23	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	20	
79-01-6	Trichloroethene	33	
123-91-1	1,4-Dioxane	580	
108-88-3	Toluene	21	
127-18-4	Tetrachloroethene	22	
100-41-4	Ethylbenzene	21	
1330-20-7	Xylene (Total)	63	
95-50-1	1,2-Dichlorobenzene	21	
91-20-3	Naphthalene	19	

FORM I VOA

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W1901MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1202297MS

Data file: /chem/HP09915.i/19nov20a.b/ln20s06.d Injection date and time: **20-NOV-2019 11:52**
Data file Sample Info. Line: W1901MS;1202297MS;1;3;MS;JCW19;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 18:20 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.500	(-0.007)	938	65	169394M	(10)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	914986	(3)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	738299	(2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.219	(0.003)	3650	152	397756	(2)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(0.000)	113	212212	47.439	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	56023	49.140	98%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	944843	48.910	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	355077	48.541	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
6) Vinyl Chloride	(2)	2.400	(-0.000)	62	119383	19.450	19.45			0.2	1
17) 1,1-Dichloroethene	(2)	3.760	(-0.000)	96	87203	22.483	22.48			0.2	1
18) Acetone	(1)	3.802	(0.001)	58	82686	145.124	145.12			0.7	20
19) Freon 113	(2)	3.795	(0.000)	101	92607	20.927	20.93			0.2	10
23) Carbon Disulfide	(2)	4.072	(-0.000)	76	267632	18.310	18.31			0.2	5
28) Methylene Chloride	(2)	4.467	(0.000)	84	97295	21.076	21.08			0.3	1
32) trans-1,2-Dichloroethene	(2)	4.889	(-0.000)	96	94490	21.059	21.06			0.2	1
36) 1,1-Dichloroethane	(2)	5.557	(-0.000)	63	161532	20.637	20.64			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.377	(0.000)	96	113966	22.629	22.63			0.2	1
44) 2-Butanone	(2)	6.361	(0.000)	43	431190	124.982	124.98			0.3	10
51) Chloroform	(2)	6.860	(-0.000)	83	155885	20.822	20.82			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.081	(0.000)	97	149742	23.435	23.43			0.3	1
60) Benzene	(2)	7.560	(-0.000)	78	394871	21.216	21.22			0.2	1
61) 1,2-Dichloroethane	(2)	7.631	(-0.000)	62	120725	20.167	20.17			0.3	1
71) Trichloroethene	(2)	8.429	(0.000)	95	154382	32.944	32.94			0.2	1
75) 1,4-Dioxane	(1)	8.853	(0.007)	88	33017	581.540	581.54			29	250
88) Toluene	(3)	10.007	(-0.000)	92	251262	20.746	20.75			0.2	1
93) Tetrachloroethene	(3)	10.538	(0.000)	166	114828	22.387	22.39			0.2	1
104) Ethylbenzene	(3)	11.467	(-0.000)	91	487541	21.061	21.06			0.4	1
106) m+p-Xylene	(3)	11.580	(-0.000)	106	389236	42.743	42.74			1	5
107) o-Xylene	(3)	11.908	(-0.000)	106	185031	20.571	20.57			0.4	1
108) Xylene (Total)	(3)			106	574267	63.313	63.31			1	6
138) 1,2-Dichlorobenzene	(4)	13.499	(-0.000)	146	223957	20.660	20.66			0.2	5
148) Naphthalene	(4)	14.772	(-0.000)	128	490007	18.823	18.82			1	5

Digitally signed by Don V. Viray on 11/20/2019 at 18:21. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov20a.b/ln20s06.d Injection date and time: **20-NOV-2019 11:52**
Data file Sample Info. Line: W1901MS;1202297MS;1;3;MS;JCW19;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 18:20 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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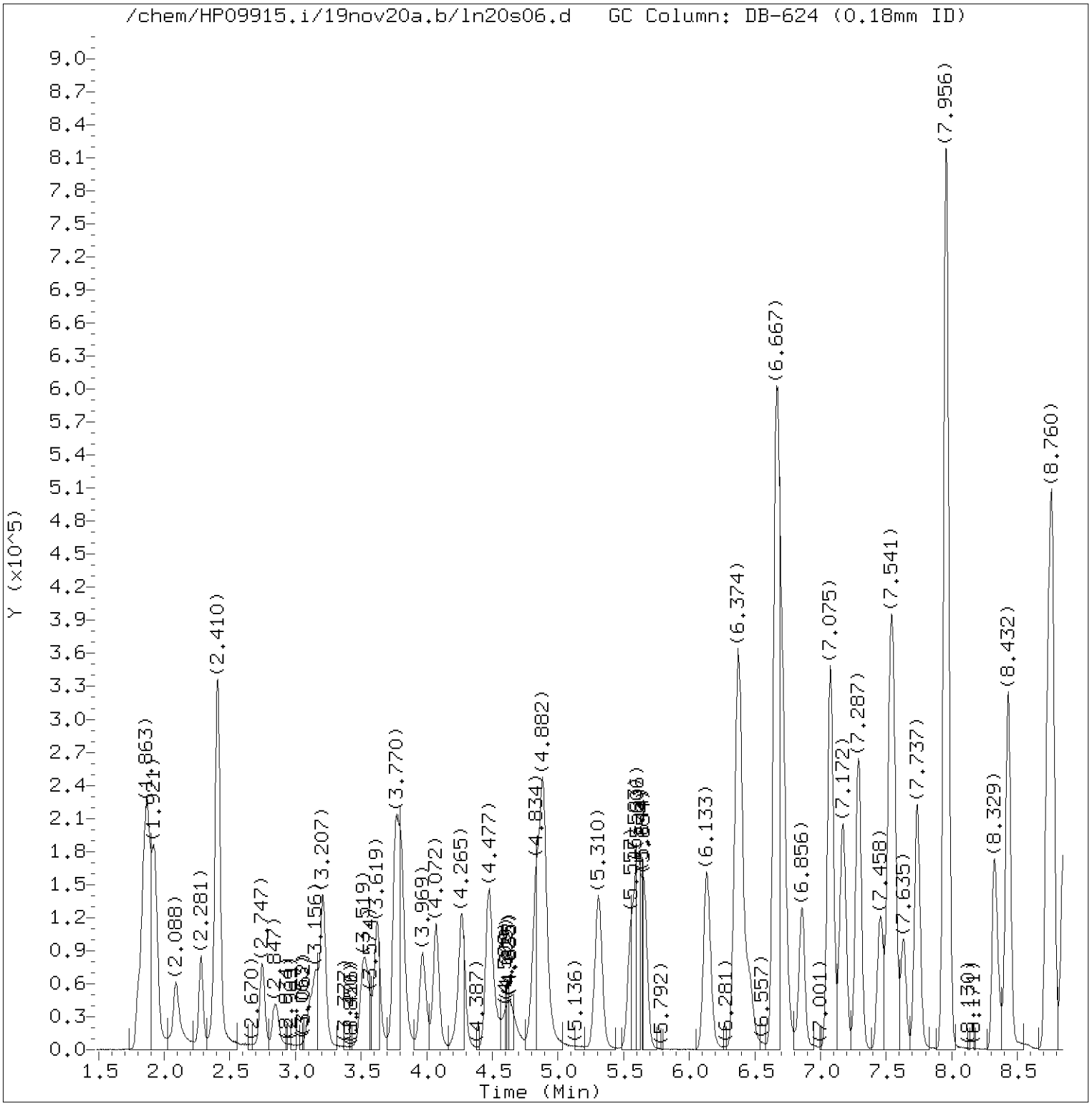
Total number of targets = 24

Digitally signed by Don V. Viray on 11/20/2019 at 18:21. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:50. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

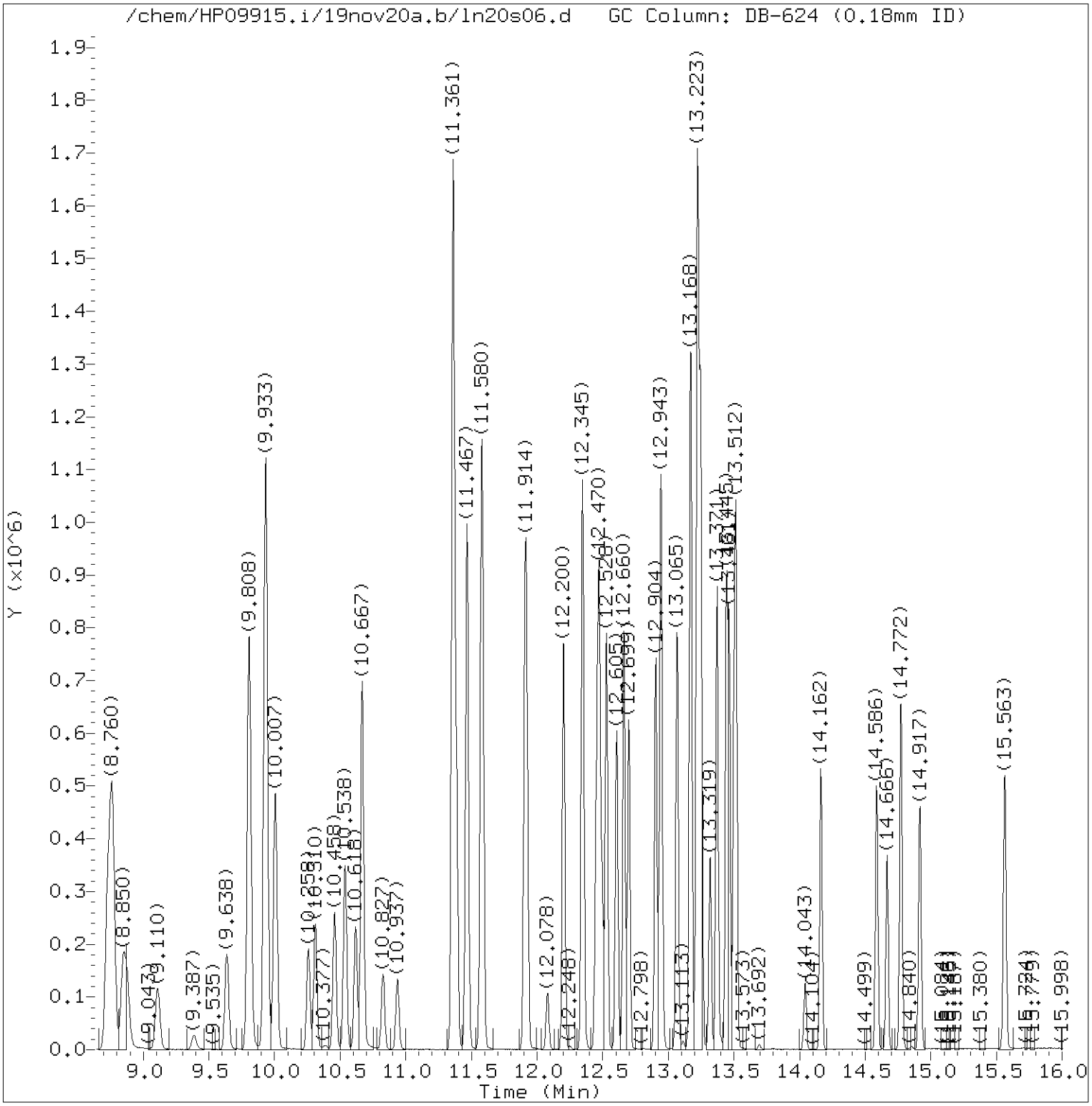
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s06.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 11:52 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 18:20 dvv10203

Sample Name: W1901MS Lab Sample ID: 1202297MS

Digitally signed by Don V. Viray
on 11/20/2019 at 18:21.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s06.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 11:52 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 18:20 dvv10203

Sample Name: W1901MS Lab Sample ID: 1202297MS

Digitally signed by Don V. Viray
on 11/20/2019 at 18:21.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s06.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 11:52 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 18:20 dvv10203

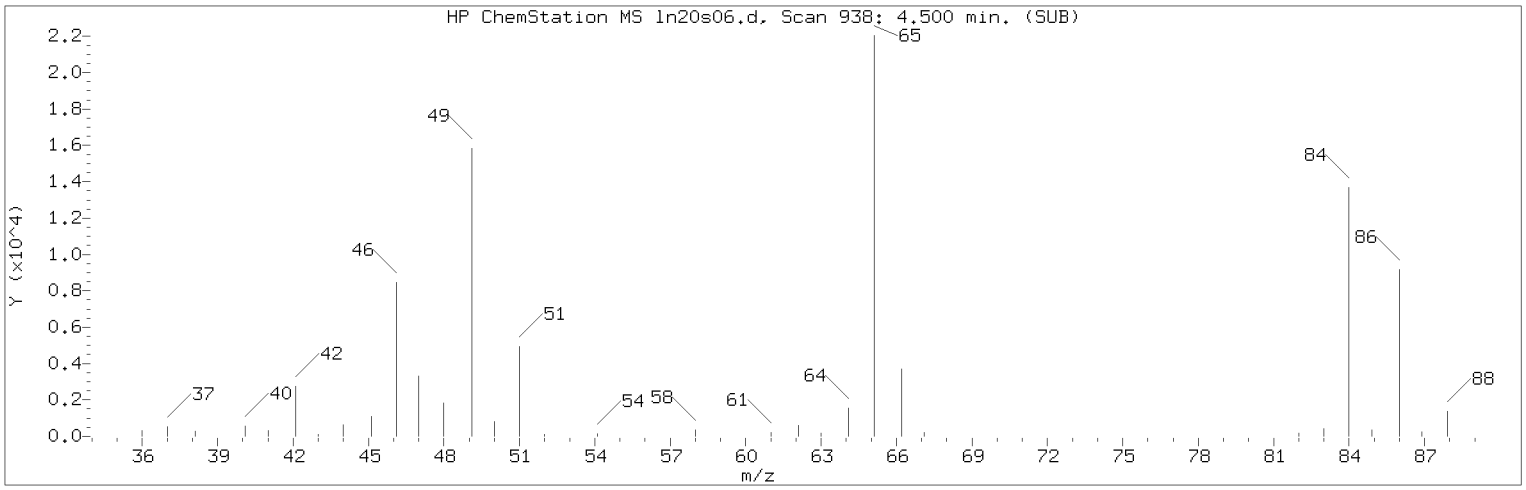
Sample Name: W1901MS Lab Sample ID: 1202297MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	2.400	62	119383	19.450
17) 1,1-Dichloroethene	(2)	3.760	96	87203	22.483
19) Freon 113	(2)	3.795	101	92607	20.927
18) Acetone	(1)	3.802	58	82686	145.124
23) Carbon Disulfide	(2)	4.072	76	267632	18.310
28) Methylene Chloride	(2)	4.467	84	97295	21.076
29)*t-Butyl alcohol-d10	(1)	4.500	65	169394M	250.000
32) trans-1,2-Dichloroethene	(2)	4.889	96	94490	21.059
36) 1,1-Dichloroethane	(2)	5.557	63	161532	20.637
44) 2-Butanone	(2)	6.361	43	431190	124.982
42) cis-1,2-Dichloroethene	(2)	6.377	96	113966	22.629
51) Chloroform	(2)	6.860	83	155885	20.822
52)$Dibromofluoromethane	(2)	7.075	113	212212	47.439
53) 1,1,1-Trichloroethane	(2)	7.081	97	149742	23.435
57)$1,2-Dichloroethane-d4	(2)	7.525	102	56023	49.140
60) Benzene	(2)	7.561	78	394871	21.216
61) 1,2-Dichloroethane	(2)	7.631	62	120725	20.167
66)*Fluorobenzene	(2)	7.959	96	914986	50.000
71) Trichloroethene	(2)	8.429	95	154382	32.944
75) 1,4-Dioxane	(1)	8.853	88	33017	581.540
83)$Toluene-d8	(3)	9.933	98	944843	48.910
88) Toluene	(3)	10.007	92	251262	20.746
93) Tetrachloroethene	(3)	10.538	166	114828	22.387
100)*Chlorobenzene-d5	(3)	11.358	117	738299	50.000
104) Ethylbenzene	(3)	11.467	91	487541	21.061
106) m+p-Xylene	(3)	11.580	106	389236	42.743
108) Xylene (Total)	(3)		106	574267	63.313
107) o-Xylene	(3)	11.908	106	185031	20.571
114)$4-Bromofluorobenzene	(3)	12.345	95	355077	48.541
131)*1,4-Dichlorobenzene-d4	(4)	13.219	152	397756	50.000
138) 1,2-Dichlorobenzene	(4)	13.499	146	223957	20.660
148) Naphthalene	(4)	14.772	128	490007	18.823

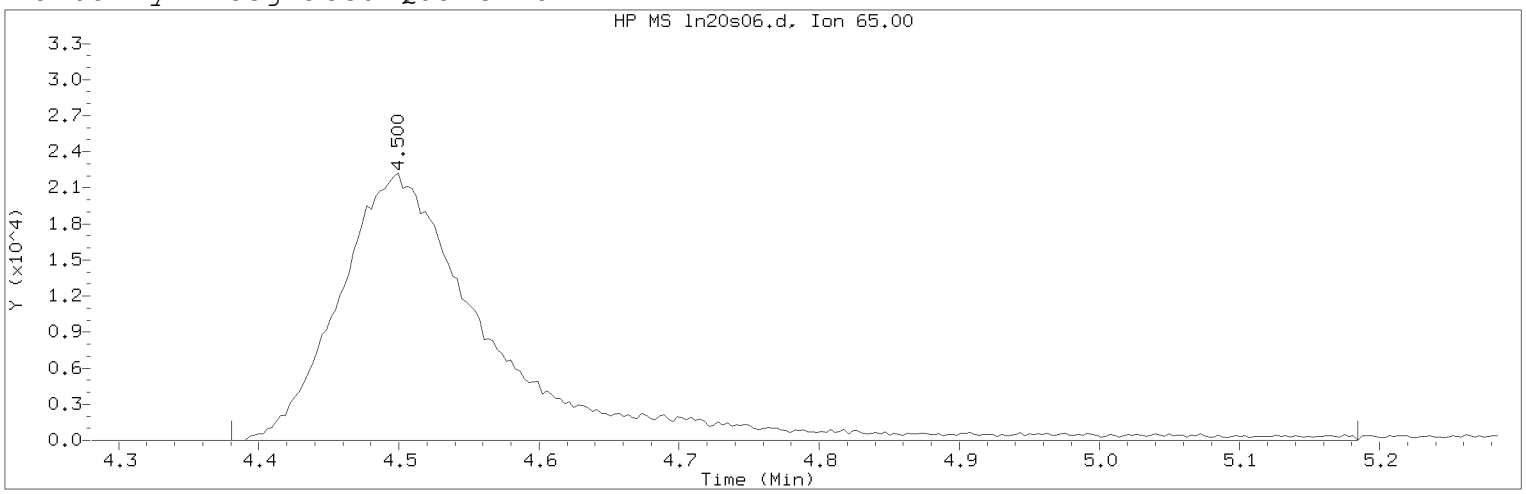
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/20/2019 at 18:21.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s06.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 11:52 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 18:20 dvv10203

Sample Name: W1901MS Lab Sample ID: 1202297MS

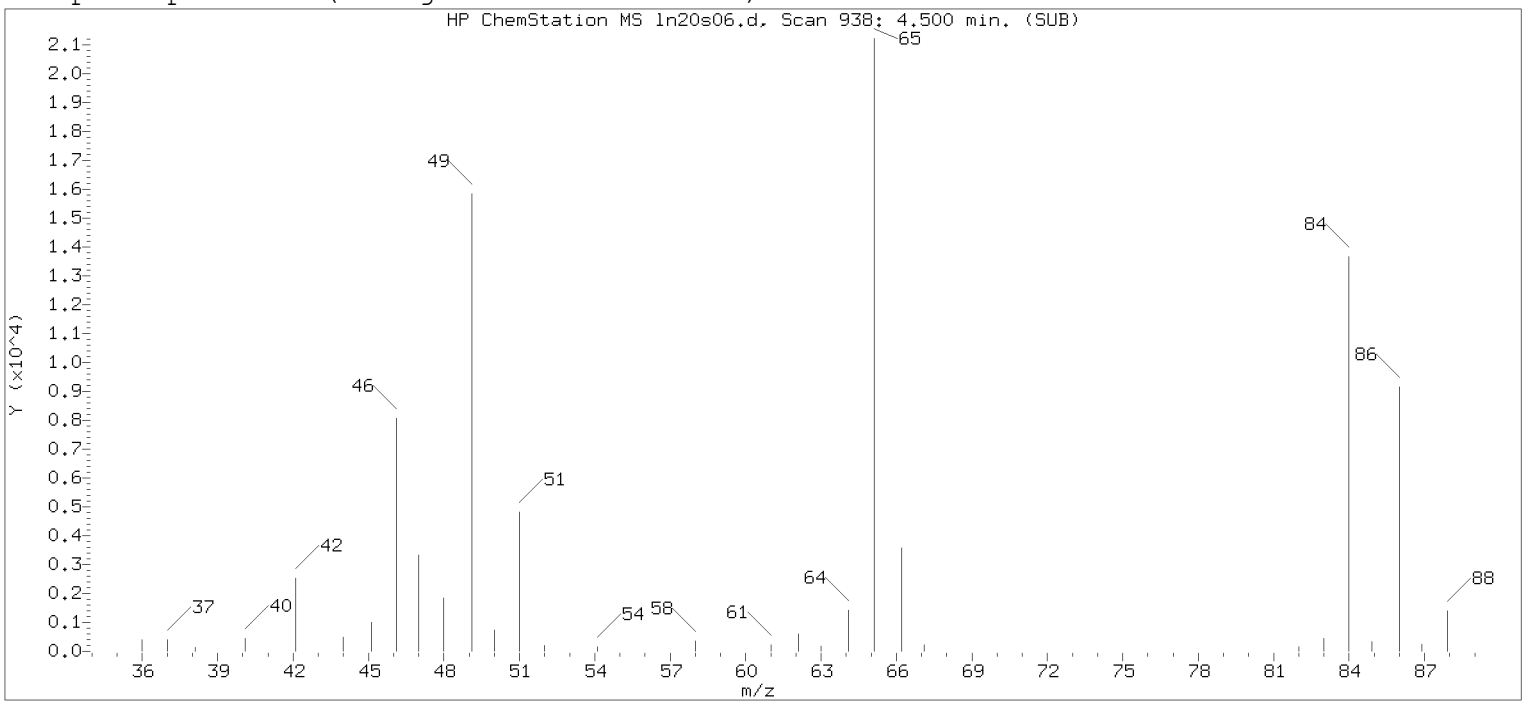
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 938
Retention Time (minutes): 4.500
Quant Ion : 65.00
Area (flag) : 169394M
On-Column Amount (ng) : 250.0000
Integration start scan : 900 Integration stop scan: 1150
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

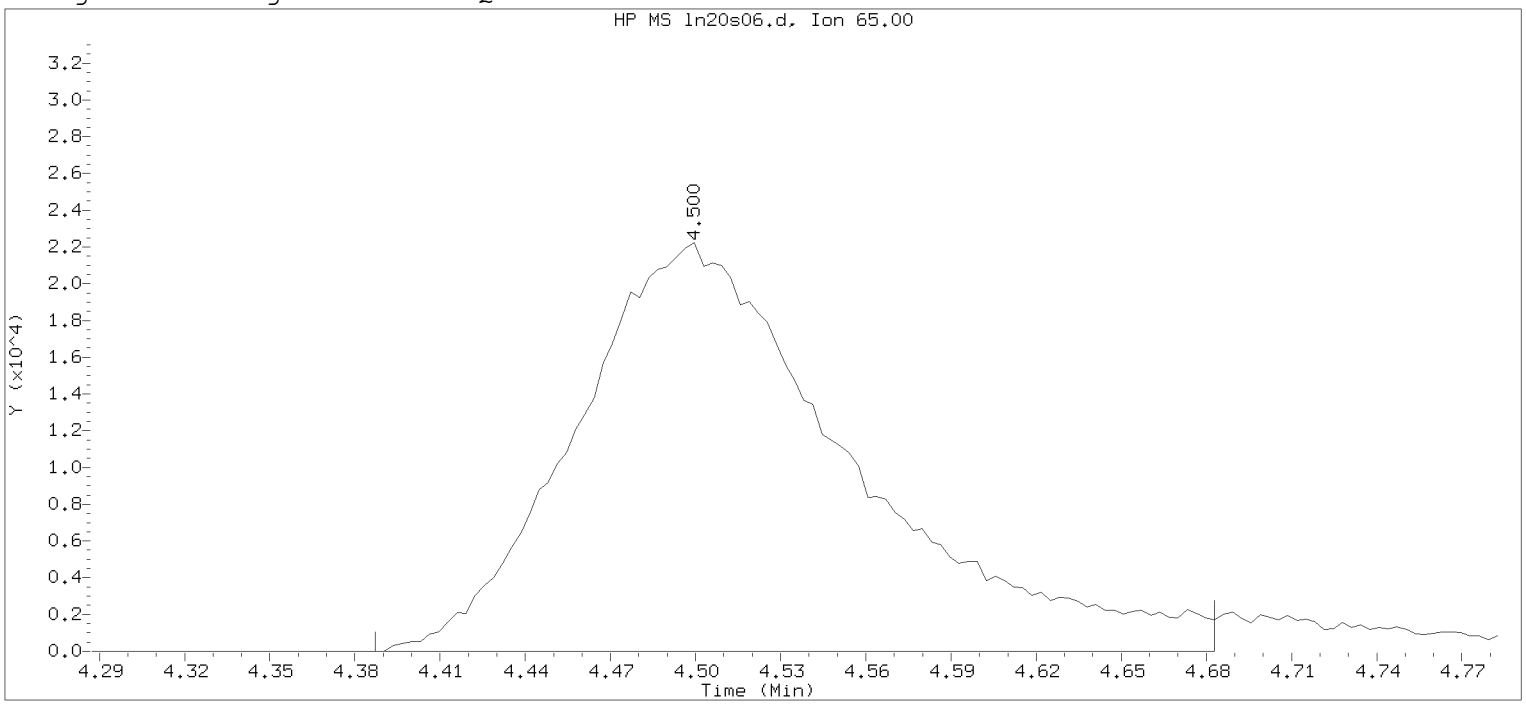
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/20/2019 at 18:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:50.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s06.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 11:52 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 12:09 Automation

Sample Name: W1901MS Lab Sample ID: 1202297MS

Compound Number	: 29		
Compound Name	: t-Butyl alcohol-d10		
Scan Number	: 938		
Retention Time (minutes)	: 4.500		
Quant Ion	: 65.00		
Area	: 150044		
On-column Amount (ng)	: 250.0000		
Integration start scan	: 902	Integration stop scan:	994
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 11/20/2019 at 18:21.
Target 3.5 esignature user ID: DVIRAY

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W1901MSD

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202298

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov20a.b/ln20s07.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	12	
75-35-4	1,1-Dichloroethene	23	
67-64-1	Acetone	140	
76-13-1	Freon 113	21	
75-15-0	Carbon Disulfide	19	
75-09-2	Methylene Chloride	21	
156-60-5	trans-1,2-Dichloroethene	22	
75-34-3	1,1-Dichloroethane	21	
156-59-2	cis-1,2-Dichloroethene	23	
78-93-3	2-Butanone	130	
67-66-3	Chloroform	21	
71-55-6	1,1,1-Trichloroethane	24	
71-43-2	Benzene	22	
107-06-2	1,2-Dichloroethane	20	
79-01-6	Trichloroethene	34	
123-91-1	1,4-Dioxane	580	
108-88-3	Toluene	21	
127-18-4	Tetrachloroethene	22	
100-41-4	Ethylbenzene	21	
1330-20-7	Xylene (Total)	63	
95-50-1	1,2-Dichlorobenzene	20	
91-20-3	Naphthalene	19	

FORM I VOA

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov20a.b/ln20s07.d Injection date and time: **20-NOV-2019 12:14**
Data file Sample Info. Line: W1901MSD;1202298MSD;1;3;MSD;JCW19;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 18:21 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493	(0.000)	936	65	177410M	(16)	250.00	
66) Fluorobenzene	7.956	(0.003)	2013	96	893439	(0)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	724388	(0)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	385924	(-1)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(0.000)	113	207769	47.566	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(0.000)	102	56089	50.384	101%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	926972	48.906	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	355669	49.556	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)	2.400	(-0.000)	62	69122	11.533	11.53			0.2	1
17) 1,1-Dichloroethene	(2)	3.760	(-0.000)	96	85697	22.628	22.63			0.2	1
18) Acetone	(1)	3.805	(-0.000)	58	82941	138.994	138.99			0.7	20
19) Freon 113	(2)	3.789	(0.001)	101	90388	20.918	20.92			0.2	10
23) Carbon Disulfide	(2)	4.072	(-0.000)	76	264825	18.555	18.56			0.2	5
28) Methylene Chloride	(2)	4.474	(-0.000)	84	95077	21.092	21.09			0.3	1
32) trans-1,2-Dichloroethene	(2)	4.882	(0.000)	96	94209	21.503	21.50			0.2	1
36) 1,1-Dichloroethane	(2)	5.554	(-0.000)	63	161068	21.074	21.07			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.380	(-0.000)	96	114155	23.213	23.21			0.2	1
44) 2-Butanone	(2)	6.358	(0.000)	43	434562	128.997	129.00			0.3	10
51) Chloroform	(2)	6.863	(-0.000)	83	153970	21.062	21.06			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.075	(0.000)	97	148652	23.825	23.83			0.3	1
60) Benzene	(2)	7.554	(0.000)	78	390920	21.511	21.51			0.2	1
61) 1,2-Dichloroethane	(2)	7.631	(-0.000)	62	117899	20.170	20.17			0.3	1
71) Trichloroethene	(2)	8.429	(-0.000)	95	156793	34.266	34.27			0.2	1
75) 1,4-Dioxane	(1)	8.853	(0.004)	88	34300	576.841	576.84			29	250
88) Toluene	(3)	10.007	(-0.000)	92	251517	21.166	21.17			0.2	1
93) Tetrachloroethene	(3)	10.538	(0.000)	166	113189	22.491	22.49			0.2	1
104) Ethylbenzene	(3)	11.467	(-0.000)	91	481016	21.178	21.18			0.4	1
106) m+p-Xylene	(3)	11.580	(-0.000)	106	380094	42.540	42.54			1	5
107) o-Xylene	(3)	11.908	(-0.000)	106	183365	20.777	20.78			0.4	1
108) Xylene (Total)	(3)			106	563459	63.317	63.32			1	6
138) 1,2-Dichlorobenzene	(4)	13.499	(0.000)	146	215096	20.451	20.45			0.2	5
148) Naphthalene	(4)	14.769	(0.000)	128	480859	19.037	19.04			1	5

Digitally signed by Don V. Viray on 11/20/2019 at 18:22. Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov20a.b/ln20s07.d Injection date and time: **20-NOV-2019 12:14**
Data file Sample Info. Line: W1901MSD;1202298MSD;1;3;MSD;JCW19;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 18:21 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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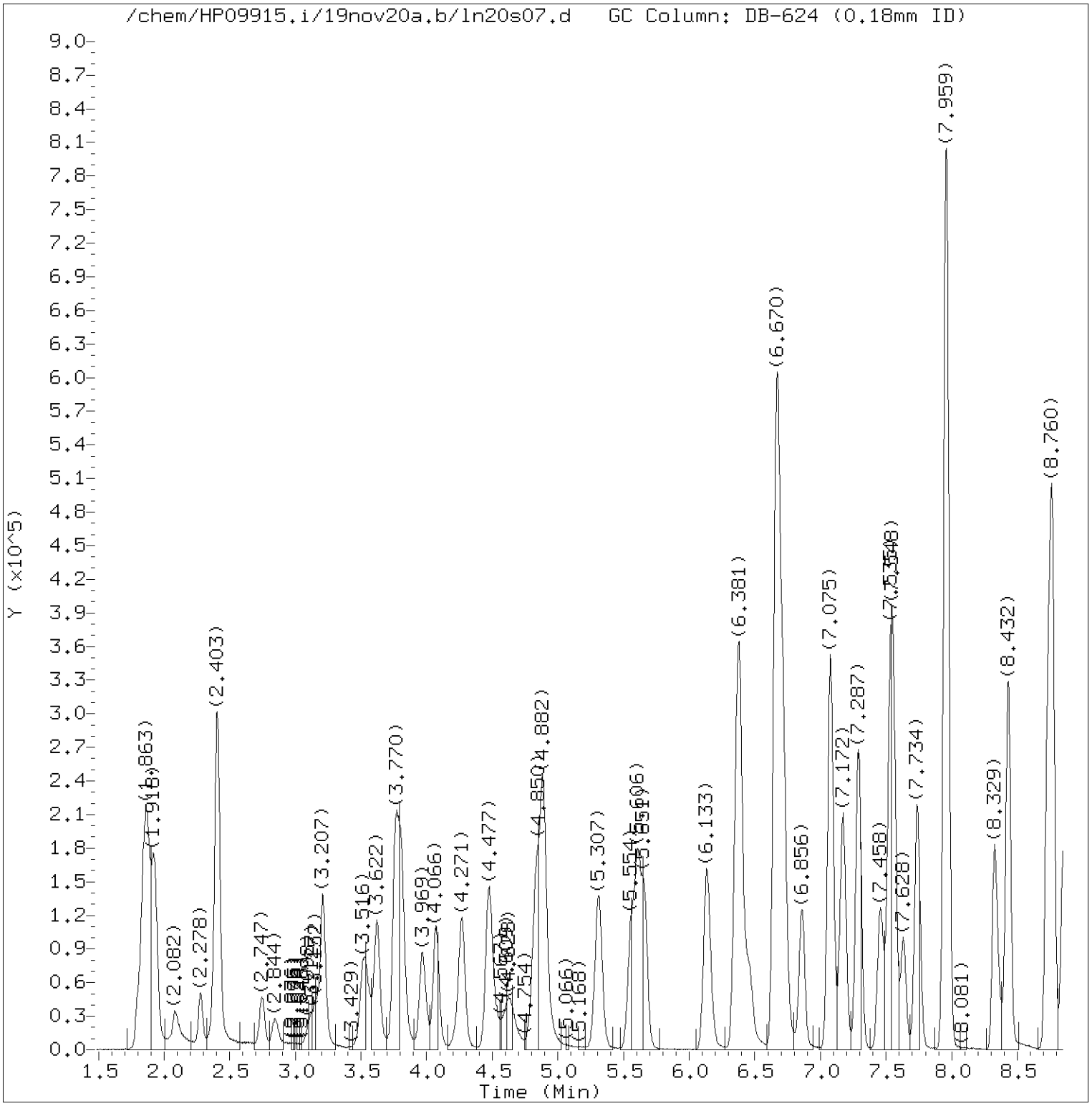
Total number of targets = 24

Digitally signed by Don V. Viray on 11/20/2019 at 18:22. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:50. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

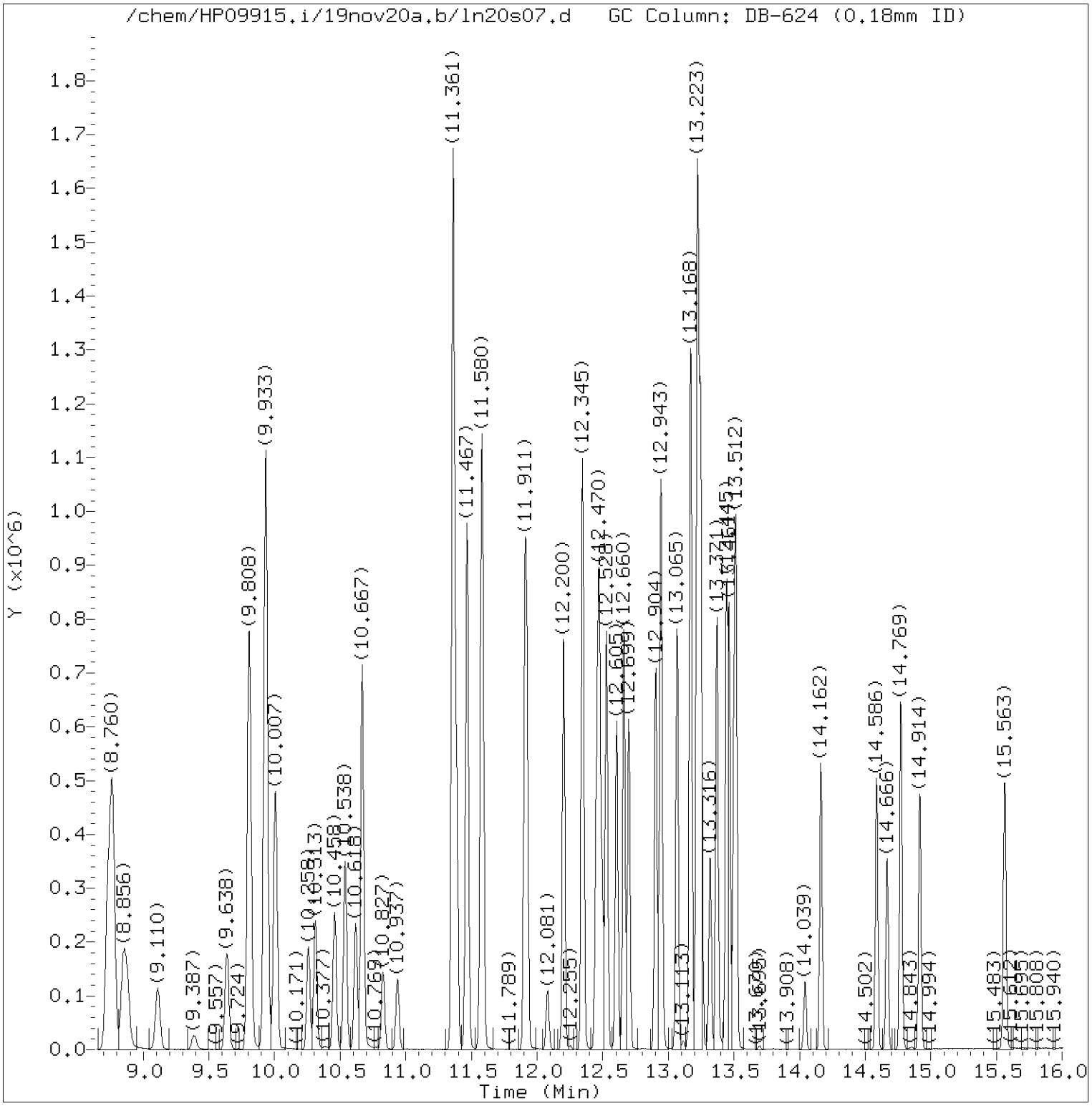
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s07.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:14 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 18:21 dvv10203

Sample Name: W1901MSD Lab Sample ID: 1202298MSD

Digitally signed by Don V. Viray
on 11/20/2019 at 18:22.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s07.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:14 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 18:21 dvv10203

Sample Name: W1901MSD Lab Sample ID: 1202298MSD

Digitally signed by Don V. Viray
on 11/20/2019 at 18:22.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s07.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:14 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 18:21 dvv10203

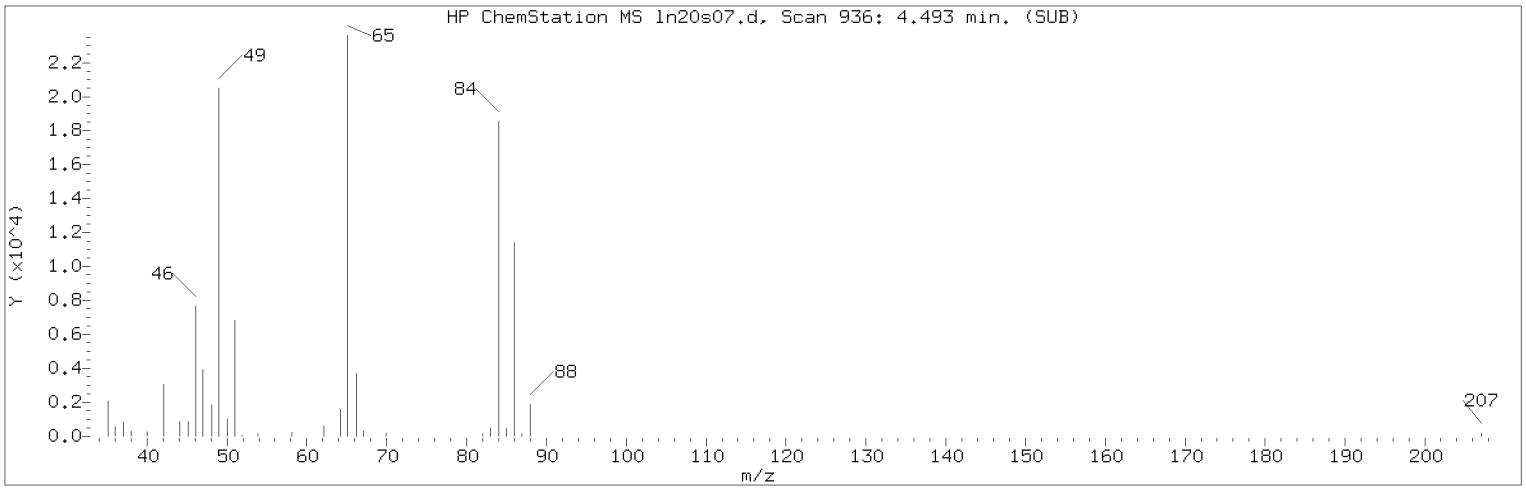
Sample Name: W1901MSD Lab Sample ID: 1202298MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	2.400	62	69122	11.533
17) 1,1-Dichloroethene	(2)	3.760	96	85697	22.628
19) Freon 113	(2)	3.789	101	90388	20.918
18) Acetone	(1)	3.805	58	82941	138.994
23) Carbon Disulfide	(2)	4.072	76	264825	18.555
28) Methylene Chloride	(2)	4.474	84	95077	21.092
29)*t-Butyl alcohol-d10	(1)	4.493	65	177410M	250.000
32) trans-1,2-Dichloroethene	(2)	4.882	96	94209	21.503
36) 1,1-Dichloroethane	(2)	5.554	63	161068	21.074
44) 2-Butanone	(2)	6.358	43	434562	128.997
42) cis-1,2-Dichloroethene	(2)	6.381	96	114155	23.213
51) Chloroform	(2)	6.863	83	153970	21.062
53) 1,1,1-Trichloroethane	(2)	7.075	97	148652	23.825
52)$Dibromofluoromethane	(2)	7.075	113	207769	47.566
57)$1,2-Dichloroethane-d4	(2)	7.528	102	56089	50.384
60) Benzene	(2)	7.554	78	390920	21.511
61) 1,2-Dichloroethane	(2)	7.631	62	117899	20.170
66)*Fluorobenzene	(2)	7.956	96	893439	50.000
71) Trichloroethene	(2)	8.429	95	156793	34.266
75) 1,4-Dioxane	(1)	8.853	88	34300	576.841
83)$Toluene-d8	(3)	9.933	98	926972	48.906
88) Toluene	(3)	10.007	92	251517	21.166
93) Tetrachloroethene	(3)	10.538	166	113189	22.491
100)*Chlorobenzene-d5	(3)	11.358	117	724388	50.000
104) Ethylbenzene	(3)	11.467	91	481016	21.178
106) m+p-Xylene	(3)	11.580	106	380094	42.540
108) Xylene (Total)	(3)		106	563459	63.317
107) o-Xylene	(3)	11.908	106	183365	20.777
114)$4-Bromofluorobenzene	(3)	12.345	95	355669	49.556
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	385924	50.000
138) 1,2-Dichlorobenzene	(4)	13.499	146	215096	20.451
148) Naphthalene	(4)	14.769	128	480859	19.037

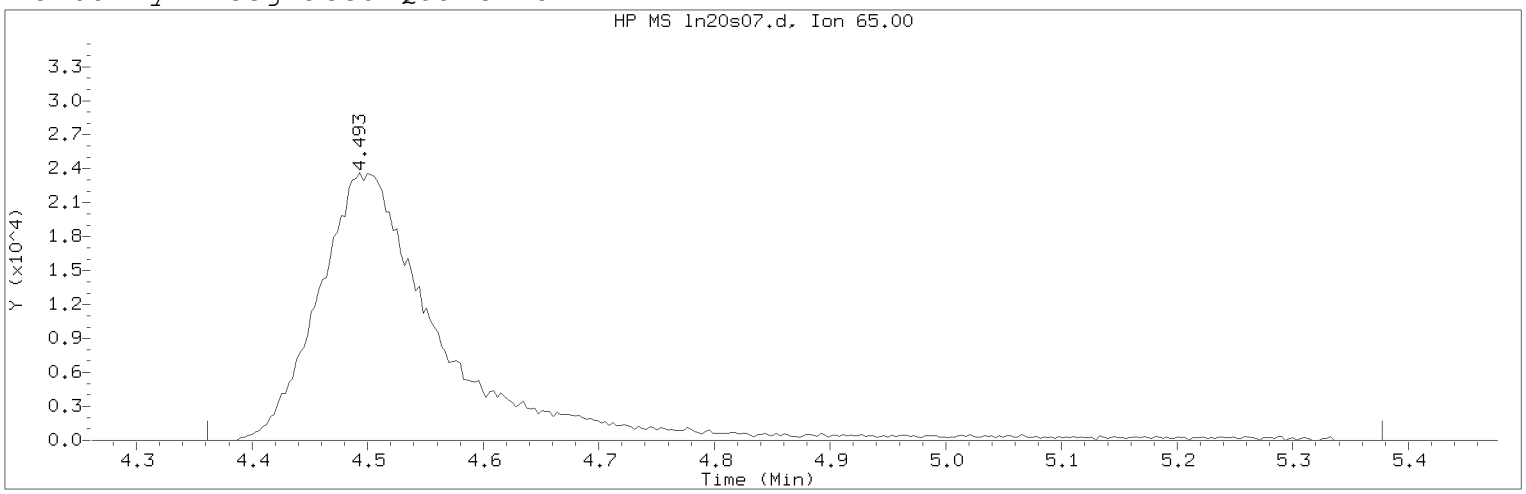
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/20/2019 at 18:22.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s07.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:14 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 18:21 dvv10203

Sample Name: W1901MSD Lab Sample ID: 1202298MSD

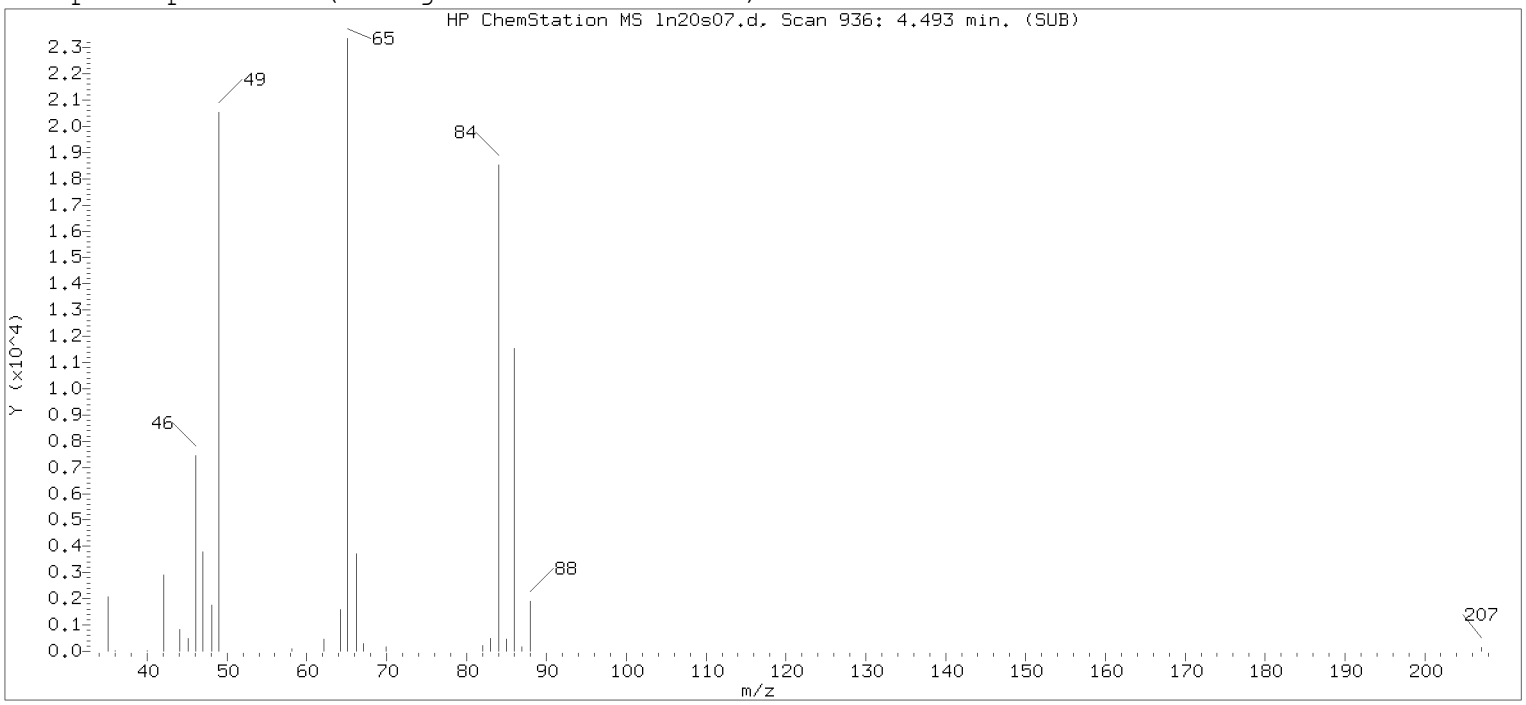
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 936
Retention Time (minutes): 4.493
Quant Ion : 65.00
Area (flag) : 177410M
On-Column Amount (ng) : 250.0000
Integration start scan : 894 Integration stop scan: 1210
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

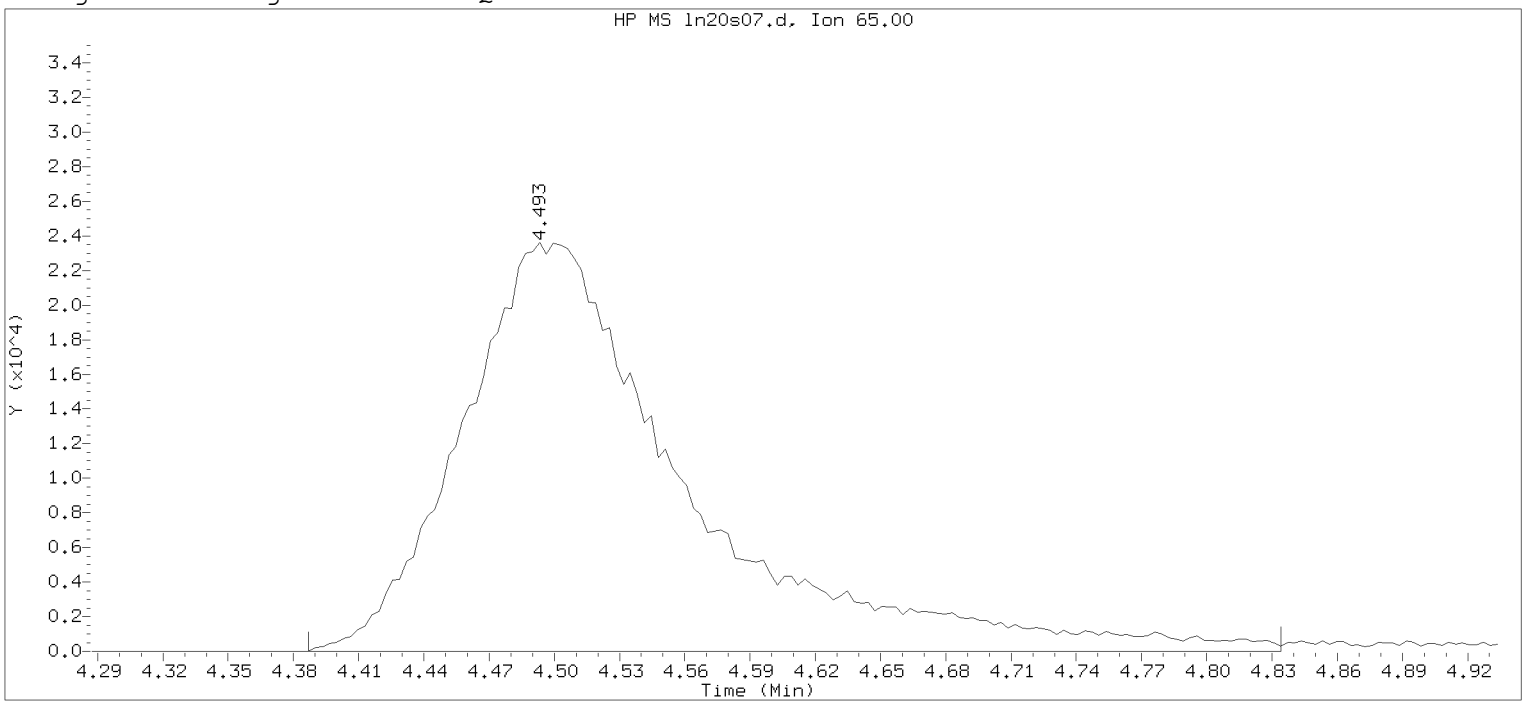
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/20/2019 at 18:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:50.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s07.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 12:14 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 12:31 Automation

Sample Name: W1901MSD Lab Sample ID: 1202298MSD

Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 936
Retention Time (minutes): 4.493
Quant Ion : 65.00
Area : 168340
On-column Amount (ng) : 250.0000
Integration start scan : 902 Integration stop scan: 1041
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/20/2019 at 18:22.
Target 3.5 esignature user ID: dvv10273

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL80

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL80

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov20a.b/ln20l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	20	
75-35-4	1,1-Dichloroethene	20	
67-64-1	Acetone	160	
76-13-1	Freon 113	19	
75-15-0	Carbon Disulfide	17	
75-09-2	Methylene Chloride	21	
156-60-5	trans-1,2-Dichloroethene	20	
75-34-3	1,1-Dichloroethane	20	
156-59-2	cis-1,2-Dichloroethene	21	
78-93-3	2-Butanone	130	
67-66-3	Chloroform	20	
71-55-6	1,1,1-Trichloroethane	20	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	20	
79-01-6	Trichloroethene	21	
123-91-1	1,4-Dioxane	640	
108-88-3	Toluene	20	
127-18-4	Tetrachloroethene	20	
100-41-4	Ethylbenzene	20	
179601-23-1	m+p-Xylene	41	
95-47-6	o-Xylene	20	
1330-20-7	Xylene (Total)	62	
95-50-1	1,2-Dichlorobenzene	21	
91-20-3	Naphthalene	20	

FORM I VOA

^

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov20a.b/ln20101.d Injection date and time: **20-NOV-2019 09:13**
Data file Sample Info. Line: LCSL80;LCSL80;1;3;LCS;;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.516	(-0.022)	943	65	168087	(10)	250.00	
66) Fluorobenzene	7.962	(-0.003)	2015	96	923804	(4)	50.00	
100) Chlorobenzene-d5	11.361	(0.000)	3072	117	756463	(4)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	402949	(3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.078	(0.000)	113	216175	47.864	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.535	(0.000)	102	57092	49.599	99%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	960737	48.538	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.348	(0.000)	95	372288	49.672	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)	2.406	(-0.000)	62	122924	19.836	19.84			0.2	1
17) 1,1-Dichloroethene	(2)	3.770	(-0.001)	96	79383	20.271	20.27			0.2	1
18) Acetone	(1)	3.808	(0.002)	58	88894	157.234	157.23			0.7	20
19) Freon 113	(2)	3.805	(-0.000)	101	84393	18.889	18.89			0.2	10
23) Carbon Disulfide	(2)	4.078	(-0.000)	76	247183	16.750	16.75			0.2	5
28) Methylene Chloride	(2)	4.483	(-0.001)	84	96028	20.603	20.60			0.3	1
32) trans-1,2-Dichloroethene	(2)	4.895	(-0.000)	96	91810	20.266	20.27			0.2	1
36) 1,1-Dichloroethane	(2)	5.560	(-0.000)	63	155286	19.649	19.65			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.384	(-0.000)	96	108658	21.369	21.37			0.2	1
44) 2-Butanone	(2)	6.368	(-0.000)	43	453248	130.122	130.12			0.3	10
51) Chloroform	(2)	6.863	(-0.000)	83	154156	20.395	20.39			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.088	(-0.000)	97	128442	19.910	19.91			0.3	1
60) Benzene	(2)	7.560	(-0.000)	78	389052	20.704	20.70			0.2	1
61) 1,2-Dichloroethane	(2)	7.634	(-0.000)	62	121733	20.141	20.14			0.3	1
71) Trichloroethene	(2)	8.435	(0.000)	95	97941	20.700	20.70			0.2	1
75) 1,4-Dioxane	(1)	8.856	(0.013)	88	36202	642.599	642.60			29	250
88) Toluene	(3)	10.007	(-0.000)	92	253800	20.452	20.45			0.2	1
93) Tetrachloroethene	(3)	10.541	(0.000)	166	104969	19.973	19.97			0.2	1
104) Ethylbenzene	(3)	11.467	(-0.000)	91	482617	20.348	20.35			0.4	1
106) m+p-Xylene	(3)	11.580	(-0.000)	106	387000	41.477	41.48			1	5
107) o-Xylene	(3)	11.908	(-0.000)	106	185853	20.166	20.17			0.4	1
108) Xylene (Total)	(3)			106	572853	61.643	61.64			1	6
138) 1,2-Dichlorobenzene	(4)	13.502	(-0.000)	146	225904	20.572	20.57			0.2	5
148) Naphthalene	(4)	14.772	(-0.000)	128	528621	20.044	20.04			1	5

Digitally signed by Don V. Viray on 11/20/2019 at 22:29. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov20a.b/ln20l01.d Injection date and time: **20-NOV-2019 09:13**
Data file Sample Info. Line: LCSL80;LCSL80;1;3;LCS;;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

THIS SPACE

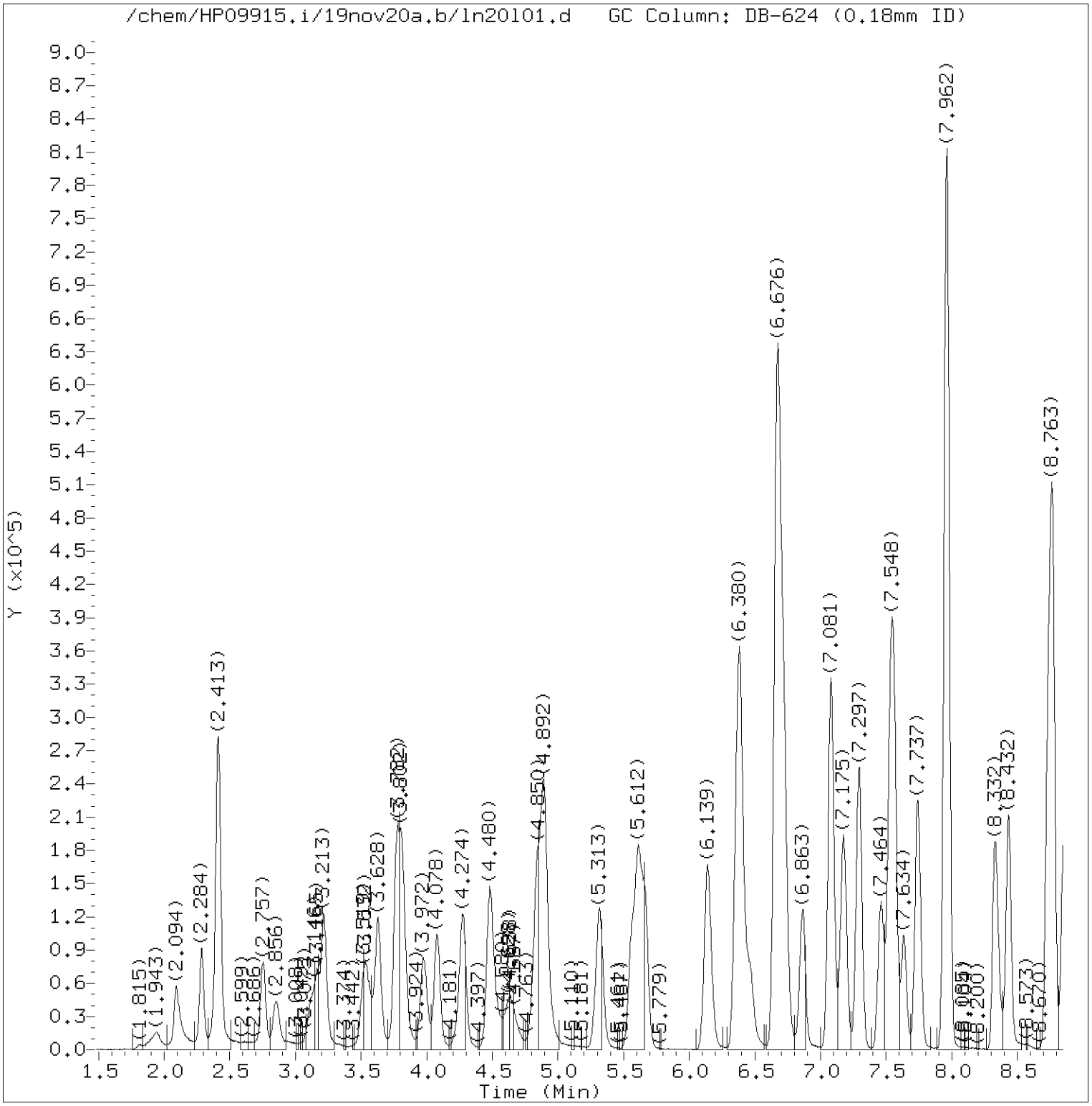
WAS LEFT

BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 11/20/2019 at 22:29. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:50. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

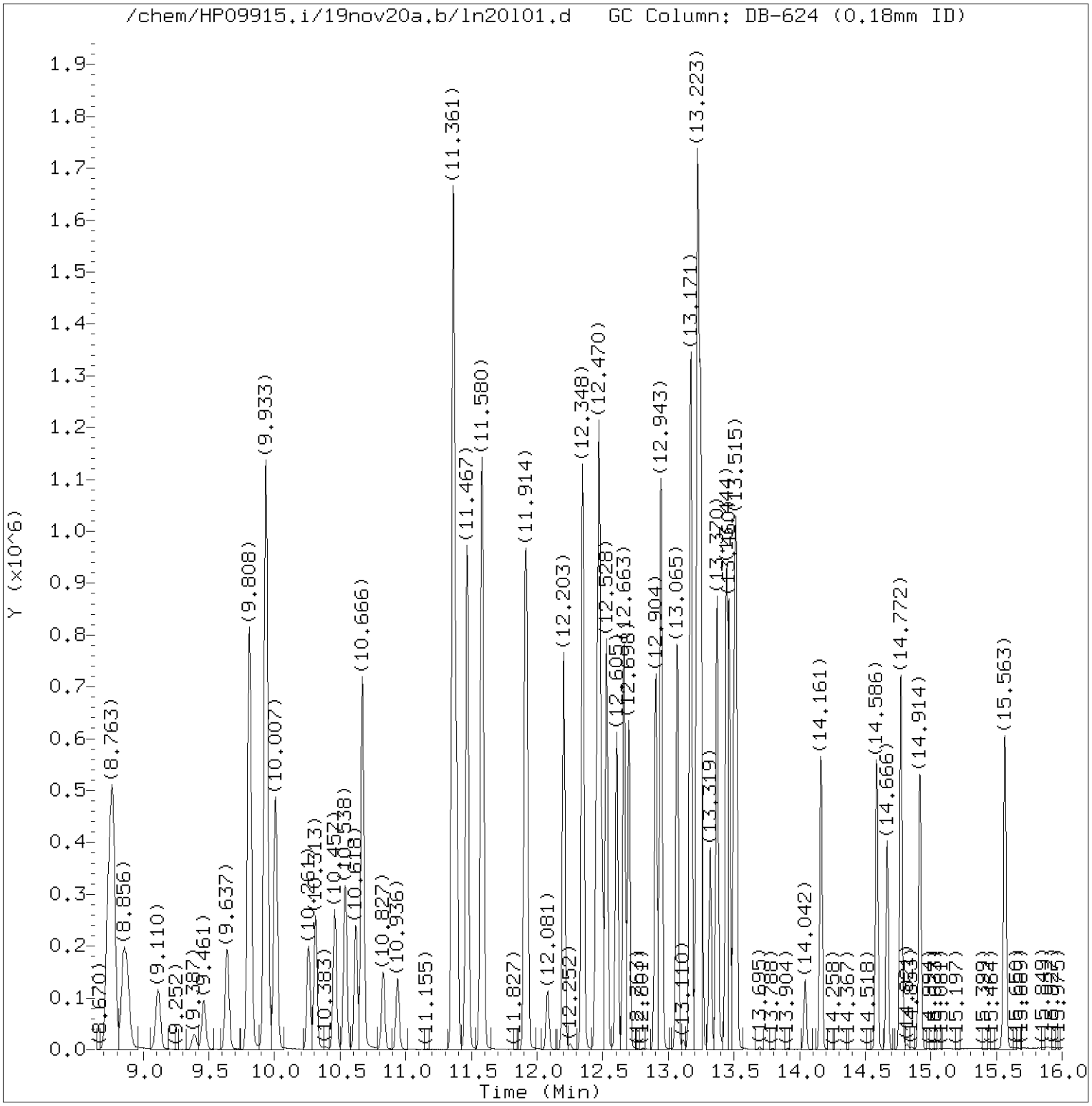
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20l01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 09:13 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Sample Name: LCSL80 Lab Sample ID: LCSL80

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20l01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 09:13 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Sample Name: LCSL80 Lab Sample ID: LCSL80

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20l01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 09:13 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Sample Name: LCSL80 Lab Sample ID: LCSL80

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	2.406	62	122924	19.836
17) 1,1-Dichloroethene	(2)	3.770	96	79383	20.271
19) Freon 113	(2)	3.805	101	84393	18.889
18) Acetone	(1)	3.808	58	88894	157.234
23) Carbon Disulfide	(2)	4.078	76	247183	16.750
28) Methylene Chloride	(2)	4.483	84	96028	20.603
29)*t-Butyl alcohol-d10	(1)	4.516	65	168087	250.000
32) trans-1,2-Dichloroethene	(2)	4.895	96	91810	20.266
36) 1,1-Dichloroethane	(2)	5.561	63	155286	19.649
44) 2-Butanone	(2)	6.368	43	453248	130.122
42) cis-1,2-Dichloroethene	(2)	6.384	96	108658	21.369
51) Chloroform	(2)	6.863	83	154156	20.395
52)$Dibromofluoromethane	(2)	7.078	113	216175	47.864
53) 1,1,1-Trichloroethane	(2)	7.088	97	128442	19.910
57)$1,2-Dichloroethane-d4	(2)	7.535	102	57092	49.599
60) Benzene	(2)	7.560	78	389052	20.704
61) 1,2-Dichloroethane	(2)	7.634	62	121733	20.141
66)*Fluorobenzene	(2)	7.962	96	923804	50.000
71) Trichloroethene	(2)	8.435	95	97941	20.700
75) 1,4-Dioxane	(1)	8.856	88	36202	642.599
83)$Toluene-d8	(3)	9.933	98	960737	48.538
88) Toluene	(3)	10.007	92	253800	20.452
93) Tetrachloroethene	(3)	10.541	166	104969	19.973
100)*Chlorobenzene-d5	(3)	11.361	117	756463	50.000
104) Ethylbenzene	(3)	11.467	91	482617	20.348
106) m+p-Xylene	(3)	11.580	106	387000	41.477
108) Xylene (Total)	(3)		106	572853	61.643
107) o-Xylene	(3)	11.908	106	185853	20.166
114)$4-Bromofluorobenzene	(3)	12.348	95	372288	49.672
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	402949	50.000
138) 1,2-Dichlorobenzene	(4)	13.502	146	225904	20.572
148) Naphthalene	(4)	14.772	128	528621	20.044

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

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NYSDEC ASP Category B Data Package

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Project: AD-New Windsor, NY
Groundwater, Surface Water and Water Samples
Collected on 11/11/19-11/13/19

SDG# JCW20

GROUP	SAMPLE NUMBERS
2074777	1202314-1202323

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-18-27
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M. Kauffman **Date:** **12/31/2019**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Katherine Klinefelter at (717) 556-7256.

2425 New Holland Pike, Lancaster, PA 17601 | 717-656-2300 | Fax: 717-656-2681 | www.LancasterLabs.com

Table of Contents for SDG# JCW20

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Sample Reference List for SDG Number JCW20 with a Data Package Type of NYSDEC B

06556 - The Johnson Company, Inc.

Project: AD-New Windsor, NY

Lab Sample Number	Client Sample ID	Collection Date	Date Received	Lab Sample Code
1202314	PDBBLANK	11/12/2019 07:15	11/14/2019 10:55	C2001
1202315	J17-UC02	11/12/2019 15:43	11/14/2019 10:55	C2002
1202316	RS-05	11/11/2019 15:50	11/14/2019 10:55	C2003
1202317	RS-12A	11/12/2019 11:37	11/14/2019 10:55	C2004
1202318	RS-01	11/12/2019 11:46	11/14/2019 10:55	C2005
1202319	RS-09	11/12/2019 11:55	11/14/2019 10:55	C2006
1202320	RS-13	11/12/2019 12:06	11/14/2019 10:55	C2007
1202321	J18-UC03	11/13/2019 10:16	11/14/2019 10:55	C2008
1202322	J21-UC01	11/13/2019 11:21	11/14/2019 10:55	C2009
1202323	J21-UC02	11/13/2019 12:04	11/14/2019 10:55	C2010

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Sample pH Log

SDG: JCW20

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
1202314	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/20/2019 10:26:16PM	10203
1202315	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/20/2019 10:26:16PM	10203
1202316	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/20/2019 10:26:16PM	10203
1202317	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/20/2019 10:26:16PM	10203
1202318	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/20/2019 10:26:16PM	10203
1202319	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/20/2019 10:26:17PM	10203
1202320	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/20/2019 10:26:17PM	10203
1202321	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/21/2019 11:09:53PM	10203
1202322	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/21/2019 11:09:53PM	10203
1202323	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/21/2019 11:09:53PM	10203

*pH Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

**Chlorine Present Code Key
NA = Chlorine Not Checked
Y = Chlorine Present
N = Chlorine Not Present

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11997 VOCs- 5ml Water by 8260C/D

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Report Date: November 24, 2019 11:31

Project: AD-New Windsor, NY

Account #: 06556
Group Number: 2074777
SDG: JCW20
PO Number: 1-0145-05
Release Number: 58300.00
State of Sample Origin: NY

Electronic Copy To	The Johnson Company, Inc.	Attn: Tristan Hardy
Electronic Copy To	The Johnson Company, Inc.	Attn: George Lester
Electronic Copy To	VHB	Attn: Quinn Ledak

Respectfully Submitted,

Katherine A. Klinefelter

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Principal Specialist

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
PDBBLANK Grab Water	11/12/2019 07:15	1202314
J17-UC02 Grab Groundwater	11/12/2019 15:43	1202315
RS-05 Grab Surface Water	11/11/2019 15:50	1202316
RS-12A Grab Surface Water	11/12/2019 11:37	1202317
RS-01 Grab Surface Water	11/12/2019 11:46	1202318
RS-09 Grab Surface Water	11/12/2019 11:55	1202319
RS-13 Grab Surface Water	11/12/2019 12:06	1202320
J18-UC03 Grab Groundwater	11/13/2019 10:16	1202321
J21-UC01 Grab Groundwater	11/13/2019 11:21	1202322
J21-UC02 Grab Groundwater	11/13/2019 12:04	1202323

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **PDBBLANK Grab Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/12/2019 07:15
SDG#: JCW20-01BL

The Johnson Company, Inc.
ELLE Sample #: WW 1202314
ELLE Group #: 2074777
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	2 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	0.3 J	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193241AA	11/20/2019 10:19	Kathrine K Muramatsu	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193241AA	11/20/2019 10:18	Kathrine K Muramatsu	1

*=This limit was used in the evaluation of the final result

Sample Description: **J17-UC02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/12/2019 15:43
SDG#: JCW20-02

The Johnson Company, Inc.
ELLE Sample #: GW 1202315
ELLE Group #: 2074777
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	1	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193241AA	11/20/2019 15:54	Kathrine K Muramatsu	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193241AA	11/20/2019 15:53	Kathrine K Muramatsu	1

*=This limit was used in the evaluation of the final result

Sample Description: **RS-05 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/11/2019 15:50
SDG#: JCW20-03

The Johnson Company, Inc.
ELLE Sample #: WW 1202316
ELLE Group #: 2074777
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.8 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	0.2 J	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	1	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	1	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	2	0.3	1	1
11997	Trichloroethene	79-01-6	11	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193241AA	11/20/2019 16:16	Kathrine K Muramatsu	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193241AA	11/20/2019 16:15	Kathrine K Muramatsu	1

*=This limit was used in the evaluation of the final result

Sample Description: **RS-12A Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/12/2019 11:37
SDG#: JCW20-04

The Johnson Company, Inc.
ELLE Sample #: WW 1202317
ELLE Group #: 2074777
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	0.5 J	0.3	1	1
11997	Trichloroethene	79-01-6	0.3 J	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193241AA	11/20/2019 16:38	Kathrine K Muramatsu	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193241AA	11/20/2019 16:37	Kathrine K Muramatsu	1

*=This limit was used in the evaluation of the final result

Sample Description: **RS-01 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/12/2019 11:46
SDG#: JCW20-05

The Johnson Company, Inc.
ELLE Sample #: WW 1202318
ELLE Group #: 2074777
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	0.6 J	0.3	1	1
11997	Trichloroethene	79-01-6	0.8 J	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193241AA	11/20/2019 17:00	Kathrine K Muramatsu	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193241AA	11/20/2019 16:59	Kathrine K Muramatsu	1

*=This limit was used in the evaluation of the final result

Sample Description: **RS-09 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/12/2019 11:55
SDG#: JCW20-06

The Johnson Company, Inc.
ELLE Sample #: WW 1202319
ELLE Group #: 2074777
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	0.5 J	0.3	1	1
11997	Trichloroethene	79-01-6	1	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193241AA	11/20/2019 17:22	Kathrine K Muramatsu	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193241AA	11/20/2019 17:21	Kathrine K Muramatsu	1

*=This limit was used in the evaluation of the final result

Sample Description: **RS-13 Grab Surface Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/12/2019 12:06
SDG#: JCW20-07

The Johnson Company, Inc.
ELLE Sample #: WW 1202320
ELLE Group #: 2074777
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.8 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	0.3 J	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	1	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	1	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	3	0.3	1	1
11997	Trichloroethene	79-01-6	13	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193241AA	11/20/2019 17:44	Kathrine K Muramatsu	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193241AA	11/20/2019 17:43	Kathrine K Muramatsu	1

*=This limit was used in the evaluation of the final result

Sample Description: **J18-UC03 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/13/2019 10:16
SDG#: JCW20-08

The Johnson Company, Inc.
ELLE Sample #: GW 1202321
ELLE Group #: 2074777
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	4	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193251AA	11/21/2019 14:39	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193251AA	11/21/2019 14:38	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **J21-UC01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/13/2019 11:21
SDG#: JCW20-09

The Johnson Company, Inc.
ELLE Sample #: GW 1202322
ELLE Group #: 2074777
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	0.3 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	1	0.3	1	1
11997	Trichloroethene	79-01-6	1 J	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193251AA	11/21/2019 15:01	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193251AA	11/21/2019 15:00	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **J21-UC02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/13/2019 12:04
SDG#: JCW20-10

The Johnson Company, Inc.
ELLE Sample #: GW 1202323
ELLE Group #: 2074777
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	0.3 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	0.3 J	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193251AA	11/21/2019 15:23	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193251AA	11/21/2019 15:22	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2074777
Reported: 11/24/2019 11:31

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: L193241AA	Sample number(s): 1202314-1202320		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	6
Batch number: L193251AA	Sample number(s): 1202321-1202323		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2074777
Reported: 11/24/2019 11:31

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	6

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: L193241AA	Sample number(s): 1202314-1202320								
Acetone	150	157.23			105		54-157		
Benzene	20	20.7			104		80-120		
2-Butanone	150	130.12			87		59-135		
Carbon Disulfide	20	16.75			84		65-128		
Chloroform	20	20.39			102		80-120		
1,2-Dichlorobenzene	20	20.57			103		80-120		
1,1-Dichloroethane	20	19.65			98		80-120		
1,2-Dichloroethane	20	20.14			101		73-124		
1,1-Dichloroethene	20	20.27			101		80-131		
cis-1,2-Dichloroethene	20	21.37			107		80-125		
trans-1,2-Dichloroethene	20	20.27			101		80-126		
1,4-Dioxane	500	642.6			129		63-146		
Ethylbenzene	20	20.35			102		80-120		
Freon 113	20	18.89			94		73-139		
Methylene Chloride	20	20.6			103		80-120		
Naphthalene	20	20.04			100		53-124		
Tetrachloroethene	20	19.97			100		80-120		
Toluene	20	20.45			102		80-120		
1,1,1-Trichloroethane	20	19.91			100		67-126		
Trichloroethene	20	20.7			104		80-120		
Vinyl Chloride	20	19.84			99		56-120		
Xylene (Total)	60	61.64			103		80-120		
Batch number: L193251AA	Sample number(s): 1202321-1202323								
Acetone	150	146.22			97		54-157		
Benzene	20	20.19			101		80-120		
2-Butanone	150	131.01			87		59-135		
Carbon Disulfide	20	15.74			79		65-128		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2074777
Reported: 11/24/2019 11:31

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Chloroform	20	20.01			100		80-120		
1,2-Dichlorobenzene	20	20.49			102		80-120		
1,1-Dichloroethane	20	18.72			94		80-120		
1,2-Dichloroethane	20	20.32			102		73-124		
1,1-Dichloroethene	20	19.25			96		80-131		
cis-1,2-Dichloroethene	20	20.73			104		80-125		
trans-1,2-Dichloroethene	20	19.48			97		80-126		
1,4-Dioxane	500	616.34			123		63-146		
Ethylbenzene	20	20.34			102		80-120		
Freon 113	20	17.96			90		73-139		
Methylene Chloride	20	20			100		80-120		
Naphthalene	20	19.46			97		53-124		
Tetrachloroethene	20	19.67			98		80-120		
Toluene	20	20.1			101		80-120		
1,1,1-Trichloroethane	20	19.03			95		67-126		
Trichloroethene	20	20.17			101		80-120		
Vinyl Chloride	20	18.91			95		56-120		
Xylene (Total)	60	61.82			103		80-120		

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: L193241AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1202314	94	100	96	98
1202315	96	101	97	96
1202316	96	103	96	96
1202317	96	101	96	97
1202318	97	102	95	96
1202319	97	102	96	96
1202320	97	101	96	95
Blank	93	98	97	98
LCS	96	99	97	99
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: L193251AA

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2074777
Reported: 11/24/2019 11:31

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: L193251AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1202321	96	101	96	97
1202322	98	101	95	96
1202323	96	101	96	96
Blank	95	101	96	97
LCS	95	99	97	100
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 6556 | For Eurofins Lancaster Laboratories Environmental use only | Group # 2074777 | Sample # 120 2314-23

COC # 596344

Client Information

Client: VHB / The Johnson Company	Acct. #: 06556
Project Name/#: AD-New Windsor / 58300	PWSID #:
Project Manager: George Lester	P.O. #:
Sampler: Adam Robley	Quote #:
State where samples were collected: NY	For Compliance: Yes ☐ No ☒

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground (G) ☒ Surface ☒ NPDES ☐ | Other: ____

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Matrix	Total # of Containers	8260C-VOCs
PDB Blank	11/12/19	715	X		DI	3	X
J17-UC02	11/12/19	1543	X		X-G	3	X
RS-05	11/11/19	1550	X		X-S	3	X
RS-12A	11/12/19	1137	X		X-S	3	X
RS-01	11/12/19	1146	X		X-S	3	X
RS-09	11/12/19	1155	X		X-S	3	X
RS-13	11/12/19	1206	X		X-S	3	X
J18-UC03	11/13/19	1016	X		X-G	3	X
J21-UC01	11/13/19	1121	X		X-G	3	X
J21-UC02	11/13/19	1204	X		X-G	3	X

For Lab Use Only

FSC: ____

SCR#: 251708

Preservation Codes

H=HCl | T=Thiosulfate | N=HNO_3 | B=NaOH | S=H_2SO_4 | P=H_3PO_4 | F=Field Filtered | O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard | Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: ____

E-mail address: Glester@vhb.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)

Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13

NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	11-6-19	1030	[signature]	11/11/19	806
[signature]	11/13/19	1645	[signature]		
			[signature]	11/14/19	1055

EDD Required? Yes / No

If yes, format: Excel

Site-Specific QC (MS/MSD/Dup)? Yes / No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ____ Other ____

Temperature upon receipt 1.3 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 266478

Group Number(s): 2074777

Client: VHB THE JOHNSON COMPANY

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	11/14/2019
Number of Packages:	1	Number of Projects:	3
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	0
Samples Chilled:	Yes	Air Quality Samples Present:	No
Paperwork Enclosed:	Yes		
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Christopher Stief

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192050133	1.3	IR	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T 717-656-2300
F 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCW20

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
1202314	PDBBLANK	X		1	Blank
1202315	J17-UC02	X		1	
1202316	RS-05	X		1	
1202317	RS-12A	X		1	
1202318	RS-01	X		1	
1202319	RS-09	X		1	
1202320	RS-13	X		1	
1202321	J18-UC03	X		1	
1202322	J21-UC01	X		1	
1202323	J21-UC02	X		1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCW20

GC/MS Volatiles

Fraction: Volatiles by GC/MS

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

1. Relative Response Factor (RRF)

$$RRF = \frac{AX}{Ais} \times \frac{Cis}{Cx}$$

Where:

Ax = Area of the characteristic ion for the compound to be measured
Ais = Area of the characteristic ion for the specific internal standard to be measured
Cis = Concentration of the internal standard
Cx = Concentration of the compound to be measured

2. % Relative Standard Deviation (%RSD)

$$\%RSD = \frac{standard\ deviation}{Mean} \times 100$$

3. % Difference

$$\%D = \frac{RRFc - RRFi}{RRFi} \times 100$$

Where:

RRFc = Relative response factor from the continuing calibration standard
RRFi = Mean relative response factor from the initial calibration

4. Concentration

$$Concentration\ (\mu g/L) = \frac{(Ax)(Is)(Df)}{(Ais)(RRF)}$$

Where:

Ax, Ais, and RRF are as given in 1. above
Is = Amount of internal standard added in parts per billion (µg/L)
Df = Dilution factor

5. % Recovery (% Rec)

$$\%Rec = \frac{SSR - SR}{SA} \times 100$$

Where:

SSR = Spiked sample result
SR = Sample result
SA = Spike added

6. Relative Percent Difference (RPD)

$$RPD = \frac{(MSR - MSRD)}{(1/2)(MSR + MSRD)} \times 100$$

Where:

MSR = Matrix spike recovery
MSRD = Matrix spike recovery duplicate

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: The Johnson Company, Inc.
SDG: JCW20

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
VOCs- 5ml Water by 8260C/D	L193241AA	VBLKL80	11/20/2019 09:35
		LCSL80	11/20/2019 09:13
		1202314 BL	11/20/2019 10:19
		1202315	11/20/2019 15:54
		1202316	11/20/2019 16:16
		1202317	11/20/2019 16:38
		1202318	11/20/2019 17:00
		1202319	11/20/2019 17:22
		1202320	11/20/2019 17:44
VOCs- 5ml Water by 8260C/D	L193251AA	VBLKL83	11/21/2019 09:24
		LCSL83	11/21/2019 09:50
		1202321	11/21/2019 14:39
		1202322	11/21/2019 15:01
		1202323	11/21/2019 15:23

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: JCW20
Matrix: LIQUID

Fraction: Volatiles by GC/MS

L193241AA / VBLKL80 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	11/20/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	11/20/19	N.D.	ug/l	0.2	1
Acetone	11/20/19	N.D.	ug/l	0.7	20
Freon 113	11/20/19	N.D.	ug/l	0.2	10
Carbon Disulfide	11/20/19	N.D.	ug/l	0.2	5
Methylene Chloride	11/20/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	11/20/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	11/20/19	N.D.	ug/l	0.2	1
2-Butanone	11/20/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	11/20/19	N.D.	ug/l	0.2	1
Chloroform	11/20/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	11/20/19	N.D.	ug/l	0.3	1
Benzene	11/20/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	11/20/19	N.D.	ug/l	0.3	1
Trichloroethene	11/20/19	N.D.	ug/l	0.2	1
1,4-Dioxane	11/20/19	N.D.	ug/l	29	250
Toluene	11/20/19	N.D.	ug/l	0.2	1
Tetrachloroethene	11/20/19	N.D.	ug/l	0.2	1
Ethylbenzene	11/20/19	N.D.	ug/l	0.4	1
Xylene (Total)	11/20/19	N.D.	ug/l	1	6
1,2-Dichlorobenzene	11/20/19	N.D.	ug/l	0.2	5
Naphthalene	11/20/19	N.D.	ug/l	1	5

L193251AA / VBLKL83 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	11/21/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	11/21/19	N.D.	ug/l	0.2	1
Acetone	11/21/19	N.D.	ug/l	0.7	20
Freon 113	11/21/19	N.D.	ug/l	0.2	10
Carbon Disulfide	11/21/19	N.D.	ug/l	0.2	5
Methylene Chloride	11/21/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	11/21/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	11/21/19	N.D.	ug/l	0.2	1
2-Butanone	11/21/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	11/21/19	N.D.	ug/l	0.2	1
Chloroform	11/21/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	11/21/19	N.D.	ug/l	0.3	1
Benzene	11/21/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	11/21/19	N.D.	ug/l	0.3	1
Trichloroethene	11/21/19	N.D.	ug/l	0.2	1
1,4-Dioxane	11/21/19	N.D.	ug/l	29	250
Toluene	11/21/19	N.D.	ug/l	0.2	1
Tetrachloroethene	11/21/19	N.D.	ug/l	0.2	1
Ethylbenzene	11/21/19	N.D.	ug/l	0.4	1
Xylene (Total)	11/21/19	N.D.	ug/l	1	6

Fraction: Volatiles by GC/MS

L193251AA / VBLKL83 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
1,2-Dichlorobenzene	11/21/19	N.D.	ug/l	0.2	5
Naphthalene	11/21/19	N.D.	ug/l	1	5

Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: JCW20
Matrix: LIQUID

Fraction: Volatiles by GC/MS

L193241AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKL80	98	80 - 120	98	80 - 120	93	80 - 120	97	80 - 120
LCSL80	99	80 - 120	99	80 - 120	96	80 - 120	97	80 - 120
1202314	100	80 - 120	98	80 - 120	94	80 - 120	96	80 - 120
1202315	101	80 - 120	96	80 - 120	96	80 - 120	97	80 - 120
1202316	103	80 - 120	96	80 - 120	96	80 - 120	96	80 - 120
1202317	101	80 - 120	97	80 - 120	96	80 - 120	96	80 - 120
1202318	102	80 - 120	96	80 - 120	97	80 - 120	95	80 - 120
1202319	102	80 - 120	96	80 - 120	97	80 - 120	96	80 - 120
1202320	101	80 - 120	95	80 - 120	97	80 - 120	96	80 - 120

L193251AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKL83	101	80 - 120	97	80 - 120	95	80 - 120	96	80 - 120
LCSL83	99	80 - 120	100	80 - 120	95	80 - 120	97	80 - 120
1202321	101	80 - 120	97	80 - 120	96	80 - 120	96	80 - 120
1202322	101	80 - 120	96	80 - 120	98	80 - 120	95	80 - 120
1202323	101	80 - 120	96	80 - 120	96	80 - 120	96	80 - 120

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: JCW20
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSL80	Batch: **L193241AA** (Sample number(s): 1202314-1202320)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	19.84	NA	99	NA	56-120	NA	NA
1,1-Dichloroethene	20	20.27	NA	101	NA	80-131	NA	NA
Acetone	150	157.23	NA	105	NA	54-157	NA	NA
Freon 113	20	18.89	NA	94	NA	73-139	NA	NA
Carbon Disulfide	20	16.75	NA	84	NA	65-128	NA	NA
Methylene Chloride	20	20.6	NA	103	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	20.27	NA	101	NA	80-126	NA	NA
1,1-Dichloroethane	20	19.65	NA	98	NA	80-120	NA	NA
2-Butanone	150	130.12	NA	87	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	21.37	NA	107	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	19.91	NA	100	NA	67-126	NA	NA
Chloroform	20	20.39	NA	102	NA	80-120	NA	NA
1,2-Dichloroethane	20	20.14	NA	101	NA	73-124	NA	NA
Benzene	20	20.7	NA	104	NA	80-120	NA	NA
Trichloroethene	20	20.7	NA	104	NA	80-120	NA	NA
1,4-Dioxane	500	642.6	NA	129	NA	63-146	NA	NA
Toluene	20	20.45	NA	102	NA	80-120	NA	NA
Tetrachloroethene	20	19.97	NA	100	NA	80-120	NA	NA
Ethylbenzene	20	20.35	NA	102	NA	80-120	NA	NA
Xylene (Total)	60	61.64	NA	103	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	20.57	NA	103	NA	80-120	NA	NA
Naphthalene	20	20.04	NA	100	NA	53-124	NA	NA

LCS: LCSL83	Batch: **L193251AA** (Sample number(s): 1202321-1202323)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	18.91	NA	95	NA	56-120	NA	NA
1,1-Dichloroethene	20	19.25	NA	96	NA	80-131	NA	NA
Acetone	150	146.22	NA	97	NA	54-157	NA	NA
Freon 113	20	17.96	NA	90	NA	73-139	NA	NA
Carbon Disulfide	20	15.74	NA	79	NA	65-128	NA	NA
Methylene Chloride	20	20	NA	100	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	19.48	NA	97	NA	80-126	NA	NA
1,1-Dichloroethane	20	18.72	NA	94	NA	80-120	NA	NA
2-Butanone	150	131.01	NA	87	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	20.73	NA	104	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	19.03	NA	95	NA	67-126	NA	NA
Chloroform	20	20.01	NA	100	NA	80-120	NA	NA
1,2-Dichloroethane	20	20.32	NA	102	NA	73-124	NA	NA
Benzene	20	20.19	NA	101	NA	80-120	NA	NA
Trichloroethene	20	20.17	NA	101	NA	80-120	NA	NA

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: JCW20
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSL83	Batch: **L193251AA** (Sample number(s): 1202321-1202323)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
1,4-Dioxane	500	616.34	NA	123	NA	63-146	NA	NA
Toluene	20	20.1	NA	101	NA	80-120	NA	NA
Tetrachloroethene	20	19.67	NA	98	NA	80-120	NA	NA
Ethylbenzene	20	20.34	NA	102	NA	80-120	NA	NA
Xylene (Total)	60	61.82	NA	103	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	20.49	NA	102	NA	80-120	NA	NA
Naphthalene	20	19.46	NA	97	NA	53-124	NA	NA

Fraction: Volatiles by GC/MS

11997: VOCs- 5ml Water by 8260C/D Analyte Name	Default MDL	Default LOQ	Units
Vinyl Chloride	0.2	1	ug/l
1,1-Dichloroethene	0.2	1	ug/l
Acetone	0.7	20	ug/l
Freon 113	0.2	10	ug/l
Carbon Disulfide	0.2	5	ug/l
Methylene Chloride	0.3	1	ug/l
trans-1,2-Dichloroethene	0.2	1	ug/l
1,1-Dichloroethane	0.2	1	ug/l
2-Butanone	0.3	10	ug/l
cis-1,2-Dichloroethene	0.2	1	ug/l
Chloroform	0.2	1	ug/l
1,1,1-Trichloroethane	0.3	1	ug/l
Benzene	0.2	1	ug/l
1,2-Dichloroethane	0.3	1	ug/l
Trichloroethene	0.2	1	ug/l
1,4-Dioxane	29	250	ug/l
Toluene	0.2	1	ug/l
Tetrachloroethene	0.2	1	ug/l
Ethylbenzene	0.4	1	ug/l
Xylene (Total)	1	6	ug/l
1,2-Dichlorobenzene	0.2	5	ug/l
Naphthalene	1	5	ug/l

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln04t06.d BFB Injection Date: 11/04/19

Instrument ID: HP09915 BFB Injection Time: 14:18

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.48
75	30.0 - 60.0% of mass 95	44.65
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.22
173	Less than 2.0% of mass 174	0.51 (0.61)1
174	Greater than 50.0% of mass 95	83.73
175	5.0 - 9.0% of mass 174	5.92 (7.07)1
176	Greater than 95.0%, but less than 101.0% of mass 174	82.66 (98.72)1
177	5.0 - 9.0% of mass 176	5.37 (6.49)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	ln04i01.d	11/04/19	14:51
02	VSTD100	ln04i02.d	11/04/19	15:13
03	VSTD50	ln04i03.d	11/04/19	15:35
04	VSTD20	ln04i04.d	11/04/19	15:57
05	VSTD10	ln04i05.d	11/04/19	16:19
06	VSTD4	ln04i06.d	11/04/19	16:41
07	VSTD1	ln04i07.d	11/04/19	17:03
08	ICVLLG	ln04v02.d	11/04/19	18:42

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln20t01.d BFB Injection Date: 11/20/19

Instrument ID: HP09915 BFB Injection Time: 08:00

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.52
75	30.0 - 60.0% of mass 95	44.88
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.35
173	Less than 2.0% of mass 174	0.43 (0.54)1
174	Greater than 50.0% of mass 95	80.67
175	5.0 - 9.0% of mass 174	5.73 (7.10)1
176	Greater than 95.0%, but less than 101.0% of mass 174	79.93 (99.08)1
177	5.0 - 9.0% of mass 176	5.28 (6.60)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	ln20c01.d	11/20/19	08:51
02	LCSL80	ln20l01.d	11/20/19	09:13
03	VBLKL80	ln20b01.d	11/20/19	09:35
04	1202295	ln20s01.d	11/20/19	09:57
05	1202314	ln20s02.d	11/20/19	10:19
06	1202284	ln20s03.d	11/20/19	10:41
07	1202285	ln20s04.d	11/20/19	11:03
08	1202296	ln20s05.d	11/20/19	11:25
09	1202297MS	ln20s06.d	11/20/19	11:52
10	1202298MSD	ln20s07.d	11/20/19	12:14
11	1202299	ln20s08.d	11/20/19	12:36
12	1202300	ln20s09.d	11/20/19	12:58
13	1202301	ln20s10.d	11/20/19	13:20
14	1202302	ln20s11.d	11/20/19	13:42
15	1202303	ln20s12.d	11/20/19	14:04
16	1202304	ln20s13.d	11/20/19	14:26
17	1202305	ln20s14.d	11/20/19	14:48
18	1202306	ln20s15.d	11/20/19	15:10
19	1202307	ln20s16.d	11/20/19	15:32
20	1202315	ln20s17.d	11/20/19	15:54
21	1202316	ln20s18.d	11/20/19	16:16
22	1202317	ln20s19.d	11/20/19	16:38

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln20t01.d BFB Injection Date: 11/20/19

Instrument ID: HP09915 BFB Injection Time: 08:00

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.52
75	30.0 - 60.0% of mass 95	44.88
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.35
173	Less than 2.0% of mass 174	0.43 (0.54)1
174	Greater than 50.0% of mass 95	80.67
175	5.0 - 9.0% of mass 174	5.73 (7.10)1
176	Greater than 95.0%, but less than 101.0% of mass 174	79.93 (99.08)1
177	5.0 - 9.0% of mass 176	5.28 (6.60)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1202318	ln20s20.d	11/20/19	17:00
24	1202319	ln20s21.d	11/20/19	17:22
25	1202320	ln20s22.d	11/20/19	17:44

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln21t02.d BFB Injection Date: 11/21/19

Instrument ID: HP09915 BFB Injection Time: 07:42

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.38
75	30.0 - 60.0% of mass 95	44.70
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.06
173	Less than 2.0% of mass 174	0.40 (0.48)1
174	Greater than 50.0% of mass 95	82.72
175	5.0 - 9.0% of mass 174	5.73 (6.92)1
176	Greater than 95.0%, but less than 101.0% of mass 174	80.53 (97.35)1
177	5.0 - 9.0% of mass 176	5.22 (6.48)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	ln21c01.d	11/21/19	08:18
02	RVLL83 - RLVL83	ln21r01.d	11/21/19	09:02
03	VBLKL83	ln21b01.d	11/21/19	09:24
04	LCSL83	ln21l01.d	11/21/19	09:50
05	1202441	ln21s02.d	11/21/19	10:59
06	1202286	ln21s03.d	11/21/19	11:21
07	1202287MS	ln21s04.d	11/21/19	11:43
08	1202288MSD	ln21s05.d	11/21/19	12:04
09	1202289	ln21s06.d	11/21/19	12:26
10	1202290	ln21s07.d	11/21/19	12:48
11	1202291	ln21s08.d	11/21/19	13:10
12	1202292	ln21s09.d	11/21/19	13:32
13	1202293	ln21s10.d	11/21/19	13:54
14	1202294	ln21s11.d	11/21/19	14:16
15	1202321	ln21s12.d	11/21/19	14:39
16	1202322	ln21s13.d	11/21/19	15:01
17	1202323	ln21s14.d	11/21/19	15:23
18	1202325	ln21s15.d	11/21/19	15:45
19	1202326	ln21s16.d	11/21/19	16:07
20	1202327	ln21s17.d	11/21/19	16:29
21	1202434	ln21s18.d	11/21/19	16:51
22	1202437	ln21s19.d	11/21/19	17:13

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln21t02.d BFB Injection Date: 11/21/19

Instrument ID: HP09915 BFB Injection Time: 07:42

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.38
75	30.0 - 60.0% of mass 95	44.70
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.06
173	Less than 2.0% of mass 174	0.40 (0.48)1
174	Greater than 50.0% of mass 95	82.72
175	5.0 - 9.0% of mass 174	5.73 (6.92)1
176	Greater than 95.0%, but less than 101.0% of mass 174	80.53 (97.35)1
177	5.0 - 9.0% of mass 176	5.22 (6.48)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1202438	ln21s20.d	11/21/19	17:35
24	1202439	ln21s21.d	11/21/19	17:57
25	1202440	ln21s22.d	11/21/19	18:19

FORM V VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 11/04/19 11/04/19

Heated Purge: (Y/N) Y Calibration Times: 14:51 17:03

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ln04i07.d RRF 4 = ln04i06.d RRF 10= ln04i05.d
RRF 20= ln04i04.d RRF 50= ln04i03.d RRF100= ln04i02.d RRF300= ln04i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
Dichlorodifluoromethane	#0.2770	0.3398	0.3322	0.3567	0.3683	0.3624	0.4044	0.3487	11	AVG	#
Chloromethane	#0.3032	0.3486	0.3309	0.3441	0.3366	0.3315	0.3574	0.3361	5	AVG	#
1,3-Butadiene	0.3190	0.2966	0.2596	0.2831	0.2680	0.2614	0.2655	0.2790	8	AVG	
Vinyl Chloride	#0.3148	0.3359	0.3281	0.3461	0.3340	0.3300	0.3588	0.3354	4	AVG	#
Bromomethane	#0.2465	0.2525	0.2338	0.2435	0.2351	0.2280	0.2436	0.2404	4	AVG	#
Chloroethane	#0.1829	0.1883	0.1826	0.1903	0.1829	0.1768	0.1864	0.1843	2	AVG	#
Dichlorofluoromethane	0.4438	0.4434	0.4617	0.4547	0.4393	0.4194	0.4429	0.4436	3	AVG	
n-Pentane	0.4515	0.4661	0.3729	0.4321	0.4220	0.4236	0.4188	0.4267	7	AVG	
Trichlorofluoromethane	#0.3135	0.3650	0.3480	0.3680	0.3738	0.3637	0.3957	0.3611	7	AVG	#
Ethyl ether	0.2040	0.2292	0.2248	0.2407	0.2462	0.2325	0.2560	0.2333	7	AVG	
Freon 123a	0.2731	0.2973	0.2841	0.3052	0.2905	0.2871	0.2961	0.2905	4	AVG	
Acrolein	1.8108	1.7178	1.8759	1.9357	1.9501	1.9507	1.8885	1.8756	5	AVG	
1,1-Dichloroethene	#0.1836	0.2109	0.2092	0.2256	0.2170	0.2158	0.2215	0.2120	6	AVG	#
1,1-Dichloroethene(2)	#0.1023	0.1059	0.1045	0.1117	0.1063	0.1059	0.1072	0.1063	3	AVG	#
Acetone	#0.8149	0.8065	0.8248	0.8719	0.8448	0.8521	0.8711	0.8409	3	AVG	#
Freon 113	#0.2090	0.2460	0.2241	0.2555	0.2493	0.2512	0.2576	0.2418	8	AVG	#
2-Propanol	0.6190	0.5470	0.6059	0.5854	0.6149	0.6455	0.6138	0.6045	5	AVG	
Methyl Iodide	0.3896	0.4318	0.4390	0.4699	0.4471	0.4440	0.4531	0.4392	6	AVG	
Carbon Disulfide	#0.6790	0.7802	0.7759	0.8606	0.8244	0.8268	0.8441	0.7987	8	AVG	#
Allyl Chloride	0.3592	0.3785	0.3741	0.3853	0.3781	0.3777	0.4087	0.3802	4	AVG	
Methyl Acetate	#0.2759	0.2713	0.2678	0.2699	0.2708	0.2665	0.2887	0.2730	3	AVG	#
Methylene Chloride	#0.2376	0.2470	0.2510	0.2643	0.2542	0.2521	0.2596	0.2523	3	AVG	#
t-Butyl alcohol	0.9987	0.9567	1.0535	1.0361	1.0823	1.1654	1.0751	1.0525	6	AVG	
Acrylonitrile	0.1302	0.1382	0.1473	0.1543	0.1516	0.1518	0.1546	0.1469	6	AVG	
trans-1,2-Dichloroethene	#0.2214	0.2420	0.2423	0.2603	0.2478	0.2478	0.2548	0.2452	5	AVG	#
Methyl Tertiary Butyl Ether	#0.7408	0.7784	0.8166	0.8514	0.8245	0.8033	0.8186	0.8048	4	AVG	#
n-Hexane	0.3287	0.3697	0.3246	0.4104	0.3995	0.4116	0.4257	0.3815	11	AVG	
1,1-Dichloroethane	#0.3709	0.4279	0.4277	0.4500	0.4356	0.4348	0.4472	0.4277	6	AVG	#
di-Isopropyl ether	0.7323	0.7905	0.8261	0.8844	0.8488	0.8391	0.8535	0.8250	6	AVG	
2-Chloro-1,3-butadiene	0.3275	0.3721	0.3665	0.4087	0.3982	0.4003	0.4129	0.3838	8	AVG	
Ethyl t-butyl ether	0.7062	0.7711	0.8131	0.8688	0.8314	0.8069	0.8067	0.8006	6	AVG	
cis-1,2-Dichloroethene	#0.2518	0.2724	0.2701	0.2905	0.2780	0.2764	0.2874	0.2752	5	AVG	#
2-Butanone	#0.1780	0.1771	0.1844	0.1937	0.1954	0.1945	0.1965	0.1885	4	AVG	#
2,2-Dichloropropane	0.2822	0.3252	0.3231	0.3546	0.3451	0.3438	0.3535	0.3325	8	AVG	
Propionitrile	1.2429	1.2037	1.2978	1.3520	1.3266	1.3641	1.3930	1.3114	5	AVG	
Methacrylonitrile	0.1422	0.1460	0.1564	0.1674	0.1637	0.1633	0.1700	0.1584	7	AVG	
Bromochloromethane	0.1253	0.1402	0.1475	0.1518	0.1494	0.1475	0.1599	0.1459	7	AVG	
Tetrahydrofuran	1.1900	1.0886	1.1667	1.2087	1.1678	1.2286	1.2418	1.1846	4	AVG	
Chloroform	#0.3565	0.3938	0.4037	0.4404	0.4177	0.4181	0.4336	0.4091	7	AVG	#
1,1,1-Trichloroethane	#0.2897	0.3392	0.3356	0.3727	0.3627	0.3635	0.3807	0.3492	9	AVG	#
Cyclohexane	#0.3956	0.4609	0.4169	0.5022	0.4885	0.4944	0.5099	0.4669	10	AVG	#
Cyclohexane(2)	#0.3456	0.3987	0.3627	0.4329	0.4236	0.4319	0.4438	0.4056	9	AVG	#
Cyclohexane(3)	#0.1219	0.1428	0.1291	0.1542	0.1510	0.1531	0.1588	0.1444	10	AVG	#
1,1-Dichloropropene	0.2907	0.3348	0.3278	0.3579	0.3462	0.3479	0.3620	0.3382	7	AVG	
Carbon Tetrachloride	#0.2440	0.2777	0.2747	0.3128	0.3114	0.3175	0.3350	0.2961	11	AVG	#
Isobutyl Alcohol	0.3485	0.3107	0.3595	0.3421	0.3590	0.3974	0.3623	0.3542	7	AVG	
Benzene	#0.8990	1.0067	1.0148	1.0842	1.0359	1.0238	1.0549	1.0170	6	AVG	#
1,2-Dichloroethane	#0.3434	0.3191	0.3218	0.3337	0.3212	0.3202	0.3304	0.3271	3	AVG	#
1,2-Dichloroethane(2)	#0.0306	0.0316	0.0313	0.0343	0.0326	0.0322	0.0340	0.0324	4	AVG	#<-
t-Amyl methyl ether	0.7161	0.7648	0.8115	0.8675	0.8369	0.8221	0.8061	0.8036	6	AVG	
n-Heptane	0.3313	0.3538	0.2821	0.3843	0.3724	0.3852	0.3855	0.3564	11	AVG	
n-Butanol	0.2496	0.2624	0.3164	0.3024	0.3250	0.3551	0.3230	0.3049	12	AVG	

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 11/04/19 11/04/19

Heated Purge: (Y/N) Y Calibration Times: 14:51 17:03

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ln04i07.d RRF 4 = ln04i06.d RRF 10= ln04i05.d
RRF 20= ln04i04.d RRF 50= ln04i03.d RRF100= ln04i02.d RRF300= ln04i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Trichloroethene	#0.2300	0.2478	0.2477	0.2710	0.2607	0.2615	0.2739	0.2561	6	AVG #
Methylcyclohexane	#0.4066	0.4619	0.4494	0.4907	0.4946	0.4918	0.5306	0.4751	8	AVG #
Methylcyclohexane(2)	#0.1773	0.2158	0.2019	0.2198	0.2245	0.2228	0.2428	0.2150	10	AVG #
1,2-Dichloropropane	#0.2299	0.2478	0.2567	0.2731	0.2644	0.2644	0.2715	0.2582	6	AVG #
Dibromomethane	0.1450	0.1593	0.1638	0.1764	0.1719	0.1732	0.1801	0.1671	7	AVG
1,4-Dioxane	0.0728	0.0772	0.0845	0.0860	0.0888	0.0886	0.0887	0.0838	8	AVG
Methyl Methacrylate	0.2026	0.2254	0.2423	0.2604	0.2637	0.2705	0.2832	0.2497	11	AVG
Bromodichloromethane	#0.2483	0.2630	0.2867	0.3150	0.3161	0.3256	0.3442	0.2998	12	AVG #
2-Nitropropane	0.0733	0.0770	0.0825	0.0914	0.1013	0.1033	0.1070	0.0908	15	AVG
2-Chloroethyl Vinyl Ether	0.0882	0.0977	0.1040	0.1130	0.1155	0.1203	0.1378	0.1109	15	AVG
cis-1,3-Dichloropropene	#0.3066	0.3495	0.3874	0.4270	0.4265	0.4334	0.4572	0.3982	13	AVG #
4-Methyl-2-pentanone	#0.3519	0.3696	0.3930	0.4183	0.4328	0.4167	0.4032	0.3979	7	AVG #
Toluene	#0.7332	0.7931	0.8181	0.8731	0.8456	0.8312	0.8473	0.8202	6	AVG #
trans-1,3-Dichloropropene	#0.3482	0.3965	0.4507	0.4938	0.5103	0.5177	0.5421	0.4656	15	AVG #
Ethyl Methacrylate	0.4474	0.4901	0.5672	0.5969	0.6125	0.6196	0.6273	0.5659	12	AVG
1,1,2-Trichloroethane	#0.2783	0.2901	0.3087	0.3230	0.3222	0.3239	0.3306	0.3110	6	AVG #
Tetrachloroethene	#0.3162	0.3426	0.3214	0.3690	0.3559	0.3544	0.3721	0.3474	6	AVG #
1,3-Dichloropropane	0.4832	0.4915	0.5312	0.5551	0.5463	0.5472	0.5620	0.5309	6	AVG
2-Hexanone	#0.3356	0.3575	0.3750	0.3917	0.4210	0.3894	0.3737	0.3777	7	AVG #
Dibromochloromethane	#0.2335	0.2673	0.3027	0.3338	0.3491	0.3626	0.3808	0.3185	17	AVG #
1,2-Dibromoethane	#0.2934	0.3052	0.3308	0.3537	0.3534	0.3557	0.3715	0.3377	9	AVG #
1-Chlorohexane	0.4605	0.4391	0.3819	0.4601	0.4417	0.4418	0.4594	0.4406	6	AVG
Chlorobenzene	#0.8164	0.9033	0.9335	0.9825	0.9556	0.9405	0.9609	0.9275	6	AVG #
1,1,1,2-Tetrachloroethane	0.2351	0.2774	0.2999	0.3286	0.3310	0.3327	0.3346	0.3056	12	AVG
Ethylbenzene	#1.3747	1.5457	1.5220	1.6801	1.6314	1.6113	1.6087	1.5677	6	AVG #
m+p-Xylene	#0.5374	0.6016	0.5976	0.6715	0.6453	0.6383	0.6253	0.6167	7	AVG #
o-Xylene	#0.5399	0.5806	0.5978	0.6590	0.6427	0.6294	0.6148	0.6092	7	AVG #
Styrene	#0.8016	0.9301	1.0102	1.0972	1.0847	1.0669	1.0557	1.0066	11	AVG #
Bromoform	#	0.1724	0.2151	0.2312	0.2542	0.2685	0.2868	0.2380	17	AVG #
Isopropylbenzene	#1.2910	1.5137	1.4363	1.6684	1.6105	1.5929	1.5825	1.5279	8	AVG #
Cyclohexanone	0.3281	0.3024	0.3195	0.3248	0.3437	0.3247	0.3541	0.3282	5	AVG
Bromobenzene	0.6787	0.7176	0.7360	0.7885	0.7819	0.7772	0.7803	0.7515	6	AVG
1,1,2,2-Tetrachloroethane	#0.8022	0.8637	0.9996	0.9771	0.9960	0.9947	0.9782	0.9445	8	AVG #
1,2,3-Trichloropropane	0.2561	0.2658	0.3031	0.2987	0.2999	0.3027	0.3026	0.2898	7	AVG
trans-1,4-Dichloro-2-butene	0.2392	0.2651	0.2913	0.3105	0.3171	0.3156	0.3005	0.2913	10	AVG
n-Propylbenzene	2.9207	3.2949	2.9806	3.5724	3.4357	3.4054	3.3722	3.2831	7	AVG
2-Chlorotoluene	0.6482	0.6609	0.6535	0.7438	0.7252	0.7177	0.7330	0.6975	6	AVG
4-Chlorotoluene	0.6762	0.7074	0.6870	0.7741	0.7474	0.7369	0.7530	0.7260	5	AVG
1,3,5-Trimethylbenzene	1.9893	2.3249	2.1852	2.6169	2.5322	2.5250	2.5281	2.3860	10	AVG
tert-Butylbenzene	0.4288	0.4845	0.4243	0.5332	0.5247	0.5261	0.5325	0.4934	10	AVG
Pentachloroethane	0.2905	0.3724	0.4105	0.4466	0.4692	0.4744	0.5106	0.4249	18	AVG
1,2,4-Trimethylbenzene	2.1648	2.4282	2.3275	2.7429	2.6696	2.6607	2.6088	2.5147	8	AVG
sec-Butylbenzene	2.5710	2.9123	2.5624	3.2580	3.1256	3.1495	3.0325	2.9444	9	AVG
1,3-Dichlorobenzene	#1.3168	1.3435	1.3443	1.4749	1.4337	1.4053	1.3479	1.3809	4	AVG #
p-Isopropyltoluene	2.2311	2.5145	2.2448	2.8322	2.7191	2.7434	2.5461	2.5473	9	AVG
1,4-Dichlorobenzene	#1.3913	1.3992	1.3855	1.5164	1.4765	1.4501	1.4018	1.4315	4	AVG #
1,2,3-Trimethylbenzene	2.3717	2.5881	2.6584	2.7814	2.7739	2.7079	2.7646	2.6637	6	AVG
Benzyl Chloride		1.4905	1.9042	2.0277	2.1892	2.2241	2.2651	2.0168	14	AVG
1,3-Diethylbenzene	1.4770	1.6040	1.6373	1.7518	1.7206	1.7031	1.7107	1.6578	6	AVG
1,4-Diethylbenzene	1.6313	1.7295	1.7208	1.8600	1.8134	1.7888	1.7510	1.7564	4	AVG
1,2-Dichlorobenzene	#1.2854	1.3272	1.3476	1.4407	1.4096	1.3800	1.3479	1.3626	4	AVG #
n-Butylbenzene	1.2635	1.3335	1.1354	1.4216	1.3485	1.3543	1.2604	1.3024	7	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 11/04/19 11/04/19

Heated Purge: (Y/N) Y Calibration Times: 14:51 17:03

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ln04i07.d RRF 4 = ln04i06.d RRF 10= ln04i05.d
RRF 20= ln04i04.d RRF 50= ln04i03.d RRF100= ln04i02.d RRF300= ln04i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
1,2-Diethylbenzene	1.2665	1.3513	1.3737	1.4741	1.4581	1.4365	1.4223	1.3975	5	AVG
1,2-Dibromo-3-chloropropane#	0.1653	0.1703	0.2163	0.2130	0.2240	0.2247	0.2337	0.2068	13	AVG #
1,3,5-Trichlorobenzene	1.0736	1.0363	0.9506	1.1293	1.0680	1.0728	0.9975	1.0469	6	AVG
1,2,4-Trichlorobenzene #	1.0928	0.9898	0.9467	1.0851	1.0411	1.0335	0.9366	1.0179	6	AVG #
Hexachlorobutadiene		0.6224	0.4463	0.5319	0.4489	0.4300	0.4042	0.4806	17	AVG
Naphthalene	2.9793	3.0036	3.3068	3.4936	3.4918	3.4237	3.2086	3.2725	7	AVG
1,2,3-Trichlorobenzene	1.0616	0.9674	0.9274	1.0684	1.0300	1.0095	0.8692	0.9905	7	AVG
2-Methylnaphthalene	1.9837	1.8879	2.0390	2.2209	2.2298	2.1150	1.6300	2.0152	10	AVG
Dibromofluoromethane	0.2407	0.2444	0.2426	0.2463	0.2437	0.2470	0.2465	0.2445	1	AVG
Dibromofluoromethane(2)	0.2457	0.2504	0.2472	0.2513	0.2494	0.2516	0.2491	0.2492	1	AVG
1,2-Dichloroethane-d4	0.0612	0.0629	0.0625	0.0629	0.0628	0.0627	0.0611	0.0623	1	AVG
1,2-Dichloroethane-d4(2)	0.2741	0.2818	0.2744	0.2819	0.2771	0.2799	0.2742	0.2776	1	AVG
1,2-Dichloroethane-d4(3)	0.0389	0.0398	0.0398	0.0408	0.0397	0.0402	0.0393	0.0398	2	AVG
Toluene-d8	1.3149	1.3039	1.3148	1.3125	1.3146	1.3005	1.2968	1.3083	1	AVG
Toluene-d8(2)	0.8480	0.8436	0.8547	0.8509	0.8480	0.8442	0.8428	0.8475	1	AVG
4-Bromofluorobenzene	0.4958	0.4982	0.5005	0.4967	0.4932	0.4898	0.4935	0.4954	1	AVG
4-Bromofluorobenzene(2)	0.4097	0.4154	0.4152	0.4118	0.4097	0.4065	0.4066	0.4107	1	AVG

Average %RSD 7

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

FORM VI VOA

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP09915.i/19nov04i.b/ln04i01.d	VSTD300
/chem/HP09915.i/19nov04i.b/ln04i02.d	VSTD100
/chem/HP09915.i/19nov04i.b/ln04i03.d	VSTD050
/chem/HP09915.i/19nov04i.b/ln04i04.d	VSTD020
/chem/HP09915.i/19nov04i.b/ln04i05.d	VSTD010
/chem/HP09915.i/19nov04i.b/ln04i06.d	VSTD004
/chem/HP09915.i/19nov04i.b/ln04i07.d	VSTD001

Area Summary

File ID:

Internal Standard Name	ln04i01.d	ln04i02.d	ln04i03.d	ln04i04.d	ln04i05.d	ln04i06.d	ln04i07.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	254406	265971	269779	258058	263427	262044	243591	259611	3	Yes
Fluorobenzene	1120873	1183605	1160755	1128743	1158257	1148427	1137124	1148255	2	Yes
Chlorobenzene-d5	891668	935628	904578	883281	897139	884065	879875	896605	2	Yes
1,4-Dichlorobenzene-d4	477171	500629	483927	476218	496298	480071	473433	483964	2	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	ln04i01.d	ln04i02.d	ln04i03.d	ln04i04.d	ln04i05.d	ln04i06.d	ln04i07.d	Avg. RT
t-Butyl alcohol-d10	4.503	4.509	4.509	4.512	4.509	4.512	4.496	4.507
Fluorobenzene	7.959	7.962	7.959	7.962	7.956	7.959	7.959	7.960
Chlorobenzene-d5	11.361	11.361	11.361	11.361	11.358	11.358	11.358	11.360
1,4-Dichlorobenzene-d4	13.223	13.223	13.223	13.223	13.223	13.223	13.223	13.223

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 11/05/2019 at 16:07.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 11/04/19 Time: 18:42

Lab File ID: ln04v02.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3487	0.3266	18.73	20	-6	#
# Chloromethane	0.3361	0.3180	18.93	20	-5	#
1,3-Butadiene	0.2790	0.2741	19.65	20	-2	
# Vinyl Chloride	0.3354	0.3245	19.35	20	-3	#
# Bromomethane	0.2404	0.2156	17.93	20	-10	#
# Chloroethane	0.1843	0.1704	18.49	20	-8	#
Dichlorofluoromethane	0.4436	0.3598	16.22	20	-19	
n-Pentane	0.4267	0.4057	19.01	20	-5	
# Trichlorofluoromethane	0.3611	0.3746	20.75	20	4	#
Ethyl ether	0.2333	0.1939	16.62	20	-17	
Freon 123a	0.2905	0.2825	19.45	20	-3	
Acrolein	1.8756	1.6896	135.12	150	-10	
# 1,1-Dichloroethene	0.2120	0.2216	20.91	20	5	#
# Acetone	0.8409	0.7666	136.75	150	-9	#
# Freon 113	0.2418	0.2394	19.80	20	-1	#
2-Propanol	0.6045	0.5806	144.06	150	-4	
Methyl Iodide	0.4392	0.4077	18.56	20	-7	
# Carbon Disulfide	0.7987	0.7452	18.66	20	-7	#
Allyl Chloride	0.3802	0.3535	18.59	20	-7	
# Methyl Acetate	0.2730	0.2606	19.09	20	-5	#
# Methylene Chloride	0.2523	0.2570	20.38	20	2	#
t-Butyl alcohol	1.0525	1.0046	190.90	200	-5	
Acrylonitrile	0.1469	0.1395	94.98	100	-5	
# trans-1,2-Dichloroethene	0.2452	0.2452	20.00	20	0	#
# Methyl Tertiary Butyl Ether	0.8048	0.7596	18.87	20	-6	#
n-Hexane	0.3815	0.3828	20.07	20	0	
# 1,1-Dichloroethane	0.4277	0.4163	19.46	20	-3	#
di-Isopropyl ether	0.8250	0.7868	19.08	20	-5	
2-Chloro-1,3-butadiene	0.3838	0.3659	19.07	20	-5	
Ethyl t-butyl ether	0.8006	0.7634	19.07	20	-5	
# cis-1,2-Dichloroethene	0.2752	0.2889	20.99	20	5	#
# 2-Butanone	0.1885	0.1794	142.74	150	-5	#
2,2-Dichloropropane	0.3325	0.3377	20.31	20	2	
Propionitrile	1.3114	1.2333	141.06	150	-6	
Methacrylonitrile	0.1584	0.1535	145.31	150	-3	
Bromochloromethane	0.1459	0.1368	18.75	20	-6	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 11/04/19 Time: 18:42

Lab File ID: ln04v02.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Tetrahydrofuran	1.1846	1.0959	92.51	100	-7	
#	Chloroform	0.4091	0.4123	20.16	20	1	#
#	1,1,1-Trichloroethane	0.3492	0.3558	20.38	20	2	#
#	Cyclohexane	0.4669	0.4442	19.02	20	-5	#
	1,1-Dichloropropene	0.3382	0.3393	20.07	20	0	
#	Carbon Tetrachloride	0.2961	0.2964	20.02	20	0	#
	Isobutyl Alcohol	0.3542	0.3198	451.41	500	-10	
#	Benzene	1.0170	1.0168	20.00	20	0	#
#	1,2-Dichloroethane	0.3271	0.3373	20.62	20	3	#
	t-Amyl methyl ether	0.8036	0.7630	18.99	20	-5	
	n-Heptane	0.3564	0.3376	18.95	20	-5	
	n-Butanol	0.3049	0.2780	911.92	1000	-9	
#	Trichloroethene	0.2561	0.2581	20.16	20	1	#
#	Methylcyclohexane	0.4751	0.4589	19.32	20	-3	#
#	1,2-Dichloropropane	0.2582	0.2641	20.45	20	2	#
	Dibromomethane	0.1671	0.1672	20.01	20	0	
	1,4-Dioxane	0.0838	0.0844	503.75	500	1	
	Methyl Methacrylate	0.2497	0.2388	19.13	20	-4	
#	Bromodichloromethane	0.2998	0.2984	19.91	20	0	#
	2-Nitropropane	0.0908	0.0741	16.32	20	-18	
	2-Chloroethyl Vinyl Ether	0.1109	0.1056	19.04	20	-5	
#	cis-1,3-Dichloropropene	0.3982	0.3957	19.87	20	-1	#
#	4-Methyl-2-pentanone	0.3979	0.3693	92.81	100	-7	#
#	Toluene	0.8202	0.8294	20.22	20	1	#
#	trans-1,3-Dichloropropene	0.4656	0.4472	19.21	20	-4	#
	Ethyl Methacrylate	0.5659	0.5138	18.16	20	-9	
#	1,1,2-Trichloroethane	0.3110	0.3171	20.39	20	2	#
#	Tetrachloroethene	0.3474	0.3842	22.12	20	11	#
	1,3-Dichloropropane	0.5309	0.5224	19.68	20	-2	
#	2-Hexanone	0.3777	0.3481	92.15	100	-8	#
#	Dibromochloromethane	0.3185	0.3147	19.76	20	-1	#
#	1,2-Dibromoethane	0.3377	0.3356	19.88	20	-1	#
	1-Chlorohexane	0.4406	0.4292	19.48	20	-3	
#	Chlorobenzene	0.9275	0.9379	20.22	20	1	#
	1,1,1,2-Tetrachloroethane	0.3056	0.3029	19.82	20	-1	
#	Ethylbenzene	1.5677	1.5899	20.28	20	1	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 11/04/19 Time: 18:42

Lab File ID: ln04v02.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# m+p-Xylene	0.6167	0.6315	40.96	40	2	#
# o-Xylene	0.6092	0.6189	20.32	20	2	#
# Styrene	1.0066	1.0350	20.56	20	3	#
# Bromoform	0.2380	0.2137	17.95	20	-10	#
# Isopropylbenzene	1.5279	1.5939	20.86	20	4	#
Cyclohexanone	0.3282	0.2949	449.36	500	-10	
Bromobenzene	0.7515	0.7447	19.82	20	-1	
# 1,1,2,2-Tetrachloroethane	0.9445	0.9245	19.58	20	-2	#
1,2,3-Trichloropropane	0.2898	0.2890	19.94	20	0	
trans-1,4-Dichloro-2-butene	0.2913	0.2850	97.83	100	-2	
n-Propylbenzene	3.2831	3.4091	20.77	20	4	
2-Chlorotoluene	0.6975	0.7037	20.18	20	1	
4-Chlorotoluene	0.7260	0.7301	20.11	20	1	
1,3,5-Trimethylbenzene	2.3860	2.4518	20.55	20	3	
tert-Butylbenzene	0.4934	0.5090	20.63	20	3	
Pentachloroethane	0.4249	0.3657	17.21	20	-14	
1,2,4-Trimethylbenzene	2.5147	2.5110	19.97	20	0	
sec-Butylbenzene	2.9444	3.0247	20.55	20	3	
# 1,3-Dichlorobenzene	1.3809	1.3855	20.07	20	0	#
p-Isopropyltoluene	2.5473	2.6162	20.54	20	3	
# 1,4-Dichlorobenzene	1.4315	1.4660	20.48	20	2	#
1,2,3-Trimethylbenzene	2.6637	2.6470	19.87	20	-1	
Benzyl Chloride	2.0168	1.6153	16.02	20	-20	
1,3-Diethylbenzene	1.6578	1.5827	19.09	20	-5	
1,4-Diethylbenzene	1.7564	1.6691	19.01	20	-5	
# 1,2-Dichlorobenzene	1.3626	1.3874	20.36	20	2	#
n-Butylbenzene	1.3024	1.2702	19.50	20	-2	
1,2-Diethylbenzene	1.3975	1.3386	19.16	20	-4	
# 1,2-Dibromo-3-chloropropane	0.2068	0.1994	19.29	20	-4	#
1,3,5-Trichlorobenzene	1.0469	0.9964	19.04	20	-5	
# 1,2,4-Trichlorobenzene	1.0179	0.9765	19.19	20	-4	#
Hexachlorobutadiene	0.4806	0.4071	16.94	20	-15	
Naphthalene	3.2725	3.2676	19.97	20	0	
1,2,3-Trichlorobenzene	0.9905	0.9443	19.07	20	-5	
2-Methylnaphthalene	2.0152	1.8367	18.23	20	-9	

Average %Drift 5

Compounds with required minimum RRF.
Maximum % Drift = 30 %

^

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem/HP09915.i/19nov04i.b/ln04i07.d
/chem/HP09915.i/19nov04i.b/ln04i06.d
/chem/HP09915.i/19nov04i.b/ln04i05.d
/chem/HP09915.i/19nov04i.b/ln04i04.d
/chem/HP09915.i/19nov04i.b/ln04i03.d
/chem/HP09915.i/19nov04i.b/ln04i02.d
/chem/HP09915.i/19nov04i.b/ln04i01.d

File /chem/HP09915.i/19nov04i.b/ln04i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem/HP09915.i/19nov20a.b/ln20c01.d

RT Summary

Internal Standard Name	File ID: ln20c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	4.493	4.509	Yes
Fluorobenzene	7.959	7.959	Yes
Chlorobenzene-d5	11.361	11.361	Yes
1,4-Dichlorobenzene-d4	13.223	13.223	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: ln20c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	153357	269779	134890	539558	Yes
Fluorobenzene	890803	1160755	580378	2321510	Yes
Chlorobenzene-d5	725253	904578	452289	1809156	Yes
1,4-Dichlorobenzene-d4	391522	483927	241964	967854	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 11/20/2019 at 09:17

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/20/19 Time: 08:51

Lab File ID: ln20c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	$\overline{RRF}$	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Dichlorodifluoromethane	0.3487	0.3663	52.52	50	5	#
#	Chloromethane	0.3361	0.3552	52.85	50	6	#
	1,3-Butadiene	0.2790	0.3839	68.80	50	38	<-
#	Vinyl Chloride	0.3354	0.3481	51.89	50	4	#
#	Bromomethane	0.2404	0.2527	52.55	50	5	#
#	Chloroethane	0.1843	0.1927	52.27	50	5	#
	n-Pentane	0.4267	0.3812	44.67	50	-11	
#	Trichlorofluoromethane	0.3611	0.3889	53.86	50	8	#
	Freon 123a	0.2905	0.2922	50.29	50	1	
	Acrolein	1.8756	2.2714	605.50	500	21	<-
#	1,1-Dichloroethene	0.2120	0.2140	50.48	50	1	#
#	1,1-Dichloroethene(2)	0.1063	0.1027	48.32	50	-3	#
#	Acetone	0.8409	0.9685	115.18	100	15	#
#	Freon 113	0.2418	0.2490	51.48	50	3	#
	2-Propanol	0.6045	0.6006	248.38	250	-1	
	Methyl Iodide	0.4392	0.4368	49.73	50	-1	
#	Carbon Disulfide	0.7987	0.7959	49.82	50	0	#
	Allyl Chloride	0.3802	0.3440	45.23	50	-10	
#	Methyl Acetate	0.2730	0.2451	44.89	50	-10	#
#	Methylene Chloride	0.2523	0.2580	51.13	50	2	#
	t-Butyl alcohol	1.0525	1.0681	253.70	250	1	
	Acrylonitrile	0.1469	0.1433	48.78	50	-2	
#	trans-1,2-Dichloroethene	0.2452	0.2494	50.85	50	2	#
#	Methyl Tertiary Butyl Ether	0.8048	0.7542	46.85	50	-6	#
	n-Hexane	0.3815	0.3808	49.91	50	0	
#	1,1-Dichloroethane	0.4277	0.4207	49.18	50	-2	#
	di-Isopropyl ether	0.8250	0.7958	48.23	50	-4	
	2-Chloro-1,3-butadiene	0.3838	0.3805	49.57	50	-1	
	Ethyl t-butyl ether	0.8006	0.7583	47.36	50	-5	
#	cis-1,2-Dichloroethene	0.2752	0.2787	50.64	50	1	#
#	2-Butanone	0.1885	0.1711	90.76	100	-9	#
	2,2-Dichloropropane	0.3325	0.3228	48.54	50	-3	
	Propionitrile	1.3114	1.6002	305.05	250	22	<-
	Methacrylonitrile	0.1584	0.1578	124.54	125	0	
	Bromochloromethane	0.1459	0.1495	51.24	50	2	
	Tetrahydrofuran	1.1846	1.4626	123.46	100	23	<-

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

page 1 of 4

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/20/19 Time: 08:51

Lab File ID: ln20c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Chloroform	0.4091	0.4156	50.80	50	2	#
#	1,1,1-Trichloroethane	0.3492	0.3481	49.85	50	0	#
#	Cyclohexane	0.4669	0.4701	50.34	50	1	#
#	Cyclohexane(2)	0.4056	0.4128	50.88	50	2	#
#	Cyclohexane(3)	0.1444	0.1459	50.51	50	1	#
	1,1-Dichloropropene	0.3382	0.3371	49.84	50	0	
#	Carbon Tetrachloride	0.2961	0.2939	49.62	50	-1	#
	Isobutyl Alcohol	0.3542	0.3893	687.03	625	10	
#	Benzene	1.0170	1.0492	51.58	50	3	#
#	1,2-Dichloroethane	0.3271	0.3180	48.60	50	-3	#
#	1,2-Dichloroethane(2)	0.0324	0.0332	51.26	50	3	#<-
	t-Amyl methyl ether	0.8036	0.7748	48.21	50	-4	
	n-Heptane	0.3564	0.3500	49.10	50	-2	
	n-Butanol	0.3049	0.3299	1352.51	1250	8	
#	Trichloroethene	0.2561	0.2683	52.38	50	5	#
#	Methylcyclohexane	0.4751	0.4693	49.39	50	-1	#
#	Methylcyclohexane(2)	0.2150	0.2121	49.33	50	-1	#
#	1,2-Dichloropropane	0.2582	0.2588	50.11	50	0	#
	Dibromomethane	0.1671	0.1726	51.66	50	3	
	1,4-Dioxane	0.0838	0.1144	853.29	625	37	<-
	Methyl Methacrylate	0.2497	0.2526	50.57	50	1	
#	Bromodichloromethane	0.2998	0.3018	50.32	50	1	#
	2-Nitropropane	0.0908	0.0825	90.80	100	-9	
	2-Chloroethyl Vinyl Ether	0.1109	0.1930	87.02	50	74	<-
#	cis-1,3-Dichloropropene	0.3982	0.3969	49.83	50	0	#
#	4-Methyl-2-pentanone	0.3979	0.3747	94.16	100	-6	#
#	Toluene	0.8202	0.8307	50.64	50	1	#
#	trans-1,3-Dichloropropene	0.4656	0.4436	47.64	50	-5	#
	Ethyl Methacrylate	0.5659	0.5631	49.76	50	0	
#	1,1,2-Trichloroethane	0.3110	0.3168	50.94	50	2	#
#	Tetrachloroethene	0.3474	0.3484	50.15	50	0	#
	1,3-Dichloropropane	0.5309	0.5280	49.72	50	-1	
#	2-Hexanone	0.3777	0.3402	90.06	100	-10	#
#	Dibromochloromethane	0.3185	0.2967	46.58	50	-7	#
#	1,2-Dibromoethane	0.3377	0.3445	51.01	50	2	#
	1-Chlorohexane	0.4406	0.4277	48.53	50	-3	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/20/19 Time: 08:51

Lab File ID: ln20c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Chlorobenzene	0.9275	0.9300	50.13	50	0	#
	1,1,1,2-Tetrachloroethane	0.3056	0.3006	49.18	50	-2	
#	Ethylbenzene	1.5677	1.6070	51.25	50	3	#
#	m+p-Xylene	0.6167	0.6327	102.60	100	3	#
#	o-Xylene	0.6092	0.6202	50.91	50	2	#
#	Styrene	1.0066	1.0480	52.05	50	4	#
#	Bromoform	0.2380	0.1905	40.01	50	-20	#
#	Isopropylbenzene	1.5279	1.5780	51.64	50	3	#
	Bromobenzene	0.7515	0.7507	49.95	50	0	
#	1,1,2,2-Tetrachloroethane	0.9445	0.9318	49.33	50	-1	#
	1,2,3-Trichloropropane	0.2898	0.2820	48.64	50	-3	
	trans-1,4-Dichloro-2-butene	0.2913	0.1700	72.96	125	-42	<-
	n-Propylbenzene	3.2831	3.4188	52.07	50	4	
	2-Chlorotoluene	0.6975	0.6959	49.89	50	0	
	4-Chlorotoluene	0.7260	0.7251	49.93	50	0	
	1,3,5-Trimethylbenzene	2.3860	2.4961	52.31	50	5	
	tert-Butylbenzene	0.4934	0.4988	50.55	50	1	
	Pentachloroethane	0.4249	0.4262	50.16	50	0	
	1,2,4-Trimethylbenzene	2.5147	2.6341	52.37	50	5	
	sec-Butylbenzene	2.9444	3.0119	51.14	50	2	
#	1,3-Dichlorobenzene	1.3809	1.3943	50.48	50	1	#
	p-Isopropyltoluene	2.5473	2.5877	50.79	50	2	
#	1,4-Dichlorobenzene	1.4315	1.4245	49.75	50	0	#
	1,2,3-Trimethylbenzene	2.6637	2.7124	50.91	50	2	
	Benzyl Chloride	2.0168	1.9540	48.44	50	-3	
	1,3-Diethylbenzene	1.6578	1.6441	49.59	50	-1	
	1,4-Diethylbenzene	1.7564	1.7102	48.68	50	-3	
#	1,2-Dichlorobenzene	1.3626	1.3641	50.05	50	0	#
	n-Butylbenzene	1.3024	1.2815	49.19	50	-2	
	1,2-Diethylbenzene	1.3975	1.3818	49.44	50	-1	
#	1,2-Dibromo-3-chloropropane	0.2068	0.1866	45.13	50	-10	#
	1,3,5-Trichlorobenzene	1.0469	0.9594	45.82	50	-8	
#	1,2,4-Trichlorobenzene	1.0179	0.9184	45.11	50	-10	#
	Hexachlorobutadiene	0.4806	0.3699	38.48	50	-23	<-
	Naphthalene	3.2725	3.2814	50.14	50	0	
	1,2,3-Trichlorobenzene	0.9905	0.8982	45.34	50	-9	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/20/19 Time: 08:51

Lab File ID: ln20c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	$\overline{RRF}$	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
2-Methylnaphthalene	2.0152	1.8591	46.13	50	-8
Dibromofluoromethane	0.2445	0.2348	48.02	50	-4
Dibromofluoromethane(2)	0.2492	0.2401	48.17	50	-4
1,2-Dichloroethane-d4	0.0623	0.0609	48.89	50	-2
1,2-Dichloroethane-d4(2)	0.2776	0.2742	49.39	50	-1
1,2-Dichloroethane-d4(3)	0.0398	0.0385	48.32	50	-3
Toluene-d8	1.3083	1.2833	49.05	50	-2
Toluene-d8(2)	0.8475	0.8246	48.65	50	-3
4-Bromofluorobenzene	0.4954	0.4950	49.96	50	0
4-Bromofluorobenzene(2)	0.4107	0.4104	49.96	50	0

Average %Drift 5

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

page 4 of 4

Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem/HP09915.i/19nov04i.b/ln04i07.d
/chem/HP09915.i/19nov04i.b/ln04i06.d
/chem/HP09915.i/19nov04i.b/ln04i05.d
/chem/HP09915.i/19nov04i.b/ln04i04.d
/chem/HP09915.i/19nov04i.b/ln04i03.d
/chem/HP09915.i/19nov04i.b/ln04i02.d
/chem/HP09915.i/19nov04i.b/ln04i01.d

File /chem/HP09915.i/19nov04i.b/ln04i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem/HP09915.i/19nov21a.b/ln21c01.d

RT Summary

Internal Standard Name	File ID: ln21c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	4.493	4.509	Yes
Fluorobenzene	7.959	7.959	Yes
Chlorobenzene-d5	11.361	11.361	Yes
1,4-Dichlorobenzene-d4	13.223	13.223	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: ln21c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	153538	269779	134890	539558	Yes
Fluorobenzene	842128	1160755	580378	2321510	Yes
Chlorobenzene-d5	689674	904578	452289	1809156	Yes
1,4-Dichlorobenzene-d4	371519	483927	241964	967854	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments:_____

report generated on 11/21/2019 at 08:49

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/21/19 Time: 08:18

Lab File ID: ln21c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3487	0.3200	45.89	50	-8	#
# Chloromethane	0.3361	0.3161	47.03	50	-6	#
1,3-Butadiene	0.2790	0.3523	63.13	50	26	<-
# Vinyl Chloride	0.3354	0.3056	45.55	50	-9	#
# Bromomethane	0.2404	0.2245	46.69	50	-7	#
# Chloroethane	0.1843	0.1686	45.74	50	-9	#
n-Pentane	0.4267	0.3590	42.06	50	-16	
# Trichlorofluoromethane	0.3611	0.3399	47.06	50	-6	#
Ethyl ether	0.2333	0.2035	43.60	50	-13	
Freon 123a	0.2905	0.2705	46.55	50	-7	
Acrolein	1.8756	2.0074	535.14	500	7	
# 1,1-Dichloroethene	0.2120	0.1985	46.82	50	-6	#
# 1,1-Dichloroethene(2)	0.1063	0.0960	45.18	50	-10	#<-
# Acetone	0.8409	0.8836	105.08	100	5	#
# Freon 113	0.2418	0.2339	48.36	50	-3	#
2-Propanol	0.6045	0.5949	246.02	250	-2	
Methyl Iodide	0.4392	0.4071	46.34	50	-7	
# Carbon Disulfide	0.7987	0.7437	46.56	50	-7	#
Allyl Chloride	0.3802	0.2978	39.16	50	-22	<-
# Methyl Acetate	0.2730	0.2237	40.97	50	-18	#
# Methylene Chloride	0.2523	0.2372	47.01	50	-6	#
t-Butyl alcohol	1.0525	1.0059	238.91	250	-4	
Acrylonitrile	0.1469	0.1320	44.95	50	-10	
# trans-1,2-Dichloroethene	0.2452	0.2282	46.53	50	-7	#
# Methyl Tertiary Butyl Ether	0.8048	0.7031	43.68	50	-13	#
n-Hexane	0.3815	0.3533	46.30	50	-7	
# 1,1-Dichloroethane	0.4277	0.3850	45.01	50	-10	#
di-Isopropyl ether	0.8250	0.7258	43.99	50	-12	
2-Chloro-1,3-butadiene	0.3838	0.3516	45.81	50	-8	
Ethyl t-butyl ether	0.8006	0.6984	43.62	50	-13	
# cis-1,2-Dichloroethene	0.2752	0.2548	46.28	50	-7	#
# 2-Butanone	0.1885	0.1618	85.83	100	-14	#
2,2-Dichloropropane	0.3325	0.2951	44.38	50	-11	
Propionitrile	1.3114	1.4743	281.05	250	12	
Methacrylonitrile	0.1584	0.1468	115.86	125	-7	
Bromochloromethane	0.1459	0.1352	46.32	50	-7	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/21/19 Time: 08:18

Lab File ID: ln21c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
Tetrahydrofuran	1.1846	1.3047	110.13	100	10	
# Chloroform	0.4091	0.3871	47.31	50	-5	#
# 1,1,1-Trichloroethane	0.3492	0.3233	46.30	50	-7	#
# Cyclohexane	0.4669	0.4265	45.67	50	-9	#
# Cyclohexane(2)	0.4056	0.3744	46.15	50	-8	#
# Cyclohexane(3)	0.1444	0.1318	45.64	50	-9	#
1,1-Dichloropropene	0.3382	0.3080	45.53	50	-9	
# Carbon Tetrachloride	0.2961	0.2706	45.69	50	-9	#
Isobutyl Alcohol	0.3542	0.3594	634.13	625	1	
# Benzene	1.0170	0.9633	47.36	50	-5	#
# 1,2-Dichloroethane	0.3271	0.2992	45.73	50	-9	#
# 1,2-Dichloroethane(2)	0.0324	0.0303	46.86	50	-6	#<-
t-Amyl methyl ether	0.8036	0.7147	44.47	50	-11	
n-Heptane	0.3564	0.3297	46.25	50	-7	
n-Butanol	0.3049	0.3064	1256.42	1250	1	
# Trichloroethene	0.2561	0.2449	47.82	50	-4	#
# Methylcyclohexane	0.4751	0.4317	45.43	50	-9	#
# Methylcyclohexane(2)	0.2150	0.1969	45.80	50	-8	#
# 1,2-Dichloropropane	0.2582	0.2405	46.56	50	-7	#
Dibromomethane	0.1671	0.1609	48.13	50	-4	
1,4-Dioxane	0.0838	0.1182	881.89	625	41	<-
Methyl Methacrylate	0.2497	0.2366	47.37	50	-5	
# Bromodichloromethane	0.2998	0.2845	47.44	50	-5	#
2-Nitropropane	0.0908	0.0803	88.39	100	-12	
2-Chloroethyl Vinyl Ether	0.1109	0.1785	80.47	50	61	<-
# cis-1,3-Dichloropropene	0.3982	0.3716	46.66	50	-7	#
# 4-Methyl-2-pentanone	0.3979	0.3523	88.53	100	-11	#
# Toluene	0.8202	0.7631	46.52	50	-7	#
# trans-1,3-Dichloropropene	0.4656	0.4237	45.50	50	-9	#
Ethyl Methacrylate	0.5659	0.5170	45.68	50	-9	
# 1,1,2-Trichloroethane	0.3110	0.2923	47.00	50	-6	#
# Tetrachloroethene	0.3474	0.3163	45.52	50	-9	#
1,3-Dichloropropane	0.5309	0.4878	45.93	50	-8	
# 2-Hexanone	0.3777	0.3137	83.06	100	-17	#
# Dibromochloromethane	0.3185	0.2875	45.12	50	-10	#
# 1,2-Dibromoethane	0.3377	0.3186	47.17	50	-6	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/21/19 Time: 08:18

Lab File ID: ln21c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
1-Chlorohexane	0.4406	0.3845	43.63	50	-13	
Chlorobenzene	0.9275	0.8582	46.26	50	-7	#
1,1,1,2-Tetrachloroethane	0.3056	0.2805	45.90	50	-8	
Ethylbenzene	1.5677	1.4572	46.47	50	-7	#
m+p-Xylene	0.6167	0.5791	93.91	100	-6	#
o-Xylene	0.6092	0.5639	46.28	50	-7	#
Styrene	1.0066	0.9611	47.74	50	-5	#
Bromoform	0.2380	0.1890	39.71	50	-21	#<-
Isopropylbenzene	1.5279	1.4377	47.05	50	-6	#
Cyclohexanone	0.3282	0.3730	710.42	625	14	
Bromobenzene	0.7515	0.6958	46.30	50	-7	
1,1,2,2-Tetrachloroethane	0.9445	0.8837	46.78	50	-6	#
1,2,3-Trichloropropane	0.2898	0.2634	45.44	50	-9	
trans-1,4-Dichloro-2-butene	0.2913	0.1626	69.76	125	-44	<-
n-Propylbenzene	3.2831	3.1169	47.47	50	-5	
2-Chlorotoluene	0.6975	0.6358	45.58	50	-9	
4-Chlorotoluene	0.7260	0.6612	45.54	50	-9	
1,3,5-Trimethylbenzene	2.3860	2.2782	47.74	50	-5	
tert-Butylbenzene	0.4934	0.4590	46.51	50	-7	
Pentachloroethane	0.4249	0.3962	46.62	50	-7	
1,2,4-Trimethylbenzene	2.5147	2.3780	47.28	50	-5	
sec-Butylbenzene	2.9444	2.7623	46.91	50	-6	
1,3-Dichlorobenzene	1.3809	1.2750	46.16	50	-8	#
p-Isopropyltoluene	2.5473	2.3679	46.48	50	-7	
1,4-Dichlorobenzene	1.4315	1.3137	45.88	50	-8	#
1,2,3-Trimethylbenzene	2.6637	2.5245	47.39	50	-5	
Benzyl Chloride	2.0168	1.8117	44.92	50	-10	
1,3-Diethylbenzene	1.6578	1.5200	45.84	50	-8	
1,4-Diethylbenzene	1.7564	1.5854	45.13	50	-10	
1,2-Dichlorobenzene	1.3626	1.2546	46.04	50	-8	#
n-Butylbenzene	1.3024	1.1619	44.60	50	-11	
1,2-Diethylbenzene	1.3975	1.2968	46.40	50	-7	
1,2-Dibromo-3-chloropropane	0.2068	0.1796	43.43	50	-13	#
1,3,5-Trichlorobenzene	1.0469	0.8882	42.42	50	-15	
1,2,4-Trichlorobenzene	1.0179	0.8437	41.44	50	-17	#
Hexachlorobutadiene	0.4806	0.3489	36.30	50	-27	<-

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/21/19 Time: 08:18

Lab File ID: ln21c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Naphthalene	3.2725	3.0277	46.26	50	-7
1,2,3-Trichlorobenzene	0.9905	0.8309	41.95	50	-16
2-Methylnaphthalene	2.0152	1.7164	42.59	50	-15
Dibromofluoromethane	0.2445	0.2351	48.09	50	-4
Dibromofluoromethane(2)	0.2492	0.2421	48.56	50	-3
1,2-Dichloroethane-d4	0.0623	0.0610	48.95	50	-2
1,2-Dichloroethane-d4(2)	0.2776	0.2763	49.75	50	0
1,2-Dichloroethane-d4(3)	0.0398	0.0389	48.92	50	-2
Toluene-d8	1.3083	1.2671	48.42	50	-3
Toluene-d8(2)	0.8475	0.8168	48.19	50	-4
4-Bromofluorobenzene	0.4954	0.4937	49.83	50	0
4-Bromofluorobenzene(2)	0.4107	0.4083	49.71	50	-1

Average %Drift 9

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ln20c01.d Date Analyzed: 11/20/19

Instrument ID: HP09915 Time Analyzed: 08:51

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	153357	4.493	890803	7.959	725253	11.361	391522	13.222
UPPER LIMIT	306714	4.993	1781606	8.459	1450506	11.861	783044	13.722
LOWER LIMIT	76678	3.993	445402	7.459	362626	10.861	195761	12.722
LAB SAMPLE ID								
01 LCSL80	168087	4.516	923804	7.962	756463	11.361	402949	13.222
02 VBLKL80	162533	4.496	913789	7.959	734830	11.358	395483	13.223
03 1202295	156140	4.487	904207	7.956	729832	11.358	390781	13.223
04 1202314	159398	4.500	895343	7.959	721900	11.361	387240	13.219
05 1202284	157544	4.490	883856	7.956	716251	11.361	379191	13.219
06 1202285	154791	4.490	865108	7.959	706277	11.358	377485	13.223
07 1202296	146194	4.493	869235	7.959	707177	11.358	381477	13.219
08 1202297MS	169394	4.500	914986	7.959	738299	11.358	397756	13.219
09 1202298MSD	177410	4.493	893439	7.956	724388	11.358	385924	13.223
10 1202299	172141	4.499	902148	7.962	726877	11.358	389170	13.222
11 1202300	172523	4.496	901563	7.956	733643	11.361	386696	13.222
12 1202301	155204	4.496	883077	7.959	718457	11.358	379474	13.223
13 1202302	157932	4.496	869741	7.959	711550	11.361	380015	13.220
14 1202303	158597	4.500	875434	7.962	708598	11.361	377448	13.219
15 1202304	157315	4.486	877236	7.956	709324	11.358	382620	13.222
16 1202305	143509	4.496	845285	7.959	691126	11.358	371262	13.219
17 1202306	147376	4.496	854788	7.962	692345	11.358	370267	13.223
18 1202307	154257	4.500	845869	7.962	695063	11.361	370586	13.223
19 1202315	147174	4.496	846942	7.956	689587	11.361	367930	13.222
20 1202316	148761	4.493	838211	7.959	689898	11.358	371294	13.223
21 1202317	150545	4.487	847494	7.959	691987	11.358	372909	13.223
22 1202318	139721	4.490	817772	7.959	674532	11.358	363582	13.223

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ln20c01.d Date Analyzed: 11/20/19

Instrument ID: HP09915 Time Analyzed: 08:51

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA) AREA #	RT #	IS2(FBZ) AREA #	RT #	IS3(CBZ) AREA #	RT #	IS4(DCB) AREA #	RT #
12 HOUR STD	153357	4.493	890803	7.959	725253	11.361	391522	13.222
UPPER LIMIT	306714	4.993	1781606	8.459	1450506	11.861	783044	13.722
LOWER LIMIT	76678	3.993	445402	7.459	362626	10.861	195761	12.722
LAB SAMPLE ID								
23 1202319	141822	4.493	822195	7.959	678476	11.361	363942	13.223
24 1202320	147376	4.496	819786	7.959	672667	11.361	356658	13.223

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

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8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ln21c01.d Date Analyzed: 11/21/19

Instrument ID: HP09915 Time Analyzed: 08:18

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	153538	4.493	842128	7.959	689674	11.361	371519	13.223
UPPER LIMIT	307076	4.993	1684256	8.459	1379348	11.861	743038	13.723
LOWER LIMIT	76769	3.993	421064	7.459	344837	10.861	185760	12.723
LAB SAMPLE ID								
01 RVLL83 - RL	163145	4.493	871784	7.956	717899	11.358	380162	13.220
02 VBLKL83	158112	4.509	860082	7.959	701132	11.358	371721	13.223
03 LCSL83	170757	4.496	895510	7.959	731089	11.361	395685	13.223
04 1202441	182891	4.490	914801	7.959	740356	11.361	394661	13.222
05 1202286	162918	4.499	847279	7.962	692359	11.361	371627	13.222
06 1202287MS	171692	4.509	862571	7.962	705149	11.361	381480	13.222
07 1202288MSD	172012	4.506	873696	7.962	703392	11.361	376918	13.223
08 1202289	164174	4.496	869822	7.956	712323	11.358	380294	13.223
09 1202290	158215	4.496	865306	7.956	705018	11.358	375108	13.223
10 1202291	156545	4.503	848538	7.962	697784	11.361	368917	13.219
11 1202292	154593	4.496	841386	7.956	685547	11.358	361435	13.223
12 1202293	148061	4.503	821642	7.962	673731	11.361	354768	13.222
13 1202294	147640	4.486	821085	7.962	673890	11.361	359670	13.222
14 1202321	143852	4.503	832267	7.962	679478	11.361	360892	13.223
15 1202322	146070	4.496	803691	7.956	668682	11.358	359126	13.219
16 1202323	139158	4.496	792251	7.956	650705	11.358	349954	13.223
17 1202325	137315	4.490	794207	7.956	660553	11.358	359250	13.219
18 1202326	140046	4.500	793651	7.959	648071	11.358	348594	13.223
19 1202327	144523	4.500	806944	7.959	666802	11.361	358400	13.223
20 1202434	151018	4.500	789510	7.959	657287	11.358	350013	13.219
21 1202437	141202	4.506	794599	7.962	661153	11.361	352032	13.223
22 1202438	135653	4.506	776680	7.962	640590	11.358	343644	13.223

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ln21c01.d Date Analyzed: 11/21/19

Instrument ID: HP09915 Time Analyzed: 08:18

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA) AREA #	RT #	IS2(FBZ) AREA #	RT #	IS3(CBZ) AREA #	RT #	IS4(DCB) AREA #	RT #
12 HOUR STD	153538	4.493	842128	7.959	689674	11.361	371519	13.223
UPPER LIMIT	307076	4.993	1684256	8.459	1379348	11.861	743038	13.723
LOWER LIMIT	76769	3.993	421064	7.459	344837	10.861	185760	12.723
LAB SAMPLE ID								
23 1202439	135273	4.499	772937	7.962	634274	11.358	343213	13.222
24 1202440	134172	4.490	769976	7.956	645962	11.361	345182	13.220

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

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Sample Data

Volatiles by GC/MS

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
C2001

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202314

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov20a.b/ln20s02.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	2	J
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	0.3	J
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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C2001 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202314

Data file: /chem/HP09915.i/19nov20a.b/ln20s02.d Injection date and time: **20-NOV-2019 10:19**
Data file Sample Info. Line: C2001;1202314;1;0;;JCW20;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 18:19 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.500	(-0.006)	938	65	159398M	(4)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	895343	(1)	50.00	
100) Chlorobenzene-d5	11.361	(0.000)	3072	117	721900	(0)	50.00	
131) 1,4-Dichlorobenzene-d4	13.219	(0.003)	3650	152	387240	(-1)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.078	(0.000)	113	206607	47.199	94%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.532	(0.000)	102	55584	49.824	100%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	910453	48.200	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	348851	48.774	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)	3.808	(-0.000)	58	806M	1.503	1.50		J	0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)	4.464	(0.000)	84	1528	0.338	0.34		J	0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

M = Compound was manually integrated.

Digitally signed by Don V. Viray on 11/20/2019 at 18:21. Target 3.5 esignature user ID: dvv10203

C2001 Lancaster Laboratories 1202314
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov20a.b/ln20s02.d Injection date and time: **20-NOV-2019 10:19**
Data file Sample Info. Line: C2001;1202314;1;0;;JCW20;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 18:19 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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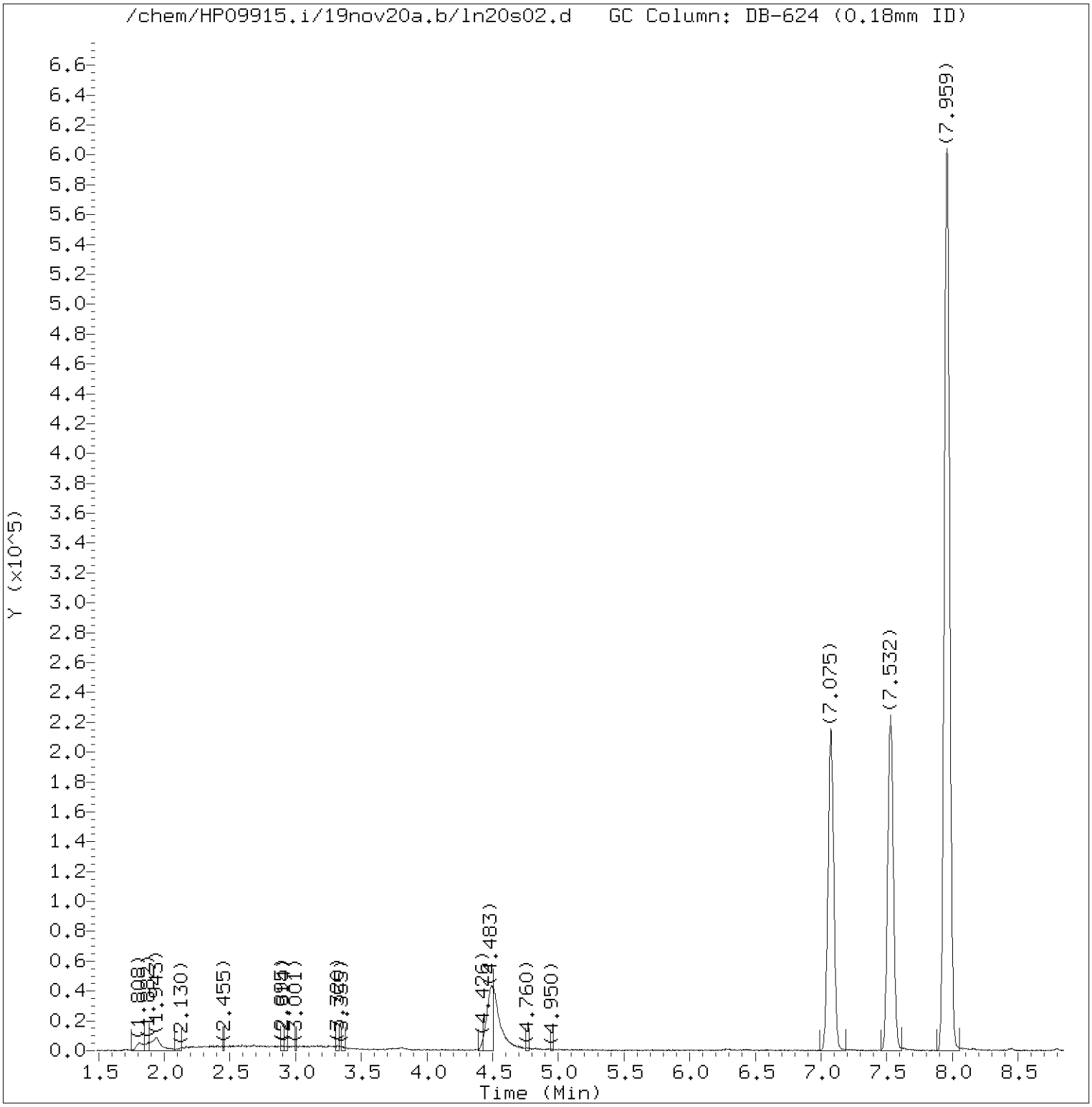
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 11/20/2019 at 18:21. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:50. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

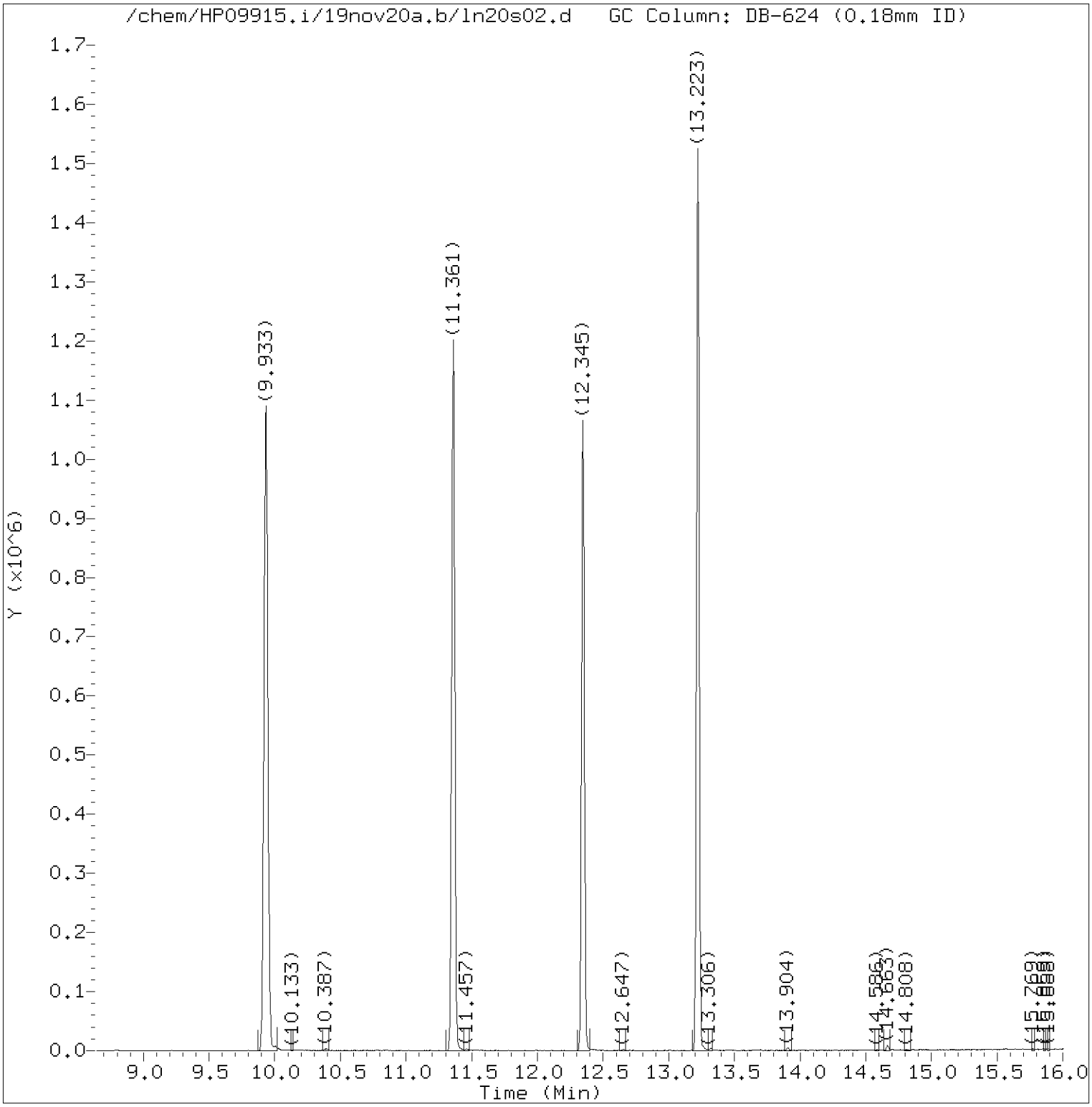
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s02.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 10:19 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 18:19 dvv10203

Sample Name: C2001 Lab Sample ID: 1202314

Digitally signed by Don V. Viray
on 11/20/2019 at 18:21.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s02.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 10:19 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 18:19 dvv10203

Sample Name: C2001 Lab Sample ID: 1202314

Digitally signed by Don V. Viray
on 11/20/2019 at 18:21.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s02.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 10:19 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 18:19 dvv10203

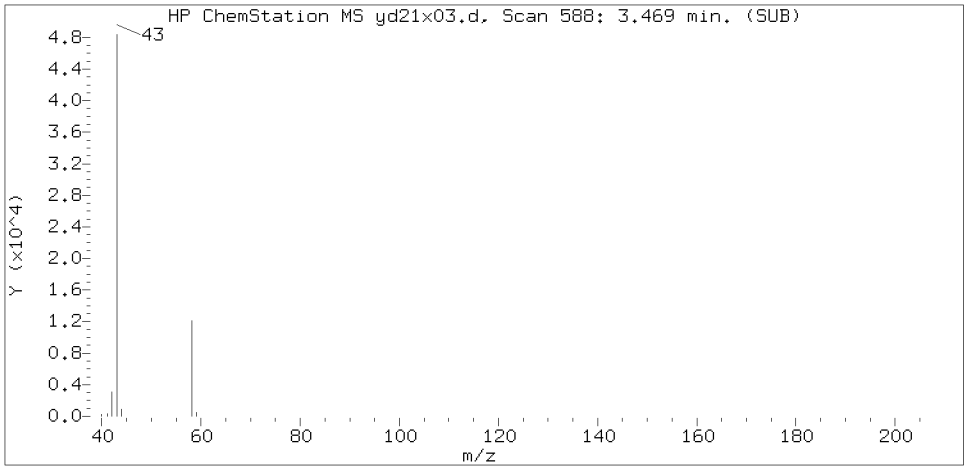
Sample Name: C2001 Lab Sample ID: 1202314

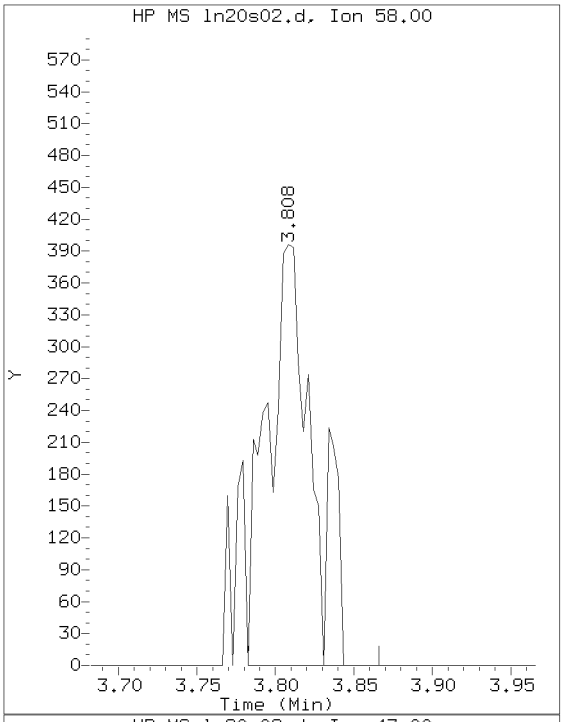
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
18) Acetone	(1)	3.808	58	806M	1.503
28) Methylene Chloride	(2)	4.464	84	1528	0.338
29)*t-Butyl alcohol-d10	(1)	4.500	65	159398M	250.000
52)$Dibromofluoromethane	(2)	7.078	113	206607	47.199
57)$1,2-Dichloroethane-d4	(2)	7.532	102	55584	49.824
66)*Fluorobenzene	(2)	7.959	96	895343	50.000
83)$Toluene-d8	(3)	9.933	98	910453	48.200
100)*Chlorobenzene-d5	(3)	11.361	117	721900	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	348851	48.774
131)*1,4-Dichlorobenzene-d4	(4)	13.219	152	387240	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

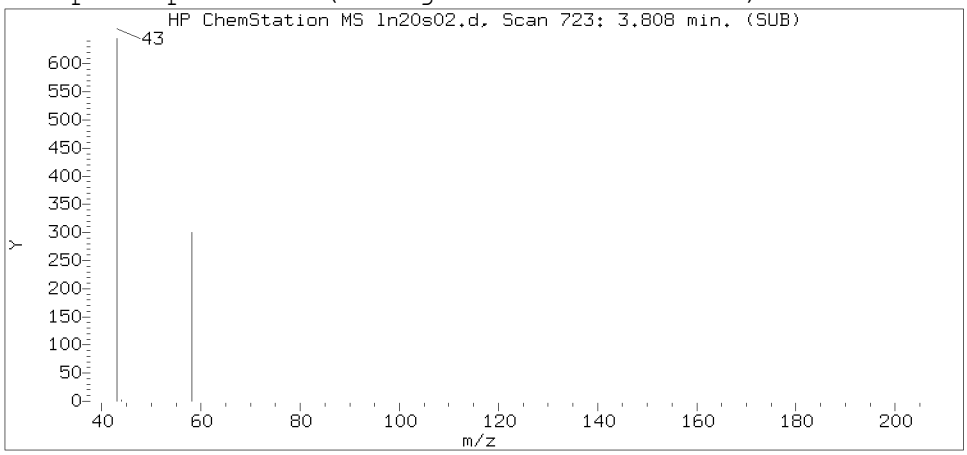
Digitally signed by Don V. Viray
on 11/20/2019 at 18:21.
Target 3.5 esignature user ID: dvv10203

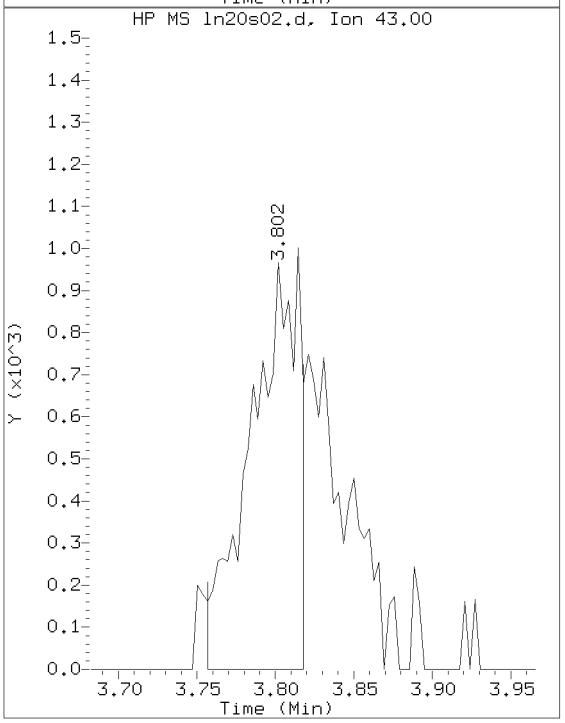
Reference Standard Spectrum for Acetone



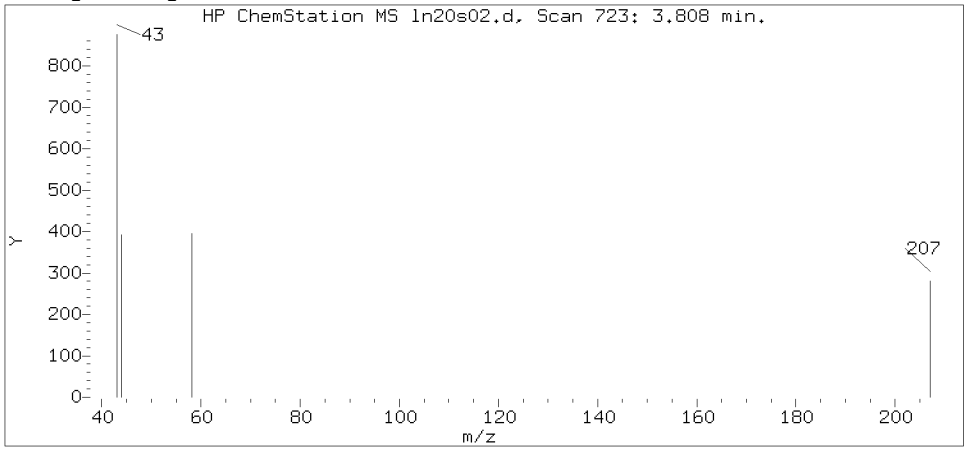


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov20a.b/ln20s02.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 10:19 Analyst ID: KKM02078

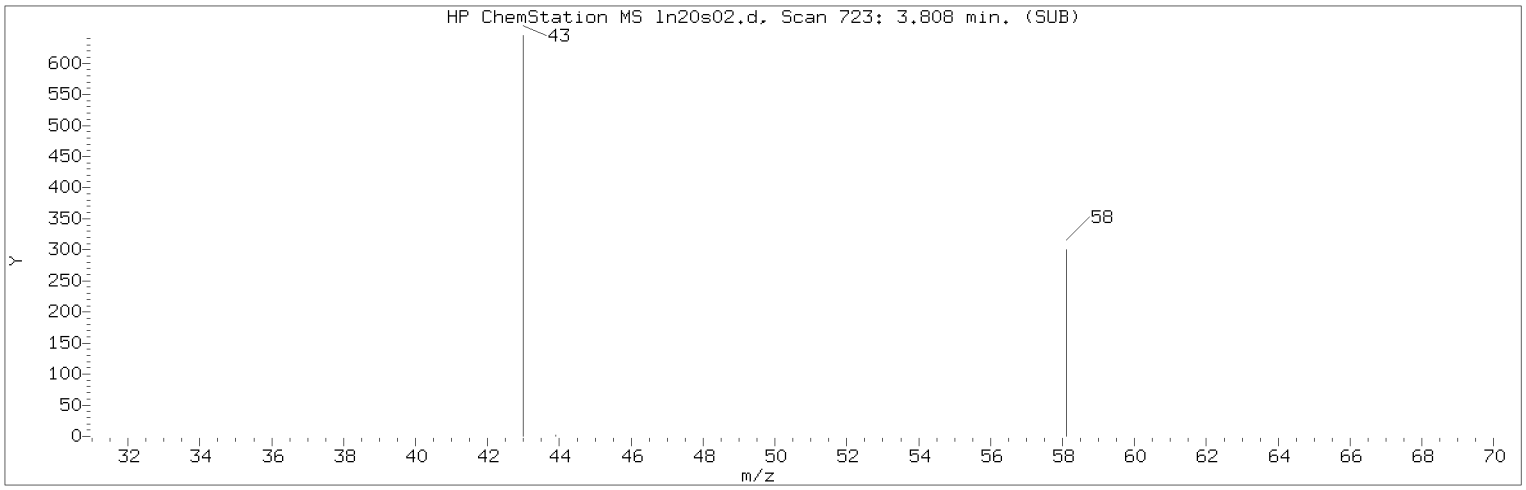
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 18:19 dvv10203

Sample Name: C2001 Lab Sample ID: 1202314

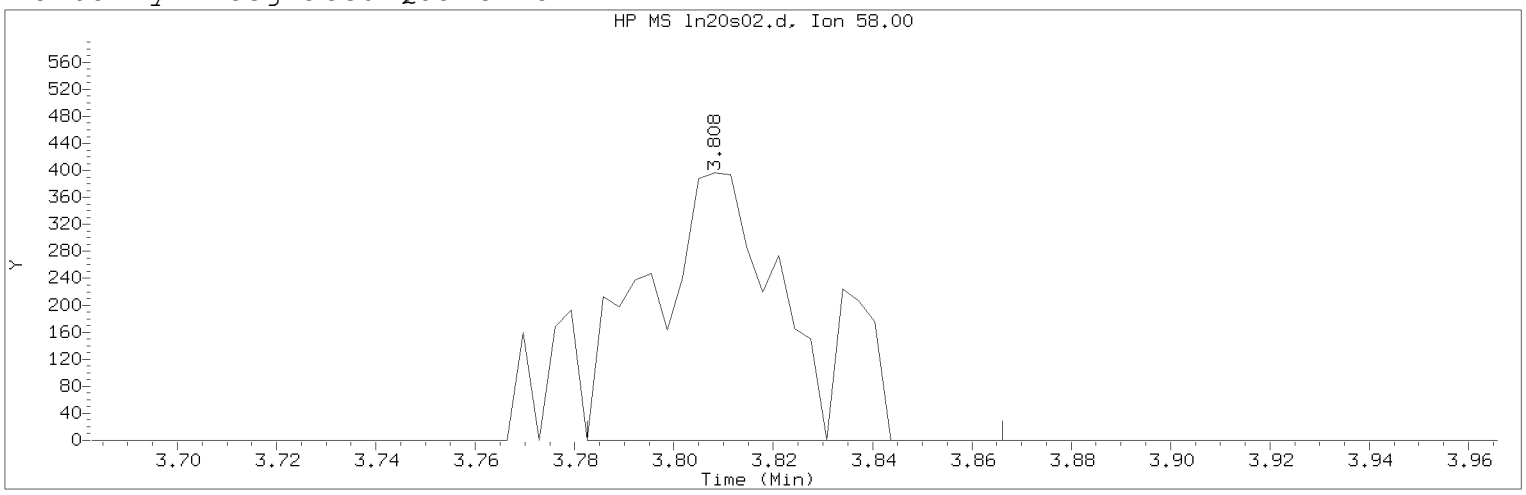
Compound Number	: 18
Compound Name	: Acetone
Scan Number	: 723
Retention Time (minutes)	: 3.808
Relative Retention Time	:-0.00023
Quant Ion	: 58.00
Area (flag)	: 806M
On-Column Amount (ng)	: 1.5034

Digitally signed by Don V. Viray on 11/20/2019 at 18:21.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s02.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 10:19 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 18:19 dvv10203

Sample Name: C2001 Lab Sample ID: 1202314

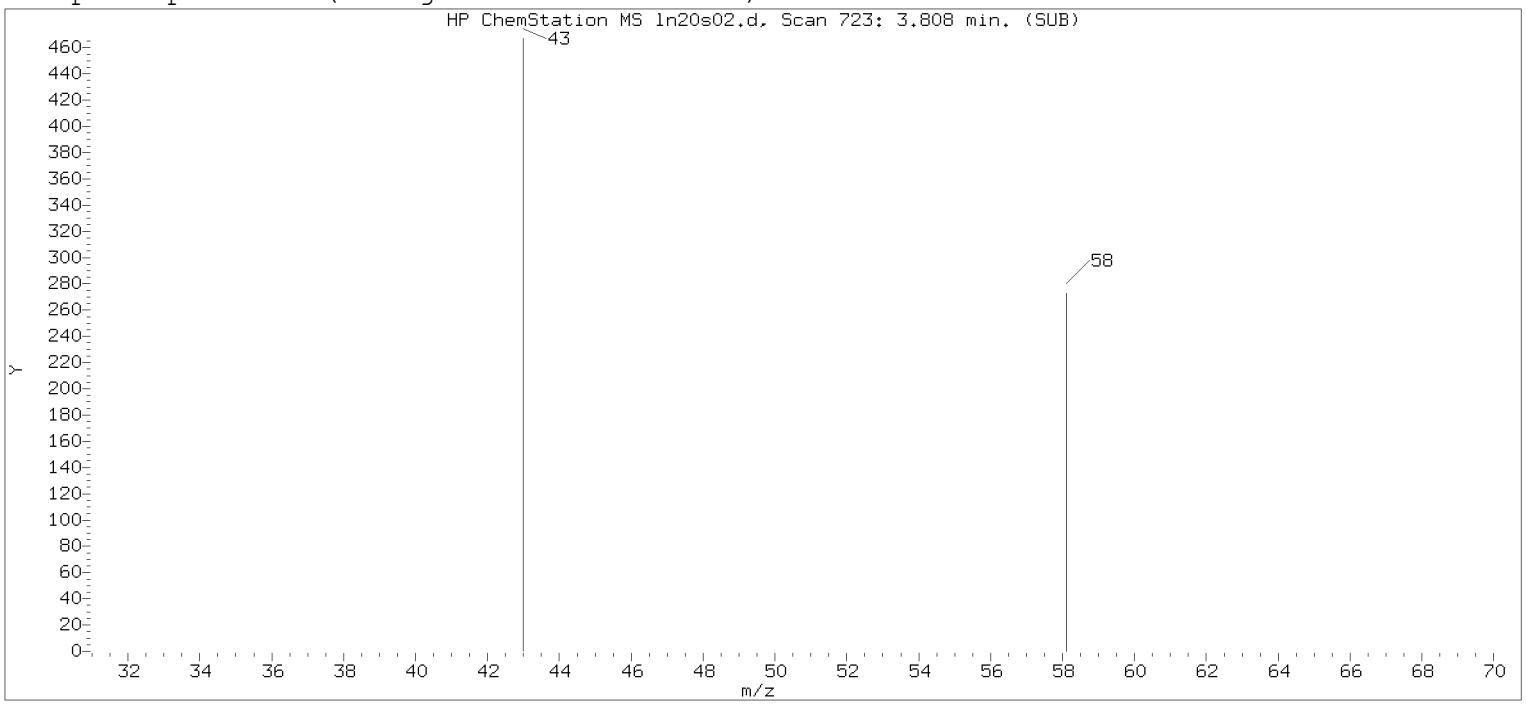
Compound Number : 18
Compound Name : Acetone
Scan Number : 723
Retention Time (minutes): 3.808
Quant Ion : 58.00
Area (flag) : 806M
On-Column Amount (ng) : 1.5034
Integration start scan : 714 Integration stop scan: 740
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

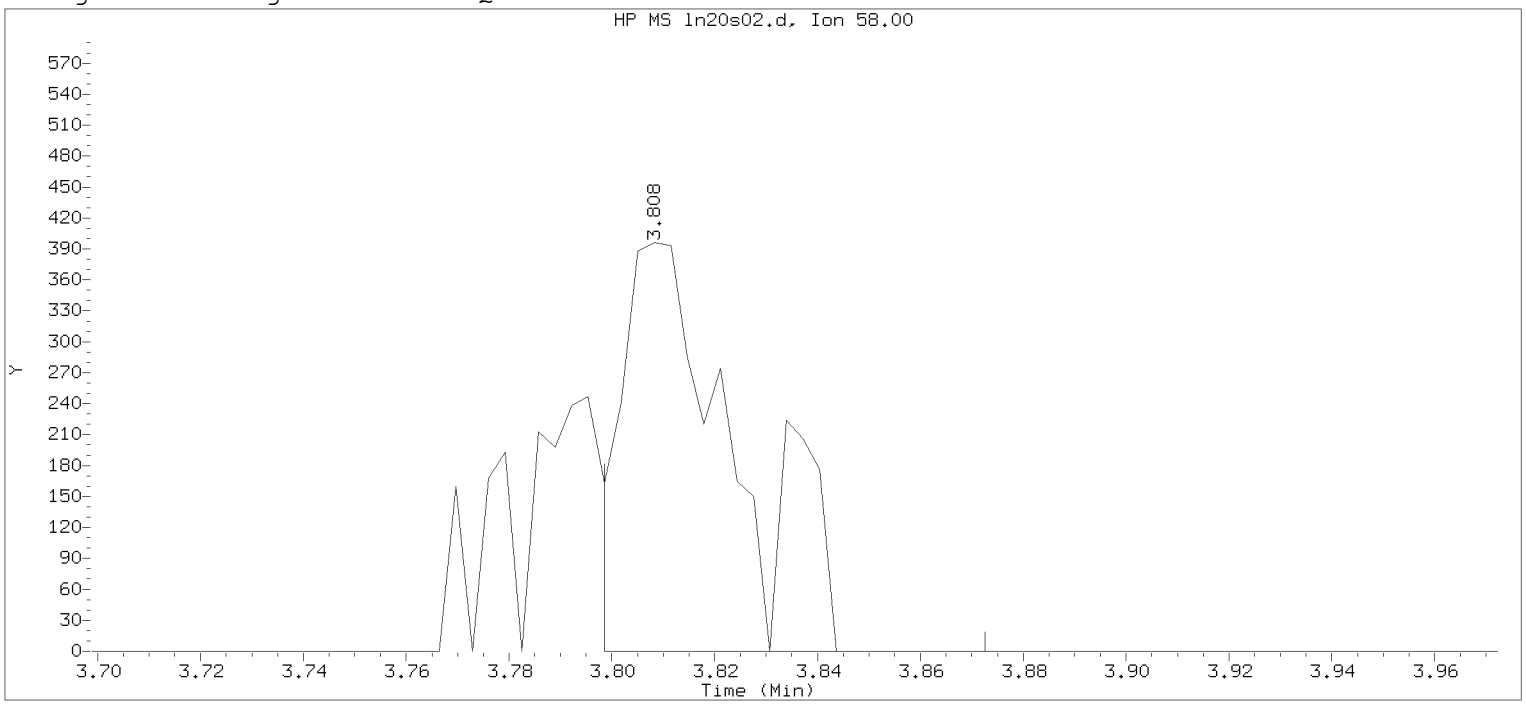
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/20/2019 at 18:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:50.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s02.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 10:19 Analyst ID: KKM02078

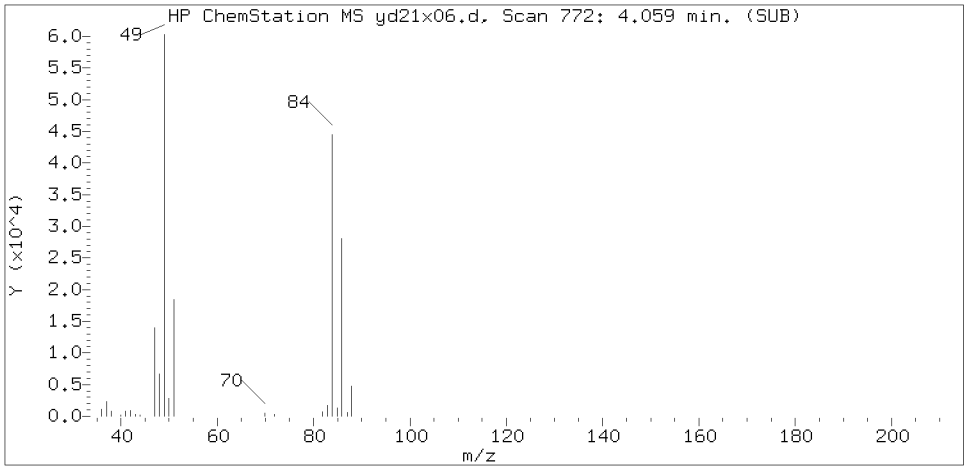
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 10:37 Automation

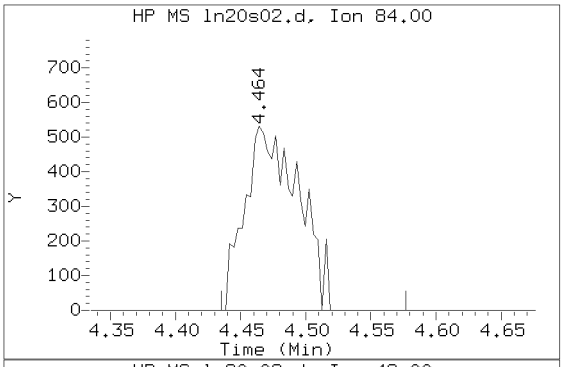
Sample Name: C2001 Lab Sample ID: 1202314

Compound Number : 18
Compound Name : Acetone
Scan Number : 723
Retention Time (minutes): 3.808
Quant Ion : 58.00
Area : 617
On-column Amount (ng) : 1.2037
Integration start scan : 719 Integration stop scan: 742
Y at integration start : 0 Y at integration end: 0

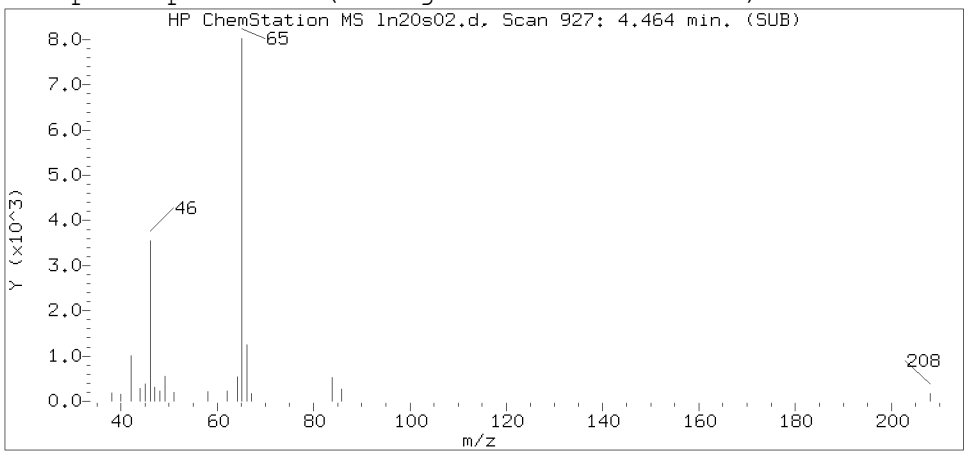
Digitally signed by Don V. Viray on 11/20/2019 at 18:21.
Target 3.5 esignature user ID: DVIRAY

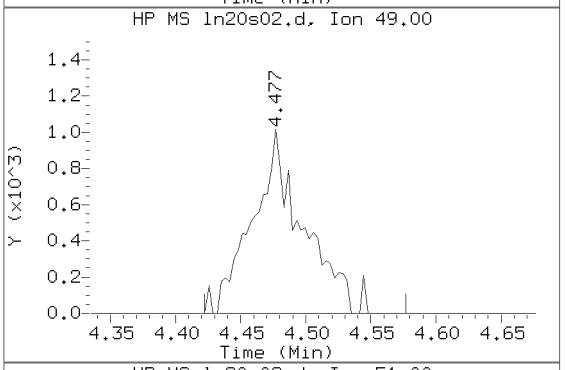
Reference Standard Spectrum for Methylene Chloride

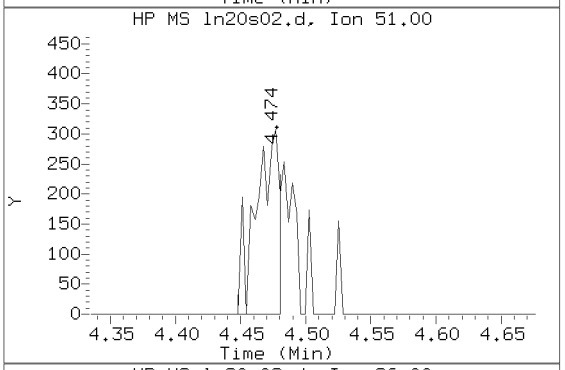




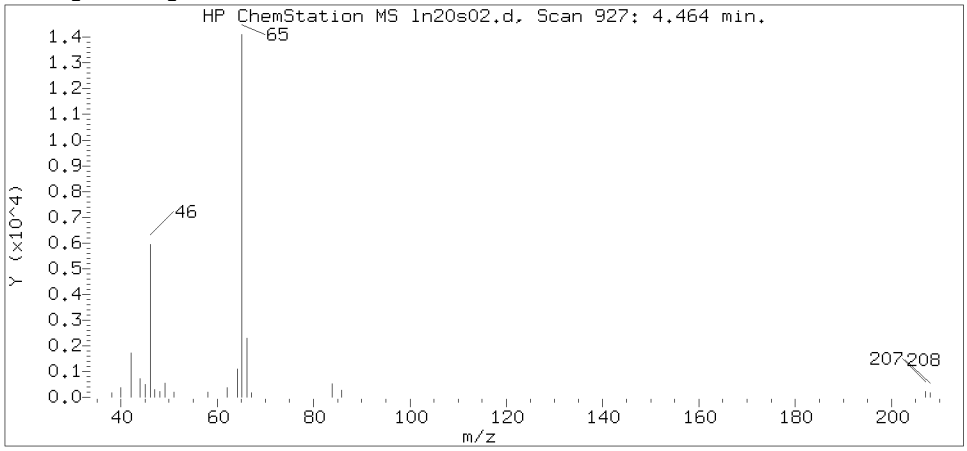
Sample Spectrum (Background Subtracted)

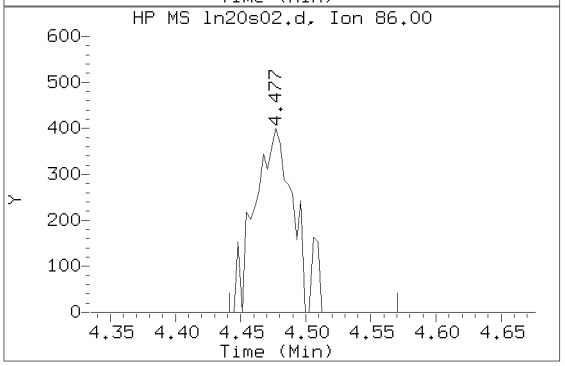






Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov20a.b/ln20s02.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 10:19 Analyst ID: KKM02078

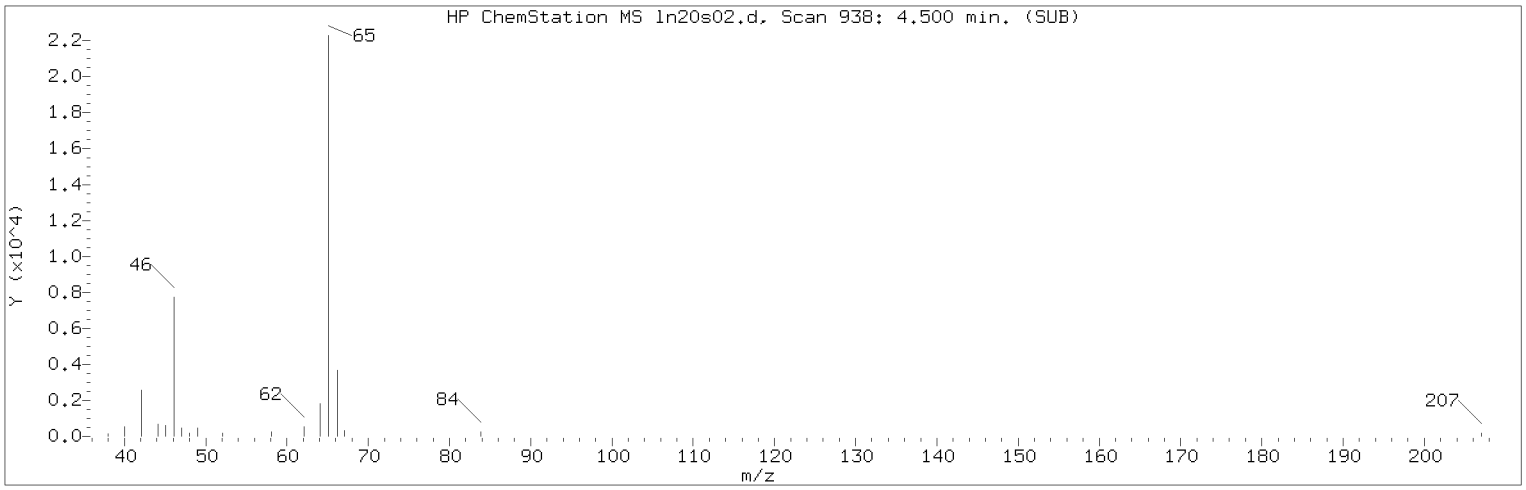
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 18:19 dvv10203

Sample Name: C2001 Lab Sample ID: 1202314

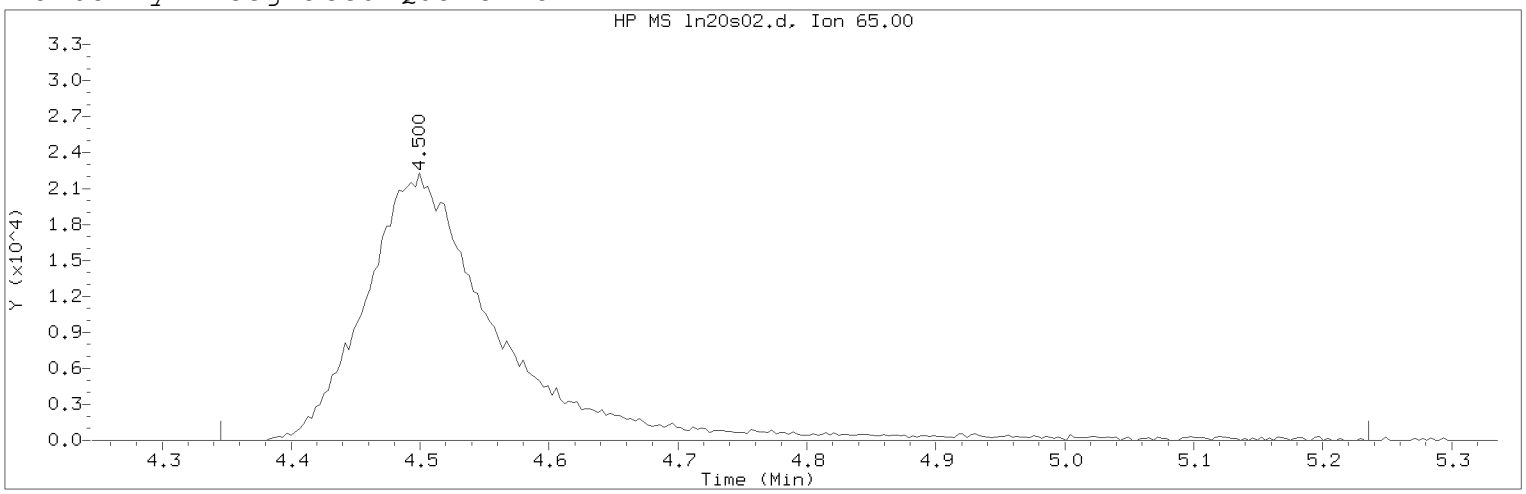
Compound Number	: 28
Compound Name	: Methylene Chloride
Scan Number	: 927
Retention Time (minutes)	: 4.464
Relative Retention Time	: 0.00080
Quant Ion	: 84.00
Area (flag)	: 1528
On-Column Amount (ng)	: 0.3383

Digitally signed by Don V. Viray on 11/20/2019 at 18:21.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s02.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 10:19 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 18:19 dvv10203

Sample Name: C2001 Lab Sample ID: 1202314

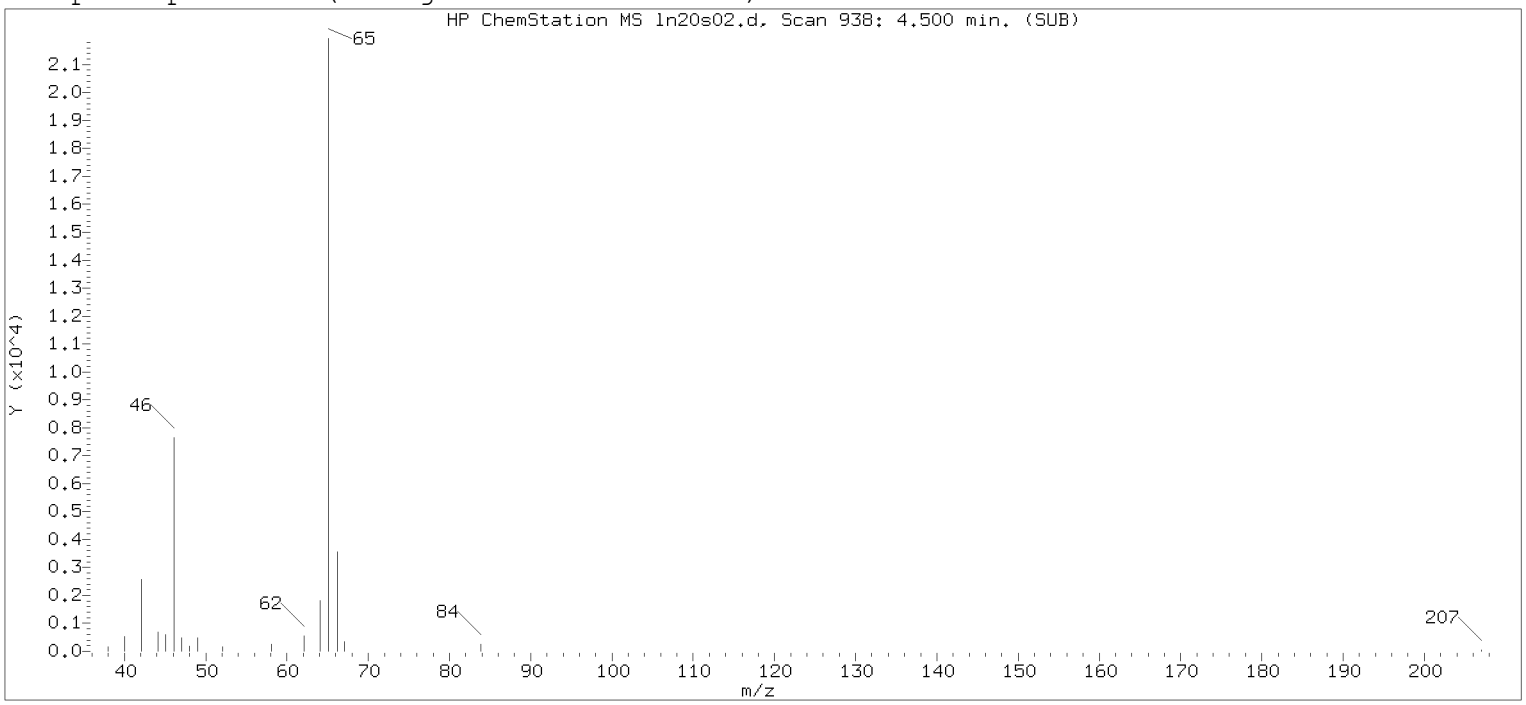
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 938
Retention Time (minutes): 4.500
Quant Ion : 65.00
Area (flag) : 159398M
On-Column Amount (ng) : 250.0000
Integration start scan : 889 Integration stop scan: 1166
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

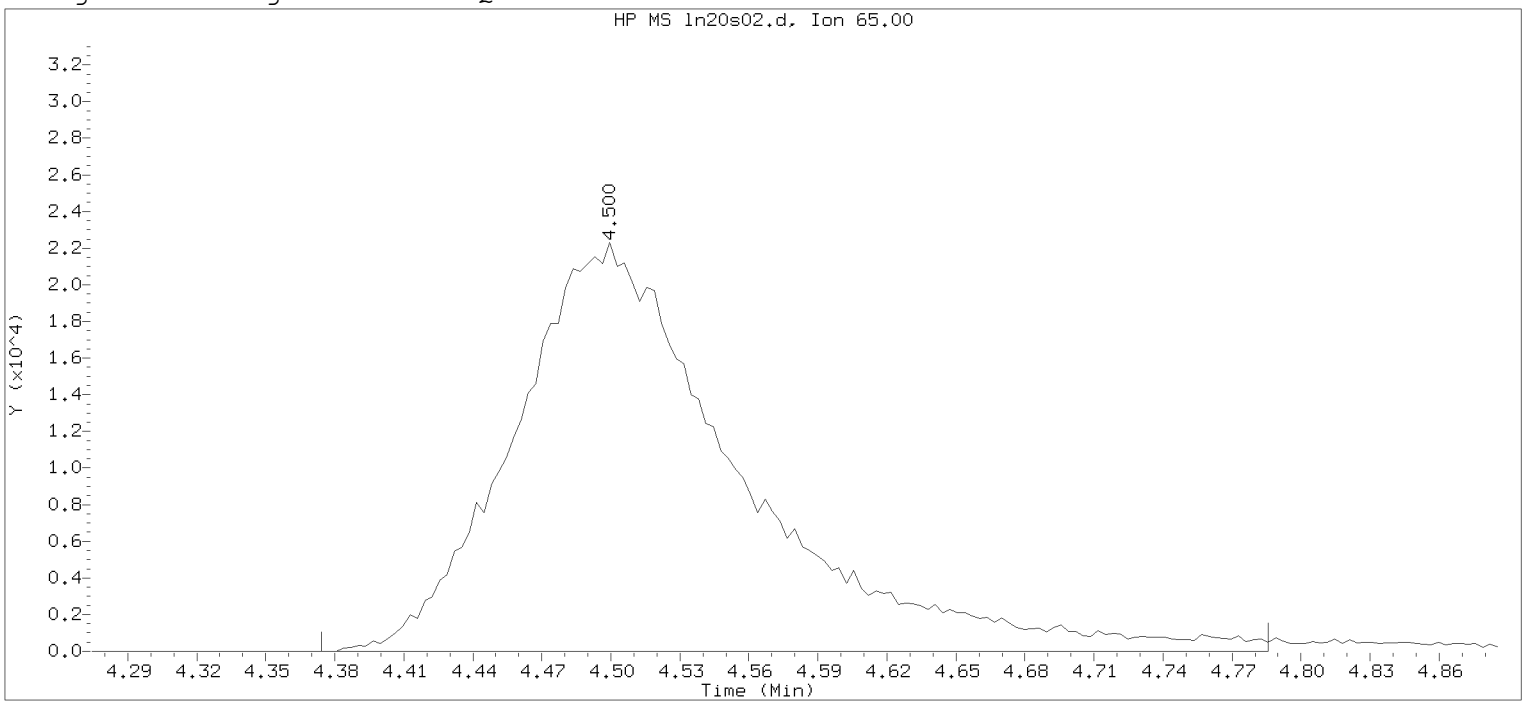
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/20/2019 at 18:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:50.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s02.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 10:19 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 10:37 Automation

Sample Name: C2001 Lab Sample ID: 1202314

Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 938
Retention Time (minutes): 4.500
Quant Ion : 65.00
Area : 152506
On-column Amount (ng) : 250.0000
Integration start scan : 898 Integration stop scan: 1026
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/20/2019 at 18:21.
Target 3.5 esignature user: Don V. Viray

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

C2002

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202315

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov20a.b/ln20s17.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L		Q
75-01-4	Vinyl Chloride		1	U
75-35-4	1,1-Dichloroethene		1	U
67-64-1	Acetone		20	U
76-13-1	Freon 113		10	U
75-15-0	Carbon Disulfide		5	U
75-09-2	Methylene Chloride		1	U
156-60-5	trans-1,2-Dichloroethene		1	U
75-34-3	1,1-Dichloroethane		1	U
156-59-2	cis-1,2-Dichloroethene		1	U
78-93-3	2-Butanone		10	U
67-66-3	Chloroform		1	
71-55-6	1,1,1-Trichloroethane		1	U
71-43-2	Benzene		1	U
107-06-2	1,2-Dichloroethane		1	U
79-01-6	Trichloroethene		1	U
123-91-1	1,4-Dioxane		250	U
108-88-3	Toluene		1	U
127-18-4	Tetrachloroethene		1	U
100-41-4	Ethylbenzene		1	U
1330-20-7	Xylene (Total)		6	U
95-50-1	1,2-Dichlorobenzene		5	U
91-20-3	Naphthalene		5	U

FORM I VOA

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C2002 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202315

Data file: /chem/HP09915.i/19nov20a.b/ln20s17.d Injection date and time: **20-NOV-2019 15:54**
Data file Sample Info. Line: C2002;1202315;1;0;;JCW20;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 16:12 Automation

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.496	(-0.003)	937	65	147174	(-4)	250.00	
66) Fluorobenzene	7.956	(0.003)	2013	96	846942	(-5)	50.00	
100) Chlorobenzene-d5	11.361	(0.000)	3072	117	689587	(-5)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	367930	(-6)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072	(0.000)	113	198459	47.929	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(0.000)	102	53441	50.641	101%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	872613	48.361	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	328670	48.105	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)	6.853	(0.000)	83	7998	1.154	1.15			0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 11/20/2019 at 21:20. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov20a.b/ln20s17.d Injection date and time: **20-NOV-2019 15:54**
Data file Sample Info. Line: C2002;1202315;1;0;;JCW20;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 16:12 Automation

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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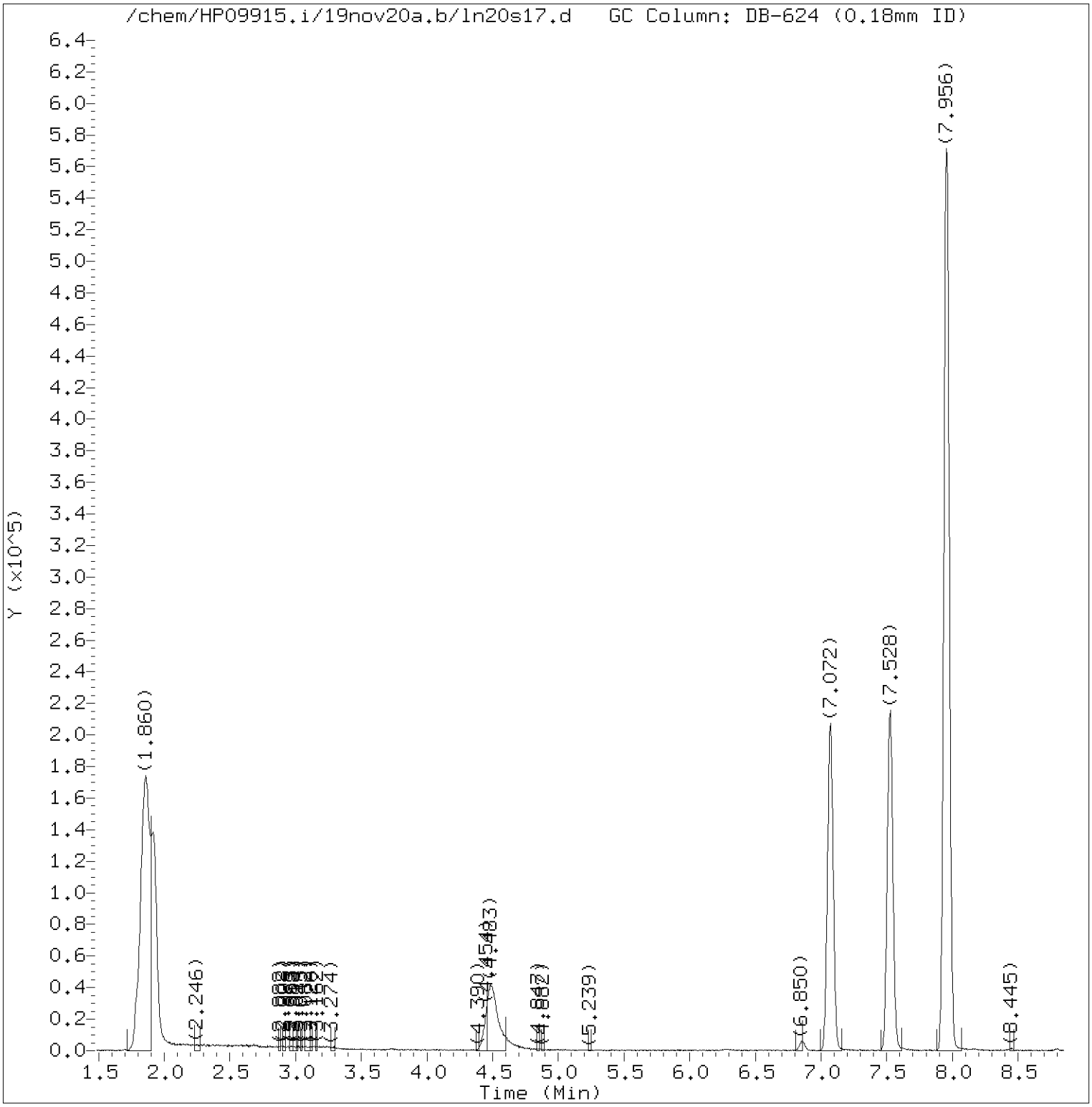
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 11/20/2019 at 21:20. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

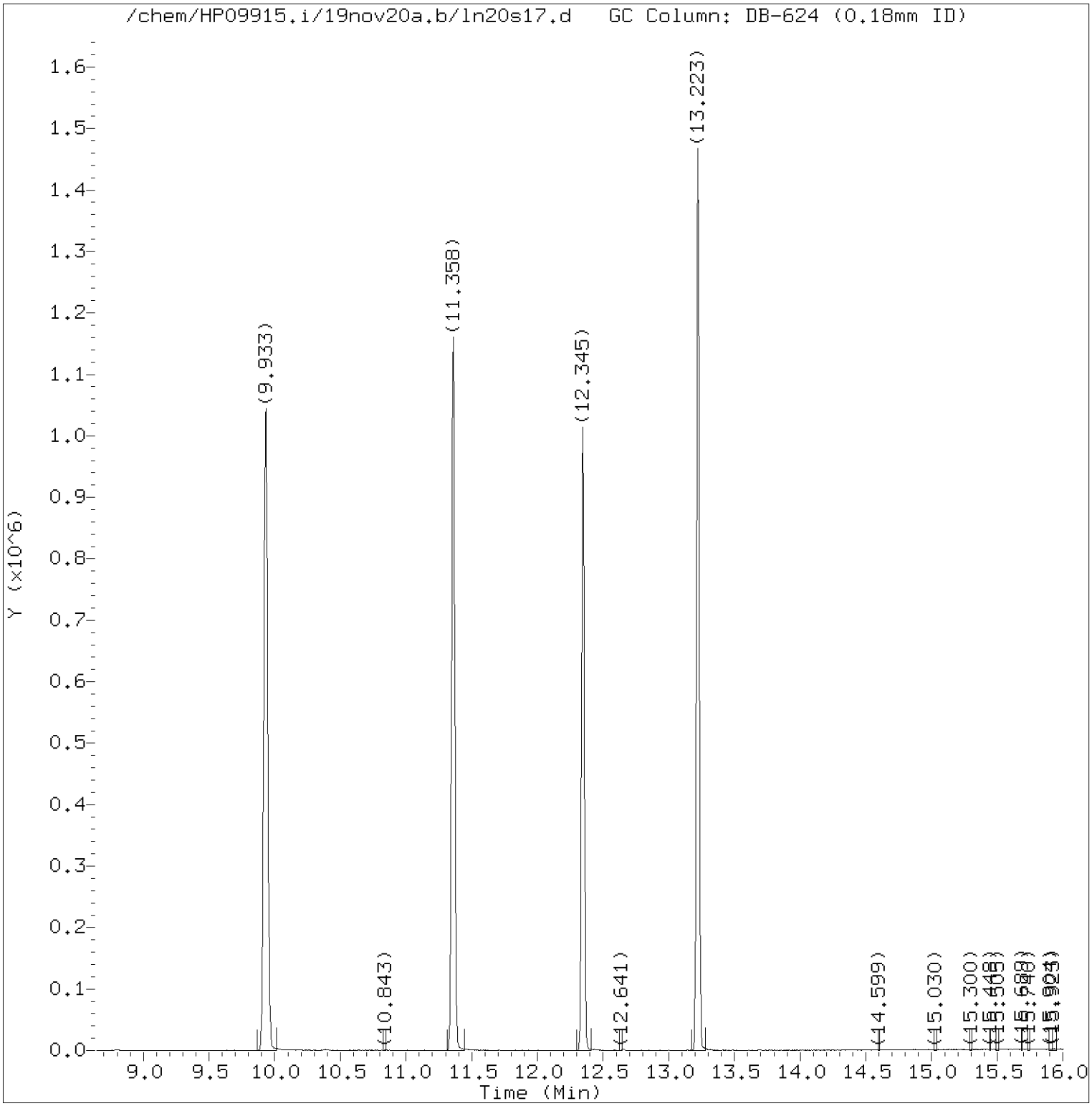
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s17.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 15:54 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 16:12 Automation

Sample Name: C2002 Lab Sample ID: 1202315

Digitally signed by Don V. Viray
on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s17.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 15:54 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 16:12 Automation

Sample Name: C2002 Lab Sample ID: 1202315

Digitally signed by Don V. Viray
on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s17.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 15:54 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 16:12 Automation

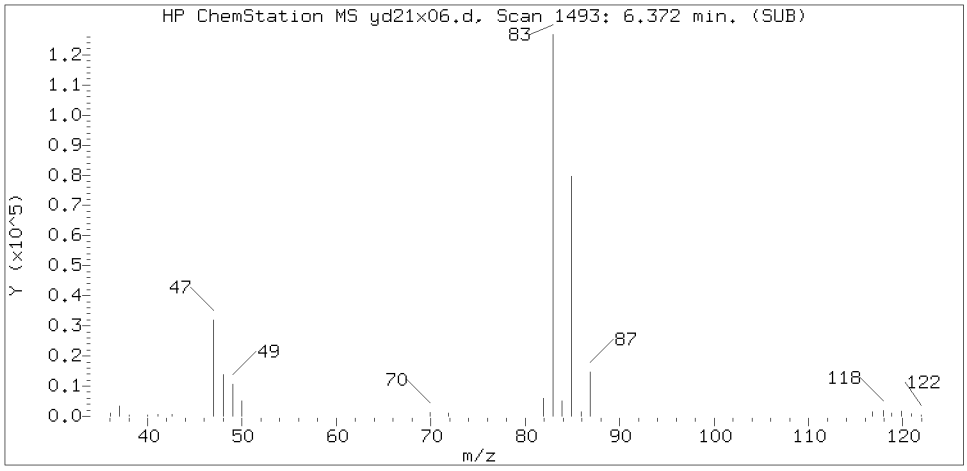
Sample Name: C2002 Lab Sample ID: 1202315

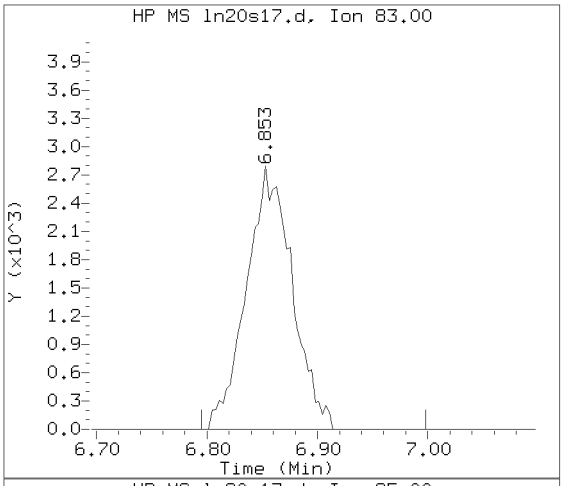
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.496	65	147174	250.000
51) Chloroform	(2)	6.853	83	7998	1.154
52)$Dibromofluoromethane	(2)	7.072	113	198459	47.929
57)$1,2-Dichloroethane-d4	(2)	7.528	102	53441	50.641
66)*Fluorobenzene	(2)	7.956	96	846942	50.000
83)$Toluene-d8	(3)	9.933	98	872613	48.361
100)*Chlorobenzene-d5	(3)	11.361	117	689587	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	328670	48.105
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	367930	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

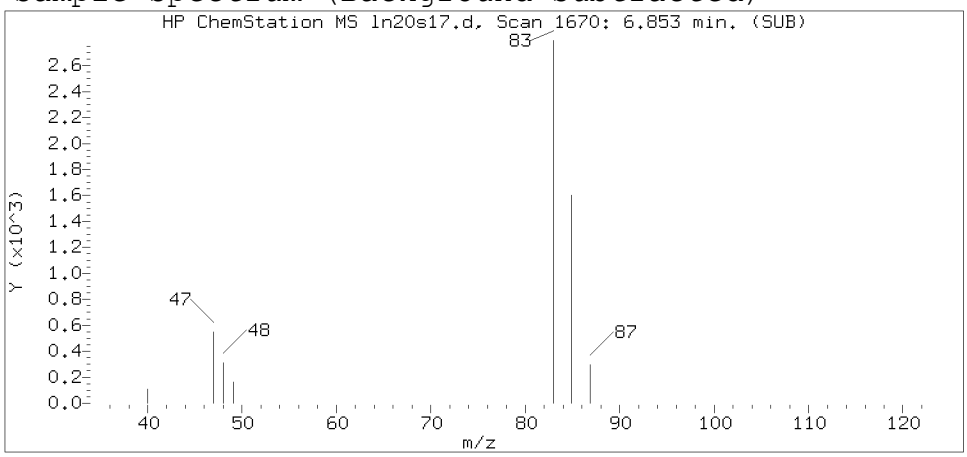
Digitally signed by Don V. Viray
on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203

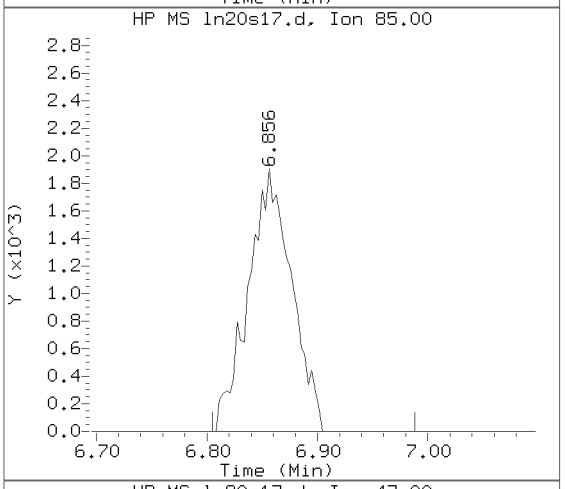
Reference Standard Spectrum for Chloroform



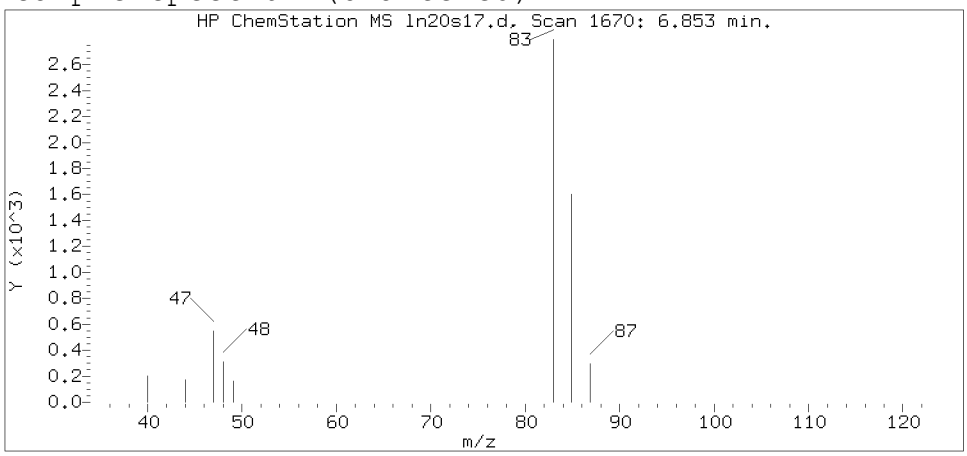


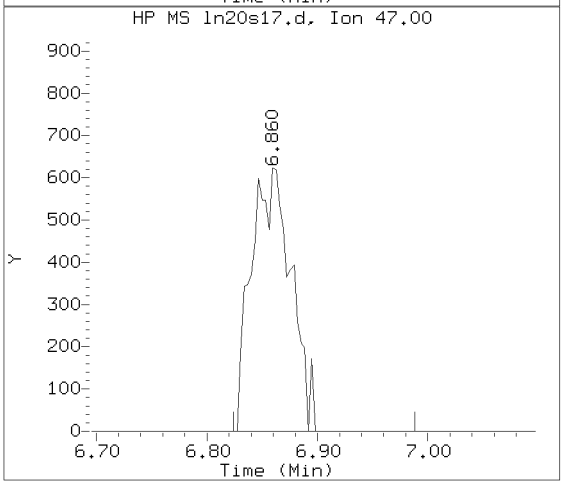
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov20a.b/ln20s17.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 15:54 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 16:12 Automation

Sample Name: C2002 Lab Sample ID: 1202315

Compound Number : 51
Compound Name : Chloroform
Scan Number : 1670
Retention Time (minutes): 6.853
Relative Retention Time : 0.00046
Quant Ion : 83.00
Area (flag) : 7998
On-Column Amount (ng) : 1.1542

Digitally signed by Don V. Viray on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

C2003

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202316

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov20a.b/ln20s18.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	0.2	J
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.8	J
156-59-2	cis-1,2-Dichloroethene	1	
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	2	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	11	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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C2003 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202316

Data file: /chem/HP09915.i/19nov20a.b/ln20s18.d Injection date and time: **20-NOV-2019 16:16**
Data file Sample Info. Line: C2003;1202316;1;0;;JCW20;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 16:34 Automation

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493	(0.000)	936	65	148761	(-3)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	838211	(-6)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	689898	(-5)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	371294	(-5)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072	(0.000)	113	197495	48.193	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	53765	51.479	103%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	862146	47.760	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	328190	48.013	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	3.757	(0.000)	96	828	0.233	0.23		J	0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.548	(0.000)	63	5418	0.756	0.76		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	6.387	(-0.000)	96	4959	1.075	1.07			0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	7.085	(-0.000)	97	13303	2.273	2.27			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.429	(0.000)	95	47056	10.961	10.96			0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)	10.541	(-0.000)	166	6611	1.379	1.38			0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

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Data file: /chem/HP09915.i/19nov20a.b/ln20s18.d Injection date and time: **20-NOV-2019 16:16**
Data file Sample Info. Line: C2003;1202316;1;0;;JCW20;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 16:34 Automation

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

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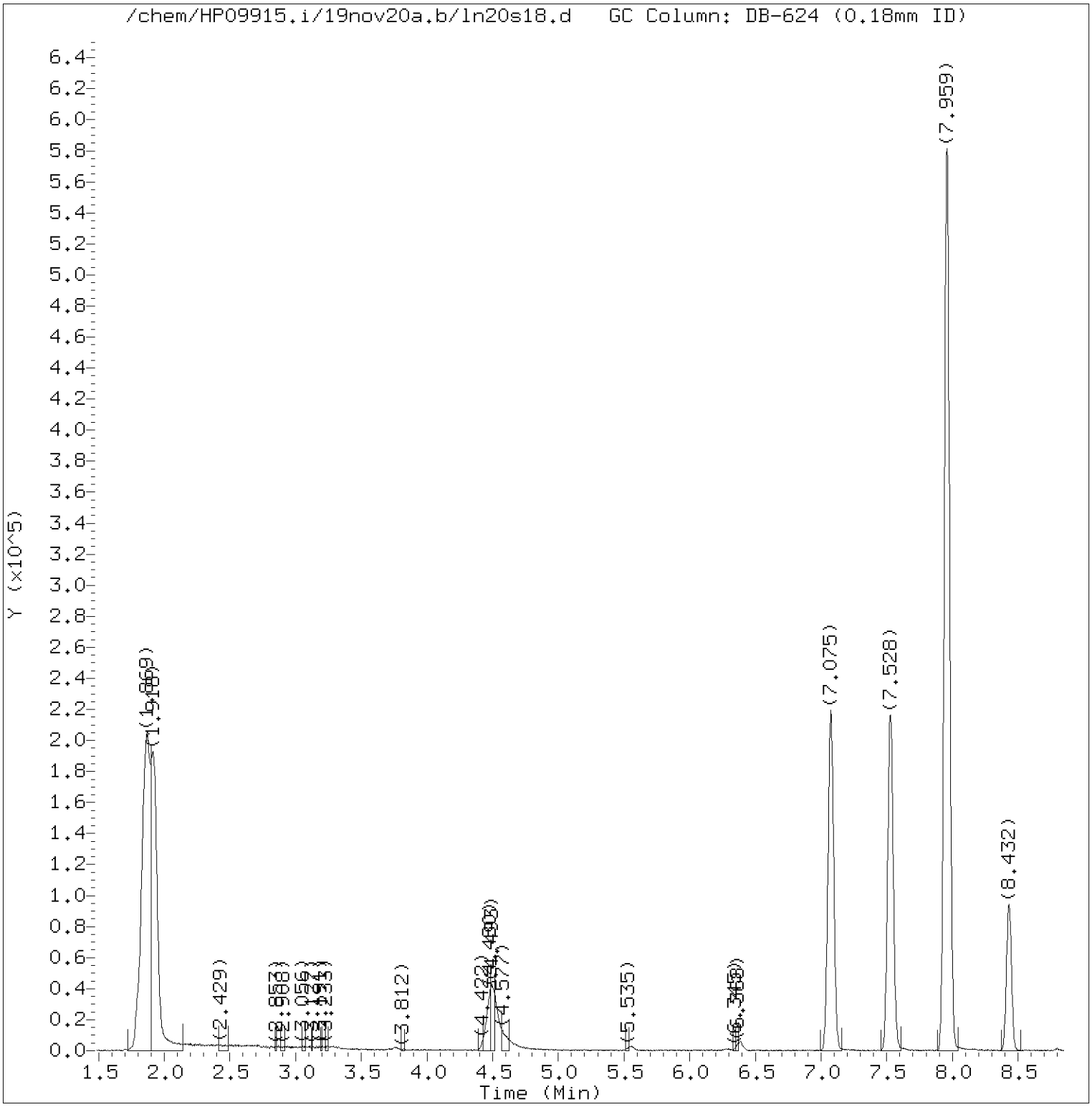
Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

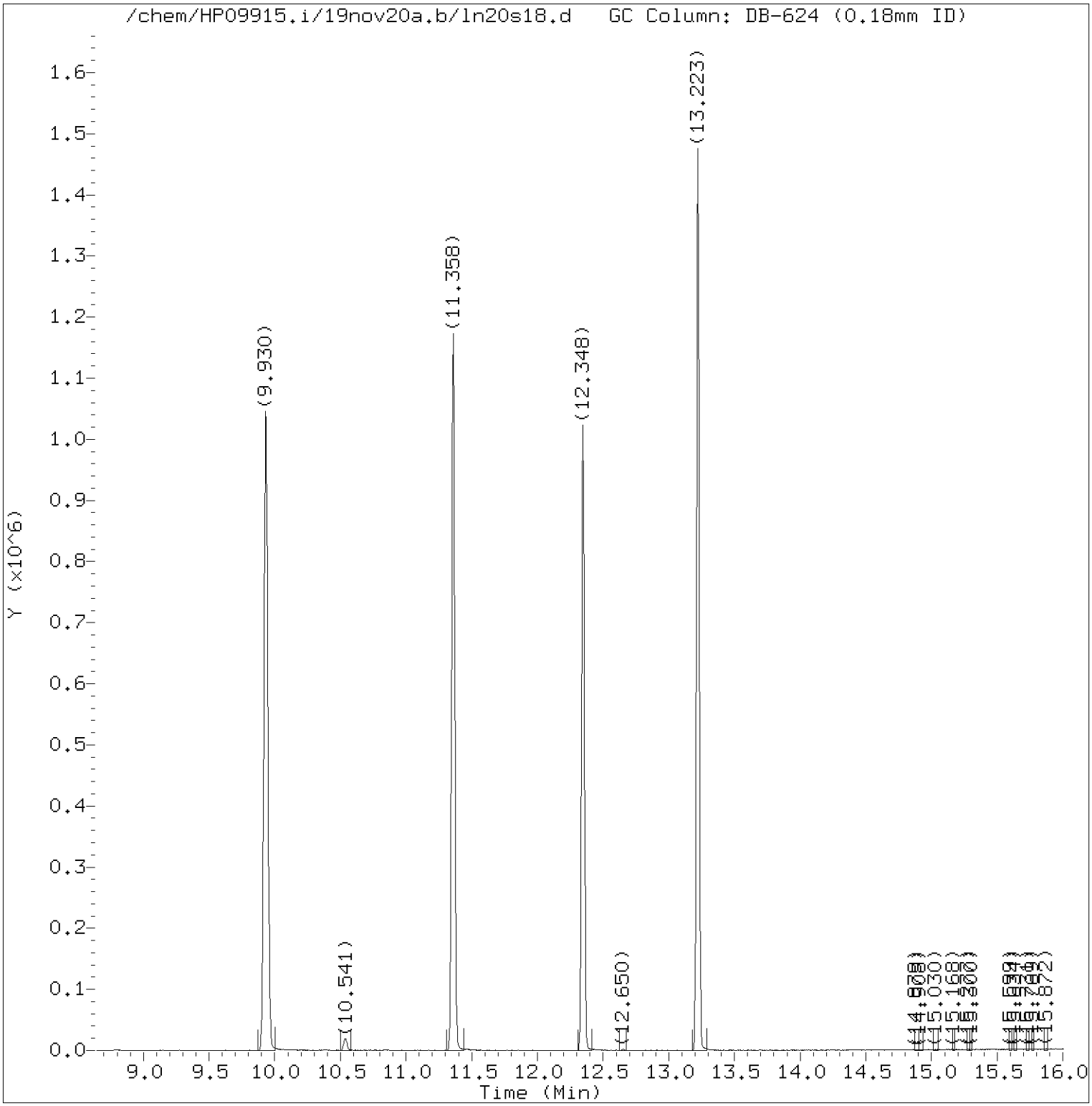
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s18.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 16:16 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 16:34 Automation

Sample Name: C2003 Lab Sample ID: 1202316

Digitally signed by Don V. Viray
on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s18.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 16:16 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 16:34 Automation

Sample Name: C2003 Lab Sample ID: 1202316

Digitally signed by Don V. Viray
on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s18.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 16:16 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 16:34 Automation

Sample Name: C2003 Lab Sample ID: 1202316

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	3.757	96	828	0.233
29)*t-Butyl alcohol-d10	(1)	4.493	65	148761	250.000
36) 1,1-Dichloroethane	(2)	5.548	63	5418	0.756
42) cis-1,2-Dichloroethene	(2)	6.387	96	4959	1.075
52)$Dibromofluoromethane	(2)	7.072	113	197495	48.193
53) 1,1,1-Trichloroethane	(2)	7.085	97	13303	2.273
57)$1,2-Dichloroethane-d4	(2)	7.525	102	53765	51.479
66)*Fluorobenzene	(2)	7.959	96	838211	50.000
71) Trichloroethene	(2)	8.429	95	47056	10.961
83)$Toluene-d8	(3)	9.930	98	862146	47.760
93) Tetrachloroethene	(3)	10.541	166	6611	1.379
100)*Chlorobenzene-d5	(3)	11.358	117	689898	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	328190	48.013
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	371294	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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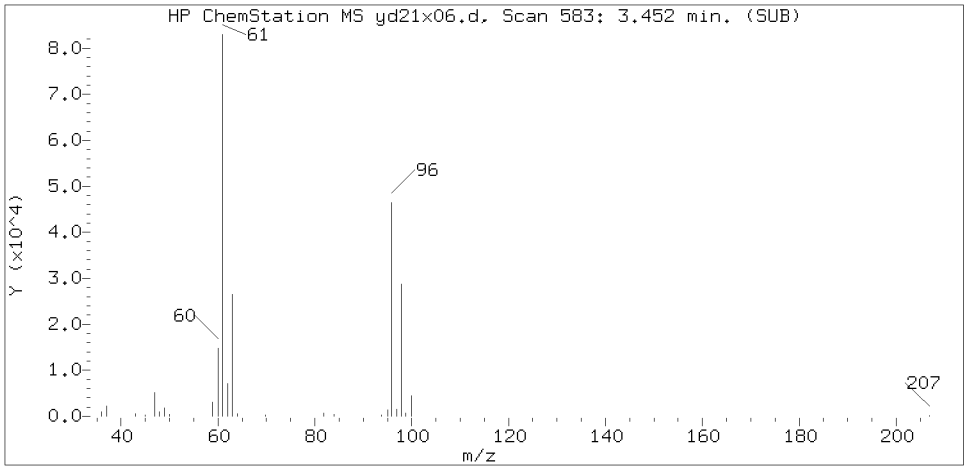
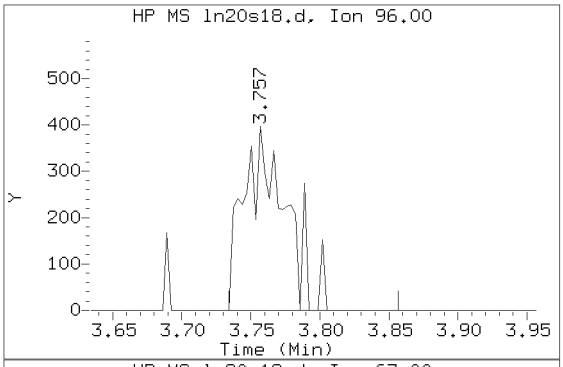
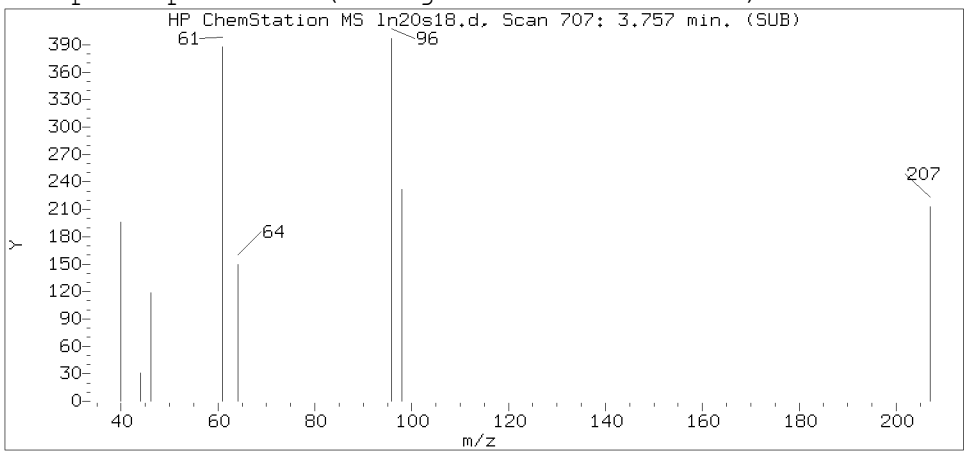
on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203

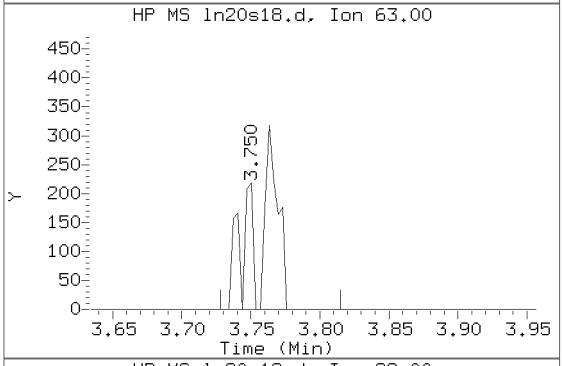
Reference Standard Spectrum for 1,1-Dichloroethene

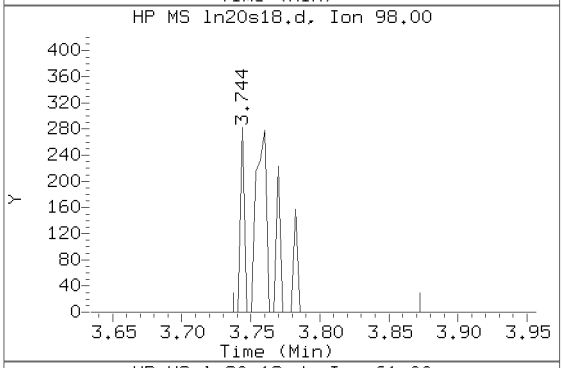




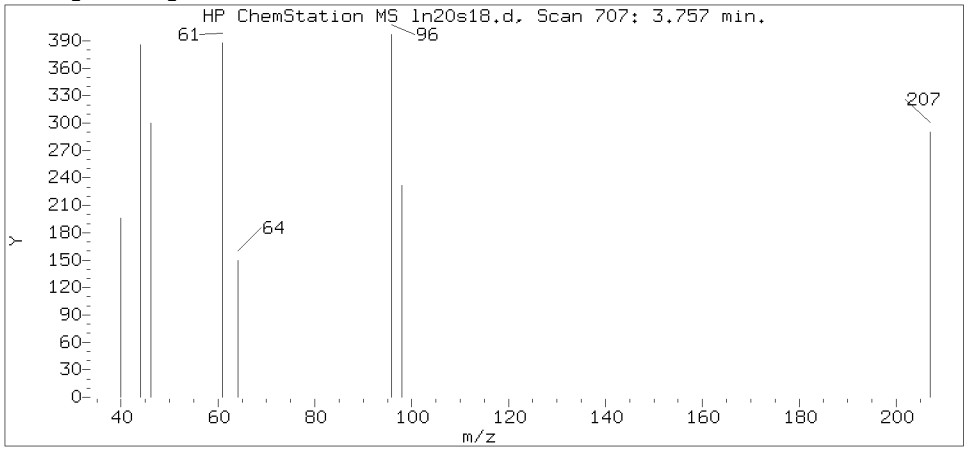
Sample Spectrum (Background Subtracted)

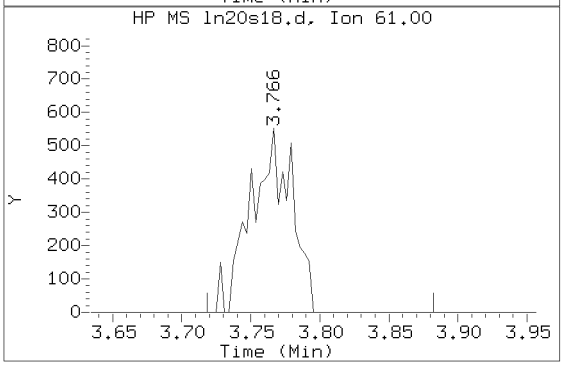






Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov20a.b/ln20s18.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 16:16 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 16:34 Automation

Sample Name: C2003 Lab Sample ID: 1202316

Compound Number	: 17
Compound Name	: 1,1-Dichloroethene
Scan Number	: 707
Retention Time (minutes)	: 3.757
Relative Retention Time	: 0.00040
Quant Ion	: 96.00
Area (flag)	: 828
On-Column Amount (ng)	: 0.2333

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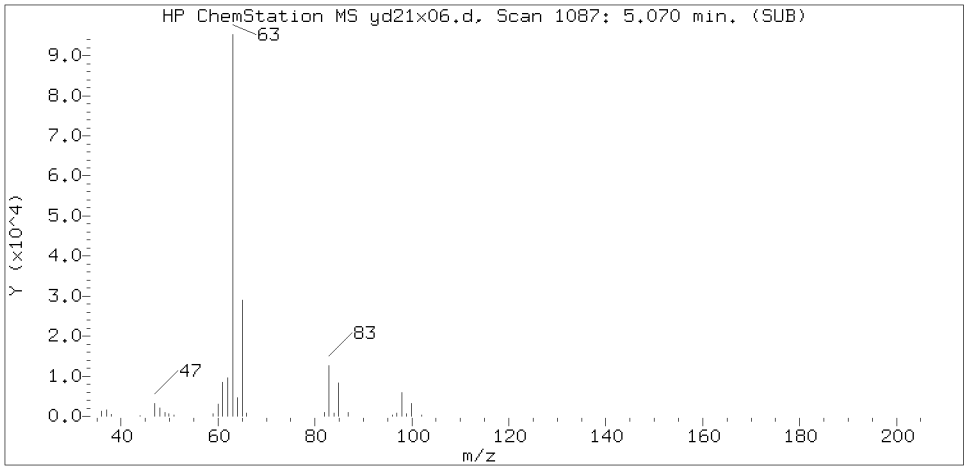
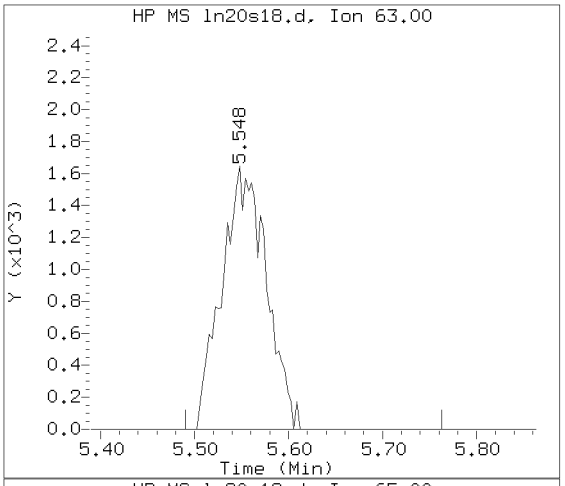
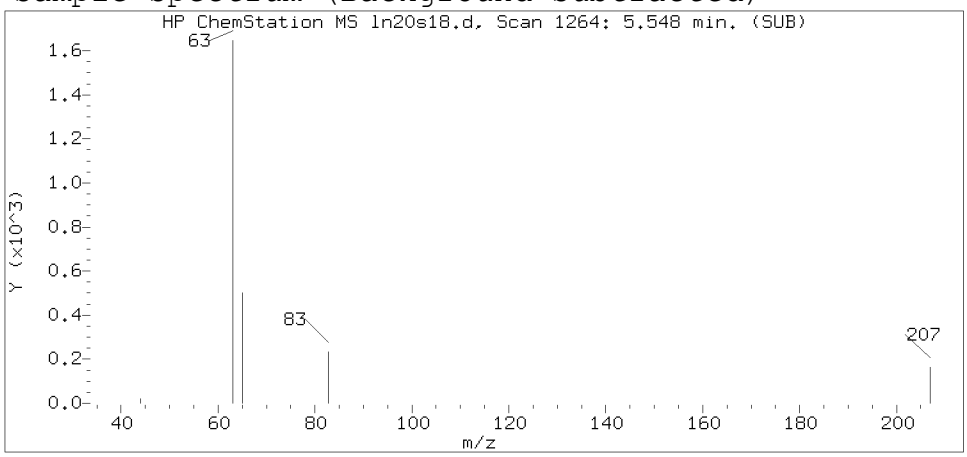
Target 3.5 esignature user ID: dvv10202

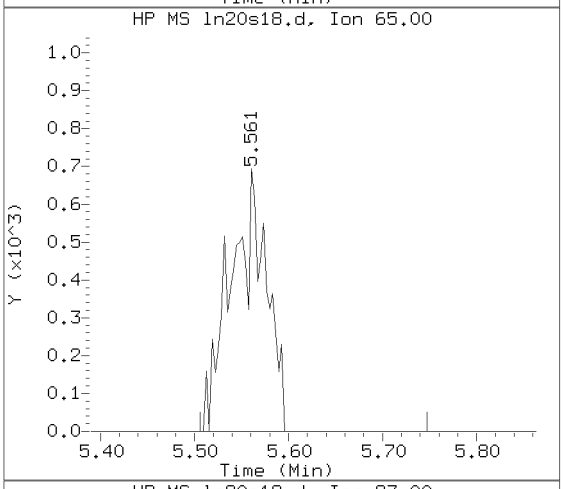
Reference Standard Spectrum for 1,1-Dichloroethane



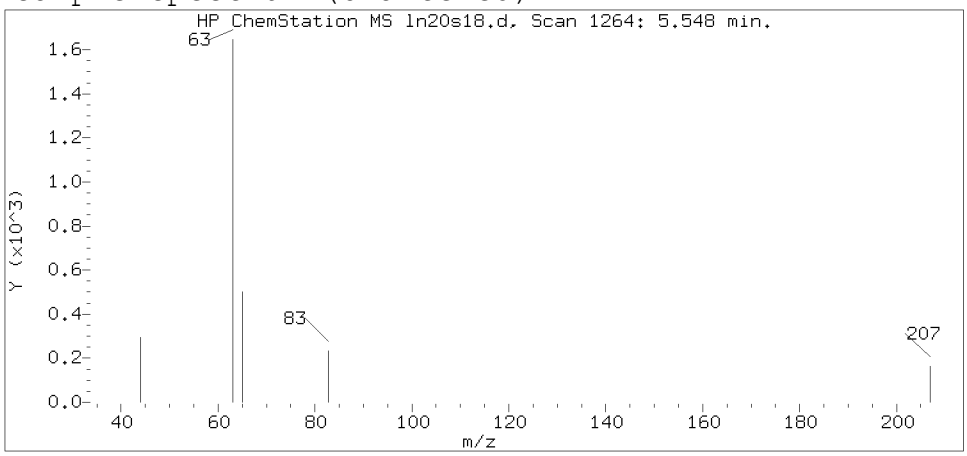


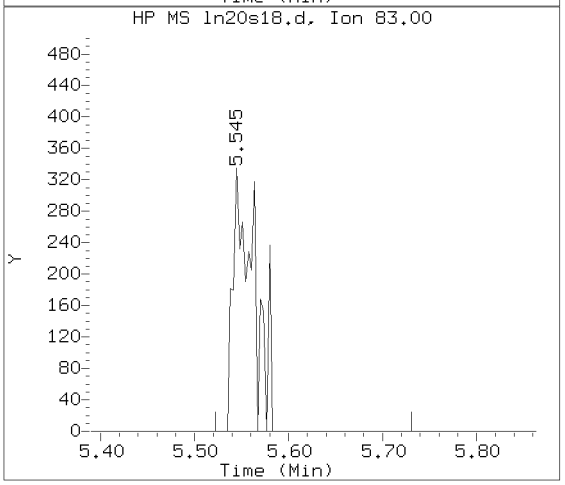
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov20a.b/ln20s18.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 16:16 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 16:34 Automation

Sample Name: C2003 Lab Sample ID: 1202316

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 1264
Retention Time (minutes): 5.548
Relative Retention Time : 0.00040
Quant Ion : 63.00
Area (flag) : 5418
On-Column Amount (ng) : 0.7557

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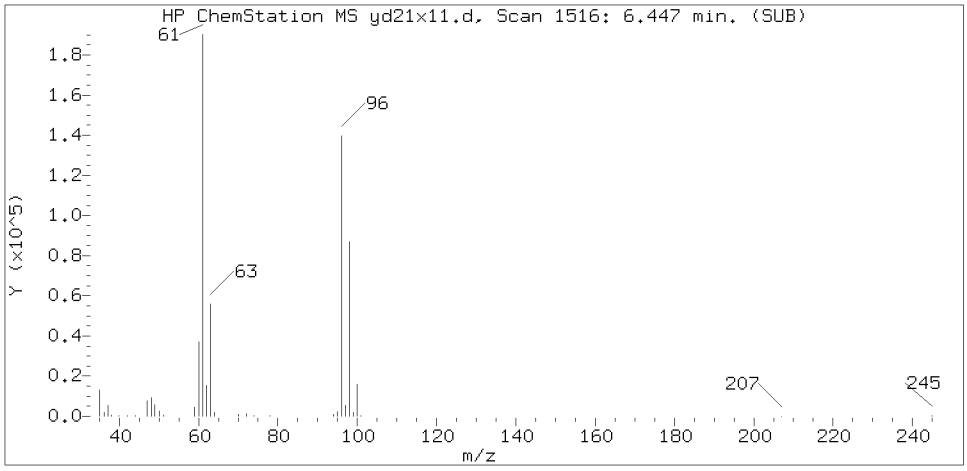
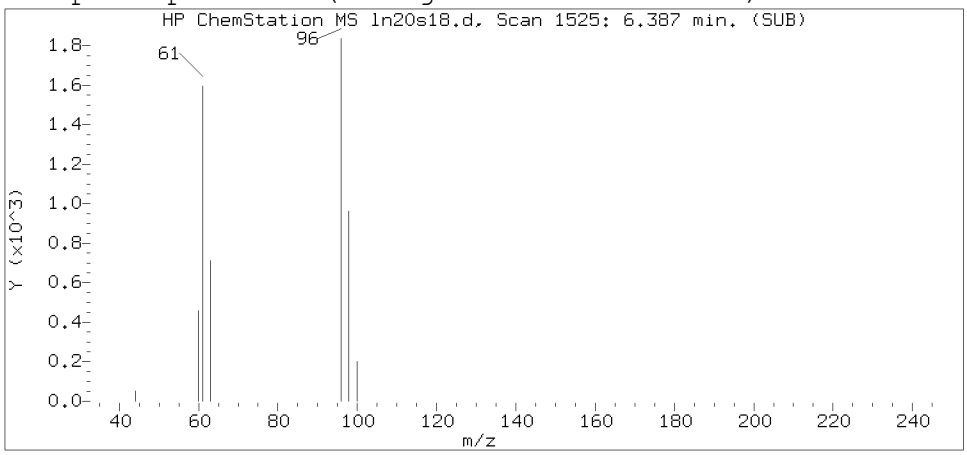
Target 3.5 esignature user ID: dvv10203

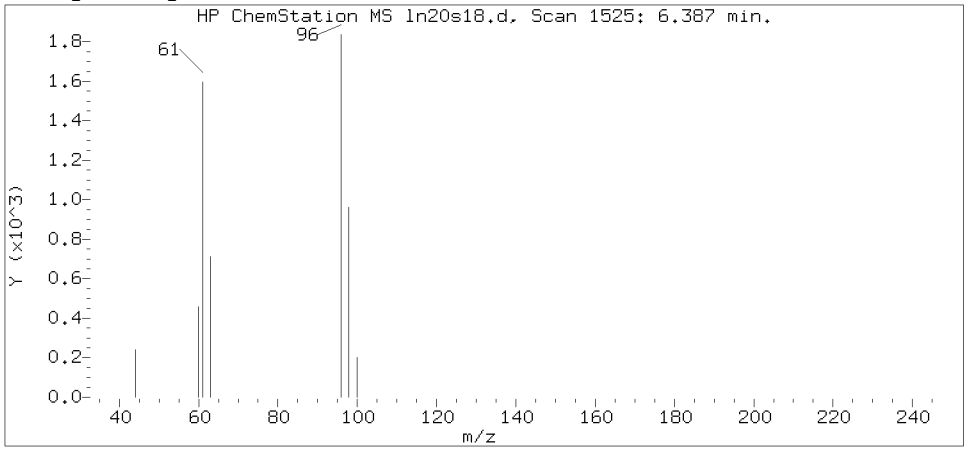
Reference Standard Spectrum for cis-1,2-Dichloroethene

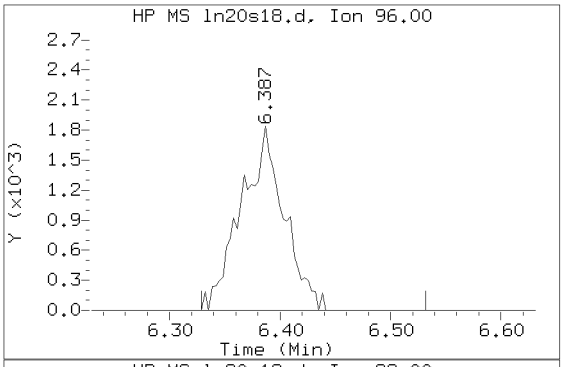


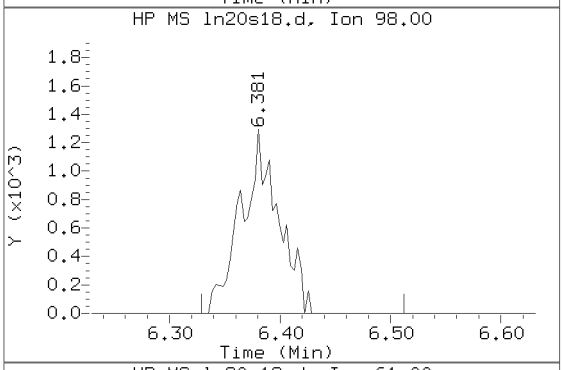
Sample Spectrum (Background Subtracted)

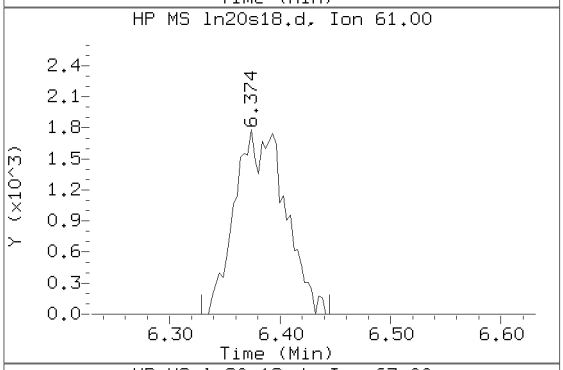


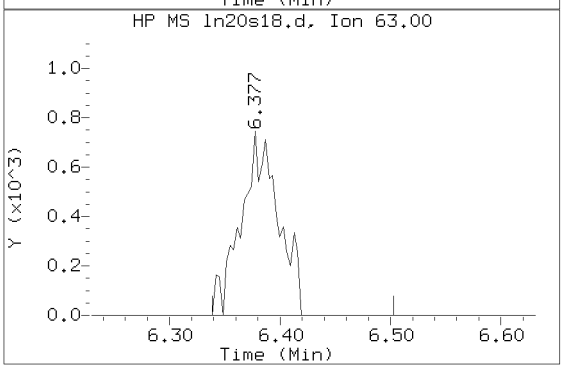
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov20a.b/ln20s18.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 16:16 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 16:34 Automation

Sample Name: C2003 Lab Sample ID: 1202316

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 1525
Retention Time (minutes): 6.387
Relative Retention Time :-0.00081
Quant Ion : 96.00
Area (flag) : 4959
On-Column Amount (ng) : 1.0750

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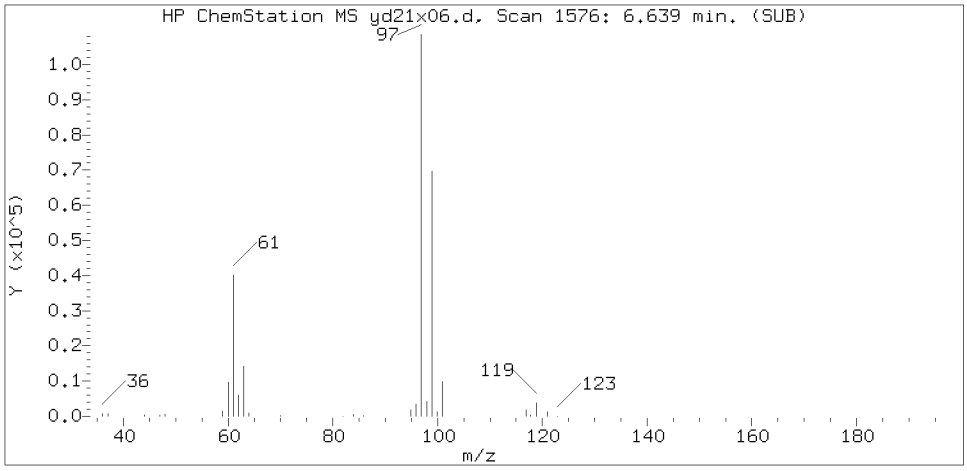
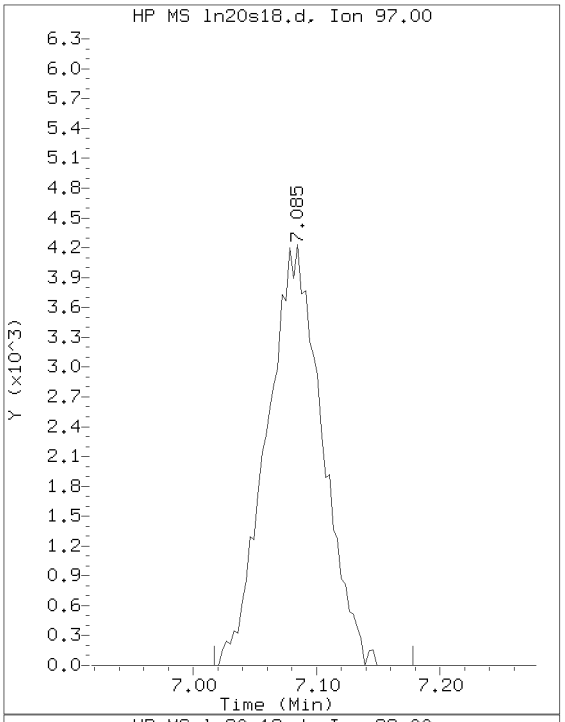
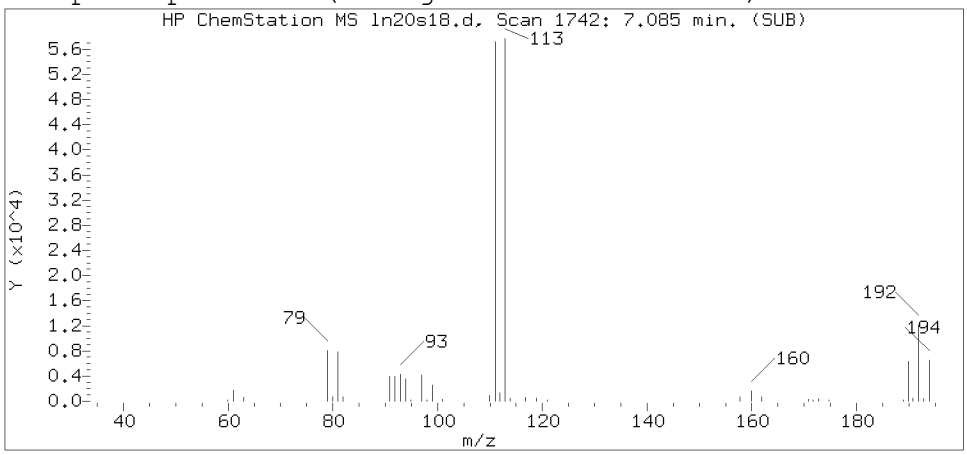
Target 3.5 esignature user ID: dvv10203

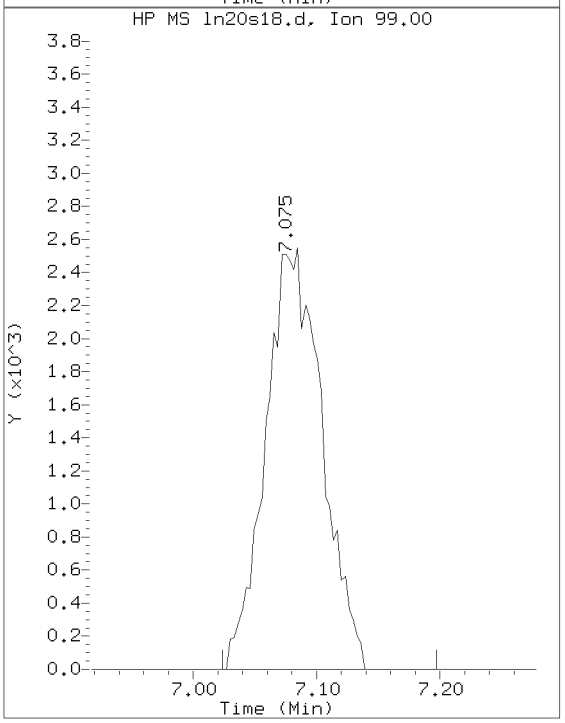
Reference Standard Spectrum for 1,1,1-Trichloroethane



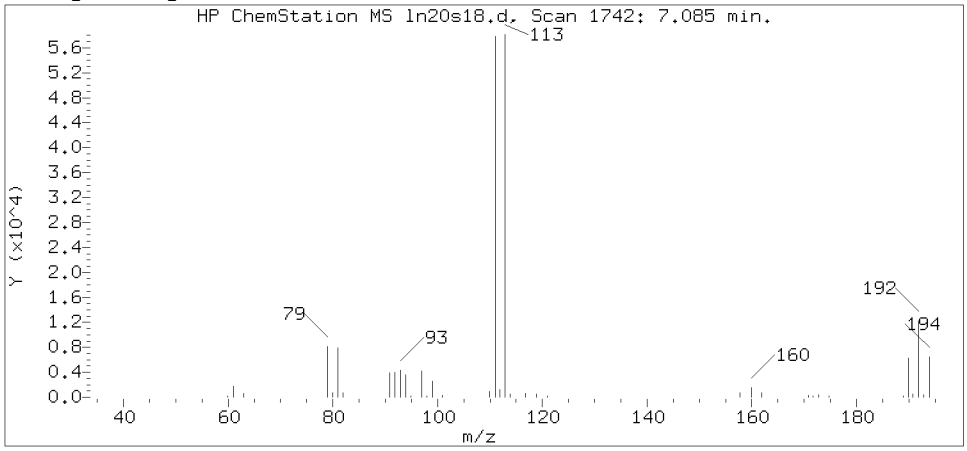


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov20a.b/ln20s18.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 16:16 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 16:34 Automation

Sample Name: C2003 Lab Sample ID: 1202316

Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 1742
Retention Time (minutes): 7.085
Relative Retention Time :-0.00000
Quant Ion : 97.00
Area (flag) : 13303
On-Column Amount (ng) : 2.2727

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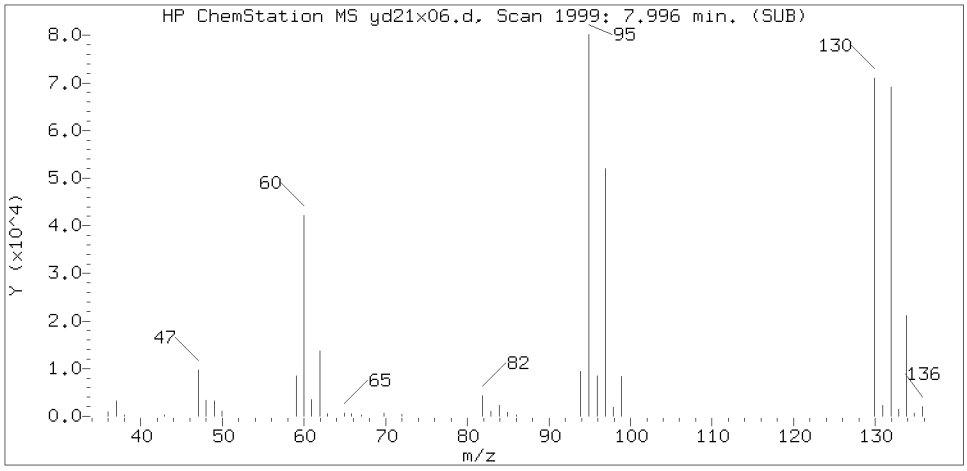
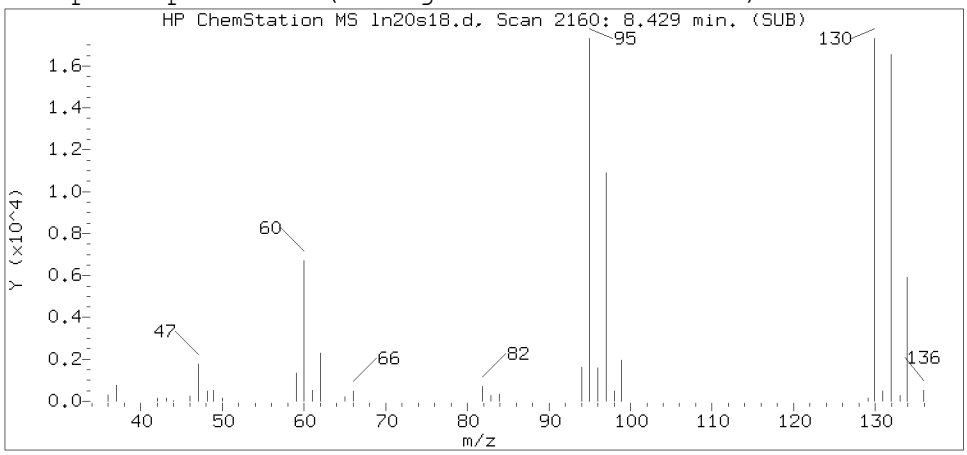
Target 3.5 esignature user ID: dvv10203

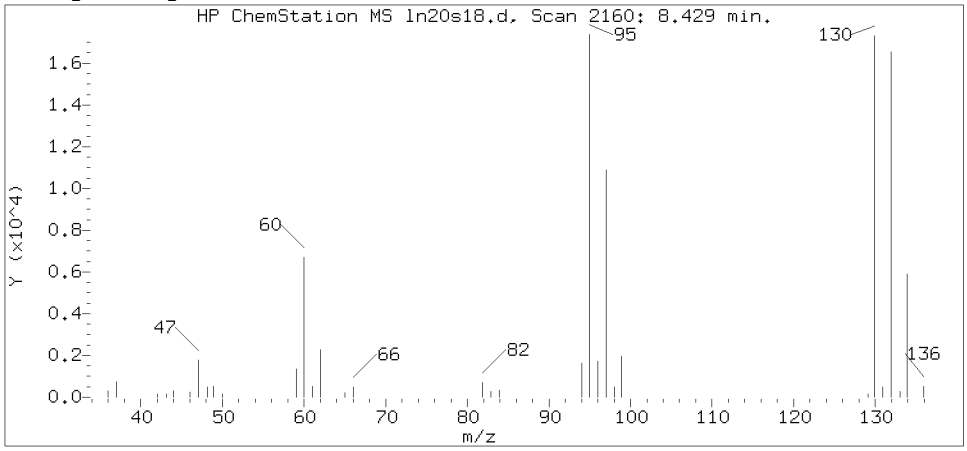
Reference Standard Spectrum for Trichloroethene

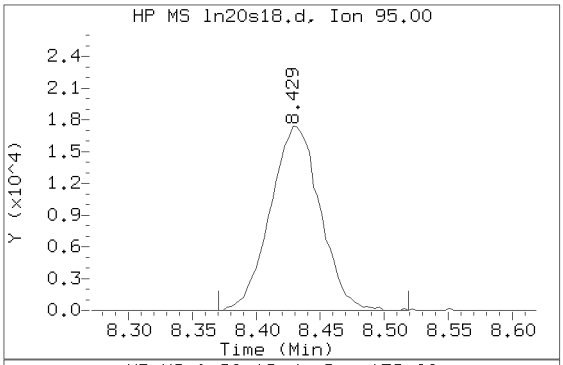


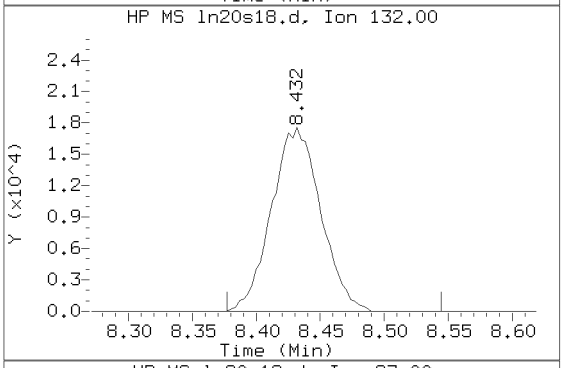
Sample Spectrum (Background Subtracted)

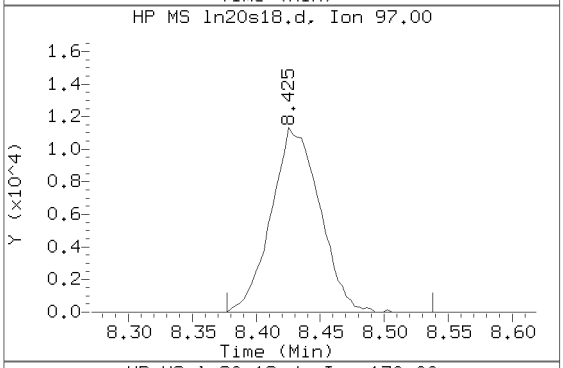


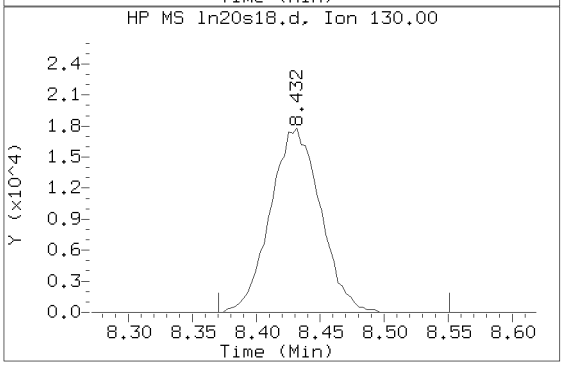
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov20a.b/ln20s18.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 16:16 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 16:34 Automation

Sample Name: C2003 Lab Sample ID: 1202316

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 2160
Retention Time (minutes)	: 8.429
Relative Retention Time	: 0.00040
Quant Ion	: 95.00
Area (flag)	: 47056
On-Column Amount (ng)	: 10.9613

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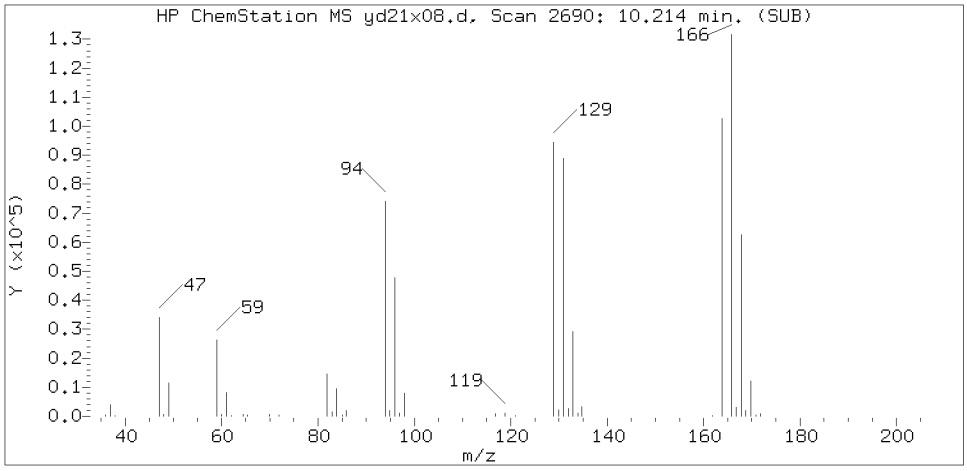
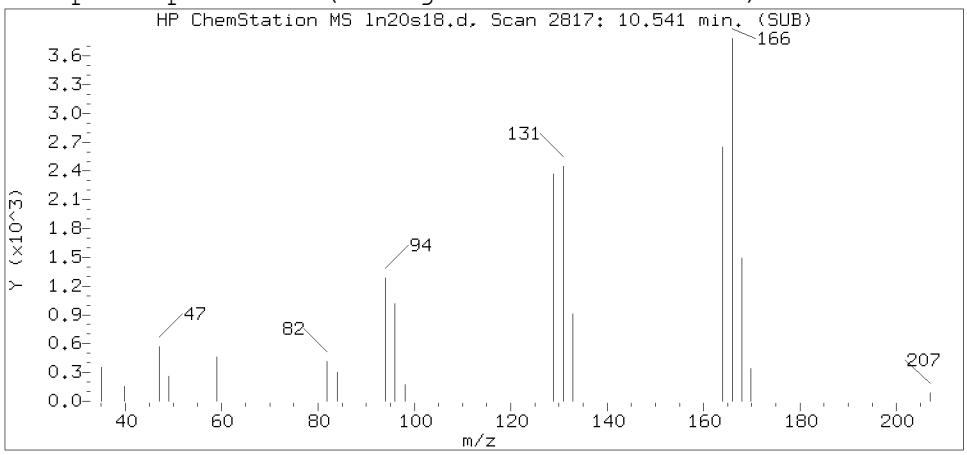
Target 3.5 esignature user ID: dvv10203

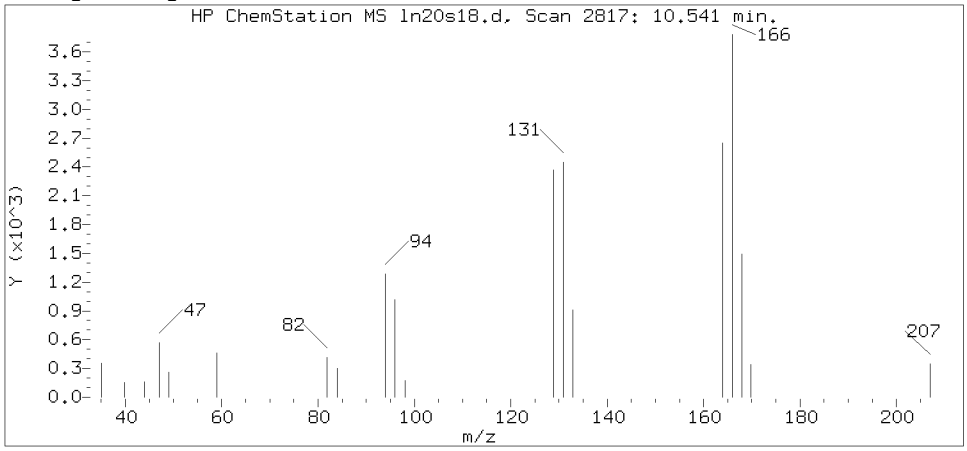
Reference Standard Spectrum for Tetrachloroethene

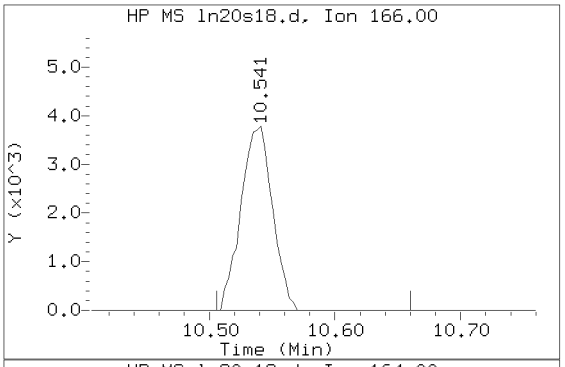


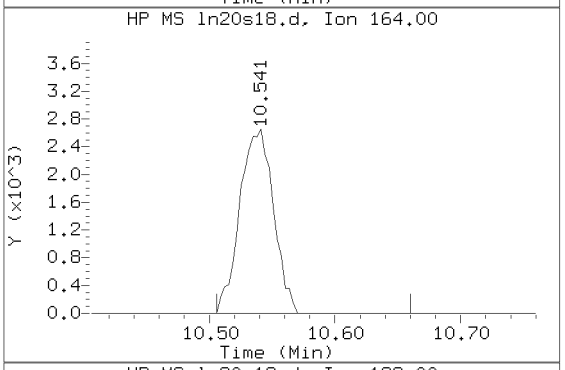
Sample Spectrum (Background Subtracted)

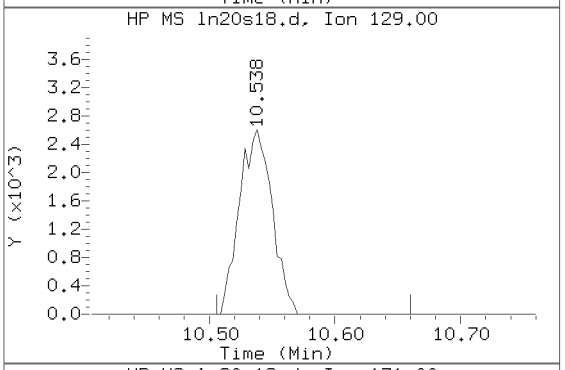


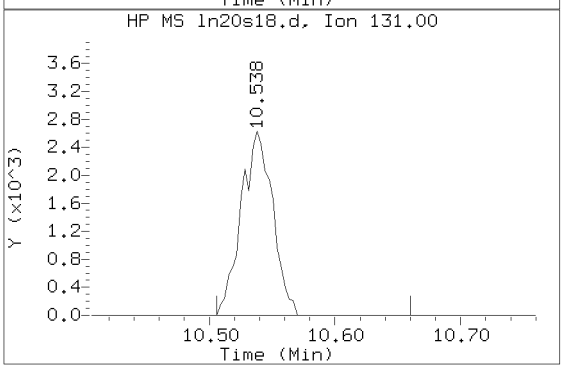
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov20a.b/ln20s18.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 16:16 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 16:34 Automation

Sample Name: C2003 Lab Sample ID: 1202316

Compound Number : 93
Compound Name : Tetrachloroethene
Scan Number : 2817
Retention Time (minutes): 10.541
Relative Retention Time :-0.00026
Quant Ion : 166.00
Area (flag) : 6611
On-Column Amount (ng) : 1.3794

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Target 3.5 esignature user ID: dvv10203

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
C2004

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202317

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov20a.b/ln20s19.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	0.5	J
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	0.3	J
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

^

C2004 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202317

Data file: /chem/HP09915.i/19nov20a.b/ln20s19.d Injection date and time: **20-NOV-2019 16:38**
Data file Sample Info. Line: C2004;1202317;1;0;;JCW20;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 16:56 Automation

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.487	(0.006)	934	65	150545	(-2)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	847494	(-5)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	691987	(-5)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	372909	(-5)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.069	(0.001)	113	199859	48.236	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	53245	50.423	101%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	871210	48.116	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	331471	48.347	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	7.072	(0.001)	97	2700	0.456	0.46		J	0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.429	(0.000)	95	1325	0.305	0.31		J	0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

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C2004 Lancaster Laboratories 1202317
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov20a.b/ln20s19.d Injection date and time: **20-NOV-2019 16:38**
Data file Sample Info. Line: C2004;1202317;1;0;;JCW20;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 16:56 Automation

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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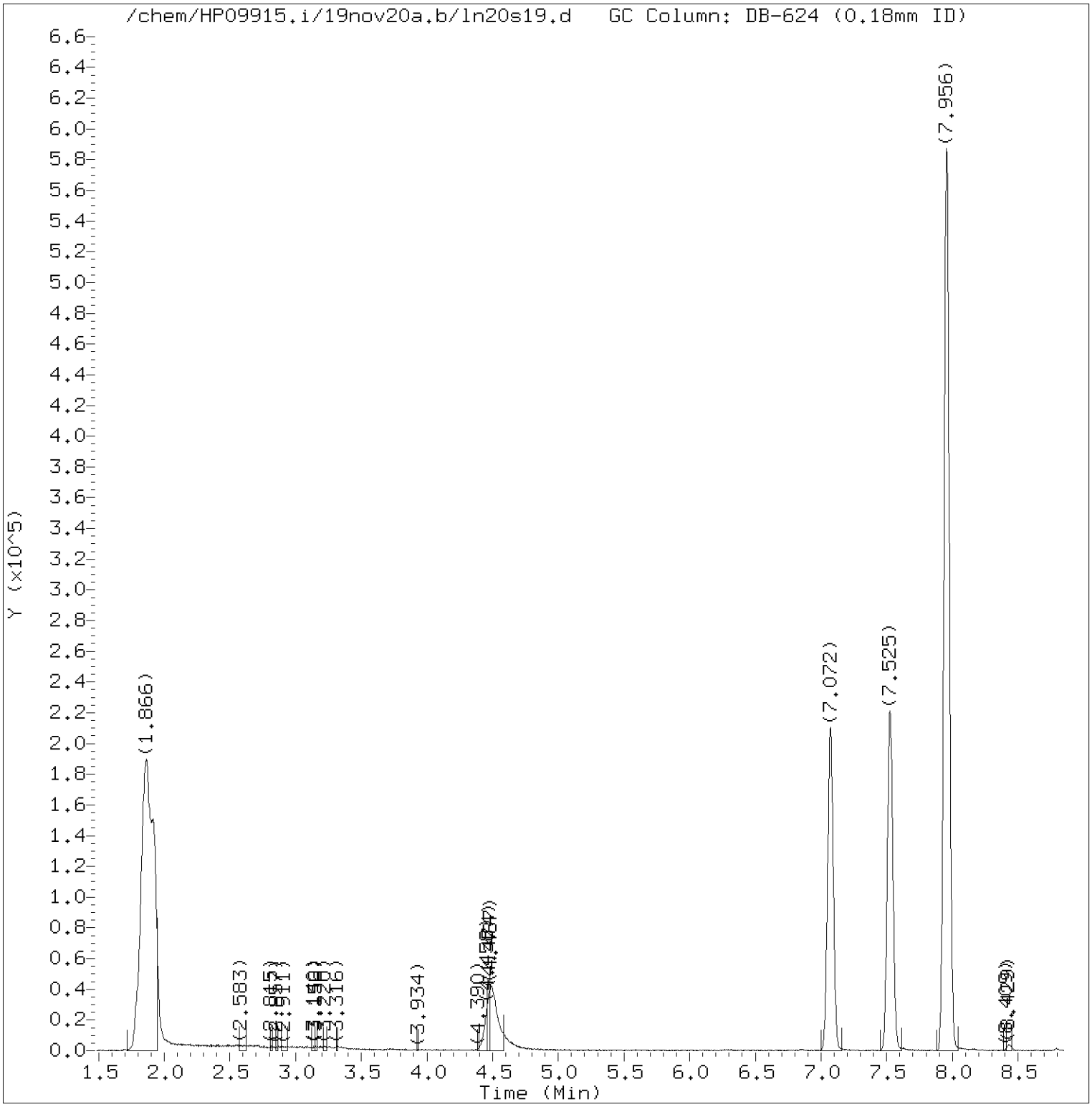
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 11/20/2019 at 21:20. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

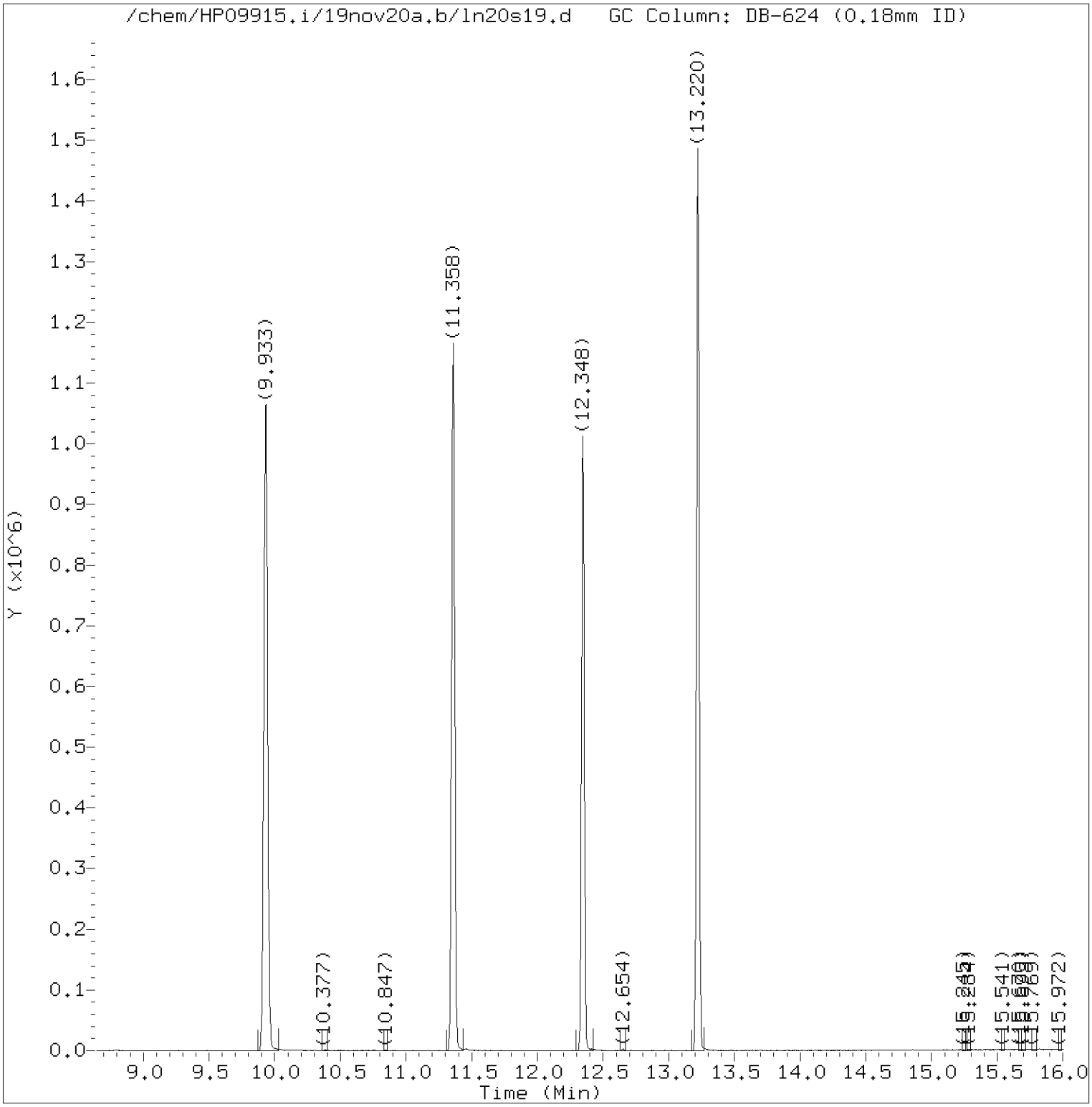
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s19.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 16:38 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 16:56 Automation

Sample Name: C2004 Lab Sample ID: 1202317

Digitally signed by Don V. Viray
on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s19.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 16:38 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 16:56 Automation

Sample Name: C2004 Lab Sample ID: 1202317

Digitally signed by Don V. Viray
on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s19.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 16:38 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 16:56 Automation

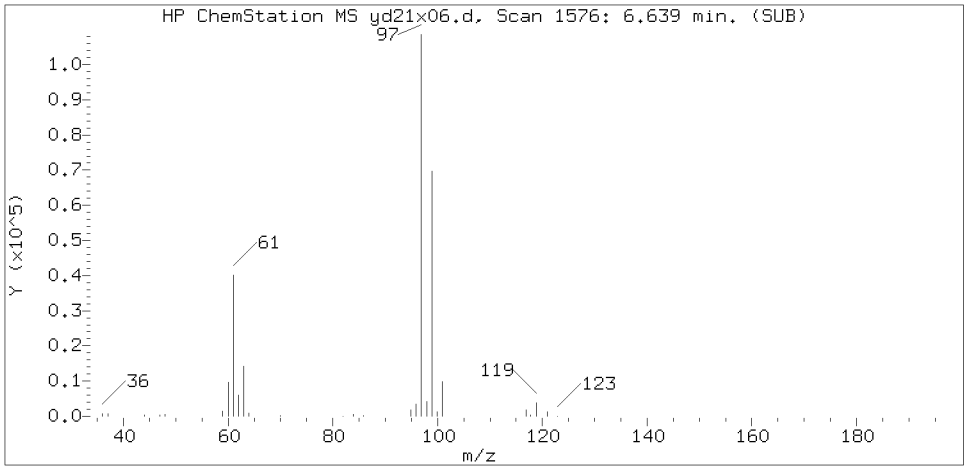
Sample Name: C2004 Lab Sample ID: 1202317

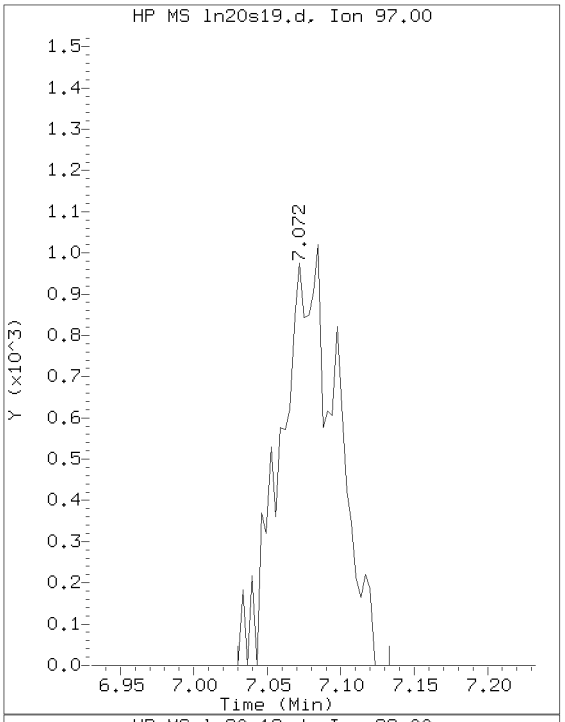
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.487	65	150545	250.000
52)$Dibromofluoromethane	(2)	7.069	113	199859	48.236
53) 1,1,1-Trichloroethane	(2)	7.072	97	2700	0.456
57)$1,2-Dichloroethane-d4	(2)	7.525	102	53245	50.423
66)*Fluorobenzene	(2)	7.959	96	847494	50.000
71) Trichloroethene	(2)	8.429	95	1325	0.305
83)$Toluene-d8	(3)	9.933	98	871210	48.116
100)*Chlorobenzene-d5	(3)	11.358	117	691987	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	331471	48.347
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	372909	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

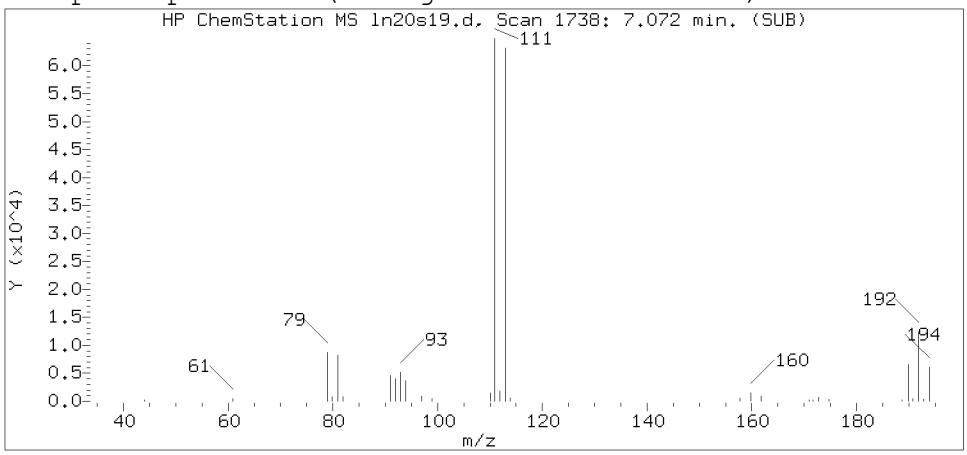
Digitally signed by Don V. Viray
on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203

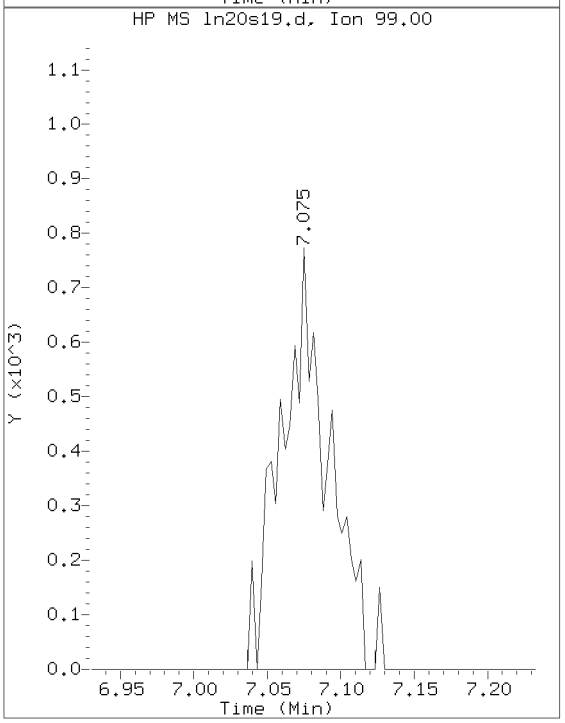
Reference Standard Spectrum for 1,1,1-Trichloroethane



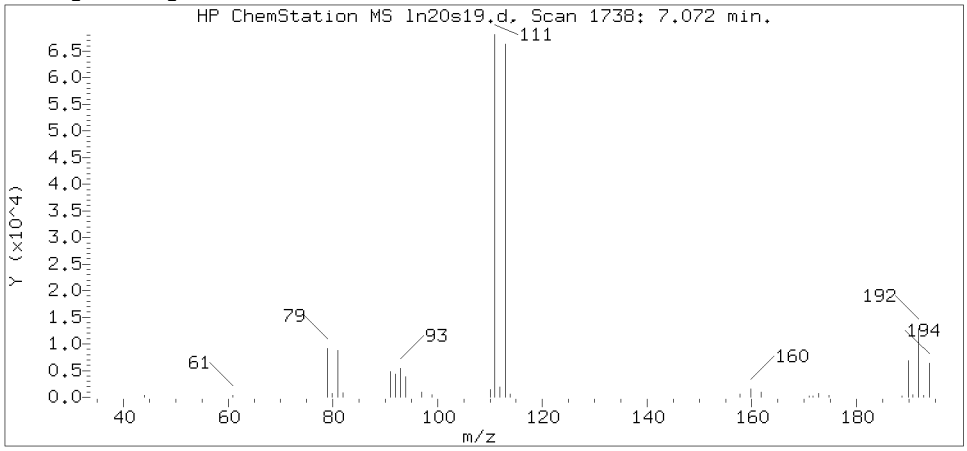


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov20a.b/ln20s19.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 16:38 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 16:56 Automation

Sample Name: C2004 Lab Sample ID: 1202317

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1738
Retention Time (minutes)	: 7.072
Relative Retention Time	: 0.00161
Quant Ion	: 97.00
Area (flag)	: 2700
On-Column Amount (ng)	: 0.4562

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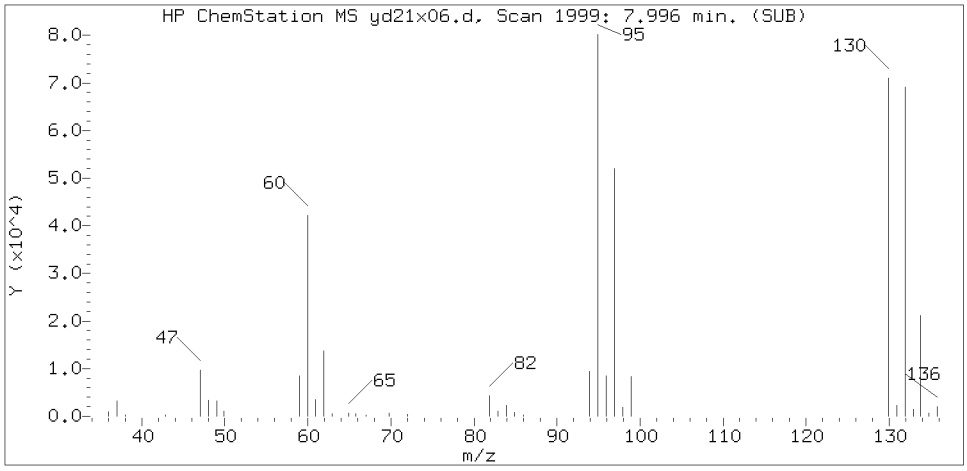
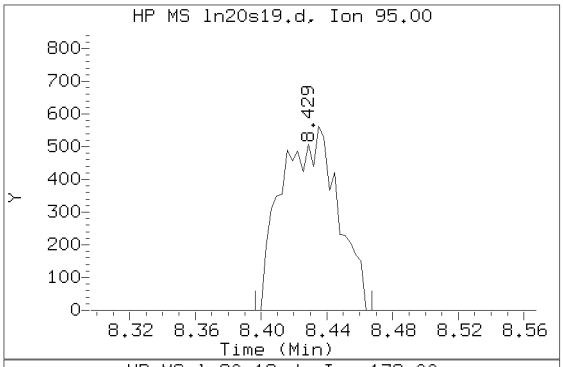
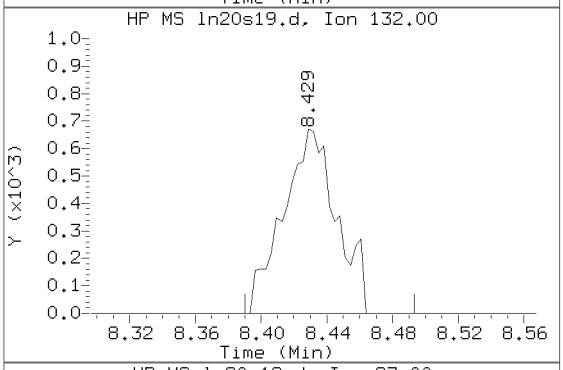
Target 3.5 esignature user ID: dvv10203

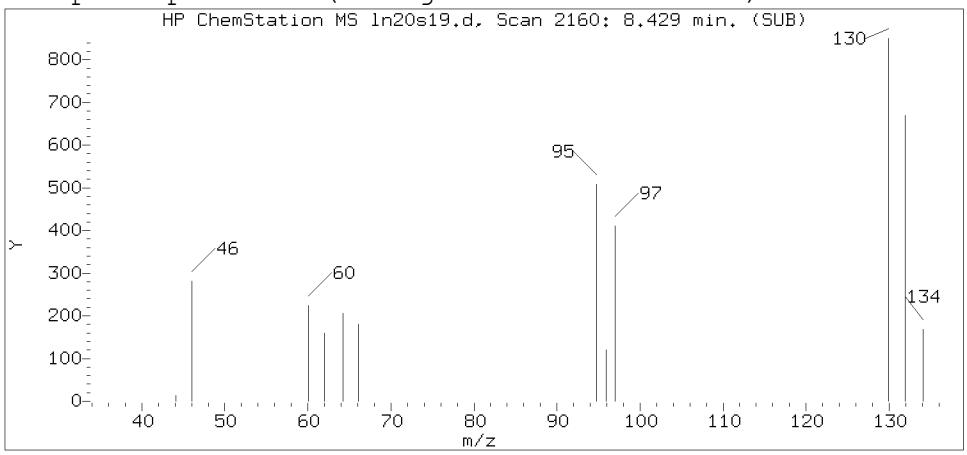
Reference Standard Spectrum for Trichloroethene

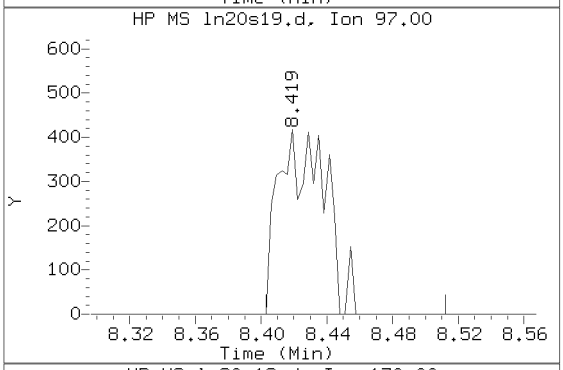




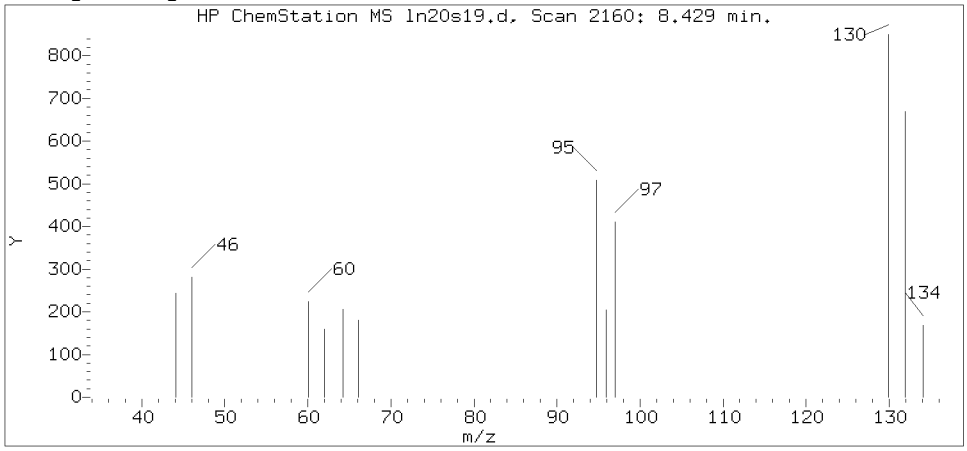


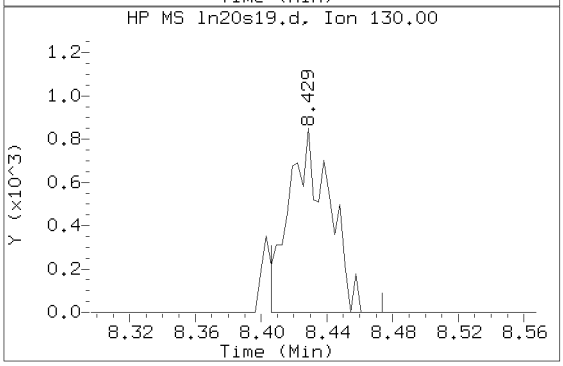
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov20a.b/ln20s19.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 16:38 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 16:56 Automation

Sample Name: C2004 Lab Sample ID: 1202317

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 2160
Retention Time (minutes)	: 8.429
Relative Retention Time	: 0.00040
Quant Ion	: 95.00
Area (flag)	: 1325
On-Column Amount (ng)	: 0.3055

Digitally signed by Don V. Viray on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
C2005

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202318

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov20a.b/ln20s20.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	0.6	J
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	0.8	J
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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C2005 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202318

Data file: /chem/HP09915.i/19nov20a.b/ln20s20.d Injection date and time: **20-NOV-2019 17:00**
Data file Sample Info. Line: C2005;1202318;1;0;;JCW20;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 21:17 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.490	(0.003)	935	65	139721	(-9)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	817772	(-8)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	674532	(-7)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	363582	(-7)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.069	(0.001)	113	194116	48.552	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.532	(0.000)	102	52053	51.085	102%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	842366	47.727	95%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.348	(0.000)	95	321666	48.131	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	7.075	(0.001)	97	3648M	0.639	0.64		J	0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.425	(0.000)	95	3171	0.757	0.76		J	0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

M = Compound was manually integrated.

Digitally signed by Don V. Viray on 11/20/2019 at 21:20. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov20a.b/ln20s20.d Injection date and time: **20-NOV-2019 17:00**
Data file Sample Info. Line: C2005;1202318;1;0;;JCW20;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 21:17 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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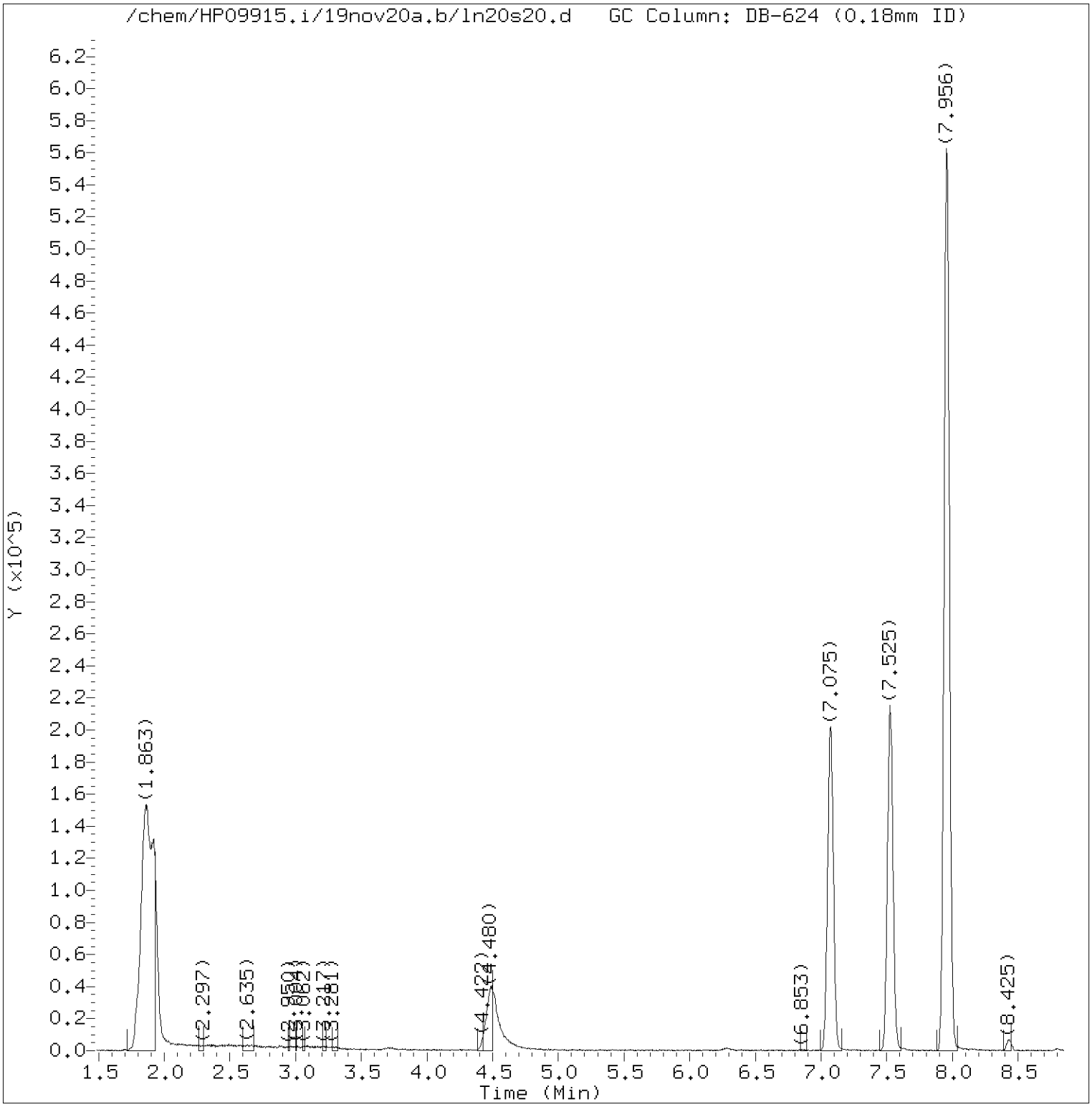
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 11/20/2019 at 21:20. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

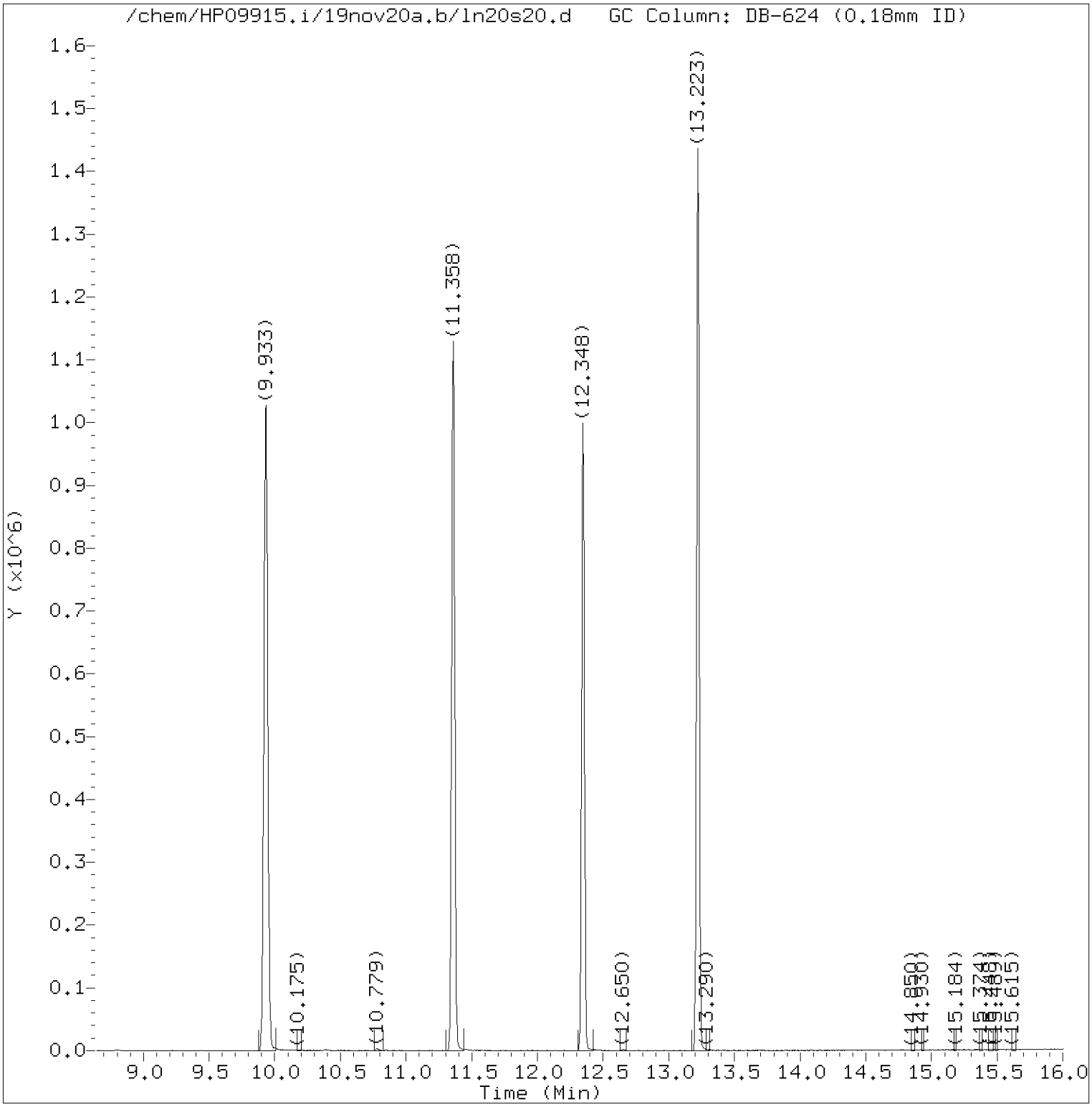
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s20.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 17:00 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:17 dvv10203

Sample Name: C2005 Lab Sample ID: 1202318

Digitally signed by Don V. Viray
on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s20.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 17:00 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:17 dvv10203

Sample Name: C2005 Lab Sample ID: 1202318

Digitally signed by Don V. Viray
on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s20.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 17:00 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:17 dvv10203

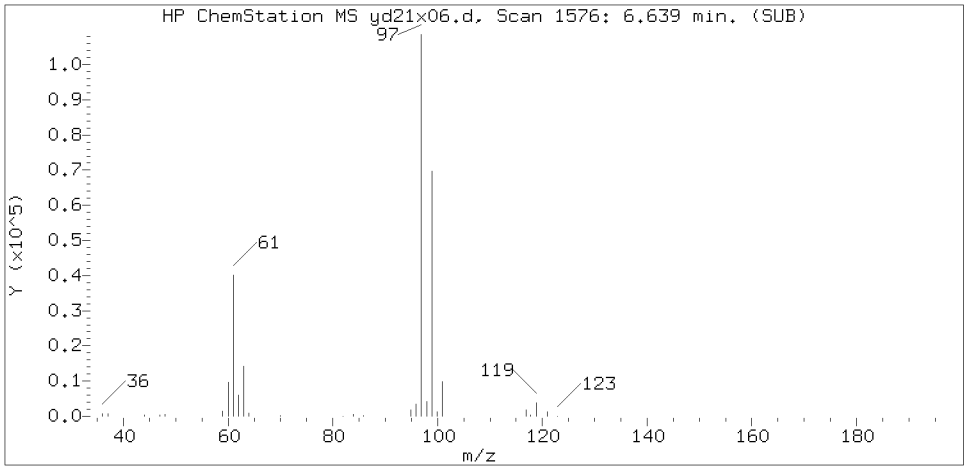
Sample Name: C2005 Lab Sample ID: 1202318

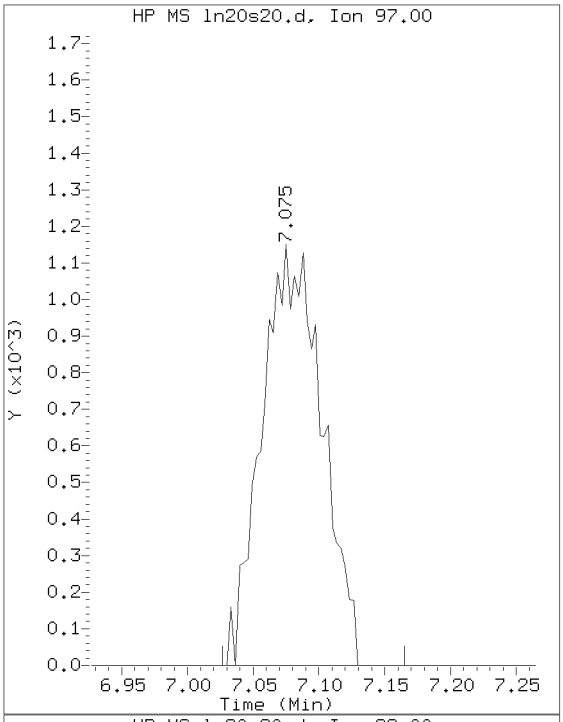
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.490	65	139721	250.000
52)$Dibromofluoromethane	(2)	7.069	113	194116	48.552
53) 1,1,1-Trichloroethane	(2)	7.075	97	3648M	0.639
57)$1,2-Dichloroethane-d4	(2)	7.532	102	52053	51.085
66)*Fluorobenzene	(2)	7.959	96	817772	50.000
71) Trichloroethene	(2)	8.425	95	3171	0.757
83)$Toluene-d8	(3)	9.930	98	842366	47.727
100)*Chlorobenzene-d5	(3)	11.358	117	674532	50.000
114)$4-Bromofluorobenzene	(3)	12.348	95	321666	48.131
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	363582	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

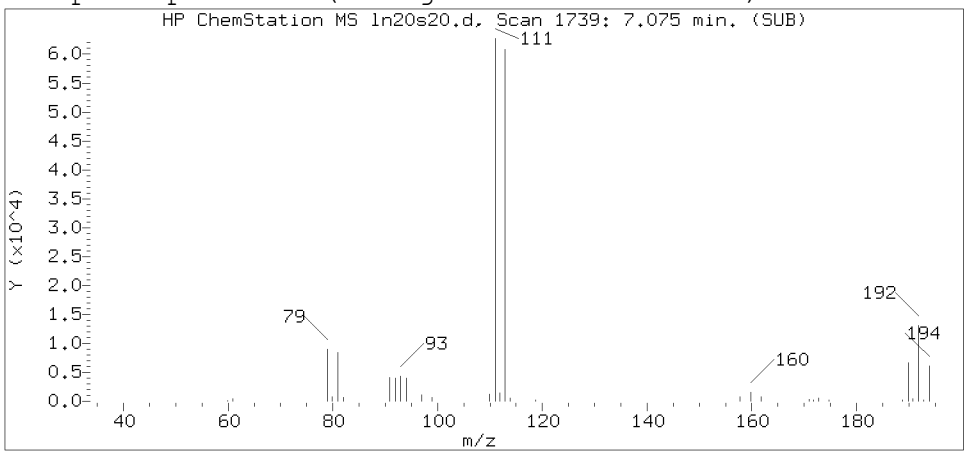
Digitally signed by Don V. Viray
on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203

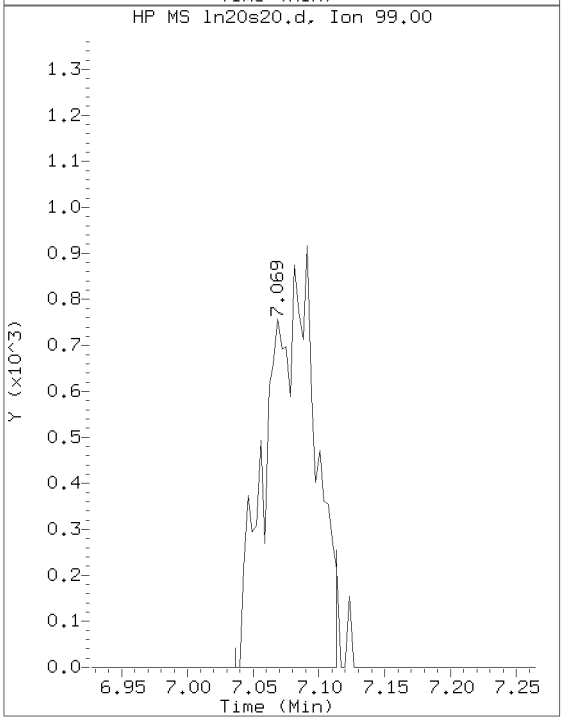
Reference Standard Spectrum for 1,1,1-Trichloroethane



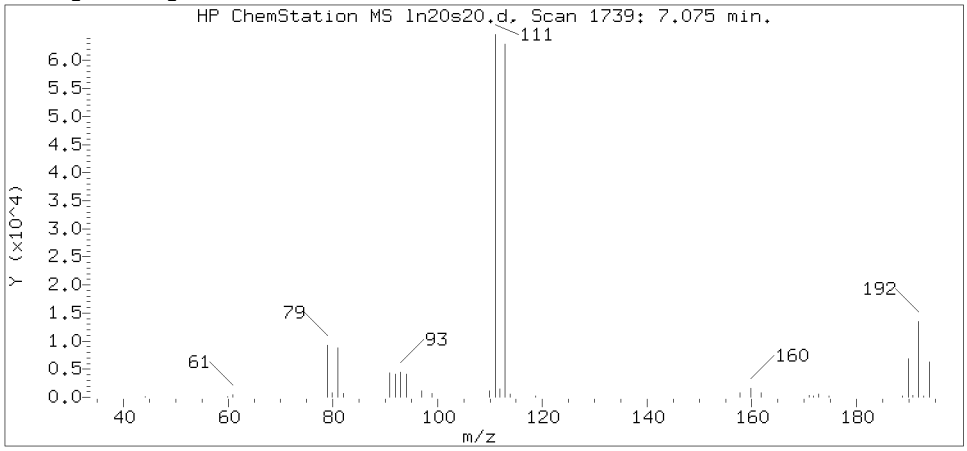


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov20a.b/ln20s20.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 17:00 Analyst ID: KKM02078

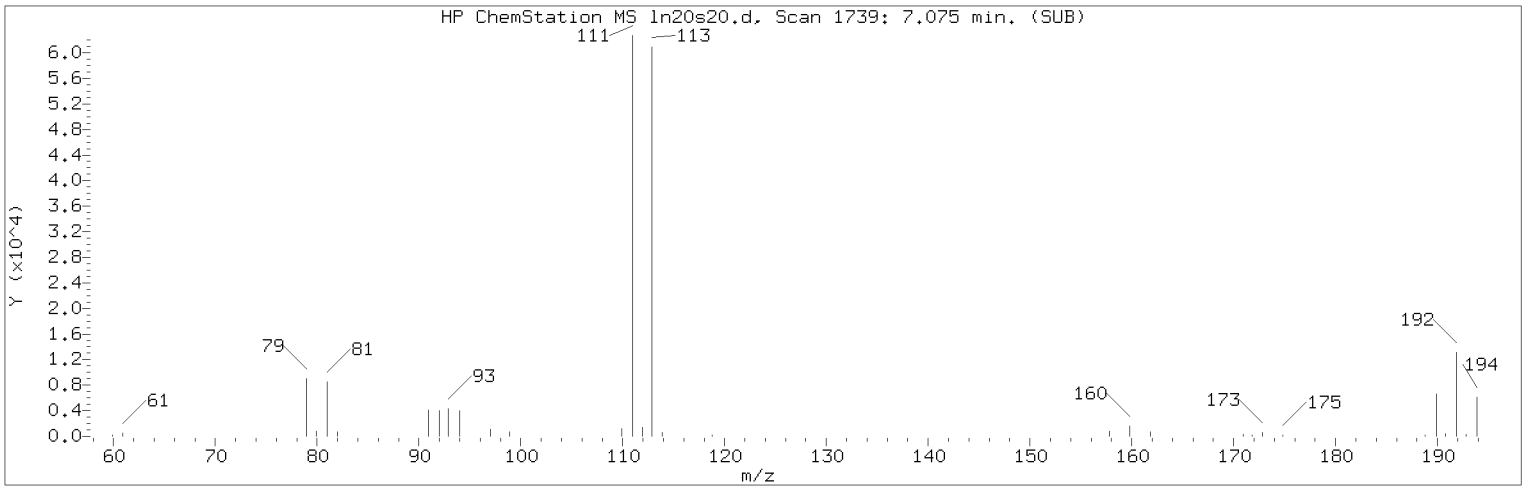
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:17 dvv10203

Sample Name: C2005 Lab Sample ID: 1202318

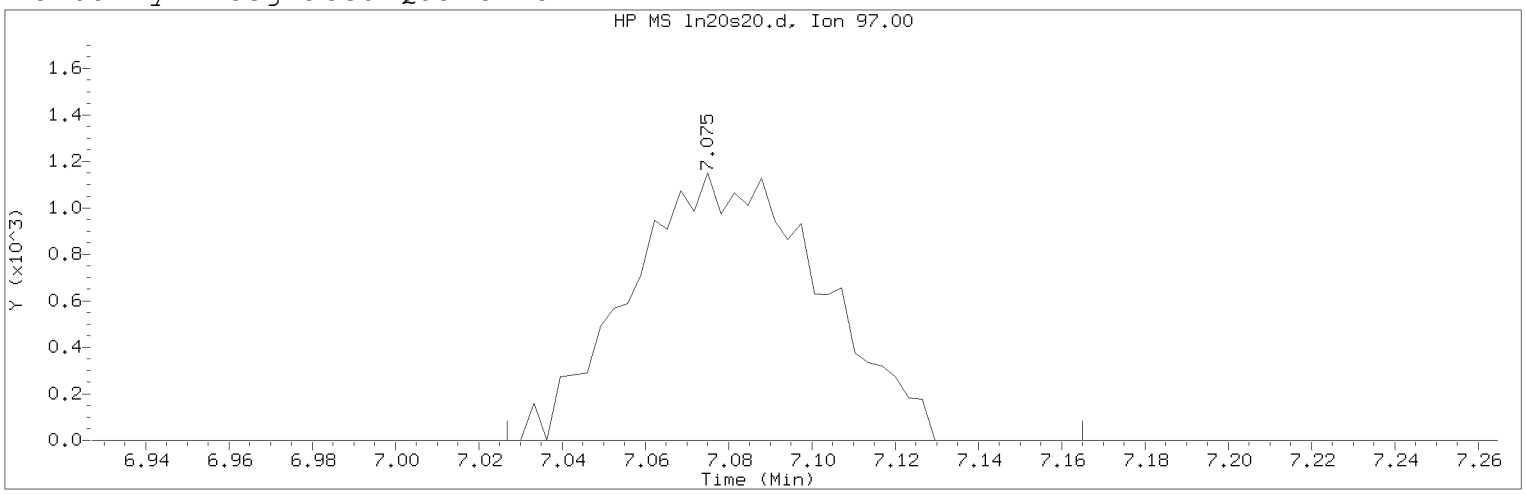
Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1739
Retention Time (minutes)	: 7.075
Relative Retention Time	: 0.00121
Quant Ion	: 97.00
Area (flag)	: 3648M
On-Column Amount (ng)	: 0.6389

Digitally signed by Don V. Viray on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s20.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 17:00 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:17 dvv10203

Sample Name: C2005 Lab Sample ID: 1202318

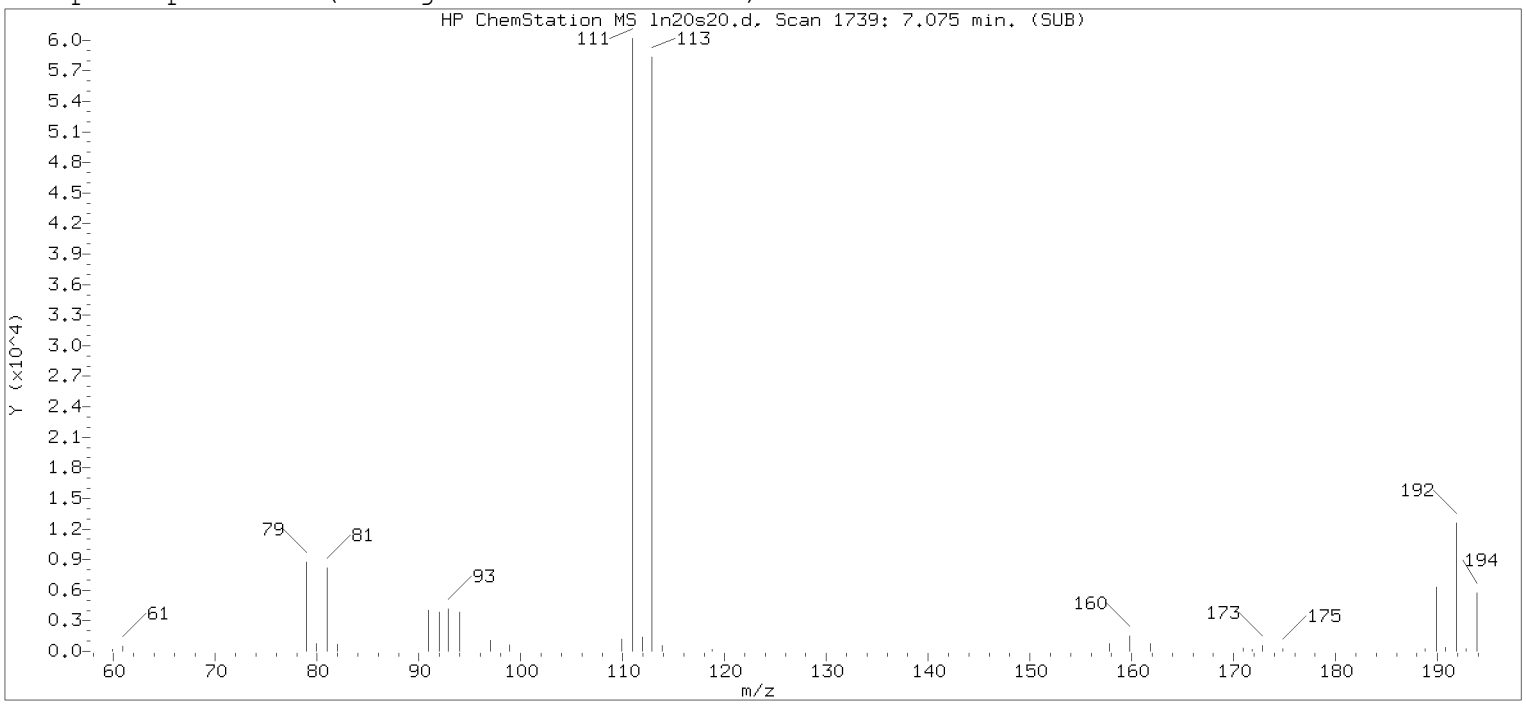
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 1739
Retention Time (minutes): 7.075
Quant Ion : 97.00
Area (flag) : 3648M
On-Column Amount (ng) : 0.6389
Integration start scan : 1723 Integration stop scan: 1766
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

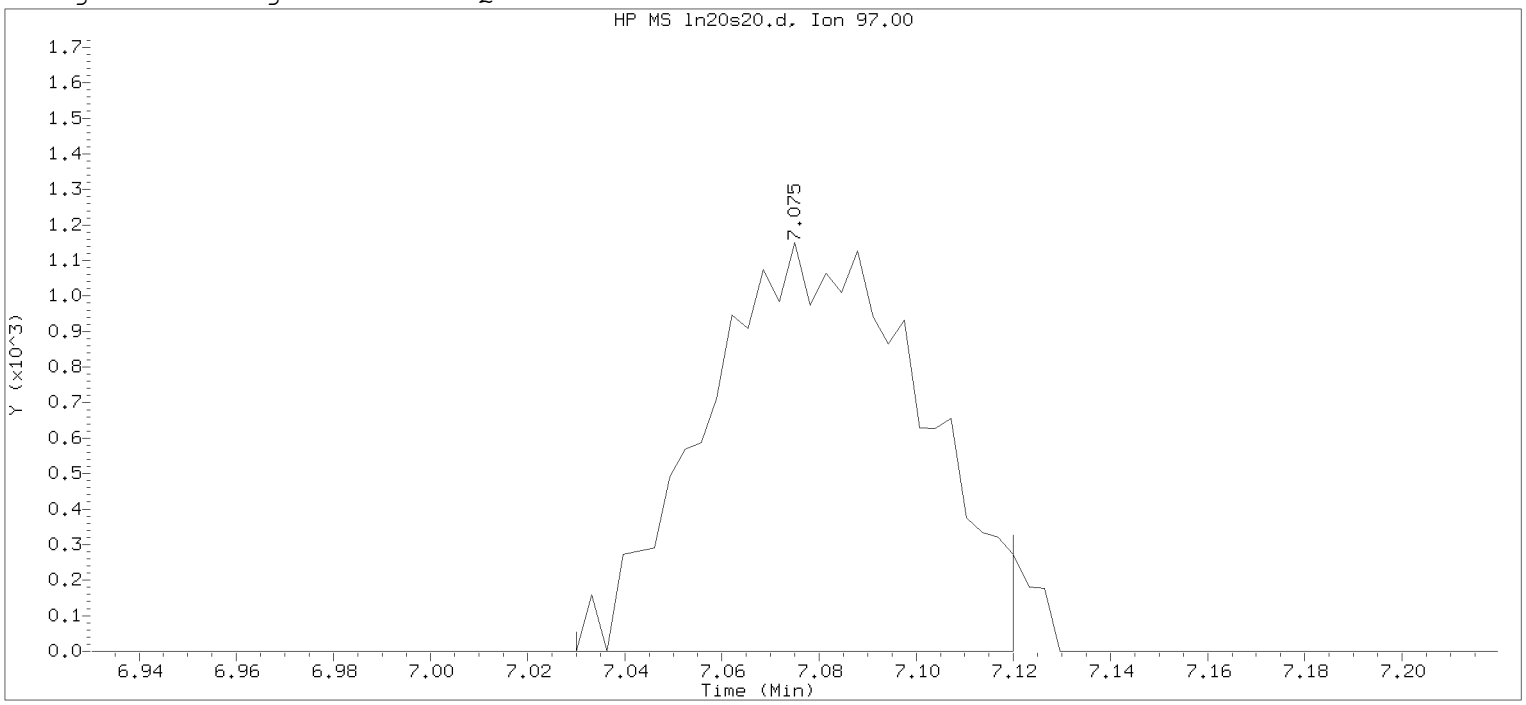
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:53.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s20.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 17:00 Analyst ID: KKM02078

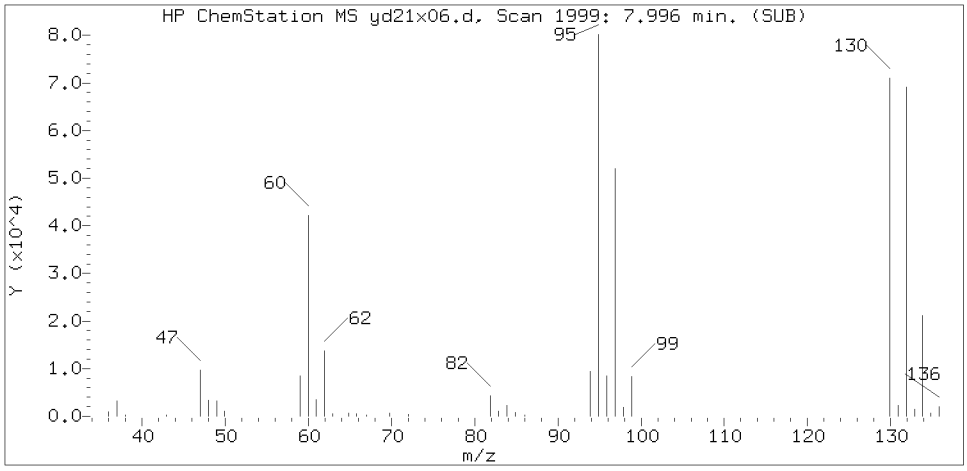
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 17:18 Automation

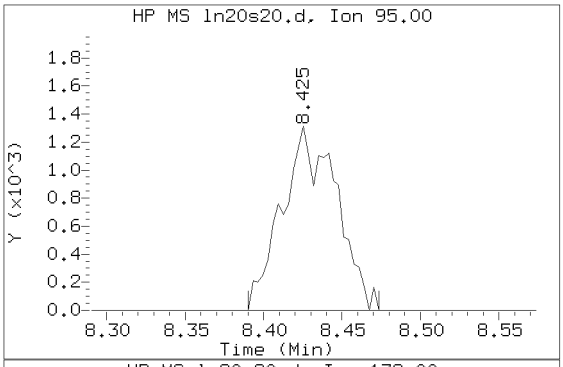
Sample Name: C2005 Lab Sample ID: 1202318

Compound Number	: 53		
Compound Name	: 1,1,1-Trichloroethane		
Scan Number	: 1739		
Retention Time (minutes)	: 7.075		
Quant Ion	: 97.00		
Area	: 3553		
On-column Amount (ng)	: 0.6222		
Integration start scan	: 1724	Integration stop scan:	1752
Y at integration start	: 0	Y at integration end:	0

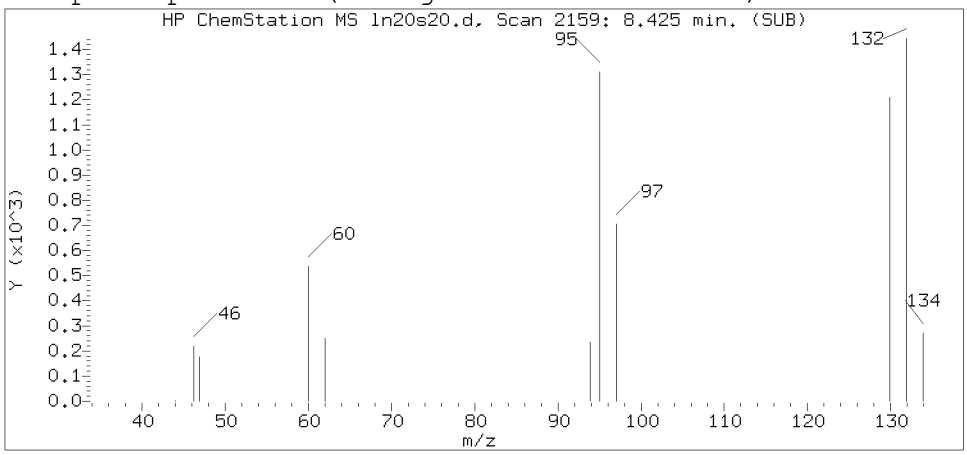
Digitally signed by Don V. Viray on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: DVIRAY

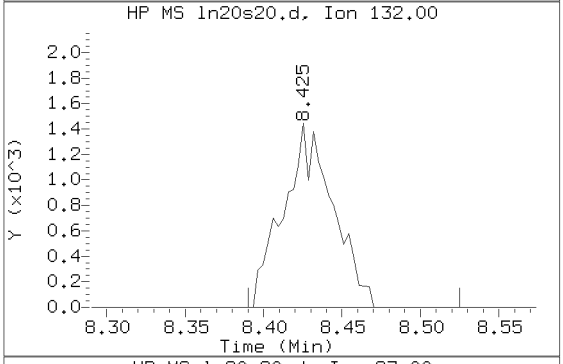
Reference Standard Spectrum for Trichloroethene

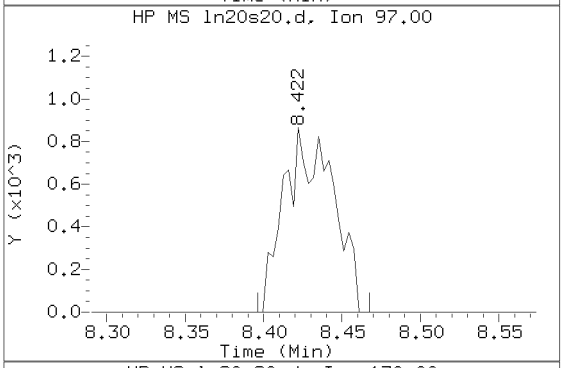




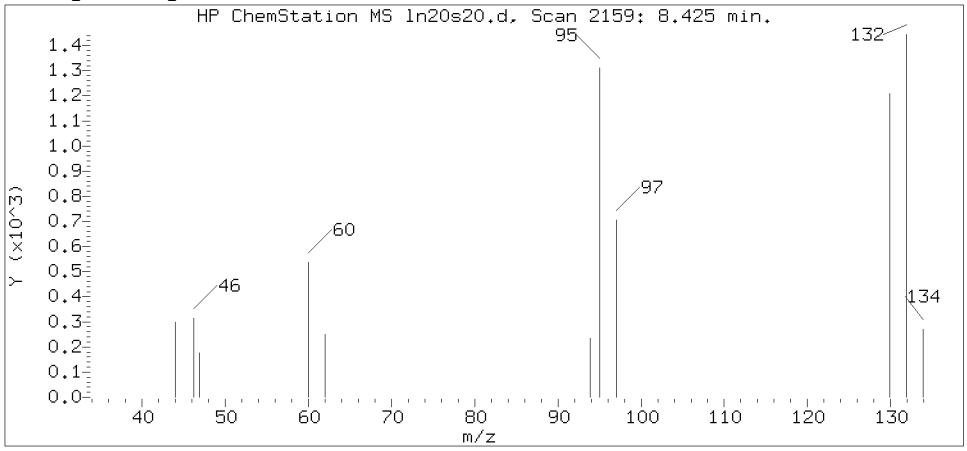
Sample Spectrum (Background Subtracted)

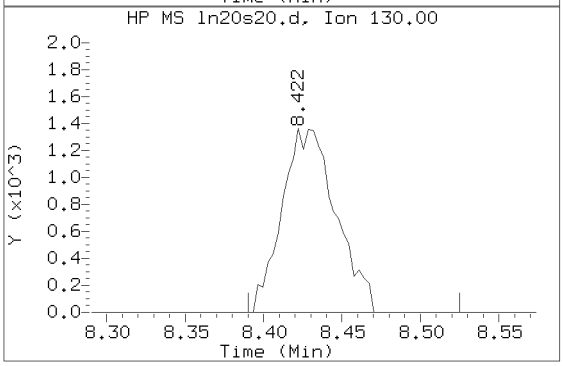






Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov20a.b/ln20s20.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 17:00 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:17 dvv10203

Sample Name: C2005 Lab Sample ID: 1202318

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 2159
Retention Time (minutes): 8.425
Relative Retention Time : 0.00081
Quant Ion : 95.00
Area (flag) : 3171
On-Column Amount (ng) : 0.7571

Digitally signed by Don V. Viray on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
C2006

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202319

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov20a.b/ln20s21.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	0.5	J
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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C2006 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202319

Data file: /chem/HP09915.i/19nov20a.b/ln20s21.d Injection date and time: **20-NOV-2019 17:22**
Data file Sample Info. Line: C2006;1202319;1;0;;JCW20;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 21:18 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493	(0.000)	936	65	141822	(-8)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	822195	(-8)	50.00	
100) Chlorobenzene-d5	11.361	(0.000)	3072	117	678476	(-6)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	363942	(-7)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(0.000)	113	195535	48.644	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.532	(0.000)	102	52468	51.215	102%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	848536	47.797	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.348	(0.000)	95	322031	47.905	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	7.075	(0.001)	97	2980M	0.519	0.52		J	0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.432	(0.000)	95	4533M	1.077	1.08			0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

M = Compound was manually integrated.

Digitally signed by Don V. Viray on 11/20/2019 at 21:20. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov20a.b/ln20s21.d Injection date and time: **20-NOV-2019 17:22**
Data file Sample Info. Line: C2006;1202319;1;0;;JCW20;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 21:18 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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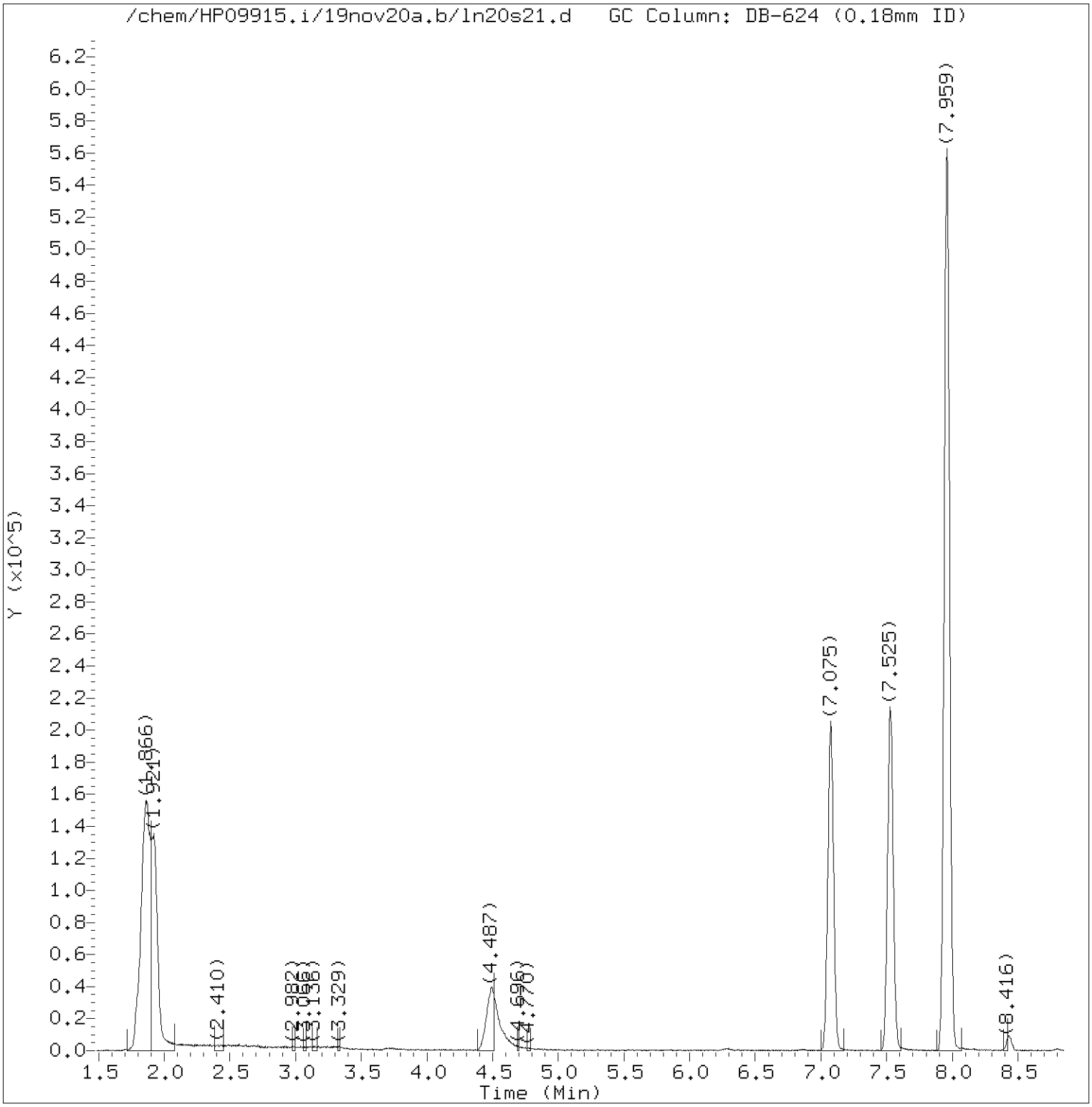
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 11/20/2019 at 21:20. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

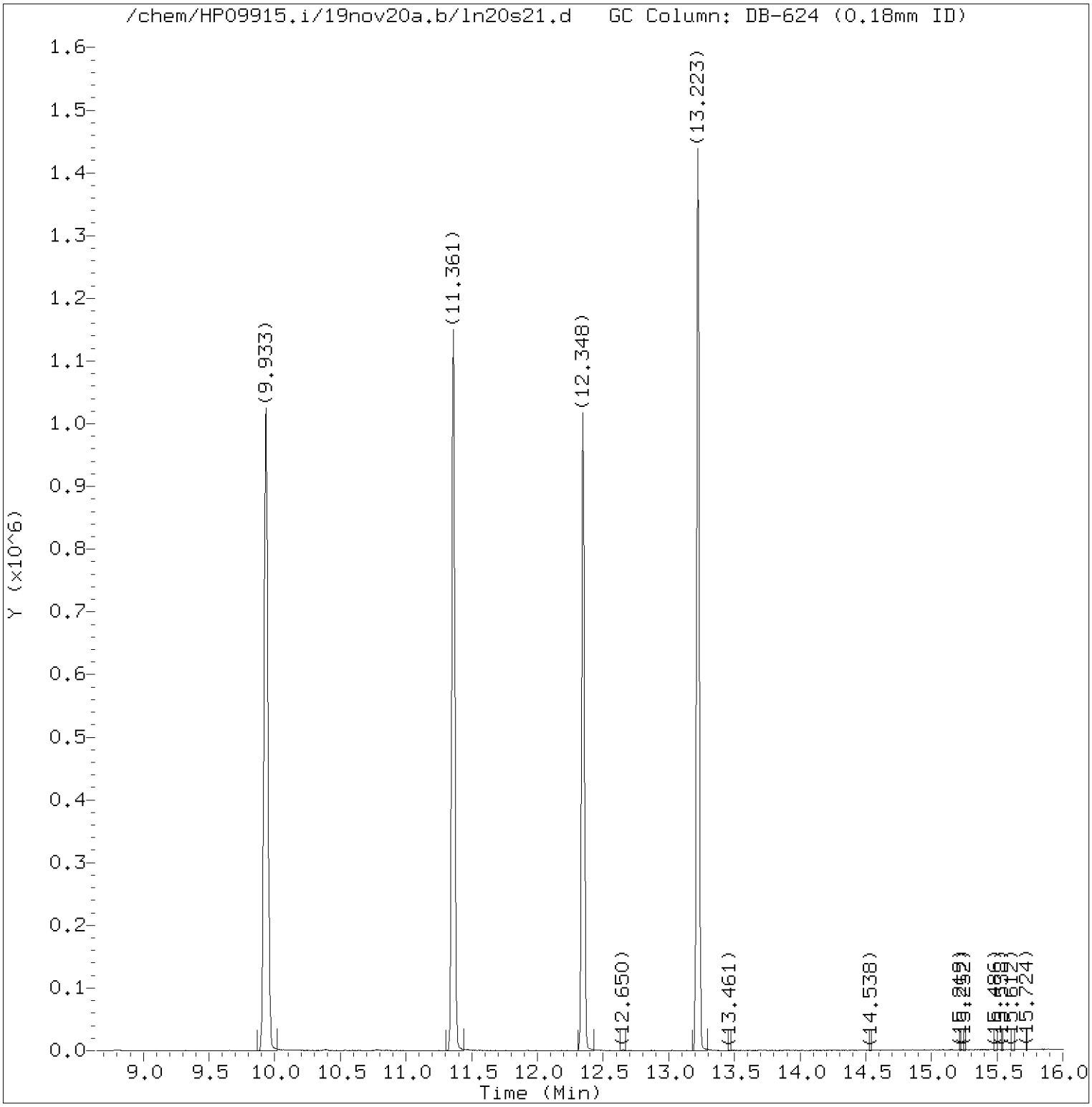
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s21.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 17:22 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:18 dvv10203

Sample Name: C2006 Lab Sample ID: 1202319

Digitally signed by Don V. Viray
on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s21.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 17:22 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:18 dvv10203

Sample Name: C2006 Lab Sample ID: 1202319

Digitally signed by Don V. Viray
on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s21.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 17:22 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:18 dvv10203

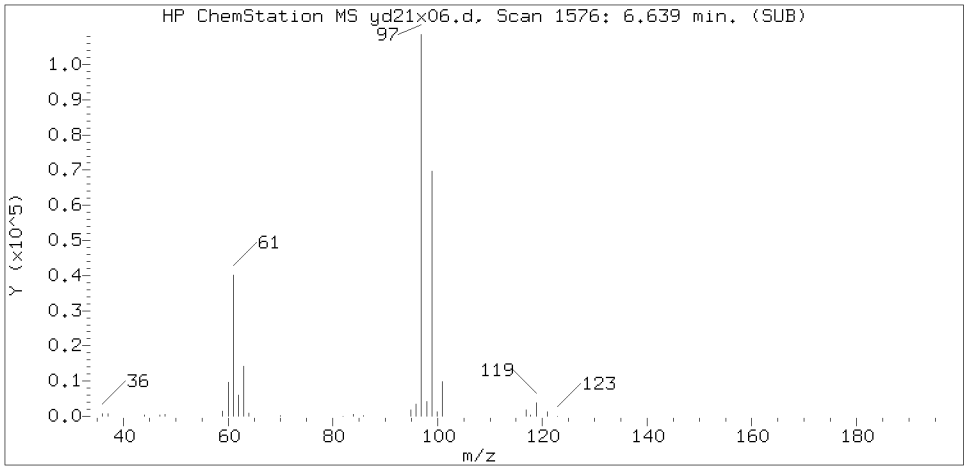
Sample Name: C2006 Lab Sample ID: 1202319

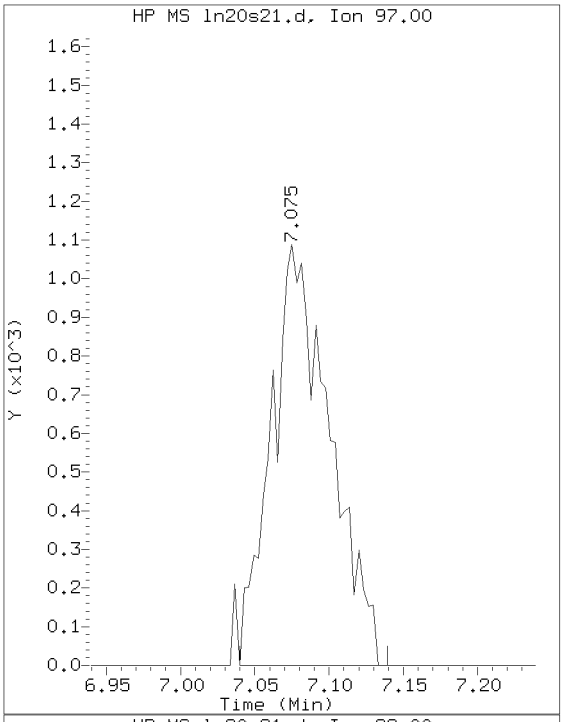
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.493	65	141822	250.000
53) 1,1,1-Trichloroethane	(2)	7.075	97	2980M	0.519
52)$Dibromofluoromethane	(2)	7.075	113	195535	48.644
57)$1,2-Dichloroethane-d4	(2)	7.532	102	52468	51.215
66)*Fluorobenzene	(2)	7.959	96	822195	50.000
71) Trichloroethene	(2)	8.432	95	4533M	1.077
83)$Toluene-d8	(3)	9.933	98	848536	47.797
100)*Chlorobenzene-d5	(3)	11.361	117	678476	50.000
114)$4-Bromofluorobenzene	(3)	12.348	95	322031	47.905
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	363942	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

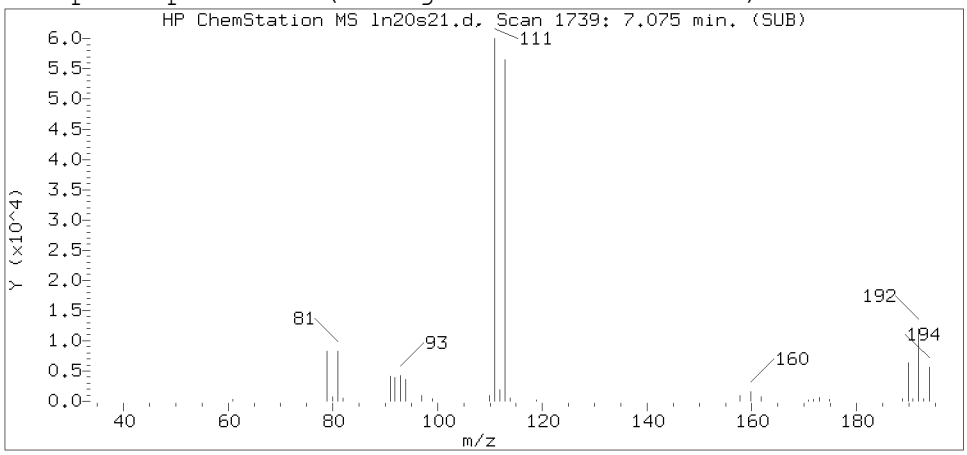
Digitally signed by Don V. Viray
on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203

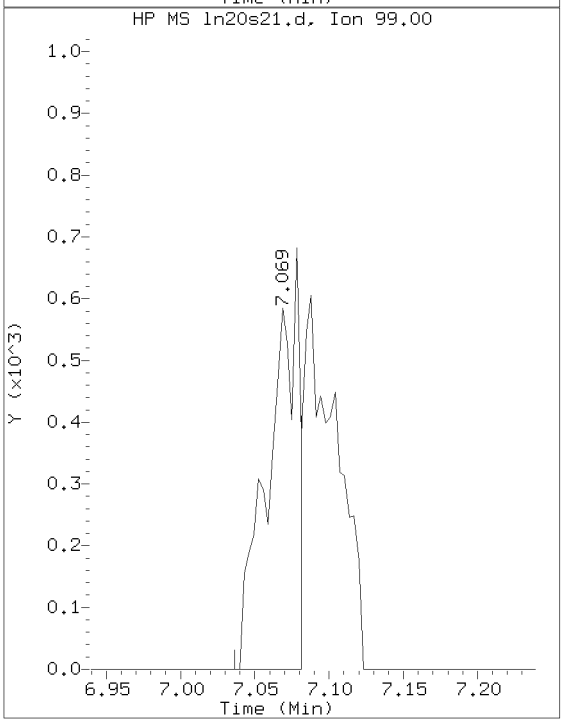
Reference Standard Spectrum for 1,1,1-Trichloroethane



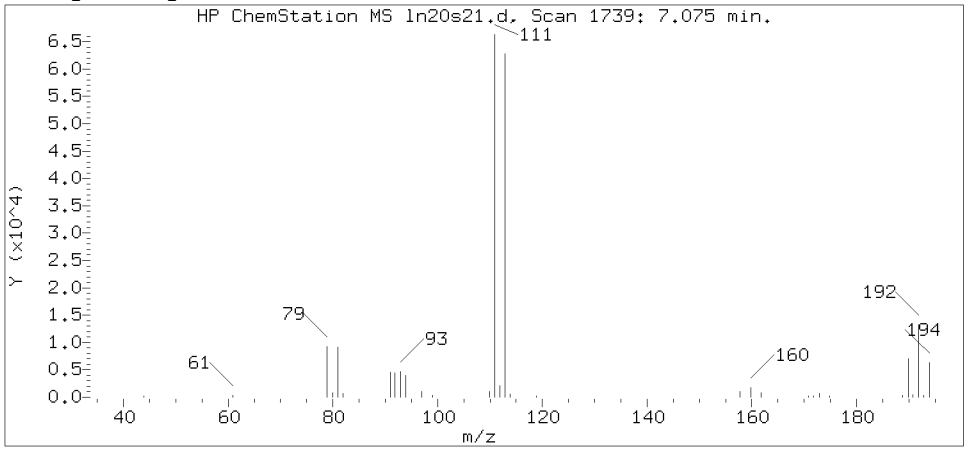


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov20a.b/ln20s21.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 17:22 Analyst ID: KKM02078

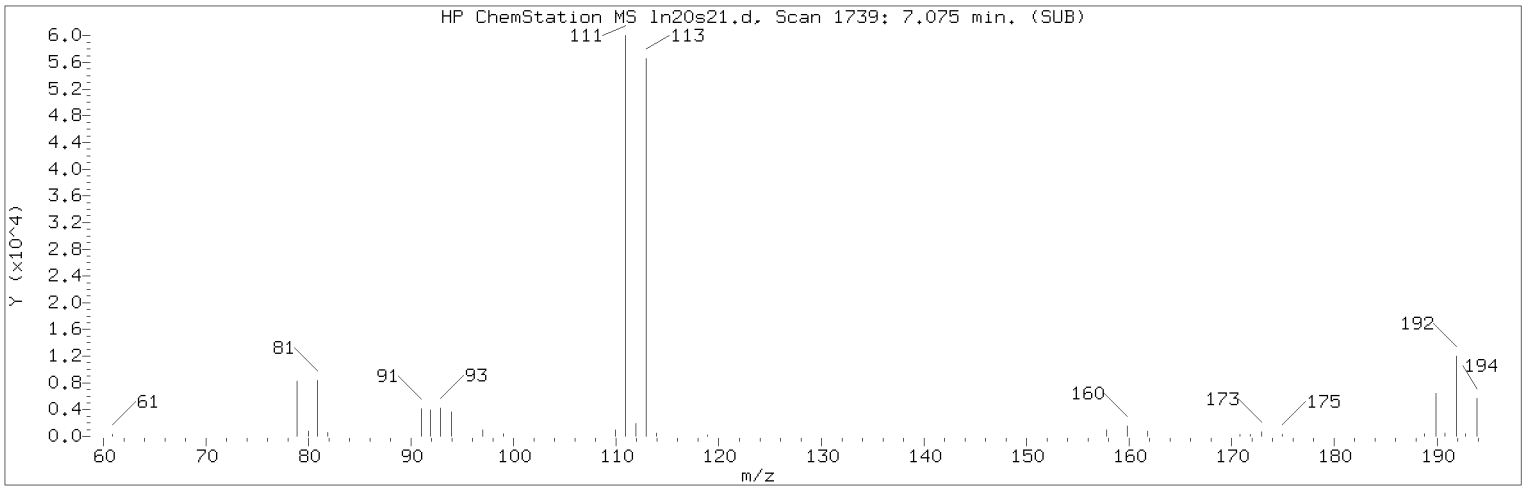
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:18 dvv10203

Sample Name: C2006 Lab Sample ID: 1202319

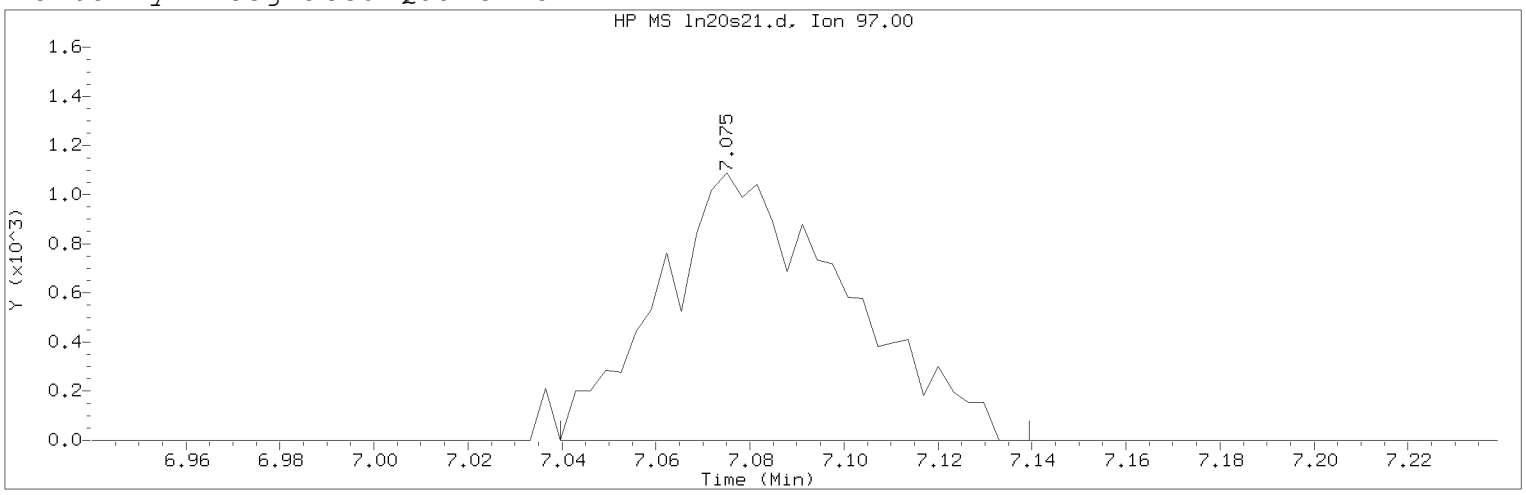
Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1739
Retention Time (minutes)	: 7.075
Relative Retention Time	: 0.00121
Quant Ion	: 97.00
Area (flag)	: 2980M
On-Column Amount (ng)	: 0.5191

Digitally signed by Don V. Viray on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s21.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 17:22 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:18 dvv10203

Sample Name: C2006 Lab Sample ID: 1202319

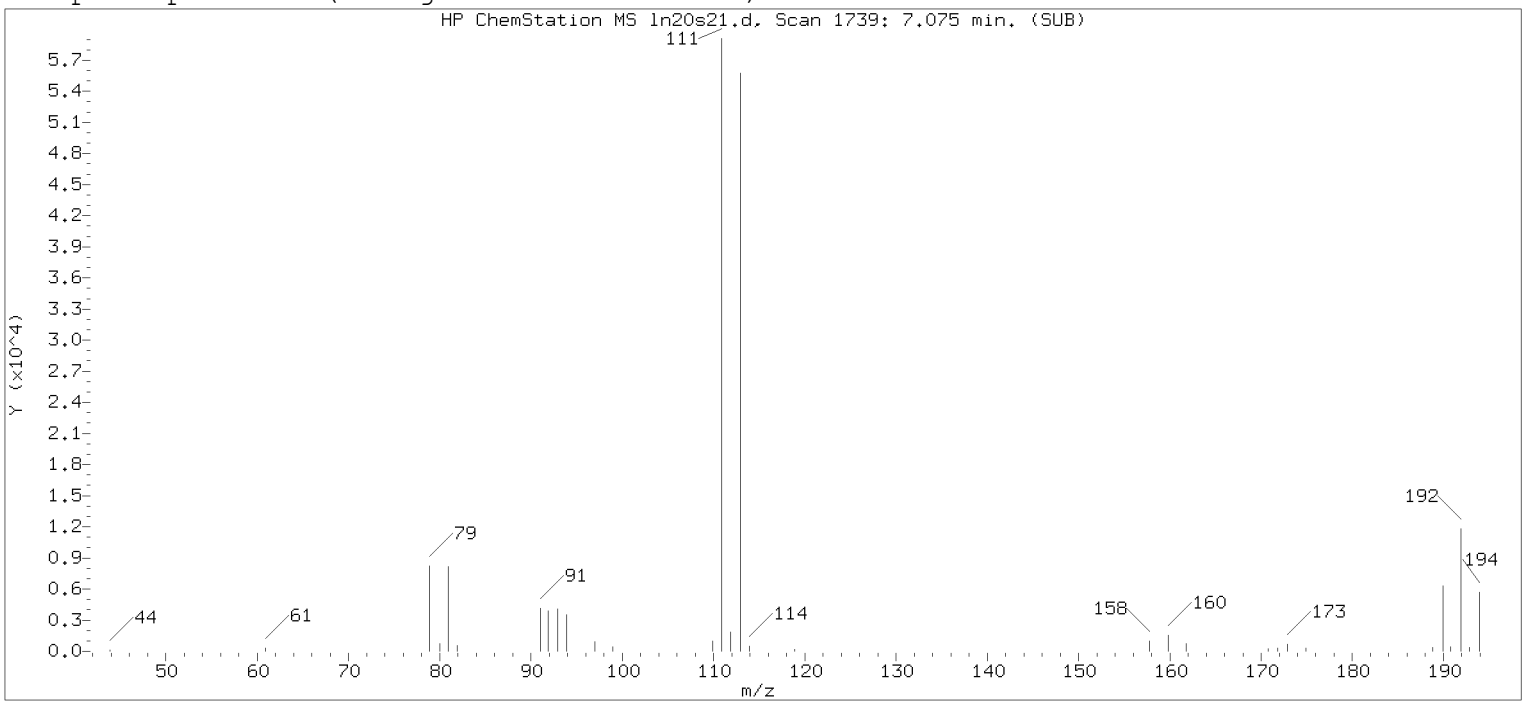
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 1739
Retention Time (minutes): 7.075
Quant Ion : 97.00
Area (flag) : 2980M
On-Column Amount (ng) : 0.5191
Integration start scan : 1727 Integration stop scan: 1758
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

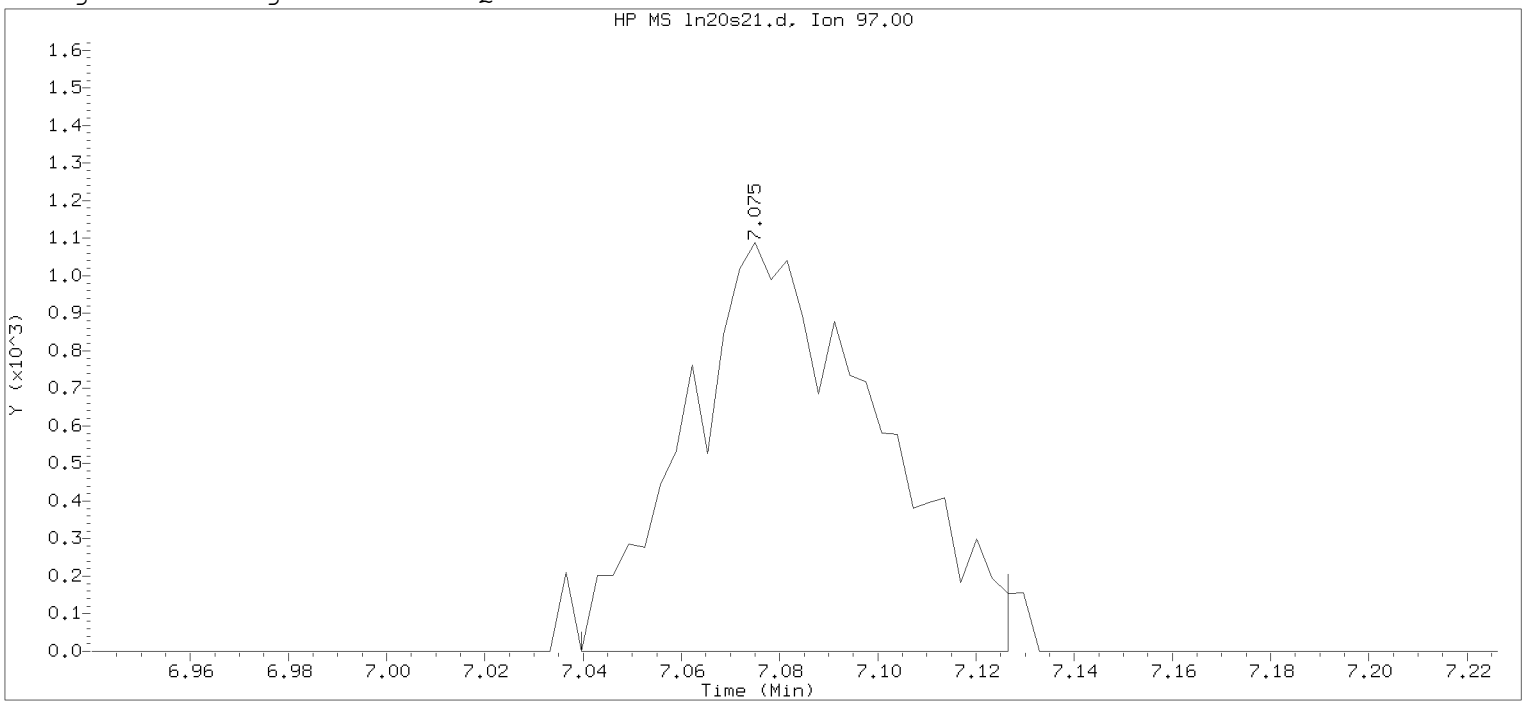
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:53.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s21.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 17:22 Analyst ID: KKM02078

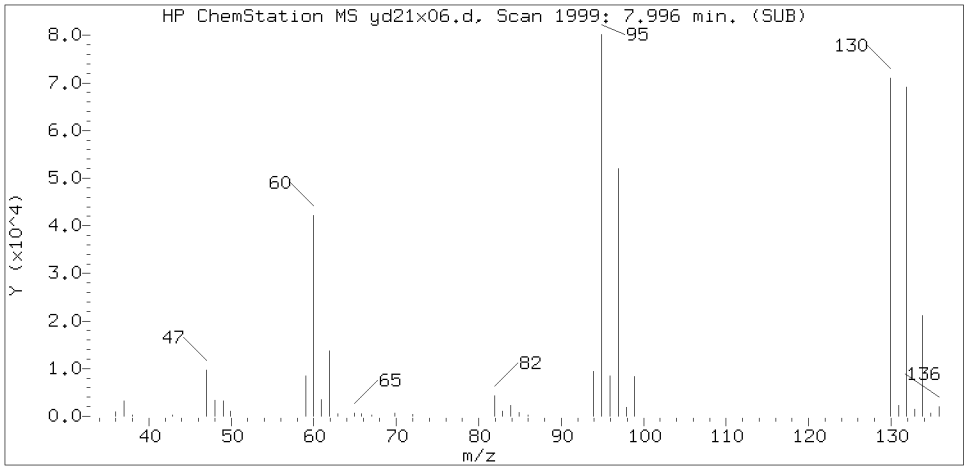
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 17:40 Automation

Sample Name: C2006 Lab Sample ID: 1202319

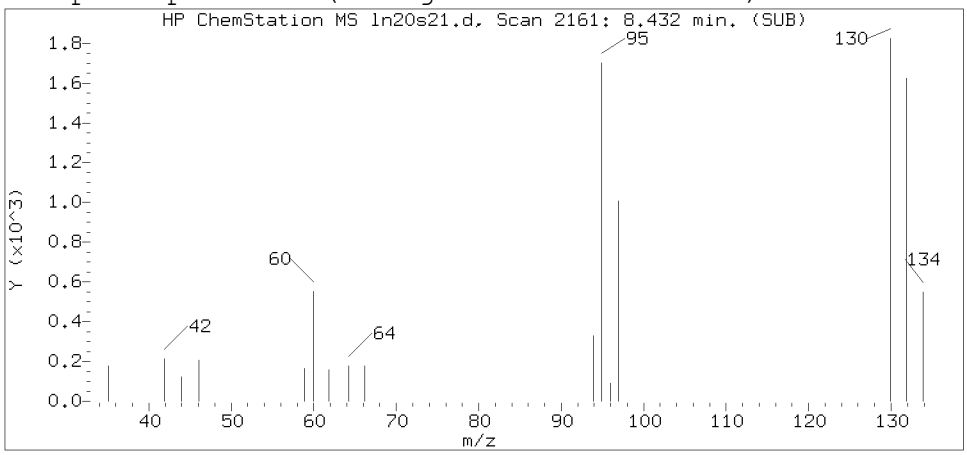
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 1739
Retention Time (minutes): 7.075
Quant Ion : 97.00
Area : 2935
On-column Amount (ng) : 0.5113
Integration start scan : 1727 Integration stop scan: 1754
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dv10203

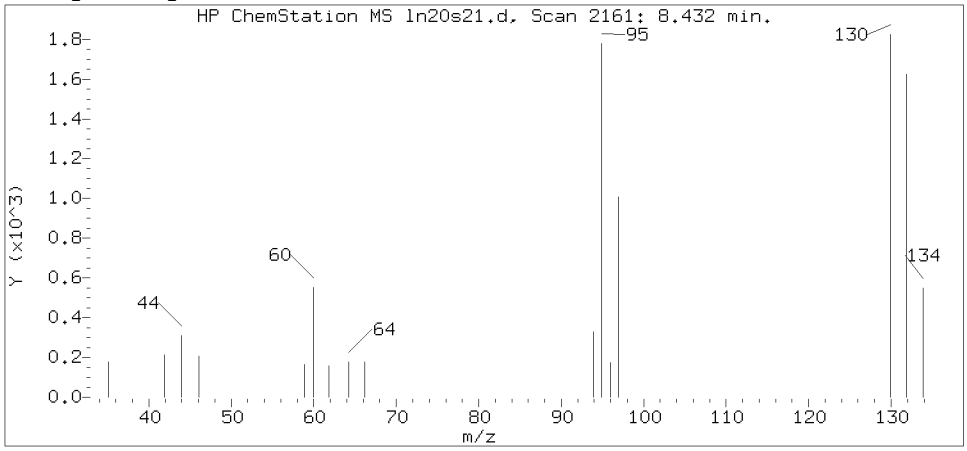
Reference Standard Spectrum for Trichloroethene

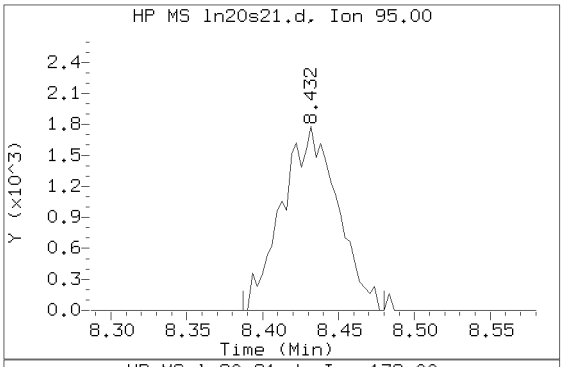


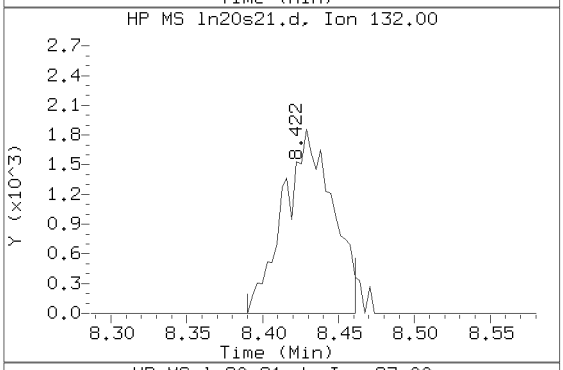
Sample Spectrum (Background Subtracted)

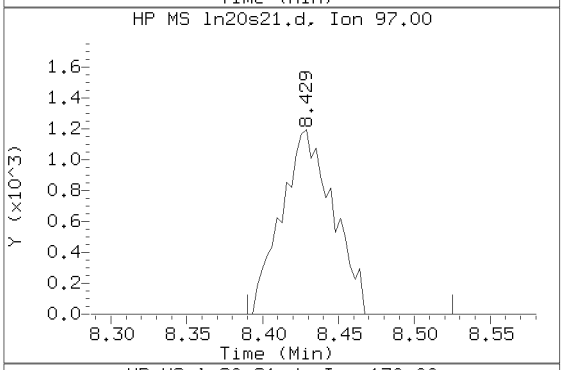


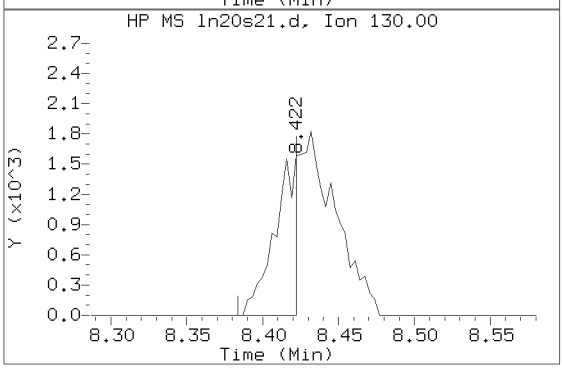
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov20a.b/ln20s21.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 17:22 Analyst ID: KKM02078

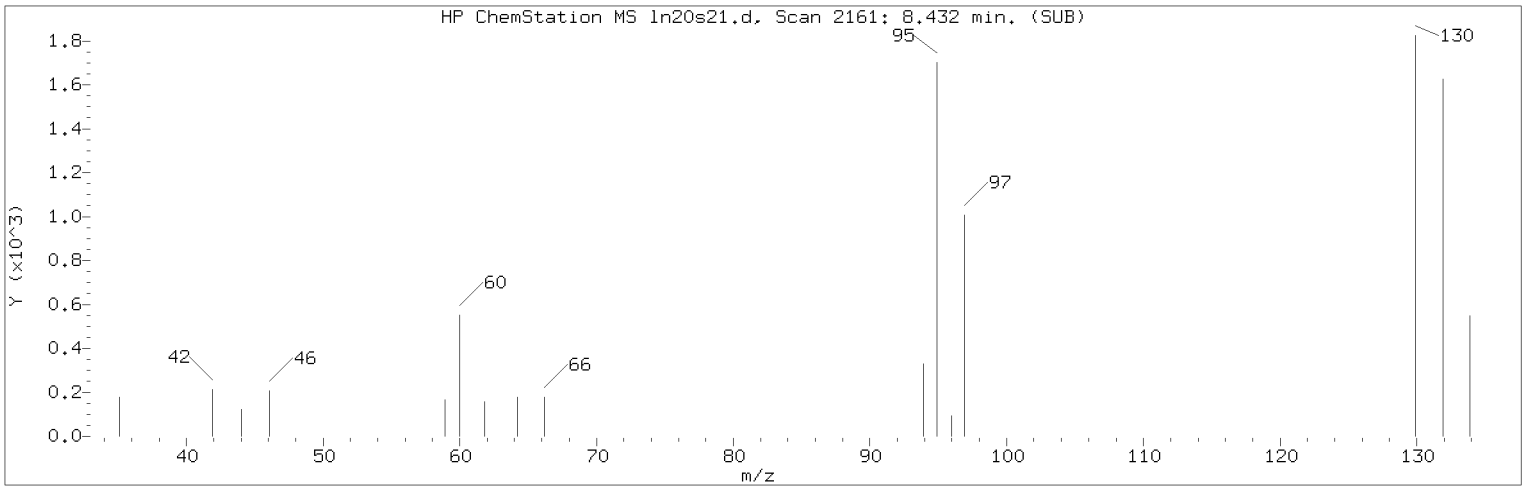
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:18 dvv10203

Sample Name: C2006 Lab Sample ID: 1202319

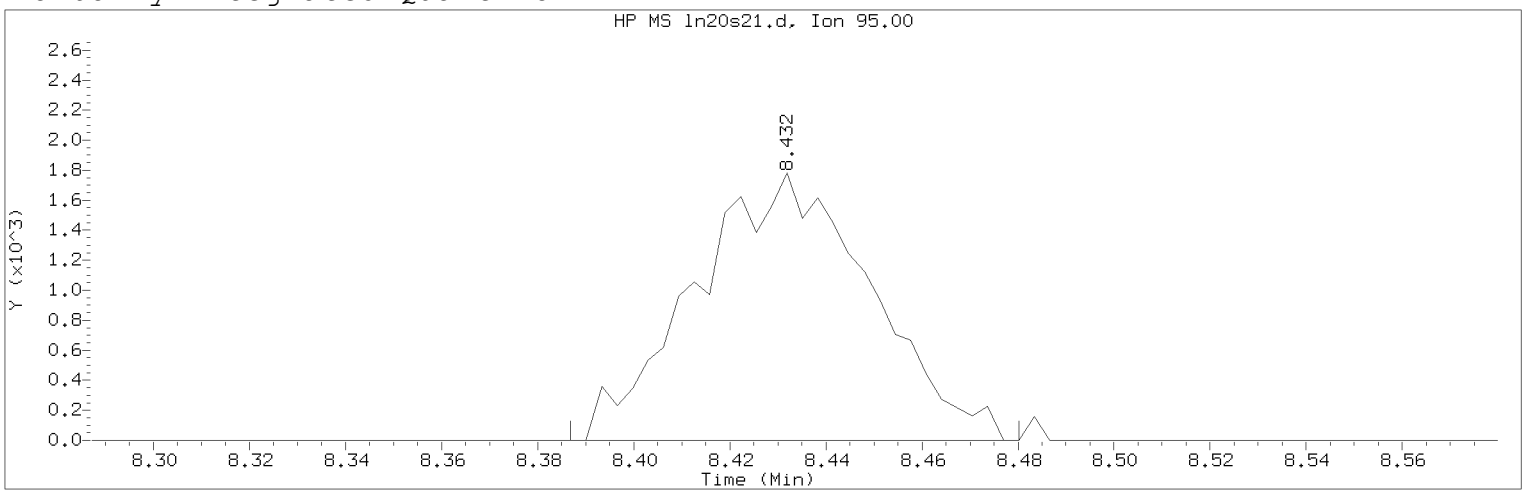
Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 2161
Retention Time (minutes)	: 8.432
Relative Retention Time	: 0.00000
Quant Ion	: 95.00
Area (flag)	: 4533M
On-Column Amount (ng)	: 1.0765

Digitally signed by Don V. Viray on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s21.d Instrument ID: HP09915.i
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Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 21:18 dvv10203

Sample Name: C2006 Lab Sample ID: 1202319

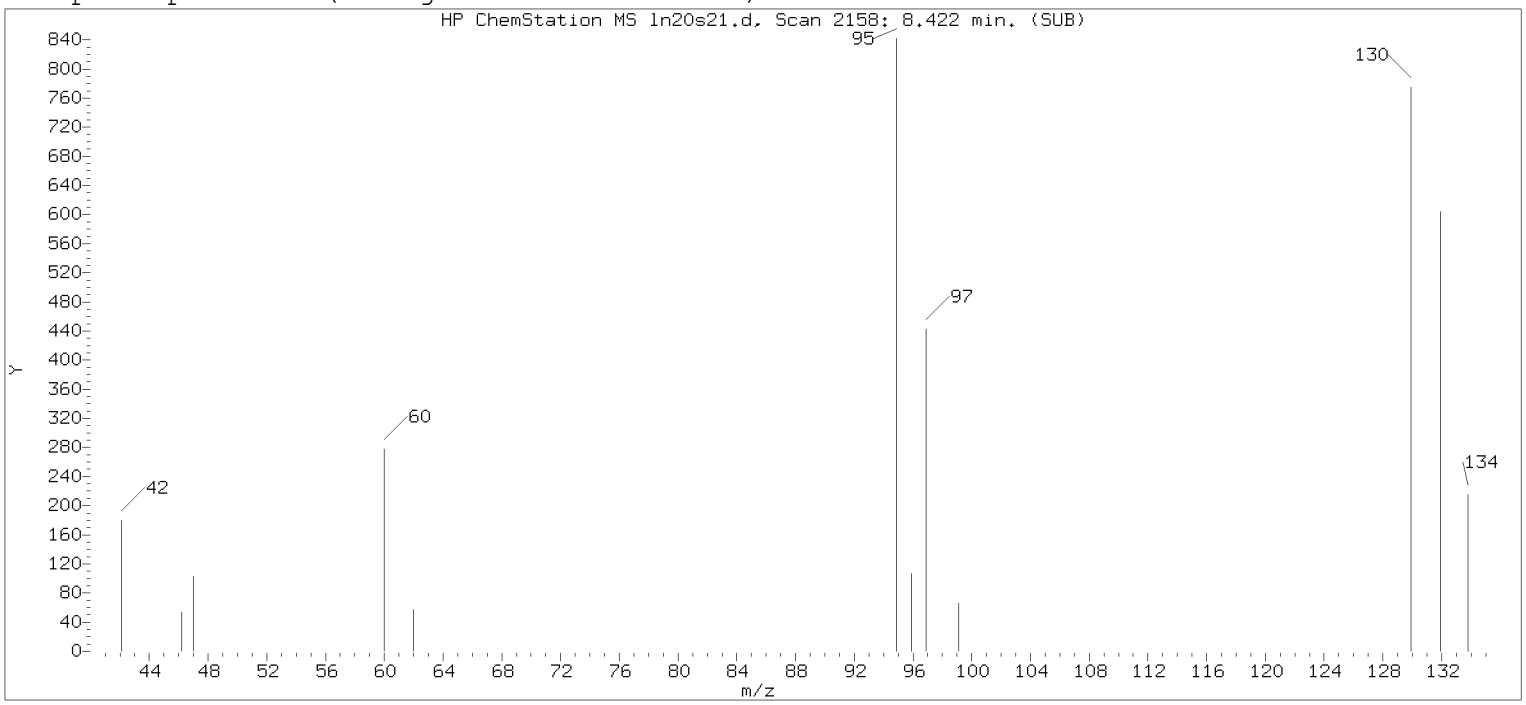
Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 2161
Retention Time (minutes): 8.432
Quant Ion : 95.00
Area (flag) : 4533M
On-Column Amount (ng) : 1.0765
Integration start scan : 2146 Integration stop scan: 2175
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

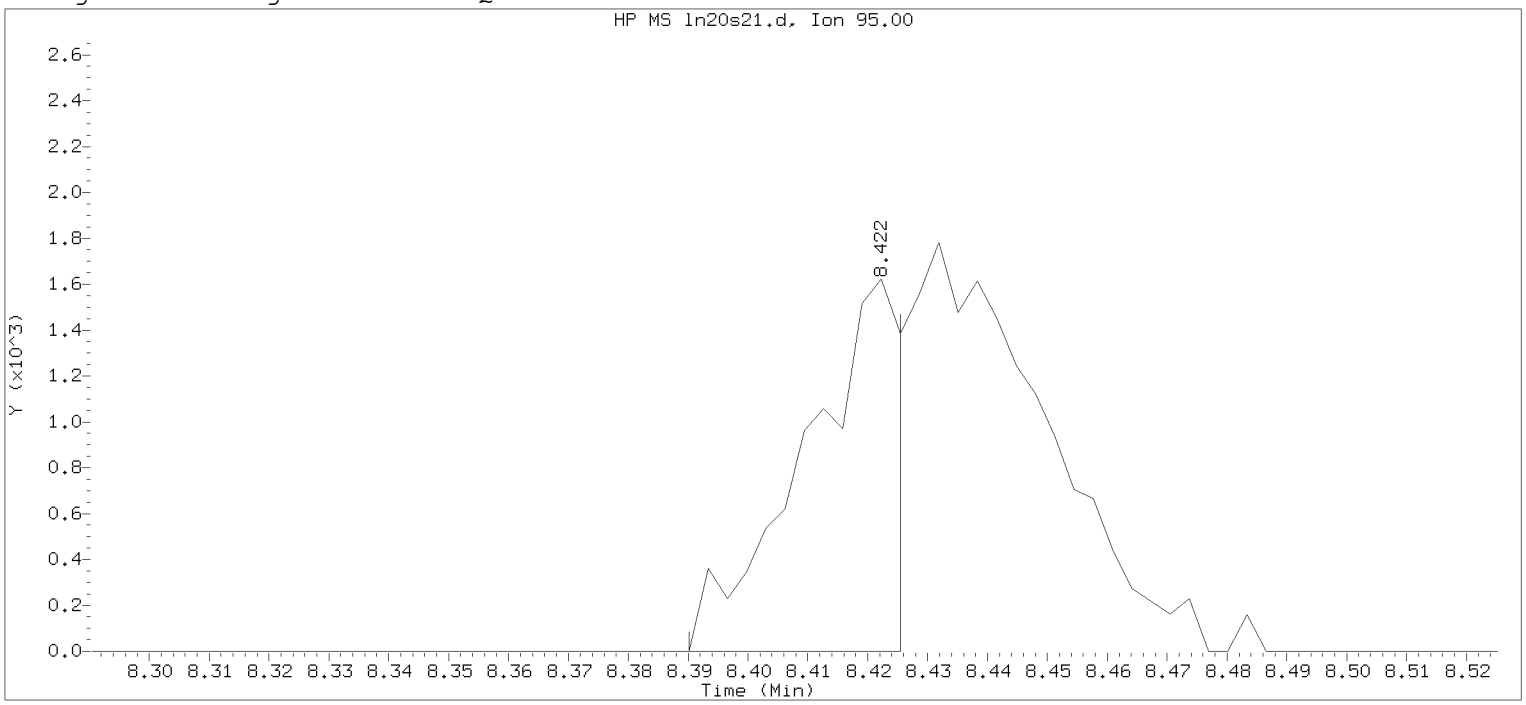
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:53.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20s21.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 17:22 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 17:40 Automation

Sample Name: C2006 Lab Sample ID: 1202319

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 2158
Retention Time (minutes): 8.422
Quant Ion : 95.00
Area : 1720
On-column Amount (ng) : 0.4086
Integration start scan : 2147 Integration stop scan: 2158
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

C2007

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202320

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov20a.b/ln20s22.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	0.3	J
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.8	J
156-59-2	cis-1,2-Dichloroethene	1	
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	3	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	13	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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C2007 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202320

Data file: /chem/HP09915.i/19nov20a.b/ln20s22.d Injection date and time: **20-NOV-2019 17:44**
Data file Sample Info. Line: C2007;1202320;1;0;;JCW20;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 18:03 Automation

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.496	(-0.003)	937	65	147376	(-4)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	819786	(-8)	50.00	
100) Chlorobenzene-d5	11.361	(0.000)	3072	117	672667	(-7)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	356658	(-9)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(0.000)	113	194851	48.616	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(0.000)	102	51822	50.733	101%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	848913	48.231	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.348	(0.000)	95	317862	47.694	95%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	3.770	(-0.001)	96	995	0.286	0.29		J	0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.570	(-0.002)	63	5893	0.840	0.84		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	6.387	(-0.000)	96	5016	1.112	1.11			0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	7.081	(0.000)	97	16994	2.969	2.97			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.429	(0.000)	95	55663	13.258	13.26			0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)	10.544	(-0.000)	166	6171	1.321	1.32			0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 11/20/2019 at 21:20. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov20a.b/ln20s22.d Injection date and time: **20-NOV-2019 17:44**
Data file Sample Info. Line: C2007;1202320;1;0;;JCW20;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 18:03 Automation

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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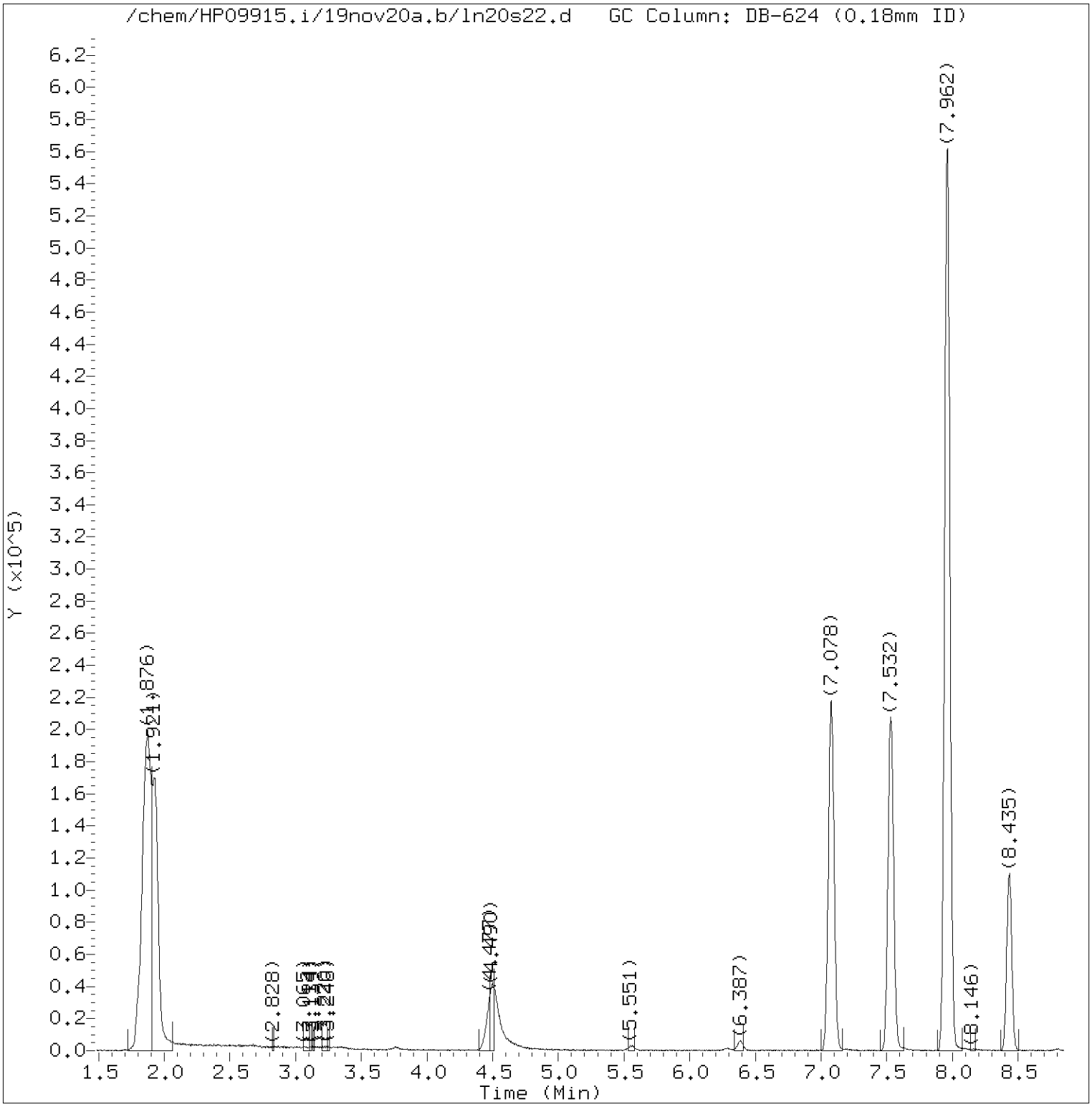
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 11/20/2019 at 21:20. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

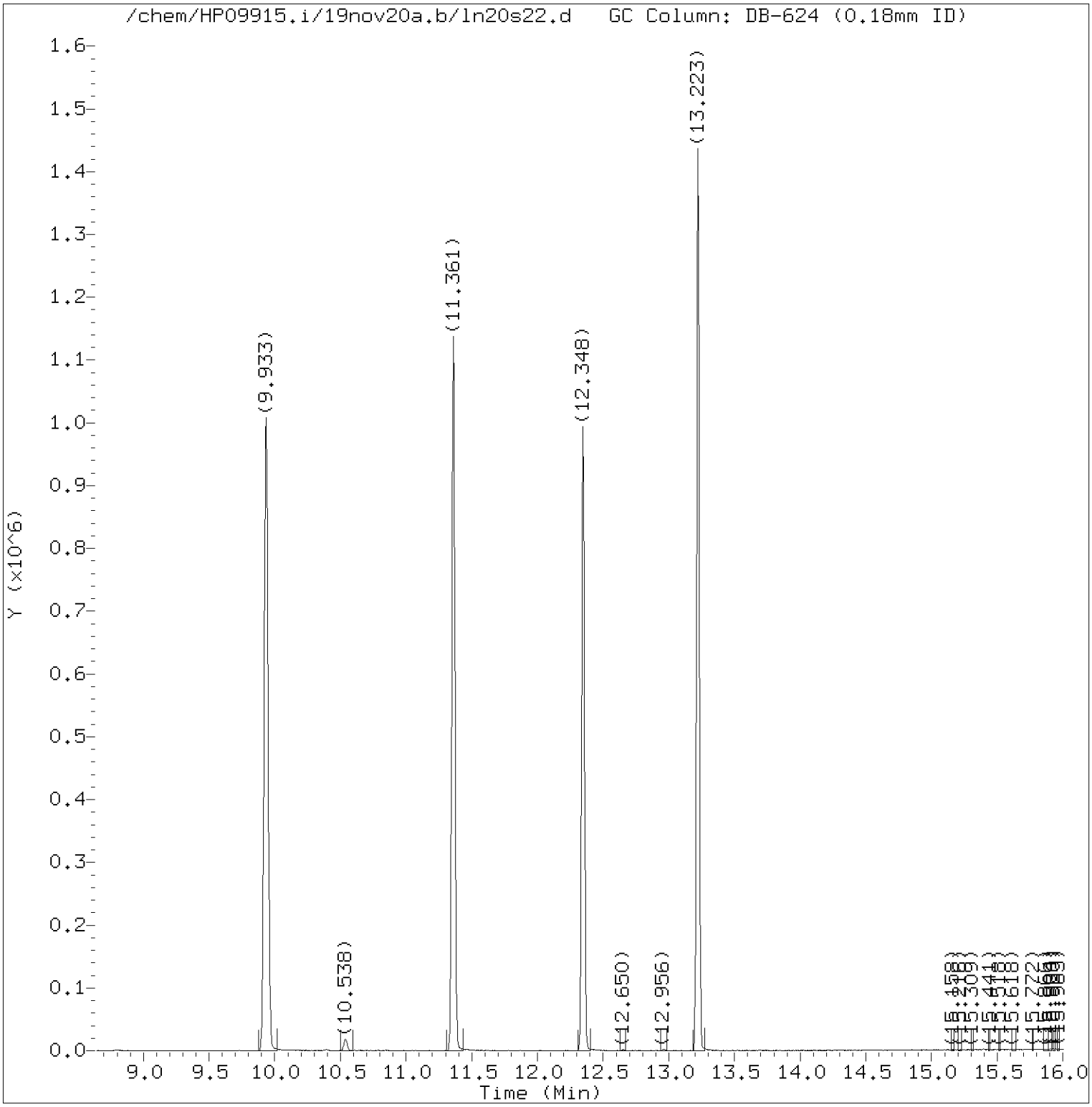
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s22.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 17:44 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 18:03 Automation

Sample Name: C2007 Lab Sample ID: 1202320

Digitally signed by Don V. Viray
on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s22.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 17:44 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 18:03 Automation

Sample Name: C2007 Lab Sample ID: 1202320

Digitally signed by Don V. Viray
on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20s22.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 17:44 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 18:03 Automation

Sample Name: C2007 Lab Sample ID: 1202320

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	3.770	96	995	0.286
29)*t-Butyl alcohol-d10	(1)	4.496	65	147376	250.000
36) 1,1-Dichloroethane	(2)	5.570	63	5893	0.840
42) cis-1,2-Dichloroethene	(2)	6.387	96	5016	1.112
52)$Dibromofluoromethane	(2)	7.075	113	194851	48.616
53) 1,1,1-Trichloroethane	(2)	7.081	97	16994	2.969
57)$1,2-Dichloroethane-d4	(2)	7.528	102	51822	50.733
66)*Fluorobenzene	(2)	7.959	96	819786	50.000
71) Trichloroethene	(2)	8.429	95	55663	13.258
83)$Toluene-d8	(3)	9.933	98	848913	48.231
93) Tetrachloroethene	(3)	10.544	166	6171	1.321
100)*Chlorobenzene-d5	(3)	11.361	117	672667	50.000
114)$4-Bromofluorobenzene	(3)	12.348	95	317862	47.694
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	356658	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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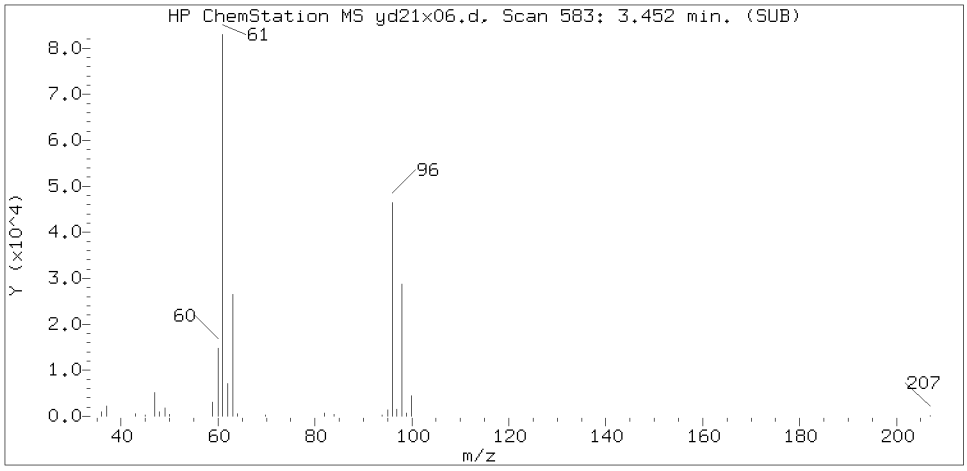
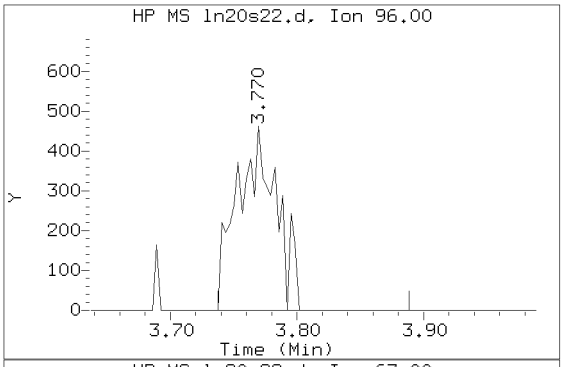
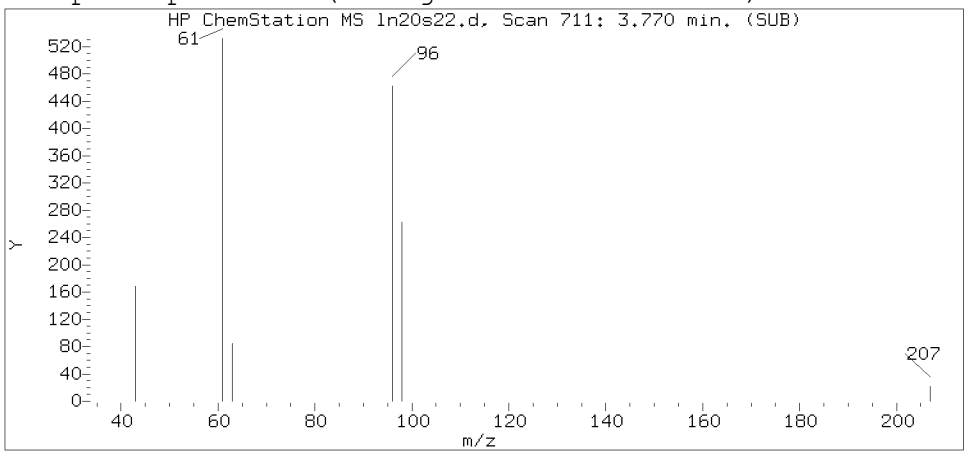
on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203

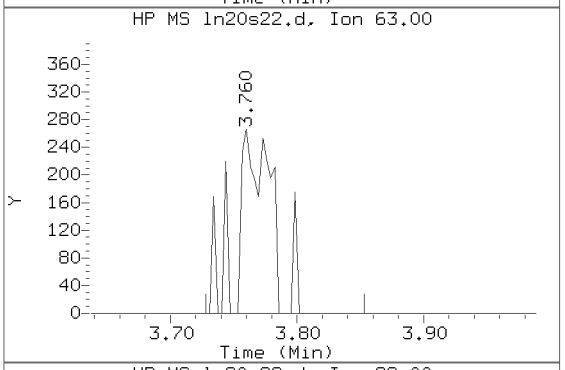
Reference Standard Spectrum for 1,1-Dichloroethene

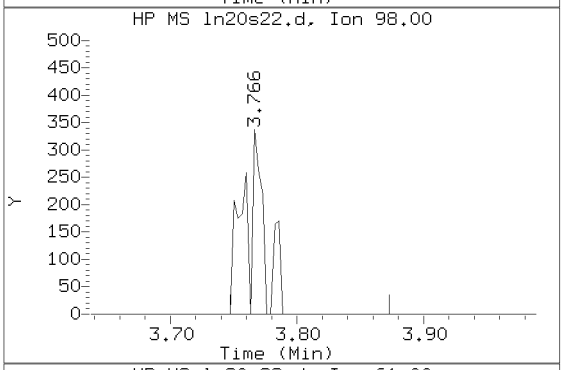




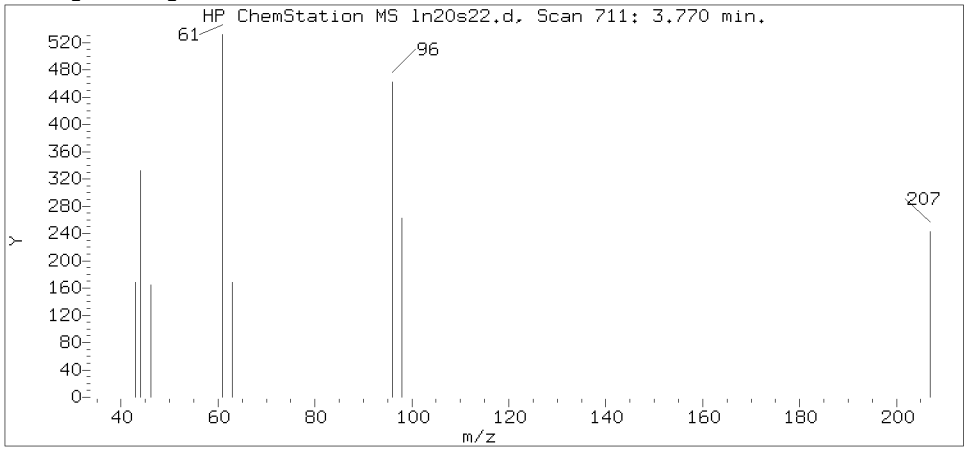
Sample Spectrum (Background Subtracted)

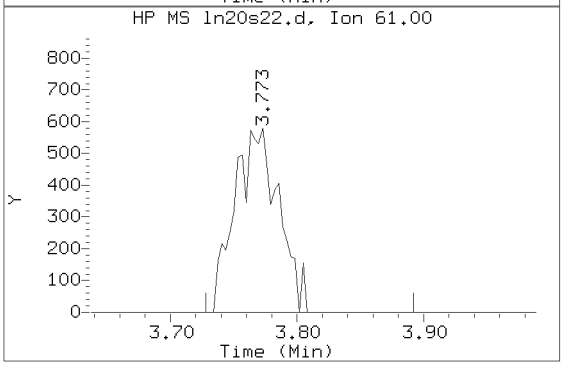






Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov20a.b/ln20s22.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 17:44 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 18:03 Automation

Sample Name: C2007 Lab Sample ID: 1202320

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 711
Retention Time (minutes): 3.770
Relative Retention Time :-0.00122
Quant Ion : 96.00
Area (flag) : 995
On-Column Amount (ng) : 0.2865

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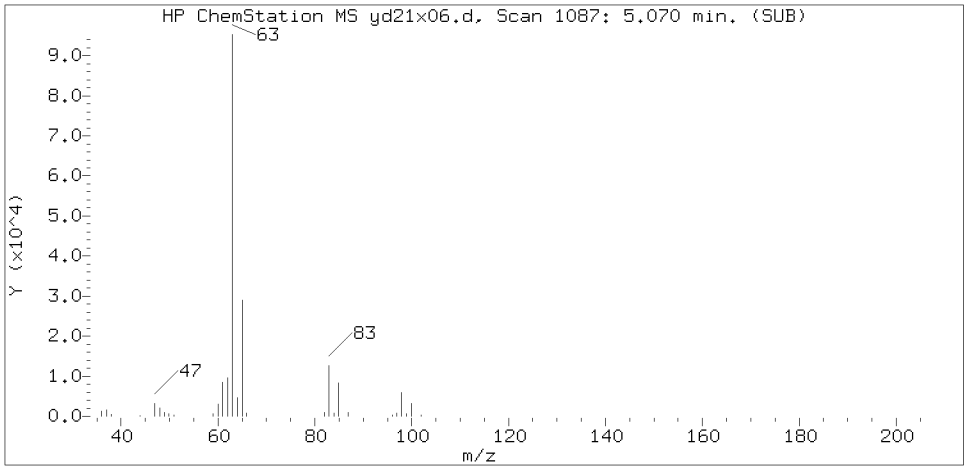
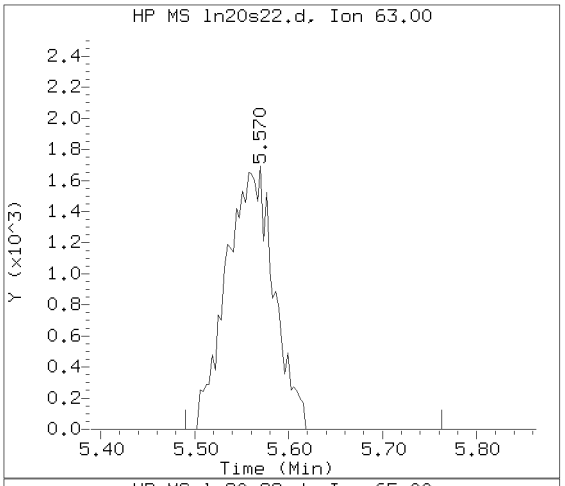
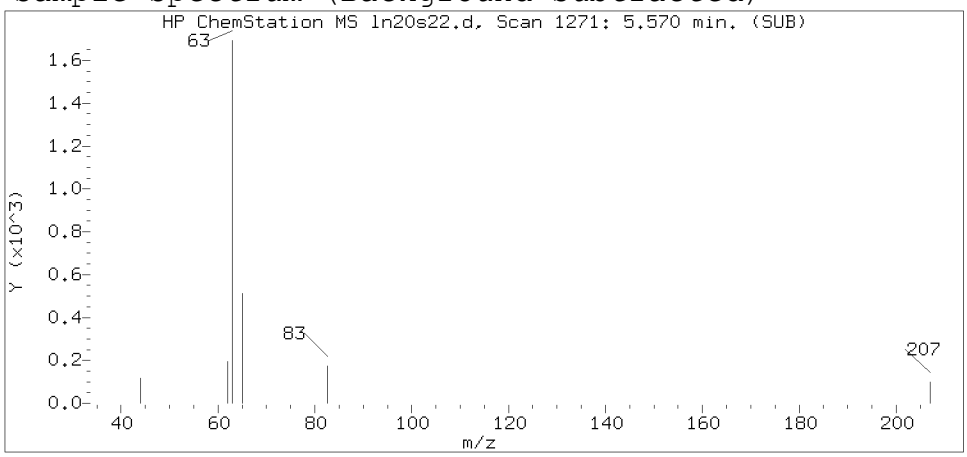
Target 3.5 esignature user ID: dvv10203

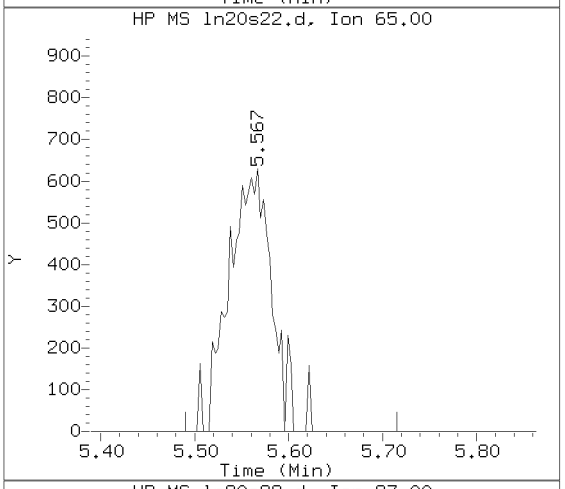
Reference Standard Spectrum for 1,1-Dichloroethane



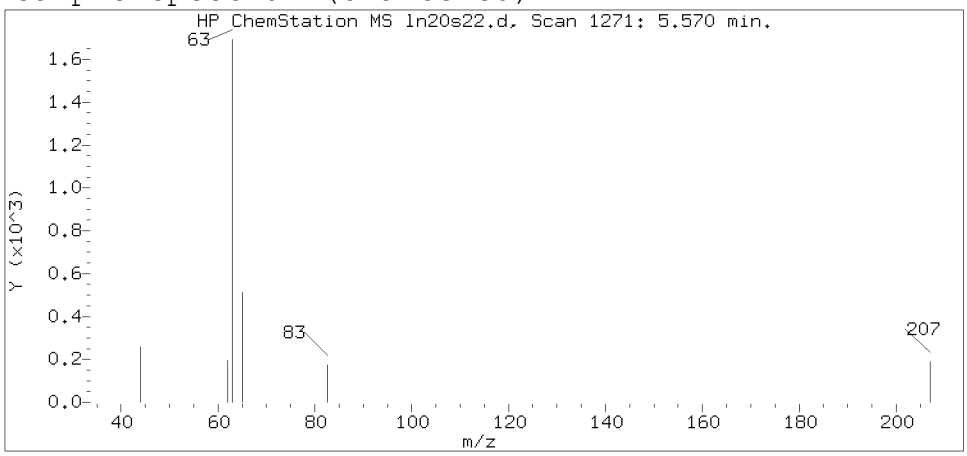


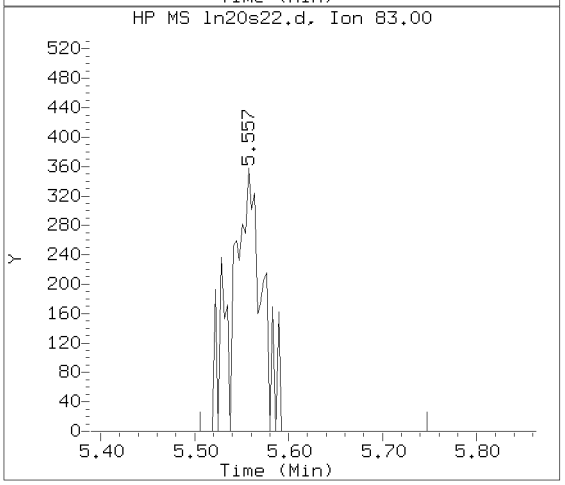
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov20a.b/ln20s22.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 17:44 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 18:03 Automation

Sample Name: C2007 Lab Sample ID: 1202320

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 1271
Retention Time (minutes): 5.570
Relative Retention Time :-0.00243
Quant Ion : 63.00
Area (flag) : 5893
On-Column Amount (ng) : 0.8403

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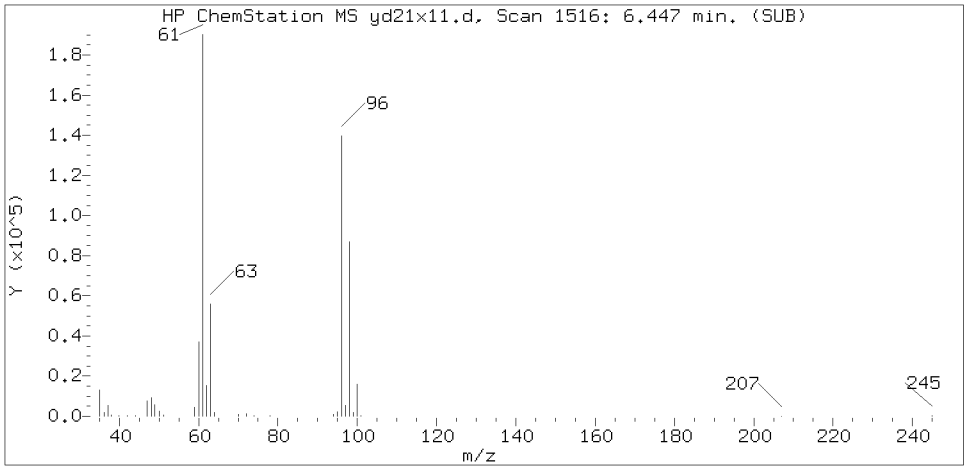
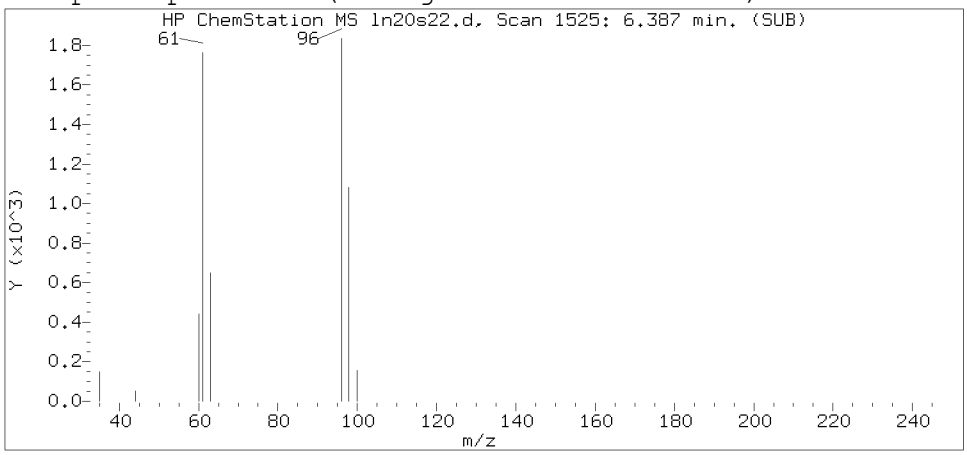
Target 3.5 esignature user ID: dvv10203

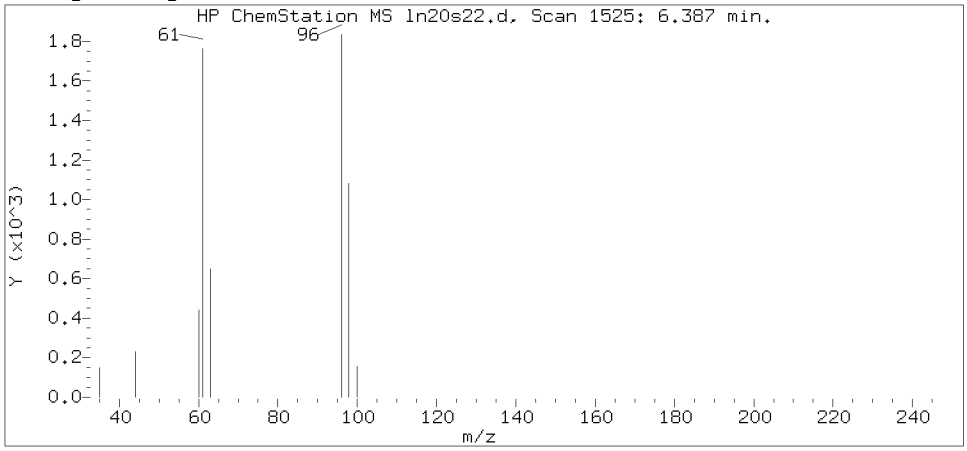
Reference Standard Spectrum for cis-1,2-Dichloroethene

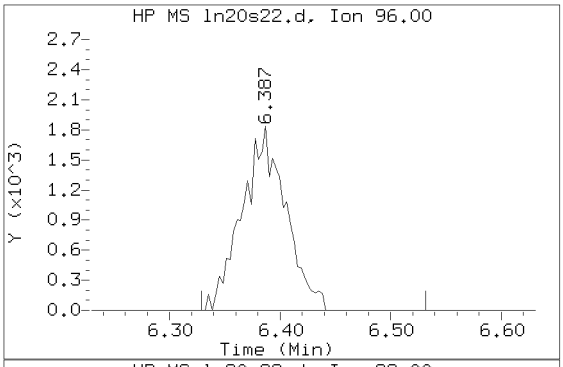


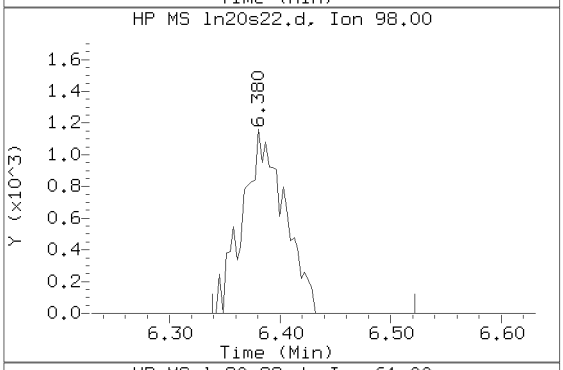
Sample Spectrum (Background Subtracted)

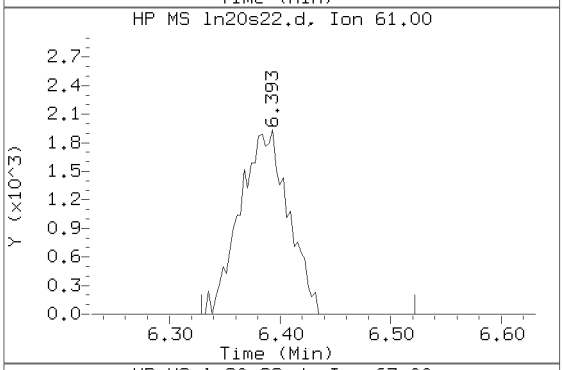


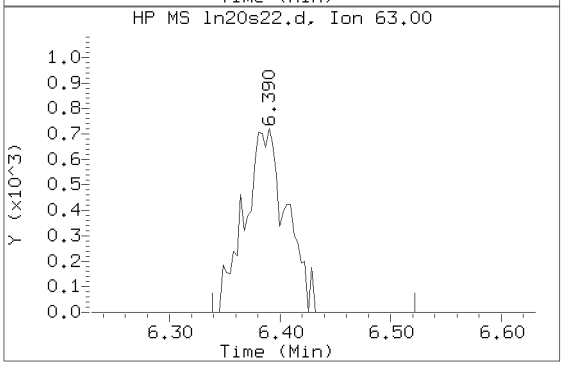
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov20a.b/ln20s22.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 17:44 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 18:03 Automation

Sample Name: C2007 Lab Sample ID: 1202320

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 1525
Retention Time (minutes): 6.387
Relative Retention Time :-0.00081
Quant Ion : 96.00
Area (flag) : 5016
On-Column Amount (ng) : 1.1117

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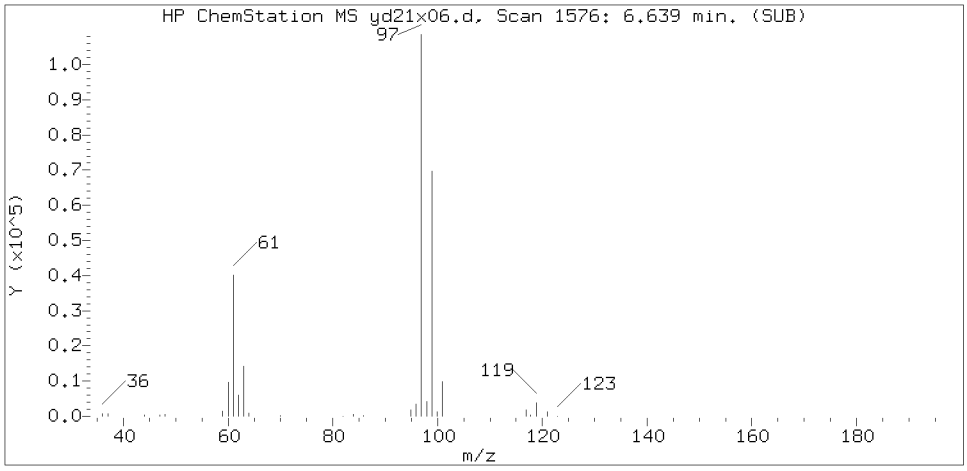
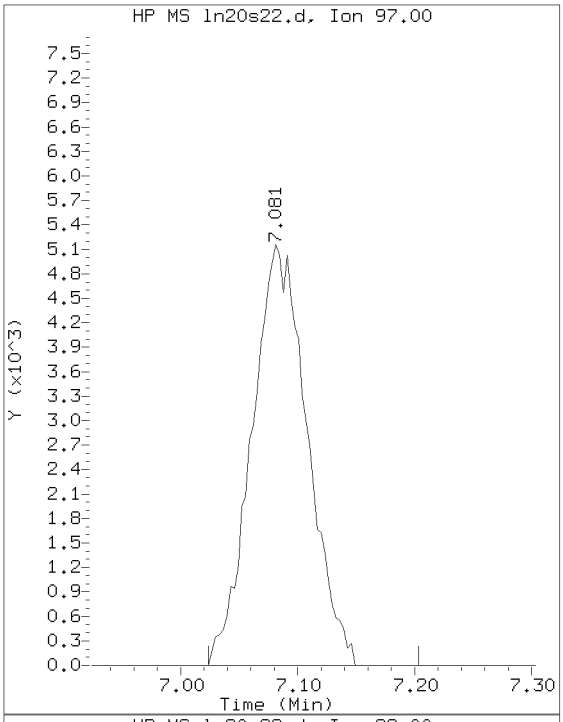
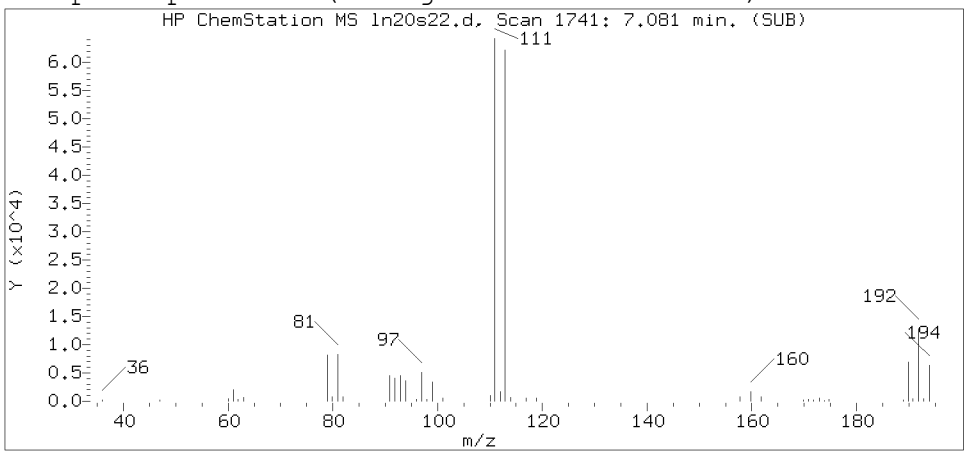
Target 3.5 esignature user ID: dvv10203

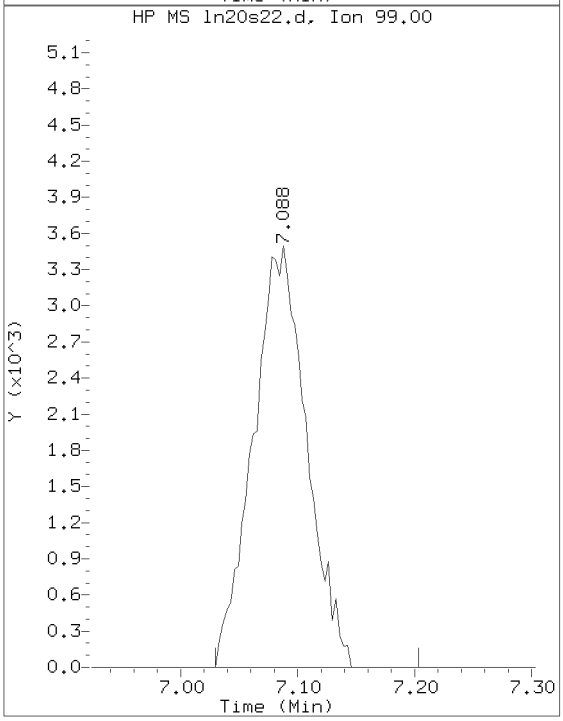
Reference Standard Spectrum for 1,1,1-Trichloroethane



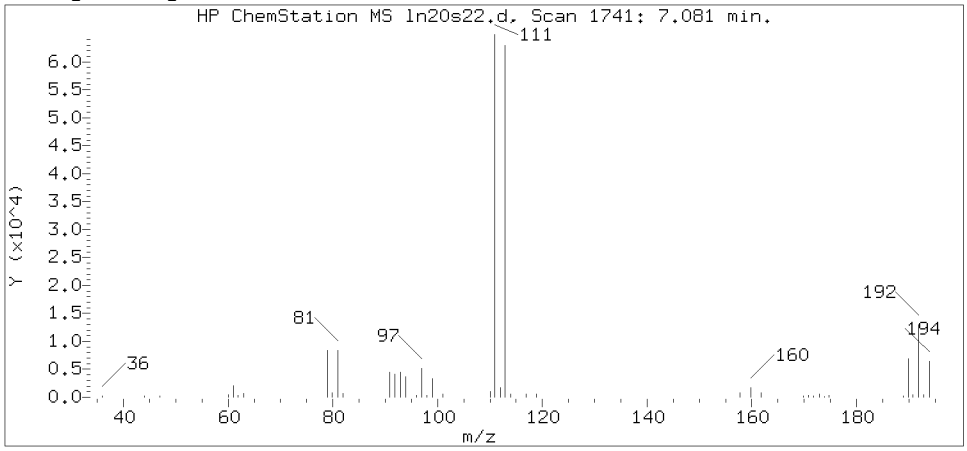


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov20a.b/ln20s22.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 17:44 Analyst ID: KKM02078

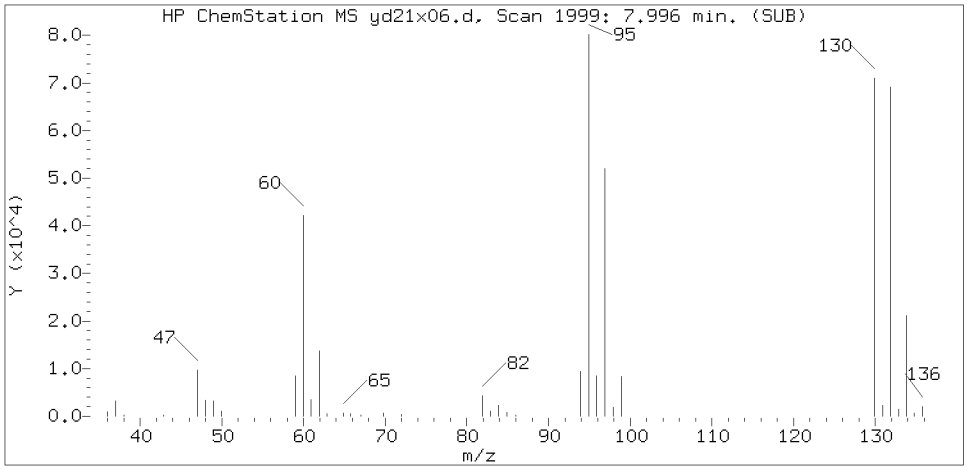
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 18:03 Automation

Sample Name: C2007 Lab Sample ID: 1202320

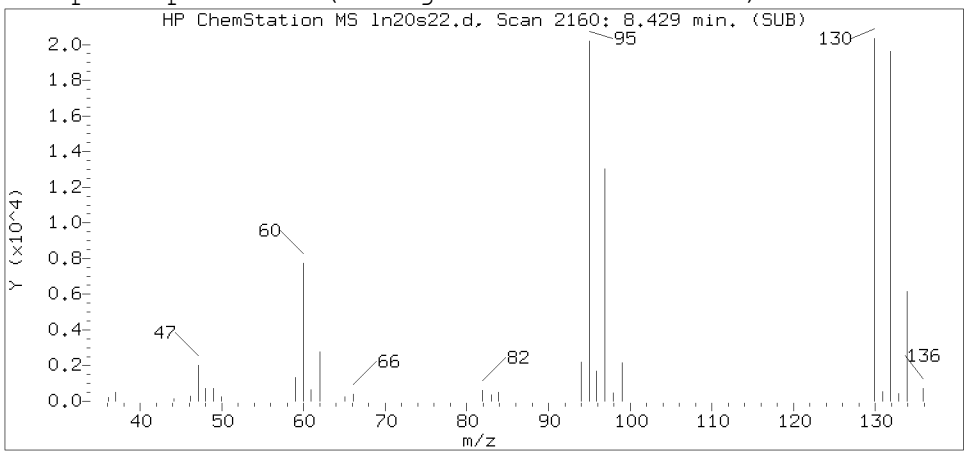
Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1741
Retention Time (minutes)	: 7.081
Relative Retention Time	: 0.00040
Quant Ion	: 97.00
Area (flag)	: 16994
On-Column Amount (ng)	: 2.9686

Digitally signed by Don V. Viray on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203

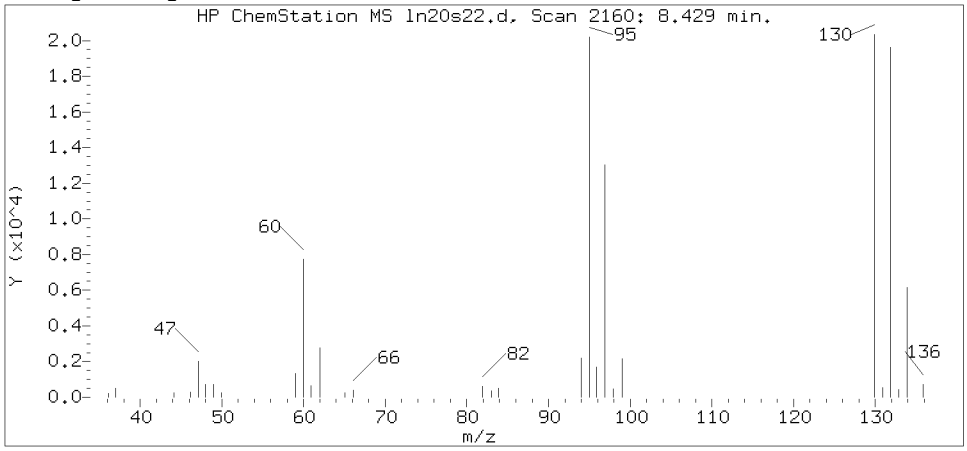
Reference Standard Spectrum for Trichloroethene

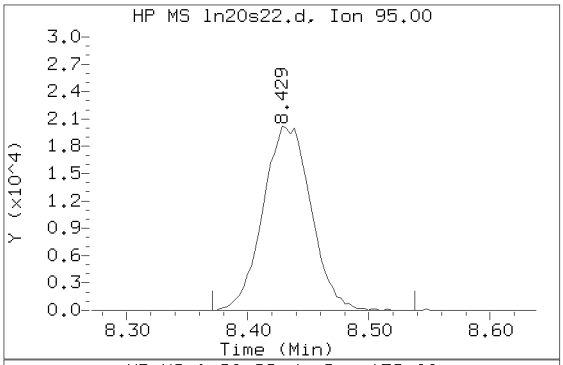


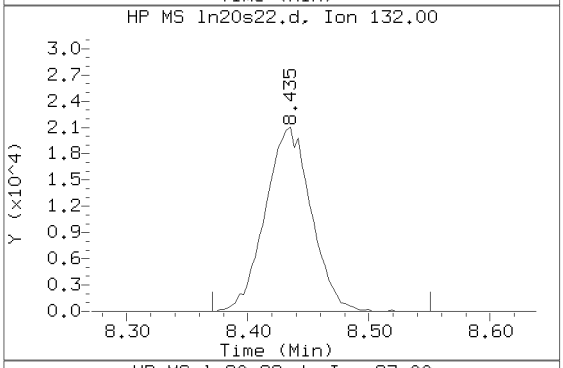
Sample Spectrum (Background Subtracted)

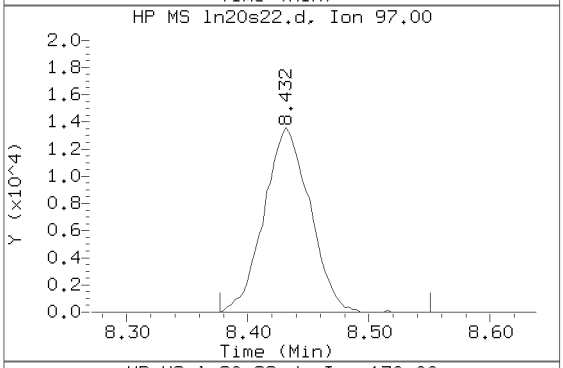


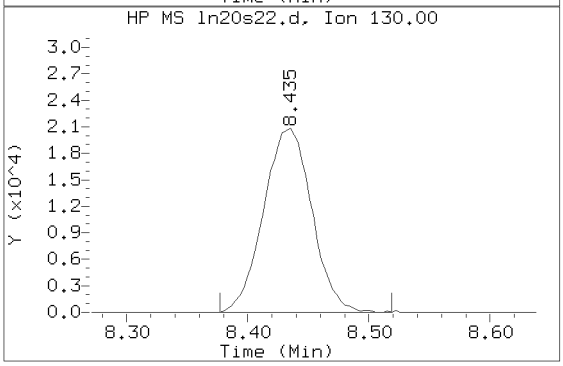
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov20a.b/ln20s22.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 17:44 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 18:03 Automation

Sample Name: C2007 Lab Sample ID: 1202320

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 2160
Retention Time (minutes)	: 8.429
Relative Retention Time	: 0.00040
Quant Ion	: 95.00
Area (flag)	: 55663
On-Column Amount (ng)	: 13.2576

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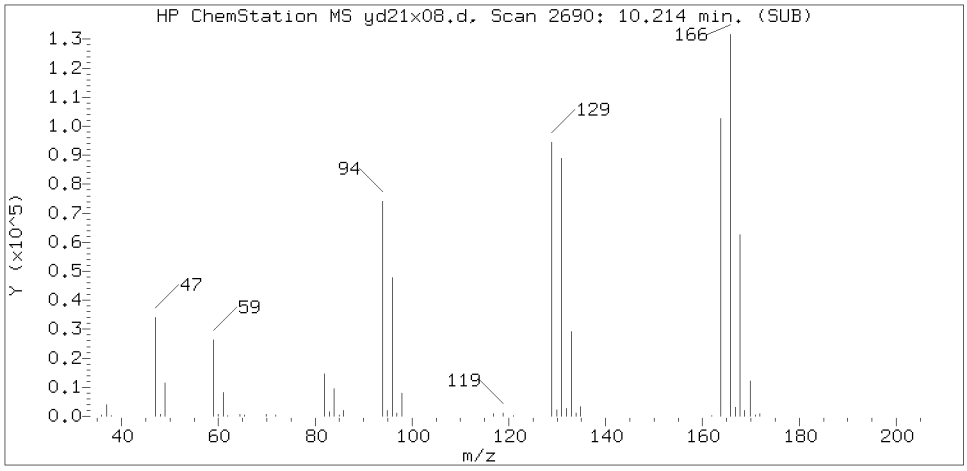
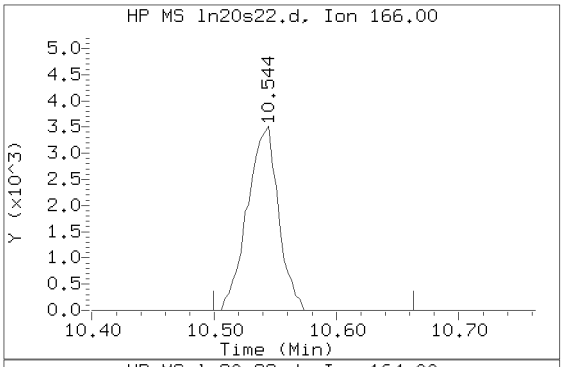
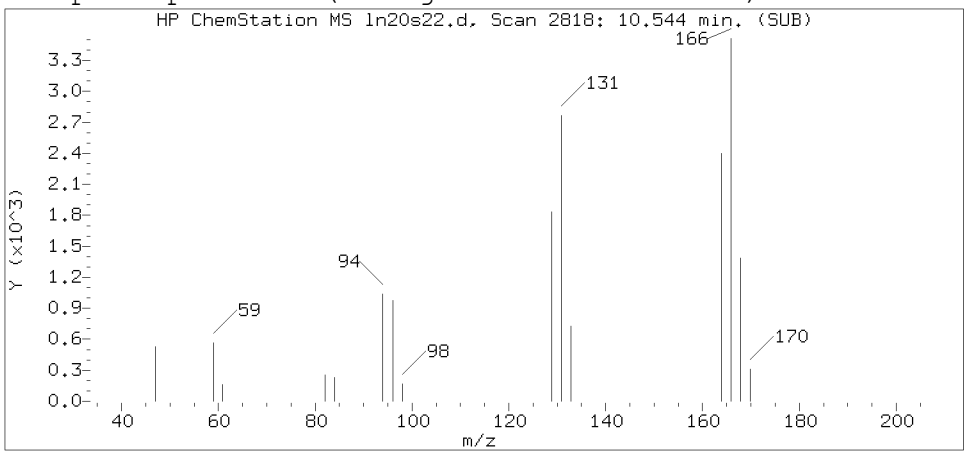
Target 3.5 esignature user ID: dvv10203

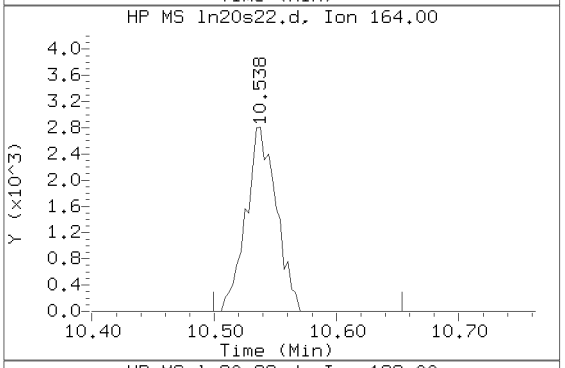
Reference Standard Spectrum for Tetrachloroethene

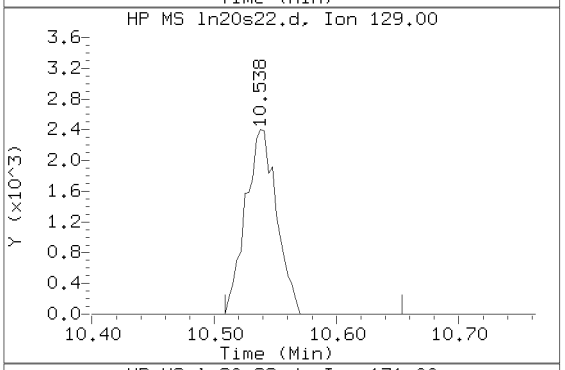




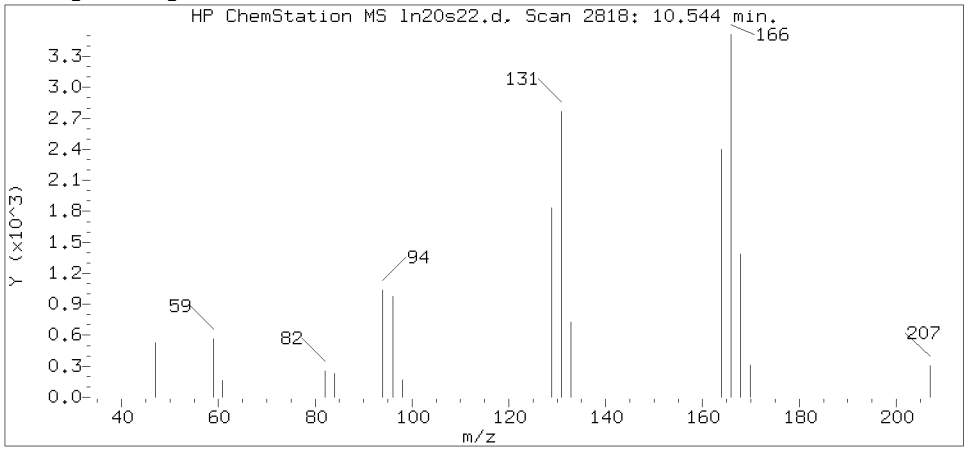
Sample Spectrum (Background Subtracted)

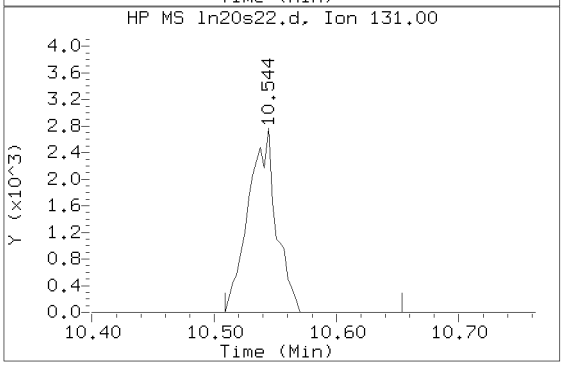






Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov20a.b/ln20s22.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 17:44 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 18:03 Automation

Sample Name: C2007 Lab Sample ID: 1202320

Compound Number : 93
Compound Name : Tetrachloroethene
Scan Number : 2818
Retention Time (minutes): 10.544
Relative Retention Time :-0.00028
Quant Ion : 166.00
Area (flag) : 6171
On-Column Amount (ng) : 1.3206

Digitally signed by Don V. Viray on 11/20/2019 at 21:20.
Target 3.5 esignature user ID: dvv10203

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
C2008

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202321

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov21a.b/ln21s12.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L		Q
75-01-4	Vinyl Chloride		1	U
75-35-4	1,1-Dichloroethene		1	U
67-64-1	Acetone		20	U
76-13-1	Freon 113		10	U
75-15-0	Carbon Disulfide		5	U
75-09-2	Methylene Chloride		1	U
156-60-5	trans-1,2-Dichloroethene		1	U
75-34-3	1,1-Dichloroethane		1	U
156-59-2	cis-1,2-Dichloroethene		1	U
78-93-3	2-Butanone		10	U
67-66-3	Chloroform		1	U
71-55-6	1,1,1-Trichloroethane		4	
71-43-2	Benzene		1	U
107-06-2	1,2-Dichloroethane		1	U
79-01-6	Trichloroethene		1	U
123-91-1	1,4-Dioxane		250	U
108-88-3	Toluene		1	U
127-18-4	Tetrachloroethene		1	U
100-41-4	Ethylbenzene		1	U
1330-20-7	Xylene (Total)		6	U
95-50-1	1,2-Dichlorobenzene		5	U
91-20-3	Naphthalene		5	U

FORM I VOA

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C2008 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202321

Data file: /chem/HP09915.i/19nov21a.b/ln21s12.d Injection date and time: **21-NOV-2019 14:39**
Data file Sample Info. Line: C2008;1202321;1;0;;JCW20;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 14:56 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.503	(-0.010)	939	65	143852	(-6)	250.00	
66) Fluorobenzene	7.962	(-0.003)	2015	96	832267	(-1)	50.00	
100) Chlorobenzene-d5	11.361	(0.000)	3072	117	679478	(-1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	360892	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(0.000)	113	195836	48.129	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(0.000)	102	52423	50.553	101%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	853470	48.004	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	325486	48.348	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	7.088	(0.000)	97	22921	3.944	3.94			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 11/21/2019 at 22:39. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov21a.b/ln21s12.d Injection date and time: **21-NOV-2019 14:39**
Data file Sample Info. Line: C2008;1202321;1;0;;JCW20;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 14:56 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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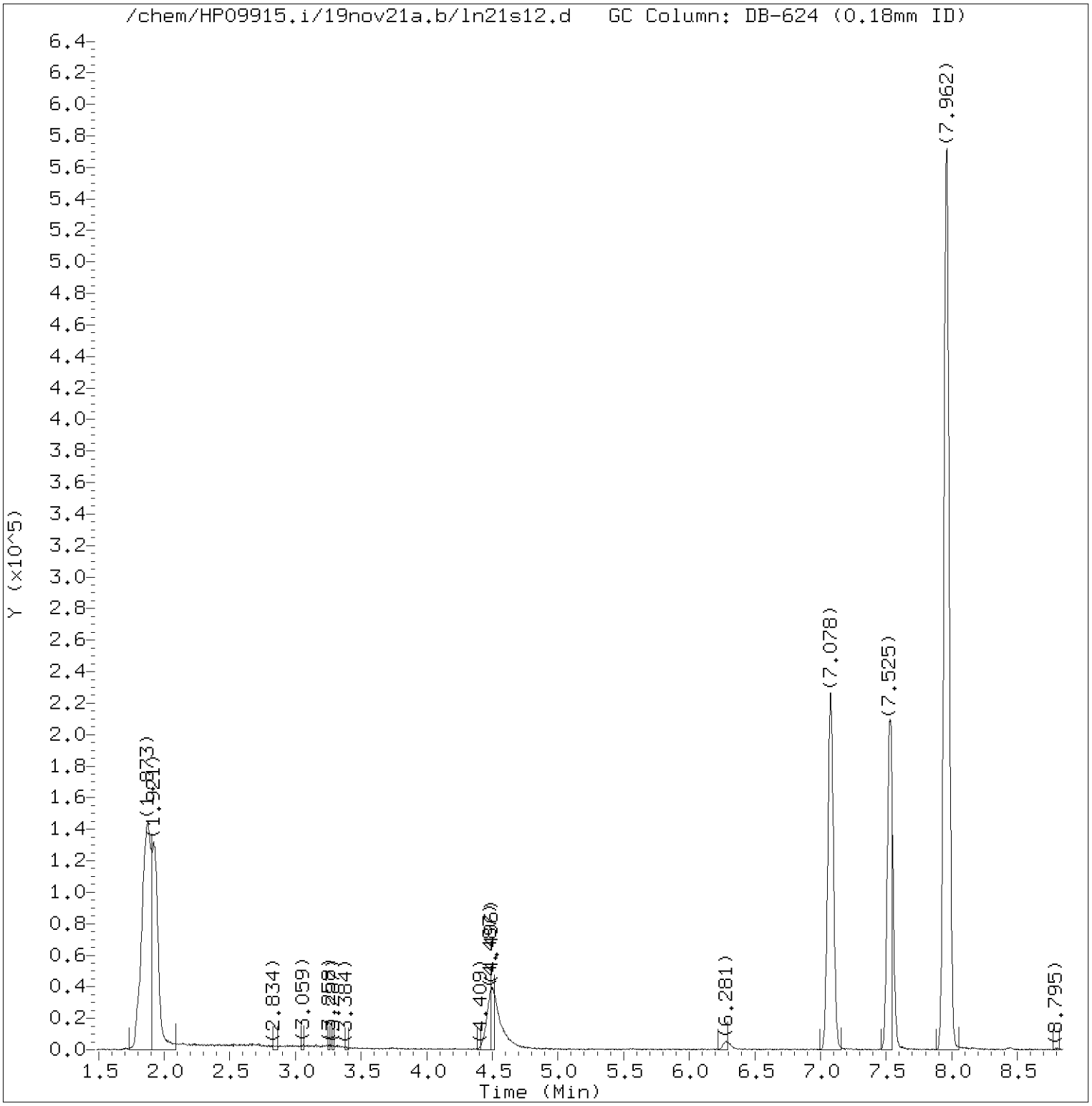
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 11/21/2019 at 22:39. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:44. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

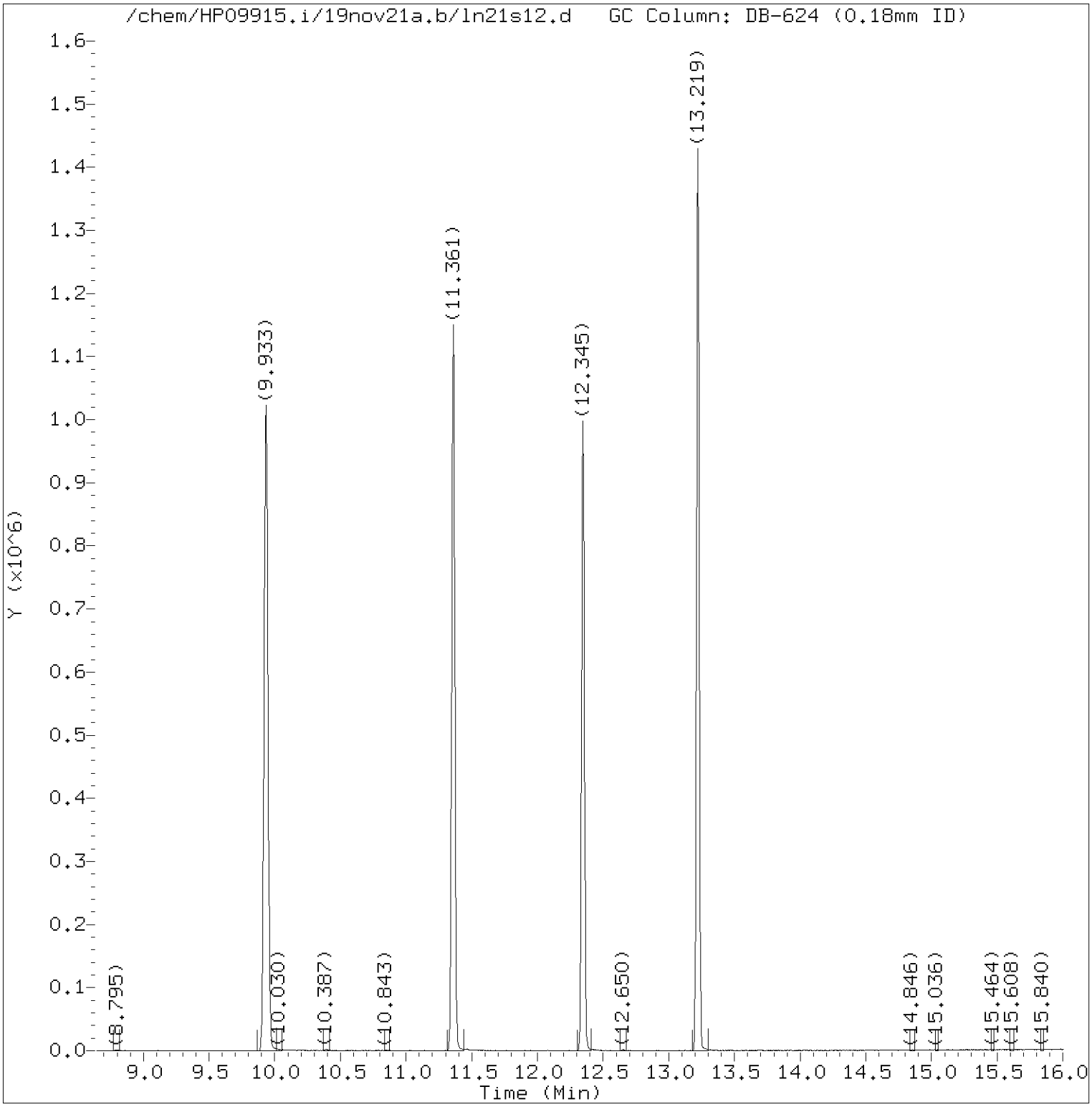
Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s12.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 14:39 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 14:56 Automation

Sample Name: C2008 Lab Sample ID: 1202321

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s12.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 14:39 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 14:56 Automation

Sample Name: C2008 Lab Sample ID: 1202321

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s12.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 14:39 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 14:56 Automation

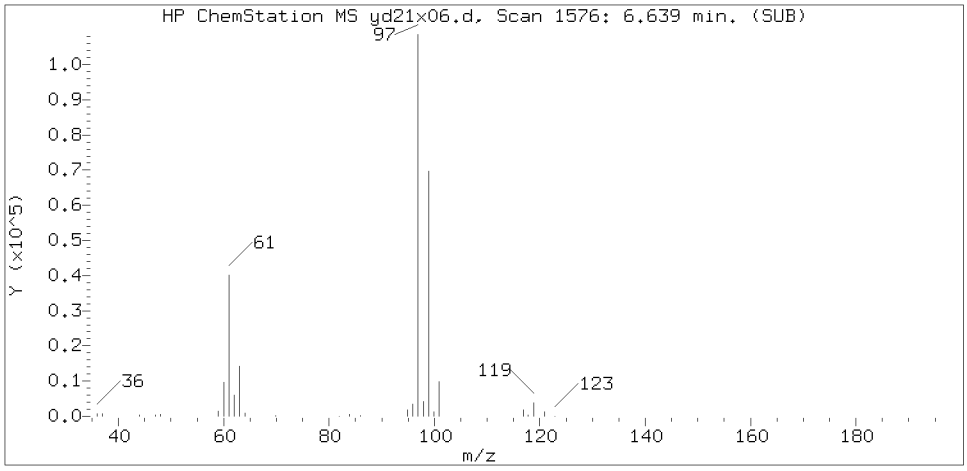
Sample Name: C2008 Lab Sample ID: 1202321

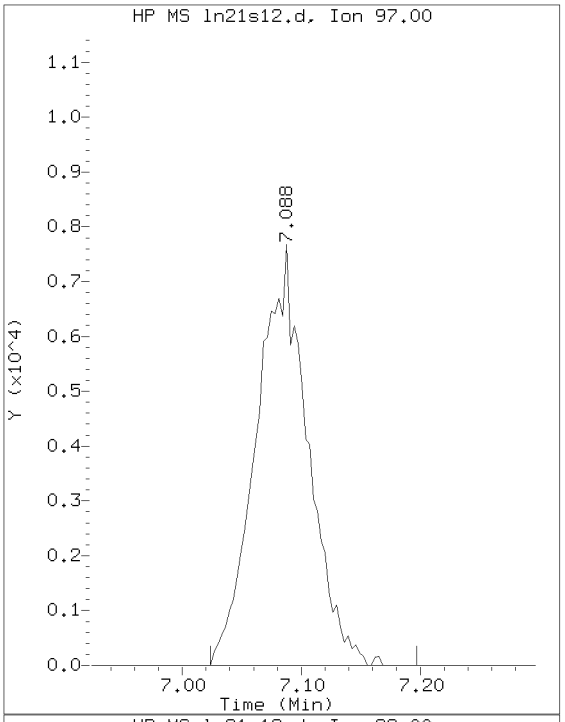
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.503	65	143852	250.000
52)$Dibromofluoromethane	(2)	7.075	113	195836	48.129
53) 1,1,1-Trichloroethane	(2)	7.088	97	22921	3.944
57)$1,2-Dichloroethane-d4	(2)	7.528	102	52423	50.553
66)*Fluorobenzene	(2)	7.962	96	832267	50.000
83)$Toluene-d8	(3)	9.933	98	853470	48.004
100)*Chlorobenzene-d5	(3)	11.361	117	679478	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	325486	48.348
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	360892	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

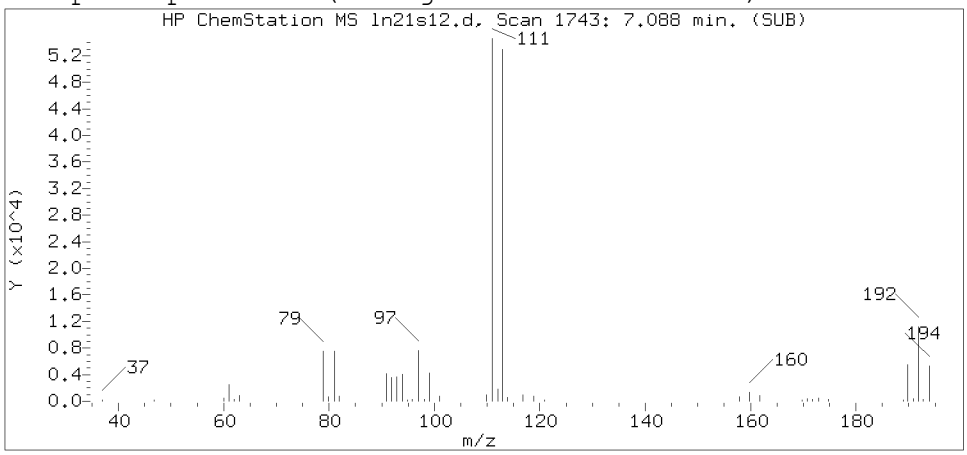
Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

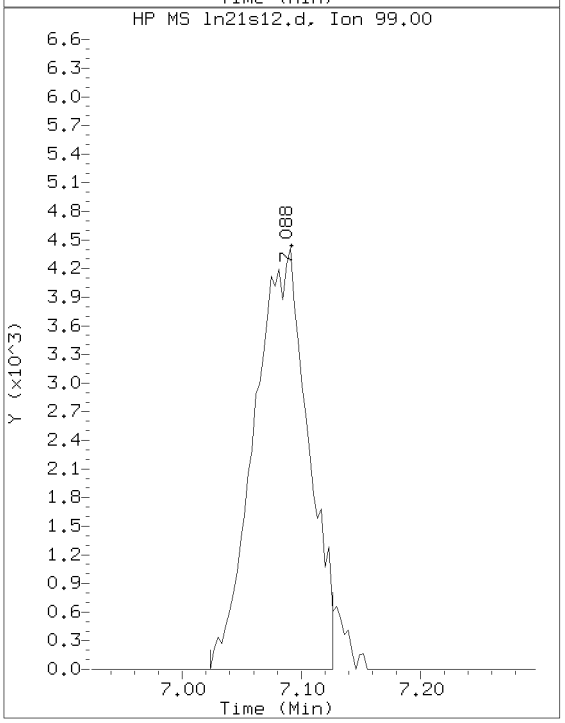
Reference Standard Spectrum for 1,1,1-Trichloroethane



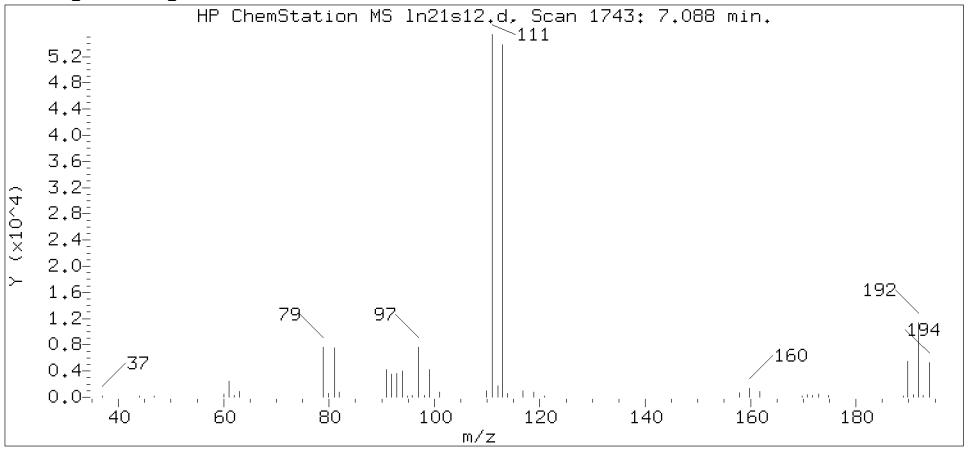


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov21a.b/ln21s12.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 14:39 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 14:56 Automation

Sample Name: C2008 Lab Sample ID: 1202321

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1743
Retention Time (minutes)	: 7.088
Relative Retention Time	: 0.00036
Quant Ion	: 97.00
Area (flag)	: 22921
On-Column Amount (ng)	: 3.9438

Digitally signed by Don V. Viray on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

C2009

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202322

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov21a.b/ln21s13.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	0.3	J
71-55-6	1,1,1-Trichloroethane	1	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	J
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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C2009 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202322

Data file: /chem/HP09915.i/19nov21a.b/ln21s13.d Injection date and time: **21-NOV-2019 15:01**
Data file Sample Info. Line: C2009;1202322;1;0;;JCW20;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 15:18 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.496	(-0.003)	937	65	146070	(-5)	250.00	
66) Fluorobenzene	7.956	(0.003)	2013	96	803691	(-5)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	668682	(-3)	50.00	
131) 1,4-Dichlorobenzene-d4	13.219	(0.003)	3650	152	359126	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072	(0.000)	113	192647	49.029	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	50571	50.500	101%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	831033	47.497	95%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.348	(-0.001)	95	317895	47.983	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)	6.850	(0.001)	83	1707	0.260	0.26		J	0.2	1
53) 1,1,1-Trichloroethane	(2)	7.078	(0.000)	97	7353	1.310	1.31			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.432	(-0.000)	95	3916	0.951	0.95		J	0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 11/21/2019 at 22:39. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov21a.b/ln21s13.d Injection date and time: **21-NOV-2019 15:01**
Data file Sample Info. Line: C2009;1202322;1;0;;JCW20;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 15:18 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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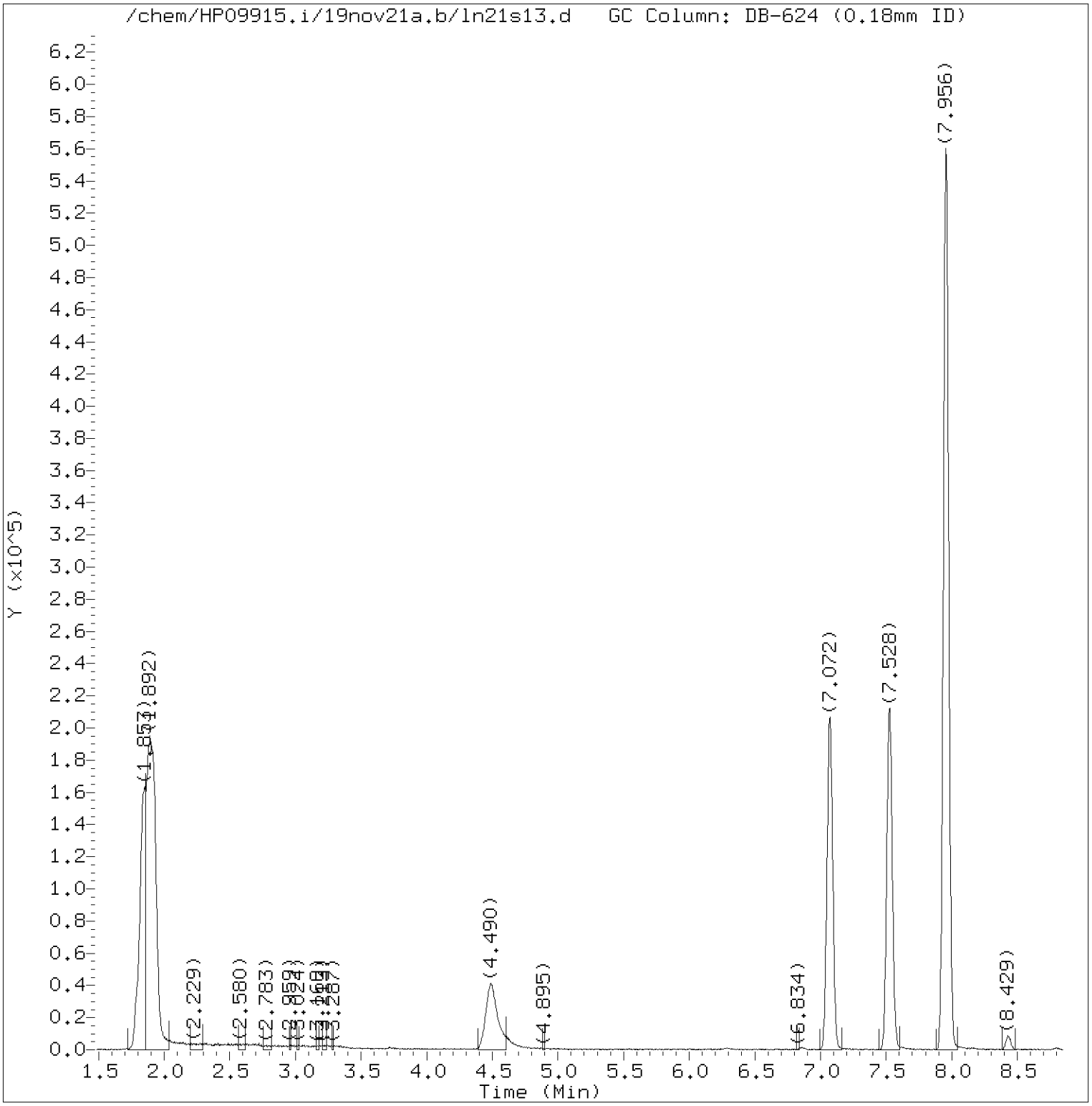
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 11/21/2019 at 22:39. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:44. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

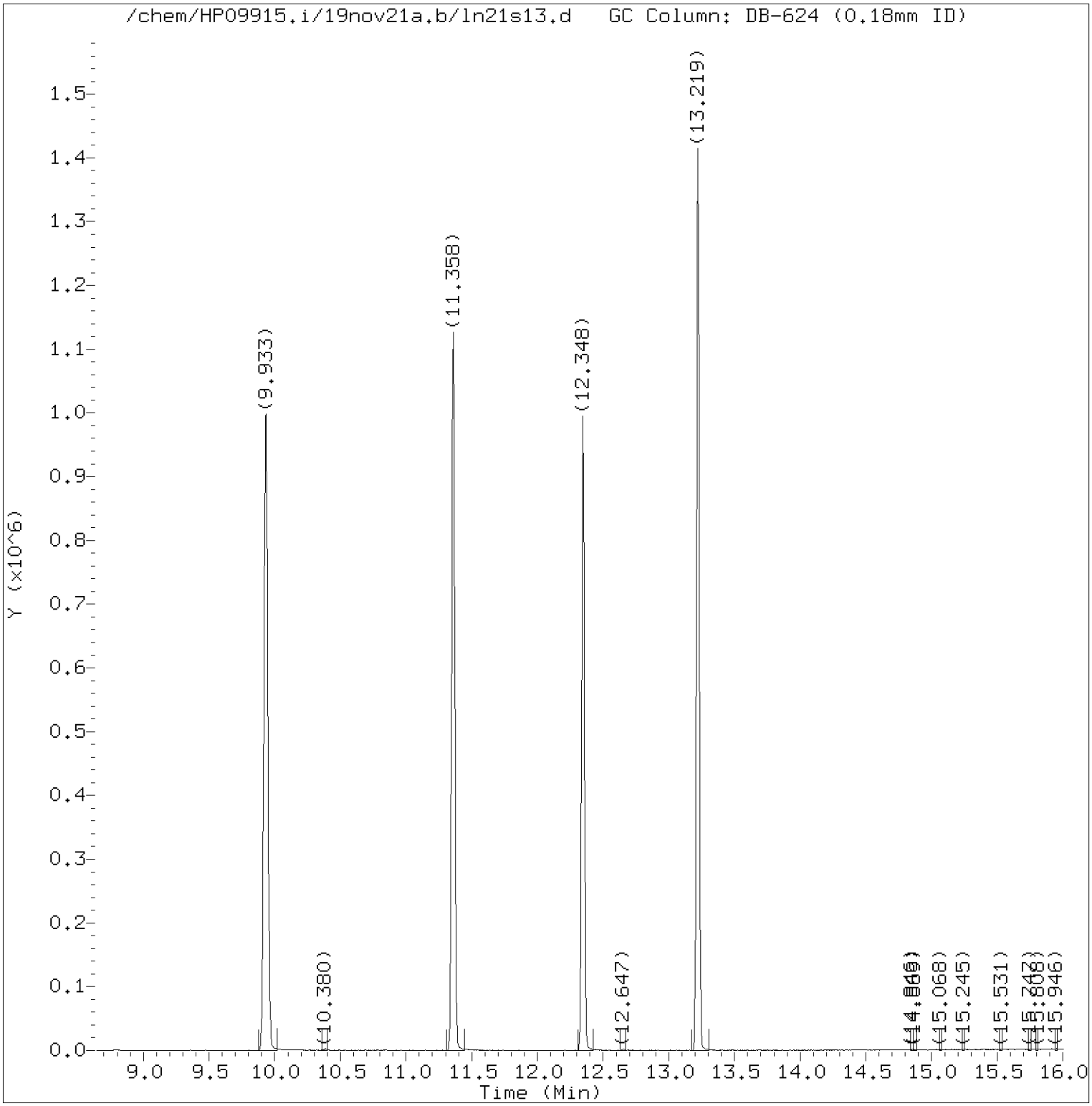
Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s13.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 15:01 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 15:18 Automation

Sample Name: C2009 Lab Sample ID: 1202322

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s13.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 15:01 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 15:18 Automation

Sample Name: C2009 Lab Sample ID: 1202322

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s13.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 15:01 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 15:18 Automation

Sample Name: C2009 Lab Sample ID: 1202322

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.496	65	146070	250.000
51) Chloroform	(2)	6.850	83	1707	0.260
52)$Dibromofluoromethane	(2)	7.072	113	192647	49.029
53) 1,1,1-Trichloroethane	(2)	7.078	97	7353	1.310
57)$1,2-Dichloroethane-d4	(2)	7.525	102	50571	50.500
66)*Fluorobenzene	(2)	7.956	96	803691	50.000
71) Trichloroethene	(2)	8.432	95	3916	0.951
83)$Toluene-d8	(3)	9.933	98	831033	47.497
100)*Chlorobenzene-d5	(3)	11.358	117	668682	50.000
114)$4-Bromofluorobenzene	(3)	12.348	95	317895	47.983
131)*1,4-Dichlorobenzene-d4	(4)	13.219	152	359126	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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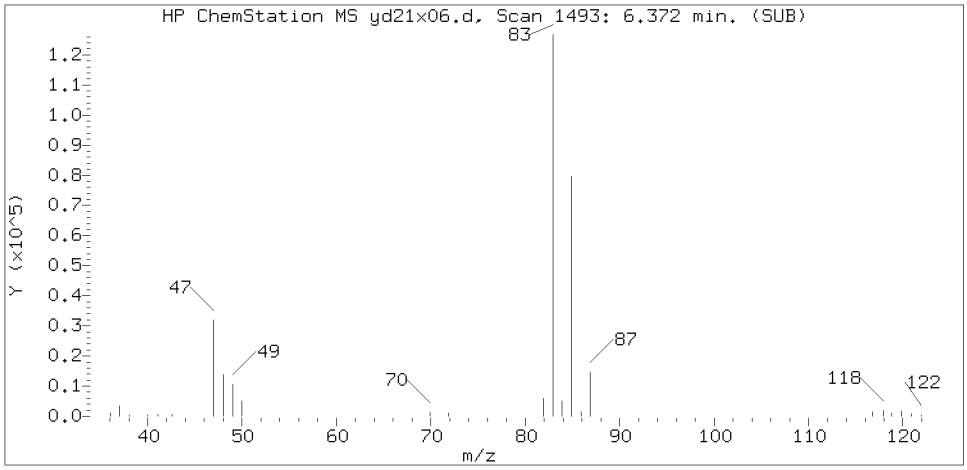
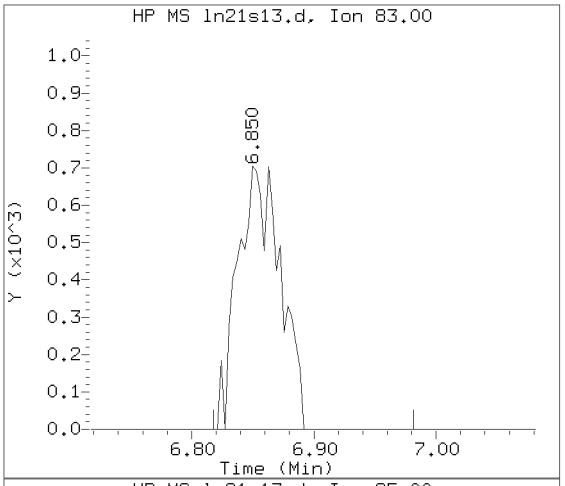
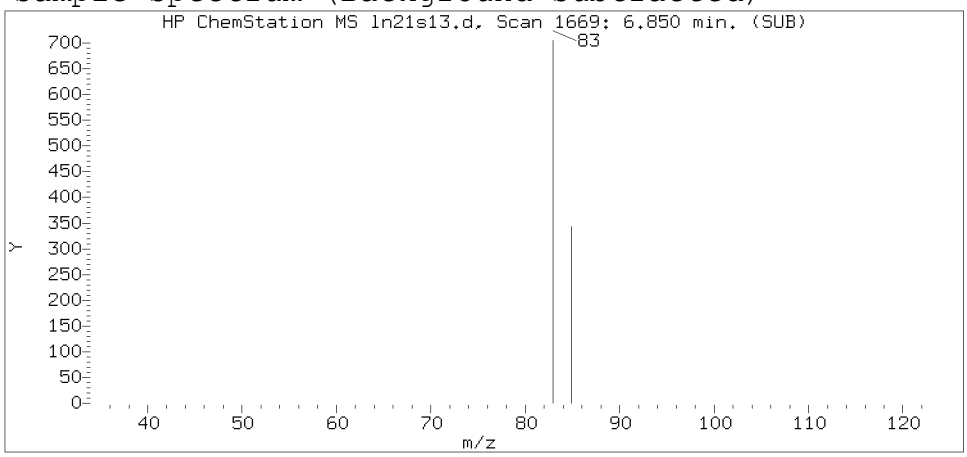
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

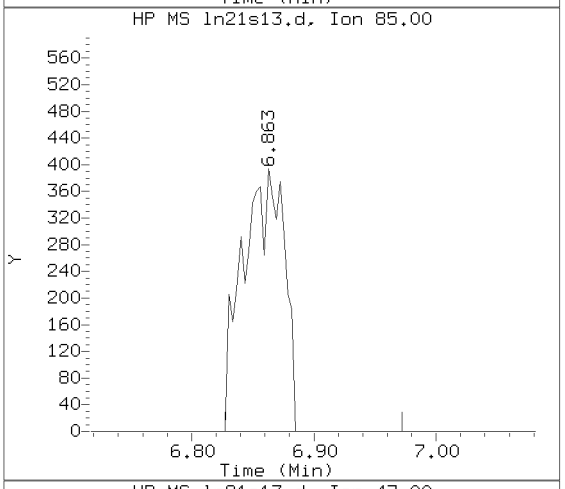
Reference Standard Spectrum for Chloroform



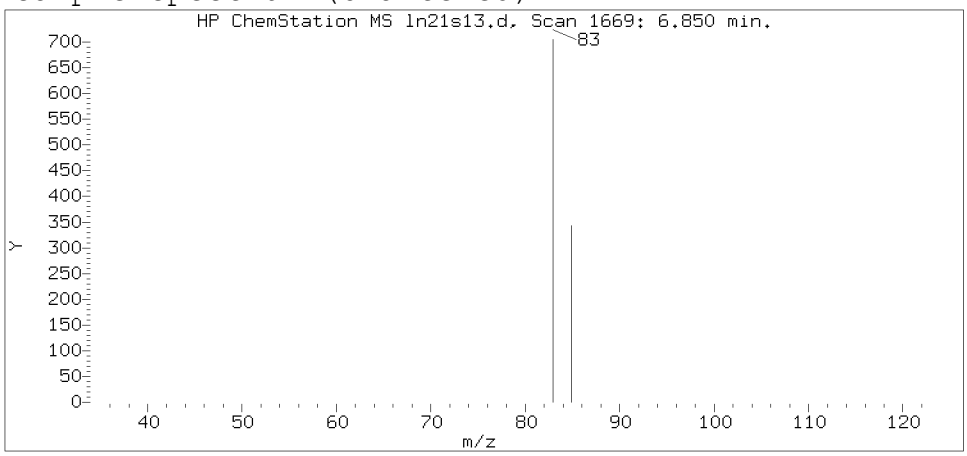


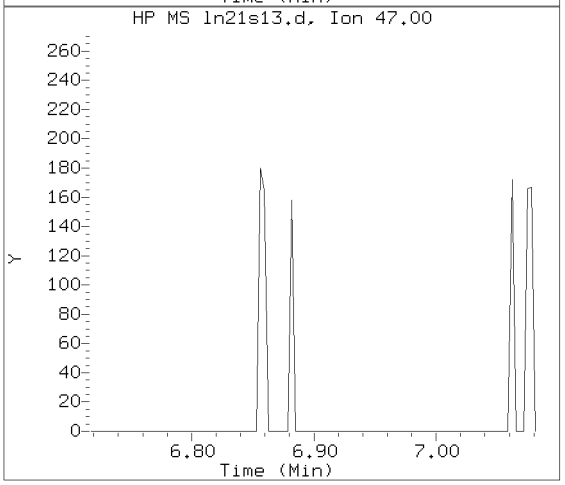
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov21a.b/ln21s13.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 15:01 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 15:18 Automation

Sample Name: C2009 Lab Sample ID: 1202322

Compound Number	: 51
Compound Name	: Chloroform
Scan Number	: 1669
Retention Time (minutes)	: 6.850
Relative Retention Time	: 0.00127
Quant Ion	: 83.00
Area (flag)	: 1707
On-Column Amount (ng)	: 0.2597

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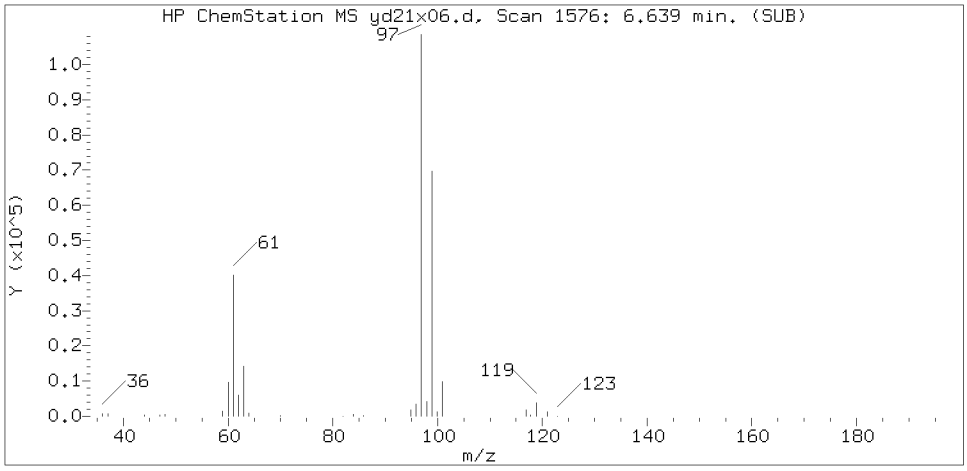
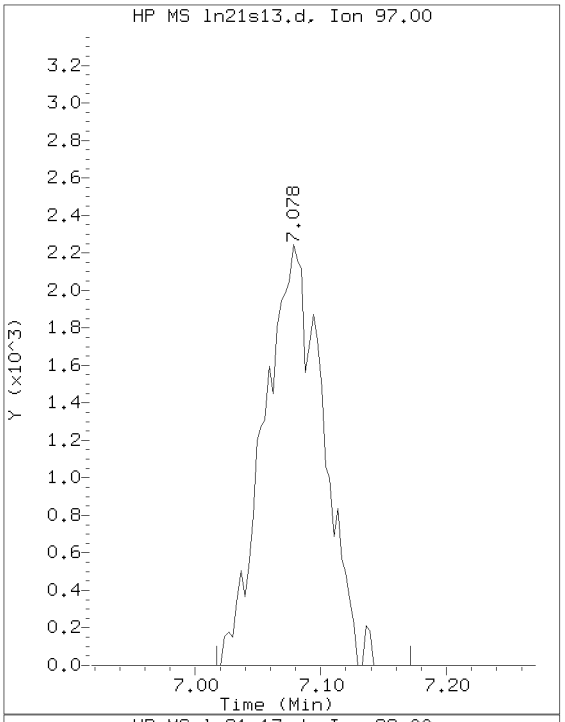
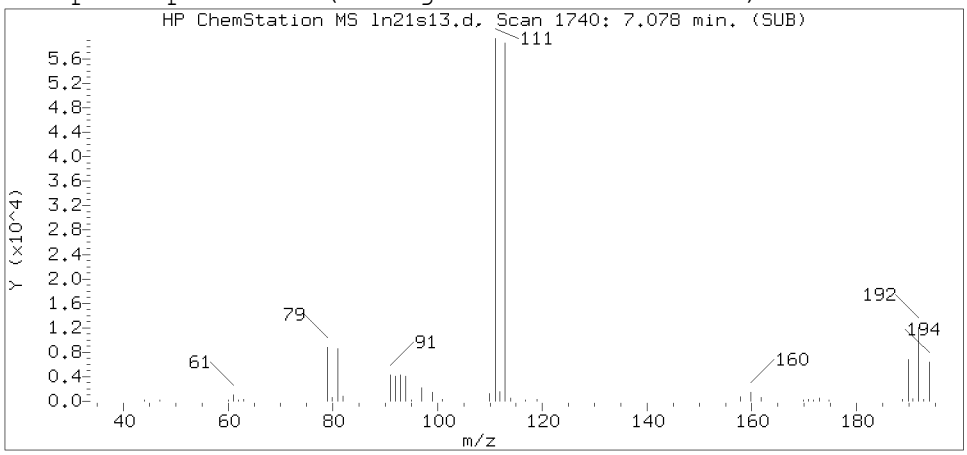
Target 3.5 esignature user ID: dvv10203

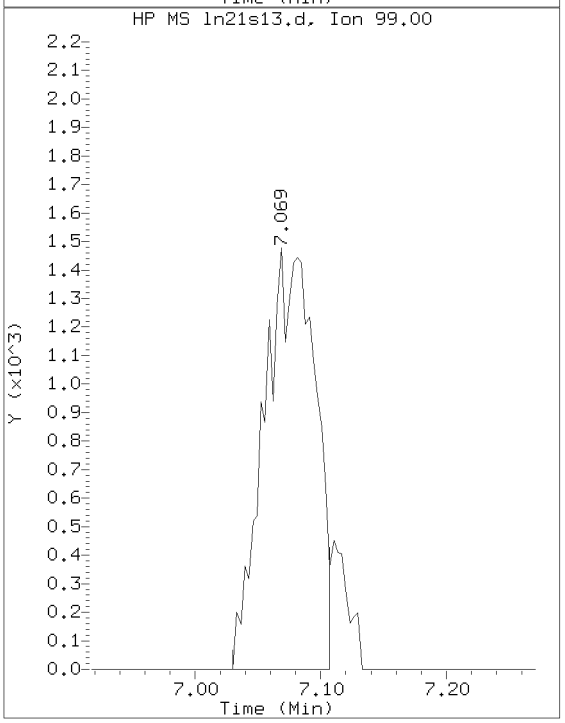
Reference Standard Spectrum for 1,1,1-Trichloroethane



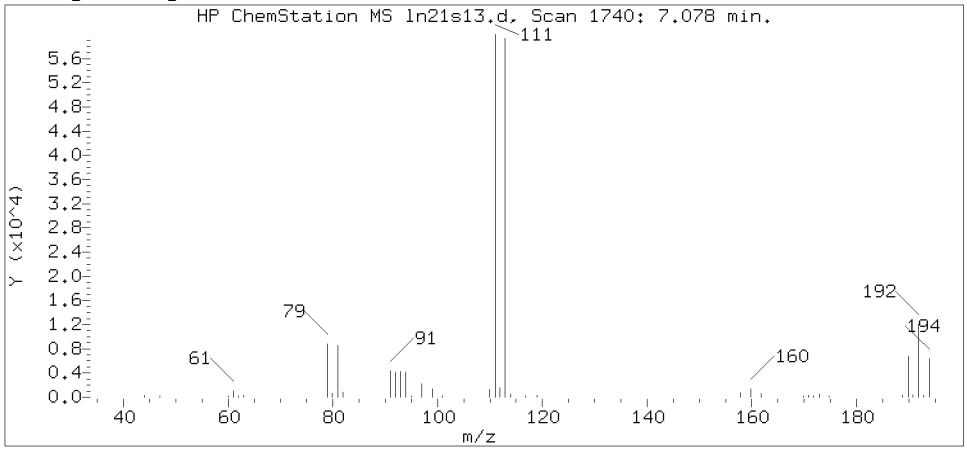


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov21a.b/ln21s13.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 15:01 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 15:18 Automation

Sample Name: C2009 Lab Sample ID: 1202322

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1740
Retention Time (minutes)	: 7.078
Relative Retention Time	: 0.00085
Quant Ion	: 97.00
Area (flag)	: 7353
On-Column Amount (ng)	: 1.3102

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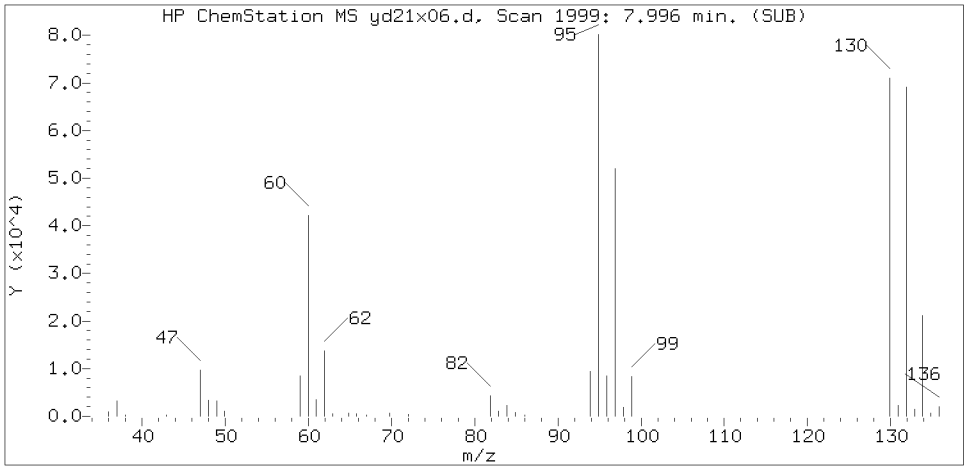
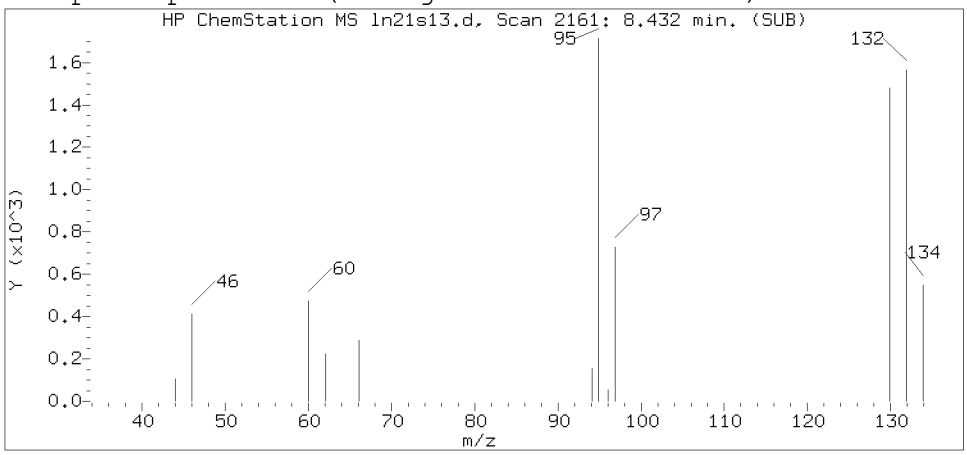
Target 3.5 esignature user ID: dvv10203

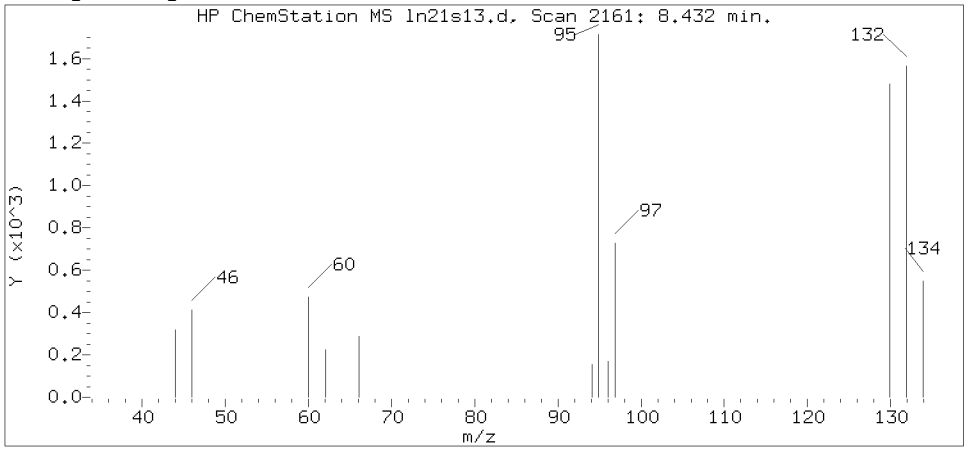
Reference Standard Spectrum for Trichloroethene

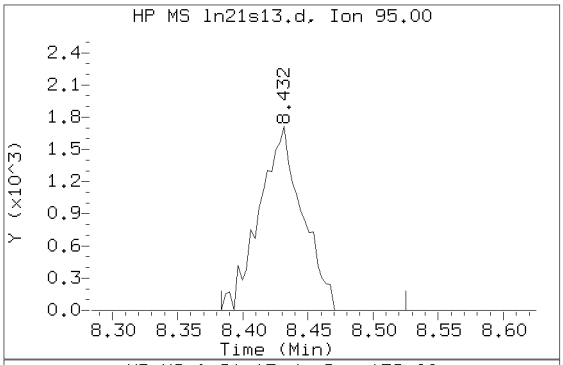


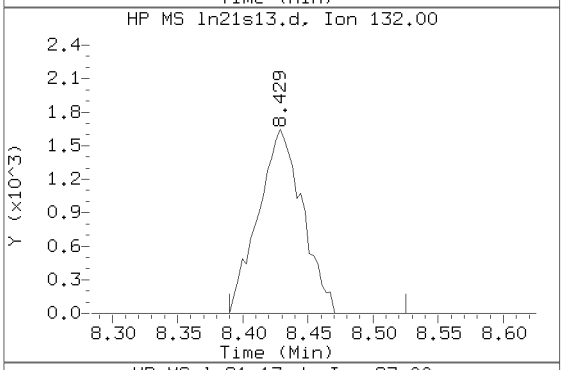
Sample Spectrum (Background Subtracted)

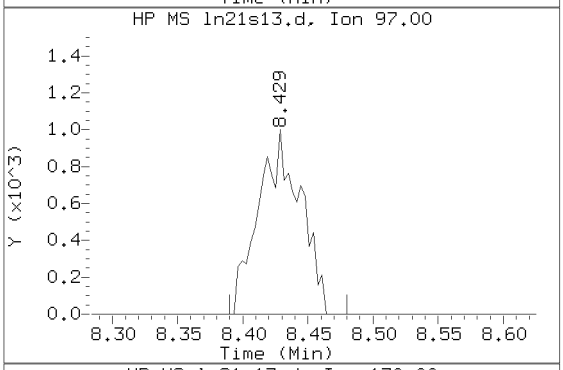


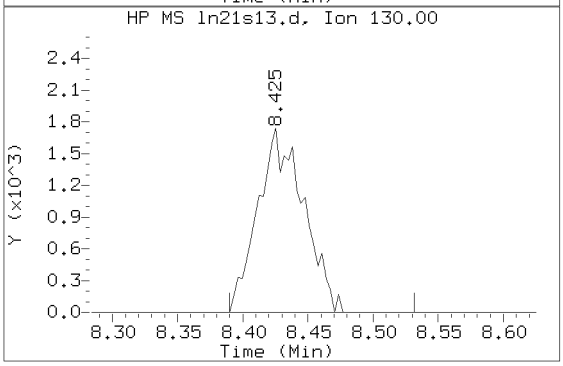
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov21a.b/ln21s13.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 15:01 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 15:18 Automation

Sample Name: C2009 Lab Sample ID: 1202322

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 2161
Retention Time (minutes): 8.432
Relative Retention Time :-0.00083
Quant Ion : 95.00
Area (flag) : 3916
On-Column Amount (ng) : 0.9514

Digitally signed by Don V. Viray on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
C2010

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202323

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov21a.b/ln21s14.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	0.3	J
71-55-6	1,1,1-Trichloroethane	0.3	J
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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C2010 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202323

Data file: /chem/HP09915.i/19nov21a.b/ln21s14.d Injection date and time: **21-NOV-2019 15:23**
Data file Sample Info. Line: C2010;1202323;1;0;;JCW20;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 22:36 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.496(-0.003)	937	65	139158 (-9)	250.00	
66) Fluorobenzene	7.956(0.003)	2013	96	792251 (-6)	50.00	
100) Chlorobenzene-d5	11.358(0.003)	3071	117	650705 (-6)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223(0.000)	3651	152	349954 (-6)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.069(0.000)	113	186446	48.136	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.529(0.000)	102	49665	50.311	101%		80 - 120
83) Toluene-d8	(3)	9.934(0.000)	98	815740	47.911	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345(0.000)	95	308374	47.832	96%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)	6.863(-0.000)	83	1848M	0.285	0.29		J	0.2	1
53) 1,1,1-Trichloroethane	(2)	7.085(0.000)	97	1765	0.319	0.32		J	0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)			Not Detected					0.2	1
75) 1,4-Dioxane	(1)			Not Detected					29	250
88) Toluene	(3)			Not Detected					0.2	1
93) Tetrachloroethene	(3)			Not Detected					0.2	1
104) Ethylbenzene	(3)			Not Detected					0.4	1
106) m+p-Xylene	(3)			Not Detected					1	5
107) o-Xylene	(3)			Not Detected					0.4	1
108) Xylene (Total)	(3)			Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
148) Naphthalene	(4)			Not Detected					1	5

M = Compound was manually integrated.

Digitally signed by Don V. Viray on 11/21/2019 at 22:39. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov21a.b/ln21s14.d Injection date and time: **21-NOV-2019 15:23**
Data file Sample Info. Line: C2010;1202323;1;0;;JCW20;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 22:36 dvv10203

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

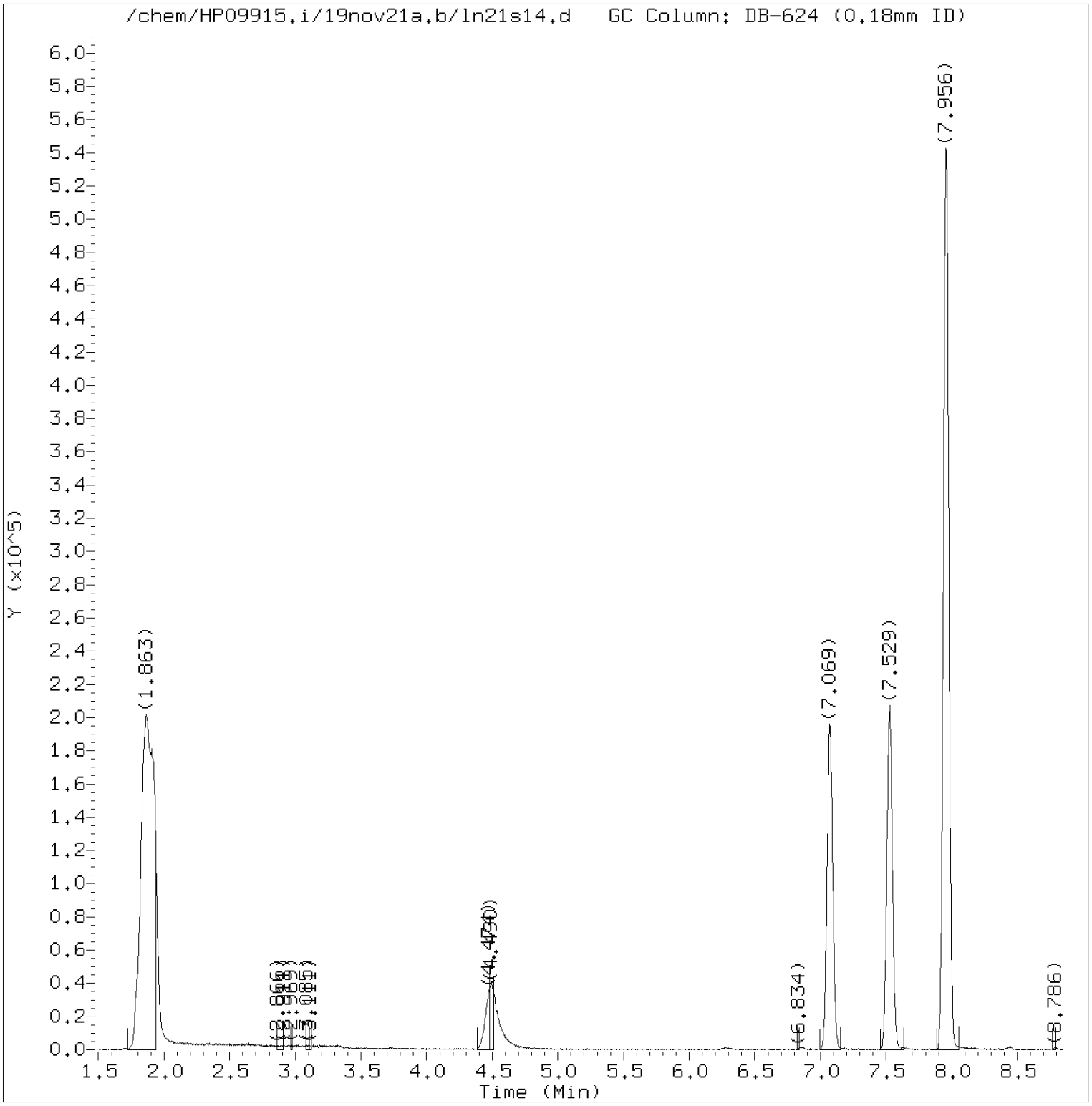
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 11/21/2019 at 22:39. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:44. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

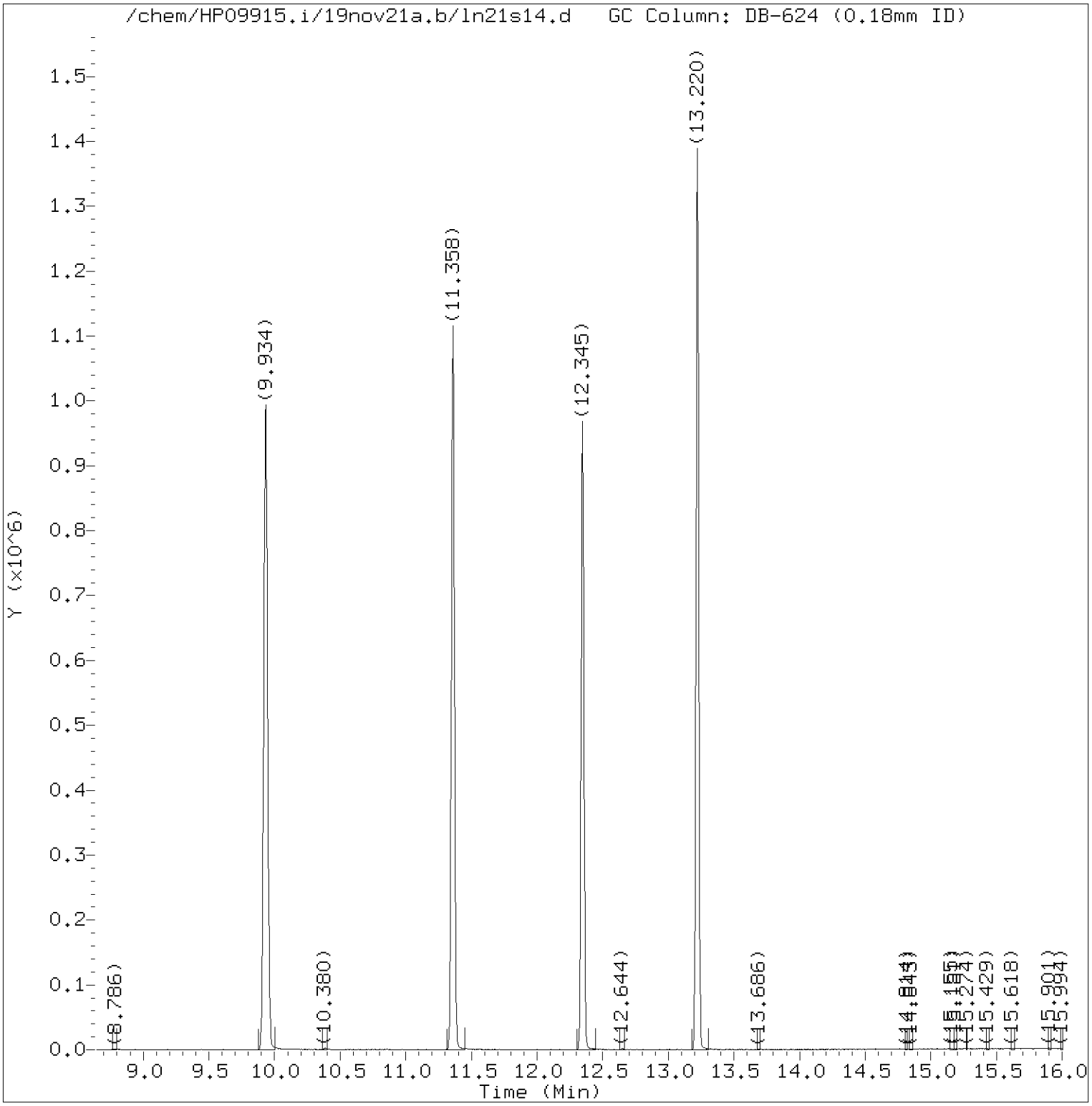
Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s14.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 15:23 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 22:36 dvv10203

Sample Name: C2010 Lab Sample ID: 1202323

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s14.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 15:23 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 22:36 dvv10203

Sample Name: C2010 Lab Sample ID: 1202323

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s14.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 15:23 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 22:36 dvv10203

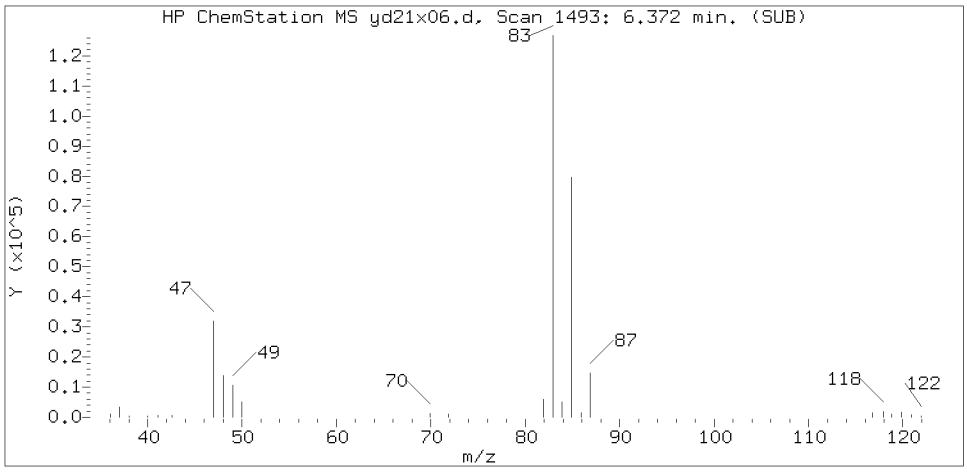
Sample Name: C2010 Lab Sample ID: 1202323

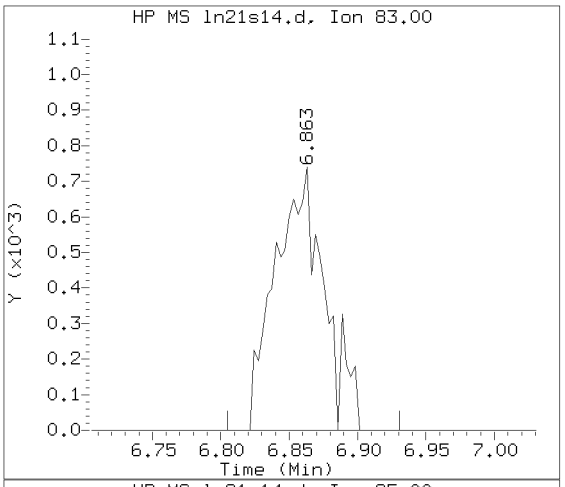
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.496	65	139158	250.000
51) Chloroform	(2)	6.863	83	1848M	0.285
52)$Dibromofluoromethane	(2)	7.069	113	186446	48.136
53) 1,1,1-Trichloroethane	(2)	7.085	97	1765	0.319
57)$1,2-Dichloroethane-d4	(2)	7.529	102	49665	50.311
66)*Fluorobenzene	(2)	7.956	96	792251	50.000
83)$Toluene-d8	(3)	9.934	98	815740	47.911
100)*Chlorobenzene-d5	(3)	11.358	117	650705	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	308374	47.832
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	349954	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

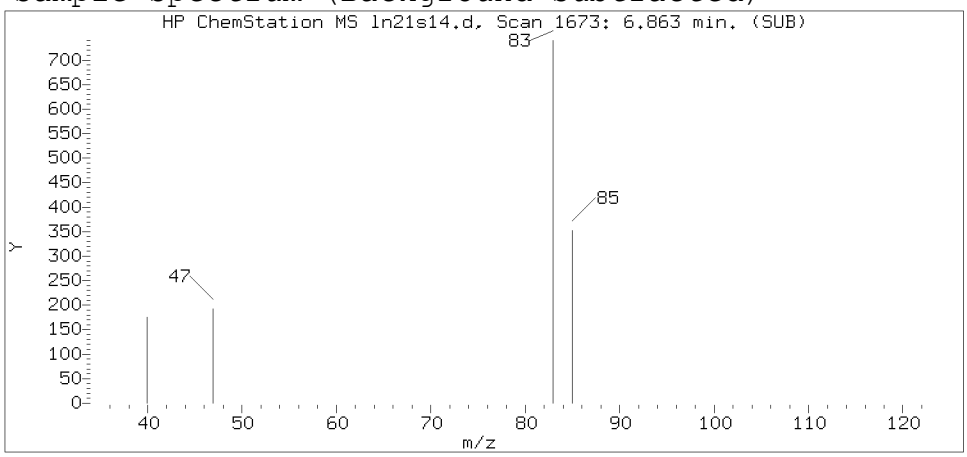
Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

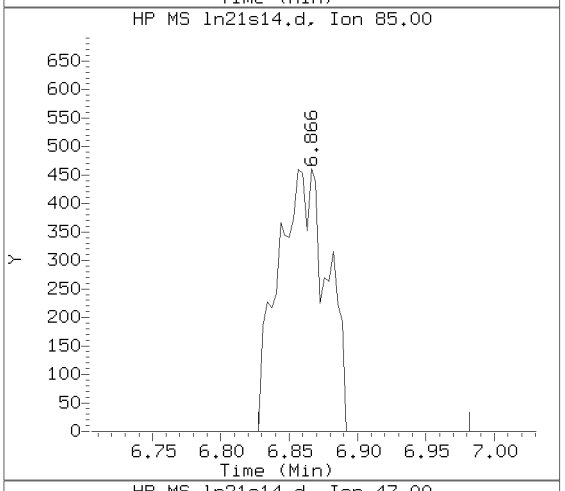
Reference Standard Spectrum for Chloroform



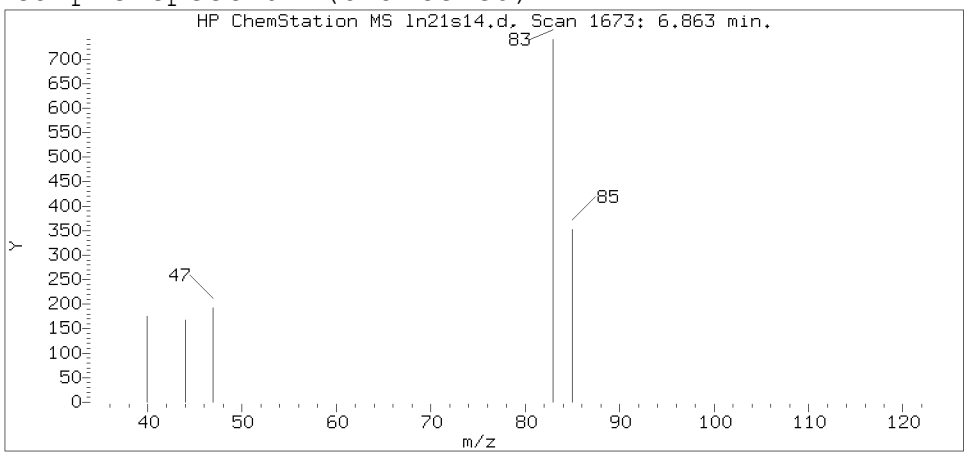


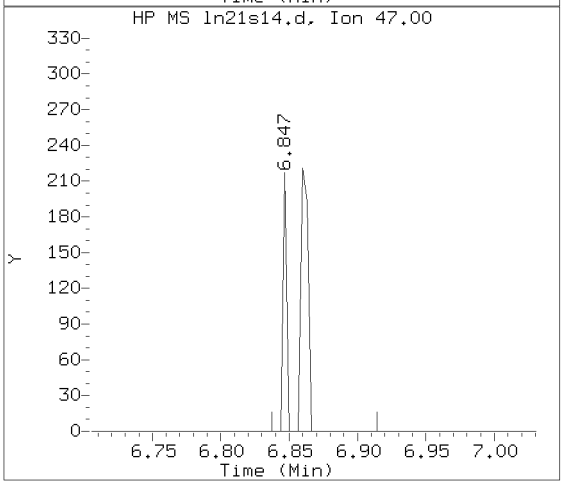
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov21a.b/ln21s14.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 15:23 Analyst ID: LCP00895

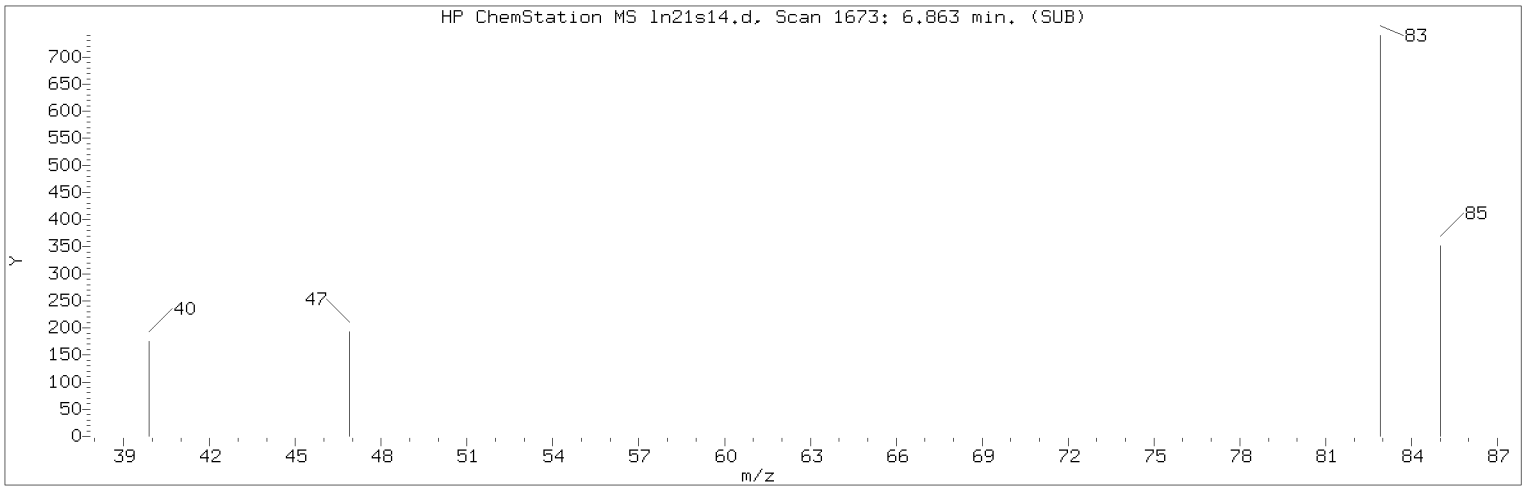
Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 22:36 dvv10203

Sample Name: C2010 Lab Sample ID: 1202323

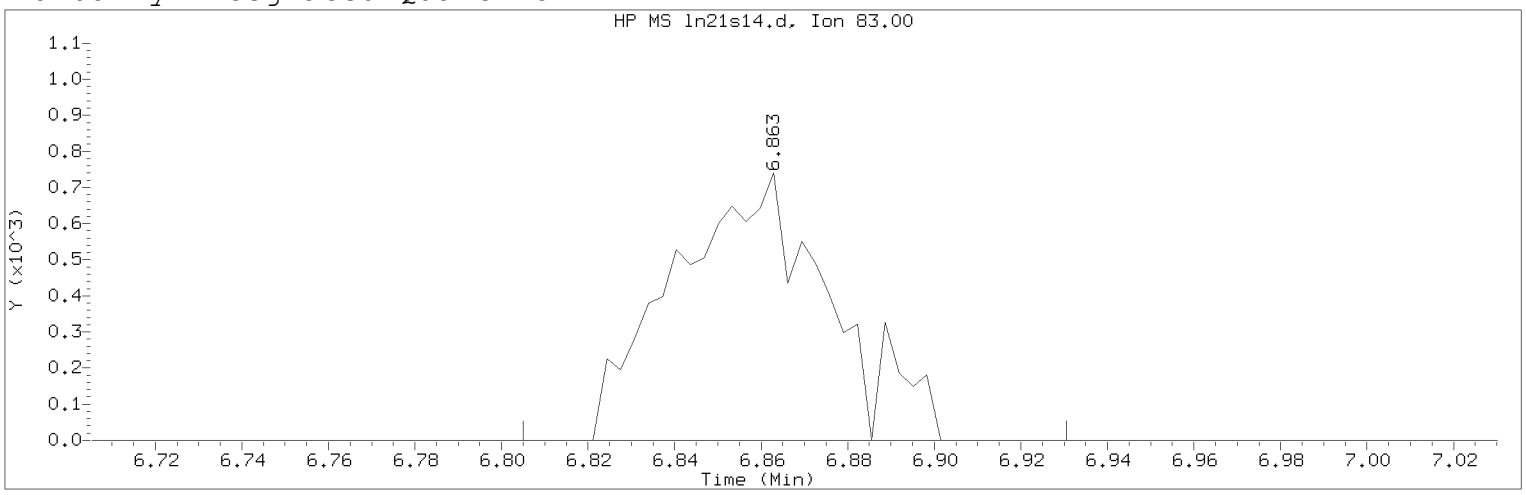
Compound Number : 51
Compound Name : Chloroform
Scan Number : 1673
Retention Time (minutes): 6.863
Relative Retention Time :-0.00035
Quant Ion : 83.00
Area (flag) : 1848M
On-Column Amount (ng) : 0.2852

Digitally signed by Don V. Viray on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov21a.b/ln21s14.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 15:23 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 22:36 dvv10203

Sample Name: C2010 Lab Sample ID: 1202323

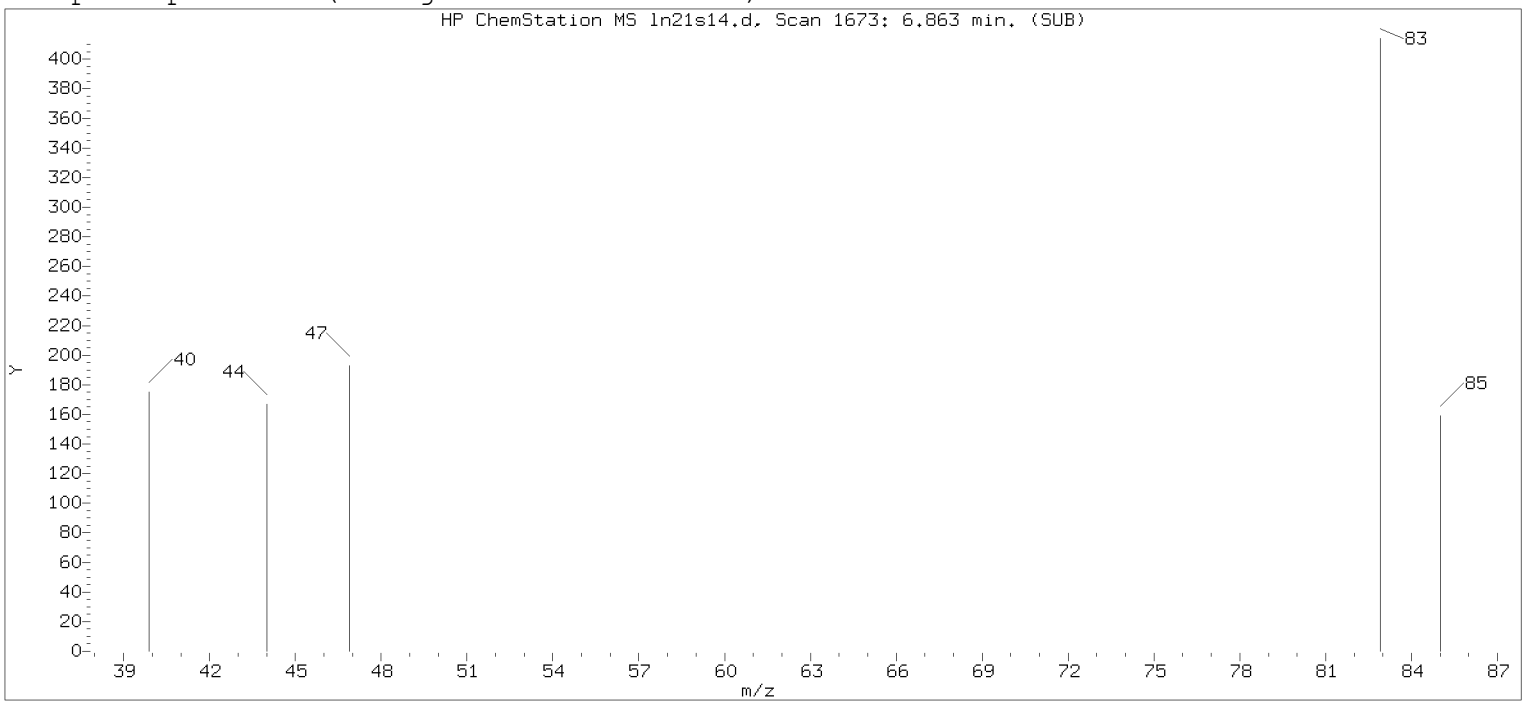
Compound Number : 51
Compound Name : Chloroform
Scan Number : 1673
Retention Time (minutes): 6.863
Quant Ion : 83.00
Area (flag) : 1848M
On-Column Amount (ng) : 0.2852
Integration start scan : 1654 Integration stop scan: 1693
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

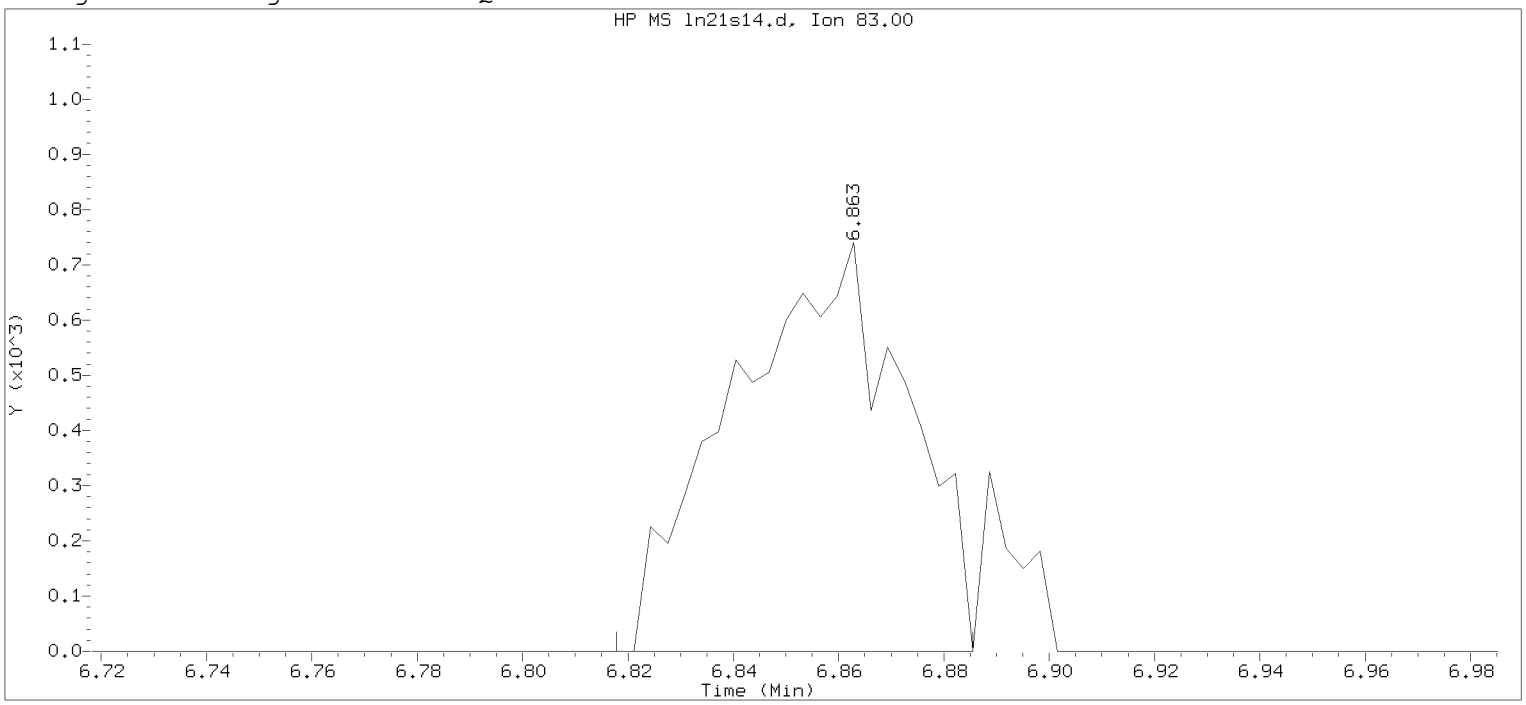
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:44.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov21a.b/ln21s14.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 15:23 Analyst ID: LCP00895

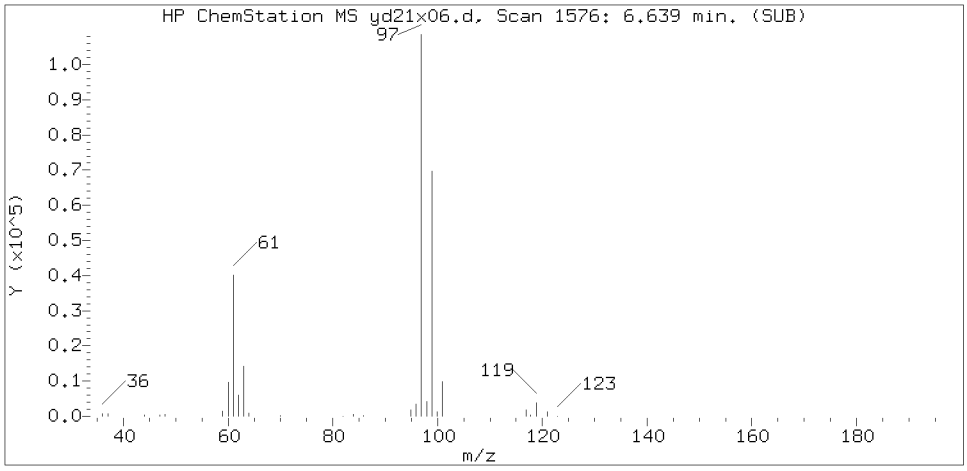
Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 15:40 Automation

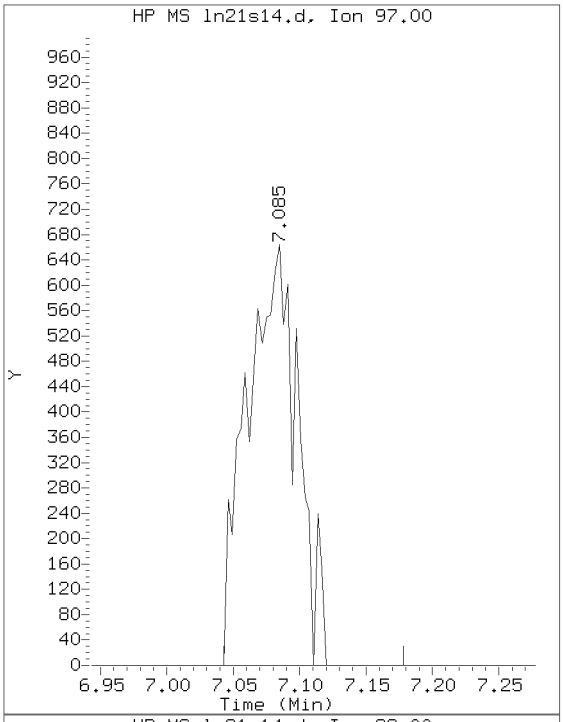
Sample Name: C2010 Lab Sample ID: 1202323

Compound Number : 51
Compound Name : Chloroform
Scan Number : 1673
Retention Time (minutes): 6.863
Quant Ion : 83.00
Area : 1685
On-column Amount (ng) : 0.2601
Integration start scan : 1658 Integration stop scan: 1679
Y at integration start : 0 Y at integration end: 0

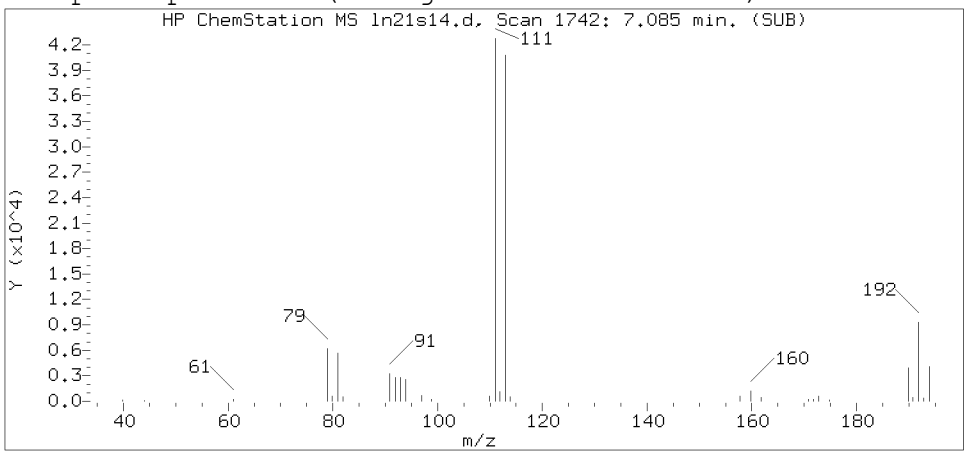
Digitally signed by Don V. Viray on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dv10267

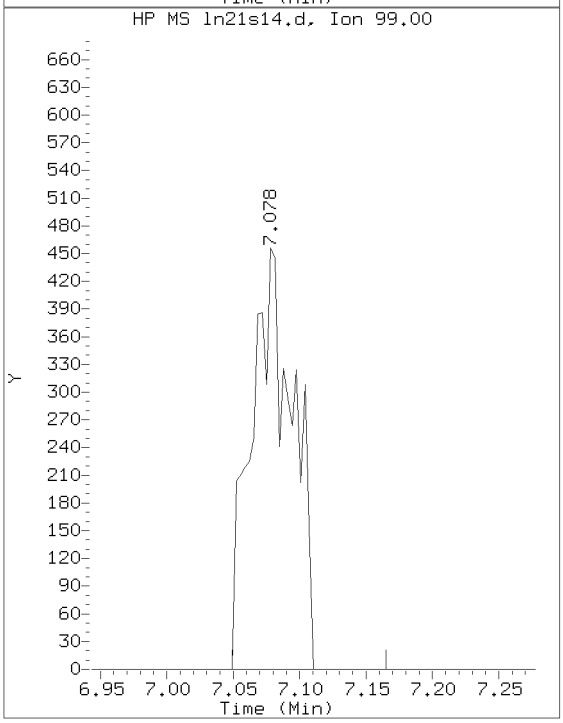
Reference Standard Spectrum for 1,1,1-Trichloroethane



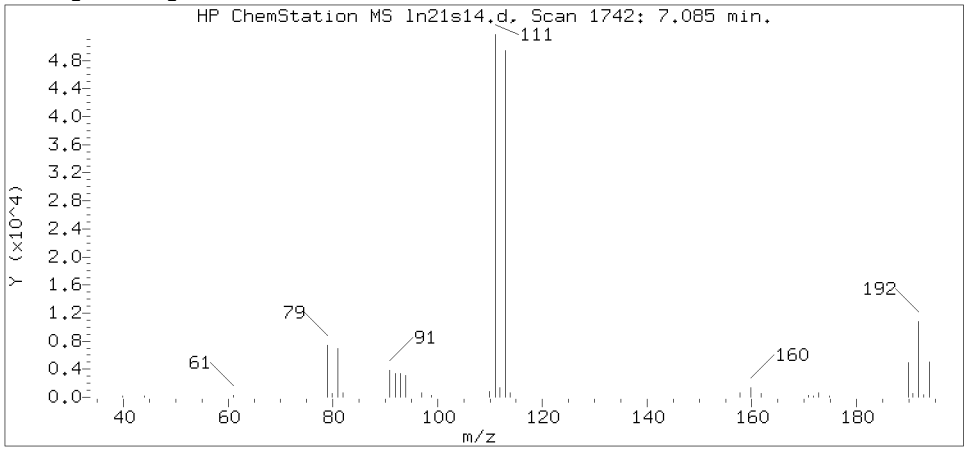


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov21a.b/ln21s14.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 15:23 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 22:36 dvv10203

Sample Name: C2010 Lab Sample ID: 1202323

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1742
Retention Time (minutes)	: 7.085
Relative Retention Time	: 0.00004
Quant Ion	: 97.00
Area (flag)	: 1765
On-Column Amount (ng)	: 0.3190

Digitally signed by Don V. Viray on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\19nov04i\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
KAS02648	LN04T01.D	50NGBFB	11/04/2019	12:52	L191821AA	
KAS02648	LN04T02.D	50NGBFB	11/04/2019	13:05	L191821AA	
KAS02648	LN04T03.D	50NGBFB	11/04/2019	13:27	L191821AA	
KAS02648	LN04T04.D	50NGBFB	11/04/2019	13:45	L191821AA	
KAS02648	LN04T05.D	50NGBFB	11/04/2019	14:07	L191821AA	
KAS02648	LN04T06.D	50NGBFB	11/04/2019	14:18	L191821AA	
KAS02648	LN04X01.D	CLNBLK	11/04/2019	14:29		
KAS02648	LN04I01.D	VSTD300	11/04/2019	14:51		
KAS02648	LN04I02.D	VSTD100	11/04/2019	15:13		
KAS02648	LN04I03.D	VSTD050	11/04/2019	15:35		
KAS02648	LN04I04.D	VSTD020	11/04/2019	15:57		
KAS02648	LN04I05.D	VSTD010	11/04/2019	16:19		
KAS02648	LN04I06.D	VSTD004	11/04/2019	16:41		
KAS02648	LN04I07.D	VSTD001	11/04/2019	17:03		
KAS02648	LN04V01.D	ICVLLG	11/04/2019	17:25		
KAS02648	LN04V02.D	ICVLLG	11/04/2019	18:42		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\19NOV20A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
KKM02078	LN20T01.D	50NGBFB	11/20/2019	08:00	L191821AA	
KKM02078	LN20X01.D	VBLKL80	11/20/2019	08:29	L193241AA	
KKM02078	LN20C01.D	VSTD050	11/20/2019	08:51	L193241AA	
KKM02078	LN20L01.D	LCSL80	11/20/2019	09:13	L193241AA	
KKM02078	LN20B01.D	VBLKL80	11/20/2019	09:35	L193241AA	
KKM02078	LN20S01.D	1202295	11/20/2019	09:57	L193241AA	
KKM02078	LN20S02.D	1202314	11/20/2019	10:19	L193241AA	
KKM02078	LN20S03.D	1202284	11/20/2019	10:41	L193241AA	
KKM02078	LN20S04.D	1202285	11/20/2019	11:03	L193241AA	
KKM02078	LN20S05.D	1202296	11/20/2019	11:25	L193241AA	
KKM02078	LN20S06.D	1202297MS	11/20/2019	11:52	L193241AA	
KKM02078	LN20S07.D	1202298MSD	11/20/2019	12:14	L193241AA	
KKM02078	LN20S08.D	1202299	11/20/2019	12:36	L193241AA	
KKM02078	LN20S09.D	1202300	11/20/2019	12:58	L193241AA	
KKM02078	LN20S10.D	1202301	11/20/2019	13:20	L193241AA	
KKM02078	LN20S11.D	1202302	11/20/2019	13:42	L193241AA	
KKM02078	LN20S12.D	1202303	11/20/2019	14:04	L193241AA	
KKM02078	LN20S13.D	1202304	11/20/2019	14:26	L193241AA	
KKM02078	LN20S14.D	1202305	11/20/2019	14:48	L193241AA	
KKM02078	LN20S15.D	1202306	11/20/2019	15:10	L193241AA	
KKM02078	LN20S16.D	1202307	11/20/2019	15:32	L193241AA	
KKM02078	LN20S17.D	1202315	11/20/2019	15:54	L193241AA	
KKM02078	LN20S18.D	1202316	11/20/2019	16:16	L193241AA	
KKM02078	LN20S19.D	1202317	11/20/2019	16:38	L193241AA	
KKM02078	LN20S20.D	1202318	11/20/2019	17:00	L193241AA	
KKM02078	LN20S21.D	1202319	11/20/2019	17:22	L193241AA	
KKM02078	LN20S22.D	1202320	11/20/2019	17:44	L193241AA	

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\19NOV21a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
lcp00895	LN21T01.D	50NGBFB	11/21/2019	07:27	L191821AA	
lcp00895	LN21T02.D	50NGBFB	11/21/2019	07:42	L191821AA	
LCP00895	LN21X01.D	CBLK	11/21/2019	07:56	L193251AA	
LCP00895	LN21C01.D	VSTD050	11/21/2019	08:18	L193251AA	
LCP00895	LN21S01.D	LCSL83	11/21/2019	08:40	L193251AA	
LCP00895	LN21r01.D	RVLL83	11/21/2019	09:02	L193251AA	
LCP00895	LN21B01.D	VBLKL83	11/21/2019	09:24	L193251AA	
LCP00895	LN21L01.D	LCSL83	11/21/2019	09:50	L193251AA	
LCP00895	LN21S02.D	1202441	11/21/2019	10:59	L193251AA	
LCP00895	LN21S03.D	1202286	11/21/2019	11:21	L193251AA	
LCP00895	LN21S04.D	1202287MS	11/21/2019	11:43	L193251AA	
LCP00895	LN21S05.D	1202288MSD	11/21/2019	12:04	L193251AA	
LCP00895	LN21S06.D	1202289	11/21/2019	12:26	L193251AA	
LCP00895	LN21S07.D	1202290	11/21/2019	12:48	L193251AA	
LCP00895	LN21S08.D	1202291	11/21/2019	13:10	L193251AA	
LCP00895	LN21S09.D	1202292	11/21/2019	13:32	L193251AA	
LCP00895	LN21S10.D	1202293	11/21/2019	13:54	L193251AA	
LCP00895	LN21S11.D	1202294	11/21/2019	14:16	L193251AA	
LCP00895	LN21S12.D	1202321	11/21/2019	14:39	L193251AA	
LCP00895	LN21S13.D	1202322	11/21/2019	15:01	L193251AA	
LCP00895	LN21S14.D	1202323	11/21/2019	15:23	L193251AA	
LCP00895	LN21S15.D	1202325	11/21/2019	15:45	L193251AA	
LCP00895	LN21S16.D	1202326	11/21/2019	16:07	L193251AA	
LCP00895	LN21S17.D	1202327	11/21/2019	16:29	L193251AA	
LCP00895	LN21S18.D	1202434	11/21/2019	16:51	L193251AA	
LCP00895	LN21S19.D	1202437	11/21/2019	17:13	L193251AA	
LCP00895	LN21S20.D	1202438	11/21/2019	17:35	L193251AA	
LCP00895	LN21S21.D	1202439	11/21/2019	17:57	L193251AA	
LCP00895	LN21S22.D	1202440	11/21/2019	18:19	L193251AA	

Data File: /chem/HP09915.i/19nov04i.b/ln04t06.d

Date : 04-NOV-2019 14:18

Client ID: AUG02-19

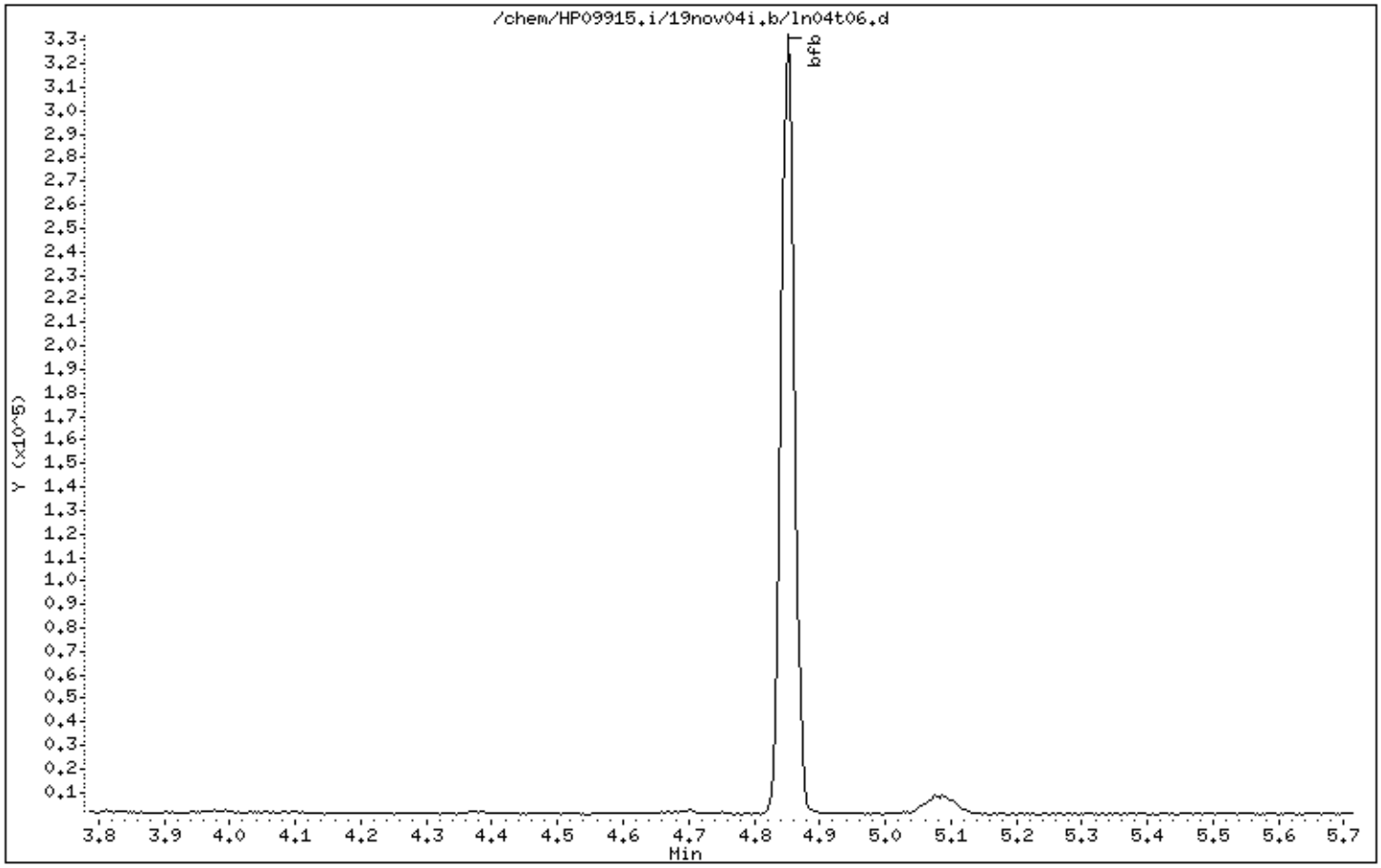
Instrument: HP09915.i

Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem/HP09915.i/19nov04i.b/ln04t06.d

Date : 04-NOV-2019 14:18

Client ID: AUG02-19

Instrument: HP09915.i

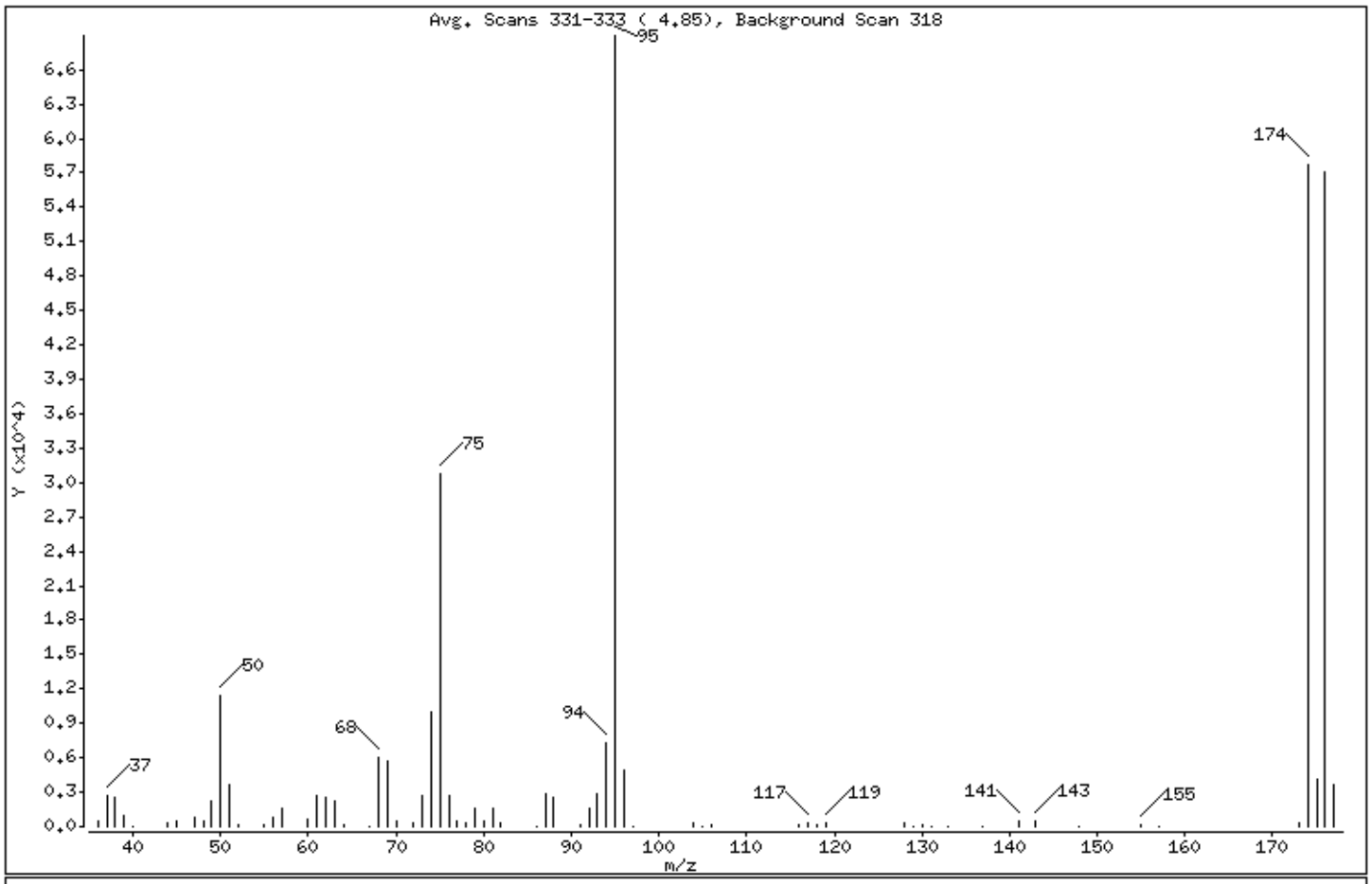
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.48
75	30.00 - 60.00% of mass 95	44.65
96	5.00 - 9.00% of mass 95	7.22
173	Less than 2.00% of mass 174	0.51 (0.61)
174	50.00 - 100.00% of mass 95	83.73
175	5.00 - 9.00% of mass 174	5.92 (7.07)
176	95.00 - 101.00% of mass 174	82.66 (98.72)
177	5.00 - 9.00% of mass 176	5.37 (6.49)

Date : 04-NOV-2019 14:18

Client ID: AUG02-19 Instrument: HP09915.i

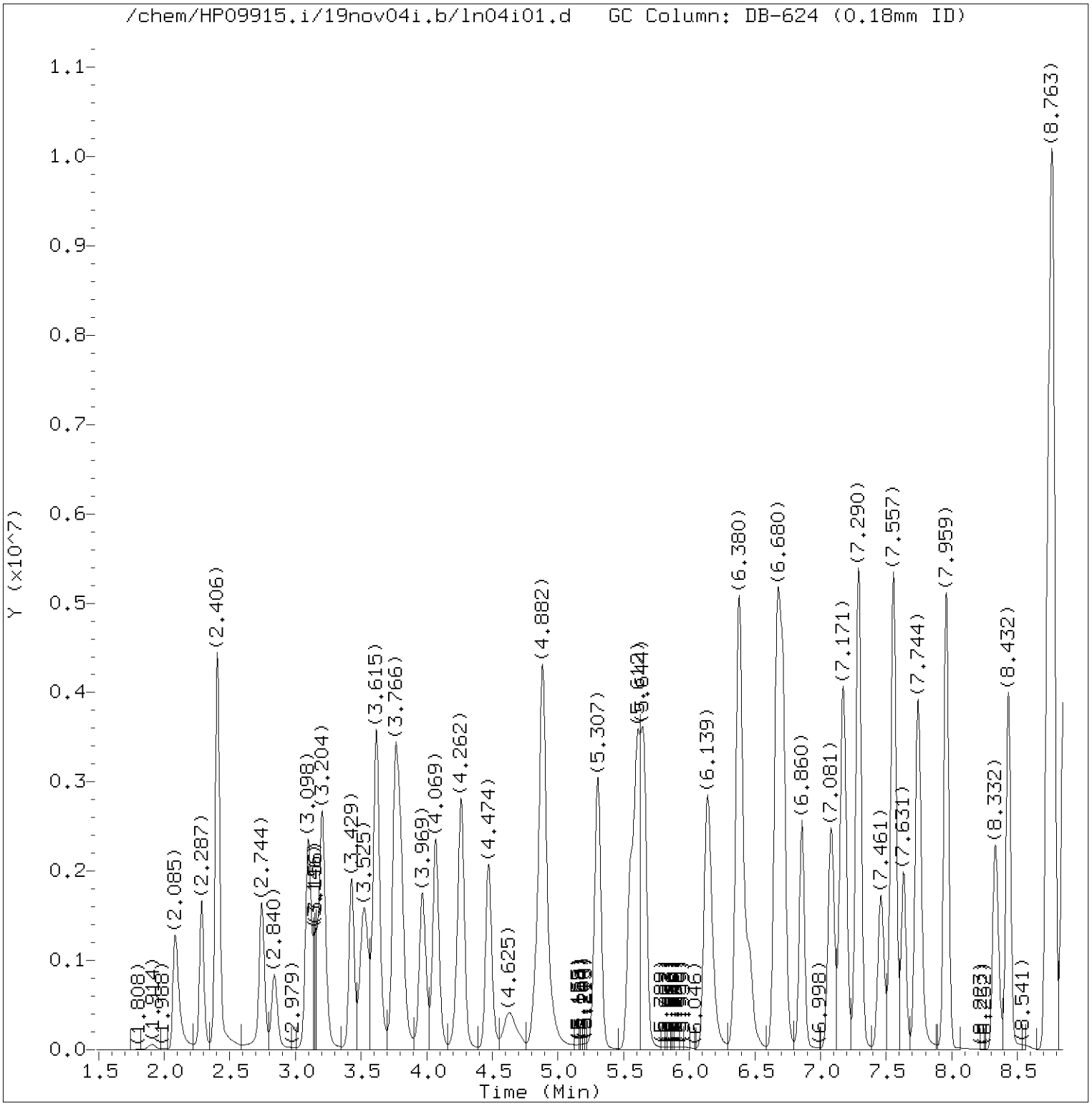
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: ln04t06.d
Spectrum: Avg. Scans 331-333 (4.85), Background Scan 318
Location of Maximum: 95.00
Number of points: 69

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	529	62.00	2498	86.00	55	129.00	53
37.00	2736	63.00	2218	87.00	2840	130.00	112
38.00	2557	64.00	150	88.00	2593	131.00	53
39.00	971	67.00	71	91.00	144	133.00	52
40.00	22	68.00	6076	92.00	1588	137.00	53
44.00	270	69.00	5647	93.00	2845	141.00	538
45.00	457	70.00	476	94.00	7275	143.00	484
47.00	784	72.00	322	95.00	68968	148.00	77
48.00	424	73.00	2656	96.00	4977	155.00	162
49.00	2292	74.00	10024	97.00	62	157.00	63
50.00	11364	75.00	30792	104.00	284	173.00	350
51.00	3586	76.00	2712	105.00	50	174.00	57744
52.00	134	77.00	405	106.00	233	175.00	4082
55.00	217	78.00	267	116.00	189	176.00	57008
56.00	871	79.00	1601	117.00	348	177.00	3701
57.00	1629	80.00	440	118.00	231		
60.00	555	81.00	1543	119.00	348		
61.00	2700	82.00	307	128.00	239		



Total Ion Chromatogram (TIC)

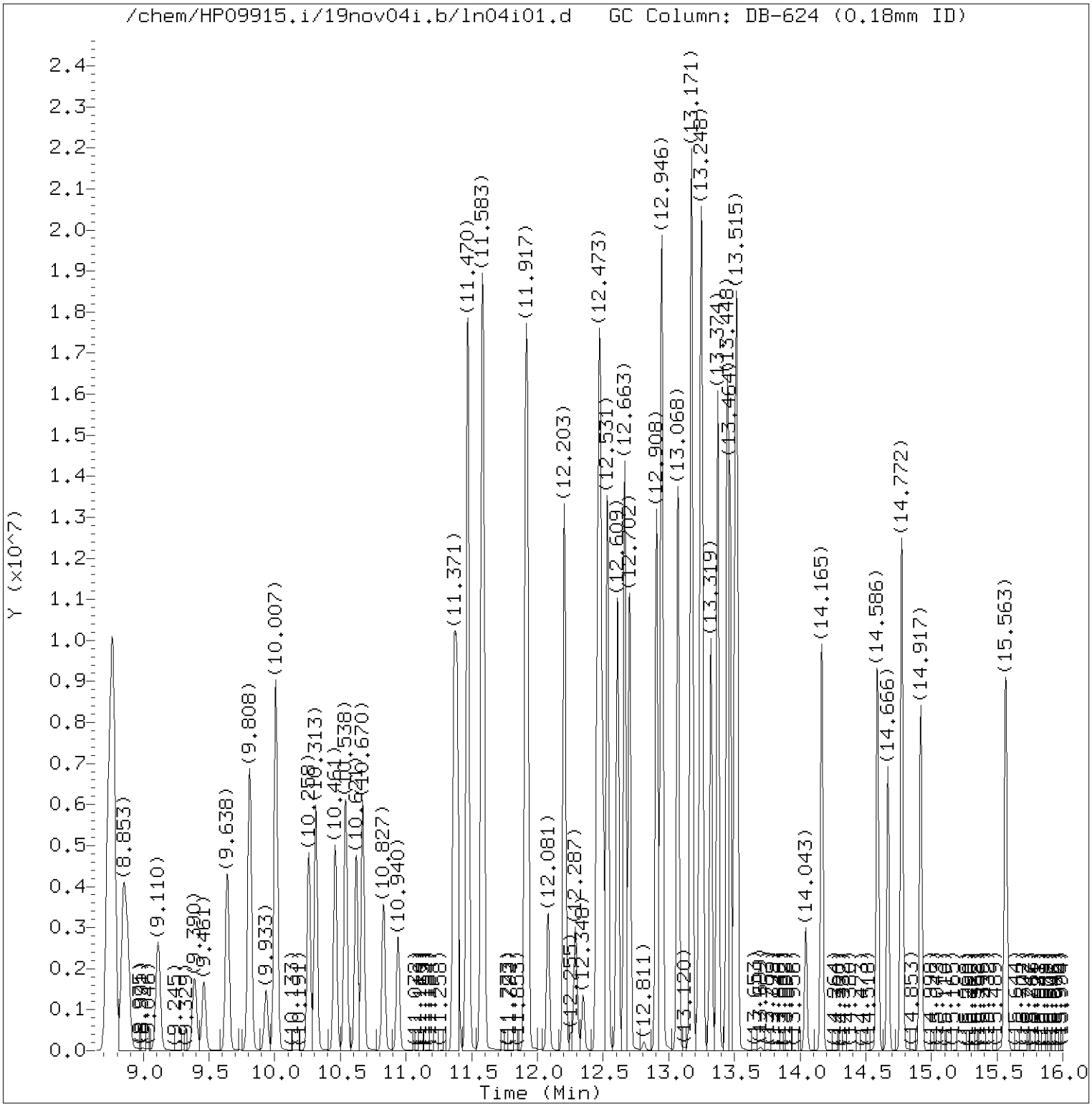
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.085	85	2719746M	347.943
4) Chloromethane	(2)	2.287	50	2403581	319.051
5) 1,3-Butadiene	(2)	2.406	39	1785787M	285.486
6) Vinyl Chloride	(2)	2.406	62	2412855	320.904
8) Bromomethane	(2)	2.744	94	1638575	304.015
9) Chloroethane	(2)	2.837	64	1253478	303.356
12) Trichlorofluoromethane	(2)	3.152	101	2661050	328.734
11) n-Pentane	(2)	3.204	43	2816823	294.455
14) Ethyl ether	(2)	3.429	59	1721693	329.146
15) Freon 123a	(2)	3.525	67	1991616	305.852
16) Acrolein	(1)	3.615	56	5765354	3020.583
17) 1,1-Dichloroethene	(2)	3.760	96	1489890	313.570
17) 1,1-Dichloroethene	(2)	3.757	63	721205	302.767
19) Freon 113	(2)	3.792	101	1732433	319.583
18) Acetone	(1)	3.802	58	531845	621.534
22) Methyl Iodide	(2)	3.966	142	3047145	309.483
21) 2-Propanol	(1)	3.995	45	936919	1523.065
23) Carbon Disulfide	(2)	4.069	76	5676465	317.027
27) Methyl Acetate	(2)	4.239	43	1941315	317.230
25) Allyl Chloride	(2)	4.265	41	2748698	322.482
28) Methylene Chloride	(2)	4.474	84	1745840	308.716
29)*t-Butyl alcohol-d10	(1)	4.503	65	254406M	250.000
30) t-Butyl alcohol	(1)	4.638	59	1641037	1532.140
31) Acrylonitrile	(2)	4.827	53	1039800	315.820
32) trans-1,2-Dichloroethene	(2)	4.885	96	1713357	311.714
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	5505439	305.143
34) n-Hexane	(2)	5.307	57	2863189M	334.811
36) 1,1-Dichloroethane	(2)	5.548	63	3007196	313.618
38) di-Isopropyl ether	(2)	5.609	45	5739955	310.377
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	2776921	322.788
40) Ethyl t-butyl ether	(2)	6.139	59	5425034	302.275
43) 1,2-Dichloroethene (Total)	(2)		96	3646040	624.977
44) 2-Butanone	(2)	6.364	43	2642793	625.317
42) cis-1,2-Dichloroethene	(2)	6.380	96	1932683	313.263
45) 2,2-Dichloropropane	(2)	6.397	77	2377411	318.945
47) Propionitrile	(1)	6.458	54	2126389	1593.336
48) Methacrylonitrile	(2)	6.670	67	2858148	804.768
49) Bromochloromethane	(2)	6.708	128	1075154	328.655

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.718	71	758236	628.991
51) Chloroform	(2)	6.860	83	2916299	317.988
52)$Dibromofluoromethane	(2)	7.075	113	276322	50.424
52)$Dibromofluoromethane	(2)	7.075	111	279197	49.969
53) 1,1,1-Trichloroethane	(2)	7.081	97	2560601	327.130
54) Cyclohexane	(2)	7.171	56	3429211	327.611
54) Cyclohexane	(2)	7.171	84	2984908	328.282
54) Cyclohexane	(2)	7.171	69	1068201	329.937
56) Carbon Tetrachloride	(2)	7.287	117	2252864	339.350
55) 1,1-Dichloropropene	(2)	7.294	75	2434619	321.125
58) Isobutyl Alcohol	(1)	7.461	41	1382486	3835.573
57)$1,2-Dichloroethane-d4	(2)	7.528	102	68480	49.033
57)$1,2-Dichloroethane-d4	(2)	7.532	65	307306	49.375
57)$1,2-Dichloroethane-d4	(2)	7.528	104	44002	49.326
60) Benzene	(2)	7.557	78	7094466	311.169
61) 1,2-Dichloroethane	(2)	7.634	62	2222342	303.049
61) 1,2-Dichloroethane	(2)	7.634	98	228988	315.535
65) t-Amyl methyl ether	(2)	7.744	73	5421278	300.945
67) n-Heptane	(2)	7.959	43	2592531MA	324.518
66)*Fluorobenzene	(2)	7.959	96	1120873	50.000
69) n-Butanol	(1)	8.332	56	2465385M	7947.068
71) Trichloroethene	(2)	8.432	95	1841720	320.821
72) Methylcyclohexane	(2)	8.734	83	3568410	335.054
72) Methylcyclohexane	(2)	8.734	98	1632993	338.844
73) 1,2-Dichloropropane	(2)	8.769	63	1825943	315.397
76) Methyl Methacrylate	(2)	8.850	69	1904896A	340.256
75) 1,4-Dioxane	(1)	8.856	88	338379M	3968.421
74) Dibromomethane	(2)	8.879	93	1210939	323.274
78) Bromodichloromethane	(2)	9.113	83	2314651	344.351
79) 2-Nitropropane	(2)	9.390	41	1438925	706.755
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	926413	372.584
81) cis-1,3-Dichloropropene	(2)	9.638	75	3074664	344.402
82) 4-Methyl-2-pentanone	(2)	9.808	43	5422938	607.899
83)$Toluene-d8	(3)	9.933	98	1156351	49.563
83)$Toluene-d8	(3)	9.933	100	751534	49.726
88) Toluene	(3)	10.007	92	4532879	309.894
90) 1,3-Dichloropropene (total)	(3)		100	5974636	693.659
89) trans-1,3-Dichloropropene	(3)	10.258	75	2899972	349.257

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	10.313	69	3356305	332.603
92) 1,1,2-Trichloroethane	(3)	10.461	97	1768710	318.935
93) Tetrachloroethene	(3)	10.541	166	1990565	321.327
94) 1,3-Dichloropropane	(3)	10.621	76	3006585	317.532
96) 2-Hexanone	(3)	10.670	43	3998423	593.616
97) Dibromochloromethane	(3)	10.827	129	2037523	358.670
99) 1,2-Dibromoethane	(3)	10.940	107	1987783	330.088
100)*Chlorobenzene-d5	(3)	11.361	117	891668	50.000
101) 1-Chlorohexane	(3)	11.364	91	2458057	312.814
102) Chlorobenzene	(3)	11.387	112	5140609	310.783
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	1789998	328.446
104) Ethylbenzene	(3)	11.470	91	8606821	307.854
106) m+p-Xylene	(3)	11.583	106	6690837	608.359
108) Xylene (Total)	(3)		106	9979970	911.130
107) o-Xylene	(3)	11.908	106	3289133	302.771
109) Styrene	(3)	11.924	104	5647939	314.619
110) Bromoform	(3)	12.081	173	1534520	361.500
111) Isopropylbenzene	(3)	12.203	105	8466138	310.714
112) Cyclohexanone	(1)	12.287	55	1351186	4046.080
114)$4-Bromofluorobenzene	(3)	12.348	95	440049	49.810
114)$4-Bromofluorobenzene	(3)	12.348	174	362553	49.502
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	2800639M	310.705
115) Bromobenzene	(4)	12.467	156	2234066	311.517
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	2150976	773.637
117) 1,2,3-Trichloropropane	(4)	12.499	110	866230	313.172
119) n-Propylbenzene	(4)	12.531	91	9654812	308.142
120) 2-Chlorotoluene	(4)	12.609	126	2098494	315.266
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	7238022	317.873
121) 4-Chlorotoluene	(4)	12.702	126	2155793	311.148
124) tert-Butylbenzene	(4)	12.908	134	1524421M	323.717
125) Pentachloroethane	(4)	12.940	167	1461833	360.511
126) 1,2,4-Trimethylbenzene	(4)	12.949	105	7469187	311.236
127) sec-Butylbenzene	(4)	13.068	105	8682126	308.971
129) 1,3-Dichlorobenzene	(4)	13.168	146	3858953	292.822
130) p-Isopropyltoluene	(4)	13.174	119	7289488	299.854
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	477171	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	4013510	293.777
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	7915203	311.364

M = Compound was manually integrated.
* = Compound is an internal standard.
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Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

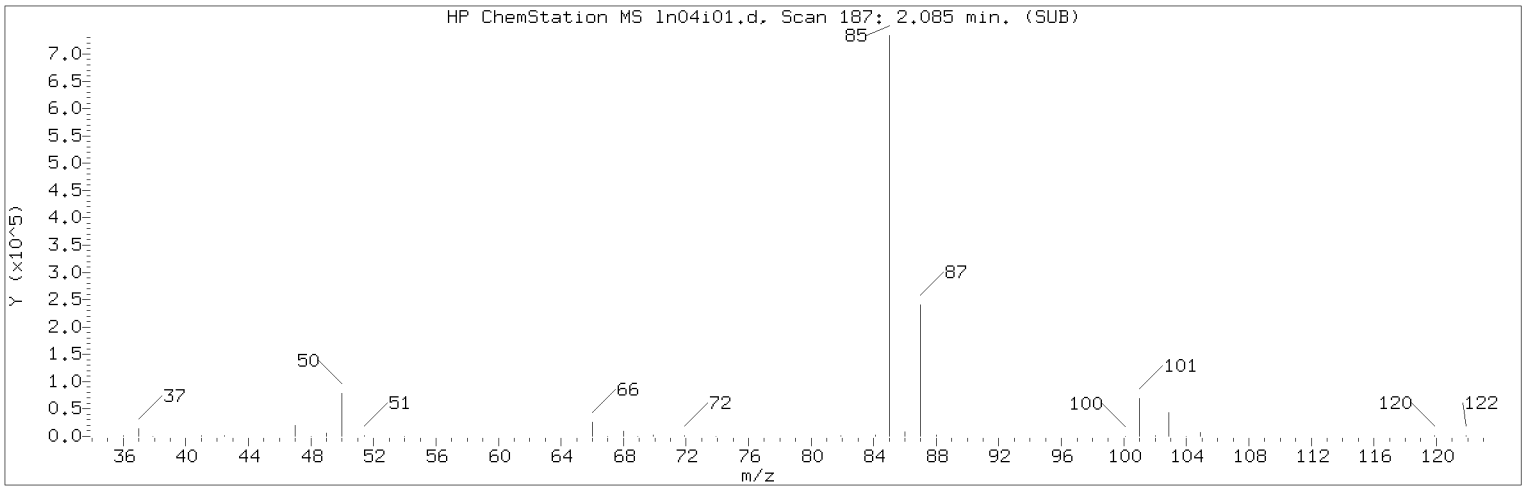
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

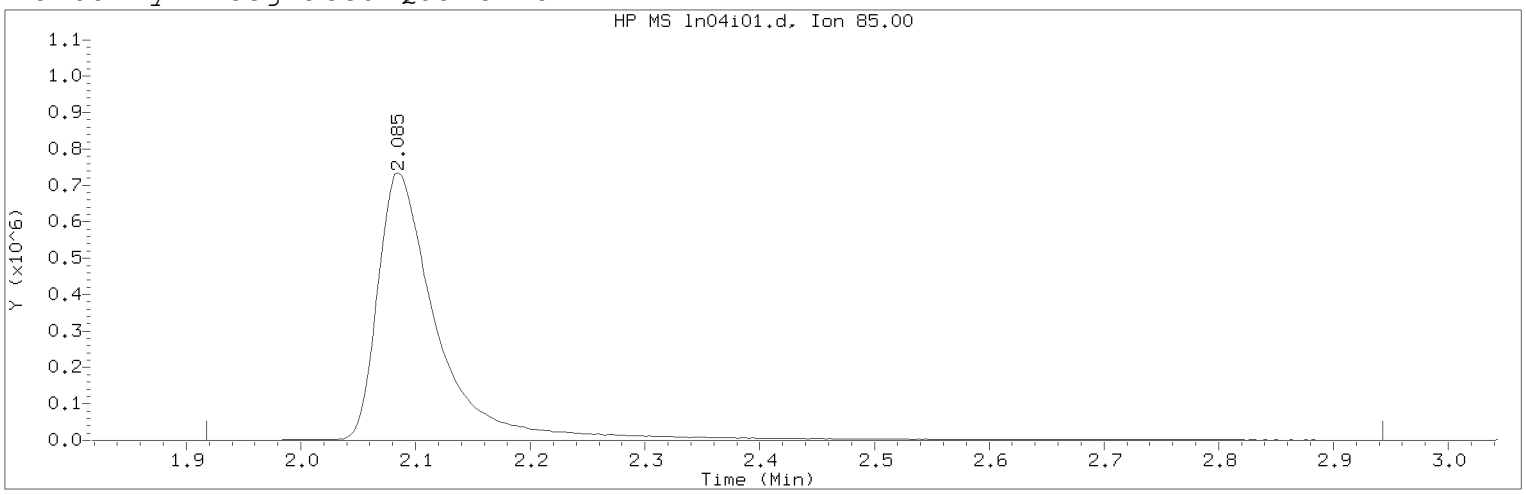
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.319	91	6484944	336.931
136) 1,3-Diethylbenzene	(4)	13.374	119	4897725	309.573
141) Diethylbenzene (total)	(4)		100	13982971	913.975
137) 1,4-Diethylbenzene	(4)	13.444	119	5013123	299.077
139) n-Butylbenzene	(4)	13.467	92	3608595	290.316
138) 1,2-Dichlorobenzene	(4)	13.502	146	3859125	296.761
140) 1,2-Diethylbenzene	(4)	13.518	119	4072123	305.325
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	669008	339.050
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	2855960	285.855
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	2681523	276.030
147) Hexachlorobutadiene	(4)	14.670	225	1157297	252.311
148) Naphthalene	(4)	14.772	128	9186333	294.145
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	2488608	263.270
150) 2-Methylnaphthalene	(4)	15.563	142	4666682	242.655

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

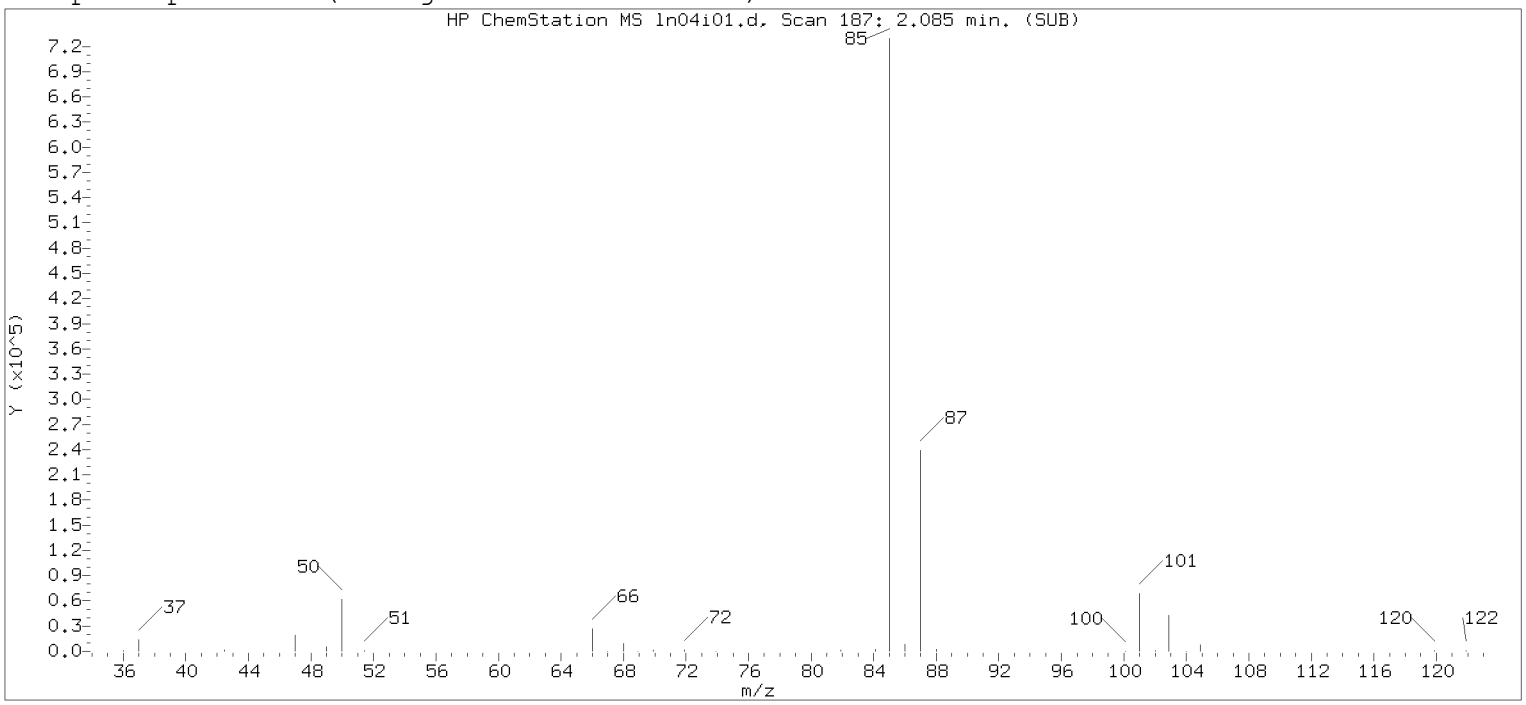
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area (flag) : 2719746M
On-Column Amount (ng) : 347.9426
Integration start scan : 134 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

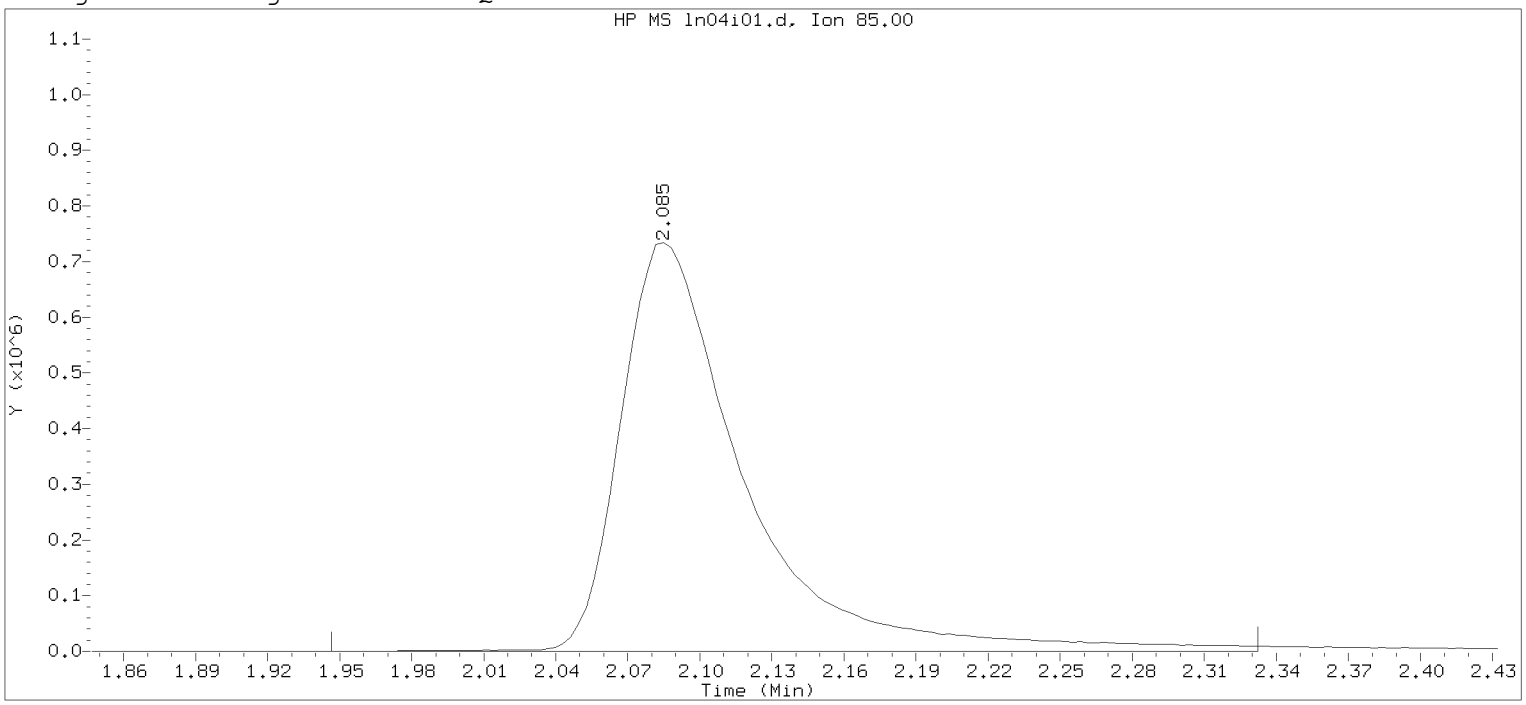
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

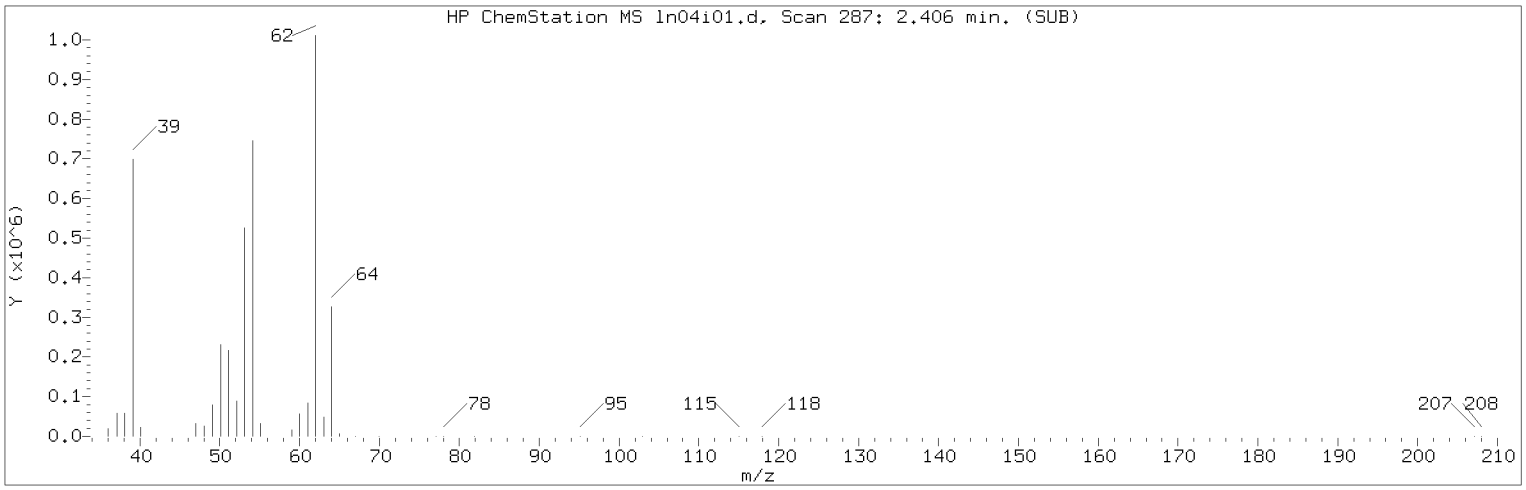
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

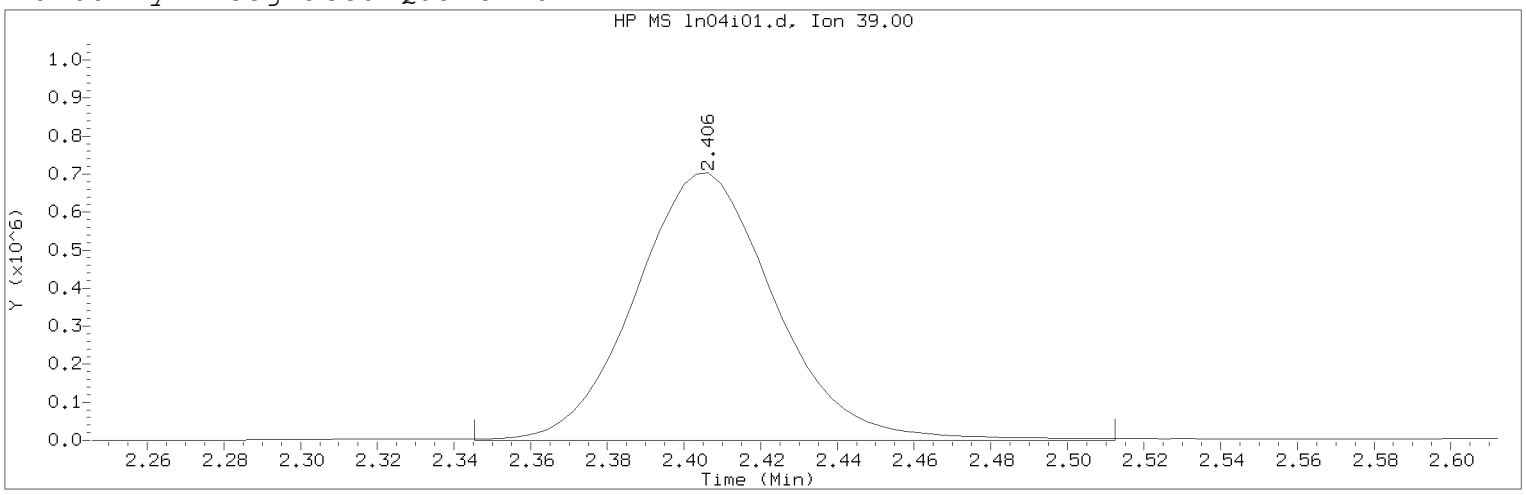
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area : 2624212
On-column Amount (ng) : 308.6520
Integration start scan : 143 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

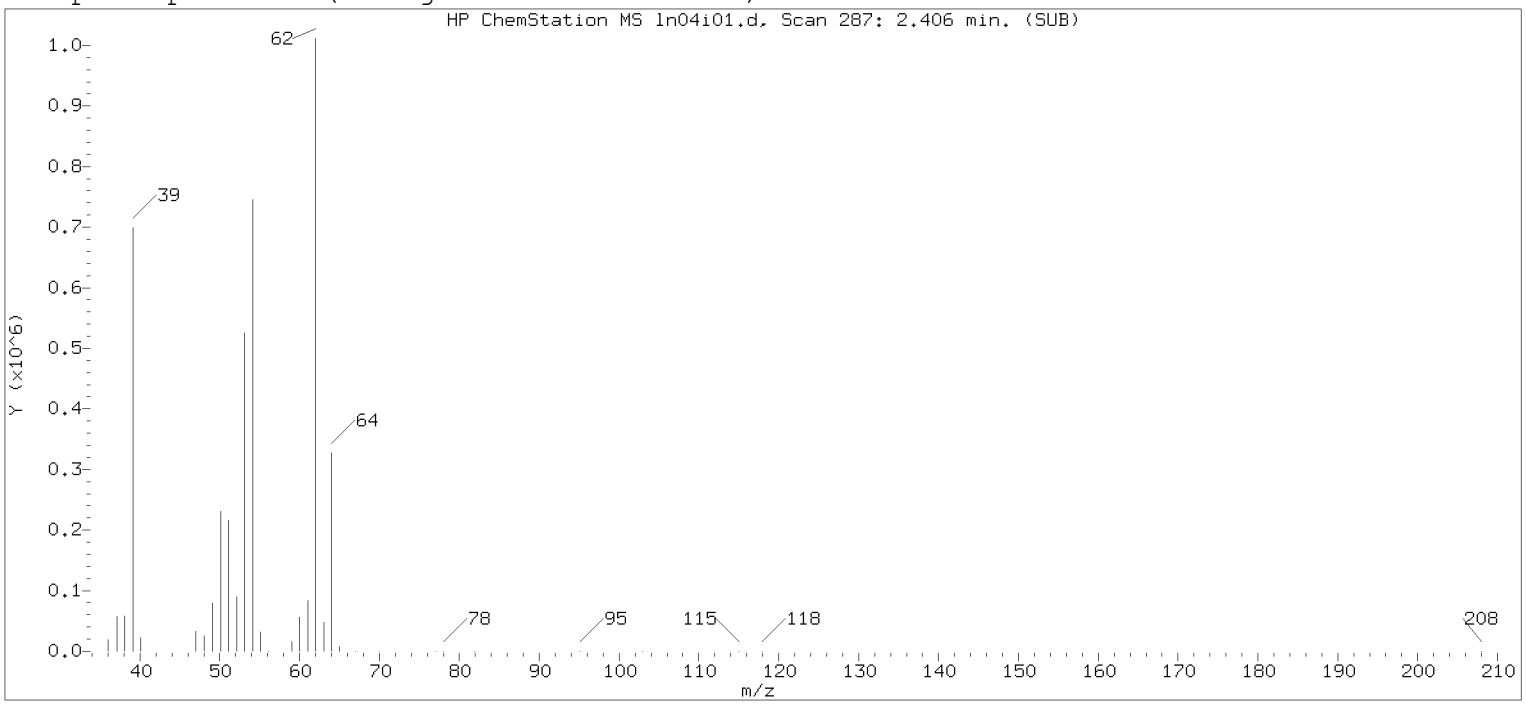
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 1785787M
On-Column Amount (ng) : 285.4858
Integration start scan : 267 Integration stop scan: 319
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

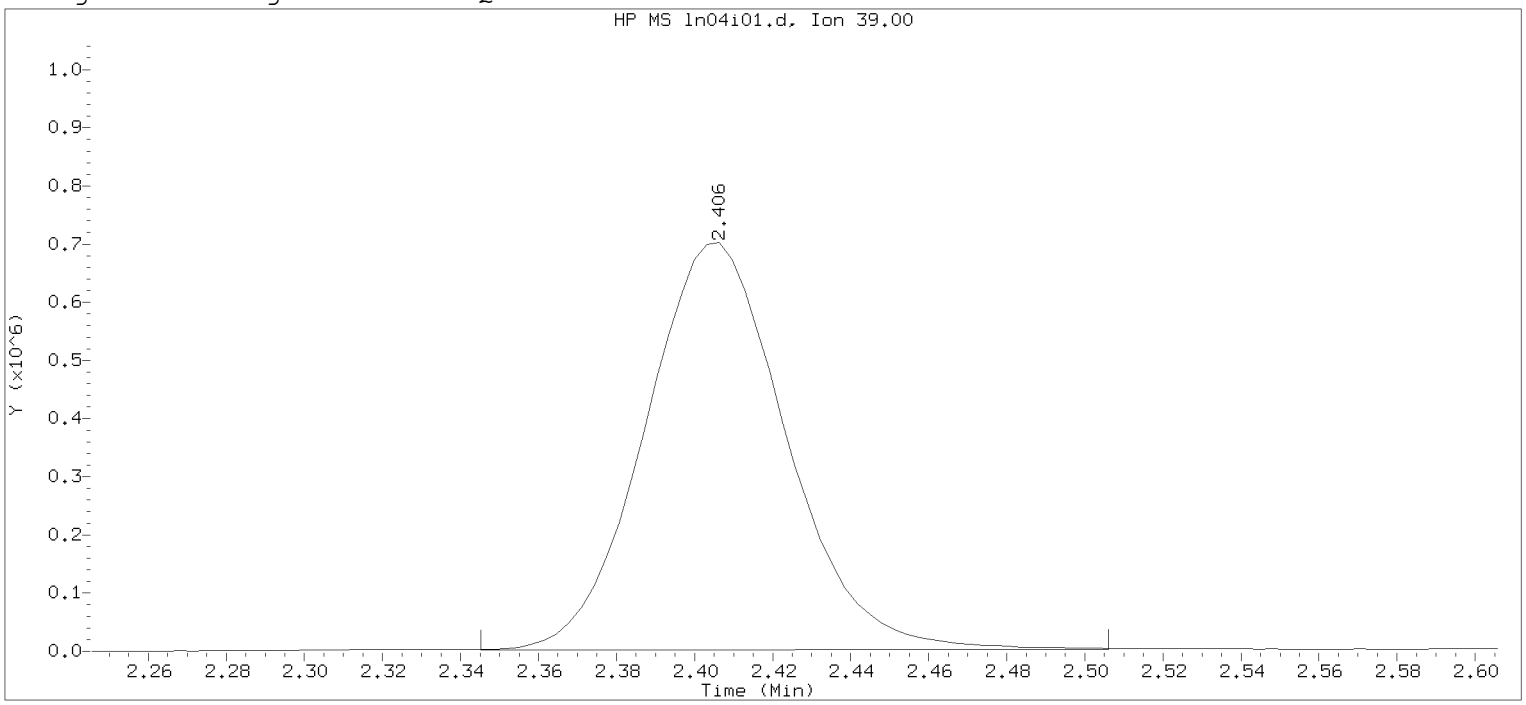
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

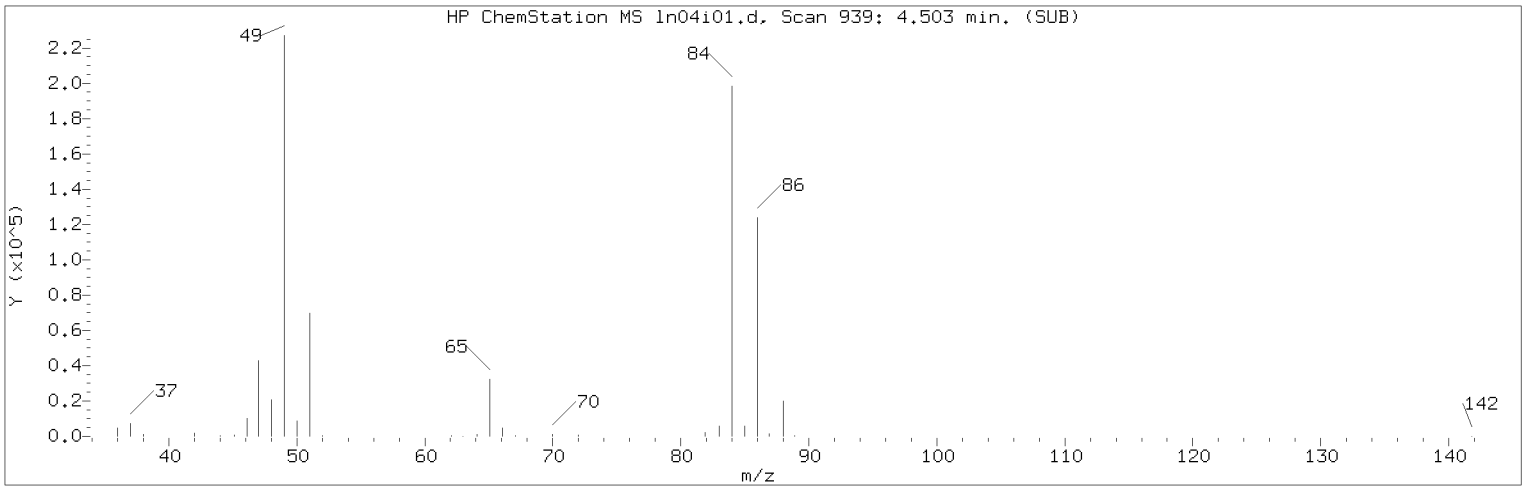
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

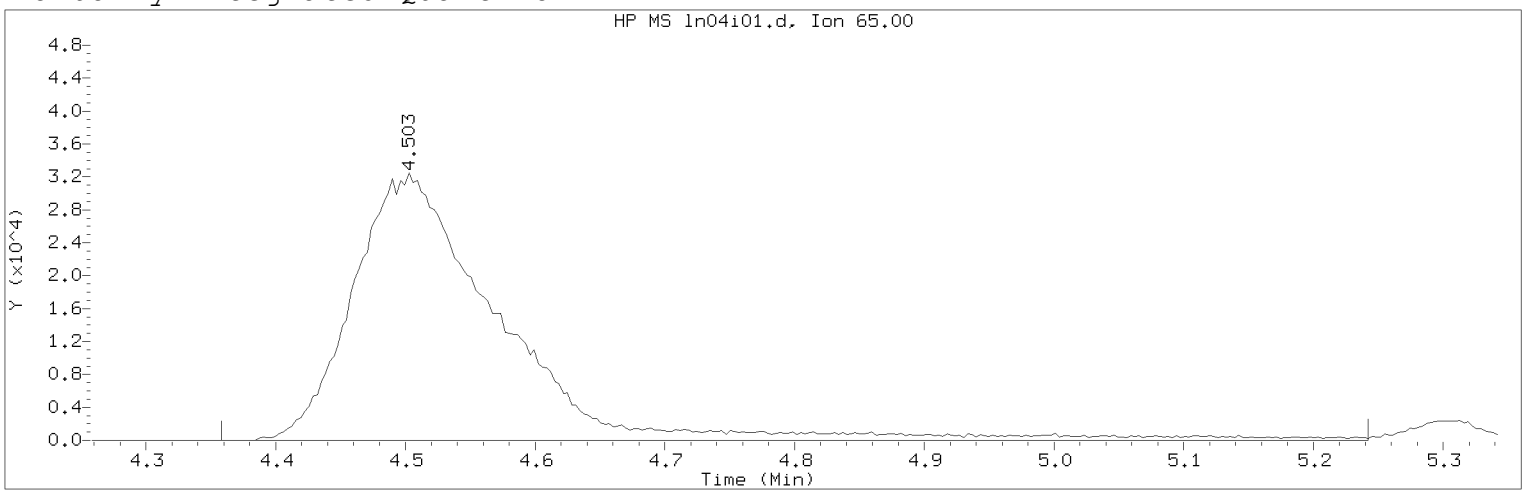
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 1755596
On-column Amount (ng) : 295.0708
Integration start scan : 267 Integration stop scan: 317
Y at integration start : 2196 Y at integration end: 3553

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh00135

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

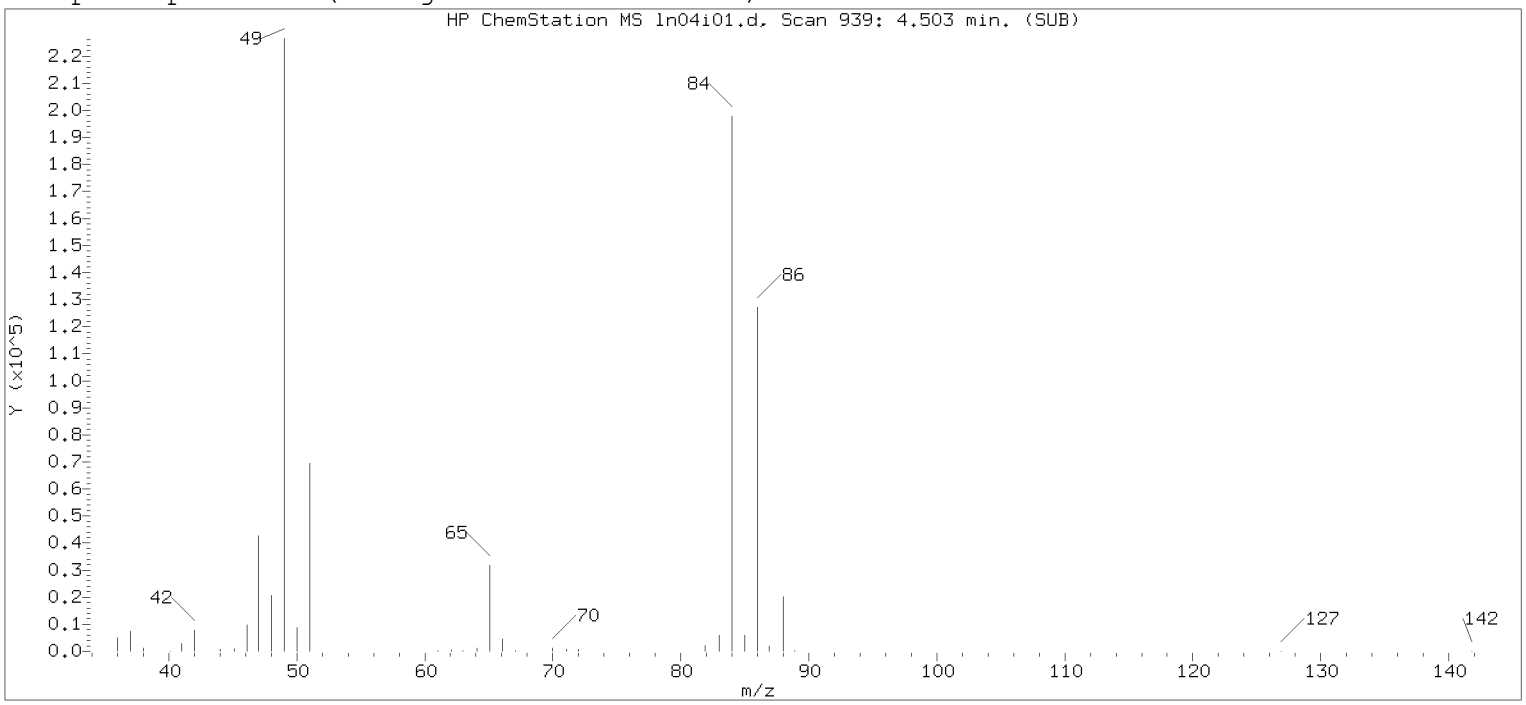
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area (flag) : 254406M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1168
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

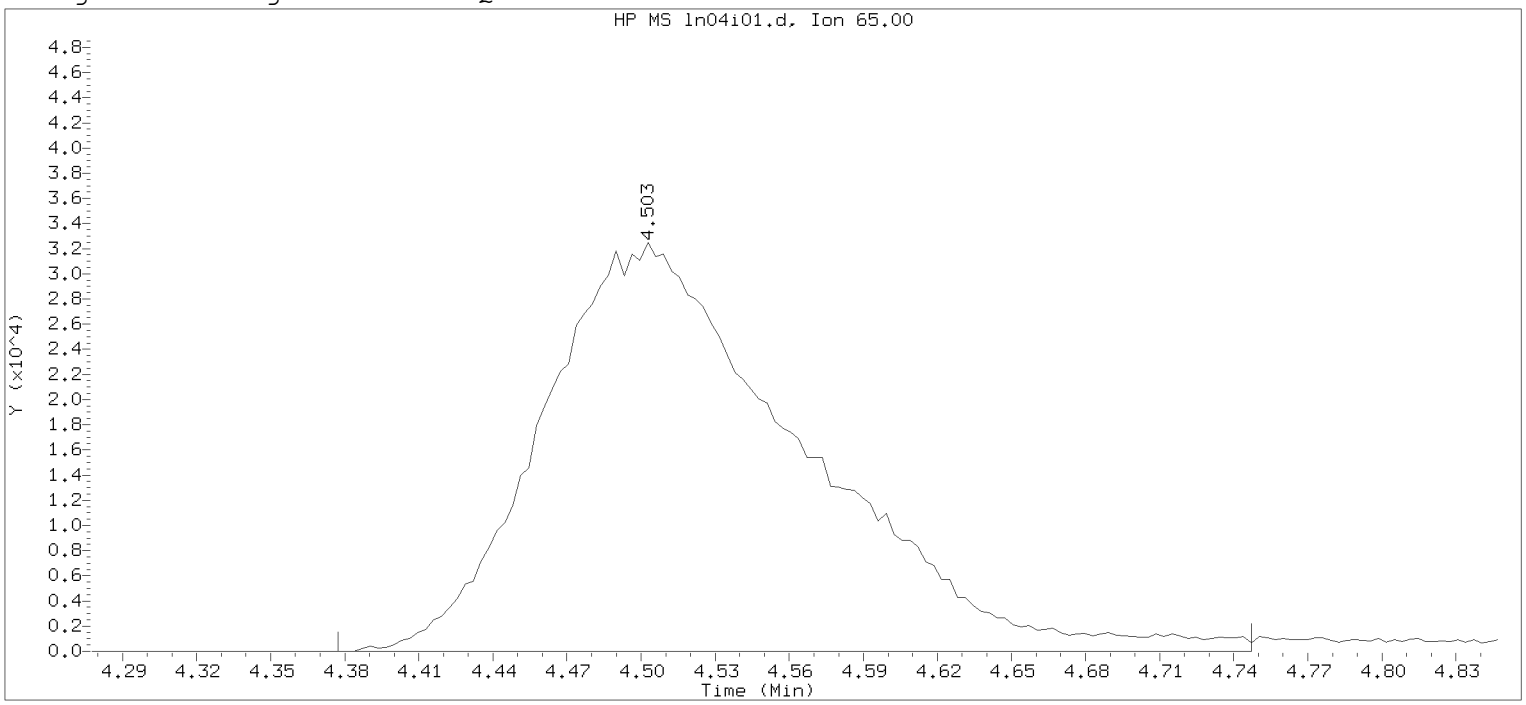
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

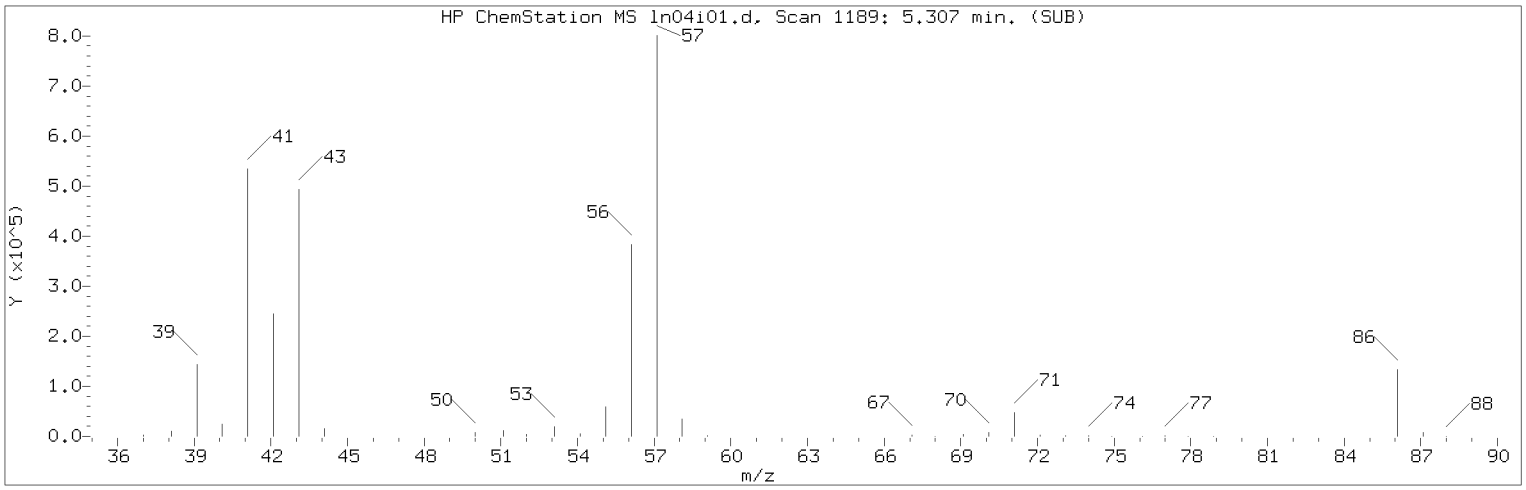
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

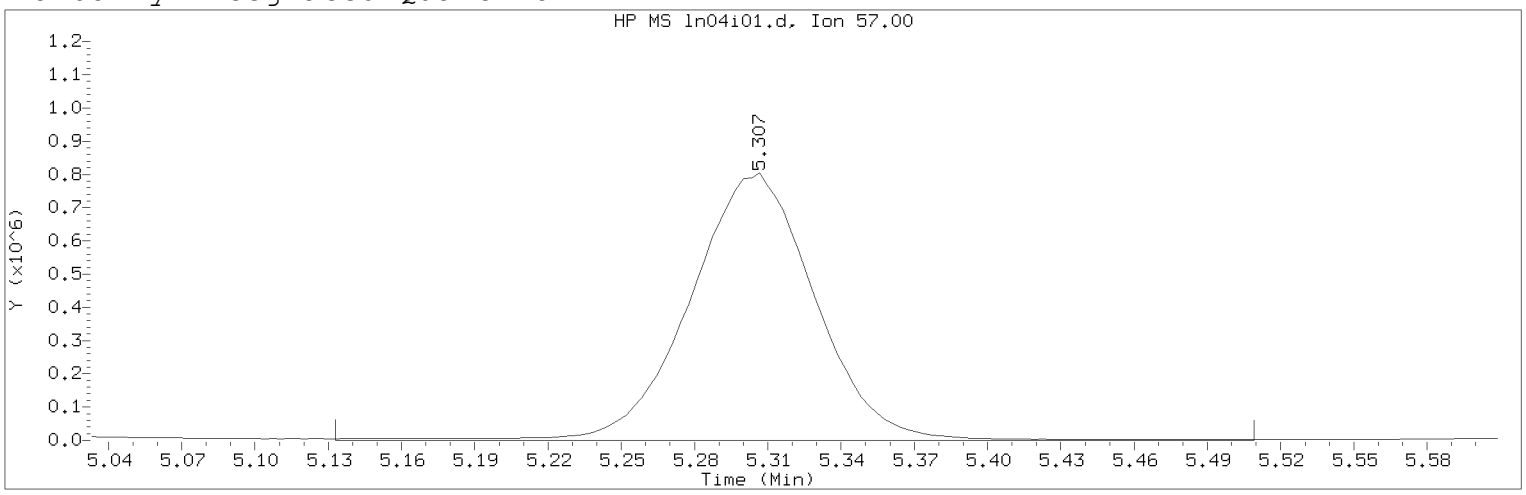
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area : 237264
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user: JKHowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

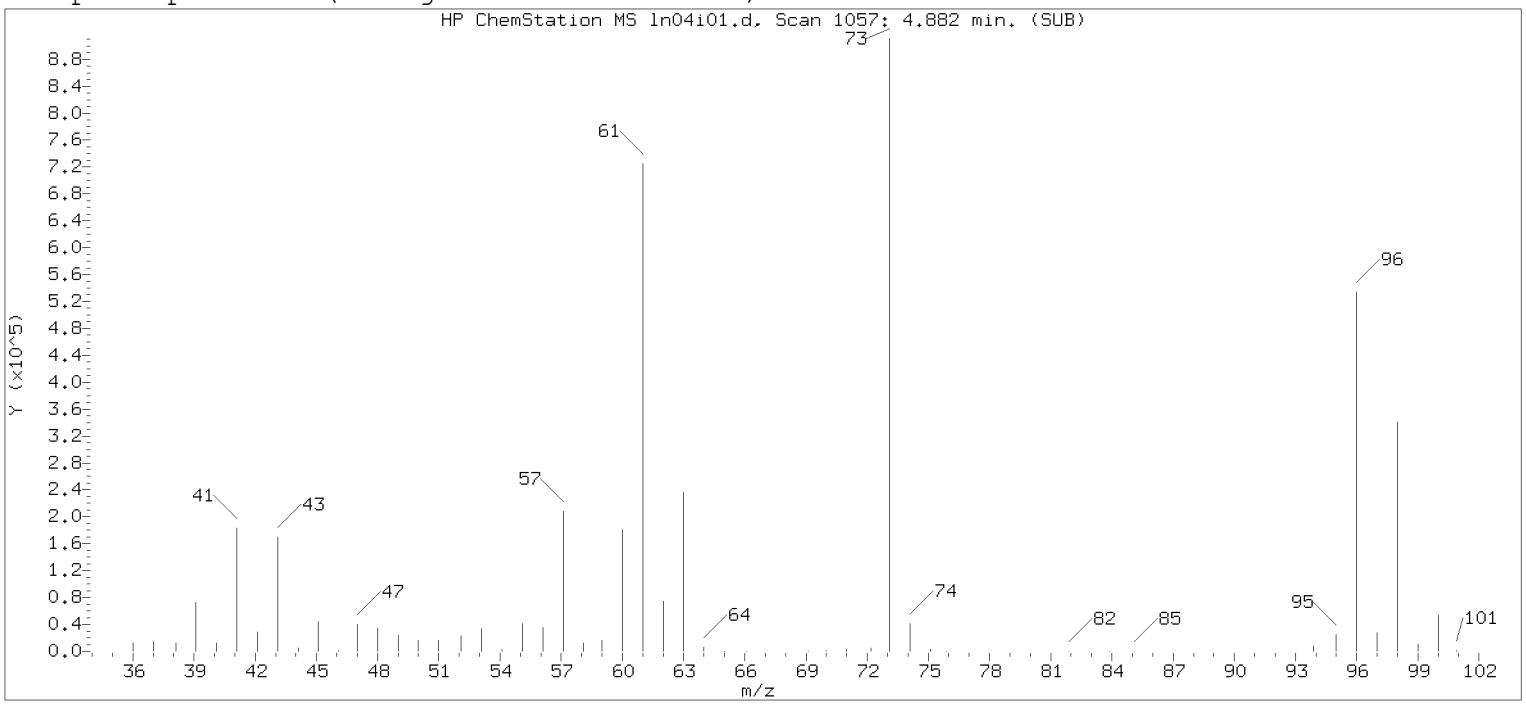
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1189
Retention Time (minutes): 5.307
Quant Ion : 57.00
Area (flag) : 2863189M
On-Column Amount (ng) : 334.8105
Integration start scan : 1134 Integration stop scan: 1251
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

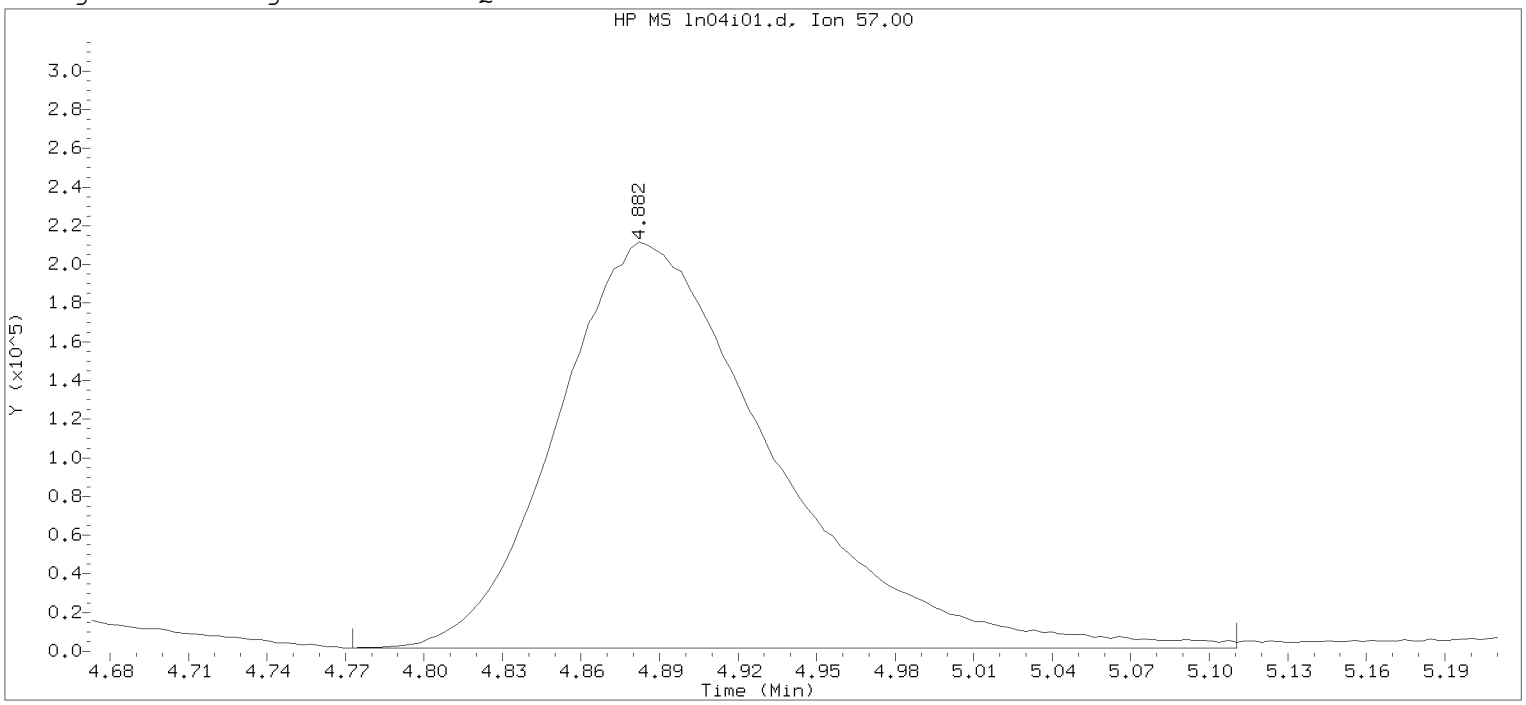
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

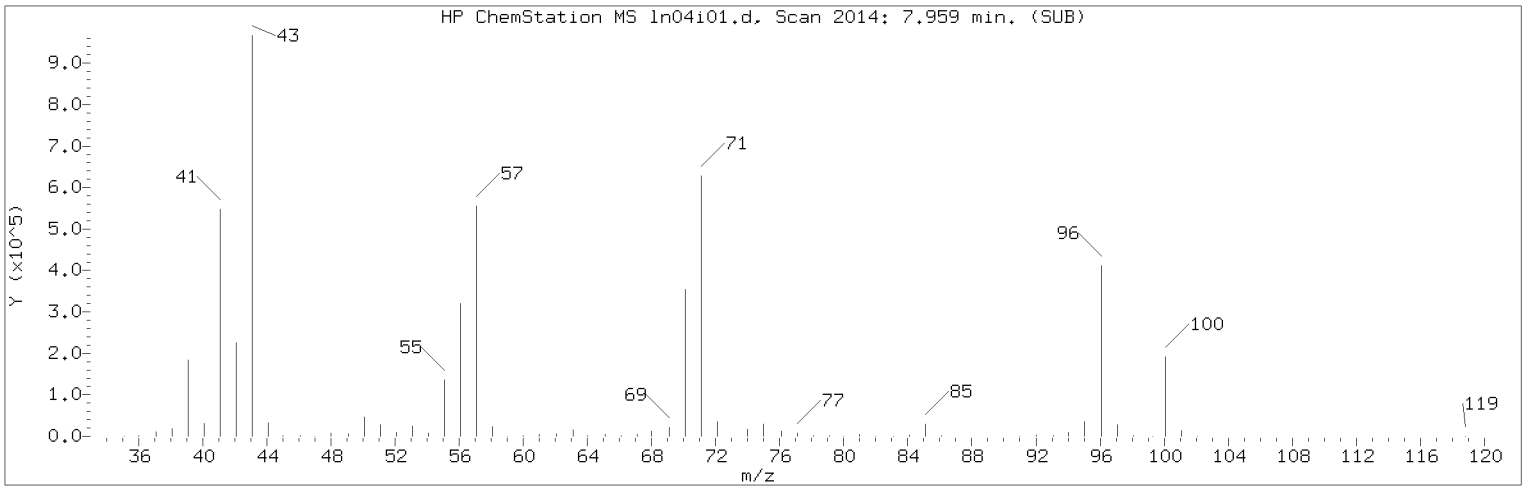
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

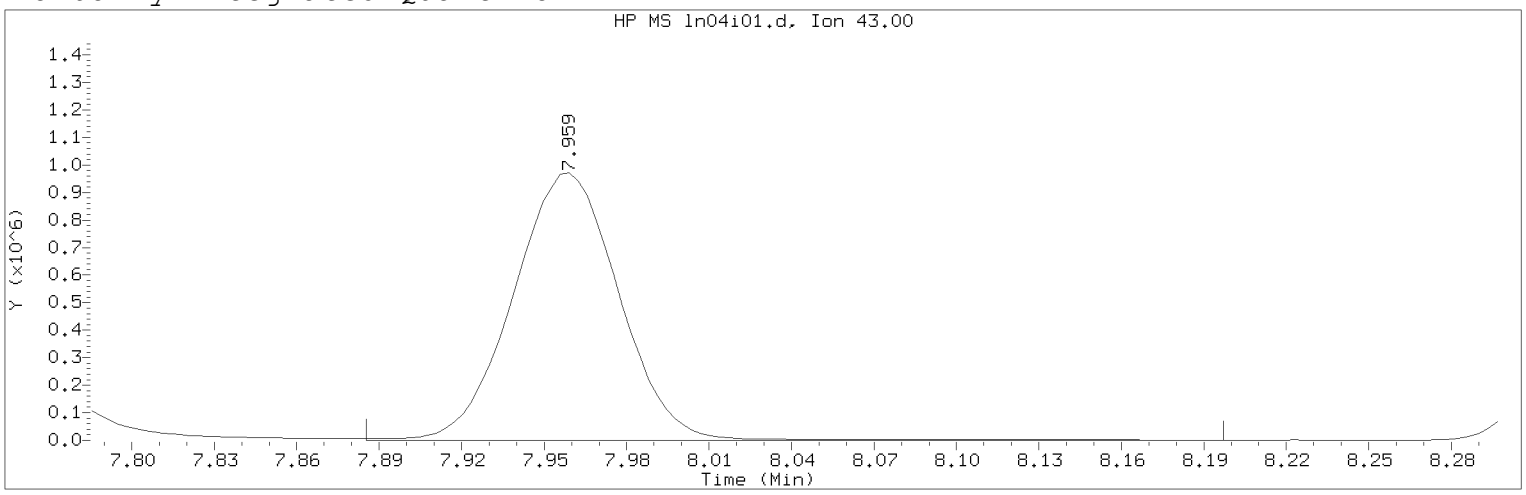
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1057
Retention Time (minutes): 4.882
Quant Ion : 57.00
Area : 1202378
On-column Amount (ng) : 301.4561
Integration start scan : 1022 Integration stop scan: 1127
Y at integration start : 1806 Y at integration end: 1806

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user id: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

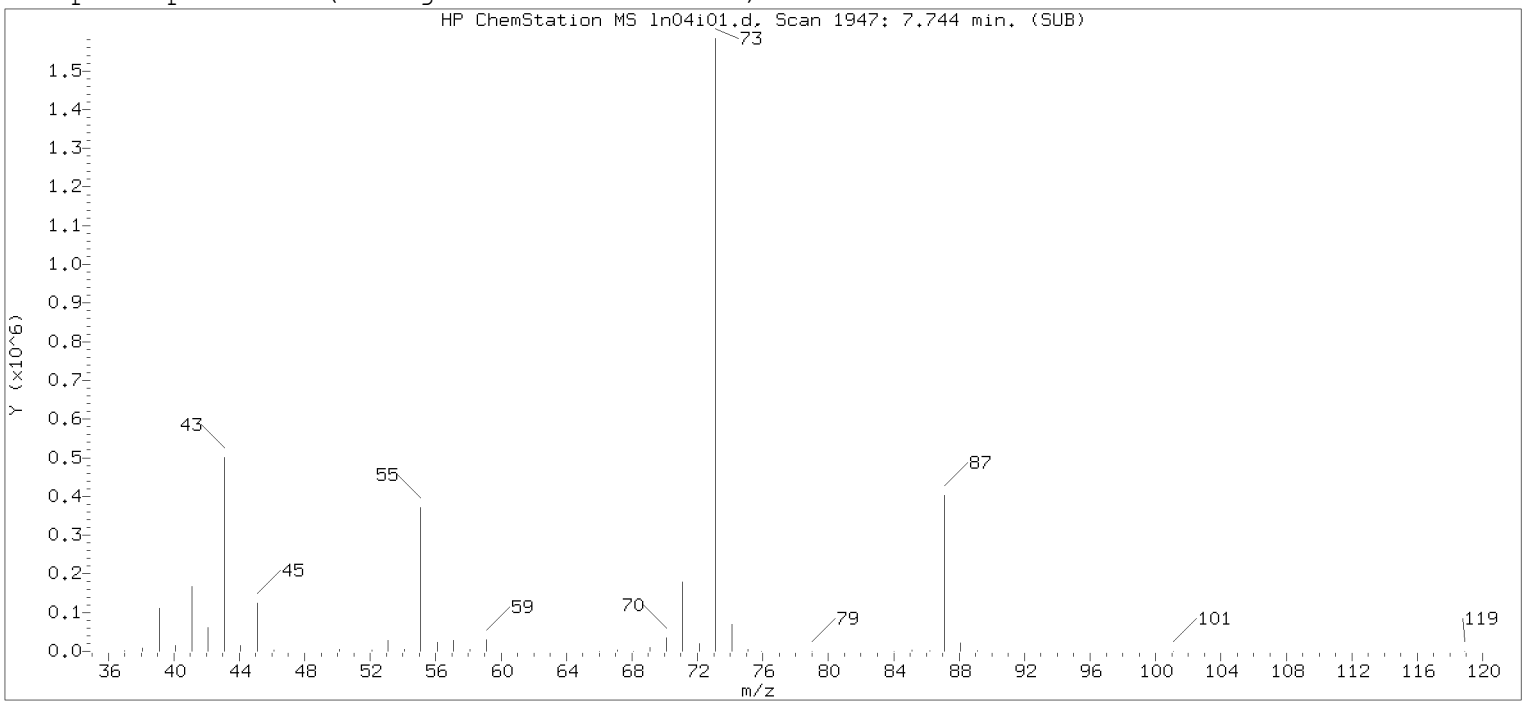
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2014
Retention Time (minutes): 7.959
Quant Ion : 43.00
Area (flag) : 2592531MA
On-Column Amount (ng) : 324.5176
Integration start scan : 1990 Integration stop scan: 2087
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

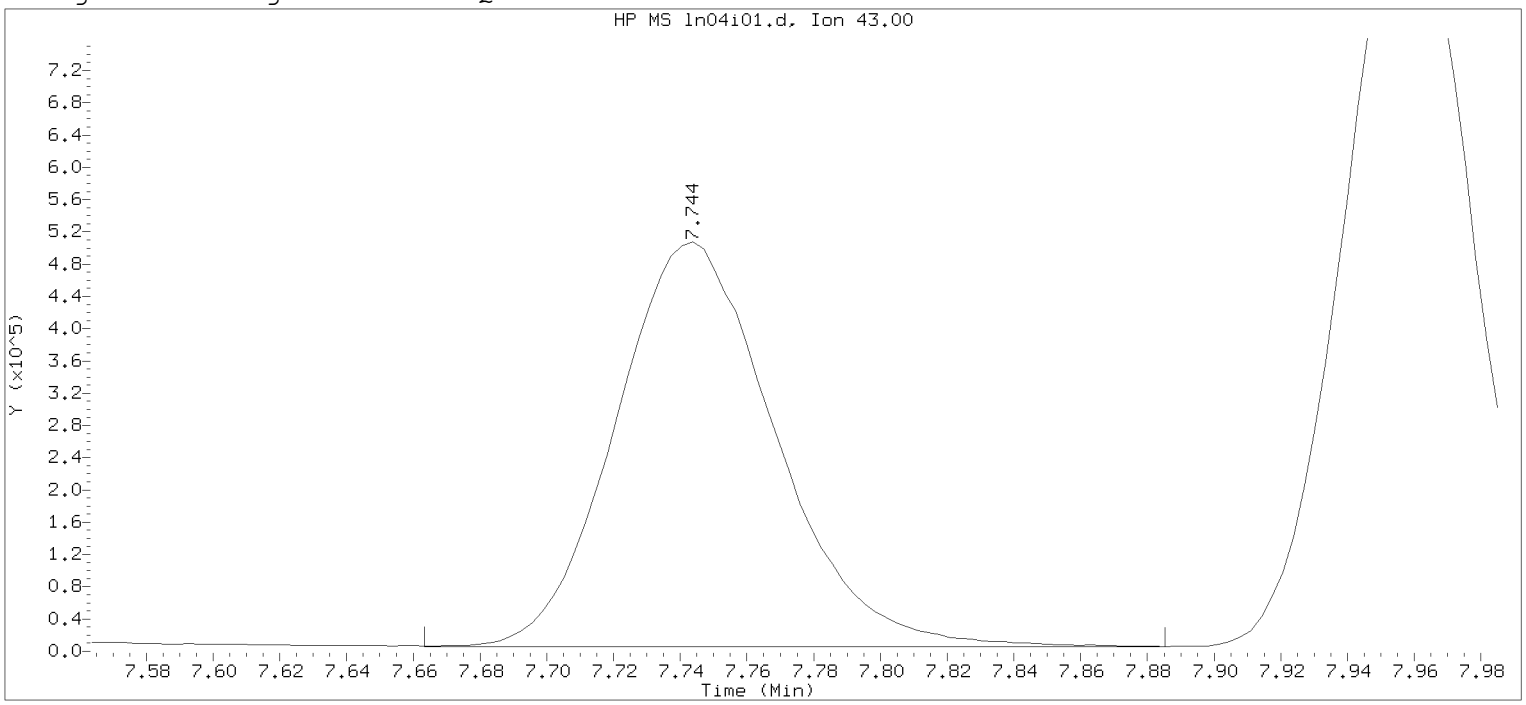
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

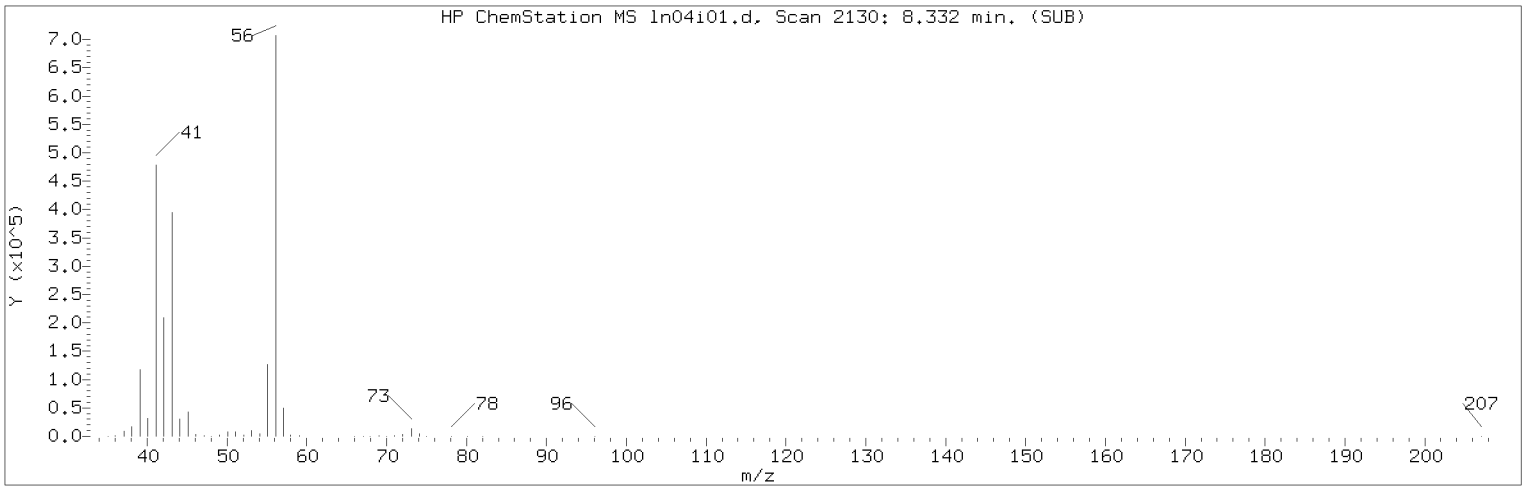
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

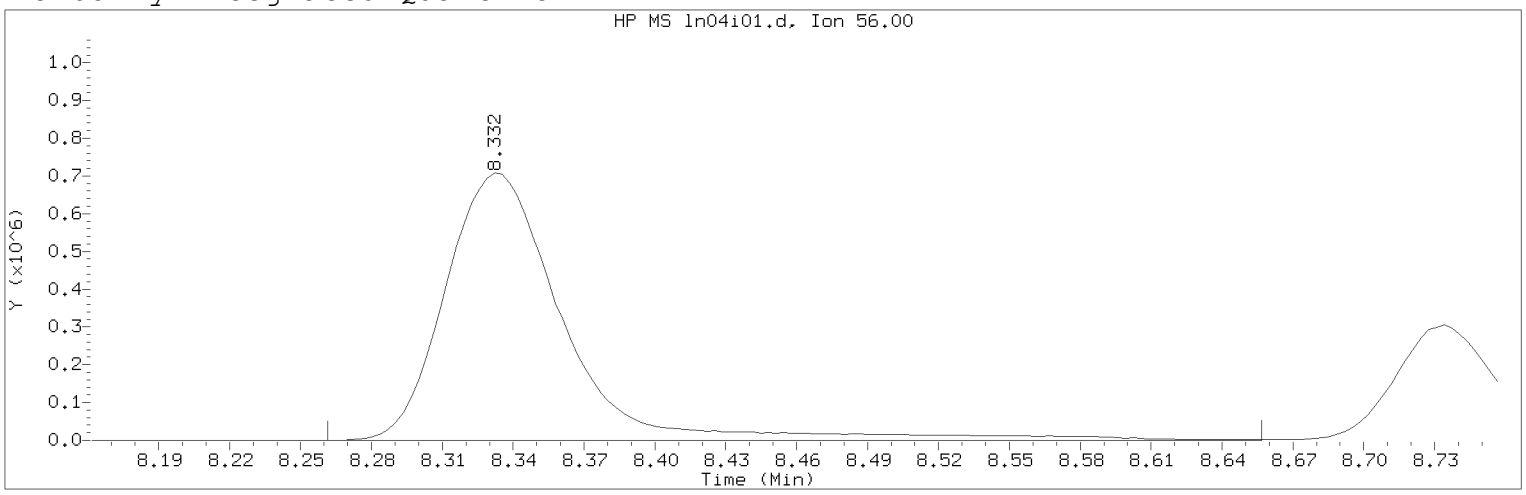
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1947
Retention Time (minutes): 7.744
Quant Ion : 43.00
Area : 1668813
On-column Amount (ng) : 288.4319
Integration start scan : 1921 Integration stop scan: 1990
Y at integration start : 5866 Y at integration end: 5866

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

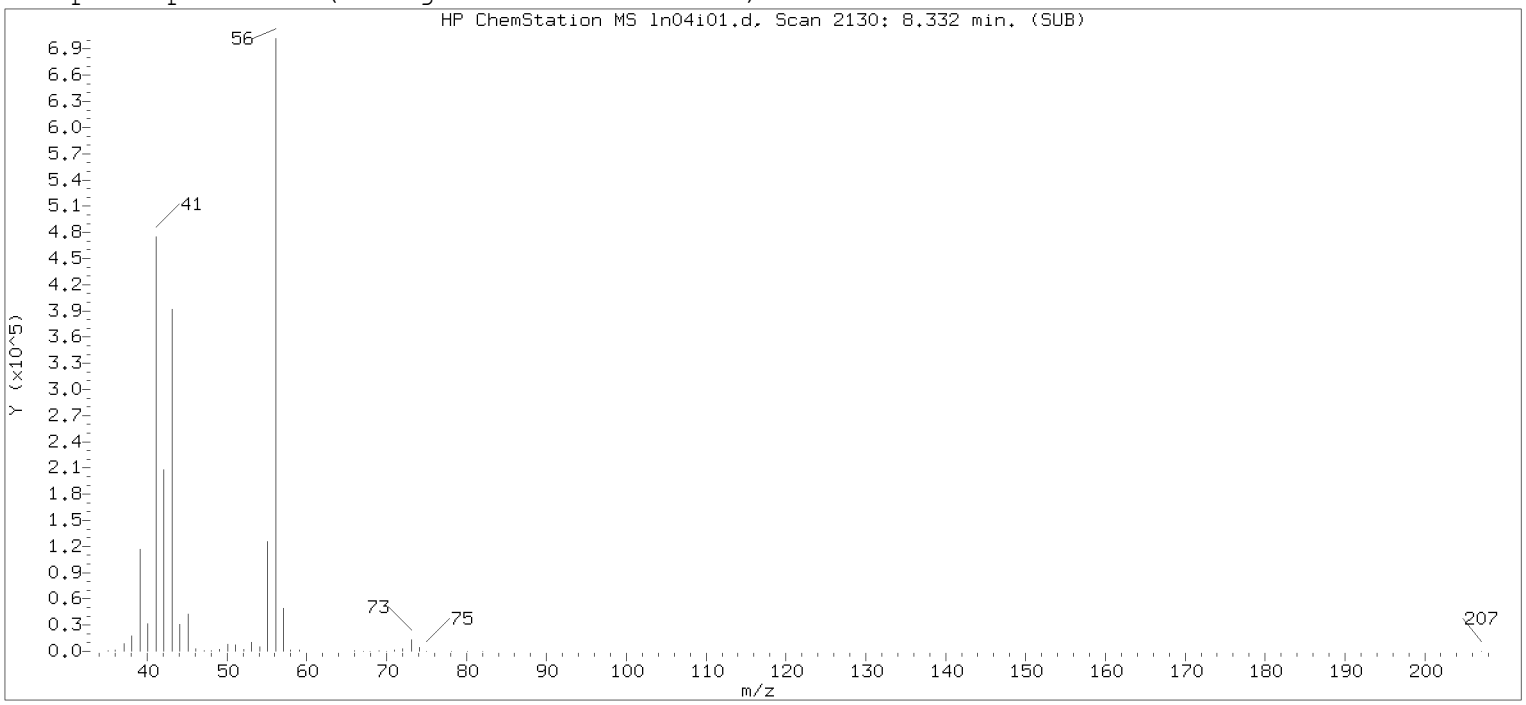
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area (flag) : 2465385M
On-Column Amount (ng) : 7947.0678
Integration start scan : 2107 Integration stop scan: 2230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

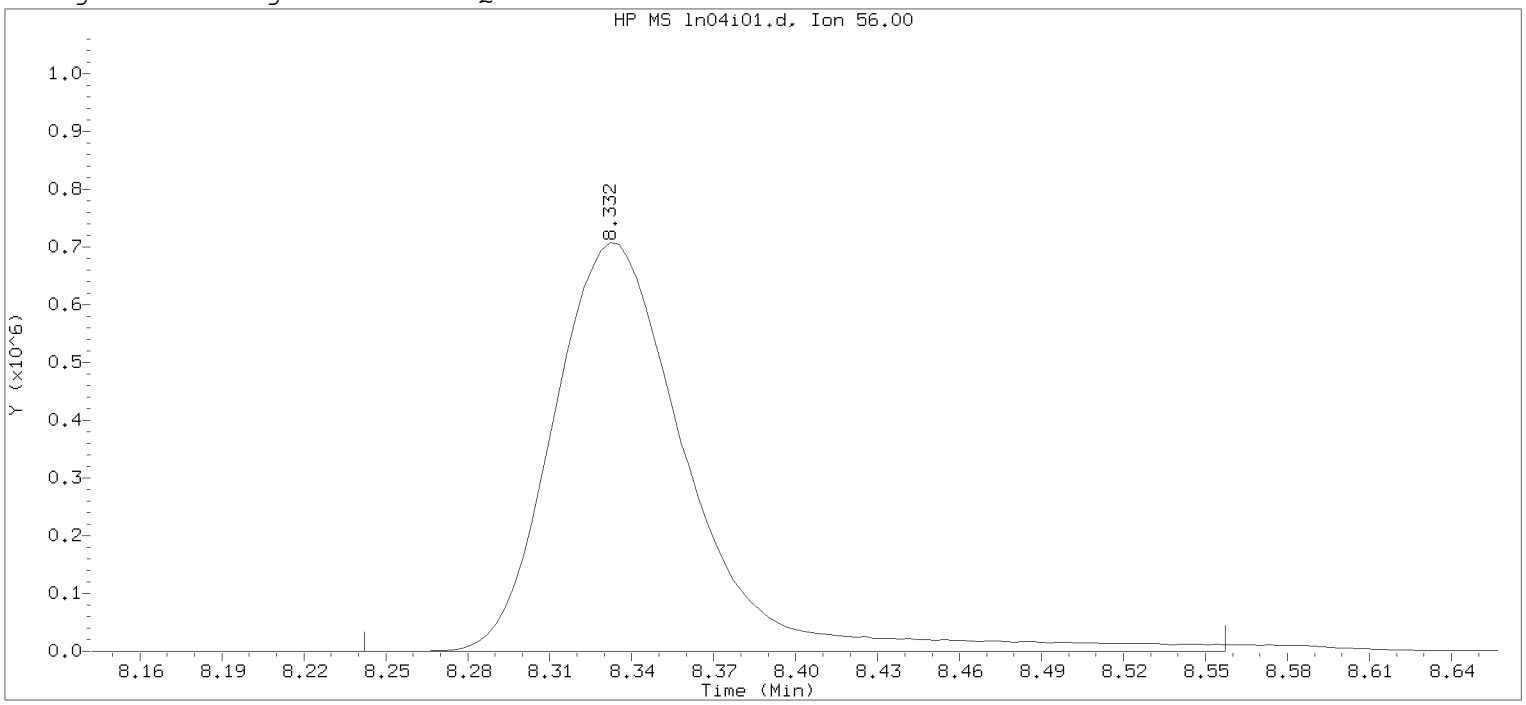
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

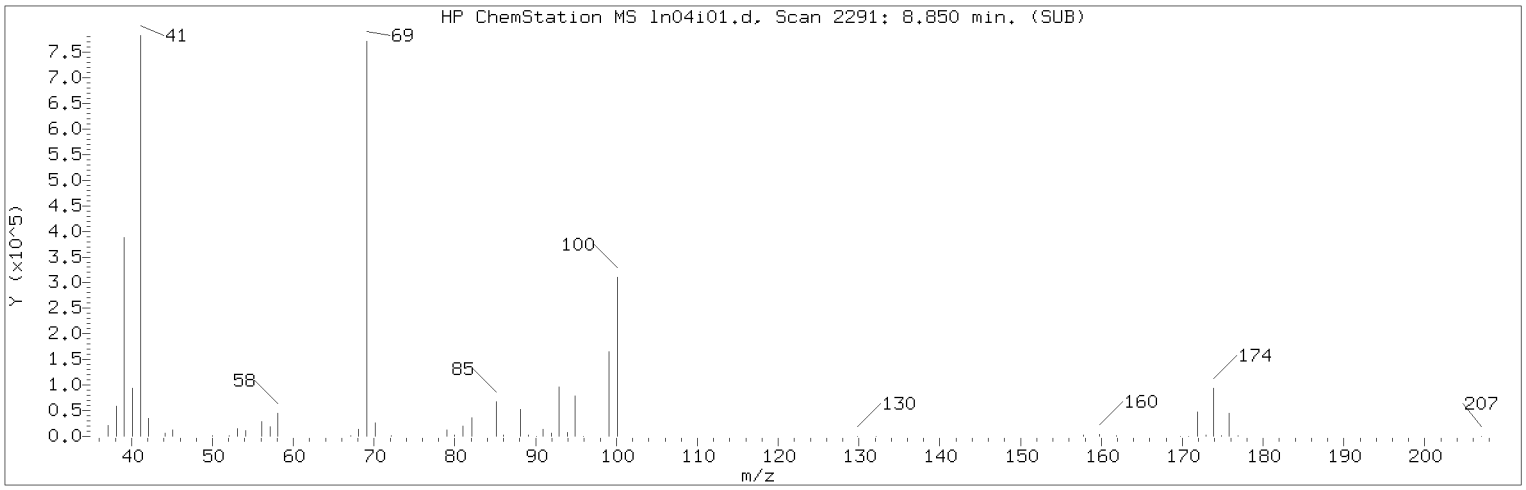
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

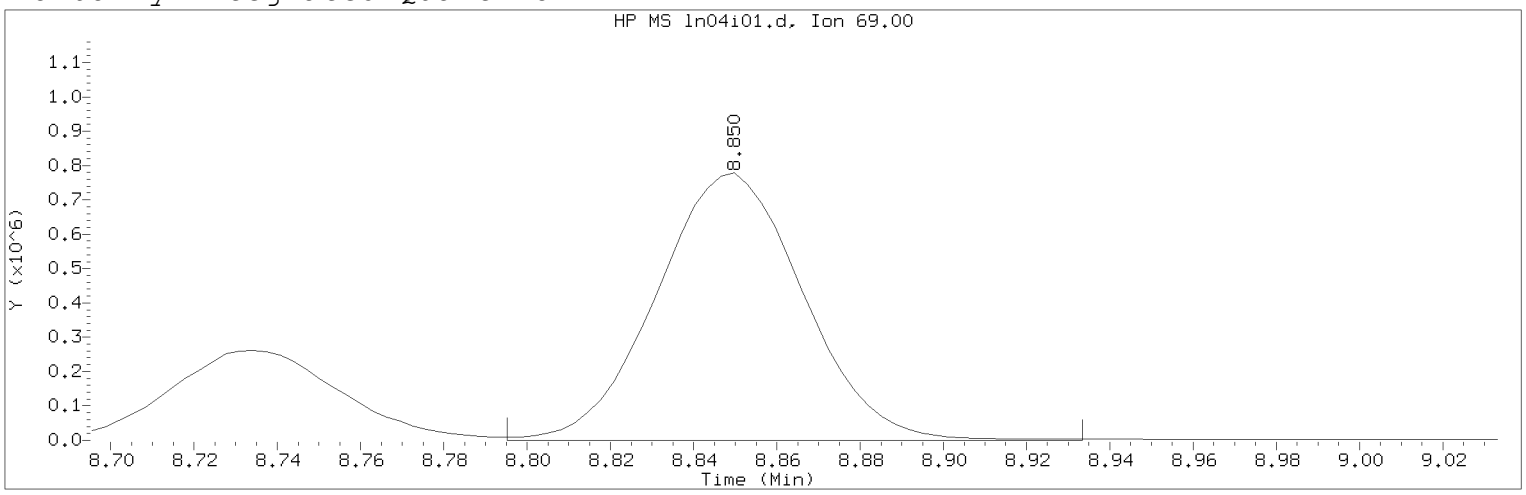
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area : 2429255
On-column Amount (ng) : 7682.9381
Integration start scan : 2101 Integration stop scan: 2199
Y at integration start : 176 Y at integration end: 176

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh00052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

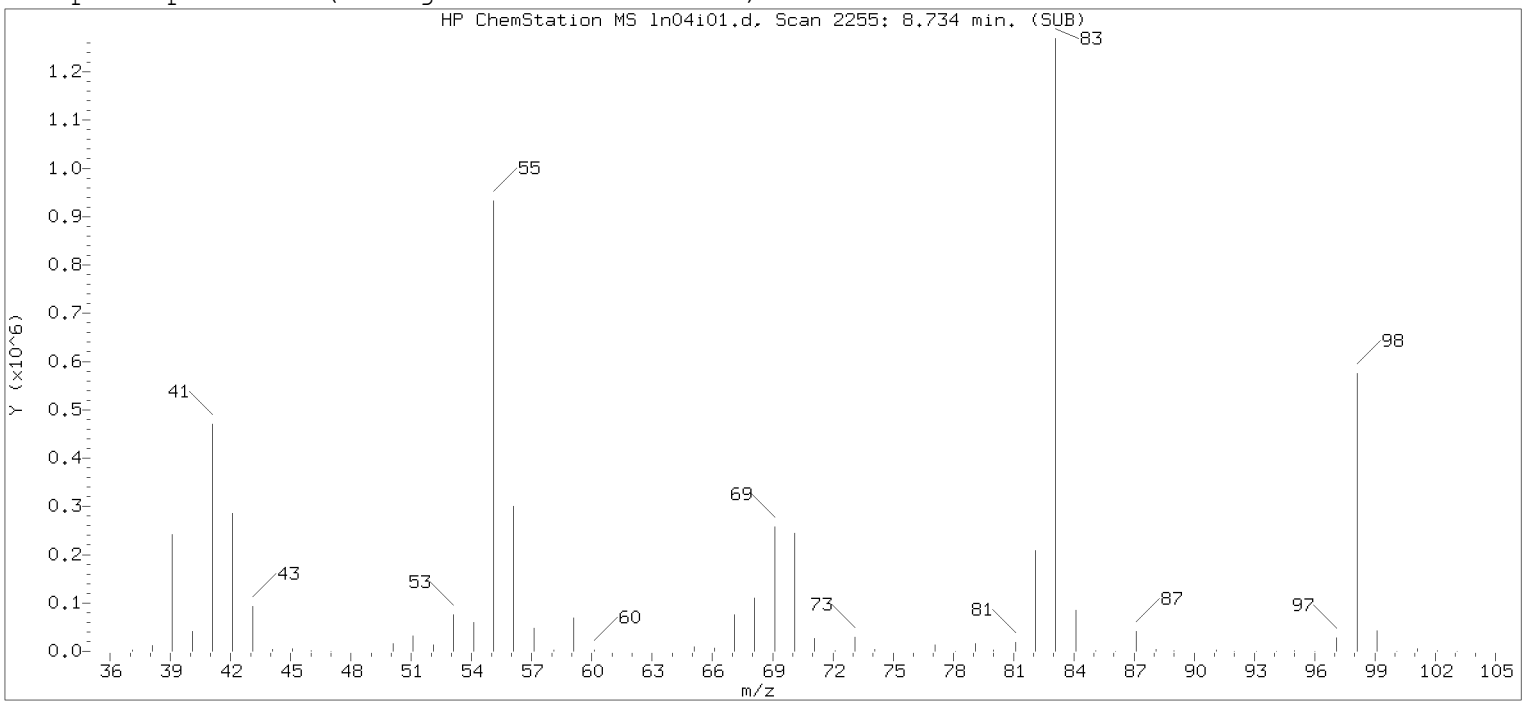
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2291
Retention Time (minutes): 8.850
Quant Ion : 69.00
Area (flag) : 1904896A
On-Column Amount (ng) : 340.2564
Integration start scan : 2273 Integration stop scan: 2316
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

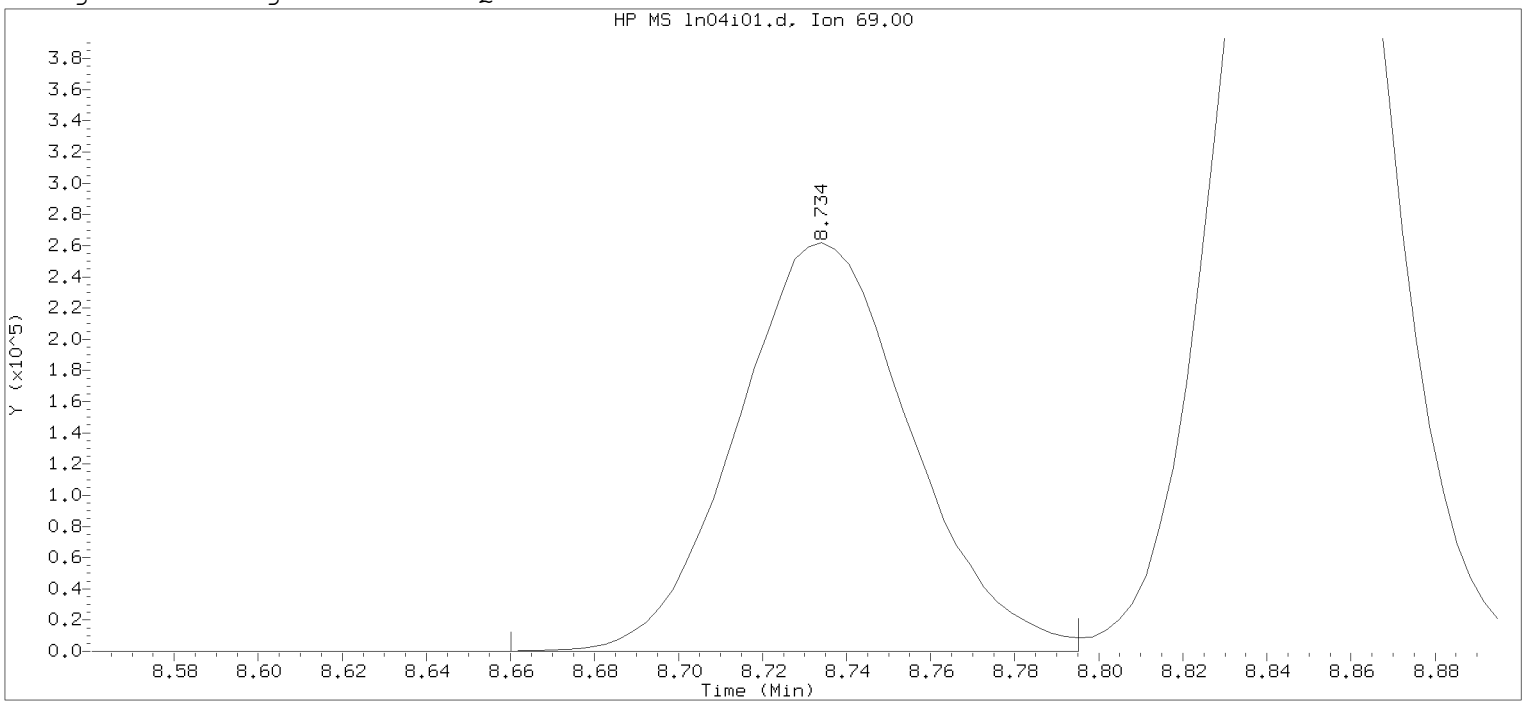
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

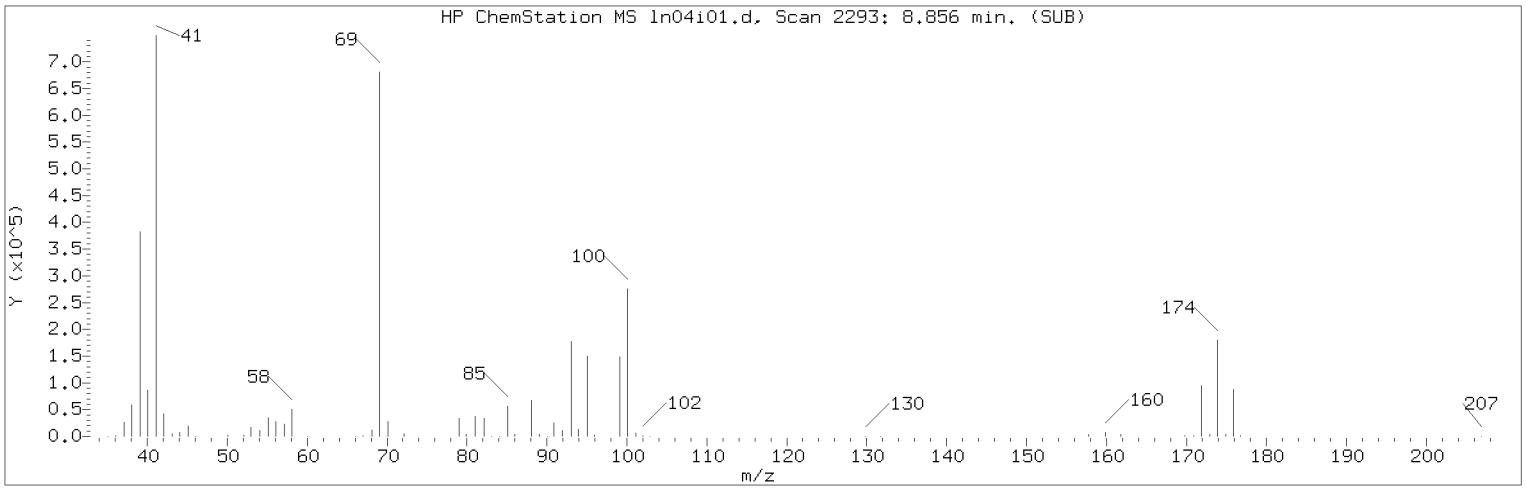
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

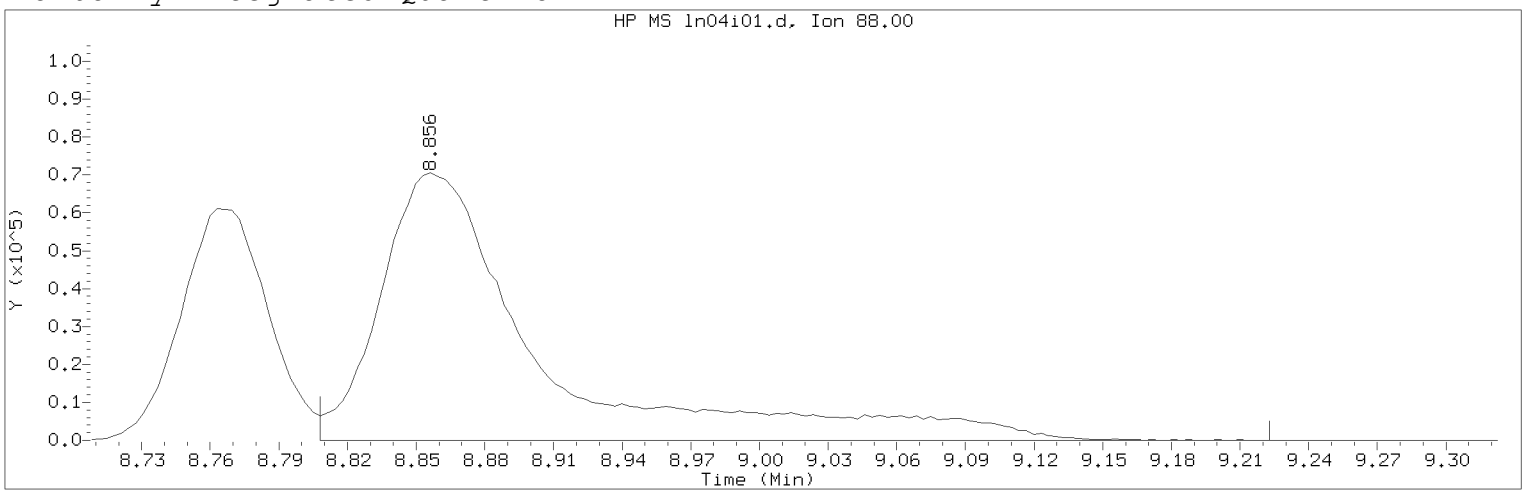
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 752058
On-column Amount (ng) : 311.1363
Integration start scan : 2231 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user: JKHowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

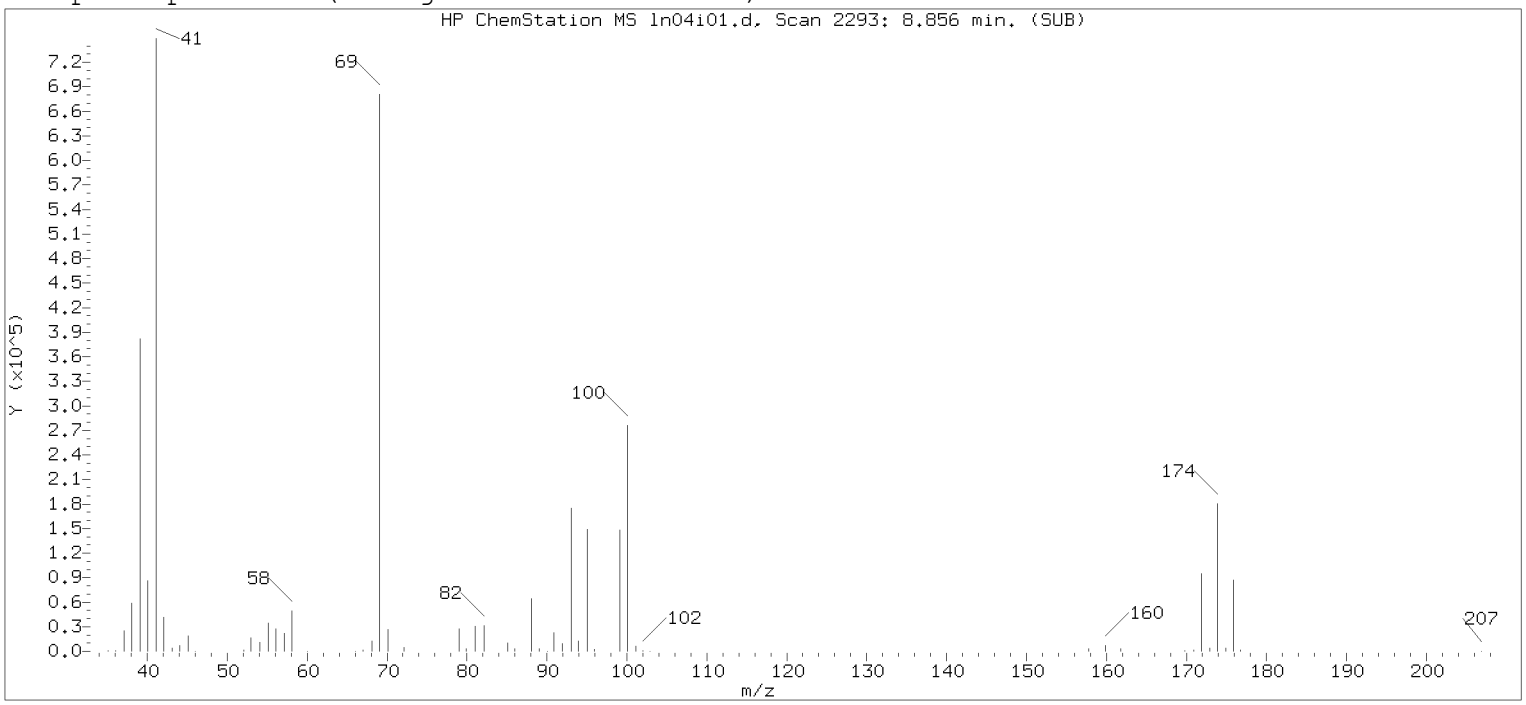
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 338379M
On-Column Amount (ng) : 3968.4208
Integration start scan : 2277 Integration stop scan: 2406
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

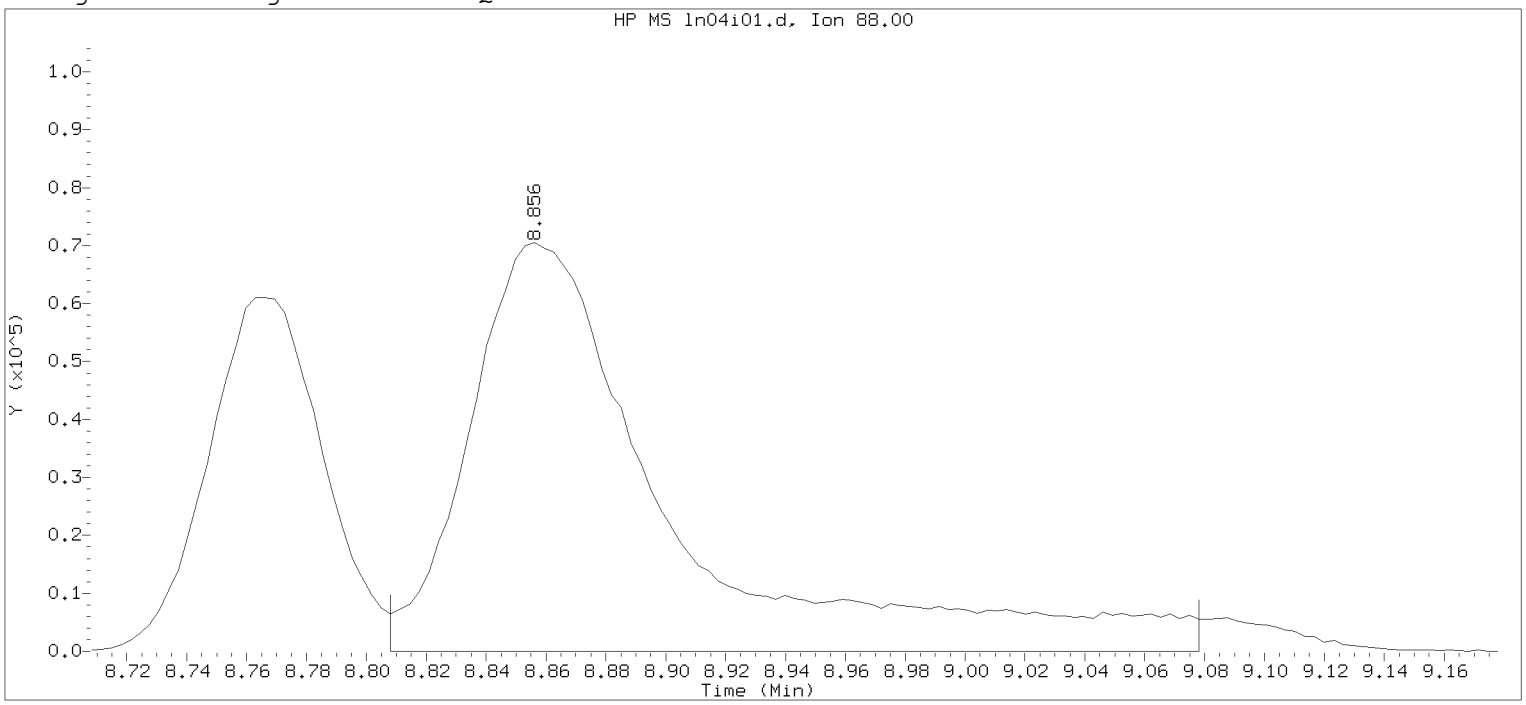
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

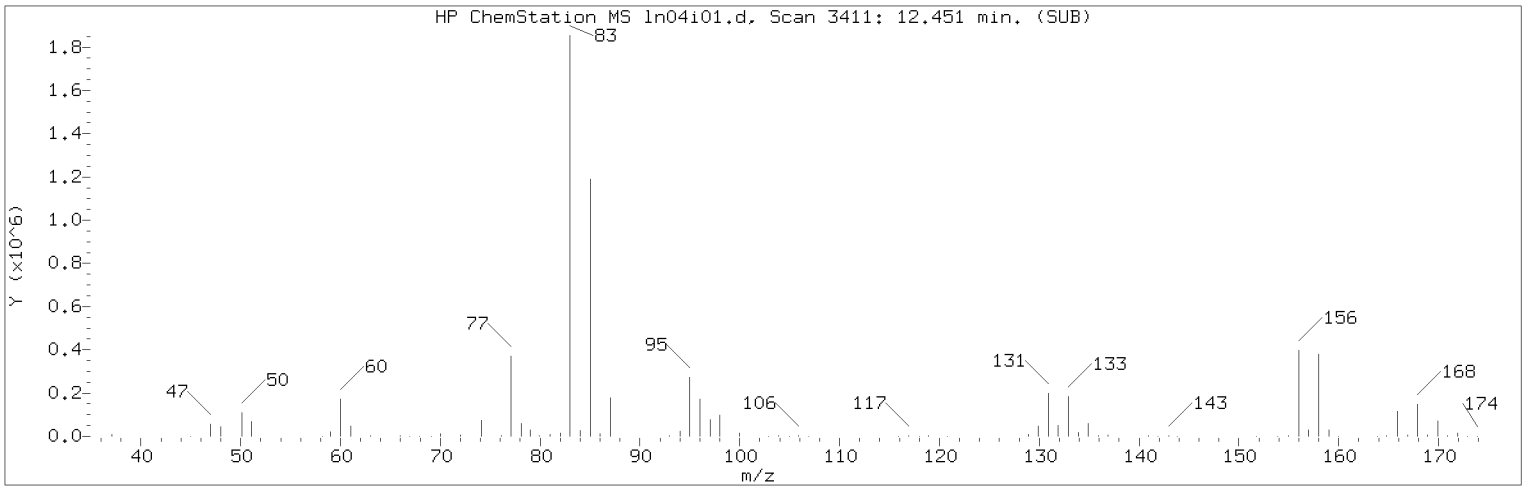
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

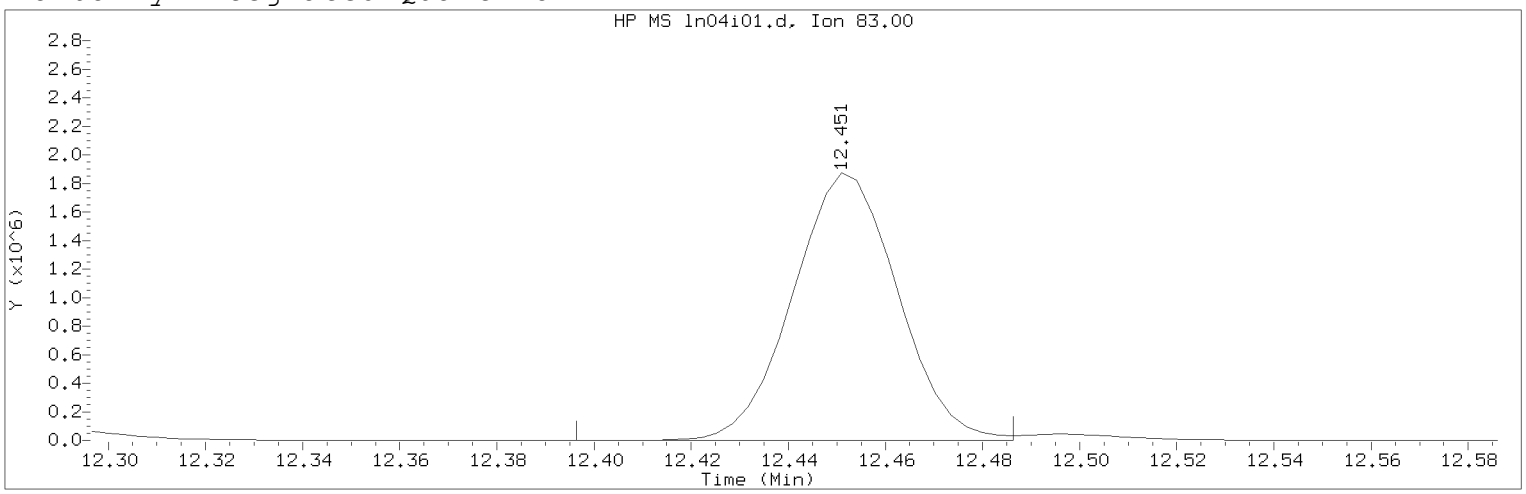
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2293		
Retention Time (minutes)	: 8.856		
Quant Ion	: 88.00		
Area	: 325164		
On-column Amount (ng)	: 3803.8575		
Integration start scan	: 2277	Integration stop scan:	2361
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user JKHowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

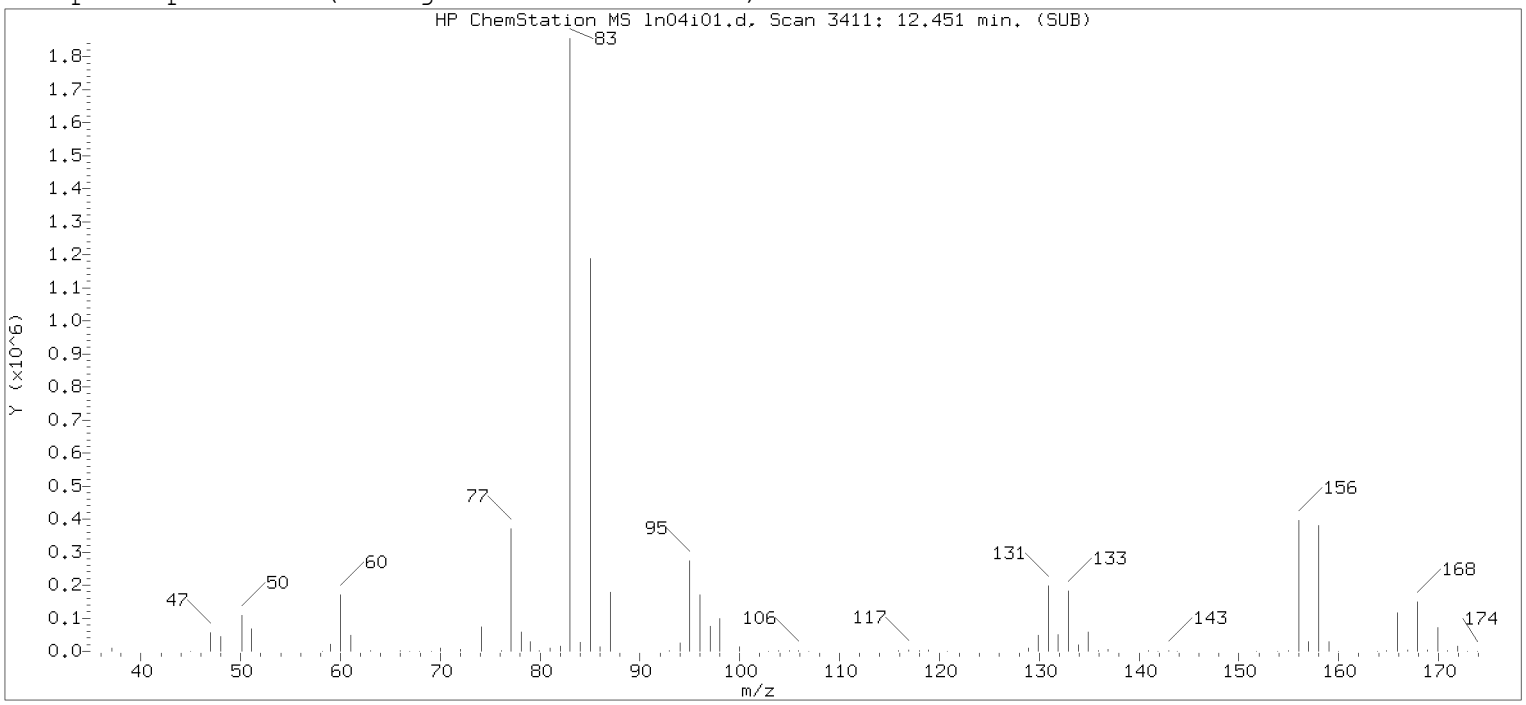
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 2800639M
On-Column Amount (ng) : 310.7054
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

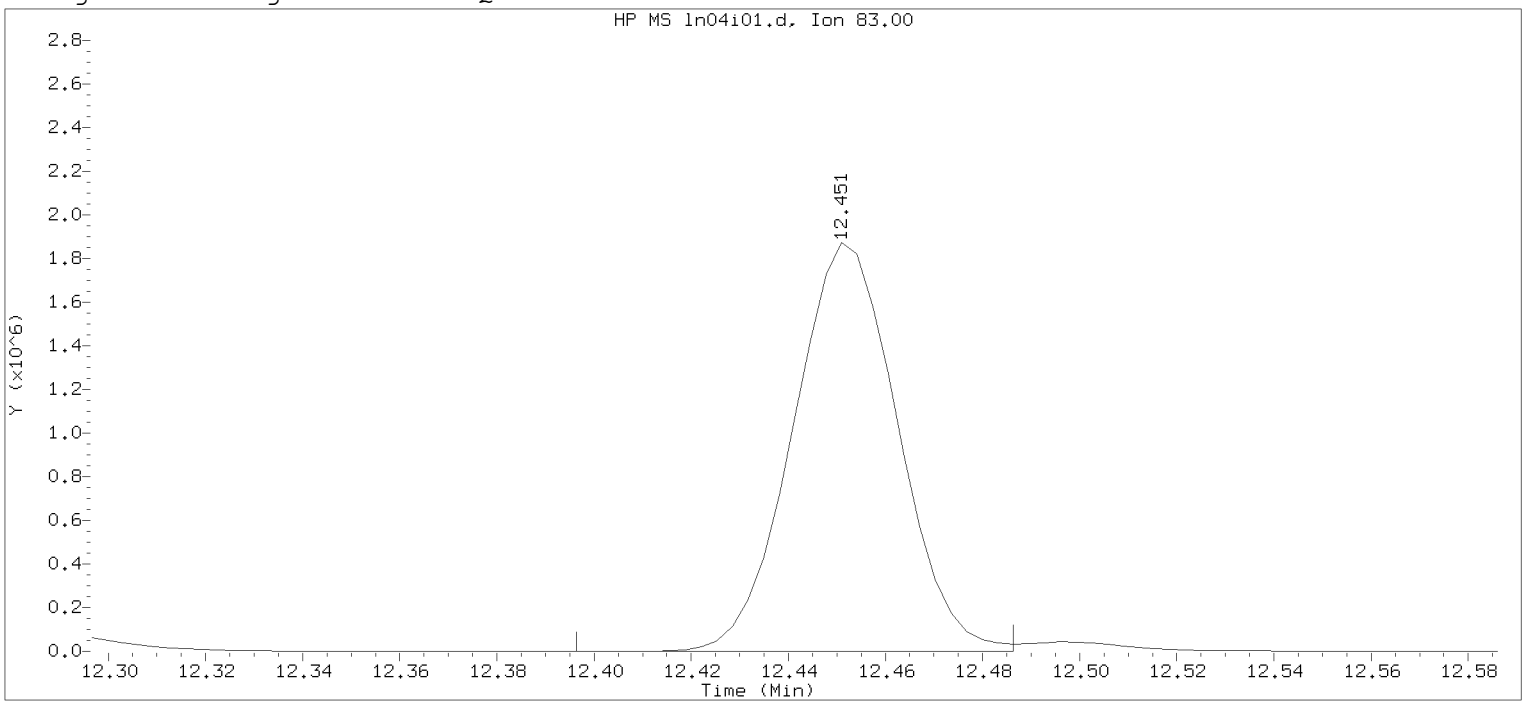
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

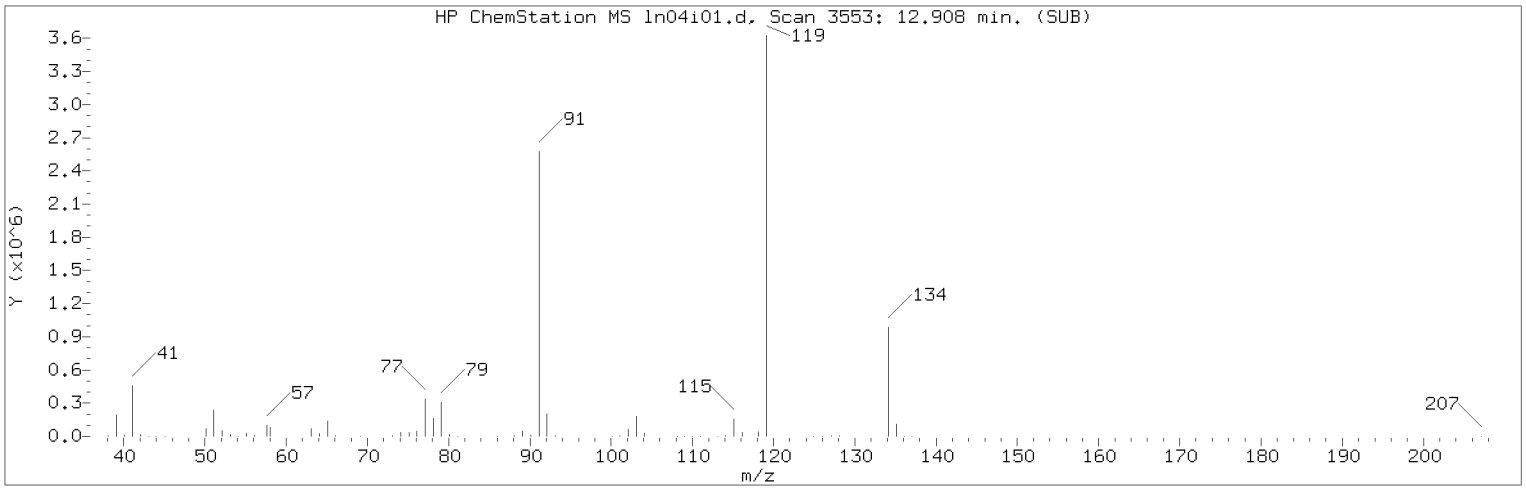
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

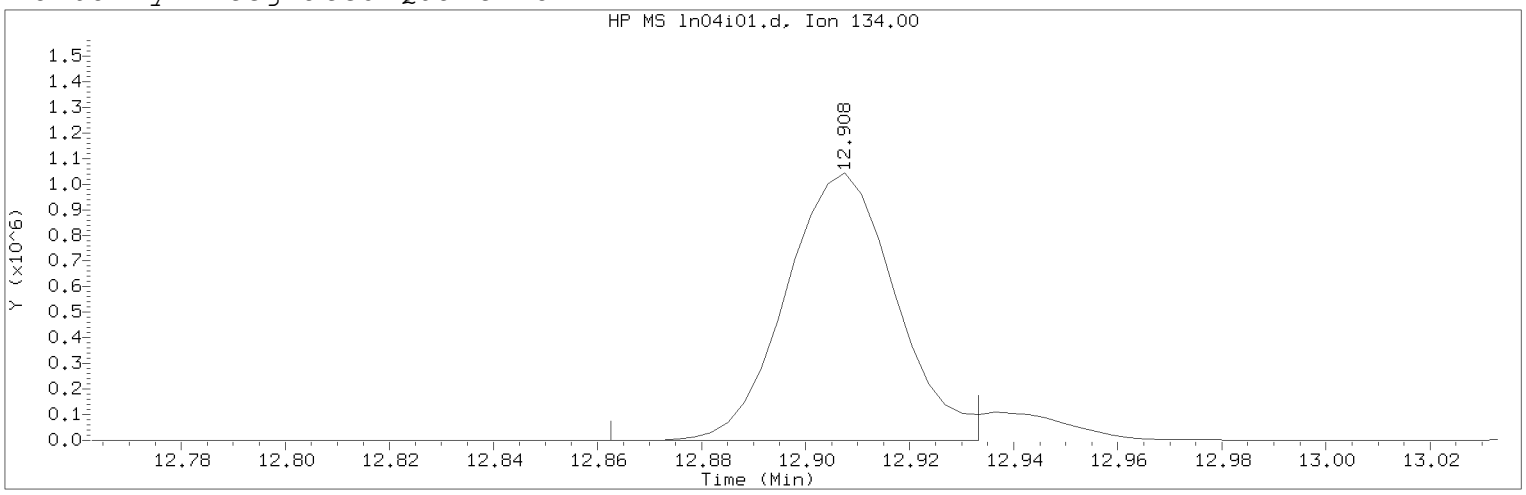
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 2797364
On-column Amount (ng) : 294.0638
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

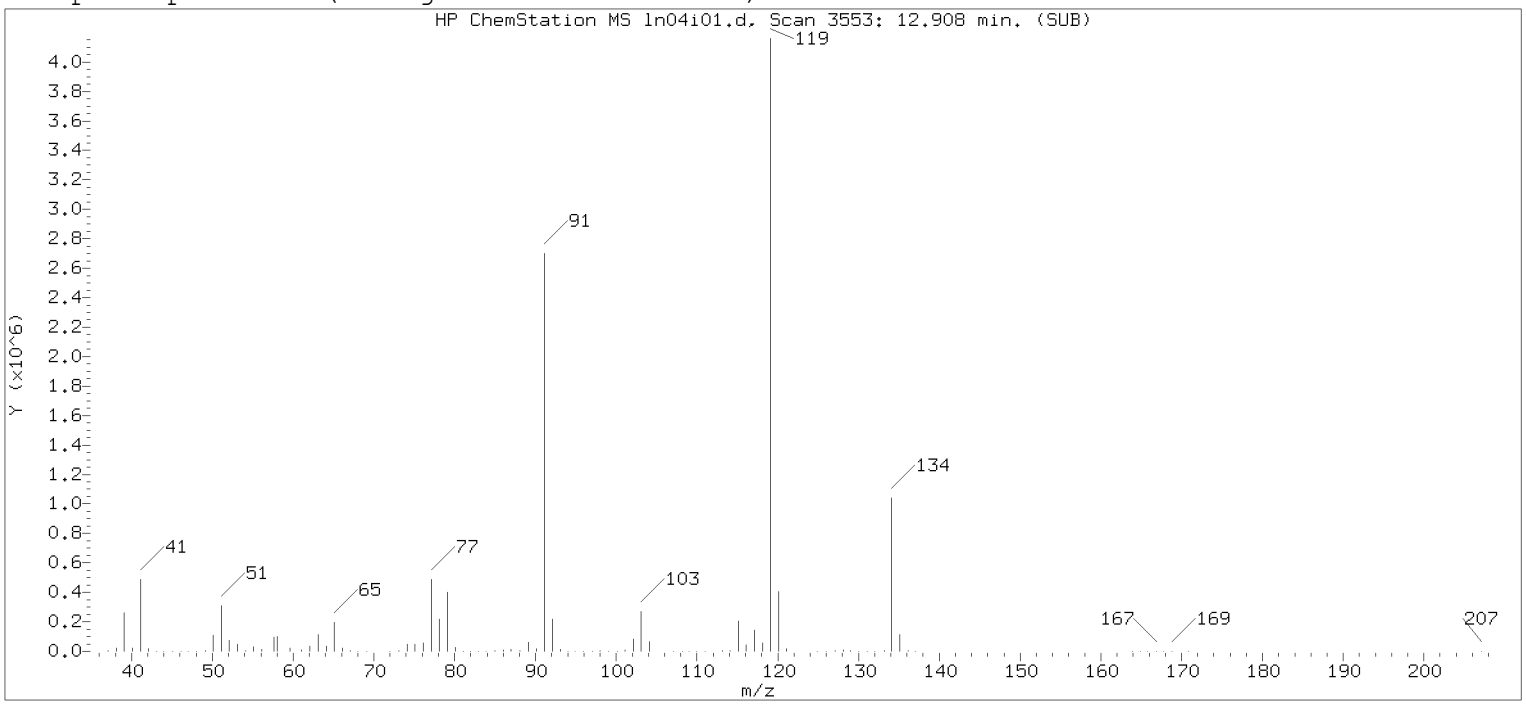
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area (flag) : 1524421M
On-Column Amount (ng) : 323.7167
Integration start scan : 3538 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

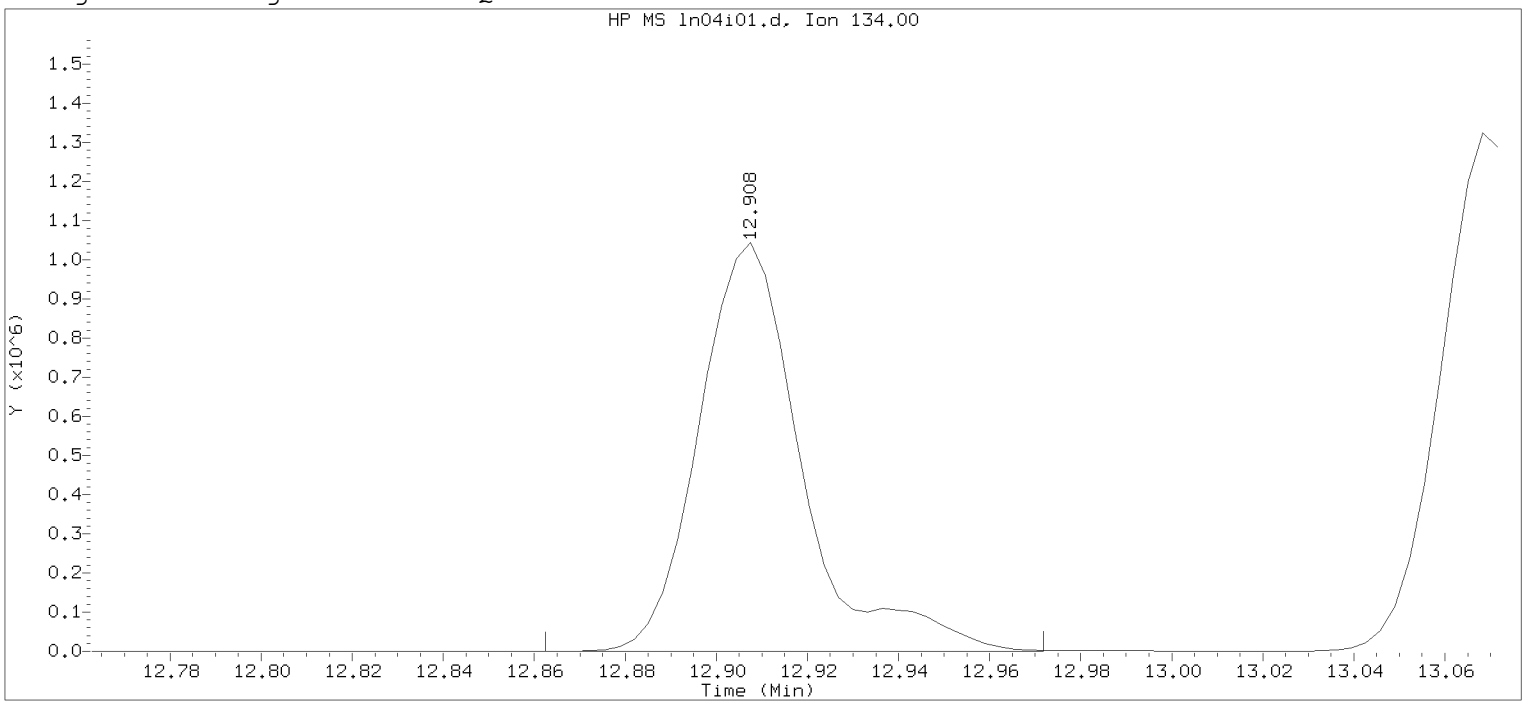
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



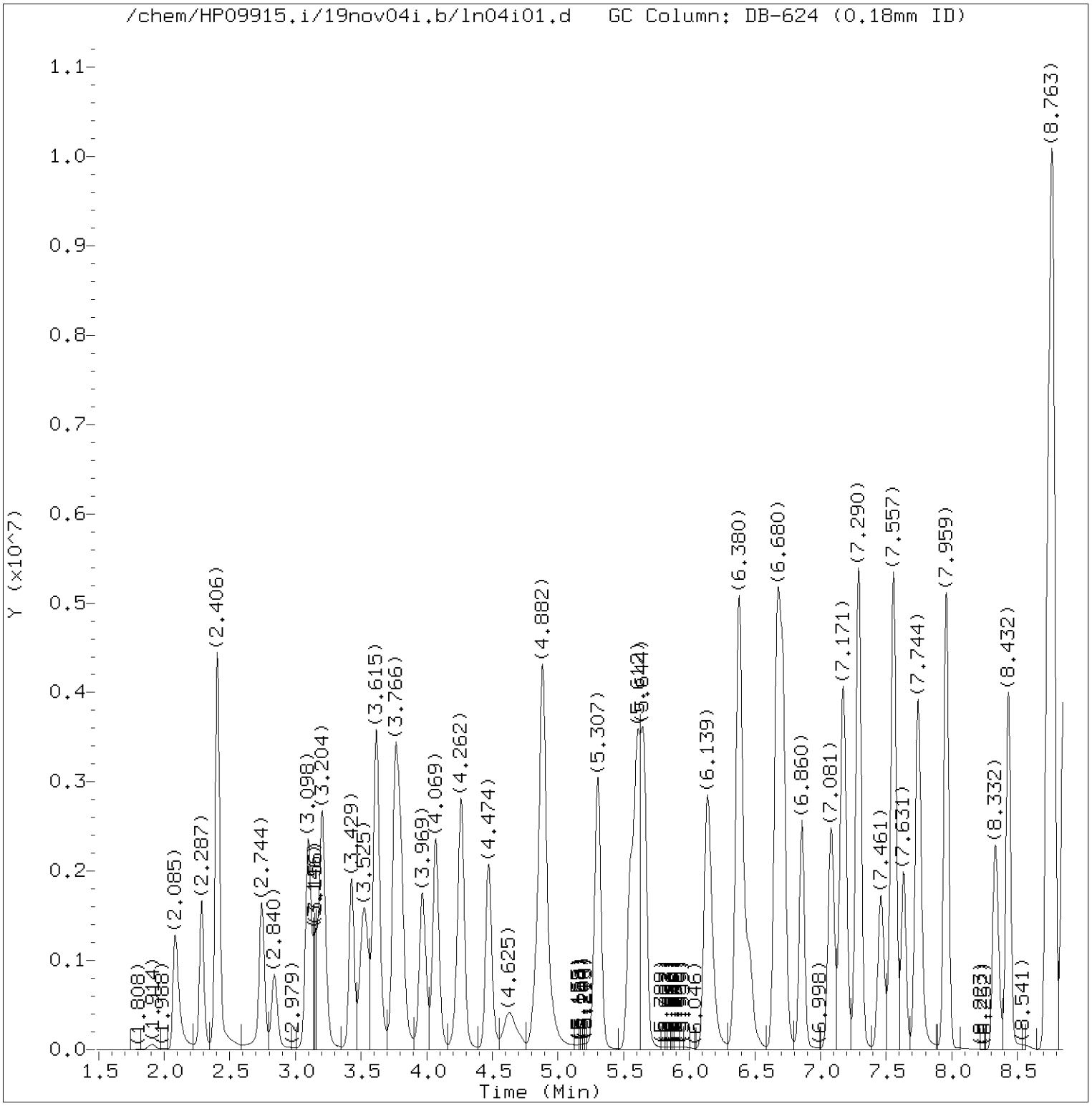
Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area : 1639624
On-column Amount (ng) : 313.1253
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh00001



Total Ion Chromatogram (TIC)

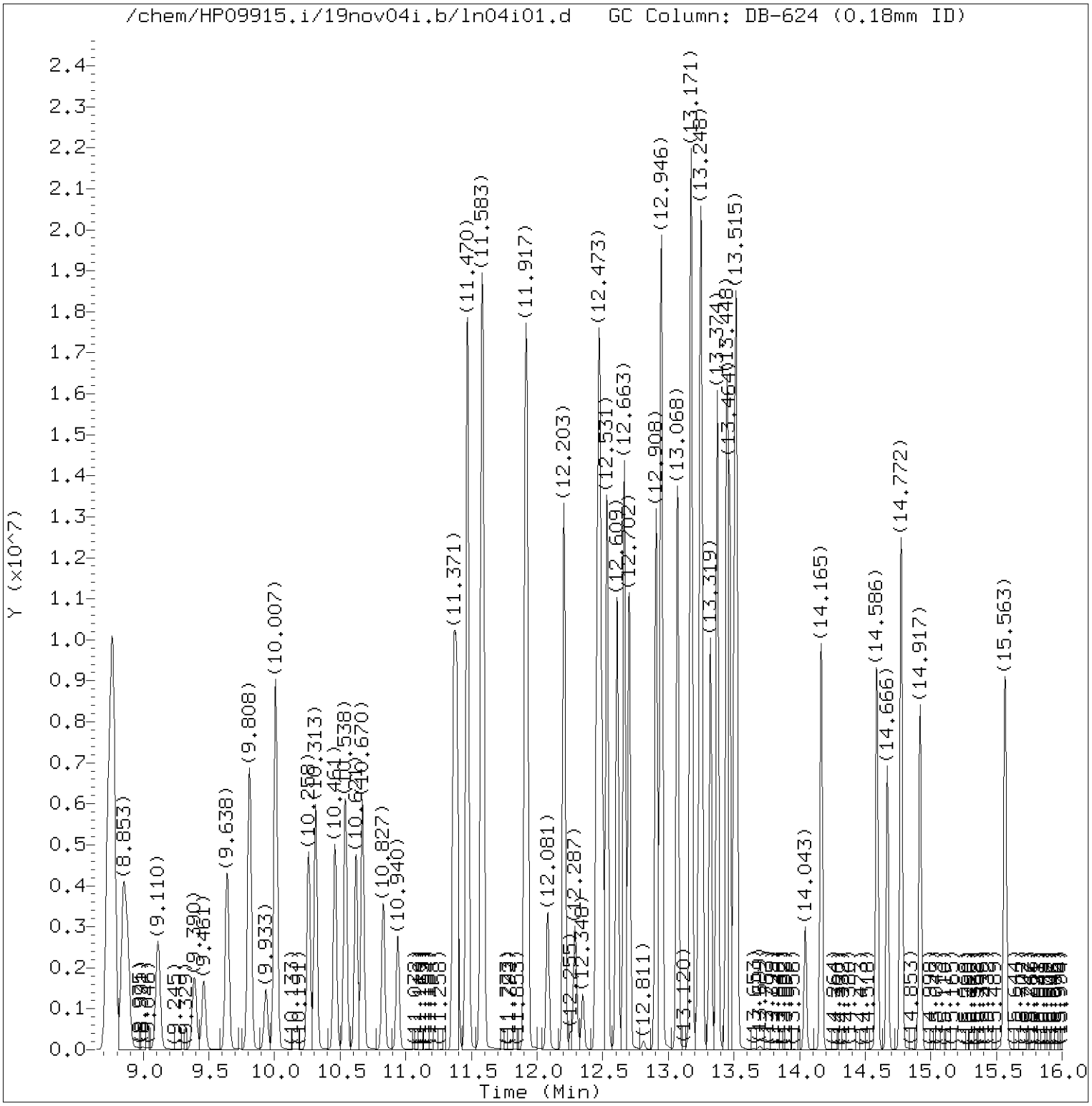
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.085	85	2719746M	347.943
4) Chloromethane	(2)	2.287	50	2403581	319.051
5) 1,3-Butadiene	(2)	2.406	39	1785787M	285.486
6) Vinyl Chloride	(2)	2.406	62	2412855	320.904
8) Bromomethane	(2)	2.744	94	1638575	304.015
9) Chloroethane	(2)	2.837	64	1253478	303.356
10) Dichlorofluoromethane	(2)	3.098	67	2978303M	300.258
12) Trichlorofluoromethane	(2)	3.152	101	2661050	328.734
11) n-Pentane	(2)	3.204	43	2816823	294.455
14) Ethyl ether	(2)	3.429	59	1721693	329.146
15) Freon 123a	(2)	3.525	67	1991616	305.852
16) Acrolein	(1)	3.615	56	5765354	3020.583
17) 1,1-Dichloroethene	(2)	3.760	96	1489890	313.570
17) 1,1-Dichloroethene	(2)	3.757	63	721205	302.767
19) Freon 113	(2)	3.792	101	1732433	319.583
18) Acetone	(1)	3.802	58	531845	621.534
22) Methyl Iodide	(2)	3.966	142	3047145	309.483
21) 2-Propanol	(1)	3.995	45	936919	1523.065
23) Carbon Disulfide	(2)	4.069	76	5676465	317.027
27) Methyl Acetate	(2)	4.239	43	1941315	317.230
25) Allyl Chloride	(2)	4.265	41	2748698	322.482
28) Methylene Chloride	(2)	4.474	84	1745840	308.716
29)*t-Butyl alcohol-d10	(1)	4.503	65	254406M	250.000
30) t-Butyl alcohol	(1)	4.638	59	1641037	1532.140
31) Acrylonitrile	(2)	4.827	53	1039800	315.820
32) trans-1,2-Dichloroethene	(2)	4.885	96	1713357	311.714
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	5505439	305.143
34) n-Hexane	(2)	5.307	57	2863189M	334.811
36) 1,1-Dichloroethane	(2)	5.548	63	3007196	313.618
38) di-Isopropyl ether	(2)	5.609	45	5739955	310.377
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	2776921	322.788
40) Ethyl t-butyl ether	(2)	6.139	59	5425034	302.275
43) 1,2-Dichloroethene (Total)	(2)		96	3646040	624.977
44) 2-Butanone	(2)	6.364	43	2642793	625.317
42) cis-1,2-Dichloroethene	(2)	6.380	96	1932683	313.263
45) 2,2-Dichloropropane	(2)	6.397	77	2377411	318.945
47) Propionitrile	(1)	6.458	54	2126389	1593.336
48) Methacrylonitrile	(2)	6.670	67	2858148	804.768

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.708	128	1075154	328.655
50) Tetrahydrofuran	(1)	6.718	71	758236	628.991
51) Chloroform	(2)	6.860	83	2916299	317.988
52)$Dibromofluoromethane	(2)	7.075	113	276322	50.424
52)$Dibromofluoromethane	(2)	7.075	111	279197	49.969
53) 1,1,1-Trichloroethane	(2)	7.081	97	2560601	327.130
54) Cyclohexane	(2)	7.171	56	3429211	327.611
54) Cyclohexane	(2)	7.171	84	2984908	328.282
54) Cyclohexane	(2)	7.171	69	1068201	329.937
56) Carbon Tetrachloride	(2)	7.287	117	2252864	339.350
55) 1,1-Dichloropropene	(2)	7.294	75	2434619	321.125
58) Isobutyl Alcohol	(1)	7.461	41	1382486	3835.573
57)$1,2-Dichloroethane-d4	(2)	7.528	102	68480	49.033
57)$1,2-Dichloroethane-d4	(2)	7.532	65	307306	49.375
57)$1,2-Dichloroethane-d4	(2)	7.528	104	44002	49.326
60) Benzene	(2)	7.557	78	7094466	311.169
61) 1,2-Dichloroethane	(2)	7.634	62	2222342	303.049
61) 1,2-Dichloroethane	(2)	7.634	98	228988	315.535
65) t-Amyl methyl ether	(2)	7.744	73	5421278	300.945
67) n-Heptane	(2)	7.959	43	2592531MA	324.518
66)*Fluorobenzene	(2)	7.959	96	1120873	50.000
69) n-Butanol	(1)	8.332	56	2465385M	7947.068
71) Trichloroethene	(2)	8.432	95	1841720	320.821
72) Methylcyclohexane	(2)	8.734	83	3568410	335.054
72) Methylcyclohexane	(2)	8.734	98	1632993	338.844
73) 1,2-Dichloropropane	(2)	8.769	63	1825943	315.397
76) Methyl Methacrylate	(2)	8.850	69	1904896A	340.256
75) 1,4-Dioxane	(1)	8.856	88	338379M	3968.421
74) Dibromomethane	(2)	8.879	93	1210939	323.274
78) Bromodichloromethane	(2)	9.113	83	2314651	344.351
79) 2-Nitropropane	(2)	9.390	41	1438925	706.755
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	926413	372.584
81) cis-1,3-Dichloropropene	(2)	9.638	75	3074664	344.402
82) 4-Methyl-2-pentanone	(2)	9.808	43	5422938	607.899
83)$Toluene-d8	(3)	9.933	98	1156351	49.563
83)$Toluene-d8	(3)	9.933	100	751534	49.726
88) Toluene	(3)	10.007	92	4532879	309.894
90) 1,3-Dichloropropene (total)	(3)		100	5974636	693.659

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	2899972	349.257
91) Ethyl Methacrylate	(3)	10.313	69	3356305	332.603
92) 1,1,2-Trichloroethane	(3)	10.461	97	1768710	318.935
93) Tetrachloroethene	(3)	10.541	166	1990565	321.327
94) 1,3-Dichloropropane	(3)	10.621	76	3006585	317.532
96) 2-Hexanone	(3)	10.670	43	3998423	593.616
97) Dibromochloromethane	(3)	10.827	129	2037523	358.670
99) 1,2-Dibromoethane	(3)	10.940	107	1987783	330.088
100)*Chlorobenzene-d5	(3)	11.361	117	891668	50.000
101) 1-Chlorohexane	(3)	11.364	91	2458057	312.814
102) Chlorobenzene	(3)	11.387	112	5140609	310.783
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	1789998	328.446
104) Ethylbenzene	(3)	11.470	91	8606821	307.854
106) m+p-Xylene	(3)	11.583	106	6690837	608.359
108) Xylene (Total)	(3)		106	9979970	911.130
107) o-Xylene	(3)	11.908	106	3289133	302.771
109) Styrene	(3)	11.924	104	5647939	314.619
110) Bromoform	(3)	12.081	173	1534520	361.500
111) Isopropylbenzene	(3)	12.203	105	8466138	310.714
112) Cyclohexanone	(1)	12.287	55	1351186	4046.080
114)$4-Bromofluorobenzene	(3)	12.348	95	440049	49.810
114)$4-Bromofluorobenzene	(3)	12.348	174	362553	49.502
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	2800639M	310.705
115) Bromobenzene	(4)	12.467	156	2234066	311.517
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	2150976	773.637
117) 1,2,3-Trichloropropane	(4)	12.499	110	866230	313.172
119) n-Propylbenzene	(4)	12.531	91	9654812	308.142
120) 2-Chlorotoluene	(4)	12.609	126	2098494	315.266
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	7238022	317.873
121) 4-Chlorotoluene	(4)	12.702	126	2155793	311.148
124) tert-Butylbenzene	(4)	12.908	134	1524421M	323.717
125) Pentachloroethane	(4)	12.940	167	1461833	360.511
126) 1,2,4-Trimethylbenzene	(4)	12.949	105	7469187	311.236
127) sec-Butylbenzene	(4)	13.068	105	8682126	308.971
129) 1,3-Dichlorobenzene	(4)	13.168	146	3858953	292.822
130) p-Isopropyltoluene	(4)	13.174	119	7289488	299.854
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	477171	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	4013510	293.777

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

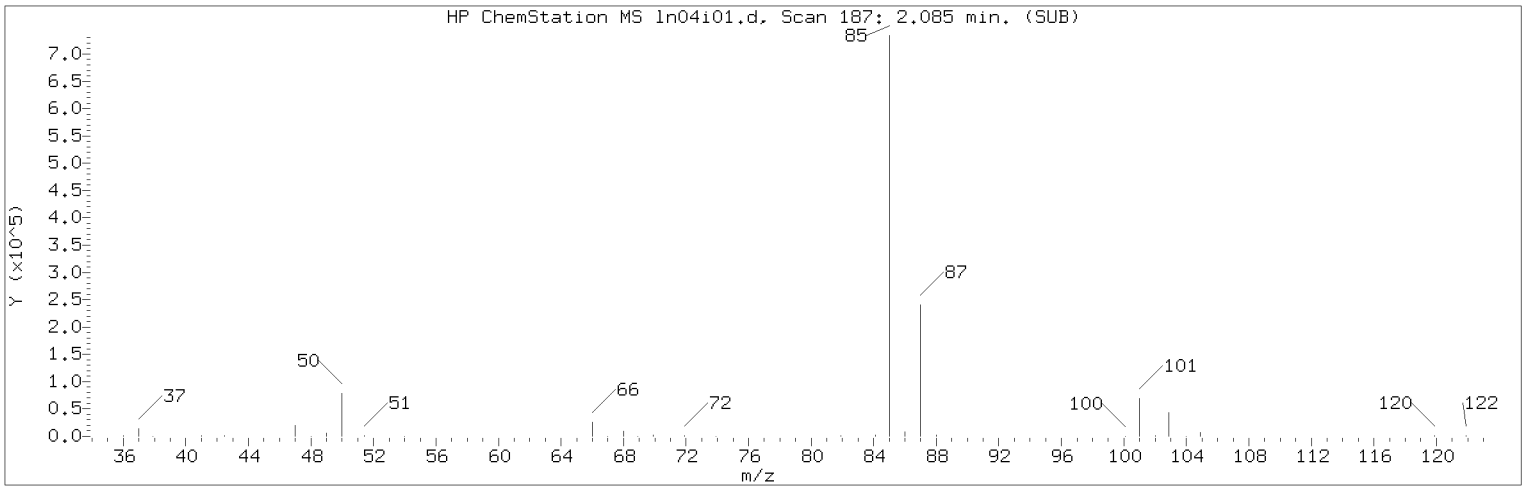
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

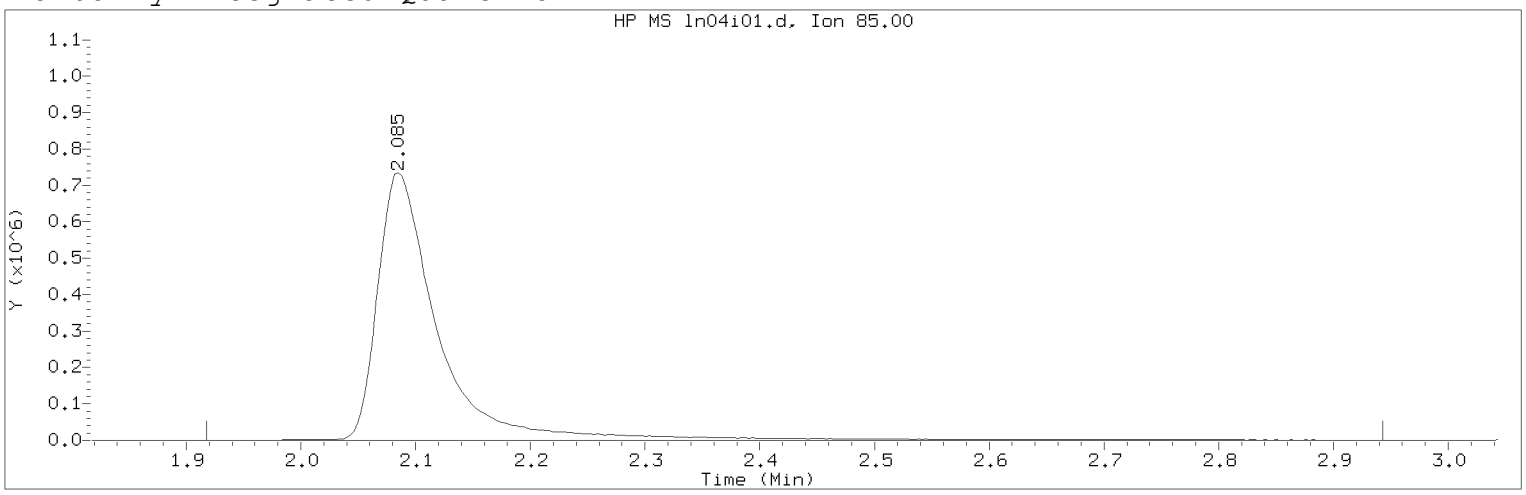
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	7915203	311.364
135) Benzyl Chloride	(4)	13.319	91	6484944	336.931
136) 1,3-Diethylbenzene	(4)	13.374	119	4897725	309.573
141) Diethylbenzene (total)	(4)		100	13982971	913.975
137) 1,4-Diethylbenzene	(4)	13.444	119	5013123	299.077
139) n-Butylbenzene	(4)	13.467	92	3608595	290.316
138) 1,2-Dichlorobenzene	(4)	13.502	146	3859125	296.761
140) 1,2-Diethylbenzene	(4)	13.518	119	4072123	305.325
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	669008	339.050
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	2855960	285.855
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	2681523	276.030
147) Hexachlorobutadiene	(4)	14.670	225	1157297	252.311
148) Naphthalene	(4)	14.772	128	9186333	294.145
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	2488608	263.270
150) 2-Methylnaphthalene	(4)	15.563	142	4666682	242.655

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

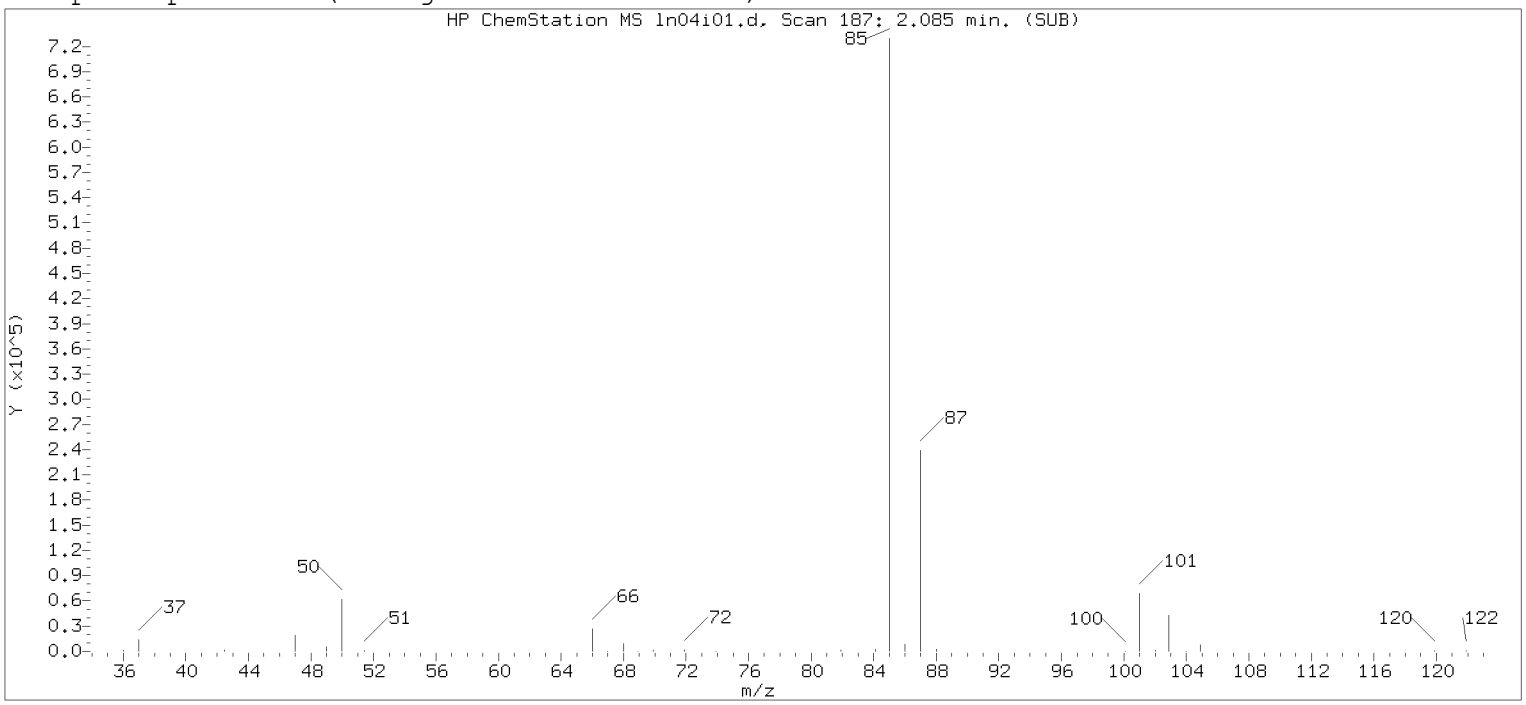
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area (flag) : 2719746M
On-Column Amount (ng) : 347.9426
Integration start scan : 134 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

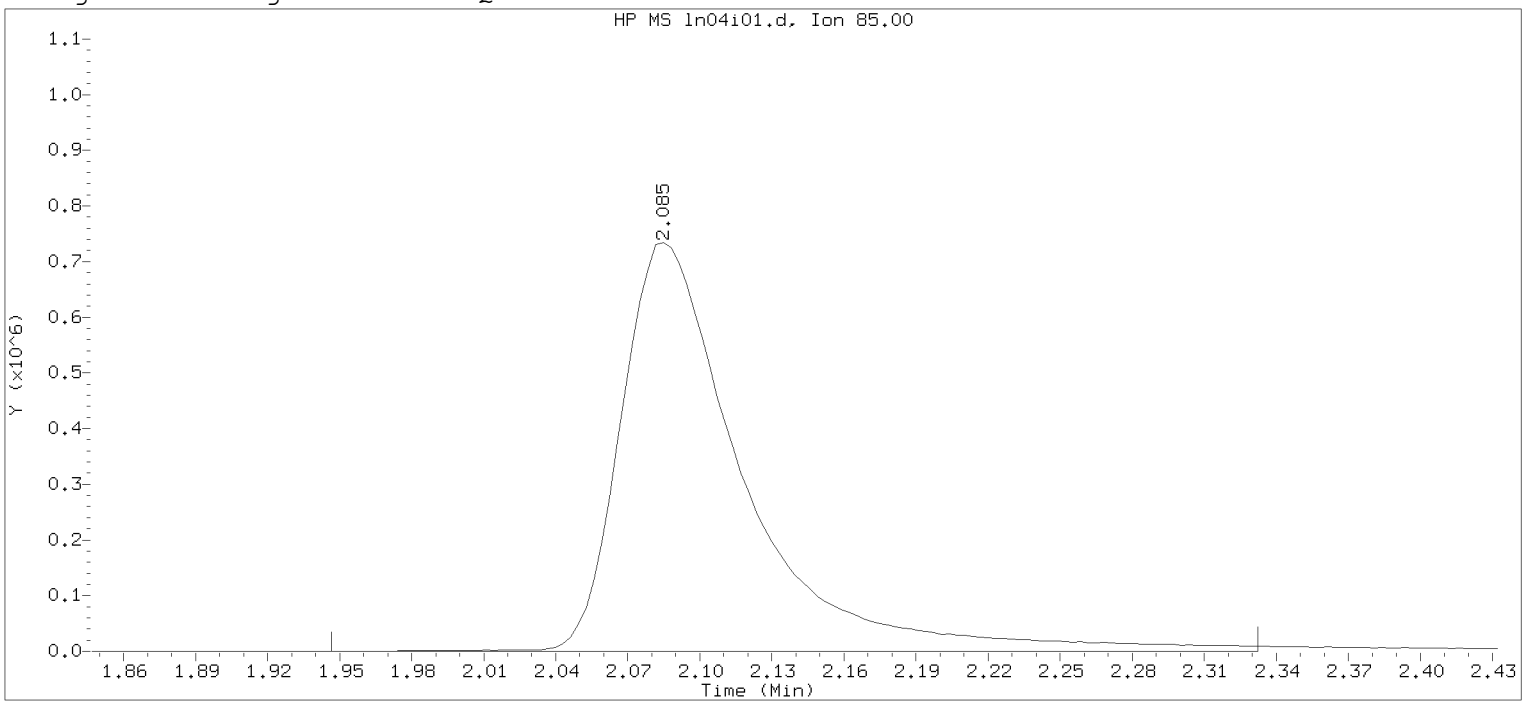
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

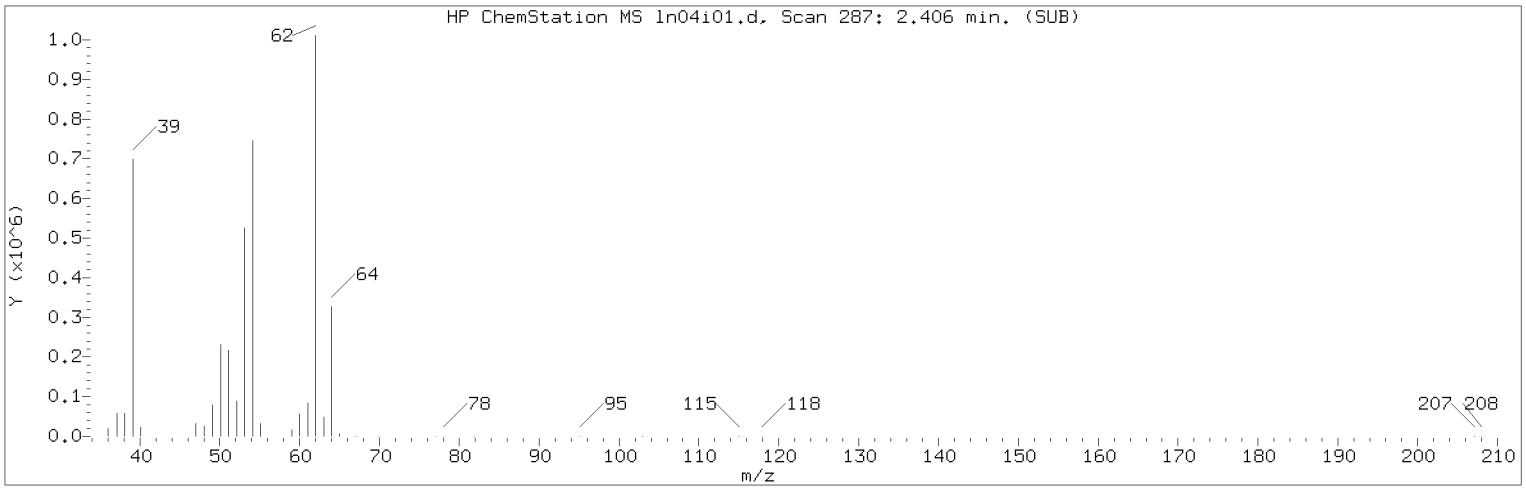
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

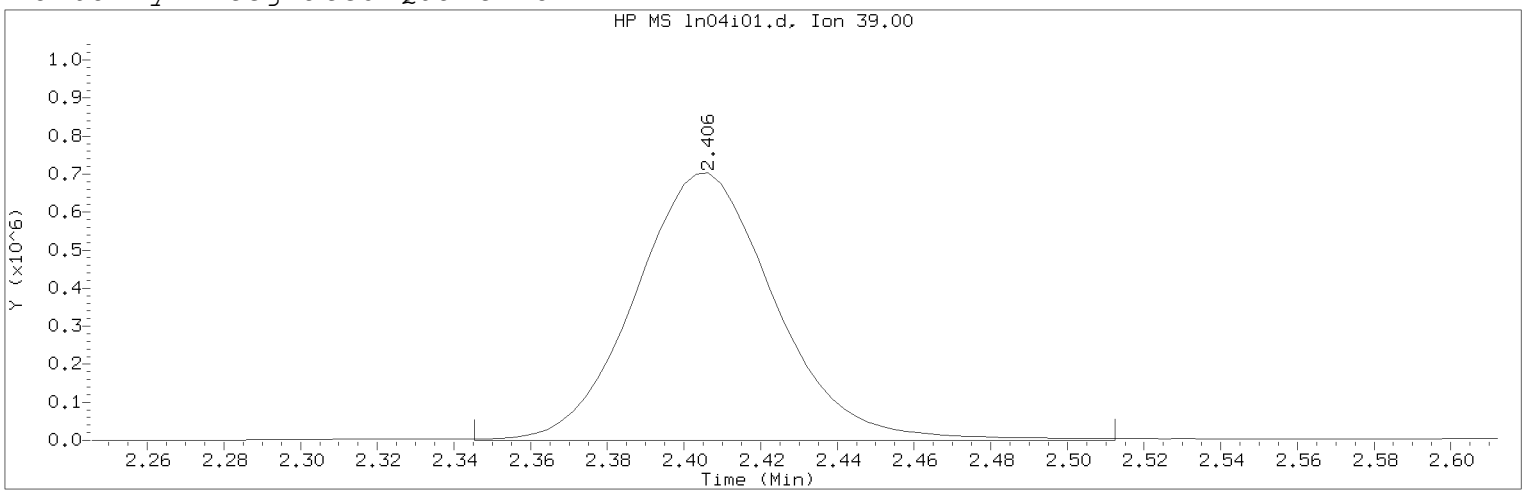
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area : 2624212
On-column Amount (ng) : 308.6520
Integration start scan : 143 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

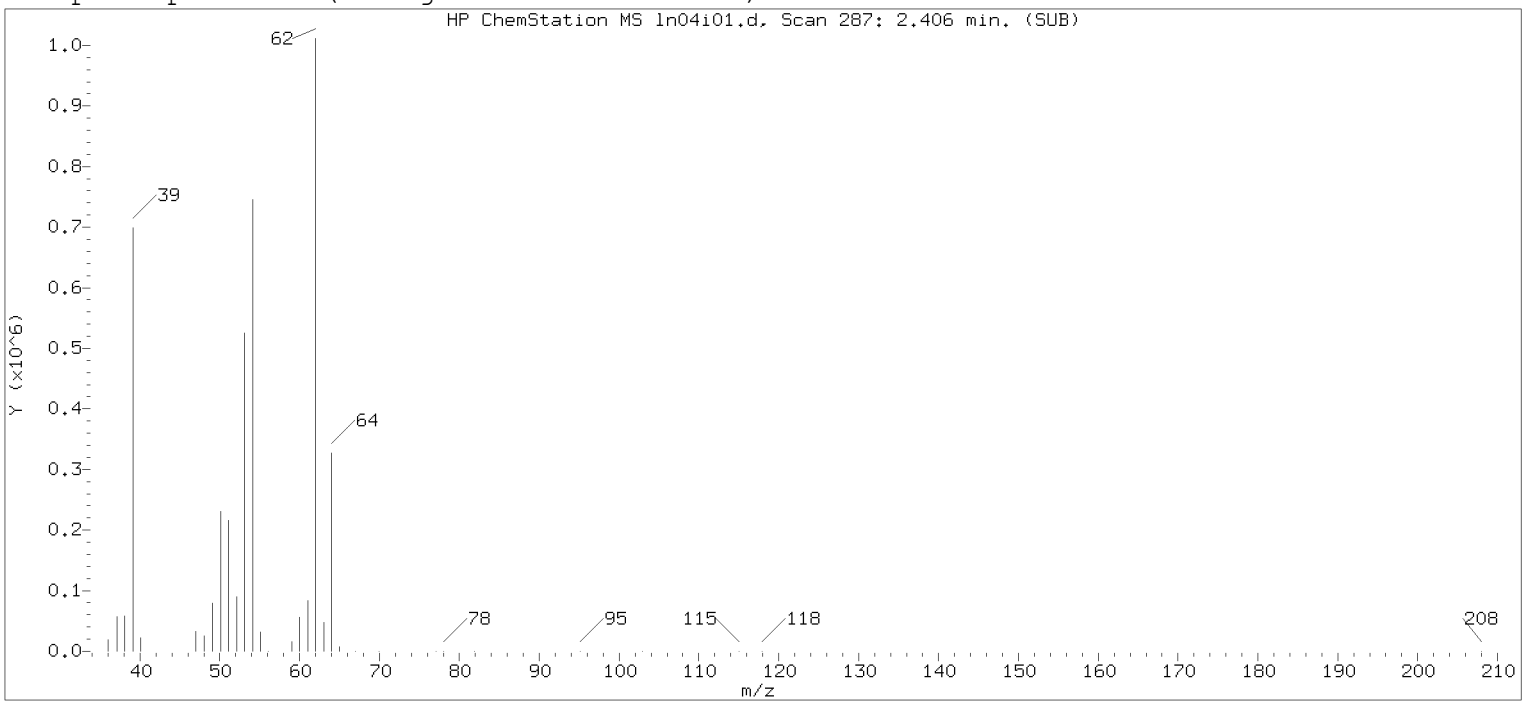
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 1785787M
On-Column Amount (ng) : 285.4858
Integration start scan : 267 Integration stop scan: 319
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

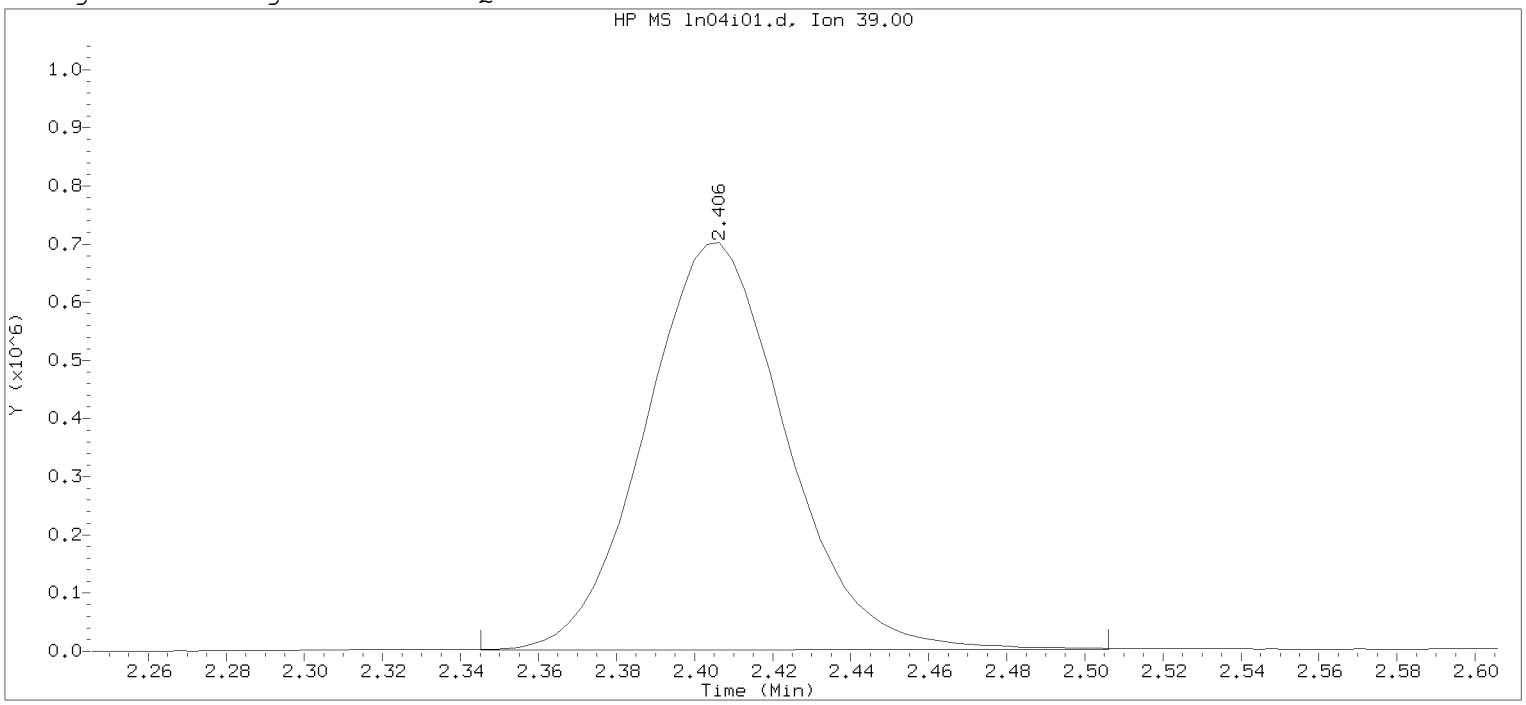
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

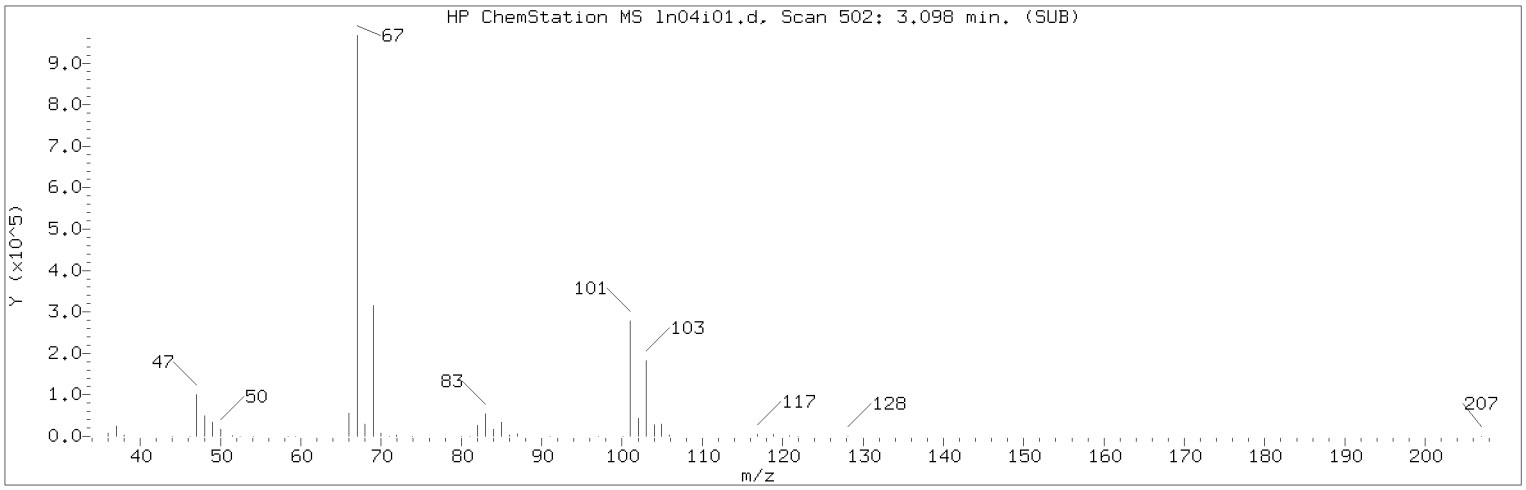
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

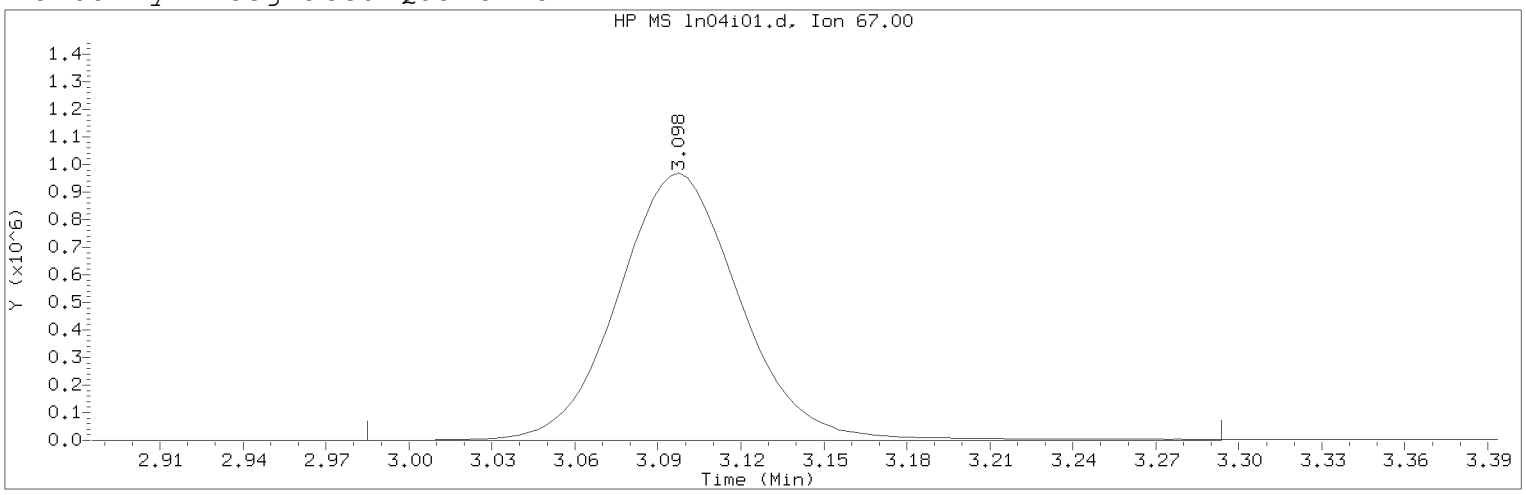
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 1755596
On-column Amount (ng) : 295.0708
Integration start scan : 267 Integration stop scan: 317
Y at integration start : 2196 Y at integration end: 3553

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

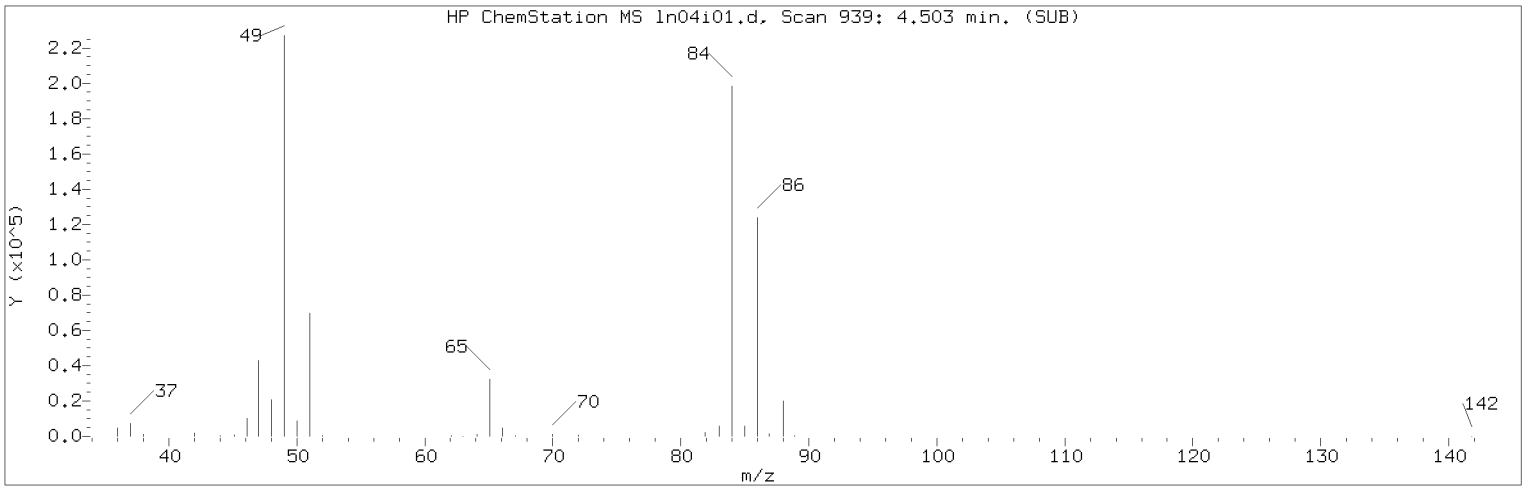
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 502
Retention Time (minutes): 3.098
Quant Ion : 67.00
Area (flag) : 2978303M
On-Column Amount (ng) : 300.2583
Integration start scan : 466 Integration stop scan: 562
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

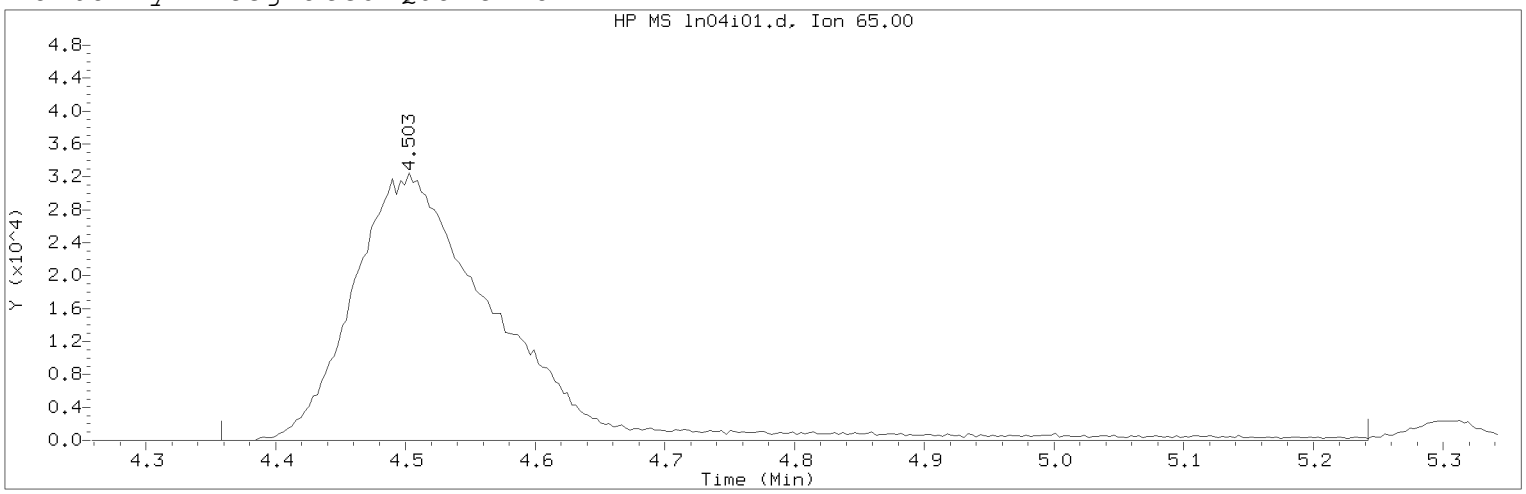
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

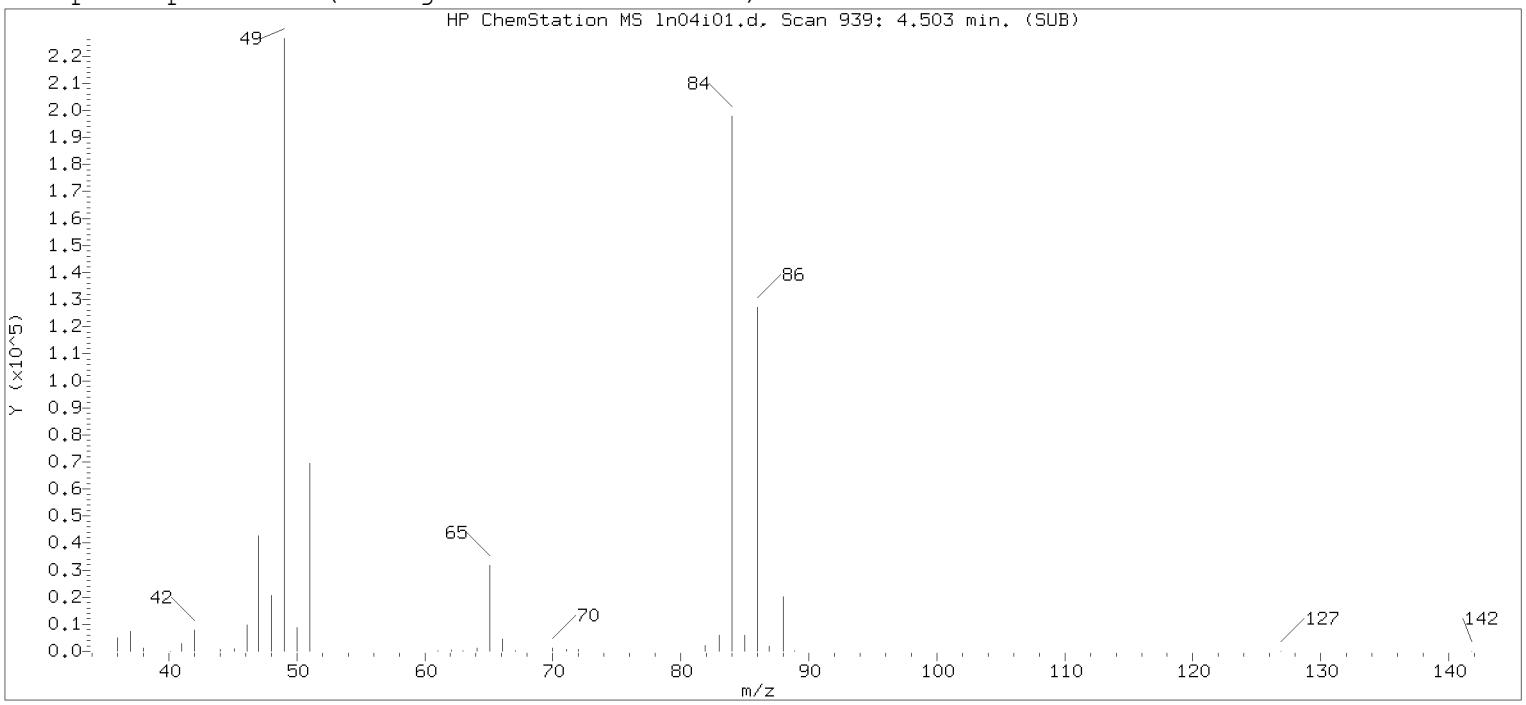
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area (flag) : 254406M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1168
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

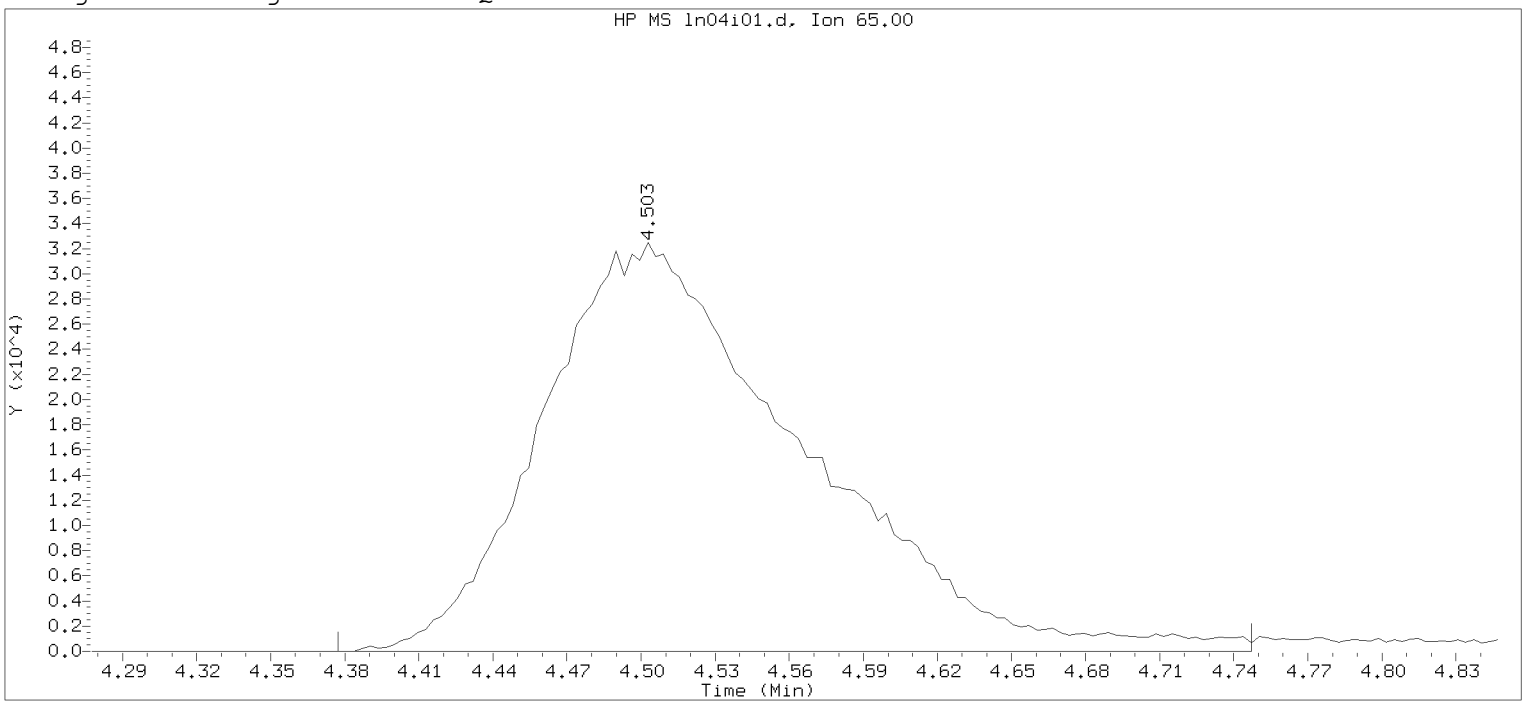
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

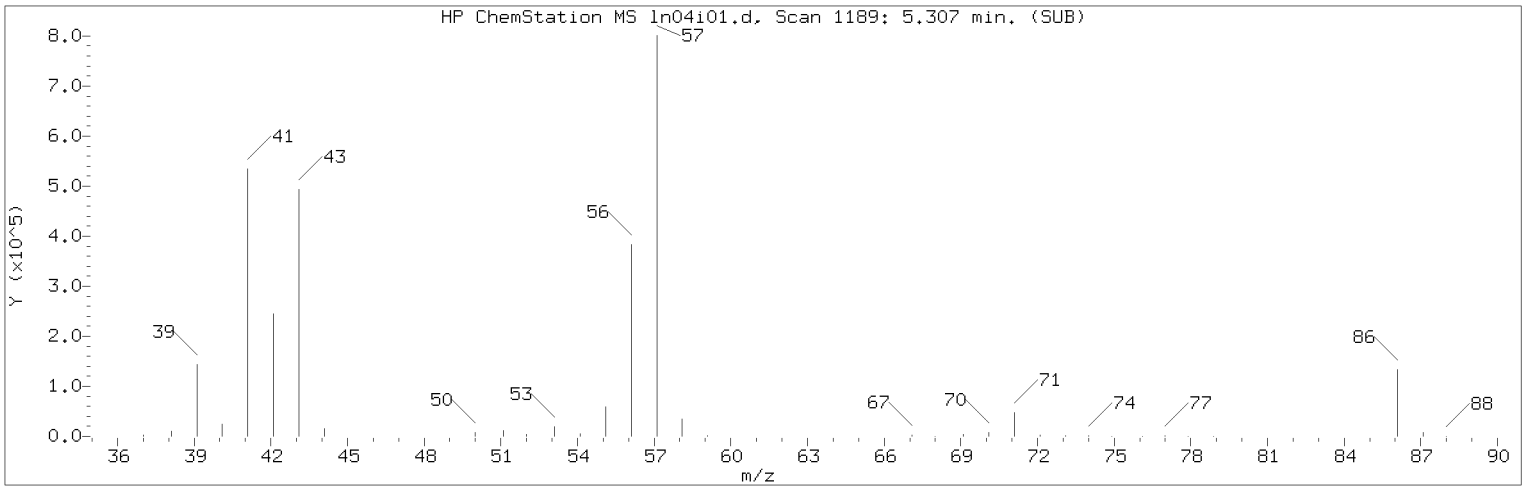
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

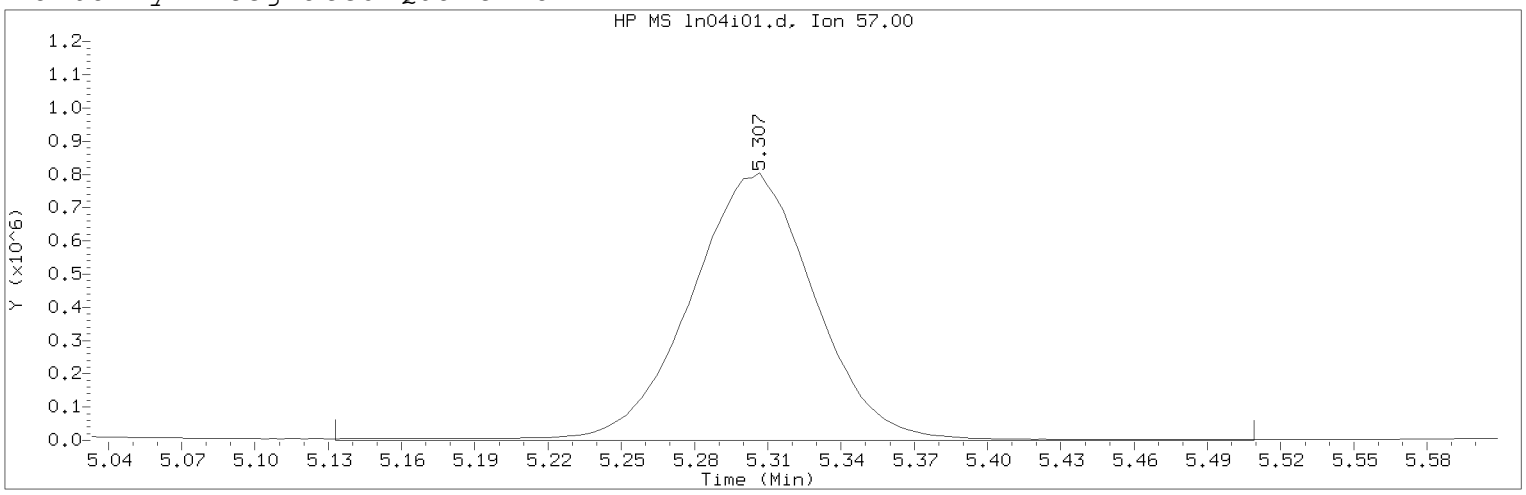
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area : 237264
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user: CW mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

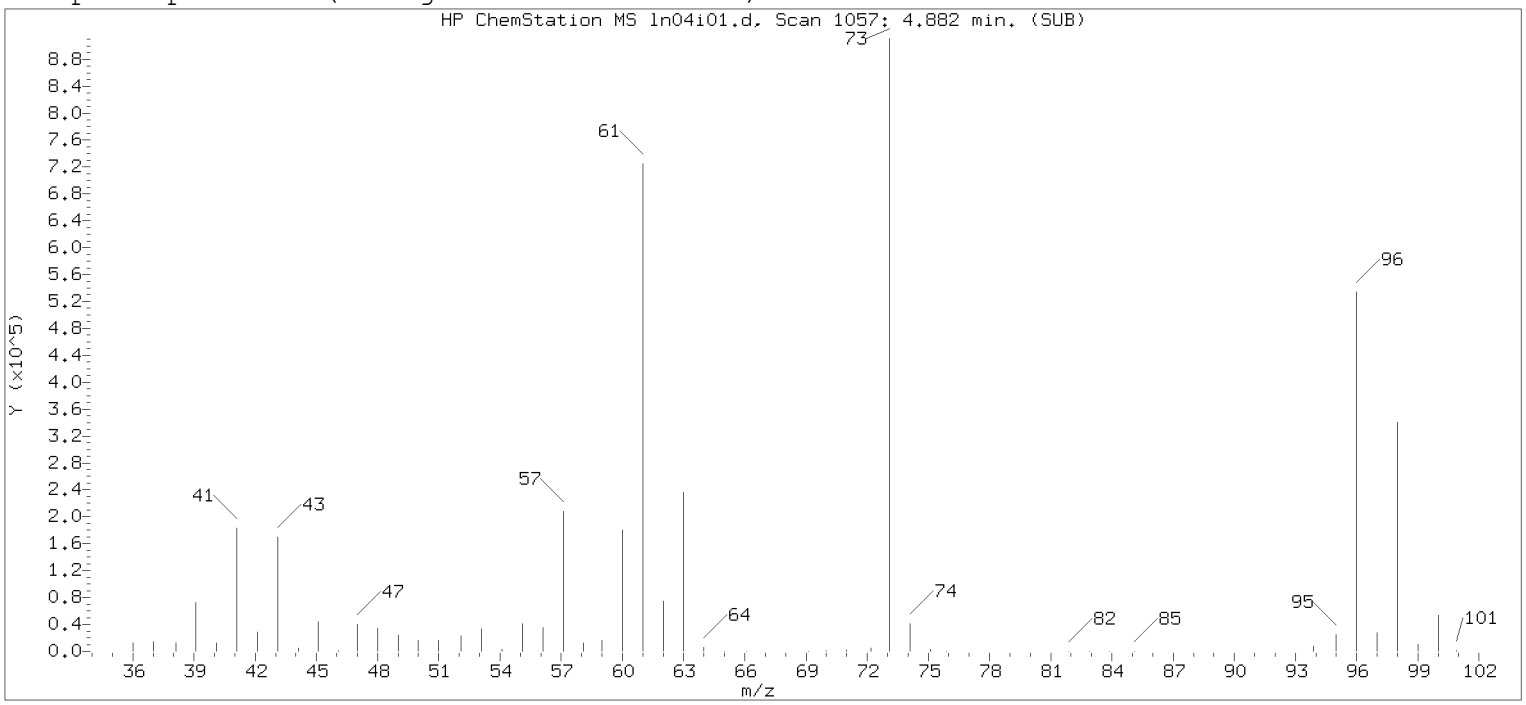
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1189
Retention Time (minutes): 5.307
Quant Ion : 57.00
Area (flag) : 2863189M
On-Column Amount (ng) : 334.8105
Integration start scan : 1134 Integration stop scan: 1251
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

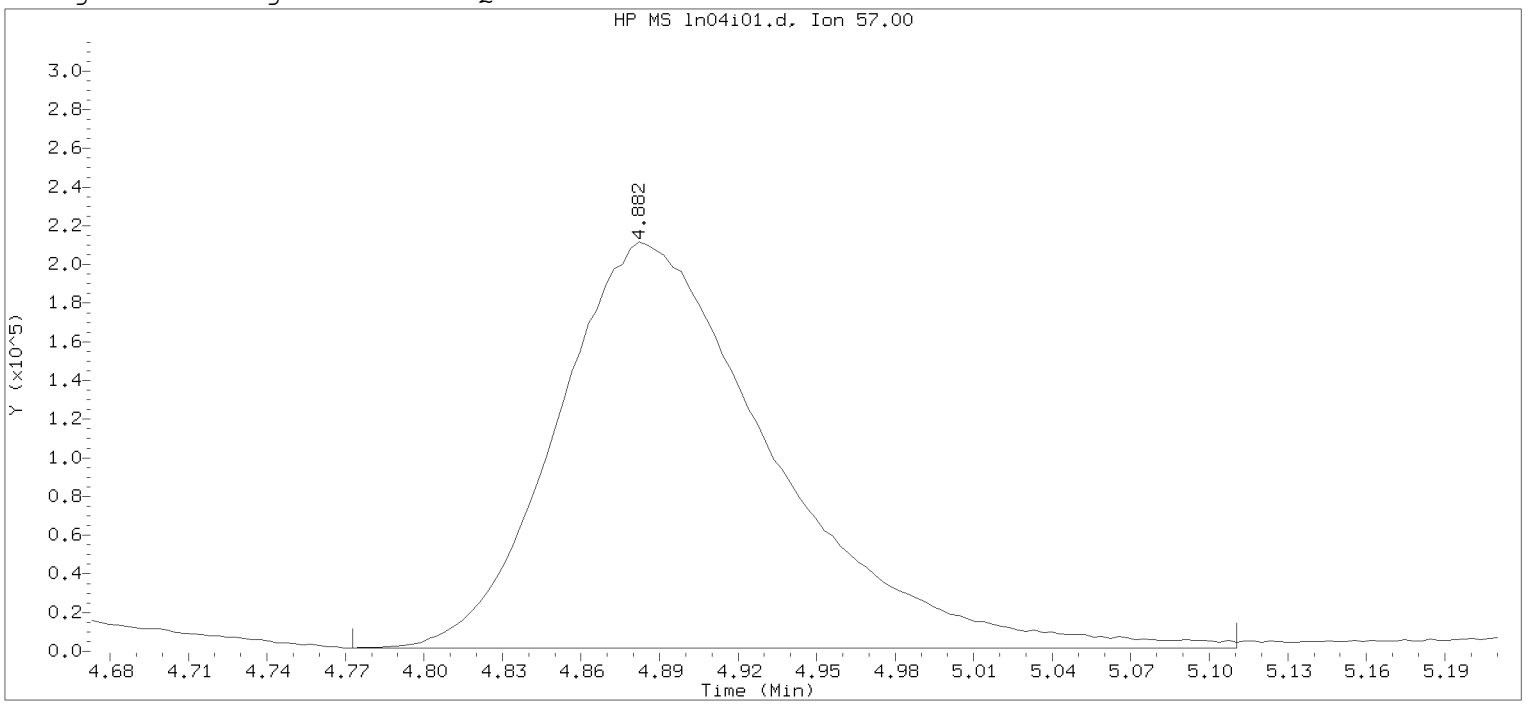
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

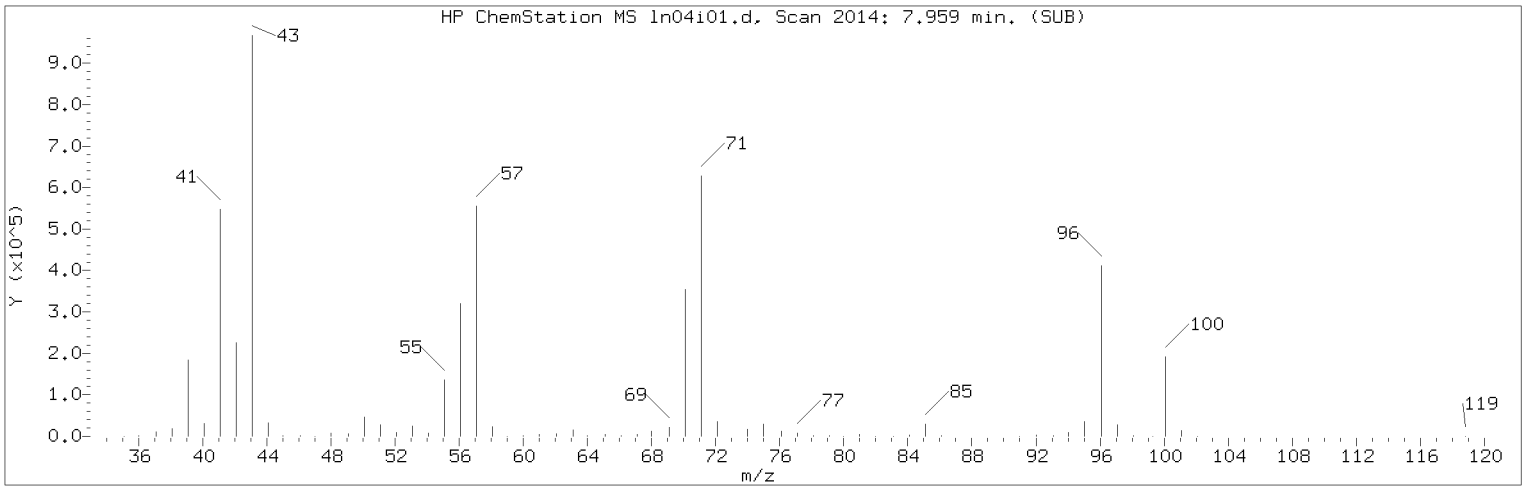
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

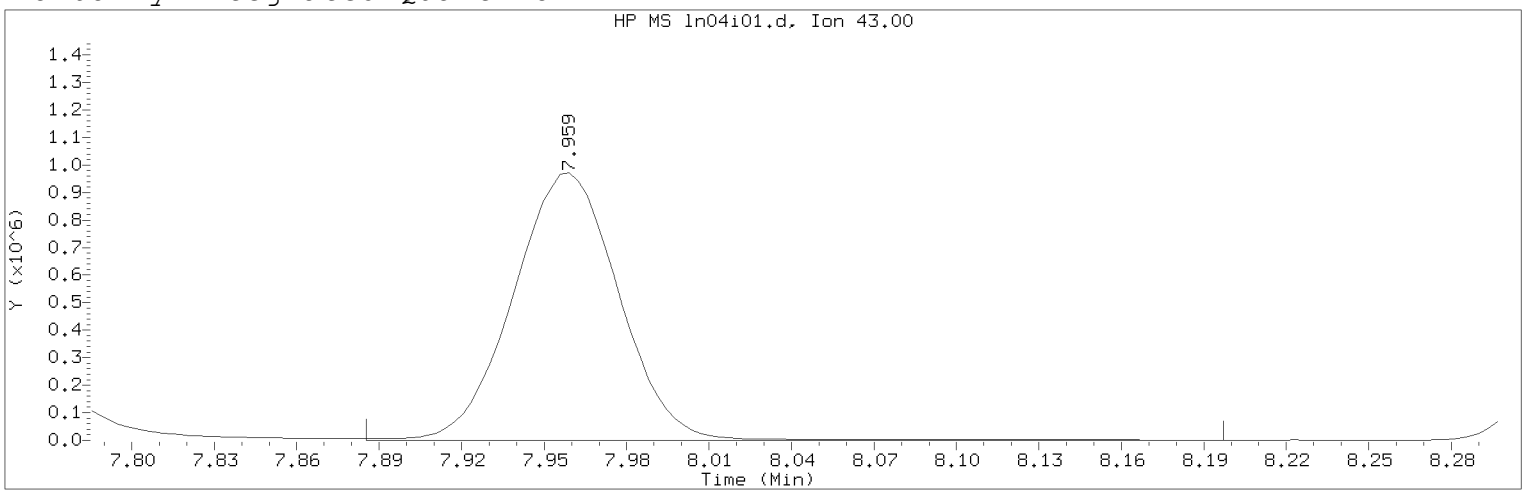
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1057
Retention Time (minutes): 4.882
Quant Ion : 57.00
Area : 1202378
On-column Amount (ng) : 301.4561
Integration start scan : 1022 Integration stop scan: 1127
Y at integration start : 1806 Y at integration end: 1806

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

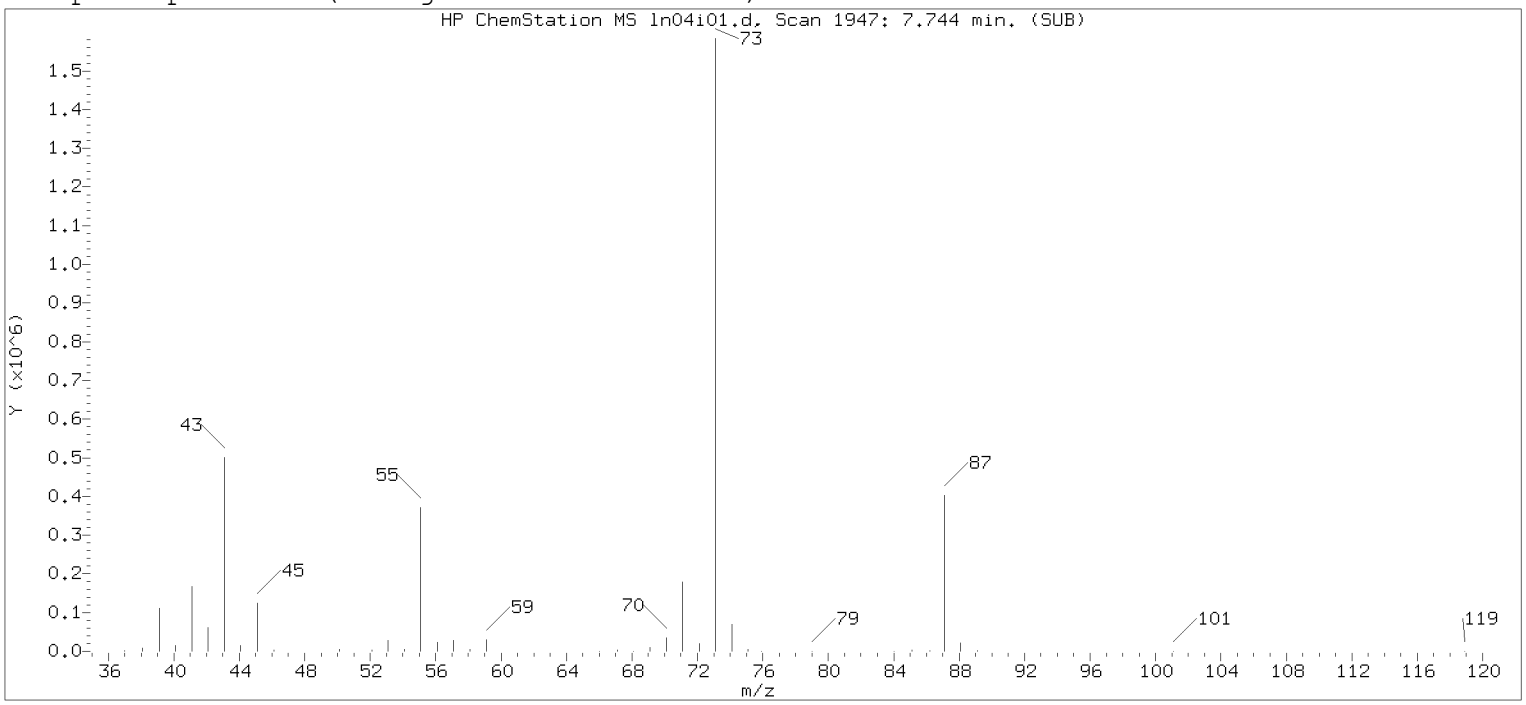
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2014
Retention Time (minutes): 7.959
Quant Ion : 43.00
Area (flag) : 2592531MA
On-Column Amount (ng) : 324.5176
Integration start scan : 1990 Integration stop scan: 2087
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

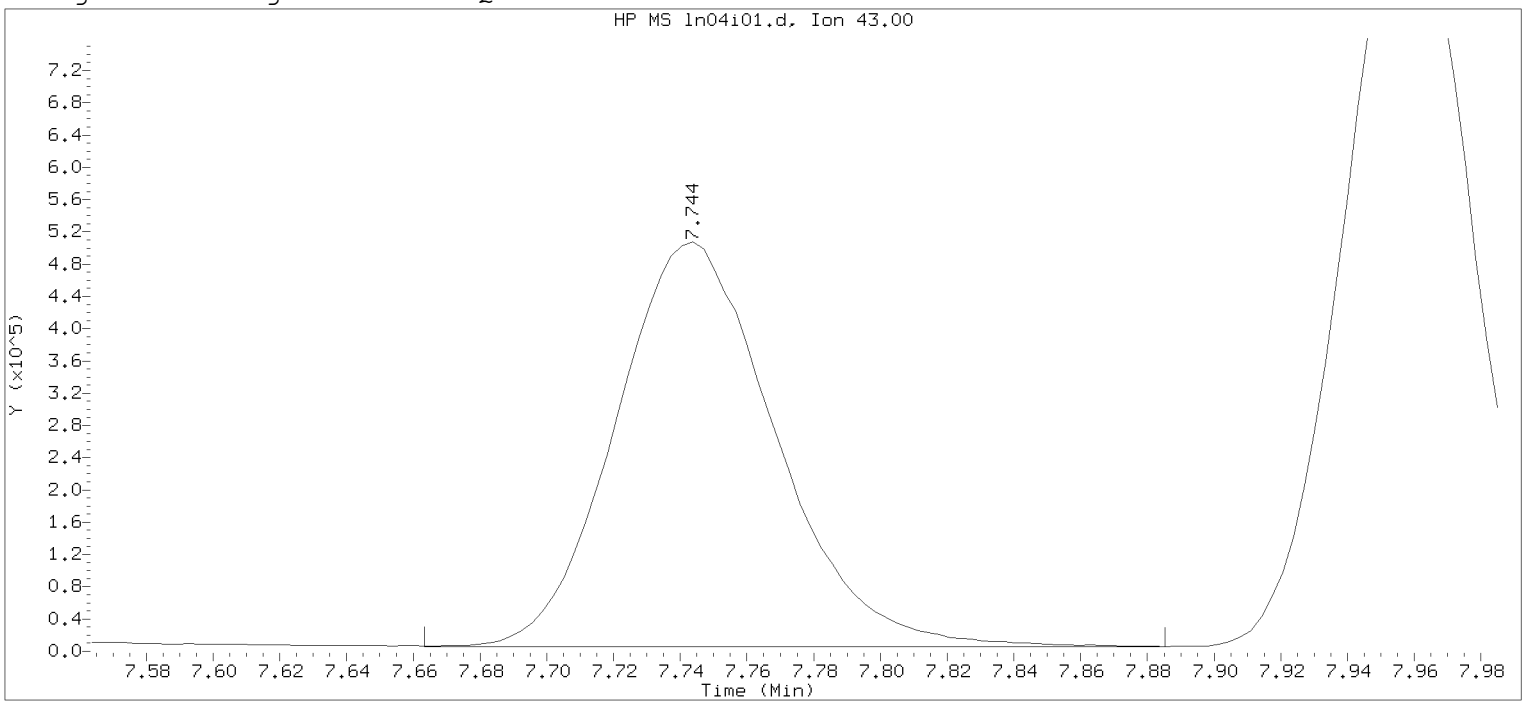
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

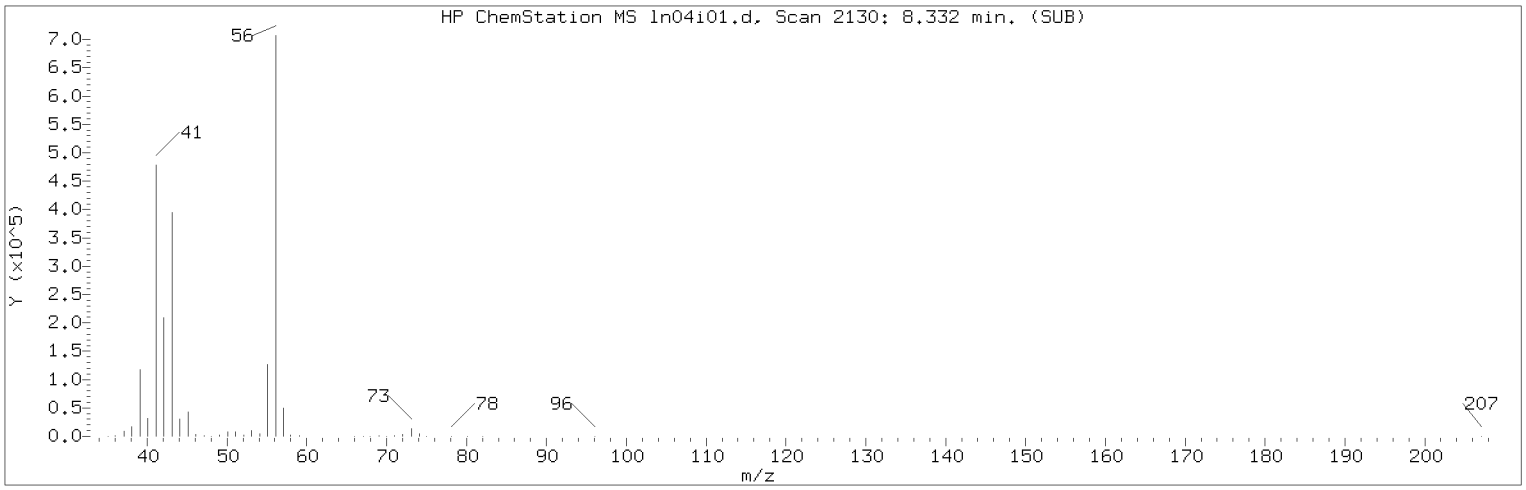
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

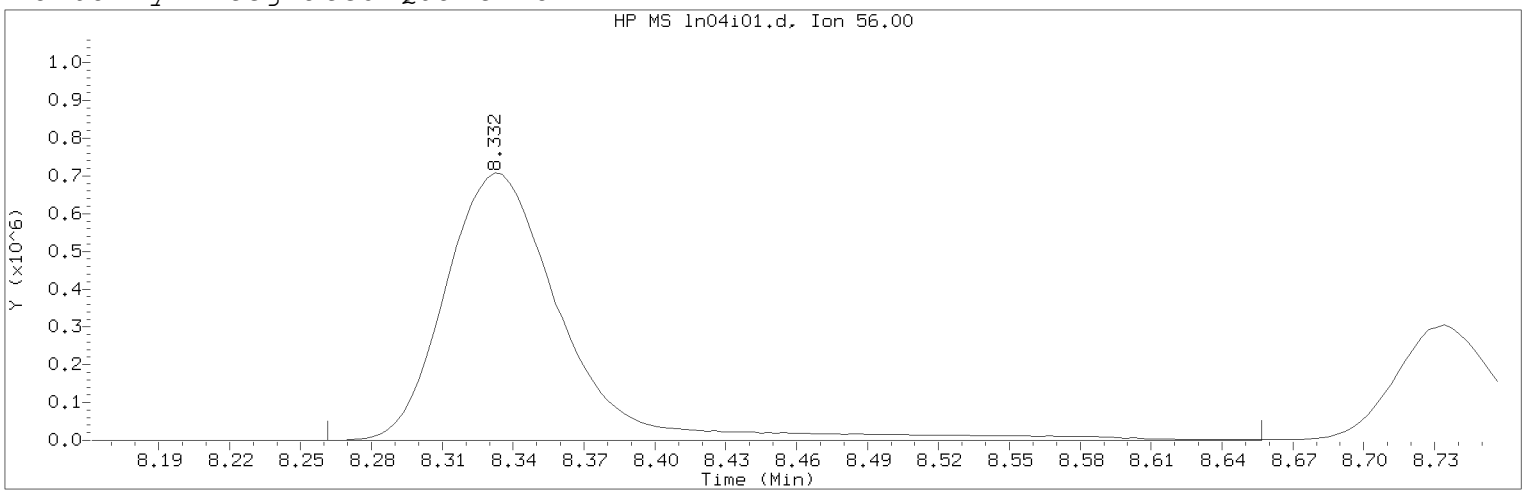
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1947
Retention Time (minutes): 7.744
Quant Ion : 43.00
Area : 1668813
On-column Amount (ng) : 288.4319
Integration start scan : 1921 Integration stop scan: 1990
Y at integration start : 5866 Y at integration end: 5866

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

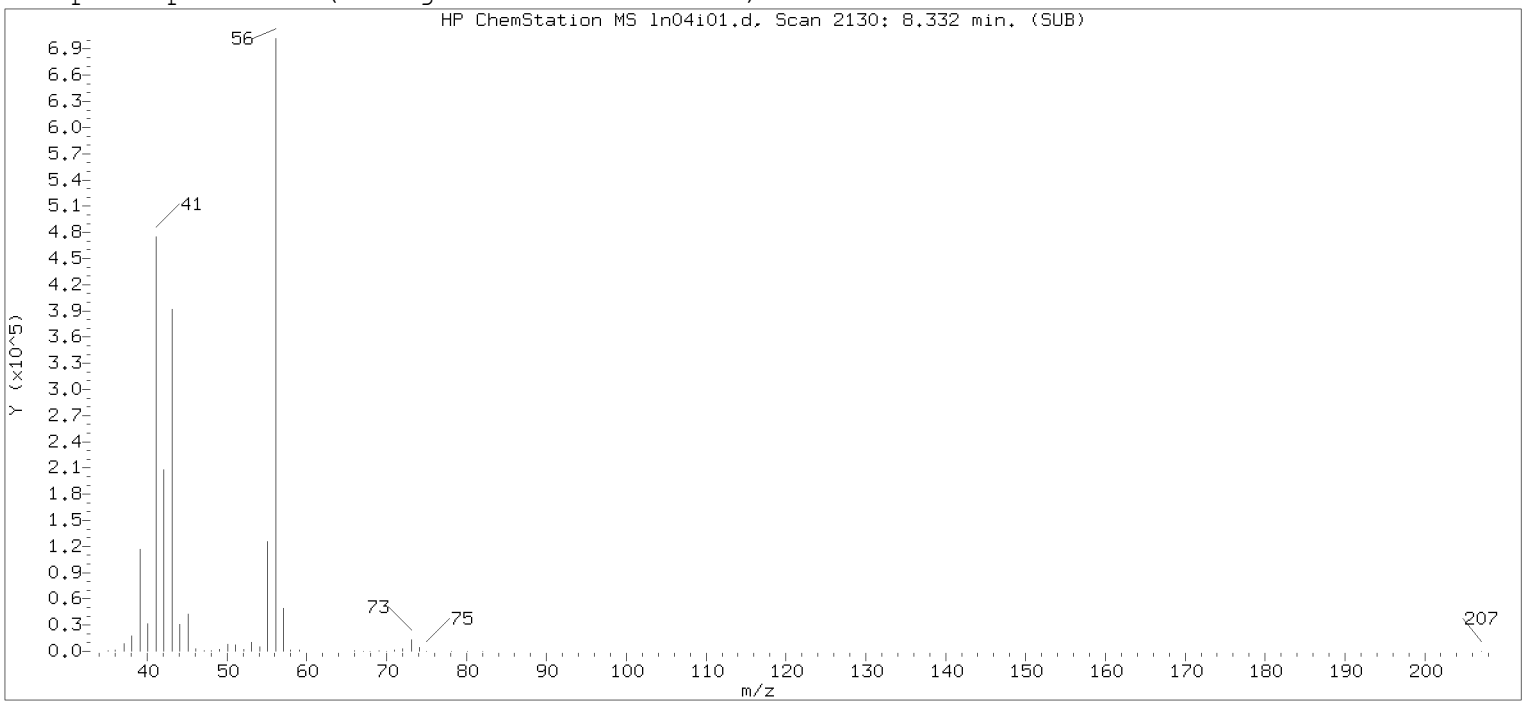
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area (flag) : 2465385M
On-Column Amount (ng) : 7947.0678
Integration start scan : 2107 Integration stop scan: 2230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

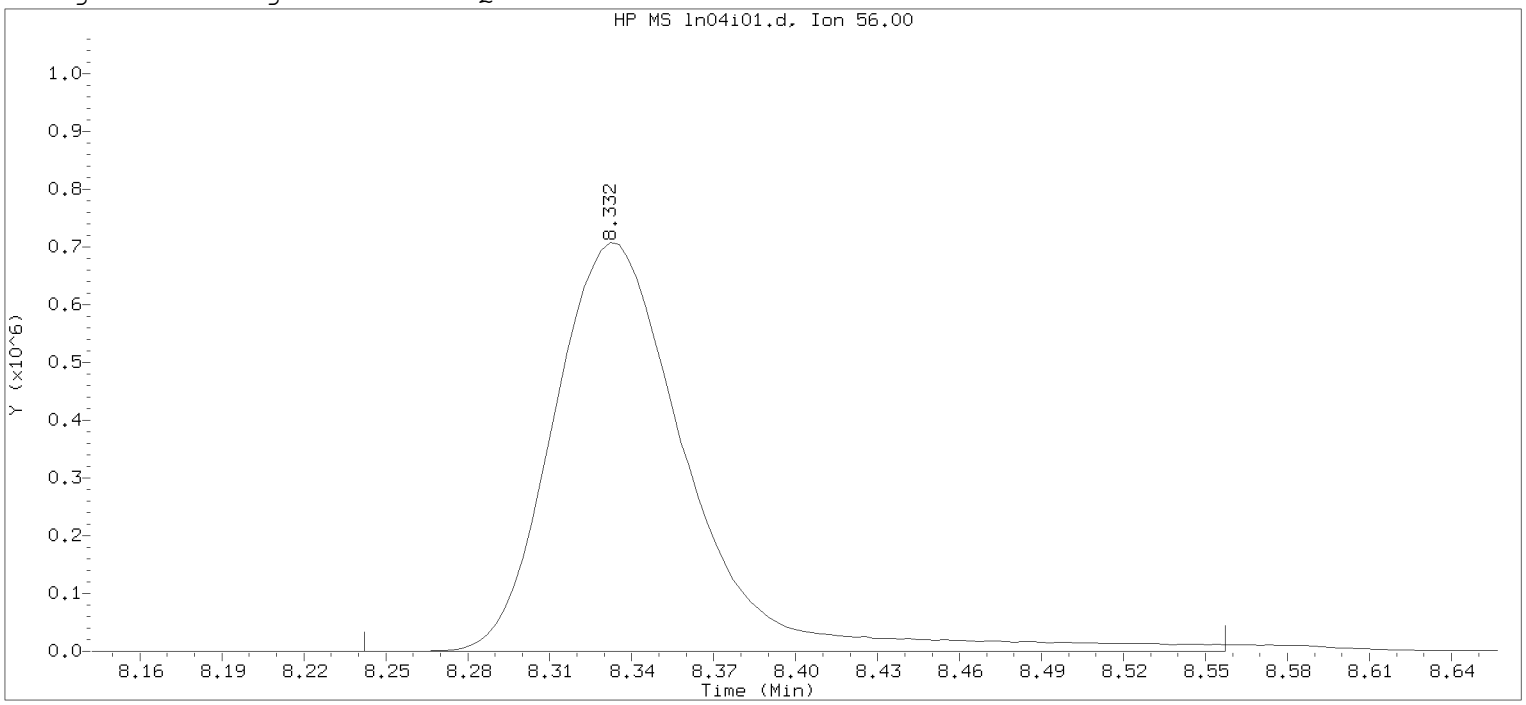
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

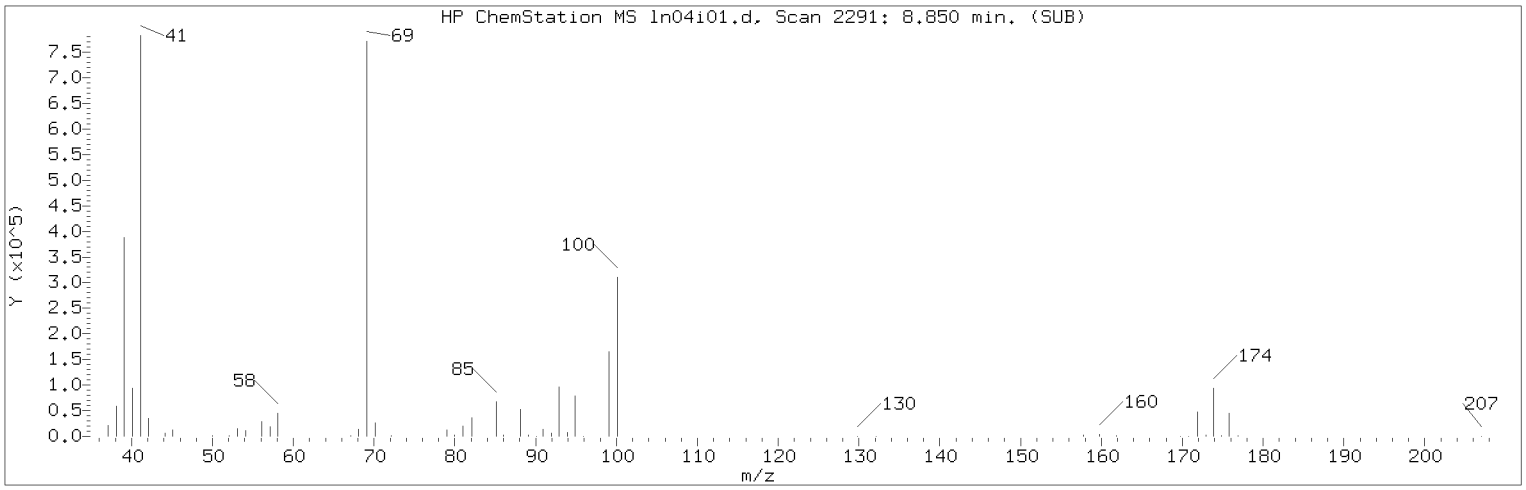
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

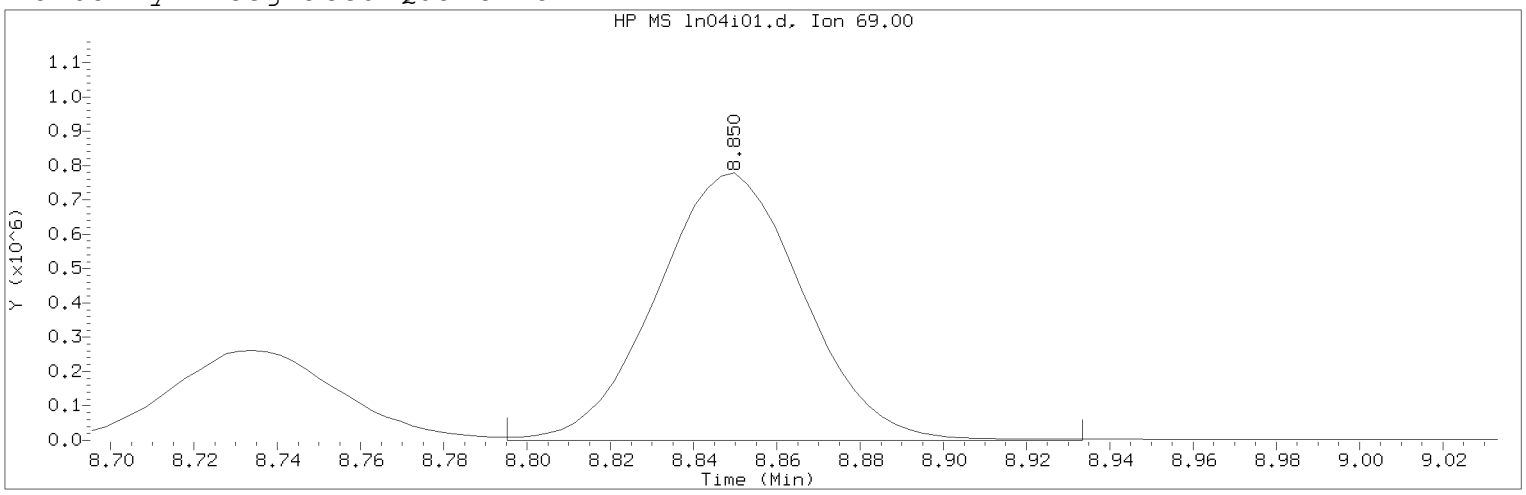
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area : 2429255
On-column Amount (ng) : 7682.9381
Integration start scan : 2101 Integration stop scan: 2199
Y at integration start : 176 Y at integration end: 176

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

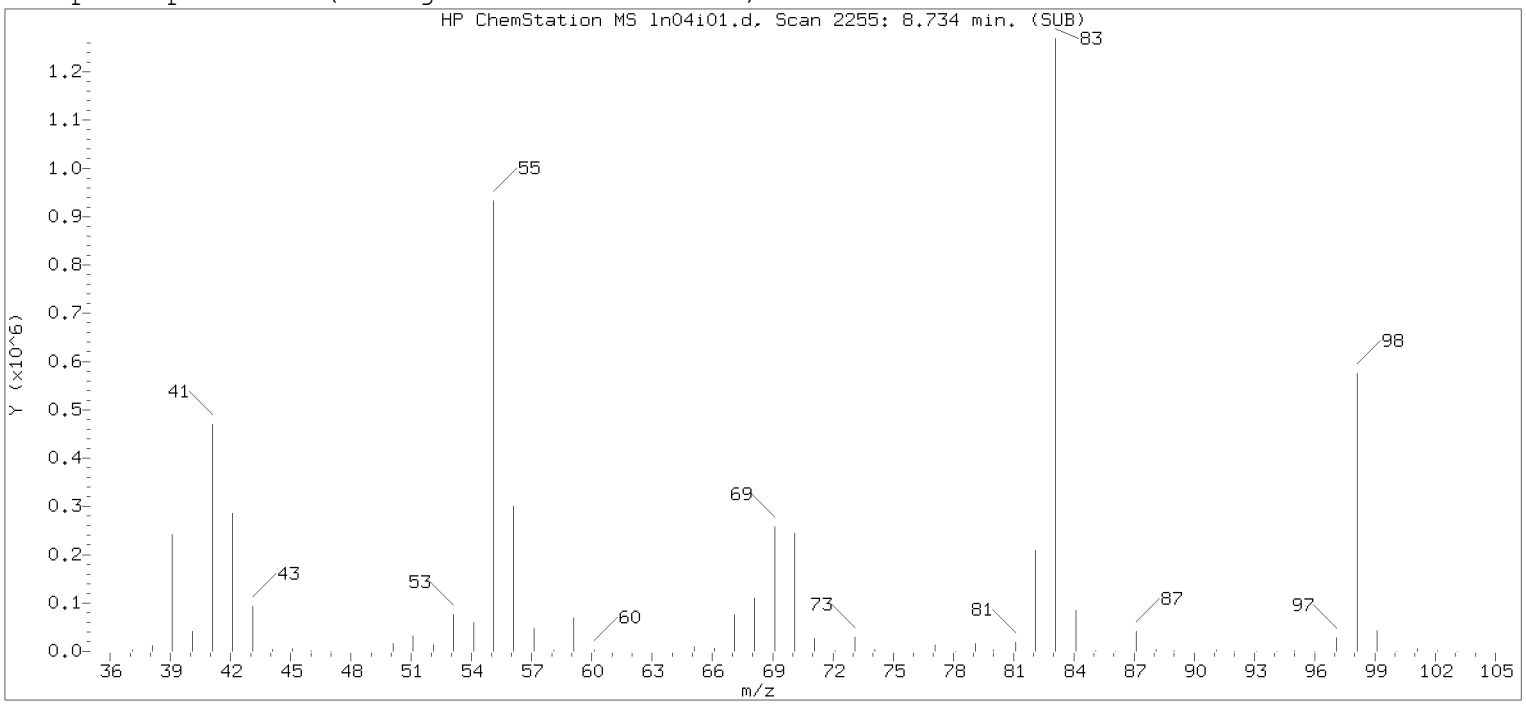
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2291
Retention Time (minutes): 8.850
Quant Ion : 69.00
Area (flag) : 1904896A
On-Column Amount (ng) : 340.2564
Integration start scan : 2273 Integration stop scan: 2316
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

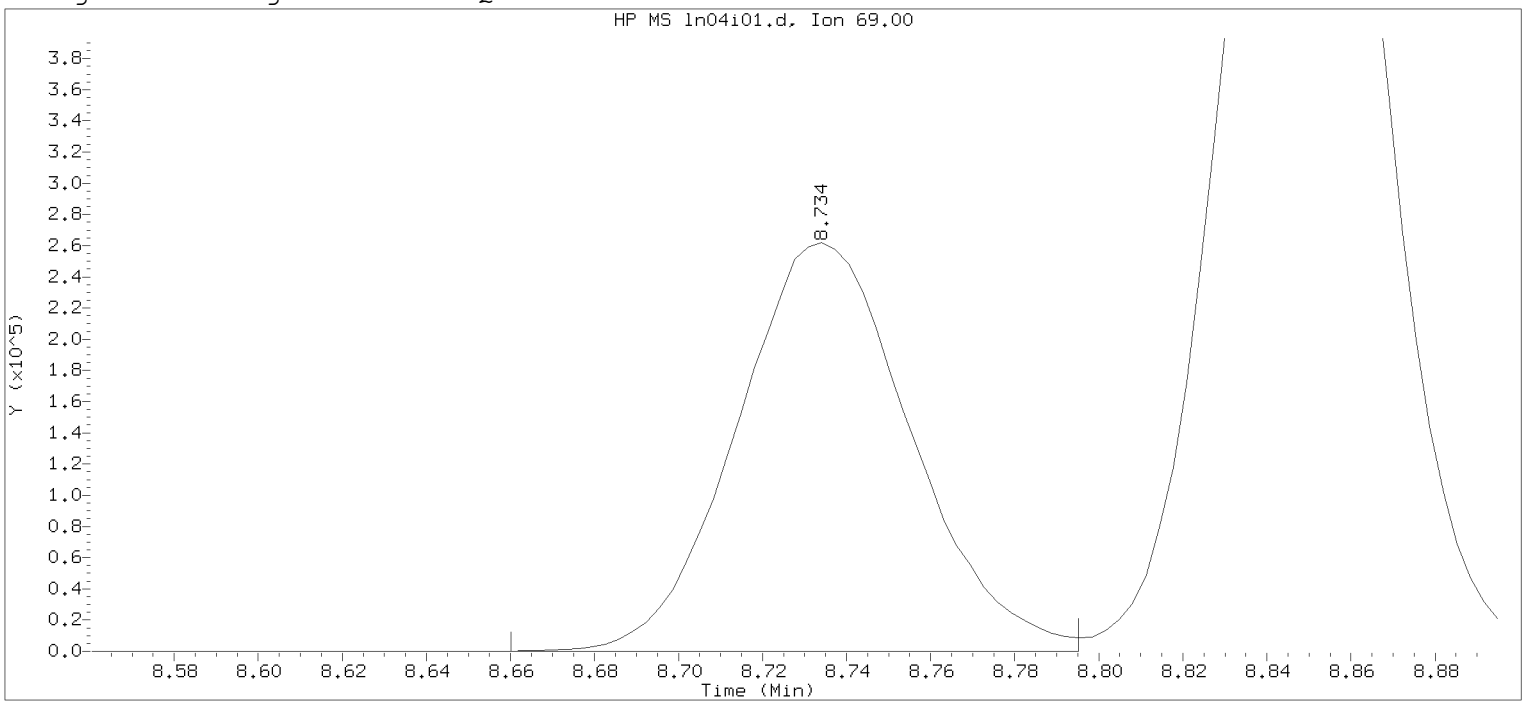
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

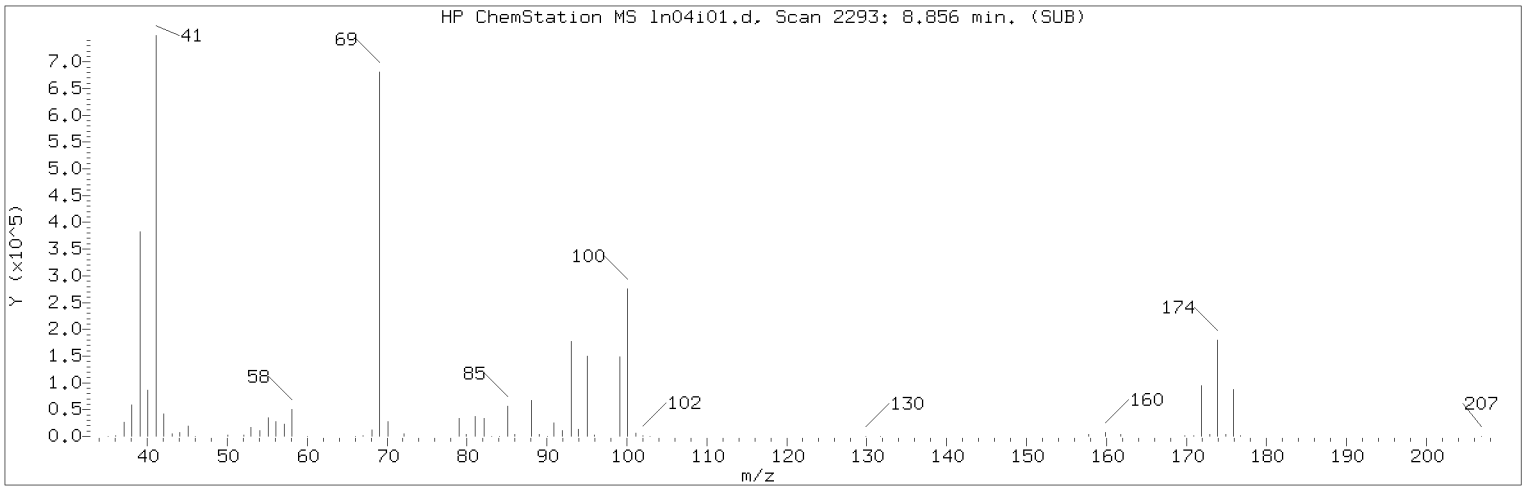
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

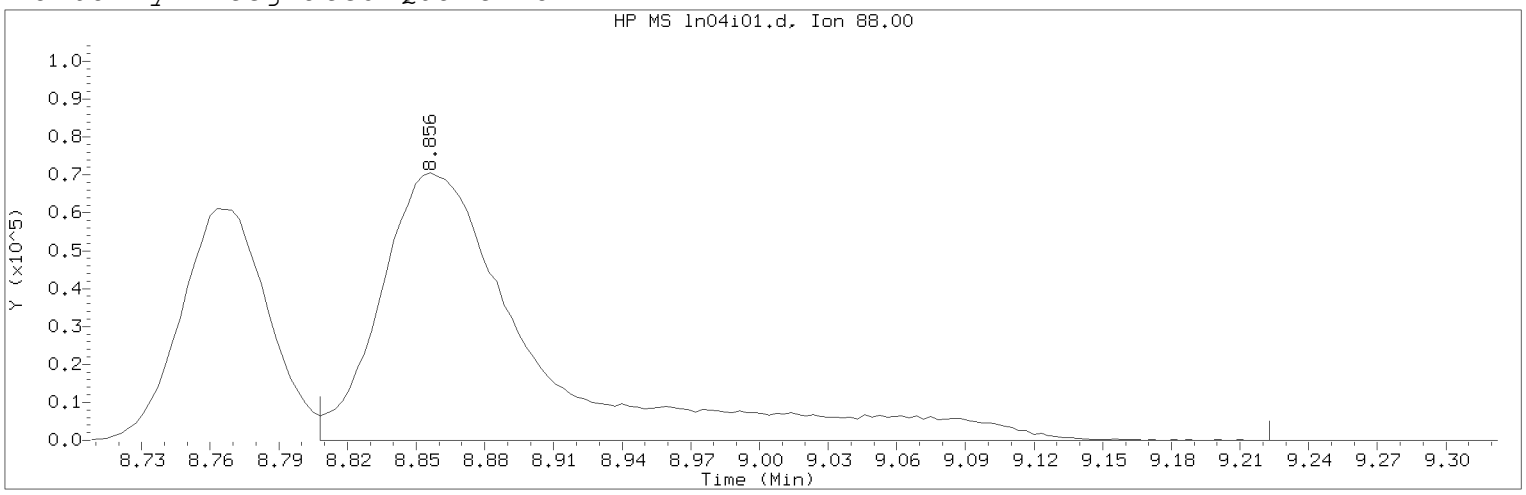
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 752058
On-column Amount (ng) : 311.1363
Integration start scan : 2231 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

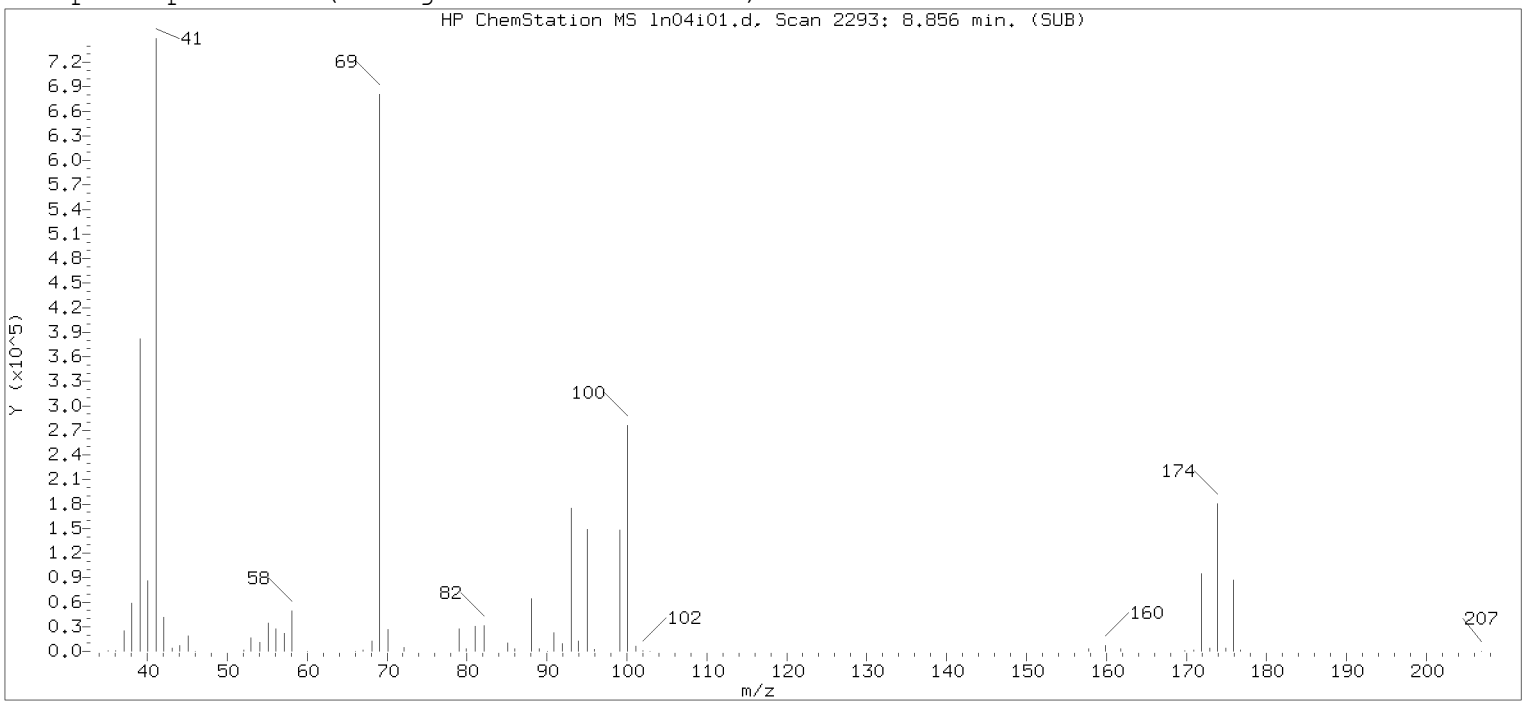
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 338379M
On-Column Amount (ng) : 3968.4208
Integration start scan : 2277 Integration stop scan: 2406
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

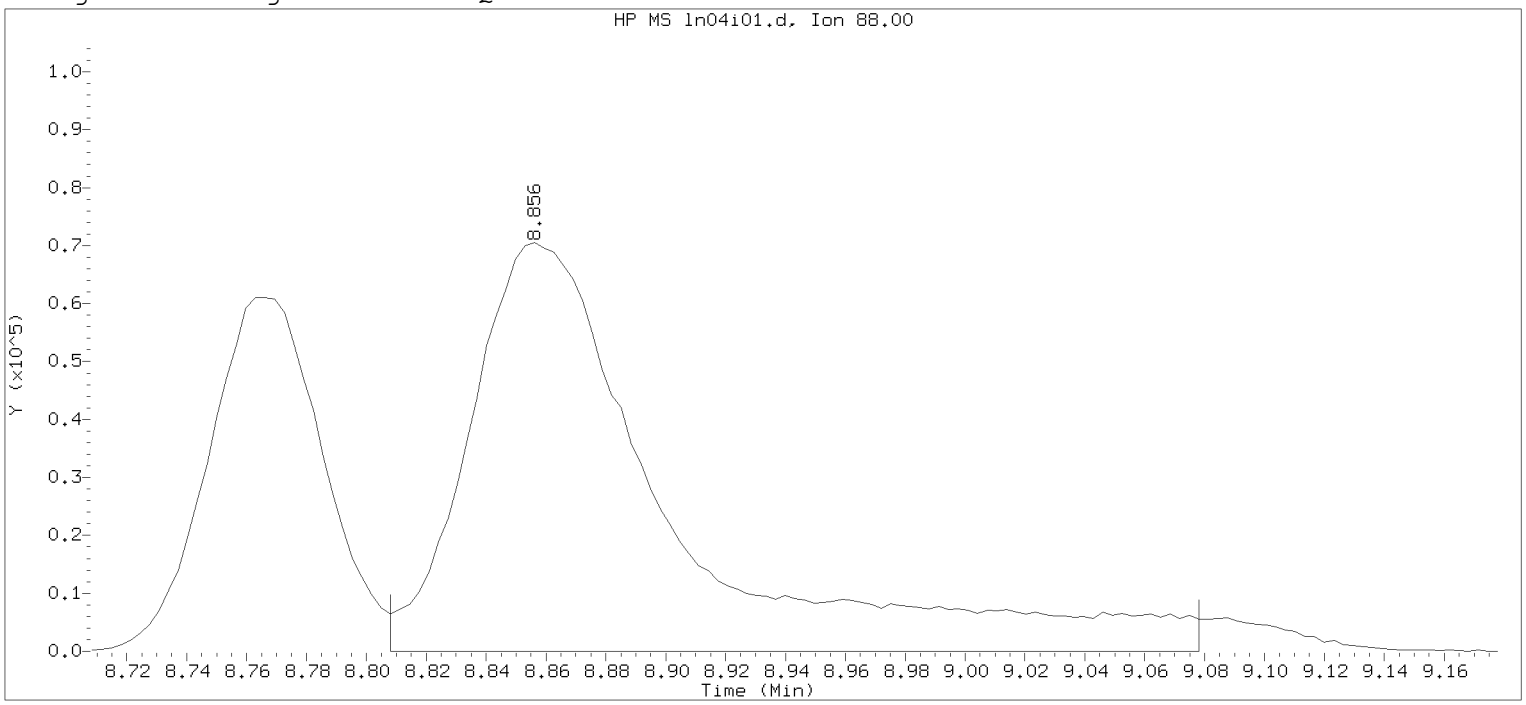
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

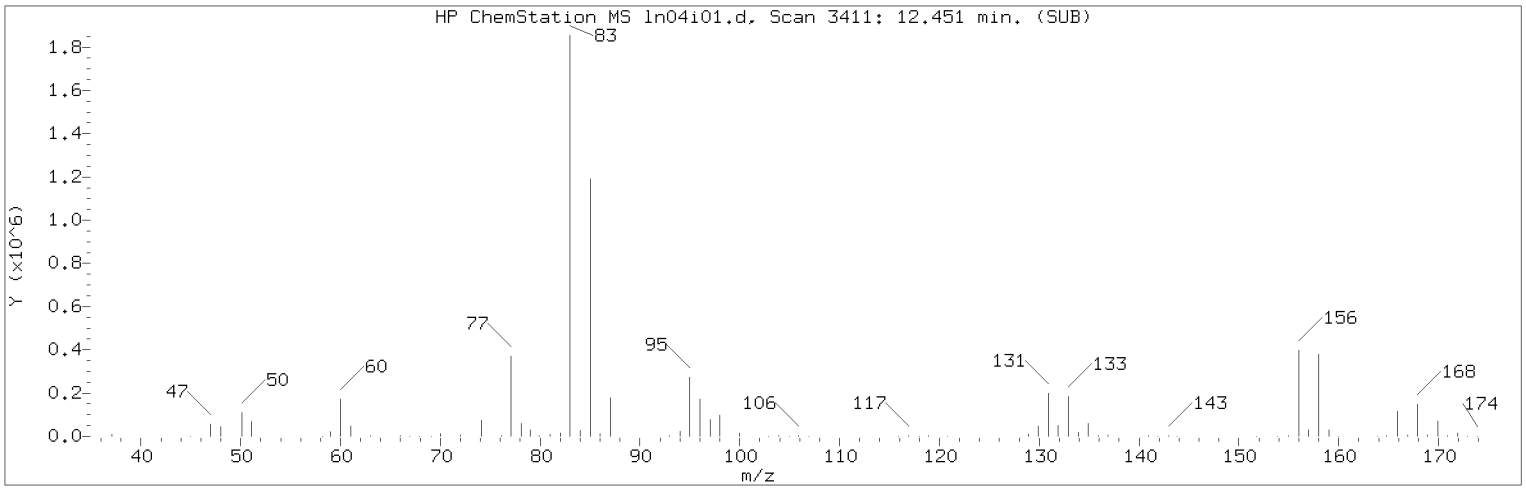
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

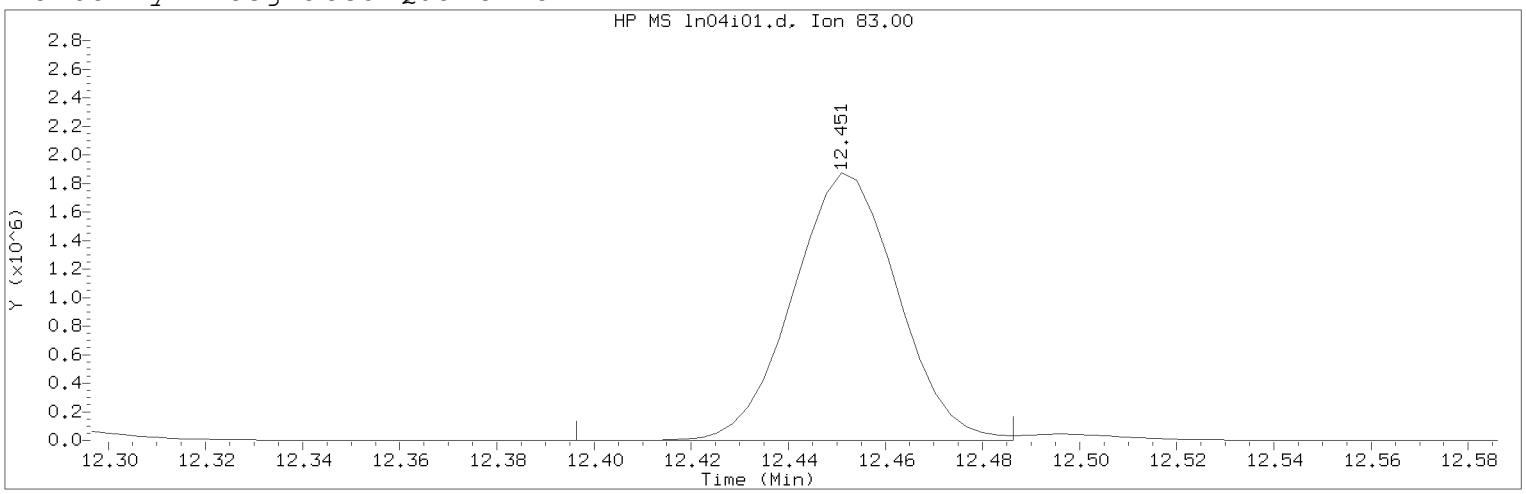
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2293		
Retention Time (minutes)	: 8.856		
Quant Ion	: 88.00		
Area	: 325164		
On-column Amount (ng)	: 3803.8575		
Integration start scan	: 2277	Integration stop scan:	2361
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

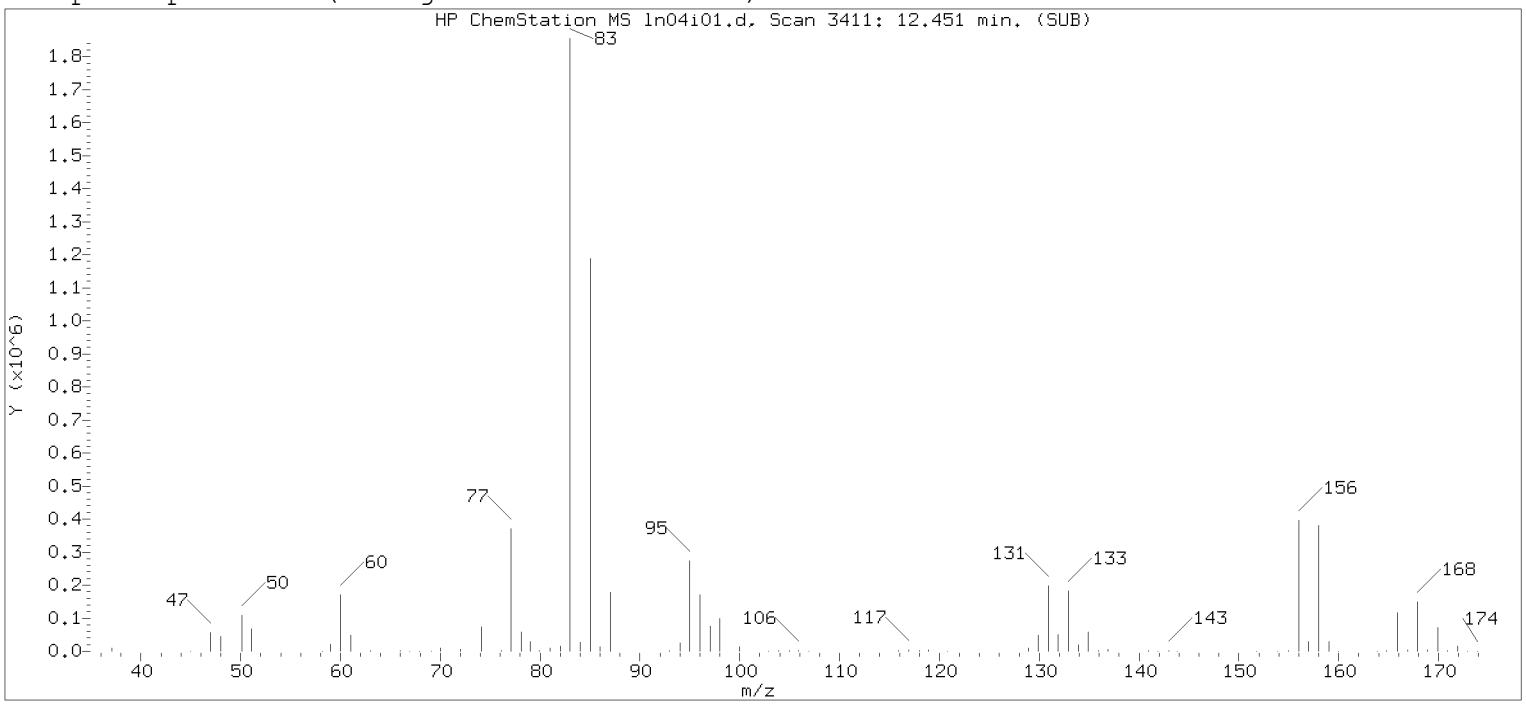
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 2800639M
On-Column Amount (ng) : 310.7054
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

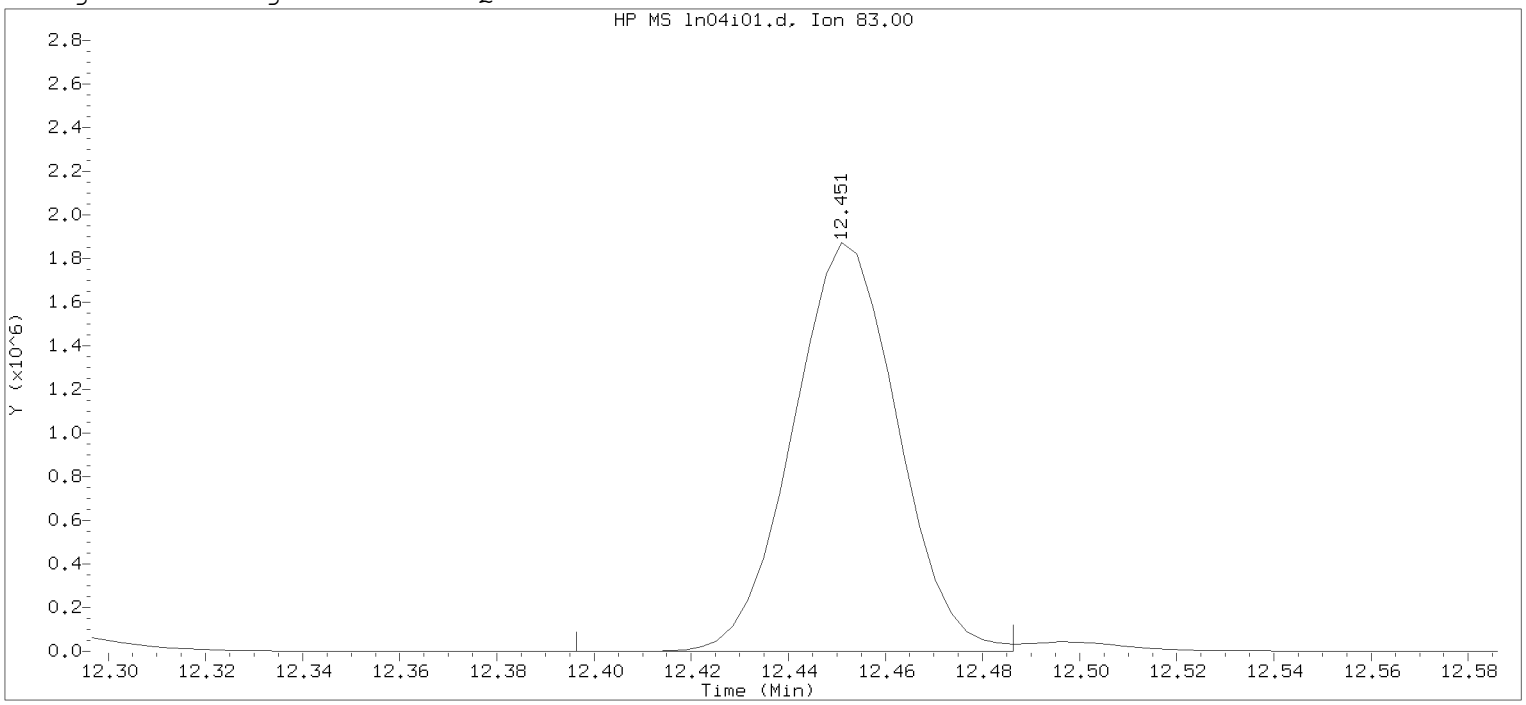
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

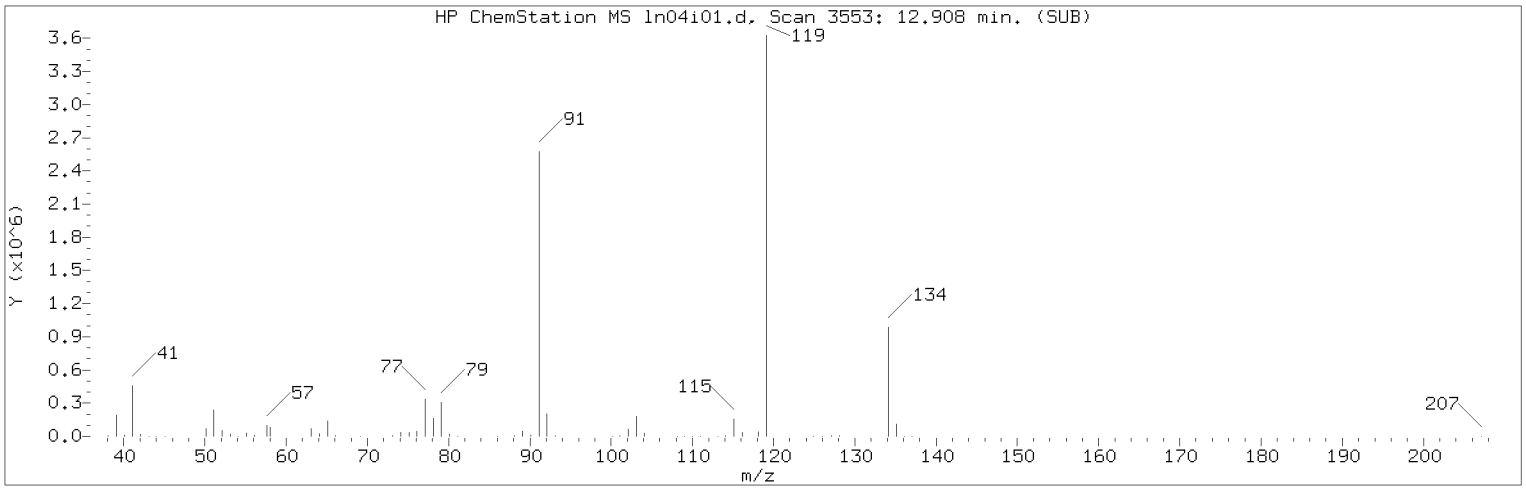
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

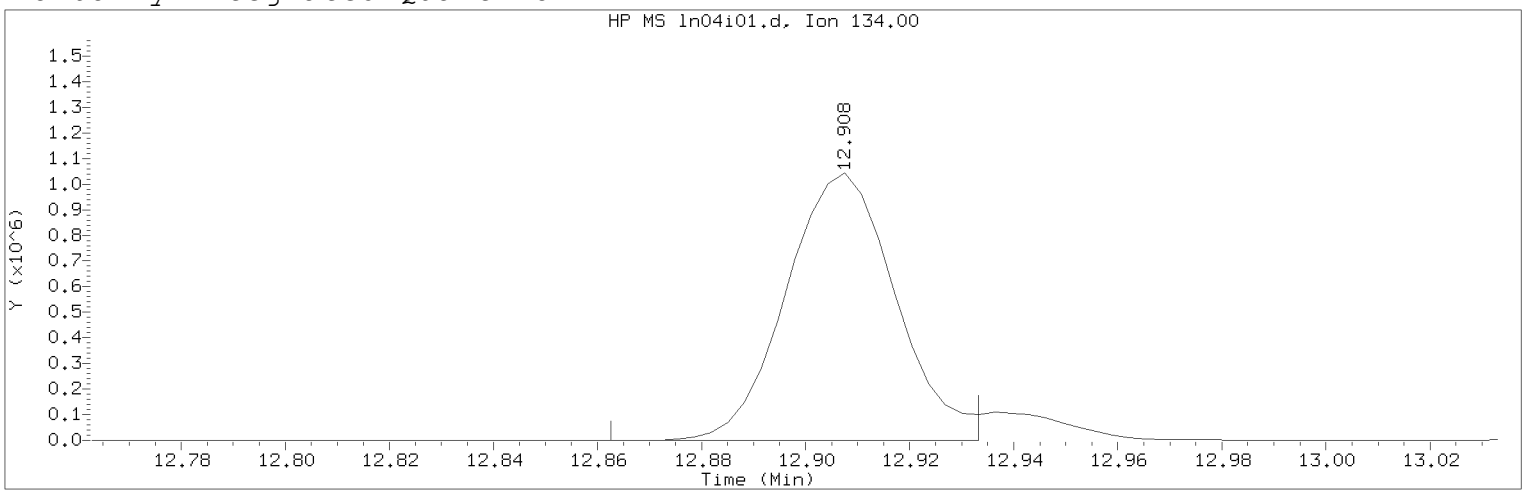
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 2797364
On-column Amount (ng) : 294.0638
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

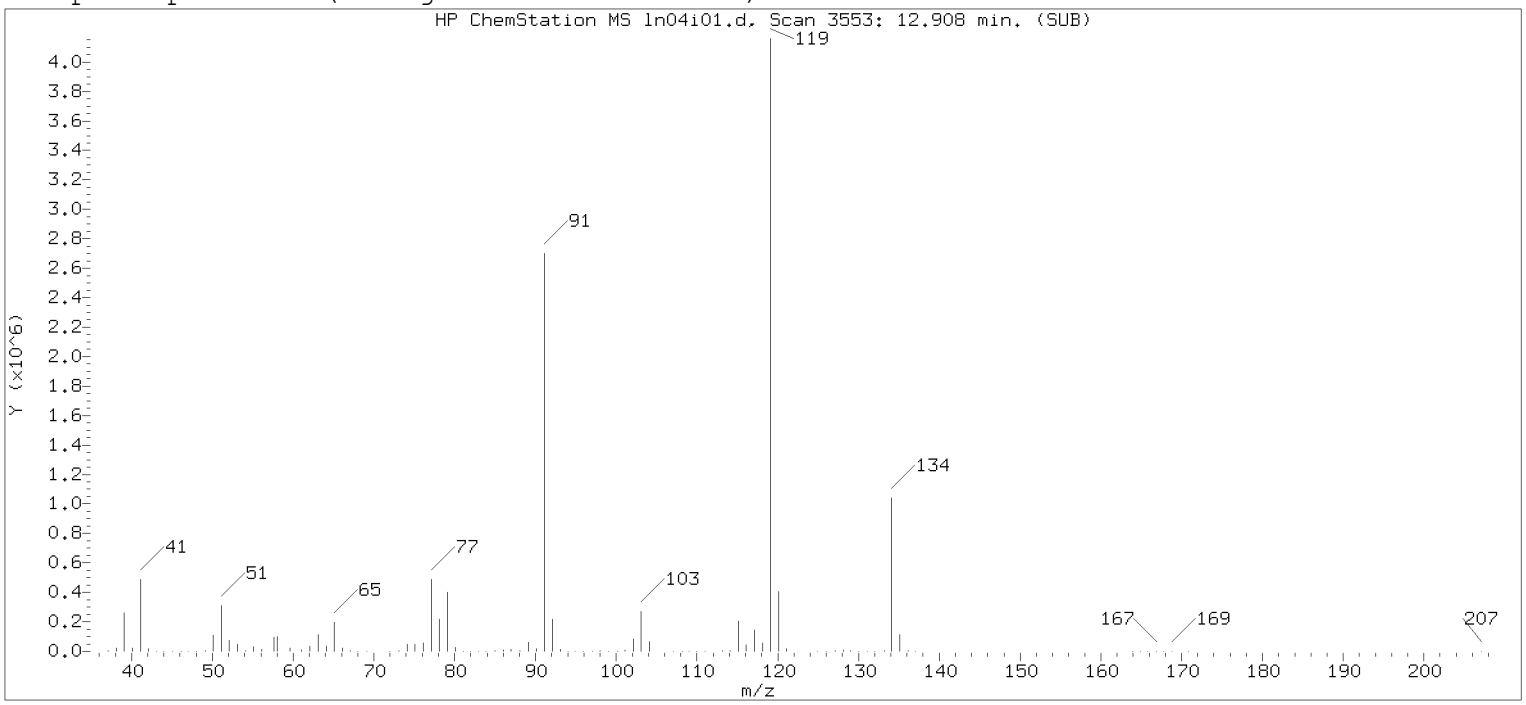
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area (flag) : 1524421M
On-Column Amount (ng) : 323.7167
Integration start scan : 3538 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

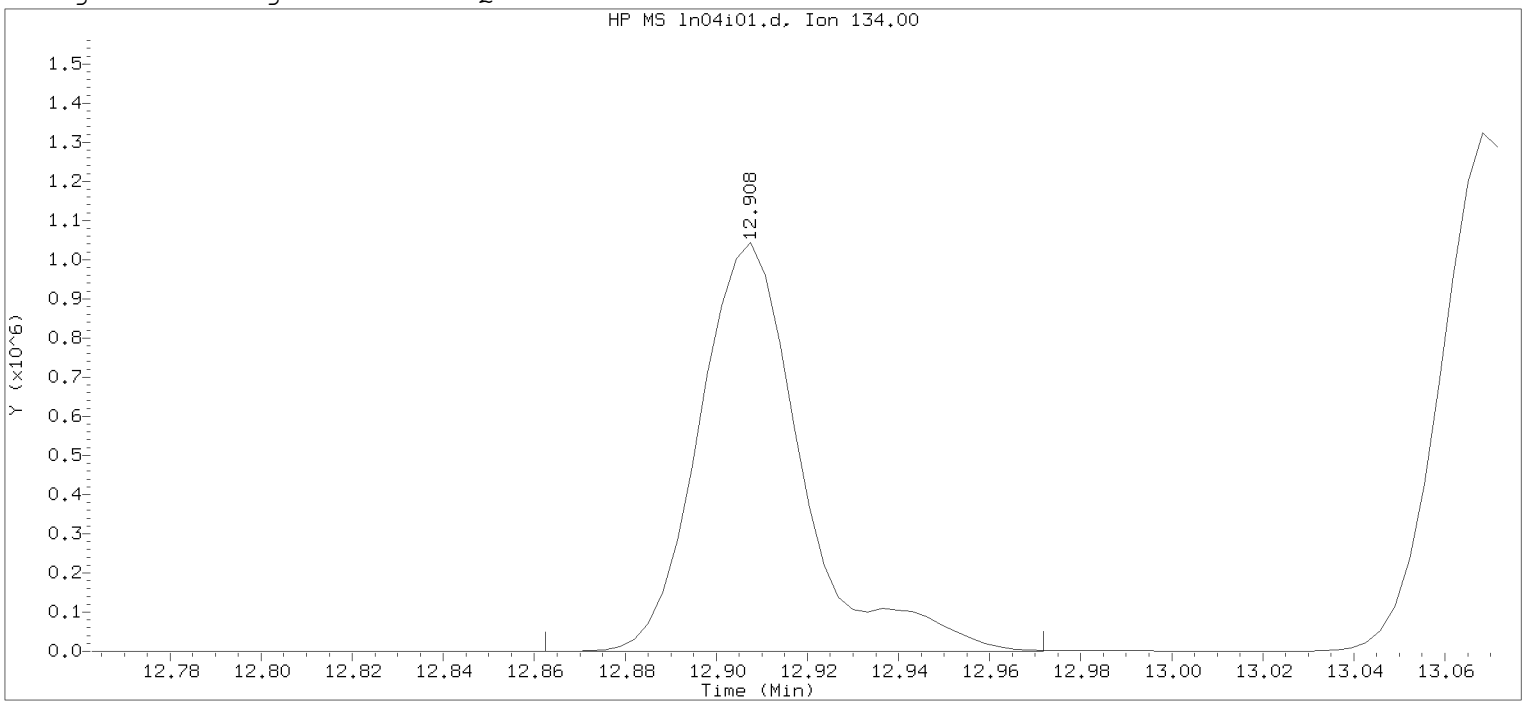
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



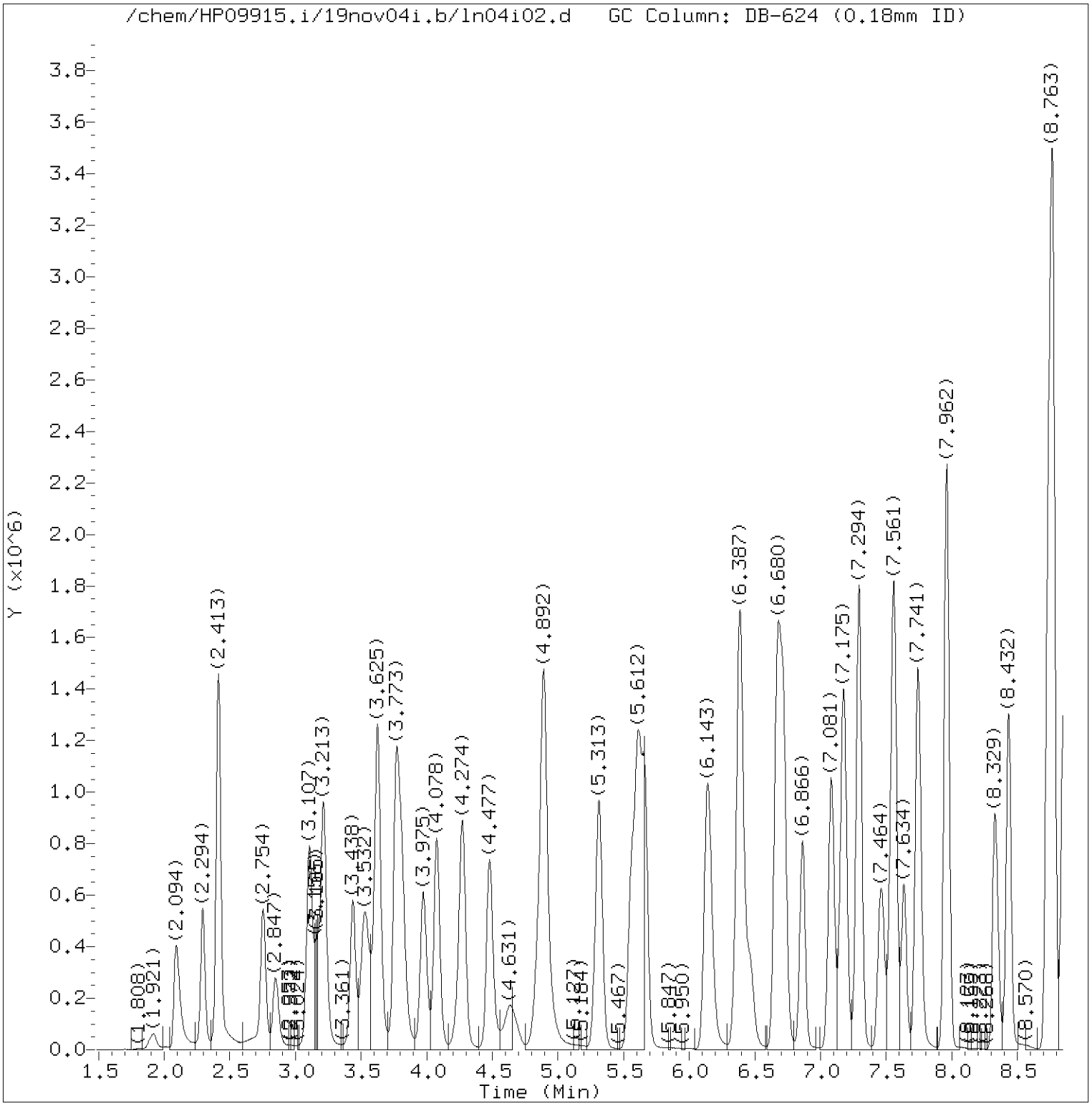
Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area : 1639624
On-column Amount (ng) : 313.1253
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

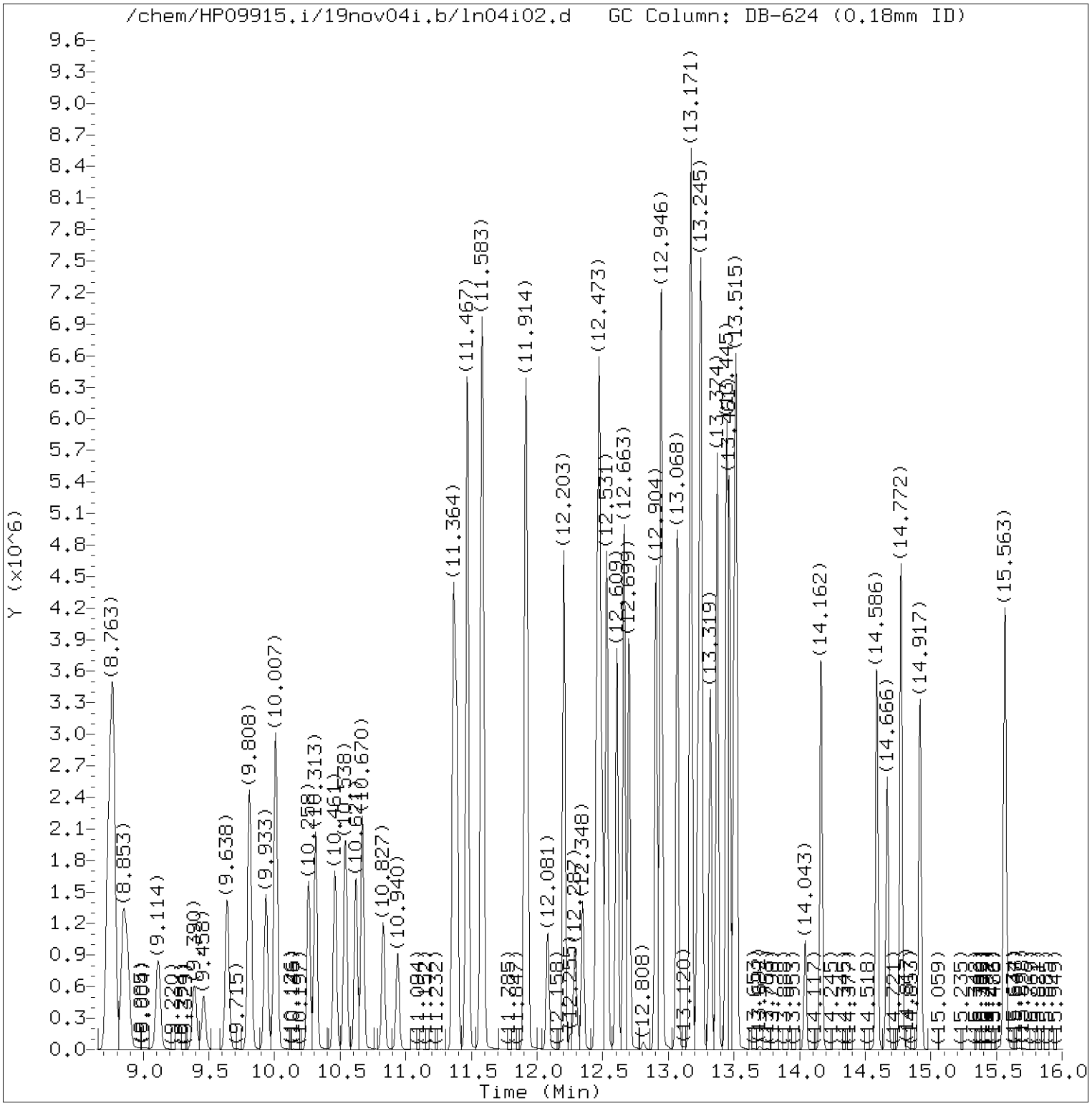
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.094	85	857961M	103.943
4) Chloromethane	(2)	2.294	50	784780	98.650
5) 1,3-Butadiene	(2)	2.413	39	618713M	93.669
6) Vinyl Chloride	(2)	2.416	62	781267	98.400
8) Bromomethane	(2)	2.754	94	539686	94.824
9) Chloroethane	(2)	2.847	64	418524	95.919
10) Dichlorofluoromethane	(2)	3.104	67	992796M	94.678
12) Trichlorofluoromethane	(2)	3.162	101	860893	100.714
11) n-Pentane	(2)	3.217	43	1002713	99.263
14) Ethyl ether	(2)	3.435	59	550266	99.622
15) Freon 123a	(2)	3.532	67	679642	98.841
16) Acrolein	(1)	3.625	56	2075331	1040.029
17) 1,1-Dichloroethene	(2)	3.763	96	510815	101.811
17) 1,1-Dichloroethene	(2)	3.766	63	250669	99.655
19) Freon 113	(2)	3.799	101	594686	103.888
18) Acetone	(1)	3.805	58	181313	202.676
22) Methyl Iodide	(2)	3.972	142	1051103	101.097
21) 2-Propanol	(1)	4.001	45	343390	533.946
23) Carbon Disulfide	(2)	4.078	76	1957296	103.520
27) Methyl Acetate	(2)	4.252	43	630892	97.630
25) Allyl Chloride	(2)	4.274	41	894091	99.337
28) Methylene Chloride	(2)	4.477	84	596882	99.952
29)*t-Butyl alcohol-d10	(1)	4.509	65	265971M	250.000
30) t-Butyl alcohol	(1)	4.631	59	619917	553.614
31) Acrylonitrile	(2)	4.837	53	359403	103.376
33) Methyl Tertiary Butyl Ether	(2)	4.889	73	1901626	99.813
32) trans-1,2-Dichloroethene	(2)	4.892	96	586662	101.076
34) n-Hexane	(2)	5.313	57	974442M	107.908
36) 1,1-Dichloroethane	(2)	5.557	63	1029230	101.649
38) di-Isopropyl ether	(2)	5.609	45	1986383	101.717
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	947614	104.312
40) Ethyl t-butyl ether	(2)	6.143	59	1910218	100.794
43) 1,2-Dichloroethene (Total)	(2)		96	1240957	201.508
44) 2-Butanone	(2)	6.364	43	920731	206.310
42) cis-1,2-Dichloroethene	(2)	6.384	96	654295	100.432
45) 2,2-Dichloropropane	(2)	6.400	77	813782	103.388
47) Propionitrile	(1)	6.464	54	725632	520.085
48) Methacrylonitrile	(2)	6.676	67	966183	257.629

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	349204	101.088
50) Tetrahydrofuran	(1)	6.721	71	261419	207.429
51) Chloroform	(2)	6.866	83	989698	102.195
52)$Dibromofluoromethane	(2)	7.078	113	292391	50.529
52)$Dibromofluoromethane	(2)	7.078	111	297764	50.467
53) 1,1,1-Trichloroethane	(2)	7.088	97	860519	104.109
54) Cyclohexane	(2)	7.175	56	1170449	105.893
54) Cyclohexane	(2)	7.181	84	1022362	106.481
54) Cyclohexane	(2)	7.175	69	362451	106.017
56) Carbon Tetrachloride	(2)	7.290	117	751477	107.196
55) 1,1-Dichloropropene	(2)	7.297	75	823627	102.878
58) Isobutyl Alcohol	(1)	7.461	41	528441	1402.358
57)$1,2-Dichloroethane-d4	(2)	7.535	102	74158	50.284
57)$1,2-Dichloroethane-d4	(2)	7.535	65	331294	50.408
57)$1,2-Dichloroethane-d4	(2)	7.535	104	47551	50.479
60) Benzene	(2)	7.561	78	2423634	100.668
61) 1,2-Dichloroethane	(2)	7.638	62	757974	97.883
61) 1,2-Dichloroethane	(2)	7.641	98	76152	99.373
65) t-Amyl methyl ether	(2)	7.741	73	1946110	102.306
67) n-Heptane	(2)	7.962	43	911962MA	108.104
66)*Fluorobenzene	(2)	7.962	96	1183605	50.000
69) n-Butanol	(1)	8.329	56	944383M	2911.812
71) Trichloroethene	(2)	8.432	95	618983	102.110
72) Methylcyclohexane	(2)	8.734	83	1164174	103.516
72) Methylcyclohexane	(2)	8.734	98	527428	103.640
73) 1,2-Dichloropropane	(2)	8.773	63	625914	102.385
76) Methyl Methacrylate	(2)	8.847	69	640445A	108.334
75) 1,4-Dioxane	(1)	8.856	88	117817M	1321.647
74) Dibromomethane	(2)	8.882	93	410059	103.668
78) Bromodichloromethane	(2)	9.114	83	770805	108.595
79) 2-Nitropropane	(2)	9.390	41	488862	227.388
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	284759	108.454
81) cis-1,3-Dichloropropene	(2)	9.638	75	1026055	108.840
82) 4-Methyl-2-pentanone	(2)	9.808	43	1972651	209.410
83)$Toluene-d8	(3)	9.933	98	1216793	49.703
83)$Toluene-d8	(3)	9.933	100	789846	49.806
88) Toluene	(3)	10.007	92	1555339	101.336
90) 1,3-Dichloropropene (total)	(3)		100	1994775	220.026

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	968720	111.186
91) Ethyl Methacrylate	(3)	10.313	69	1159403	109.496
92) 1,1,2-Trichloroethane	(3)	10.461	97	606132	104.163
93) Tetrachloroethene	(3)	10.541	166	663260	102.036
94) 1,3-Dichloropropane	(3)	10.621	76	1023947	103.060
96) 2-Hexanone	(3)	10.670	43	1457165	206.170
97) Dibromochloromethane	(3)	10.827	129	678552	113.835
99) 1,2-Dibromoethane	(3)	10.940	107	665574	105.331
100)*Chlorobenzene-d5	(3)	11.361	117	935628	50.000
101) 1-Chlorohexane	(3)	11.364	91	826713	100.265
102) Chlorobenzene	(3)	11.387	112	1760002	101.404
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	622547	108.864
104) Ethylbenzene	(3)	11.470	91	3015086	102.779
106) m+p-Xylene	(3)	11.583	106	2388845	206.999
108) Xylene (Total)	(3)		106	3566525	310.313
107) o-Xylene	(3)	11.908	106	1177680	103.314
109) Styrene	(3)	11.924	104	1996461	105.988
110) Bromoform	(3)	12.081	173	502388	112.791
111) Isopropylbenzene	(3)	12.203	105	2980812	104.258
112) Cyclohexanone	(1)	12.287	55	431750	1236.644
114)$4-Bromofluorobenzene	(3)	12.348	95	458263	49.435
114)$4-Bromofluorobenzene	(3)	12.348	174	380301	49.485
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	995972M	105.317
115) Bromobenzene	(4)	12.464	156	778170	103.423
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	790040	270.837
117) 1,2,3-Trichloropropane	(4)	12.496	110	303037	104.425
119) n-Propylbenzene	(4)	12.531	91	3409679	103.724
120) 2-Chlorotoluene	(4)	12.609	126	718635	102.905
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	2528195	105.828
121) 4-Chlorotoluene	(4)	12.699	126	737830	101.502
124) tert-Butylbenzene	(4)	12.904	134	526781M	106.622
125) Pentachloroethane	(4)	12.940	167	474988	111.651
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	2664001	105.806
127) sec-Butylbenzene	(4)	13.068	105	3153429	106.963
129) 1,3-Dichlorobenzene	(4)	13.168	146	1407080	101.768
130) p-Isopropyltoluene	(4)	13.171	119	2746850	107.698
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	500629	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	1451933	101.297

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	2711349	101.660
135) Benzyl Chloride	(4)	13.319	91	2226905	110.280
136) 1,3-Diethylbenzene	(4)	13.374	119	1705244	102.734
141) Diethylbenzene (total)	(4)		100	4934627	307.371
137) 1,4-Diethylbenzene	(4)	13.445	119	1791059	101.846
139) n-Butylbenzene	(4)	13.464	92	1355994	103.980
138) 1,2-Dichlorobenzene	(4)	13.502	146	1381717	101.273
140) 1,2-Diethylbenzene	(4)	13.518	119	1438324	102.791
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	224965	108.669
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	1074198	102.479
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	1034842	101.533
147) Hexachlorobutadiene	(4)	14.666	225	430531	89.465
148) Naphthalene	(4)	14.772	128	3428000	104.621
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	1010801	101.922
150) 2-Methylnaphthalene	(4)	15.563	142	2117626	104.952

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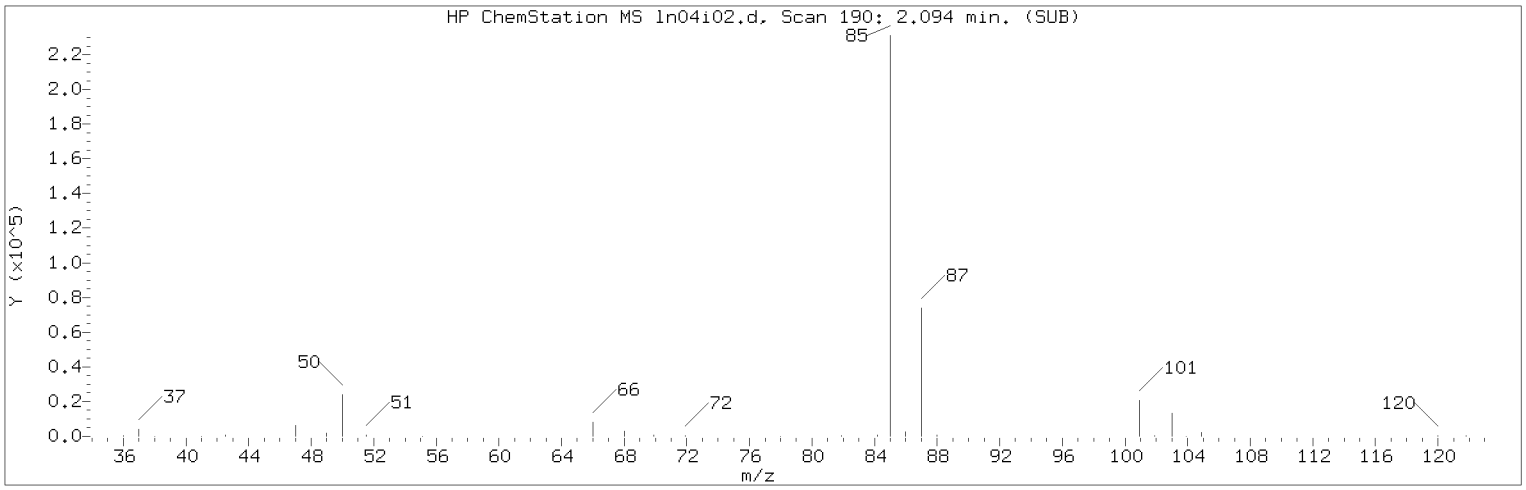
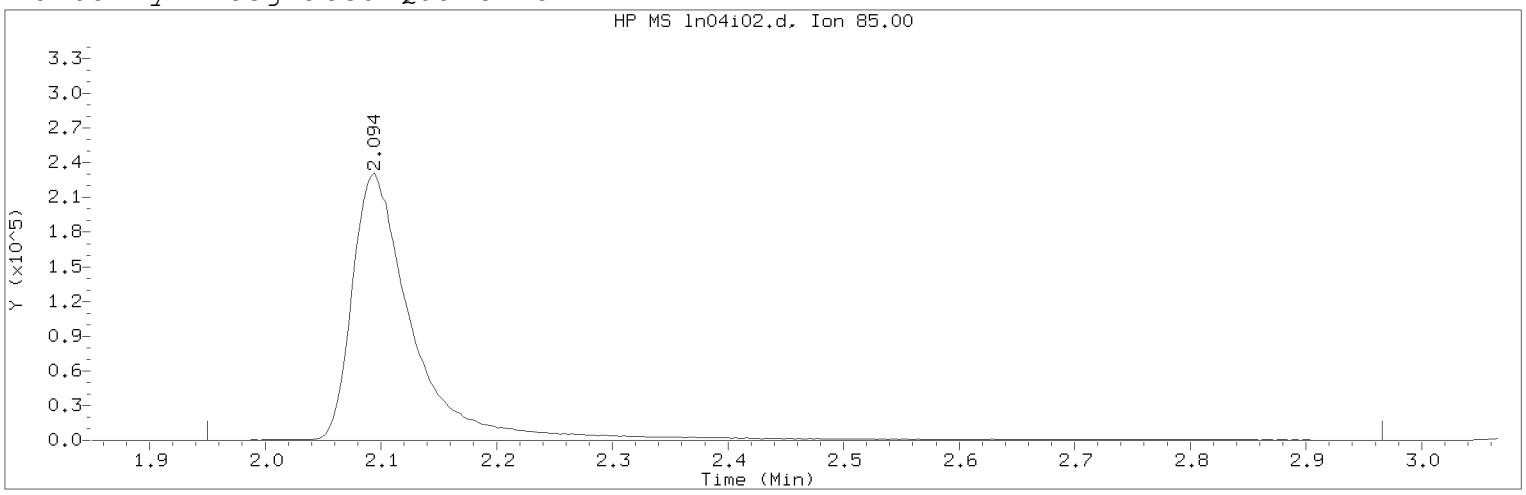
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

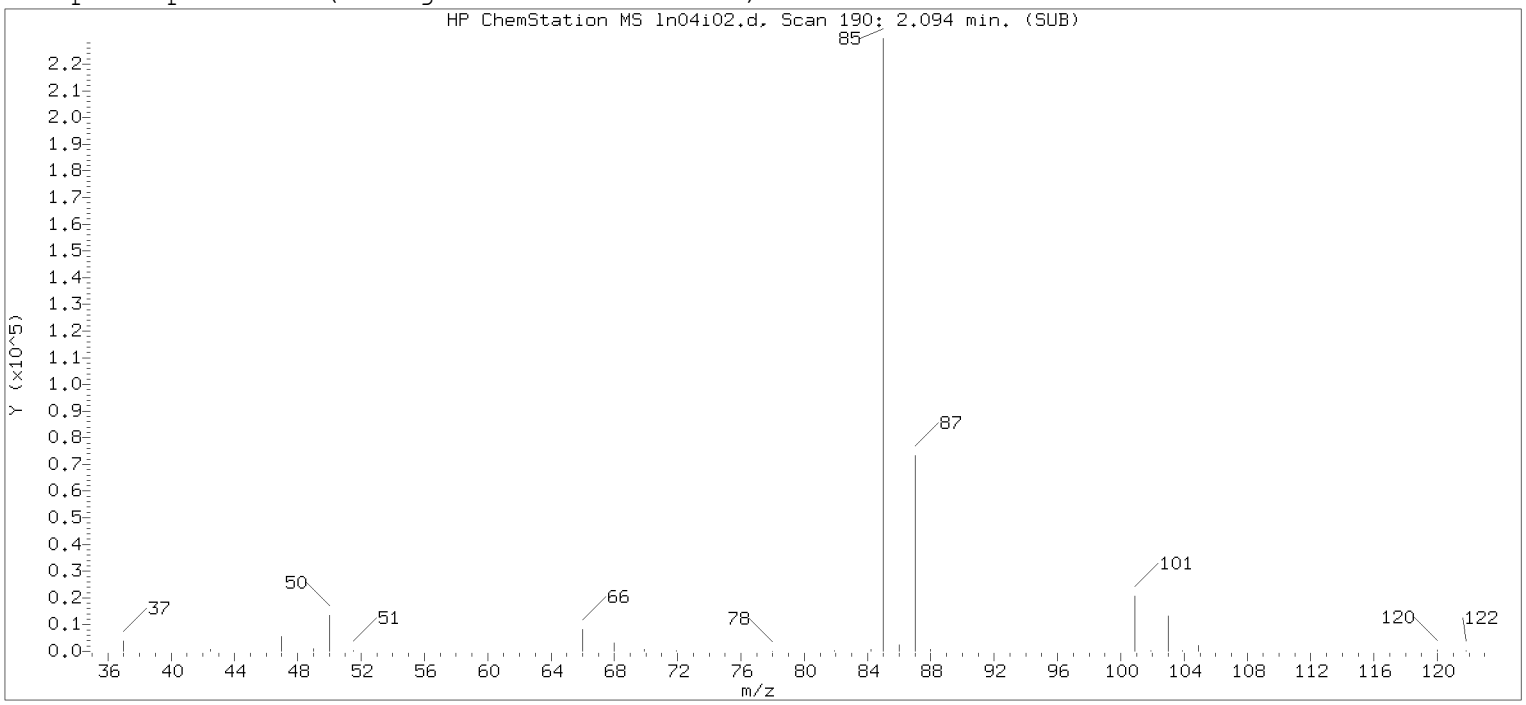
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area (flag) : 857961M
On-Column Amount (ng) : 103.9433
Integration start scan : 144 Integration stop scan: 460
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

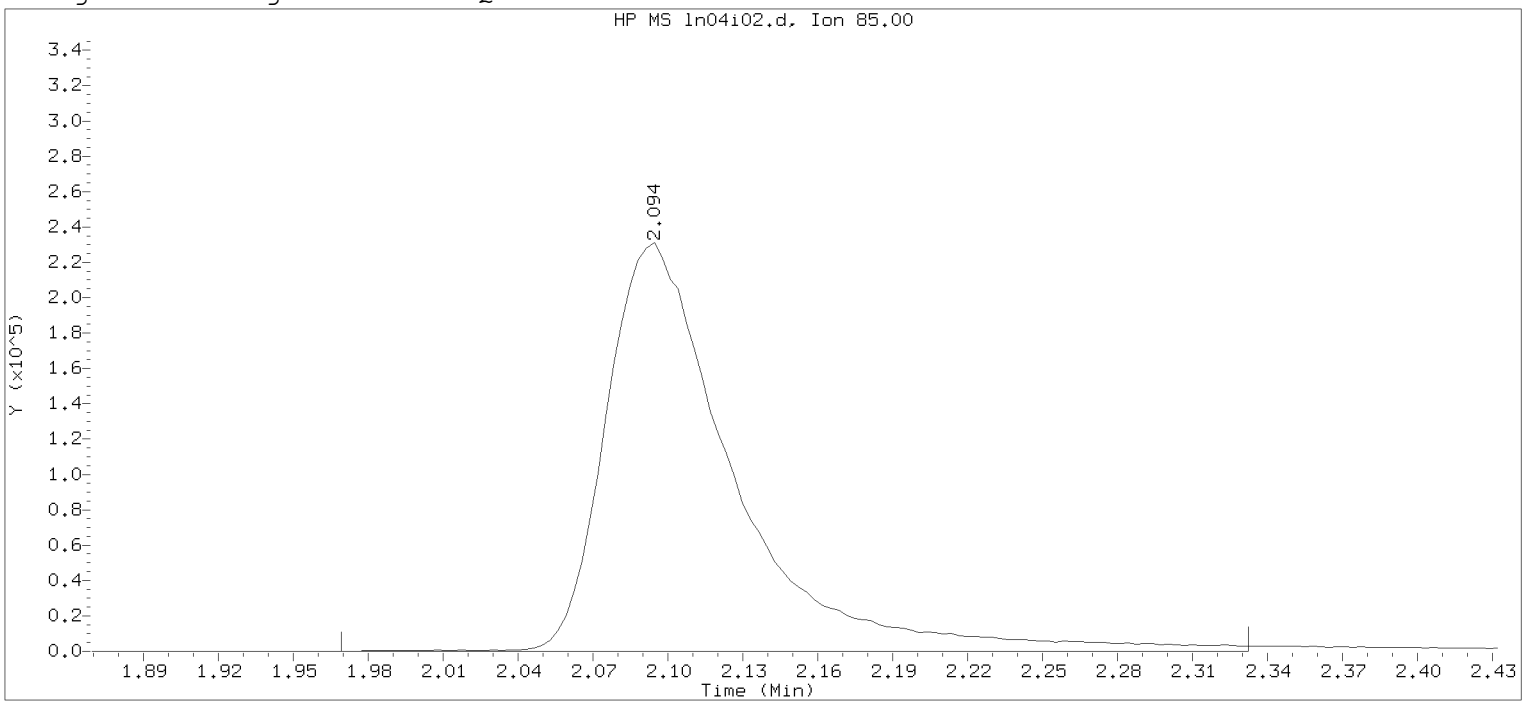
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

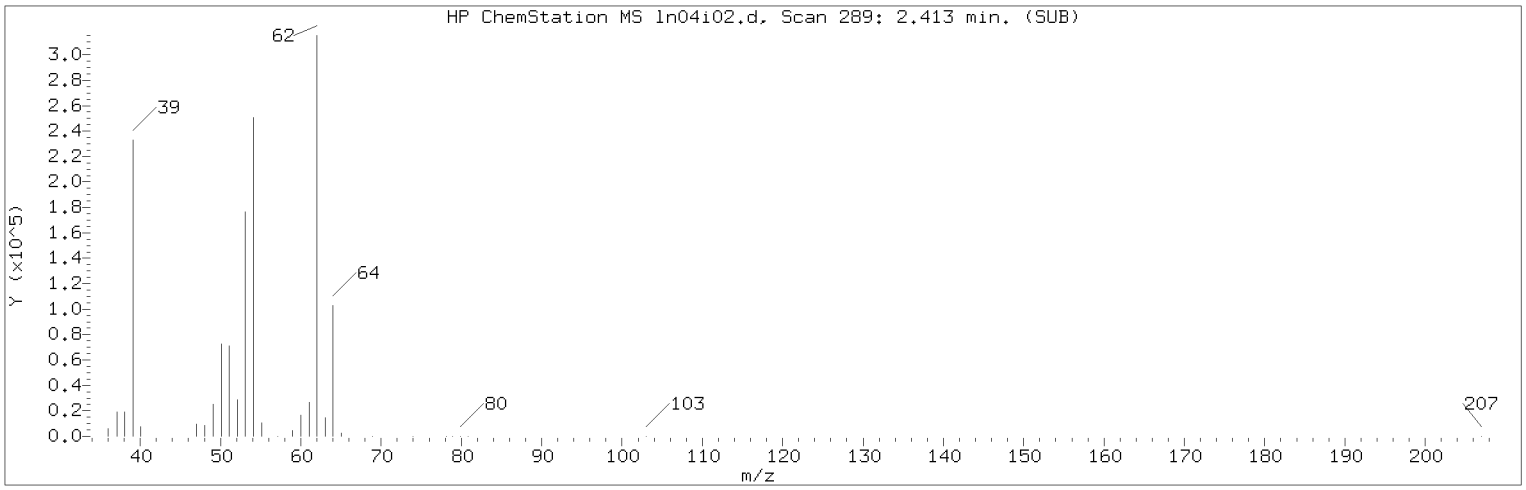
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

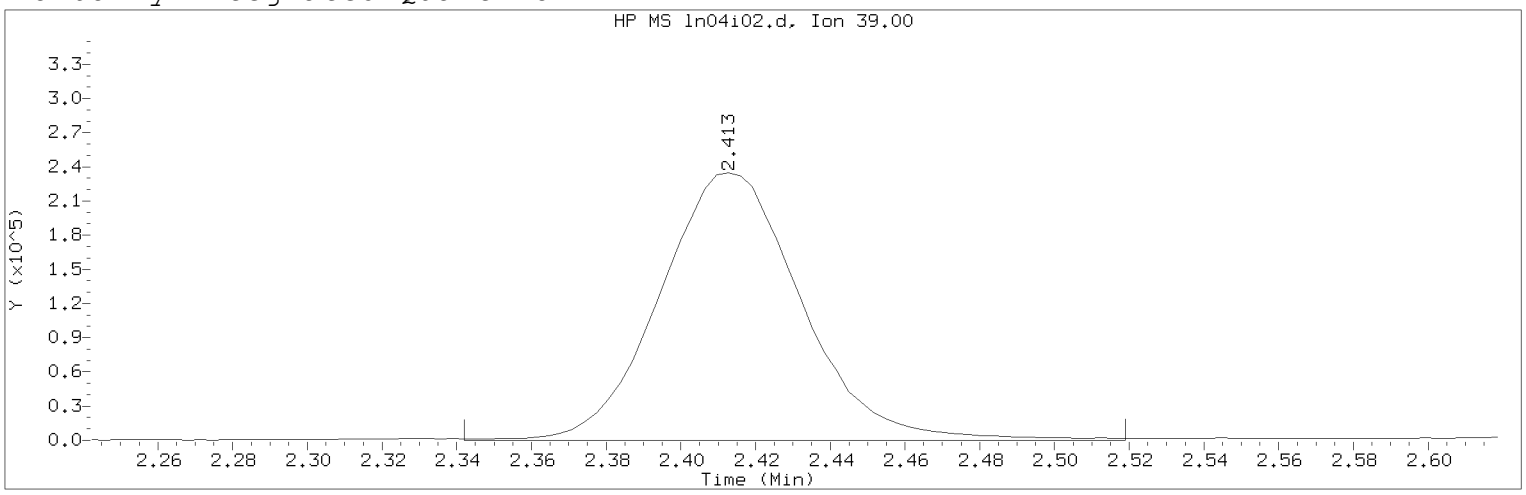
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area : 824639
On-column Amount (ng) : 94.4157
Integration start scan : 150 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

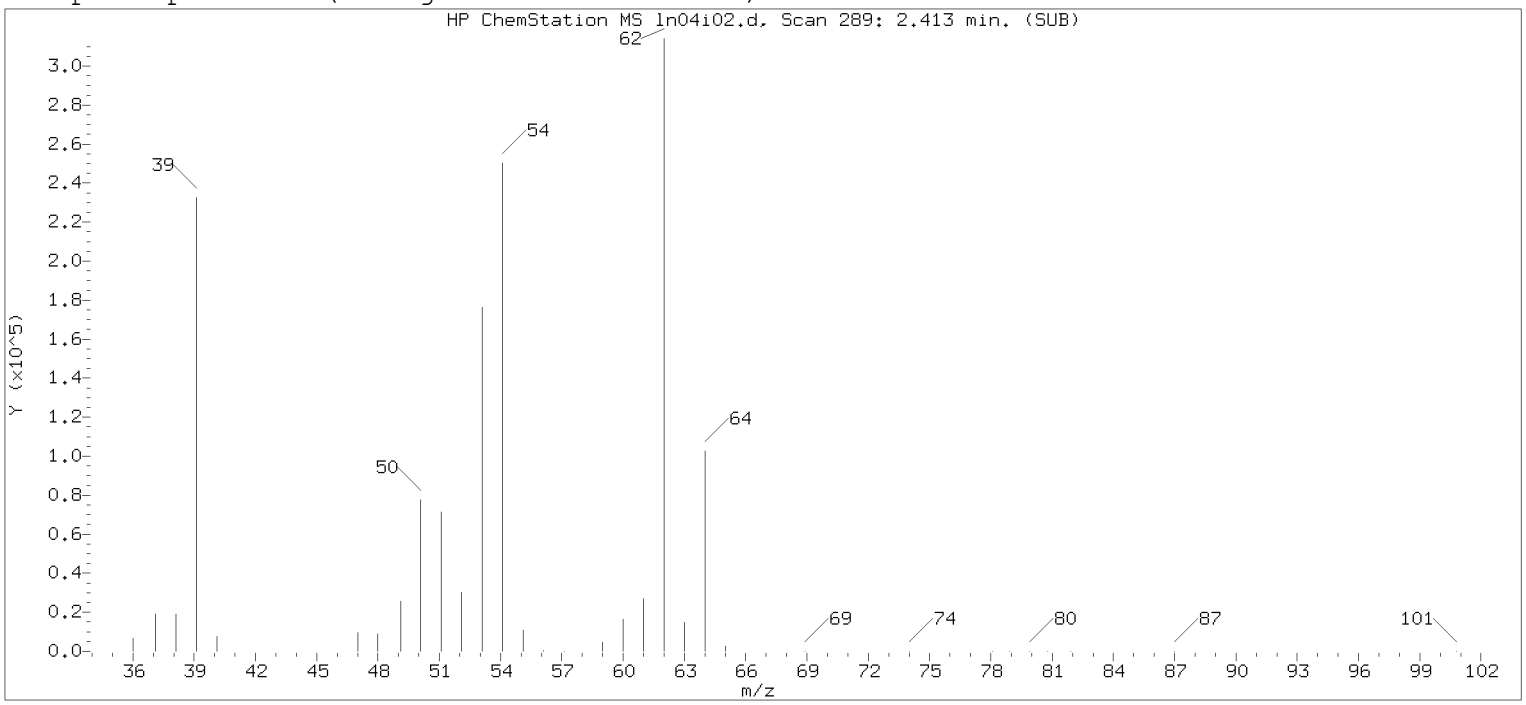
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area (flag) : 618713M
On-Column Amount (ng) : 93.6685
Integration start scan : 266 Integration stop scan: 321
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

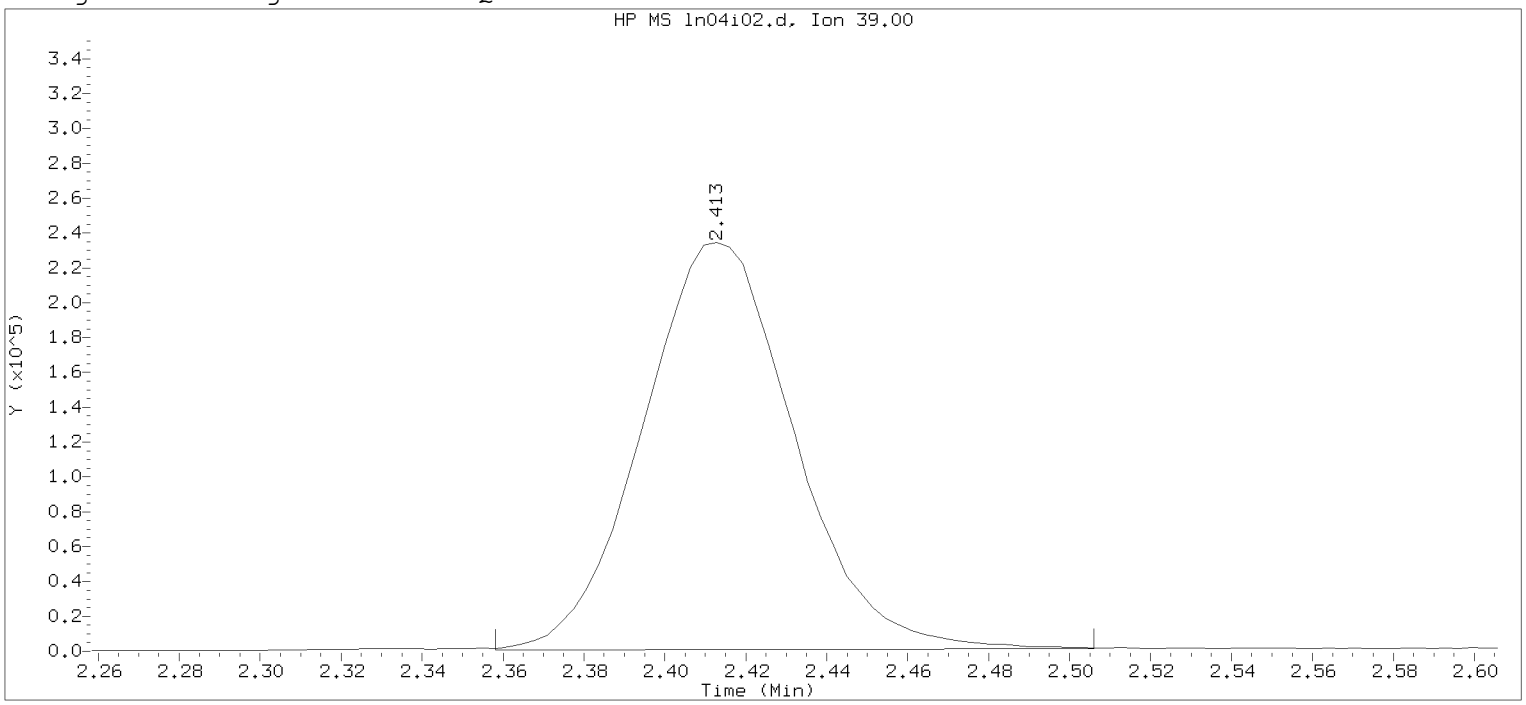
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area : 605602
On-column Amount (ng) : 97.5651
Integration start scan : 271 Integration stop scan: 317
Y at integration start : 806 Y at integration end: 1441

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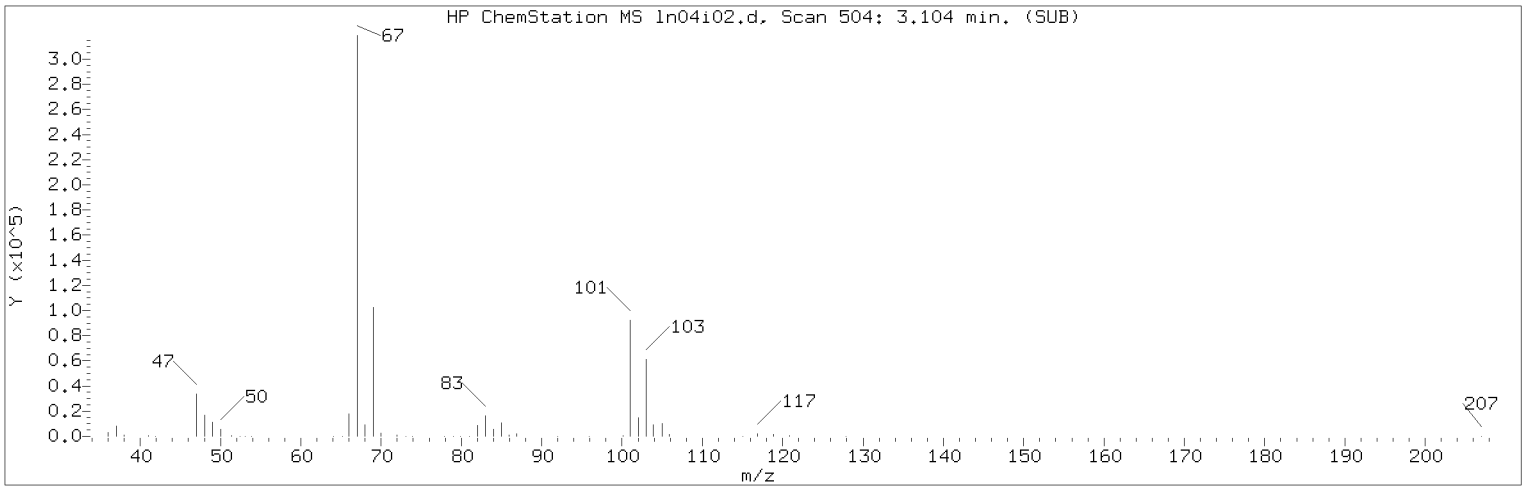
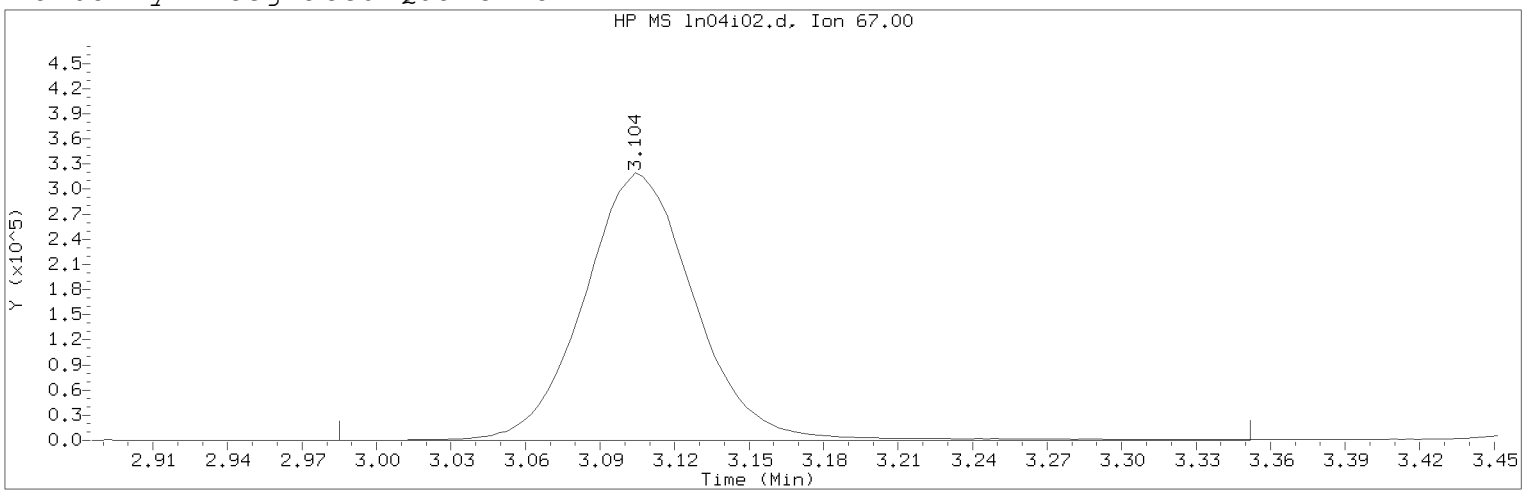
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

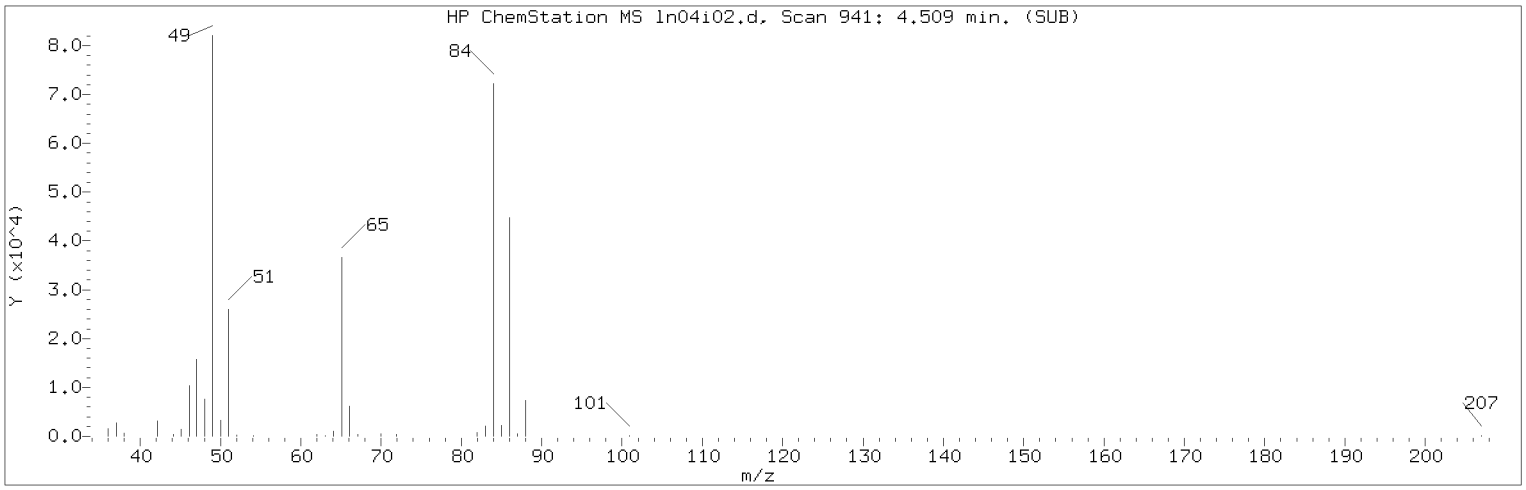
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 504
Retention Time (minutes): 3.104
Quant Ion : 67.00
Area (flag) : 992796M
On-Column Amount (ng) : 94.6777
Integration start scan : 466 Integration stop scan: 580
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

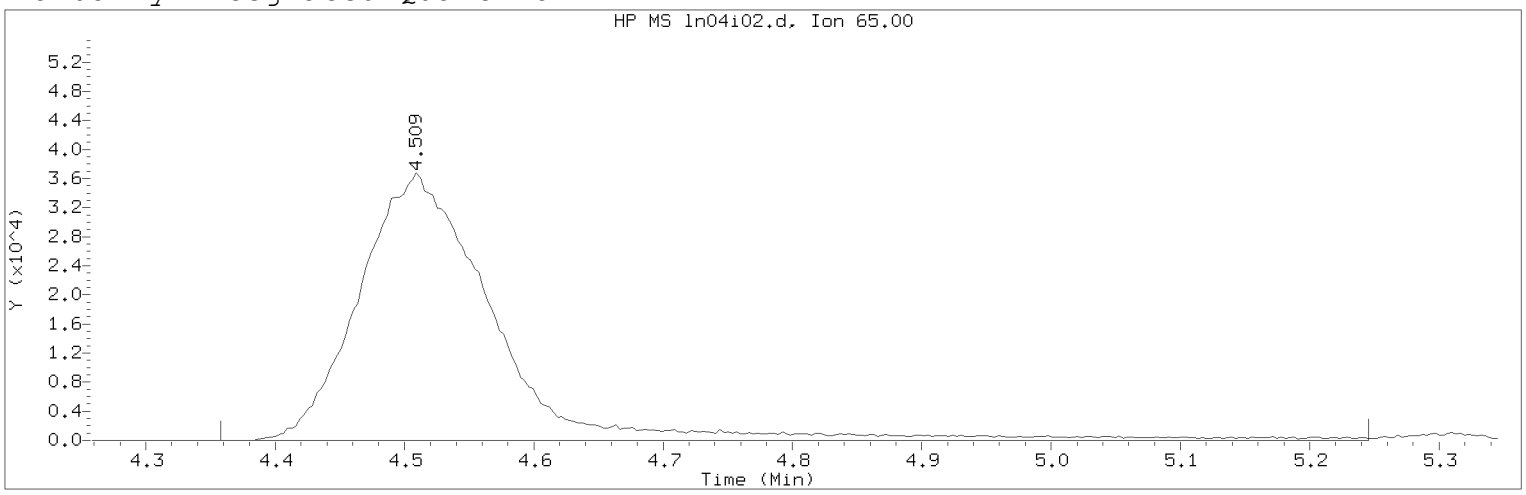
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

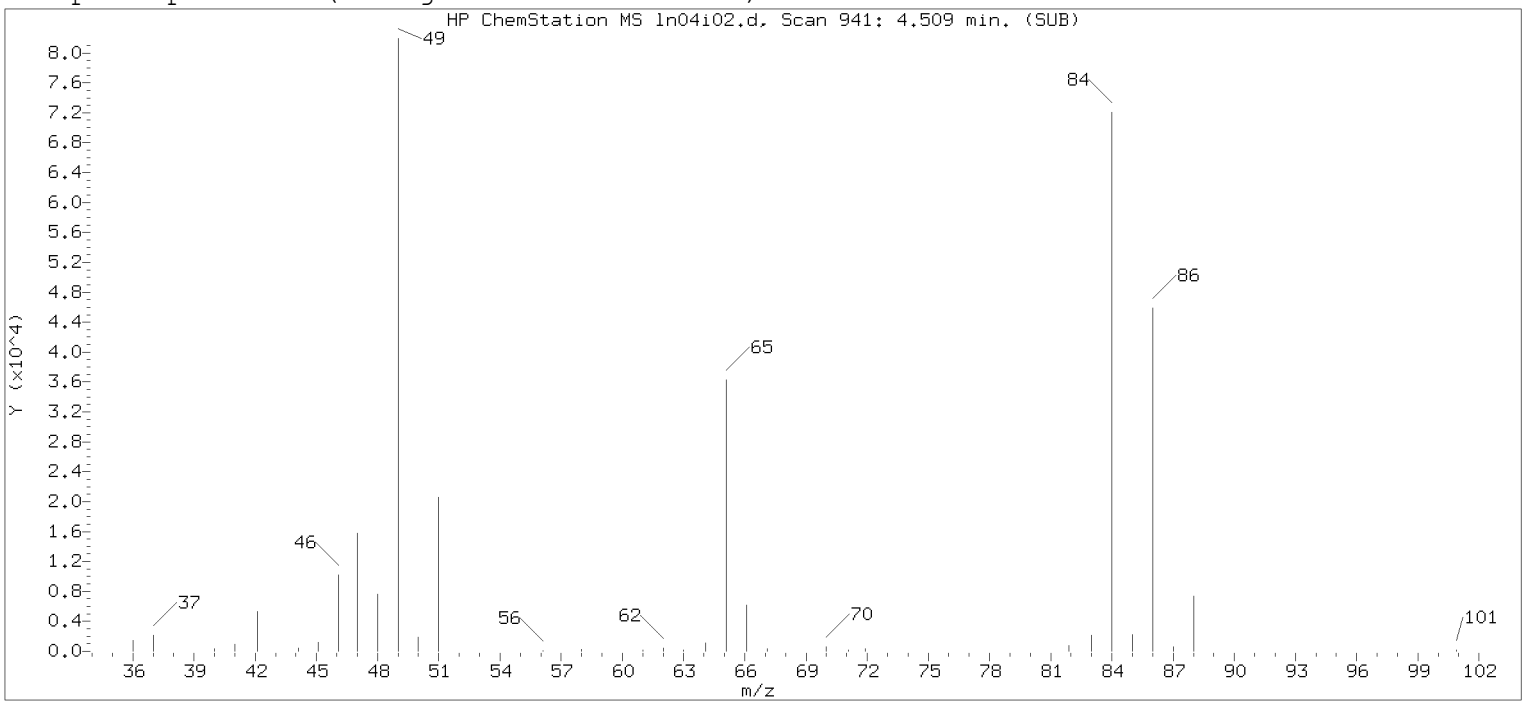
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 265971M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1169
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

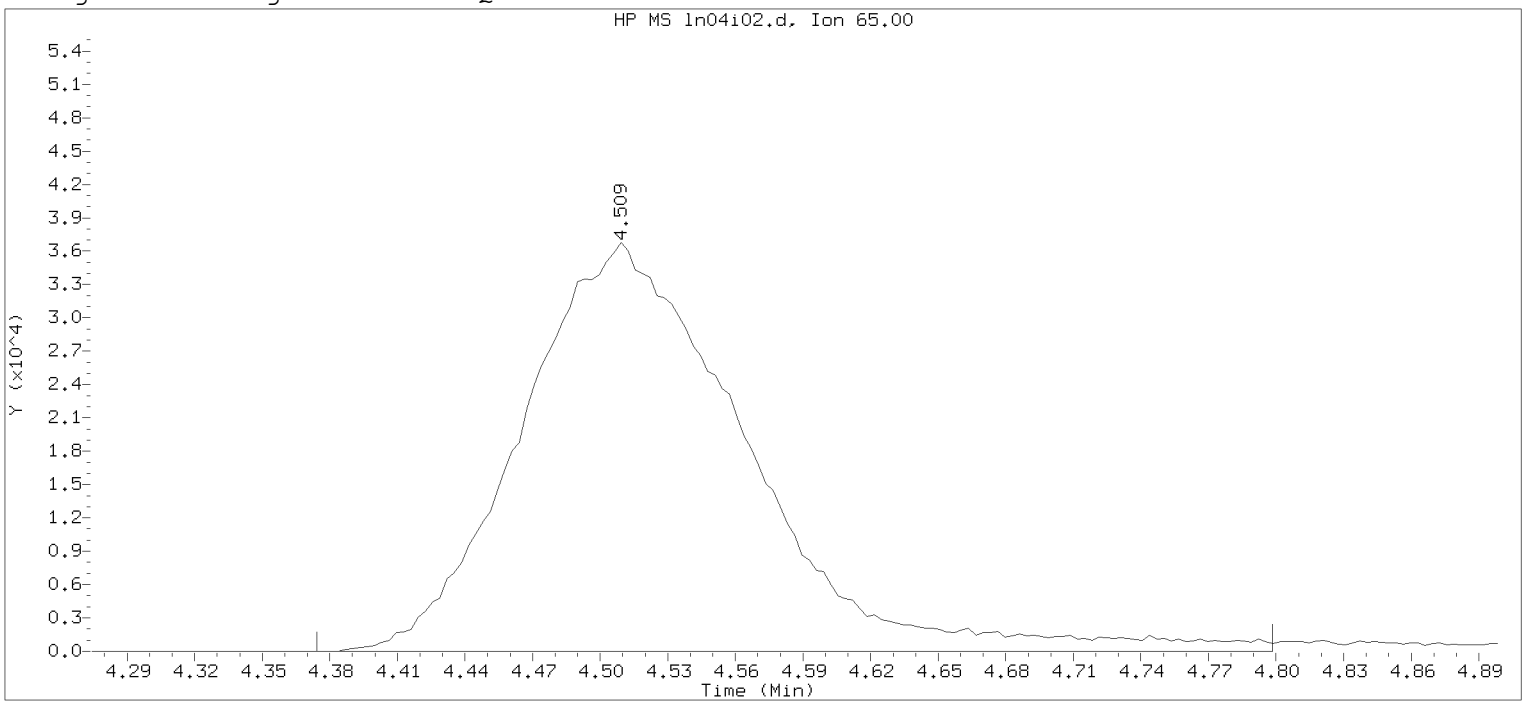
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

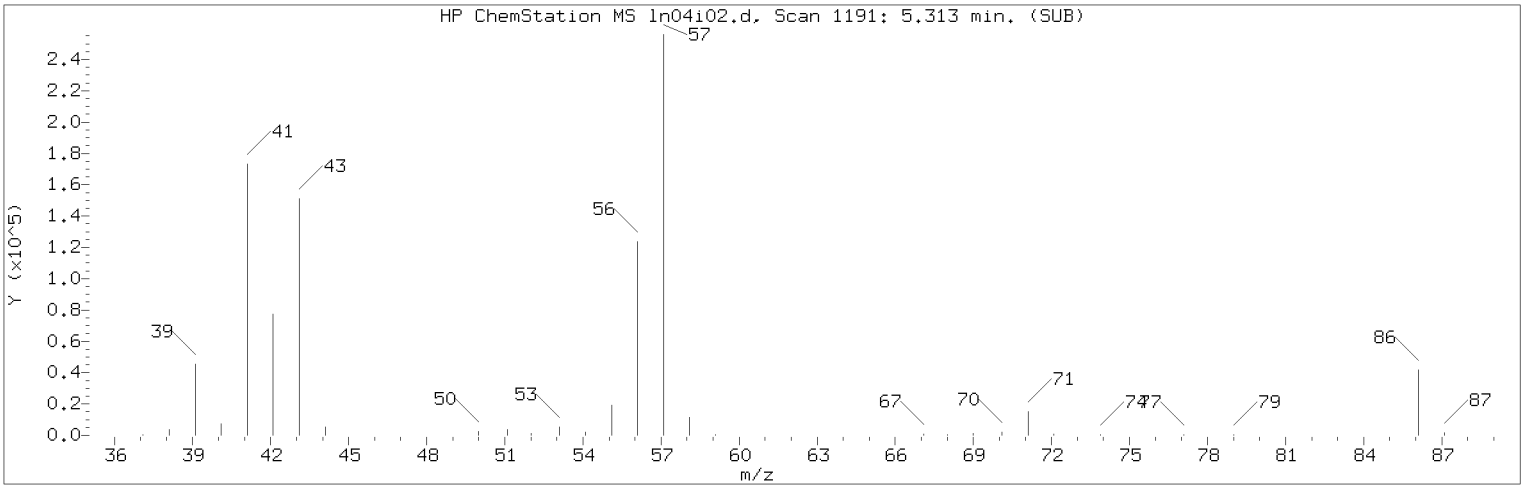
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

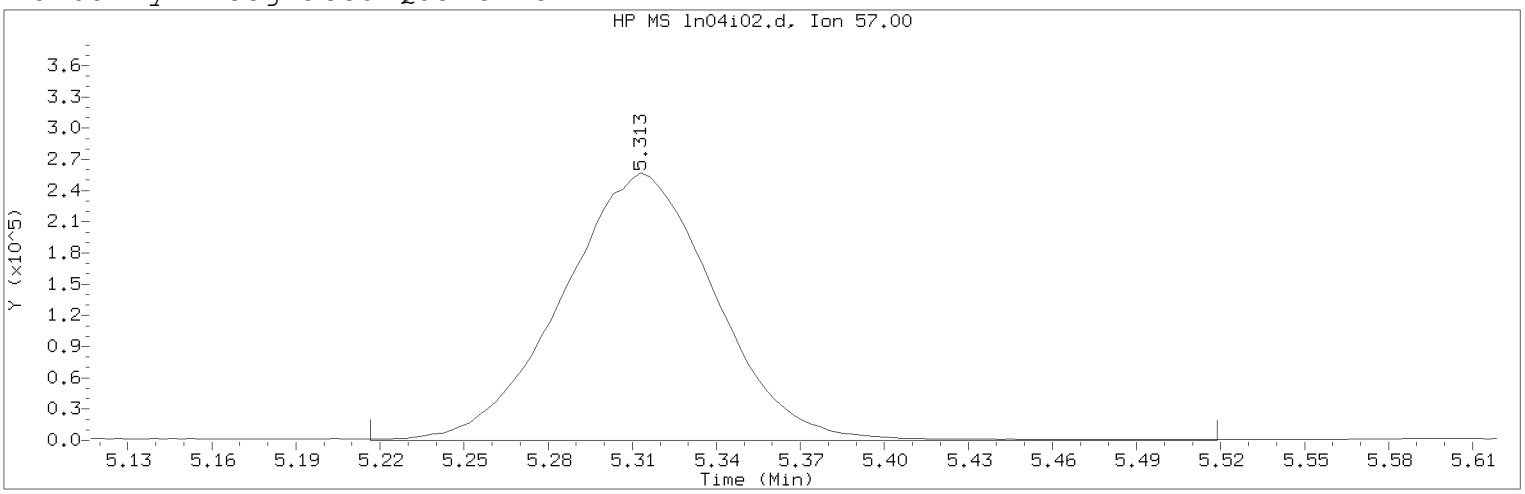
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 252632
On-column Amount (ng) : 250.0000
Integration start scan : 898 Integration stop scan: 1030
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

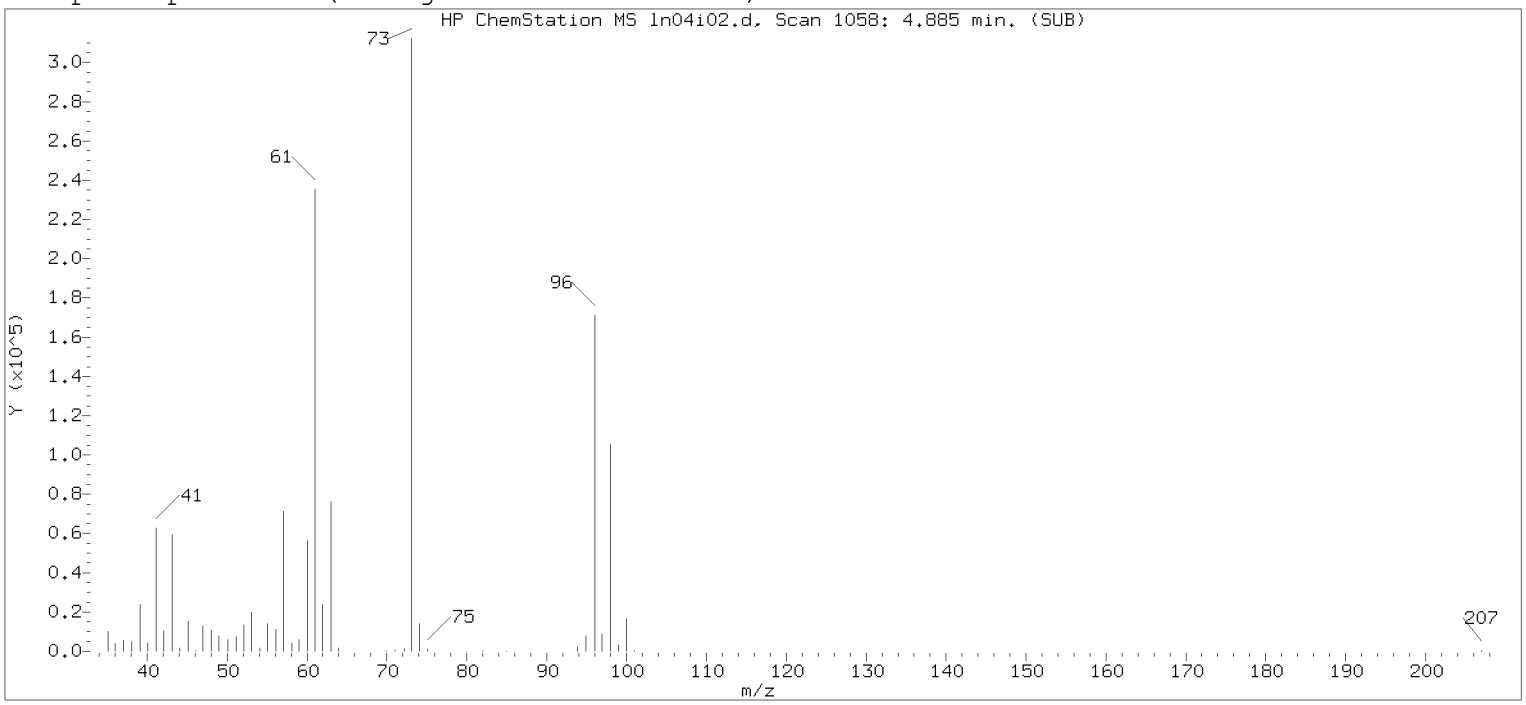
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1191
Retention Time (minutes): 5.313
Quant Ion : 57.00
Area (flag) : 974442M
On-Column Amount (ng) : 107.9083
Integration start scan : 1160 Integration stop scan: 1254
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

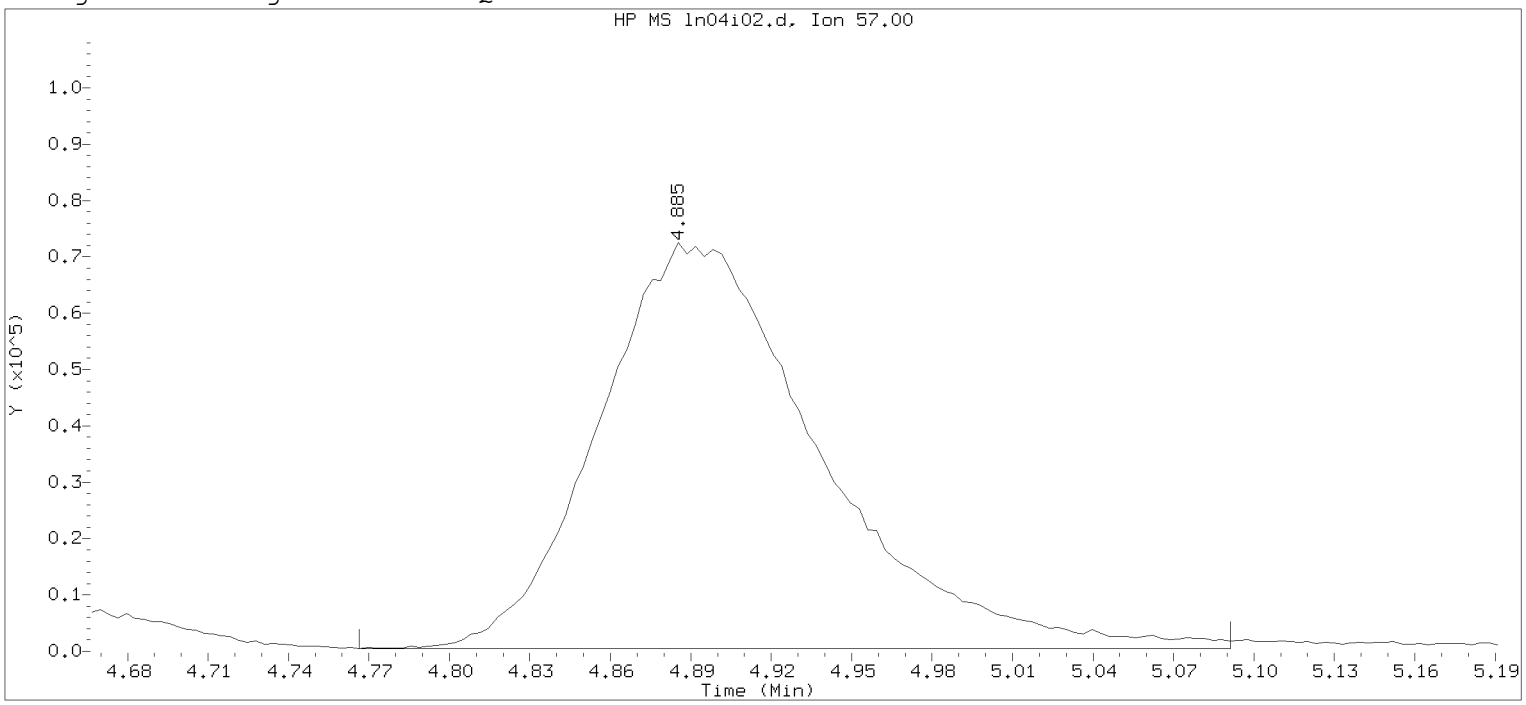
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

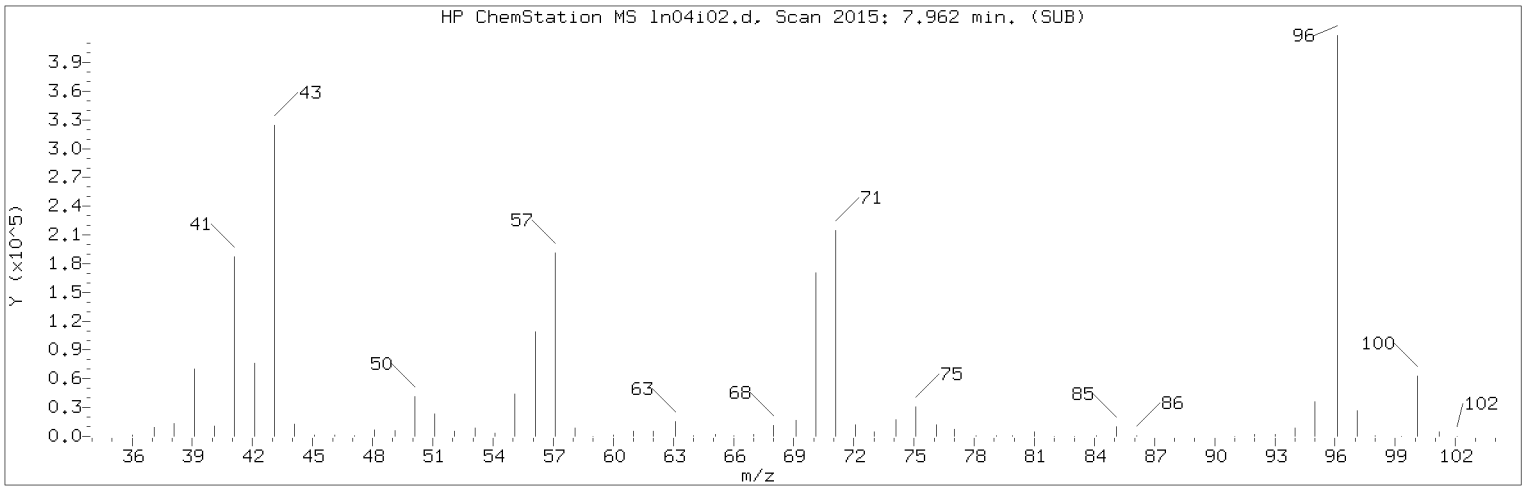
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

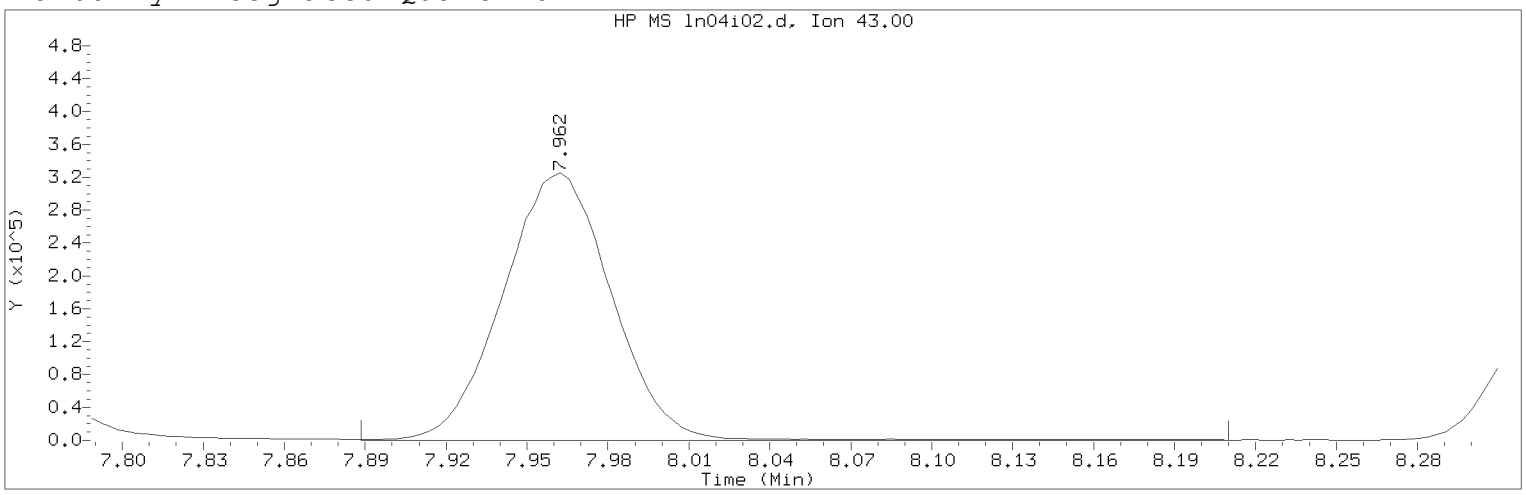
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1058
Retention Time (minutes): 4.885
Quant Ion : 57.00
Area : 414312
On-column Amount (ng) : 98.9070
Integration start scan : 1020 Integration stop scan: 1121
Y at integration start : 485 Y at integration end: 485

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

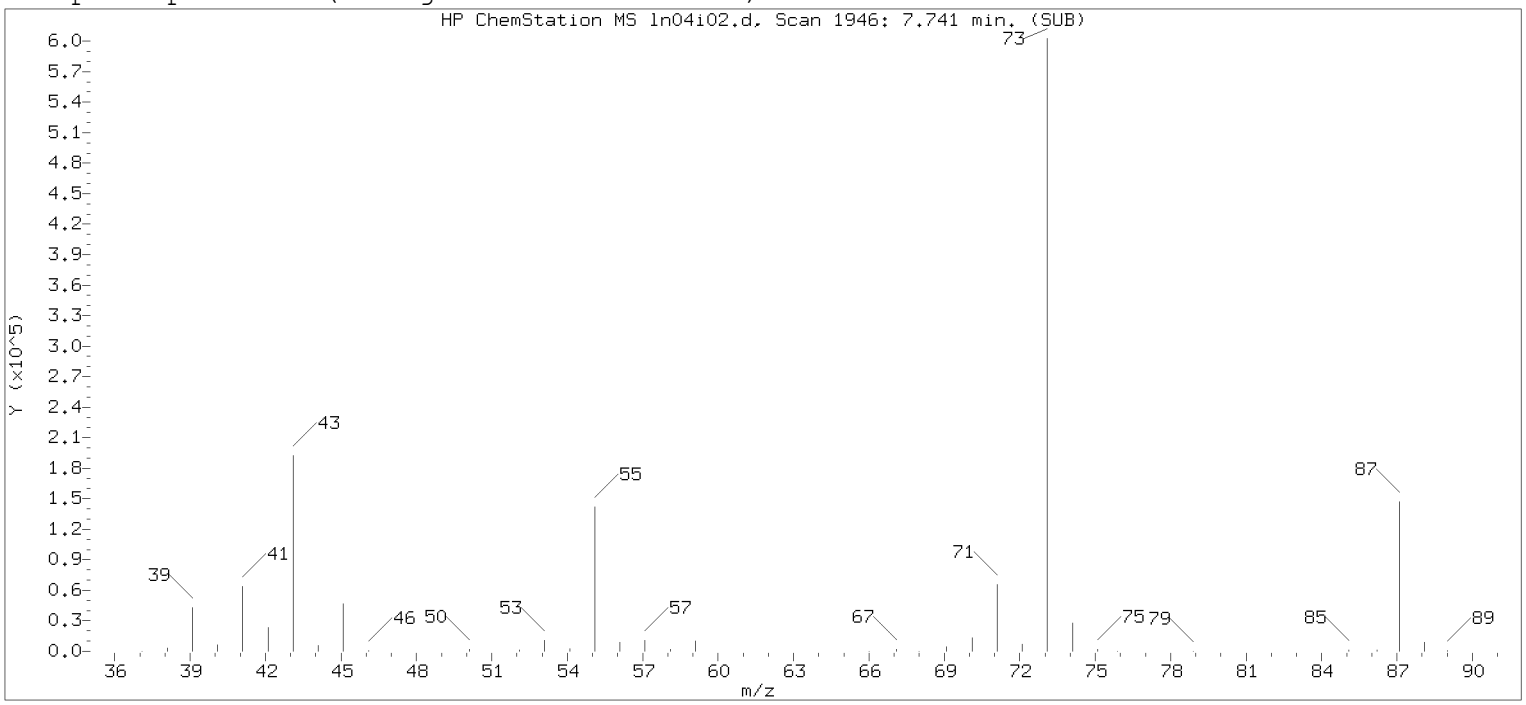
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2015
Retention Time (minutes): 7.962
Quant Ion : 43.00
Area (flag) : 911962MA
On-Column Amount (ng) : 108.1037
Integration start scan : 1991 Integration stop scan: 2091
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

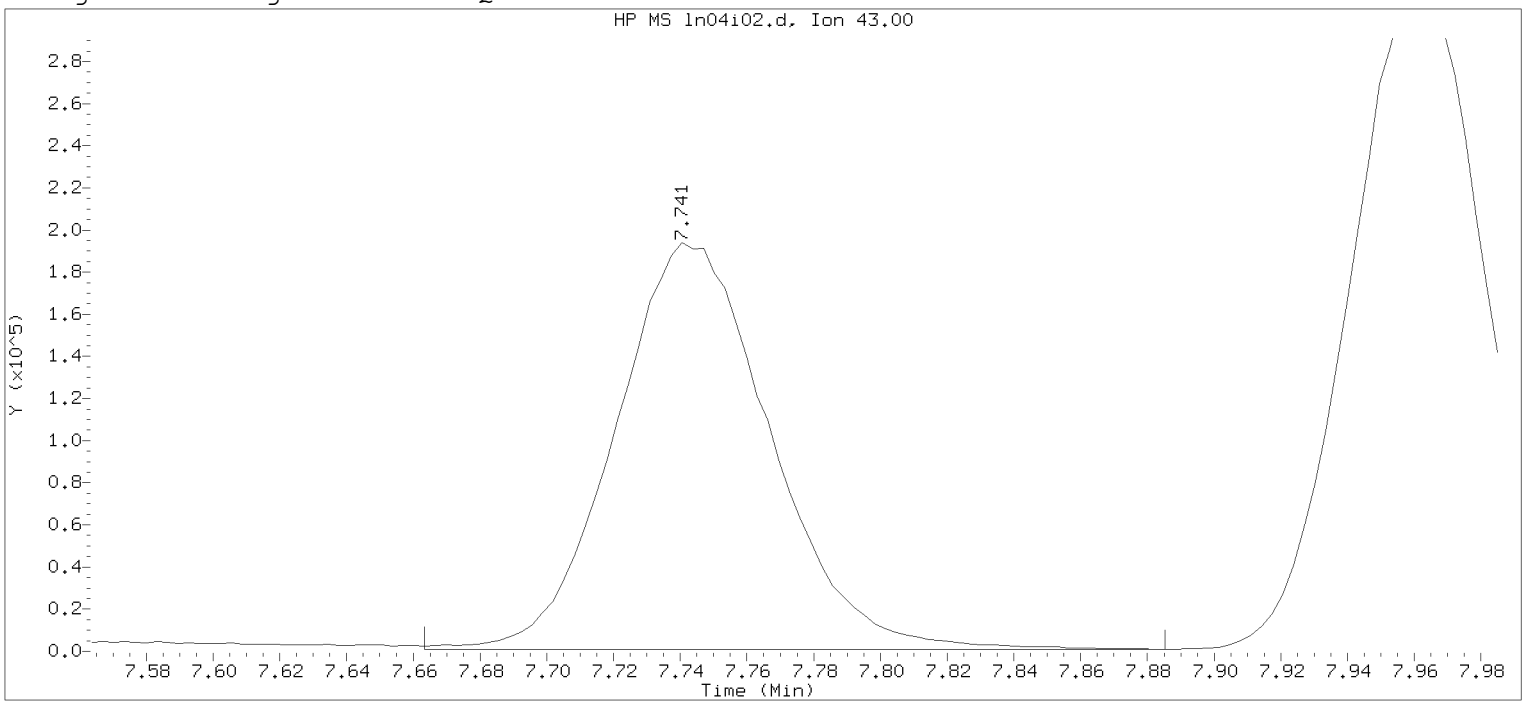
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

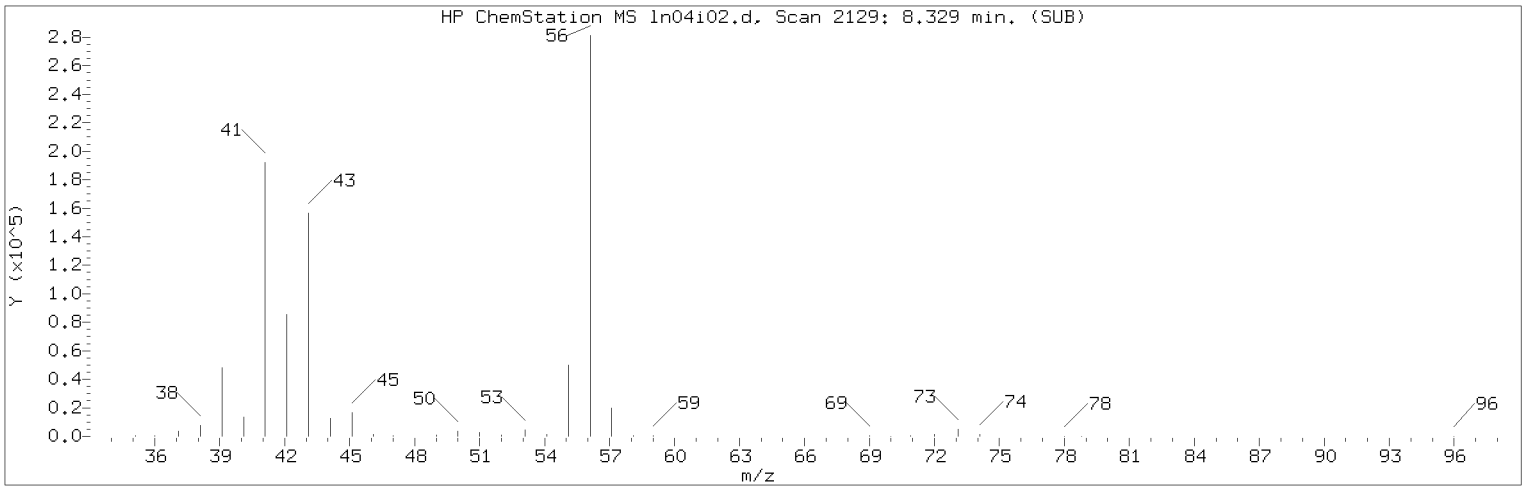
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

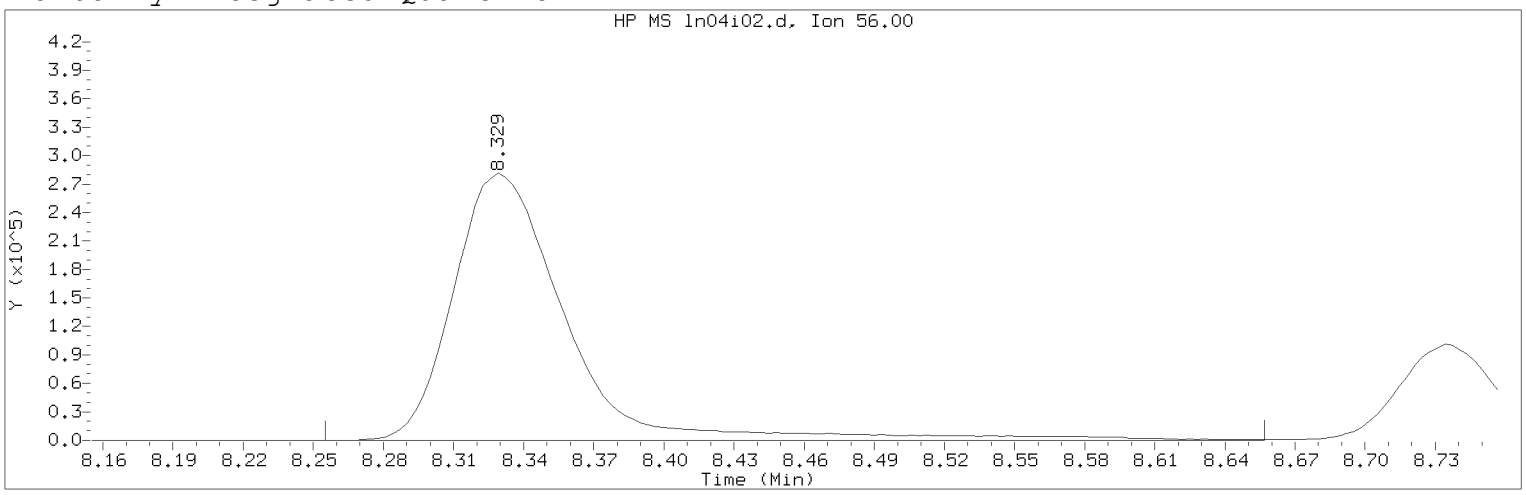
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.741
Quant Ion : 43.00
Area : 623358
On-column Amount (ng) : 101.3435
Integration start scan : 1921 Integration stop scan: 1990
Y at integration start : 845 Y at integration end: 845

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

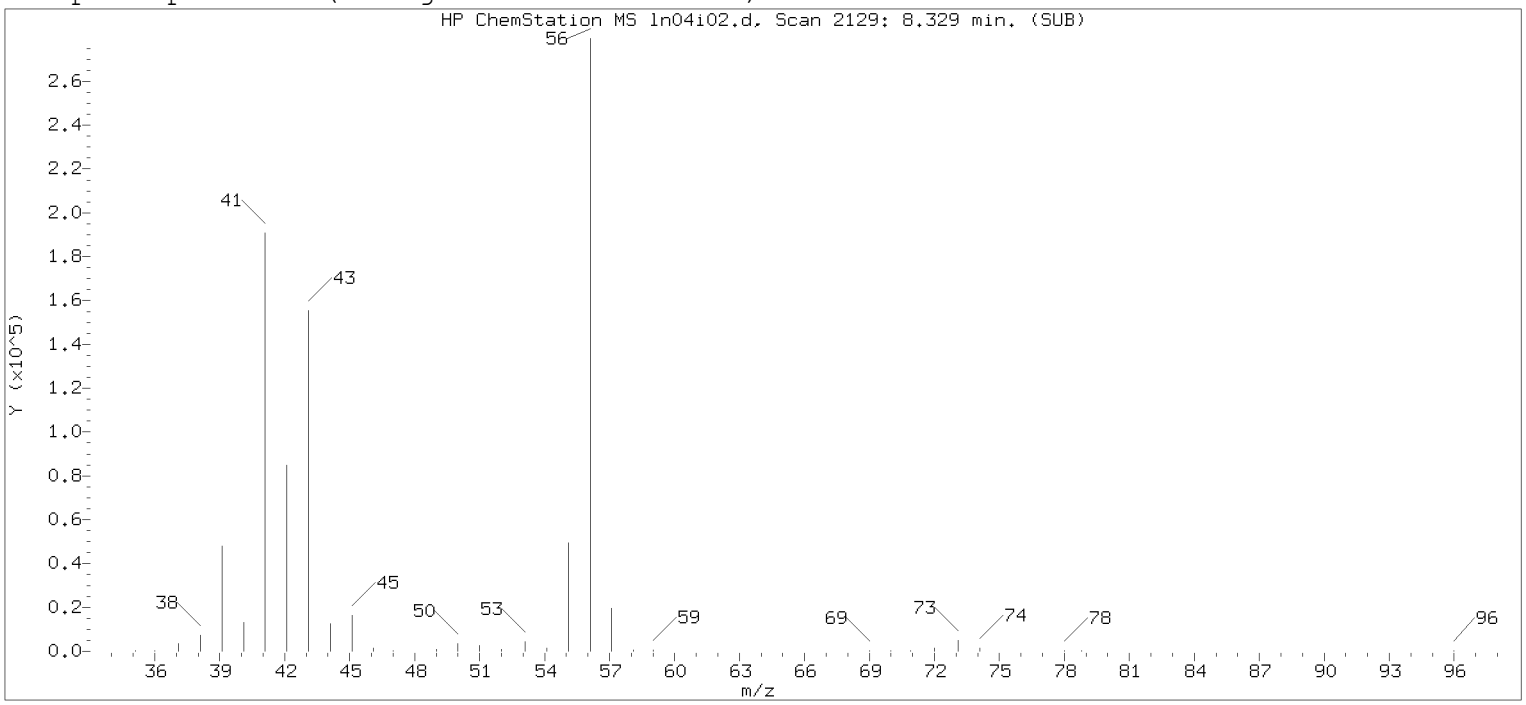
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area (flag) : 944383M
On-Column Amount (ng) : 2911.8124
Integration start scan : 2105 Integration stop scan: 2230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

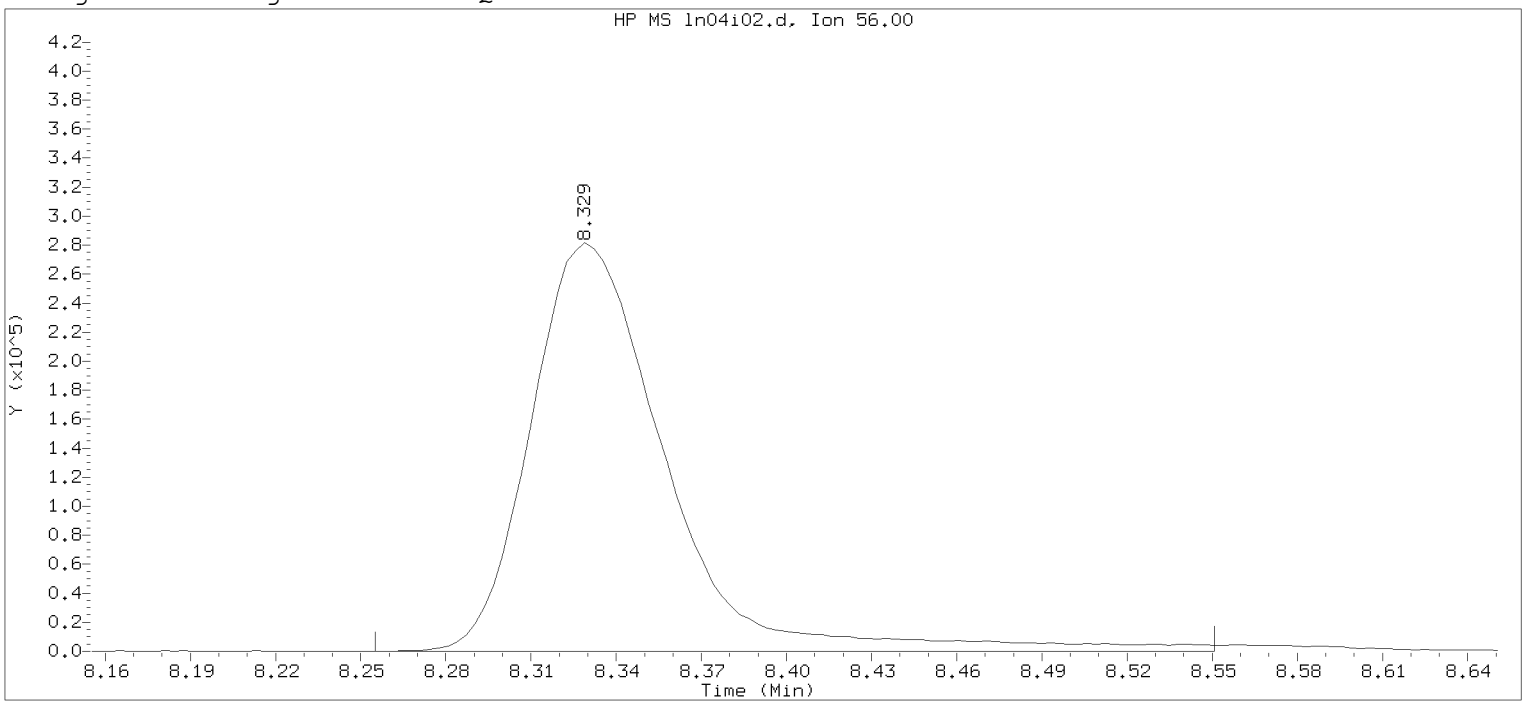
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

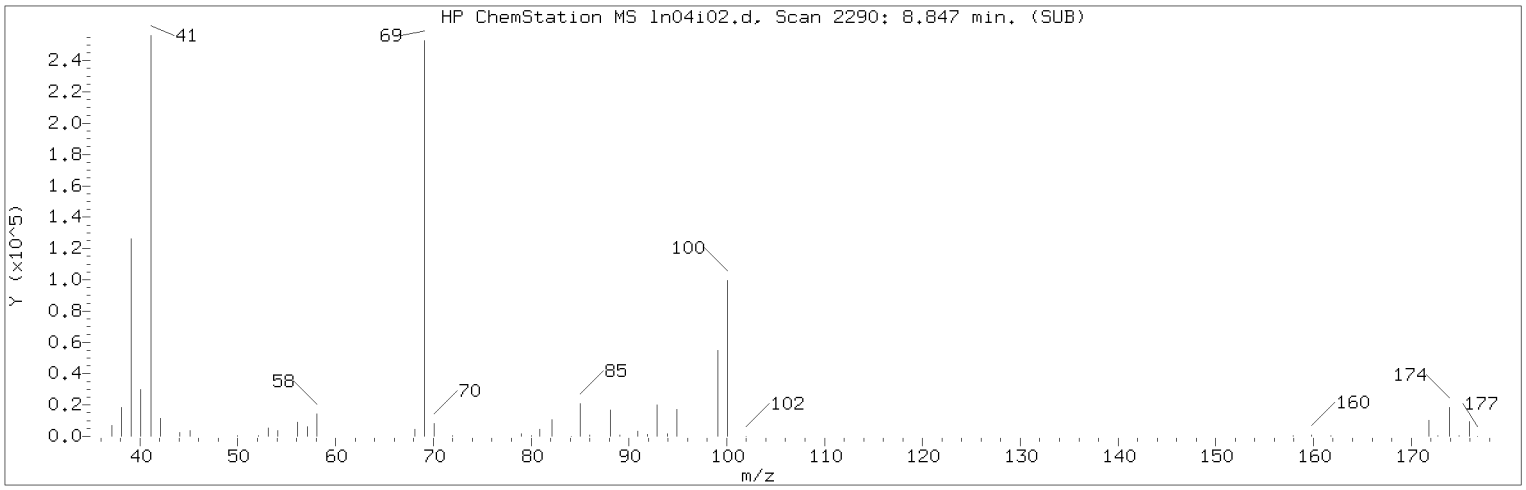
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

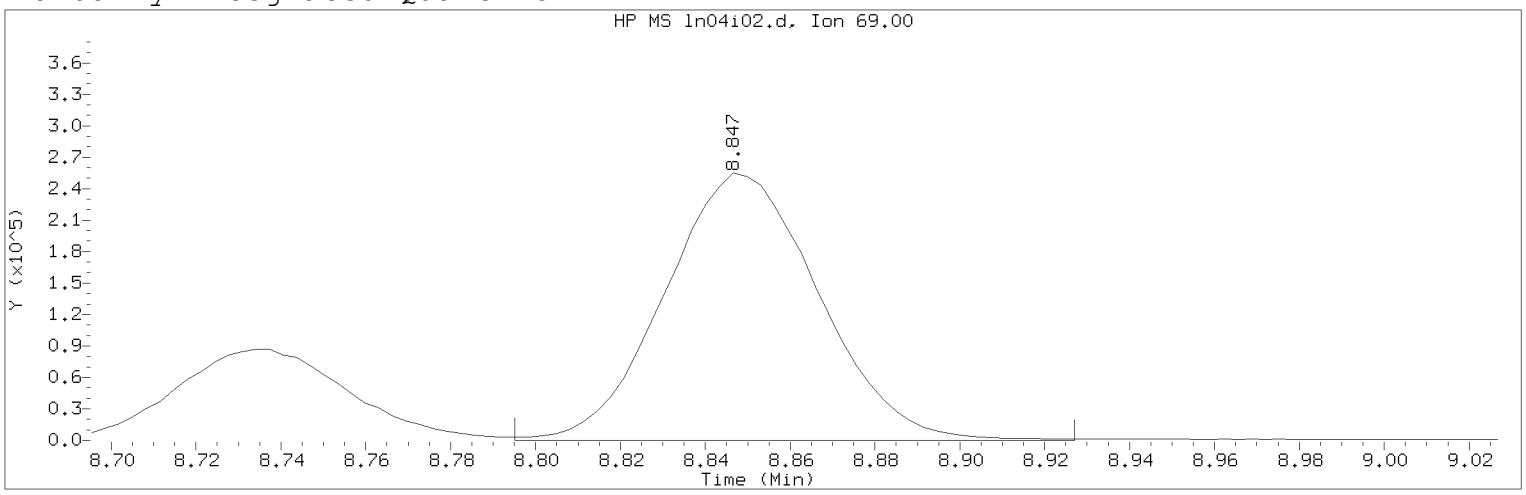
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area : 929615
On-column Amount (ng) : 2668.2803
Integration start scan : 2105 Integration stop scan: 2197
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

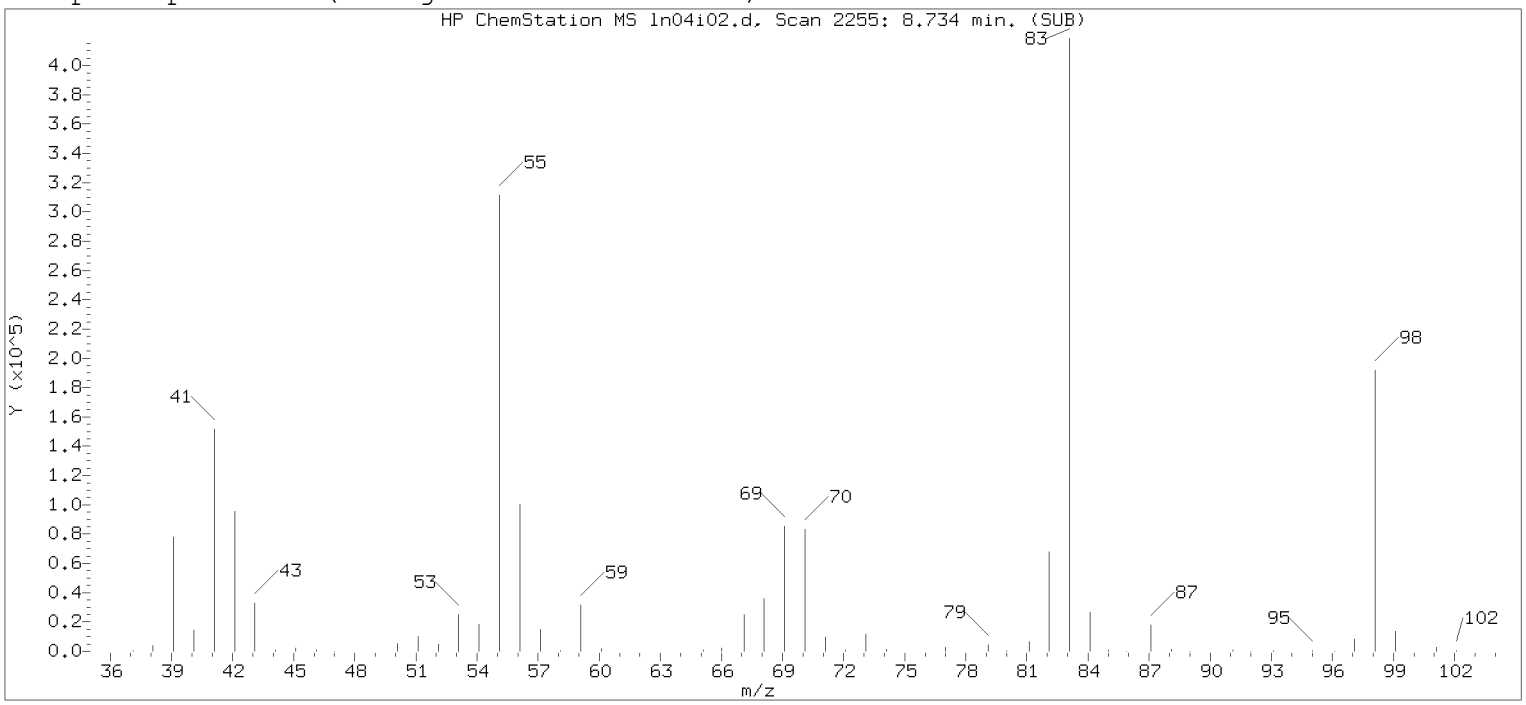
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2290
Retention Time (minutes): 8.847
Quant Ion : 69.00
Area (flag) : 640445A
On-Column Amount (ng) : 108.3344
Integration start scan : 2273 Integration stop scan: 2314
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

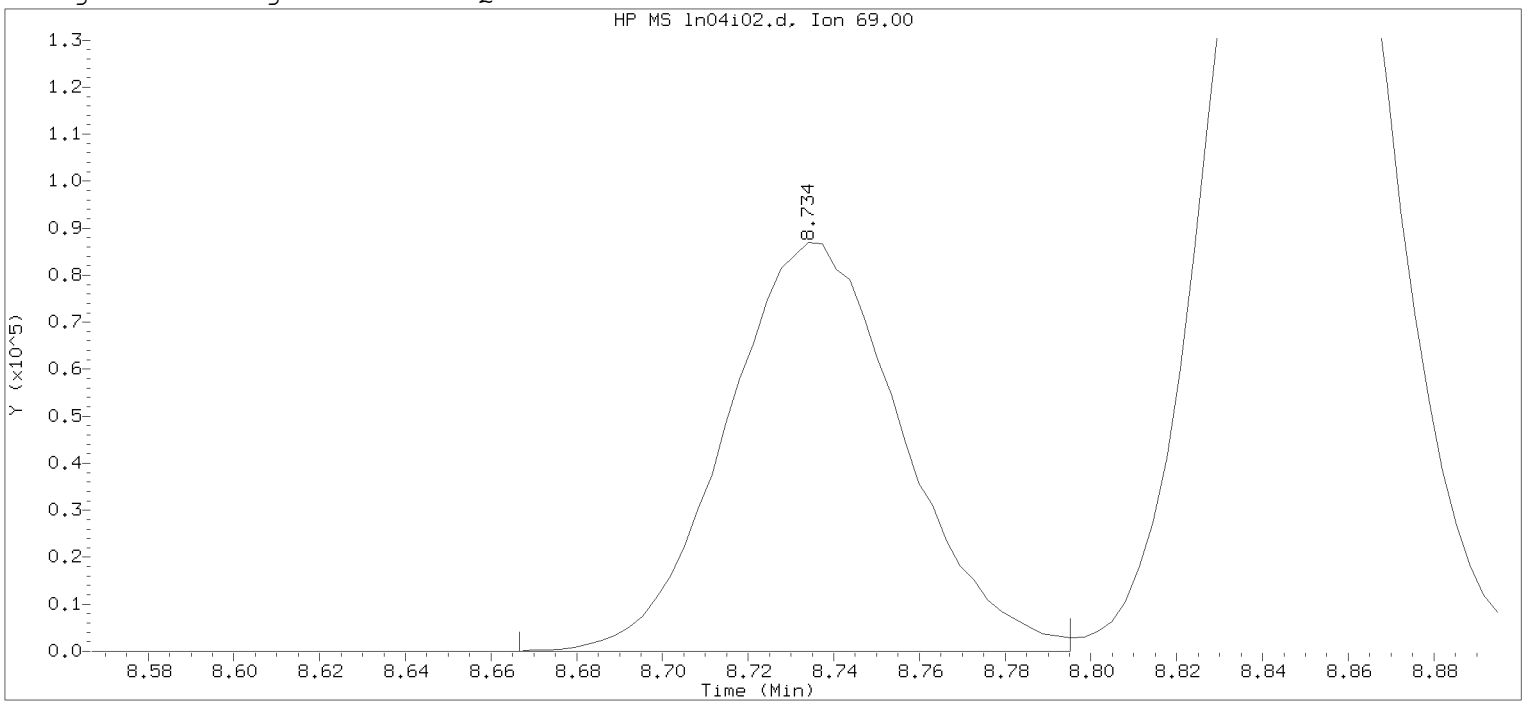
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

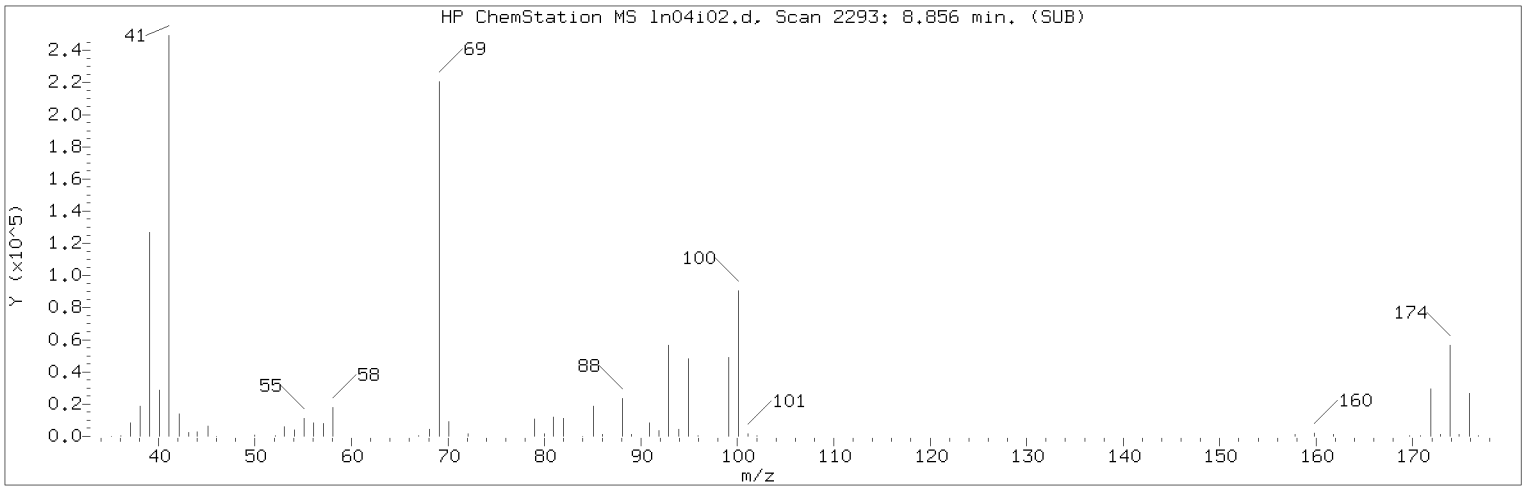
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

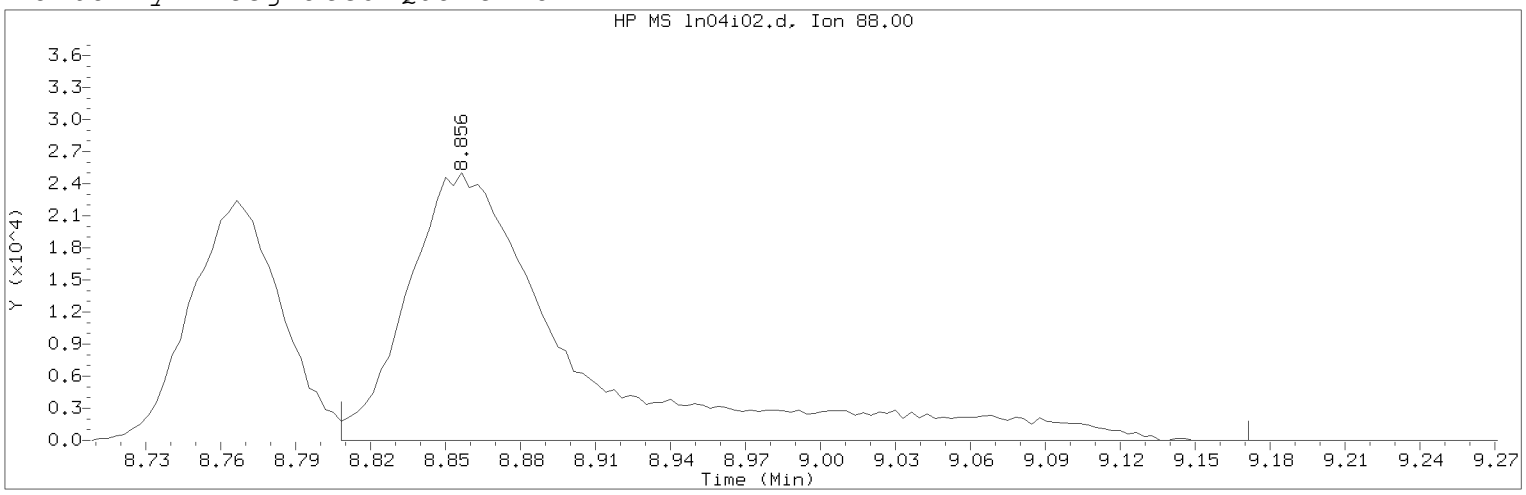
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 247190
On-column Amount (ng) : 97.8749
Integration start scan : 2233 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

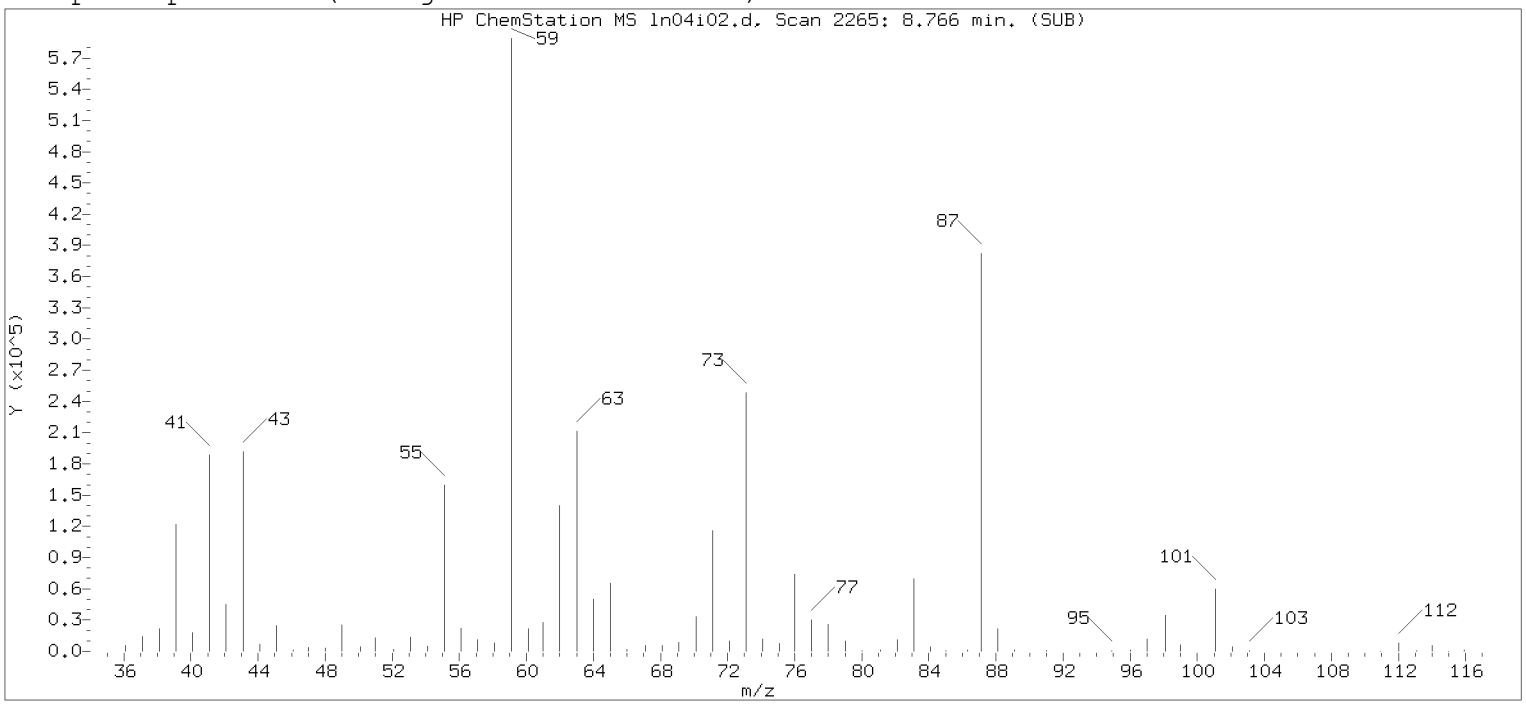
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 117817M
On-Column Amount (ng) : 1321.6466
Integration start scan : 2277 Integration stop scan: 2390
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

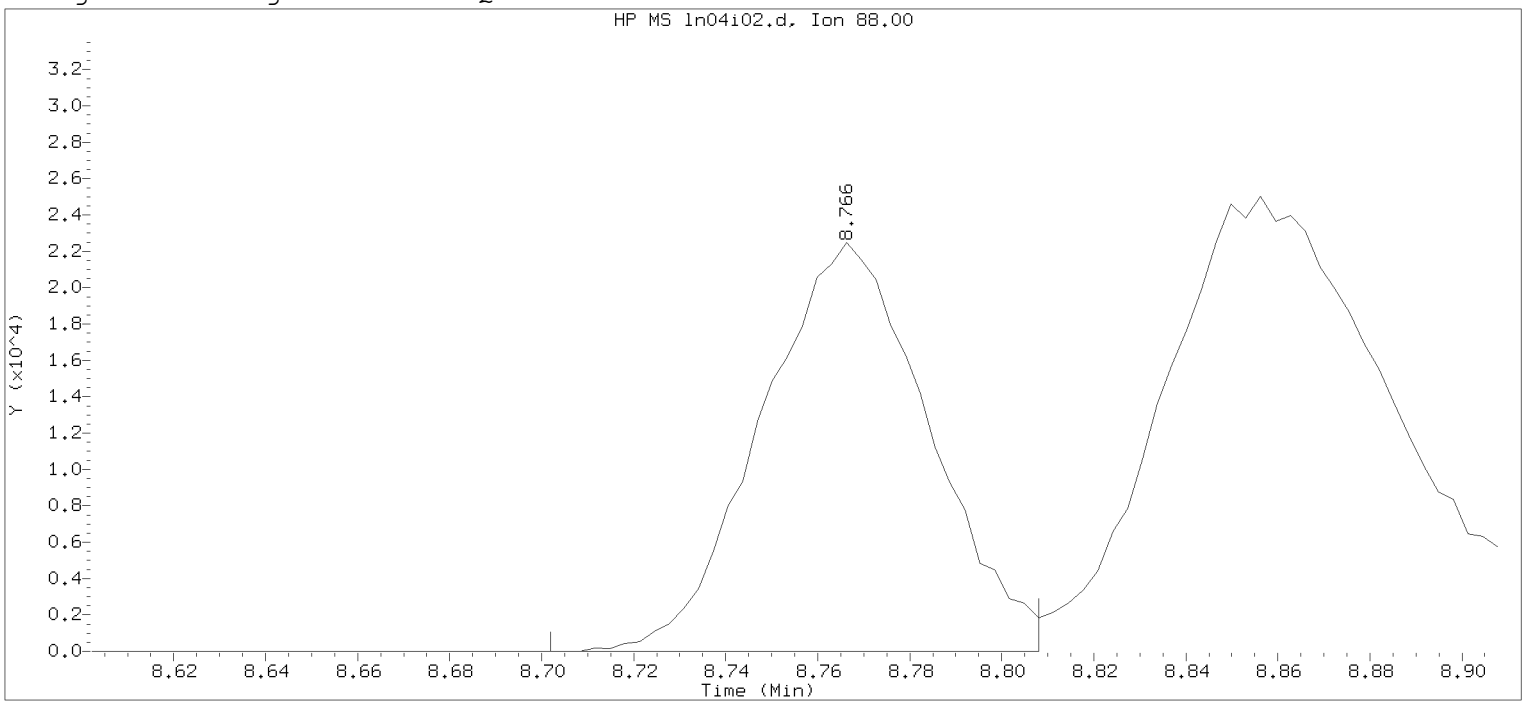
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

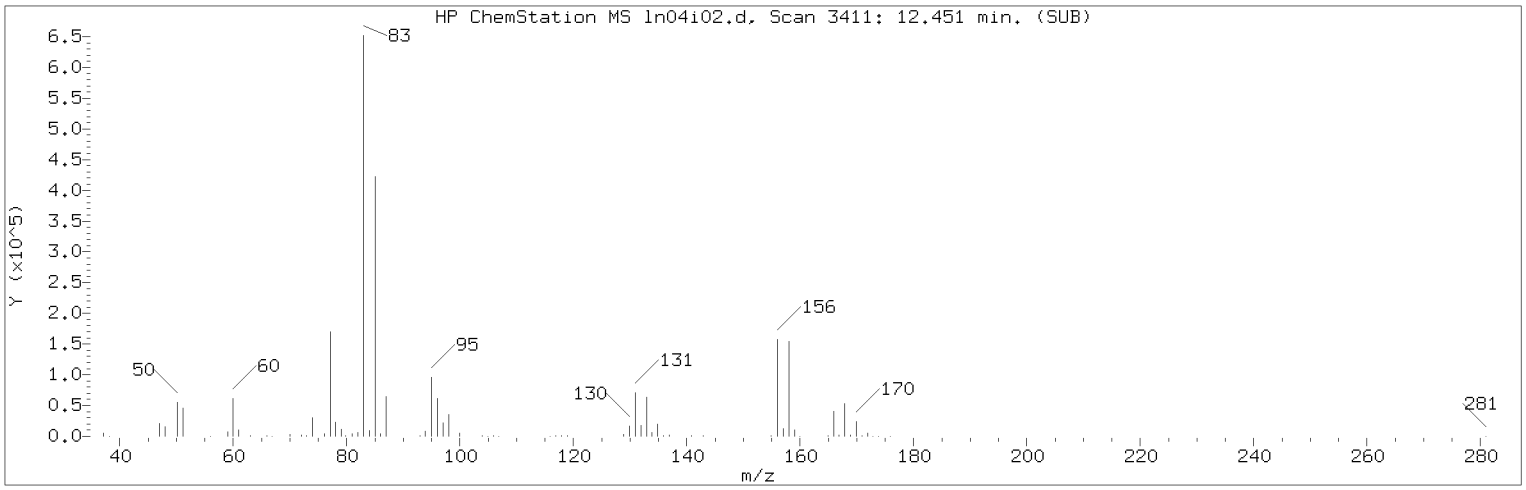
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

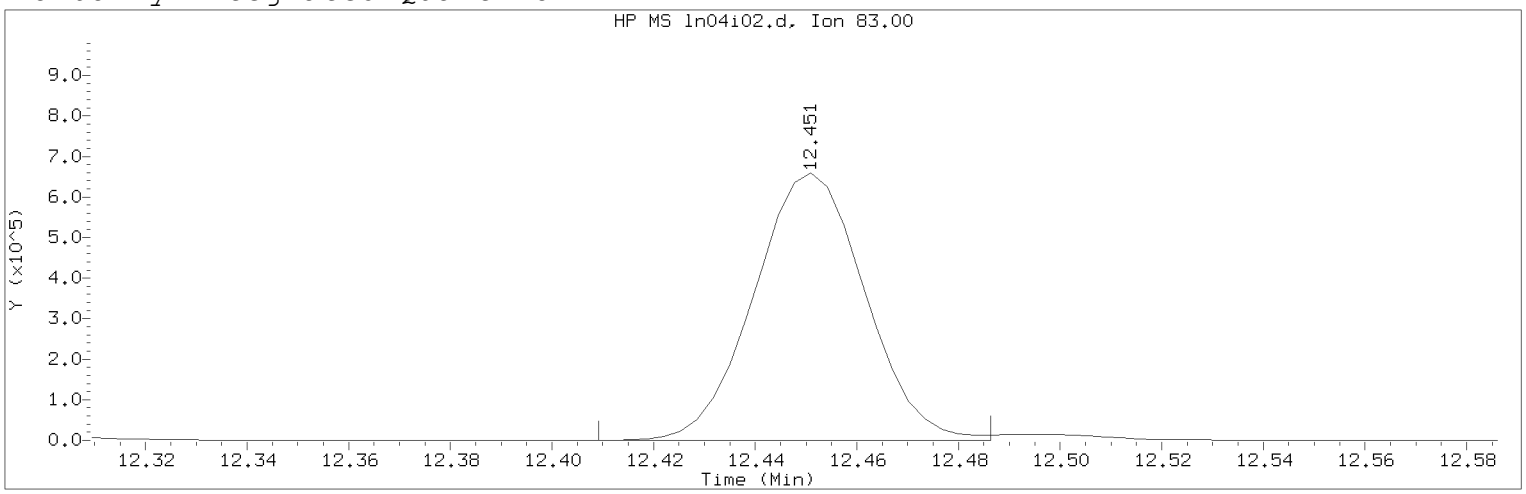
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2265		
Retention Time (minutes)	: 8.766		
Quant Ion	: 88.00		
Area	: 56534		
On-column Amount (ng)	: 746.2694		
Integration start scan	: 2244	Integration stop scan:	2277
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

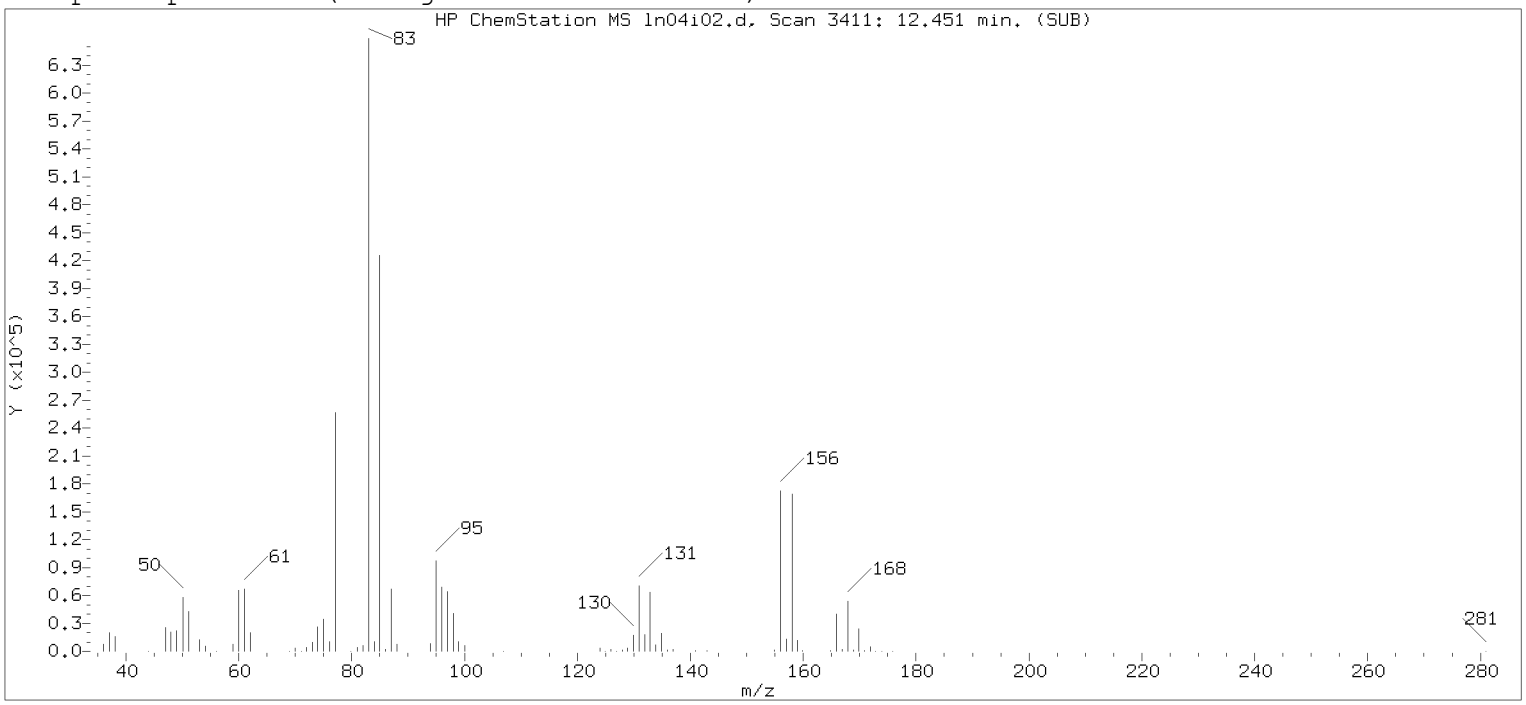
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 995972M
On-Column Amount (ng) : 105.3166
Integration start scan : 3397 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

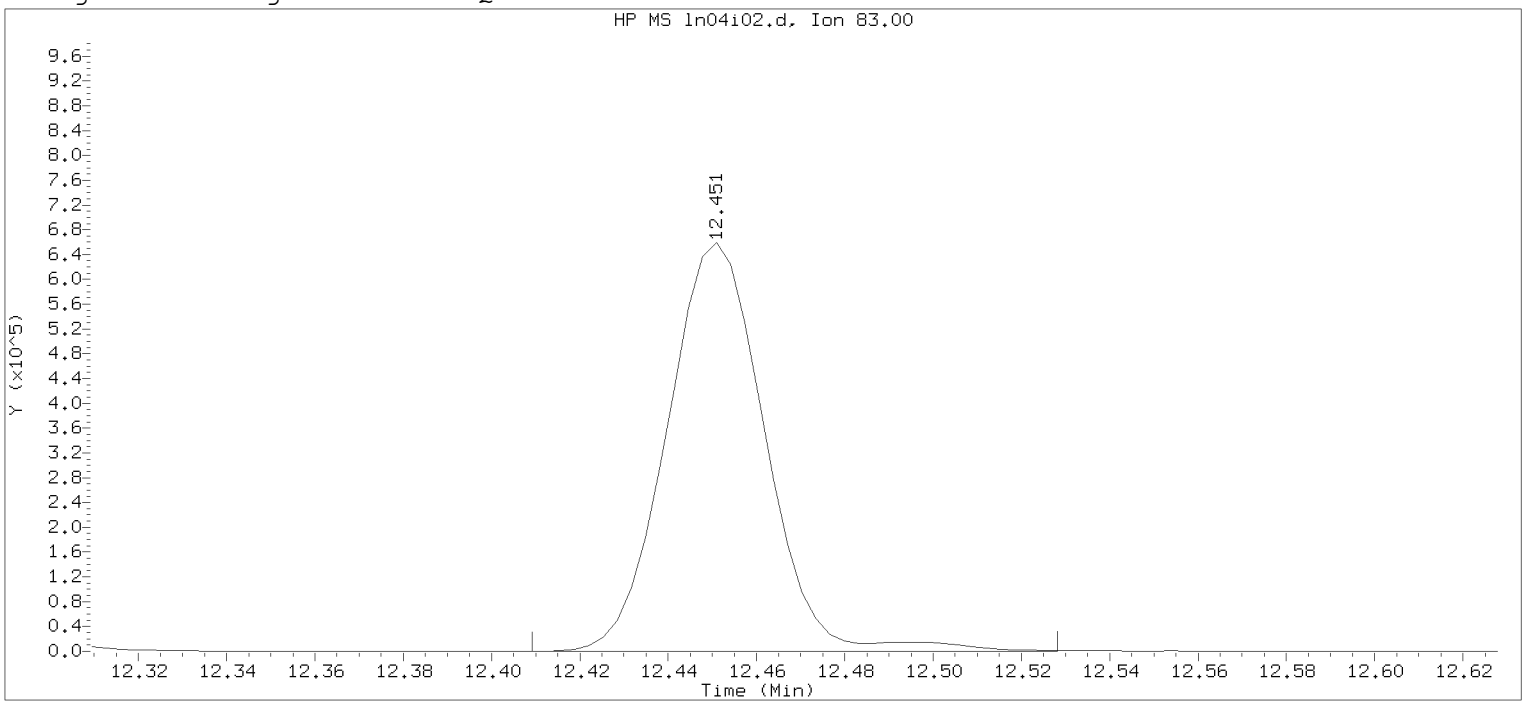
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

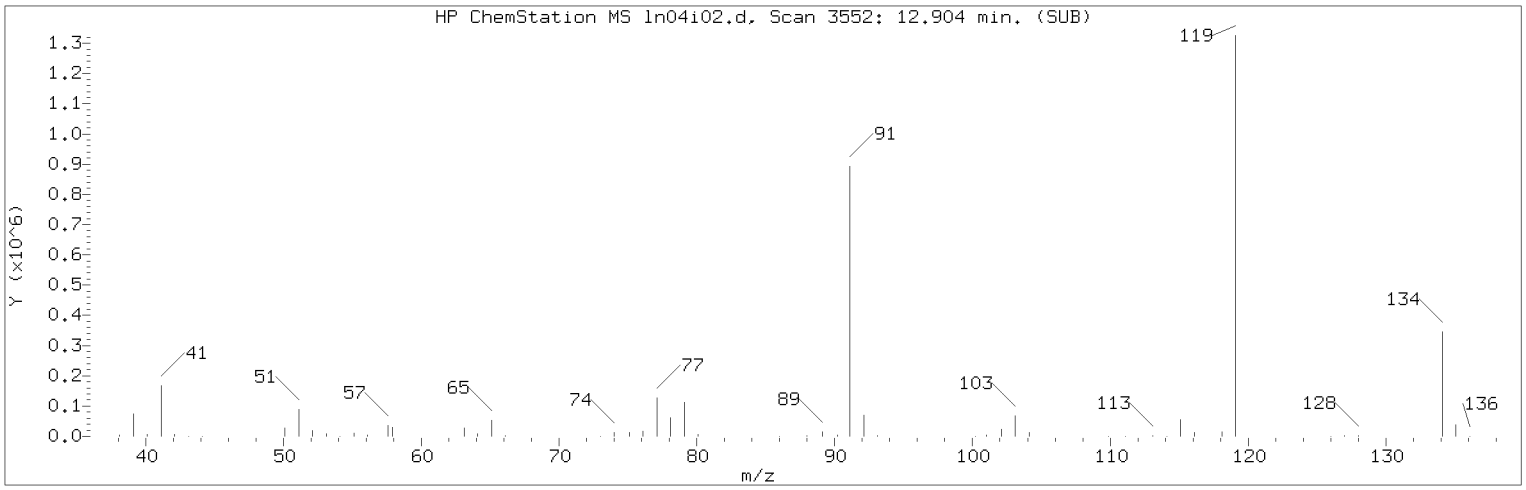
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

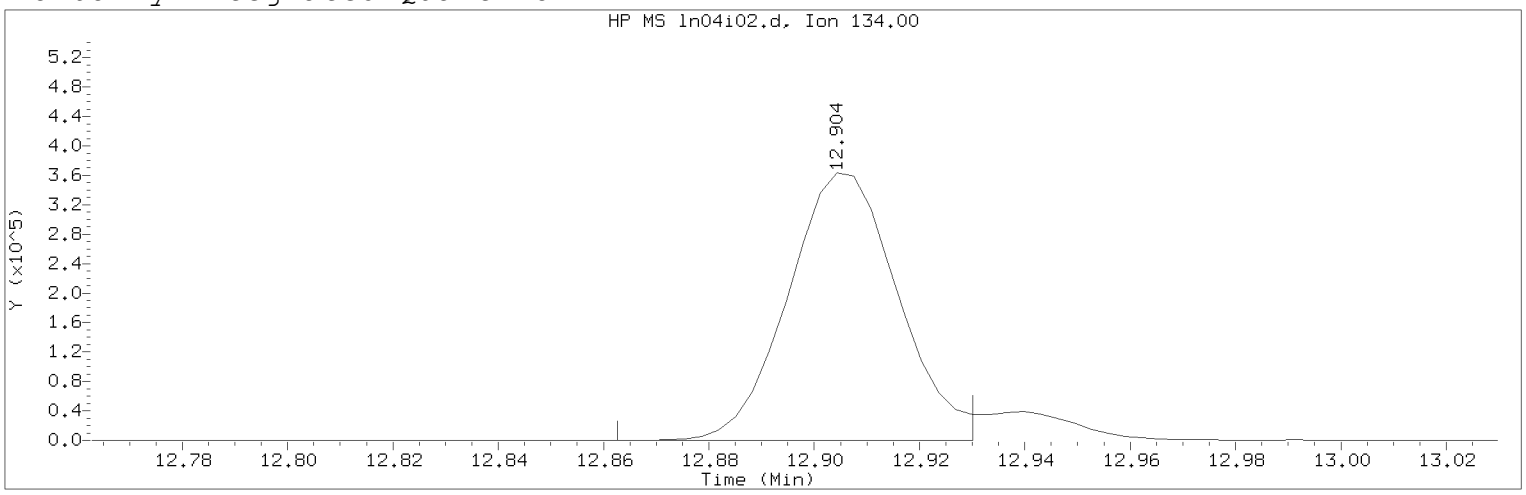
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 1015846
On-column Amount (ng) : 101.1821
Integration start scan : 3397 Integration stop scan: 3434
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

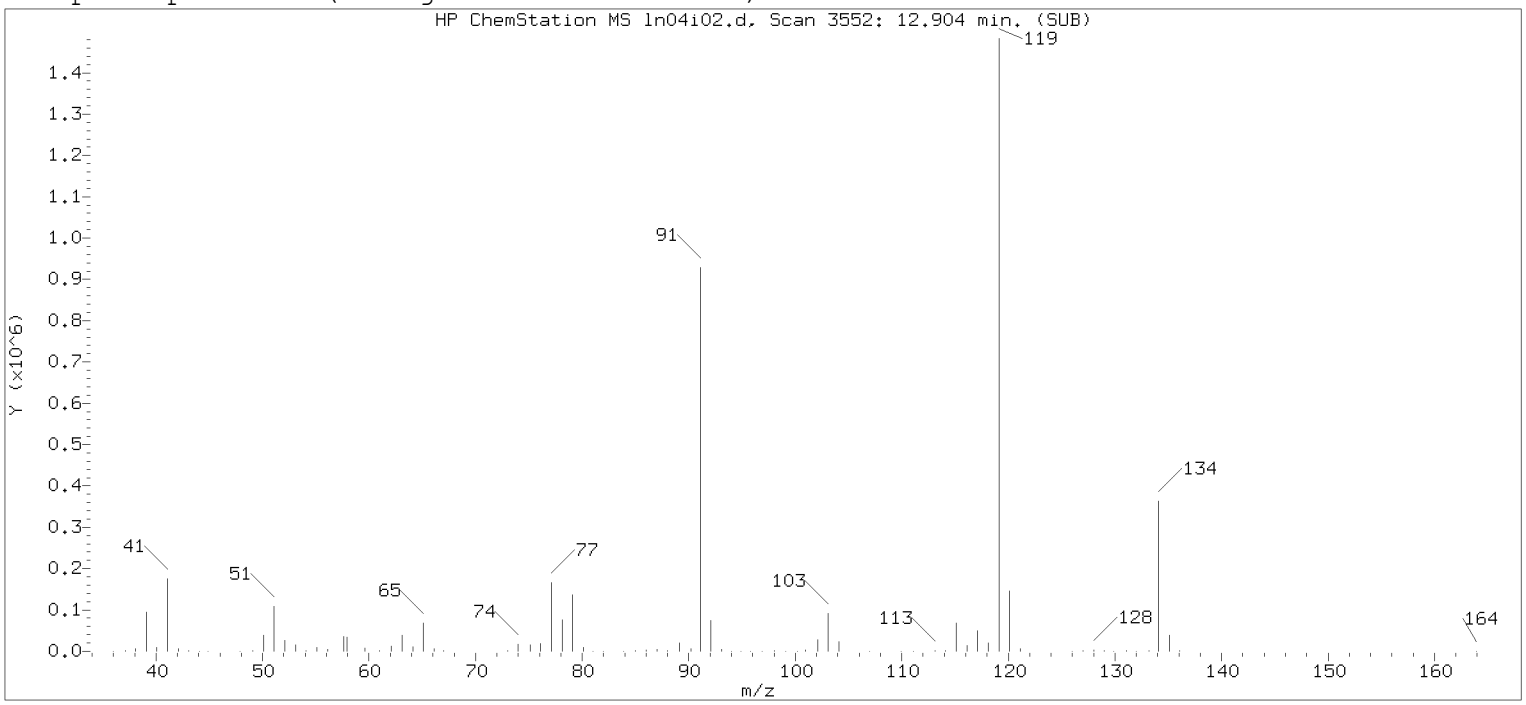
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 526781M
On-Column Amount (ng) : 106.6224
Integration start scan : 3538 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

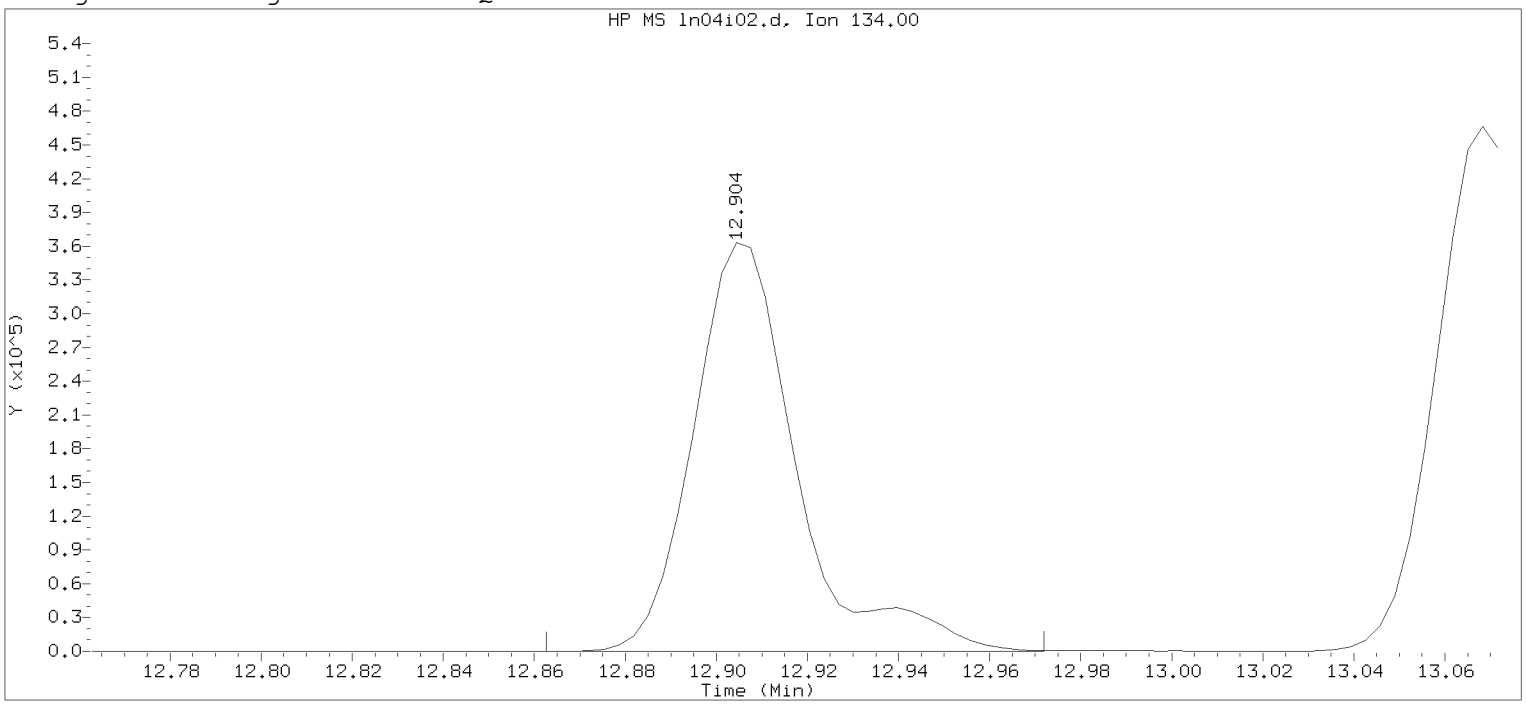
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



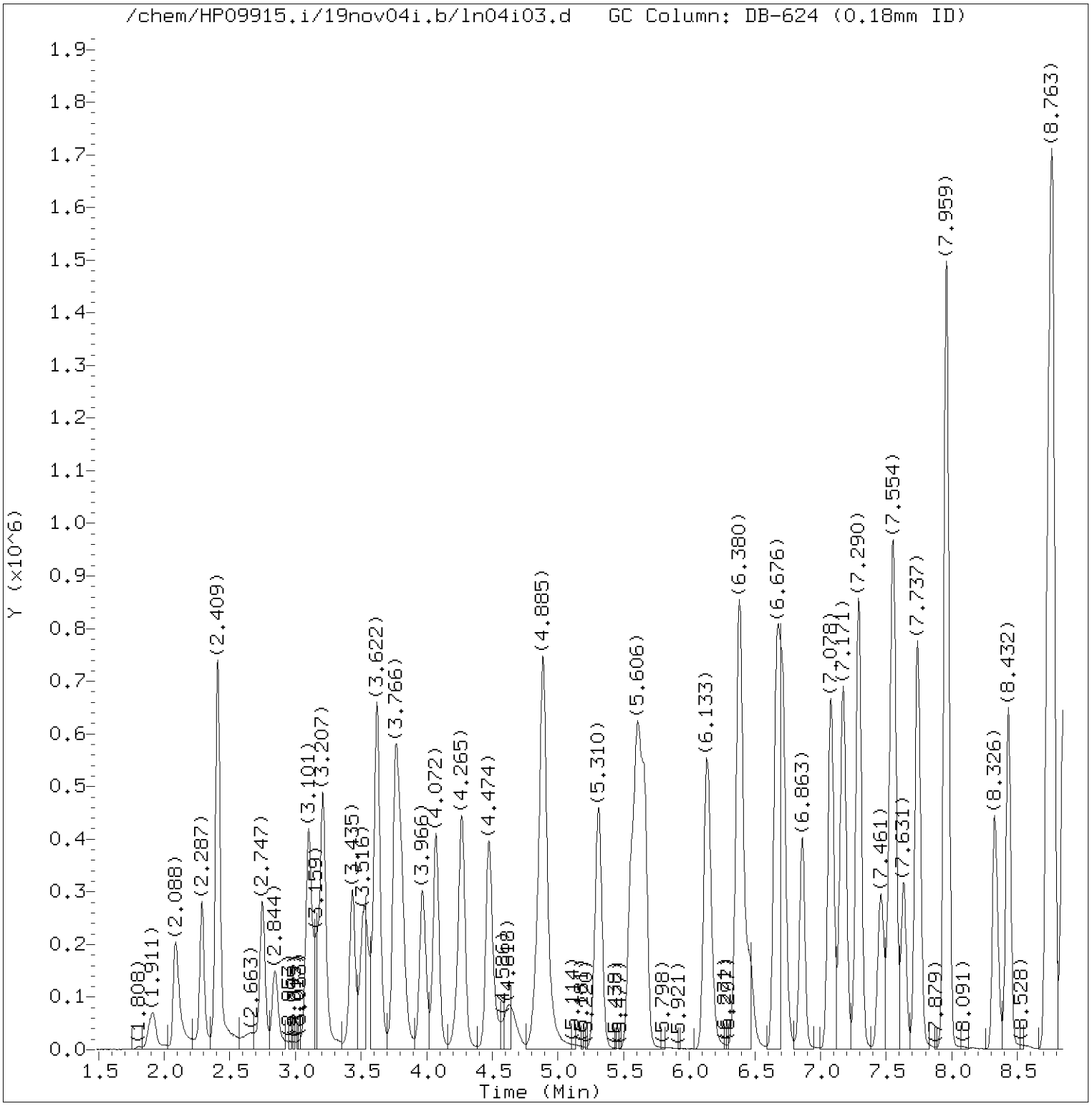
Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 572341
On-column Amount (ng) : 102.7487
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

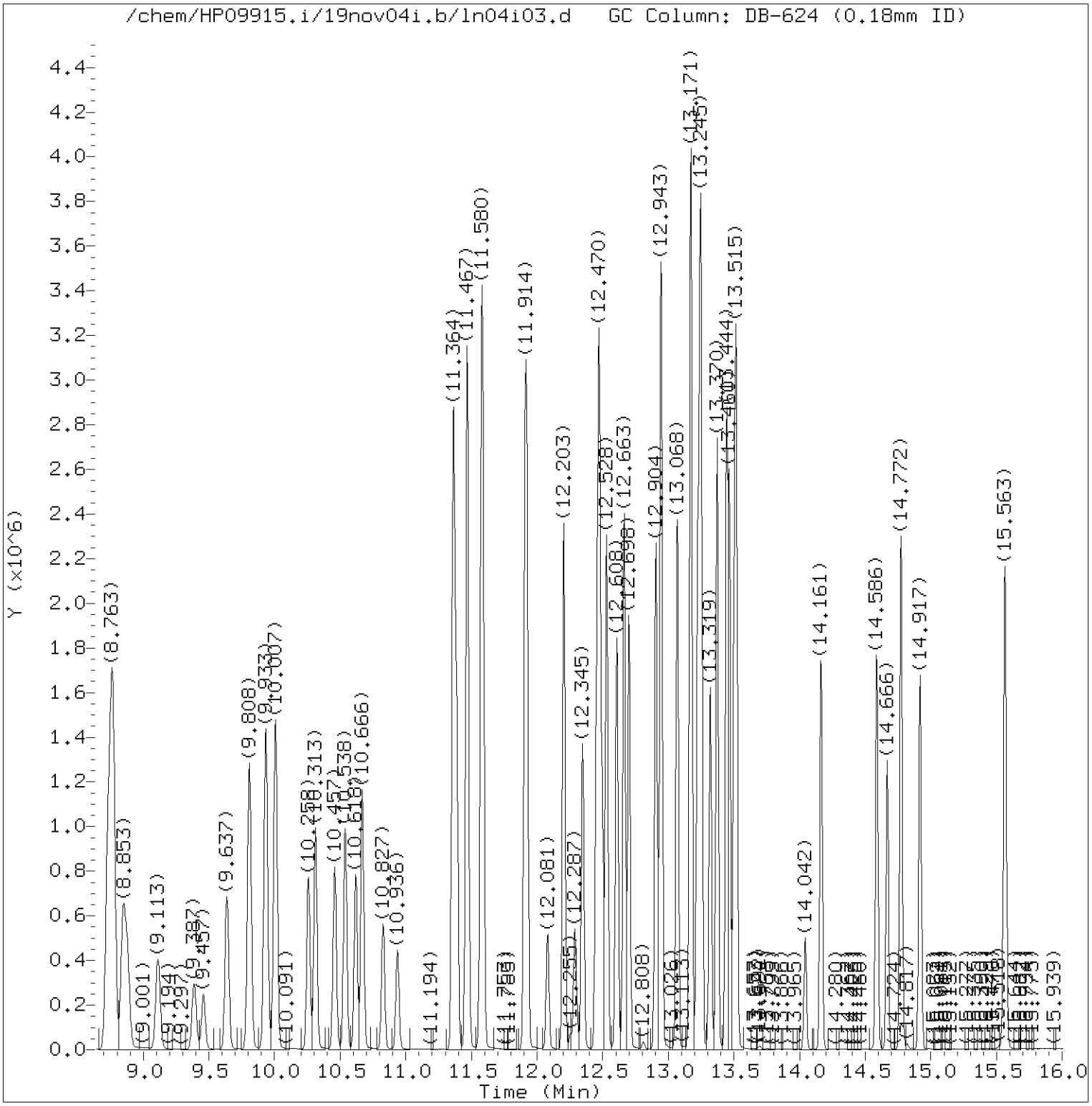
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.088	85	427538M	52.817
4) Chloromethane	(2)	2.287	50	390734	50.084
5) 1,3-Butadiene	(2)	2.406	39	311095M	48.025
6) Vinyl Chloride	(2)	2.409	62	387720	49.794
8) Bromomethane	(2)	2.747	94	272873	48.888
9) Chloroethane	(2)	2.844	64	212325	49.620
10) Dichlorofluoromethane	(2)	3.098	67	509913MA	49.515
12) Trichlorofluoromethane	(2)	3.152	101	433881	51.758
11) n-Pentane	(2)	3.207	43	489872	49.449
14) Ethyl ether	(2)	3.432	59	285731	52.748
15) Freon 123a	(2)	3.525	67	337192	50.003
16) Acrolein	(1)	3.622	56	1052176	519.843
17) 1,1-Dichloroethene	(2)	3.760	96	251911	51.197
17) 1,1-Dichloroethene	(2)	3.760	63	123343	50.001
19) Freon 113	(2)	3.795	101	289343	51.541
18) Acetone	(1)	3.802	58	91161	100.464
22) Methyl Iodide	(2)	3.966	142	518954	50.897
21) 2-Propanol	(1)	3.998	45	165875M	254.283
23) Carbon Disulfide	(2)	4.072	76	956902	51.606
27) Methyl Acetate	(2)	4.245	43	314348	49.603
25) Allyl Chloride	(2)	4.271	41	438915	49.725
28) Methylene Chloride	(2)	4.474	84	295055	50.382
29)*t-Butyl alcohol-d10	(1)	4.509	65	269779M	250.000
30) t-Butyl alcohol	(1)	4.625	59	291988	257.078
31) Acrylonitrile	(2)	4.834	53	175969	51.611
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	957096	51.225
32) trans-1,2-Dichloroethene	(2)	4.888	96	287617	50.529
34) n-Hexane	(2)	5.313	57	463732M	52.364
36) 1,1-Dichloroethane	(2)	5.551	63	505667	50.924
38) di-Isopropyl ether	(2)	5.609	45	985238	51.444
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	462216	51.882
40) Ethyl t-butyl ether	(2)	6.133	59	965104	51.927
43) 1,2-Dichloroethene (Total)	(2)		96	610267	101.029
44) 2-Butanone	(2)	6.361	43	453665	103.655
42) cis-1,2-Dichloroethene	(2)	6.380	96	322650	50.501
45) 2,2-Dichloropropane	(2)	6.400	77	400546	51.890
47) Propionitrile	(1)	6.464	54	357876	252.881
48) Methacrylonitrile	(2)	6.670	67	475036	129.160

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	173386	51.180
50) Tetrahydrofuran	(1)	6.721	71	126019	98.581
51) Chloroform	(2)	6.859	83	484828	51.048
52)$Dibromofluoromethane	(2)	7.075	113	282824	49.838
52)$Dibromofluoromethane	(2)	7.075	111	289462	50.026
53) 1,1,1-Trichloroethane	(2)	7.085	97	420986	51.935
54) Cyclohexane	(2)	7.171	56	567043	52.311
54) Cyclohexane	(2)	7.175	84	491699	52.219
54) Cyclohexane	(2)	7.175	69	175289	52.282
56) Carbon Tetrachloride	(2)	7.284	117	361443	52.574
55) 1,1-Dichloropropene	(2)	7.294	75	401799	51.176
58) Isobutyl Alcohol	(1)	7.461	41	242114	633.444
57)$1,2-Dichloroethane-d4	(2)	7.528	102	72846	50.367
57)$1,2-Dichloroethane-d4	(2)	7.531	65	321603	49.897
57)$1,2-Dichloroethane-d4	(2)	7.531	104	46134	49.939
60) Benzene	(2)	7.557	78	1202424	50.927
61) 1,2-Dichloroethane	(2)	7.638	62	372805	49.091
61) 1,2-Dichloroethane	(2)	7.634	98	37850	50.364
65) t-Amyl methyl ether	(2)	7.737	73	971399	52.071
67) n-Heptane	(2)	7.956	43	432248MA	52.247
66)*Fluorobenzene	(2)	7.959	96	1160755	50.000
69) n-Butanol	(1)	8.326	56	438437M	1332.750
71) Trichloroethene	(2)	8.432	95	302634	50.906
72) Methylcyclohexane	(2)	8.734	83	574135	52.056
72) Methylcyclohexane	(2)	8.731	98	260583	52.213
73) 1,2-Dichloropropane	(2)	8.773	63	306937	51.196
76) Methyl Methacrylate	(2)	8.847	69	306086A	52.795
75) 1,4-Dioxane	(1)	8.853	88	59876M	662.196
74) Dibromomethane	(2)	8.879	93	199498	51.428
78) Bromodichloromethane	(2)	9.113	83	366892	52.707
79) 2-Nitropropane	(2)	9.390	41	235097	111.505
80) 2-Chloroethyl Vinyl Ether	(2)	9.457	63	134015	52.046
81) cis-1,3-Dichloropropene	(2)	9.637	75	495055	53.547
82) 4-Methyl-2-pentanone	(2)	9.808	43	1004831	108.769
83)$Toluene-d8	(3)	9.933	98	1189125	50.240
83)$Toluene-d8	(3)	9.933	100	767119	50.033
88) Toluene	(3)	10.007	92	764927	51.549
90) 1,3-Dichloropropene (total)	(3)		100	956669	108.348

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	461614	54.801
91) Ethyl Methacrylate	(3)	10.313	69	554039	54.121
92) 1,1,2-Trichloroethane	(3)	10.461	97	291480	51.810
93) Tetrachloroethene	(3)	10.538	166	321895	51.220
94) 1,3-Dichloropropane	(3)	10.618	76	494204	51.449
96) 2-Hexanone	(3)	10.670	43	761734	111.475
97) Dibromochloromethane	(3)	10.827	129	315765	54.792
99) 1,2-Dibromoethane	(3)	10.936	107	319699	52.331
100)*Chlorobenzene-d5	(3)	11.361	117	904578	50.000
101) 1-Chlorohexane	(3)	11.364	91	399510	50.116
102) Chlorobenzene	(3)	11.387	112	864419	51.514
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	299375	54.148
104) Ethylbenzene	(3)	11.467	91	1475718	52.031
106) m+p-Xylene	(3)	11.580	106	1167470	104.636
108) Xylene (Total)	(3)		106	1748839	157.389
107) o-Xylene	(3)	11.907	106	581369	52.752
109) Styrene	(3)	11.924	104	981189	53.877
110) Bromoform	(3)	12.081	173	229903	53.387
111) Isopropylbenzene	(3)	12.203	105	1456789	52.702
112) Cyclohexanone	(1)	12.287	55	231776	654.496
114)$4-Bromofluorobenzene	(3)	12.345	95	446156	49.781
114)$4-Bromofluorobenzene	(3)	12.348	174	370576	49.875
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	482004M	52.727
115) Bromobenzene	(4)	12.464	156	378400	52.027
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	383692	136.075
117) 1,2,3-Trichloropropane	(4)	12.496	110	145151	51.744
119) n-Propylbenzene	(4)	12.528	91	1662625	52.323
120) 2-Chlorotoluene	(4)	12.608	126	350943	51.988
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	1225419	53.065
121) 4-Chlorotoluene	(4)	12.698	126	361669	51.471
124) tert-Butylbenzene	(4)	12.904	134	253906M	53.165
125) Pentachloroethane	(4)	12.940	167	227064	55.216
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	1291883	53.080
127) sec-Butylbenzene	(4)	13.068	105	1512547	53.076
129) 1,3-Dichlorobenzene	(4)	13.168	146	693790	51.911
130) p-Isopropyltoluene	(4)	13.174	119	1315828	53.371
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	483927	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	714495	51.569

M = Compound was manually integrated.
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Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

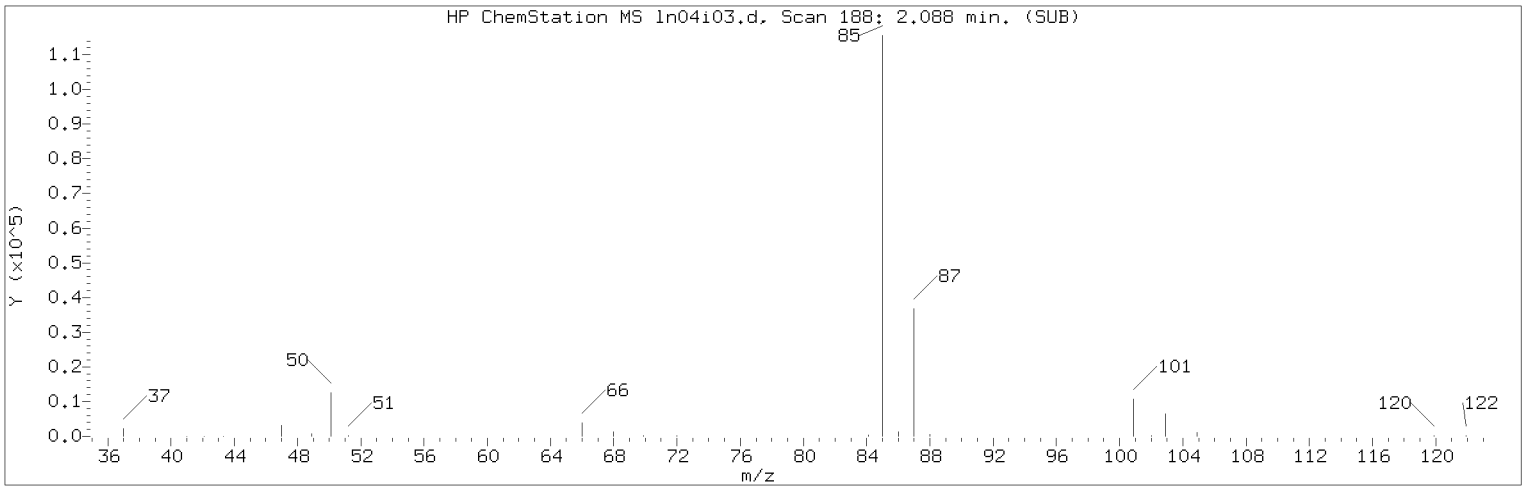
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

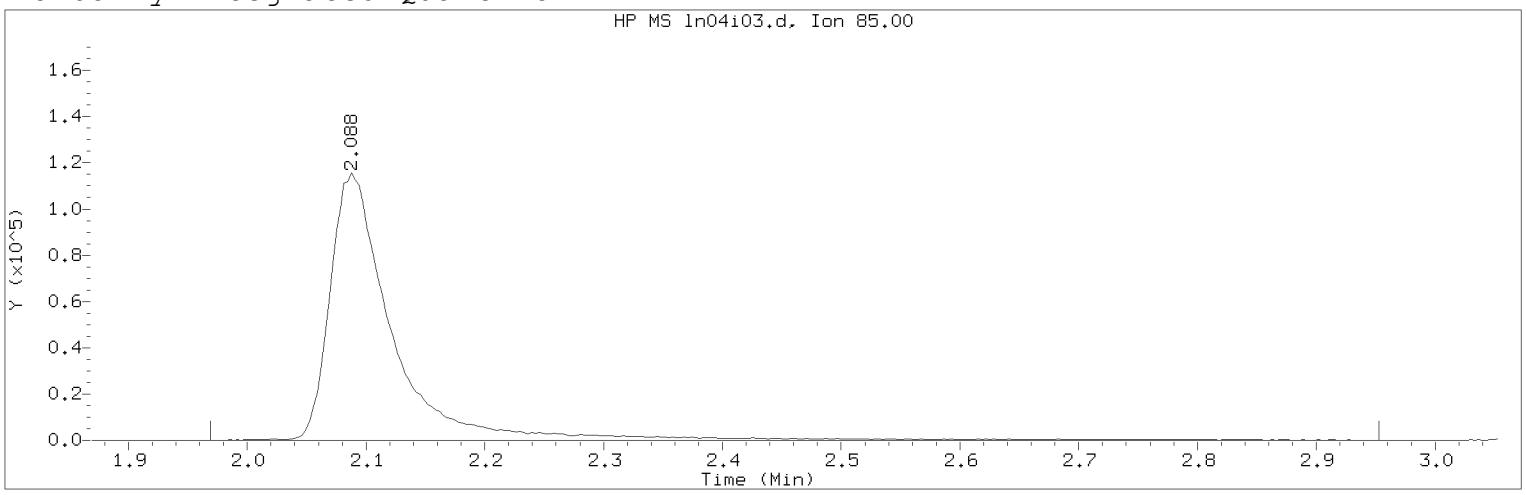
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.251	105	1342367	52.068
135) Benzyl Chloride	(4)	13.319	91	1059398	54.274
136) 1,3-Diethylbenzene	(4)	13.370	119	832647	51.895
141) Diethylbenzene (total)	(4)		100	2415817	155.686
137) 1,4-Diethylbenzene	(4)	13.441	119	877553	51.623
139) n-Butylbenzene	(4)	13.464	92	652599	51.769
138) 1,2-Dichlorobenzene	(4)	13.502	146	682120	51.722
140) 1,2-Diethylbenzene	(4)	13.518	119	705617	52.168
142) 1,2-Dibromo-3-chloropropane	(4)	14.042	75	108388	54.164
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	516839	51.009
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	503797	51.136
147) Hexachlorobutadiene	(4)	14.666	225	217236	46.700
148) Naphthalene	(4)	14.772	128	1689758	53.350
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	498430	51.993
150) 2-Methylnaphthalene	(4)	15.563	142	1079055	55.325

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

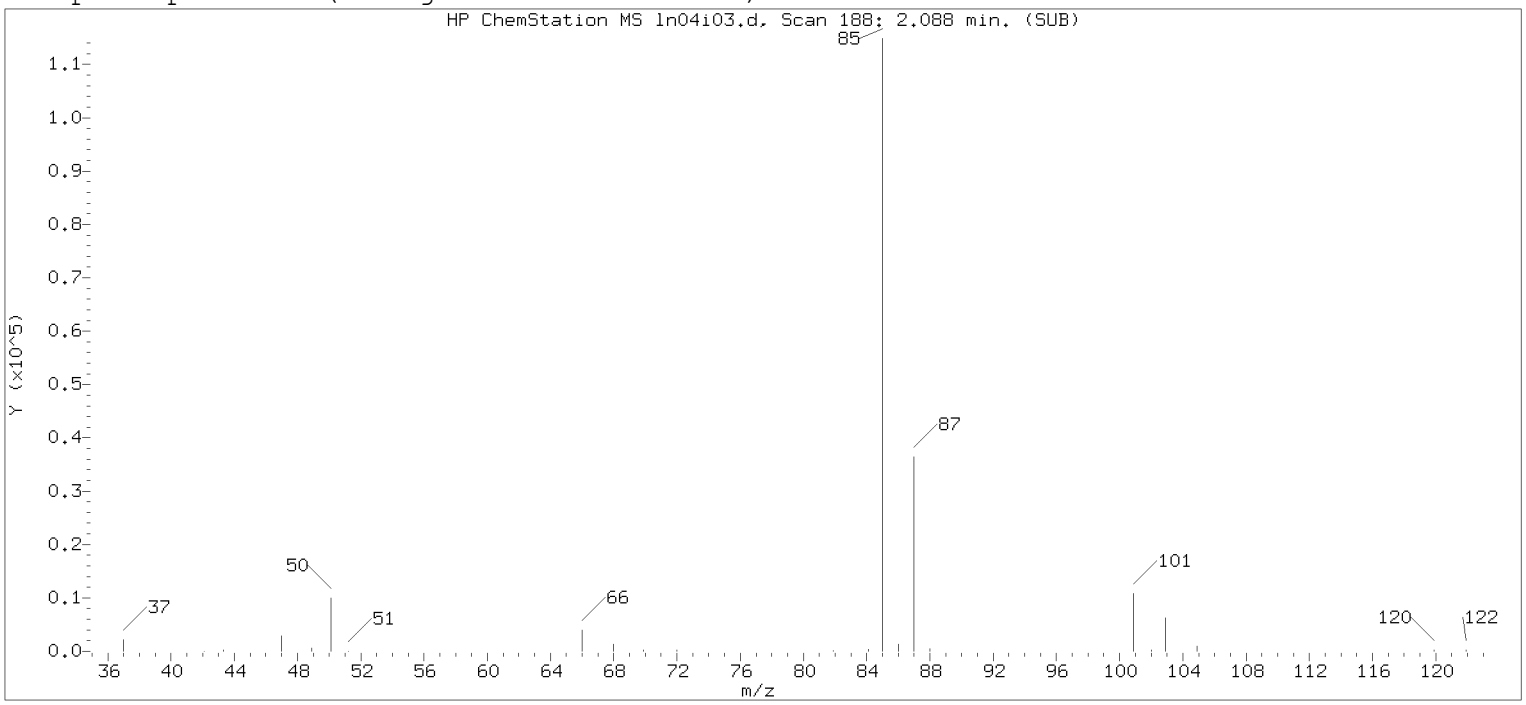
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 188
Retention Time (minutes): 2.088
Quant Ion : 85.00
Area (flag) : 427538M
On-Column Amount (ng) : 52.8165
Integration start scan : 150 Integration stop scan: 456
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

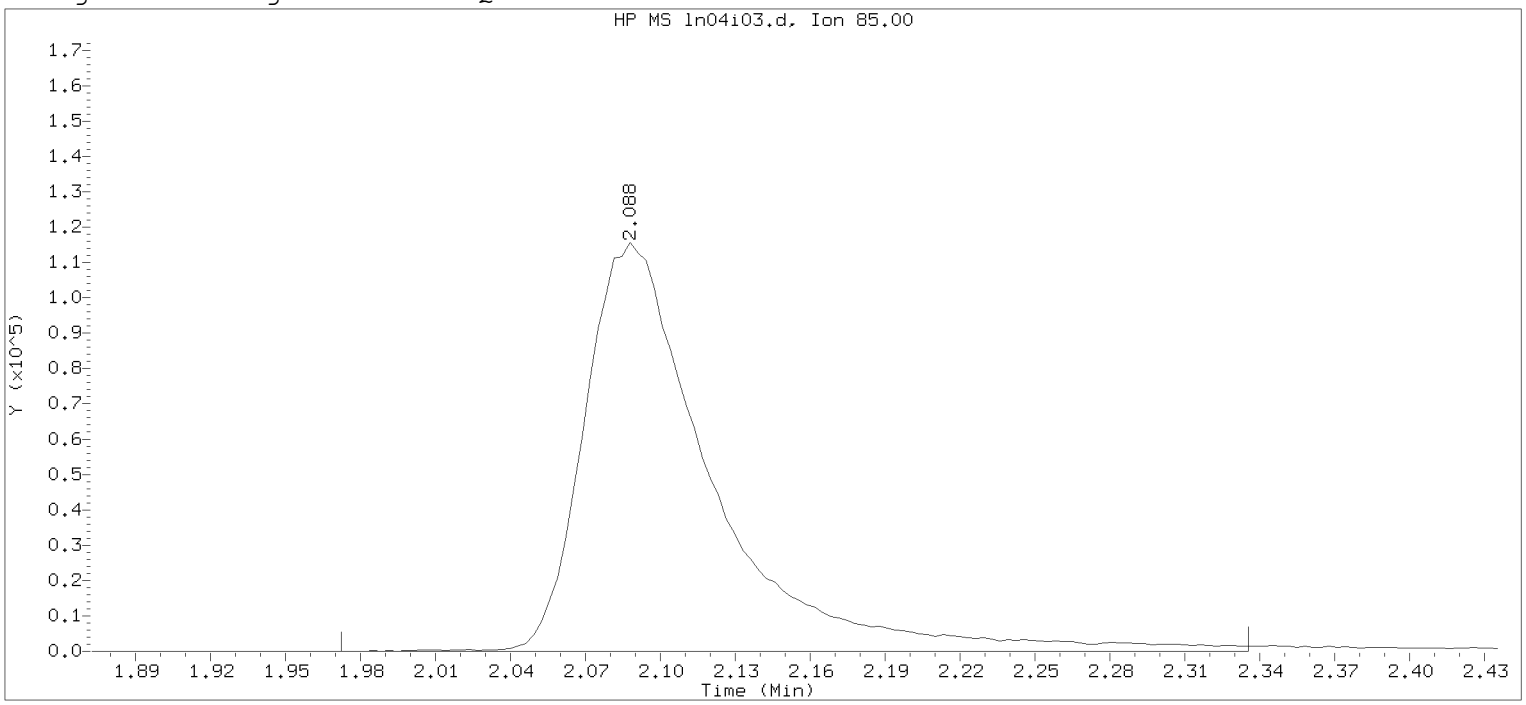
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

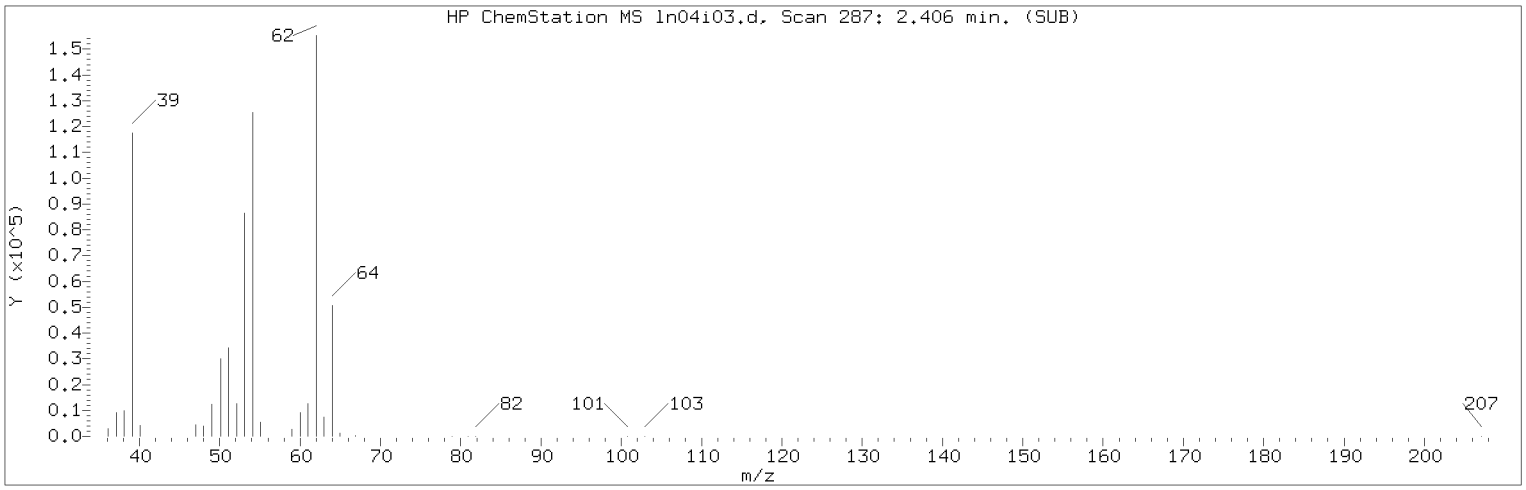
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

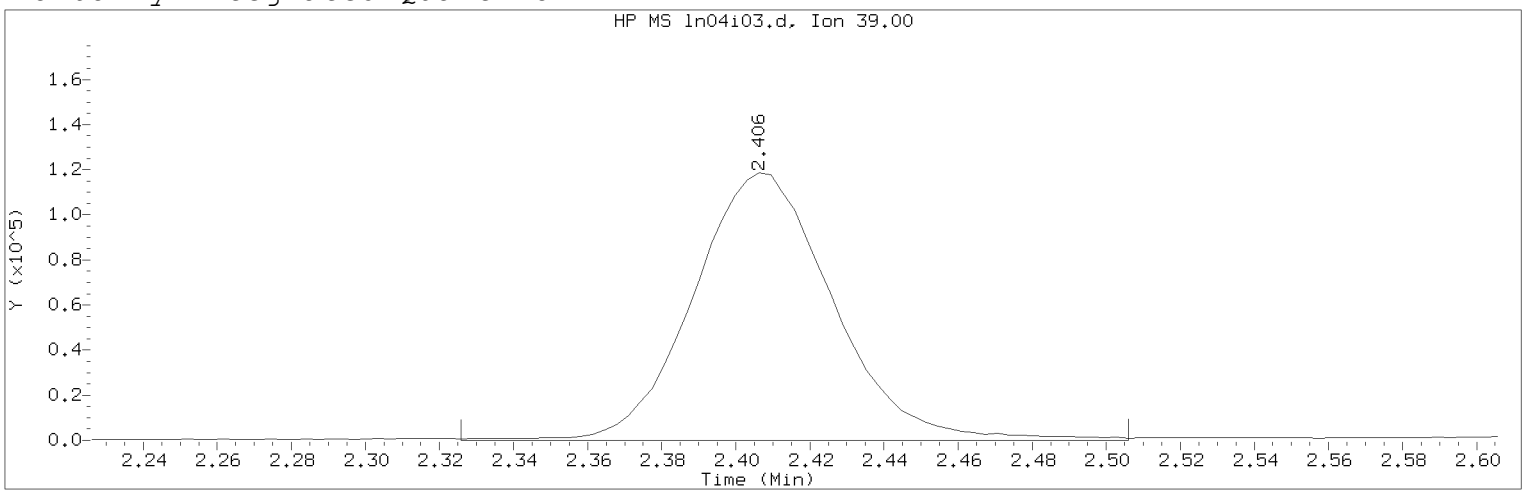
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 188
Retention Time (minutes): 2.088
Quant Ion : 85.00
Area : 411065
On-column Amount (ng) : 48.5918
Integration start scan : 151 Integration stop scan: 264
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mecm2264

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

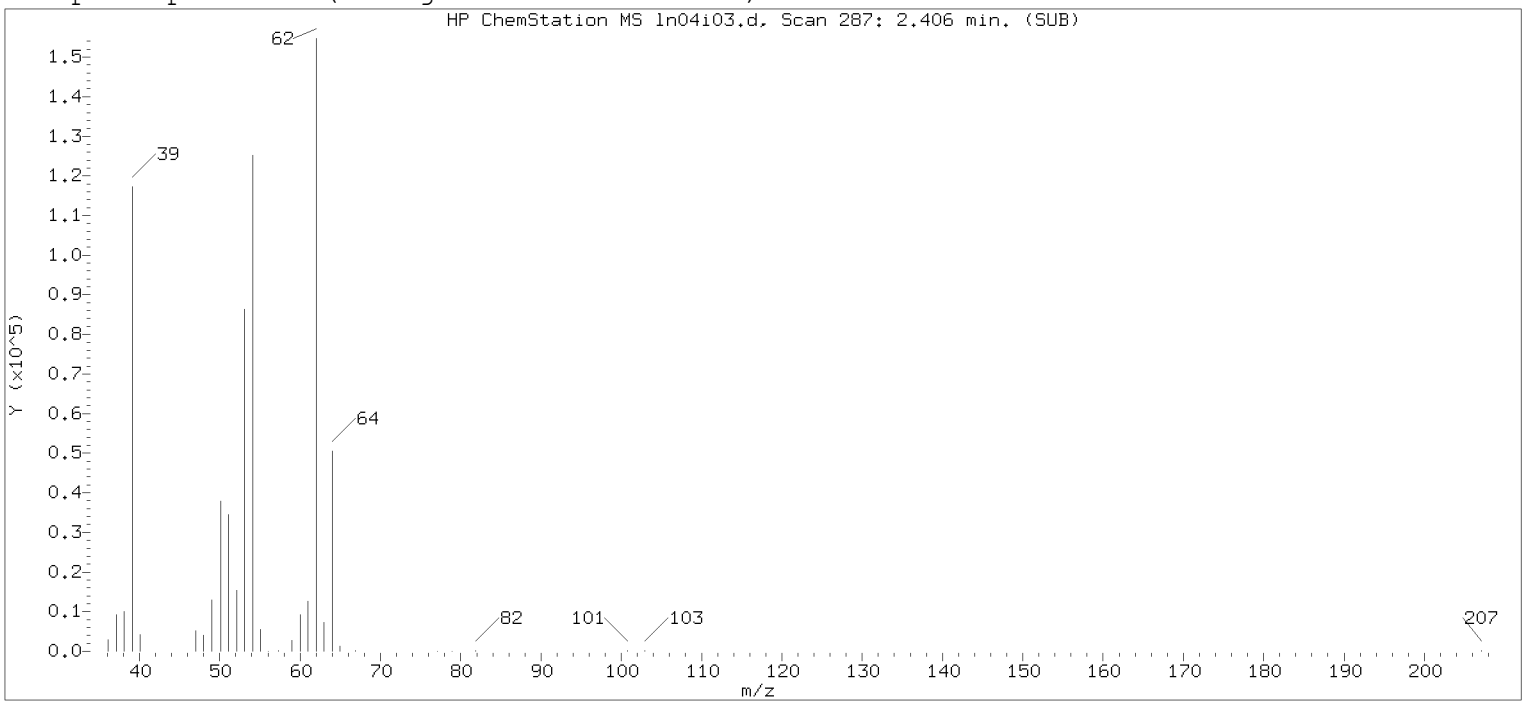
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 311095M
On-Column Amount (ng) : 48.0246
Integration start scan : 261 Integration stop scan: 317
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

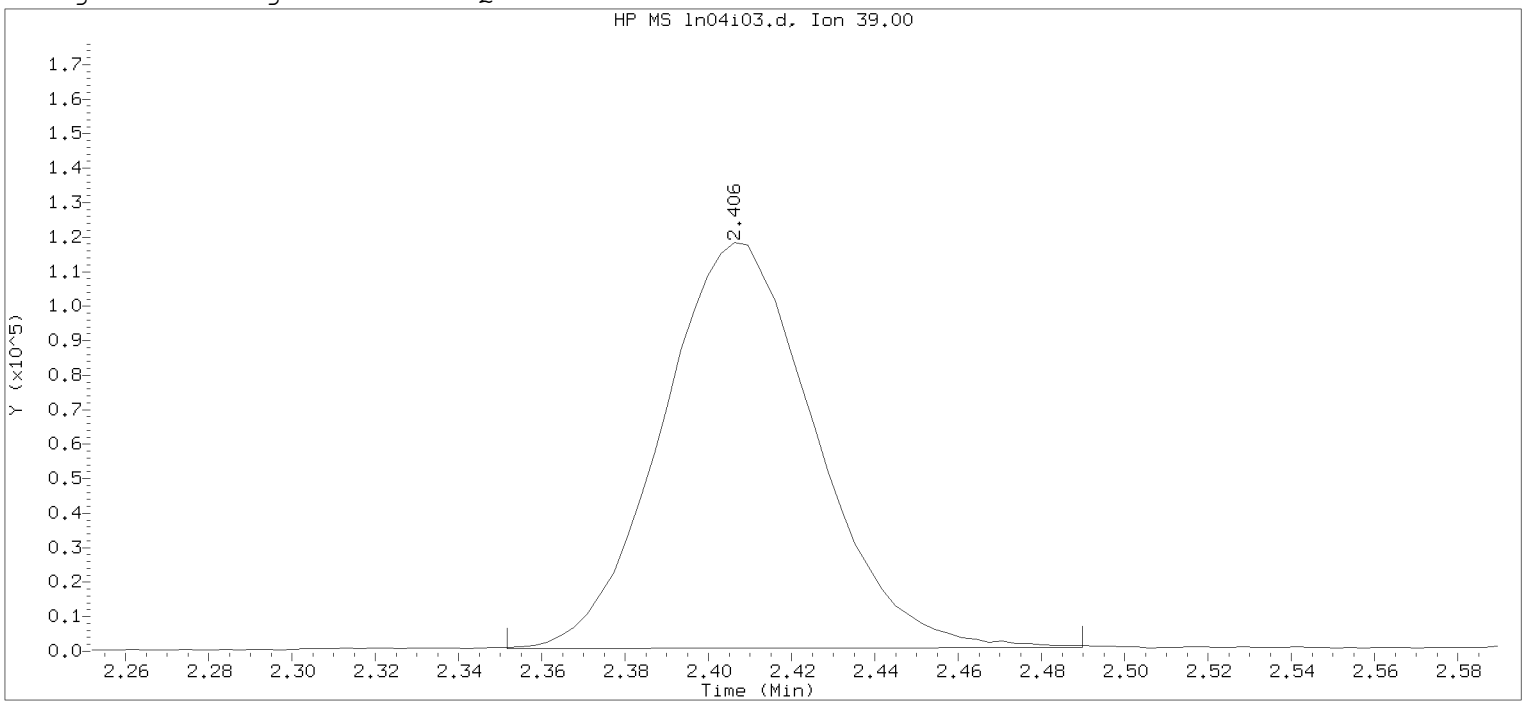
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

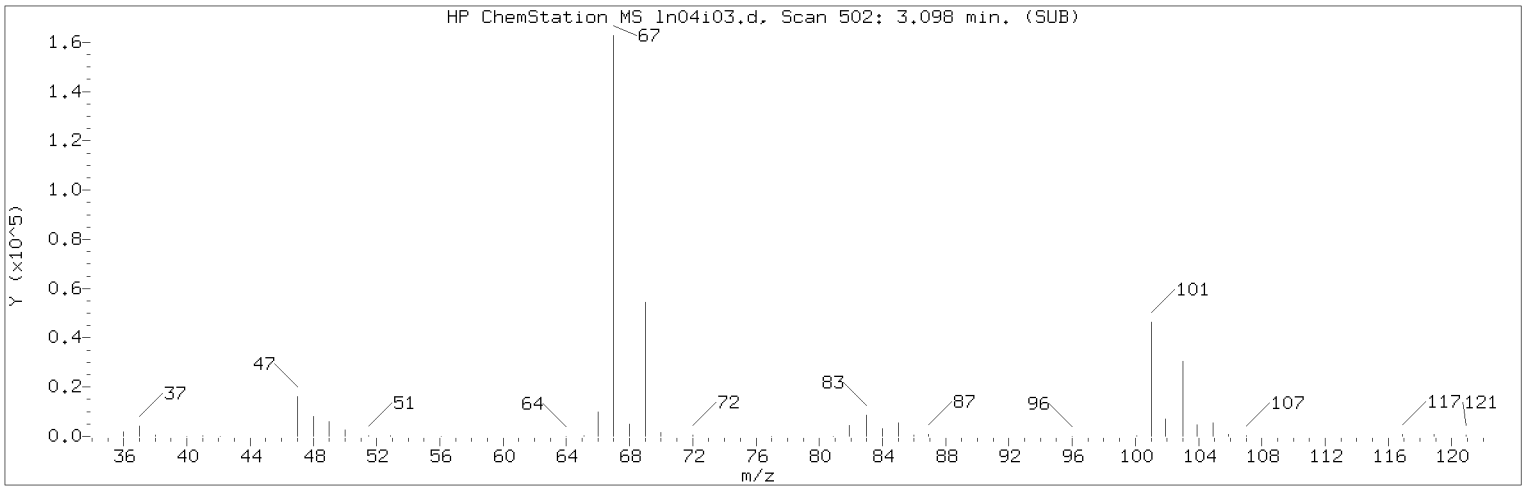
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

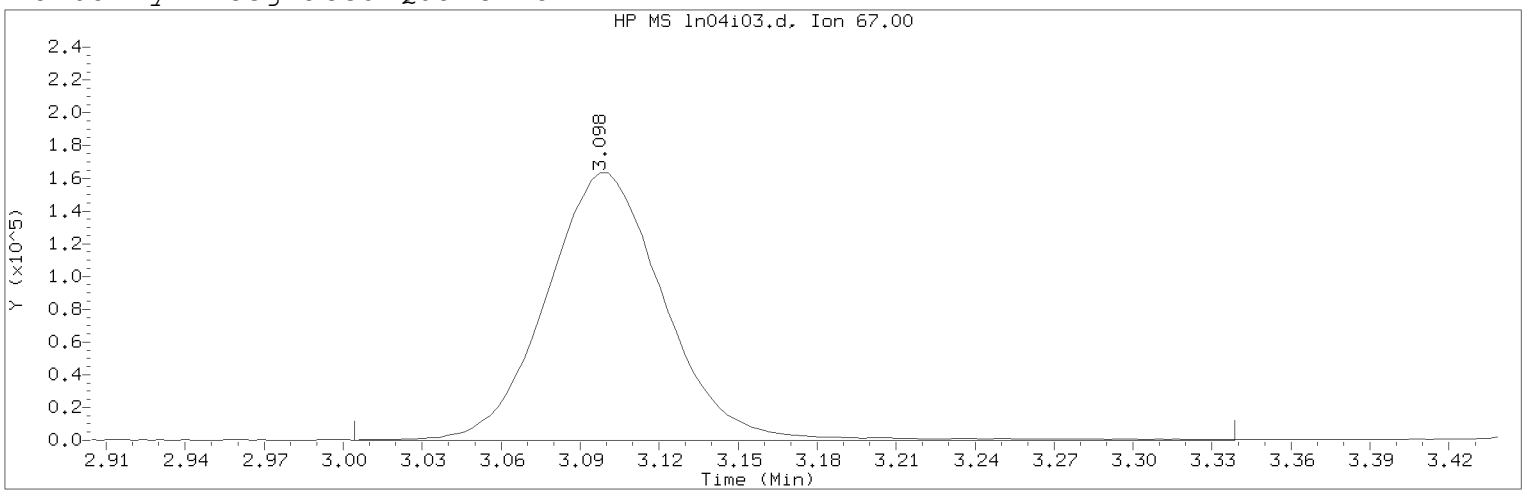
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 300667
On-column Amount (ng) : 50.0756
Integration start scan : 269 Integration stop scan: 312
Y at integration start : 752 Y at integration end: 1063

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mecm2285

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

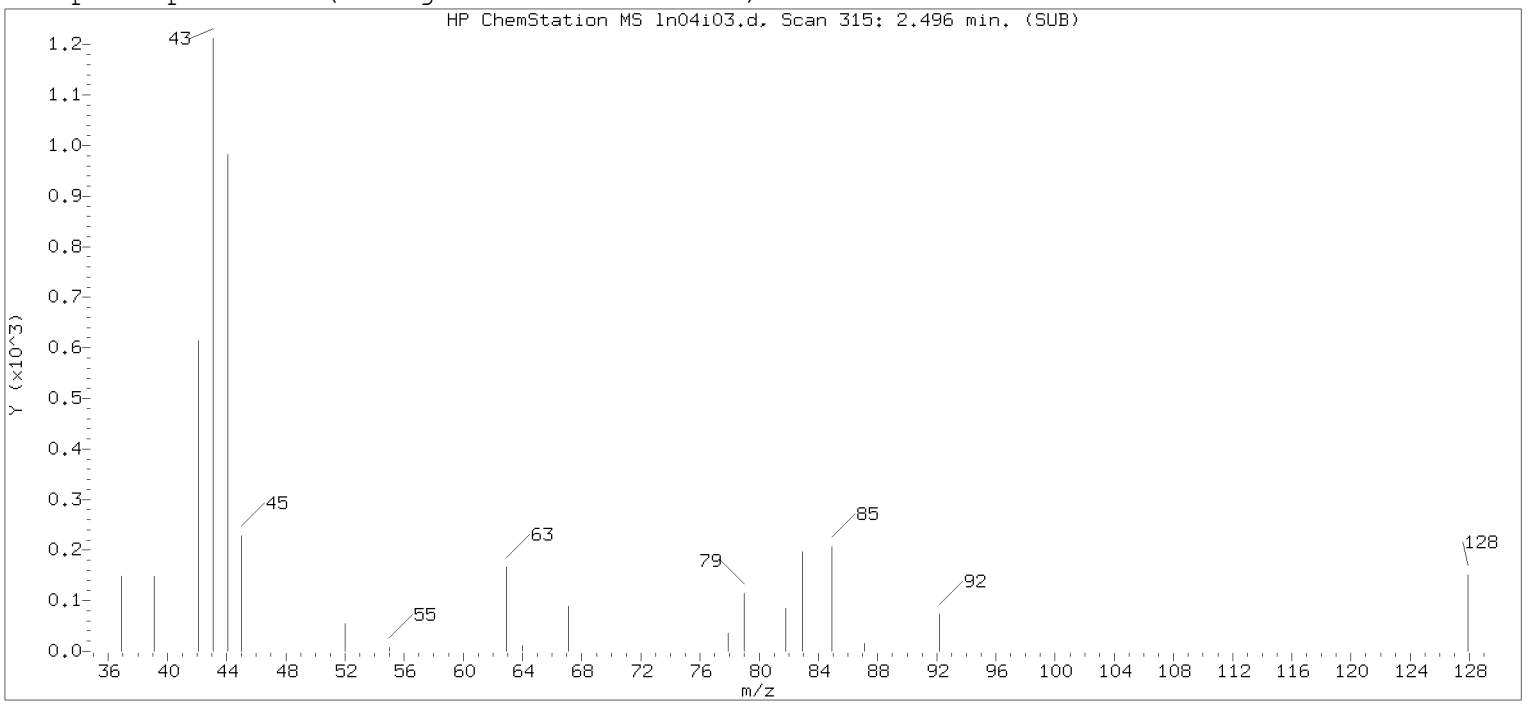
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 502
Retention Time (minutes): 3.098
Quant Ion : 67.00
Area (flag) : 509913MA
On-Column Amount (ng) : 49.5150
Integration start scan : 472 Integration stop scan: 576
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

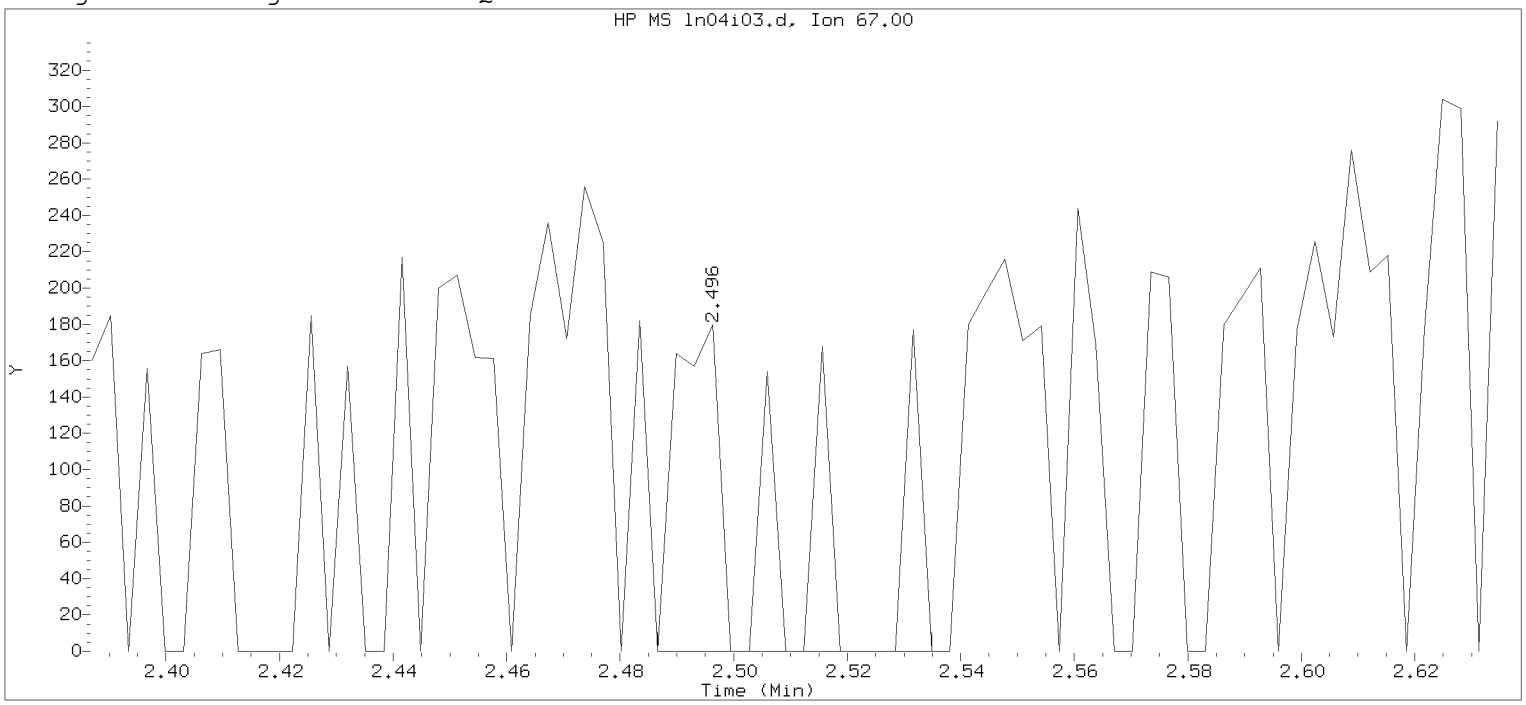
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

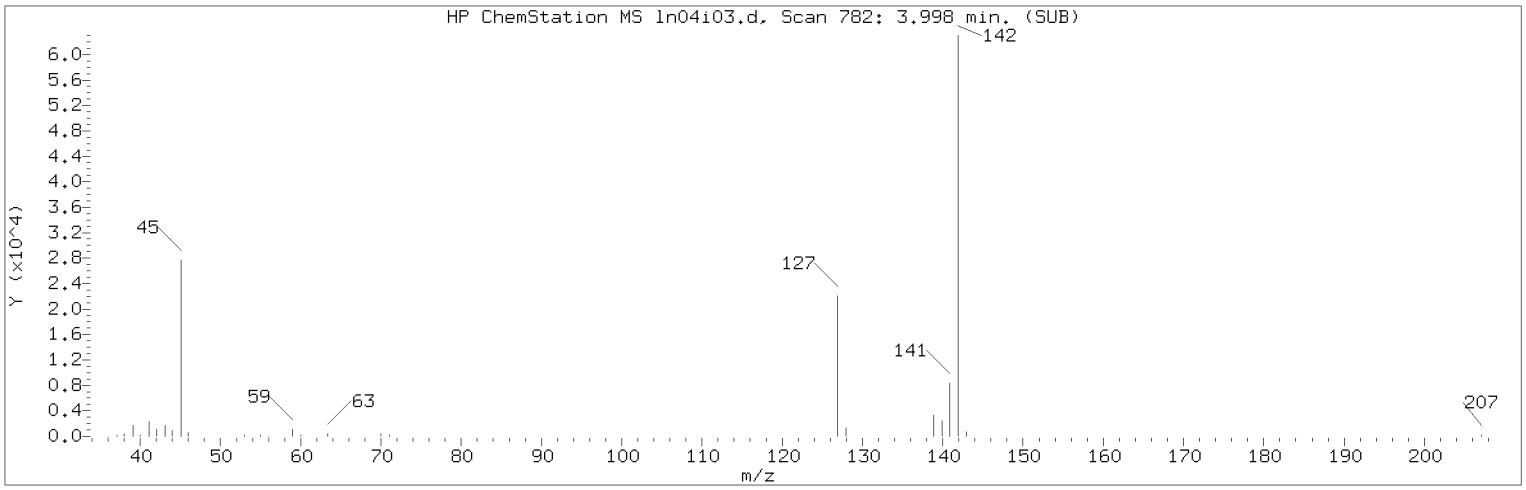
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

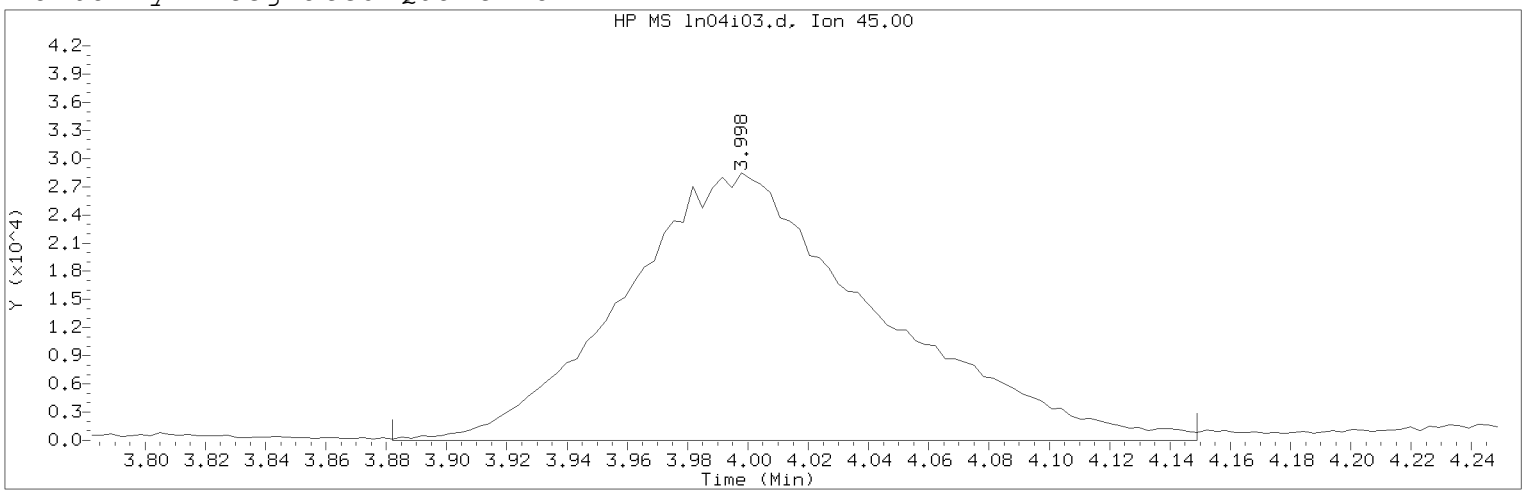
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 315
Retention Time (minutes): 2.496
Quant Ion : 67.00
Area : 192
On-column Amount (ng) : 0.0562
Integration start scan : 311 Integration stop scan: 326
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

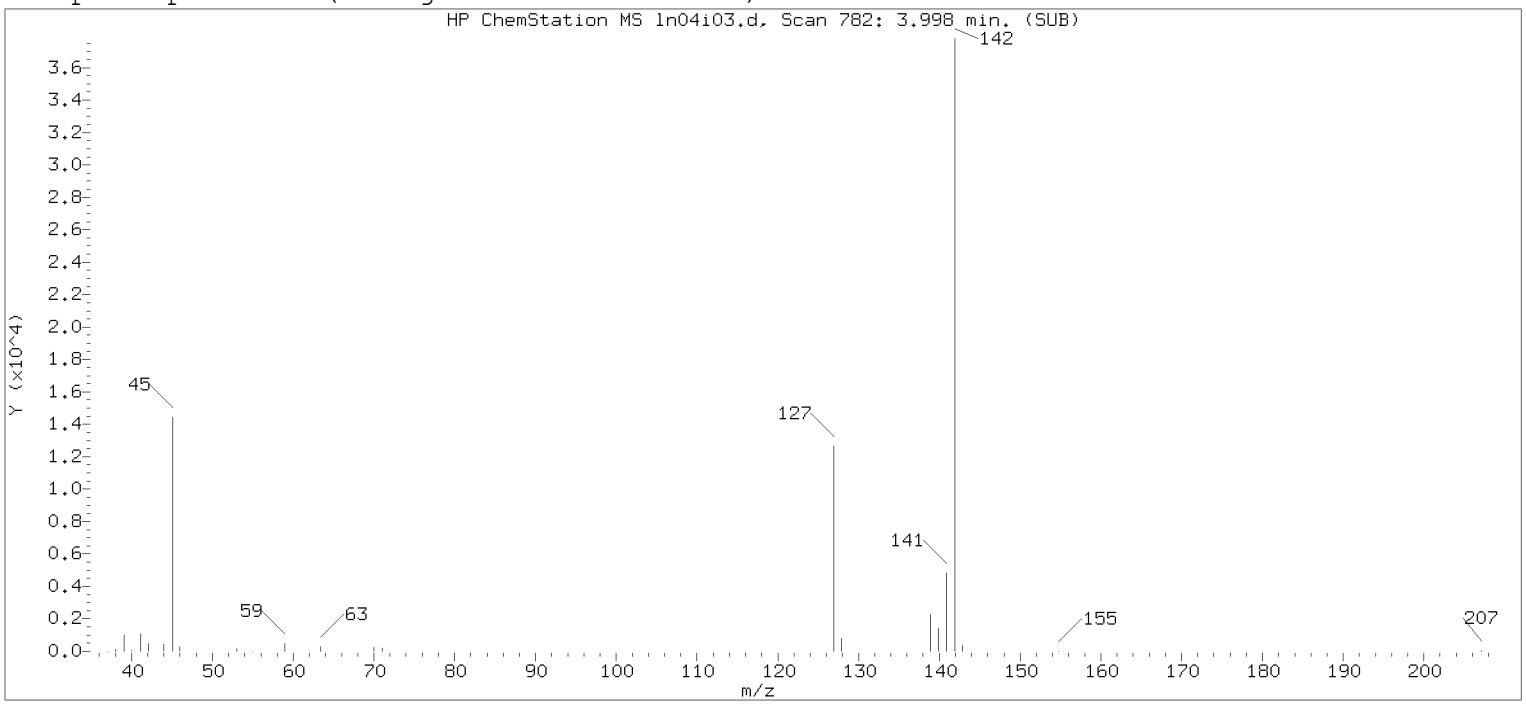
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 782
Retention Time (minutes): 3.998
Quant Ion : 45.00
Area (flag) : 165875M
On-Column Amount (ng) : 254.2825
Integration start scan : 745 Integration stop scan: 828
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

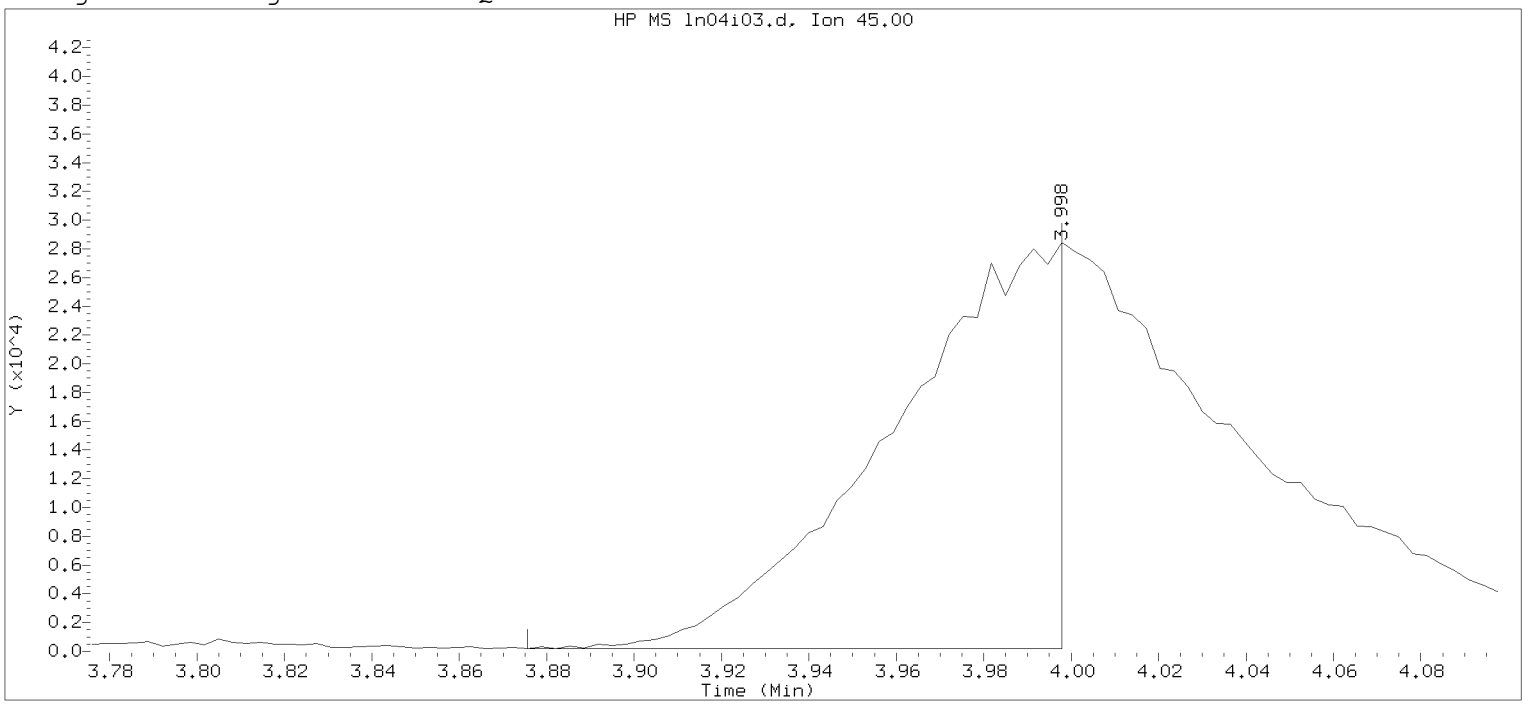
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

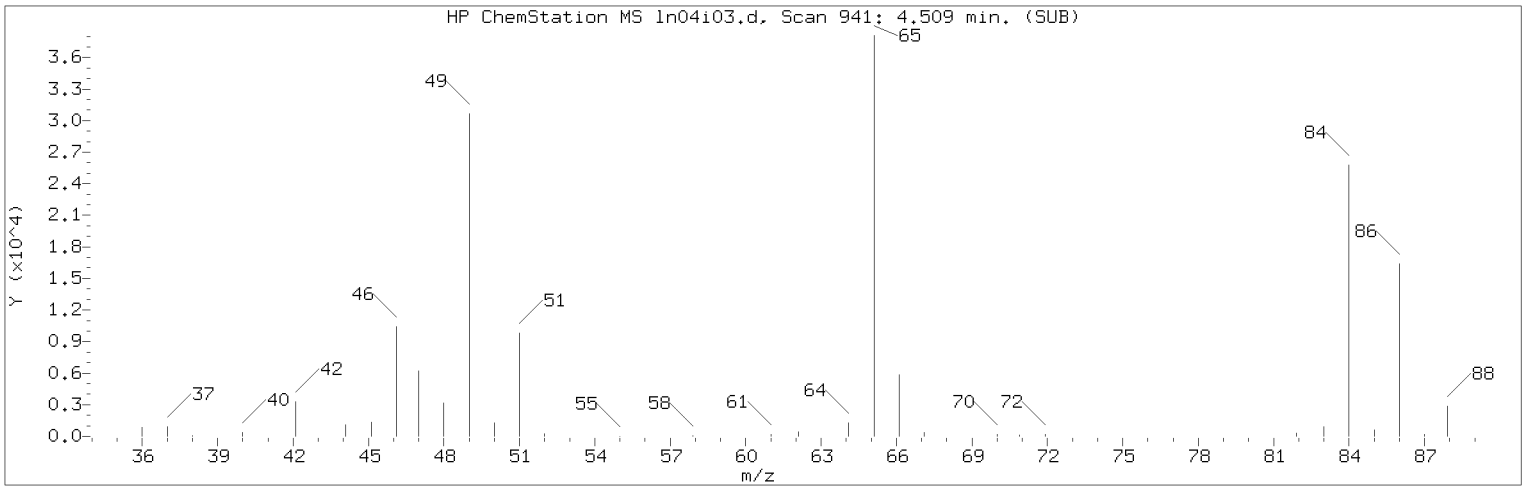
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

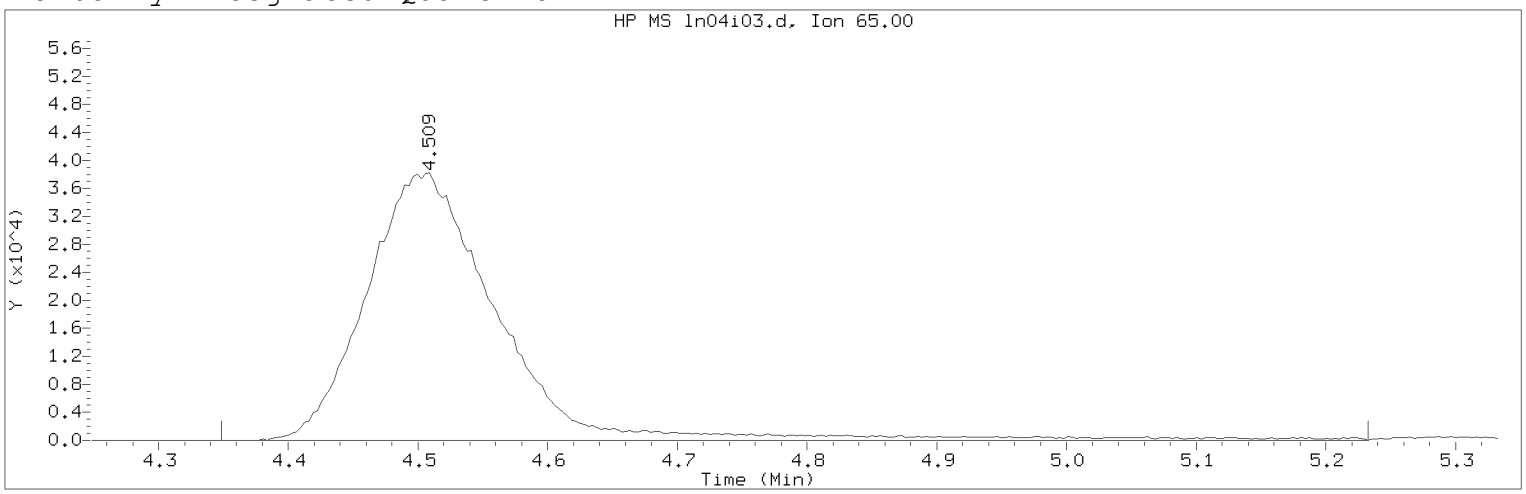
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 782
Retention Time (minutes): 3.998
Quant Ion : 45.00
Area : 74713
On-column Amount (ng) : 135.4026
Integration start scan : 743 Integration stop scan: 781
Y at integration start : 167 Y at integration end: 167

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

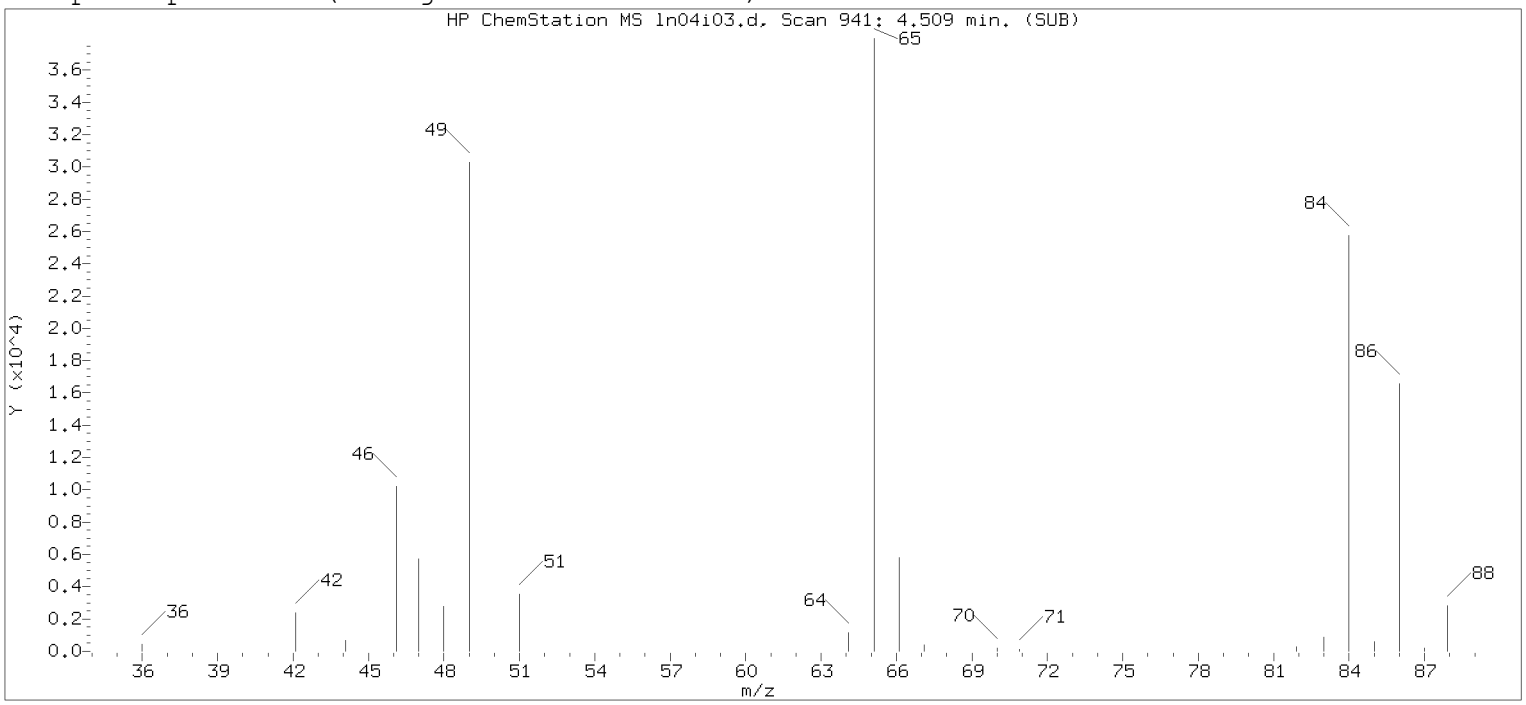
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 269779M
On-Column Amount (ng) : 250.0000
Integration start scan : 890 Integration stop scan: 1165
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

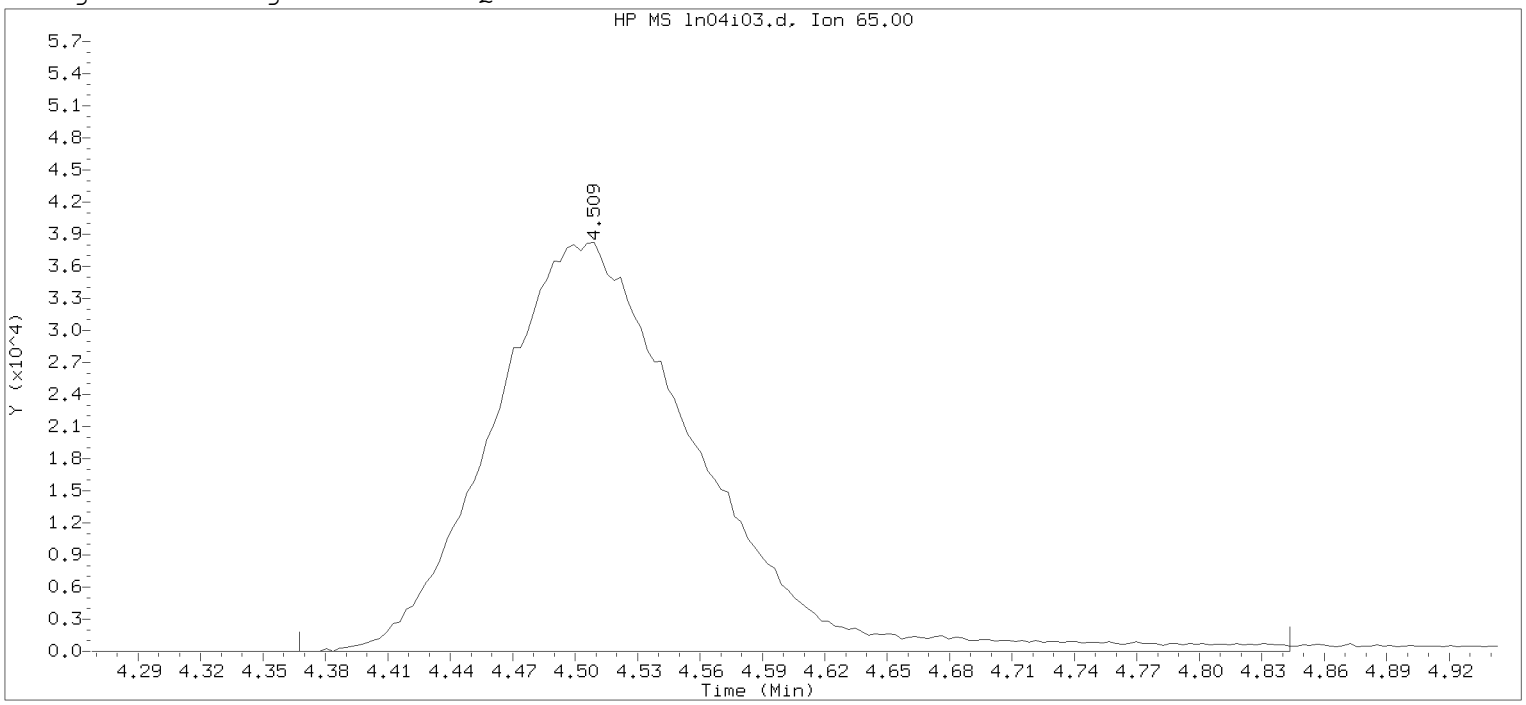
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

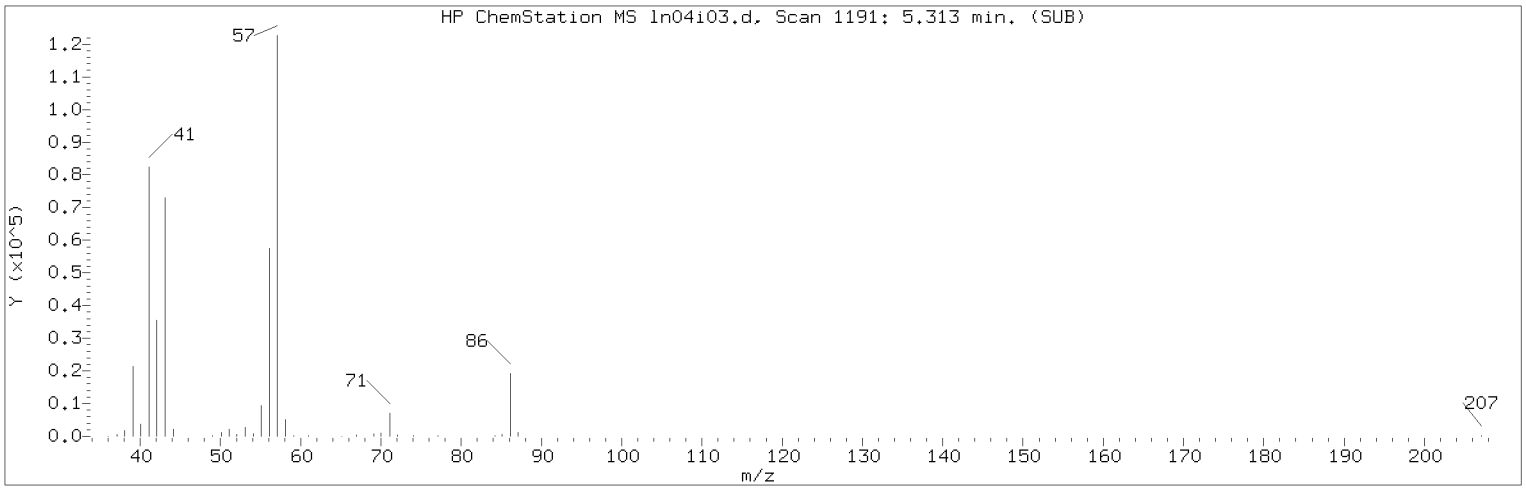
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

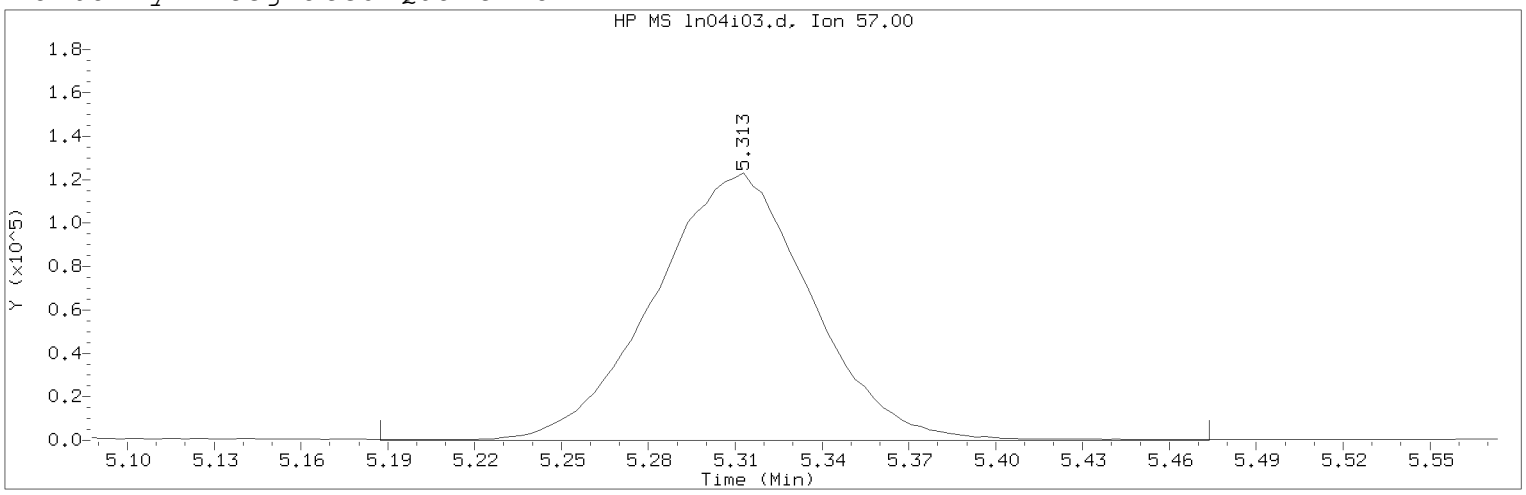
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 261144
On-column Amount (ng) : 250.0000
Integration start scan : 896 Integration stop scan: 1044
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: me20284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

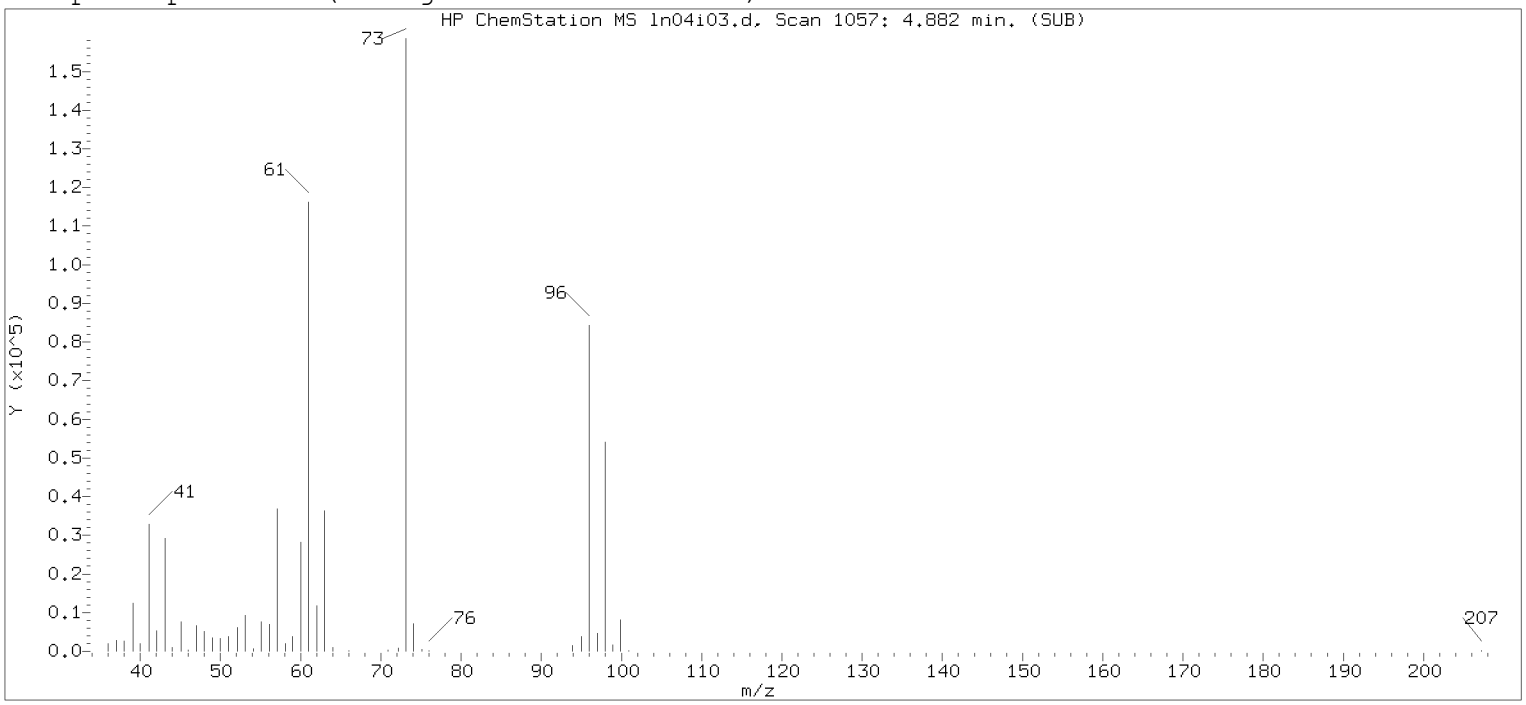
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1191
Retention Time (minutes): 5.313
Quant Ion : 57.00
Area (flag) : 463732M
On-Column Amount (ng) : 52.3639
Integration start scan : 1151 Integration stop scan: 1240
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

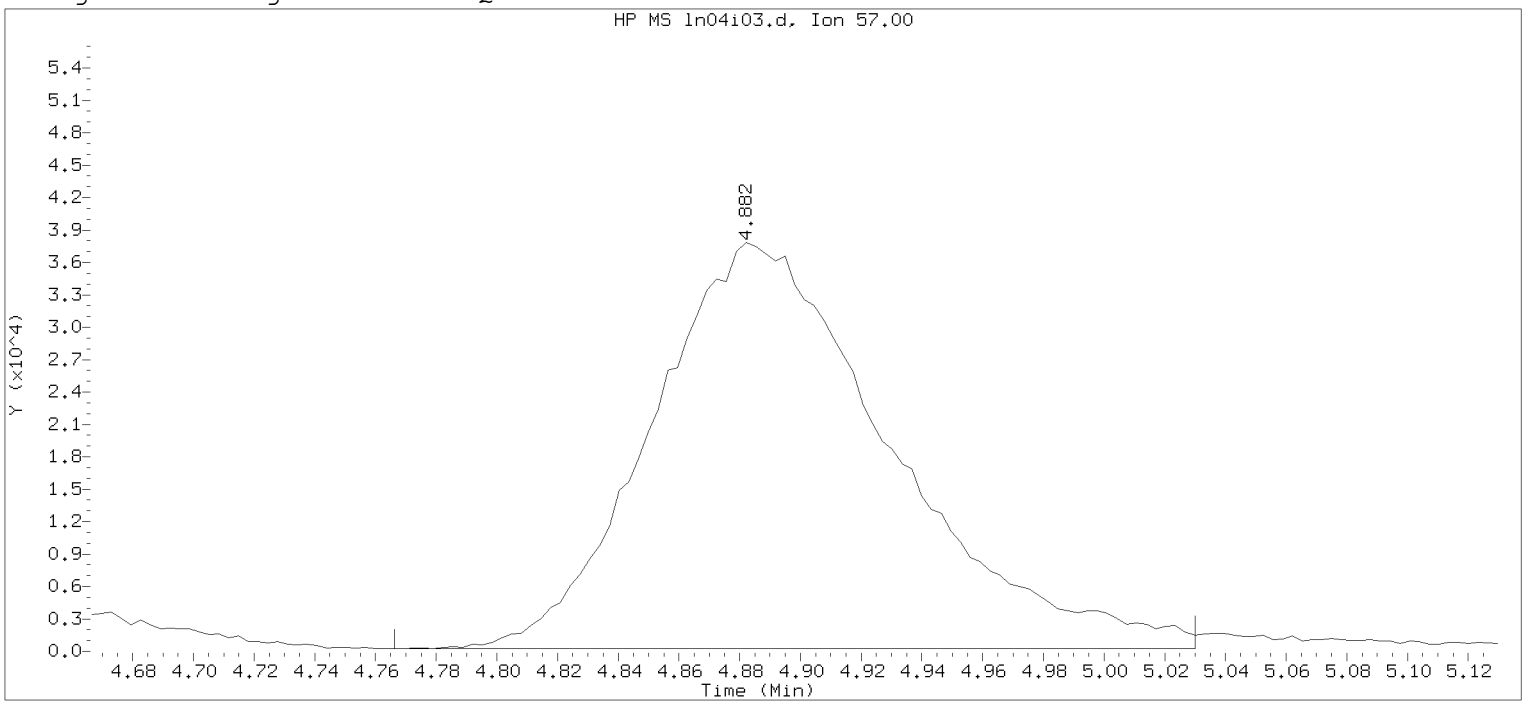
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

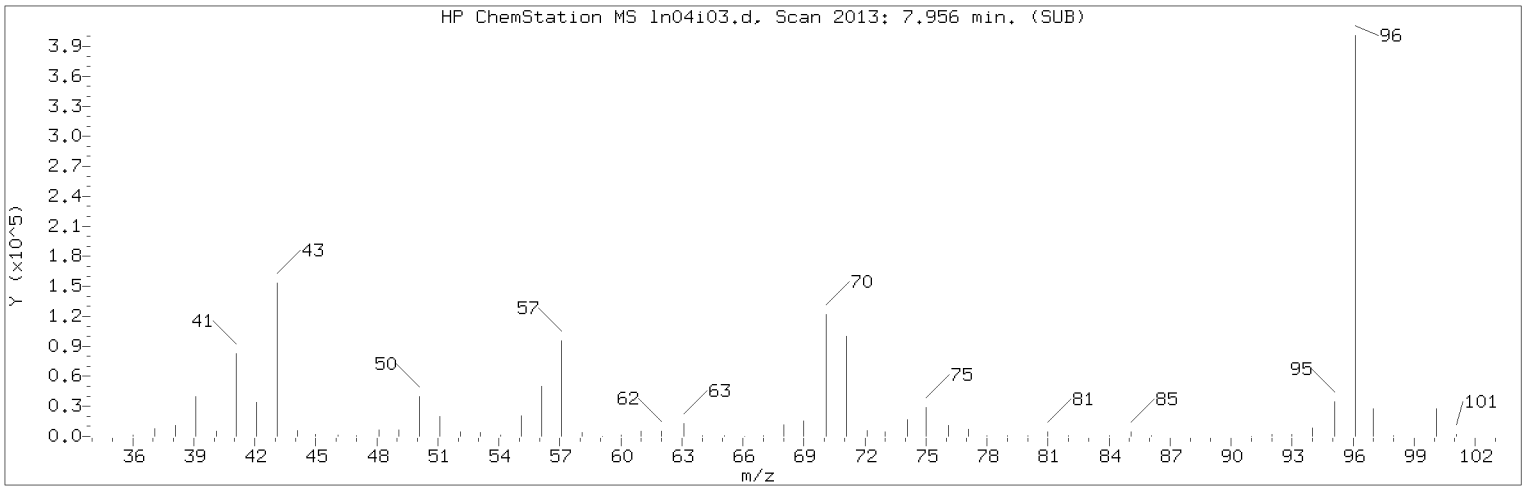
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

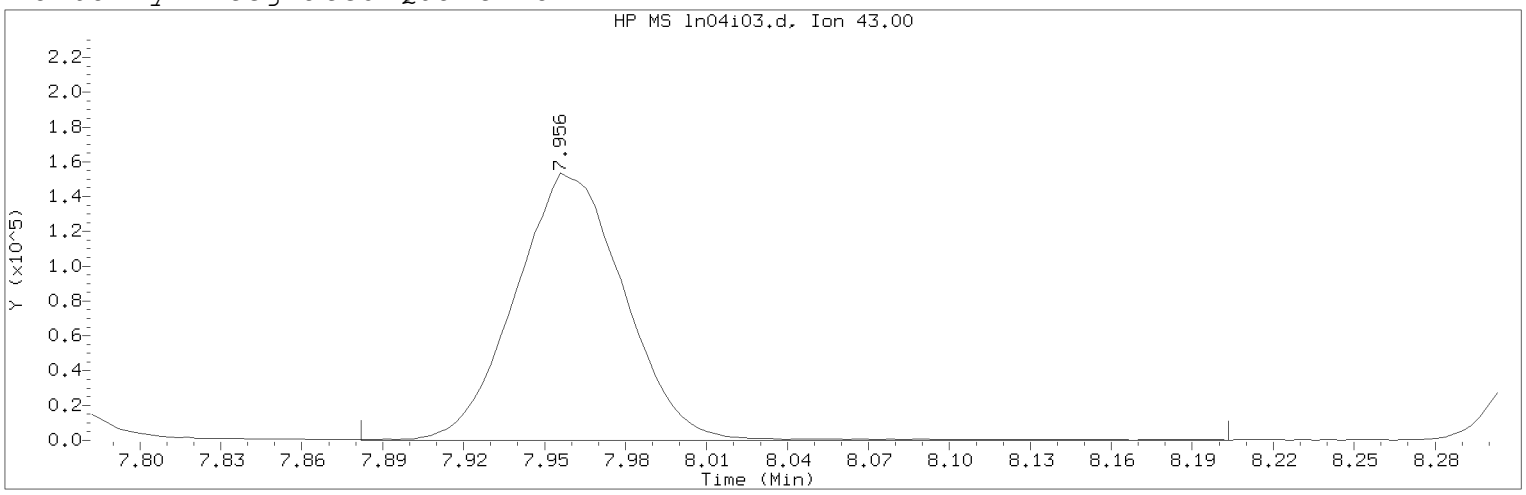
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1057
Retention Time (minutes): 4.882
Quant Ion : 57.00
Area : 205522
On-column Amount (ng) : 50.0557
Integration start scan : 1020 Integration stop scan: 1102
Y at integration start : 228 Y at integration end: 228

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: MCampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

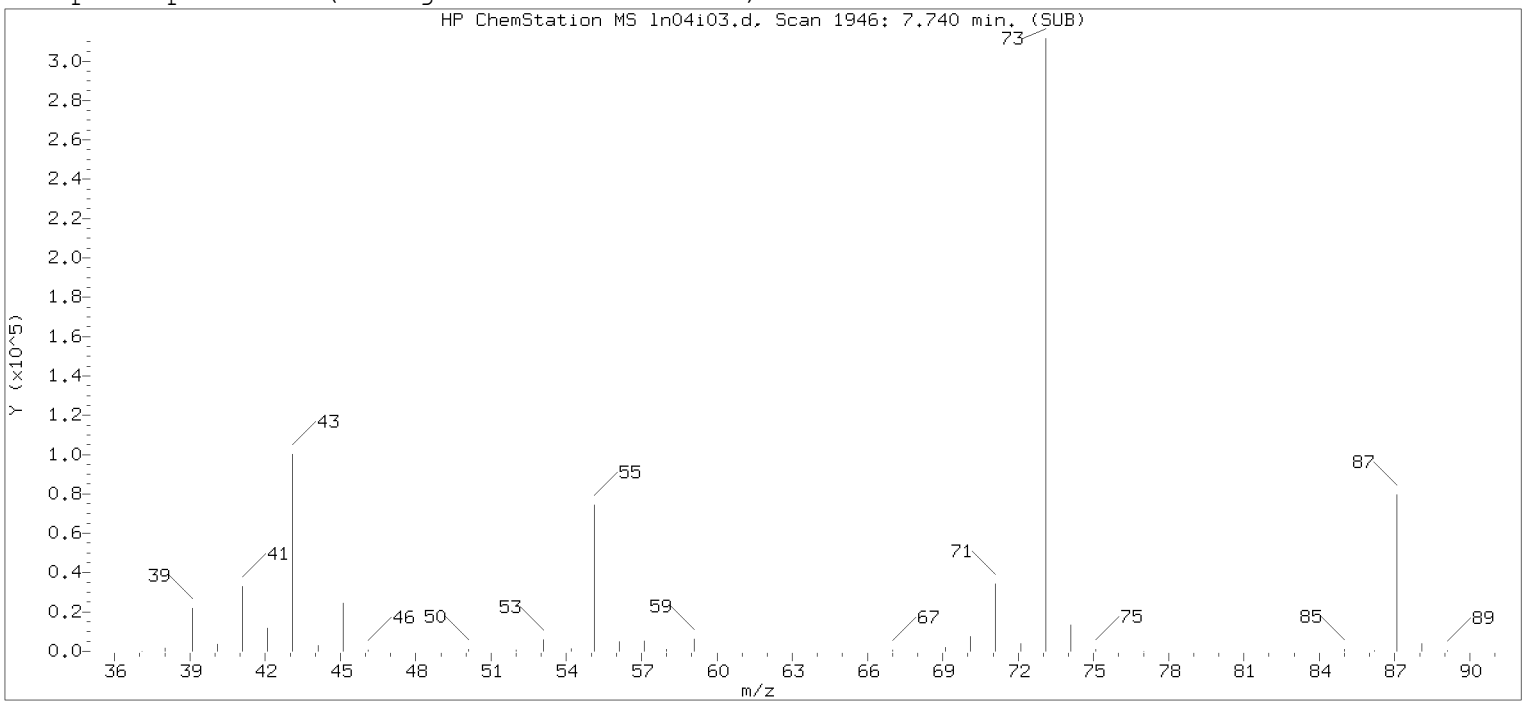
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2013
Retention Time (minutes): 7.956
Quant Ion : 43.00
Area (flag) : 432248MA
On-Column Amount (ng) : 52.2472
Integration start scan : 1989 Integration stop scan: 2089
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

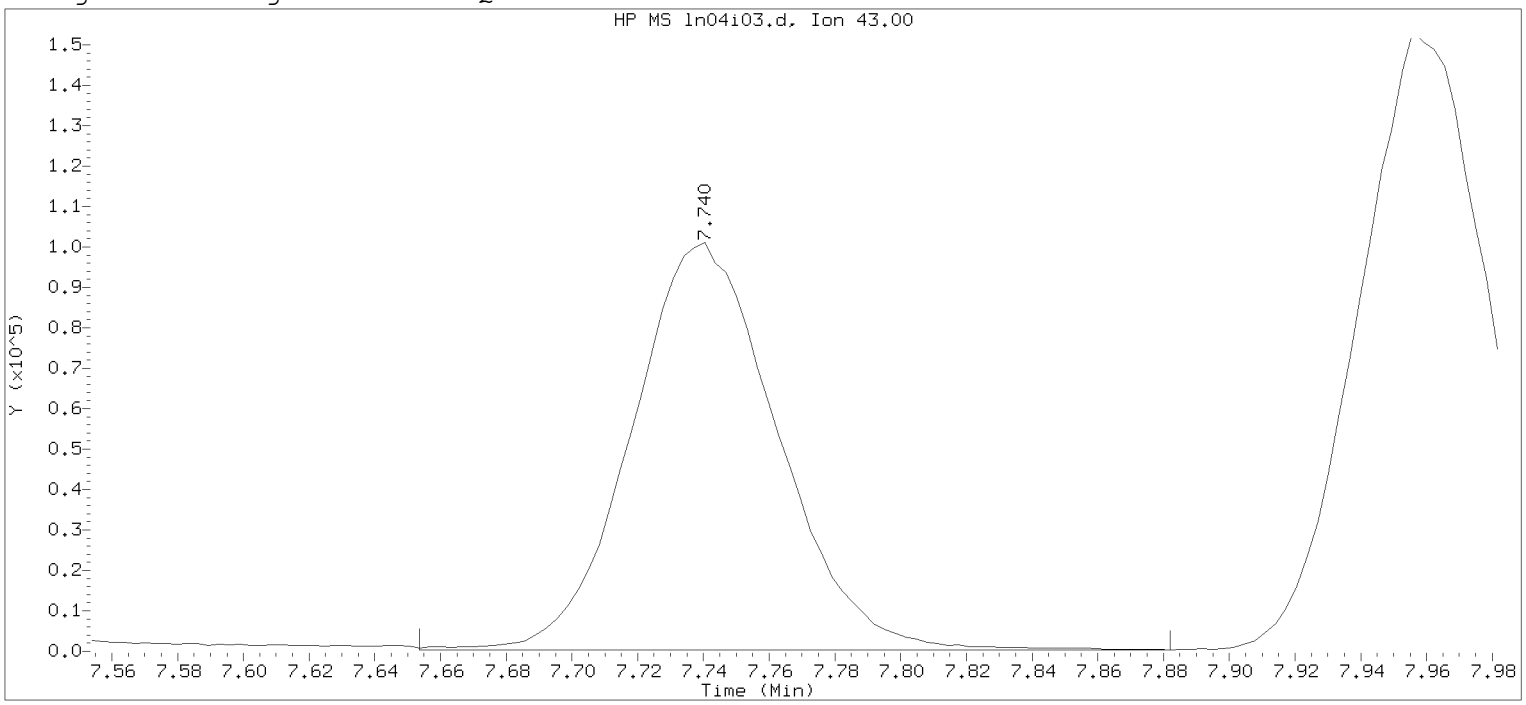
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

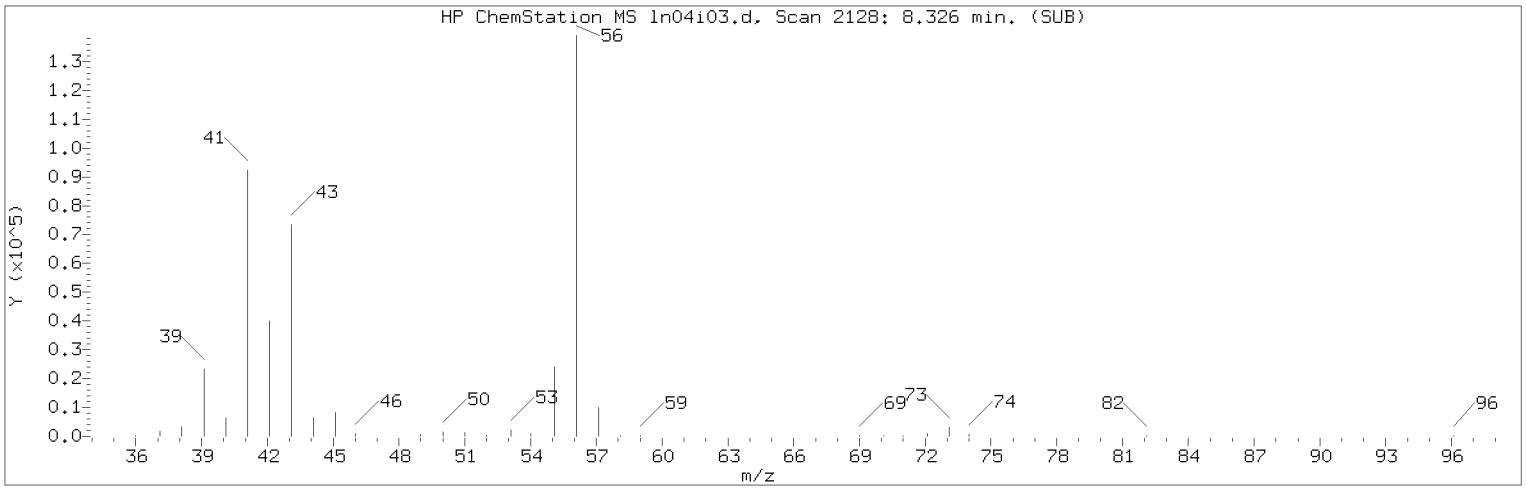
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

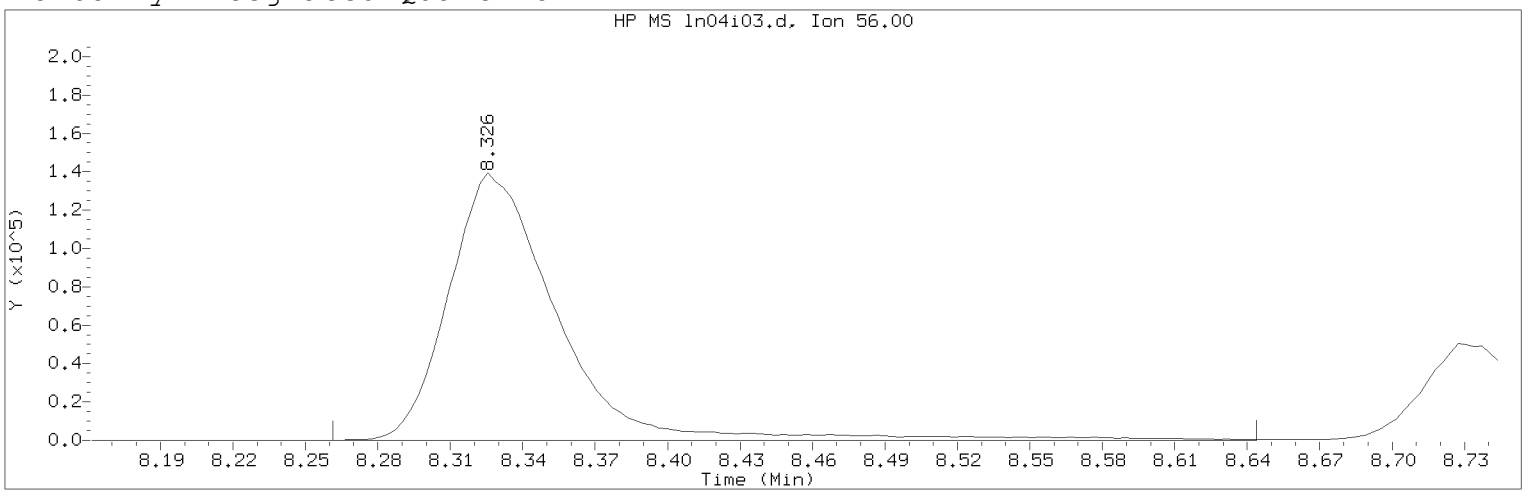
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.740
Quant Ion : 43.00
Area : 311136
On-column Amount (ng) : 51.5793
Integration start scan : 1918 Integration stop scan: 1989
Y at integration start : 288 Y at integration end: 288

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

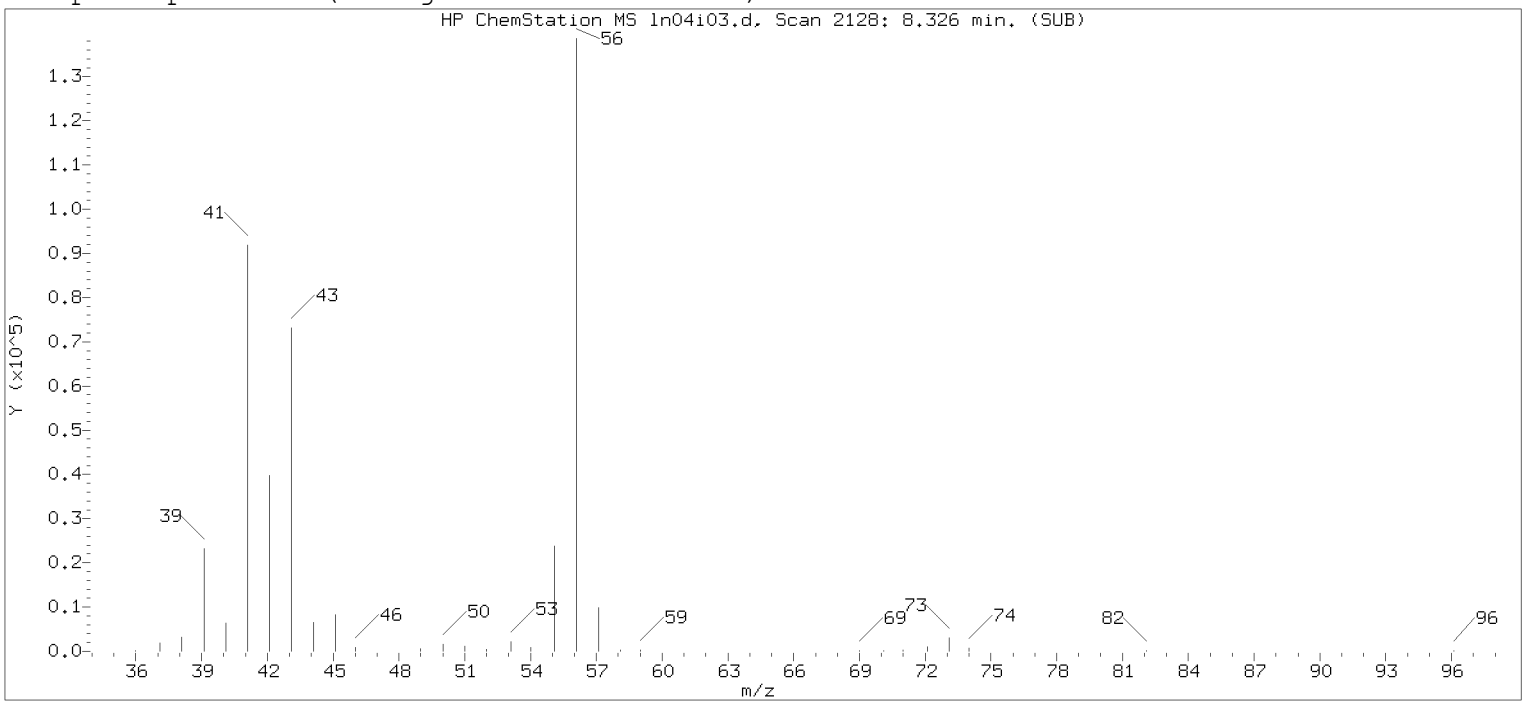
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area (flag) : 438437M
On-Column Amount (ng) : 1332.7496
Integration start scan : 2107 Integration stop scan: 2226
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

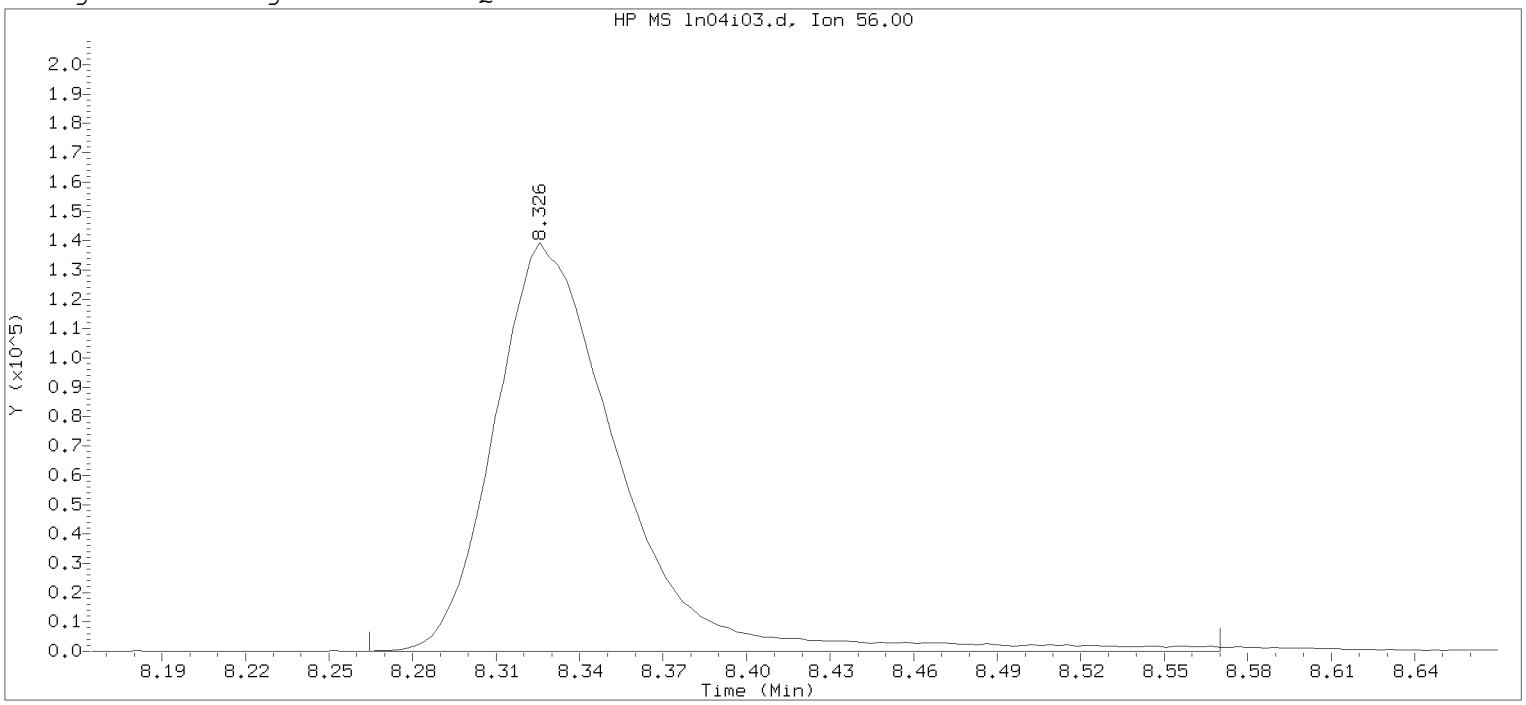
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

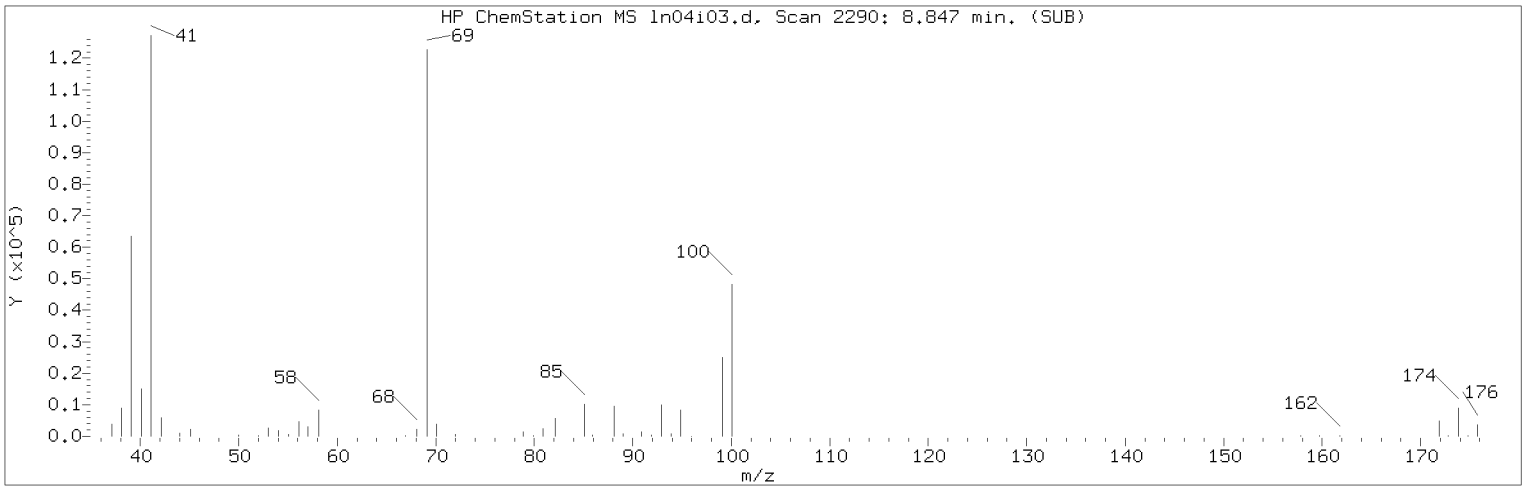
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

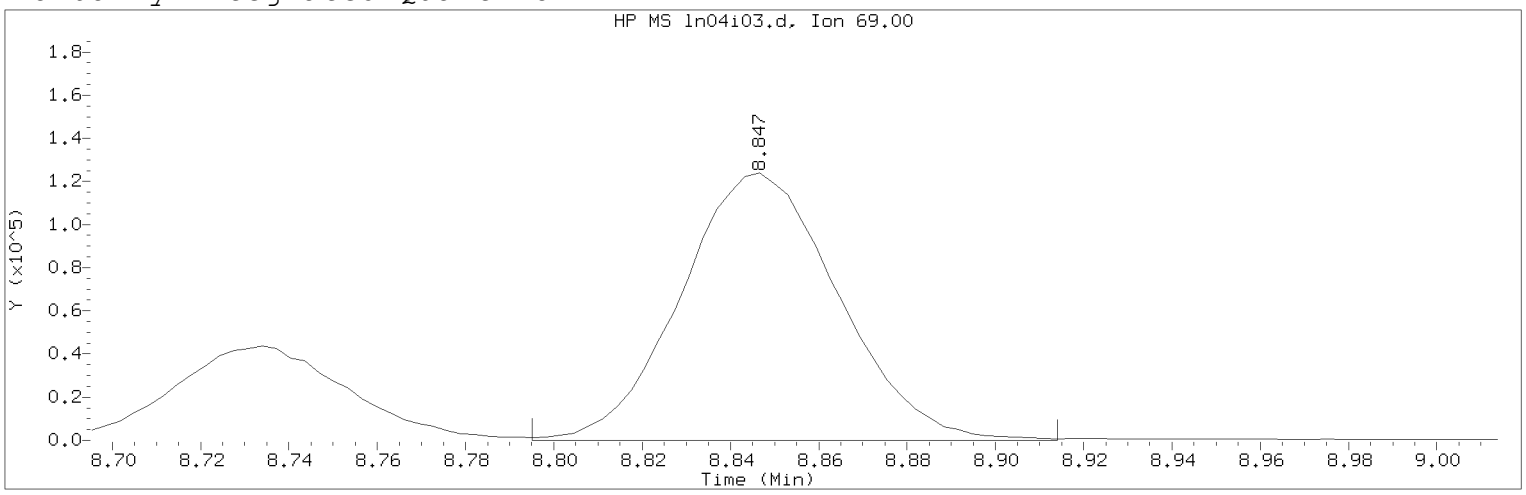
Compound Number	: 69		
Compound Name	: n-Butanol		
Scan Number	: 2128		
Retention Time (minutes)	: 8.326		
Quant Ion	: 56.00		
Area	: 434385		
On-column Amount (ng)	: 1223.8707		
Integration start scan	: 2108	Integration stop scan:	2203
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

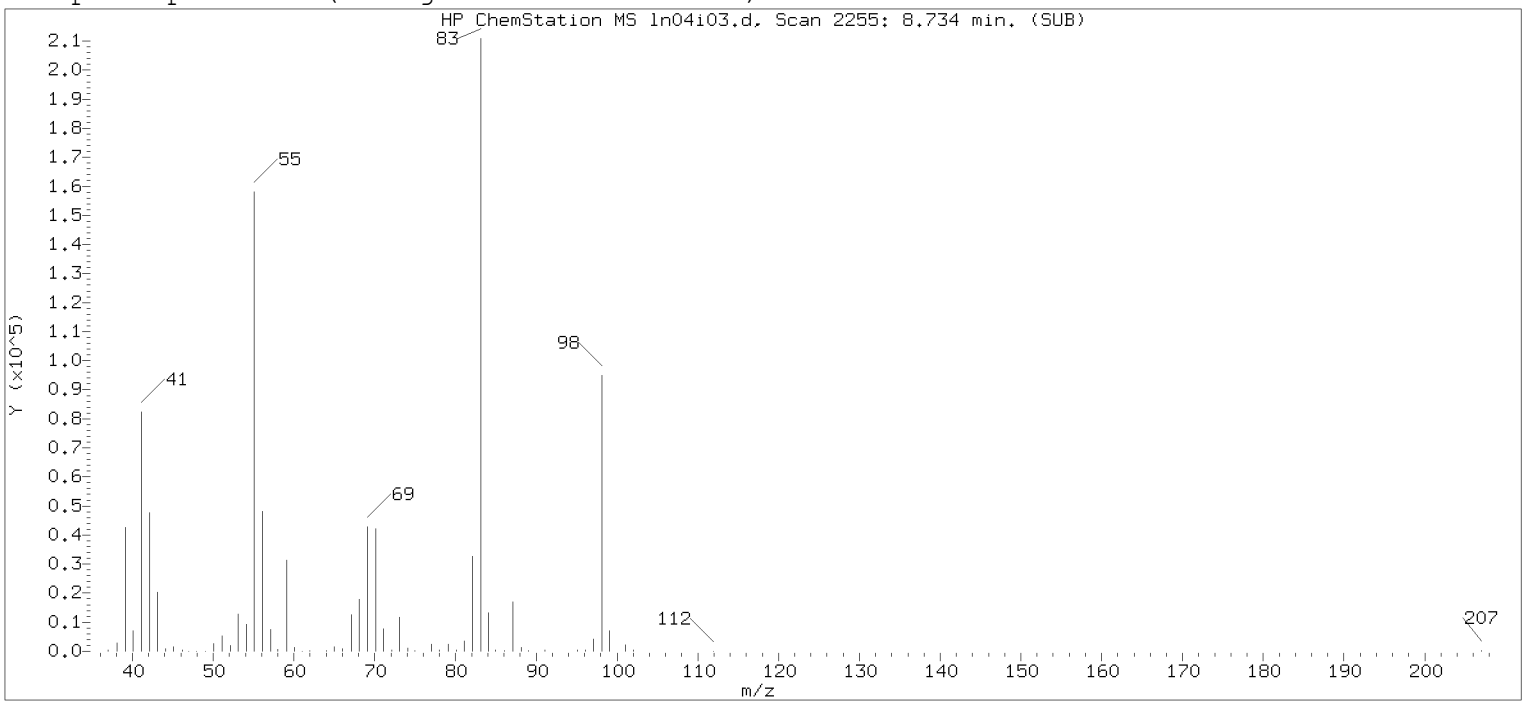
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2290
Retention Time (minutes): 8.847
Quant Ion : 69.00
Area (flag) : 306086A
On-Column Amount (ng) : 52.7952
Integration start scan : 2273 Integration stop scan: 2310
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

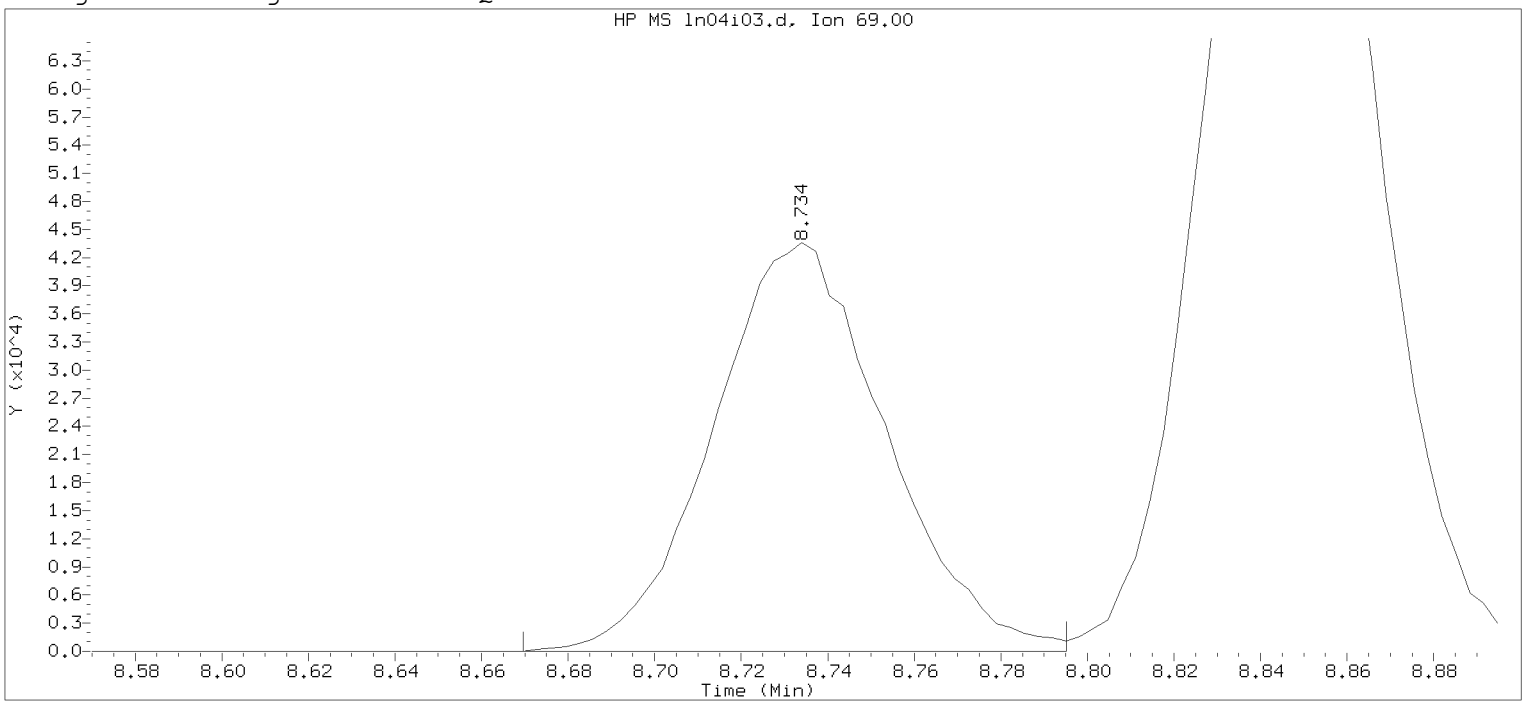
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

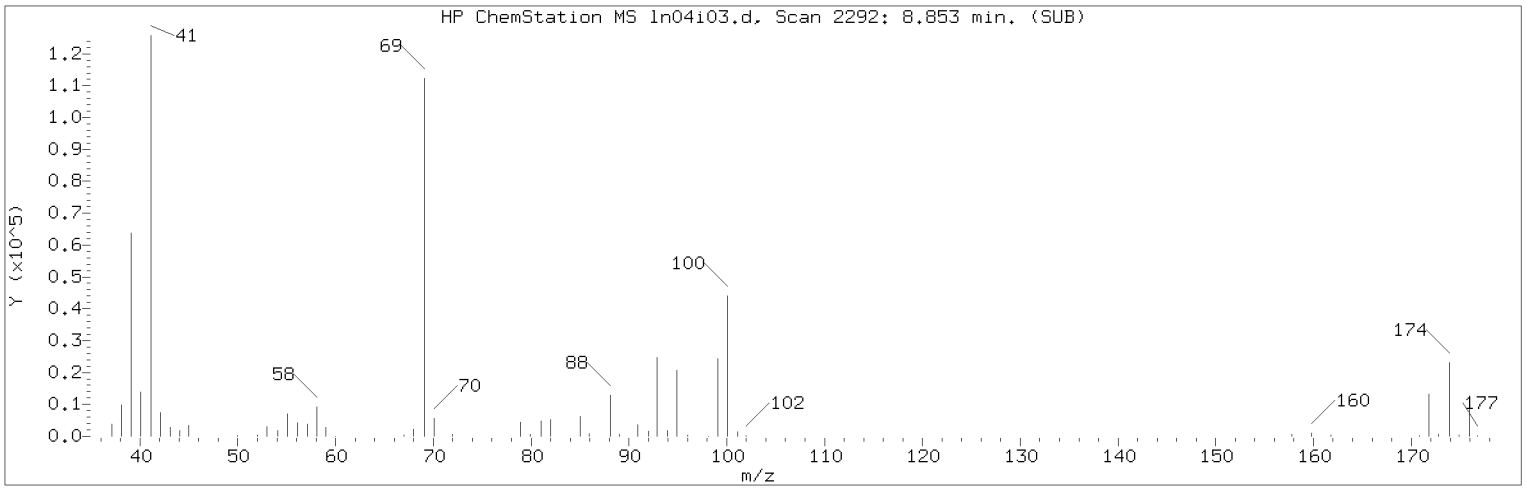
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

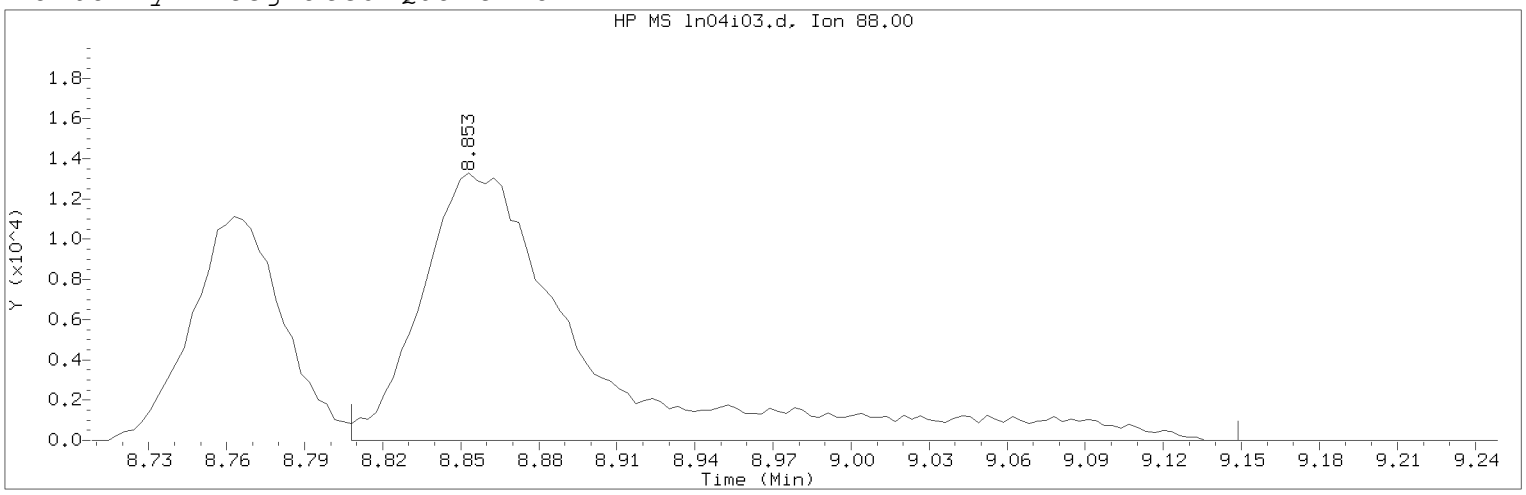
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 120511
On-column Amount (ng) : 48.6556
Integration start scan : 2234 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

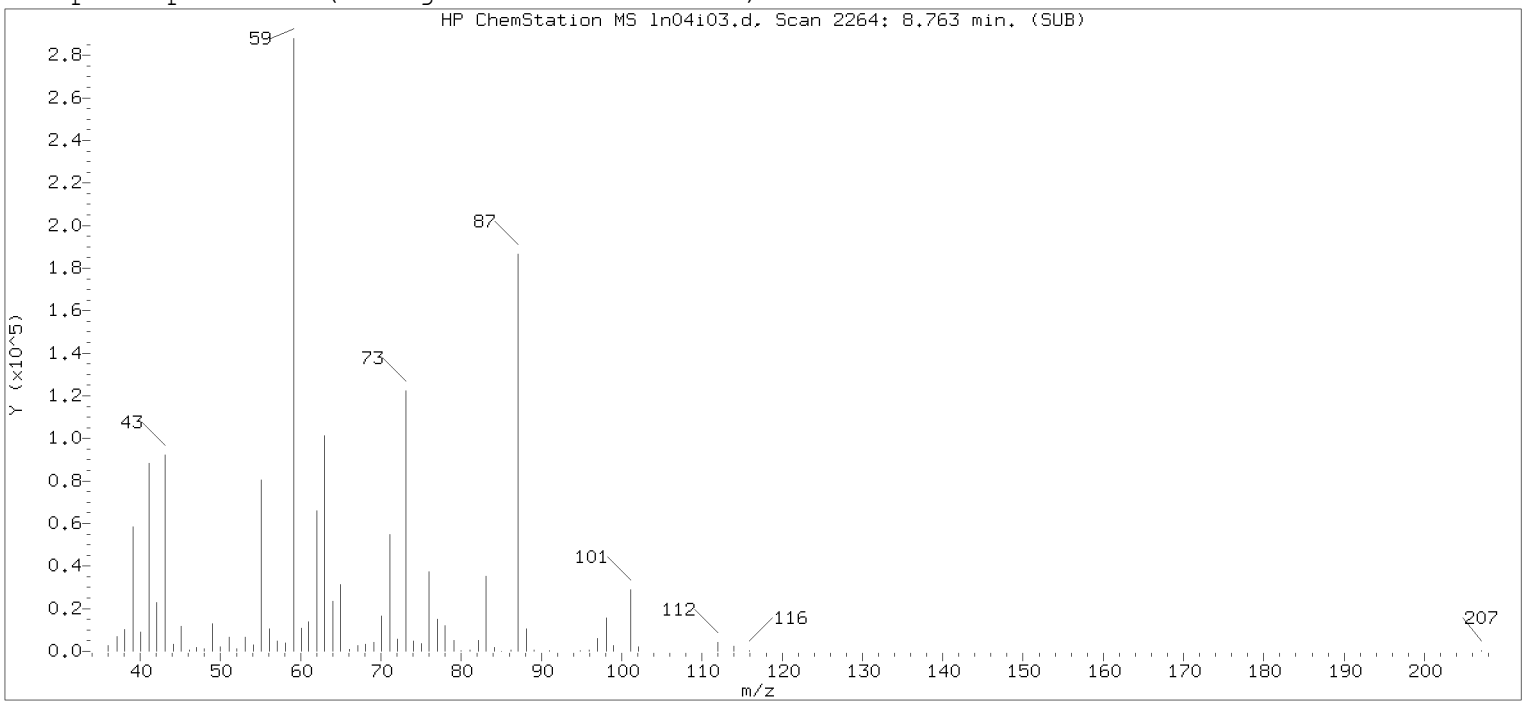
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area (flag) : 59876M
On-Column Amount (ng) : 662.1956
Integration start scan : 2277 Integration stop scan: 2383
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

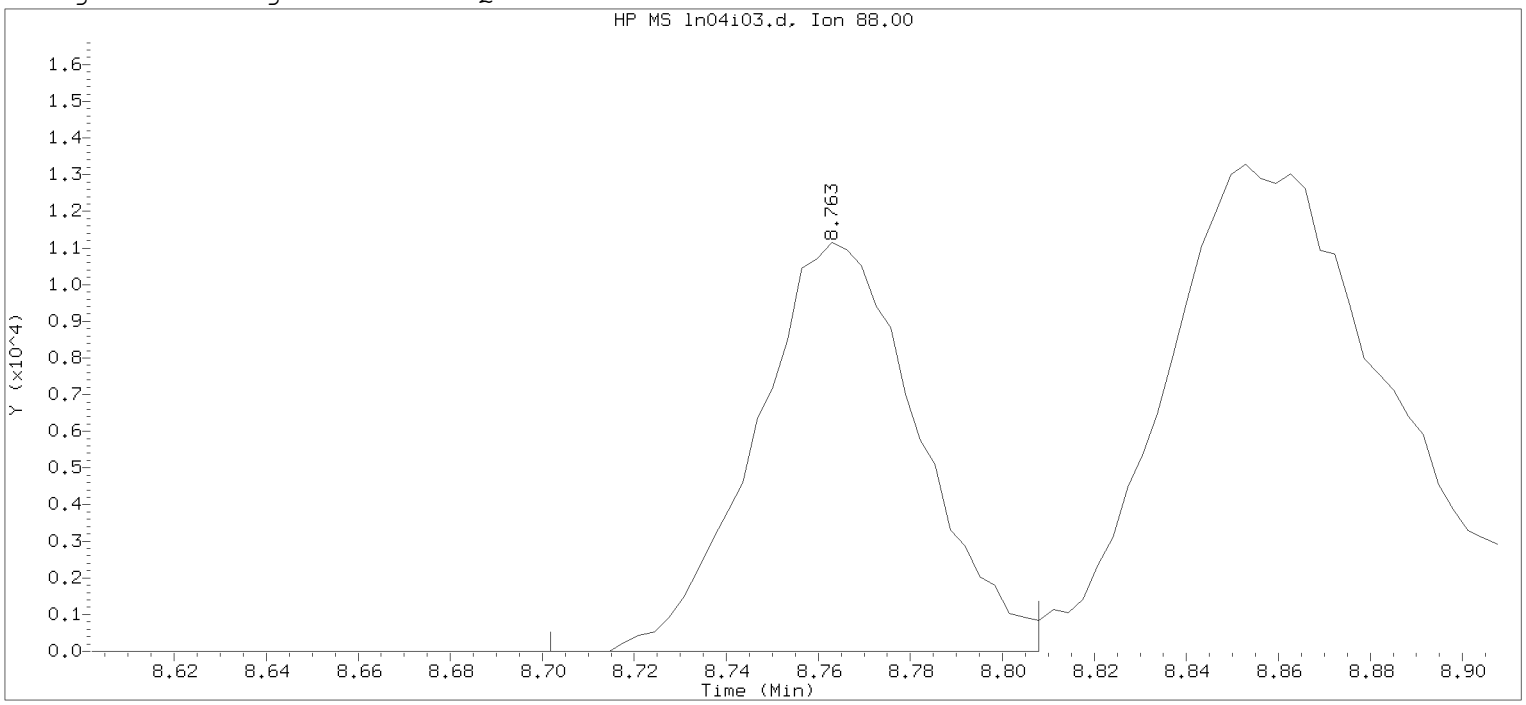
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

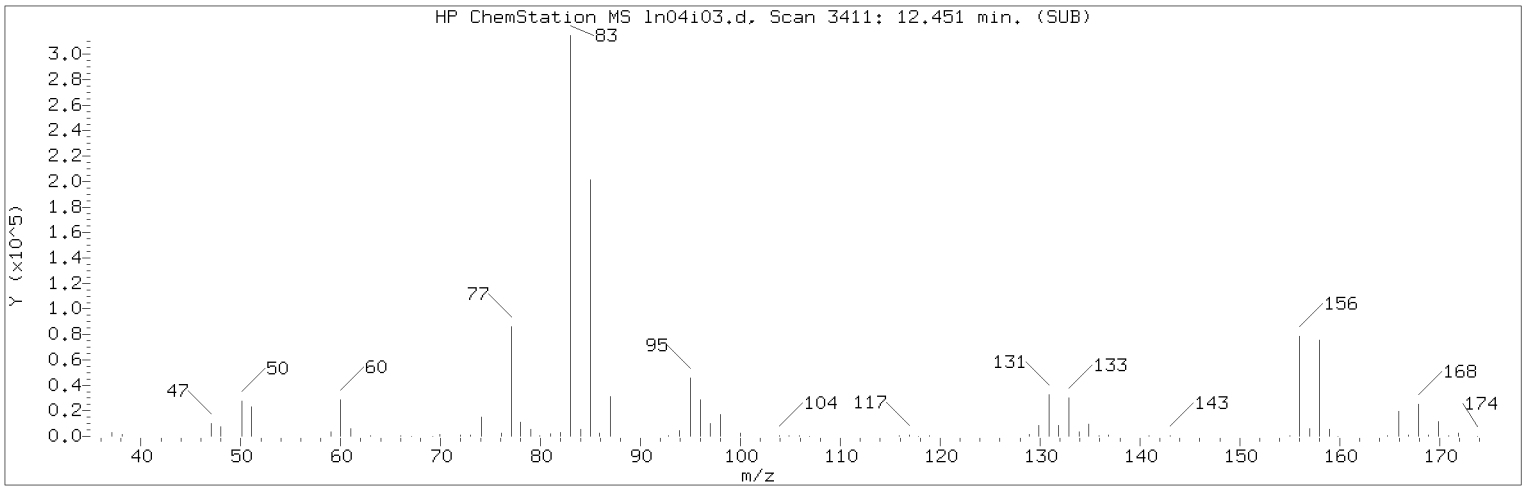
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

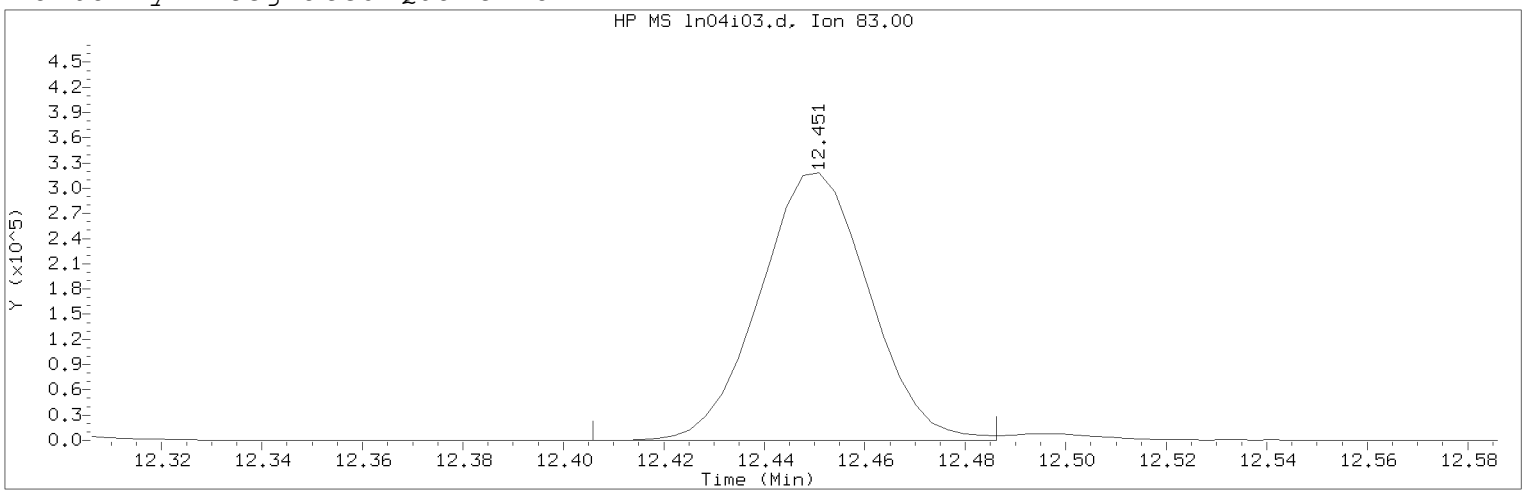
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2264
Retention Time (minutes): 8.763
Quant Ion : 88.00
Area : 27334
On-column Amount (ng) : 447.5530
Integration start scan : 2244 Integration stop scan: 2277
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

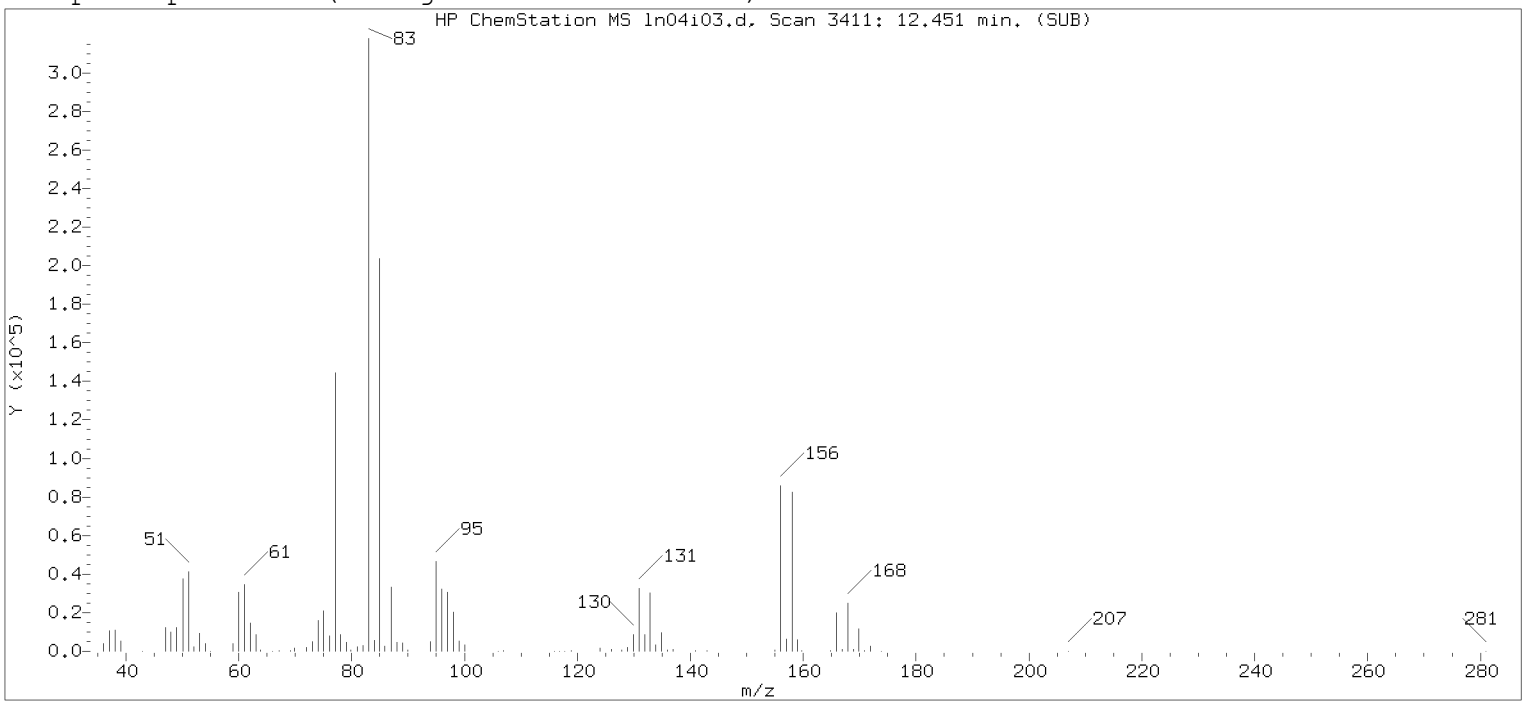
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 482004M
On-Column Amount (ng) : 52.7274
Integration start scan : 3396 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

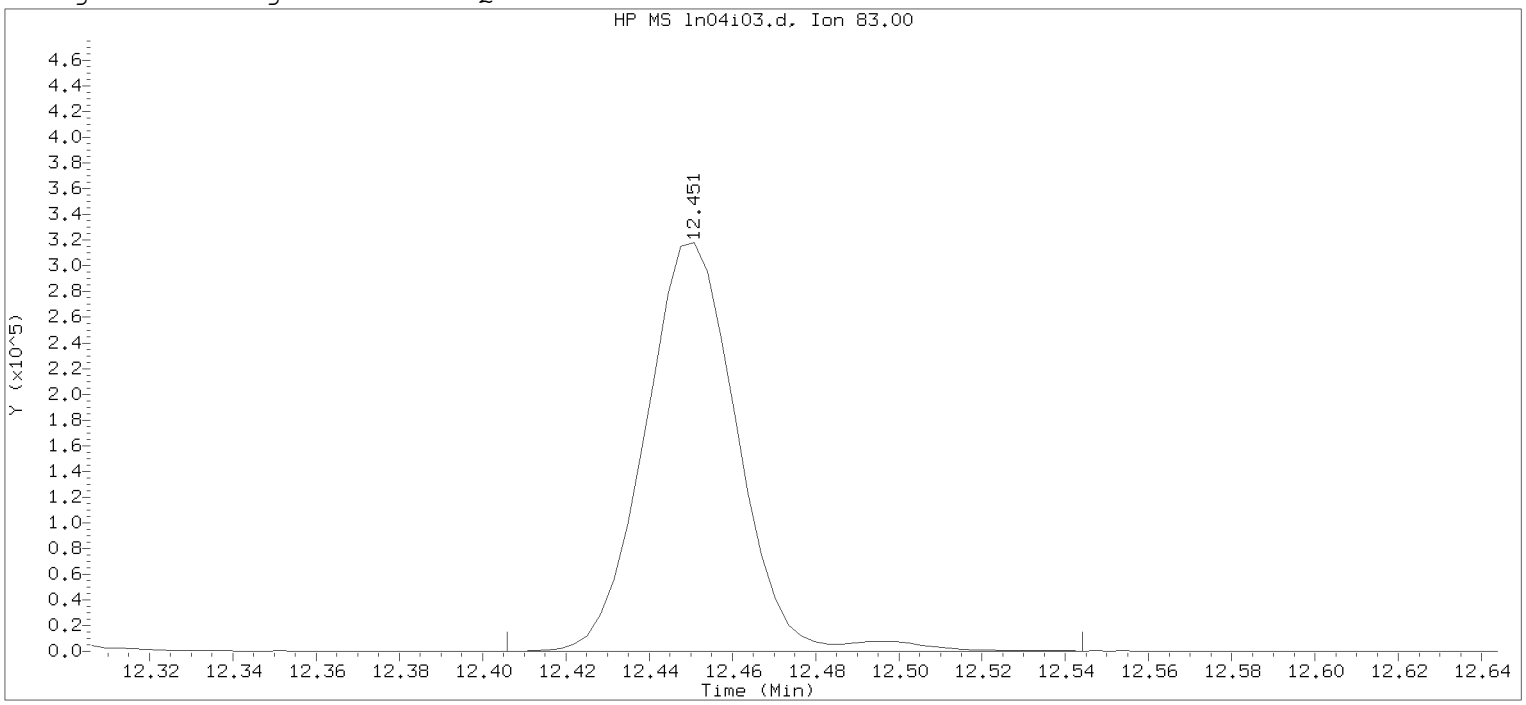
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

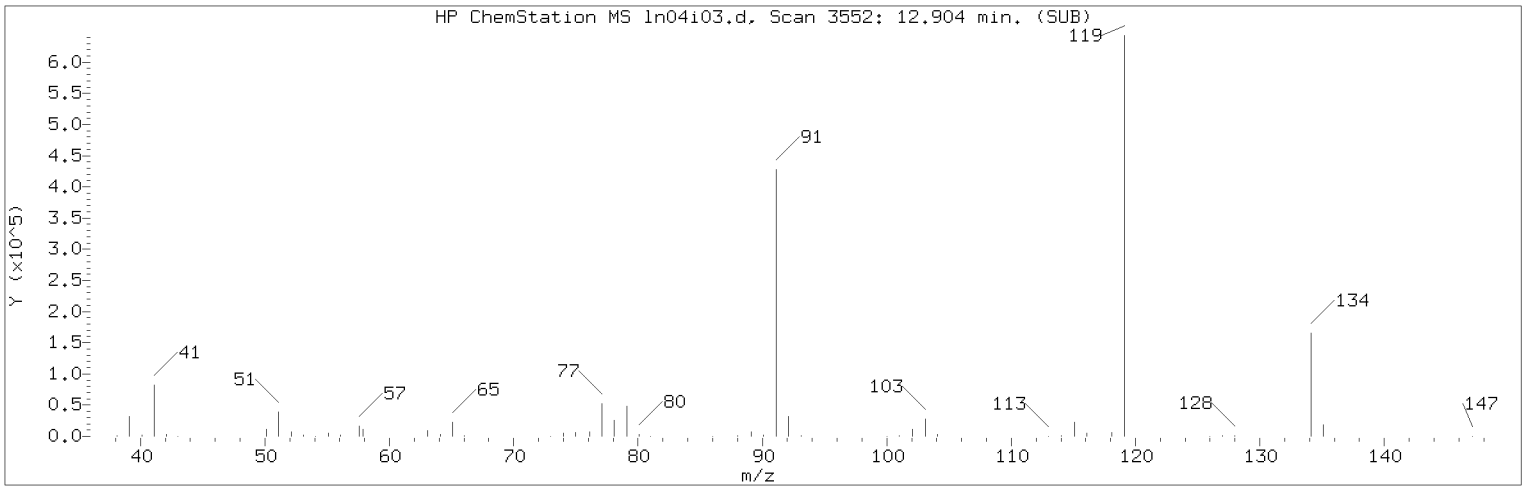
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

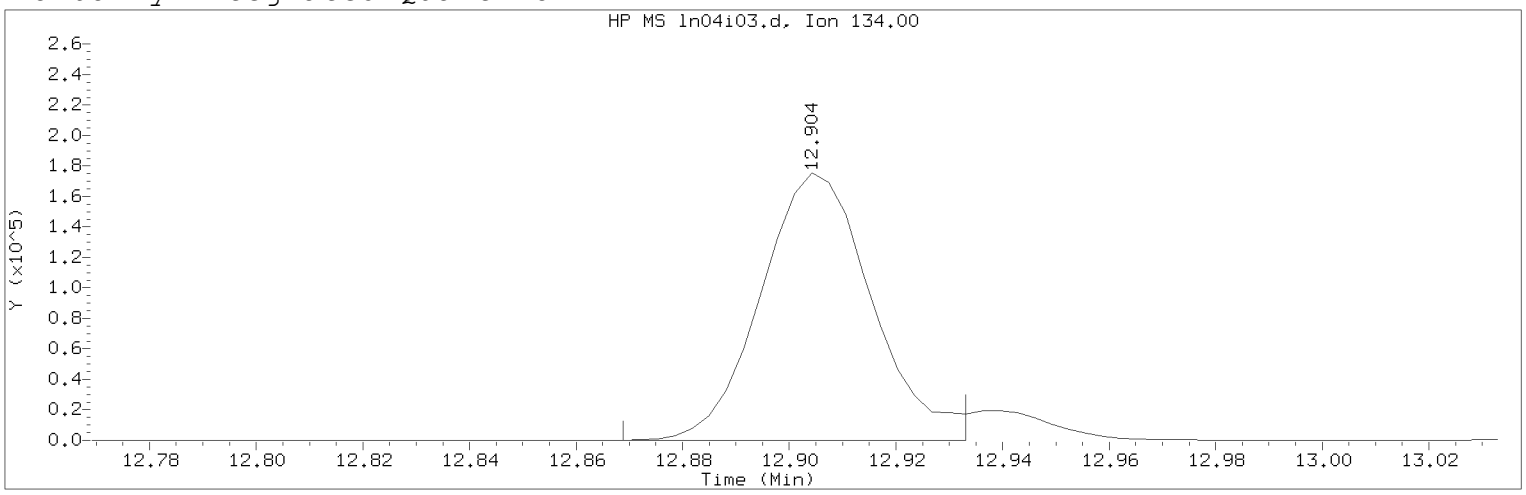
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 491918
On-column Amount (ng) : 50.7154
Integration start scan : 3396 Integration stop scan: 3439
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

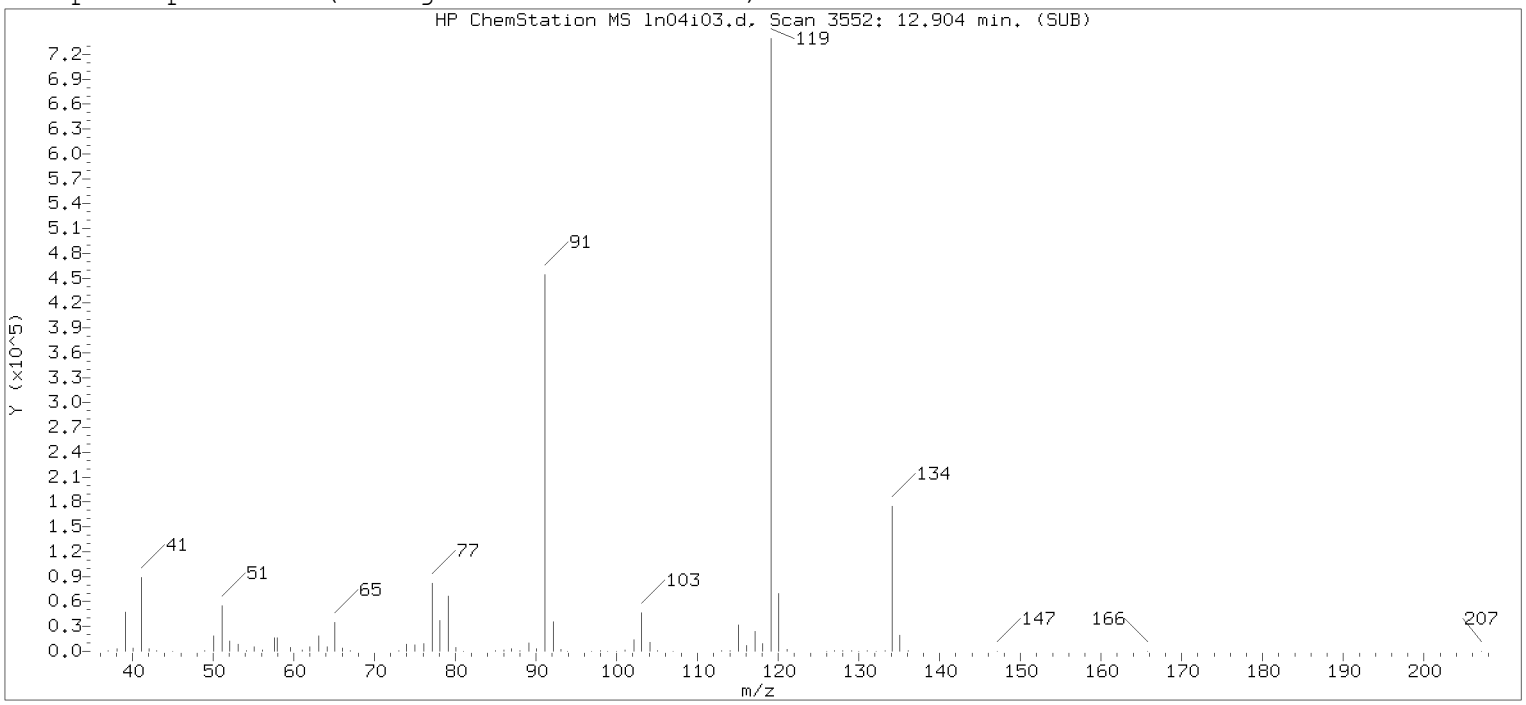
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 253906M
On-Column Amount (ng) : 53.1652
Integration start scan : 3540 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

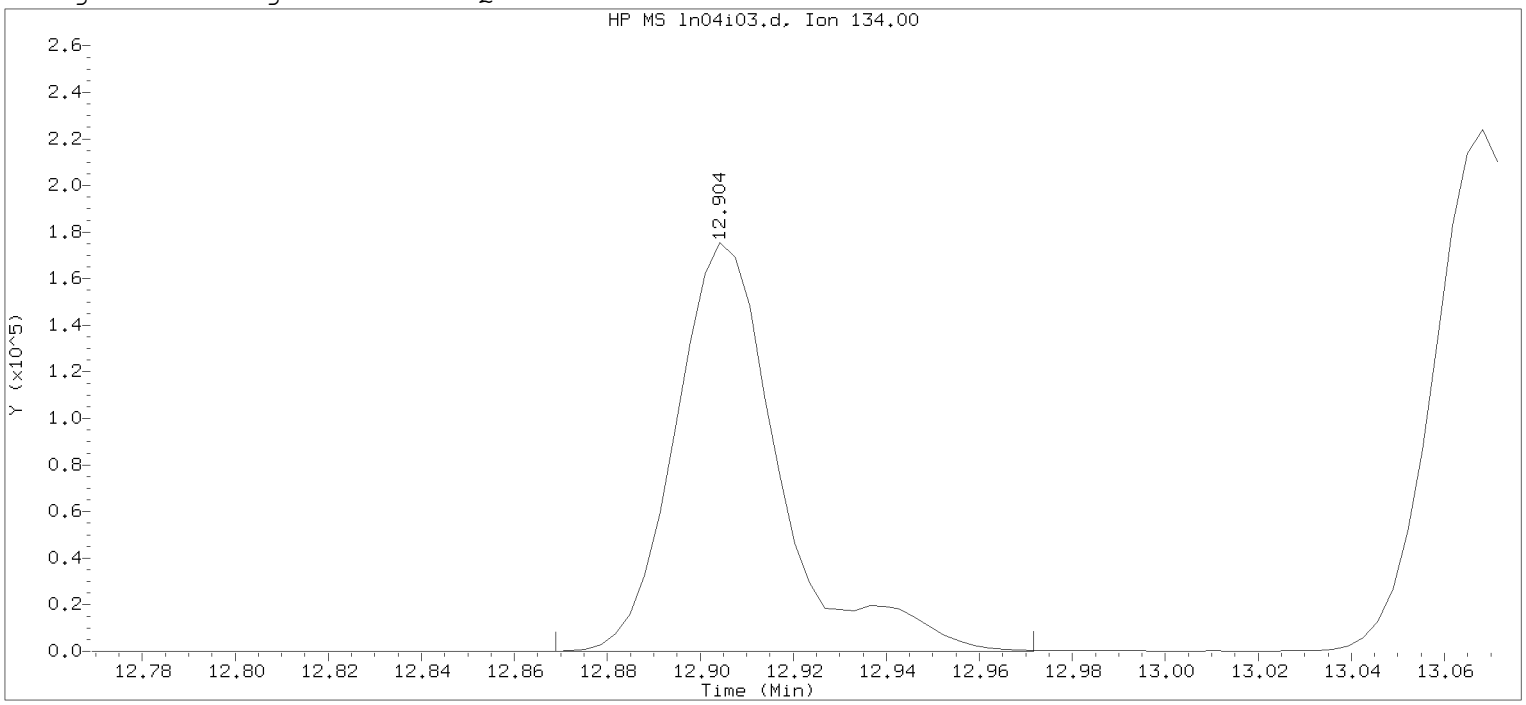
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



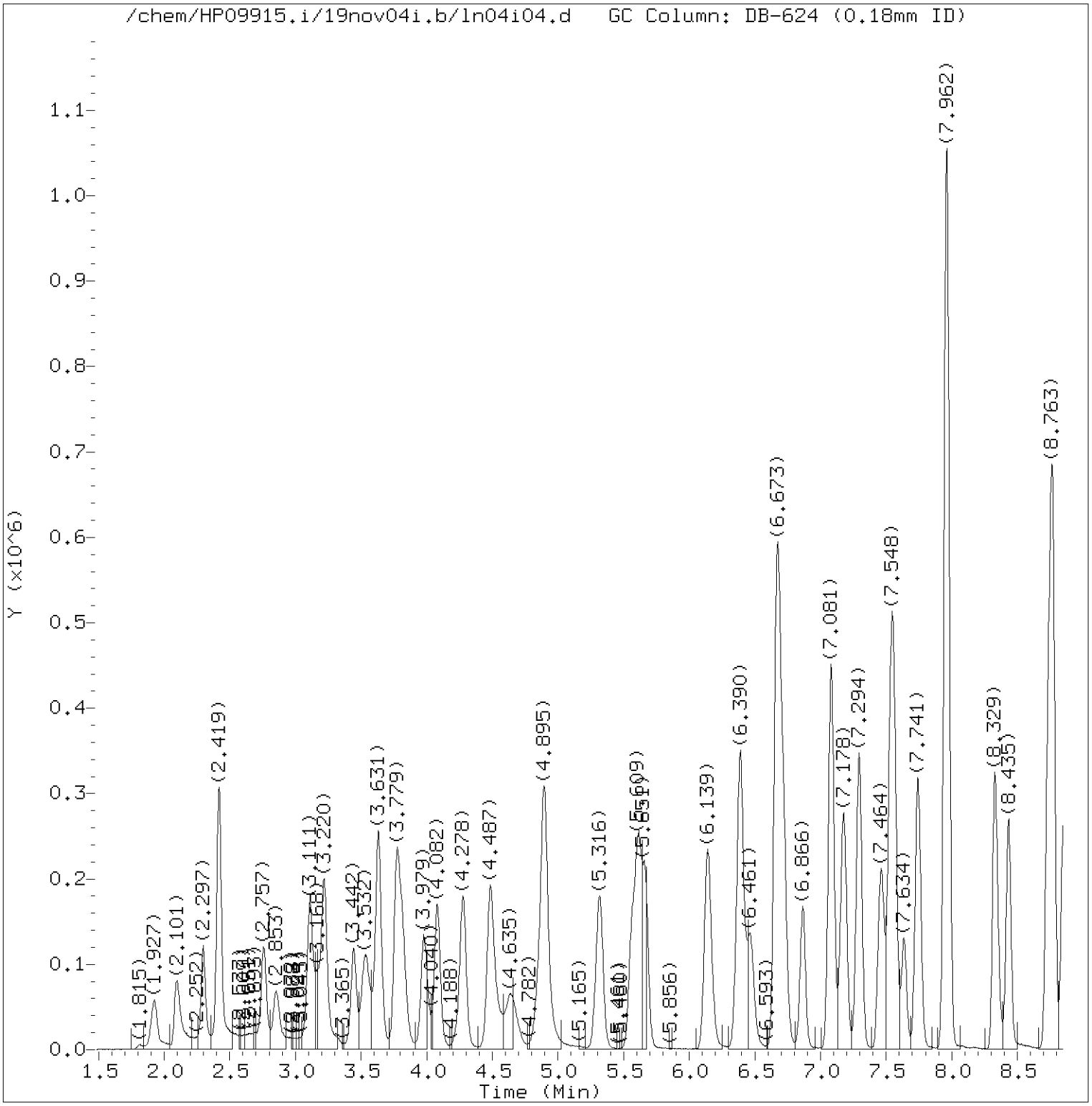
Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 273047
On-column Amount (ng) : 50.7591
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: me20285



Total Ion Chromatogram (TIC)

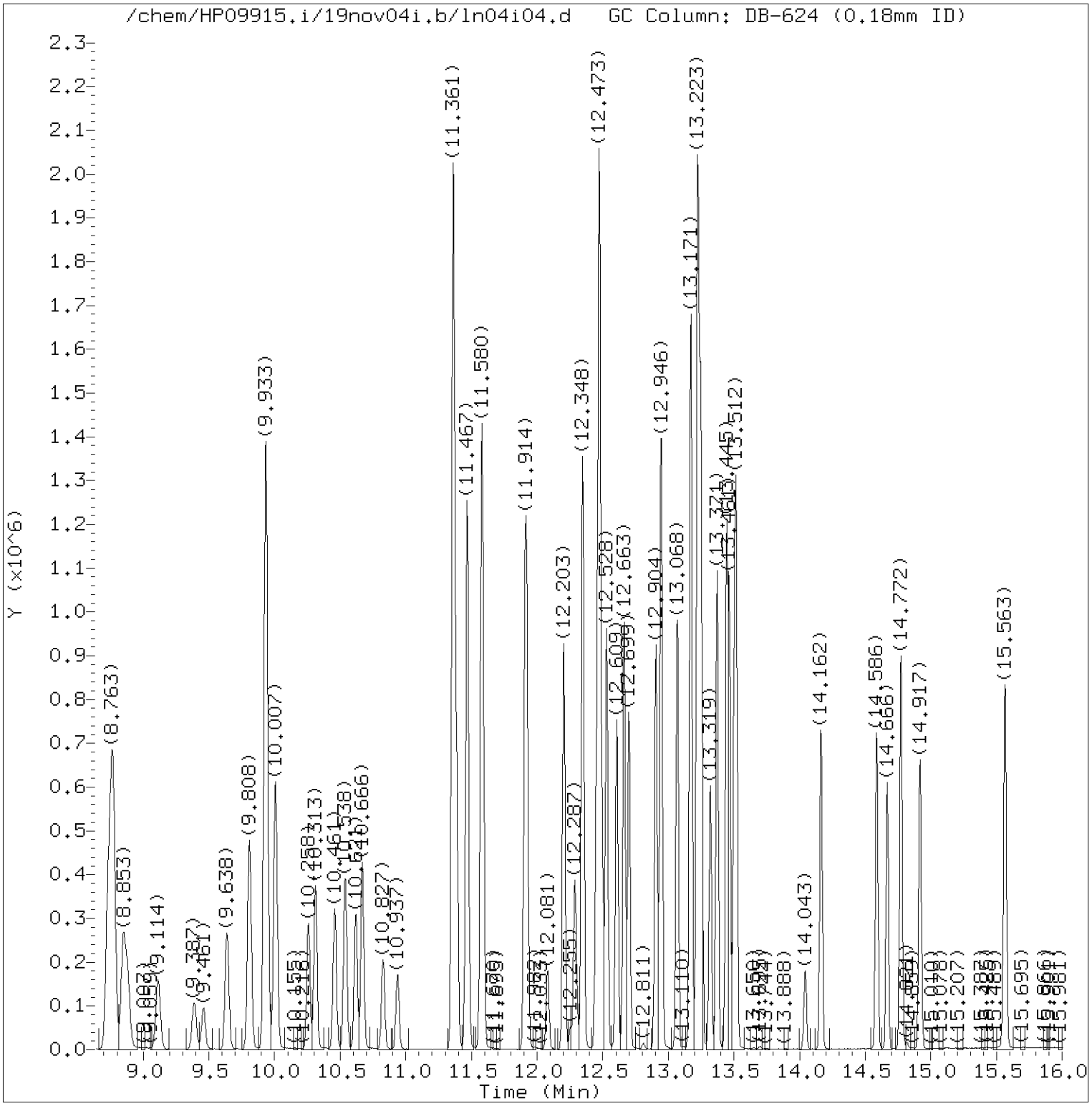
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.095	85	161054M	20.460
4) Chloromethane	(2)	2.297	50	155347	20.477
5) 1,3-Butadiene	(2)	2.416	39	127826M	20.292
6) Vinyl Chloride	(2)	2.419	62	156255	20.637
8) Bromomethane	(2)	2.757	94	109945	20.257
9) Chloroethane	(2)	2.853	64	85938	20.653
10) Dichlorofluoromethane	(2)	3.111	67	205276M	20.838
12) Trichlorofluoromethane	(2)	3.168	101	166167	20.384
11) n-Pentane	(2)	3.220	43	195074	20.250
14) Ethyl ether	(2)	3.442	59	108665	20.629
15) Freon 123a	(2)	3.532	67	137784	21.012
16) Acrolein	(1)	3.631	56	399615	206.403
17) 1,1-Dichloroethene	(2)	3.773	96	101858	21.288
17) 1,1-Dichloroethene	(2)	3.773	63	50444	21.029
19) Freon 113	(2)	3.805	101	115335	21.128
18) Acetone	(1)	3.815	58	36001	41.477
22) Methyl Iodide	(2)	3.979	142	212163	21.398
21) 2-Propanol	(1)	4.004	45	120851	193.676
23) Carbon Disulfide	(2)	4.082	76	388574	21.550
27) Methyl Acetate	(2)	4.255	43	121876	19.777
25) Allyl Chloride	(2)	4.281	41	173950	20.266
28) Methylene Chloride	(2)	4.483	84	119344	20.956
29)*t-Butyl alcohol-d10	(1)	4.512	65	258058M	250.000
30) t-Butyl alcohol	(1)	4.644	59	213903	196.882
31) Acrylonitrile	(2)	4.844	53	69677	21.016
32) trans-1,2-Dichloroethene	(2)	4.898	96	117516	21.231
33) Methyl Tertiary Butyl Ether	(2)	4.898	73	384426	21.159
34) n-Hexane	(2)	5.323	57	185314M	21.519
36) 1,1-Dichloroethane	(2)	5.561	63	203176	21.041
38) di-Isopropyl ether	(2)	5.615	45	399314	21.442
39) 2-Chloro-1,3-butadiene	(2)	5.670	53	184546	21.302
40) Ethyl t-butyl ether	(2)	6.146	59	392243	21.703
43) 1,2-Dichloroethene (Total)	(2)		96	248665	42.340
44) 2-Butanone	(2)	6.371	43	174937	41.104
42) cis-1,2-Dichloroethene	(2)	6.390	96	131149	21.109
45) 2,2-Dichloropropane	(2)	6.397	77	160123	21.332
47) Propionitrile	(1)	6.471	54	279106	206.179
48) Methacrylonitrile	(2)	6.673	67	377980	105.686

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	68547	20.807
50) Tetrahydrofuran	(1)	6.728	71	49905	40.813
51) Chloroform	(2)	6.863	83	198842	21.530
52)$Dibromofluoromethane	(2)	7.078	113	277983	50.374
52)$Dibromofluoromethane	(2)	7.081	111	283696	50.420
53) 1,1,1-Trichloroethane	(2)	7.081	97	168285	21.349
54) Cyclohexane	(2)	7.178	56	226762	21.513
54) Cyclohexane	(2)	7.178	84	195470	21.348
54) Cyclohexane	(2)	7.171	69	69608	21.350
56) Carbon Tetrachloride	(2)	7.290	117	141234	21.126
55) 1,1-Dichloropropene	(2)	7.297	75	161608	21.167
58) Isobutyl Alcohol	(1)	7.464	41	176564	482.927
57)$1,2-Dichloroethane-d4	(2)	7.535	102	71029	50.503
57)$1,2-Dichloroethane-d4	(2)	7.532	65	318244	50.776
57)$1,2-Dichloroethane-d4	(2)	7.535	104	46070	51.284
60) Benzene	(2)	7.561	78	489494	21.320
61) 1,2-Dichloroethane	(2)	7.634	62	150643	20.399
61) 1,2-Dichloroethane	(2)	7.634	98	15487	21.192
65) t-Amyl methyl ether	(2)	7.744	73	391674	21.591
67) n-Heptane	(2)	7.962	43	173500MA	21.566
66)*Fluorobenzene	(2)	7.962	96	1128743	50.000
69) n-Butanol	(1)	8.329	56	312189M	992.087
71) Trichloroethene	(2)	8.435	95	122357	21.166
72) Methylcyclohexane	(2)	8.737	83	221554	20.658
72) Methylcyclohexane	(2)	8.737	98	99234	20.447
73) 1,2-Dichloropropane	(2)	8.769	63	123290	21.148
76) Methyl Methacrylate	(2)	8.850	69	117550A	20.851
75) 1,4-Dioxane	(1)	8.856	88	44376M	513.065
74) Dibromomethane	(2)	8.879	93	79643	21.113
78) Bromodichloromethane	(2)	9.114	83	142226	21.011
79) 2-Nitropropane	(2)	9.390	41	82517M	40.247
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	51005	20.370
81) cis-1,3-Dichloropropene	(2)	9.634	75	192808	21.446
82) 4-Methyl-2-pentanone	(2)	9.808	43	377728	42.047
83)$Toluene-d8	(3)	9.933	98	1159273	50.160
83)$Toluene-d8	(3)	9.933	100	751601	50.203
88) Toluene	(3)	10.007	92	308466	21.289
90) 1,3-Dichloropropene (total)	(3)		100	367273	42.658

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	174465	21.211
91) Ethyl Methacrylate	(3)	10.313	69	210882	21.096
92) 1,1,2-Trichloroethane	(3)	10.461	97	114106	20.771
93) Tetrachloroethene	(3)	10.538	166	130358	21.243
94) 1,3-Dichloropropane	(3)	10.618	76	196136	20.911
96) 2-Hexanone	(3)	10.666	43	276801	41.485
97) Dibromochloromethane	(3)	10.827	129	117920	20.955
99) 1,2-Dibromoethane	(3)	10.940	107	124981	20.951
100)*Chlorobenzene-d5	(3)	11.361	117	883281	50.000
101) 1-Chlorohexane	(3)	11.364	91	162552	20.883
102) Chlorobenzene	(3)	11.387	112	347116	21.185
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	116096	21.505
104) Ethylbenzene	(3)	11.467	91	593614	21.434
106) m+p-Xylene	(3)	11.580	106	474524	43.555
108) Xylene (Total)	(3)		106	707354	65.191
107) o-Xylene	(3)	11.908	106	232830	21.636
109) Styrene	(3)	11.924	104	387652	21.799
110) Bromoform	(3)	12.081	173	81670	19.422
111) Isopropylbenzene	(3)	12.203	105	589458	21.839
112) Cyclohexanone	(1)	12.287	55	167626	494.847
114)$4-Bromofluorobenzene	(3)	12.348	95	438766	50.137
114)$4-Bromofluorobenzene	(3)	12.348	174	363757	50.138
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	186119M	20.690
115) Bromobenzene	(4)	12.464	156	150208	20.987
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	295707	106.569
117) 1,2,3-Trichloropropane	(4)	12.499	110	56899	20.612
119) n-Propylbenzene	(4)	12.528	91	680502	21.762
120) 2-Chlorotoluene	(4)	12.609	126	141675	21.327
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	498486	21.936
121) 4-Chlorotoluene	(4)	12.699	126	147463	21.326
124) tert-Butylbenzene	(4)	12.904	134	101571M	21.612
125) Pentachloroethane	(4)	12.940	167	85065	21.020
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	522495	21.816
127) sec-Butylbenzene	(4)	13.068	105	620603	22.130
129) 1,3-Dichlorobenzene	(4)	13.168	146	280954	21.362
130) p-Isopropyltoluene	(4)	13.171	119	539497	22.237
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	476218	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	288857	21.186

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

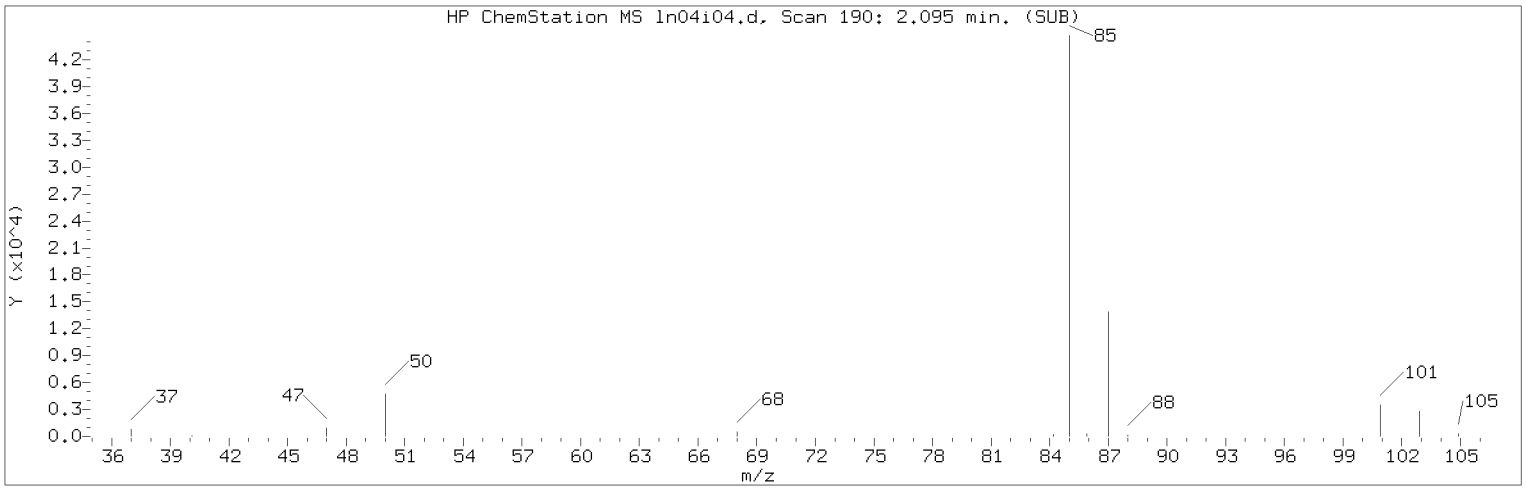
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

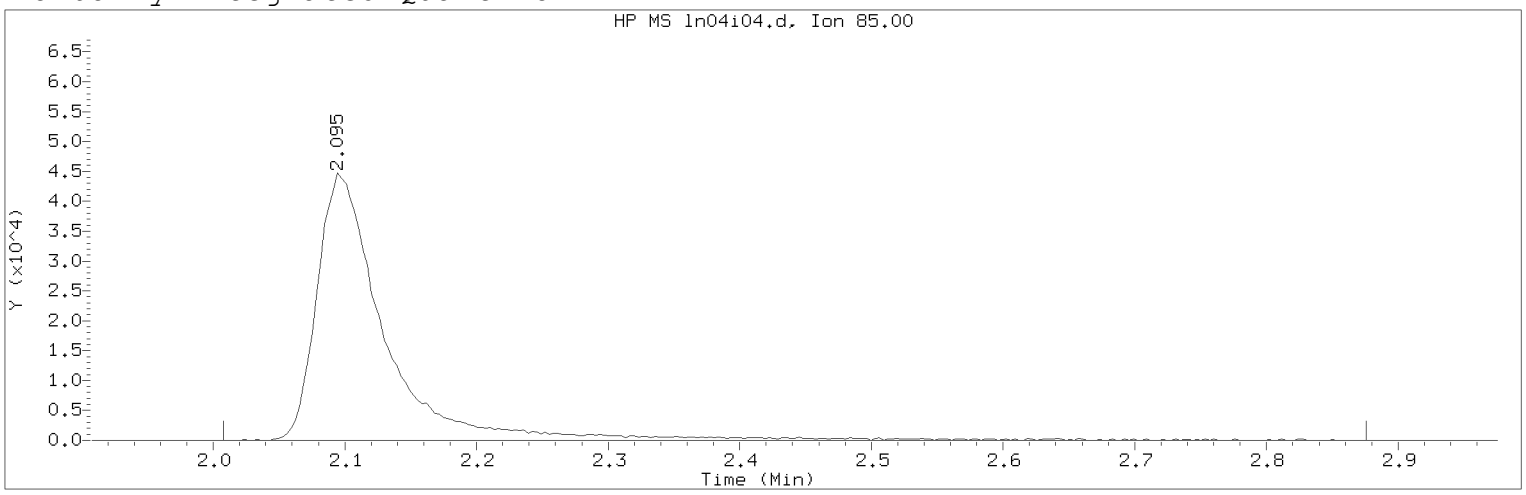
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	529814	20.883
135) Benzyl Chloride	(4)	13.319	91	386244	20.108
136) 1,3-Diethylbenzene	(4)	13.371	119	333696	21.134
141) Diethylbenzene (total)	(4)		100	968804	63.411
137) 1,4-Diethylbenzene	(4)	13.445	119	354305	21.180
139) n-Butylbenzene	(4)	13.464	92	270790	21.829
138) 1,2-Dichlorobenzene	(4)	13.502	146	274435	21.146
140) 1,2-Diethylbenzene	(4)	13.518	119	280803	21.097
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	40583	20.608
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	215108	21.573
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	206700	21.320
147) Hexachlorobutadiene	(4)	14.666	225	101324	22.135
148) Naphthalene	(4)	14.772	128	665482	21.351
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	203518	21.573
150) 2-Methylnaphthalene	(4)	15.563	142	423056	22.042

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

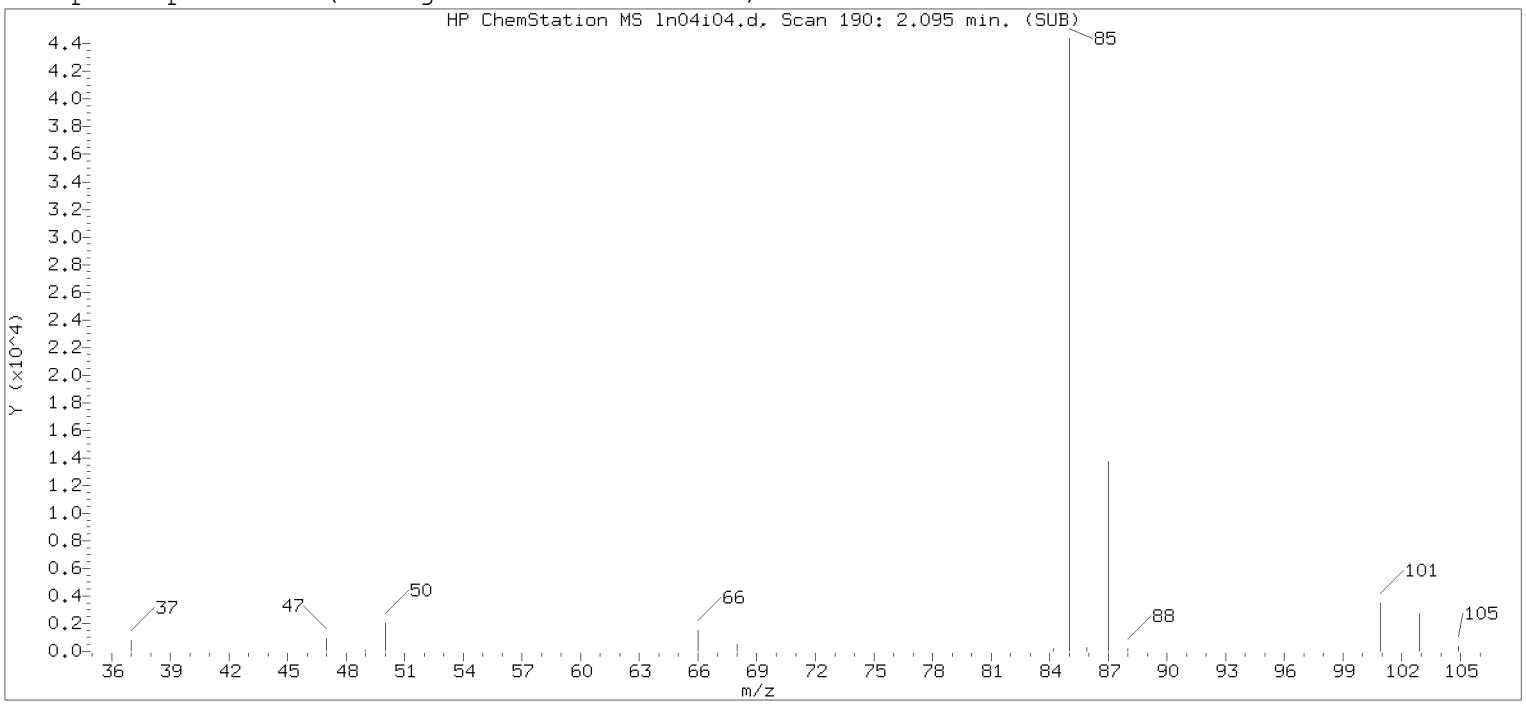
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.095
Quant Ion : 85.00
Area (flag) : 161054M
On-Column Amount (ng) : 20.4603
Integration start scan : 162 Integration stop scan: 432
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

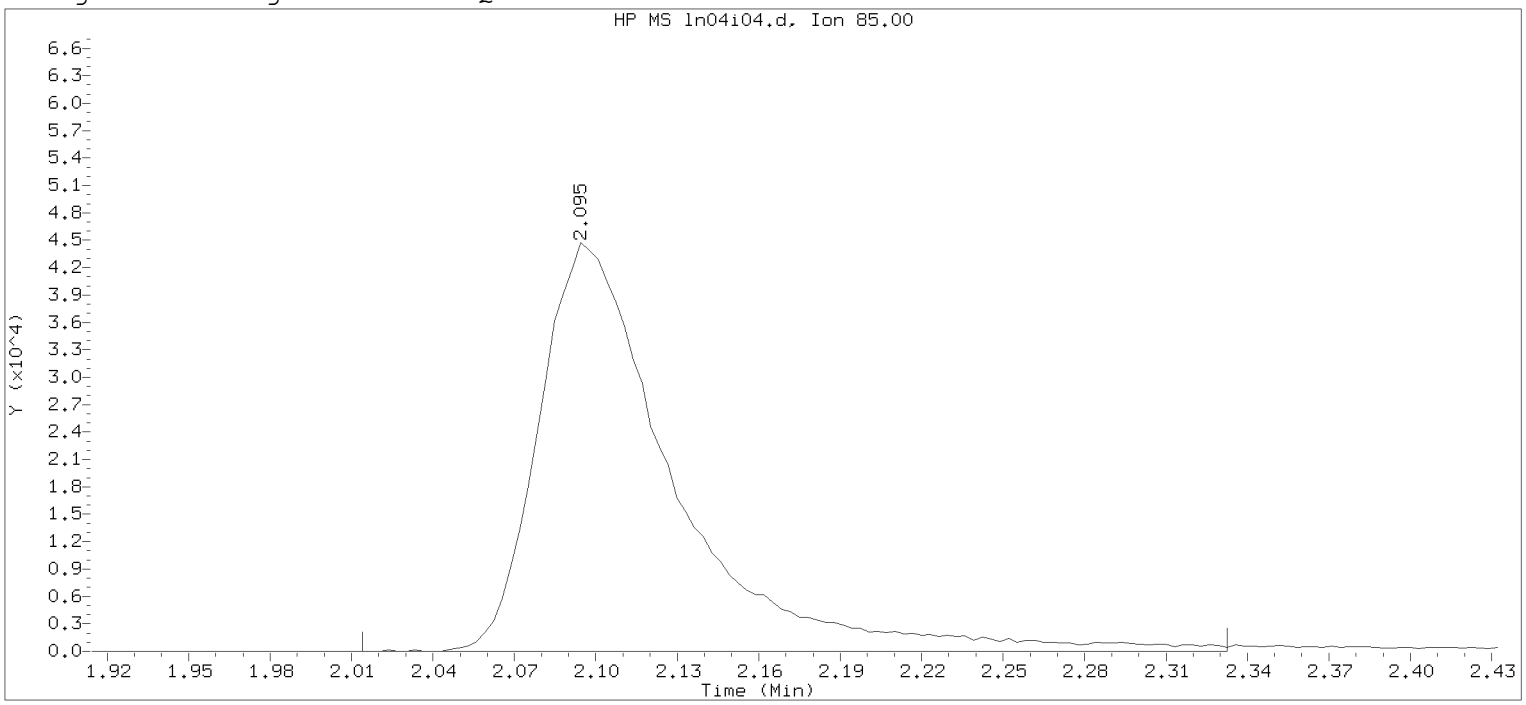
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

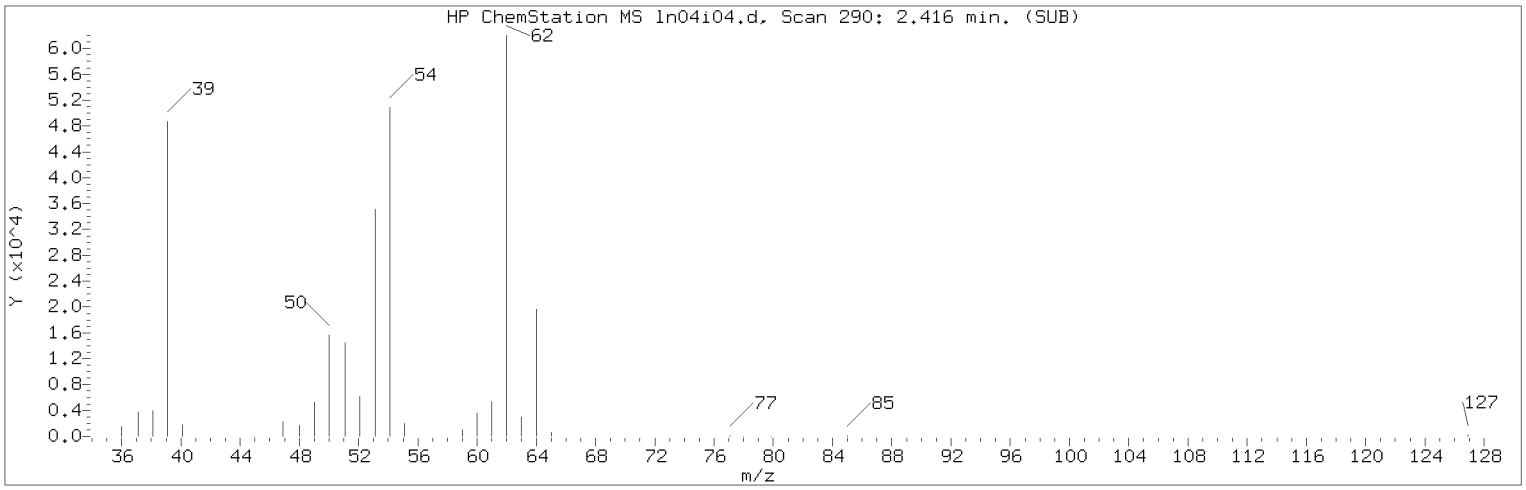
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

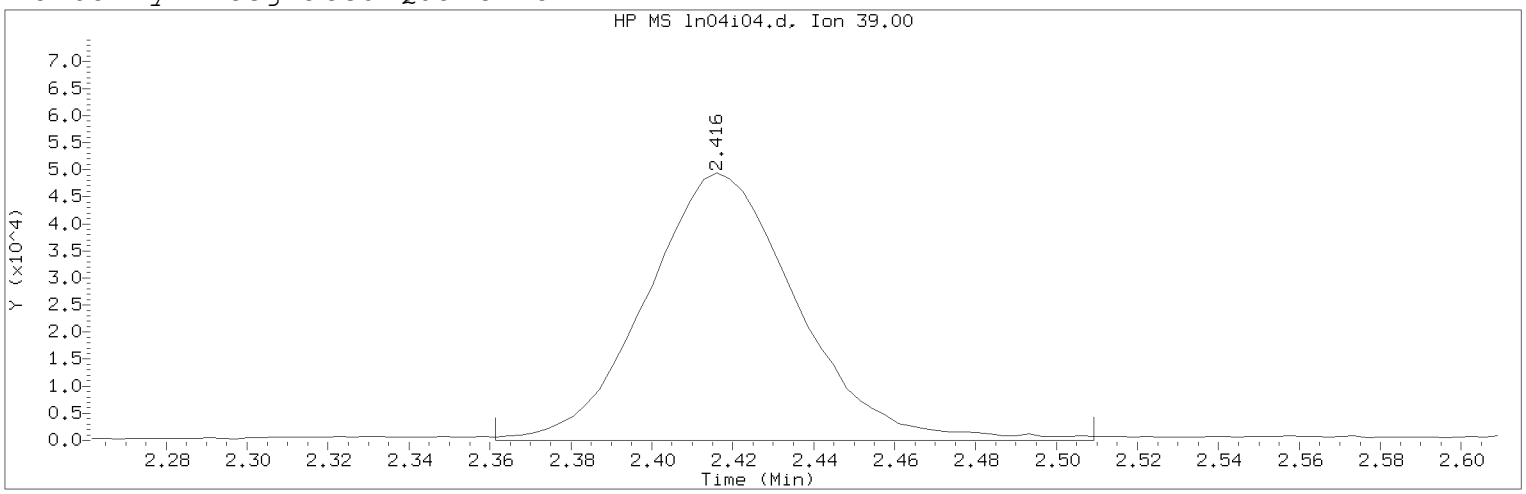
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.095
Quant Ion : 85.00
Area : 154796
On-column Amount (ng) : 18.9193
Integration start scan : 164 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

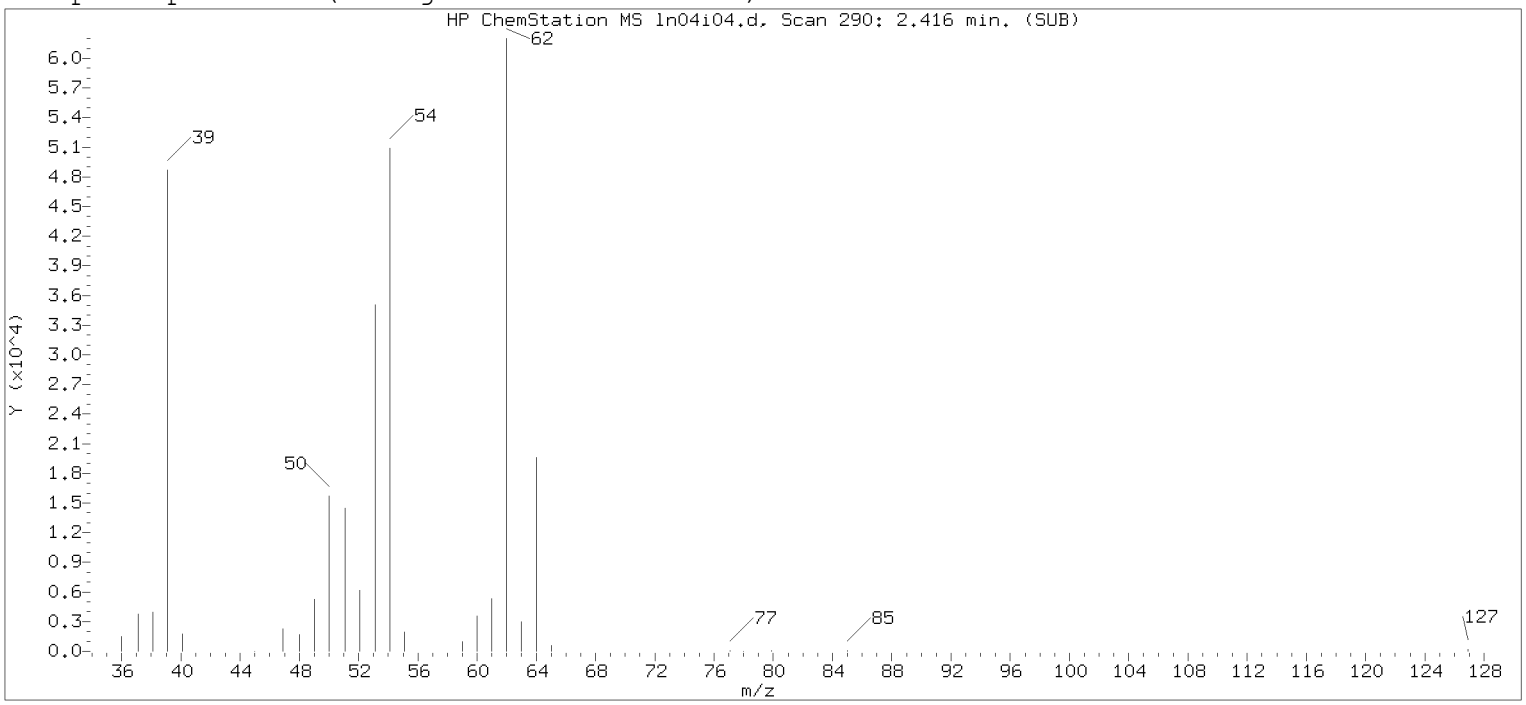
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 290
Retention Time (minutes): 2.416
Quant Ion : 39.00
Area (flag) : 127826M
On-Column Amount (ng) : 20.2925
Integration start scan : 272 Integration stop scan: 318
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

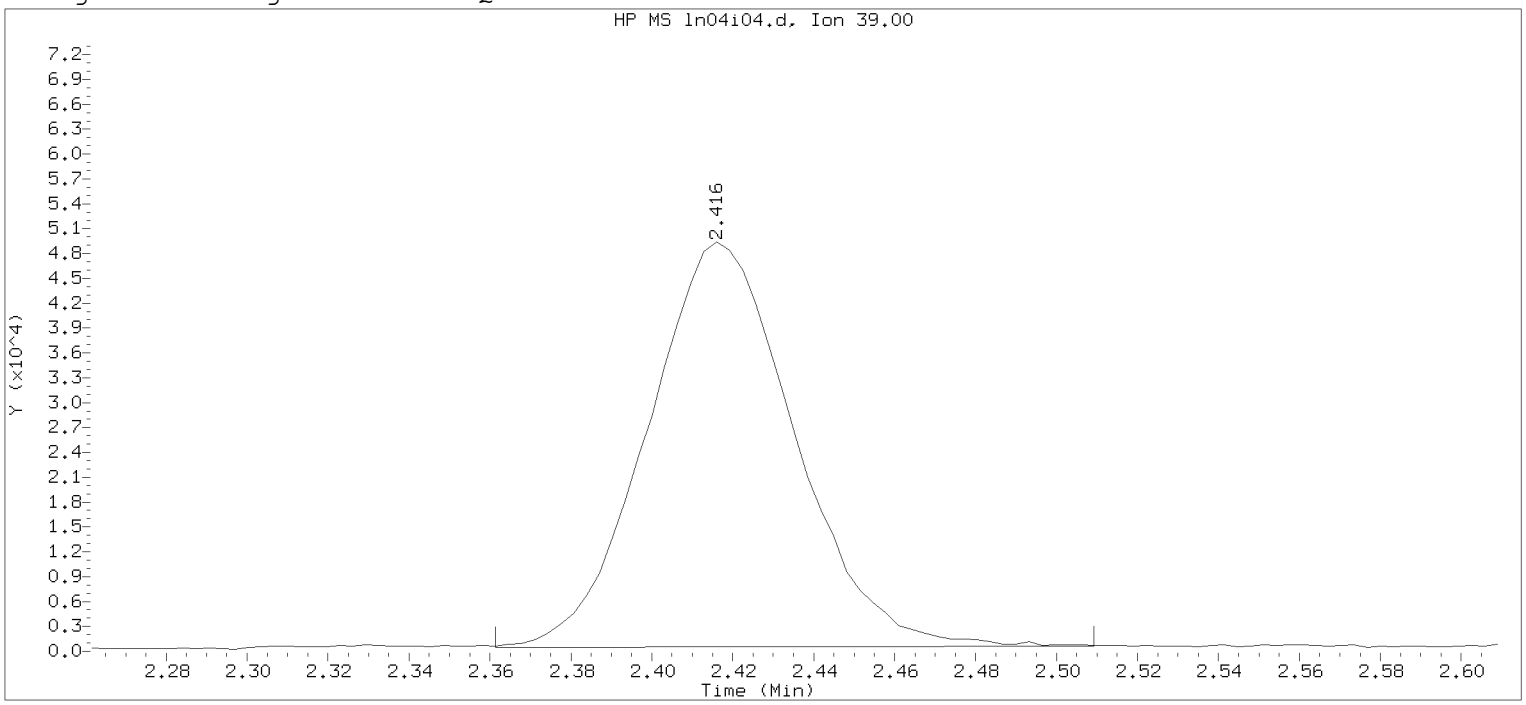
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

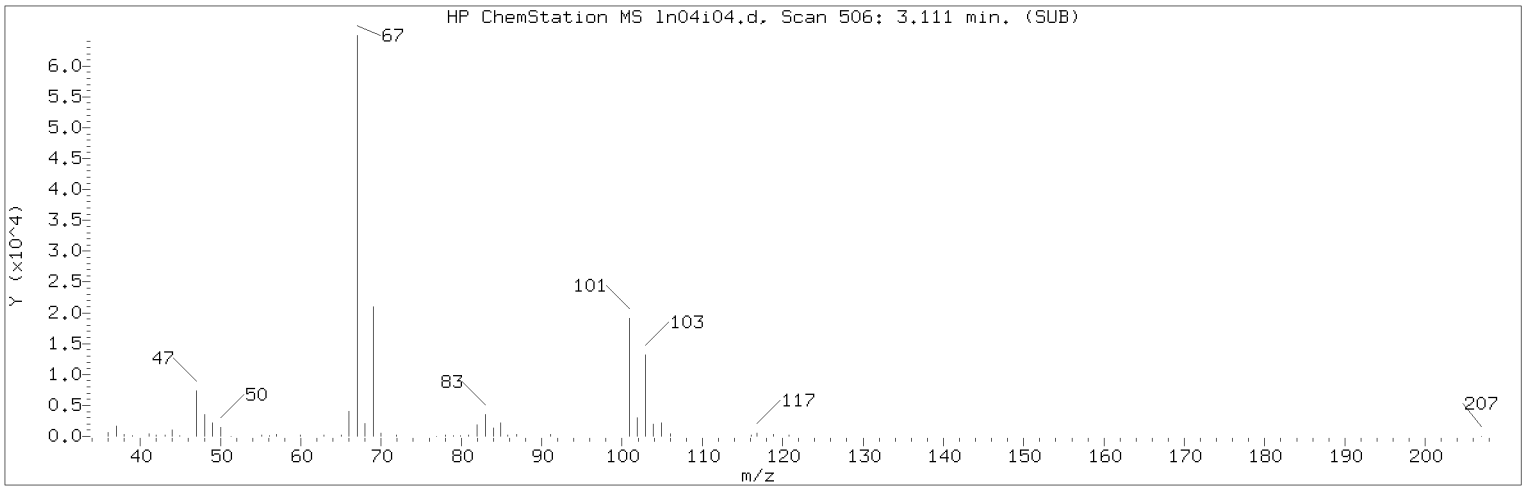
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

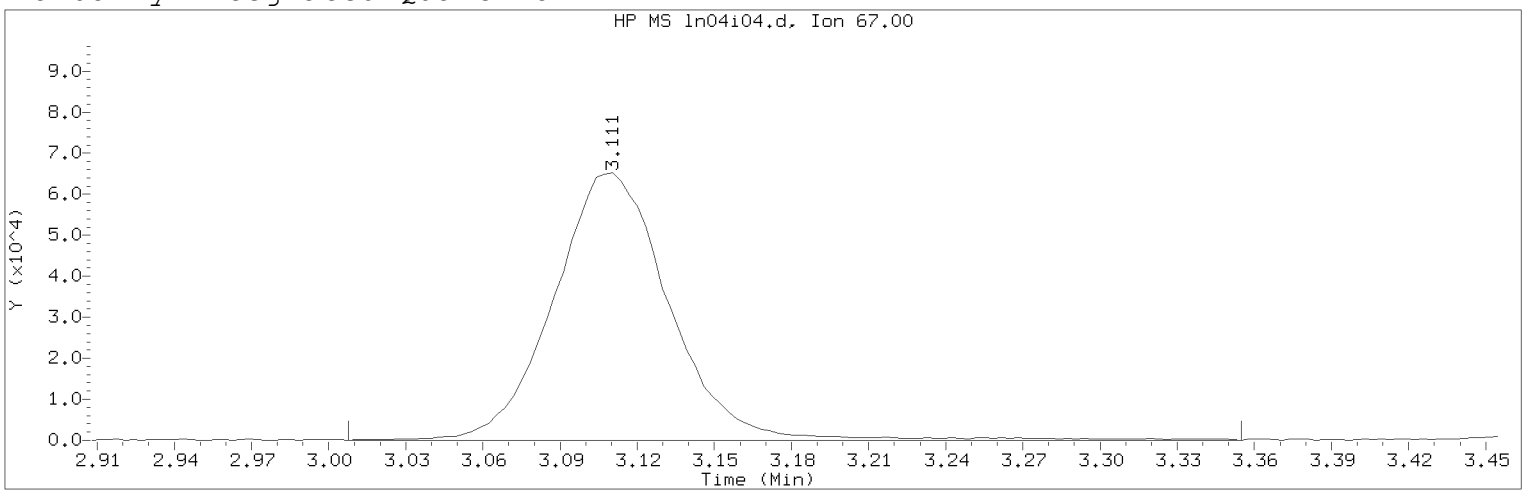
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 290
Retention Time (minutes): 2.416
Quant Ion : 39.00
Area : 122801
On-column Amount (ng) : 20.5539
Integration start scan : 272 Integration stop scan: 318
Y at integration start : 477 Y at integration end: 628

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

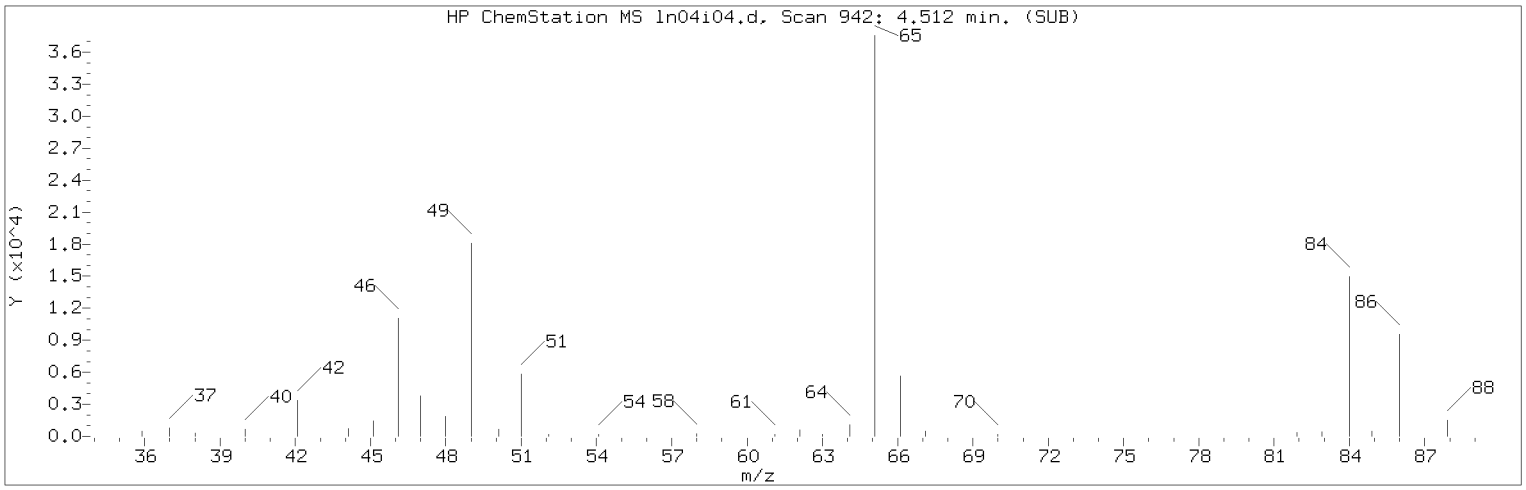
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 506
Retention Time (minutes): 3.111
Quant Ion : 67.00
Area (flag) : 205276M
On-Column Amount (ng) : 20.8381
Integration start scan : 473 Integration stop scan: 581
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

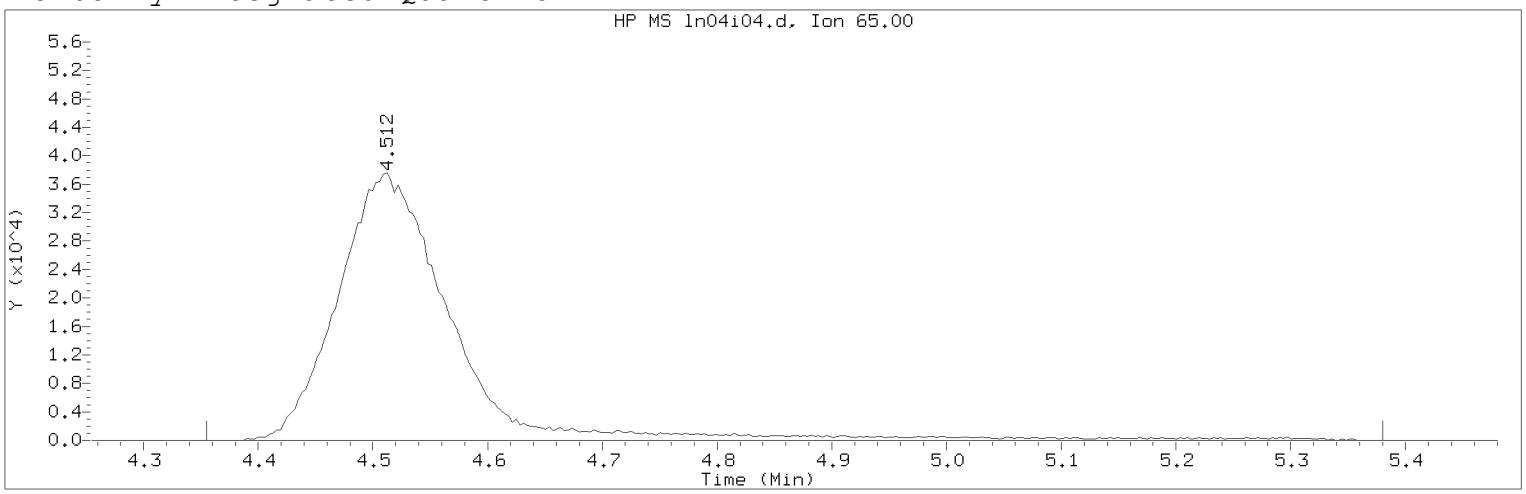
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

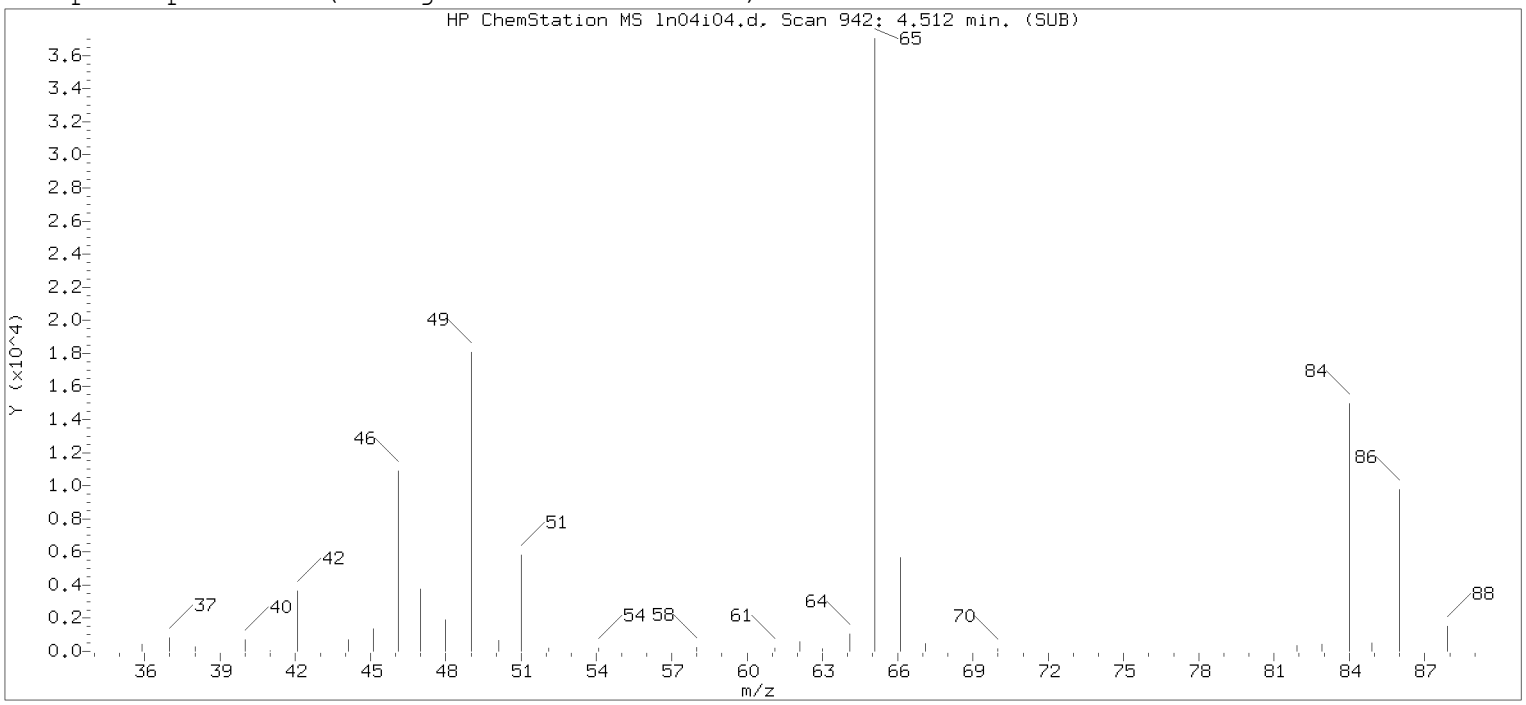
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area (flag) : 258058M
On-Column Amount (ng) : 250.0000
Integration start scan : 892 Integration stop scan: 1211
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

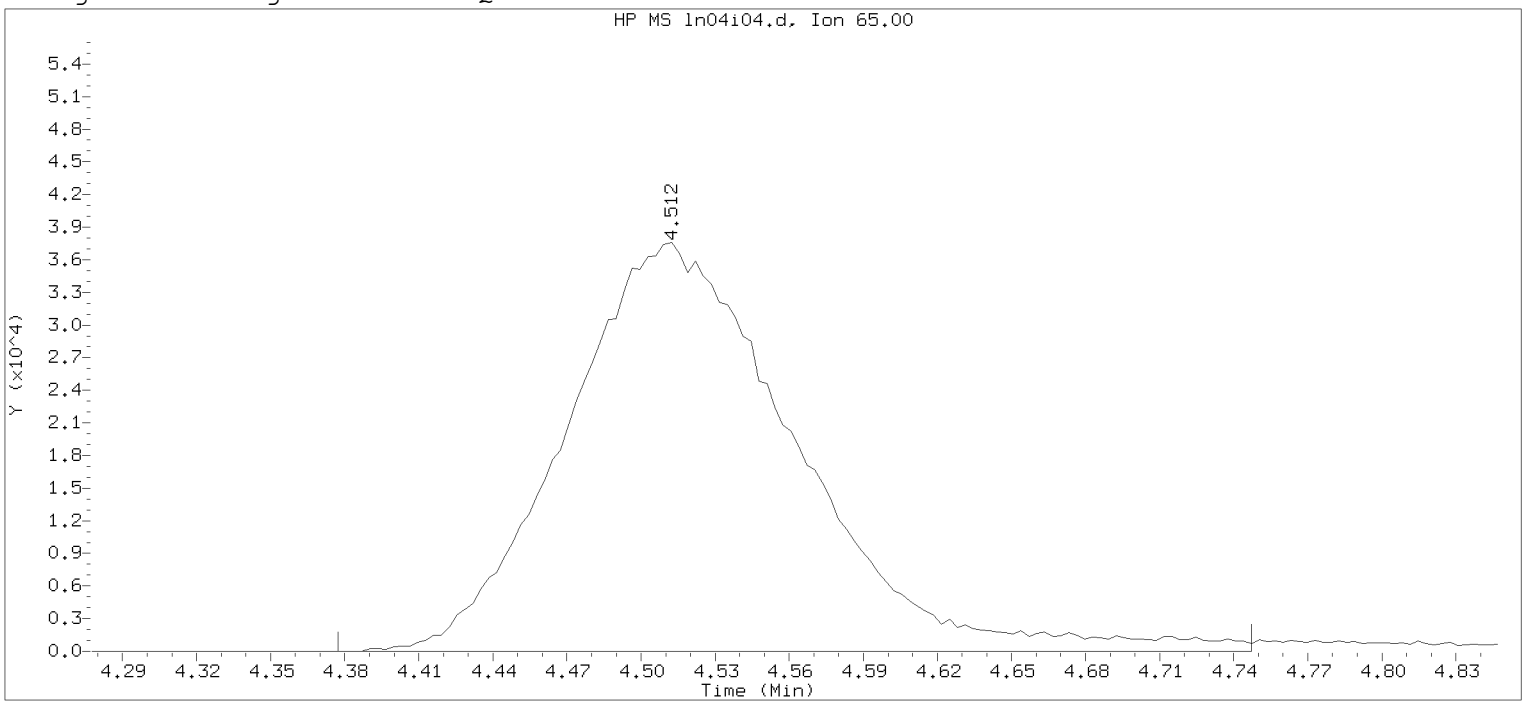
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

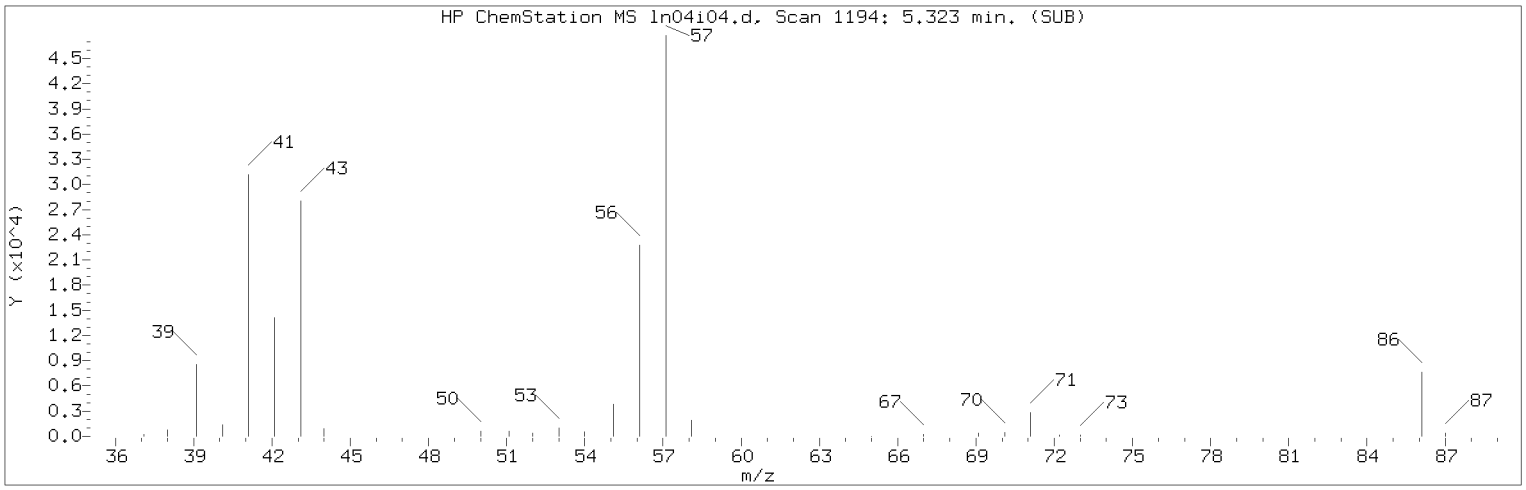
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

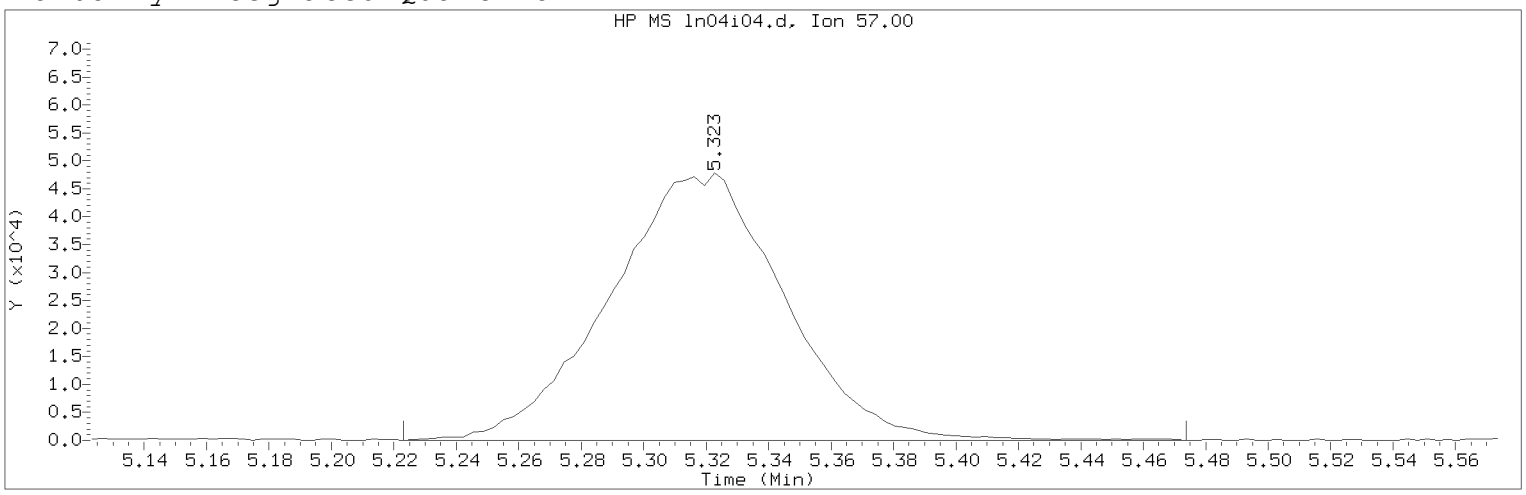
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area : 242565
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

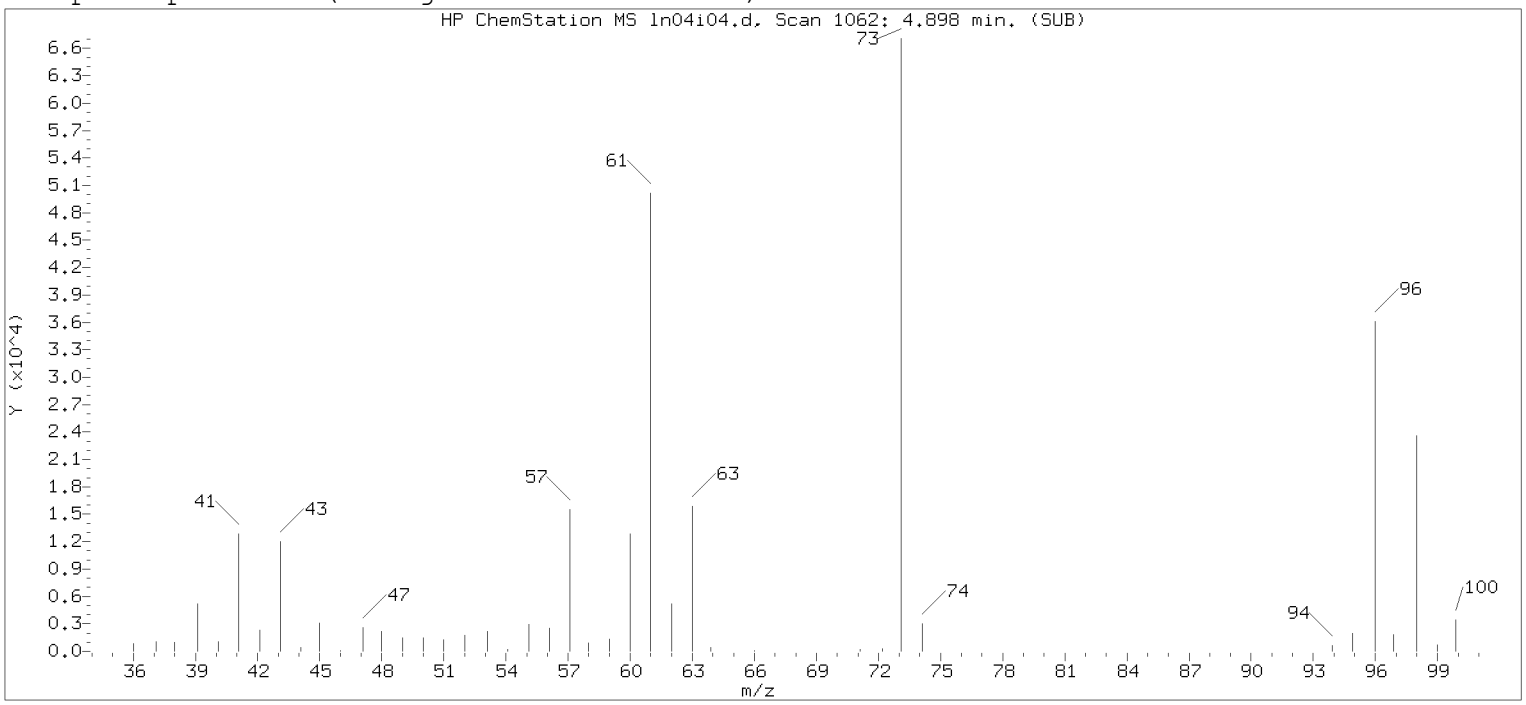
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1194
Retention Time (minutes): 5.323
Quant Ion : 57.00
Area (flag) : 185314M
On-Column Amount (ng) : 21.5188
Integration start scan : 1162 Integration stop scan: 1240
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

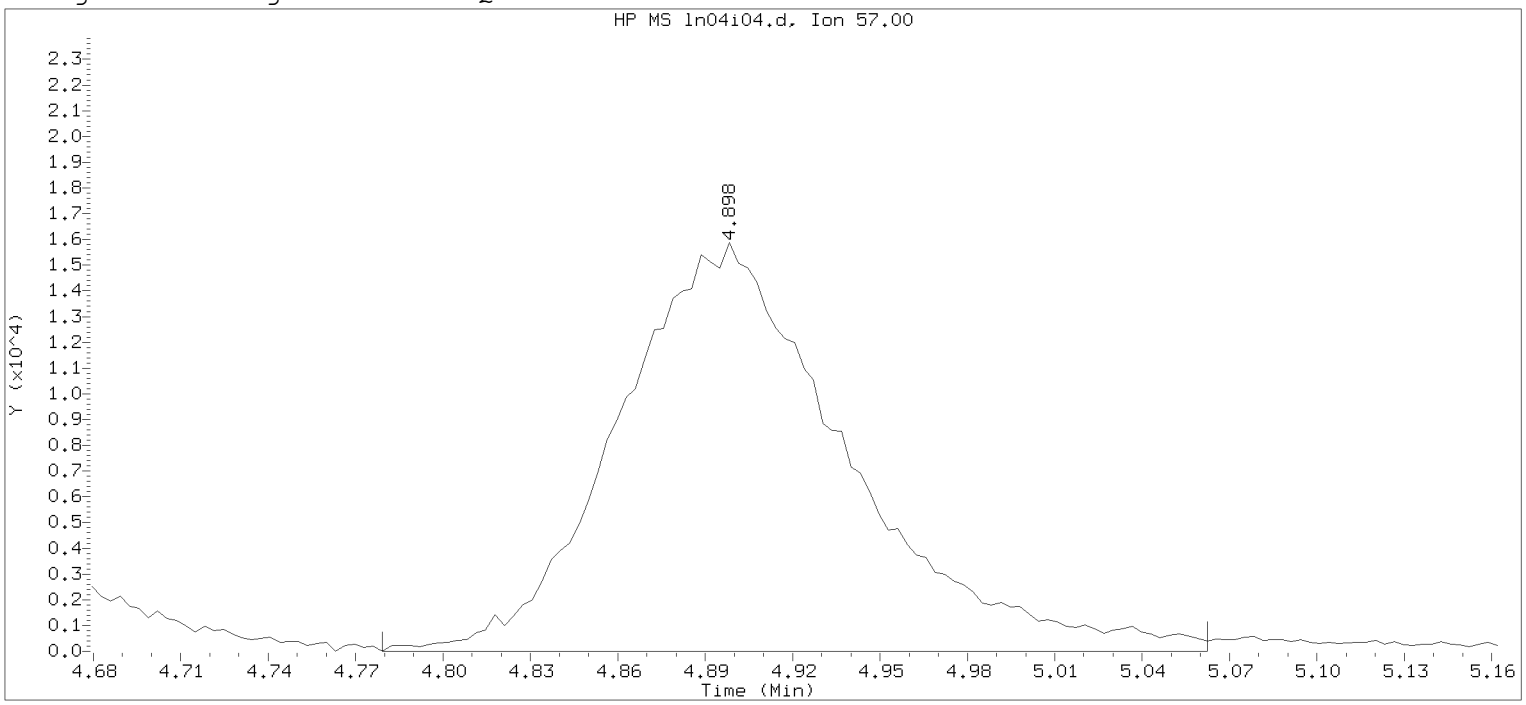
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

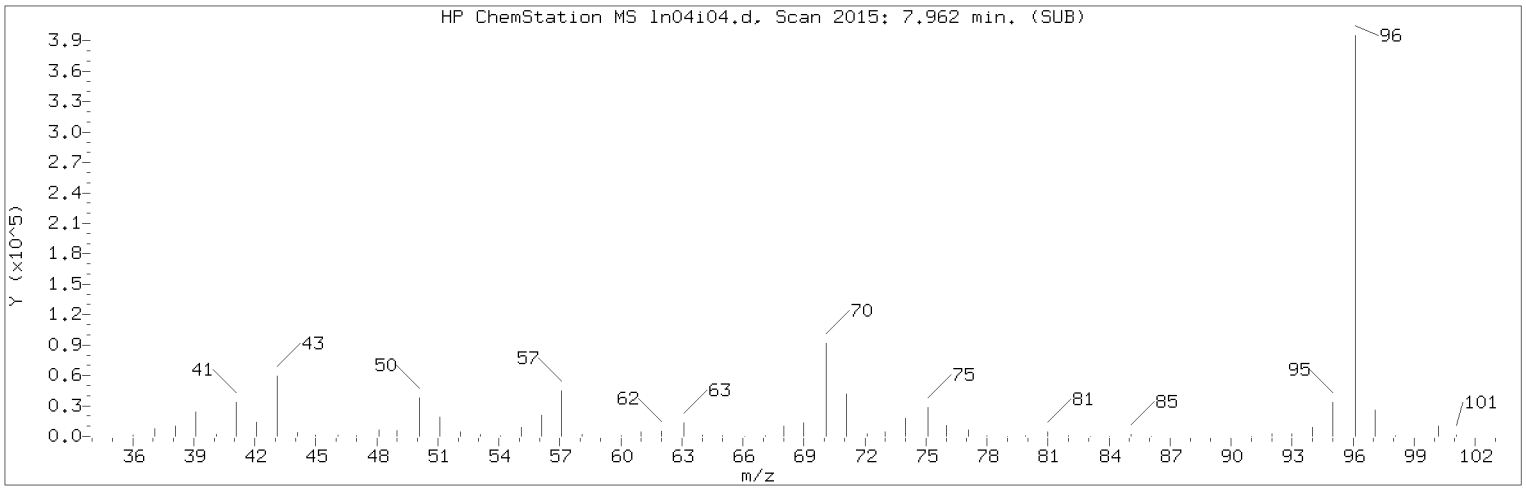
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

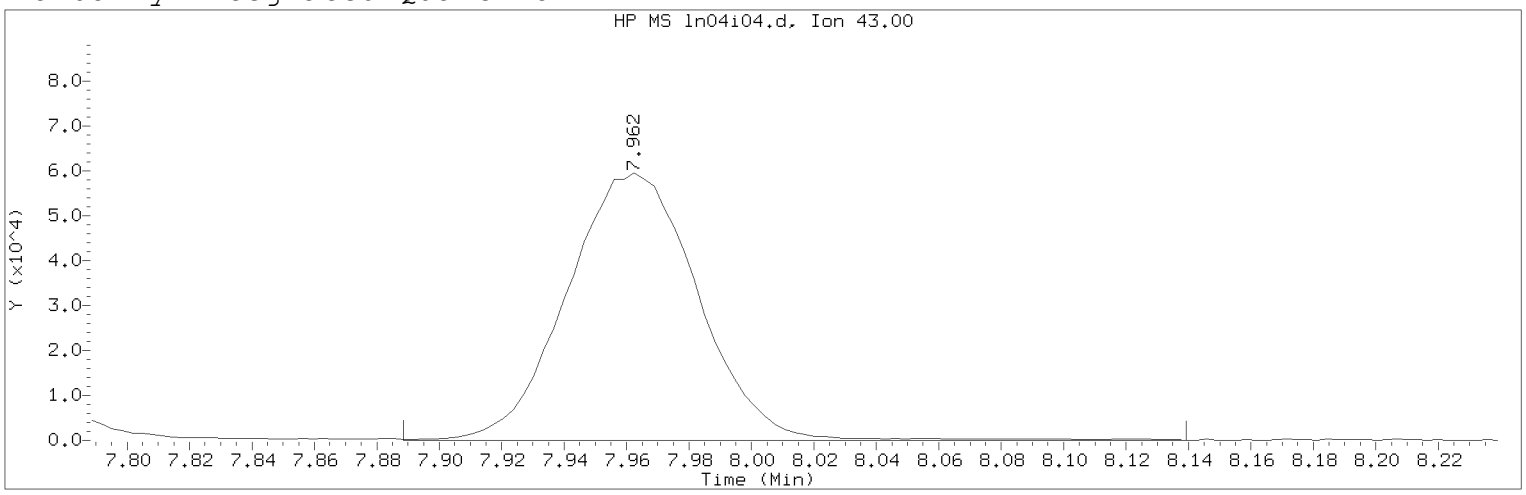
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1062		
Retention Time (minutes)	: 4.898		
Quant Ion	: 57.00		
Area	: 86496		
On-column Amount (ng)	: 21.2144		
Integration start scan	: 1024	Integration stop scan:	1112
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

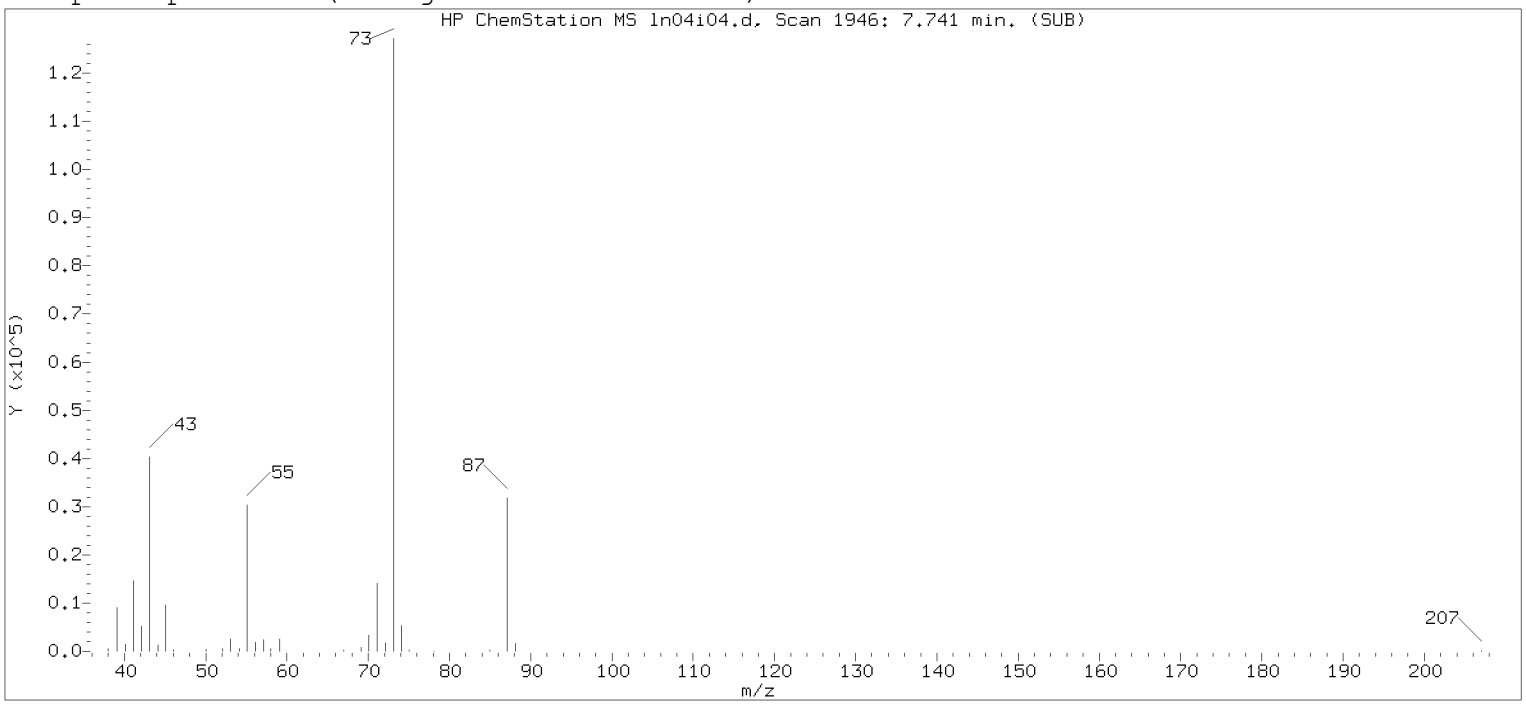
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2015
Retention Time (minutes): 7.962
Quant Ion : 43.00
Area (flag) : 173500MA
On-Column Amount (ng) : 21.5663
Integration start scan : 1991 Integration stop scan: 2069
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

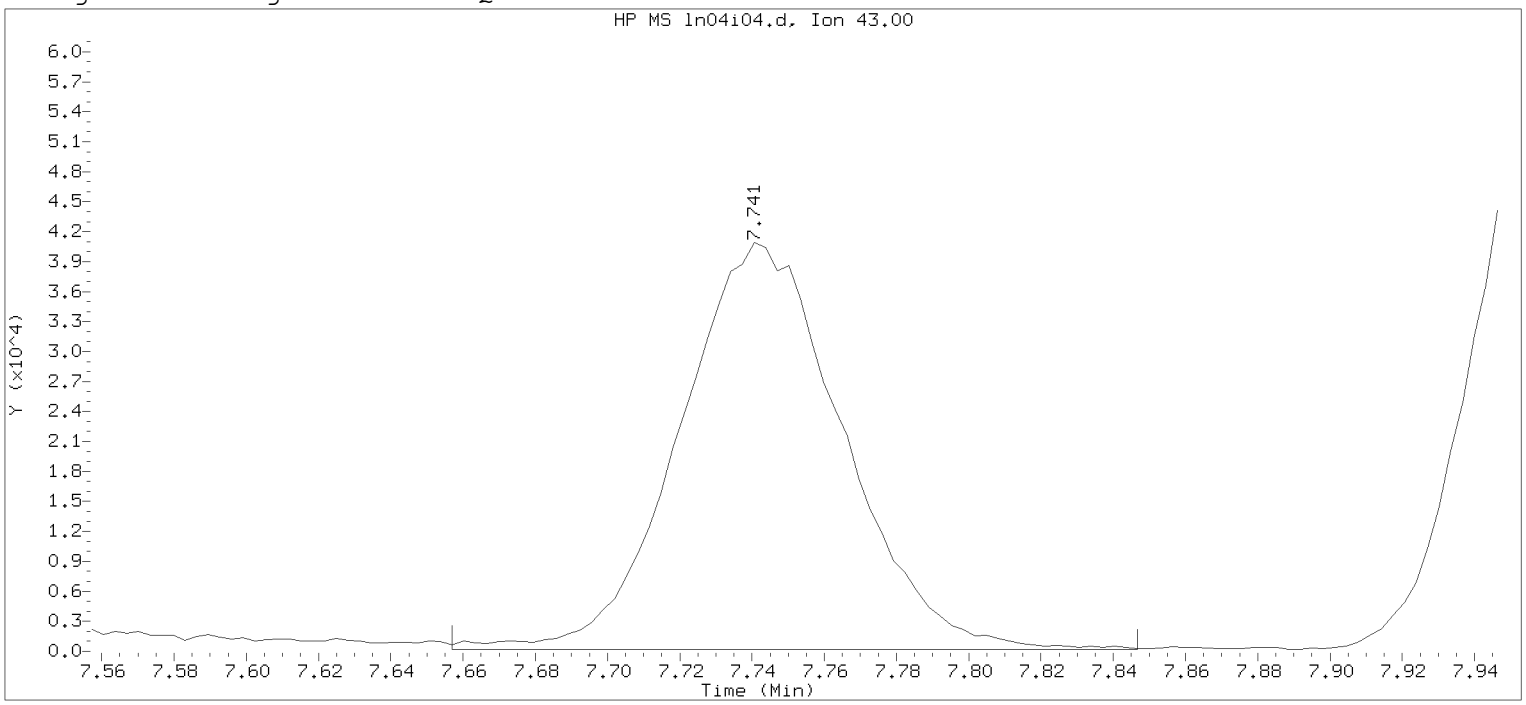
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

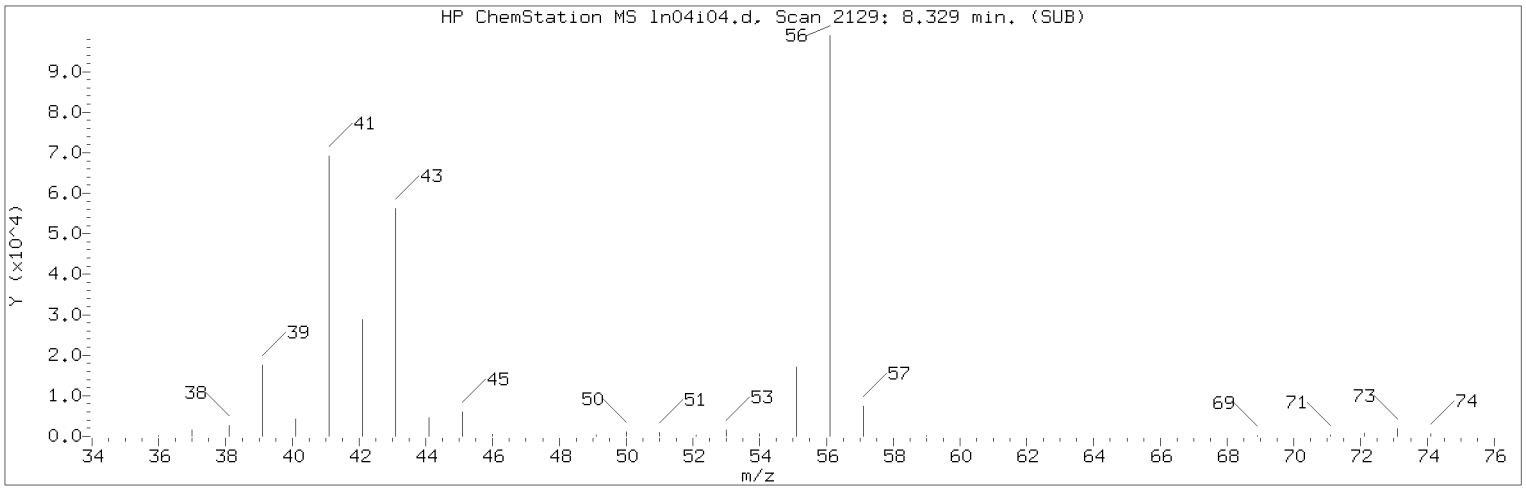
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

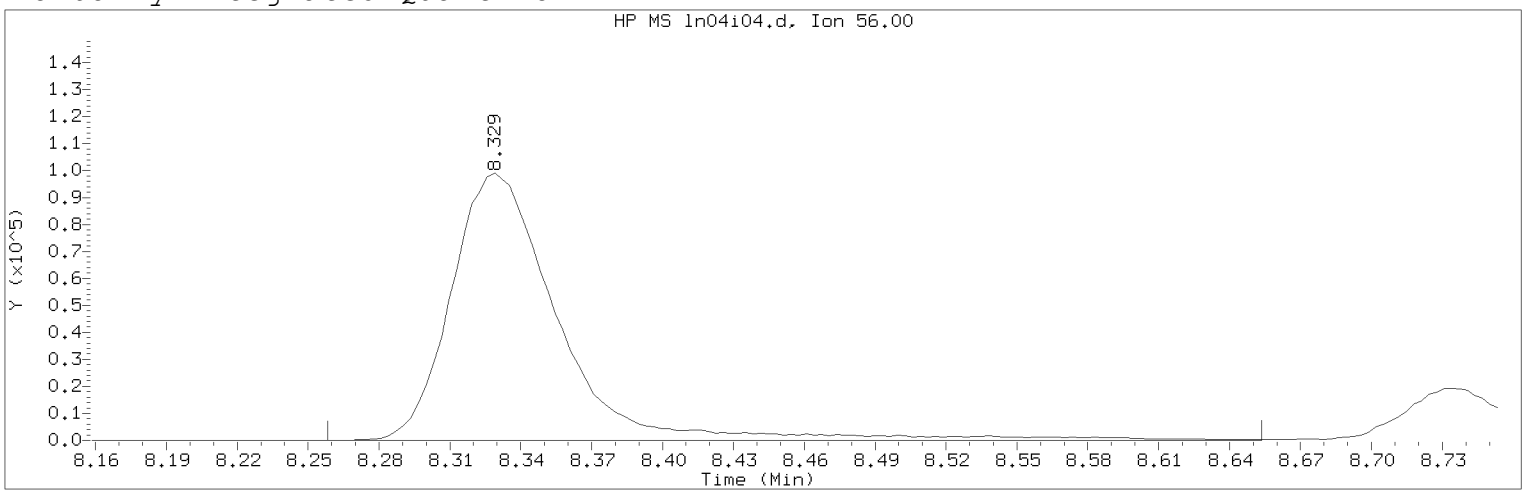
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.741
Quant Ion : 43.00
Area : 127386
On-column Amount (ng) : 21.2604
Integration start scan : 1919 Integration stop scan: 1978
Y at integration start : 203 Y at integration end: 203

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

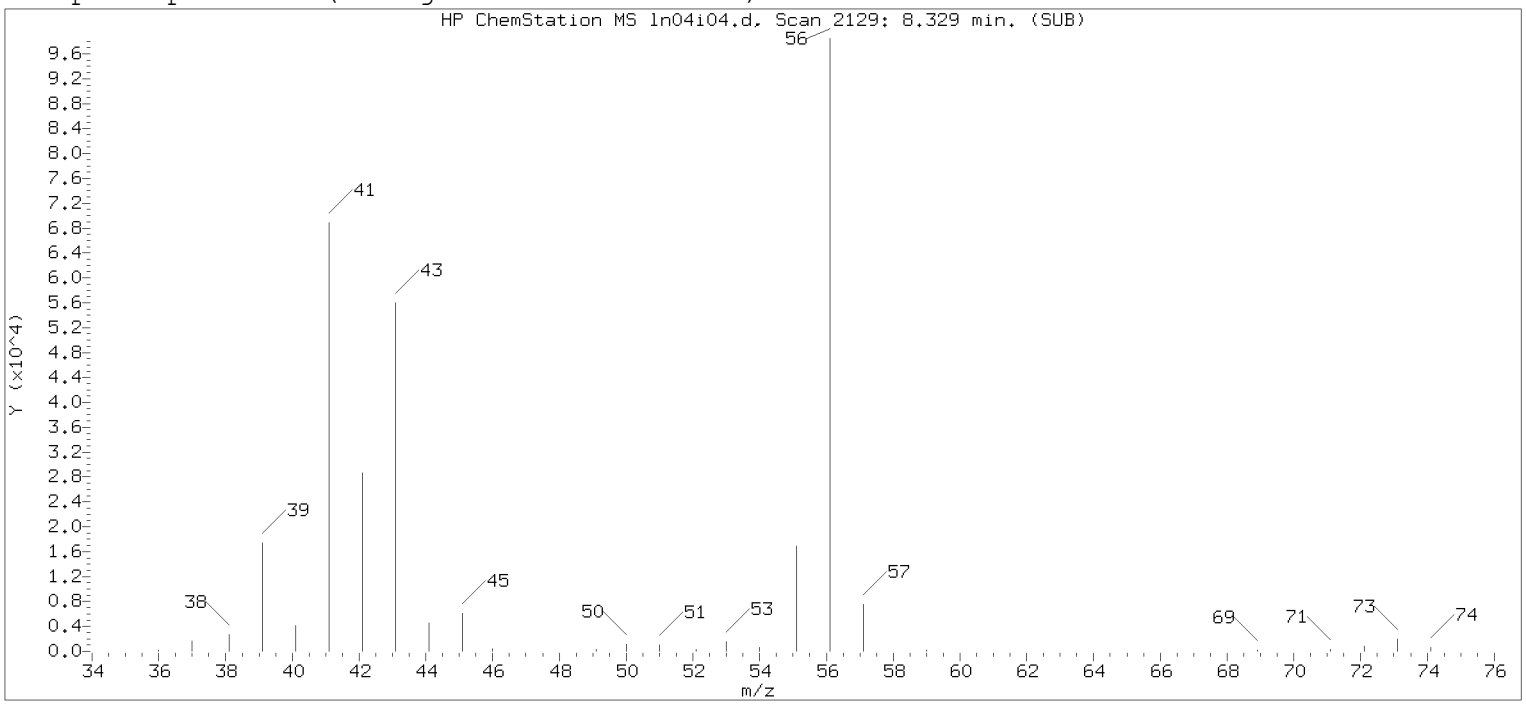
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area (flag) : 312189M
On-Column Amount (ng) : 992.0871
Integration start scan : 2106 Integration stop scan: 2229
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

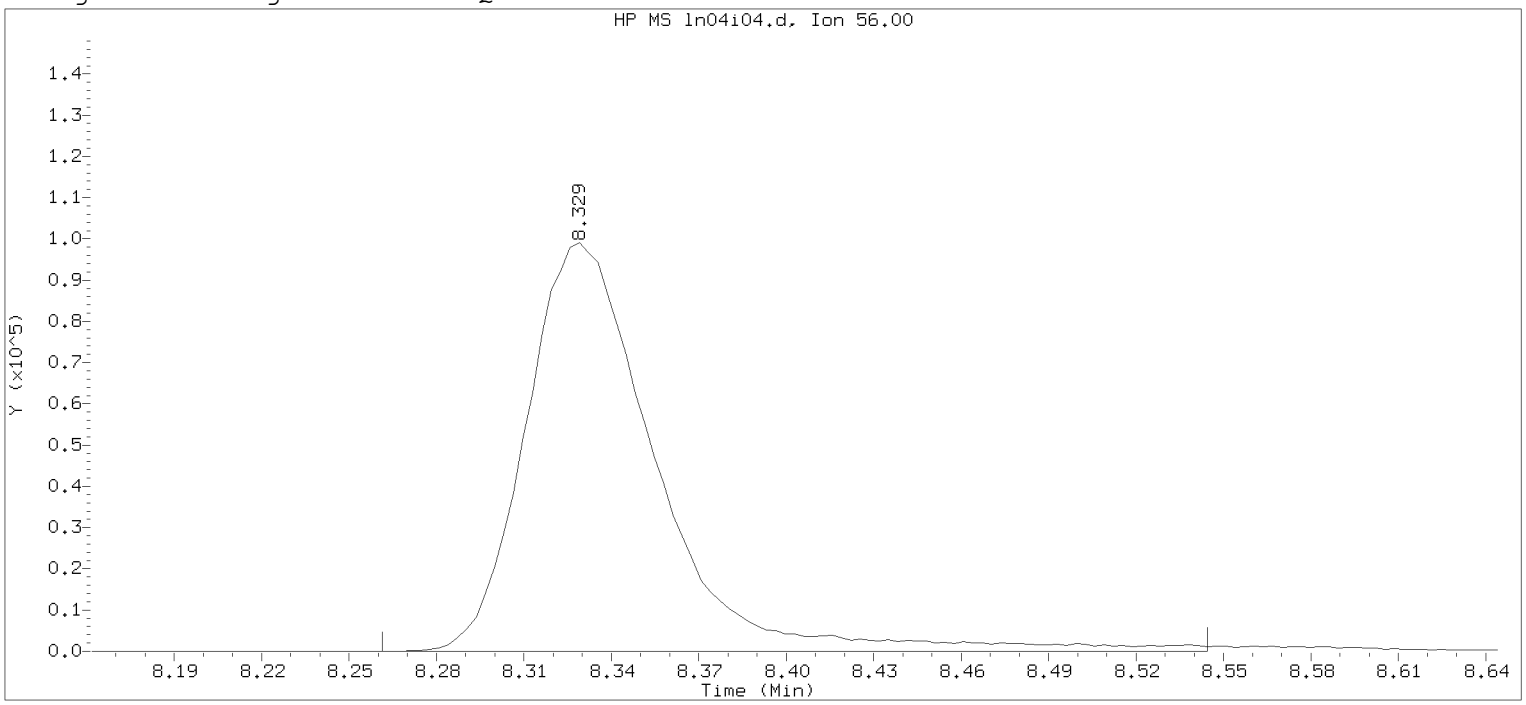
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

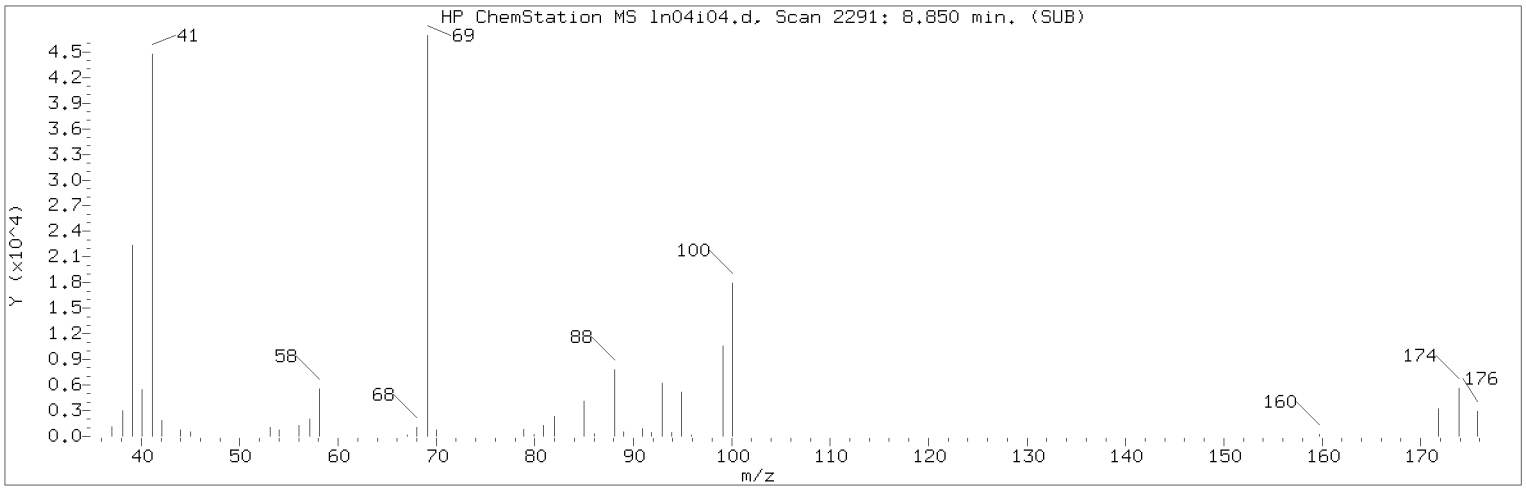
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

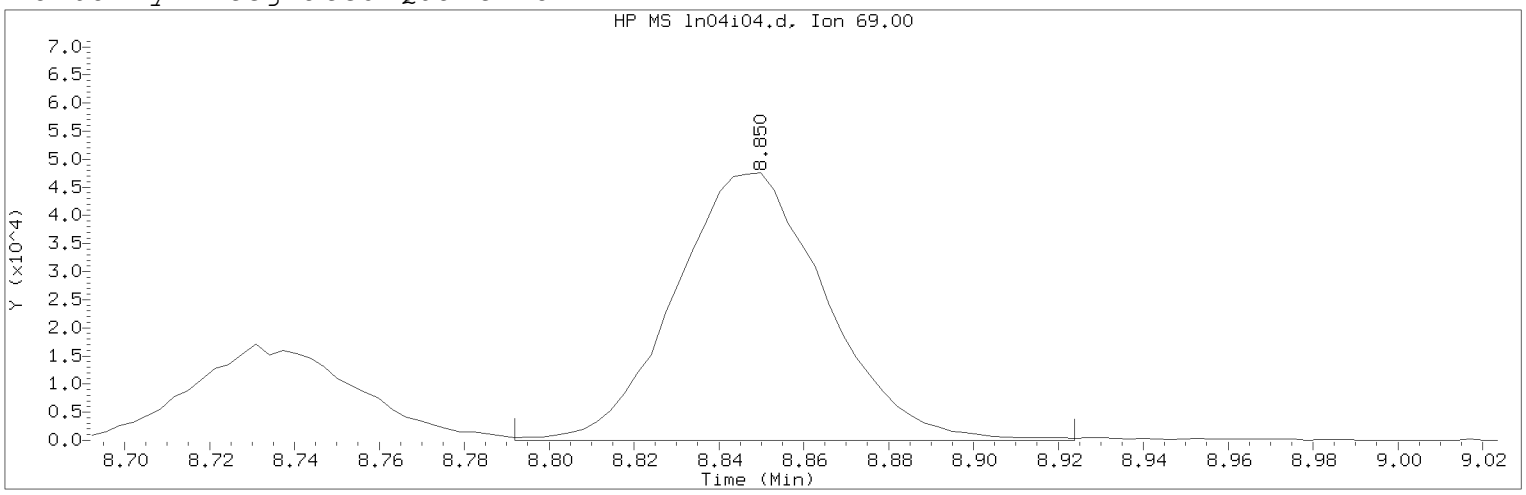
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area : 307443
On-column Amount (ng) : 938.0571
Integration start scan : 2107 Integration stop scan: 2195
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

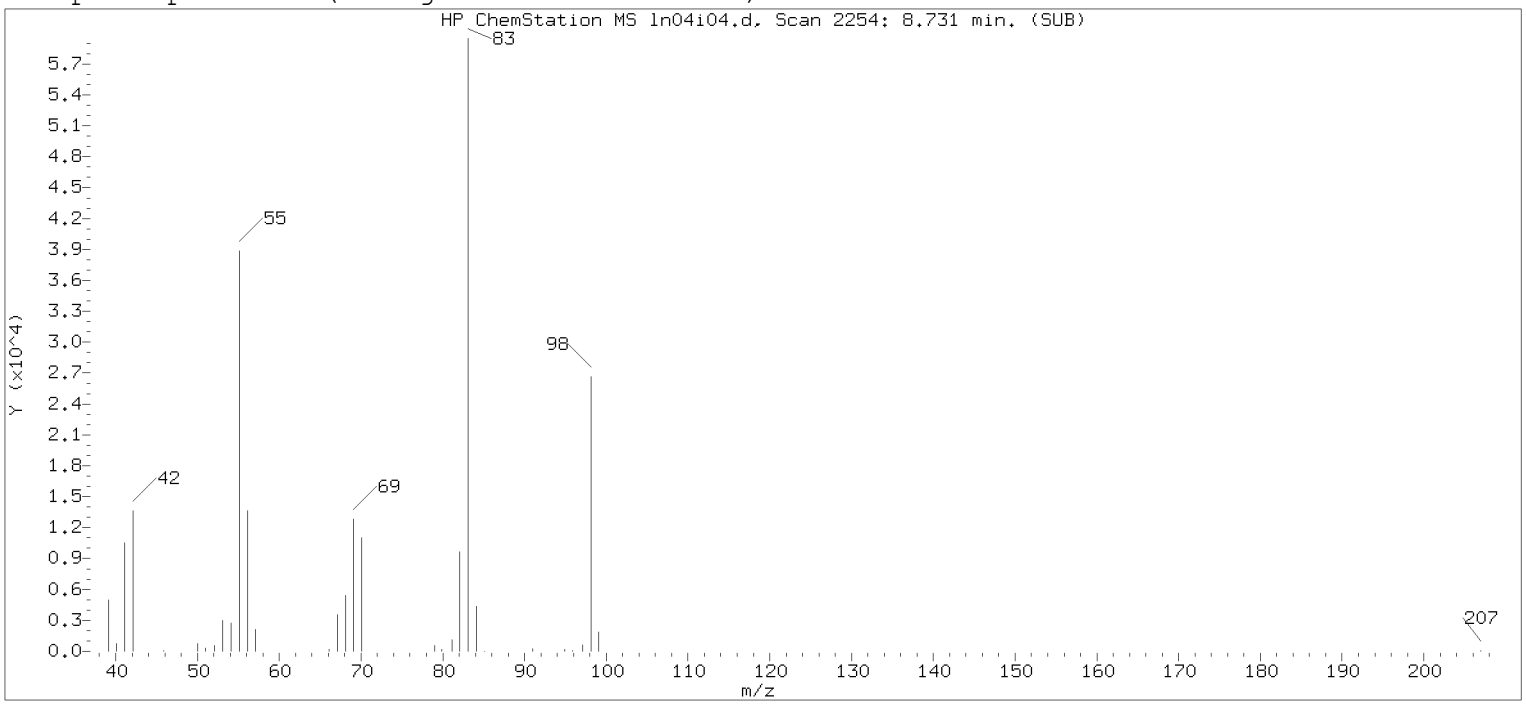
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2291
Retention Time (minutes): 8.850
Quant Ion : 69.00
Area (flag) : 117550A
On-Column Amount (ng) : 20.8506
Integration start scan : 2272 Integration stop scan: 2313
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

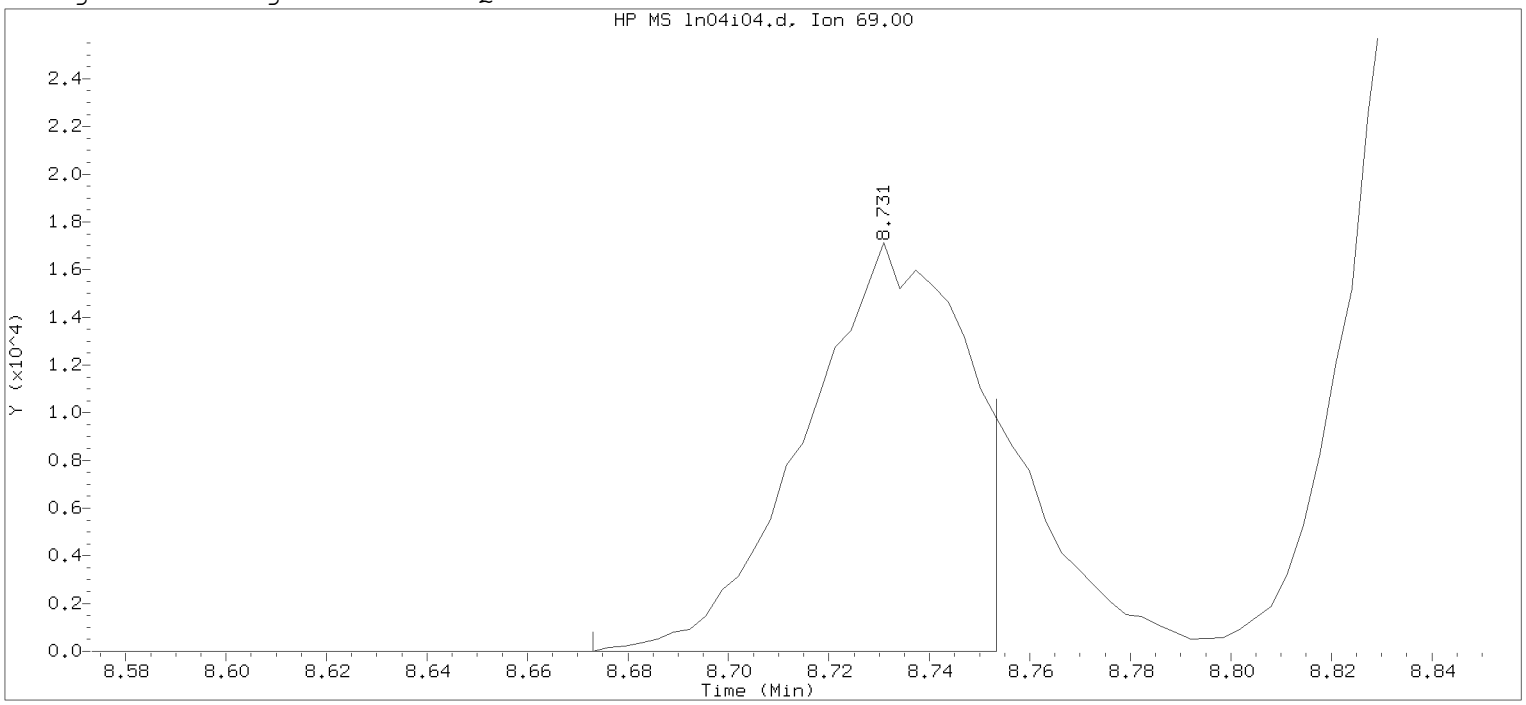
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

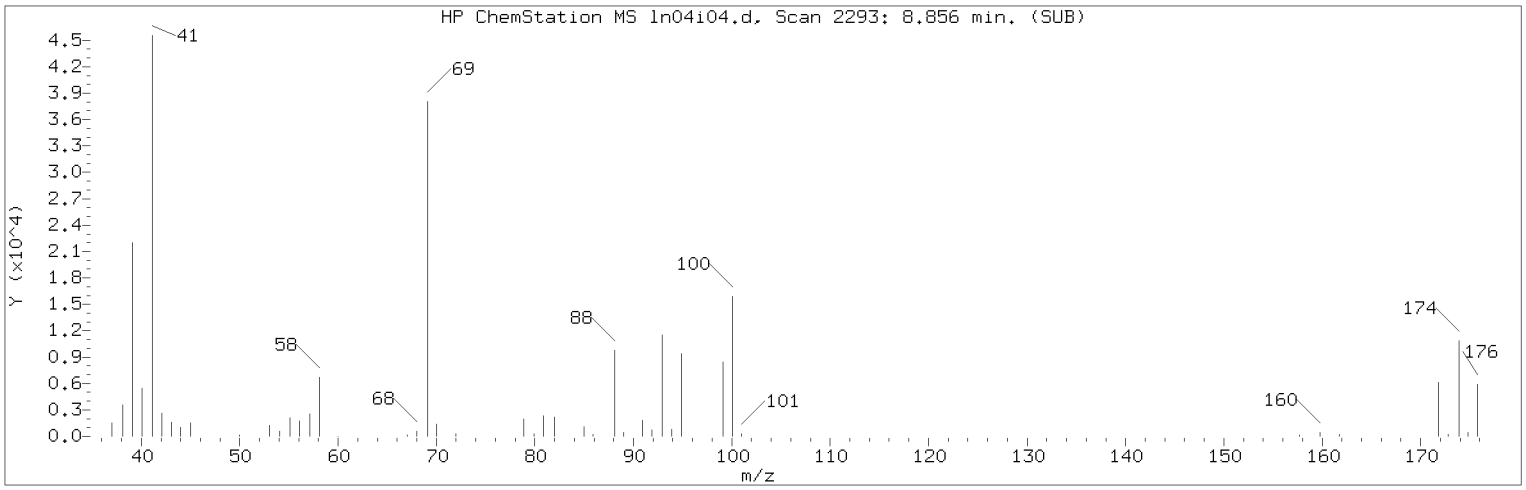
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

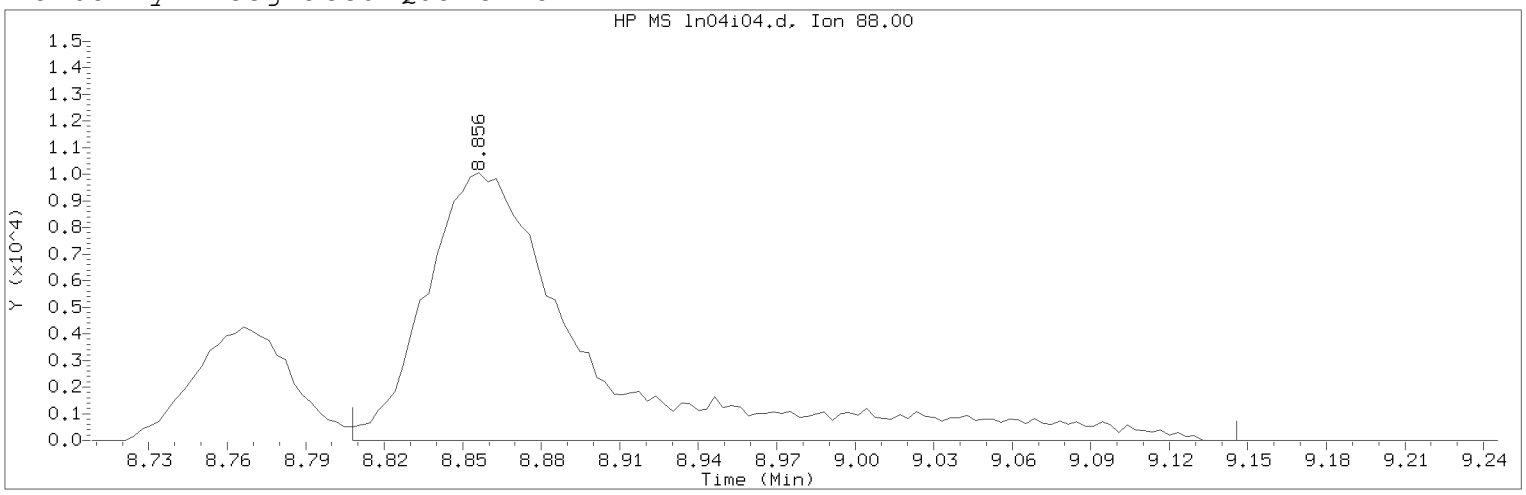
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2254
Retention Time (minutes): 8.731
Quant Ion : 69.00
Area : 37815
On-column Amount (ng) : 16.5923
Integration start scan : 2235 Integration stop scan: 2260
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

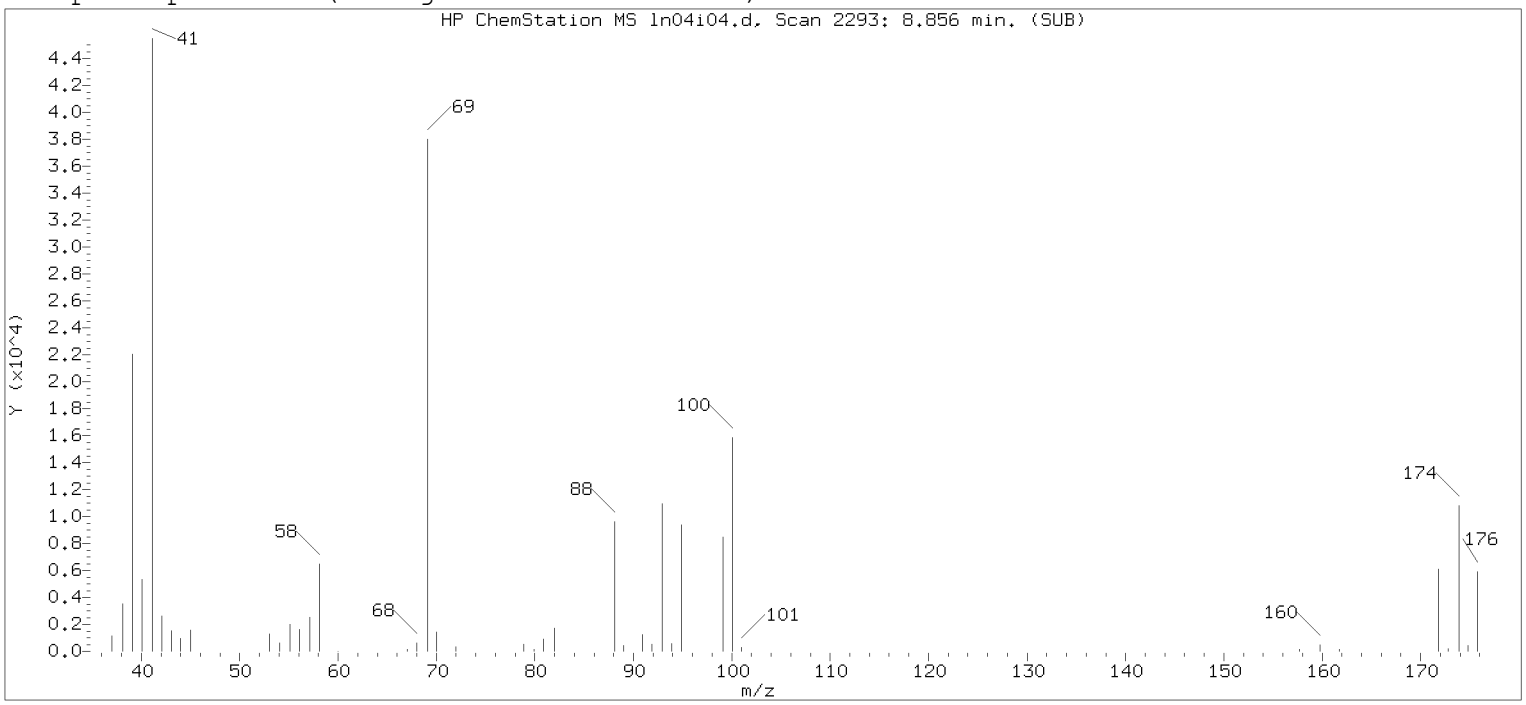
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 44376M
On-Column Amount (ng) : 513.0651
Integration start scan : 2277 Integration stop scan: 2382
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

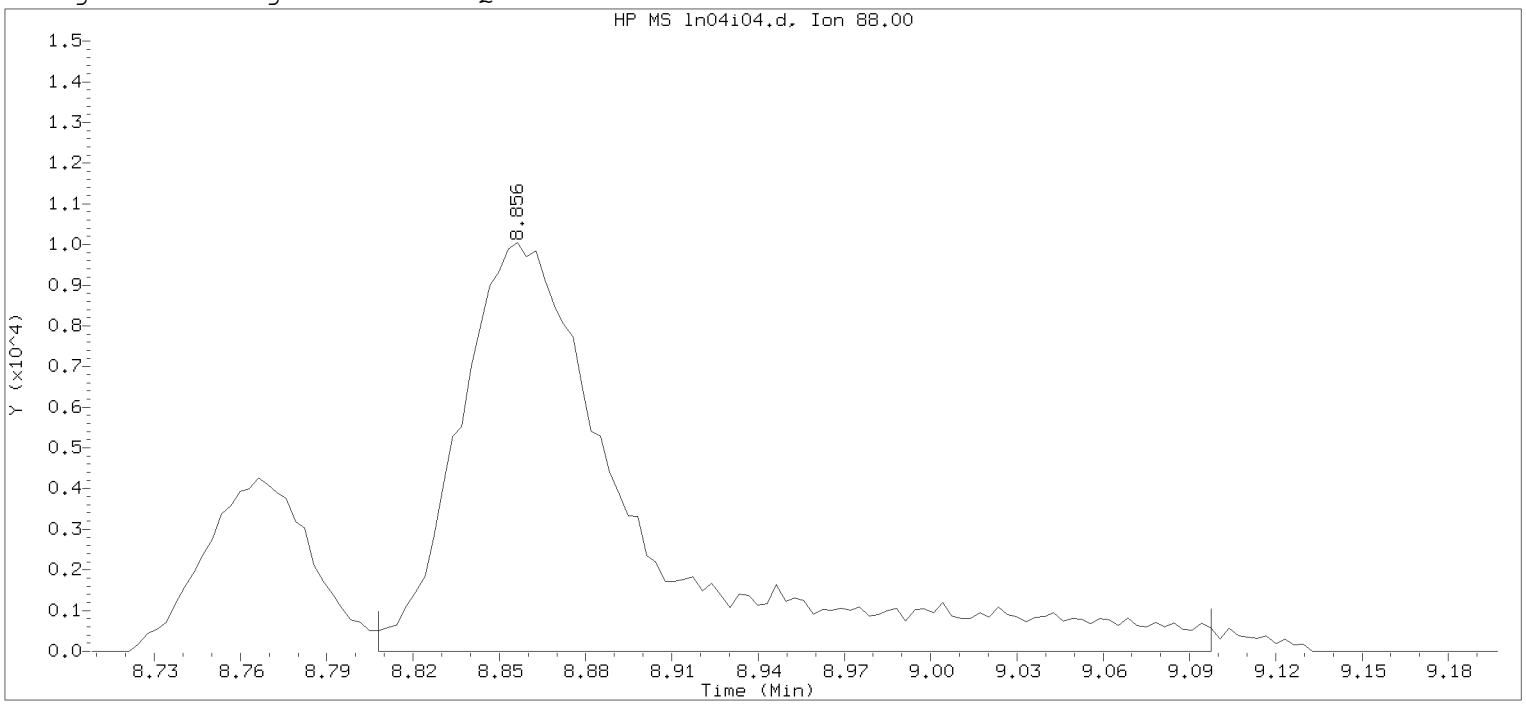
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

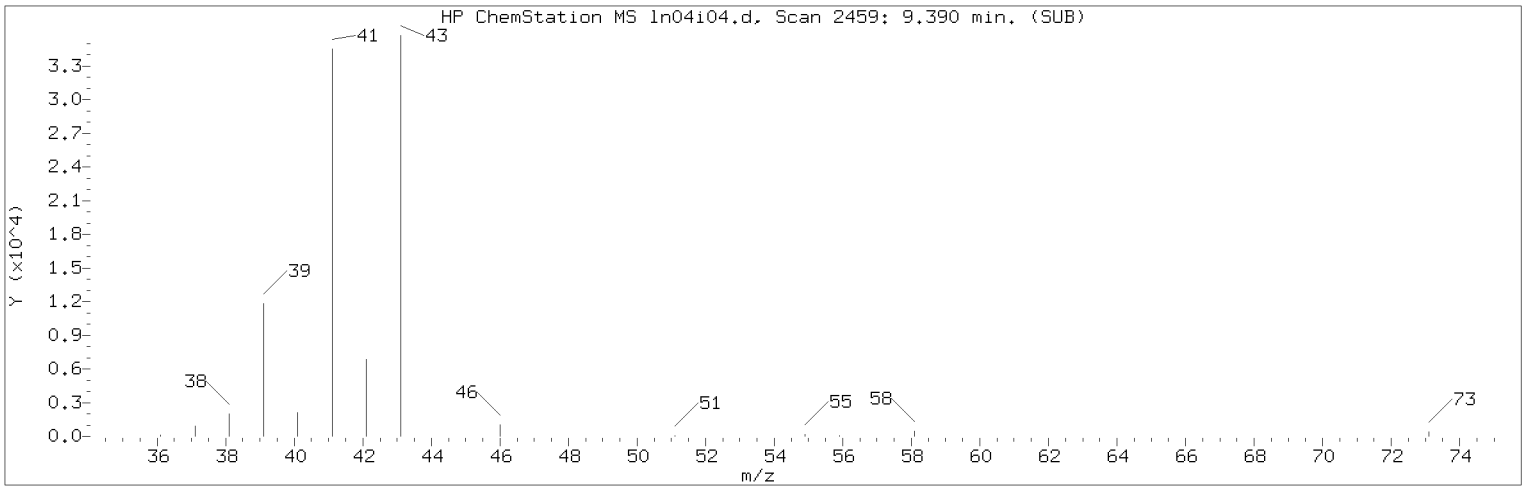
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

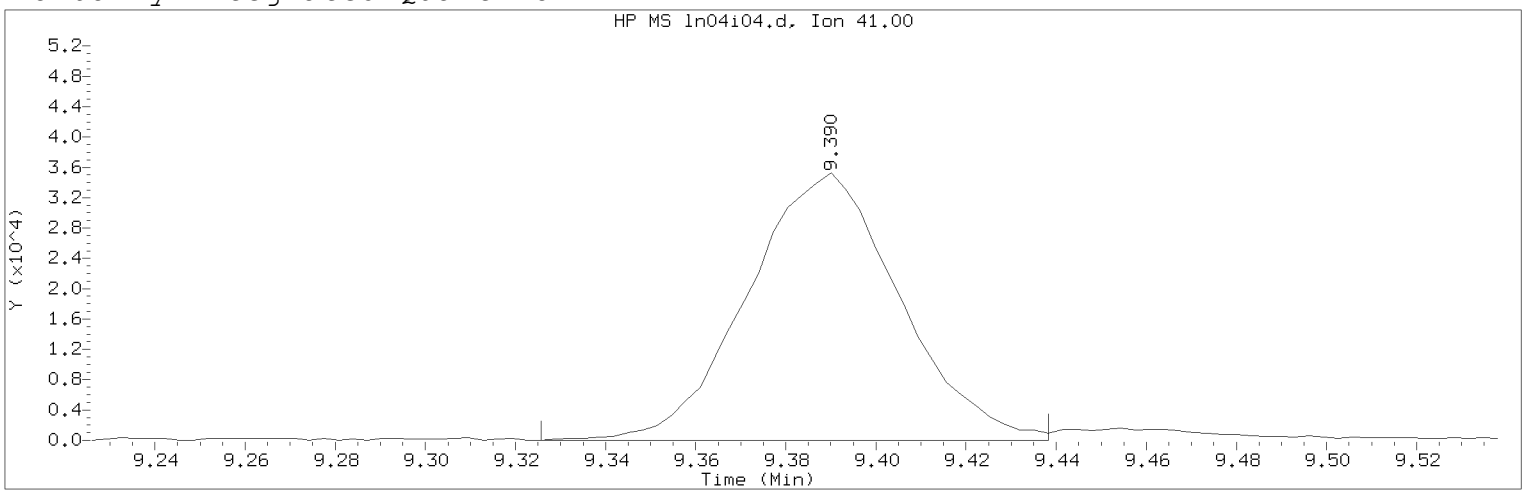
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area : 43671
On-column Amount (ng) : 571.7062
Integration start scan : 2277 Integration stop scan: 2367
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

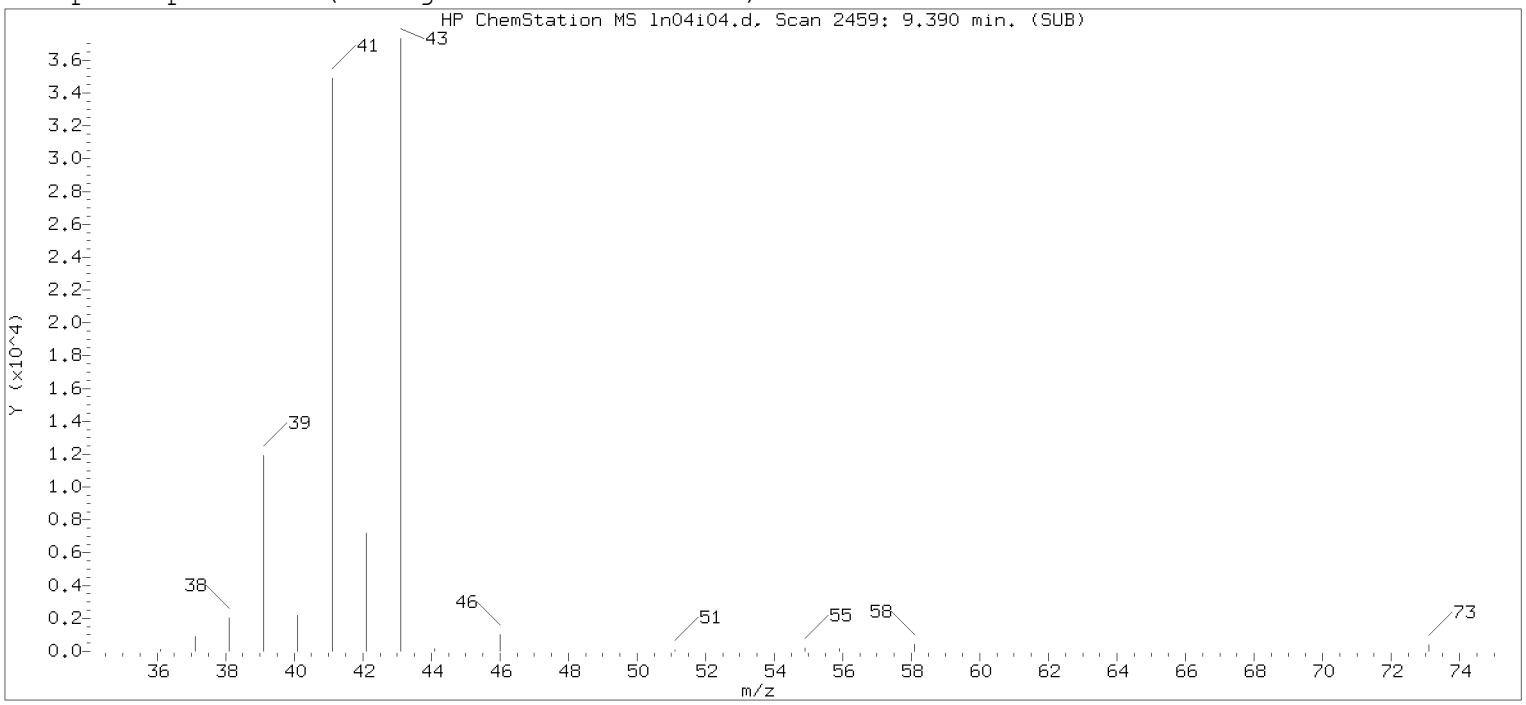
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2459
Retention Time (minutes): 9.390
Quant Ion : 41.00
Area (flag) : 82517M
On-Column Amount (ng) : 40.2472
Integration start scan : 2438 Integration stop scan: 2473
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

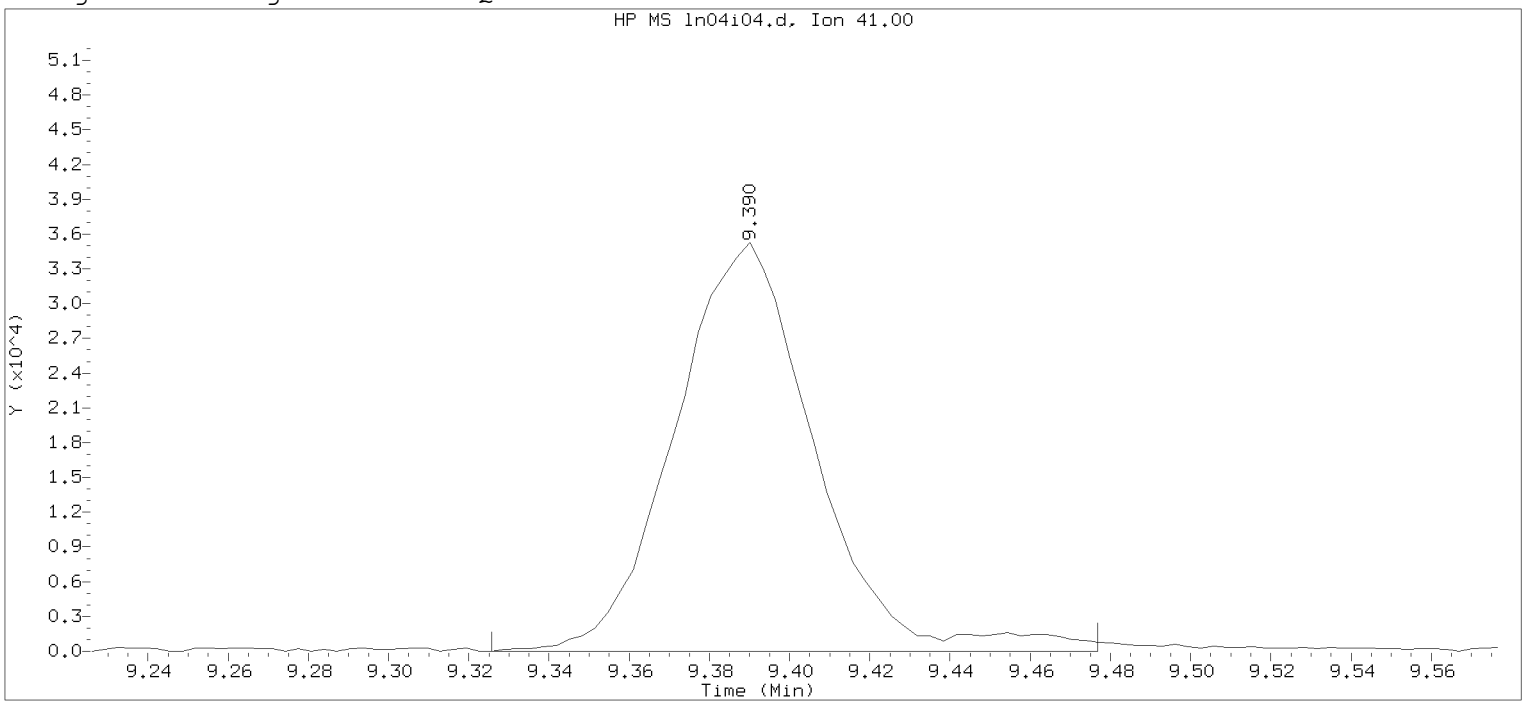
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

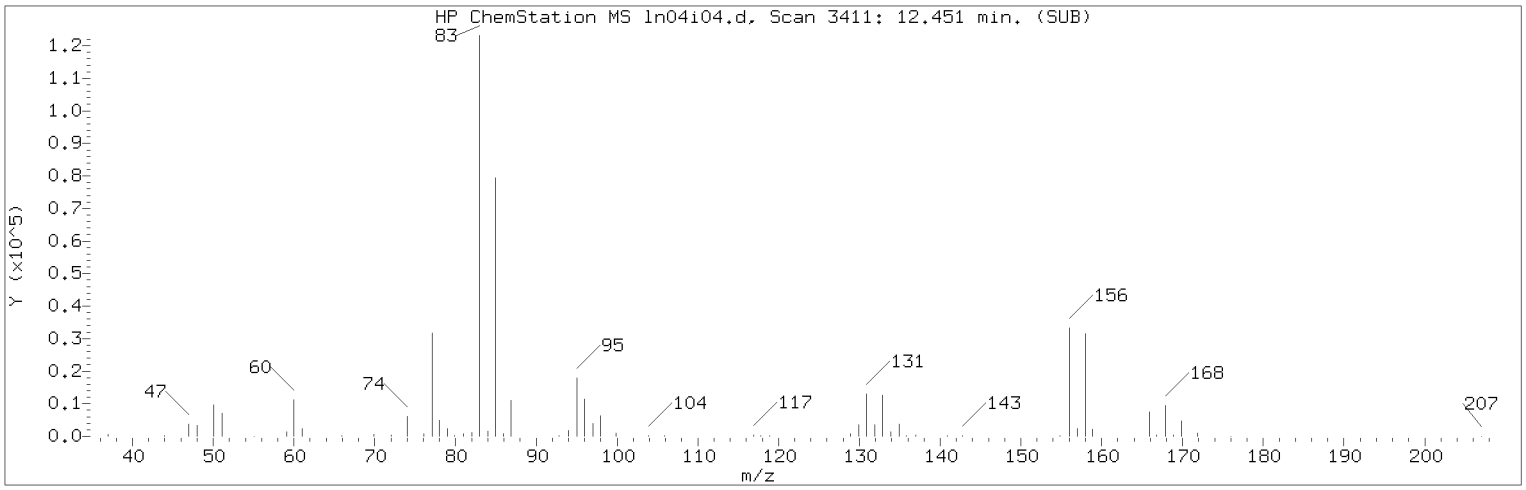
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

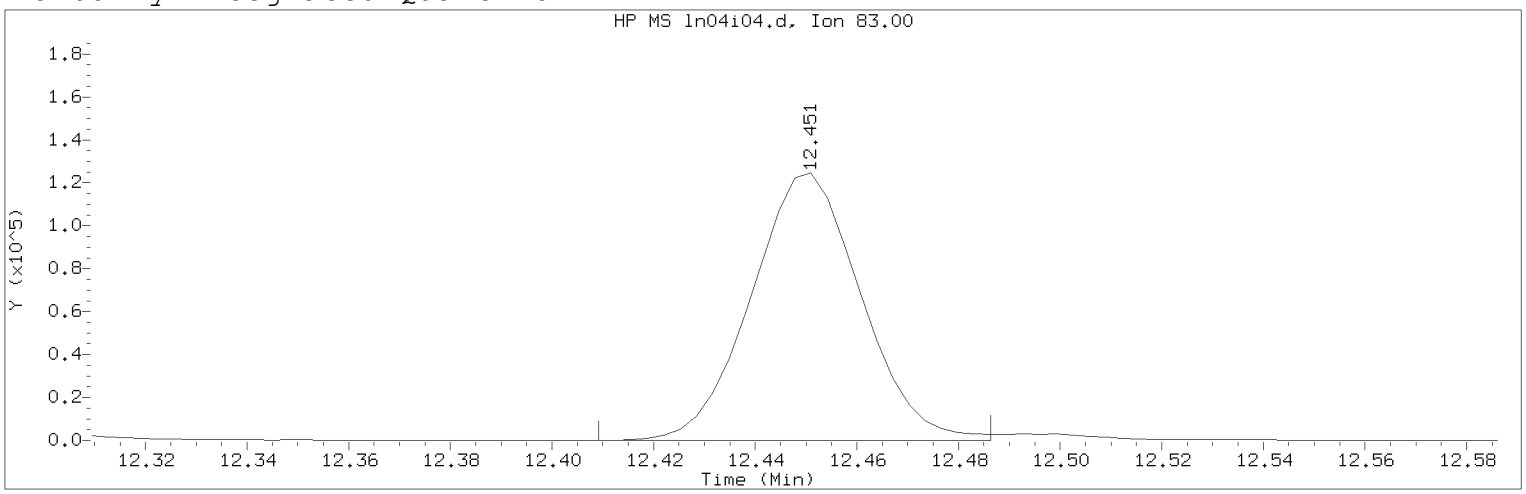
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2459
Retention Time (minutes): 9.390
Quant Ion : 41.00
Area : 85427
On-column Amount (ng) : 37.2727
Integration start scan : 2438 Integration stop scan: 2485
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

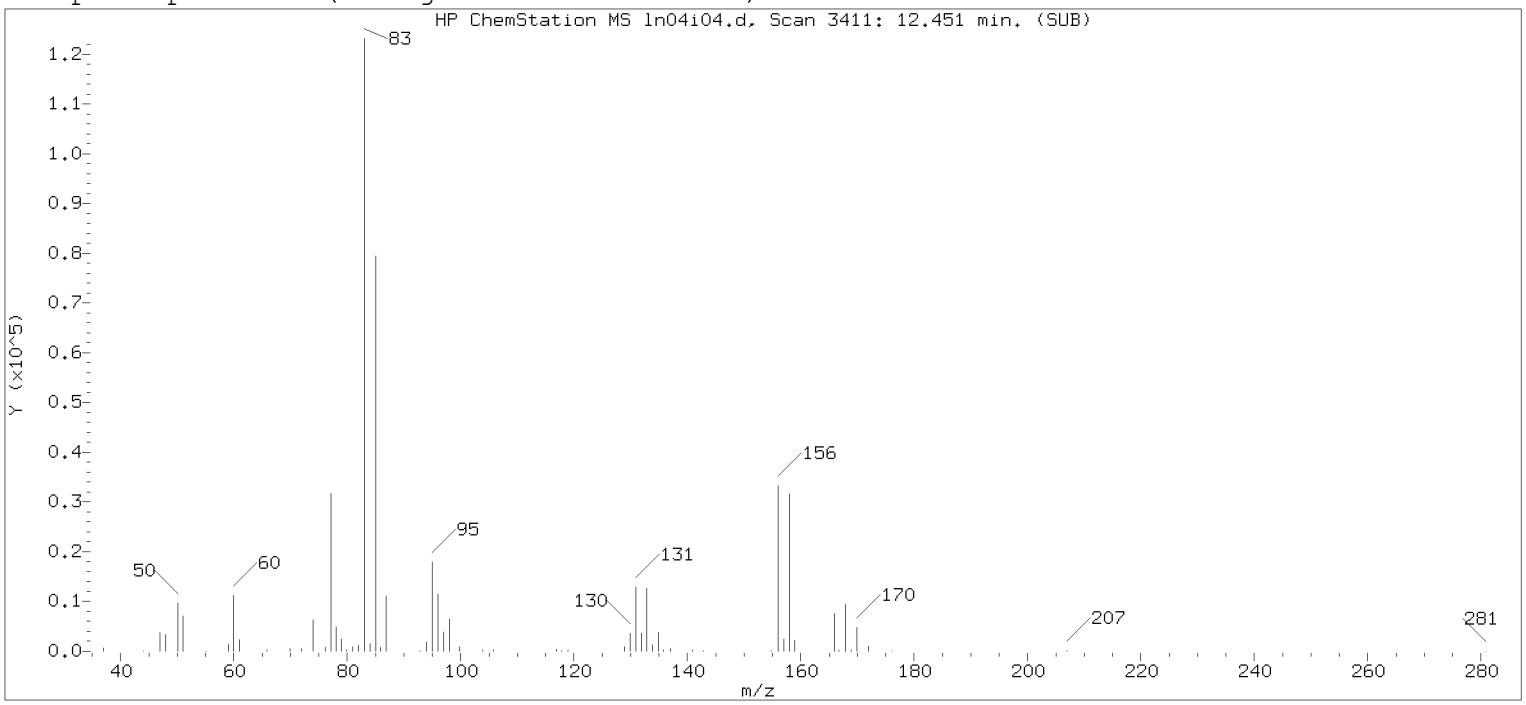
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 186119M
On-Column Amount (ng) : 20.6895
Integration start scan : 3397 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

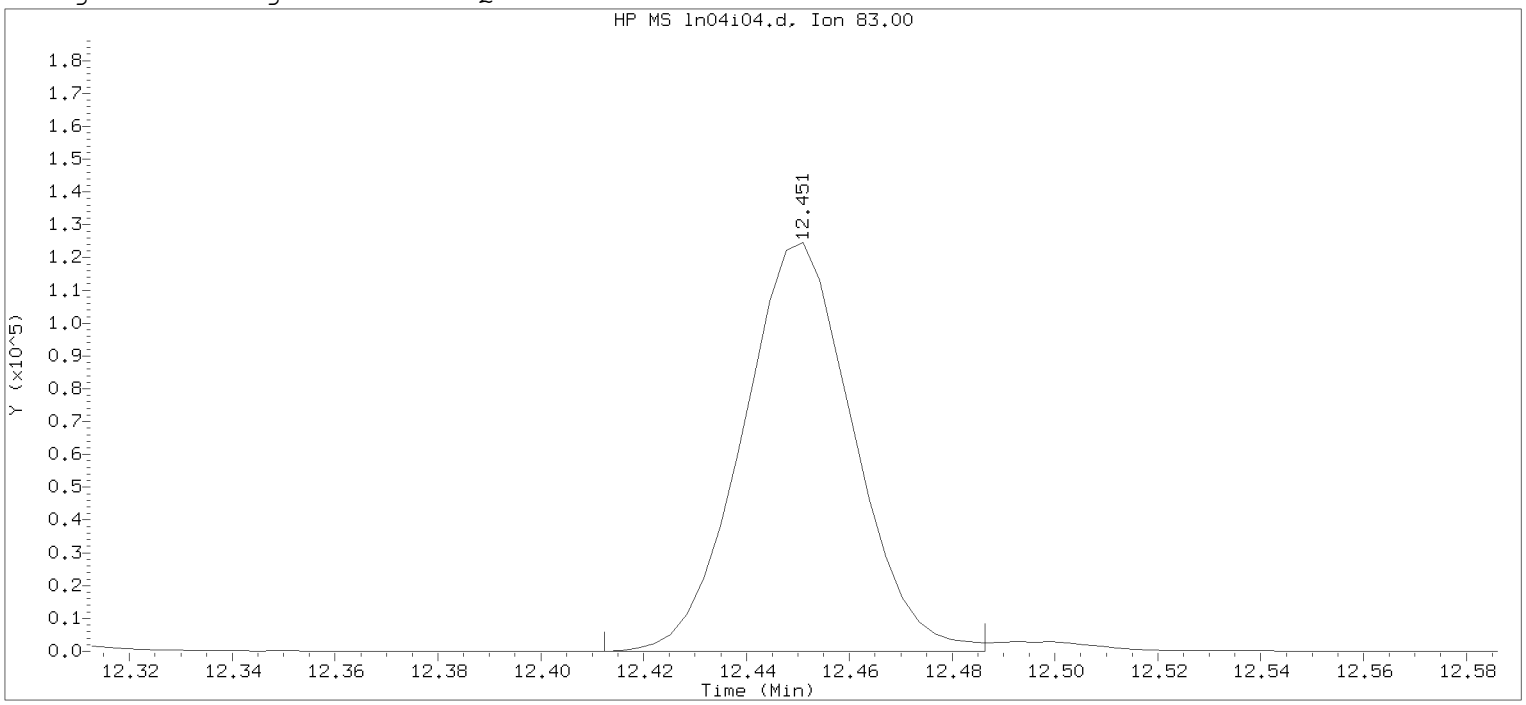
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

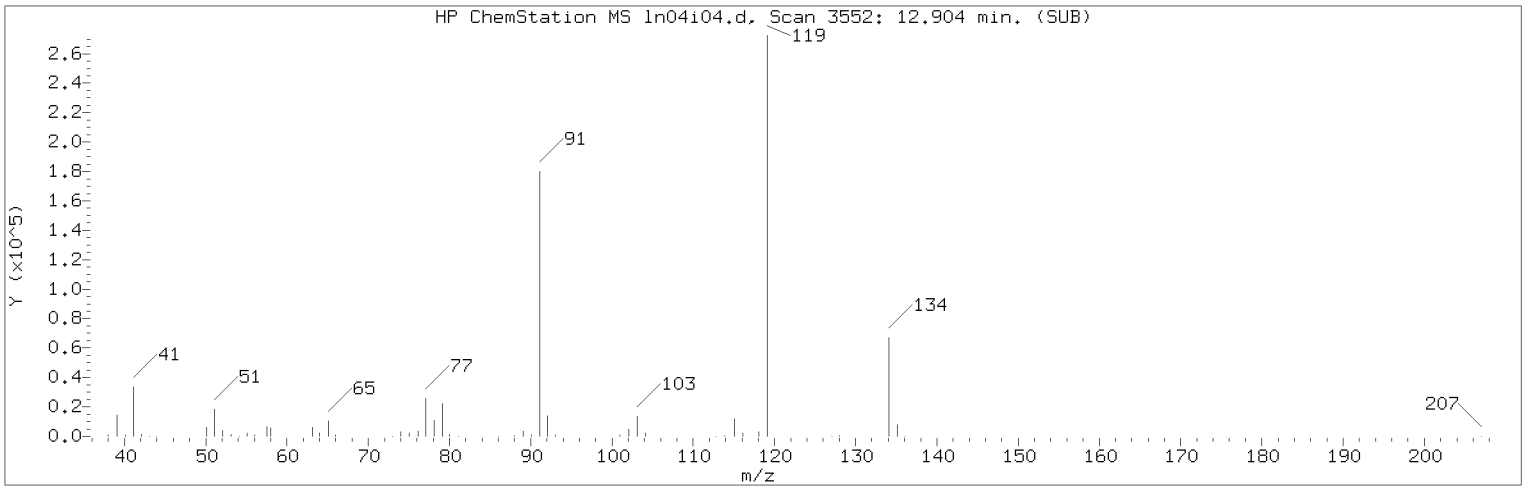
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

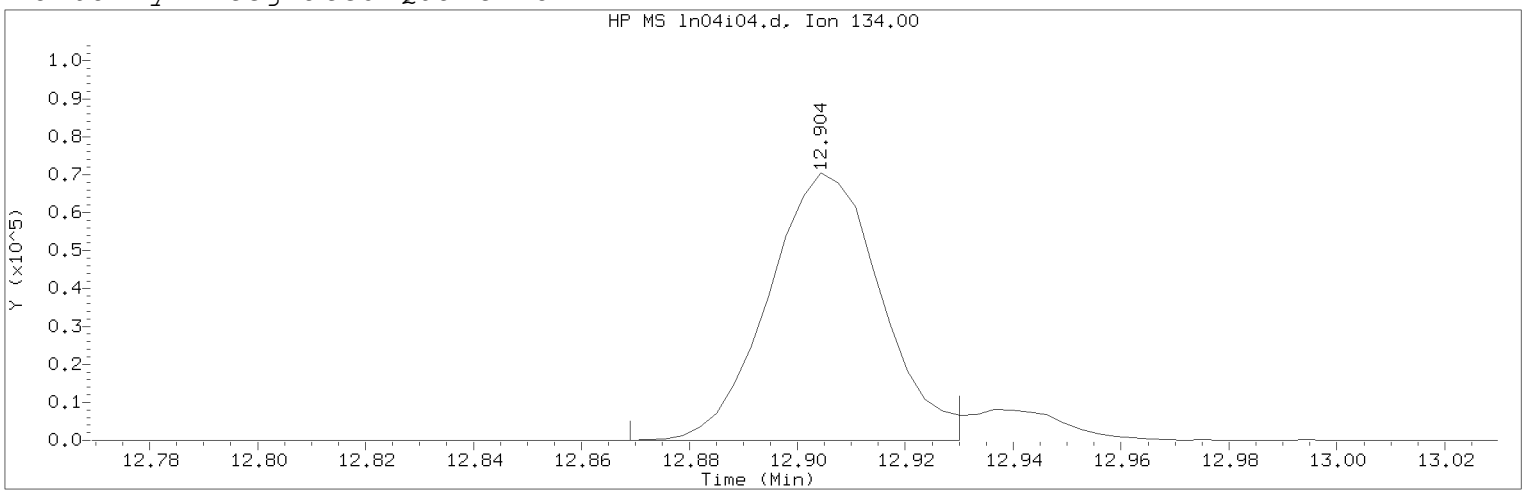
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 185866
On-column Amount (ng) : 19.5938
Integration start scan : 3398 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

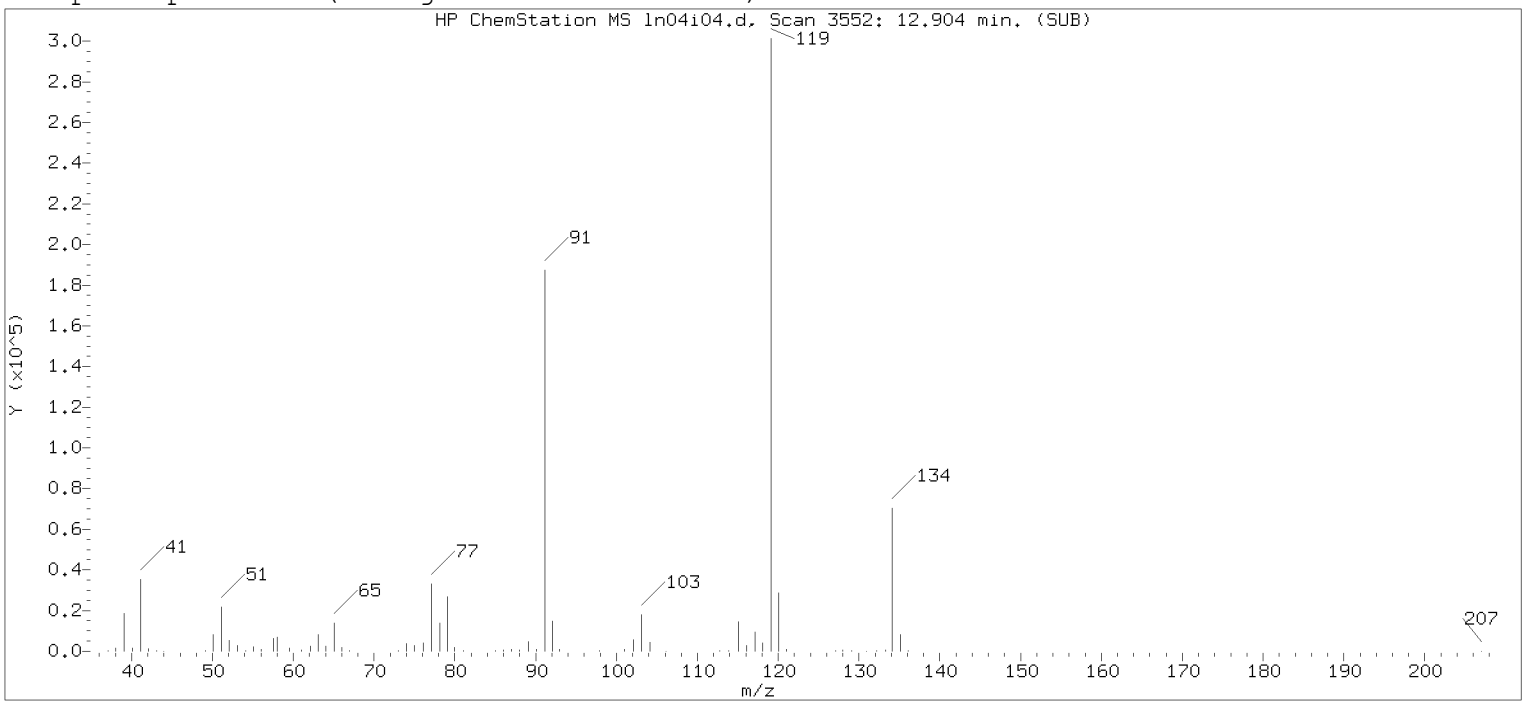
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 101571M
On-Column Amount (ng) : 21.6122
Integration start scan : 3540 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

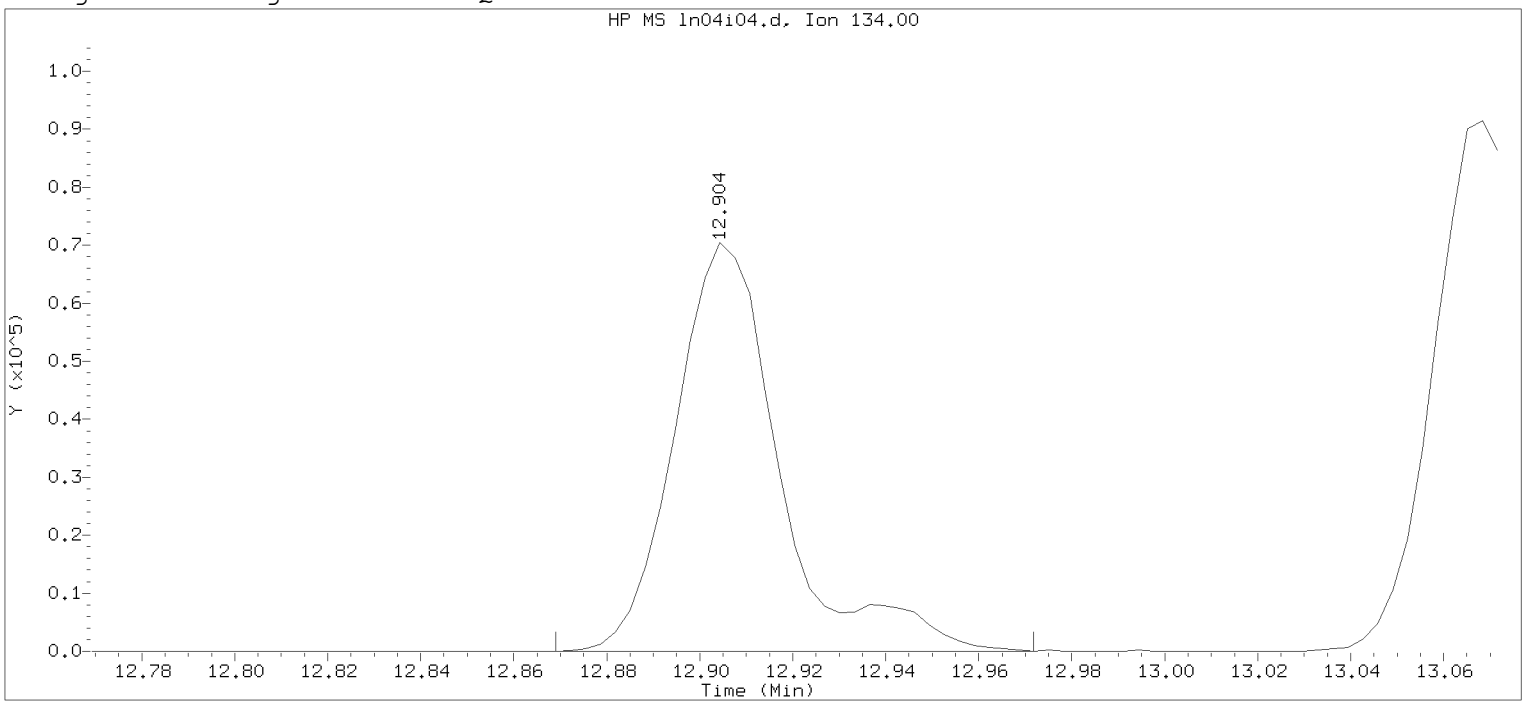
Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



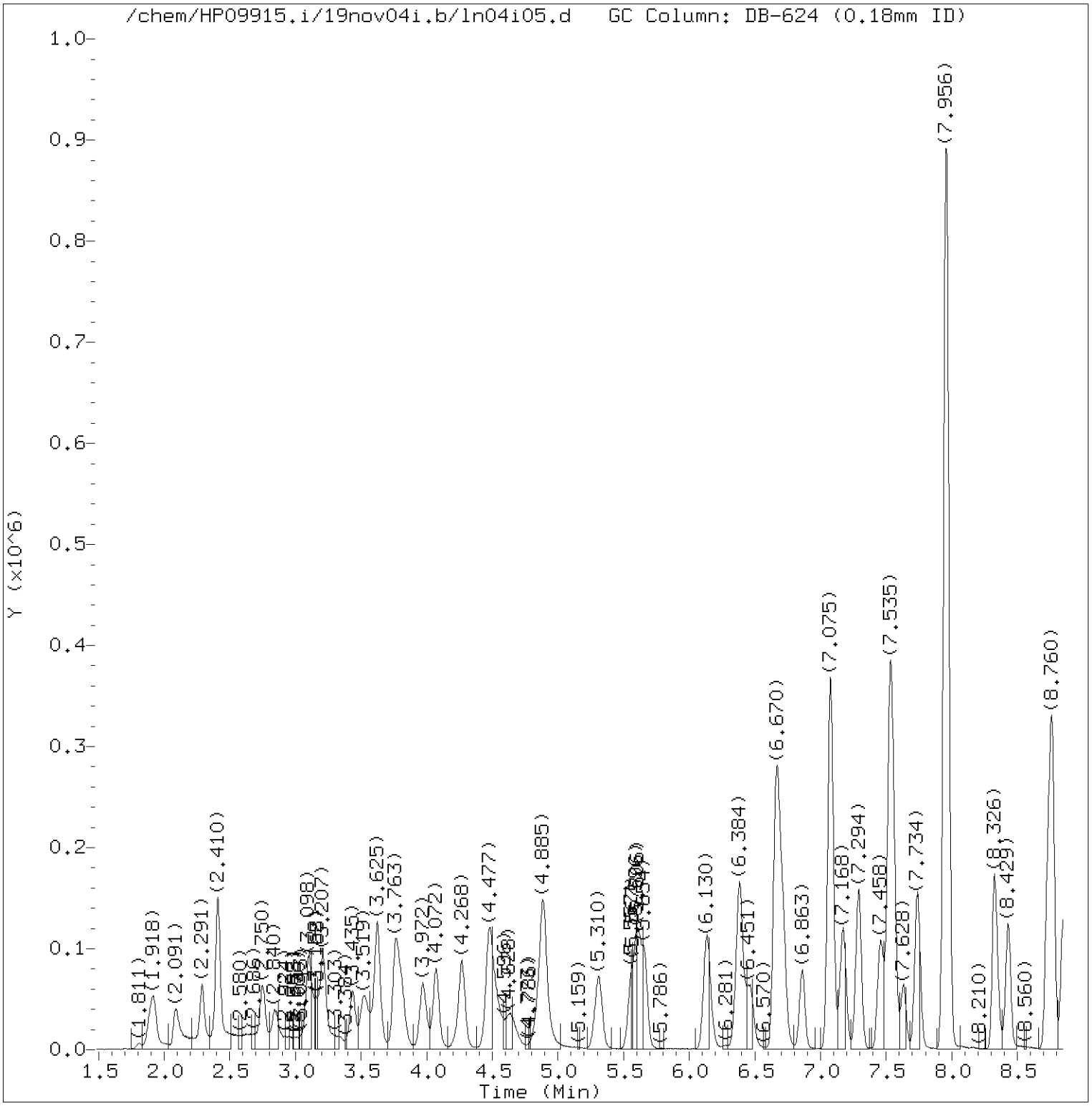
Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 110902
On-column Amount (ng) : 20.6897
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

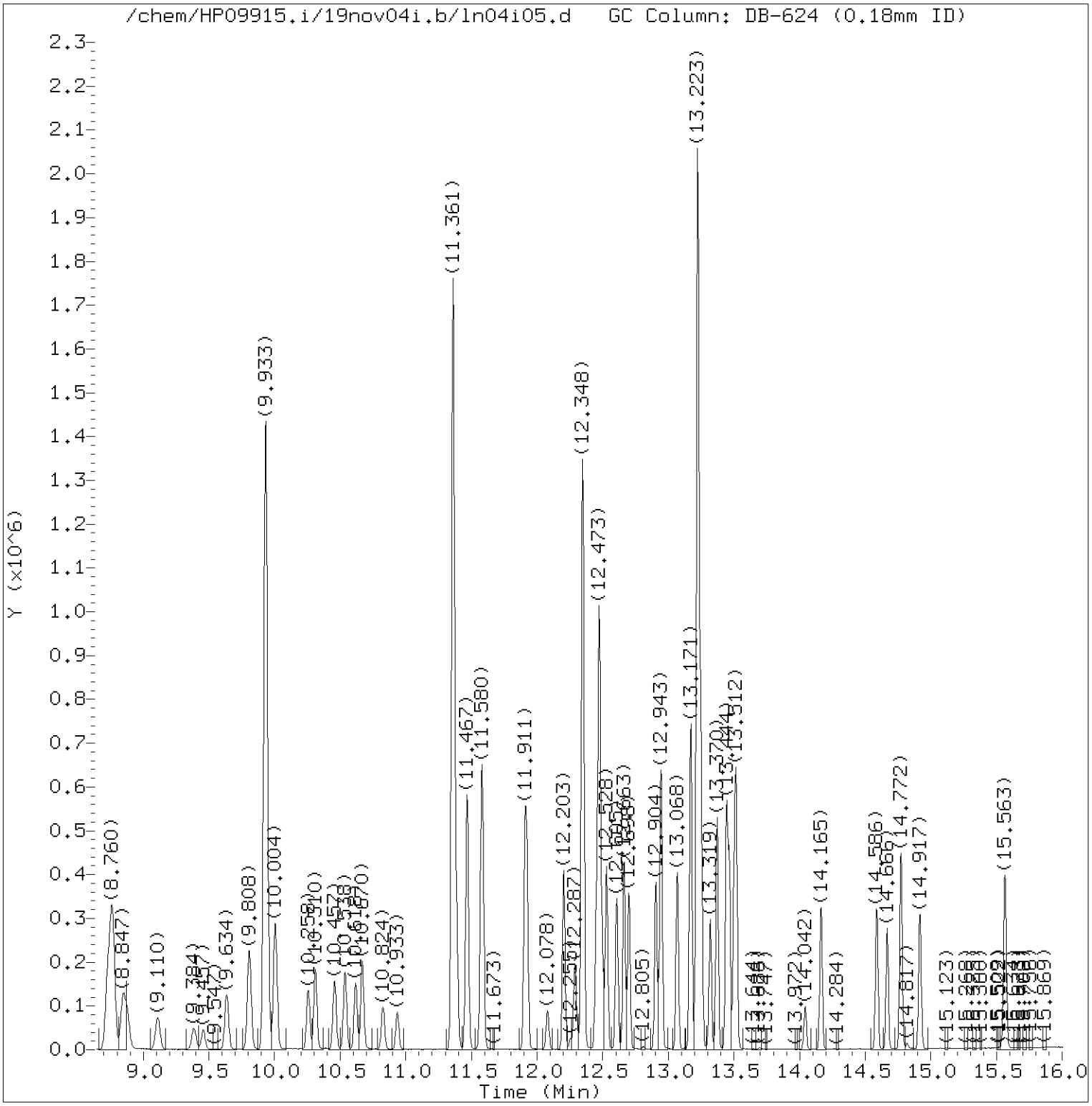
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.091	85	76947M	9.526
4) Chloromethane	(2)	2.291	50	76659	9.847
5) 1,3-Butadiene	(2)	2.406	39	60141M	9.304
6) Vinyl Chloride	(2)	2.413	62	76016	9.784
8) Bromomethane	(2)	2.750	94	54155	9.723
9) Chloroethane	(2)	2.853	64	42303	9.907
10) Dichlorofluoromethane	(2)	3.104	67	106956M	10.459
12) Trichlorofluoromethane	(2)	3.152	101	80624	9.638
11) n-Pentane	(2)	3.213	43	86389	8.739
14) Ethyl ether	(2)	3.438	59	52079	9.635
15) Freon 123a	(2)	3.519	67	65806	9.780
16) Acrolein	(1)	3.625	56	197662	100.013
17) 1,1-Dichloroethene	(2)	3.763	96	48467	9.871
17) 1,1-Dichloroethene	(2)	3.763	63	24200	9.831
19) Freon 113	(2)	3.792	101	51923	9.269
18) Acetone	(1)	3.805	58	17383	19.619
22) Methyl Iodide	(2)	3.969	142	101688	9.995
21) 2-Propanol	(1)	4.001	45	63841	100.227
23) Carbon Disulfide	(2)	4.075	76	179738	9.714
27) Methyl Acetate	(2)	4.245	43	62026	9.809
25) Allyl Chloride	(2)	4.268	41	86653	9.838
28) Methylene Chloride	(2)	4.474	84	58140	9.949
29)*t-Butyl alcohol-d10	(1)	4.509	65	263427M	250.000
30) t-Butyl alcohol	(1)	4.644	59	111005	100.090
31) Acrylonitrile	(2)	4.840	53	34130	10.032
33) Methyl Tertiary Butyl Ether	(2)	4.882	73	189173	10.147
32) trans-1,2-Dichloroethene	(2)	4.889	96	56133	9.883
34) n-Hexane	(2)	5.306	57	75187M	8.508
36) 1,1-Dichloroethane	(2)	5.557	63	99074	9.999
38) di-Isopropyl ether	(2)	5.606	45	191363	10.014
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	84906	9.551
40) Ethyl t-butyl ether	(2)	6.136	59	188350	10.156
43) 1,2-Dichloroethene (Total)	(2)		96	118698	19.696
44) 2-Butanone	(2)	6.364	43	85445	19.565
42) cis-1,2-Dichloroethene	(2)	6.387	96	62565	9.814
45) 2,2-Dichloropropane	(2)	6.396	77	74849	9.717
47) Propionitrile	(1)	6.464	54	136751	98.961
48) Methacrylonitrile	(2)	6.663	67	181171	49.366

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	34163	10.106
50) Tetrahydrofuran	(1)	6.724	71	24588	19.698
51) Chloroform	(2)	6.863	83	93507	9.867
52)$Dibromofluoromethane	(2)	7.072	113	280960	49.616
52)$Dibromofluoromethane	(2)	7.075	111	286315	49.589
53) 1,1,1-Trichloroethane	(2)	7.078	97	77742	9.611
54) Cyclohexane	(2)	7.175	56	96567	8.928
54) Cyclohexane	(2)	7.175	84	84021	8.942
54) Cyclohexane	(2)	7.175	69	29917	8.942
56) Carbon Tetrachloride	(2)	7.287	117	63638	9.276
55) 1,1-Dichloropropene	(2)	7.294	75	75943	9.694
58) Isobutyl Alcohol	(1)	7.458	41	94699	253.736
57)$1,2-Dichloroethane-d4	(2)	7.532	102	72410	50.173
57)$1,2-Dichloroethane-d4	(2)	7.528	65	317862	49.423
57)$1,2-Dichloroethane-d4	(2)	7.528	104	46131	50.043
60) Benzene	(2)	7.557	78	235083	9.978
61) 1,2-Dichloroethane	(2)	7.634	62	74555	9.839
61) 1,2-Dichloroethane	(2)	7.634	98	7256	9.676
65) t-Amyl methyl ether	(2)	7.740	73	187995	10.099
66)*Fluorobenzene	(2)	7.956	96	1158257	50.000
67) n-Heptane	(2)	7.959	43	65347MA	7.916
69) n-Butanol	(1)	8.326	56	166674M	518.868
71) Trichloroethene	(2)	8.425	95	57378	9.672
72) Methylcyclohexane	(2)	8.731	83	104101	9.459
72) Methylcyclohexane	(2)	8.731	98	46774	9.392
73) 1,2-Dichloropropane	(2)	8.766	63	59459	9.939
76) Methyl Methacrylate	(2)	8.843	69	56123	9.701
75) 1,4-Dioxane	(1)	8.859	88	22251M	252.018
74) Dibromomethane	(2)	8.875	93	37949	9.804
78) Bromodichloromethane	(2)	9.110	83	66403	9.560
79) 2-Nitropropane	(2)	9.387	41	38245M	18.178
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	24083	9.373
81) cis-1,3-Dichloropropene	(2)	9.638	75	89740	9.728
82) 4-Methyl-2-pentanone	(2)	9.808	43	182101	19.754
83)$Toluene-d8	(3)	9.933	98	1179588	50.250
83)$Toluene-d8	(3)	9.933	100	766795	50.427
88) Toluene	(3)	10.004	92	146792	9.974
90) 1,3-Dichloropropene (total)	(3)		100	170602	19.407

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.255	75	80862	9.679
91) Ethyl Methacrylate	(3)	10.310	69	101774	10.024
92) 1,1,2-Trichloroethane	(3)	10.457	97	55397	9.928
93) Tetrachloroethene	(3)	10.538	166	57668	9.252
94) 1,3-Dichloropropane	(3)	10.615	76	95319	10.005
96) 2-Hexanone	(3)	10.670	43	134577	19.858
97) Dibromochloromethane	(3)	10.824	129	54317	9.503
99) 1,2-Dibromoethane	(3)	10.937	107	59349	9.795
100)*Chlorobenzene-d5	(3)	11.358	117	897139	50.000
101) 1-Chlorohexane	(3)	11.364	91	68517	8.666
102) Chlorobenzene	(3)	11.383	112	167497	10.065
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	53804	9.812
104) Ethylbenzene	(3)	11.467	91	273085	9.708
106) m+p-Xylene	(3)	11.583	106	214450	19.380
108) Xylene (Total)	(3)		106	321712	29.193
107) o-Xylene	(3)	11.908	106	107262	9.813
109) Styrene	(3)	11.924	104	181265	10.036
110) Bromoform	(3)	12.078	173	38599	9.038
111) Isopropylbenzene	(3)	12.203	105	257704	9.400
112) Cyclohexanone	(1)	12.290	55	84173	243.422
114)$4-Bromofluorobenzene	(3)	12.348	95	448980	50.511
114)$4-Bromofluorobenzene	(3)	12.348	174	372460	50.544
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	99221M	10.583
115) Bromobenzene	(4)	12.464	156	73059	9.795
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	144573	49.994
117) 1,2,3-Trichloropropane	(4)	12.496	110	30082	10.457
119) n-Propylbenzene	(4)	12.528	91	295857	9.079
120) 2-Chlorotoluene	(4)	12.608	126	64871	9.370
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	216905	9.159
121) 4-Chlorotoluene	(4)	12.698	126	68187	9.462
124) tert-Butylbenzene	(4)	12.907	134	42119M	8.599
125) Pentachloroethane	(4)	12.936	167	40747	9.662
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	231031	9.256
127) sec-Butylbenzene	(4)	13.068	105	254340	8.702
129) 1,3-Dichlorobenzene	(4)	13.168	146	133435	9.735
130) p-Isopropyltoluene	(4)	13.171	119	222820	8.812
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	496298	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	137520	9.678

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	263873	9.980
135) Benzyl Chloride	(4)	13.319	91	189013	9.442
136) 1,3-Diethylbenzene	(4)	13.370	119	162518	9.876
141) Diethylbenzene (total)	(4)		100	469676	29.503
137) 1,4-Diethylbenzene	(4)	13.444	119	170802	9.797
139) n-Butylbenzene	(4)	13.464	92	112696	8.717
138) 1,2-Dichlorobenzene	(4)	13.502	146	133767	9.890
140) 1,2-Diethylbenzene	(4)	13.518	119	136356	9.830
142) 1,2-Dibromo-3-chloropropane	(4)	14.042	75	21471	10.462
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	94358	9.080
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	93971	9.300
147) Hexachlorobutadiene	(4)	14.666	225	44299	9.286
148) Naphthalene	(4)	14.772	128	328233	10.105
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	92049	9.363
150) 2-Methylnaphthalene	(4)	15.563	142	202392	10.118

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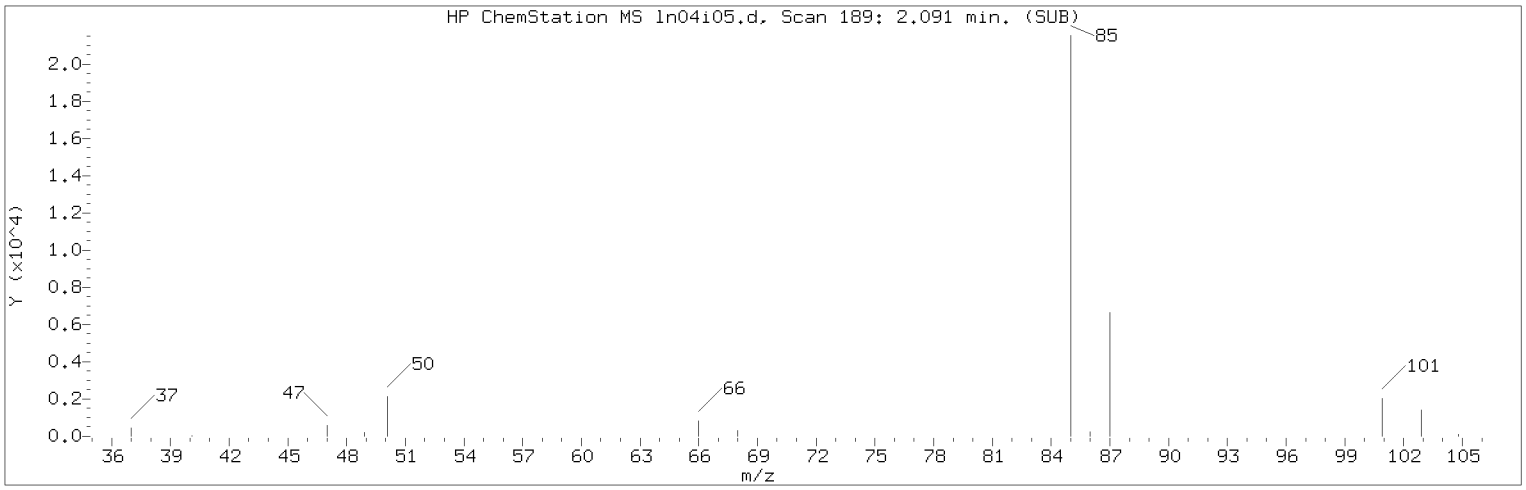
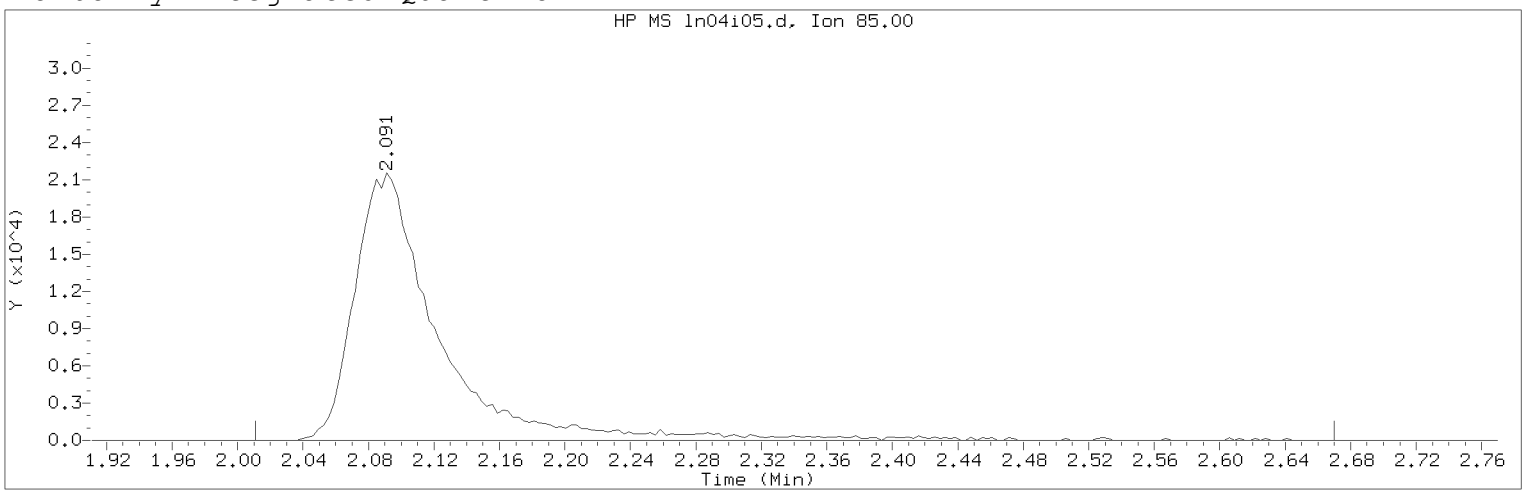
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

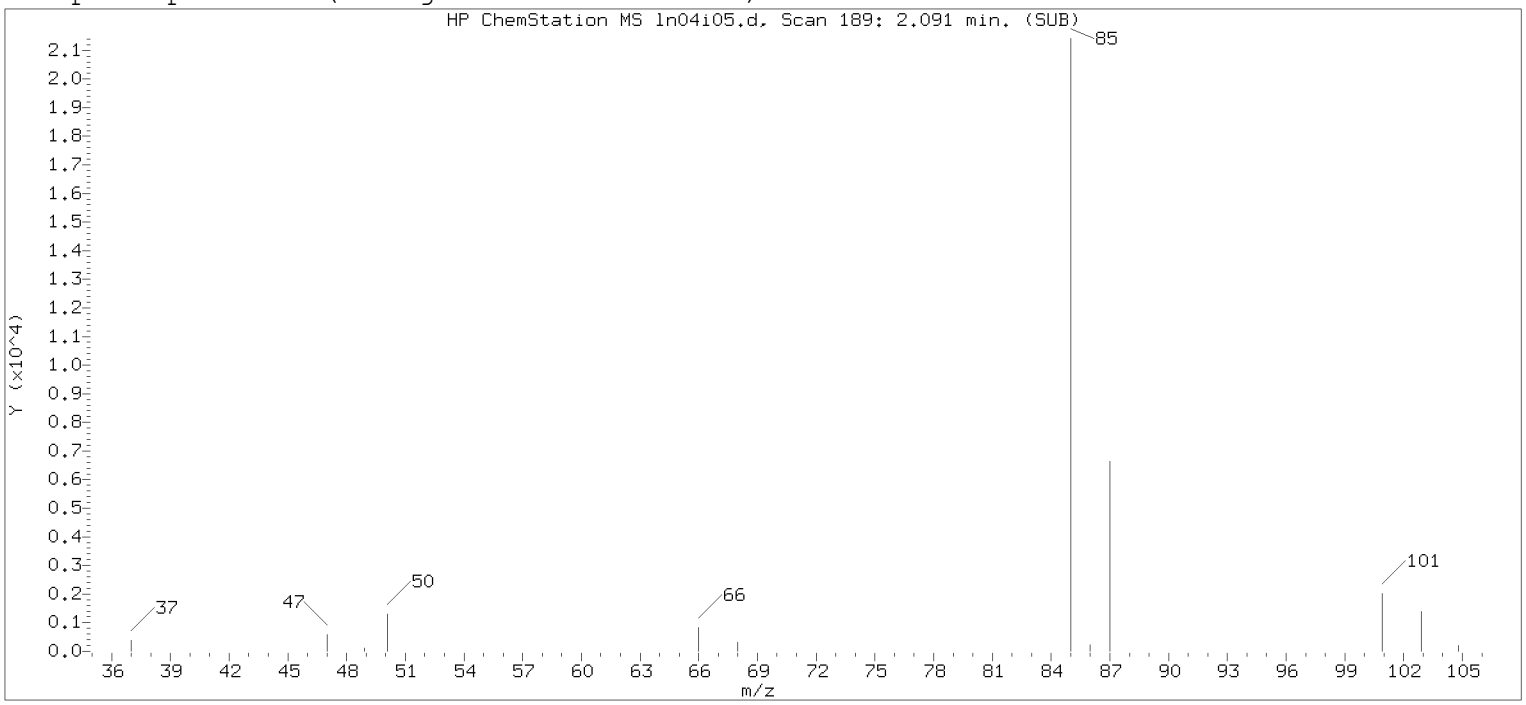
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 189
Retention Time (minutes): 2.091
Quant Ion : 85.00
Area (flag) : 76947M
On-Column Amount (ng) : 9.5263
Integration start scan : 163 Integration stop scan: 368
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

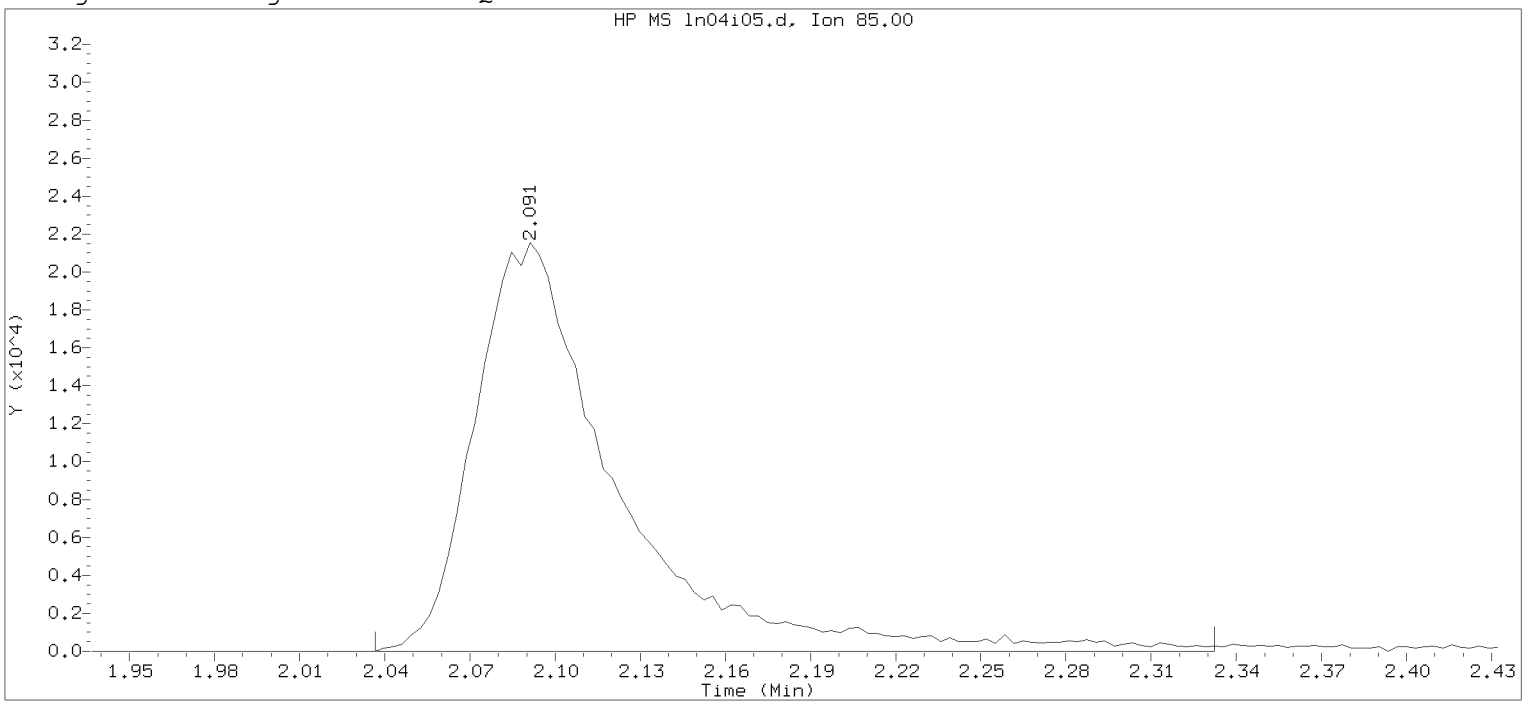
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

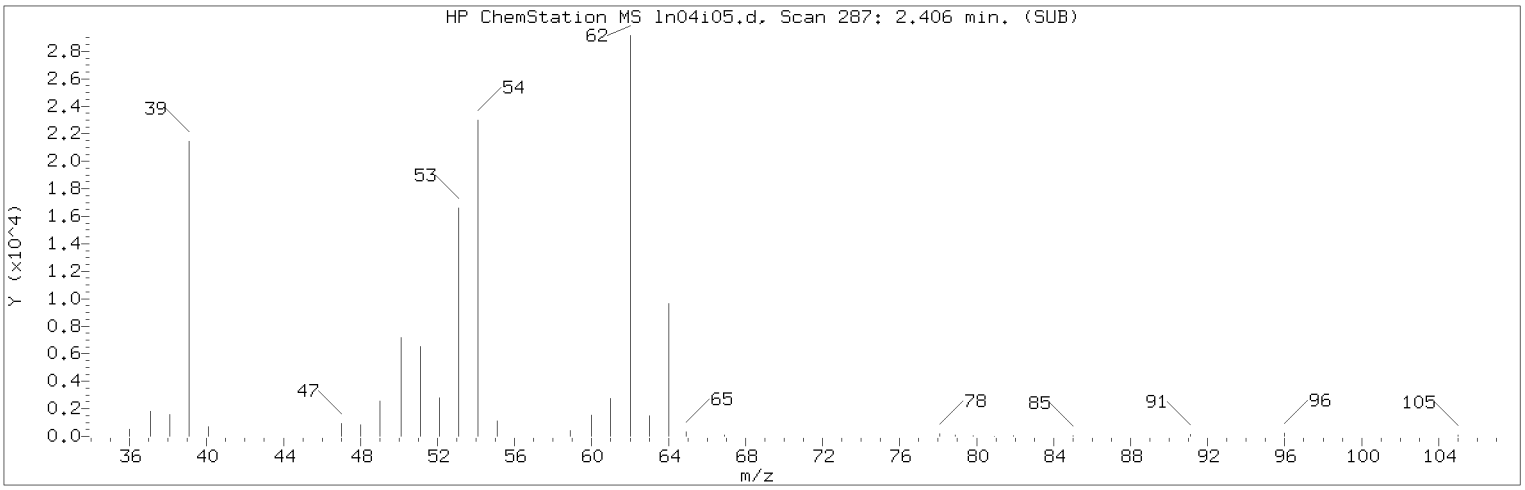
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

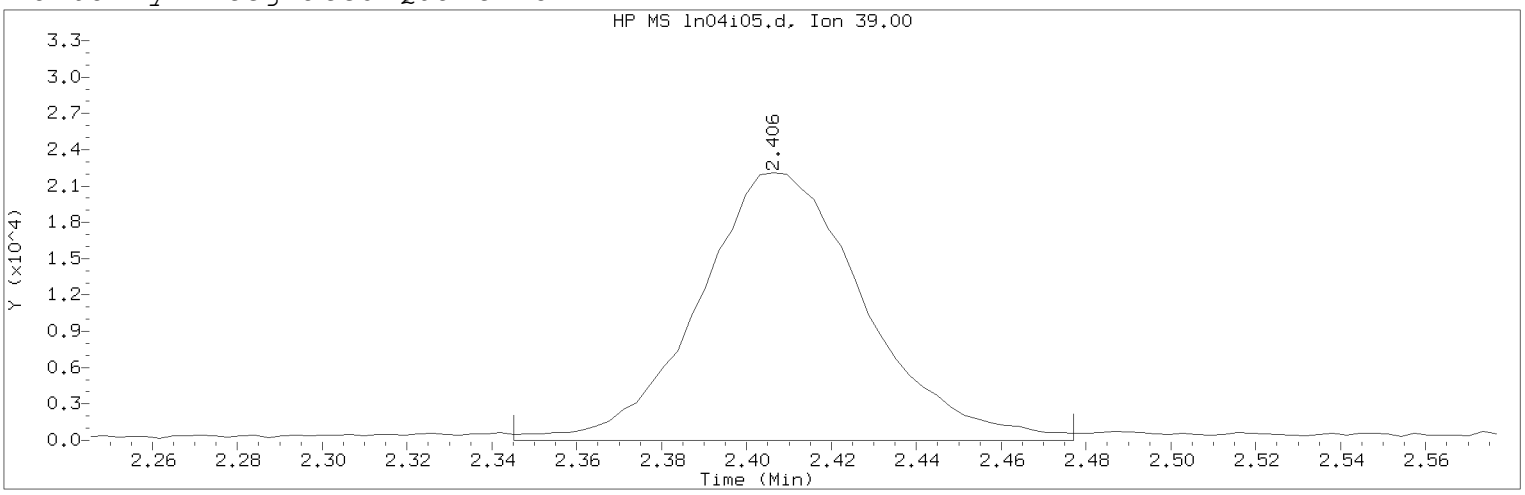
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 189
Retention Time (minutes): 2.091
Quant Ion : 85.00
Area : 74877
On-column Amount (ng) : 9.3136
Integration start scan : 171 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

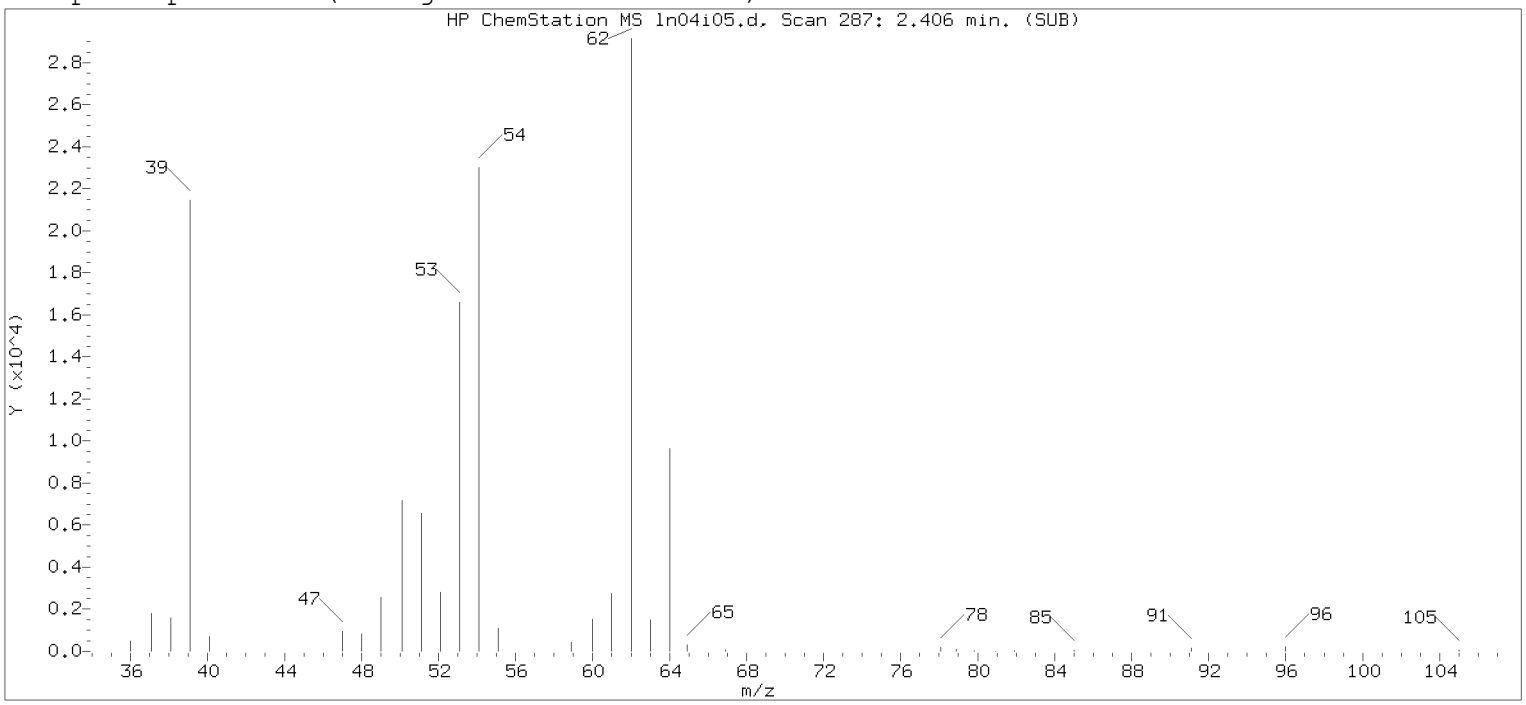
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 60141M
On-Column Amount (ng) : 9.3042
Integration start scan : 267 Integration stop scan: 308
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

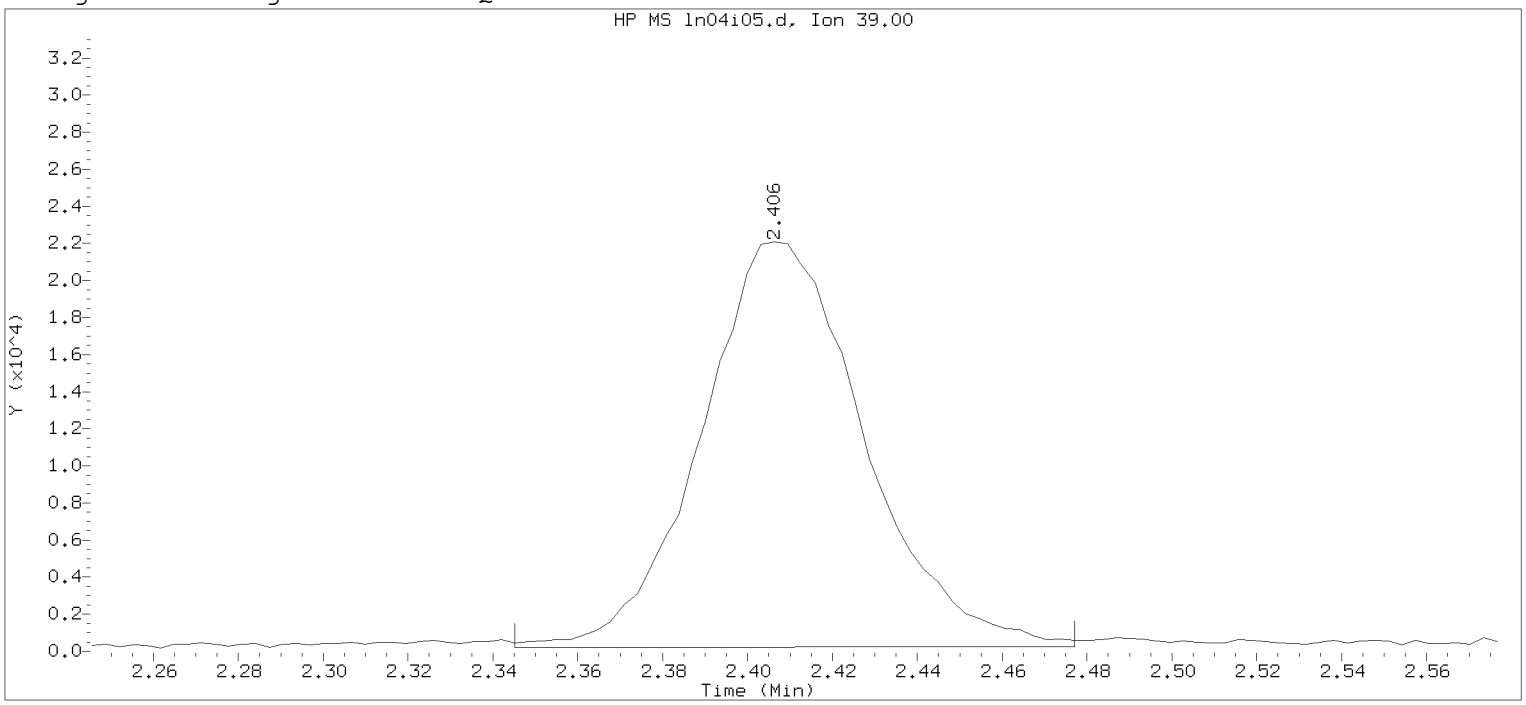
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

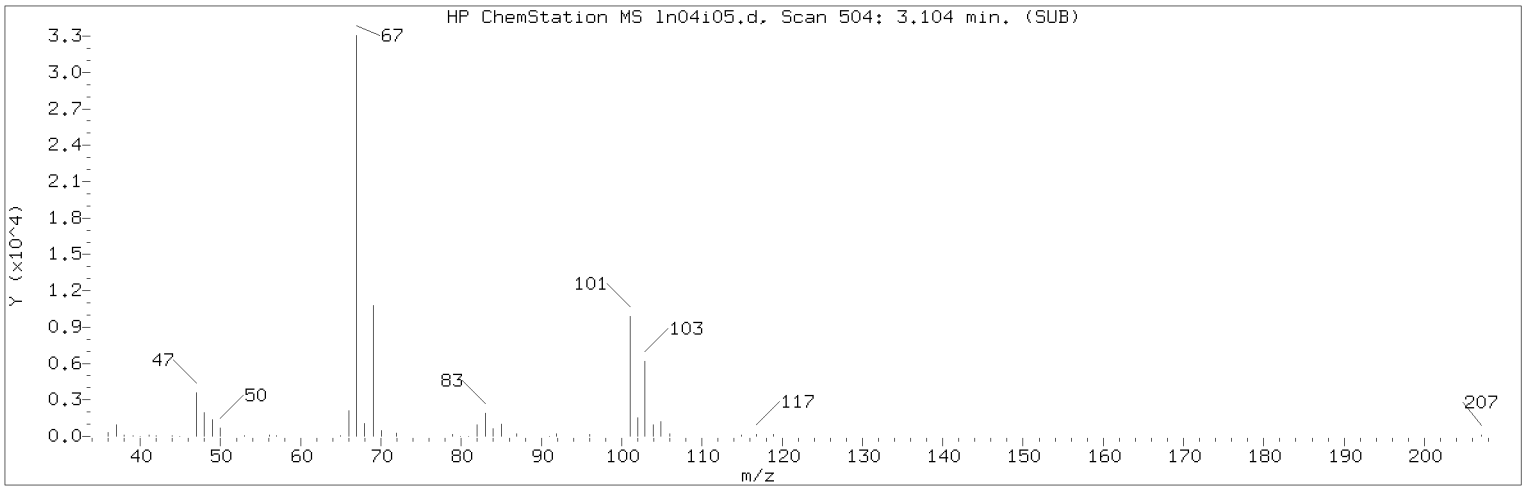
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

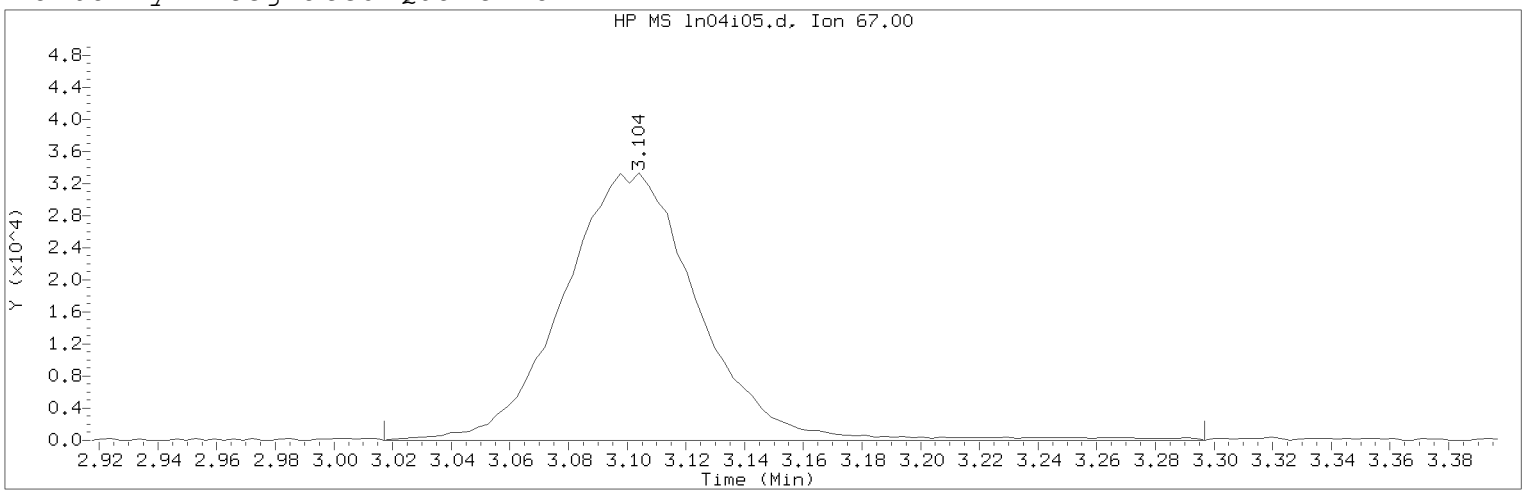
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 58240
On-column Amount (ng) : 9.5707
Integration start scan : 267 Integration stop scan: 308
Y at integration start : 206 Y at integration end: 250

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

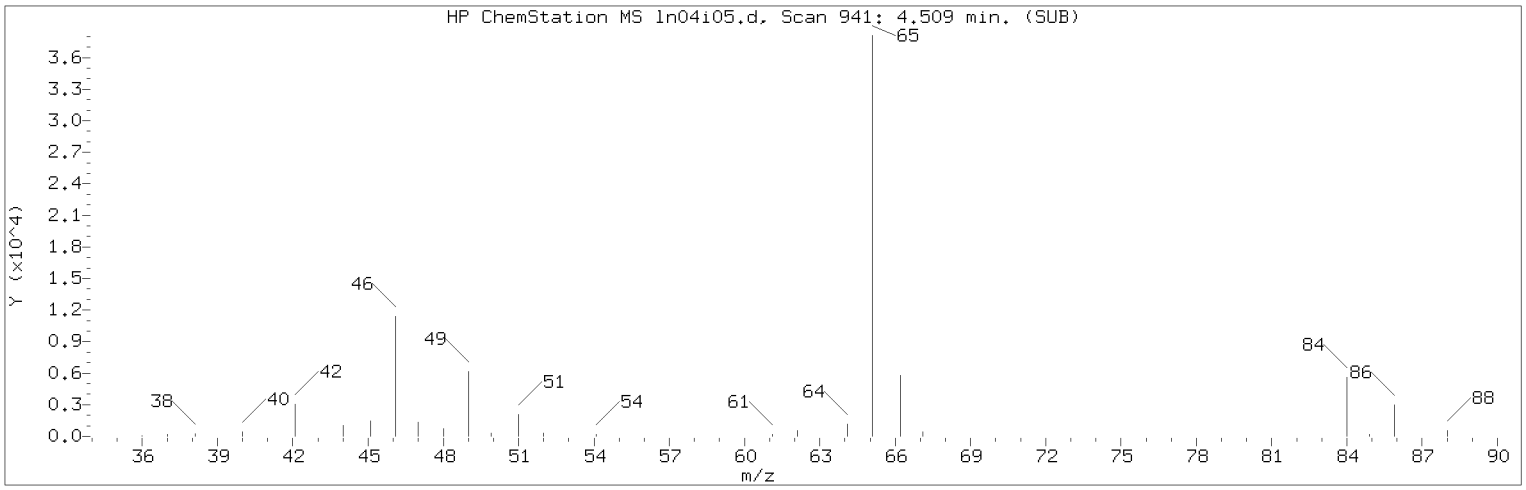
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 504
Retention Time (minutes): 3.104
Quant Ion : 67.00
Area (flag) : 106956M
On-Column Amount (ng) : 10.4593
Integration start scan : 476 Integration stop scan: 563
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

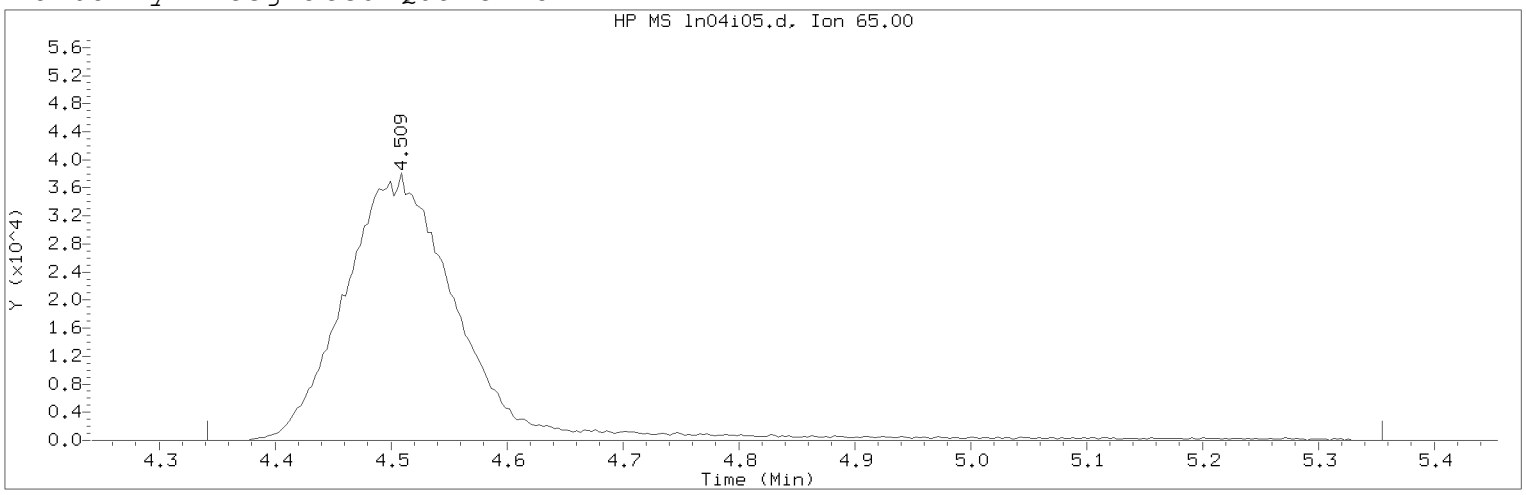
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

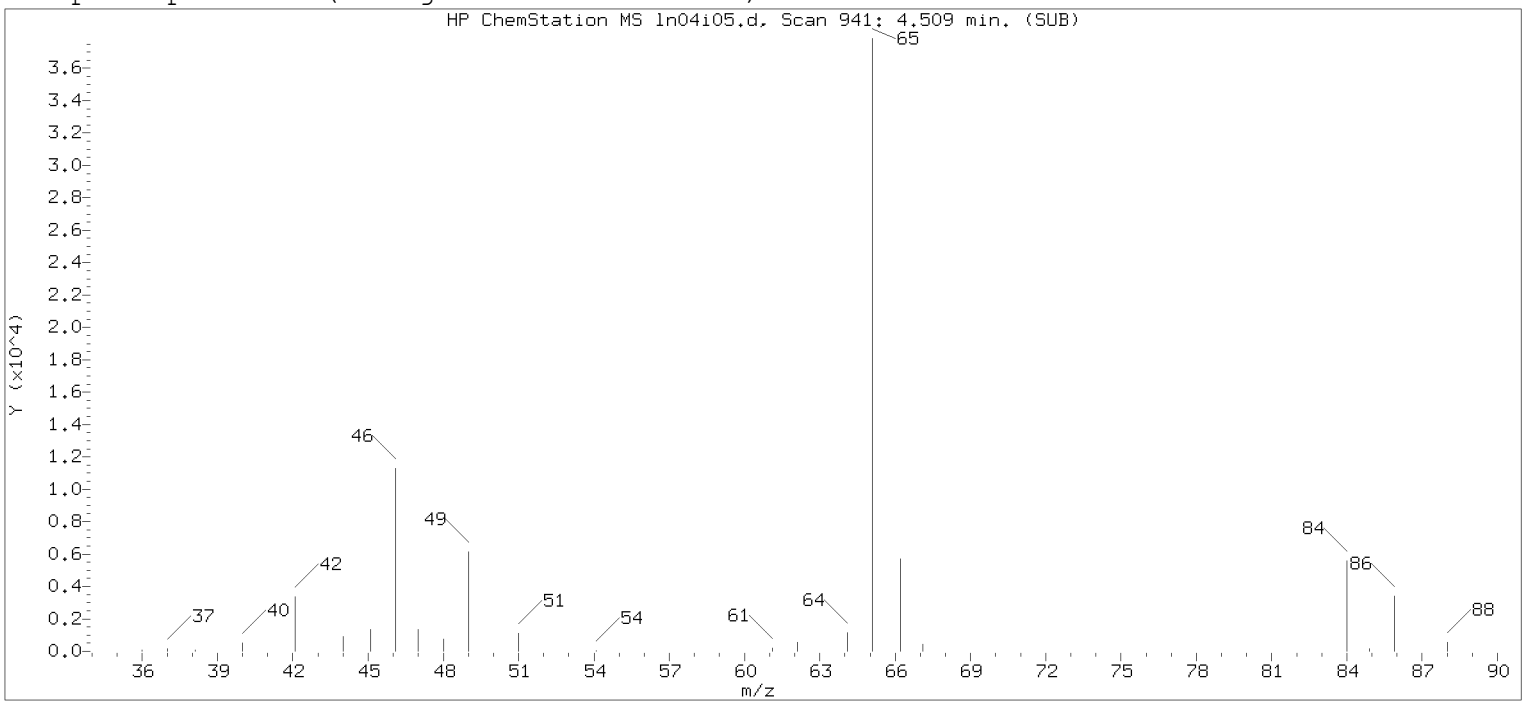
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 263427M
On-Column Amount (ng) : 250.0000
Integration start scan : 888 Integration stop scan: 1203
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

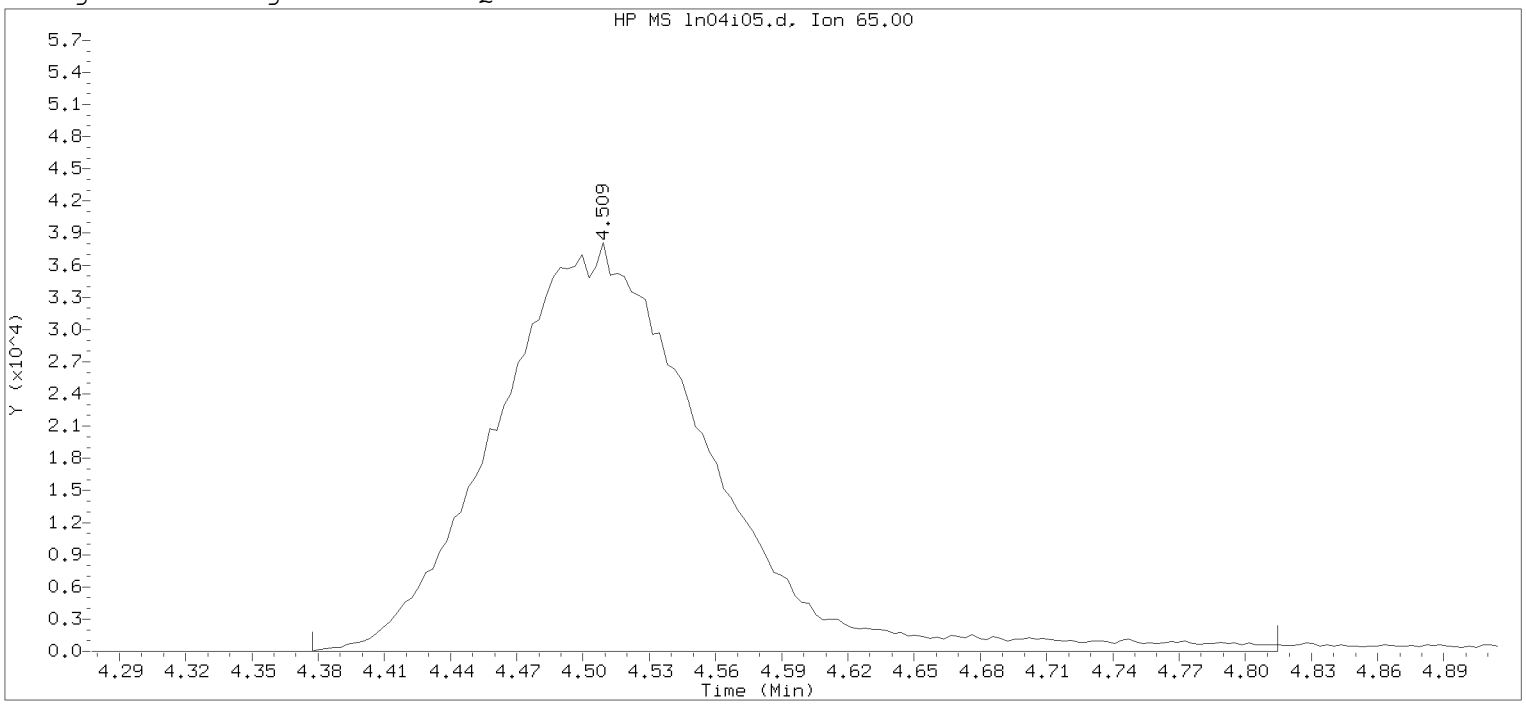
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

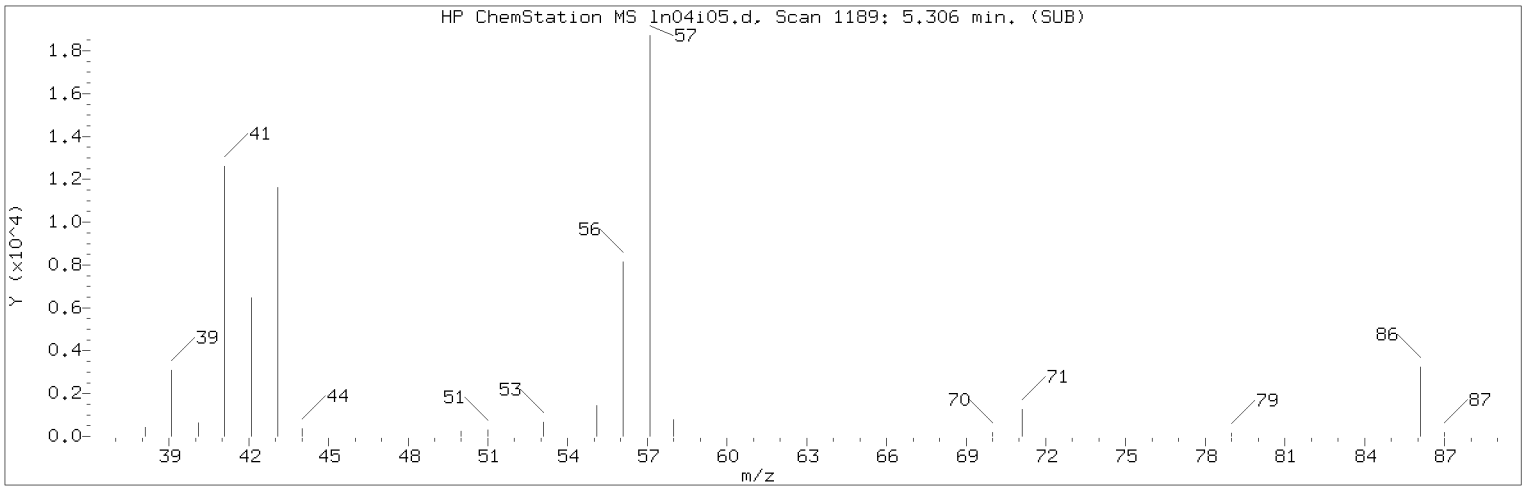
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

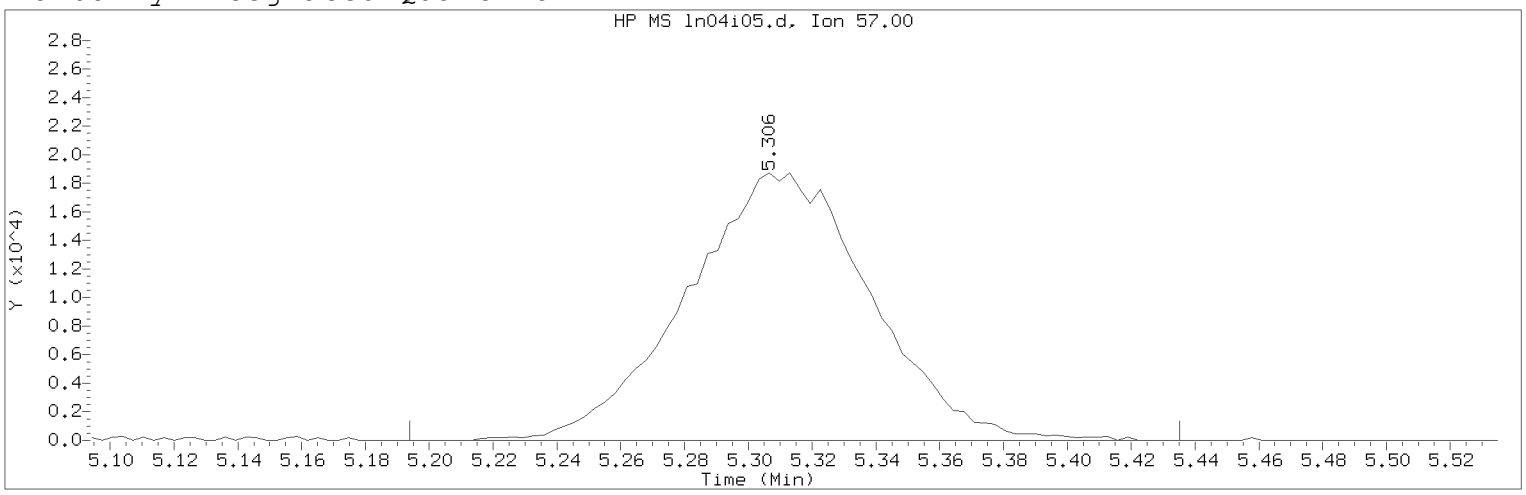
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 253092
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1035
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

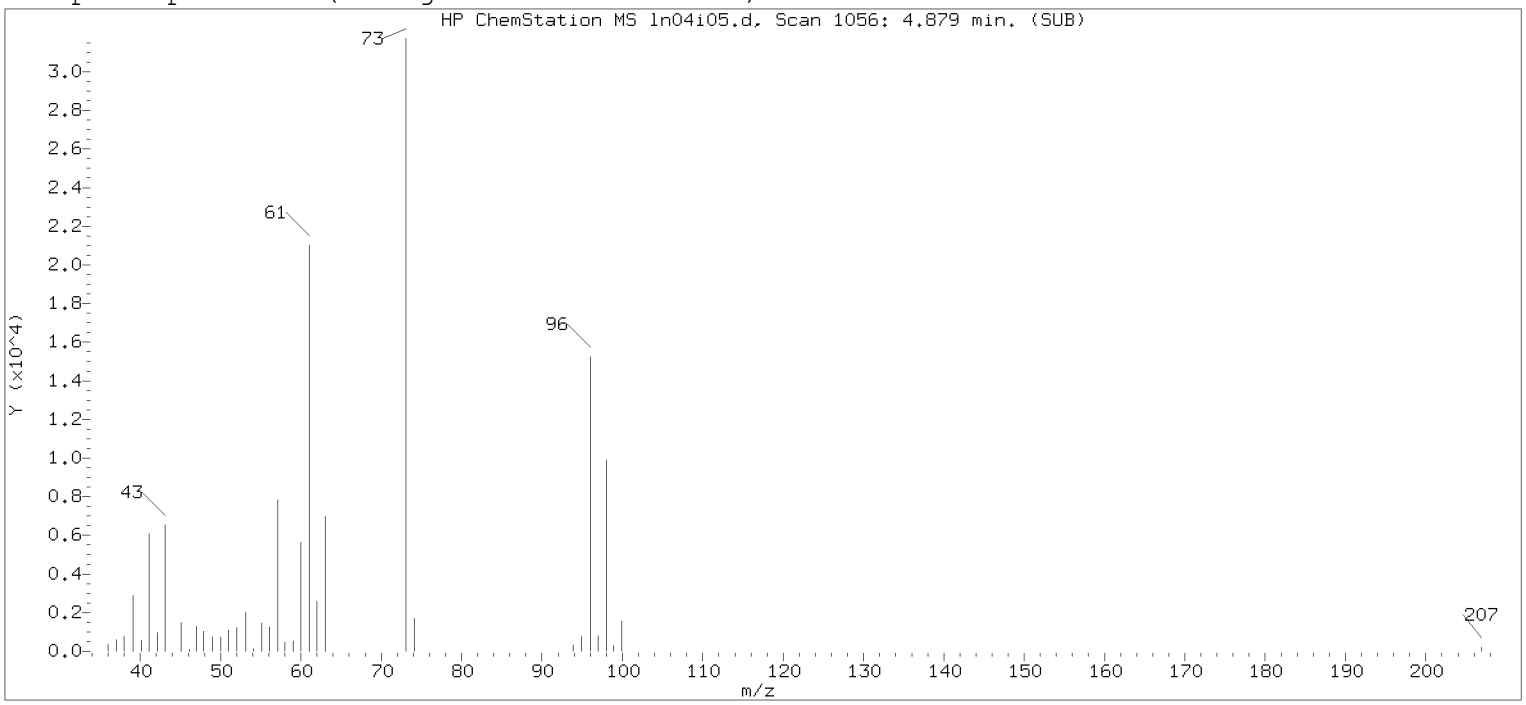
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1189
Retention Time (minutes): 5.306
Quant Ion : 57.00
Area (flag) : 75187M
On-Column Amount (ng) : 8.5083
Integration start scan : 1153 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

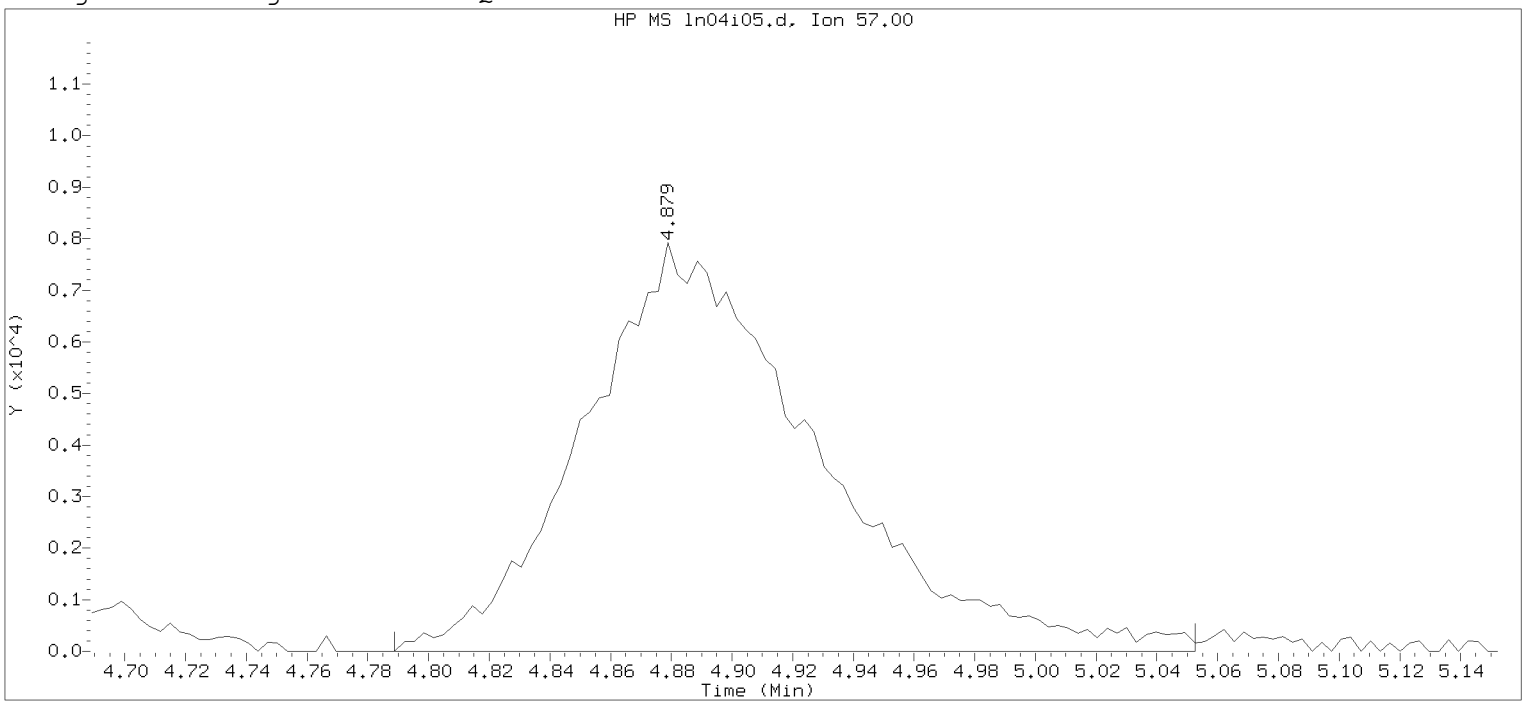
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

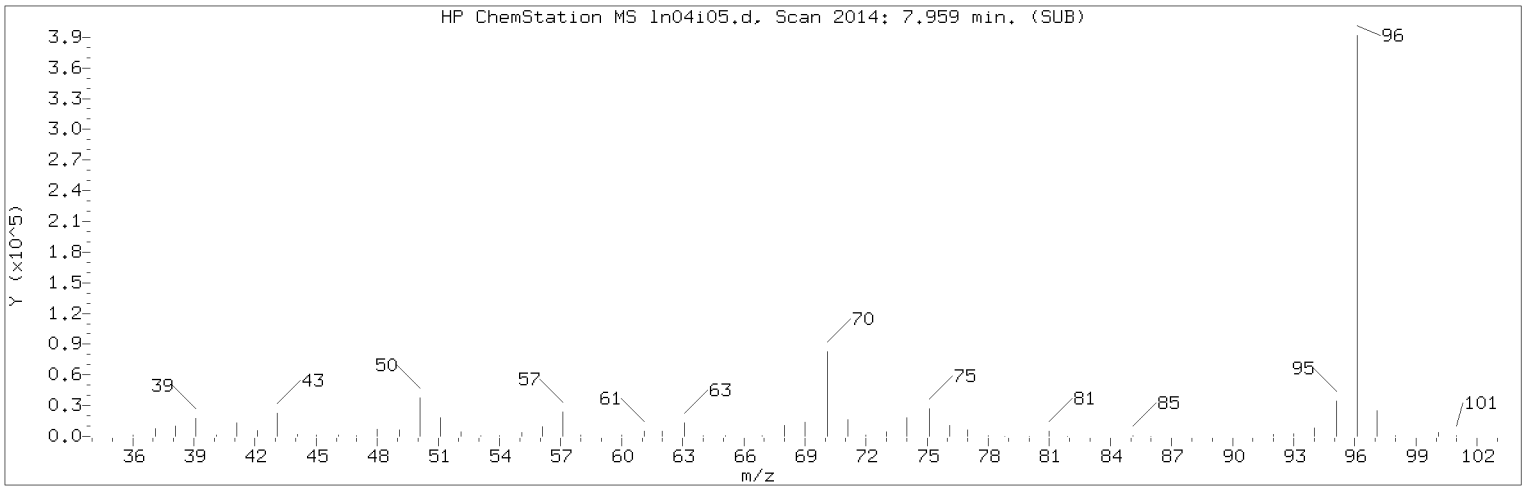
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

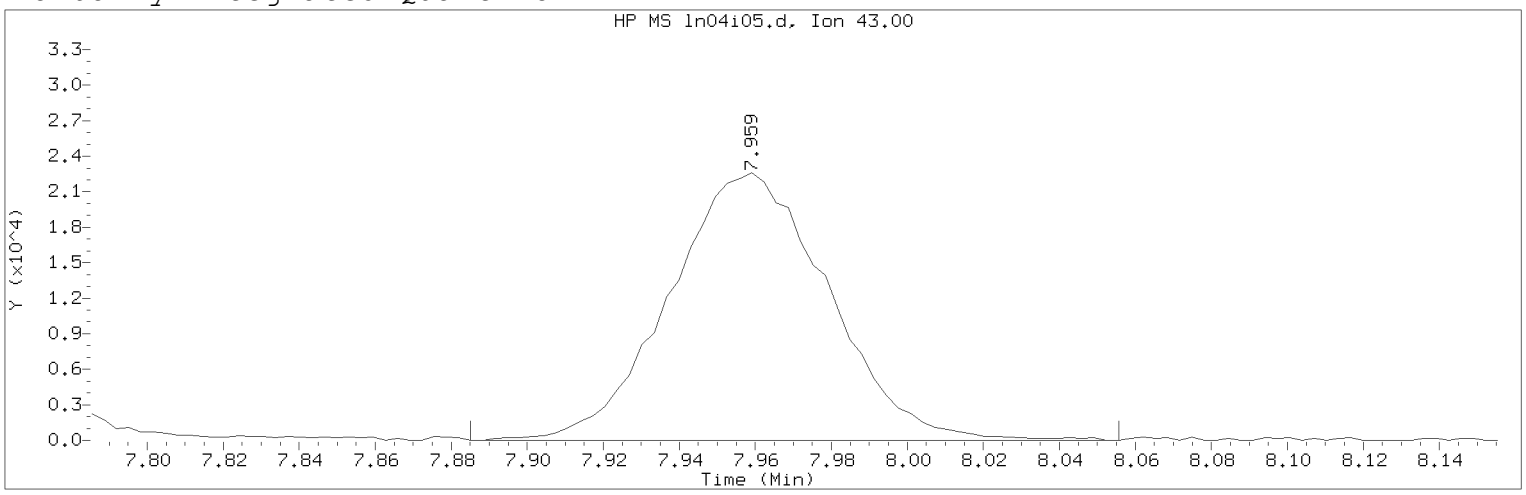
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1056
Retention Time (minutes): 4.879
Quant Ion : 57.00
Area : 42116
On-column Amount (ng) : 11.5193
Integration start scan : 1027 Integration stop scan: 1109
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

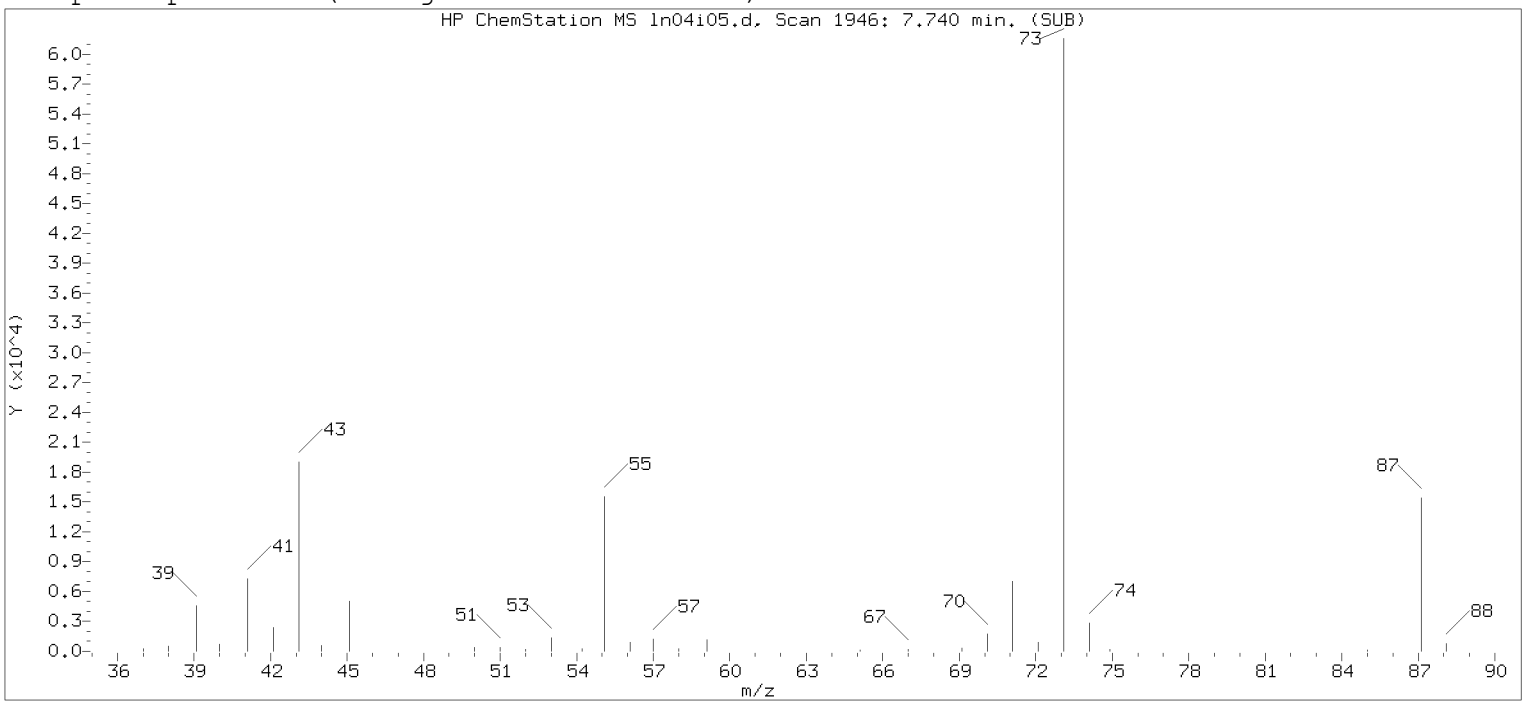
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2014
Retention Time (minutes): 7.959
Quant Ion : 43.00
Area (flag) : 65347MA
On-Column Amount (ng) : 7.9157
Integration start scan : 1990 Integration stop scan: 2043
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

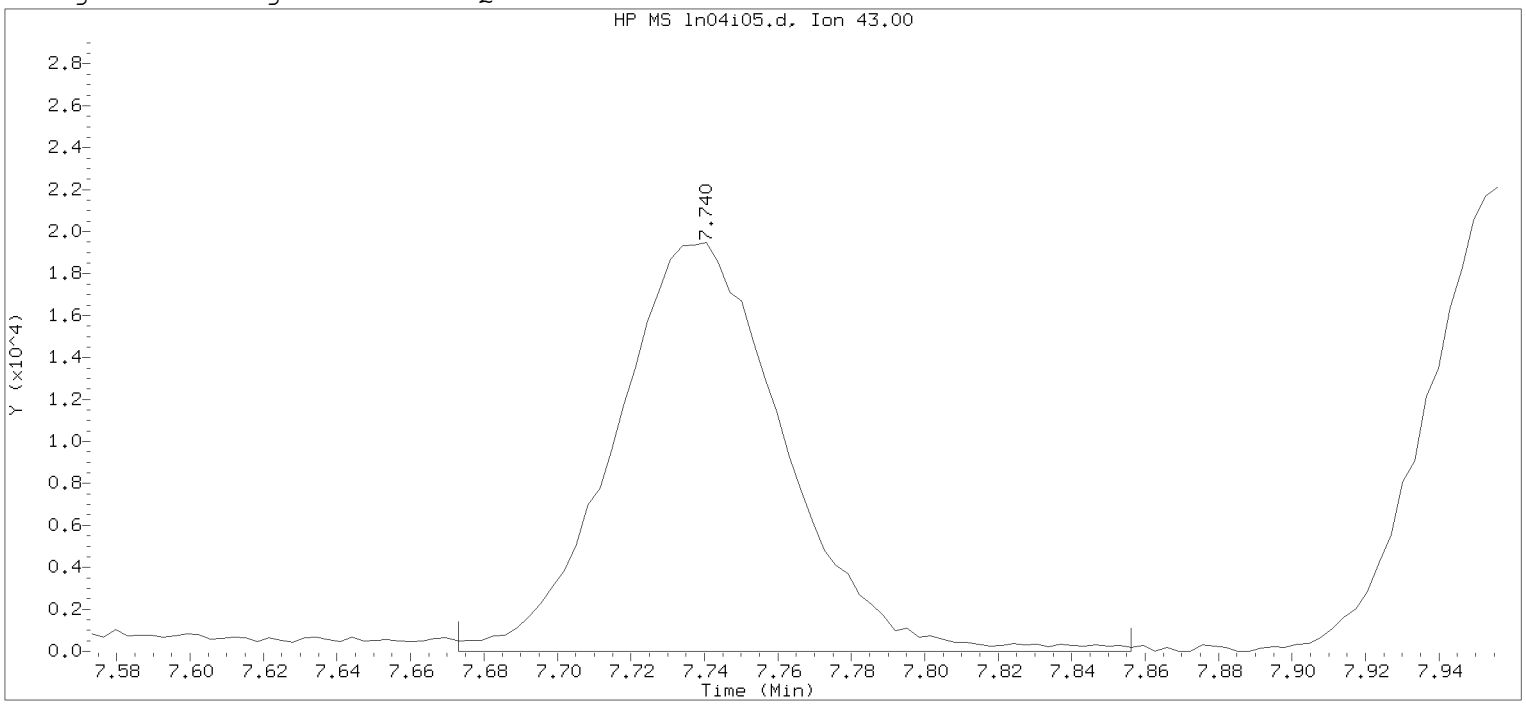
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

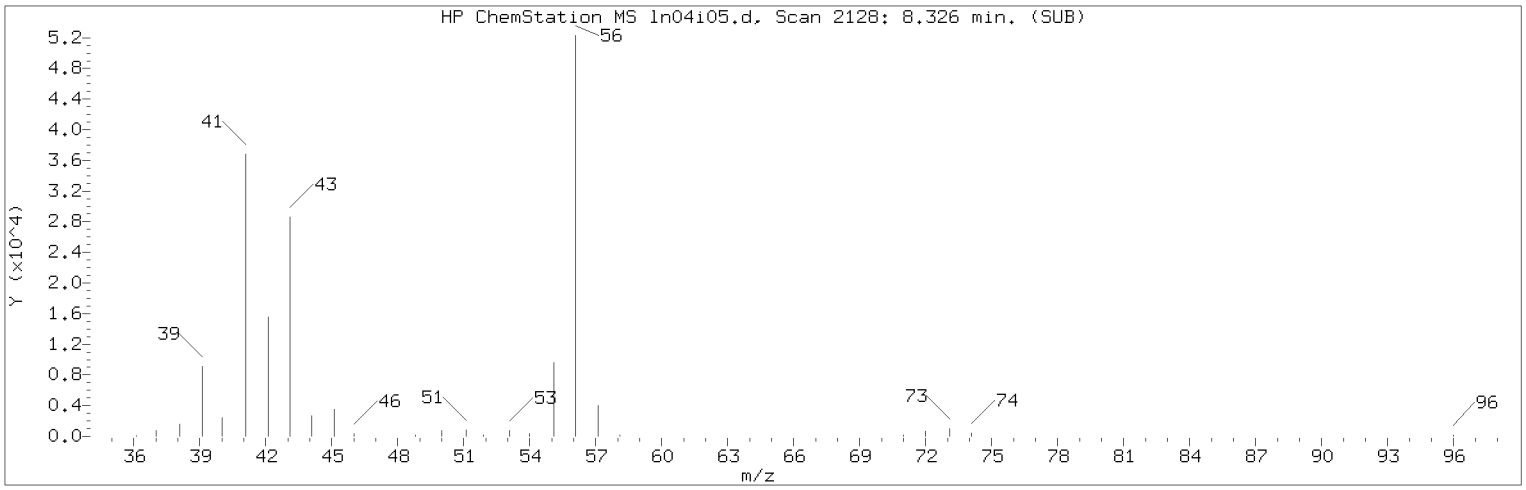
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

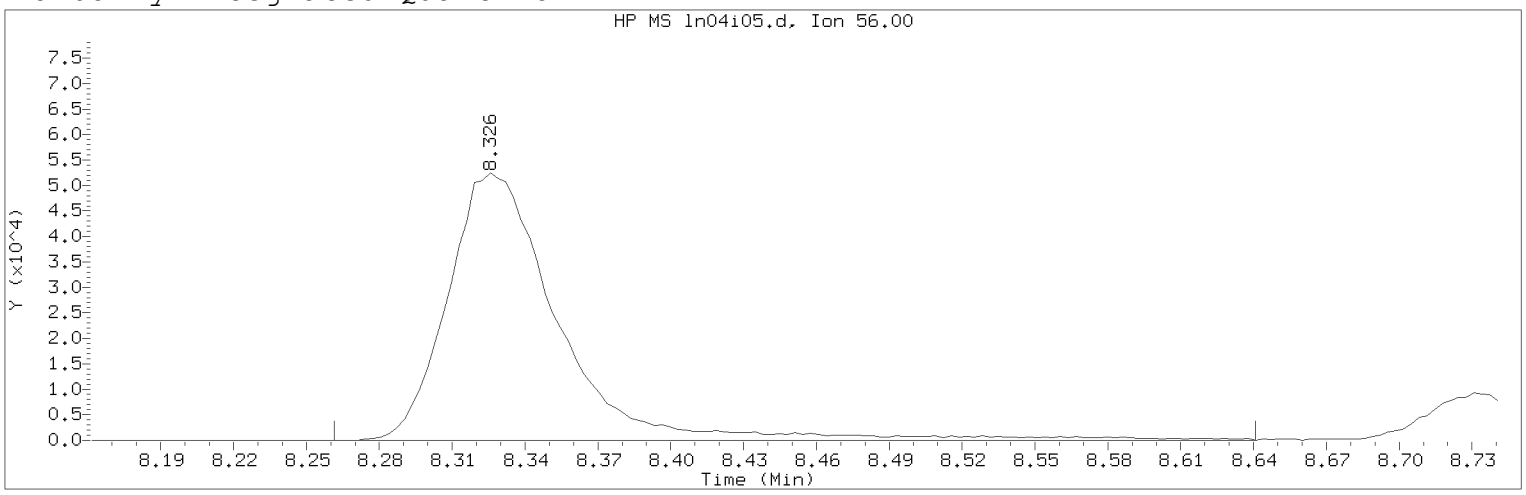
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.740
Quant Ion : 43.00
Area : 62104
On-column Amount (ng) : 10.1613
Integration start scan : 1924 Integration stop scan: 1981
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

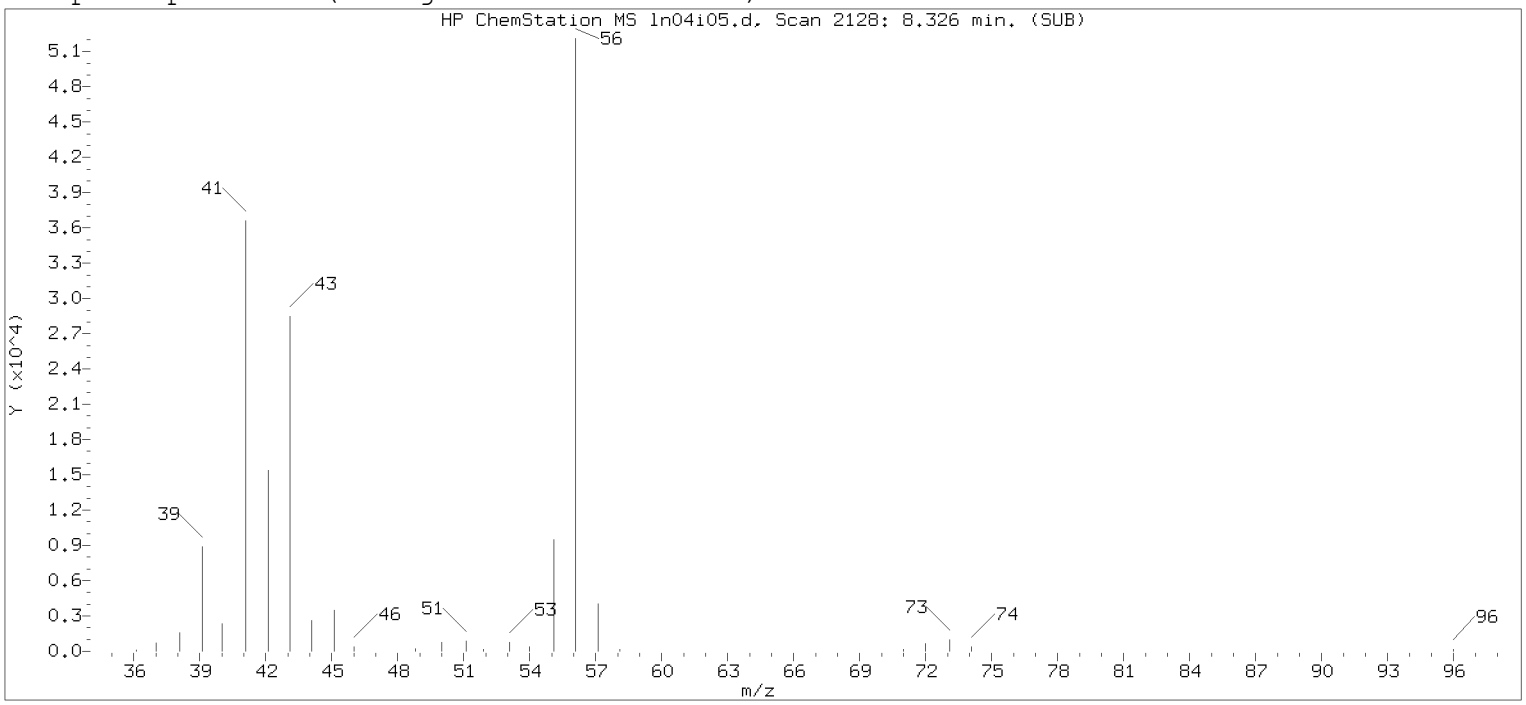
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area (flag) : 166674M
On-Column Amount (ng) : 518.8682
Integration start scan : 2107 Integration stop scan: 2225
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

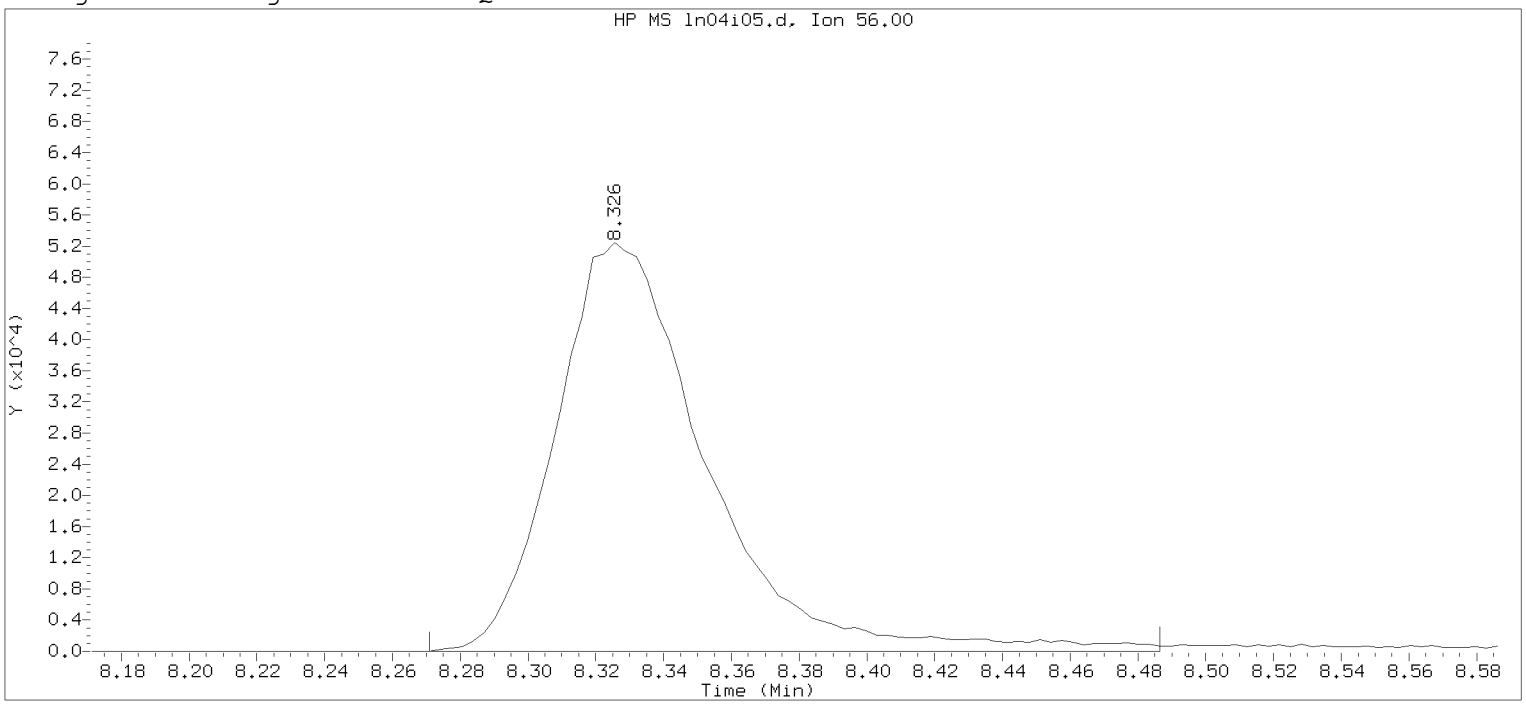
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

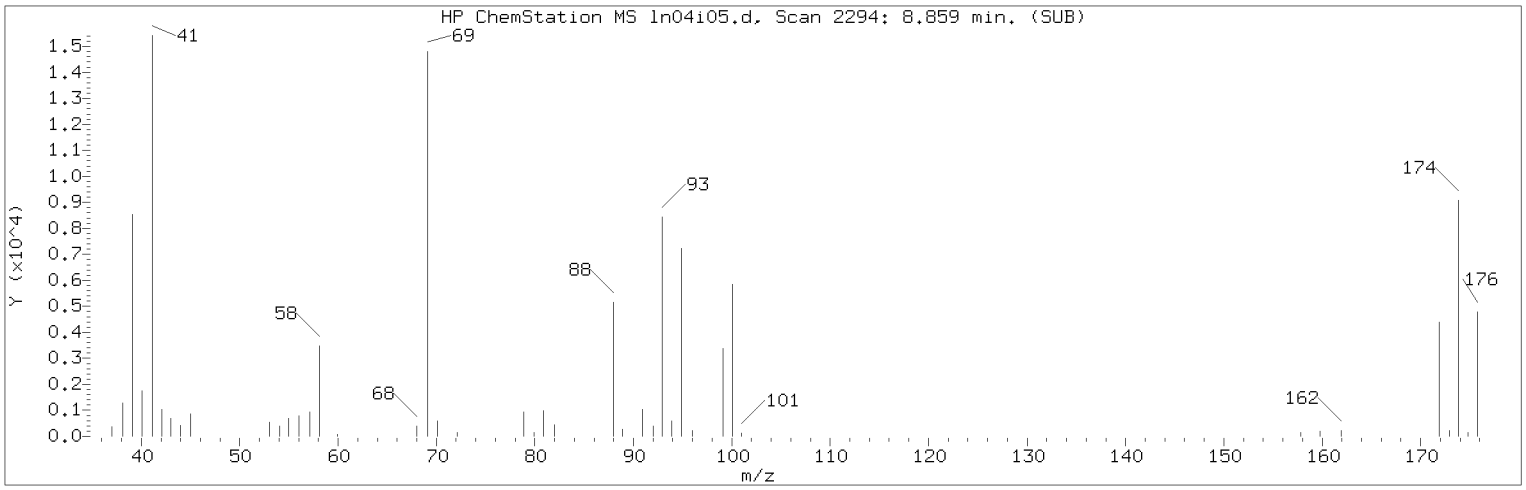
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

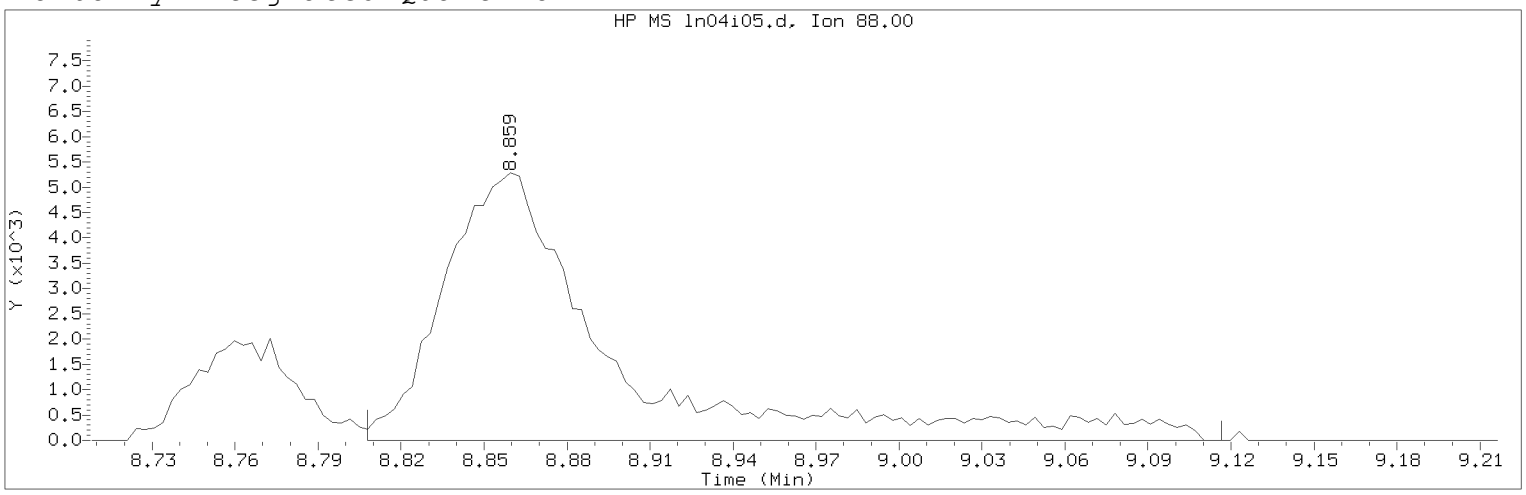
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area : 161642
On-column Amount (ng) : 524.2963
Integration start scan : 2110 Integration stop scan: 2177
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

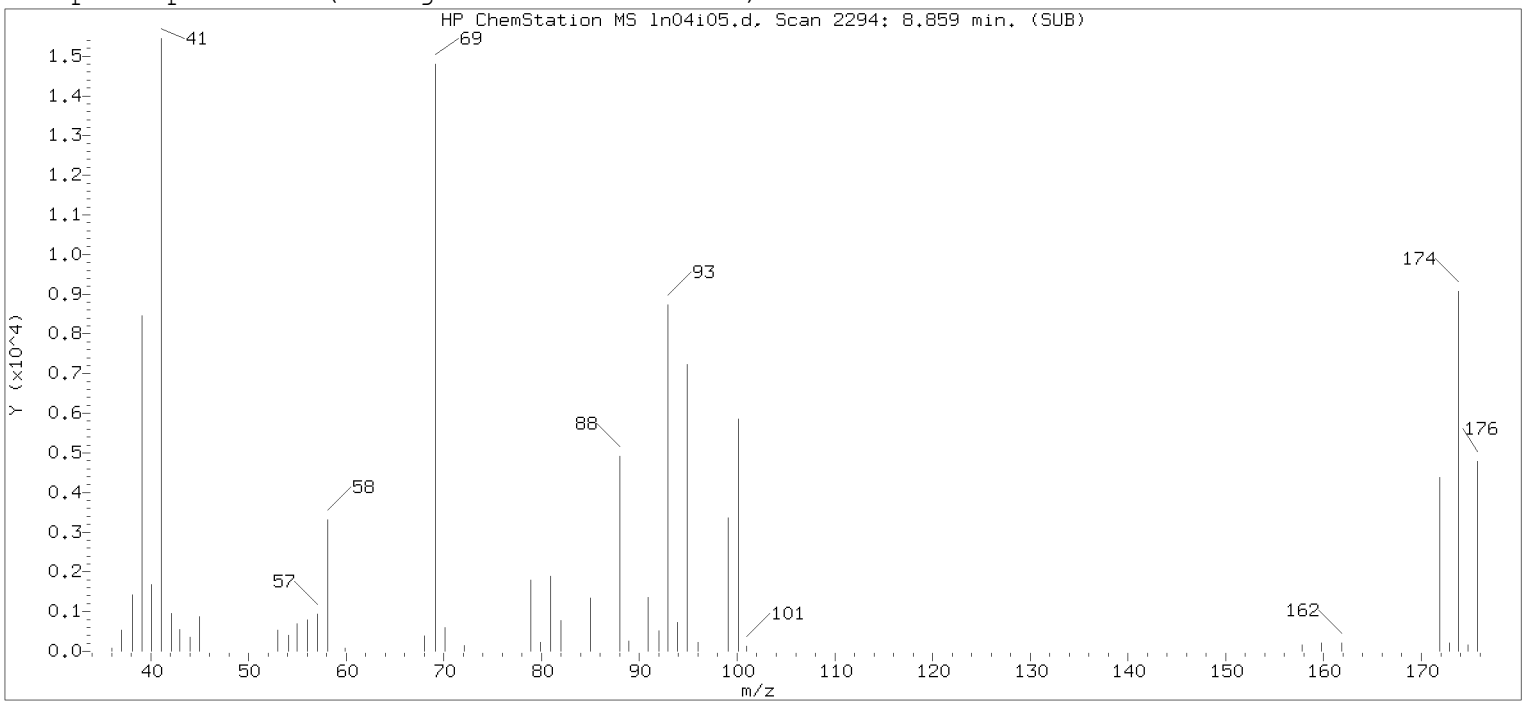
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2294
Retention Time (minutes): 8.859
Quant Ion : 88.00
Area (flag) : 22251M
On-Column Amount (ng) : 252.0176
Integration start scan : 2277 Integration stop scan: 2373
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

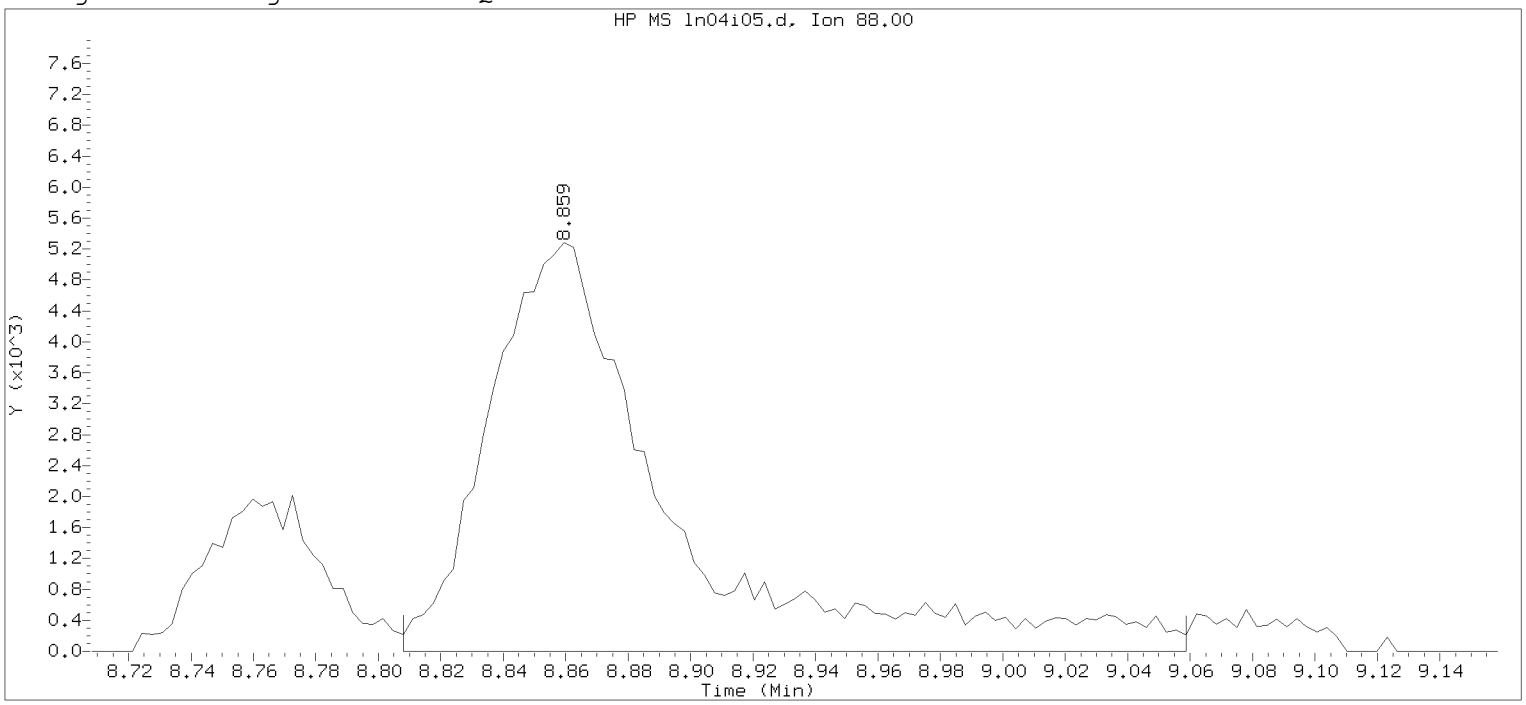
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

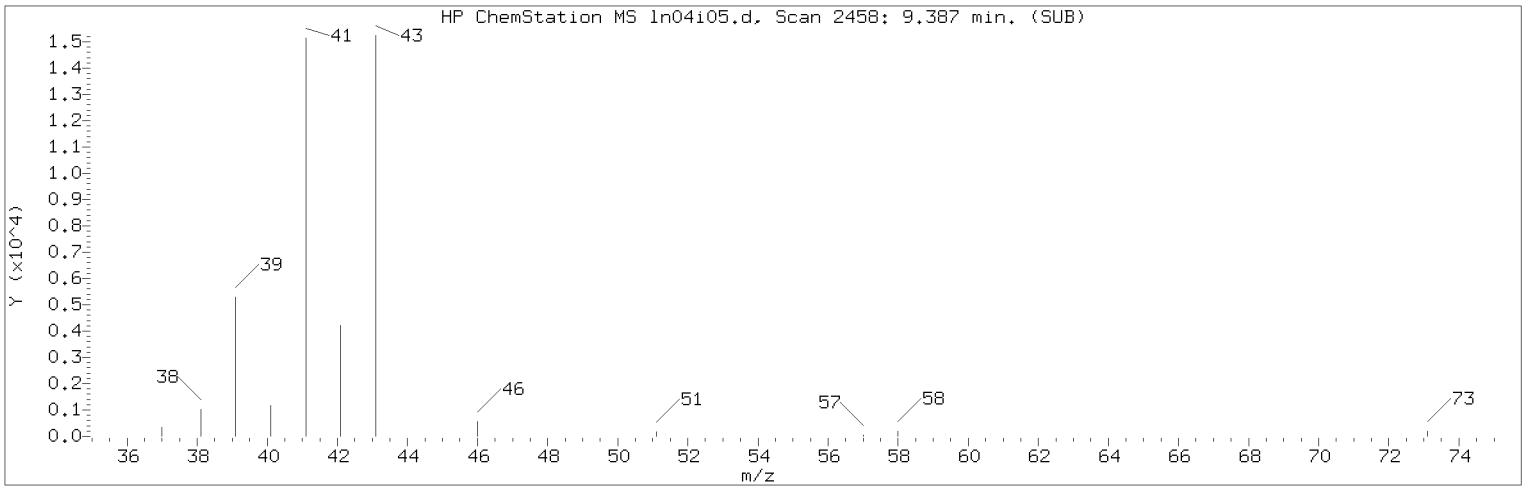
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

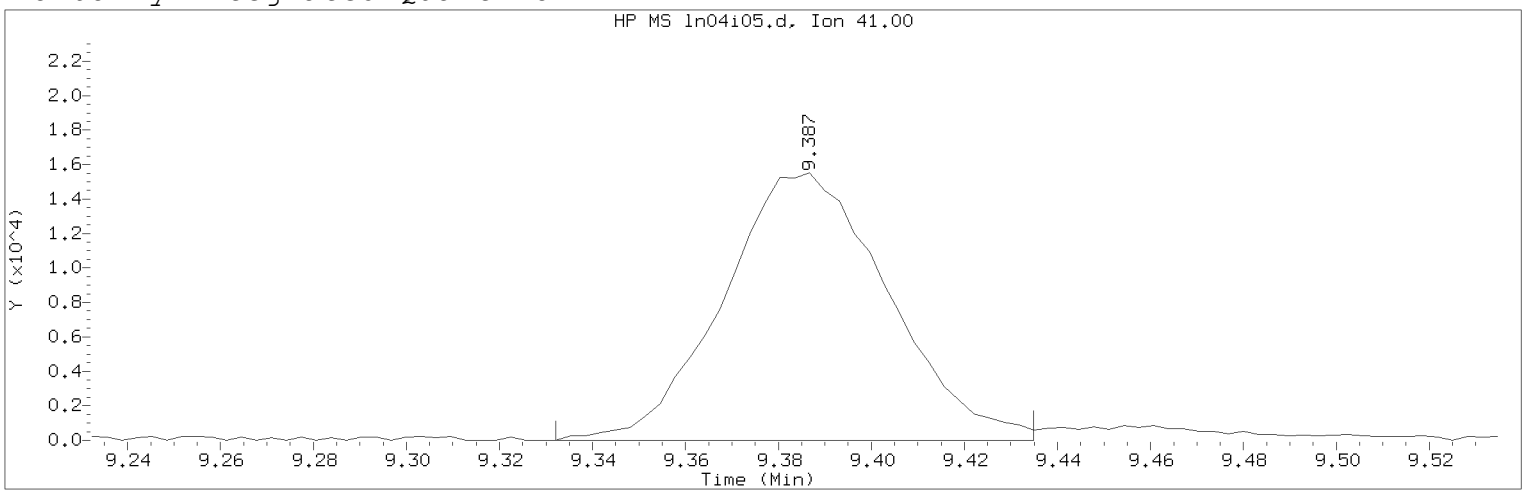
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2294
Retention Time (minutes): 8.859
Quant Ion : 88.00
Area : 21165
On-column Amount (ng) : 248.6410
Integration start scan : 2277 Integration stop scan: 2355
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

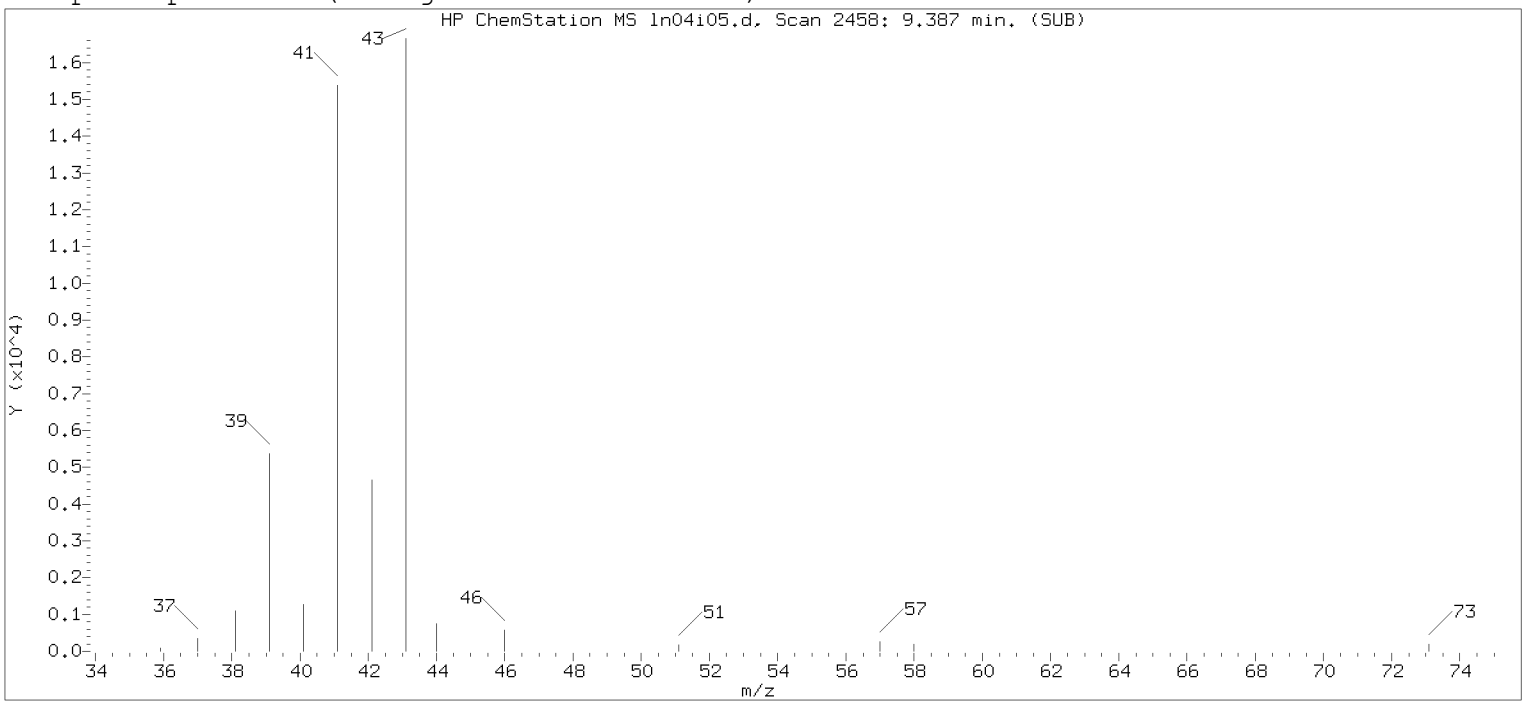
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2458
Retention Time (minutes): 9.387
Quant Ion : 41.00
Area (flag) : 38245M
On-Column Amount (ng) : 18.1785
Integration start scan : 2440 Integration stop scan: 2472
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

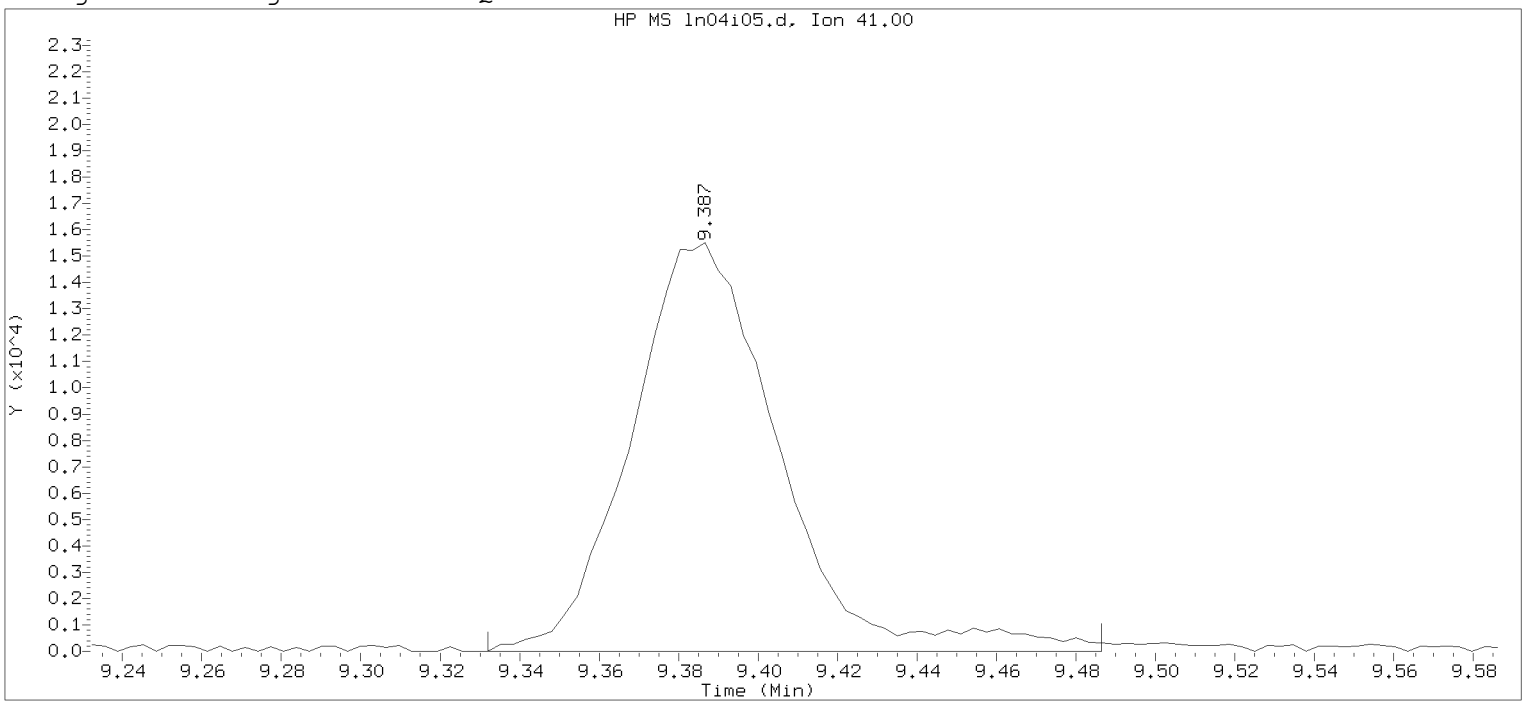
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

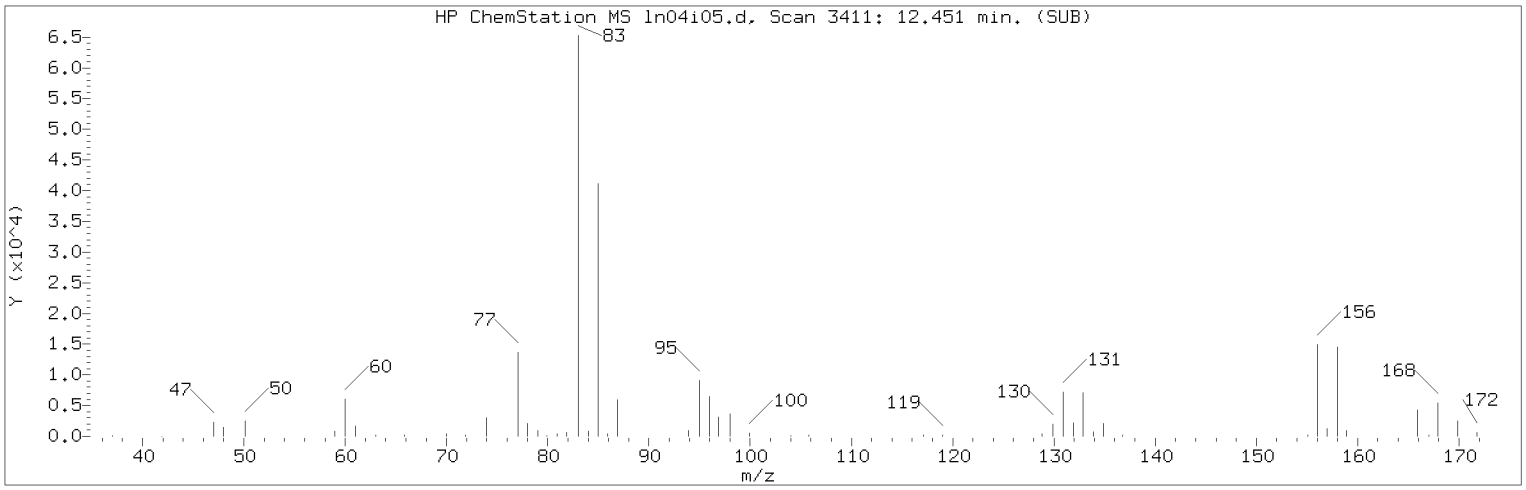
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

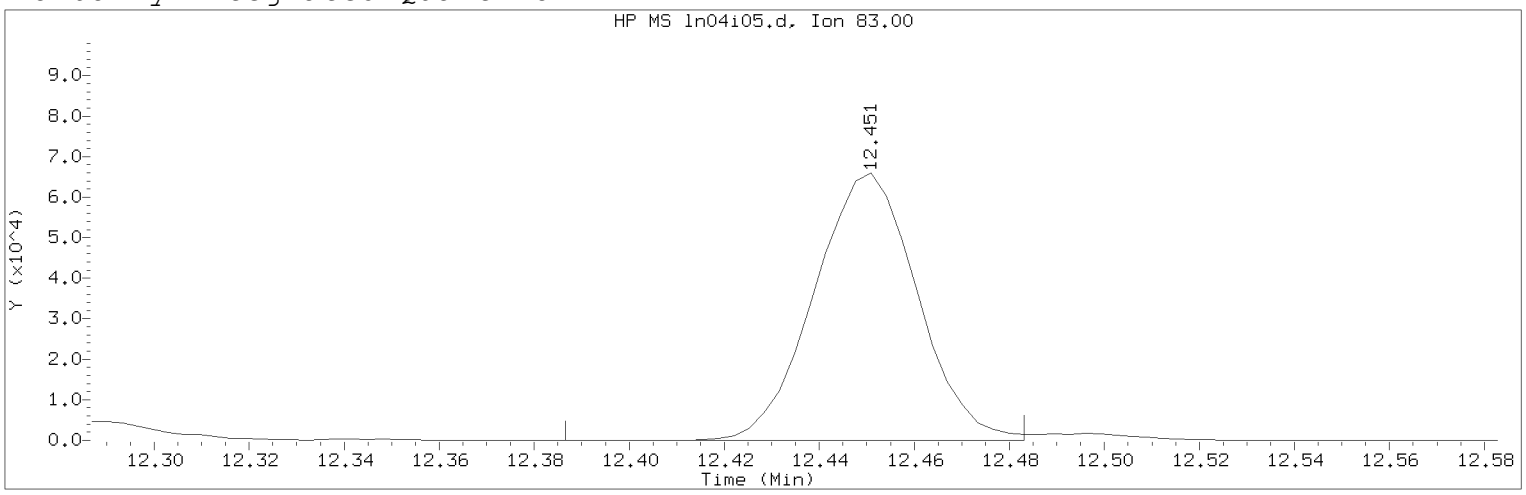
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2458
Retention Time (minutes): 9.387
Quant Ion : 41.00
Area : 40127
On-column Amount (ng) : 18.9522
Integration start scan : 2440 Integration stop scan: 2488
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

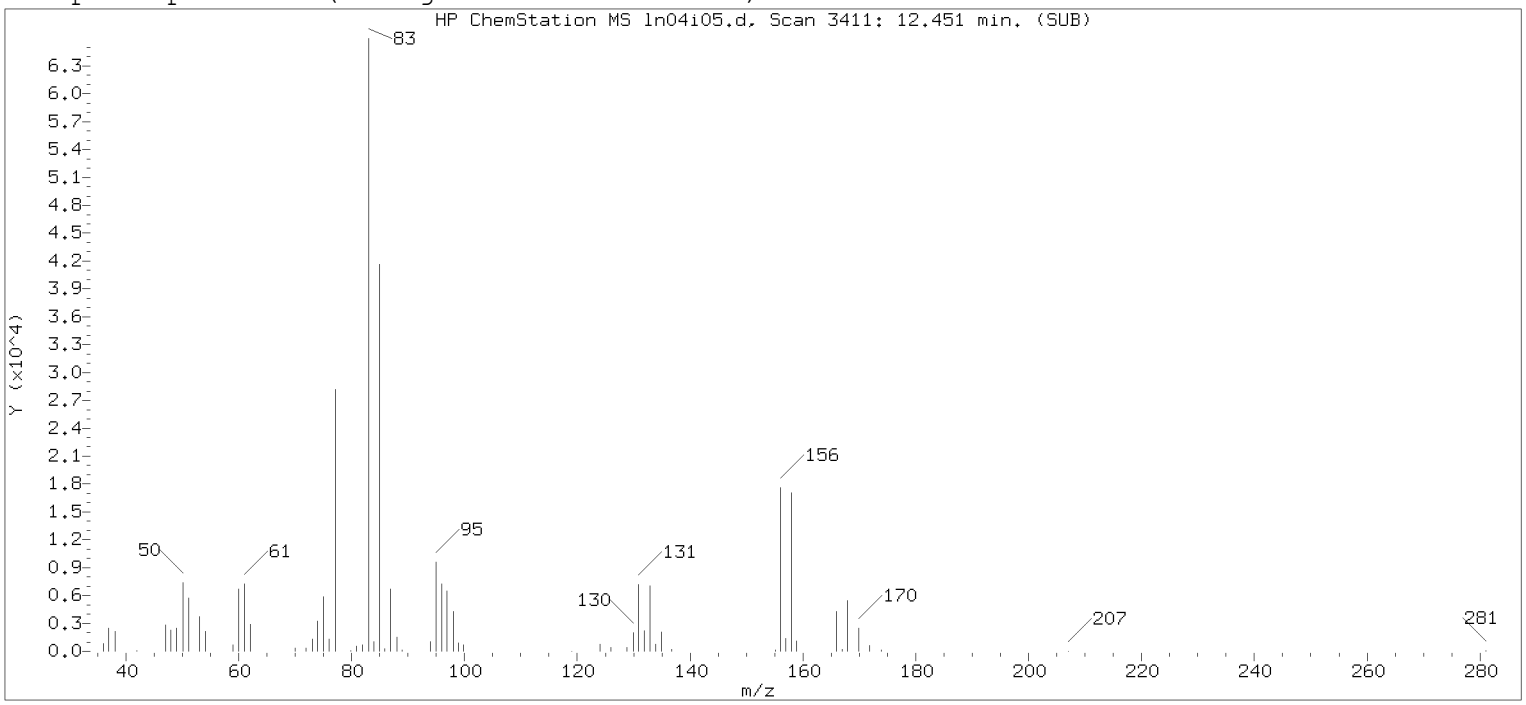
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 99221M
On-Column Amount (ng) : 10.5834
Integration start scan : 3390 Integration stop scan: 3420
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

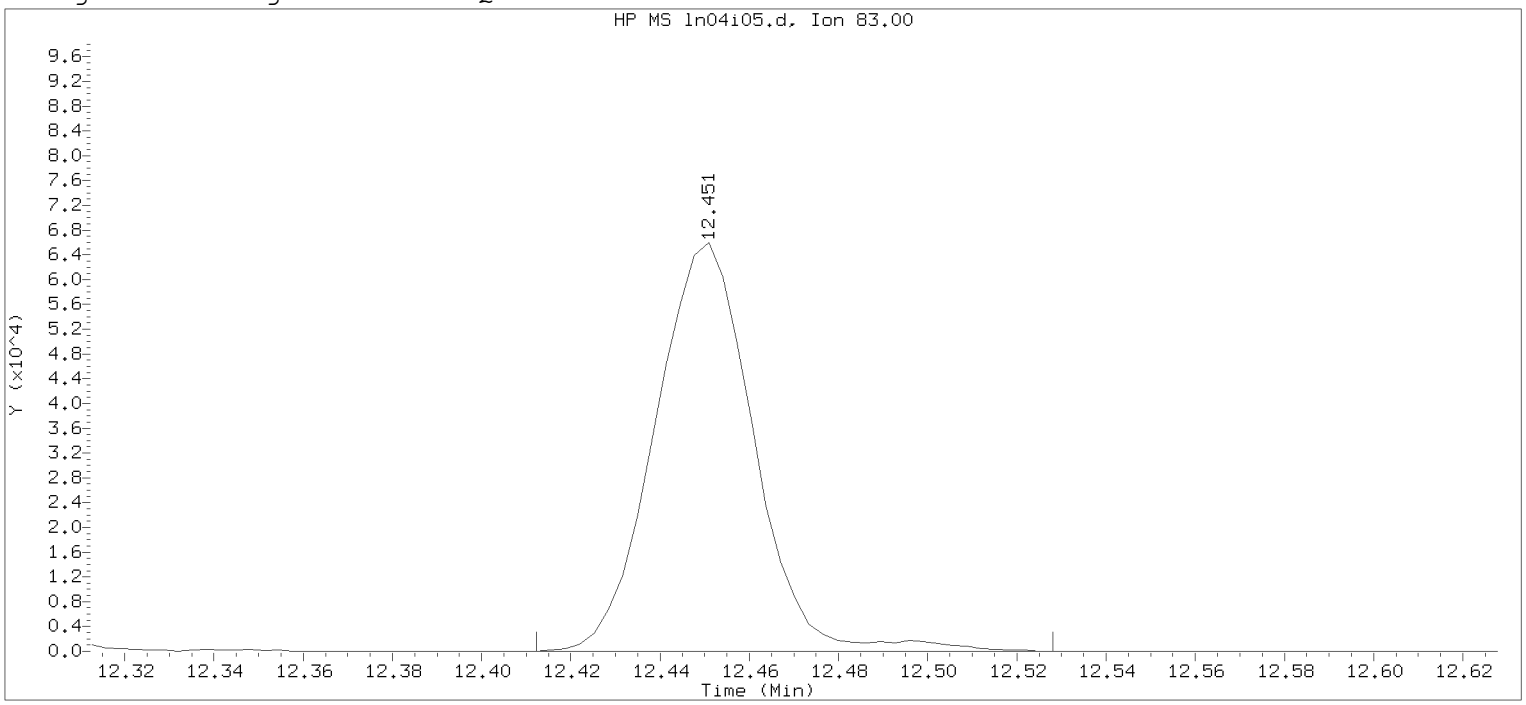
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

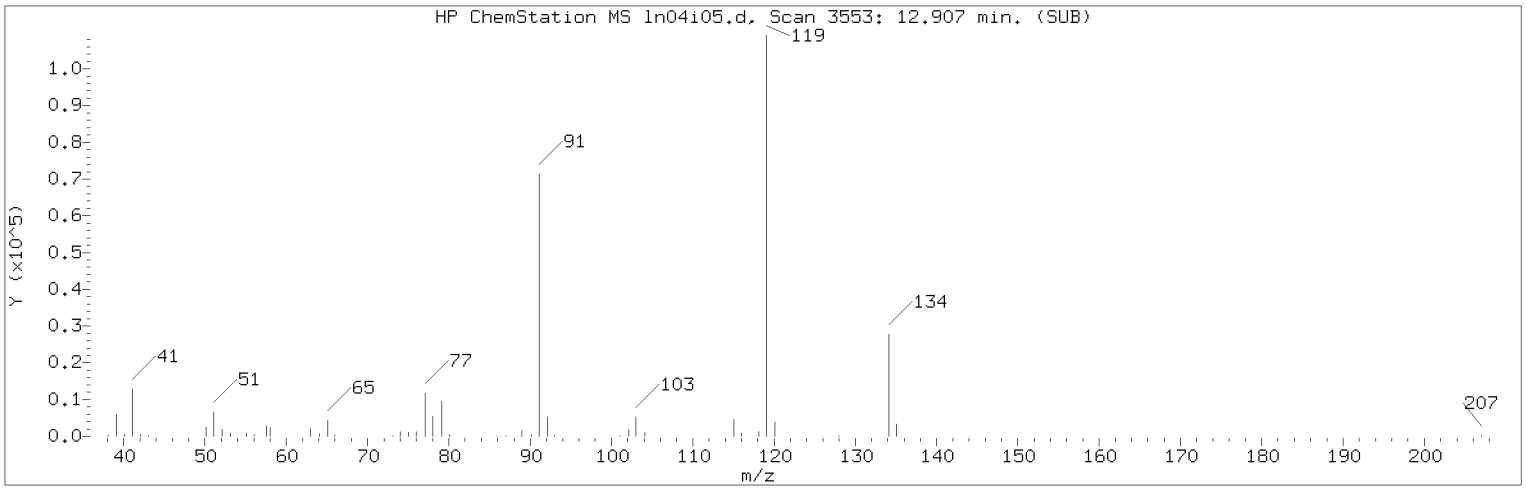
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

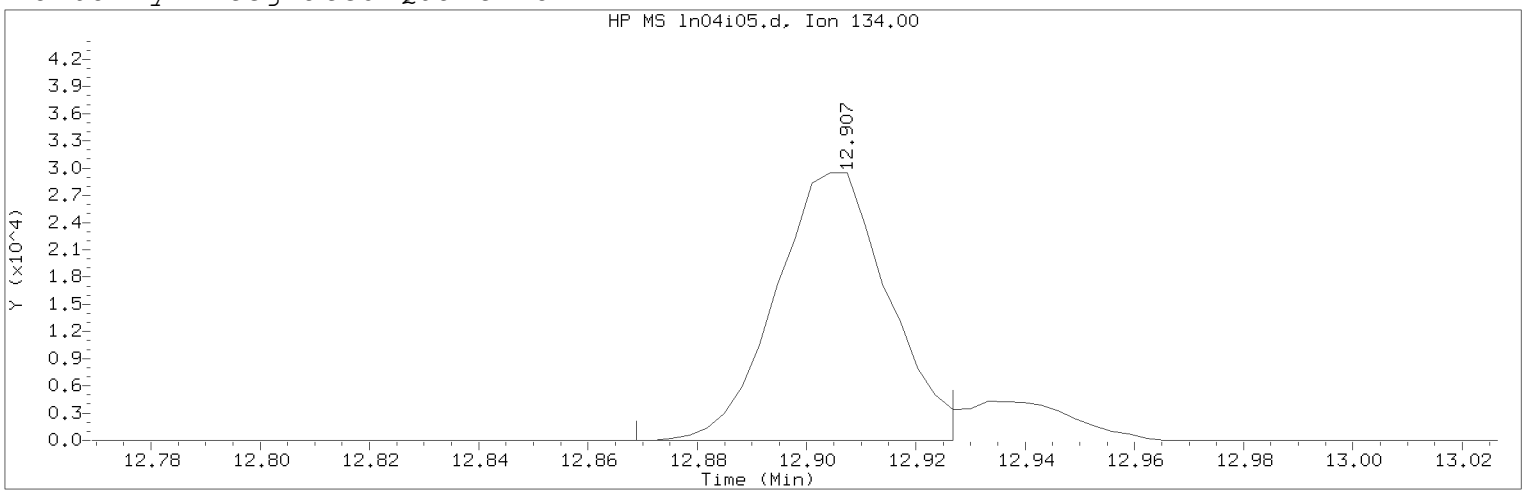
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 101487
On-column Amount (ng) : 10.6325
Integration start scan : 3398 Integration stop scan: 3434
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

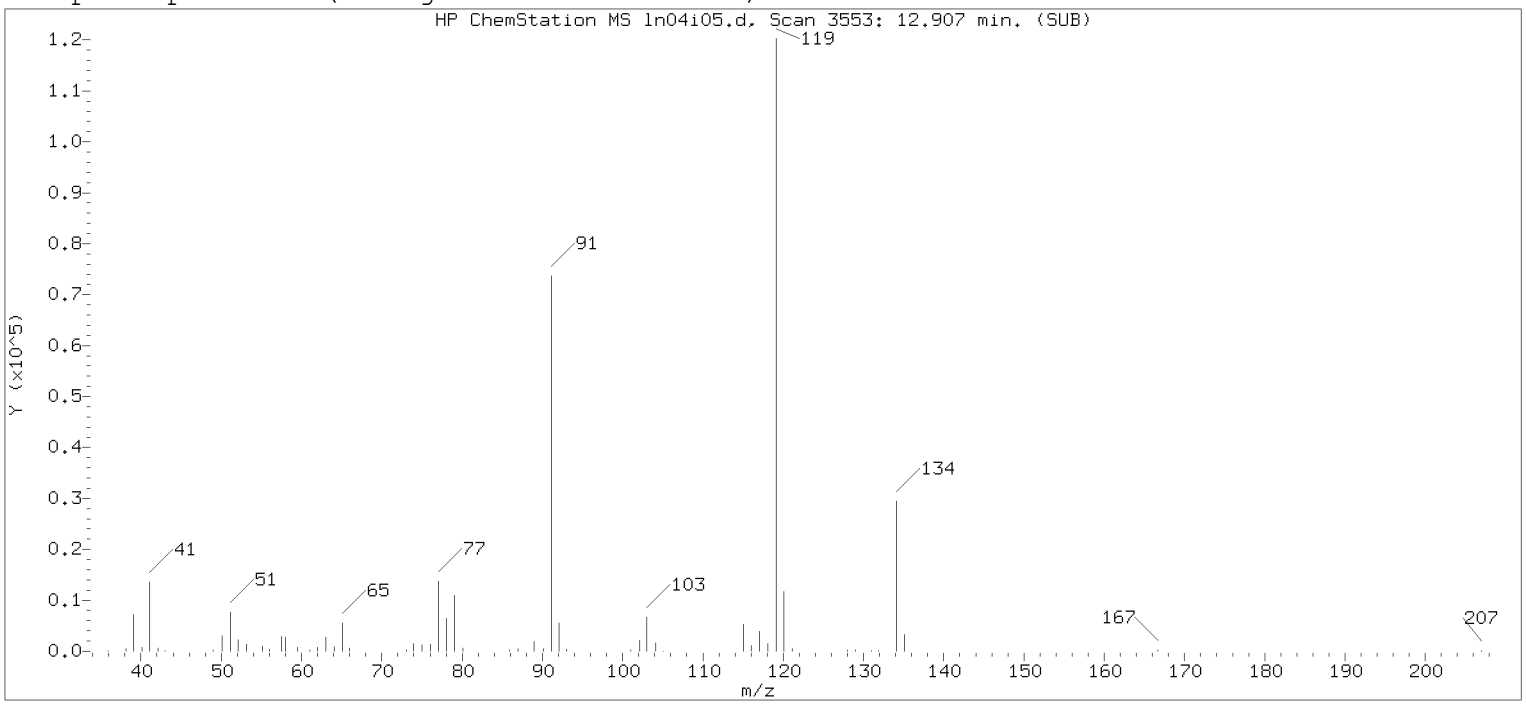
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area (flag) : 42119M
On-Column Amount (ng) : 8.5994
Integration start scan : 3540 Integration stop scan: 3558
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

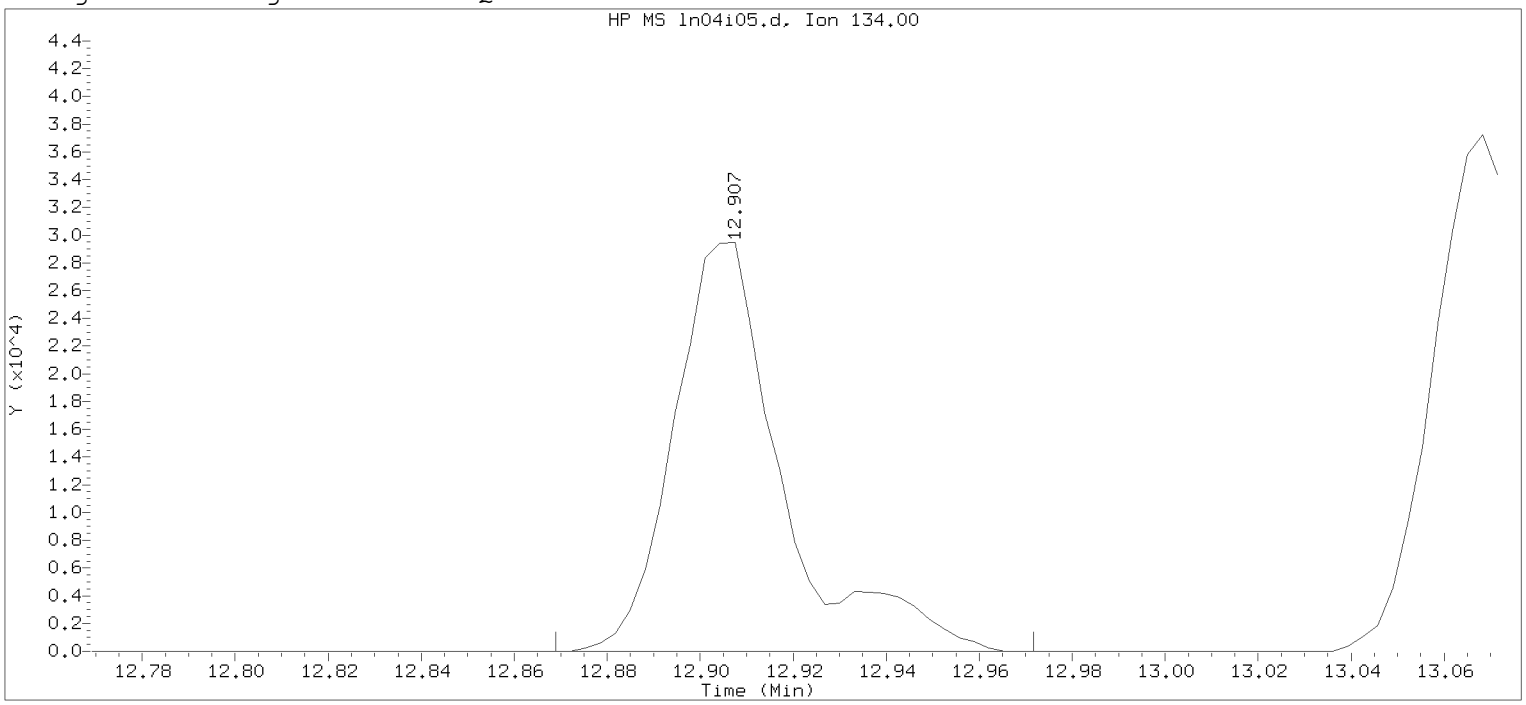
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



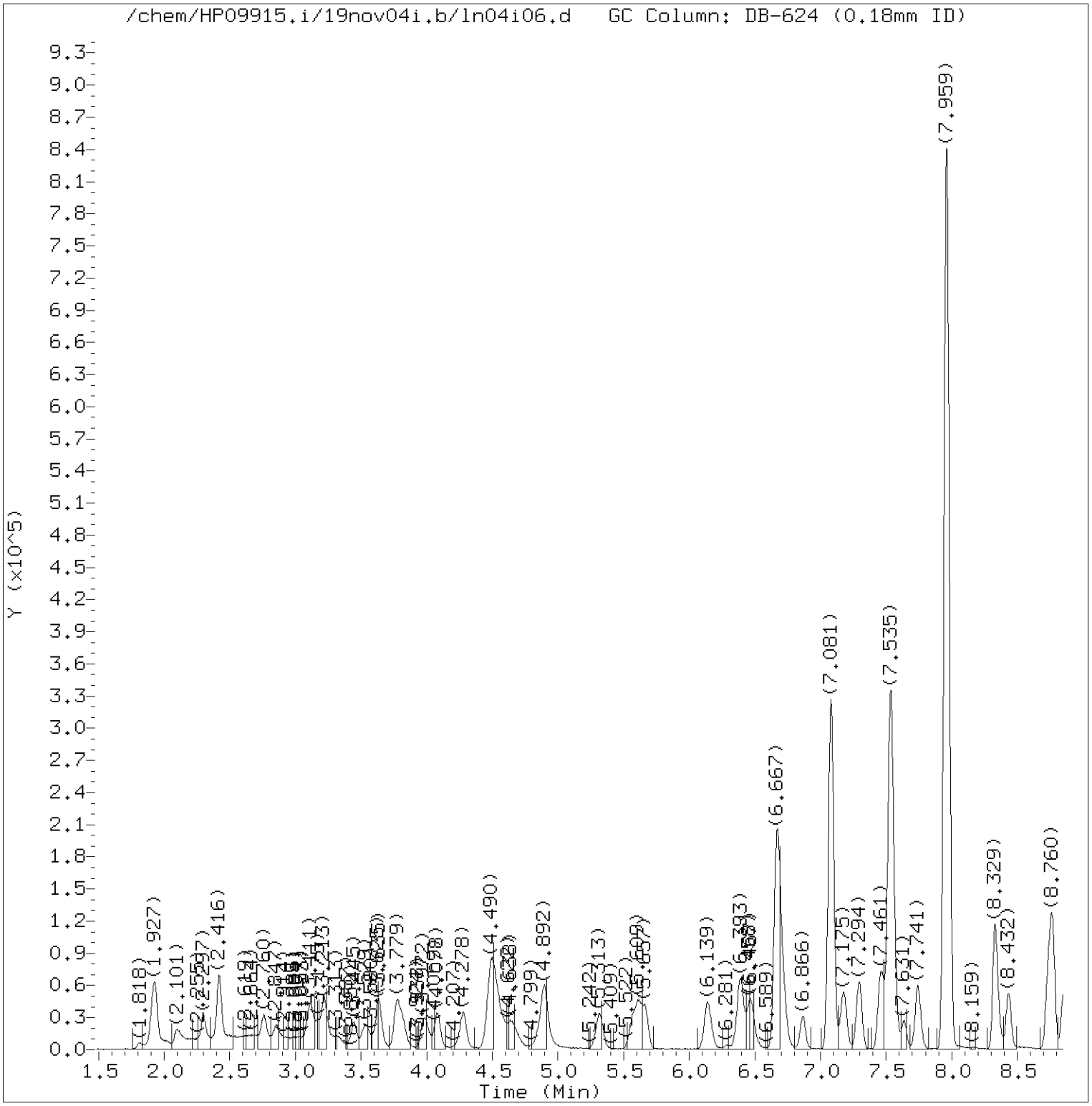
Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area : 47747
On-column Amount (ng) : 9.3569
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

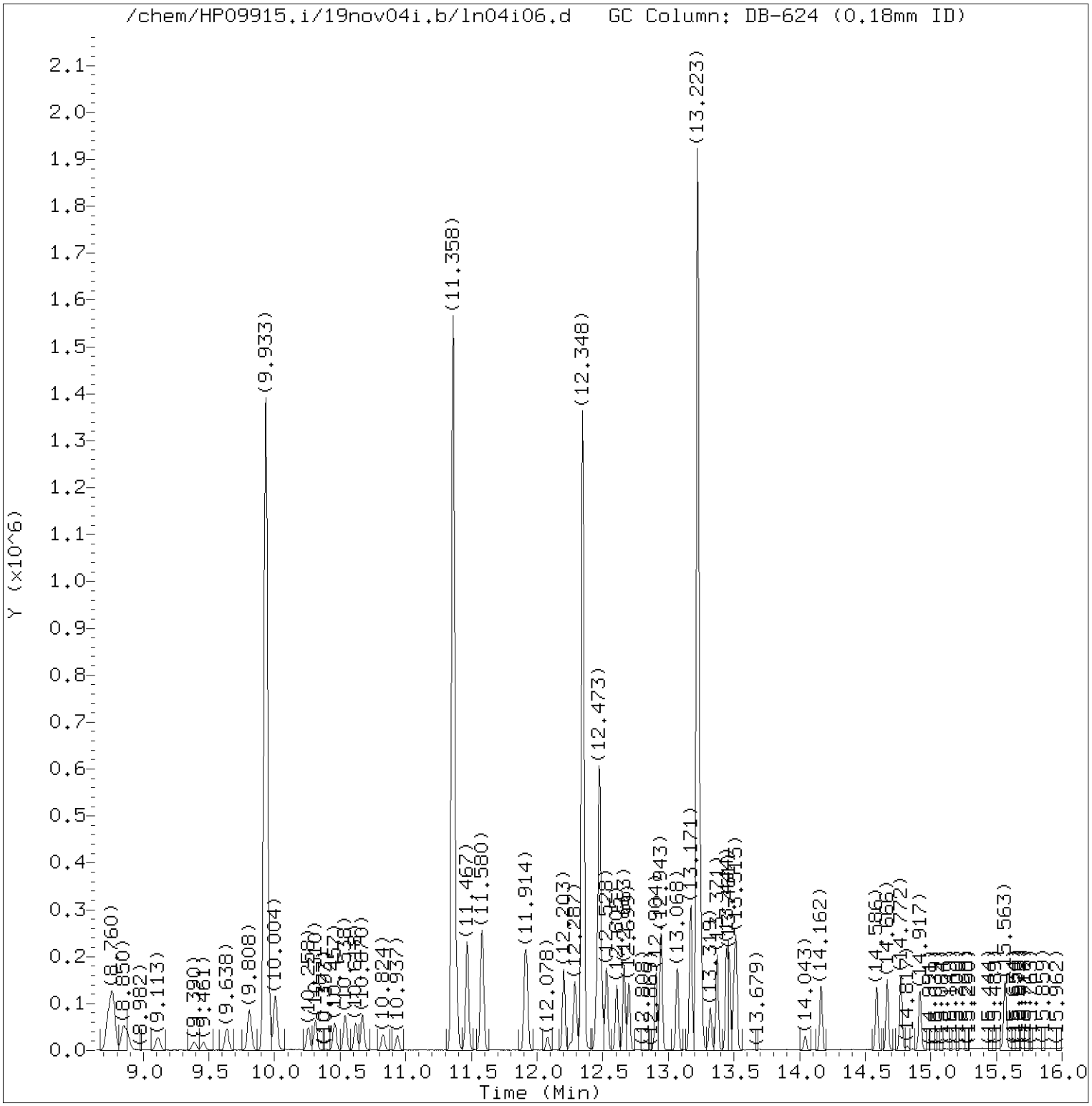
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.098	85	31217M	3.898
4) Chloromethane	(2)	2.297	50	32031	4.150
6) Vinyl Chloride	(2)	2.416	62	30864	4.006
5) 1,3-Butadiene	(2)	2.419	39	27249M	4.252
8) Bromomethane	(2)	2.760	94	23202	4.202
9) Chloroethane	(2)	2.860	64	17298	4.086
10) Dichlorofluoromethane	(2)	3.107	67	40740M	4.015
12) Trichlorofluoromethane	(2)	3.168	101	33532	4.043
11) n-Pentane	(2)	3.223	43	42826M	4.369
14) Ethyl ether	(2)	3.445	59	21059	3.929
15) Freon 123a	(2)	3.538	67	27312	4.094
16) Acrolein	(1)	3.635	56	72021	36.633
17) 1,1-Dichloroethene	(2)	3.773	96	19372	3.979
17) 1,1-Dichloroethene	(2)	3.773	63	9734	3.988
19) Freon 113	(2)	3.805	101	22601	4.069
18) Acetone	(1)	3.815	58	6763M	7.673
22) Methyl Iodide	(2)	3.972	142	39671	3.933
21) 2-Propanol	(1)	4.004	45	45871	72.395
23) Carbon Disulfide	(2)	4.082	76	71681	3.907
27) Methyl Acetate	(2)	4.258	43	24928M	3.976
25) Allyl Chloride	(2)	4.281	41	34775	3.982
28) Methylene Chloride	(2)	4.477	84	22693	3.917
29)*t-Butyl alcohol-d10	(1)	4.512	65	262044M	250.000
30) t-Butyl alcohol	(1)	4.638	59	80219	72.713
31) Acrylonitrile	(2)	4.840	53	12699	3.765
32) trans-1,2-Dichloroethene	(2)	4.901	96	22231	3.947
33) Methyl Tertiary Butyl Ether	(2)	4.901	73	71515	3.869
34) n-Hexane	(2)	5.323	57	33969M	3.877
36) 1,1-Dichloroethane	(2)	5.564	63	39317	4.002
38) di-Isopropyl ether	(2)	5.615	45	72628	3.833
39) 2-Chloro-1,3-butadiene	(2)	5.663	53	34190	3.879
40) Ethyl t-butyl ether	(2)	6.139	59	70845	3.853
43) 1,2-Dichloroethene (Total)	(2)		96	47253	7.906
44) 2-Butanone	(2)	6.371	43	32547	7.516
42) cis-1,2-Dichloroethene	(2)	6.390	96	25022	3.958
45) 2,2-Dichloropropane	(2)	6.400	77	29877	3.912
47) Propionitrile	(1)	6.467	54	100934	73.427
48) Methacrylonitrile	(2)	6.670	67	134092	36.850

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.718	128	12879	3.842
50) Tetrahydrofuran	(1)	6.734	71	9128	7.351
51) Chloroform	(2)	6.869	83	36176	3.850
52)$Dibromofluoromethane	(2)	7.081	113	280667	49.988
52)$Dibromofluoromethane	(2)	7.078	111	287593	50.237
53) 1,1,1-Trichloroethane	(2)	7.091	97	31167	3.886
54) Cyclohexane	(2)	7.178	56	42347	3.949
54) Cyclohexane	(2)	7.175	84	36627	3.932
54) Cyclohexane	(2)	7.181	69	13119	3.955
56) Carbon Tetrachloride	(2)	7.287	117	25509	3.750
55) 1,1-Dichloropropene	(2)	7.297	75	30762	3.960
58) Isobutyl Alcohol	(1)	7.464	41	65125	175.416
57)$1,2-Dichloroethane-d4	(2)	7.532	102	72246	50.488
57)$1,2-Dichloroethane-d4	(2)	7.535	65	323654	50.754
57)$1,2-Dichloroethane-d4	(2)	7.538	104	45694	49.994
60) Benzene	(2)	7.564	78	92488	3.959
61) 1,2-Dichloroethane	(2)	7.638	62	29321	3.902
61) 1,2-Dichloroethane	(2)	7.628	98	2899	3.899
65) t-Amyl methyl ether	(2)	7.744	73	70267	3.807
66)*Fluorobenzene	(2)	7.959	96	1148427	50.000
67) n-Heptane	(2)	7.962	43	32502MA	3.971
69) n-Butanol	(1)	8.329	56	110027M	344.330
71) Trichloroethene	(2)	8.435	95	22766	3.871
72) Methylcyclohexane	(2)	8.737	83	42437	3.889
72) Methylcyclohexane	(2)	8.731	98	19822	4.014
73) 1,2-Dichloropropane	(2)	8.773	63	22762	3.837
76) Methyl Methacrylate	(2)	8.843	69	20713M	3.611
75) 1,4-Dioxane	(1)	8.850	88	16188	184.315
74) Dibromomethane	(2)	8.879	93	14634	3.813
78) Bromodichloromethane	(2)	9.110	83	24167	3.509
79) 2-Nitropropane	(2)	9.387	41	14154	6.785
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	8979	3.525
81) cis-1,3-Dichloropropene	(2)	9.638	75	32112	3.511
82) 4-Methyl-2-pentanone	(2)	9.808	43	67922	7.431
83)$Toluene-d8	(3)	9.933	98	1152733	49.832
83)$Toluene-d8	(3)	9.933	100	745821	49.773
88) Toluene	(3)	10.004	92	56092	3.868
90) 1,3-Dichloropropene (total)	(3)		100	60153	6.917

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	28041	3.406
91) Ethyl Methacrylate	(3)	10.310	69	34660	3.464
92) 1,1,2-Trichloroethane	(3)	10.457	97	20516	3.731
93) Tetrachloroethene	(3)	10.538	166	24234	3.946
94) 1,3-Dichloropropane	(3)	10.618	76	34762	3.703
96) 2-Hexanone	(3)	10.670	43	50570	7.572
97) Dibromochloromethane	(3)	10.824	129	18906	3.357
99) 1,2-Dibromoethane	(3)	10.937	107	21586	3.615
100)*Chlorobenzene-d5	(3)	11.358	117	884065	50.000
101) 1-Chlorohexane	(3)	11.364	91	31055	3.986
102) Chlorobenzene	(3)	11.387	112	63883	3.895
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	19618	3.631
104) Ethylbenzene	(3)	11.467	91	109318	3.944
106) m+p-Xylene	(3)	11.580	106	85093	7.804
108) Xylene (Total)	(3)		106	126157	11.616
107) o-Xylene	(3)	11.908	106	41064	3.813
109) Styrene	(3)	11.924	104	65784	3.696
110) Bromoform	(3)	12.078	173	12196	2.898
111) Isopropylbenzene	(3)	12.203	105	107056	3.963
112) Cyclohexanone	(1)	12.287	55	63391	184.289
114)$4-Bromofluorobenzene	(3)	12.348	95	440415	50.280
114)$4-Bromofluorobenzene	(3)	12.348	174	367241	50.573
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	33170M	3.658
115) Bromobenzene	(4)	12.467	156	27559	3.820
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	101806	36.395
117) 1,2,3-Trichloropropane	(4)	12.496	110	10208	3.668
119) n-Propylbenzene	(4)	12.528	91	126543	4.014
120) 2-Chlorotoluene	(4)	12.609	126	25381	3.790
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	89290	3.898
121) 4-Chlorotoluene	(4)	12.699	126	27169	3.898
124) tert-Butylbenzene	(4)	12.904	134	18608M	3.928
125) Pentachloroethane	(4)	12.940	167	14303	3.506
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	93258	3.863
127) sec-Butylbenzene	(4)	13.068	105	111847	3.956
129) 1,3-Dichlorobenzene	(4)	13.168	146	51597	3.892
130) p-Isopropyltoluene	(4)	13.174	119	96571	3.948
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	480071	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	53736	3.910

M = Compound was manually integrated.
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on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	99398	3.886
135) Benzyl Chloride	(4)	13.319	91	57244	2.956
136) 1,3-Diethylbenzene	(4)	13.371	119	61603	3.870
141) Diethylbenzene (total)	(4)		100	179922	11.677
137) 1,4-Diethylbenzene	(4)	13.444	119	66423	3.939
139) n-Butylbenzene	(4)	13.464	92	51213	4.095
138) 1,2-Dichlorobenzene	(4)	13.502	146	50972	3.896
140) 1,2-Diethylbenzene	(4)	13.518	119	51896	3.868
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	6542	3.295
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	39801	3.960
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	38013	3.889
147) Hexachlorobutadiene	(4)	14.670	225	23904	5.180
148) Naphthalene	(4)	14.772	128	115354	3.671
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	37152	3.907
150) 2-Methylnaphthalene	(4)	15.563	142	72506	3.747

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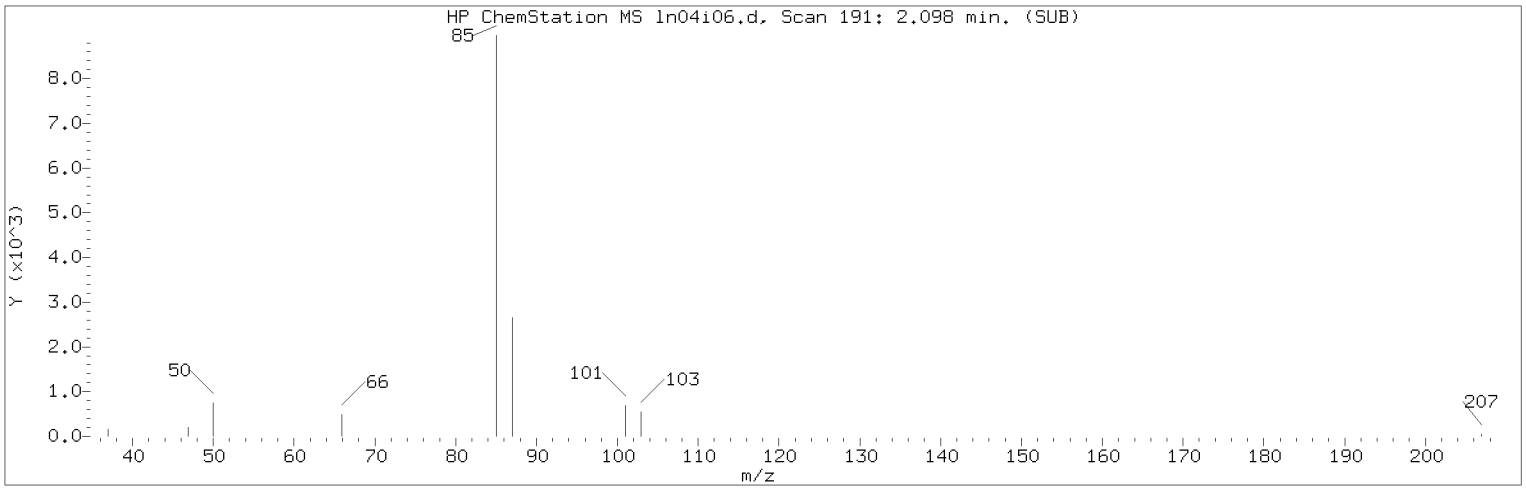
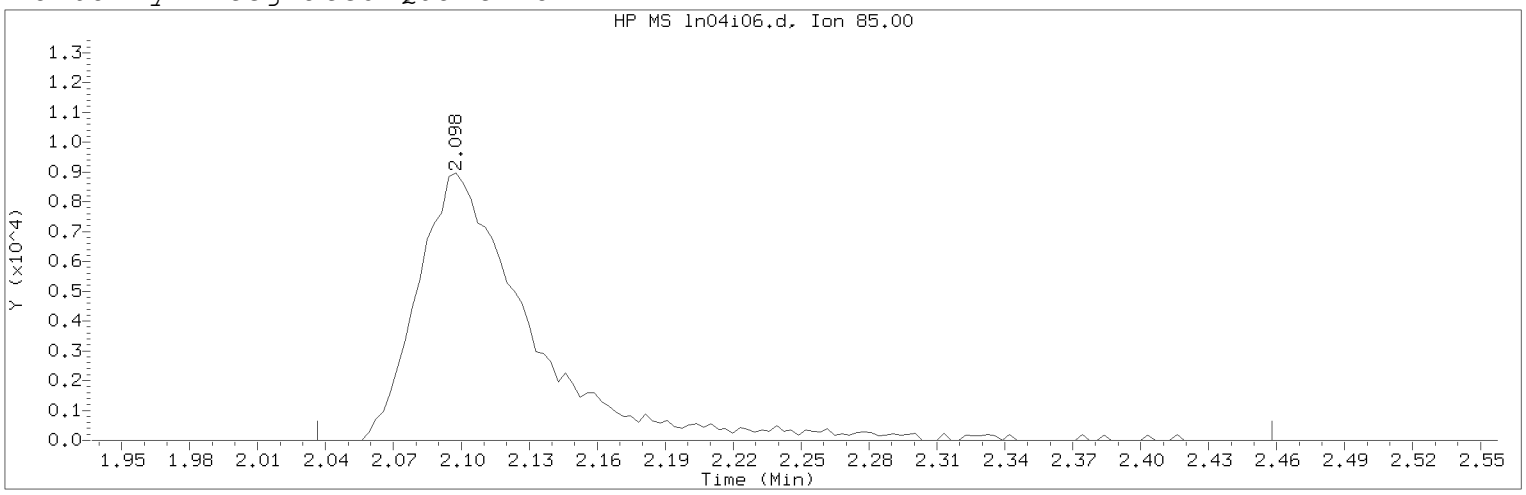
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

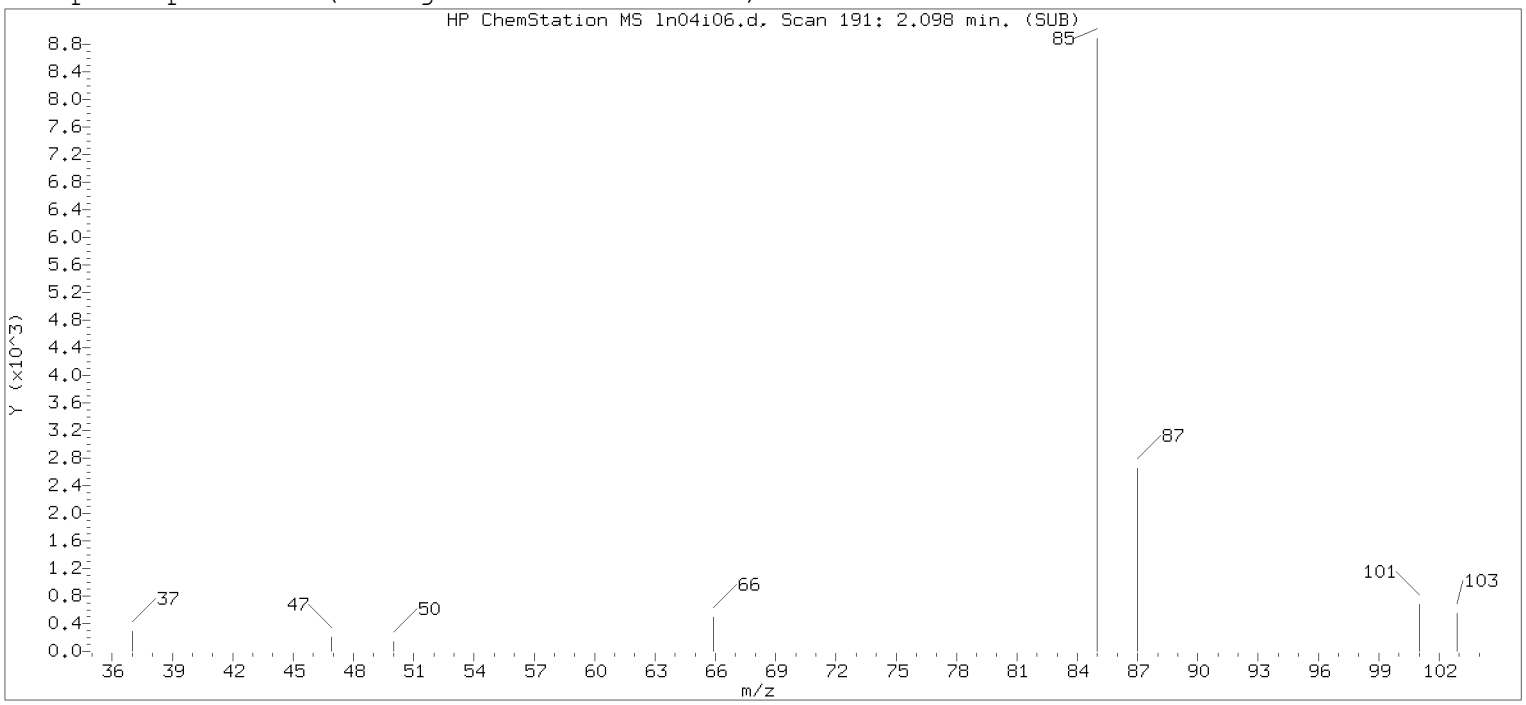
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 191
Retention Time (minutes): 2.098
Quant Ion : 85.00
Area (flag) : 31217M
On-Column Amount (ng) : 3.8978
Integration start scan : 171 Integration stop scan: 302
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

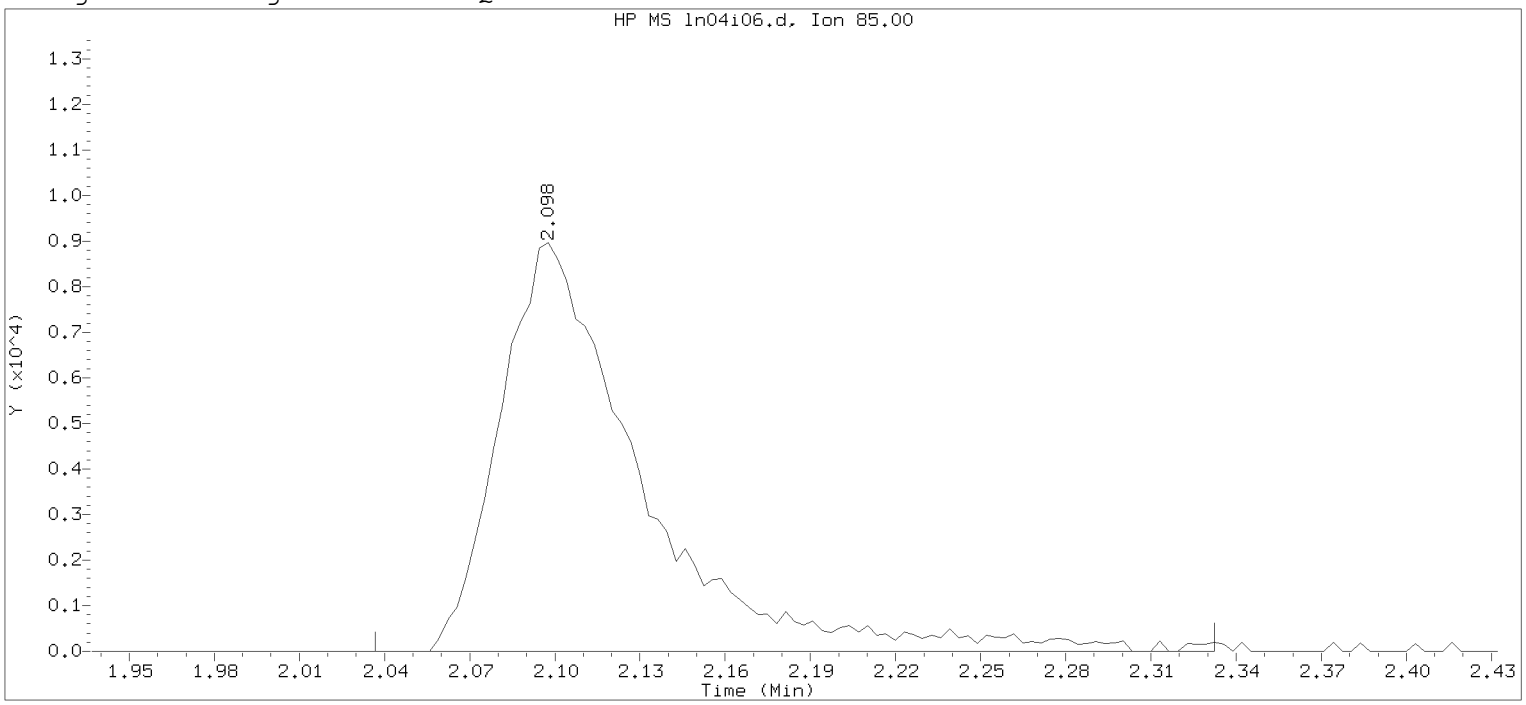
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

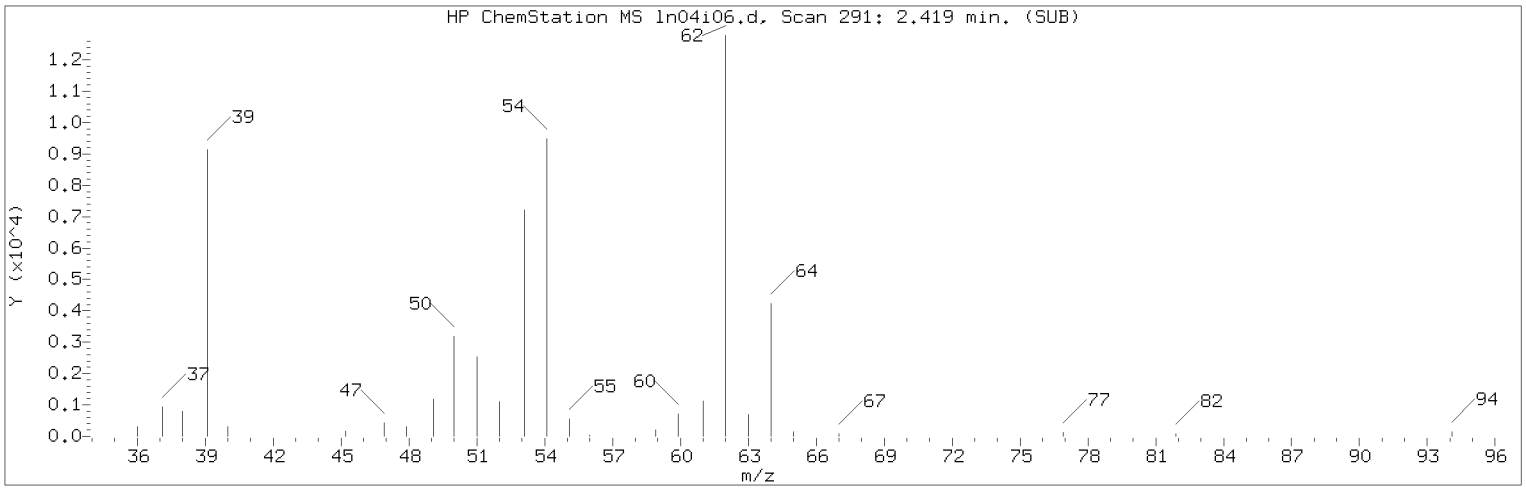
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

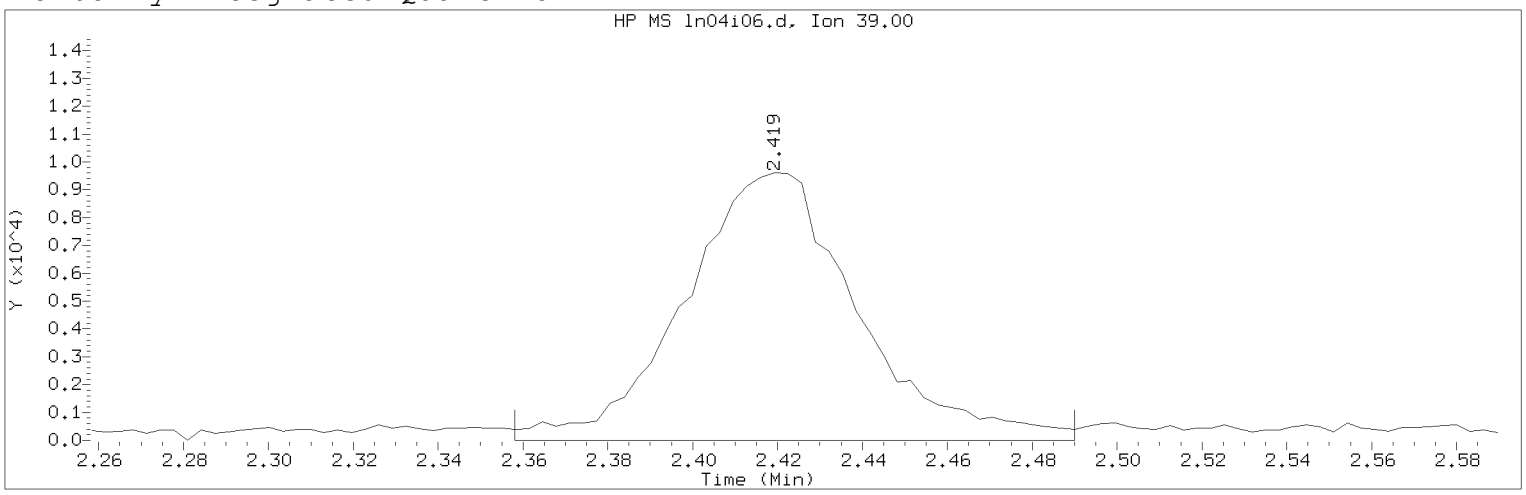
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 191
Retention Time (minutes): 2.098
Quant Ion : 85.00
Area : 30987
On-column Amount (ng) : 3.8874
Integration start scan : 171 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

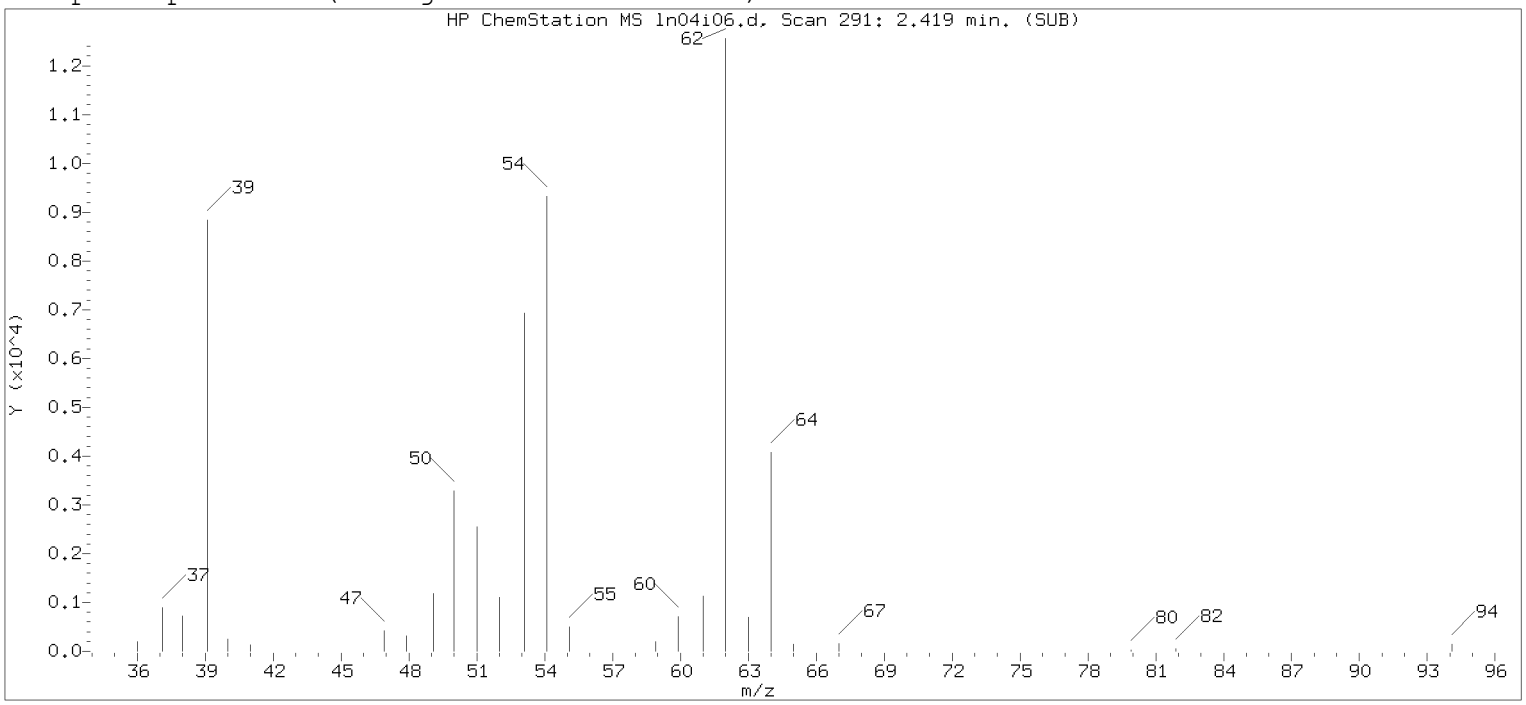
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 291
Retention Time (minutes): 2.419
Quant Ion : 39.00
Area (flag) : 27249M
On-Column Amount (ng) : 4.2517
Integration start scan : 271 Integration stop scan: 312
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

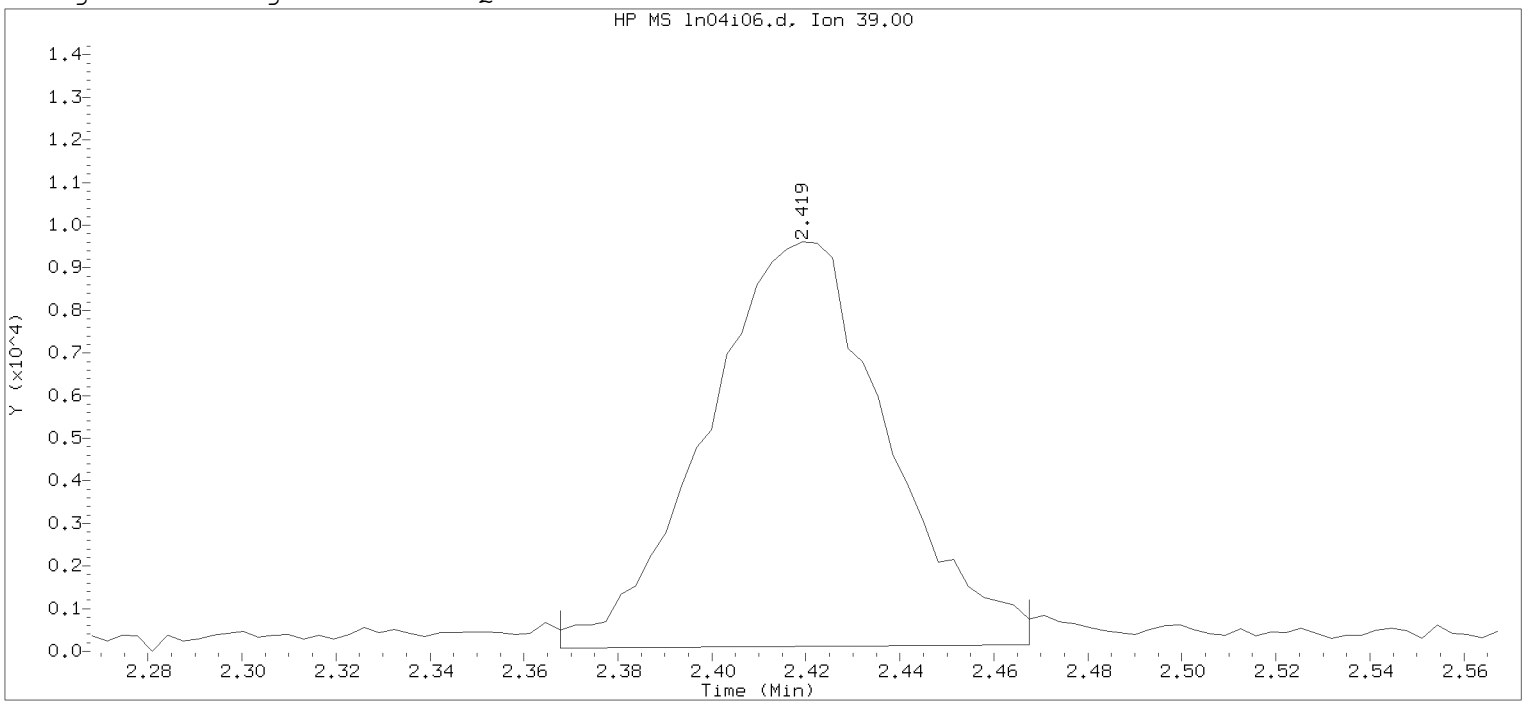
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

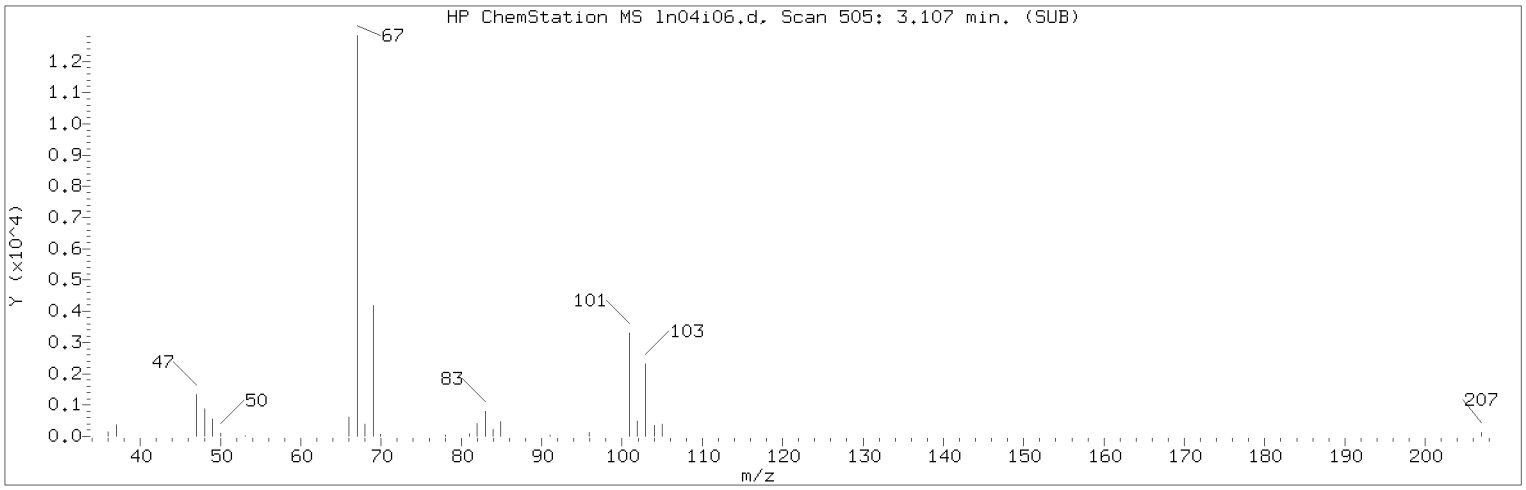
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

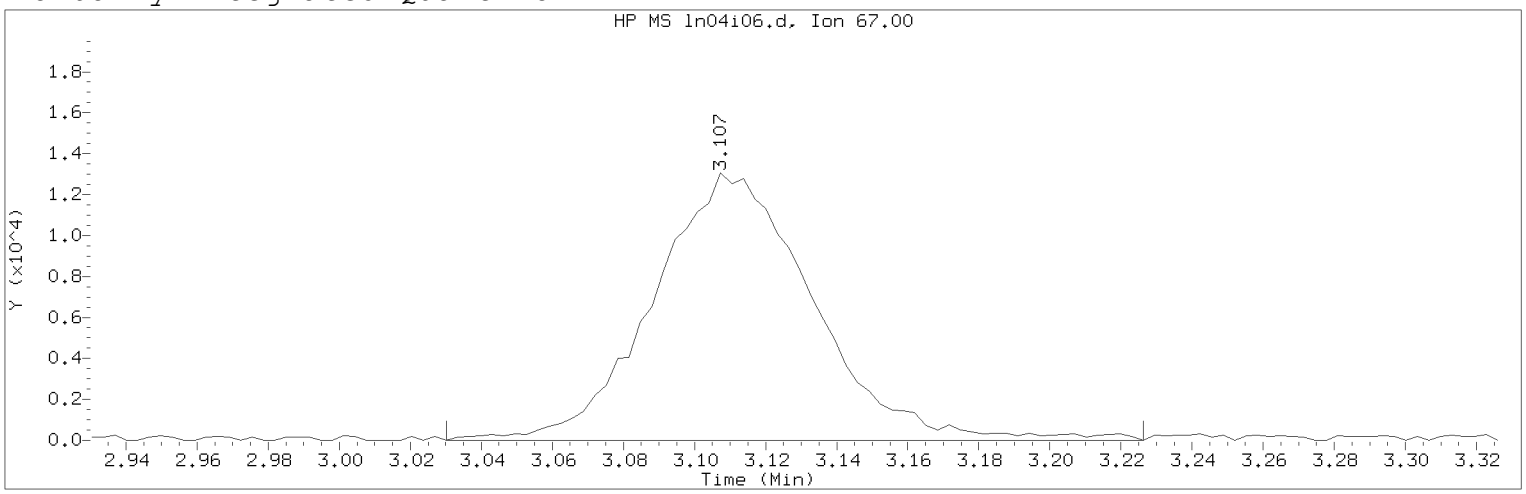
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 291
Retention Time (minutes): 2.419
Quant Ion : 39.00
Area : 25391
On-column Amount (ng) : 4.2082
Integration start scan : 274 Integration stop scan: 305
Y at integration start : 76 Y at integration end: 147

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

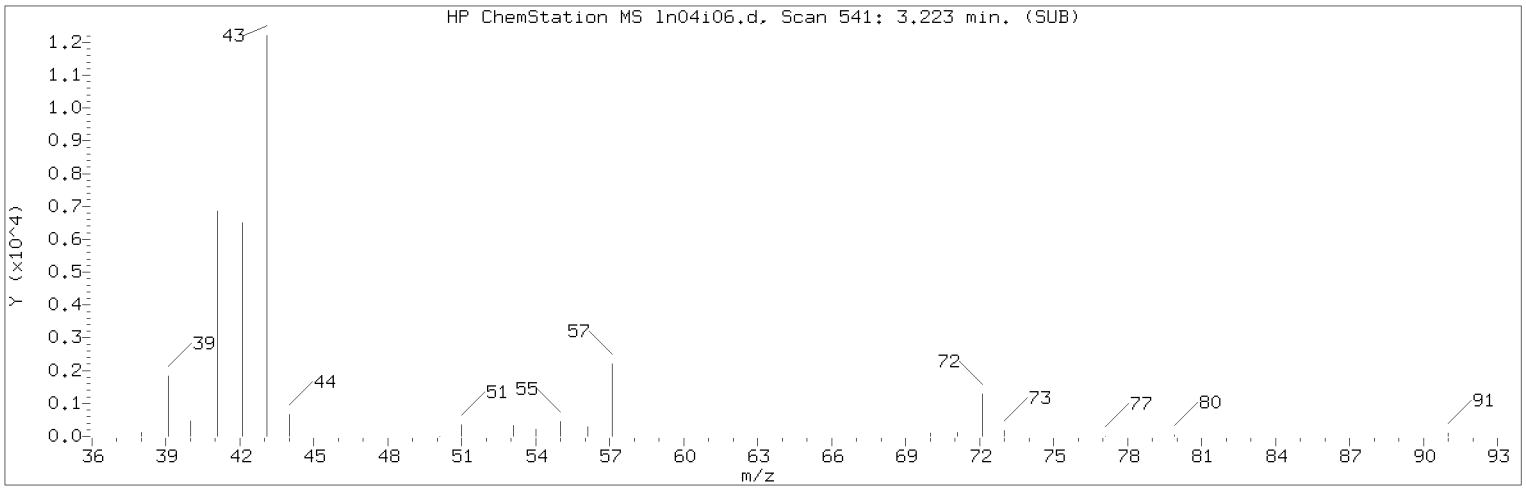
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 505
Retention Time (minutes): 3.107
Quant Ion : 67.00
Area (flag) : 40740M
On-Column Amount (ng) : 4.0151
Integration start scan : 480 Integration stop scan: 541
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

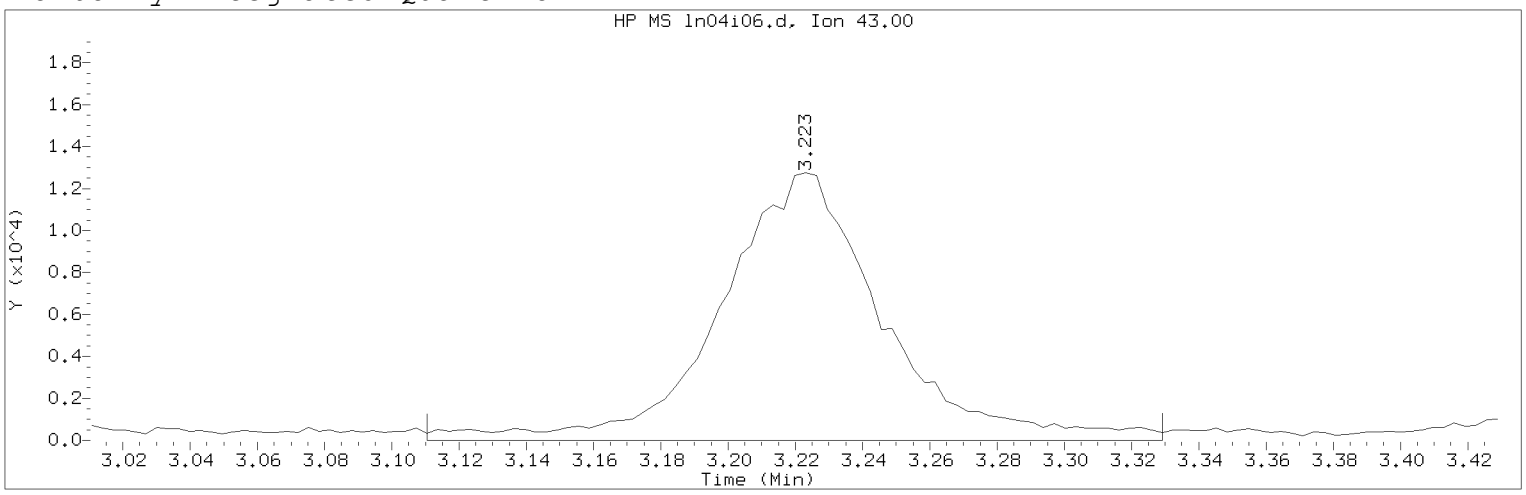
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

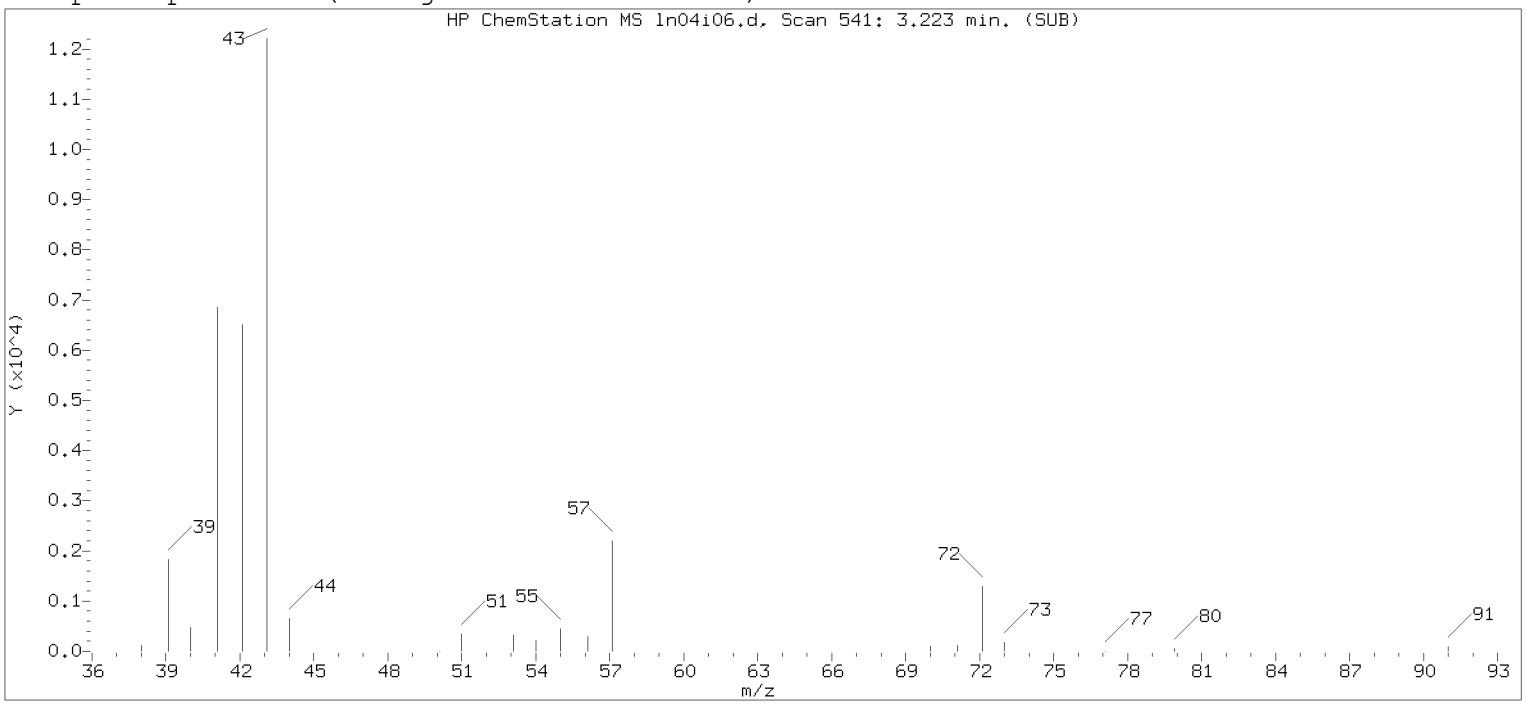
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 541
Retention Time (minutes): 3.223
Quant Ion : 43.00
Area (flag) : 42826M
On-Column Amount (ng) : 4.3694
Integration start scan : 505 Integration stop scan: 573
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

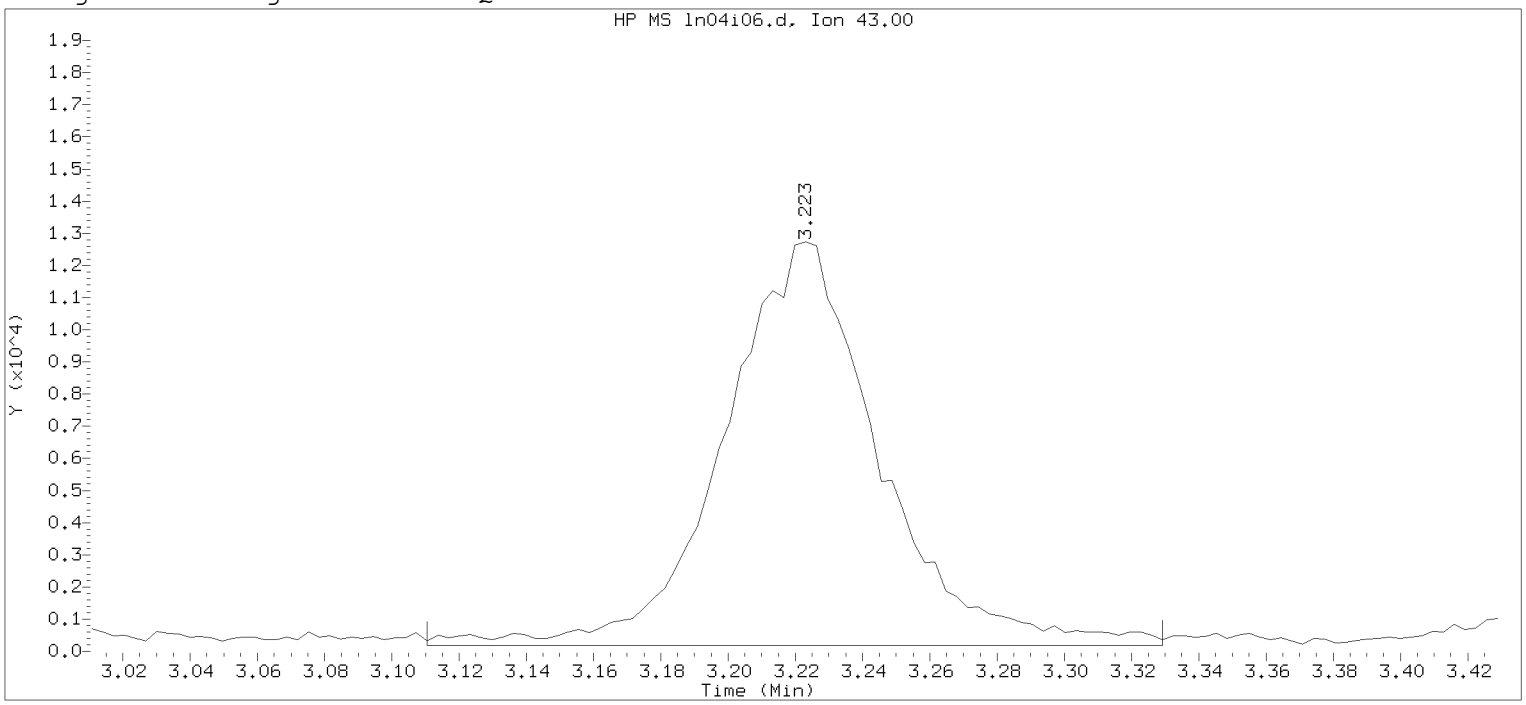
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

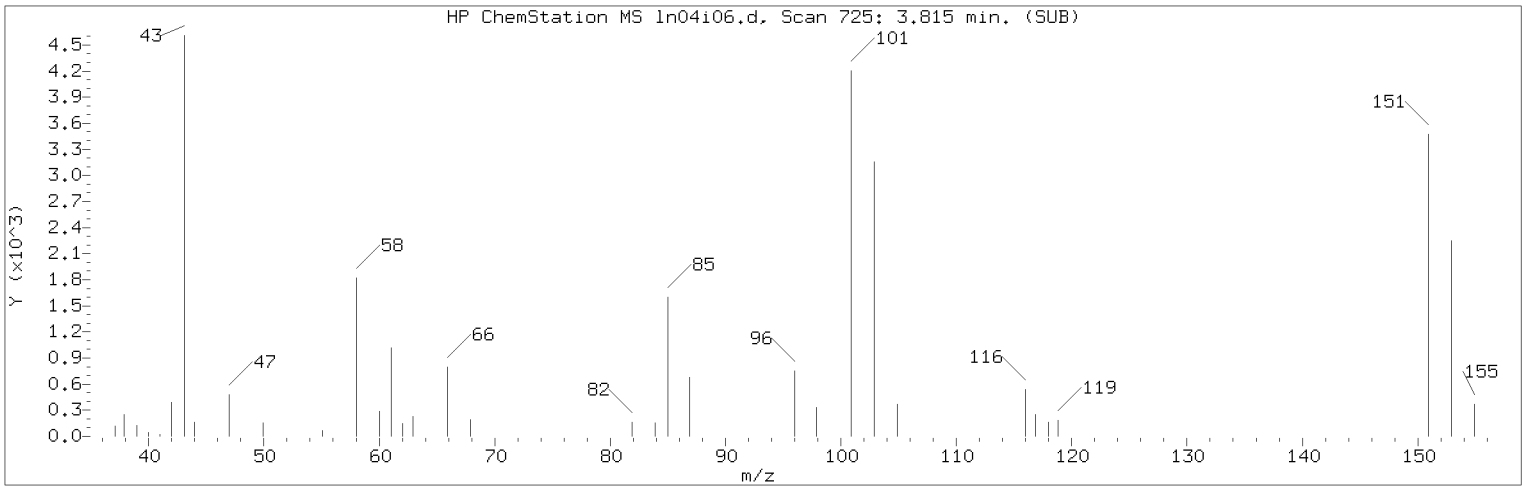
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

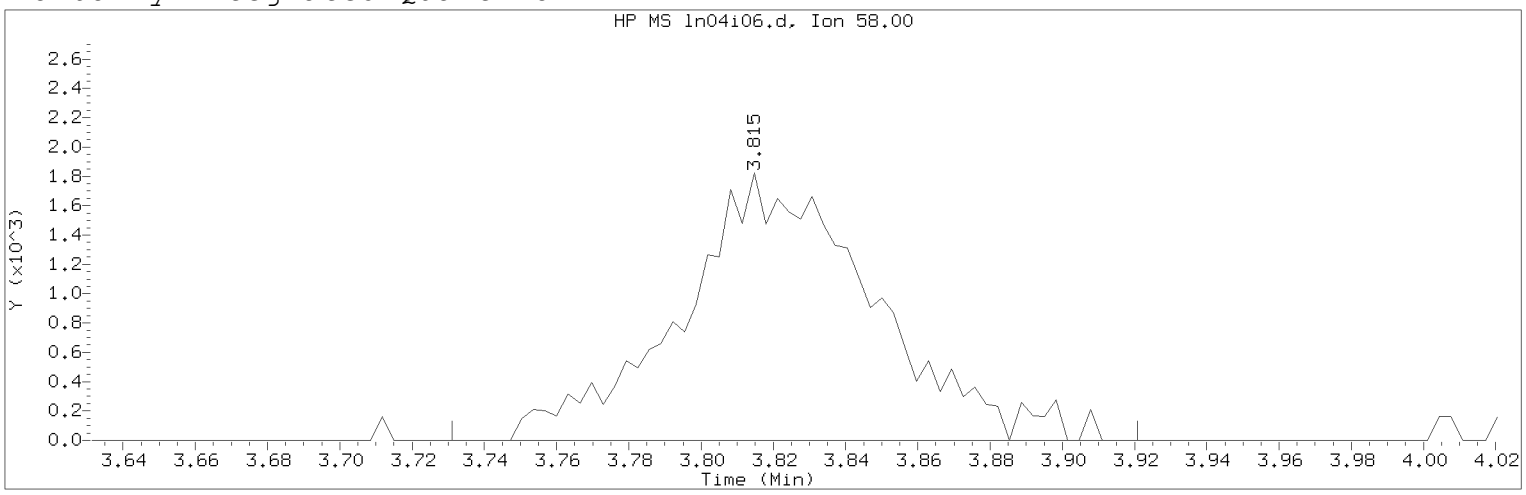
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 541
Retention Time (minutes): 3.223
Quant Ion : 43.00
Area : 40359
On-column Amount (ng) : 4.1550
Integration start scan : 505 Integration stop scan: 573
Y at integration start : 183 Y at integration end: 183

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

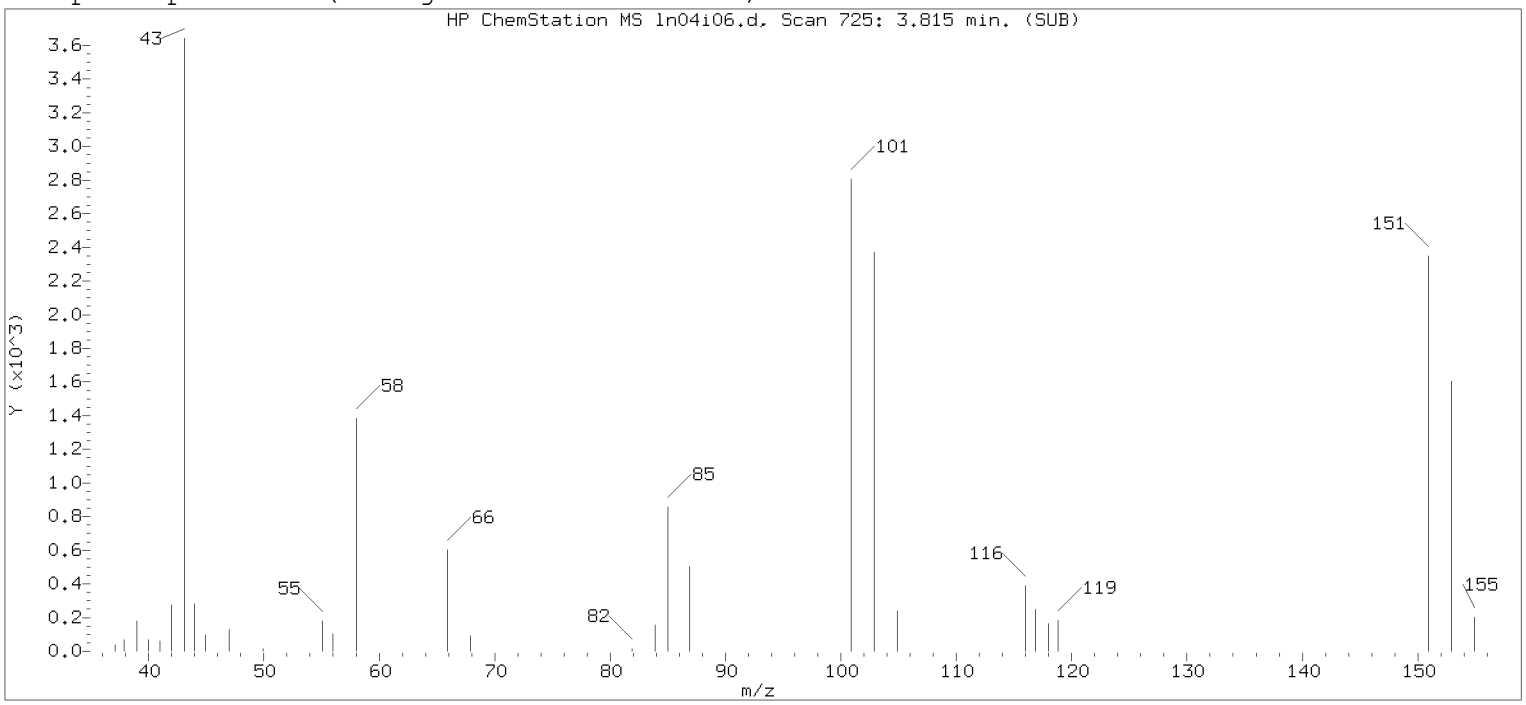
Compound Number : 18
Compound Name : Acetone
Scan Number : 725
Retention Time (minutes): 3.815
Quant Ion : 58.00
Area (flag) : 6763M
On-Column Amount (ng) : 7.6731
Integration start scan : 698 Integration stop scan: 757
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

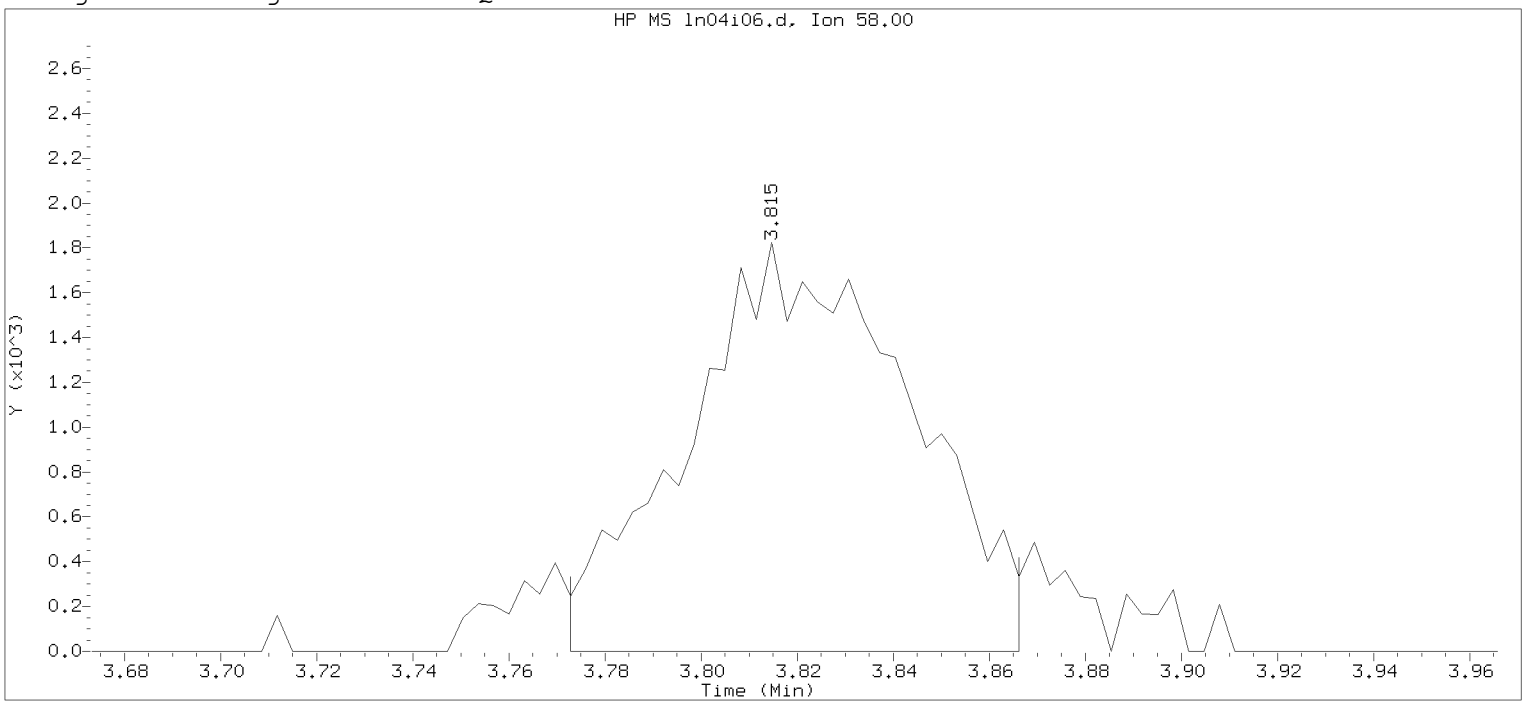
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

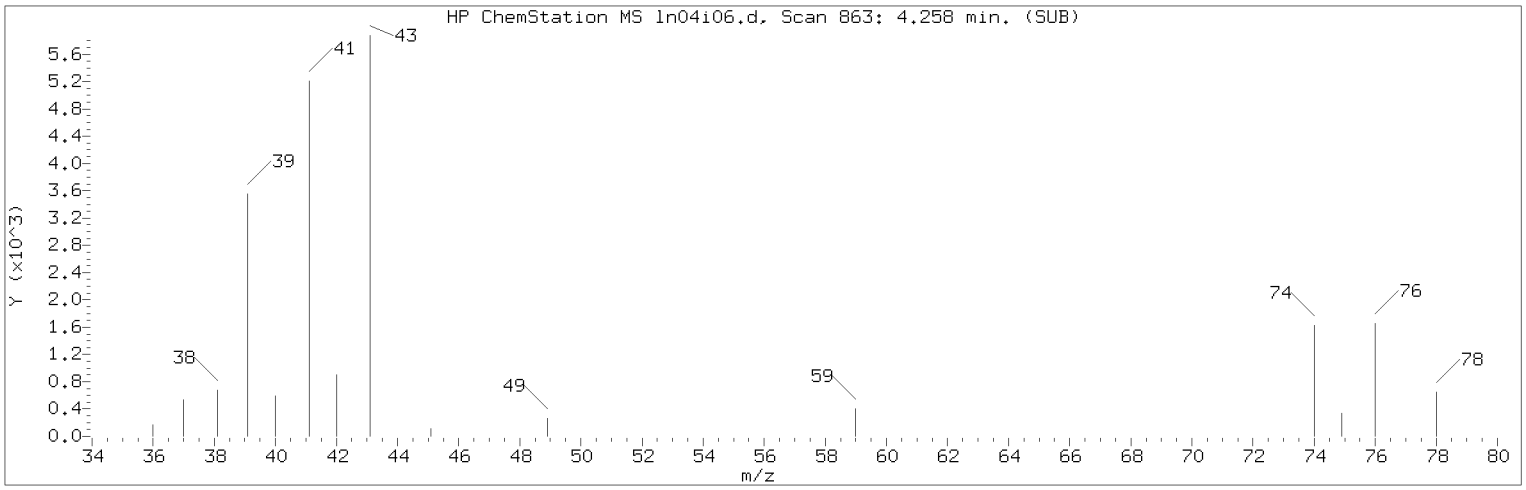
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

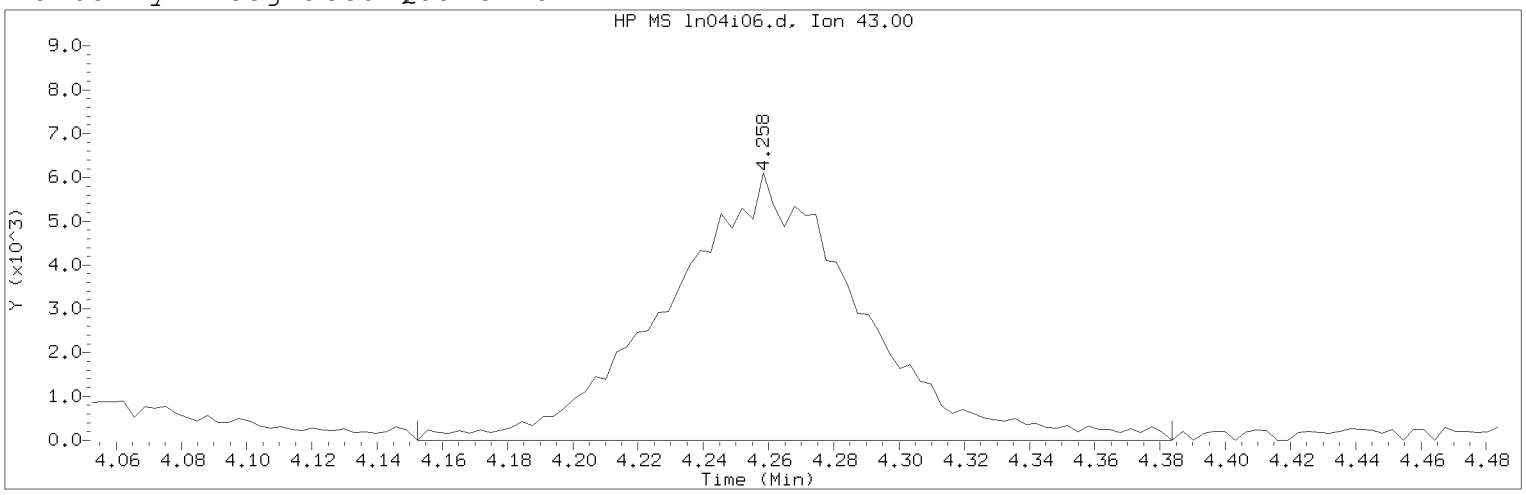
Compound Number	: 18		
Compound Name	: Acetone		
Scan Number	: 725		
Retention Time (minutes)	: 3.815		
Quant Ion	: 58.00		
Area	: 5862		
On-column Amount (ng)	: 7.7134		
Integration start scan	: 711	Integration stop scan:	740
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

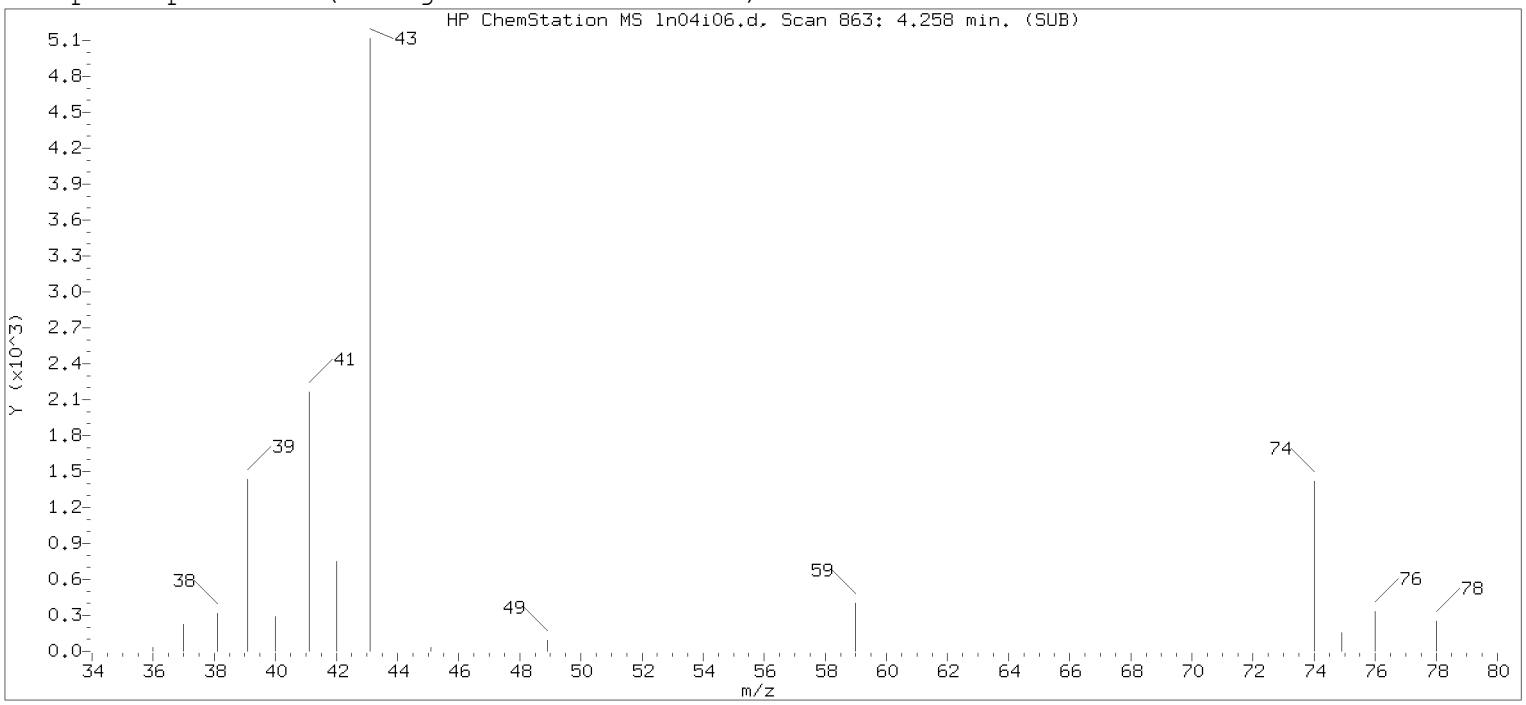
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 863
Retention Time (minutes): 4.258
Quant Ion : 43.00
Area (flag) : 24928M
On-Column Amount (ng) : 3.9757
Integration start scan : 829 Integration stop scan: 901
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

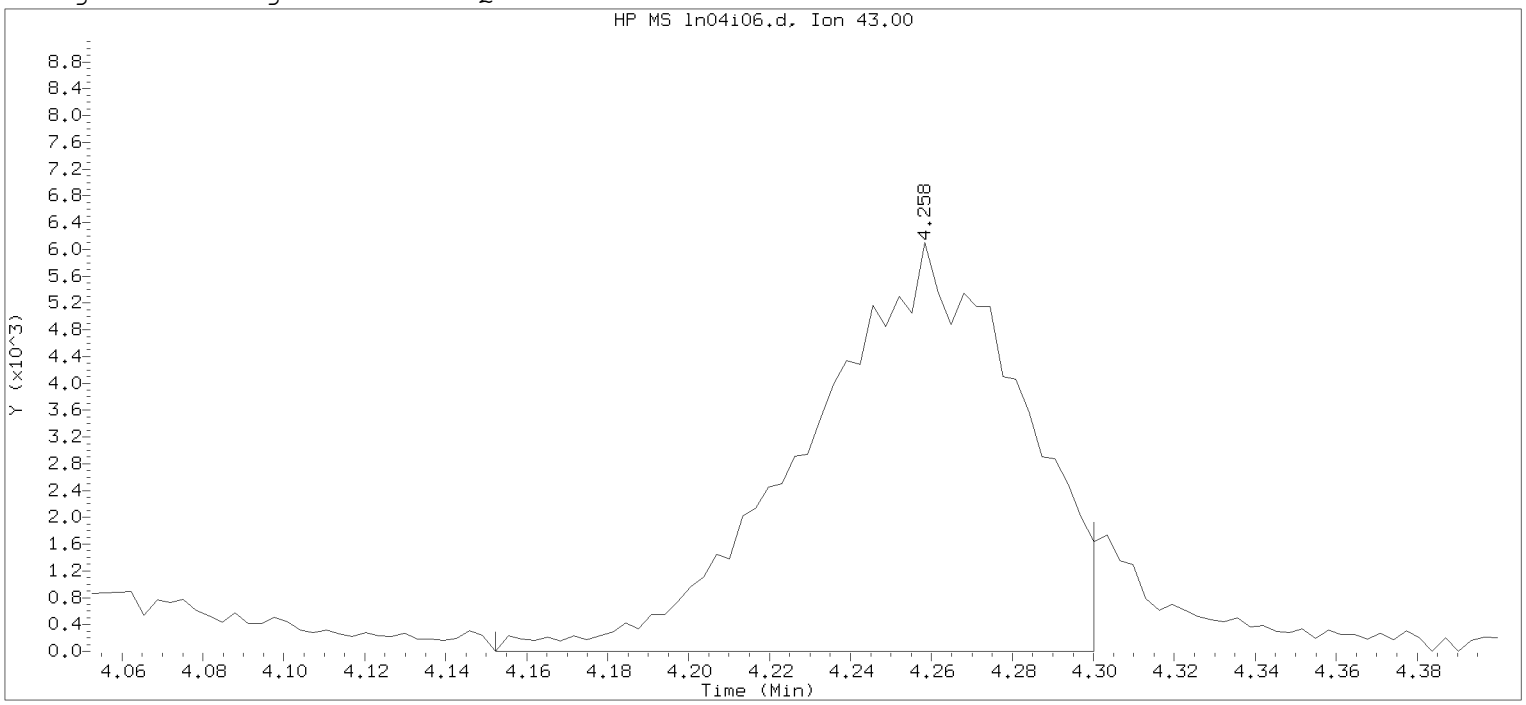
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

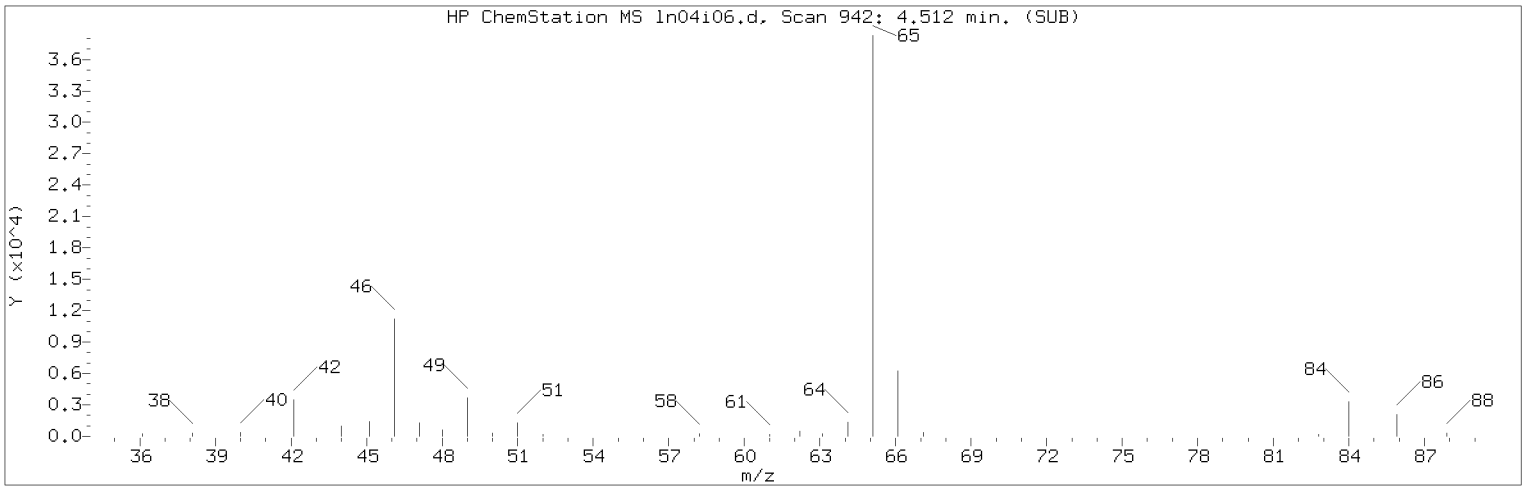
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

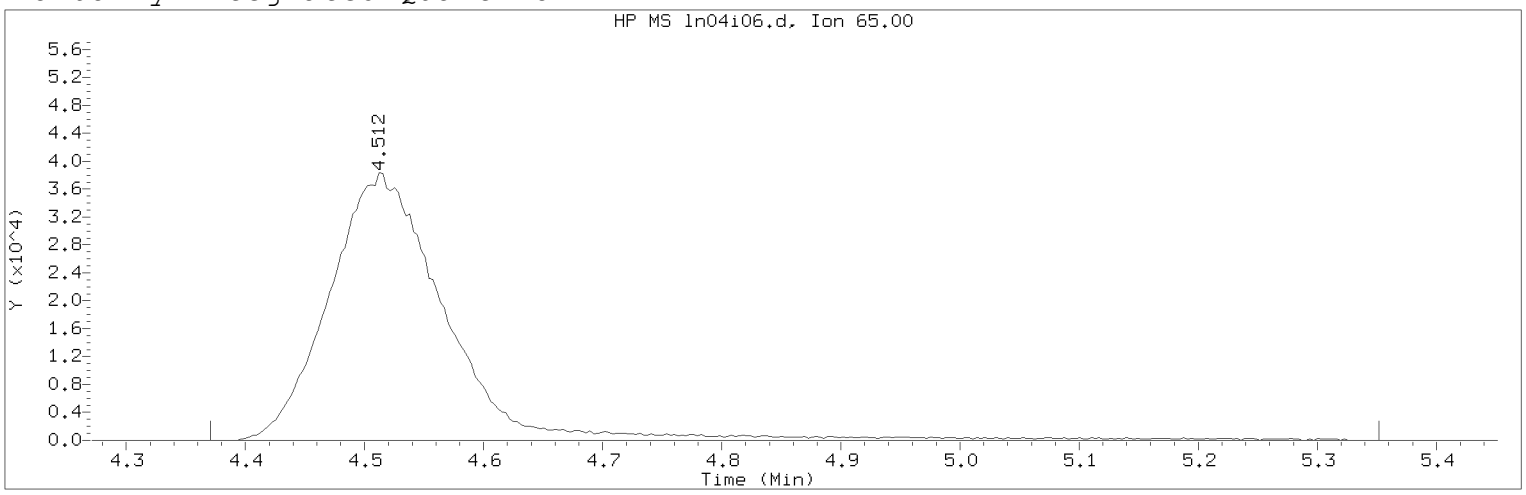
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 863
Retention Time (minutes): 4.258
Quant Ion : 43.00
Area : 22302
On-column Amount (ng) : 3.7243
Integration start scan : 829 Integration stop scan: 875
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

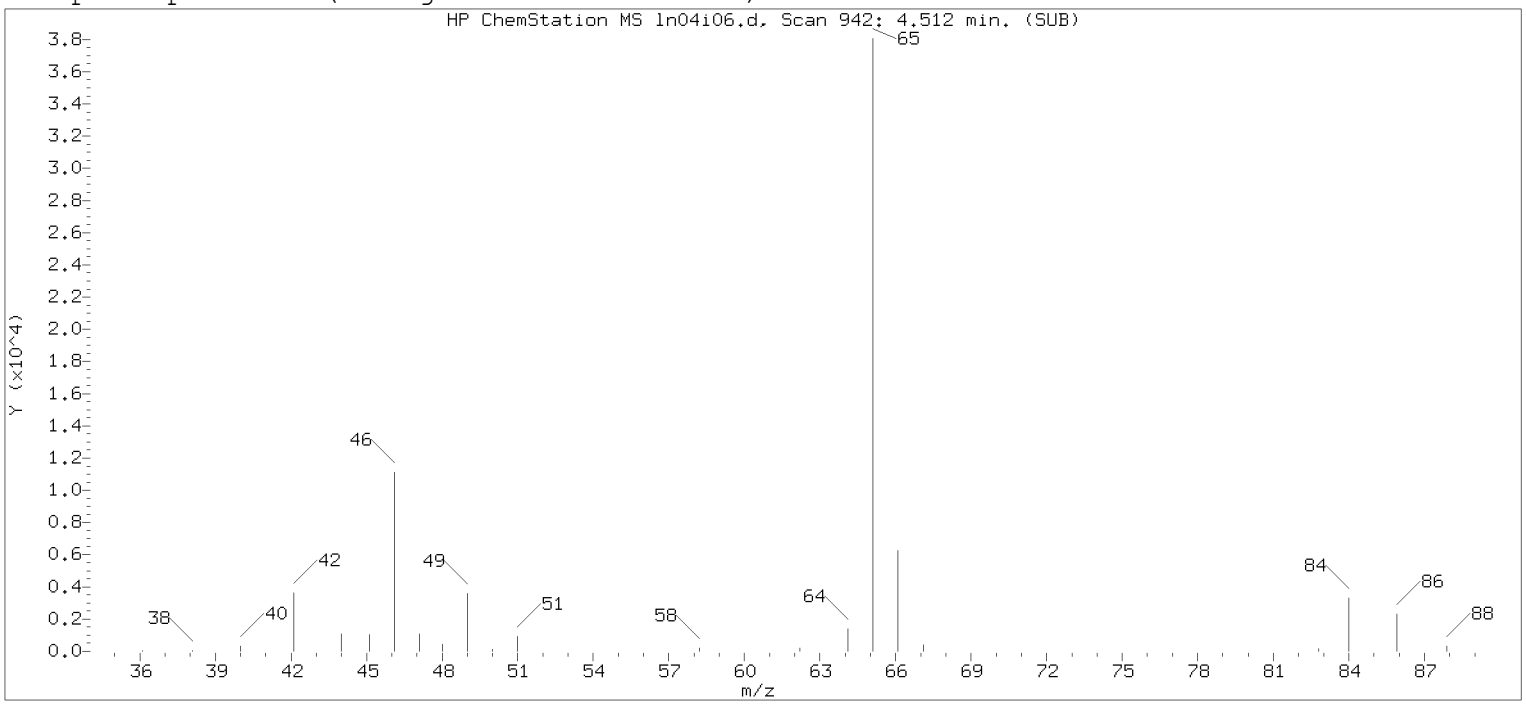
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area (flag) : 262044M
On-Column Amount (ng) : 250.0000
Integration start scan : 897 Integration stop scan: 1202
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

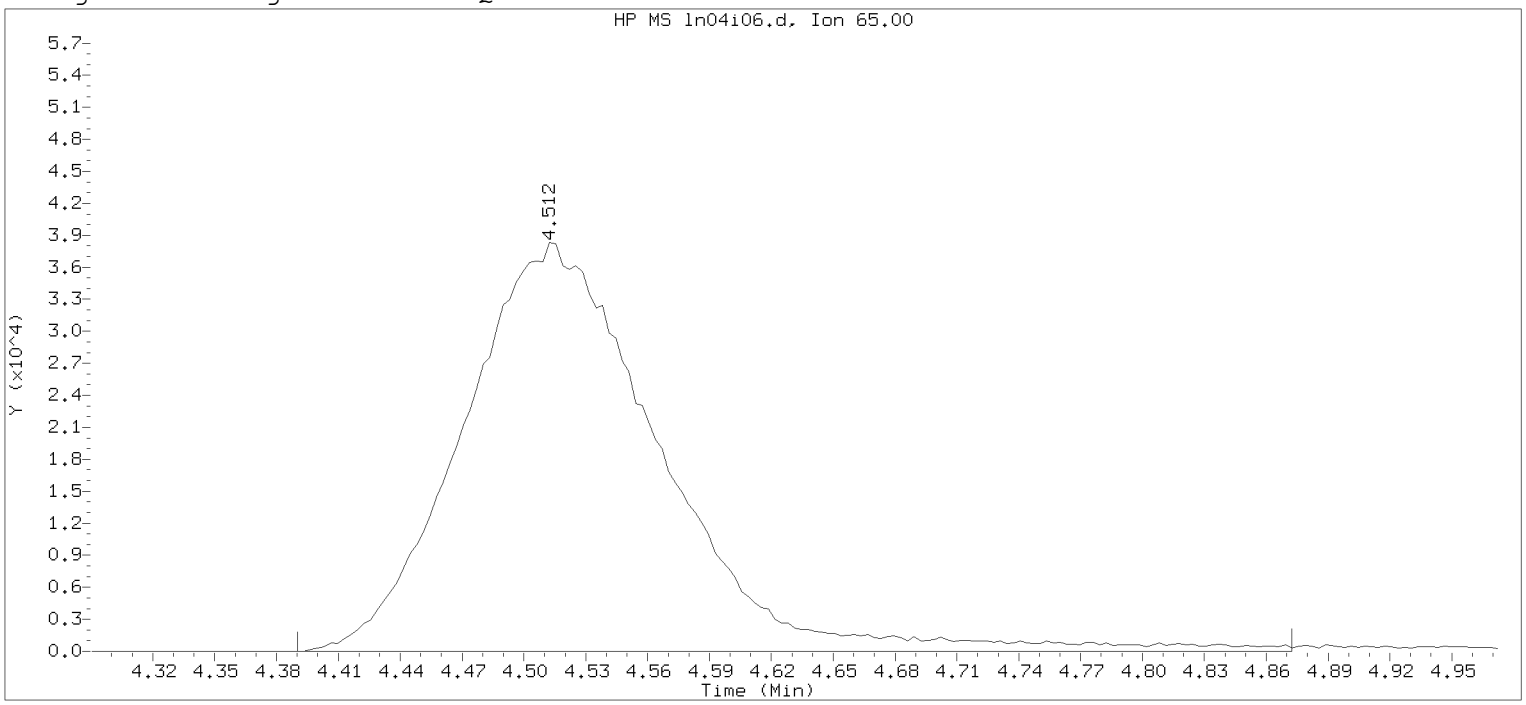
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

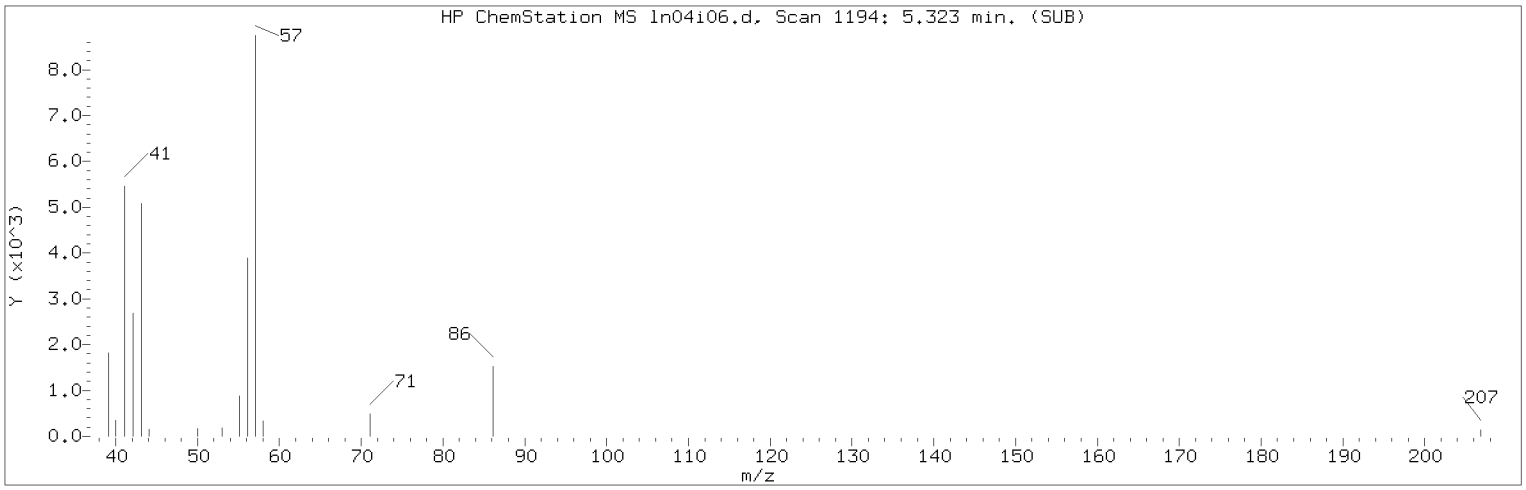
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

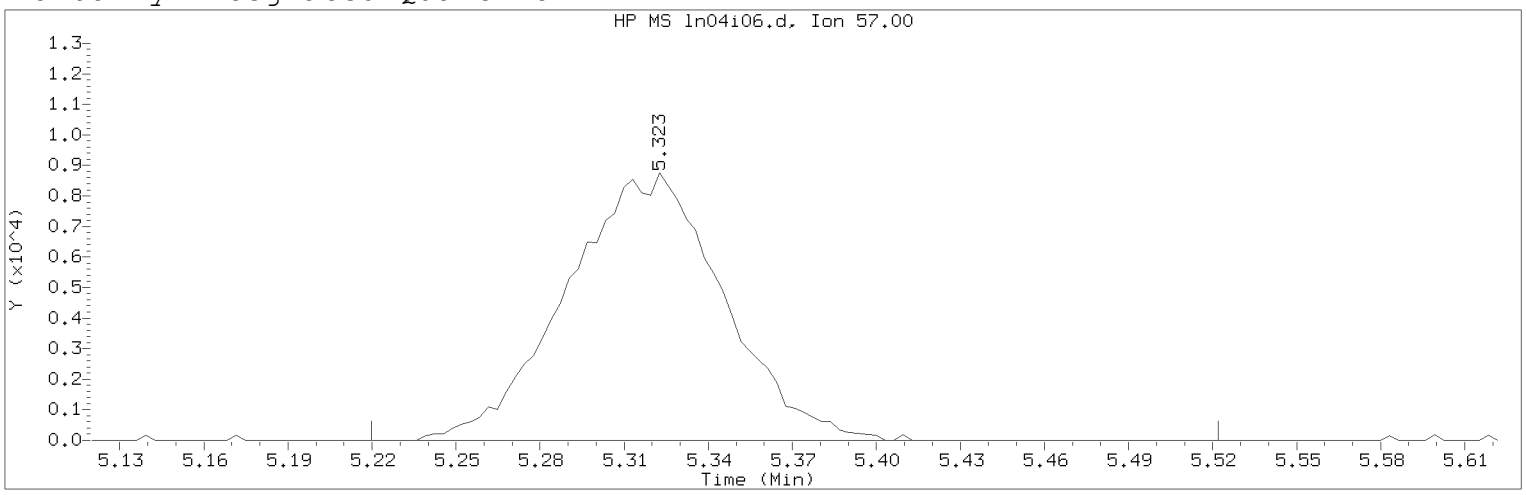
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area : 254362
On-column Amount (ng) : 250.0000
Integration start scan : 903 Integration stop scan: 1053
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user: CW mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

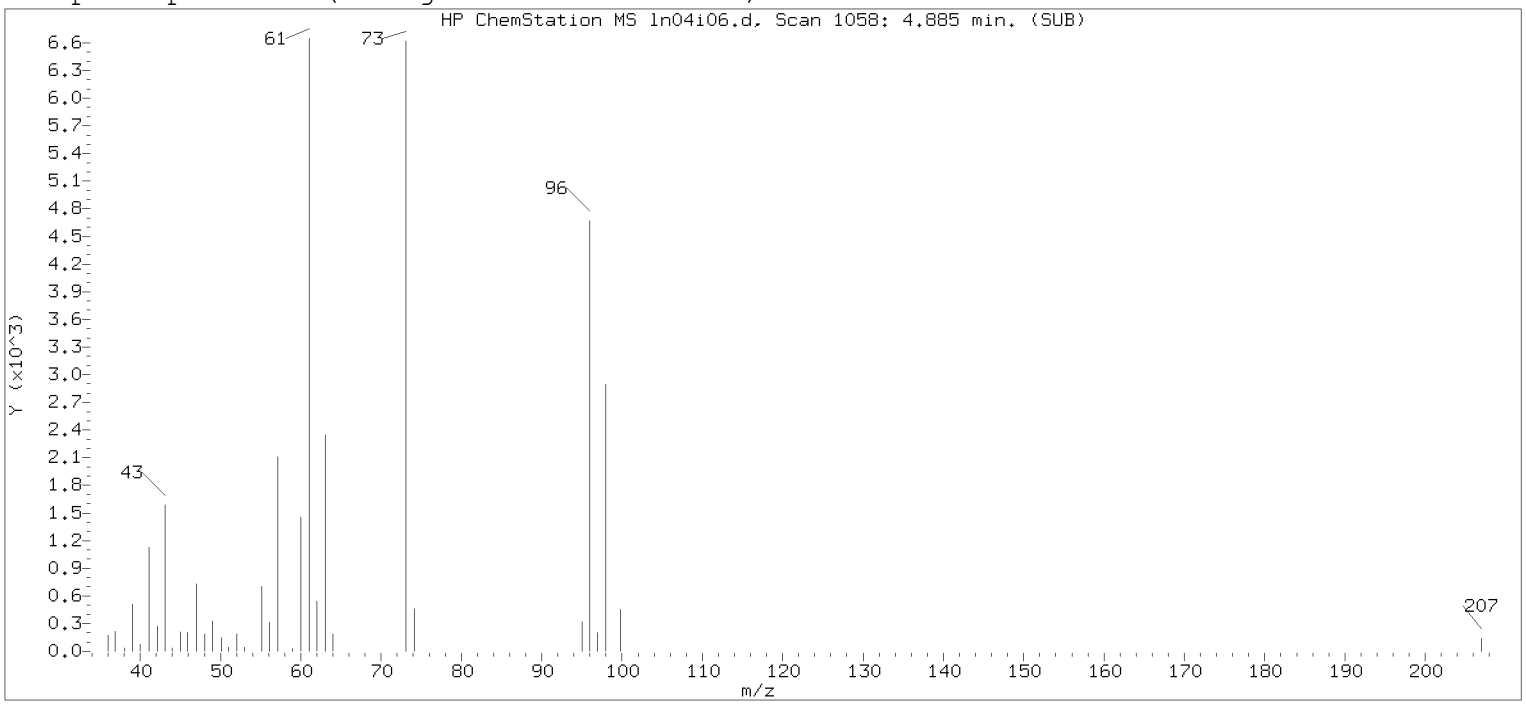
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1194
Retention Time (minutes): 5.323
Quant Ion : 57.00
Area (flag) : 33969M
On-Column Amount (ng) : 3.8769
Integration start scan : 1161 Integration stop scan: 1255
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

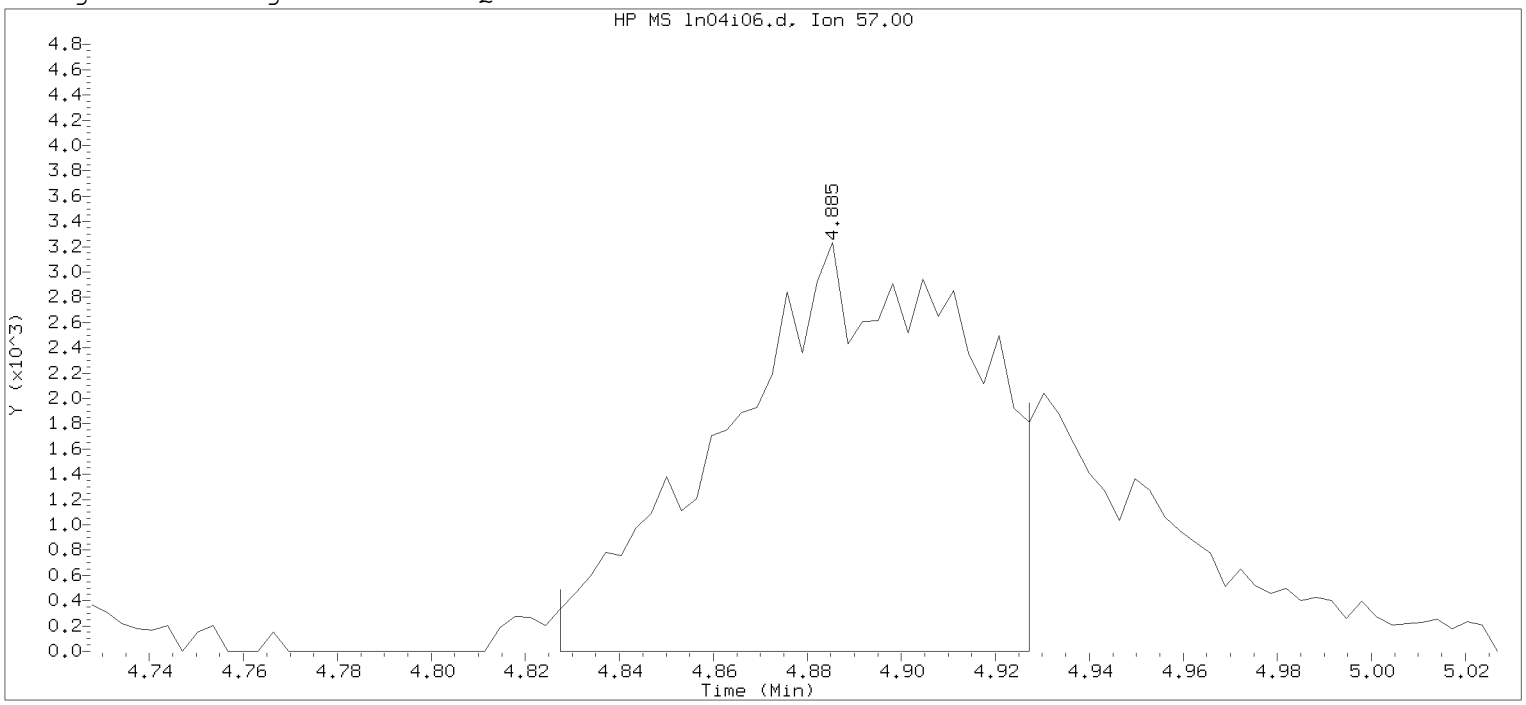
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

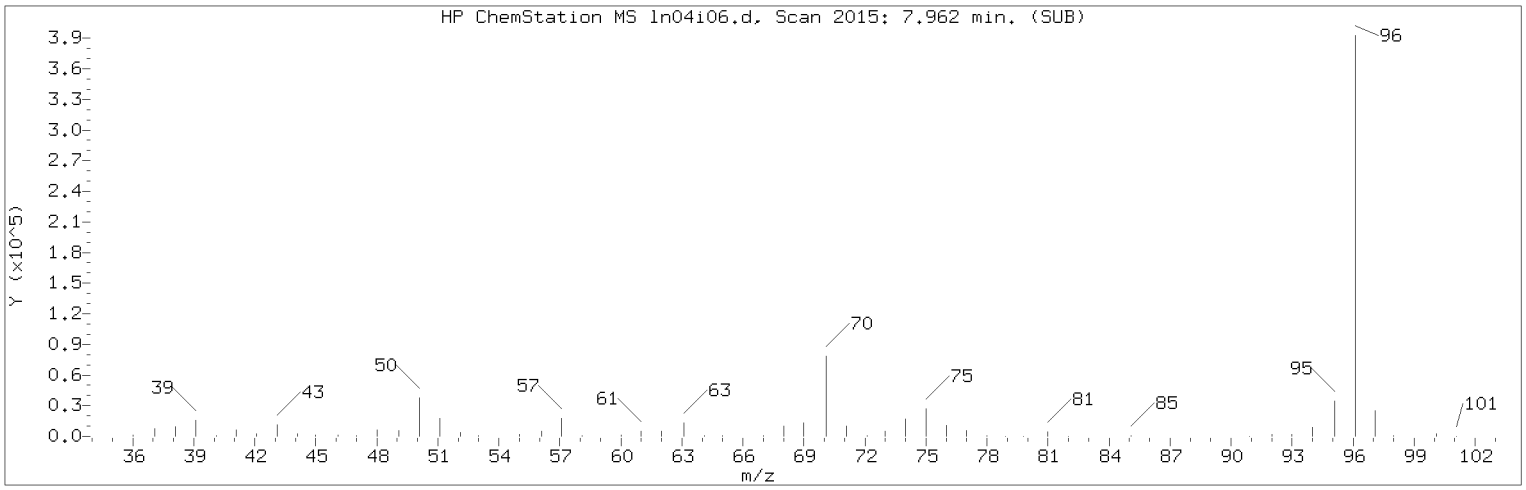
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

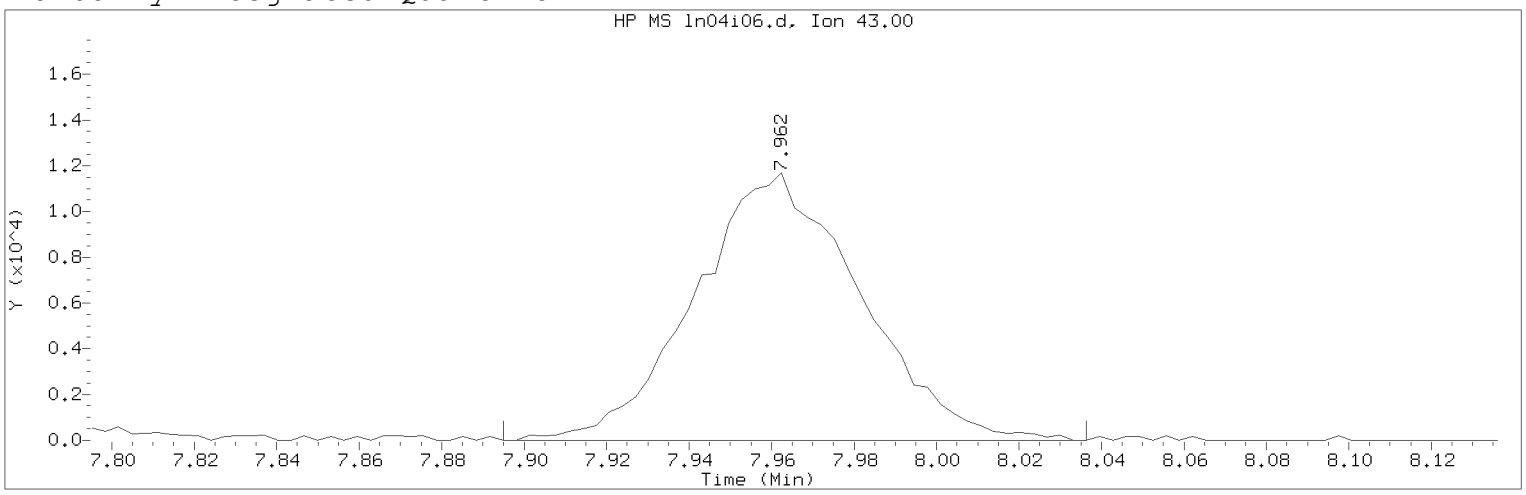
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1058		
Retention Time (minutes)	: 4.885		
Quant Ion	: 57.00		
Area	: 11708		
On-column Amount (ng)	: 3.2297		
Integration start scan	: 1039	Integration stop scan:	1070
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

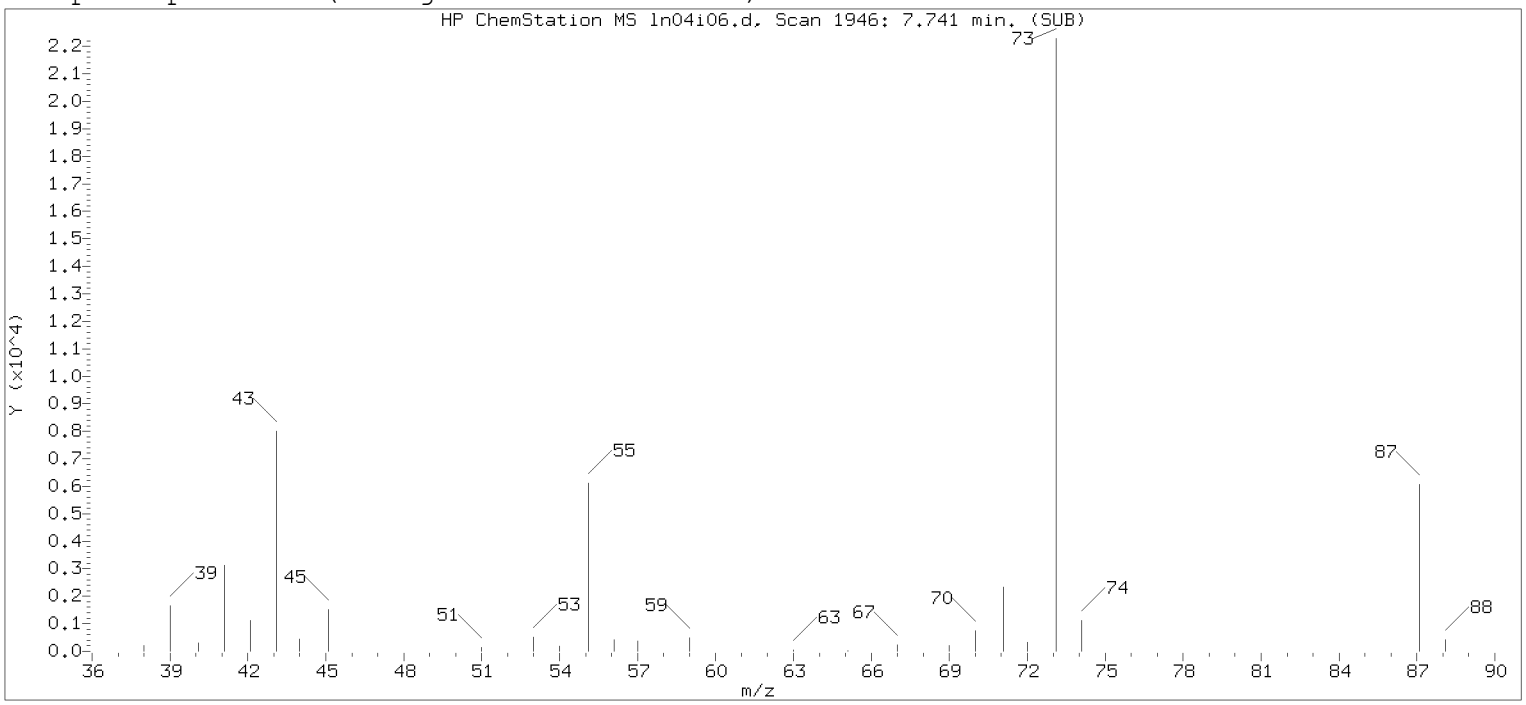
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2015
Retention Time (minutes): 7.962
Quant Ion : 43.00
Area (flag) : 32502MA
On-Column Amount (ng) : 3.9708
Integration start scan : 1993 Integration stop scan: 2037
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

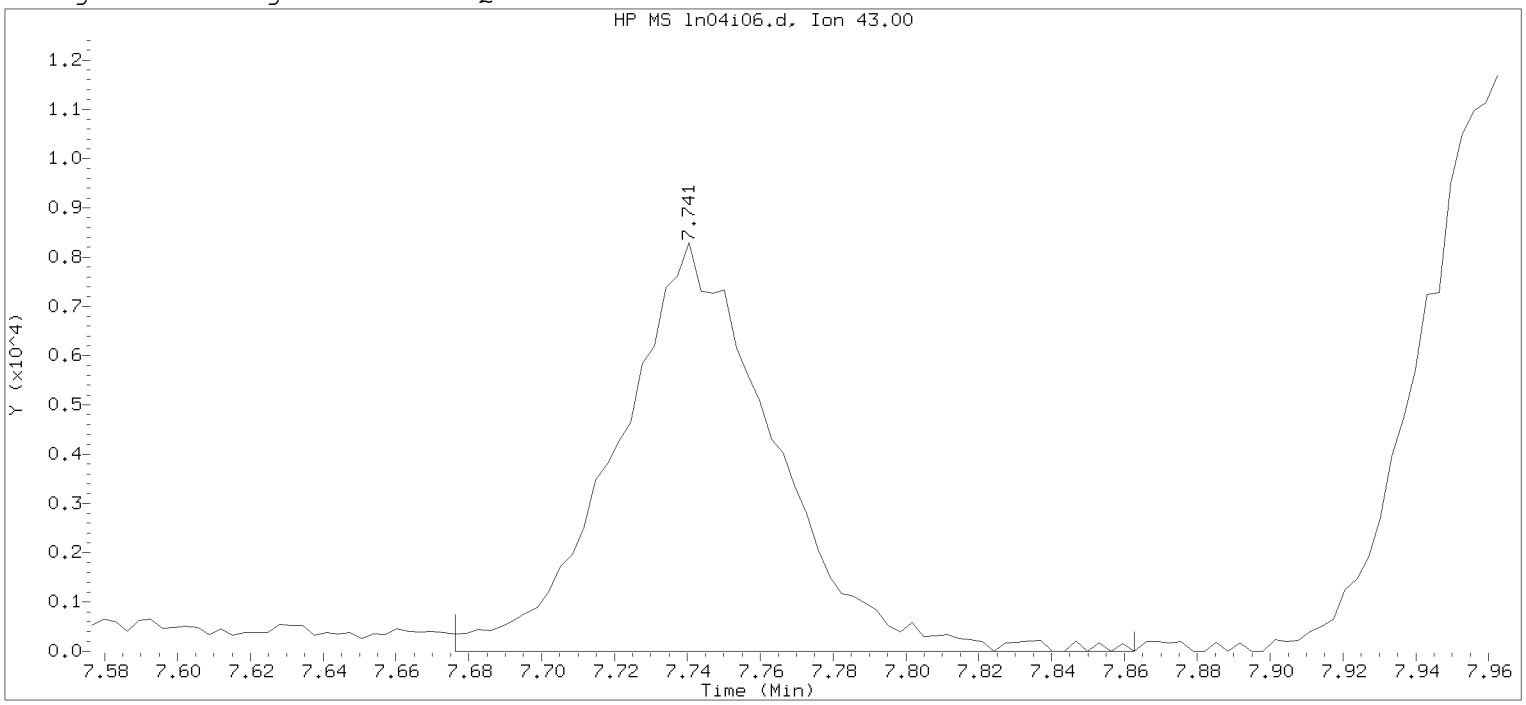
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

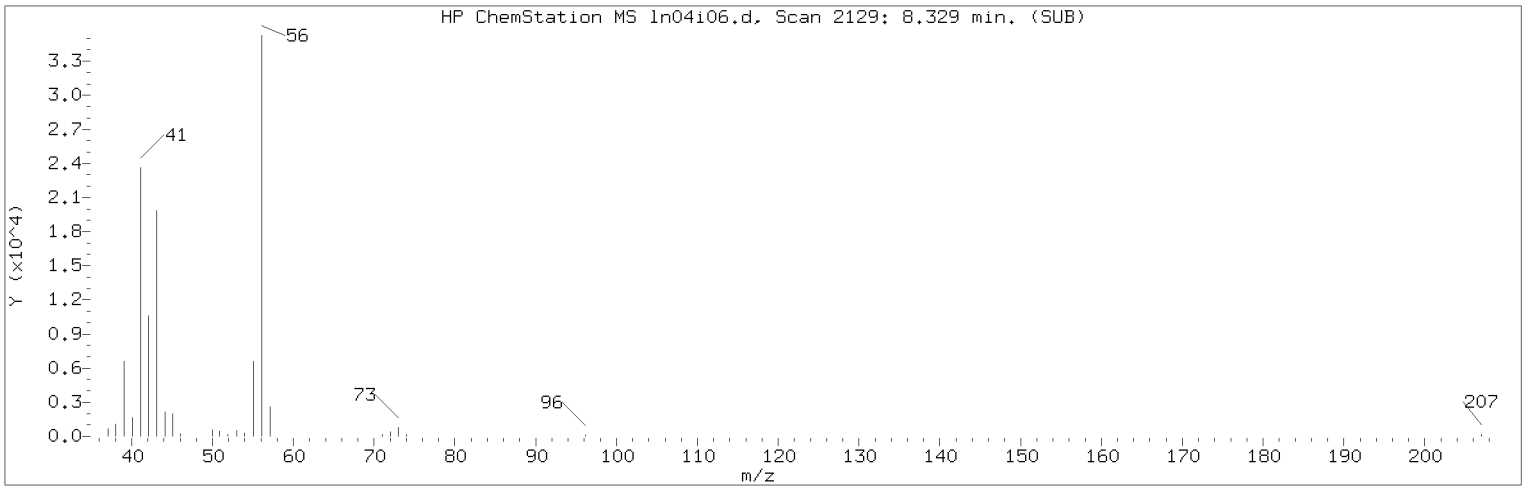
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

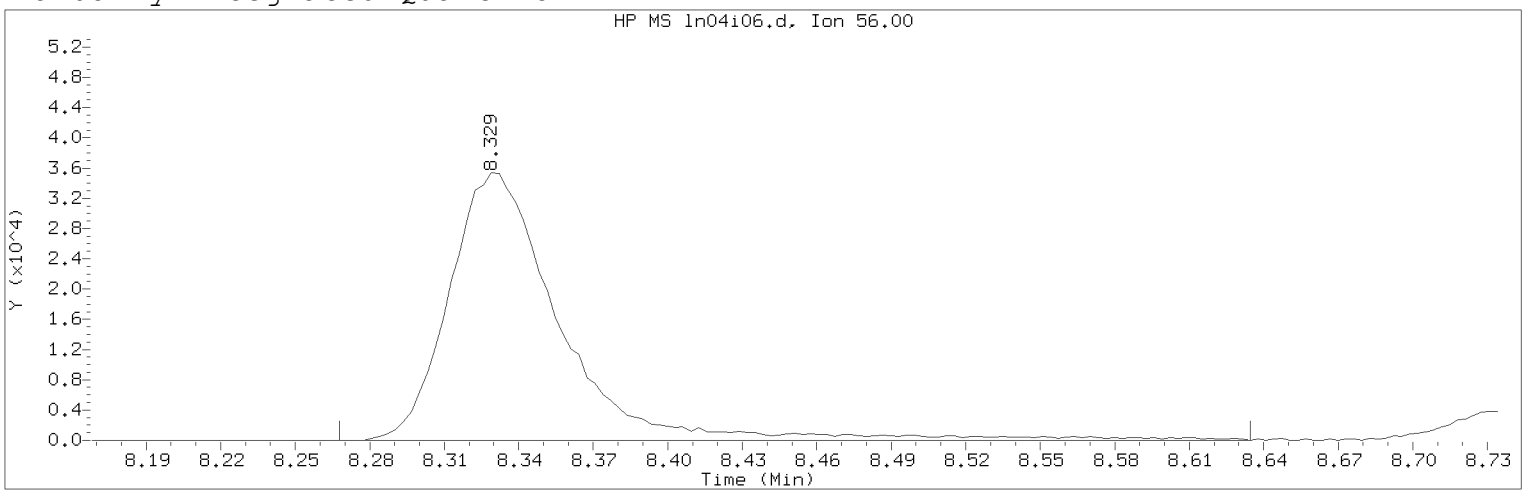
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.741
Quant Ion : 43.00
Area : 24793
On-column Amount (ng) : 4.0913
Integration start scan : 1925 Integration stop scan: 1983
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

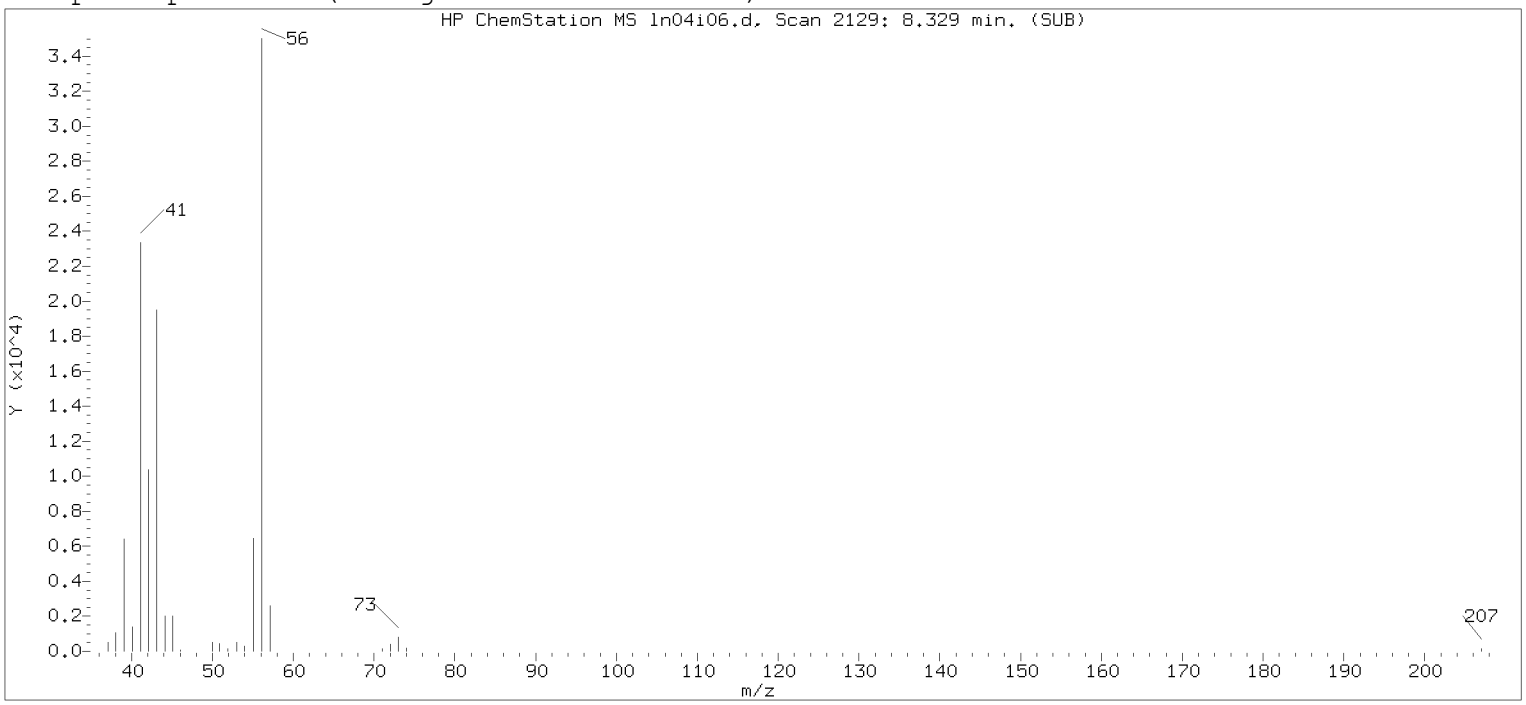
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area (flag) : 110027M
On-Column Amount (ng) : 344.3298
Integration start scan : 2109 Integration stop scan: 2223
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

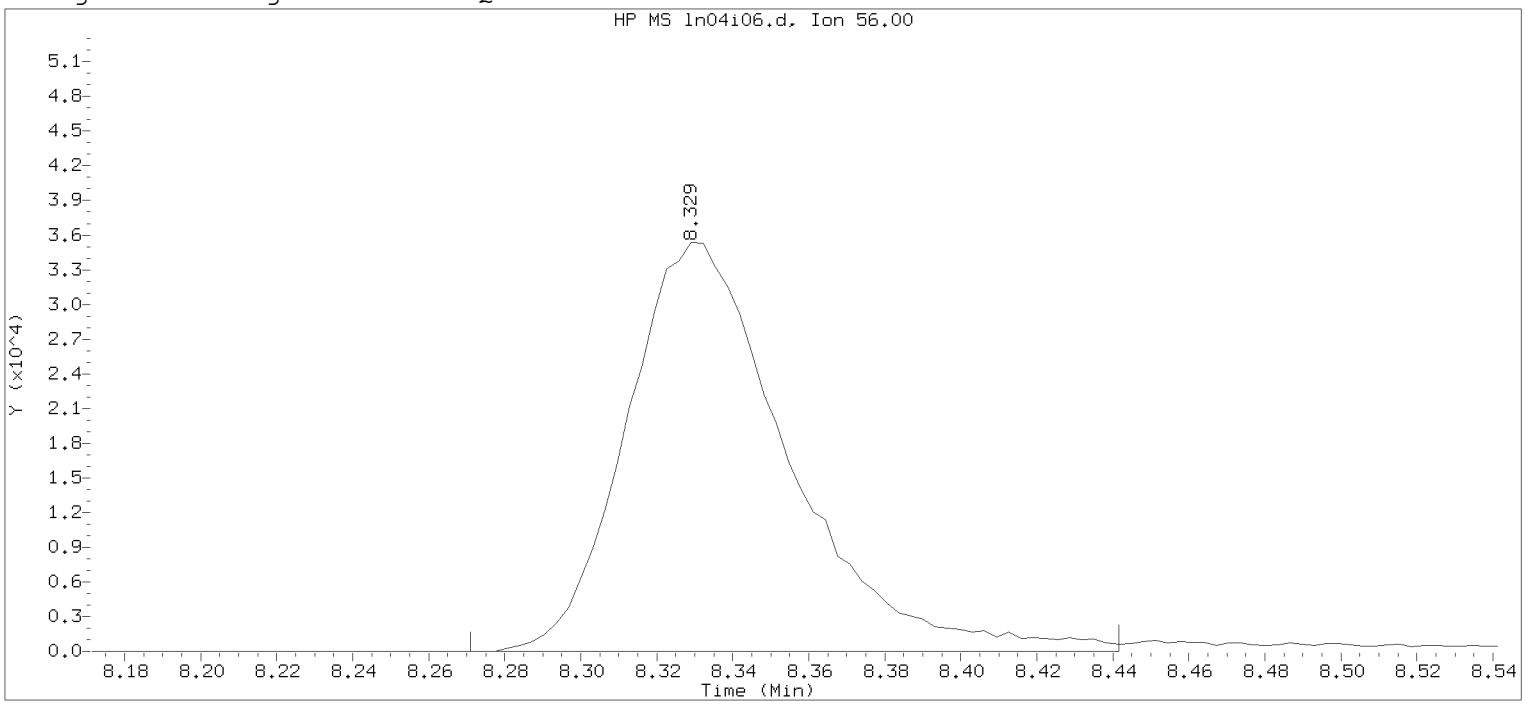
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

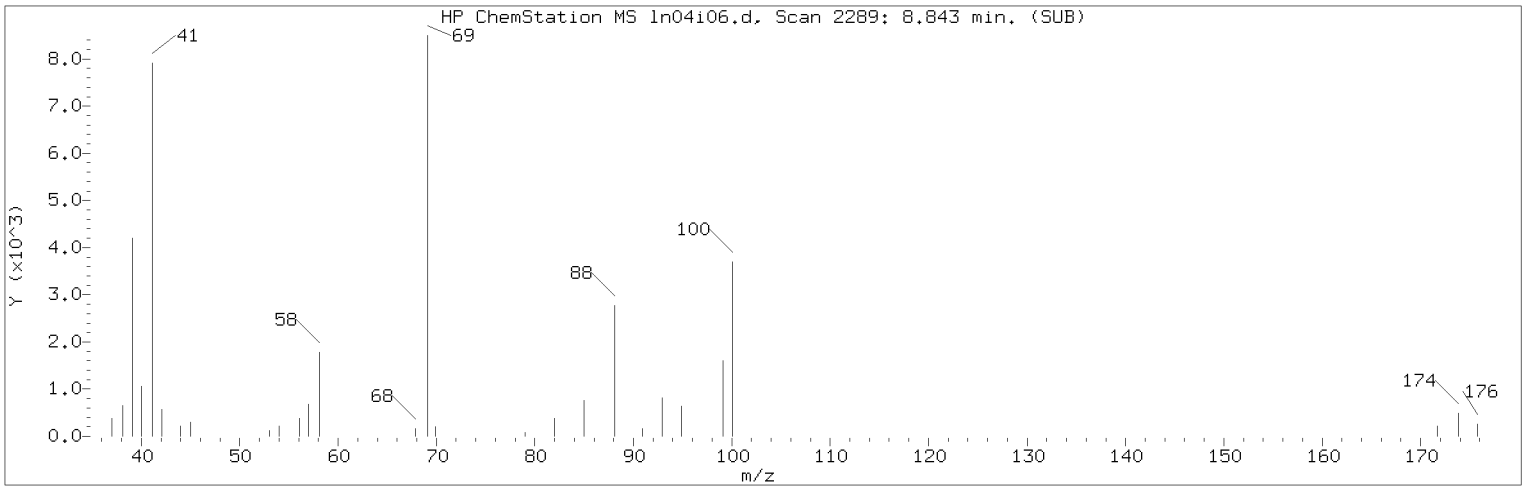
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

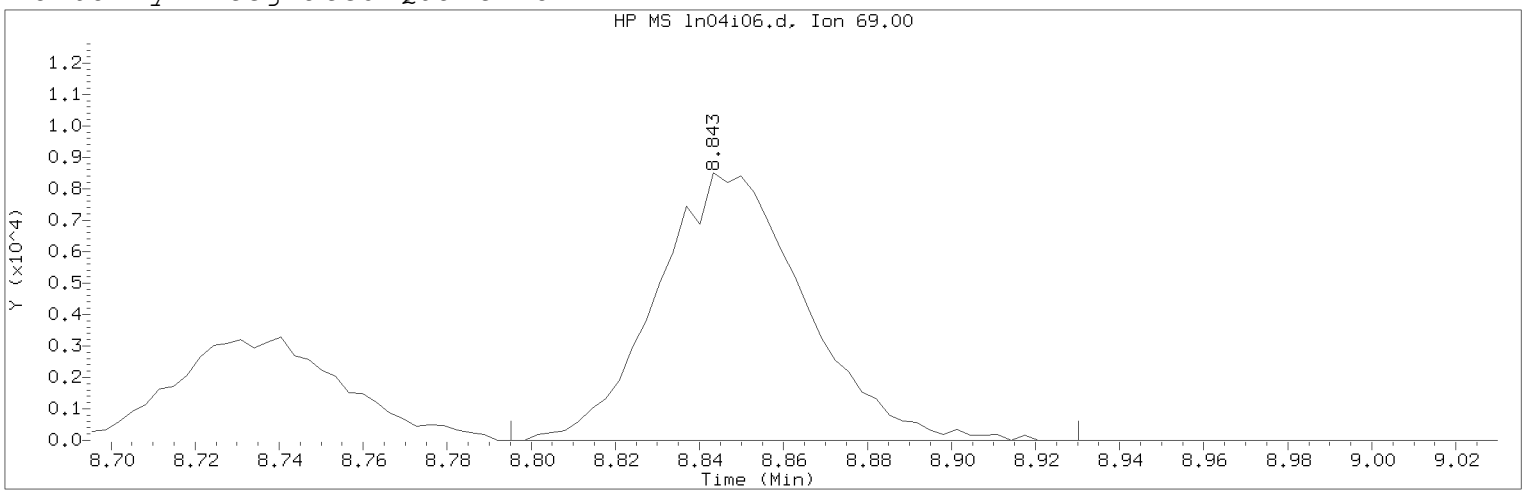
Compound Number	: 69		
Compound Name	: n-Butanol		
Scan Number	: 2129		
Retention Time (minutes)	: 8.329		
Quant Ion	: 56.00		
Area	: 104688		
On-column Amount (ng)	: 337.8676		
Integration start scan	: 2110	Integration stop scan:	2163
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

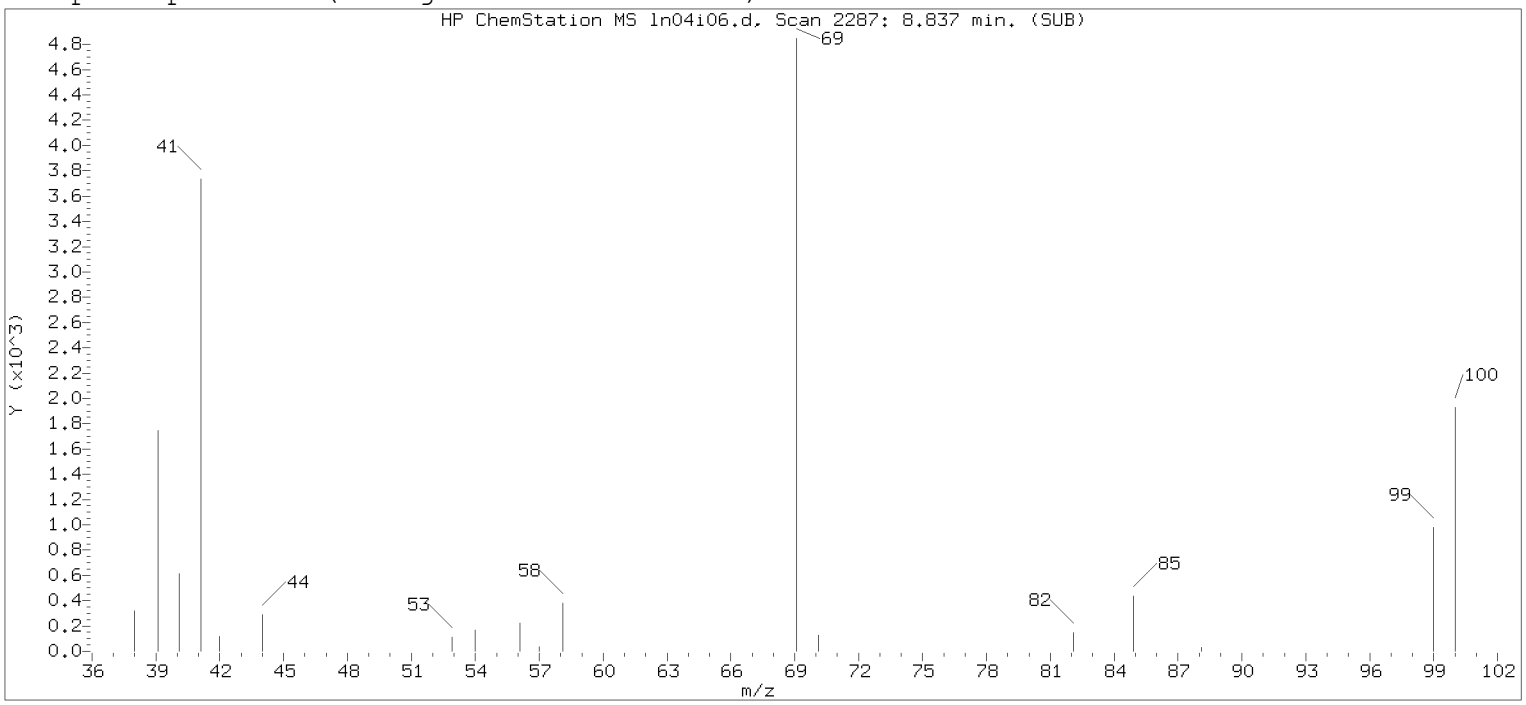
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2289
Retention Time (minutes): 8.843
Quant Ion : 69.00
Area (flag) : 20713M
On-Column Amount (ng) : 3.6110
Integration start scan : 2273 Integration stop scan: 2315
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

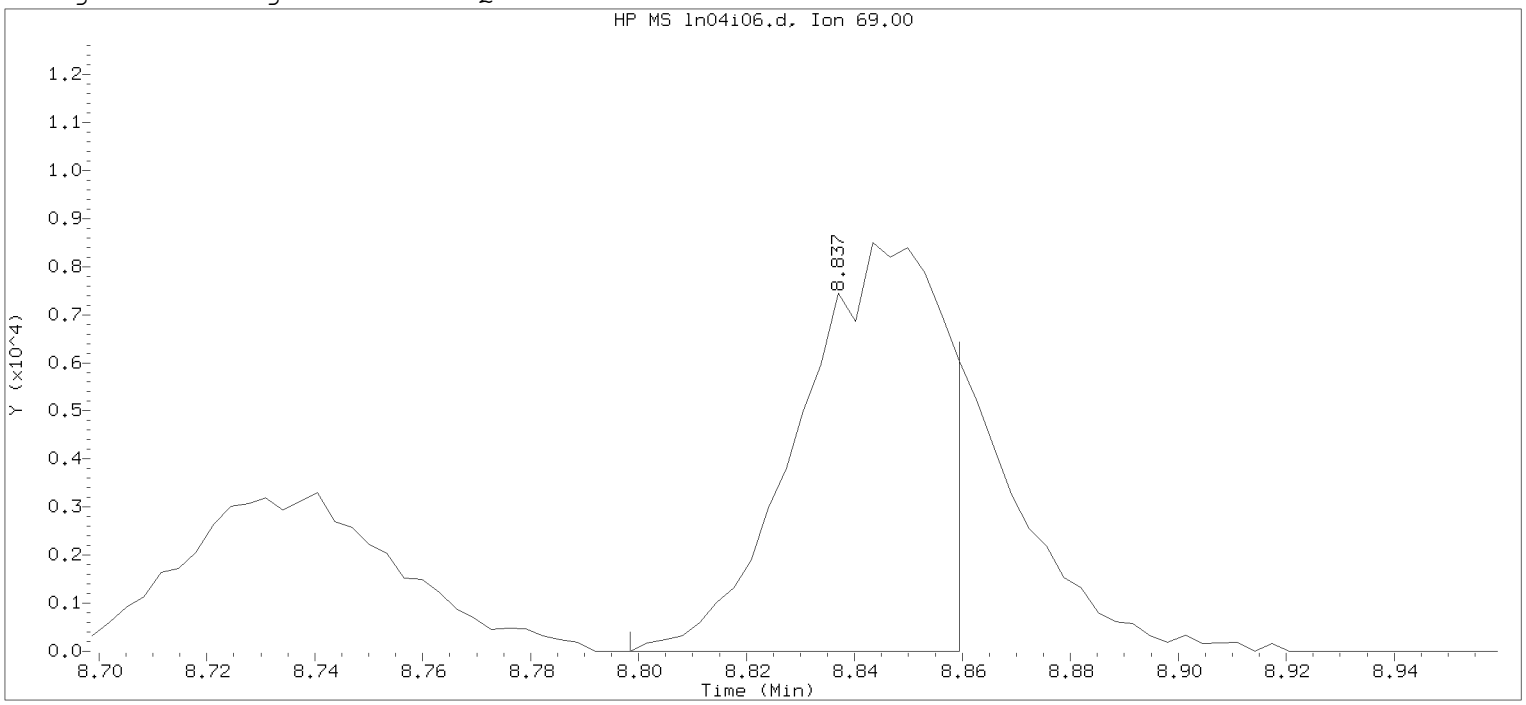
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

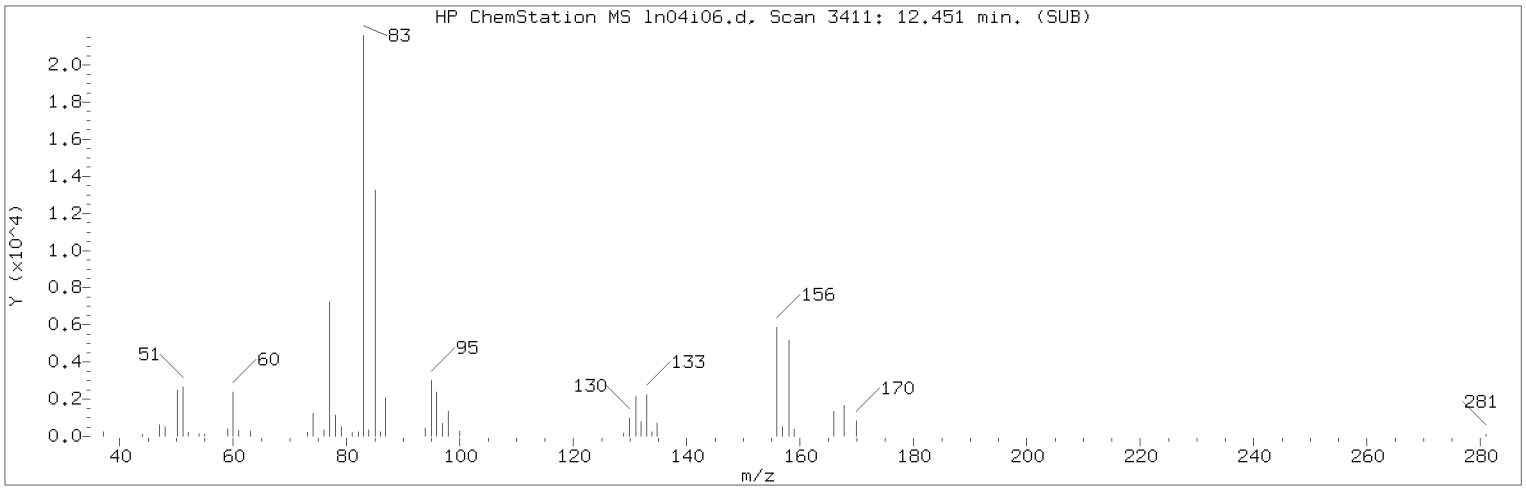
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

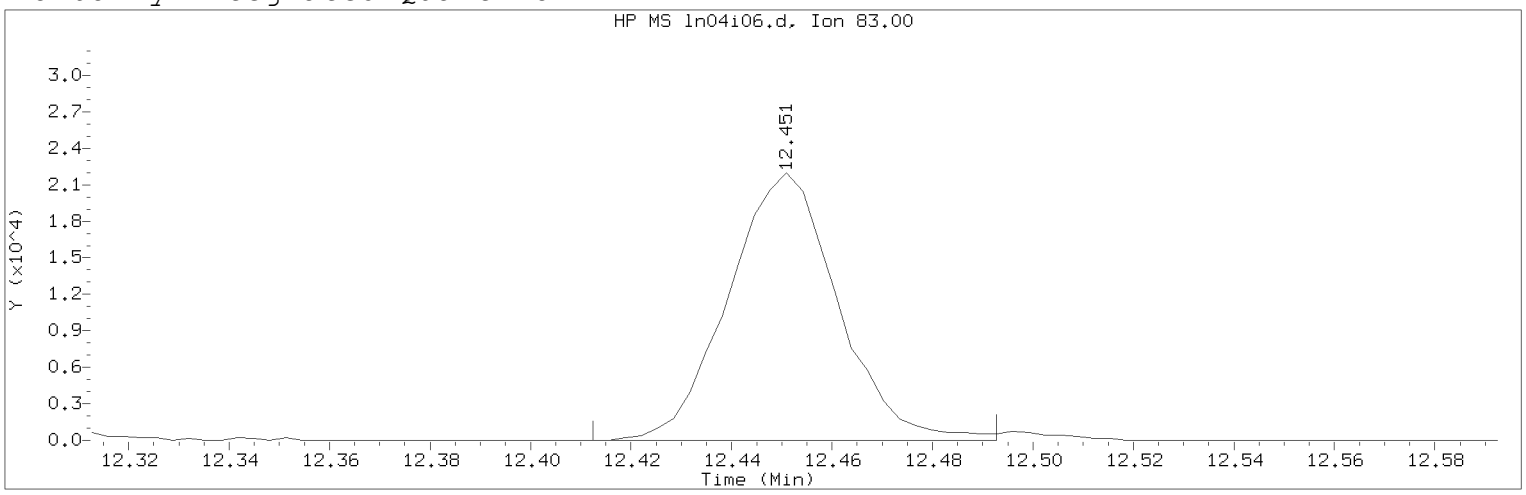
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2287
Retention Time (minutes): 8.837
Quant Ion : 69.00
Area : 15546
On-column Amount (ng) : 2.8548
Integration start scan : 2274 Integration stop scan: 2293
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

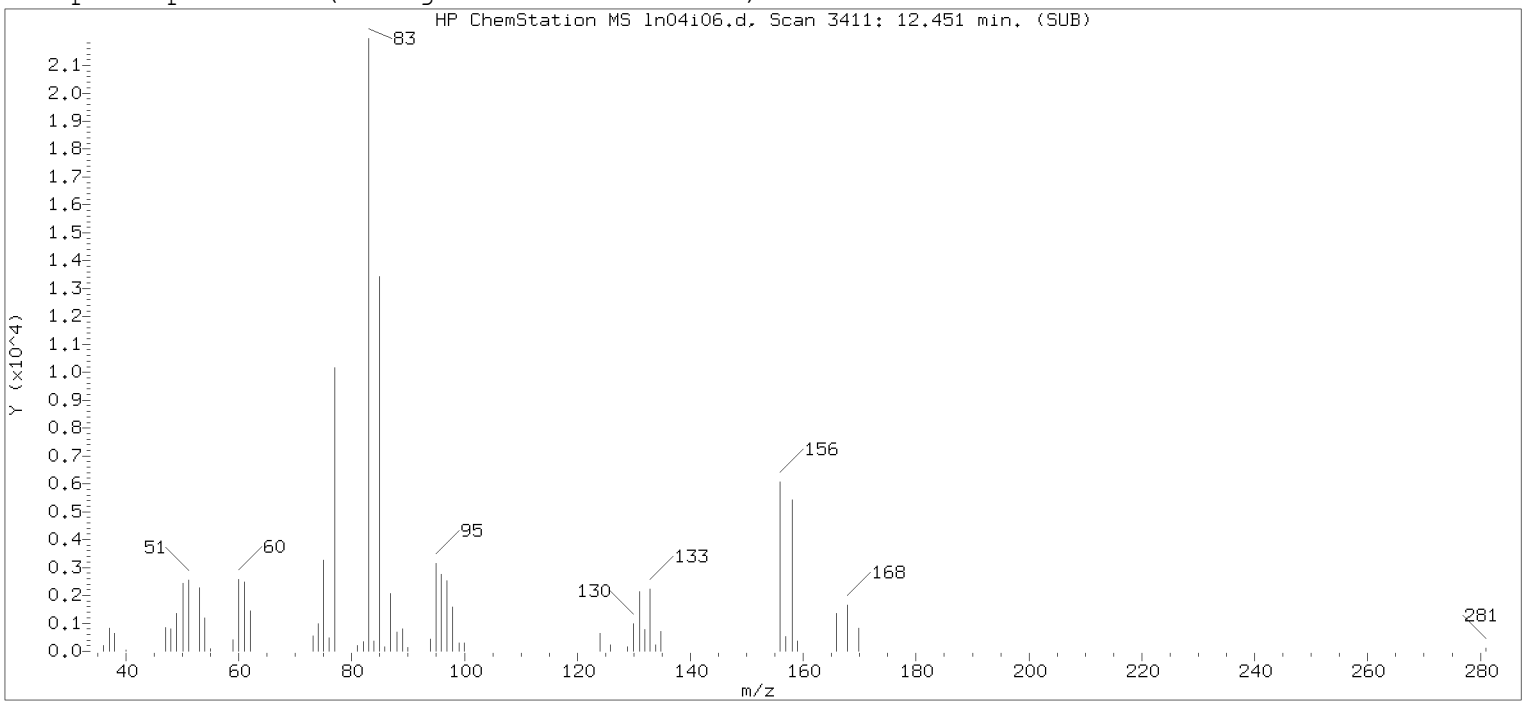
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 33170M
On-Column Amount (ng) : 3.6577
Integration start scan : 3398 Integration stop scan: 3423
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

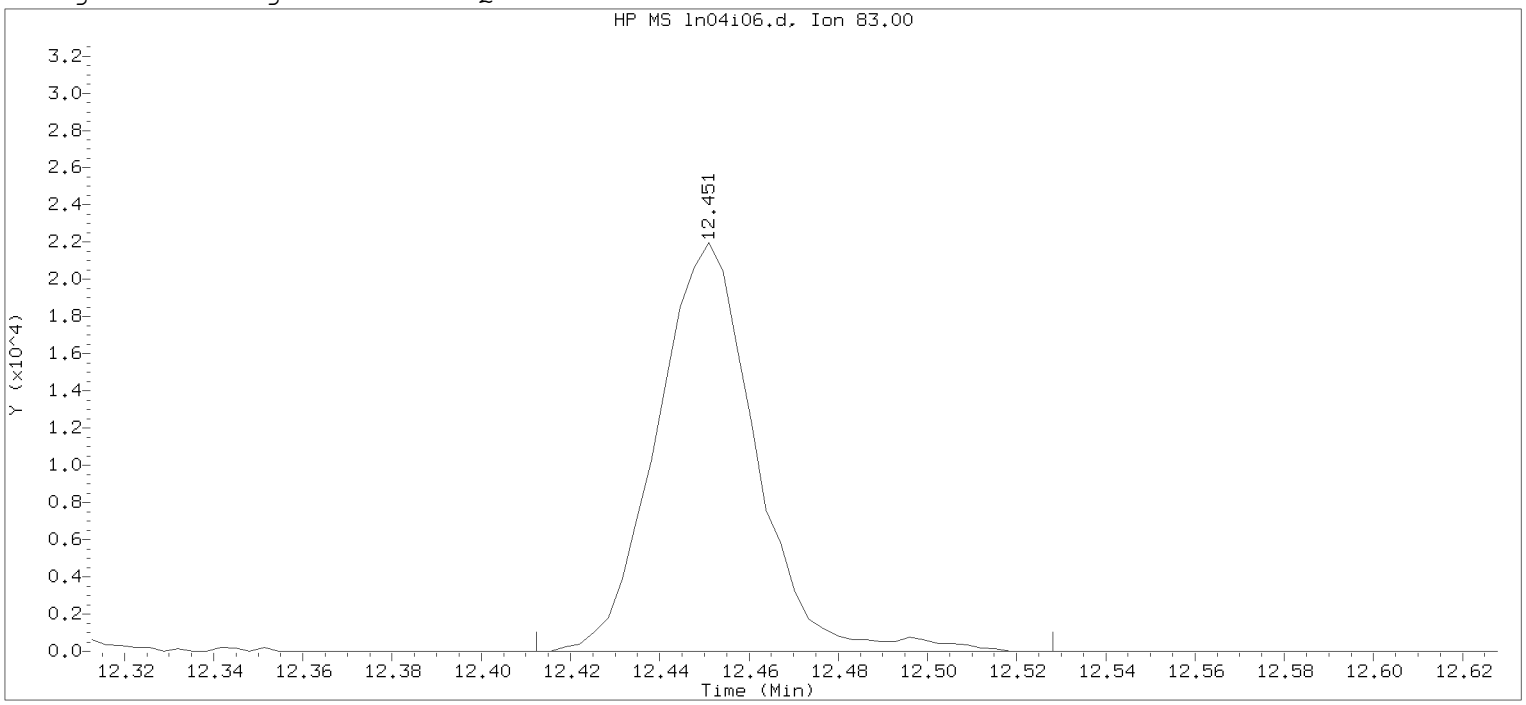
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 33718
On-column Amount (ng) : 3.6520
Integration start scan : 3398 Integration stop scan: 3434
Y at integration start : 0 Y at integration end: 0

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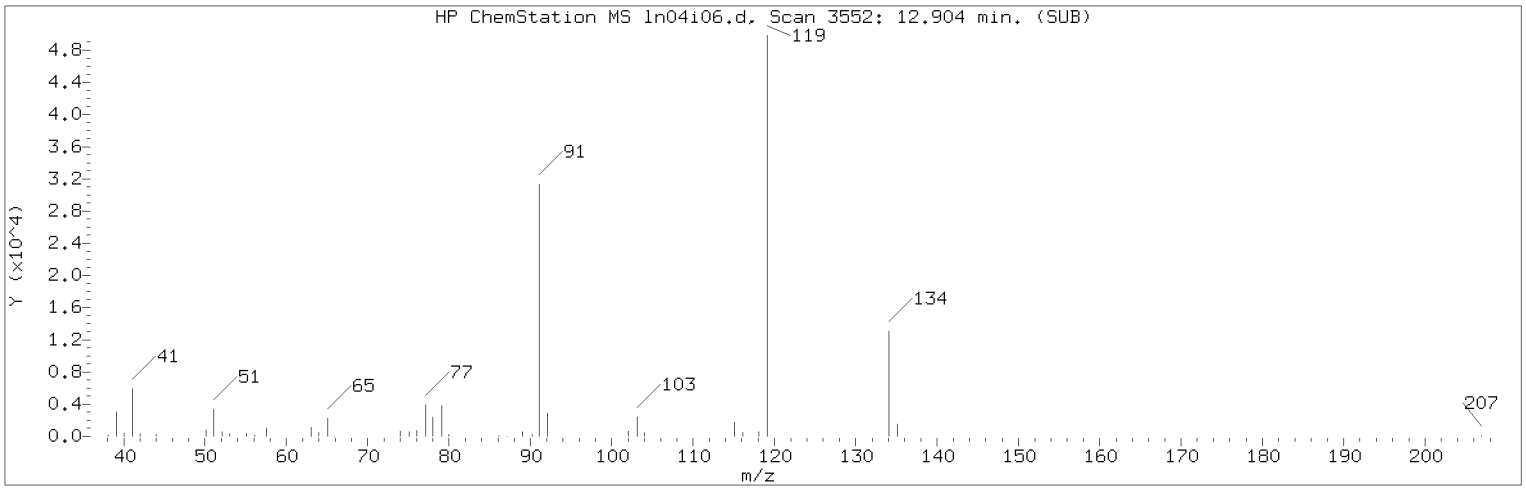
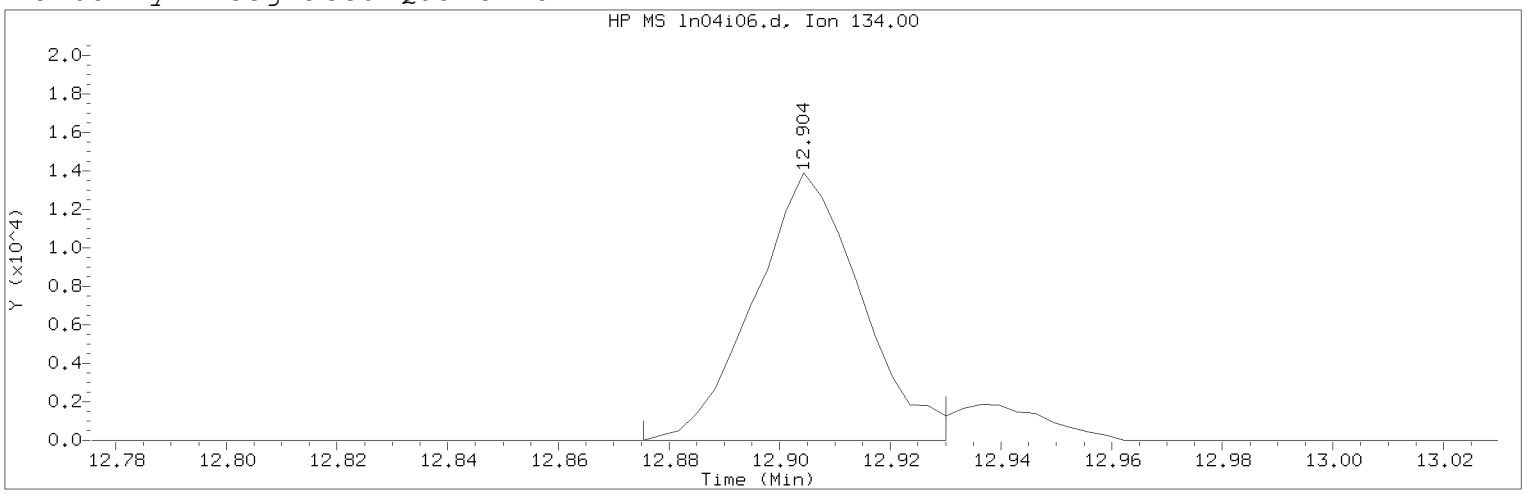
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

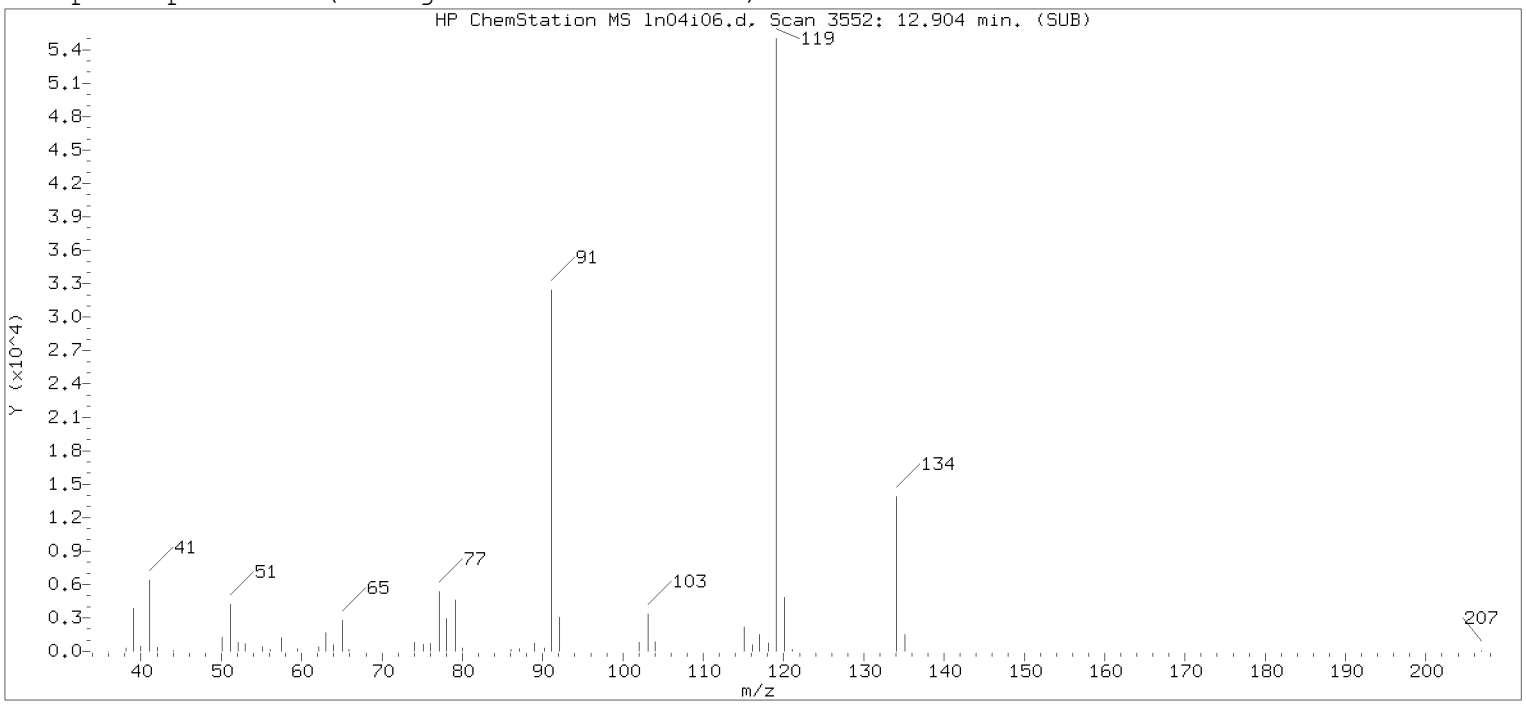
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 18608M
On-Column Amount (ng) : 3.9276
Integration start scan : 3542 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

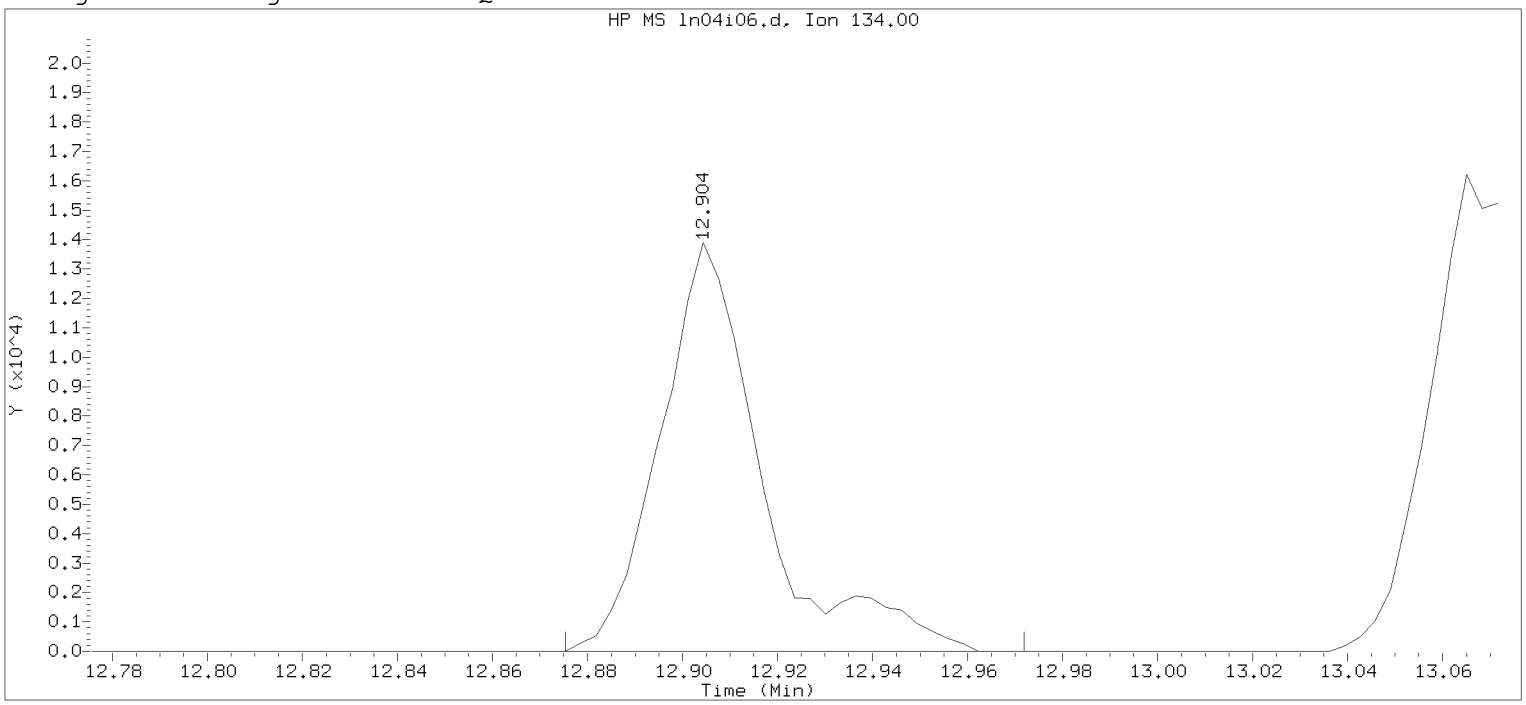
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



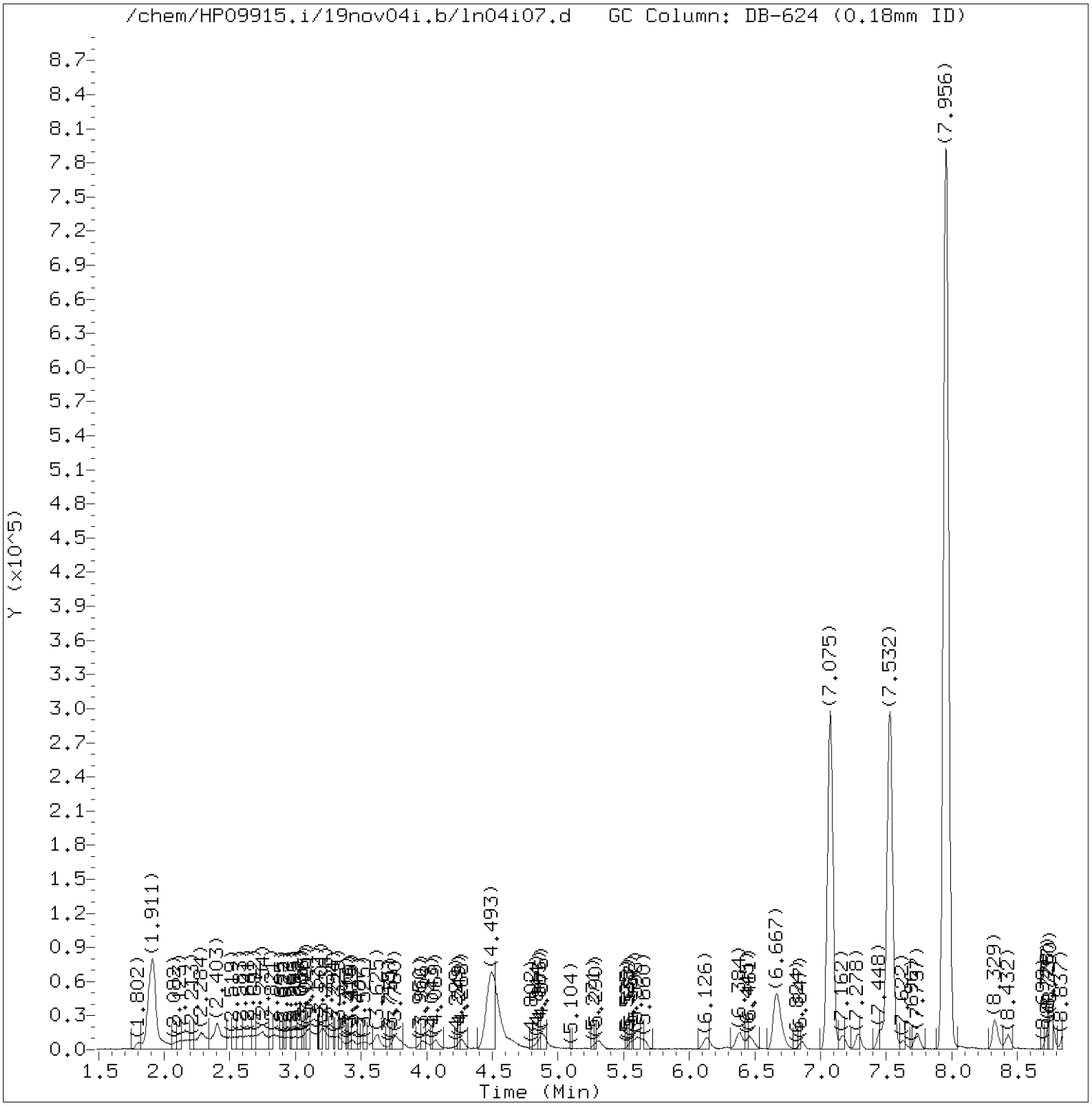
Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 20636
On-column Amount (ng) : 4.1808
Integration start scan : 3542 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

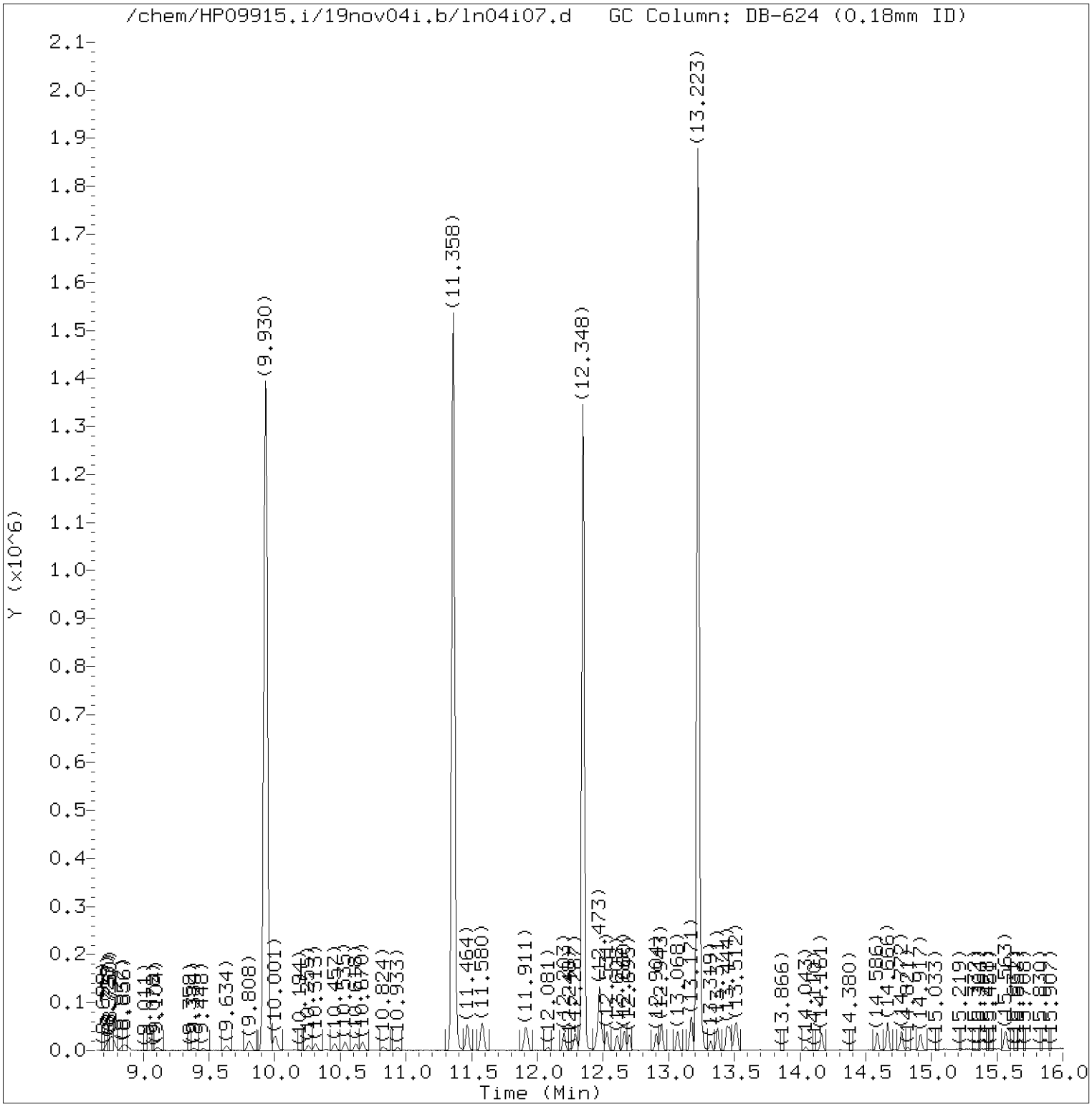
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.078	85	6299	0.794
4) Chloromethane	(2)	2.284	50	6896	0.902
5) 1,3-Butadiene	(2)	2.403	39	7255M	1.143
6) Vinyl Chloride	(2)	2.410	62	7160	0.939
8) Bromomethane	(2)	2.744	94	5605	1.025
9) Chloroethane	(2)	2.840	64	4160M	0.992
10) Dichlorofluoromethane	(2)	3.094	67	10094M	1.004
12) Trichlorofluoromethane	(2)	3.146	101	7129	0.868
11) n-Pentane	(2)	3.204	43	10269	1.058
14) Ethyl ether	(2)	3.429	59	4640M	0.874
15) Freon 123a	(2)	3.516	67	6210	0.940
16) Acrolein	(1)	3.622	56	17644	9.654
17) 1,1-Dichloroethene	(2)	3.750	96	4176	0.866
17) 1,1-Dichloroethene	(2)	3.754	63	2326	0.963
19) Freon 113	(2)	3.779	101	4754	0.864
18) Acetone	(1)	3.831	58	1588M	1.938
22) Methyl Iodide	(2)	3.966	142	8860	0.887
21) 2-Propanol	(1)	4.011	45	12063	20.480
23) Carbon Disulfide	(2)	4.075	76	15443	0.850
27) Methyl Acetate	(2)	4.255	43	6274M	1.011
25) Allyl Chloride	(2)	4.271	41	8168	0.945
28) Methylene Chloride	(2)	4.474	84	5404	0.942
29)*t-Butyl alcohol-d10	(1)	4.496	65	243591	250.000
30) t-Butyl alcohol	(1)	4.622	59	19461	18.976
31) Acrylonitrile	(2)	4.856	53	2960	0.886
33) Methyl Tertiary Butyl Ether	(2)	4.879	73	16848	0.920
32) trans-1,2-Dichloroethene	(2)	4.885	96	5035	0.903
34) n-Hexane	(2)	5.316	57	7475M	0.862
36) 1,1-Dichloroethane	(2)	5.548	63	8436	0.867
38) di-Isopropyl ether	(2)	5.606	45	16654	0.888
39) 2-Chloro-1,3-butadiene	(2)	5.663	53	7448	0.853
40) Ethyl t-butyl ether	(2)	6.126	59	16060	0.882
43) 1,2-Dichloroethene (Total)	(2)		96	10762	1.818
44) 2-Butanone	(2)	6.361	43	8098	1.889
42) cis-1,2-Dichloroethene	(2)	6.377	96	5727	0.915
45) 2,2-Dichloropropane	(2)	6.390	77	6419M	0.849
47) Propionitrile	(1)	6.461	54	24221	18.955
48) Methacrylonitrile	(2)	6.670	67	32346	8.977

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	2849	0.858
50) Tetrahydrofuran	(1)	6.728	71	2319	2.009
51) Chloroform	(2)	6.860	83	8108	0.871
52)$Dibromofluoromethane	(2)	7.075	113	273696	49.231
52)$Dibromofluoromethane	(2)	7.075	111	279412	49.293
53) 1,1,1-Trichloroethane	(2)	7.078	97	6588	0.830
54) Cyclohexane	(2)	7.171	56	8997	0.847
54) Cyclohexane	(2)	7.178	84	7859	0.852
54) Cyclohexane	(2)	7.178	69	2772	0.844
56) Carbon Tetrachloride	(2)	7.284	117	5549	0.824
55) 1,1-Dichloropropene	(2)	7.287	75	6611	0.860
58) Isobutyl Alcohol	(1)	7.458	41	16978	49.195
57)$1,2-Dichloroethane-d4	(2)	7.528	102	69641	49.151
57)$1,2-Dichloroethane-d4	(2)	7.528	65	311703	49.366
57)$1,2-Dichloroethane-d4	(2)	7.535	104	44286	48.935
60) Benzene	(2)	7.551	78	20445	0.884
61) 1,2-Dichloroethane	(2)	7.631	62	7810	1.050
61) 1,2-Dichloroethane	(2)	7.631	98	696	0.945
65) t-Amyl methyl ether	(2)	7.741	73	16286	0.891
67) n-Heptane	(2)	7.956	43	7535M	0.930
66)*Fluorobenzene	(2)	7.959	96	1137124	50.000
69) n-Butanol	(1)	8.329	56	24322	81.882
71) Trichloroethene	(2)	8.432	95	5231	0.898
72) Methylcyclohexane	(2)	8.737	83	9247	0.856
72) Methylcyclohexane	(2)	8.731	98	4032	0.825
73) 1,2-Dichloropropane	(2)	8.760	63	5229	0.890
76) Methyl Methacrylate	(2)	8.837	69	4607M	0.811
75) 1,4-Dioxane	(1)	8.856	88	3548M	43.457
74) Dibromomethane	(2)	8.866	93	3298	0.868
78) Bromodichloromethane	(2)	9.107	83	5648	0.828
79) 2-Nitropropane	(2)	9.384	41	3333	1.614
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	2007	0.796
81) cis-1,3-Dichloropropene	(2)	9.638	75	6973	0.770
82) 4-Methyl-2-pentanone	(2)	9.808	43	16006	1.769
83)$Toluene-d8	(3)	9.930	98	1156948	50.253
83)$Toluene-d8	(3)	9.930	100	746174	50.033
88) Toluene	(3)	10.007	92	12902	0.894
90) 1,3-Dichloropropene (total)	(3)		100	13101	1.518

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.255	75	6128	0.748
91) Ethyl Methacrylate	(3)	10.313	69	7873	0.791
92) 1,1,2-Trichloroethane	(3)	10.461	97	4897	0.895
93) Tetrachloroethene	(3)	10.538	166	5565	0.910
94) 1,3-Dichloropropane	(3)	10.618	76	8504	0.910
96) 2-Hexanone	(3)	10.670	43	11811	1.777
97) Dibromochloromethane	(3)	10.827	129	4109	0.733
99) 1,2-Dibromoethane	(3)	10.937	107	5163	0.869
100)*Chlorobenzene-d5	(3)	11.358	117	879875	50.000
101) 1-Chlorohexane	(3)	11.361	91	8103	1.045
102) Chlorobenzene	(3)	11.383	112	14367	0.880
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	4138	0.769
104) Ethylbenzene	(3)	11.464	91	24192	0.877
106) m+p-Xylene	(3)	11.583	106	18914	1.743
108) Xylene (Total)	(3)		106	28415	2.629
107) o-Xylene	(3)	11.908	106	9501	0.886
109) Styrene	(3)	11.917	104	14106	0.796
110) Bromoform	(3)	12.081	173	2729	0.652
111) Isopropylbenzene	(3)	12.203	105	22719	0.845
112) Cyclohexanone	(1)	12.287	55	15983	49.985
114)$4-Bromofluorobenzene	(3)	12.348	95	436282	50.046
114)$4-Bromofluorobenzene	(3)	12.348	174	360511	49.883
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	7596	0.849
115) Bromobenzene	(4)	12.461	156	6426	0.903
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	22650	8.211
117) 1,2,3-Trichloropropane	(4)	12.496	110	2425	0.884
119) n-Propylbenzene	(4)	12.528	91	27655	0.890
120) 2-Chlorotoluene	(4)	12.612	126	6138M	0.929
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	18836	0.834
121) 4-Chlorotoluene	(4)	12.702	126	6403M	0.931
124) tert-Butylbenzene	(4)	12.904	134	4060M	0.869
125) Pentachloroethane	(4)	12.940	167	2751	0.684
126) 1,2,4-Trimethylbenzene	(4)	12.943	105	20498	0.861
127) sec-Butylbenzene	(4)	13.065	105	24344	0.873
129) 1,3-Dichlorobenzene	(4)	13.165	146	12468	0.954
130) p-Isopropyltoluene	(4)	13.174	119	21126	0.876
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	473433	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	13174	0.972

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

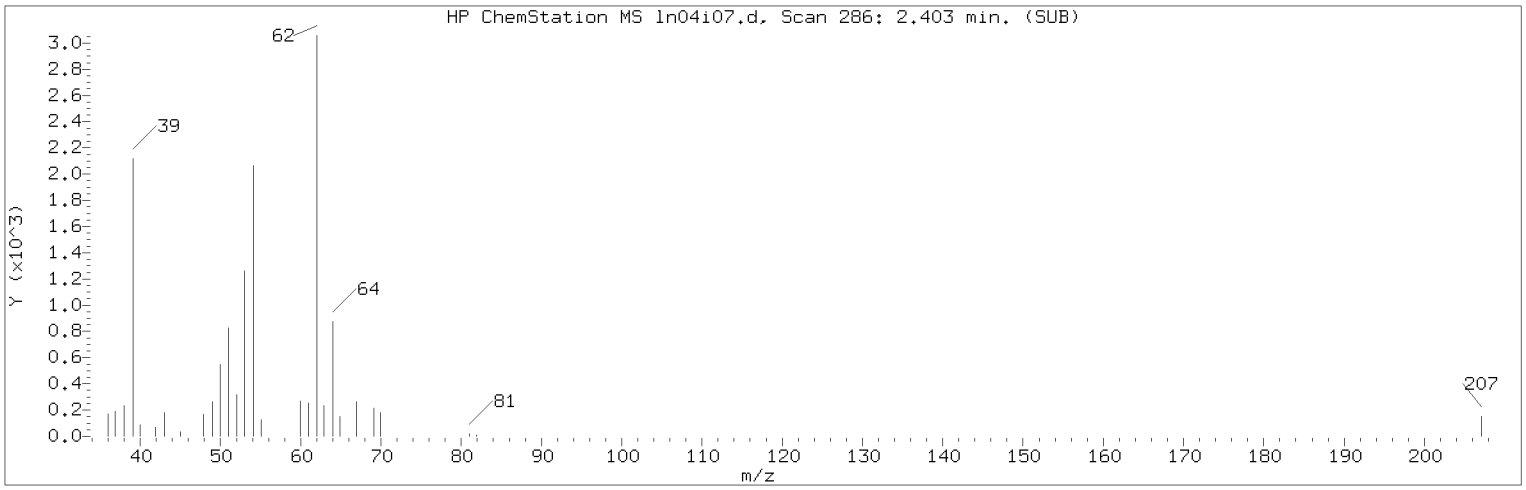
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	22457	0.890
135) Benzyl Chloride	(4)	13.319	91	11494	0.602
136) 1,3-Diethylbenzene	(4)	13.374	119	13985	0.891
141) Diethylbenzene (total)	(4)		100	41423	2.726
137) 1,4-Diethylbenzene	(4)	13.441	119	15446	0.929
139) n-Butylbenzene	(4)	13.464	92	11964M	0.970
138) 1,2-Dichlorobenzene	(4)	13.502	146	12171	0.943
140) 1,2-Diethylbenzene	(4)	13.515	119	11992	0.906
142) 1,2-Dibromo-3-chloropropane	(4)	14.046	75	1565	0.799
144) 1,3,5-Trichlorobenzene	(4)	14.161	180	10166	1.026
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	10347	1.074
147) Hexachlorobutadiene	(4)	14.666	225	9370	2.059
148) Naphthalene	(4)	14.772	128	28210	0.910
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	10052	1.072
150) 2-Methylnaphthalene	(4)	15.567	142	18783M	0.984

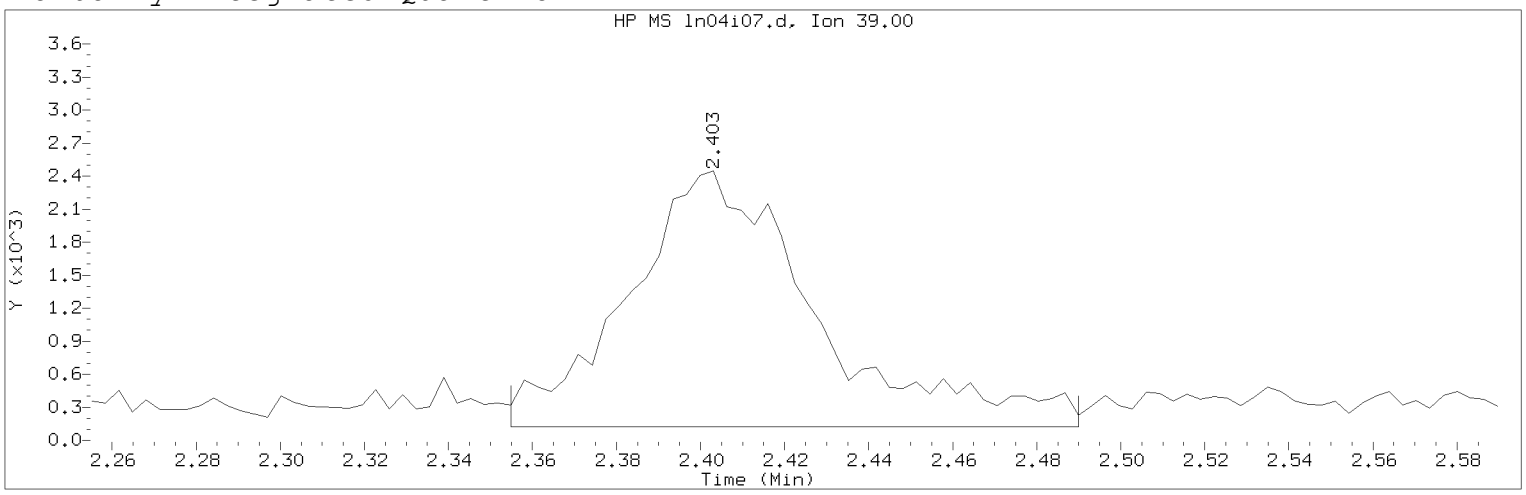
M = Compound was manually integrated.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

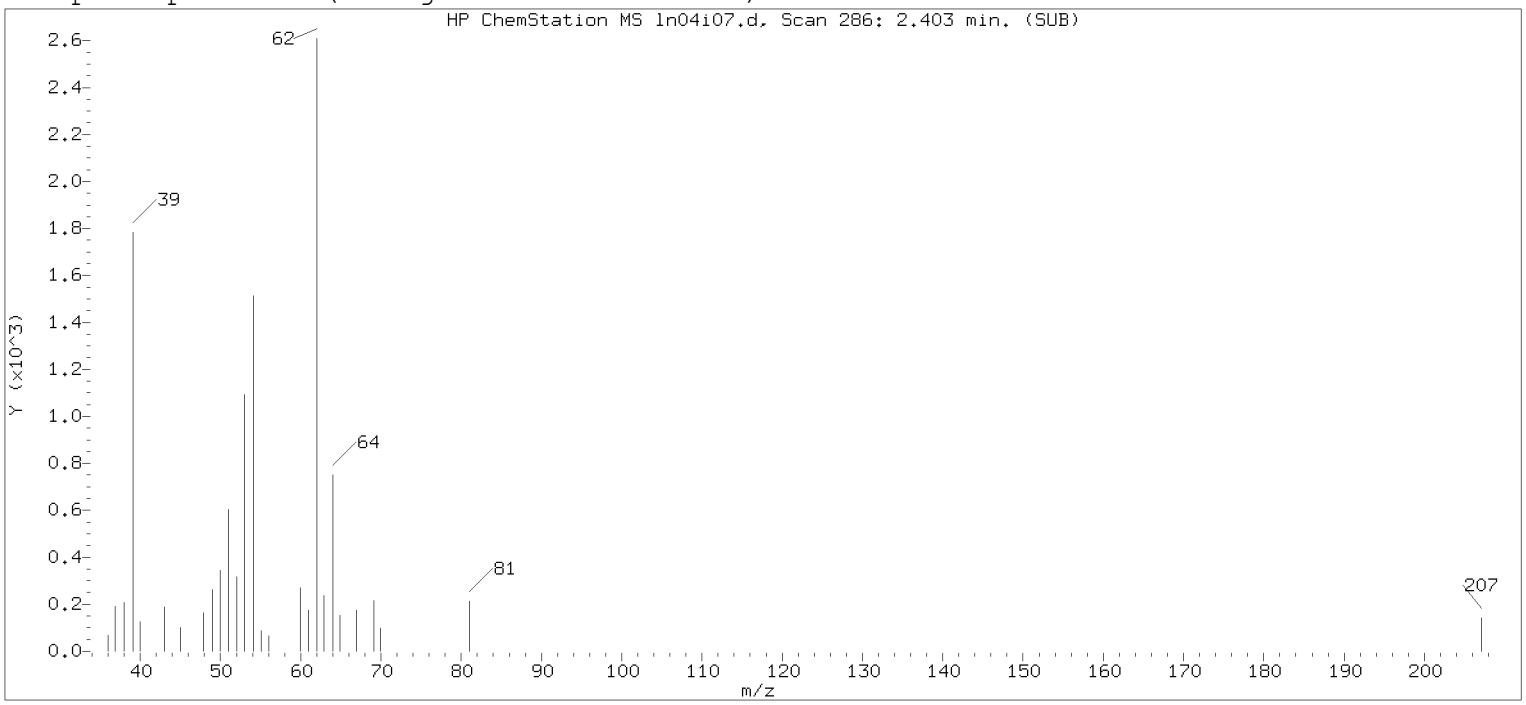
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 286
Retention Time (minutes): 2.403
Quant Ion : 39.00
Area (flag) : 7255M
On-Column Amount (ng) : 1.1432
Integration start scan : 270 Integration stop scan: 312
Y at integration start : 120 Y at integration end: 120

Reason for manual integration: improper integration

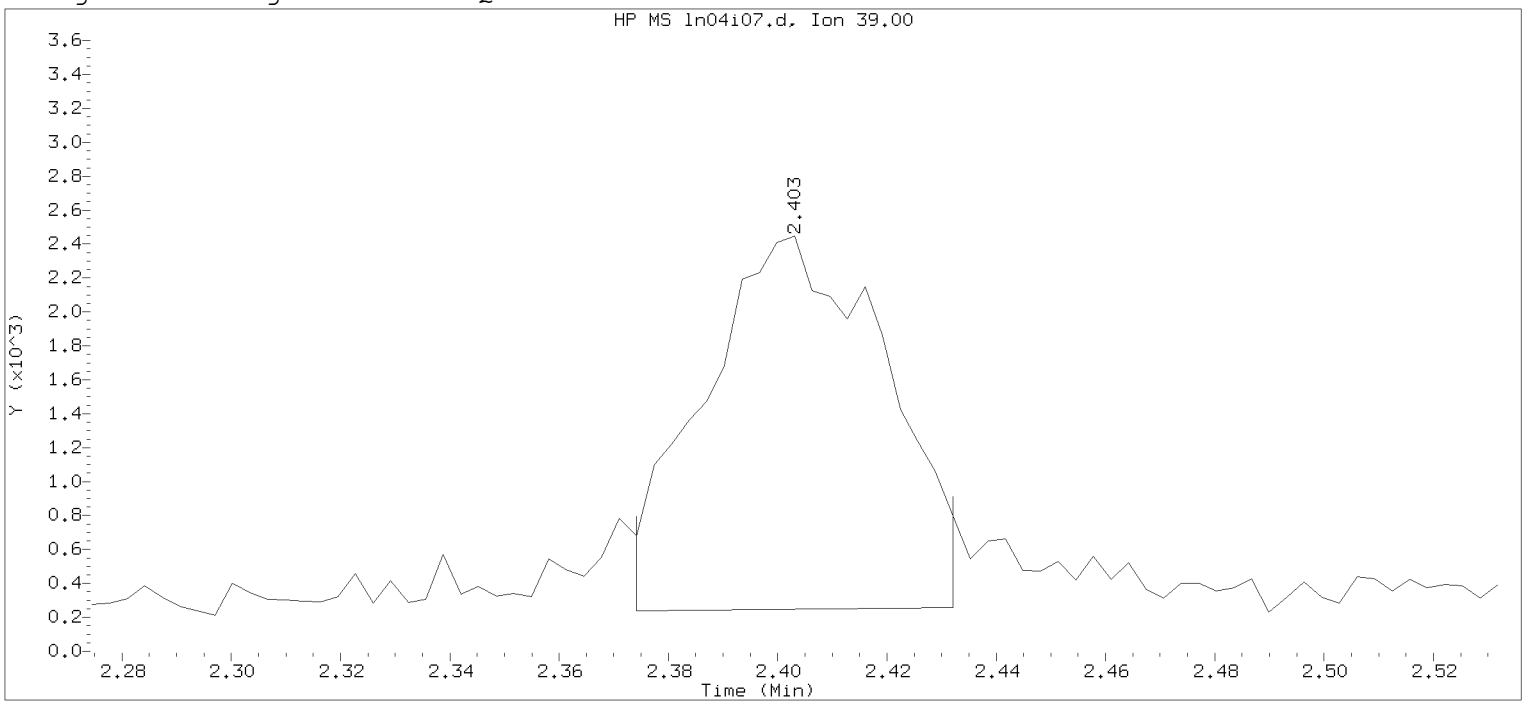
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

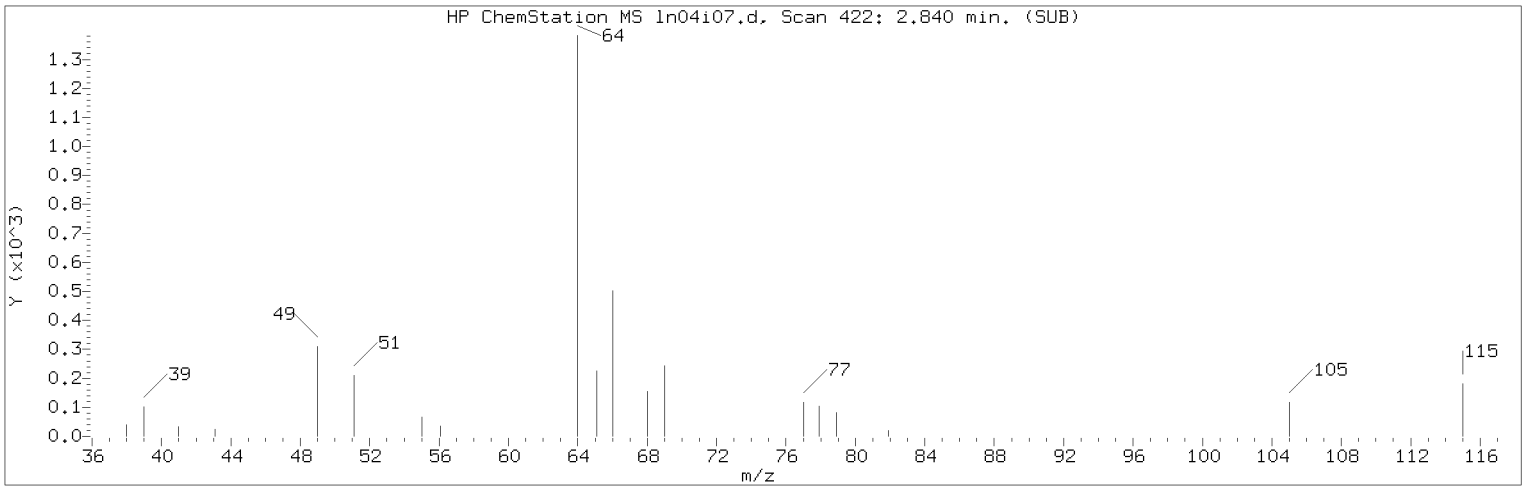
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

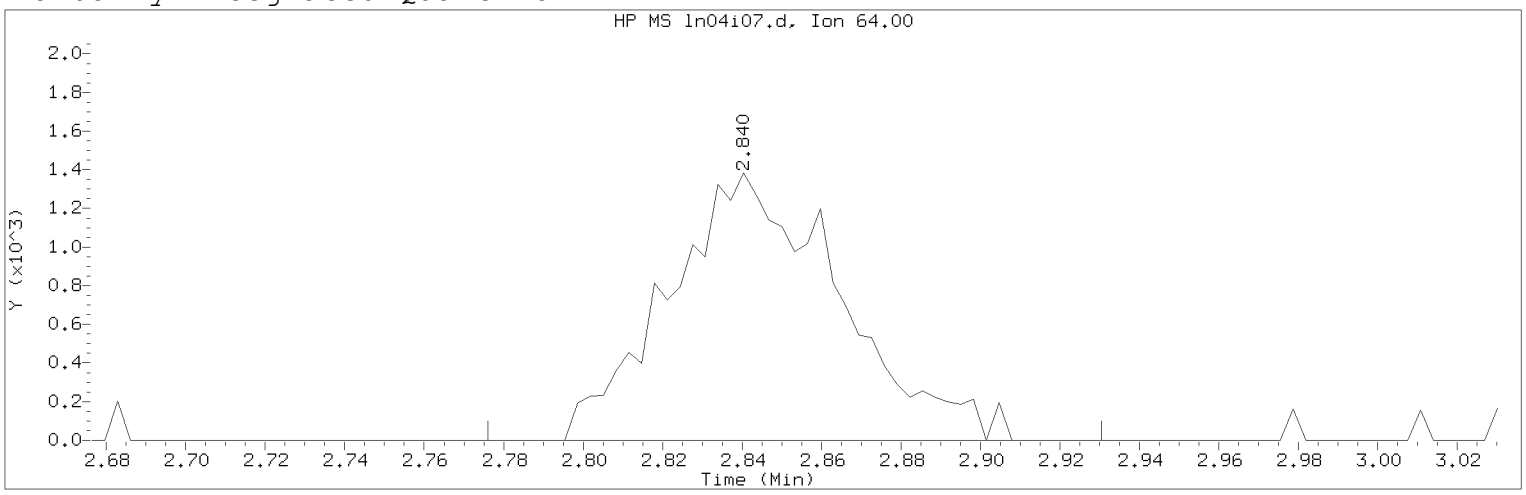
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 286
Retention Time (minutes): 2.403
Quant Ion : 39.00
Area : 5073
On-column Amount (ng) : 0.8493
Integration start scan : 276 Integration stop scan: 294
Y at integration start : 239 Y at integration end: 258

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

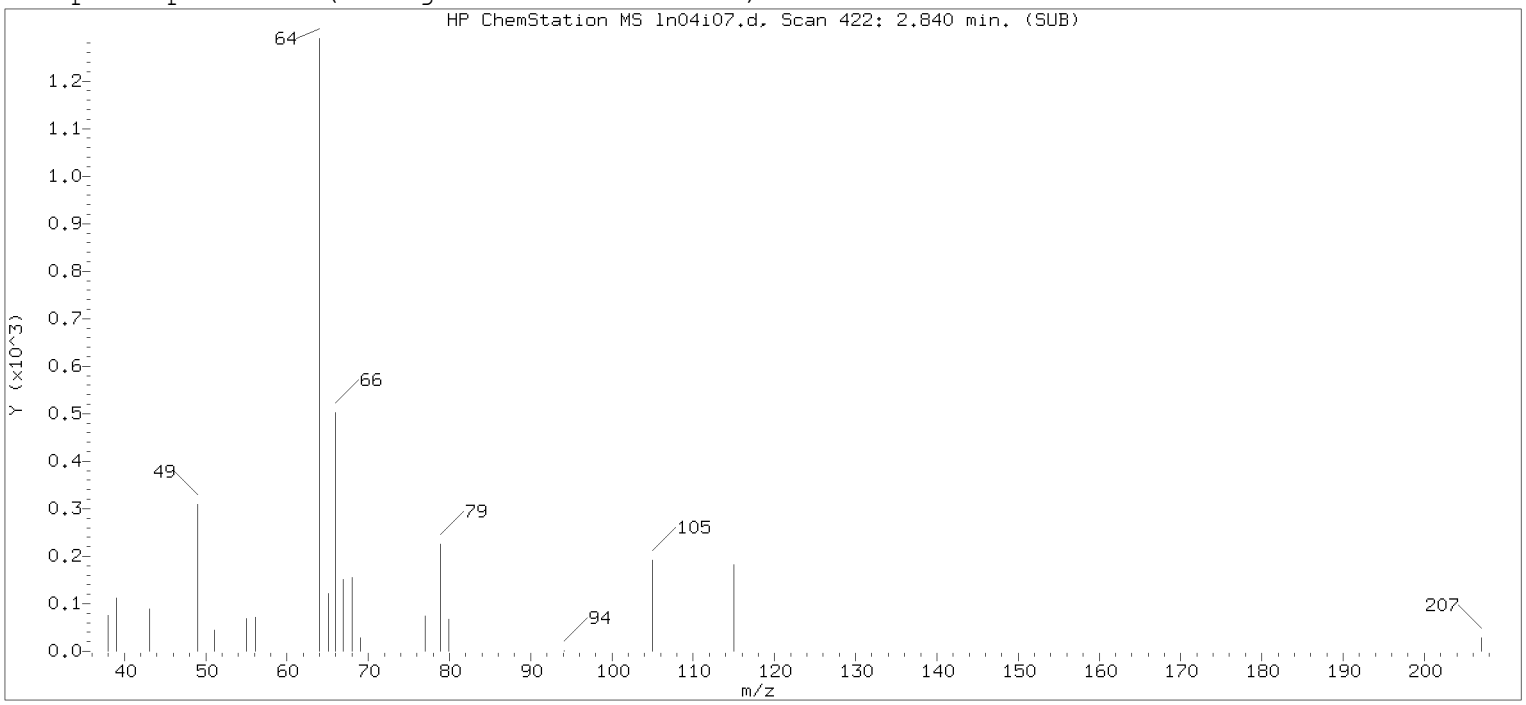
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 422
Retention Time (minutes): 2.840
Quant Ion : 64.00
Area (flag) : 4160M
On-Column Amount (ng) : 0.9924
Integration start scan : 401 Integration stop scan: 449
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

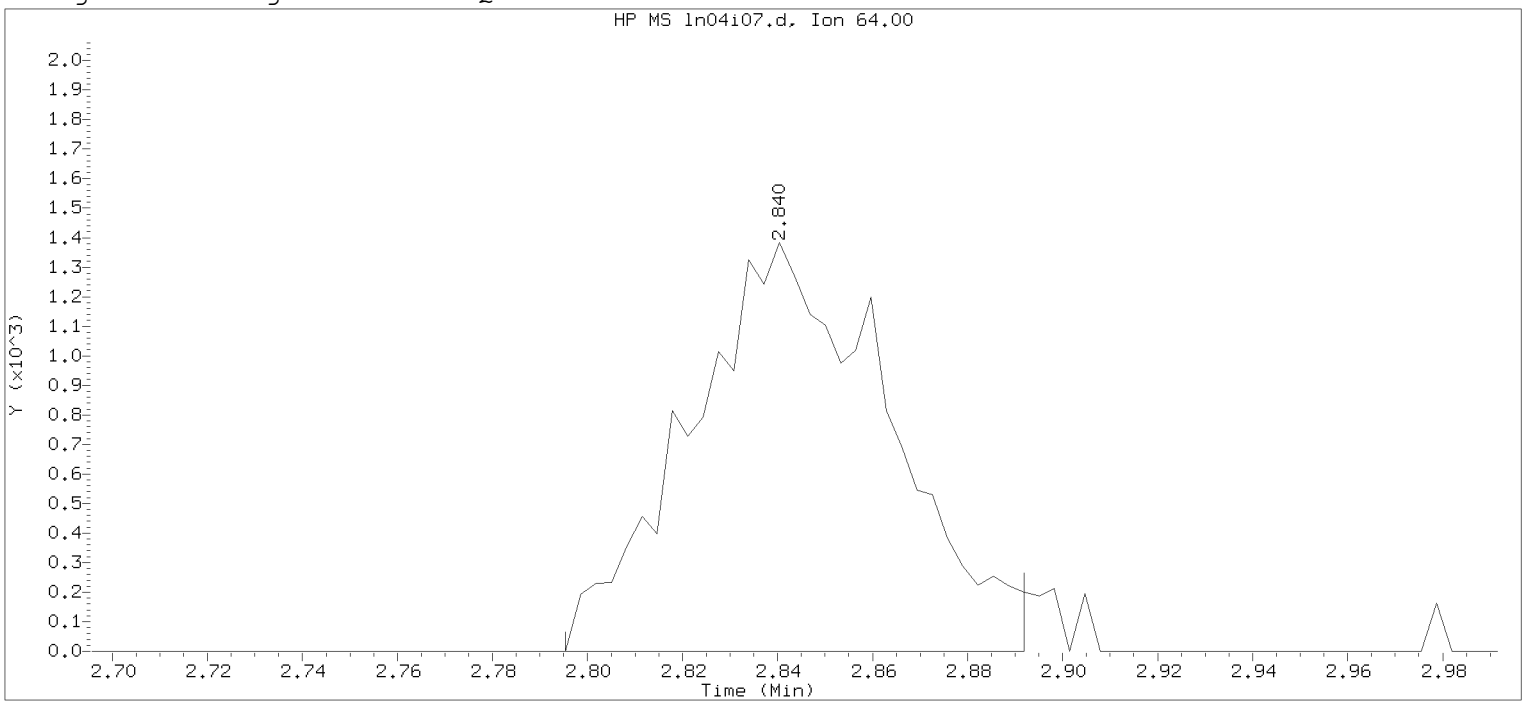
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

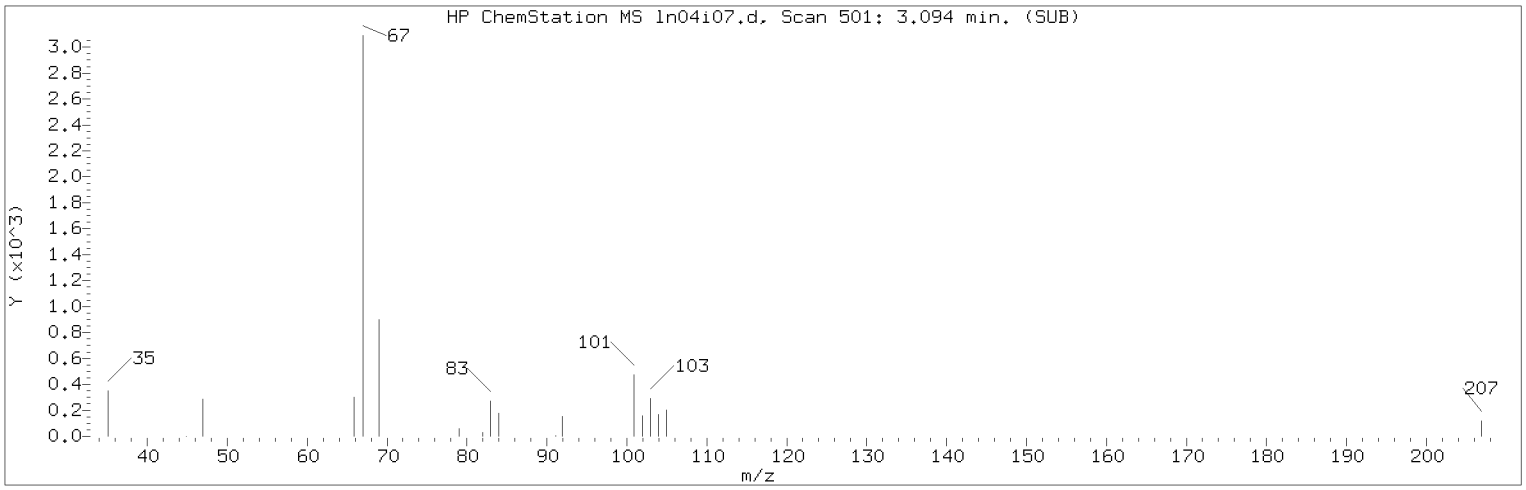
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

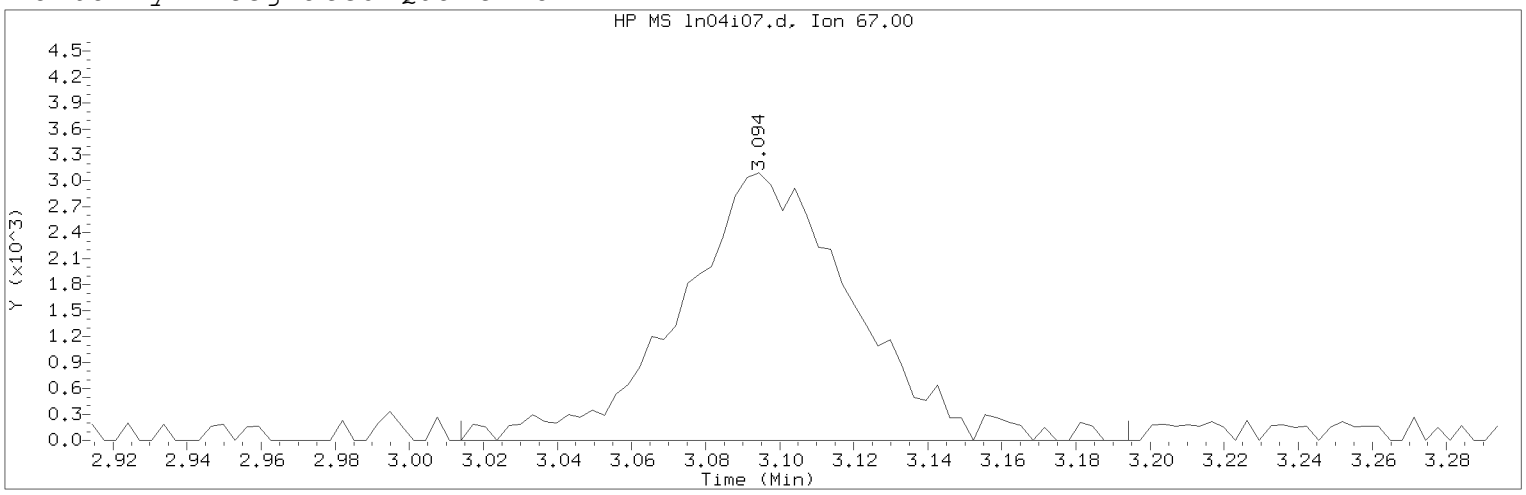
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 422
Retention Time (minutes): 2.840
Quant Ion : 64.00
Area : 4026
On-column Amount (ng) : 0.9650
Integration start scan : 407 Integration stop scan: 437
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

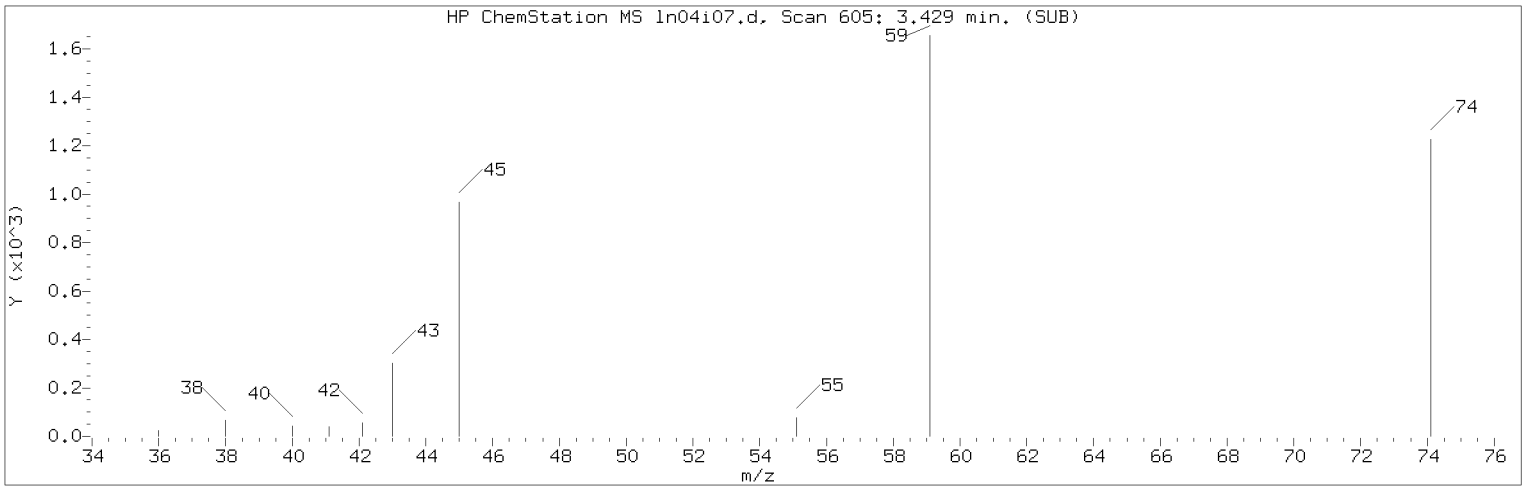
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 501
Retention Time (minutes): 3.094
Quant Ion : 67.00
Area (flag) : 10094M
On-Column Amount (ng) : 1.0040
Integration start scan : 475 Integration stop scan: 531
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

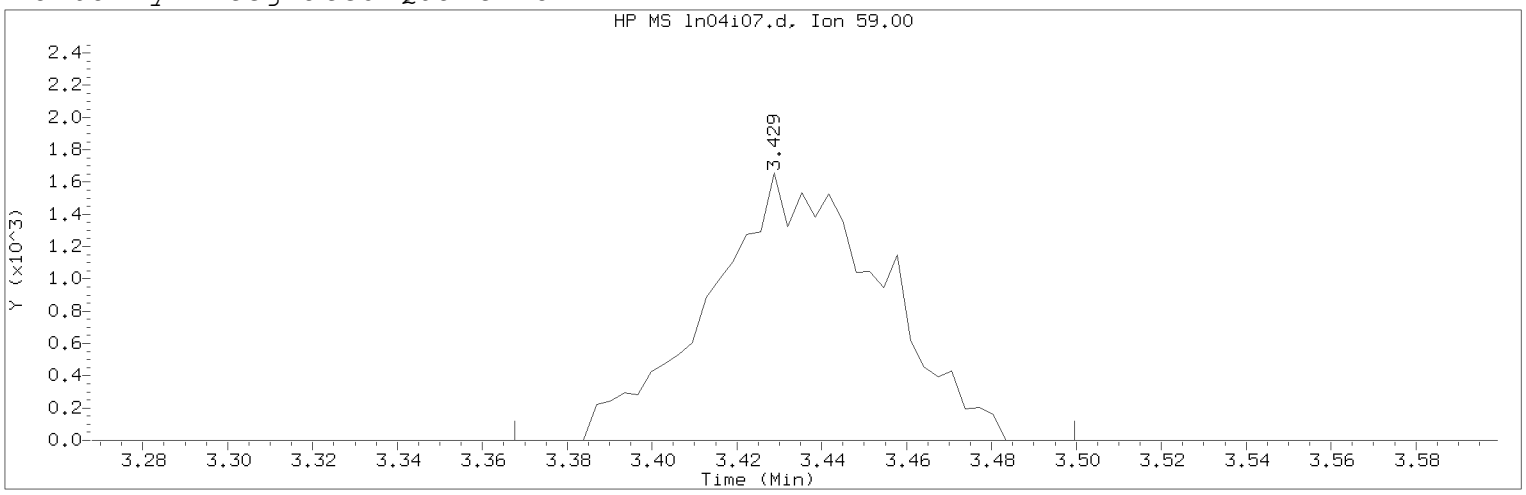
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

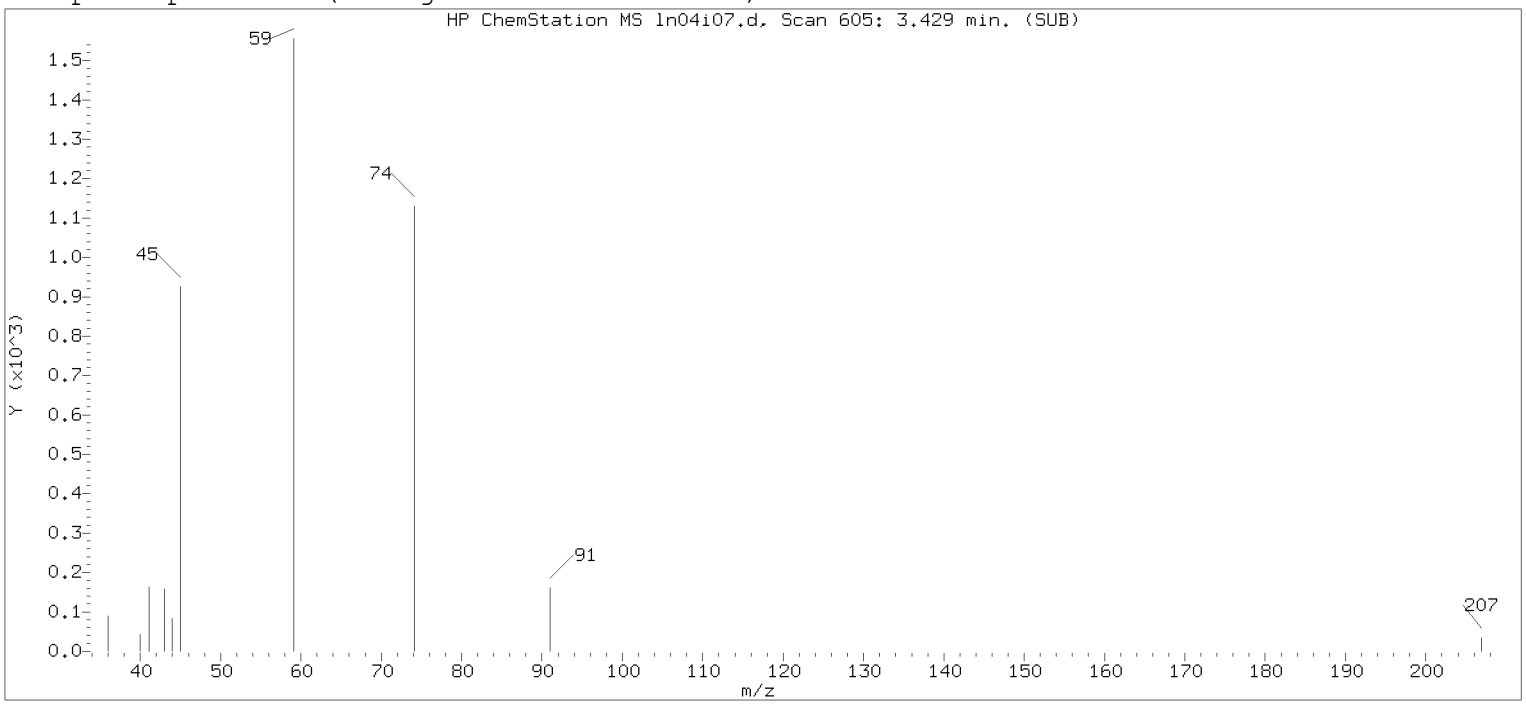
Compound Number : 14
Compound Name : Ethyl ether
Scan Number : 605
Retention Time (minutes): 3.429
Quant Ion : 59.00
Area (flag) : 4640M
On-Column Amount (ng) : 0.8744
Integration start scan : 585 Integration stop scan: 626
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

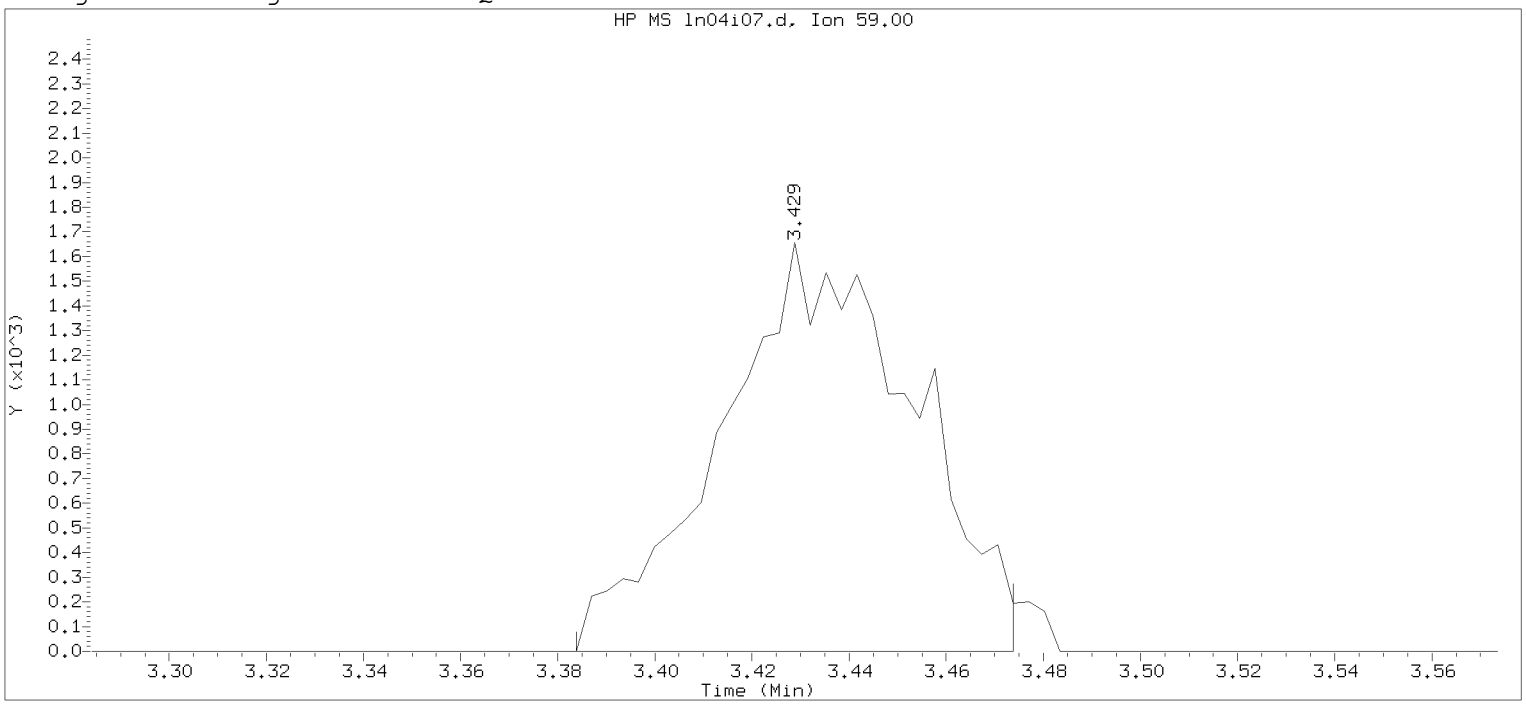
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

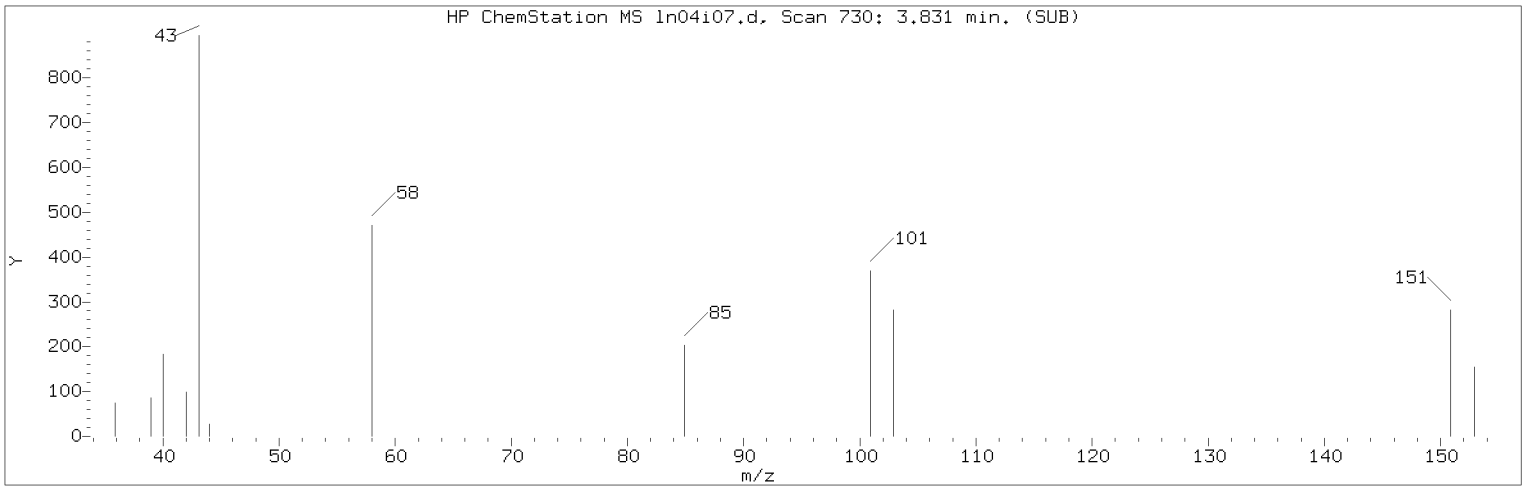
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

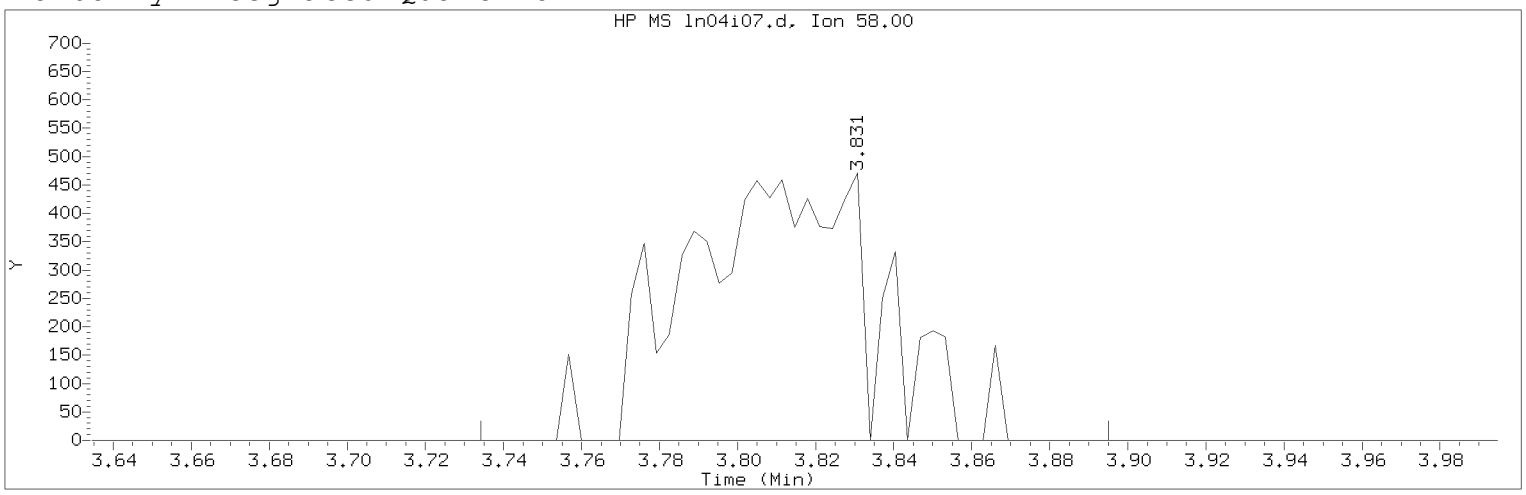
Compound Number : 14
Compound Name : Ethyl ether
Scan Number : 605
Retention Time (minutes): 3.429
Quant Ion : 59.00
Area : 4552
On-column Amount (ng) : 0.8599
Integration start scan : 590 Integration stop scan: 618
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

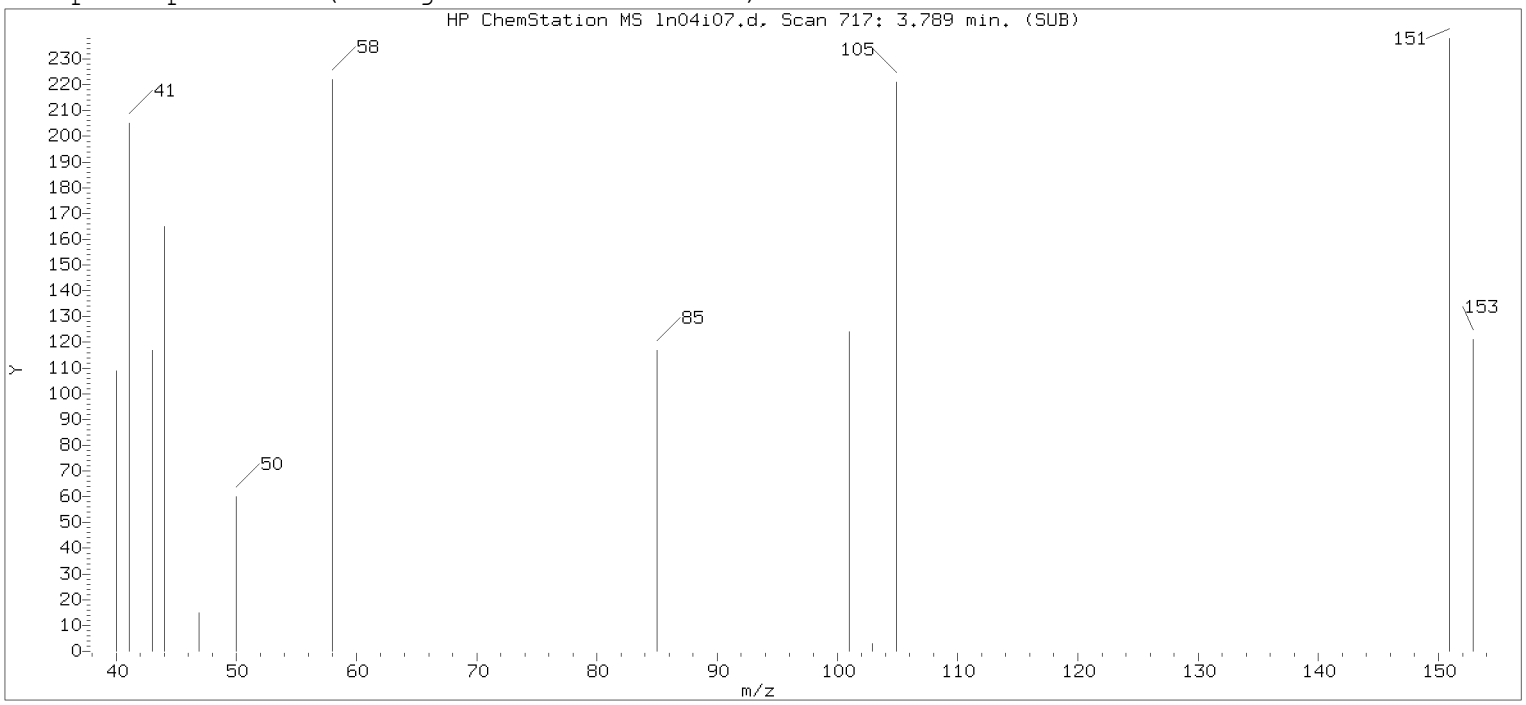
Compound Number : 18
Compound Name : Acetone
Scan Number : 730
Retention Time (minutes): 3.831
Quant Ion : 58.00
Area (flag) : 1588M
On-Column Amount (ng) : 1.9382
Integration start scan : 699 Integration stop scan: 749
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

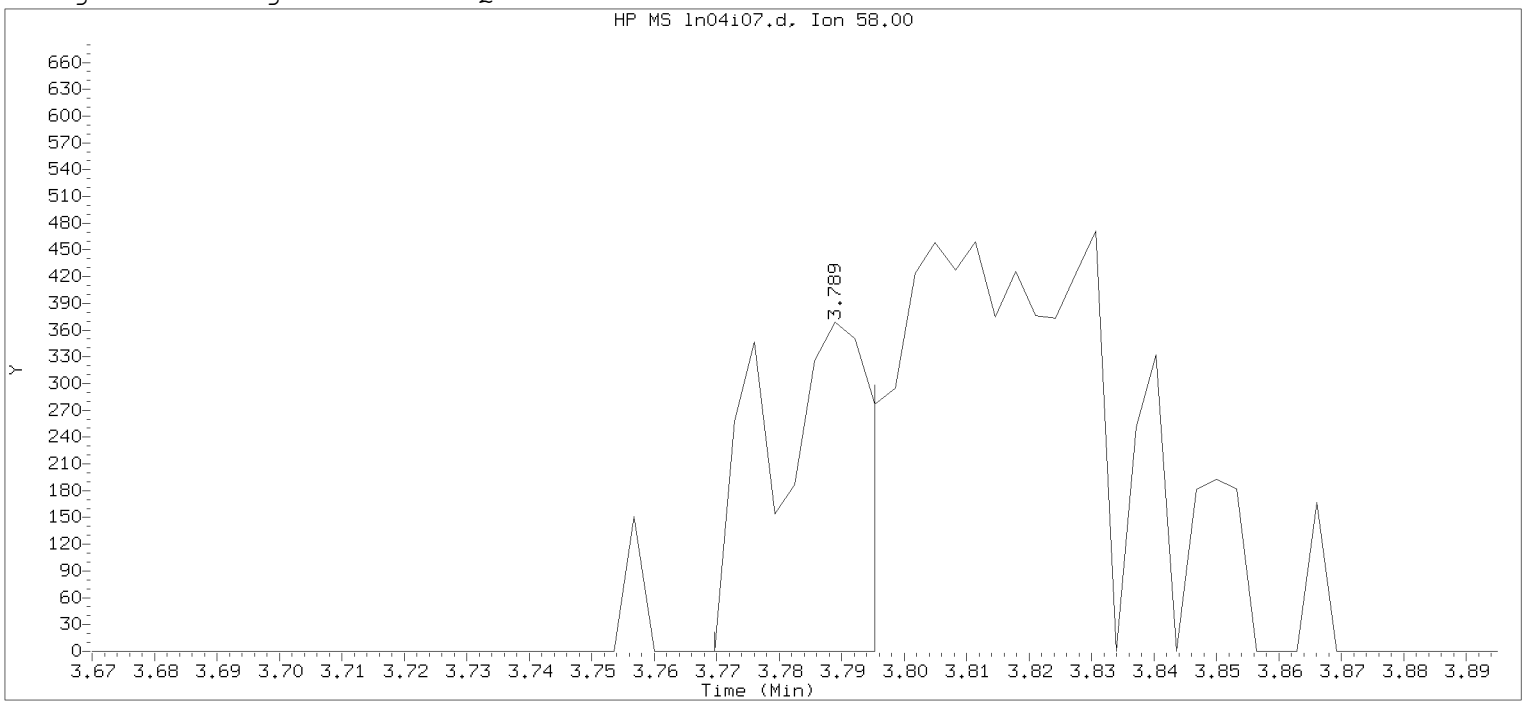
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

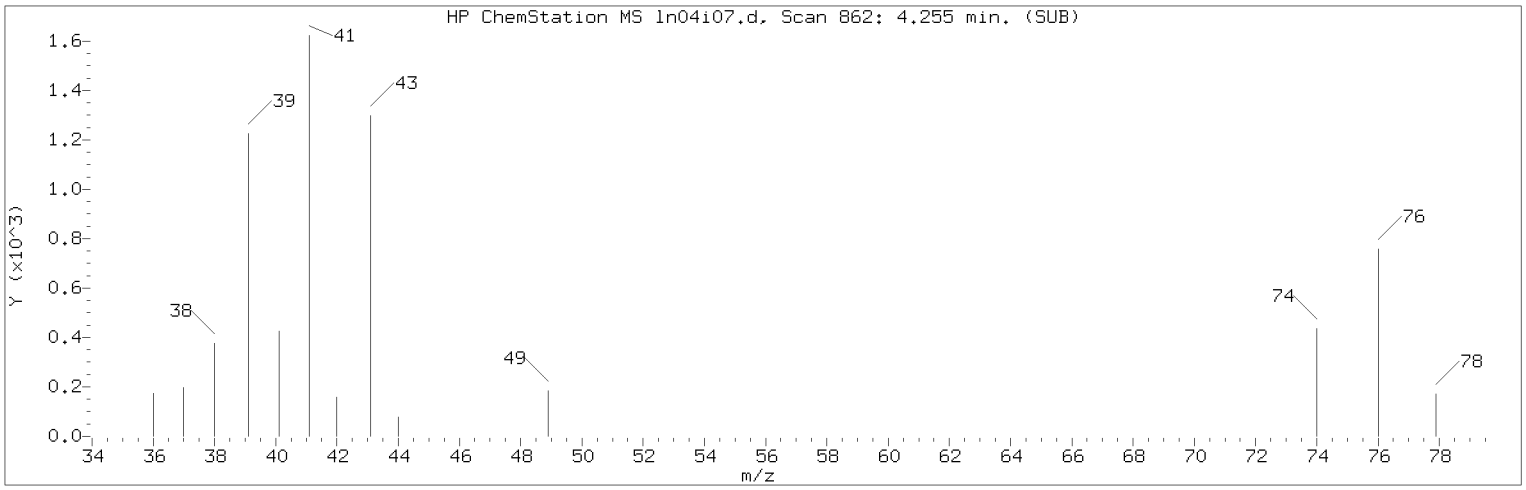
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

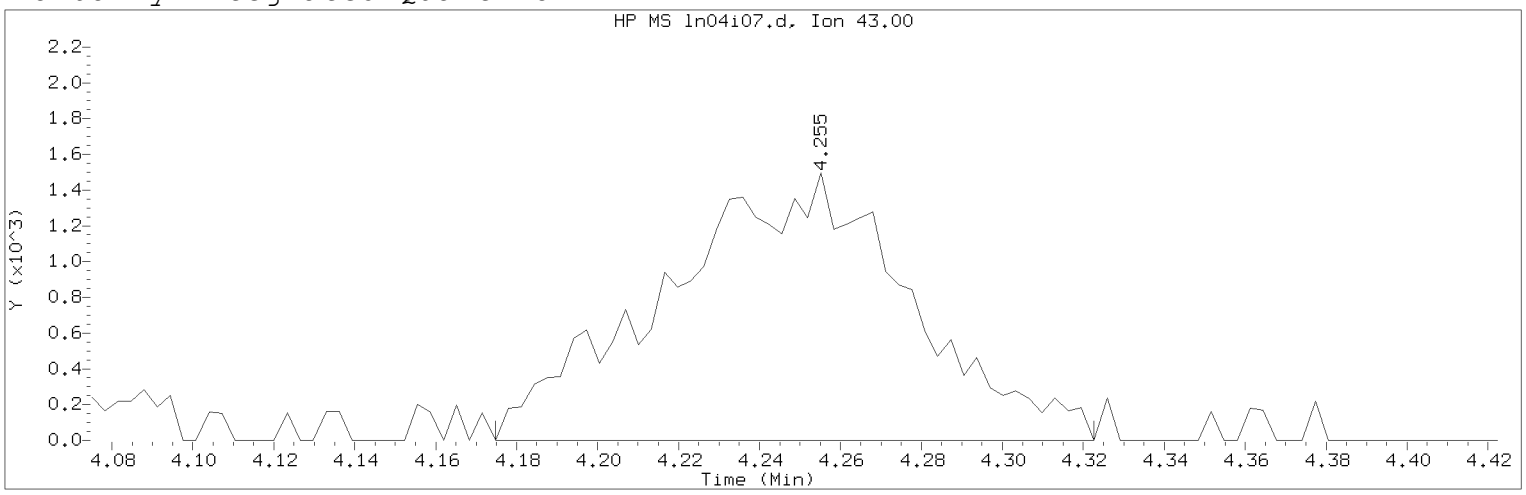
Compound Number : 18
Compound Name : Acetone
Scan Number : 717
Retention Time (minutes): 3.789
Quant Ion : 58.00
Area : 410
On-column Amount (ng) : 0.5644
Integration start scan : 710 Integration stop scan: 718
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

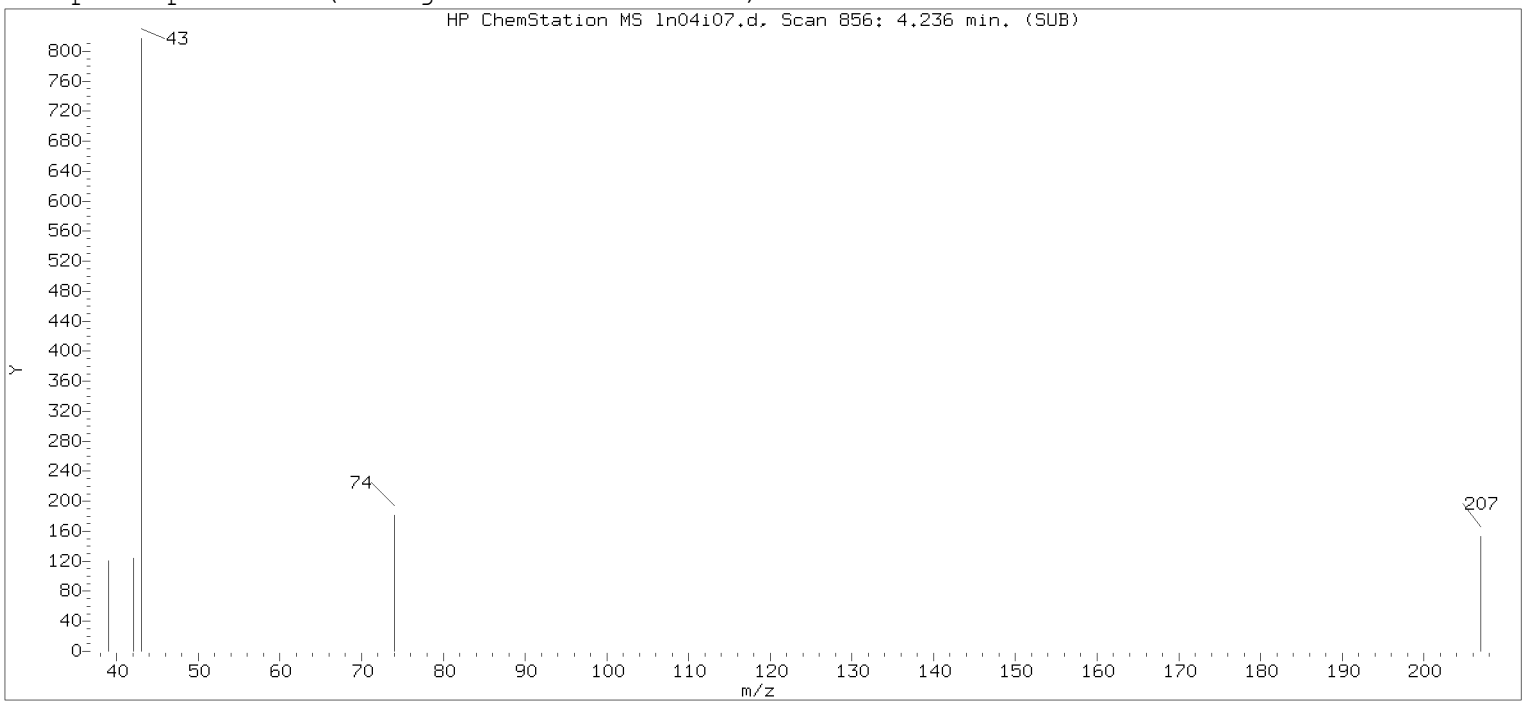
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 862
Retention Time (minutes): 4.255
Quant Ion : 43.00
Area (flag) : 6274M
On-Column Amount (ng) : 1.0106
Integration start scan : 836 Integration stop scan: 882
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

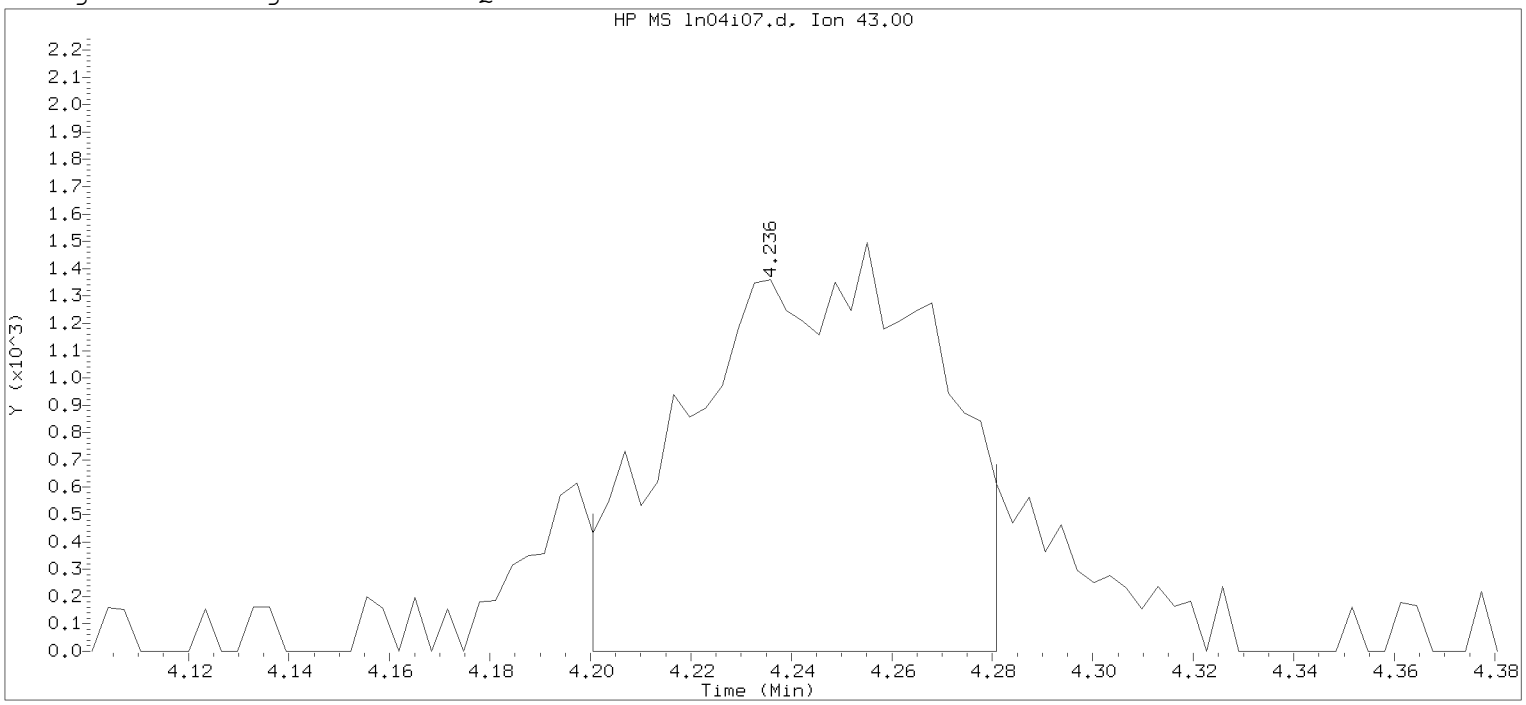
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

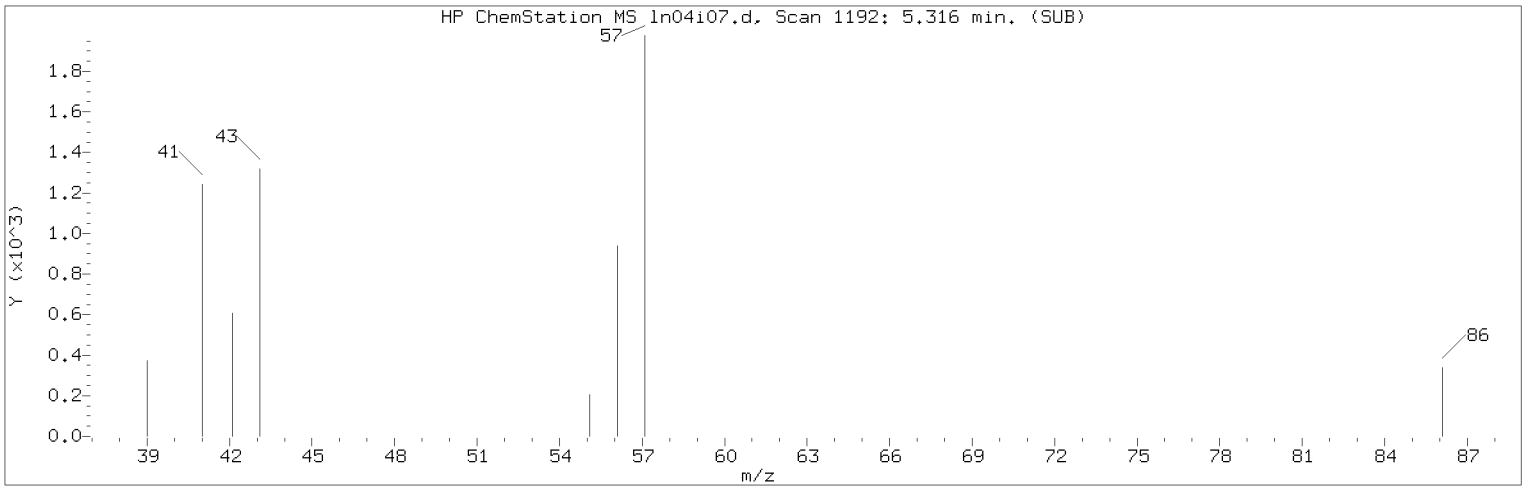
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

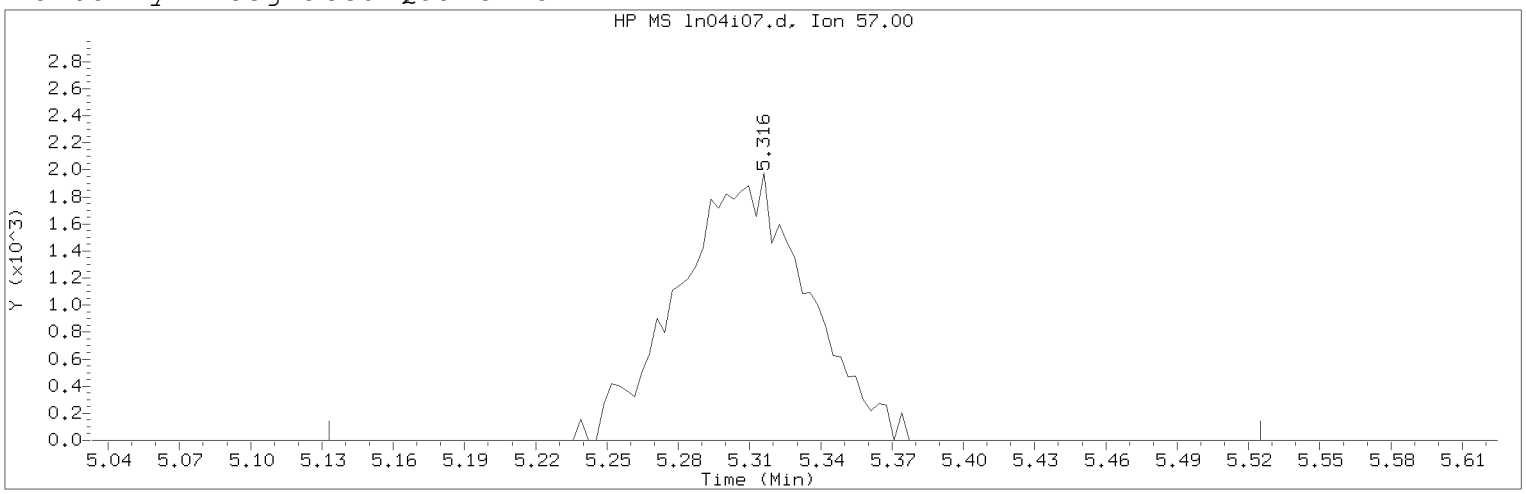
Compound Number	: 27		
Compound Name	: Methyl Acetate		
Scan Number	: 856		
Retention Time (minutes)	: 4.236		
Quant Ion	: 43.00		
Area	: 4972		
On-column Amount (ng)	: 0.8386		
Integration start scan	: 844	Integration stop scan:	869
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

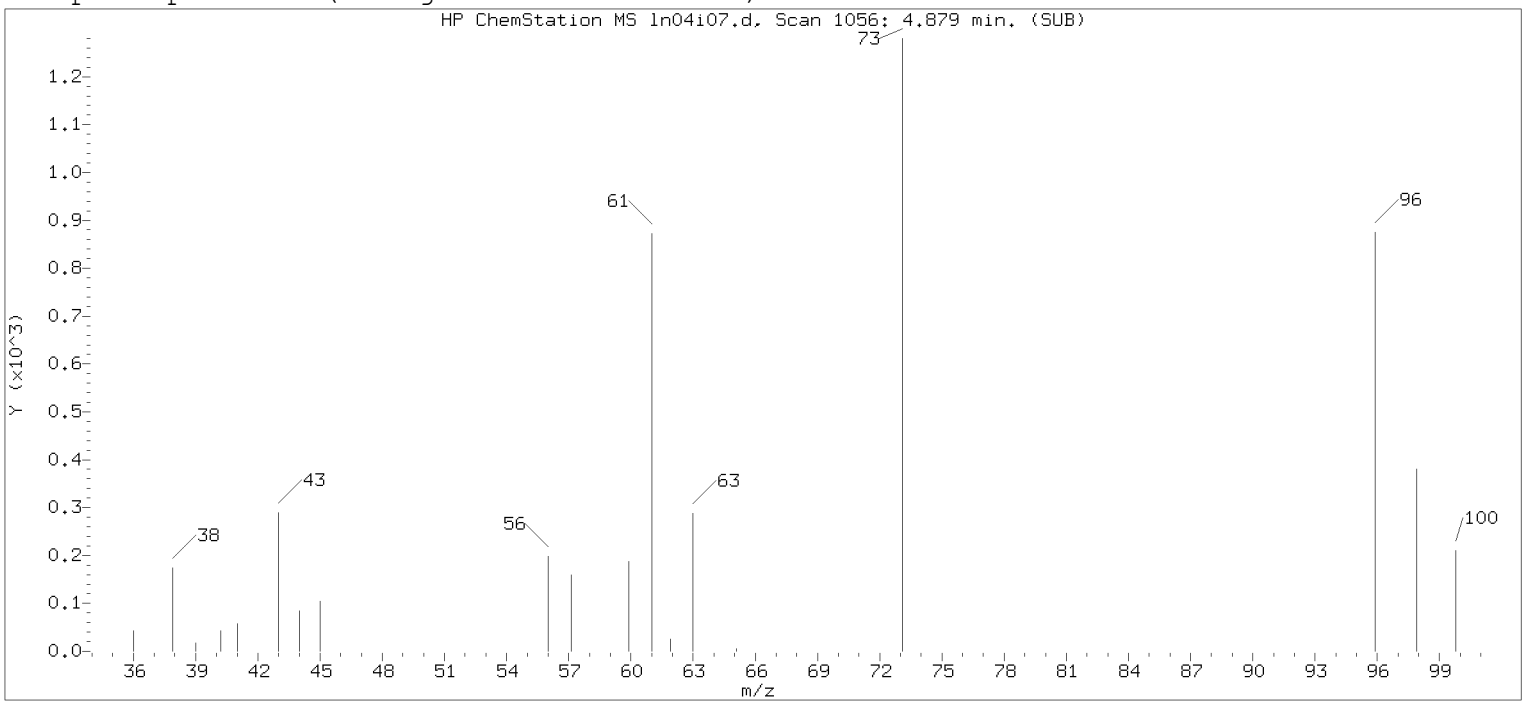
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1192
Retention Time (minutes): 5.316
Quant Ion : 57.00
Area (flag) : 7475M
On-Column Amount (ng) : 0.8616
Integration start scan : 1134 Integration stop scan: 1256
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

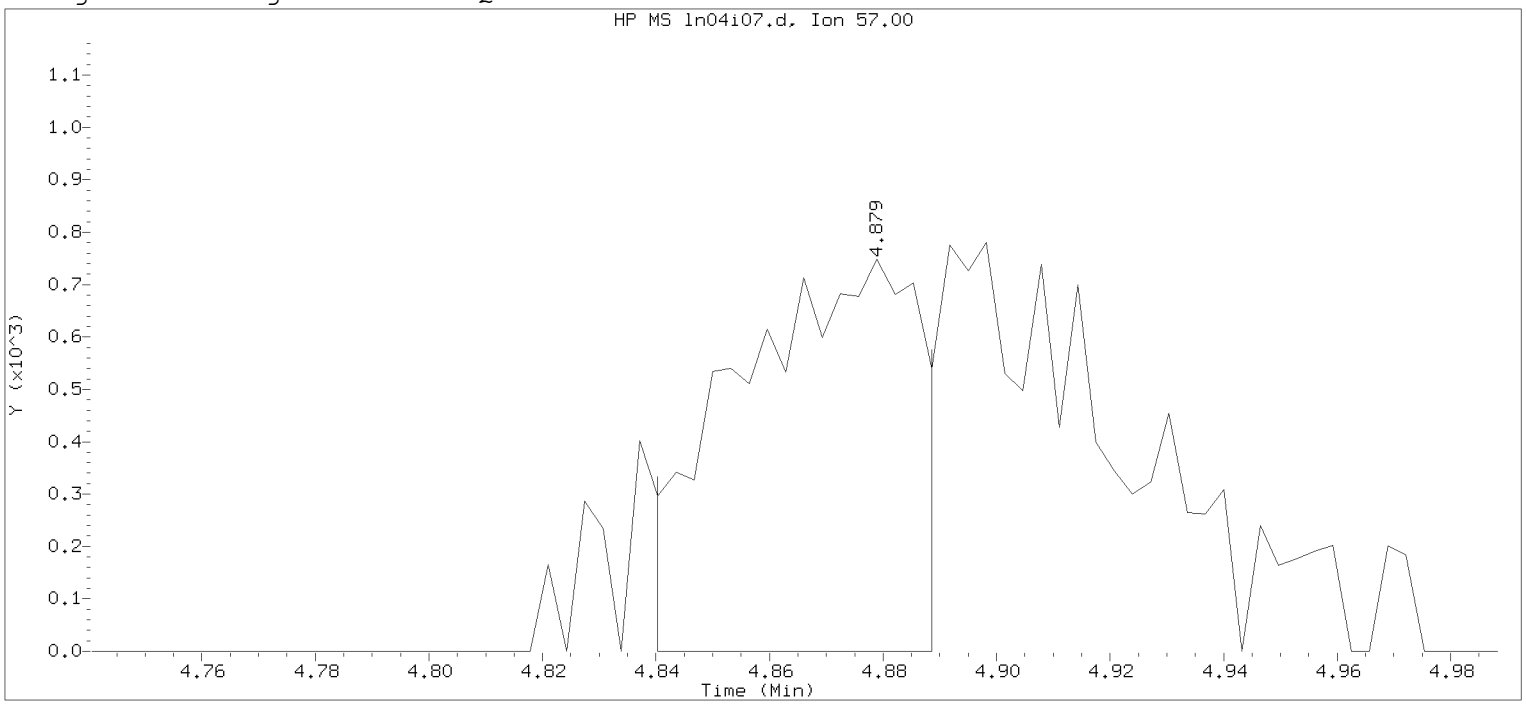
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

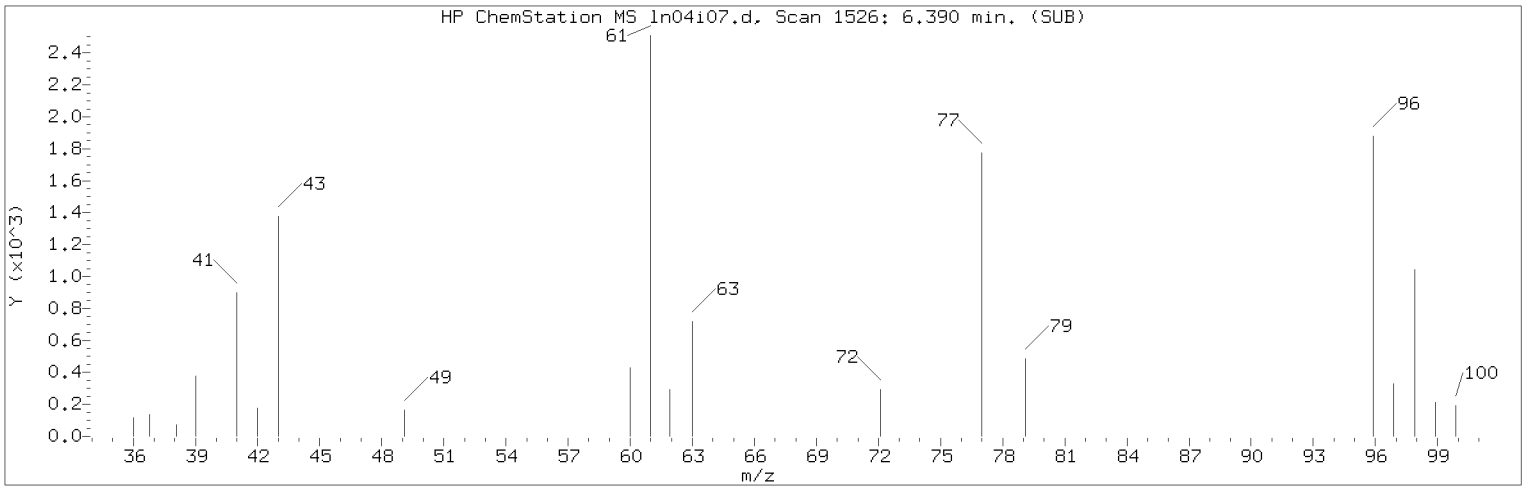
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

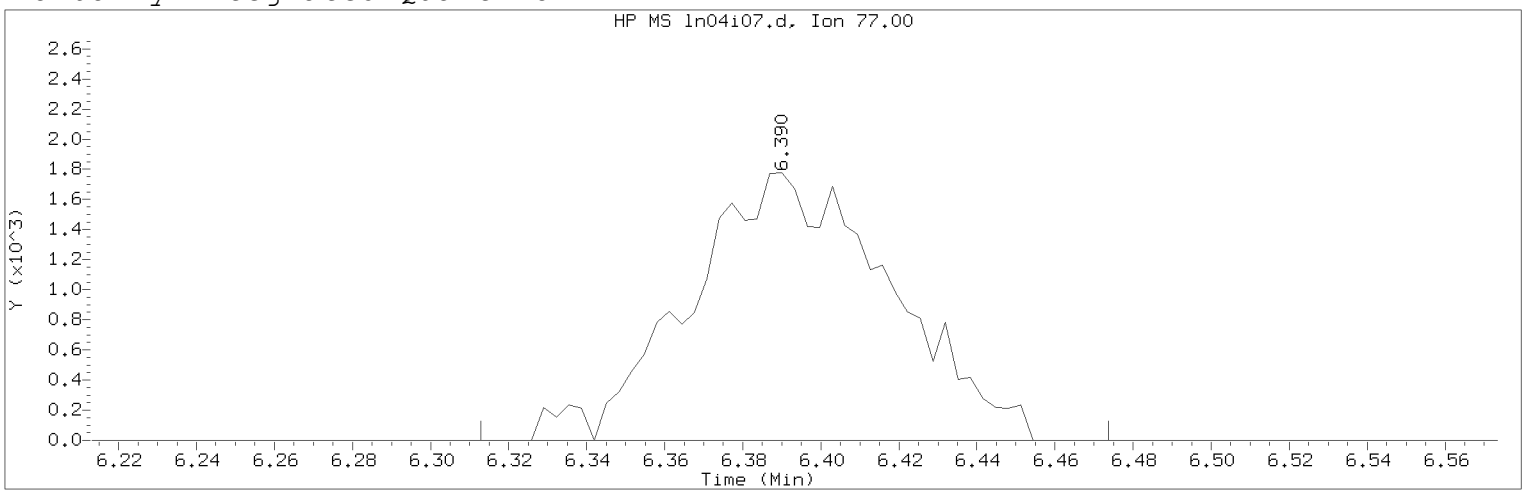
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1056		
Retention Time (minutes)	: 4.879		
Quant Ion	: 57.00		
Area	: 1663		
On-column Amount (ng)	: 0.4635		
Integration start scan	: 1043	Integration stop scan:	1058
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

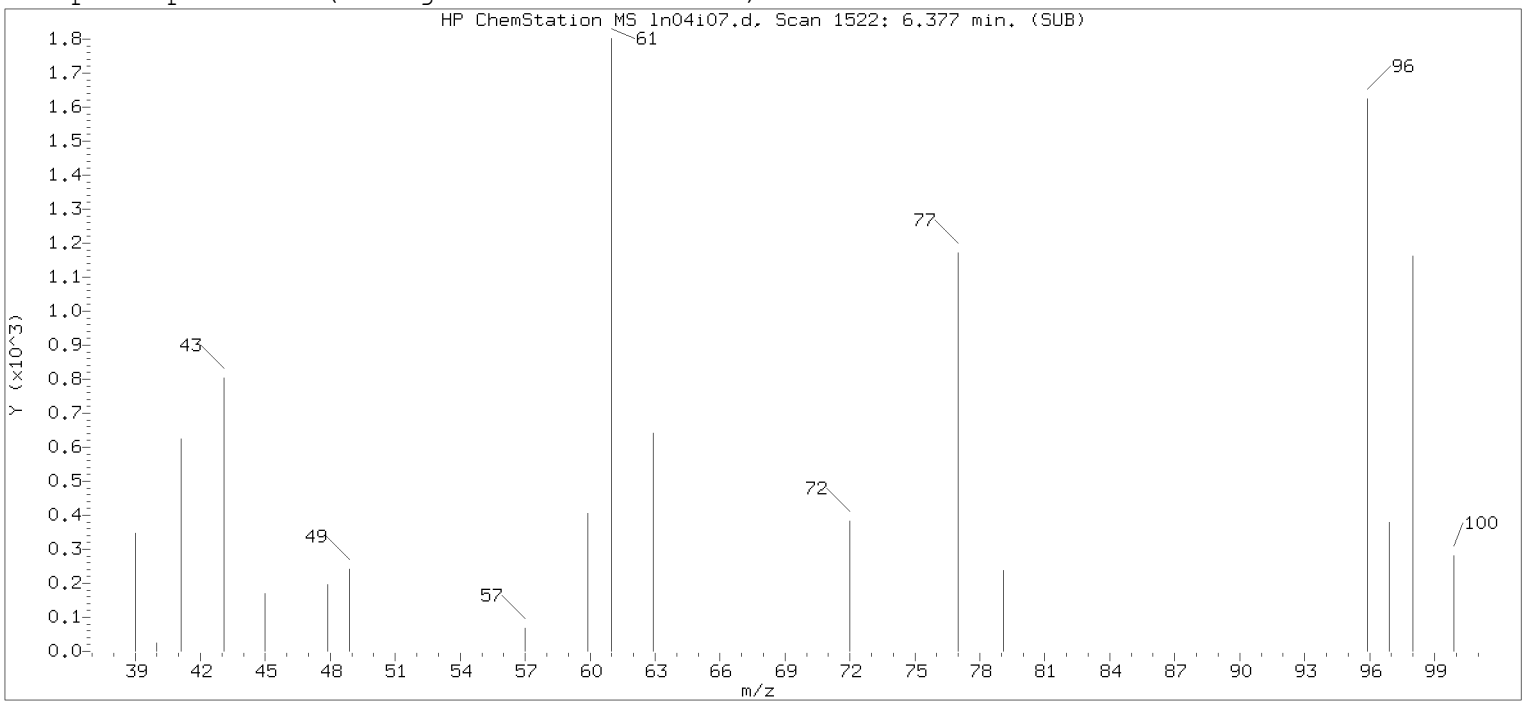
Compound Number : 45
Compound Name : 2,2-Dichloropropane
Scan Number : 1526
Retention Time (minutes): 6.390
Quant Ion : 77.00
Area (flag) : 6419M
On-Column Amount (ng) : 0.8488
Integration start scan : 1501 Integration stop scan: 1551
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

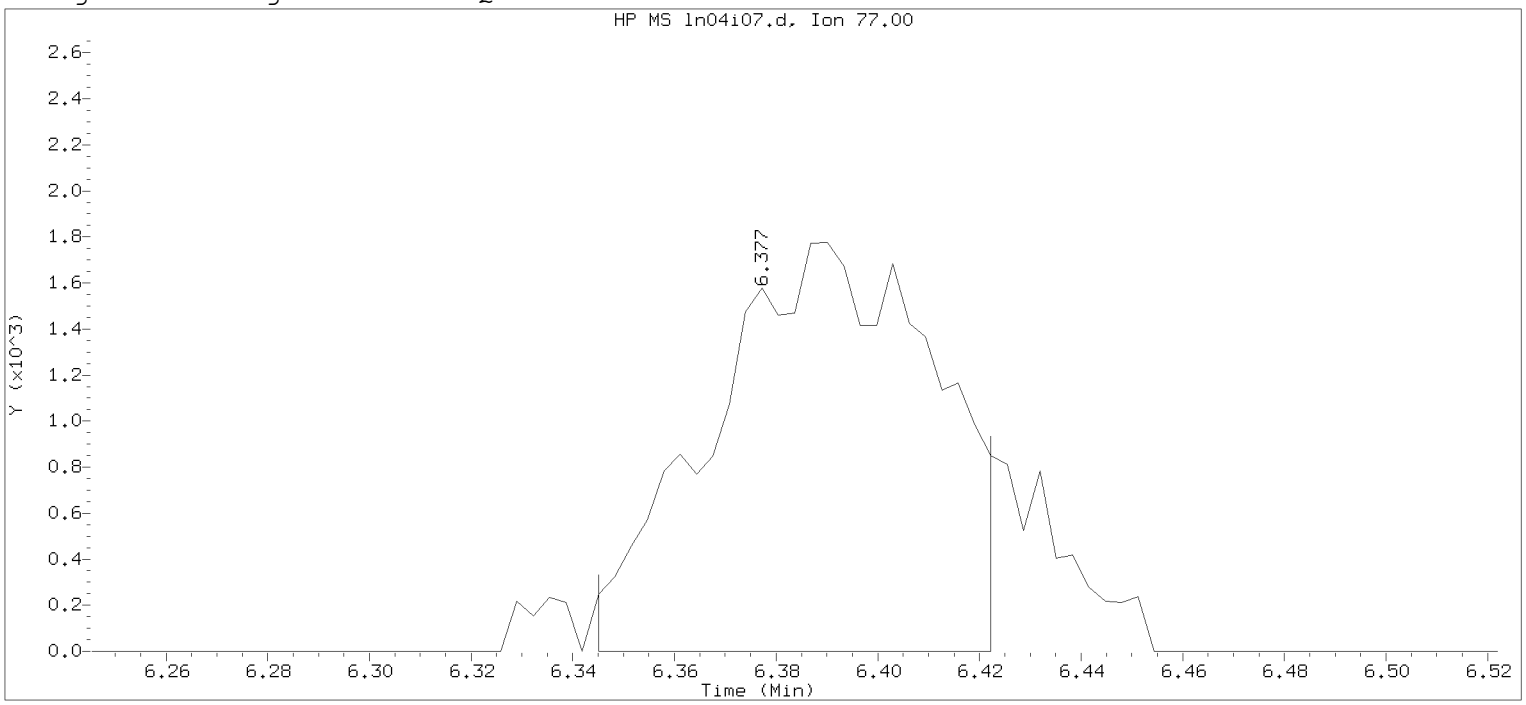
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

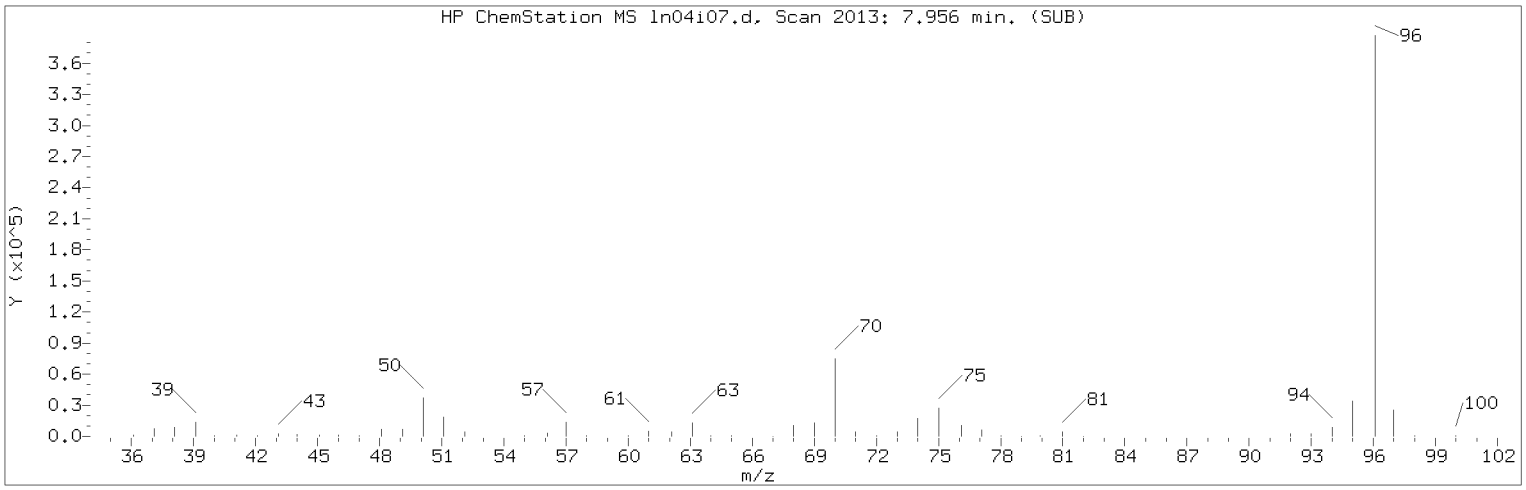
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

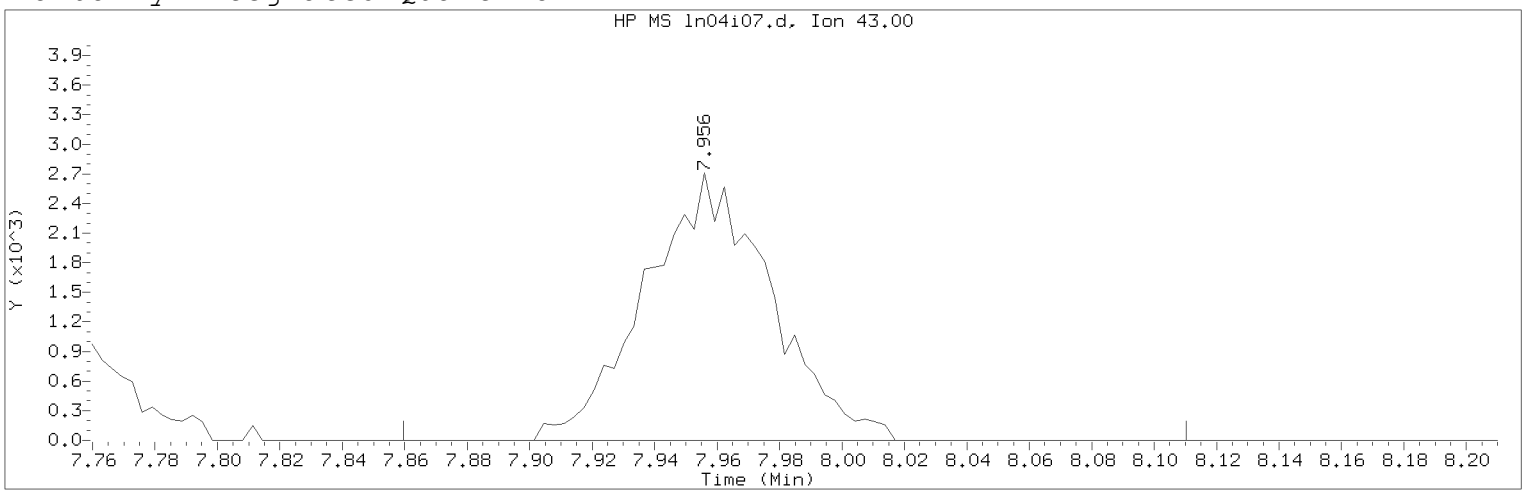
Compound Number : 45
Compound Name : 2,2-Dichloropropane
Scan Number : 1522
Retention Time (minutes): 6.377
Quant Ion : 77.00
Area : 5406
On-column Amount (ng) : 0.7289
Integration start scan : 1511 Integration stop scan: 1535
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

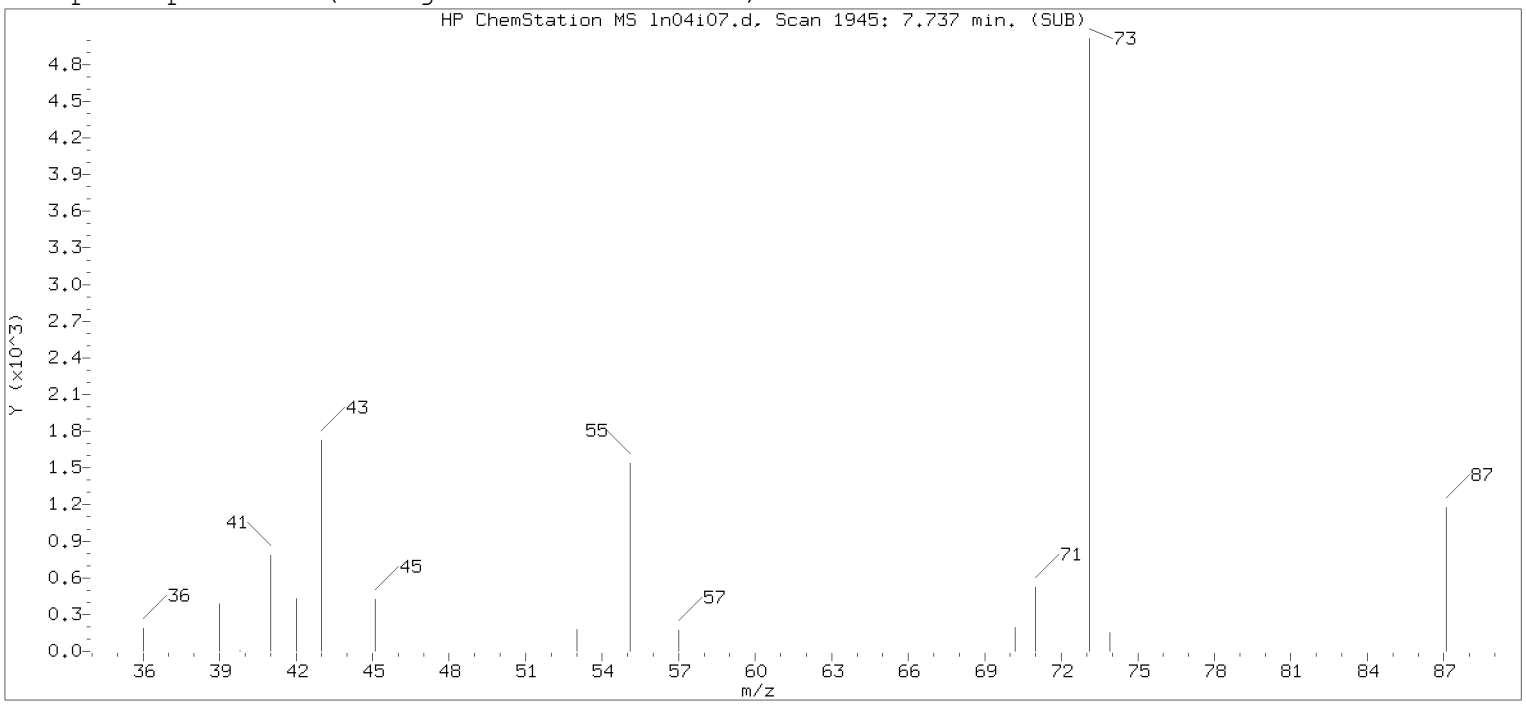
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2013
Retention Time (minutes): 7.956
Quant Ion : 43.00
Area (flag) : 7535M
On-Column Amount (ng) : 0.9297
Integration start scan : 1982 Integration stop scan: 2060
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

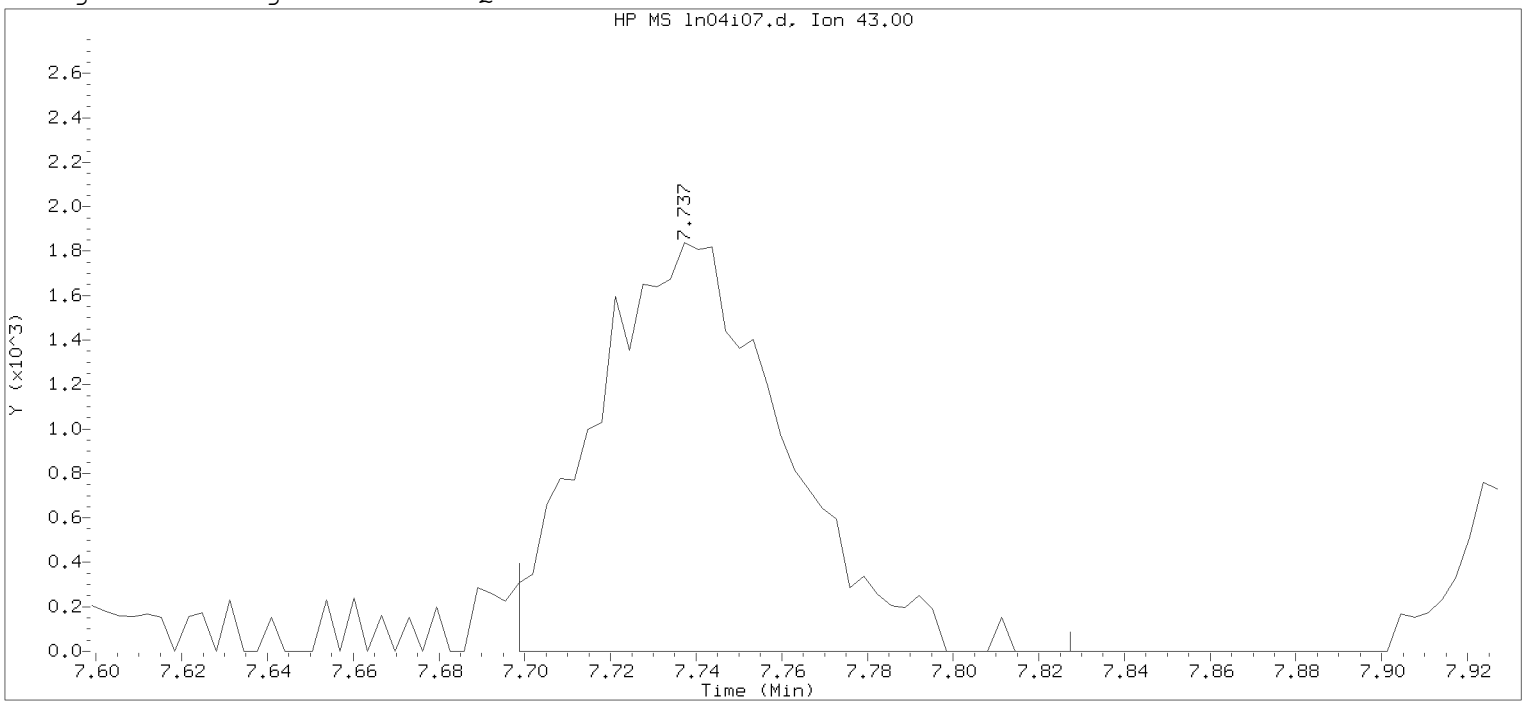
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

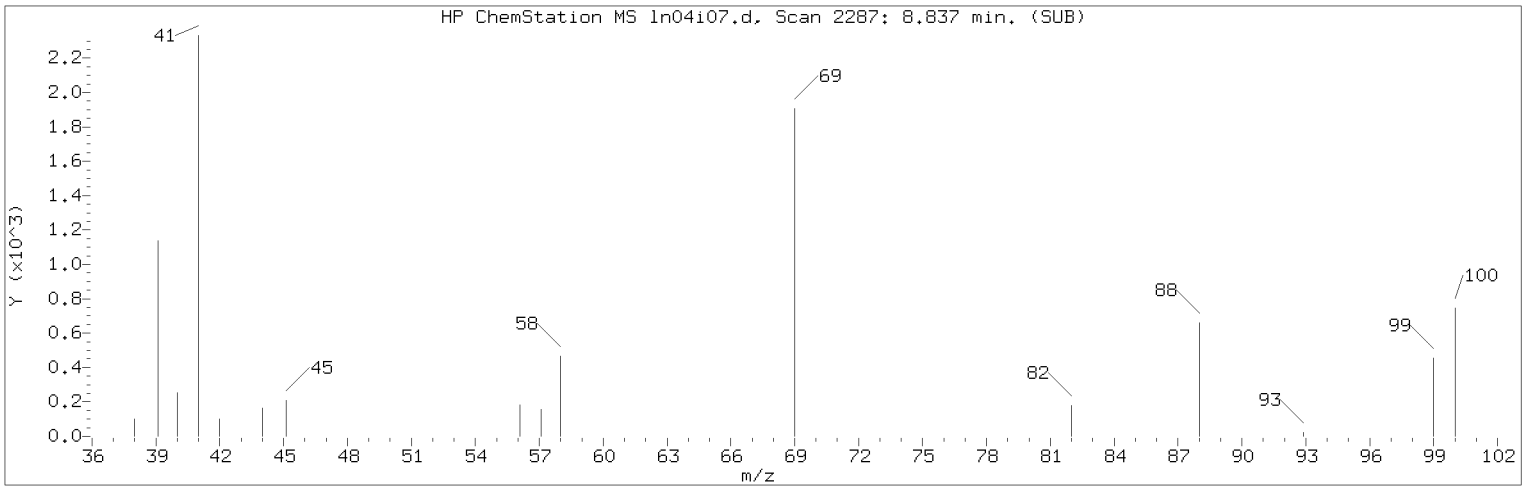
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

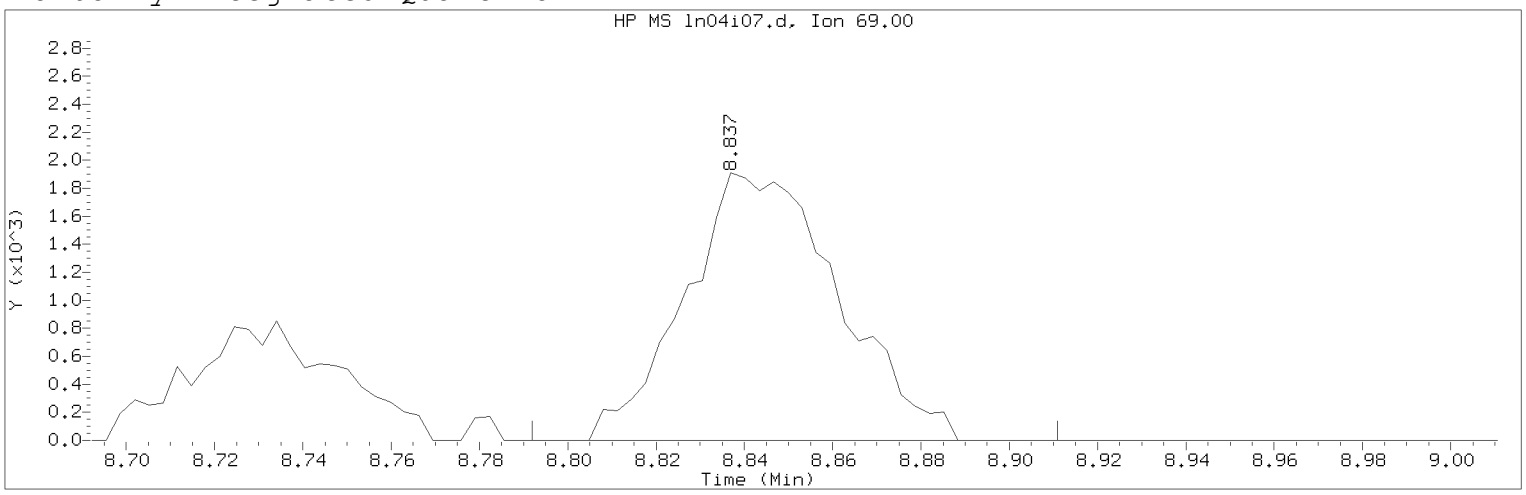
Compound Number	: 67		
Compound Name	: n-Heptane		
Scan Number	: 1945		
Retention Time (minutes)	: 7.737		
Quant Ion	: 43.00		
Area	: 5623		
On-column Amount (ng)	: 0.9372		
Integration start scan	: 1932	Integration stop scan:	1972
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

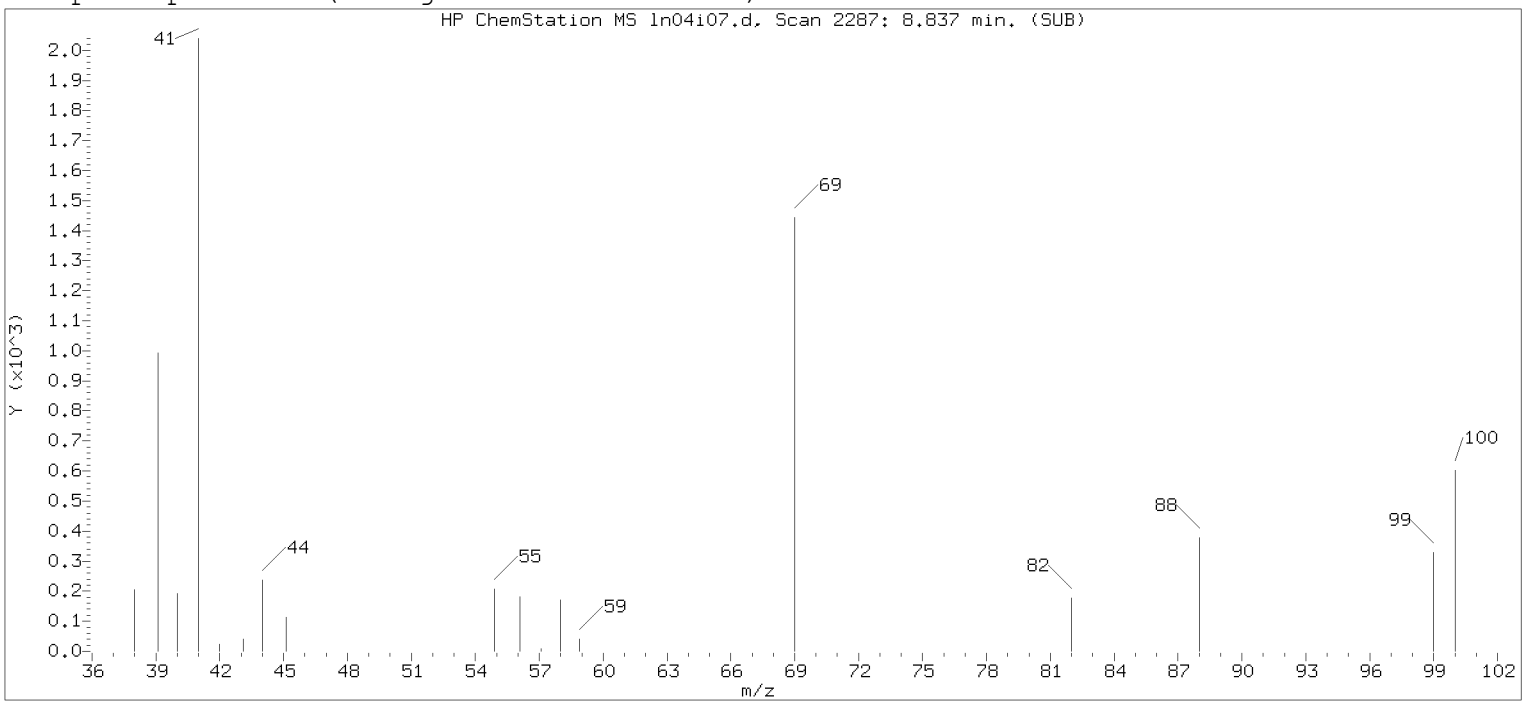
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2287
Retention Time (minutes): 8.837
Quant Ion : 69.00
Area (flag) : 4607M
On-Column Amount (ng) : 0.8112
Integration start scan : 2272 Integration stop scan: 2309
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

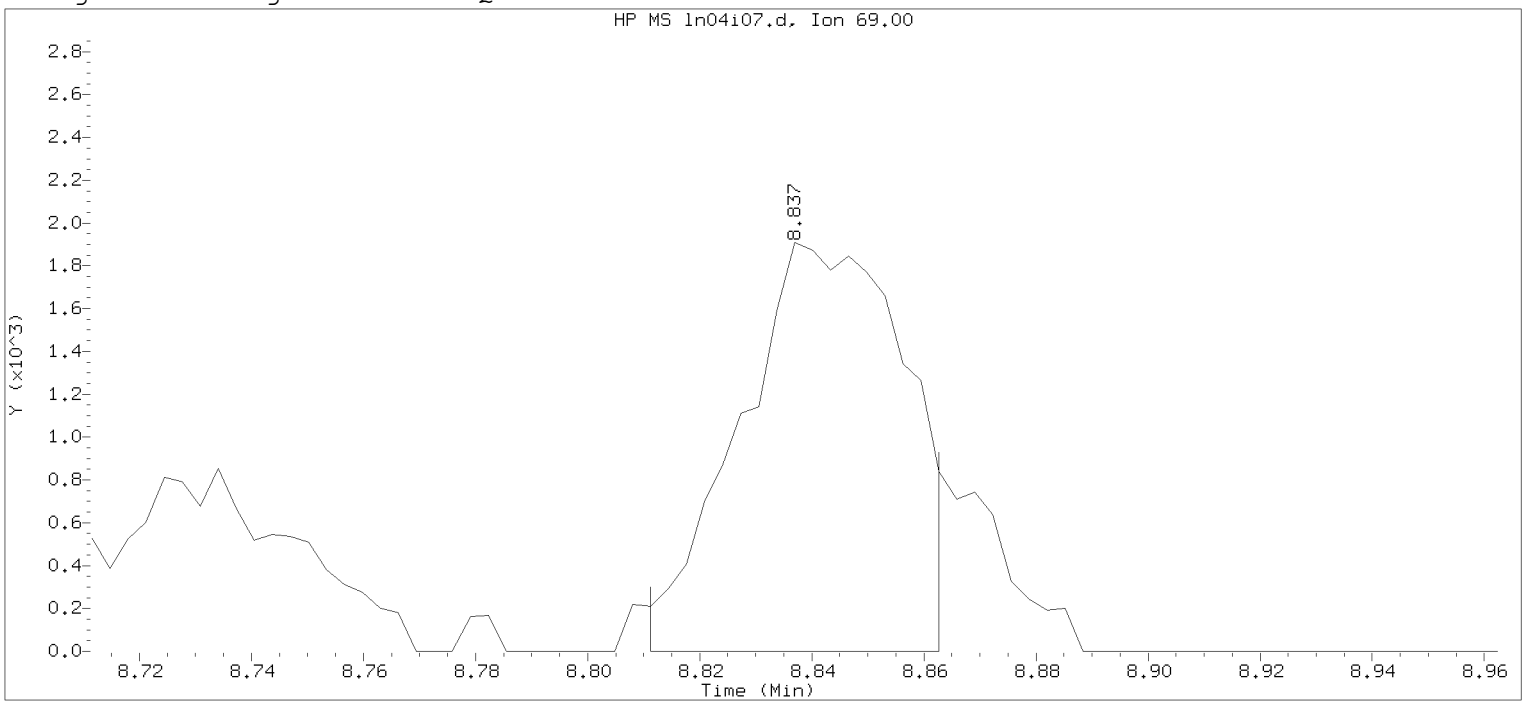
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

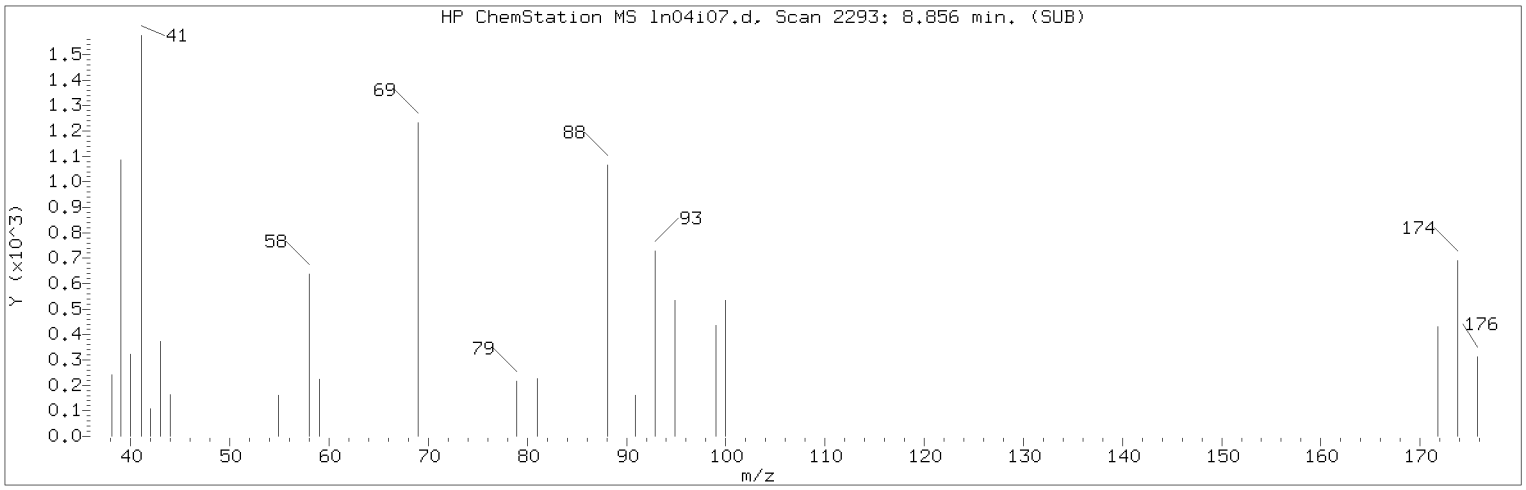
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

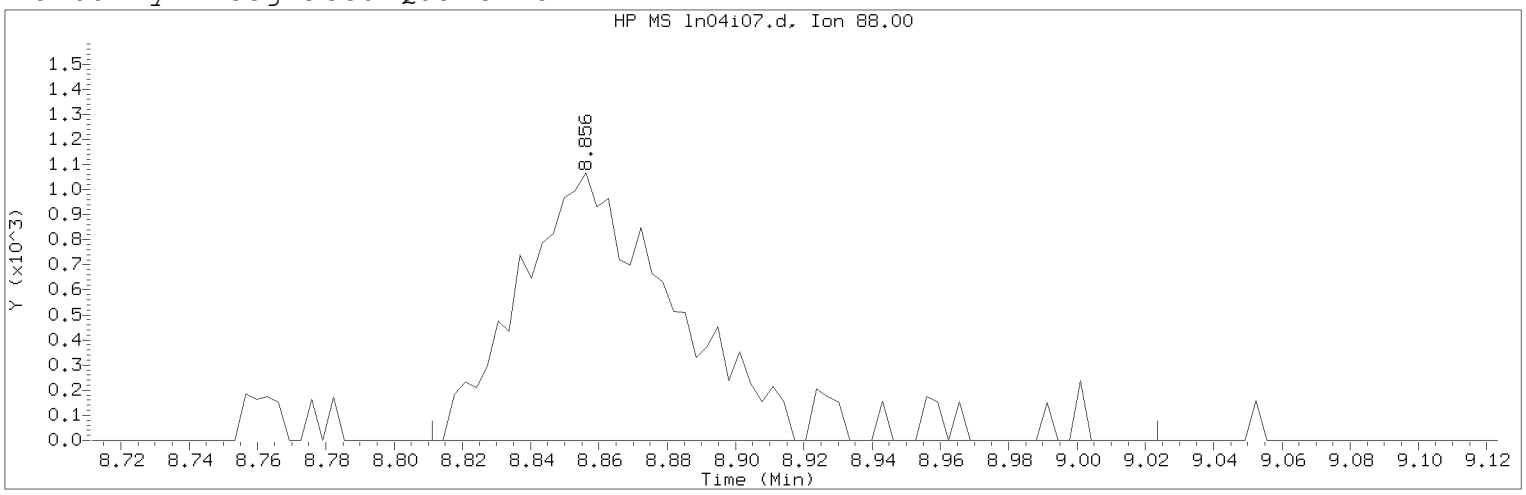
Compound Number	: 76		
Compound Name	: Methyl Methacrylate		
Scan Number	: 2287		
Retention Time (minutes)	: 8.837		
Quant Ion	: 69.00		
Area	: 3874		
On-column Amount (ng)	: 0.7186		
Integration start scan	: 2278	Integration stop scan:	2294
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

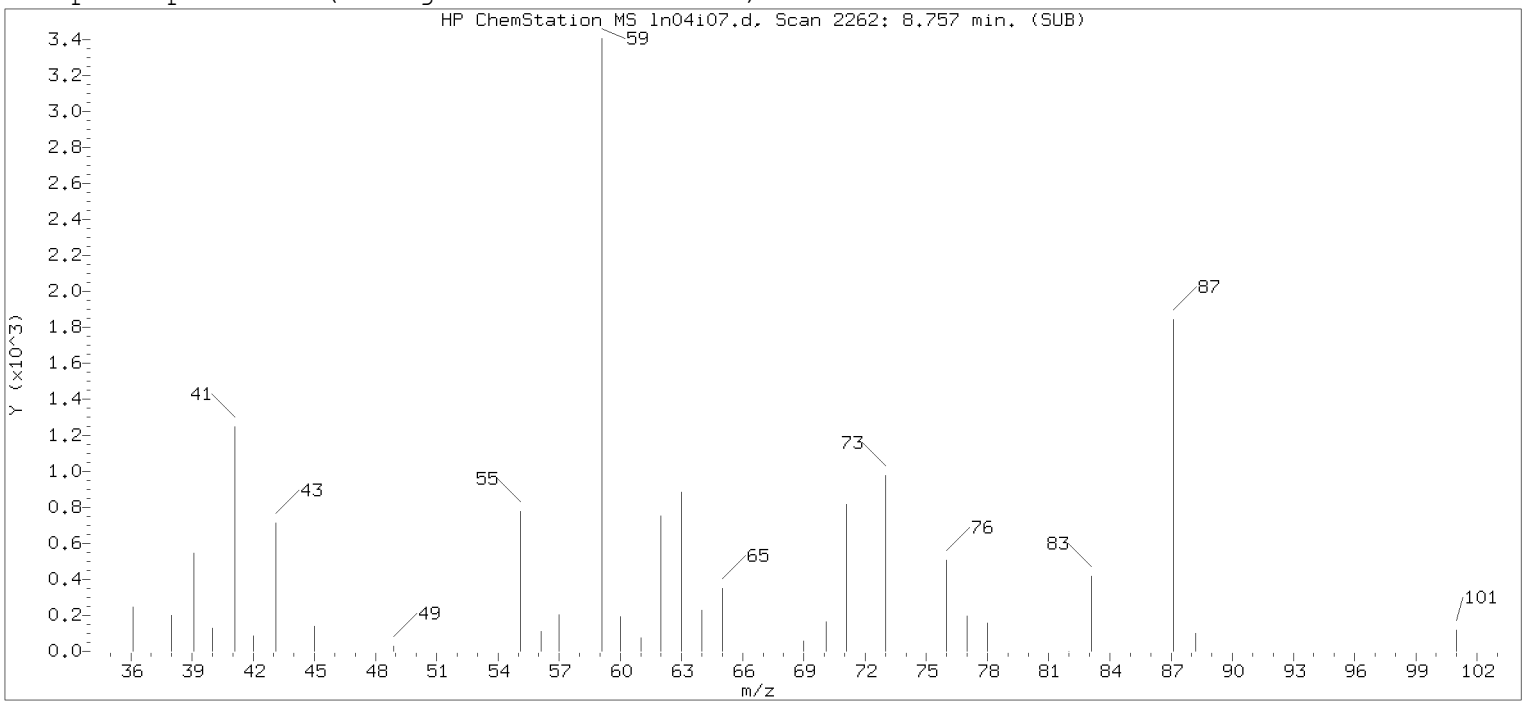
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 3548M
On-Column Amount (ng) : 43.4574
Integration start scan : 2278 Integration stop scan: 2344
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

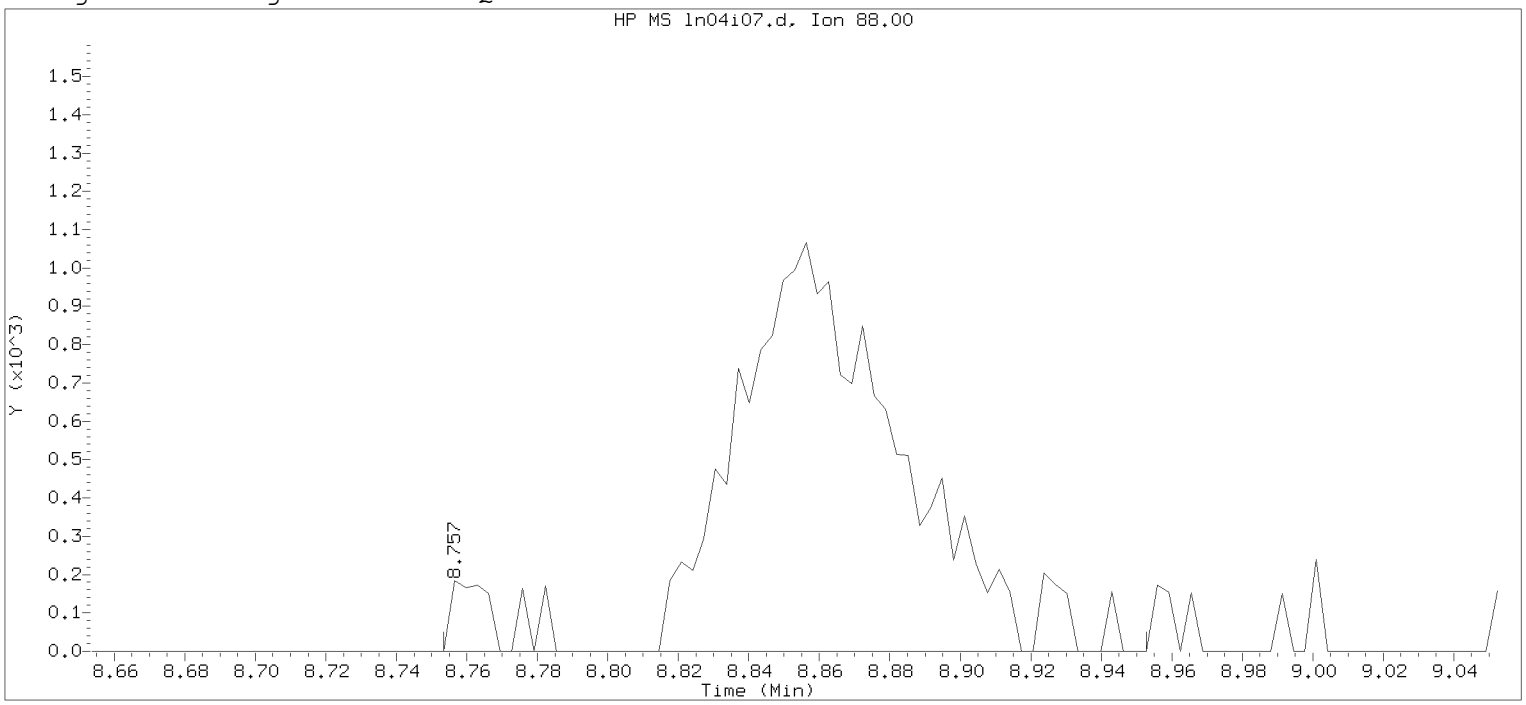
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

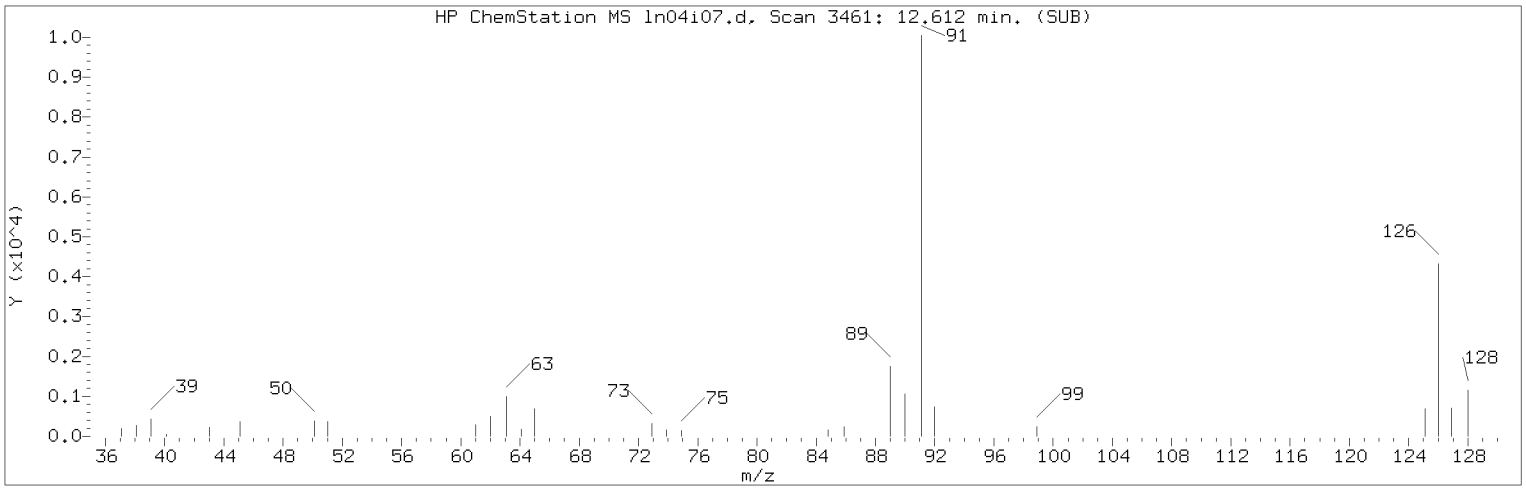
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

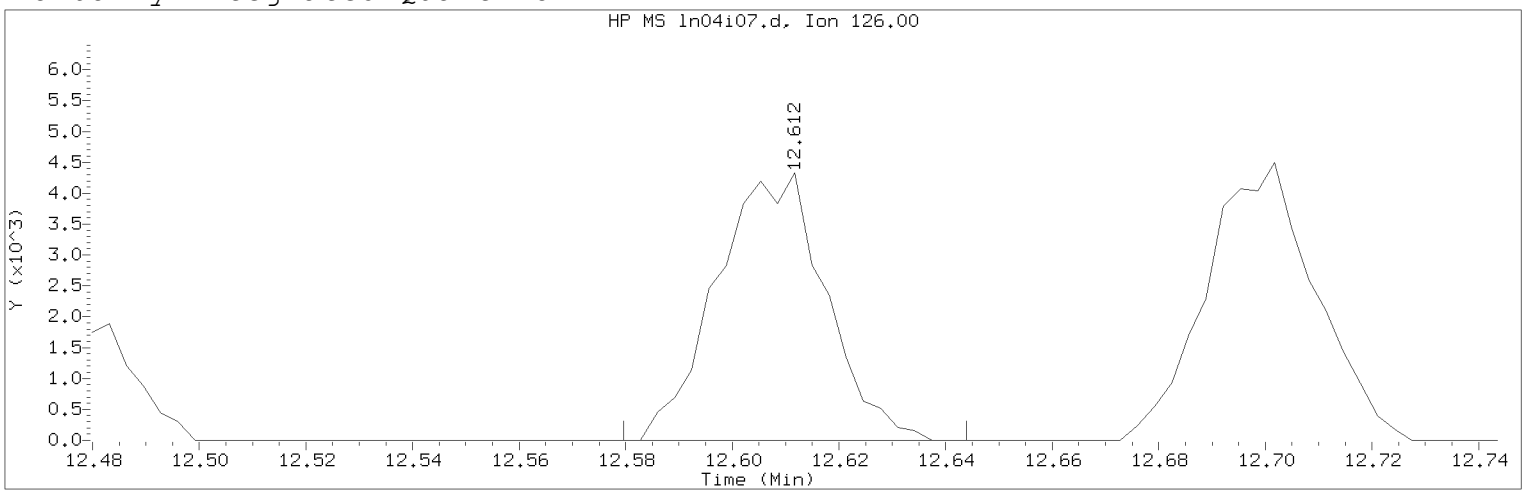
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2262		
Retention Time (minutes)	: 8.757		
Quant Ion	: 88.00		
Area	: 3575		
On-column Amount (ng)	: 43.6406		
Integration start scan	: 2260	Integration stop scan:	2322
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

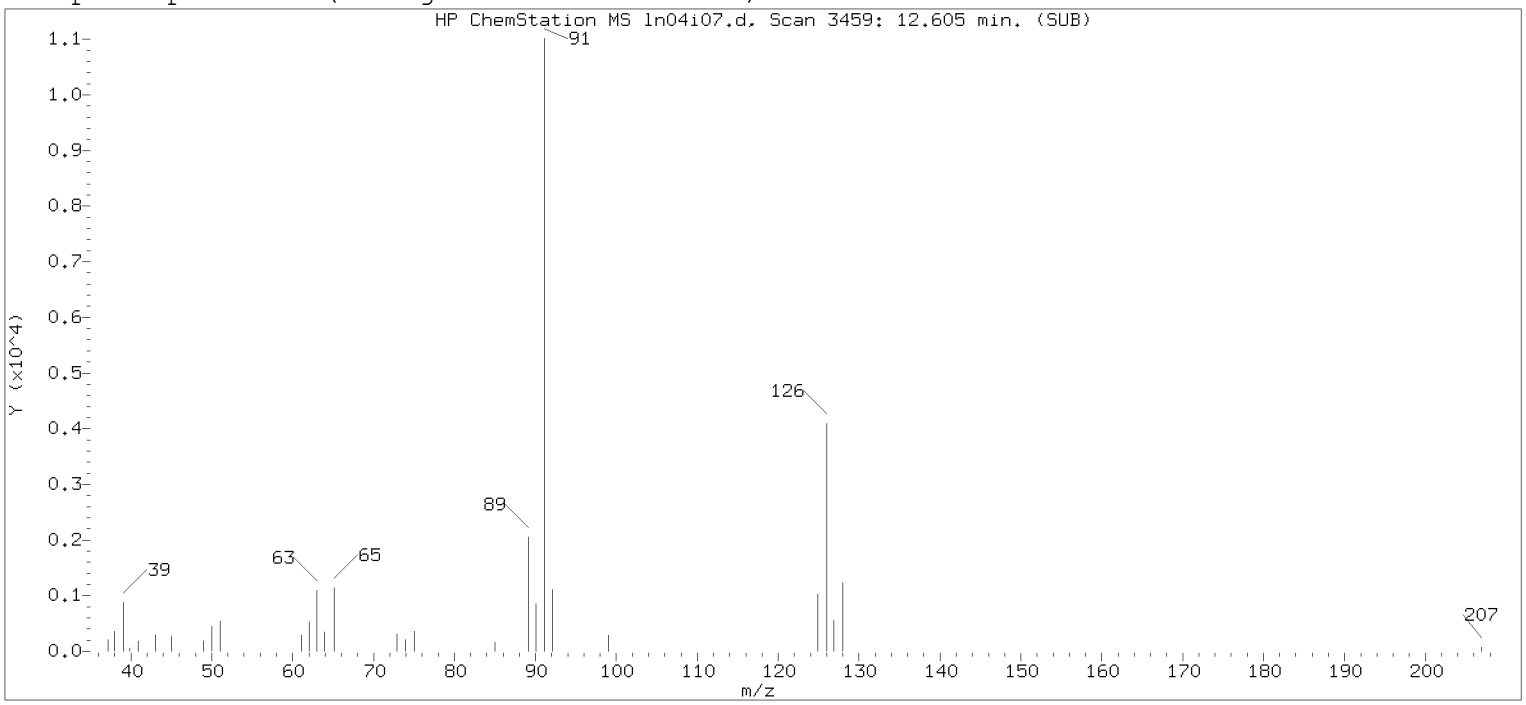
Compound Number : 120
Compound Name : 2-Chlorotoluene
Scan Number : 3461
Retention Time (minutes): 12.612
Quant Ion : 126.00
Area (flag) : 6138M
On-Column Amount (ng) : 0.9294
Integration start scan : 3450 Integration stop scan: 3470
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

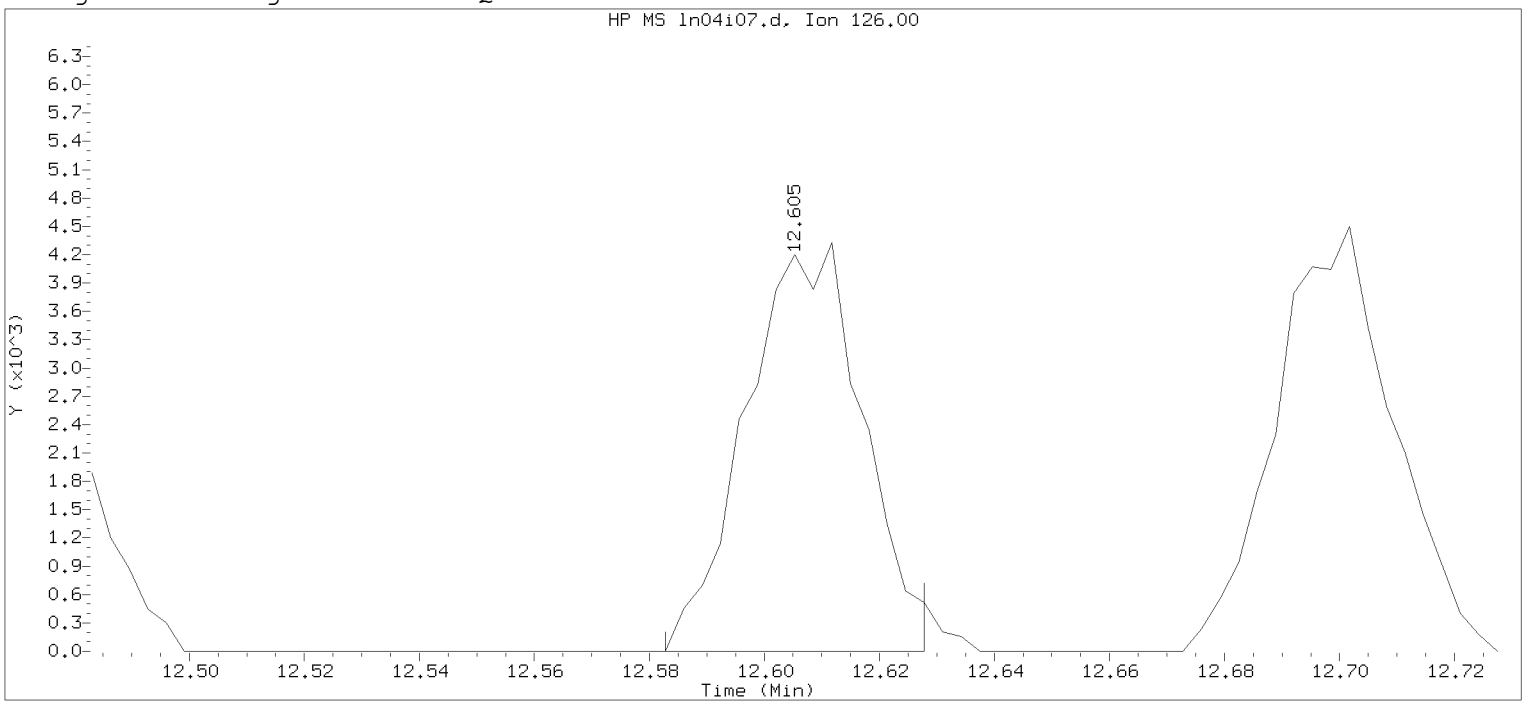
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

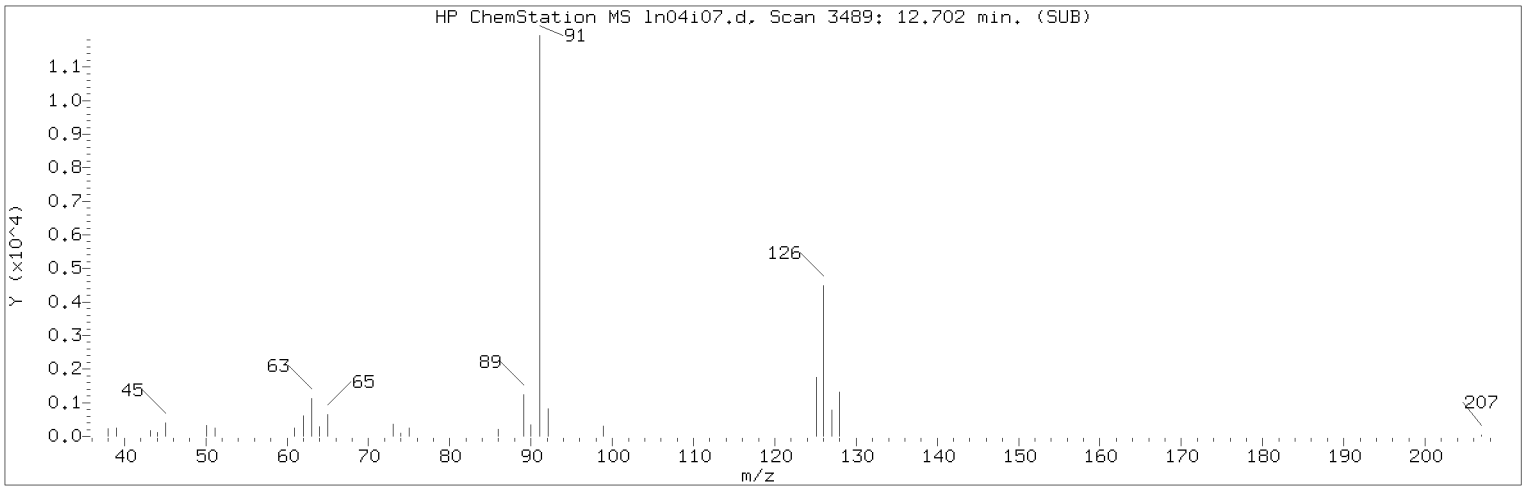
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

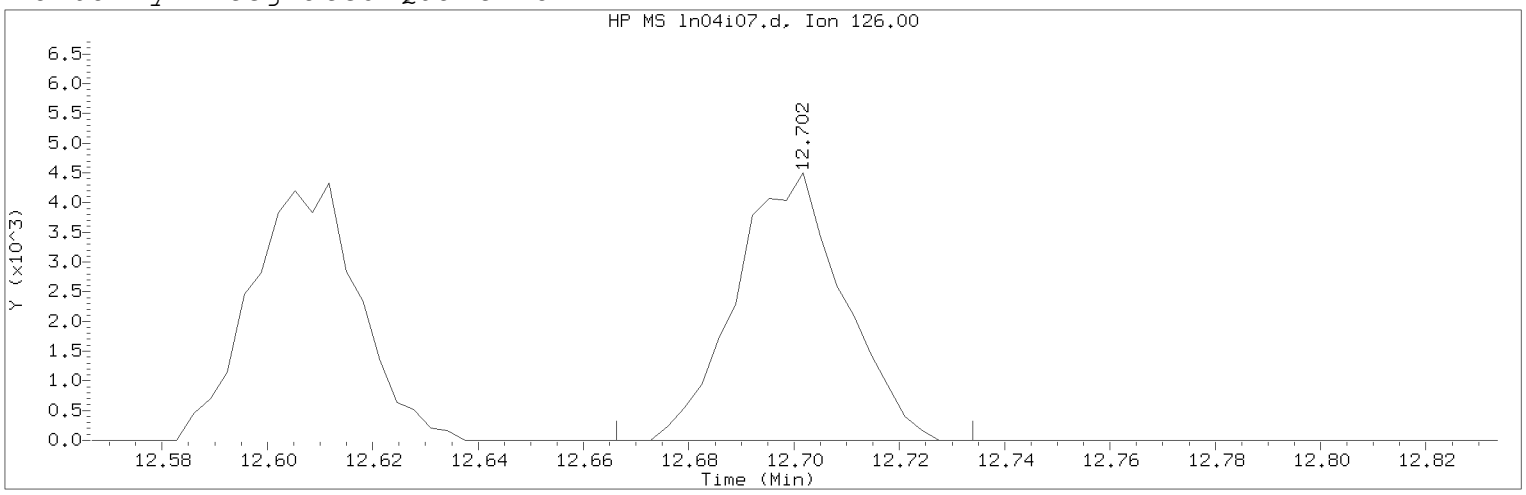
Compound Number : 120
Compound Name : 2-Chlorotoluene
Scan Number : 3459
Retention Time (minutes): 12.605
Quant Ion : 126.00
Area : 6018
On-column Amount (ng) : 0.9136
Integration start scan : 3451 Integration stop scan: 3465
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

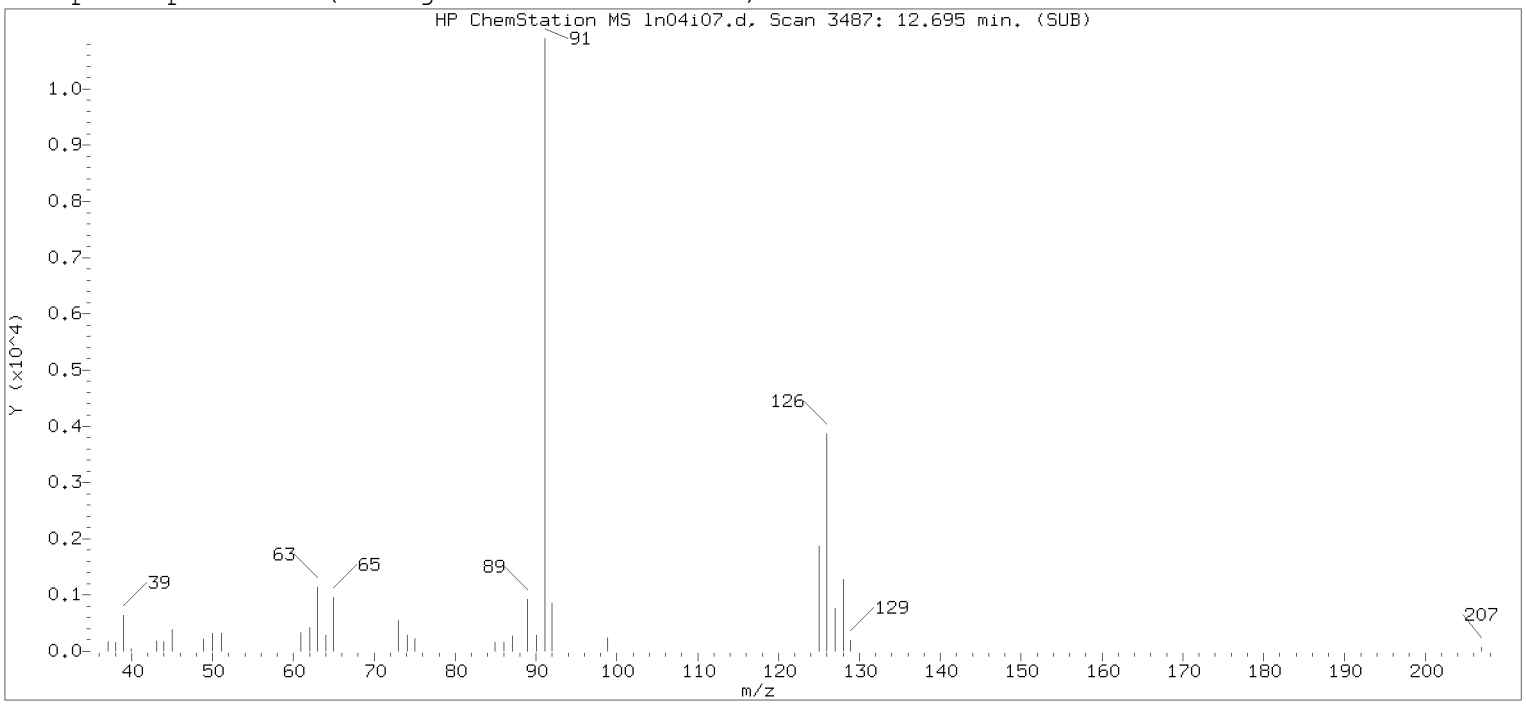
Compound Number : 121
Compound Name : 4-Chlorotoluene
Scan Number : 3489
Retention Time (minutes): 12.702
Quant Ion : 126.00
Area (flag) : 6403M
On-Column Amount (ng) : 0.9314
Integration start scan : 3477 Integration stop scan: 3498
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

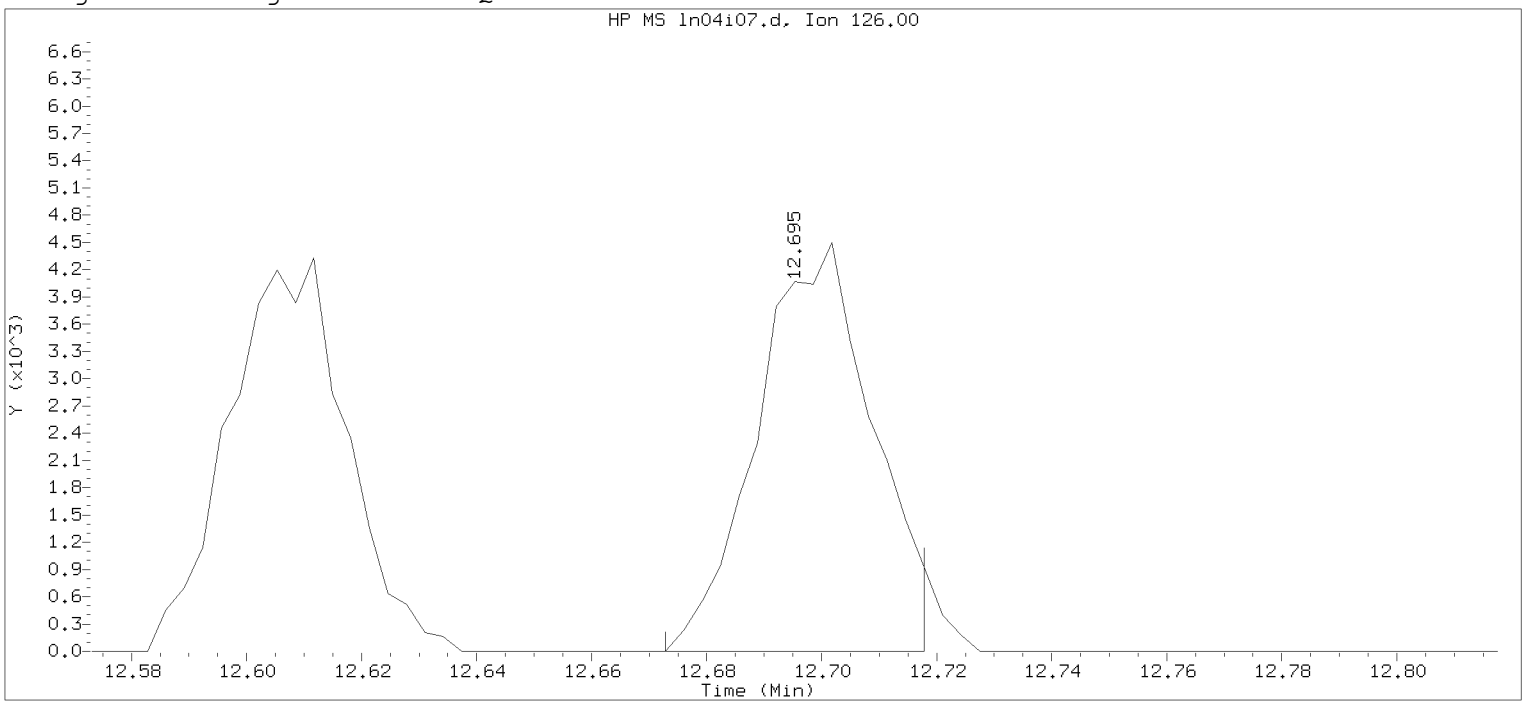
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

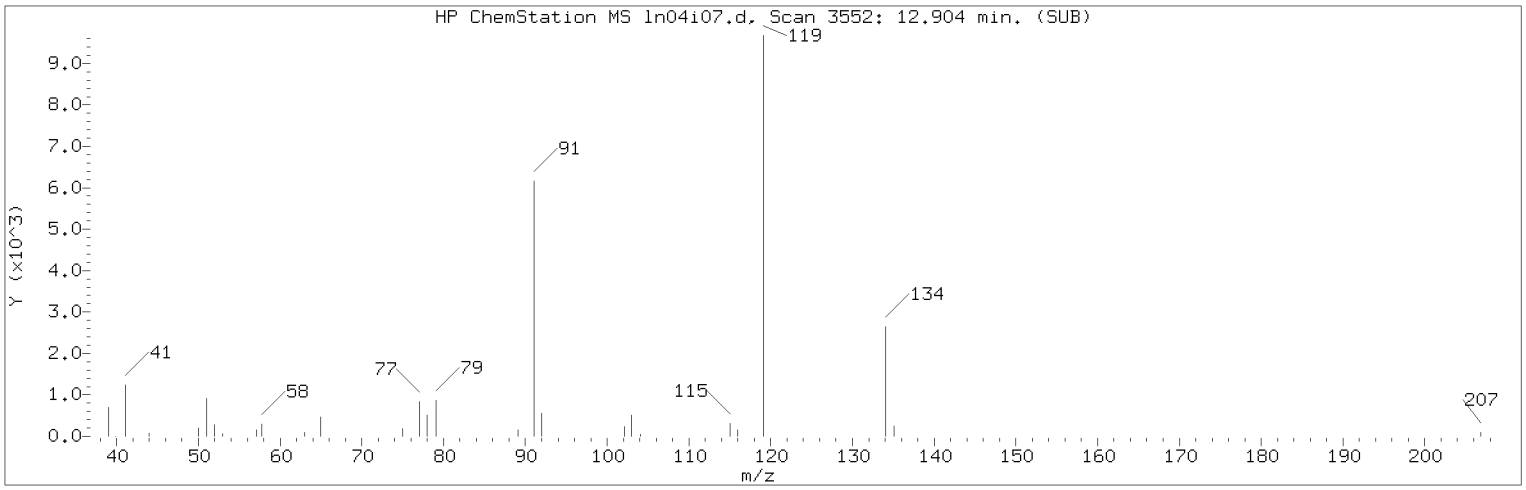
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

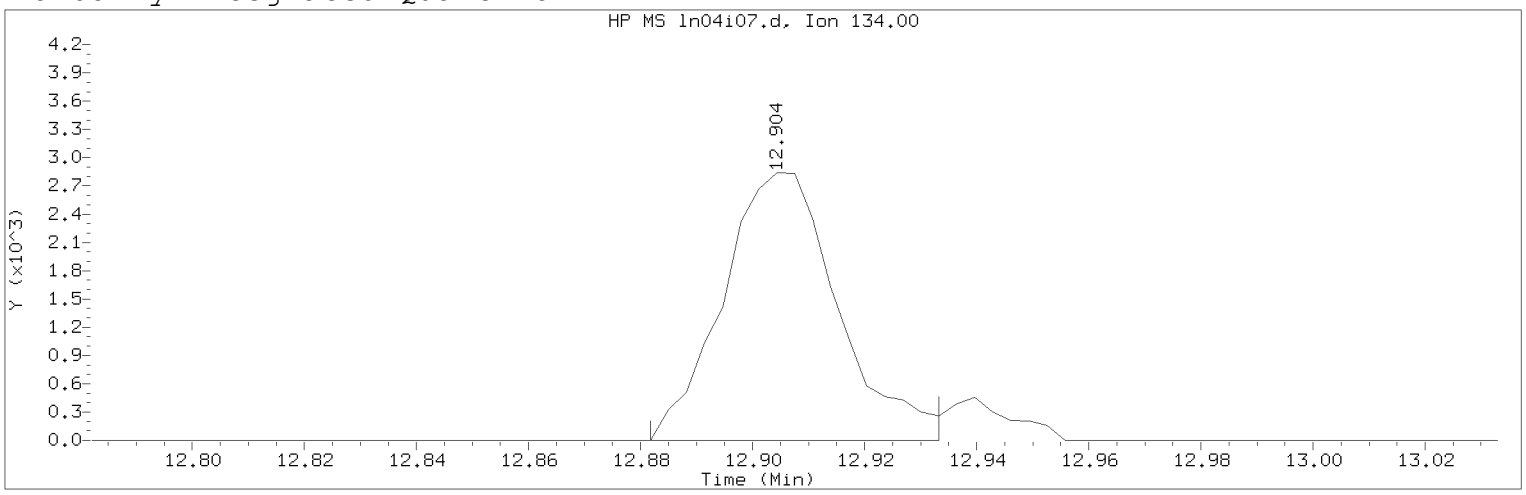
Compound Number : 121
Compound Name : 4-Chlorotoluene
Scan Number : 3487
Retention Time (minutes): 12.695
Quant Ion : 126.00
Area : 6203
On-column Amount (ng) : 0.9062
Integration start scan : 3479 Integration stop scan: 3493
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

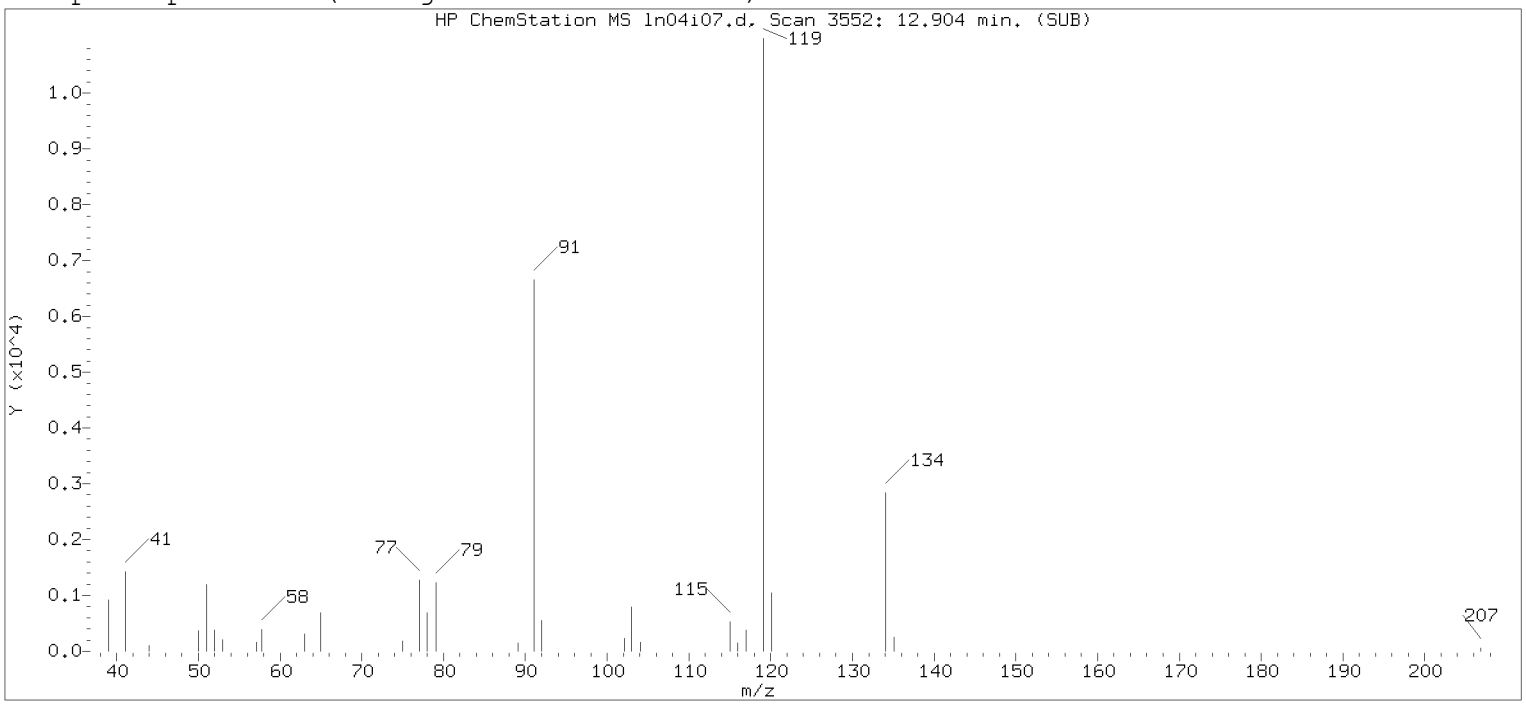
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 4060M
On-Column Amount (ng) : 0.8690
Integration start scan : 3544 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

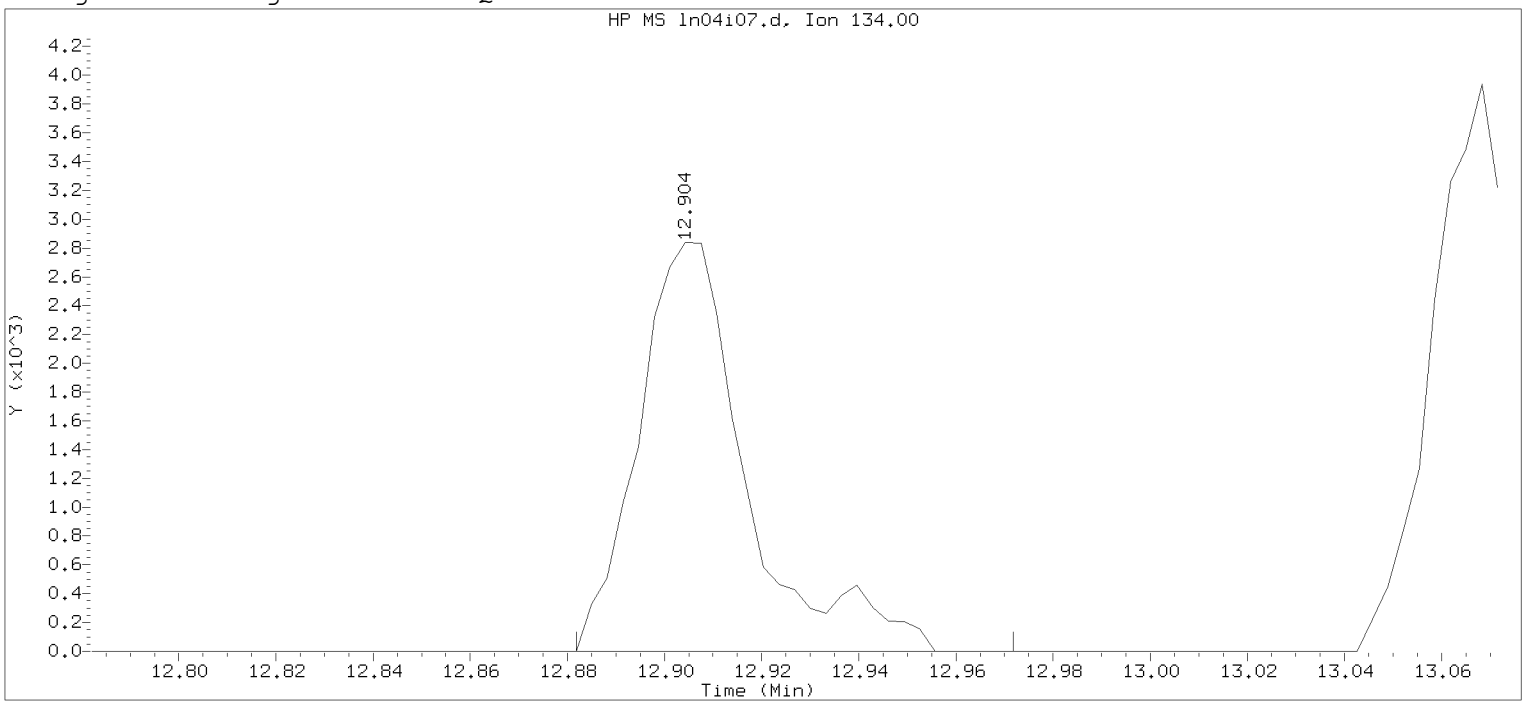
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

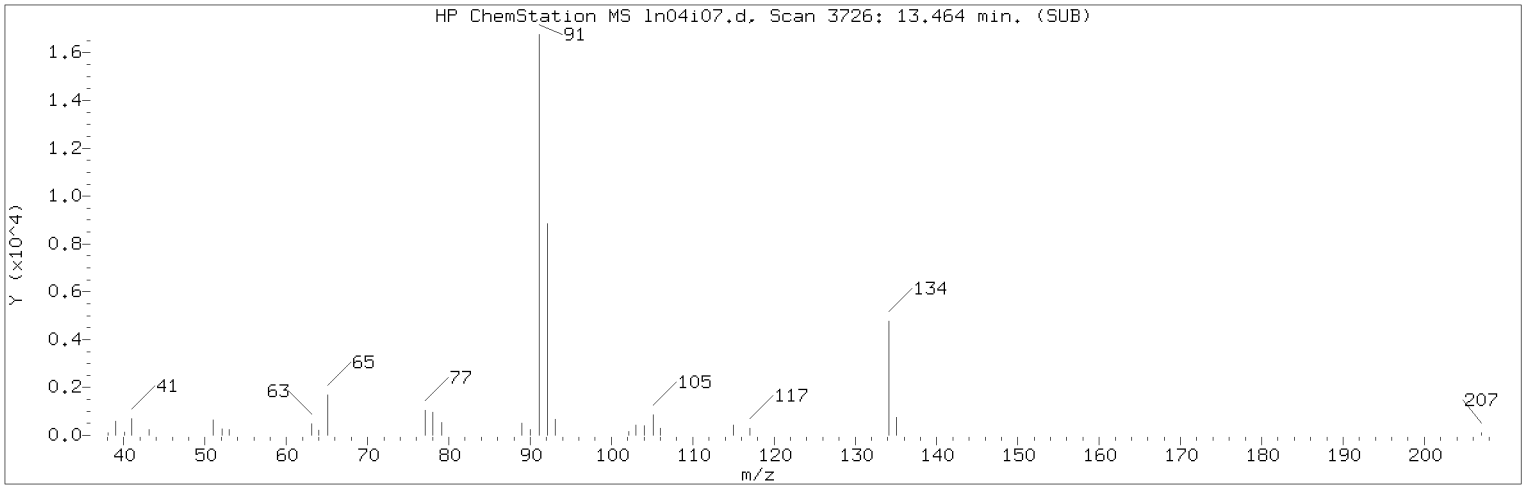
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

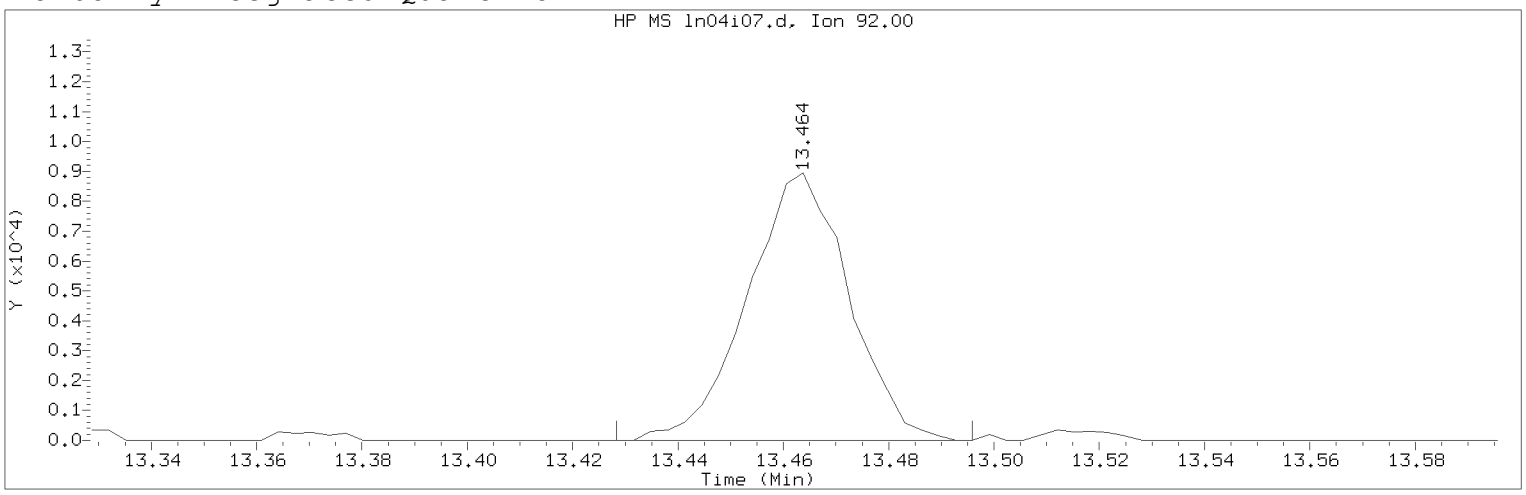
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 4392
On-column Amount (ng) : 0.9024
Integration start scan : 3544 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

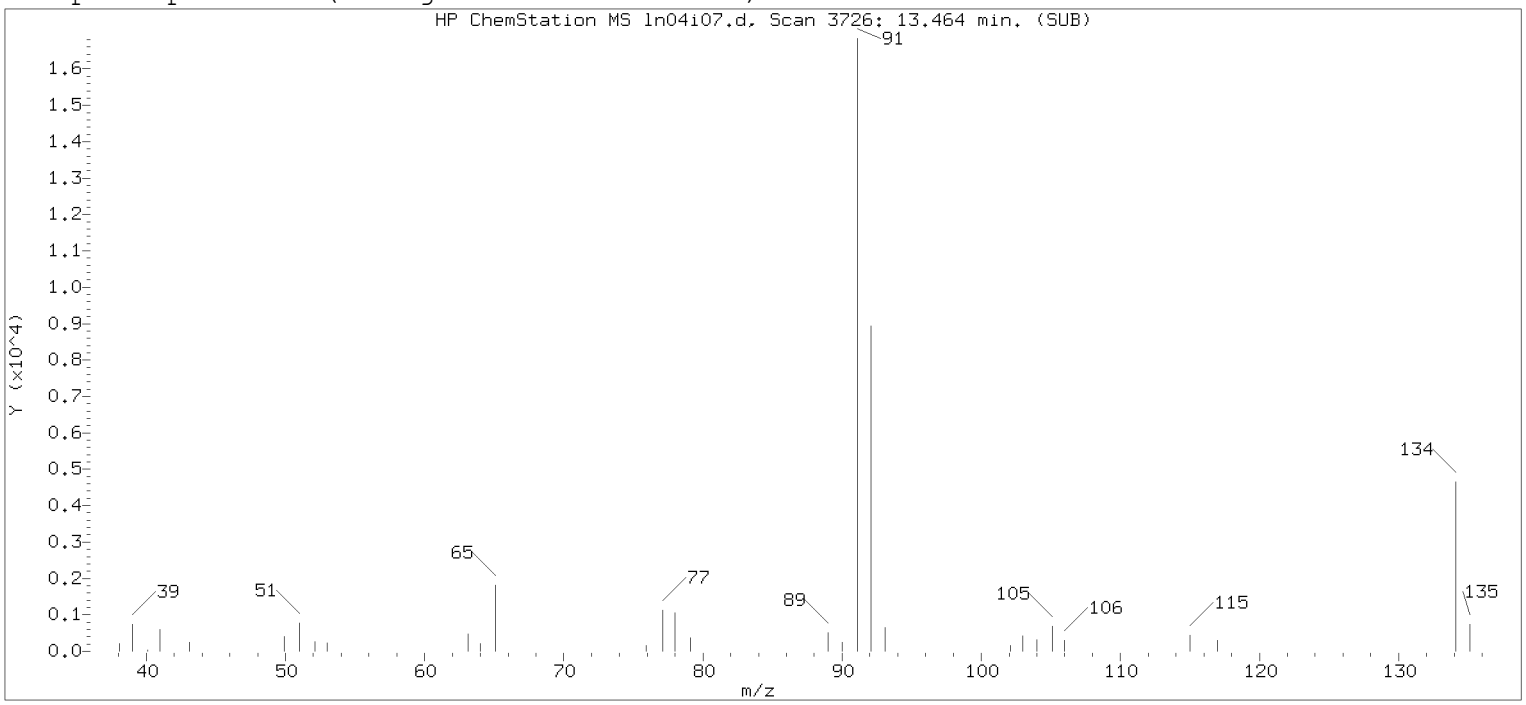
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 3726
Retention Time (minutes): 13.464
Quant Ion : 92.00
Area (flag) : 11964M
On-Column Amount (ng) : 0.9701
Integration start scan : 3714 Integration stop scan: 3735
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

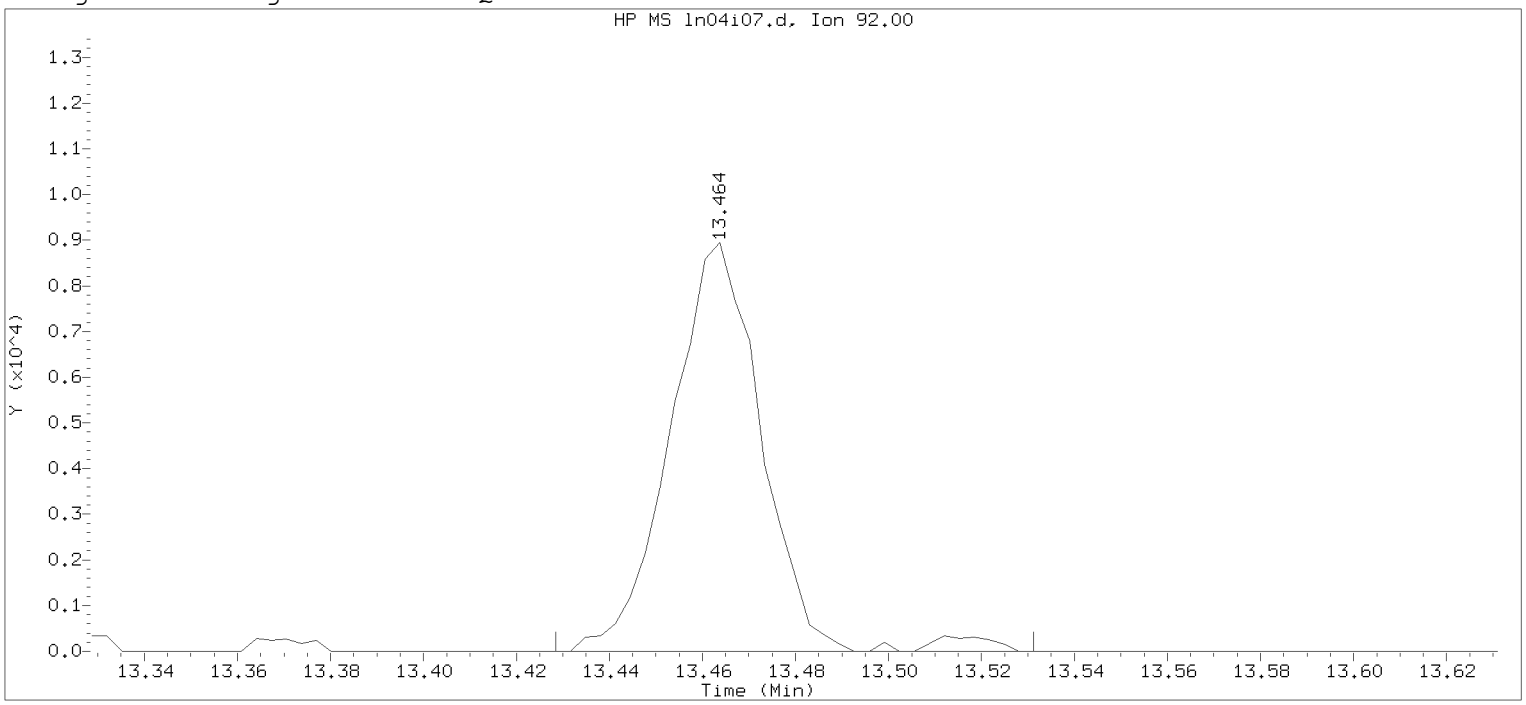
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

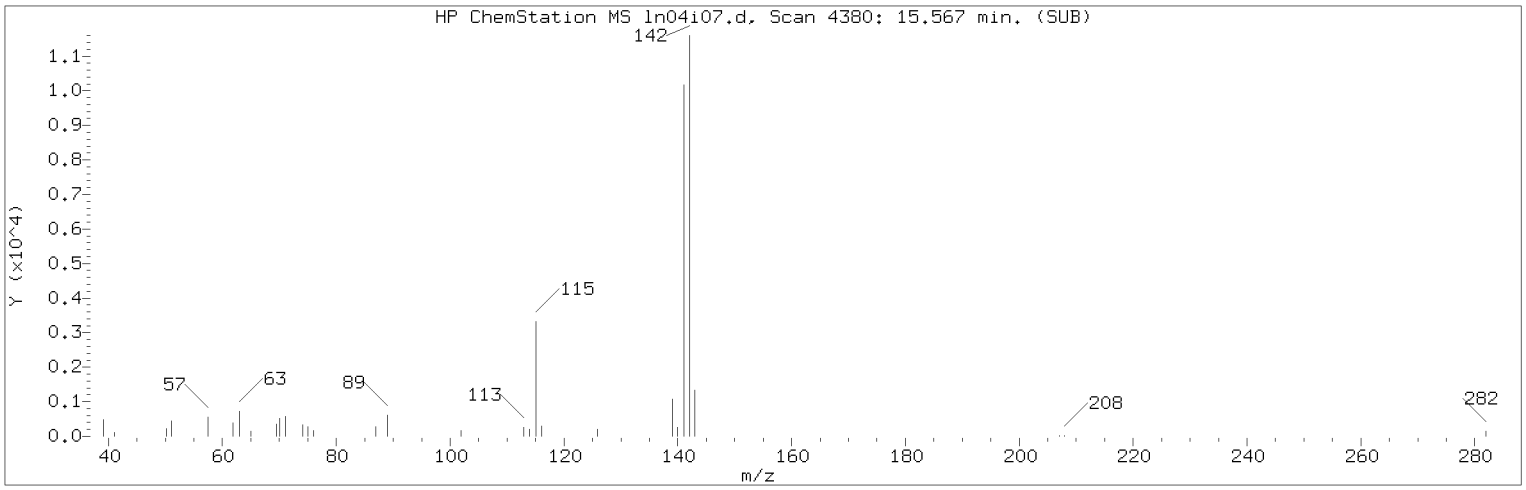
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

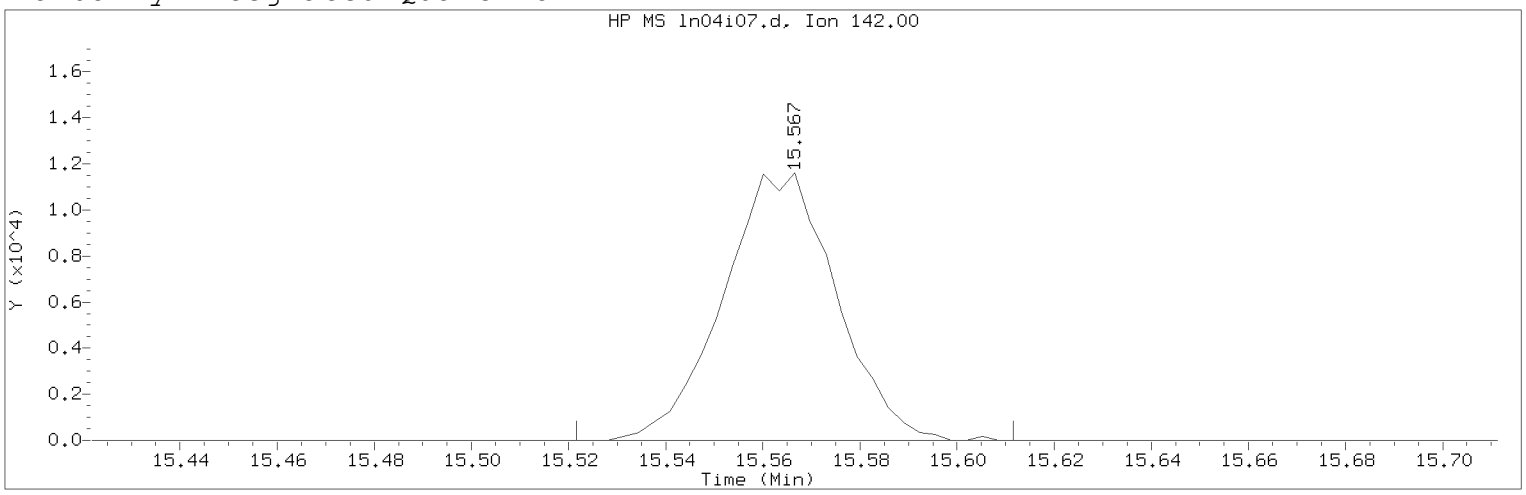
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 3726
Retention Time (minutes): 13.464
Quant Ion : 92.00
Area : 12291
On-column Amount (ng) : 0.9929
Integration start scan : 3714 Integration stop scan: 3746
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

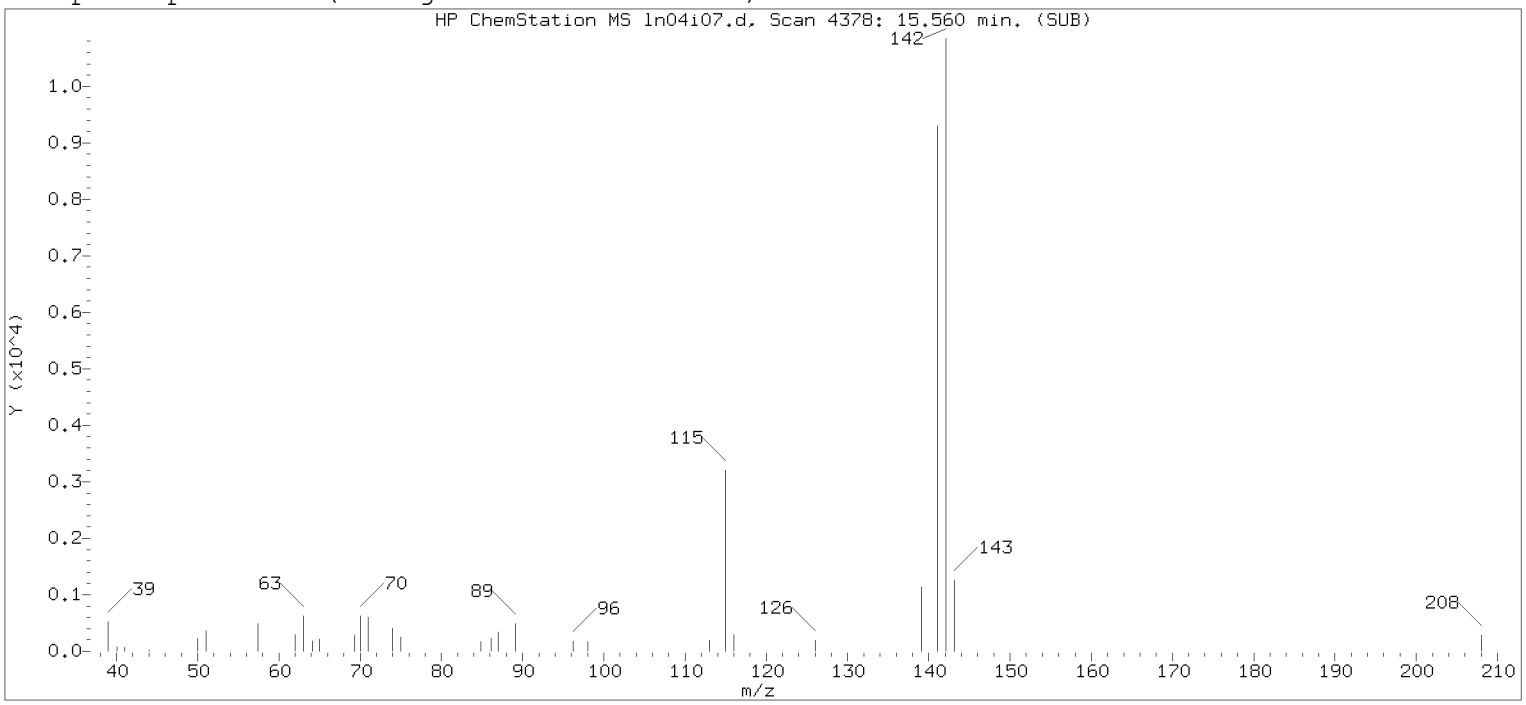
Compound Number : 150
Compound Name : 2-Methylnaphthalene
Scan Number : 4380
Retention Time (minutes): 15.567
Quant Ion : 142.00
Area (flag) : 18783M
On-Column Amount (ng) : 0.9844
Integration start scan : 4365 Integration stop scan: 4393
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

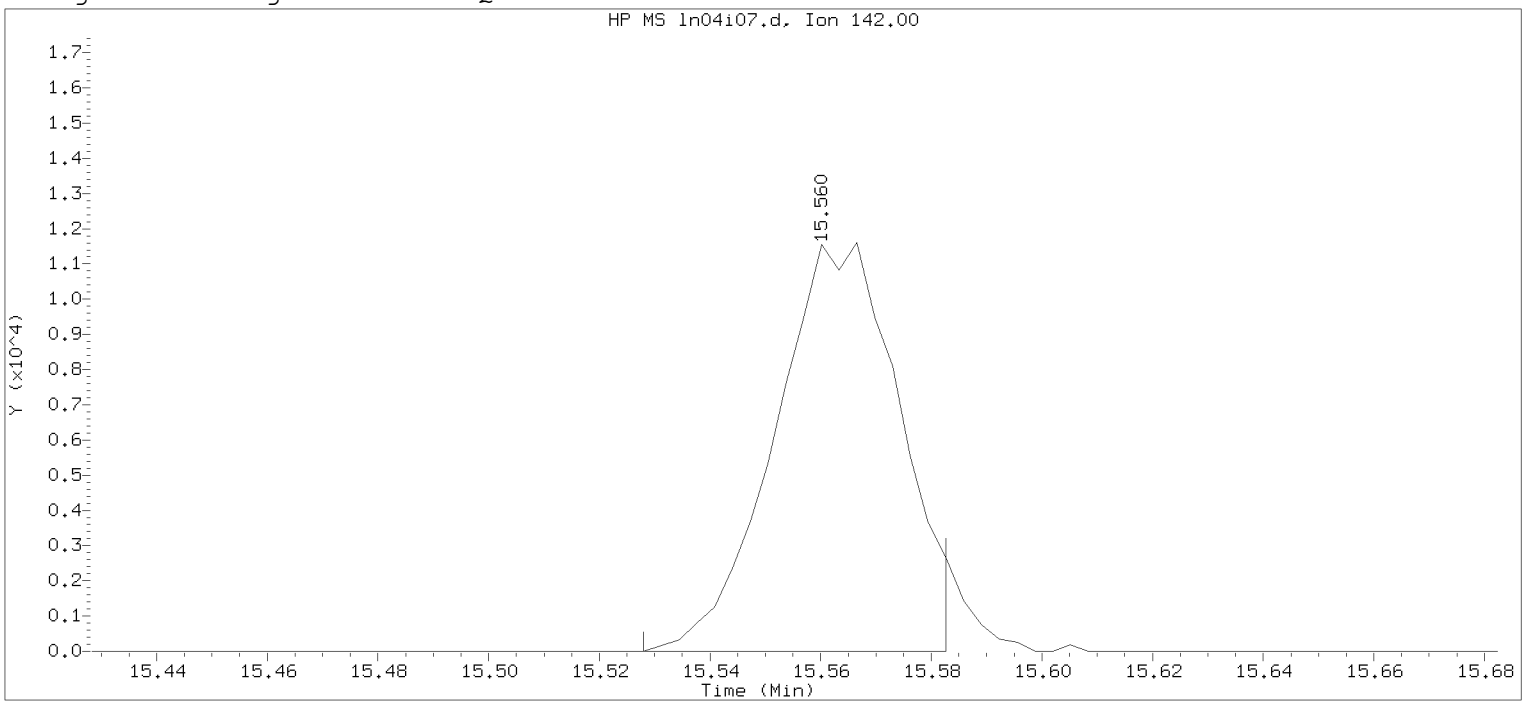
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



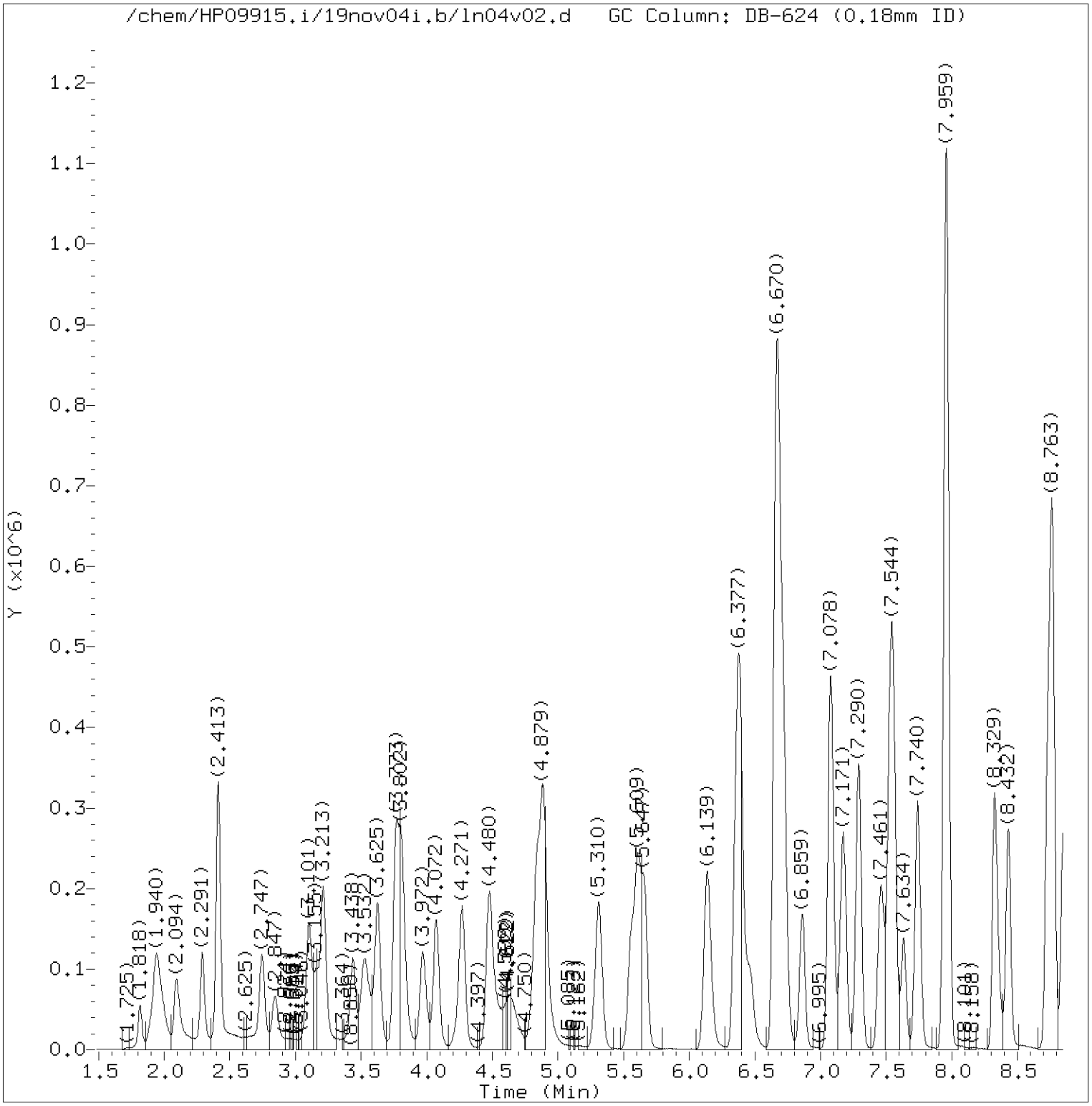
Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 150
Compound Name : 2-Methylnaphthalene
Scan Number : 4378
Retention Time (minutes): 15.560
Quant Ion : 142.00
Area : 17962
On-column Amount (ng) : 0.9472
Integration start scan : 4367 Integration stop scan: 4384
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

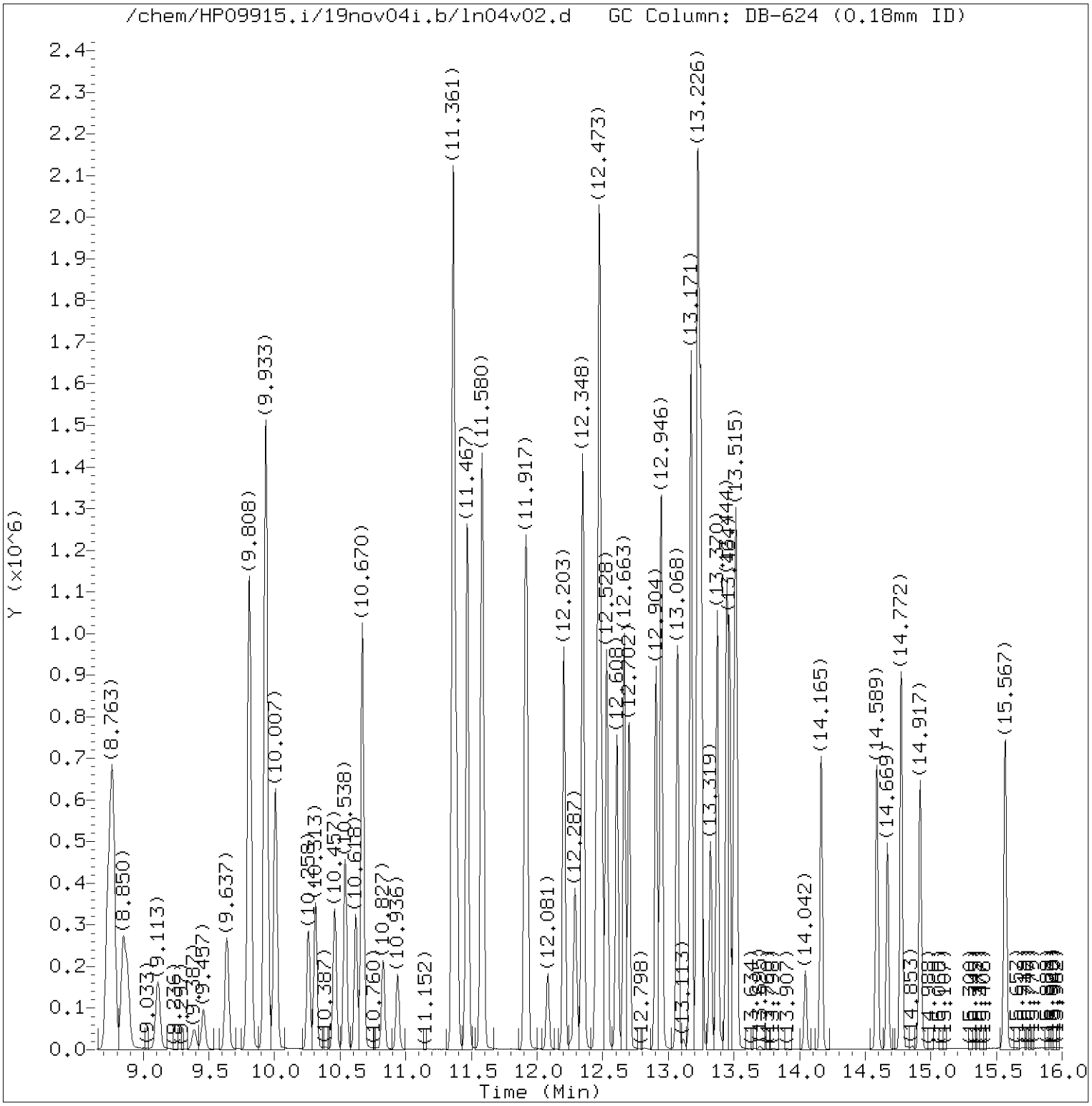
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.094	85	158021M	18.732
4) Chloromethane	(2)	2.291	50	153886	18.927
5) 1,3-Butadiene	(2)	2.413	39	132622M	19.645
6) Vinyl Chloride	(2)	2.413	62	157013	19.349
8) Bromomethane	(2)	2.747	94	104324	17.935
9) Chloroethane	(2)	2.847	64	82467	18.493
10) Dichlorofluoromethane	(2)	3.101	67	174118M	16.224
12) Trichlorofluoromethane	(2)	3.159	101	181238	20.746
11) n-Pentane	(2)	3.213	43	196297	19.014
14) Ethyl ether	(2)	3.438	59	93832	16.622
15) Freon 123a	(2)	3.528	67	136689	19.450
16) Acrolein	(1)	3.625	56	286690	135.125
17) 1,1-Dichloroethene	(2)	3.766	96	107244	20.914
19) Freon 113	(2)	3.795	101	115842	19.801
18) Acetone	(1)	3.805	58	130076	136.752
22) Methyl Iodide	(2)	3.969	142	197263	18.564
21) 2-Propanol	(1)	4.008	45	98510	144.063
23) Carbon Disulfide	(2)	4.075	76	360582	18.660
27) Methyl Acetate	(2)	4.249	43	126109	19.095
25) Allyl Chloride	(2)	4.271	41	171048	18.595
28) Methylene Chloride	(2)	4.474	84	124367	20.377
29)*t-Butyl alcohol-d10	(1)	4.503	65	282794M	250.000
30) t-Butyl alcohol	(1)	4.641	59	227283	190.899
31) Acrylonitrile	(2)	4.834	53	337483	94.980
32) trans-1,2-Dichloroethene	(2)	4.888	96	118658	20.003
33) Methyl Tertiary Butyl Ether	(2)	4.892	73	367523	18.875
34) n-Hexane	(2)	5.310	57	185206M	20.067
36) 1,1-Dichloroethane	(2)	5.554	63	201428	19.465
38) di-Isopropyl ether	(2)	5.609	45	380712	19.075
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	177031	19.067
40) Ethyl t-butyl ether	(2)	6.139	59	369375	19.070
43) 1,2-Dichloroethene (Total)	(2)		96	258427	40.995
44) 2-Butanone	(2)	6.361	43	651073	142.743
42) cis-1,2-Dichloroethene	(2)	6.384	96	139769	20.992
45) 2,2-Dichloropropane	(2)	6.396	77	163413	20.314
47) Propionitrile	(1)	6.461	54	209265	141.065
48) Methacrylonitrile	(2)	6.670	67	556962	145.312
49) Bromochloromethane	(2)	6.712	128	66215	18.755

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.721	71	123960	92.508
51) Chloroform	(2)	6.866	83	199497	20.156
52)$Dibromofluoromethane	(2)	7.075	113	293558	49.637
53) 1,1,1-Trichloroethane	(2)	7.081	97	172182	20.382
54) Cyclohexane	(2)	7.171	56	214913	19.025
56) Carbon Tetrachloride	(2)	7.287	117	143405	20.016
55) 1,1-Dichloropropene	(2)	7.294	75	164177	20.065
58) Isobutyl Alcohol	(1)	7.461	41	180862	451.413
57)$1,2-Dichloroethane-d4	(2)	7.531	102	74610	49.500
60) Benzene	(2)	7.560	78	492012	19.996
61) 1,2-Dichloroethane	(2)	7.638	62	163231	20.625
65) t-Amyl methyl ether	(2)	7.740	73	369180	18.989
67) n-Heptane	(2)	7.956	43	163362M	18.948
66)*Fluorobenzene	(2)	7.959	96	1209671	50.000
69) n-Butanol	(1)	8.326	56	314470M	911.924
71) Trichloroethene	(2)	8.429	95	124893	20.159
72) Methylcyclohexane	(2)	8.731	83	222042	19.318
73) 1,2-Dichloropropane	(2)	8.769	63	127774	20.450
76) Methyl Methacrylate	(2)	8.847	69	115569	19.128
75) 1,4-Dioxane	(1)	8.853	88	47747M	503.753
74) Dibromomethane	(2)	8.879	93	80909	20.014
78) Bromodichloromethane	(2)	9.113	83	144408	19.907
79) 2-Nitropropane	(2)	9.383	41	35869	16.324
80) 2-Chloroethyl Vinyl Ether	(2)	9.457	63	51088	19.038
81) cis-1,3-Dichloropropene	(2)	9.637	75	191486	19.874
82) 4-Methyl-2-pentanone	(2)	9.808	43	893533	92.810
83)$Toluene-d8	(3)	9.933	98	1243931	50.214
88) Toluene	(3)	10.007	92	314091	20.224
90) 1,3-Dichloropropene (total)	(3)		100	360855	39.085
89) trans-1,3-Dichloropropene	(3)	10.258	75	169369	19.211
91) Ethyl Methacrylate	(3)	10.313	69	194593	18.162
92) 1,1,2-Trichloroethane	(3)	10.457	97	120085	20.394
93) Tetrachloroethene	(3)	10.538	166	145489	22.119
94) 1,3-Dichloropropane	(3)	10.618	76	197817	19.676
96) 2-Hexanone	(3)	10.670	43	659041	92.150
97) Dibromochloromethane	(3)	10.827	129	119169	19.757
99) 1,2-Dibromoethane	(3)	10.936	107	127100	19.878
100)*Chlorobenzene-d5	(3)	11.361	117	946755	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) 1-Chlorohexane	(3)	11.364	91	162531	19.480
102) Chlorobenzene	(3)	11.387	112	355167	20.223
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	114709	19.823
104) Ethylbenzene	(3)	11.470	91	602093	20.283
106) m+p-Xylene	(3)	11.583	106	478306	40.959
108) Xylene (Total)	(3)		106	712690	61.279
107) o-Xylene	(3)	11.908	106	234384	20.320
109) Styrene	(3)	11.924	104	391950	20.563
110) Bromoform	(3)	12.081	173	80910	17.952
111) Isopropylbenzene	(3)	12.203	105	603598	20.864
112) Cyclohexanone	(1)	12.287	55	166810	449.364
114)$4-Bromofluorobenzene	(3)	12.348	95	469009	49.999
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	188446M	19.576
115) Bromobenzene	(4)	12.467	156	151805	19.821
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	290498	97.834
117) 1,2,3-Trichloropropane	(4)	12.496	110	58902M	19.940
119) n-Propylbenzene	(4)	12.531	91	694916	20.768
120) 2-Chlorotoluene	(4)	12.608	126	143440	20.178
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	499772	20.552
121) 4-Chlorotoluene	(4)	12.702	126	148830	20.114
124) tert-Butylbenzene	(4)	12.907	134	103762M	20.632
125) Pentachloroethane	(4)	12.943	167	74538	17.213
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	511834	19.971
127) sec-Butylbenzene	(4)	13.068	105	616554	20.545
129) 1,3-Dichlorobenzene	(4)	13.168	146	282424	20.067
130) p-Isopropyltoluene	(4)	13.174	119	533278	20.541
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	509597	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	298831	20.482
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	539562	19.874
135) Benzyl Chloride	(4)	13.319	91	329267	16.019
136) 1,3-Diethylbenzene	(4)	13.374	119	322622	19.095
141) Diethylbenzene (total)	(4)		100	935720	57.258
137) 1,4-Diethylbenzene	(4)	13.444	119	340230	19.006
139) n-Butylbenzene	(4)	13.464	92	258920	19.505
138) 1,2-Dichlorobenzene	(4)	13.502	146	282807	20.364
140) 1,2-Diethylbenzene	(4)	13.518	119	272868	19.158
142) 1,2-Dibromo-3-chloropropane	(4)	14.042	75	40654	19.292
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	203102	19.035

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146)	1,2,4-Trichlorobenzene	(4)	14.589	180	199046	19.186
147)	Hexachlorobutadiene	(4)	14.666	225	82991	16.942
148)	Naphthalene	(4)	14.772	128	666056	19.970
149)	1,2,3-Trichlorobenzene	(4)	14.917	180	192487	19.067
150)	2-Methylnaphthalene	(4)	15.567	142	374385	18.228

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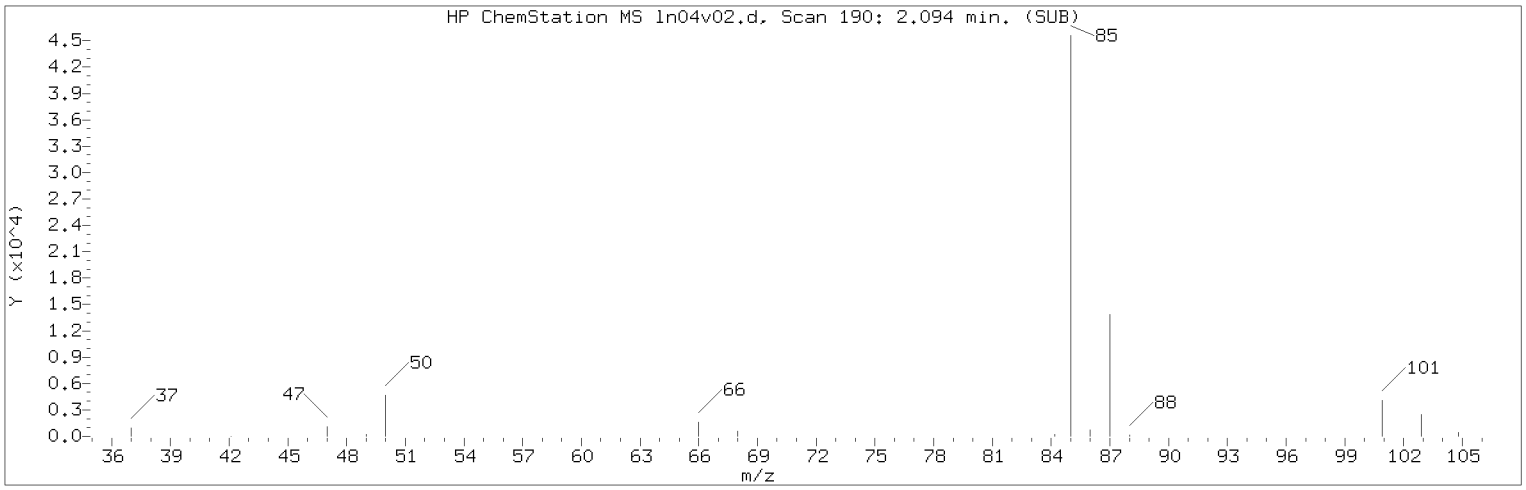
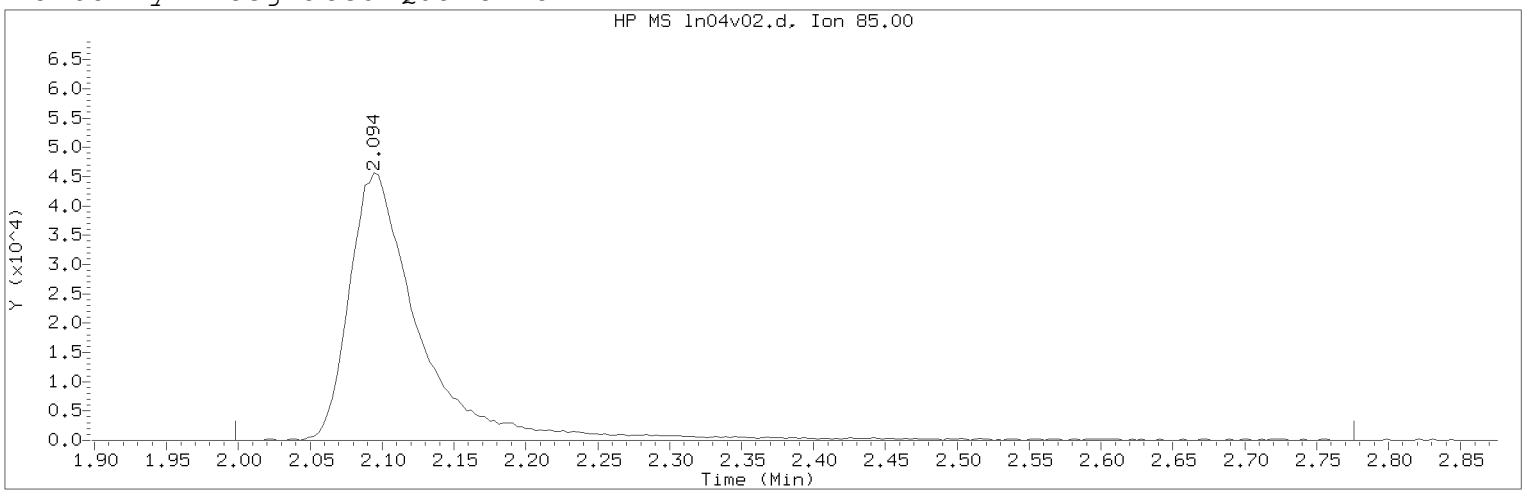
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

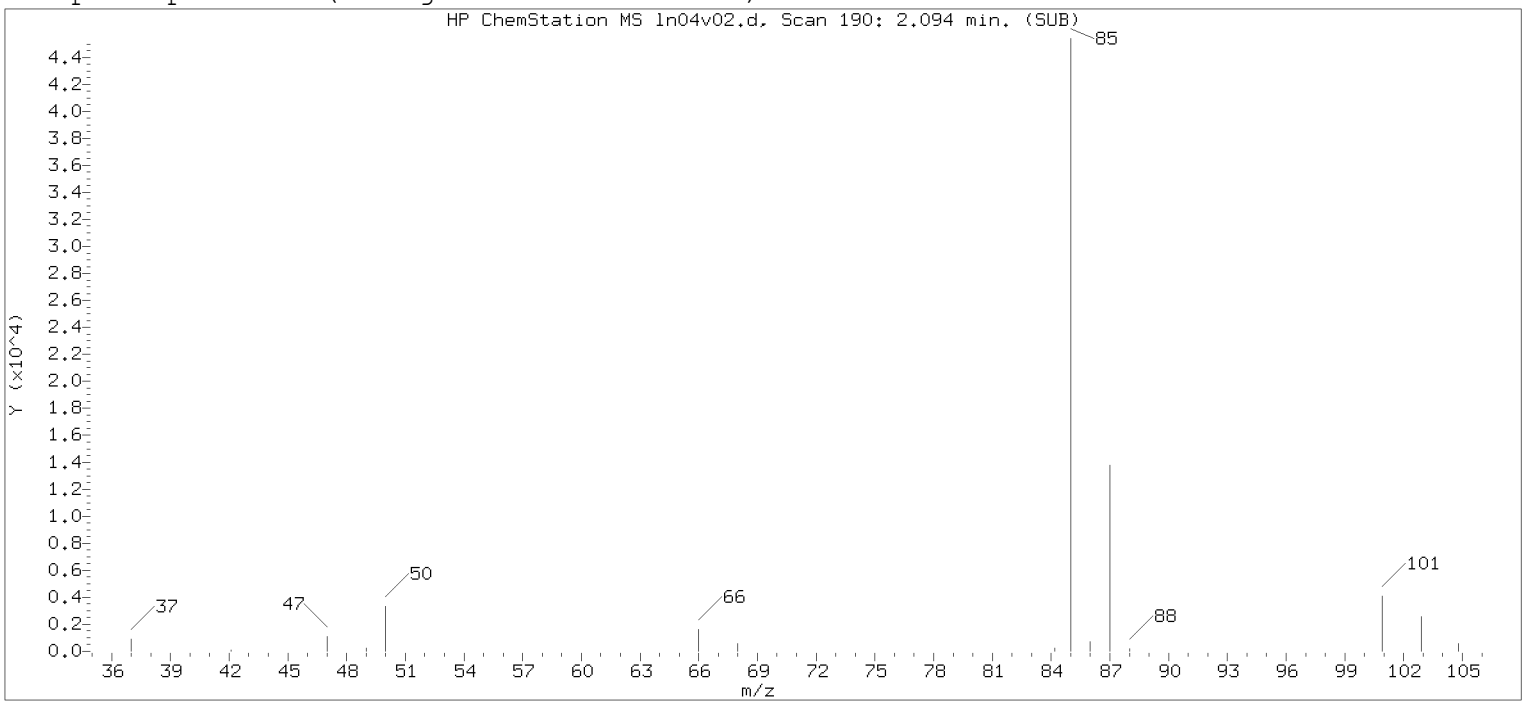
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area (flag) : 158021M
On-Column Amount (ng) : 18.7320
Integration start scan : 159 Integration stop scan: 401
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

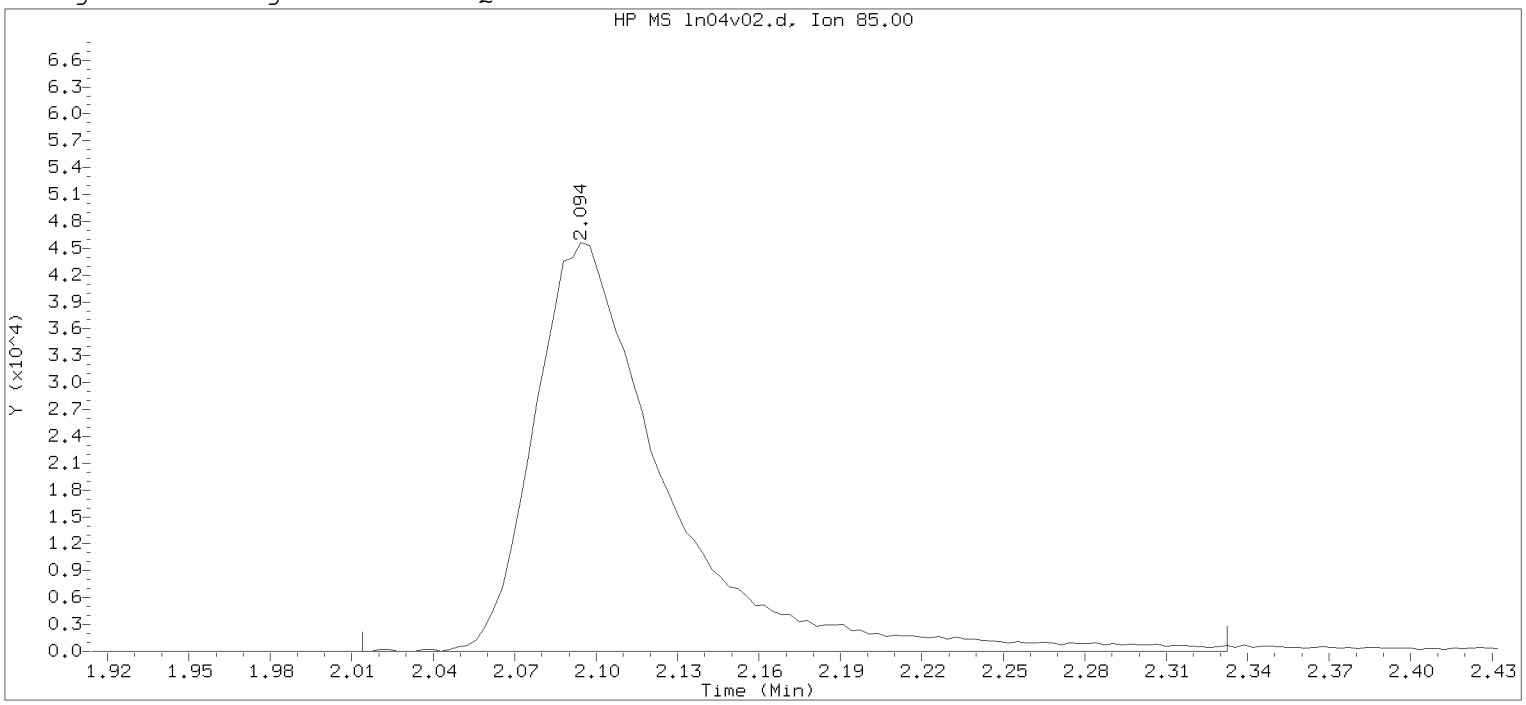
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

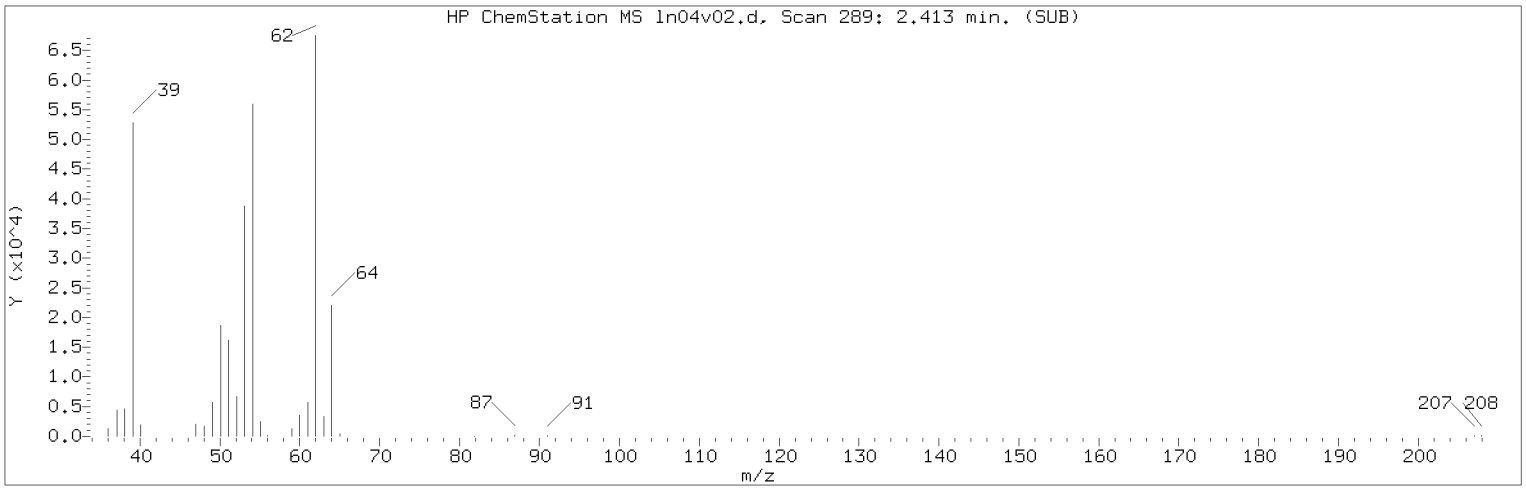
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

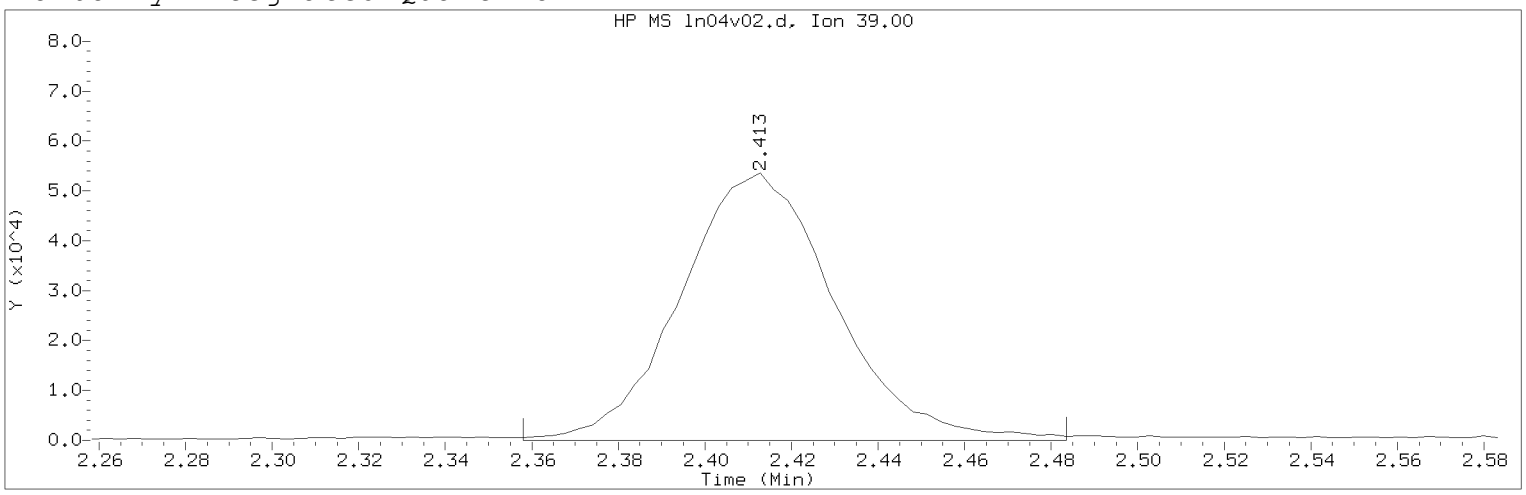
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area : 152845
On-column Amount (ng) : 18.1184
Integration start scan : 164 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

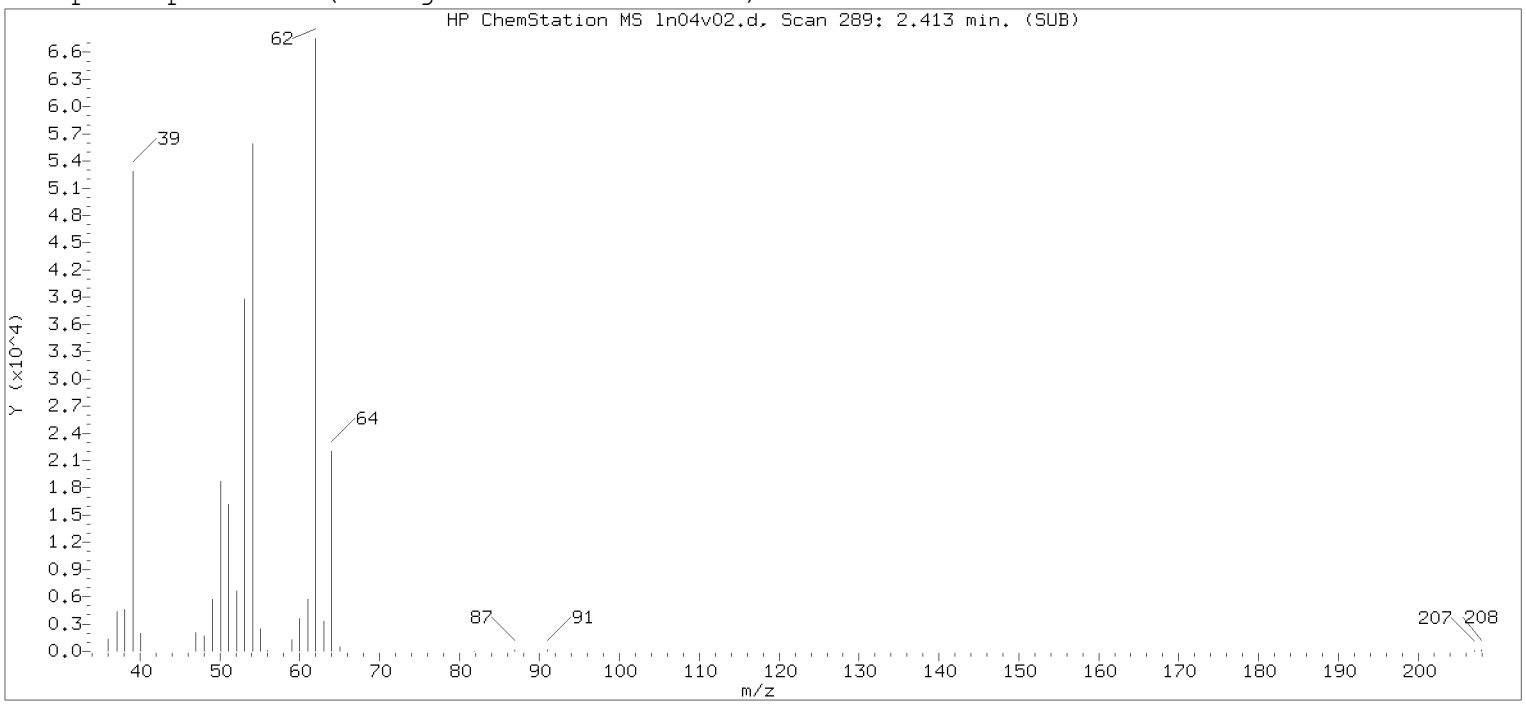
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area (flag) : 132622M
On-Column Amount (ng) : 19.6453
Integration start scan : 271 Integration stop scan: 310
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

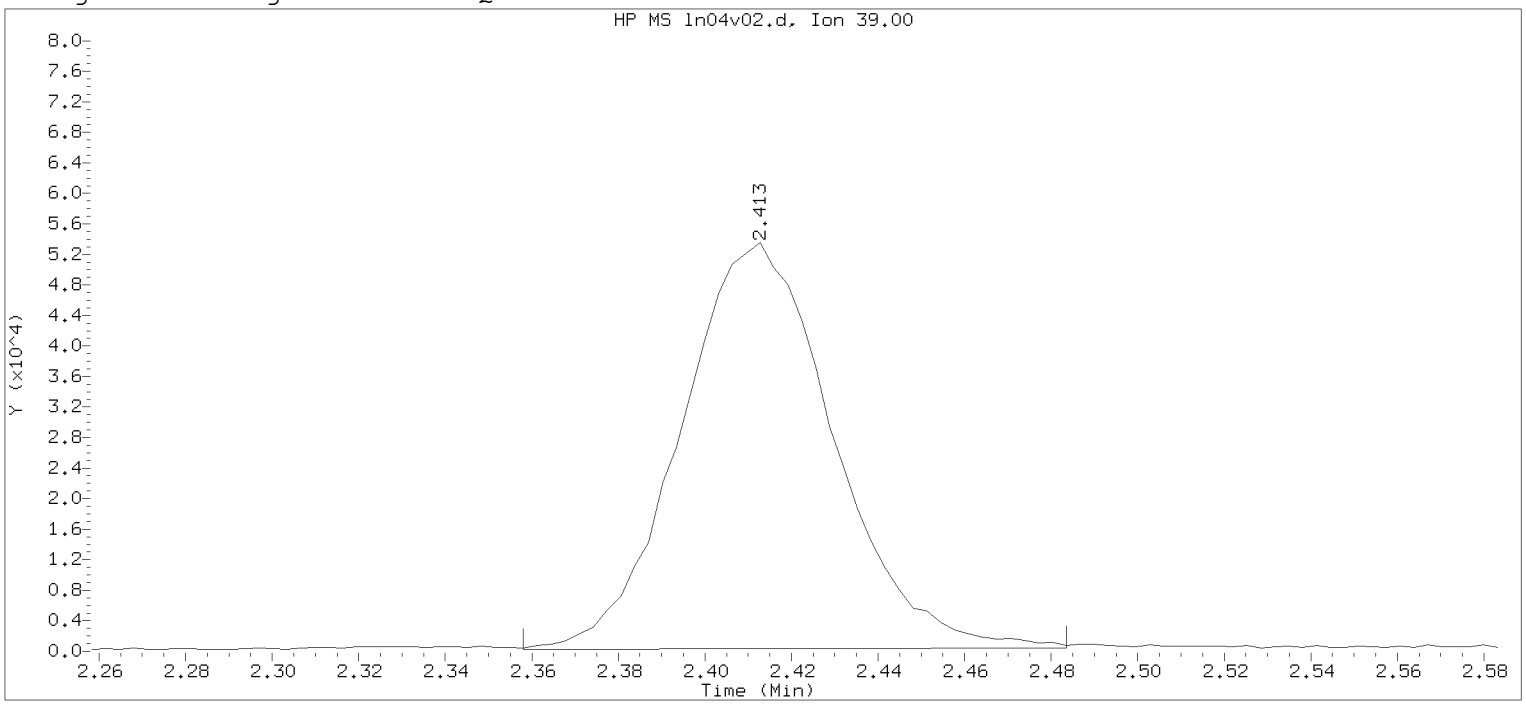
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area : 129885
On-column Amount (ng) : 19.2400
Integration start scan : 271 Integration stop scan: 310
Y at integration start : 283 Y at integration end: 414

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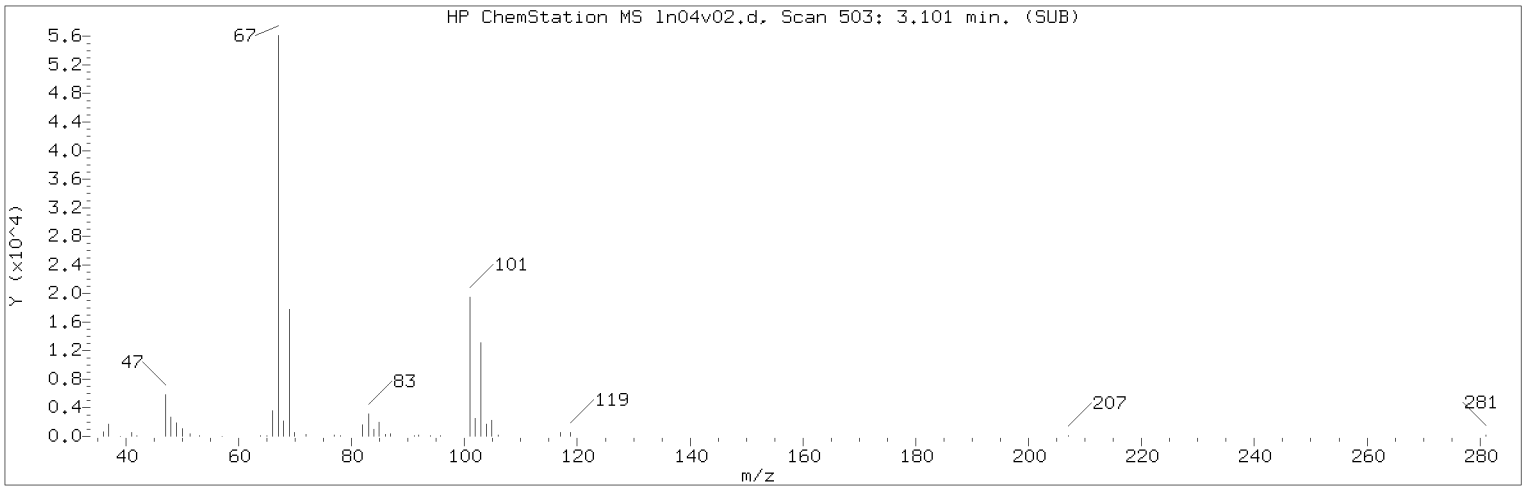
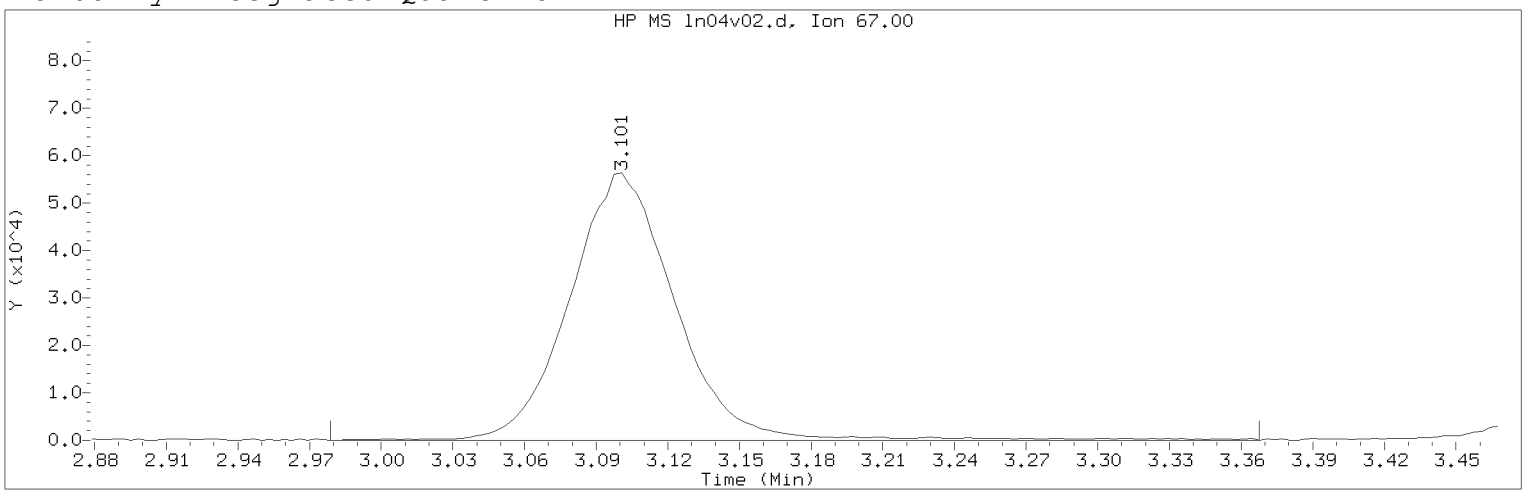
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

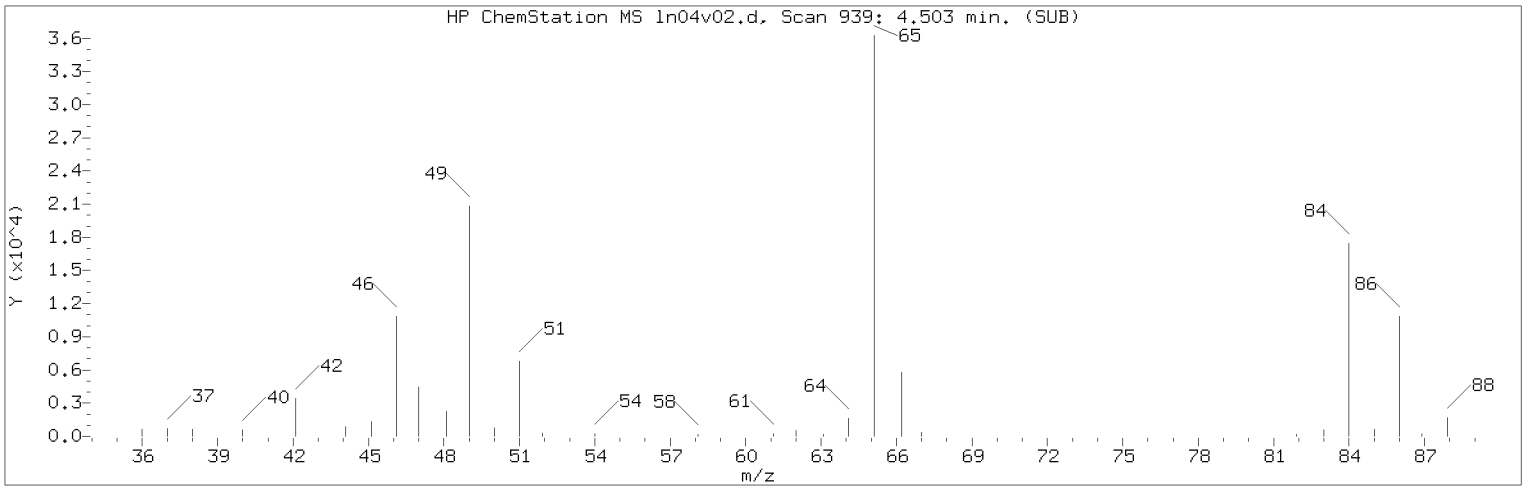
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 503
Retention Time (minutes): 3.101
Quant Ion : 67.00
Area (flag) : 174118M
On-Column Amount (ng) : 16.2240
Integration start scan : 464 Integration stop scan: 585
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

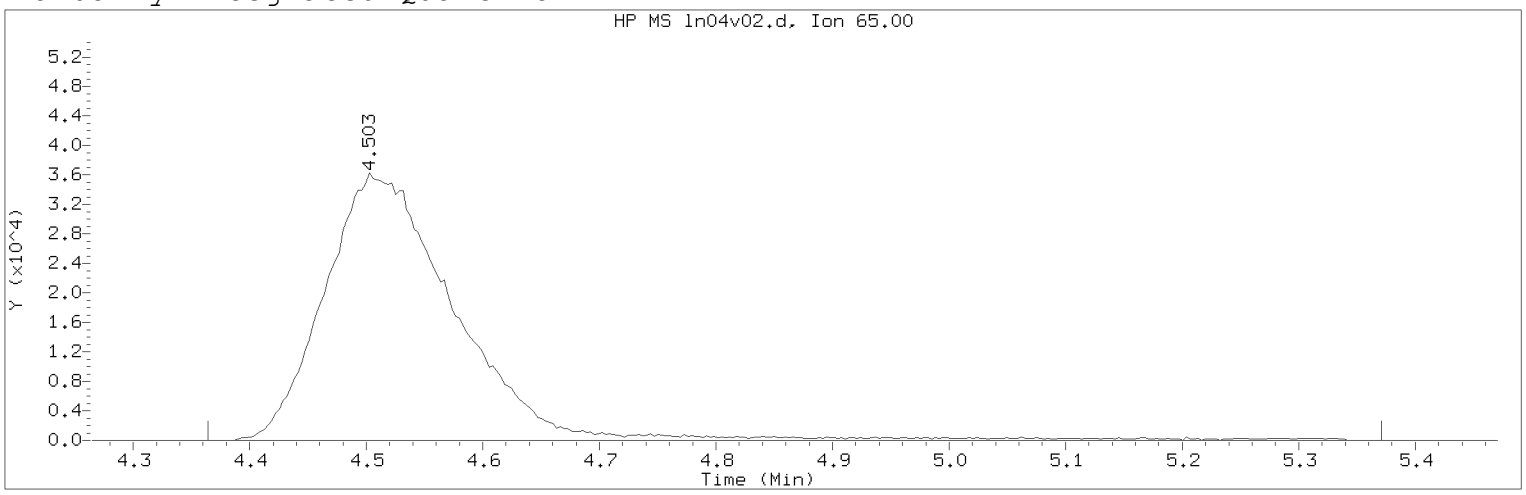
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

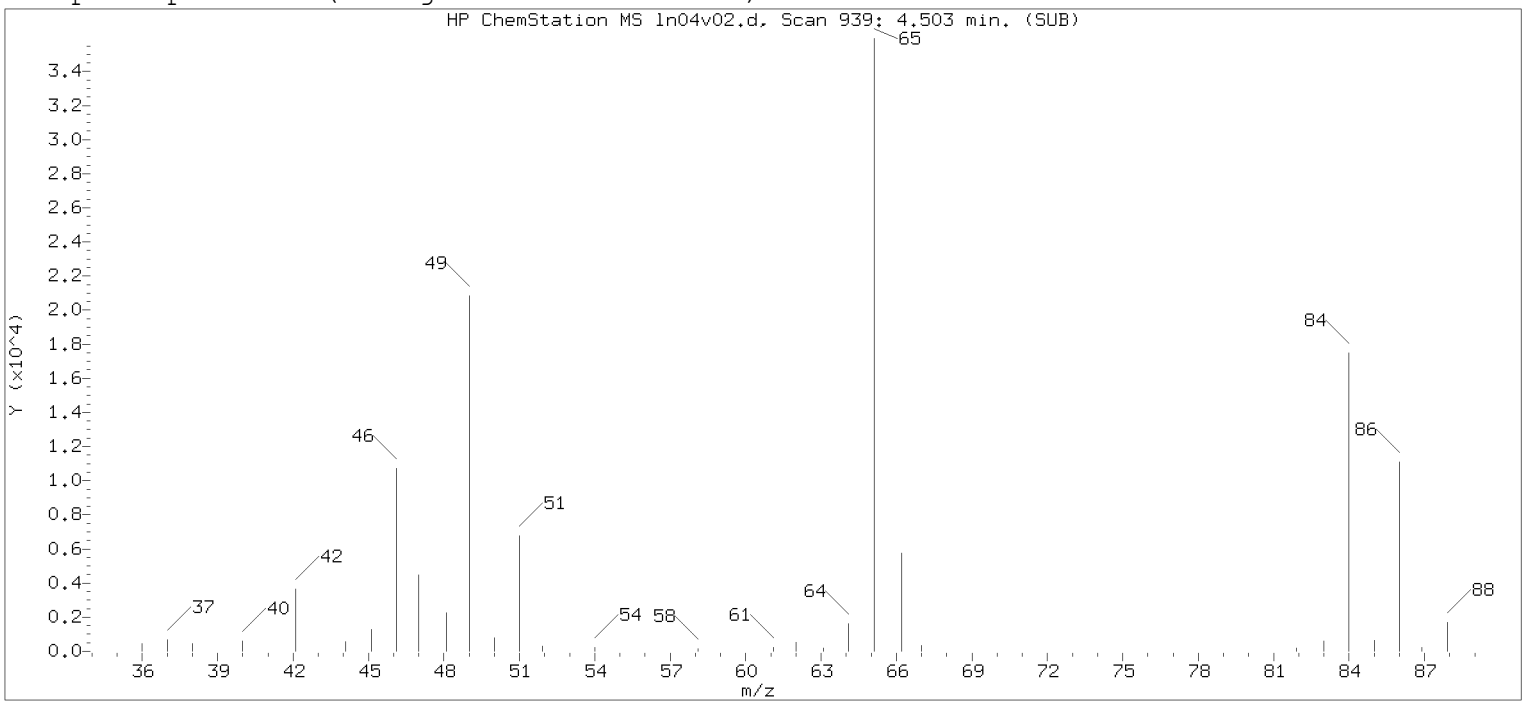
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area (flag) : 282794M
On-Column Amount (ng) : 250.0000
Integration start scan : 895 Integration stop scan: 1208
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

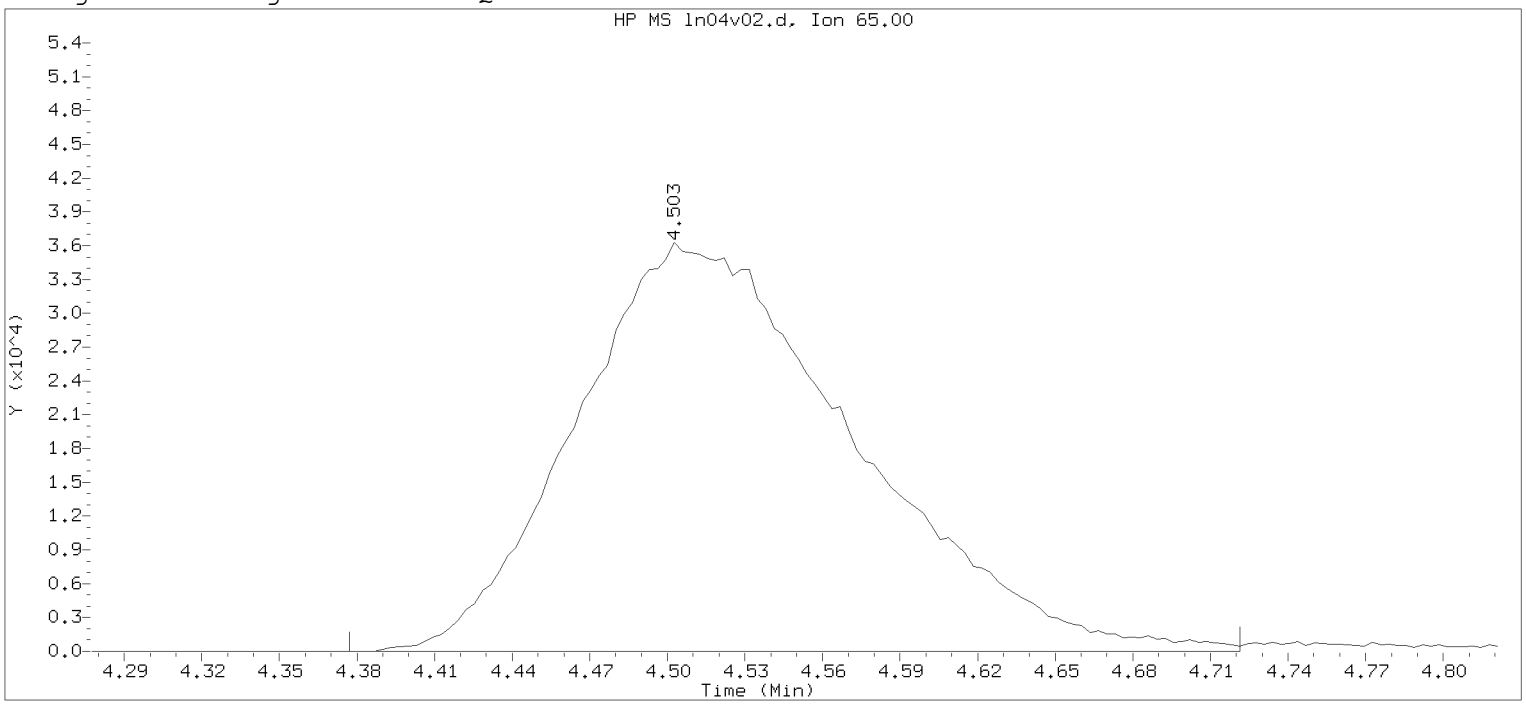
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

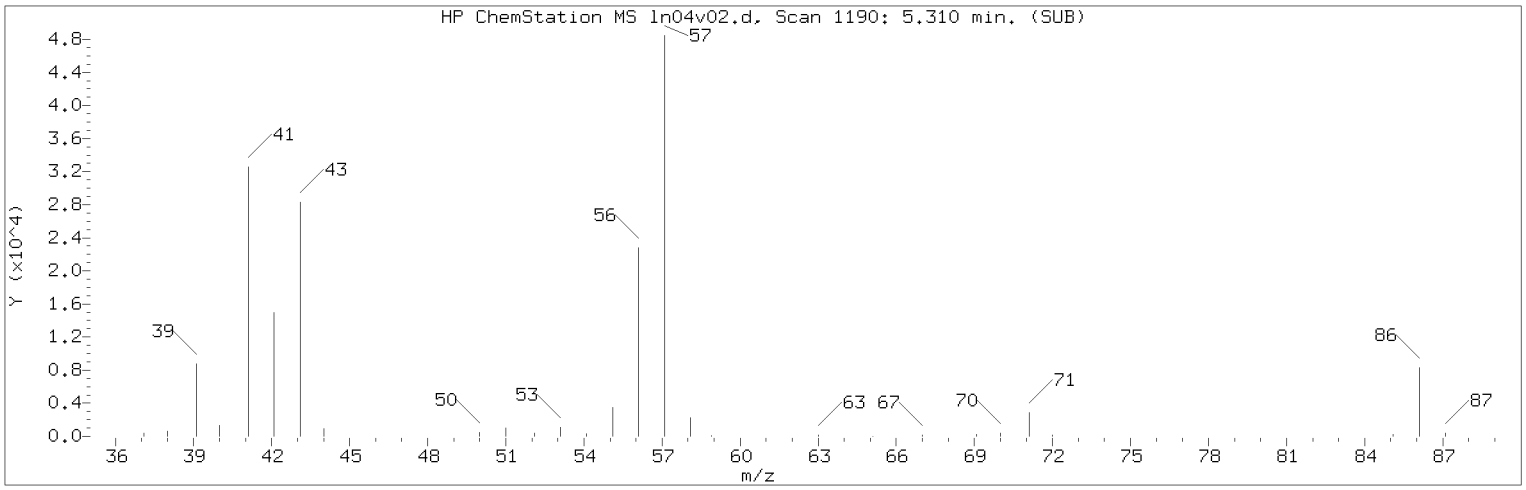
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

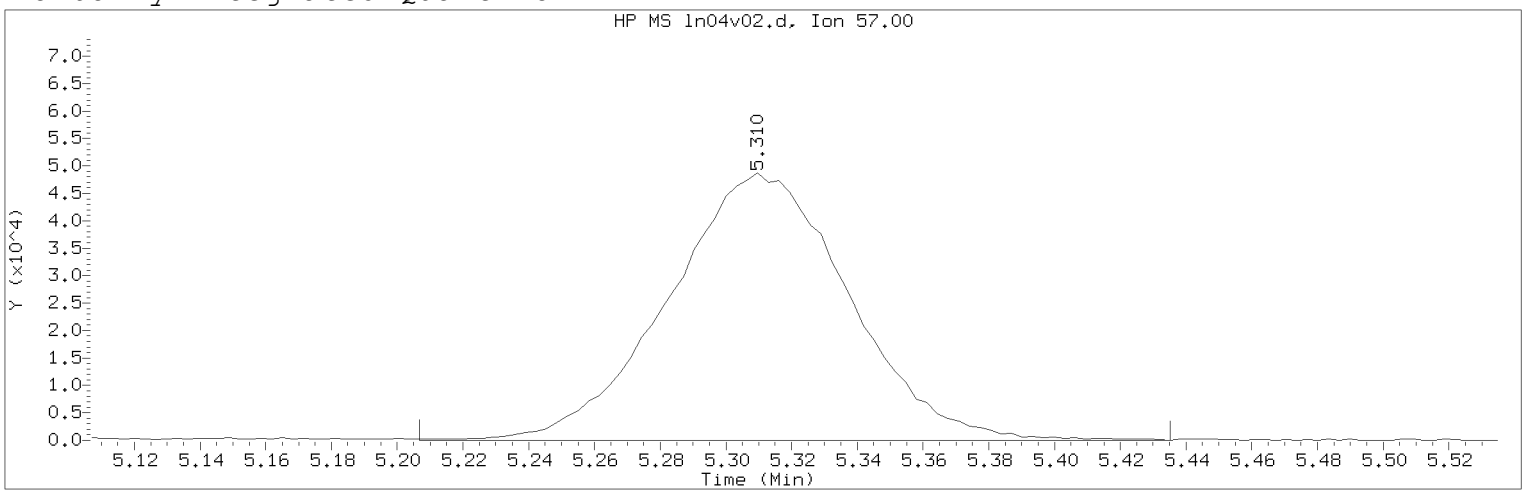
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area : 270950
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1006
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

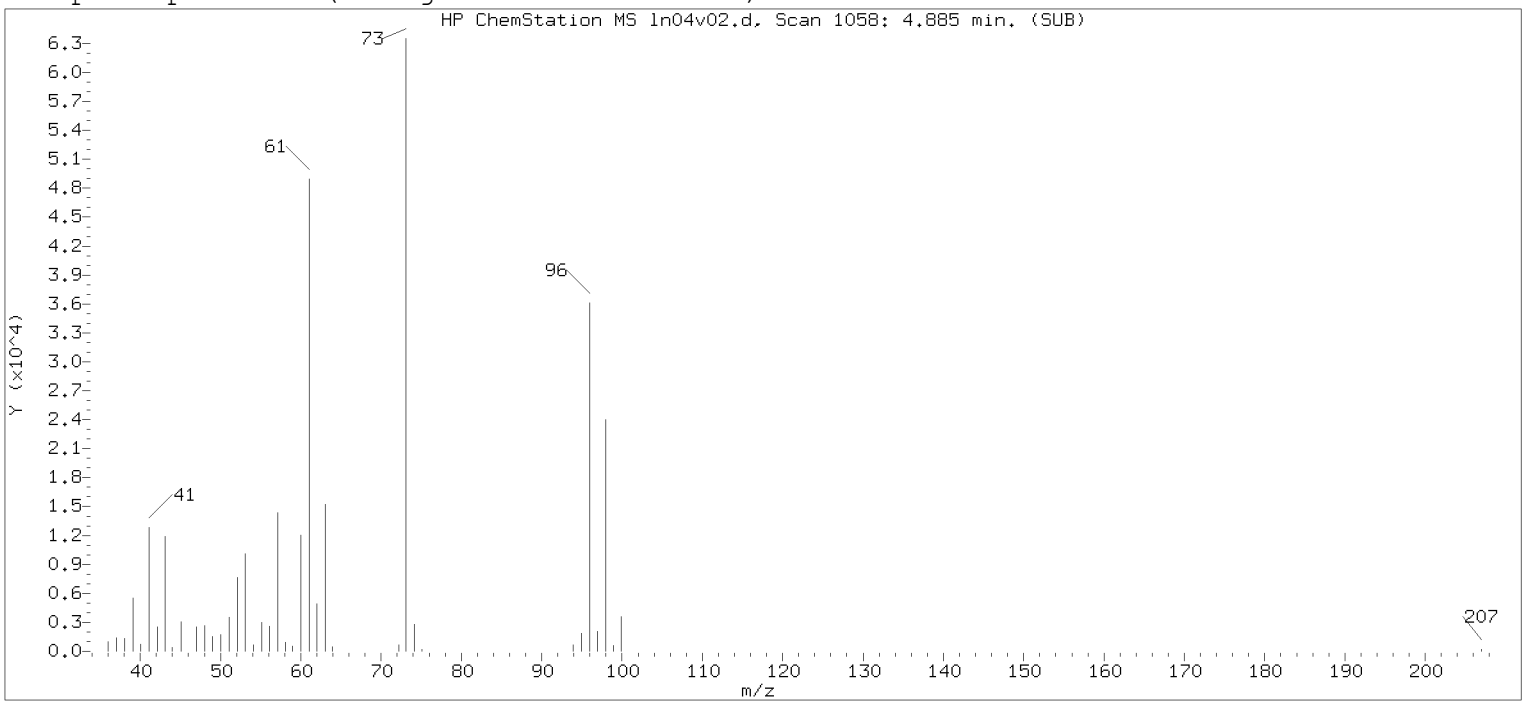
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1190
Retention Time (minutes): 5.310
Quant Ion : 57.00
Area (flag) : 185206M
On-Column Amount (ng) : 20.0675
Integration start scan : 1157 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

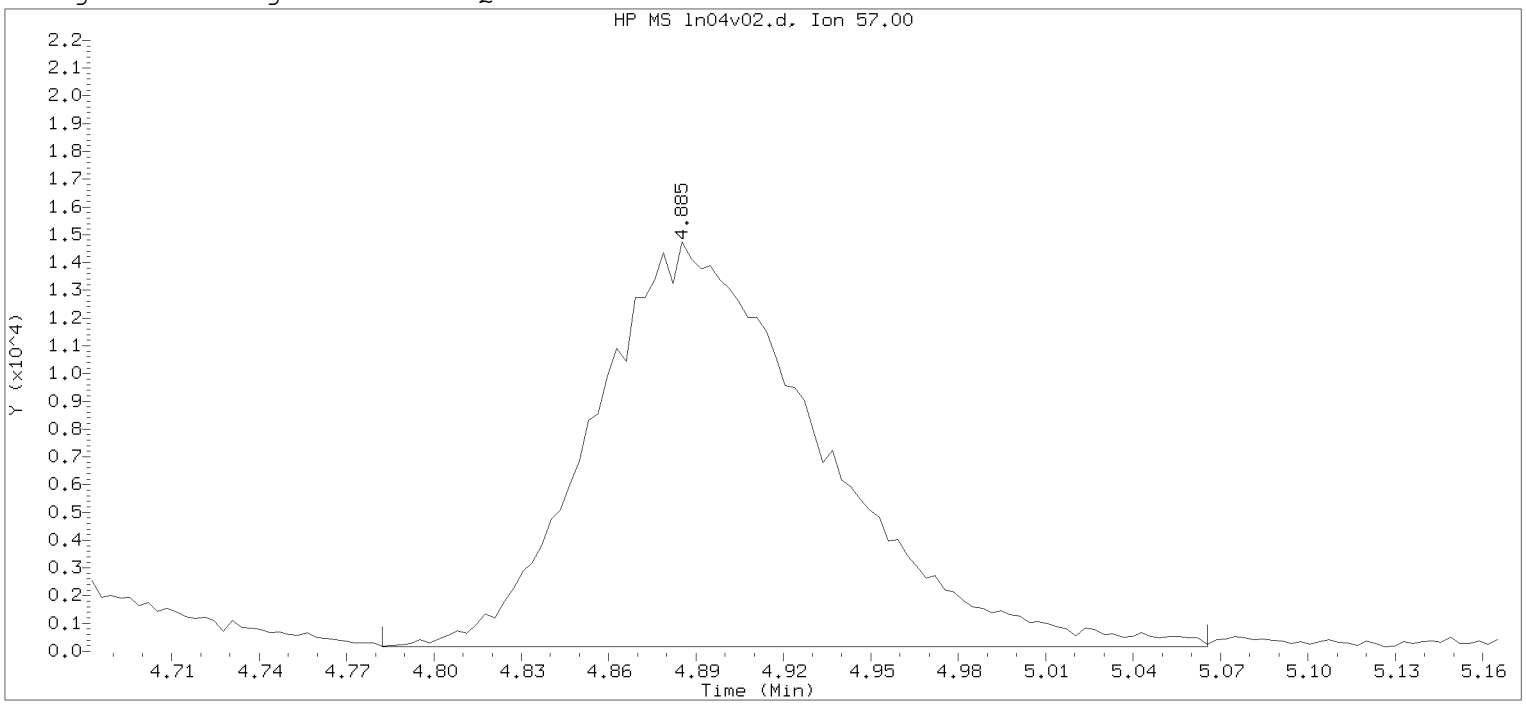
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

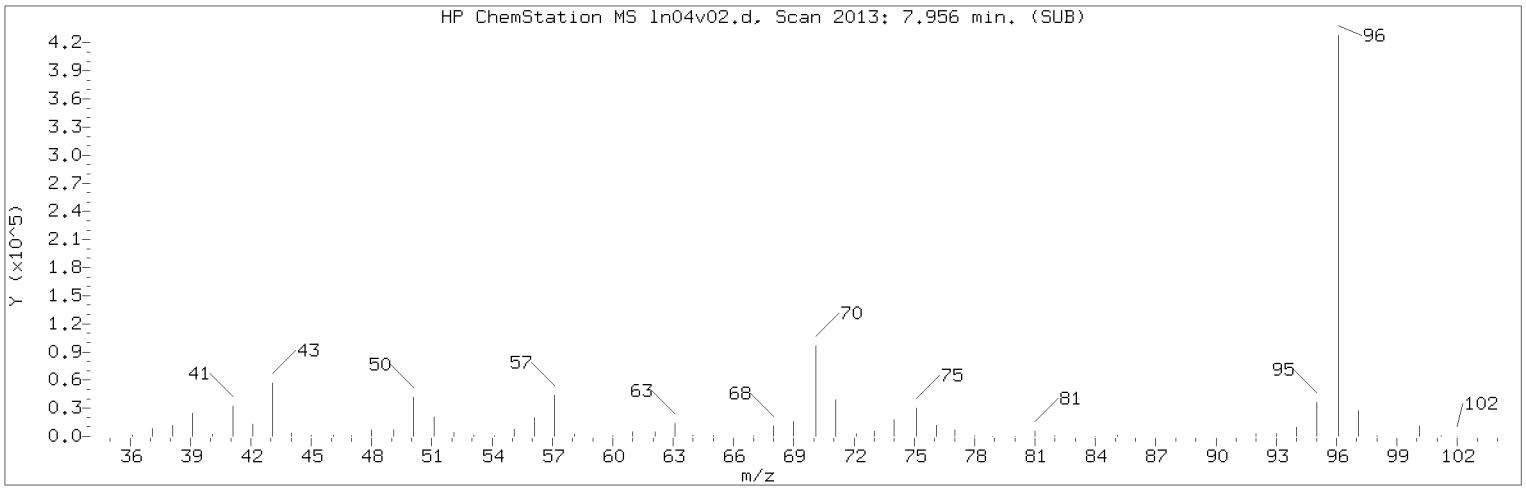
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

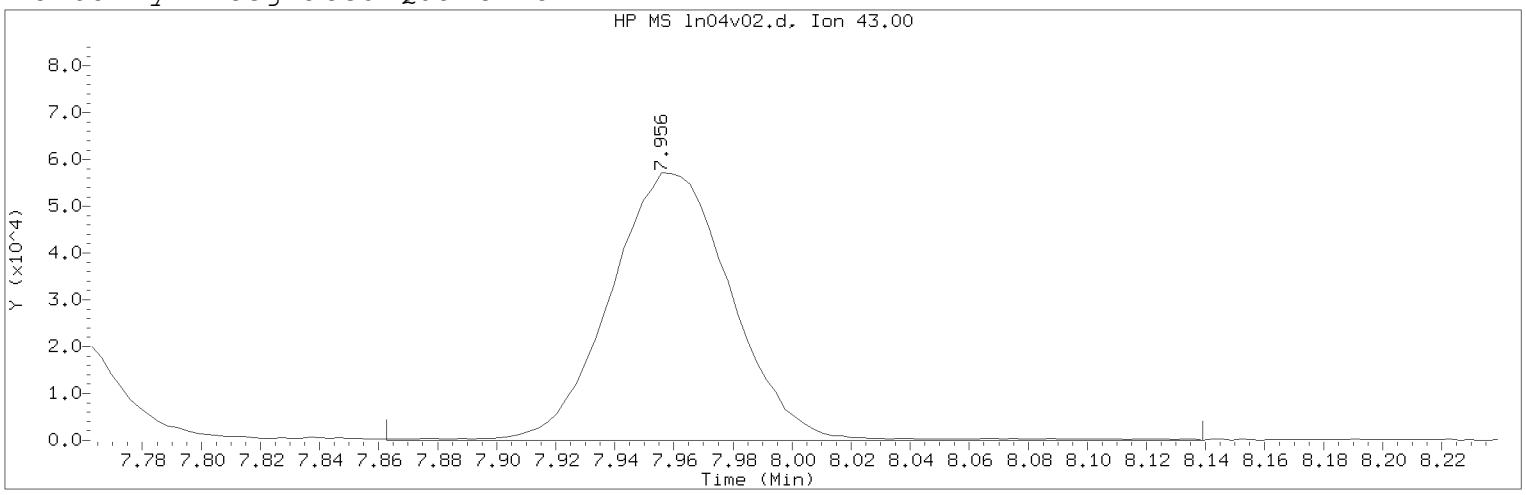
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1058
Retention Time (minutes): 4.885
Quant Ion : 57.00
Area : 79381
On-column Amount (ng) : 18.4374
Integration start scan : 1025 Integration stop scan: 1113
Y at integration start : 160 Y at integration end: 160

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

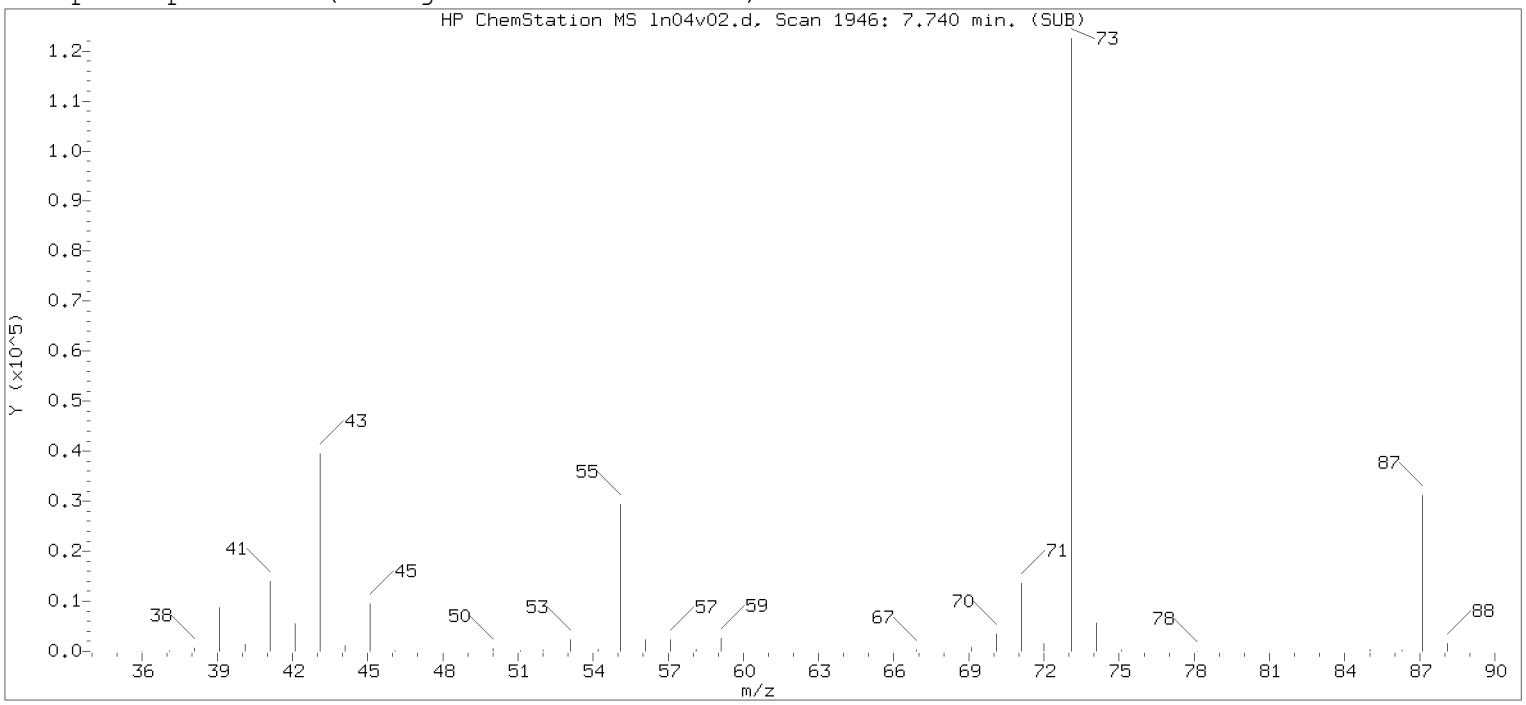
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2013
Retention Time (minutes): 7.956
Quant Ion : 43.00
Area (flag) : 163362M
On-Column Amount (ng) : 18.9476
Integration start scan : 1983 Integration stop scan: 2069
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

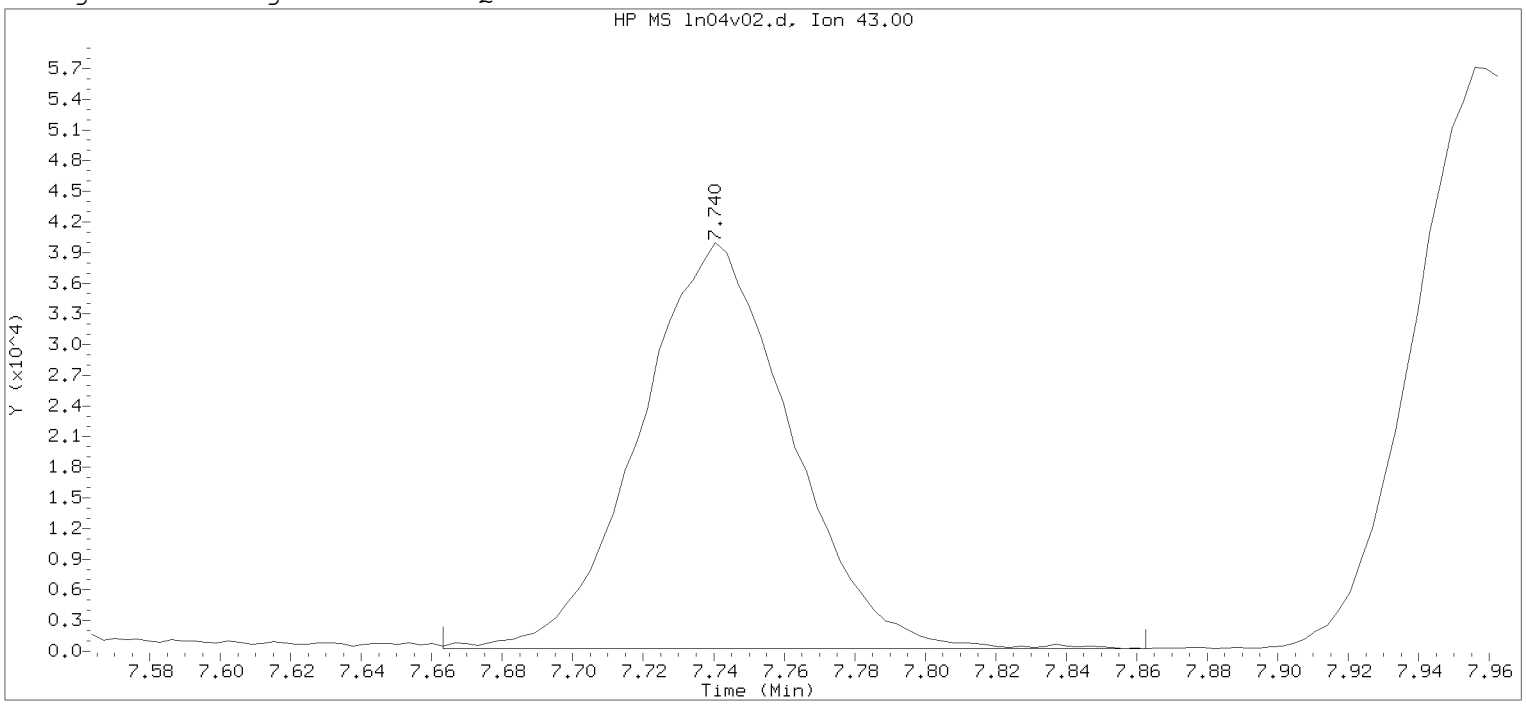
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

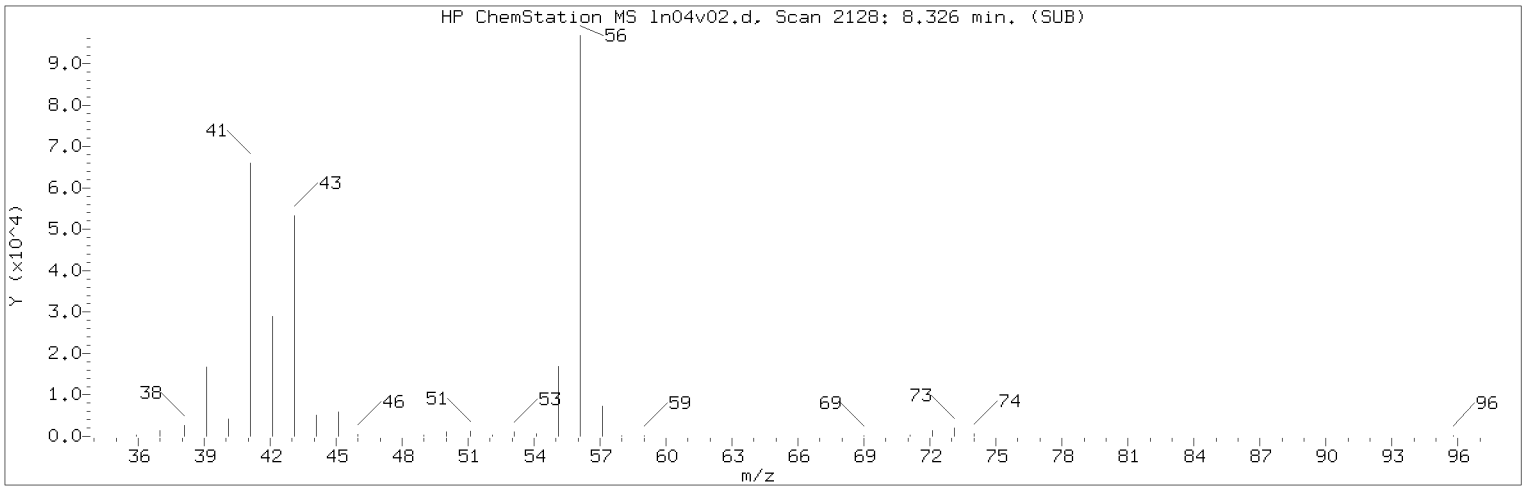
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

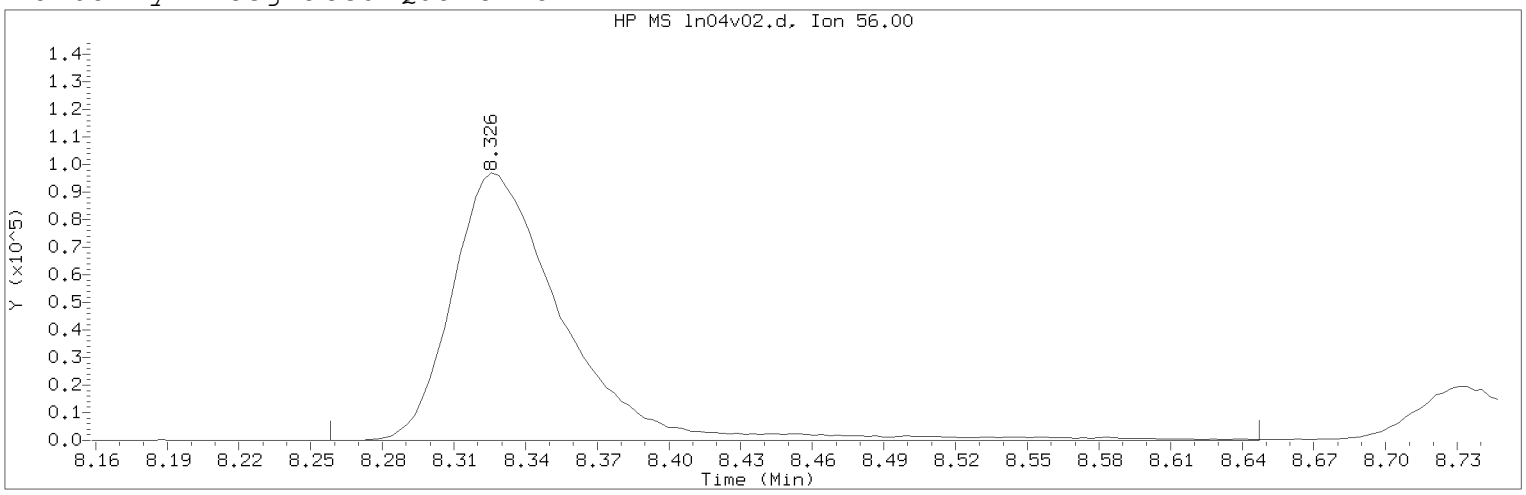
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.740
Quant Ion : 43.00
Area : 118529
On-column Amount (ng) : 18.5036
Integration start scan : 1921 Integration stop scan: 1983
Y at integration start : 255 Y at integration end: 255

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

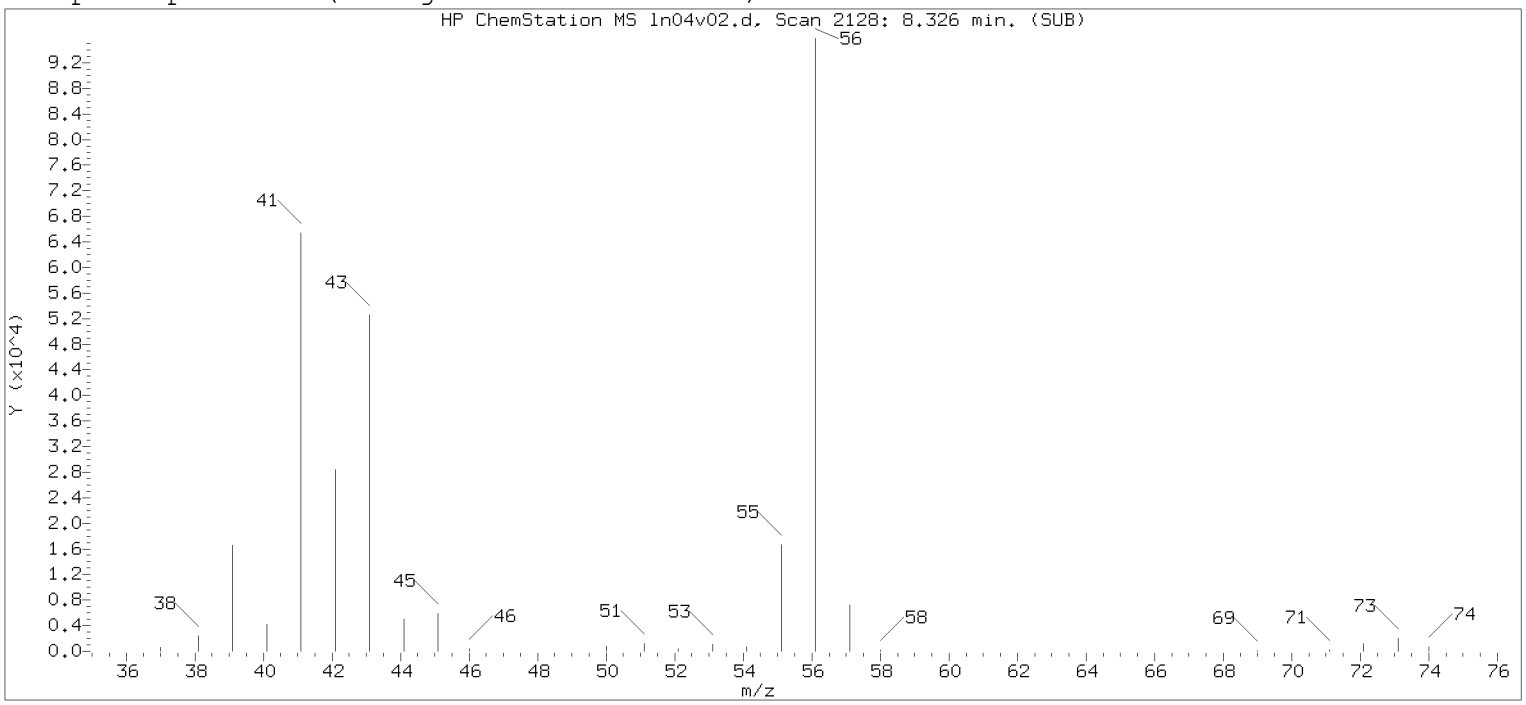
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area (flag) : 314470M
On-Column Amount (ng) : 911.9238
Integration start scan : 2106 Integration stop scan: 2227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

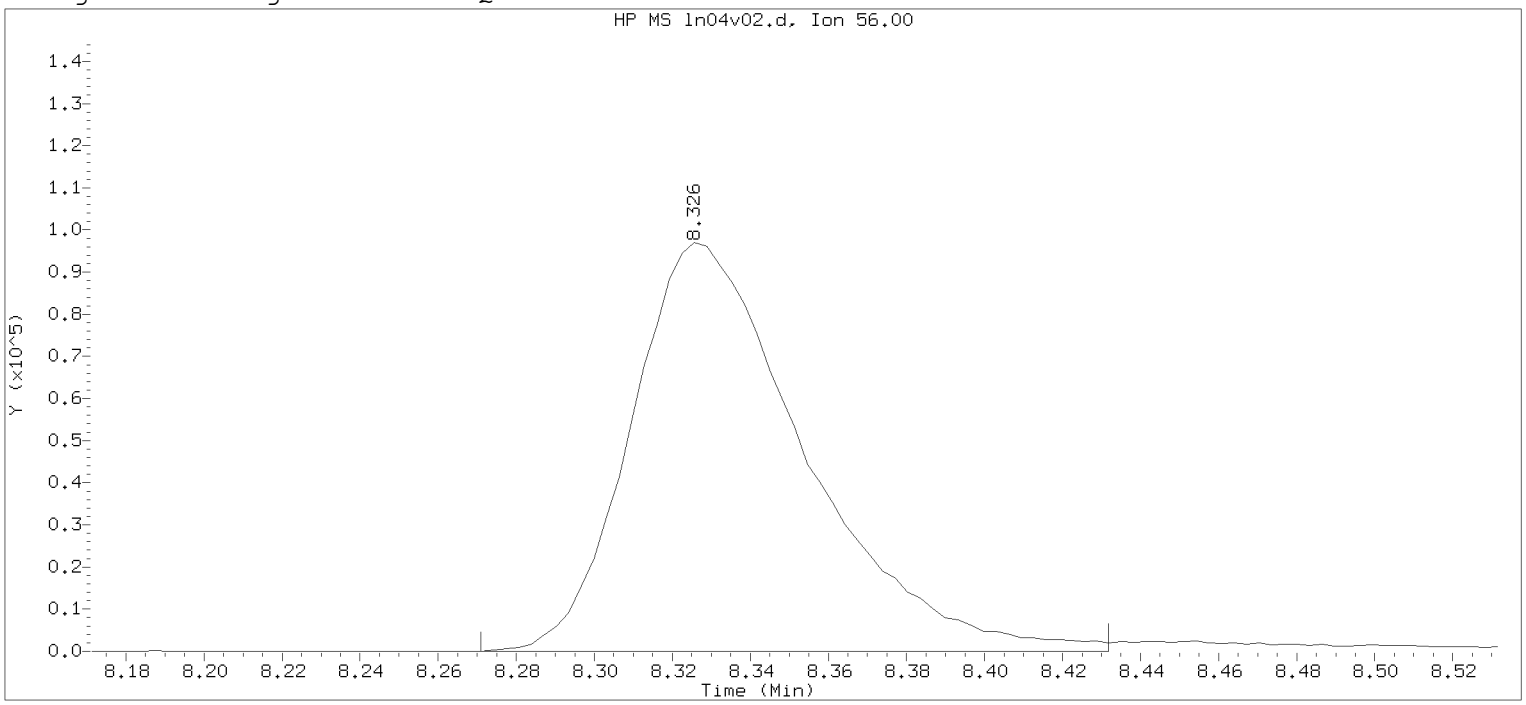
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

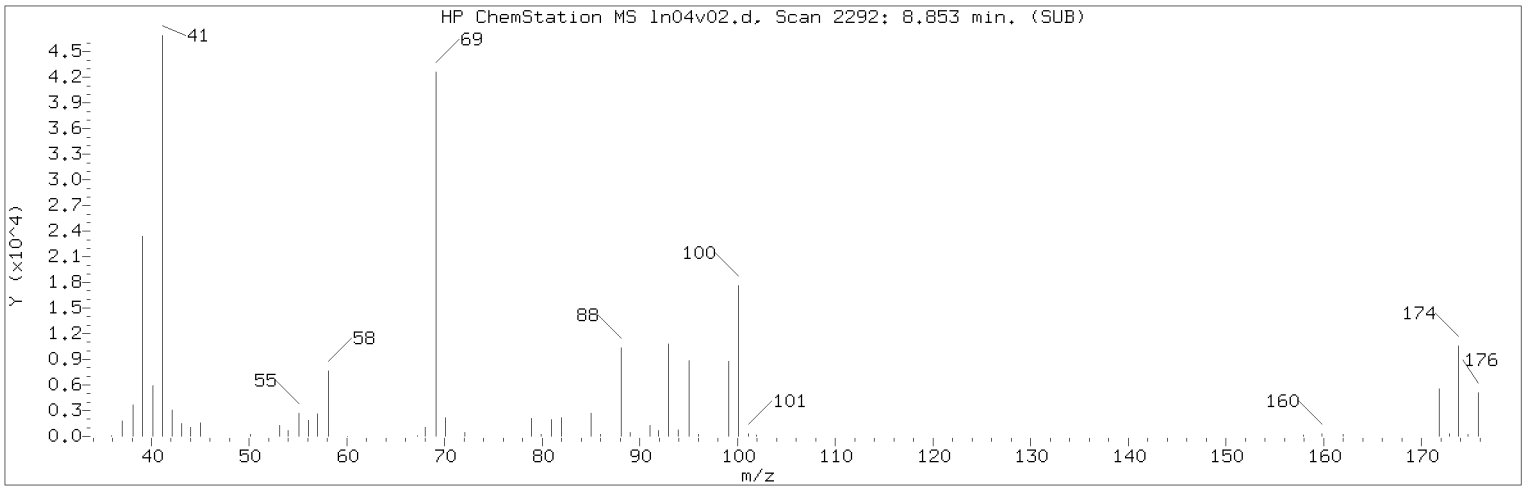
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

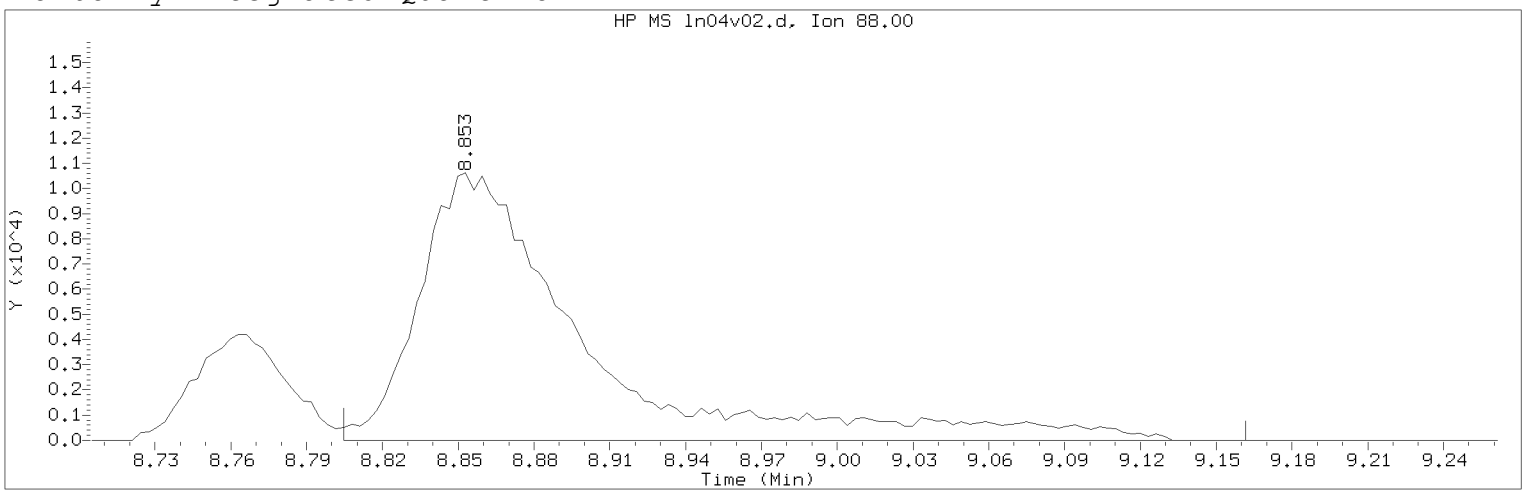
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area : 299611
On-column Amount (ng) : 906.8122
Integration start scan : 2110 Integration stop scan: 2160
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

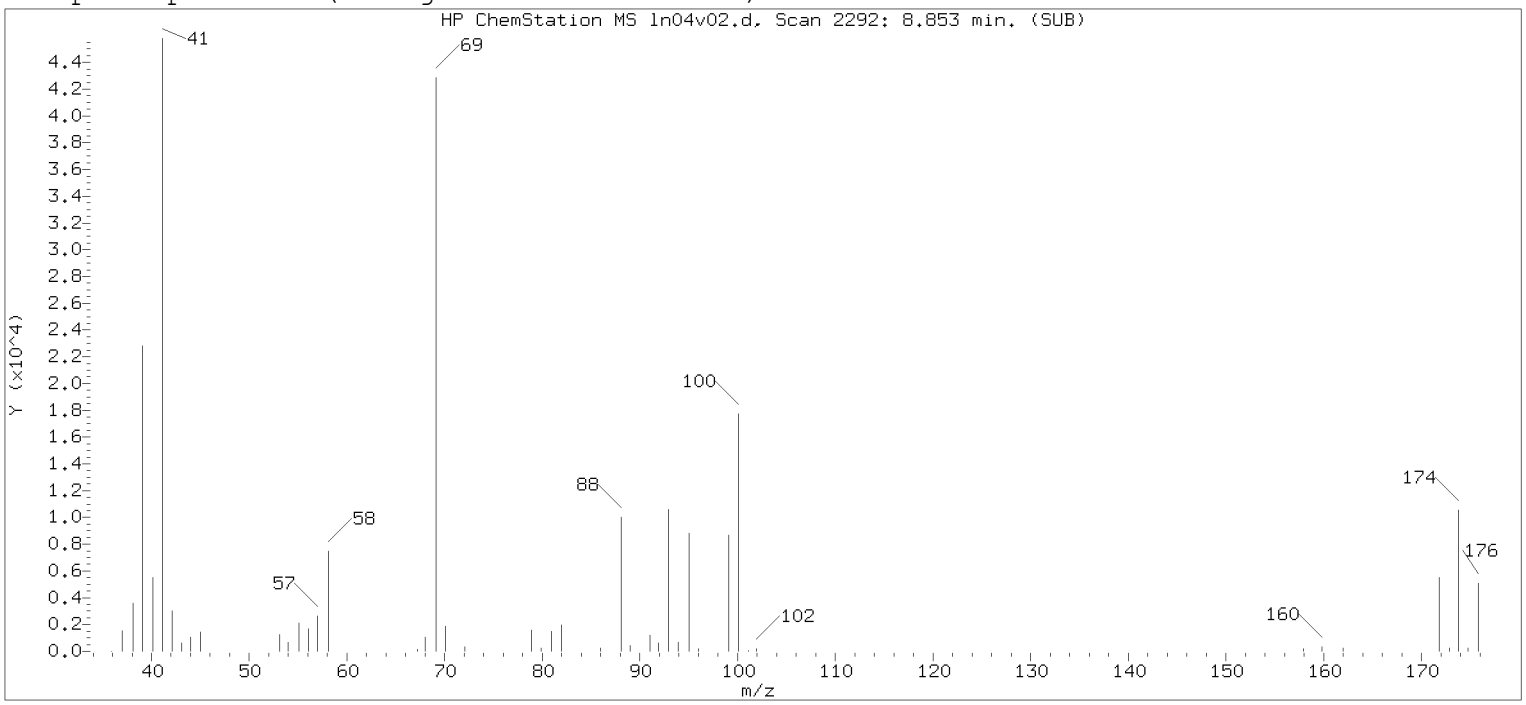
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area (flag) : 47747M
On-Column Amount (ng) : 503.7529
Integration start scan : 2276 Integration stop scan: 2387
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

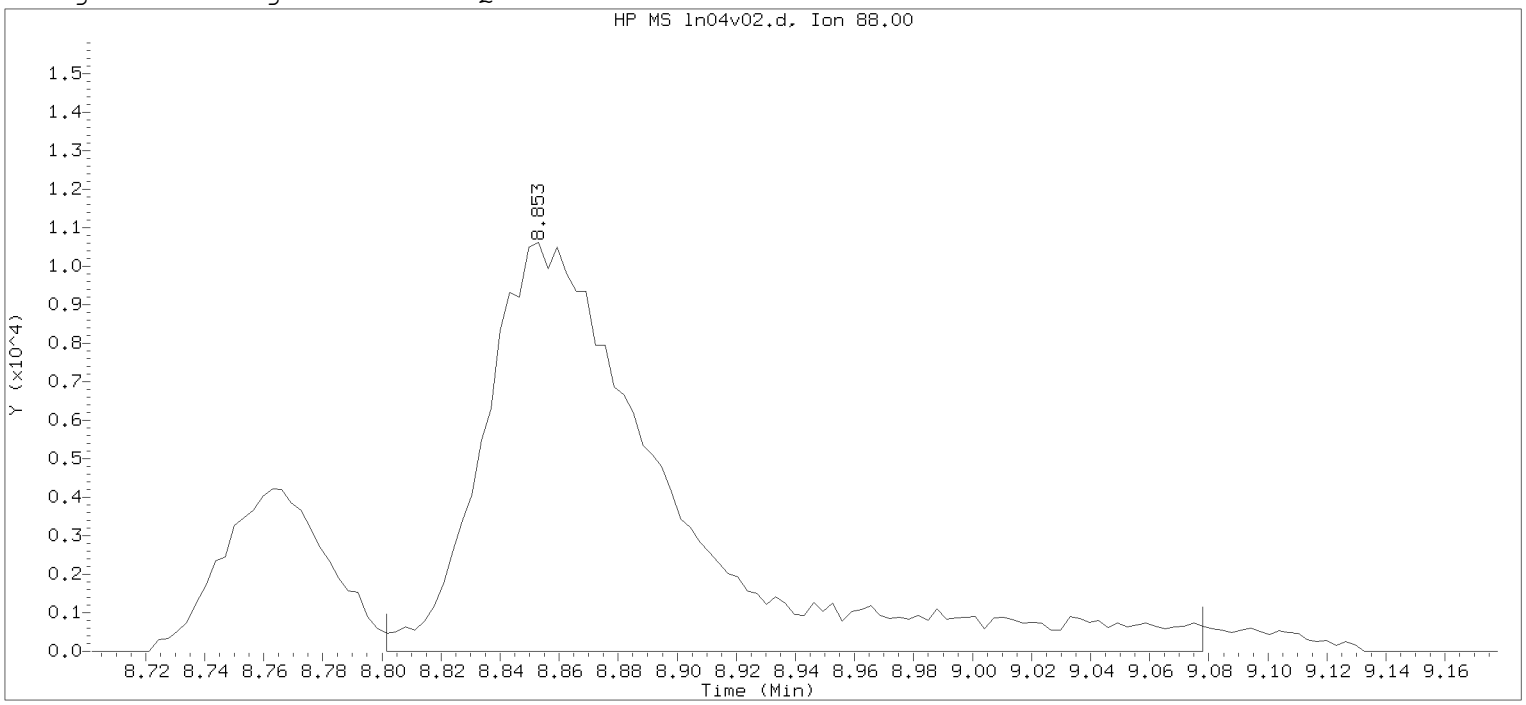
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

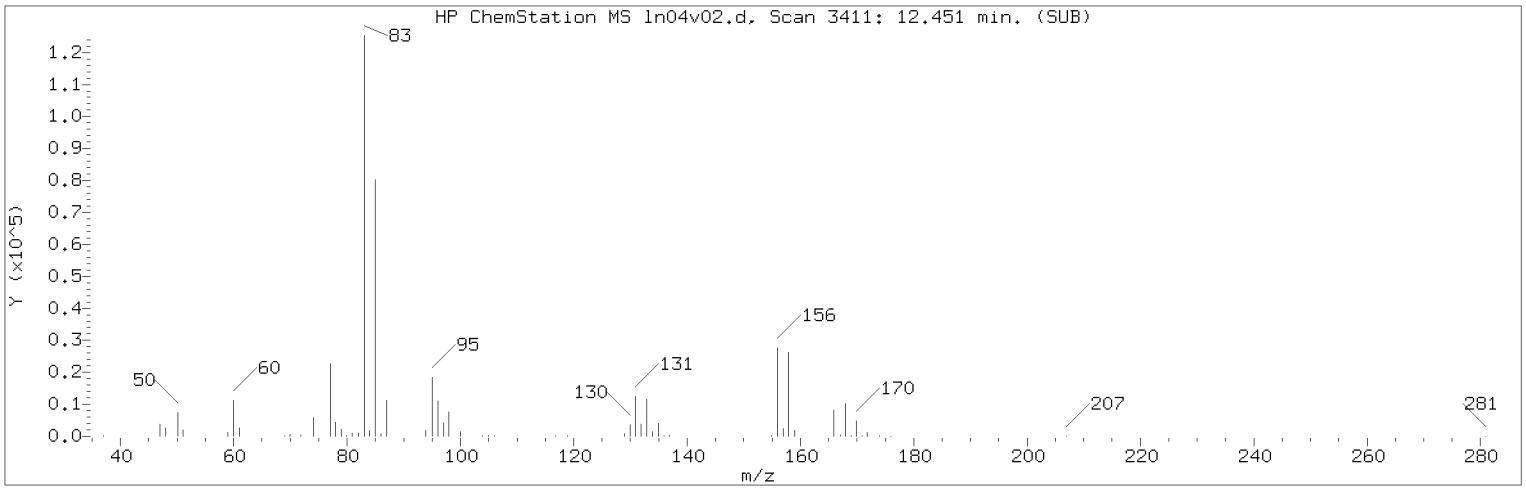
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

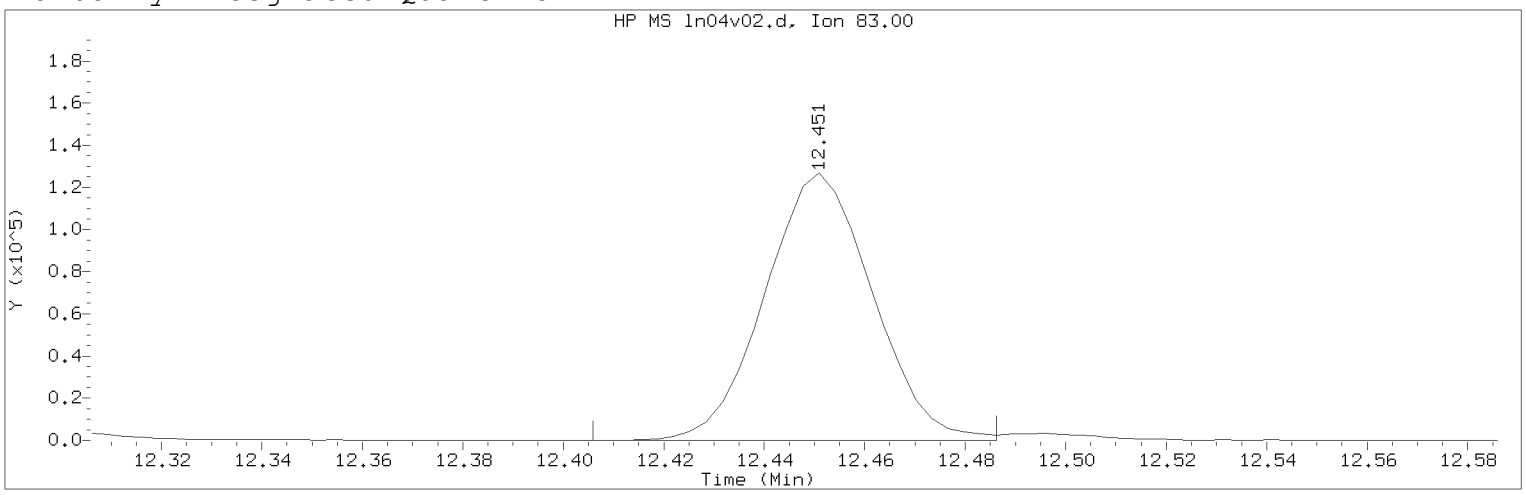
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area : 46453
On-column Amount (ng) : 511.5262
Integration start scan : 2275 Integration stop scan: 2361
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

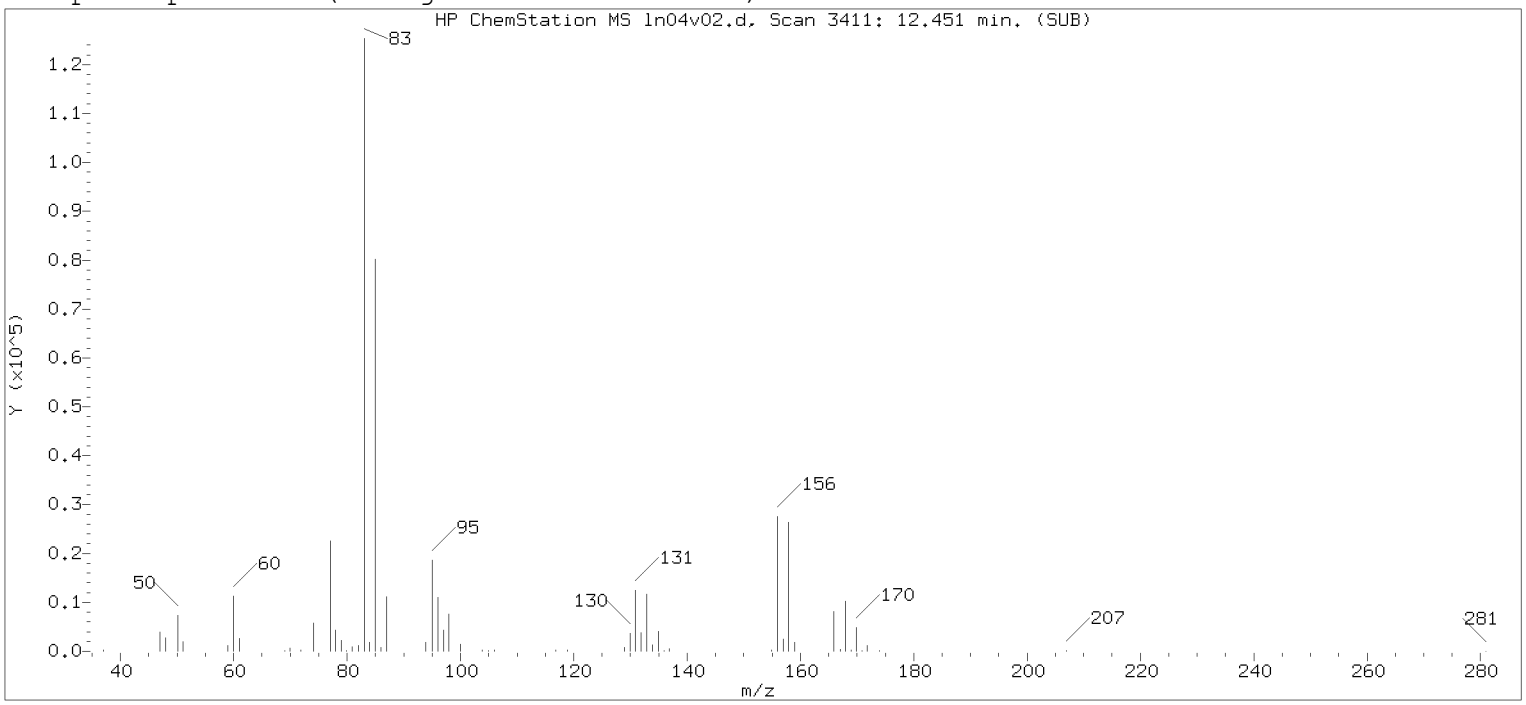
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 188446M
On-Column Amount (ng) : 19.5761
Integration start scan : 3396 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

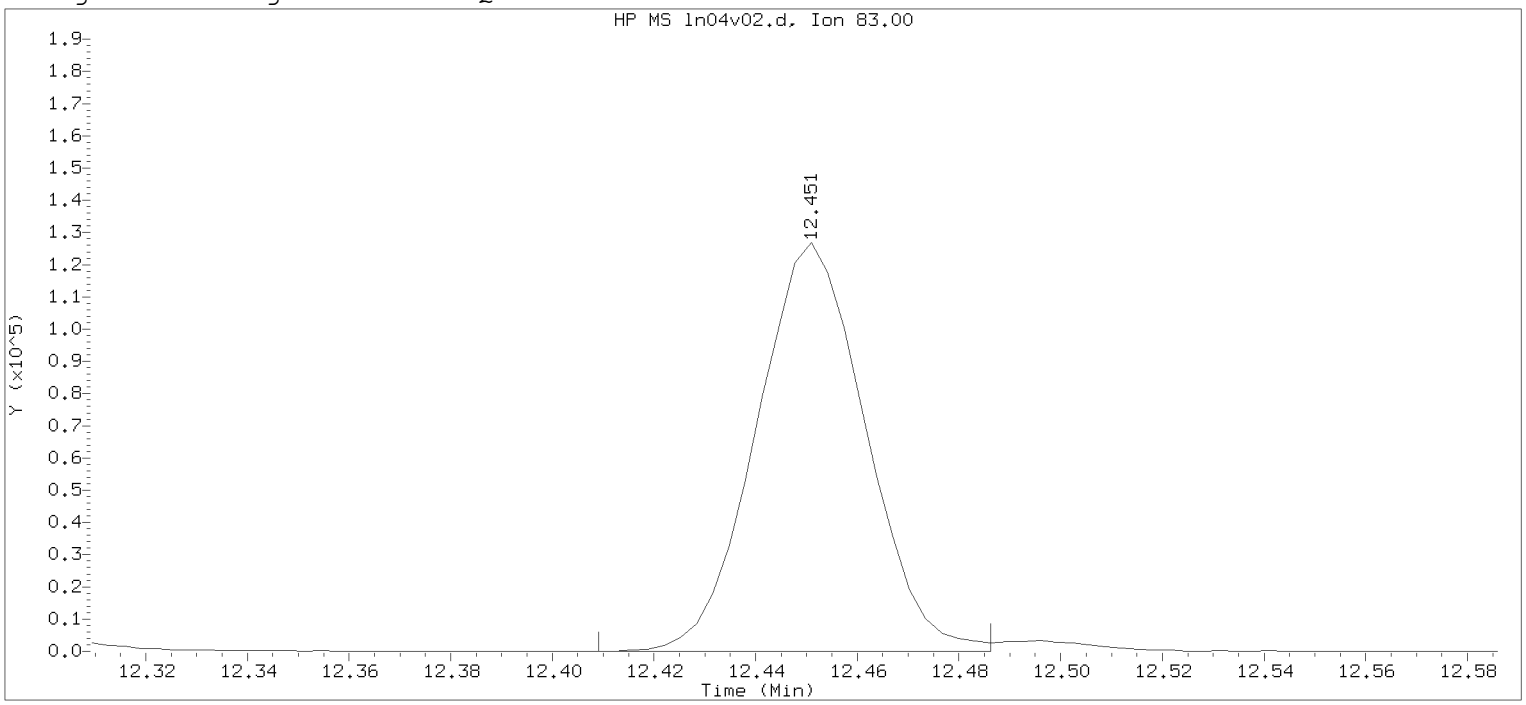
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

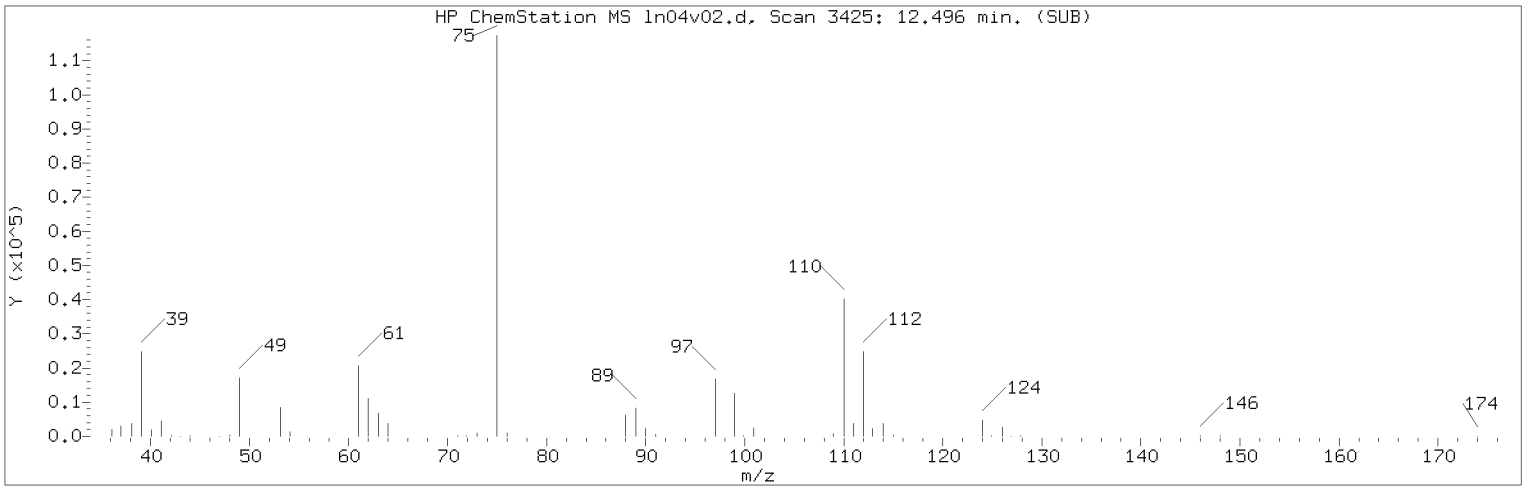
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

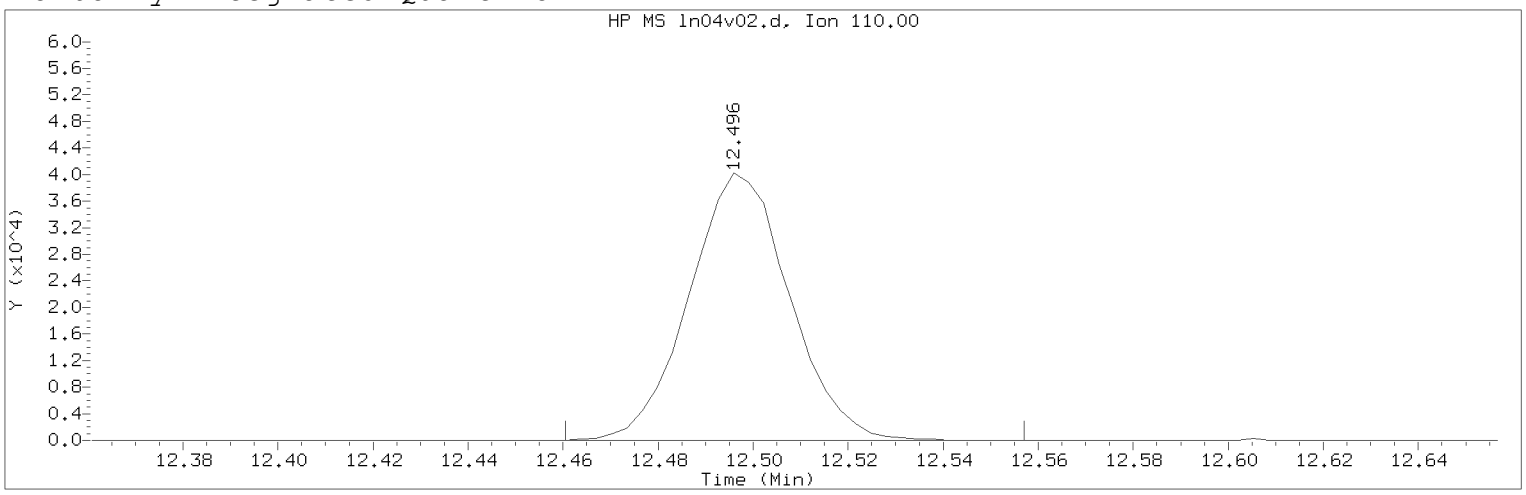
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 188196
On-column Amount (ng) : 19.2022
Integration start scan : 3397 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

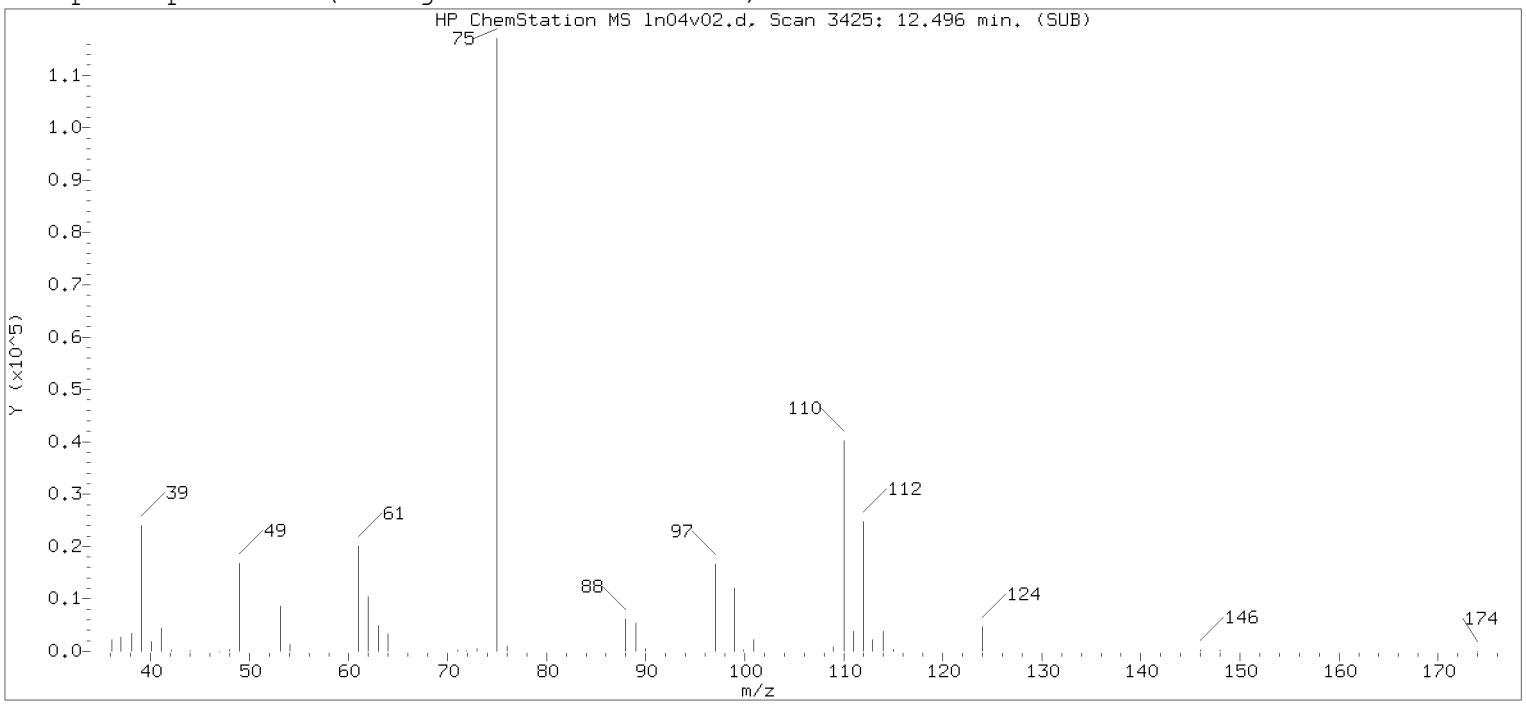
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 3425
Retention Time (minutes): 12.496
Quant Ion : 110.00
Area (flag) : 58902M
On-Column Amount (ng) : 19.9401
Integration start scan : 3413 Integration stop scan: 3443
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

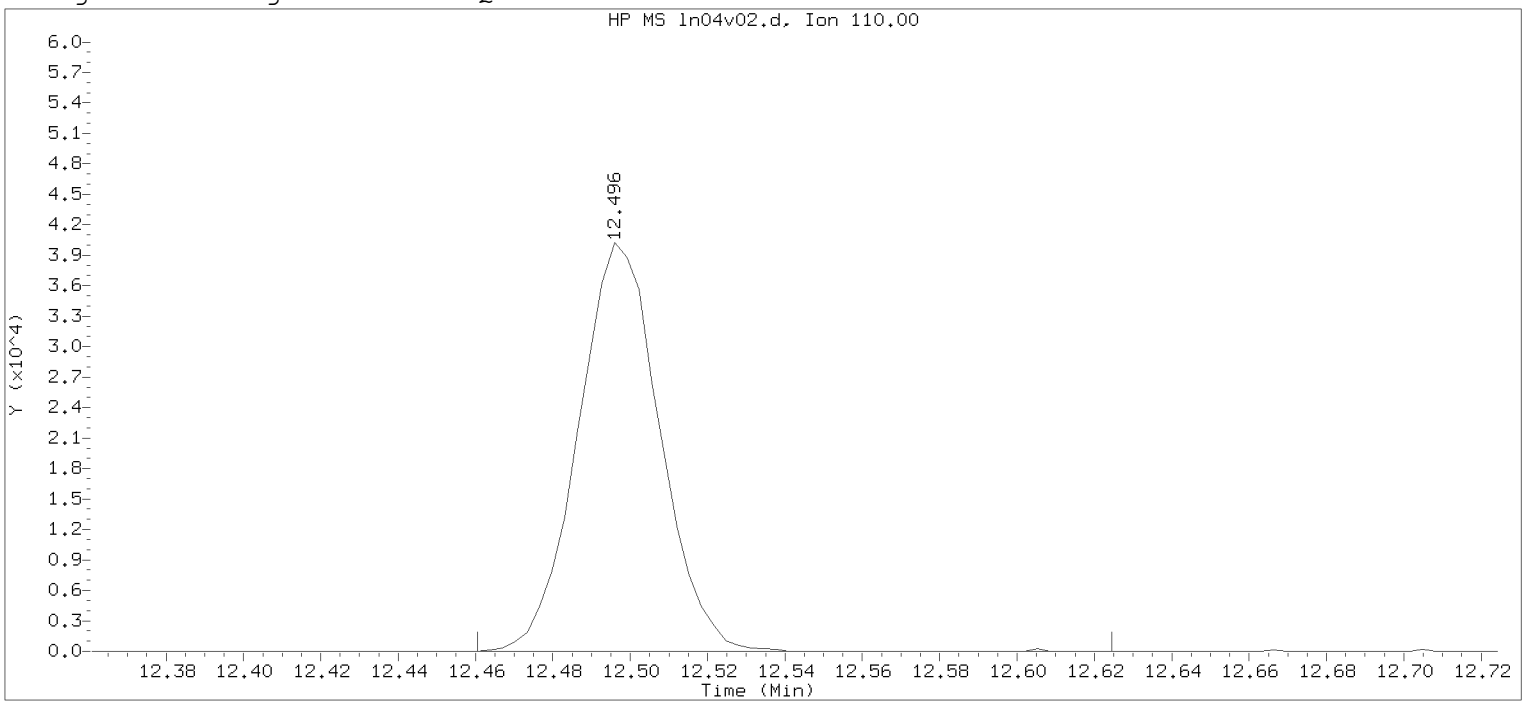
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

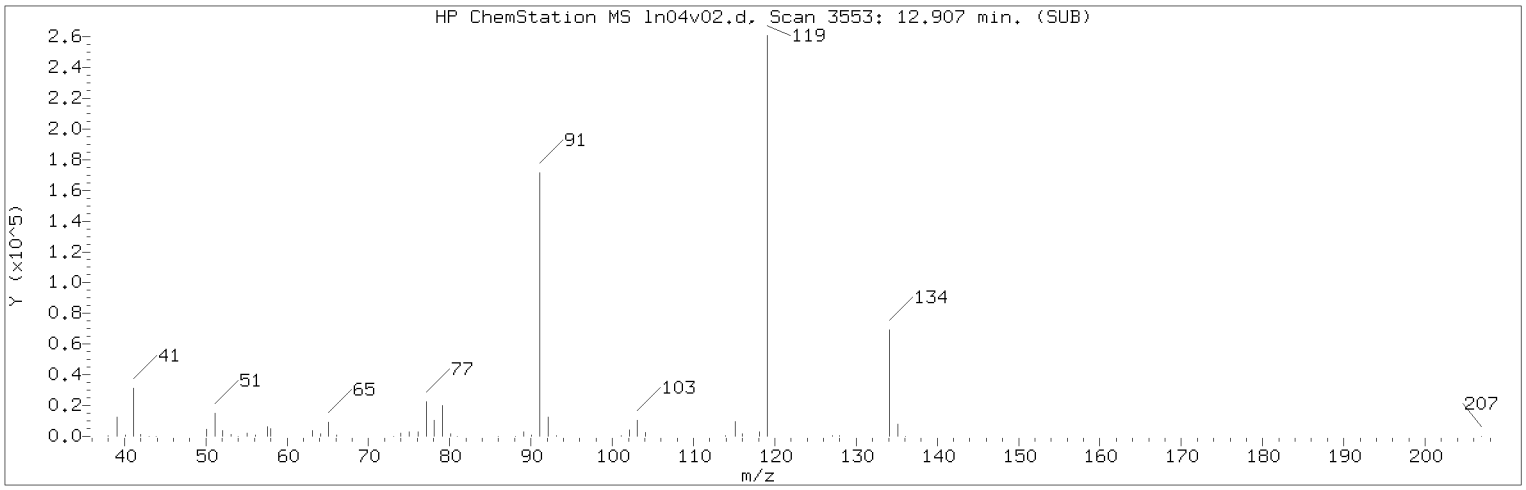
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

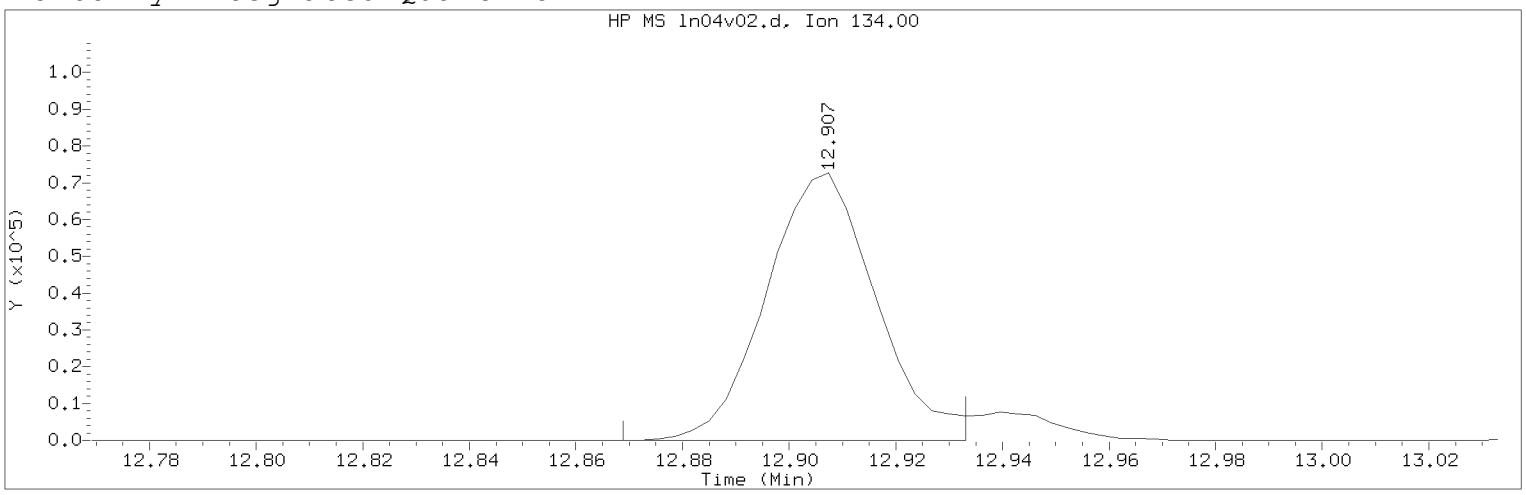
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 3425
Retention Time (minutes): 12.496
Quant Ion : 110.00
Area : 58948
On-column Amount (ng) : 19.9559
Integration start scan : 3413 Integration stop scan: 3464
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

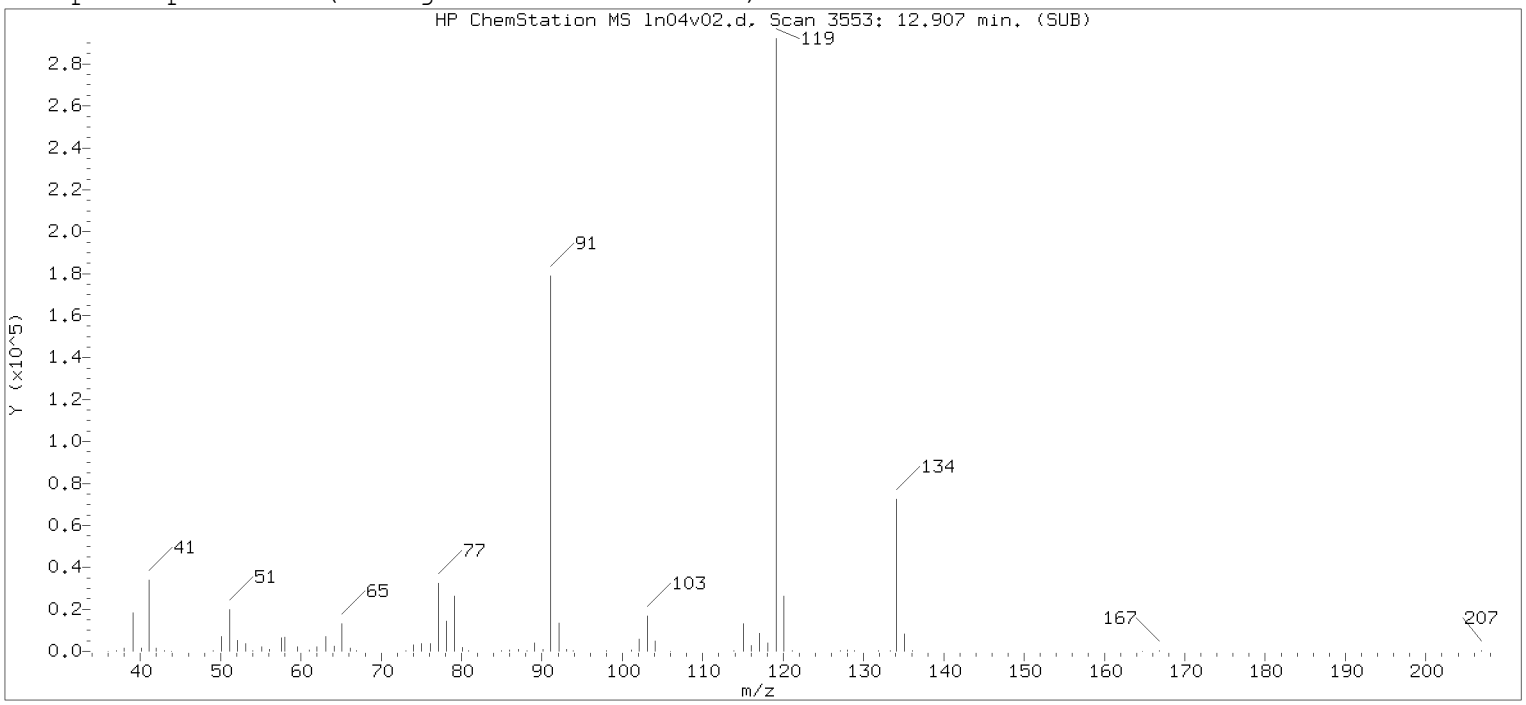
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area (flag) : 103762M
On-Column Amount (ng) : 20.6322
Integration start scan : 3540 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

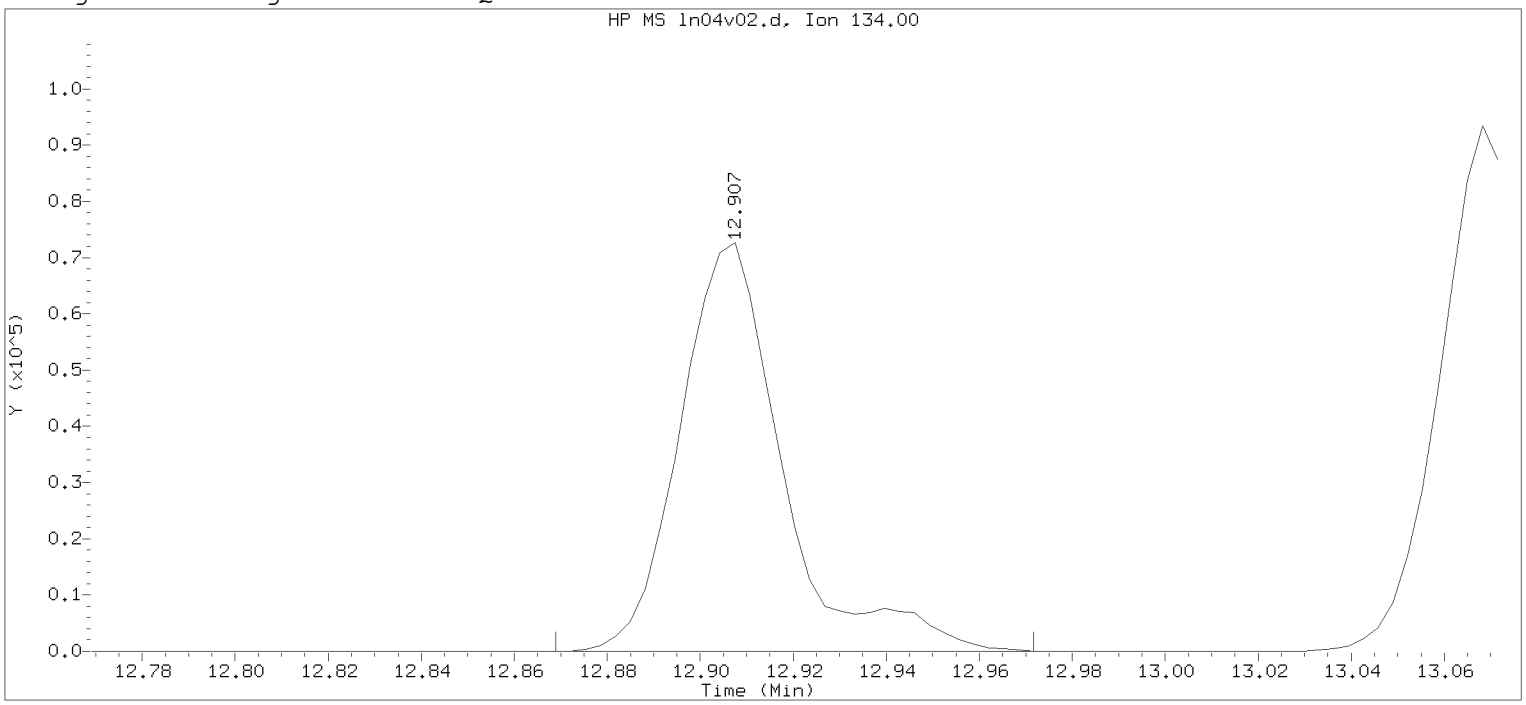
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area : 111654
On-column Amount (ng) : 22.2016
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASPOSITO

Data File: /chem/HP09915.i/19nov20a.b/ln20t01.d

Date : 20-NOV-2019 08:00

Client ID: AUG02-19

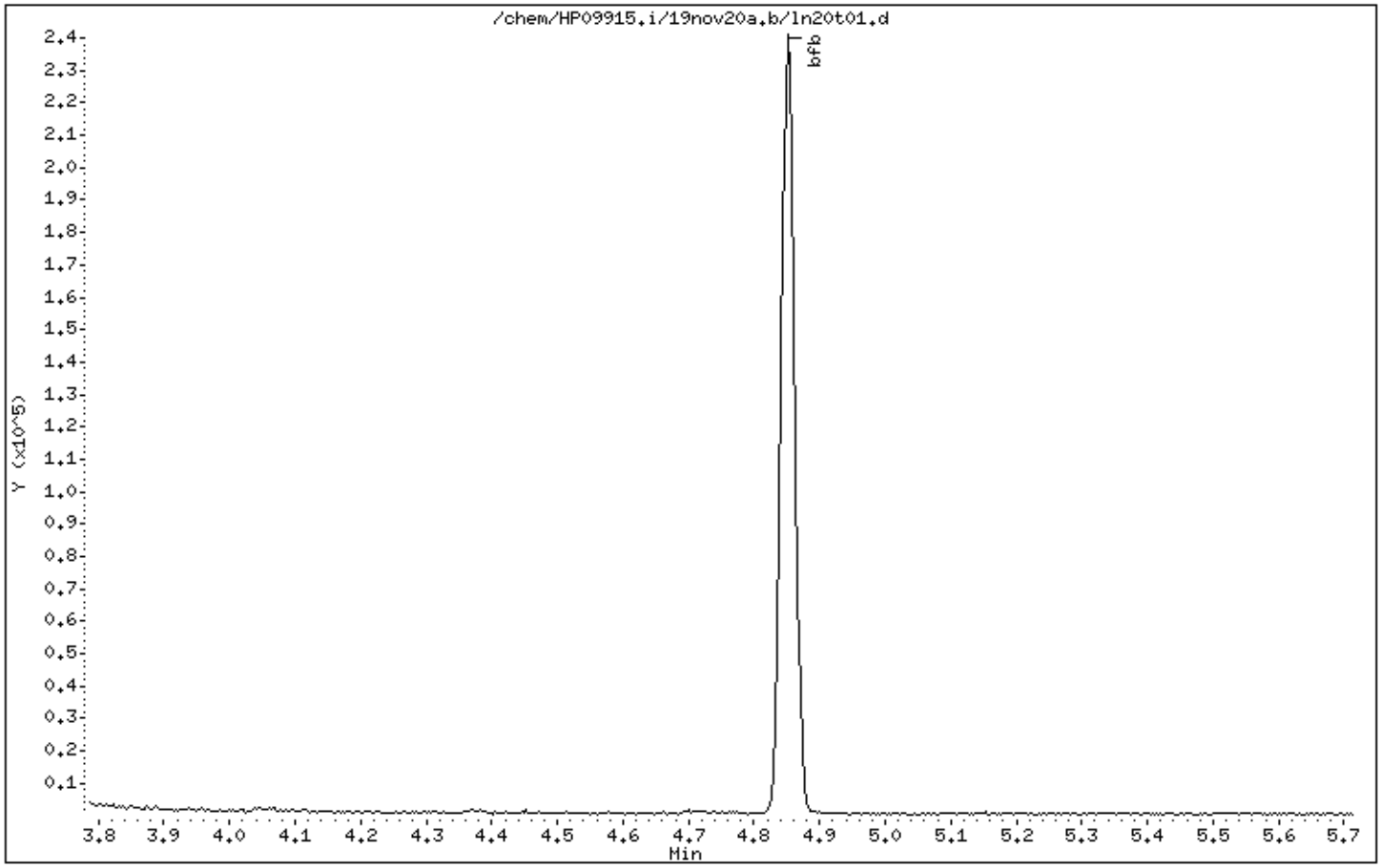
Instrument: HP09915.i

Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KKM02078

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem/HP09915.i/19nov20a.b/ln20t01.d

Date : 20-NOV-2019 08:00

Client ID: AUG02-19

Instrument: HP09915.i

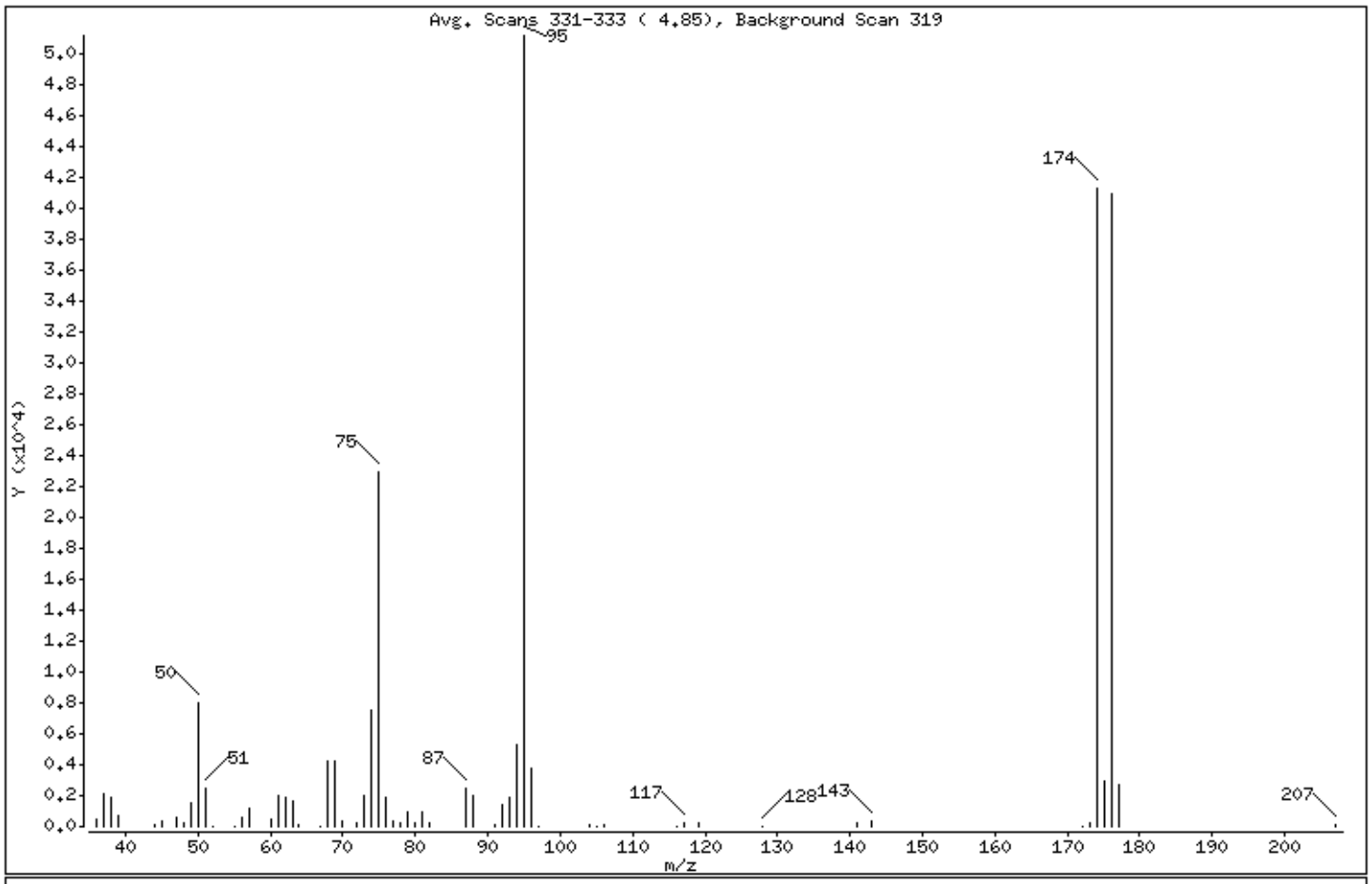
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KKM02078

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.52
75	30.00 - 60.00% of mass 95	44.88
96	5.00 - 9.00% of mass 95	7.35
173	Less than 2.00% of mass 174	0.43 (0.54)
174	50.00 - 100.00% of mass 95	80.67
175	5.00 - 9.00% of mass 174	5.73 (7.10)
176	95.00 - 101.00% of mass 174	79.93 (99.08)
177	5.00 - 9.00% of mass 176	5.28 (6.60)

Date : 20-NOV-2019 08:00

Client ID: AUG02-19 Instrument: HP09915.i

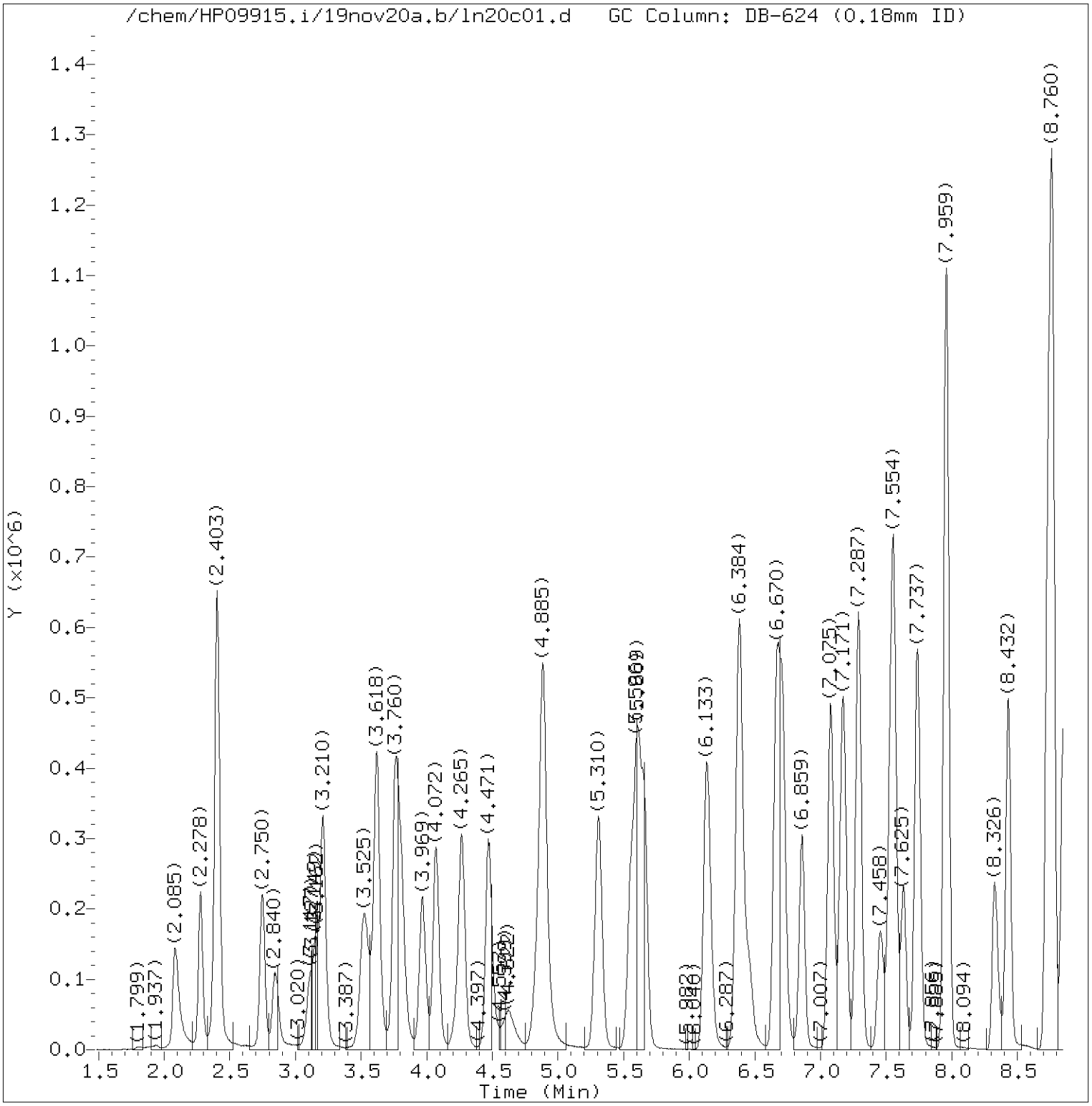
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KKM02078

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: ln20t01.d
Spectrum: Avg. Scans 331-333 (4.85), Background Scan 319
Location of Maximum: 95.00
Number of points: 60

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	451	61.00	2034	80.00	255	117.00	288
37.00	2069	62.00	1895	81.00	973	119.00	215
38.00	1837	63.00	1592	82.00	221	128.00	55
39.00	714	64.00	109	87.00	2453	141.00	259
44.00	148	67.00	54	88.00	2042	143.00	338
45.00	332	68.00	4194	91.00	65	172.00	57
47.00	626	69.00	4272	92.00	1374	173.00	222
48.00	227	70.00	356	93.00	1841	174.00	41256
49.00	1528	72.00	207	94.00	5326	175.00	2929
50.00	7940	73.00	1995	95.00	51144	176.00	40880
51.00	2515	74.00	7474	96.00	3757	177.00	2698
52.00	57	75.00	22952	97.00	57	207.00	105
55.00	55	76.00	1909	104.00	65		
56.00	578	77.00	397	105.00	57		
57.00	1121	78.00	194	106.00	138		
60.00	445	79.00	979	116.00	52		



Total Ion Chromatogram (TIC)

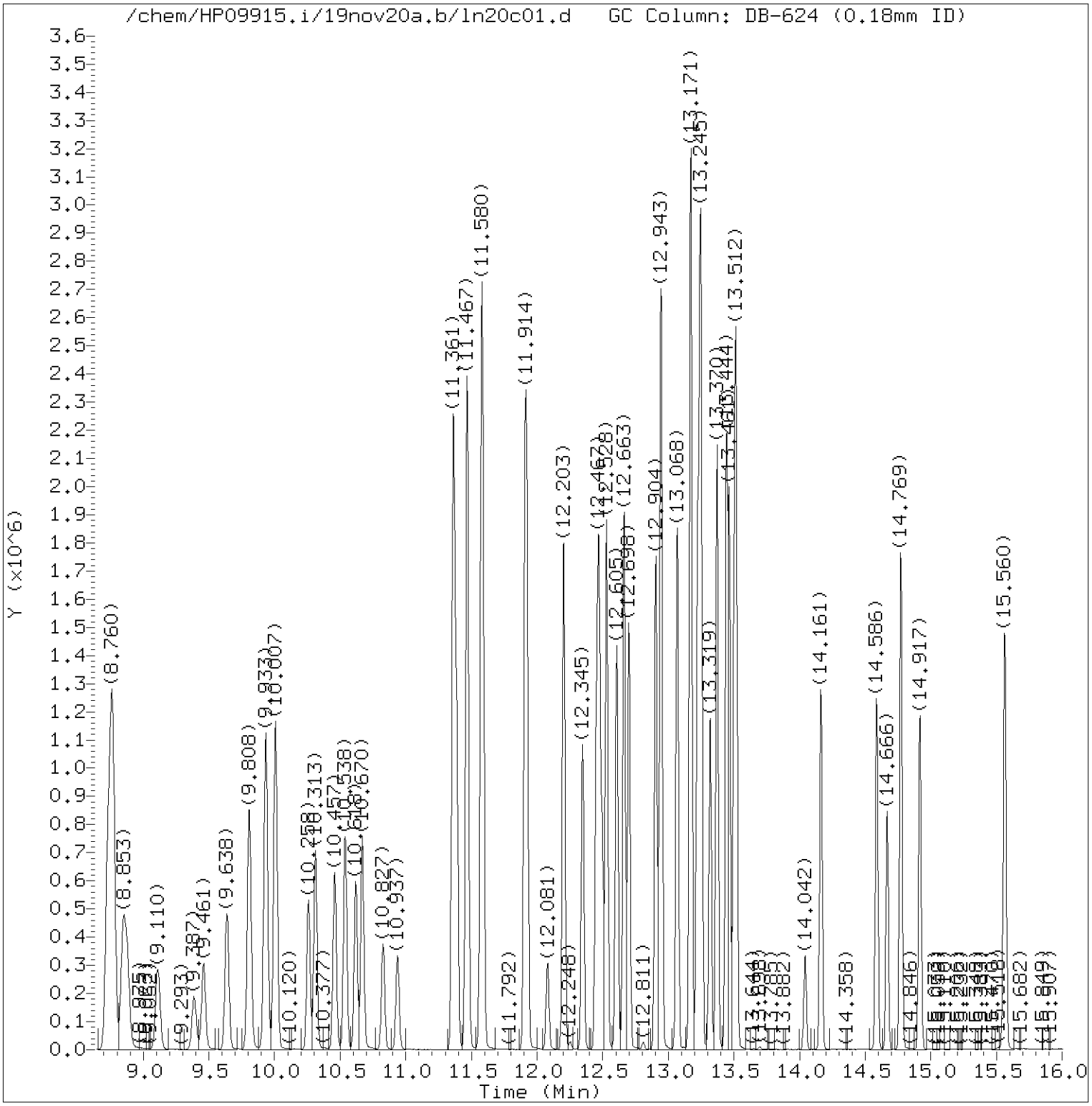
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:16 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:16 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:16 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.082	85	326259	52.519
4) Chloromethane	(2)	2.278	50	316444	52.853
6) Vinyl Chloride	(2)	2.400	62	310090	51.893
5) 1,3-Butadiene	(2)	2.403	39	342004	68.796
8) Bromomethane	(2)	2.750	94	225079	52.546
9) Chloroethane	(2)	2.847	64	171656	52.272
12) Trichlorofluoromethane	(2)	3.155	101	346477	53.857
11) n-Pentane	(2)	3.210	43	339598	44.668
15) Freon 123a	(2)	3.528	67	260250	50.289
16) Acrolein	(1)	3.622	56	696670	605.502
17) 1,1-Dichloroethene	(2)	3.760	96	190636	50.485
17) 1,1-Dichloroethene	(2)	3.760	63	91479	48.322
18) Acetone	(1)	3.802	58	59413	115.182
19) Freon 113	(2)	3.802	101	221782	51.479
22) Methyl Iodide	(2)	3.966	142	389119	49.728
21) 2-Propanol	(1)	3.991	45	92104	248.381
23) Carbon Disulfide	(2)	4.072	76	709012	49.825
27) Methyl Acetate	(2)	4.242	43	218317	44.889
25) Allyl Chloride	(2)	4.271	41	306394	45.231
28) Methylene Chloride	(2)	4.471	84	229802	51.131
29)*t-Butyl alcohol-d10	(1)	4.493	65	153357	250.000
30) t-Butyl alcohol	(1)	4.628	59	163799	253.697
31) Acrylonitrile	(2)	4.827	53	127627	48.776
32) trans-1,2-Dichloroethene	(2)	4.885	96	222145	50.853
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	671832	46.854
34) n-Hexane	(2)	5.306	57	339215	49.911
36) 1,1-Dichloroethane	(2)	5.551	63	374755	49.177
38) di-Isopropyl ether	(2)	5.609	45	708930	48.235
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	338915	49.570
40) Ethyl t-butyl ether	(2)	6.136	59	675454	47.356
43) 1,2-Dichloroethene (Total)	(2)		96	470427	101.490
44) 2-Butanone	(2)	6.364	43	304853	90.762
42) cis-1,2-Dichloroethene	(2)	6.380	96	248282	50.637
45) 2,2-Dichloropropane	(2)	6.393	77	287579	48.545
47) Propionitrile	(1)	6.458	54	245407	305.053
48) Methacrylonitrile	(2)	6.663	67	351520	124.540
49) Bromochloromethane	(2)	6.712	128	133209	51.236
50) Tetrahydrofuran	(1)	6.724	71	89717	123.464

* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:16 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	6.859	83	370227	50.795
52)$Dibromofluoromethane	(2)	7.075	113	209125	48.018
52)$Dibromofluoromethane	(2)	7.075	111	213900	48.170
53) 1,1,1-Trichloroethane	(2)	7.085	97	310121	49.852
54) Cyclohexane	(2)	7.171	56	418800	50.344
54) Cyclohexane	(2)	7.171	84	367688	50.883
54) Cyclohexane	(2)	7.175	69	129970	50.512
56) Carbon Tetrachloride	(2)	7.284	117	261805	49.621
55) 1,1-Dichloropropene	(2)	7.290	75	300302	49.840
58) Isobutyl Alcohol	(1)	7.458	41	149273	687.028
57)$1,2-Dichloroethane-d4	(2)	7.528	102	54261	48.886
57)$1,2-Dichloroethane-d4	(2)	7.528	65	244295	49.389
57)$1,2-Dichloroethane-d4	(2)	7.528	104	34257	48.320
60) Benzene	(2)	7.557	78	934647	51.582
61) 1,2-Dichloroethane	(2)	7.631	62	283247	48.601
61) 1,2-Dichloroethane	(2)	7.634	98	29562	51.256
65) t-Amyl methyl ether	(2)	7.737	73	690174	48.208
66)*Fluorobenzene	(2)	7.959	96	890803	50.000
67) n-Heptane	(2)	7.959	43	311764	49.104
69) n-Butanol	(1)	8.326	56	252927	1352.512
71) Trichloroethene	(2)	8.432	95	238980	52.381
72) Methylcyclohexane	(2)	8.728	83	418062	49.392
72) Methylcyclohexane	(2)	8.731	98	188938	49.330
73) 1,2-Dichloropropane	(2)	8.769	63	230555	50.109
76) Methyl Methacrylate	(2)	8.843	69	224994M	50.569
75) 1,4-Dioxane	(1)	8.872	88	43859	853.290
74) Dibromomethane	(2)	8.879	93	153782	51.657
78) Bromodichloromethane	(2)	9.107	83	268825	50.322
79) 2-Nitropropane	(2)	9.383	41	146917	90.798
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	171958	87.020
81) cis-1,3-Dichloropropene	(2)	9.638	75	353528	49.827
82) 4-Methyl-2-pentanone	(2)	9.808	43	667553	94.158
83)$Toluene-d8	(3)	9.933	98	930752	49.047
83)$Toluene-d8	(3)	9.933	100	598016	48.648
88) Toluene	(3)	10.007	92	602456	50.638
90) 1,3-Dichloropropene (total)	(3)		100	675260	97.466
89) trans-1,3-Dichloropropene	(3)	10.258	75	321732	47.639
91) Ethyl Methacrylate	(3)	10.313	69	408379	49.756

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:16 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) 1,1,2-Trichloroethane	(3)	10.457	97	229790	50.944
93) Tetrachloroethene	(3)	10.541	166	252685	50.149
94) 1,3-Dichloropropane	(3)	10.618	76	382898	49.718
96) 2-Hexanone	(3)	10.670	43	493410	90.061
97) Dibromochloromethane	(3)	10.827	129	215215	46.578
99) 1,2-Dibromoethane	(3)	10.937	107	249836	51.007
100)*Chlorobenzene-d5	(3)	11.361	117	725253	50.000
101) 1-Chlorohexane	(3)	11.364	91	310183	48.532
102) Chlorobenzene	(3)	11.387	112	674501	50.135
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	218017	49.183
104) Ethylbenzene	(3)	11.467	91	1165468	51.253
106) m+p-Xylene	(3)	11.580	106	917792	102.598
108) Xylene (Total)	(3)		106	1367612	153.505
107) o-Xylene	(3)	11.908	106	449820	50.908
109) Styrene	(3)	11.924	104	760046	52.053
110) Bromoform	(3)	12.081	173	138157	40.015
111) Isopropylbenzene	(3)	12.203	105	1144466	51.641
114)$4-Bromofluorobenzene	(3)	12.348	95	359000	49.960
114)$4-Bromofluorobenzene	(3)	12.348	174	297621	49.960
116) 1,1,2,2-Tetrachloroethane	(4)	12.448	83	364836	49.330
115) Bromobenzene	(4)	12.464	156	293923	49.950
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	166445	72.961
117) 1,2,3-Trichloropropane	(4)	12.496	110	110400	48.645
119) n-Propylbenzene	(4)	12.528	91	1338544	52.066
120) 2-Chlorotoluene	(4)	12.608	126	272469	49.889
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	977290	52.309
121) 4-Chlorotoluene	(4)	12.698	126	283874	49.935
124) tert-Butylbenzene	(4)	12.904	134	195300M	50.545
125) Pentachloroethane	(4)	12.936	167	166872	50.156
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	1031308	52.375
127) sec-Butylbenzene	(4)	13.068	105	1179214	51.145
129) 1,3-Dichlorobenzene	(4)	13.168	146	545887	50.484
130) p-Isopropyltoluene	(4)	13.171	119	1013128	50.792
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	391522	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	557732	49.755
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	1061978	50.914
135) Benzyl Chloride	(4)	13.319	91	765038	48.444
136) 1,3-Diethylbenzene	(4)	13.370	119	643709	49.588

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

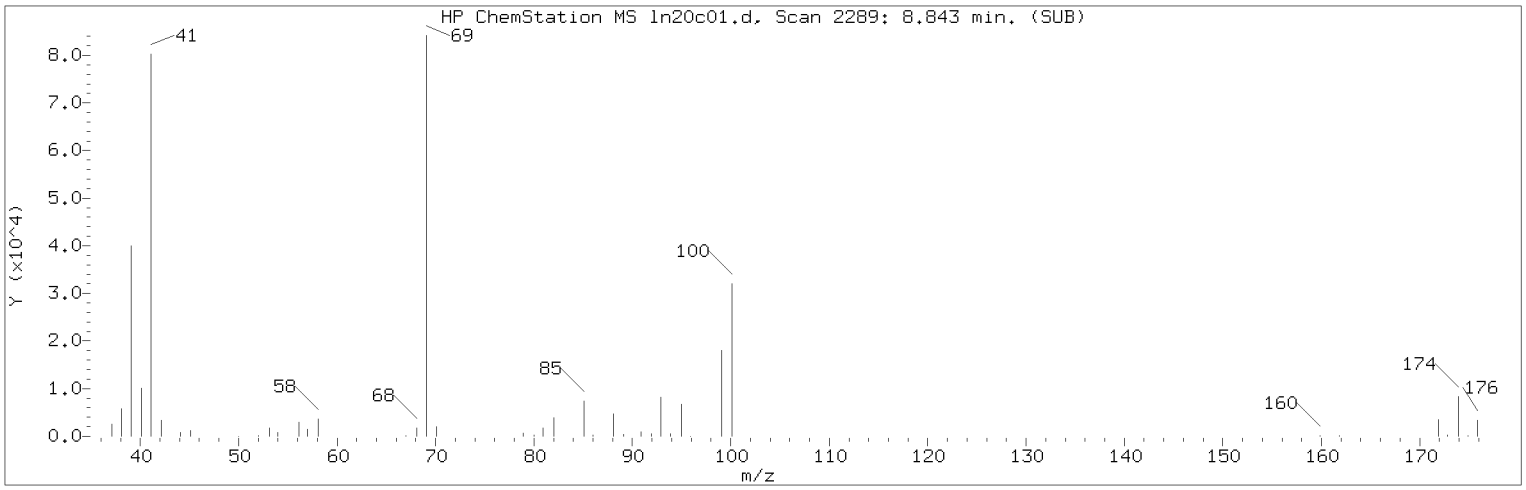
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:16 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

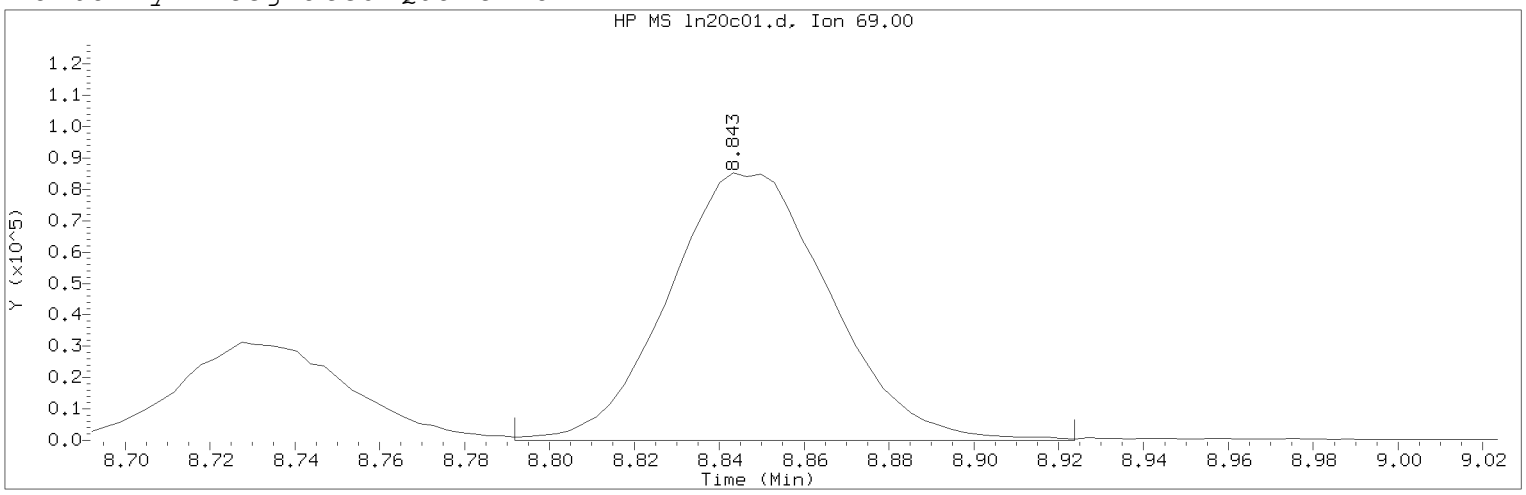
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
141) Diethylbenzene (total)	(4)		100	1854289	147.711
137) 1,4-Diethylbenzene	(4)	13.441	119	669574	48.685
139) n-Butylbenzene	(4)	13.464	92	501730	49.195
138) 1,2-Dichlorobenzene	(4)	13.502	146	534076	50.054
140) 1,2-Diethylbenzene	(4)	13.515	119	541006	49.438
142) 1,2-Dibromo-3-chloropropane	(4)	14.042	75	73070	45.132
144) 1,3,5-Trichlorobenzene	(4)	14.161	180	375618	45.820
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	359555	45.108
147) Hexachlorobutadiene	(4)	14.666	225	144831	38.483
148) Naphthalene	(4)	14.769	128	1284725	50.136
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	351680	45.343
150) 2-Methylnaphthalene	(4)	15.563	142	727887	46.128

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:16 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

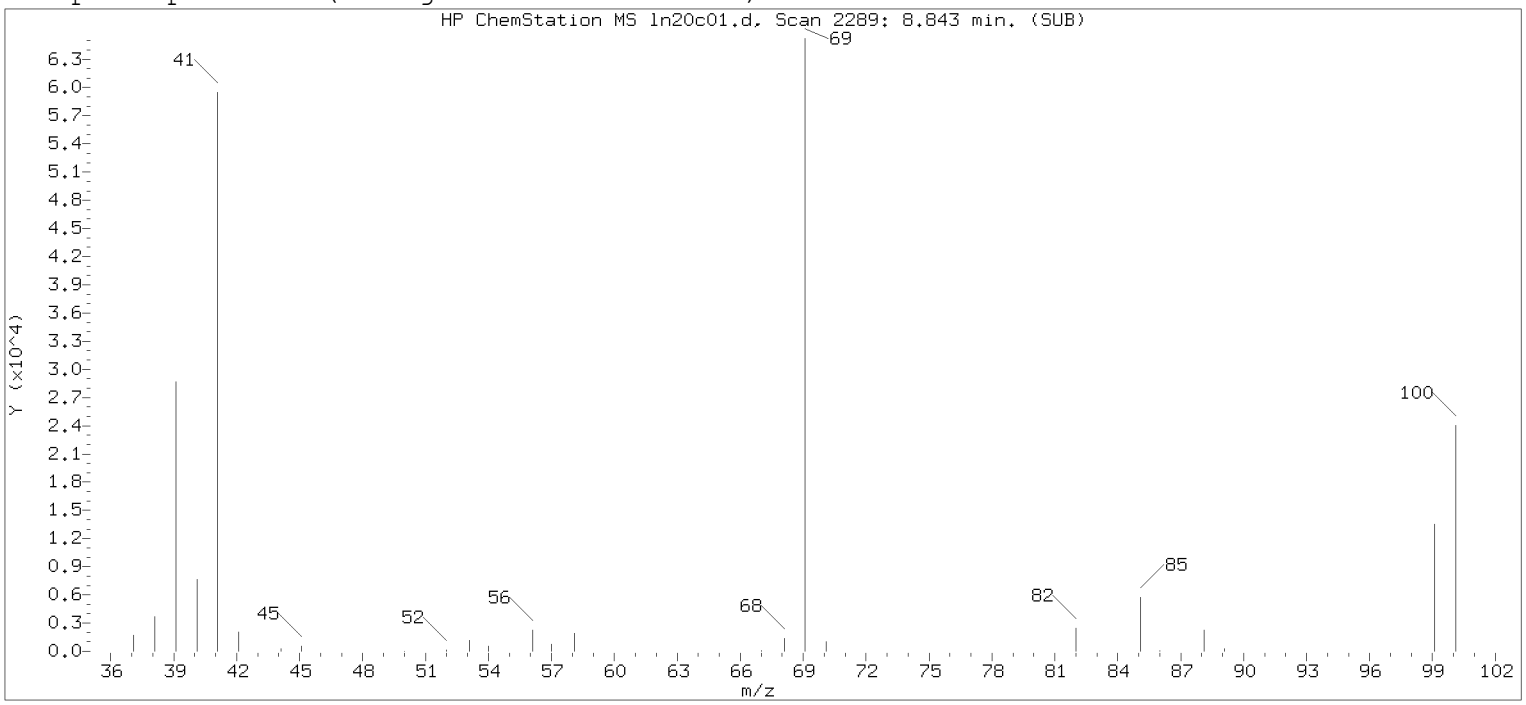
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2289
Retention Time (minutes): 8.843
Quant Ion : 69.00
Area (flag) : 224994M
On-Column Amount (ng) : 50.5687
Integration start scan : 2272 Integration stop scan: 2313
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

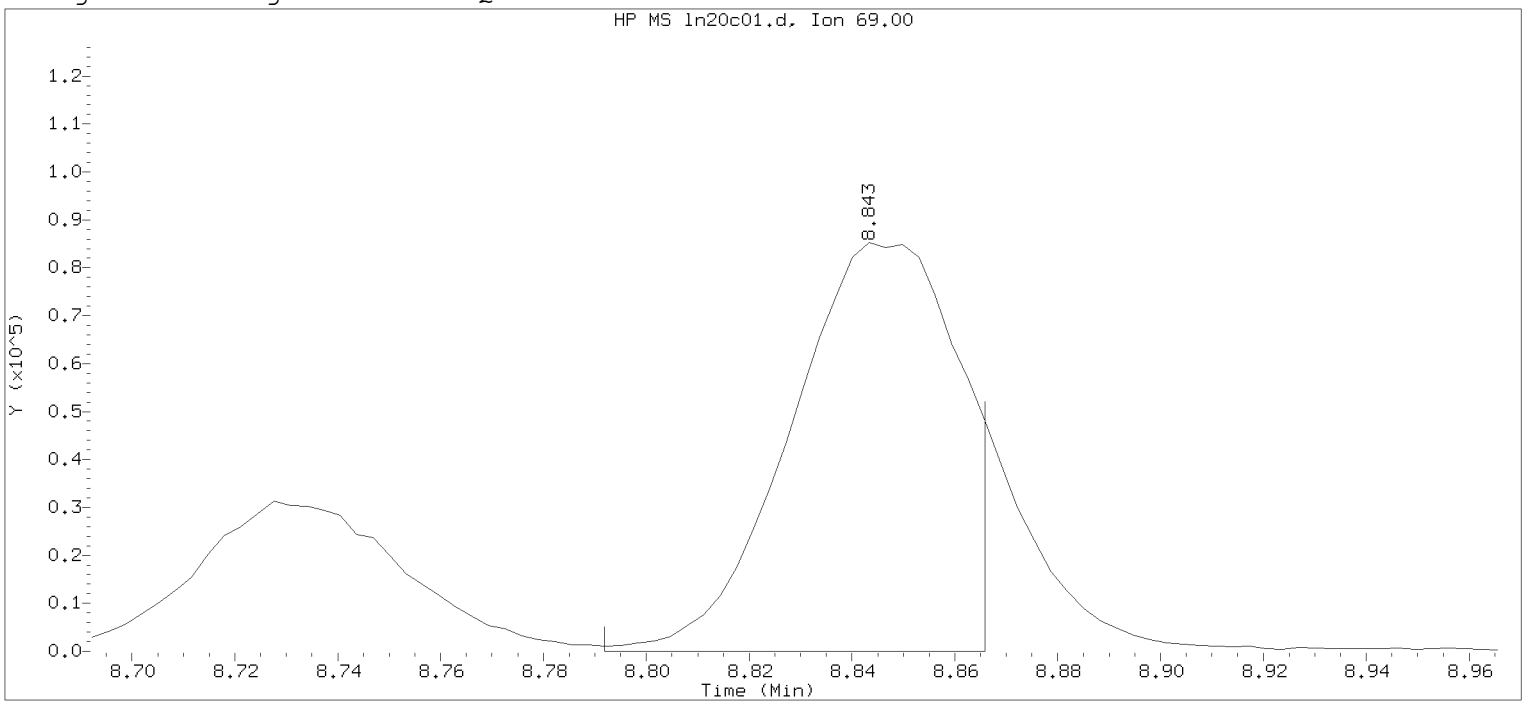
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:50.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

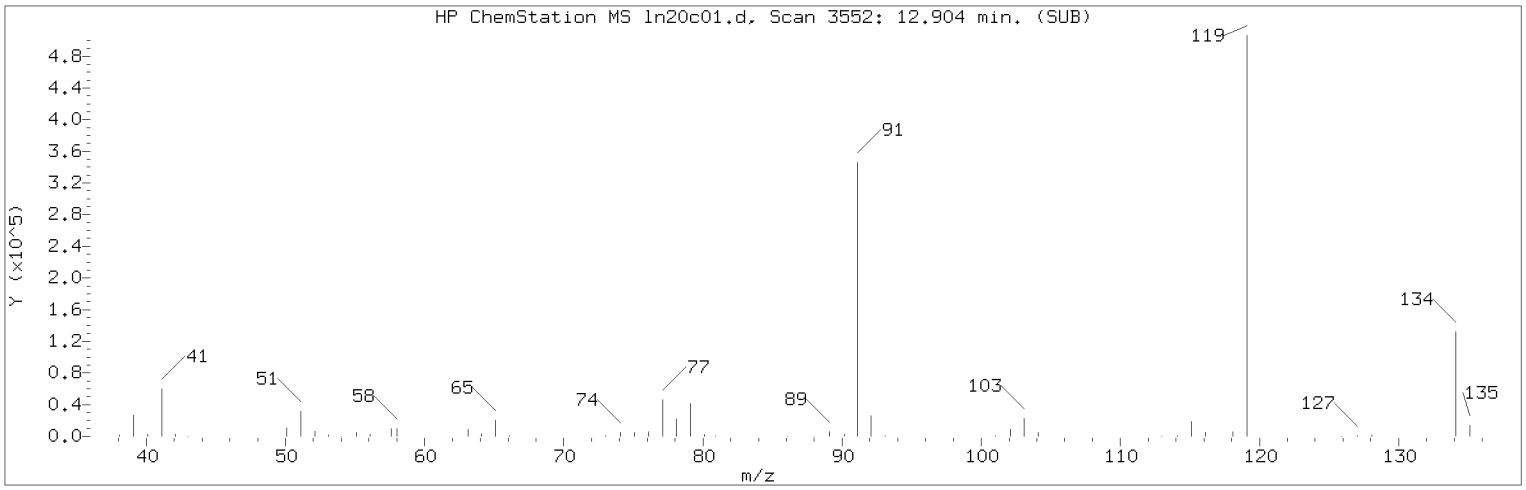
Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:14 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

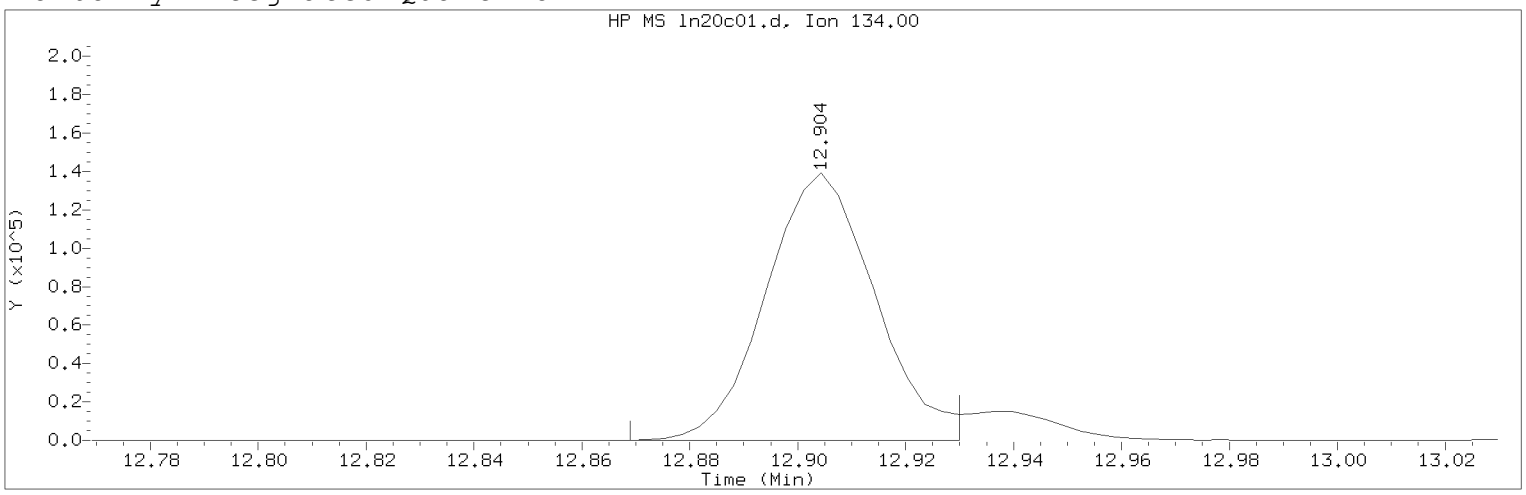
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2289
Retention Time (minutes): 8.843
Quant Ion : 69.00
Area : 190388
On-column Amount (ng) : 42.7908
Integration start scan : 2272 Integration stop scan: 2295
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10243

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:16 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

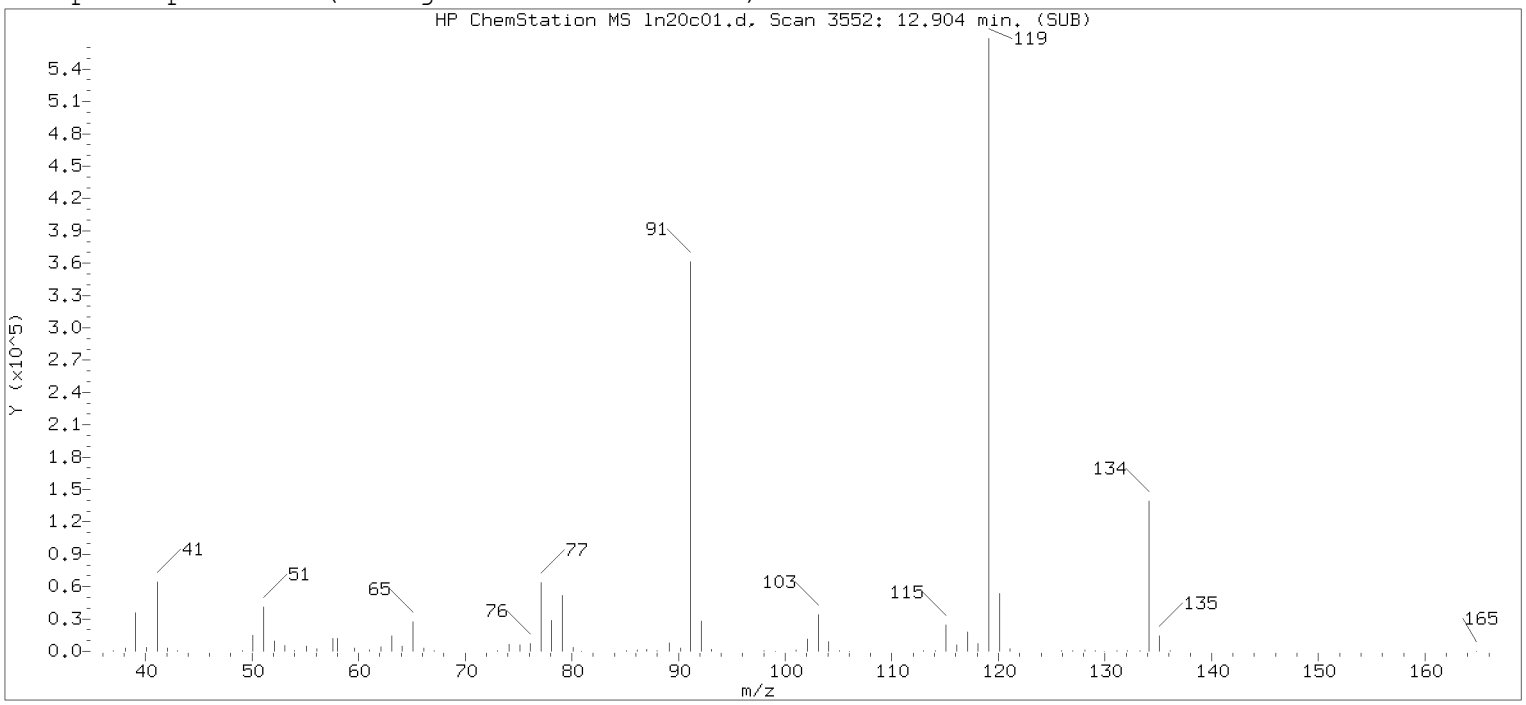
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 195300M
On-Column Amount (ng) : 50.5455
Integration start scan : 3540 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

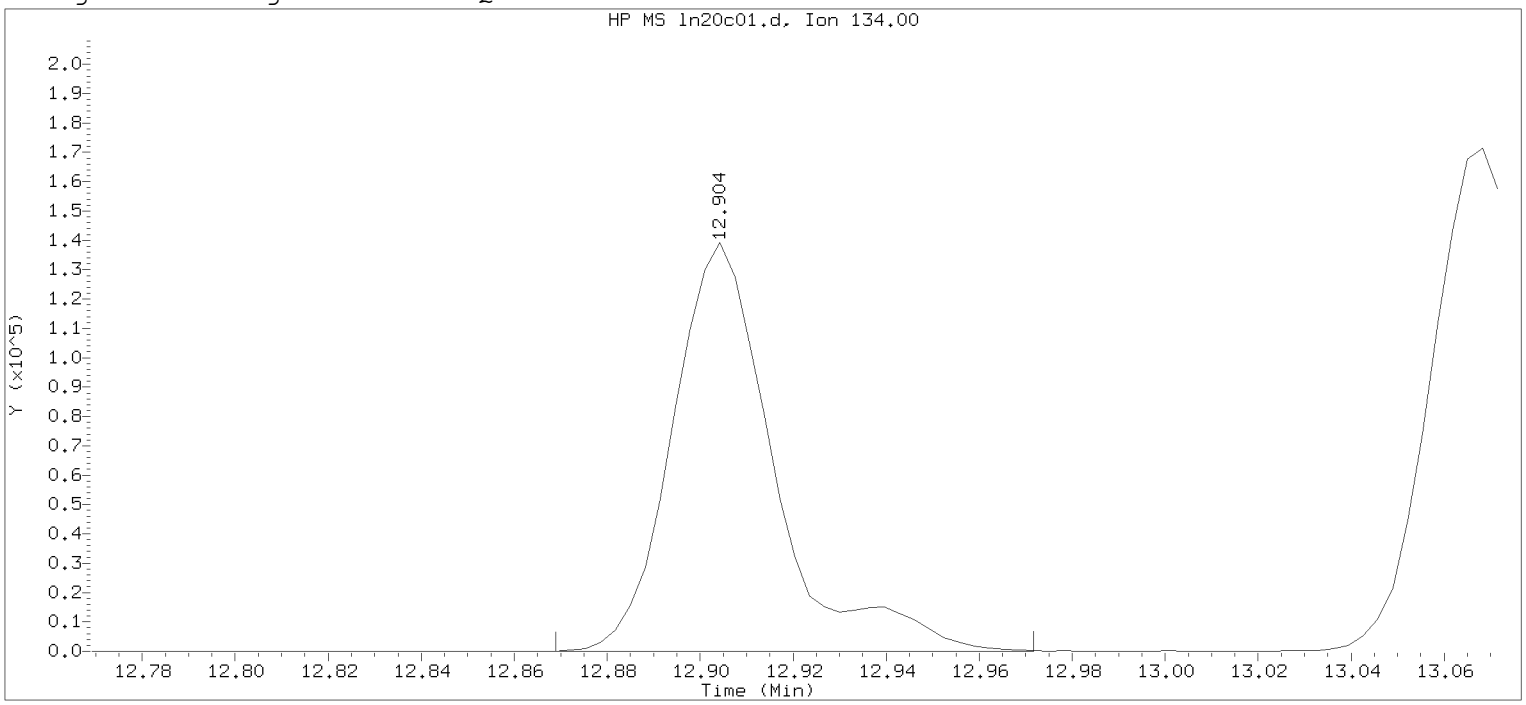
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:50.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov20a.b/ln20c01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 08:51 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 8260W-DEC
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 09:14 kkm02078

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 212024
On-column Amount (ng) : 54.8736
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dviray0249

Data File: /chem/HP09915.i/19nov21a.b/ln21t02.d

Date : 21-NOV-2019 07:42

Client ID: AUG02-19

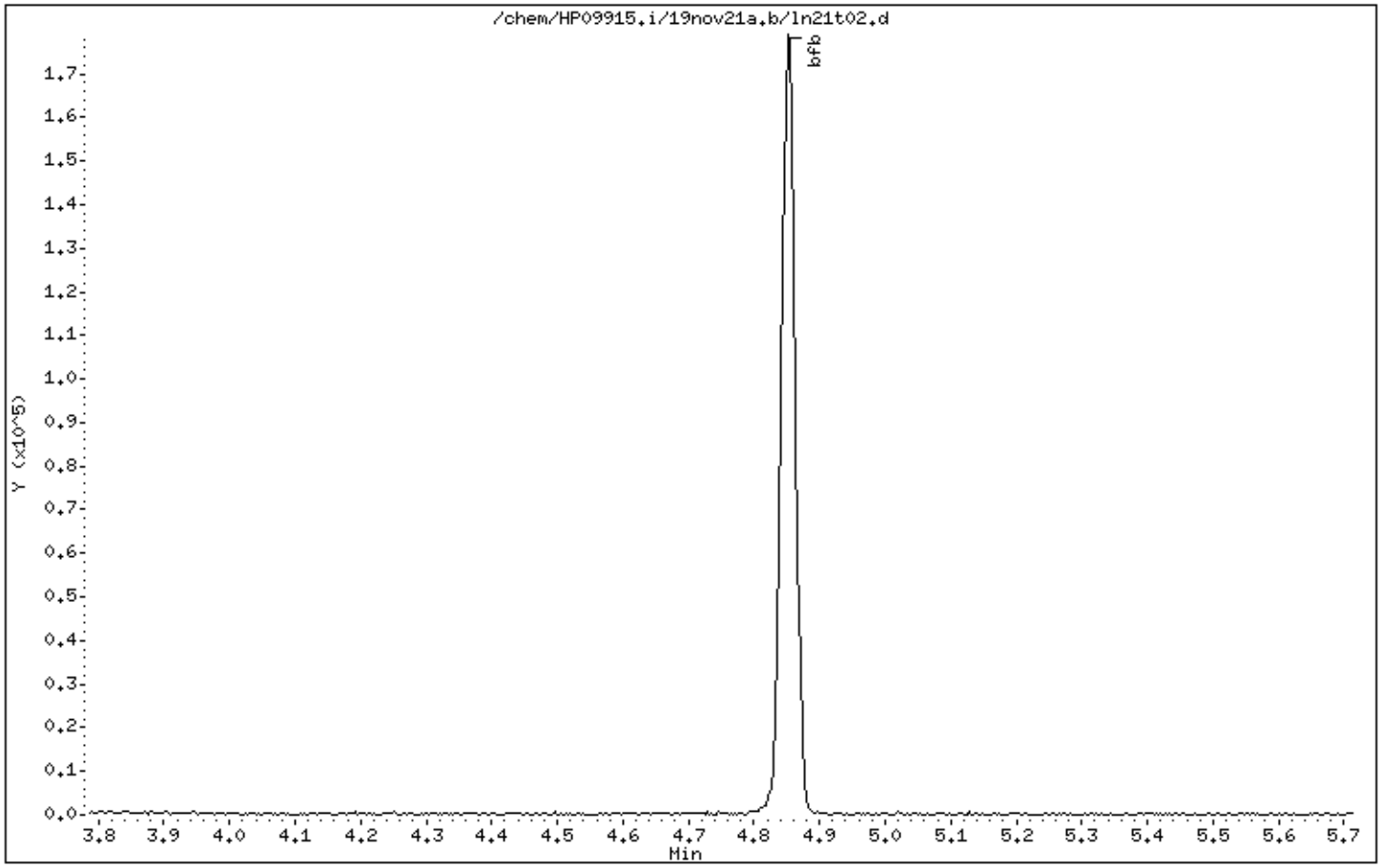
Instrument: HP09915.i

Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: lcp00895

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem/HP09915.i/19nov21a.b/ln21t02.d

Date : 21-NOV-2019 07:42

Client ID: AUG02-19

Instrument: HP09915.i

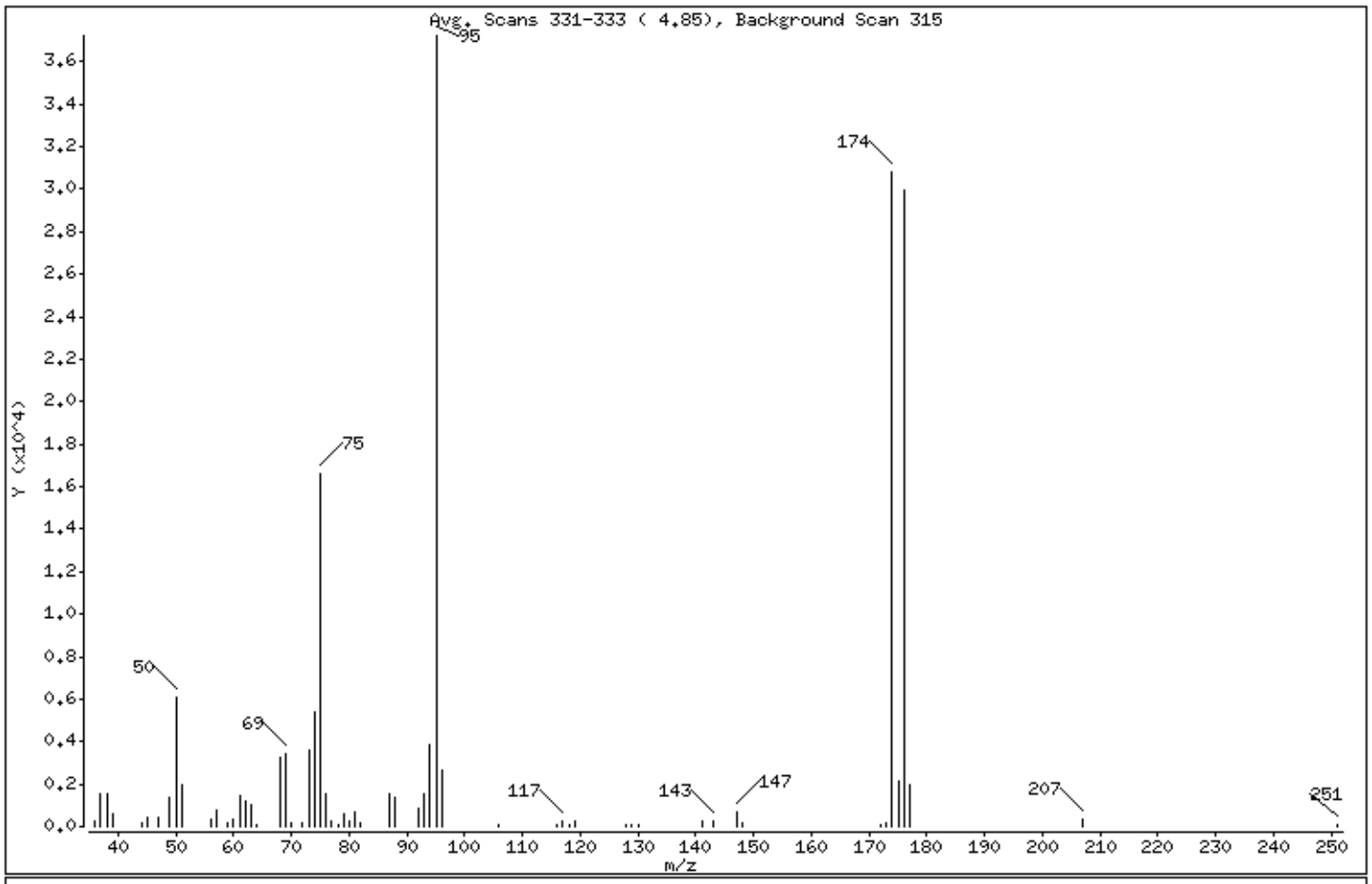
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: lcp00895

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.38
75	30.00 - 60.00% of mass 95	44.70
96	5.00 - 9.00% of mass 95	7.06
173	Less than 2.00% of mass 174	0.40 (0.48)
174	50.00 - 100.00% of mass 95	82.72
175	5.00 - 9.00% of mass 174	5.73 (6.92)
176	95.00 - 101.00% of mass 174	80.53 (97.35)
177	5.00 - 9.00% of mass 176	5.22 (6.48)

Date : 21-NOV-2019 07:42

Client ID: AUG02-19 Instrument: HP09915.i

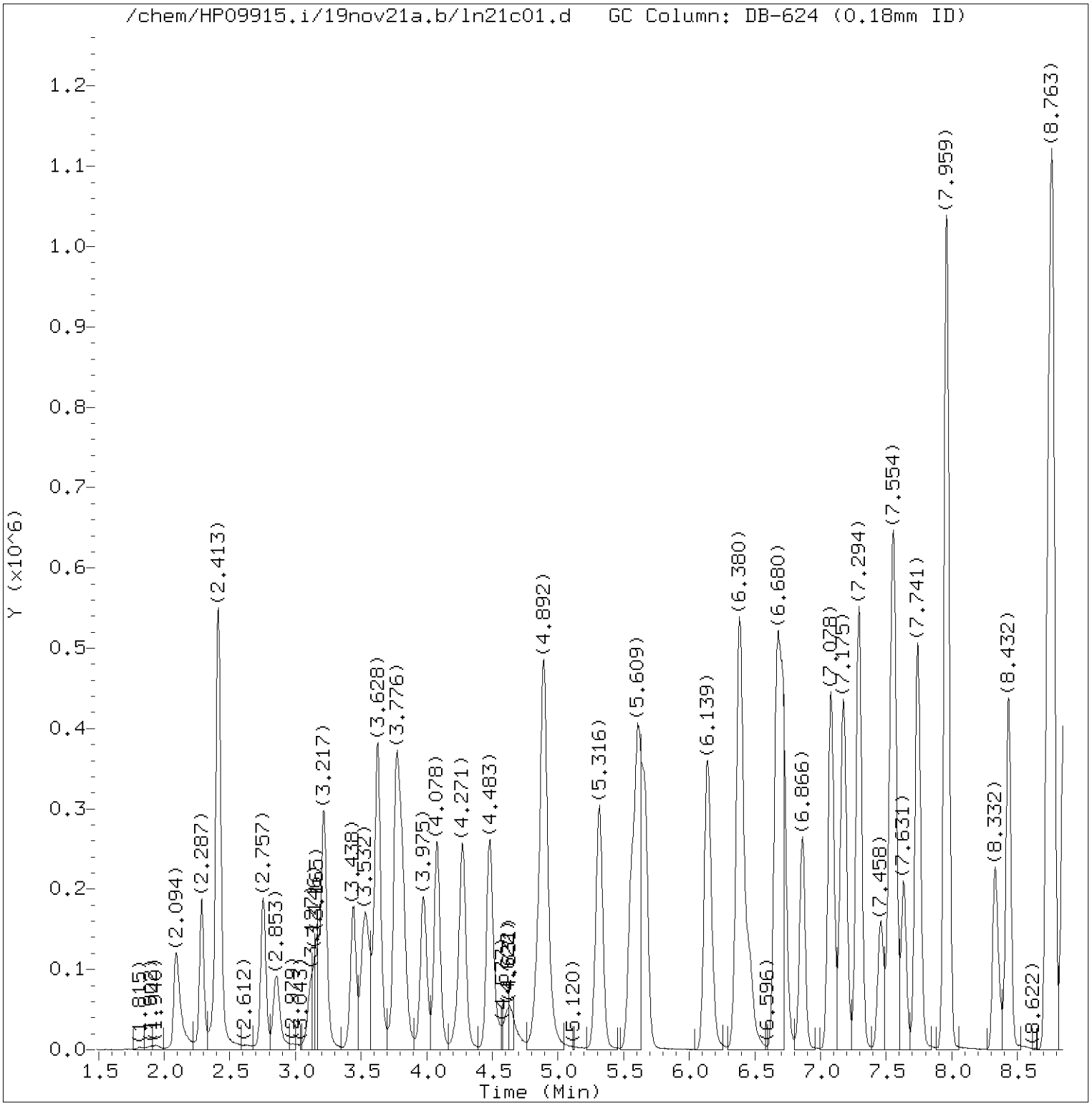
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: lcp00895

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: ln21t02.d
Spectrum: Avg. Scans 331-333 (4.85), Background Scan 315
Location of Maximum: 95.00
Number of points: 59

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	266	62.00	1237	81.00	704	129.00	55
37.00	1507	63.00	1057	82.00	134	130.00	50
38.00	1559	64.00	58	87.00	1579	141.00	232
39.00	563	68.00	3215	88.00	1366	143.00	261
44.00	205	69.00	3403	92.00	837	147.00	710
45.00	424	70.00	180	93.00	1531	148.00	131
47.00	411	72.00	185	94.00	3863	172.00	83
49.00	1346	73.00	3567	95.00	37224	173.00	148
50.00	6099	74.00	5365	96.00	2628	174.00	30792
51.00	1983	75.00	16640	106.00	61	175.00	2132
56.00	333	76.00	1498	116.00	50	176.00	29976
57.00	804	77.00	232	117.00	254	177.00	1942
59.00	179	78.00	72	118.00	61	207.00	371
60.00	309	79.00	604	119.00	246	251.00	50
61.00	1481	80.00	229	128.00	59		



Total Ion Chromatogram (TIC)

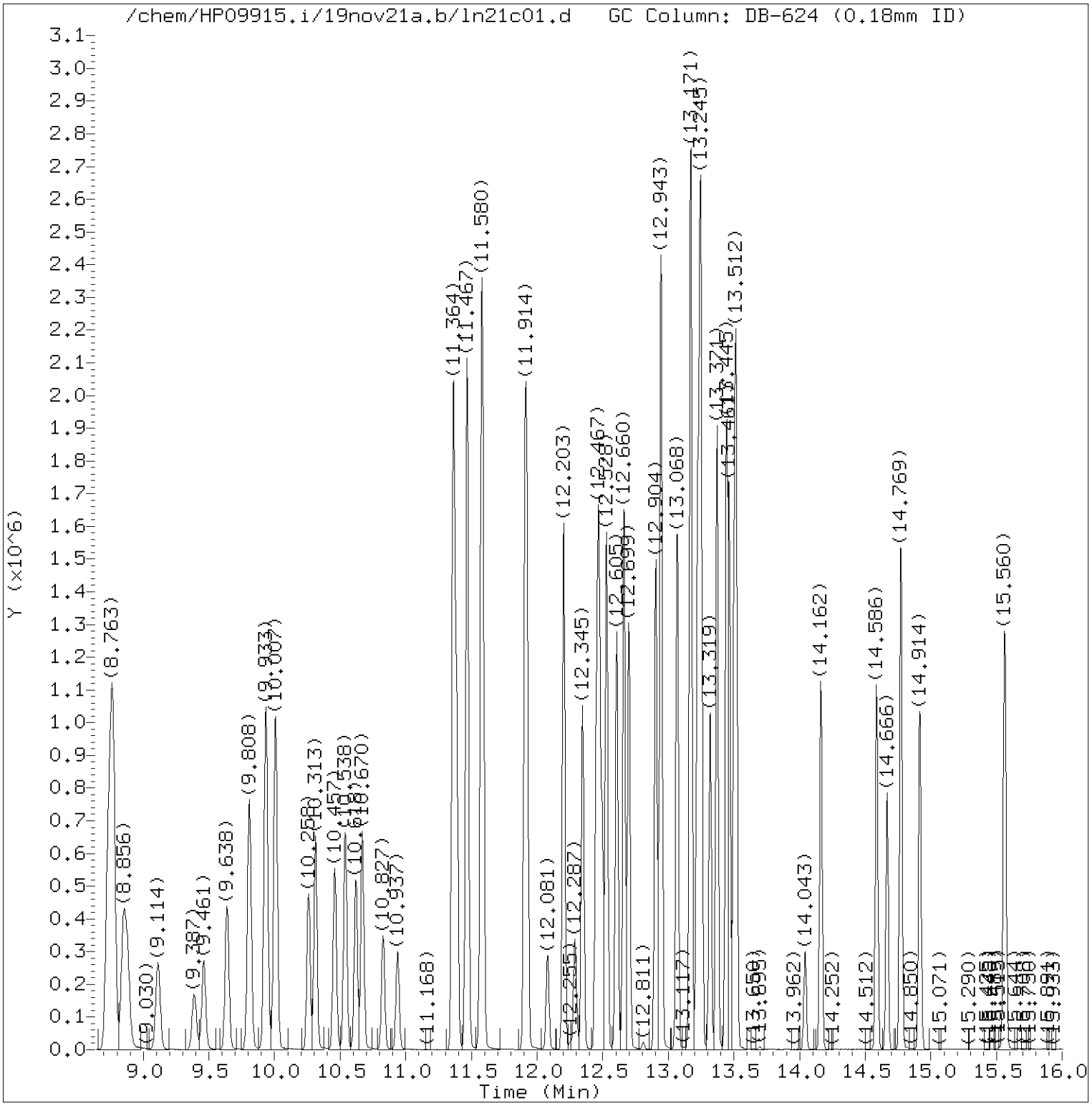
Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:48 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Linda C. Pape
on 11/21/2019 at 08:49.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:48 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Linda C. Pape
on 11/21/2019 at 08:49.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:48 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.091	85	269500	45.890
4) Chloromethane	(2)	2.287	50	266206	47.032
6) Vinyl Chloride	(2)	2.410	62	257324	45.552
5) 1,3-Butadiene	(2)	2.416	39	296686	63.129
8) Bromomethane	(2)	2.754	94	189066	46.690
9) Chloroethane	(2)	2.857	64	142003	45.742
12) Trichlorofluoromethane	(2)	3.162	101	286217	47.061
11) n-Pentane	(2)	3.217	43	302331	42.065
14) Ethyl ether	(2)	3.445	59	171366	43.605
15) Freon 123a	(2)	3.532	67	227759	46.554
16) Acrolein	(1)	3.628	56	616439	535.139
17) 1,1-Dichloroethene	(2)	3.763	96	167149	46.823
17) 1,1-Dichloroethene	(2)	3.770	63	80865	45.184
19) Freon 113	(2)	3.799	101	196955	48.358
18) Acetone	(1)	3.808	58	54264	105.076
22) Methyl Iodide	(2)	3.975	142	342801	46.341
21) 2-Propanol	(1)	3.998	45	91337	246.022
23) Carbon Disulfide	(2)	4.078	76	626326	46.558
27) Methyl Acetate	(2)	4.249	43	188364	40.969
25) Allyl Chloride	(2)	4.274	41	250788	39.162
28) Methylene Chloride	(2)	4.477	84	199725	47.007
29)*t-Butyl alcohol-d10	(1)	4.493	65	153538	250.000
30) t-Butyl alcohol	(1)	4.631	59	154437	238.915
31) Acrylonitrile	(2)	4.837	53	111178	44.946
33) Methyl Tertiary Butyl Ether	(2)	4.882	73	592117	43.681
32) trans-1,2-Dichloroethene	(2)	4.892	96	192144	46.528
34) n-Hexane	(2)	5.316	57	297489	46.302
36) 1,1-Dichloroethane	(2)	5.554	63	324254	45.009
38) di-Isopropyl ether	(2)	5.609	45	611174	43.987
39) 2-Chloro-1,3-butadiene	(2)	5.663	53	296084	45.809
40) Ethyl t-butyl ether	(2)	6.136	59	588145	43.618
43) 1,2-Dichloroethene (Total)	(2)		96	406684	92.812
44) 2-Butanone	(2)	6.364	43	272523	85.826
42) cis-1,2-Dichloroethene	(2)	6.380	96	214540	46.285
45) 2,2-Dichloropropane	(2)	6.397	77	248547	44.381
47) Propionitrile	(1)	6.458	54	226363	281.049
48) Methacrylonitrile	(2)	6.667	67	309152	115.861
49) Bromochloromethane	(2)	6.708	128	113854	46.323

* = Compound is an internal standard.

Digitally signed by Linda C. Pape
on 11/21/2019 at 08:49.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:48 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.718	71	80126	110.135
51) Chloroform	(2)	6.863	83	326006	47.313
52)$Dibromofluoromethane	(2)	7.075	113	197988	48.089
52)$Dibromofluoromethane	(2)	7.078	111	203853	48.561
53) 1,1,1-Trichloroethane	(2)	7.088	97	272281	46.299
54) Cyclohexane	(2)	7.171	56	359166	45.671
54) Cyclohexane	(2)	7.178	84	315259	46.149
54) Cyclohexane	(2)	7.178	69	111017	45.640
56) Carbon Tetrachloride	(2)	7.287	117	227872	45.686
55) 1,1-Dichloropropene	(2)	7.294	75	259369	45.534
58) Isobutyl Alcohol	(1)	7.464	41	137942	634.129
57)$1,2-Dichloroethane-d4	(2)	7.528	102	51359	48.946
57)$1,2-Dichloroethane-d4	(2)	7.532	65	232643	49.752
57)$1,2-Dichloroethane-d4	(2)	7.535	104	32790	48.924
60) Benzene	(2)	7.561	78	811232	47.359
61) 1,2-Dichloroethane	(2)	7.631	62	251951	45.729
61) 1,2-Dichloroethane	(2)	7.638	98	25548	46.857
65) t-Amyl methyl ether	(2)	7.741	73	601832	44.467
66)*Fluorobenzene	(2)	7.959	96	842128	50.000
67) n-Heptane	(2)	7.962	43	277613	46.252
69) n-Butanol	(1)	8.332	56	235235	1256.422
71) Trichloroethene	(2)	8.429	95	206241	47.818
72) Methylcyclohexane	(2)	8.734	83	363539	45.433
72) Methylcyclohexane	(2)	8.731	98	165844	45.803
73) 1,2-Dichloropropane	(2)	8.769	63	202513	46.559
76) Methyl Methacrylate	(2)	8.850	69	199229	47.366
75) 1,4-Dioxane	(1)	8.859	88	45382M	881.892
74) Dibromomethane	(2)	8.879	93	135467	48.135
78) Bromodichloromethane	(2)	9.114	83	239567	47.437
79) 2-Nitropropane	(2)	9.387	41	135200	88.386
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	150329	80.471
81) cis-1,3-Dichloropropene	(2)	9.638	75	312935	46.655
82) 4-Methyl-2-pentanone	(2)	9.808	43	593356	88.530
83)$Toluene-d8	(3)	9.933	98	873852	48.424
83)$Toluene-d8	(3)	9.933	100	563295	48.187
88) Toluene	(3)	10.007	92	526302	46.519
90) 1,3-Dichloropropene (total)	(3)		100	605159	92.157
89) trans-1,3-Dichloropropene	(3)	10.258	75	292224	45.502

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/21/2019 at 08:49.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:48 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	10.313	69	356547	45.682
92) 1,1,2-Trichloroethane	(3)	10.461	97	201587	46.997
93) Tetrachloroethene	(3)	10.538	166	218124	45.523
94) 1,3-Dichloropropane	(3)	10.621	76	336408	45.935
96) 2-Hexanone	(3)	10.670	43	432748	83.064
97) Dibromochloromethane	(3)	10.824	129	198248	45.119
99) 1,2-Dibromoethane	(3)	10.937	107	219712	47.171
100)*Chlorobenzene-d5	(3)	11.361	117	689674	50.000
101) 1-Chlorohexane	(3)	11.364	91	265174	43.630
102) Chlorobenzene	(3)	11.387	112	591870	46.262
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	193478	45.899
104) Ethylbenzene	(3)	11.467	91	1004961	46.474
106) m+p-Xylene	(3)	11.580	106	798833	93.906
108) Xylene (Total)	(3)		106	1187719	140.188
107) o-Xylene	(3)	11.908	106	388886	46.282
109) Styrene	(3)	11.924	104	662866	47.740
110) Bromoform	(3)	12.081	173	130378	39.710
111) Isopropylbenzene	(3)	12.203	105	991541	47.048
112) Cyclohexanone	(1)	12.287	55	143181	710.422
114)$4-Bromofluorobenzene	(3)	12.345	95	340502	49.831
114)$4-Bromofluorobenzene	(3)	12.348	174	281616	49.713
116) 1,1,2,2-Tetrachloroethane	(4)	12.448	83	328297	46.779
115) Bromobenzene	(4)	12.464	156	258502	46.296
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	151011	69.759
117) 1,2,3-Trichloropropane	(4)	12.496	110	97849	45.436
119) n-Propylbenzene	(4)	12.528	91	1157970	47.468
120) 2-Chlorotoluene	(4)	12.605	126	236208	45.578
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	846397	47.742
121) 4-Chlorotoluene	(4)	12.699	126	245639	45.536
124) tert-Butylbenzene	(4)	12.904	134	170518M	46.508
125) Pentachloroethane	(4)	12.940	167	147178	46.618
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	883458	47.282
127) sec-Butylbenzene	(4)	13.068	105	1026258	46.907
129) 1,3-Dichlorobenzene	(4)	13.168	146	473678	46.165
130) p-Isopropyltoluene	(4)	13.171	119	879731	46.479
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	371519	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	488046	45.882
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	937888	47.386

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/21/2019 at 08:49.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

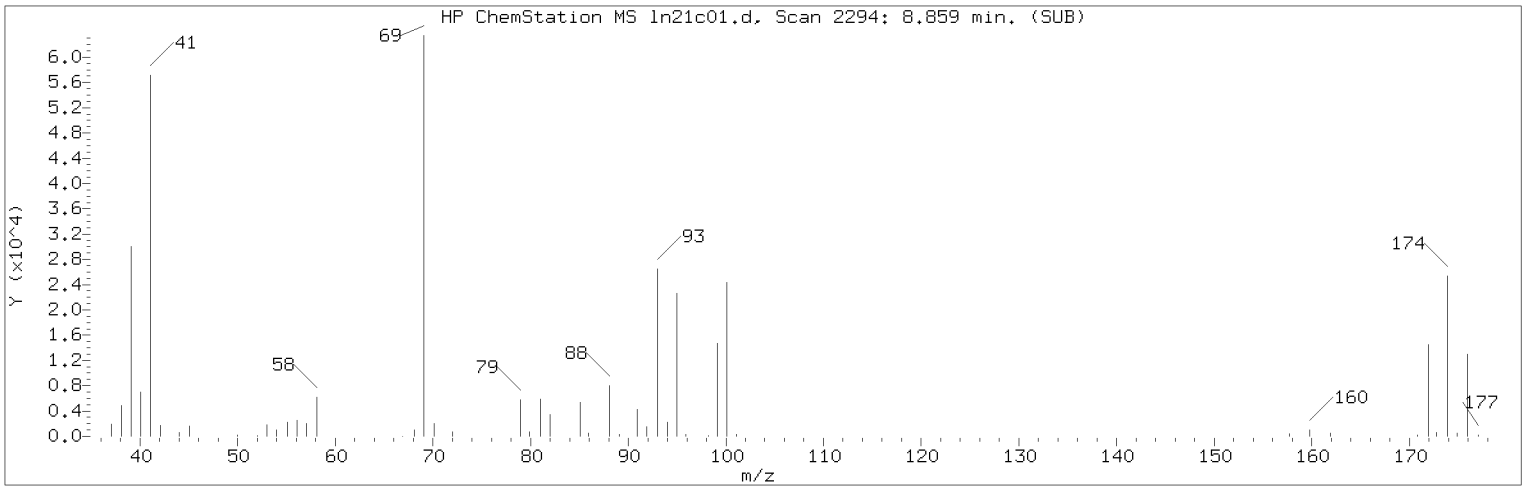
Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:48 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

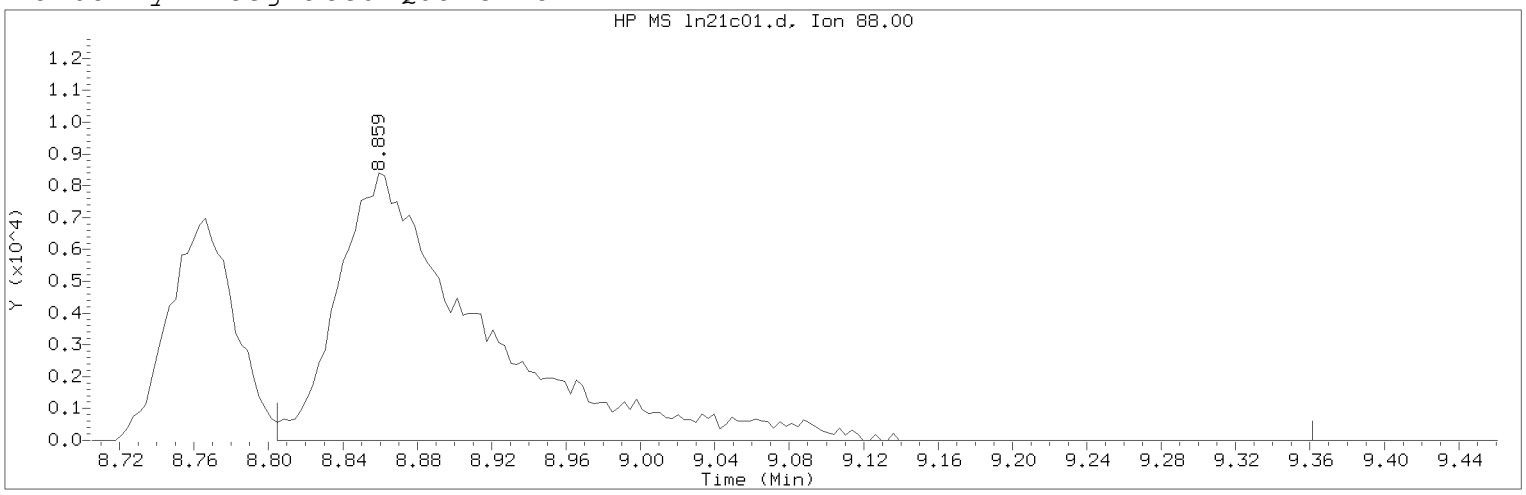
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.319	91	673087	44.916
136) 1,3-Diethylbenzene	(4)	13.371	119	564691	45.843
141) Diethylbenzene (total)	(4)		100	1635457	137.370
137) 1,4-Diethylbenzene	(4)	13.441	119	588988	45.131
139) n-Butylbenzene	(4)	13.464	92	431653	44.603
138) 1,2-Dichlorobenzene	(4)	13.499	146	466125	46.038
140) 1,2-Diethylbenzene	(4)	13.515	119	481778	46.396
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	66725	43.432
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	329988	42.421
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	313458	41.443
147) Hexachlorobutadiene	(4)	14.666	225	129620	36.296
148) Naphthalene	(4)	14.772	128	1124833	46.259
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	308707	41.945
150) 2-Methylnaphthalene	(4)	15.560	142	637684	42.587

Digitally signed by Linda C. Pape
on 11/21/2019 at 08:49.
Target 3.5 esignature user ID: lcp00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:48 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

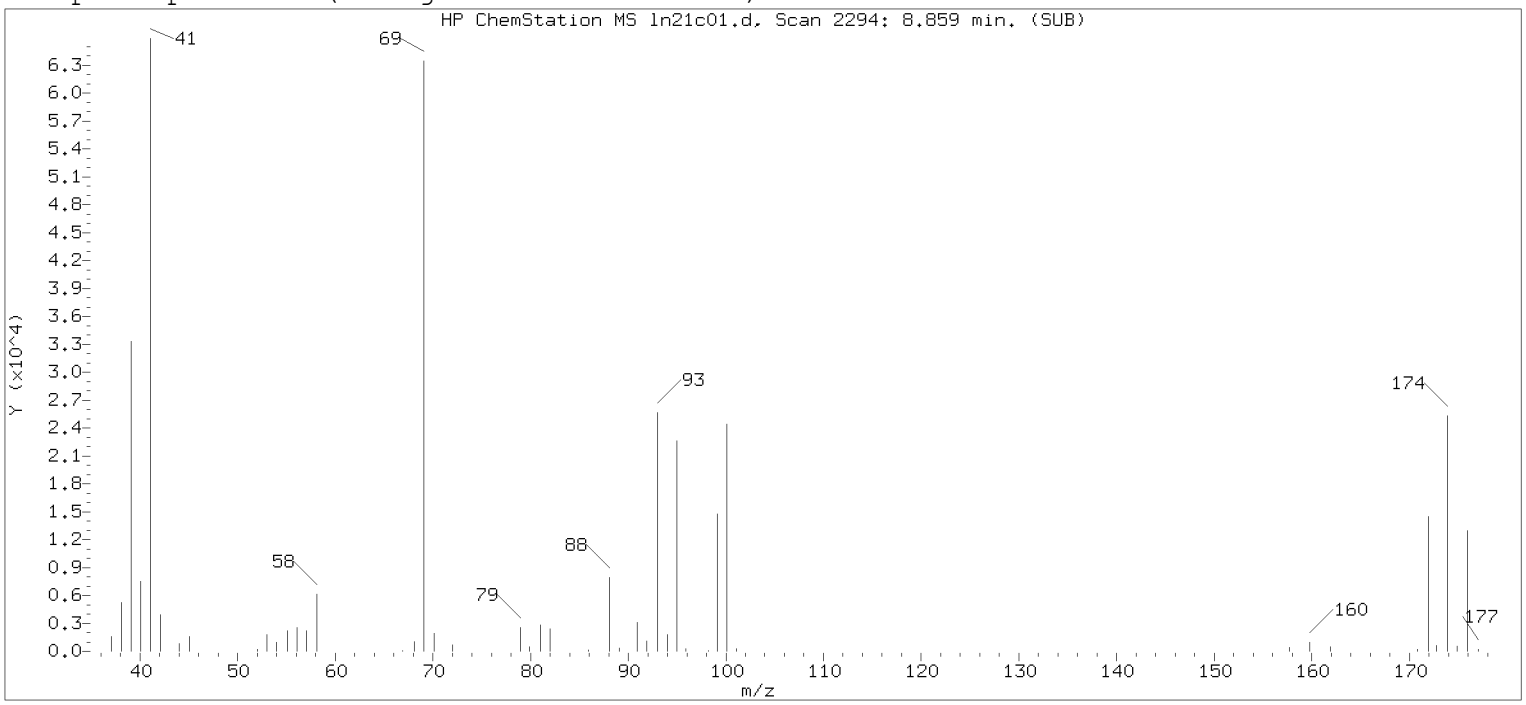
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2294
Retention Time (minutes): 8.859
Quant Ion : 88.00
Area (flag) : 45382M
On-Column Amount (ng) : 881.8916
Integration start scan : 2276 Integration stop scan: 2449
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

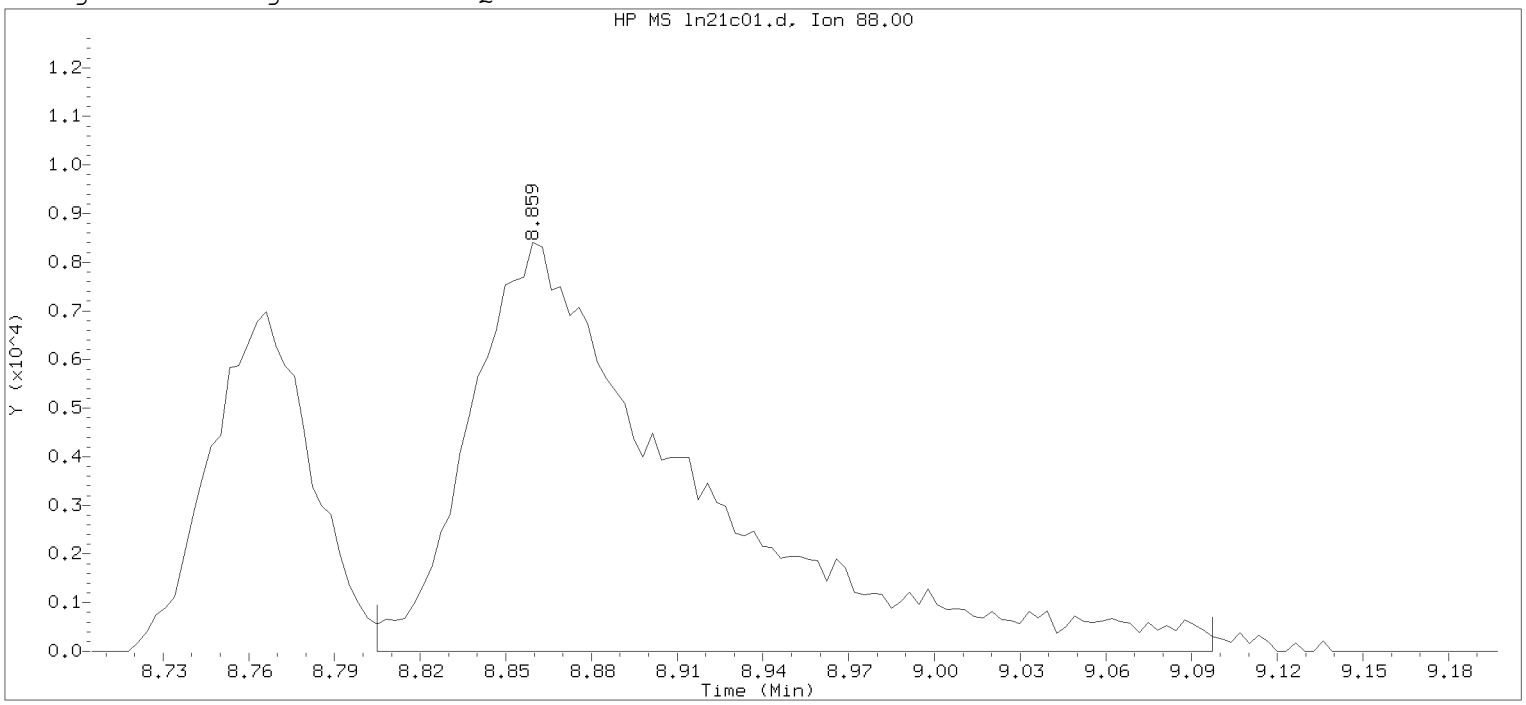
Analyst responsible for change: Digitally signed by Linda C. Pape
on 11/21/2019 at 08:49.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:40.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

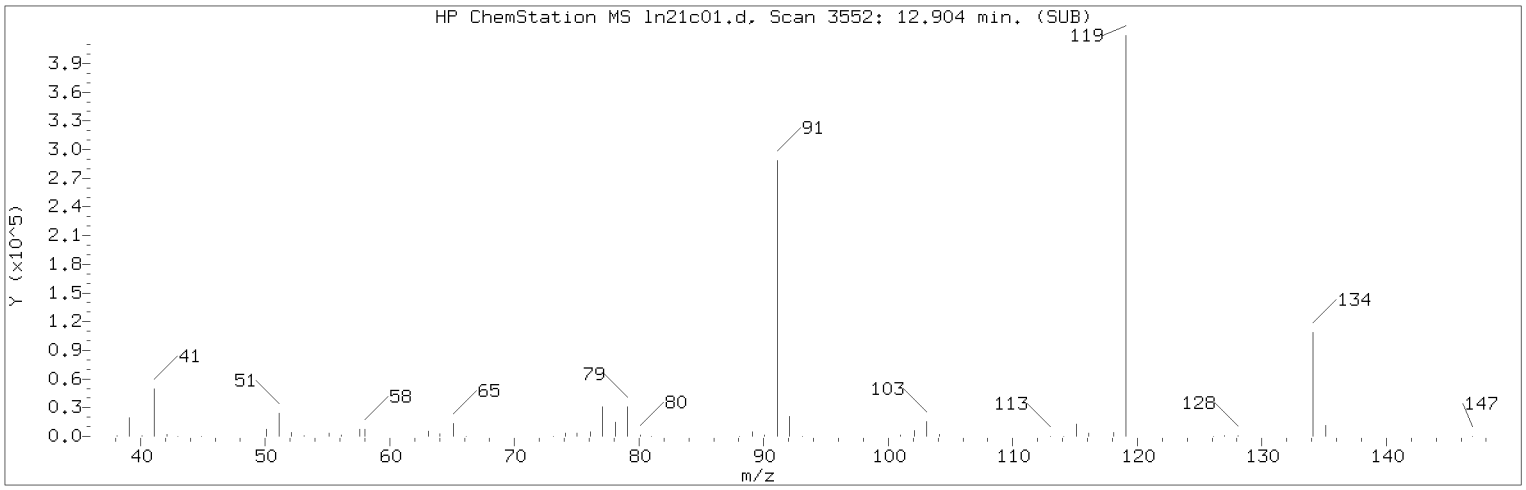
Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:46 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

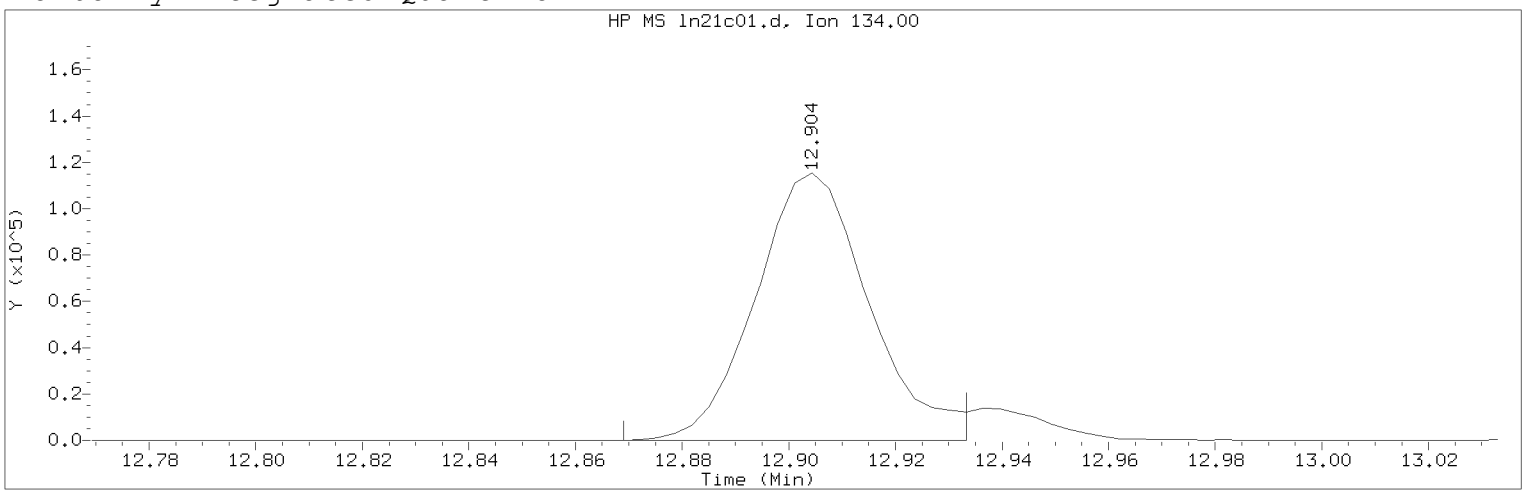
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2294
Retention Time (minutes): 8.859
Quant Ion : 88.00
Area : 44934
On-column Amount (ng) : 873.1754
Integration start scan : 2276 Integration stop scan: 2367
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 11/21/2019 at 08:49.
Target 3.5 esignature user: LCP00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:48 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

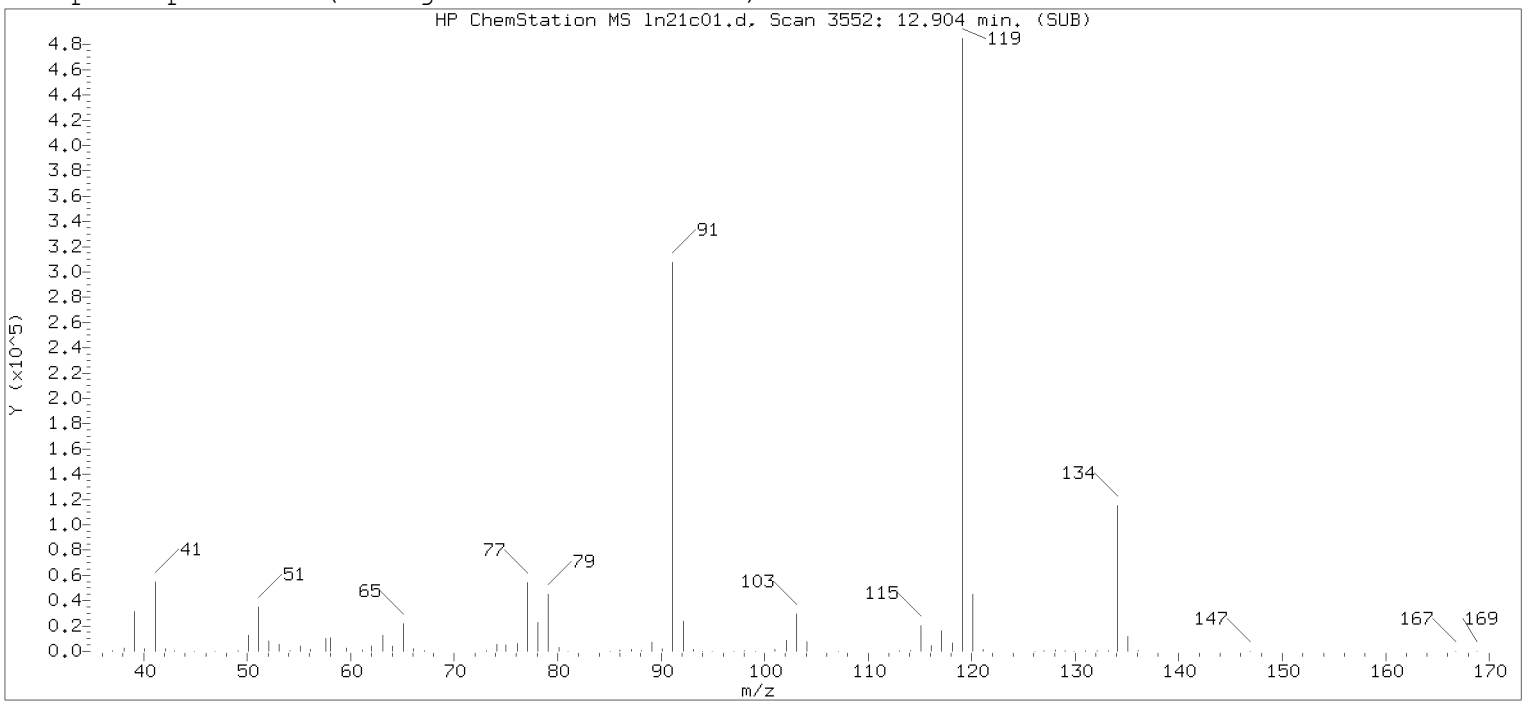
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 170518M
On-Column Amount (ng) : 46.5076
Integration start scan : 3540 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

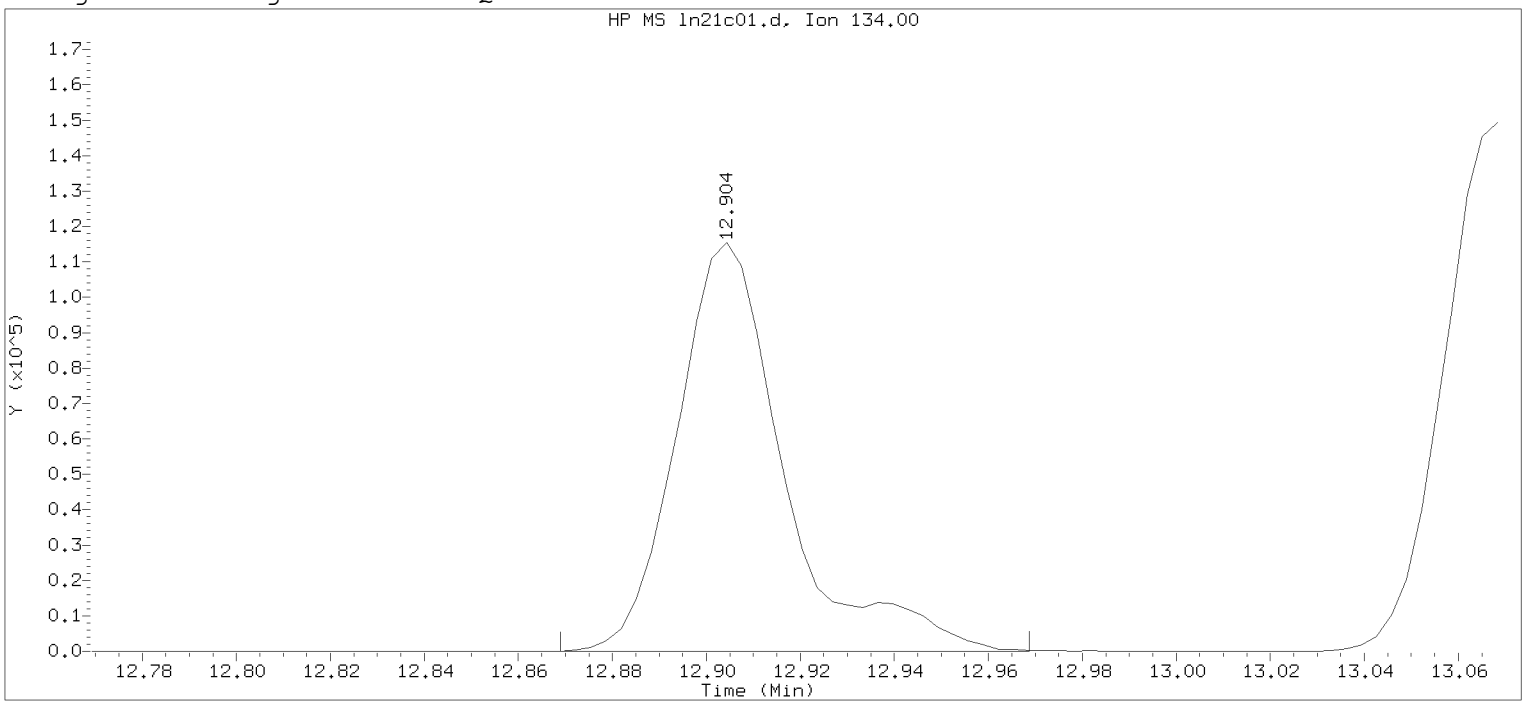
Analyst responsible for change: Digitally signed by Linda C. Pape
on 11/21/2019 at 08:49.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:40.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:46 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 183305
On-column Amount (ng) : 49.9951
Integration start scan : 3540 Integration stop scan: 3571
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 11/21/2019 at 08:49.
Target 3.5 esignature user: LCP00895

RLVL83 Lancaster Laboratories Analysis Summary for GC/MS Volatiles RVLL83

Data file: /chem/HP09915.i/19nov21a.b/ln21r01.d Injection date and time: **21-NOV-2019 09:02**
Data file Sample Info. Line: RLVL83;RVLL83;1;3;MDL/LOQ;;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 10:16 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **MDLY325**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493(0.000)	936	65	163145 (6)	250.00	
66) Fluorobenzene	7.956(0.003)	2013	96	871784 (4)	50.00	
100) Chlorobenzene-d5	11.358(0.003)	3071	117	717899 (4)	50.00	
131) 1,4-Dichlorobenzene-d4	13.220(0.003)	3650	152	380162 (2)	50.00	

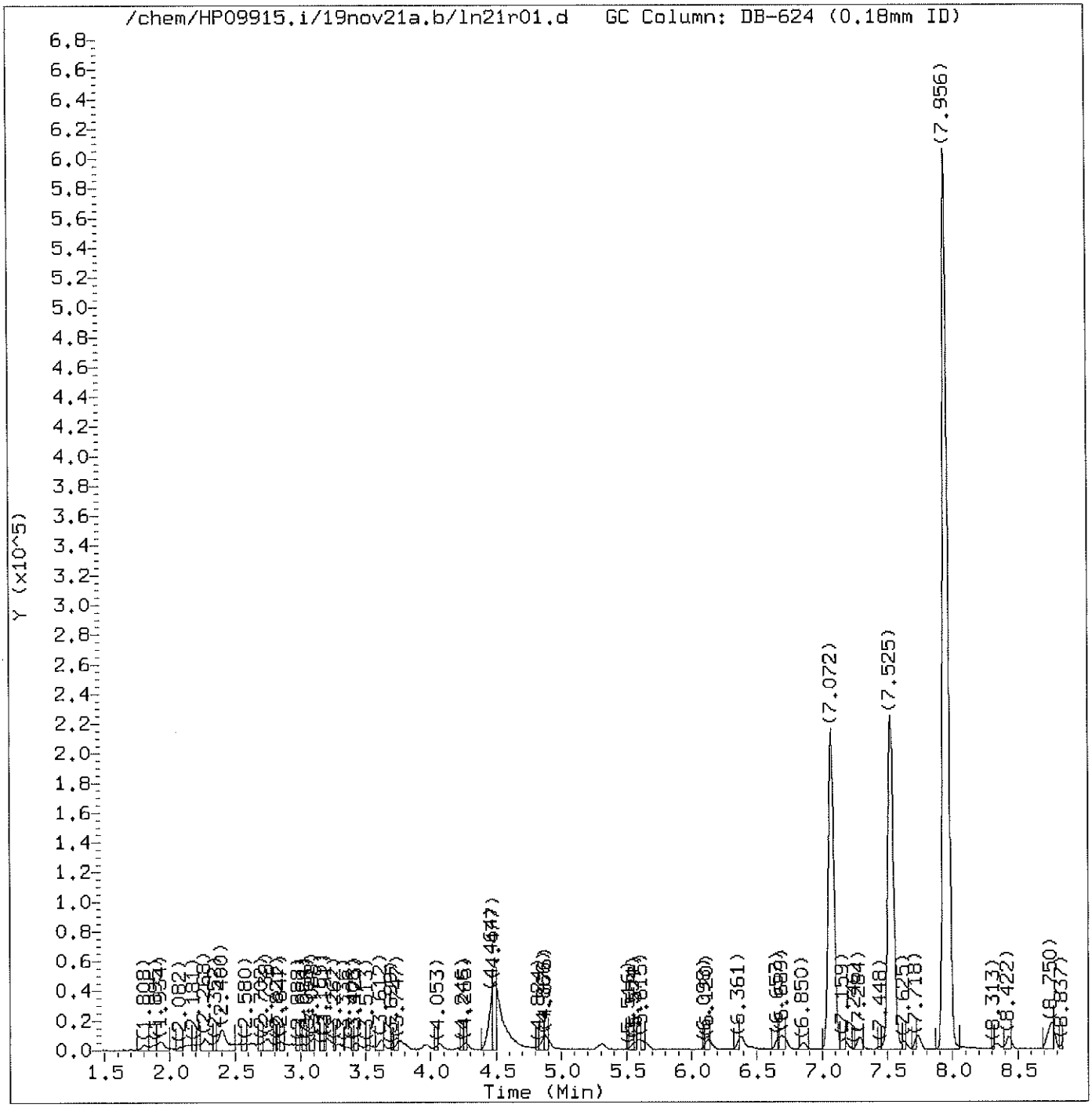
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072(0.000)	113	203622	47.775	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.529(0.000)	102	55485	51.080	102%		80 - 120
83) Toluene-d8	(3)	9.930(0.000)	98	901116	47.972	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345(0.000)	95	348356	48.976	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
110) Bromoform	(3)	12.078(-0.000)	173	1568	0.459	0.46		J	1	4

Total number of targets = 1

Digitally signed by Linda C. Pape on 11/21/2019 at 10:16. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:40. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21r01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:02 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: MDLY325
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 10:16 lcp00895

Sample Name: RLVL83 Lab Sample ID: RVLL83

Digitally signed by Linda C. Pape
on 11/21/2019 at 10:16.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln2lr01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:02 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: MDLY325
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 10:16 lcp00895

Sample Name: RLVL83 Lab Sample ID: RVLL83

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-dl0	(1)	4.493	65	163145	250.000
52)$Dibromofluoromethane	(2)	7.072	113	203622	47.775
57)$1,2-Dichloroethane-d4	(2)	7.529	102	55485	51.080
66)*Fluorobenzene	(2)	7.956	96	871784	50.000
83)$Toluene-d8	(3)	9.930	98	901116	47.972
100)*Chlorobenzene-d5	(3)	11.358	117	717899	50.000
110) Bromoform	(3)	12.078	173	1568	0.459
114)$4-Bromofluorobenzene	(3)	12.345	95	348356	48.976
131)*1,4-Dichlorobenzene-d4	(4)	13.220	152	380162	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/21/2019 at 10:16.
Target 3.5 esignature user ID: lcp00895

Raw QC Data

Volatiles by GC/MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKL80

Data file: /chem/HP09915.i/19nov20a.b/ln20b01.d
Data file Sample Info. Line: VBLKL80;VBLKL80;1;3;;;;;;
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Injection date and time: **20-NOV-2019 09:35**
Instrument ID: **HP09915.i** Batch: **L193241AA**

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.496	(-0.003)	937	65	162533	(6)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	913789	(3)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	734830	(1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	395483	(1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(0.000)	113	207995	46.557	93%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(0.000)	102	55854	49.055	98%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	928523	48.292	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	356385	48.950	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 11/20/2019 at 22:29. Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov20a.b/ln20b01.d Injection date and time: **20-NOV-2019 09:35**
Data file Sample Info. Line: VBLKL80;VBLKL80;1;3;;;;;; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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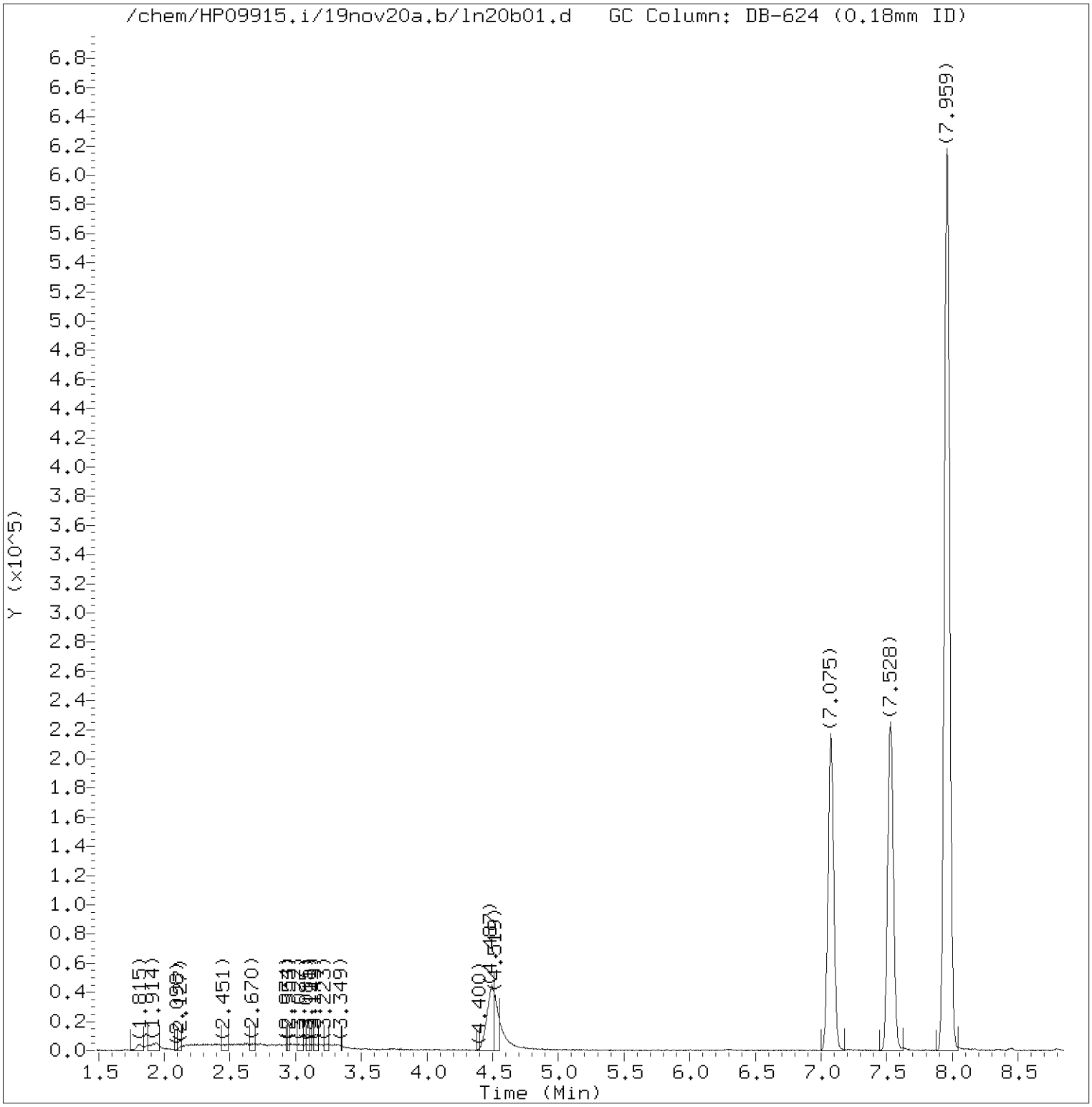
Total number of targets = 24

Digitally signed by Don V. Viray on 11/20/2019 at 22:29. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:50. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

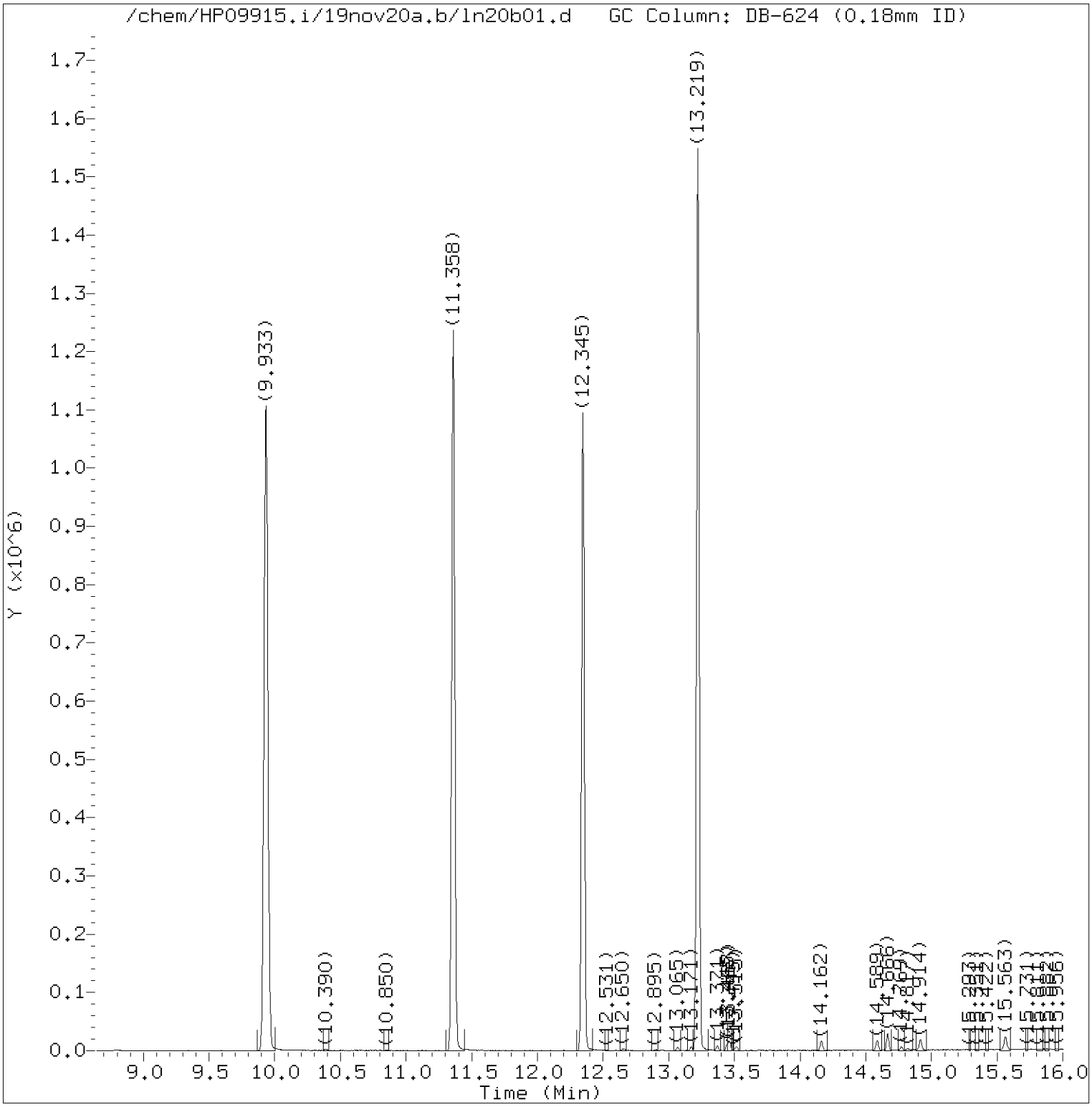
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20b01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 09:35 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Sample Name: VBLKL80 Lab Sample ID: VBLKL80

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20b01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 09:35 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Sample Name: VBLKL80 Lab Sample ID: VBLKL80

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20b01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 09:35 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Sample Name: VBLKL80 Lab Sample ID: VBLKL80

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.496	65	162533	250.000
52)$Dibromofluoromethane	(2)	7.075	113	207995	46.557
57)$1,2-Dichloroethane-d4	(2)	7.528	102	55854	49.055
66)*Fluorobenzene	(2)	7.959	96	913789	50.000
83)$Toluene-d8	(3)	9.933	98	928523	48.292
100)*Chlorobenzene-d5	(3)	11.358	117	734830	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	356385	48.950
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	395483	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov21a.b/ln21b01.d
Data file Sample Info. Line: VBLKL83;VBLKL83;1;3;;;;;;
Date, time and analyst ID of latest file update: 21-Nov-2019 09:41 Automation

Injection date and time: **21-NOV-2019 09:24**
Instrument ID: **HP09915.i** Batch: **L193251AA**

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 21-NOV-2019 08:49
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.509	(-0.016)	941	65	158112	(3)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	860082	(2)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	701132	(2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	371721	(0)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.078	(0.000)	113	199192	47.371	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.535	(-0.001)	102	54120	50.501	101%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	879921	47.963	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	336566	48.450	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)				Not Detected					0.2	1
4) Chloromethane	(2)				Not Detected					0.2	1
5) 1,3-Butadiene	(2)				Not Detected					1	3
6) Vinyl Chloride	(2)				Not Detected					0.2	1
8) Bromomethane	(2)				Not Detected					0.3	1
9) Chloroethane	(2)				Not Detected					0.2	1
11) n-Pentane	(2)				Not Detected					0.4	10
12) Trichlorofluoromethane	(2)				Not Detected					0.2	1
14) Ethyl ether	(2)				Not Detected					0.2	5
15) Freon 123a	(2)				Not Detected					0.4	5
16) Acrolein	(1)				Not Detected					2	100
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
21) 2-Propanol	(1)				Not Detected					18	100
22) Methyl Iodide	(2)				Not Detected					0.2	1
23) Carbon Disulfide	(2)				Not Detected					0.2	5
25) Allyl Chloride	(2)				Not Detected					0.3	5
27) Methyl Acetate	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
30) t-Butyl alcohol	(1)				Not Detected					12	50
31) Acrylonitrile	(2)				Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.2	1
34) n-Hexane	(2)				Not Detected					2	5
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
38) di-Isopropyl ether	(2)				Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)				Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)				Not Detected					0.4	2

Digitally signed by Linda C. Pape on 11/21/2019 at 10:13. Target 3.5 esignature user ID: lcp00895

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKL83

Data file: /chem/HP09915.i/19nov21a.b/ln21b01.d Injection date and time: **21-NOV-2019 09:24**
Data file Sample Info. Line: VBLKL83;VBLKL83;1;3;;;;;; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 09:41 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 21-NOV-2019 08:49
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)				Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					1	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
72) Methylcyclohexane	(2)				Not Detected					0.5	5
73) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
74) Dibromomethane	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
76) Methyl Methacrylate	(2)				Not Detected					0.2	5
78) Bromodichloromethane	(2)				Not Detected					0.2	1
79) 2-Nitropropane	(2)				Not Detected					0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
81) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
82) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
88) Toluene	(3)				Not Detected					0.2	1
89) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
90) 1,3-Dichloropropene (total)	(3)				Not Detected					0.4	2
91) Ethyl Methacrylate	(3)				Not Detected					0.2	5
92) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
94) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
96) 2-Hexanone	(3)				Not Detected					0.3	10
97) Dibromochloromethane	(3)				Not Detected					0.2	1
99) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
101) 1-Chlorohexane	(3)				Not Detected					0.3	5
102) Chlorobenzene	(3)				Not Detected					0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
109) Styrene	(3)				Not Detected					0.2	5
110) Bromoform	(3)				Not Detected					1	4
111) Isopropylbenzene	(3)				Not Detected					0.2	5
112) Cyclohexanone	(1)				Not Detected					25	100
115) Bromobenzene	(4)				Not Detected					0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
117) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
118) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50
119) n-Propylbenzene	(4)				Not Detected					0.2	5

Digitally signed by Linda C. Pape on 11/21/2019 at 10:13. Target 3.5 esignature user ID: lcp00895

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov21a.b/ln21b01.d Injection date and time: **21-NOV-2019 09:24**
Data file Sample Info. Line: VBLKL83;VBLKL83;1;3;;;;;; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 09:41 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 21-NOV-2019 08:49
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

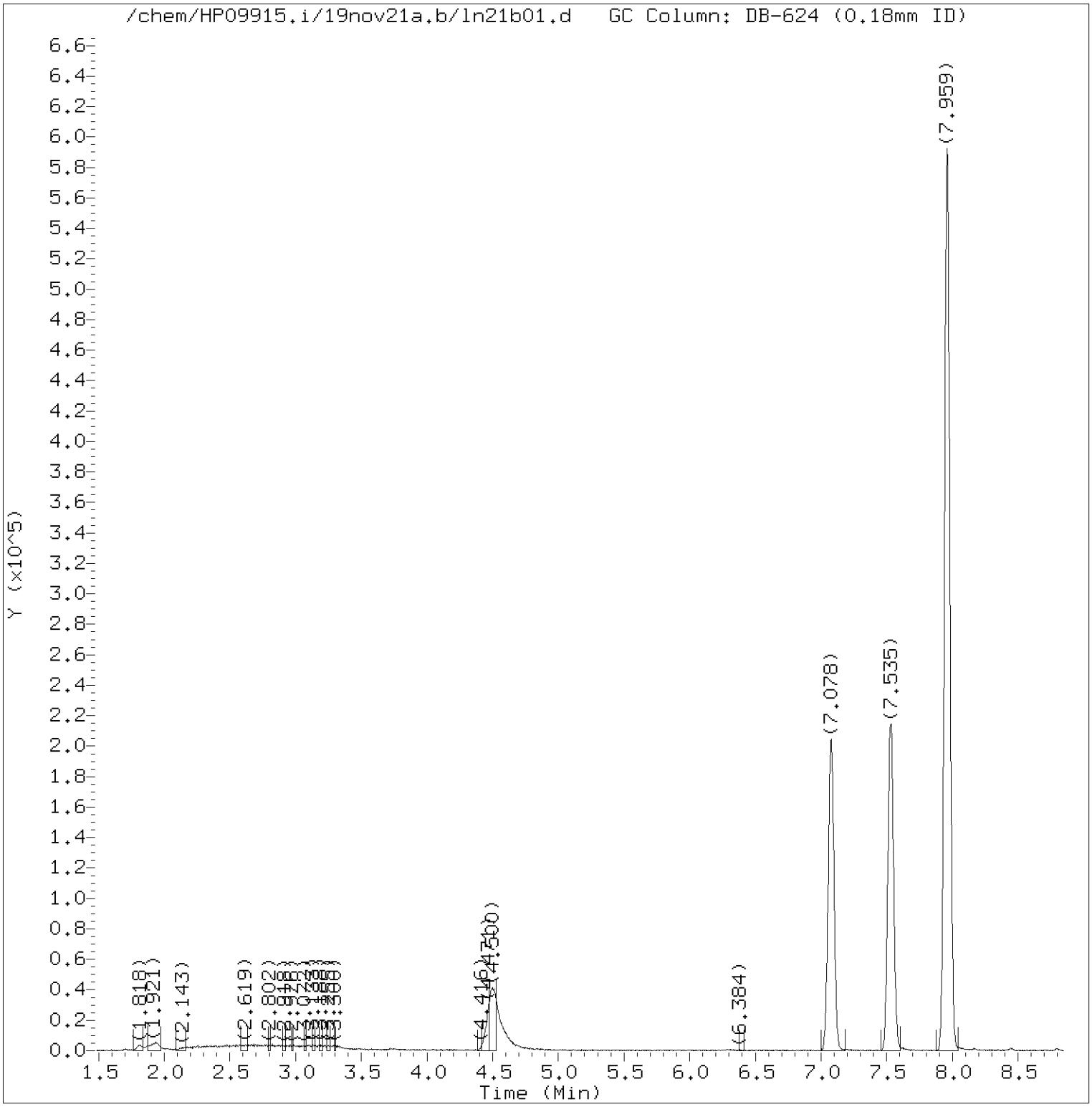
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)				Not Detected					0.2	5
121) 4-Chlorotoluene	(4)				Not Detected					0.2	5
122) 1,3,5-Trimethylbenzene	(4)				Not Detected					0.3	5
124) tert-Butylbenzene	(4)				Not Detected					0.3	5
125) Pentachloroethane	(4)				Not Detected					0.2	5
126) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5
127) sec-Butylbenzene	(4)				Not Detected					0.2	5
129) 1,3-Dichlorobenzene	(4)				Not Detected					0.2	5
130) p-Isopropyltoluene	(4)				Not Detected					0.2	5
133) 1,4-Dichlorobenzene	(4)				Not Detected					0.2	5
134) 1,2,3-Trimethylbenzene	(4)				Not Detected					0.3	5
135) Benzyl Chloride	(4)				Not Detected					1	5
136) 1,3-Diethylbenzene	(4)				Not Detected					0.2	5
137) 1,4-Diethylbenzene	(4)				Not Detected					0.2	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
139) n-Butylbenzene	(4)				Not Detected					0.2	5
140) 1,2-Diethylbenzene	(4)				Not Detected					0.2	5
141) Diethylbenzene (total)	(4)				Not Detected					0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.3	5
144) 1,3,5-Trichlorobenzene	(4)				Not Detected					0.2	5
146) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	5
147) Hexachlorobutadiene	(4)				Not Detected					2	5
148) Naphthalene	(4)				Not Detected					1	5
149) 1,2,3-Trichlorobenzene	(4)				Not Detected					0.4	5
150) 2-Methylnaphthalene	(4)				Not Detected					2	4

Total number of targets = 110

Digitally signed by Linda C. Pape on 11/21/2019 at 10:13. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:40. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

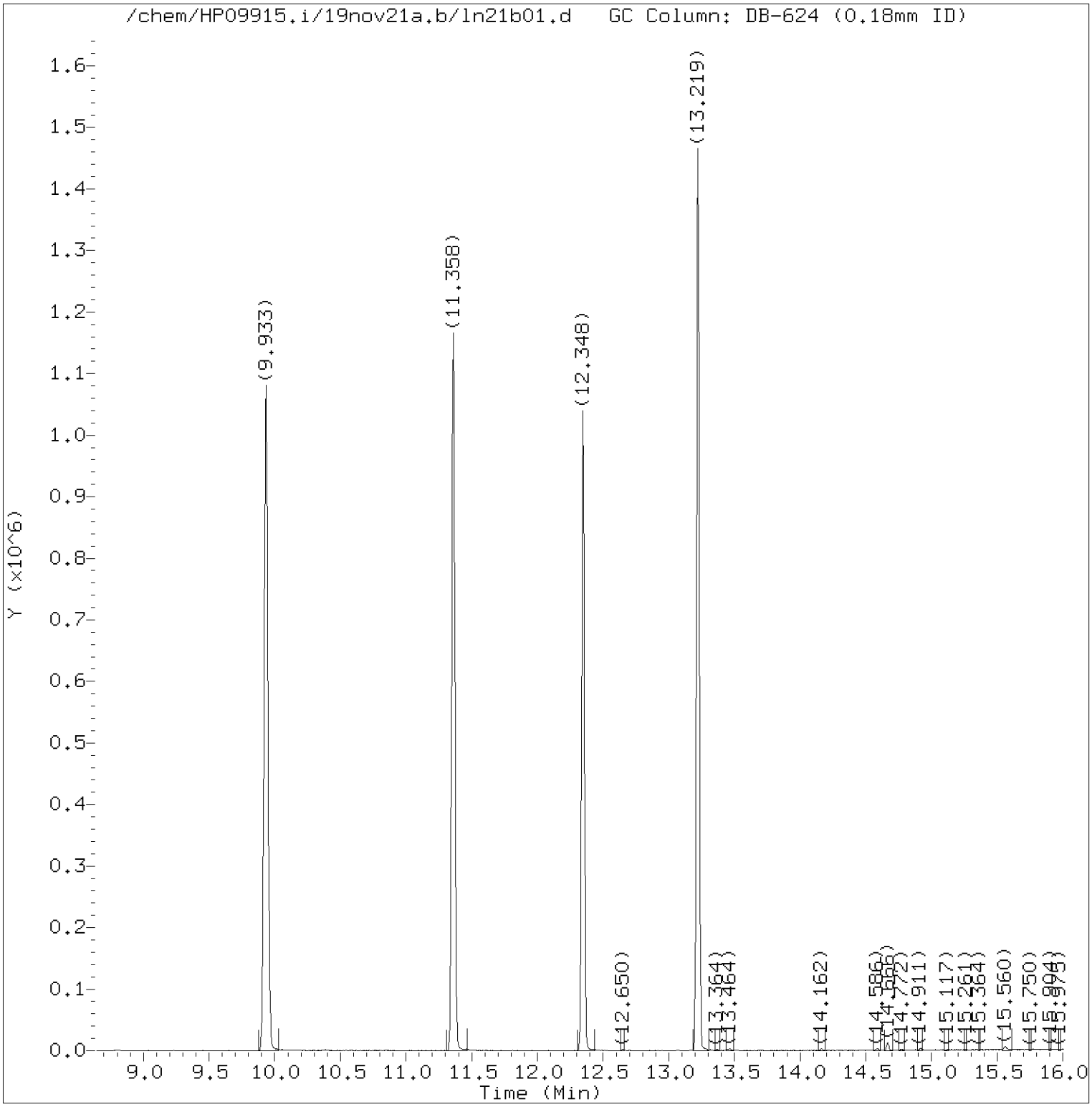
Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21b01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:24 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 09:41 Automation

Sample Name: VBLKL83 Lab Sample ID: VBLKL83

Digitally signed by Linda C. Pape
on 11/21/2019 at 10:13.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21b01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:24 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 09:41 Automation

Sample Name: VBLKL83 Lab Sample ID: VBLKL83

Digitally signed by Linda C. Pape
on 11/21/2019 at 10:13.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21b01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:24 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 09:41 Automation

Sample Name: VBLKL83 Lab Sample ID: VBLKL83

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.509	65	158112	250.000
52)$Dibromofluoromethane	(2)	7.078	113	199192	47.371
57)$1,2-Dichloroethane-d4	(2)	7.535	102	54120	50.501
66)*Fluorobenzene	(2)	7.959	96	860082	50.000
83)$Toluene-d8	(3)	9.933	98	879921	47.963
100)*Chlorobenzene-d5	(3)	11.358	117	701132	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	336566	48.450
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	371721	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/21/2019 at 10:13.
Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL80

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL80

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov20a.b/ln20l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/20/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	20	
75-35-4	1,1-Dichloroethene	20	
67-64-1	Acetone	160	
76-13-1	Freon 113	19	
75-15-0	Carbon Disulfide	17	
75-09-2	Methylene Chloride	21	
156-60-5	trans-1,2-Dichloroethene	20	
75-34-3	1,1-Dichloroethane	20	
156-59-2	cis-1,2-Dichloroethene	21	
78-93-3	2-Butanone	130	
67-66-3	Chloroform	20	
71-55-6	1,1,1-Trichloroethane	20	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	20	
79-01-6	Trichloroethene	21	
123-91-1	1,4-Dioxane	640	
108-88-3	Toluene	20	
127-18-4	Tetrachloroethene	20	
100-41-4	Ethylbenzene	20	
179601-23-1	m+p-Xylene	41	
95-47-6	o-Xylene	20	
1330-20-7	Xylene (Total)	62	
95-50-1	1,2-Dichlorobenzene	21	
91-20-3	Naphthalene	20	

FORM I VOA

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov20a.b/ln20101.d Injection date and time: **20-NOV-2019 09:13**
Data file Sample Info. Line: LCSL80;LCSL80;1;3;LCS;;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.516	(-0.022)	943	65	168087	(10)	250.00	
66) Fluorobenzene	7.962	(-0.003)	2015	96	923804	(4)	50.00	
100) Chlorobenzene-d5	11.361	(0.000)	3072	117	756463	(4)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	402949	(3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.078	(0.000)	113	216175	47.864	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.535	(0.000)	102	57092	49.599	99%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	960737	48.538	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.348	(0.000)	95	372288	49.672	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)	2.406	(-0.000)	62	122924	19.836	19.84			0.2	1
17) 1,1-Dichloroethene	(2)	3.770	(-0.001)	96	79383	20.271	20.27			0.2	1
18) Acetone	(1)	3.808	(0.002)	58	88894	157.234	157.23			0.7	20
19) Freon 113	(2)	3.805	(-0.000)	101	84393	18.889	18.89			0.2	10
23) Carbon Disulfide	(2)	4.078	(-0.000)	76	247183	16.750	16.75			0.2	5
28) Methylene Chloride	(2)	4.483	(-0.001)	84	96028	20.603	20.60			0.3	1
32) trans-1,2-Dichloroethene	(2)	4.895	(-0.000)	96	91810	20.266	20.27			0.2	1
36) 1,1-Dichloroethane	(2)	5.560	(-0.000)	63	155286	19.649	19.65			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.384	(-0.000)	96	108658	21.369	21.37			0.2	1
44) 2-Butanone	(2)	6.368	(-0.000)	43	453248	130.122	130.12			0.3	10
51) Chloroform	(2)	6.863	(-0.000)	83	154156	20.395	20.39			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.088	(-0.000)	97	128442	19.910	19.91			0.3	1
60) Benzene	(2)	7.560	(-0.000)	78	389052	20.704	20.70			0.2	1
61) 1,2-Dichloroethane	(2)	7.634	(-0.000)	62	121733	20.141	20.14			0.3	1
71) Trichloroethene	(2)	8.435	(0.000)	95	97941	20.700	20.70			0.2	1
75) 1,4-Dioxane	(1)	8.856	(0.013)	88	36202	642.599	642.60			29	250
88) Toluene	(3)	10.007	(-0.000)	92	253800	20.452	20.45			0.2	1
93) Tetrachloroethene	(3)	10.541	(0.000)	166	104969	19.973	19.97			0.2	1
104) Ethylbenzene	(3)	11.467	(-0.000)	91	482617	20.348	20.35			0.4	1
106) m+p-Xylene	(3)	11.580	(-0.000)	106	387000	41.477	41.48			1	5
107) o-Xylene	(3)	11.908	(-0.000)	106	185853	20.166	20.17			0.4	1
108) Xylene (Total)	(3)			106	572853	61.643	61.64			1	6
138) 1,2-Dichlorobenzene	(4)	13.502	(-0.000)	146	225904	20.572	20.57			0.2	5
148) Naphthalene	(4)	14.772	(-0.000)	128	528621	20.044	20.04			1	5

Digitally signed by Don V. Viray on 11/20/2019 at 22:29. Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov20a.b/ln20101.d Injection date and time: **20-NOV-2019 09:13**
Data file Sample Info. Line: LCSL80;LCSL80;1;3;LCS;;;;ln20b01; Instrument ID: **HP09915.i** Batch: **L193241AA**
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Blank Data file reference: **/chem/HP09915.i/19nov20a.b/ln20b01.d**

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 20-NOV-2019 09:14
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov20a.b/ln20c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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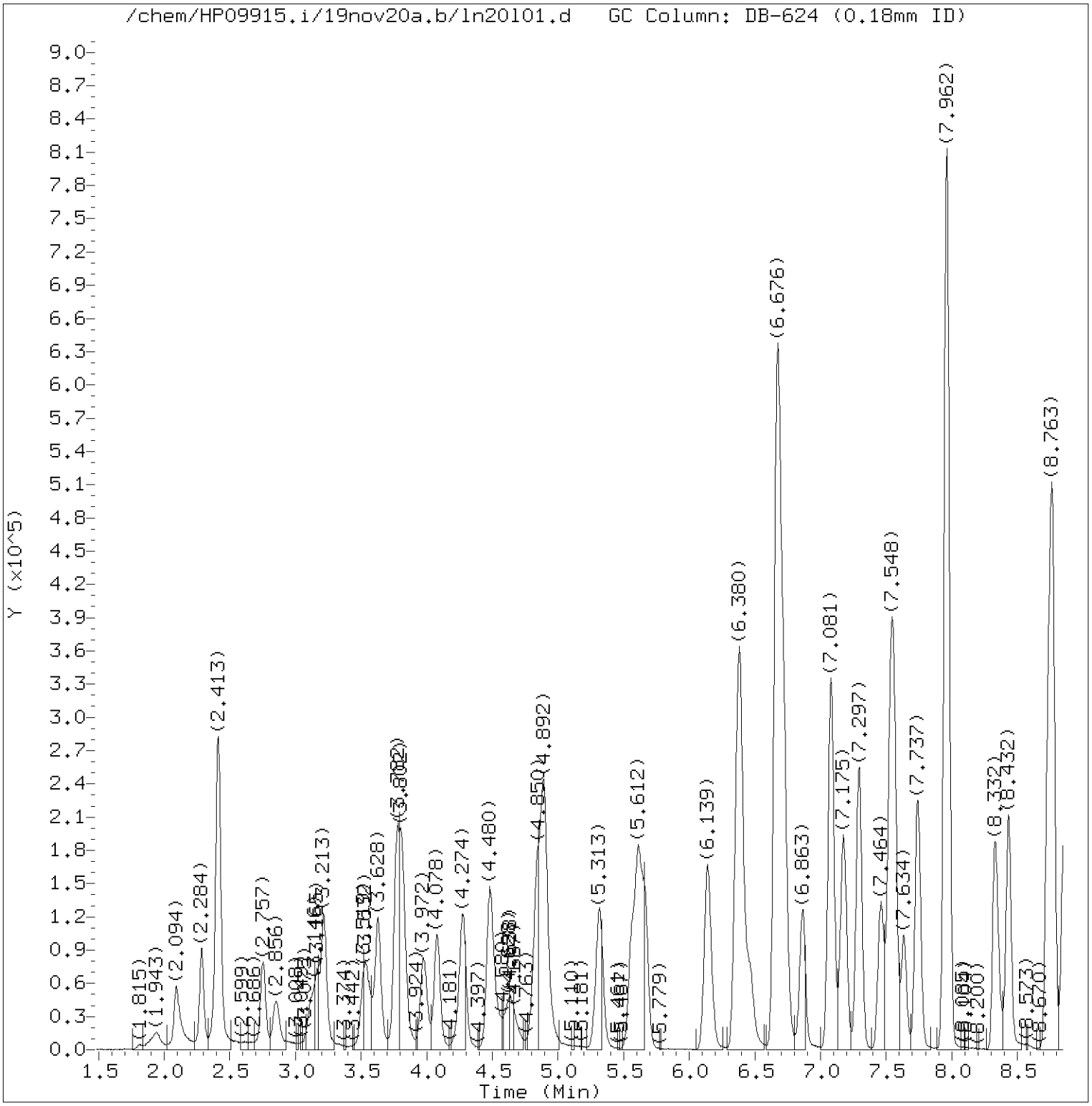
Total number of targets = 24

Digitally signed by Don V. Viray on 11/20/2019 at 22:29. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:50. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

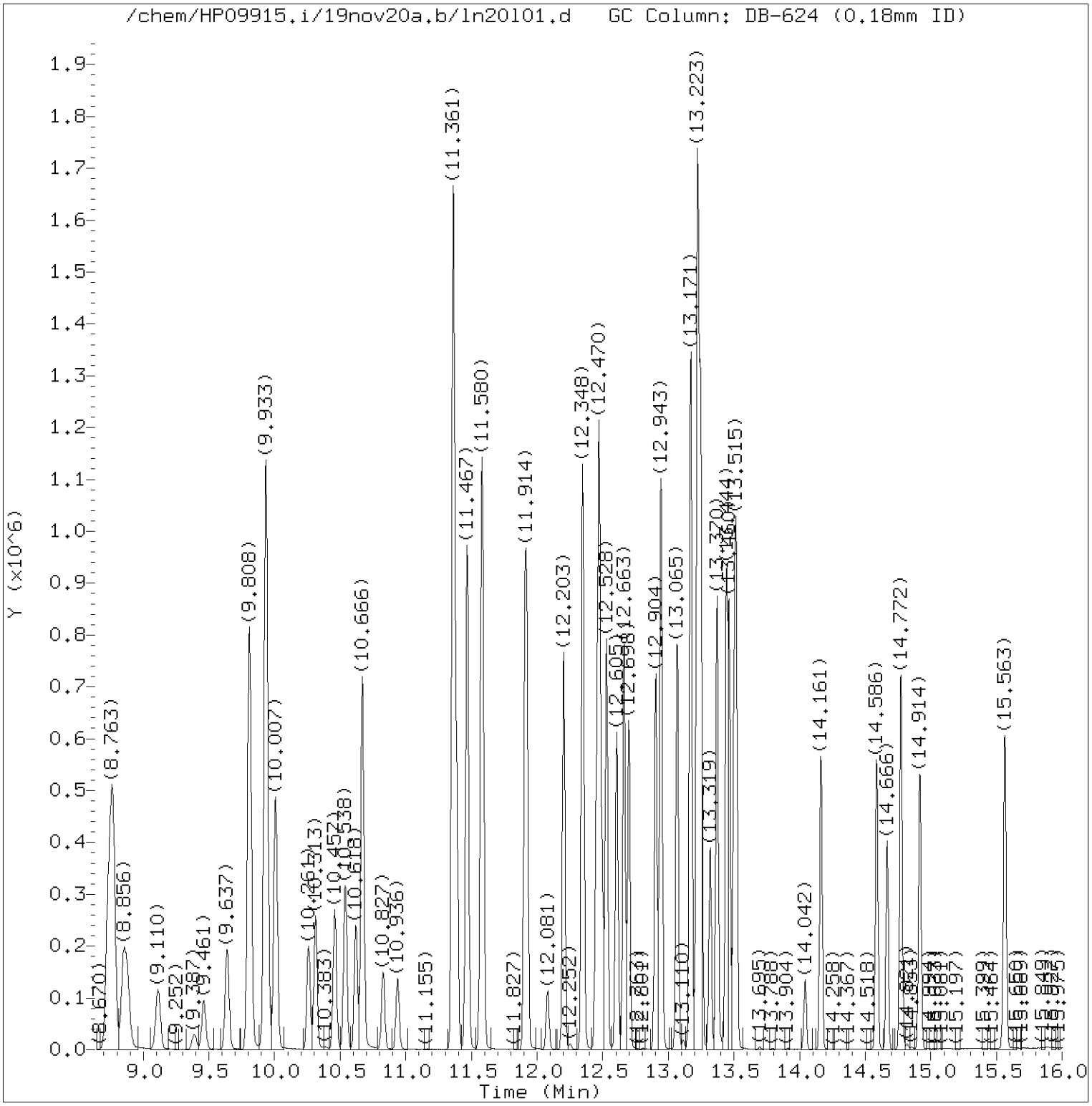
Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20l01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 09:13 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Sample Name: LCSL80 Lab Sample ID: LCSL80

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20l01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 09:13 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Sample Name: LCSL80 Lab Sample ID: LCSL80

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov20a.b/ln20l01.d Instrument ID: HP09915.i
Injection date and time: 20-NOV-2019 09:13 Analyst ID: KKM02078

Method used: /chem/HP09915.i/19nov20a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 20-NOV-2019 09:14
Date, time and analyst ID of latest file update: 20-Nov-2019 11:52 kkm02078

Sample Name: LCSL80 Lab Sample ID: LCSL80

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	2.406	62	122924	19.836
17) 1,1-Dichloroethene	(2)	3.770	96	79383	20.271
19) Freon 113	(2)	3.805	101	84393	18.889
18) Acetone	(1)	3.808	58	88894	157.234
23) Carbon Disulfide	(2)	4.078	76	247183	16.750
28) Methylene Chloride	(2)	4.483	84	96028	20.603
29)*t-Butyl alcohol-d10	(1)	4.516	65	168087	250.000
32) trans-1,2-Dichloroethene	(2)	4.895	96	91810	20.266
36) 1,1-Dichloroethane	(2)	5.561	63	155286	19.649
44) 2-Butanone	(2)	6.368	43	453248	130.122
42) cis-1,2-Dichloroethene	(2)	6.384	96	108658	21.369
51) Chloroform	(2)	6.863	83	154156	20.395
52)$Dibromofluoromethane	(2)	7.078	113	216175	47.864
53) 1,1,1-Trichloroethane	(2)	7.088	97	128442	19.910
57)$1,2-Dichloroethane-d4	(2)	7.535	102	57092	49.599
60) Benzene	(2)	7.560	78	389052	20.704
61) 1,2-Dichloroethane	(2)	7.634	62	121733	20.141
66)*Fluorobenzene	(2)	7.962	96	923804	50.000
71) Trichloroethene	(2)	8.435	95	97941	20.700
75) 1,4-Dioxane	(1)	8.856	88	36202	642.599
83)$Toluene-d8	(3)	9.933	98	960737	48.538
88) Toluene	(3)	10.007	92	253800	20.452
93) Tetrachloroethene	(3)	10.541	166	104969	19.973
100)*Chlorobenzene-d5	(3)	11.361	117	756463	50.000
104) Ethylbenzene	(3)	11.467	91	482617	20.348
106) m+p-Xylene	(3)	11.580	106	387000	41.477
108) Xylene (Total)	(3)		106	572853	61.643
107) o-Xylene	(3)	11.908	106	185853	20.166
114)$4-Bromofluorobenzene	(3)	12.348	95	372288	49.672
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	402949	50.000
138) 1,2-Dichlorobenzene	(4)	13.502	146	225904	20.572
148) Naphthalene	(4)	14.772	128	528621	20.044

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/20/2019 at 22:29.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL83

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL83

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov21a.b/ln21l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	19	
74-87-3	Chloromethane	19	
106-99-0	1,3-Butadiene	29	
75-01-4	Vinyl Chloride	19	
74-83-9	Bromomethane	16	
75-00-3	Chloroethane	17	
109-66-0	n-Pentane	15	
75-69-4	Trichlorofluoromethane	21	
60-29-7	Ethyl ether	20	
354-23-4	Freon 123a	19	
107-02-8	Acrolein	150	
75-35-4	1,1-Dichloroethene	19	
67-64-1	Acetone	150	
76-13-1	Freon 113	18	
67-63-0	2-Propanol	140	
74-88-4	Methyl Iodide	17	
75-15-0	Carbon Disulfide	16	
107-05-1	Allyl Chloride	17	
79-20-9	Methyl Acetate	18	
75-09-2	Methylene Chloride	20	
75-65-0	t-Butyl alcohol	190	
107-13-1	Acrylonitrile	89	
156-60-5	trans-1,2-Dichloroethene	19	
1634-04-4	Methyl Tertiary Butyl Ether	18	
110-54-3	n-Hexane	18	
75-34-3	1,1-Dichloroethane	19	
108-20-3	di-Isopropyl ether	18	
126-99-8	2-Chloro-1,3-butadiene	17	
637-92-3	Ethyl t-butyl ether	18	
156-59-2	cis-1,2-Dichloroethene	21	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL83

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL83

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov21a.b/ln21l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	40	
78-93-3	2-Butanone	130	
594-20-7	2,2-Dichloropropane	19	
107-12-0	Propionitrile	160	
126-98-7	Methacrylonitrile	140	
74-97-5	Bromochloromethane	19	
109-99-9	Tetrahydrofuran	110	
67-66-3	Chloroform	20	
71-55-6	1,1,1-Trichloroethane	19	
110-82-7	Cyclohexane	17	
563-58-6	1,1-Dichloropropene	19	
56-23-5	Carbon Tetrachloride	18	
78-83-1	Isobutyl Alcohol	500	
71-43-2	Benzene	20	
107-06-2	1,2-Dichloroethane	20	
994-05-8	t-Amyl methyl ether	18	
142-82-5	n-Heptane	17	
71-36-3	n-Butanol	960	
79-01-6	Trichloroethene	20	
108-87-2	Methylcyclohexane	19	
78-87-5	1,2-Dichloropropane	20	
74-95-3	Dibromomethane	20	
123-91-1	1,4-Dioxane	620	
80-62-6	Methyl Methacrylate	18	
75-27-4	Bromodichloromethane	19	
79-46-9	2-Nitropropane	14	
110-75-8	2-Chloroethyl Vinyl Ether	30	
10061-01-5	cis-1,3-Dichloropropene	19	
108-10-1	4-Methyl-2-pentanone	87	
108-88-3	Toluene	20	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL83

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL83

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov21a.b/ln21l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	18	
542-75-6	1,3-Dichloropropene (total)	37	
97-63-2	Ethyl Methacrylate	17	
79-00-5	1,1,2-Trichloroethane	21	
127-18-4	Tetrachloroethene	20	
142-28-9	1,3-Dichloropropane	19	
591-78-6	2-Hexanone	85	
124-48-1	Dibromochloromethane	18	
106-93-4	1,2-Dibromoethane	20	
544-10-5	1-Chlorohexane	19	
108-90-7	Chlorobenzene	20	
630-20-6	1,1,1,2-Tetrachloroethane	19	
100-41-4	Ethylbenzene	20	
179601-23-1	m+p-Xylene	42	
95-47-6	o-Xylene	20	
1330-20-7	Xylene (Total)	62	
100-42-5	Styrene	20	
75-25-2	Bromoform	15	
98-82-8	Isopropylbenzene	21	
108-94-1	Cyclohexanone	480	
108-86-1	Bromobenzene	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	
96-18-4	1,2,3-Trichloropropane	19	
110-57-6	trans-1,4-Dichloro-2-butene	58	
103-65-1	n-Propylbenzene	21	
95-49-8	2-Chlorotoluene	20	
106-43-4	4-Chlorotoluene	20	
108-67-8	1,3,5-Trimethylbenzene	21	
98-06-6	tert-Butylbenzene	20	
76-01-7	Pentachloroethane	18	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL83

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL83

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov21a.b/ln21l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
95-63-6	1,2,4-Trimethylbenzene	20	
135-98-8	sec-Butylbenzene	20	
541-73-1	1,3-Dichlorobenzene	20	
99-87-6	p-Isopropyltoluene	20	
106-46-7	1,4-Dichlorobenzene	21	
526-73-8	1,2,3-Trimethylbenzene	20	
100-44-7	Benzyl Chloride	15	
141-93-5	1,3-Diethylbenzene	19	
105-05-5	1,4-Diethylbenzene	19	
95-50-1	1,2-Dichlorobenzene	20	
104-51-8	n-Butylbenzene	20	
135-01-3	1,2-Diethylbenzene	19	
25340-17-4	Diethylbenzene (total)	56	
96-12-8	1,2-Dibromo-3-chloropropane	18	
108-70-3	1,3,5-Trichlorobenzene	19	
120-82-1	1,2,4-Trichlorobenzene	18	
87-68-3	Hexachlorobutadiene	16	
91-20-3	Naphthalene	19	
87-61-6	1,2,3-Trichlorobenzene	18	
91-57-6	2-Methylnaphthalene	16	

Data file: /chem/HP09915.i/19nov21a.b/ln21l01.d Injection date and time: **21-NOV-2019 09:50**
Data file Sample Info. Line: LCSL83;LCSL83;1;3;LCS;;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 21-NOV-2019 08:49
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.496(-0.003)	937	65	170757 (11)	250.00	
66) Fluorobenzene	7.959(0.000)	2014	96	895510 (6)	50.00	
100) Chlorobenzene-d5	11.361(0.000)	3072	117	731089 (6)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223(0.000)	3651	152	395685 (7)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075(0.000)	113	208873	47.708	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.529(0.000)	102	55217	49.486	99%		80 - 120
83) Toluene-d8	(3)	9.934(0.000)	98	926555	48.436	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345(0.000)	95	362022	49.979	100%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	2.088(0.000)	85	118879	19.036	19.04			0.2	1
4) Chloromethane	(2)	2.281(0.000)	50	113496	18.857	18.86			0.2	1
5) 1,3-Butadiene	(2)	2.413(0.000)	39	146875	29.389	29.39			1	3
6) Vinyl Chloride	(2)	2.403(0.000)	62	113623	18.915	18.91			0.2	1
8) Bromomethane	(2)	2.747(0.000)	94	67718	15.726	15.73			0.3	1
9) Chloroethane	(2)	2.847(0.001)	64	55454	16.798	16.80			0.2	1
11) n-Pentane	(2)	3.210(0.000)	43	112271	14.690	14.69			0.4	10
12) Trichlorofluoromethane	(2)	3.156(0.000)	101	133402	20.627	20.63			0.2	1
14) Ethyl ether	(2)	3.435(0.001)	59	84003	20.101	20.10			0.2	5
15) Freon 123a	(2)	3.525(0.000)	67	99452	19.116	19.12			0.4	5
16) Acrolein	(1)	3.625(0.001)	56	190688	148.846	148.85			2	100
17) 1,1-Dichloroethene	(2)	3.767(-0.000)	96	73082	19.252	19.25			0.2	1
18) Acetone	(1)	3.805(0.001)	58	83980	146.219	146.22			0.7	20
19) Freon 113	(2)	3.802(-0.000)	101	77803	17.964	17.96			0.2	10
21) 2-Propanol	(1)	3.992(0.002)	45	56775	137.506	137.51			18	100
22) Methyl Iodide	(2)	3.969(0.000)	142	131428	16.708	16.71			0.2	1
23) Carbon Disulfide	(2)	4.075(0.000)	76	225161	15.740	15.74			0.2	5
25) Allyl Chloride	(2)	4.268(0.000)	41	118427	17.391	17.39			0.3	5
27) Methyl Acetate	(2)	4.249(-0.000)	43	88270	18.054	18.05			0.2	5
28) Methylene Chloride	(2)	4.471(0.000)	84	90359	19.999	20.00			0.3	1
30) t-Butyl alcohol	(1)	4.638(-0.000)	59	137540	191.319	191.32			12	50
31) Acrylonitrile	(2)	4.831(0.000)	53	234895	89.300	89.30			0.3	20
32) trans-1,2-Dichloroethene	(2)	4.889(0.000)	96	85560	19.483	19.48			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	4.882(-0.000)	73	257047	17.832	17.83			0.2	1
34) n-Hexane	(2)	5.313(0.000)	57	119870	17.545	17.54			2	5
36) 1,1-Dichloroethane	(2)	5.548(0.000)	63	143445	18.725	18.72			0.2	1
38) di-Isopropyl ether	(2)	5.612(-0.000)	45	261090	17.671	17.67			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	5.657(0.000)	53	118366	17.221	17.22			0.2	5
40) Ethyl t-butyl ether	(2)	6.133(0.000)	59	253354	17.669	17.67			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.384(-0.000)	96	102179	20.730	20.73			0.2	1
43) 1,2-Dichloroethene (Total)	(2)		96	187739	40.213	40.21			0.4	2

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov21a.b/ln21l01.d Injection date and time: **21-NOV-2019 09:50**
Data file Sample Info. Line: LCSL83;LCSL83;1;3;LCS;;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 21-NOV-2019 08:49
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	6.361(0.000)	43	442351	131.006	131.01			0.3	10
45) 2,2-Dichloropropane	(2)	6.394(0.000)	77	111627	18.744	18.74			0.3	1
47) Propionitrile	(1)	6.461(0.000)	54	146275	163.299	163.30			14	100
48) Methacrylonitrile	(2)	6.667(-0.000)	67	400873	141.279	141.28			6	50
49) Bromochloromethane	(2)	6.709(-0.000)	128	49407	18.904	18.90			0.2	5
50) Tetrahydrofuran	(1)	6.721(0.000)	71	87199	107.771	107.77			0.7	10
51) Chloroform	(2)	6.860(0.000)	83	146586	20.006	20.01			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.082(0.000)	97	119018	19.032	19.03			0.3	1
54) Cyclohexane	(2)	7.178(-0.000)	56	141265	16.892	16.89			1	5
55) 1,1-Dichloropropene	(2)	7.294(-0.000)	75	116105	19.168	19.17			0.2	5
56) Carbon Tetrachloride	(2)	7.284(0.000)	117	97222	18.330	18.33			0.2	1
58) Isobutyl Alcohol	(1)	7.454(0.003)	41	121599	502.630	502.63			36	250
60) Benzene	(2)	7.561(0.000)	78	367758	20.189	20.19			0.2	1
61) 1,2-Dichloroethane	(2)	7.631(0.000)	62	119034	20.317	20.32			0.3	1
65) t-Amyl methyl ether	(2)	7.738(0.000)	73	254601	17.690	17.69			0.8	5
67) n-Heptane	(2)	7.956(0.000)	43	109713	17.189	17.19			2	5
69) n-Butanol	(1)	8.326(0.002)	56	199622	958.693	958.69			61	250
71) Trichloroethene	(2)	8.429(0.000)	95	92501	20.168	20.17			0.2	1
72) Methylcyclohexane	(2)	8.731(0.000)	83	160259	18.834	18.83			0.5	5
73) 1,2-Dichloropropane	(2)	8.766(0.000)	63	92469	19.992	19.99			0.2	1
74) Dibromomethane	(2)	8.876(0.000)	93	59478	19.874	19.87			0.2	1
75) 1,4-Dioxane	(1)	8.853(0.002)	88	35274	616.336	616.34			29	250
76) Methyl Methacrylate	(2)	8.847(0.000)	69	82115	18.359	18.36			0.2	5
78) Bromodichloromethane	(2)	9.107(0.000)	83	103992	19.364	19.36			0.2	1
79) 2-Nitropropane	(2)	9.384(0.000)	41	23405	14.389	14.39			0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)	9.458(0.000)	63	60340	30.375	30.37			0.2	10
81) cis-1,3-Dichloropropene	(2)	9.638(0.000)	75	135603	19.012	19.01			0.2	1
82) 4-Methyl-2-pentanone	(2)	9.808(0.000)	43	621984	87.269	87.27			0.5	10
88) Toluene	(3)	10.004(0.000)	92	241061	20.100	20.10			0.2	1
89) trans-1,3-Dichloropropene	(3)	10.258(-0.000)	75	120804	17.745	17.74			0.2	1
90) 1,3-Dichloropropene (total)	(3)		100	256407	36.756	36.76			0.4	2
91) Ethyl Methacrylate	(3)	10.313(0.000)	69	140443	16.975	16.97			0.2	5
92) 1,1,2-Trichloroethane	(3)	10.458(0.000)	97	93560	20.576	20.58			0.2	1
93) Tetrachloroethene	(3)	10.538(0.000)	166	99925	19.673	19.67			0.2	1
94) 1,3-Dichloropropane	(3)	10.618(0.000)	76	149885	19.307	19.31			0.2	1
96) 2-Hexanone	(3)	10.670(-0.000)	43	469593	85.030	85.03			0.3	10
97) Dibromochloromethane	(3)	10.827(-0.000)	129	83867	18.006	18.01			0.2	1
99) 1,2-Dibromoethane	(3)	10.937(0.000)	107	97408	19.728	19.73			0.2	1
101) 1-Chlorohexane	(3)	11.364(0.000)	91	121373	18.839	18.84			0.3	5
102) Chlorobenzene	(3)	11.387(0.000)	112	270985	19.981	19.98			0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)	11.464(0.000)	131	82916	18.556	18.56			0.2	1
104) Ethylbenzene	(3)	11.467(0.000)	91	466291	20.342	20.34			0.4	1
106) m+p-Xylene	(3)	11.580(0.000)	106	374583	41.539	41.54			1	5
107) o-Xylene	(3)	11.904(0.000)	106	180611	20.277	20.28			0.4	1
108) Xylene (Total)	(3)		106	555194	61.817	61.82			1	6
109) Styrene	(3)	11.921(0.000)	104	297281	20.197	20.20			0.2	5
110) Bromoform	(3)	12.078(0.000)	173	51595	14.824	14.82			1	4
111) Isopropylbenzene	(3)	12.204(0.000)	105	464963	20.813	20.81			0.2	5
112) Cyclohexanone	(1)	12.287(0.002)	55	108072	482.149	482.15			25	100
115) Bromobenzene	(4)	12.464(-0.000)	156	118387	19.907	19.91			0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	12.448(-0.000)	83	145855	19.514	19.51			0.2	1
117) 1,2,3-Trichloropropane	(4)	12.496(-0.000)	110	44405	19.360	19.36			0.2	5
118) trans-1,4-Dichloro-2-butene	(4)	12.474(-0.000)	53	133192	57.770	57.77			6	50
119) n-Propylbenzene	(4)	12.528(-0.000)	91	548025	21.093	21.09			0.2	5

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov21a.b/ln21l01.d Injection date and time: **21-NOV-2019 09:50**
Data file Sample Info. Line: LCSL83;LCSL83;1;3;LCS;;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 21-NOV-2019 08:49
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

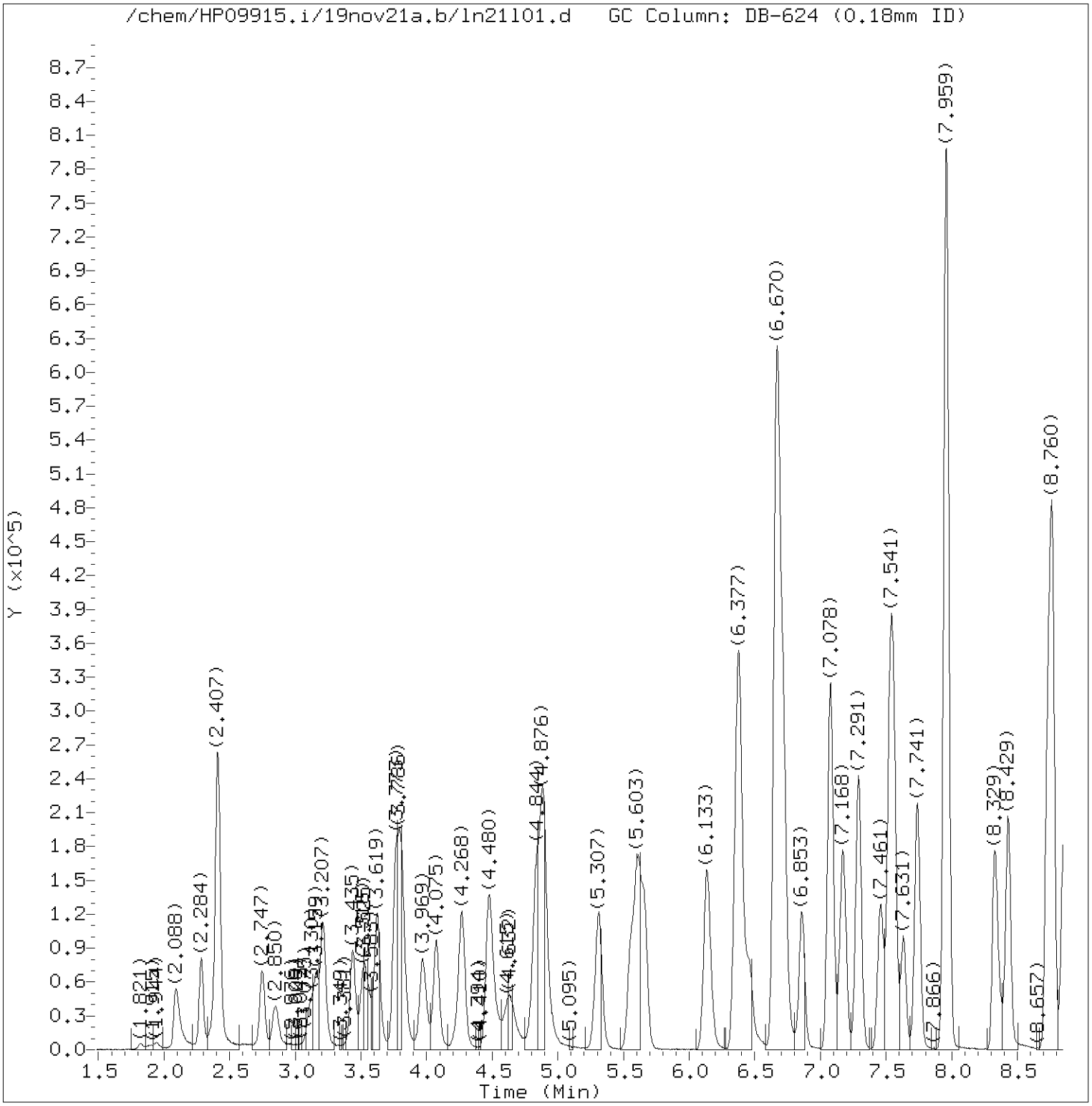
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)	12.605(-0.000)	126	109908	19.912	19.91			0.2	5
121) 4-Chlorotoluene	(4)	12.699(-0.000)	126	113526	19.760	19.76			0.2	5
122) 1,3,5-Trimethylbenzene	(4)	12.663(-0.000)	105	393837	20.858	20.86			0.3	5
124) tert-Butylbenzene	(4)	12.904(-0.000)	134	77963M	19.965	19.97			0.3	5
125) Pentachloroethane	(4)	12.940(-0.000)	167	60994	18.140	18.14			0.2	5
126) 1,2,4-Trimethylbenzene	(4)	12.946(-0.000)	105	407466	20.475	20.48			1	5
127) sec-Butylbenzene	(4)	13.065(0.000)	105	474978	20.384	20.38			0.2	5
129) 1,3-Dichlorobenzene	(4)	13.168(-0.000)	146	223060	20.412	20.41			0.2	5
130) p-Isopropyltoluene	(4)	13.171(-0.000)	119	410287	20.353	20.35			0.2	5
133) 1,4-Dichlorobenzene	(4)	13.239(-0.000)	146	232976	20.565	20.56			0.2	5
134) 1,2,3-Trimethylbenzene	(4)	13.248(-0.000)	105	419667	19.908	19.91			0.3	5
135) Benzyl Chloride	(4)	13.319(-0.000)	91	247243	15.491	15.49			1	5
136) 1,3-Diethylbenzene	(4)	13.371(0.000)	119	245308	18.698	18.70			0.2	5
137) 1,4-Diethylbenzene	(4)	13.441(-0.000)	119	257150	18.501	18.50			0.2	5
138) 1,2-Dichlorobenzene	(4)	13.499(0.000)	146	220908	20.486	20.49			0.2	5
139) n-Butylbenzene	(4)	13.464(-0.000)	92	201574	19.557	19.56			0.2	5
140) 1,2-Diethylbenzene	(4)	13.515(-0.000)	119	206983	18.715	18.72			0.2	5
141) Diethylbenzene (total)	(4)		100	709441	55.914	55.91			0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)	14.039(0.000)	75	28853	17.634	17.63			0.3	5
144) 1,3,5-Trichlorobenzene	(4)	14.162(0.000)	180	153703	18.552	18.55			0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.586(-0.000)	180	146410	18.175	18.17			0.3	5
147) Hexachlorobutadiene	(4)	14.666(-0.000)	225	60761	15.975	15.98			2	5
148) Naphthalene	(4)	14.769(0.000)	128	503848	19.456	19.46			1	5
149) 1,2,3-Trichlorobenzene	(4)	14.914(0.000)	180	143184	18.267	18.27			0.4	5
150) 2-Methylnaphthalene	(4)	15.560(0.000)	142	248524	15.584	15.58			2	4

M = Compound was manually integrated.

Total number of targets = 110

Digitally signed by Linda C. Pape on 11/21/2019 at 10:30. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:40. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

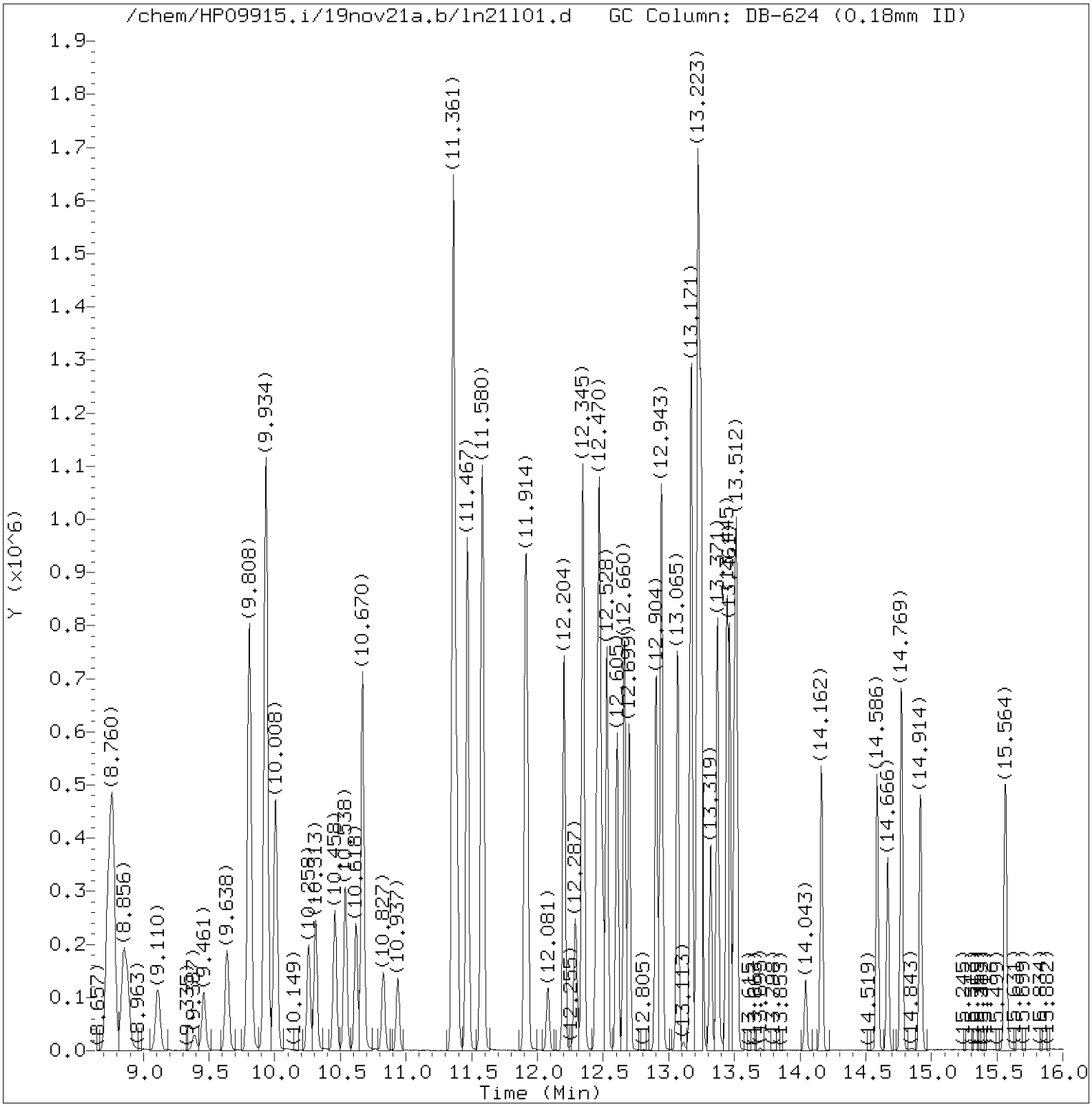
Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21l01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:50 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Sample Name: LCSL83 Lab Sample ID: LCSL83

Digitally signed by Linda C. Pape
on 11/21/2019 at 10:30.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21l01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:50 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Sample Name: LCSL83 Lab Sample ID: LCSL83

Digitally signed by Linda C. Pape
on 11/21/2019 at 10:30.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21l01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:50 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Sample Name: LCSL83 Lab Sample ID: LCSL83

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.088	85	118879	19.036
4) Chloromethane	(2)	2.281	50	113496	18.857
6) Vinyl Chloride	(2)	2.403	62	113623	18.915
5) 1,3-Butadiene	(2)	2.413	39	146875	29.389
8) Bromomethane	(2)	2.747	94	67718	15.726
9) Chloroethane	(2)	2.847	64	55454	16.798
12) Trichlorofluoromethane	(2)	3.156	101	133402	20.627
11) n-Pentane	(2)	3.210	43	112271	14.690
14) Ethyl ether	(2)	3.435	59	84003	20.101
15) Freon 123a	(2)	3.525	67	99452	19.116
16) Acrolein	(1)	3.625	56	190688	148.846
17) 1,1-Dichloroethene	(2)	3.767	96	73082	19.252
19) Freon 113	(2)	3.802	101	77803	17.964
18) Acetone	(1)	3.805	58	83980	146.219
22) Methyl Iodide	(2)	3.969	142	131428	16.708
21) 2-Propanol	(1)	3.992	45	56775	137.506
23) Carbon Disulfide	(2)	4.075	76	225161	15.740
27) Methyl Acetate	(2)	4.249	43	88270	18.054
25) Allyl Chloride	(2)	4.268	41	118427	17.391
28) Methylene Chloride	(2)	4.471	84	90359	19.999
29)*t-Butyl alcohol-d10	(1)	4.496	65	170757	250.000
30) t-Butyl alcohol	(1)	4.638	59	137540	191.319
31) Acrylonitrile	(2)	4.831	53	234895	89.300
33) Methyl Tertiary Butyl Ether	(2)	4.882	73	257047	17.832
32) trans-1,2-Dichloroethene	(2)	4.889	96	85560	19.483
34) n-Hexane	(2)	5.313	57	119870	17.545
36) 1,1-Dichloroethane	(2)	5.548	63	143445	18.725
38) di-Isopropyl ether	(2)	5.612	45	261090	17.671
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	118366	17.221
40) Ethyl t-butyl ether	(2)	6.133	59	253354	17.669
43) 1,2-Dichloroethene (Total)	(2)		96	187739	40.213
44) 2-Butanone	(2)	6.361	43	442351	131.006
42) cis-1,2-Dichloroethene	(2)	6.384	96	102179	20.730
45) 2,2-Dichloropropane	(2)	6.394	77	111627	18.744
47) Propionitrile	(1)	6.461	54	146275	163.299
48) Methacrylonitrile	(2)	6.667	67	400873	141.279
49) Bromochloromethane	(2)	6.709	128	49407	18.904
50) Tetrahydrofuran	(1)	6.721	71	87199	107.771

* = Compound is an internal standard.

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on 11/21/2019 at 10:30.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21l01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:50 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Sample Name: LCSL83 Lab Sample ID: LCSL83

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	6.860	83	146586	20.006
52)$Dibromofluoromethane	(2)	7.075	113	208873	47.708
53) 1,1,1-Trichloroethane	(2)	7.082	97	119018	19.032
54) Cyclohexane	(2)	7.178	56	141265	16.892
56) Carbon Tetrachloride	(2)	7.284	117	97222	18.330
55) 1,1-Dichloropropene	(2)	7.294	75	116105	19.168
58) Isobutyl Alcohol	(1)	7.455	41	121599	502.630
57)$1,2-Dichloroethane-d4	(2)	7.529	102	55217	49.486
60) Benzene	(2)	7.561	78	367758	20.189
61) 1,2-Dichloroethane	(2)	7.631	62	119034	20.317
65) t-Amyl methyl ether	(2)	7.737	73	254601	17.690
67) n-Heptane	(2)	7.956	43	109713	17.189
66)*Fluorobenzene	(2)	7.959	96	895510	50.000
69) n-Butanol	(1)	8.326	56	199622	958.693
71) Trichloroethene	(2)	8.429	95	92501	20.168
72) Methylcyclohexane	(2)	8.731	83	160259	18.834
73) 1,2-Dichloropropane	(2)	8.766	63	92469	19.992
76) Methyl Methacrylate	(2)	8.847	69	82115	18.359
75) 1,4-Dioxane	(1)	8.853	88	35274	616.336
74) Dibromomethane	(2)	8.876	93	59478	19.874
78) Bromodichloromethane	(2)	9.107	83	103992	19.364
79) 2-Nitropropane	(2)	9.384	41	23405	14.389
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	60340	30.375
81) cis-1,3-Dichloropropene	(2)	9.638	75	135603	19.012
82) 4-Methyl-2-pentanone	(2)	9.808	43	621984	87.269
83)$Toluene-d8	(3)	9.934	98	926555	48.436
88) Toluene	(3)	10.004	92	241061	20.100
90) 1,3-Dichloropropene (total)	(3)		100	256407	36.756
89) trans-1,3-Dichloropropene	(3)	10.258	75	120804	17.745
91) Ethyl Methacrylate	(3)	10.313	69	140443	16.975
92) 1,1,2-Trichloroethane	(3)	10.458	97	93560	20.576
93) Tetrachloroethene	(3)	10.538	166	99925	19.673
94) 1,3-Dichloropropane	(3)	10.618	76	149885	19.307
96) 2-Hexanone	(3)	10.670	43	469593	85.030
97) Dibromochloromethane	(3)	10.827	129	83867	18.006
99) 1,2-Dibromoethane	(3)	10.937	107	97408	19.728
100)*Chlorobenzene-d5	(3)	11.361	117	731089	50.000
101) 1-Chlorohexane	(3)	11.364	91	121373	18.839

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/21/2019 at 10:30.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21l01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:50 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Sample Name: LCSL83 Lab Sample ID: LCSL83

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
102) Chlorobenzene	(3)	11.387	112	270985	19.981
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	82916	18.556
104) Ethylbenzene	(3)	11.467	91	466291	20.342
106) m+p-Xylene	(3)	11.580	106	374583	41.539
108) Xylene (Total)	(3)		106	555194	61.817
107) o-Xylene	(3)	11.905	106	180611	20.277
109) Styrene	(3)	11.921	104	297281	20.197
110) Bromoform	(3)	12.078	173	51595	14.824
111) Isopropylbenzene	(3)	12.204	105	464963	20.813
112) Cyclohexanone	(1)	12.287	55	108072	482.149
114)$4-Bromofluorobenzene	(3)	12.345	95	362022	49.979
116) 1,1,2,2-Tetrachloroethane	(4)	12.448	83	145855	19.514
115) Bromobenzene	(4)	12.464	156	118387	19.907
118) trans-1,4-Dichloro-2-butene	(4)	12.474	53	133192	57.770
117) 1,2,3-Trichloropropane	(4)	12.496	110	44405	19.360
119) n-Propylbenzene	(4)	12.528	91	548025	21.093
120) 2-Chlorotoluene	(4)	12.605	126	109908	19.912
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	393837	20.858
121) 4-Chlorotoluene	(4)	12.699	126	113526	19.760
124) tert-Butylbenzene	(4)	12.904	134	77963M	19.965
125) Pentachloroethane	(4)	12.940	167	60994	18.140
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	407466	20.475
127) sec-Butylbenzene	(4)	13.065	105	474978	20.384
129) 1,3-Dichlorobenzene	(4)	13.168	146	223060	20.412
130) p-Isopropyltoluene	(4)	13.171	119	410287	20.353
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	395685	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	232976	20.565
134) 1,2,3-Trimethylbenzene	(4)	13.249	105	419667	19.908
135) Benzyl Chloride	(4)	13.319	91	247243	15.491
136) 1,3-Diethylbenzene	(4)	13.371	119	245308	18.698
141) Diethylbenzene (total)	(4)		100	709441	55.914
137) 1,4-Diethylbenzene	(4)	13.441	119	257150	18.501
139) n-Butylbenzene	(4)	13.464	92	201574	19.557
138) 1,2-Dichlorobenzene	(4)	13.499	146	220908	20.486
140) 1,2-Diethylbenzene	(4)	13.515	119	206983	18.715
142) 1,2-Dibromo-3-chloropropane	(4)	14.039	75	28853	17.634
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	153703	18.552
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	146410	18.175

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/21/2019 at 10:30.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21l01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:50 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Sample Name: LCSL83 Lab Sample ID: LCSL83

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Hexachlorobutadiene	(4)	14.666	225	60761	15.975
148) Naphthalene	(4)	14.769	128	503848	19.456
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	143184	18.267
150) 2-Methylnaphthalene	(4)	15.560	142	248524	15.584

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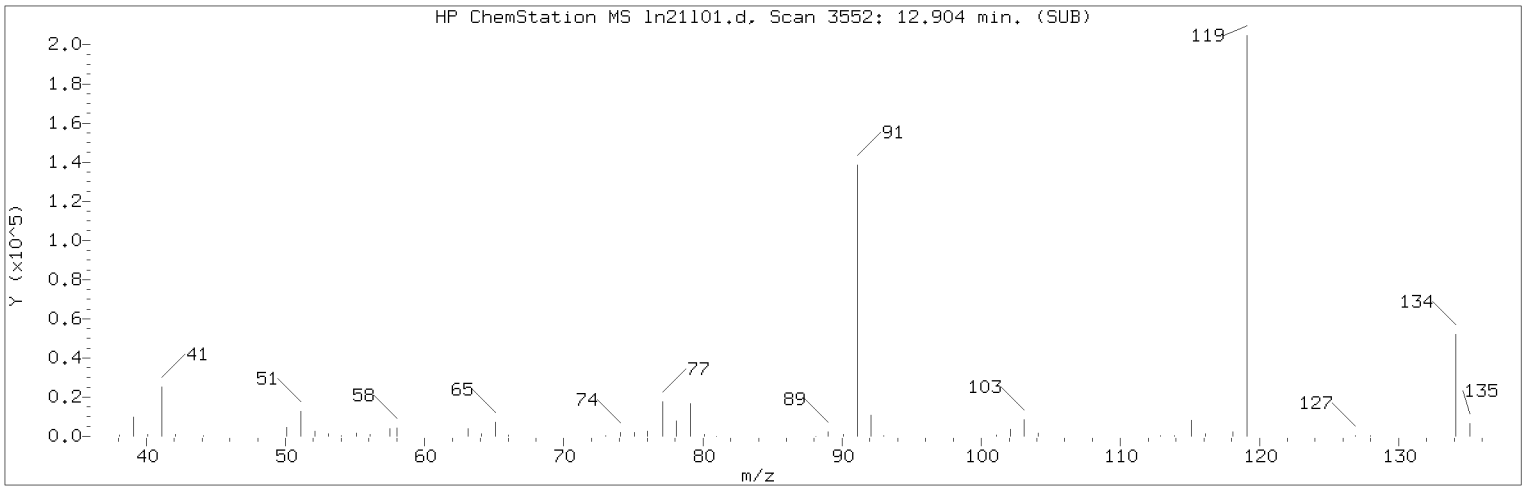
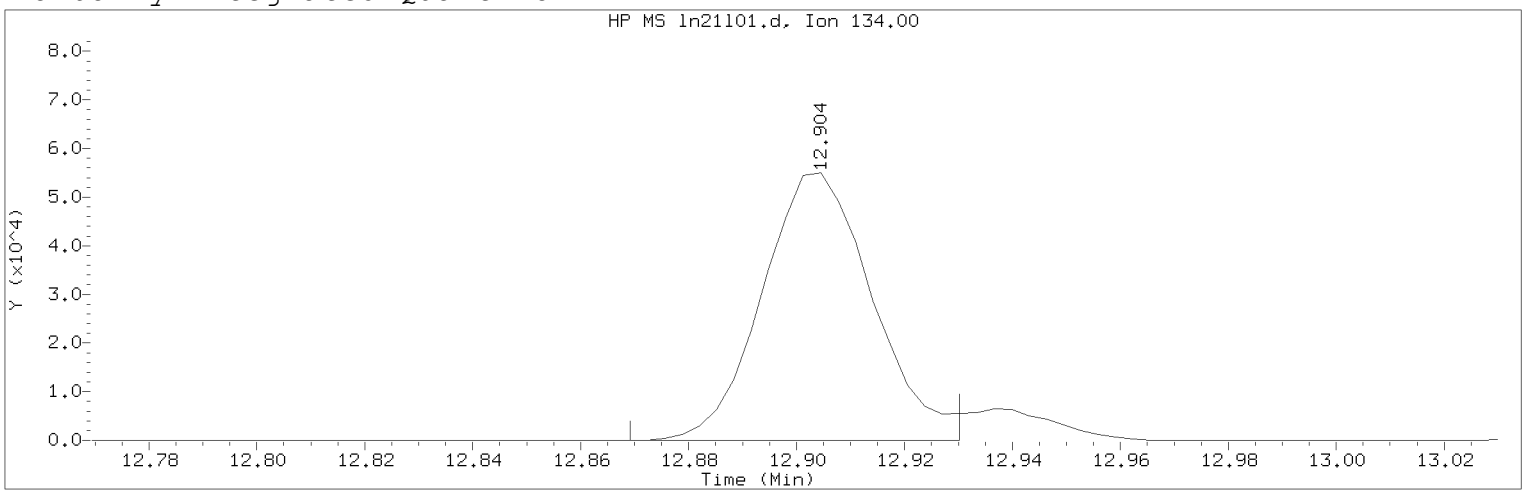
on 11/21/2019 at 10:30.
Target 3.5 esignature user ID: lcp00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov21a.b/ln21101.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:50 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Sample Name: LCSL83 Lab Sample ID: LCSL83

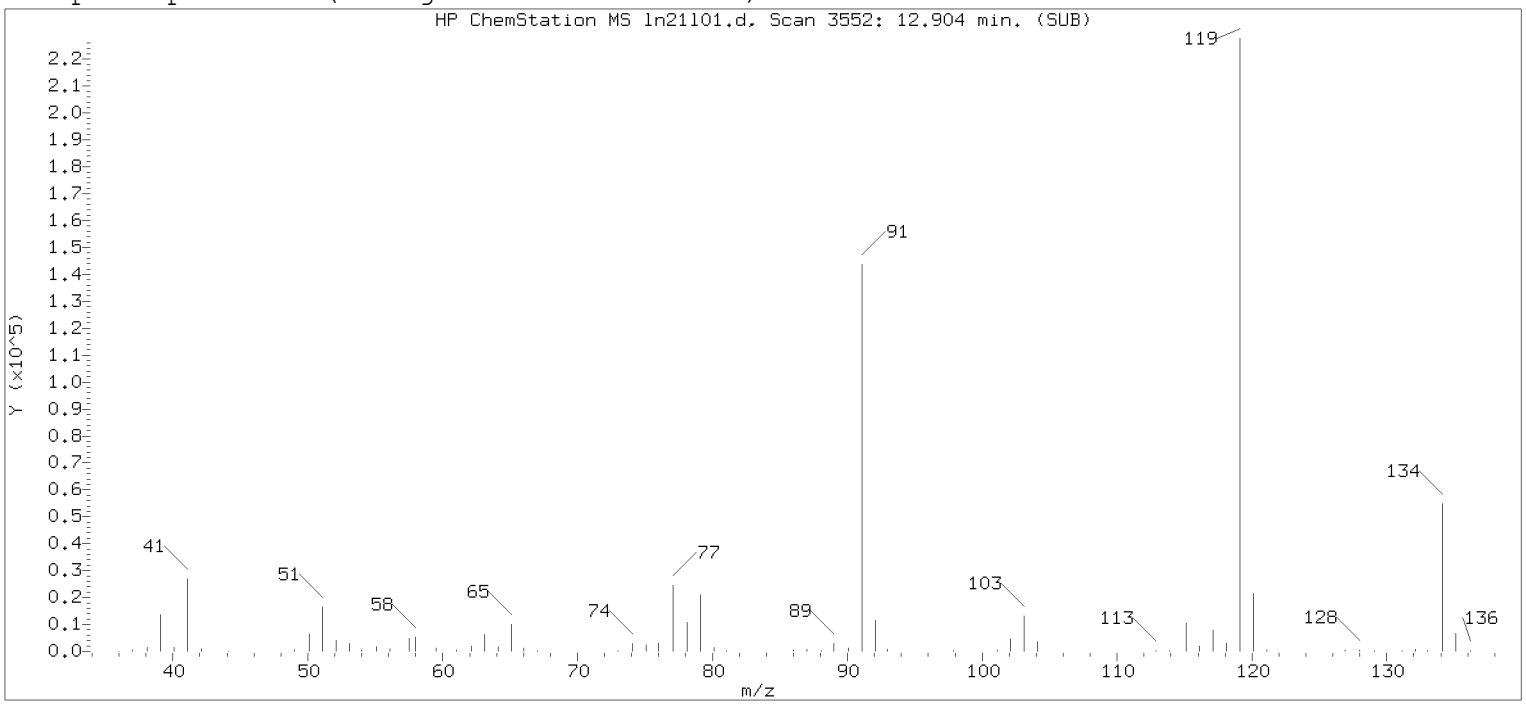
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 77963M
On-Column Amount (ng) : 19.9653
Integration start scan : 3540 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

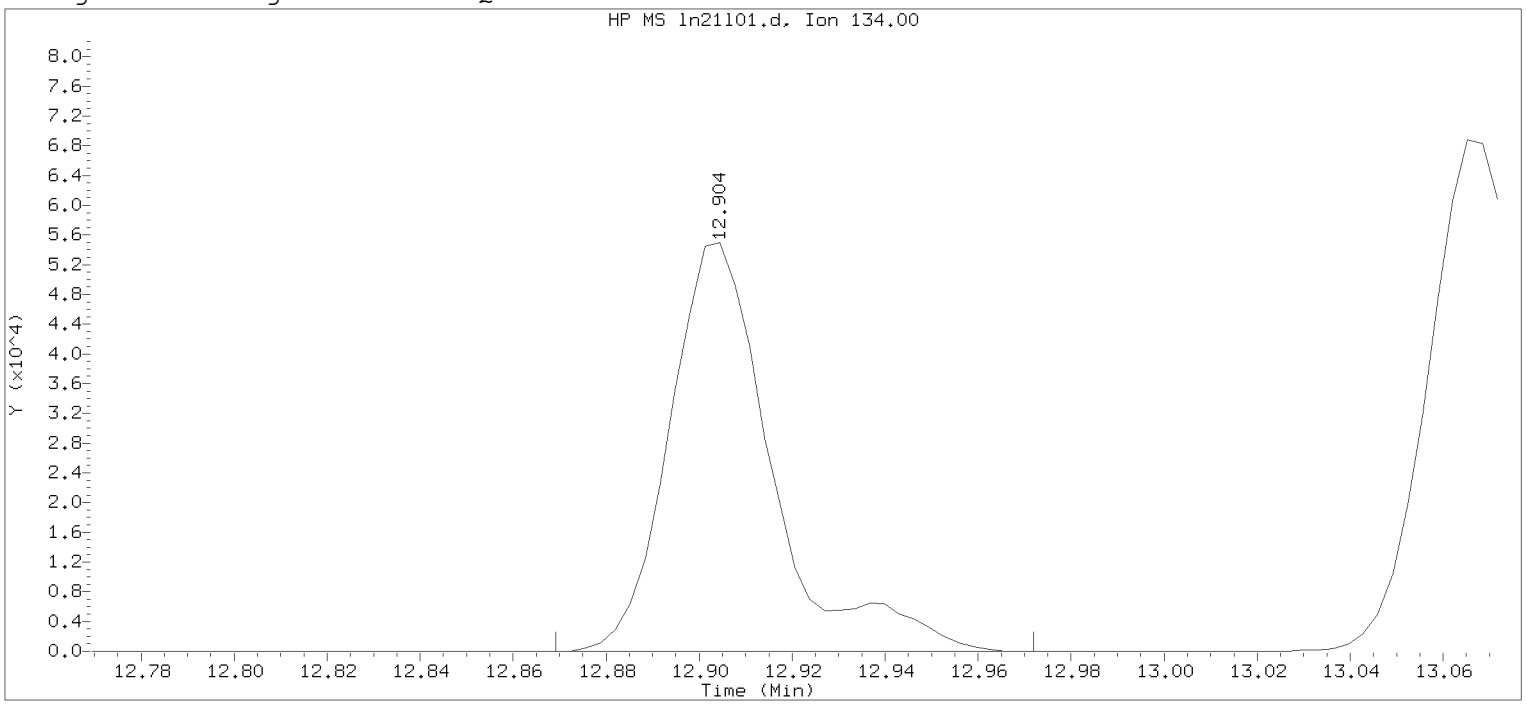
Analyst responsible for change: Digitally signed by Linda C. Pape
on 11/21/2019 at 10:30.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:40.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov21a.b/ln21101.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:50 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 10:07 Automation

Sample Name: LCSL83 Lab Sample ID: LCSL83

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 84738
On-column Amount (ng) : 21.7003
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 11/21/2019 at 10:30.
Target 3.5 esignature user ID: LCP00895

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NYSDEC ASP Category B Data Package

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Project: AD-New Windsor, NY
Groundwater Samples
Collected on 11/13/19

SDG# JCW21

GROUP	SAMPLE NUMBERS
2074778	1202325-1202327

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-18-27
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M. Kauffman

Dana M. Kauffman
Manager

Date: 12/13/2019

Any questions or concerns you might have regarding this data package should be directed to your client representative, Katherine Klinefelter at (717) 556-7256.

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Sample Reference List for SDG Number JCW21
with a Data Package Type of NYSDEC B

06556 - The Johnson Company, Inc.
Project: AD-New Windsor, NY

Lab Sample Number	Client Sample ID	Collection Date	Date Received	Lab Sample Code
1202325	J16-UC02	11/13/2019 13:52	11/14/2019 10:55	C2101
1202326	J16-UC01	11/13/2019 14:44	11/14/2019 10:55	C2102
1202327	J17-UC01	11/13/2019 15:56	11/14/2019 10:55	C2103

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Sample pH Log

SDG: JCW21

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
1202325	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/21/2019 11:09:53PM	10203
1202326	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/21/2019 11:09:54PM	10203
1202327	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/21/2019 11:09:54PM	10203

*pH Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

**Chlorine Present Code Key
NA = Chlorine Not Checked
Y = Chlorine Present
N = Chlorine Not Present

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11997 VOCs- 5ml Water by 8260C/D

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Report Date: November 23, 2019 13:14

Project: AD-New Windsor, NY

Account #: 06556
Group Number: 2074778
SDG: JCW21
PO Number: 1-0145-05
Release Number: 58300.00
State of Sample Origin: VT

Electronic Copy To	The Johnson Company, Inc.	Attn: Tristan Hardy
Electronic Copy To	The Johnson Company, Inc.	Attn: George Lester
Electronic Copy To	VHB	Attn: Quinn Ledak

Respectfully Submitted,

Katherine A. Klinefelter

Katherine A. Klinefelter
Principal Specialist

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
J16-UC02 Grab Groundwater	11/13/2019 13:52	1202325
J16-UC01 Grab Groundwater	11/13/2019 14:44	1202326
J17-UC01 Grab Groundwater	11/13/2019 15:56	1202327

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **J16-UC02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/13/2019 13:52
SDG#: JCW21-01

The Johnson Company, Inc.
ELLE Sample #: GW 1202325
ELLE Group #: 2074778
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	0.5 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.6 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	0.9 J	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	0.2 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	11	0.3	1	1
11997	Trichloroethene	79-01-6	41	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193251AA	11/21/2019 15:45	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193251AA	11/21/2019 15:44	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **J16-UC01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/13/2019 14:44
SDG#: JCW21-02

The Johnson Company, Inc.
ELLE Sample #: GW 1202326
ELLE Group #: 2074778
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	0.7 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.5 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	1	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	0.6 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	15	0.3	1	1
11997	Trichloroethene	79-01-6	38	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193251AA	11/21/2019 16:07	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193251AA	11/21/2019 16:06	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **J17-UC01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/14/2019 10:55
Collection Date/Time: 11/13/2019 15:56
SDG#: JCW21-03

The Johnson Company, Inc.
ELLE Sample #: GW 1202327
ELLE Group #: 2074778
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193251AA	11/21/2019 16:29	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193251AA	11/21/2019 16:28	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2074778
Reported: 11/23/2019 13:14

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: L193251AA	Sample number(s): 1202325-1202327		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	6

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: L193251AA	Sample number(s): 1202325-1202327								
Acetone	150	146.22			97		54-157		
Benzene	20	20.19			101		80-120		
2-Butanone	150	131.01			87		59-135		
Carbon Disulfide	20	15.74			79		65-128		
Chloroform	20	20.01			100		80-120		
1,2-Dichlorobenzene	20	20.49			102		80-120		
1,1-Dichloroethane	20	18.72			94		80-120		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2074778
Reported: 11/23/2019 13:14

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,2-Dichloroethane	20	20.32			102		73-124		
1,1-Dichloroethene	20	19.25			96		80-131		
cis-1,2-Dichloroethene	20	20.73			104		80-125		
trans-1,2-Dichloroethene	20	19.48			97		80-126		
1,4-Dioxane	500	616.34			123		63-146		
Ethylbenzene	20	20.34			102		80-120		
Freon 113	20	17.96			90		73-139		
Methylene Chloride	20	20			100		80-120		
Naphthalene	20	19.46			97		53-124		
Tetrachloroethene	20	19.67			98		80-120		
Toluene	20	20.1			101		80-120		
1,1,1-Trichloroethane	20	19.03			95		67-126		
Trichloroethene	20	20.17			101		80-120		
Vinyl Chloride	20	18.91			95		56-120		
Xylene (Total)	60	61.82			103		80-120		

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: L193251AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1202325	98	103	96	97
1202326	95	100	96	96
1202327	97	100	95	95
Blank	95	101	96	97
LCS	95	99	97	100
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 6556 For Eurofins Lancaster Laboratories Environmental use only Group # 2074778 Sample # 1202325-27

COC # 596346

Client Information

Client: VHB / The Johnson Company	Acct. #: 06556
Project Name/#: AD-New Windsor / 58300	PWSID #:
Project Manager: George Lester	P.O. #:
Sampler: Adam Lobley	Quote #:
State where samples were collected: VT	For Compliance: Yes ☐ No ☒

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☒ NPDES ☐ Surface ☐ | Other: ____

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Analysis Requested: Preservation and Filtration Codes (B260C - VOCs)
J16-UC02	11/13/19	1352	X		3	X
J16-UC01	11/13/19	1444	X		3	X
J17-UC01	11/13/19	1556	X		3	X

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days:

E-mail address: Glester@vhb.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	11/13/19	1645			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by [signature]	11/14/19	1055

EDD Required? Yes No
If yes, format: Excel

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ____ Other ____

Temperature upon receipt 1.3 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 266478

Group Number(s): 2074778

Client: VHB THE JOHNSON COMPANY

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	11/14/2019
Number of Packages:	1	Number of Projects:	3
State/Province of Origin:	VT		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	0
Samples Chilled:	Yes	Air Quality Samples Present:	No
Paperwork Enclosed:	Yes		
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Julissa Rivera-Santa

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192050133	1.3	IR	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCW21

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
1202325	J16-UC02	X		1	
1202326	J16-UC01	X		1	
1202327	J17-UC01	X		1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCW21

GC/MS Volatiles

Fraction: Volatiles by GC/MS

+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

1. Relative Response Factor (RRF)

$$RRF = \frac{AX}{Ais} \times \frac{Cis}{Cx}$$

Where:

Ax = Area of the characteristic ion for the compound to be measured
Ais = Area of the characteristic ion for the specific internal standard to be measured
Cis = Concentration of the internal standard
Cx = Concentration of the compound to be measured

2. % Relative Standard Deviation (%RSD)

$$\%RSD = \frac{standard\ deviation}{Mean} \times 100$$

3. % Difference

$$\%D = \frac{RRFc - RRFi}{RRFi} \times 100$$

Where:

RRFc = Relative response factor from the continuing calibration standard
RRFi = Mean relative response factor from the initial calibration

4. Concentration

$$Concentration\ (\mu g/L) = \frac{(Ax)(Is)(Df)}{(Ais)(RRF)}$$

Where:

Ax, Ais, and RRF are as given in 1. above
Is = Amount of internal standard added in parts per billion (µg/L)
Df = Dilution factor

5. % Recovery (% Rec)

$$\%Rec = \frac{SSR - SR}{SA} \times 100$$

Where:

SSR = Spiked sample result
SR = Sample result
SA = Spike added

6. Relative Percent Difference (RPD)

$$RPD = \frac{(MSR - MSRD)}{(1/2)(MSR + MSRD)} \times 100$$

Where:

MSR = Matrix spike recovery
MSRD = Matrix spike recovery duplicate

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: The Johnson Company, Inc.
SDG: JCW21

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
VOCs- 5ml Water by 8260C/D	L193251AA	VBLKL83	11/21/2019 09:24
		LCSL83	11/21/2019 09:50
		1202325	11/21/2019 15:45
		1202326	11/21/2019 16:07
		1202327	11/21/2019 16:29

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: JCW21
Matrix: LIQUID

Fraction: Volatiles by GC/MS

L193251AA / VBLKL83 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	11/21/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	11/21/19	N.D.	ug/l	0.2	1
Acetone	11/21/19	N.D.	ug/l	0.7	20
Freon 113	11/21/19	N.D.	ug/l	0.2	10
Carbon Disulfide	11/21/19	N.D.	ug/l	0.2	5
Methylene Chloride	11/21/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	11/21/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	11/21/19	N.D.	ug/l	0.2	1
2-Butanone	11/21/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	11/21/19	N.D.	ug/l	0.2	1
Chloroform	11/21/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	11/21/19	N.D.	ug/l	0.3	1
Benzene	11/21/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	11/21/19	N.D.	ug/l	0.3	1
Trichloroethene	11/21/19	N.D.	ug/l	0.2	1
1,4-Dioxane	11/21/19	N.D.	ug/l	29	250
Toluene	11/21/19	N.D.	ug/l	0.2	1
Tetrachloroethene	11/21/19	N.D.	ug/l	0.2	1
Ethylbenzene	11/21/19	N.D.	ug/l	0.4	1
Xylene (Total)	11/21/19	N.D.	ug/l	1	6
1,2-Dichlorobenzene	11/21/19	N.D.	ug/l	0.2	5
Naphthalene	11/21/19	N.D.	ug/l	1	5

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Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: JCW21
Matrix: LIQUID

Fraction: Volatiles by GC/MS

L193251AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKL83	101	80 - 120	97	80 - 120	95	80 - 120	96	80 - 120
LCSL83	99	80 - 120	100	80 - 120	95	80 - 120	97	80 - 120
1202325	103	80 - 120	97	80 - 120	98	80 - 120	96	80 - 120
1202326	100	80 - 120	96	80 - 120	95	80 - 120	96	80 - 120
1202327	100	80 - 120	95	80 - 120	97	80 - 120	95	80 - 120

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: JCW21
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSL83	Batch: **L193251AA** (Sample number(s): 1202325-1202327)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	18.91	NA	95	NA	56-120	NA	NA
1,1-Dichloroethene	20	19.25	NA	96	NA	80-131	NA	NA
Acetone	150	146.22	NA	97	NA	54-157	NA	NA
Freon 113	20	17.96	NA	90	NA	73-139	NA	NA
Carbon Disulfide	20	15.74	NA	79	NA	65-128	NA	NA
Methylene Chloride	20	20	NA	100	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	19.48	NA	97	NA	80-126	NA	NA
1,1-Dichloroethane	20	18.72	NA	94	NA	80-120	NA	NA
2-Butanone	150	131.01	NA	87	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	20.73	NA	104	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	19.03	NA	95	NA	67-126	NA	NA
Chloroform	20	20.01	NA	100	NA	80-120	NA	NA
1,2-Dichloroethane	20	20.32	NA	102	NA	73-124	NA	NA
Benzene	20	20.19	NA	101	NA	80-120	NA	NA
Trichloroethene	20	20.17	NA	101	NA	80-120	NA	NA
1,4-Dioxane	500	616.34	NA	123	NA	63-146	NA	NA
Toluene	20	20.1	NA	101	NA	80-120	NA	NA
Tetrachloroethene	20	19.67	NA	98	NA	80-120	NA	NA
Ethylbenzene	20	20.34	NA	102	NA	80-120	NA	NA
Xylene (Total)	60	61.82	NA	103	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	20.49	NA	102	NA	80-120	NA	NA
Naphthalene	20	19.46	NA	97	NA	53-124	NA	NA

Fraction: Volatiles by GC/MS

11997: VOCs- 5ml Water by 8260C/D Analyte Name	Default MDL	Default LOQ	Units
Vinyl Chloride	0.2	1	ug/l
1,1-Dichloroethene	0.2	1	ug/l
Acetone	0.7	20	ug/l
Freon 113	0.2	10	ug/l
Carbon Disulfide	0.2	5	ug/l
Methylene Chloride	0.3	1	ug/l
trans-1,2-Dichloroethene	0.2	1	ug/l
1,1-Dichloroethane	0.2	1	ug/l
2-Butanone	0.3	10	ug/l
cis-1,2-Dichloroethene	0.2	1	ug/l
Chloroform	0.2	1	ug/l
1,1,1-Trichloroethane	0.3	1	ug/l
Benzene	0.2	1	ug/l
1,2-Dichloroethane	0.3	1	ug/l
Trichloroethene	0.2	1	ug/l
1,4-Dioxane	29	250	ug/l
Toluene	0.2	1	ug/l
Tetrachloroethene	0.2	1	ug/l
Ethylbenzene	0.4	1	ug/l
Xylene (Total)	1	6	ug/l
1,2-Dichlorobenzene	0.2	5	ug/l
Naphthalene	1	5	ug/l

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln04t06.d BFB Injection Date: 11/04/19

Instrument ID: HP09915 BFB Injection Time: 14:18

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.48
75	30.0 - 60.0% of mass 95	44.65
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.22
173	Less than 2.0% of mass 174	0.51 (0.61)1
174	Greater than 50.0% of mass 95	83.73
175	5.0 - 9.0% of mass 174	5.92 (7.07)1
176	Greater than 95.0%, but less than 101.0% of mass 174	82.66 (98.72)1
177	5.0 - 9.0% of mass 176	5.37 (6.49)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	ln04i01.d	11/04/19	14:51
02	VSTD100	ln04i02.d	11/04/19	15:13
03	VSTD50	ln04i03.d	11/04/19	15:35
04	VSTD20	ln04i04.d	11/04/19	15:57
05	VSTD10	ln04i05.d	11/04/19	16:19
06	VSTD4	ln04i06.d	11/04/19	16:41
07	VSTD1	ln04i07.d	11/04/19	17:03
08	ICVLLG	ln04v02.d	11/04/19	18:42

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln21t02.d BFB Injection Date: 11/21/19

Instrument ID: HP09915 BFB Injection Time: 07:42

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.38
75	30.0 - 60.0% of mass 95	44.70
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.06
173	Less than 2.0% of mass 174	0.40 (0.48)1
174	Greater than 50.0% of mass 95	82.72
175	5.0 - 9.0% of mass 174	5.73 (6.92)1
176	Greater than 95.0%, but less than 101.0% of mass 174	80.53 (97.35)1
177	5.0 - 9.0% of mass 176	5.22 (6.48)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	ln21c01.d	11/21/19	08:18
02	RVLL83 - RLVL83	ln21r01.d	11/21/19	09:02
03	VBLKL83	ln21b01.d	11/21/19	09:24
04	LCSL83	ln21l01.d	11/21/19	09:50
05	1202441	ln21s02.d	11/21/19	10:59
06	1202286	ln21s03.d	11/21/19	11:21
07	1202287MS	ln21s04.d	11/21/19	11:43
08	1202288MSD	ln21s05.d	11/21/19	12:04
09	1202289	ln21s06.d	11/21/19	12:26
10	1202290	ln21s07.d	11/21/19	12:48
11	1202291	ln21s08.d	11/21/19	13:10
12	1202292	ln21s09.d	11/21/19	13:32
13	1202293	ln21s10.d	11/21/19	13:54
14	1202294	ln21s11.d	11/21/19	14:16
15	1202321	ln21s12.d	11/21/19	14:39
16	1202322	ln21s13.d	11/21/19	15:01
17	1202323	ln21s14.d	11/21/19	15:23
18	1202325	ln21s15.d	11/21/19	15:45
19	1202326	ln21s16.d	11/21/19	16:07
20	1202327	ln21s17.d	11/21/19	16:29
21	1202434	ln21s18.d	11/21/19	16:51
22	1202437	ln21s19.d	11/21/19	17:13

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln21t02.d BFB Injection Date: 11/21/19

Instrument ID: HP09915 BFB Injection Time: 07:42

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.38
75	30.0 - 60.0% of mass 95	44.70
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.06
173	Less than 2.0% of mass 174	0.40 (0.48)1
174	Greater than 50.0% of mass 95	82.72
175	5.0 - 9.0% of mass 174	5.73 (6.92)1
176	Greater than 95.0%, but less than 101.0% of mass 174	80.53 (97.35)1
177	5.0 - 9.0% of mass 176	5.22 (6.48)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1202438	ln21s20.d	11/21/19	17:35
24	1202439	ln21s21.d	11/21/19	17:57
25	1202440	ln21s22.d	11/21/19	18:19

FORM V VOA

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 11/04/19 Time: 18:42

Lab File ID: ln04v02.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	m+p-Xylene	0.6167	0.6315	40.96	40	2	#
#	o-Xylene	0.6092	0.6189	20.32	20	2	#
#	Styrene	1.0066	1.0350	20.56	20	3	#
#	Bromoform	0.2380	0.2137	17.95	20	-10	#
#	Isopropylbenzene	1.5279	1.5939	20.86	20	4	#
	Cyclohexanone	0.3282	0.2949	449.36	500	-10	
	Bromobenzene	0.7515	0.7447	19.82	20	-1	
#	1,1,2,2-Tetrachloroethane	0.9445	0.9245	19.58	20	-2	#
	1,2,3-Trichloropropane	0.2898	0.2890	19.94	20	0	
	trans-1,4-Dichloro-2-butene	0.2913	0.2850	97.83	100	-2	
	n-Propylbenzene	3.2831	3.4091	20.77	20	4	
	2-Chlorotoluene	0.6975	0.7037	20.18	20	1	
	4-Chlorotoluene	0.7260	0.7301	20.11	20	1	
	1,3,5-Trimethylbenzene	2.3860	2.4518	20.55	20	3	
	tert-Butylbenzene	0.4934	0.5090	20.63	20	3	
	Pentachloroethane	0.4249	0.3657	17.21	20	-14	
	1,2,4-Trimethylbenzene	2.5147	2.5110	19.97	20	0	
	sec-Butylbenzene	2.9444	3.0247	20.55	20	3	
#	1,3-Dichlorobenzene	1.3809	1.3855	20.07	20	0	#
	p-Isopropyltoluene	2.5473	2.6162	20.54	20	3	
#	1,4-Dichlorobenzene	1.4315	1.4660	20.48	20	2	#
	1,2,3-Trimethylbenzene	2.6637	2.6470	19.87	20	-1	
	Benzyl Chloride	2.0168	1.6153	16.02	20	-20	
	1,3-Diethylbenzene	1.6578	1.5827	19.09	20	-5	
	1,4-Diethylbenzene	1.7564	1.6691	19.01	20	-5	
#	1,2-Dichlorobenzene	1.3626	1.3874	20.36	20	2	#
	n-Butylbenzene	1.3024	1.2702	19.50	20	-2	
	1,2-Diethylbenzene	1.3975	1.3386	19.16	20	-4	
#	1,2-Dibromo-3-chloropropane	0.2068	0.1994	19.29	20	-4	#
	1,3,5-Trichlorobenzene	1.0469	0.9964	19.04	20	-5	
#	1,2,4-Trichlorobenzene	1.0179	0.9765	19.19	20	-4	#
	Hexachlorobutadiene	0.4806	0.4071	16.94	20	-15	
	Naphthalene	3.2725	3.2676	19.97	20	0	
	1,2,3-Trichlorobenzene	0.9905	0.9443	19.07	20	-5	
	2-Methylnaphthalene	2.0152	1.8367	18.23	20	-9	

Average %Drift 5

Compounds with required minimum RRF.
Maximum % Drift = 30 %

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Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem/HP09915.i/19nov04i.b/ln04i07.d
/chem/HP09915.i/19nov04i.b/ln04i06.d
/chem/HP09915.i/19nov04i.b/ln04i05.d
/chem/HP09915.i/19nov04i.b/ln04i04.d
/chem/HP09915.i/19nov04i.b/ln04i03.d
/chem/HP09915.i/19nov04i.b/ln04i02.d
/chem/HP09915.i/19nov04i.b/ln04i01.d

File /chem/HP09915.i/19nov04i.b/ln04i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem/HP09915.i/19nov21a.b/ln21c01.d

RT Summary

Internal Standard Name	File ID: ln21c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	4.493	4.509	Yes
Fluorobenzene	7.959	7.959	Yes
Chlorobenzene-d5	11.361	11.361	Yes
1,4-Dichlorobenzene-d4	13.223	13.223	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: ln21c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	153538	269779	134890	539558	Yes
Fluorobenzene	842128	1160755	580378	2321510	Yes
Chlorobenzene-d5	689674	904578	452289	1809156	Yes
1,4-Dichlorobenzene-d4	371519	483927	241964	967854	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments:_____

report generated on 11/21/2019 at 08:49

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/21/19 Time: 08:18

Lab File ID: ln21c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3487	0.3200	45.89	50	-8	#
# Chloromethane	0.3361	0.3161	47.03	50	-6	#
1,3-Butadiene	0.2790	0.3523	63.13	50	26	<-
# Vinyl Chloride	0.3354	0.3056	45.55	50	-9	#
# Bromomethane	0.2404	0.2245	46.69	50	-7	#
# Chloroethane	0.1843	0.1686	45.74	50	-9	#
n-Pentane	0.4267	0.3590	42.06	50	-16	
# Trichlorofluoromethane	0.3611	0.3399	47.06	50	-6	#
Ethyl ether	0.2333	0.2035	43.60	50	-13	
Freon 123a	0.2905	0.2705	46.55	50	-7	
Acrolein	1.8756	2.0074	535.14	500	7	
# 1,1-Dichloroethene	0.2120	0.1985	46.82	50	-6	#
# 1,1-Dichloroethene(2)	0.1063	0.0960	45.18	50	-10	#<-
# Acetone	0.8409	0.8836	105.08	100	5	#
# Freon 113	0.2418	0.2339	48.36	50	-3	#
2-Propanol	0.6045	0.5949	246.02	250	-2	
Methyl Iodide	0.4392	0.4071	46.34	50	-7	
# Carbon Disulfide	0.7987	0.7437	46.56	50	-7	#
Allyl Chloride	0.3802	0.2978	39.16	50	-22	<-
# Methyl Acetate	0.2730	0.2237	40.97	50	-18	#
# Methylene Chloride	0.2523	0.2372	47.01	50	-6	#
t-Butyl alcohol	1.0525	1.0059	238.91	250	-4	
Acrylonitrile	0.1469	0.1320	44.95	50	-10	
# trans-1,2-Dichloroethene	0.2452	0.2282	46.53	50	-7	#
# Methyl Tertiary Butyl Ether	0.8048	0.7031	43.68	50	-13	#
n-Hexane	0.3815	0.3533	46.30	50	-7	
# 1,1-Dichloroethane	0.4277	0.3850	45.01	50	-10	#
di-Isopropyl ether	0.8250	0.7258	43.99	50	-12	
2-Chloro-1,3-butadiene	0.3838	0.3516	45.81	50	-8	
Ethyl t-butyl ether	0.8006	0.6984	43.62	50	-13	
# cis-1,2-Dichloroethene	0.2752	0.2548	46.28	50	-7	#
# 2-Butanone	0.1885	0.1618	85.83	100	-14	#
2,2-Dichloropropane	0.3325	0.2951	44.38	50	-11	
Propionitrile	1.3114	1.4743	281.05	250	12	
Methacrylonitrile	0.1584	0.1468	115.86	125	-7	
Bromochloromethane	0.1459	0.1352	46.32	50	-7	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/21/19 Time: 08:18

Lab File ID: ln21c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
Tetrahydrofuran	1.1846	1.3047	110.13	100	10	
# Chloroform	0.4091	0.3871	47.31	50	-5	#
# 1,1,1-Trichloroethane	0.3492	0.3233	46.30	50	-7	#
# Cyclohexane	0.4669	0.4265	45.67	50	-9	#
# Cyclohexane(2)	0.4056	0.3744	46.15	50	-8	#
# Cyclohexane(3)	0.1444	0.1318	45.64	50	-9	#
1,1-Dichloropropene	0.3382	0.3080	45.53	50	-9	
# Carbon Tetrachloride	0.2961	0.2706	45.69	50	-9	#
Isobutyl Alcohol	0.3542	0.3594	634.13	625	1	
# Benzene	1.0170	0.9633	47.36	50	-5	#
# 1,2-Dichloroethane	0.3271	0.2992	45.73	50	-9	#
# 1,2-Dichloroethane(2)	0.0324	0.0303	46.86	50	-6	#<-
t-Amyl methyl ether	0.8036	0.7147	44.47	50	-11	
n-Heptane	0.3564	0.3297	46.25	50	-7	
n-Butanol	0.3049	0.3064	1256.42	1250	1	
# Trichloroethene	0.2561	0.2449	47.82	50	-4	#
# Methylcyclohexane	0.4751	0.4317	45.43	50	-9	#
# Methylcyclohexane(2)	0.2150	0.1969	45.80	50	-8	#
# 1,2-Dichloropropane	0.2582	0.2405	46.56	50	-7	#
Dibromomethane	0.1671	0.1609	48.13	50	-4	
1,4-Dioxane	0.0838	0.1182	881.89	625	41	<-
Methyl Methacrylate	0.2497	0.2366	47.37	50	-5	
# Bromodichloromethane	0.2998	0.2845	47.44	50	-5	#
2-Nitropropane	0.0908	0.0803	88.39	100	-12	
2-Chloroethyl Vinyl Ether	0.1109	0.1785	80.47	50	61	<-
# cis-1,3-Dichloropropene	0.3982	0.3716	46.66	50	-7	#
# 4-Methyl-2-pentanone	0.3979	0.3523	88.53	100	-11	#
# Toluene	0.8202	0.7631	46.52	50	-7	#
# trans-1,3-Dichloropropene	0.4656	0.4237	45.50	50	-9	#
Ethyl Methacrylate	0.5659	0.5170	45.68	50	-9	
# 1,1,2-Trichloroethane	0.3110	0.2923	47.00	50	-6	#
# Tetrachloroethene	0.3474	0.3163	45.52	50	-9	#
1,3-Dichloropropane	0.5309	0.4878	45.93	50	-8	
# 2-Hexanone	0.3777	0.3137	83.06	100	-17	#
# Dibromochloromethane	0.3185	0.2875	45.12	50	-10	#
# 1,2-Dibromoethane	0.3377	0.3186	47.17	50	-6	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/21/19 Time: 08:18

Lab File ID: ln21c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
1-Chlorohexane	0.4406	0.3845	43.63	50	-13	
Chlorobenzene	0.9275	0.8582	46.26	50	-7	#
1,1,1,2-Tetrachloroethane	0.3056	0.2805	45.90	50	-8	
Ethylbenzene	1.5677	1.4572	46.47	50	-7	#
m+p-Xylene	0.6167	0.5791	93.91	100	-6	#
o-Xylene	0.6092	0.5639	46.28	50	-7	#
Styrene	1.0066	0.9611	47.74	50	-5	#
Bromoform	0.2380	0.1890	39.71	50	-21	#<-
Isopropylbenzene	1.5279	1.4377	47.05	50	-6	#
Cyclohexanone	0.3282	0.3730	710.42	625	14	
Bromobenzene	0.7515	0.6958	46.30	50	-7	
1,1,2,2-Tetrachloroethane	0.9445	0.8837	46.78	50	-6	#
1,2,3-Trichloropropane	0.2898	0.2634	45.44	50	-9	
trans-1,4-Dichloro-2-butene	0.2913	0.1626	69.76	125	-44	<-
n-Propylbenzene	3.2831	3.1169	47.47	50	-5	
2-Chlorotoluene	0.6975	0.6358	45.58	50	-9	
4-Chlorotoluene	0.7260	0.6612	45.54	50	-9	
1,3,5-Trimethylbenzene	2.3860	2.2782	47.74	50	-5	
tert-Butylbenzene	0.4934	0.4590	46.51	50	-7	
Pentachloroethane	0.4249	0.3962	46.62	50	-7	
1,2,4-Trimethylbenzene	2.5147	2.3780	47.28	50	-5	
sec-Butylbenzene	2.9444	2.7623	46.91	50	-6	
1,3-Dichlorobenzene	1.3809	1.2750	46.16	50	-8	#
p-Isopropyltoluene	2.5473	2.3679	46.48	50	-7	
1,4-Dichlorobenzene	1.4315	1.3137	45.88	50	-8	#
1,2,3-Trimethylbenzene	2.6637	2.5245	47.39	50	-5	
Benzyl Chloride	2.0168	1.8117	44.92	50	-10	
1,3-Diethylbenzene	1.6578	1.5200	45.84	50	-8	
1,4-Diethylbenzene	1.7564	1.5854	45.13	50	-10	
1,2-Dichlorobenzene	1.3626	1.2546	46.04	50	-8	#
n-Butylbenzene	1.3024	1.1619	44.60	50	-11	
1,2-Diethylbenzene	1.3975	1.2968	46.40	50	-7	
1,2-Dibromo-3-chloropropane	0.2068	0.1796	43.43	50	-13	#
1,3,5-Trichlorobenzene	1.0469	0.8882	42.42	50	-15	
1,2,4-Trichlorobenzene	1.0179	0.8437	41.44	50	-17	#
Hexachlorobutadiene	0.4806	0.3489	36.30	50	-27	<-

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/21/19 Time: 08:18

Lab File ID: ln21c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Naphthalene	3.2725	3.0277	46.26	50	-7
1,2,3-Trichlorobenzene	0.9905	0.8309	41.95	50	-16
2-Methylnaphthalene	2.0152	1.7164	42.59	50	-15
Dibromofluoromethane	0.2445	0.2351	48.09	50	-4
Dibromofluoromethane(2)	0.2492	0.2421	48.56	50	-3
1,2-Dichloroethane-d4	0.0623	0.0610	48.95	50	-2
1,2-Dichloroethane-d4(2)	0.2776	0.2763	49.75	50	0
1,2-Dichloroethane-d4(3)	0.0398	0.0389	48.92	50	-2
Toluene-d8	1.3083	1.2671	48.42	50	-3
Toluene-d8(2)	0.8475	0.8168	48.19	50	-4
4-Bromofluorobenzene	0.4954	0.4937	49.83	50	0
4-Bromofluorobenzene(2)	0.4107	0.4083	49.71	50	-1

Average %Drift 9

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ln21c01.d Date Analyzed: 11/21/19

Instrument ID: HP09915 Time Analyzed: 08:18

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	153538	4.493	842128	7.959	689674	11.361	371519	13.223
UPPER LIMIT	307076	4.993	1684256	8.459	1379348	11.861	743038	13.723
LOWER LIMIT	76769	3.993	421064	7.459	344837	10.861	185760	12.723
LAB SAMPLE ID								
01 RVLL83 - RL	163145	4.493	871784	7.956	717899	11.358	380162	13.220
02 VBLKL83	158112	4.509	860082	7.959	701132	11.358	371721	13.223
03 LCSL83	170757	4.496	895510	7.959	731089	11.361	395685	13.223
04 1202441	182891	4.490	914801	7.959	740356	11.361	394661	13.222
05 1202286	162918	4.499	847279	7.962	692359	11.361	371627	13.222
06 1202287MS	171692	4.509	862571	7.962	705149	11.361	381480	13.222
07 1202288MSD	172012	4.506	873696	7.962	703392	11.361	376918	13.223
08 1202289	164174	4.496	869822	7.956	712323	11.358	380294	13.223
09 1202290	158215	4.496	865306	7.956	705018	11.358	375108	13.223
10 1202291	156545	4.503	848538	7.962	697784	11.361	368917	13.219
11 1202292	154593	4.496	841386	7.956	685547	11.358	361435	13.223
12 1202293	148061	4.503	821642	7.962	673731	11.361	354768	13.222
13 1202294	147640	4.486	821085	7.962	673890	11.361	359670	13.222
14 1202321	143852	4.503	832267	7.962	679478	11.361	360892	13.223
15 1202322	146070	4.496	803691	7.956	668682	11.358	359126	13.219
16 1202323	139158	4.496	792251	7.956	650705	11.358	349954	13.223
17 1202325	137315	4.490	794207	7.956	660553	11.358	359250	13.219
18 1202326	140046	4.500	793651	7.959	648071	11.358	348594	13.223
19 1202327	144523	4.500	806944	7.959	666802	11.361	358400	13.223
20 1202434	151018	4.500	789510	7.959	657287	11.358	350013	13.219
21 1202437	141202	4.506	794599	7.962	661153	11.361	352032	13.223
22 1202438	135653	4.506	776680	7.962	640590	11.358	343644	13.223

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ln21c01.d Date Analyzed: 11/21/19

Instrument ID: HP09915 Time Analyzed: 08:18

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	153538	4.493	842128	7.959	689674	11.361	371519	13.223
UPPER LIMIT	307076	4.993	1684256	8.459	1379348	11.861	743038	13.723
LOWER LIMIT	76769	3.993	421064	7.459	344837	10.861	185760	12.723
LAB SAMPLE ID								
23 1202439	135273	4.499	772937	7.962	634274	11.358	343213	13.222
24 1202440	134172	4.490	769976	7.956	645962	11.361	345182	13.220

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

page 2 of 2

FORM VIII VOA

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Sample Data

Volatiles by GC/MS

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
C2101

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202325

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov21a.b/ln21s15.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	0.9	J
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.6	J
156-59-2	cis-1,2-Dichloroethene	0.2	J
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	0.5	J
71-55-6	1,1,1-Trichloroethane	11	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	41	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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C2101 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202325

Data file: /chem/HP09915.i/19nov21a.b/ln21s15.d Injection date and time: **21-NOV-2019 15:45**
Data file Sample Info. Line: C2101;1202325;1;0;;JCW21;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 16:02 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.490	(0.003)	935	65	137315	(-11)	250.00	
66) Fluorobenzene	7.956	(0.003)	2013	96	794207	(-6)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	660553	(-4)	50.00	
131) 1,4-Dichlorobenzene-d4	13.220	(0.003)	3650	152	359250	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072	(0.000)	113	189849	48.894	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(0.000)	102	50772	51.307	103%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	830807	48.068	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	317690	48.542	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	3.763	(-0.000)	96	3127	0.929	0.93		J	0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.544	(0.000)	63	3803	0.560	0.56		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	6.387	(-0.001)	96	974	0.223	0.22		J	0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)	6.850	(0.001)	83	3267	0.503	0.50		J	0.2	1
53) 1,1,1-Trichloroethane	(2)	7.075	(0.001)	97	59631	10.752	10.75			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.429	(-0.000)	95	168630	41.457	41.46			0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 11/21/2019 at 22:39. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov21a.b/ln21s15.d Injection date and time: **21-NOV-2019 15:45**
Data file Sample Info. Line: C2101;1202325;1;0;;JCW21;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 16:02 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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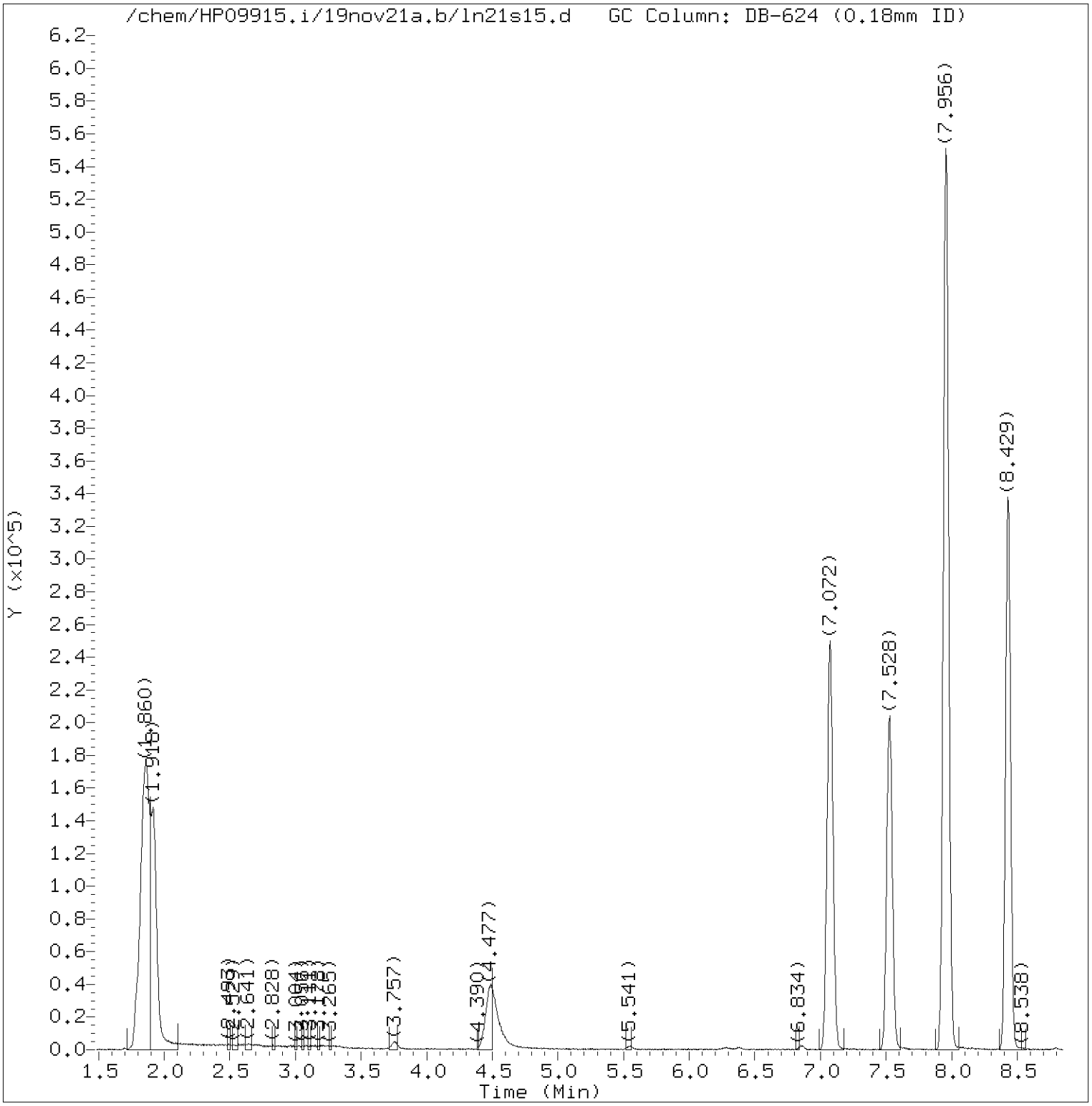
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 11/21/2019 at 22:39. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:44. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

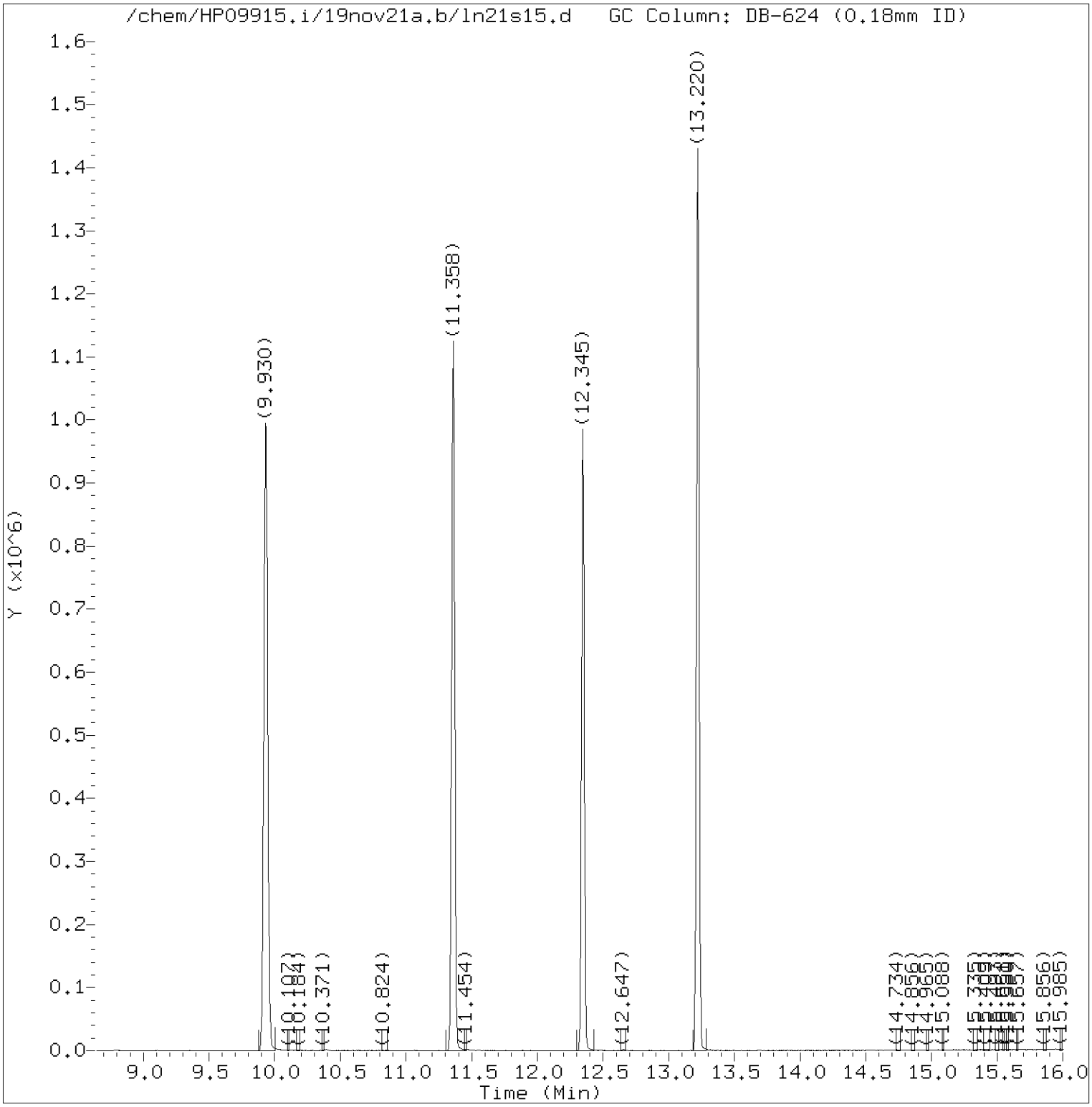
Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s15.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 15:45 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 16:02 Automation

Sample Name: C2101 Lab Sample ID: 1202325

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s15.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 15:45 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 16:02 Automation

Sample Name: C2101 Lab Sample ID: 1202325

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s15.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 15:45 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 16:02 Automation

Sample Name: C2101 Lab Sample ID: 1202325

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	3.763	96	3127	0.929
29)*t-Butyl alcohol-d10	(1)	4.490	65	137315	250.000
36) 1,1-Dichloroethane	(2)	5.545	63	3803	0.560
42) cis-1,2-Dichloroethene	(2)	6.387	96	974	0.223
51) Chloroform	(2)	6.850	83	3267	0.503
52)$Dibromofluoromethane	(2)	7.072	113	189849	48.894
53) 1,1,1-Trichloroethane	(2)	7.075	97	59631	10.752
57)$1,2-Dichloroethane-d4	(2)	7.528	102	50772	51.307
66)*Fluorobenzene	(2)	7.956	96	794207	50.000
71) Trichloroethene	(2)	8.429	95	168630	41.457
83)$Toluene-d8	(3)	9.930	98	830807	48.068
100)*Chlorobenzene-d5	(3)	11.358	117	660553	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	317690	48.542
131)*1,4-Dichlorobenzene-d4	(4)	13.220	152	359250	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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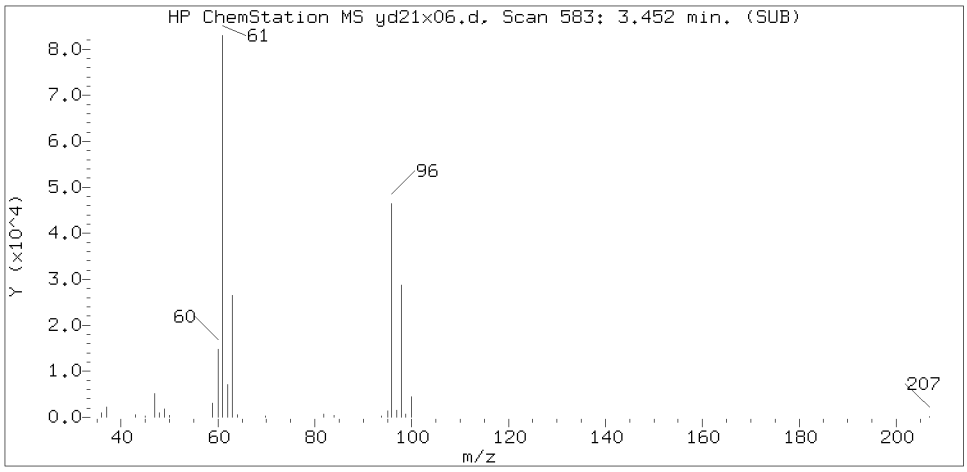
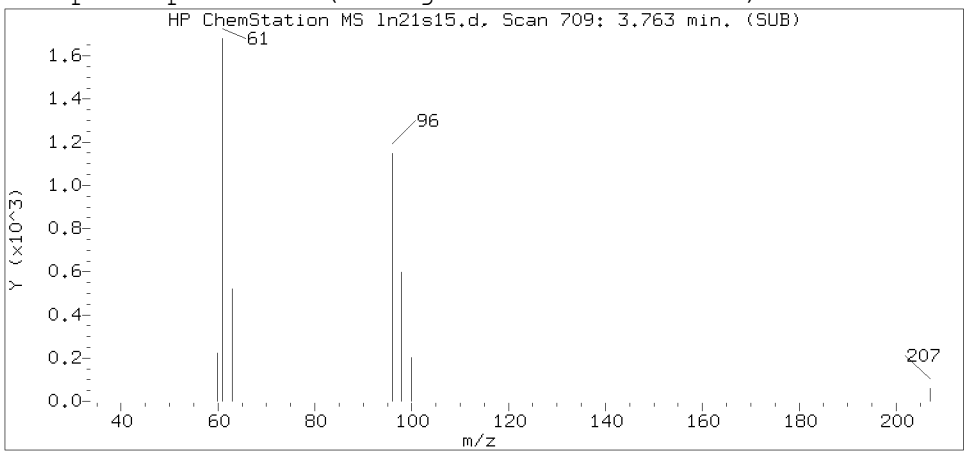
Target 3.5 esignature user ID: dvv10203

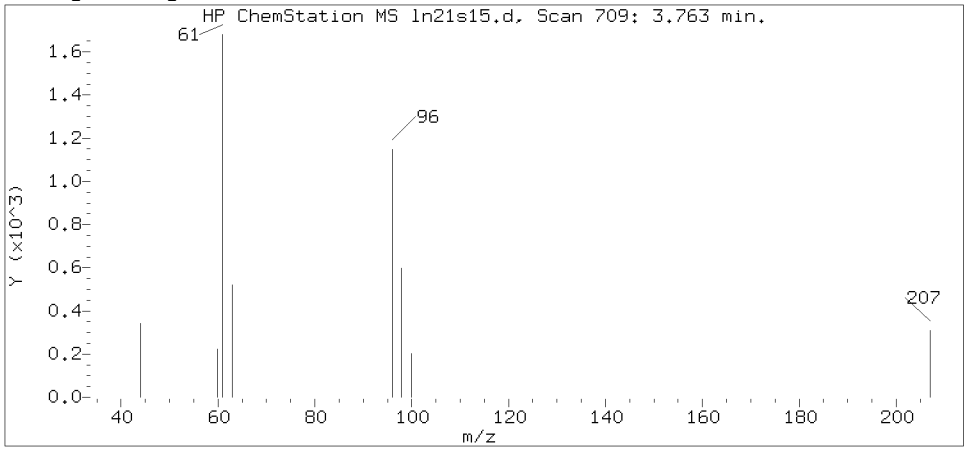
Reference Standard Spectrum for 1,1-Dichloroethene

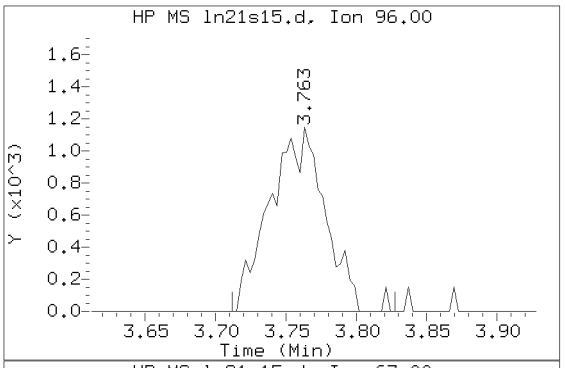


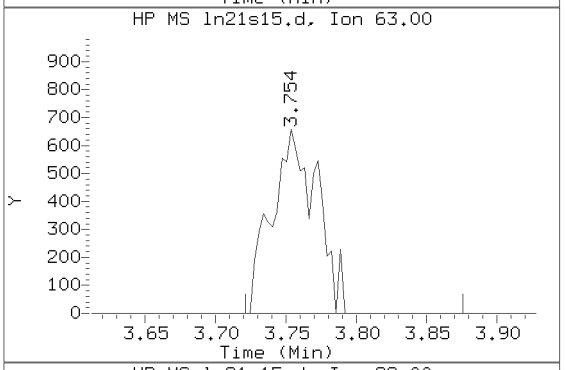
Sample Spectrum (Background Subtracted)

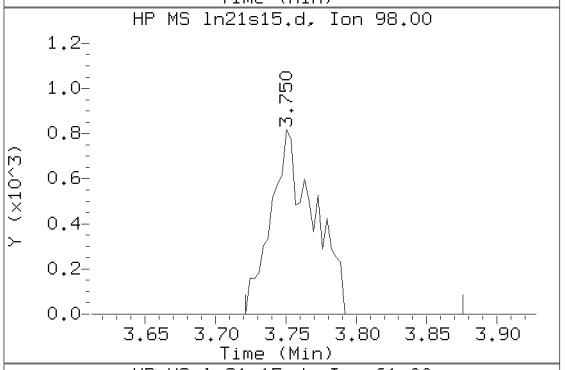


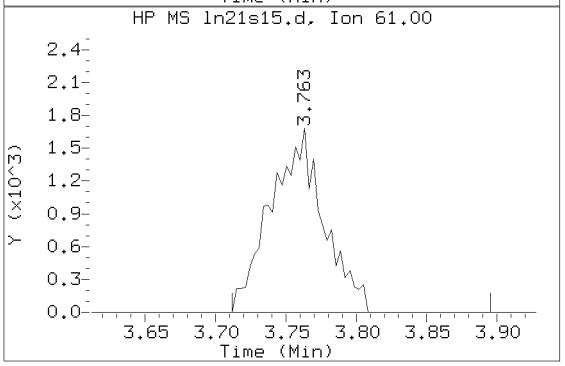
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov21a.b/ln21s15.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 15:45 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 16:02 Automation

Sample Name: C2101 Lab Sample ID: 1202325

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 709
Retention Time (minutes): 3.763
Relative Retention Time :-0.00020
Quant Ion : 96.00
Area (flag) : 3127
On-Column Amount (ng) : 0.9290

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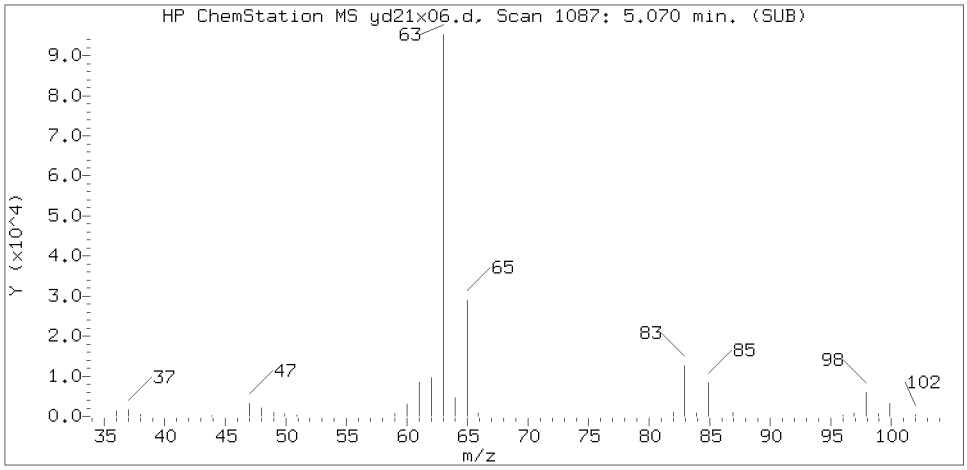
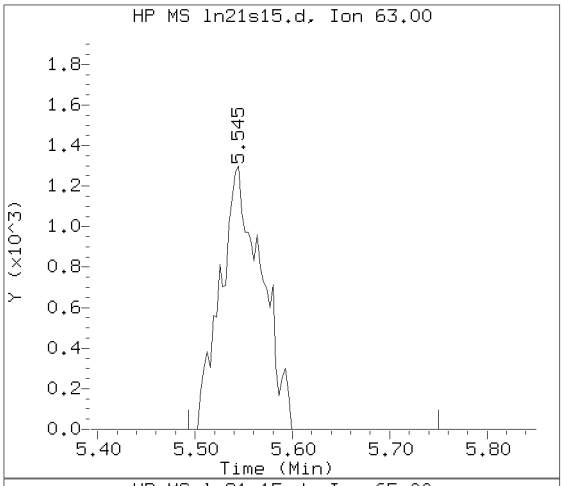
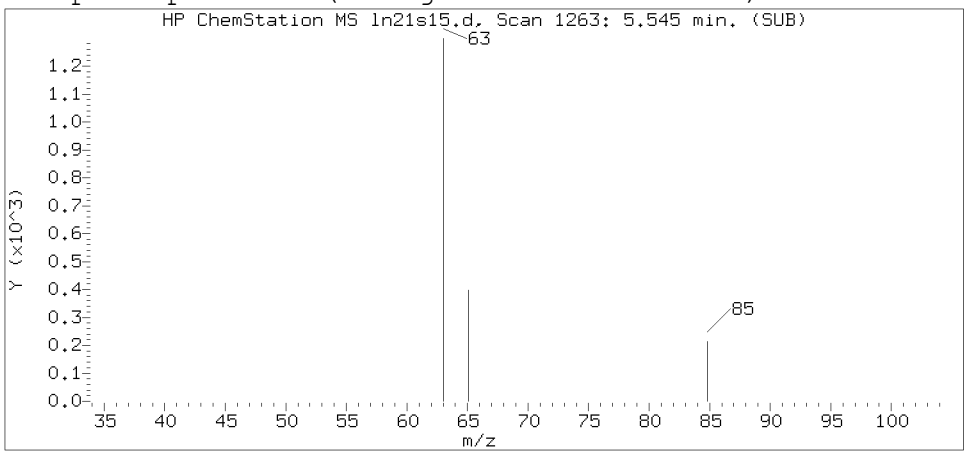
Target 3.5 esignature user ID: dvv1023

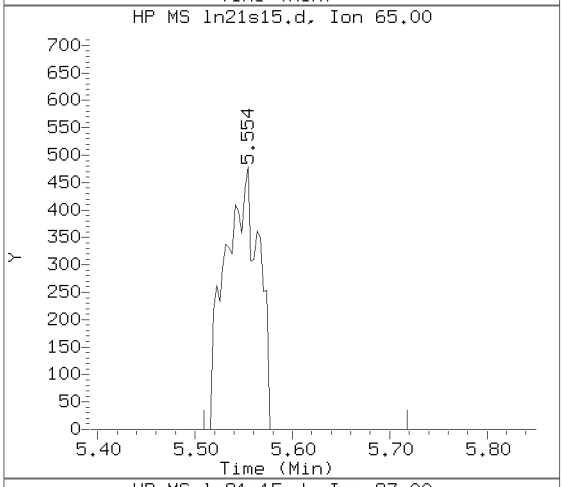
Reference Standard Spectrum for 1,1-Dichloroethane



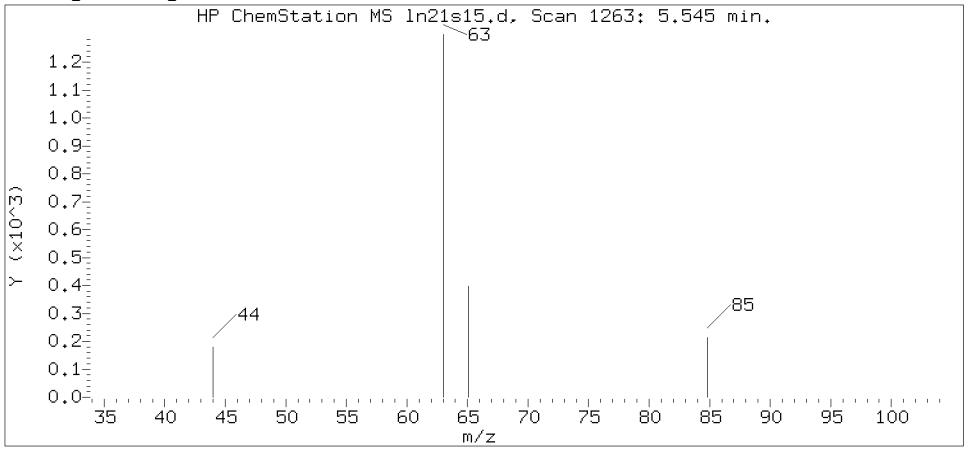


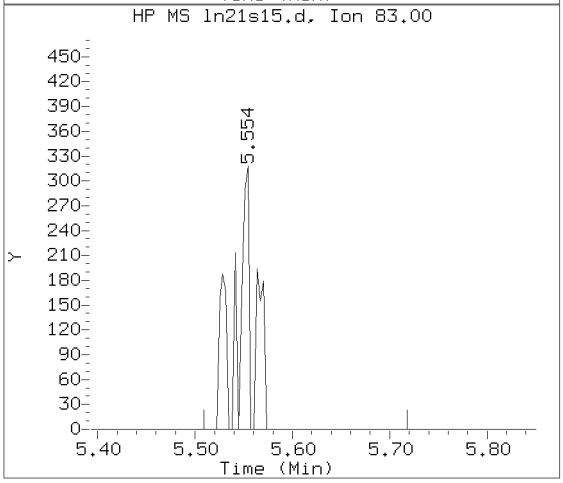
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov21a.b/ln21s15.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 15:45 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 16:02 Automation

Sample Name: C2101 Lab Sample ID: 1202325

Compound Number	: 36
Compound Name	: 1,1-Dichloroethane
Scan Number	: 1263
Retention Time (minutes)	: 5.545
Relative Retention Time	: 0.00093
Quant Ion	: 63.00
Area (flag)	: 3803
On-Column Amount (ng)	: 0.5598

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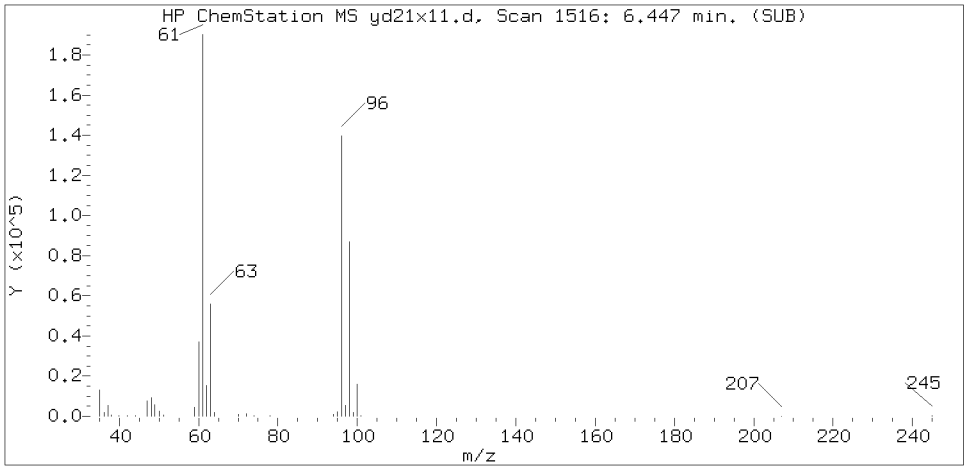
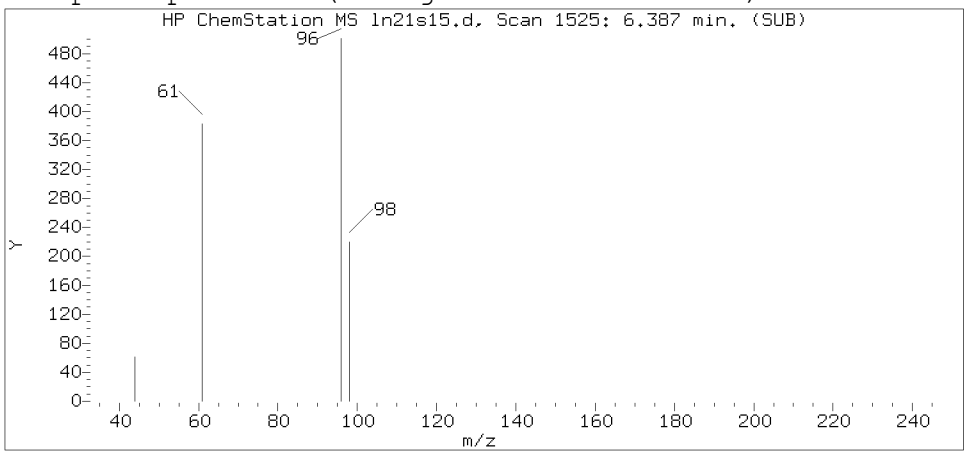
Target 3.5 esignature user ID: dvv10203

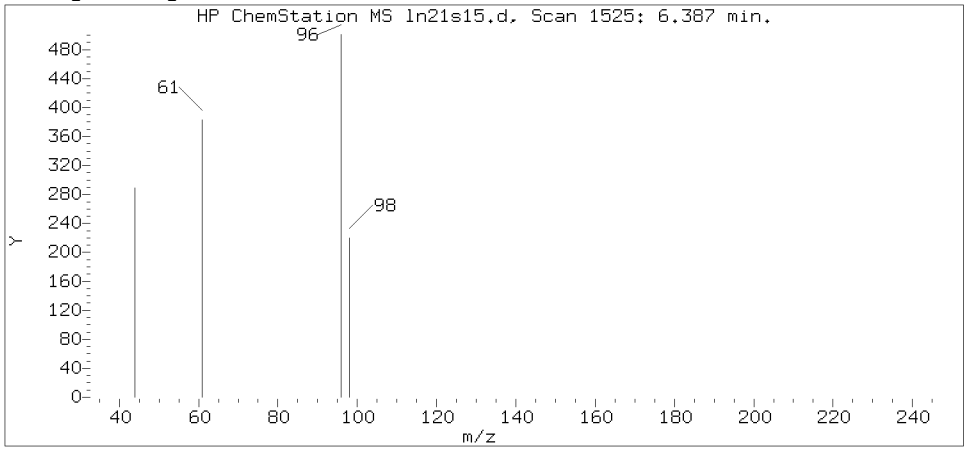
Reference Standard Spectrum for cis-1,2-Dichloroethene

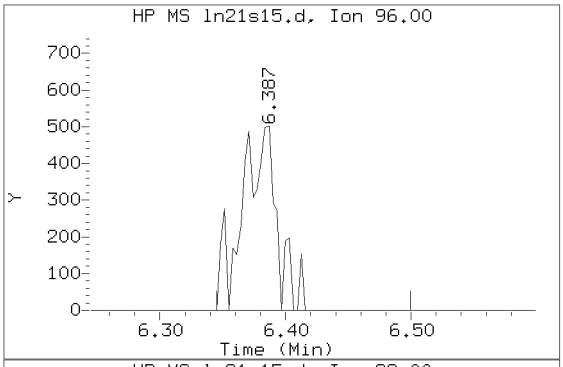


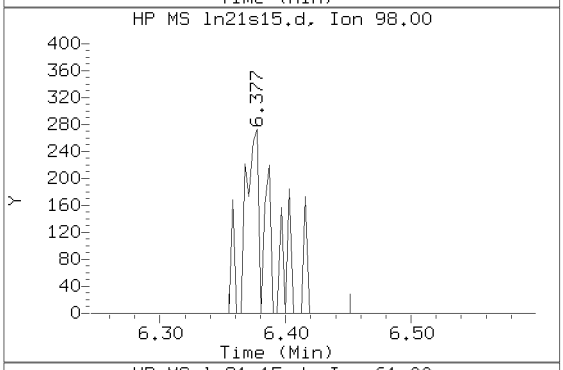
Sample Spectrum (Background Subtracted)

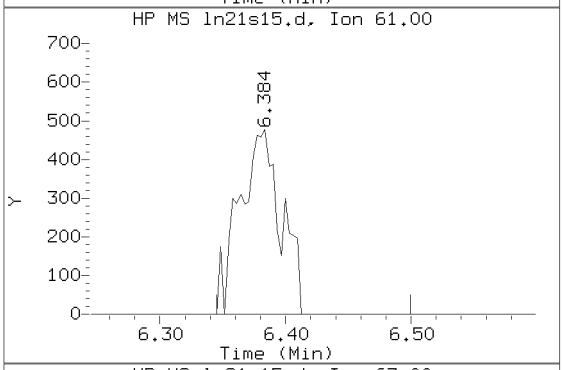


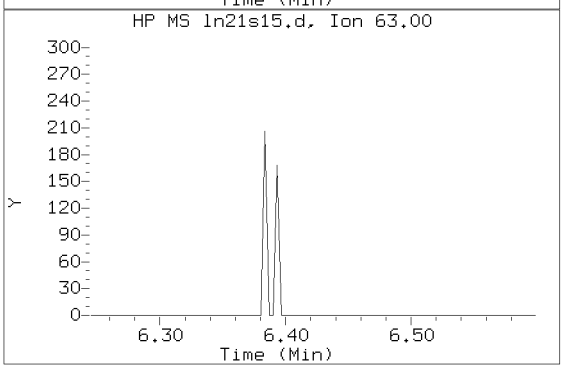
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov21a.b/ln21s15.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 15:45 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 16:02 Automation

Sample Name: C2101 Lab Sample ID: 1202325

Compound Number	: 42
Compound Name	: cis-1,2-Dichloroethene
Scan Number	: 1525
Retention Time (minutes)	: 6.387
Relative Retention Time	:-0.00113
Quant Ion	: 96.00
Area (flag)	: 974
On-Column Amount (ng)	: 0.2229

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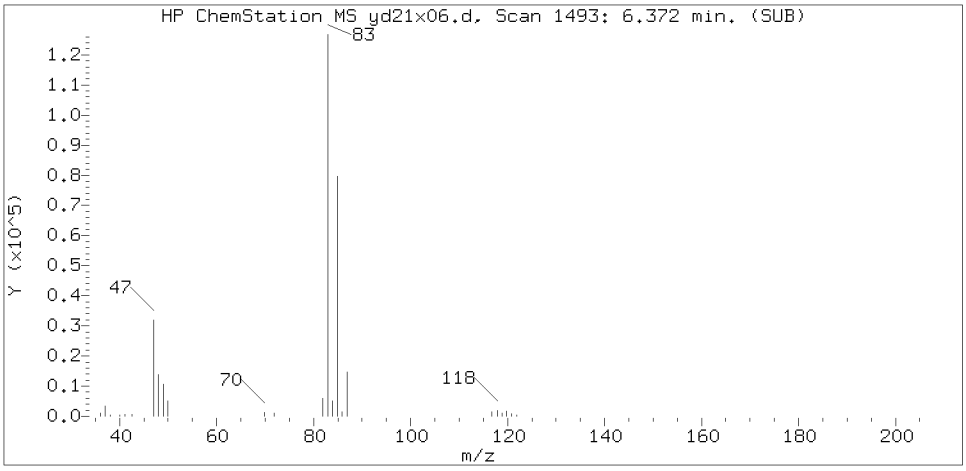
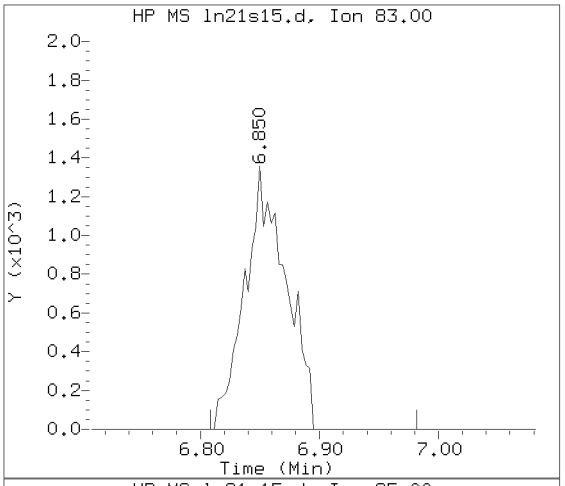
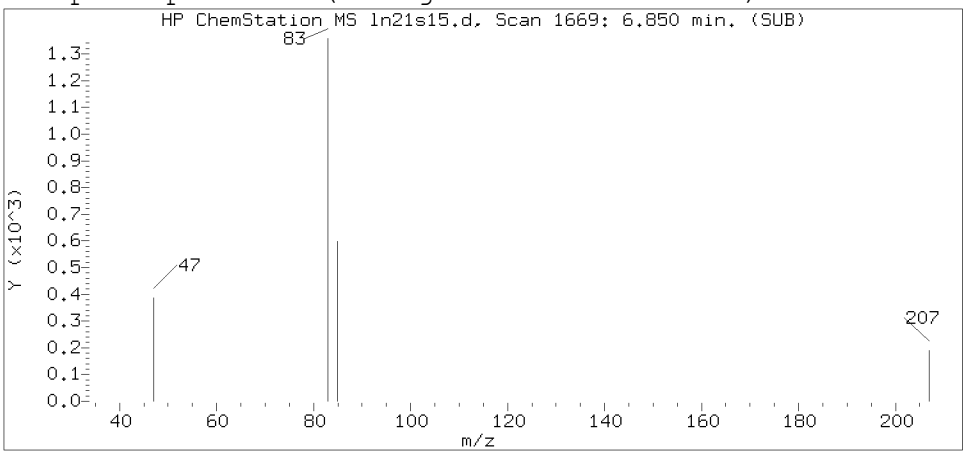
Target 3.5 esignature user ID: dvv10203

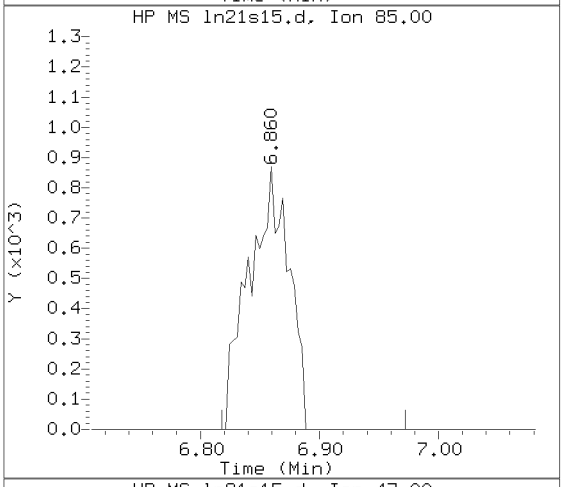
Reference Standard Spectrum for Chloroform



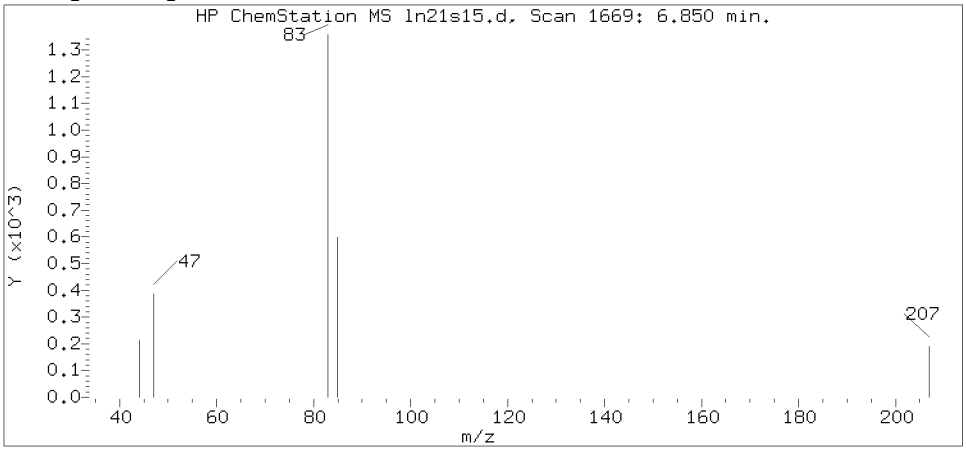


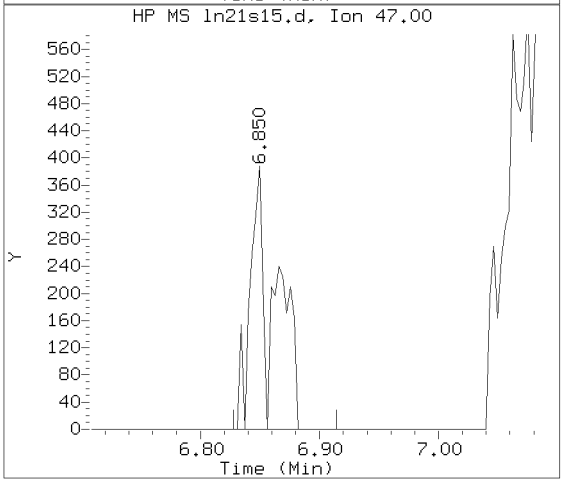
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov21a.b/ln21s15.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 15:45 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 16:02 Automation

Sample Name: C2101 Lab Sample ID: 1202325

Compound Number : 51
Compound Name : Chloroform
Scan Number : 1669
Retention Time (minutes): 6.850
Relative Retention Time : 0.00127
Quant Ion : 83.00
Area (flag) : 3267
On-Column Amount (ng) : 0.5028

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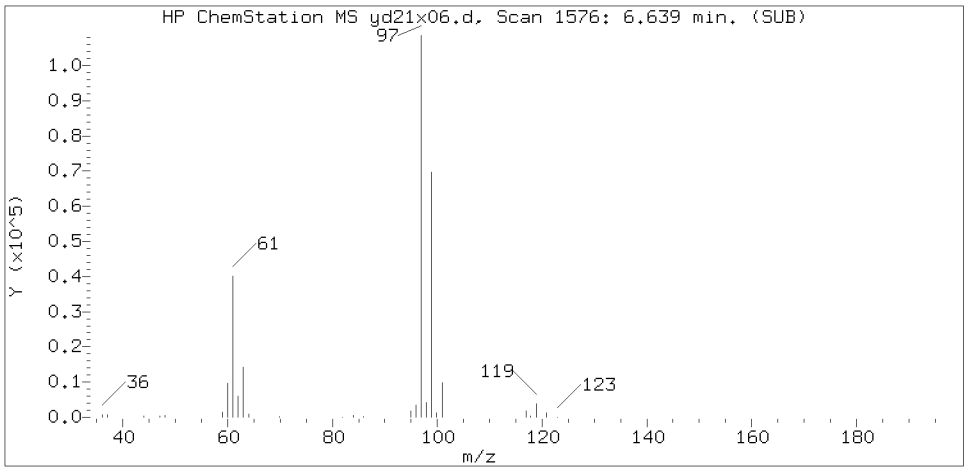
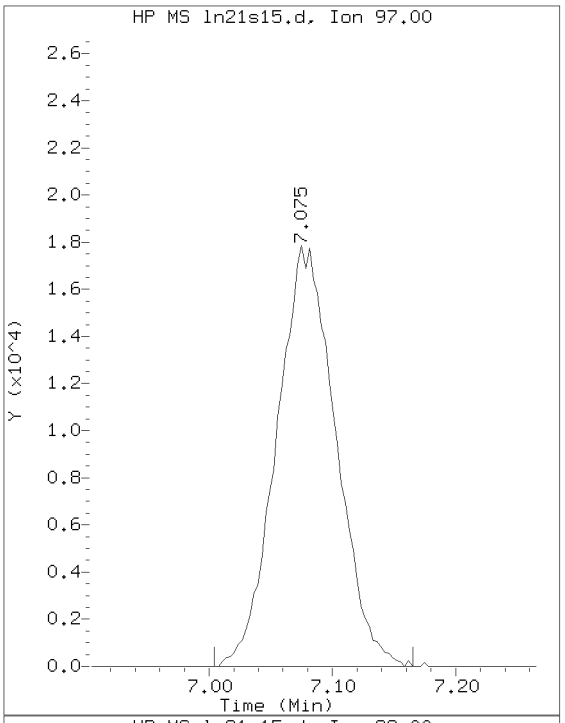
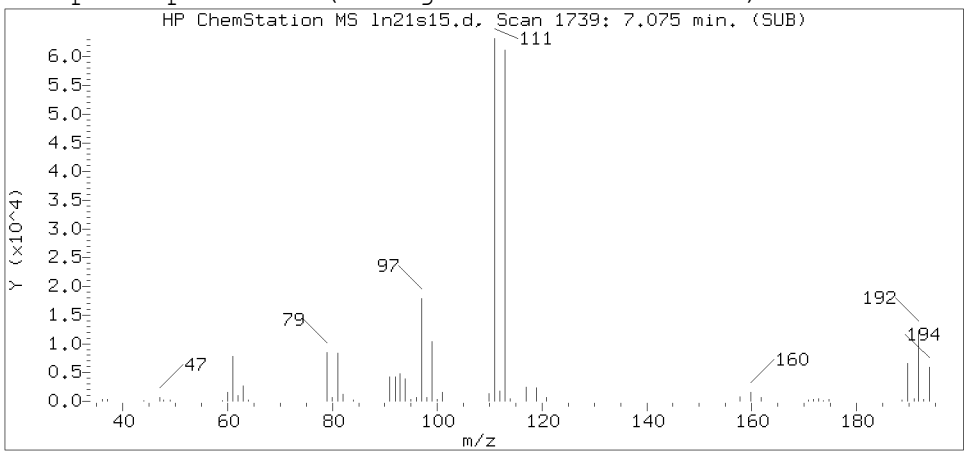
Target 3.5 esignature user ID: dvv10203

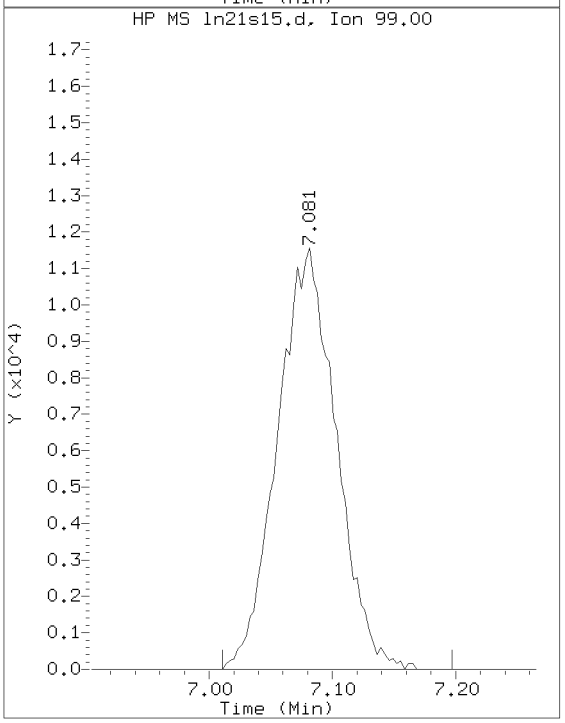
Reference Standard Spectrum for 1,1,1-Trichloroethane



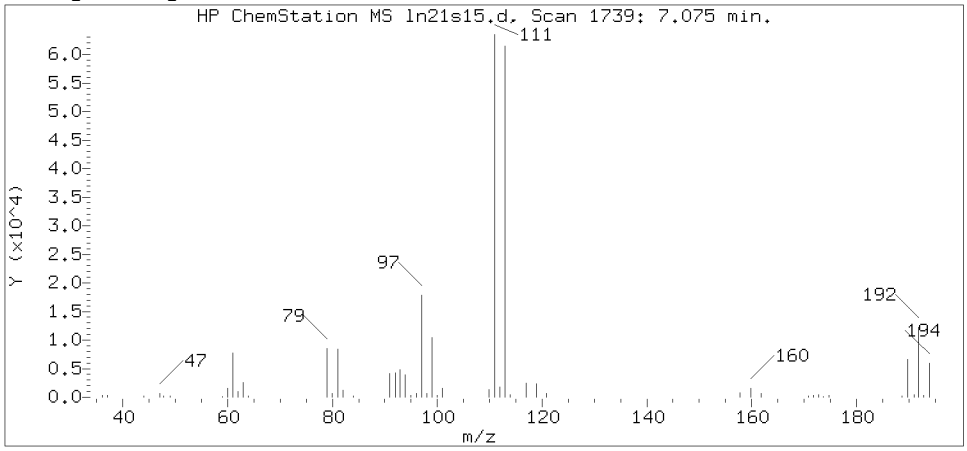


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov21a.b/ln21s15.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 15:45 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 16:02 Automation

Sample Name: C2101 Lab Sample ID: 1202325

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1739
Retention Time (minutes)	: 7.075
Relative Retention Time	: 0.00126
Quant Ion	: 97.00
Area (flag)	: 59631
On-Column Amount (ng)	: 10.7516

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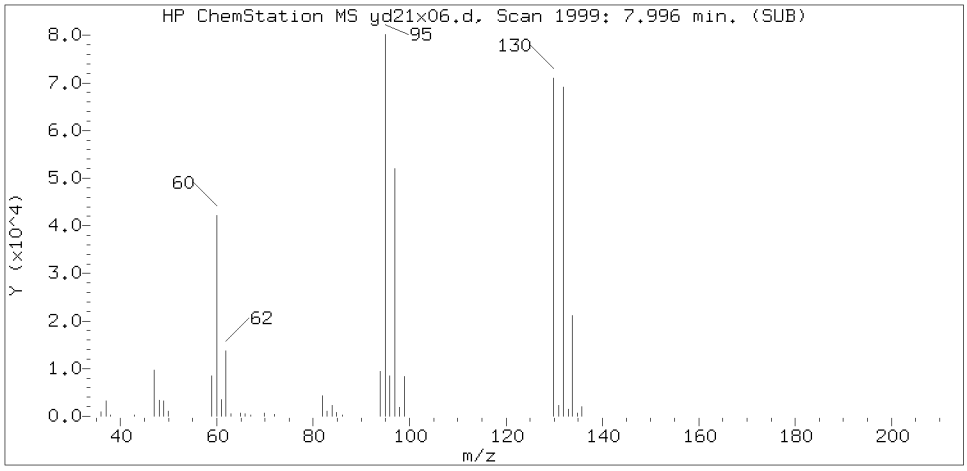
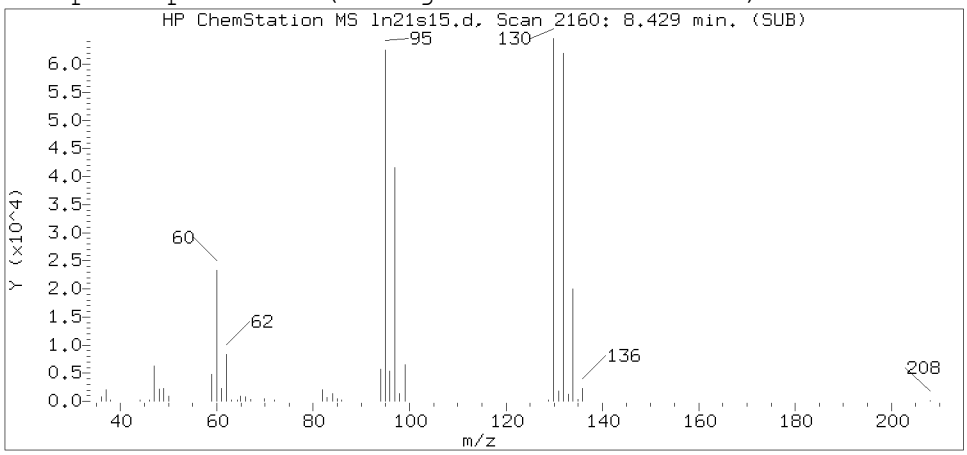
Target 3.5 esignature user ID: dvv10203

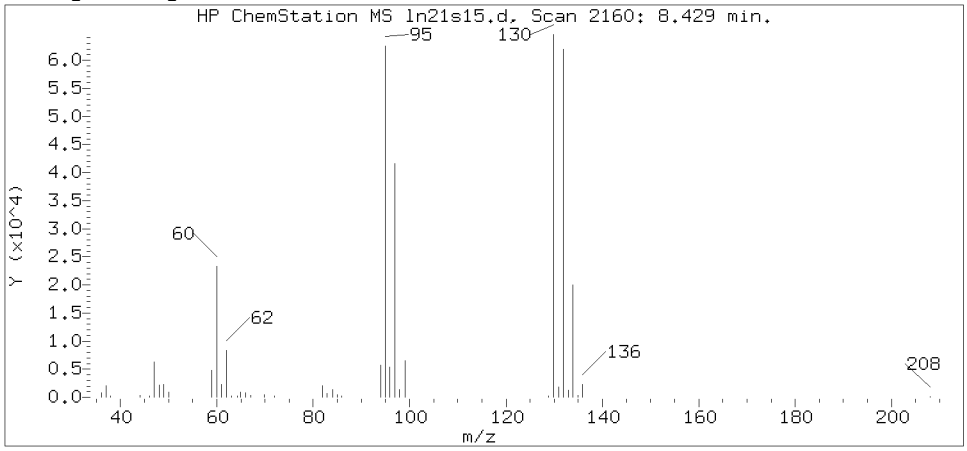
Reference Standard Spectrum for Trichloroethene

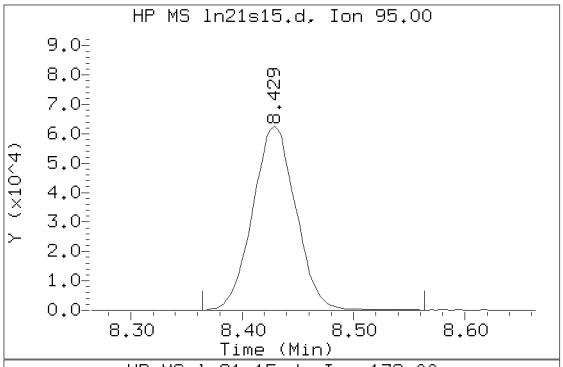


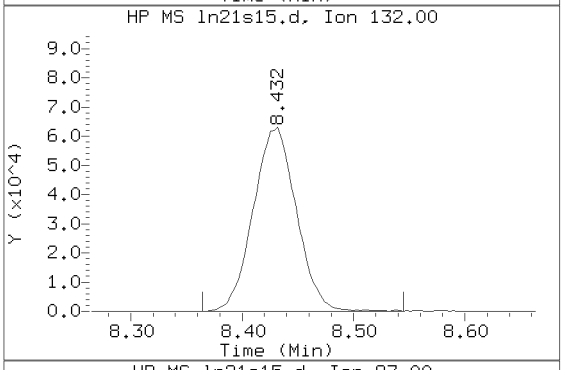
Sample Spectrum (Background Subtracted)

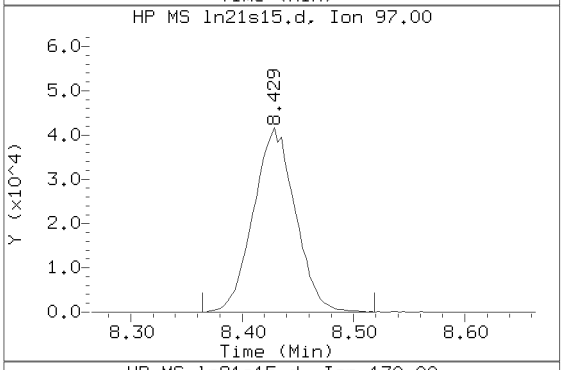


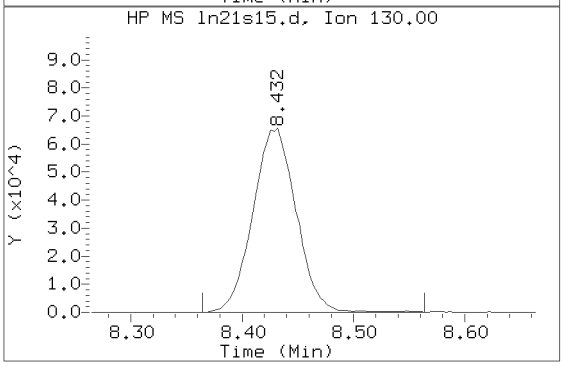
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov21a.b/ln21s15.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 15:45 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 16:02 Automation

Sample Name: C2101 Lab Sample ID: 1202325

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 2160
Retention Time (minutes): 8.429
Relative Retention Time :-0.00043
Quant Ion : 95.00
Area (flag) : 168630
On-Column Amount (ng) : 41.4569

Digitally signed by Don V. Viray on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
C2102

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202326

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov21a.b/ln21s16.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.5	J
156-59-2	cis-1,2-Dichloroethene	0.6	J
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	0.7	J
71-55-6	1,1,1-Trichloroethane	15	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	38	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

^

C2102 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202326

Data file: /chem/HP09915.i/19nov21a.b/ln21s16.d Injection date and time: **21-NOV-2019 16:07**
Data file Sample Info. Line: C2102;1202326;1;0;;JCW21;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 16:24 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.500	(-0.007)	938	65	140046	(-9)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	793651	(-6)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	648071	(-6)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	348594	(-6)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072	(0.000)	113	185221	47.736	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(0.000)	102	49230	49.784	100%		80 - 120
83) Toluene-d8	(3)	9.934	(0.000)	98	817271	48.196	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	309290	48.169	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	3.766	(-0.000)	96	3856	1.146	1.15			0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.551	(0.000)	63	3359	0.495	0.49		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	6.384	(-0.000)	96	2501	0.573	0.57		J	0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)	6.853	(0.001)	83	4524	0.697	0.70		J	0.2	1
53) 1,1,1-Trichloroethane	(2)	7.078	(0.001)	97	80598	14.542	14.54			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.429	(0.000)	95	156022	38.384	38.38			0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

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Data file: /chem/HP09915.i/19nov21a.b/ln21s16.d Injection date and time: **21-NOV-2019 16:07**
Data file Sample Info. Line: C2102;1202326;1;0;;JCW21;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 16:24 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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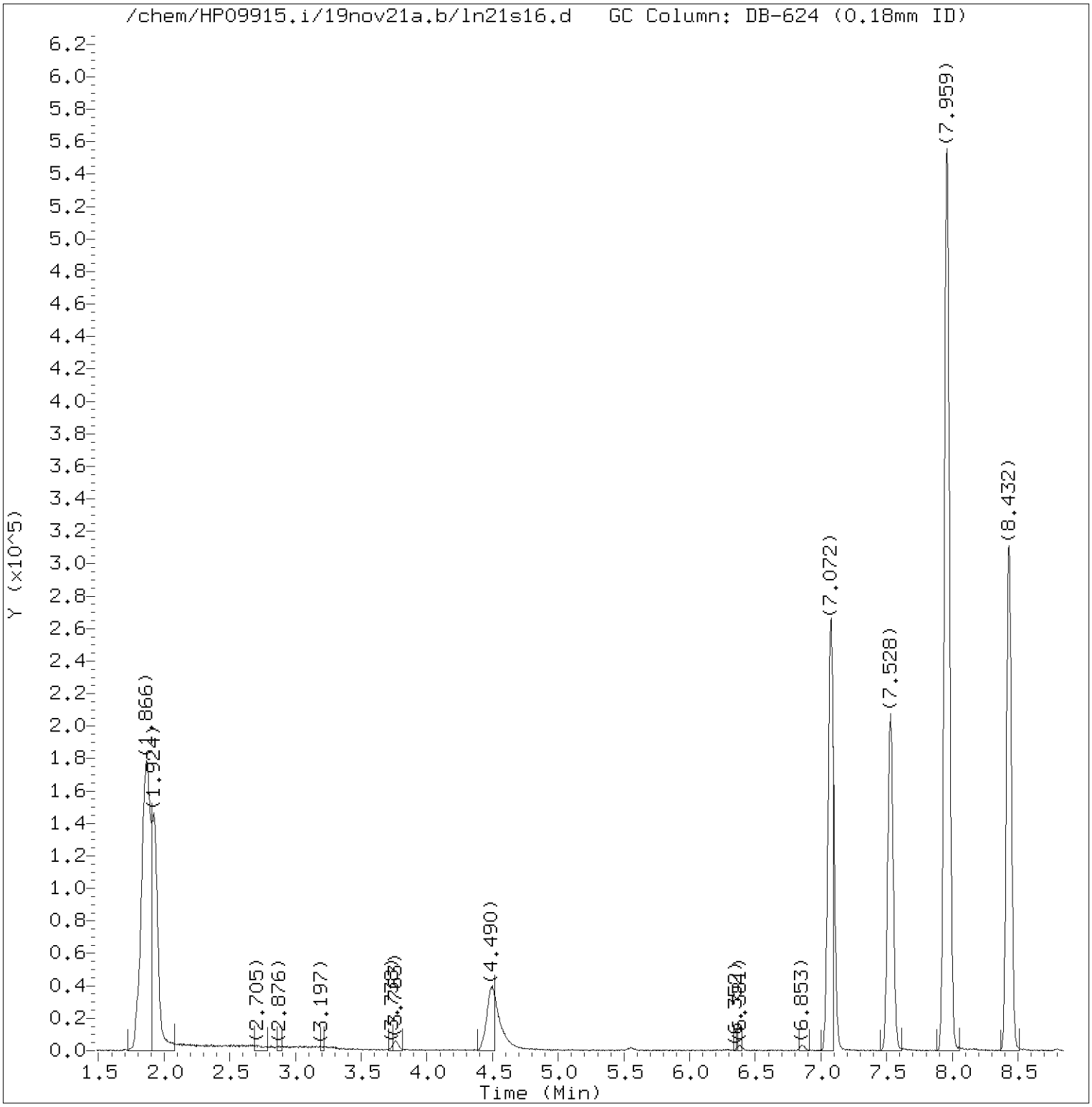
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 11/21/2019 at 22:39. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:44. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

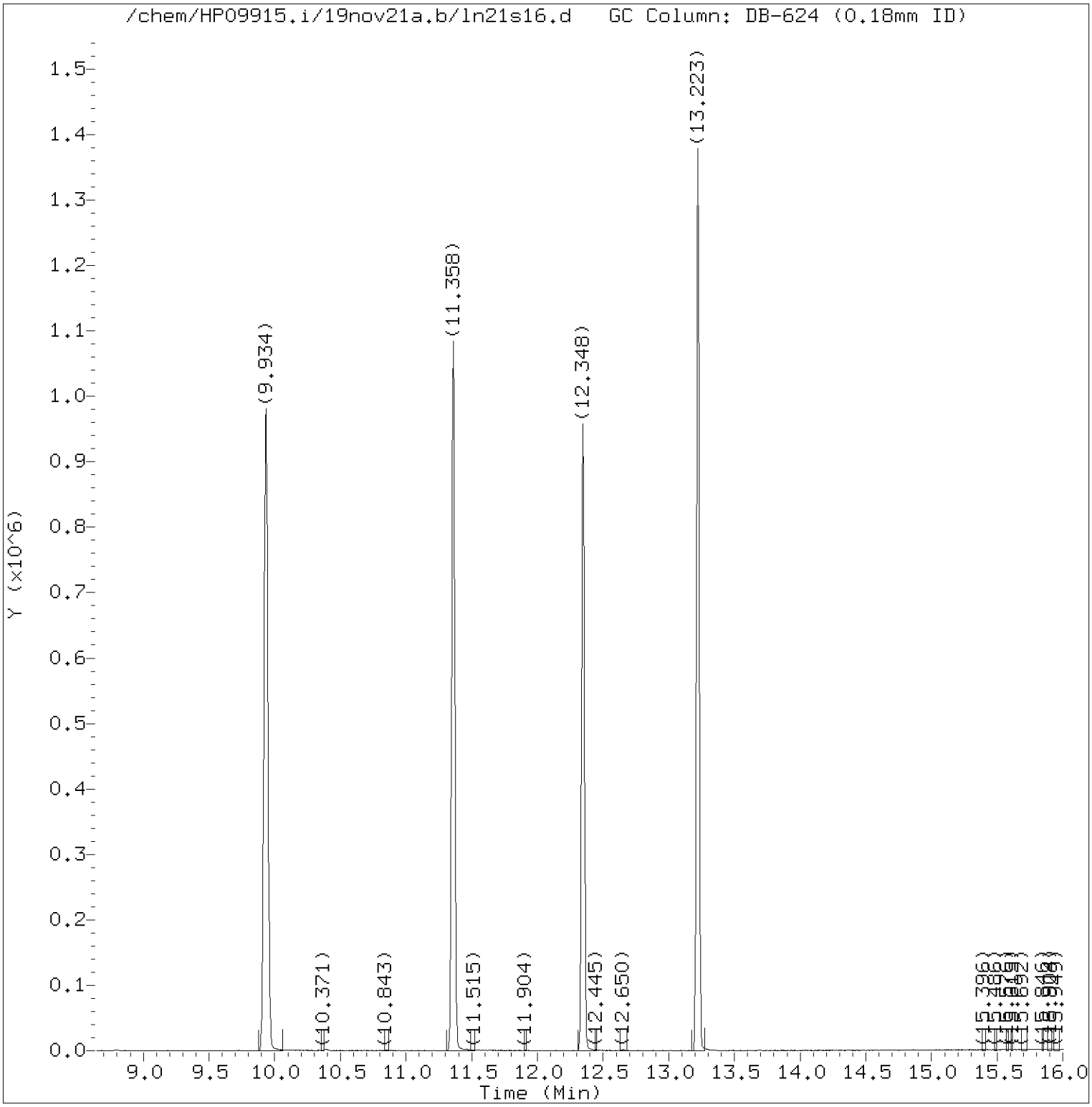
Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s16.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 16:07 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 16:24 Automation

Sample Name: C2102 Lab Sample ID: 1202326

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s16.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 16:07 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 16:24 Automation

Sample Name: C2102 Lab Sample ID: 1202326

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s16.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 16:07 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 16:24 Automation

Sample Name: C2102 Lab Sample ID: 1202326

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	3.767	96	3856	1.146
29)*t-Butyl alcohol-d10	(1)	4.500	65	140046	250.000
36) 1,1-Dichloroethane	(2)	5.551	63	3359	0.495
42) cis-1,2-Dichloroethene	(2)	6.384	96	2501	0.573
51) Chloroform	(2)	6.853	83	4524	0.697
52)$Dibromofluoromethane	(2)	7.072	113	185221	47.736
53) 1,1,1-Trichloroethane	(2)	7.078	97	80598	14.542
57)$1,2-Dichloroethane-d4	(2)	7.528	102	49230	49.784
66)*Fluorobenzene	(2)	7.959	96	793651	50.000
71) Trichloroethene	(2)	8.429	95	156022	38.384
83)$Toluene-d8	(3)	9.934	98	817271	48.196
100)*Chlorobenzene-d5	(3)	11.358	117	648071	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	309290	48.169
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	348594	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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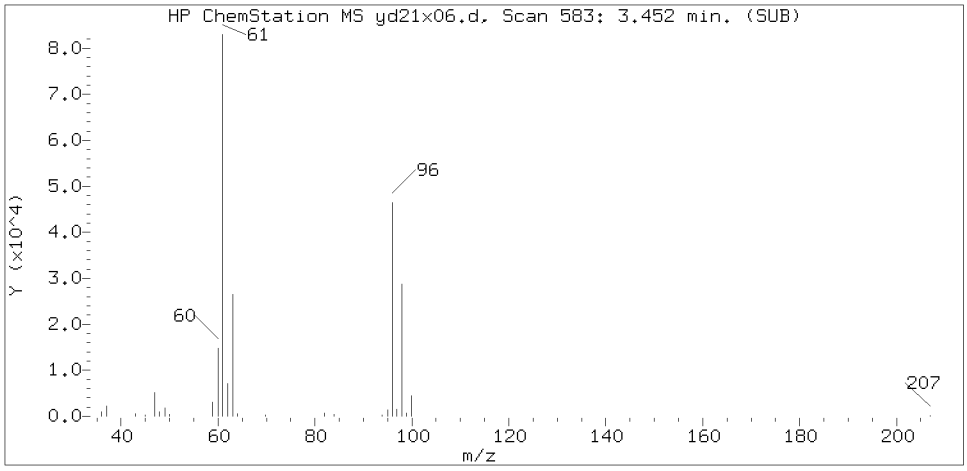
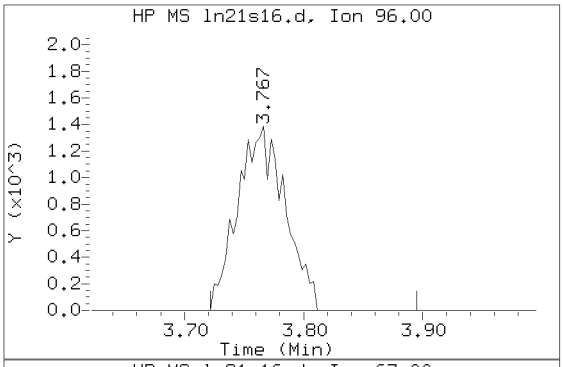
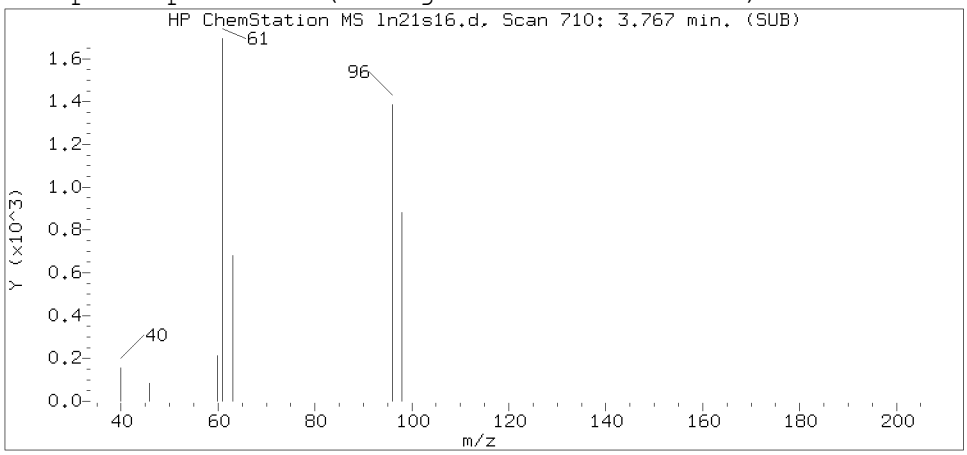
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

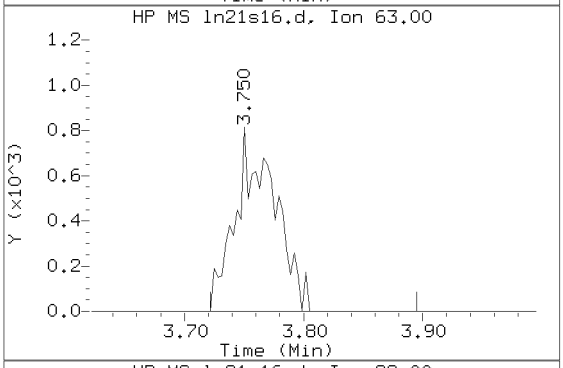
Reference Standard Spectrum for 1,1-Dichloroethene

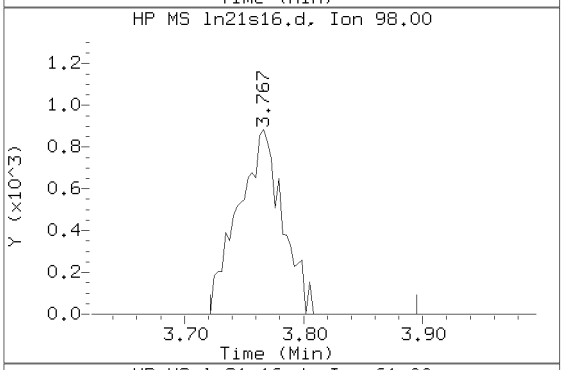




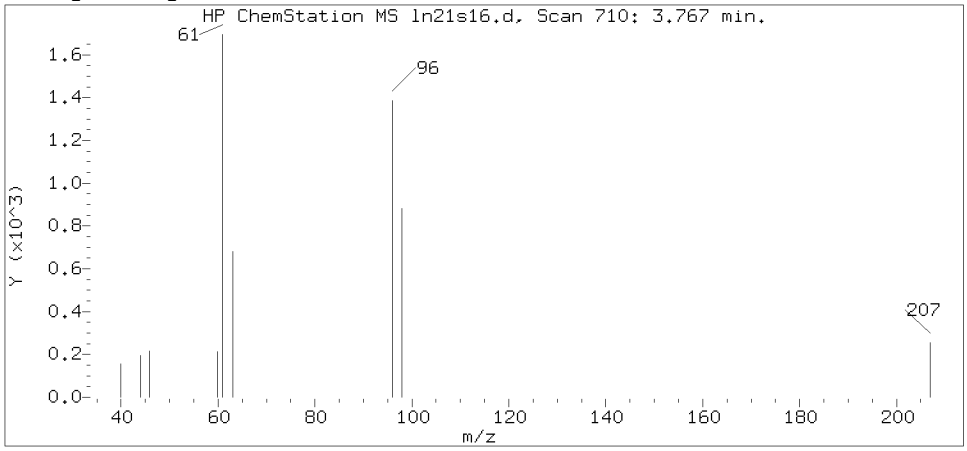
Sample Spectrum (Background Subtracted)

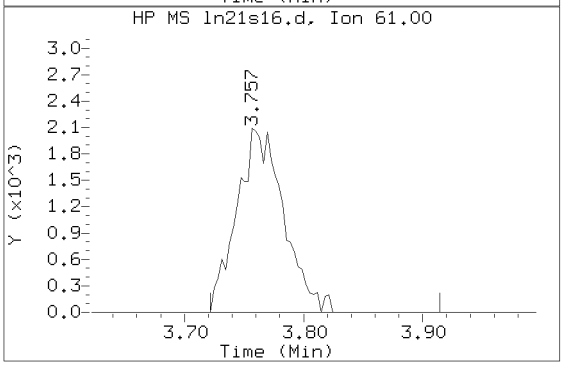






Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov21a.b/ln21s16.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 16:07 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 16:24 Automation

Sample Name: C2102 Lab Sample ID: 1202326

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 710
Retention Time (minutes): 3.767
Relative Retention Time :-0.00041
Quant Ion : 96.00
Area (flag) : 3856
On-Column Amount (ng) : 1.1463

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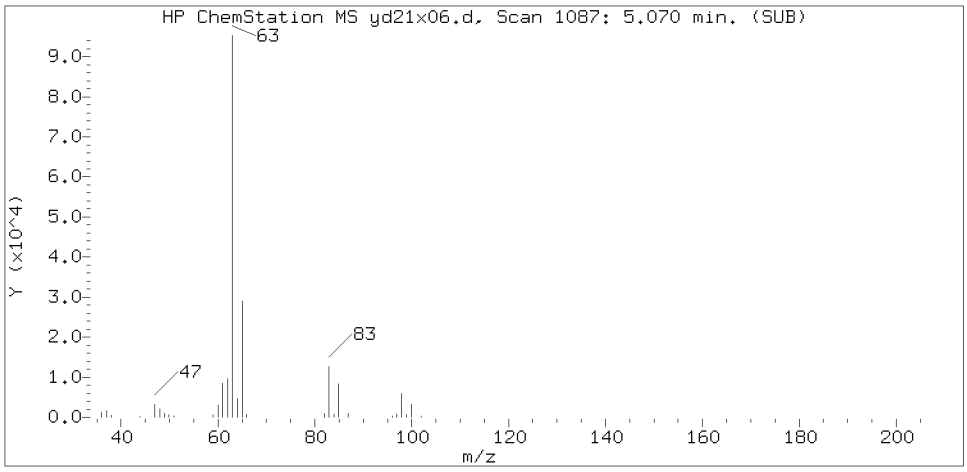
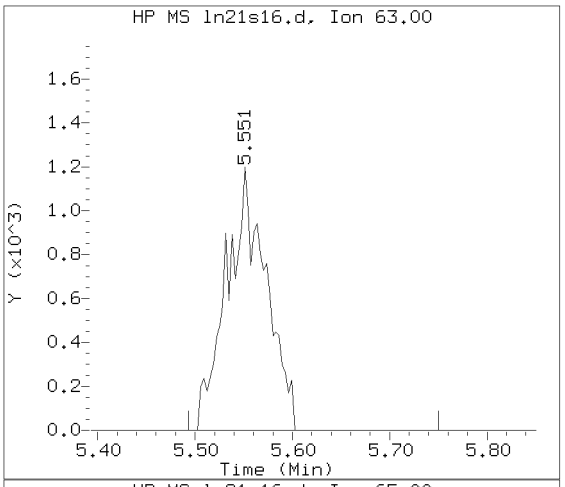
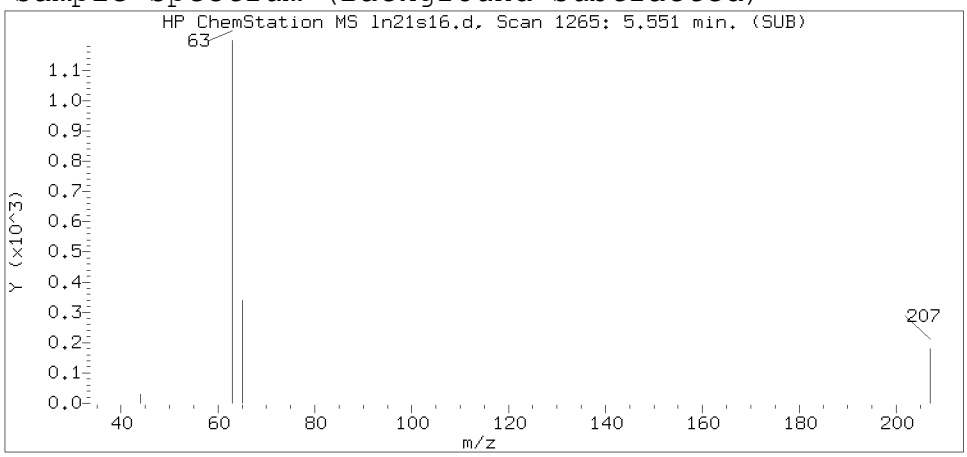
Target 3.5 esignature user ID: dvv10203

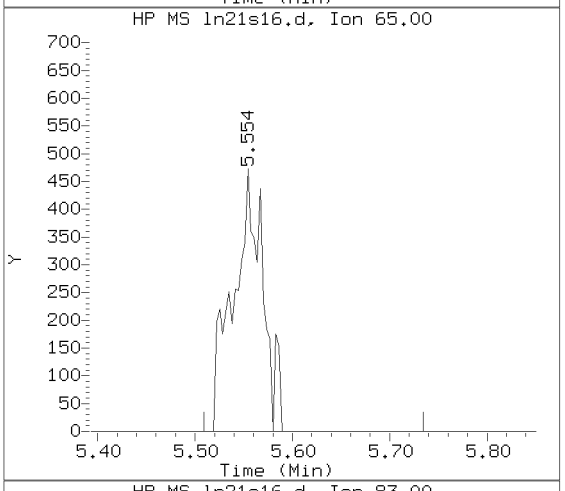
Reference Standard Spectrum for 1,1-Dichloroethane



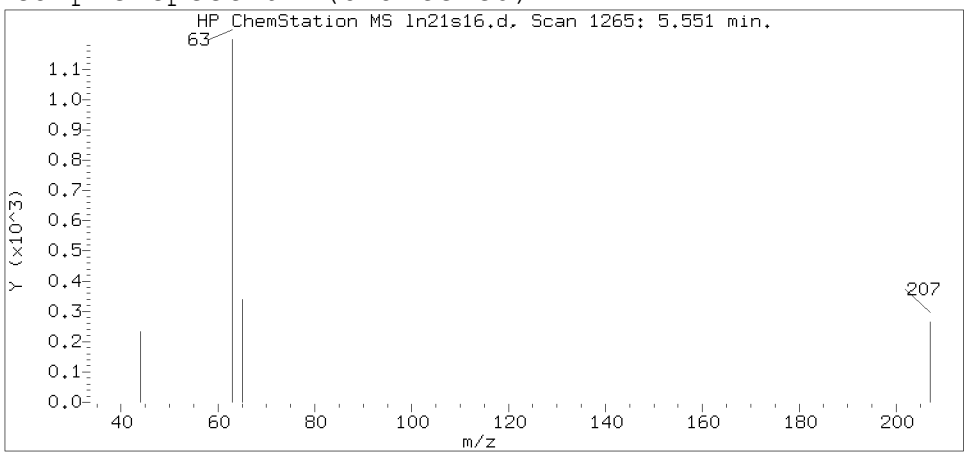


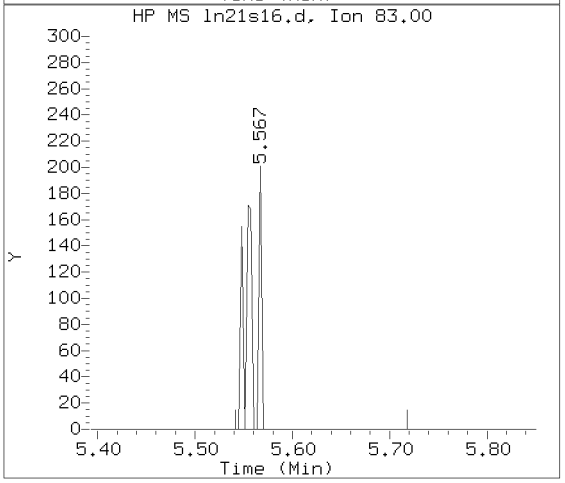
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov21a.b/ln21s16.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 16:07 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 16:24 Automation

Sample Name: C2102 Lab Sample ID: 1202326

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 1265
Retention Time (minutes): 5.551
Relative Retention Time : 0.00040
Quant Ion : 63.00
Area (flag) : 3359
On-Column Amount (ng) : 0.4948

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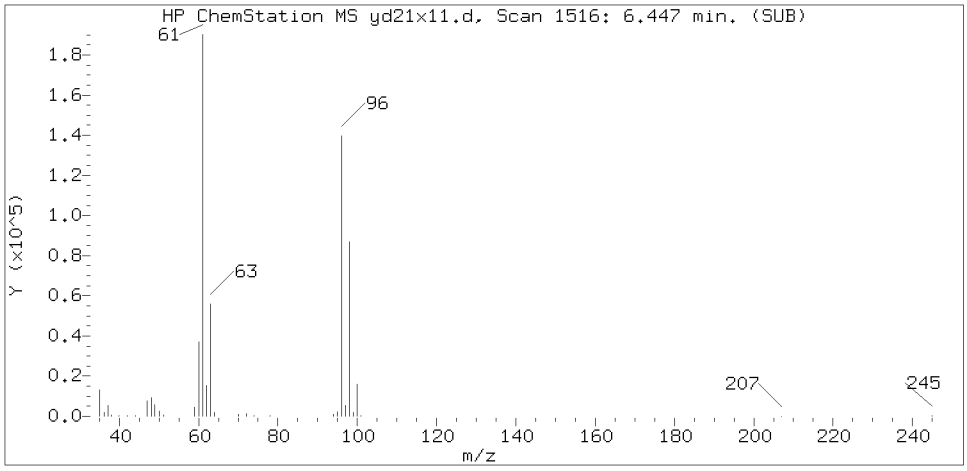
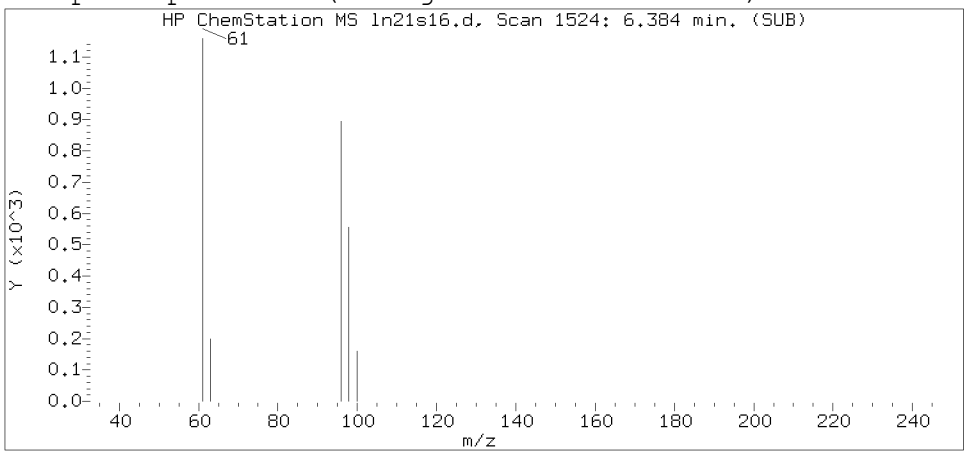
Target 3.5 esignature user ID: dvv10203

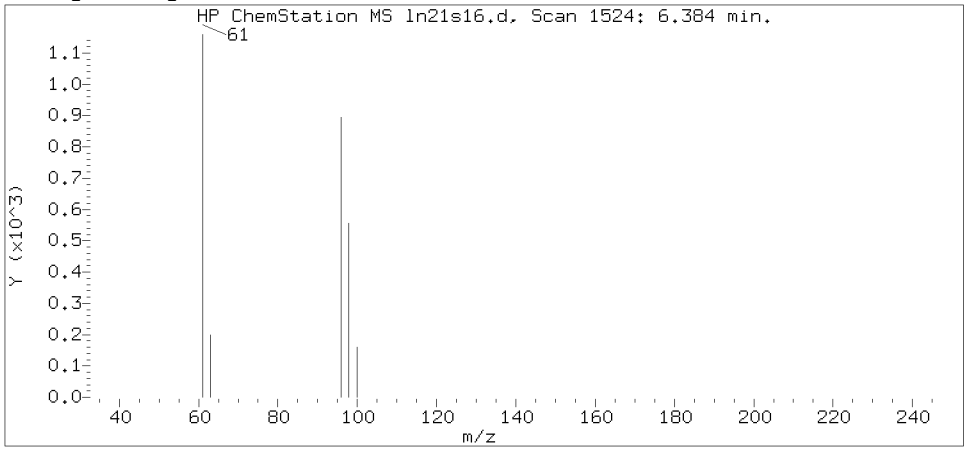
Reference Standard Spectrum for cis-1,2-Dichloroethene

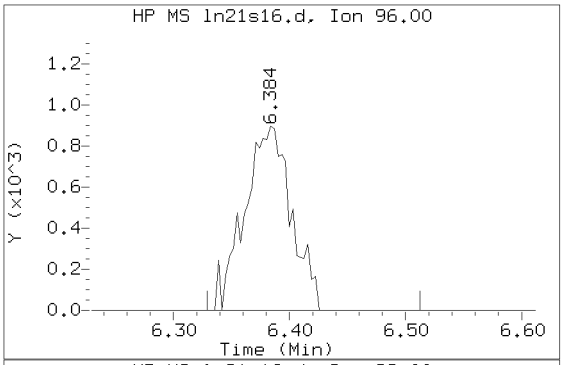


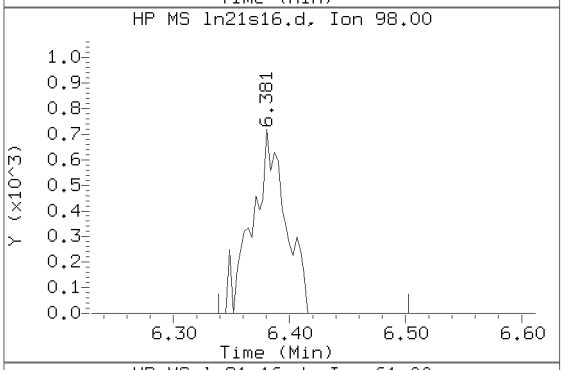
Sample Spectrum (Background Subtracted)

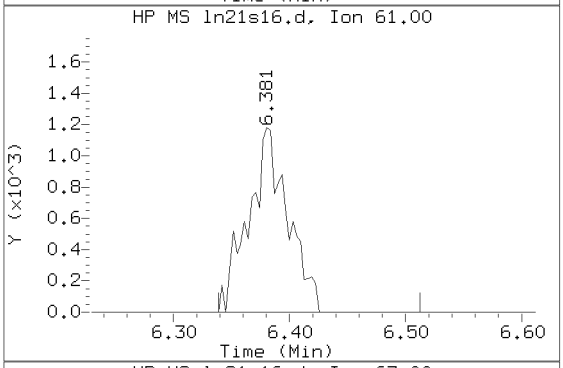


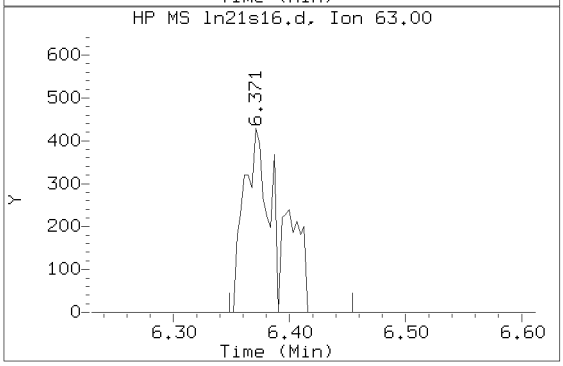
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov21a.b/ln21s16.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 16:07 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 16:24 Automation

Sample Name: C2102 Lab Sample ID: 1202326

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 1524
Retention Time (minutes): 6.384
Relative Retention Time :-0.00041
Quant Ion : 96.00
Area (flag) : 2501
On-Column Amount (ng) : 0.5727

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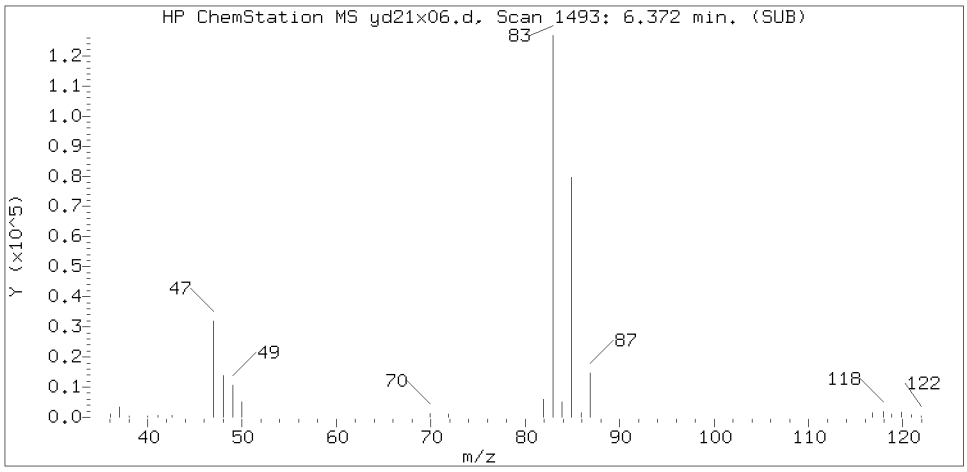
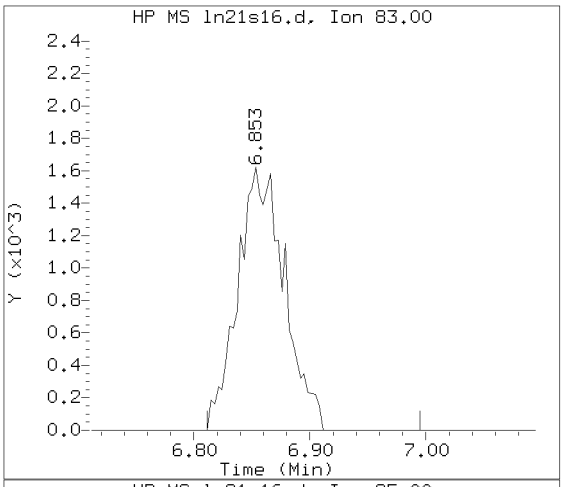
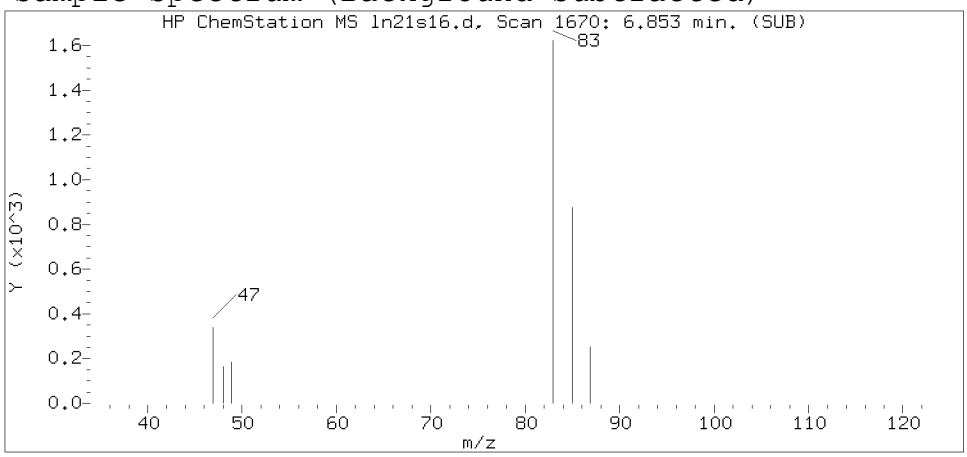
Target 3.5 esignature user ID: dvv10203

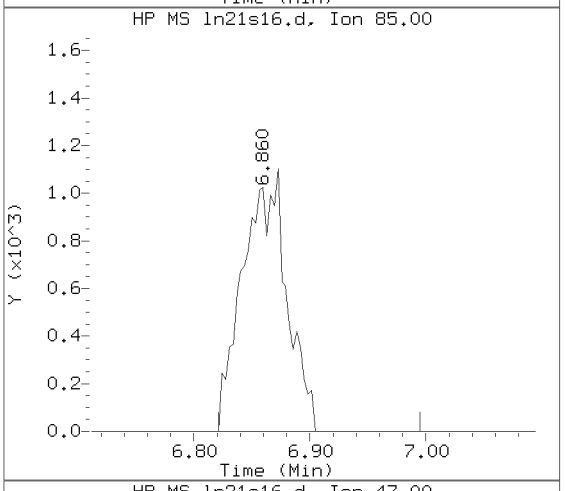
Reference Standard Spectrum for Chloroform



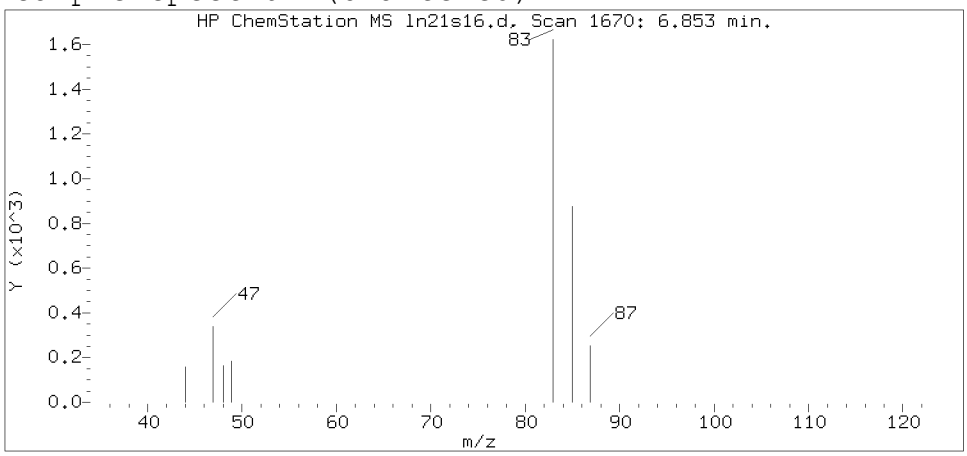


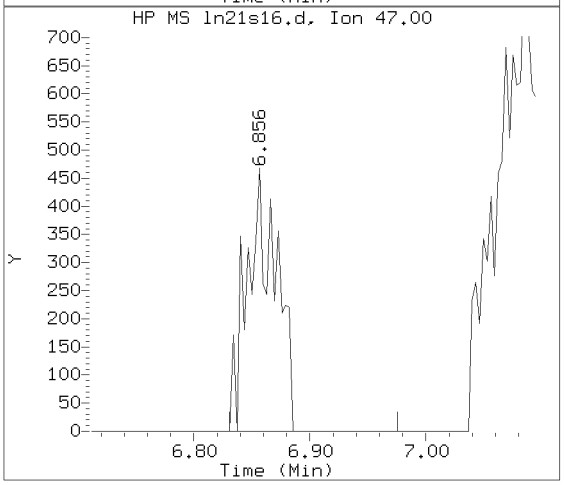
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov21a.b/ln21s16.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 16:07 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 16:24 Automation

Sample Name: C2102 Lab Sample ID: 1202326

Compound Number : 51
Compound Name : Chloroform
Scan Number : 1670
Retention Time (minutes): 6.853
Relative Retention Time : 0.00121
Quant Ion : 83.00
Area (flag) : 4524
On-Column Amount (ng) : 0.6967

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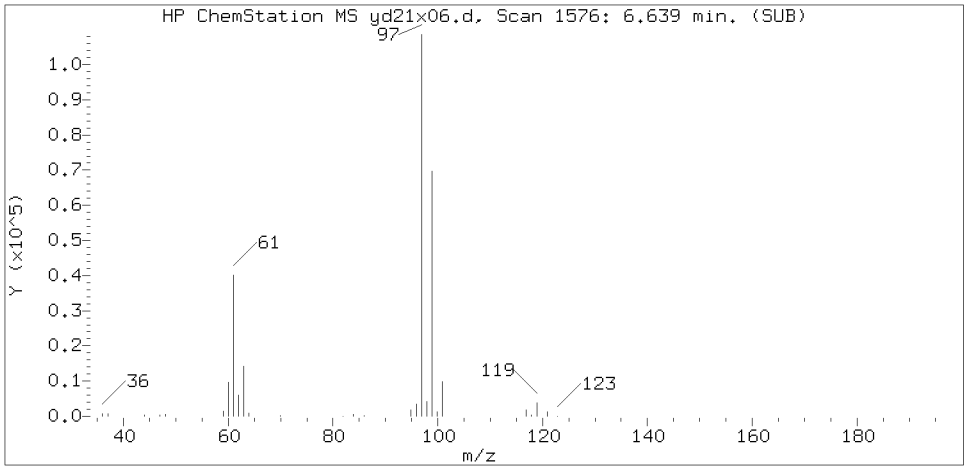
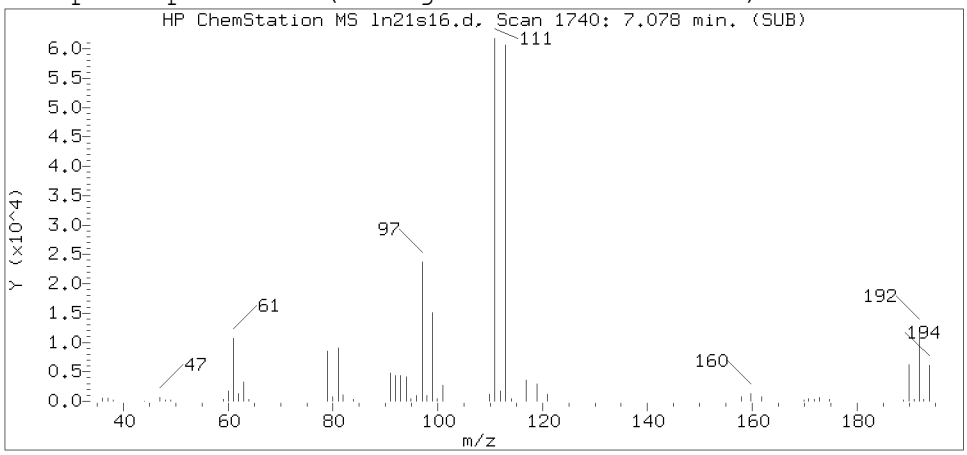
Target 3.5 esignature user ID: dvv10203

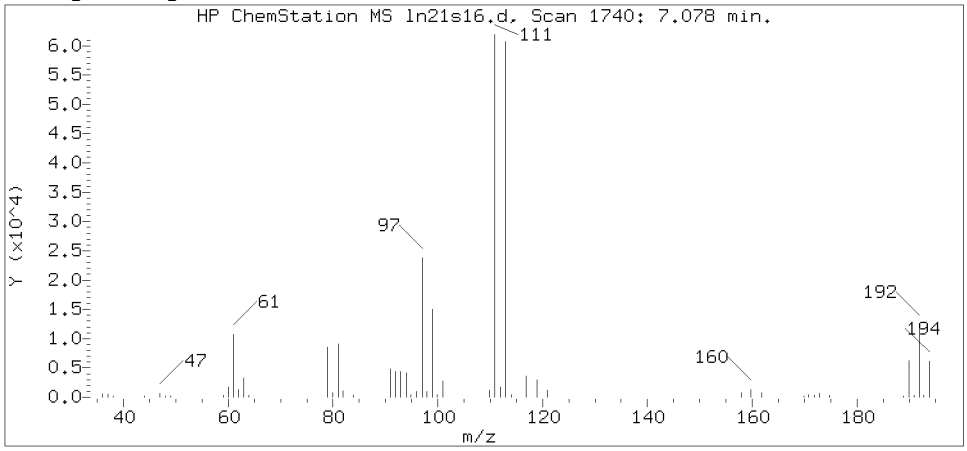
Reference Standard Spectrum for 1,1,1-Trichloroethane

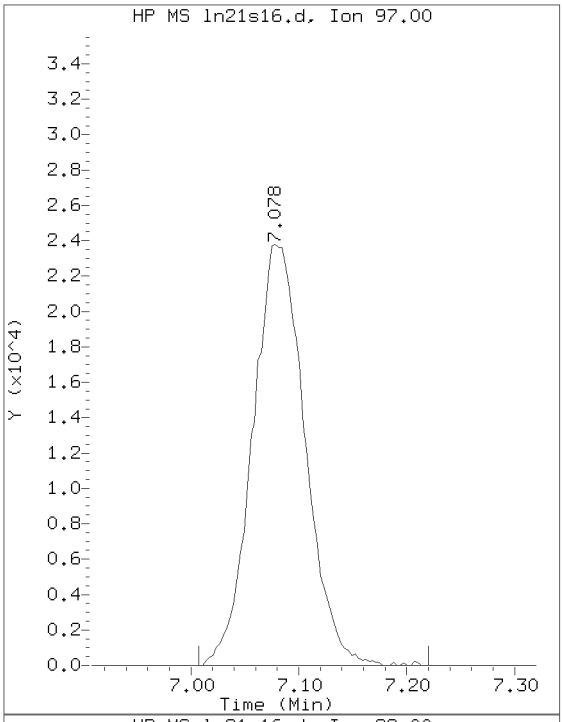


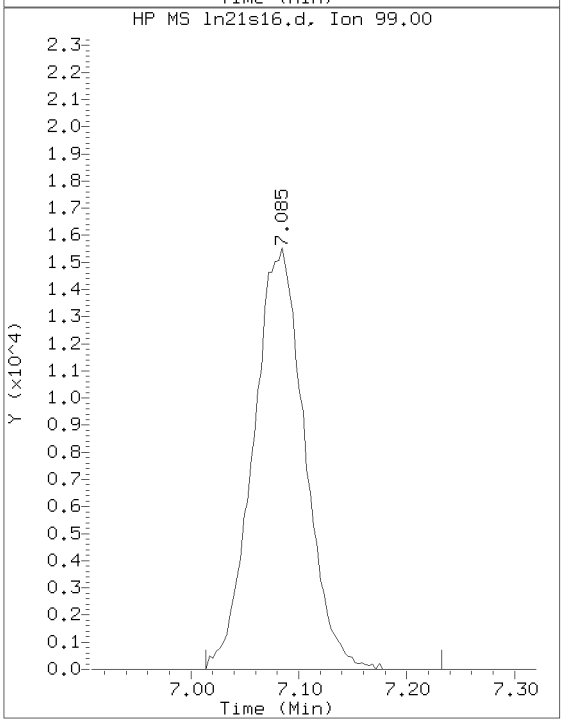
Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)







Data File: /chem/HP09915.i/19nov21a.b/ln21s16.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 16:07 Analyst ID: LCP00895

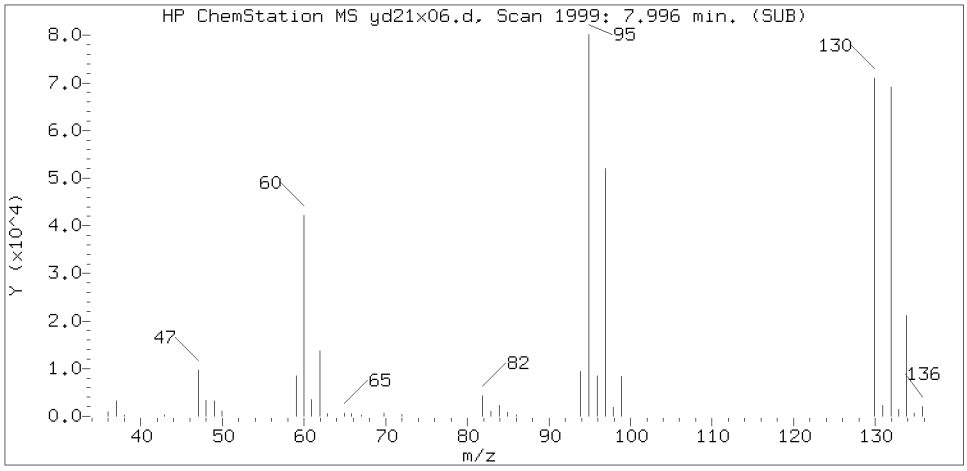
Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 16:24 Automation

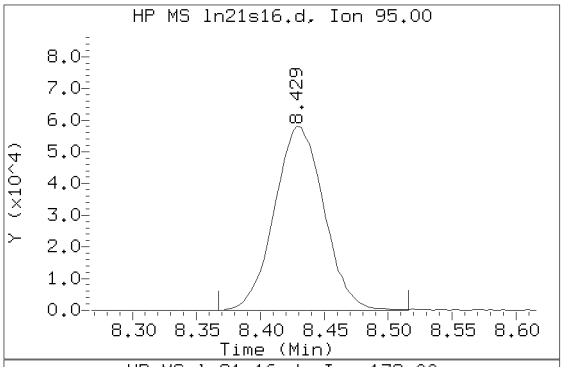
Sample Name: C2102 Lab Sample ID: 1202326

Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 1740
Retention Time (minutes): 7.078
Relative Retention Time : 0.00121
Quant Ion : 97.00
Area (flag) : 80598
On-Column Amount (ng) : 14.5423

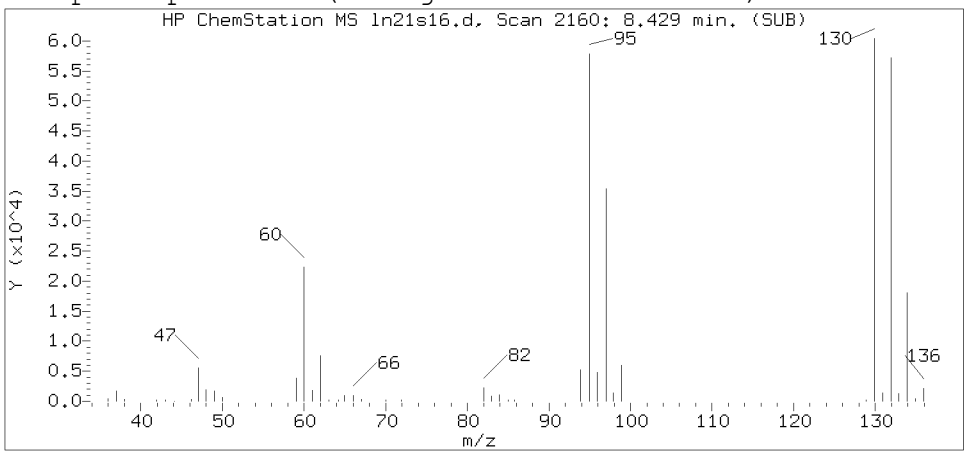
Digitally signed by Don V. Viray on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10202

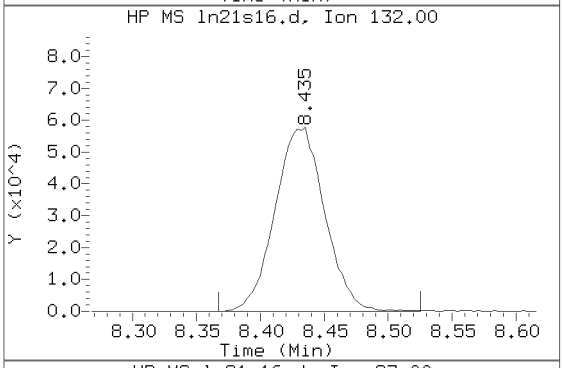
Reference Standard Spectrum for Trichloroethene

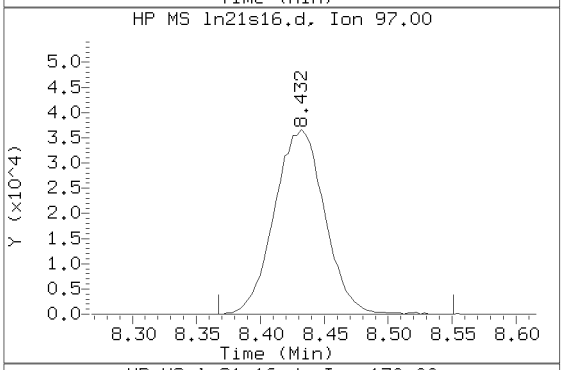




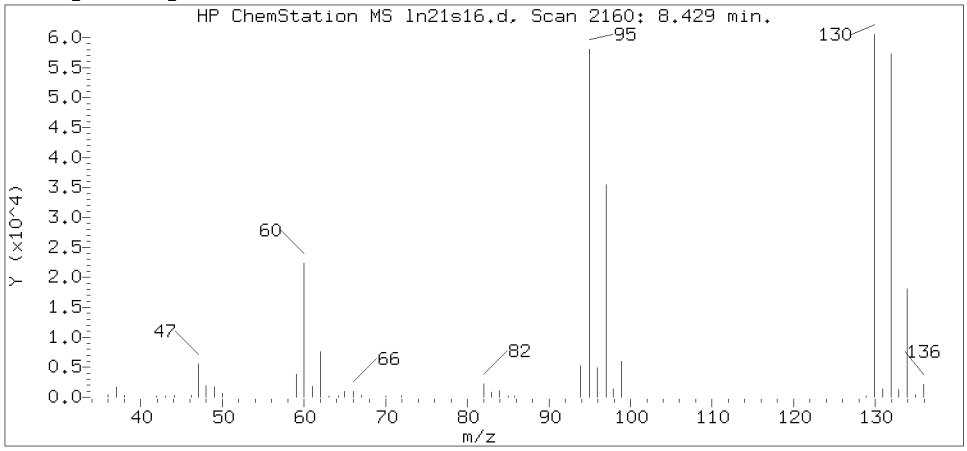
Sample Spectrum (Background Subtracted)

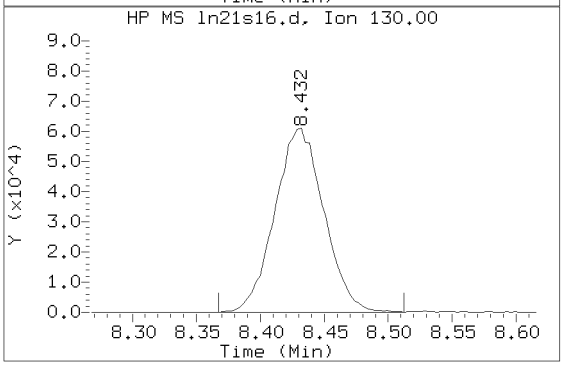






Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov21a.b/ln21s16.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 16:07 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 16:24 Automation

Sample Name: C2102 Lab Sample ID: 1202326

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 2160
Retention Time (minutes)	: 8.429
Relative Retention Time	: 0.00000
Quant Ion	: 95.00
Area (flag)	: 156022
On-Column Amount (ng)	: 38.3843

Digitally signed by Don V. Viray on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
C2103

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1202327

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov21a.b/ln21s17.d

Level: (low/med) LOW Date Received: 11/14/19

Moisture: not dec. _____ Date Analyzed: 11/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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C2103 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1202327

Data file: /chem/HP09915.i/19nov21a.b/ln21s17.d Injection date and time: **21-NOV-2019 16:29**
Data file Sample Info. Line: C2103;1202327;1;0;;JCW21;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 16:46 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.500	(-0.006)	938	65	144523	(-6)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	806944	(-4)	50.00	
100) Chlorobenzene-d5	11.361	(0.000)	3072	117	666802	(-3)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	358400	(-4)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.078	(0.000)	113	190665	48.329	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(0.000)	102	50236	49.964	100%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	828719	47.498	95%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	314712	47.636	95%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Don V. Viray on 11/21/2019 at 22:39. Target 3.5 esignature user ID: dvv10203

Data file: /chem/HP09915.i/19nov21a.b/ln21s17.d Injection date and time: **21-NOV-2019 16:29**
Data file Sample Info. Line: C2103;1202327;1;0;;JCW21;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 16:46 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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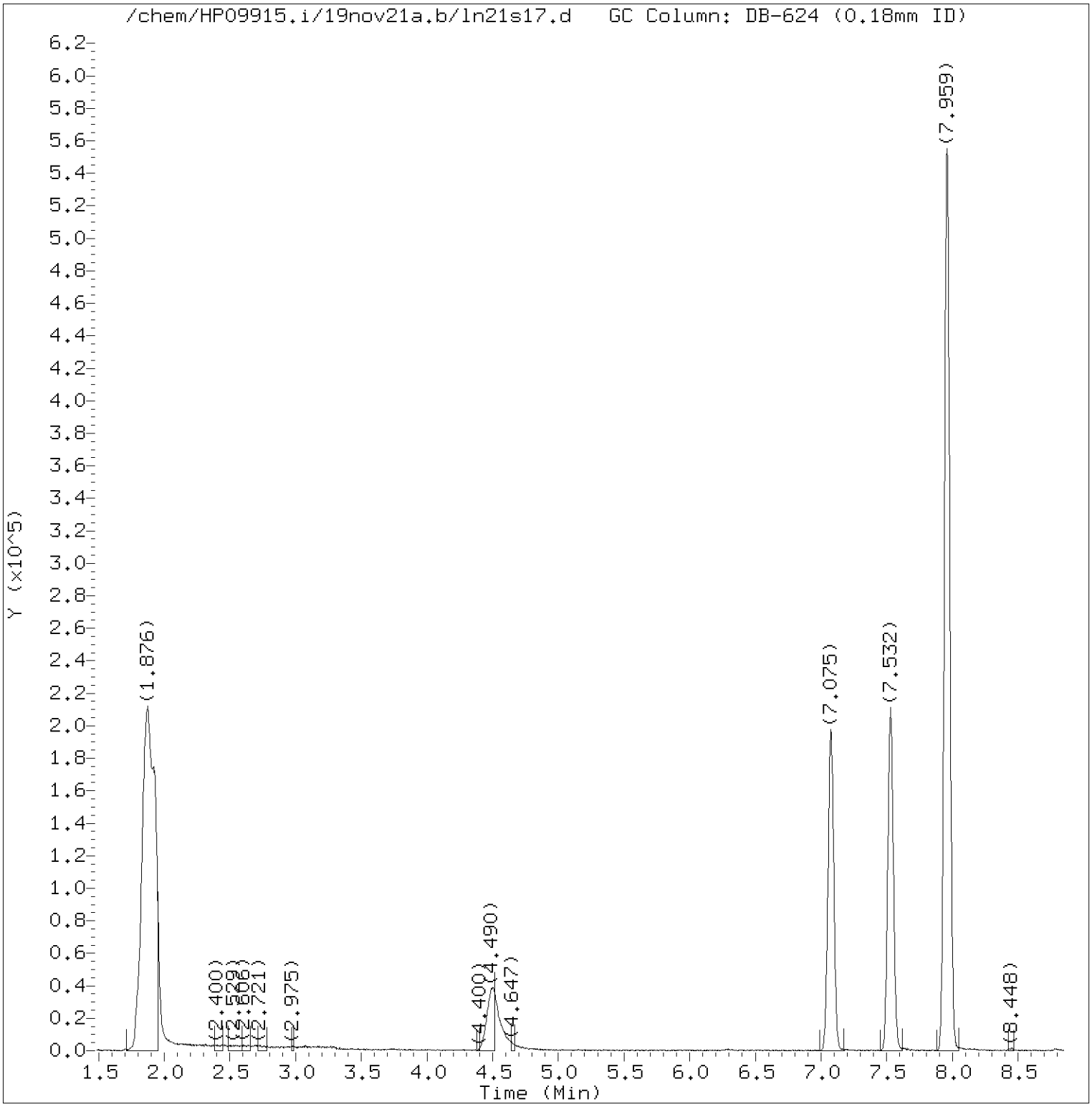
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Don V. Viray on 11/21/2019 at 22:39. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:44. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

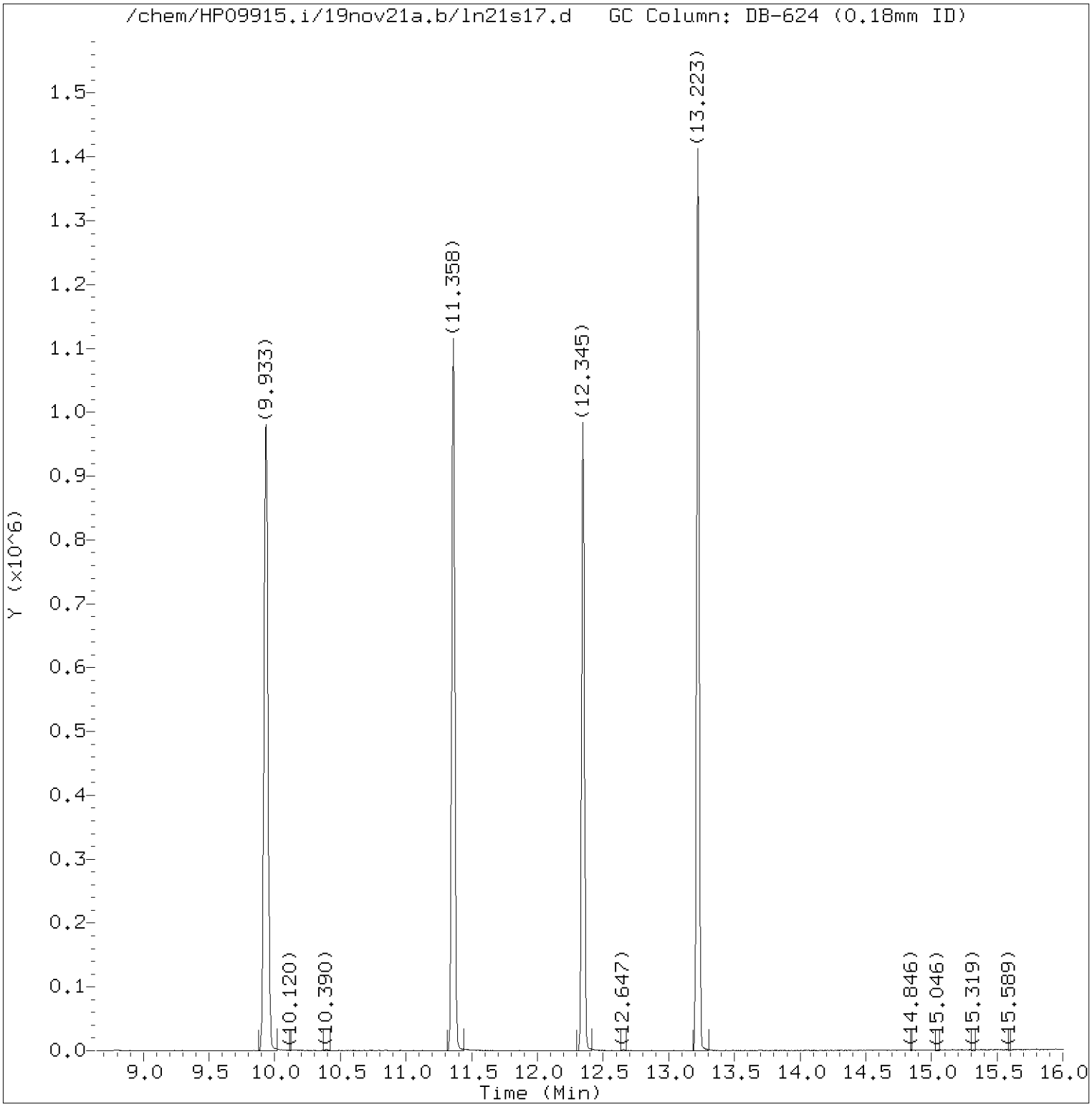
Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s17.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 16:29 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 16:46 Automation

Sample Name: C2103 Lab Sample ID: 1202327

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s17.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 16:29 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 16:46 Automation

Sample Name: C2103 Lab Sample ID: 1202327

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21s17.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 16:29 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 16:46 Automation

Sample Name: C2103 Lab Sample ID: 1202327

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.500	65	144523	250.000
52)$Dibromofluoromethane	(2)	7.078	113	190665	48.329
57)$1,2-Dichloroethane-d4	(2)	7.528	102	50236	49.964
66)*Fluorobenzene	(2)	7.959	96	806944	50.000
83)$Toluene-d8	(3)	9.930	98	828719	47.498
100)*Chlorobenzene-d5	(3)	11.361	117	666802	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	314712	47.636
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	358400	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/21/2019 at 22:39.
Target 3.5 esignature user ID: dvv10203

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\19nov04i\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
KAS02648	LN04T01.D	50NGBFB	11/04/2019	12:52	L191821AA	
KAS02648	LN04T02.D	50NGBFB	11/04/2019	13:05	L191821AA	
KAS02648	LN04T03.D	50NGBFB	11/04/2019	13:27	L191821AA	
KAS02648	LN04T04.D	50NGBFB	11/04/2019	13:45	L191821AA	
KAS02648	LN04T05.D	50NGBFB	11/04/2019	14:07	L191821AA	
KAS02648	LN04T06.D	50NGBFB	11/04/2019	14:18	L191821AA	
KAS02648	LN04X01.D	CLNBLK	11/04/2019	14:29		
KAS02648	LN04I01.D	VSTD300	11/04/2019	14:51		
KAS02648	LN04I02.D	VSTD100	11/04/2019	15:13		
KAS02648	LN04I03.D	VSTD050	11/04/2019	15:35		
KAS02648	LN04I04.D	VSTD020	11/04/2019	15:57		
KAS02648	LN04I05.D	VSTD010	11/04/2019	16:19		
KAS02648	LN04I06.D	VSTD004	11/04/2019	16:41		
KAS02648	LN04I07.D	VSTD001	11/04/2019	17:03		
KAS02648	LN04V01.D	ICVLLG	11/04/2019	17:25		
KAS02648	LN04V02.D	ICVLLG	11/04/2019	18:42		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\19NOV21a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
lcp00895	LN21T01.D	50NGBFB	11/21/2019	07:27	L191821AA	
lcp00895	LN21T02.D	50NGBFB	11/21/2019	07:42	L191821AA	
LCP00895	LN21X01.D	CBLK	11/21/2019	07:56	L193251AA	
LCP00895	LN21C01.D	VSTD050	11/21/2019	08:18	L193251AA	
LCP00895	LN21S01.D	LCSL83	11/21/2019	08:40	L193251AA	
LCP00895	LN21r01.D	RVLL83	11/21/2019	09:02	L193251AA	
LCP00895	LN21B01.D	VBLKL83	11/21/2019	09:24	L193251AA	
LCP00895	LN21L01.D	LCSL83	11/21/2019	09:50	L193251AA	
LCP00895	LN21S02.D	1202441	11/21/2019	10:59	L193251AA	
LCP00895	LN21S03.D	1202286	11/21/2019	11:21	L193251AA	
LCP00895	LN21S04.D	1202287MS	11/21/2019	11:43	L193251AA	
LCP00895	LN21S05.D	1202288MSD	11/21/2019	12:04	L193251AA	
LCP00895	LN21S06.D	1202289	11/21/2019	12:26	L193251AA	
LCP00895	LN21S07.D	1202290	11/21/2019	12:48	L193251AA	
LCP00895	LN21S08.D	1202291	11/21/2019	13:10	L193251AA	
LCP00895	LN21S09.D	1202292	11/21/2019	13:32	L193251AA	
LCP00895	LN21S10.D	1202293	11/21/2019	13:54	L193251AA	
LCP00895	LN21S11.D	1202294	11/21/2019	14:16	L193251AA	
LCP00895	LN21S12.D	1202321	11/21/2019	14:39	L193251AA	
LCP00895	LN21S13.D	1202322	11/21/2019	15:01	L193251AA	
LCP00895	LN21S14.D	1202323	11/21/2019	15:23	L193251AA	
LCP00895	LN21S15.D	1202325	11/21/2019	15:45	L193251AA	
LCP00895	LN21S16.D	1202326	11/21/2019	16:07	L193251AA	
LCP00895	LN21S17.D	1202327	11/21/2019	16:29	L193251AA	
LCP00895	LN21S18.D	1202434	11/21/2019	16:51	L193251AA	
LCP00895	LN21S19.D	1202437	11/21/2019	17:13	L193251AA	
LCP00895	LN21S20.D	1202438	11/21/2019	17:35	L193251AA	
LCP00895	LN21S21.D	1202439	11/21/2019	17:57	L193251AA	
LCP00895	LN21S22.D	1202440	11/21/2019	18:19	L193251AA	

Data File: /chem/HP09915.i/19nov04i.b/ln04t06.d

Date : 04-NOV-2019 14:18

Client ID: AUG02-19

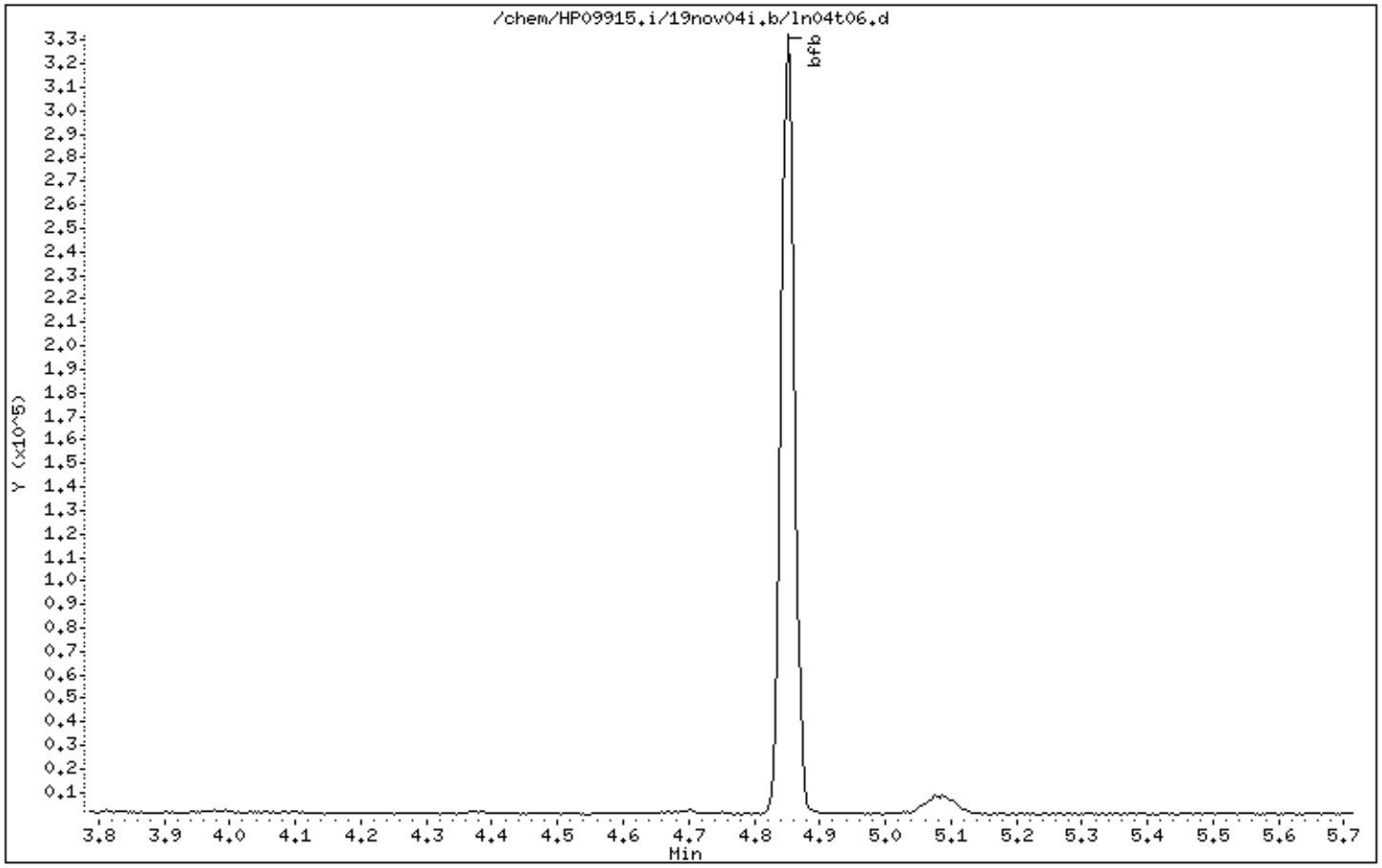
Instrument: HP09915.i

Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem/HP09915.i/19nov04i.b/ln04t06.d

Date : 04-NOV-2019 14:18

Client ID: AUG02-19

Instrument: HP09915.i

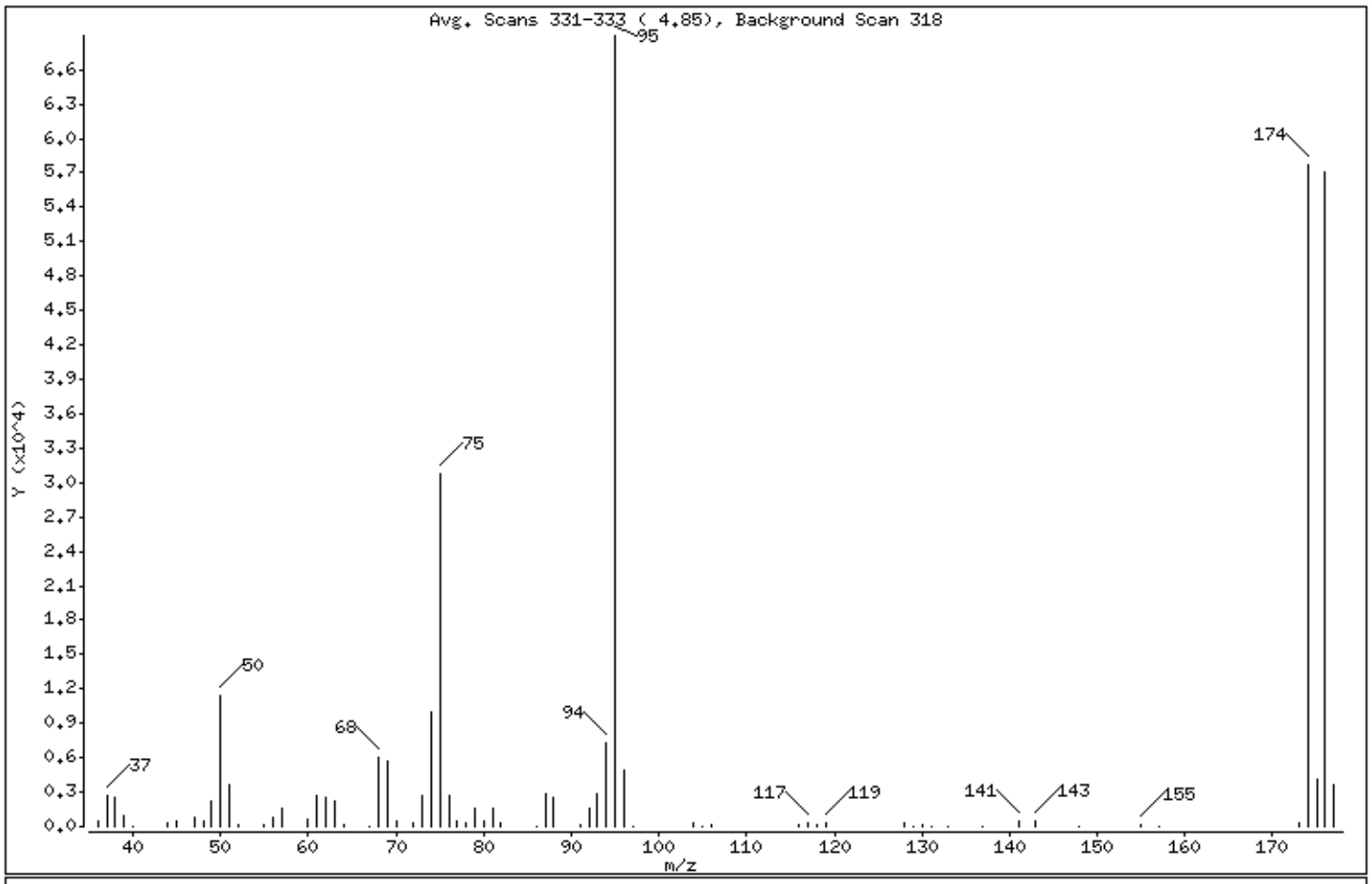
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.48
75	30.00 - 60.00% of mass 95	44.65
96	5.00 - 9.00% of mass 95	7.22
173	Less than 2.00% of mass 174	0.51 (0.61)
174	50.00 - 100.00% of mass 95	83.73
175	5.00 - 9.00% of mass 174	5.92 (7.07)
176	95.00 - 101.00% of mass 174	82.66 (98.72)
177	5.00 - 9.00% of mass 176	5.37 (6.49)

Date : 04-NOV-2019 14:18

Client ID: AUG02-19 Instrument: HP09915.i

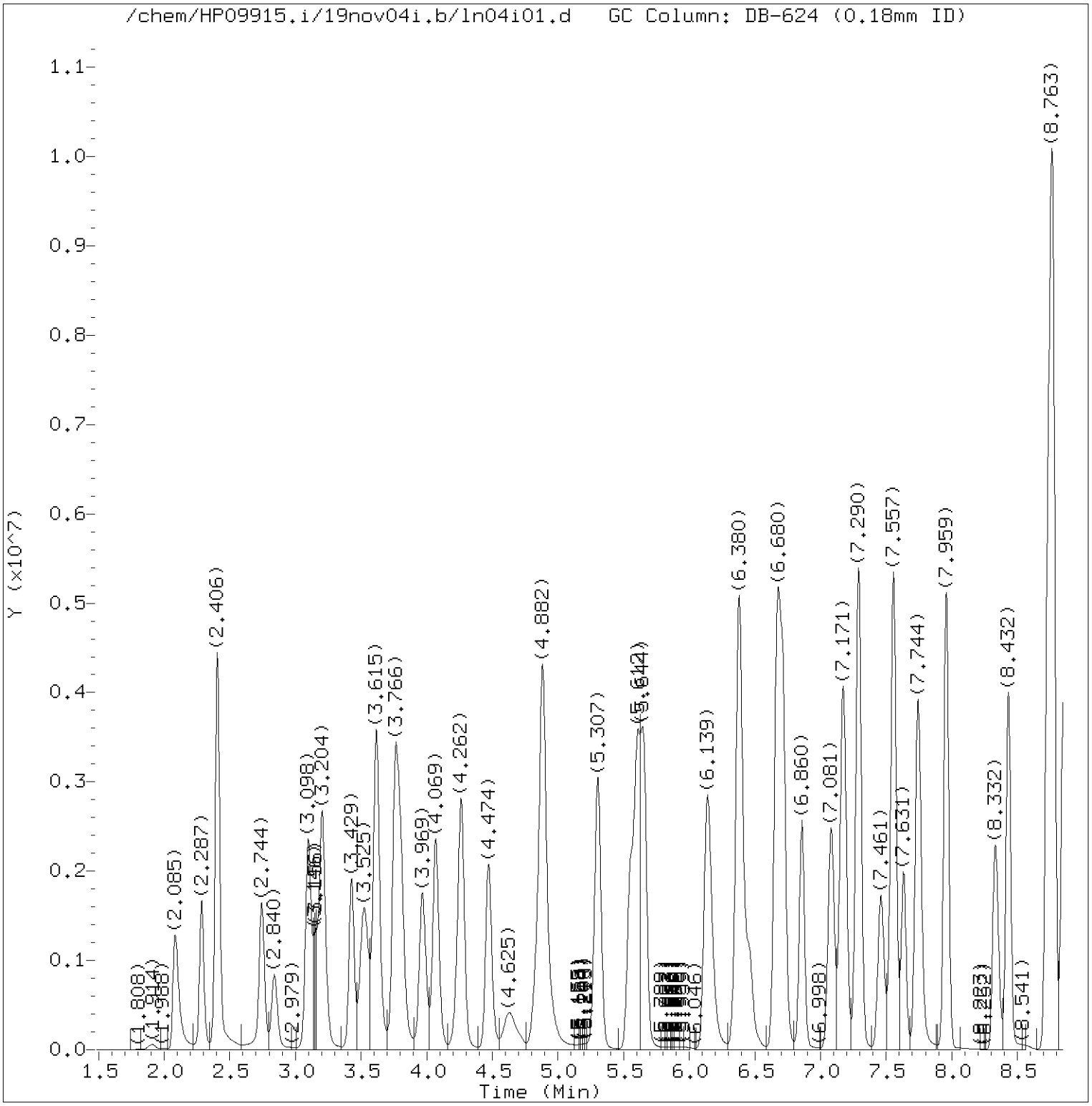
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: ln04t06.d
Spectrum: Avg. Scans 331-333 (4.85), Background Scan 318
Location of Maximum: 95.00
Number of points: 69

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	529	62.00	2498	86.00	55	129.00	53
37.00	2736	63.00	2218	87.00	2840	130.00	112
38.00	2557	64.00	150	88.00	2593	131.00	53
39.00	971	67.00	71	91.00	144	133.00	52
40.00	22	68.00	6076	92.00	1588	137.00	53
44.00	270	69.00	5647	93.00	2845	141.00	538
45.00	457	70.00	476	94.00	7275	143.00	484
47.00	784	72.00	322	95.00	68968	148.00	77
48.00	424	73.00	2656	96.00	4977	155.00	162
49.00	2292	74.00	10024	97.00	62	157.00	63
50.00	11364	75.00	30792	104.00	284	173.00	350
51.00	3586	76.00	2712	105.00	50	174.00	57744
52.00	134	77.00	405	106.00	233	175.00	4082
55.00	217	78.00	267	116.00	189	176.00	57008
56.00	871	79.00	1601	117.00	348	177.00	3701
57.00	1629	80.00	440	118.00	231		
60.00	555	81.00	1543	119.00	348		
61.00	2700	82.00	307	128.00	239		



Total Ion Chromatogram (TIC)

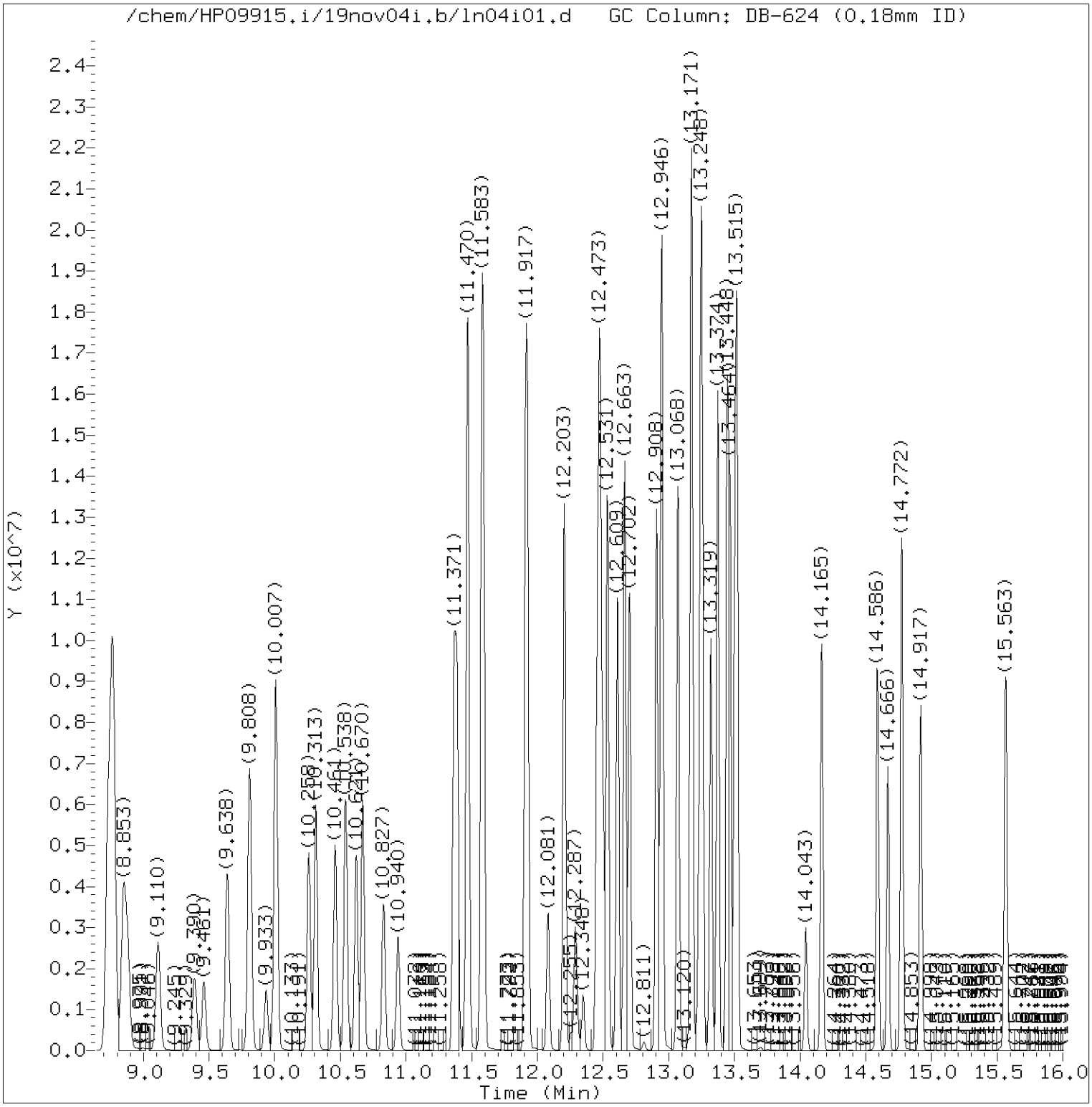
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.085	85	2719746M	347.943
4) Chloromethane	(2)	2.287	50	2403581	319.051
5) 1,3-Butadiene	(2)	2.406	39	1785787M	285.486
6) Vinyl Chloride	(2)	2.406	62	2412855	320.904
8) Bromomethane	(2)	2.744	94	1638575	304.015
9) Chloroethane	(2)	2.837	64	1253478	303.356
12) Trichlorofluoromethane	(2)	3.152	101	2661050	328.734
11) n-Pentane	(2)	3.204	43	2816823	294.455
14) Ethyl ether	(2)	3.429	59	1721693	329.146
15) Freon 123a	(2)	3.525	67	1991616	305.852
16) Acrolein	(1)	3.615	56	5765354	3020.583
17) 1,1-Dichloroethene	(2)	3.760	96	1489890	313.570
17) 1,1-Dichloroethene	(2)	3.757	63	721205	302.767
19) Freon 113	(2)	3.792	101	1732433	319.583
18) Acetone	(1)	3.802	58	531845	621.534
22) Methyl Iodide	(2)	3.966	142	3047145	309.483
21) 2-Propanol	(1)	3.995	45	936919	1523.065
23) Carbon Disulfide	(2)	4.069	76	5676465	317.027
27) Methyl Acetate	(2)	4.239	43	1941315	317.230
25) Allyl Chloride	(2)	4.265	41	2748698	322.482
28) Methylene Chloride	(2)	4.474	84	1745840	308.716
29)*t-Butyl alcohol-d10	(1)	4.503	65	254406M	250.000
30) t-Butyl alcohol	(1)	4.638	59	1641037	1532.140
31) Acrylonitrile	(2)	4.827	53	1039800	315.820
32) trans-1,2-Dichloroethene	(2)	4.885	96	1713357	311.714
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	5505439	305.143
34) n-Hexane	(2)	5.307	57	2863189M	334.811
36) 1,1-Dichloroethane	(2)	5.548	63	3007196	313.618
38) di-Isopropyl ether	(2)	5.609	45	5739955	310.377
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	2776921	322.788
40) Ethyl t-butyl ether	(2)	6.139	59	5425034	302.275
43) 1,2-Dichloroethene (Total)	(2)		96	3646040	624.977
44) 2-Butanone	(2)	6.364	43	2642793	625.317
42) cis-1,2-Dichloroethene	(2)	6.380	96	1932683	313.263
45) 2,2-Dichloropropane	(2)	6.397	77	2377411	318.945
47) Propionitrile	(1)	6.458	54	2126389	1593.336
48) Methacrylonitrile	(2)	6.670	67	2858148	804.768
49) Bromochloromethane	(2)	6.708	128	1075154	328.655

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.718	71	758236	628.991
51) Chloroform	(2)	6.860	83	2916299	317.988
52)$Dibromofluoromethane	(2)	7.075	113	276322	50.424
52)$Dibromofluoromethane	(2)	7.075	111	279197	49.969
53) 1,1,1-Trichloroethane	(2)	7.081	97	2560601	327.130
54) Cyclohexane	(2)	7.171	56	3429211	327.611
54) Cyclohexane	(2)	7.171	84	2984908	328.282
54) Cyclohexane	(2)	7.171	69	1068201	329.937
56) Carbon Tetrachloride	(2)	7.287	117	2252864	339.350
55) 1,1-Dichloropropene	(2)	7.294	75	2434619	321.125
58) Isobutyl Alcohol	(1)	7.461	41	1382486	3835.573
57)$1,2-Dichloroethane-d4	(2)	7.528	102	68480	49.033
57)$1,2-Dichloroethane-d4	(2)	7.532	65	307306	49.375
57)$1,2-Dichloroethane-d4	(2)	7.528	104	44002	49.326
60) Benzene	(2)	7.557	78	7094466	311.169
61) 1,2-Dichloroethane	(2)	7.634	62	2222342	303.049
61) 1,2-Dichloroethane	(2)	7.634	98	228988	315.535
65) t-Amyl methyl ether	(2)	7.744	73	5421278	300.945
67) n-Heptane	(2)	7.959	43	2592531MA	324.518
66)*Fluorobenzene	(2)	7.959	96	1120873	50.000
69) n-Butanol	(1)	8.332	56	2465385M	7947.068
71) Trichloroethene	(2)	8.432	95	1841720	320.821
72) Methylcyclohexane	(2)	8.734	83	3568410	335.054
72) Methylcyclohexane	(2)	8.734	98	1632993	338.844
73) 1,2-Dichloropropane	(2)	8.769	63	1825943	315.397
76) Methyl Methacrylate	(2)	8.850	69	1904896A	340.256
75) 1,4-Dioxane	(1)	8.856	88	338379M	3968.421
74) Dibromomethane	(2)	8.879	93	1210939	323.274
78) Bromodichloromethane	(2)	9.113	83	2314651	344.351
79) 2-Nitropropane	(2)	9.390	41	1438925	706.755
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	926413	372.584
81) cis-1,3-Dichloropropene	(2)	9.638	75	3074664	344.402
82) 4-Methyl-2-pentanone	(2)	9.808	43	5422938	607.899
83)$Toluene-d8	(3)	9.933	98	1156351	49.563
83)$Toluene-d8	(3)	9.933	100	751534	49.726
88) Toluene	(3)	10.007	92	4532879	309.894
90) 1,3-Dichloropropene (total)	(3)		100	5974636	693.659
89) trans-1,3-Dichloropropene	(3)	10.258	75	2899972	349.257

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	10.313	69	3356305	332.603
92) 1,1,2-Trichloroethane	(3)	10.461	97	1768710	318.935
93) Tetrachloroethene	(3)	10.541	166	1990565	321.327
94) 1,3-Dichloropropane	(3)	10.621	76	3006585	317.532
96) 2-Hexanone	(3)	10.670	43	3998423	593.616
97) Dibromochloromethane	(3)	10.827	129	2037523	358.670
99) 1,2-Dibromoethane	(3)	10.940	107	1987783	330.088
100)*Chlorobenzene-d5	(3)	11.361	117	891668	50.000
101) 1-Chlorohexane	(3)	11.364	91	2458057	312.814
102) Chlorobenzene	(3)	11.387	112	5140609	310.783
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	1789998	328.446
104) Ethylbenzene	(3)	11.470	91	8606821	307.854
106) m+p-Xylene	(3)	11.583	106	6690837	608.359
108) Xylene (Total)	(3)		106	9979970	911.130
107) o-Xylene	(3)	11.908	106	3289133	302.771
109) Styrene	(3)	11.924	104	5647939	314.619
110) Bromoform	(3)	12.081	173	1534520	361.500
111) Isopropylbenzene	(3)	12.203	105	8466138	310.714
112) Cyclohexanone	(1)	12.287	55	1351186	4046.080
114)$4-Bromofluorobenzene	(3)	12.348	95	440049	49.810
114)$4-Bromofluorobenzene	(3)	12.348	174	362553	49.502
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	2800639M	310.705
115) Bromobenzene	(4)	12.467	156	2234066	311.517
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	2150976	773.637
117) 1,2,3-Trichloropropane	(4)	12.499	110	866230	313.172
119) n-Propylbenzene	(4)	12.531	91	9654812	308.142
120) 2-Chlorotoluene	(4)	12.609	126	2098494	315.266
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	7238022	317.873
121) 4-Chlorotoluene	(4)	12.702	126	2155793	311.148
124) tert-Butylbenzene	(4)	12.908	134	1524421M	323.717
125) Pentachloroethane	(4)	12.940	167	1461833	360.511
126) 1,2,4-Trimethylbenzene	(4)	12.949	105	7469187	311.236
127) sec-Butylbenzene	(4)	13.068	105	8682126	308.971
129) 1,3-Dichlorobenzene	(4)	13.168	146	3858953	292.822
130) p-Isopropyltoluene	(4)	13.174	119	7289488	299.854
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	477171	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	4013510	293.777
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	7915203	311.364

M = Compound was manually integrated.
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Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.319	91	6484944	336.931
136) 1,3-Diethylbenzene	(4)	13.374	119	4897725	309.573
141) Diethylbenzene (total)	(4)		100	13982971	913.975
137) 1,4-Diethylbenzene	(4)	13.444	119	5013123	299.077
139) n-Butylbenzene	(4)	13.467	92	3608595	290.316
138) 1,2-Dichlorobenzene	(4)	13.502	146	3859125	296.761
140) 1,2-Diethylbenzene	(4)	13.518	119	4072123	305.325
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	669008	339.050
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	2855960	285.855
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	2681523	276.030
147) Hexachlorobutadiene	(4)	14.670	225	1157297	252.311
148) Naphthalene	(4)	14.772	128	9186333	294.145
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	2488608	263.270
150) 2-Methylnaphthalene	(4)	15.563	142	4666682	242.655

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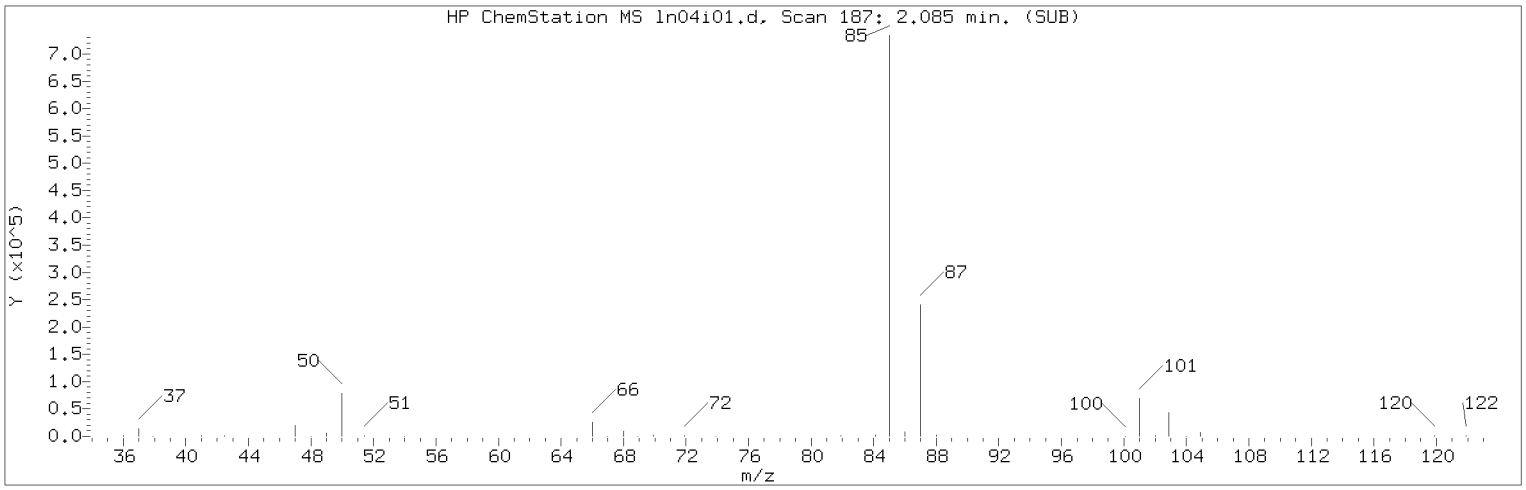
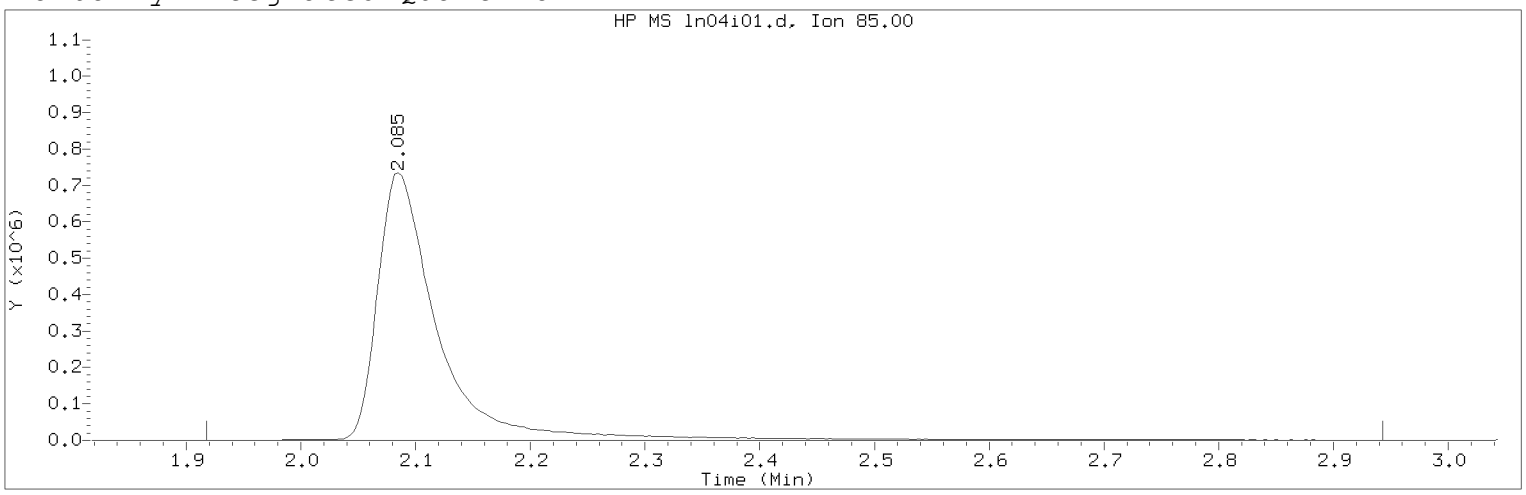
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

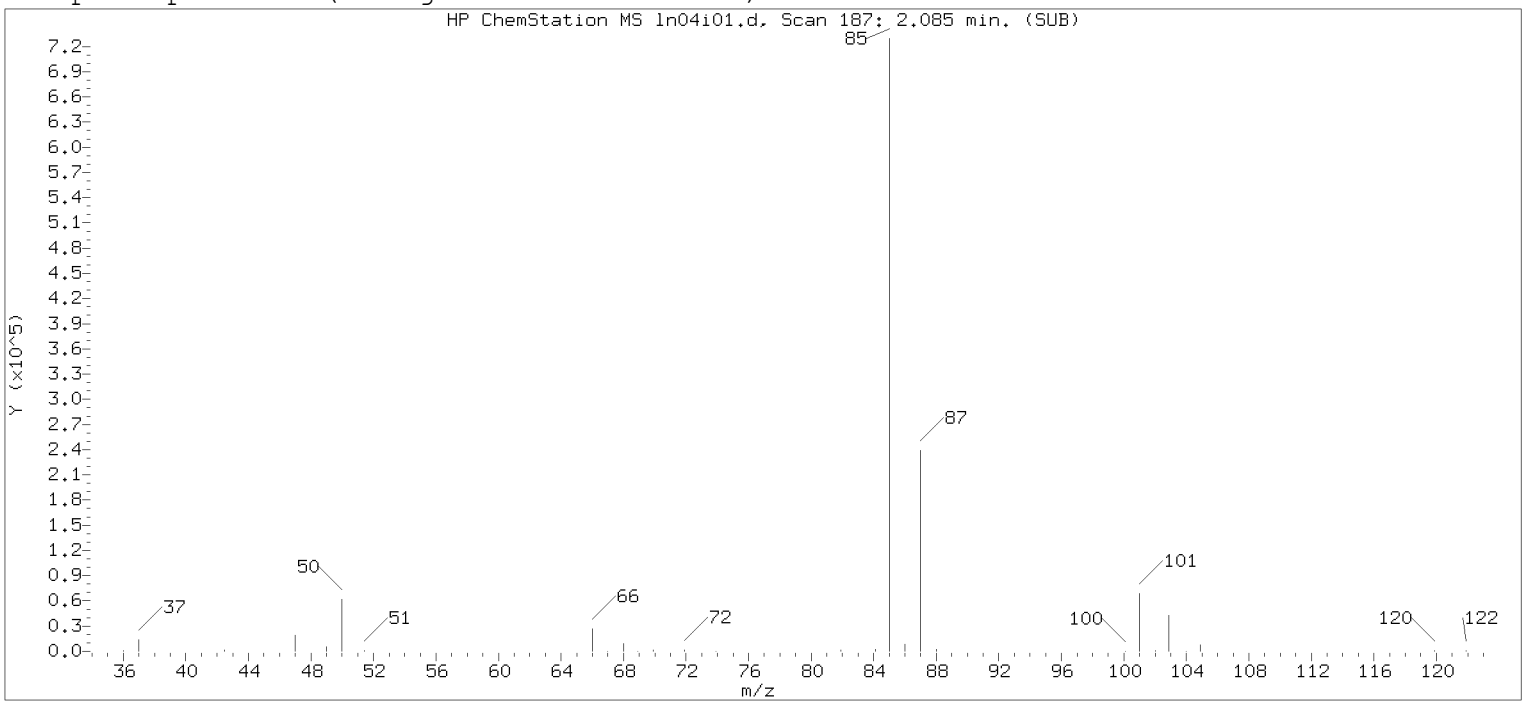
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area (flag) : 2719746M
On-Column Amount (ng) : 347.9426
Integration start scan : 134 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

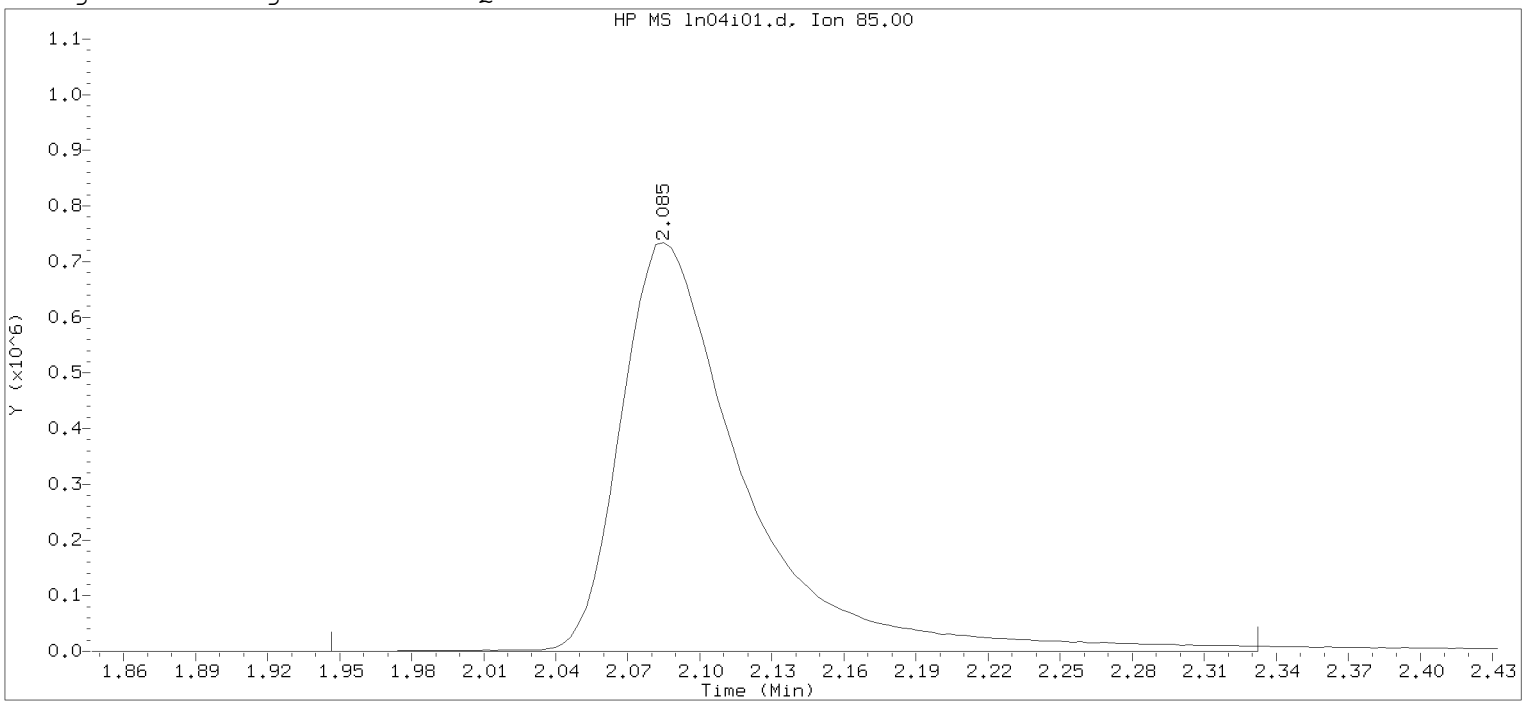
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

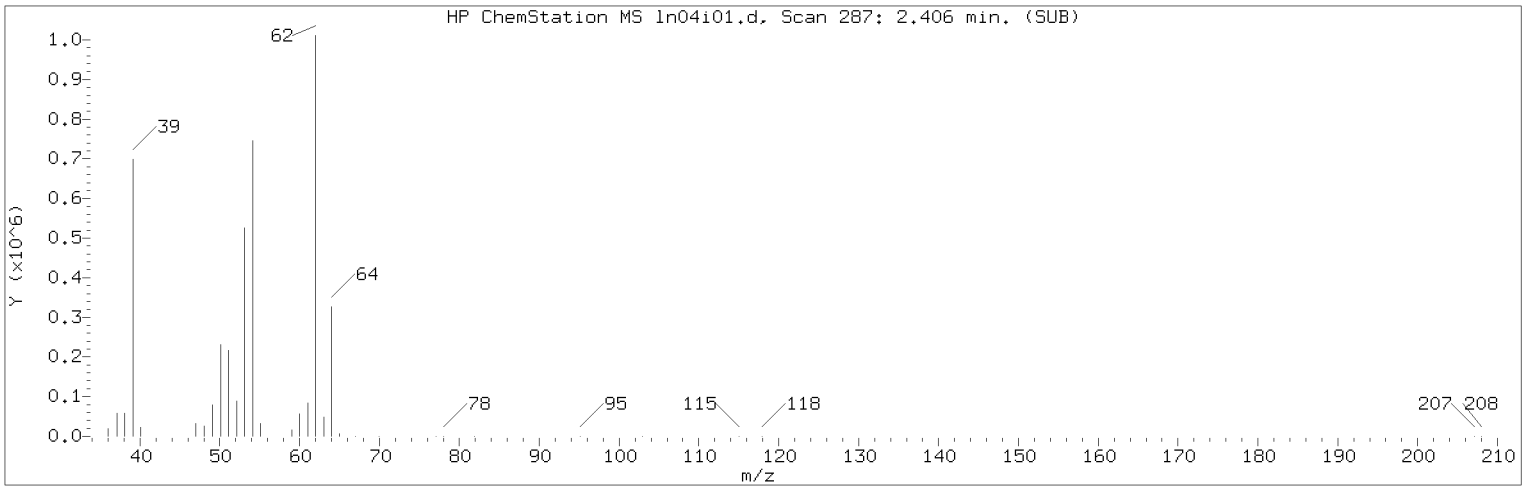
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

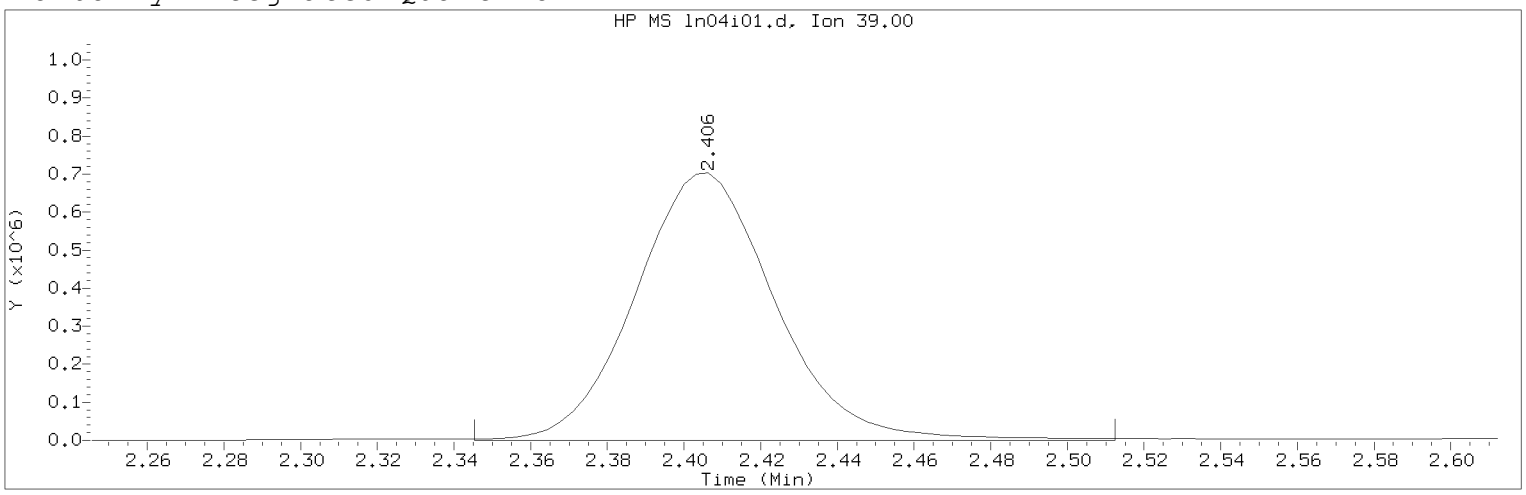
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area : 2624212
On-column Amount (ng) : 308.6520
Integration start scan : 143 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user id: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

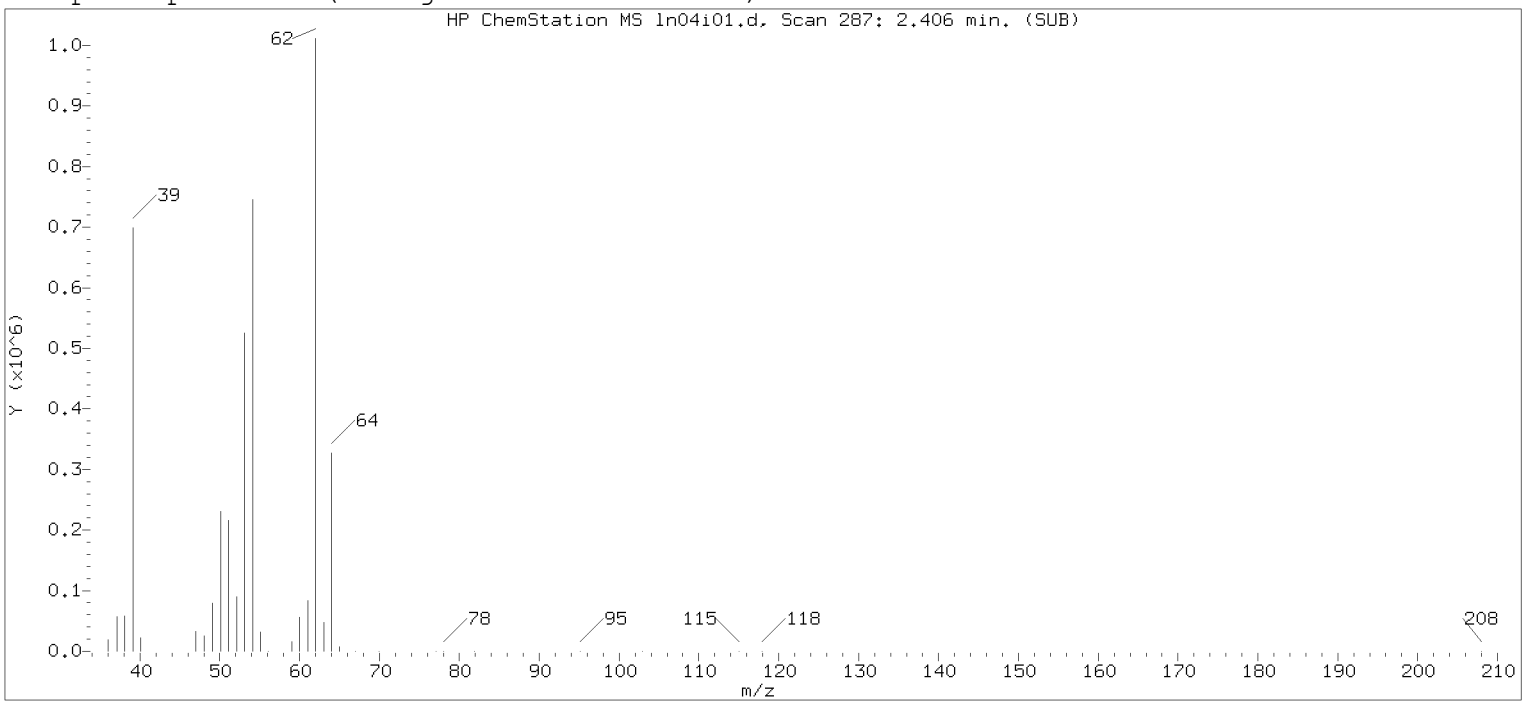
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 1785787M
On-Column Amount (ng) : 285.4858
Integration start scan : 267 Integration stop scan: 319
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

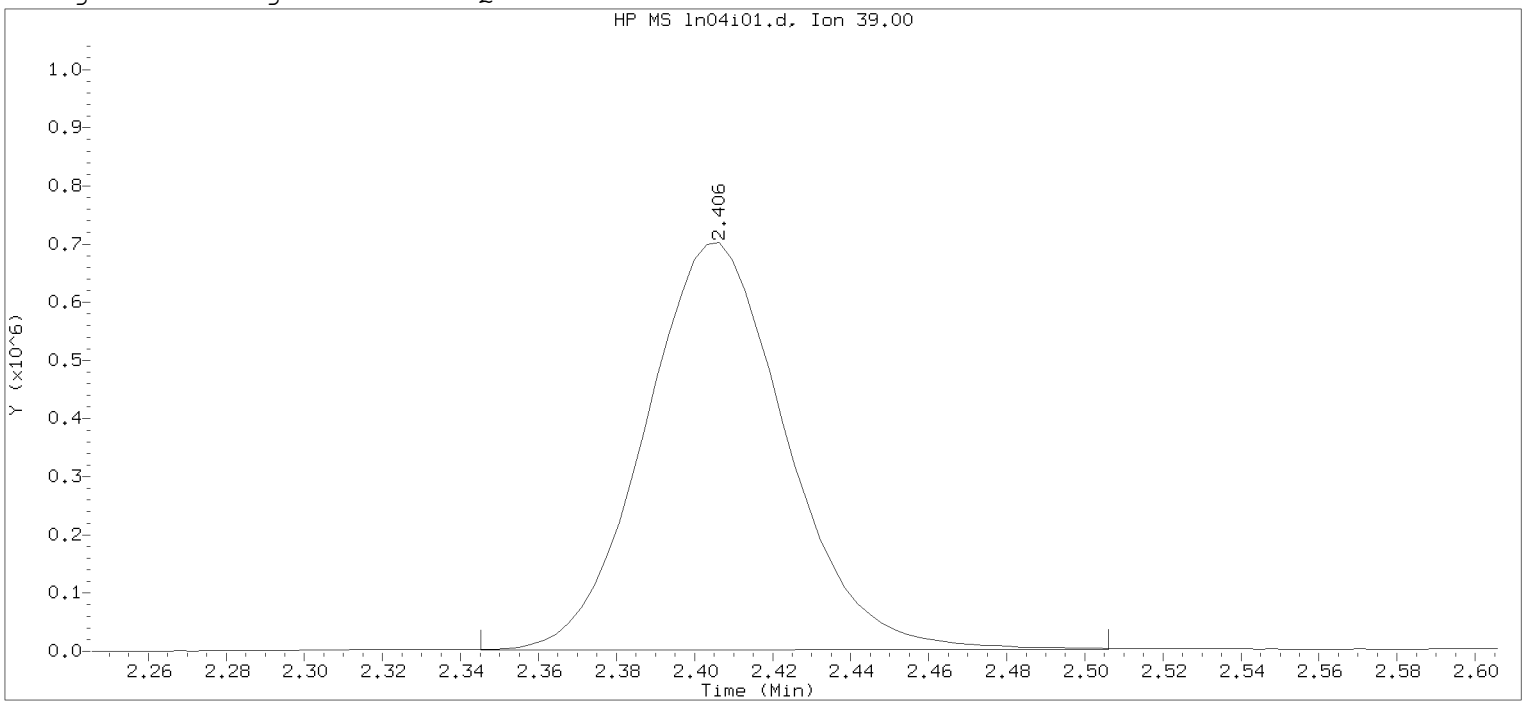
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

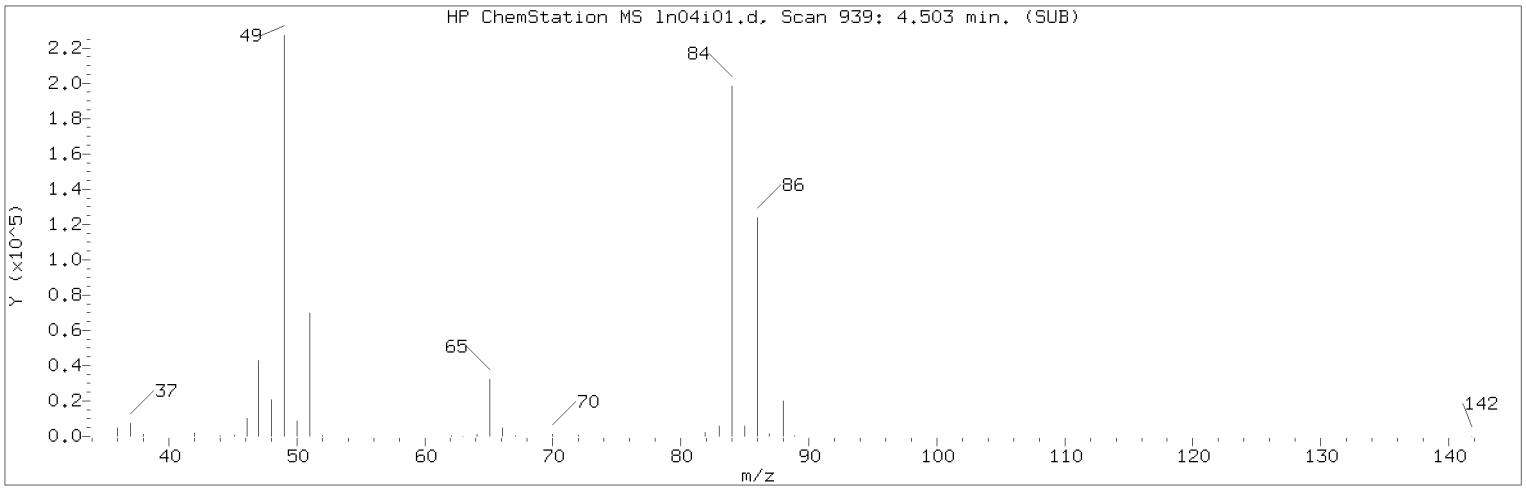
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

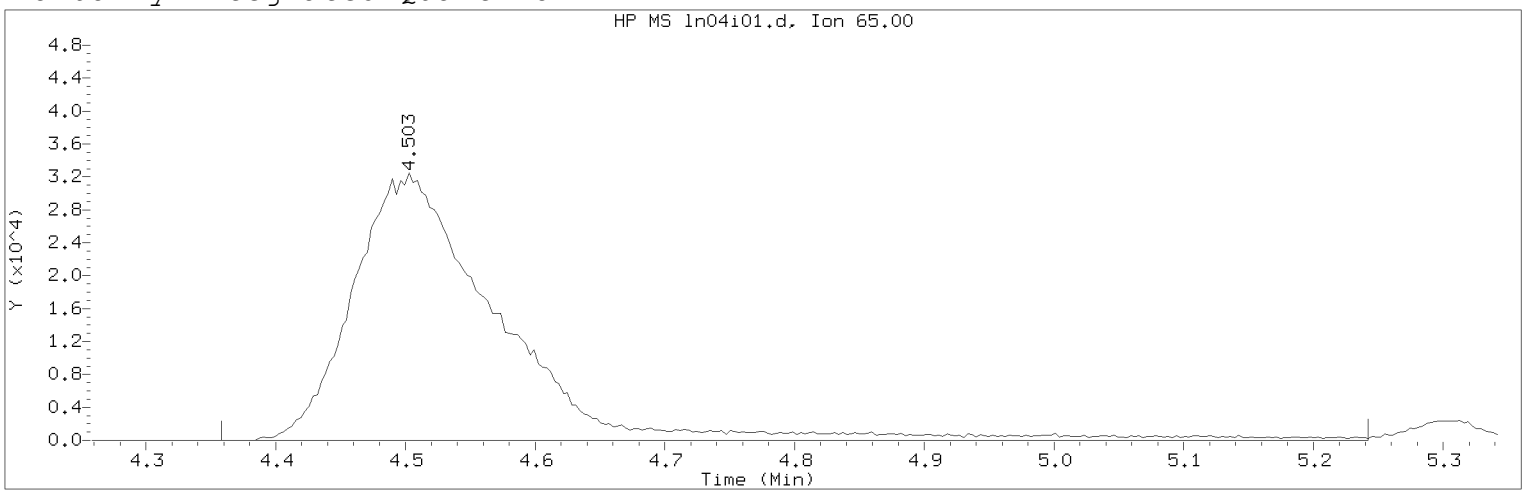
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 1755596
On-column Amount (ng) : 295.0708
Integration start scan : 267 Integration stop scan: 317
Y at integration start : 2196 Y at integration end: 3553

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user id: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

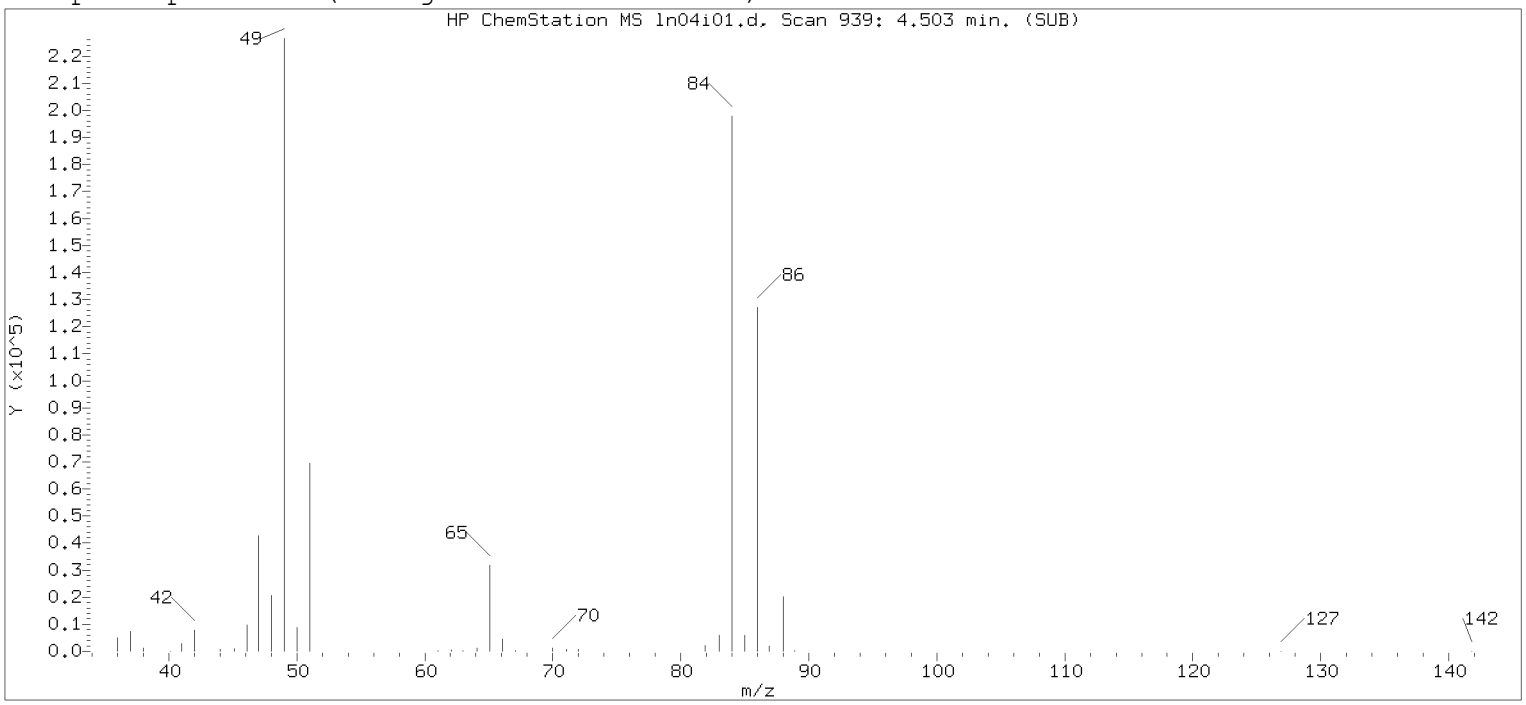
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area (flag) : 254406M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1168
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

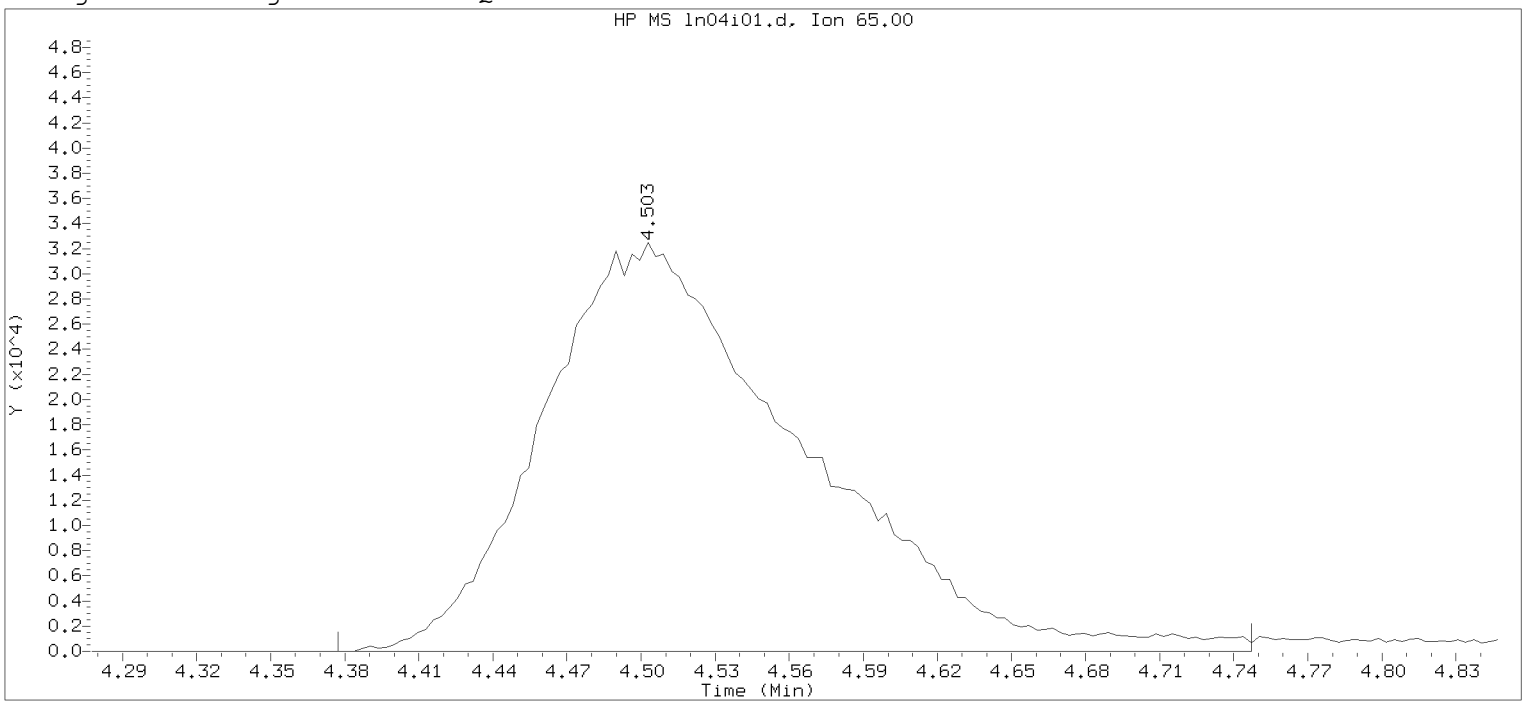
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

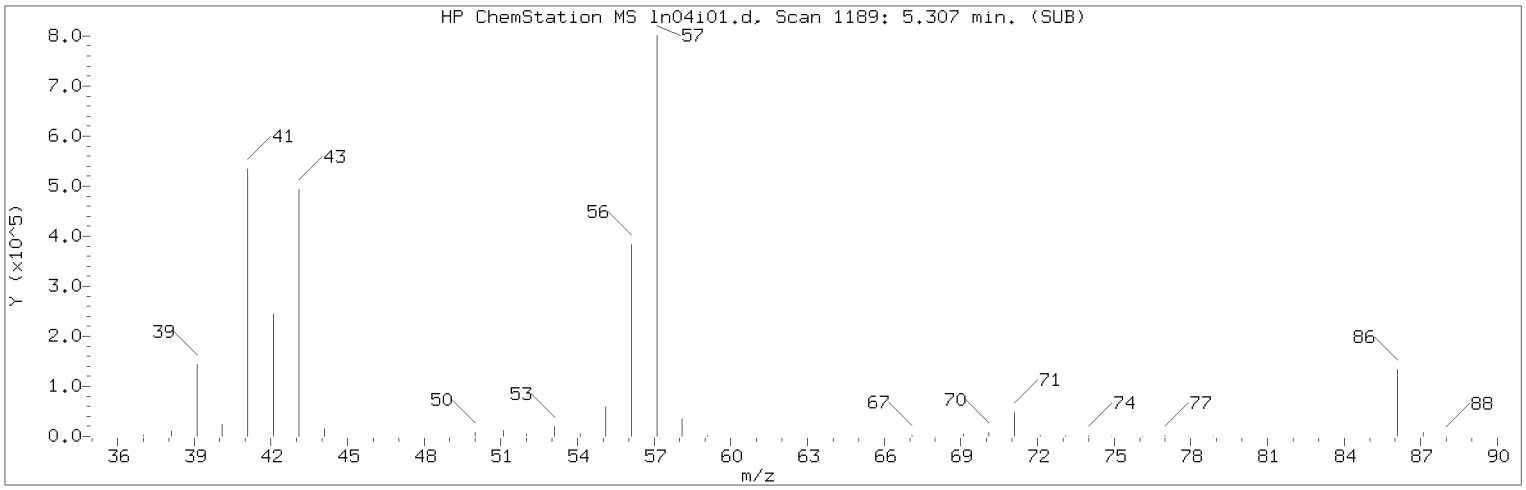
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

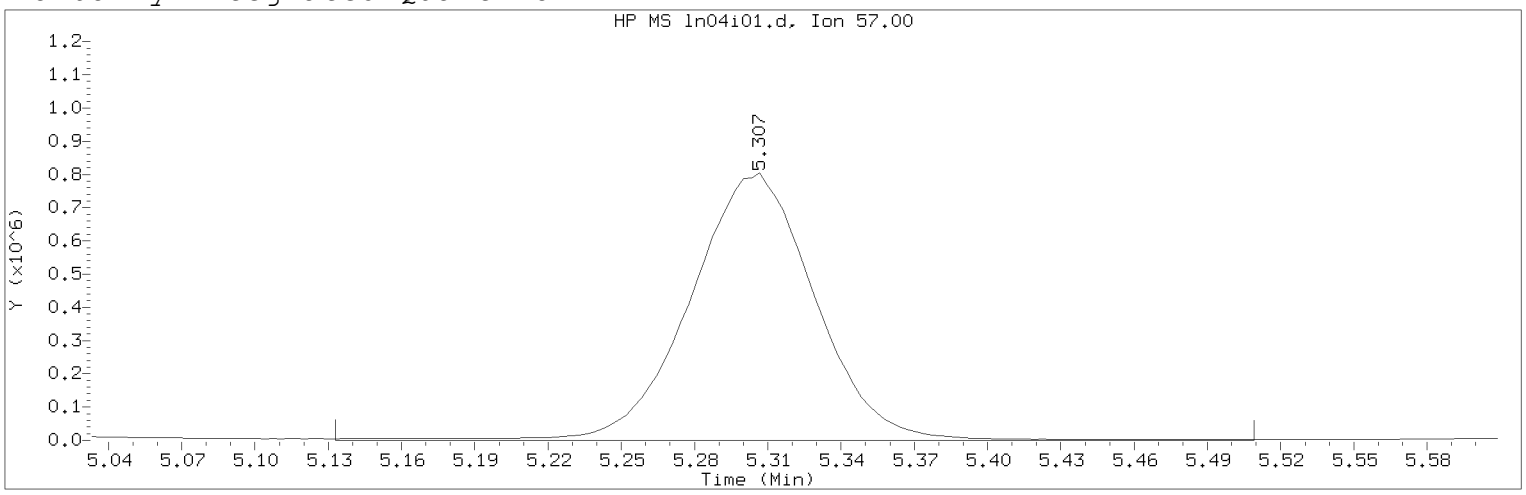
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area : 237264
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user id: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

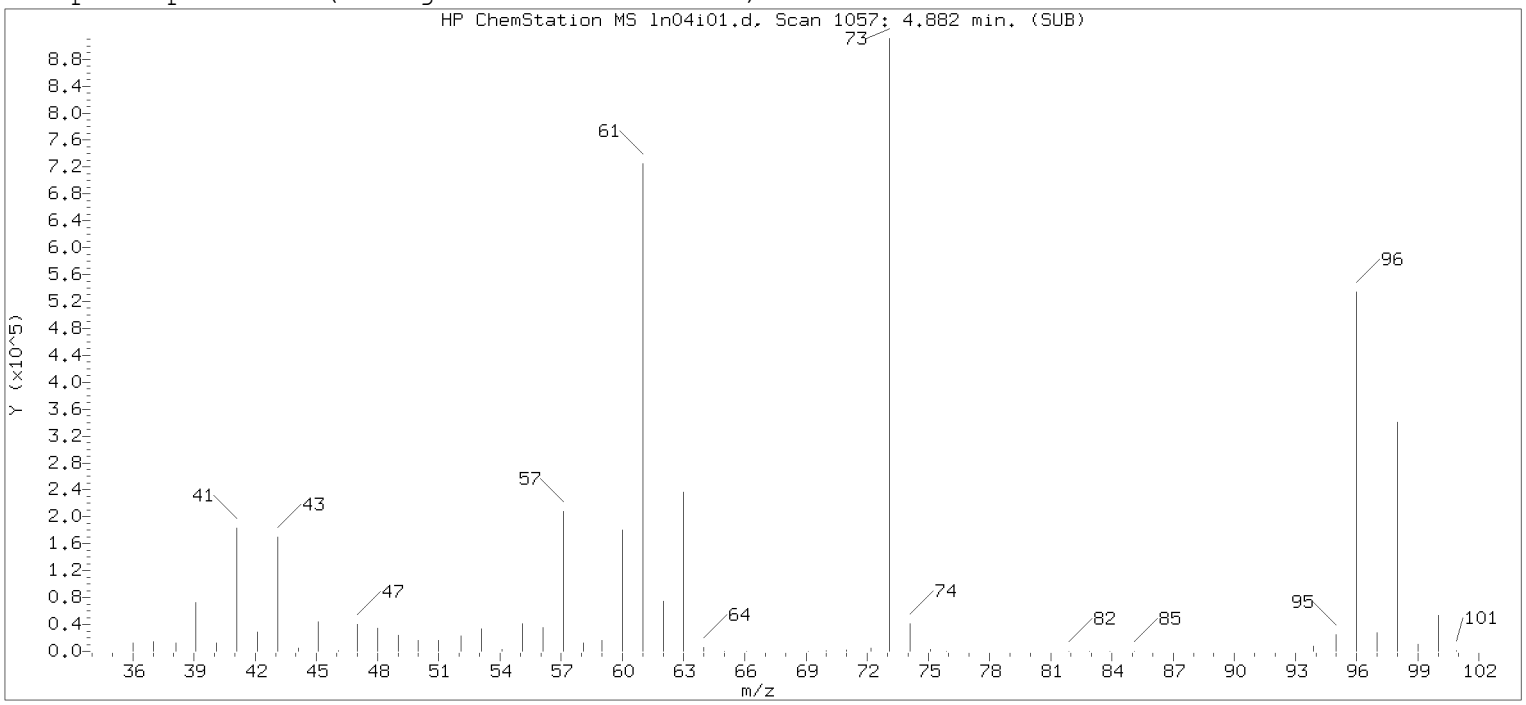
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1189
Retention Time (minutes): 5.307
Quant Ion : 57.00
Area (flag) : 2863189M
On-Column Amount (ng) : 334.8105
Integration start scan : 1134 Integration stop scan: 1251
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

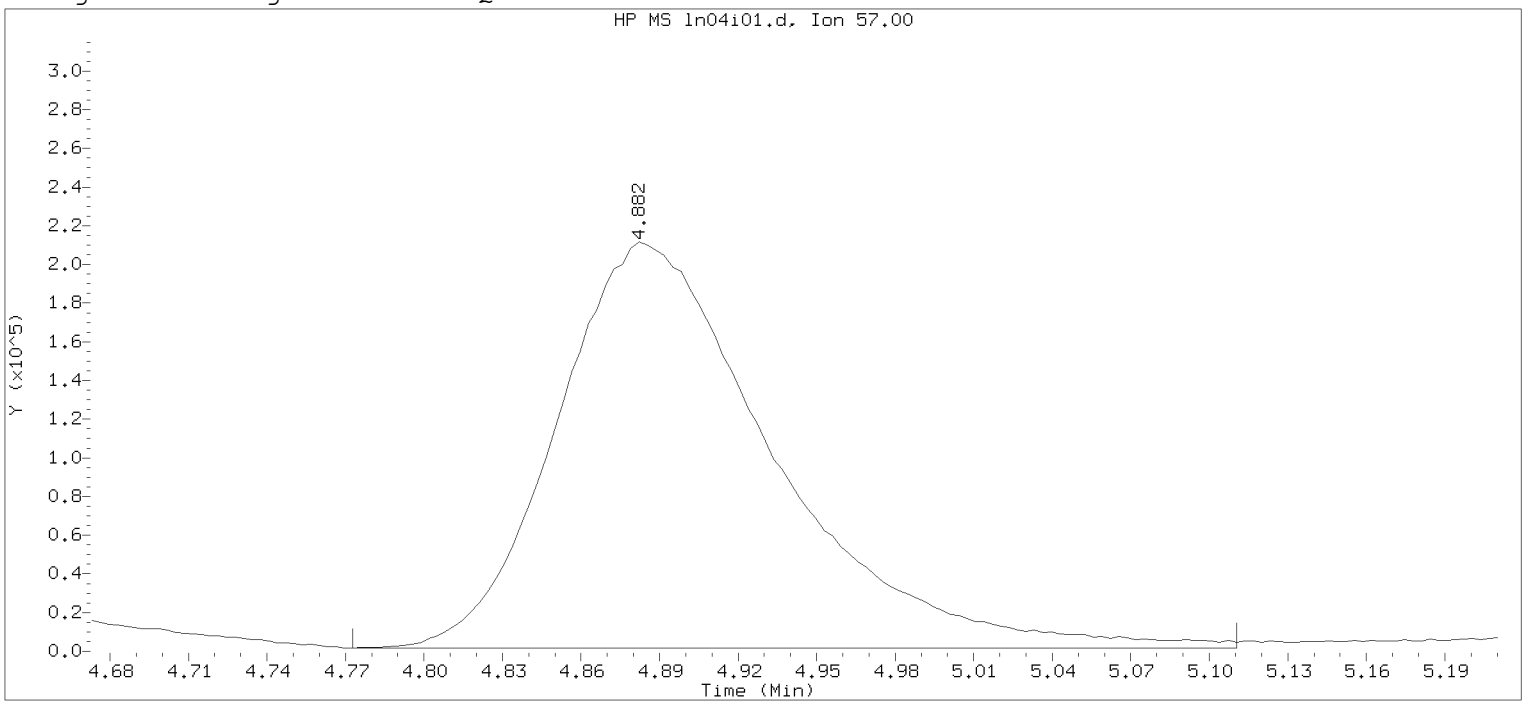
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1057		
Retention Time (minutes)	: 4.882		
Quant Ion	: 57.00		
Area	: 1202378		
On-column Amount (ng)	: 301.4561		
Integration start scan	: 1022	Integration stop scan	: 1127
Y at integration start	: 1806	Y at integration end	: 1806

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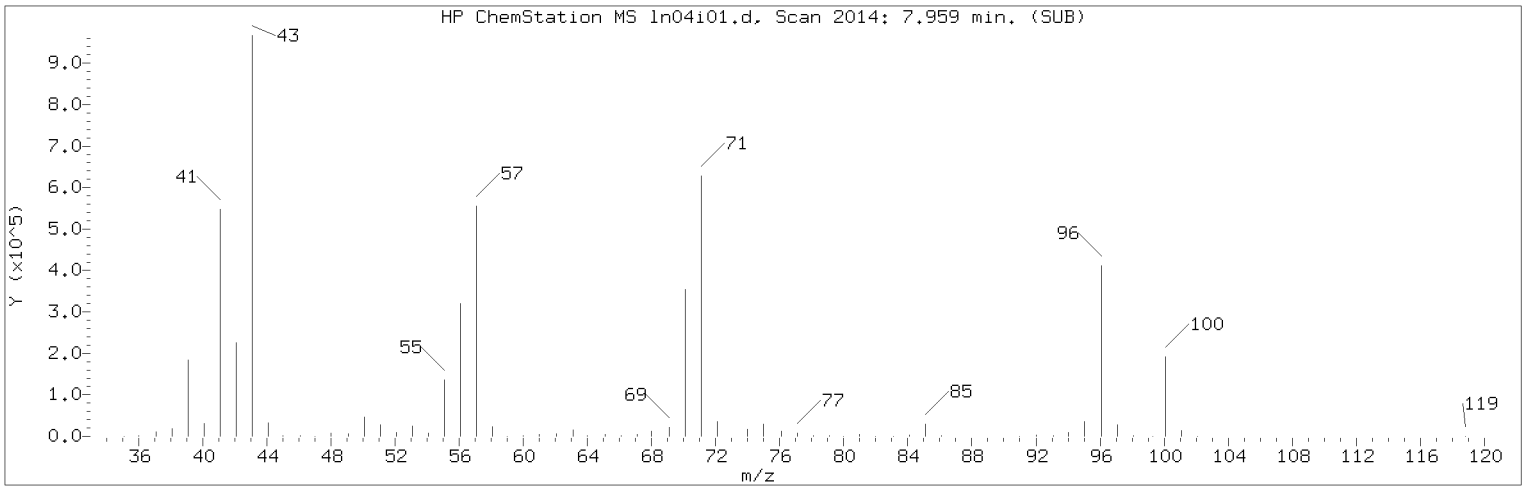
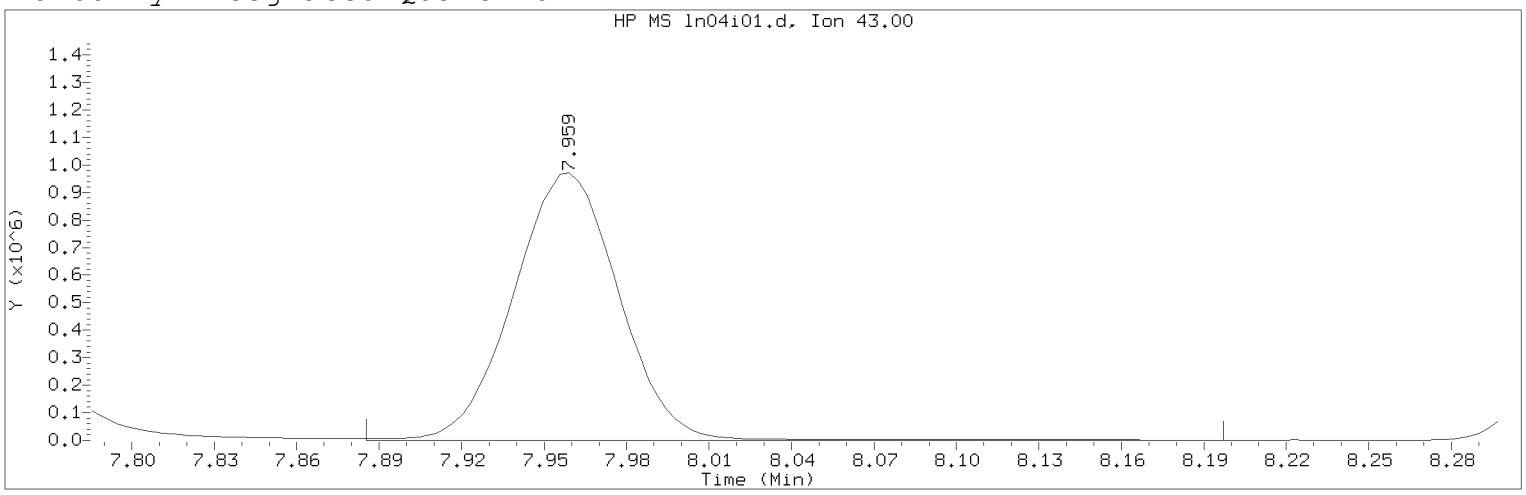
Target 3.5 esignature user id: jkhowe02

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

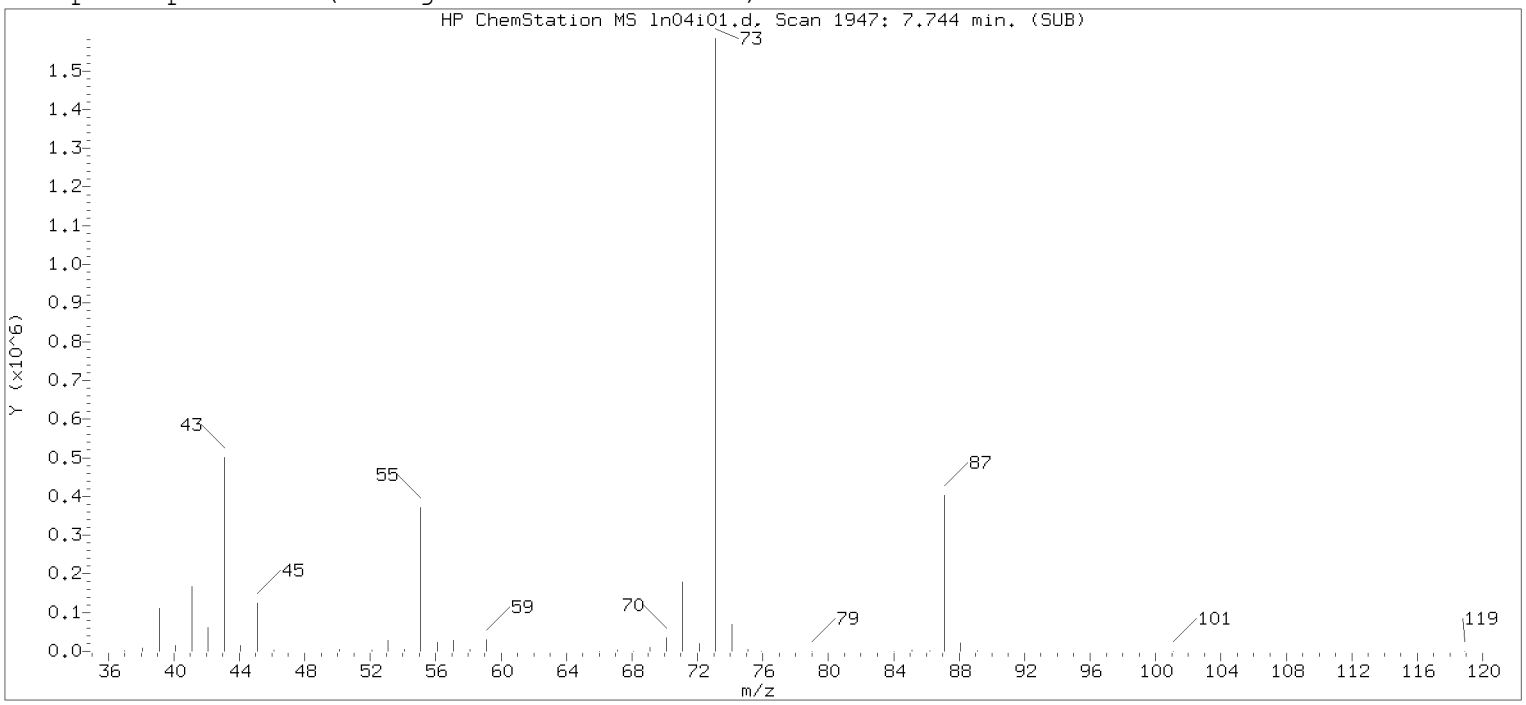
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2014
Retention Time (minutes): 7.959
Quant Ion : 43.00
Area (flag) : 2592531MA
On-Column Amount (ng) : 324.5176
Integration start scan : 1990 Integration stop scan: 2087
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

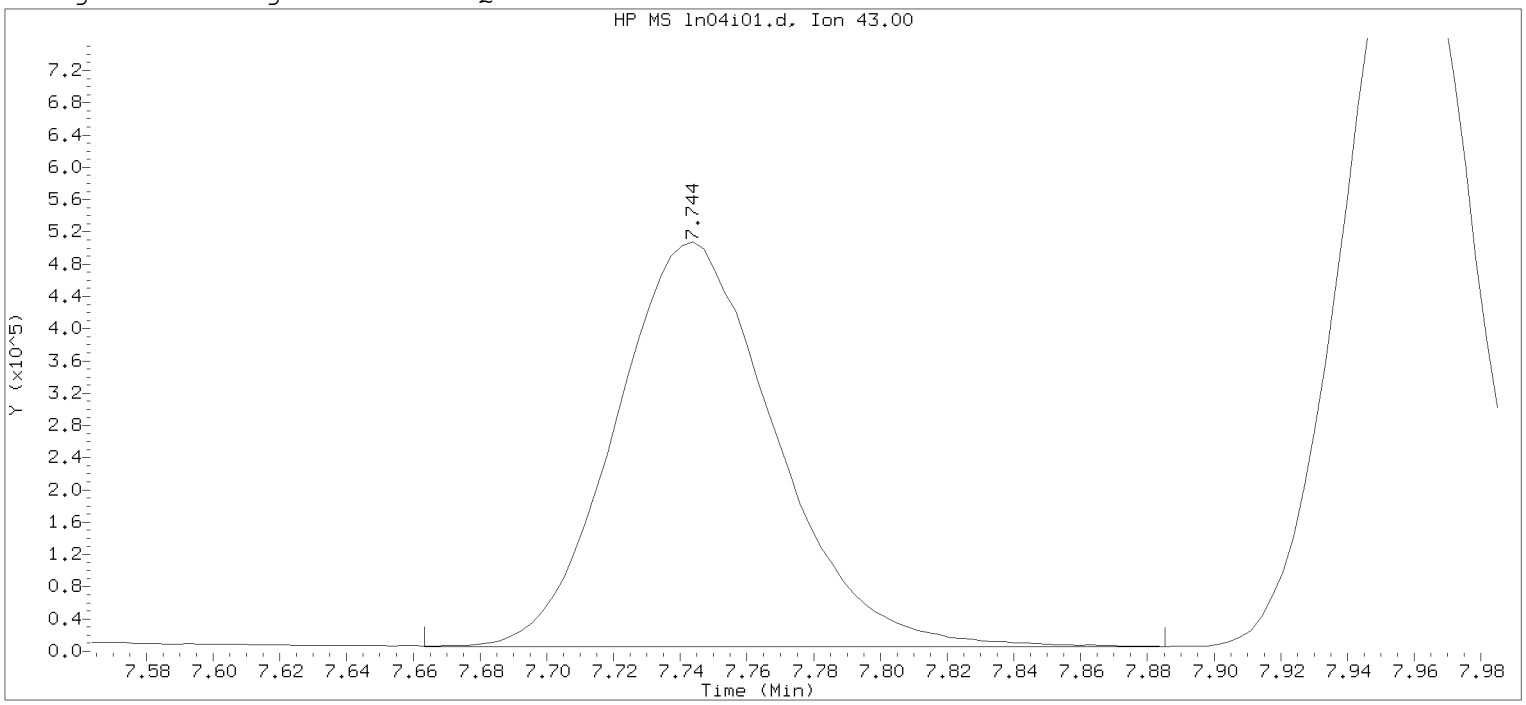
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number	: 67		
Compound Name	: n-Heptane		
Scan Number	: 1947		
Retention Time (minutes)	: 7.744		
Quant Ion	: 43.00		
Area	: 1668813		
On-column Amount (ng)	: 288.4319		
Integration start scan	: 1921	Integration stop scan:	1990
Y at integration start	: 5866	Y at integration end:	5866

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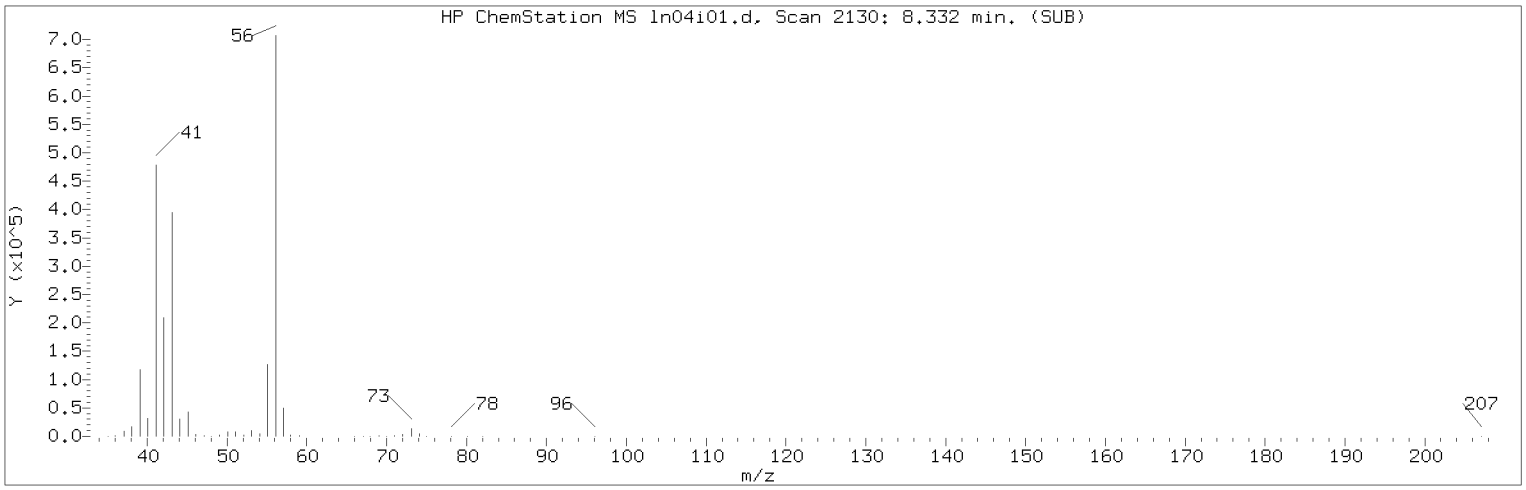
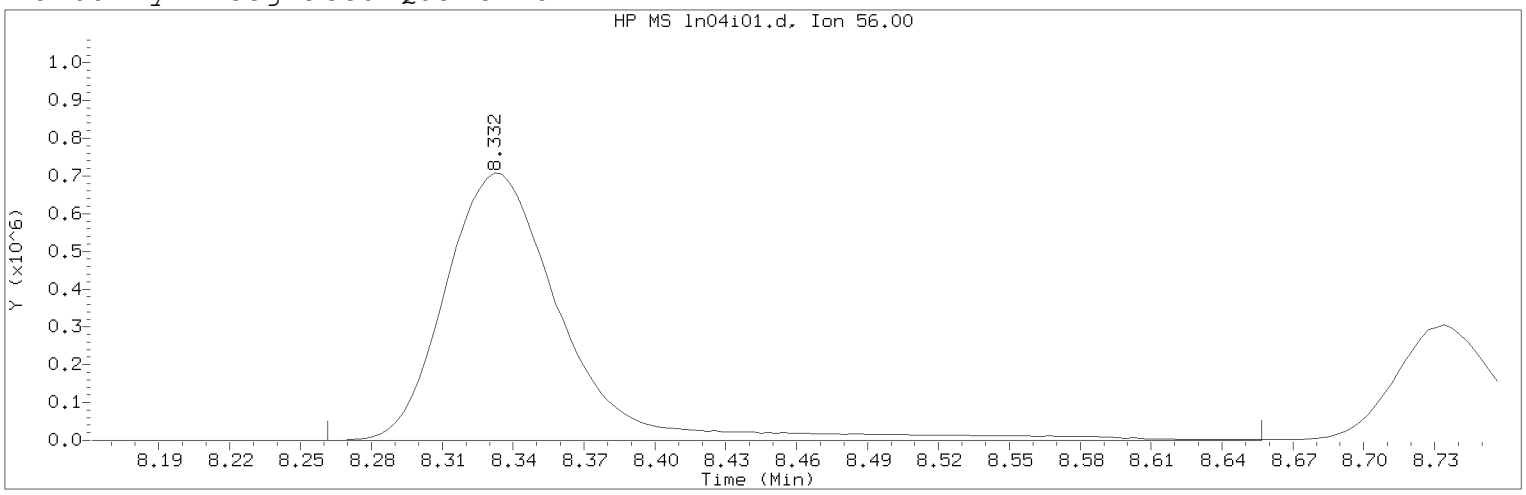
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

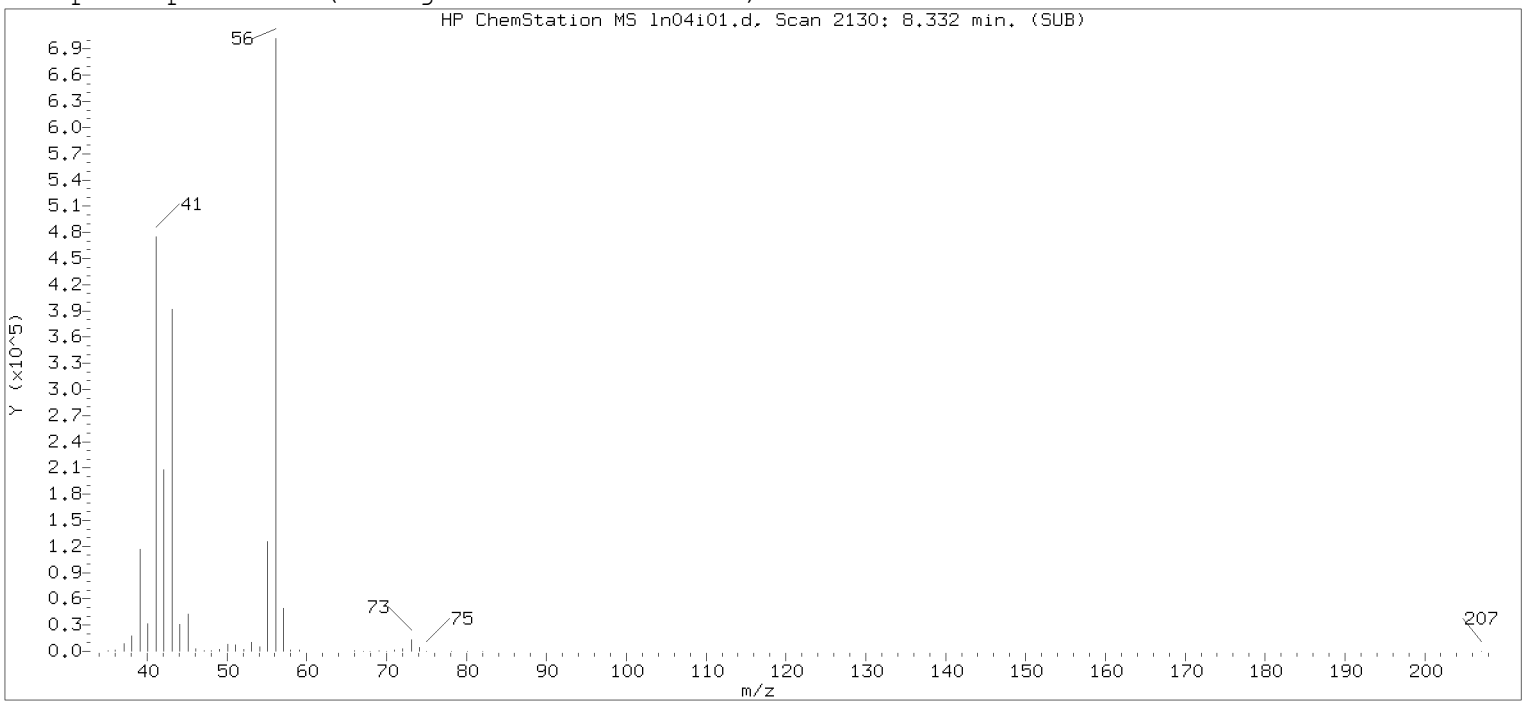
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area (flag) : 2465385M
On-Column Amount (ng) : 7947.0678
Integration start scan : 2107 Integration stop scan: 2230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

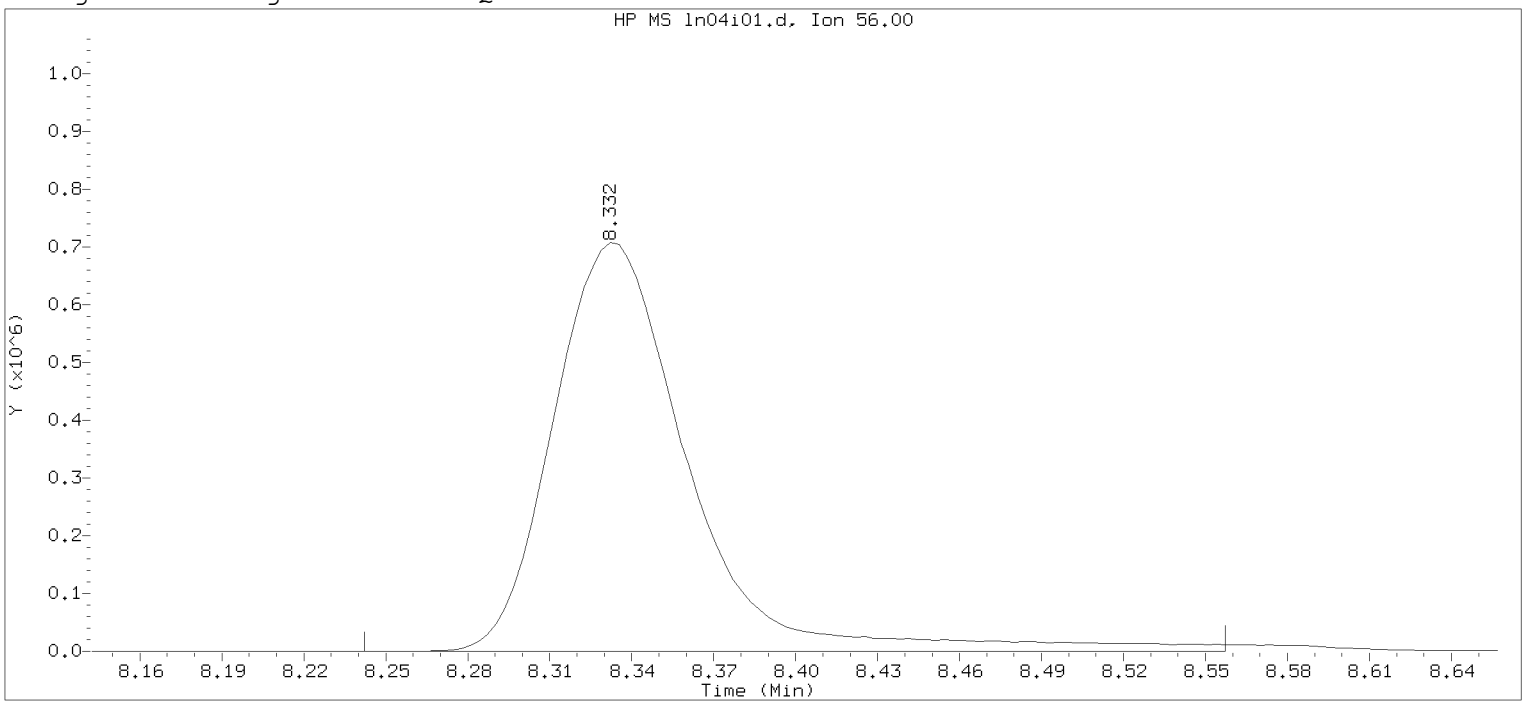
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

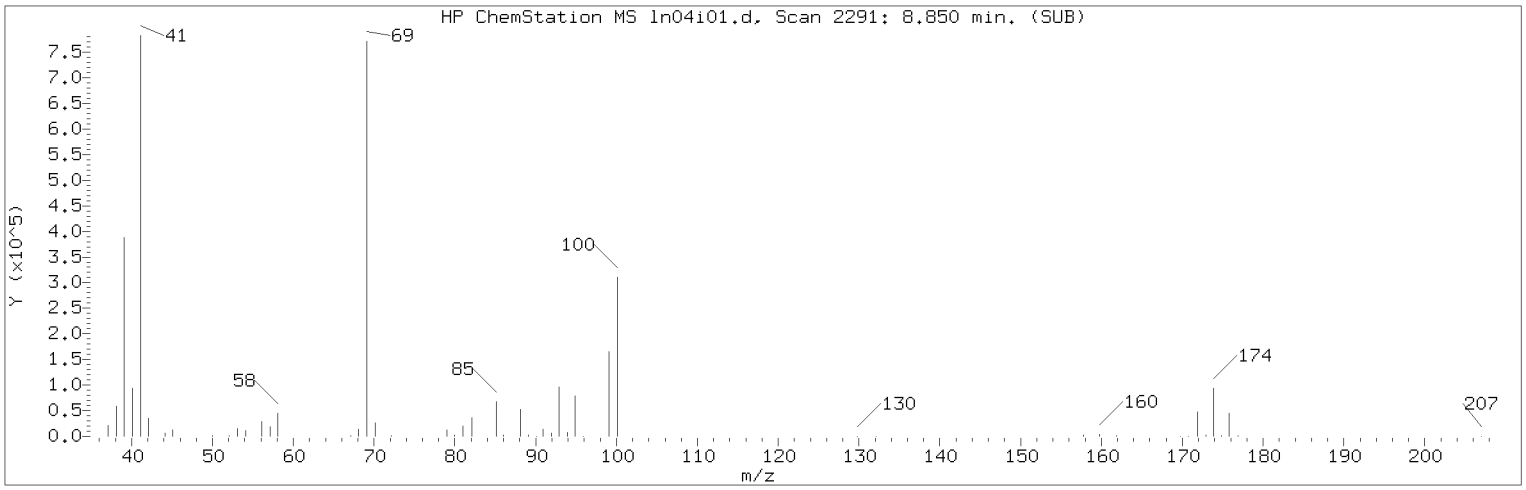
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

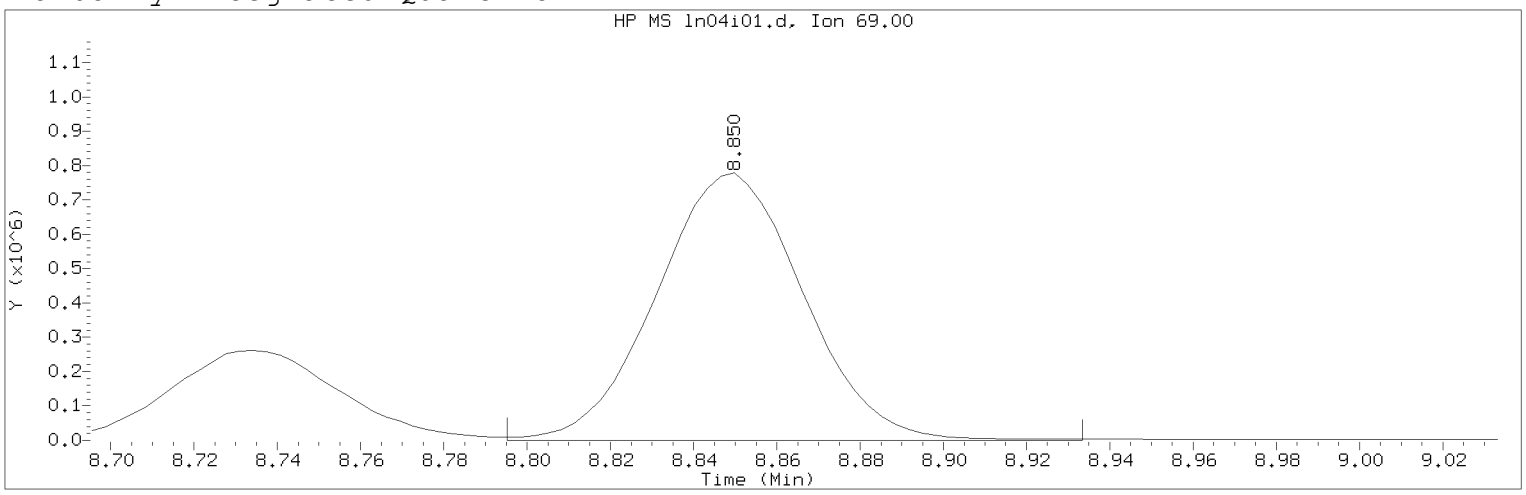
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area : 2429255
On-column Amount (ng) : 7682.9381
Integration start scan : 2101 Integration stop scan: 2199
Y at integration start : 176 Y at integration end: 176

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user Jennifer K. Howe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

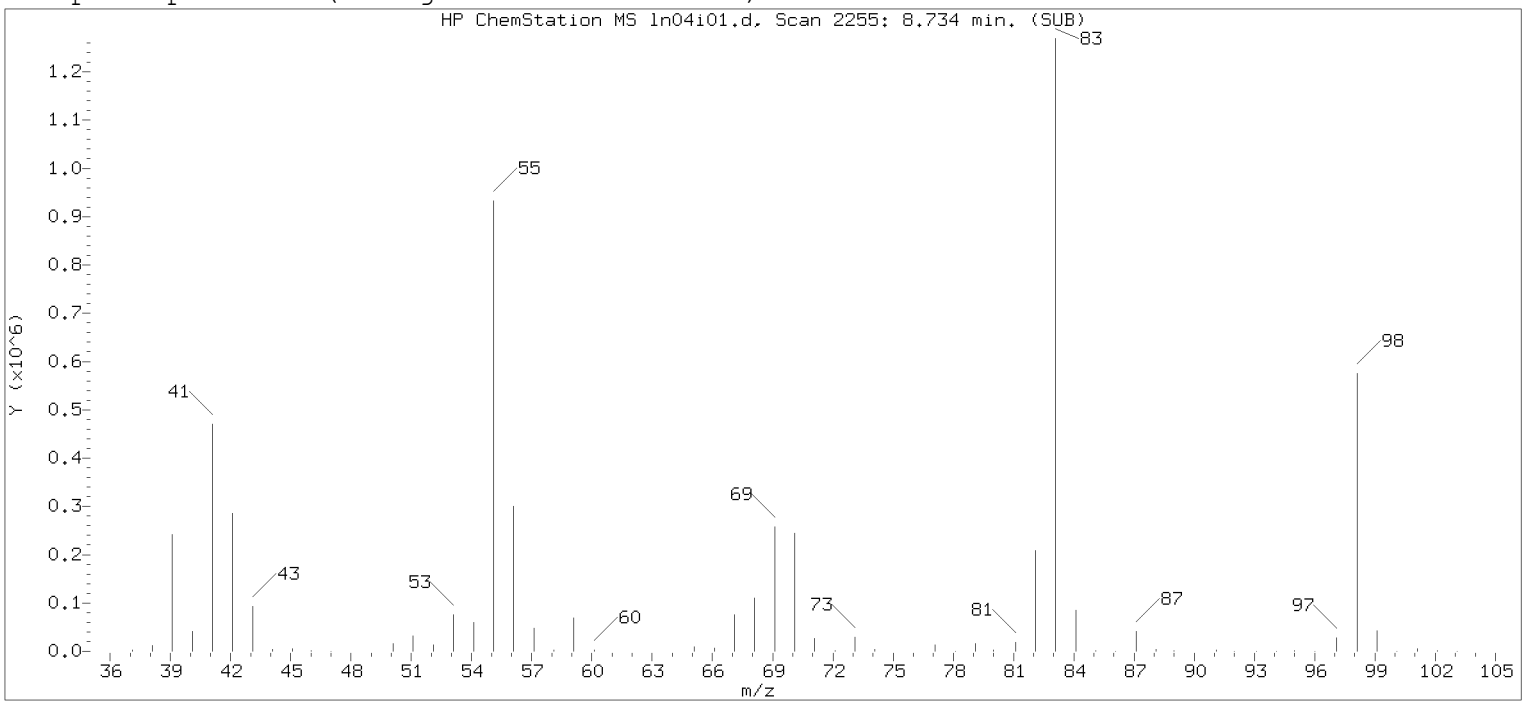
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2291
Retention Time (minutes): 8.850
Quant Ion : 69.00
Area (flag) : 1904896A
On-Column Amount (ng) : 340.2564
Integration start scan : 2273 Integration stop scan: 2316
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

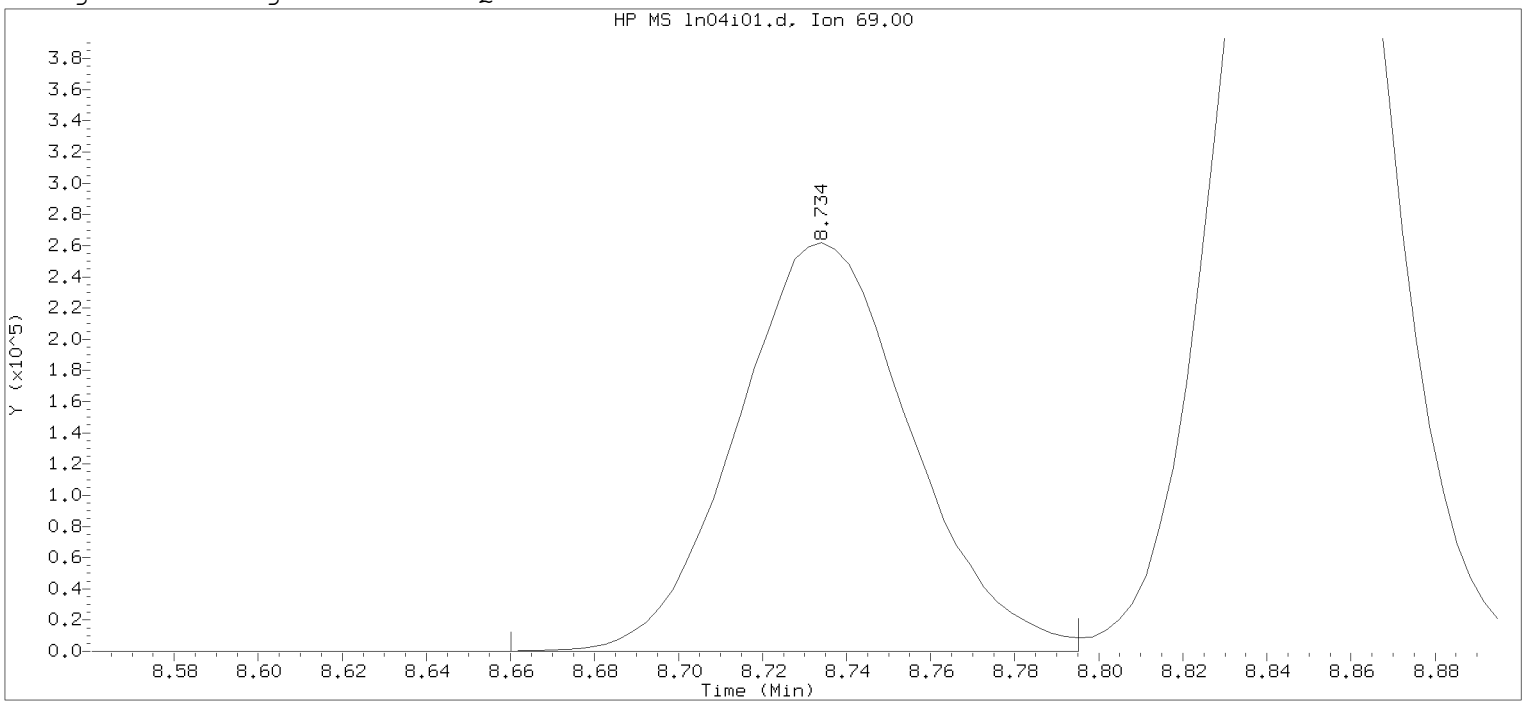
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

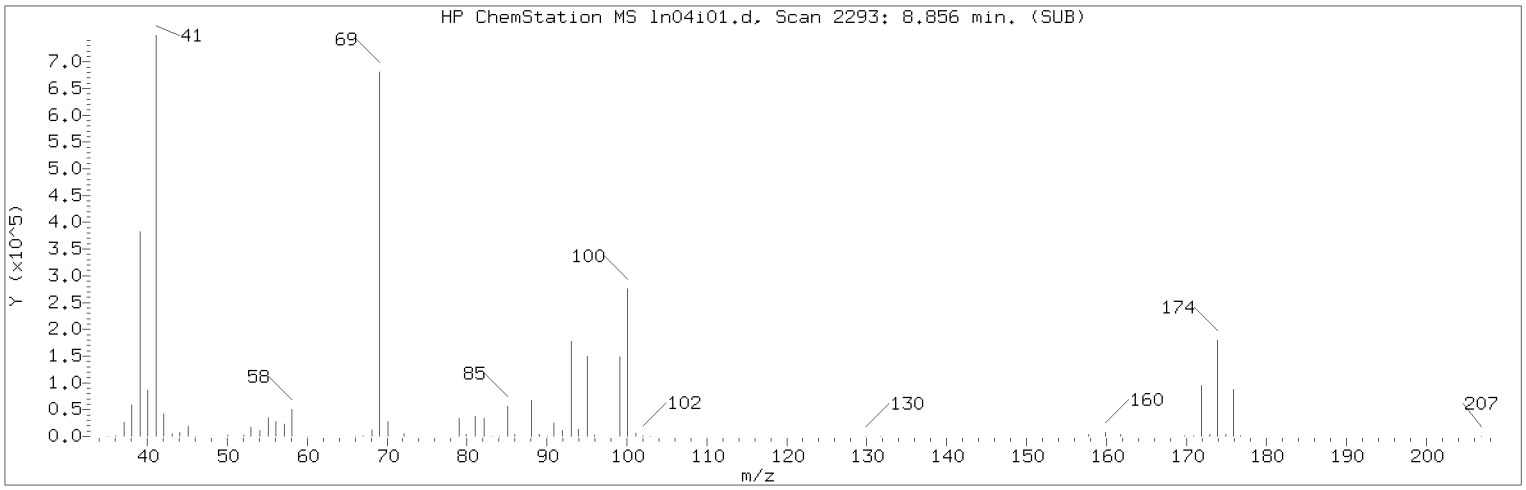
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

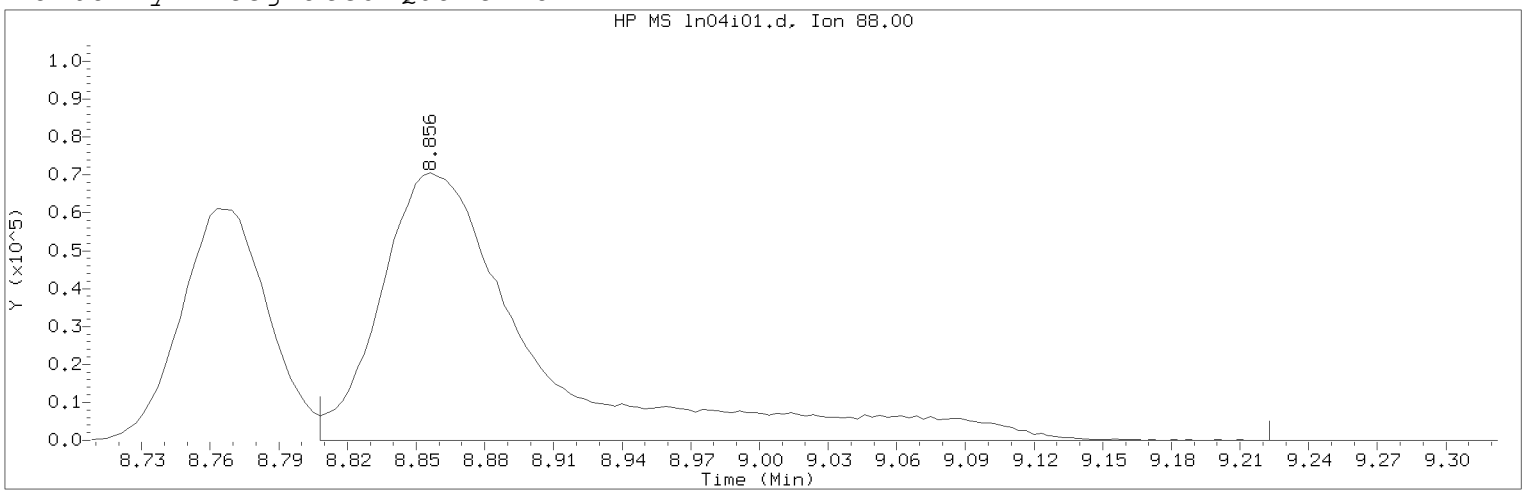
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 752058
On-column Amount (ng) : 311.1363
Integration start scan : 2231 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user id: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

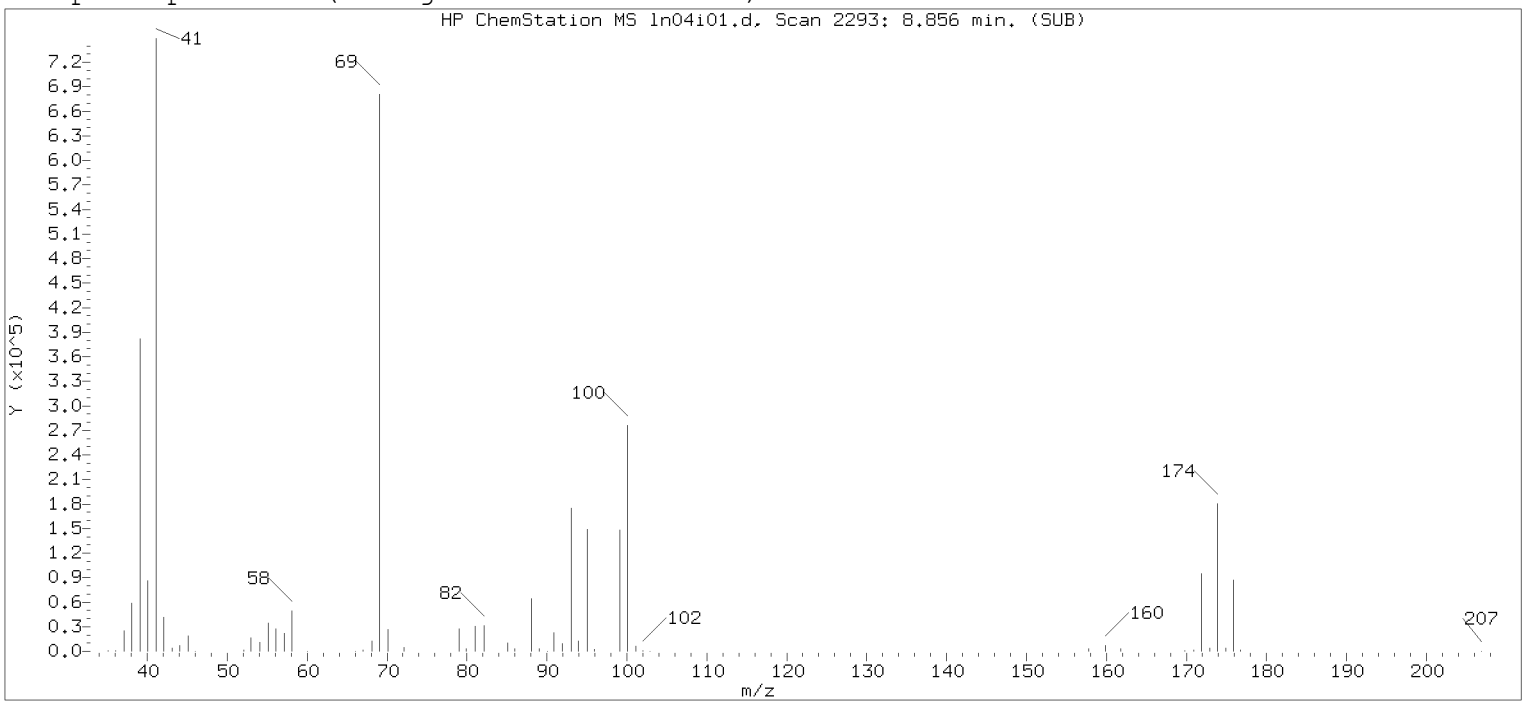
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 338379M
On-Column Amount (ng) : 3968.4208
Integration start scan : 2277 Integration stop scan: 2406
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

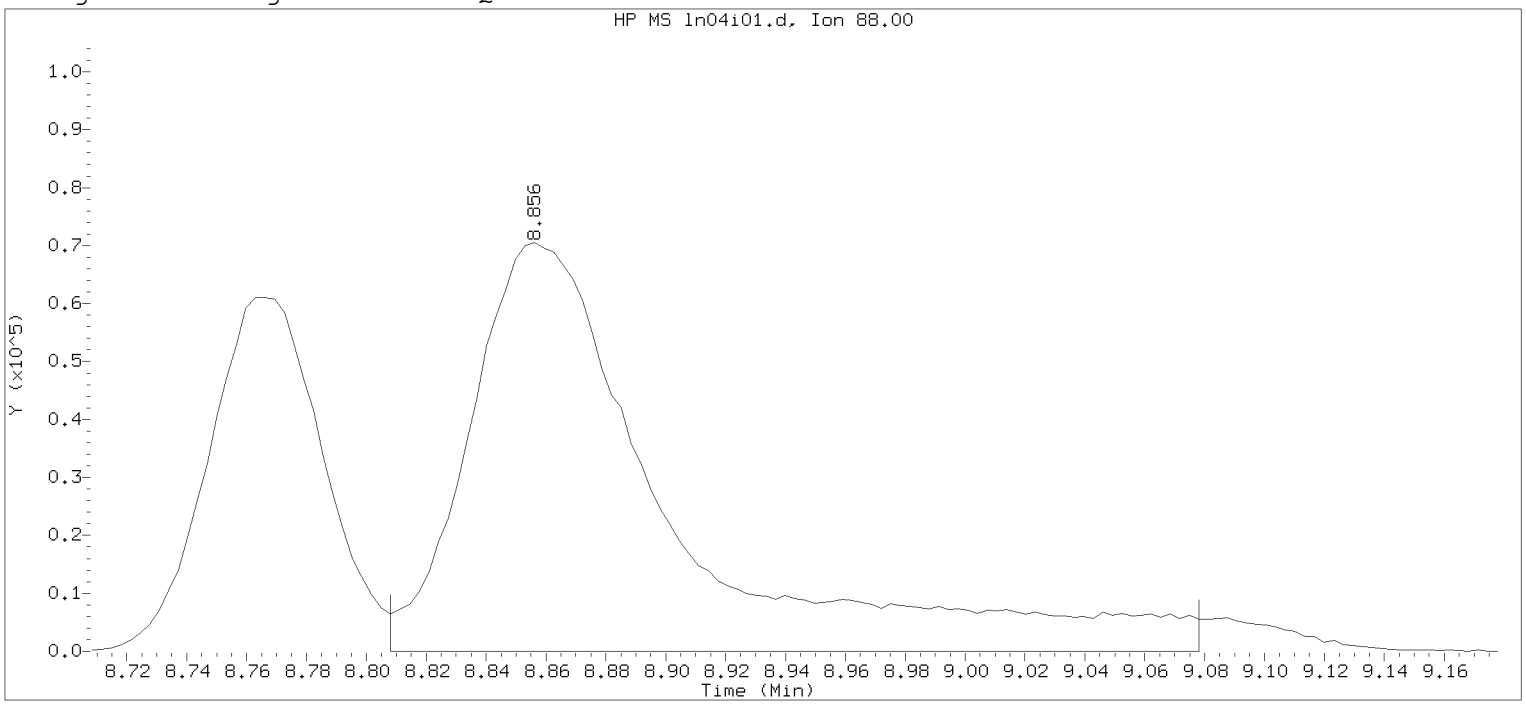
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

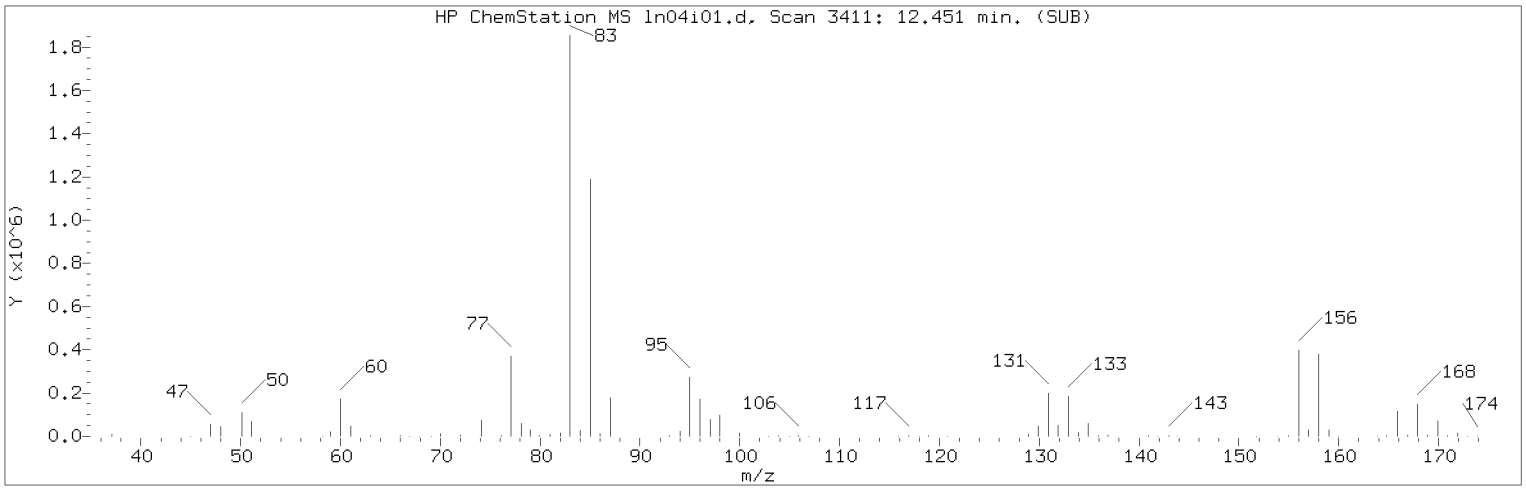
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

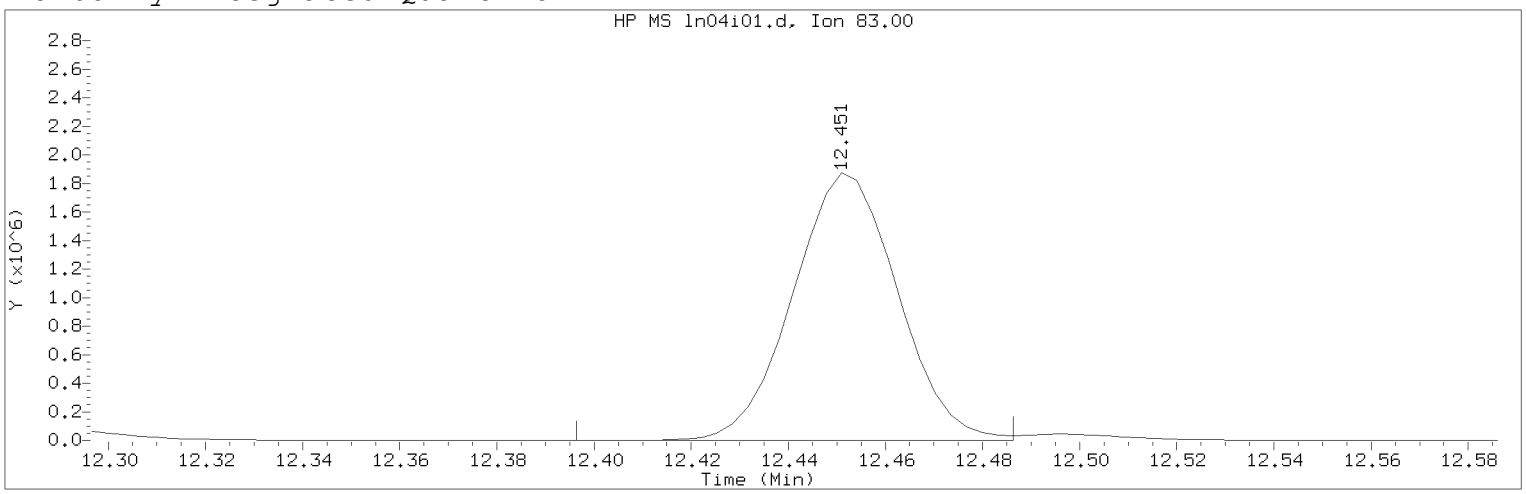
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2293		
Retention Time (minutes)	: 8.856		
Quant Ion	: 88.00		
Area	: 325164		
On-column Amount (ng)	: 3803.8575		
Integration start scan	: 2277	Integration stop scan:	2361
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

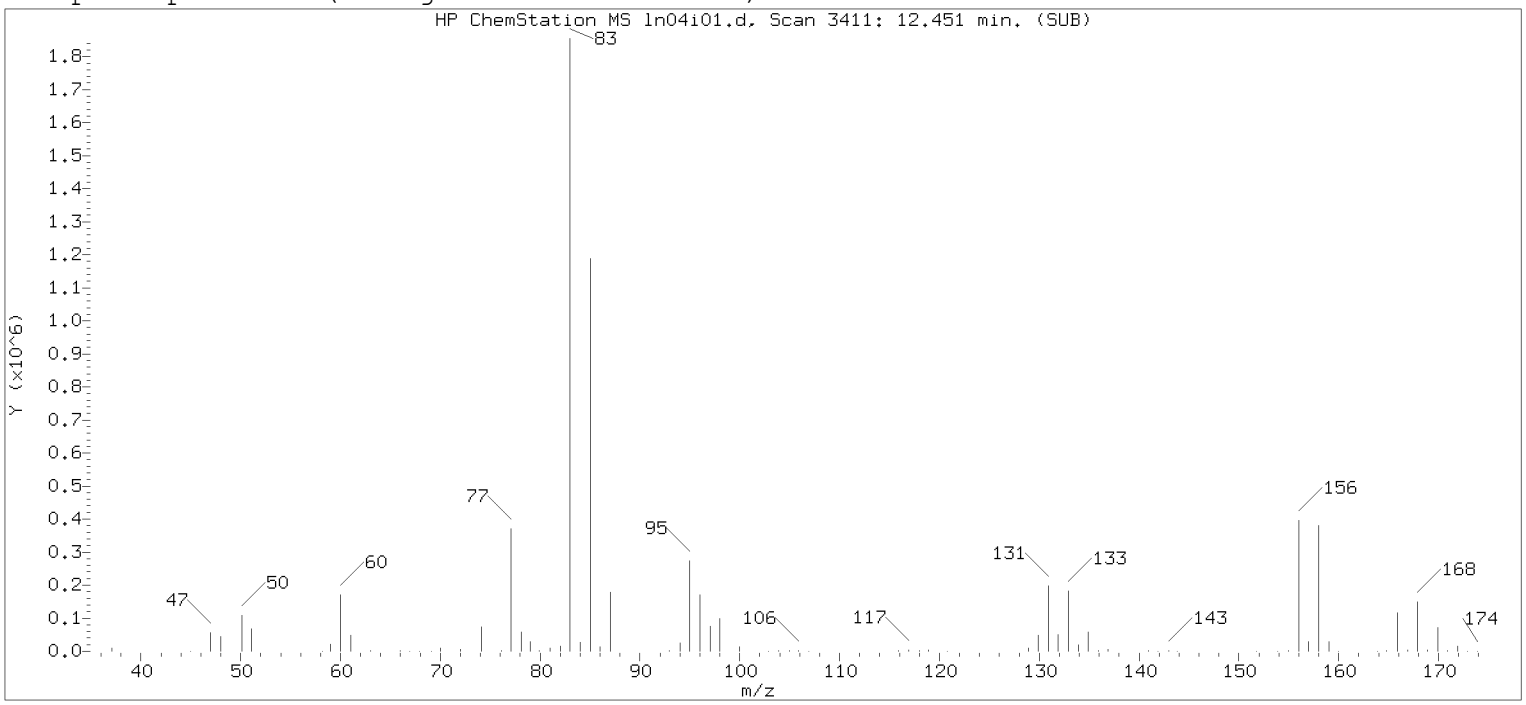
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 2800639M
On-Column Amount (ng) : 310.7054
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

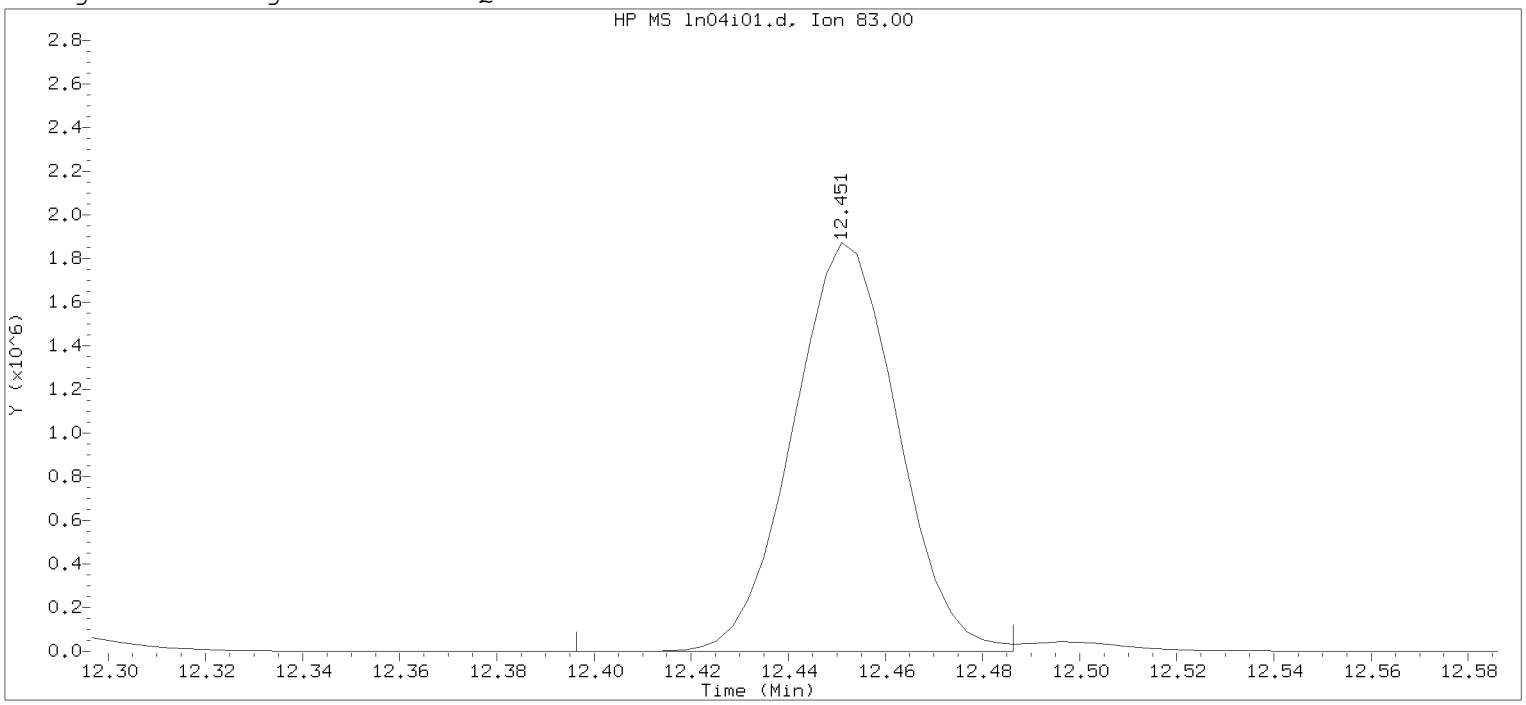
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

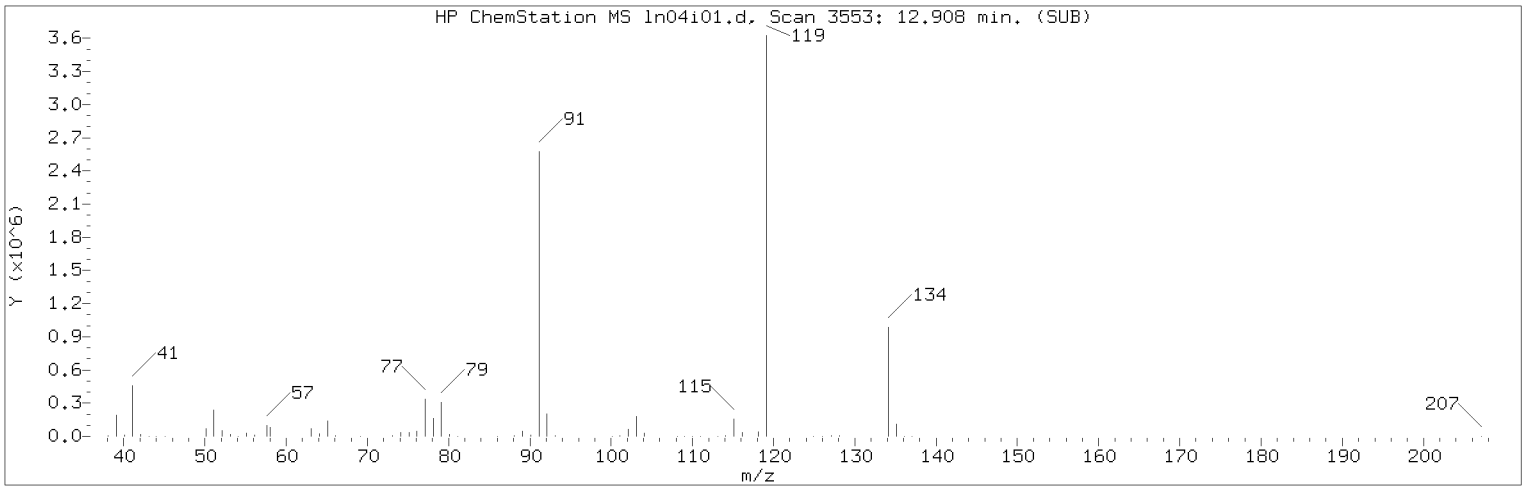
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

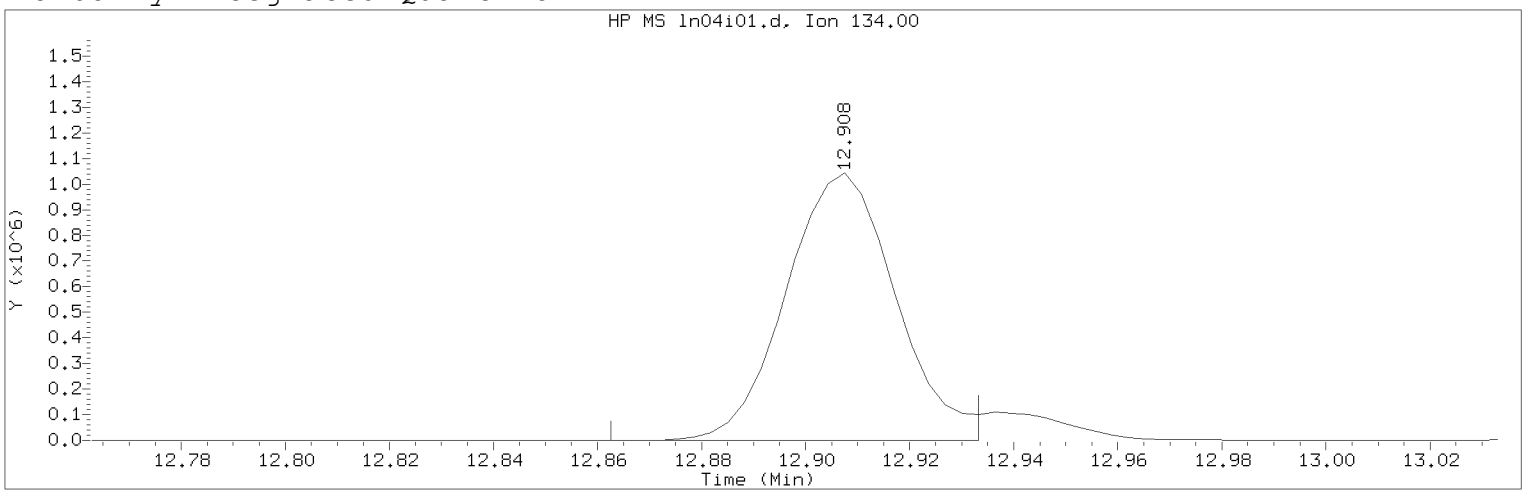
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 2797364
On-column Amount (ng) : 294.0638
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09102

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

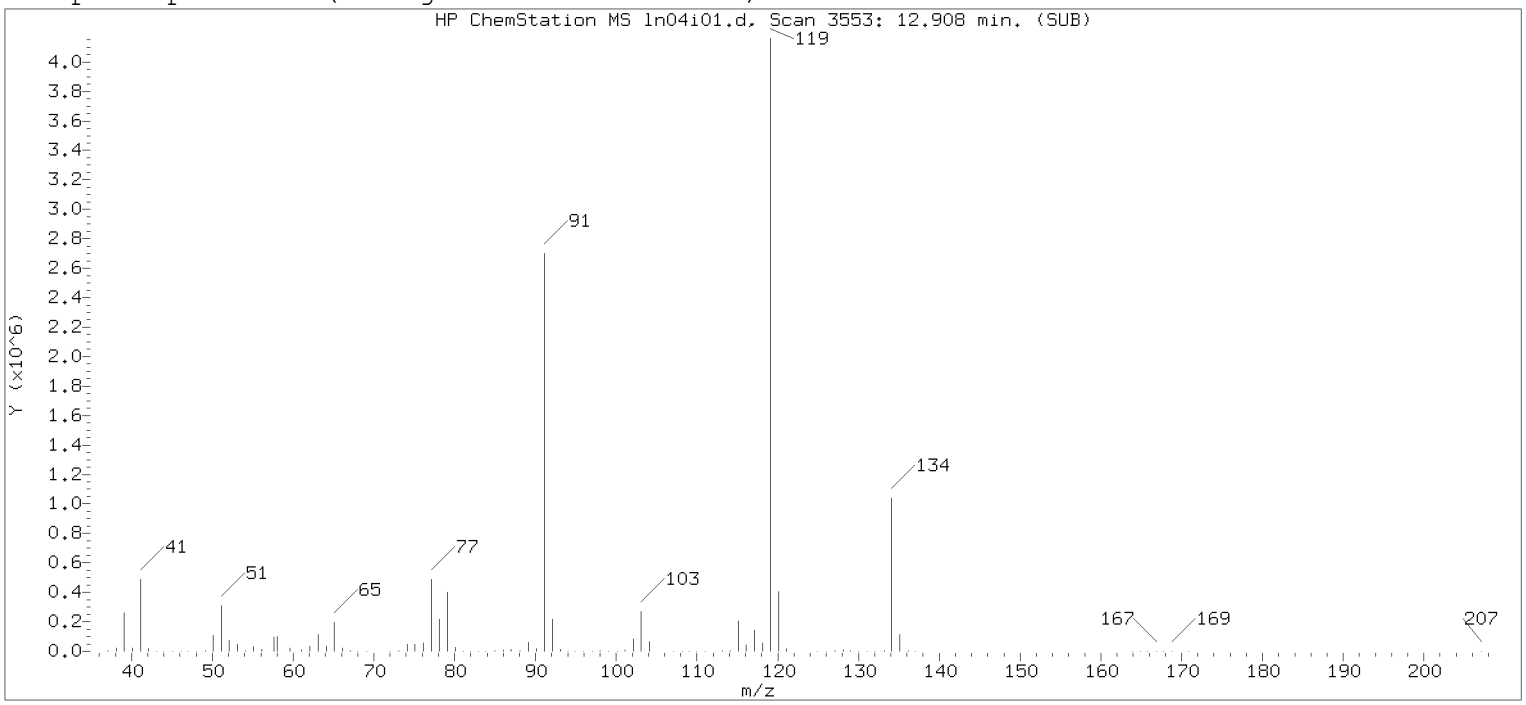
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area (flag) : 1524421M
On-Column Amount (ng) : 323.7167
Integration start scan : 3538 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

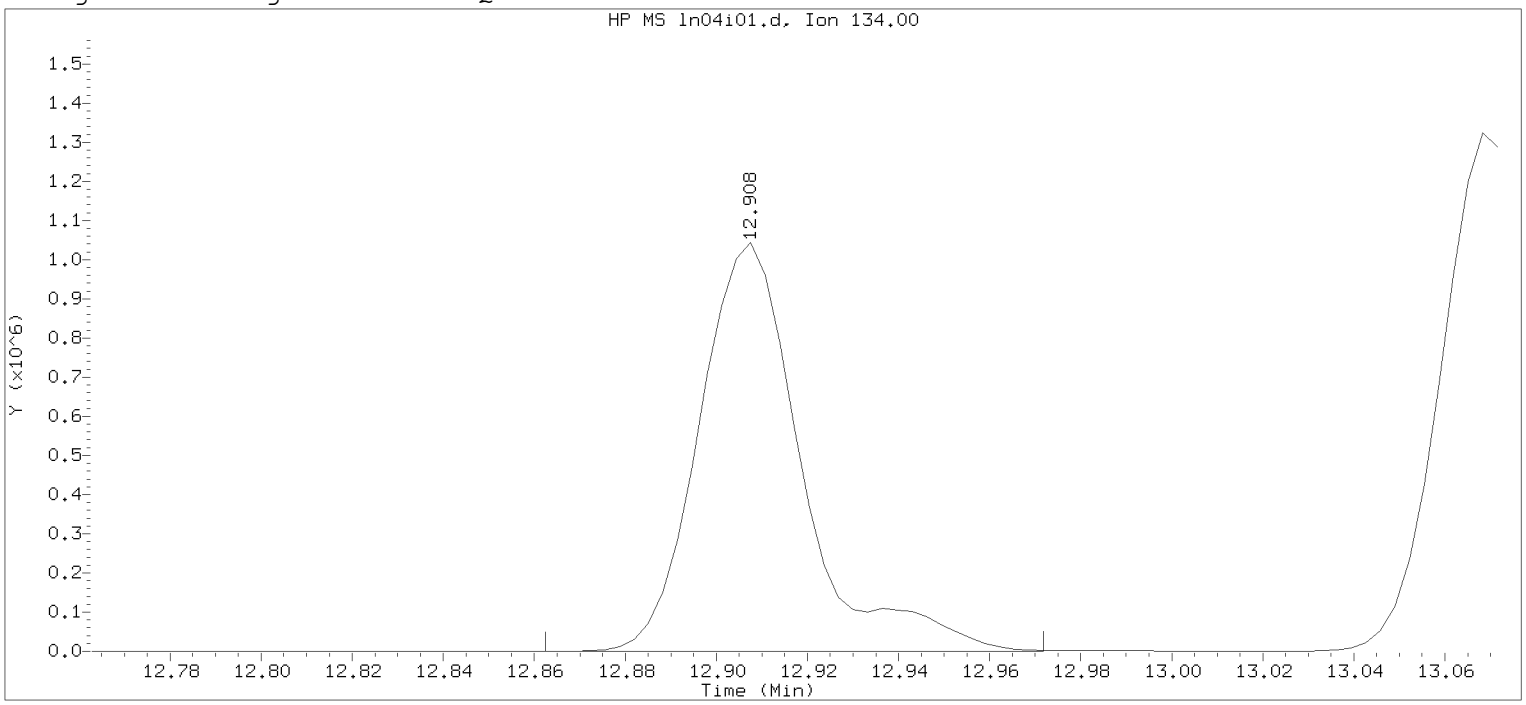
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



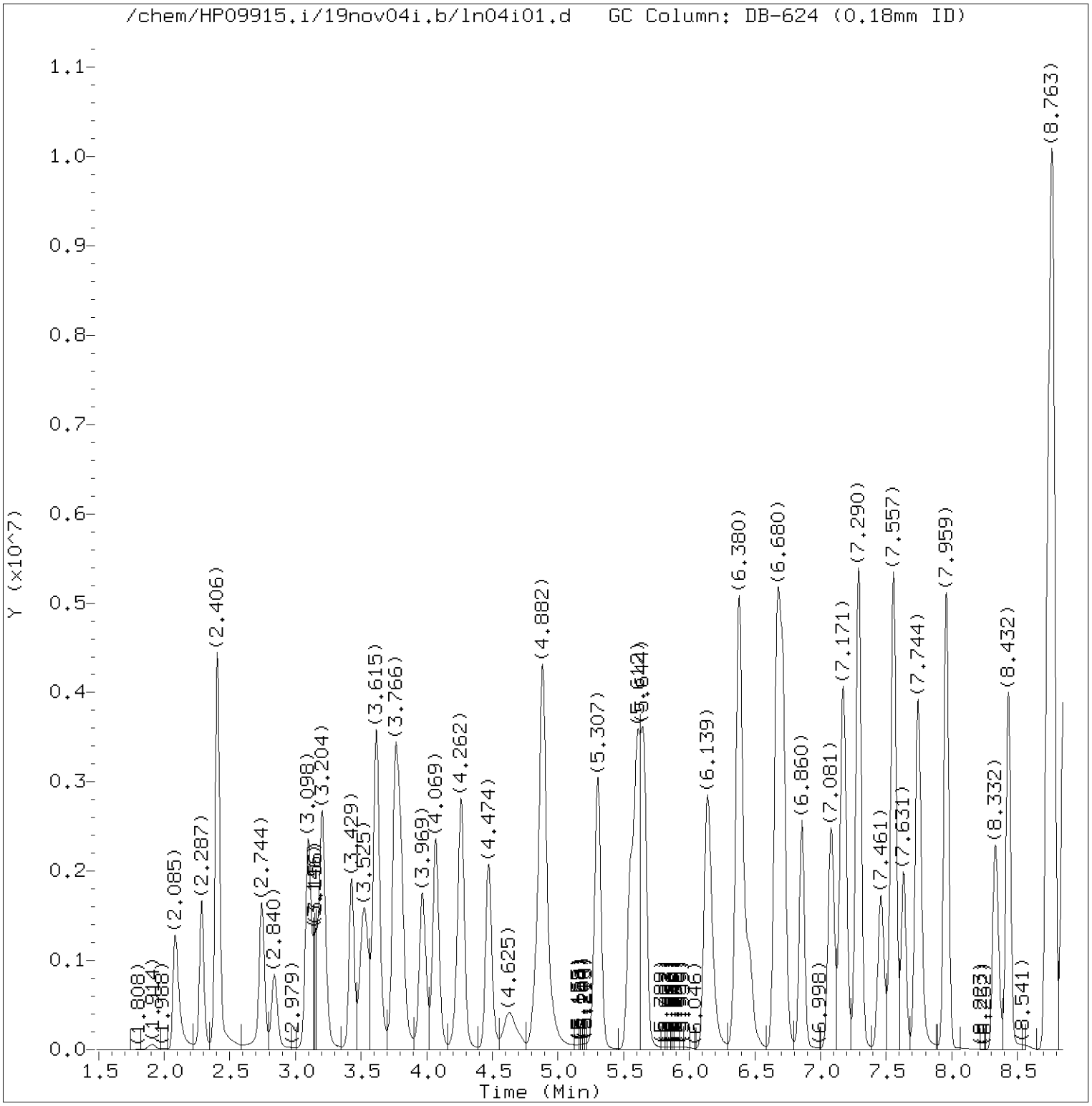
Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area : 1639624
On-column Amount (ng) : 313.1253
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user: JKHowe01



Total Ion Chromatogram (TIC)

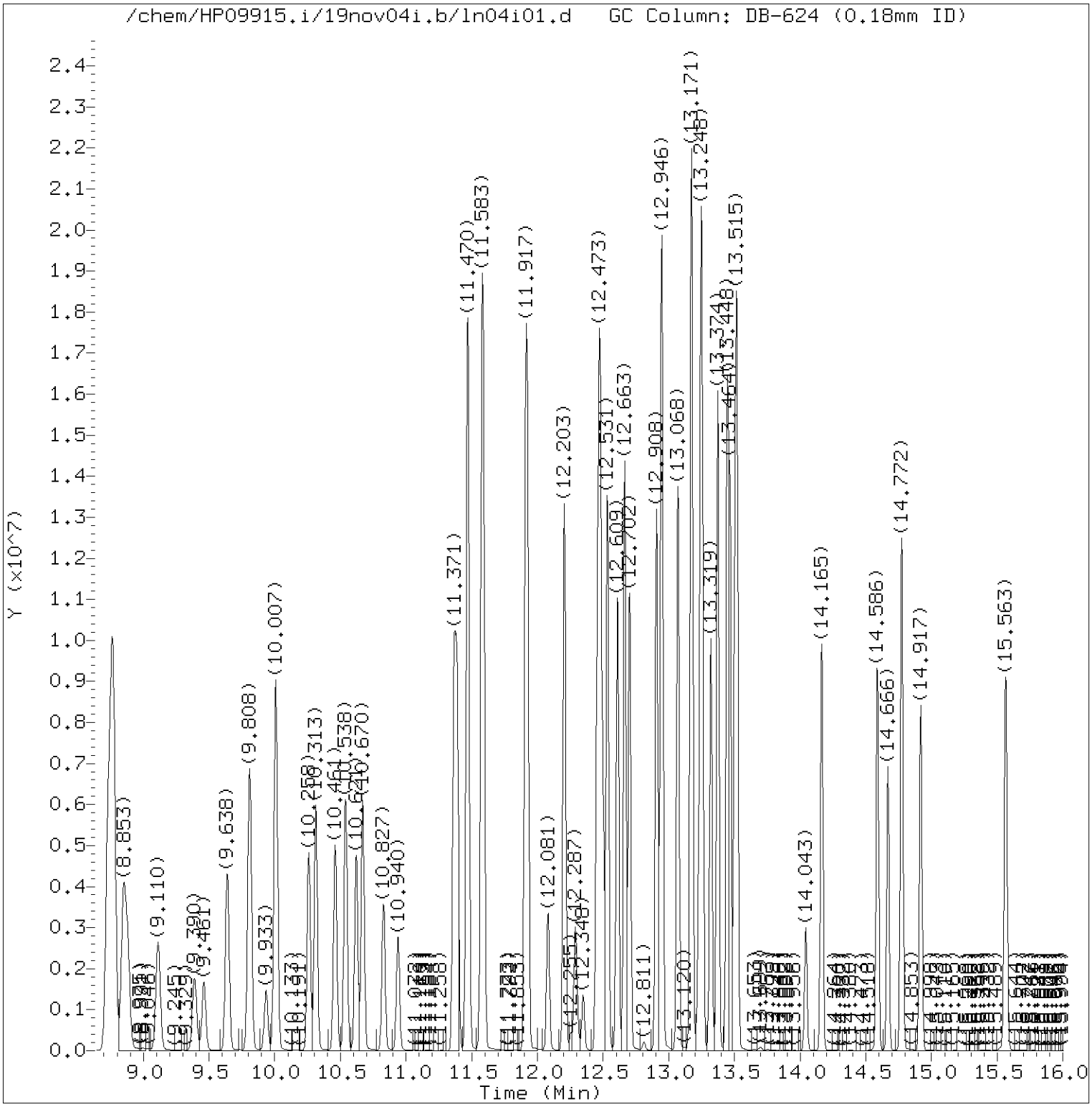
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.085	85	2719746M	347.943
4) Chloromethane	(2)	2.287	50	2403581	319.051
5) 1,3-Butadiene	(2)	2.406	39	1785787M	285.486
6) Vinyl Chloride	(2)	2.406	62	2412855	320.904
8) Bromomethane	(2)	2.744	94	1638575	304.015
9) Chloroethane	(2)	2.837	64	1253478	303.356
10) Dichlorofluoromethane	(2)	3.098	67	2978303M	300.258
12) Trichlorofluoromethane	(2)	3.152	101	2661050	328.734
11) n-Pentane	(2)	3.204	43	2816823	294.455
14) Ethyl ether	(2)	3.429	59	1721693	329.146
15) Freon 123a	(2)	3.525	67	1991616	305.852
16) Acrolein	(1)	3.615	56	5765354	3020.583
17) 1,1-Dichloroethene	(2)	3.760	96	1489890	313.570
17) 1,1-Dichloroethene	(2)	3.757	63	721205	302.767
19) Freon 113	(2)	3.792	101	1732433	319.583
18) Acetone	(1)	3.802	58	531845	621.534
22) Methyl Iodide	(2)	3.966	142	3047145	309.483
21) 2-Propanol	(1)	3.995	45	936919	1523.065
23) Carbon Disulfide	(2)	4.069	76	5676465	317.027
27) Methyl Acetate	(2)	4.239	43	1941315	317.230
25) Allyl Chloride	(2)	4.265	41	2748698	322.482
28) Methylene Chloride	(2)	4.474	84	1745840	308.716
29)*t-Butyl alcohol-d10	(1)	4.503	65	254406M	250.000
30) t-Butyl alcohol	(1)	4.638	59	1641037	1532.140
31) Acrylonitrile	(2)	4.827	53	1039800	315.820
32) trans-1,2-Dichloroethene	(2)	4.885	96	1713357	311.714
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	5505439	305.143
34) n-Hexane	(2)	5.307	57	2863189M	334.811
36) 1,1-Dichloroethane	(2)	5.548	63	3007196	313.618
38) di-Isopropyl ether	(2)	5.609	45	5739955	310.377
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	2776921	322.788
40) Ethyl t-butyl ether	(2)	6.139	59	5425034	302.275
43) 1,2-Dichloroethene (Total)	(2)		96	3646040	624.977
44) 2-Butanone	(2)	6.364	43	2642793	625.317
42) cis-1,2-Dichloroethene	(2)	6.380	96	1932683	313.263
45) 2,2-Dichloropropane	(2)	6.397	77	2377411	318.945
47) Propionitrile	(1)	6.458	54	2126389	1593.336
48) Methacrylonitrile	(2)	6.670	67	2858148	804.768

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.708	128	1075154	328.655
50) Tetrahydrofuran	(1)	6.718	71	758236	628.991
51) Chloroform	(2)	6.860	83	2916299	317.988
52)$Dibromofluoromethane	(2)	7.075	113	276322	50.424
52)$Dibromofluoromethane	(2)	7.075	111	279197	49.969
53) 1,1,1-Trichloroethane	(2)	7.081	97	2560601	327.130
54) Cyclohexane	(2)	7.171	56	3429211	327.611
54) Cyclohexane	(2)	7.171	84	2984908	328.282
54) Cyclohexane	(2)	7.171	69	1068201	329.937
56) Carbon Tetrachloride	(2)	7.287	117	2252864	339.350
55) 1,1-Dichloropropene	(2)	7.294	75	2434619	321.125
58) Isobutyl Alcohol	(1)	7.461	41	1382486	3835.573
57)$1,2-Dichloroethane-d4	(2)	7.528	102	68480	49.033
57)$1,2-Dichloroethane-d4	(2)	7.532	65	307306	49.375
57)$1,2-Dichloroethane-d4	(2)	7.528	104	44002	49.326
60) Benzene	(2)	7.557	78	7094466	311.169
61) 1,2-Dichloroethane	(2)	7.634	62	2222342	303.049
61) 1,2-Dichloroethane	(2)	7.634	98	228988	315.535
65) t-Amyl methyl ether	(2)	7.744	73	5421278	300.945
67) n-Heptane	(2)	7.959	43	2592531MA	324.518
66)*Fluorobenzene	(2)	7.959	96	1120873	50.000
69) n-Butanol	(1)	8.332	56	2465385M	7947.068
71) Trichloroethene	(2)	8.432	95	1841720	320.821
72) Methylcyclohexane	(2)	8.734	83	3568410	335.054
72) Methylcyclohexane	(2)	8.734	98	1632993	338.844
73) 1,2-Dichloropropane	(2)	8.769	63	1825943	315.397
76) Methyl Methacrylate	(2)	8.850	69	1904896A	340.256
75) 1,4-Dioxane	(1)	8.856	88	338379M	3968.421
74) Dibromomethane	(2)	8.879	93	1210939	323.274
78) Bromodichloromethane	(2)	9.113	83	2314651	344.351
79) 2-Nitropropane	(2)	9.390	41	1438925	706.755
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	926413	372.584
81) cis-1,3-Dichloropropene	(2)	9.638	75	3074664	344.402
82) 4-Methyl-2-pentanone	(2)	9.808	43	5422938	607.899
83)$Toluene-d8	(3)	9.933	98	1156351	49.563
83)$Toluene-d8	(3)	9.933	100	751534	49.726
88) Toluene	(3)	10.007	92	4532879	309.894
90) 1,3-Dichloropropene (total)	(3)		100	5974636	693.659

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	2899972	349.257
91) Ethyl Methacrylate	(3)	10.313	69	3356305	332.603
92) 1,1,2-Trichloroethane	(3)	10.461	97	1768710	318.935
93) Tetrachloroethene	(3)	10.541	166	1990565	321.327
94) 1,3-Dichloropropane	(3)	10.621	76	3006585	317.532
96) 2-Hexanone	(3)	10.670	43	3998423	593.616
97) Dibromochloromethane	(3)	10.827	129	2037523	358.670
99) 1,2-Dibromoethane	(3)	10.940	107	1987783	330.088
100)*Chlorobenzene-d5	(3)	11.361	117	891668	50.000
101) 1-Chlorohexane	(3)	11.364	91	2458057	312.814
102) Chlorobenzene	(3)	11.387	112	5140609	310.783
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	1789998	328.446
104) Ethylbenzene	(3)	11.470	91	8606821	307.854
106) m+p-Xylene	(3)	11.583	106	6690837	608.359
108) Xylene (Total)	(3)		106	9979970	911.130
107) o-Xylene	(3)	11.908	106	3289133	302.771
109) Styrene	(3)	11.924	104	5647939	314.619
110) Bromoform	(3)	12.081	173	1534520	361.500
111) Isopropylbenzene	(3)	12.203	105	8466138	310.714
112) Cyclohexanone	(1)	12.287	55	1351186	4046.080
114)$4-Bromofluorobenzene	(3)	12.348	95	440049	49.810
114)$4-Bromofluorobenzene	(3)	12.348	174	362553	49.502
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	2800639M	310.705
115) Bromobenzene	(4)	12.467	156	2234066	311.517
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	2150976	773.637
117) 1,2,3-Trichloropropane	(4)	12.499	110	866230	313.172
119) n-Propylbenzene	(4)	12.531	91	9654812	308.142
120) 2-Chlorotoluene	(4)	12.609	126	2098494	315.266
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	7238022	317.873
121) 4-Chlorotoluene	(4)	12.702	126	2155793	311.148
124) tert-Butylbenzene	(4)	12.908	134	1524421M	323.717
125) Pentachloroethane	(4)	12.940	167	1461833	360.511
126) 1,2,4-Trimethylbenzene	(4)	12.949	105	7469187	311.236
127) sec-Butylbenzene	(4)	13.068	105	8682126	308.971
129) 1,3-Dichlorobenzene	(4)	13.168	146	3858953	292.822
130) p-Isopropyltoluene	(4)	13.174	119	7289488	299.854
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	477171	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	4013510	293.777

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

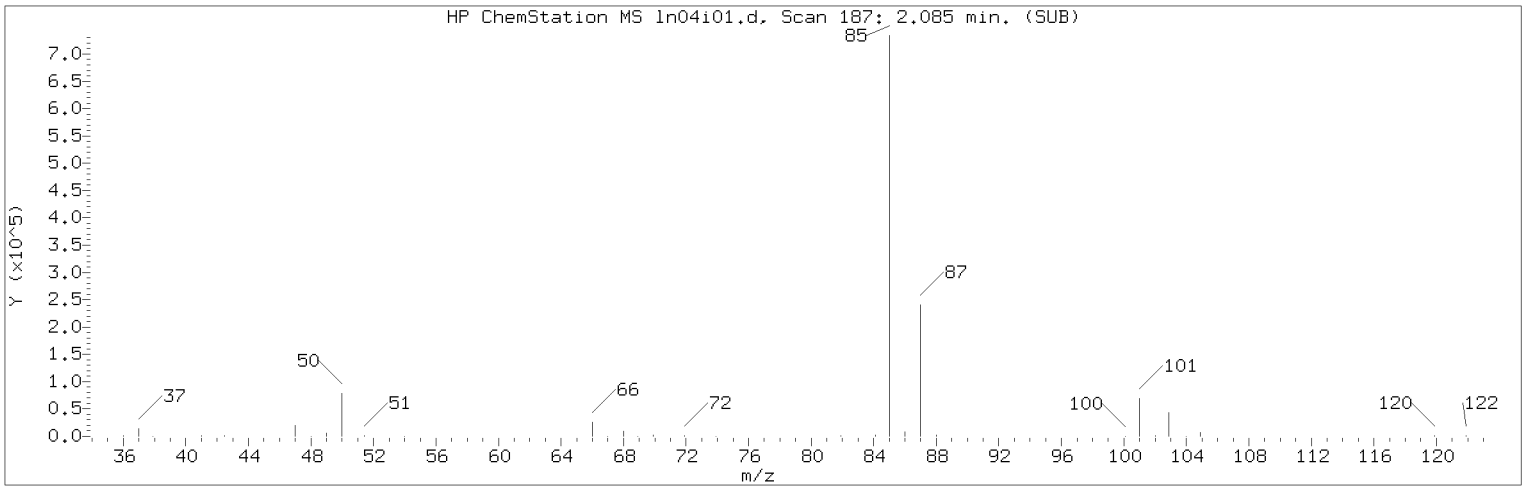
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

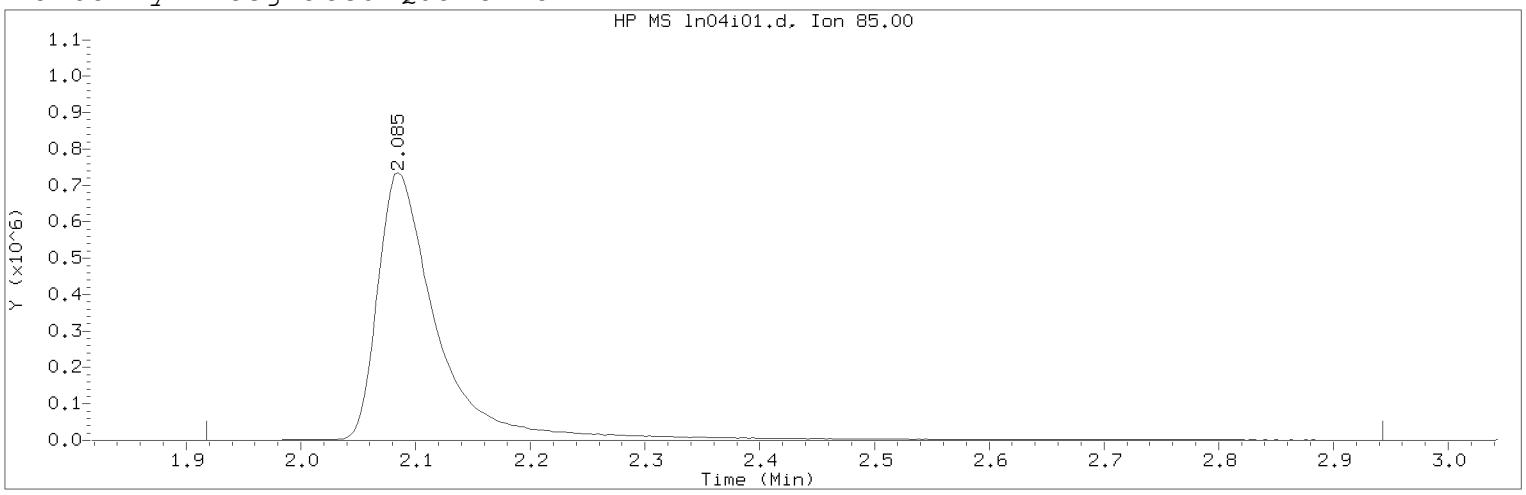
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	7915203	311.364
135) Benzyl Chloride	(4)	13.319	91	6484944	336.931
136) 1,3-Diethylbenzene	(4)	13.374	119	4897725	309.573
141) Diethylbenzene (total)	(4)		100	13982971	913.975
137) 1,4-Diethylbenzene	(4)	13.444	119	5013123	299.077
139) n-Butylbenzene	(4)	13.467	92	3608595	290.316
138) 1,2-Dichlorobenzene	(4)	13.502	146	3859125	296.761
140) 1,2-Diethylbenzene	(4)	13.518	119	4072123	305.325
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	669008	339.050
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	2855960	285.855
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	2681523	276.030
147) Hexachlorobutadiene	(4)	14.670	225	1157297	252.311
148) Naphthalene	(4)	14.772	128	9186333	294.145
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	2488608	263.270
150) 2-Methylnaphthalene	(4)	15.563	142	4666682	242.655

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

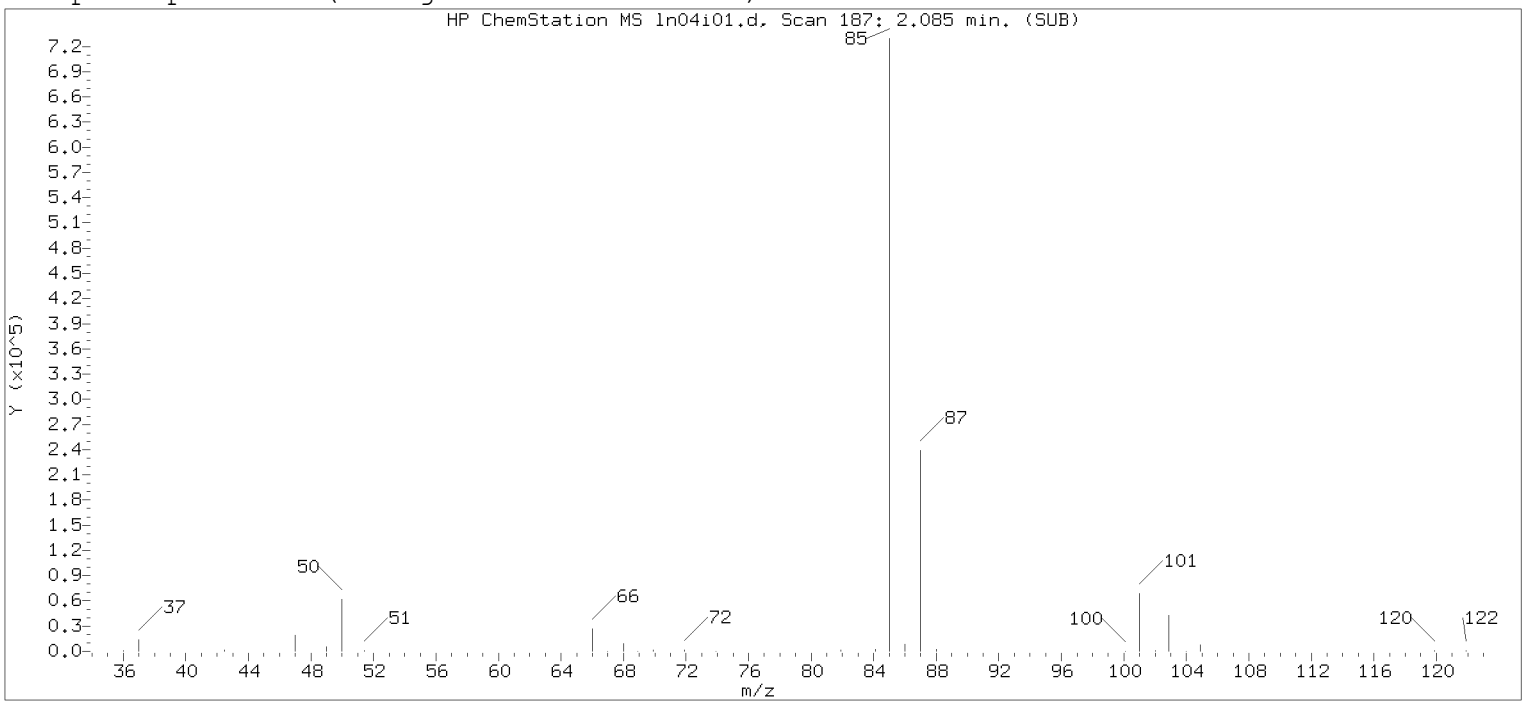
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area (flag) : 2719746M
On-Column Amount (ng) : 347.9426
Integration start scan : 134 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

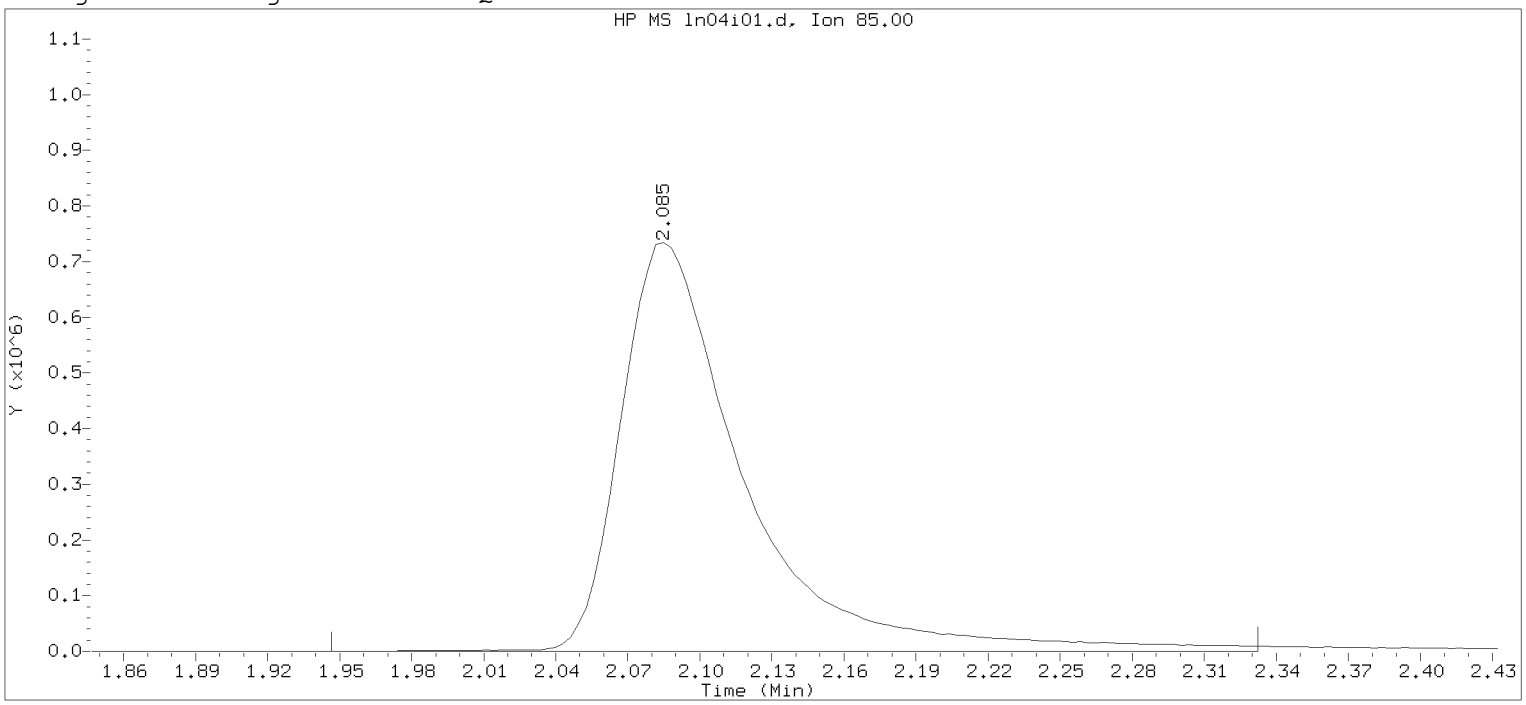
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

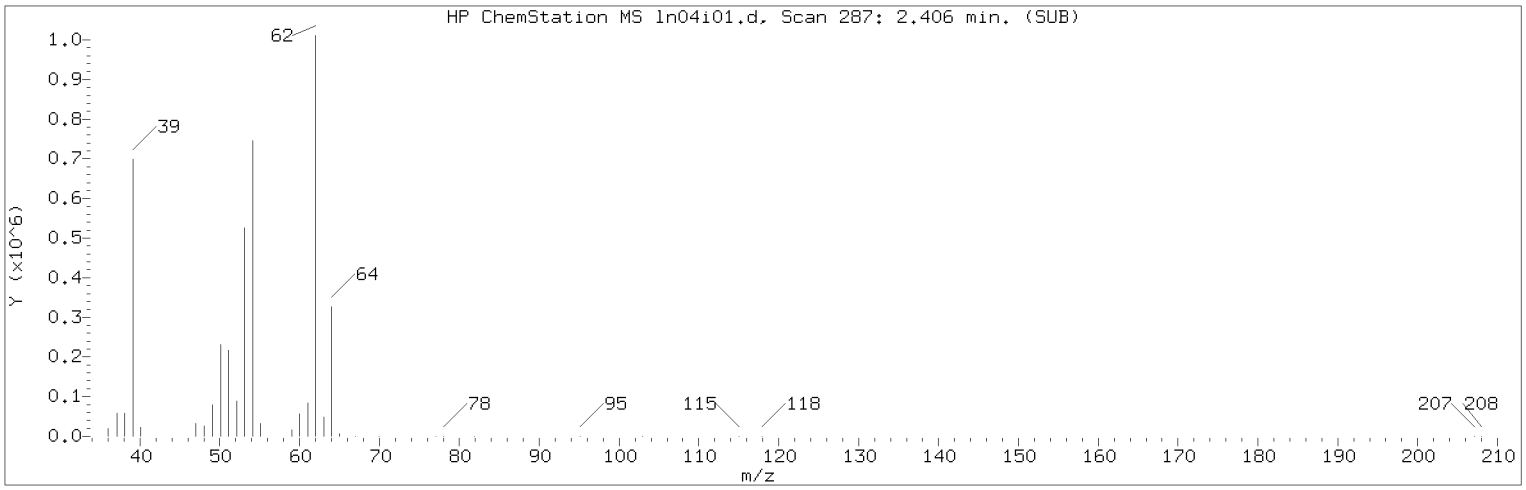
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

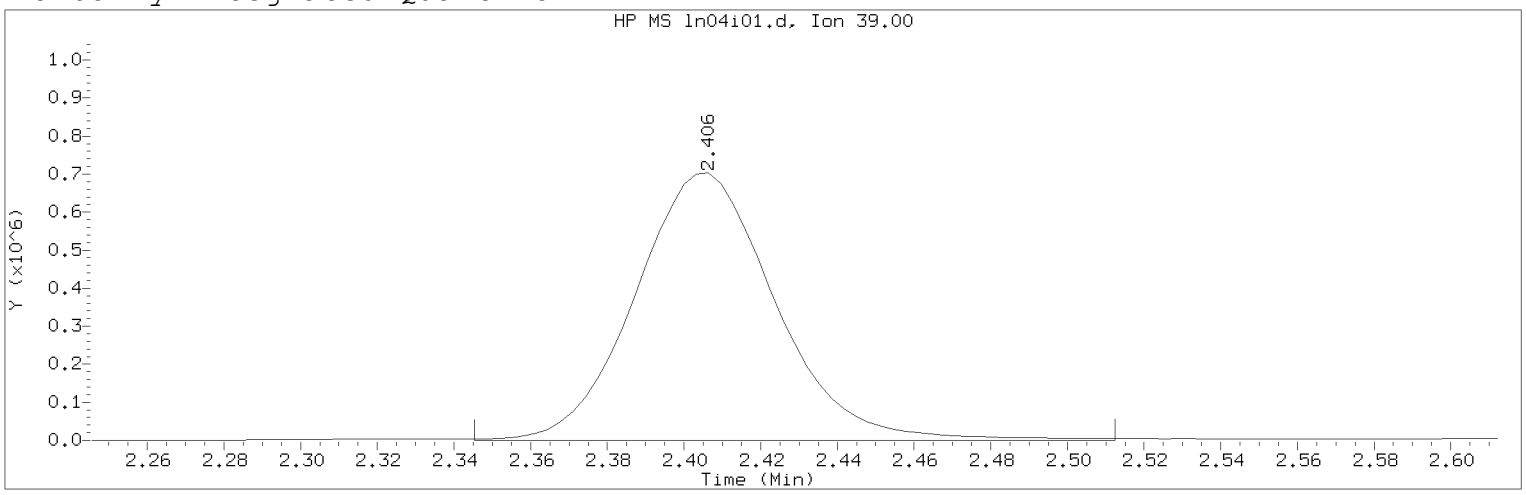
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area : 2624212
On-column Amount (ng) : 308.6520
Integration start scan : 143 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

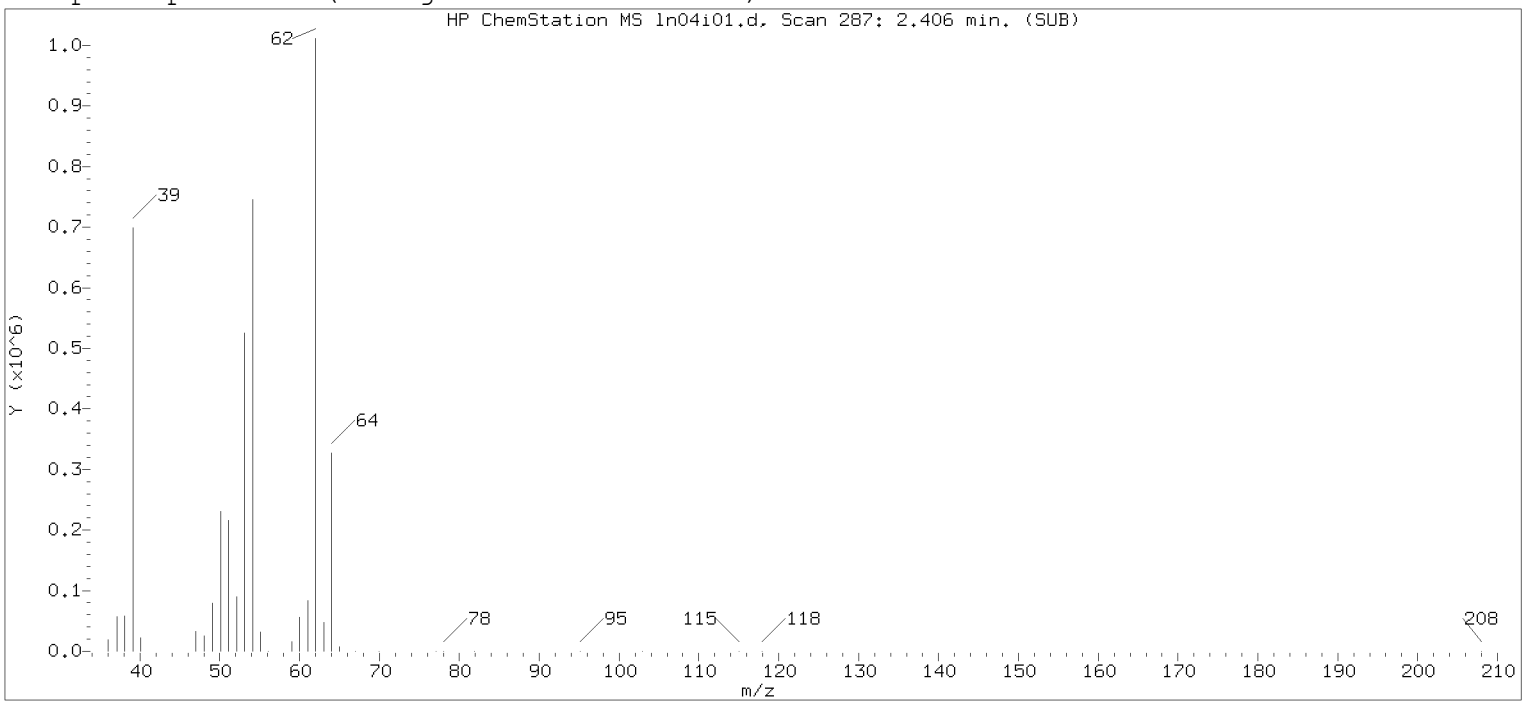
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 1785787M
On-Column Amount (ng) : 285.4858
Integration start scan : 267 Integration stop scan: 319
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

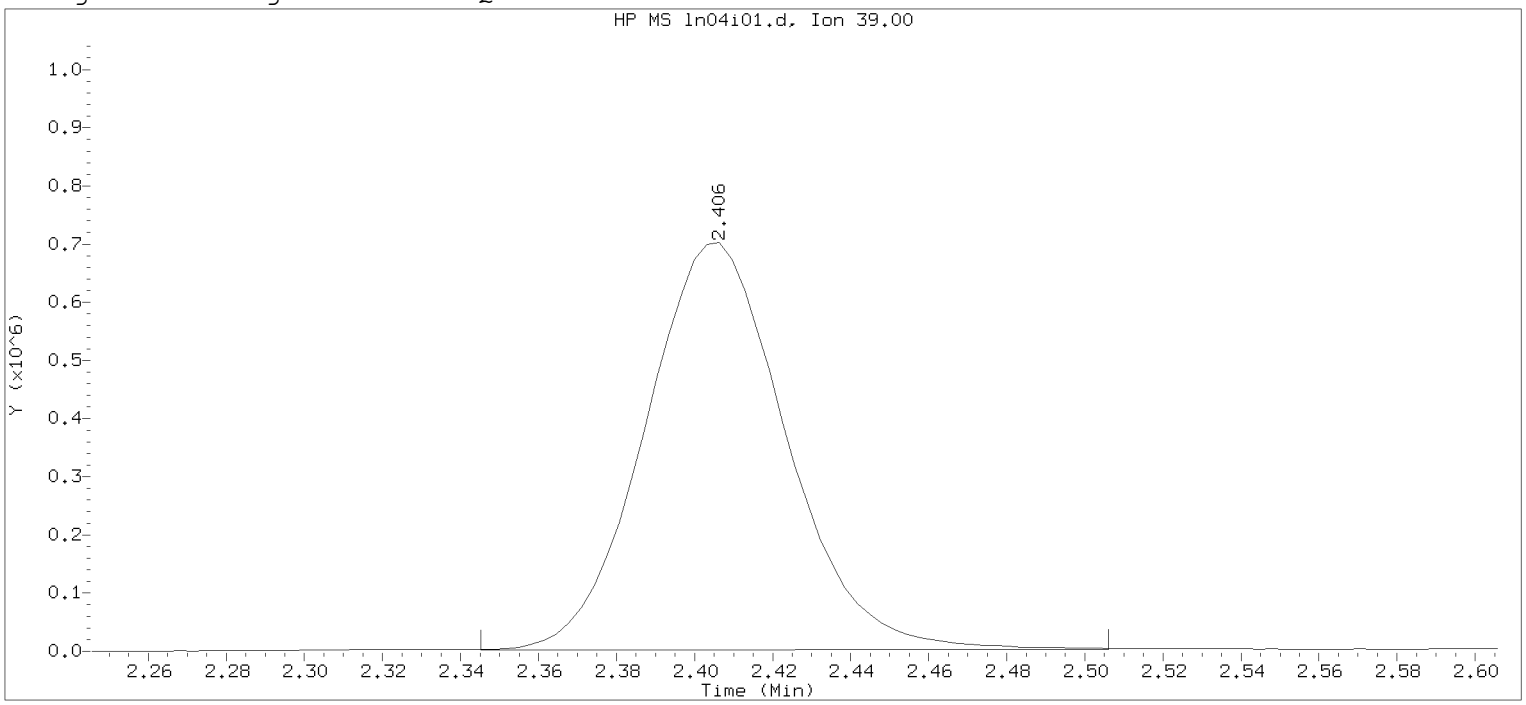
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

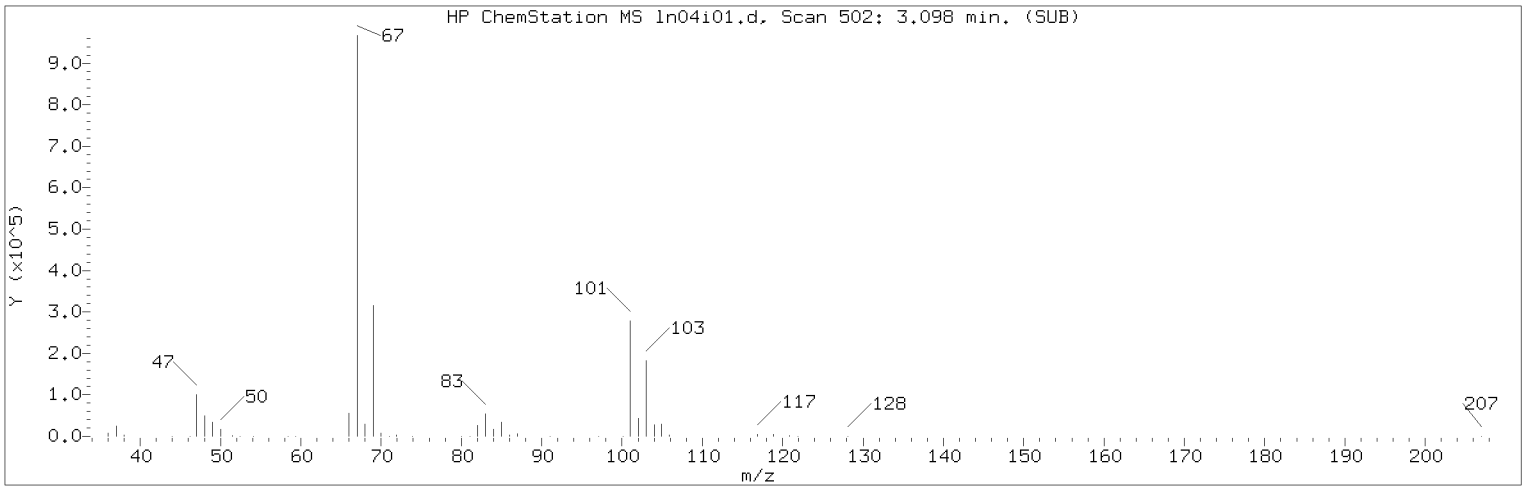
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

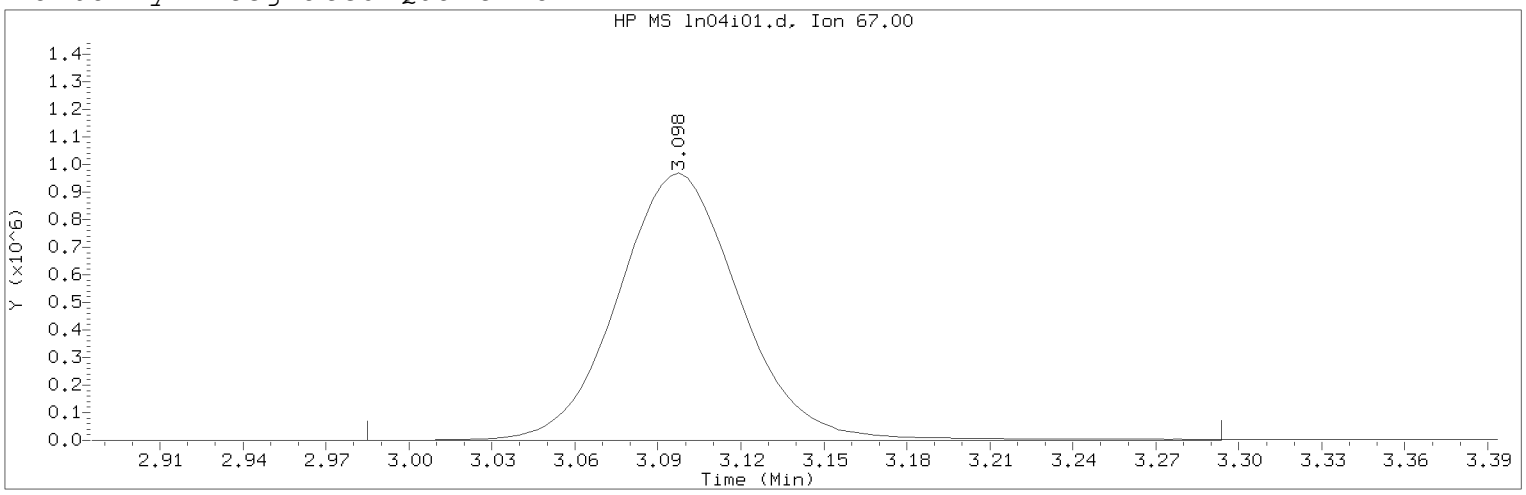
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 1755596
On-column Amount (ng) : 295.0708
Integration start scan : 267 Integration stop scan: 317
Y at integration start : 2196 Y at integration end: 3553

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

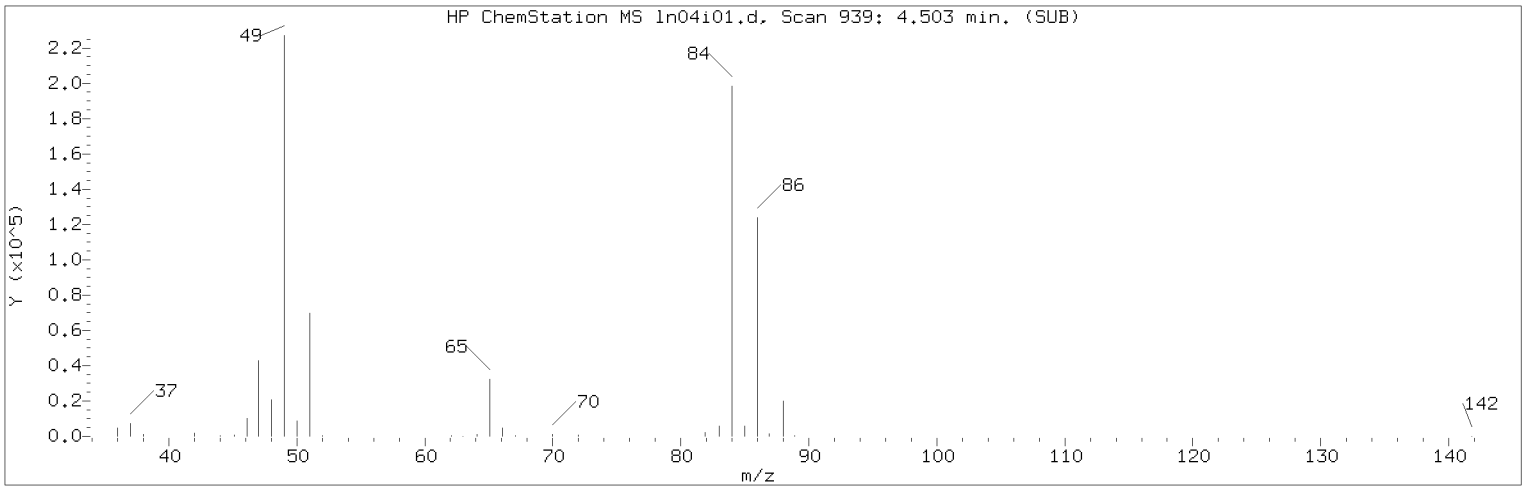
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 502
Retention Time (minutes): 3.098
Quant Ion : 67.00
Area (flag) : 2978303M
On-Column Amount (ng) : 300.2583
Integration start scan : 466 Integration stop scan: 562
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

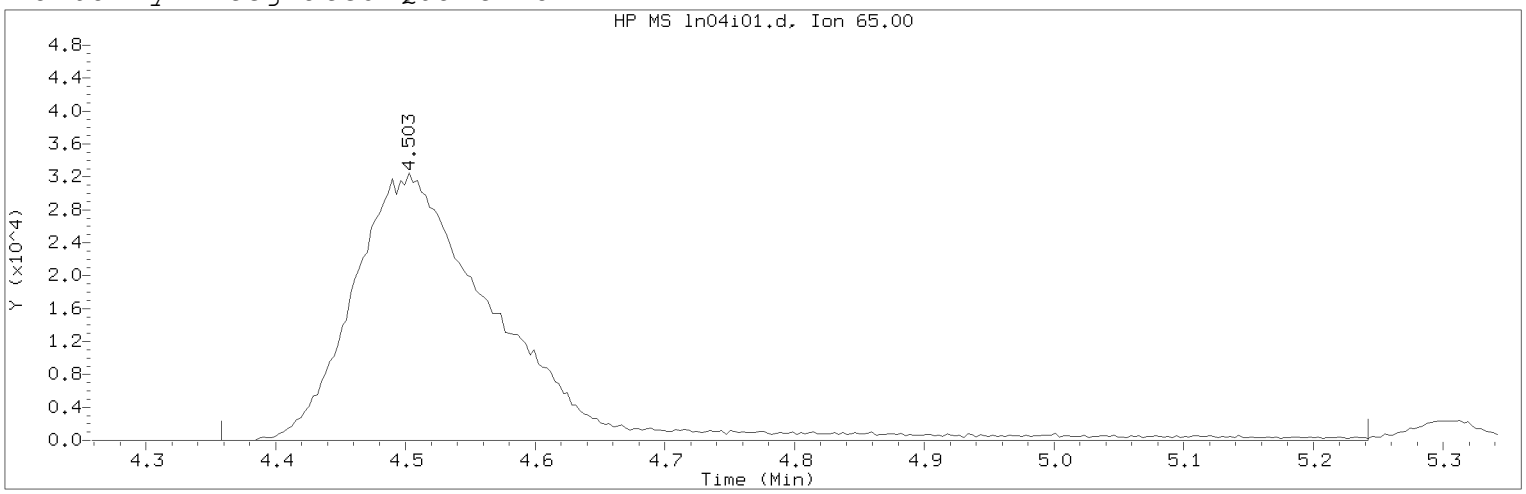
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

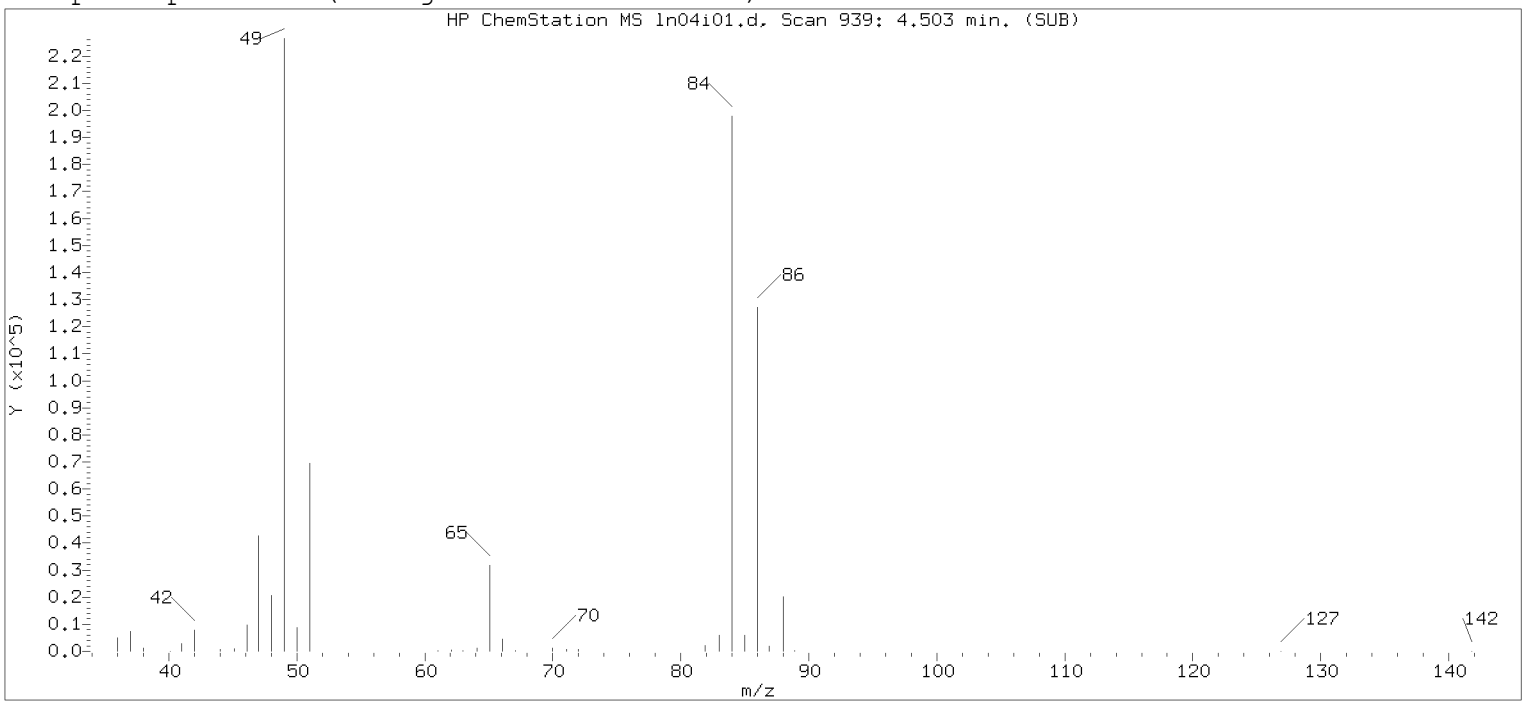
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area (flag) : 254406M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1168
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

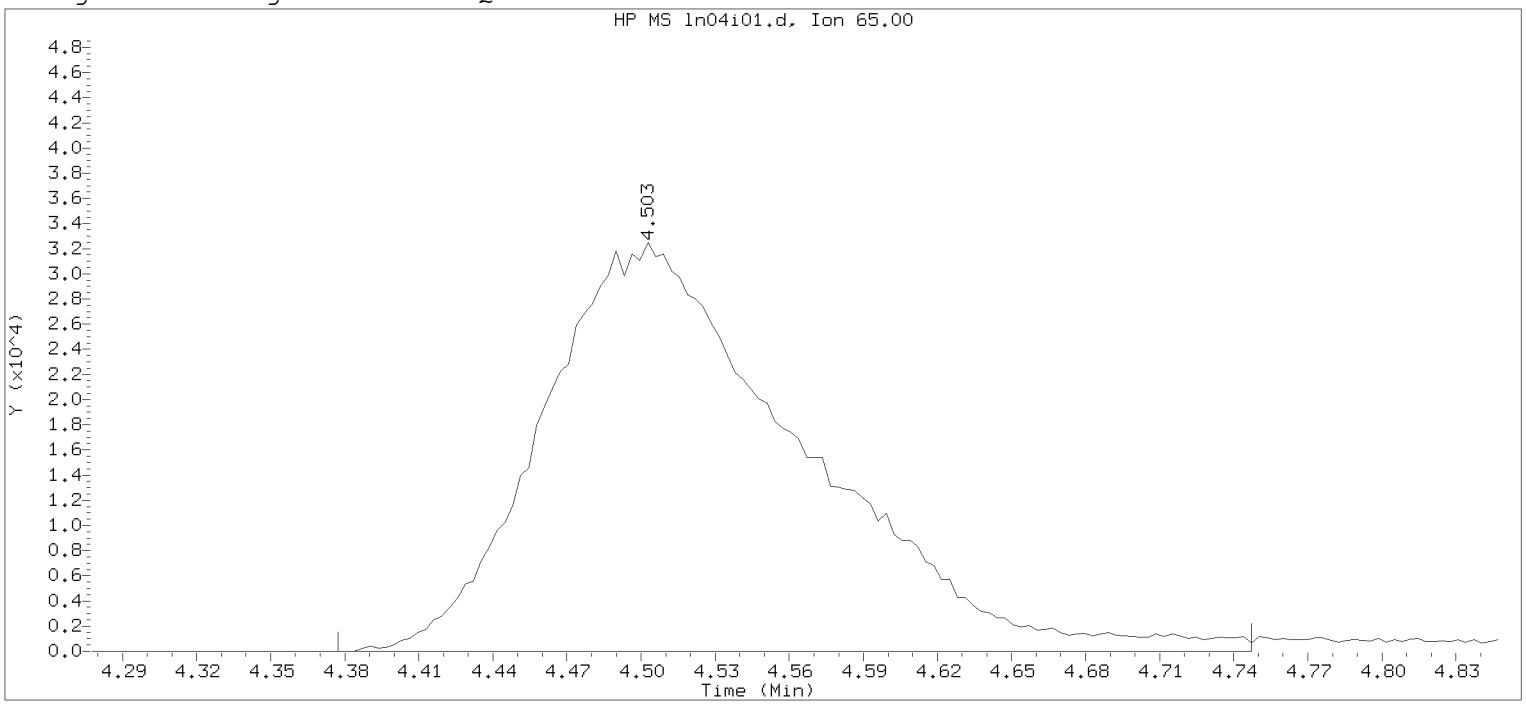
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

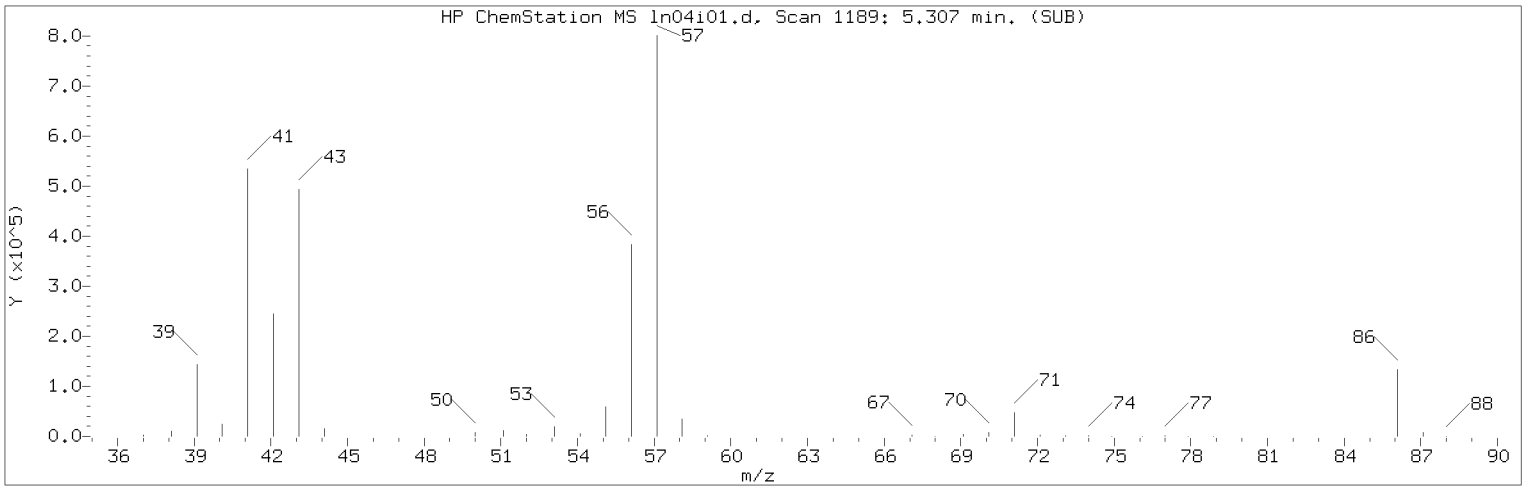
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

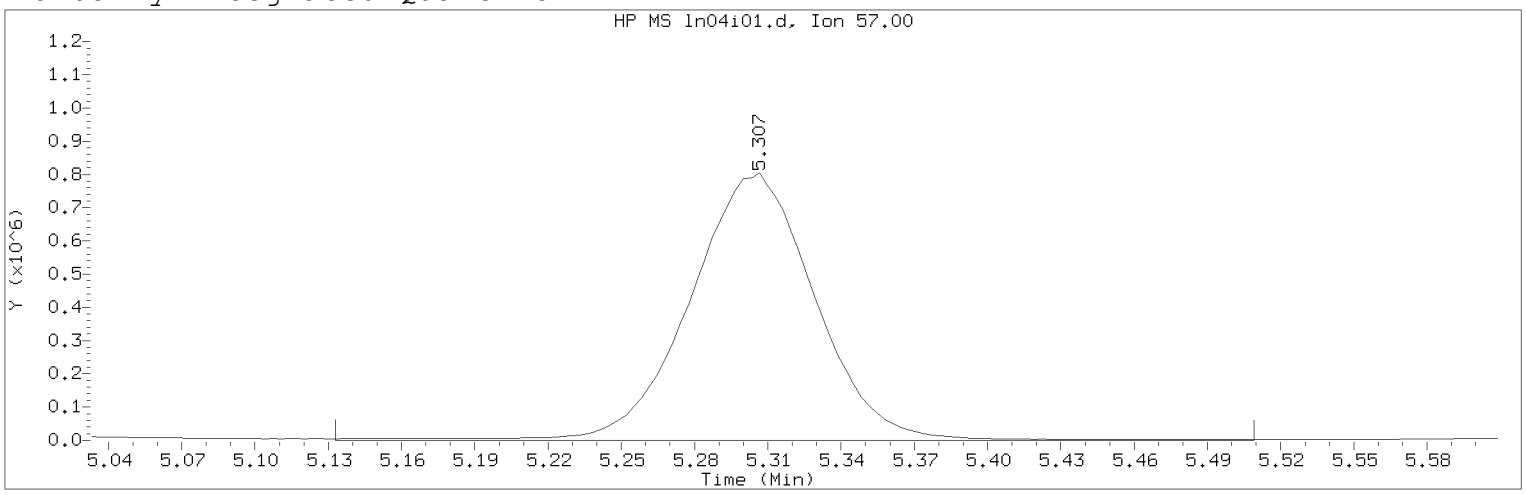
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area : 237264
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

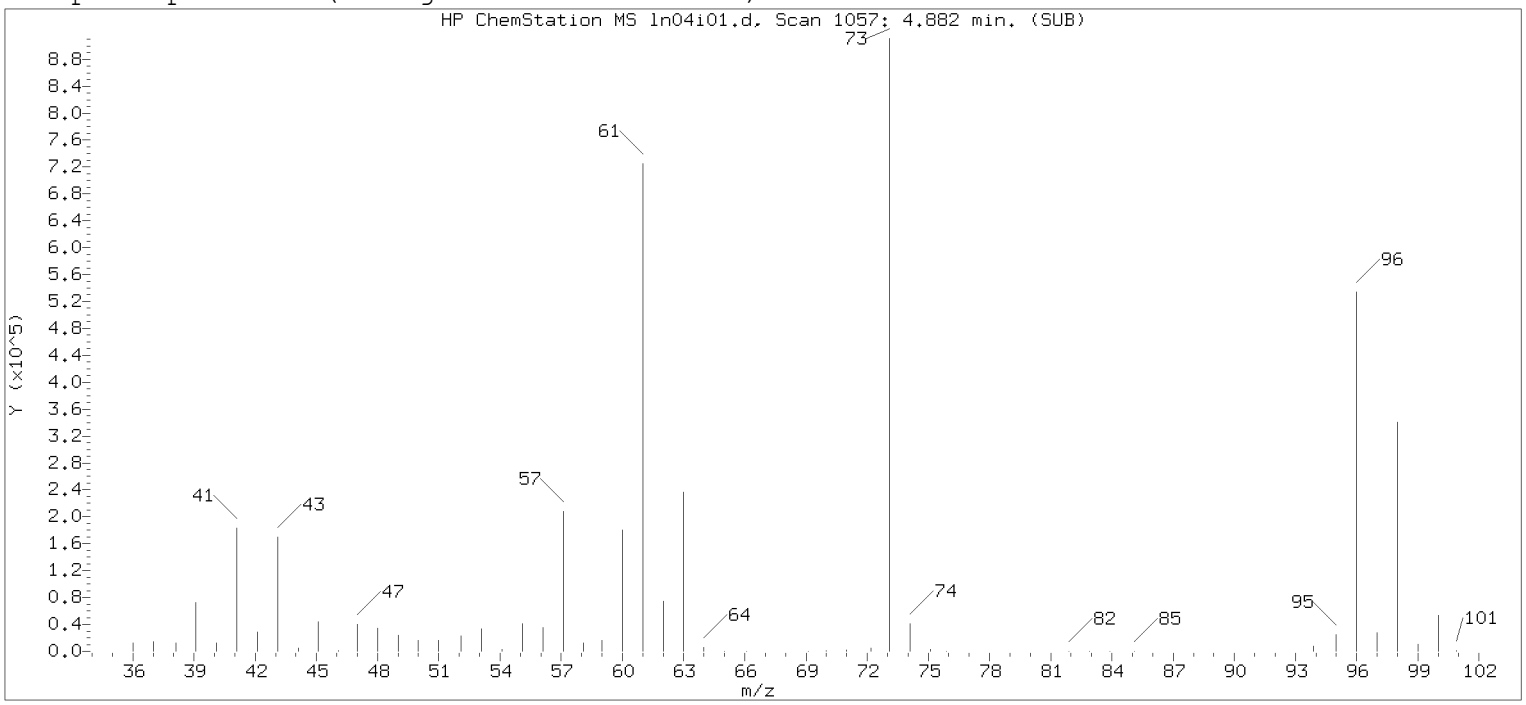
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1189
Retention Time (minutes): 5.307
Quant Ion : 57.00
Area (flag) : 2863189M
On-Column Amount (ng) : 334.8105
Integration start scan : 1134 Integration stop scan: 1251
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

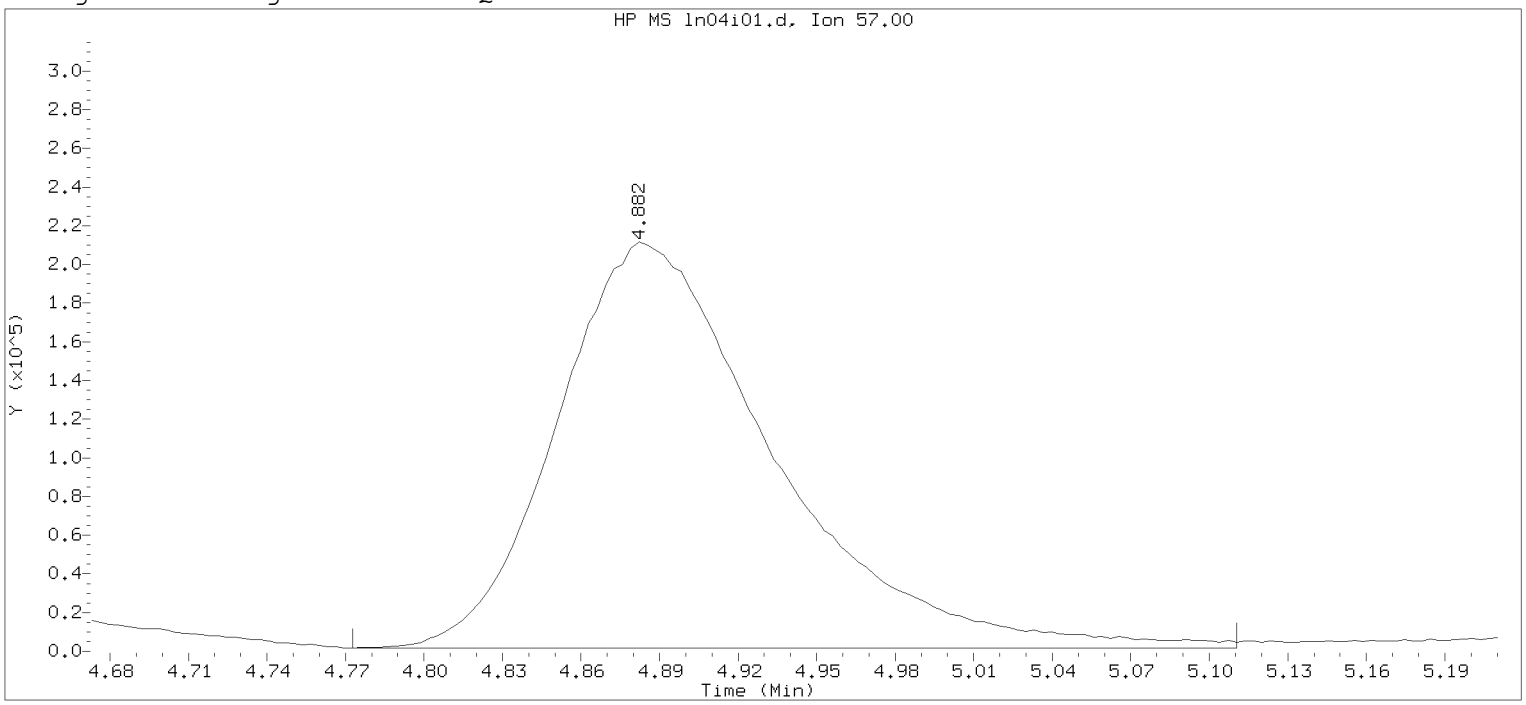
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

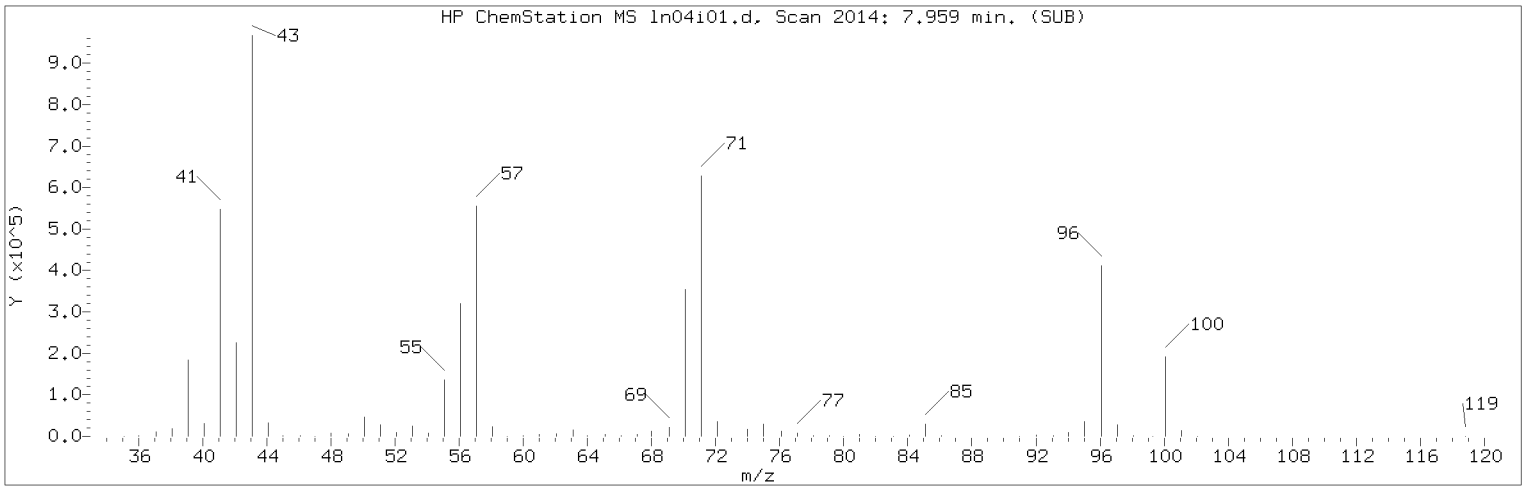
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

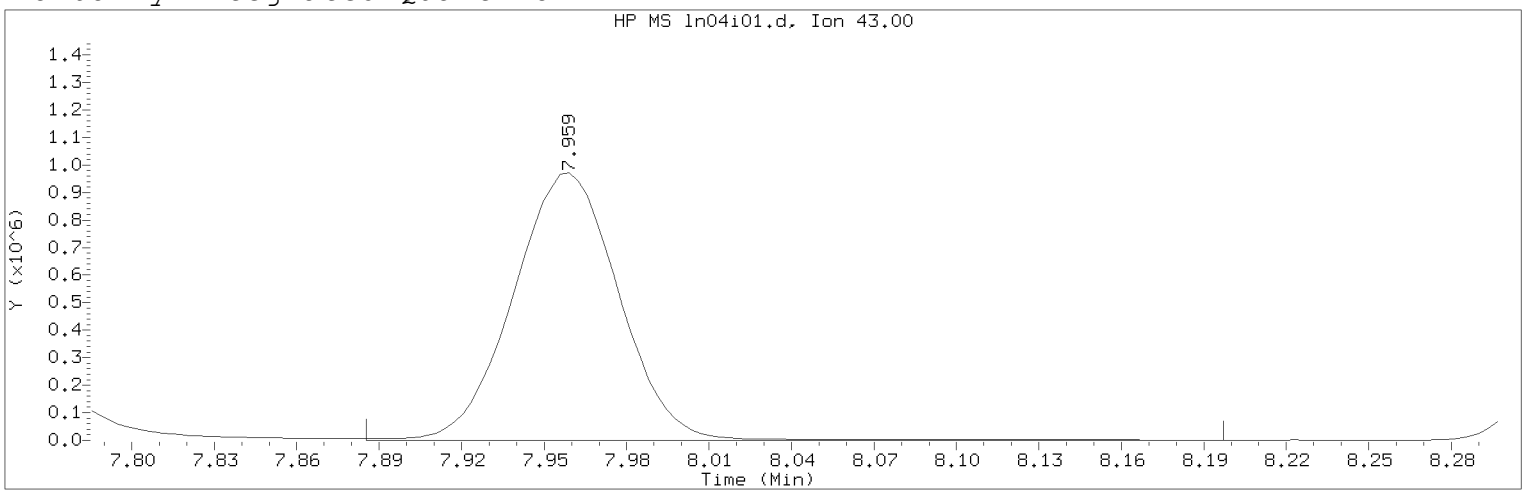
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1057		
Retention Time (minutes)	: 4.882		
Quant Ion	: 57.00		
Area	: 1202378		
On-column Amount (ng)	: 301.4561		
Integration start scan	: 1022	Integration stop scan	: 1127
Y at integration start	: 1806	Y at integration end	: 1806

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

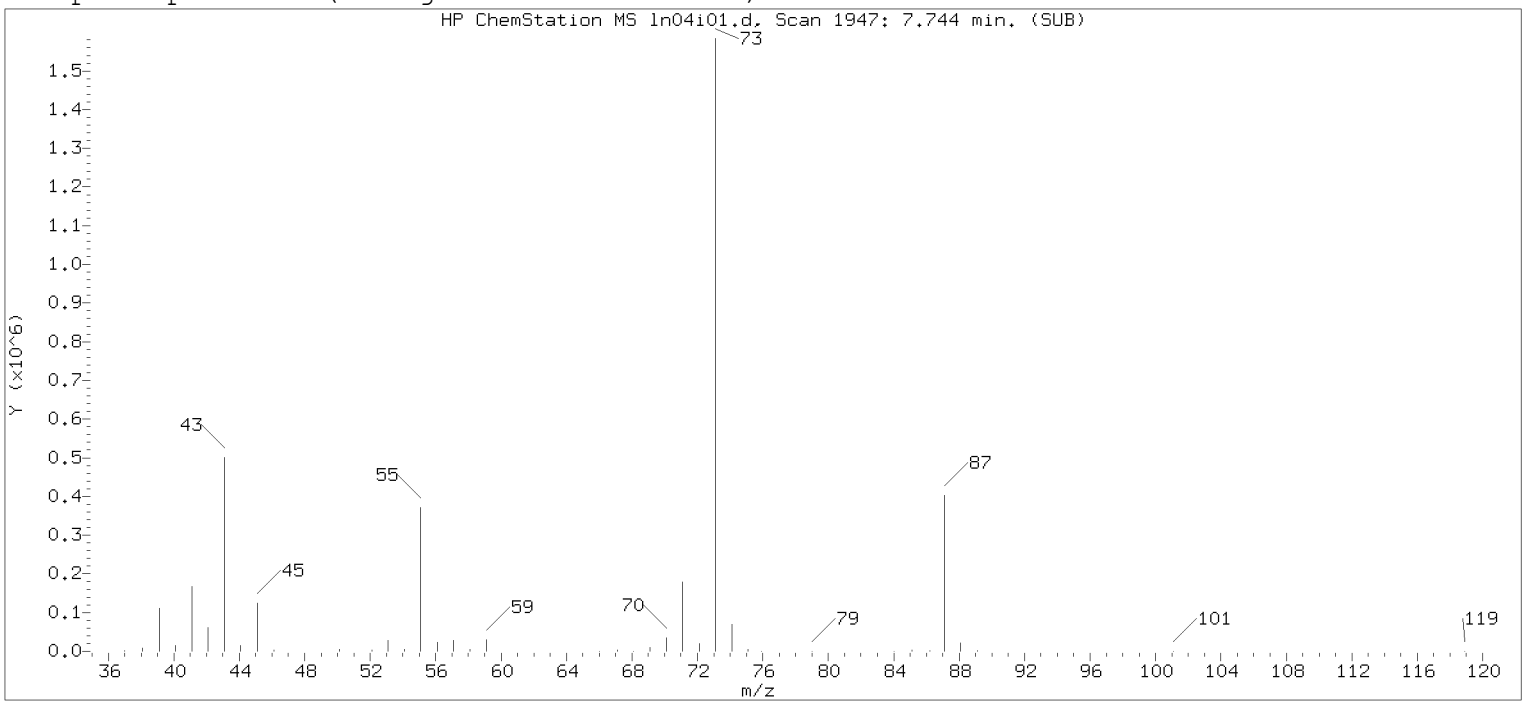
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2014
Retention Time (minutes): 7.959
Quant Ion : 43.00
Area (flag) : 2592531MA
On-Column Amount (ng) : 324.5176
Integration start scan : 1990 Integration stop scan: 2087
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

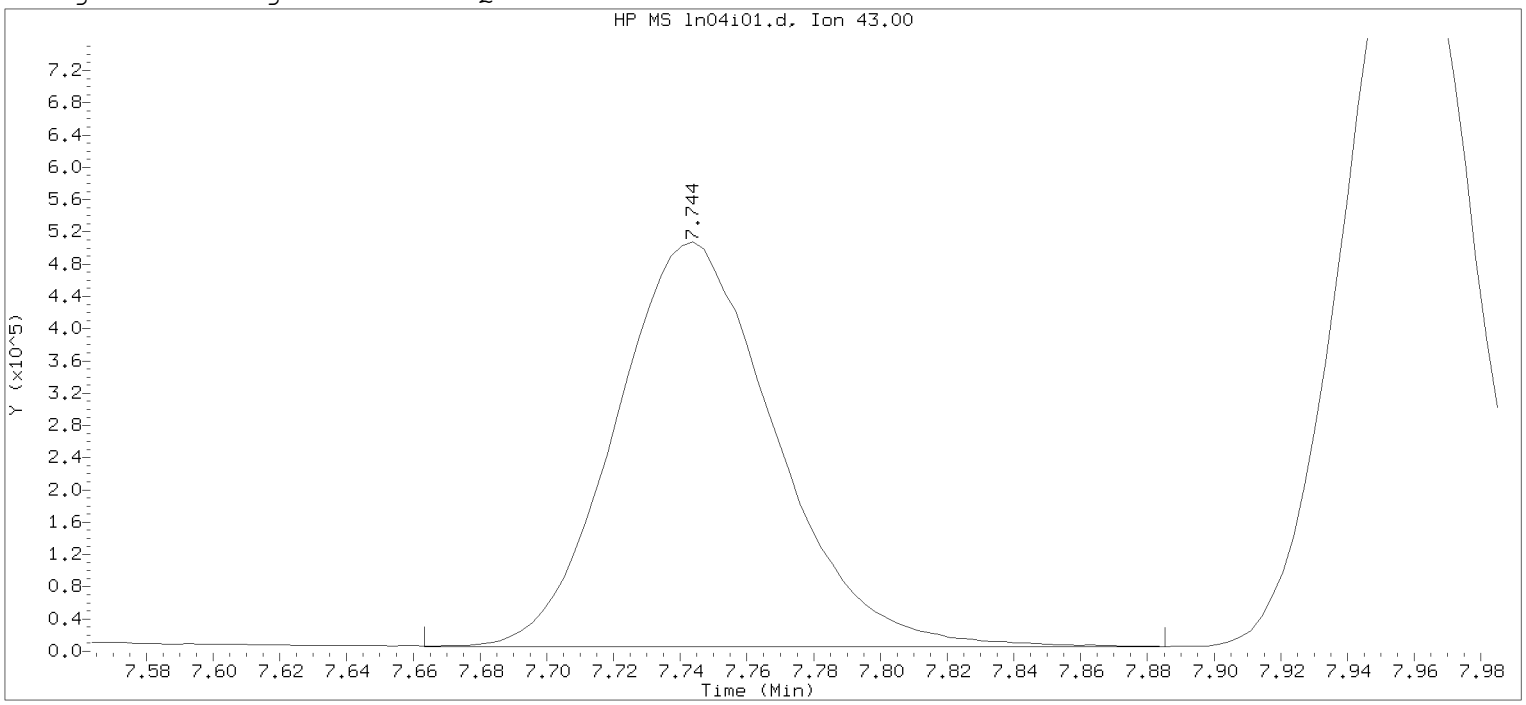
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

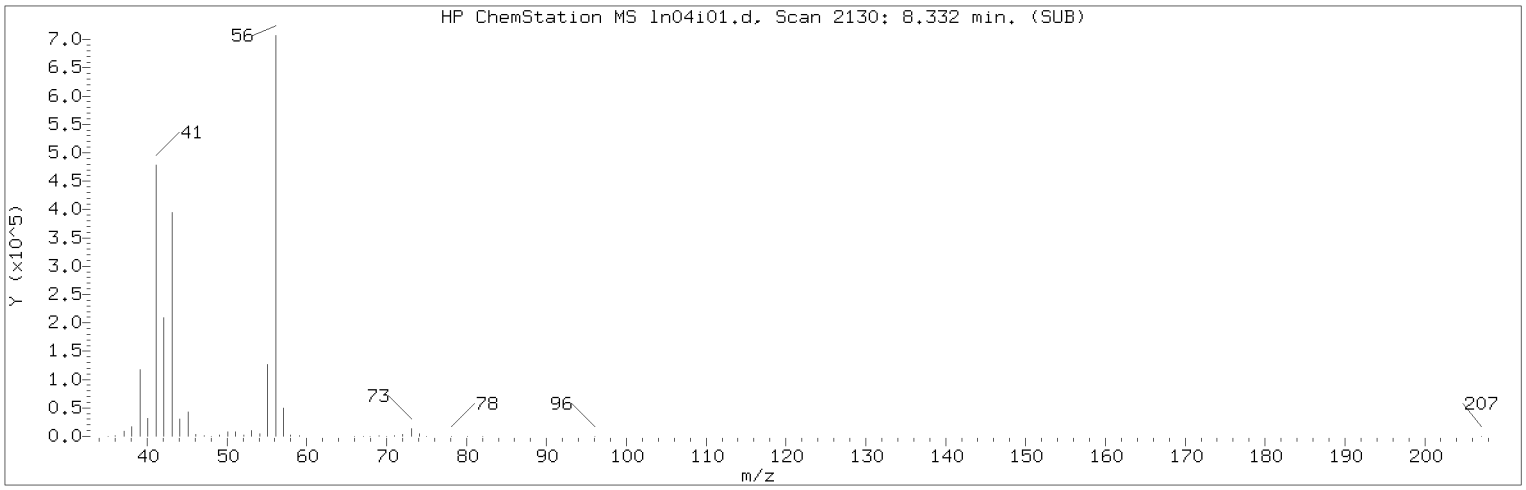
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

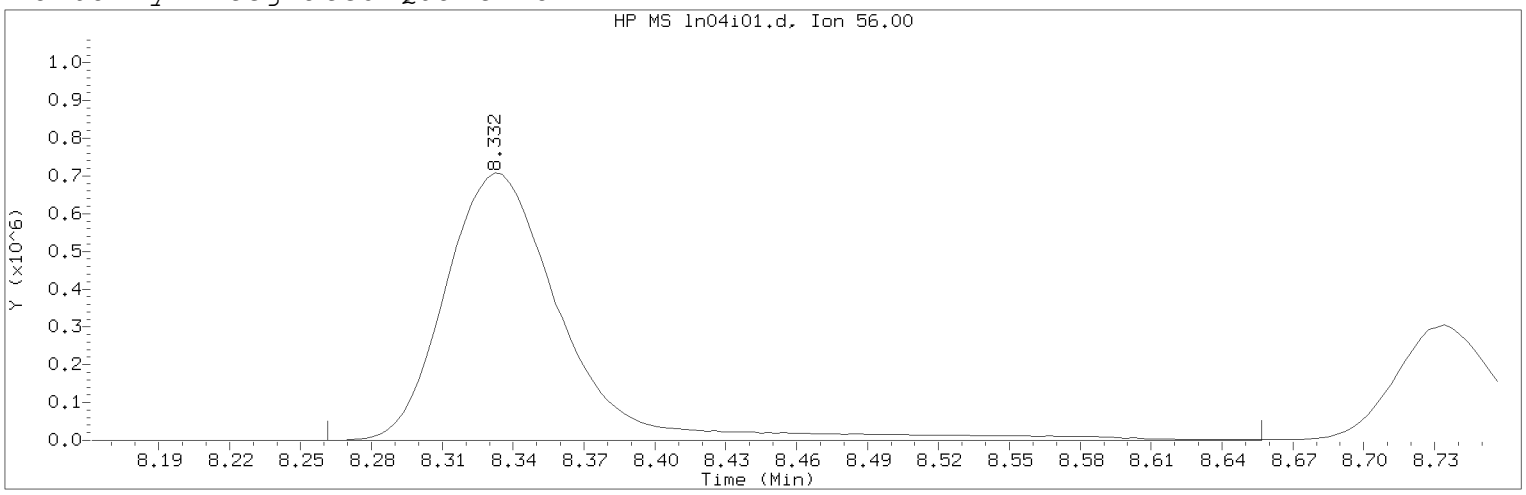
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1947
Retention Time (minutes): 7.744
Quant Ion : 43.00
Area : 1668813
On-column Amount (ng) : 288.4319
Integration start scan : 1921 Integration stop scan: 1990
Y at integration start : 5866 Y at integration end: 5866

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

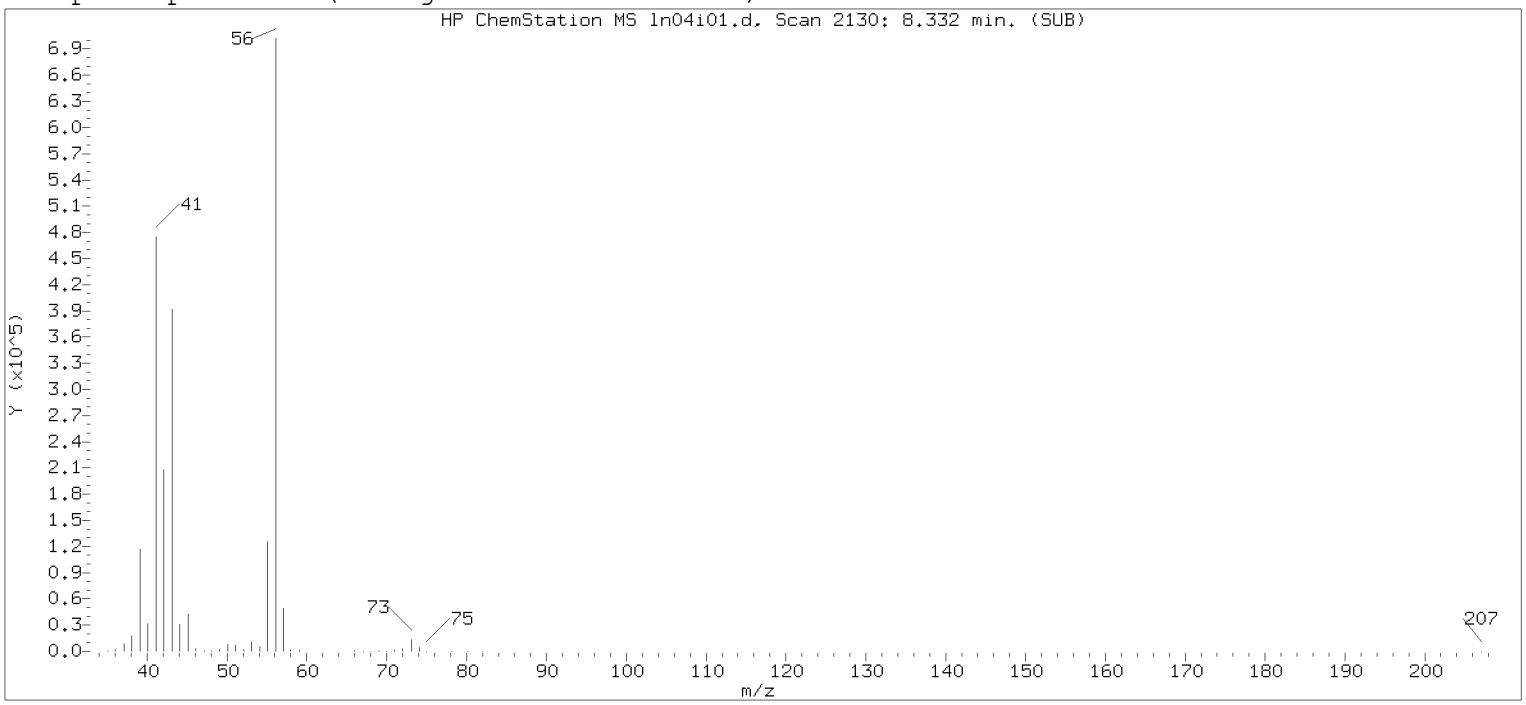
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area (flag) : 2465385M
On-Column Amount (ng) : 7947.0678
Integration start scan : 2107 Integration stop scan: 2230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

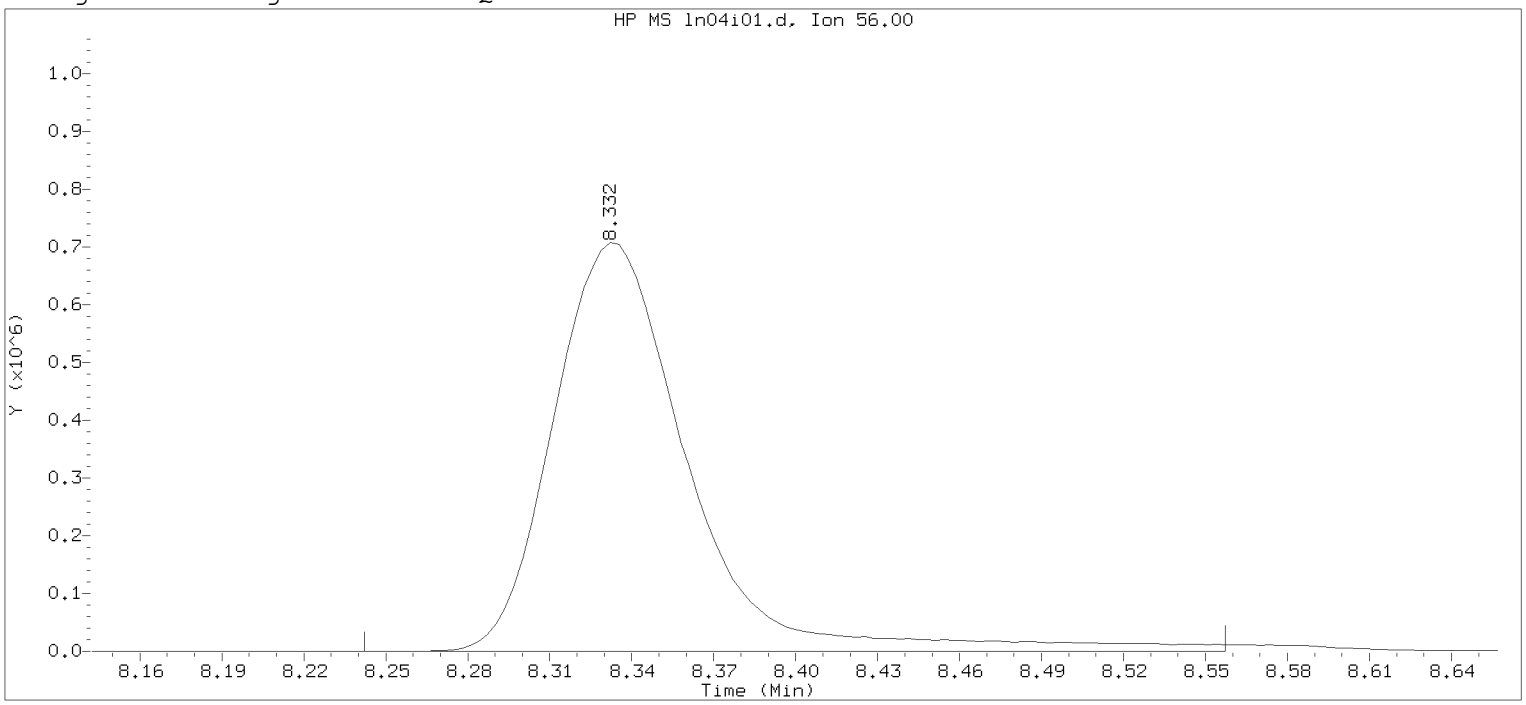
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

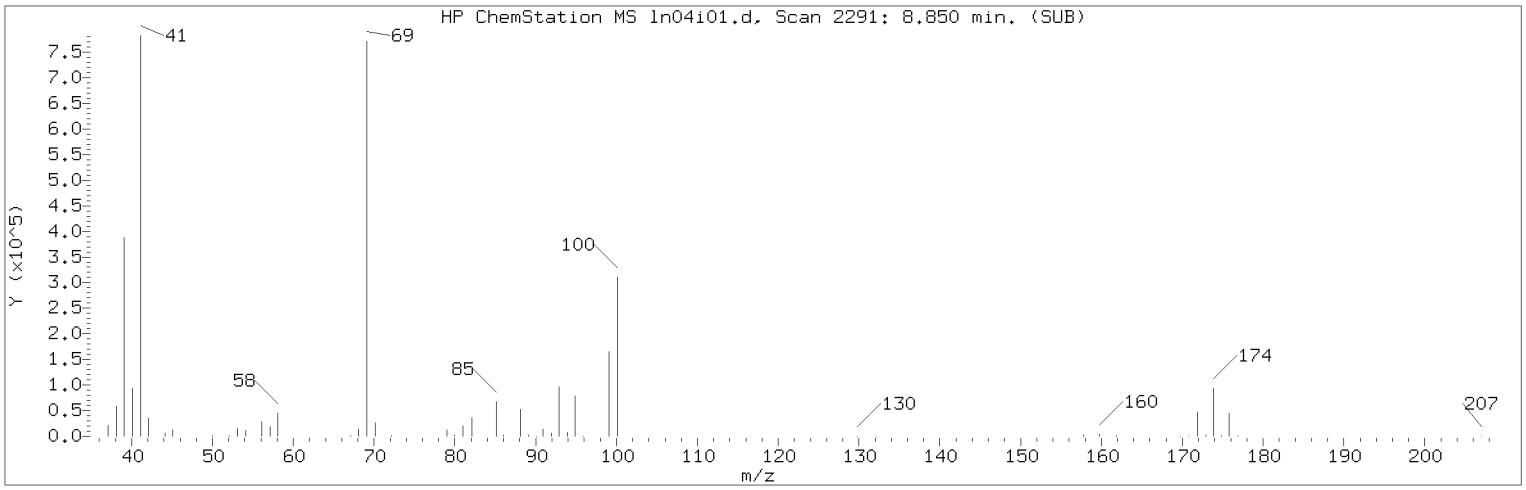
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

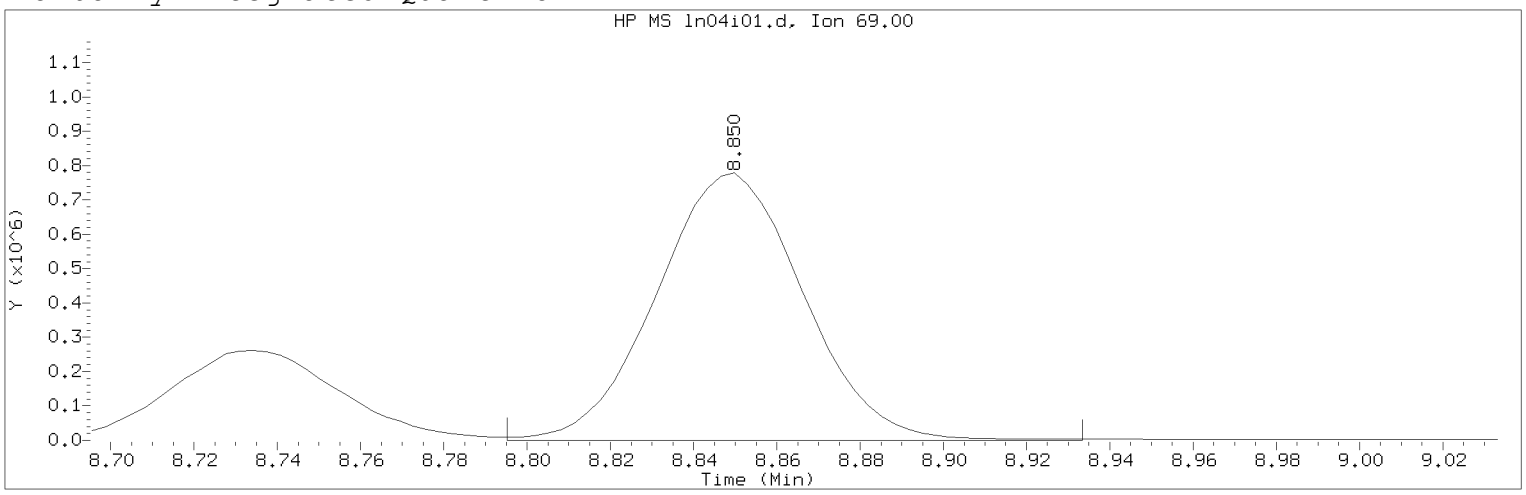
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area : 2429255
On-column Amount (ng) : 7682.9381
Integration start scan : 2101 Integration stop scan: 2199
Y at integration start : 176 Y at integration end: 176

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

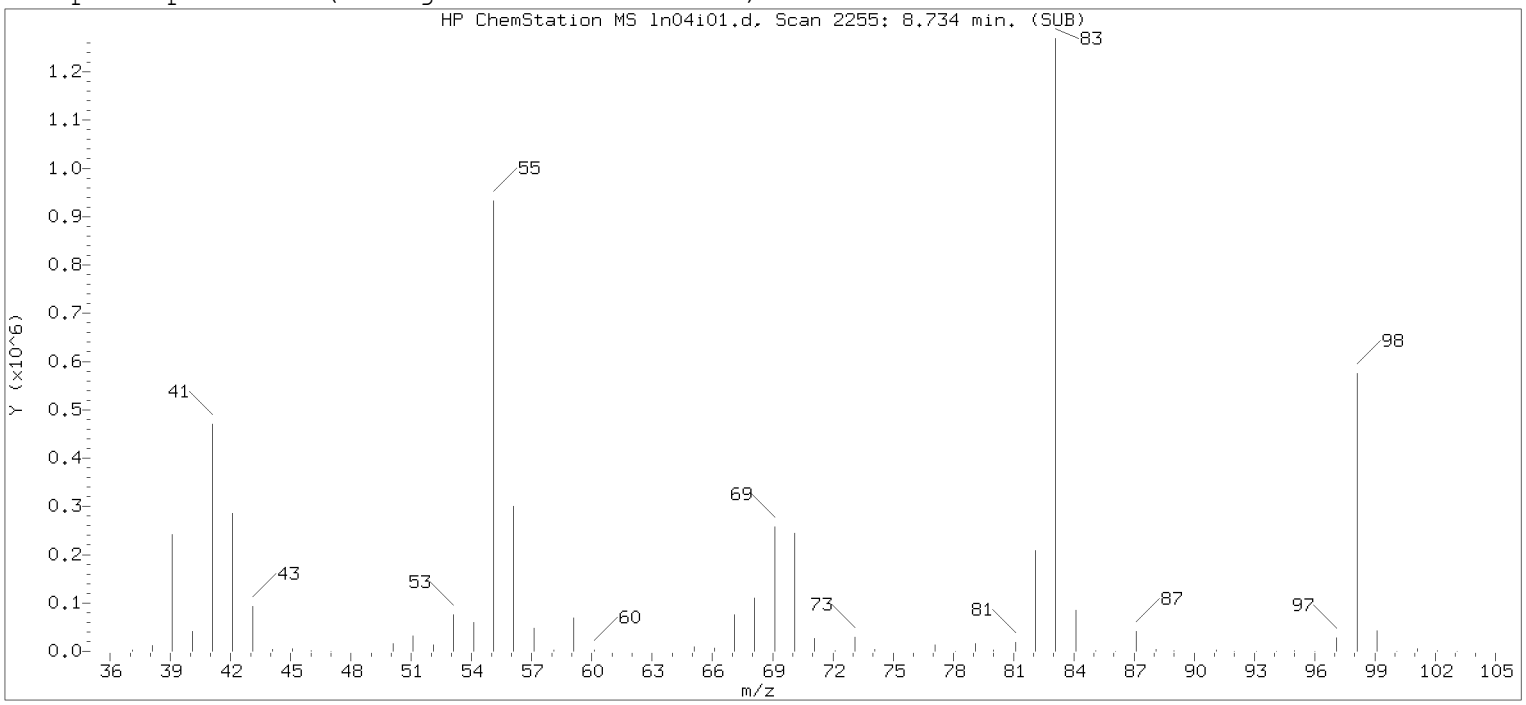
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2291
Retention Time (minutes): 8.850
Quant Ion : 69.00
Area (flag) : 1904896A
On-Column Amount (ng) : 340.2564
Integration start scan : 2273 Integration stop scan: 2316
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

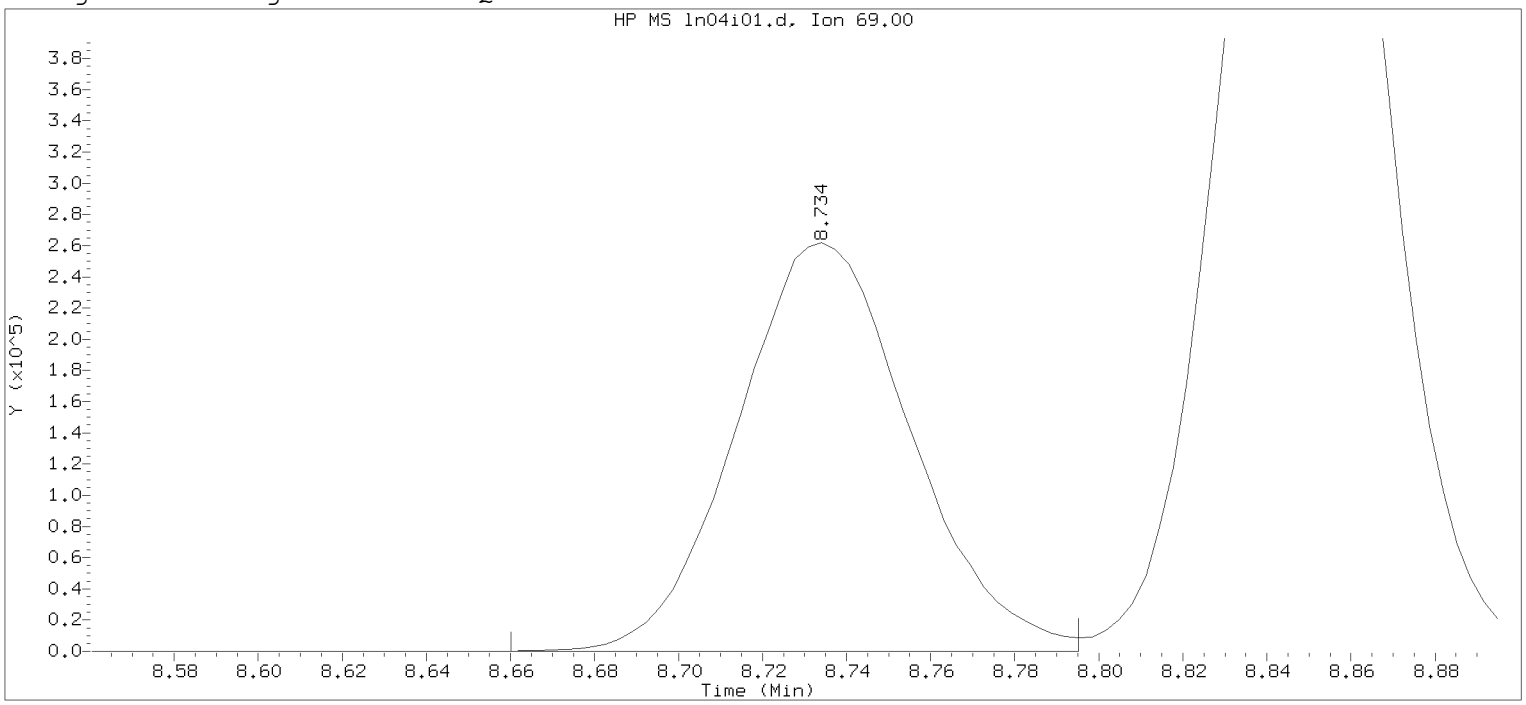
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

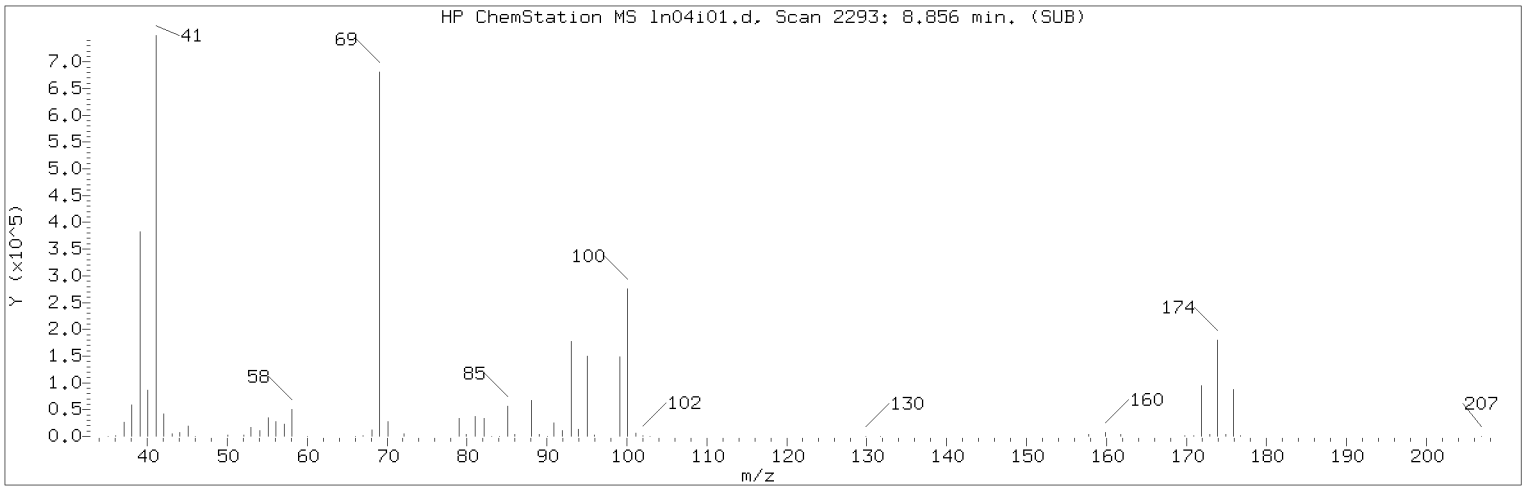
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

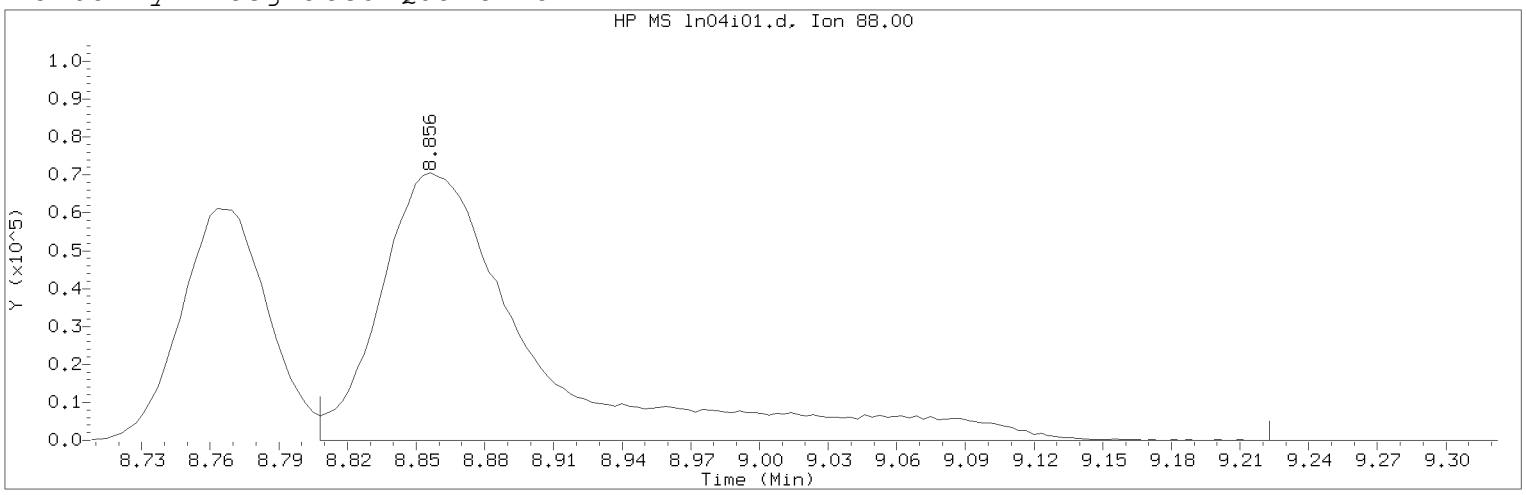
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 752058
On-column Amount (ng) : 311.1363
Integration start scan : 2231 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

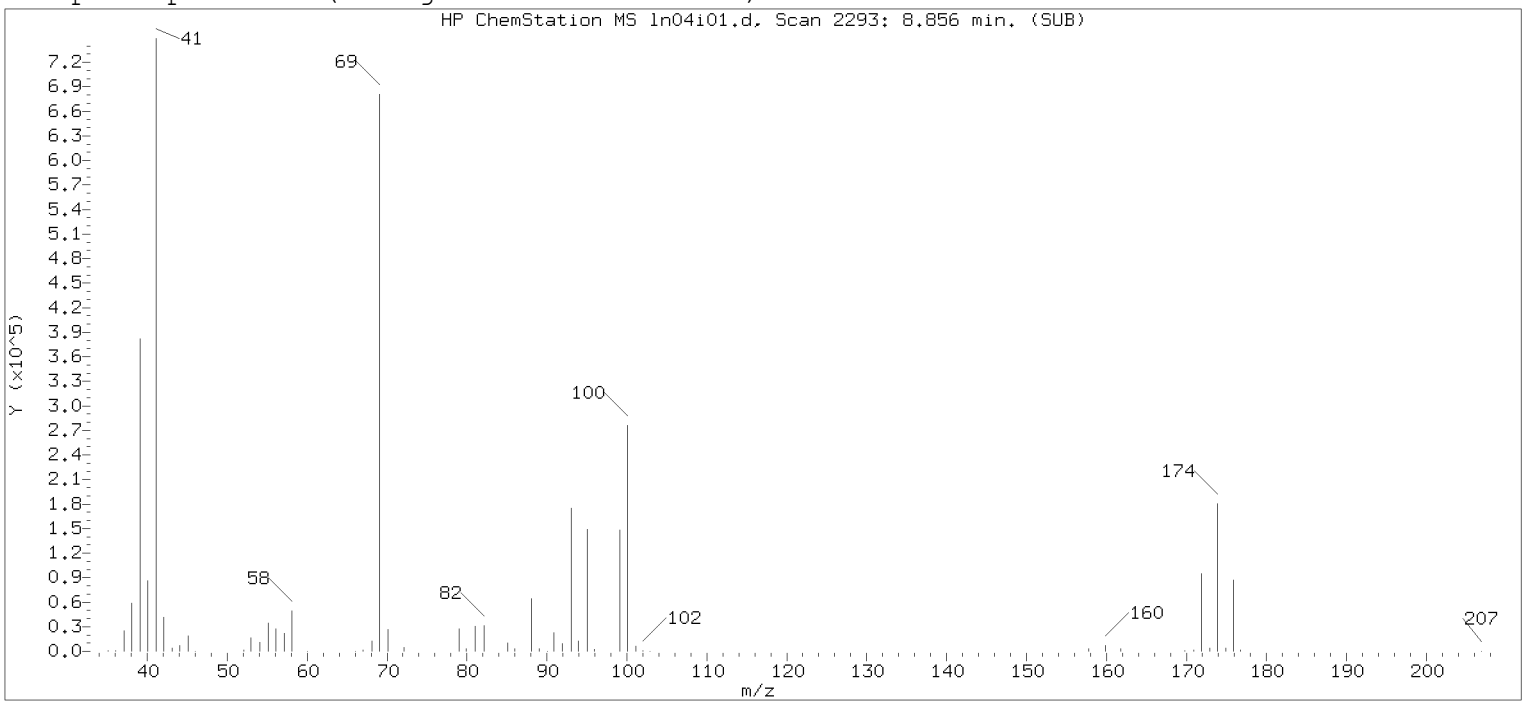
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 338379M
On-Column Amount (ng) : 3968.4208
Integration start scan : 2277 Integration stop scan: 2406
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

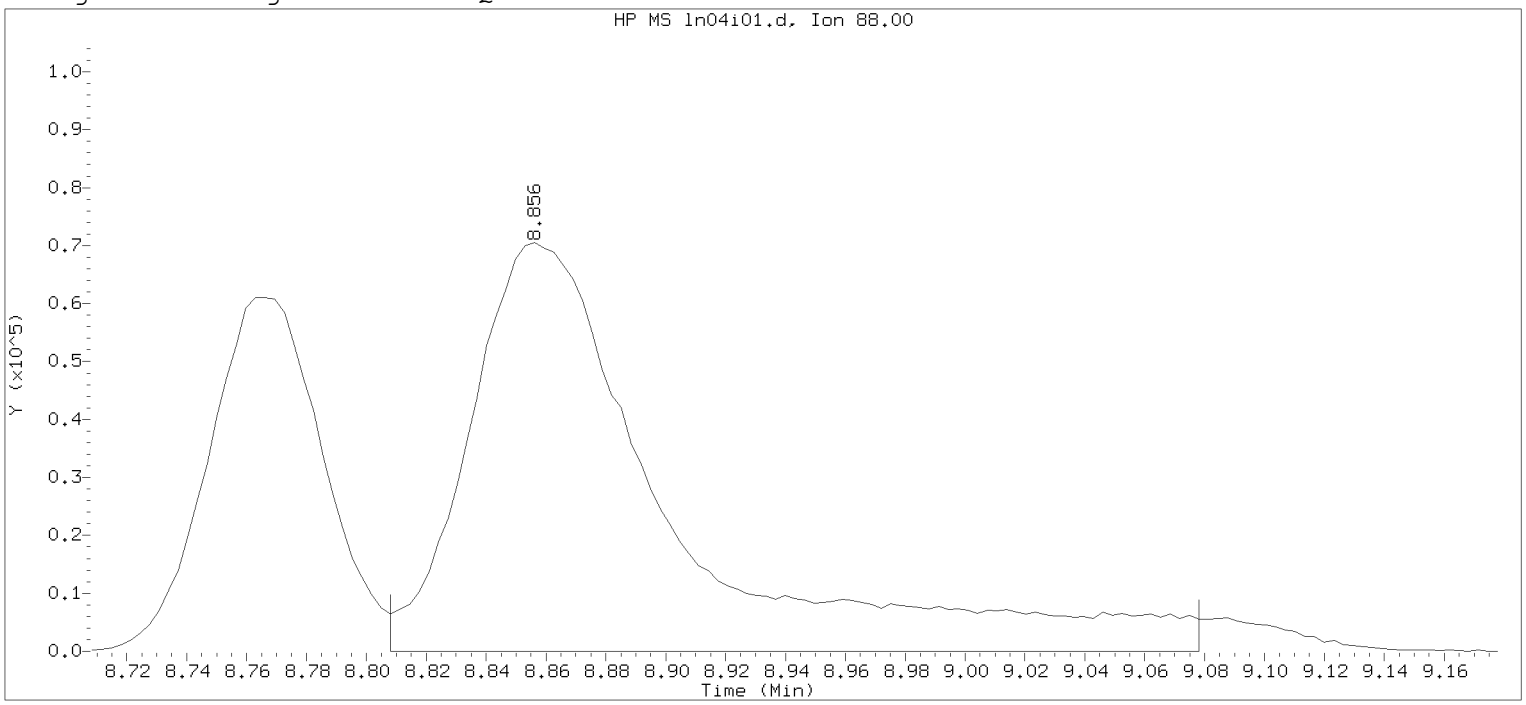
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

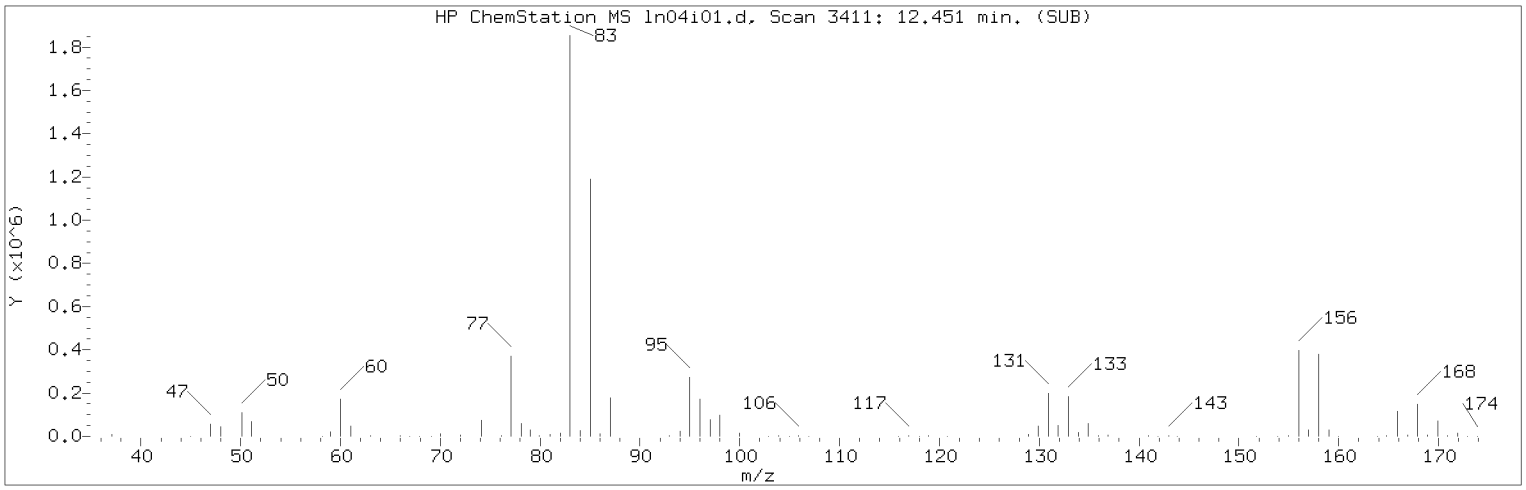
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

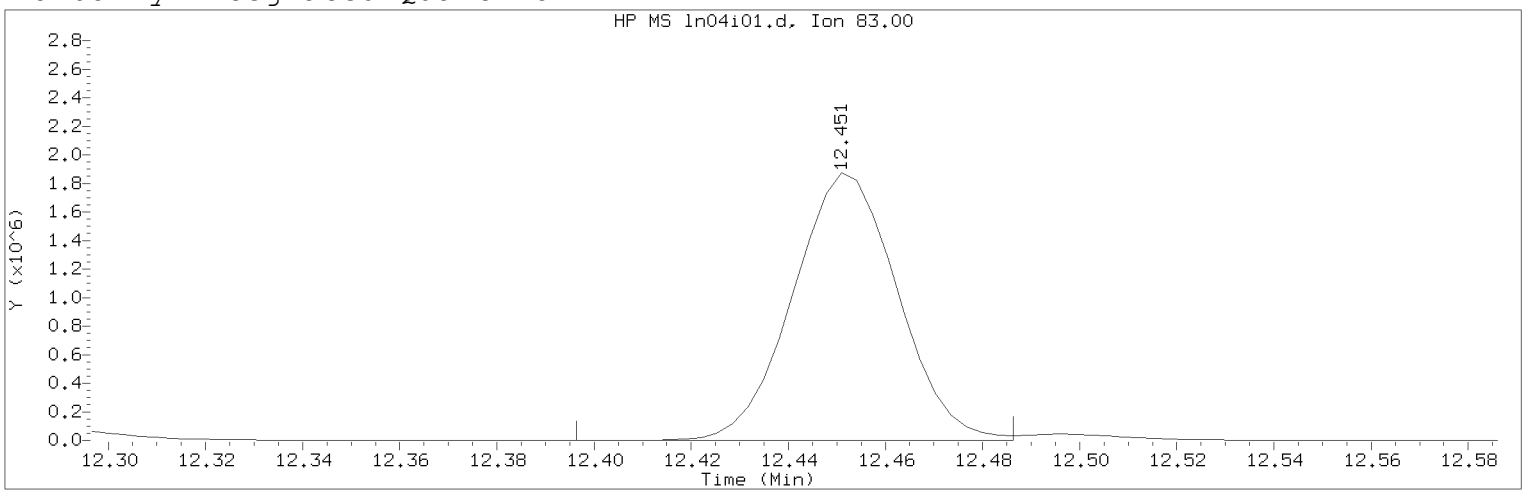
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2293		
Retention Time (minutes)	: 8.856		
Quant Ion	: 88.00		
Area	: 325164		
On-column Amount (ng)	: 3803.8575		
Integration start scan	: 2277	Integration stop scan:	2361
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

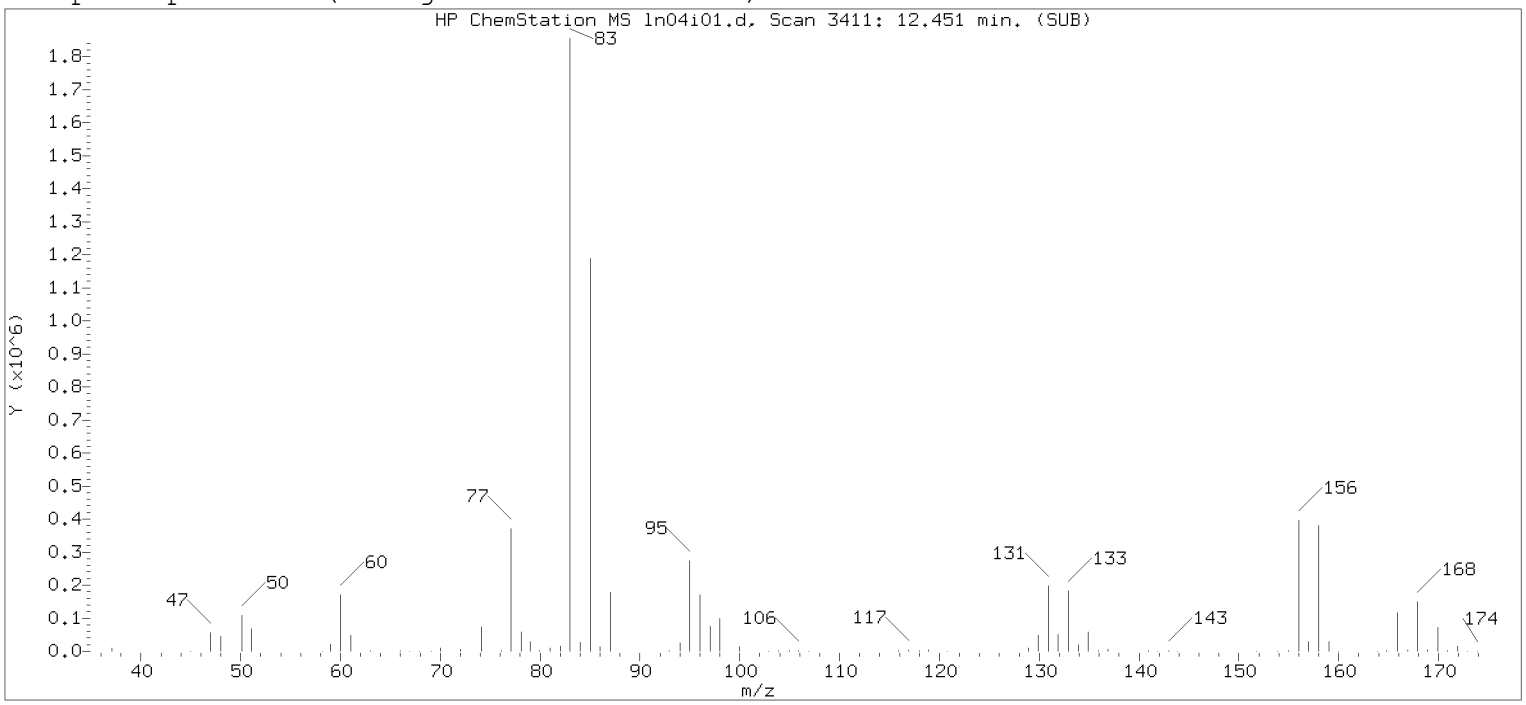
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 2800639M
On-Column Amount (ng) : 310.7054
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

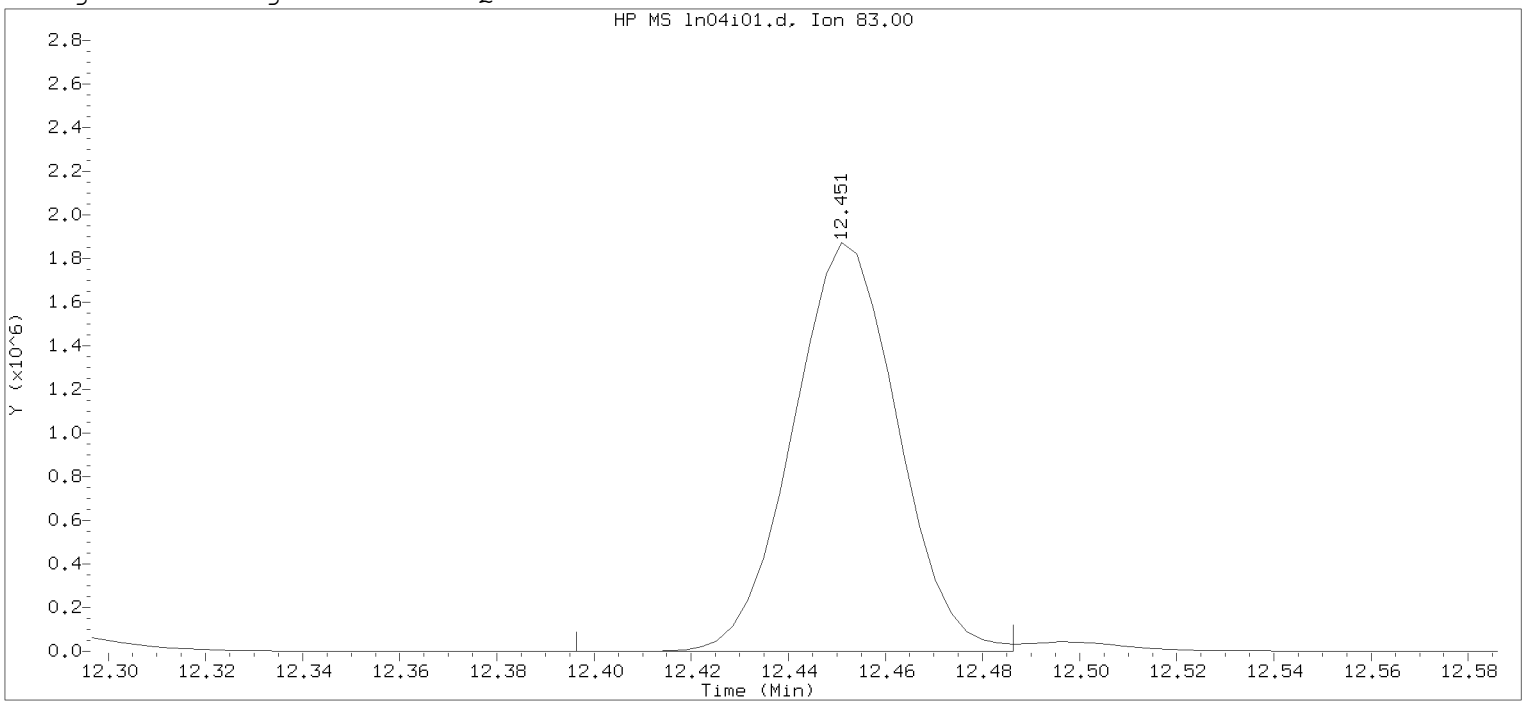
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

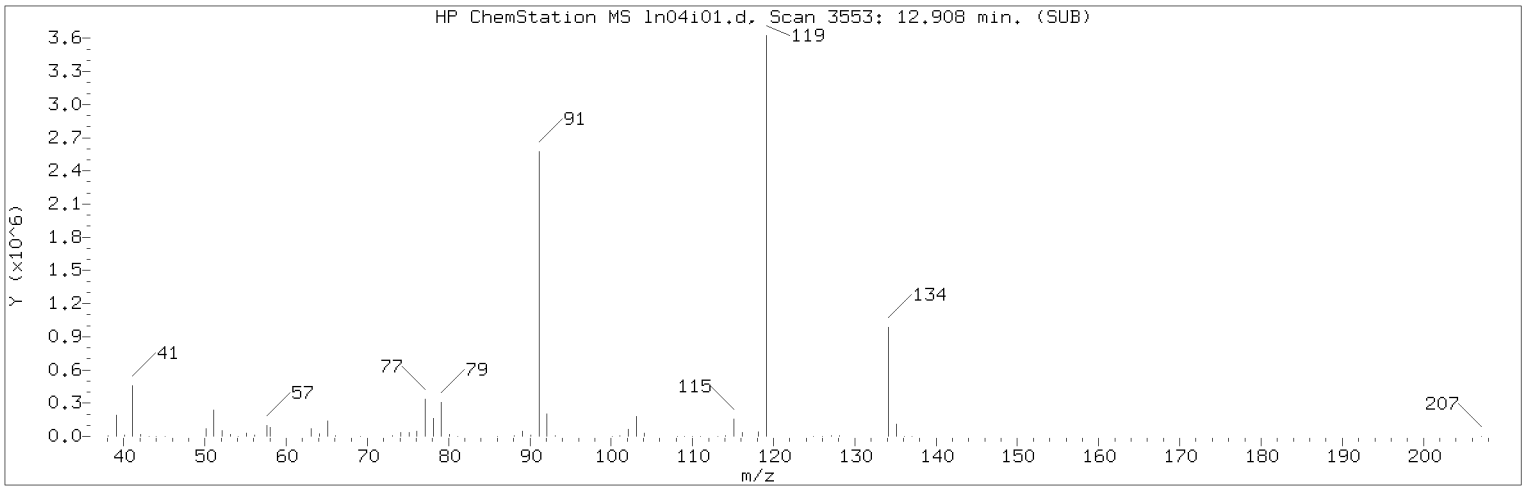
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

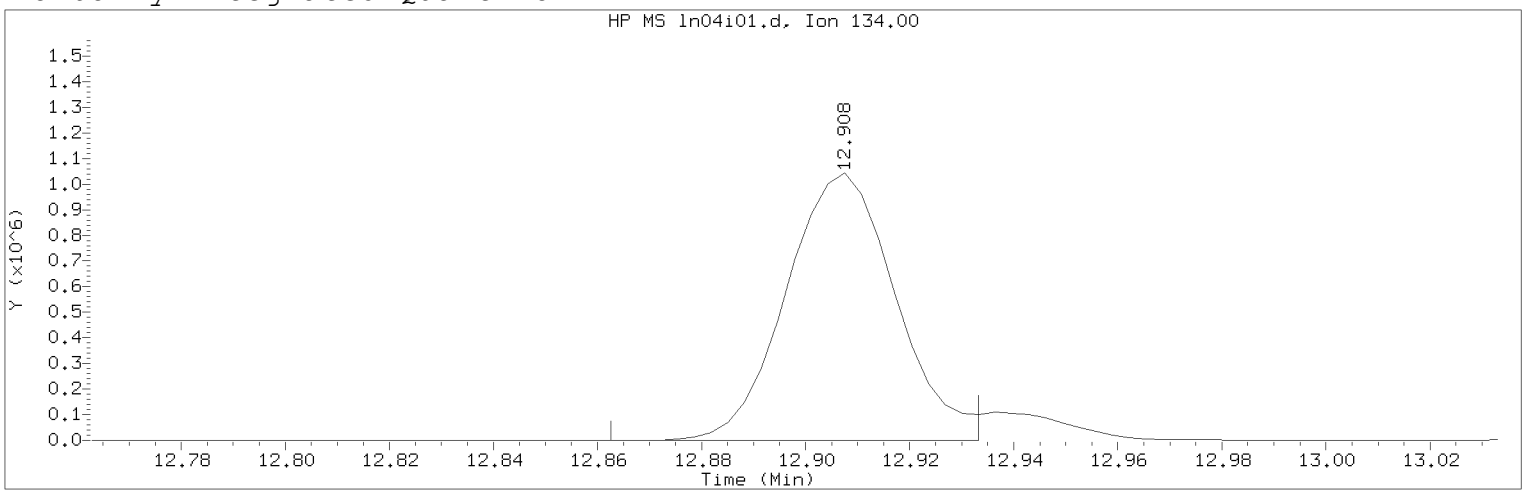
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 2797364
On-column Amount (ng) : 294.0638
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

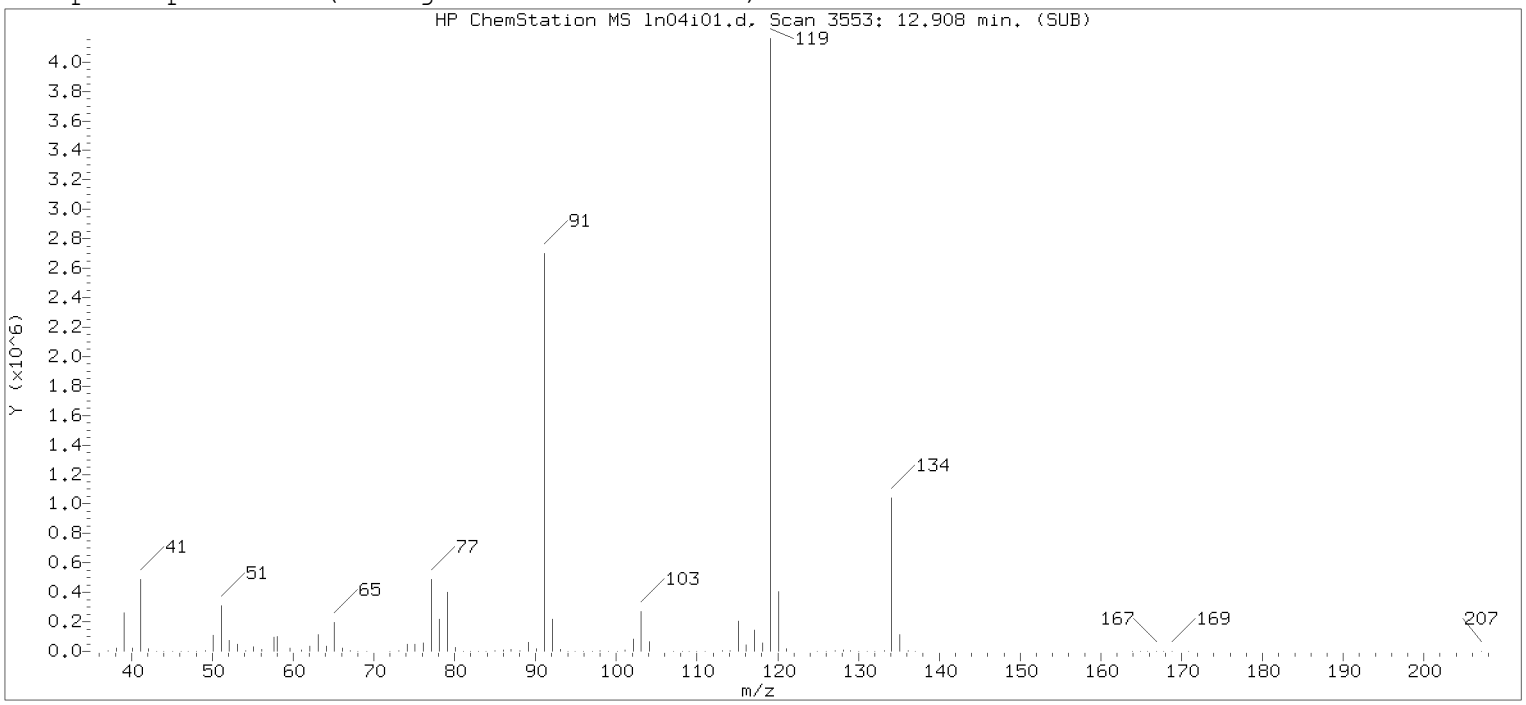
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area (flag) : 1524421M
On-Column Amount (ng) : 323.7167
Integration start scan : 3538 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

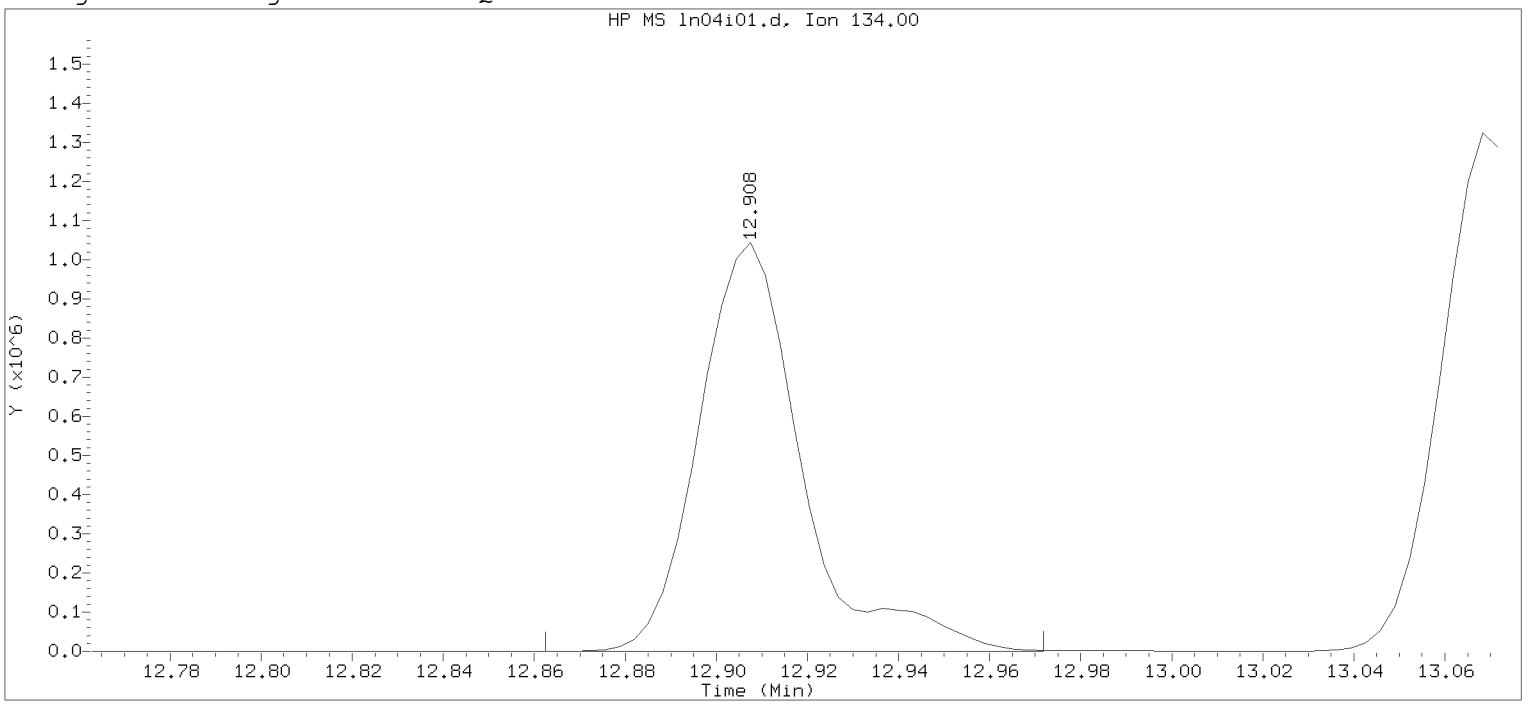
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



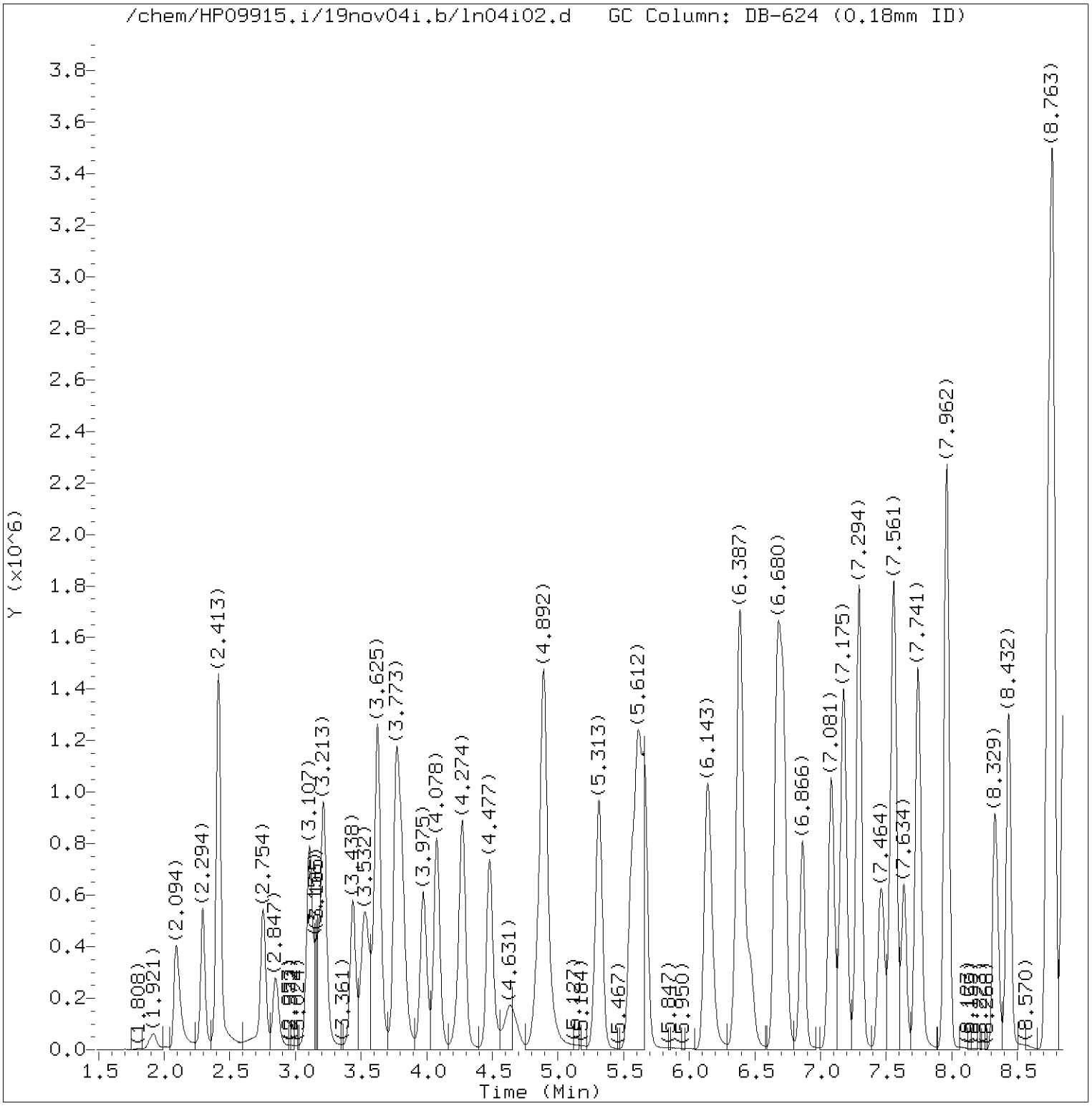
Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area : 1639624
On-column Amount (ng) : 313.1253
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

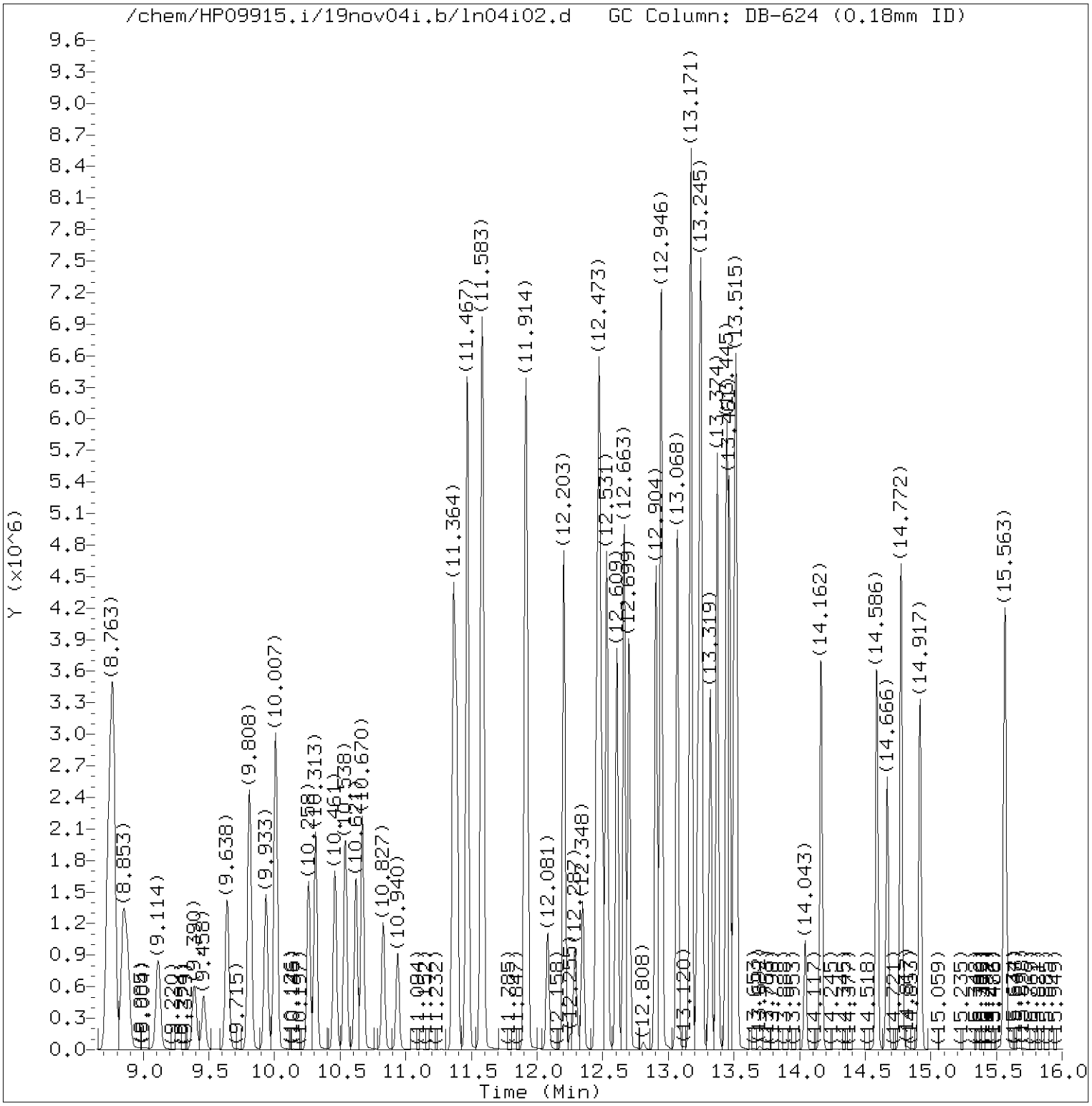
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.094	85	857961M	103.943
4) Chloromethane	(2)	2.294	50	784780	98.650
5) 1,3-Butadiene	(2)	2.413	39	618713M	93.669
6) Vinyl Chloride	(2)	2.416	62	781267	98.400
8) Bromomethane	(2)	2.754	94	539686	94.824
9) Chloroethane	(2)	2.847	64	418524	95.919
10) Dichlorofluoromethane	(2)	3.104	67	992796M	94.678
12) Trichlorofluoromethane	(2)	3.162	101	860893	100.714
11) n-Pentane	(2)	3.217	43	1002713	99.263
14) Ethyl ether	(2)	3.435	59	550266	99.622
15) Freon 123a	(2)	3.532	67	679642	98.841
16) Acrolein	(1)	3.625	56	2075331	1040.029
17) 1,1-Dichloroethene	(2)	3.763	96	510815	101.811
17) 1,1-Dichloroethene	(2)	3.766	63	250669	99.655
19) Freon 113	(2)	3.799	101	594686	103.888
18) Acetone	(1)	3.805	58	181313	202.676
22) Methyl Iodide	(2)	3.972	142	1051103	101.097
21) 2-Propanol	(1)	4.001	45	343390	533.946
23) Carbon Disulfide	(2)	4.078	76	1957296	103.520
27) Methyl Acetate	(2)	4.252	43	630892	97.630
25) Allyl Chloride	(2)	4.274	41	894091	99.337
28) Methylene Chloride	(2)	4.477	84	596882	99.952
29)*t-Butyl alcohol-d10	(1)	4.509	65	265971M	250.000
30) t-Butyl alcohol	(1)	4.631	59	619917	553.614
31) Acrylonitrile	(2)	4.837	53	359403	103.376
33) Methyl Tertiary Butyl Ether	(2)	4.889	73	1901626	99.813
32) trans-1,2-Dichloroethene	(2)	4.892	96	586662	101.076
34) n-Hexane	(2)	5.313	57	974442M	107.908
36) 1,1-Dichloroethane	(2)	5.557	63	1029230	101.649
38) di-Isopropyl ether	(2)	5.609	45	1986383	101.717
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	947614	104.312
40) Ethyl t-butyl ether	(2)	6.143	59	1910218	100.794
43) 1,2-Dichloroethene (Total)	(2)		96	1240957	201.508
44) 2-Butanone	(2)	6.364	43	920731	206.310
42) cis-1,2-Dichloroethene	(2)	6.384	96	654295	100.432
45) 2,2-Dichloropropane	(2)	6.400	77	813782	103.388
47) Propionitrile	(1)	6.464	54	725632	520.085
48) Methacrylonitrile	(2)	6.676	67	966183	257.629

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	349204	101.088
50) Tetrahydrofuran	(1)	6.721	71	261419	207.429
51) Chloroform	(2)	6.866	83	989698	102.195
52)$Dibromofluoromethane	(2)	7.078	113	292391	50.529
52)$Dibromofluoromethane	(2)	7.078	111	297764	50.467
53) 1,1,1-Trichloroethane	(2)	7.088	97	860519	104.109
54) Cyclohexane	(2)	7.175	56	1170449	105.893
54) Cyclohexane	(2)	7.181	84	1022362	106.481
54) Cyclohexane	(2)	7.175	69	362451	106.017
56) Carbon Tetrachloride	(2)	7.290	117	751477	107.196
55) 1,1-Dichloropropene	(2)	7.297	75	823627	102.878
58) Isobutyl Alcohol	(1)	7.461	41	528441	1402.358
57)$1,2-Dichloroethane-d4	(2)	7.535	102	74158	50.284
57)$1,2-Dichloroethane-d4	(2)	7.535	65	331294	50.408
57)$1,2-Dichloroethane-d4	(2)	7.535	104	47551	50.479
60) Benzene	(2)	7.561	78	2423634	100.668
61) 1,2-Dichloroethane	(2)	7.638	62	757974	97.883
61) 1,2-Dichloroethane	(2)	7.641	98	76152	99.373
65) t-Amyl methyl ether	(2)	7.741	73	1946110	102.306
67) n-Heptane	(2)	7.962	43	911962MA	108.104
66)*Fluorobenzene	(2)	7.962	96	1183605	50.000
69) n-Butanol	(1)	8.329	56	944383M	2911.812
71) Trichloroethene	(2)	8.432	95	618983	102.110
72) Methylcyclohexane	(2)	8.734	83	1164174	103.516
72) Methylcyclohexane	(2)	8.734	98	527428	103.640
73) 1,2-Dichloropropane	(2)	8.773	63	625914	102.385
76) Methyl Methacrylate	(2)	8.847	69	640445A	108.334
75) 1,4-Dioxane	(1)	8.856	88	117817M	1321.647
74) Dibromomethane	(2)	8.882	93	410059	103.668
78) Bromodichloromethane	(2)	9.114	83	770805	108.595
79) 2-Nitropropane	(2)	9.390	41	488862	227.388
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	284759	108.454
81) cis-1,3-Dichloropropene	(2)	9.638	75	1026055	108.840
82) 4-Methyl-2-pentanone	(2)	9.808	43	1972651	209.410
83)$Toluene-d8	(3)	9.933	98	1216793	49.703
83)$Toluene-d8	(3)	9.933	100	789846	49.806
88) Toluene	(3)	10.007	92	1555339	101.336
90) 1,3-Dichloropropene (total)	(3)		100	1994775	220.026

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	968720	111.186
91) Ethyl Methacrylate	(3)	10.313	69	1159403	109.496
92) 1,1,2-Trichloroethane	(3)	10.461	97	606132	104.163
93) Tetrachloroethene	(3)	10.541	166	663260	102.036
94) 1,3-Dichloropropane	(3)	10.621	76	1023947	103.060
96) 2-Hexanone	(3)	10.670	43	1457165	206.170
97) Dibromochloromethane	(3)	10.827	129	678552	113.835
99) 1,2-Dibromoethane	(3)	10.940	107	665574	105.331
100)*Chlorobenzene-d5	(3)	11.361	117	935628	50.000
101) 1-Chlorohexane	(3)	11.364	91	826713	100.265
102) Chlorobenzene	(3)	11.387	112	1760002	101.404
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	622547	108.864
104) Ethylbenzene	(3)	11.470	91	3015086	102.779
106) m+p-Xylene	(3)	11.583	106	2388845	206.999
108) Xylene (Total)	(3)		106	3566525	310.313
107) o-Xylene	(3)	11.908	106	1177680	103.314
109) Styrene	(3)	11.924	104	1996461	105.988
110) Bromoform	(3)	12.081	173	502388	112.791
111) Isopropylbenzene	(3)	12.203	105	2980812	104.258
112) Cyclohexanone	(1)	12.287	55	431750	1236.644
114)$4-Bromofluorobenzene	(3)	12.348	95	458263	49.435
114)$4-Bromofluorobenzene	(3)	12.348	174	380301	49.485
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	995972M	105.317
115) Bromobenzene	(4)	12.464	156	778170	103.423
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	790040	270.837
117) 1,2,3-Trichloropropane	(4)	12.496	110	303037	104.425
119) n-Propylbenzene	(4)	12.531	91	3409679	103.724
120) 2-Chlorotoluene	(4)	12.609	126	718635	102.905
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	2528195	105.828
121) 4-Chlorotoluene	(4)	12.699	126	737830	101.502
124) tert-Butylbenzene	(4)	12.904	134	526781M	106.622
125) Pentachloroethane	(4)	12.940	167	474988	111.651
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	2664001	105.806
127) sec-Butylbenzene	(4)	13.068	105	3153429	106.963
129) 1,3-Dichlorobenzene	(4)	13.168	146	1407080	101.768
130) p-Isopropyltoluene	(4)	13.171	119	2746850	107.698
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	500629	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	1451933	101.297

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	2711349	101.660
135) Benzyl Chloride	(4)	13.319	91	2226905	110.280
136) 1,3-Diethylbenzene	(4)	13.374	119	1705244	102.734
141) Diethylbenzene (total)	(4)		100	4934627	307.371
137) 1,4-Diethylbenzene	(4)	13.445	119	1791059	101.846
139) n-Butylbenzene	(4)	13.464	92	1355994	103.980
138) 1,2-Dichlorobenzene	(4)	13.502	146	1381717	101.273
140) 1,2-Diethylbenzene	(4)	13.518	119	1438324	102.791
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	224965	108.669
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	1074198	102.479
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	1034842	101.533
147) Hexachlorobutadiene	(4)	14.666	225	430531	89.465
148) Naphthalene	(4)	14.772	128	3428000	104.621
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	1010801	101.922
150) 2-Methylnaphthalene	(4)	15.563	142	2117626	104.952

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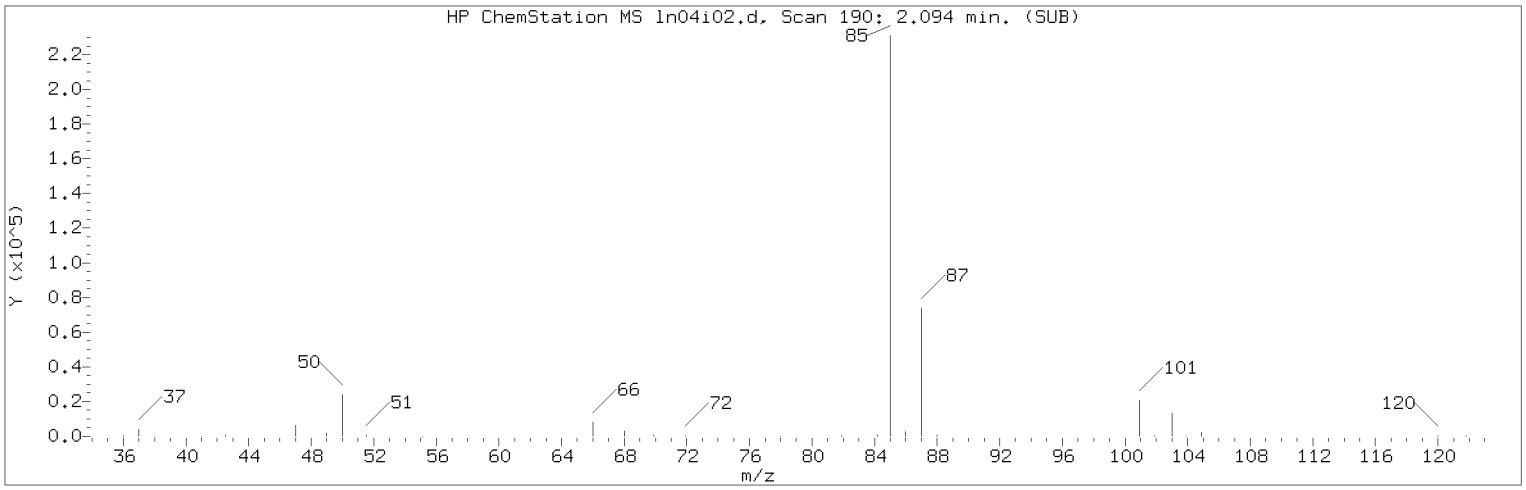
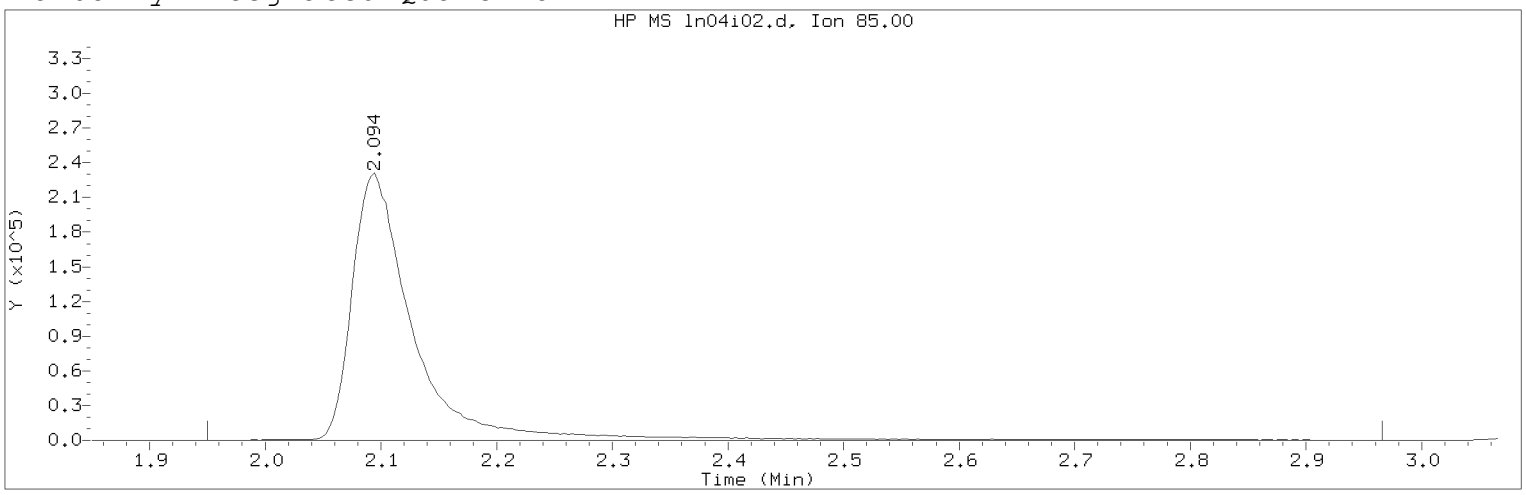
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

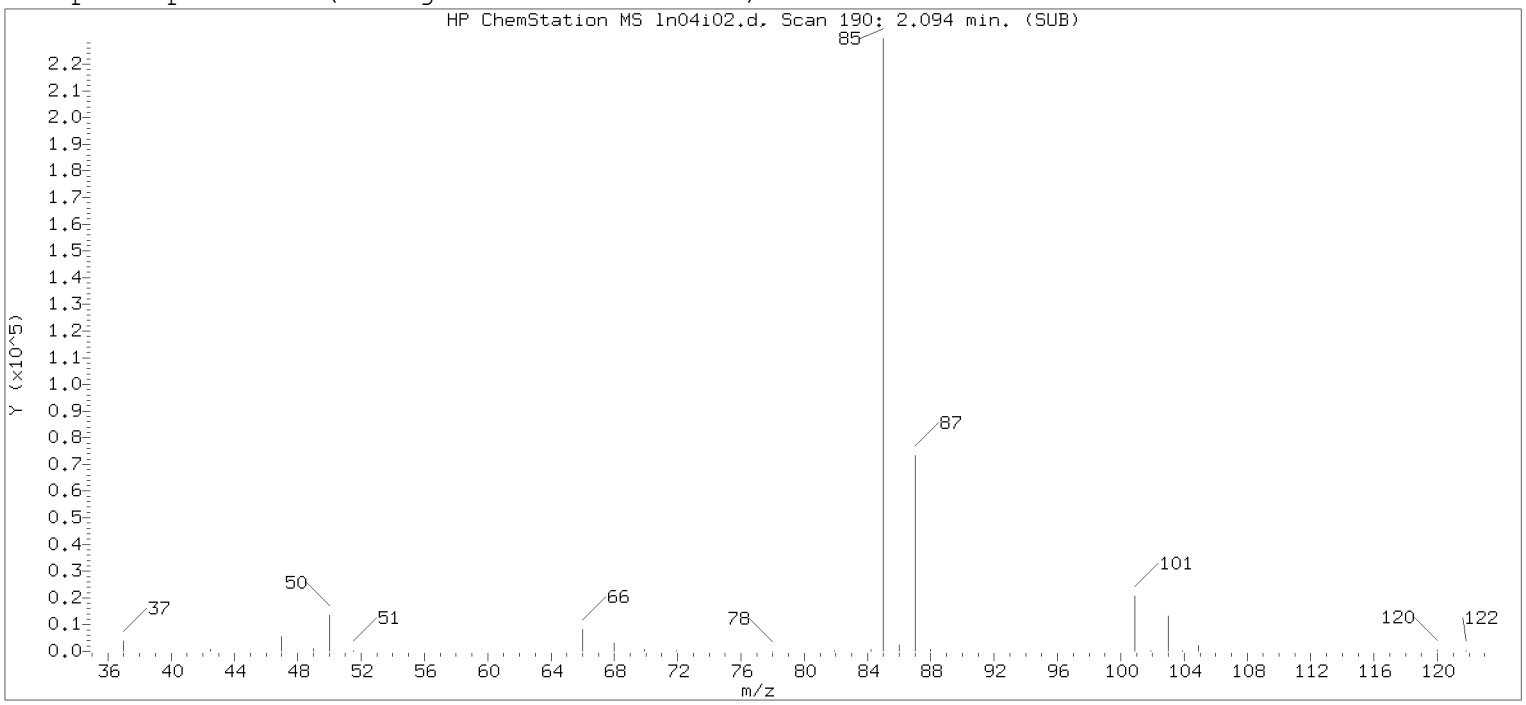
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area (flag) : 857961M
On-Column Amount (ng) : 103.9433
Integration start scan : 144 Integration stop scan: 460
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

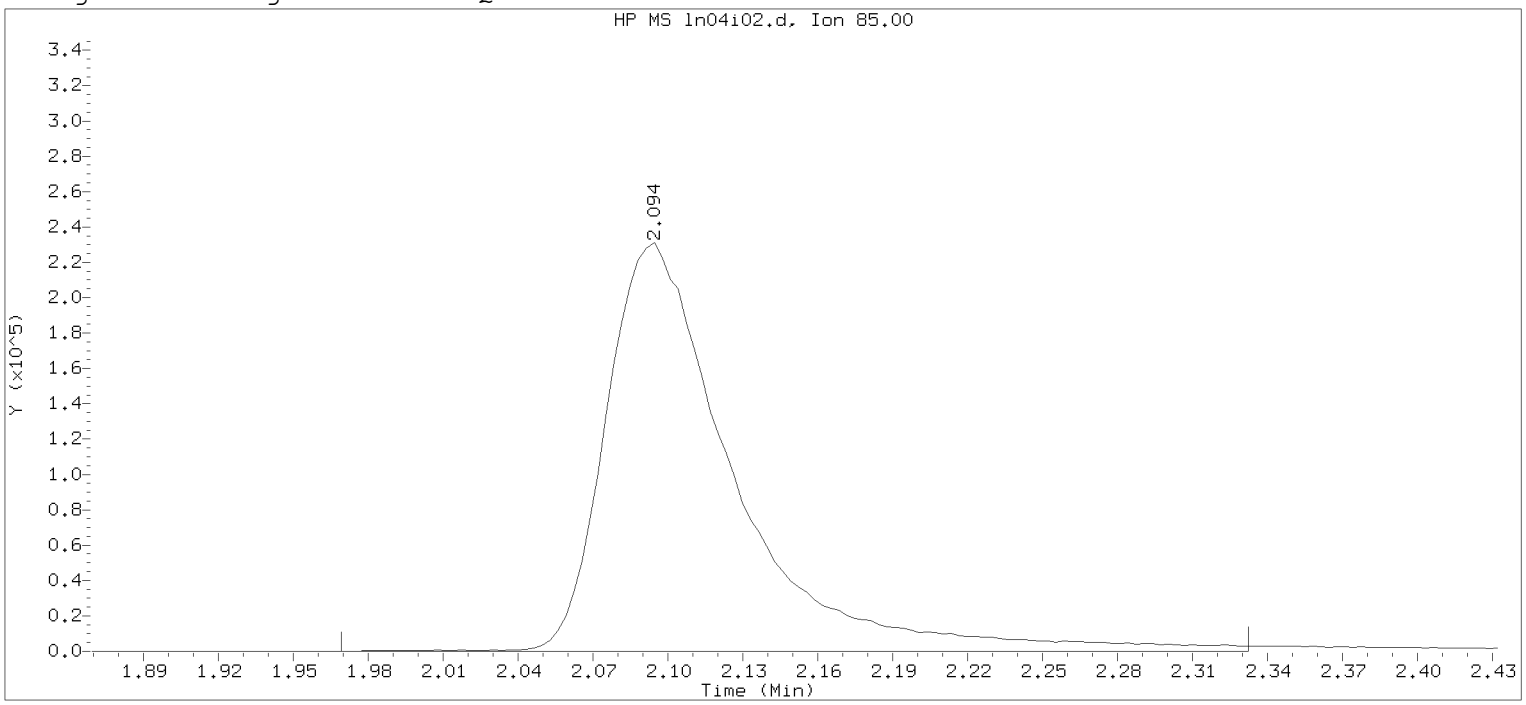
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

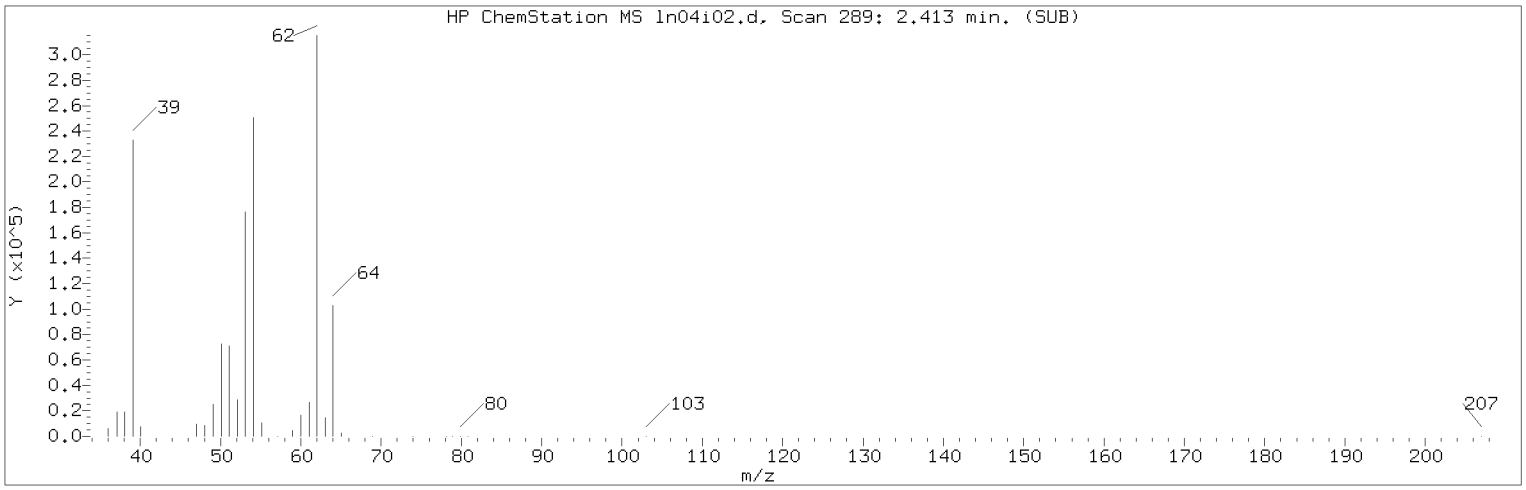
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

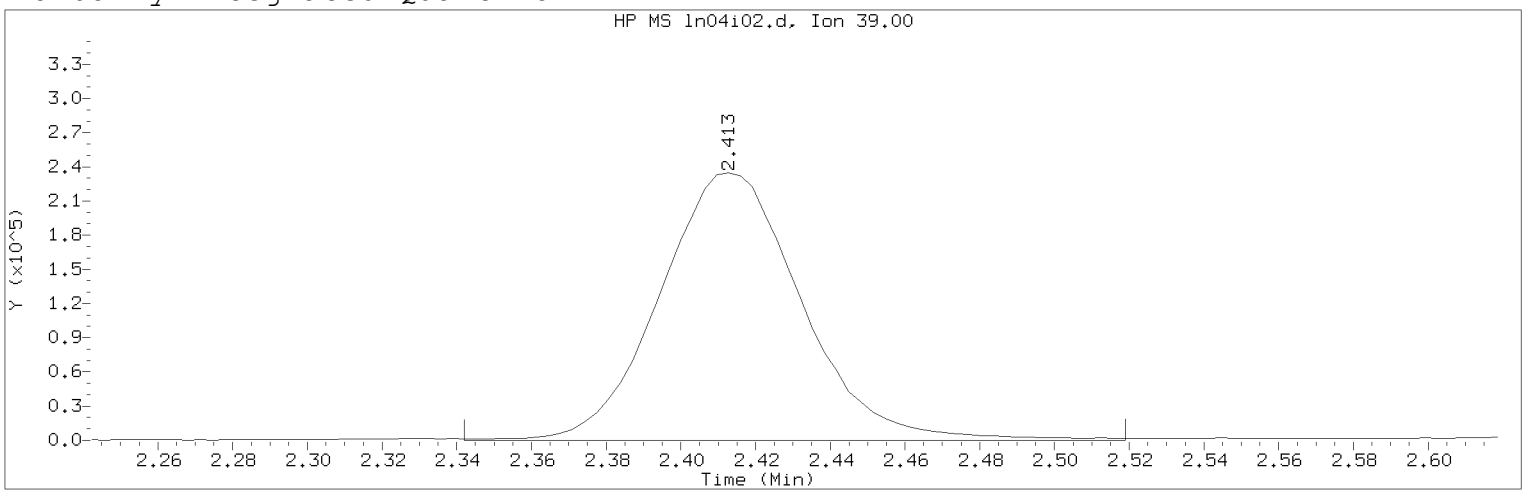
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area : 824639
On-column Amount (ng) : 94.4157
Integration start scan : 150 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

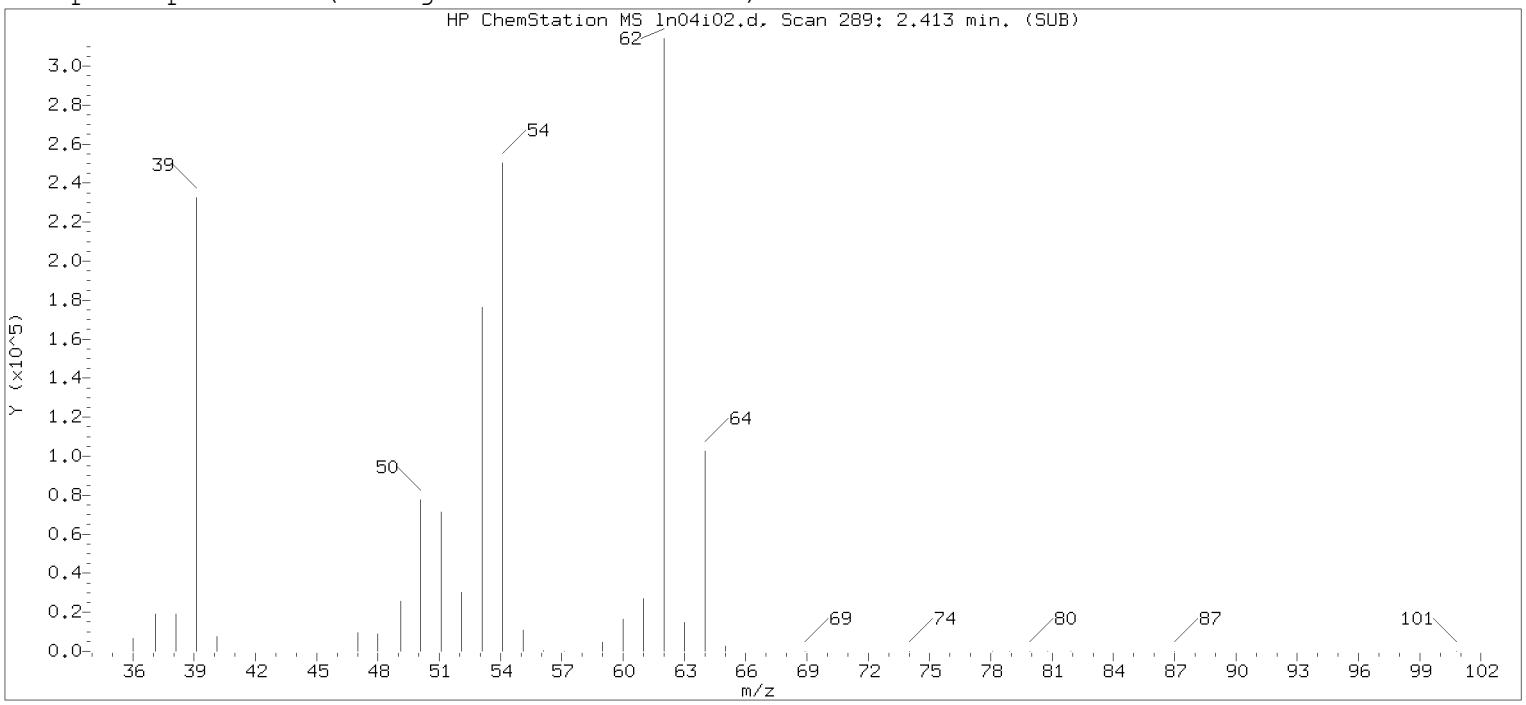
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area (flag) : 618713M
On-Column Amount (ng) : 93.6685
Integration start scan : 266 Integration stop scan: 321
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

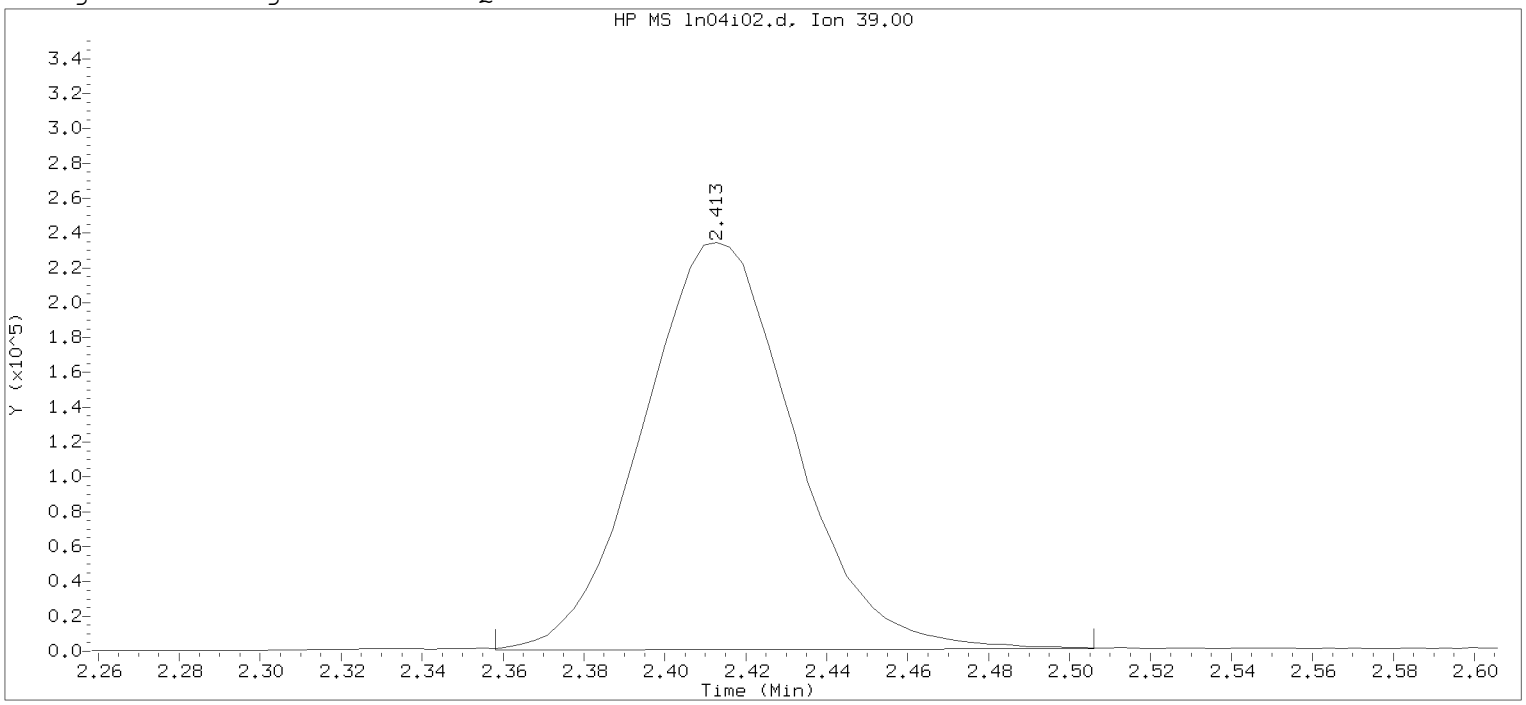
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area : 605602
On-column Amount (ng) : 97.5651
Integration start scan : 271 Integration stop scan: 317
Y at integration start : 806 Y at integration end: 1441

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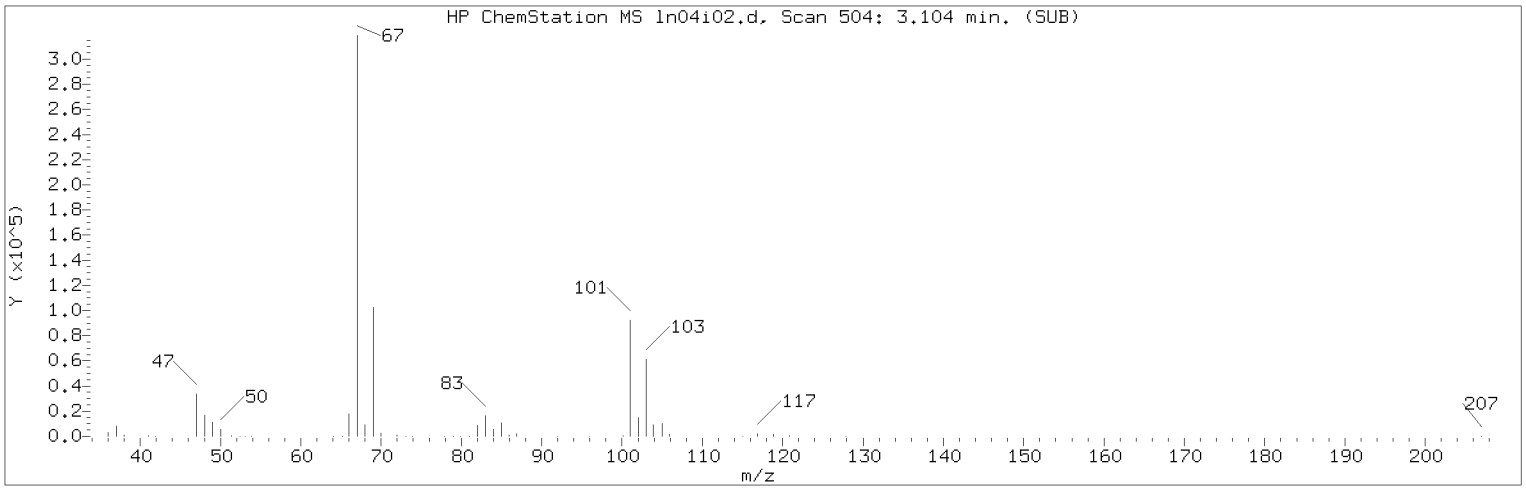
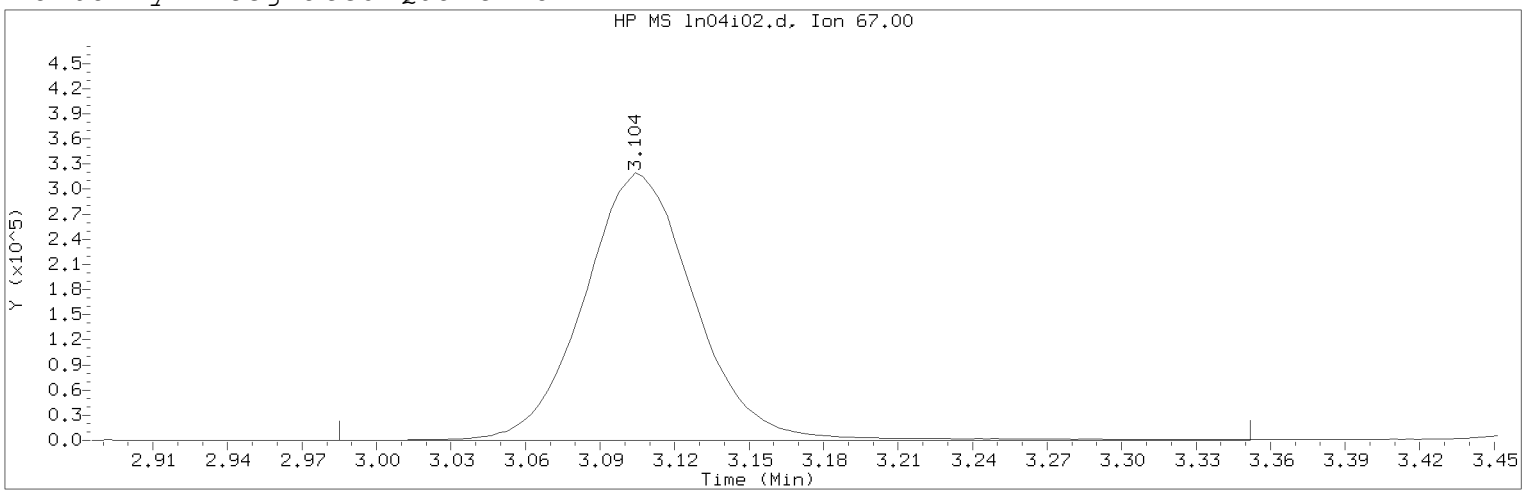
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

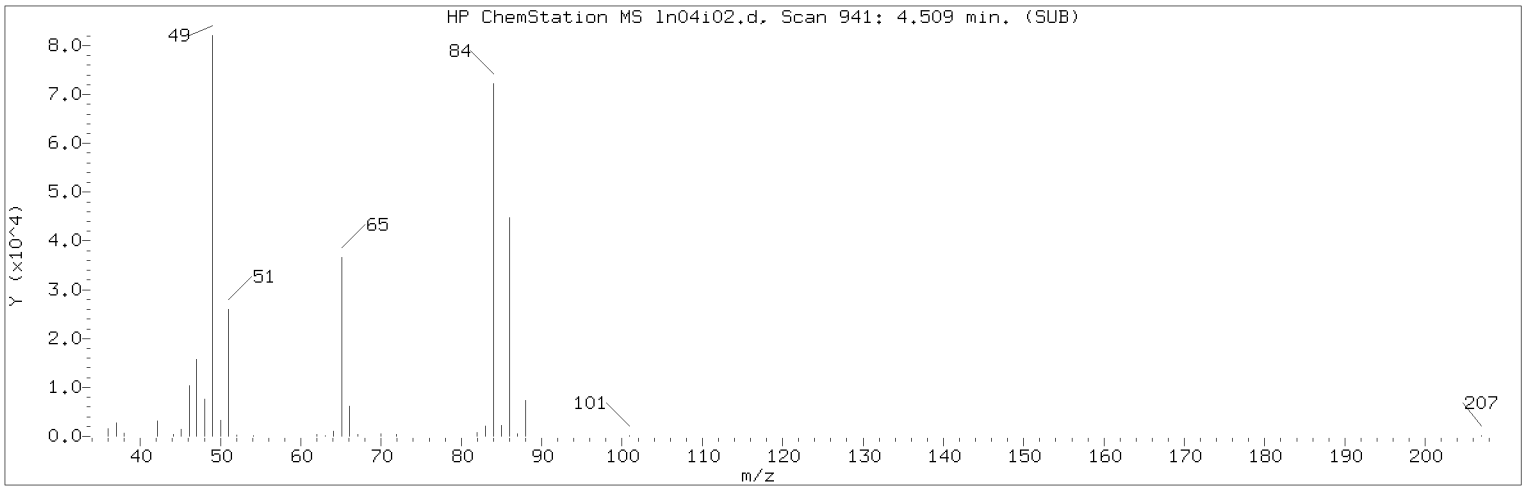
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 504
Retention Time (minutes): 3.104
Quant Ion : 67.00
Area (flag) : 992796M
On-Column Amount (ng) : 94.6777
Integration start scan : 466 Integration stop scan: 580
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

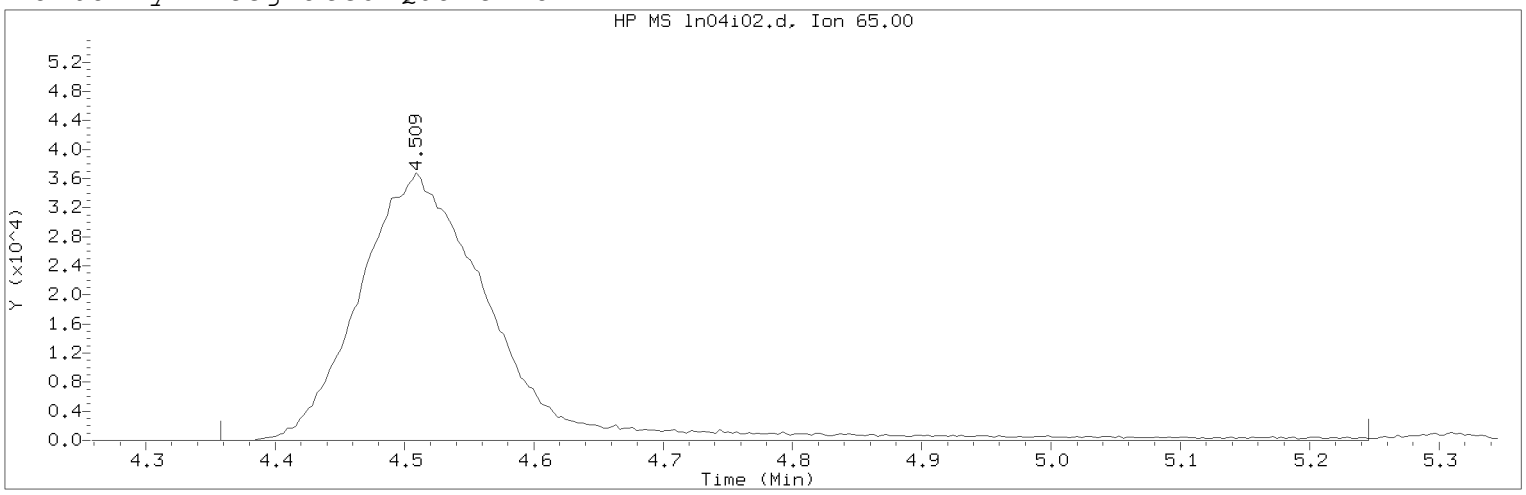
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

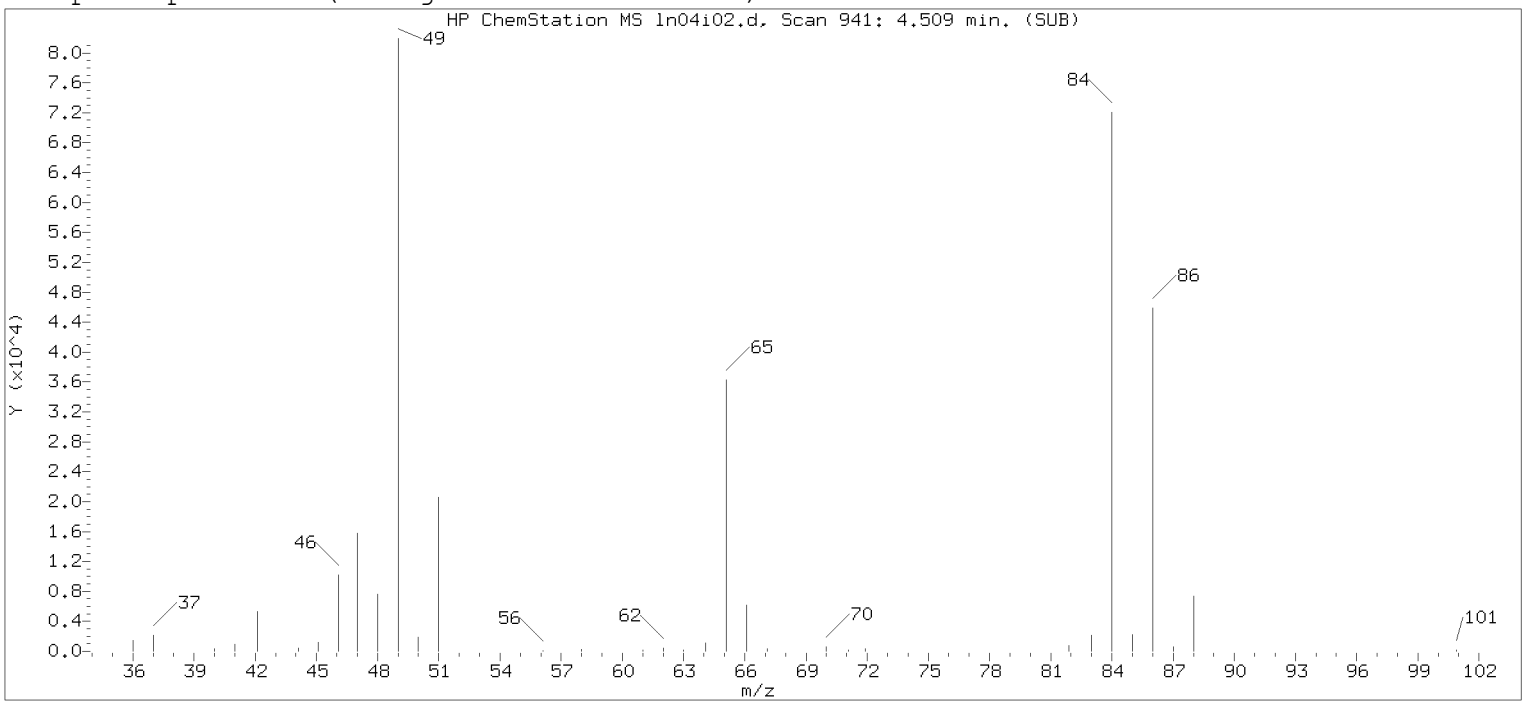
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 265971M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1169
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

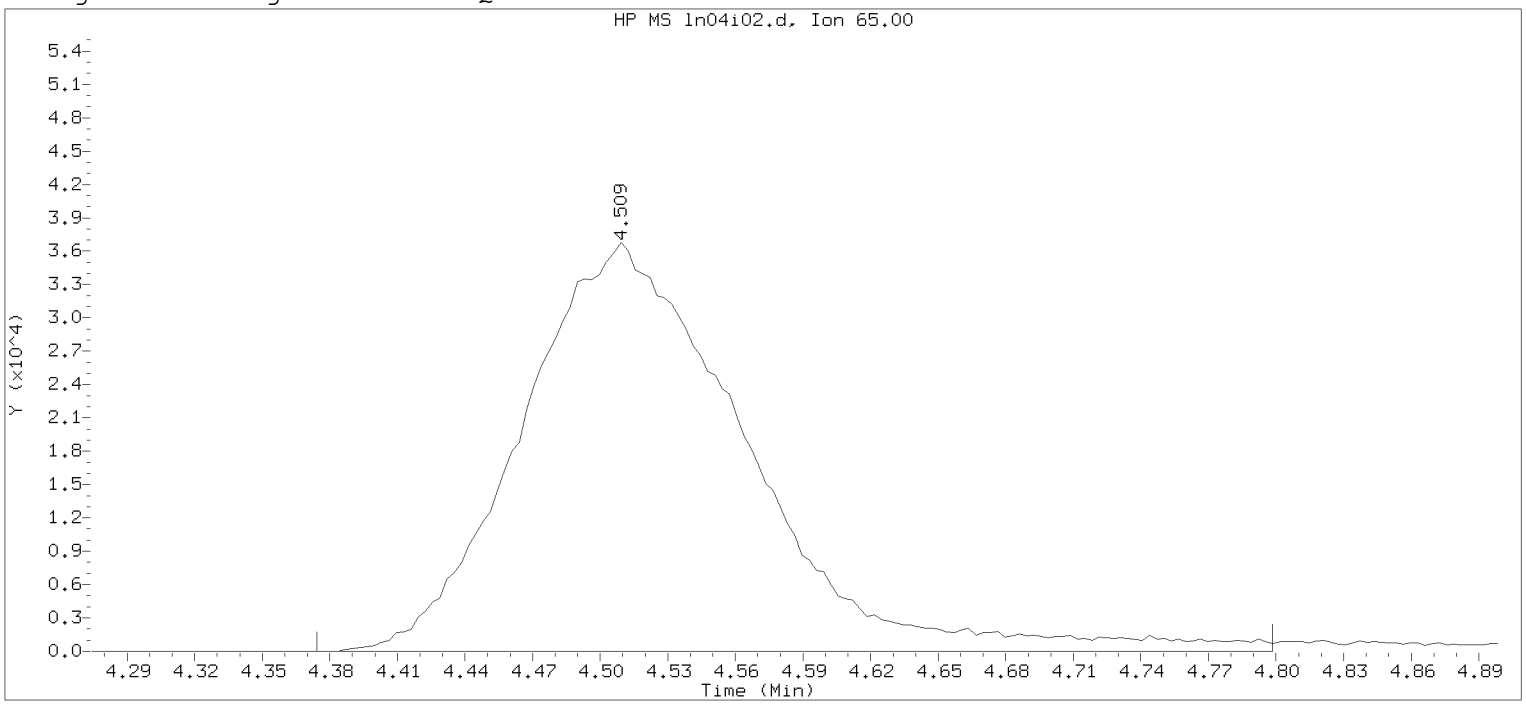
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

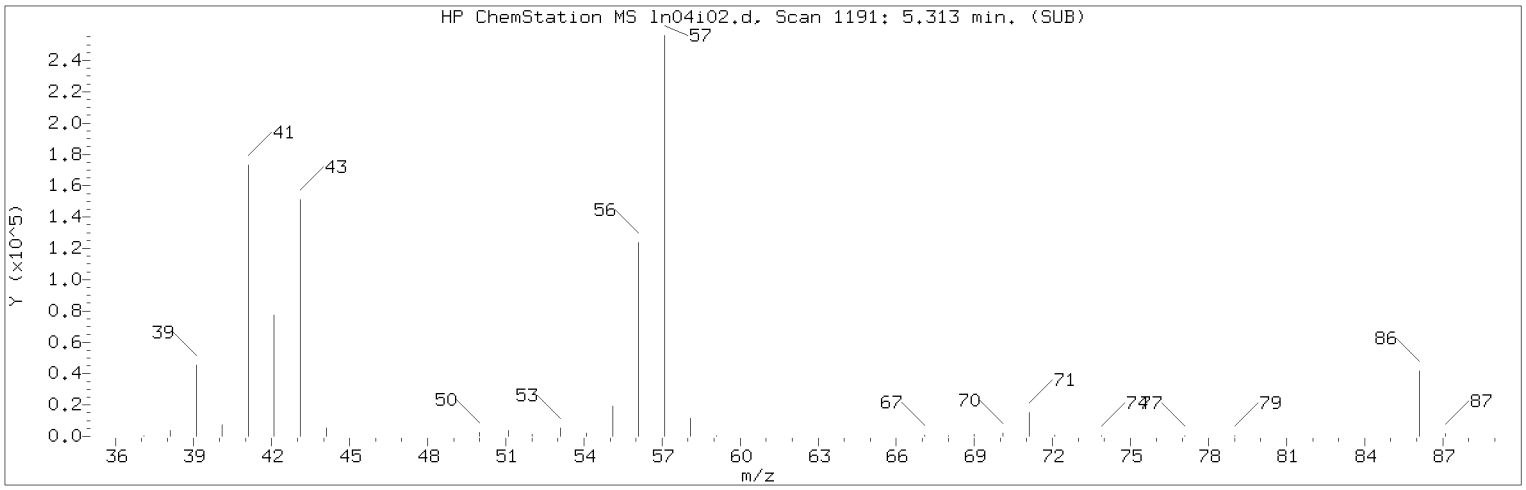
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

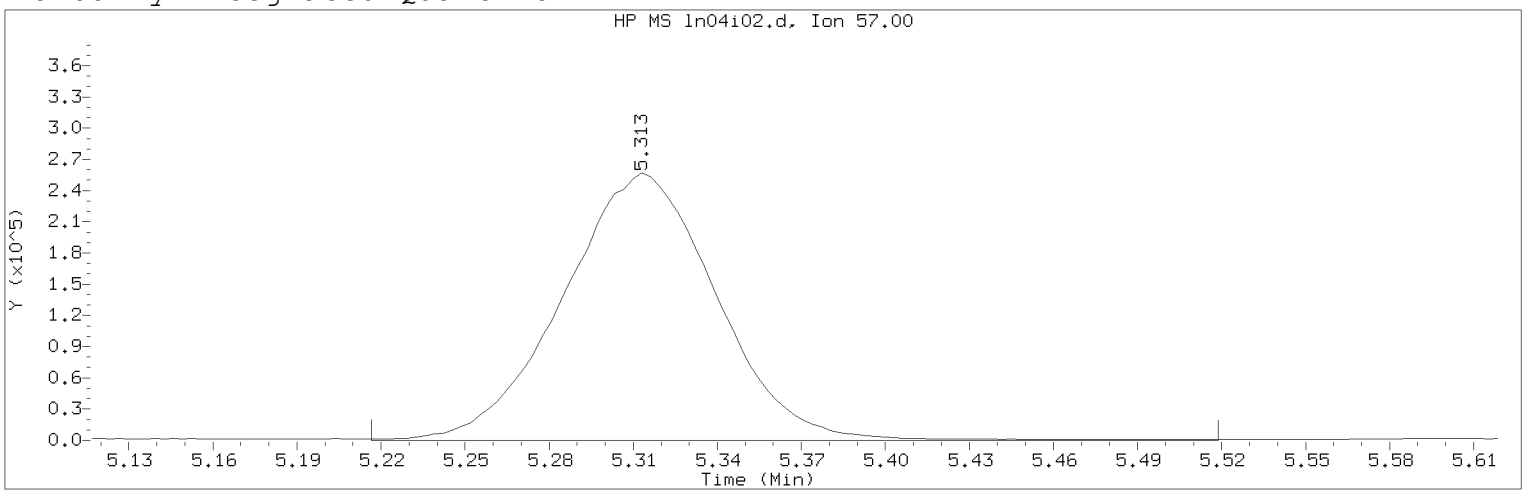
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 252632
On-column Amount (ng) : 250.0000
Integration start scan : 898 Integration stop scan: 1030
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

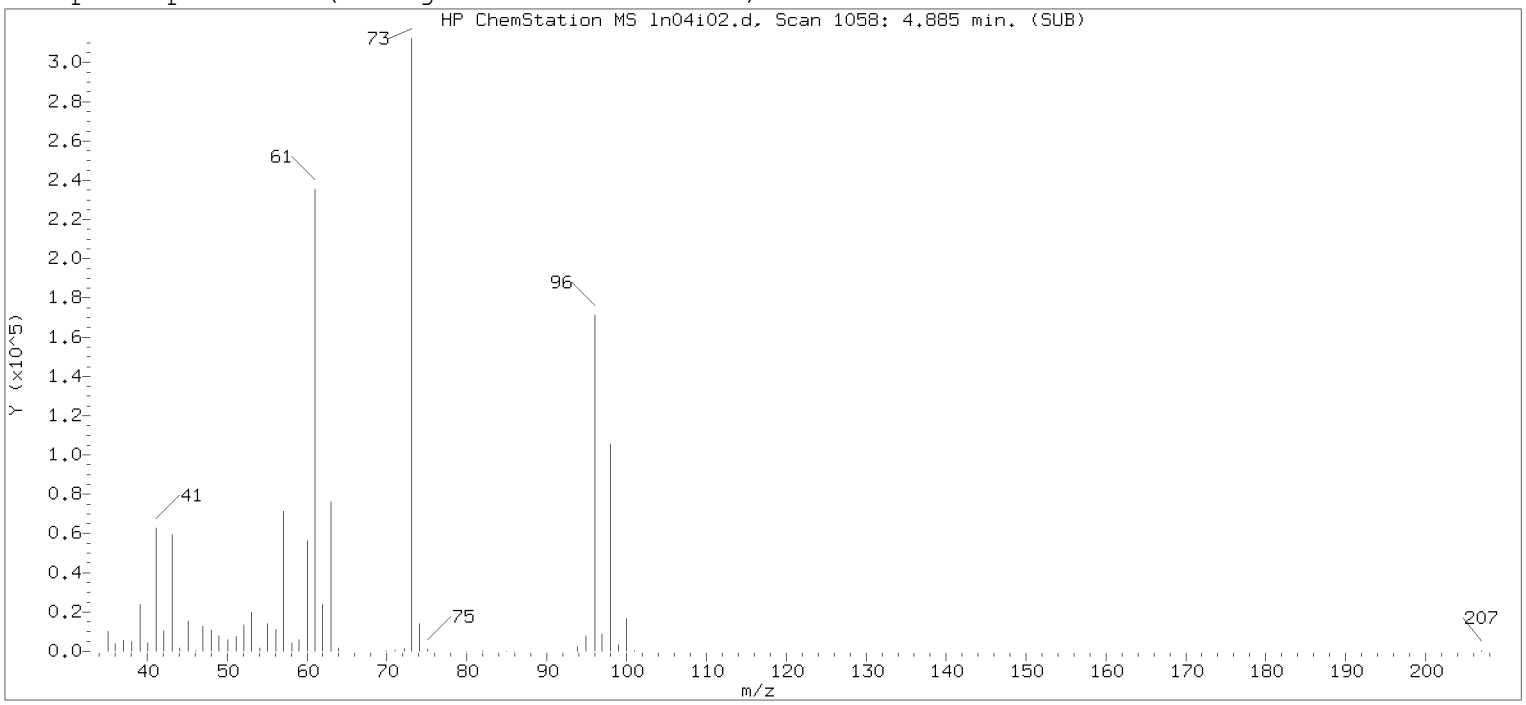
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1191
Retention Time (minutes): 5.313
Quant Ion : 57.00
Area (flag) : 974442M
On-Column Amount (ng) : 107.9083
Integration start scan : 1160 Integration stop scan: 1254
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

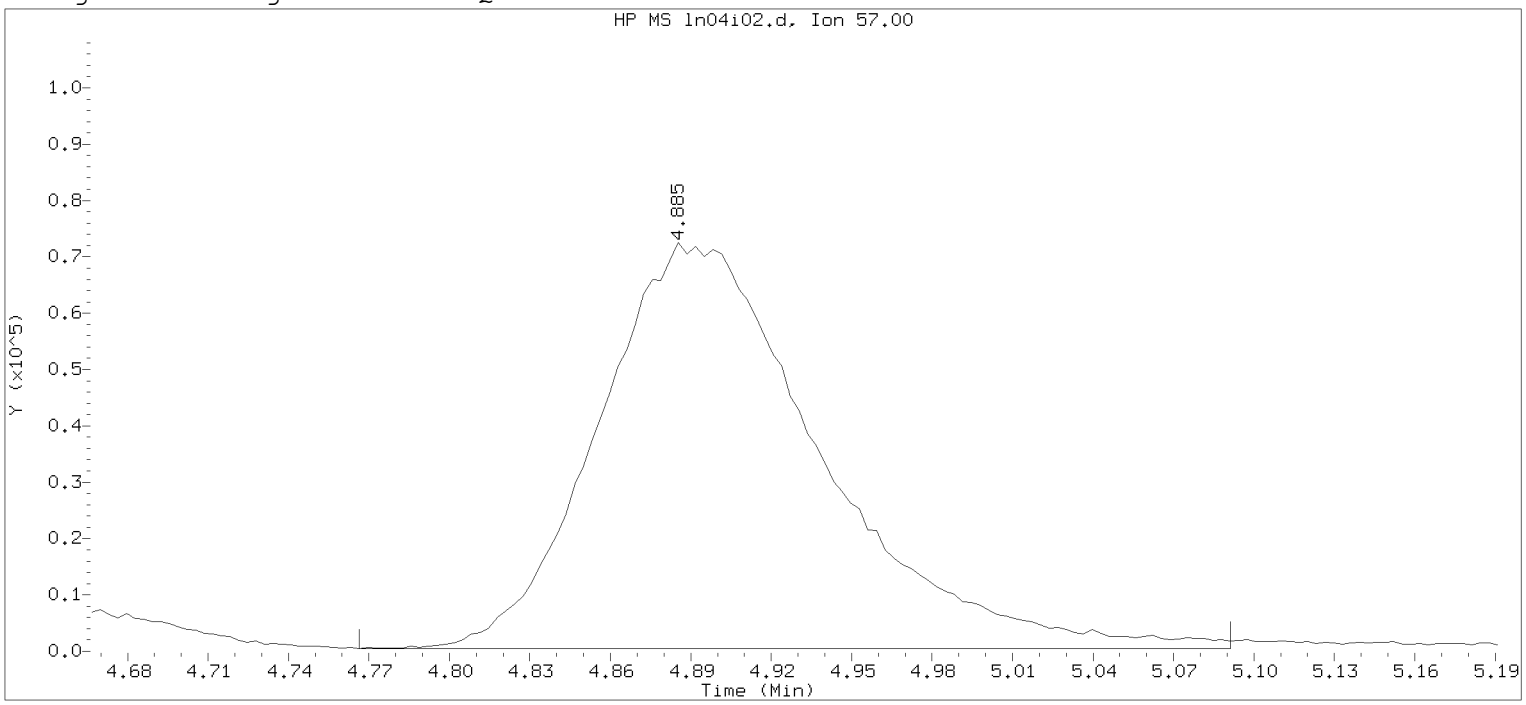
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

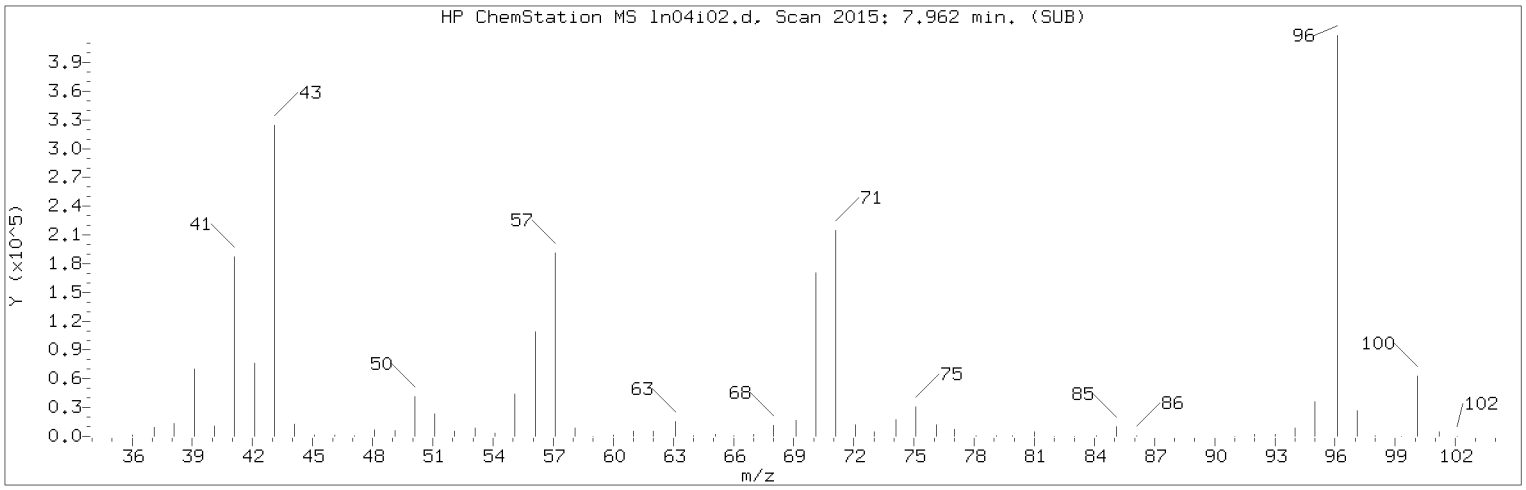
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

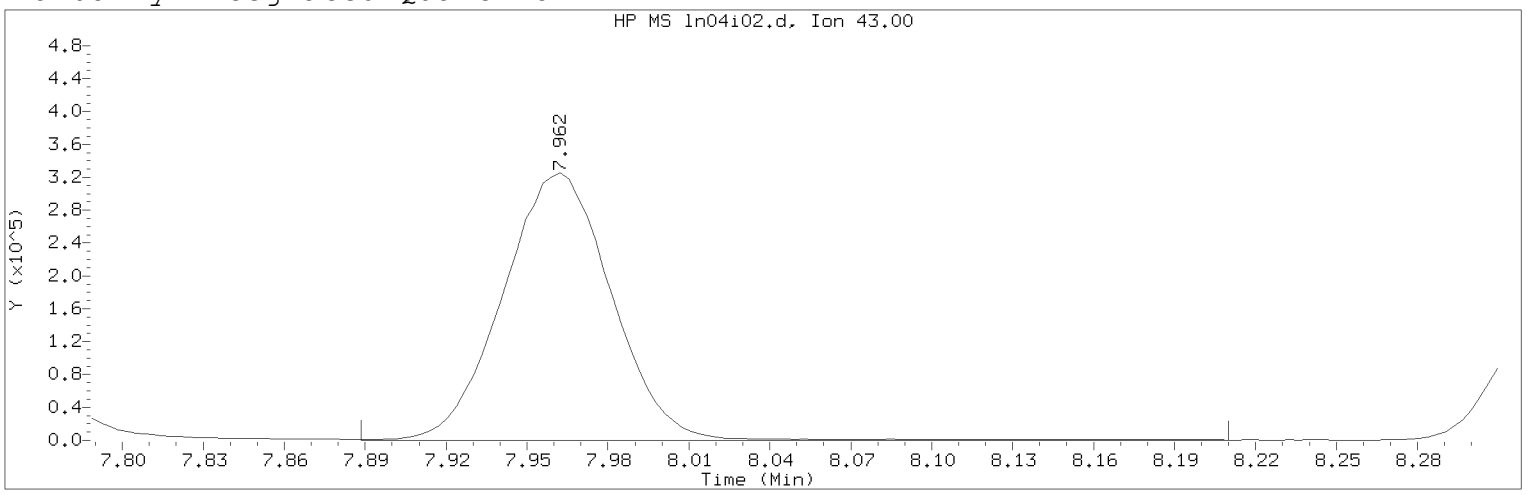
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1058
Retention Time (minutes): 4.885
Quant Ion : 57.00
Area : 414312
On-column Amount (ng) : 98.9070
Integration start scan : 1020 Integration stop scan: 1121
Y at integration start : 485 Y at integration end: 485

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

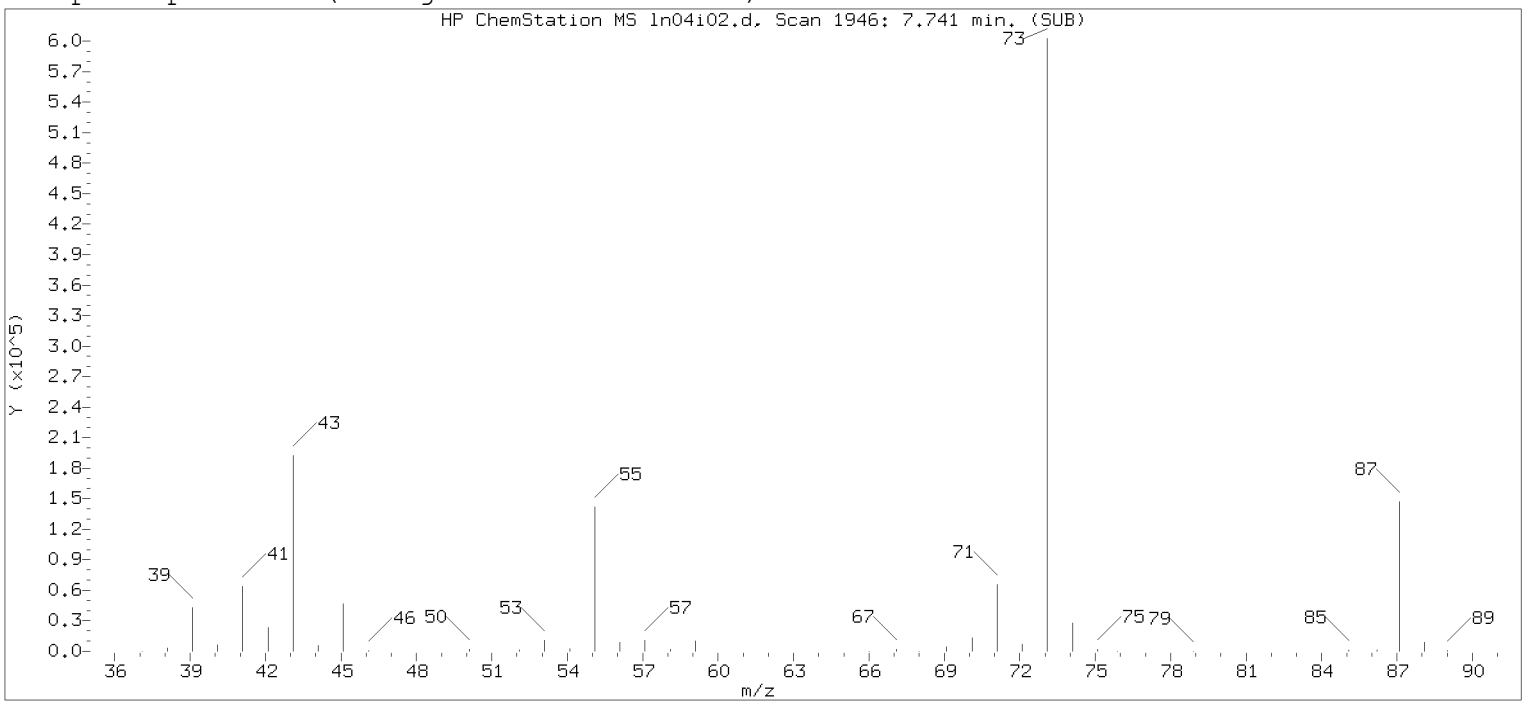
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2015
Retention Time (minutes): 7.962
Quant Ion : 43.00
Area (flag) : 911962MA
On-Column Amount (ng) : 108.1037
Integration start scan : 1991 Integration stop scan: 2091
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

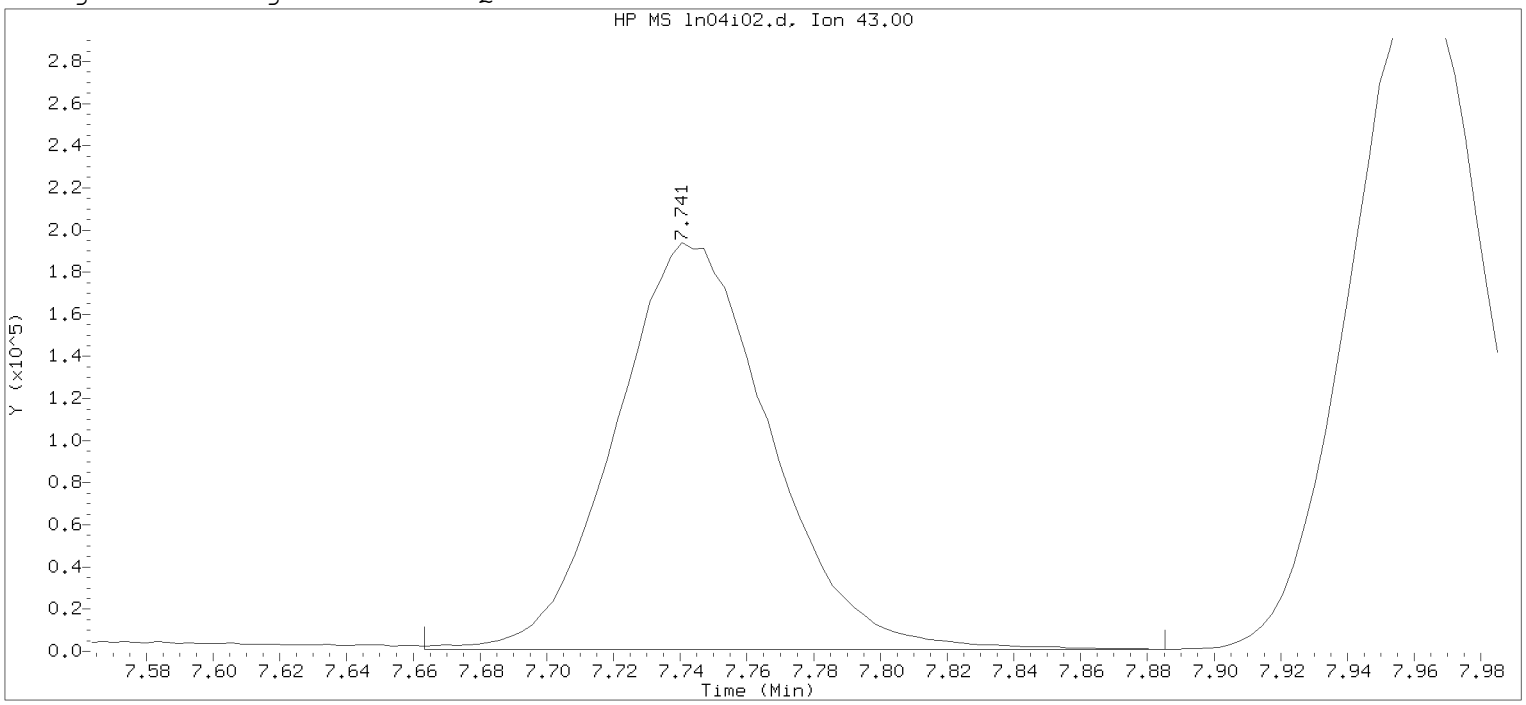
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

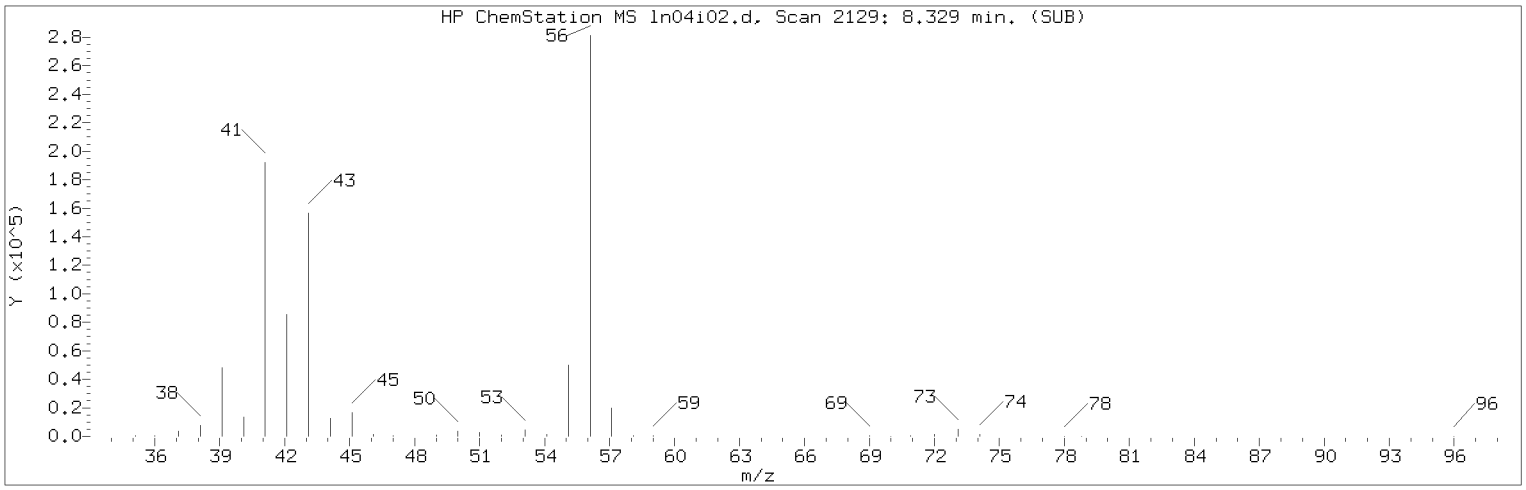
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

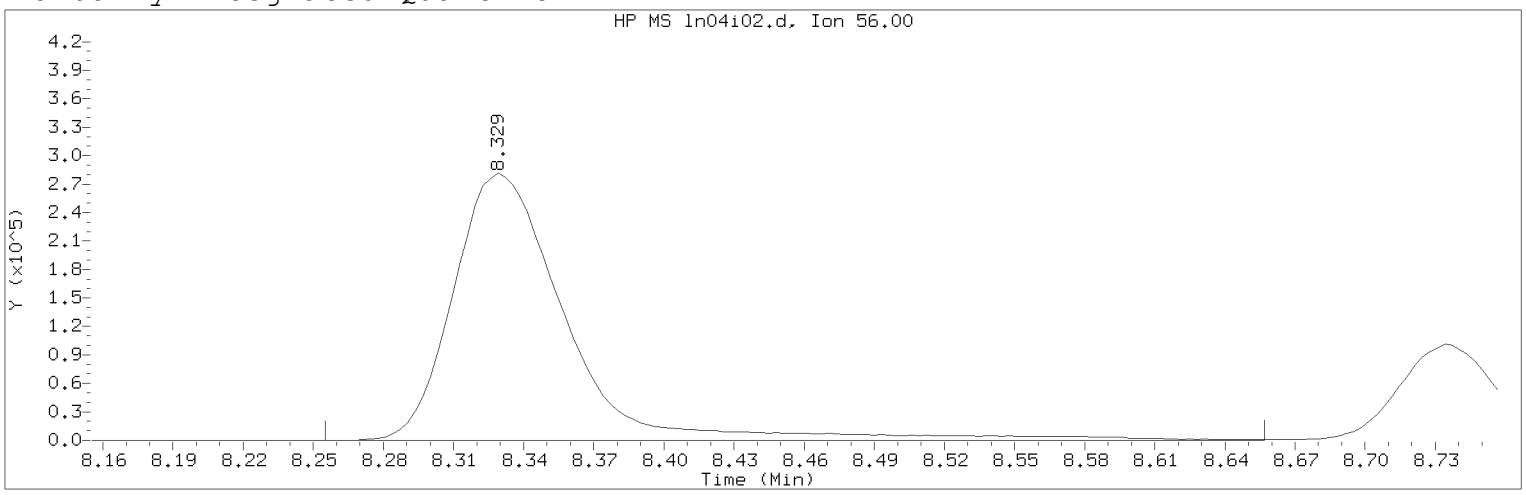
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.741
Quant Ion : 43.00
Area : 623358
On-column Amount (ng) : 101.3435
Integration start scan : 1921 Integration stop scan: 1990
Y at integration start : 845 Y at integration end: 845

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

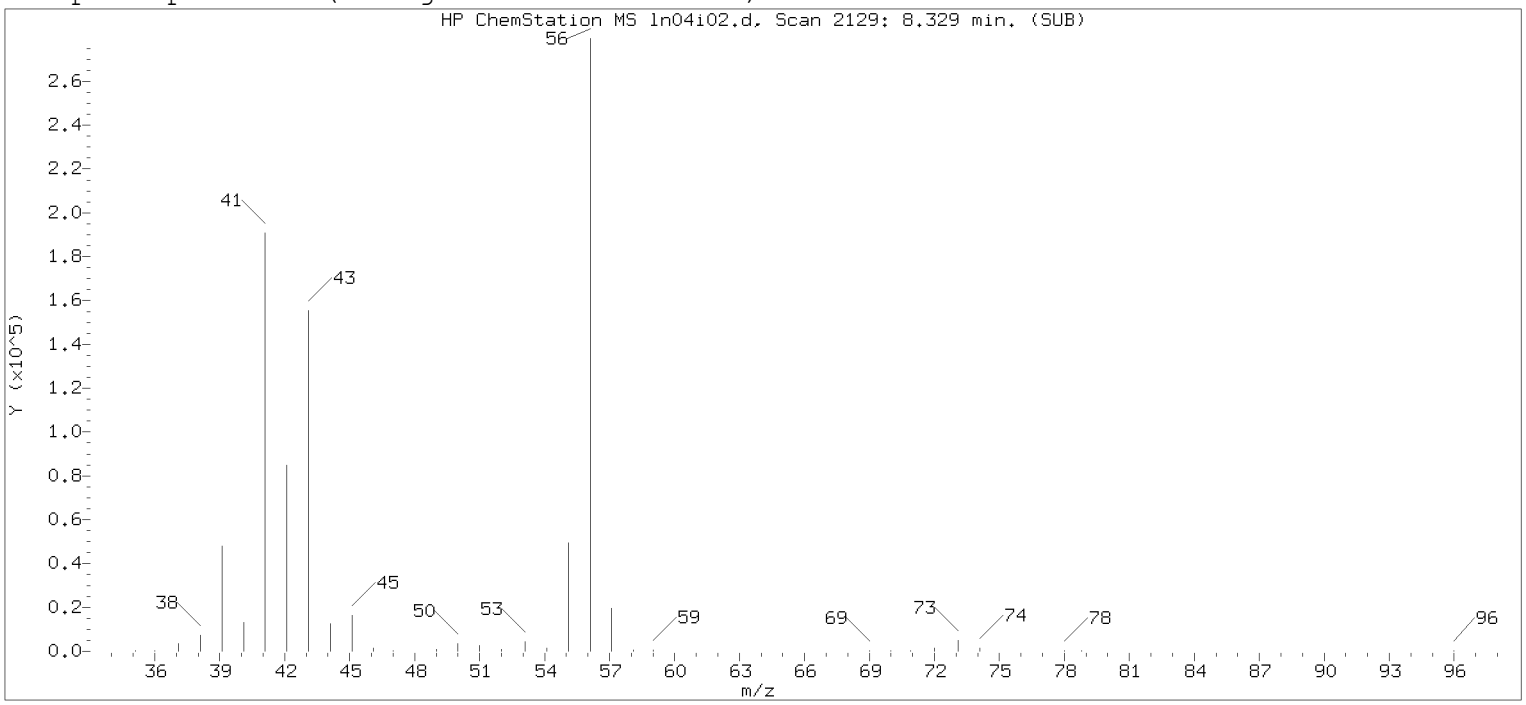
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area (flag) : 944383M
On-Column Amount (ng) : 2911.8124
Integration start scan : 2105 Integration stop scan: 2230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

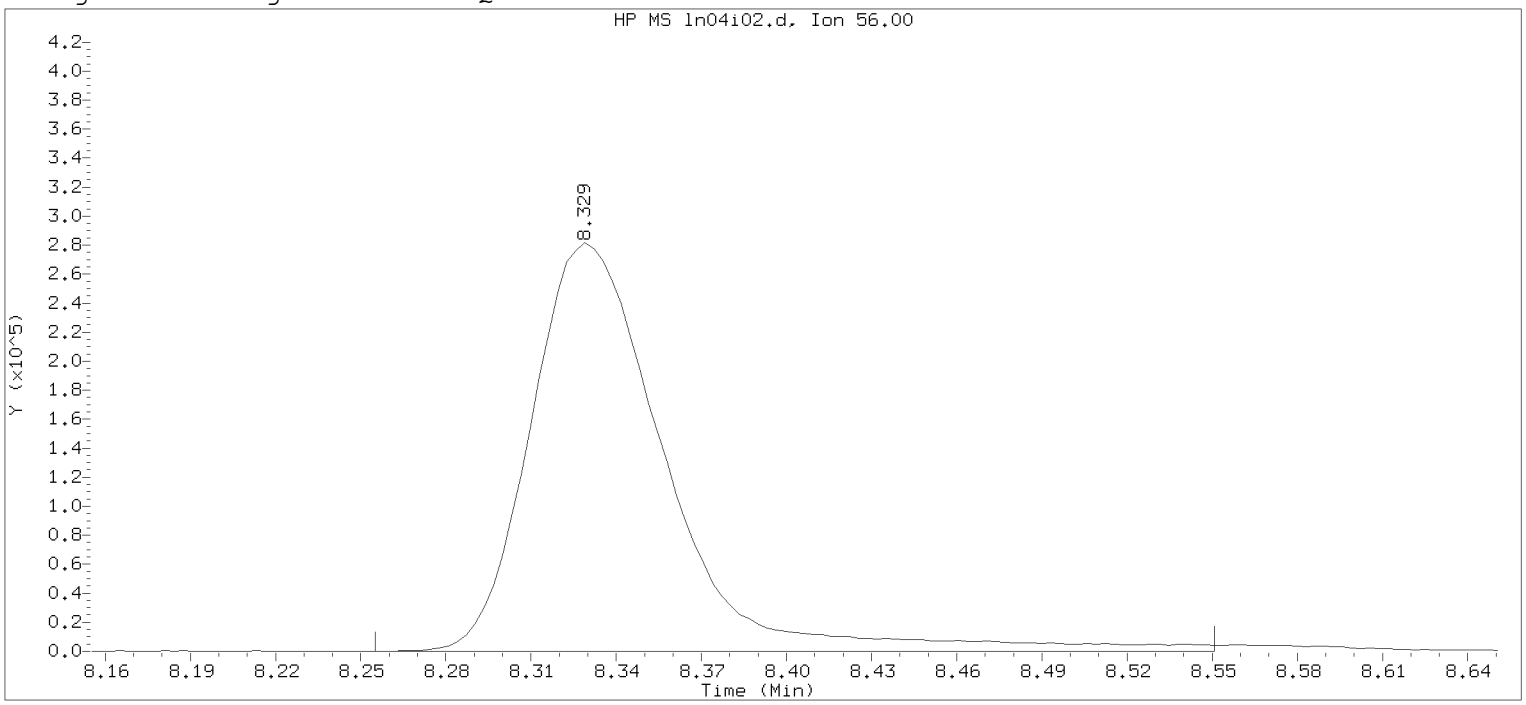
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

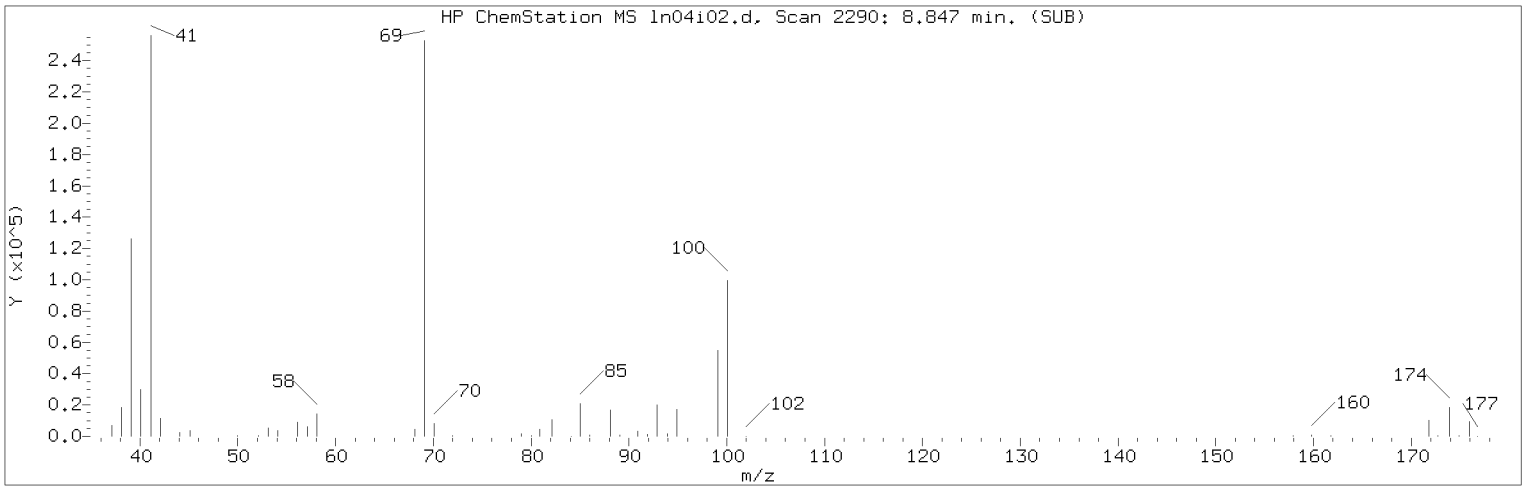
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

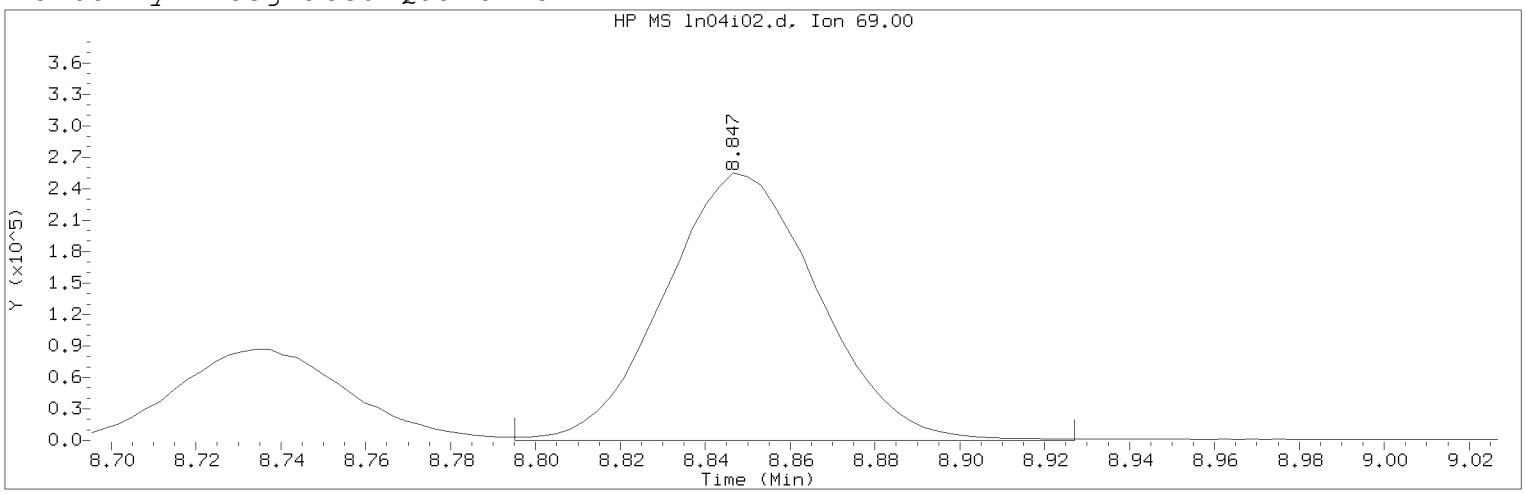
Compound Number	: 69		
Compound Name	: n-Butanol		
Scan Number	: 2129		
Retention Time (minutes)	: 8.329		
Quant Ion	: 56.00		
Area	: 929615		
On-column Amount (ng)	: 2668.2803		
Integration start scan	: 2105	Integration stop scan:	2197
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

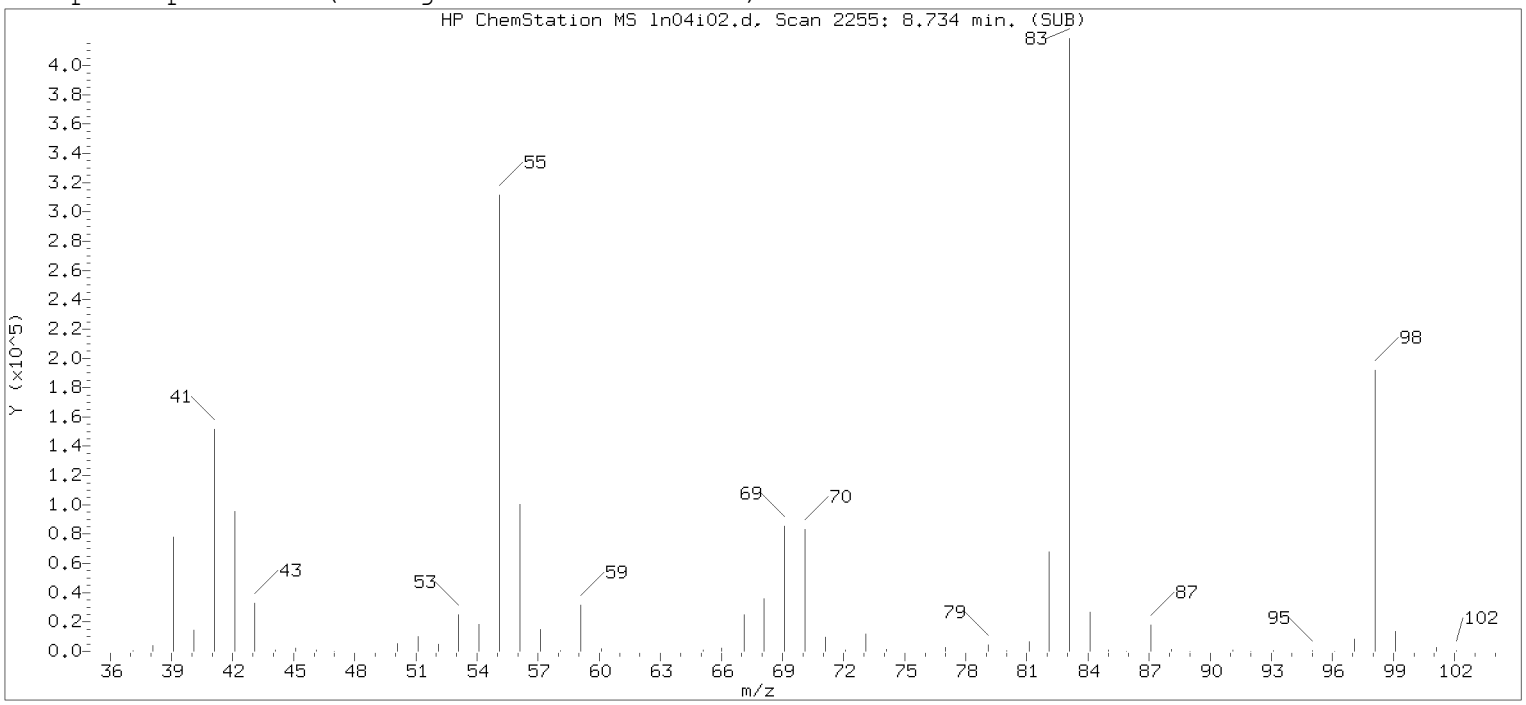
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2290
Retention Time (minutes): 8.847
Quant Ion : 69.00
Area (flag) : 640445A
On-Column Amount (ng) : 108.3344
Integration start scan : 2273 Integration stop scan: 2314
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

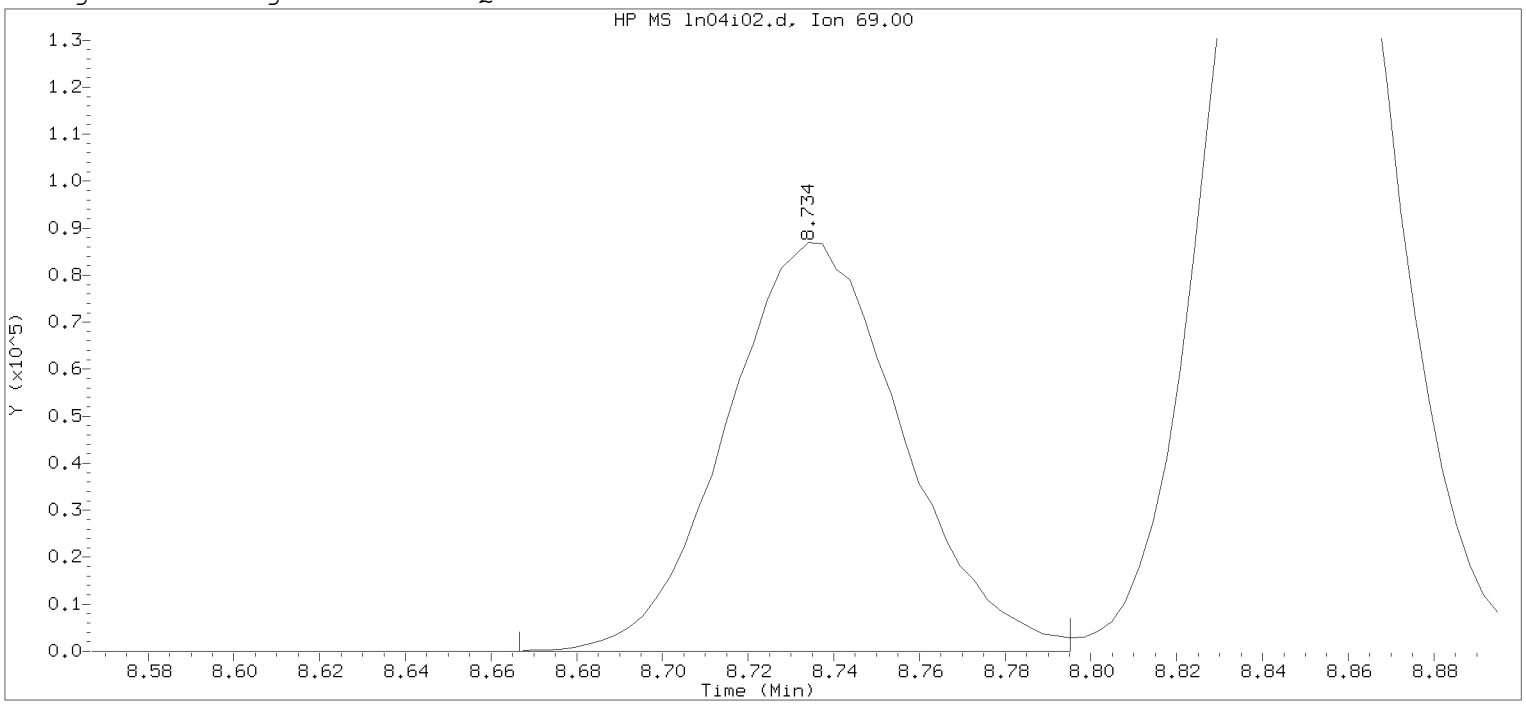
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

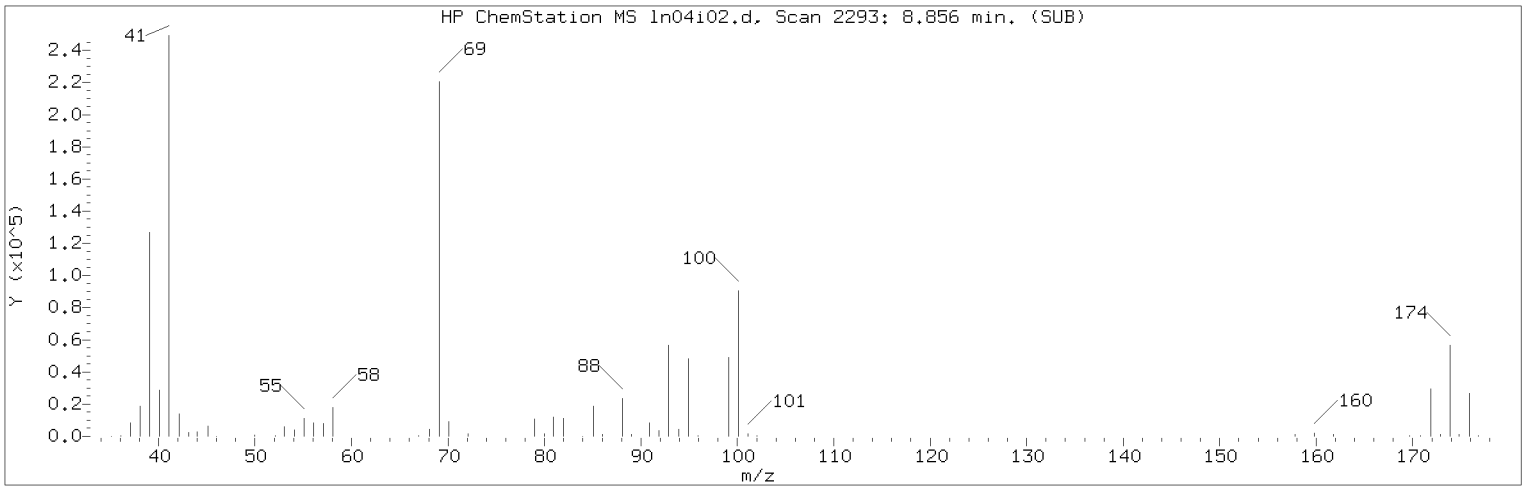
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

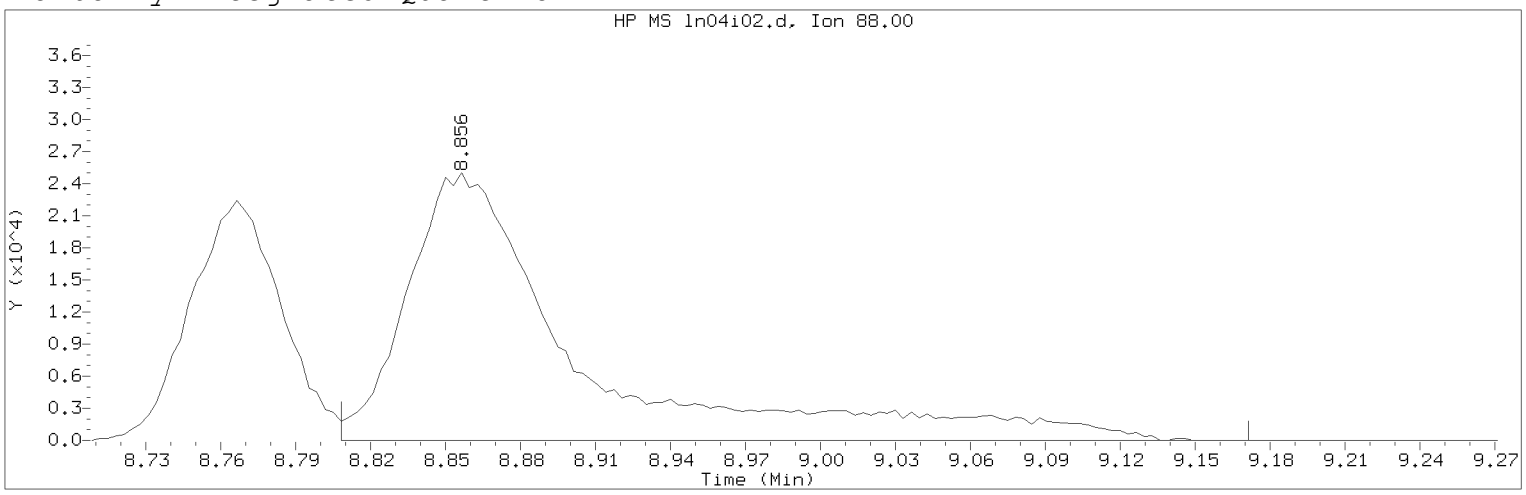
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 247190
On-column Amount (ng) : 97.8749
Integration start scan : 2233 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

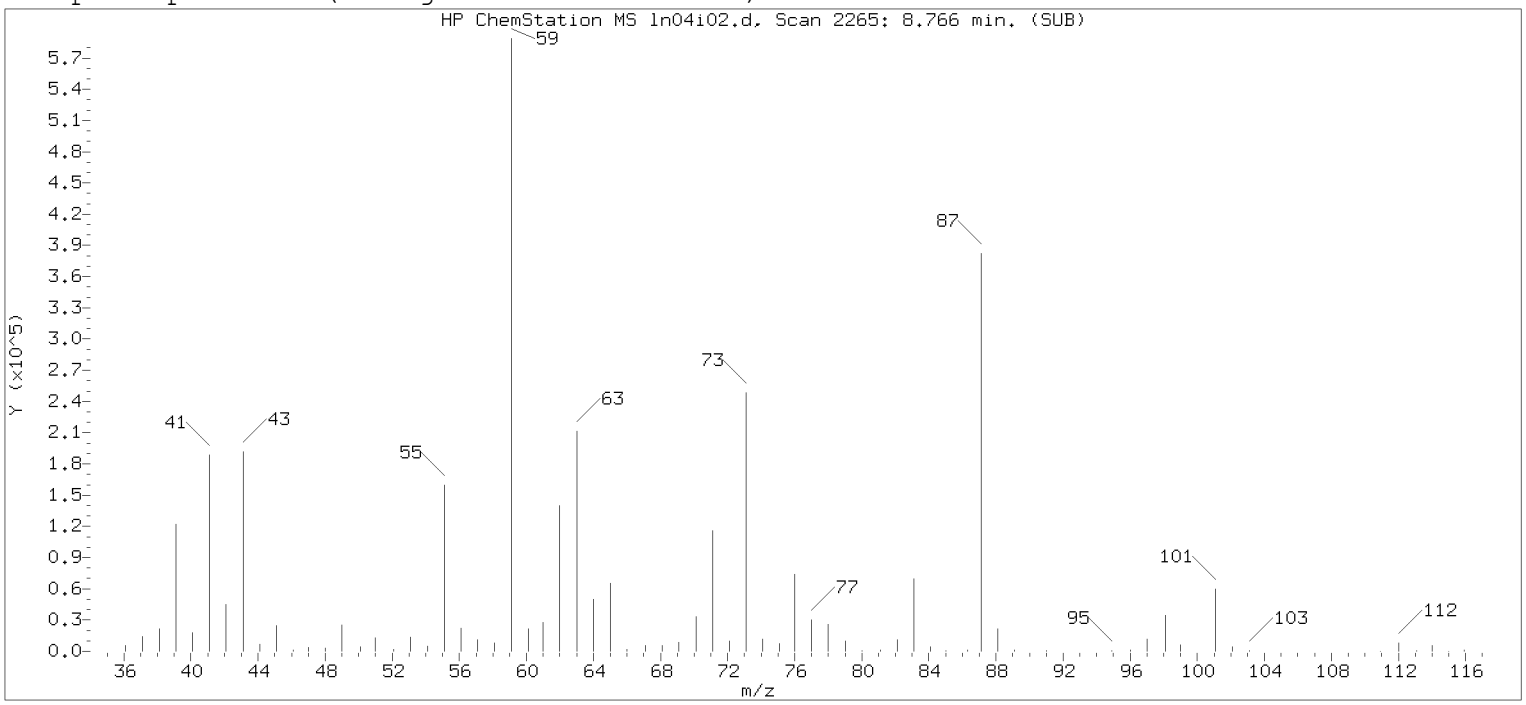
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 117817M
On-Column Amount (ng) : 1321.6466
Integration start scan : 2277 Integration stop scan: 2390
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

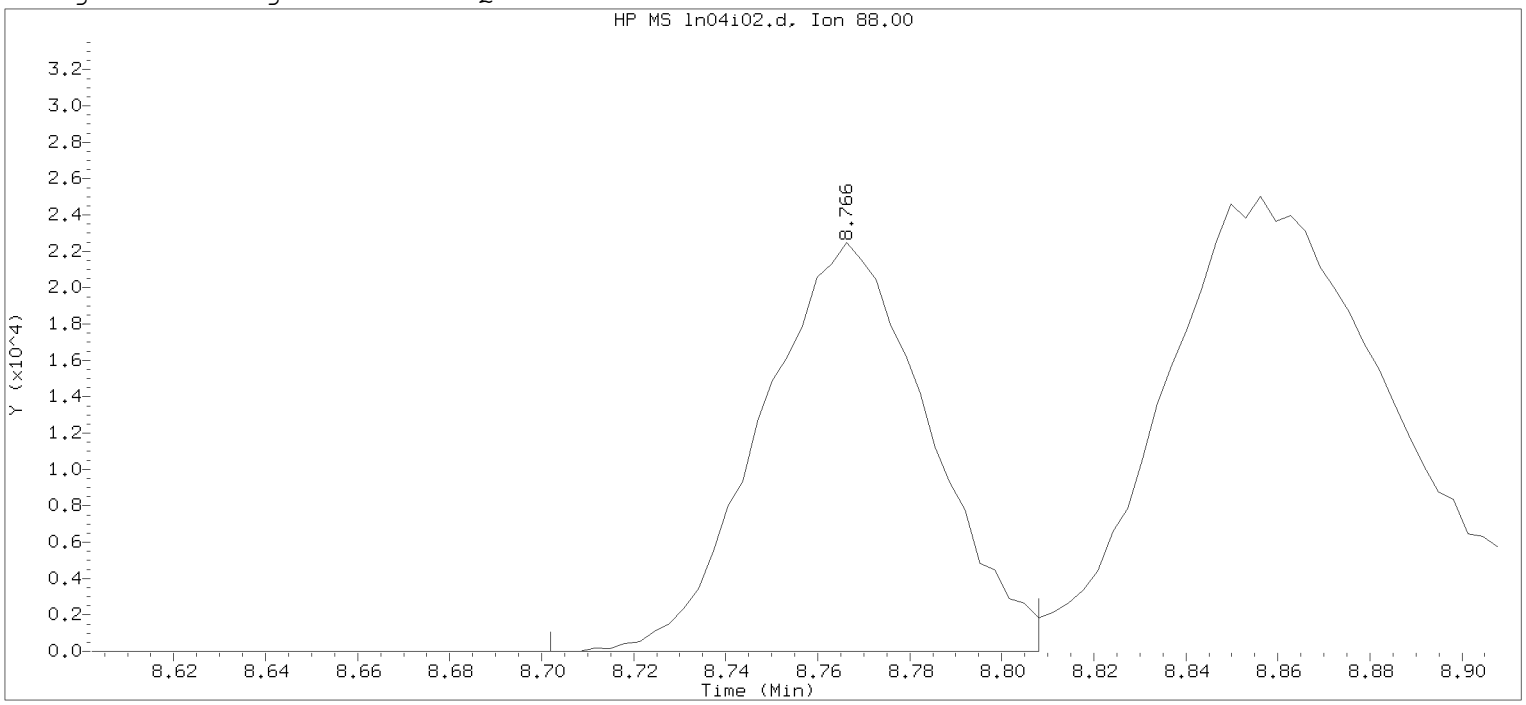
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

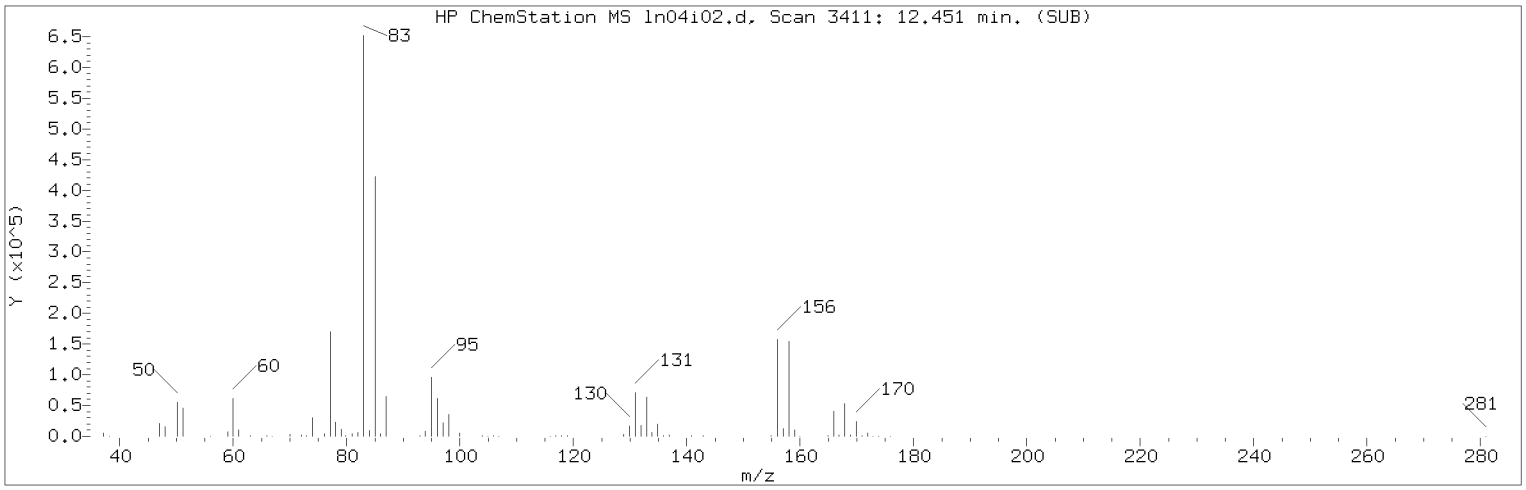
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

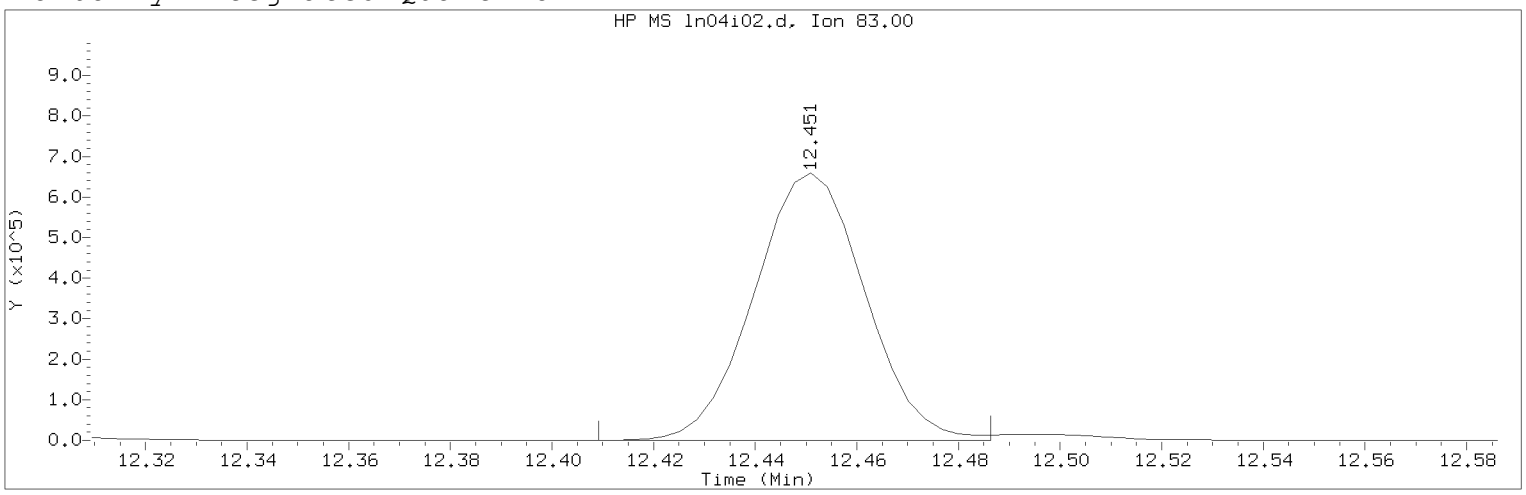
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2265
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area : 56534
On-column Amount (ng) : 746.2694
Integration start scan : 2244 Integration stop scan: 2277
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

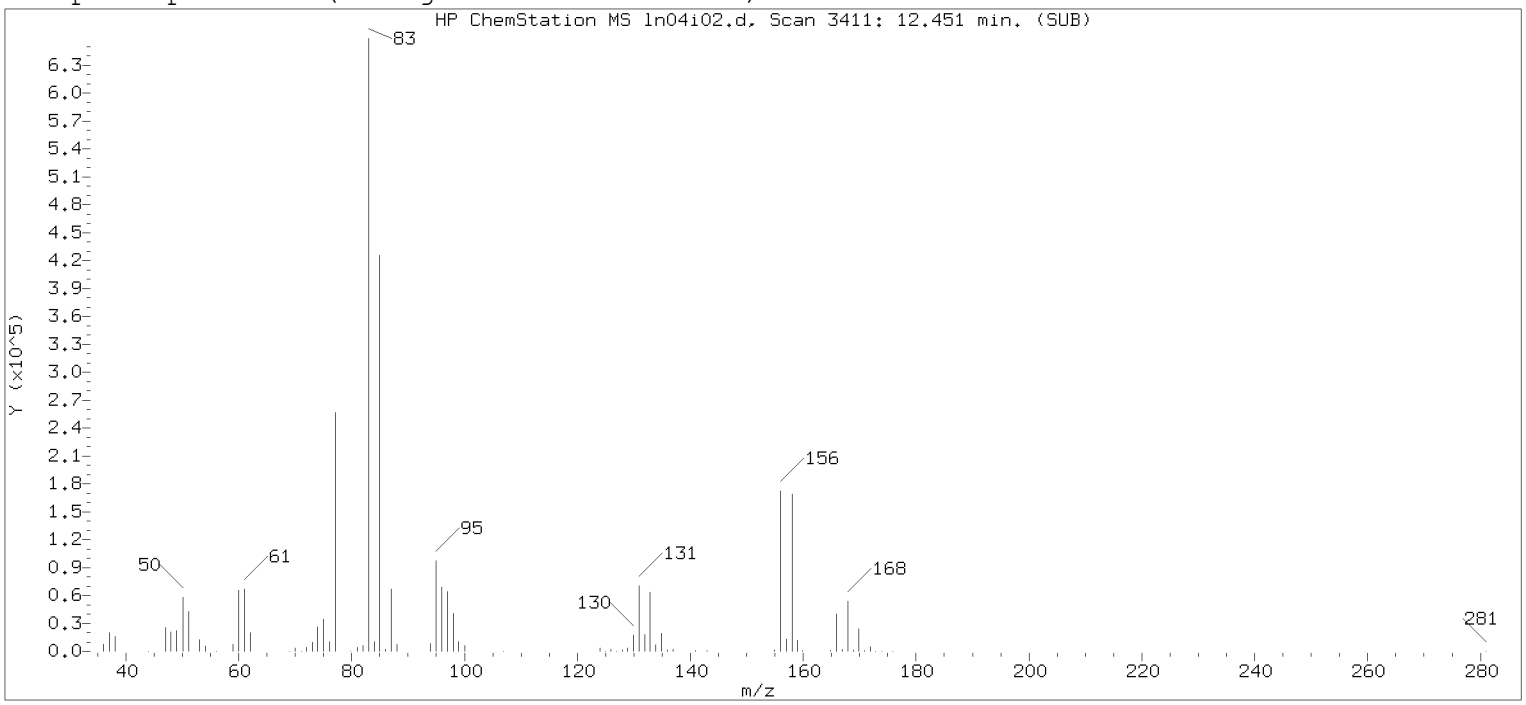
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 995972M
On-Column Amount (ng) : 105.3166
Integration start scan : 3397 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

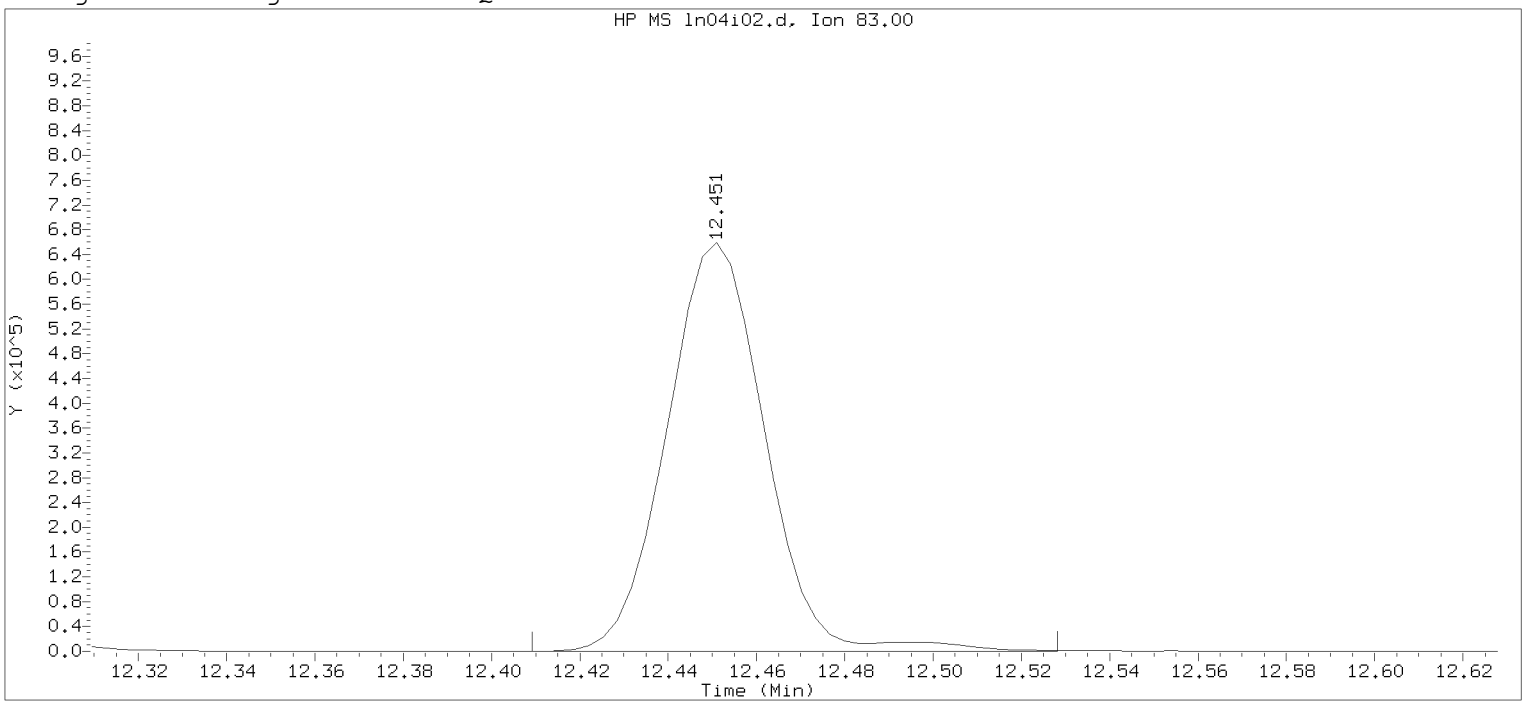
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

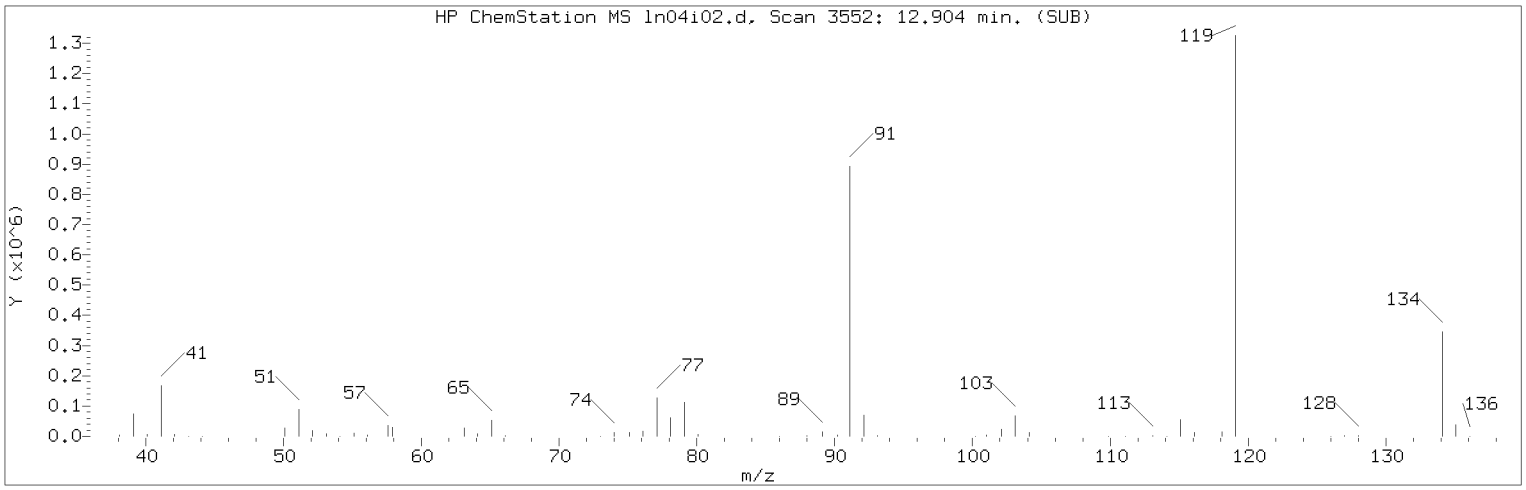
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

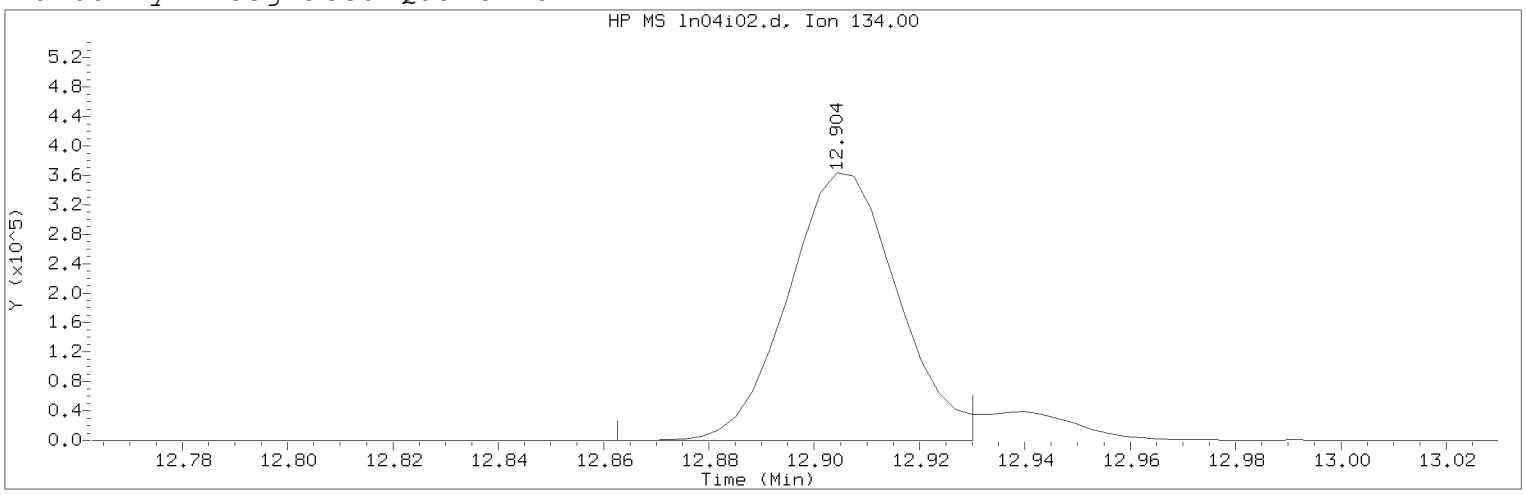
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 1015846
On-column Amount (ng) : 101.1821
Integration start scan : 3397 Integration stop scan: 3434
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

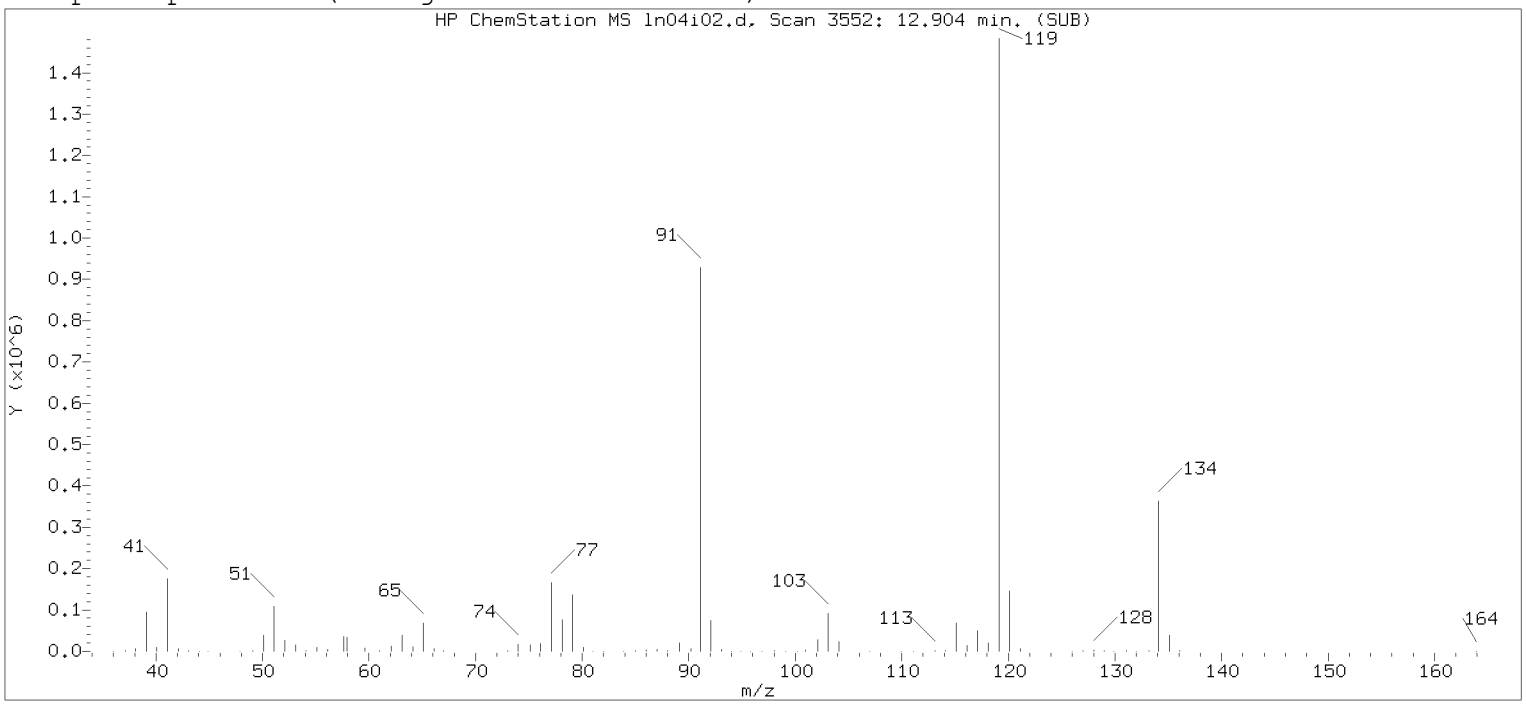
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 526781M
On-Column Amount (ng) : 106.6224
Integration start scan : 3538 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

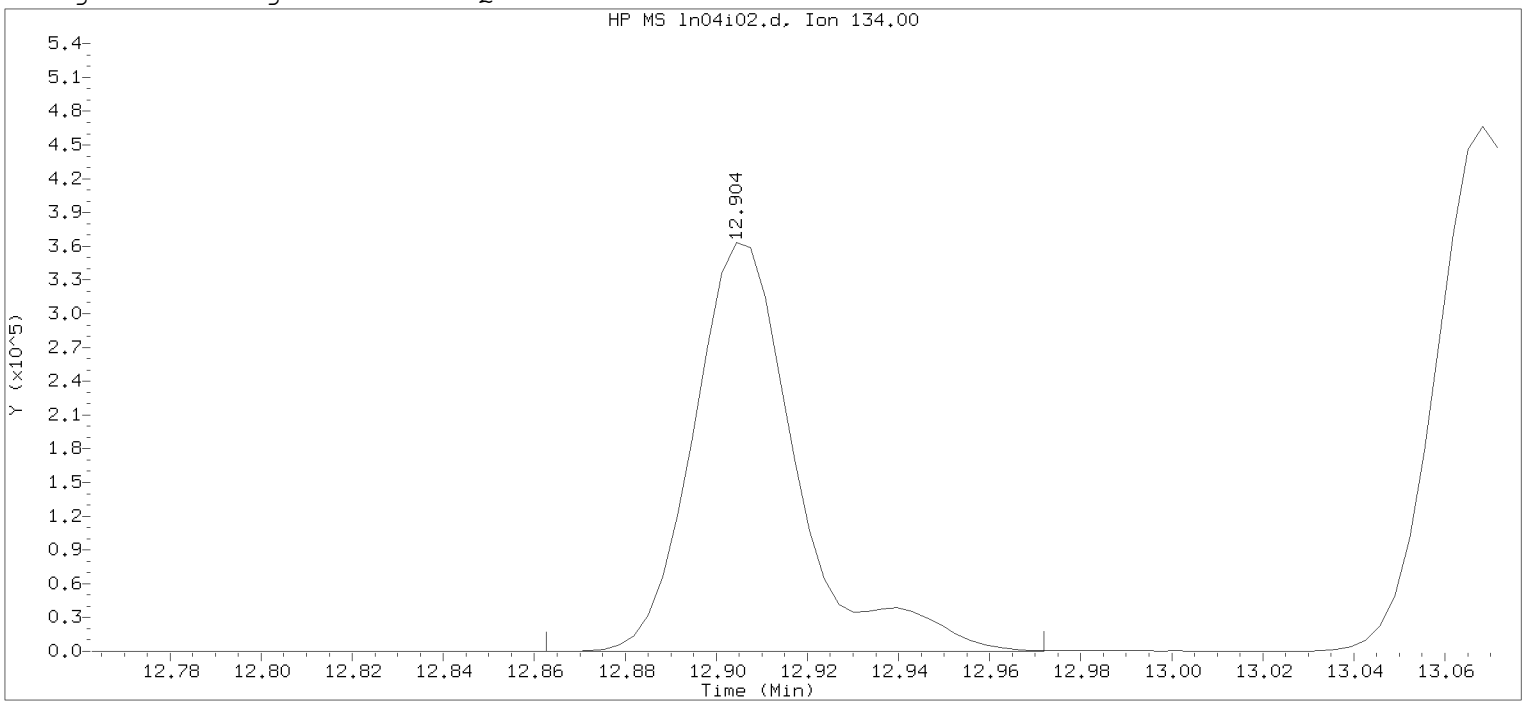
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



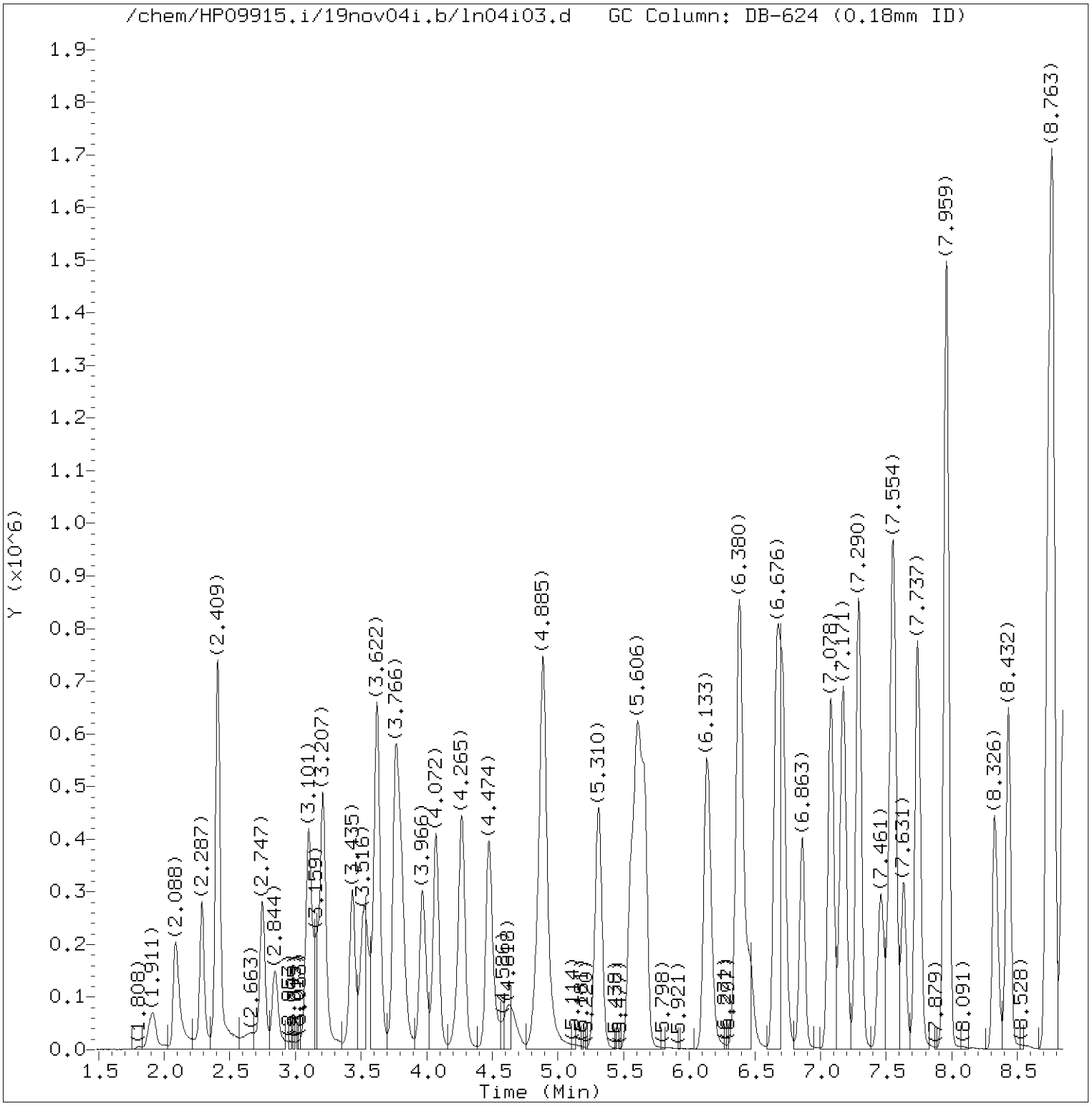
Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 572341
On-column Amount (ng) : 102.7487
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

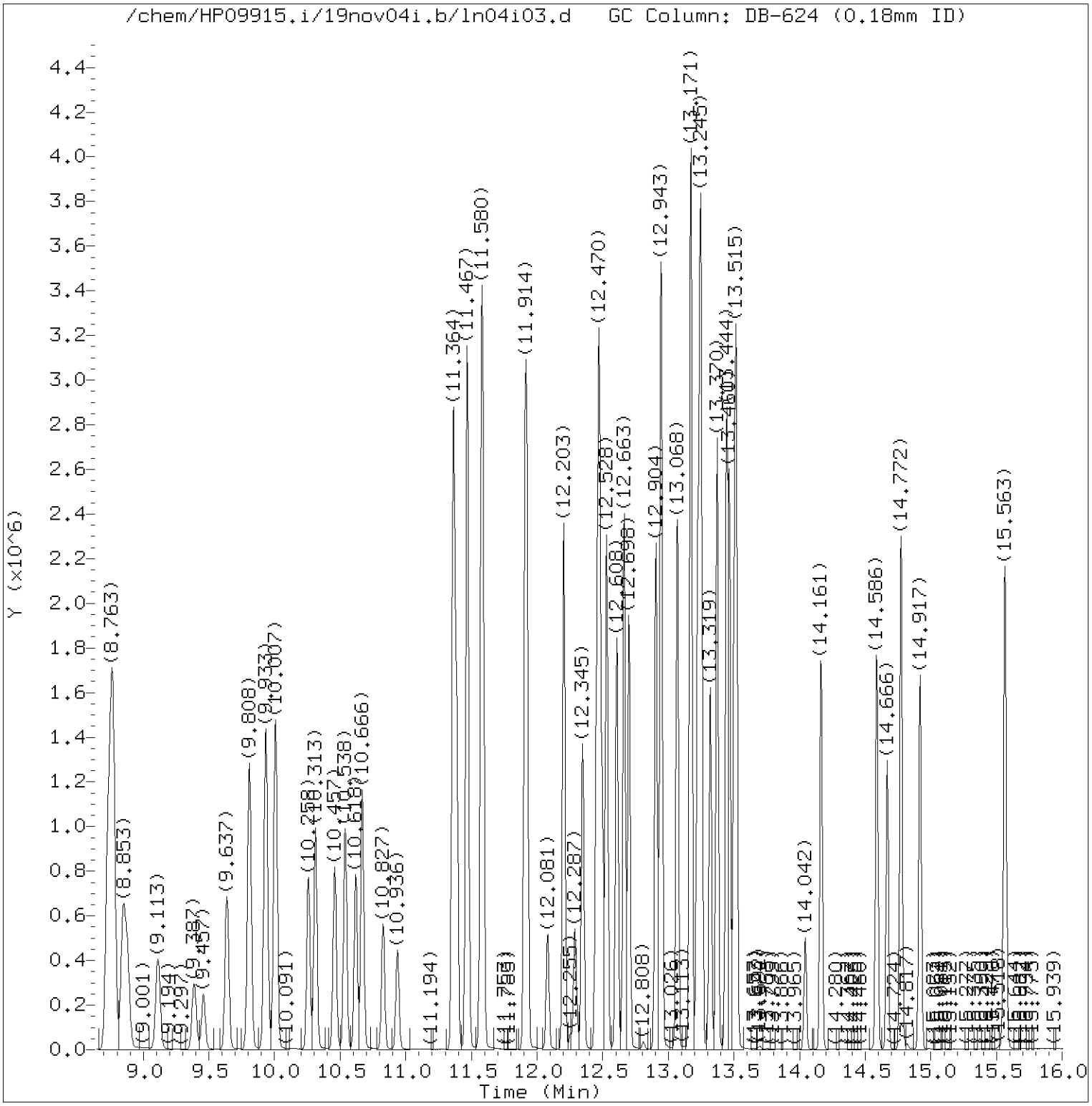
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.088	85	427538M	52.817
4) Chloromethane	(2)	2.287	50	390734	50.084
5) 1,3-Butadiene	(2)	2.406	39	311095M	48.025
6) Vinyl Chloride	(2)	2.409	62	387720	49.794
8) Bromomethane	(2)	2.747	94	272873	48.888
9) Chloroethane	(2)	2.844	64	212325	49.620
10) Dichlorofluoromethane	(2)	3.098	67	509913MA	49.515
12) Trichlorofluoromethane	(2)	3.152	101	433881	51.758
11) n-Pentane	(2)	3.207	43	489872	49.449
14) Ethyl ether	(2)	3.432	59	285731	52.748
15) Freon 123a	(2)	3.525	67	337192	50.003
16) Acrolein	(1)	3.622	56	1052176	519.843
17) 1,1-Dichloroethene	(2)	3.760	96	251911	51.197
17) 1,1-Dichloroethene	(2)	3.760	63	123343	50.001
19) Freon 113	(2)	3.795	101	289343	51.541
18) Acetone	(1)	3.802	58	91161	100.464
22) Methyl Iodide	(2)	3.966	142	518954	50.897
21) 2-Propanol	(1)	3.998	45	165875M	254.283
23) Carbon Disulfide	(2)	4.072	76	956902	51.606
27) Methyl Acetate	(2)	4.245	43	314348	49.603
25) Allyl Chloride	(2)	4.271	41	438915	49.725
28) Methylene Chloride	(2)	4.474	84	295055	50.382
29)*t-Butyl alcohol-d10	(1)	4.509	65	269779M	250.000
30) t-Butyl alcohol	(1)	4.625	59	291988	257.078
31) Acrylonitrile	(2)	4.834	53	175969	51.611
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	957096	51.225
32) trans-1,2-Dichloroethene	(2)	4.888	96	287617	50.529
34) n-Hexane	(2)	5.313	57	463732M	52.364
36) 1,1-Dichloroethane	(2)	5.551	63	505667	50.924
38) di-Isopropyl ether	(2)	5.609	45	985238	51.444
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	462216	51.882
40) Ethyl t-butyl ether	(2)	6.133	59	965104	51.927
43) 1,2-Dichloroethene (Total)	(2)		96	610267	101.029
44) 2-Butanone	(2)	6.361	43	453665	103.655
42) cis-1,2-Dichloroethene	(2)	6.380	96	322650	50.501
45) 2,2-Dichloropropane	(2)	6.400	77	400546	51.890
47) Propionitrile	(1)	6.464	54	357876	252.881
48) Methacrylonitrile	(2)	6.670	67	475036	129.160

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	173386	51.180
50) Tetrahydrofuran	(1)	6.721	71	126019	98.581
51) Chloroform	(2)	6.859	83	484828	51.048
52)$Dibromofluoromethane	(2)	7.075	113	282824	49.838
52)$Dibromofluoromethane	(2)	7.075	111	289462	50.026
53) 1,1,1-Trichloroethane	(2)	7.085	97	420986	51.935
54) Cyclohexane	(2)	7.171	56	567043	52.311
54) Cyclohexane	(2)	7.175	84	491699	52.219
54) Cyclohexane	(2)	7.175	69	175289	52.282
56) Carbon Tetrachloride	(2)	7.284	117	361443	52.574
55) 1,1-Dichloropropene	(2)	7.294	75	401799	51.176
58) Isobutyl Alcohol	(1)	7.461	41	242114	633.444
57)$1,2-Dichloroethane-d4	(2)	7.528	102	72846	50.367
57)$1,2-Dichloroethane-d4	(2)	7.531	65	321603	49.897
57)$1,2-Dichloroethane-d4	(2)	7.531	104	46134	49.939
60) Benzene	(2)	7.557	78	1202424	50.927
61) 1,2-Dichloroethane	(2)	7.638	62	372805	49.091
61) 1,2-Dichloroethane	(2)	7.634	98	37850	50.364
65) t-Amyl methyl ether	(2)	7.737	73	971399	52.071
67) n-Heptane	(2)	7.956	43	432248MA	52.247
66)*Fluorobenzene	(2)	7.959	96	1160755	50.000
69) n-Butanol	(1)	8.326	56	438437M	1332.750
71) Trichloroethene	(2)	8.432	95	302634	50.906
72) Methylcyclohexane	(2)	8.734	83	574135	52.056
72) Methylcyclohexane	(2)	8.731	98	260583	52.213
73) 1,2-Dichloropropane	(2)	8.773	63	306937	51.196
76) Methyl Methacrylate	(2)	8.847	69	306086A	52.795
75) 1,4-Dioxane	(1)	8.853	88	59876M	662.196
74) Dibromomethane	(2)	8.879	93	199498	51.428
78) Bromodichloromethane	(2)	9.113	83	366892	52.707
79) 2-Nitropropane	(2)	9.390	41	235097	111.505
80) 2-Chloroethyl Vinyl Ether	(2)	9.457	63	134015	52.046
81) cis-1,3-Dichloropropene	(2)	9.637	75	495055	53.547
82) 4-Methyl-2-pentanone	(2)	9.808	43	1004831	108.769
83)$Toluene-d8	(3)	9.933	98	1189125	50.240
83)$Toluene-d8	(3)	9.933	100	767119	50.033
88) Toluene	(3)	10.007	92	764927	51.549
90) 1,3-Dichloropropene (total)	(3)		100	956669	108.348

M = Compound was manually integrated.
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Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	461614	54.801
91) Ethyl Methacrylate	(3)	10.313	69	554039	54.121
92) 1,1,2-Trichloroethane	(3)	10.461	97	291480	51.810
93) Tetrachloroethene	(3)	10.538	166	321895	51.220
94) 1,3-Dichloropropane	(3)	10.618	76	494204	51.449
96) 2-Hexanone	(3)	10.670	43	761734	111.475
97) Dibromochloromethane	(3)	10.827	129	315765	54.792
99) 1,2-Dibromoethane	(3)	10.936	107	319699	52.331
100)*Chlorobenzene-d5	(3)	11.361	117	904578	50.000
101) 1-Chlorohexane	(3)	11.364	91	399510	50.116
102) Chlorobenzene	(3)	11.387	112	864419	51.514
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	299375	54.148
104) Ethylbenzene	(3)	11.467	91	1475718	52.031
106) m+p-Xylene	(3)	11.580	106	1167470	104.636
108) Xylene (Total)	(3)		106	1748839	157.389
107) o-Xylene	(3)	11.907	106	581369	52.752
109) Styrene	(3)	11.924	104	981189	53.877
110) Bromoform	(3)	12.081	173	229903	53.387
111) Isopropylbenzene	(3)	12.203	105	1456789	52.702
112) Cyclohexanone	(1)	12.287	55	231776	654.496
114)$4-Bromofluorobenzene	(3)	12.345	95	446156	49.781
114)$4-Bromofluorobenzene	(3)	12.348	174	370576	49.875
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	482004M	52.727
115) Bromobenzene	(4)	12.464	156	378400	52.027
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	383692	136.075
117) 1,2,3-Trichloropropane	(4)	12.496	110	145151	51.744
119) n-Propylbenzene	(4)	12.528	91	1662625	52.323
120) 2-Chlorotoluene	(4)	12.608	126	350943	51.988
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	1225419	53.065
121) 4-Chlorotoluene	(4)	12.698	126	361669	51.471
124) tert-Butylbenzene	(4)	12.904	134	253906M	53.165
125) Pentachloroethane	(4)	12.940	167	227064	55.216
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	1291883	53.080
127) sec-Butylbenzene	(4)	13.068	105	1512547	53.076
129) 1,3-Dichlorobenzene	(4)	13.168	146	693790	51.911
130) p-Isopropyltoluene	(4)	13.174	119	1315828	53.371
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	483927	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	714495	51.569

M = Compound was manually integrated.
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Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

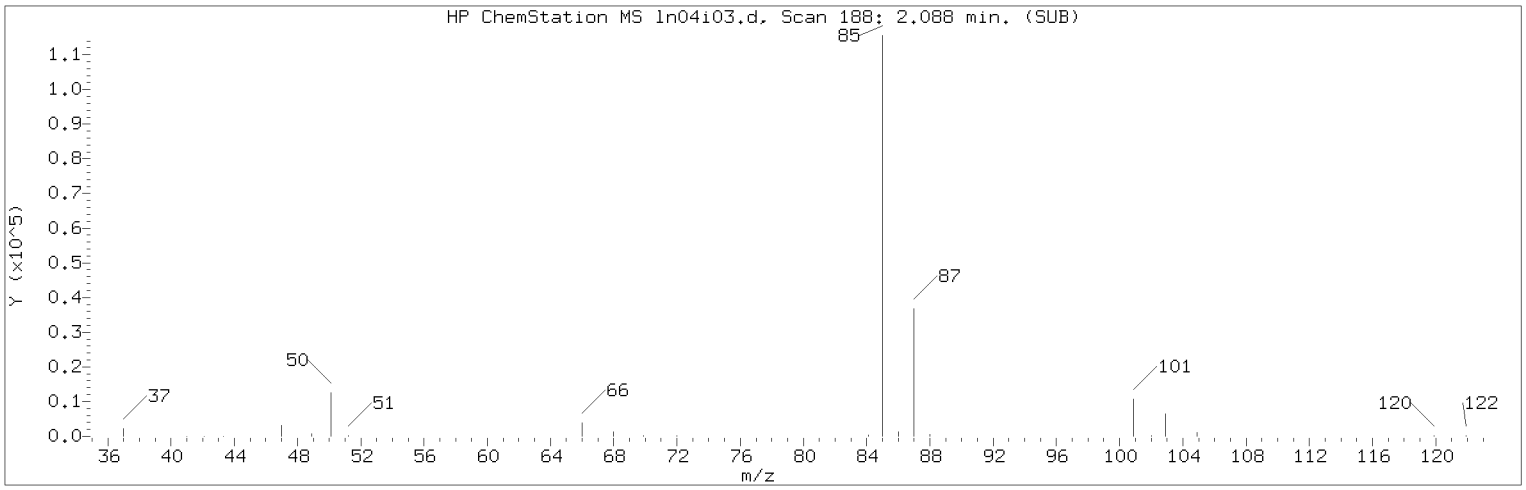
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

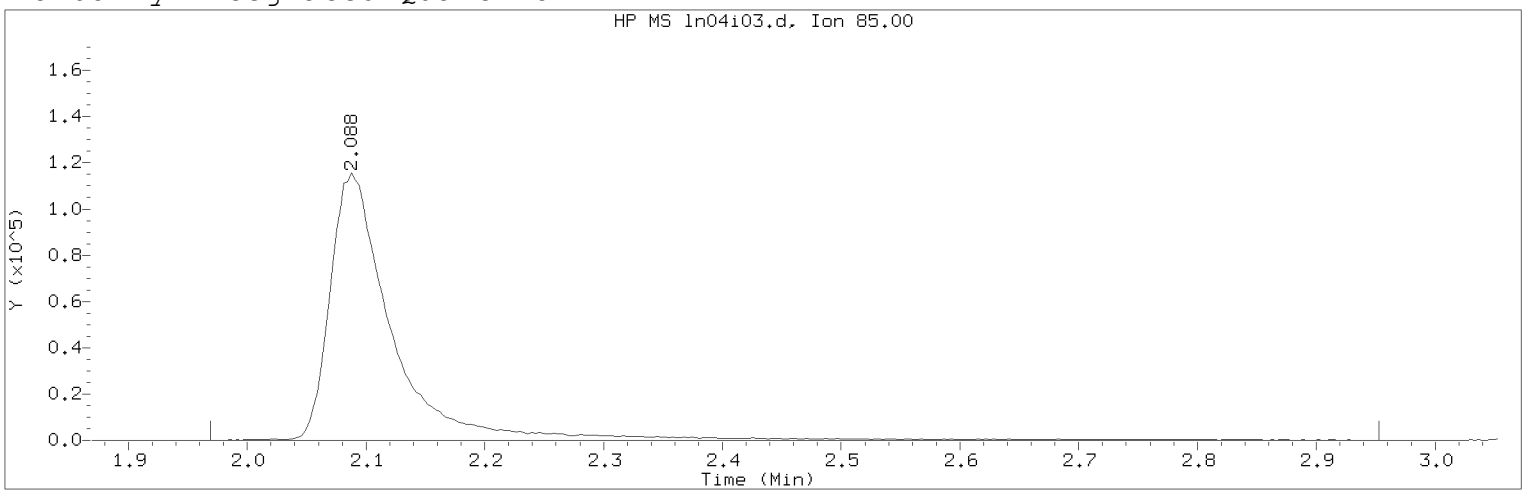
	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134)	1,2,3-Trimethylbenzene	(4)	13.251	105	1342367	52.068
135)	Benzyl Chloride	(4)	13.319	91	1059398	54.274
136)	1,3-Diethylbenzene	(4)	13.370	119	832647	51.895
141)	Diethylbenzene (total)	(4)		100	2415817	155.686
137)	1,4-Diethylbenzene	(4)	13.441	119	877553	51.623
139)	n-Butylbenzene	(4)	13.464	92	652599	51.769
138)	1,2-Dichlorobenzene	(4)	13.502	146	682120	51.722
140)	1,2-Diethylbenzene	(4)	13.518	119	705617	52.168
142)	1,2-Dibromo-3-chloropropane	(4)	14.042	75	108388	54.164
144)	1,3,5-Trichlorobenzene	(4)	14.165	180	516839	51.009
146)	1,2,4-Trichlorobenzene	(4)	14.586	180	503797	51.136
147)	Hexachlorobutadiene	(4)	14.666	225	217236	46.700
148)	Naphthalene	(4)	14.772	128	1689758	53.350
149)	1,2,3-Trichlorobenzene	(4)	14.917	180	498430	51.993
150)	2-Methylnaphthalene	(4)	15.563	142	1079055	55.325

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

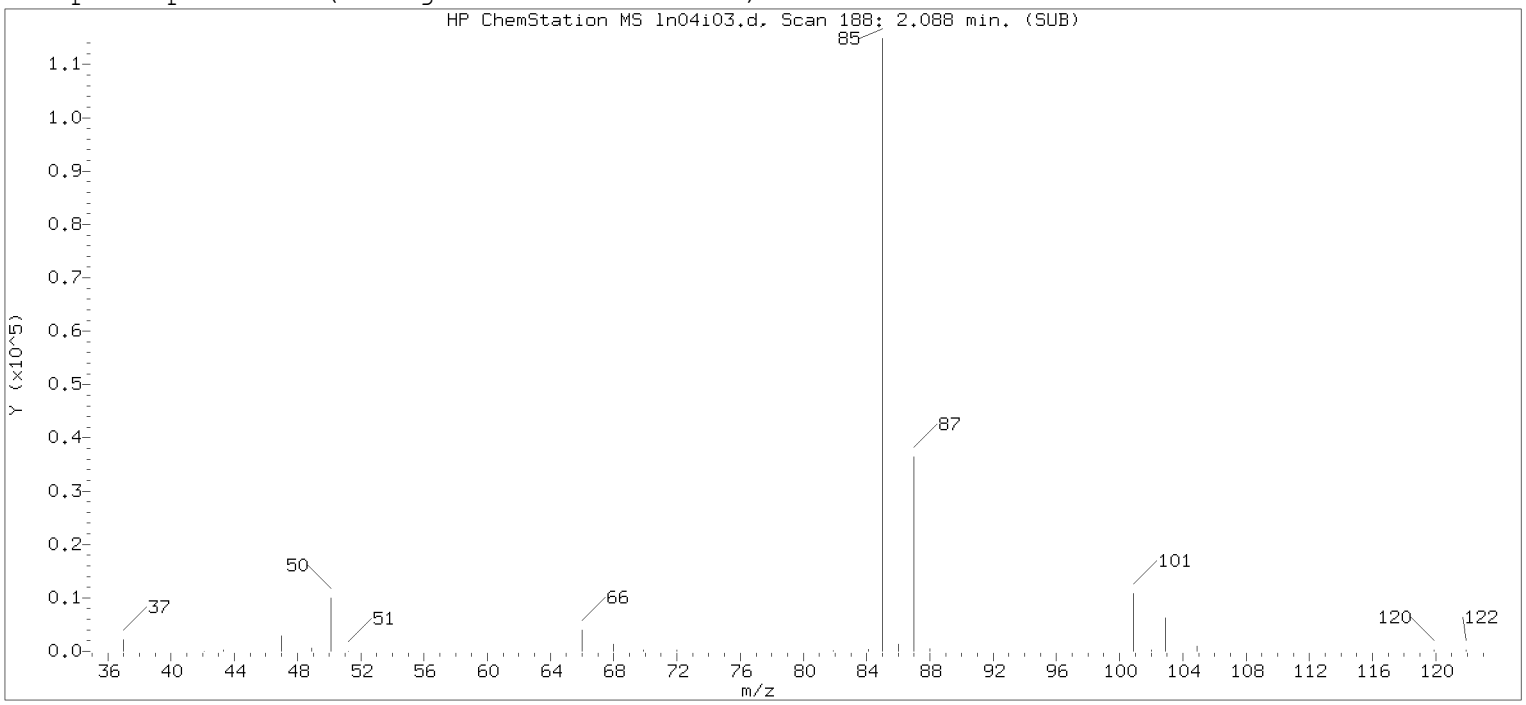
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 188
Retention Time (minutes): 2.088
Quant Ion : 85.00
Area (flag) : 427538M
On-Column Amount (ng) : 52.8165
Integration start scan : 150 Integration stop scan: 456
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

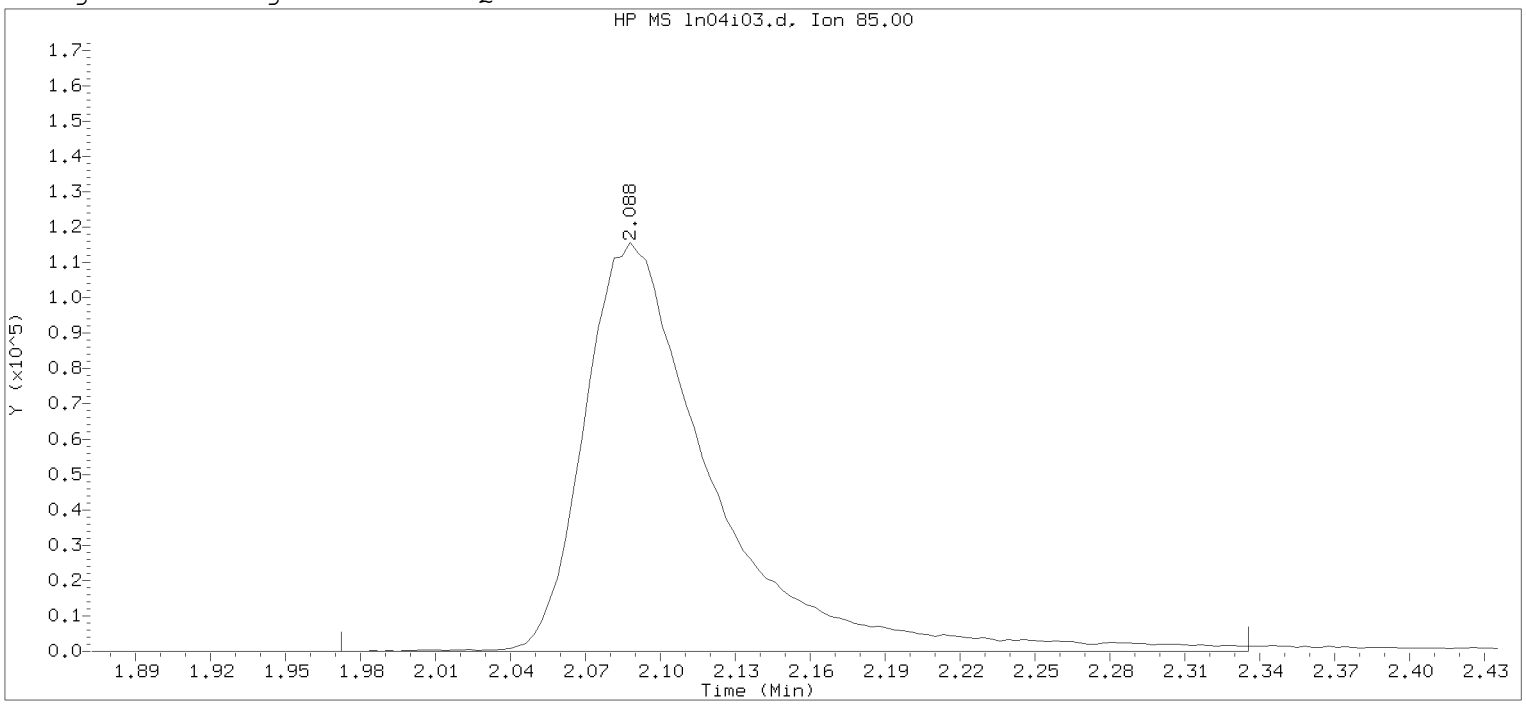
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

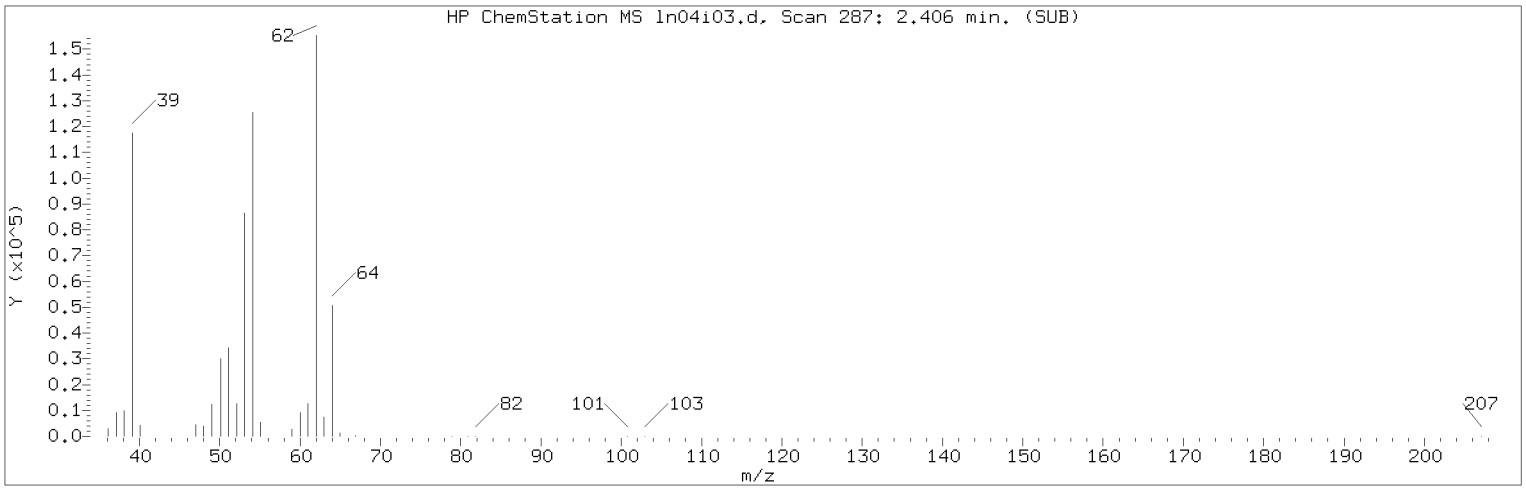
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

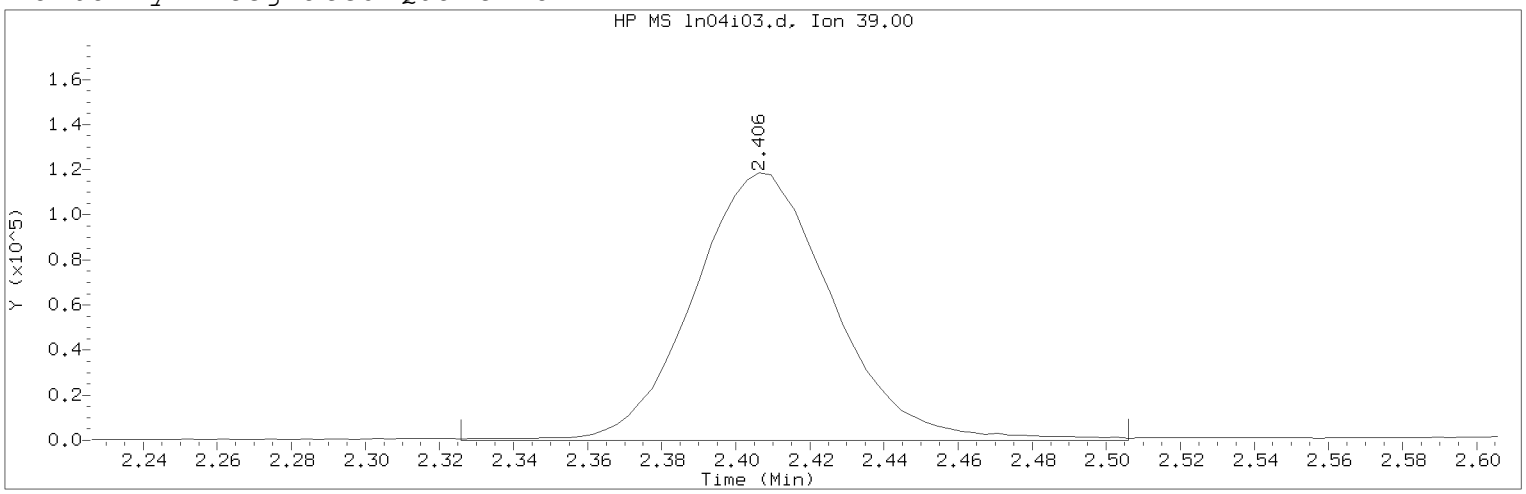
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 188
Retention Time (minutes): 2.088
Quant Ion : 85.00
Area : 411065
On-column Amount (ng) : 48.5918
Integration start scan : 151 Integration stop scan: 264
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

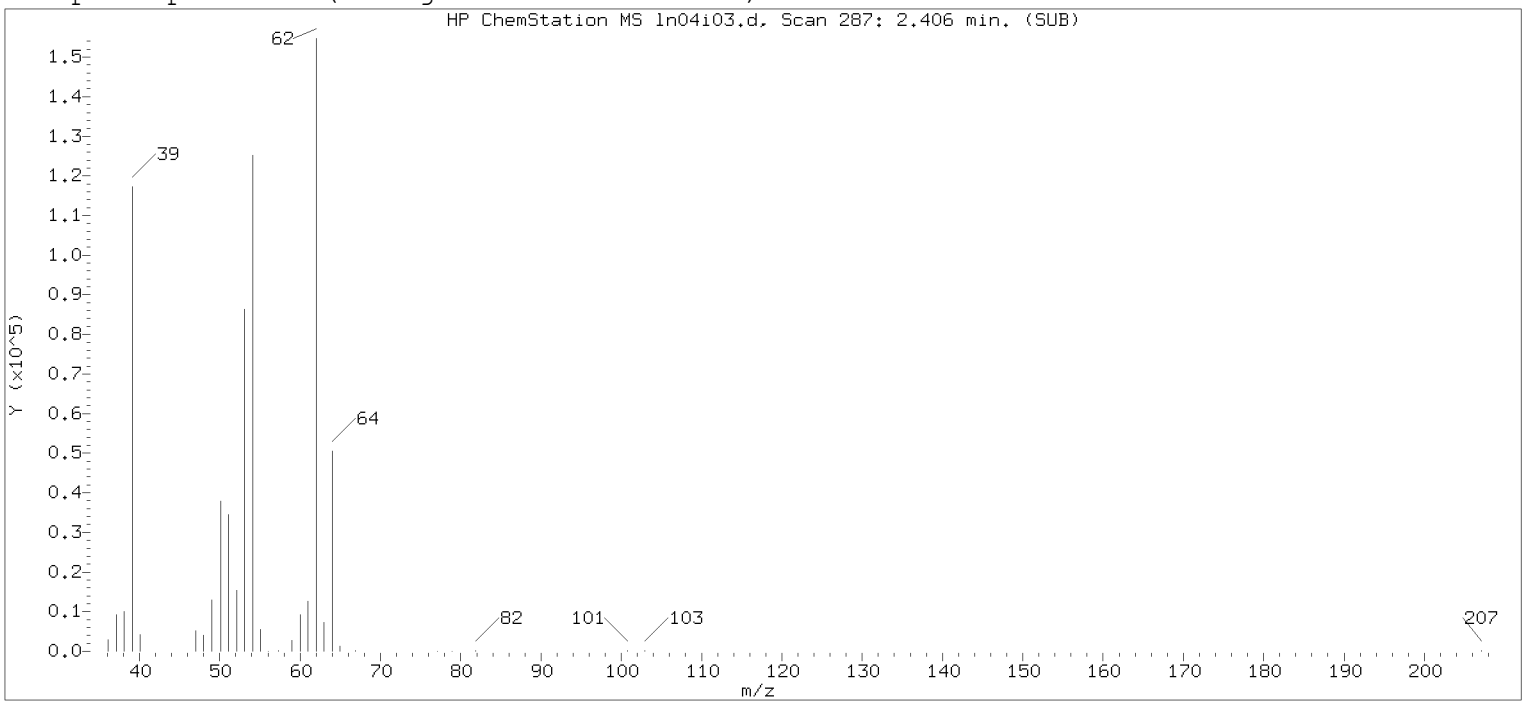
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 311095M
On-Column Amount (ng) : 48.0246
Integration start scan : 261 Integration stop scan: 317
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

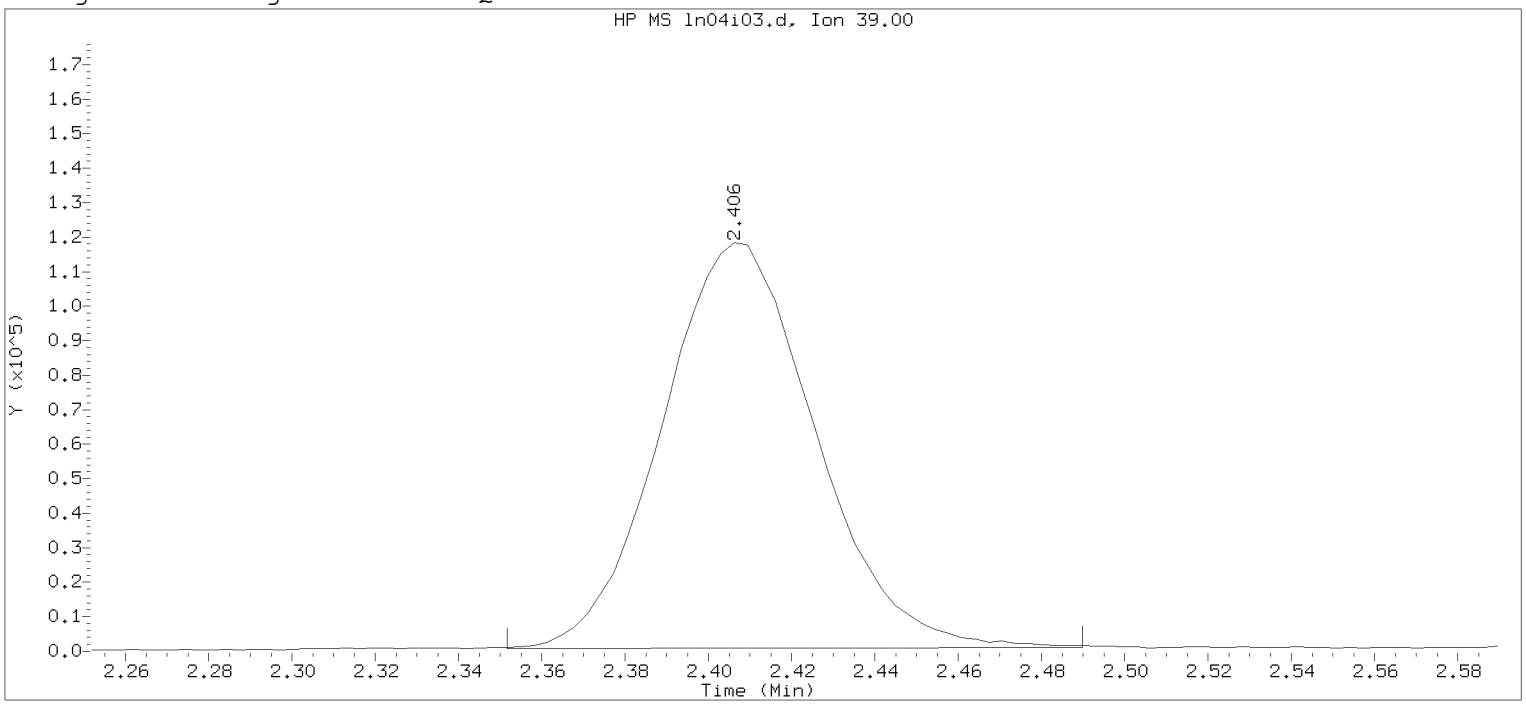
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

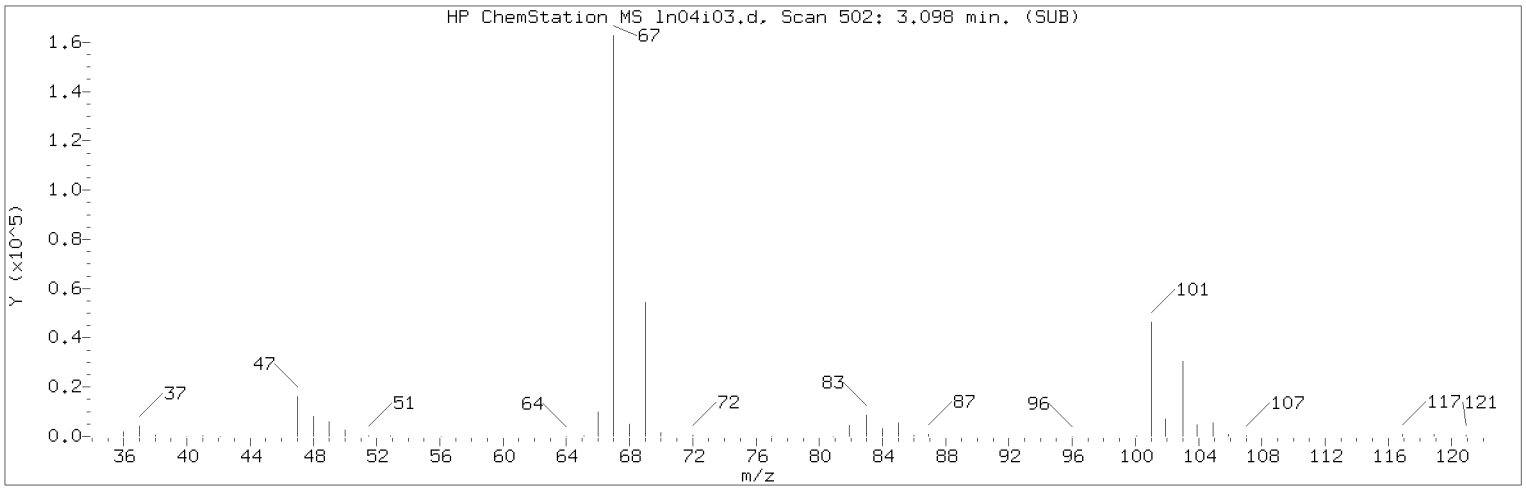
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

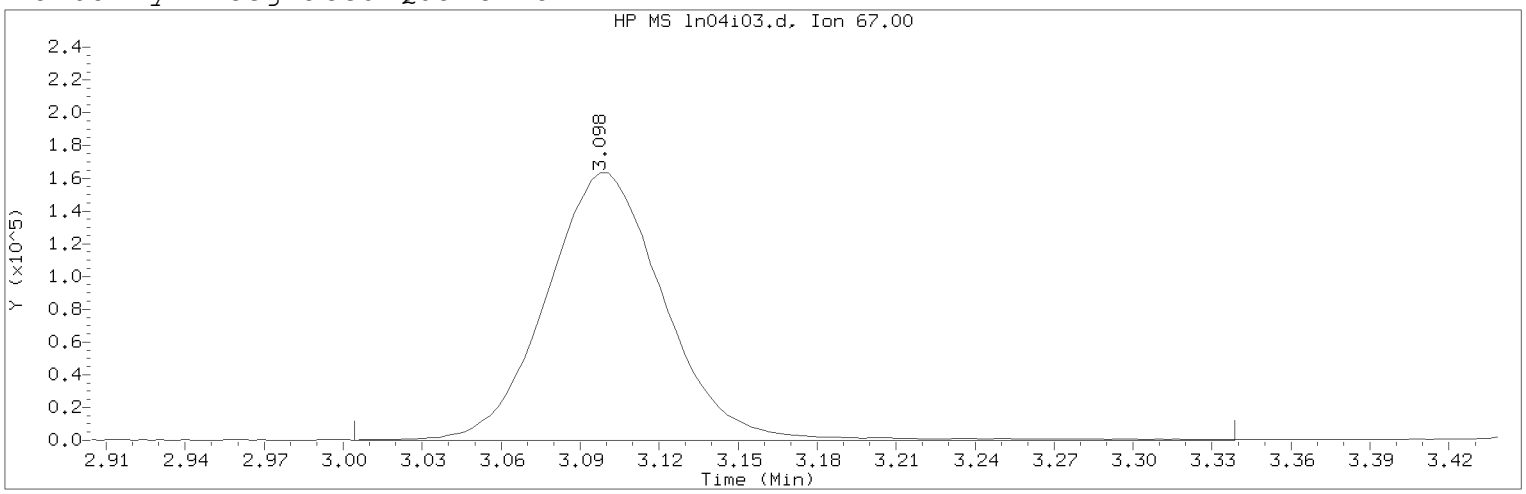
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 300667
On-column Amount (ng) : 50.0756
Integration start scan : 269 Integration stop scan: 312
Y at integration start : 752 Y at integration end: 1063

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

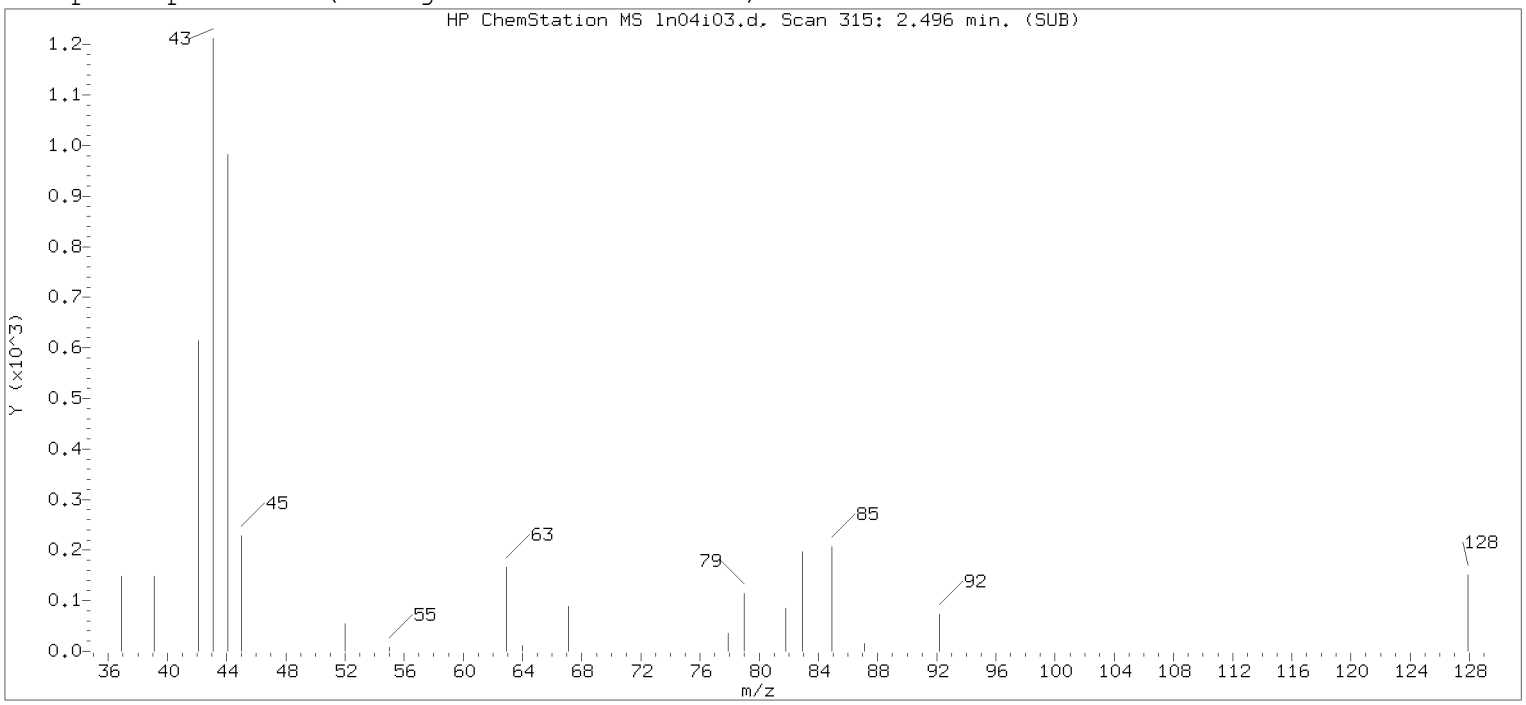
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 502
Retention Time (minutes): 3.098
Quant Ion : 67.00
Area (flag) : 509913MA
On-Column Amount (ng) : 49.5150
Integration start scan : 472 Integration stop scan: 576
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

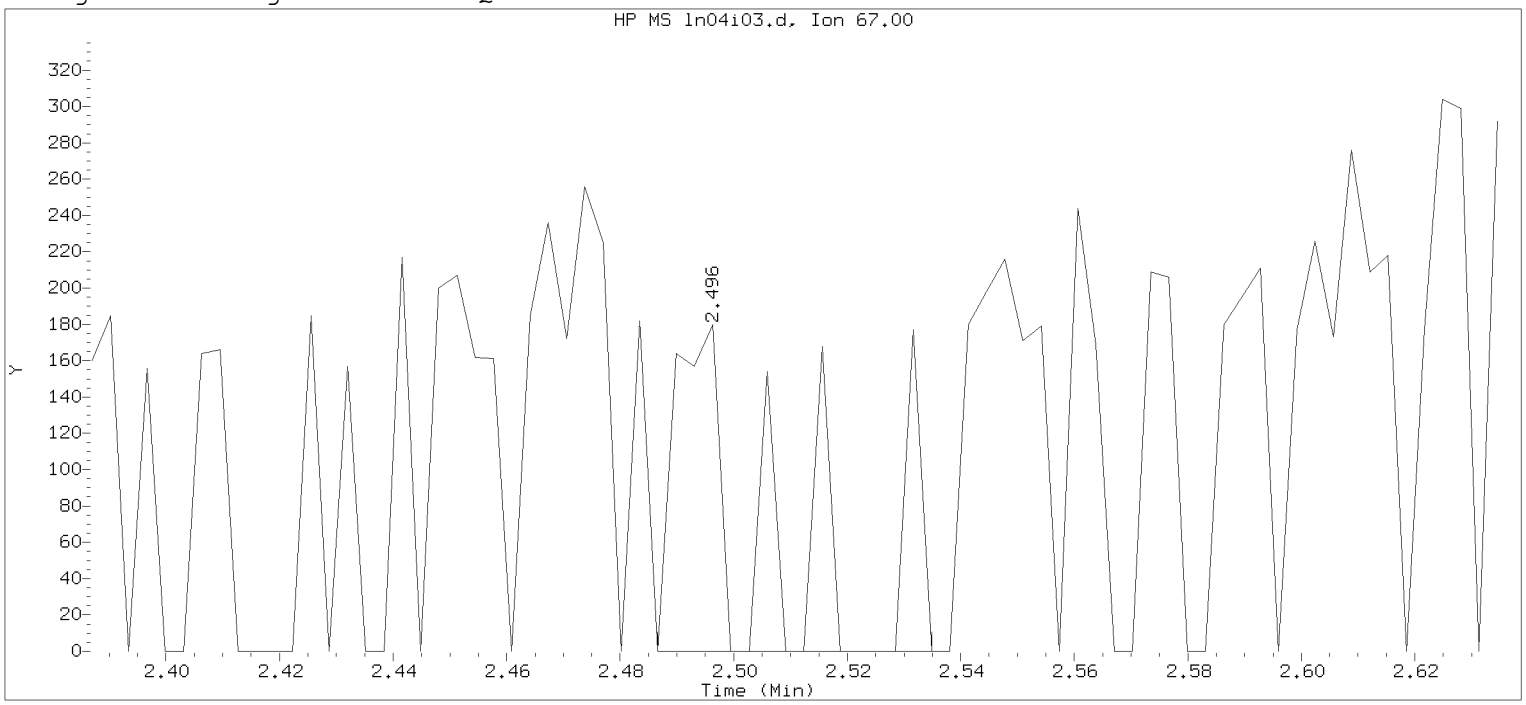
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

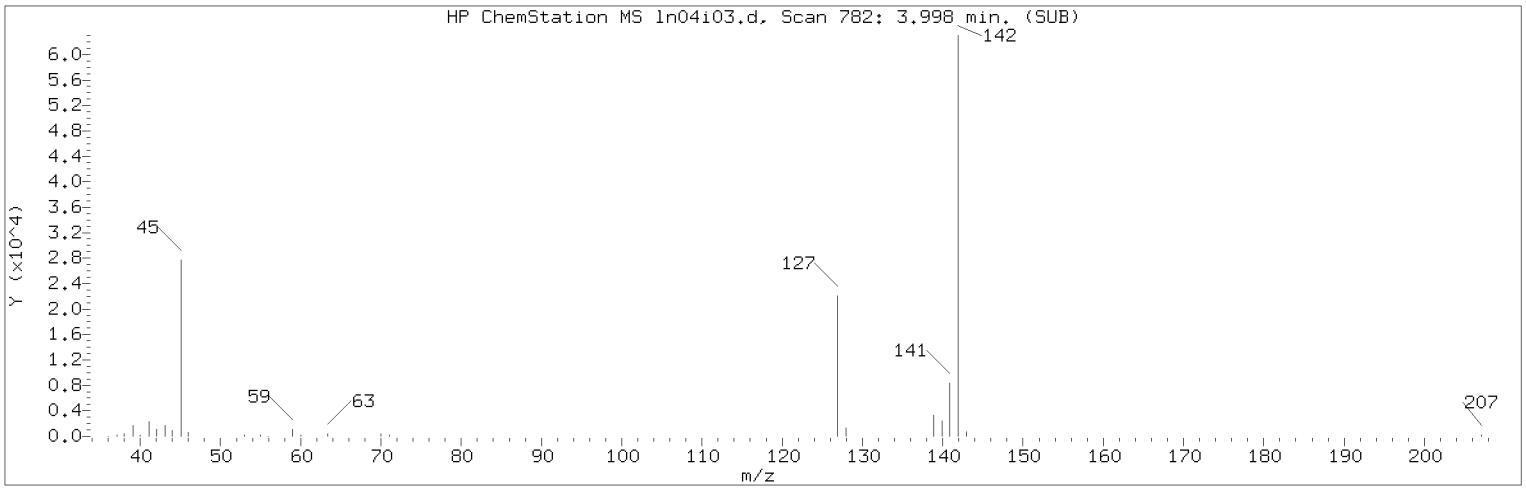
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

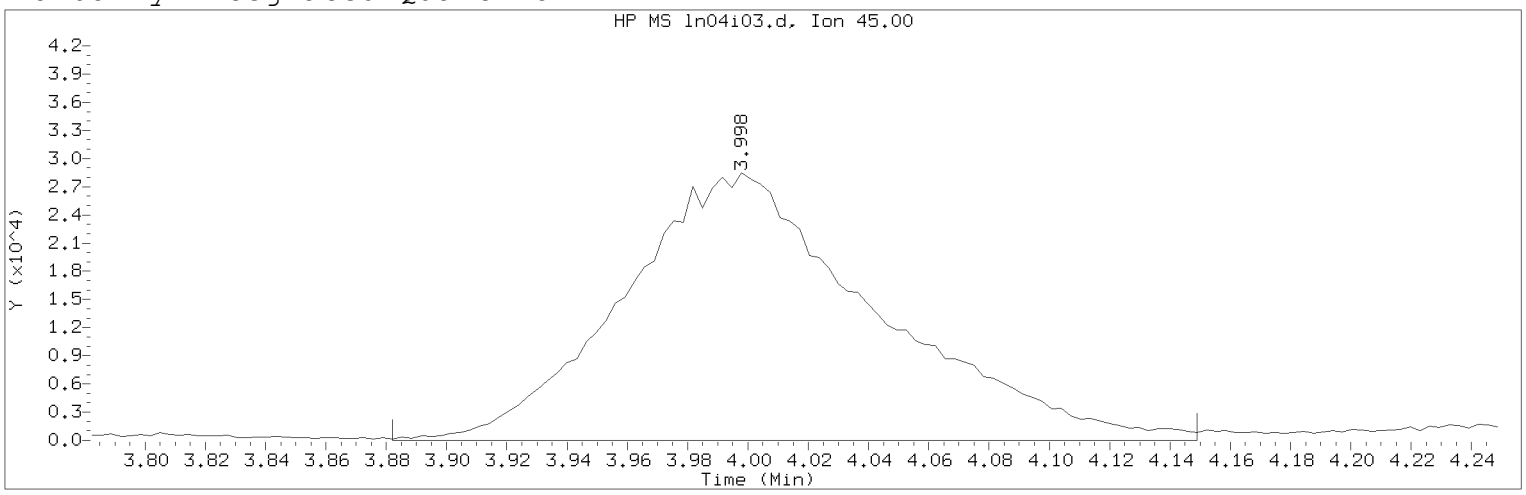
Compound Number	: 10		
Compound Name	: Dichlorofluoromethane		
Scan Number	: 315		
Retention Time (minutes)	: 2.496		
Quant Ion	: 67.00		
Area	: 192		
On-column Amount (ng)	: 0.0562		
Integration start scan	: 311	Integration stop scan:	326
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

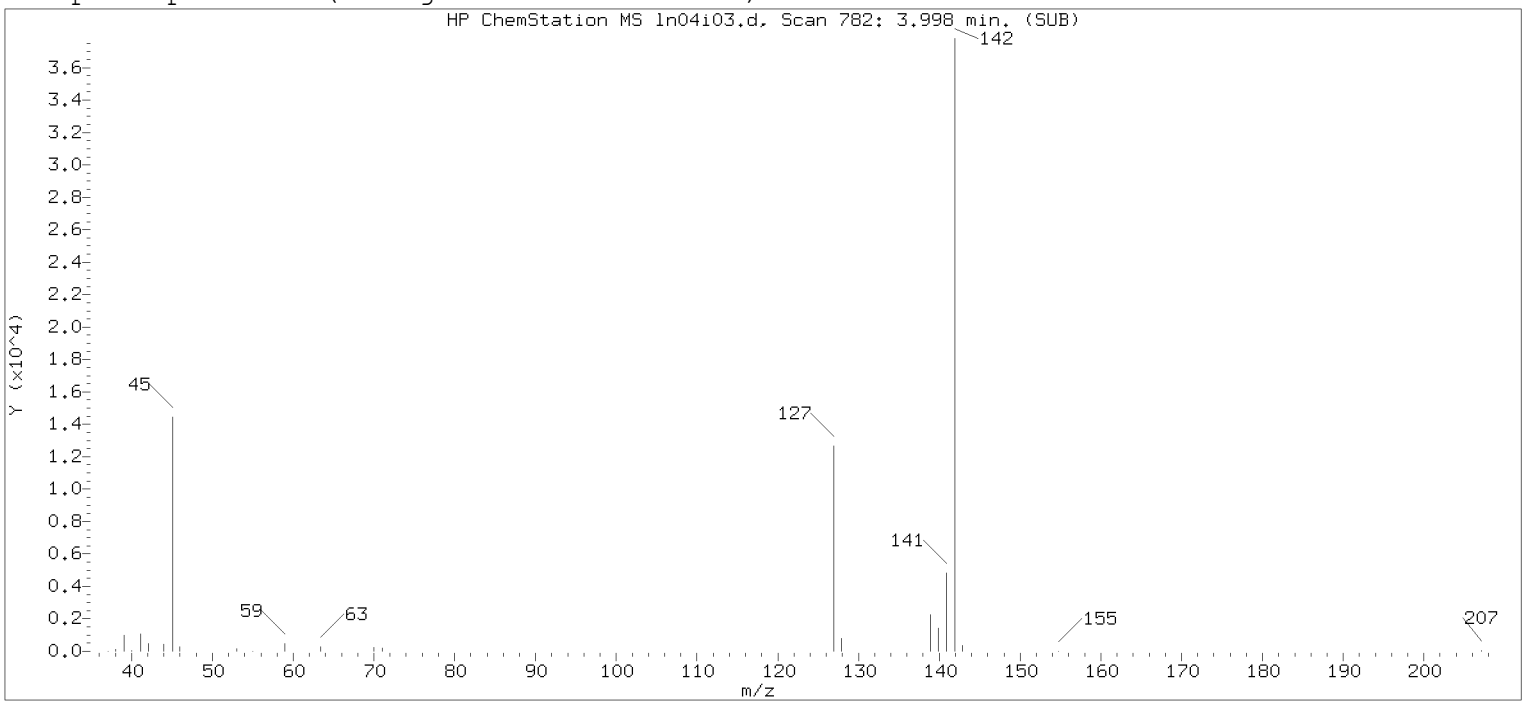
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 782
Retention Time (minutes): 3.998
Quant Ion : 45.00
Area (flag) : 165875M
On-Column Amount (ng) : 254.2825
Integration start scan : 745 Integration stop scan: 828
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

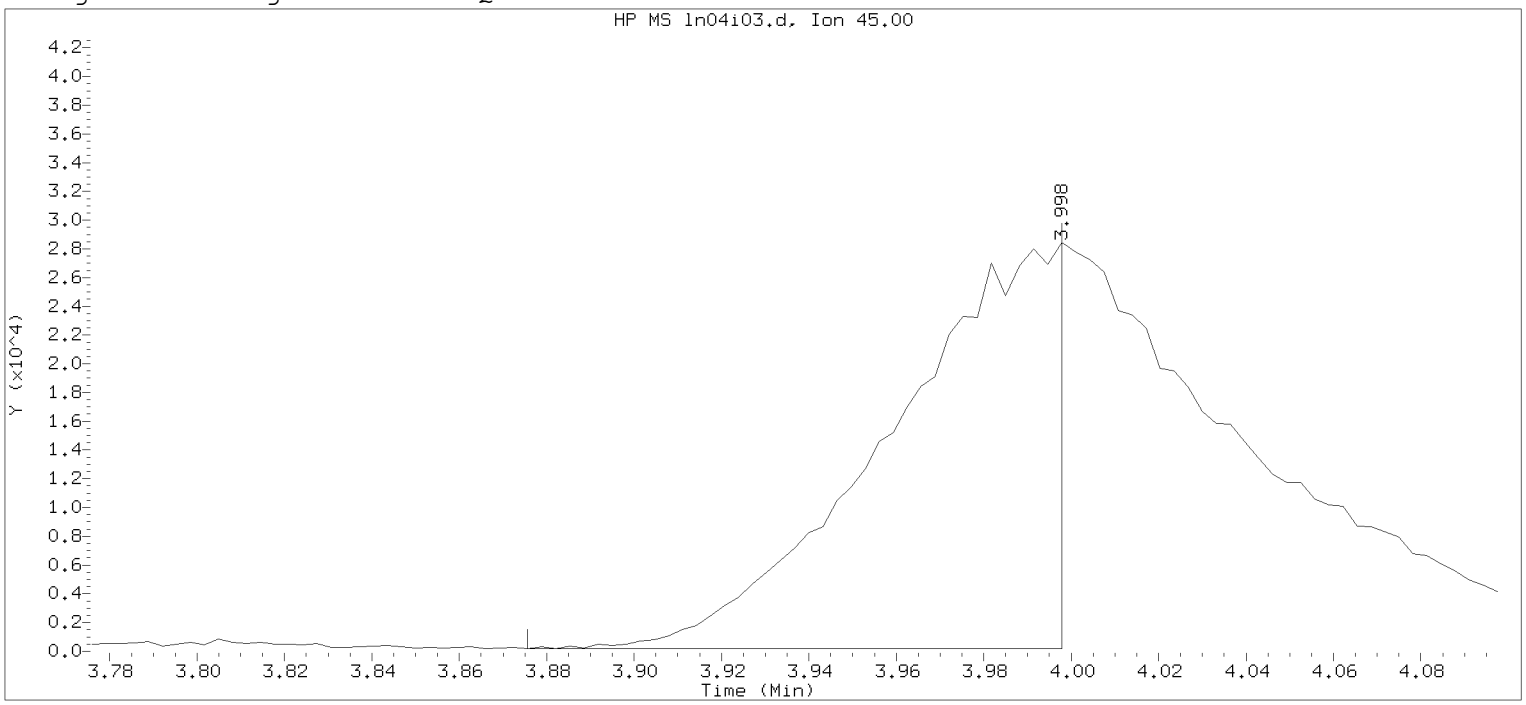
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

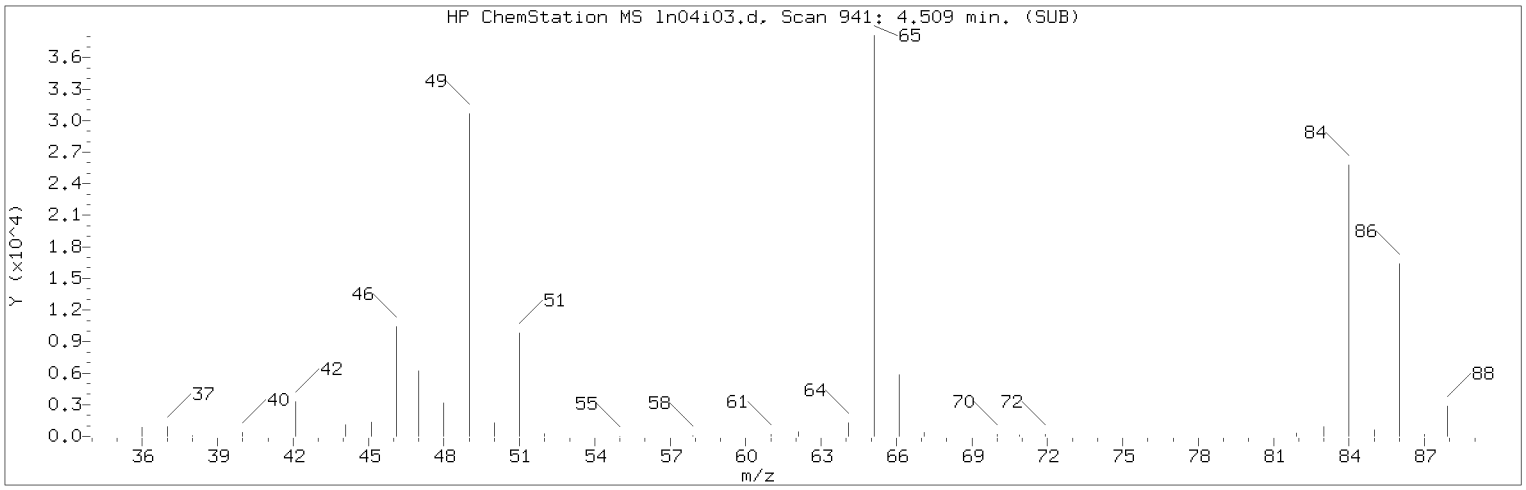
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

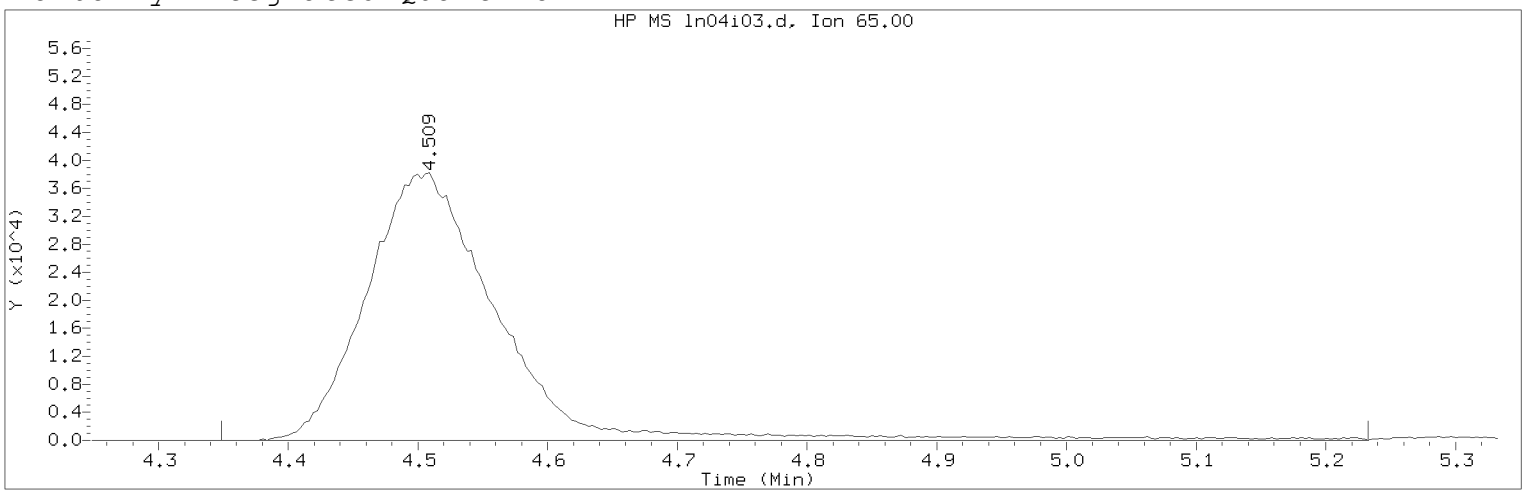
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 782
Retention Time (minutes): 3.998
Quant Ion : 45.00
Area : 74713
On-column Amount (ng) : 135.4026
Integration start scan : 743 Integration stop scan: 781
Y at integration start : 167 Y at integration end: 167

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

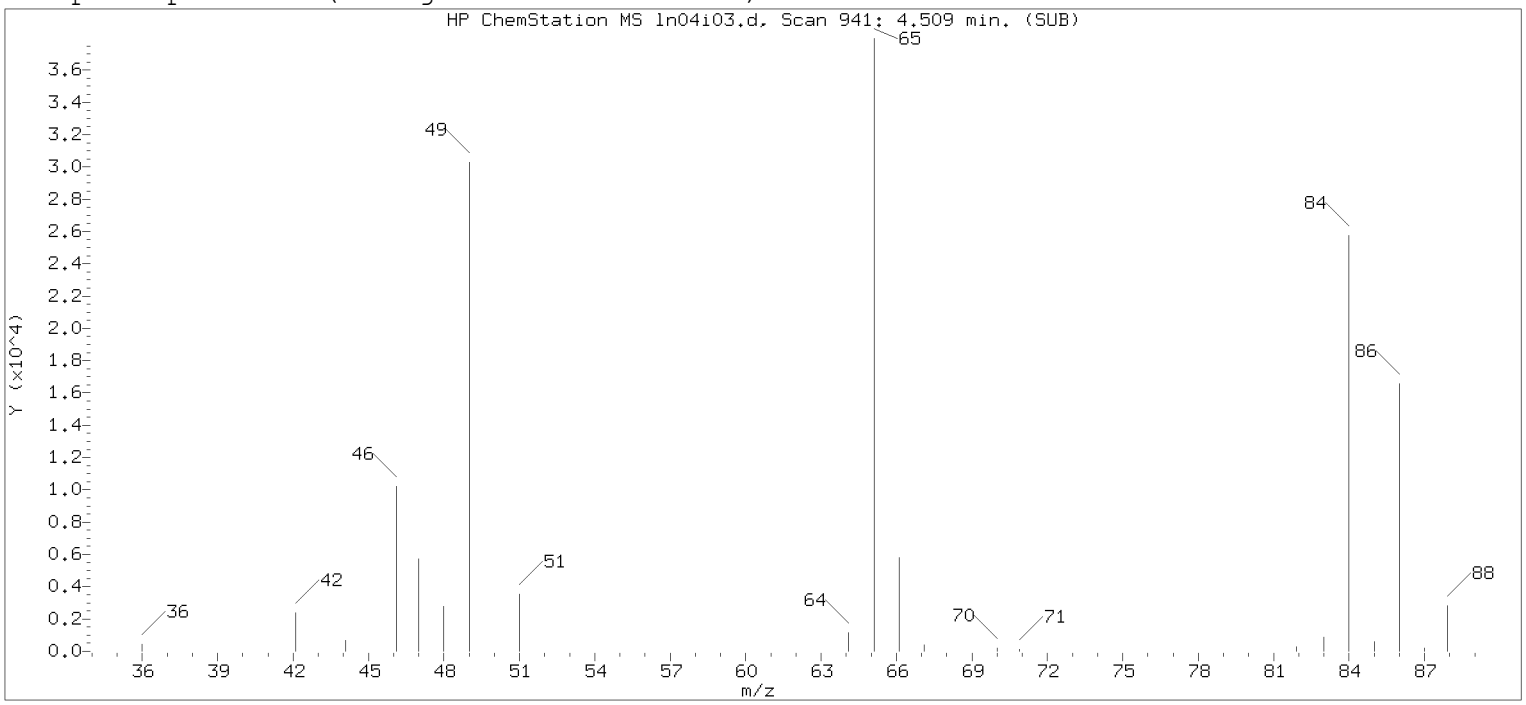
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 269779M
On-Column Amount (ng) : 250.0000
Integration start scan : 890 Integration stop scan: 1165
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

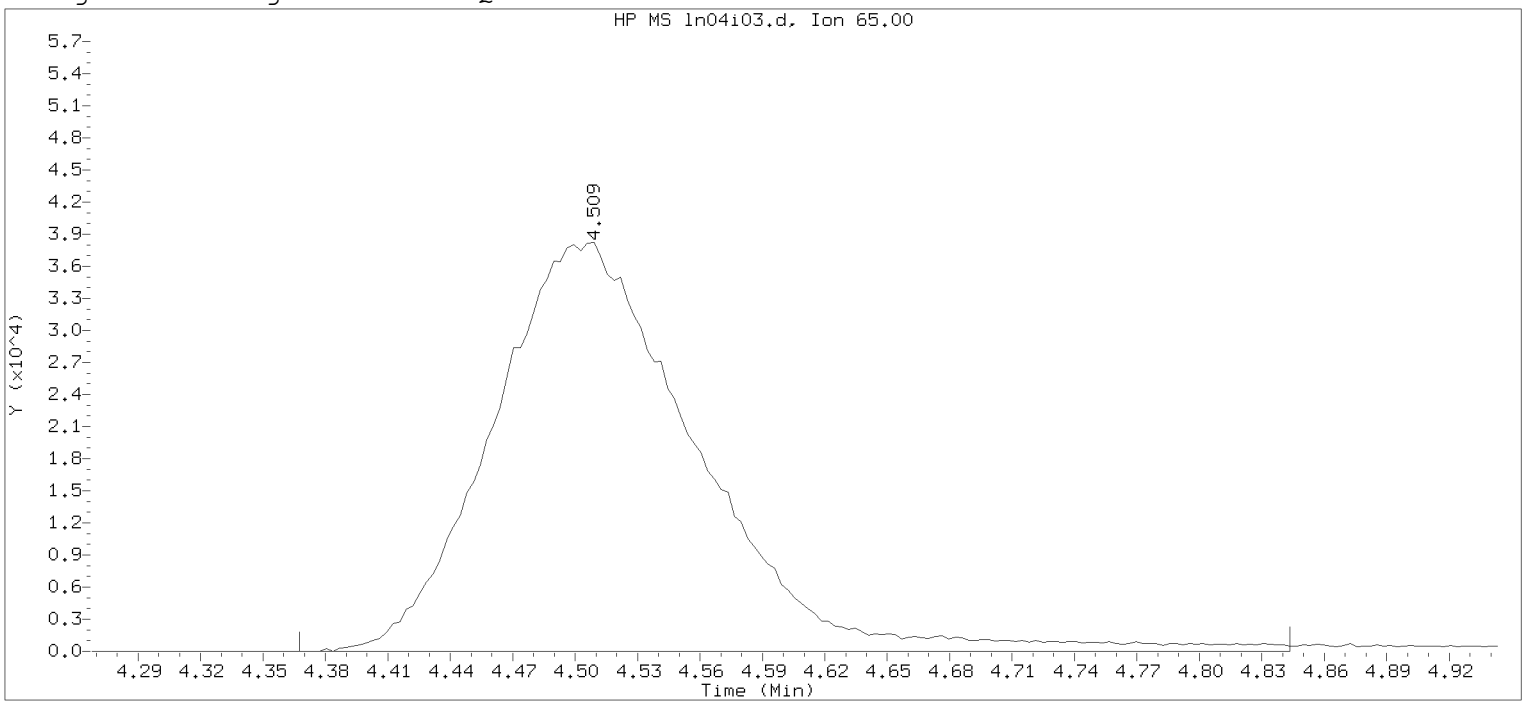
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

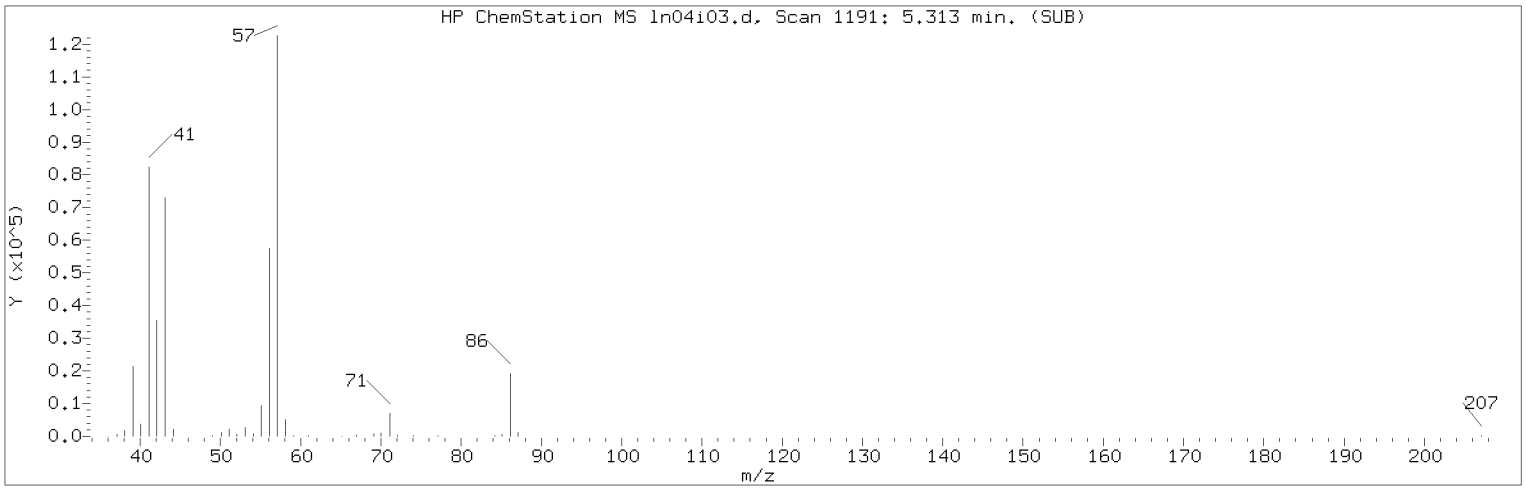
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

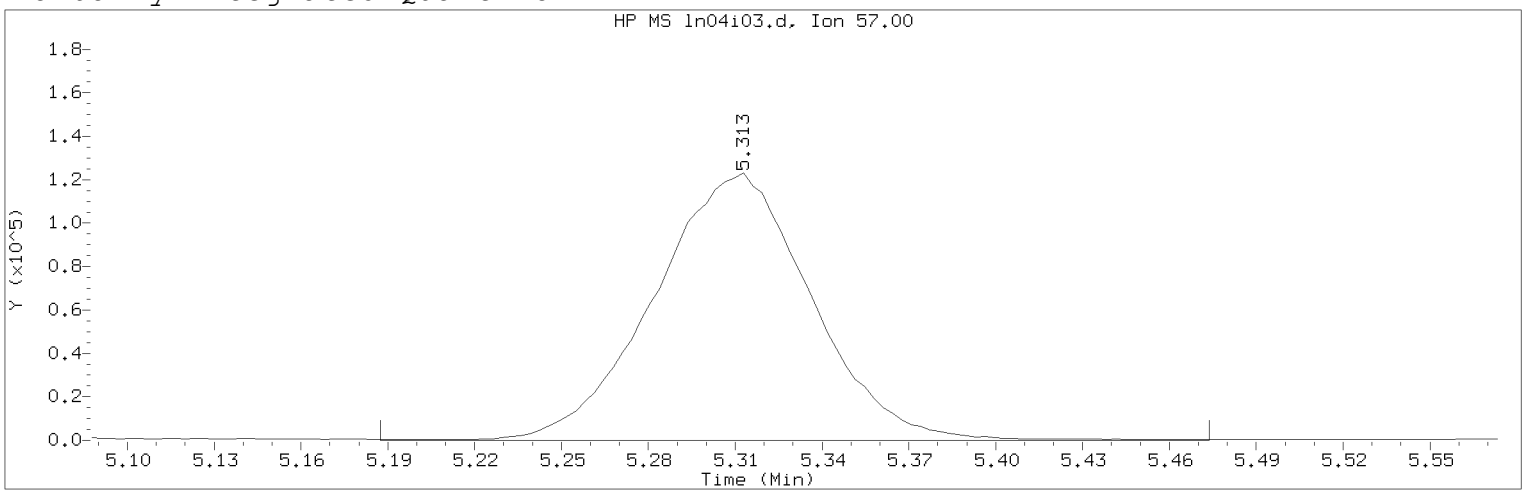
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 261144
On-column Amount (ng) : 250.0000
Integration start scan : 896 Integration stop scan: 1044
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

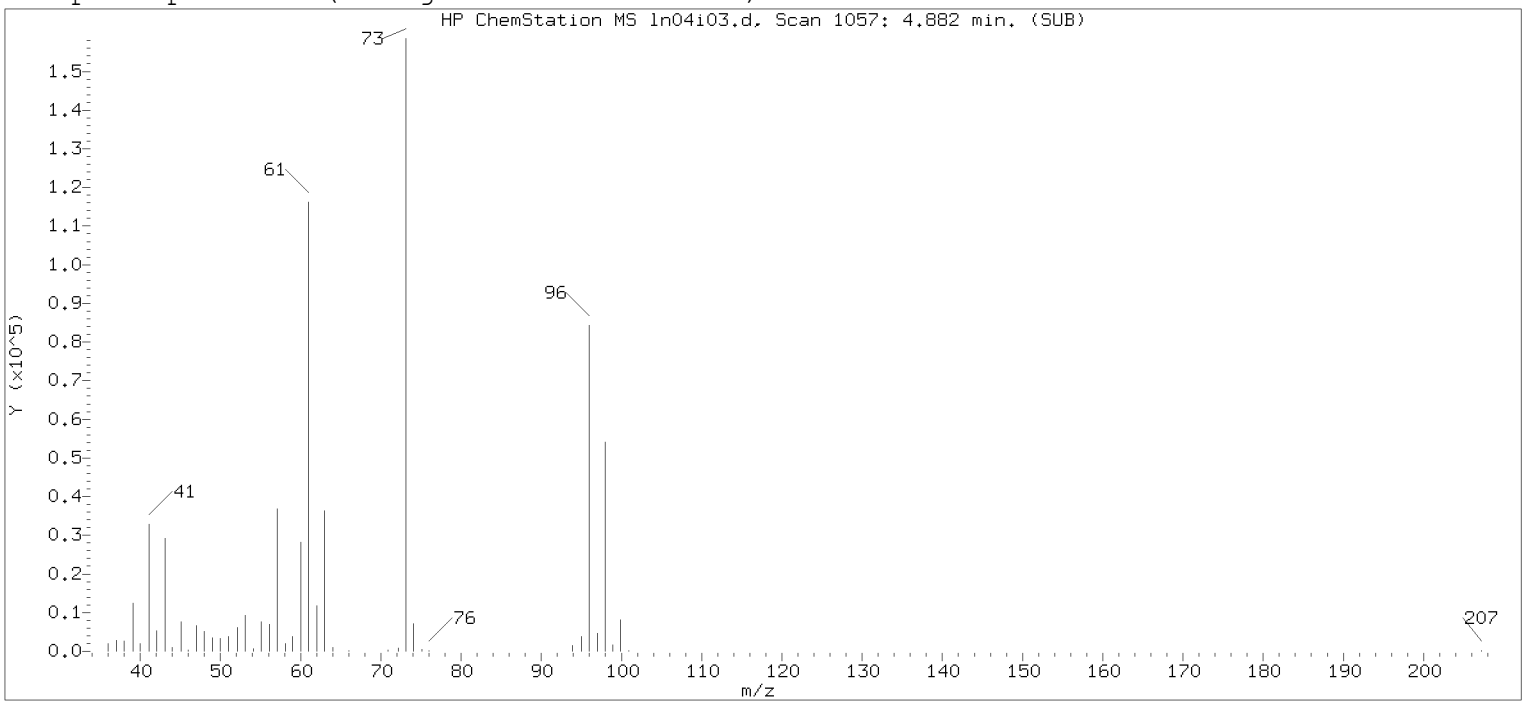
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1191
Retention Time (minutes): 5.313
Quant Ion : 57.00
Area (flag) : 463732M
On-Column Amount (ng) : 52.3639
Integration start scan : 1151 Integration stop scan: 1240
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

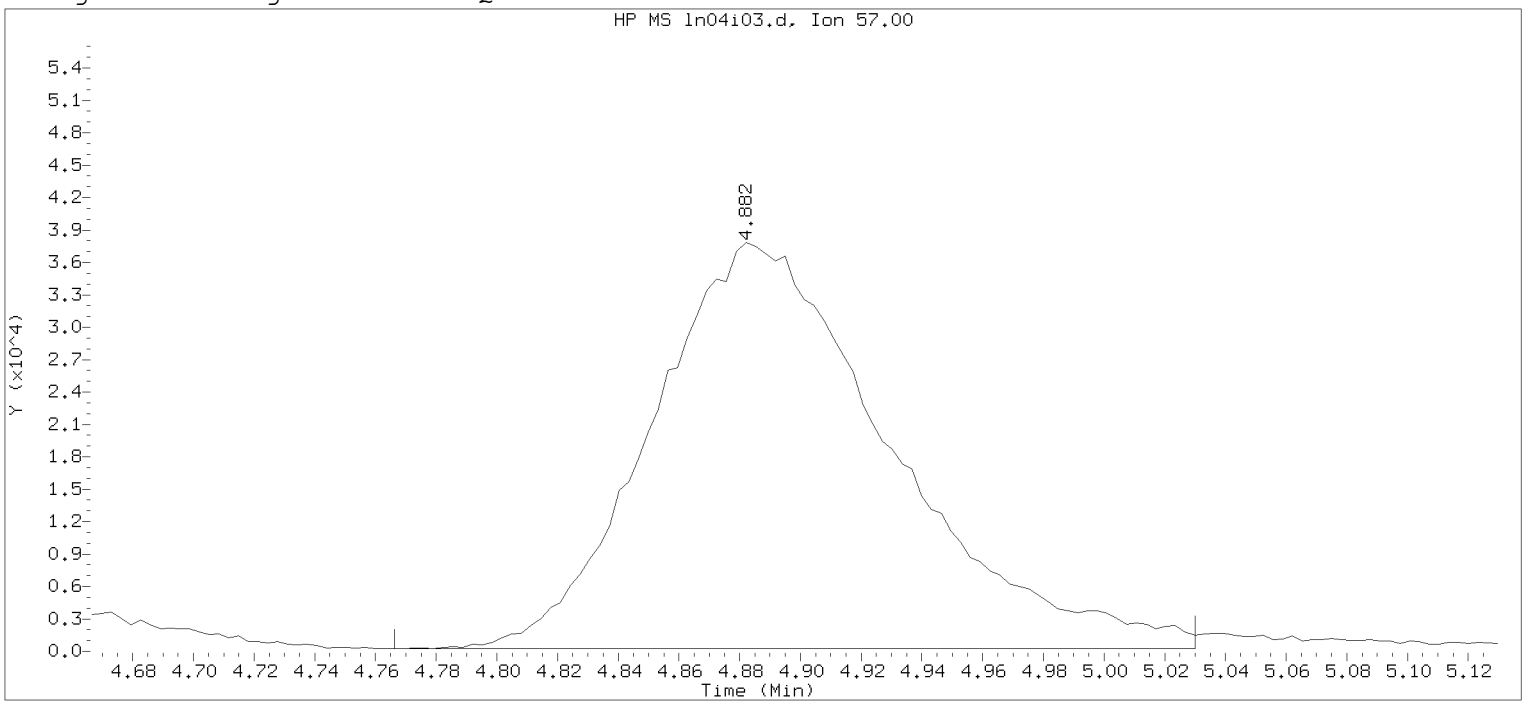
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

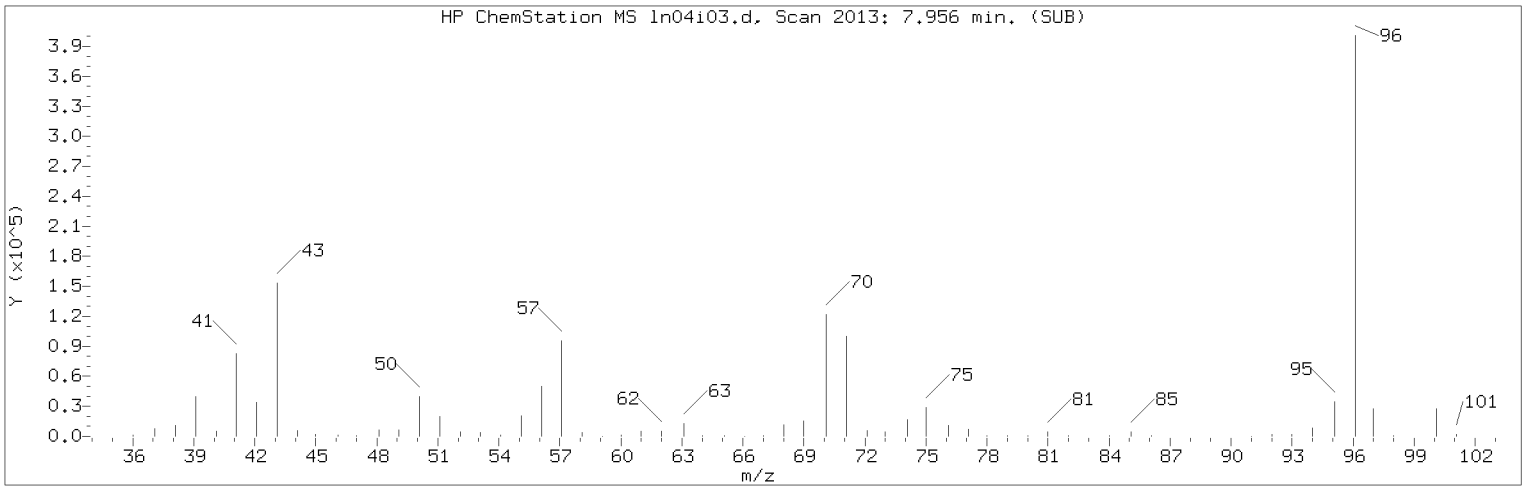
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

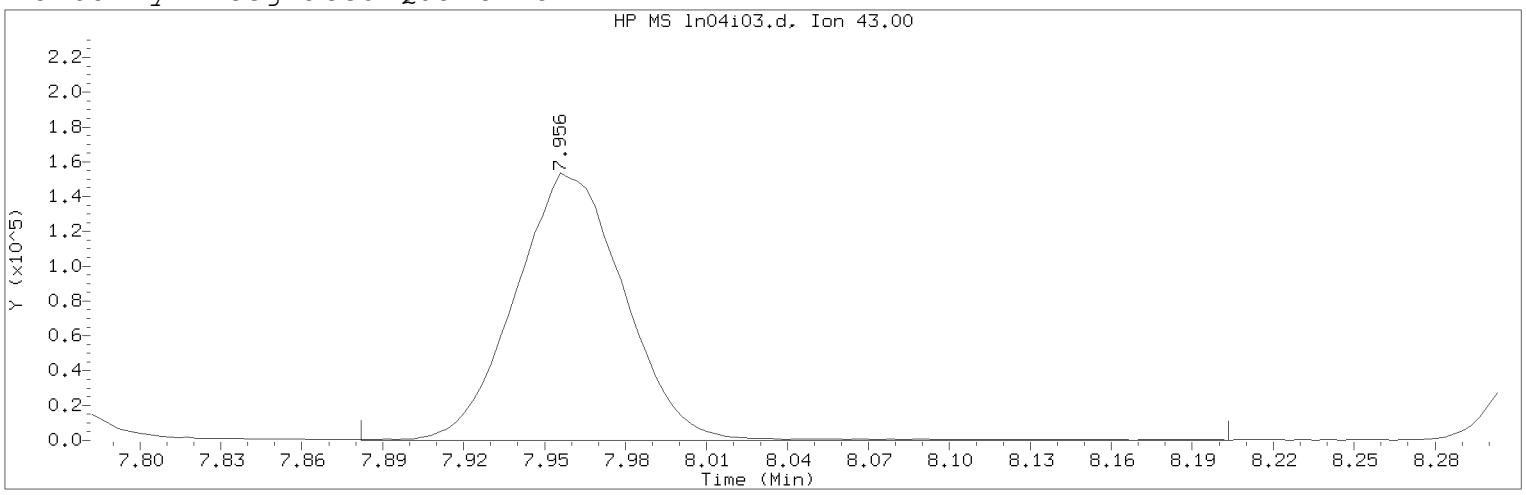
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1057		
Retention Time (minutes)	: 4.882		
Quant Ion	: 57.00		
Area	: 205522		
On-column Amount (ng)	: 50.0557		
Integration start scan	: 1020	Integration stop scan:	1102
Y at integration start	: 228	Y at integration end:	228

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

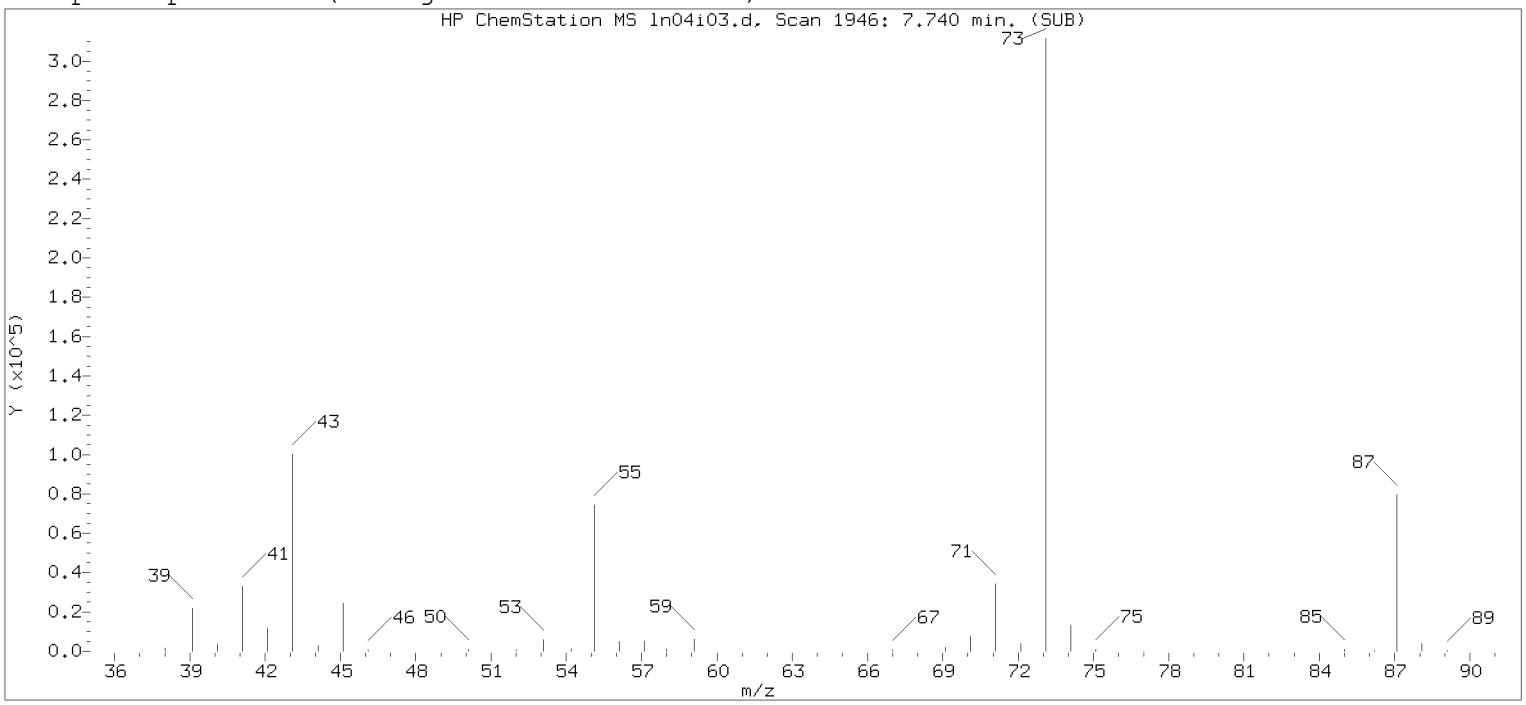
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2013
Retention Time (minutes): 7.956
Quant Ion : 43.00
Area (flag) : 432248MA
On-Column Amount (ng) : 52.2472
Integration start scan : 1989 Integration stop scan: 2089
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

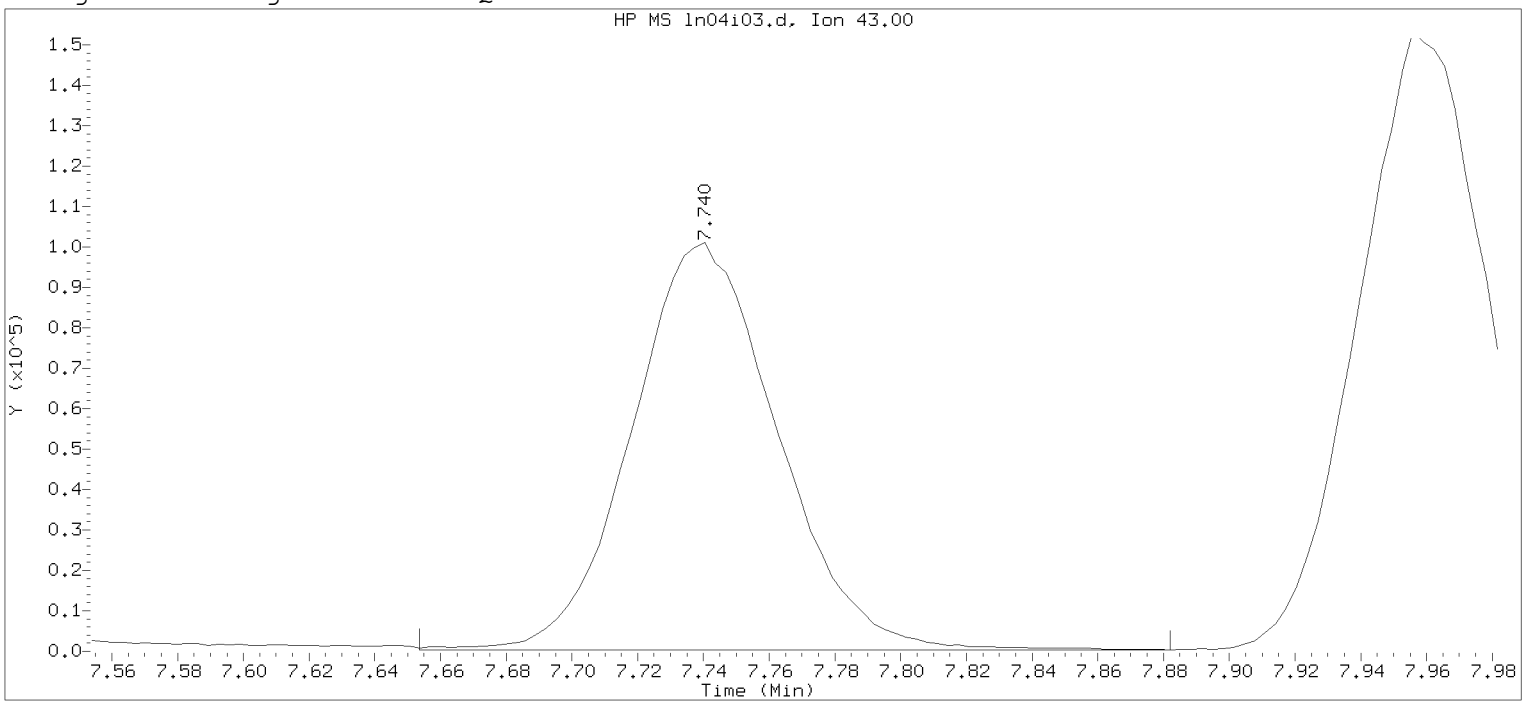
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

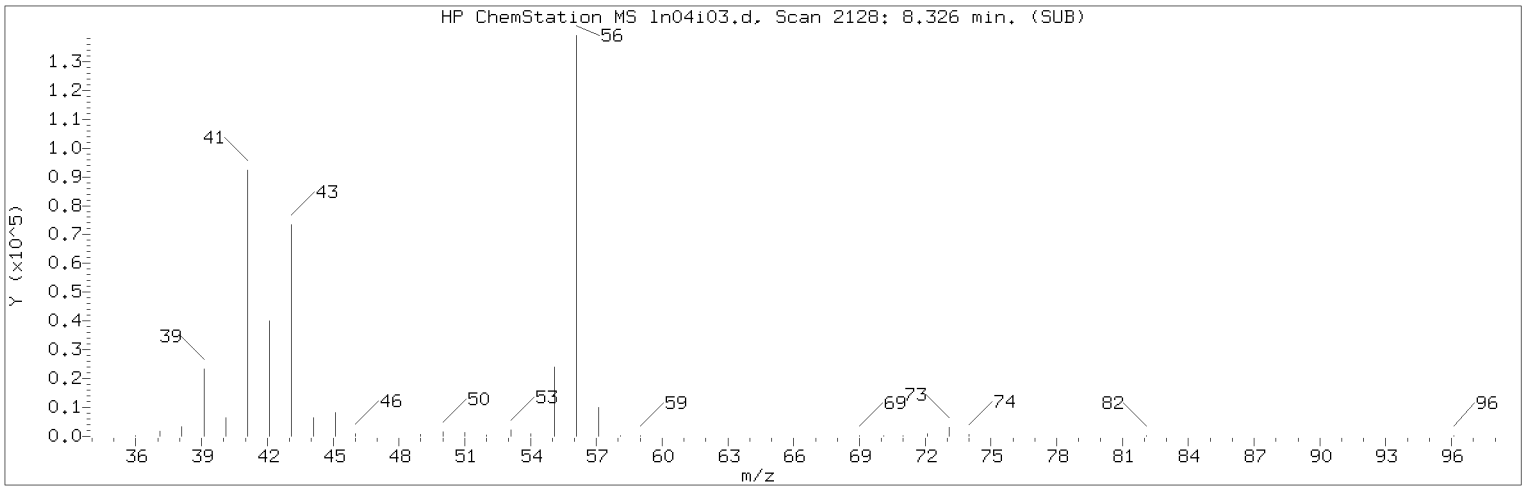
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

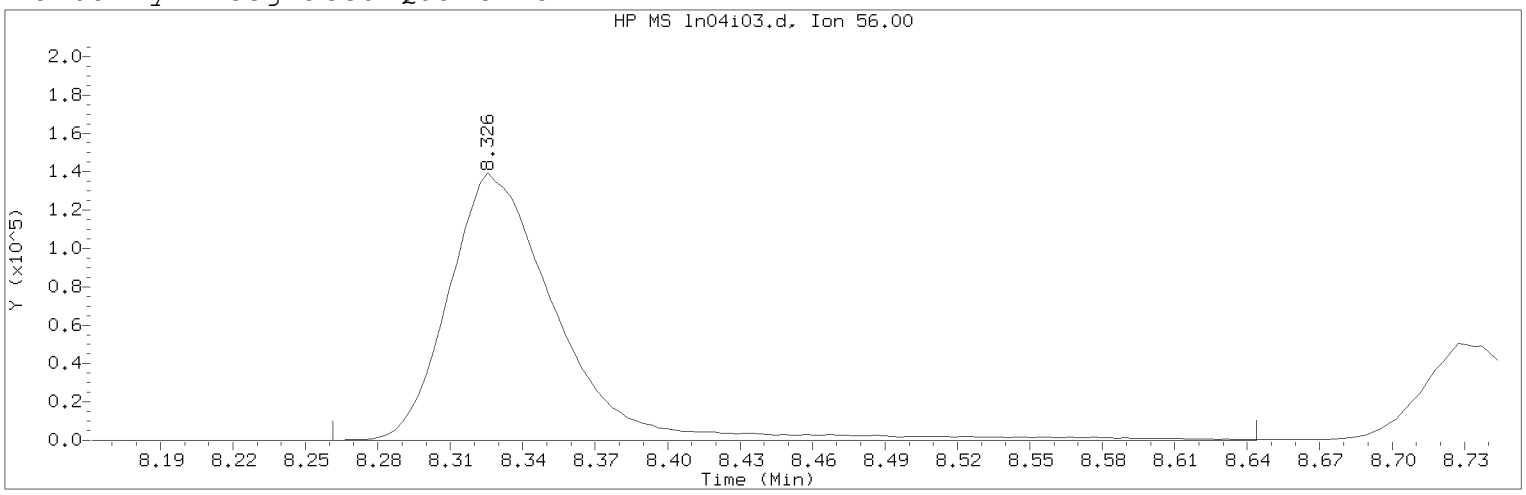
Compound Number	: 67		
Compound Name	: n-Heptane		
Scan Number	: 1946		
Retention Time (minutes)	: 7.740		
Quant Ion	: 43.00		
Area	: 311136		
On-column Amount (ng)	: 51.5793		
Integration start scan	: 1918	Integration stop scan:	1989
Y at integration start	: 288	Y at integration end:	288

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

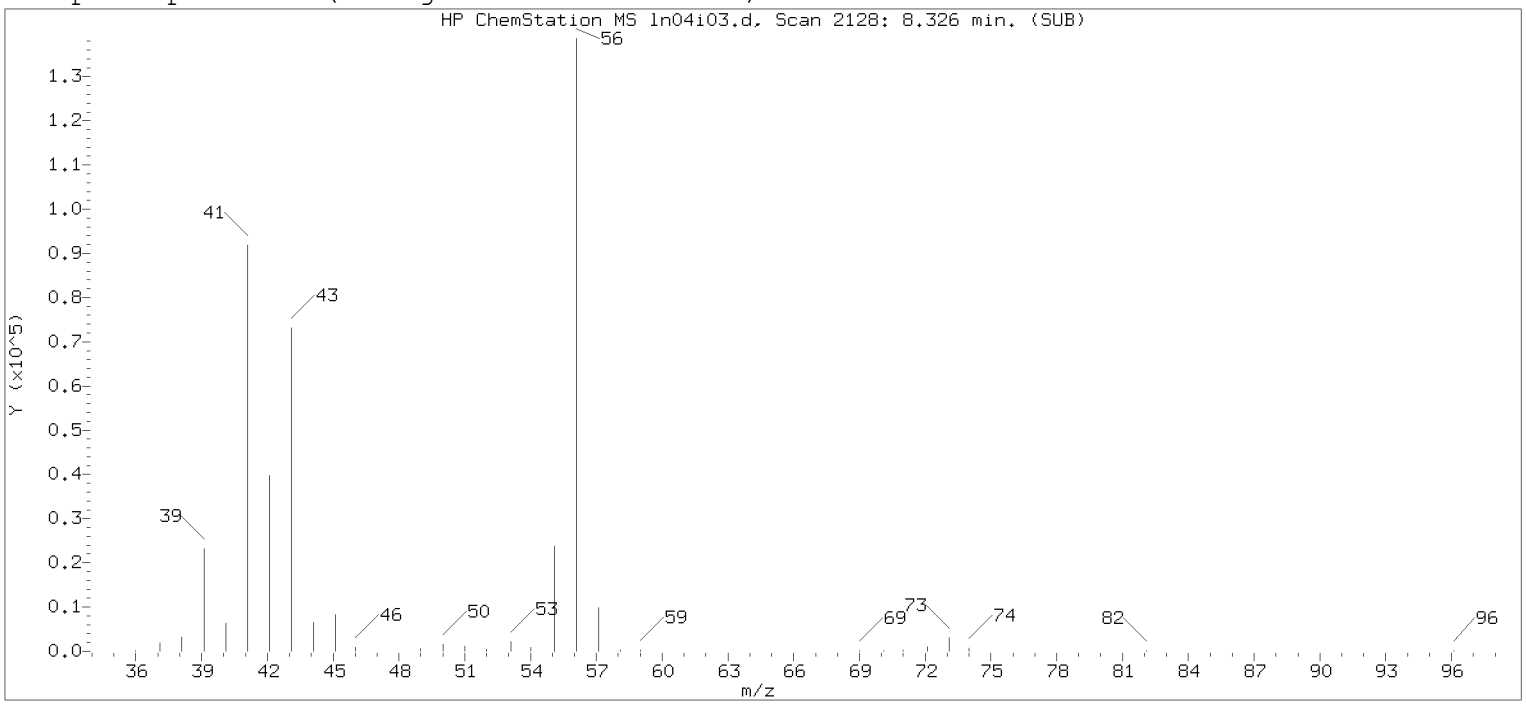
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area (flag) : 438437M
On-Column Amount (ng) : 1332.7496
Integration start scan : 2107 Integration stop scan: 2226
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

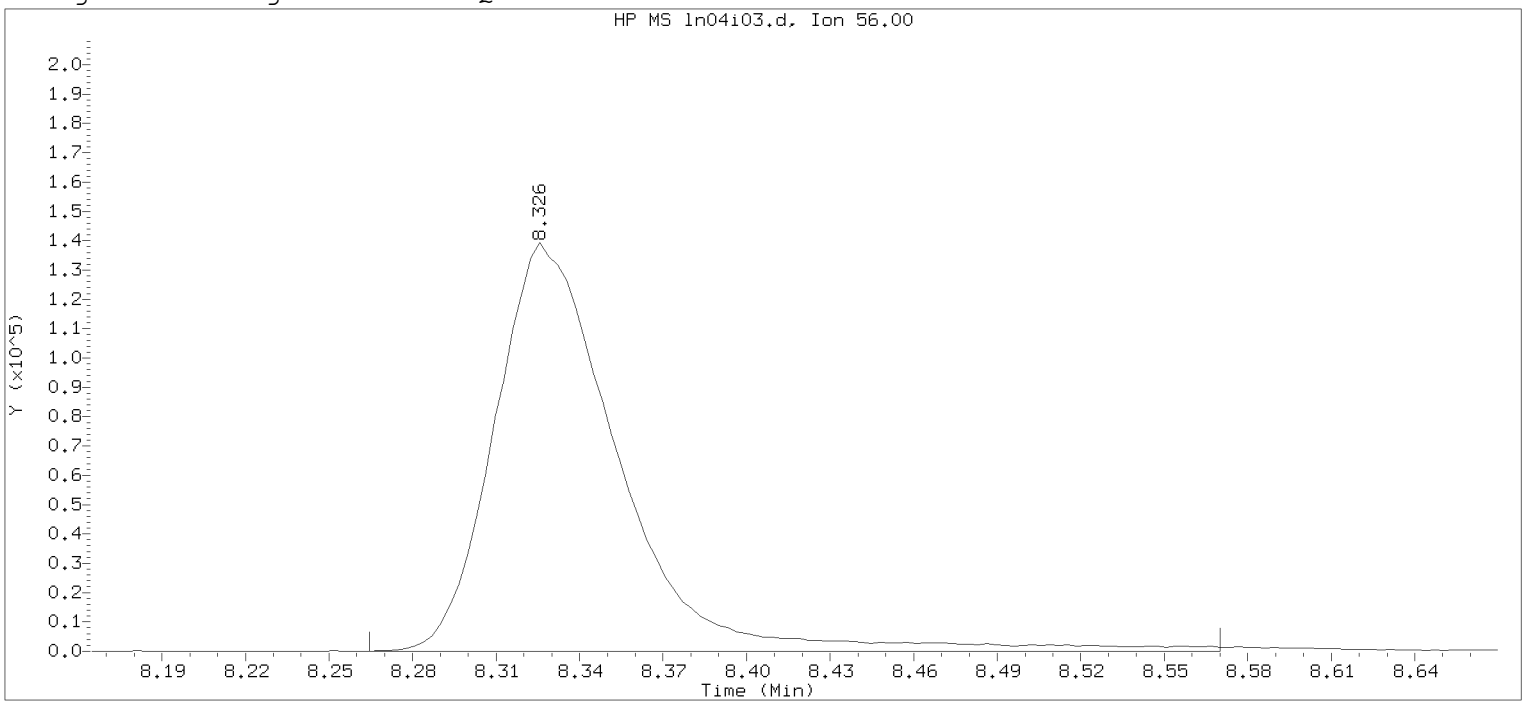
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

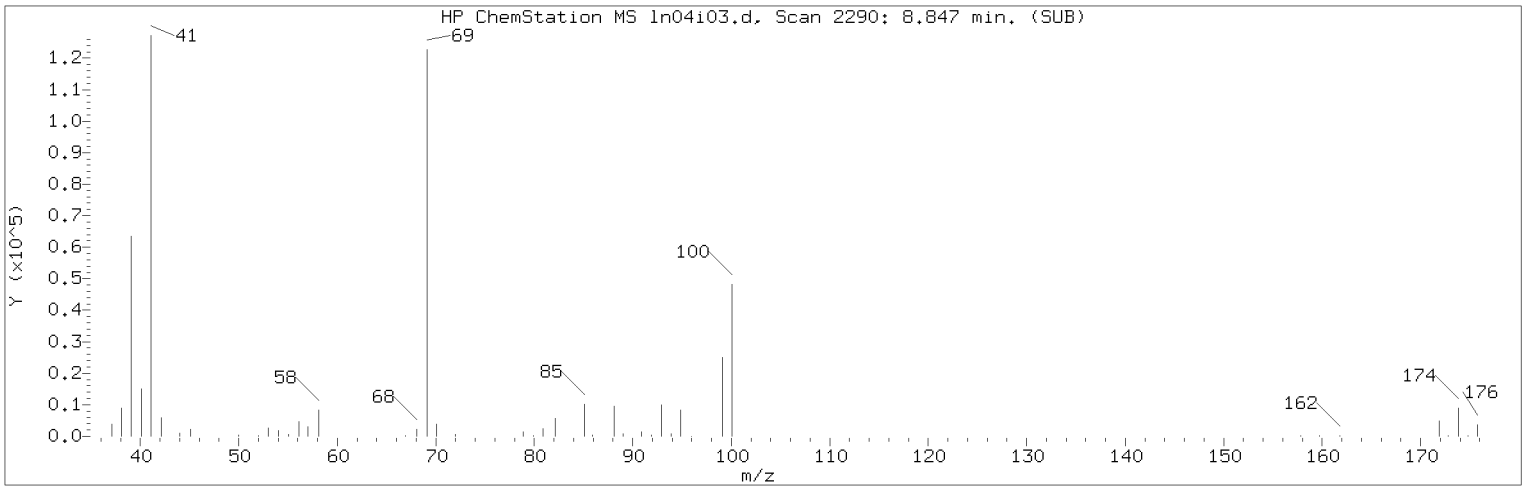
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

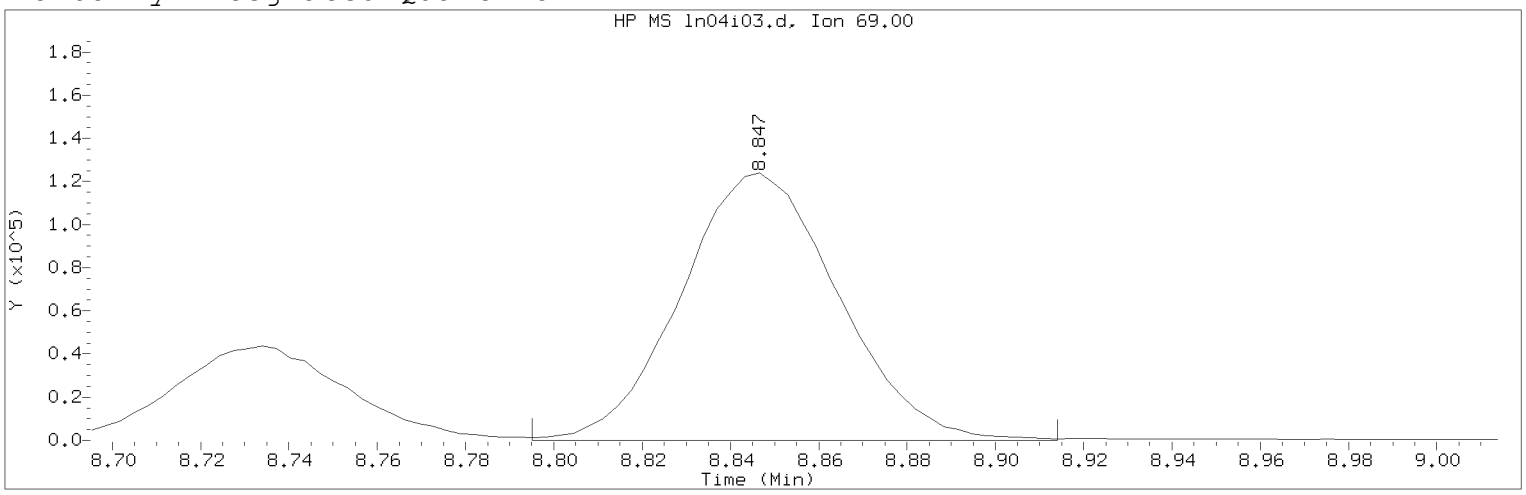
Compound Number	: 69		
Compound Name	: n-Butanol		
Scan Number	: 2128		
Retention Time (minutes)	: 8.326		
Quant Ion	: 56.00		
Area	: 434385		
On-column Amount (ng)	: 1223.8707		
Integration start scan	: 2108	Integration stop scan:	2203
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

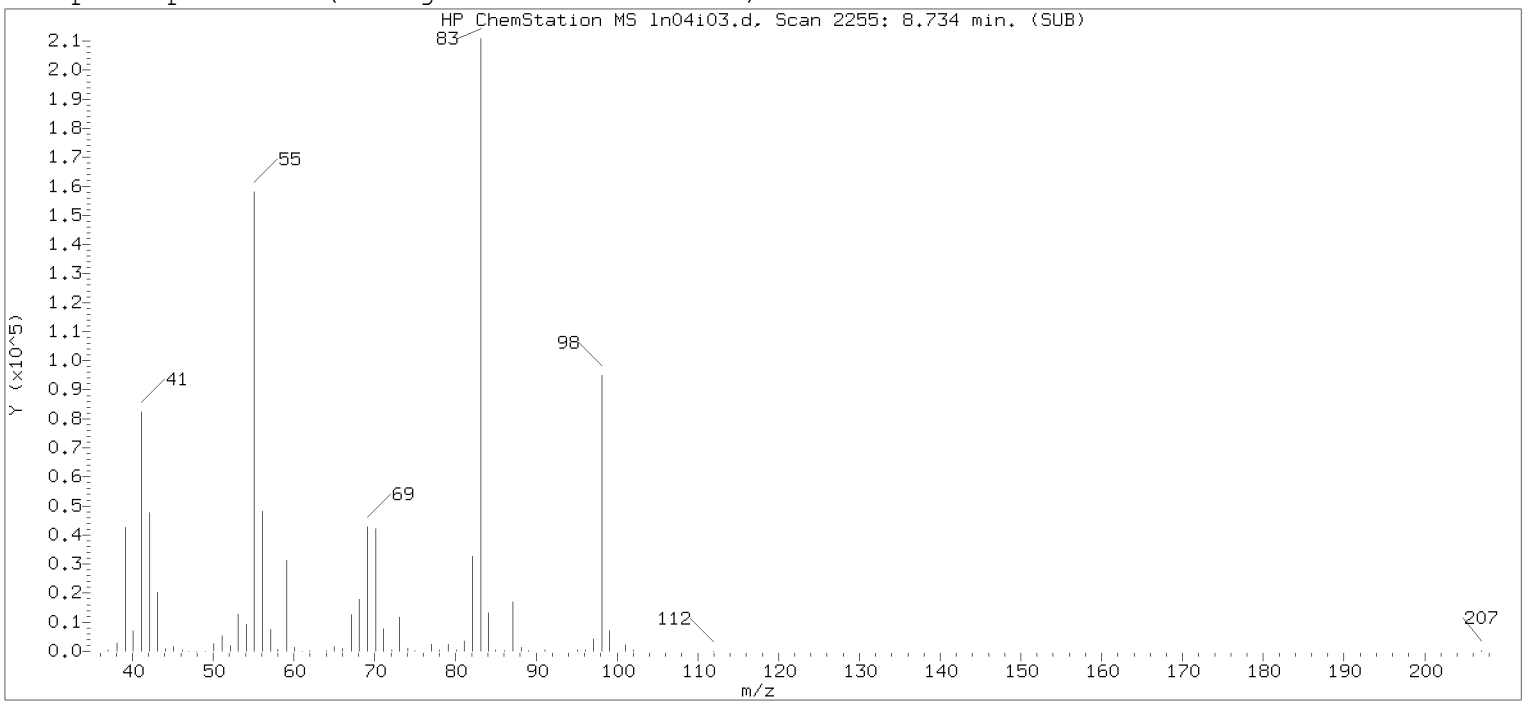
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2290
Retention Time (minutes): 8.847
Quant Ion : 69.00
Area (flag) : 306086A
On-Column Amount (ng) : 52.7952
Integration start scan : 2273 Integration stop scan: 2310
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

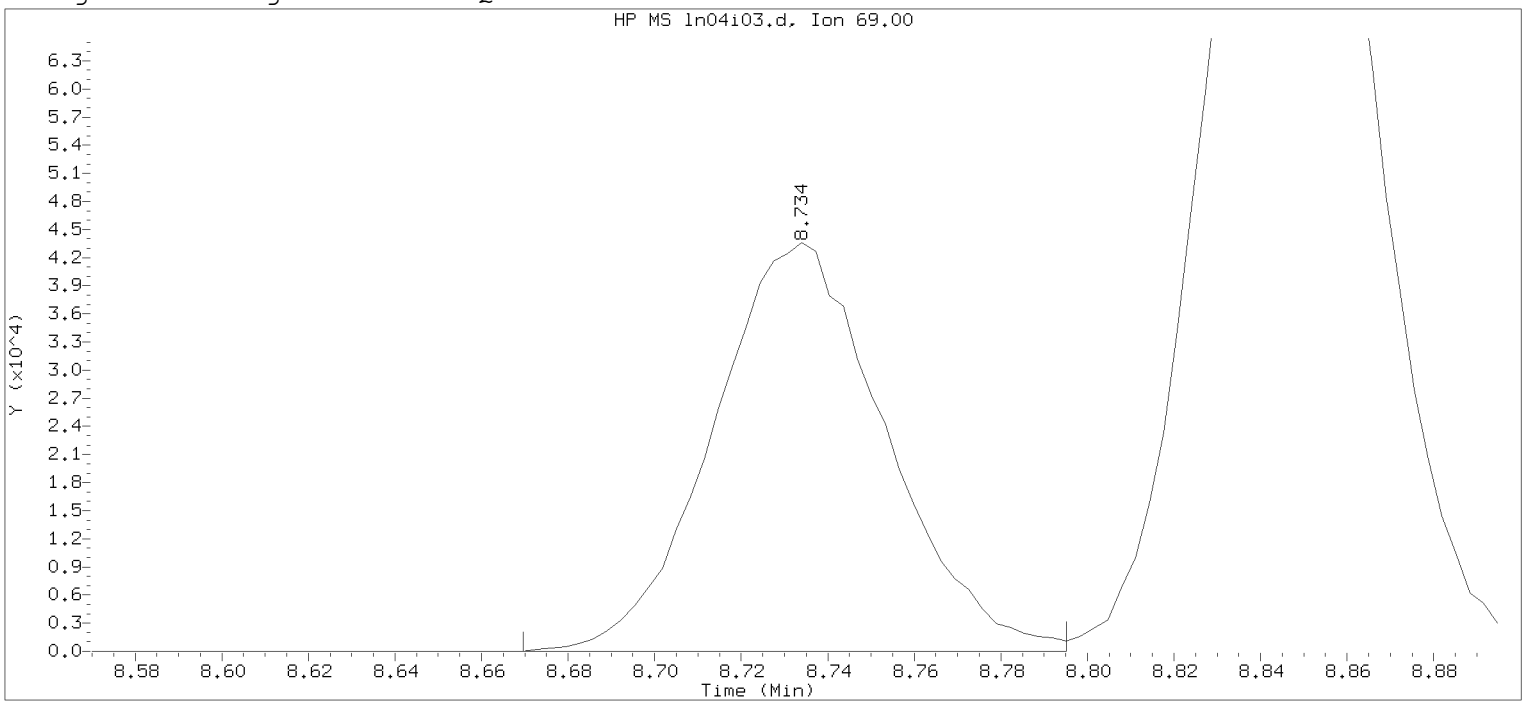
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

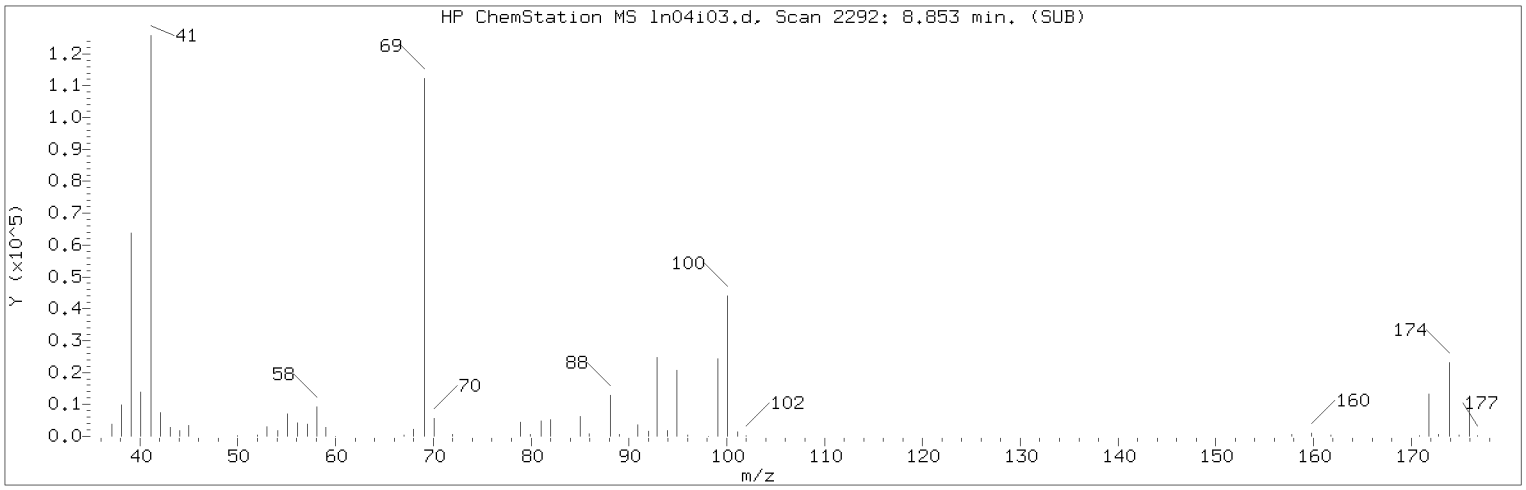
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

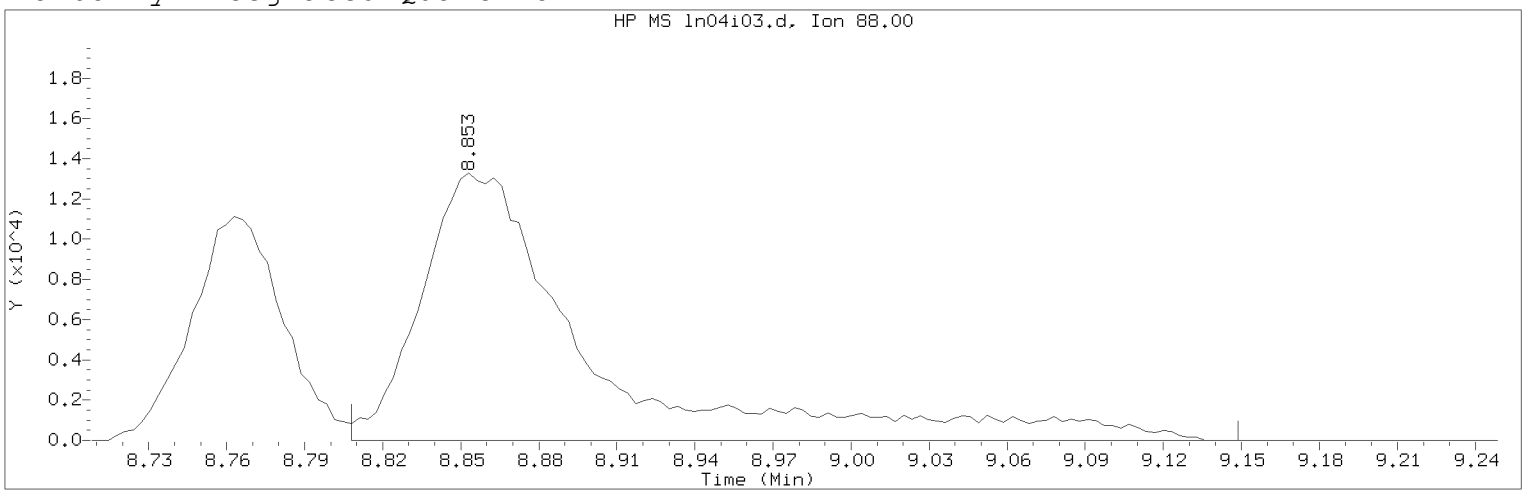
Compound Number	: 76		
Compound Name	: Methyl Methacrylate		
Scan Number	: 2255		
Retention Time (minutes)	: 8.734		
Quant Ion	: 69.00		
Area	: 120511		
On-column Amount (ng)	: 48.6556		
Integration start scan	: 2234	Integration stop scan:	2273
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

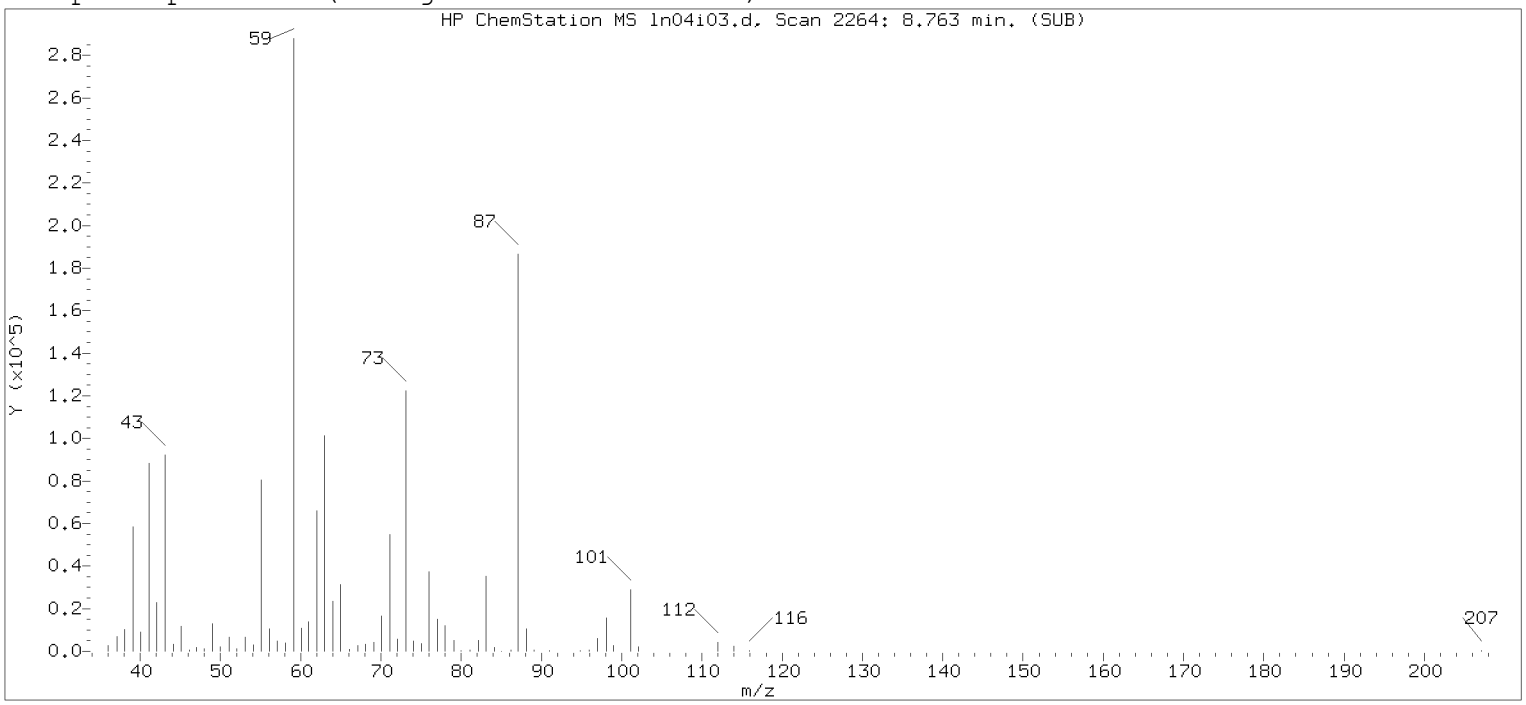
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area (flag) : 59876M
On-Column Amount (ng) : 662.1956
Integration start scan : 2277 Integration stop scan: 2383
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

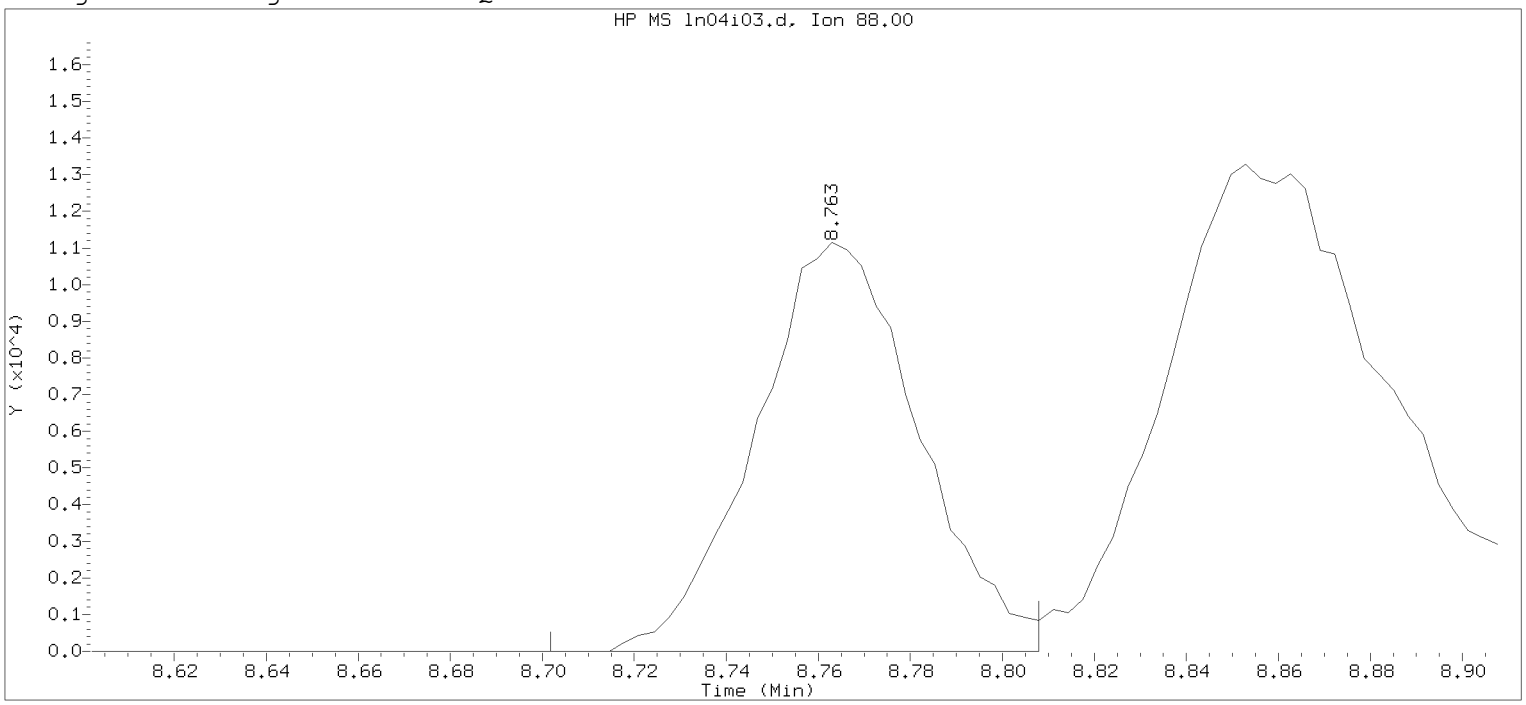
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

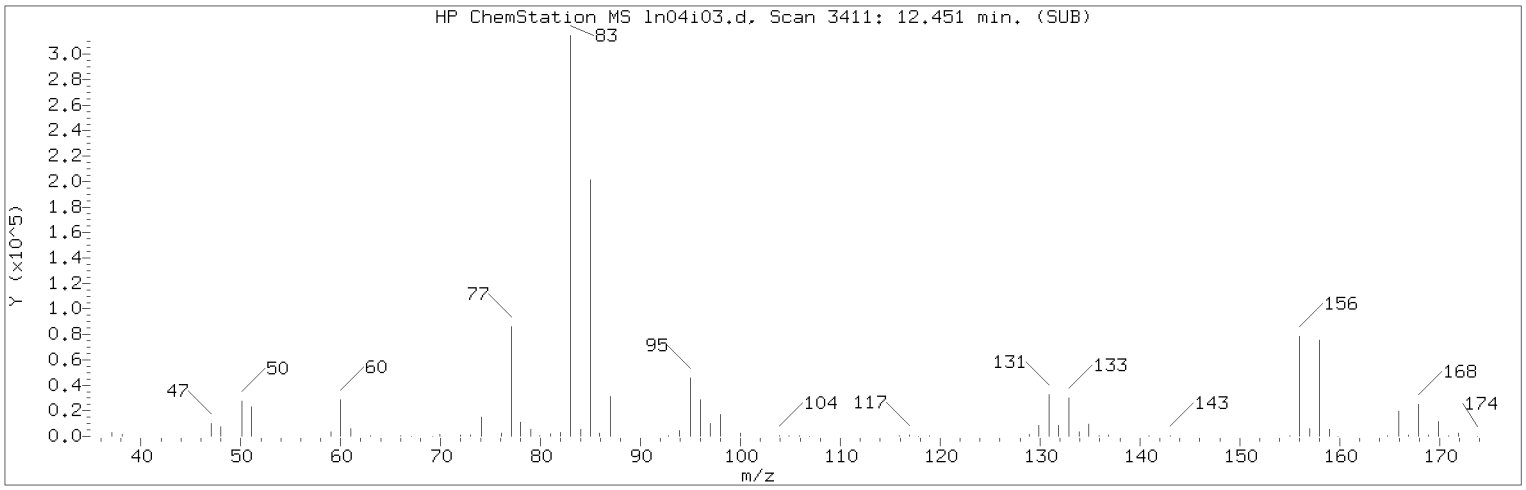
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

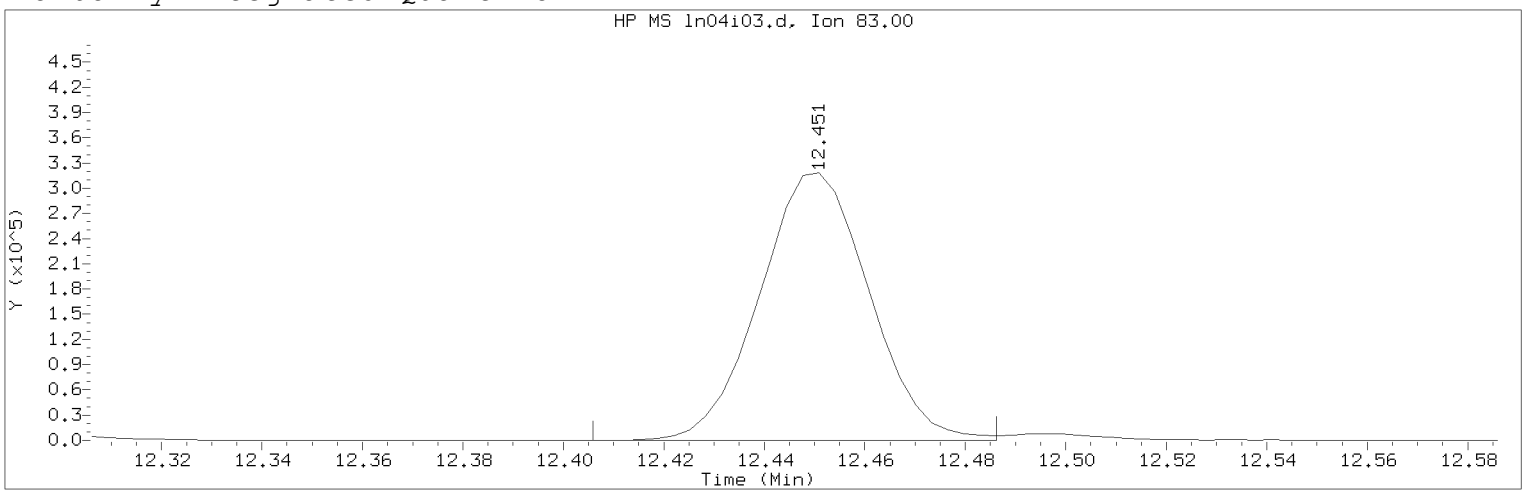
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2264
Retention Time (minutes): 8.763
Quant Ion : 88.00
Area : 27334
On-column Amount (ng) : 447.5530
Integration start scan : 2244 Integration stop scan: 2277
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

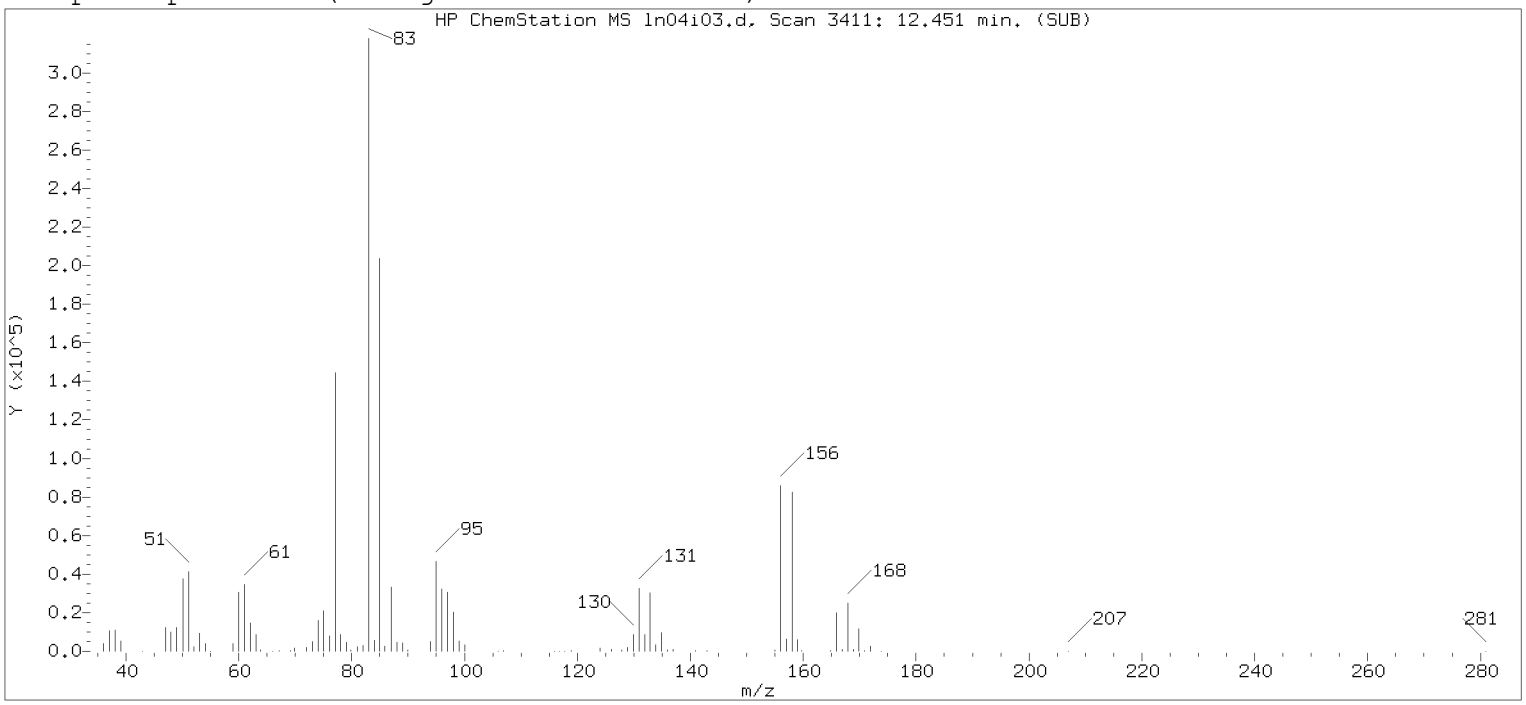
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 482004M
On-Column Amount (ng) : 52.7274
Integration start scan : 3396 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

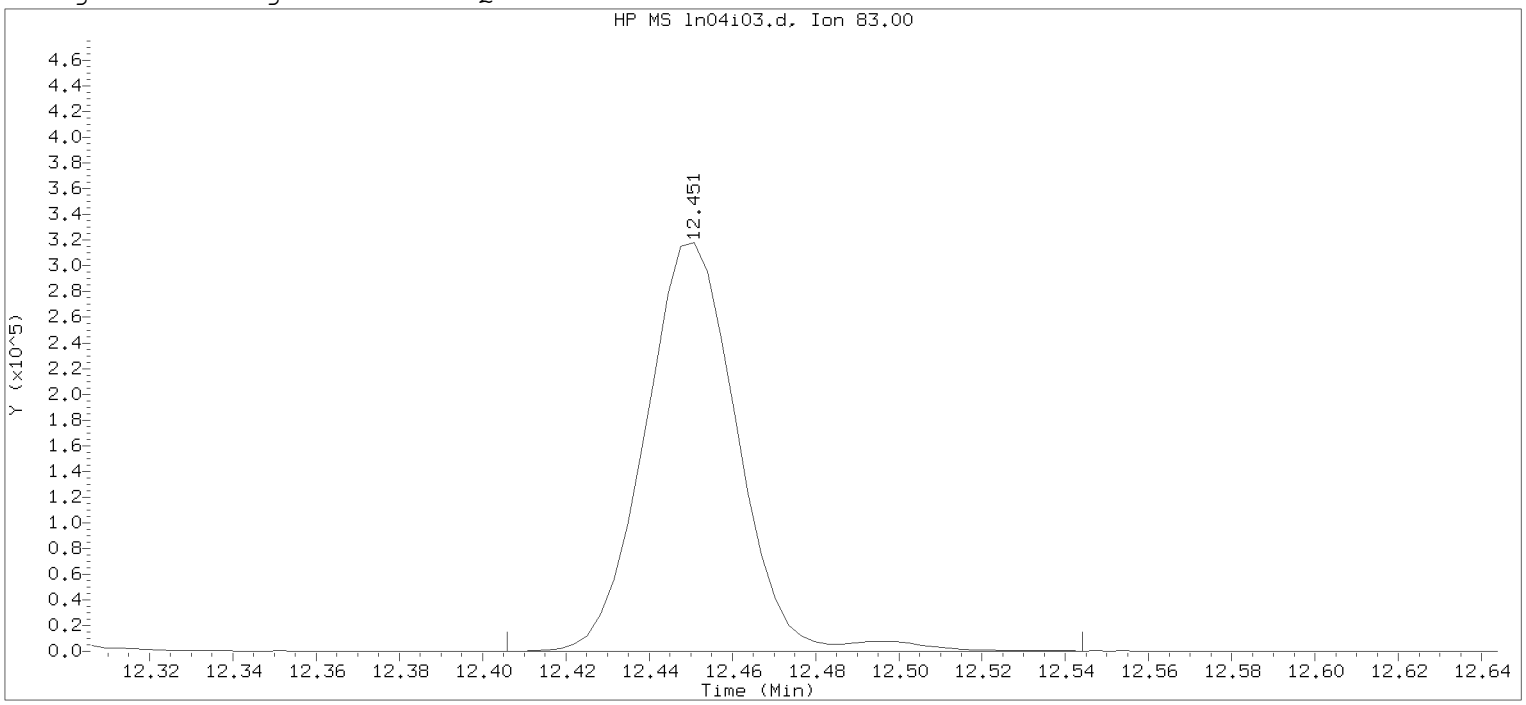
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

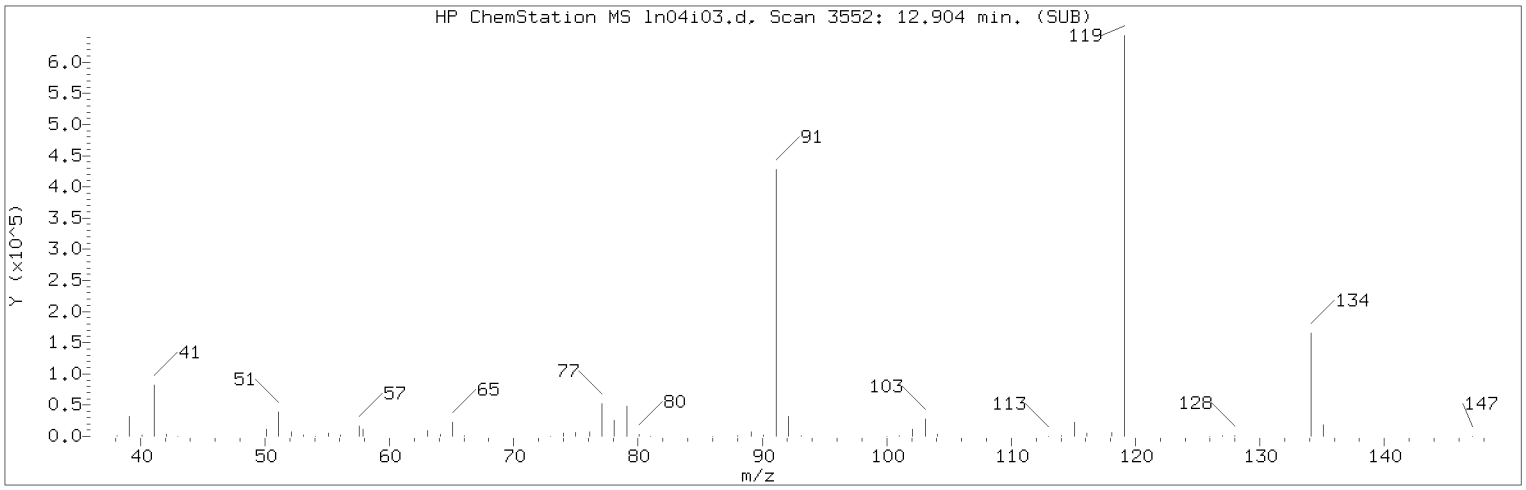
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

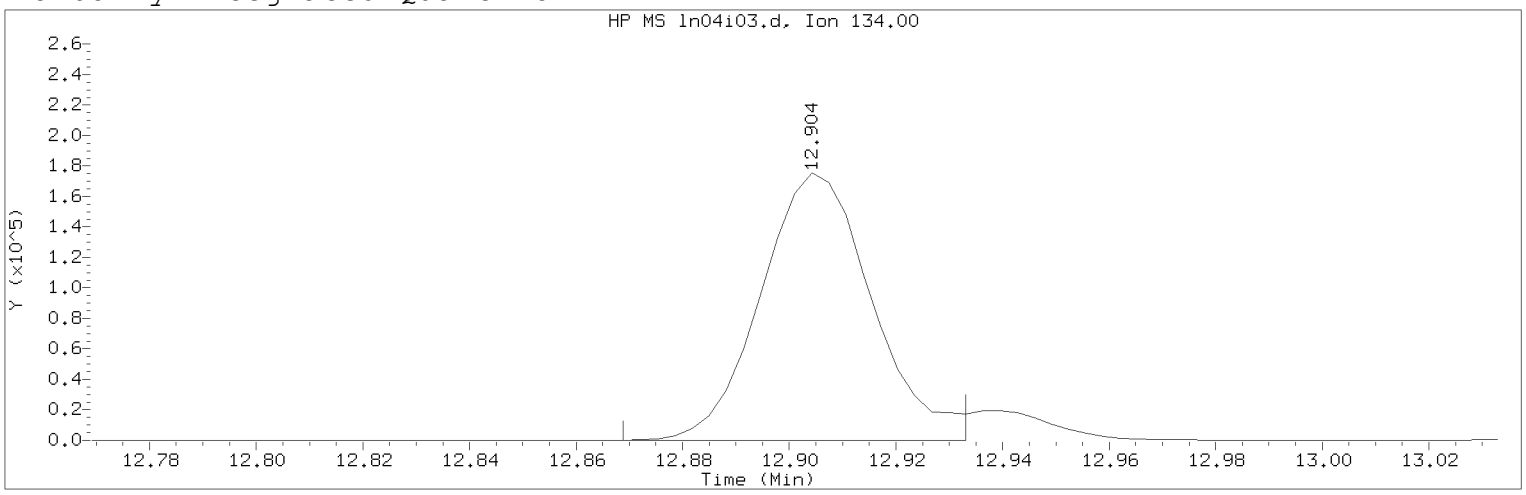
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 491918
On-column Amount (ng) : 50.7154
Integration start scan : 3396 Integration stop scan: 3439
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

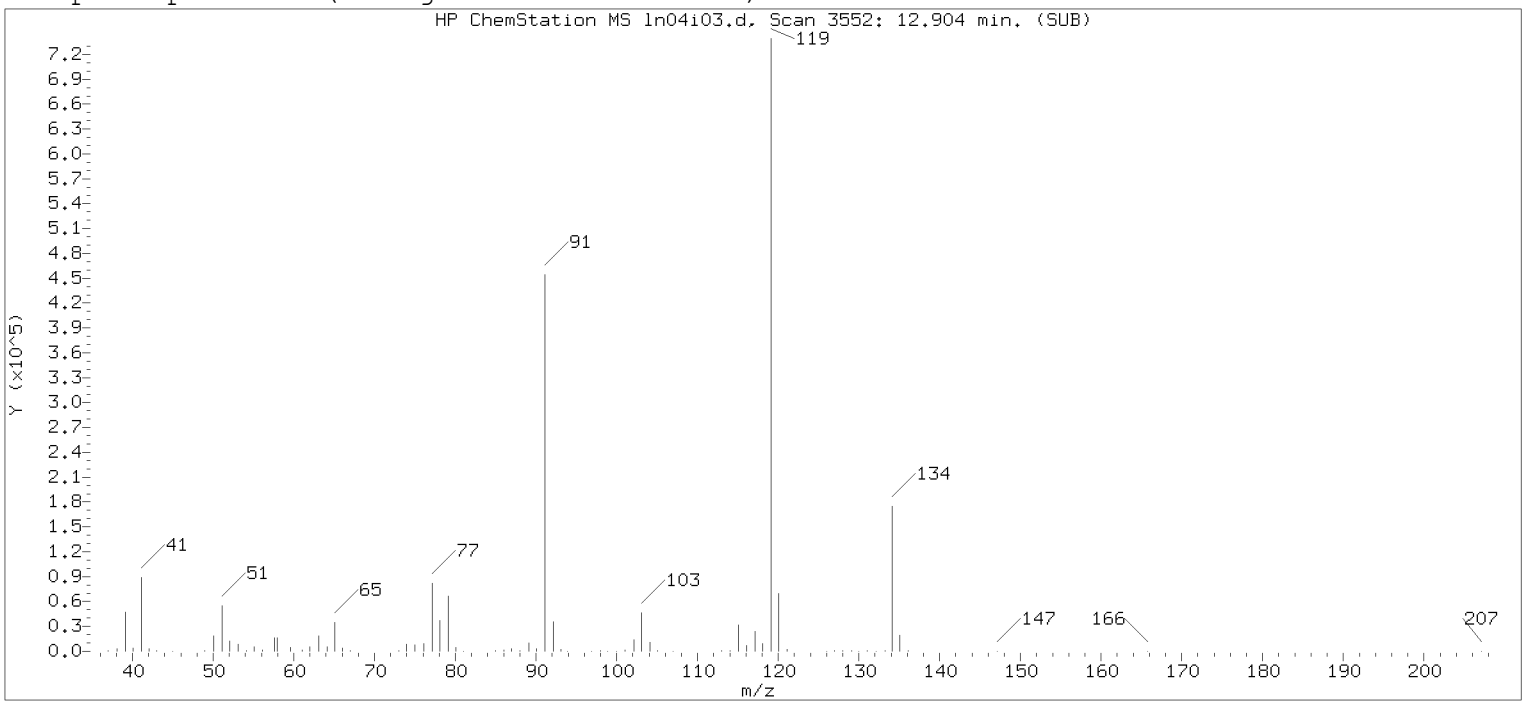
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 253906M
On-Column Amount (ng) : 53.1652
Integration start scan : 3540 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

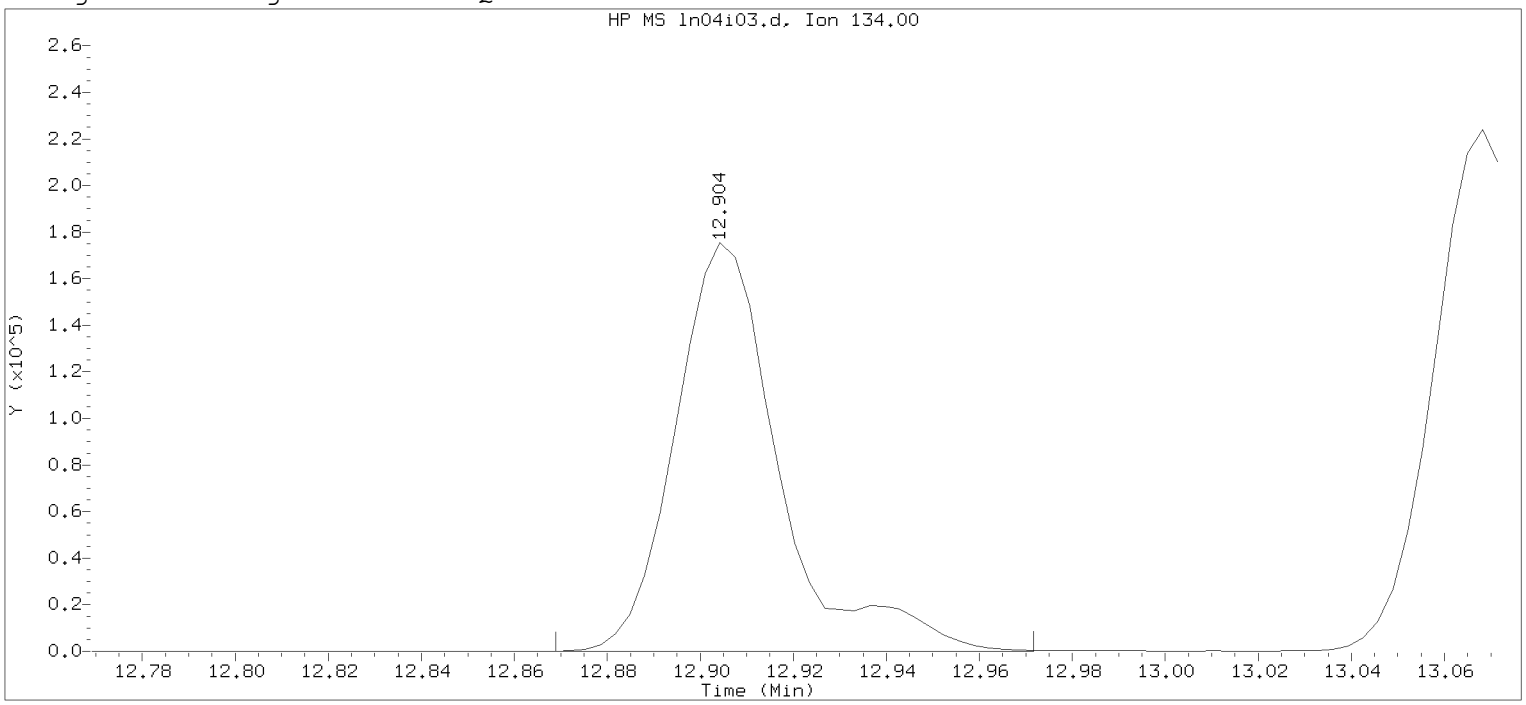
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



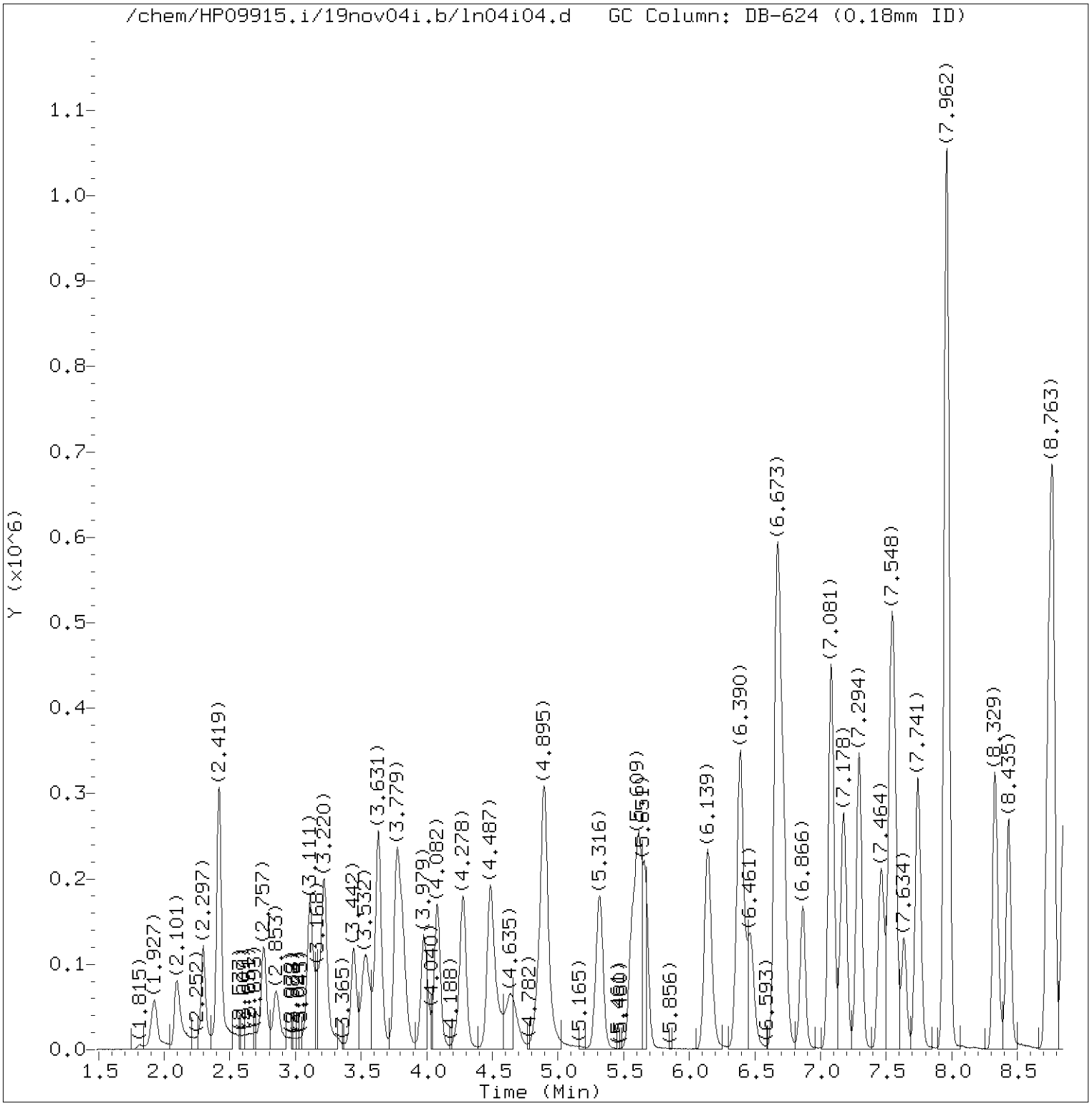
Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 273047
On-column Amount (ng) : 50.7591
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]



Total Ion Chromatogram (TIC)

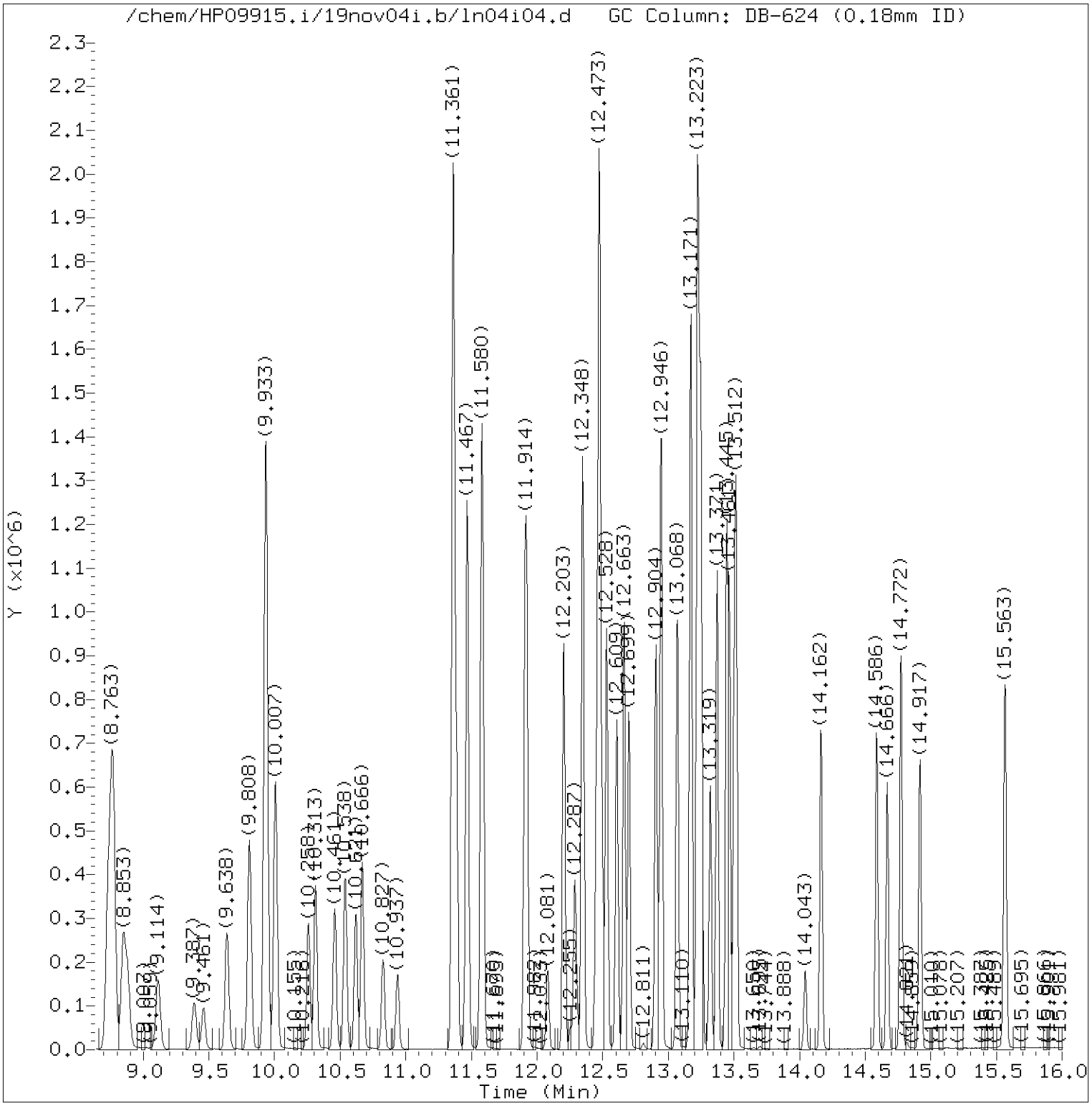
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.095	85	161054M	20.460
4) Chloromethane	(2)	2.297	50	155347	20.477
5) 1,3-Butadiene	(2)	2.416	39	127826M	20.292
6) Vinyl Chloride	(2)	2.419	62	156255	20.637
8) Bromomethane	(2)	2.757	94	109945	20.257
9) Chloroethane	(2)	2.853	64	85938	20.653
10) Dichlorofluoromethane	(2)	3.111	67	205276M	20.838
12) Trichlorofluoromethane	(2)	3.168	101	166167	20.384
11) n-Pentane	(2)	3.220	43	195074	20.250
14) Ethyl ether	(2)	3.442	59	108665	20.629
15) Freon 123a	(2)	3.532	67	137784	21.012
16) Acrolein	(1)	3.631	56	399615	206.403
17) 1,1-Dichloroethene	(2)	3.773	96	101858	21.288
17) 1,1-Dichloroethene	(2)	3.773	63	50444	21.029
19) Freon 113	(2)	3.805	101	115335	21.128
18) Acetone	(1)	3.815	58	36001	41.477
22) Methyl Iodide	(2)	3.979	142	212163	21.398
21) 2-Propanol	(1)	4.004	45	120851	193.676
23) Carbon Disulfide	(2)	4.082	76	388574	21.550
27) Methyl Acetate	(2)	4.255	43	121876	19.777
25) Allyl Chloride	(2)	4.281	41	173950	20.266
28) Methylene Chloride	(2)	4.483	84	119344	20.956
29)*t-Butyl alcohol-d10	(1)	4.512	65	258058M	250.000
30) t-Butyl alcohol	(1)	4.644	59	213903	196.882
31) Acrylonitrile	(2)	4.844	53	69677	21.016
32) trans-1,2-Dichloroethene	(2)	4.898	96	117516	21.231
33) Methyl Tertiary Butyl Ether	(2)	4.898	73	384426	21.159
34) n-Hexane	(2)	5.323	57	185314M	21.519
36) 1,1-Dichloroethane	(2)	5.561	63	203176	21.041
38) di-Isopropyl ether	(2)	5.615	45	399314	21.442
39) 2-Chloro-1,3-butadiene	(2)	5.670	53	184546	21.302
40) Ethyl t-butyl ether	(2)	6.146	59	392243	21.703
43) 1,2-Dichloroethene (Total)	(2)		96	248665	42.340
44) 2-Butanone	(2)	6.371	43	174937	41.104
42) cis-1,2-Dichloroethene	(2)	6.390	96	131149	21.109
45) 2,2-Dichloropropane	(2)	6.397	77	160123	21.332
47) Propionitrile	(1)	6.471	54	279106	206.179
48) Methacrylonitrile	(2)	6.673	67	377980	105.686

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	68547	20.807
50) Tetrahydrofuran	(1)	6.728	71	49905	40.813
51) Chloroform	(2)	6.863	83	198842	21.530
52)$Dibromofluoromethane	(2)	7.078	113	277983	50.374
52)$Dibromofluoromethane	(2)	7.081	111	283696	50.420
53) 1,1,1-Trichloroethane	(2)	7.081	97	168285	21.349
54) Cyclohexane	(2)	7.178	56	226762	21.513
54) Cyclohexane	(2)	7.178	84	195470	21.348
54) Cyclohexane	(2)	7.171	69	69608	21.350
56) Carbon Tetrachloride	(2)	7.290	117	141234	21.126
55) 1,1-Dichloropropene	(2)	7.297	75	161608	21.167
58) Isobutyl Alcohol	(1)	7.464	41	176564	482.927
57)$1,2-Dichloroethane-d4	(2)	7.535	102	71029	50.503
57)$1,2-Dichloroethane-d4	(2)	7.532	65	318244	50.776
57)$1,2-Dichloroethane-d4	(2)	7.535	104	46070	51.284
60) Benzene	(2)	7.561	78	489494	21.320
61) 1,2-Dichloroethane	(2)	7.634	62	150643	20.399
61) 1,2-Dichloroethane	(2)	7.634	98	15487	21.192
65) t-Amyl methyl ether	(2)	7.744	73	391674	21.591
67) n-Heptane	(2)	7.962	43	173500MA	21.566
66)*Fluorobenzene	(2)	7.962	96	1128743	50.000
69) n-Butanol	(1)	8.329	56	312189M	992.087
71) Trichloroethene	(2)	8.435	95	122357	21.166
72) Methylcyclohexane	(2)	8.737	83	221554	20.658
72) Methylcyclohexane	(2)	8.737	98	99234	20.447
73) 1,2-Dichloropropane	(2)	8.769	63	123290	21.148
76) Methyl Methacrylate	(2)	8.850	69	117550A	20.851
75) 1,4-Dioxane	(1)	8.856	88	44376M	513.065
74) Dibromomethane	(2)	8.879	93	79643	21.113
78) Bromodichloromethane	(2)	9.114	83	142226	21.011
79) 2-Nitropropane	(2)	9.390	41	82517M	40.247
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	51005	20.370
81) cis-1,3-Dichloropropene	(2)	9.634	75	192808	21.446
82) 4-Methyl-2-pentanone	(2)	9.808	43	377728	42.047
83)$Toluene-d8	(3)	9.933	98	1159273	50.160
83)$Toluene-d8	(3)	9.933	100	751601	50.203
88) Toluene	(3)	10.007	92	308466	21.289
90) 1,3-Dichloropropene (total)	(3)		100	367273	42.658

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	174465	21.211
91) Ethyl Methacrylate	(3)	10.313	69	210882	21.096
92) 1,1,2-Trichloroethane	(3)	10.461	97	114106	20.771
93) Tetrachloroethene	(3)	10.538	166	130358	21.243
94) 1,3-Dichloropropane	(3)	10.618	76	196136	20.911
96) 2-Hexanone	(3)	10.666	43	276801	41.485
97) Dibromochloromethane	(3)	10.827	129	117920	20.955
99) 1,2-Dibromoethane	(3)	10.940	107	124981	20.951
100)*Chlorobenzene-d5	(3)	11.361	117	883281	50.000
101) 1-Chlorohexane	(3)	11.364	91	162552	20.883
102) Chlorobenzene	(3)	11.387	112	347116	21.185
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	116096	21.505
104) Ethylbenzene	(3)	11.467	91	593614	21.434
106) m+p-Xylene	(3)	11.580	106	474524	43.555
108) Xylene (Total)	(3)		106	707354	65.191
107) o-Xylene	(3)	11.908	106	232830	21.636
109) Styrene	(3)	11.924	104	387652	21.799
110) Bromoform	(3)	12.081	173	81670	19.422
111) Isopropylbenzene	(3)	12.203	105	589458	21.839
112) Cyclohexanone	(1)	12.287	55	167626	494.847
114)$4-Bromofluorobenzene	(3)	12.348	95	438766	50.137
114)$4-Bromofluorobenzene	(3)	12.348	174	363757	50.138
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	186119M	20.690
115) Bromobenzene	(4)	12.464	156	150208	20.987
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	295707	106.569
117) 1,2,3-Trichloropropane	(4)	12.499	110	56899	20.612
119) n-Propylbenzene	(4)	12.528	91	680502	21.762
120) 2-Chlorotoluene	(4)	12.609	126	141675	21.327
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	498486	21.936
121) 4-Chlorotoluene	(4)	12.699	126	147463	21.326
124) tert-Butylbenzene	(4)	12.904	134	101571M	21.612
125) Pentachloroethane	(4)	12.940	167	85065	21.020
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	522495	21.816
127) sec-Butylbenzene	(4)	13.068	105	620603	22.130
129) 1,3-Dichlorobenzene	(4)	13.168	146	280954	21.362
130) p-Isopropyltoluene	(4)	13.171	119	539497	22.237
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	476218	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	288857	21.186

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

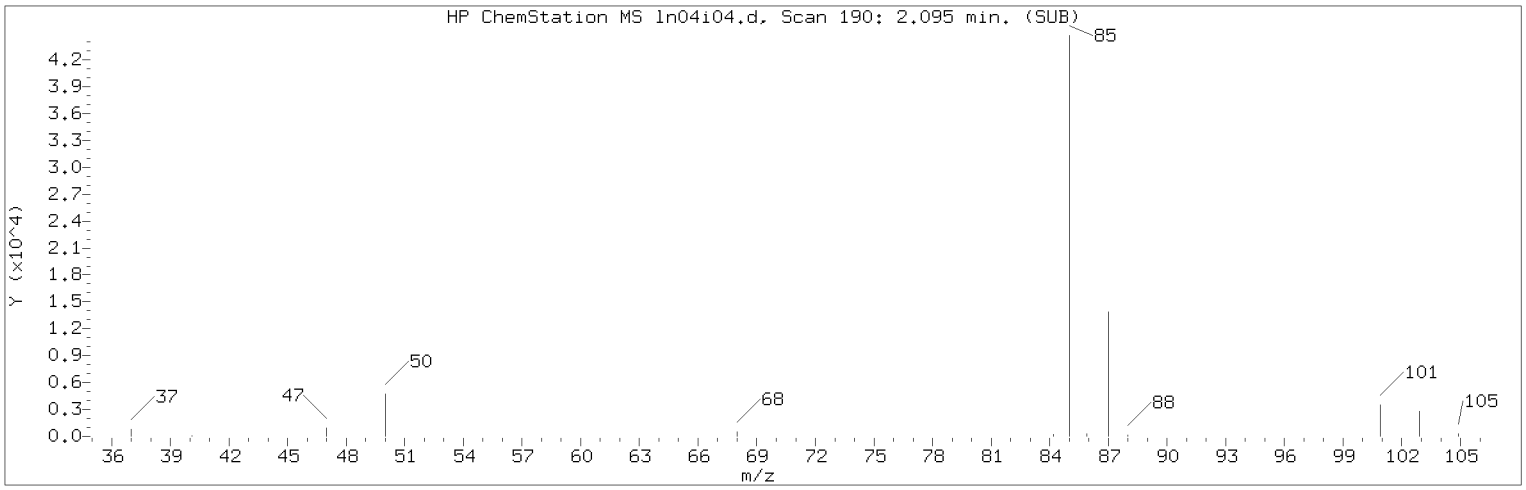
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

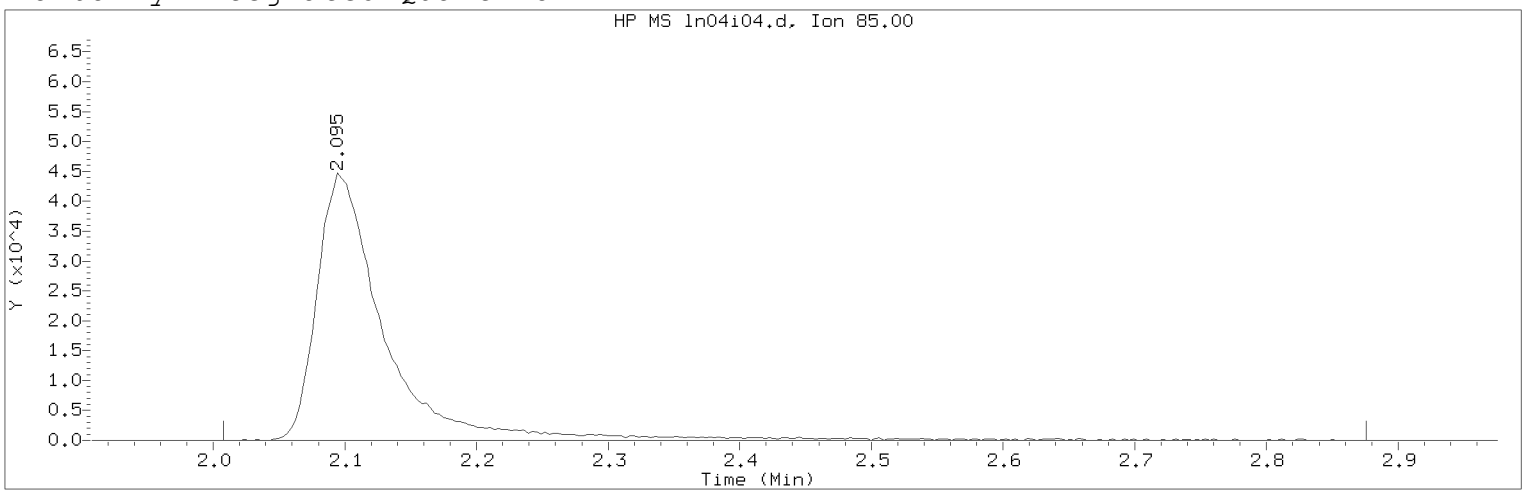
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	529814	20.883
135) Benzyl Chloride	(4)	13.319	91	386244	20.108
136) 1,3-Diethylbenzene	(4)	13.371	119	333696	21.134
141) Diethylbenzene (total)	(4)		100	968804	63.411
137) 1,4-Diethylbenzene	(4)	13.445	119	354305	21.180
139) n-Butylbenzene	(4)	13.464	92	270790	21.829
138) 1,2-Dichlorobenzene	(4)	13.502	146	274435	21.146
140) 1,2-Diethylbenzene	(4)	13.518	119	280803	21.097
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	40583	20.608
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	215108	21.573
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	206700	21.320
147) Hexachlorobutadiene	(4)	14.666	225	101324	22.135
148) Naphthalene	(4)	14.772	128	665482	21.351
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	203518	21.573
150) 2-Methylnaphthalene	(4)	15.563	142	423056	22.042

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

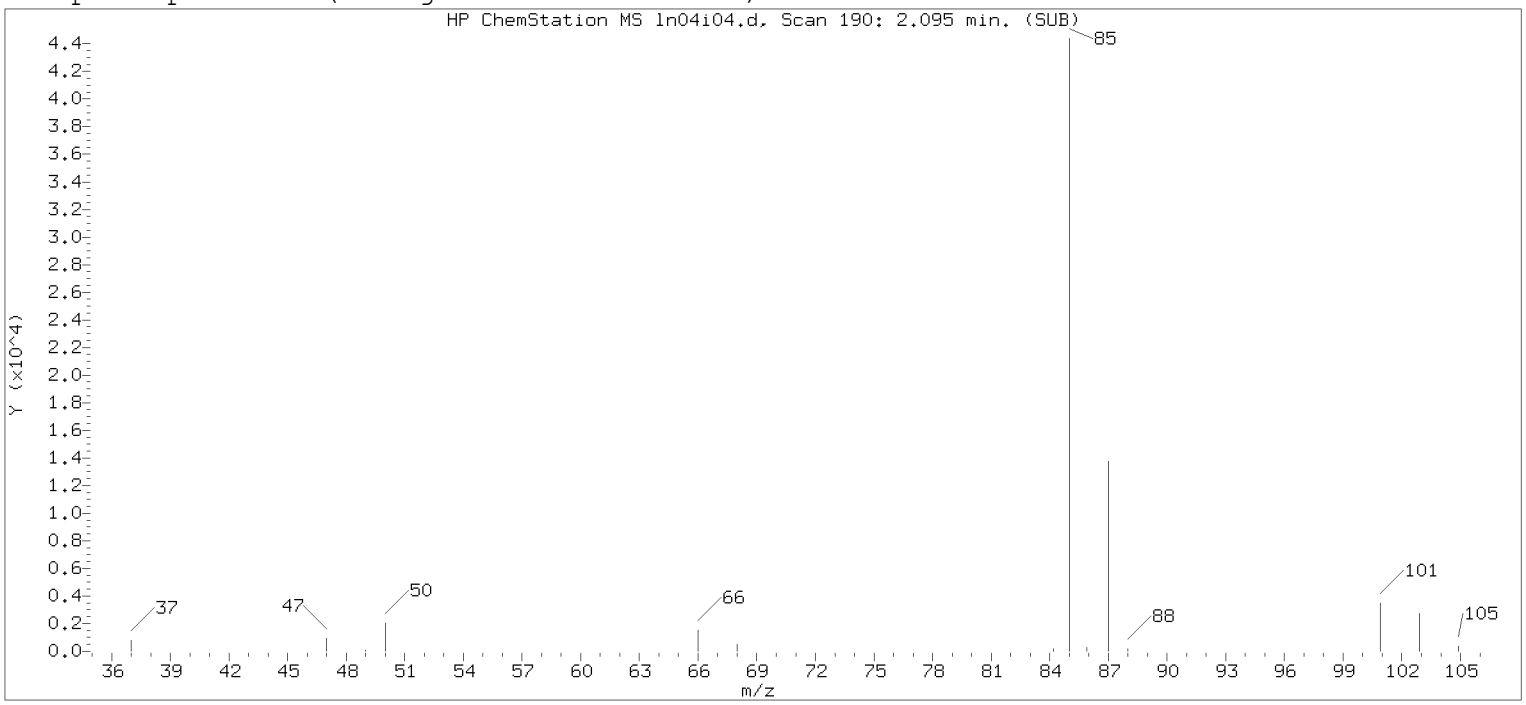
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.095
Quant Ion : 85.00
Area (flag) : 161054M
On-Column Amount (ng) : 20.4603
Integration start scan : 162 Integration stop scan: 432
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

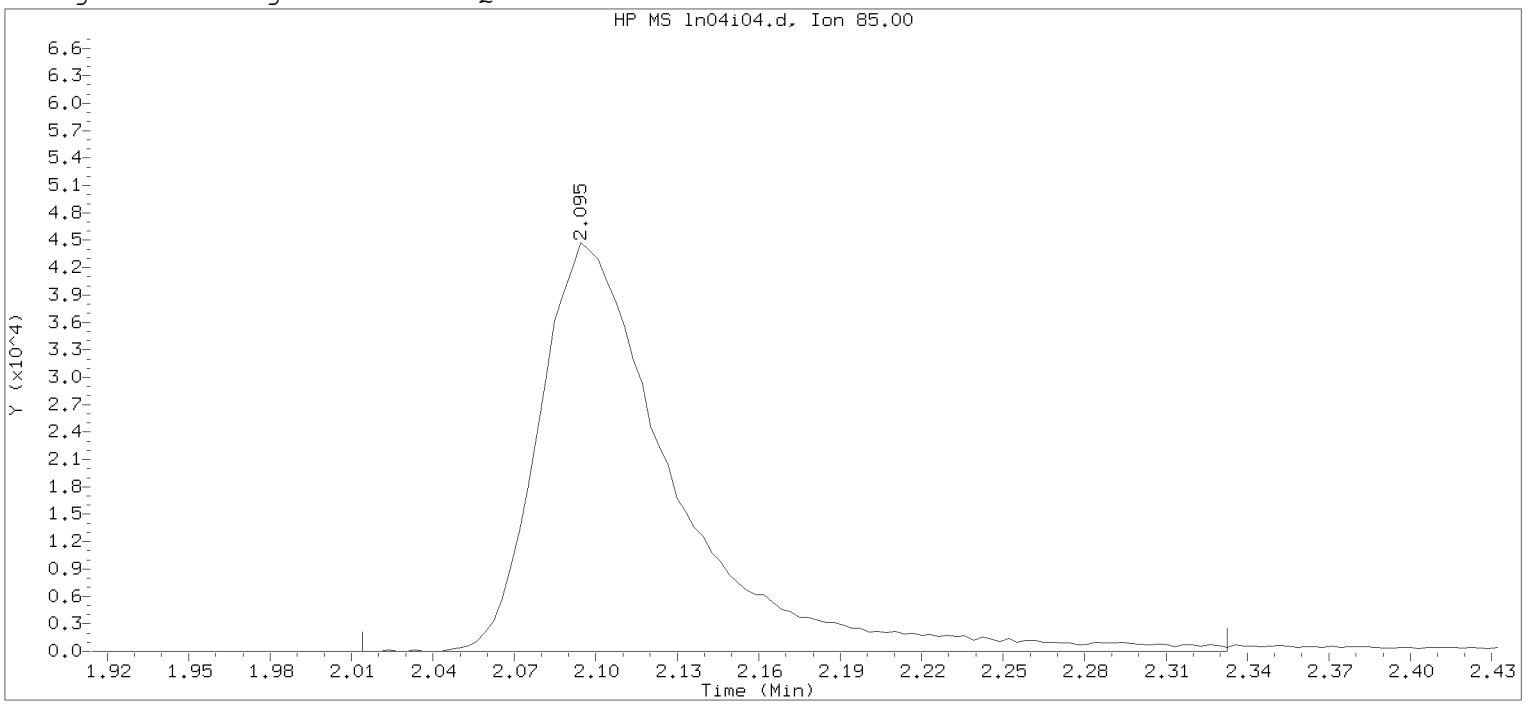
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

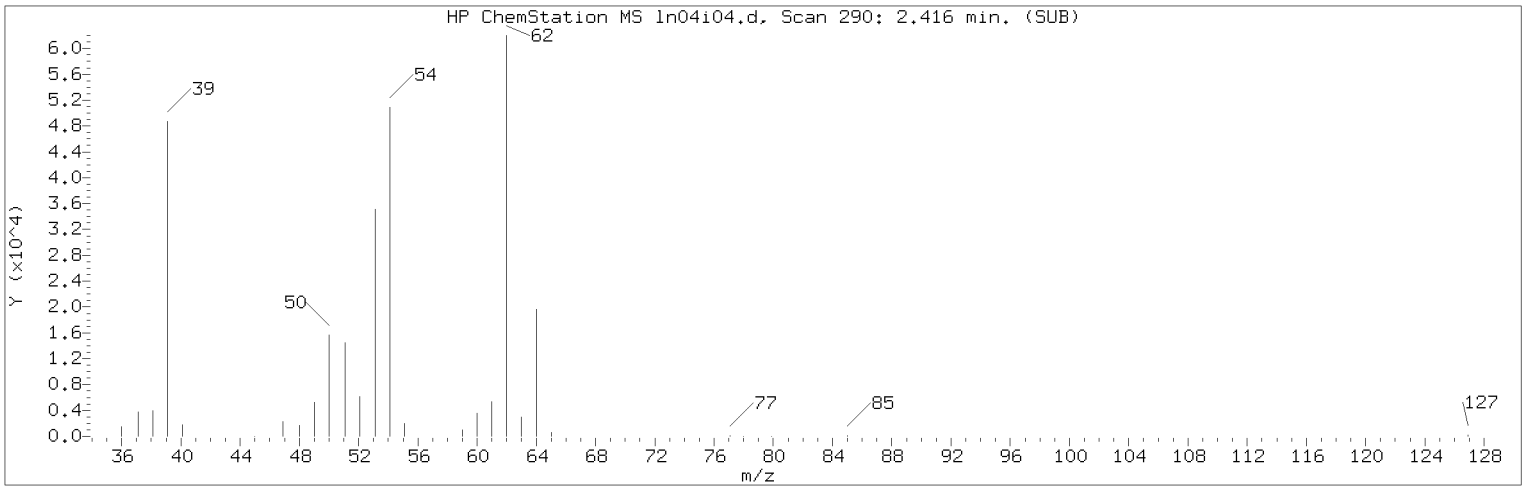
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

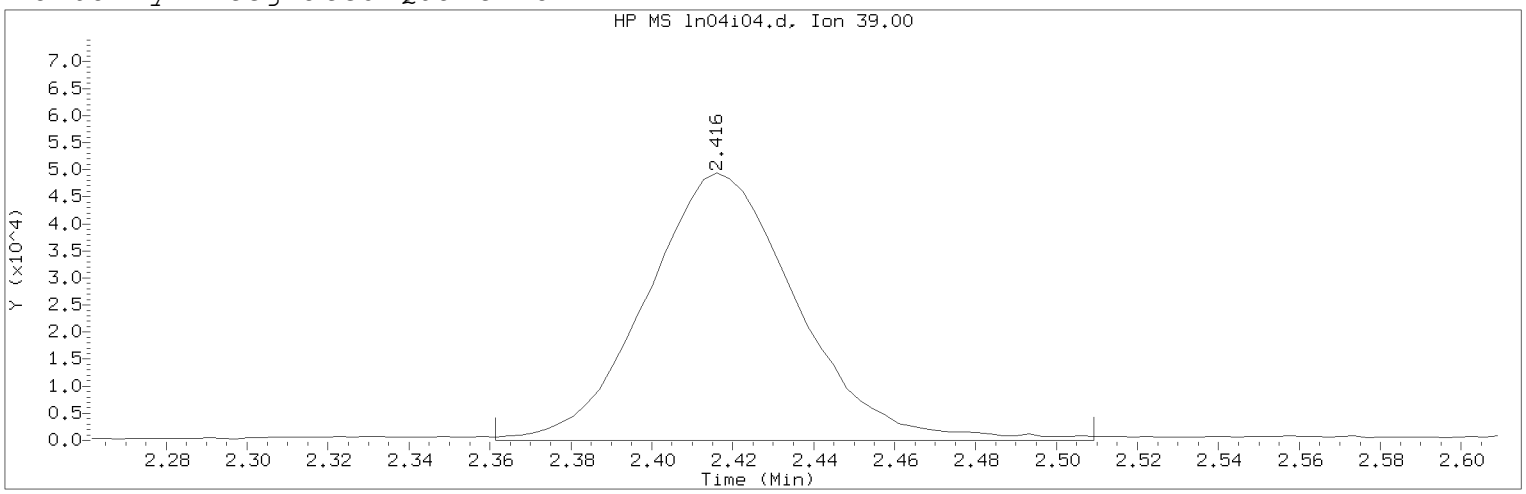
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.095
Quant Ion : 85.00
Area : 154796
On-column Amount (ng) : 18.9193
Integration start scan : 164 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

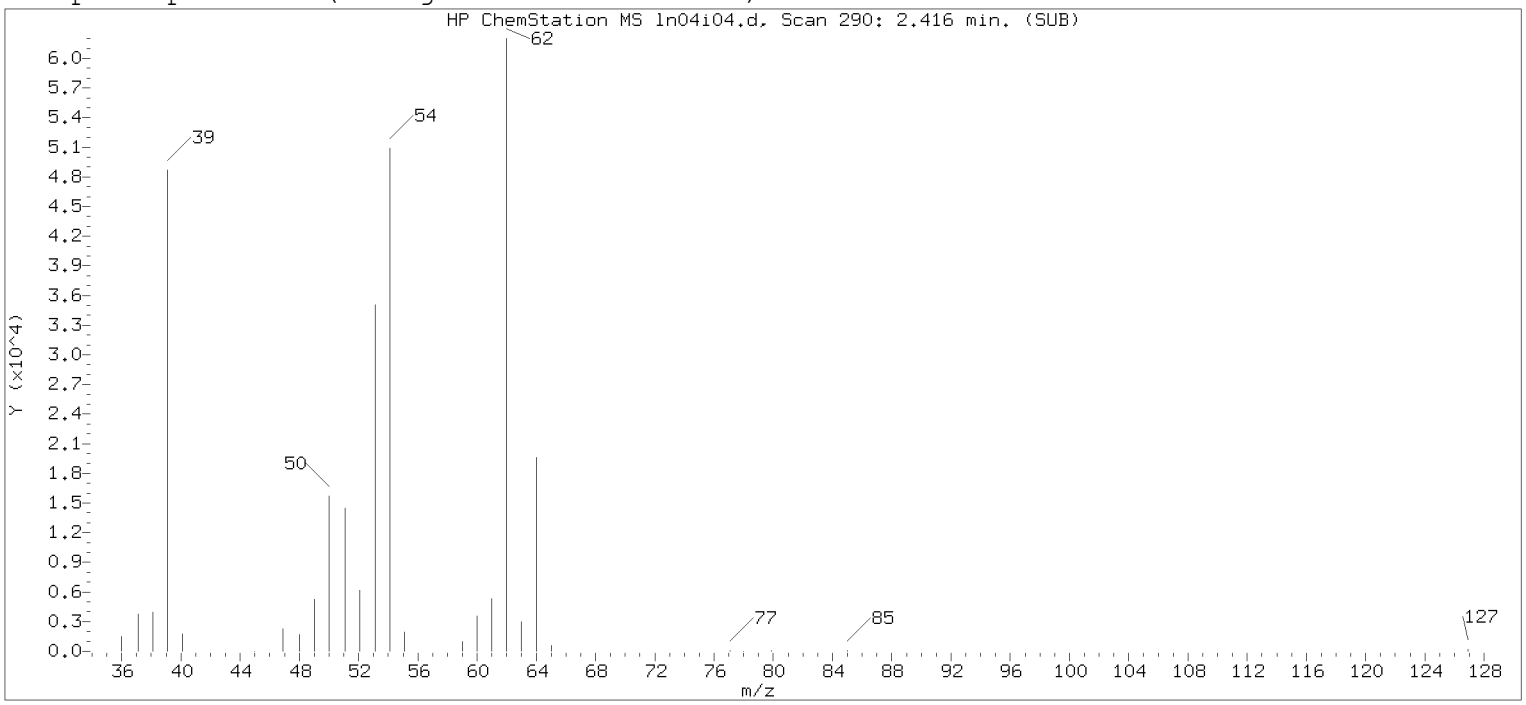
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 290
Retention Time (minutes): 2.416
Quant Ion : 39.00
Area (flag) : 127826M
On-Column Amount (ng) : 20.2925
Integration start scan : 272 Integration stop scan: 318
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

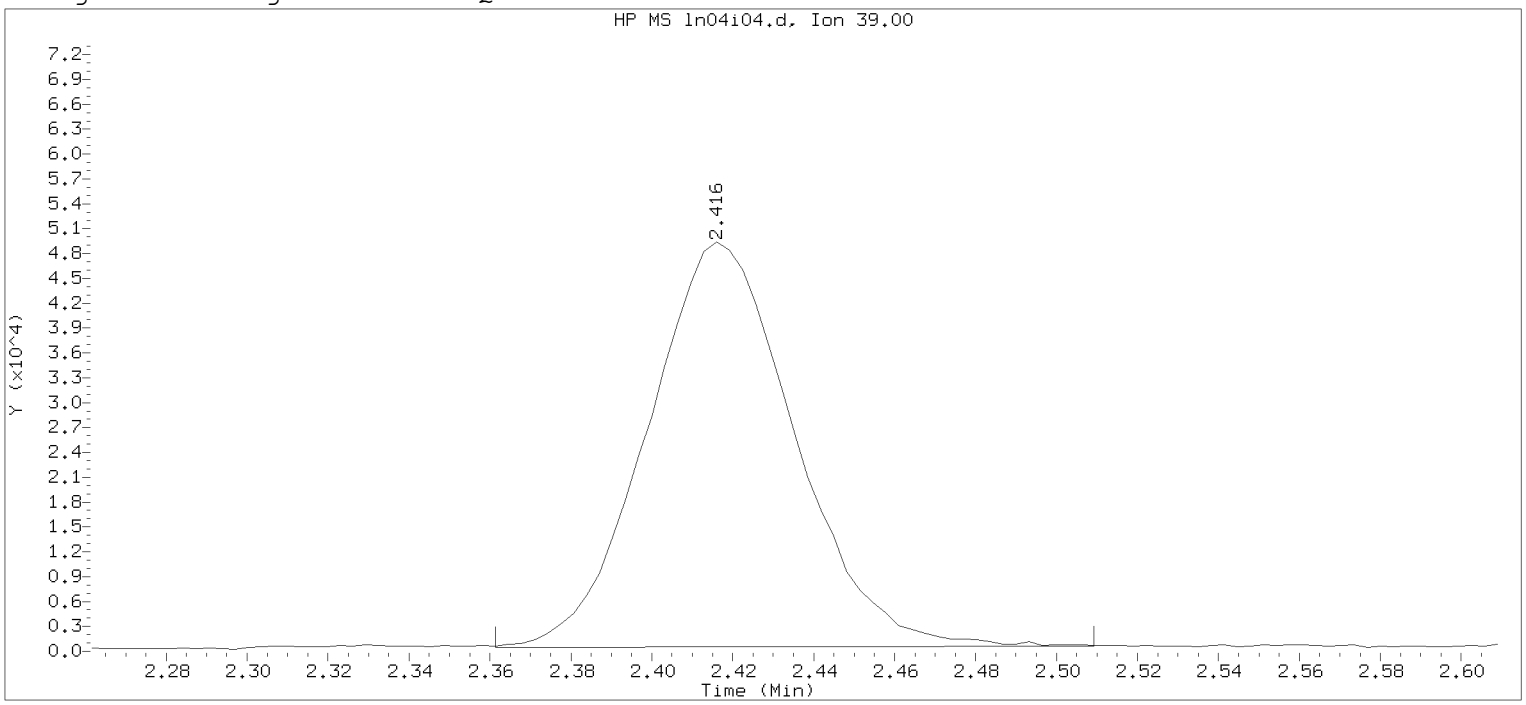
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

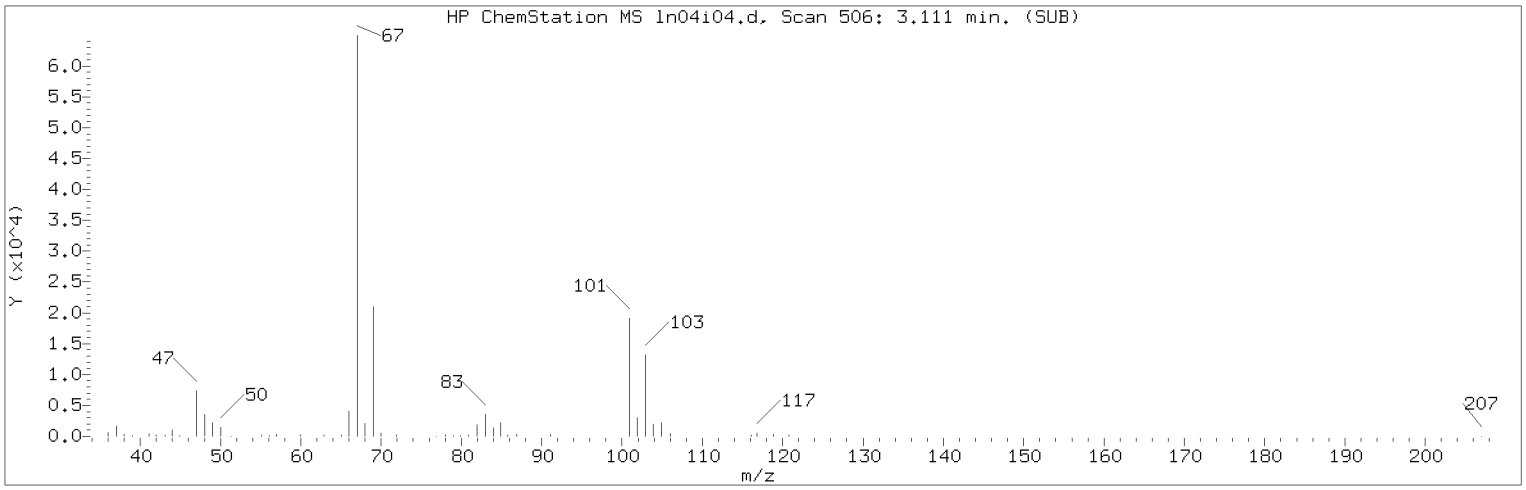
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

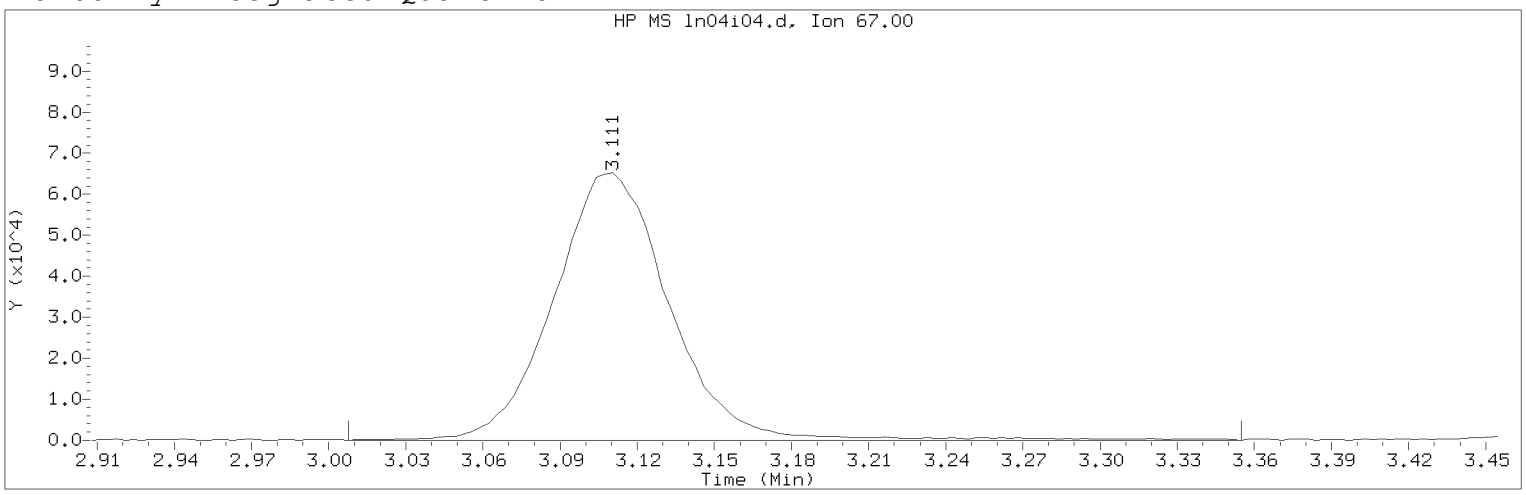
Compound Number	: 5		
Compound Name	: 1,3-Butadiene		
Scan Number	: 290		
Retention Time (minutes)	: 2.416		
Quant Ion	: 39.00		
Area	: 122801		
On-column Amount (ng)	: 20.5539		
Integration start scan	: 272	Integration stop scan:	318
Y at integration start	: 477	Y at integration end:	628

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

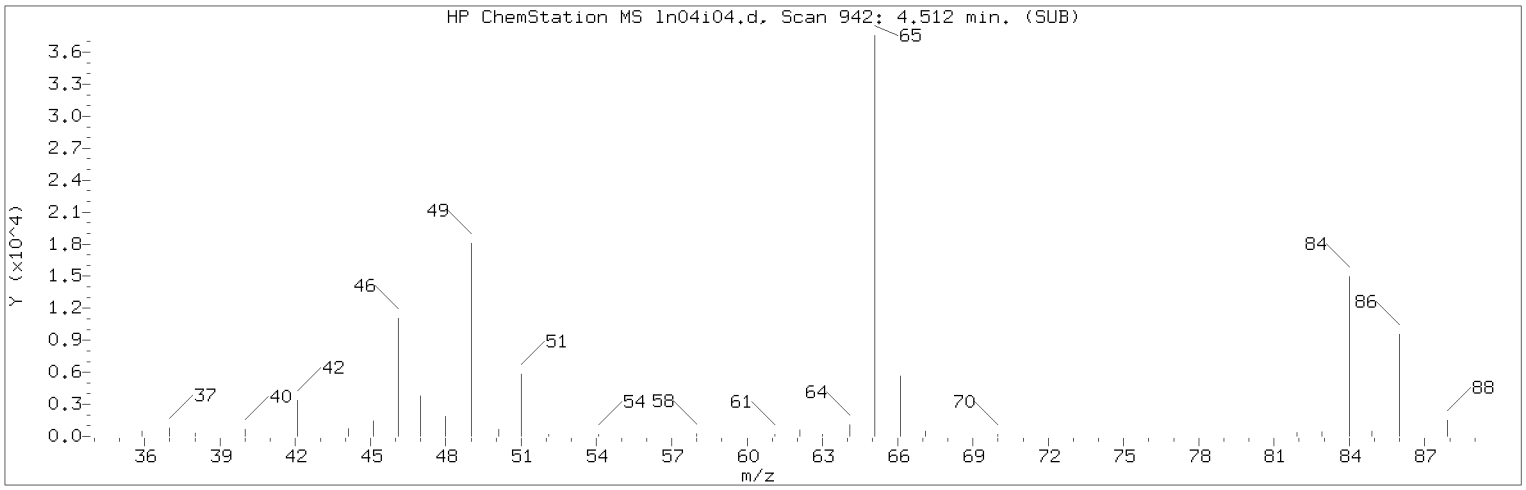
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 506
Retention Time (minutes): 3.111
Quant Ion : 67.00
Area (flag) : 205276M
On-Column Amount (ng) : 20.8381
Integration start scan : 473 Integration stop scan: 581
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

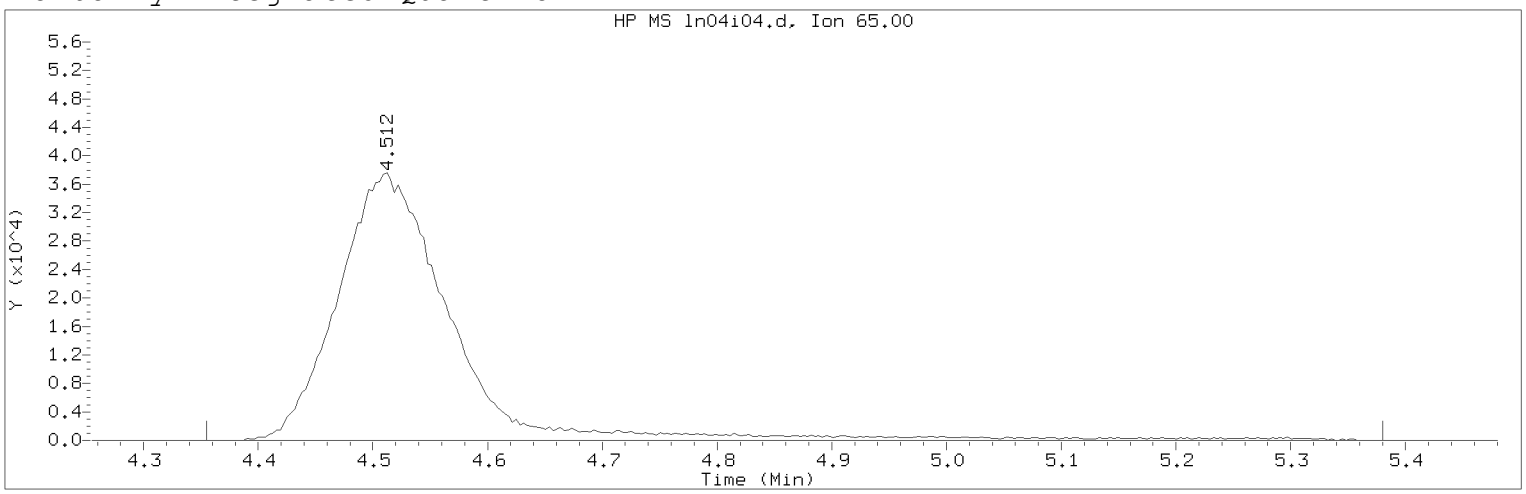
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

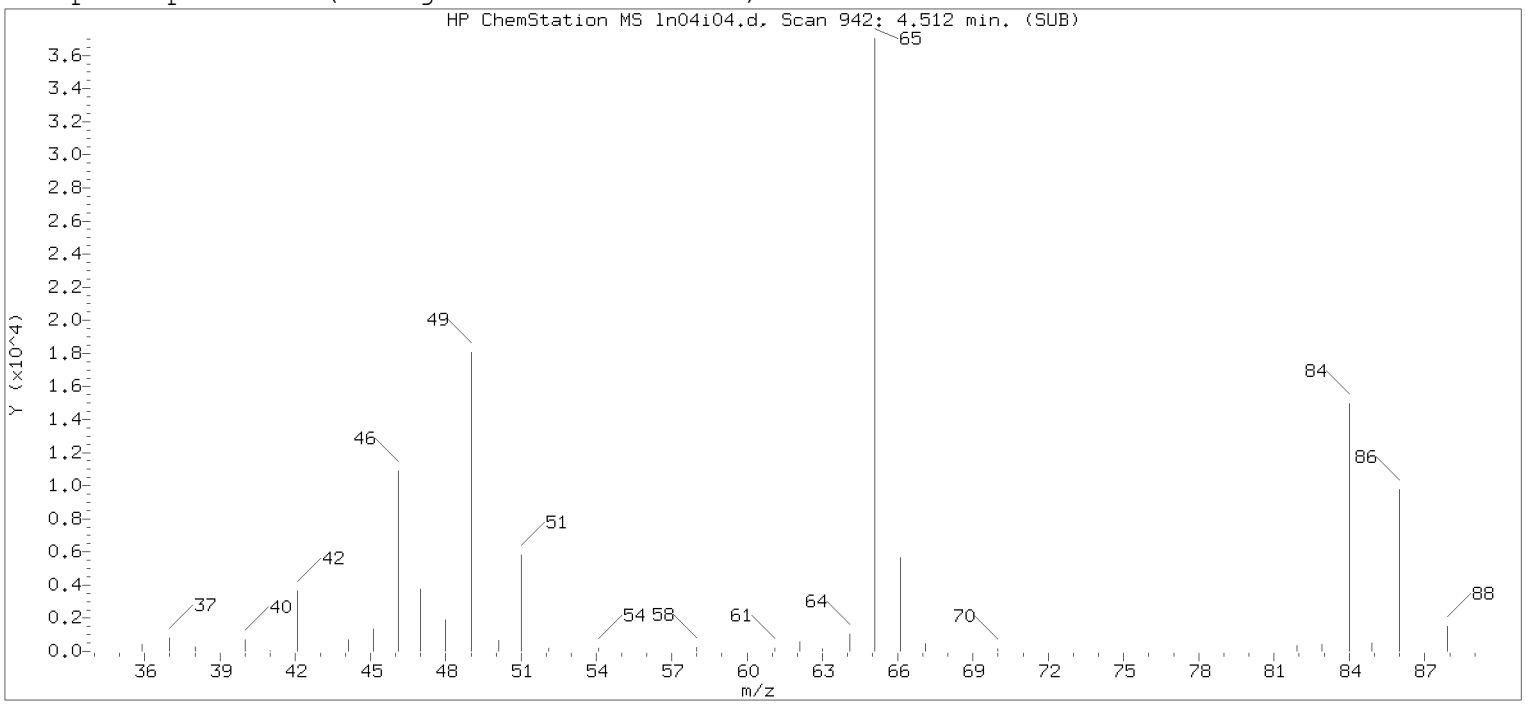
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area (flag) : 258058M
On-Column Amount (ng) : 250.0000
Integration start scan : 892 Integration stop scan: 1211
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

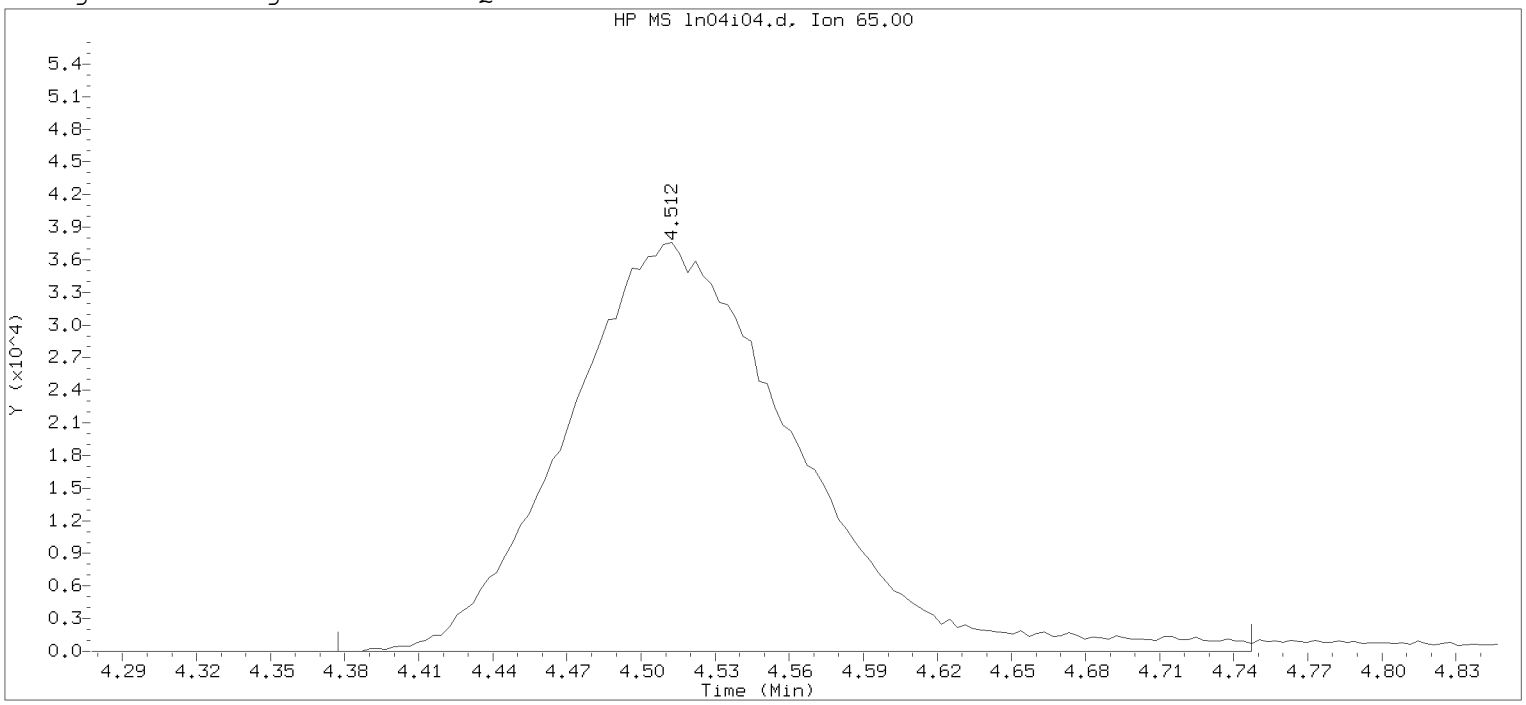
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

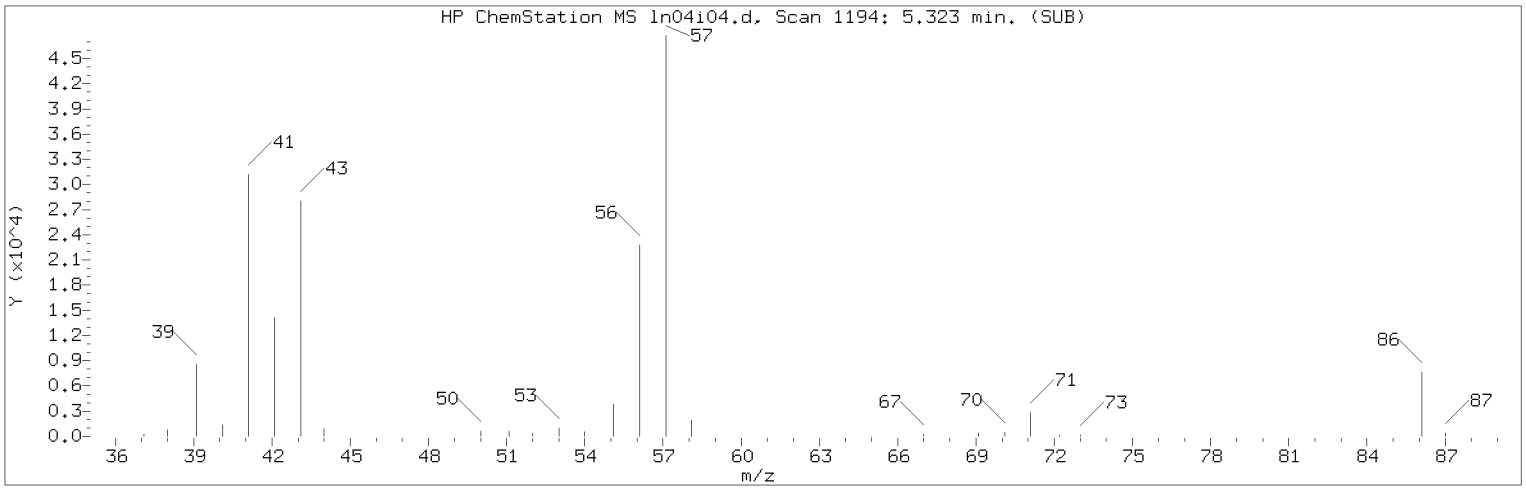
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

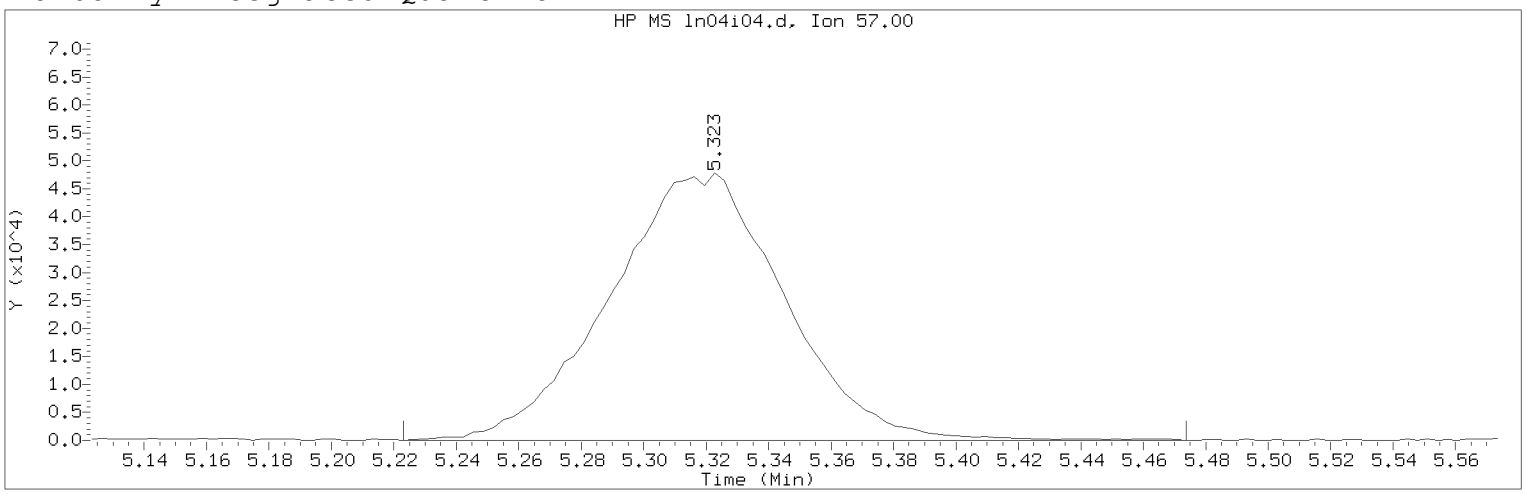
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area : 242565
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

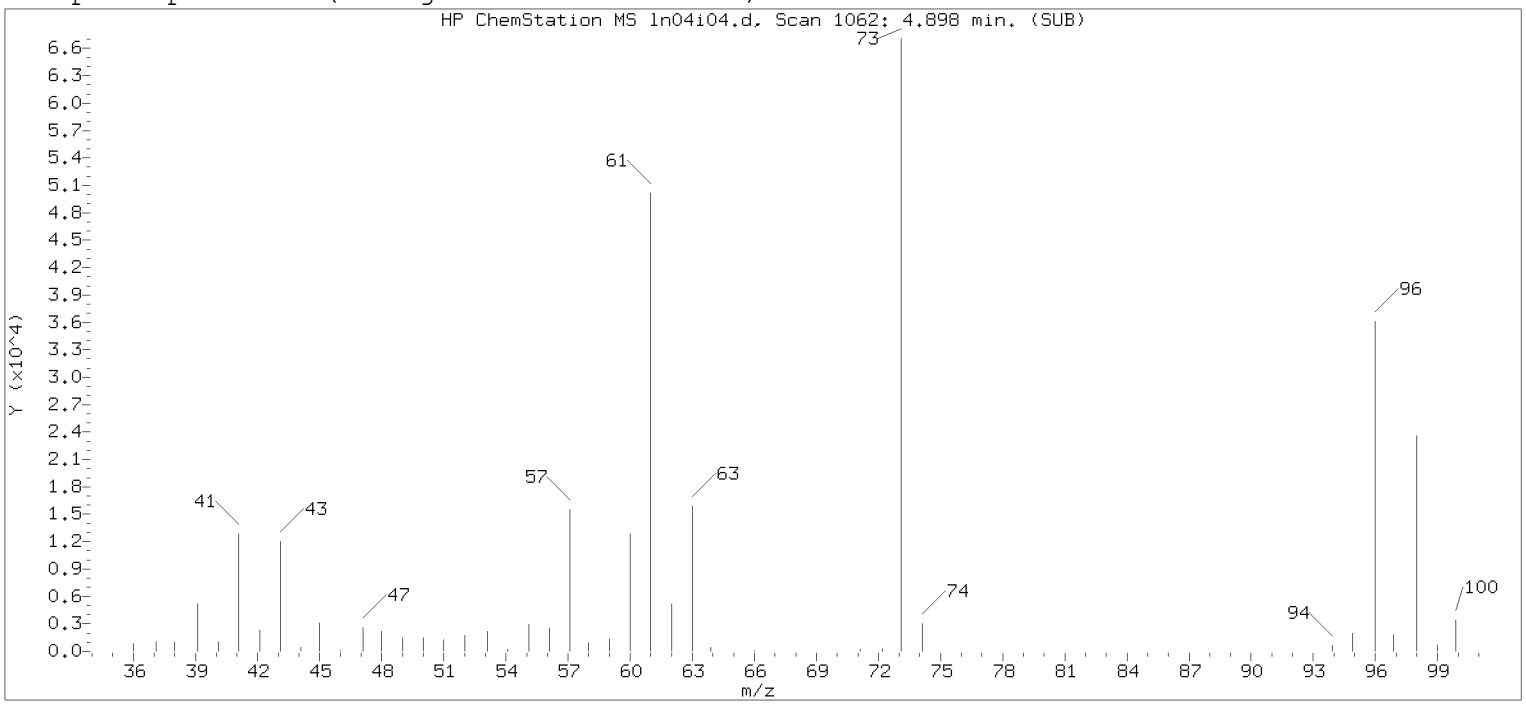
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1194
Retention Time (minutes): 5.323
Quant Ion : 57.00
Area (flag) : 185314M
On-Column Amount (ng) : 21.5188
Integration start scan : 1162 Integration stop scan: 1240
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

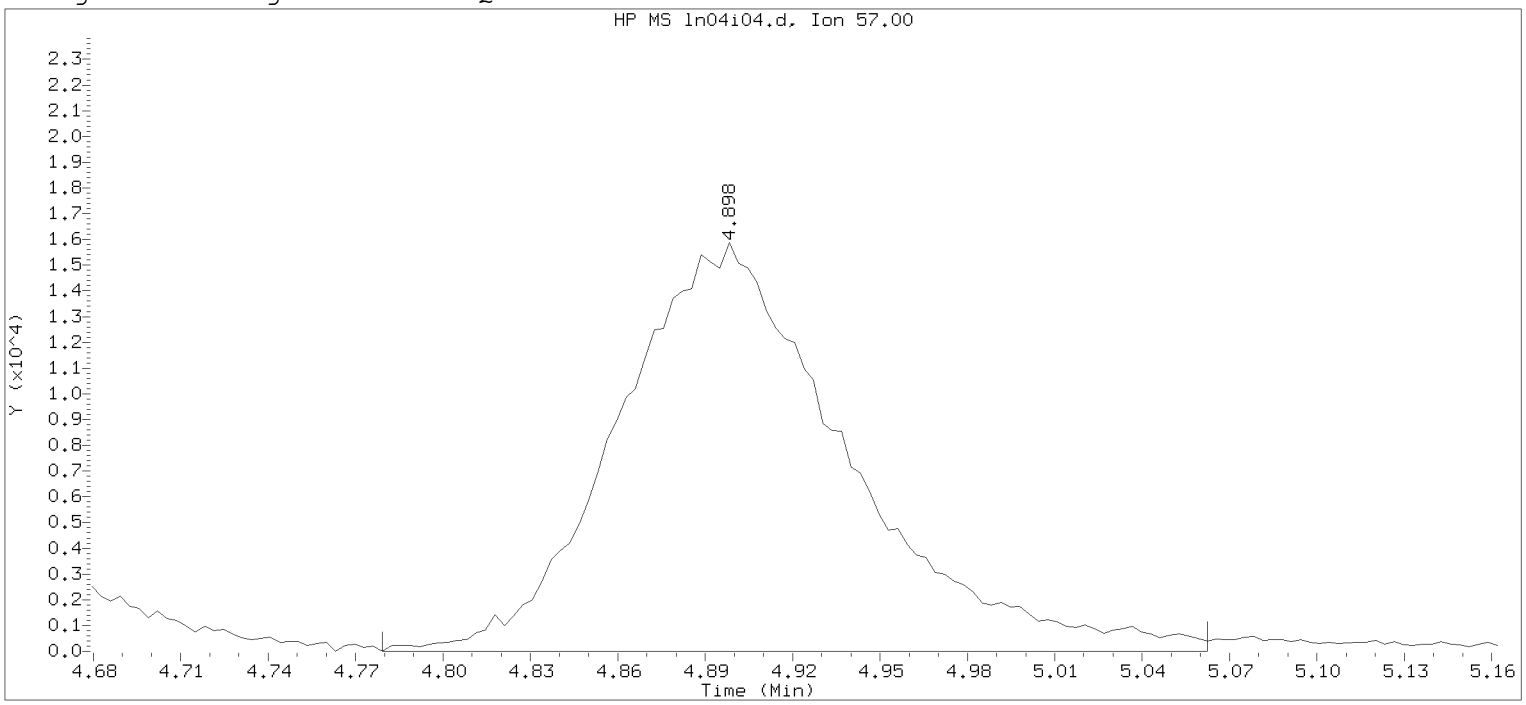
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

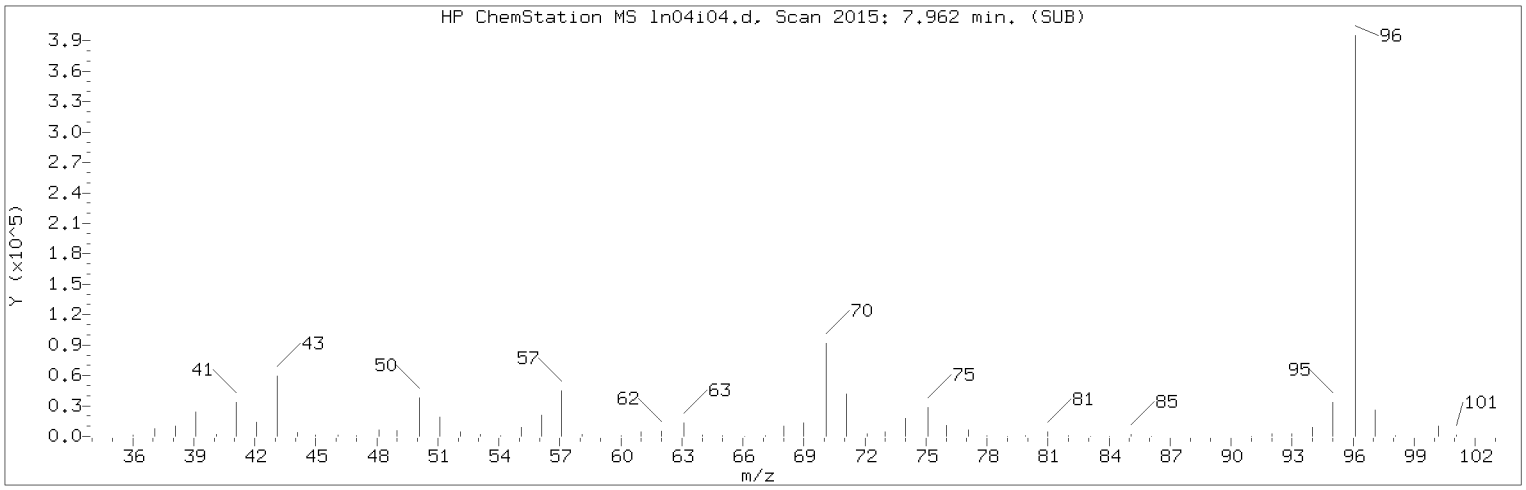
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

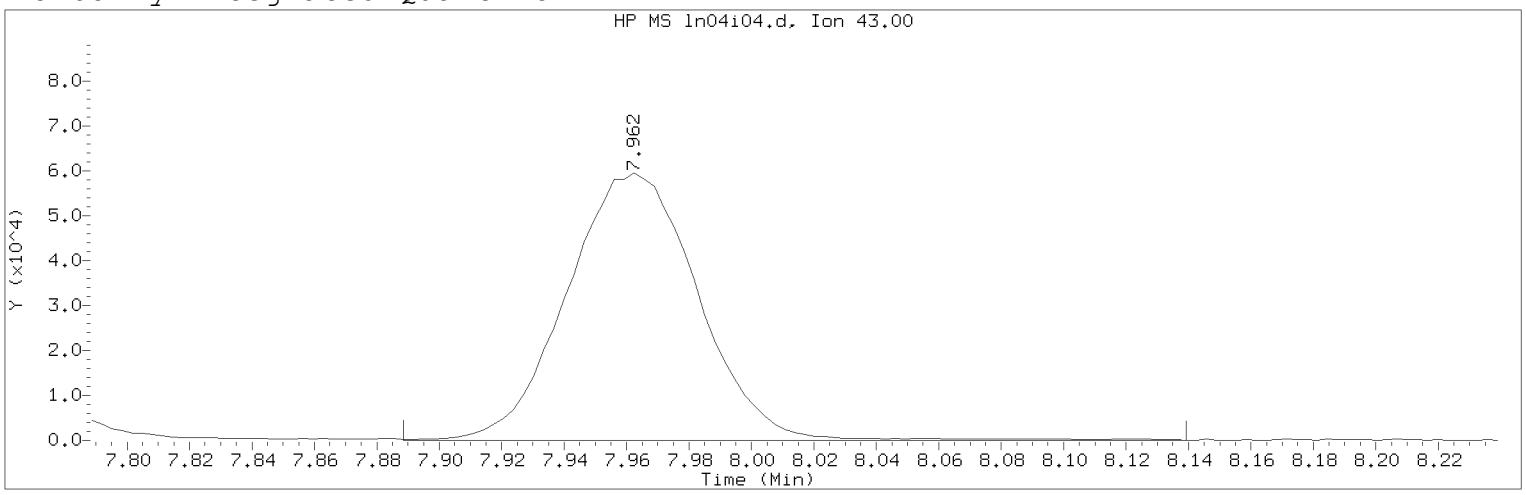
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1062
Retention Time (minutes): 4.898
Quant Ion : 57.00
Area : 86496
On-column Amount (ng) : 21.2144
Integration start scan : 1024 Integration stop scan: 1112
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

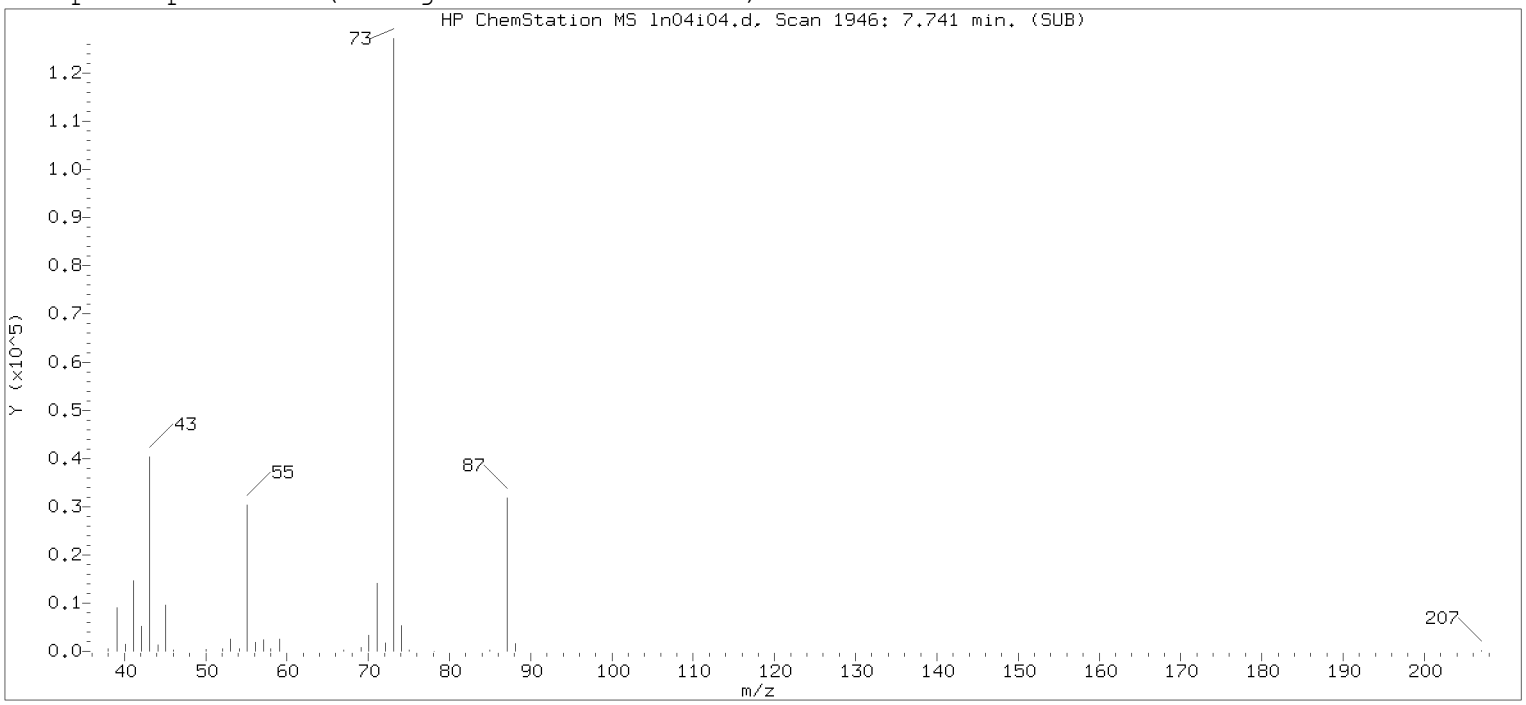
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2015
Retention Time (minutes): 7.962
Quant Ion : 43.00
Area (flag) : 173500MA
On-Column Amount (ng) : 21.5663
Integration start scan : 1991 Integration stop scan: 2069
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

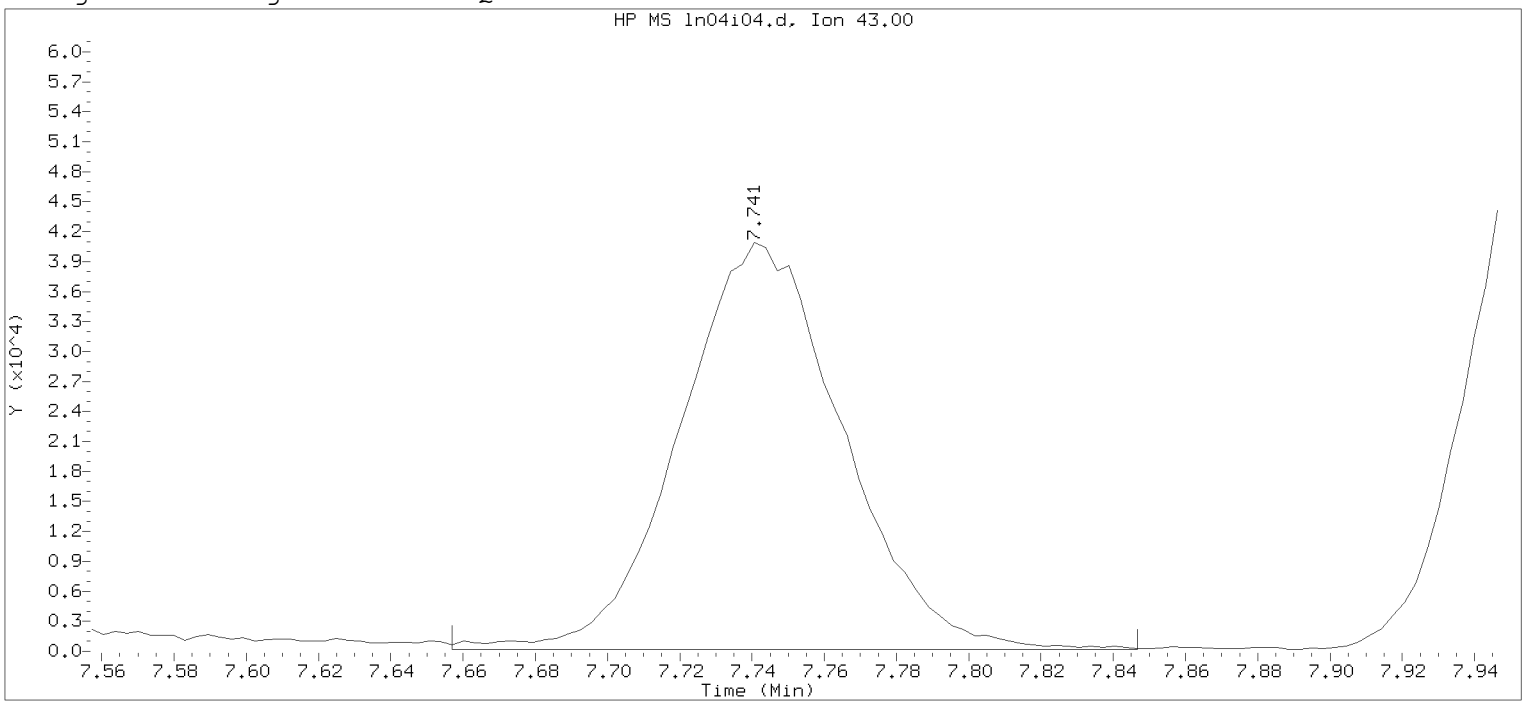
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

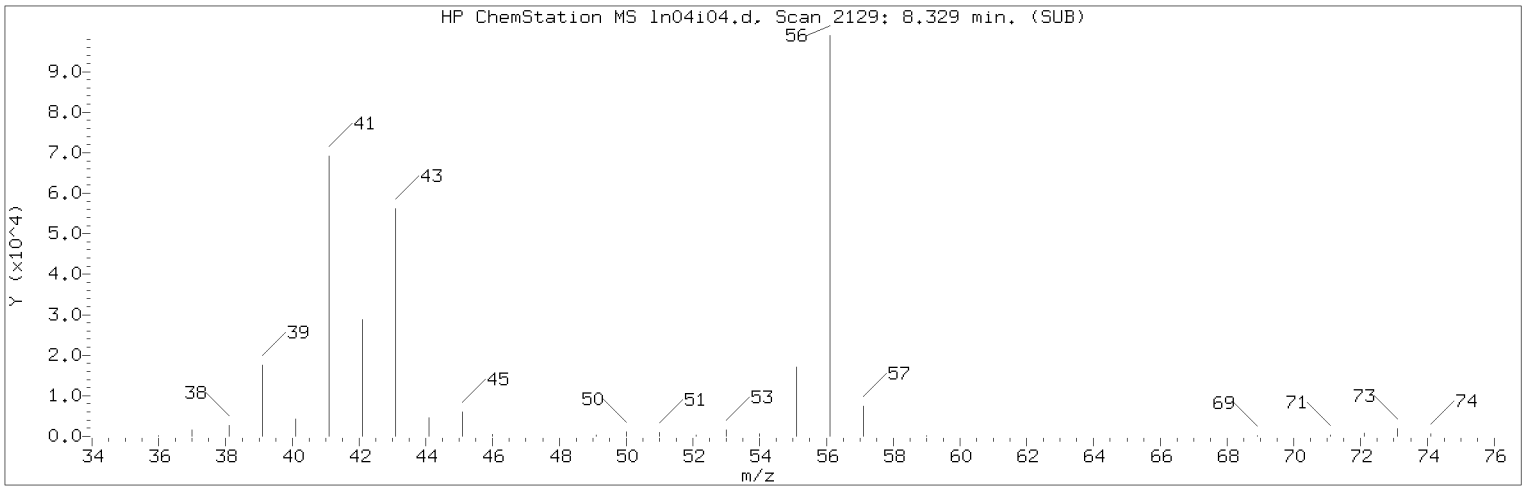
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

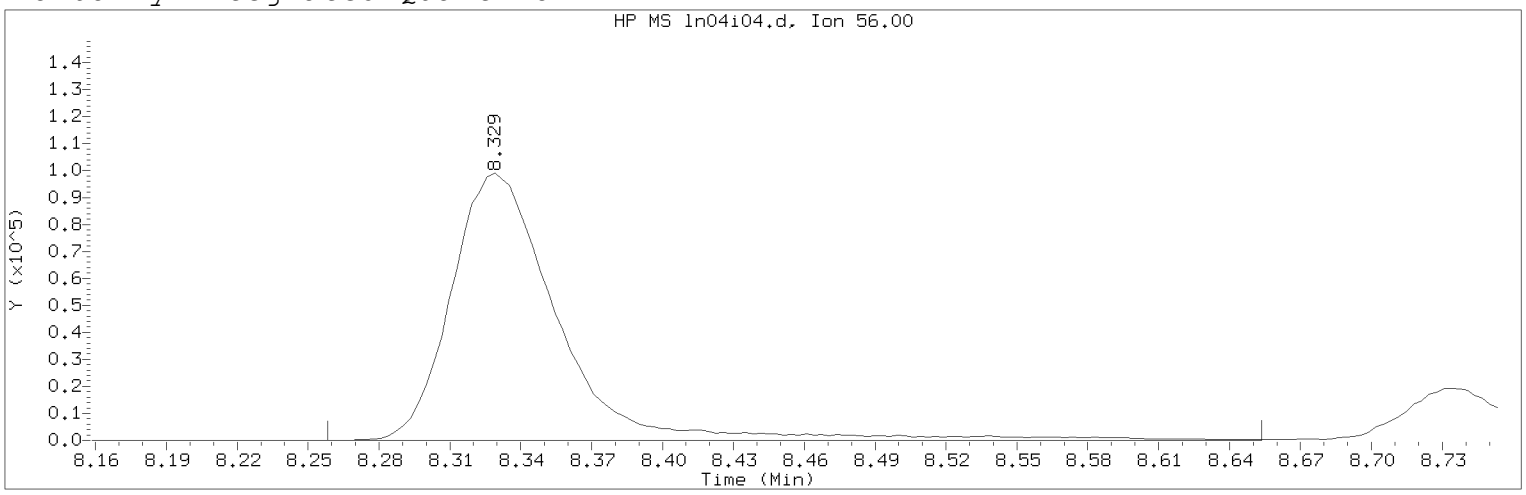
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.741
Quant Ion : 43.00
Area : 127386
On-column Amount (ng) : 21.2604
Integration start scan : 1919 Integration stop scan: 1978
Y at integration start : 203 Y at integration end: 203

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

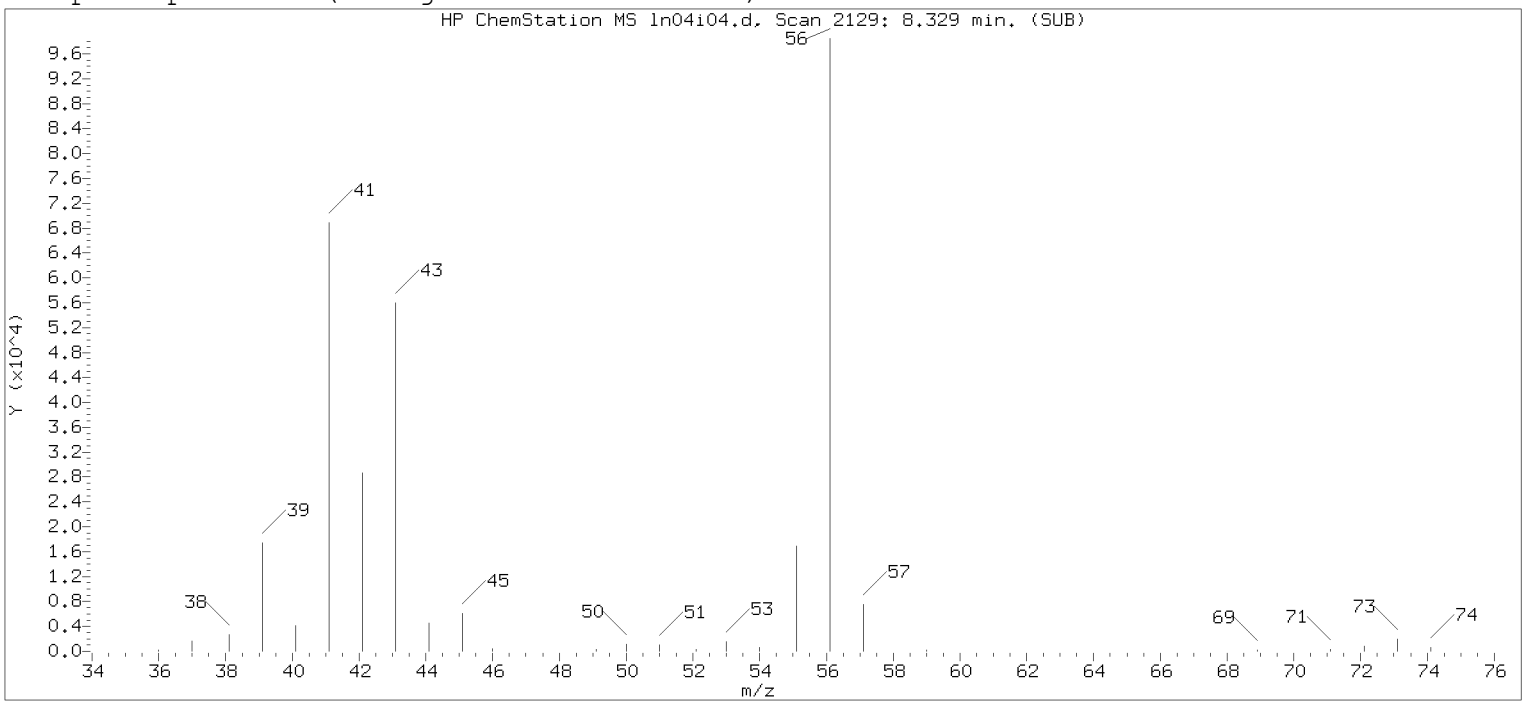
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area (flag) : 312189M
On-Column Amount (ng) : 992.0871
Integration start scan : 2106 Integration stop scan: 2229
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

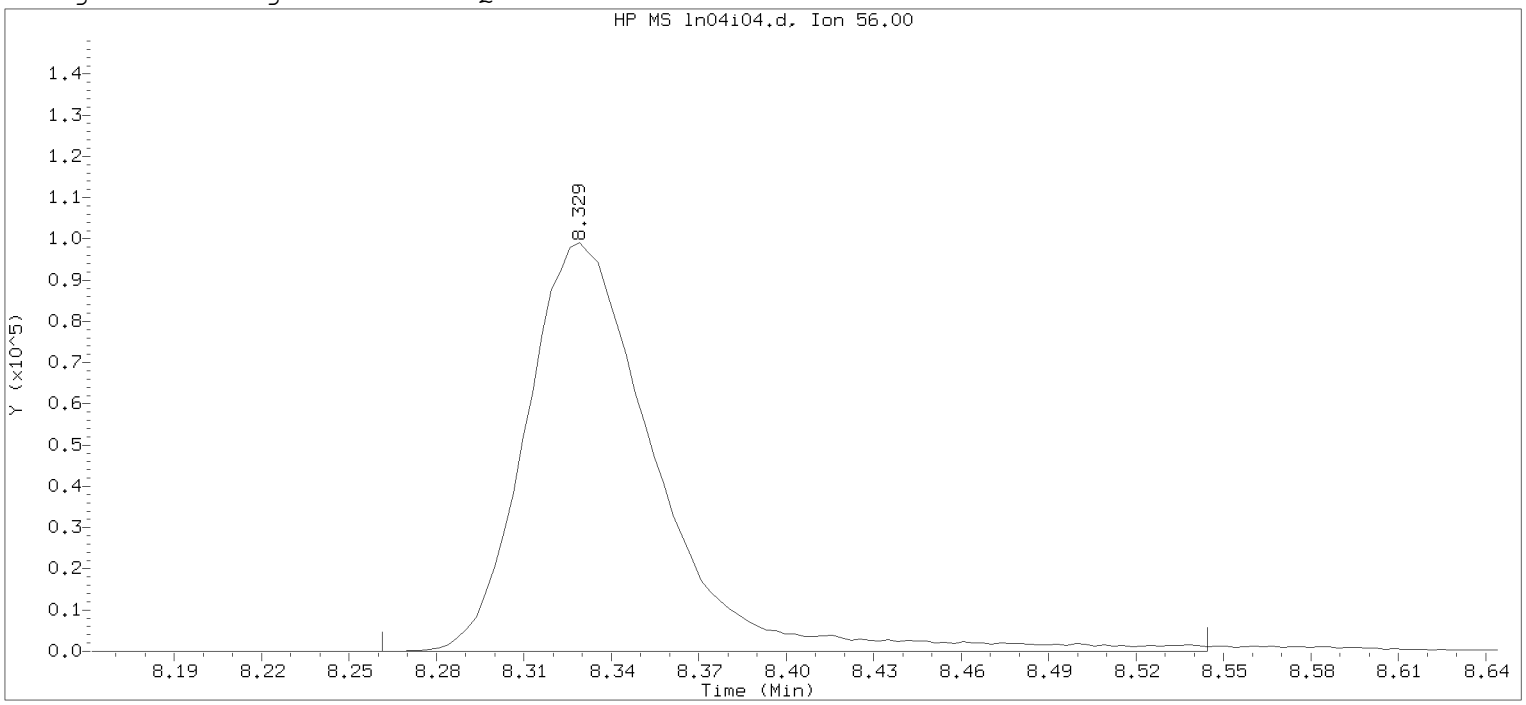
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

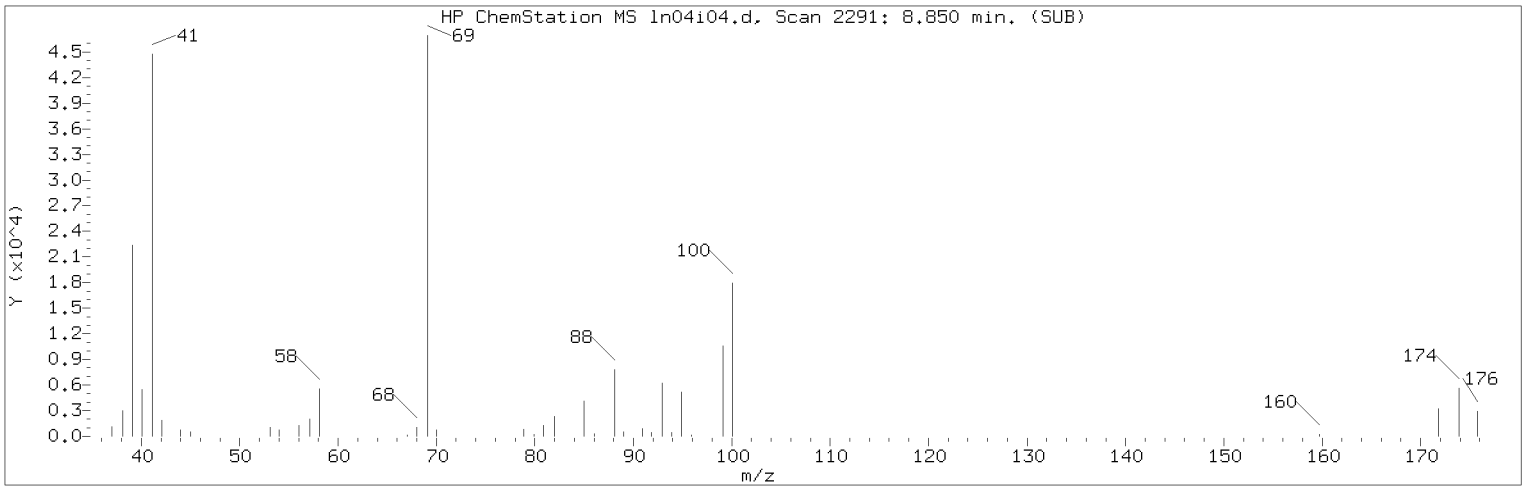
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

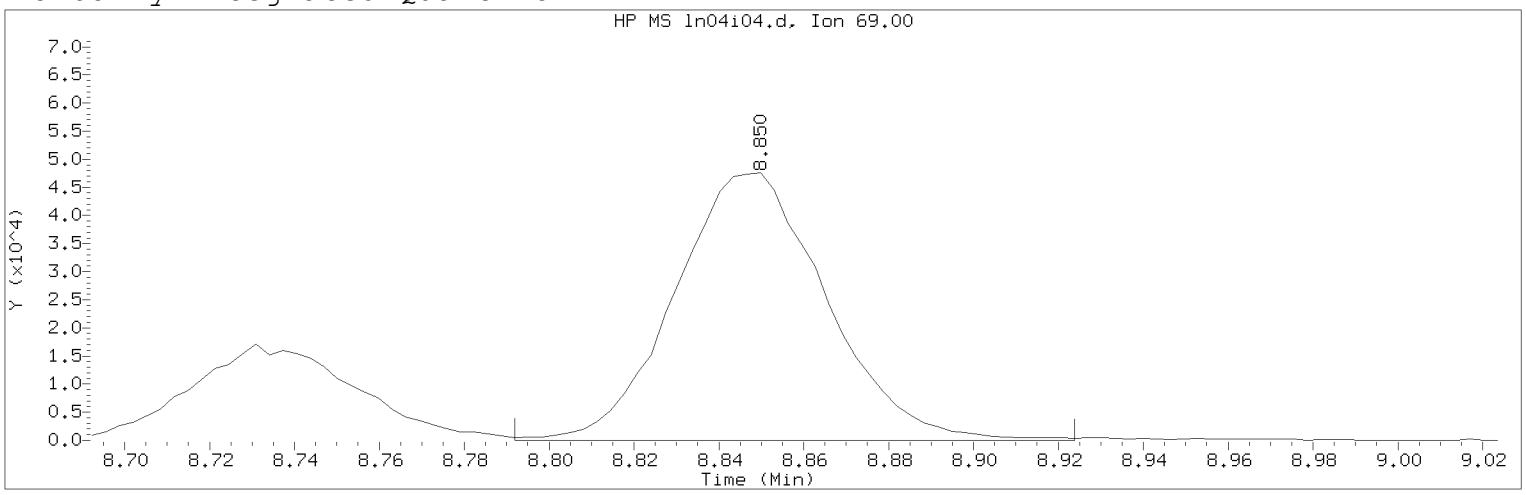
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area : 307443
On-column Amount (ng) : 938.0571
Integration start scan : 2107 Integration stop scan: 2195
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

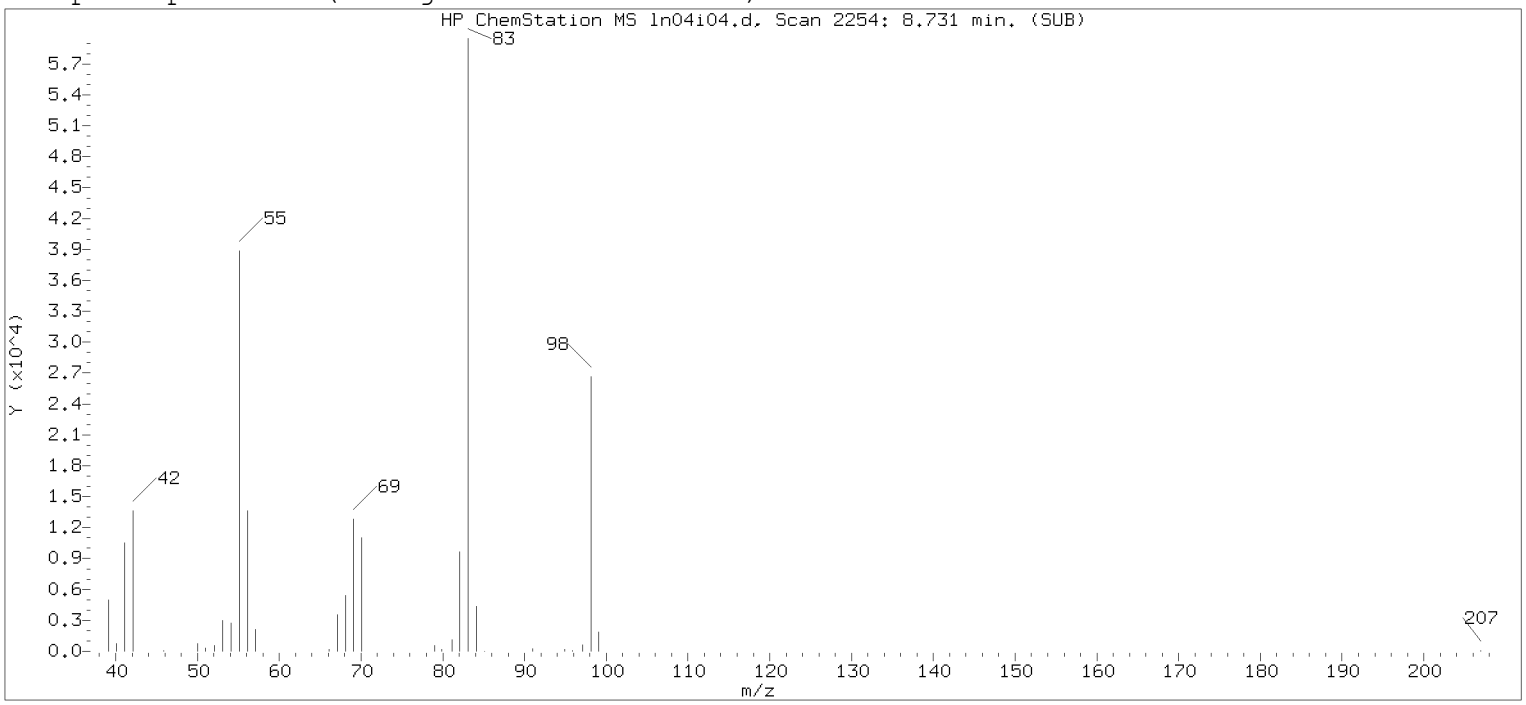
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2291
Retention Time (minutes): 8.850
Quant Ion : 69.00
Area (flag) : 117550A
On-Column Amount (ng) : 20.8506
Integration start scan : 2272 Integration stop scan: 2313
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

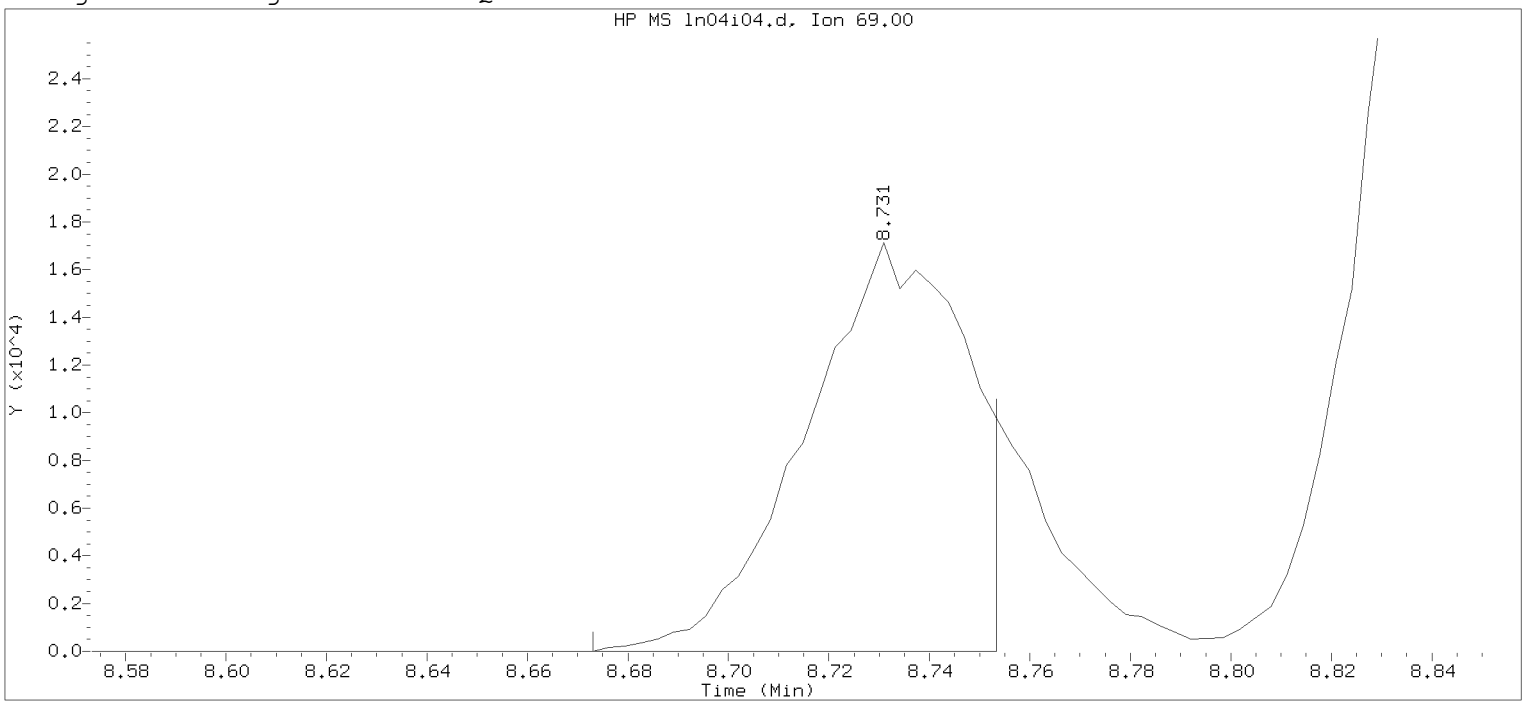
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

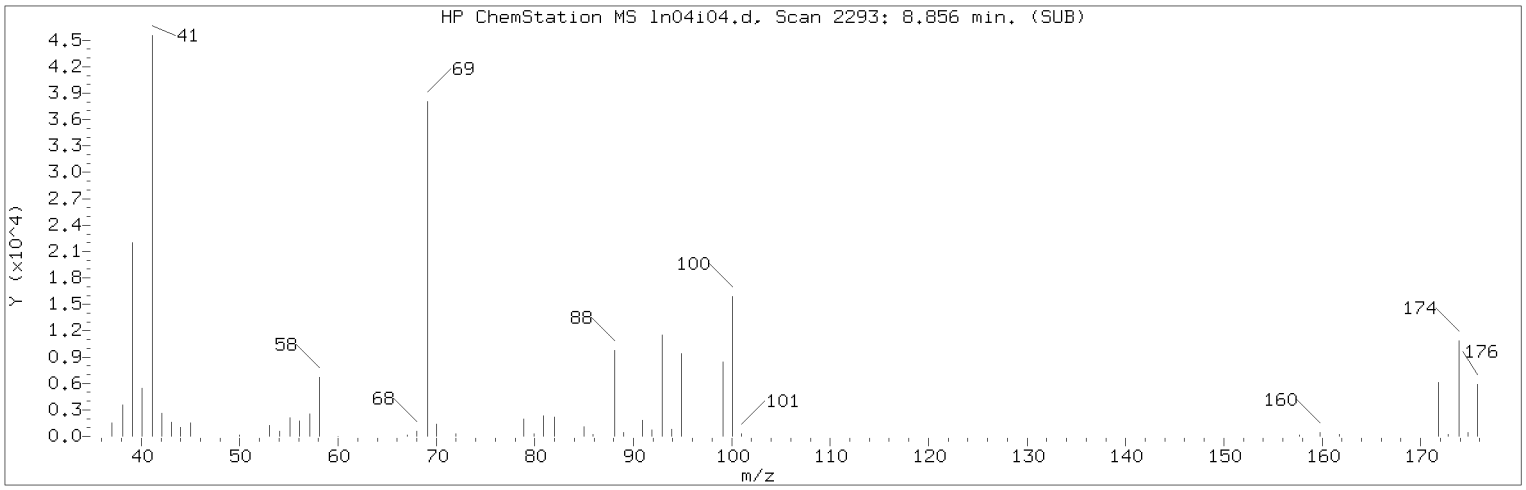
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

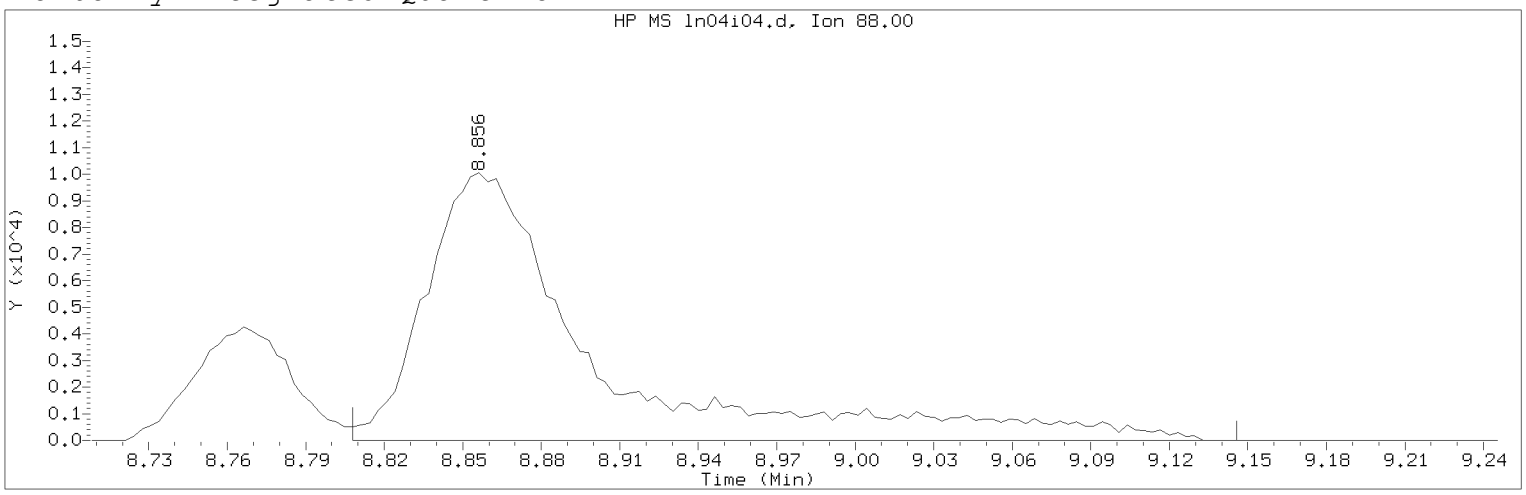
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2254
Retention Time (minutes): 8.731
Quant Ion : 69.00
Area : 37815
On-column Amount (ng) : 16.5923
Integration start scan : 2235 Integration stop scan: 2260
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

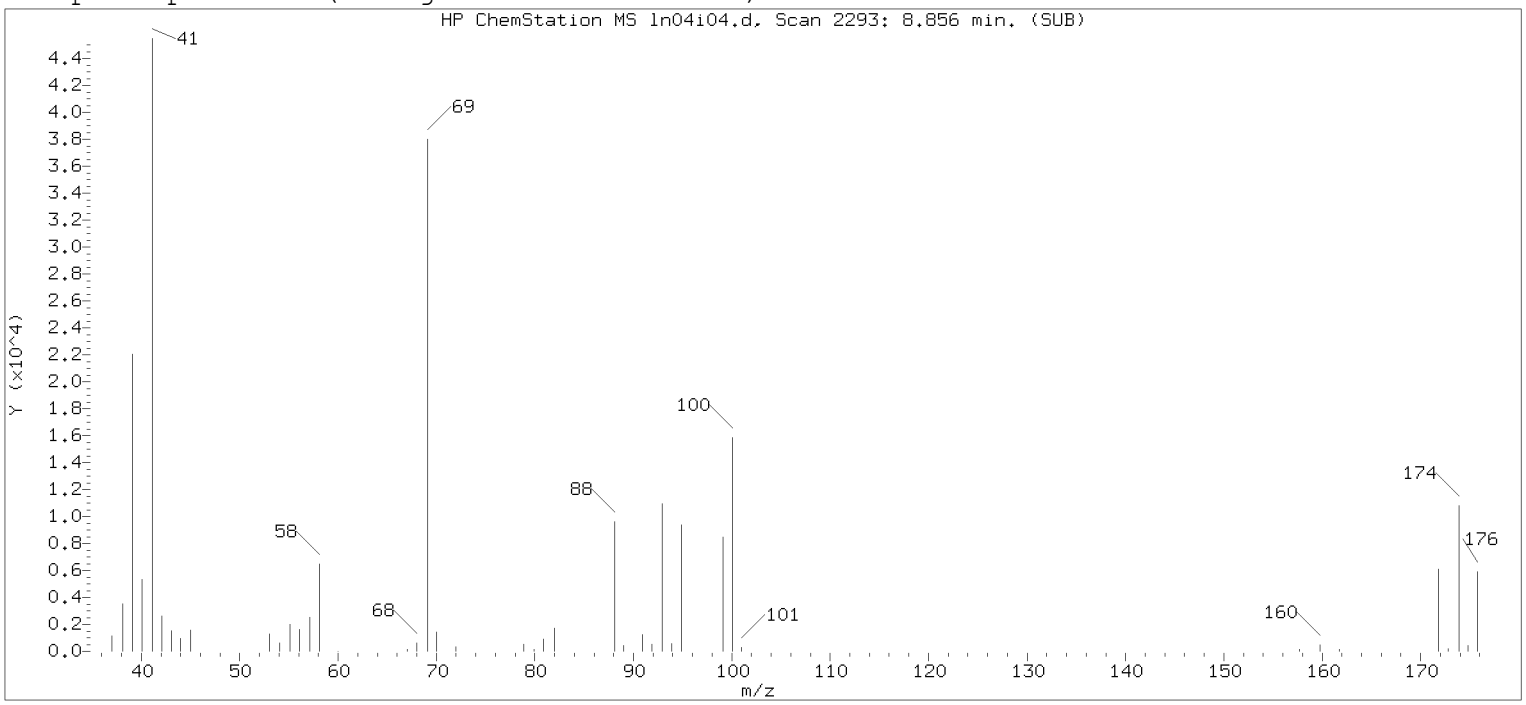
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 44376M
On-Column Amount (ng) : 513.0651
Integration start scan : 2277 Integration stop scan: 2382
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

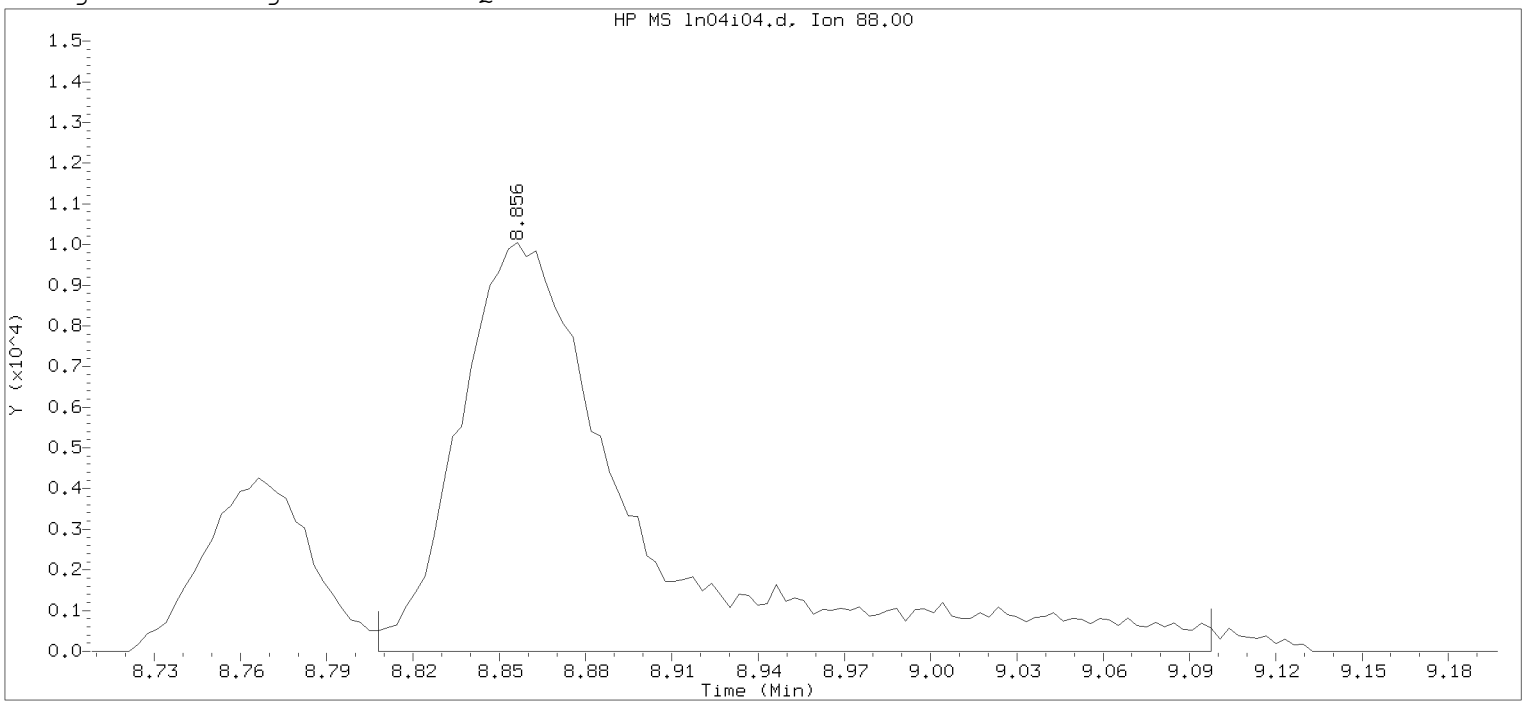
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

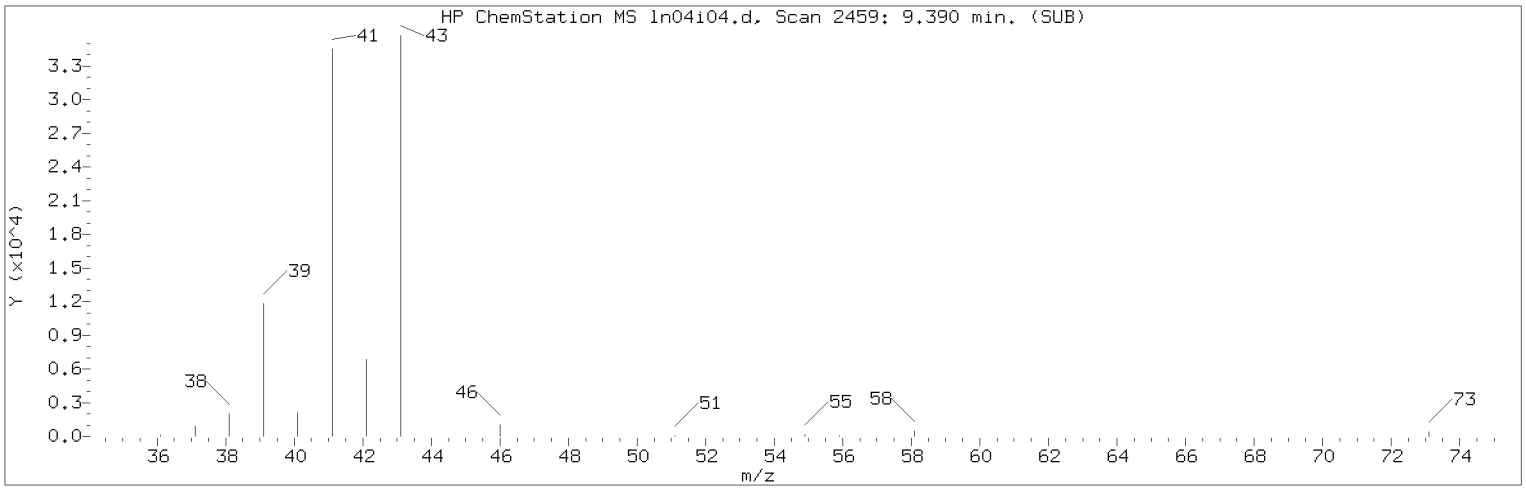
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

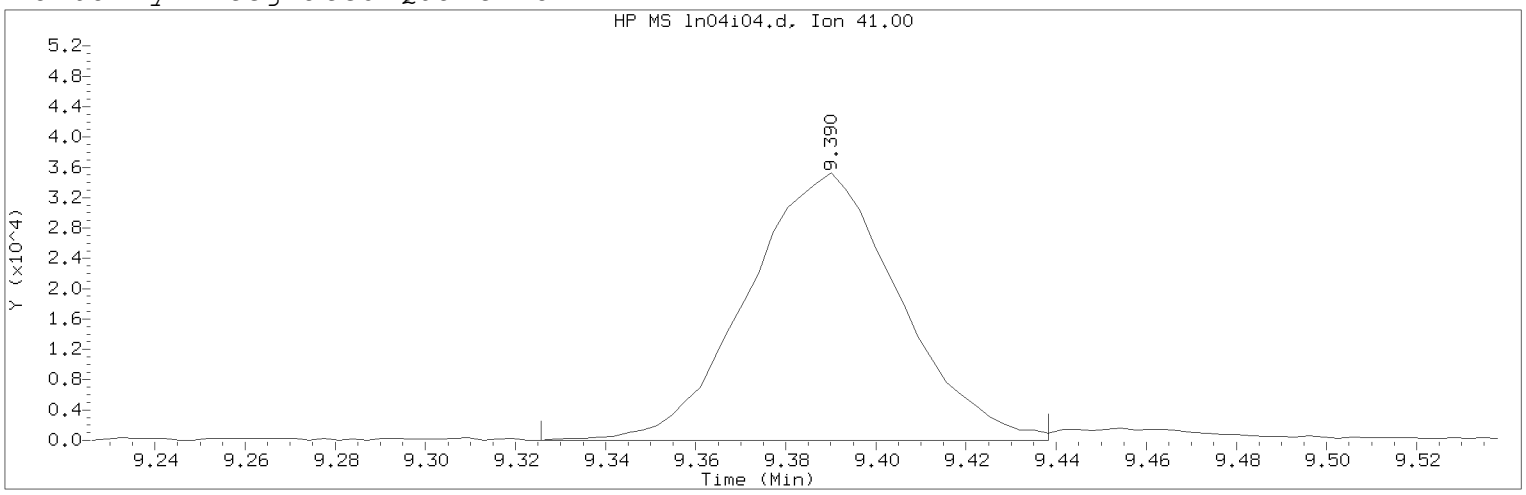
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2293		
Retention Time (minutes)	: 8.856		
Quant Ion	: 88.00		
Area	: 43671		
On-column Amount (ng)	: 571.7062		
Integration start scan	: 2277	Integration stop scan:	2367
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

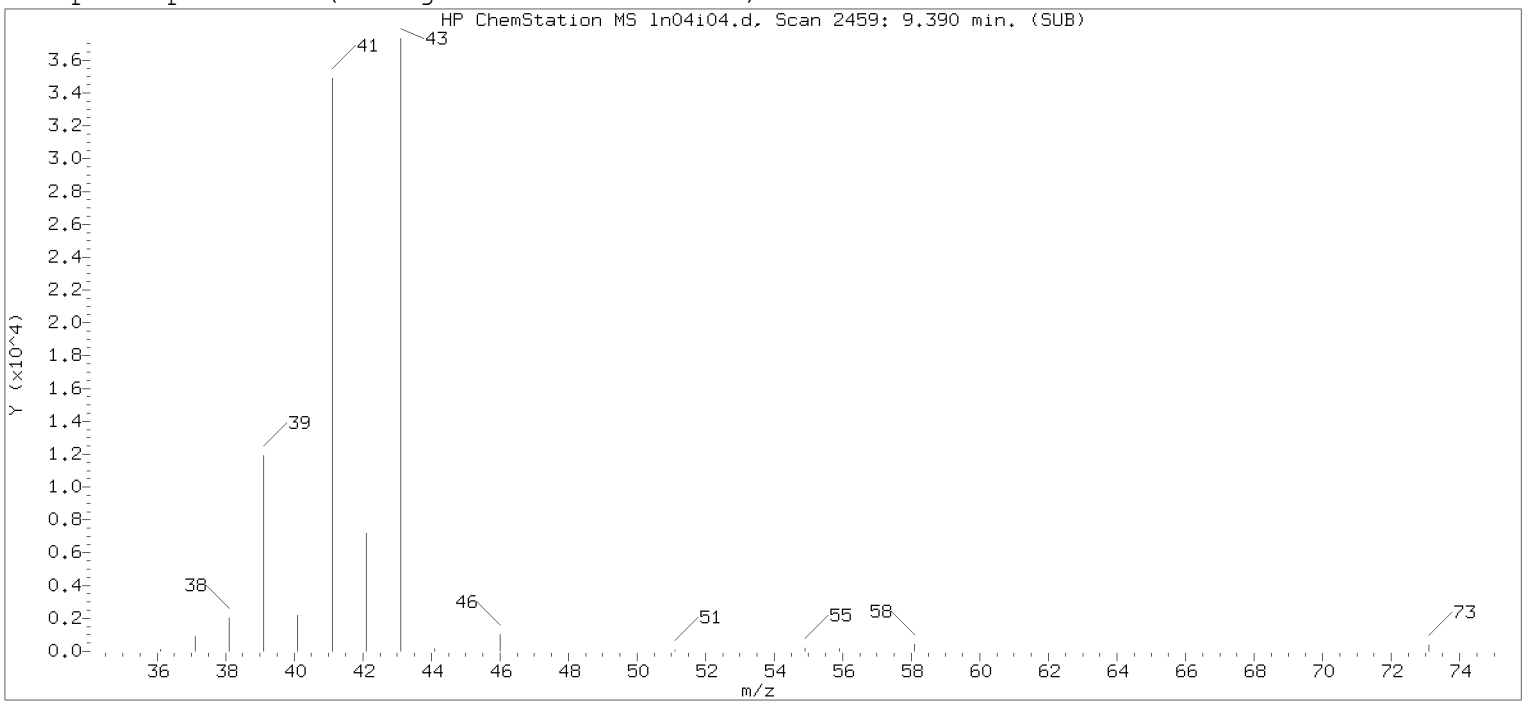
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2459
Retention Time (minutes): 9.390
Quant Ion : 41.00
Area (flag) : 82517M
On-Column Amount (ng) : 40.2472
Integration start scan : 2438 Integration stop scan: 2473
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

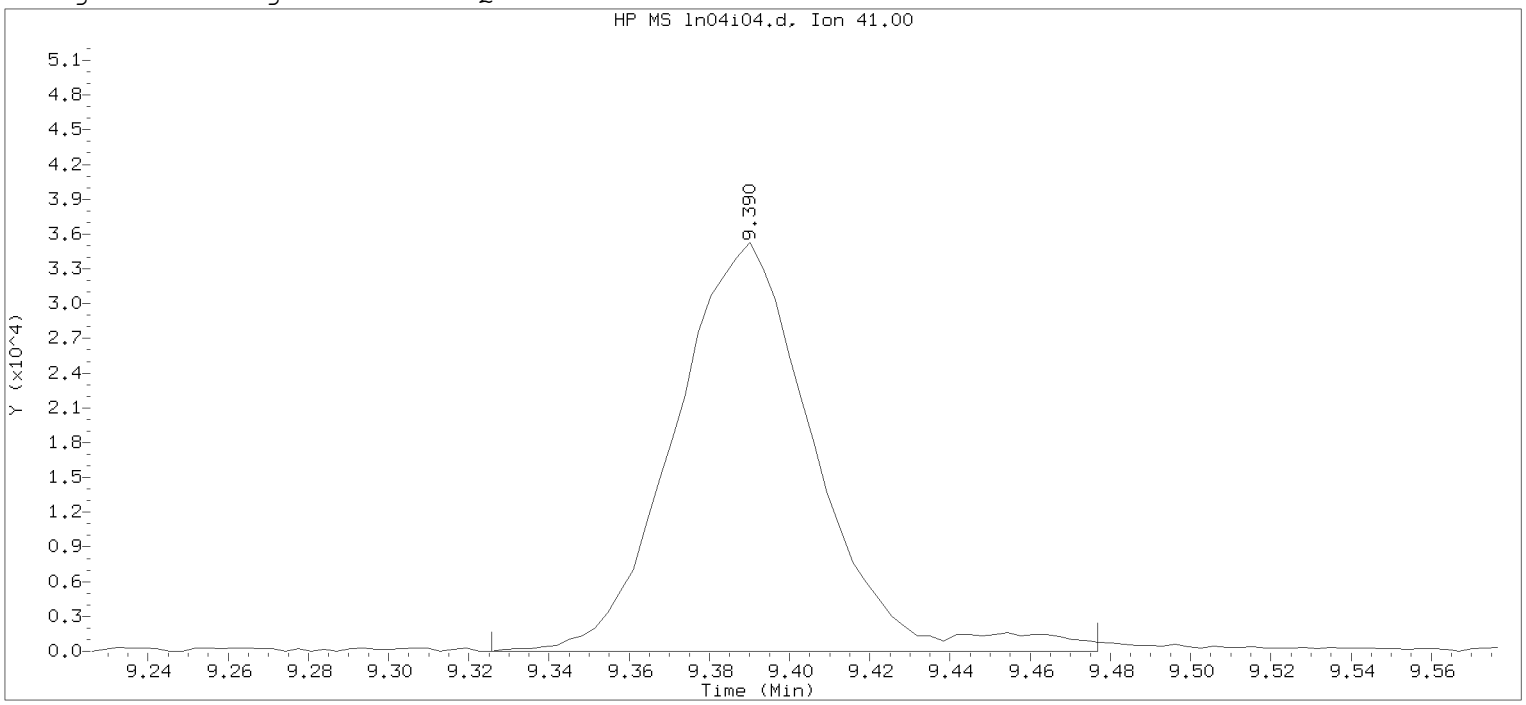
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

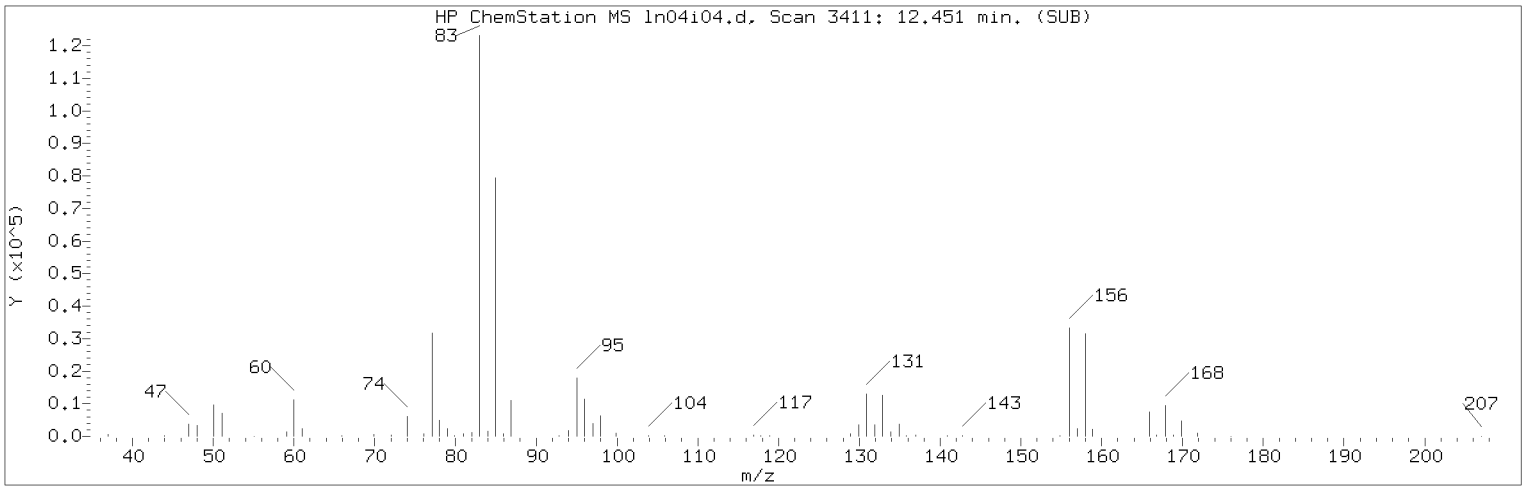
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

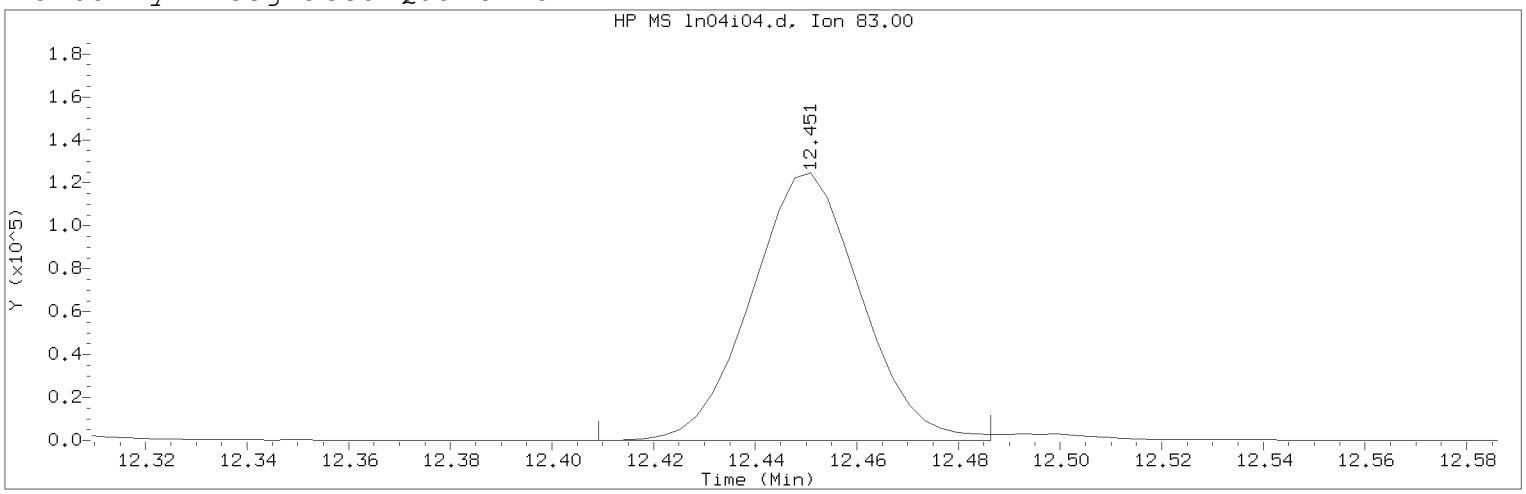
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2459
Retention Time (minutes): 9.390
Quant Ion : 41.00
Area : 85427
On-column Amount (ng) : 37.2727
Integration start scan : 2438 Integration stop scan: 2485
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

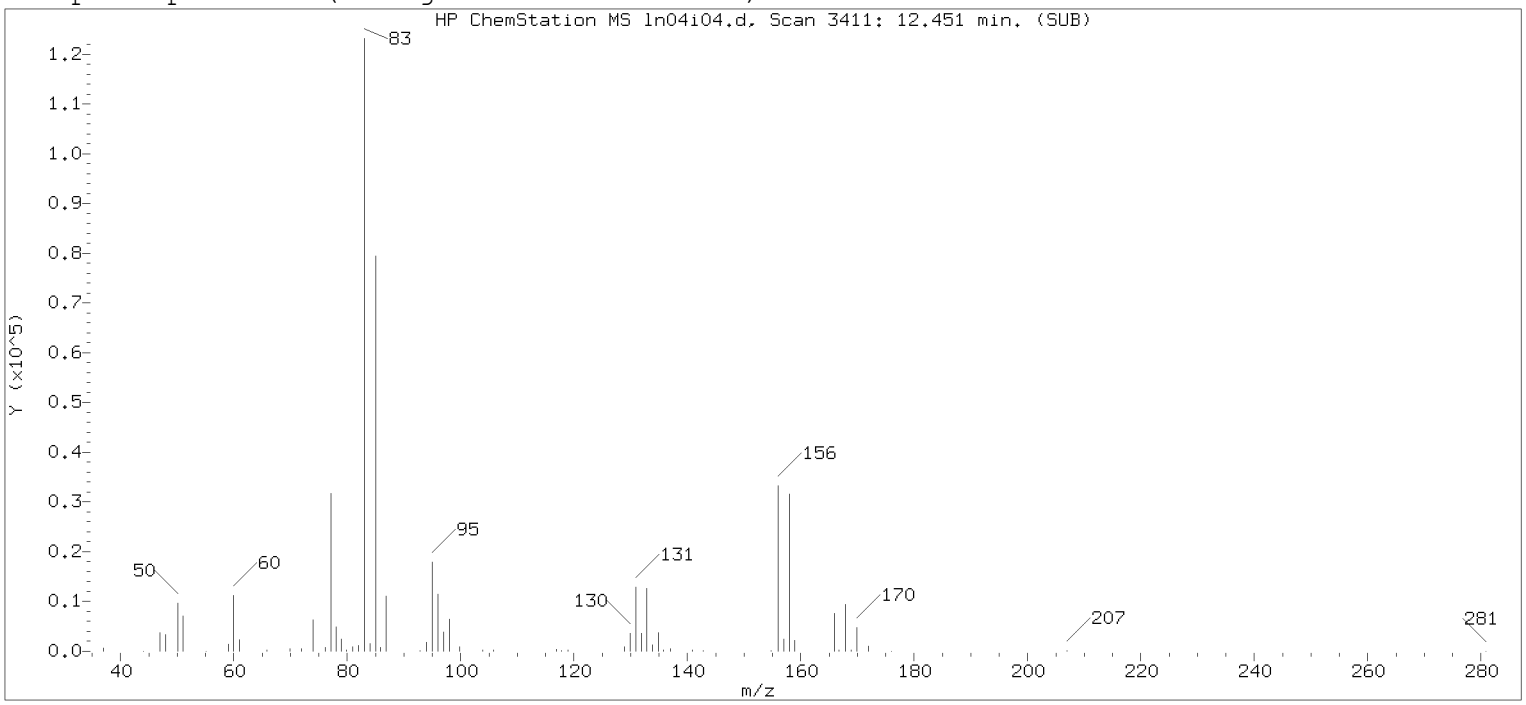
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 186119M
On-Column Amount (ng) : 20.6895
Integration start scan : 3397 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

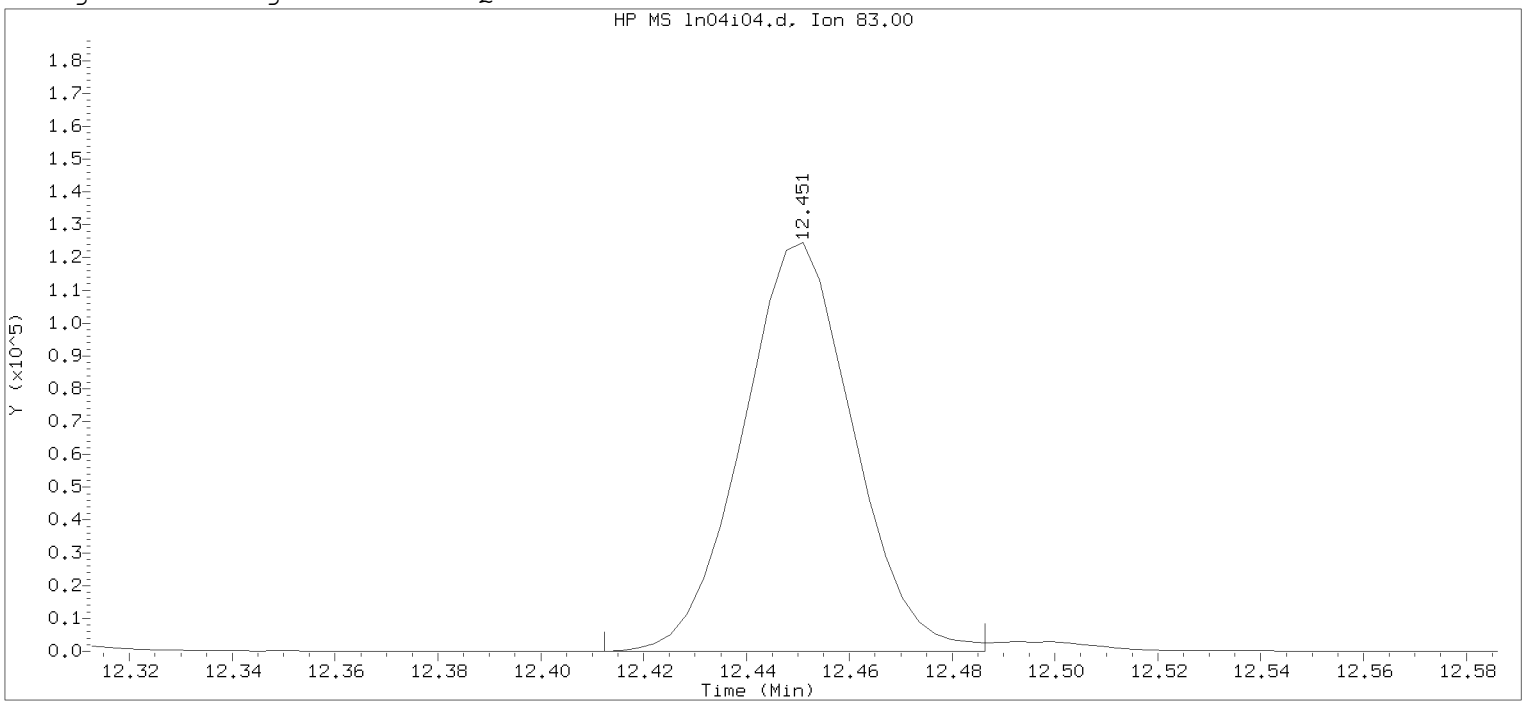
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

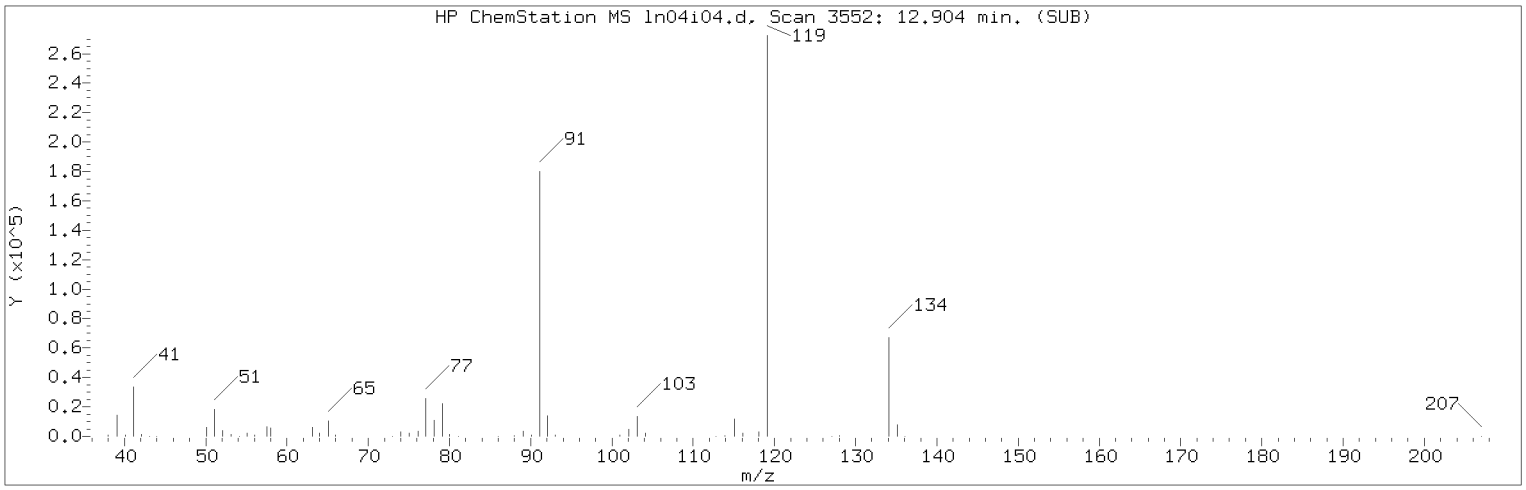
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

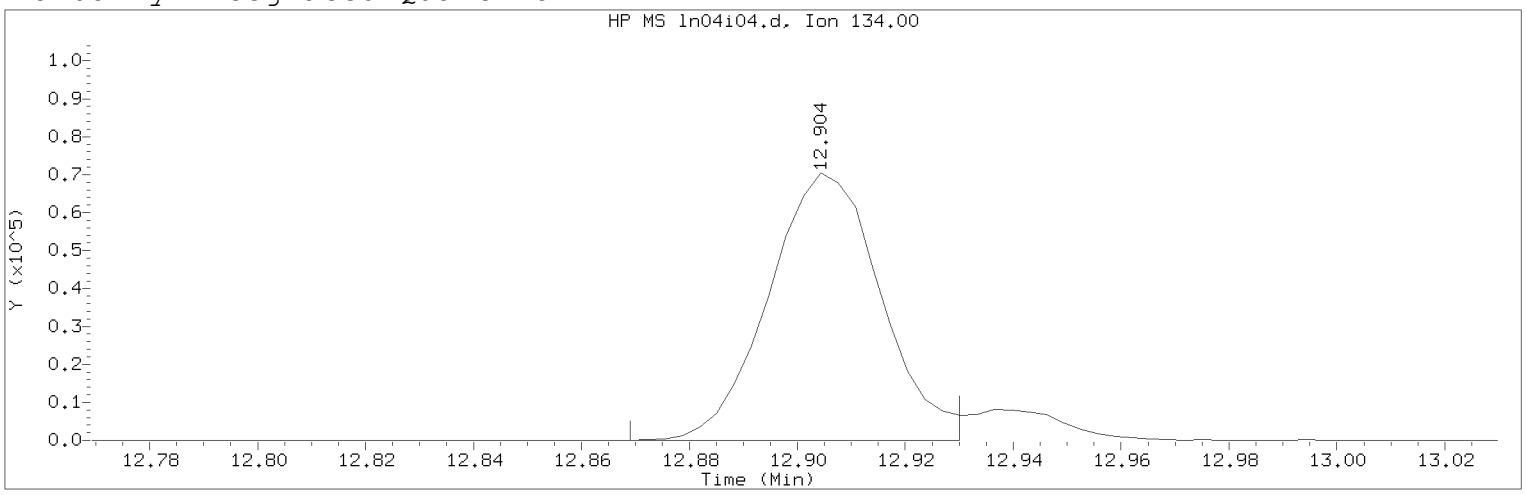
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 185866
On-column Amount (ng) : 19.5938
Integration start scan : 3398 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

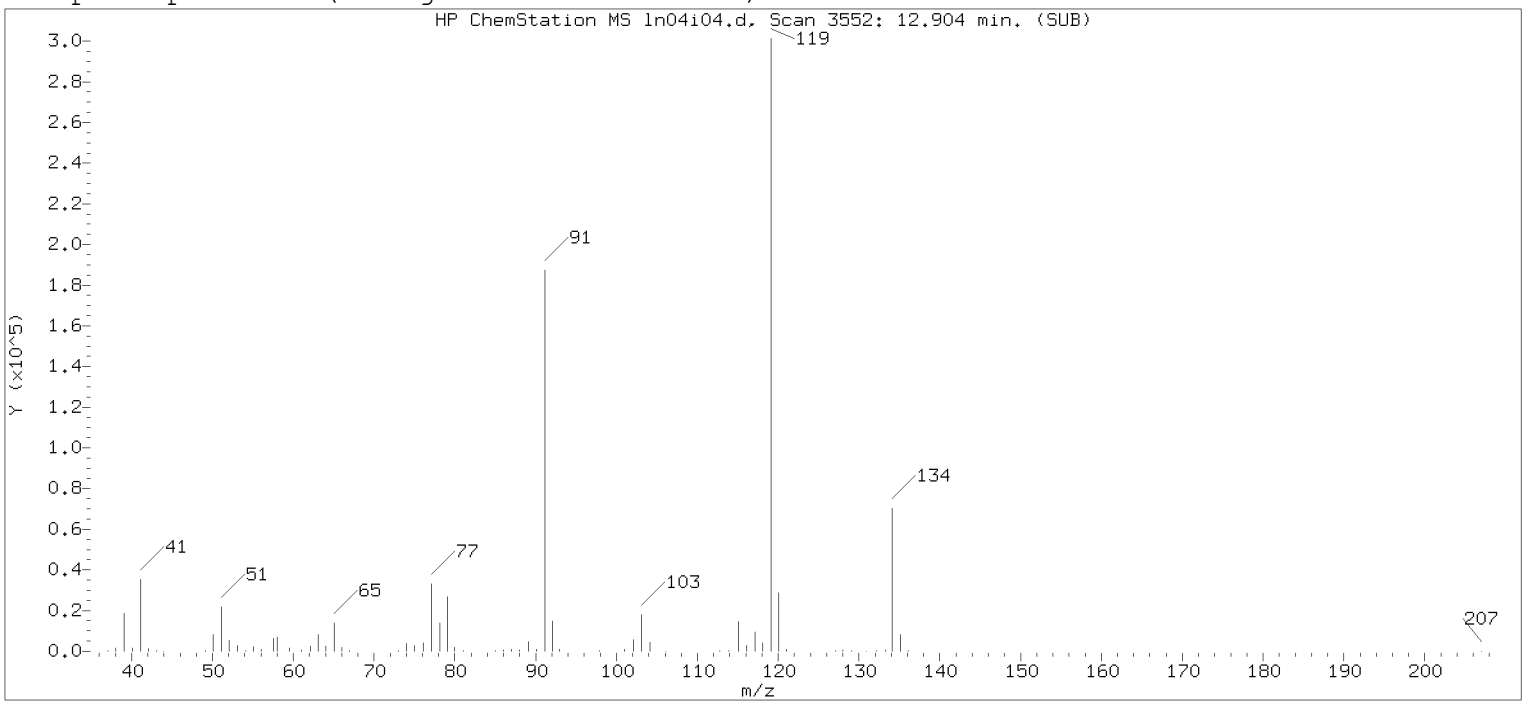
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 101571M
On-Column Amount (ng) : 21.6122
Integration start scan : 3540 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

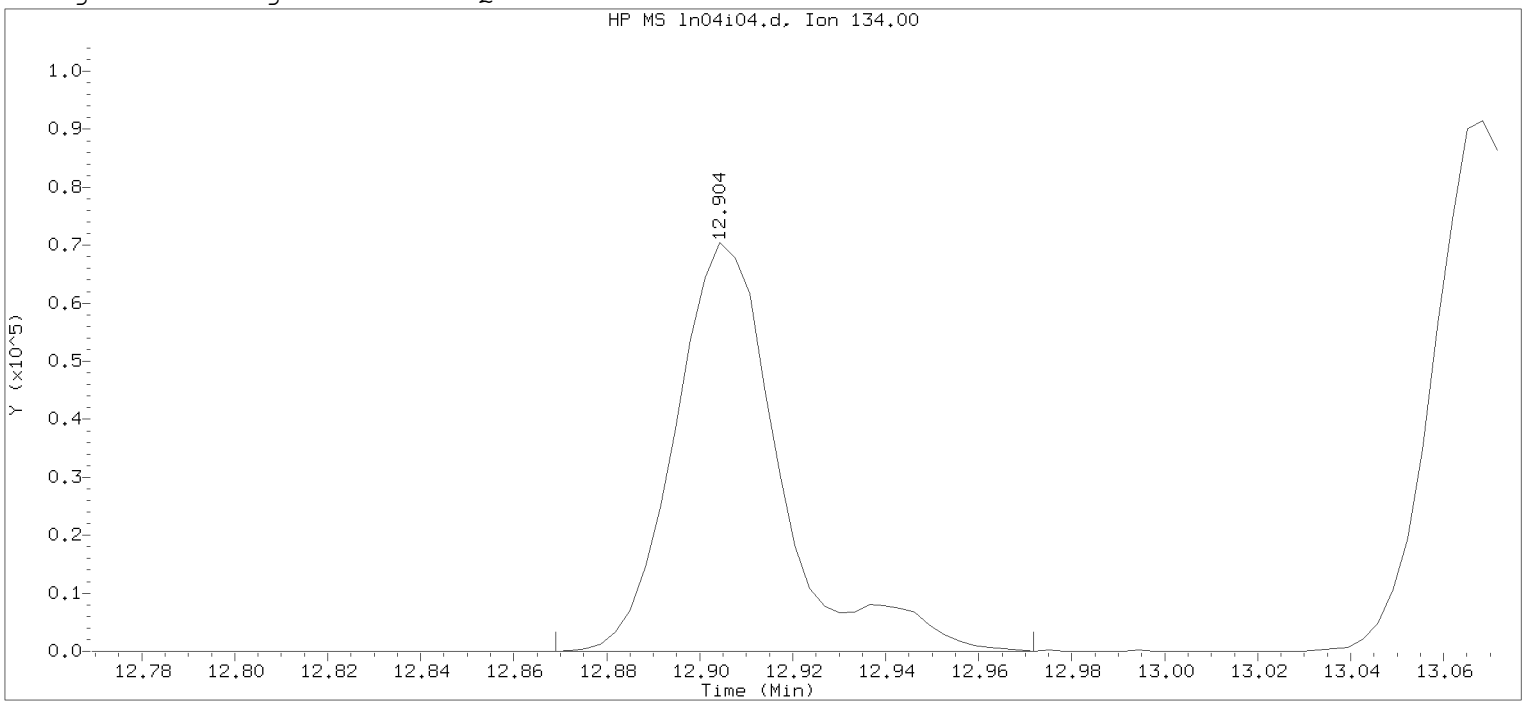
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



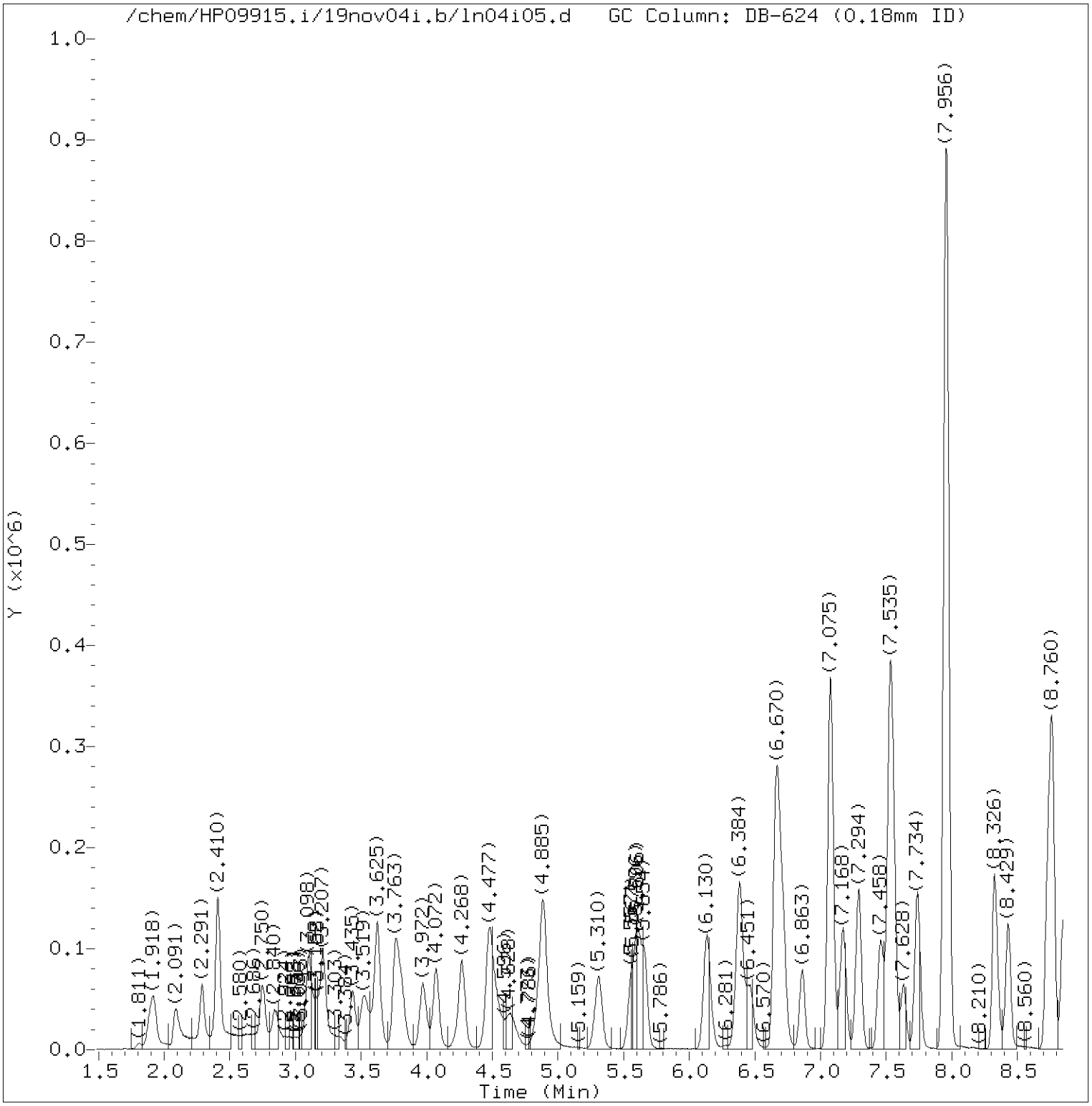
Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 110902
On-column Amount (ng) : 20.6897
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

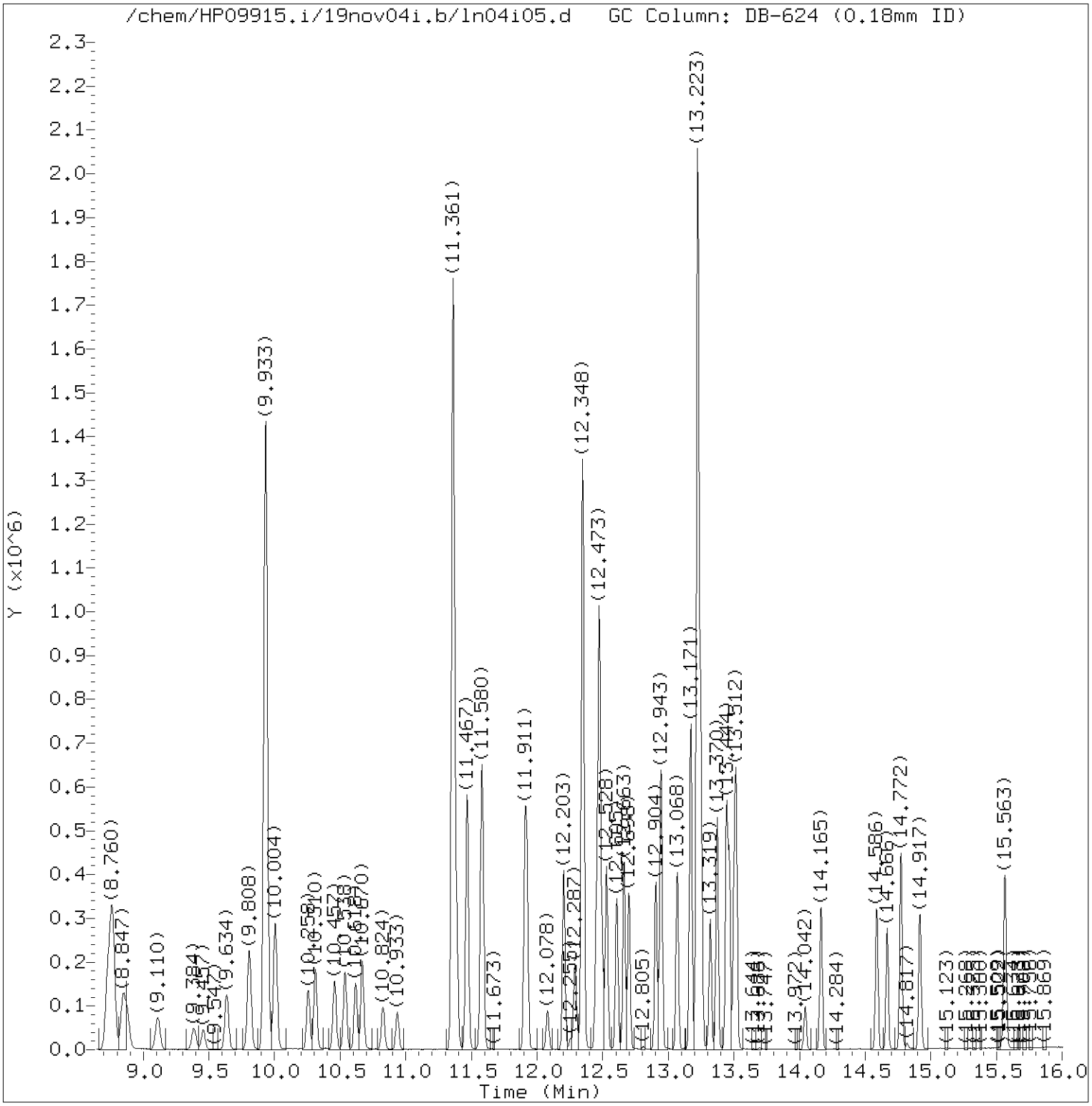
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.091	85	76947M	9.526
4) Chloromethane	(2)	2.291	50	76659	9.847
5) 1,3-Butadiene	(2)	2.406	39	60141M	9.304
6) Vinyl Chloride	(2)	2.413	62	76016	9.784
8) Bromomethane	(2)	2.750	94	54155	9.723
9) Chloroethane	(2)	2.853	64	42303	9.907
10) Dichlorofluoromethane	(2)	3.104	67	106956M	10.459
12) Trichlorofluoromethane	(2)	3.152	101	80624	9.638
11) n-Pentane	(2)	3.213	43	86389	8.739
14) Ethyl ether	(2)	3.438	59	52079	9.635
15) Freon 123a	(2)	3.519	67	65806	9.780
16) Acrolein	(1)	3.625	56	197662	100.013
17) 1,1-Dichloroethene	(2)	3.763	96	48467	9.871
17) 1,1-Dichloroethene	(2)	3.763	63	24200	9.831
19) Freon 113	(2)	3.792	101	51923	9.269
18) Acetone	(1)	3.805	58	17383	19.619
22) Methyl Iodide	(2)	3.969	142	101688	9.995
21) 2-Propanol	(1)	4.001	45	63841	100.227
23) Carbon Disulfide	(2)	4.075	76	179738	9.714
27) Methyl Acetate	(2)	4.245	43	62026	9.809
25) Allyl Chloride	(2)	4.268	41	86653	9.838
28) Methylene Chloride	(2)	4.474	84	58140	9.949
29)*t-Butyl alcohol-d10	(1)	4.509	65	263427M	250.000
30) t-Butyl alcohol	(1)	4.644	59	111005	100.090
31) Acrylonitrile	(2)	4.840	53	34130	10.032
33) Methyl Tertiary Butyl Ether	(2)	4.882	73	189173	10.147
32) trans-1,2-Dichloroethene	(2)	4.889	96	56133	9.883
34) n-Hexane	(2)	5.306	57	75187M	8.508
36) 1,1-Dichloroethane	(2)	5.557	63	99074	9.999
38) di-Isopropyl ether	(2)	5.606	45	191363	10.014
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	84906	9.551
40) Ethyl t-butyl ether	(2)	6.136	59	188350	10.156
43) 1,2-Dichloroethene (Total)	(2)		96	118698	19.696
44) 2-Butanone	(2)	6.364	43	85445	19.565
42) cis-1,2-Dichloroethene	(2)	6.387	96	62565	9.814
45) 2,2-Dichloropropane	(2)	6.396	77	74849	9.717
47) Propionitrile	(1)	6.464	54	136751	98.961
48) Methacrylonitrile	(2)	6.663	67	181171	49.366

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	34163	10.106
50) Tetrahydrofuran	(1)	6.724	71	24588	19.698
51) Chloroform	(2)	6.863	83	93507	9.867
52)$Dibromofluoromethane	(2)	7.072	113	280960	49.616
52)$Dibromofluoromethane	(2)	7.075	111	286315	49.589
53) 1,1,1-Trichloroethane	(2)	7.078	97	77742	9.611
54) Cyclohexane	(2)	7.175	56	96567	8.928
54) Cyclohexane	(2)	7.175	84	84021	8.942
54) Cyclohexane	(2)	7.175	69	29917	8.942
56) Carbon Tetrachloride	(2)	7.287	117	63638	9.276
55) 1,1-Dichloropropene	(2)	7.294	75	75943	9.694
58) Isobutyl Alcohol	(1)	7.458	41	94699	253.736
57)$1,2-Dichloroethane-d4	(2)	7.532	102	72410	50.173
57)$1,2-Dichloroethane-d4	(2)	7.528	65	317862	49.423
57)$1,2-Dichloroethane-d4	(2)	7.528	104	46131	50.043
60) Benzene	(2)	7.557	78	235083	9.978
61) 1,2-Dichloroethane	(2)	7.634	62	74555	9.839
61) 1,2-Dichloroethane	(2)	7.634	98	7256	9.676
65) t-Amyl methyl ether	(2)	7.740	73	187995	10.099
66)*Fluorobenzene	(2)	7.956	96	1158257	50.000
67) n-Heptane	(2)	7.959	43	65347MA	7.916
69) n-Butanol	(1)	8.326	56	166674M	518.868
71) Trichloroethene	(2)	8.425	95	57378	9.672
72) Methylcyclohexane	(2)	8.731	83	104101	9.459
72) Methylcyclohexane	(2)	8.731	98	46774	9.392
73) 1,2-Dichloropropane	(2)	8.766	63	59459	9.939
76) Methyl Methacrylate	(2)	8.843	69	56123	9.701
75) 1,4-Dioxane	(1)	8.859	88	22251M	252.018
74) Dibromomethane	(2)	8.875	93	37949	9.804
78) Bromodichloromethane	(2)	9.110	83	66403	9.560
79) 2-Nitropropane	(2)	9.387	41	38245M	18.178
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	24083	9.373
81) cis-1,3-Dichloropropene	(2)	9.638	75	89740	9.728
82) 4-Methyl-2-pentanone	(2)	9.808	43	182101	19.754
83)$Toluene-d8	(3)	9.933	98	1179588	50.250
83)$Toluene-d8	(3)	9.933	100	766795	50.427
88) Toluene	(3)	10.004	92	146792	9.974
90) 1,3-Dichloropropene (total)	(3)		100	170602	19.407

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.255	75	80862	9.679
91) Ethyl Methacrylate	(3)	10.310	69	101774	10.024
92) 1,1,2-Trichloroethane	(3)	10.457	97	55397	9.928
93) Tetrachloroethene	(3)	10.538	166	57668	9.252
94) 1,3-Dichloropropane	(3)	10.615	76	95319	10.005
96) 2-Hexanone	(3)	10.670	43	134577	19.858
97) Dibromochloromethane	(3)	10.824	129	54317	9.503
99) 1,2-Dibromoethane	(3)	10.937	107	59349	9.795
100)*Chlorobenzene-d5	(3)	11.358	117	897139	50.000
101) 1-Chlorohexane	(3)	11.364	91	68517	8.666
102) Chlorobenzene	(3)	11.383	112	167497	10.065
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	53804	9.812
104) Ethylbenzene	(3)	11.467	91	273085	9.708
106) m+p-Xylene	(3)	11.583	106	214450	19.380
108) Xylene (Total)	(3)		106	321712	29.193
107) o-Xylene	(3)	11.908	106	107262	9.813
109) Styrene	(3)	11.924	104	181265	10.036
110) Bromoform	(3)	12.078	173	38599	9.038
111) Isopropylbenzene	(3)	12.203	105	257704	9.400
112) Cyclohexanone	(1)	12.290	55	84173	243.422
114)$4-Bromofluorobenzene	(3)	12.348	95	448980	50.511
114)$4-Bromofluorobenzene	(3)	12.348	174	372460	50.544
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	99221M	10.583
115) Bromobenzene	(4)	12.464	156	73059	9.795
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	144573	49.994
117) 1,2,3-Trichloropropane	(4)	12.496	110	30082	10.457
119) n-Propylbenzene	(4)	12.528	91	295857	9.079
120) 2-Chlorotoluene	(4)	12.608	126	64871	9.370
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	216905	9.159
121) 4-Chlorotoluene	(4)	12.698	126	68187	9.462
124) tert-Butylbenzene	(4)	12.907	134	42119M	8.599
125) Pentachloroethane	(4)	12.936	167	40747	9.662
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	231031	9.256
127) sec-Butylbenzene	(4)	13.068	105	254340	8.702
129) 1,3-Dichlorobenzene	(4)	13.168	146	133435	9.735
130) p-Isopropyltoluene	(4)	13.171	119	222820	8.812
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	496298	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	137520	9.678

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	263873	9.980
135) Benzyl Chloride	(4)	13.319	91	189013	9.442
136) 1,3-Diethylbenzene	(4)	13.370	119	162518	9.876
141) Diethylbenzene (total)	(4)		100	469676	29.503
137) 1,4-Diethylbenzene	(4)	13.444	119	170802	9.797
139) n-Butylbenzene	(4)	13.464	92	112696	8.717
138) 1,2-Dichlorobenzene	(4)	13.502	146	133767	9.890
140) 1,2-Diethylbenzene	(4)	13.518	119	136356	9.830
142) 1,2-Dibromo-3-chloropropane	(4)	14.042	75	21471	10.462
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	94358	9.080
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	93971	9.300
147) Hexachlorobutadiene	(4)	14.666	225	44299	9.286
148) Naphthalene	(4)	14.772	128	328233	10.105
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	92049	9.363
150) 2-Methylnaphthalene	(4)	15.563	142	202392	10.118

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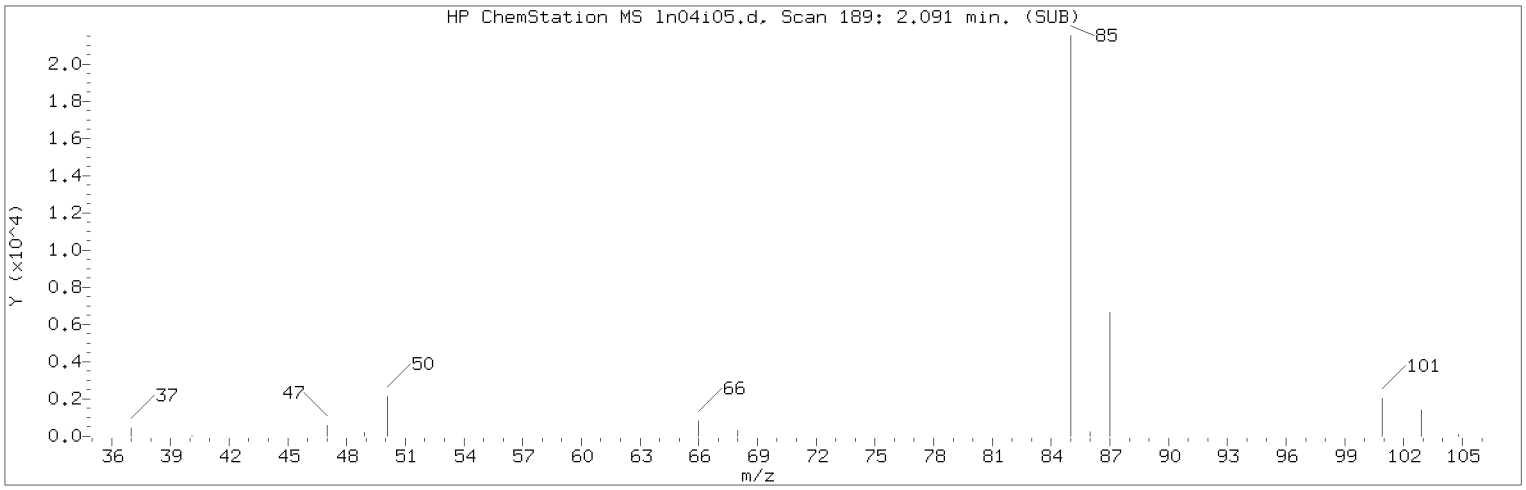
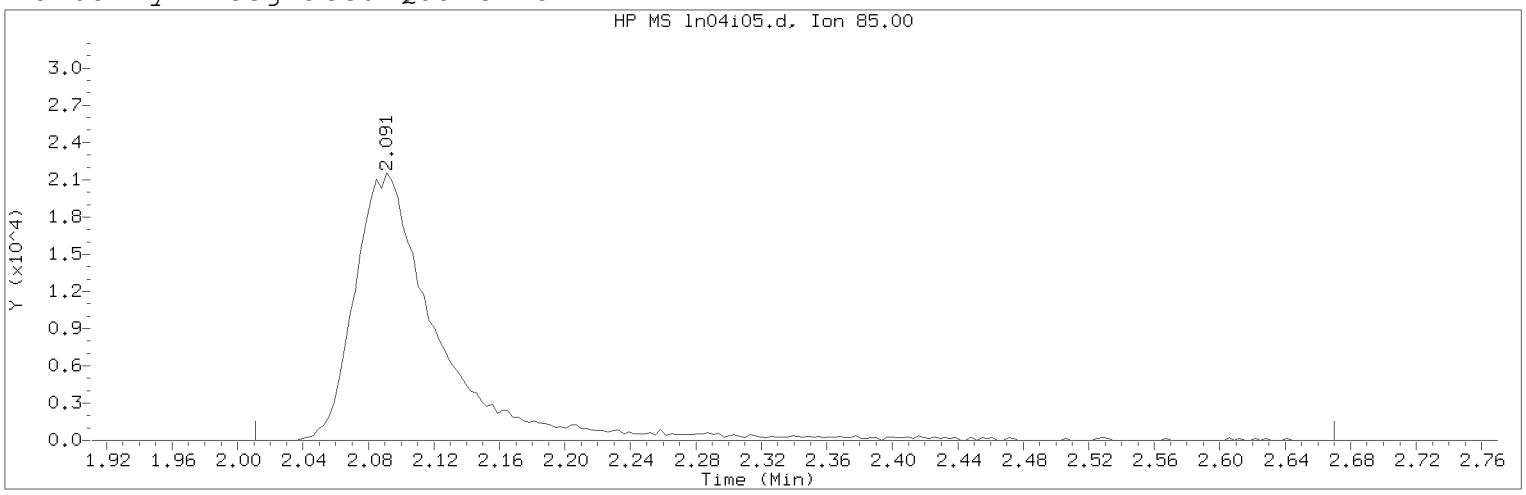
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

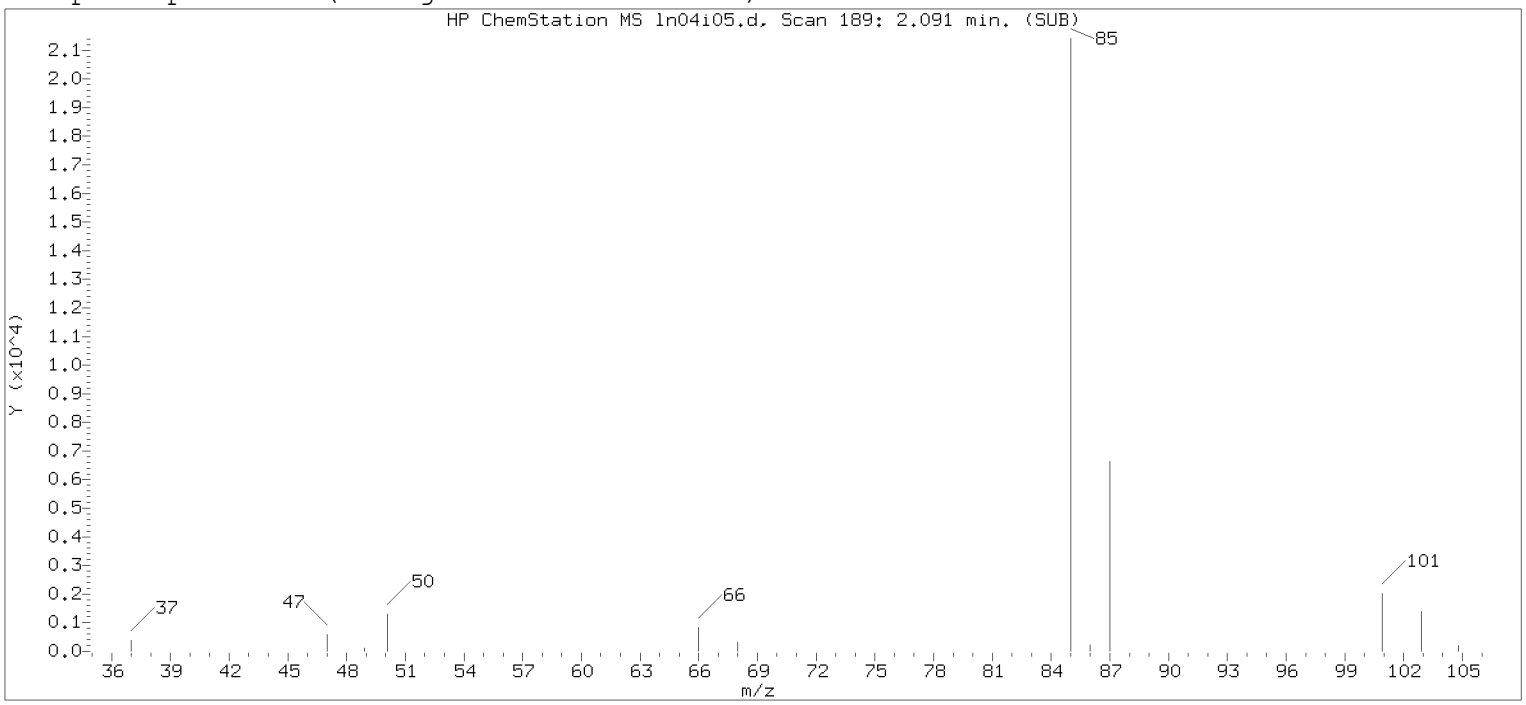
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 189
Retention Time (minutes): 2.091
Quant Ion : 85.00
Area (flag) : 76947M
On-Column Amount (ng) : 9.5263
Integration start scan : 163 Integration stop scan: 368
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

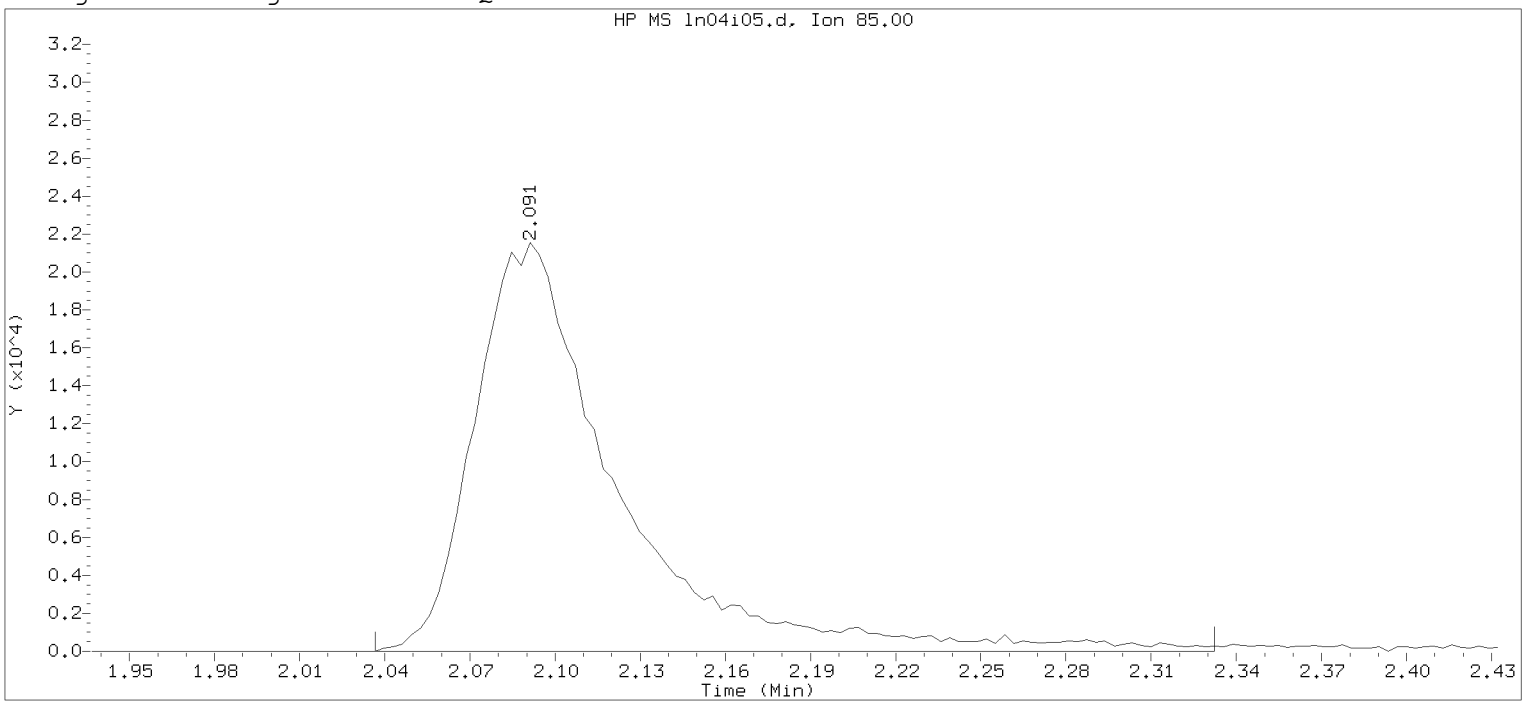
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

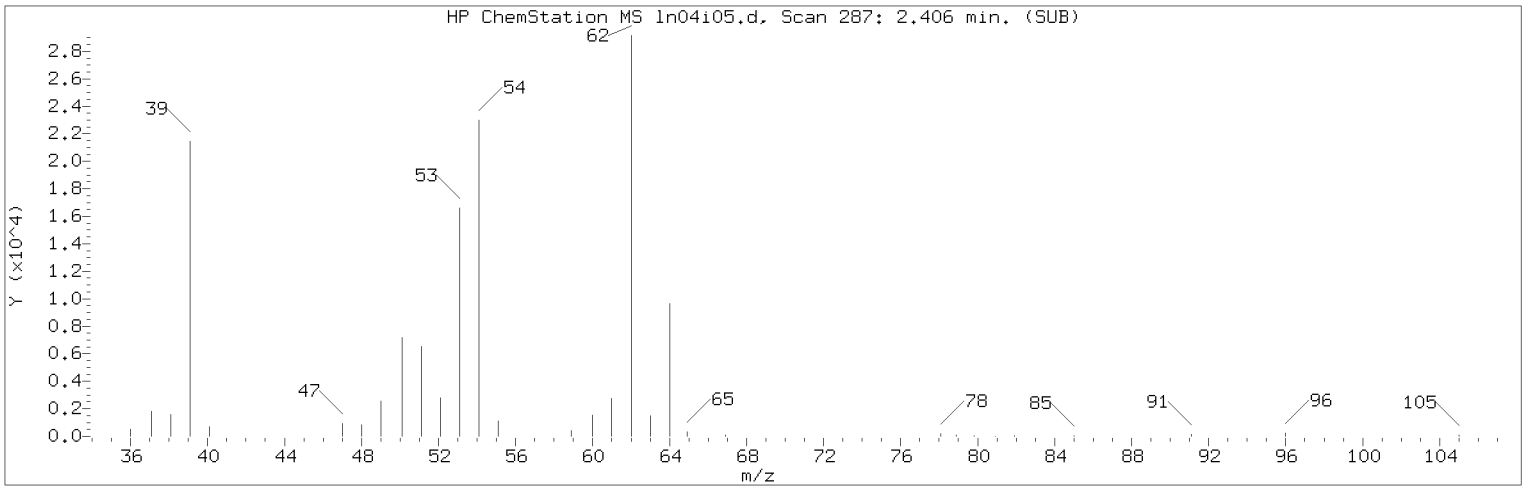
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

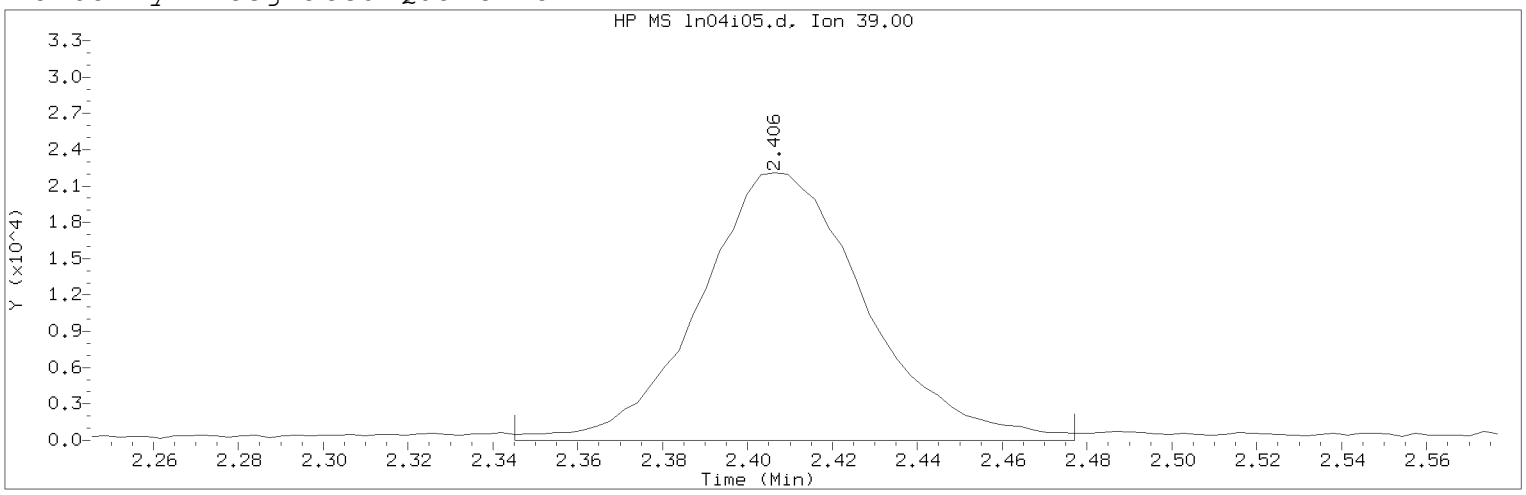
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 189
Retention Time (minutes): 2.091
Quant Ion : 85.00
Area : 74877
On-column Amount (ng) : 9.3136
Integration start scan : 171 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

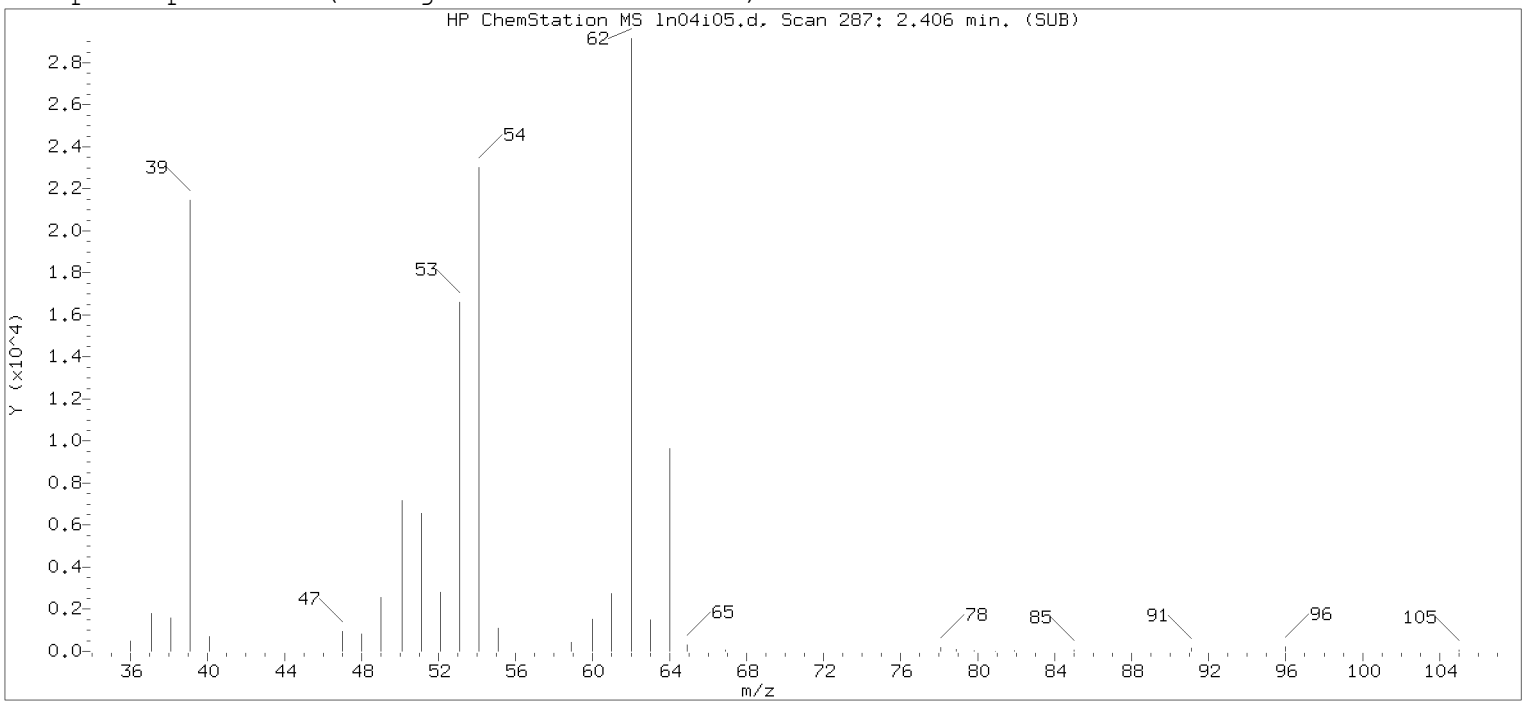
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 60141M
On-Column Amount (ng) : 9.3042
Integration start scan : 267 Integration stop scan: 308
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

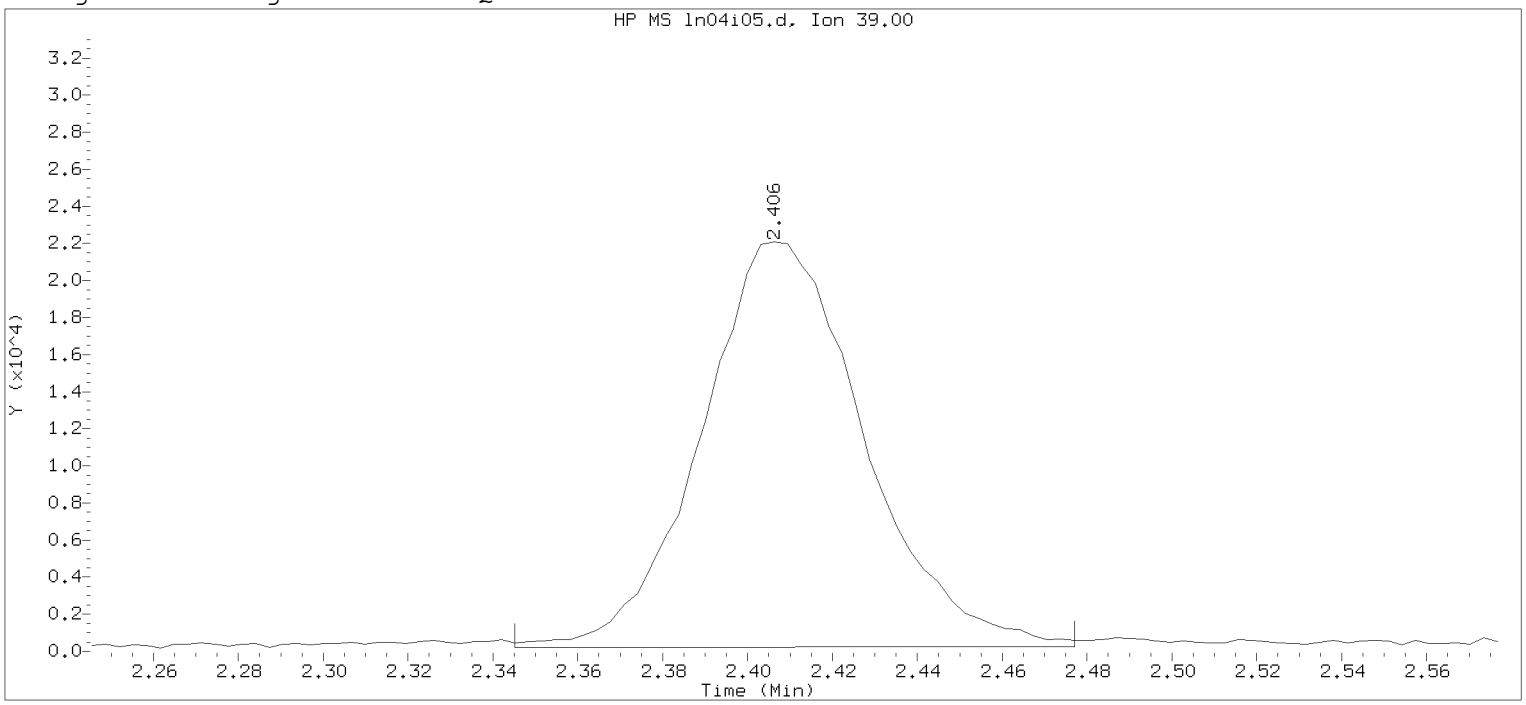
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

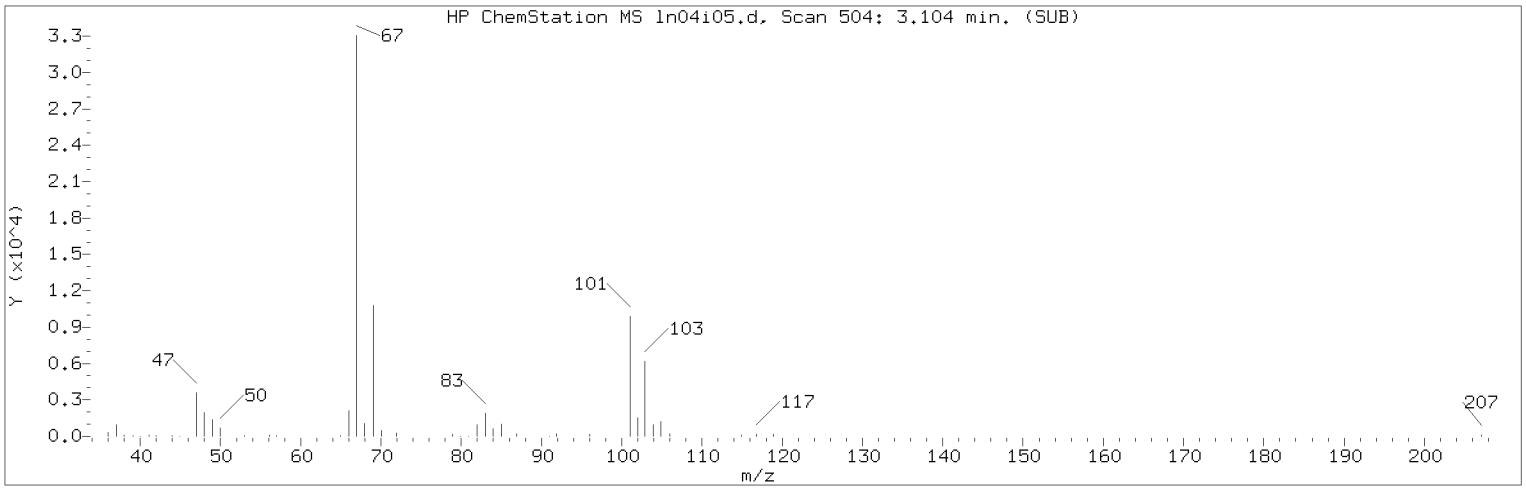
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

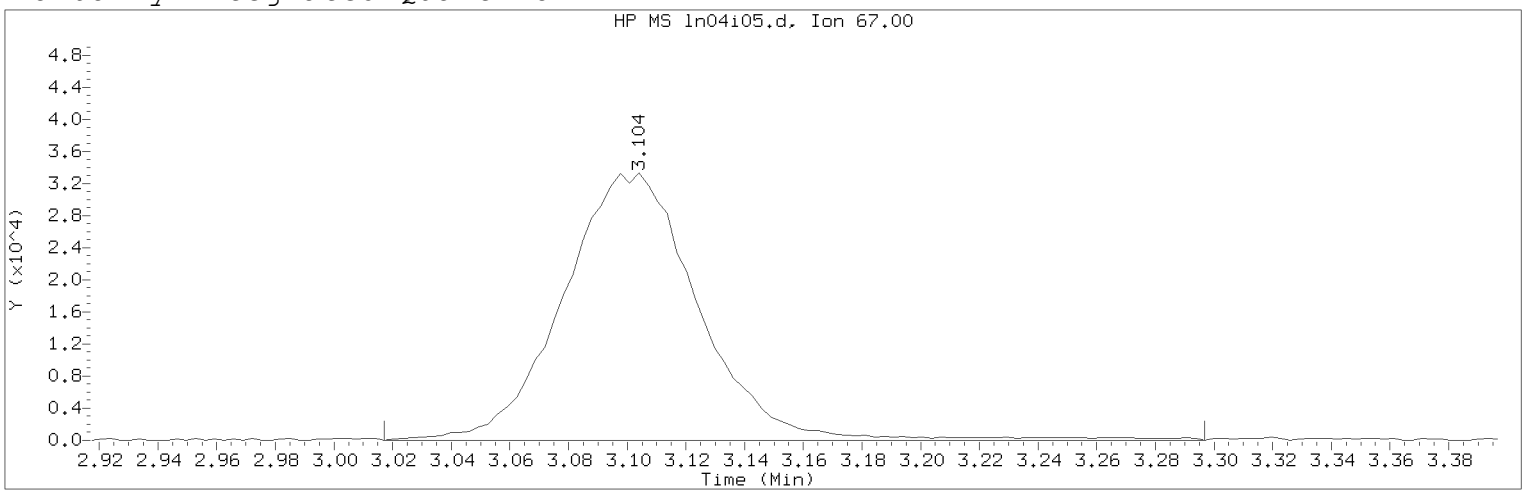
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 58240
On-column Amount (ng) : 9.5707
Integration start scan : 267 Integration stop scan: 308
Y at integration start : 206 Y at integration end: 250

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

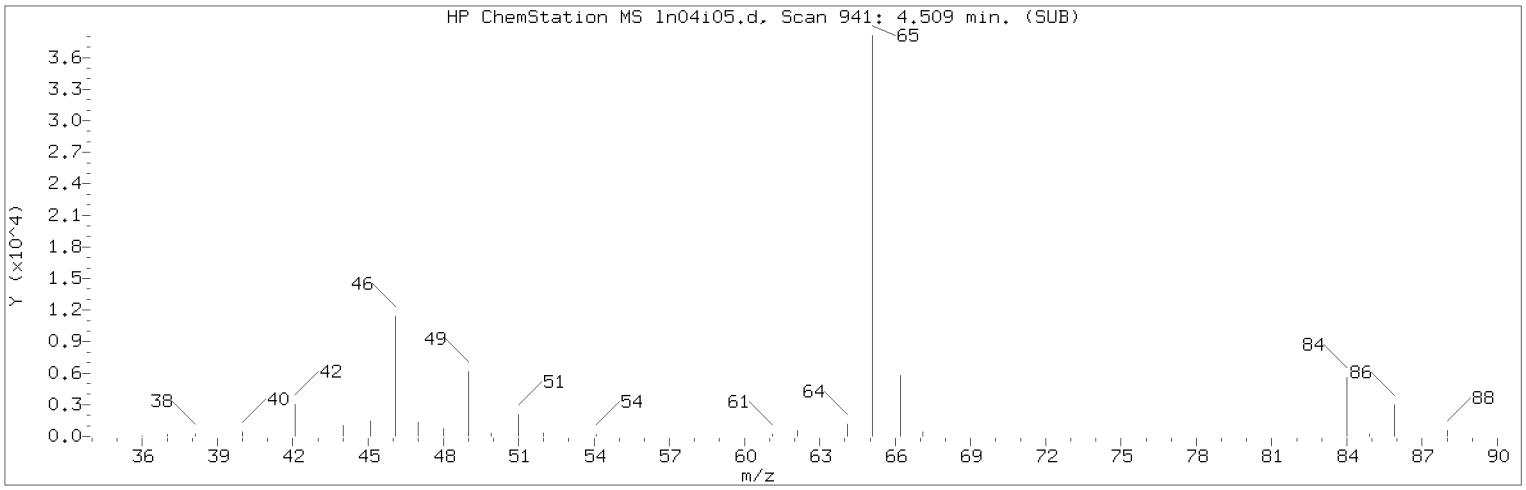
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 504
Retention Time (minutes): 3.104
Quant Ion : 67.00
Area (flag) : 106956M
On-Column Amount (ng) : 10.4593
Integration start scan : 476 Integration stop scan: 563
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

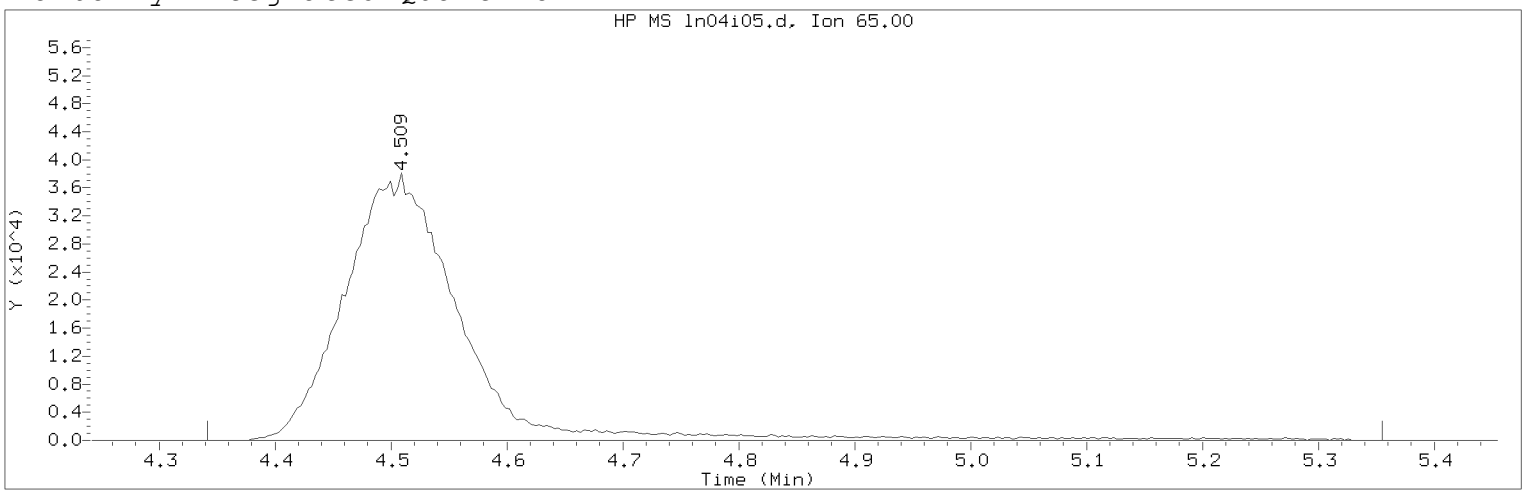
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

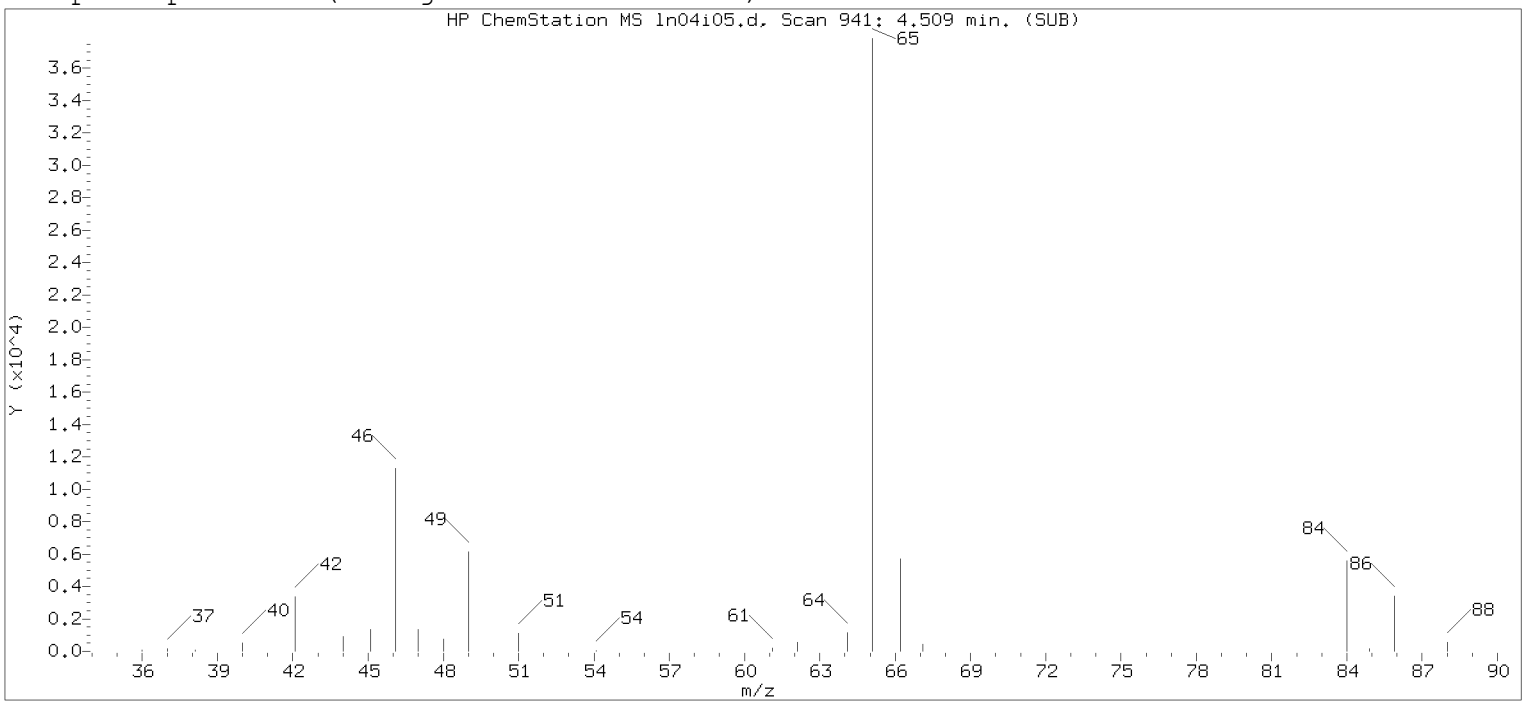
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 263427M
On-Column Amount (ng) : 250.0000
Integration start scan : 888 Integration stop scan: 1203
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

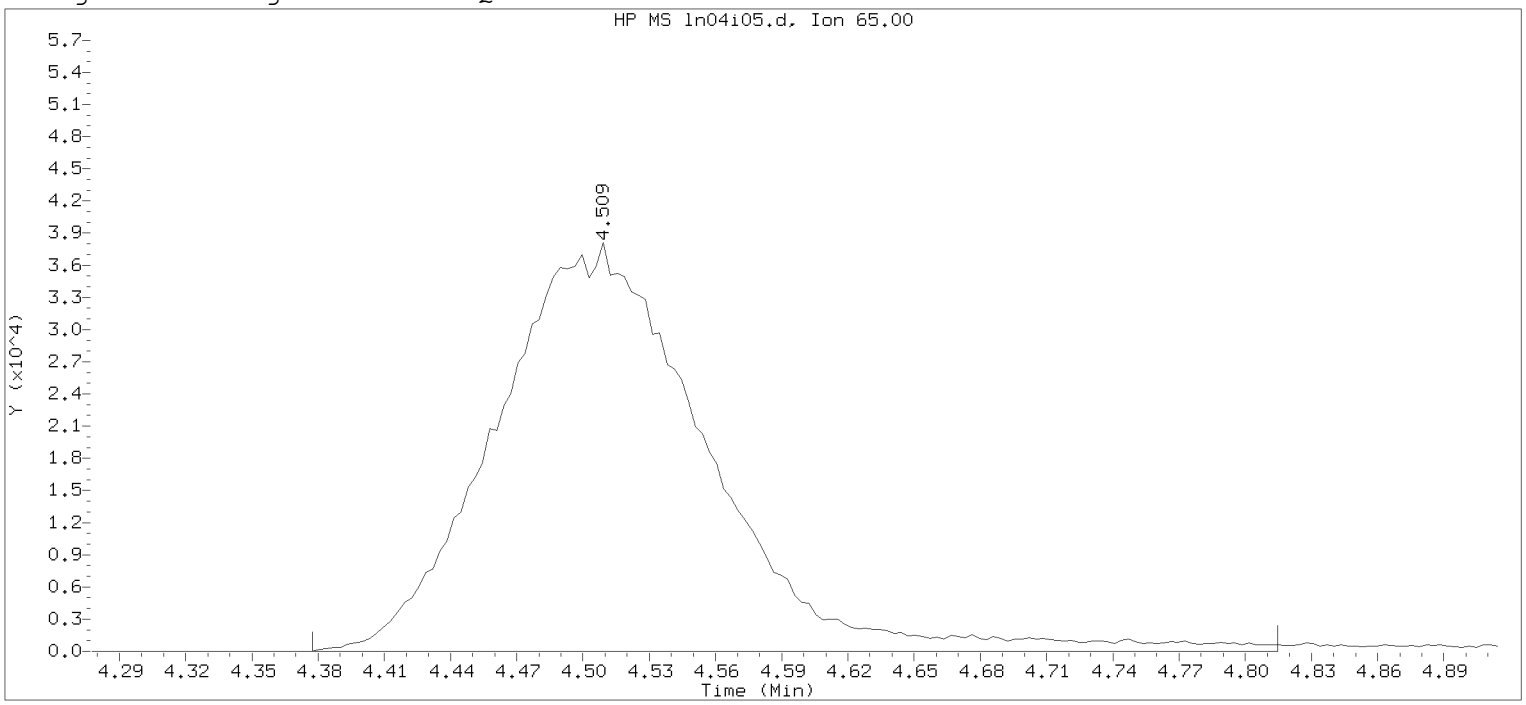
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

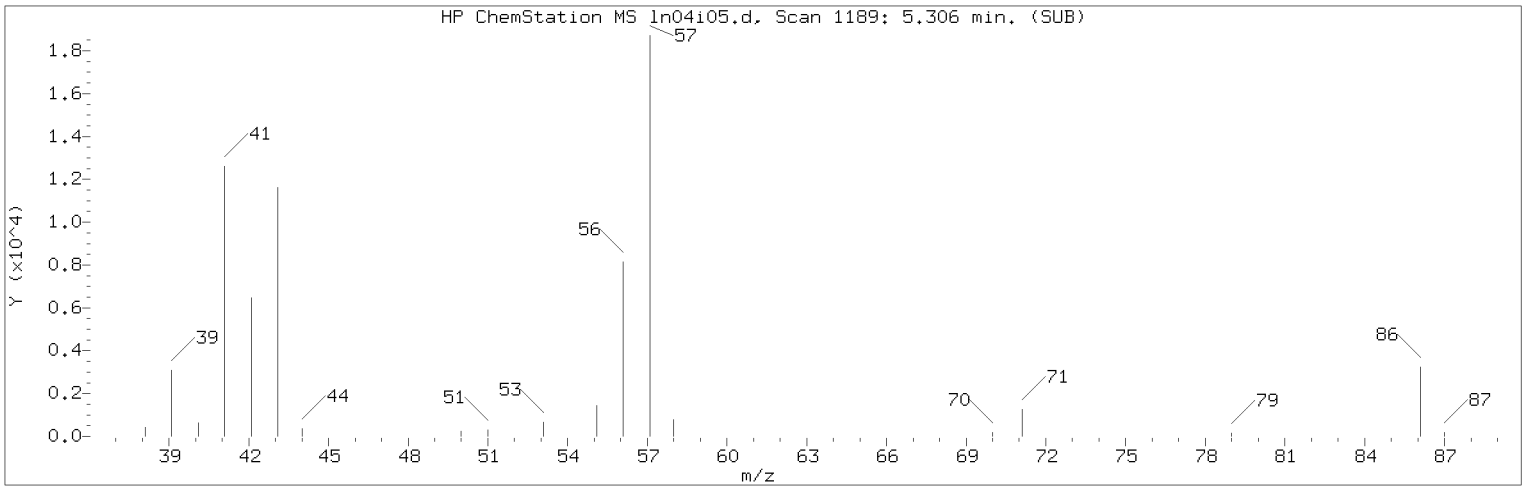
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

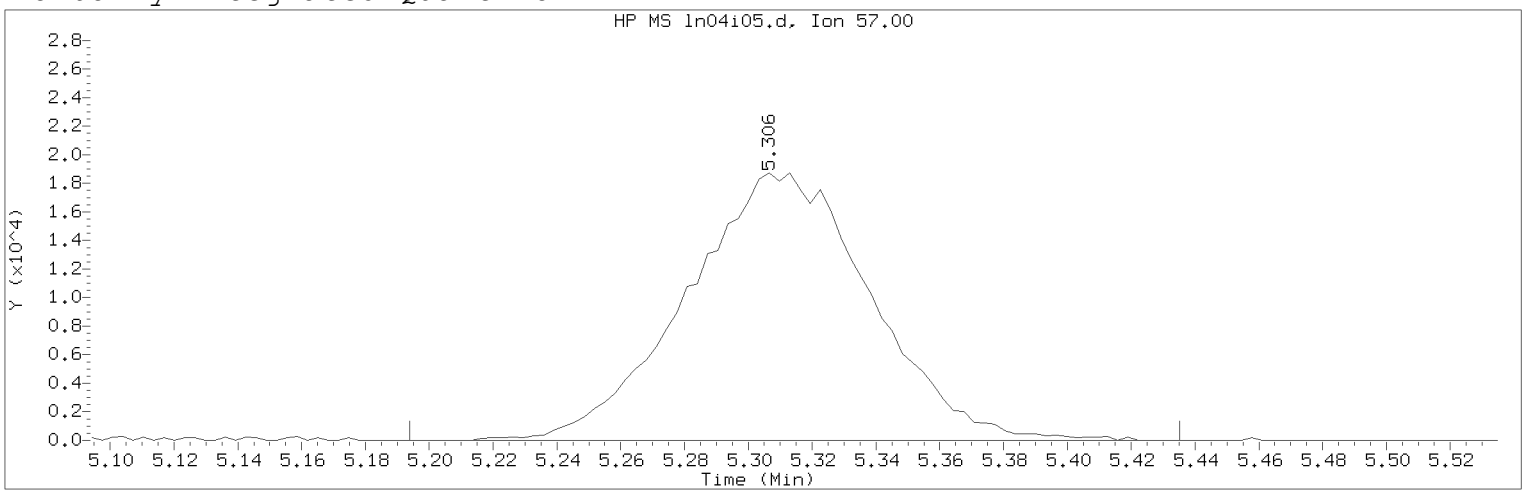
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 253092
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1035
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

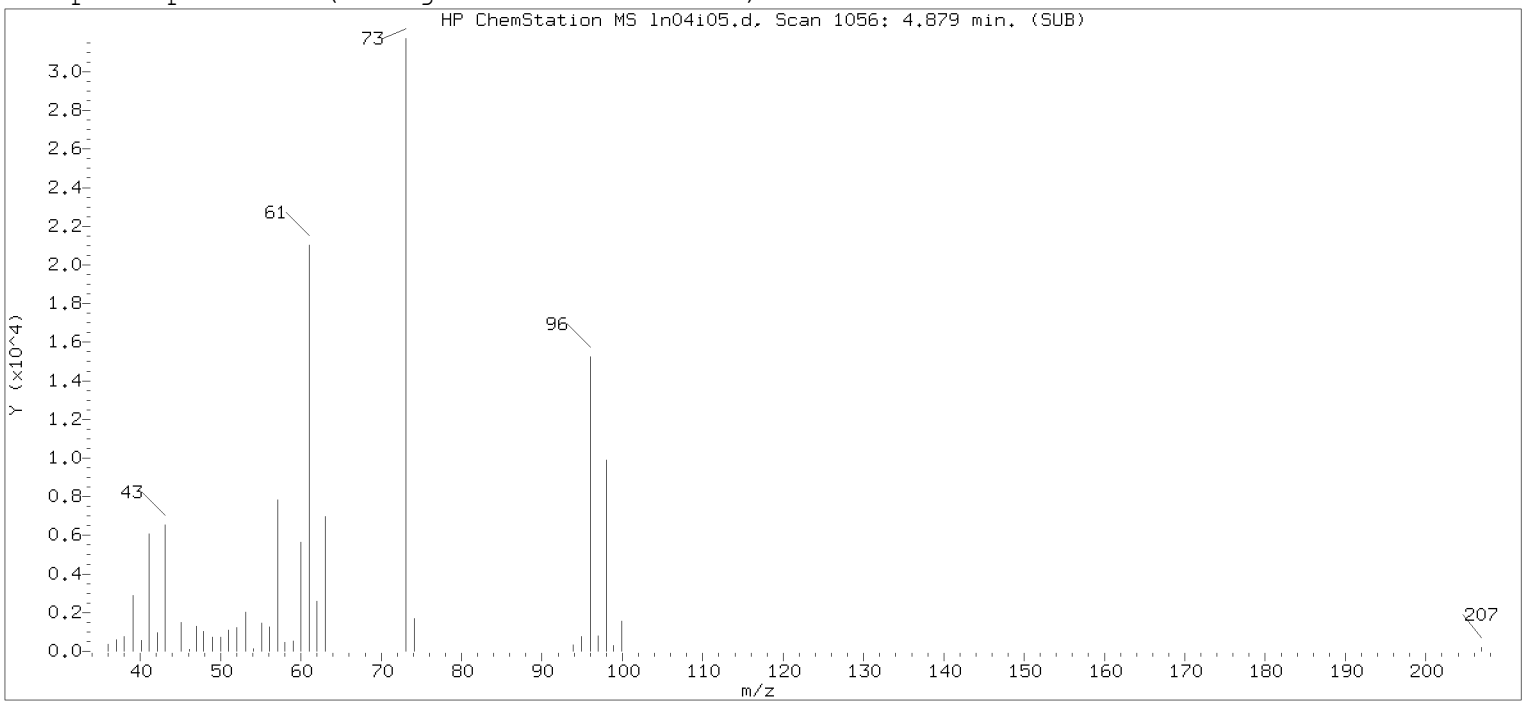
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1189
Retention Time (minutes): 5.306
Quant Ion : 57.00
Area (flag) : 75187M
On-Column Amount (ng) : 8.5083
Integration start scan : 1153 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

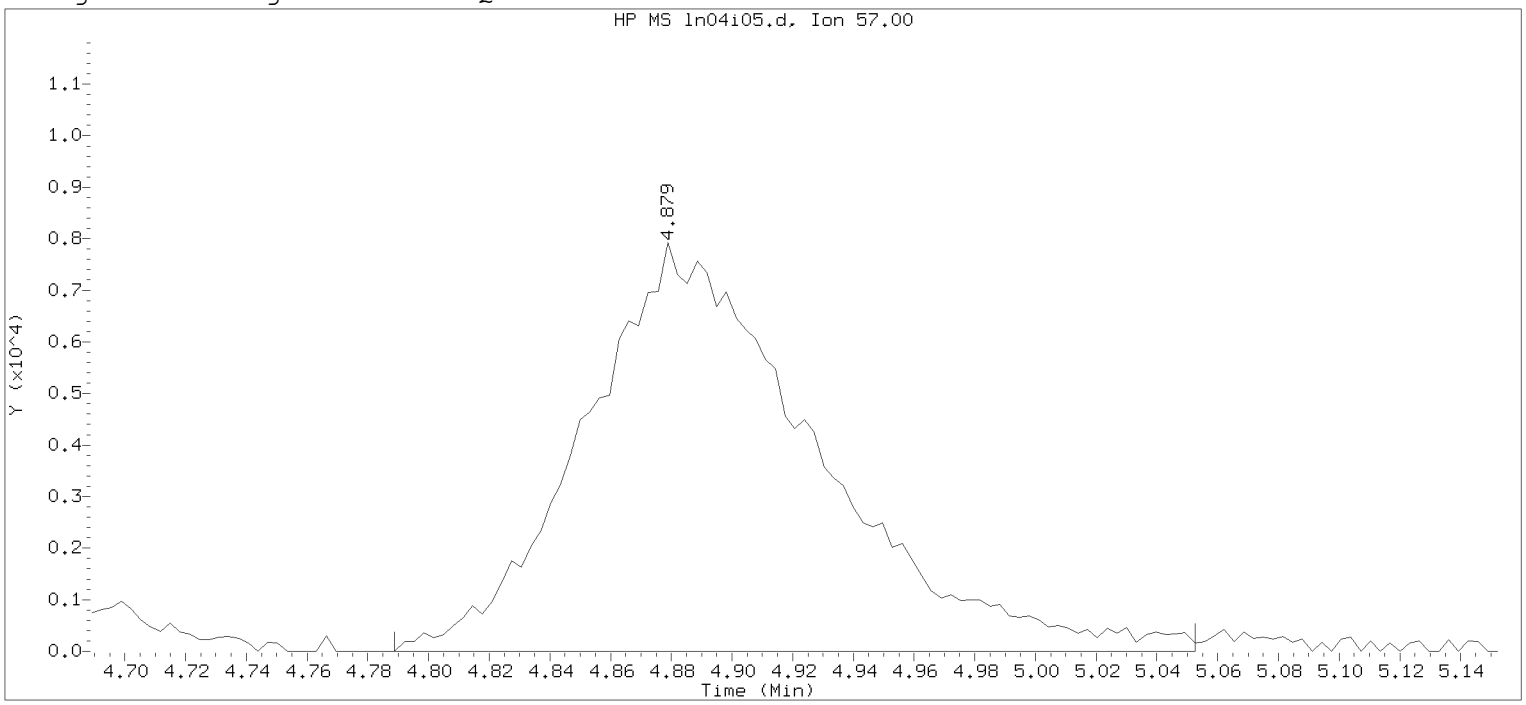
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

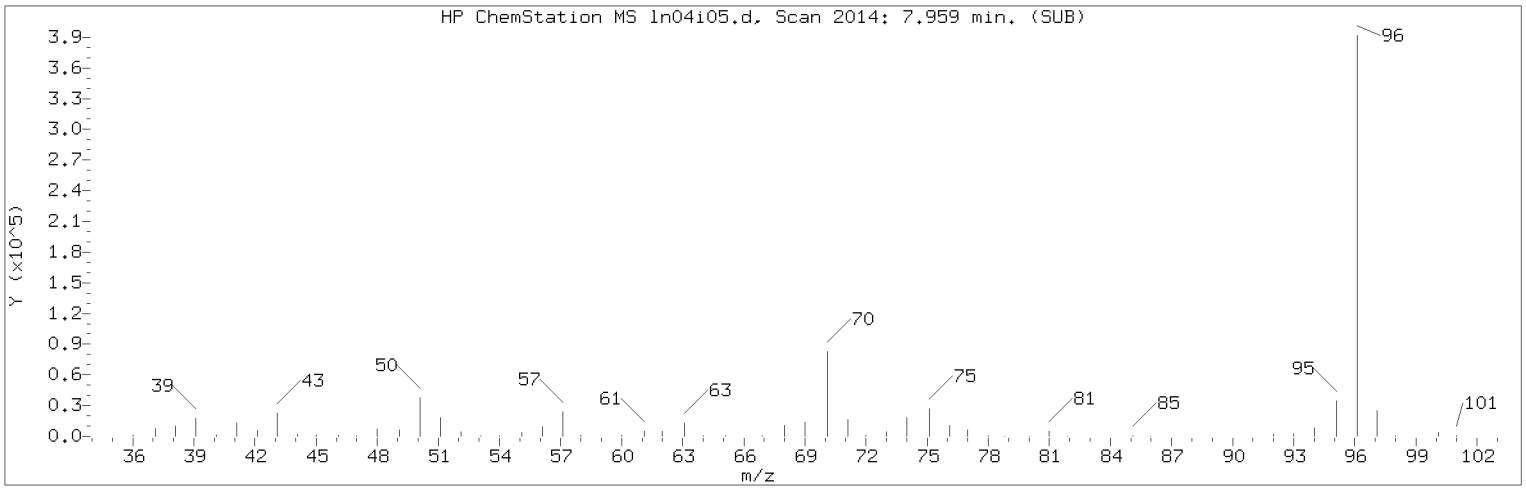
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

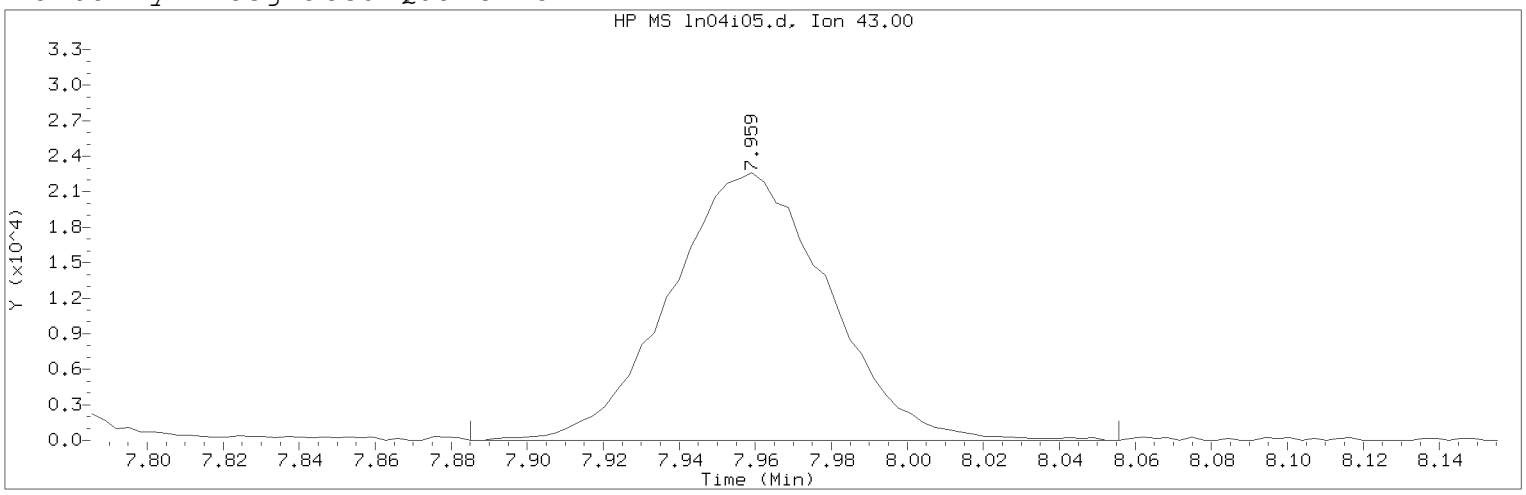
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1056		
Retention Time (minutes)	: 4.879		
Quant Ion	: 57.00		
Area	: 42116		
On-column Amount (ng)	: 11.5193		
Integration start scan	: 1027	Integration stop scan:	1109
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

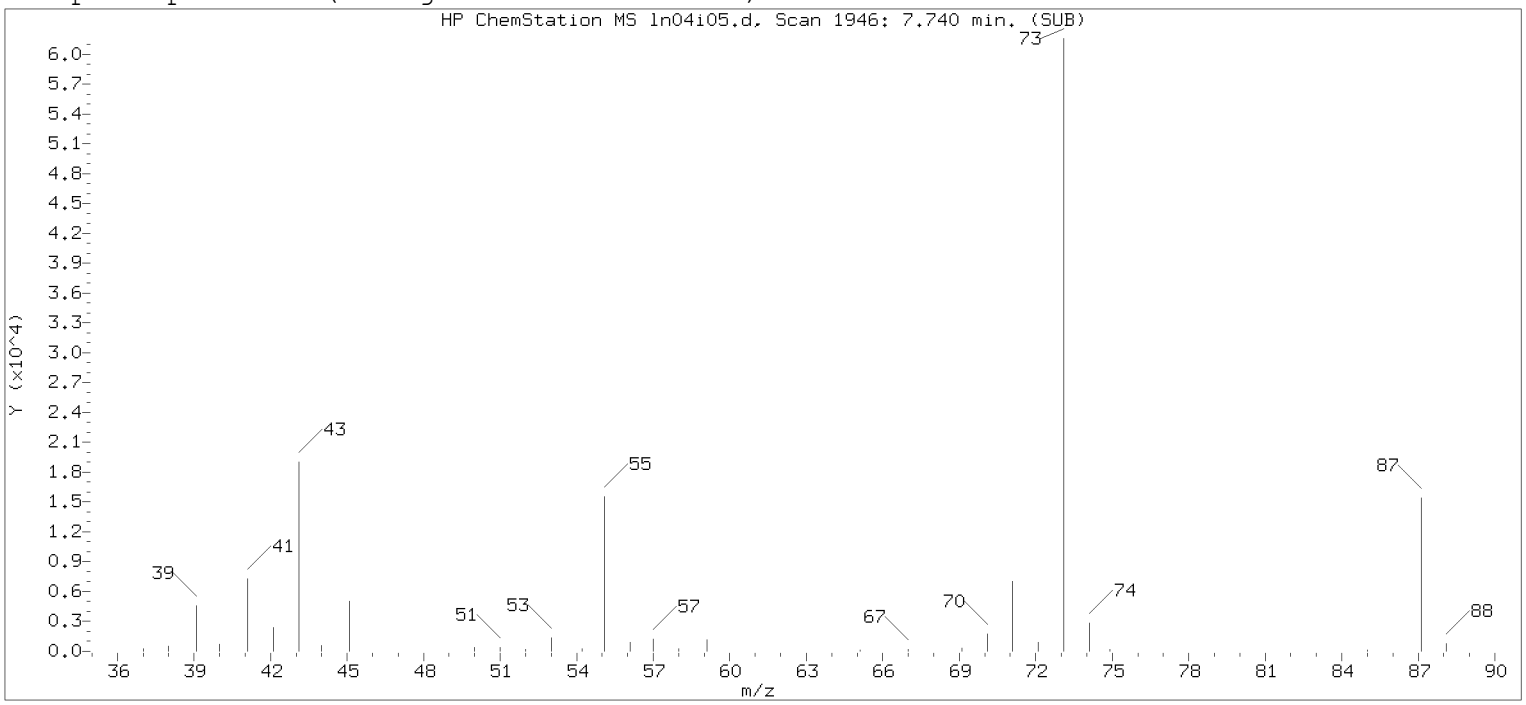
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2014
Retention Time (minutes): 7.959
Quant Ion : 43.00
Area (flag) : 65347MA
On-Column Amount (ng) : 7.9157
Integration start scan : 1990 Integration stop scan: 2043
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

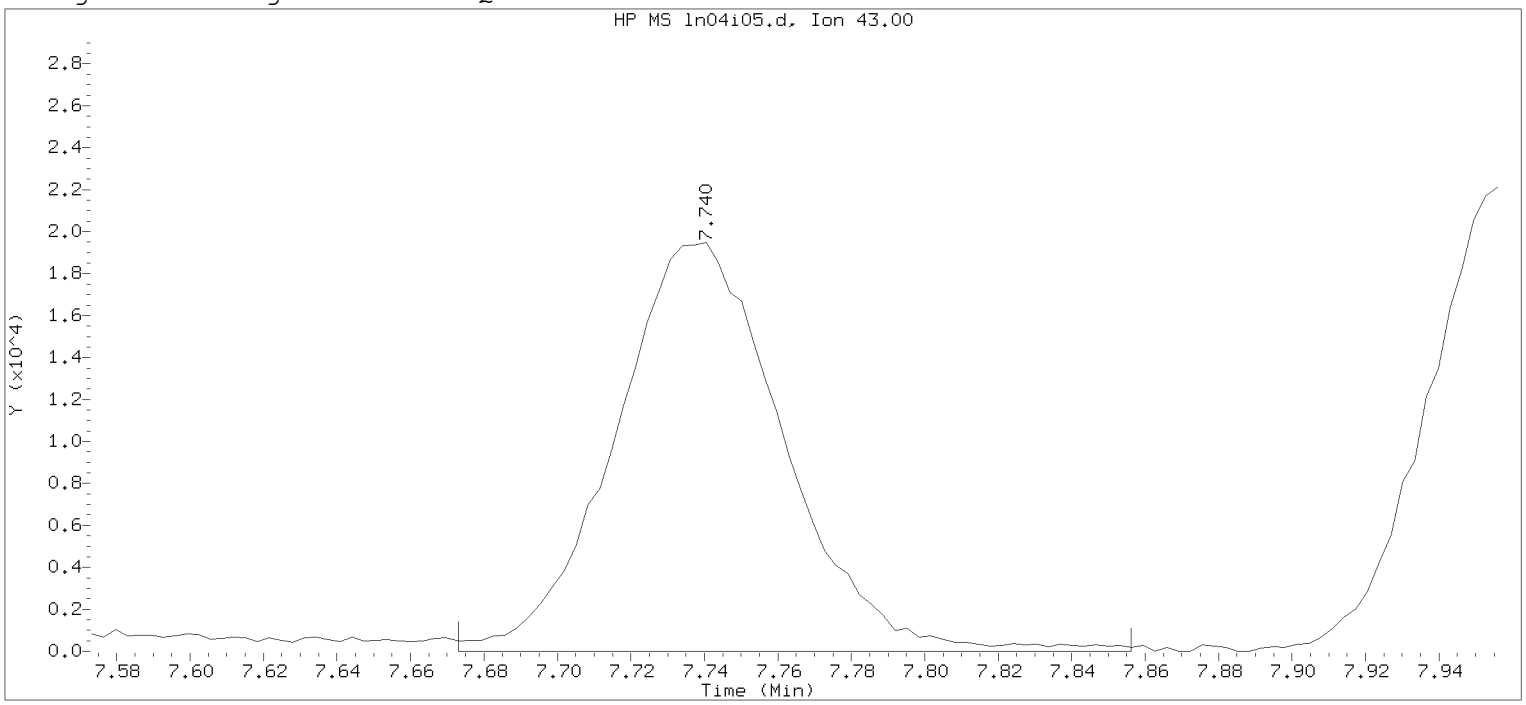
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

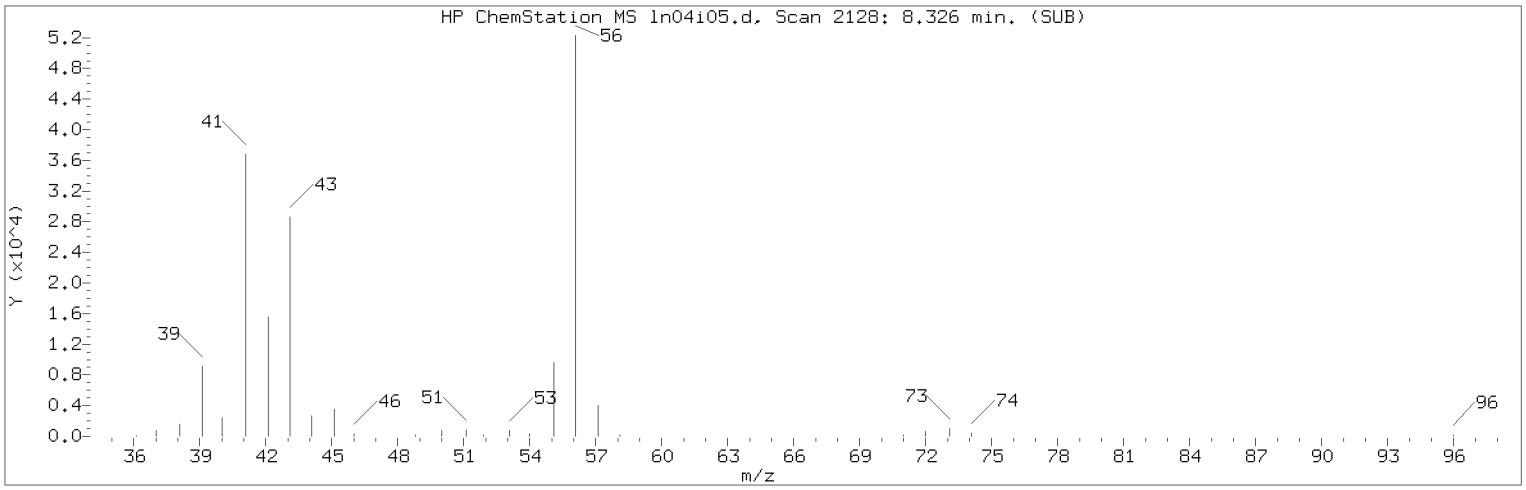
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

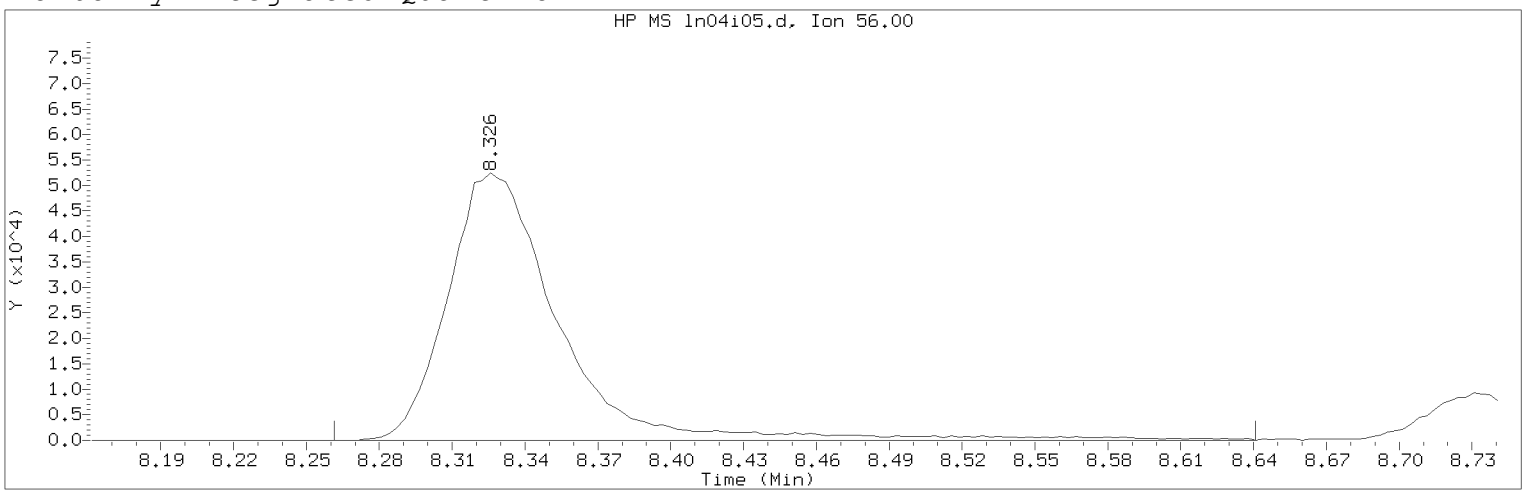
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.740
Quant Ion : 43.00
Area : 62104
On-column Amount (ng) : 10.1613
Integration start scan : 1924 Integration stop scan: 1981
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

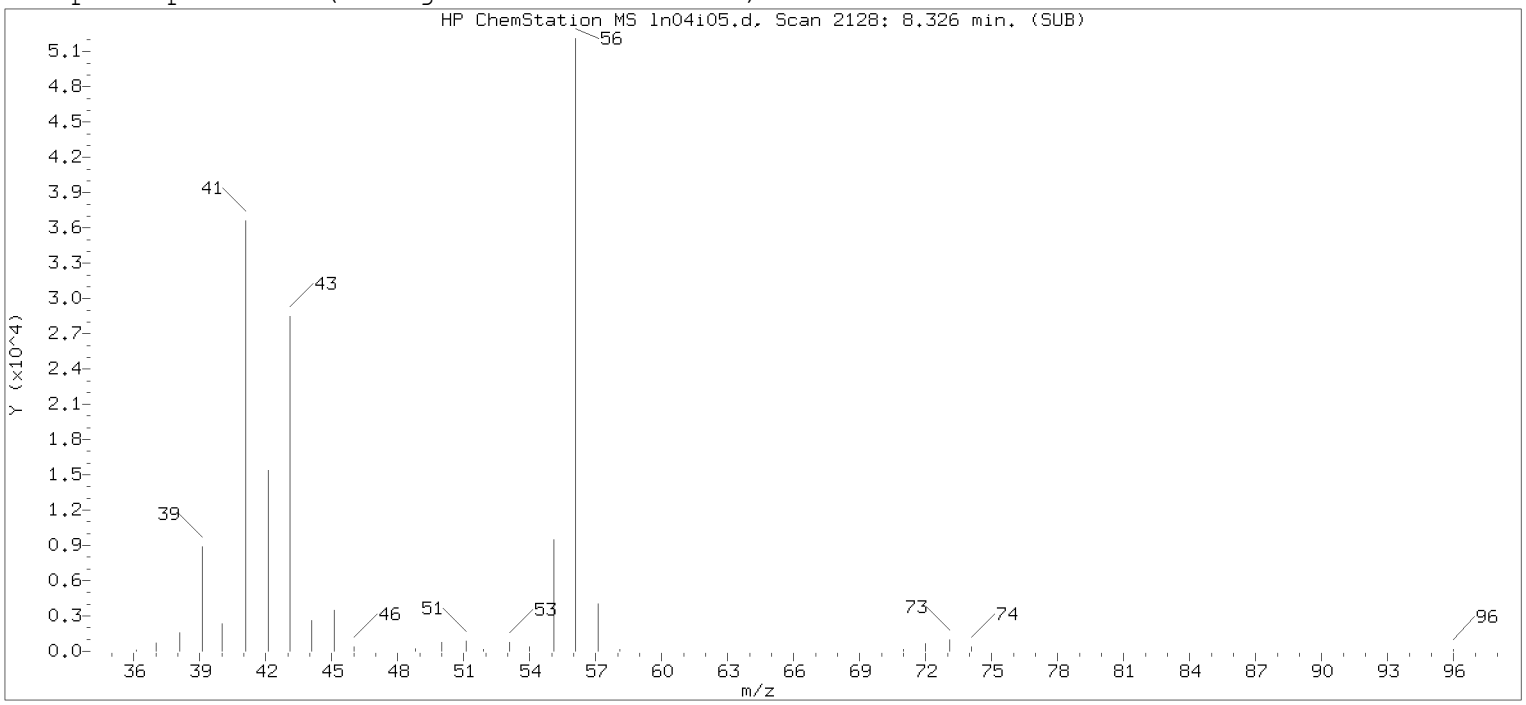
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area (flag) : 166674M
On-Column Amount (ng) : 518.8682
Integration start scan : 2107 Integration stop scan: 2225
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

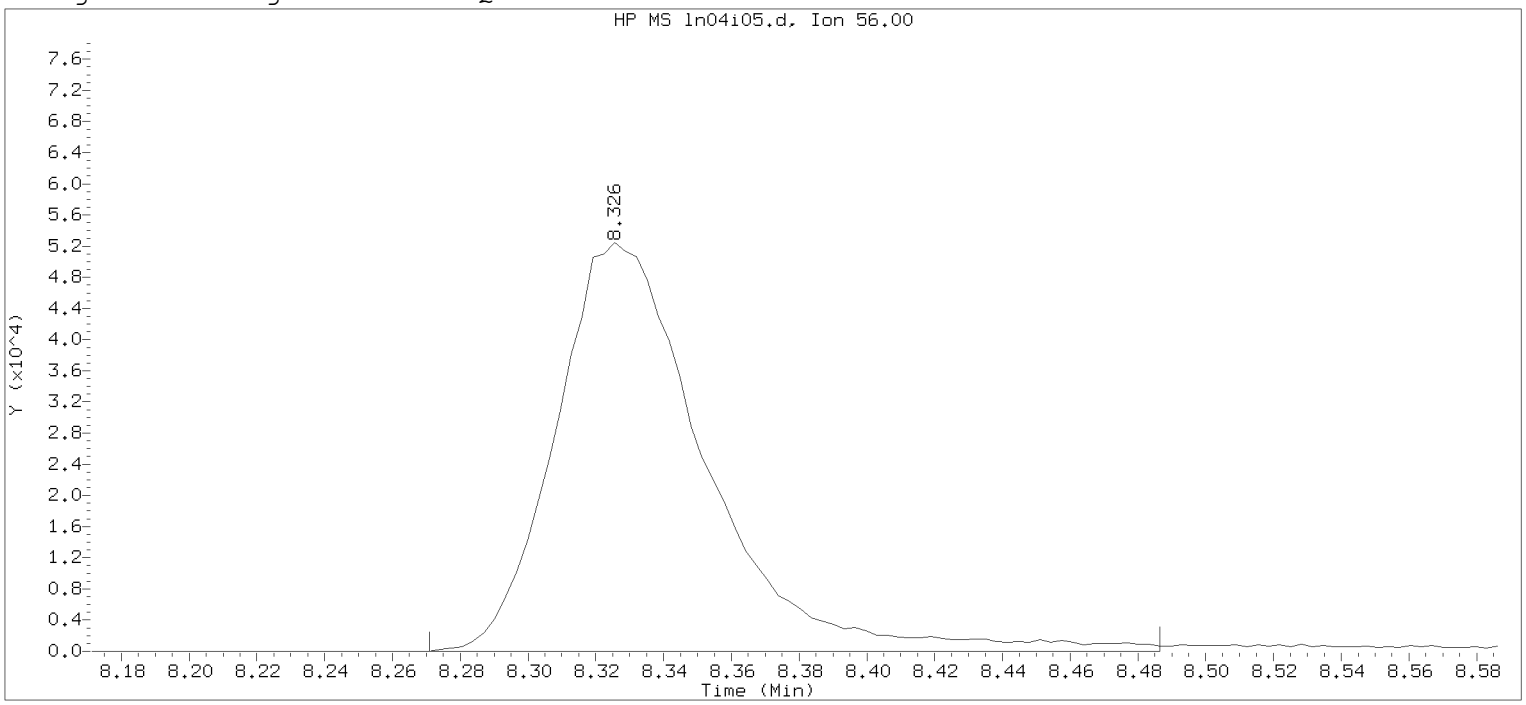
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

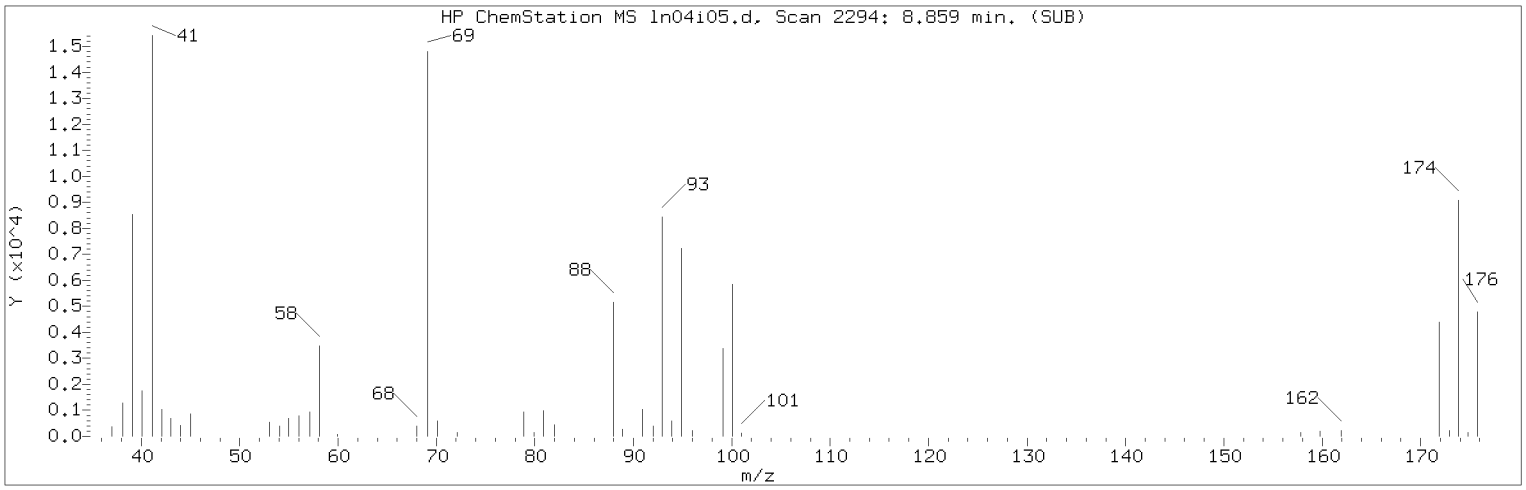
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

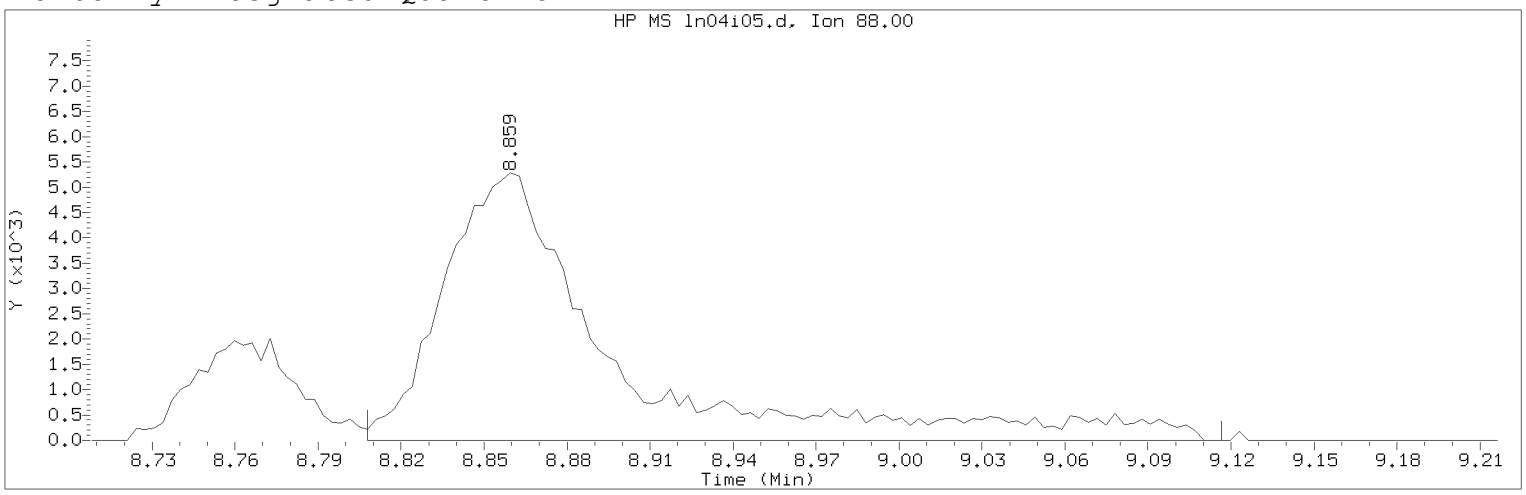
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area : 161642
On-column Amount (ng) : 524.2963
Integration start scan : 2110 Integration stop scan: 2177
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

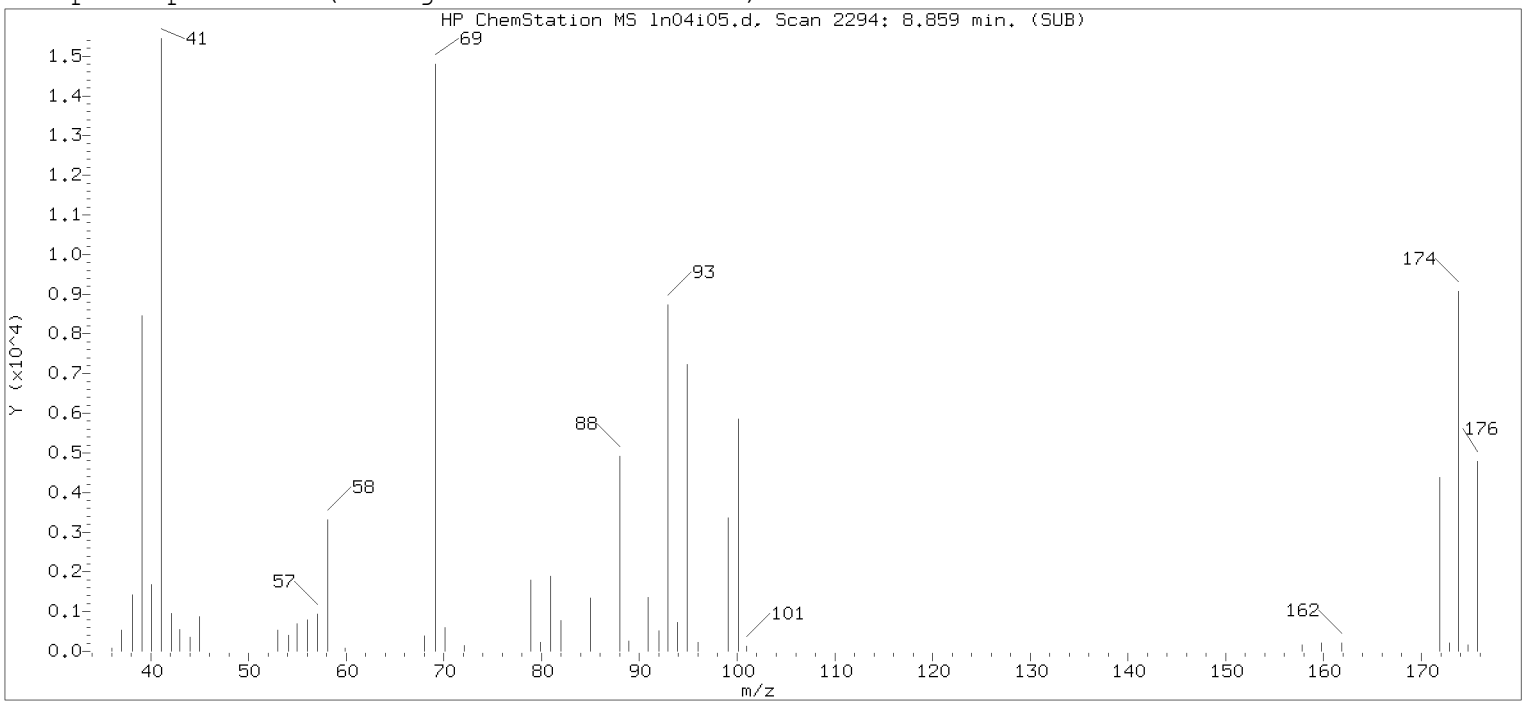
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2294
Retention Time (minutes): 8.859
Quant Ion : 88.00
Area (flag) : 22251M
On-Column Amount (ng) : 252.0176
Integration start scan : 2277 Integration stop scan: 2373
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

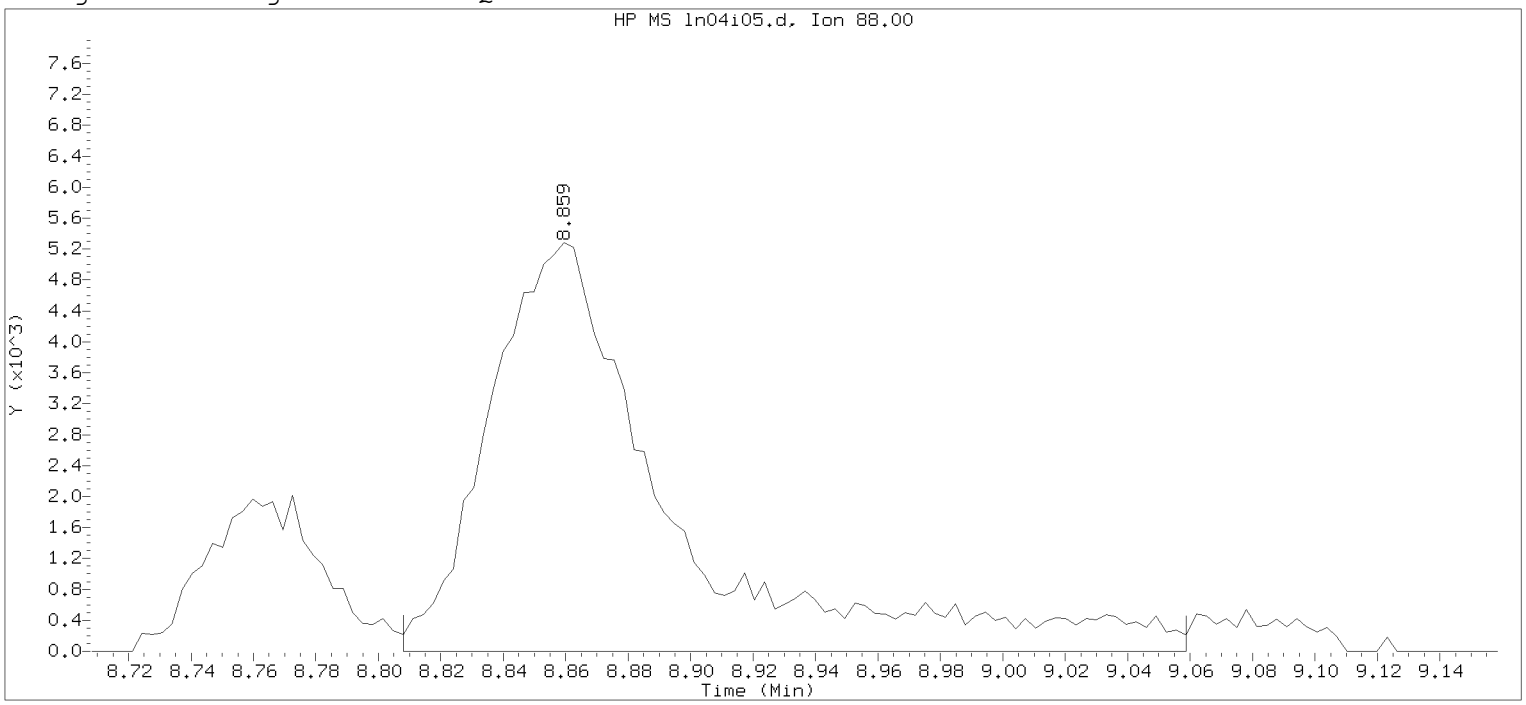
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

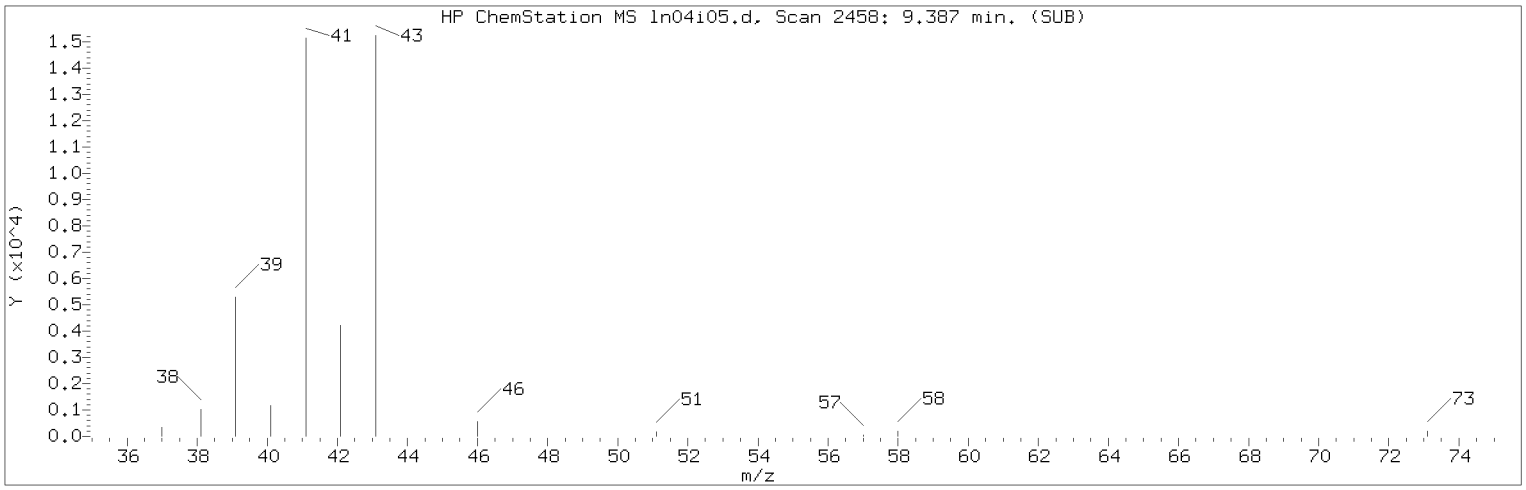
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

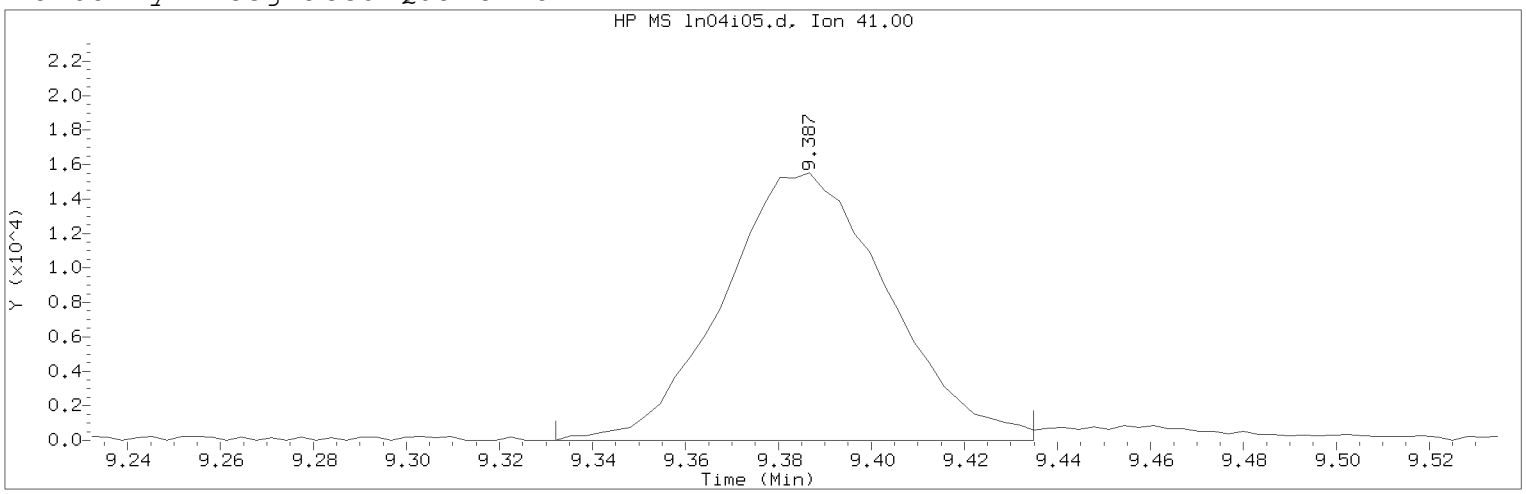
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2294
Retention Time (minutes): 8.859
Quant Ion : 88.00
Area : 21165
On-column Amount (ng) : 248.6410
Integration start scan : 2277 Integration stop scan: 2355
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

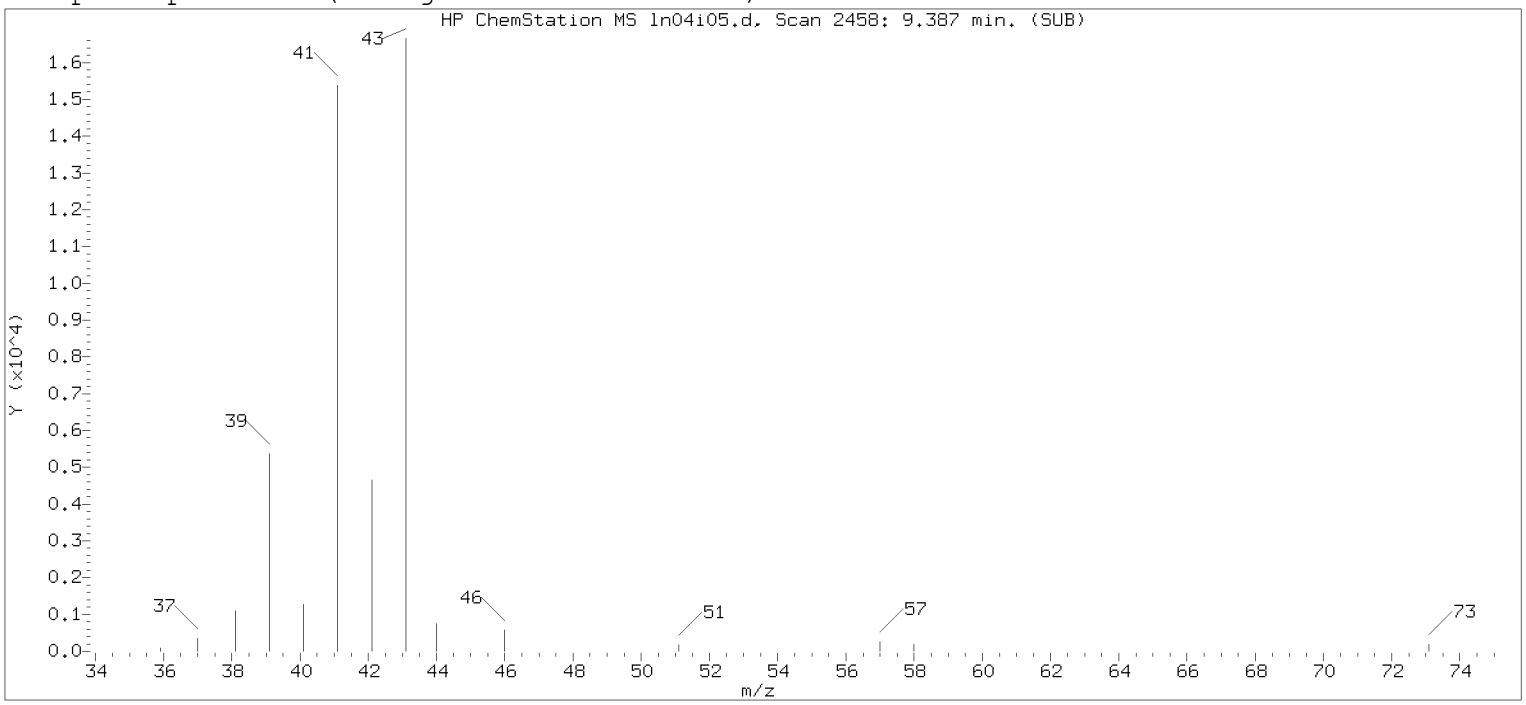
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2458
Retention Time (minutes): 9.387
Quant Ion : 41.00
Area (flag) : 38245M
On-Column Amount (ng) : 18.1785
Integration start scan : 2440 Integration stop scan: 2472
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

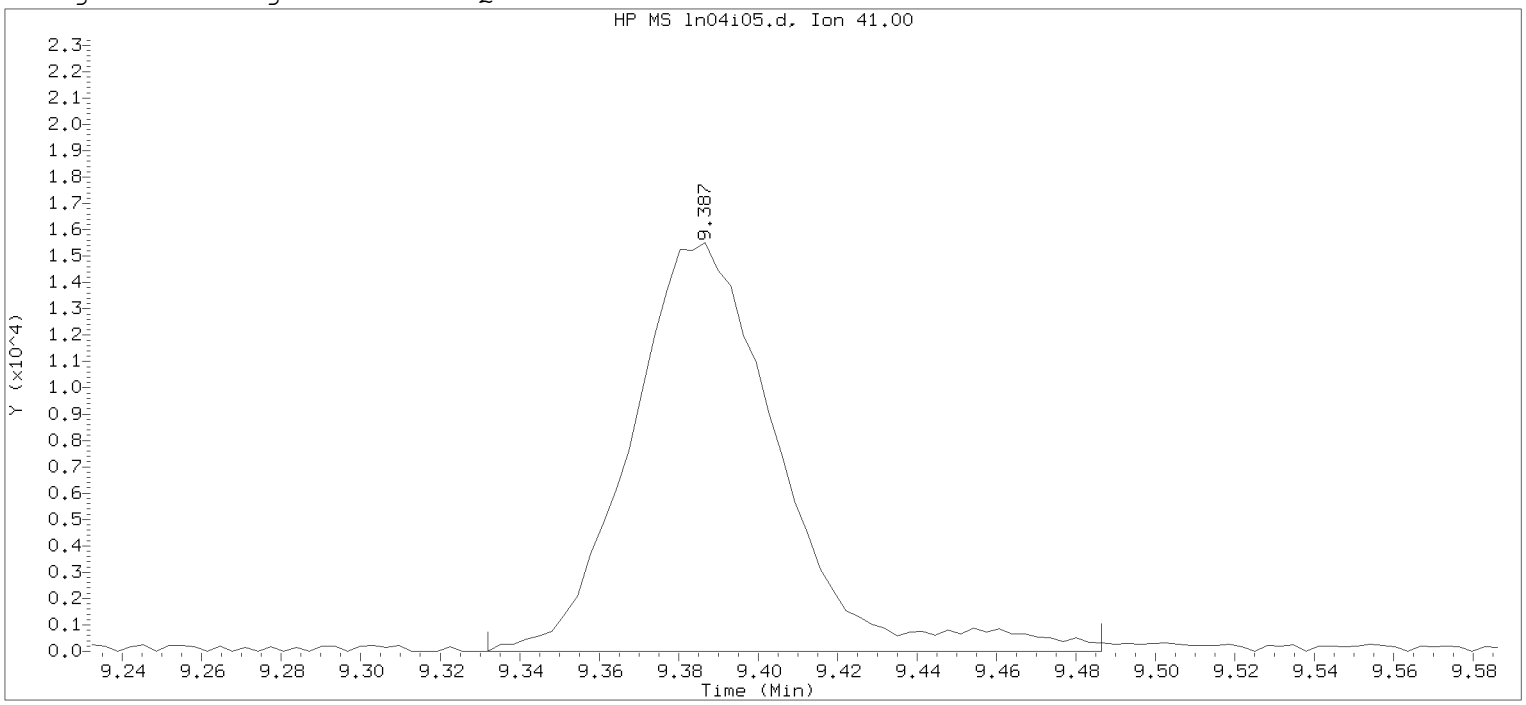
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

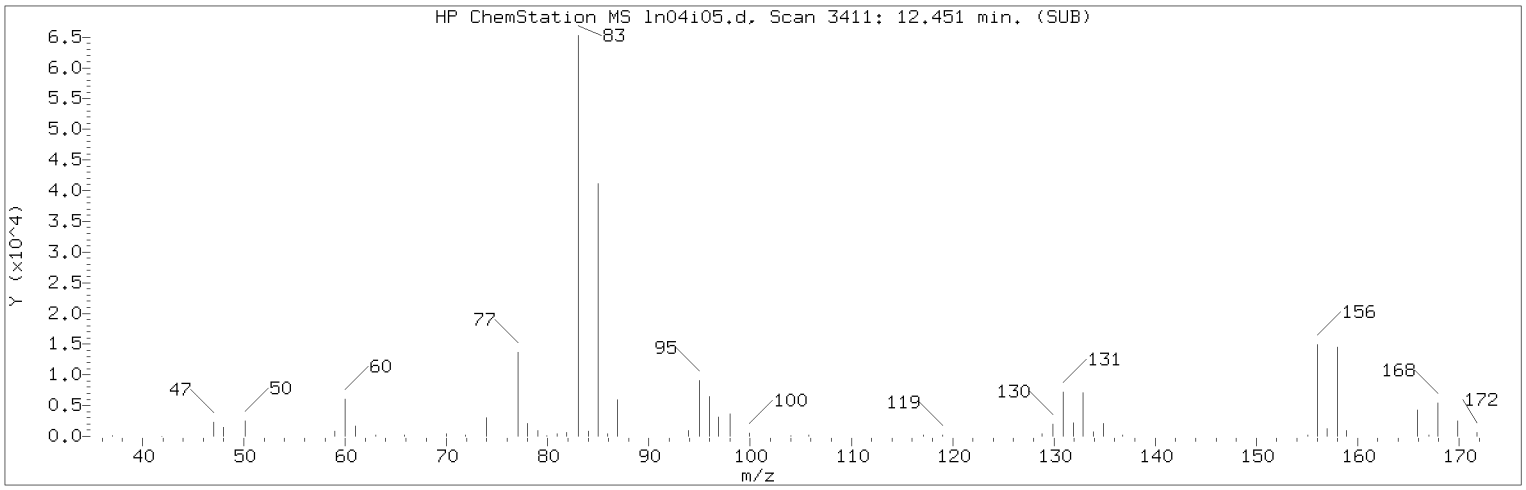
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

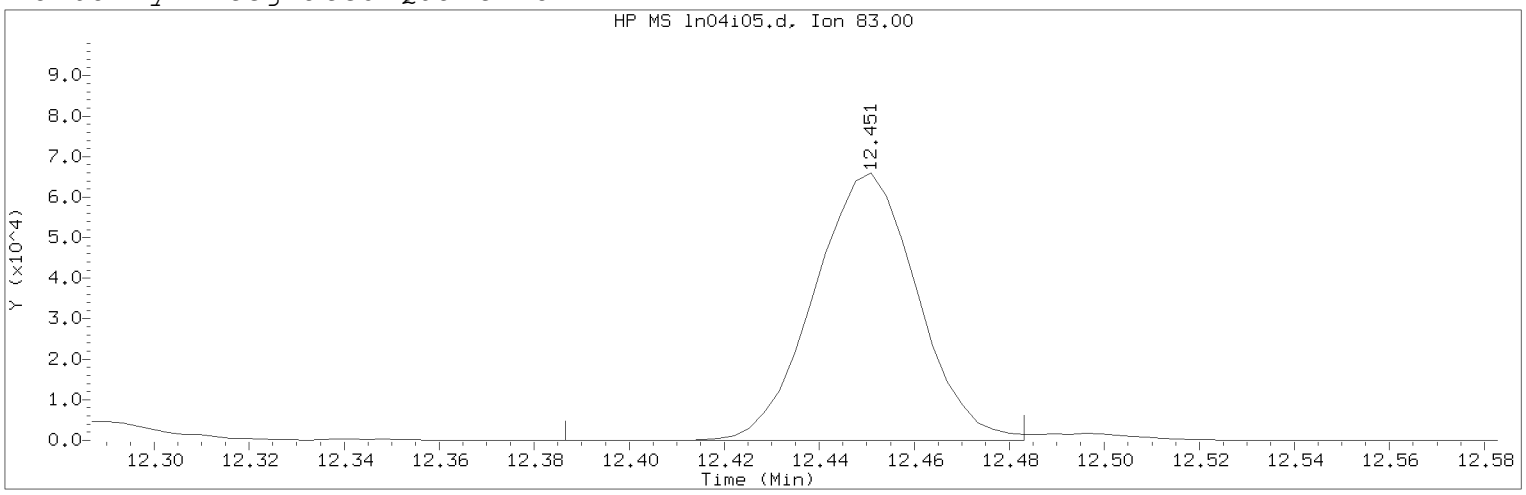
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2458
Retention Time (minutes): 9.387
Quant Ion : 41.00
Area : 40127
On-column Amount (ng) : 18.9522
Integration start scan : 2440 Integration stop scan: 2488
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

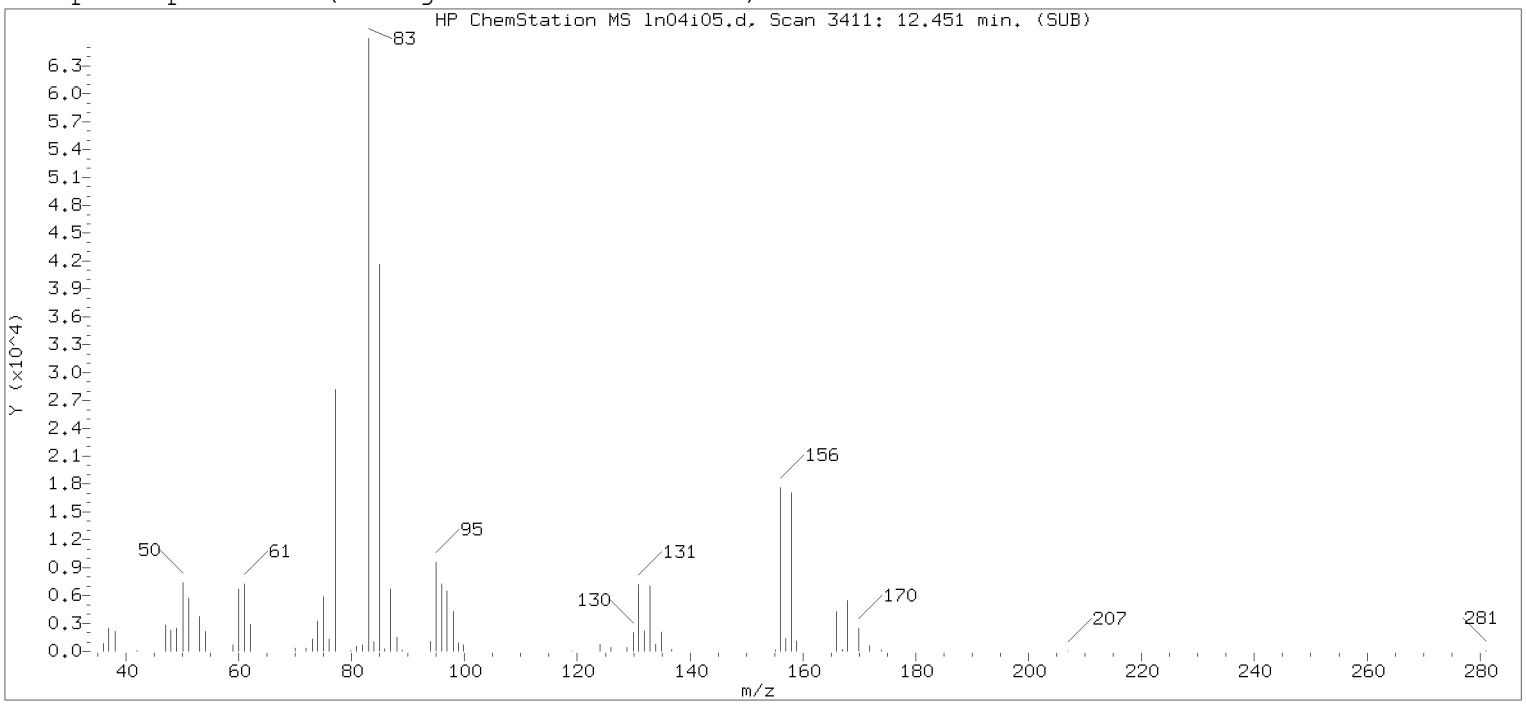
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 99221M
On-Column Amount (ng) : 10.5834
Integration start scan : 3390 Integration stop scan: 3420
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

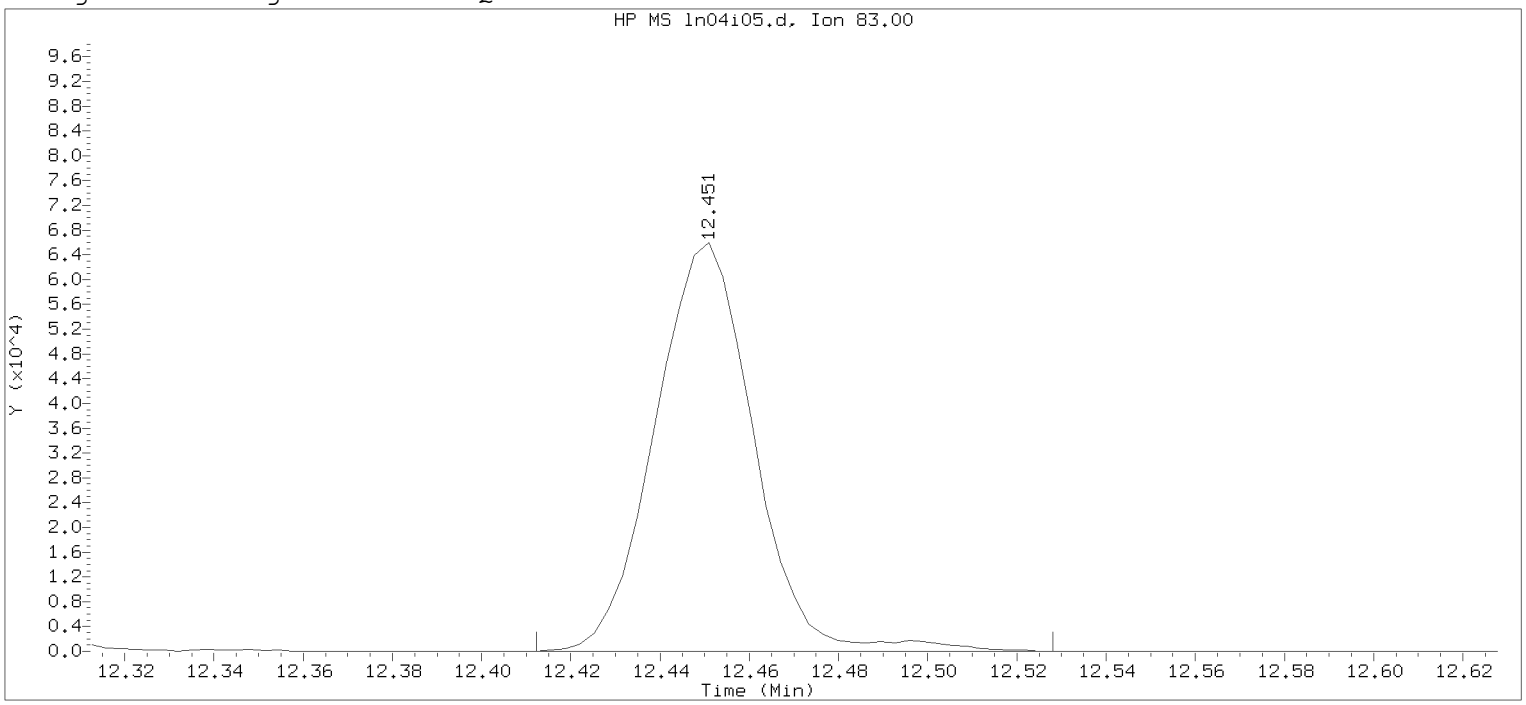
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

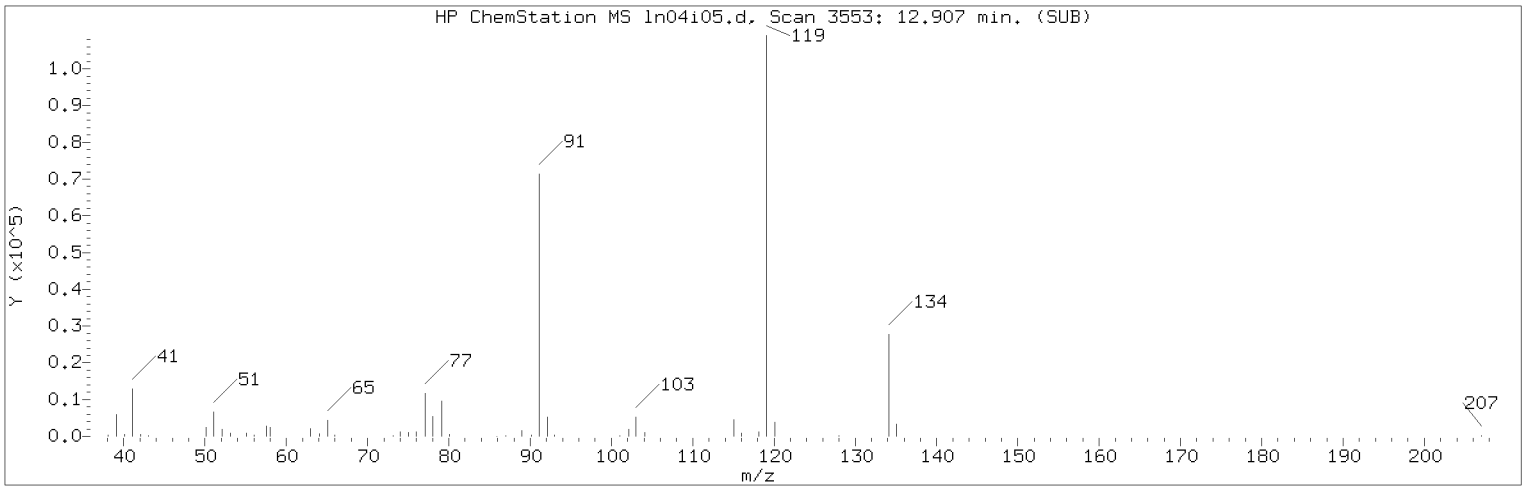
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

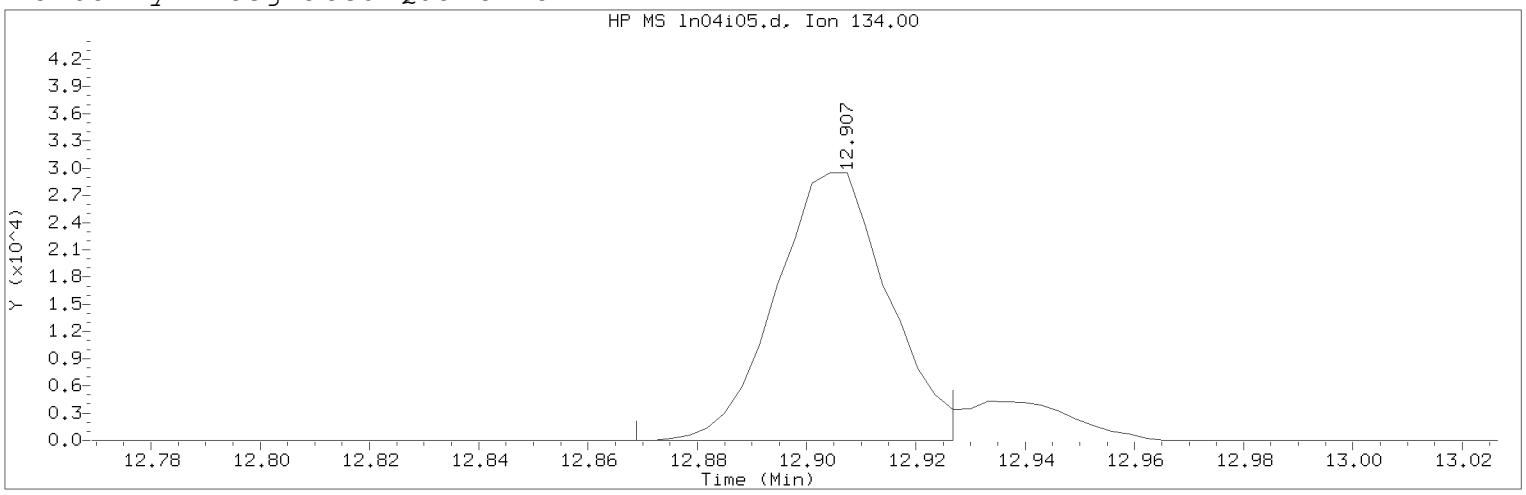
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 101487
On-column Amount (ng) : 10.6325
Integration start scan : 3398 Integration stop scan: 3434
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

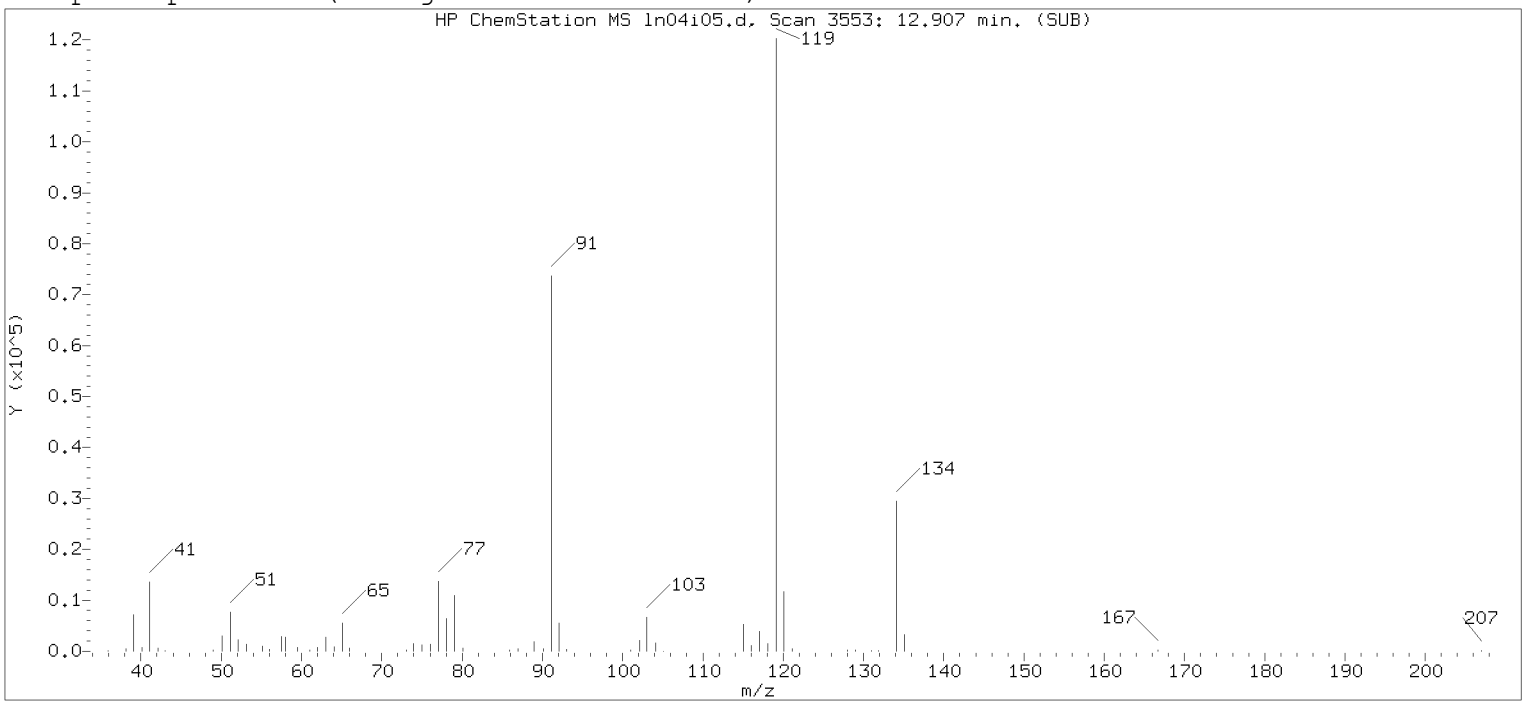
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area (flag) : 42119M
On-Column Amount (ng) : 8.5994
Integration start scan : 3540 Integration stop scan: 3558
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

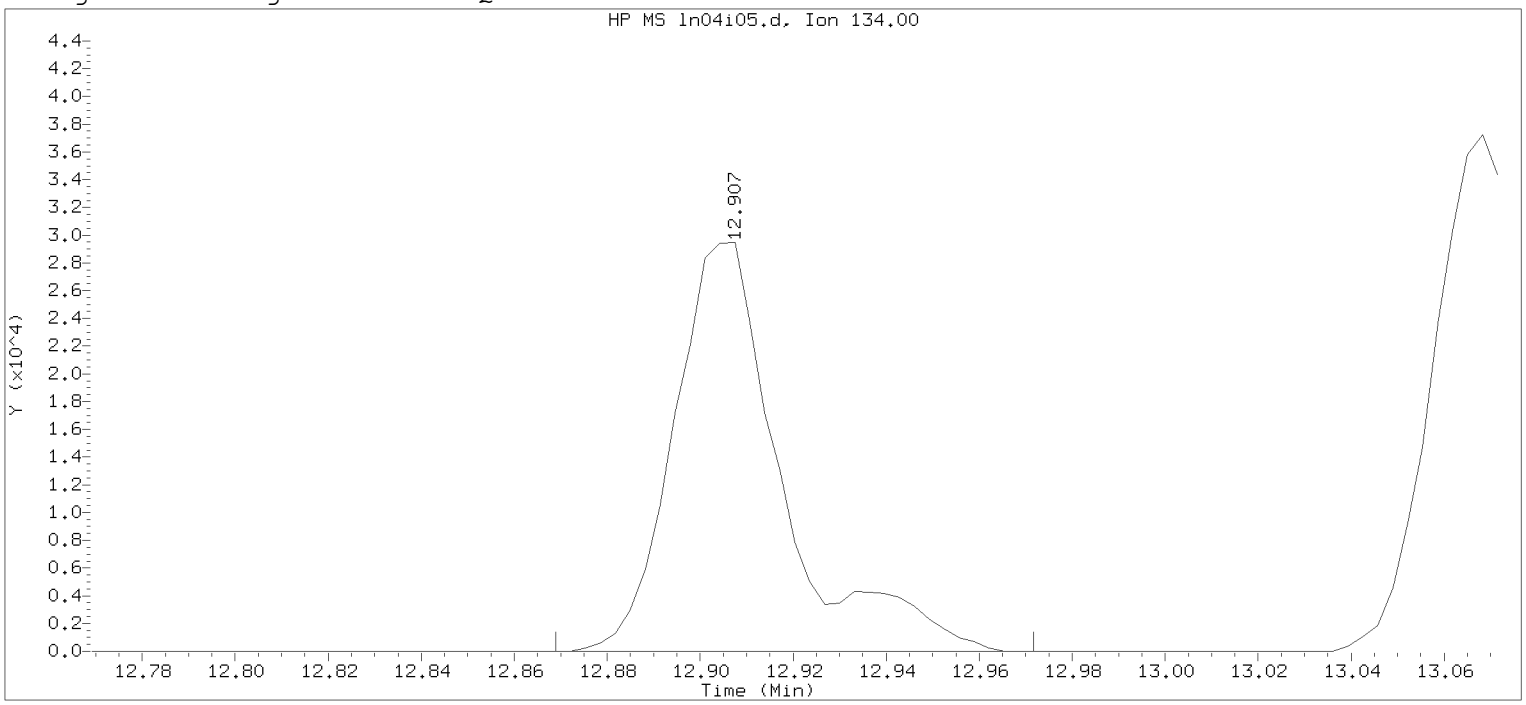
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



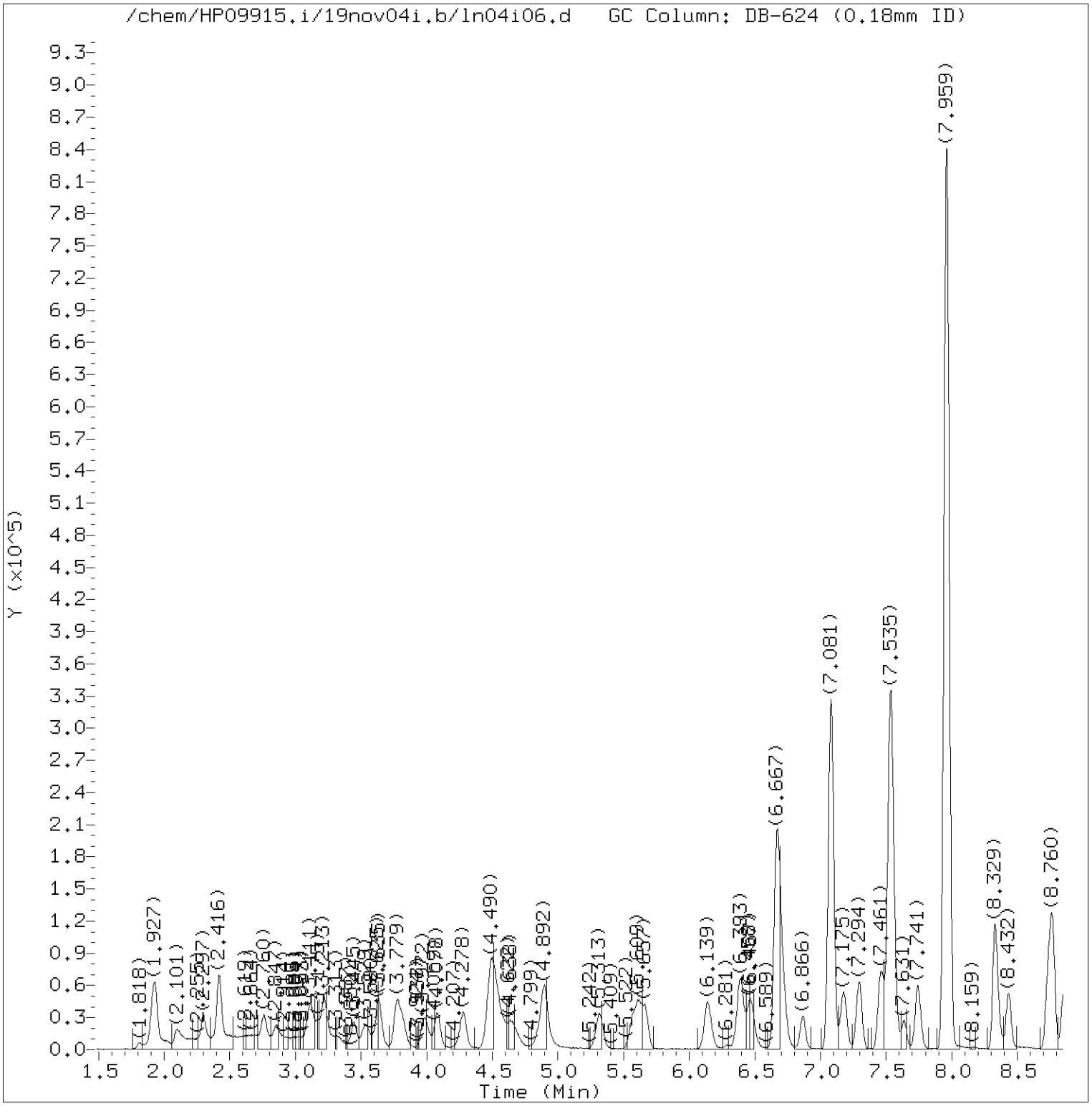
Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area : 47747
On-column Amount (ng) : 9.3569
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

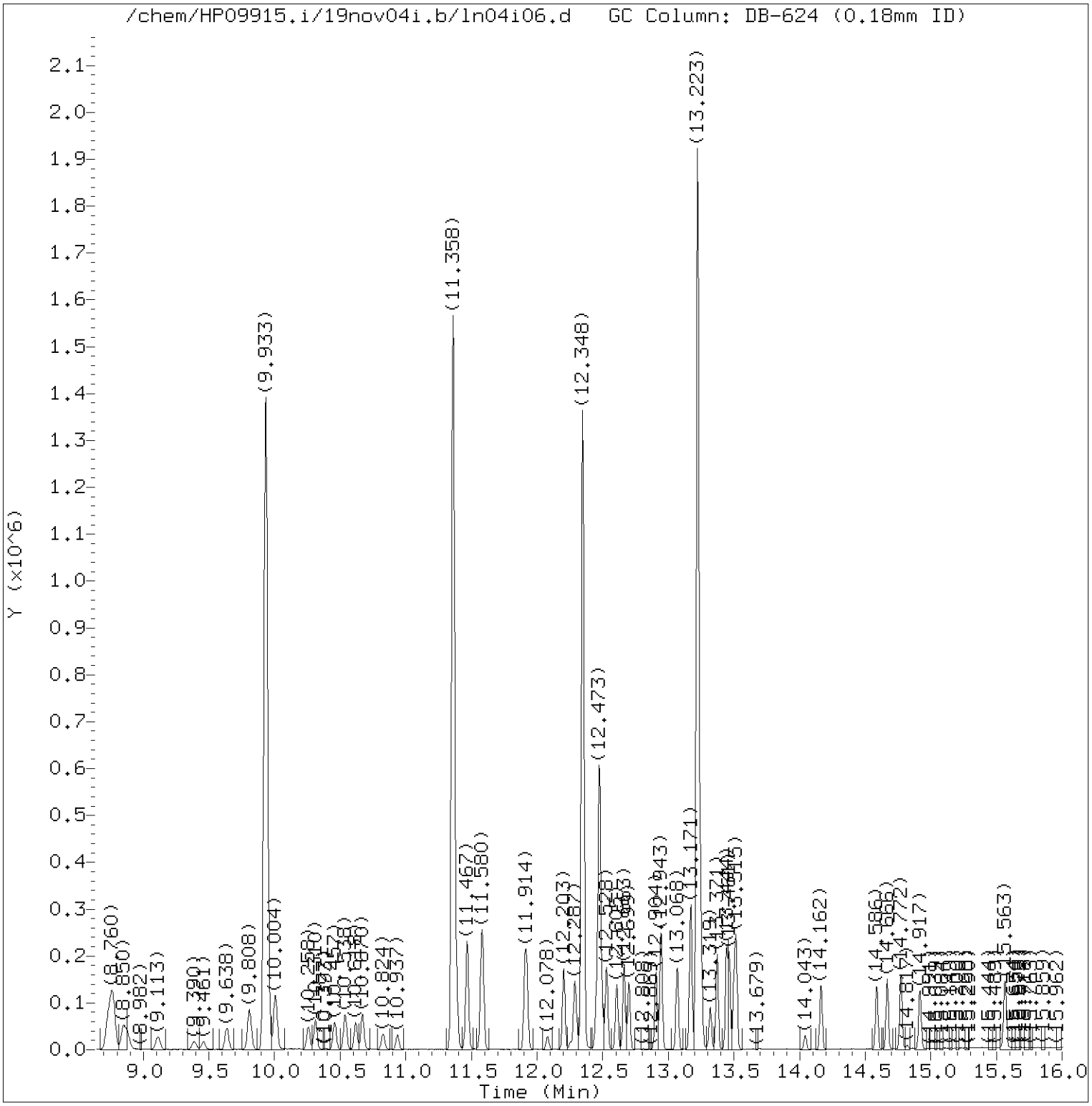
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.098	85	31217M	3.898
4) Chloromethane	(2)	2.297	50	32031	4.150
6) Vinyl Chloride	(2)	2.416	62	30864	4.006
5) 1,3-Butadiene	(2)	2.419	39	27249M	4.252
8) Bromomethane	(2)	2.760	94	23202	4.202
9) Chloroethane	(2)	2.860	64	17298	4.086
10) Dichlorofluoromethane	(2)	3.107	67	40740M	4.015
12) Trichlorofluoromethane	(2)	3.168	101	33532	4.043
11) n-Pentane	(2)	3.223	43	42826M	4.369
14) Ethyl ether	(2)	3.445	59	21059	3.929
15) Freon 123a	(2)	3.538	67	27312	4.094
16) Acrolein	(1)	3.635	56	72021	36.633
17) 1,1-Dichloroethene	(2)	3.773	96	19372	3.979
17) 1,1-Dichloroethene	(2)	3.773	63	9734	3.988
19) Freon 113	(2)	3.805	101	22601	4.069
18) Acetone	(1)	3.815	58	6763M	7.673
22) Methyl Iodide	(2)	3.972	142	39671	3.933
21) 2-Propanol	(1)	4.004	45	45871	72.395
23) Carbon Disulfide	(2)	4.082	76	71681	3.907
27) Methyl Acetate	(2)	4.258	43	24928M	3.976
25) Allyl Chloride	(2)	4.281	41	34775	3.982
28) Methylene Chloride	(2)	4.477	84	22693	3.917
29)*t-Butyl alcohol-d10	(1)	4.512	65	262044M	250.000
30) t-Butyl alcohol	(1)	4.638	59	80219	72.713
31) Acrylonitrile	(2)	4.840	53	12699	3.765
32) trans-1,2-Dichloroethene	(2)	4.901	96	22231	3.947
33) Methyl Tertiary Butyl Ether	(2)	4.901	73	71515	3.869
34) n-Hexane	(2)	5.323	57	33969M	3.877
36) 1,1-Dichloroethane	(2)	5.564	63	39317	4.002
38) di-Isopropyl ether	(2)	5.615	45	72628	3.833
39) 2-Chloro-1,3-butadiene	(2)	5.663	53	34190	3.879
40) Ethyl t-butyl ether	(2)	6.139	59	70845	3.853
43) 1,2-Dichloroethene (Total)	(2)		96	47253	7.906
44) 2-Butanone	(2)	6.371	43	32547	7.516
42) cis-1,2-Dichloroethene	(2)	6.390	96	25022	3.958
45) 2,2-Dichloropropane	(2)	6.400	77	29877	3.912
47) Propionitrile	(1)	6.467	54	100934	73.427
48) Methacrylonitrile	(2)	6.670	67	134092	36.850

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.718	128	12879	3.842
50) Tetrahydrofuran	(1)	6.734	71	9128	7.351
51) Chloroform	(2)	6.869	83	36176	3.850
52)$Dibromofluoromethane	(2)	7.081	113	280667	49.988
52)$Dibromofluoromethane	(2)	7.078	111	287593	50.237
53) 1,1,1-Trichloroethane	(2)	7.091	97	31167	3.886
54) Cyclohexane	(2)	7.178	56	42347	3.949
54) Cyclohexane	(2)	7.175	84	36627	3.932
54) Cyclohexane	(2)	7.181	69	13119	3.955
56) Carbon Tetrachloride	(2)	7.287	117	25509	3.750
55) 1,1-Dichloropropene	(2)	7.297	75	30762	3.960
58) Isobutyl Alcohol	(1)	7.464	41	65125	175.416
57)$1,2-Dichloroethane-d4	(2)	7.532	102	72246	50.488
57)$1,2-Dichloroethane-d4	(2)	7.535	65	323654	50.754
57)$1,2-Dichloroethane-d4	(2)	7.538	104	45694	49.994
60) Benzene	(2)	7.564	78	92488	3.959
61) 1,2-Dichloroethane	(2)	7.638	62	29321	3.902
61) 1,2-Dichloroethane	(2)	7.628	98	2899	3.899
65) t-Amyl methyl ether	(2)	7.744	73	70267	3.807
66)*Fluorobenzene	(2)	7.959	96	1148427	50.000
67) n-Heptane	(2)	7.962	43	32502MA	3.971
69) n-Butanol	(1)	8.329	56	110027M	344.330
71) Trichloroethene	(2)	8.435	95	22766	3.871
72) Methylcyclohexane	(2)	8.737	83	42437	3.889
72) Methylcyclohexane	(2)	8.731	98	19822	4.014
73) 1,2-Dichloropropane	(2)	8.773	63	22762	3.837
76) Methyl Methacrylate	(2)	8.843	69	20713M	3.611
75) 1,4-Dioxane	(1)	8.850	88	16188	184.315
74) Dibromomethane	(2)	8.879	93	14634	3.813
78) Bromodichloromethane	(2)	9.110	83	24167	3.509
79) 2-Nitropropane	(2)	9.387	41	14154	6.785
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	8979	3.525
81) cis-1,3-Dichloropropene	(2)	9.638	75	32112	3.511
82) 4-Methyl-2-pentanone	(2)	9.808	43	67922	7.431
83)$Toluene-d8	(3)	9.933	98	1152733	49.832
83)$Toluene-d8	(3)	9.933	100	745821	49.773
88) Toluene	(3)	10.004	92	56092	3.868
90) 1,3-Dichloropropene (total)	(3)		100	60153	6.917

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	28041	3.406
91) Ethyl Methacrylate	(3)	10.310	69	34660	3.464
92) 1,1,2-Trichloroethane	(3)	10.457	97	20516	3.731
93) Tetrachloroethene	(3)	10.538	166	24234	3.946
94) 1,3-Dichloropropane	(3)	10.618	76	34762	3.703
96) 2-Hexanone	(3)	10.670	43	50570	7.572
97) Dibromochloromethane	(3)	10.824	129	18906	3.357
99) 1,2-Dibromoethane	(3)	10.937	107	21586	3.615
100)*Chlorobenzene-d5	(3)	11.358	117	884065	50.000
101) 1-Chlorohexane	(3)	11.364	91	31055	3.986
102) Chlorobenzene	(3)	11.387	112	63883	3.895
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	19618	3.631
104) Ethylbenzene	(3)	11.467	91	109318	3.944
106) m+p-Xylene	(3)	11.580	106	85093	7.804
108) Xylene (Total)	(3)		106	126157	11.616
107) o-Xylene	(3)	11.908	106	41064	3.813
109) Styrene	(3)	11.924	104	65784	3.696
110) Bromoform	(3)	12.078	173	12196	2.898
111) Isopropylbenzene	(3)	12.203	105	107056	3.963
112) Cyclohexanone	(1)	12.287	55	63391	184.289
114)$4-Bromofluorobenzene	(3)	12.348	95	440415	50.280
114)$4-Bromofluorobenzene	(3)	12.348	174	367241	50.573
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	33170M	3.658
115) Bromobenzene	(4)	12.467	156	27559	3.820
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	101806	36.395
117) 1,2,3-Trichloropropane	(4)	12.496	110	10208	3.668
119) n-Propylbenzene	(4)	12.528	91	126543	4.014
120) 2-Chlorotoluene	(4)	12.609	126	25381	3.790
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	89290	3.898
121) 4-Chlorotoluene	(4)	12.699	126	27169	3.898
124) tert-Butylbenzene	(4)	12.904	134	18608M	3.928
125) Pentachloroethane	(4)	12.940	167	14303	3.506
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	93258	3.863
127) sec-Butylbenzene	(4)	13.068	105	111847	3.956
129) 1,3-Dichlorobenzene	(4)	13.168	146	51597	3.892
130) p-Isopropyltoluene	(4)	13.174	119	96571	3.948
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	480071	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	53736	3.910

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	99398	3.886
135) Benzyl Chloride	(4)	13.319	91	57244	2.956
136) 1,3-Diethylbenzene	(4)	13.371	119	61603	3.870
141) Diethylbenzene (total)	(4)		100	179922	11.677
137) 1,4-Diethylbenzene	(4)	13.444	119	66423	3.939
139) n-Butylbenzene	(4)	13.464	92	51213	4.095
138) 1,2-Dichlorobenzene	(4)	13.502	146	50972	3.896
140) 1,2-Diethylbenzene	(4)	13.518	119	51896	3.868
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	6542	3.295
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	39801	3.960
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	38013	3.889
147) Hexachlorobutadiene	(4)	14.670	225	23904	5.180
148) Naphthalene	(4)	14.772	128	115354	3.671
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	37152	3.907
150) 2-Methylnaphthalene	(4)	15.563	142	72506	3.747

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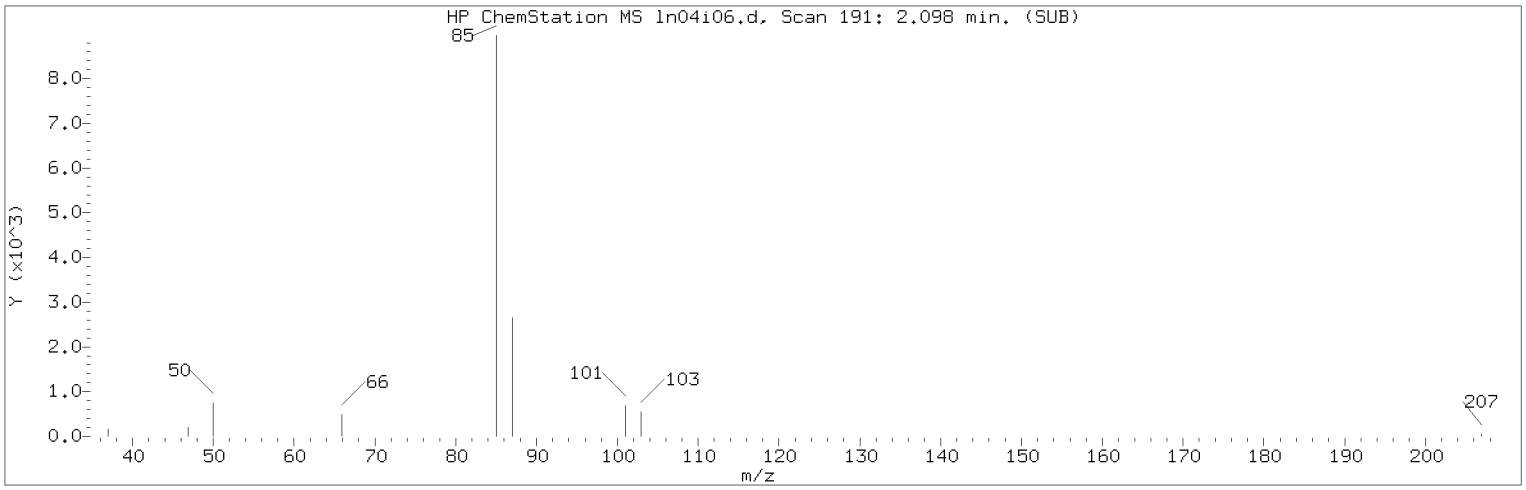
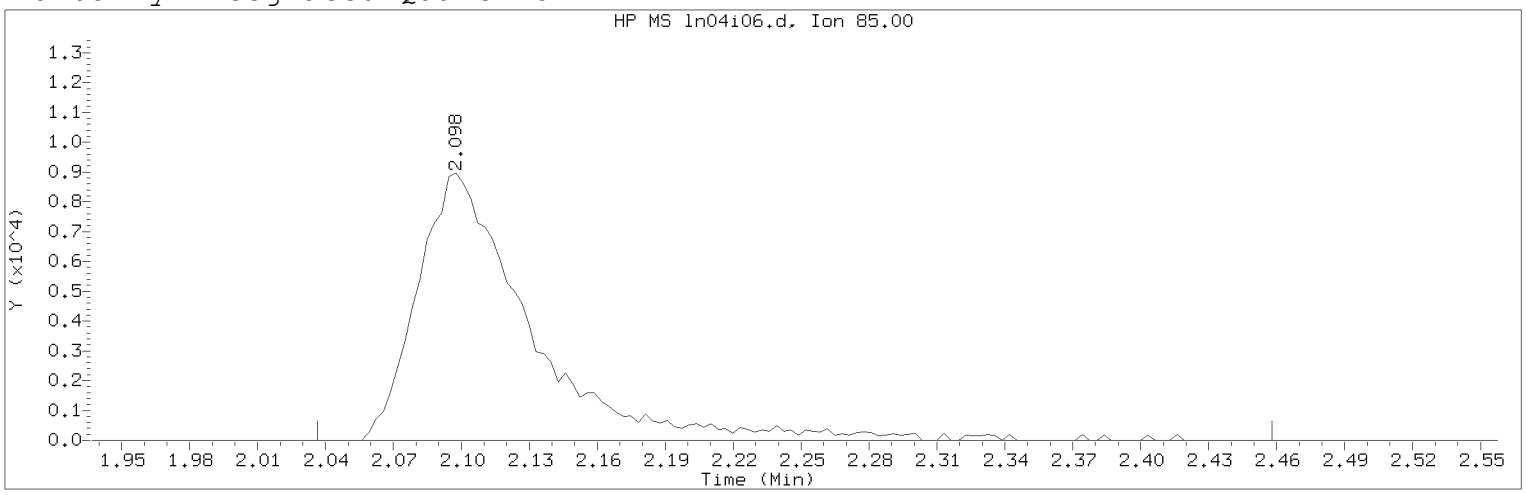
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

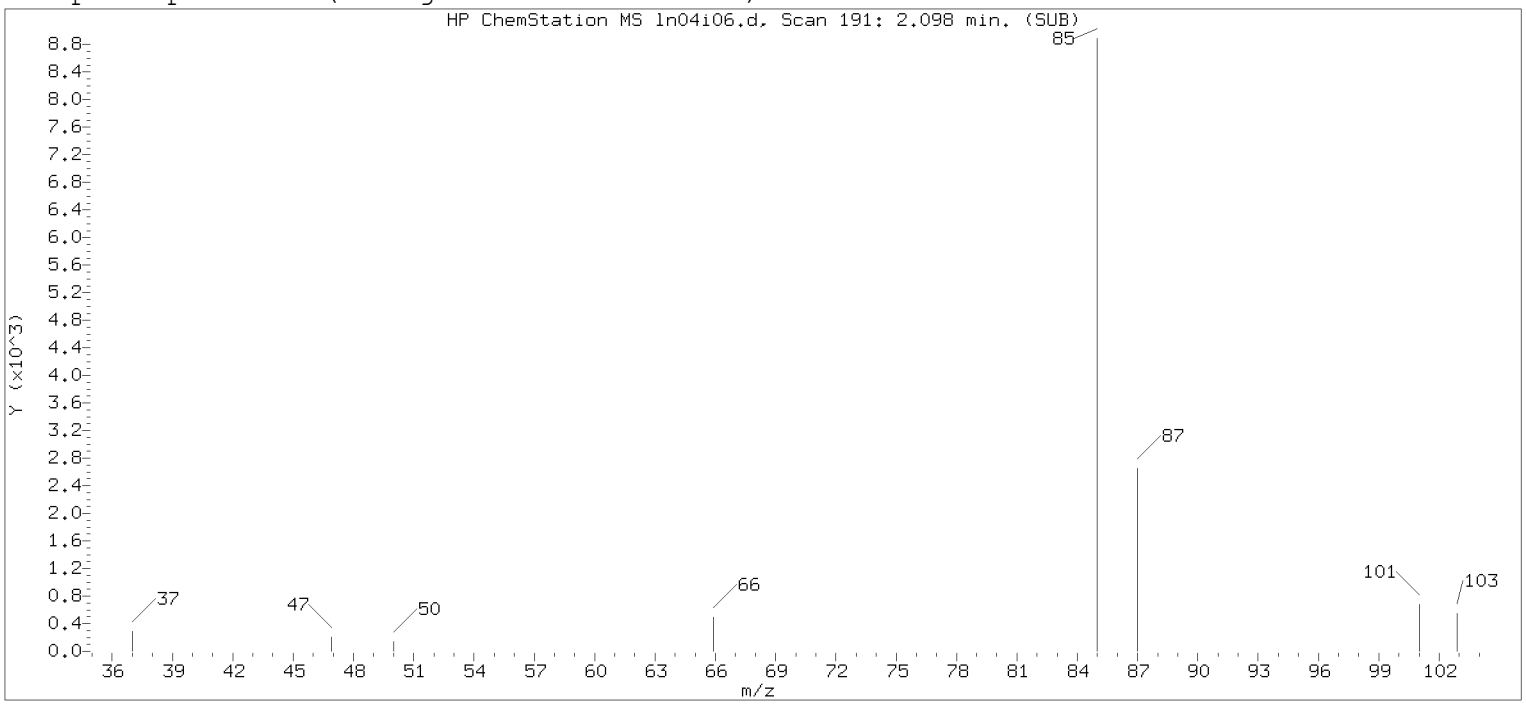
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 191
Retention Time (minutes): 2.098
Quant Ion : 85.00
Area (flag) : 31217M
On-Column Amount (ng) : 3.8978
Integration start scan : 171 Integration stop scan: 302
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

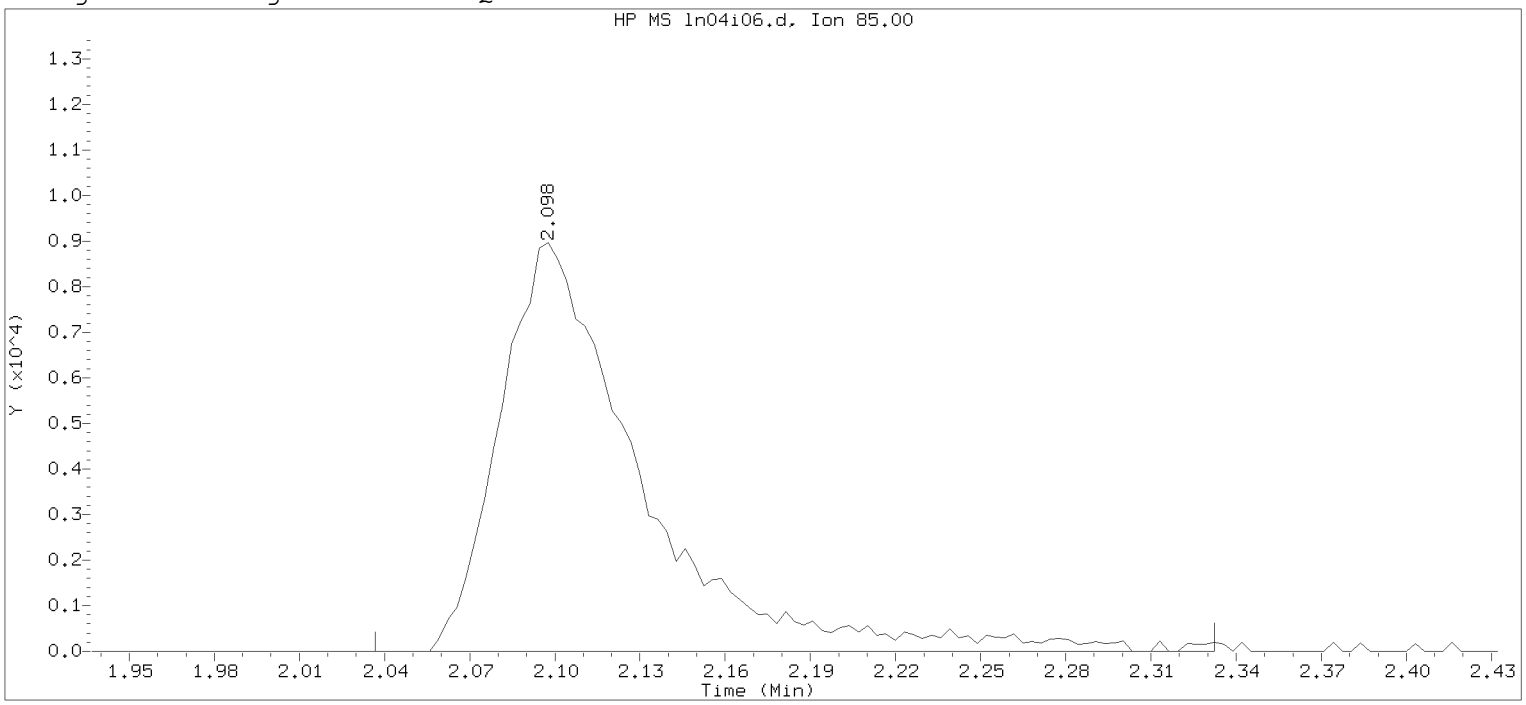
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

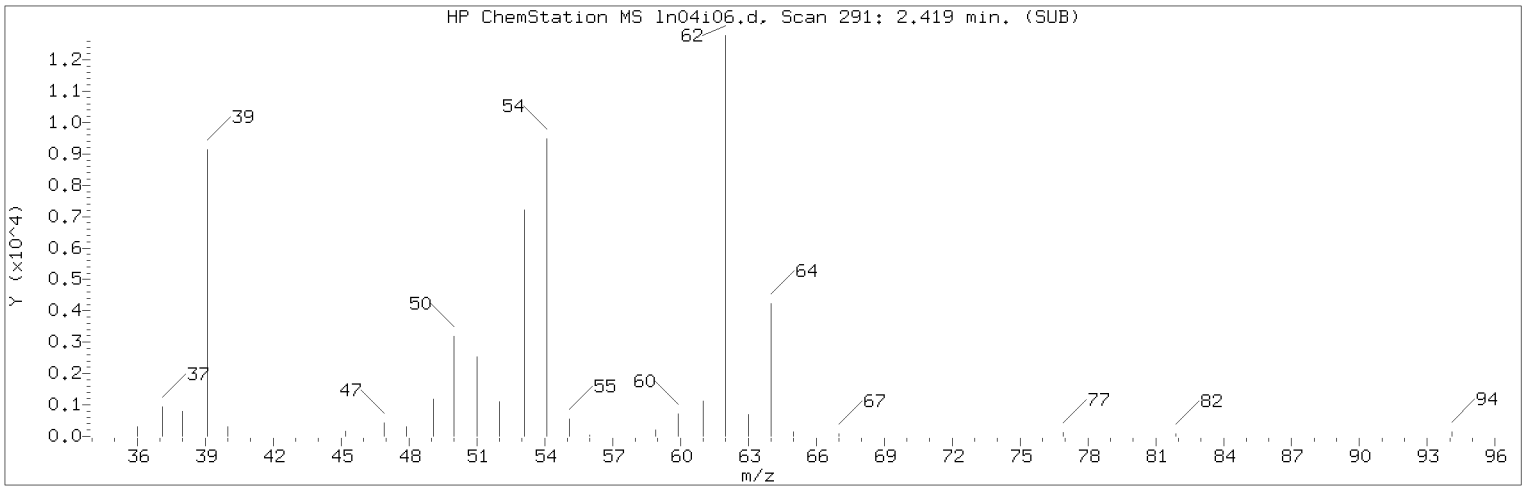
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

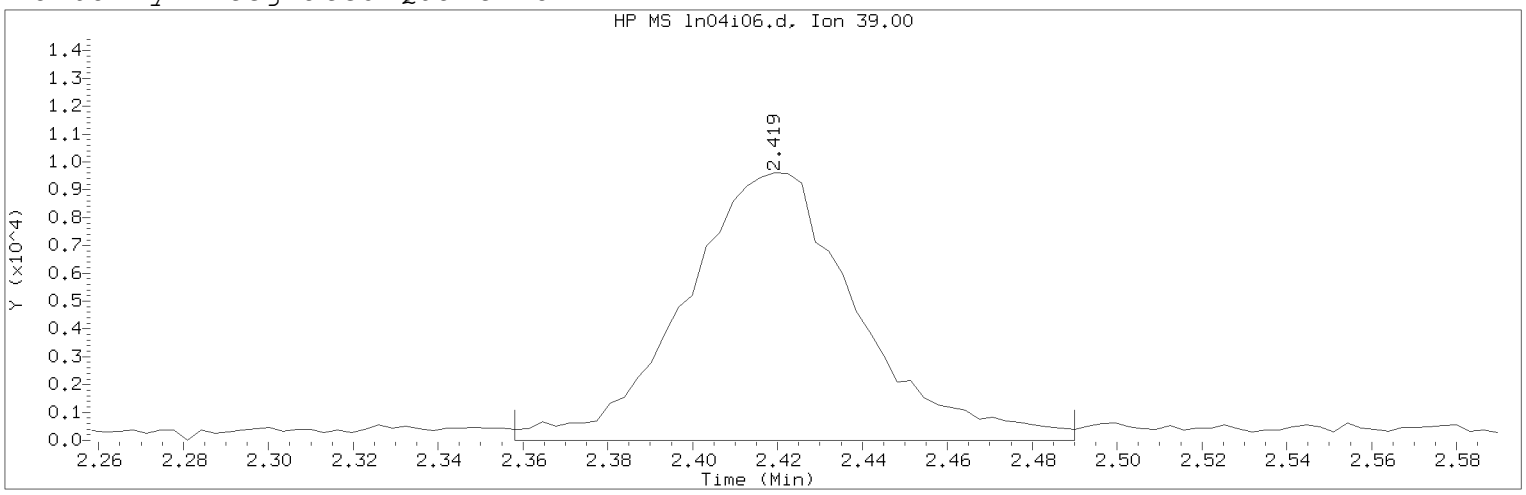
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 191
Retention Time (minutes): 2.098
Quant Ion : 85.00
Area : 30987
On-column Amount (ng) : 3.8874
Integration start scan : 171 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

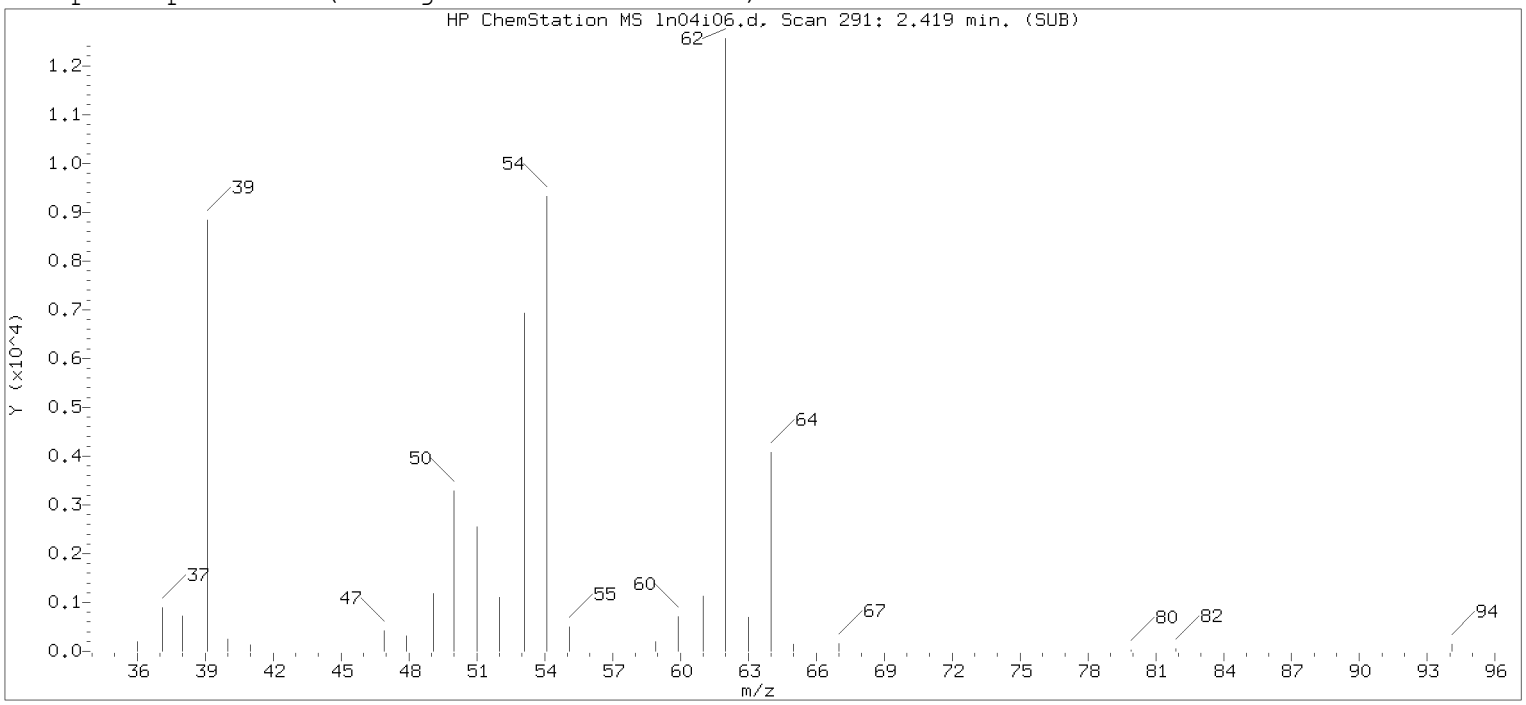
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 291
Retention Time (minutes): 2.419
Quant Ion : 39.00
Area (flag) : 27249M
On-Column Amount (ng) : 4.2517
Integration start scan : 271 Integration stop scan: 312
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

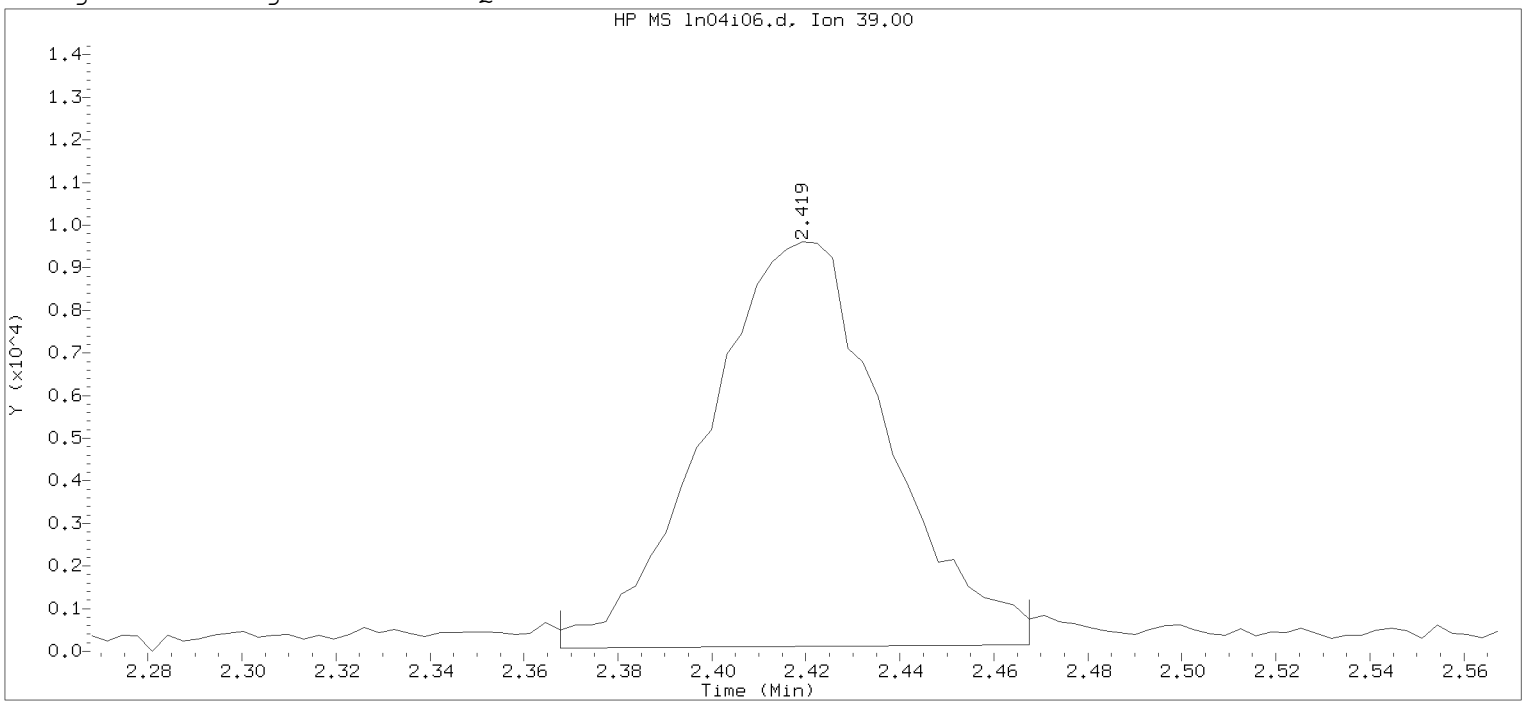
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

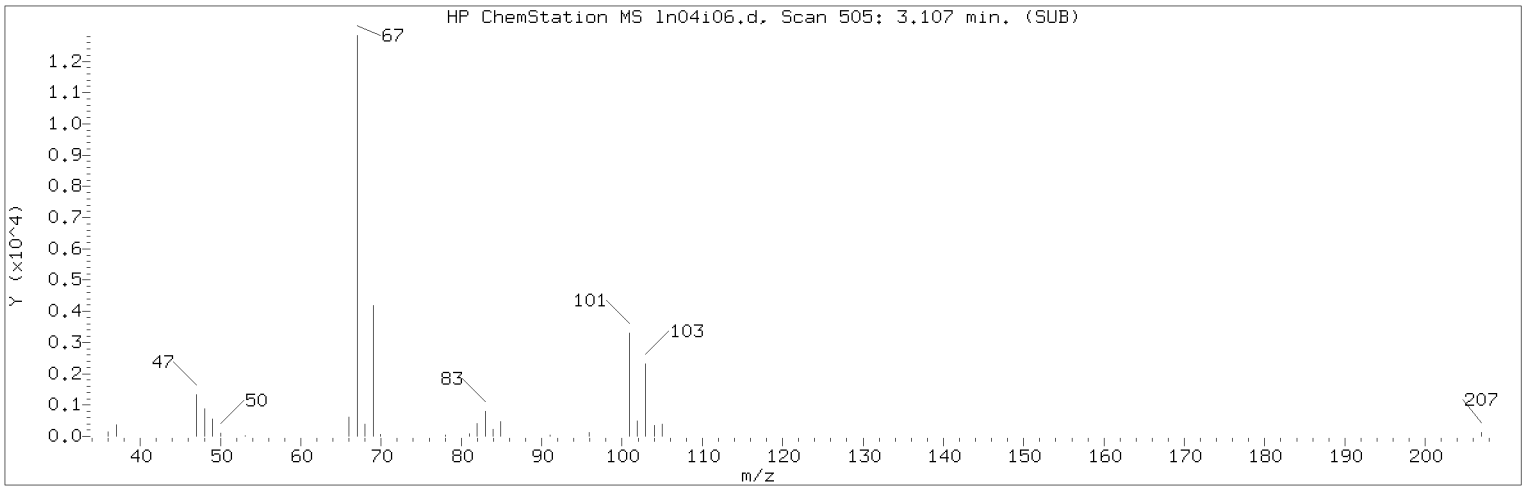
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

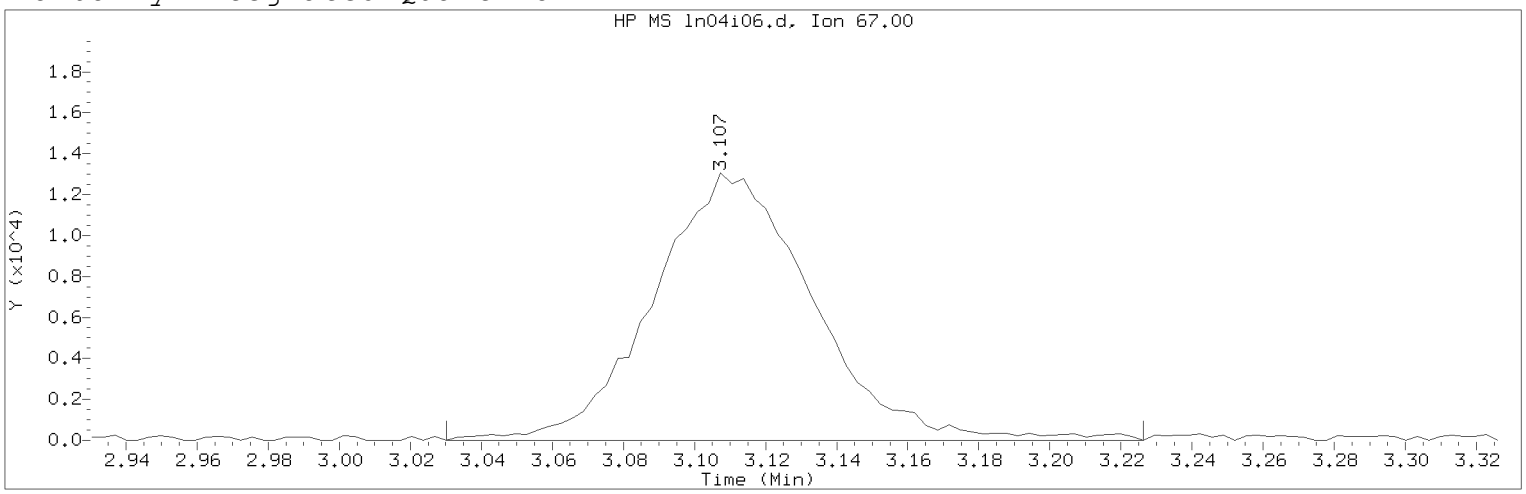
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 291
Retention Time (minutes): 2.419
Quant Ion : 39.00
Area : 25391
On-column Amount (ng) : 4.2082
Integration start scan : 274 Integration stop scan: 305
Y at integration start : 76 Y at integration end: 147

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

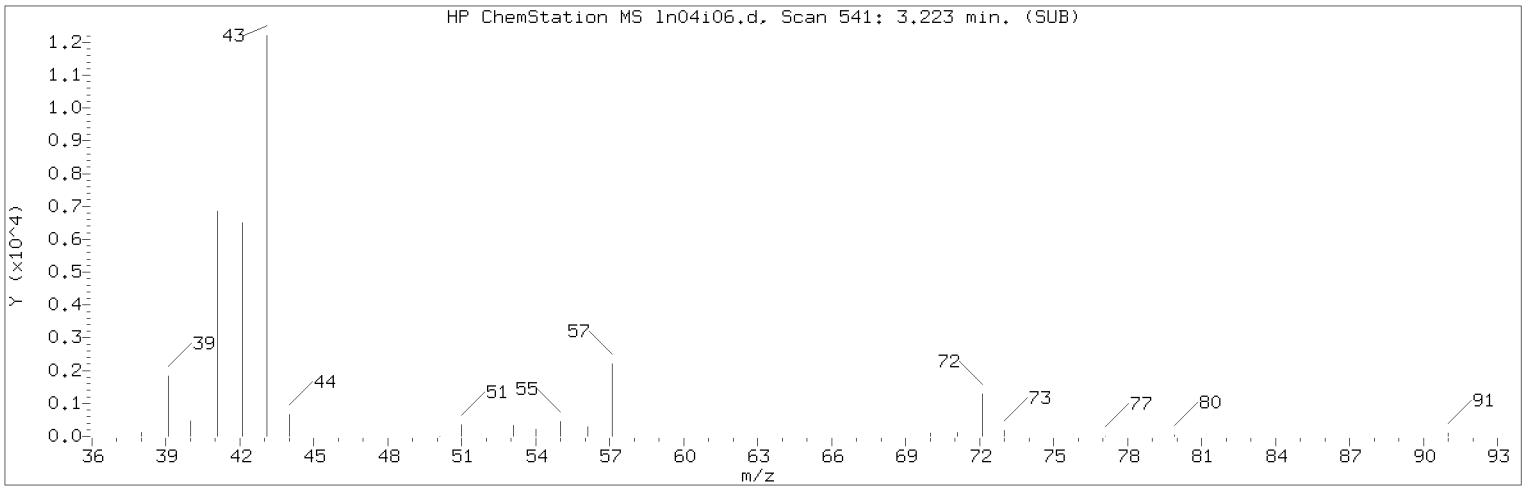
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 505
Retention Time (minutes): 3.107
Quant Ion : 67.00
Area (flag) : 40740M
On-Column Amount (ng) : 4.0151
Integration start scan : 480 Integration stop scan: 541
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

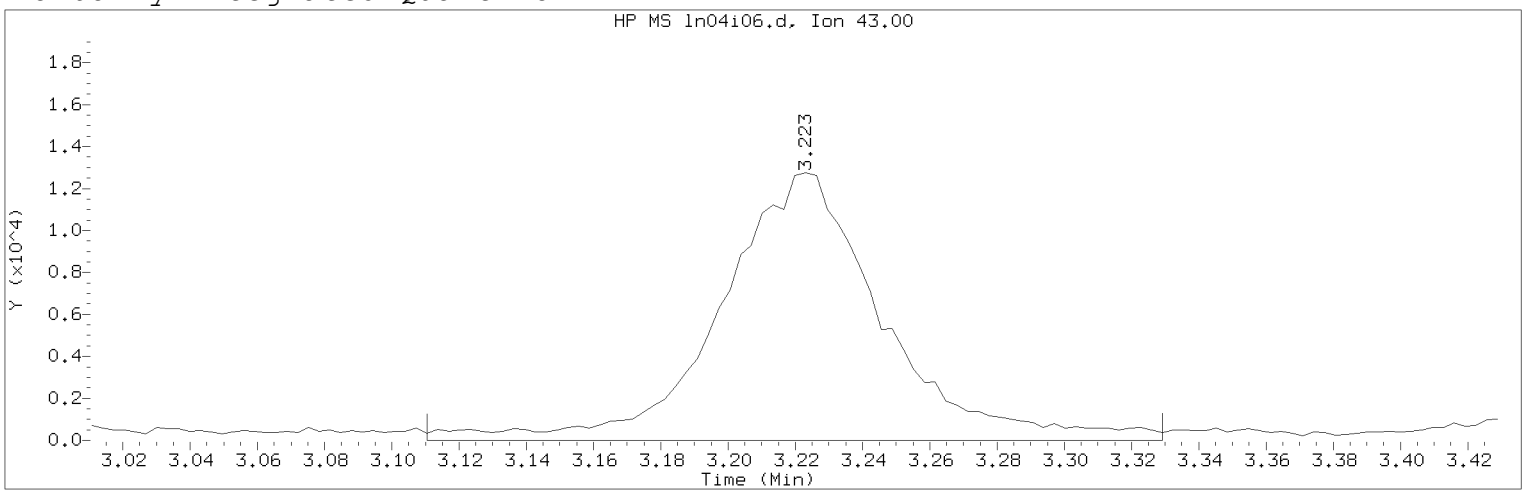
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

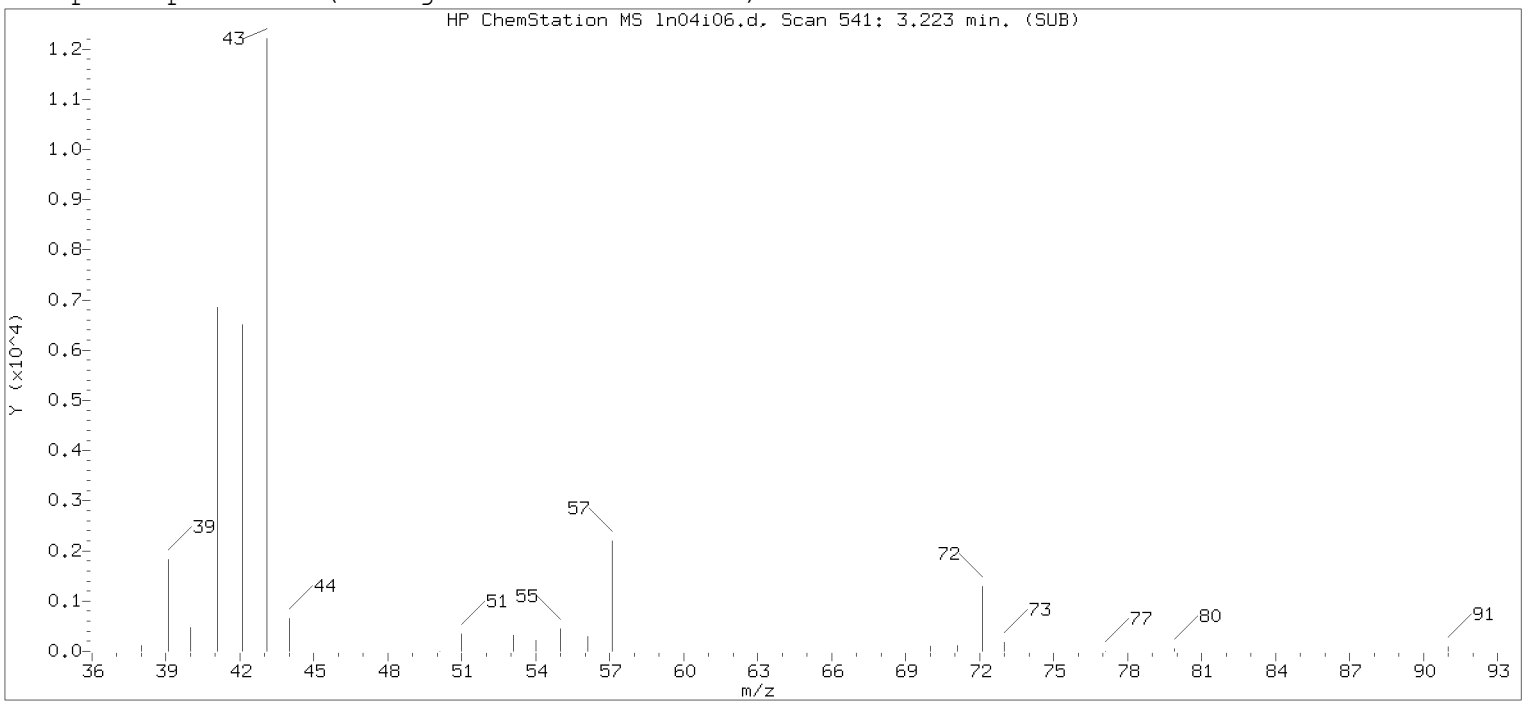
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 541
Retention Time (minutes): 3.223
Quant Ion : 43.00
Area (flag) : 42826M
On-Column Amount (ng) : 4.3694
Integration start scan : 505 Integration stop scan: 573
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

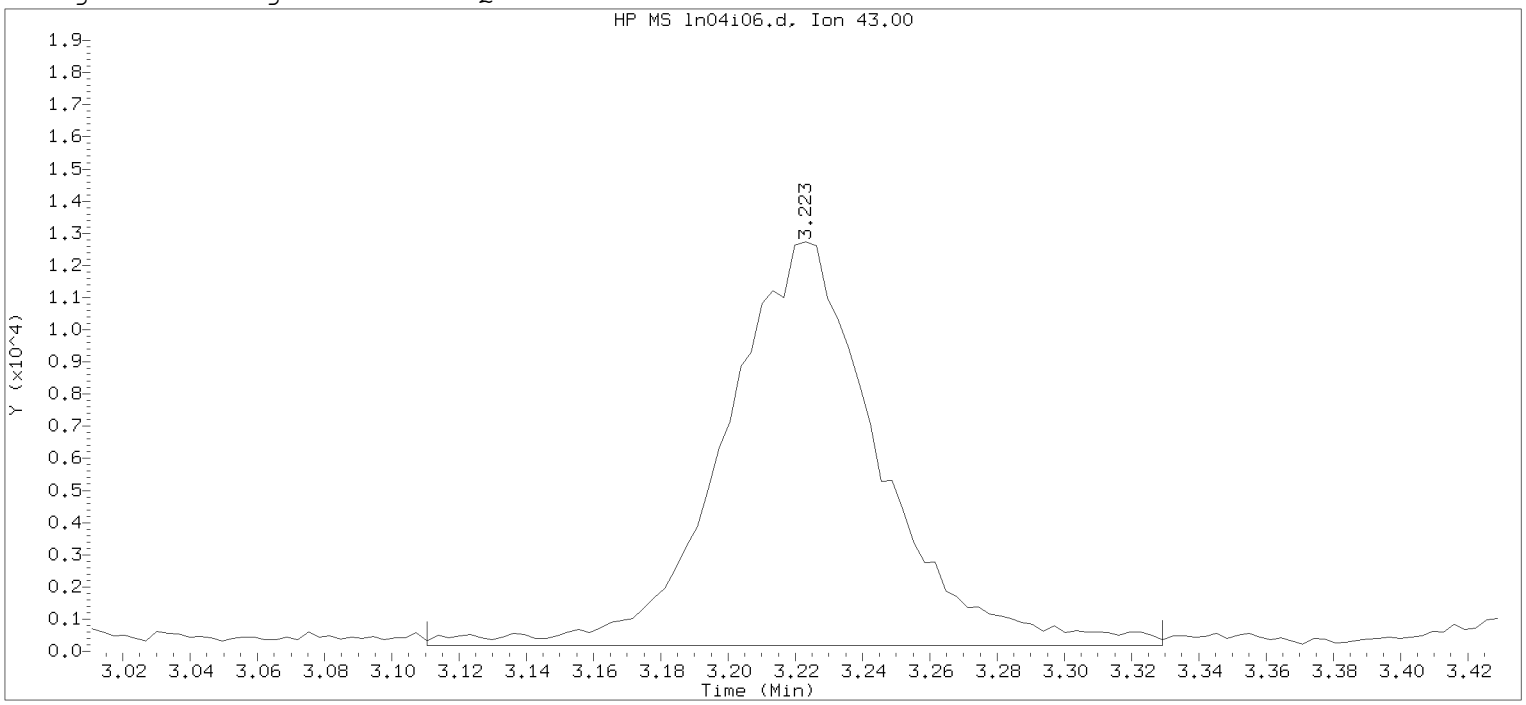
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

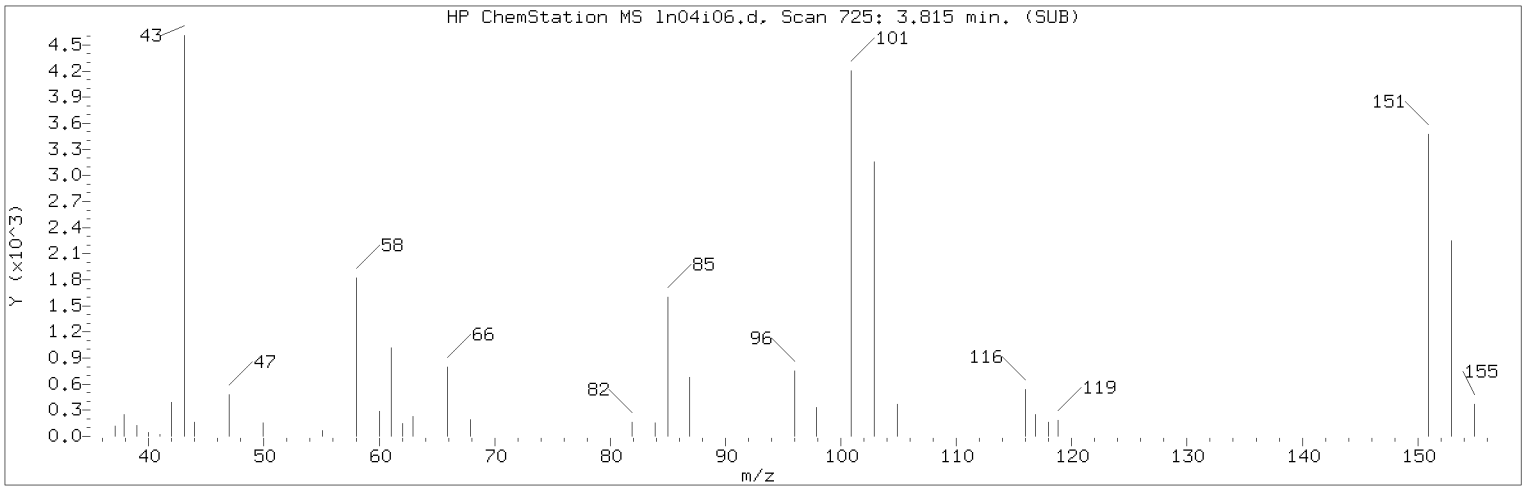
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

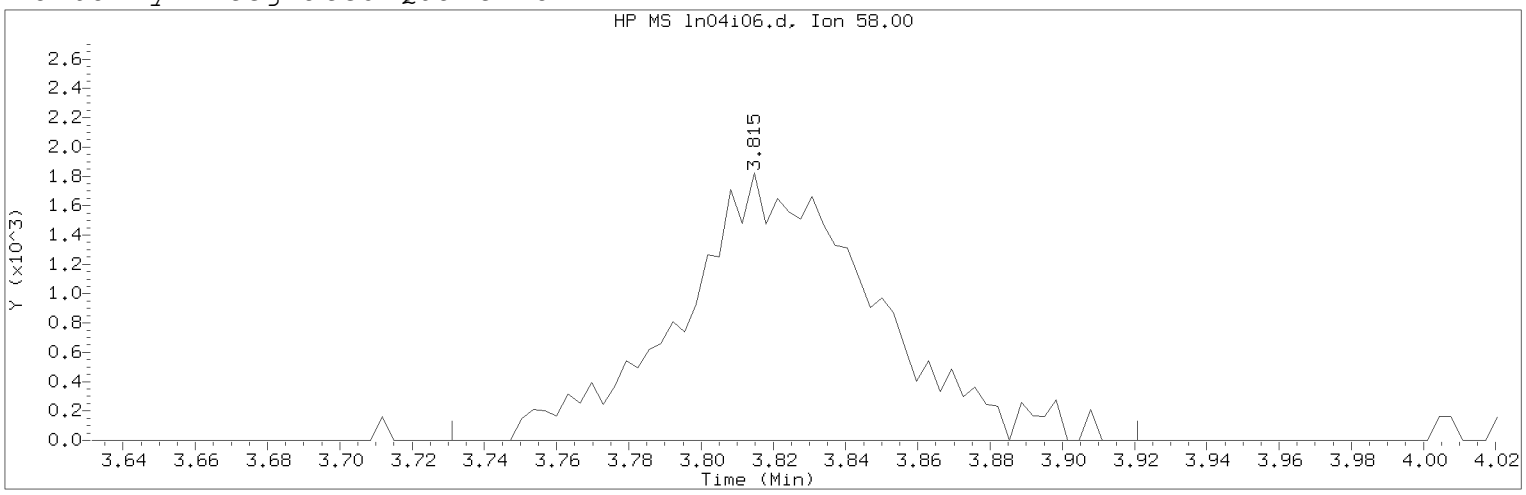
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 541
Retention Time (minutes): 3.223
Quant Ion : 43.00
Area : 40359
On-column Amount (ng) : 4.1550
Integration start scan : 505 Integration stop scan: 573
Y at integration start : 183 Y at integration end: 183

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

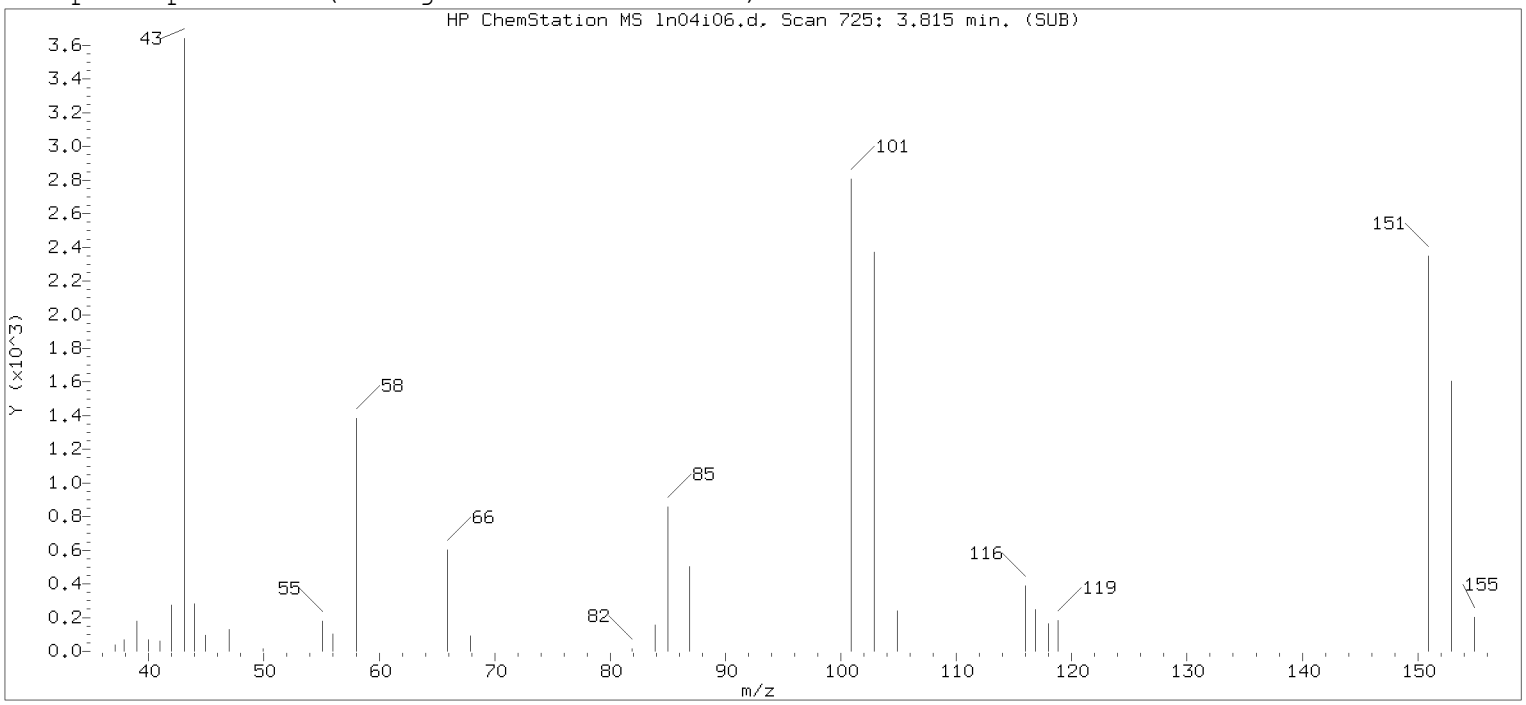
Compound Number : 18
Compound Name : Acetone
Scan Number : 725
Retention Time (minutes): 3.815
Quant Ion : 58.00
Area (flag) : 6763M
On-Column Amount (ng) : 7.6731
Integration start scan : 698 Integration stop scan: 757
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

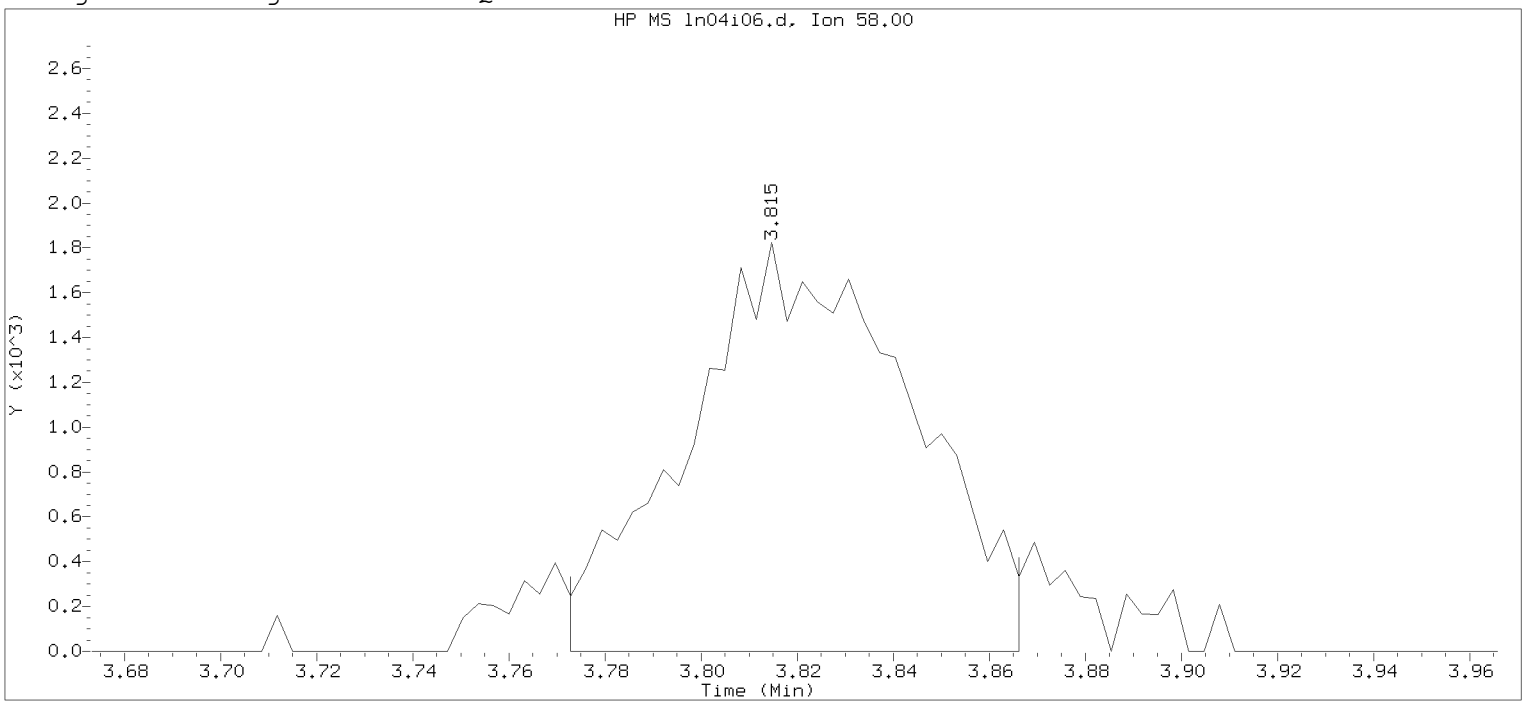
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

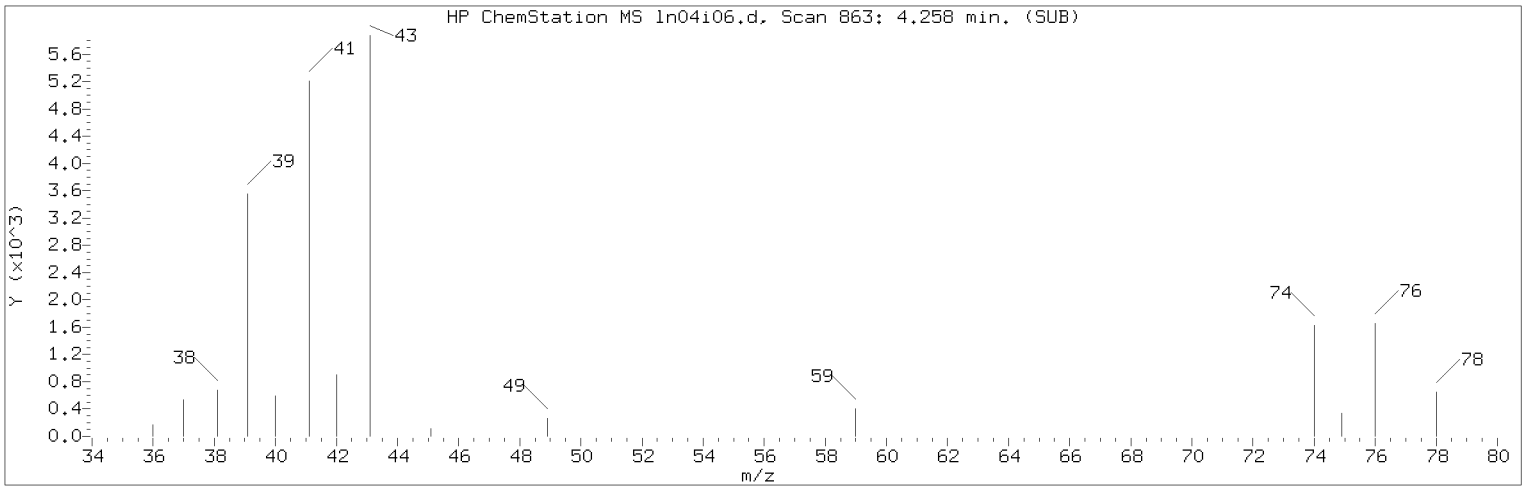
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

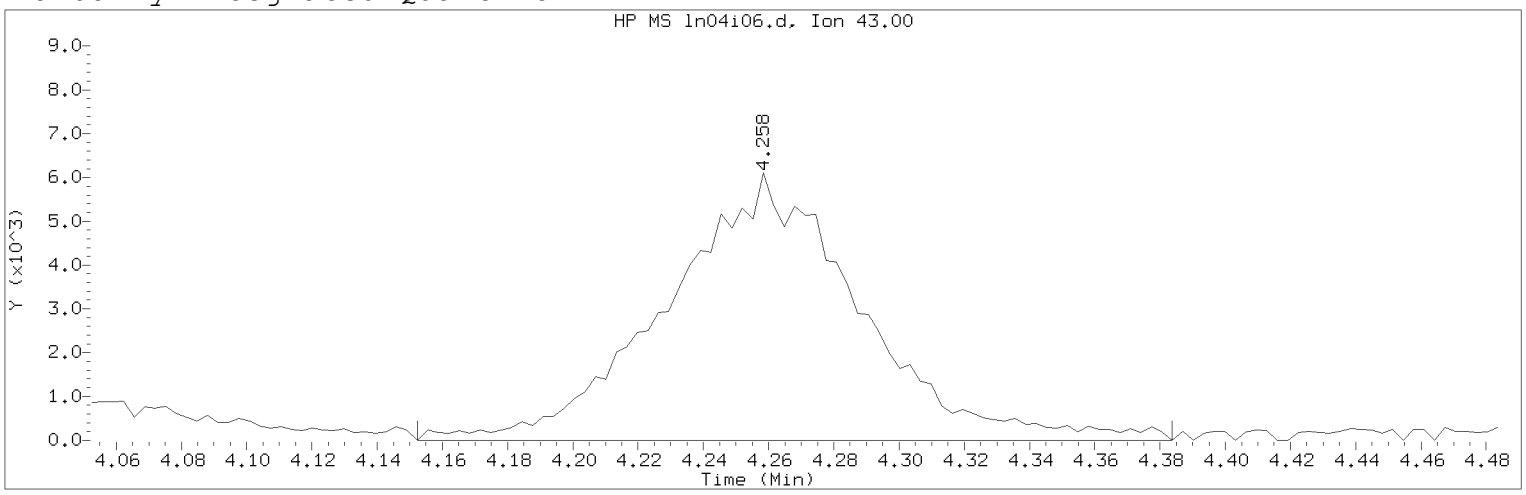
Compound Number	: 18		
Compound Name	: Acetone		
Scan Number	: 725		
Retention Time (minutes)	: 3.815		
Quant Ion	: 58.00		
Area	: 5862		
On-column Amount (ng)	: 7.7134		
Integration start scan	: 711	Integration stop scan:	740
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

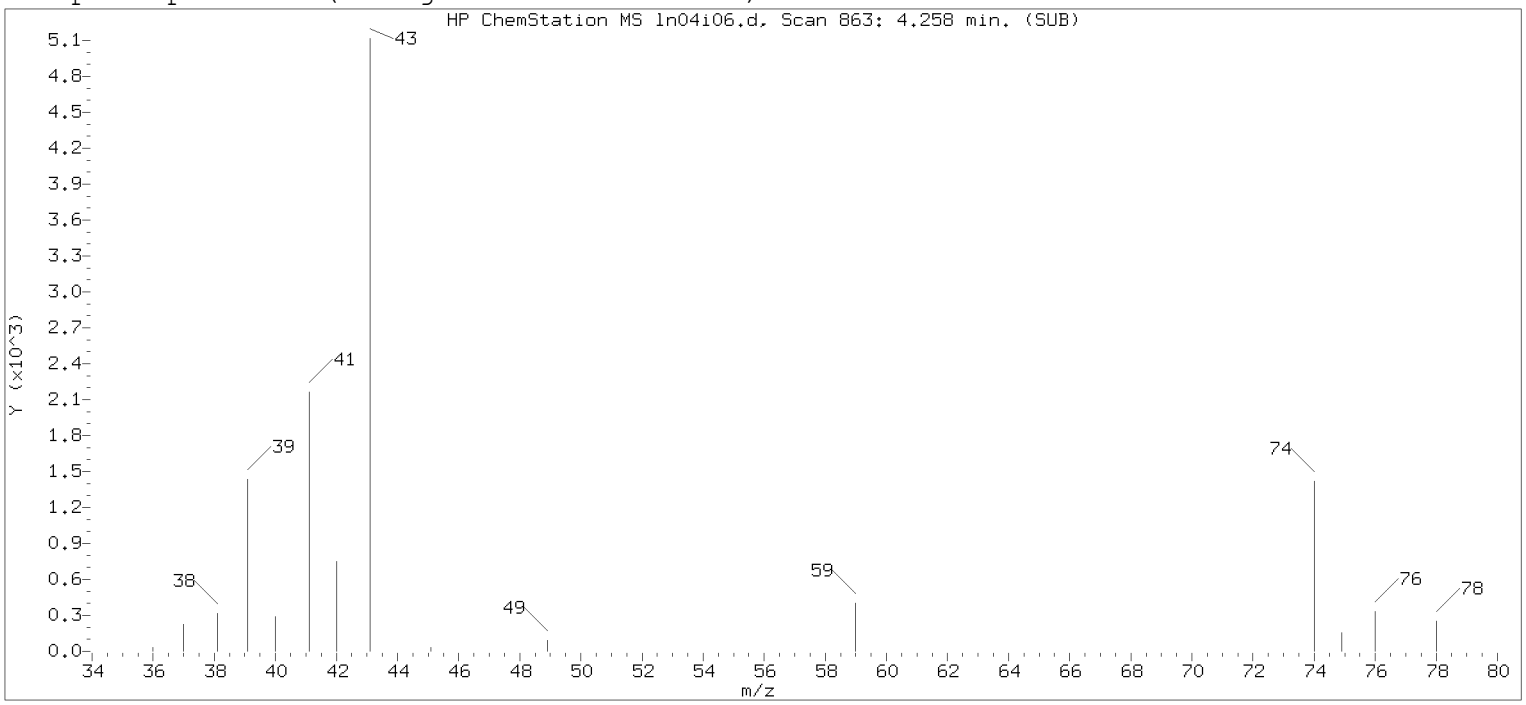
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 863
Retention Time (minutes): 4.258
Quant Ion : 43.00
Area (flag) : 24928M
On-Column Amount (ng) : 3.9757
Integration start scan : 829 Integration stop scan: 901
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

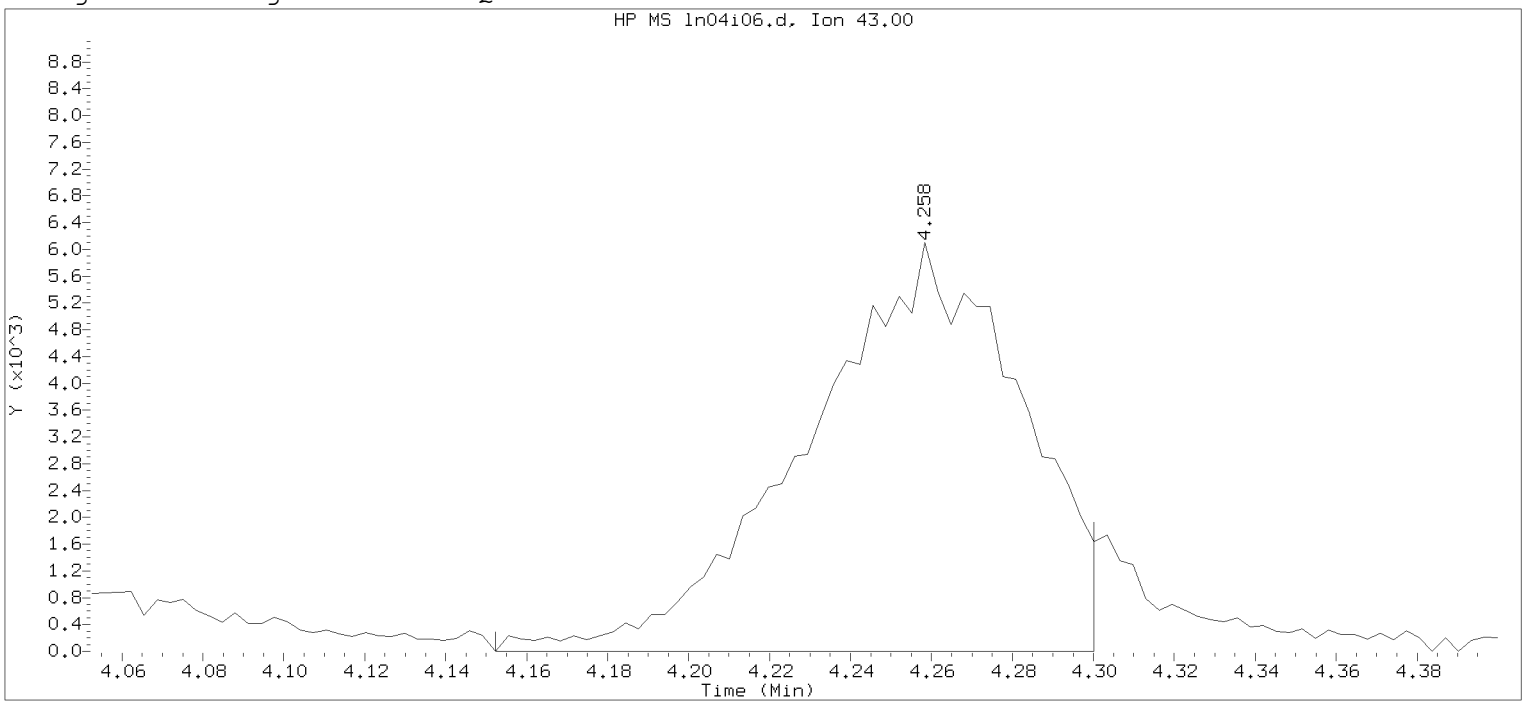
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

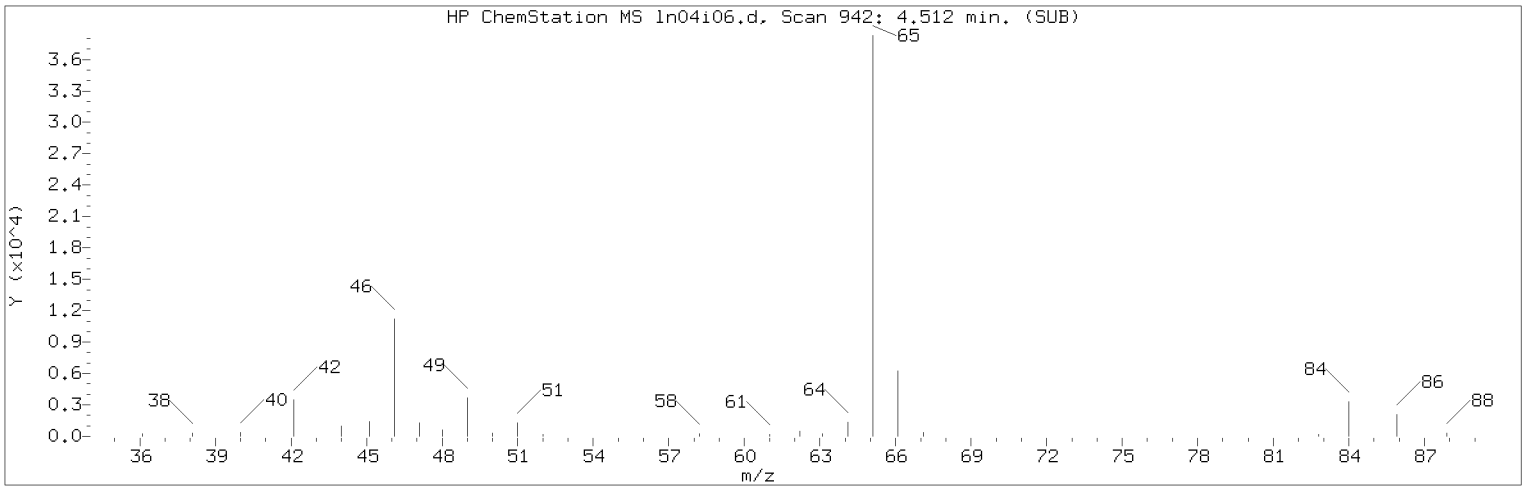
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

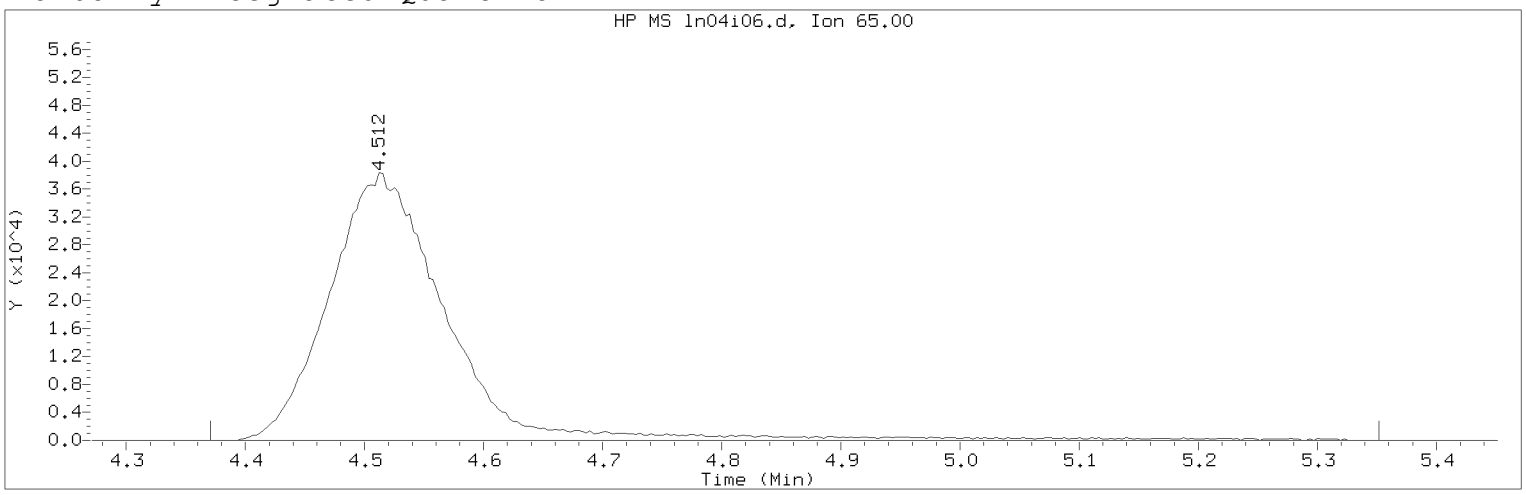
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 863
Retention Time (minutes): 4.258
Quant Ion : 43.00
Area : 22302
On-column Amount (ng) : 3.7243
Integration start scan : 829 Integration stop scan: 875
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

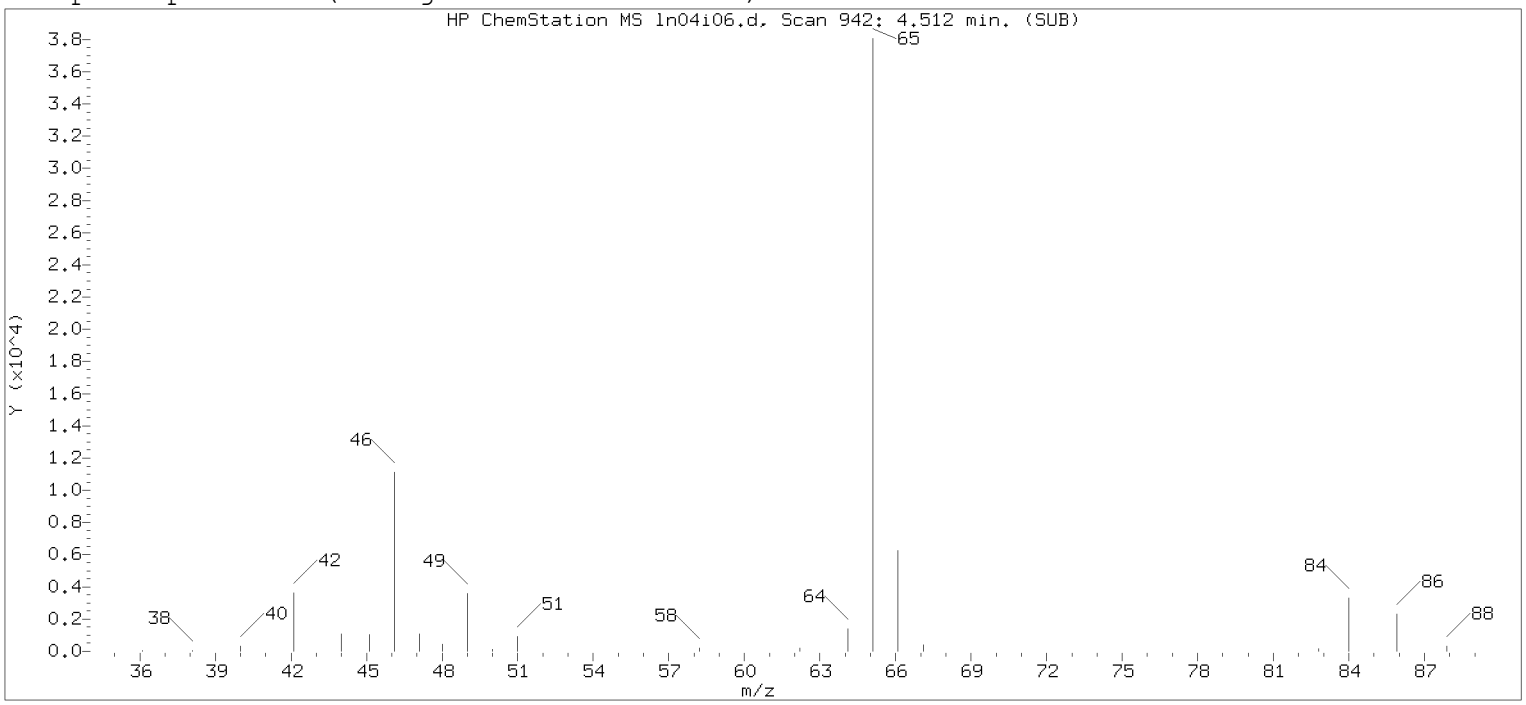
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area (flag) : 262044M
On-Column Amount (ng) : 250.0000
Integration start scan : 897 Integration stop scan: 1202
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

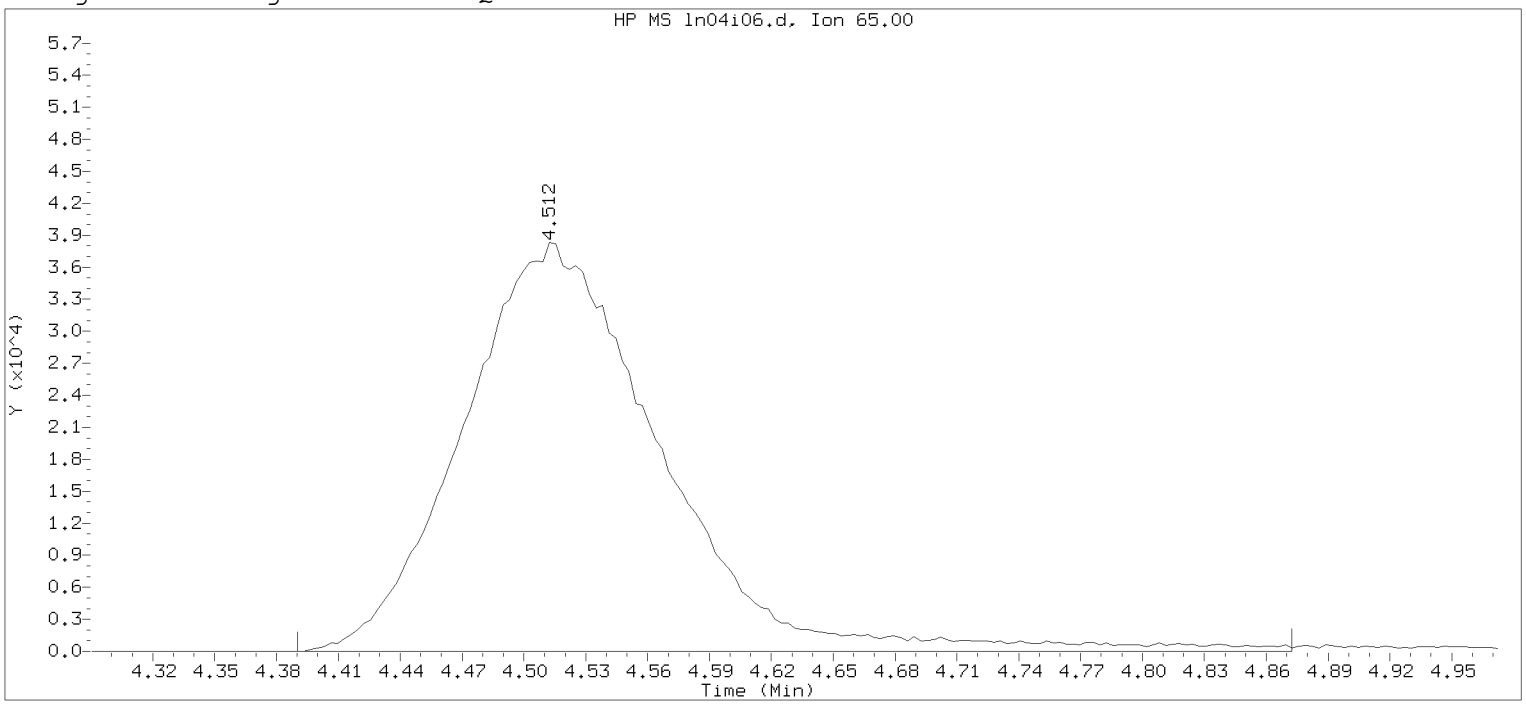
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

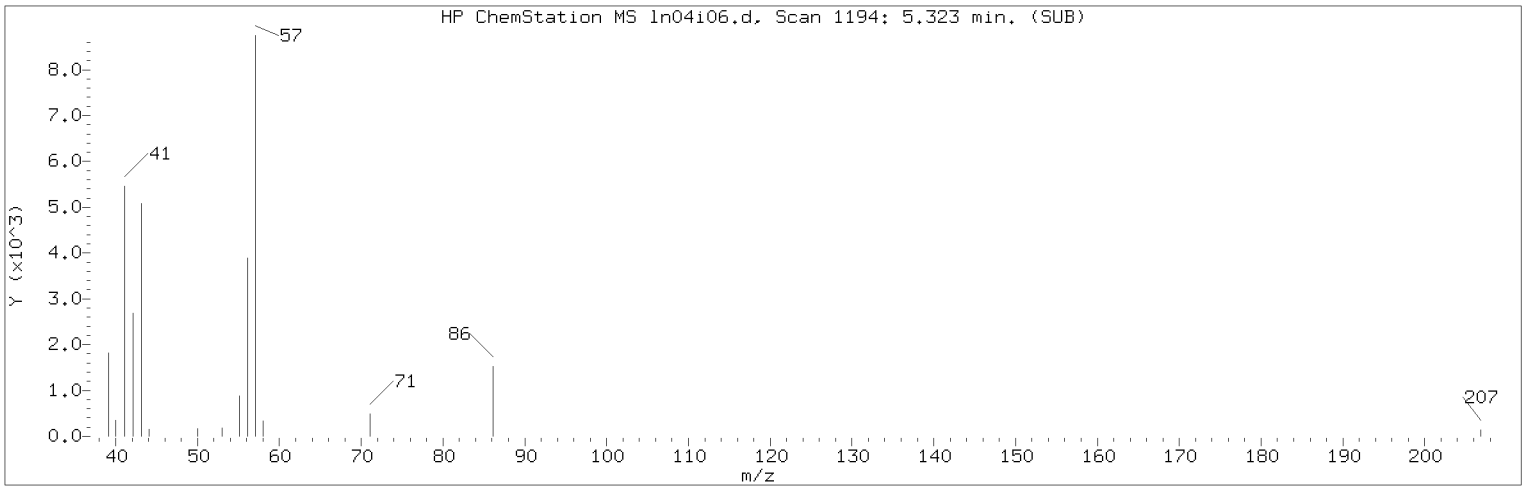
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

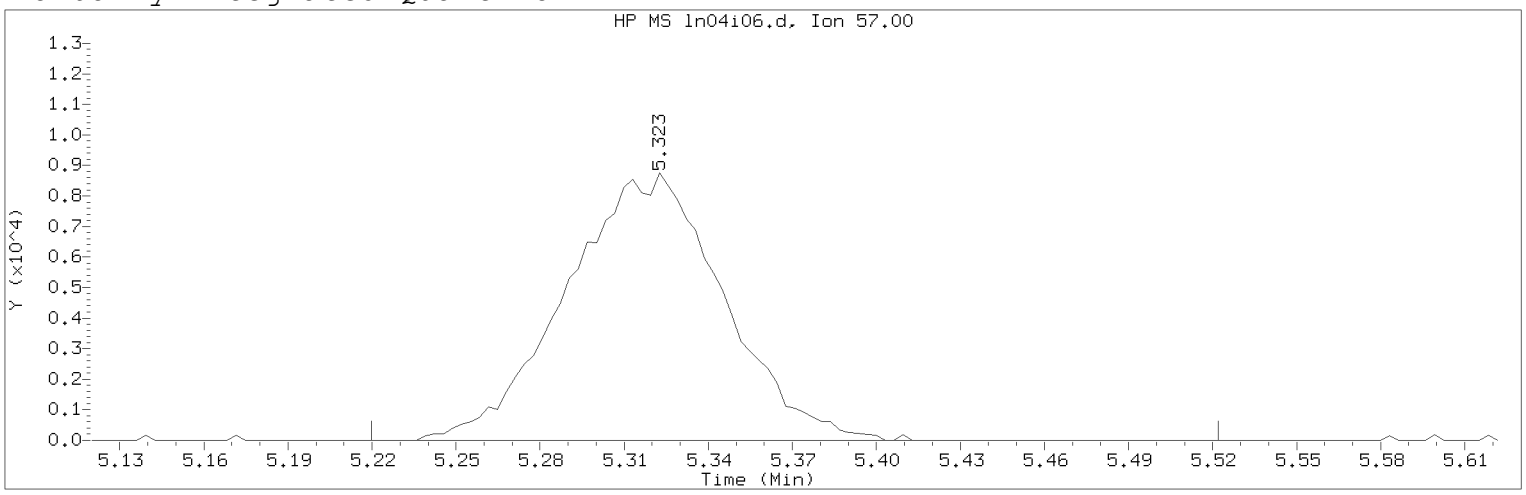
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area : 254362
On-column Amount (ng) : 250.0000
Integration start scan : 903 Integration stop scan: 1053
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

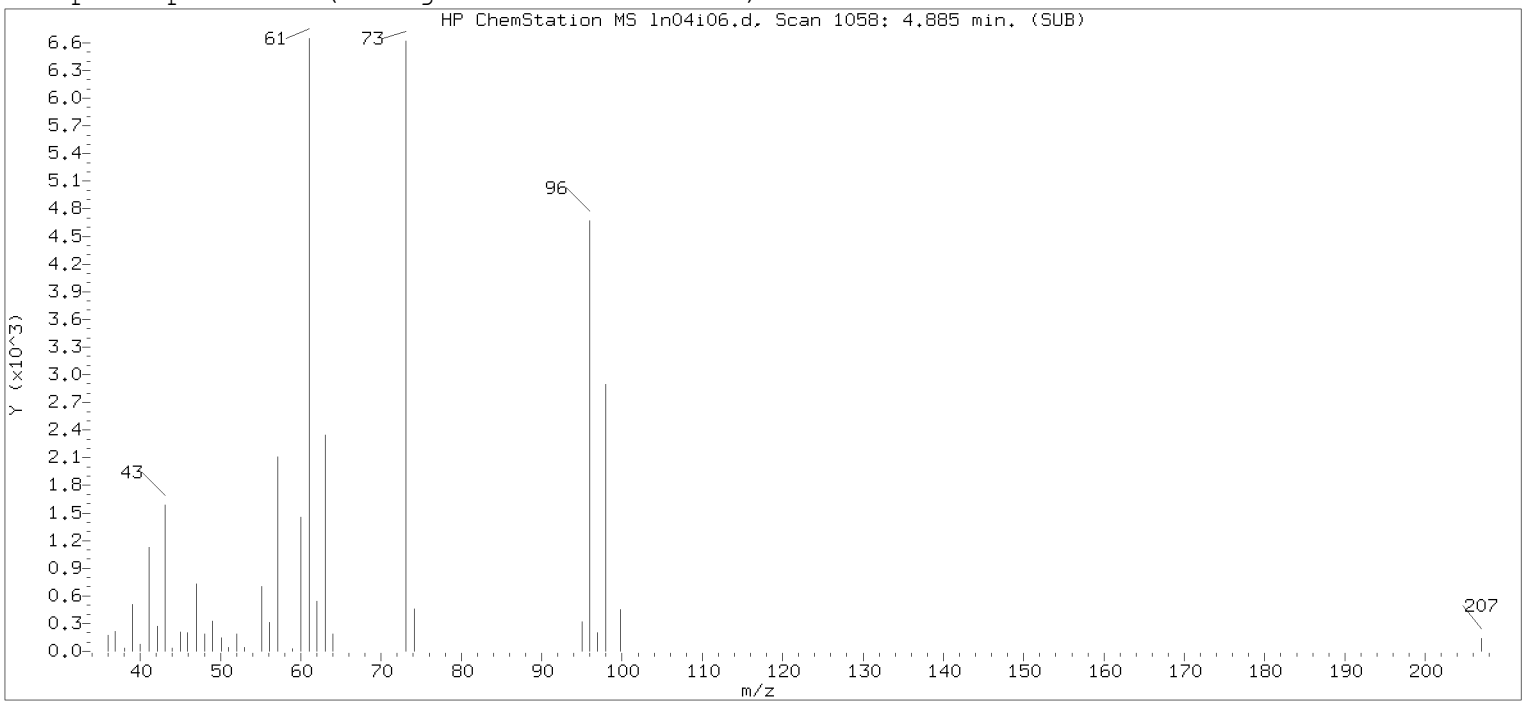
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1194
Retention Time (minutes): 5.323
Quant Ion : 57.00
Area (flag) : 33969M
On-Column Amount (ng) : 3.8769
Integration start scan : 1161 Integration stop scan: 1255
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

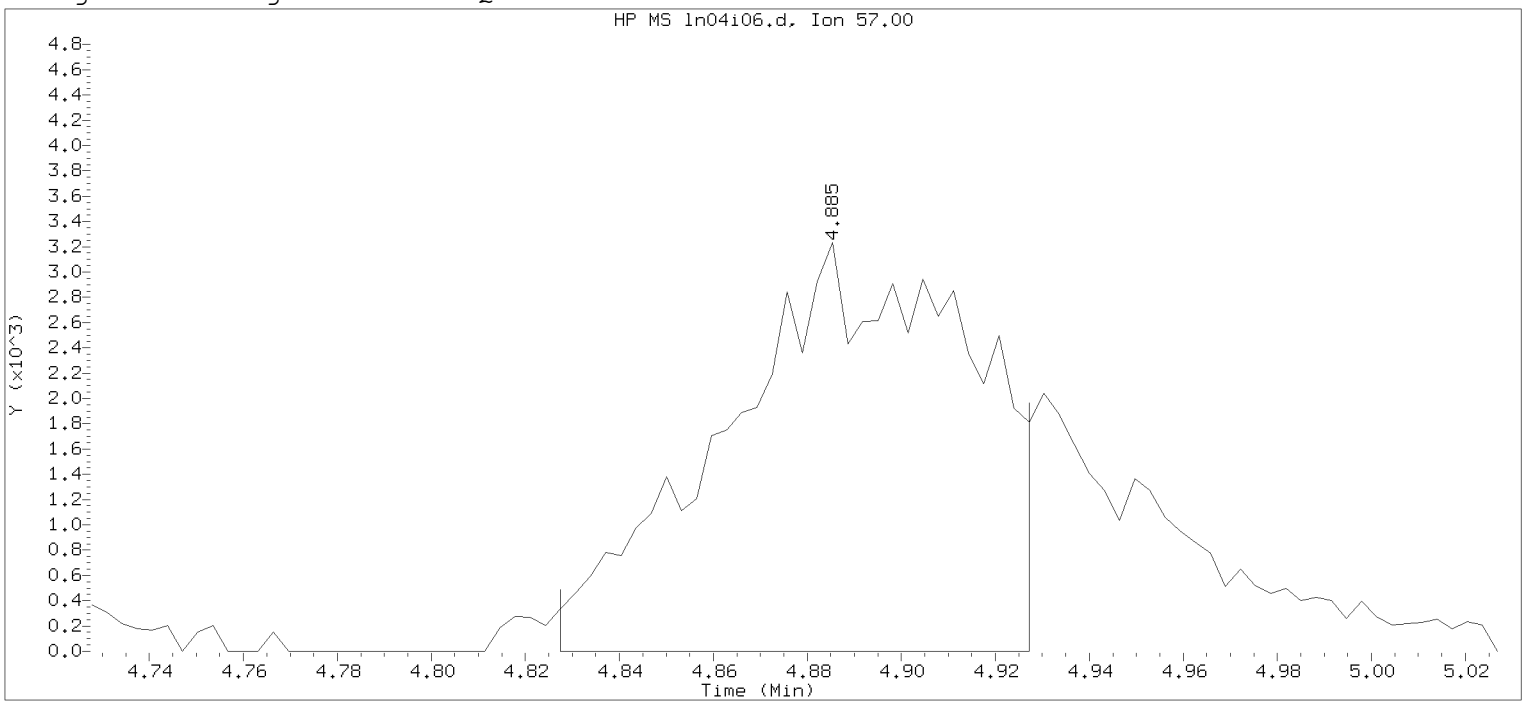
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

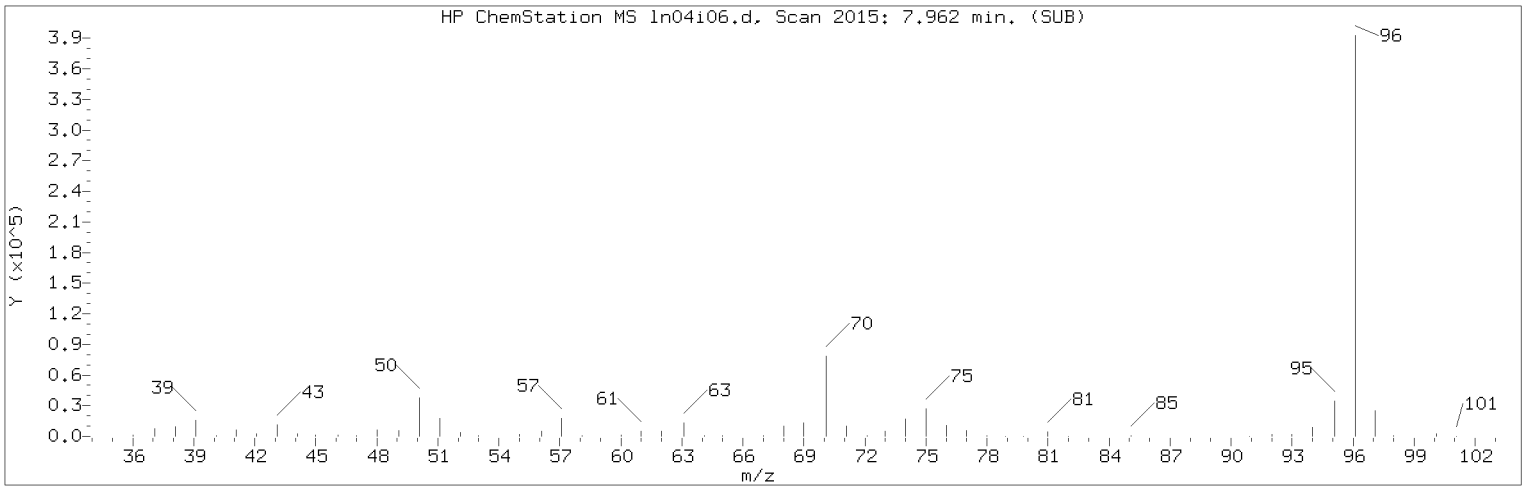
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

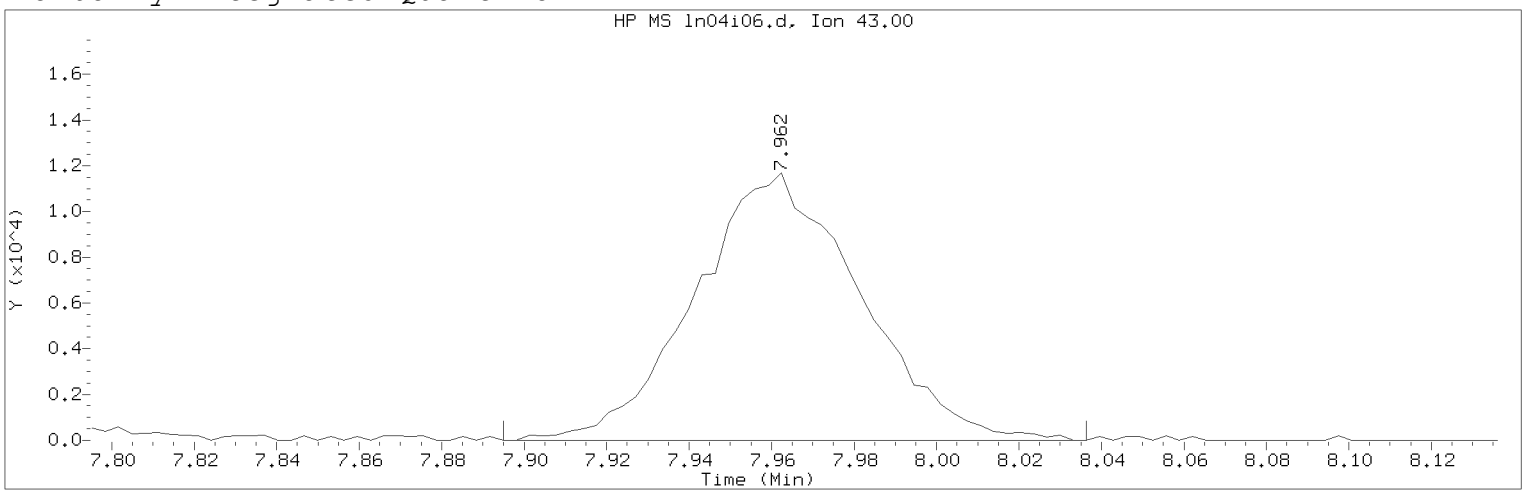
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1058		
Retention Time (minutes)	: 4.885		
Quant Ion	: 57.00		
Area	: 11708		
On-column Amount (ng)	: 3.2297		
Integration start scan	: 1039	Integration stop scan:	1070
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

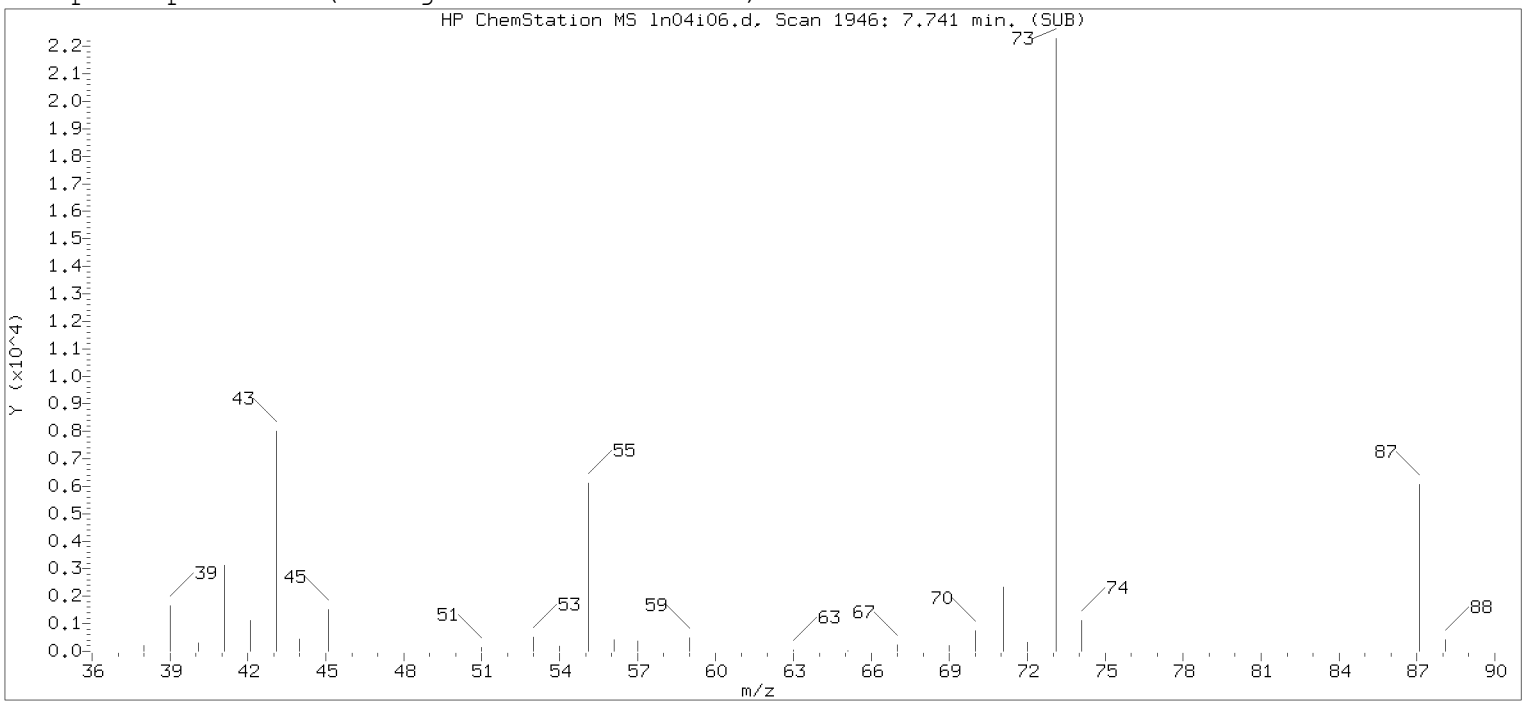
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2015
Retention Time (minutes): 7.962
Quant Ion : 43.00
Area (flag) : 32502MA
On-Column Amount (ng) : 3.9708
Integration start scan : 1993 Integration stop scan: 2037
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

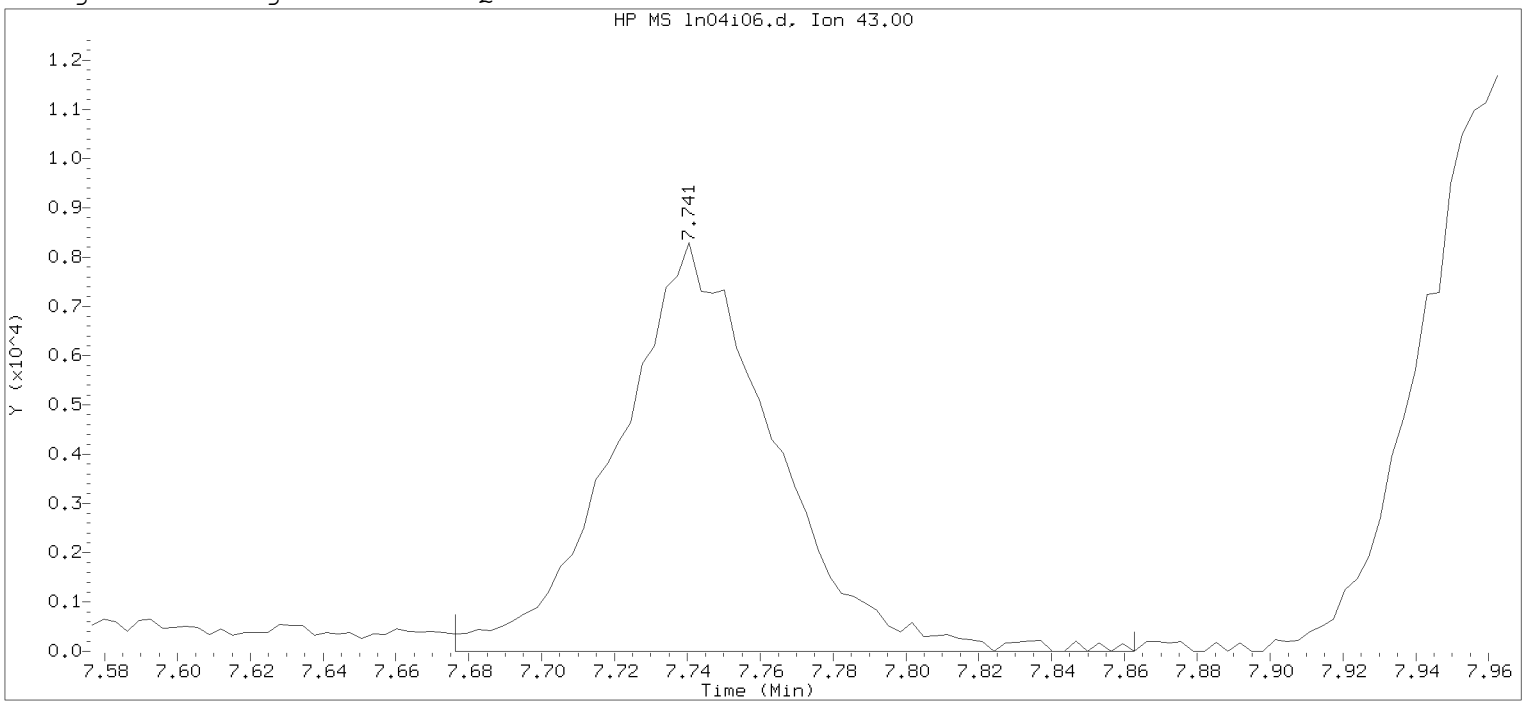
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

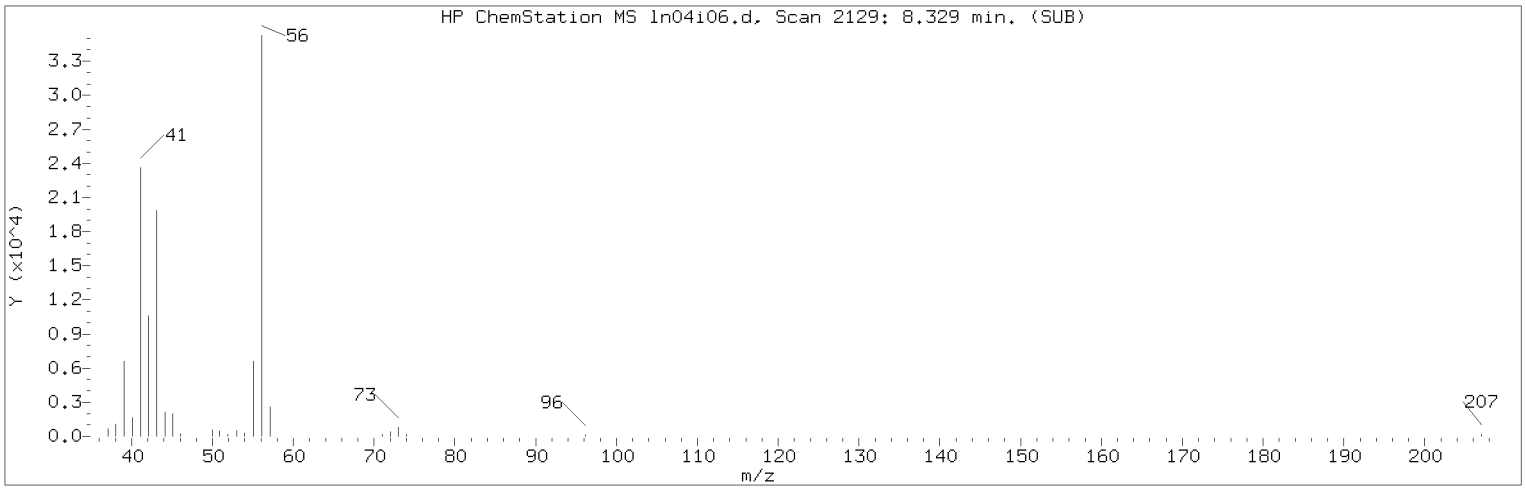
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

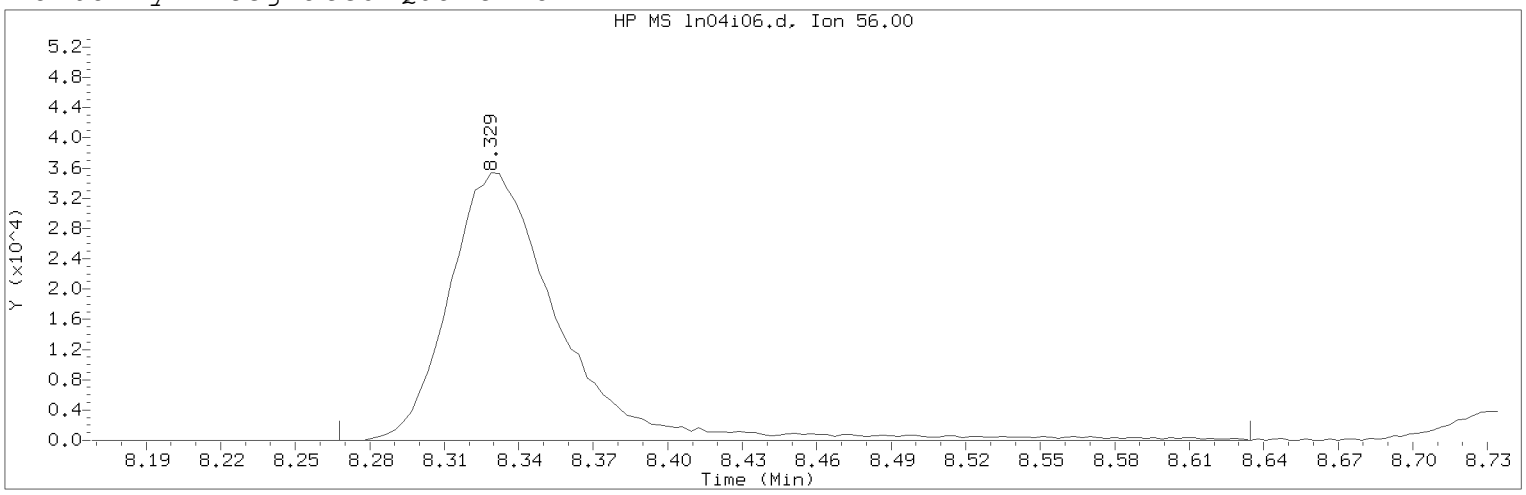
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.741
Quant Ion : 43.00
Area : 24793
On-column Amount (ng) : 4.0913
Integration start scan : 1925 Integration stop scan: 1983
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

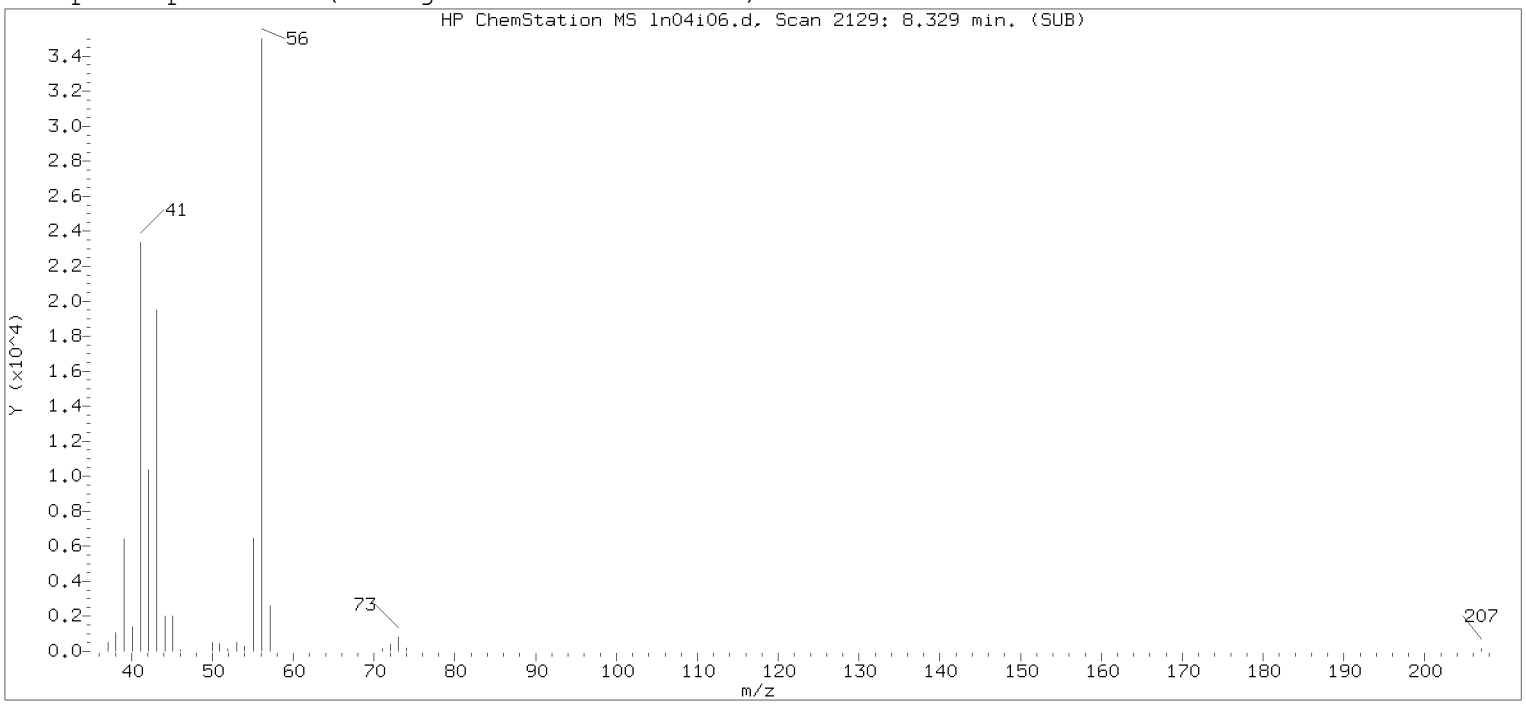
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area (flag) : 110027M
On-Column Amount (ng) : 344.3298
Integration start scan : 2109 Integration stop scan: 2223
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

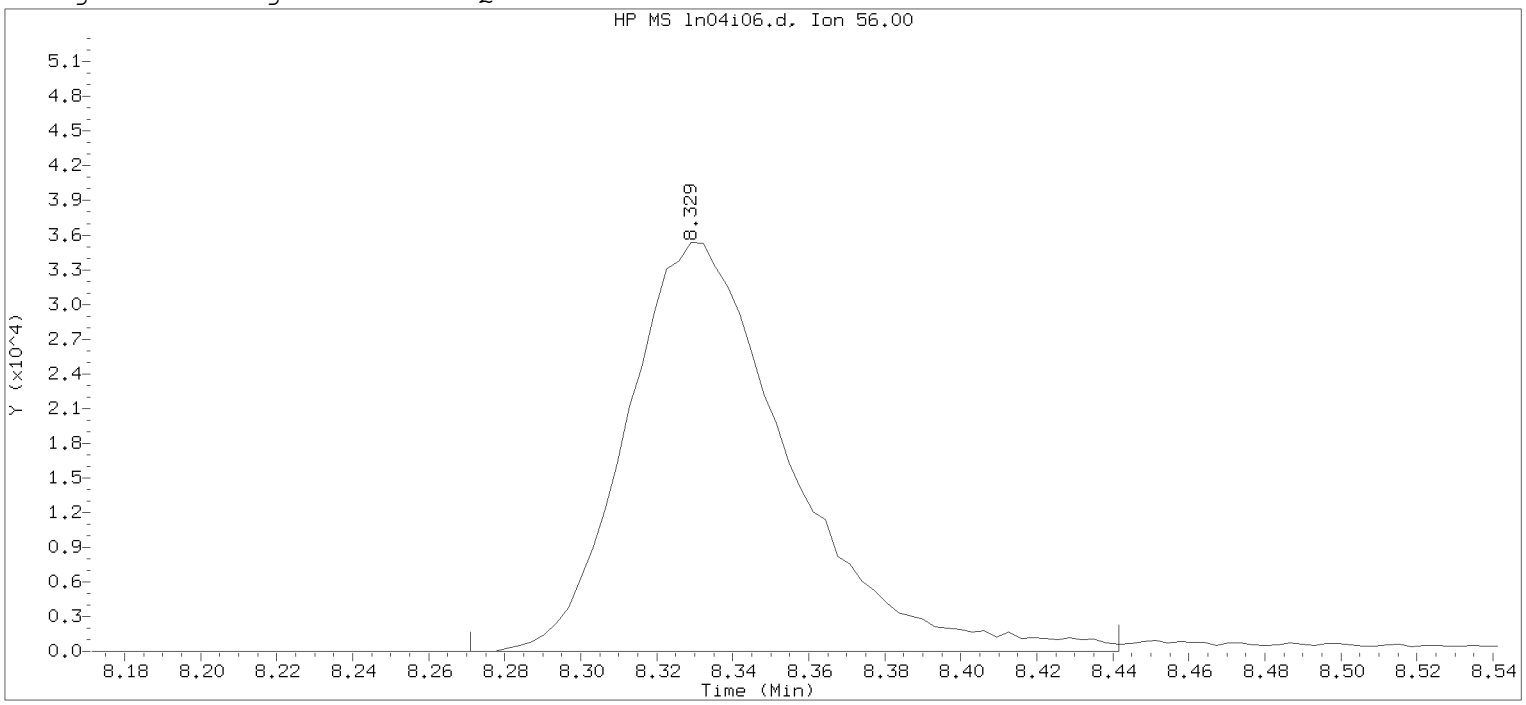
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

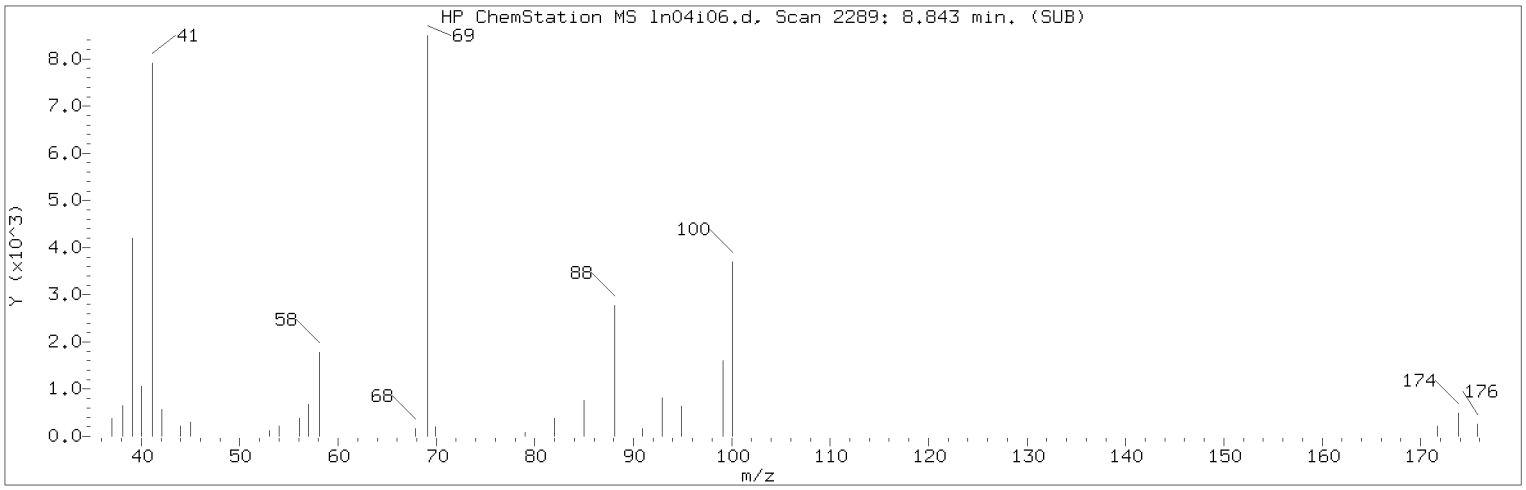
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

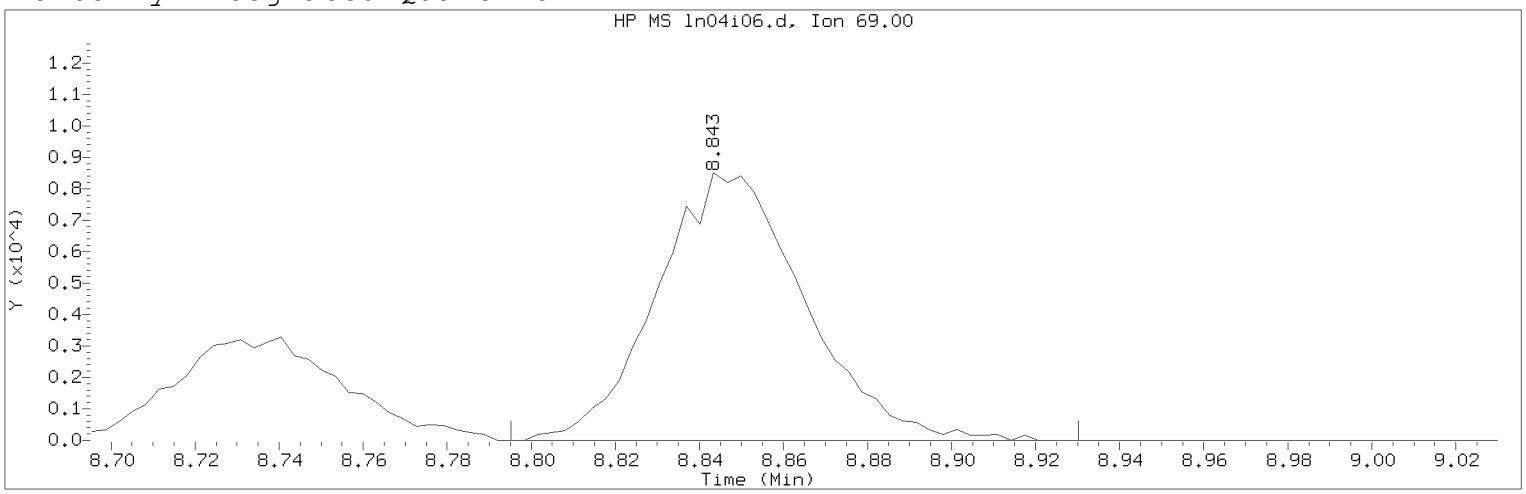
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area : 104688
On-column Amount (ng) : 337.8676
Integration start scan : 2110 Integration stop scan: 2163
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

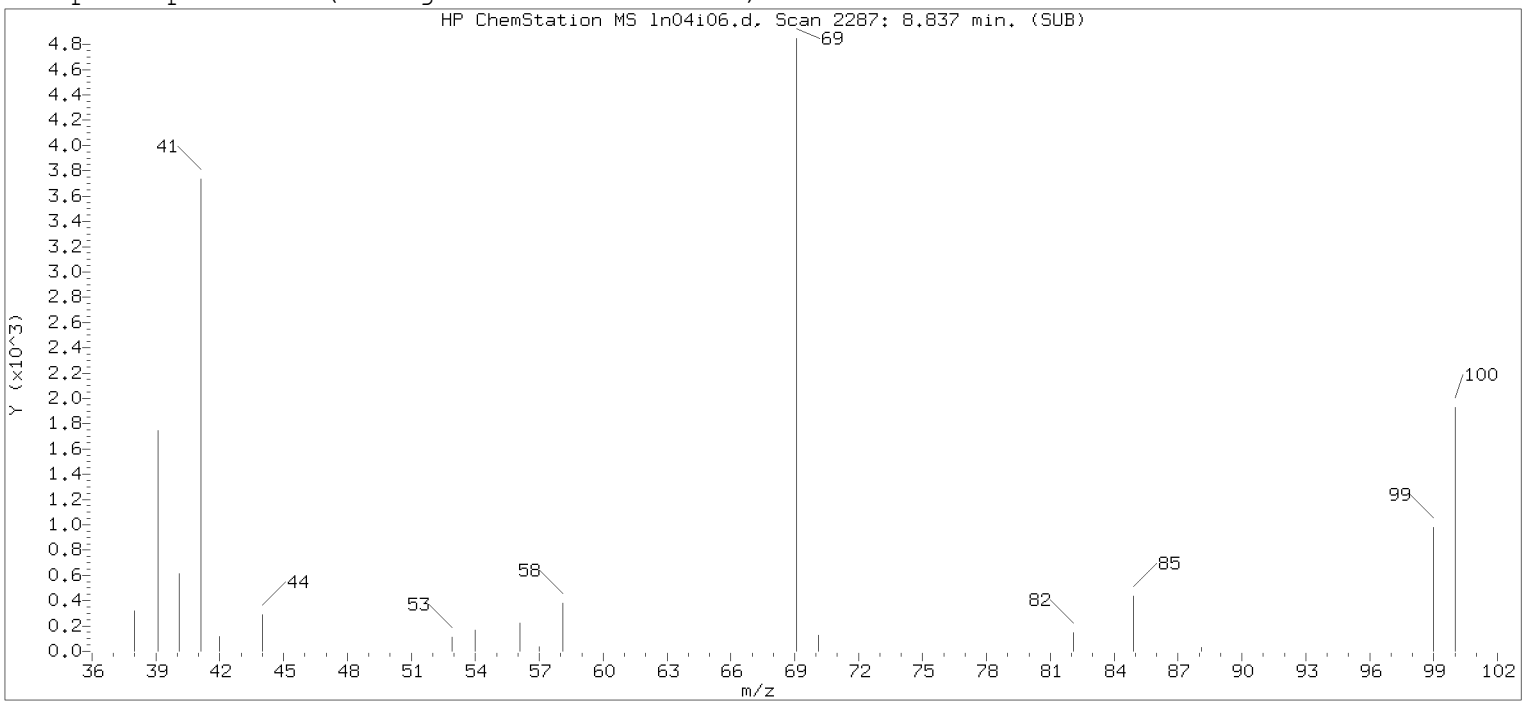
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2289
Retention Time (minutes): 8.843
Quant Ion : 69.00
Area (flag) : 20713M
On-Column Amount (ng) : 3.6110
Integration start scan : 2273 Integration stop scan: 2315
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

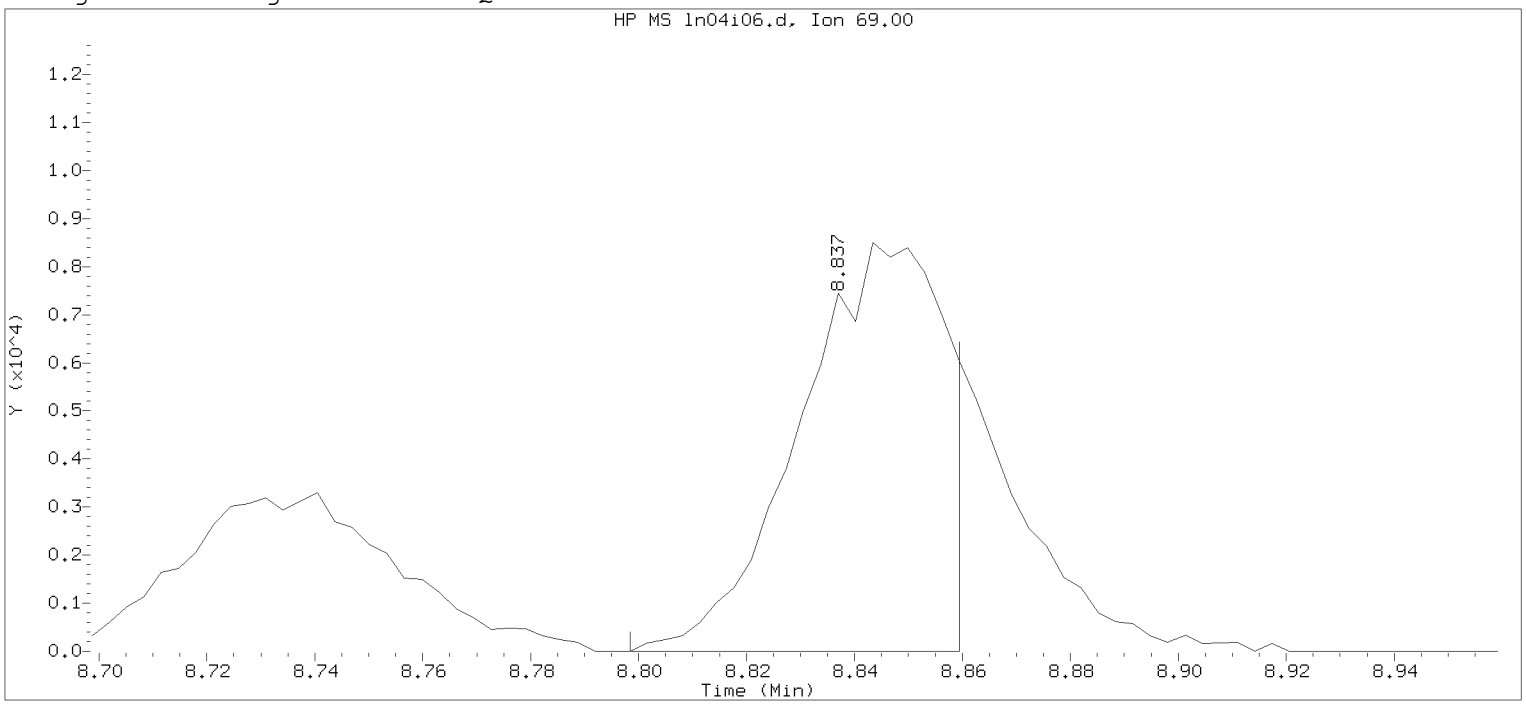
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

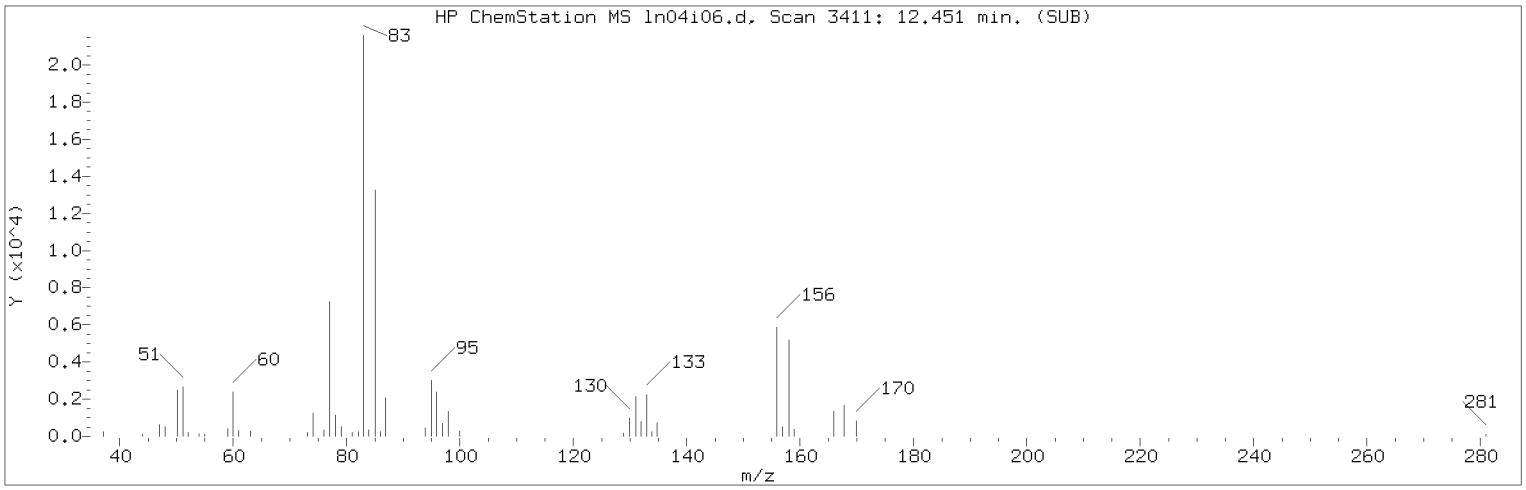
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

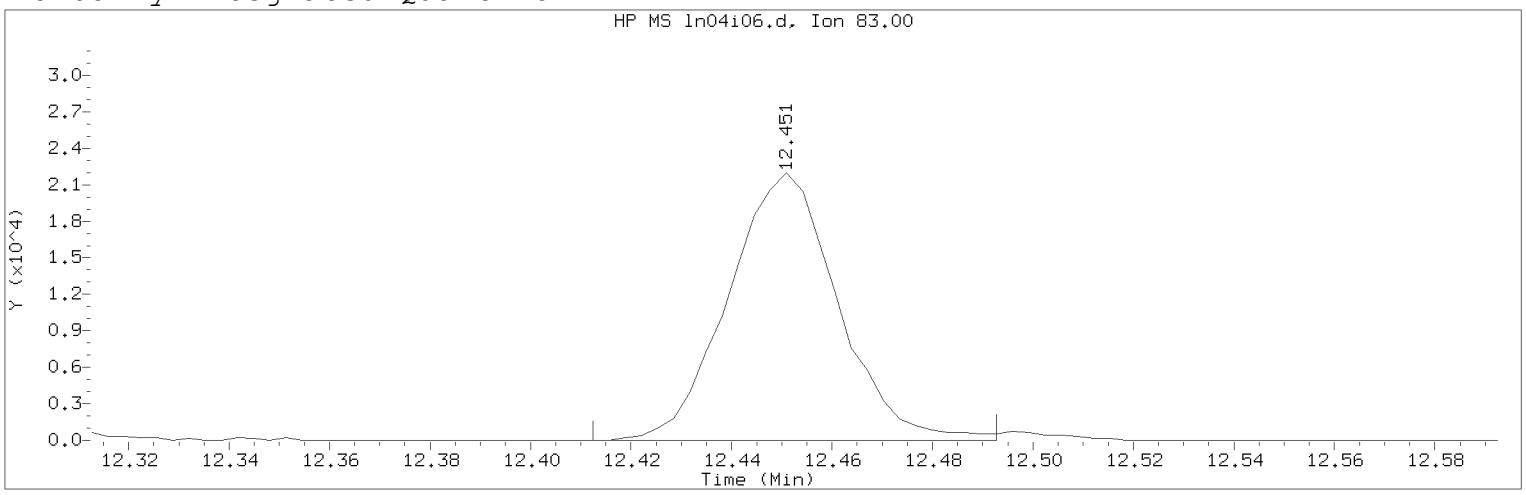
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2287
Retention Time (minutes): 8.837
Quant Ion : 69.00
Area : 15546
On-column Amount (ng) : 2.8548
Integration start scan : 2274 Integration stop scan: 2293
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

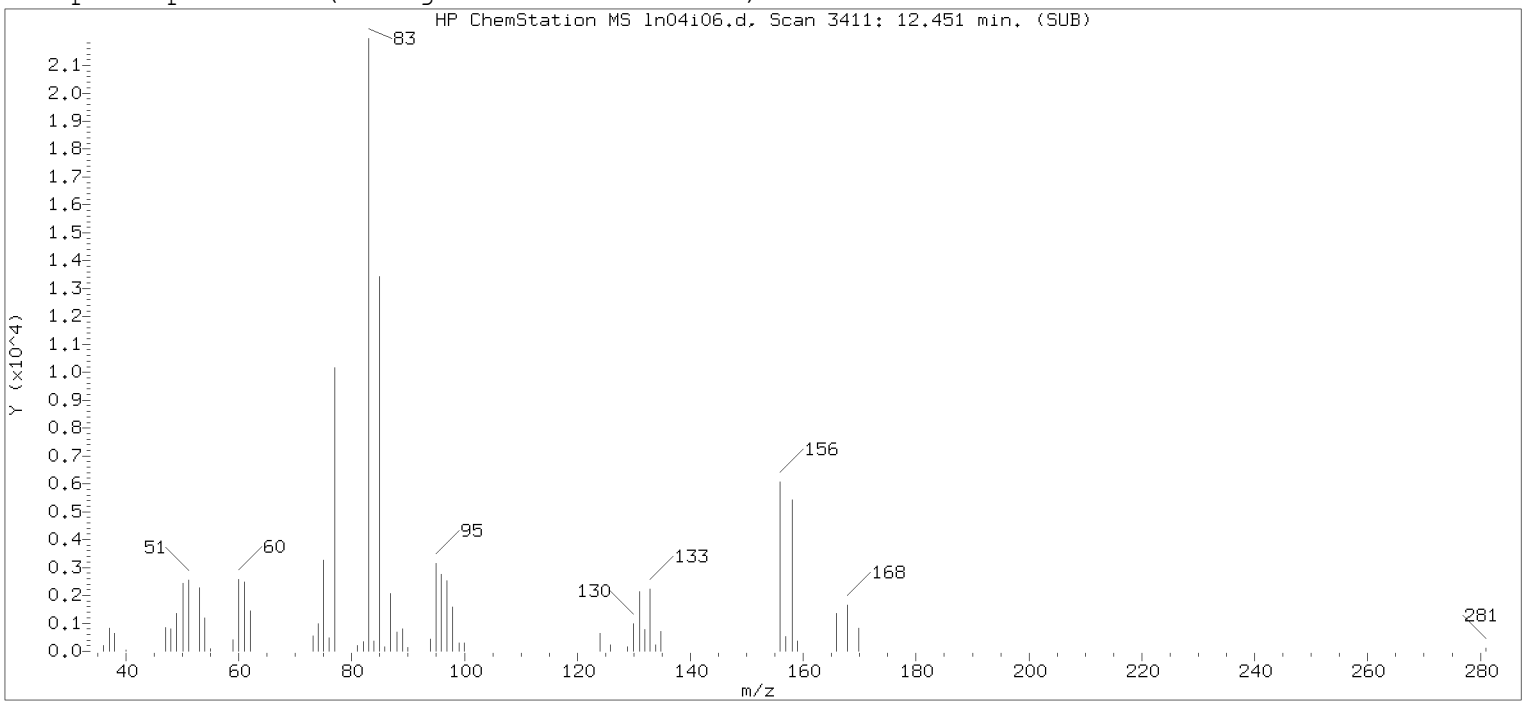
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 33170M
On-Column Amount (ng) : 3.6577
Integration start scan : 3398 Integration stop scan: 3423
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

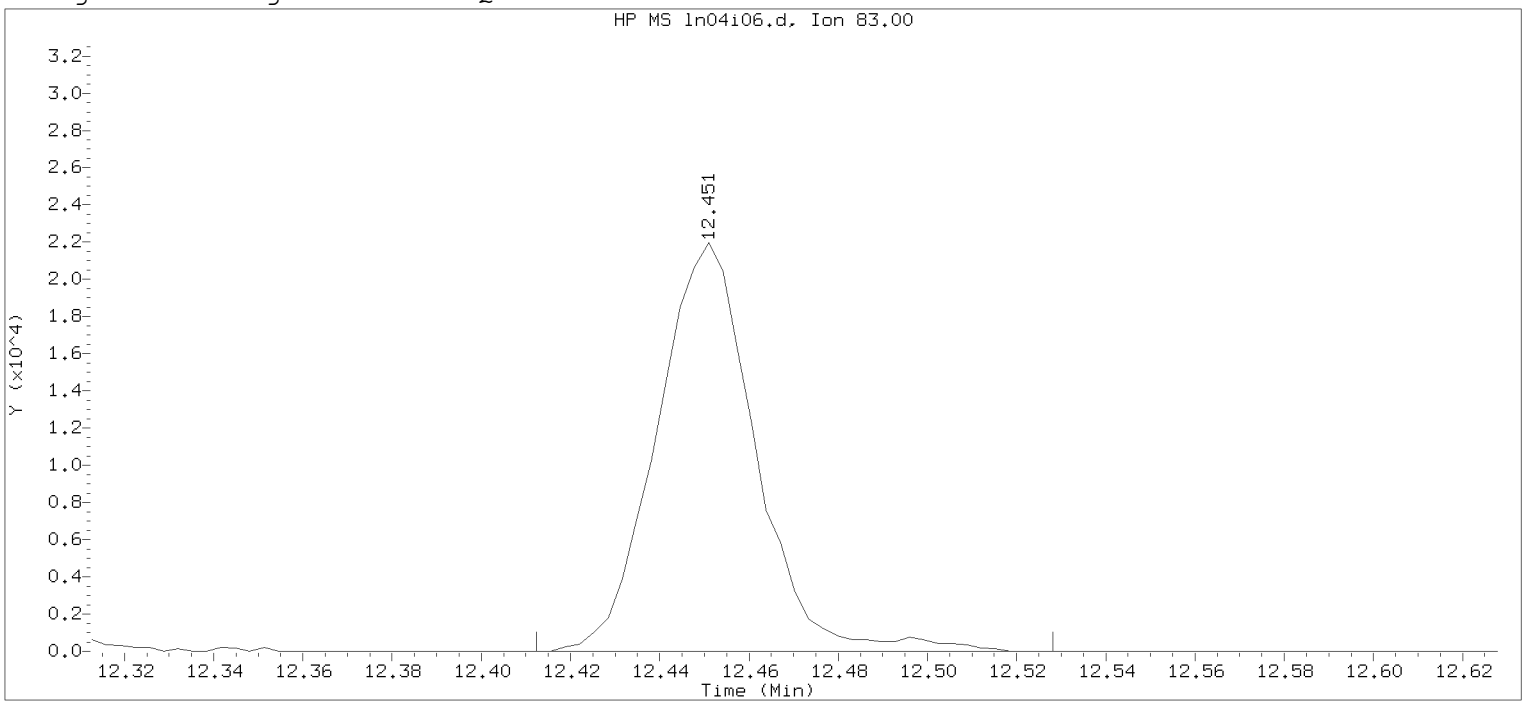
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

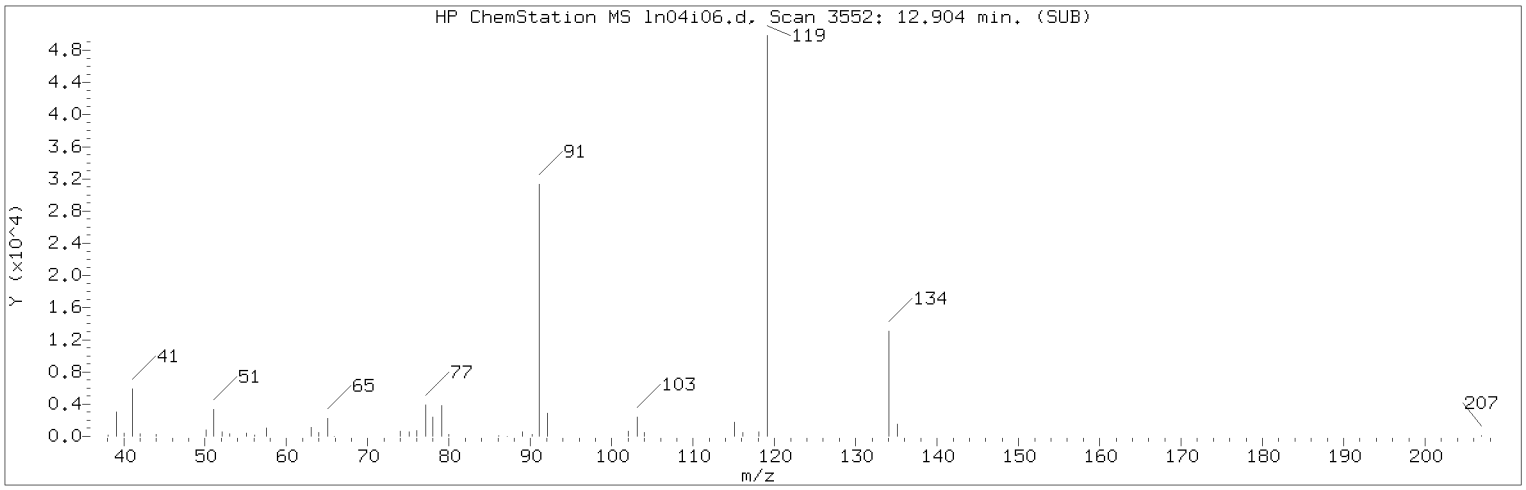
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

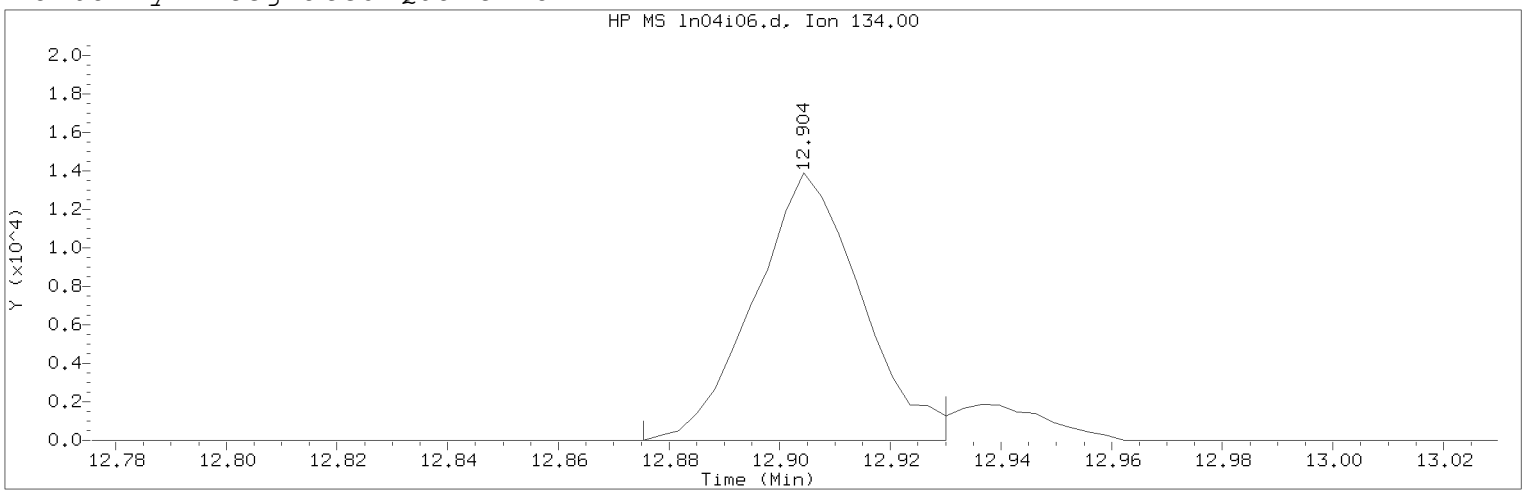
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 33718
On-column Amount (ng) : 3.6520
Integration start scan : 3398 Integration stop scan: 3434
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

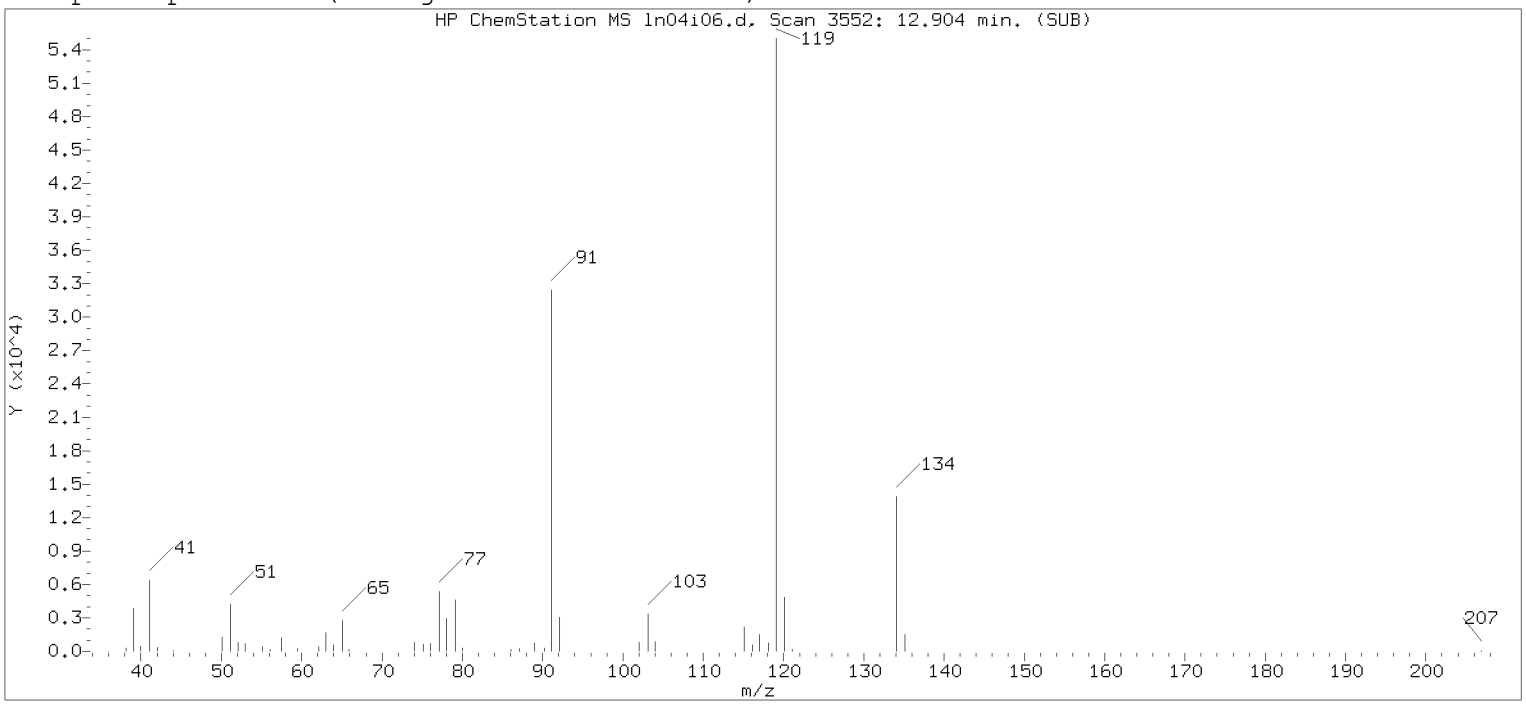
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 18608M
On-Column Amount (ng) : 3.9276
Integration start scan : 3542 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

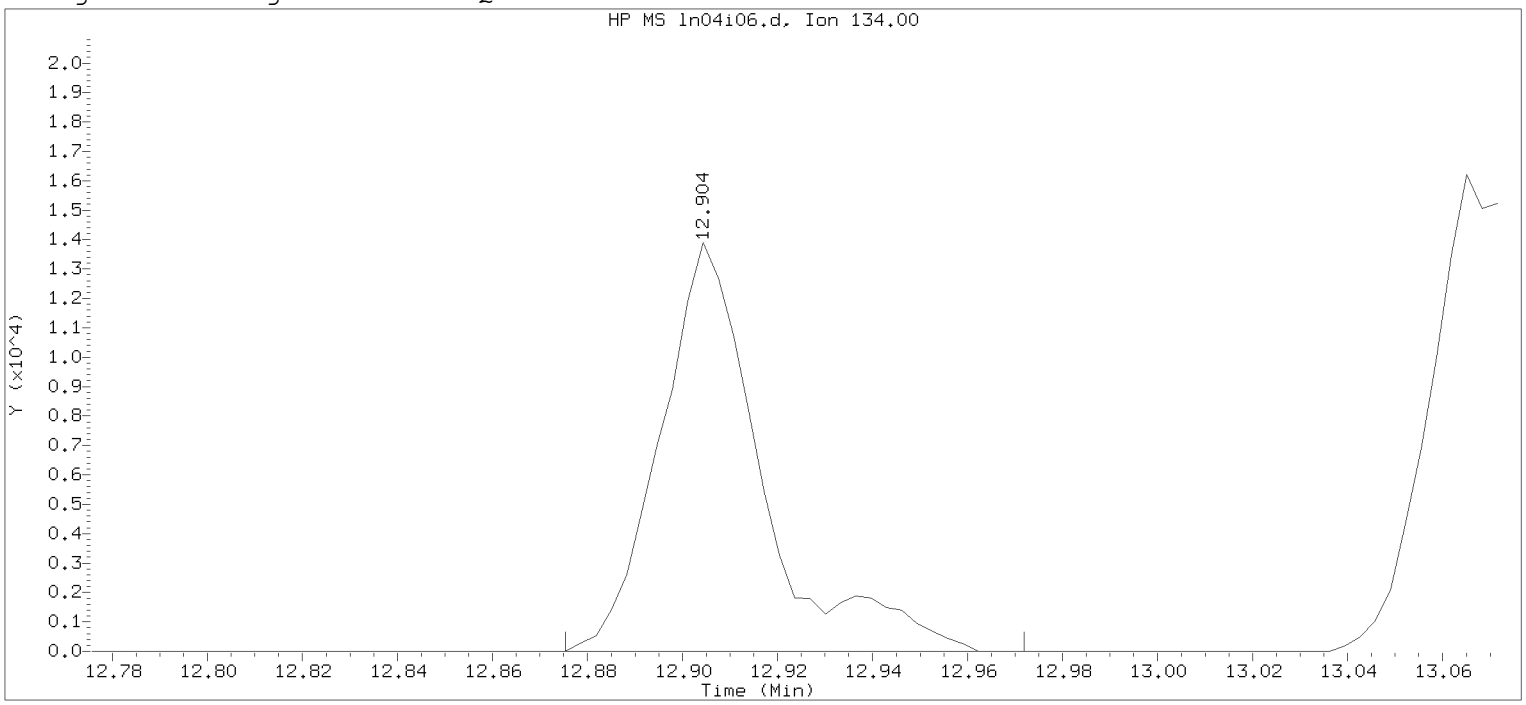
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



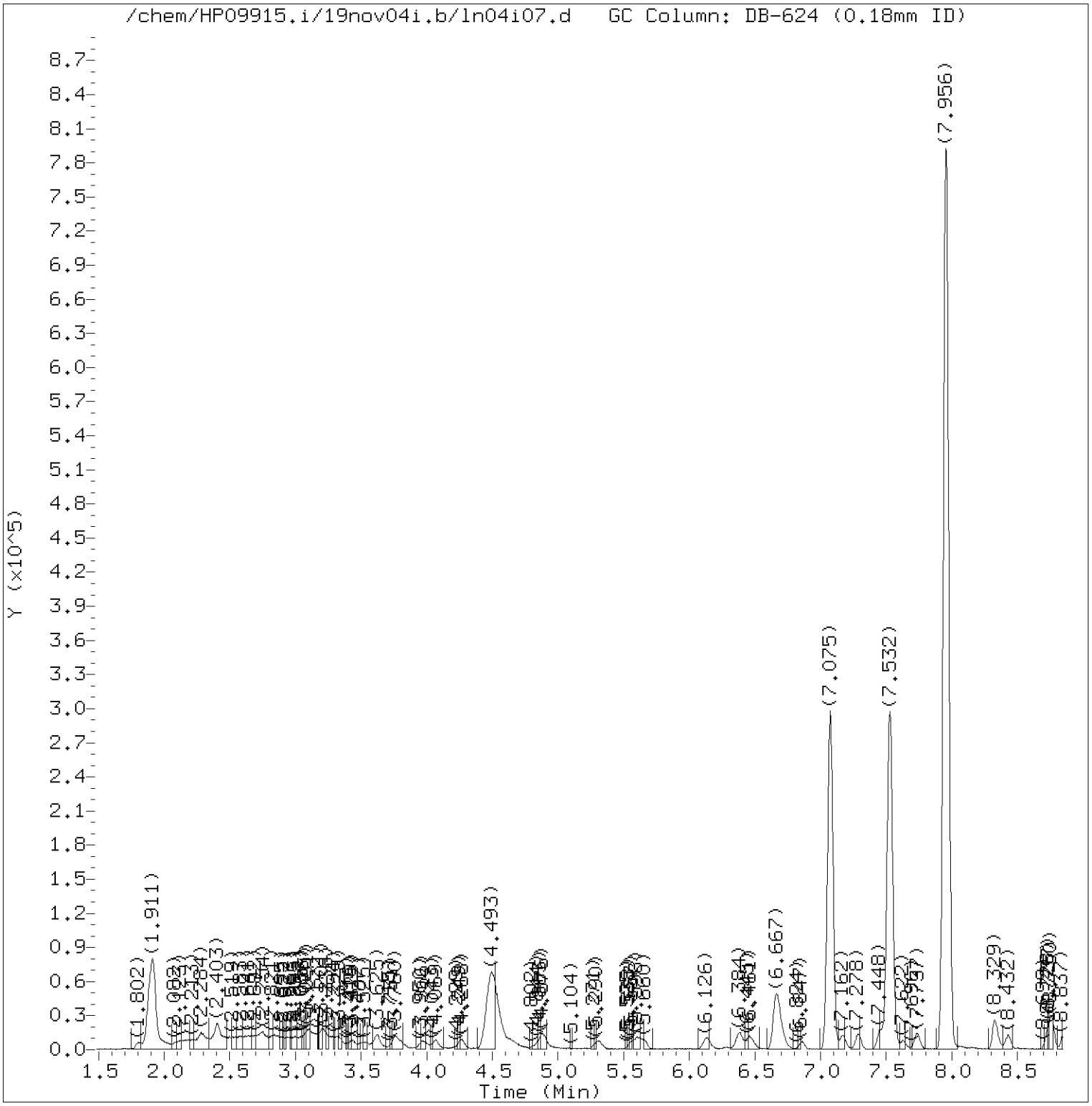
Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 20636
On-column Amount (ng) : 4.1808
Integration start scan : 3542 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

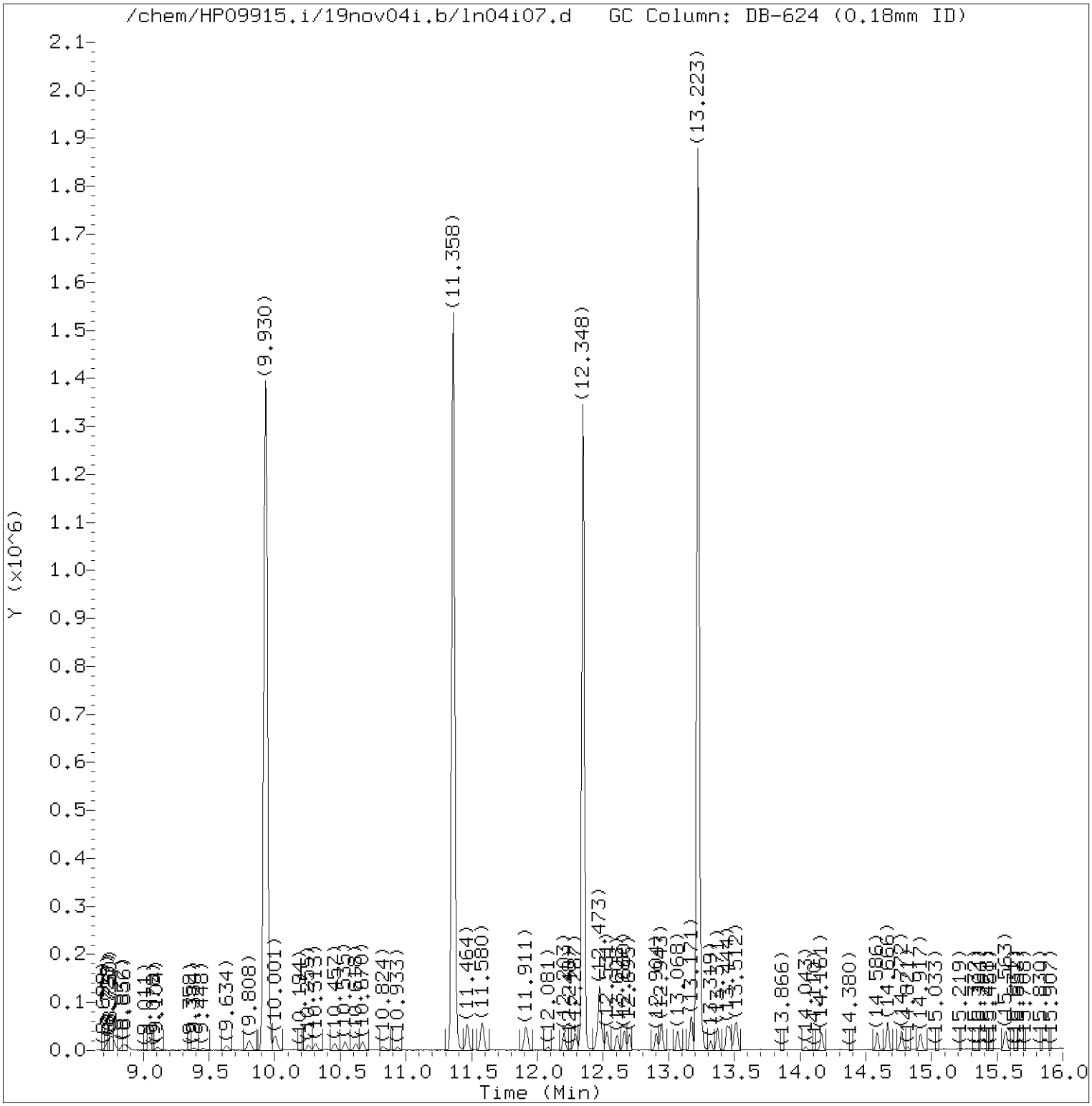
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.078	85	6299	0.794
4) Chloromethane	(2)	2.284	50	6896	0.902
5) 1,3-Butadiene	(2)	2.403	39	7255M	1.143
6) Vinyl Chloride	(2)	2.410	62	7160	0.939
8) Bromomethane	(2)	2.744	94	5605	1.025
9) Chloroethane	(2)	2.840	64	4160M	0.992
10) Dichlorofluoromethane	(2)	3.094	67	10094M	1.004
12) Trichlorofluoromethane	(2)	3.146	101	7129	0.868
11) n-Pentane	(2)	3.204	43	10269	1.058
14) Ethyl ether	(2)	3.429	59	4640M	0.874
15) Freon 123a	(2)	3.516	67	6210	0.940
16) Acrolein	(1)	3.622	56	17644	9.654
17) 1,1-Dichloroethene	(2)	3.750	96	4176	0.866
17) 1,1-Dichloroethene	(2)	3.754	63	2326	0.963
19) Freon 113	(2)	3.779	101	4754	0.864
18) Acetone	(1)	3.831	58	1588M	1.938
22) Methyl Iodide	(2)	3.966	142	8860	0.887
21) 2-Propanol	(1)	4.011	45	12063	20.480
23) Carbon Disulfide	(2)	4.075	76	15443	0.850
27) Methyl Acetate	(2)	4.255	43	6274M	1.011
25) Allyl Chloride	(2)	4.271	41	8168	0.945
28) Methylene Chloride	(2)	4.474	84	5404	0.942
29)*t-Butyl alcohol-d10	(1)	4.496	65	243591	250.000
30) t-Butyl alcohol	(1)	4.622	59	19461	18.976
31) Acrylonitrile	(2)	4.856	53	2960	0.886
33) Methyl Tertiary Butyl Ether	(2)	4.879	73	16848	0.920
32) trans-1,2-Dichloroethene	(2)	4.885	96	5035	0.903
34) n-Hexane	(2)	5.316	57	7475M	0.862
36) 1,1-Dichloroethane	(2)	5.548	63	8436	0.867
38) di-Isopropyl ether	(2)	5.606	45	16654	0.888
39) 2-Chloro-1,3-butadiene	(2)	5.663	53	7448	0.853
40) Ethyl t-butyl ether	(2)	6.126	59	16060	0.882
43) 1,2-Dichloroethene (Total)	(2)		96	10762	1.818
44) 2-Butanone	(2)	6.361	43	8098	1.889
42) cis-1,2-Dichloroethene	(2)	6.377	96	5727	0.915
45) 2,2-Dichloropropane	(2)	6.390	77	6419M	0.849
47) Propionitrile	(1)	6.461	54	24221	18.955
48) Methacrylonitrile	(2)	6.670	67	32346	8.977

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	2849	0.858
50) Tetrahydrofuran	(1)	6.728	71	2319	2.009
51) Chloroform	(2)	6.860	83	8108	0.871
52)$Dibromofluoromethane	(2)	7.075	113	273696	49.231
52)$Dibromofluoromethane	(2)	7.075	111	279412	49.293
53) 1,1,1-Trichloroethane	(2)	7.078	97	6588	0.830
54) Cyclohexane	(2)	7.171	56	8997	0.847
54) Cyclohexane	(2)	7.178	84	7859	0.852
54) Cyclohexane	(2)	7.178	69	2772	0.844
56) Carbon Tetrachloride	(2)	7.284	117	5549	0.824
55) 1,1-Dichloropropene	(2)	7.287	75	6611	0.860
58) Isobutyl Alcohol	(1)	7.458	41	16978	49.195
57)$1,2-Dichloroethane-d4	(2)	7.528	102	69641	49.151
57)$1,2-Dichloroethane-d4	(2)	7.528	65	311703	49.366
57)$1,2-Dichloroethane-d4	(2)	7.535	104	44286	48.935
60) Benzene	(2)	7.551	78	20445	0.884
61) 1,2-Dichloroethane	(2)	7.631	62	7810	1.050
61) 1,2-Dichloroethane	(2)	7.631	98	696	0.945
65) t-Amyl methyl ether	(2)	7.741	73	16286	0.891
67) n-Heptane	(2)	7.956	43	7535M	0.930
66)*Fluorobenzene	(2)	7.959	96	1137124	50.000
69) n-Butanol	(1)	8.329	56	24322	81.882
71) Trichloroethene	(2)	8.432	95	5231	0.898
72) Methylcyclohexane	(2)	8.737	83	9247	0.856
72) Methylcyclohexane	(2)	8.731	98	4032	0.825
73) 1,2-Dichloropropane	(2)	8.760	63	5229	0.890
76) Methyl Methacrylate	(2)	8.837	69	4607M	0.811
75) 1,4-Dioxane	(1)	8.856	88	3548M	43.457
74) Dibromomethane	(2)	8.866	93	3298	0.868
78) Bromodichloromethane	(2)	9.107	83	5648	0.828
79) 2-Nitropropane	(2)	9.384	41	3333	1.614
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	2007	0.796
81) cis-1,3-Dichloropropene	(2)	9.638	75	6973	0.770
82) 4-Methyl-2-pentanone	(2)	9.808	43	16006	1.769
83)$Toluene-d8	(3)	9.930	98	1156948	50.253
83)$Toluene-d8	(3)	9.930	100	746174	50.033
88) Toluene	(3)	10.007	92	12902	0.894
90) 1,3-Dichloropropene (total)	(3)		100	13101	1.518

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.255	75	6128	0.748
91) Ethyl Methacrylate	(3)	10.313	69	7873	0.791
92) 1,1,2-Trichloroethane	(3)	10.461	97	4897	0.895
93) Tetrachloroethene	(3)	10.538	166	5565	0.910
94) 1,3-Dichloropropane	(3)	10.618	76	8504	0.910
96) 2-Hexanone	(3)	10.670	43	11811	1.777
97) Dibromochloromethane	(3)	10.827	129	4109	0.733
99) 1,2-Dibromoethane	(3)	10.937	107	5163	0.869
100)*Chlorobenzene-d5	(3)	11.358	117	879875	50.000
101) 1-Chlorohexane	(3)	11.361	91	8103	1.045
102) Chlorobenzene	(3)	11.383	112	14367	0.880
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	4138	0.769
104) Ethylbenzene	(3)	11.464	91	24192	0.877
106) m+p-Xylene	(3)	11.583	106	18914	1.743
108) Xylene (Total)	(3)		106	28415	2.629
107) o-Xylene	(3)	11.908	106	9501	0.886
109) Styrene	(3)	11.917	104	14106	0.796
110) Bromoform	(3)	12.081	173	2729	0.652
111) Isopropylbenzene	(3)	12.203	105	22719	0.845
112) Cyclohexanone	(1)	12.287	55	15983	49.985
114)$4-Bromofluorobenzene	(3)	12.348	95	436282	50.046
114)$4-Bromofluorobenzene	(3)	12.348	174	360511	49.883
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	7596	0.849
115) Bromobenzene	(4)	12.461	156	6426	0.903
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	22650	8.211
117) 1,2,3-Trichloropropane	(4)	12.496	110	2425	0.884
119) n-Propylbenzene	(4)	12.528	91	27655	0.890
120) 2-Chlorotoluene	(4)	12.612	126	6138M	0.929
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	18836	0.834
121) 4-Chlorotoluene	(4)	12.702	126	6403M	0.931
124) tert-Butylbenzene	(4)	12.904	134	4060M	0.869
125) Pentachloroethane	(4)	12.940	167	2751	0.684
126) 1,2,4-Trimethylbenzene	(4)	12.943	105	20498	0.861
127) sec-Butylbenzene	(4)	13.065	105	24344	0.873
129) 1,3-Dichlorobenzene	(4)	13.165	146	12468	0.954
130) p-Isopropyltoluene	(4)	13.174	119	21126	0.876
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	473433	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	13174	0.972

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

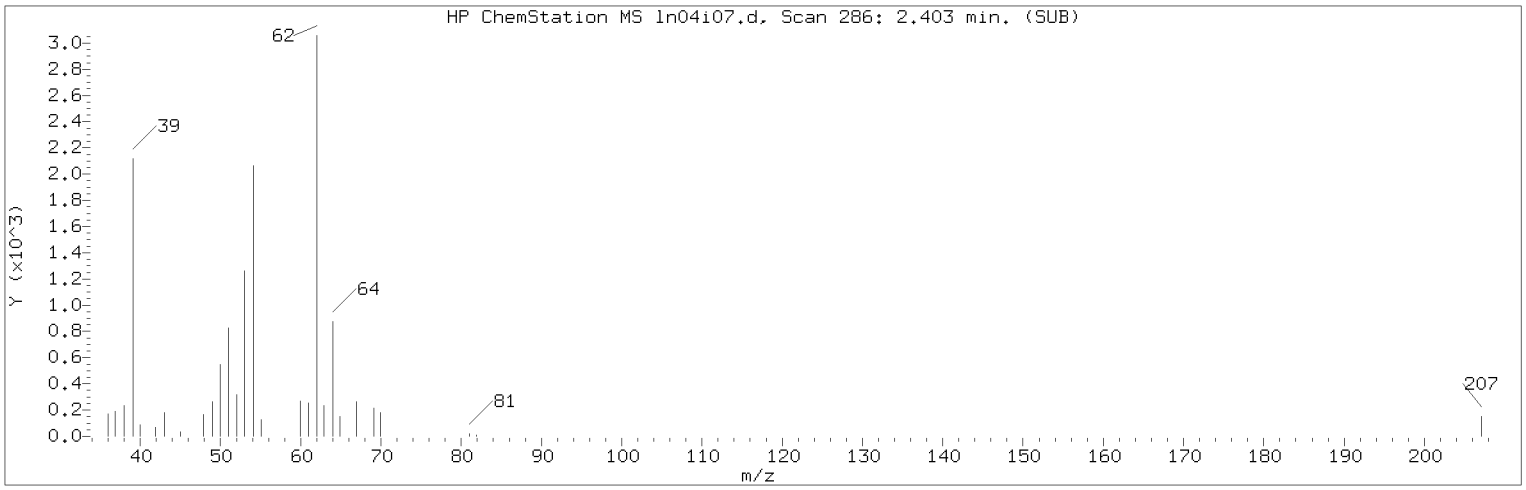
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	22457	0.890
135) Benzyl Chloride	(4)	13.319	91	11494	0.602
136) 1,3-Diethylbenzene	(4)	13.374	119	13985	0.891
141) Diethylbenzene (total)	(4)		100	41423	2.726
137) 1,4-Diethylbenzene	(4)	13.441	119	15446	0.929
139) n-Butylbenzene	(4)	13.464	92	11964M	0.970
138) 1,2-Dichlorobenzene	(4)	13.502	146	12171	0.943
140) 1,2-Diethylbenzene	(4)	13.515	119	11992	0.906
142) 1,2-Dibromo-3-chloropropane	(4)	14.046	75	1565	0.799
144) 1,3,5-Trichlorobenzene	(4)	14.161	180	10166	1.026
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	10347	1.074
147) Hexachlorobutadiene	(4)	14.666	225	9370	2.059
148) Naphthalene	(4)	14.772	128	28210	0.910
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	10052	1.072
150) 2-Methylnaphthalene	(4)	15.567	142	18783M	0.984

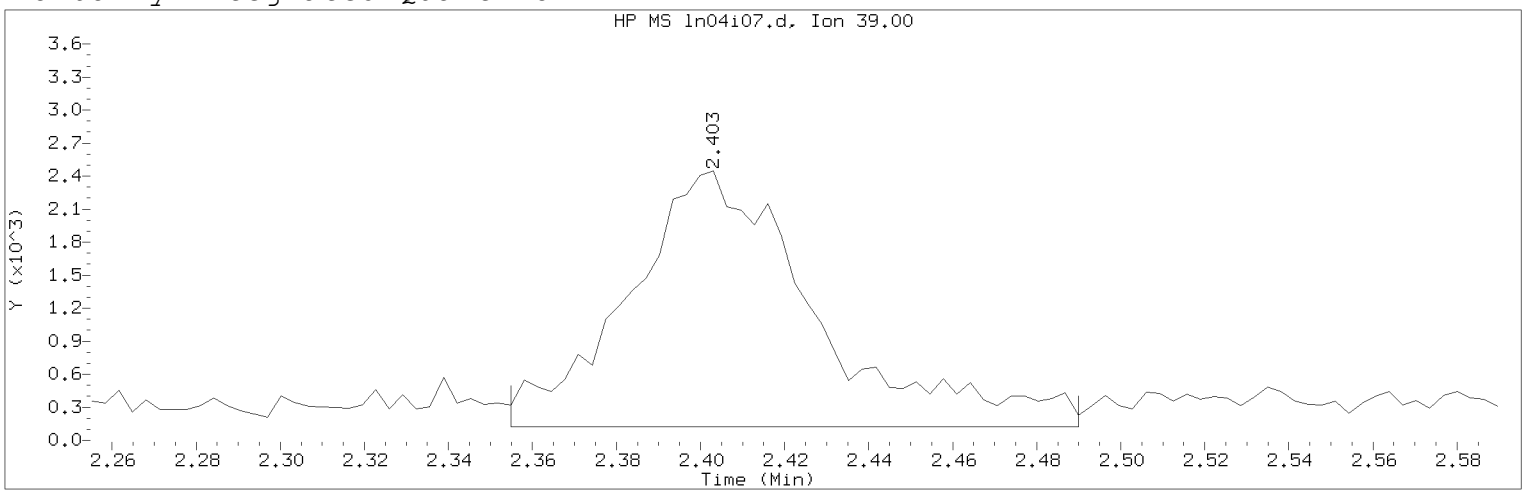
M = Compound was manually integrated.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

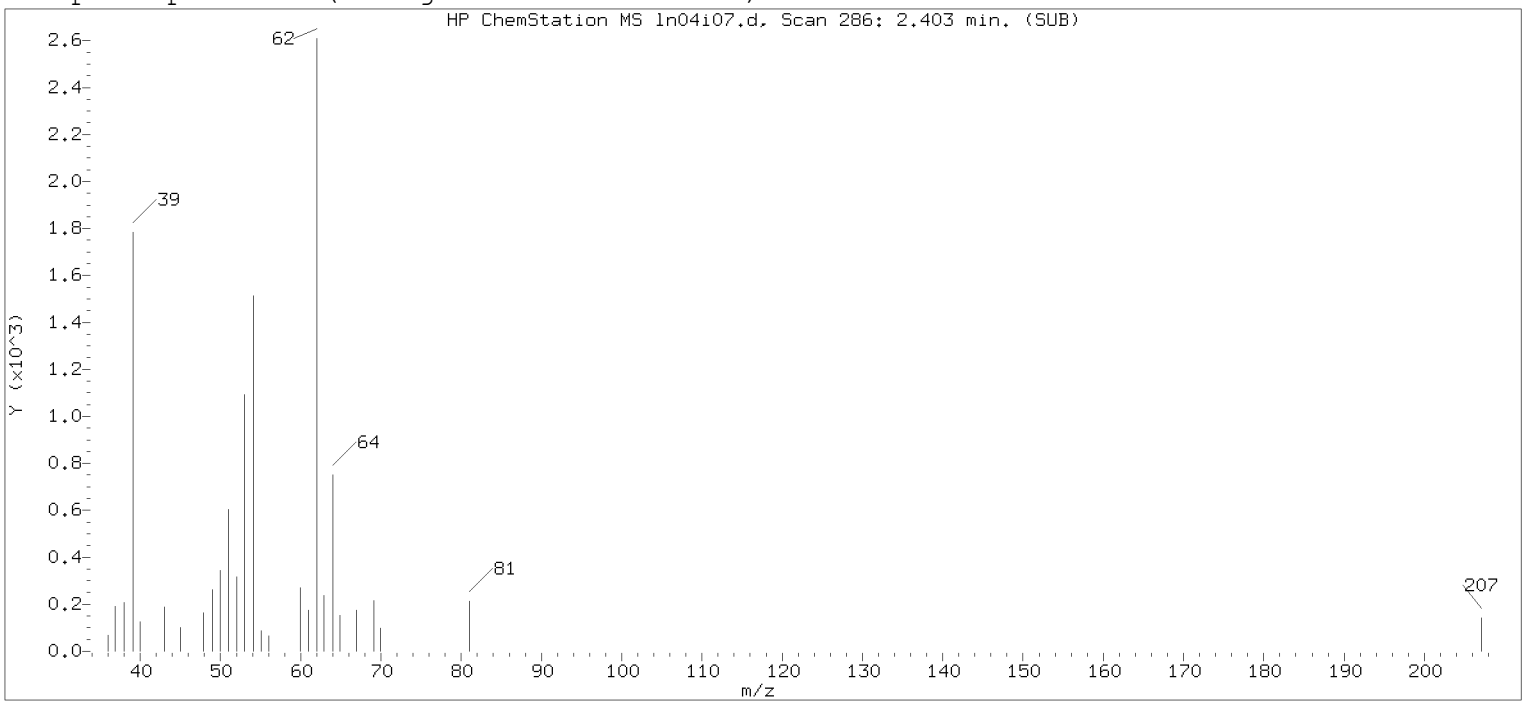
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 286
Retention Time (minutes): 2.403
Quant Ion : 39.00
Area (flag) : 7255M
On-Column Amount (ng) : 1.1432
Integration start scan : 270 Integration stop scan: 312
Y at integration start : 120 Y at integration end: 120

Reason for manual integration: improper integration

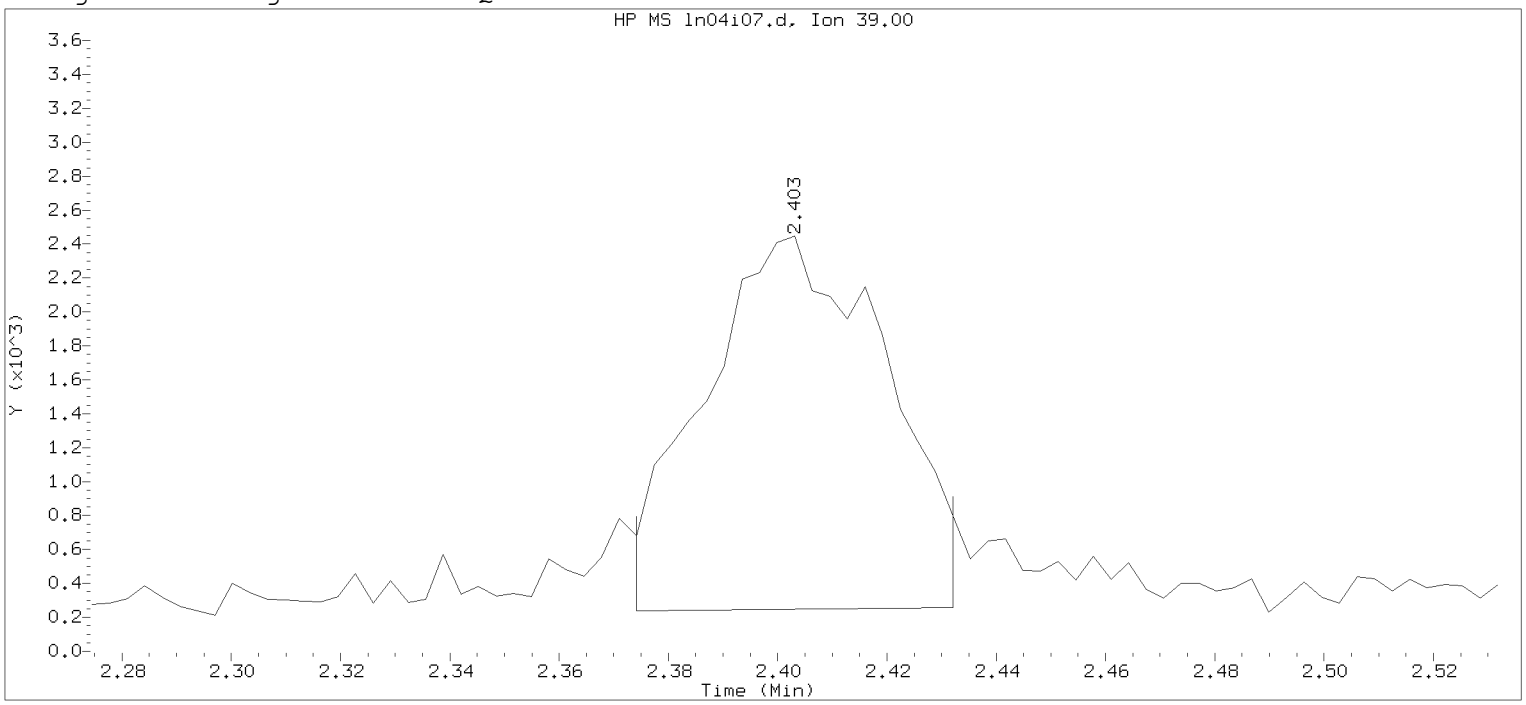
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

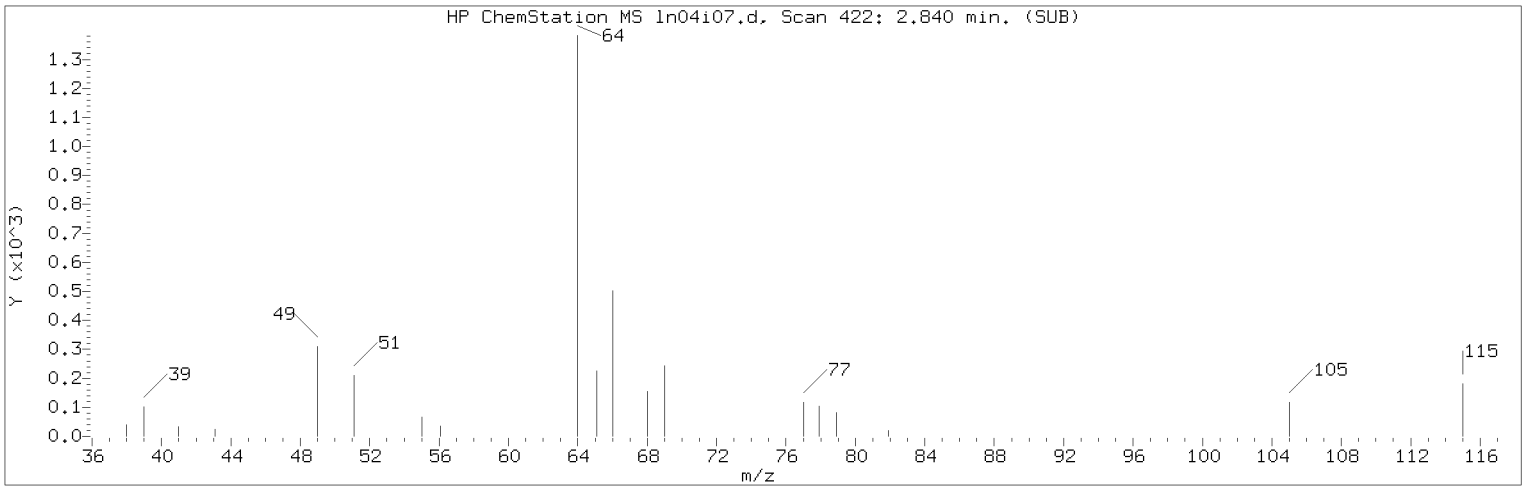
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

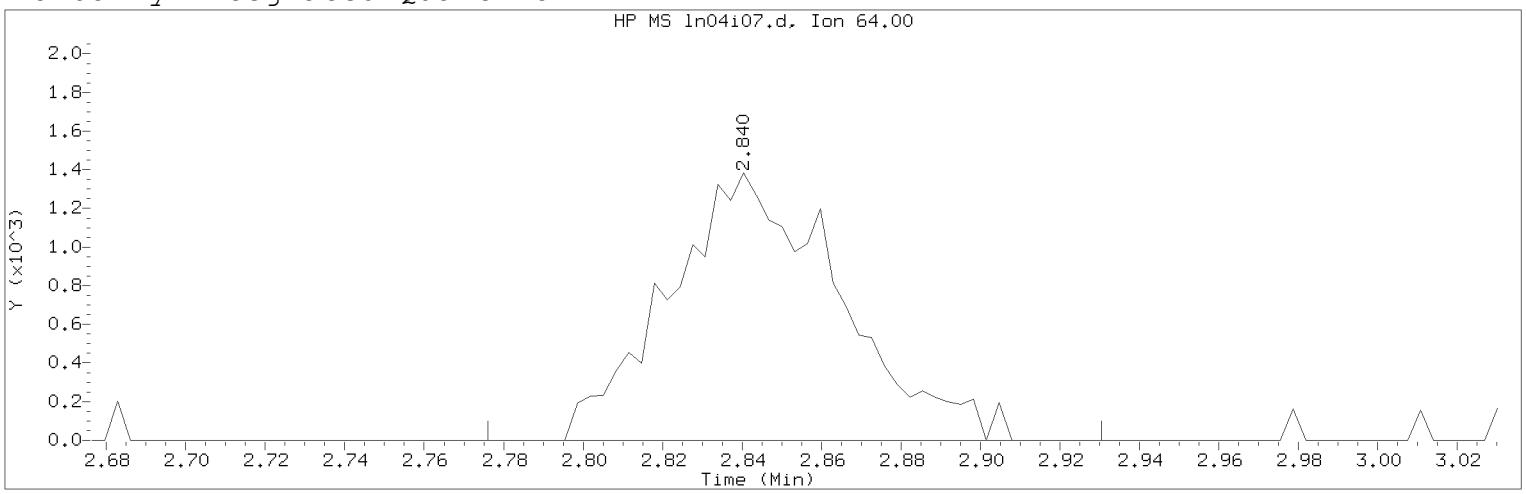
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 286
Retention Time (minutes): 2.403
Quant Ion : 39.00
Area : 5073
On-column Amount (ng) : 0.8493
Integration start scan : 276 Integration stop scan: 294
Y at integration start : 239 Y at integration end: 258

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

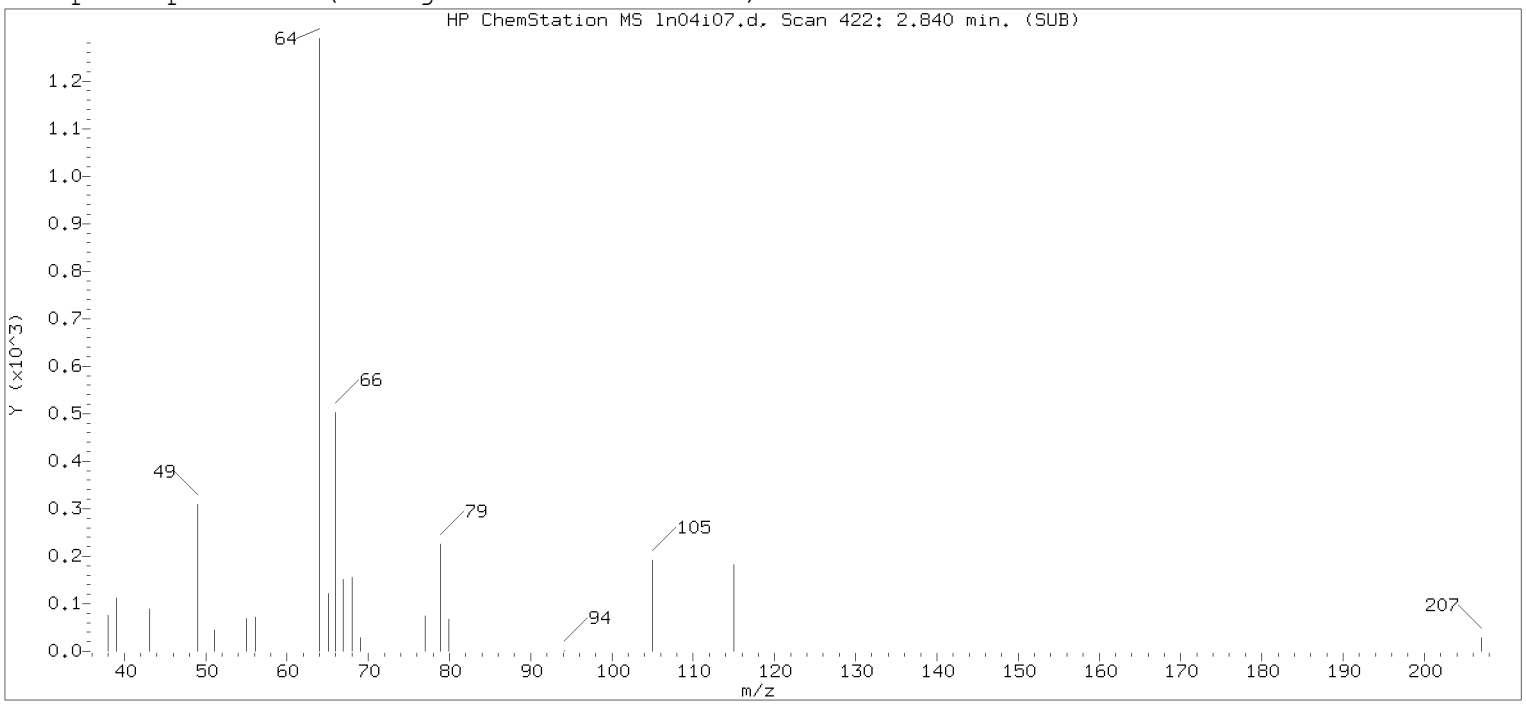
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 422
Retention Time (minutes): 2.840
Quant Ion : 64.00
Area (flag) : 4160M
On-Column Amount (ng) : 0.9924
Integration start scan : 401 Integration stop scan: 449
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

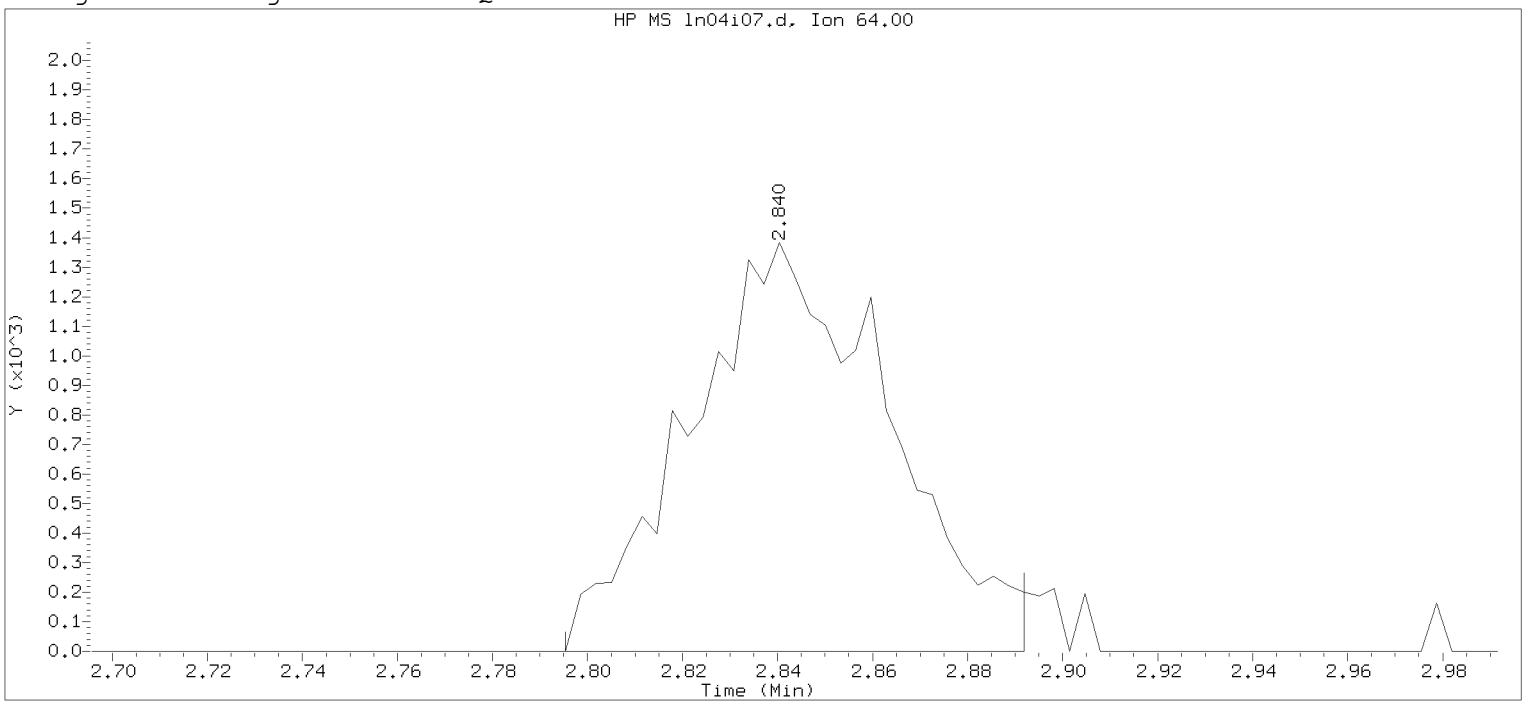
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

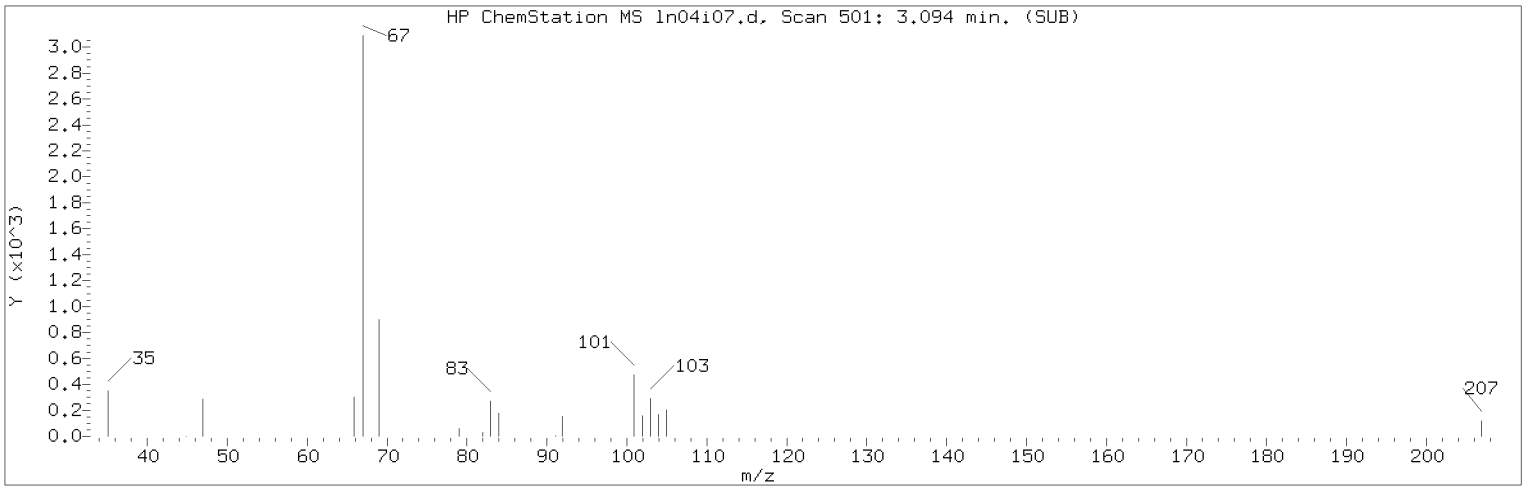
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

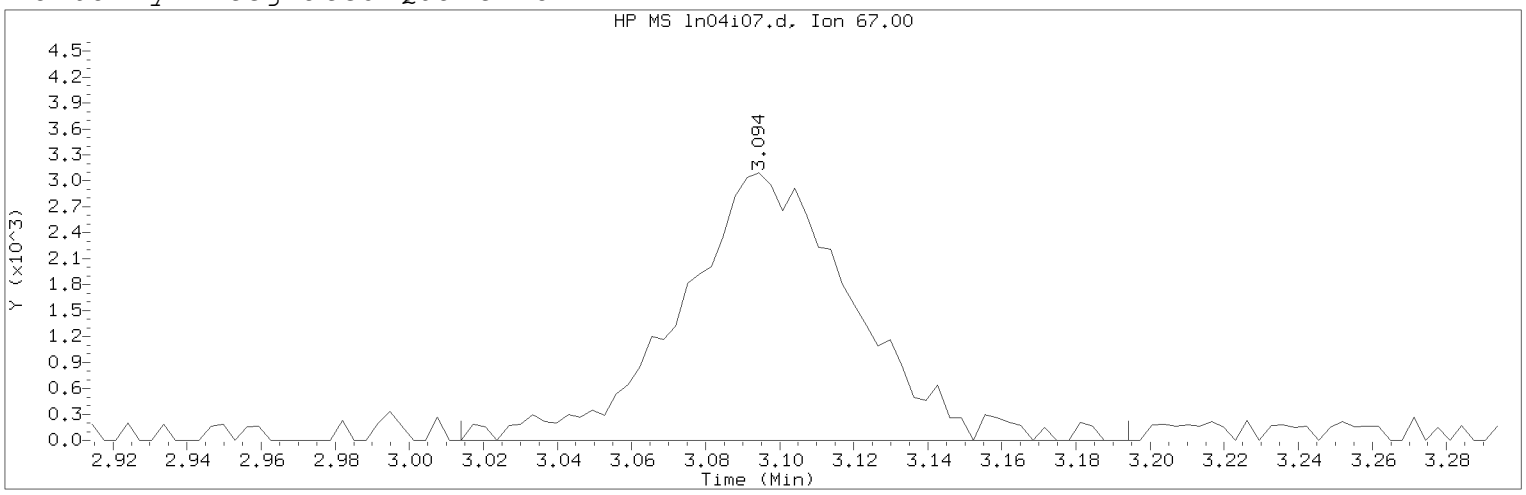
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 422
Retention Time (minutes): 2.840
Quant Ion : 64.00
Area : 4026
On-column Amount (ng) : 0.9650
Integration start scan : 407 Integration stop scan: 437
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

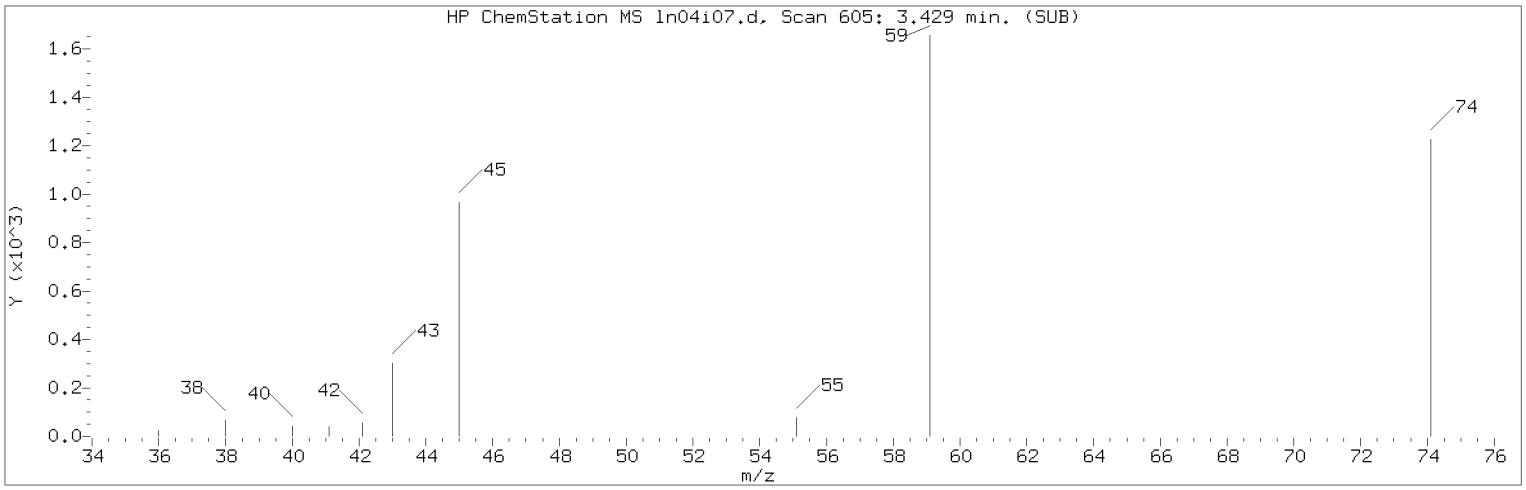
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 501
Retention Time (minutes): 3.094
Quant Ion : 67.00
Area (flag) : 10094M
On-Column Amount (ng) : 1.0040
Integration start scan : 475 Integration stop scan: 531
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

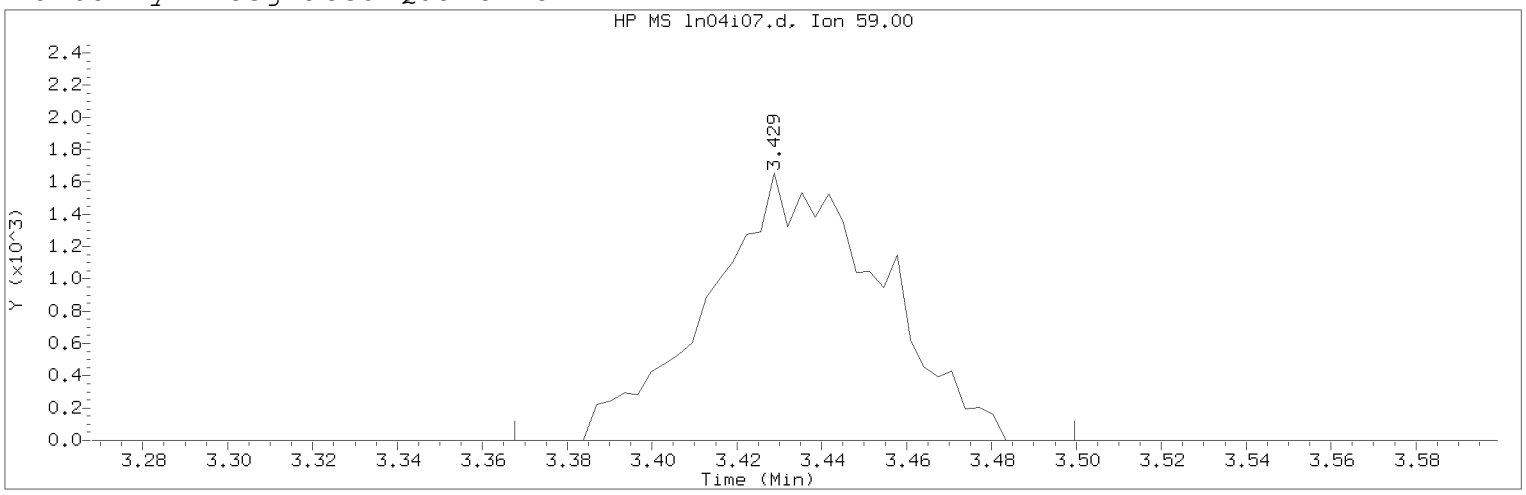
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

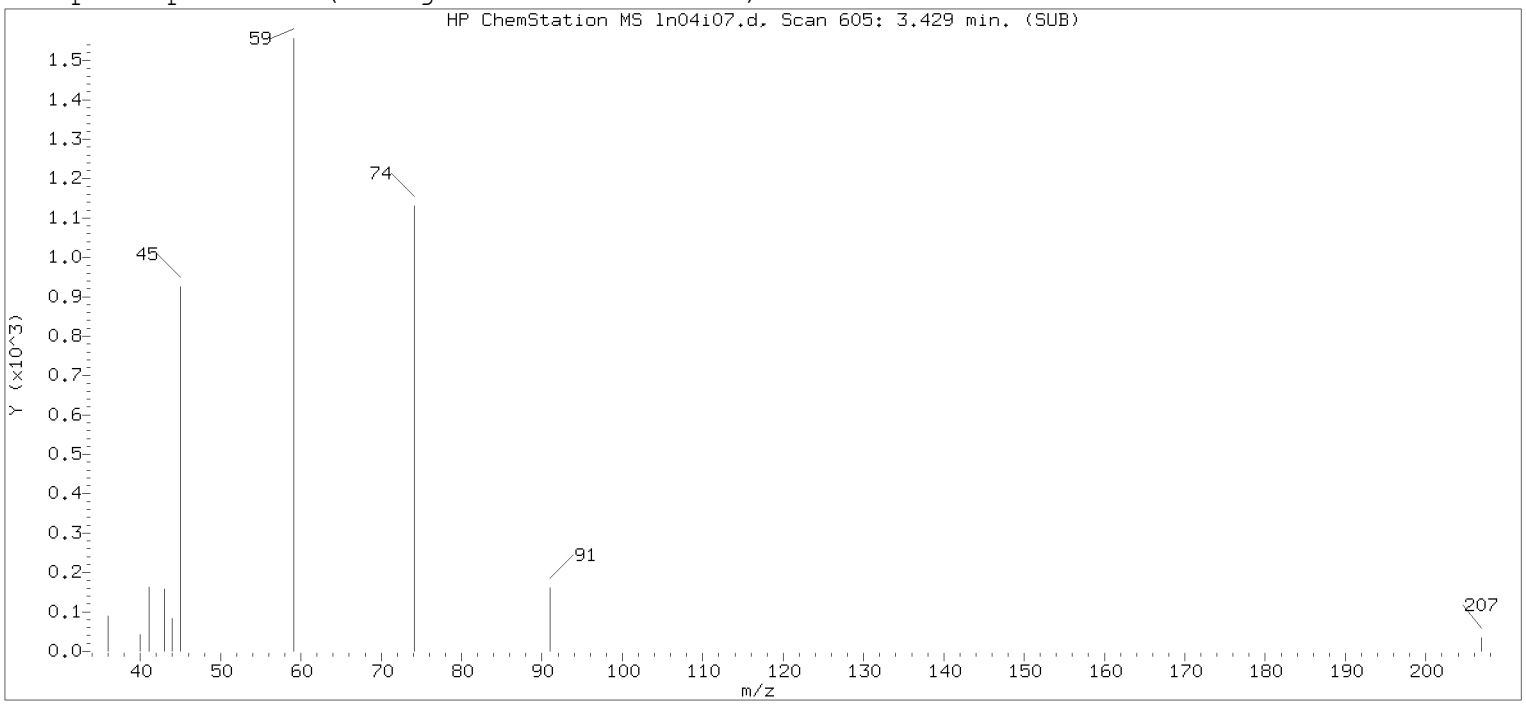
Compound Number : 14
Compound Name : Ethyl ether
Scan Number : 605
Retention Time (minutes): 3.429
Quant Ion : 59.00
Area (flag) : 4640M
On-Column Amount (ng) : 0.8744
Integration start scan : 585 Integration stop scan: 626
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

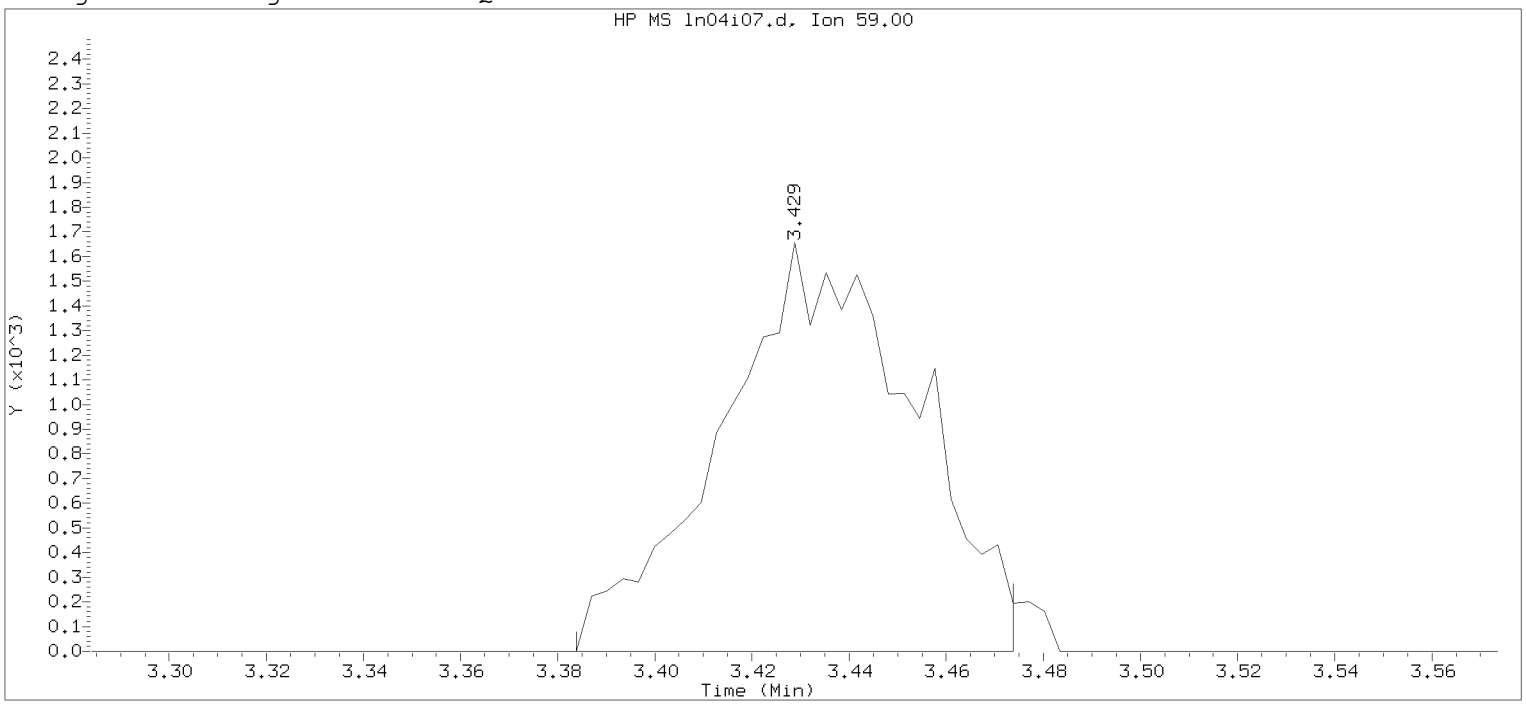
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

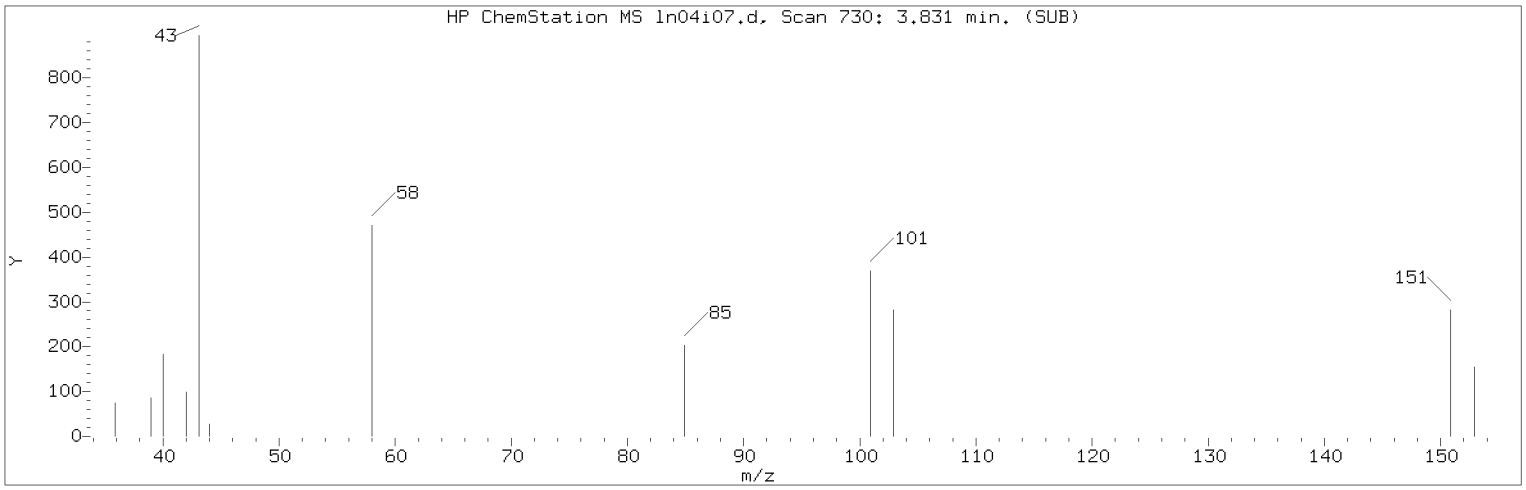
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

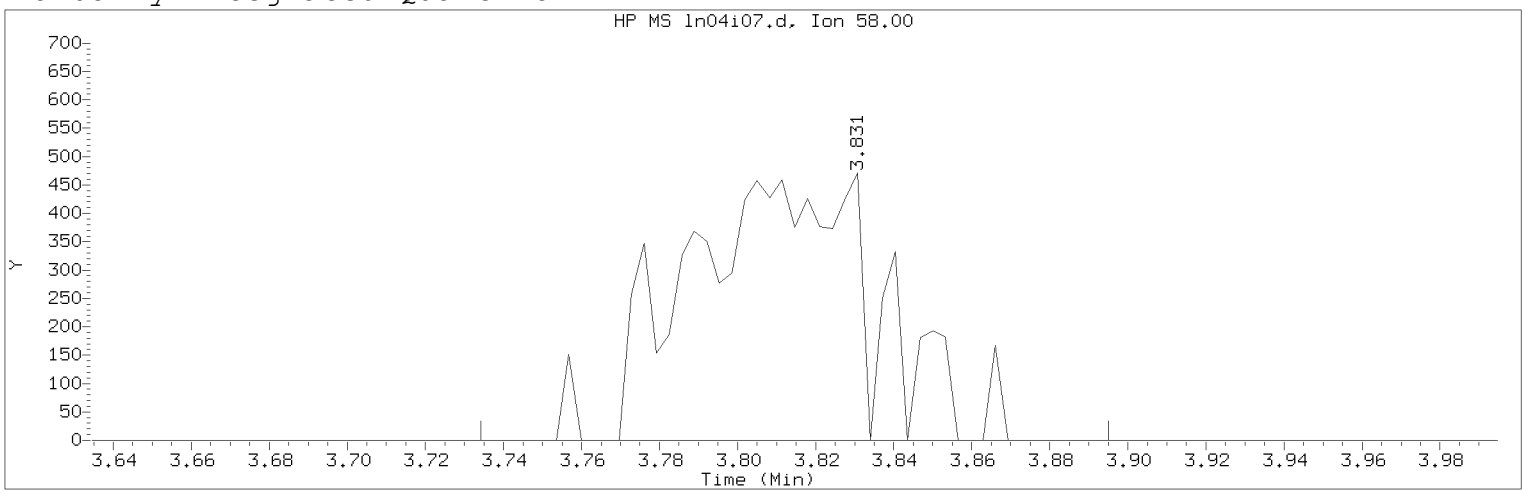
Compound Number : 14
Compound Name : Ethyl ether
Scan Number : 605
Retention Time (minutes): 3.429
Quant Ion : 59.00
Area : 4552
On-column Amount (ng) : 0.8599
Integration start scan : 590 Integration stop scan: 618
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

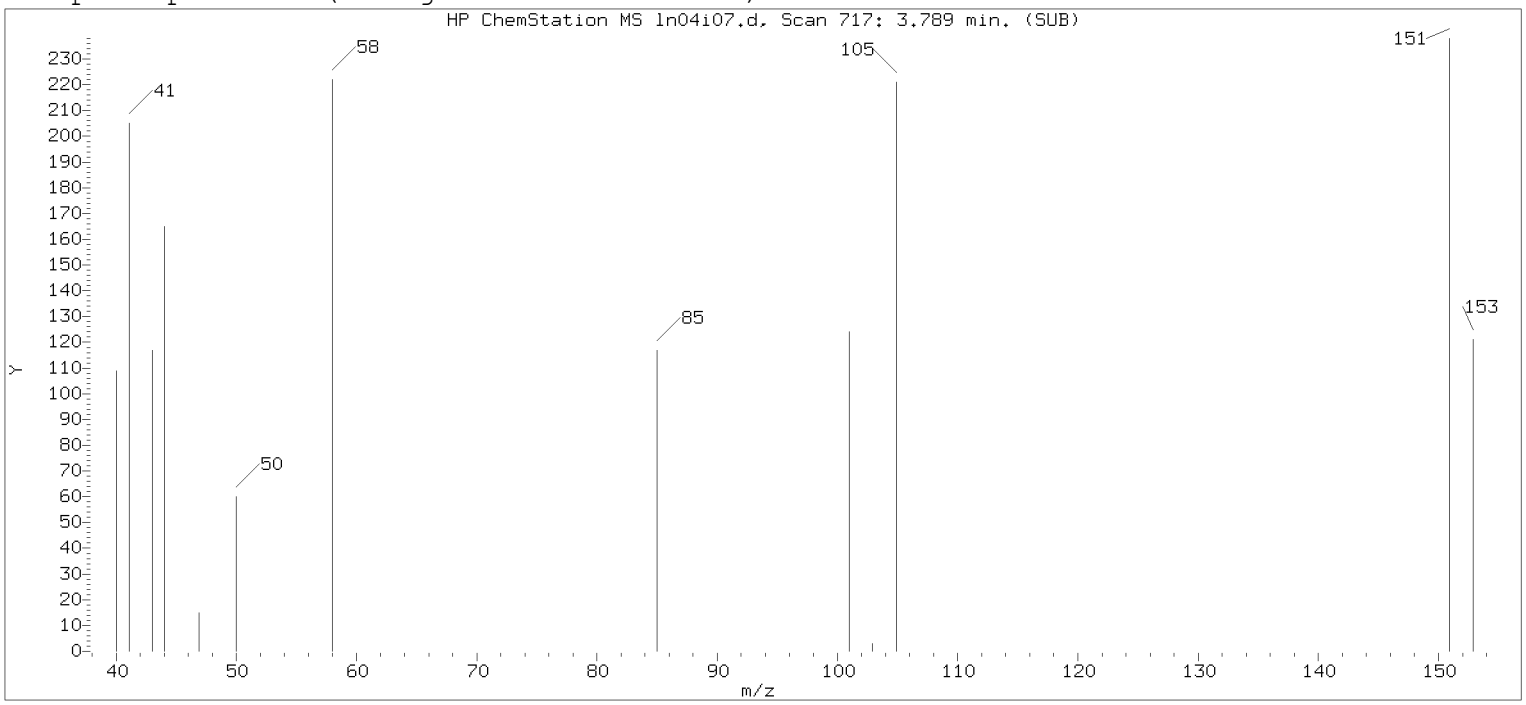
Compound Number : 18
Compound Name : Acetone
Scan Number : 730
Retention Time (minutes): 3.831
Quant Ion : 58.00
Area (flag) : 1588M
On-Column Amount (ng) : 1.9382
Integration start scan : 699 Integration stop scan: 749
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

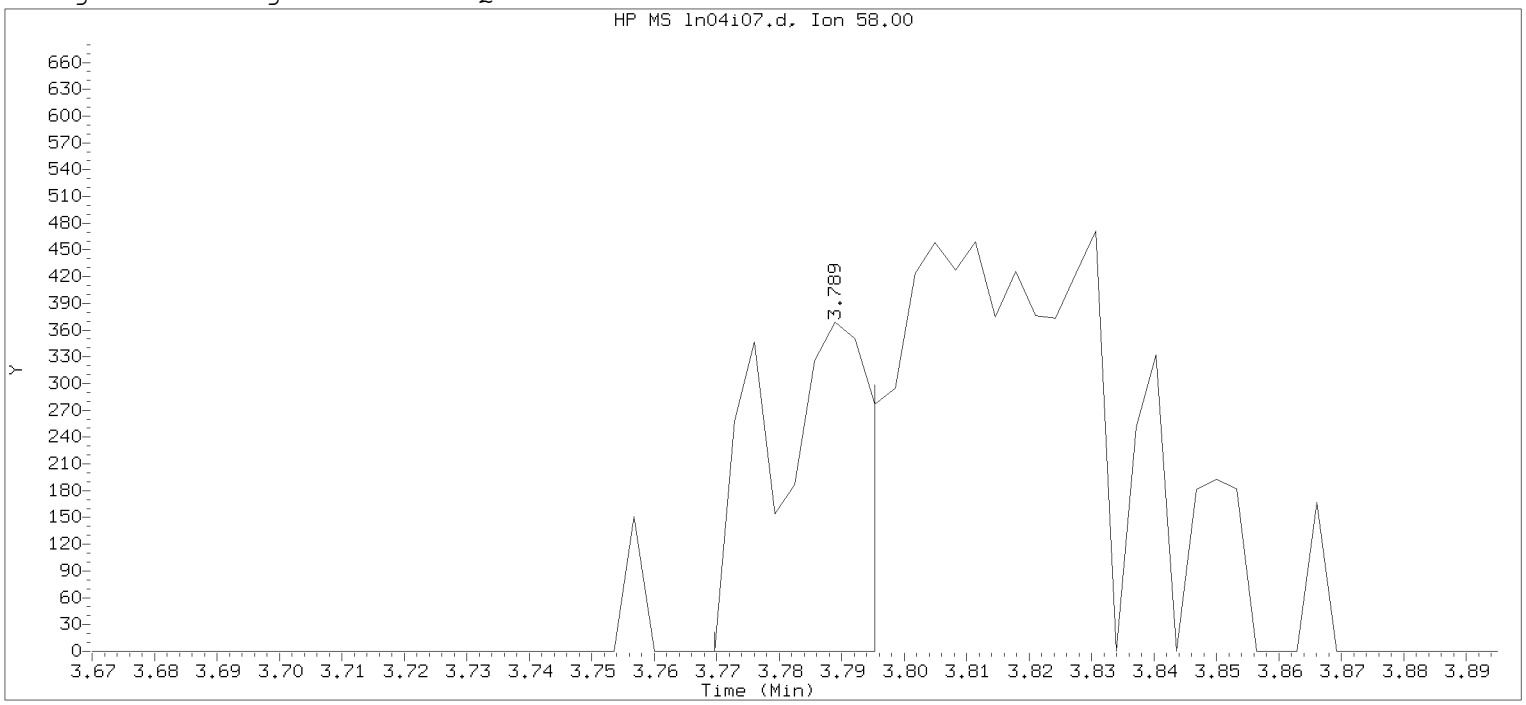
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

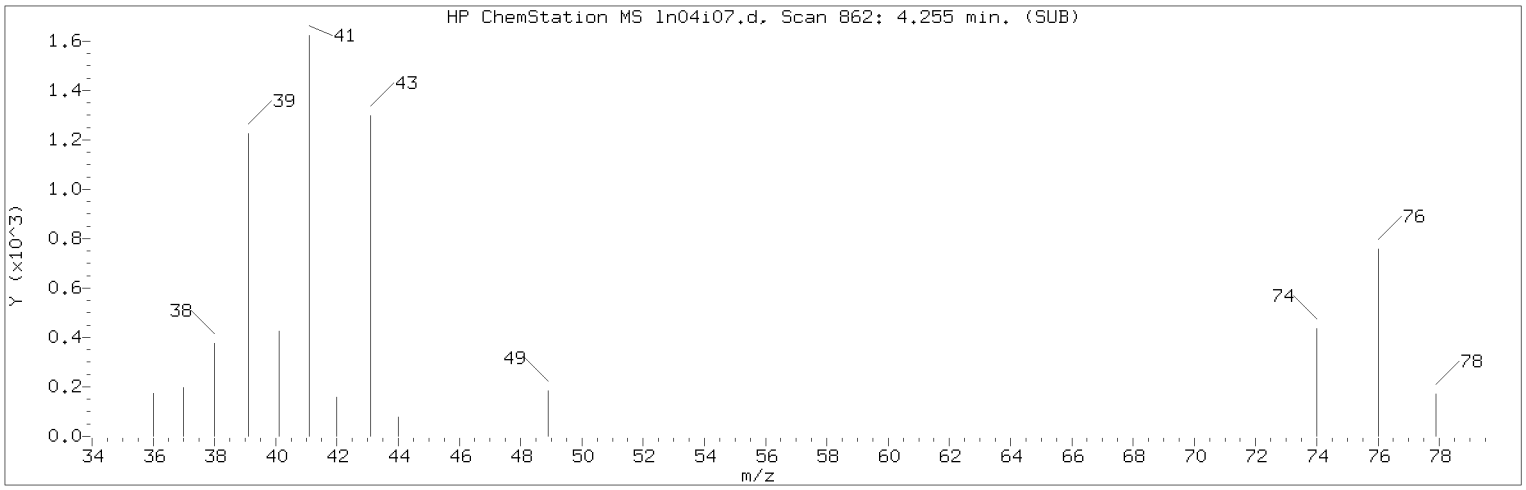
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

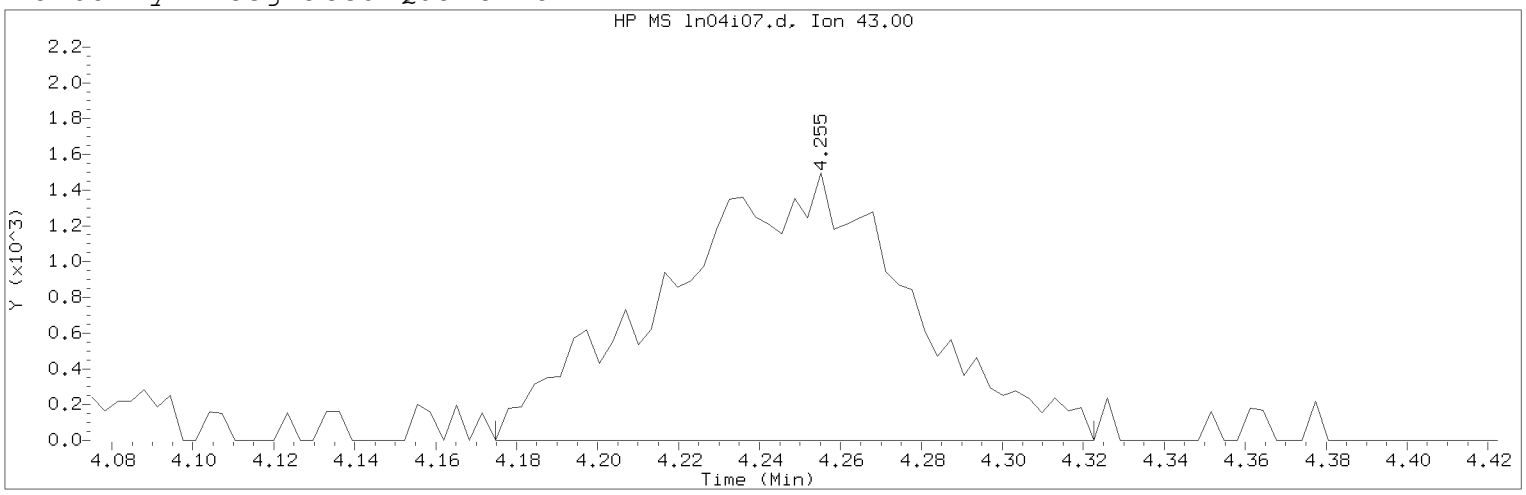
Compound Number : 18
Compound Name : Acetone
Scan Number : 717
Retention Time (minutes): 3.789
Quant Ion : 58.00
Area : 410
On-column Amount (ng) : 0.5644
Integration start scan : 710 Integration stop scan: 718
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

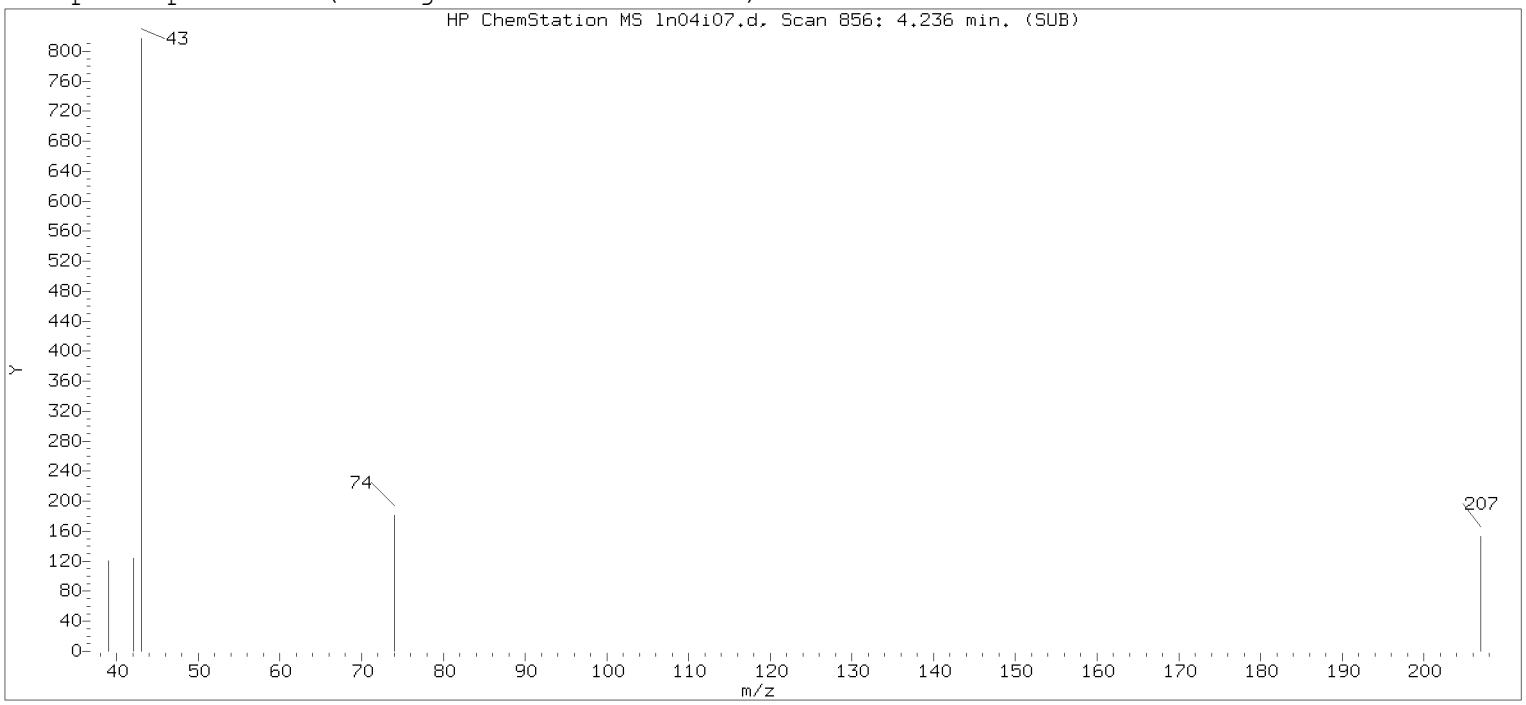
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 862
Retention Time (minutes): 4.255
Quant Ion : 43.00
Area (flag) : 6274M
On-Column Amount (ng) : 1.0106
Integration start scan : 836 Integration stop scan: 882
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

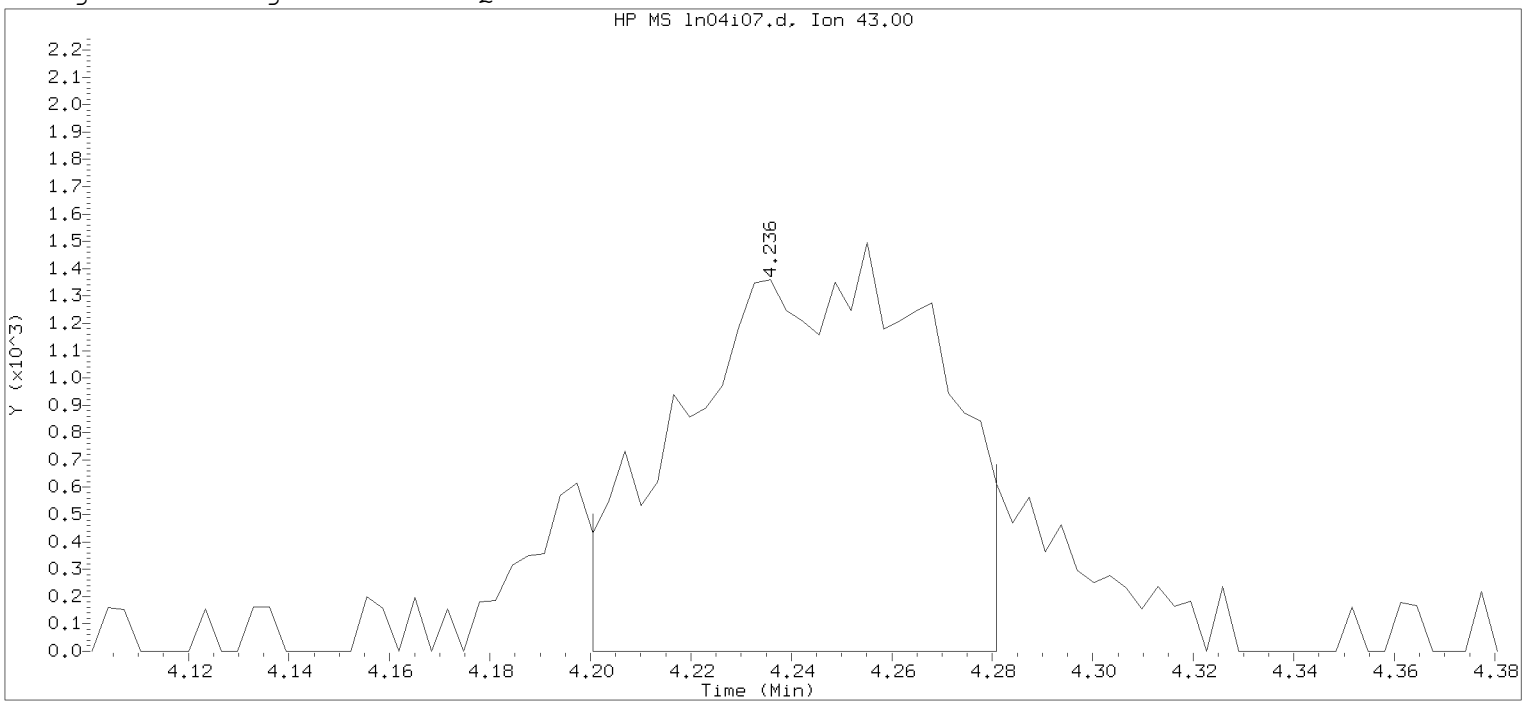
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

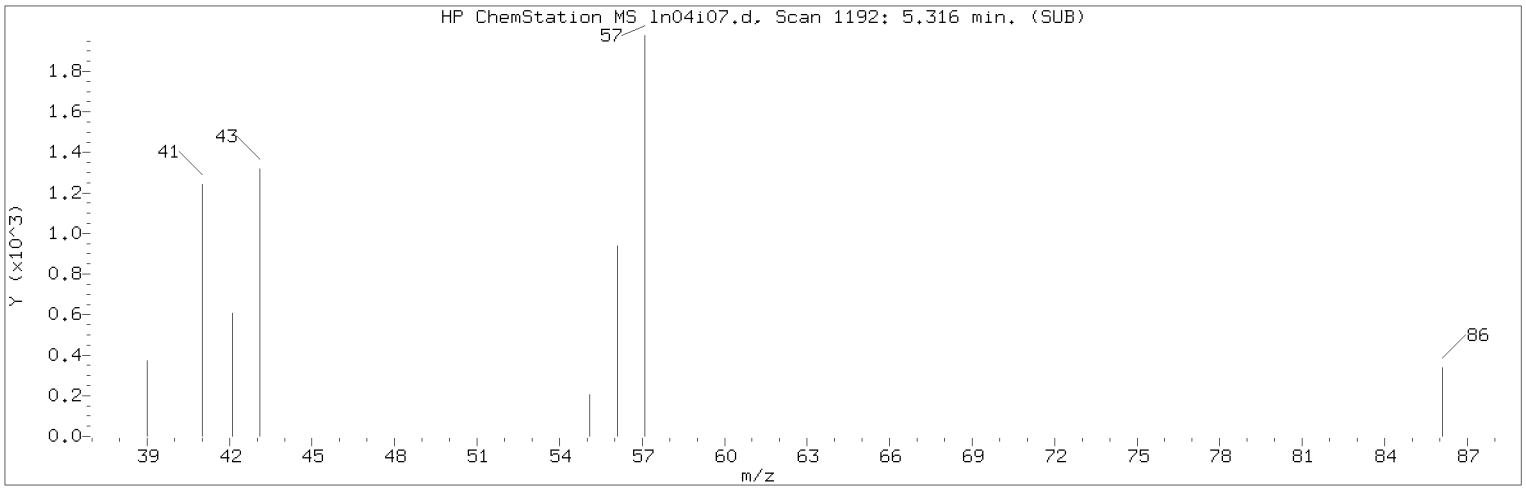
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

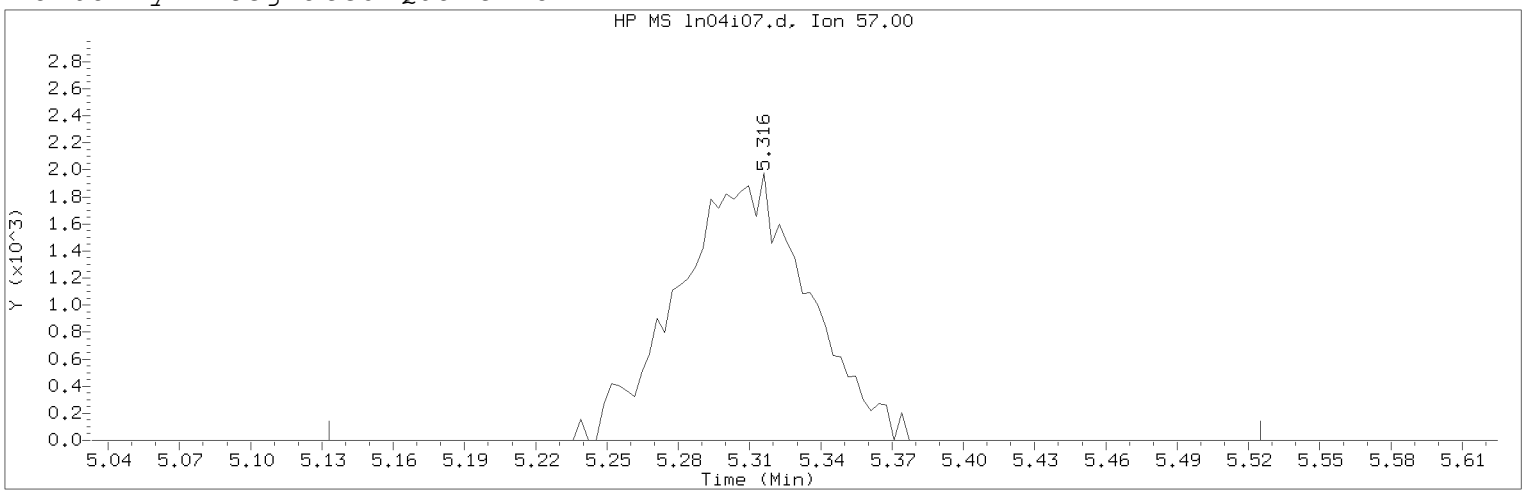
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 856
Retention Time (minutes): 4.236
Quant Ion : 43.00
Area : 4972
On-column Amount (ng) : 0.8386
Integration start scan : 844 Integration stop scan: 869
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

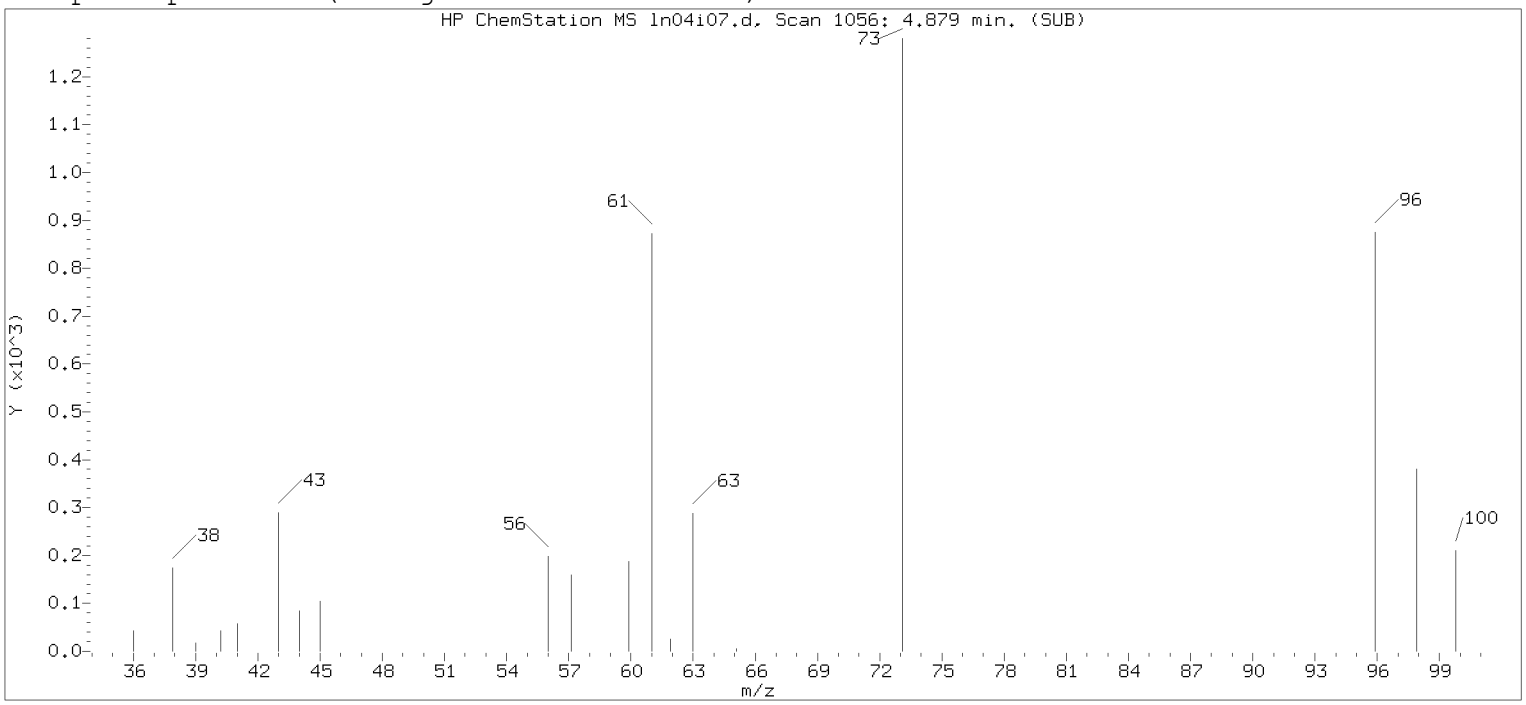
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1192
Retention Time (minutes): 5.316
Quant Ion : 57.00
Area (flag) : 7475M
On-Column Amount (ng) : 0.8616
Integration start scan : 1134 Integration stop scan: 1256
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

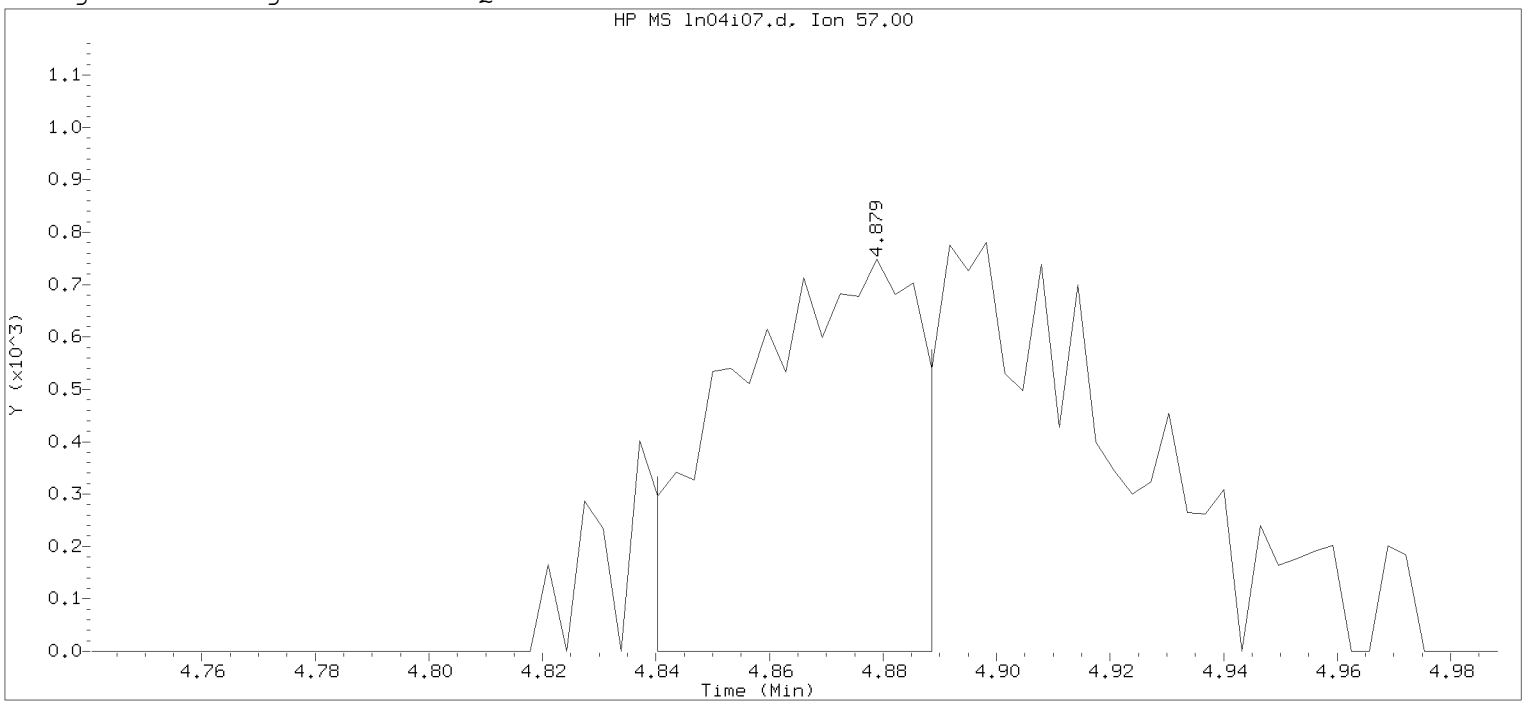
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

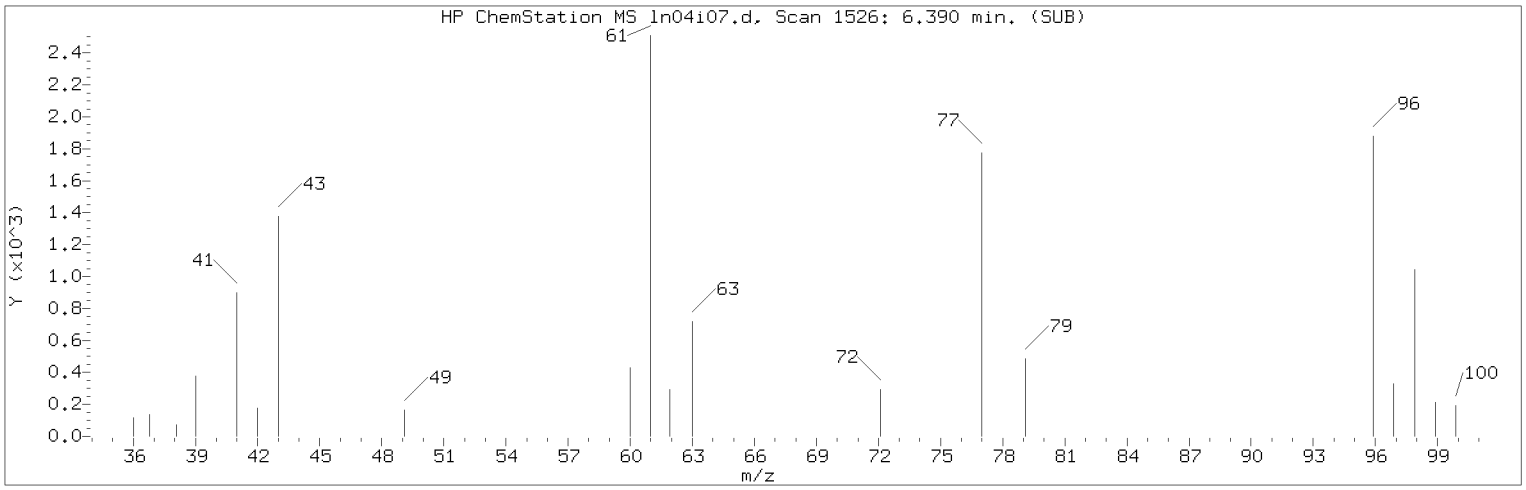
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

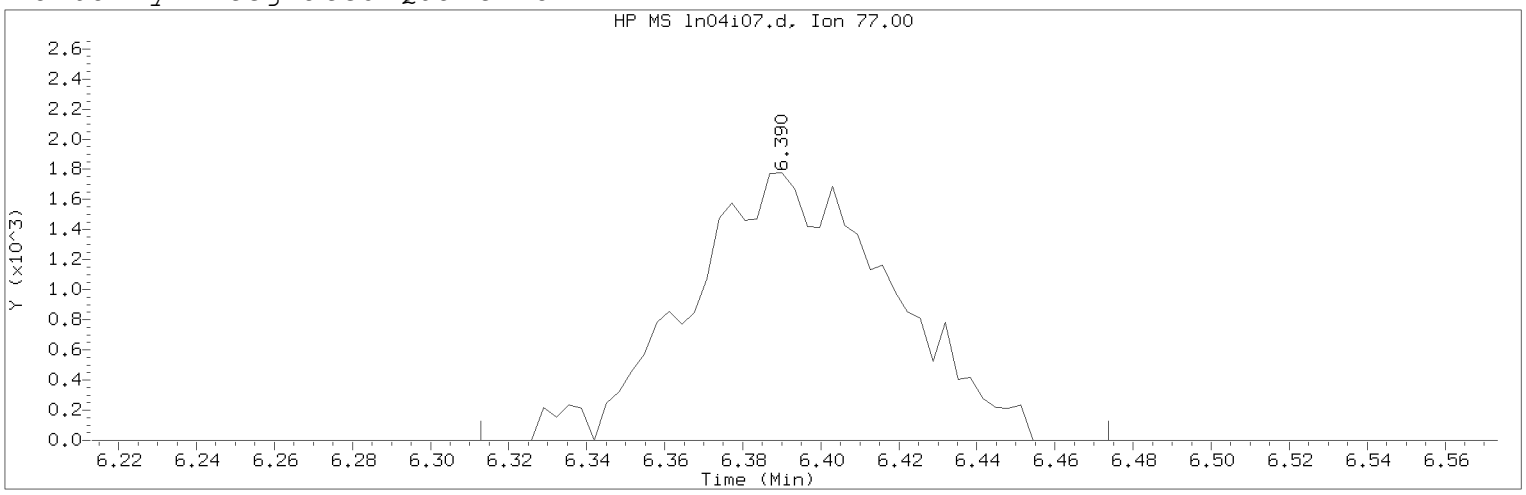
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1056		
Retention Time (minutes)	: 4.879		
Quant Ion	: 57.00		
Area	: 1663		
On-column Amount (ng)	: 0.4635		
Integration start scan	: 1043	Integration stop scan:	1058
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

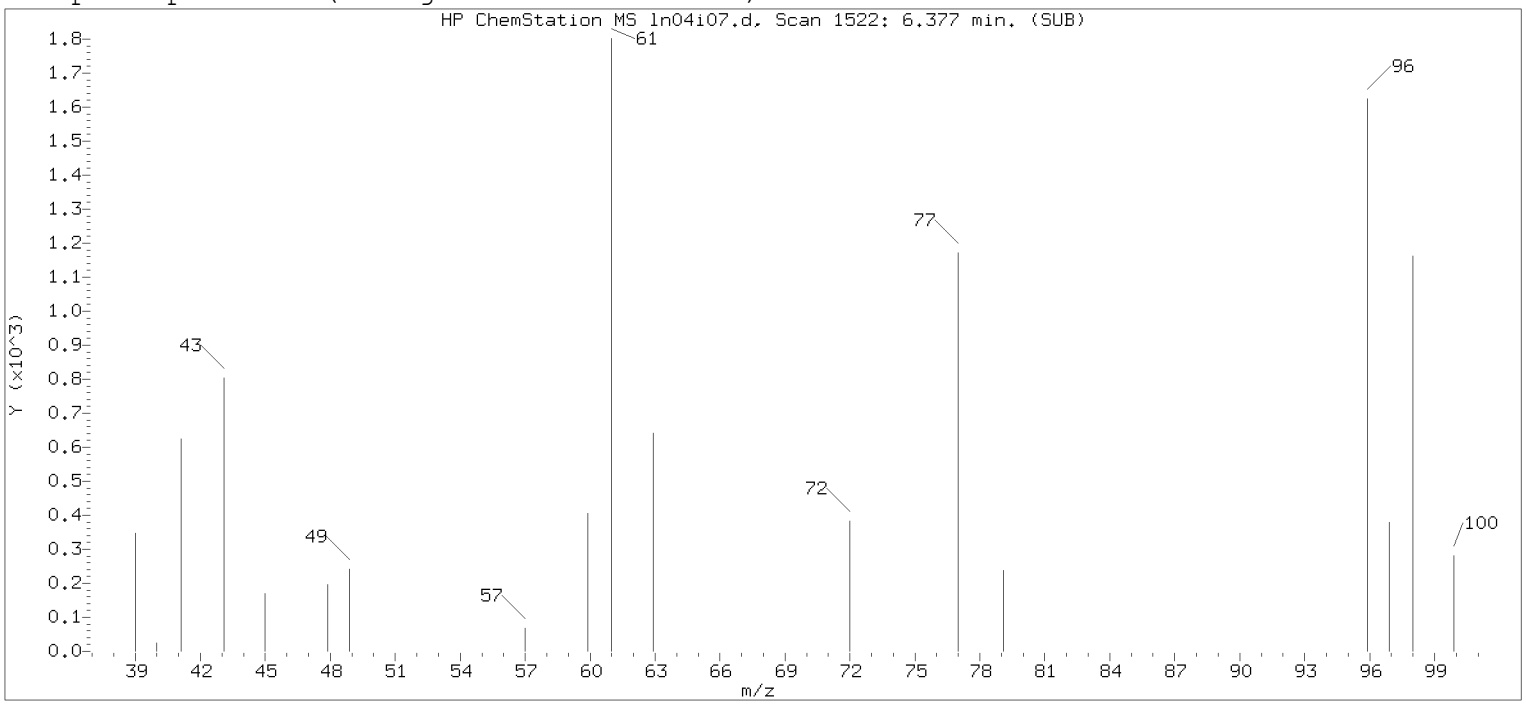
Compound Number : 45
Compound Name : 2,2-Dichloropropane
Scan Number : 1526
Retention Time (minutes): 6.390
Quant Ion : 77.00
Area (flag) : 6419M
On-Column Amount (ng) : 0.8488
Integration start scan : 1501 Integration stop scan: 1551
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

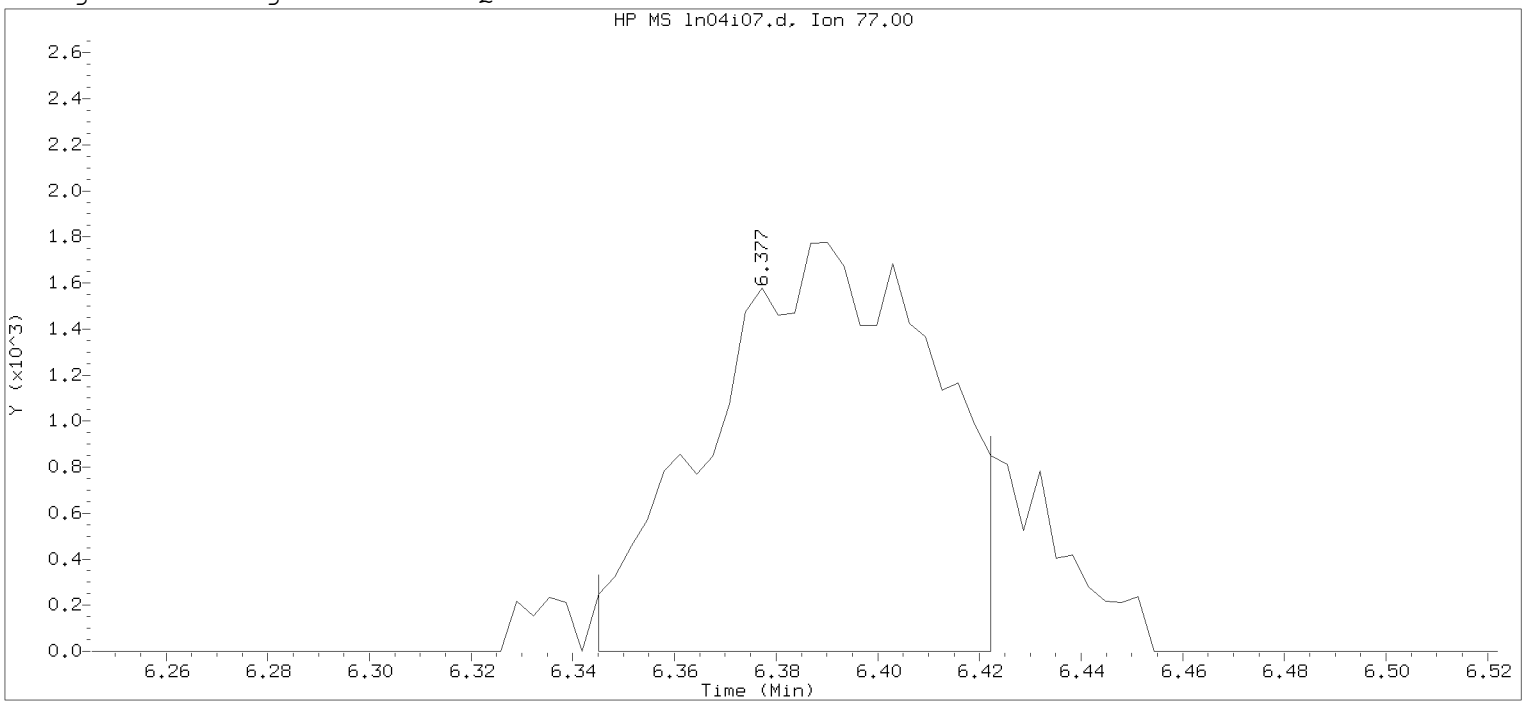
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

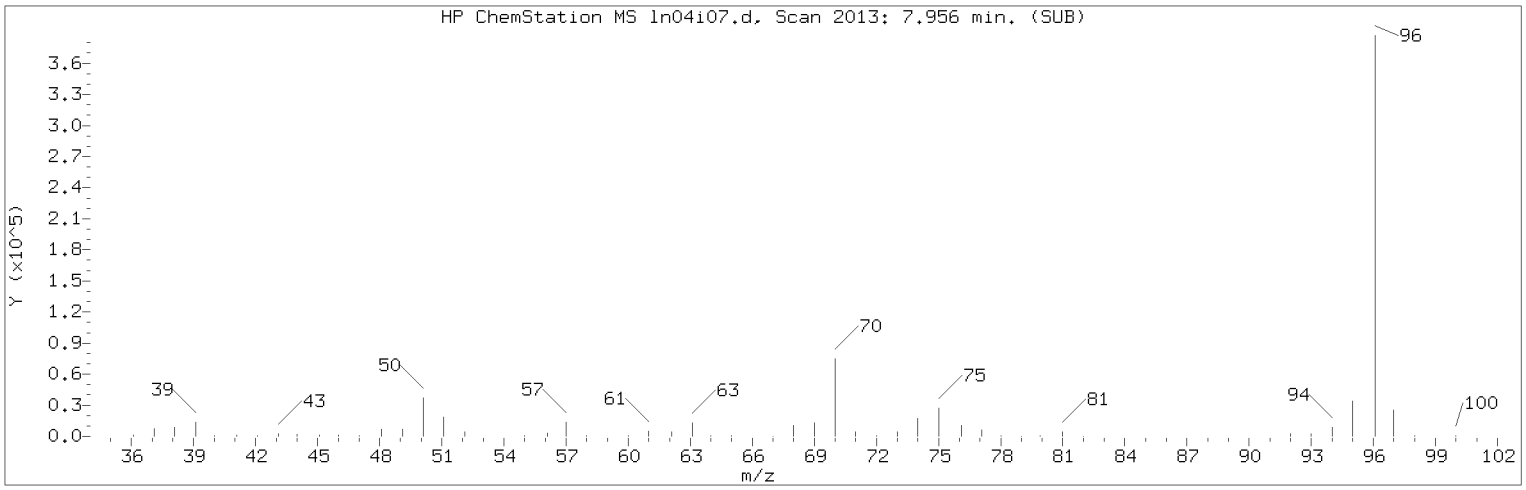
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

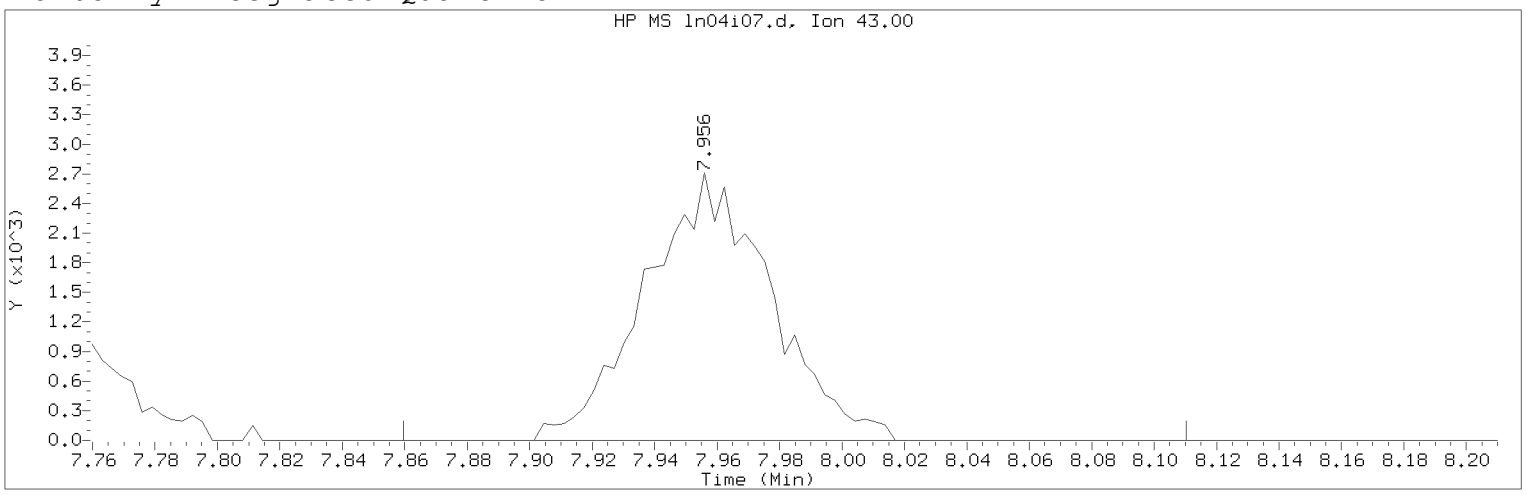
Compound Number : 45
Compound Name : 2,2-Dichloropropane
Scan Number : 1522
Retention Time (minutes): 6.377
Quant Ion : 77.00
Area : 5406
On-column Amount (ng) : 0.7289
Integration start scan : 1511 Integration stop scan: 1535
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

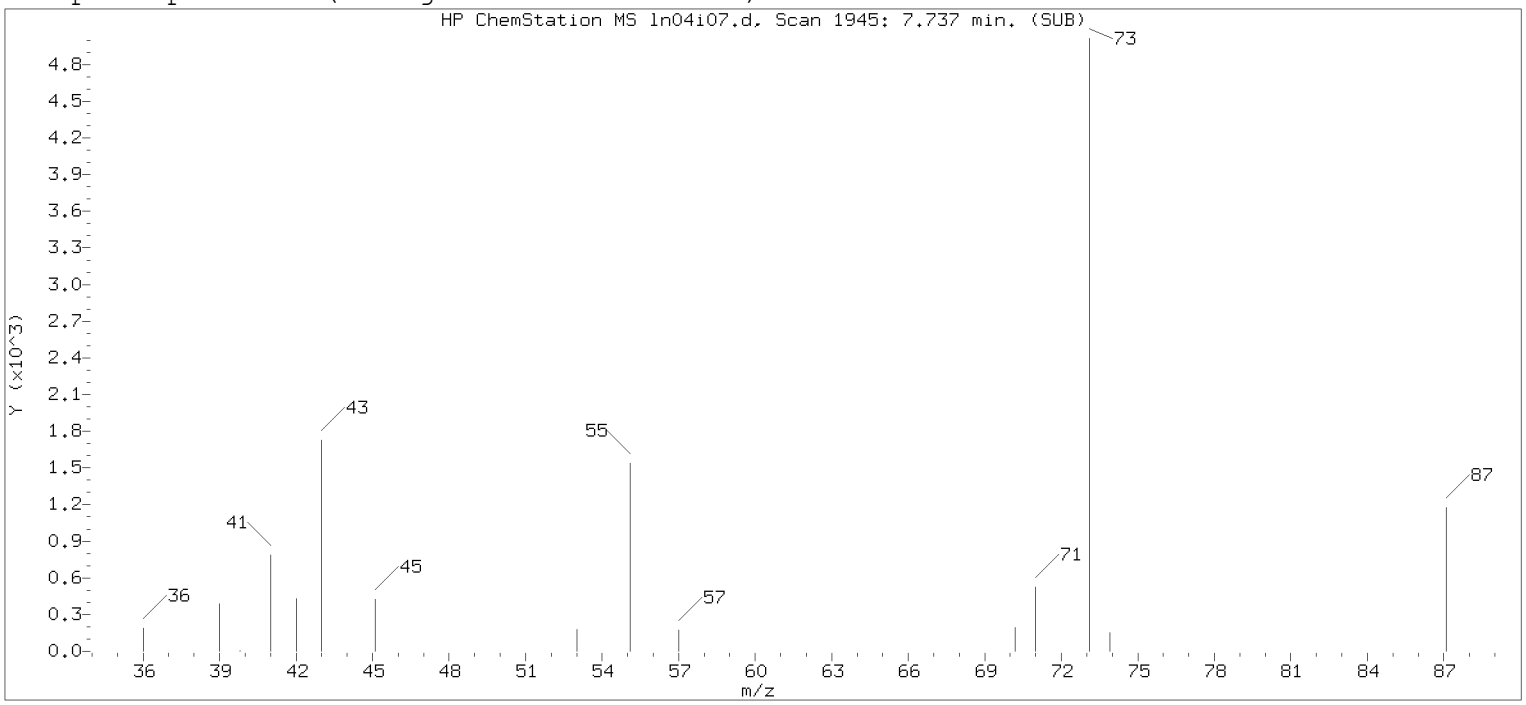
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2013
Retention Time (minutes): 7.956
Quant Ion : 43.00
Area (flag) : 7535M
On-Column Amount (ng) : 0.9297
Integration start scan : 1982 Integration stop scan: 2060
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

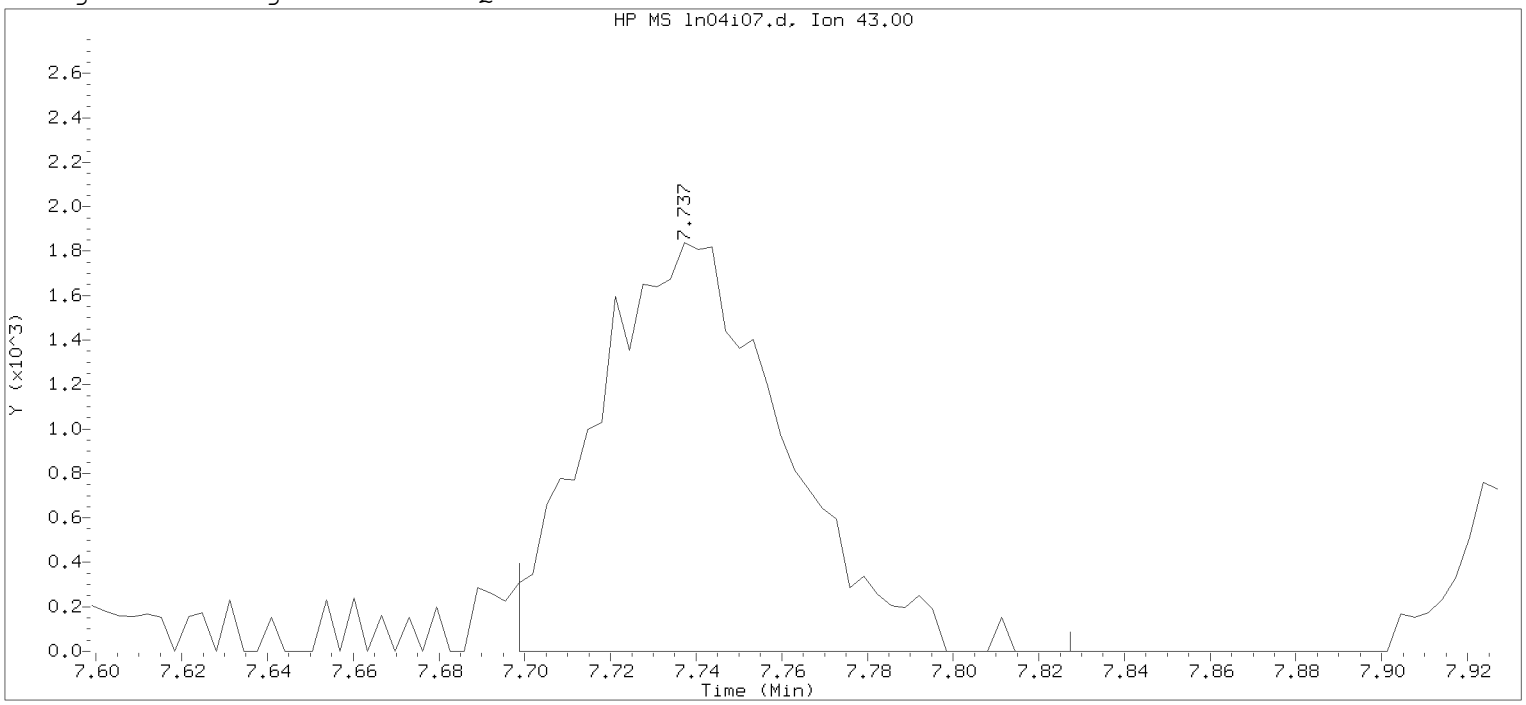
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

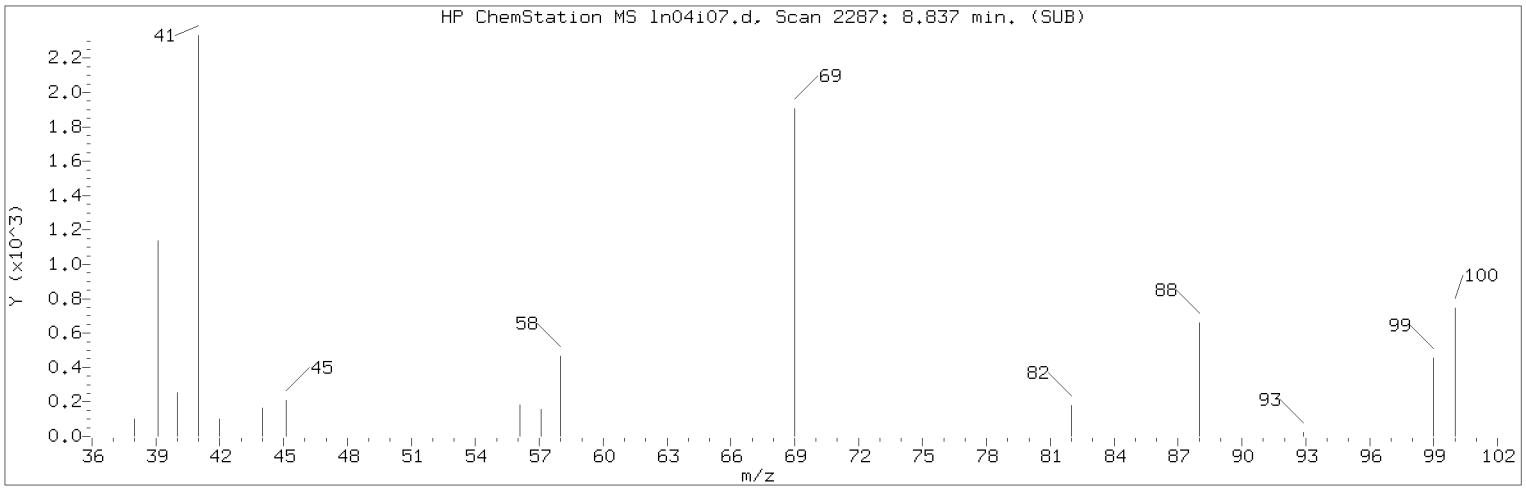
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

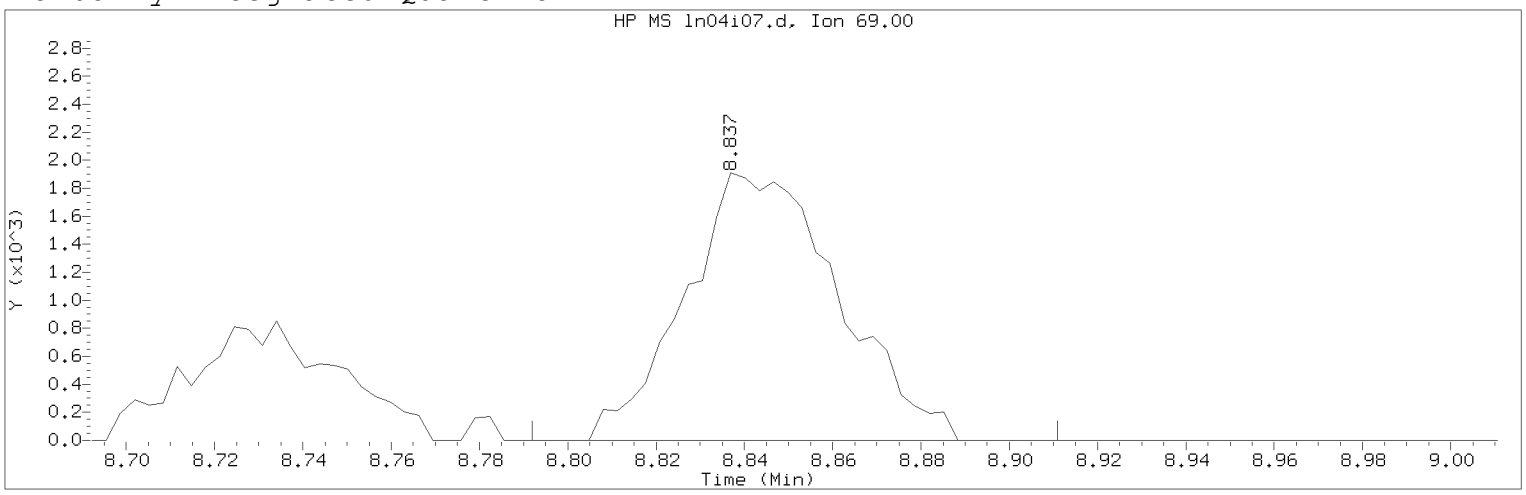
Compound Number	: 67		
Compound Name	: n-Heptane		
Scan Number	: 1945		
Retention Time (minutes)	: 7.737		
Quant Ion	: 43.00		
Area	: 5623		
On-column Amount (ng)	: 0.9372		
Integration start scan	: 1932	Integration stop scan:	1972
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

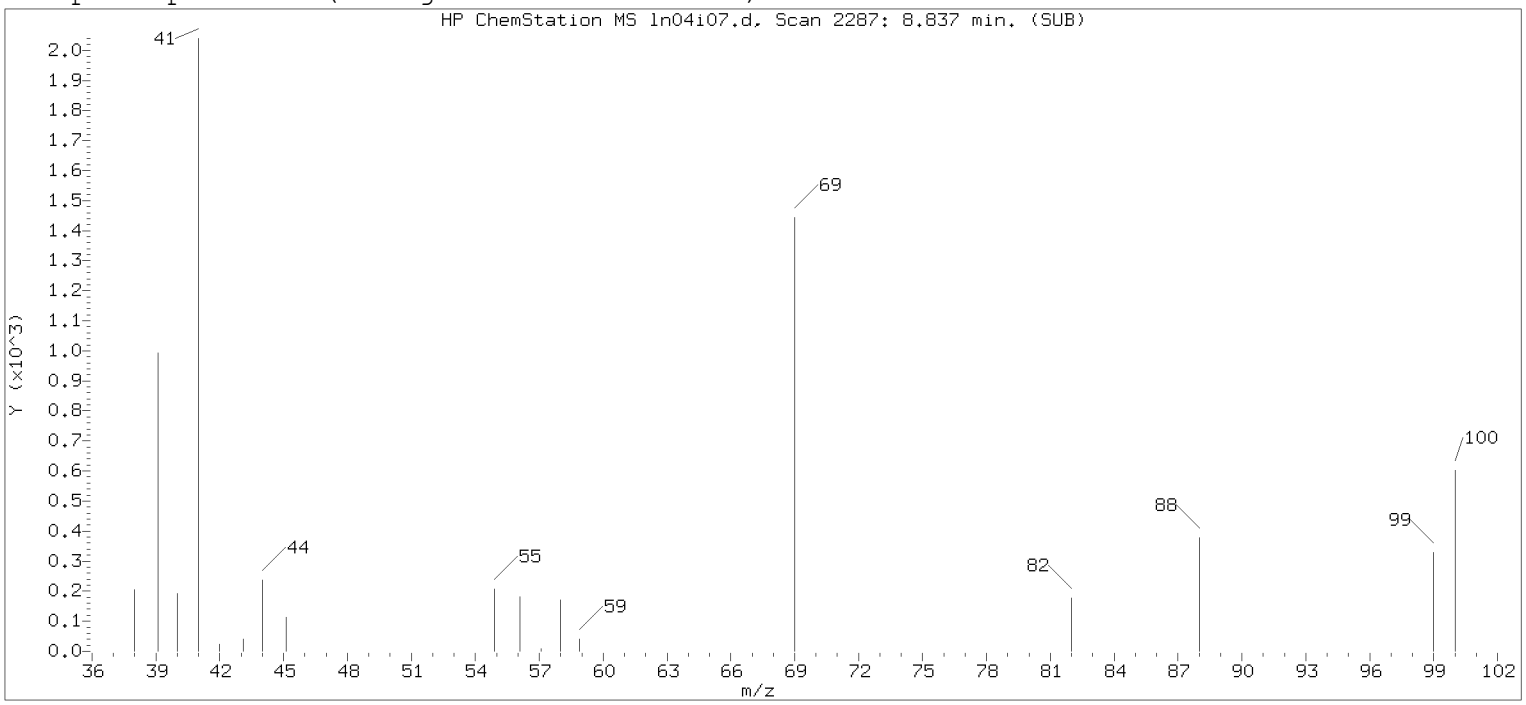
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2287
Retention Time (minutes): 8.837
Quant Ion : 69.00
Area (flag) : 4607M
On-Column Amount (ng) : 0.8112
Integration start scan : 2272 Integration stop scan: 2309
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

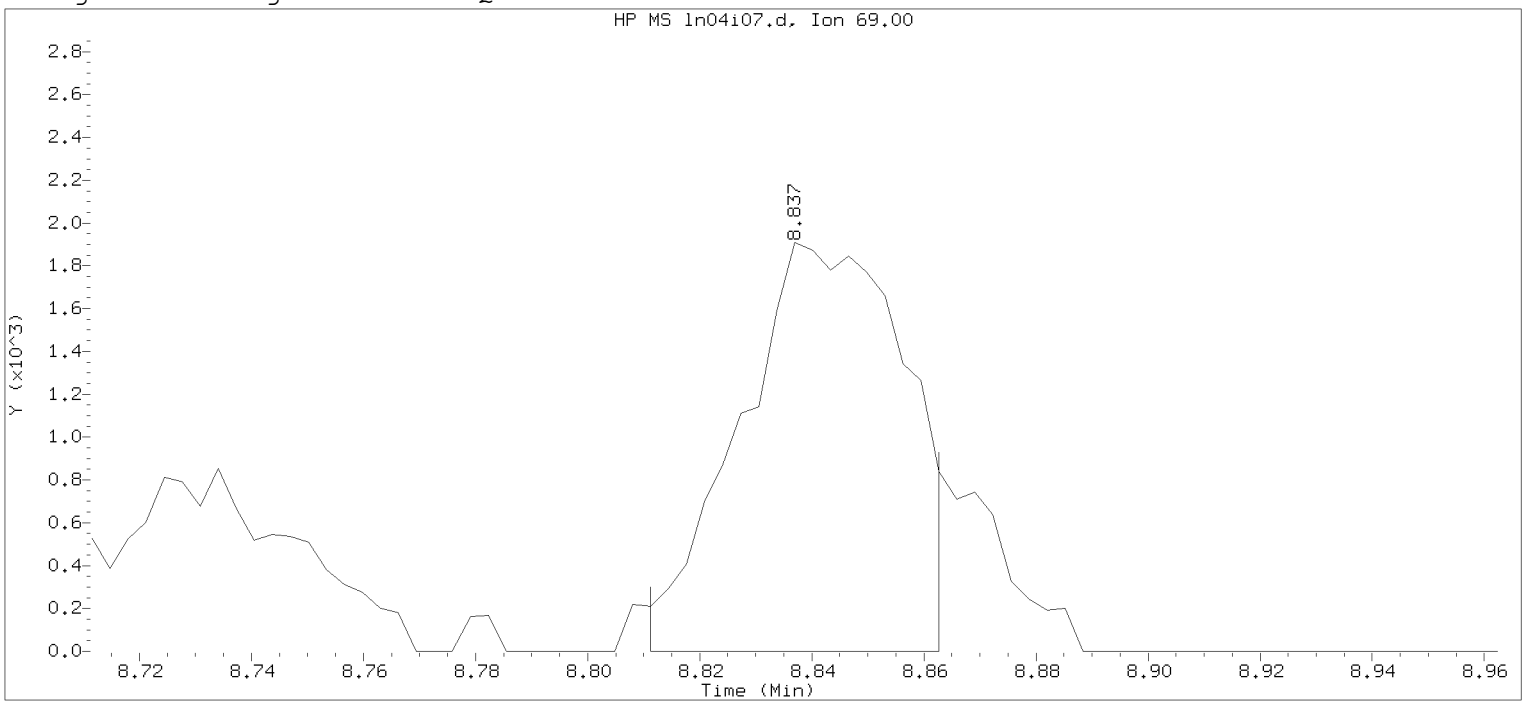
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

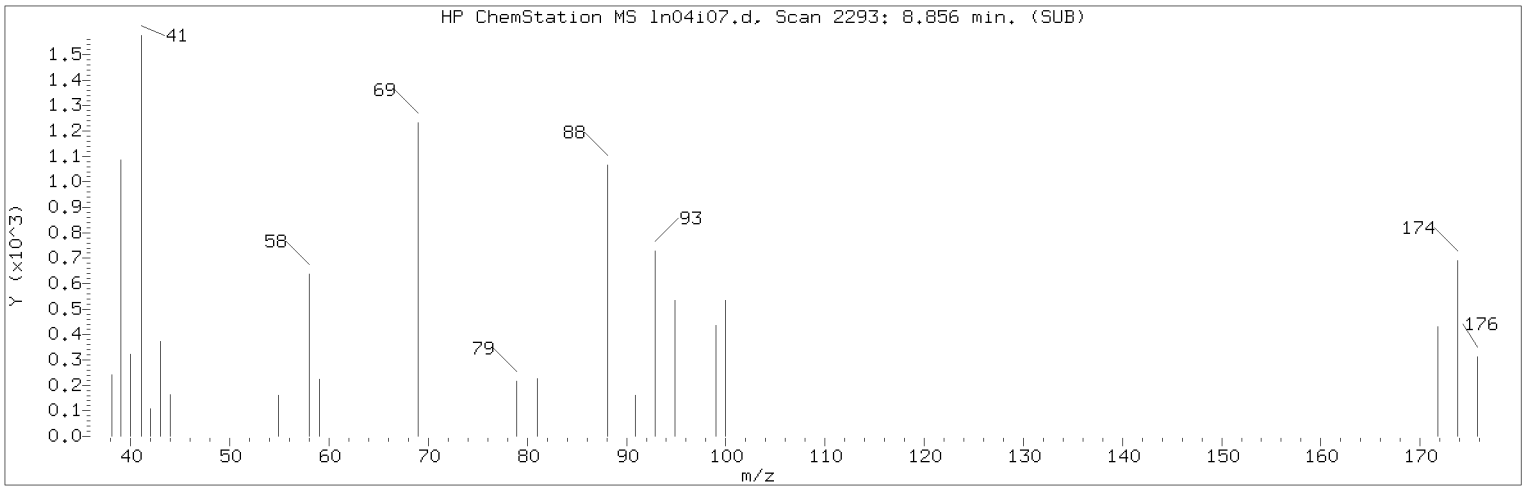
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

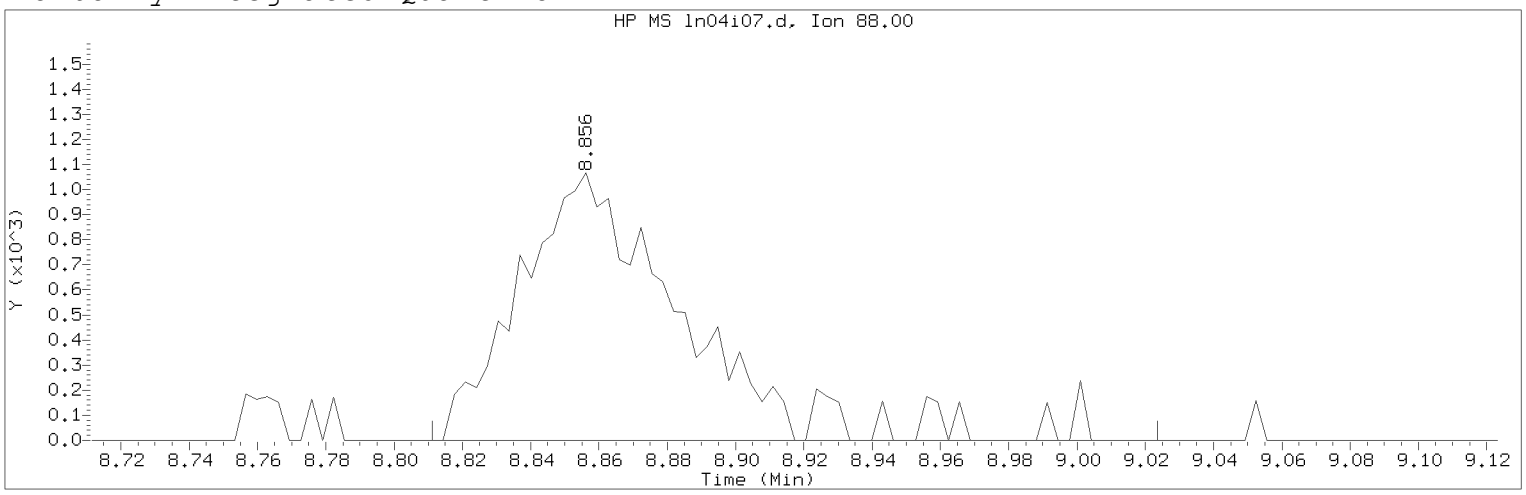
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2287
Retention Time (minutes): 8.837
Quant Ion : 69.00
Area : 3874
On-column Amount (ng) : 0.7186
Integration start scan : 2278 Integration stop scan: 2294
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

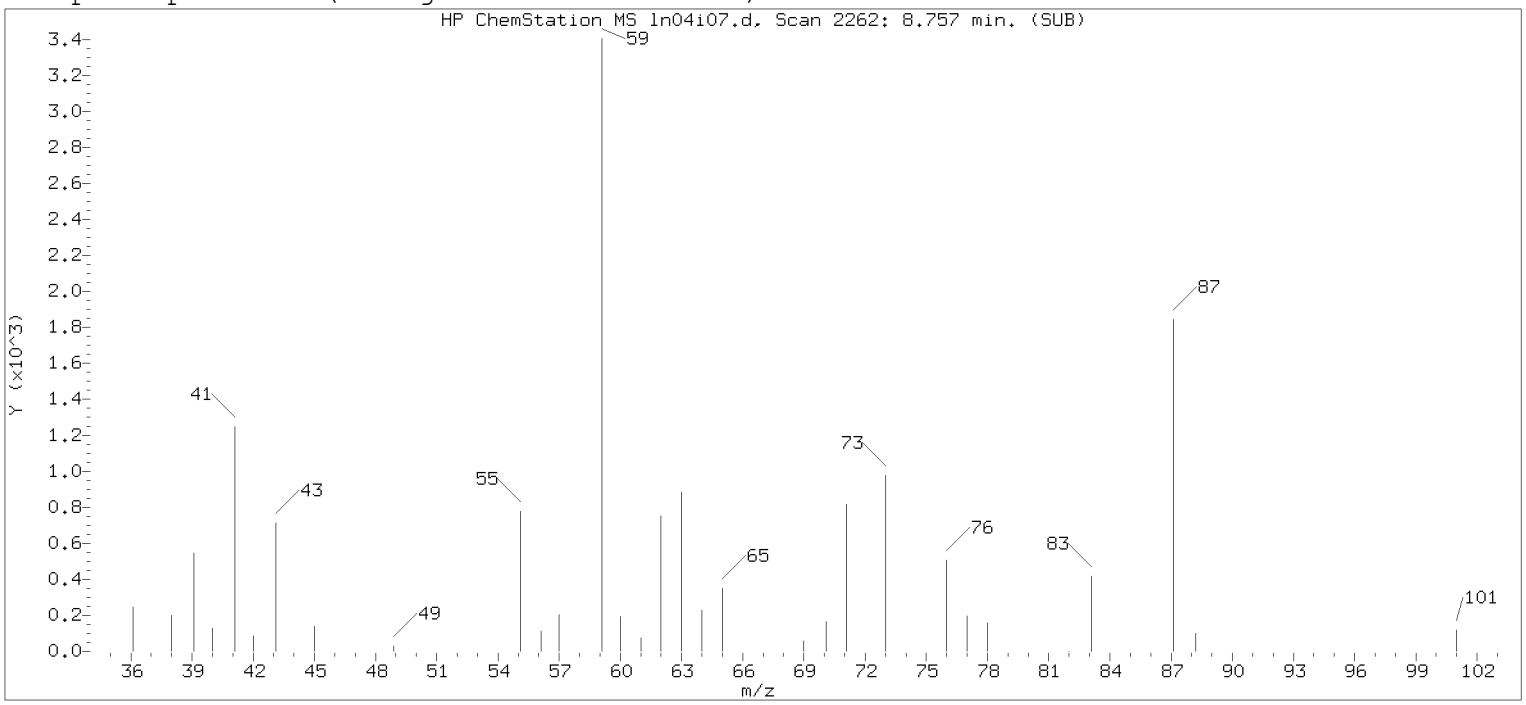
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 3548M
On-Column Amount (ng) : 43.4574
Integration start scan : 2278 Integration stop scan: 2344
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

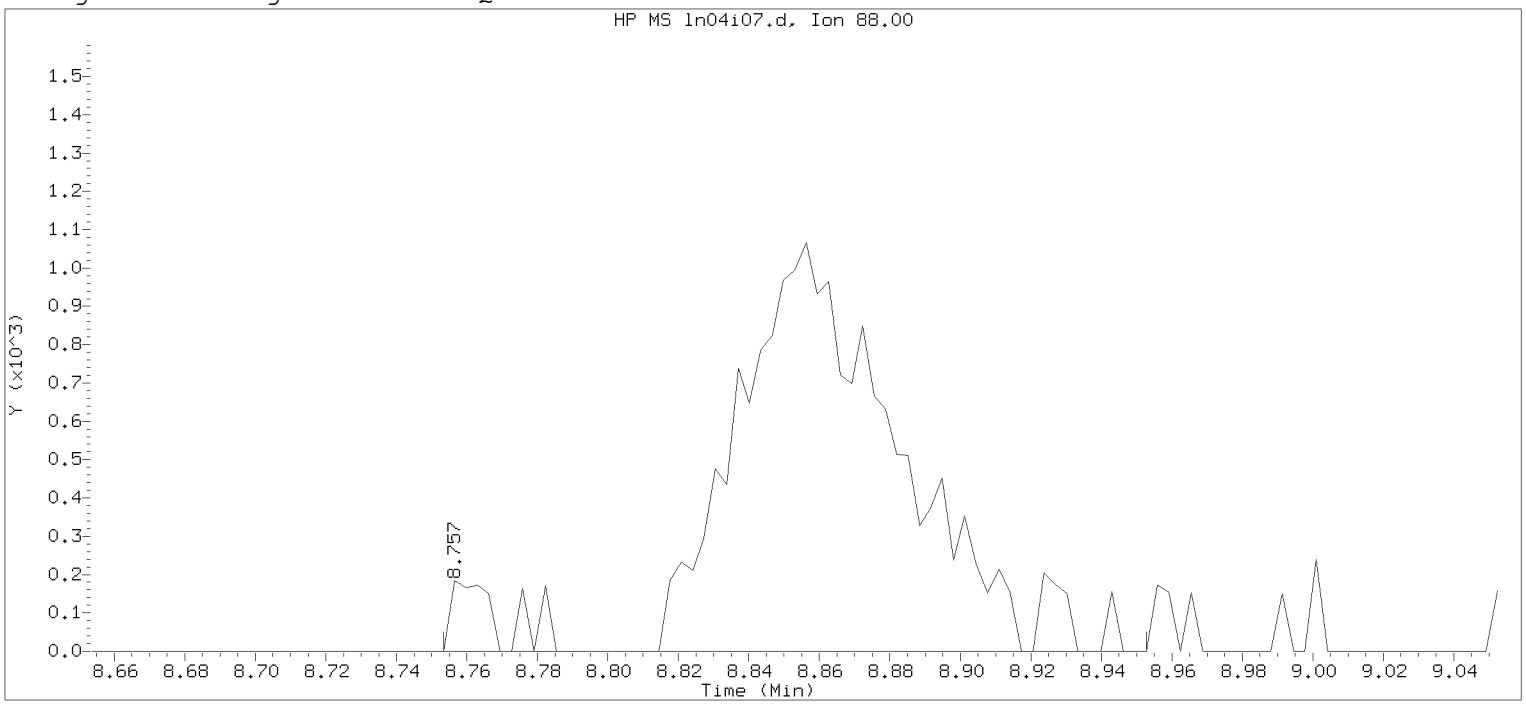
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

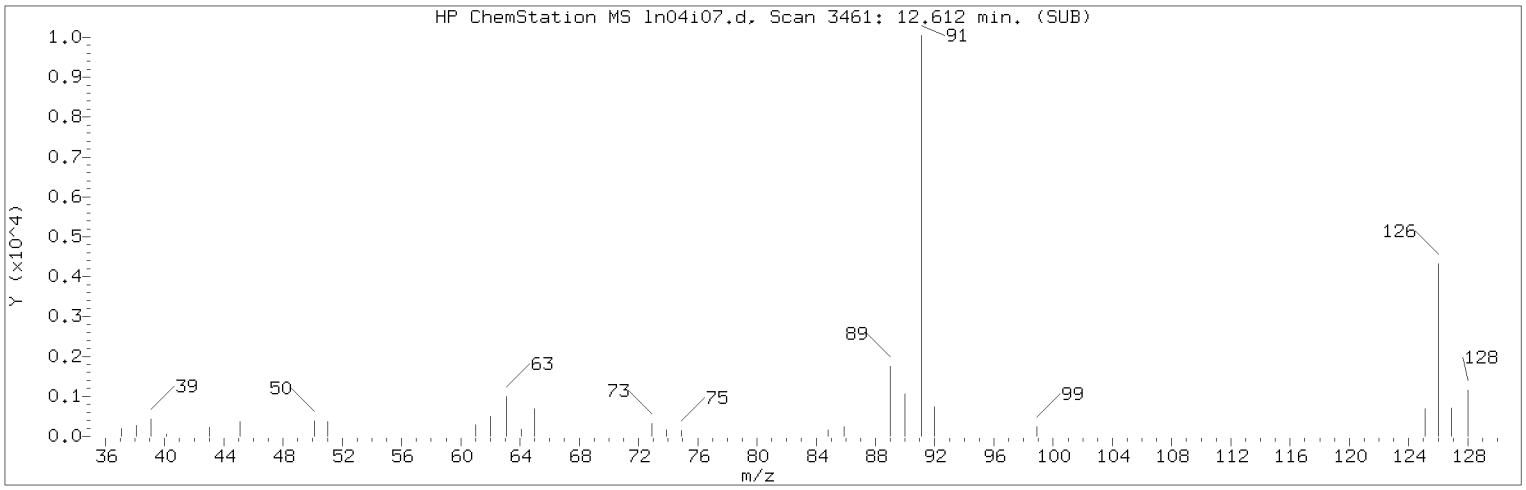
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

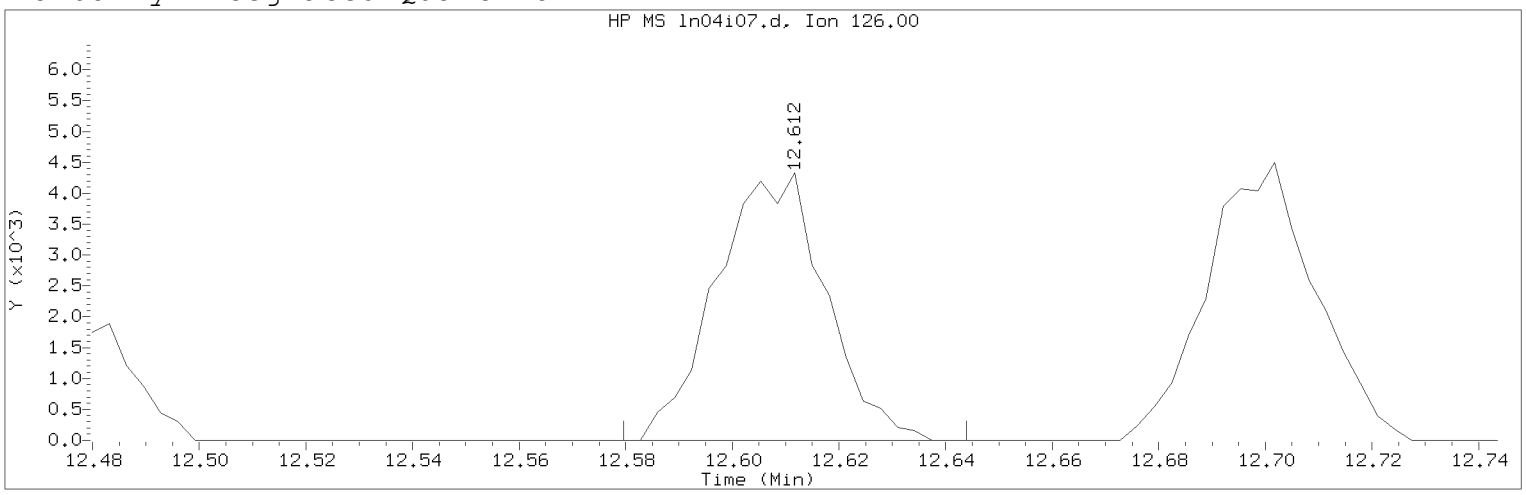
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2262		
Retention Time (minutes)	: 8.757		
Quant Ion	: 88.00		
Area	: 3575		
On-column Amount (ng)	: 43.6406		
Integration start scan	: 2260	Integration stop scan	: 2322
Y at integration start	: 0	Y at integration end	: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

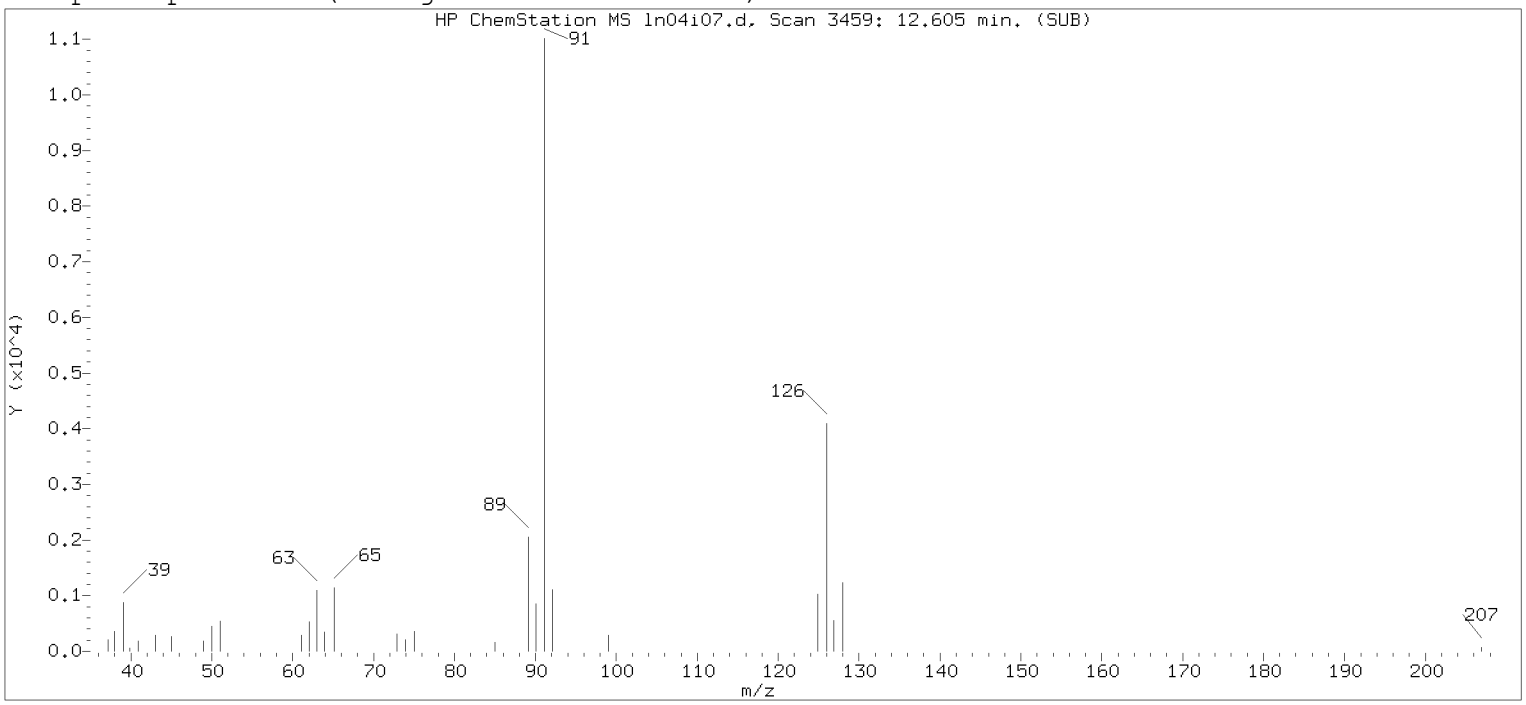
Compound Number : 120
Compound Name : 2-Chlorotoluene
Scan Number : 3461
Retention Time (minutes): 12.612
Quant Ion : 126.00
Area (flag) : 6138M
On-Column Amount (ng) : 0.9294
Integration start scan : 3450 Integration stop scan: 3470
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

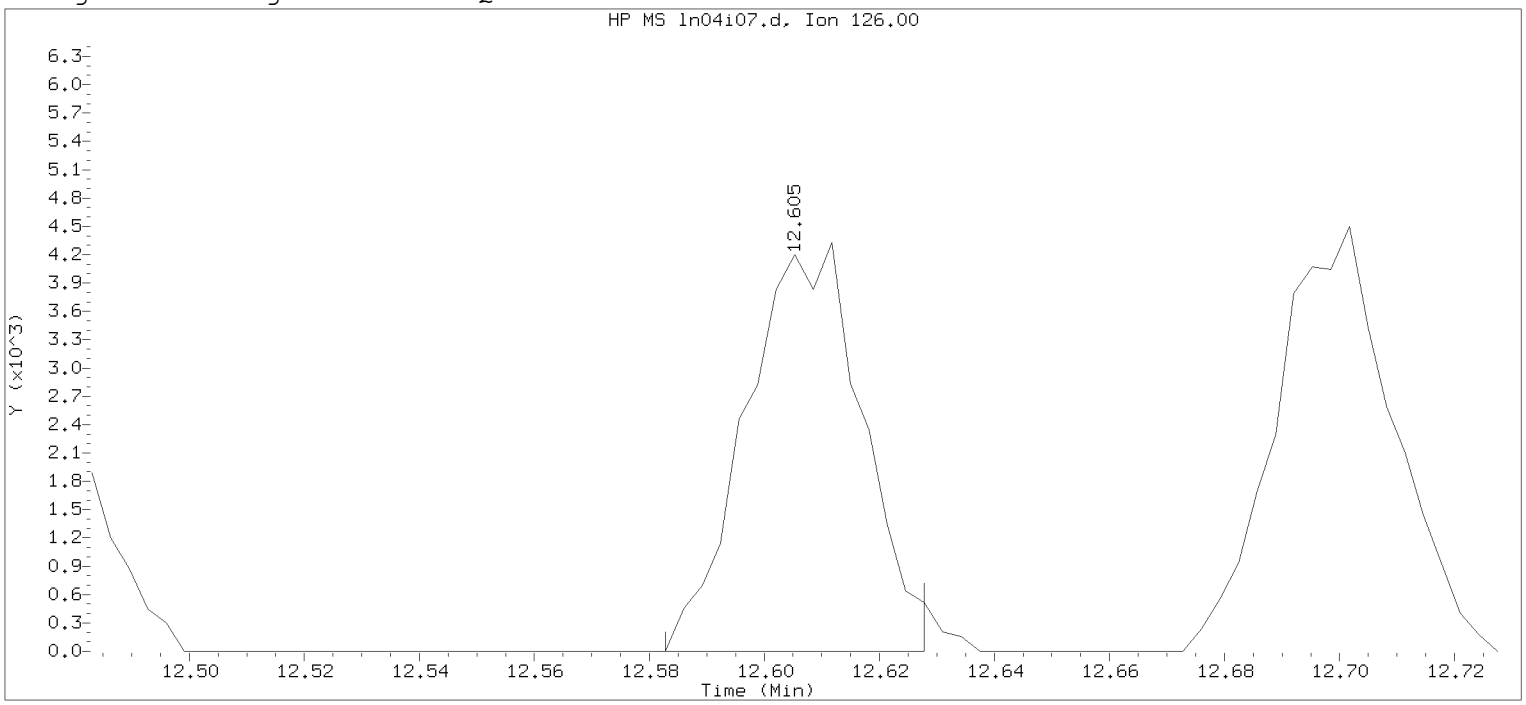
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

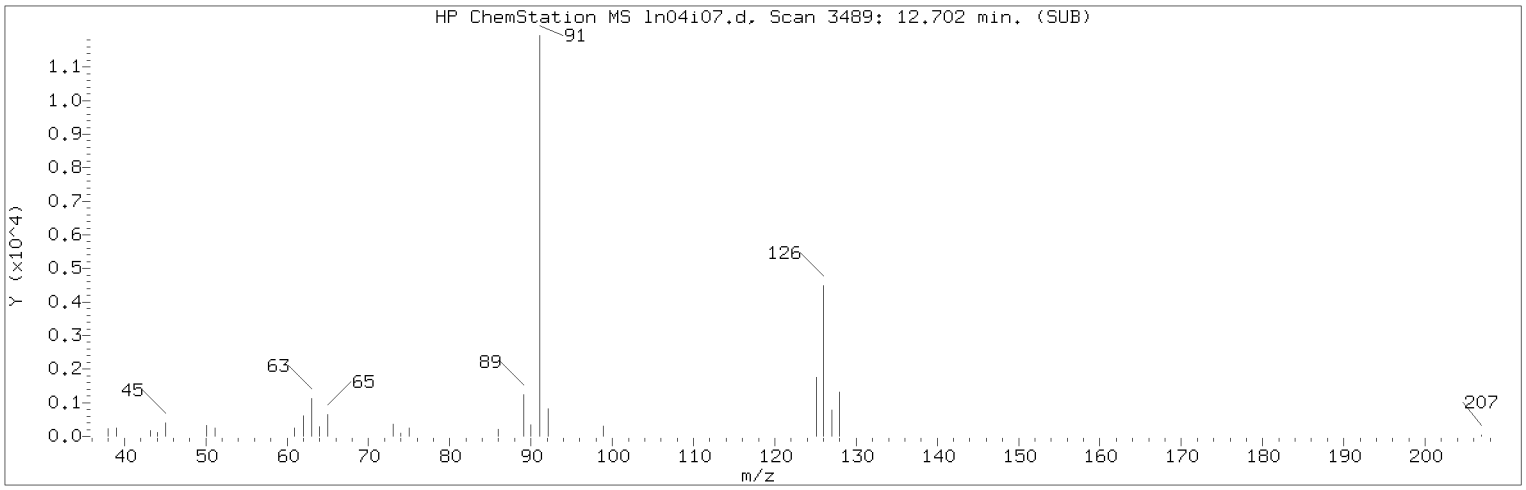
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

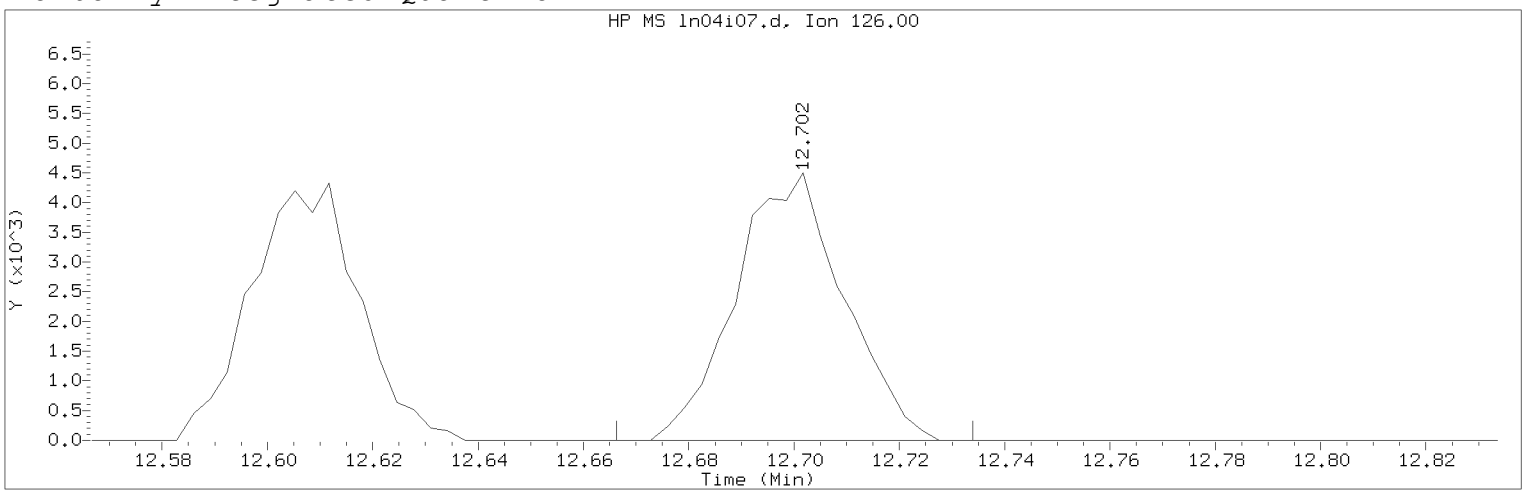
Compound Number : 120
Compound Name : 2-Chlorotoluene
Scan Number : 3459
Retention Time (minutes): 12.605
Quant Ion : 126.00
Area : 6018
On-column Amount (ng) : 0.9136
Integration start scan : 3451 Integration stop scan: 3465
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

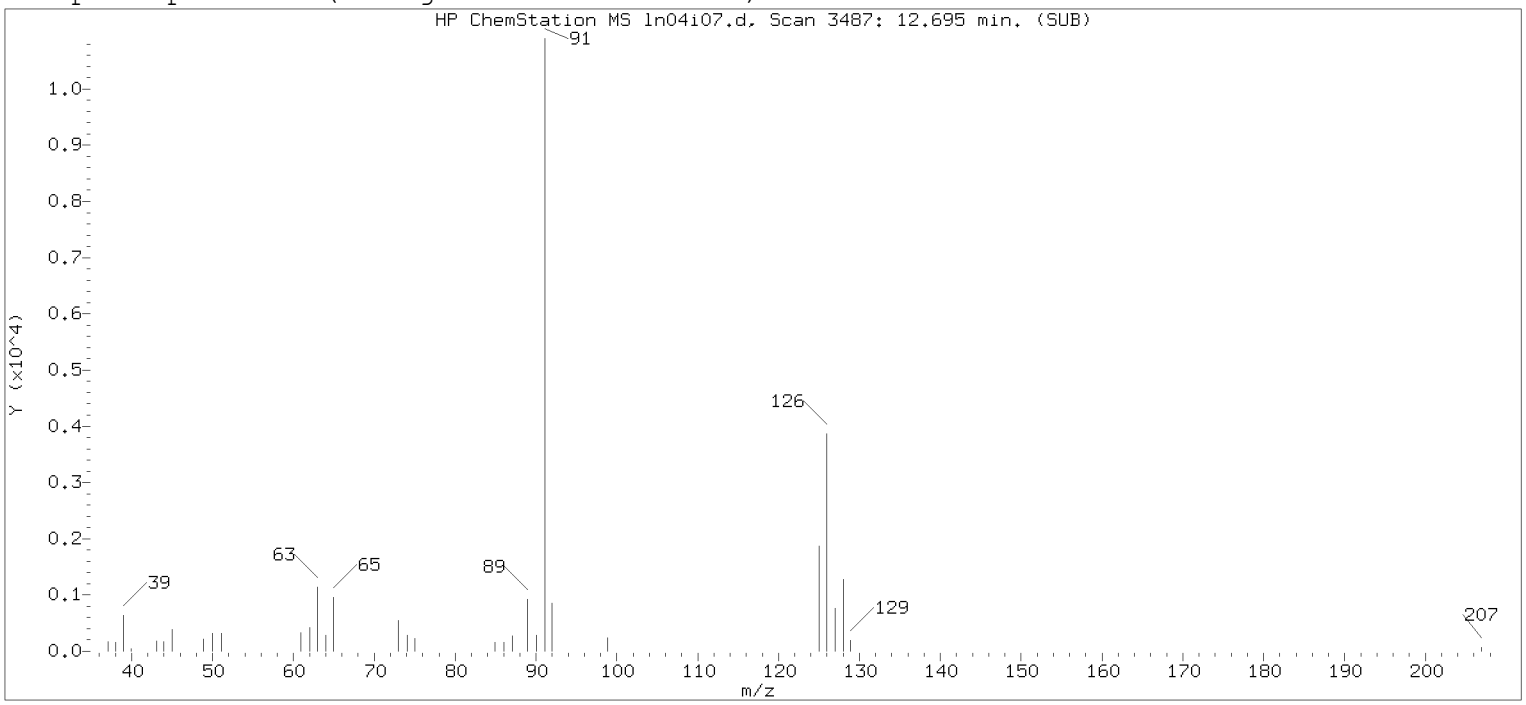
Compound Number : 121
Compound Name : 4-Chlorotoluene
Scan Number : 3489
Retention Time (minutes): 12.702
Quant Ion : 126.00
Area (flag) : 6403M
On-Column Amount (ng) : 0.9314
Integration start scan : 3477 Integration stop scan: 3498
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

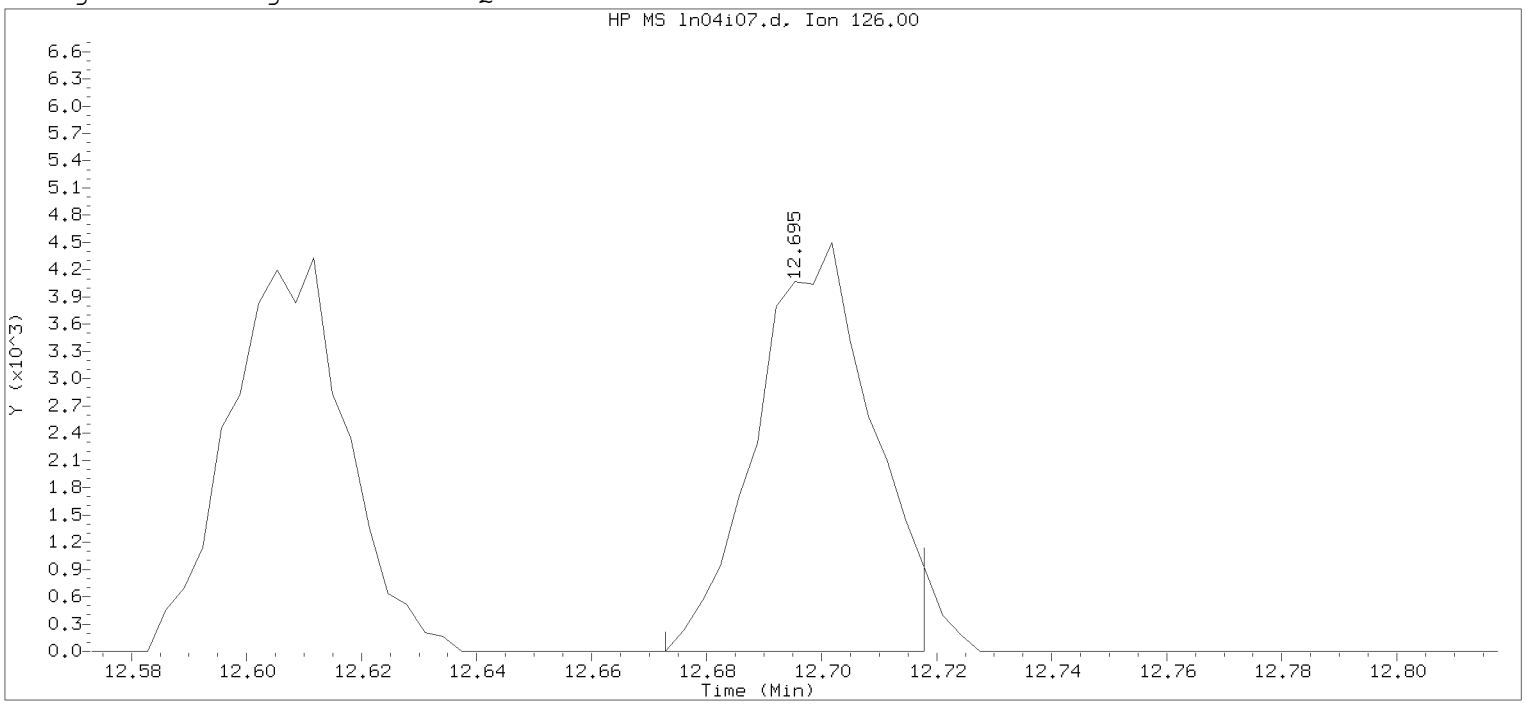
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

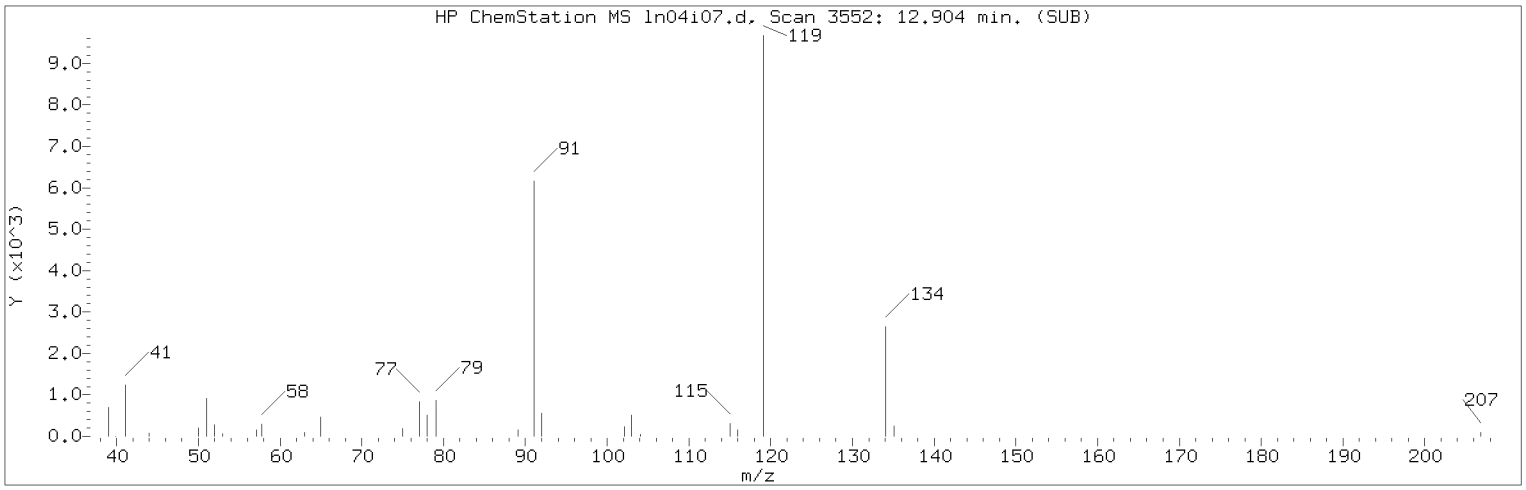
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

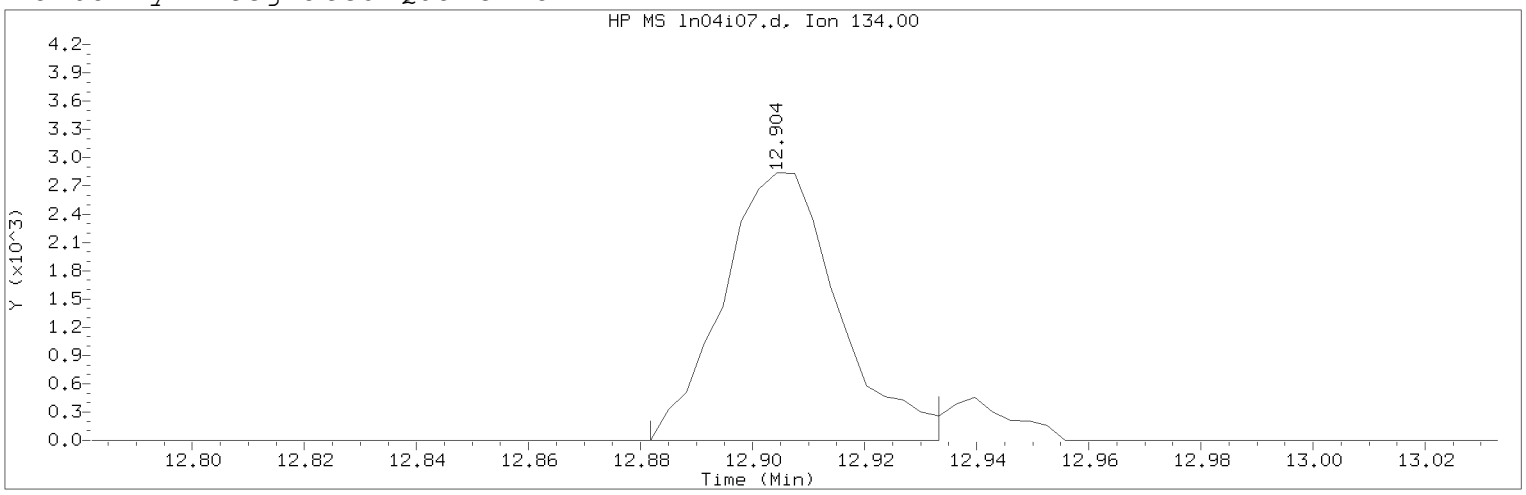
Compound Number : 121
Compound Name : 4-Chlorotoluene
Scan Number : 3487
Retention Time (minutes): 12.695
Quant Ion : 126.00
Area : 6203
On-column Amount (ng) : 0.9062
Integration start scan : 3479 Integration stop scan: 3493
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

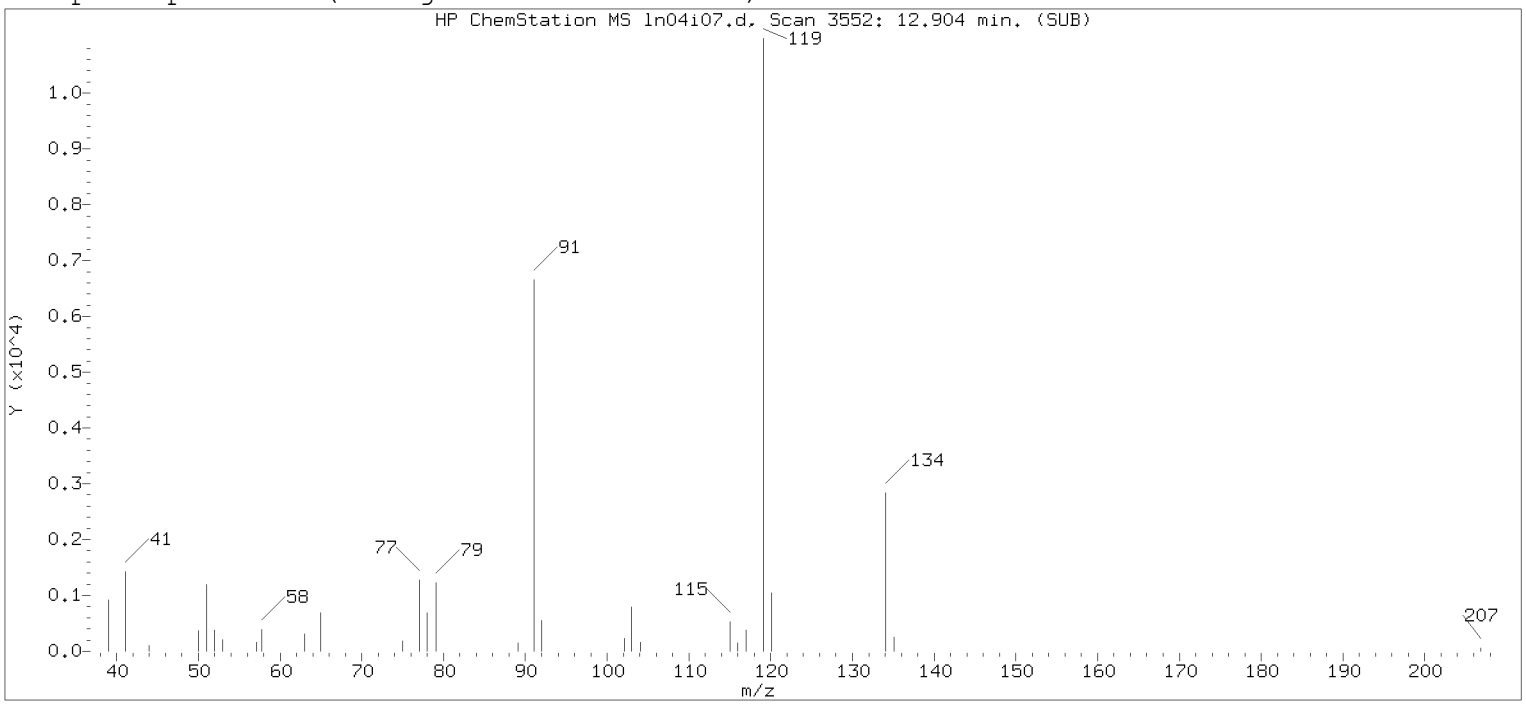
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 4060M
On-Column Amount (ng) : 0.8690
Integration start scan : 3544 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

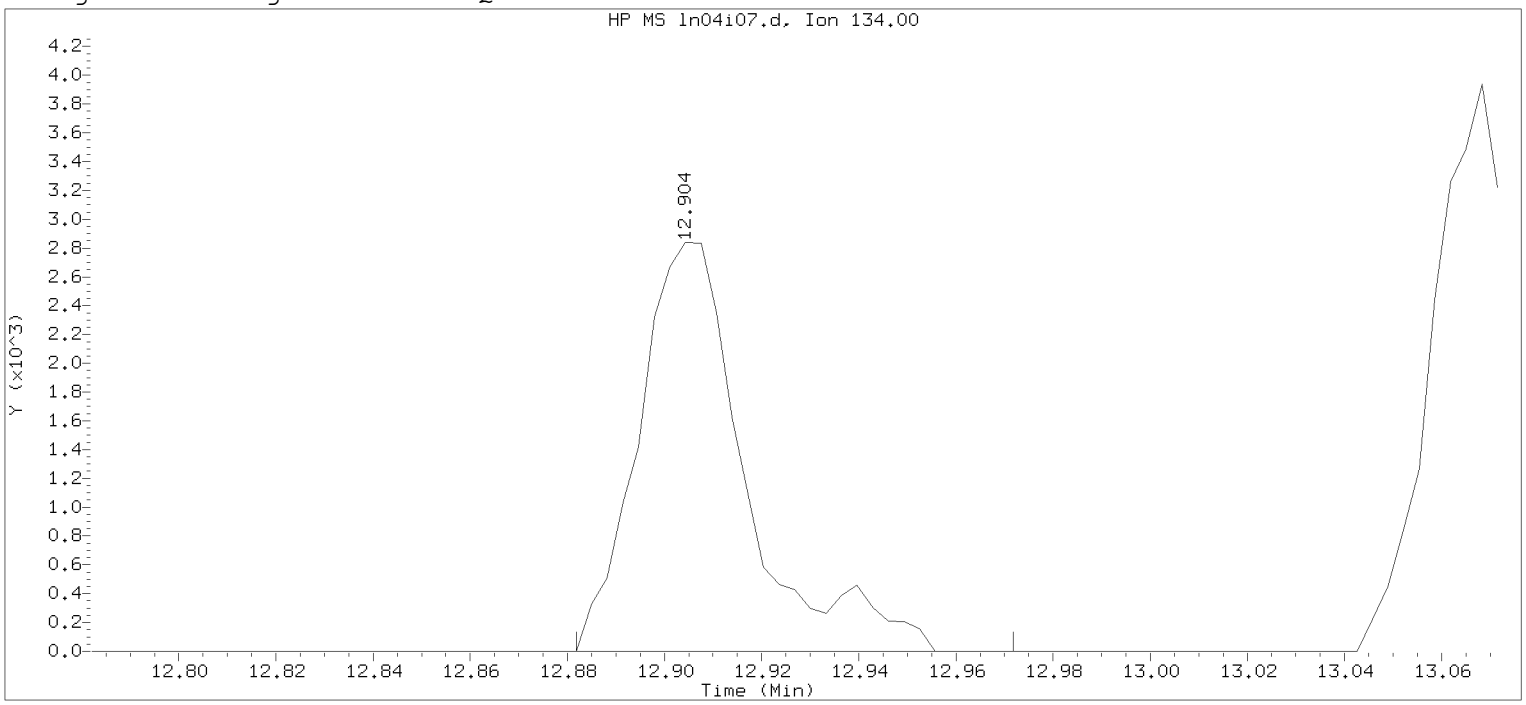
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

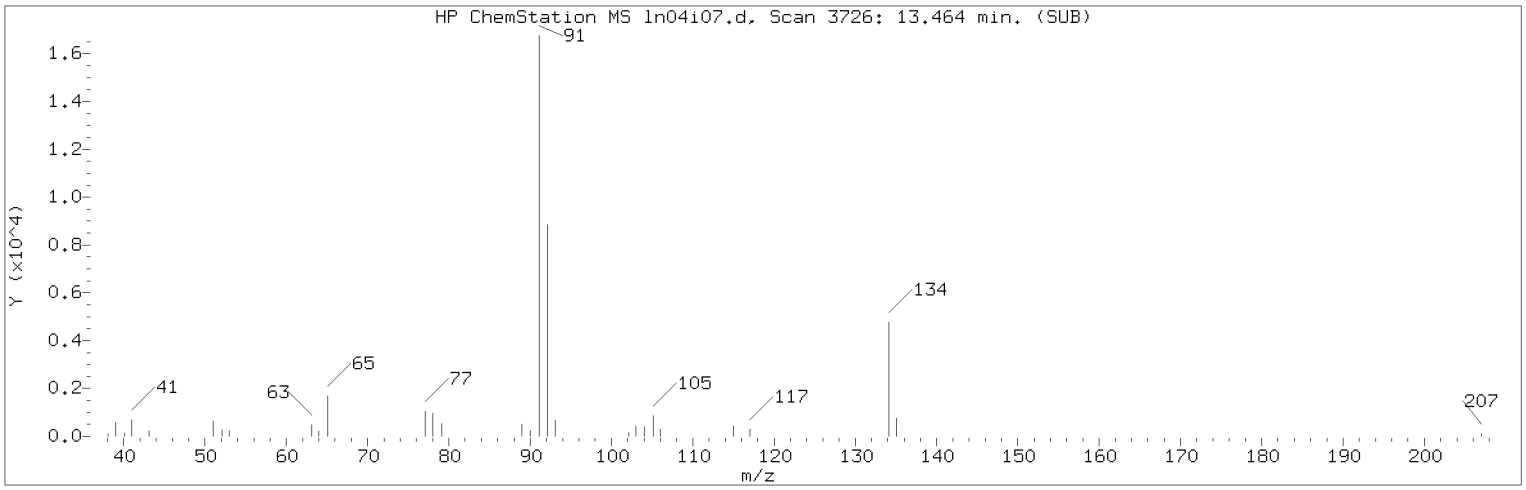
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

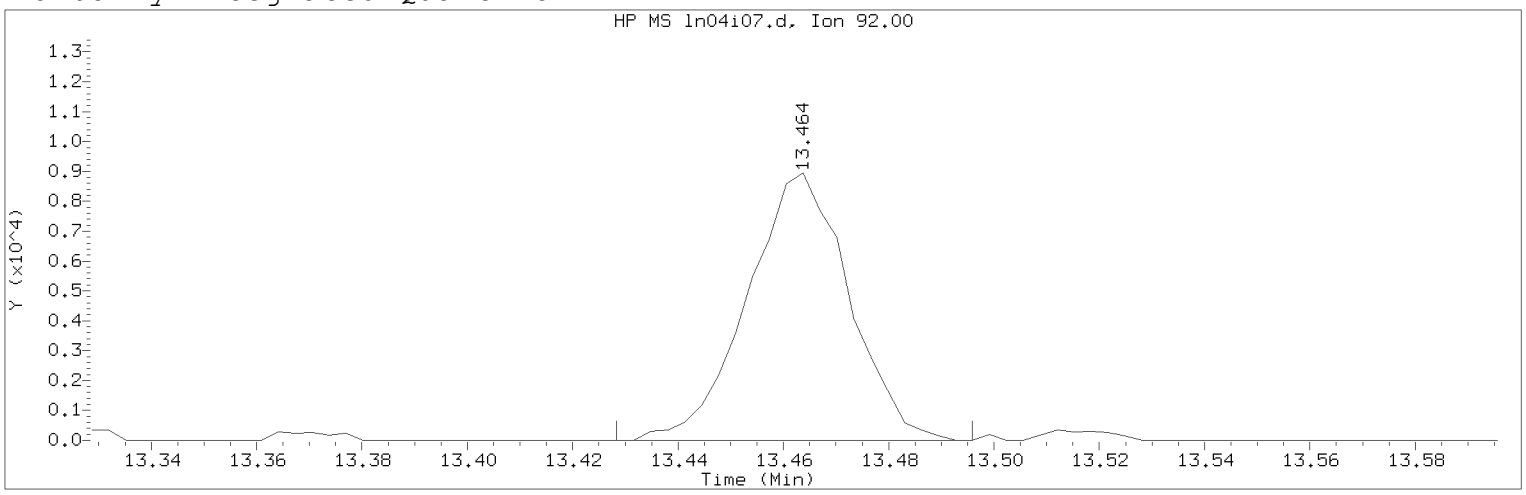
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 4392
On-column Amount (ng) : 0.9024
Integration start scan : 3544 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

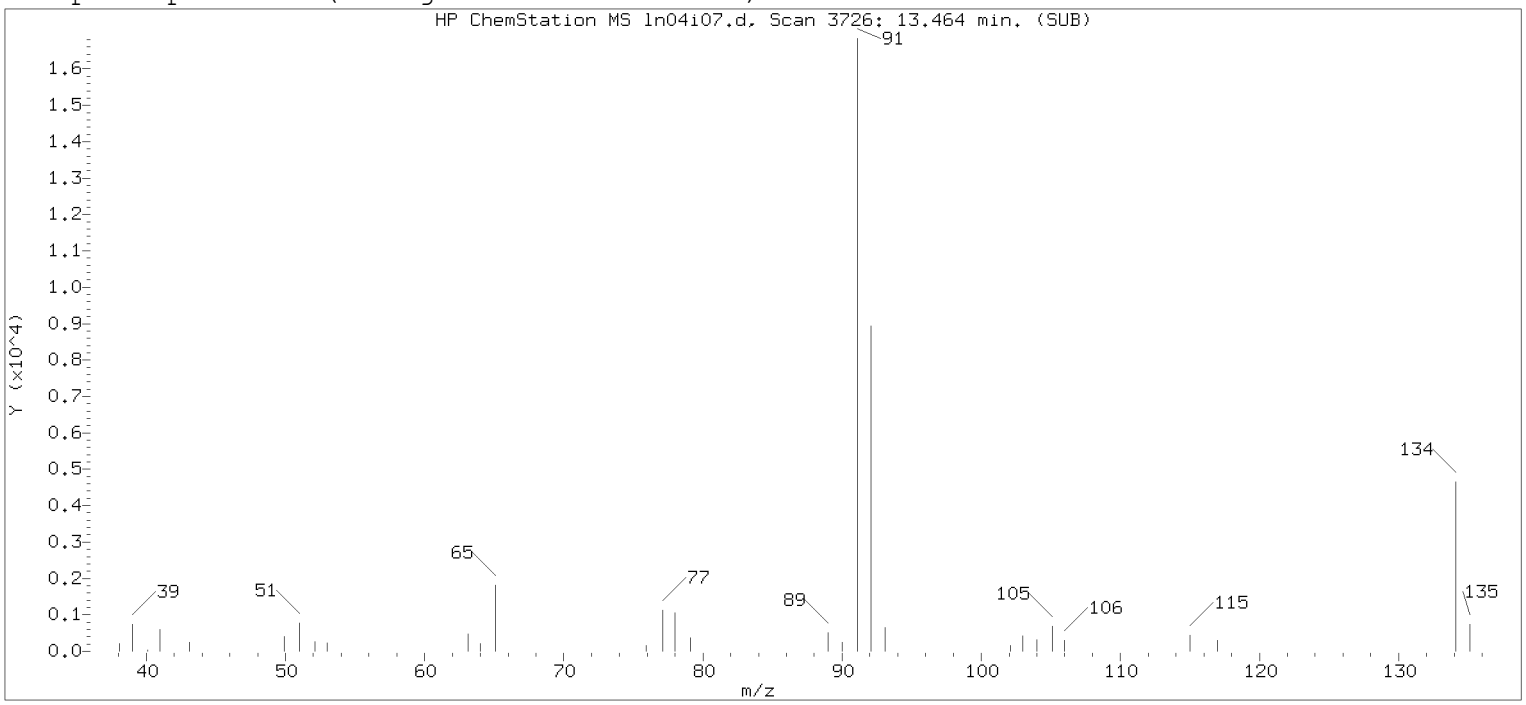
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 3726
Retention Time (minutes): 13.464
Quant Ion : 92.00
Area (flag) : 11964M
On-Column Amount (ng) : 0.9701
Integration start scan : 3714 Integration stop scan: 3735
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

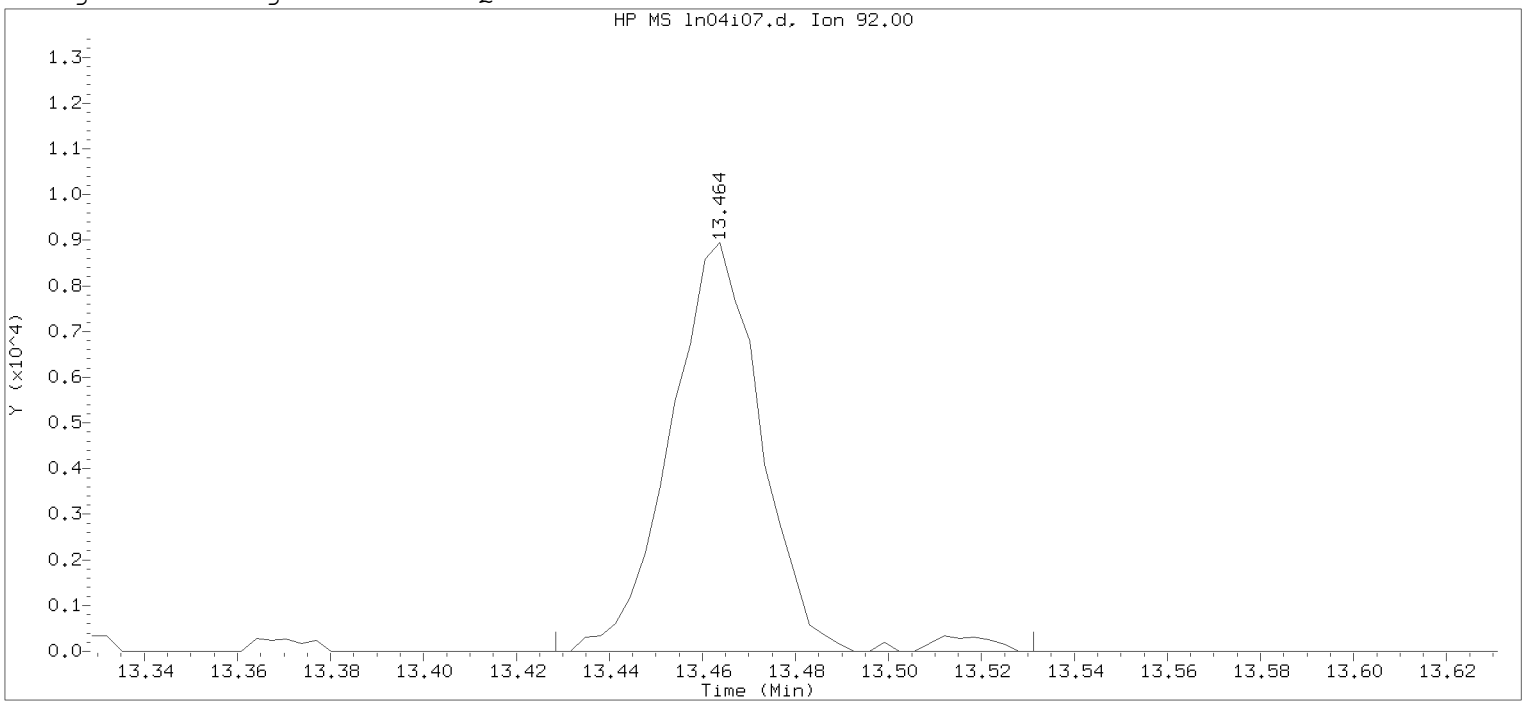
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

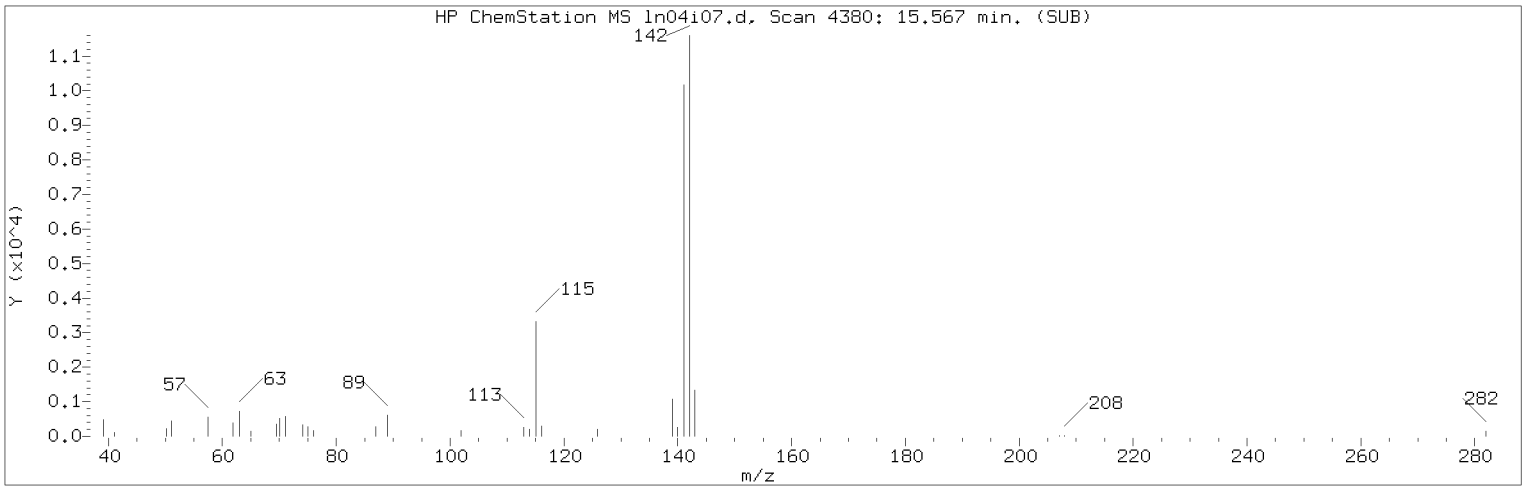
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

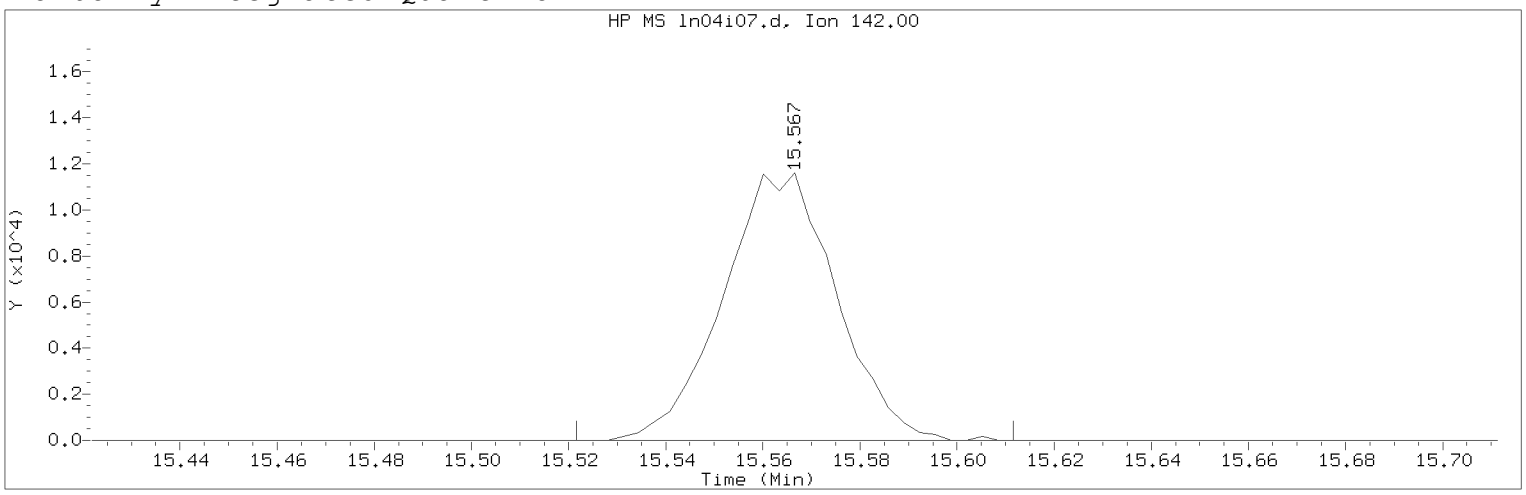
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 3726
Retention Time (minutes): 13.464
Quant Ion : 92.00
Area : 12291
On-column Amount (ng) : 0.9929
Integration start scan : 3714 Integration stop scan: 3746
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

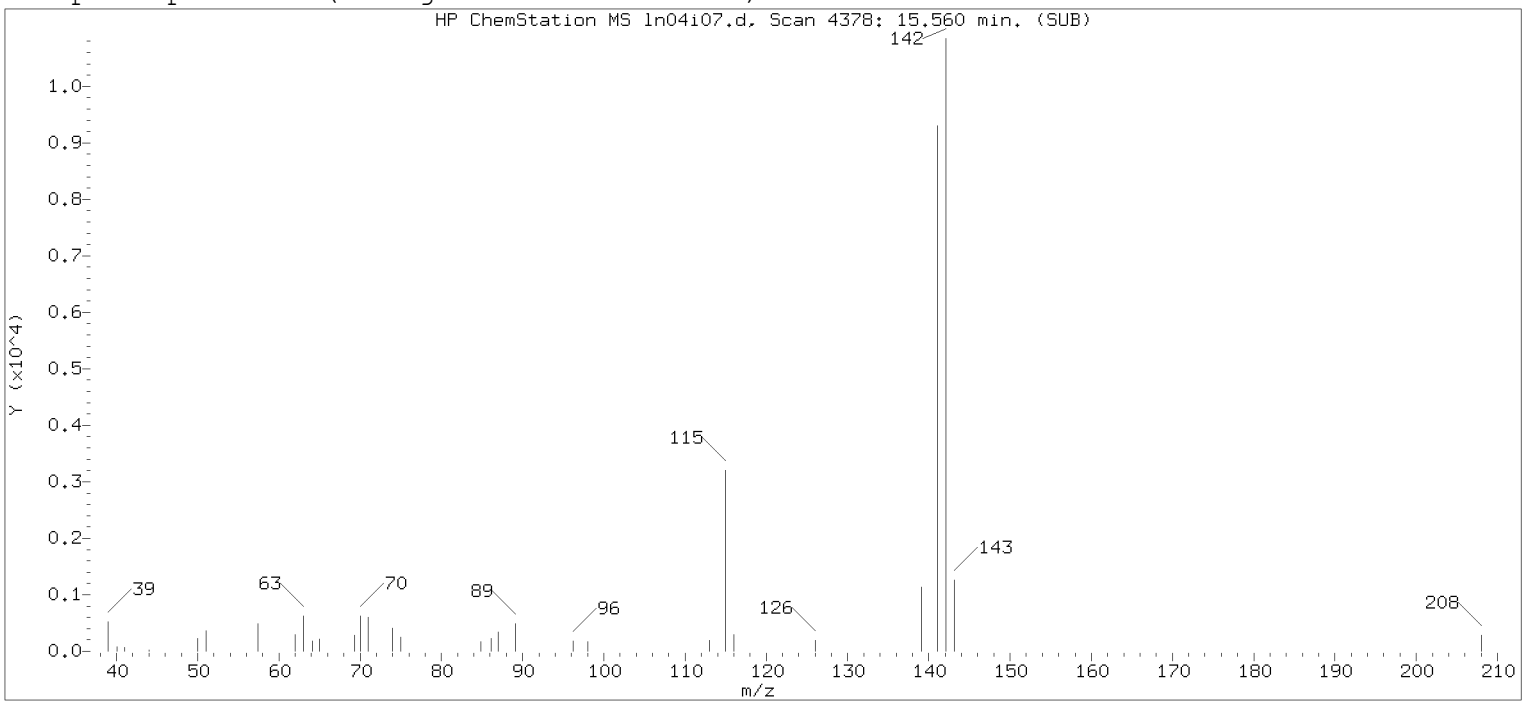
Compound Number : 150
Compound Name : 2-Methylnaphthalene
Scan Number : 4380
Retention Time (minutes): 15.567
Quant Ion : 142.00
Area (flag) : 18783M
On-Column Amount (ng) : 0.9844
Integration start scan : 4365 Integration stop scan: 4393
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

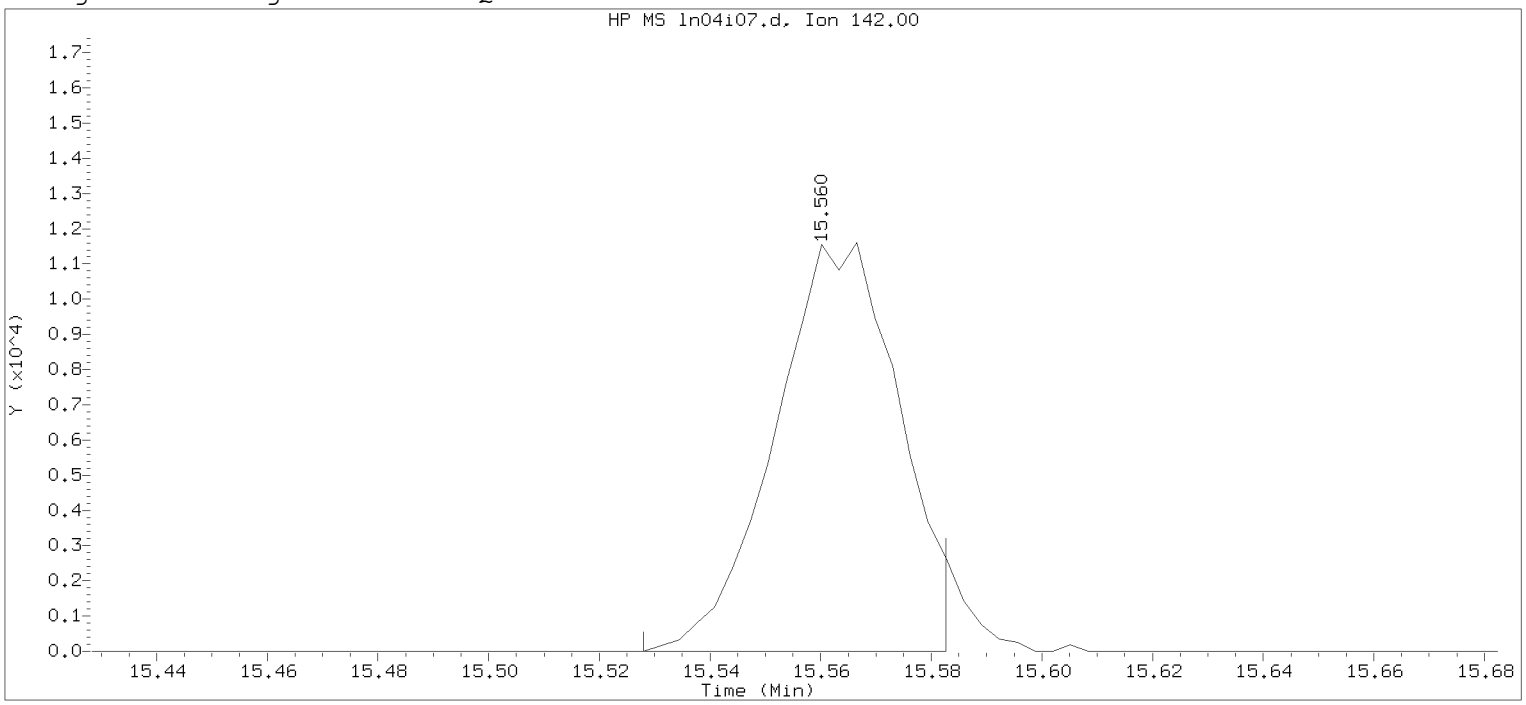
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



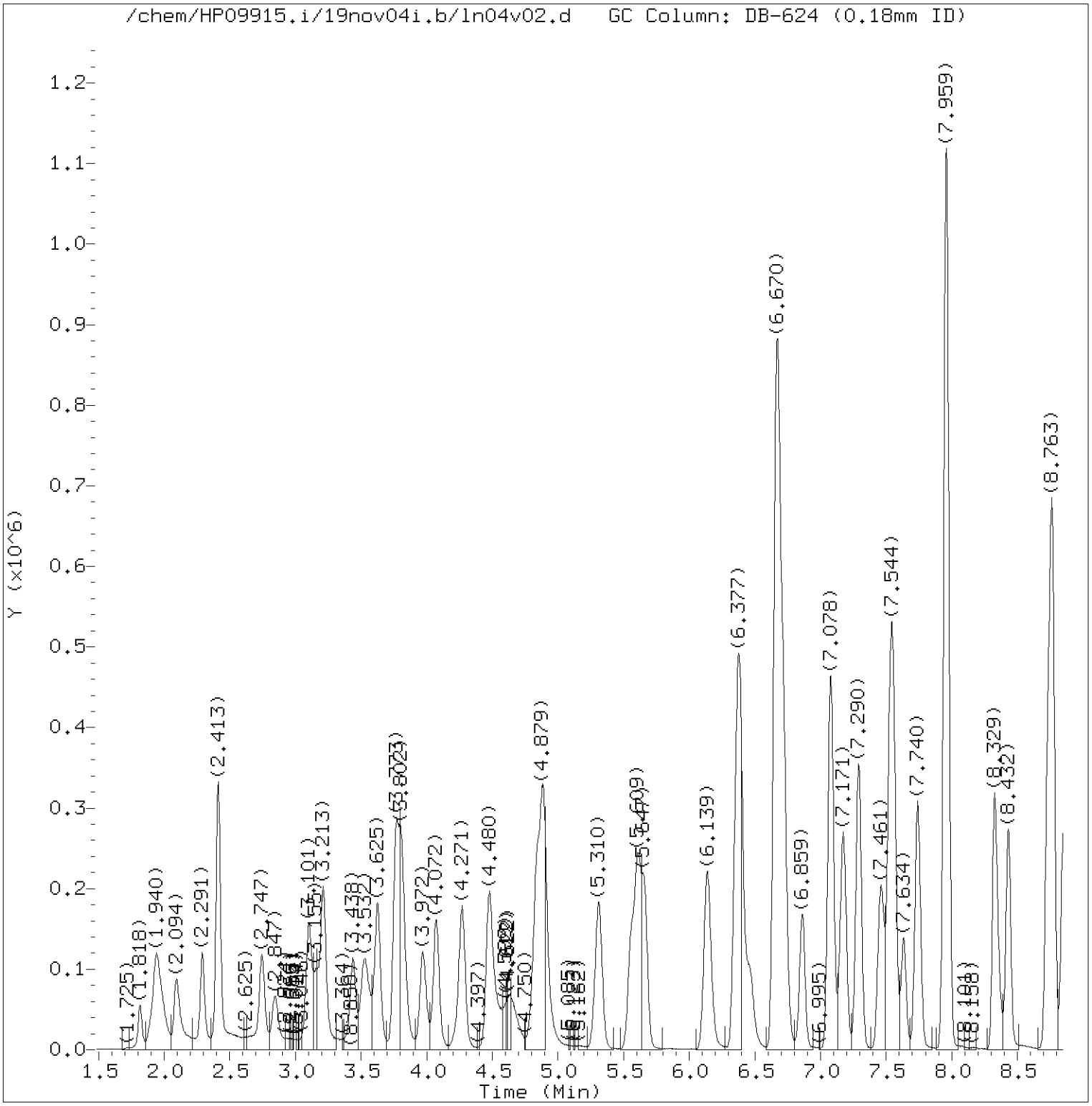
Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 150
Compound Name : 2-Methylnaphthalene
Scan Number : 4378
Retention Time (minutes): 15.560
Quant Ion : 142.00
Area : 17962
On-column Amount (ng) : 0.9472
Integration start scan : 4367 Integration stop scan: 4384
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

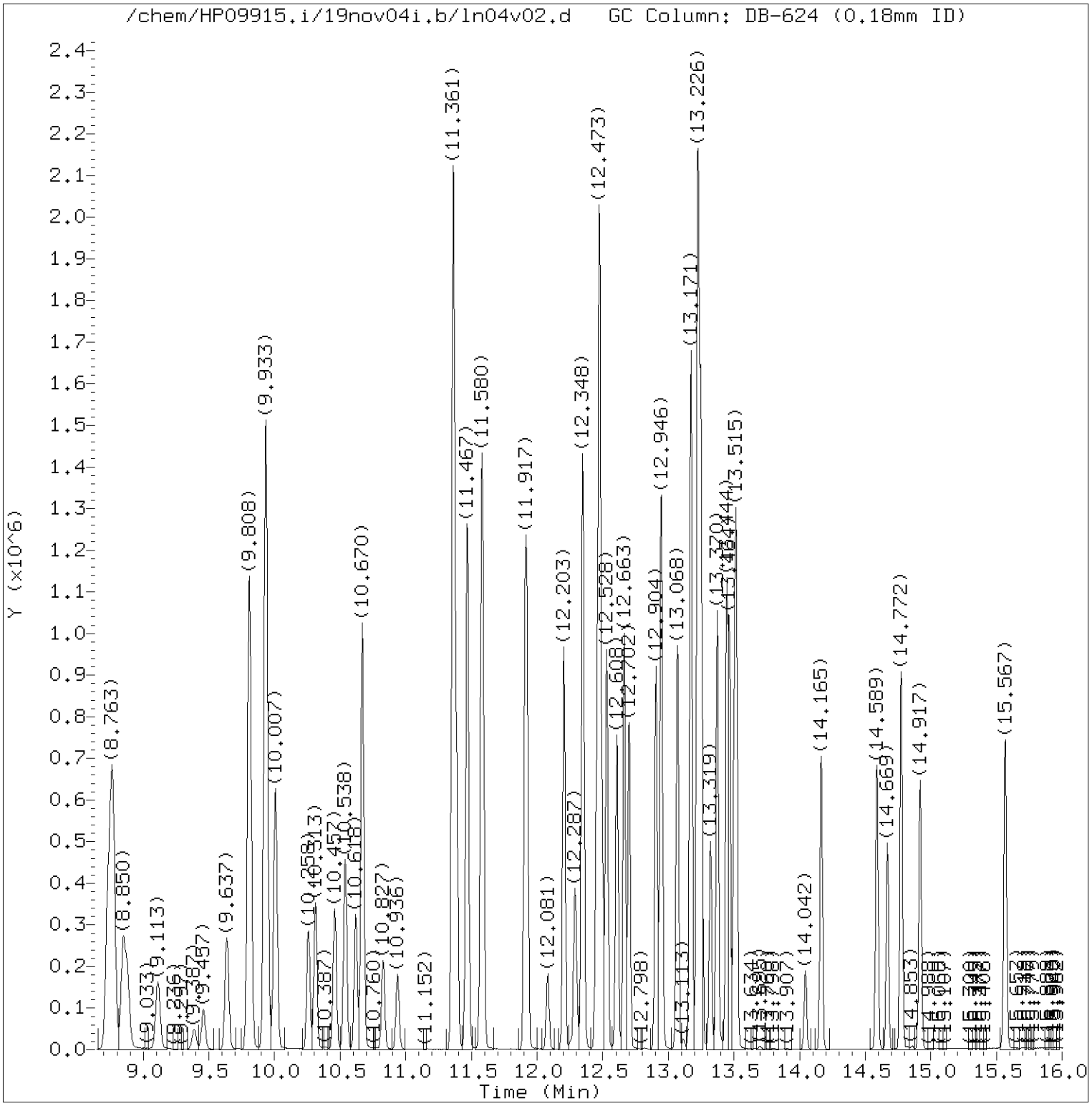
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.094	85	158021M	18.732
4) Chloromethane	(2)	2.291	50	153886	18.927
5) 1,3-Butadiene	(2)	2.413	39	132622M	19.645
6) Vinyl Chloride	(2)	2.413	62	157013	19.349
8) Bromomethane	(2)	2.747	94	104324	17.935
9) Chloroethane	(2)	2.847	64	82467	18.493
10) Dichlorofluoromethane	(2)	3.101	67	174118M	16.224
12) Trichlorofluoromethane	(2)	3.159	101	181238	20.746
11) n-Pentane	(2)	3.213	43	196297	19.014
14) Ethyl ether	(2)	3.438	59	93832	16.622
15) Freon 123a	(2)	3.528	67	136689	19.450
16) Acrolein	(1)	3.625	56	286690	135.125
17) 1,1-Dichloroethene	(2)	3.766	96	107244	20.914
19) Freon 113	(2)	3.795	101	115842	19.801
18) Acetone	(1)	3.805	58	130076	136.752
22) Methyl Iodide	(2)	3.969	142	197263	18.564
21) 2-Propanol	(1)	4.008	45	98510	144.063
23) Carbon Disulfide	(2)	4.075	76	360582	18.660
27) Methyl Acetate	(2)	4.249	43	126109	19.095
25) Allyl Chloride	(2)	4.271	41	171048	18.595
28) Methylene Chloride	(2)	4.474	84	124367	20.377
29)*t-Butyl alcohol-d10	(1)	4.503	65	282794M	250.000
30) t-Butyl alcohol	(1)	4.641	59	227283	190.899
31) Acrylonitrile	(2)	4.834	53	337483	94.980
32) trans-1,2-Dichloroethene	(2)	4.888	96	118658	20.003
33) Methyl Tertiary Butyl Ether	(2)	4.892	73	367523	18.875
34) n-Hexane	(2)	5.310	57	185206M	20.067
36) 1,1-Dichloroethane	(2)	5.554	63	201428	19.465
38) di-Isopropyl ether	(2)	5.609	45	380712	19.075
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	177031	19.067
40) Ethyl t-butyl ether	(2)	6.139	59	369375	19.070
43) 1,2-Dichloroethene (Total)	(2)		96	258427	40.995
44) 2-Butanone	(2)	6.361	43	651073	142.743
42) cis-1,2-Dichloroethene	(2)	6.384	96	139769	20.992
45) 2,2-Dichloropropane	(2)	6.396	77	163413	20.314
47) Propionitrile	(1)	6.461	54	209265	141.065
48) Methacrylonitrile	(2)	6.670	67	556962	145.312
49) Bromochloromethane	(2)	6.712	128	66215	18.755

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.721	71	123960	92.508
51) Chloroform	(2)	6.866	83	199497	20.156
52)$Dibromofluoromethane	(2)	7.075	113	293558	49.637
53) 1,1,1-Trichloroethane	(2)	7.081	97	172182	20.382
54) Cyclohexane	(2)	7.171	56	214913	19.025
56) Carbon Tetrachloride	(2)	7.287	117	143405	20.016
55) 1,1-Dichloropropene	(2)	7.294	75	164177	20.065
58) Isobutyl Alcohol	(1)	7.461	41	180862	451.413
57)$1,2-Dichloroethane-d4	(2)	7.531	102	74610	49.500
60) Benzene	(2)	7.560	78	492012	19.996
61) 1,2-Dichloroethane	(2)	7.638	62	163231	20.625
65) t-Amyl methyl ether	(2)	7.740	73	369180	18.989
67) n-Heptane	(2)	7.956	43	163362M	18.948
66)*Fluorobenzene	(2)	7.959	96	1209671	50.000
69) n-Butanol	(1)	8.326	56	314470M	911.924
71) Trichloroethene	(2)	8.429	95	124893	20.159
72) Methylcyclohexane	(2)	8.731	83	222042	19.318
73) 1,2-Dichloropropane	(2)	8.769	63	127774	20.450
76) Methyl Methacrylate	(2)	8.847	69	115569	19.128
75) 1,4-Dioxane	(1)	8.853	88	47747M	503.753
74) Dibromomethane	(2)	8.879	93	80909	20.014
78) Bromodichloromethane	(2)	9.113	83	144408	19.907
79) 2-Nitropropane	(2)	9.383	41	35869	16.324
80) 2-Chloroethyl Vinyl Ether	(2)	9.457	63	51088	19.038
81) cis-1,3-Dichloropropene	(2)	9.637	75	191486	19.874
82) 4-Methyl-2-pentanone	(2)	9.808	43	893533	92.810
83)$Toluene-d8	(3)	9.933	98	1243931	50.214
88) Toluene	(3)	10.007	92	314091	20.224
90) 1,3-Dichloropropene (total)	(3)		100	360855	39.085
89) trans-1,3-Dichloropropene	(3)	10.258	75	169369	19.211
91) Ethyl Methacrylate	(3)	10.313	69	194593	18.162
92) 1,1,2-Trichloroethane	(3)	10.457	97	120085	20.394
93) Tetrachloroethene	(3)	10.538	166	145489	22.119
94) 1,3-Dichloropropane	(3)	10.618	76	197817	19.676
96) 2-Hexanone	(3)	10.670	43	659041	92.150
97) Dibromochloromethane	(3)	10.827	129	119169	19.757
99) 1,2-Dibromoethane	(3)	10.936	107	127100	19.878
100)*Chlorobenzene-d5	(3)	11.361	117	946755	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) 1-Chlorohexane	(3)	11.364	91	162531	19.480
102) Chlorobenzene	(3)	11.387	112	355167	20.223
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	114709	19.823
104) Ethylbenzene	(3)	11.470	91	602093	20.283
106) m+p-Xylene	(3)	11.583	106	478306	40.959
108) Xylene (Total)	(3)		106	712690	61.279
107) o-Xylene	(3)	11.908	106	234384	20.320
109) Styrene	(3)	11.924	104	391950	20.563
110) Bromoform	(3)	12.081	173	80910	17.952
111) Isopropylbenzene	(3)	12.203	105	603598	20.864
112) Cyclohexanone	(1)	12.287	55	166810	449.364
114)$4-Bromofluorobenzene	(3)	12.348	95	469009	49.999
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	188446M	19.576
115) Bromobenzene	(4)	12.467	156	151805	19.821
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	290498	97.834
117) 1,2,3-Trichloropropane	(4)	12.496	110	58902M	19.940
119) n-Propylbenzene	(4)	12.531	91	694916	20.768
120) 2-Chlorotoluene	(4)	12.608	126	143440	20.178
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	499772	20.552
121) 4-Chlorotoluene	(4)	12.702	126	148830	20.114
124) tert-Butylbenzene	(4)	12.907	134	103762M	20.632
125) Pentachloroethane	(4)	12.943	167	74538	17.213
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	511834	19.971
127) sec-Butylbenzene	(4)	13.068	105	616554	20.545
129) 1,3-Dichlorobenzene	(4)	13.168	146	282424	20.067
130) p-Isopropyltoluene	(4)	13.174	119	533278	20.541
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	509597	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	298831	20.482
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	539562	19.874
135) Benzyl Chloride	(4)	13.319	91	329267	16.019
136) 1,3-Diethylbenzene	(4)	13.374	119	322622	19.095
141) Diethylbenzene (total)	(4)		100	935720	57.258
137) 1,4-Diethylbenzene	(4)	13.444	119	340230	19.006
139) n-Butylbenzene	(4)	13.464	92	258920	19.505
138) 1,2-Dichlorobenzene	(4)	13.502	146	282807	20.364
140) 1,2-Diethylbenzene	(4)	13.518	119	272868	19.158
142) 1,2-Dibromo-3-chloropropane	(4)	14.042	75	40654	19.292
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	203102	19.035

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146)	1,2,4-Trichlorobenzene	(4)	14.589	180	199046	19.186
147)	Hexachlorobutadiene	(4)	14.666	225	82991	16.942
148)	Naphthalene	(4)	14.772	128	666056	19.970
149)	1,2,3-Trichlorobenzene	(4)	14.917	180	192487	19.067
150)	2-Methylnaphthalene	(4)	15.567	142	374385	18.228

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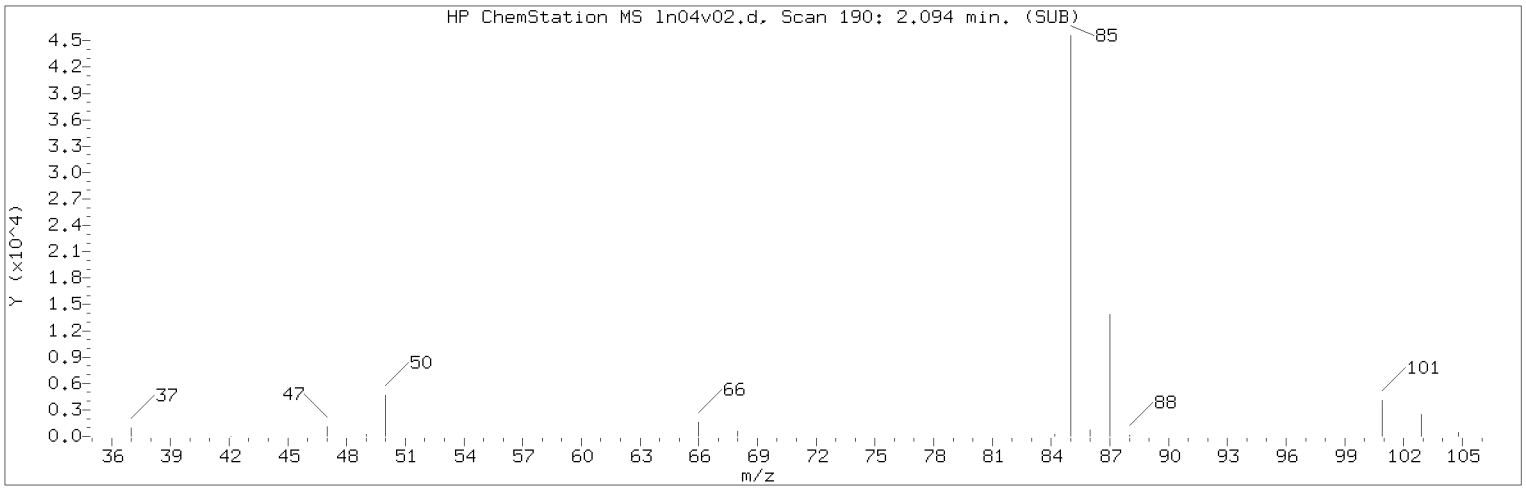
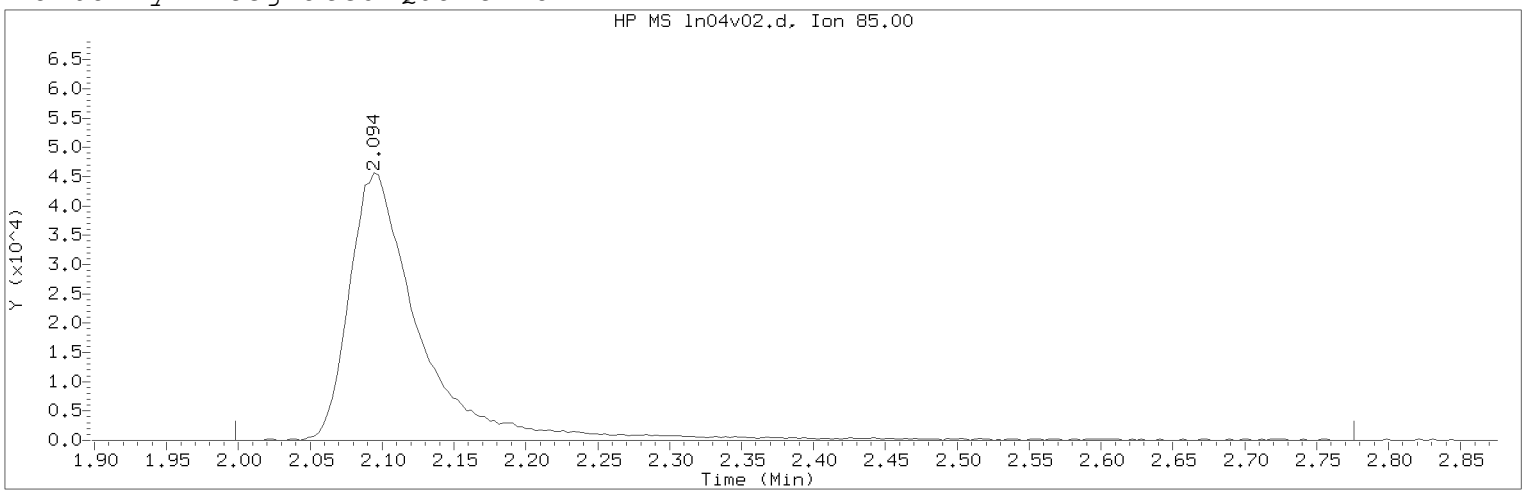
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

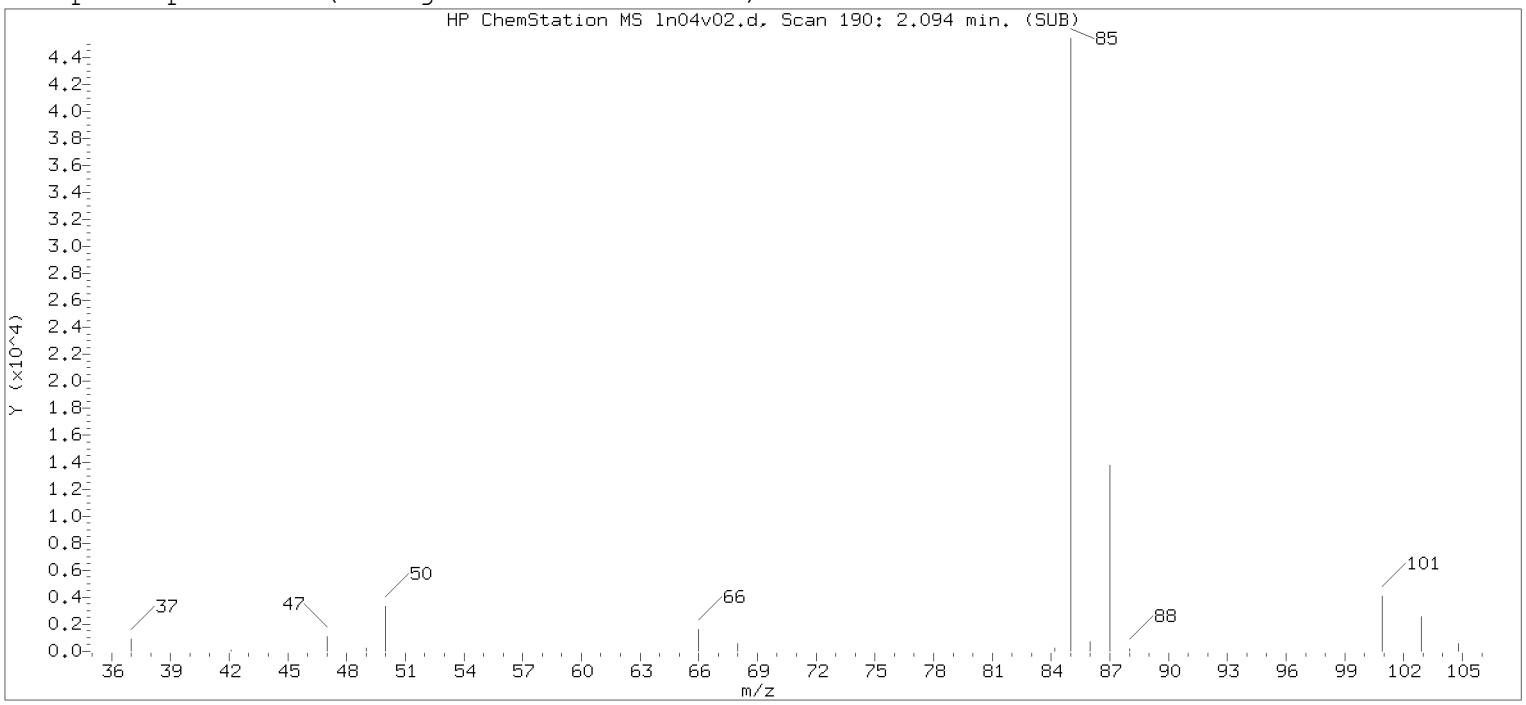
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area (flag) : 158021M
On-Column Amount (ng) : 18.7320
Integration start scan : 159 Integration stop scan: 401
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

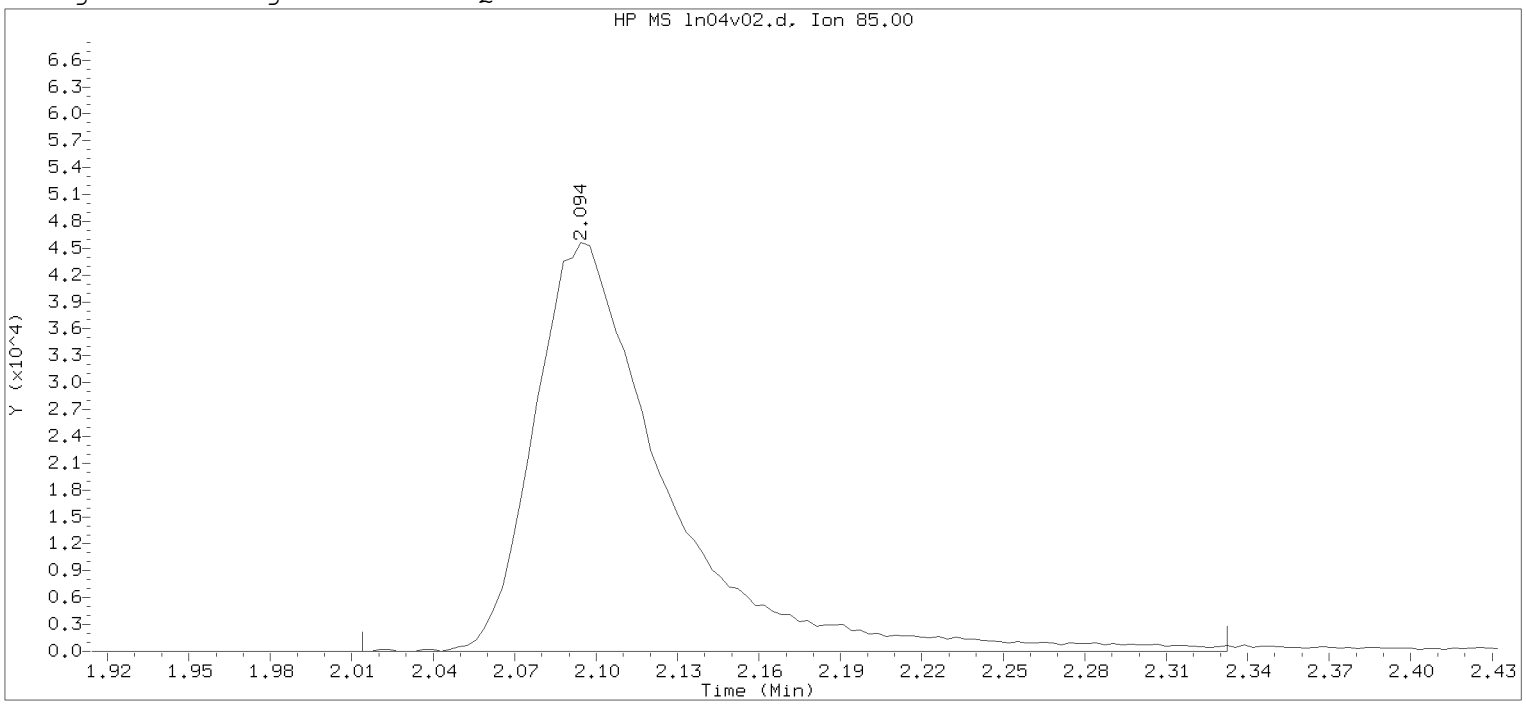
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area : 152845
On-column Amount (ng) : 18.1184
Integration start scan : 164 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

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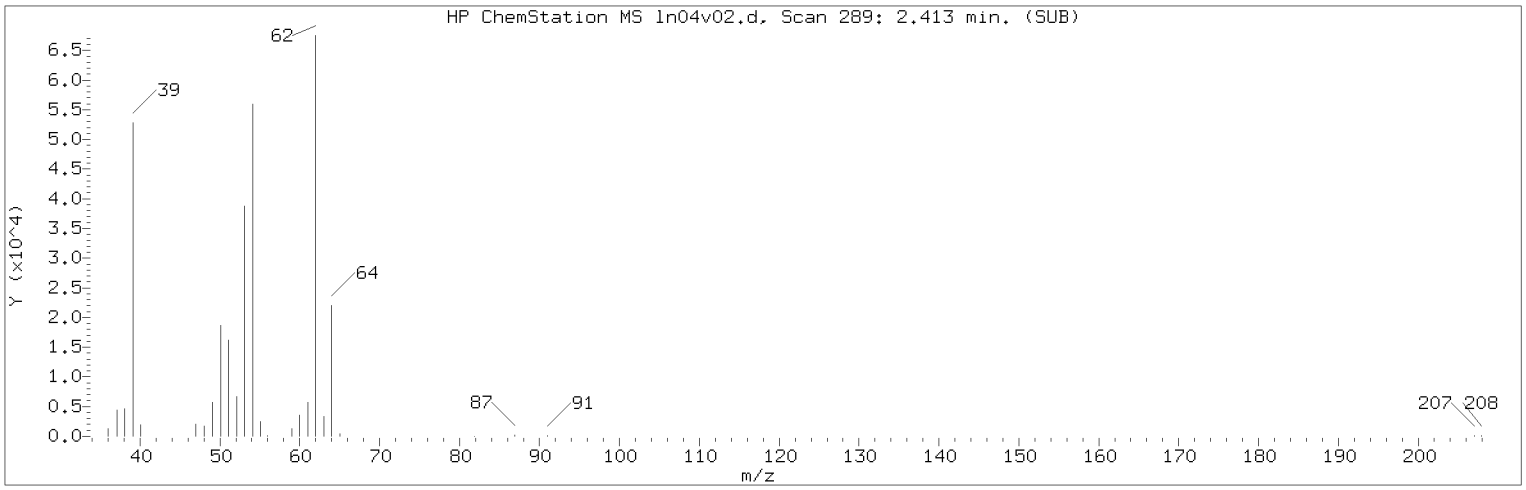
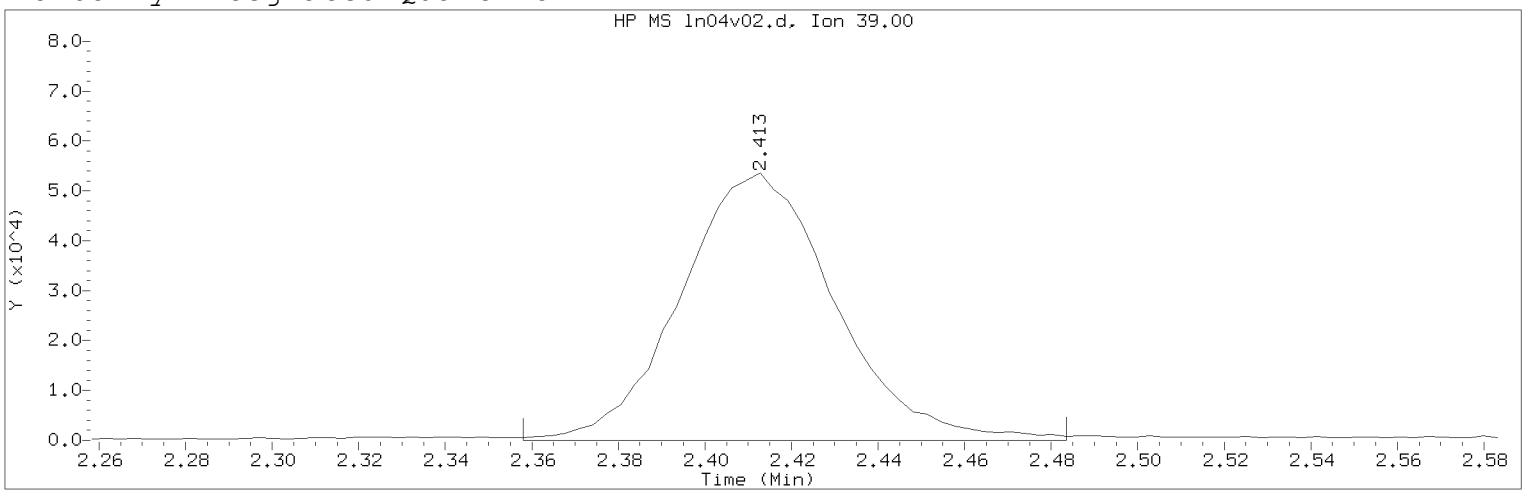
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

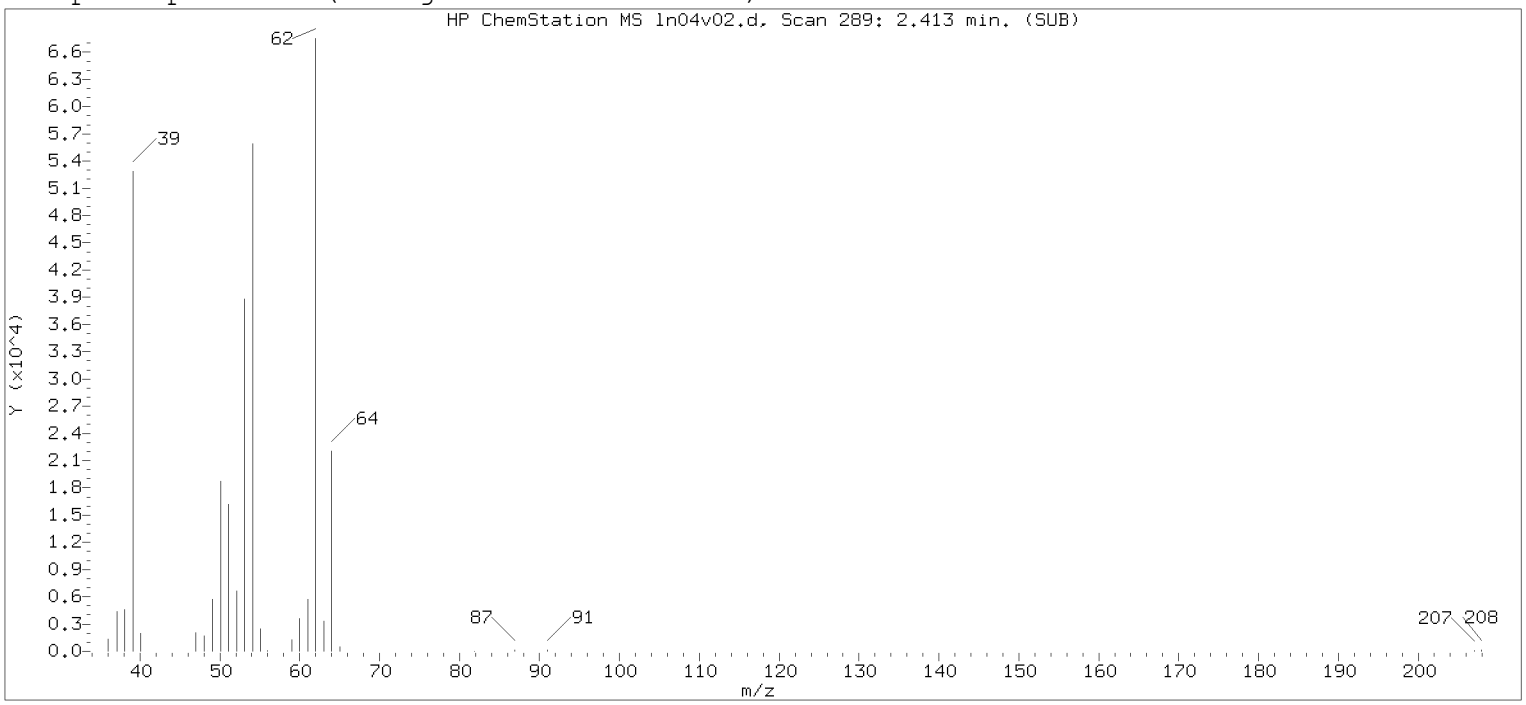
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area (flag) : 132622M
On-Column Amount (ng) : 19.6453
Integration start scan : 271 Integration stop scan: 310
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

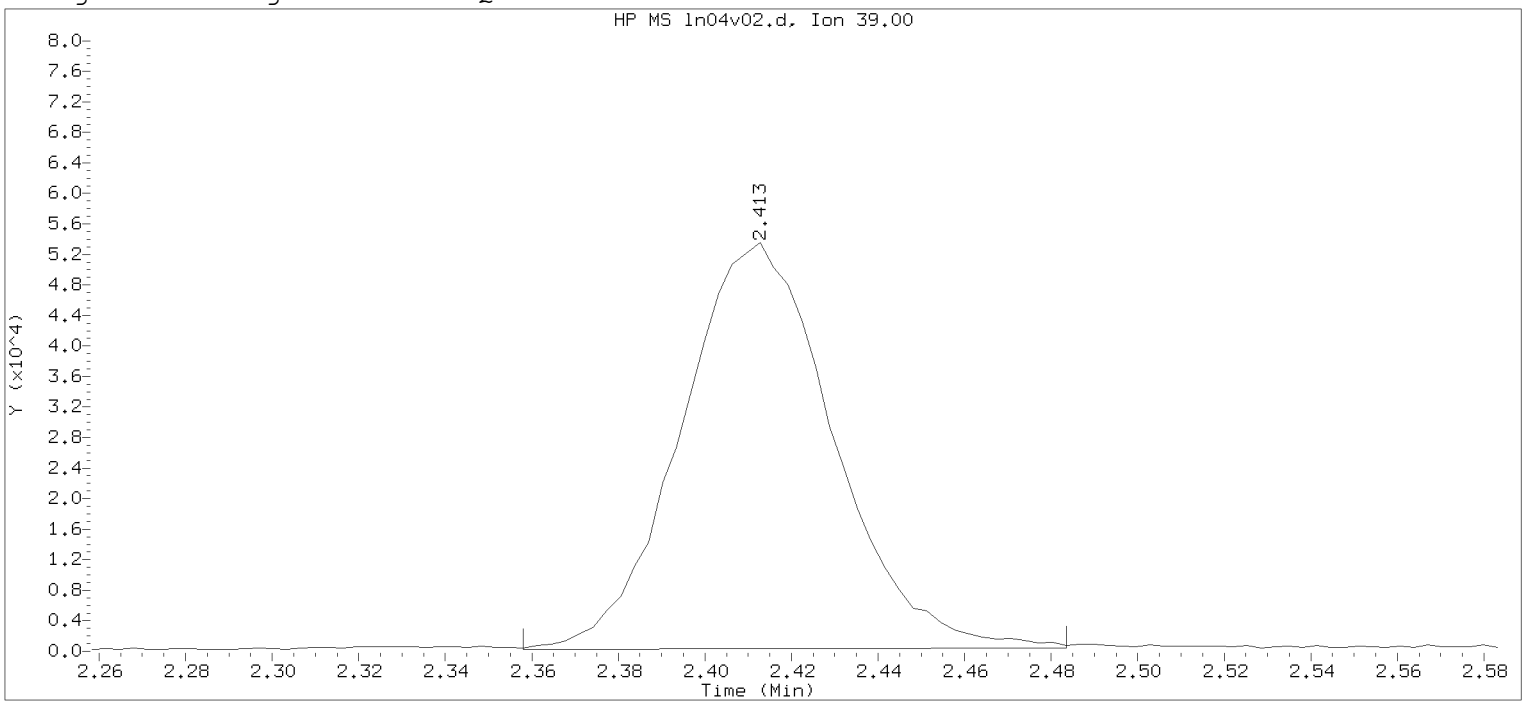
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area : 129885
On-column Amount (ng) : 19.2400
Integration start scan : 271 Integration stop scan: 310
Y at integration start : 283 Y at integration end: 414

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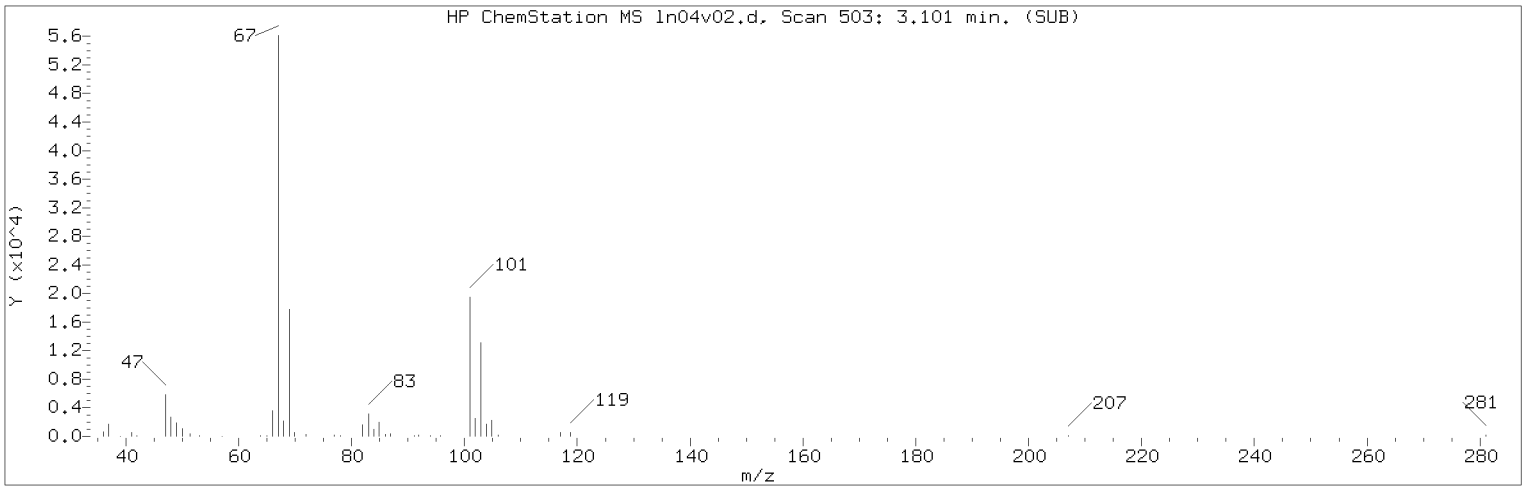
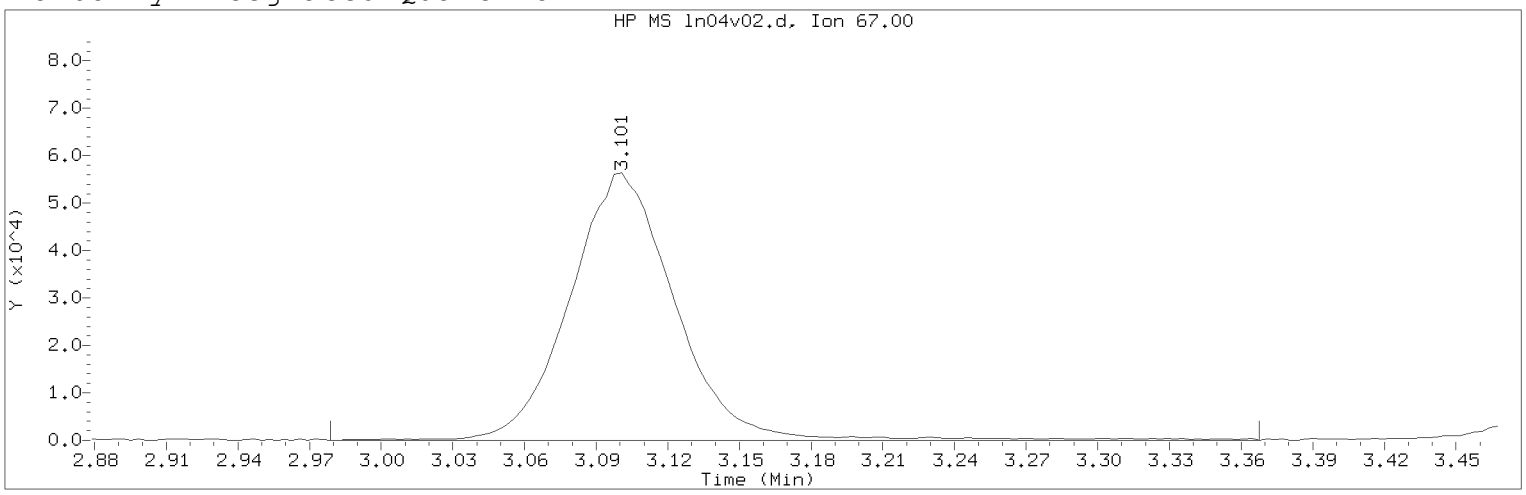
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

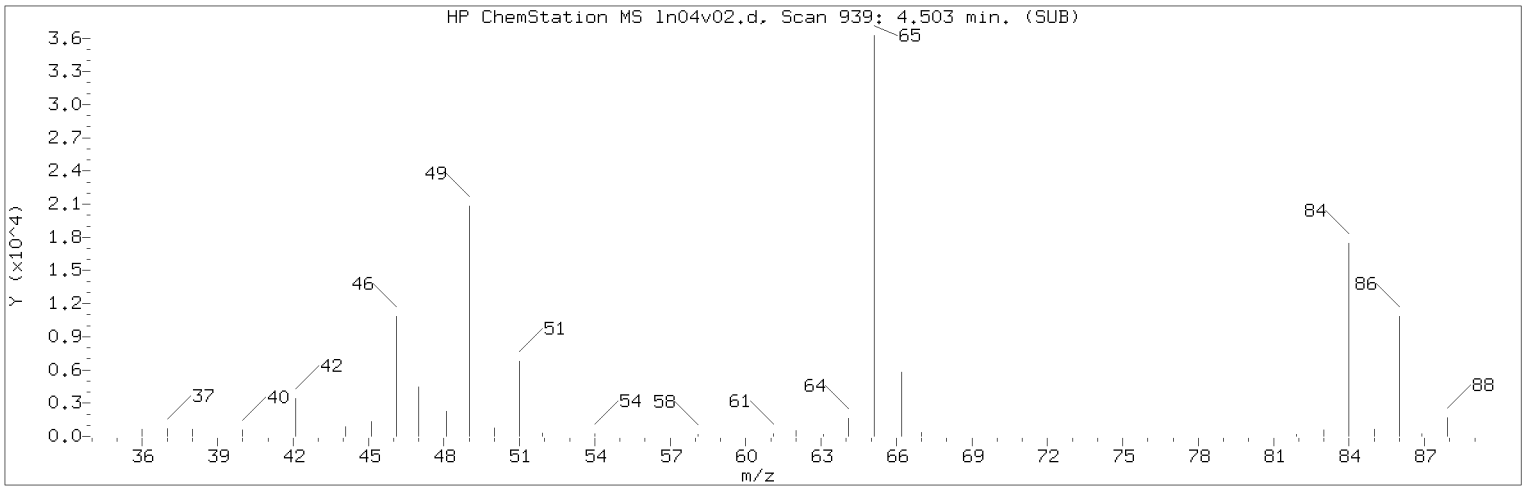
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 503
Retention Time (minutes): 3.101
Quant Ion : 67.00
Area (flag) : 174118M
On-Column Amount (ng) : 16.2240
Integration start scan : 464 Integration stop scan: 585
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

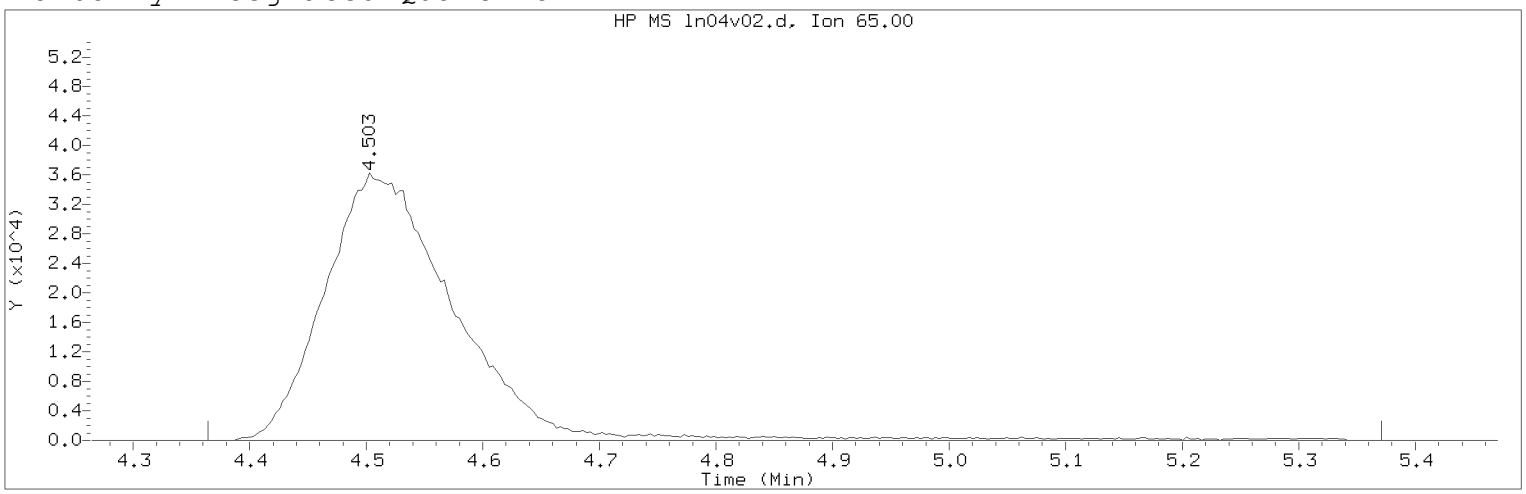
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

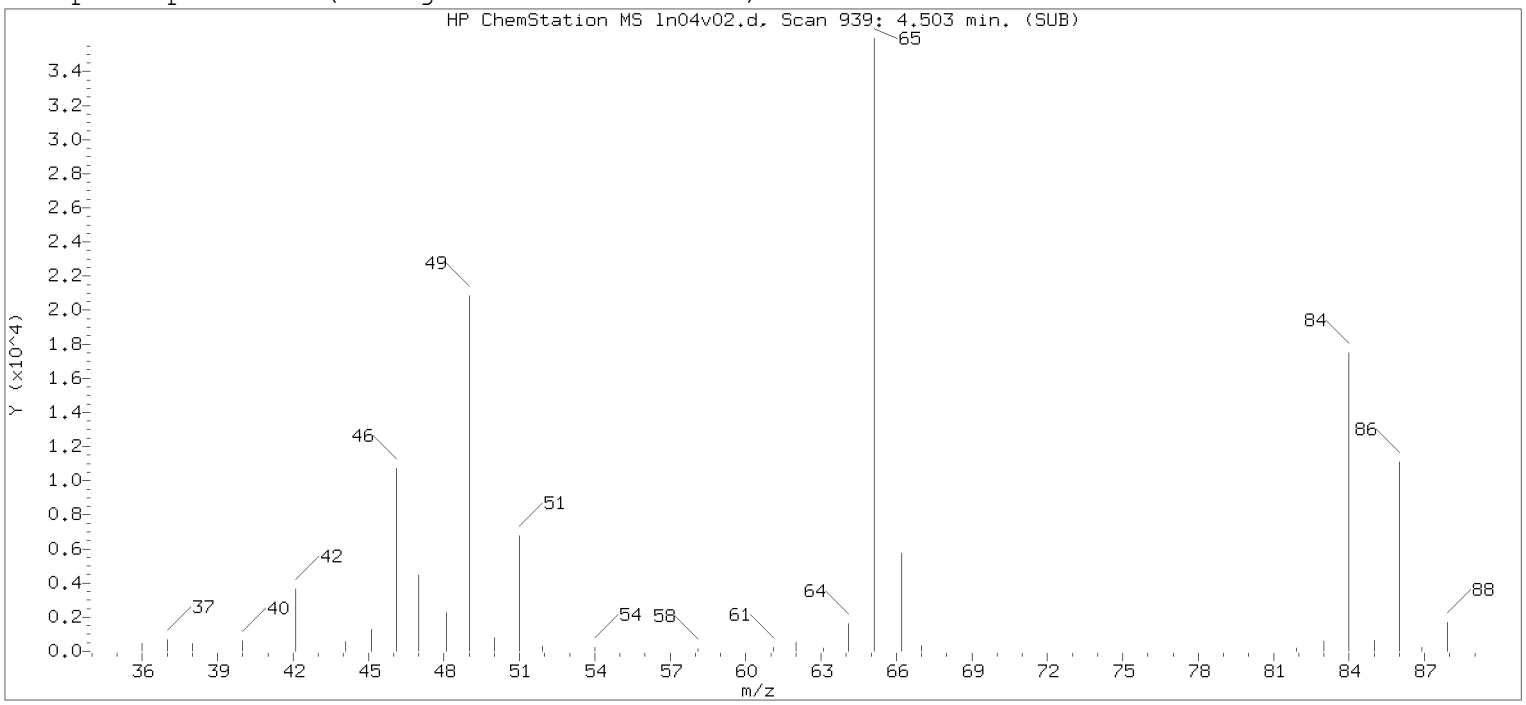
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area (flag) : 282794M
On-Column Amount (ng) : 250.0000
Integration start scan : 895 Integration stop scan: 1208
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

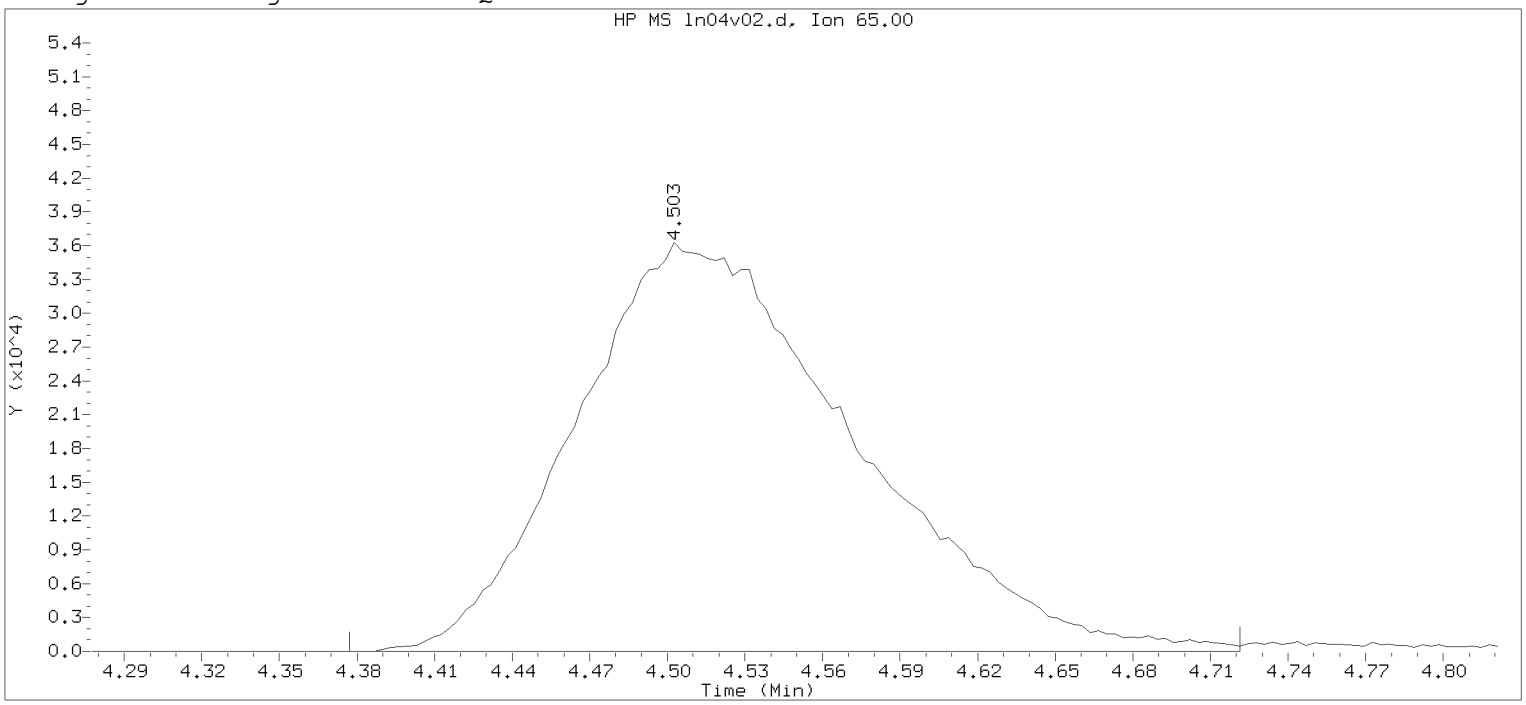
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

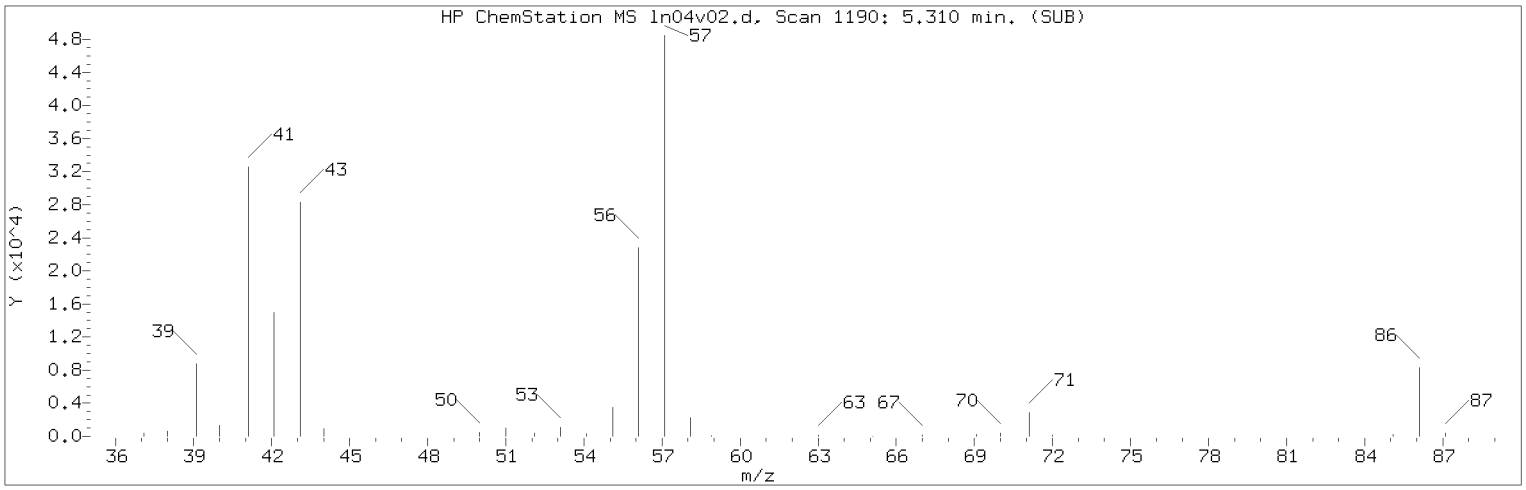
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

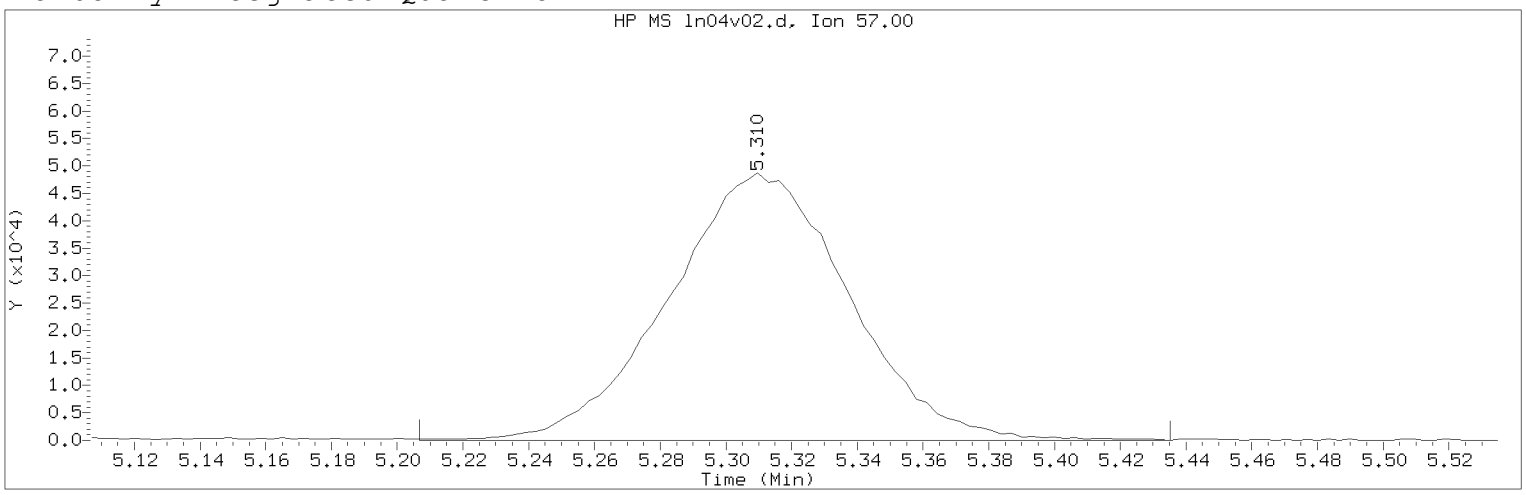
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area : 270950
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1006
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

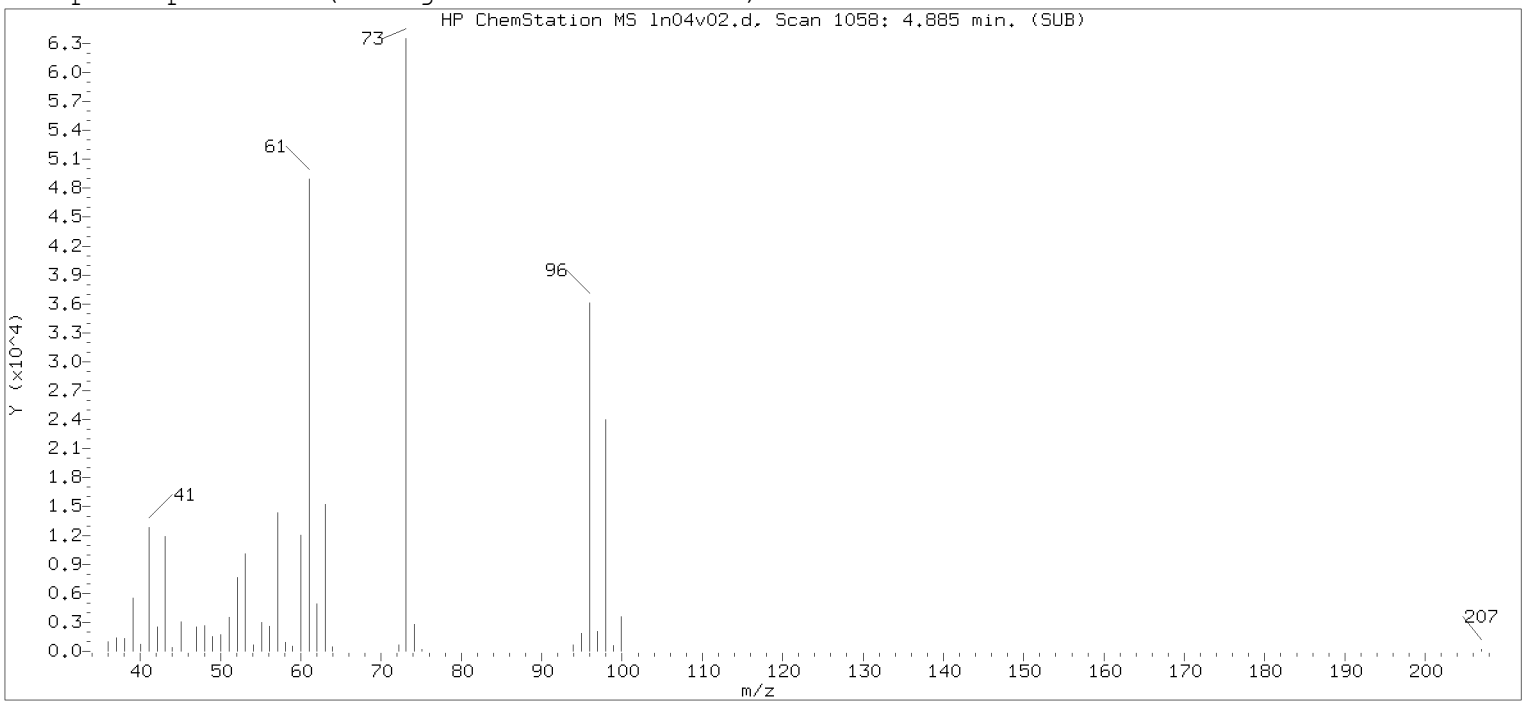
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1190
Retention Time (minutes): 5.310
Quant Ion : 57.00
Area (flag) : 185206M
On-Column Amount (ng) : 20.0675
Integration start scan : 1157 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

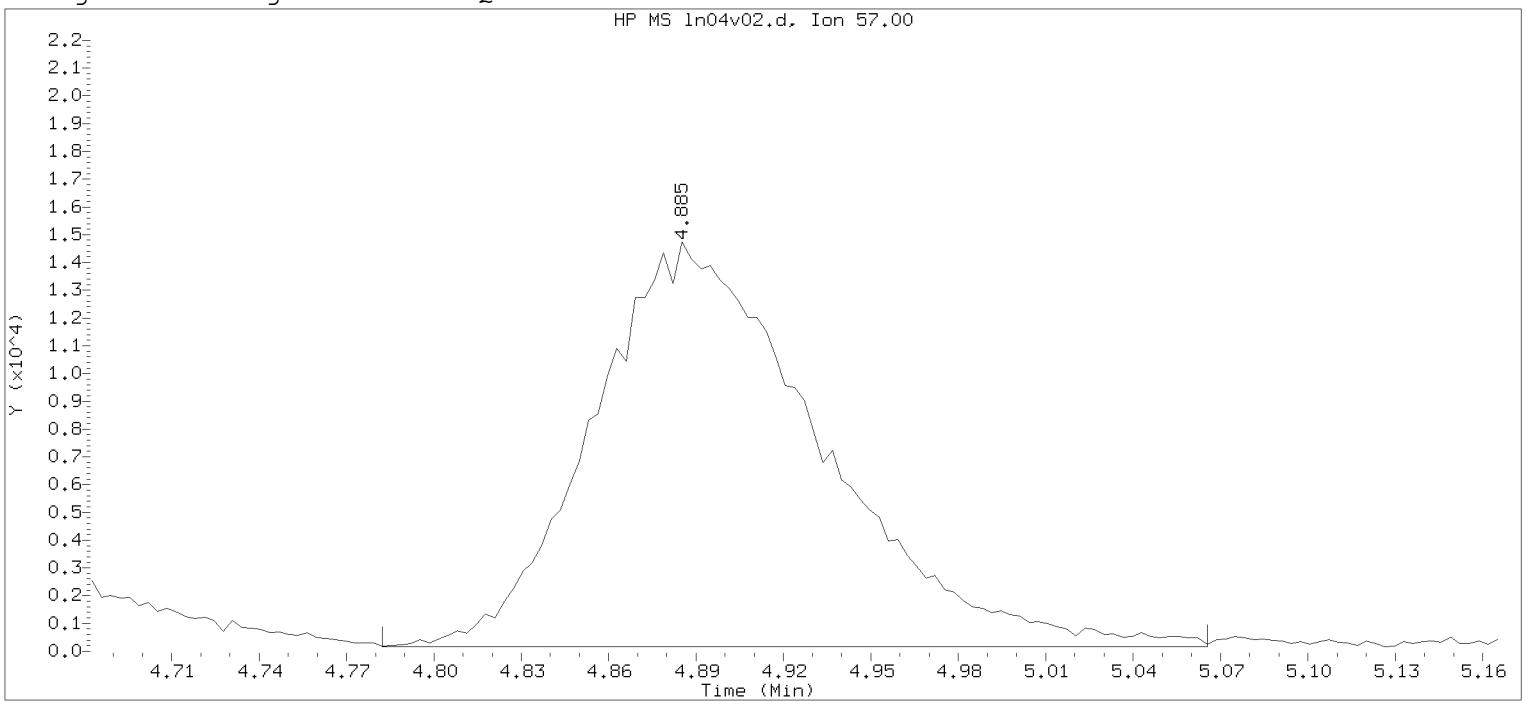
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

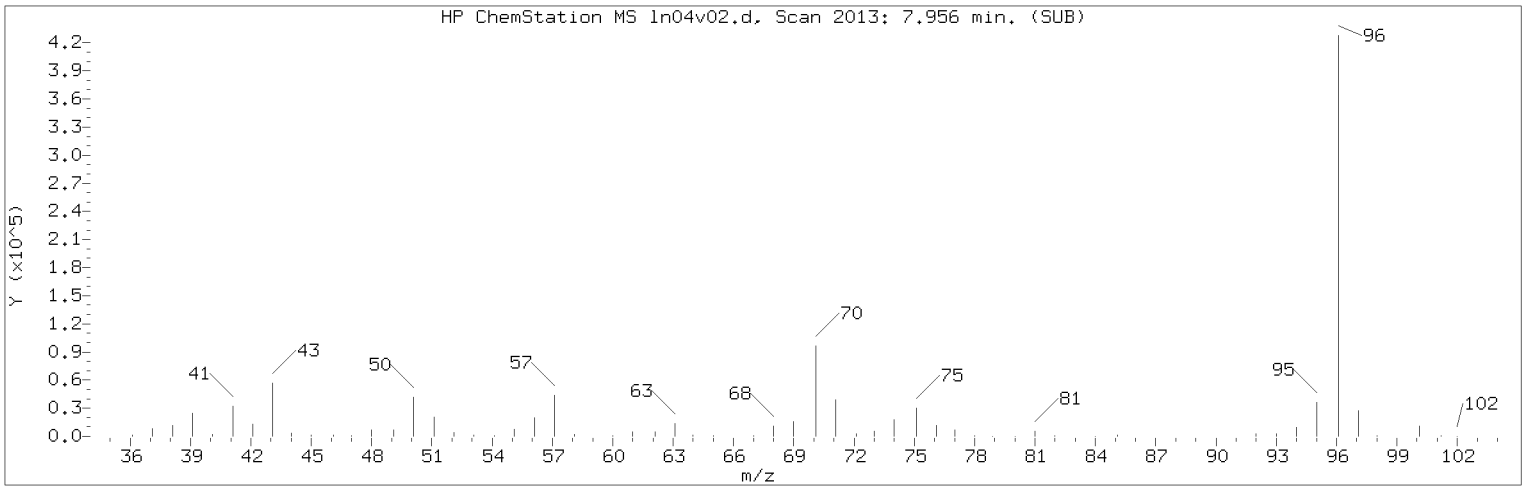
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

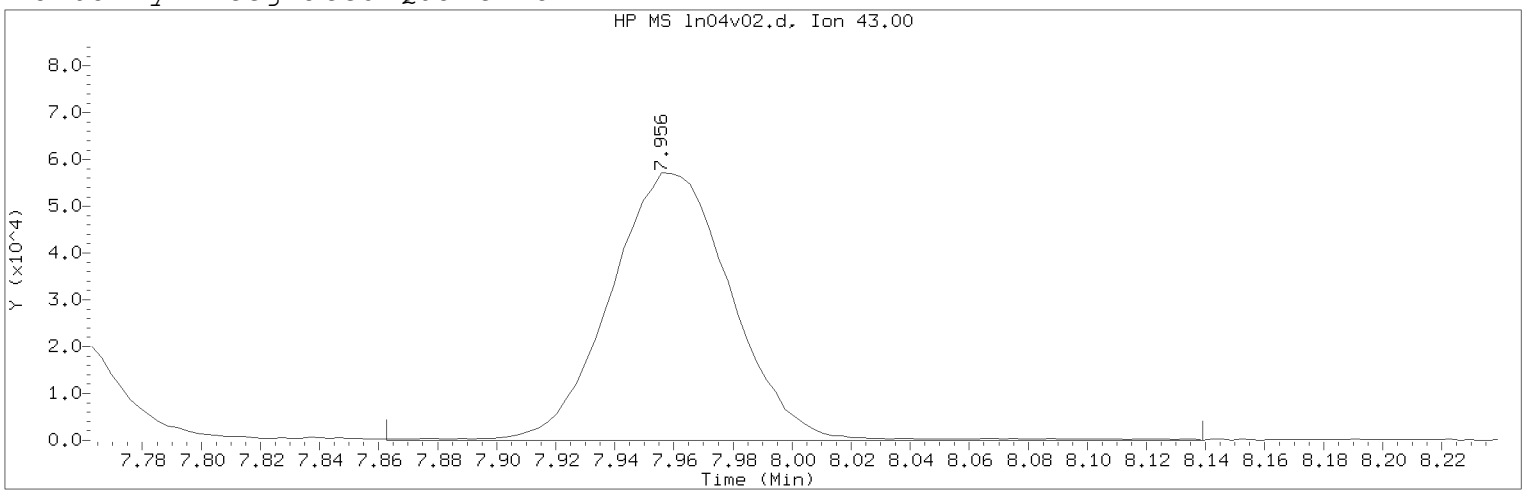
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1058		
Retention Time (minutes)	: 4.885		
Quant Ion	: 57.00		
Area	: 79381		
On-column Amount (ng)	: 18.4374		
Integration start scan	: 1025	Integration stop scan:	1113
Y at integration start	: 160	Y at integration end:	160

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

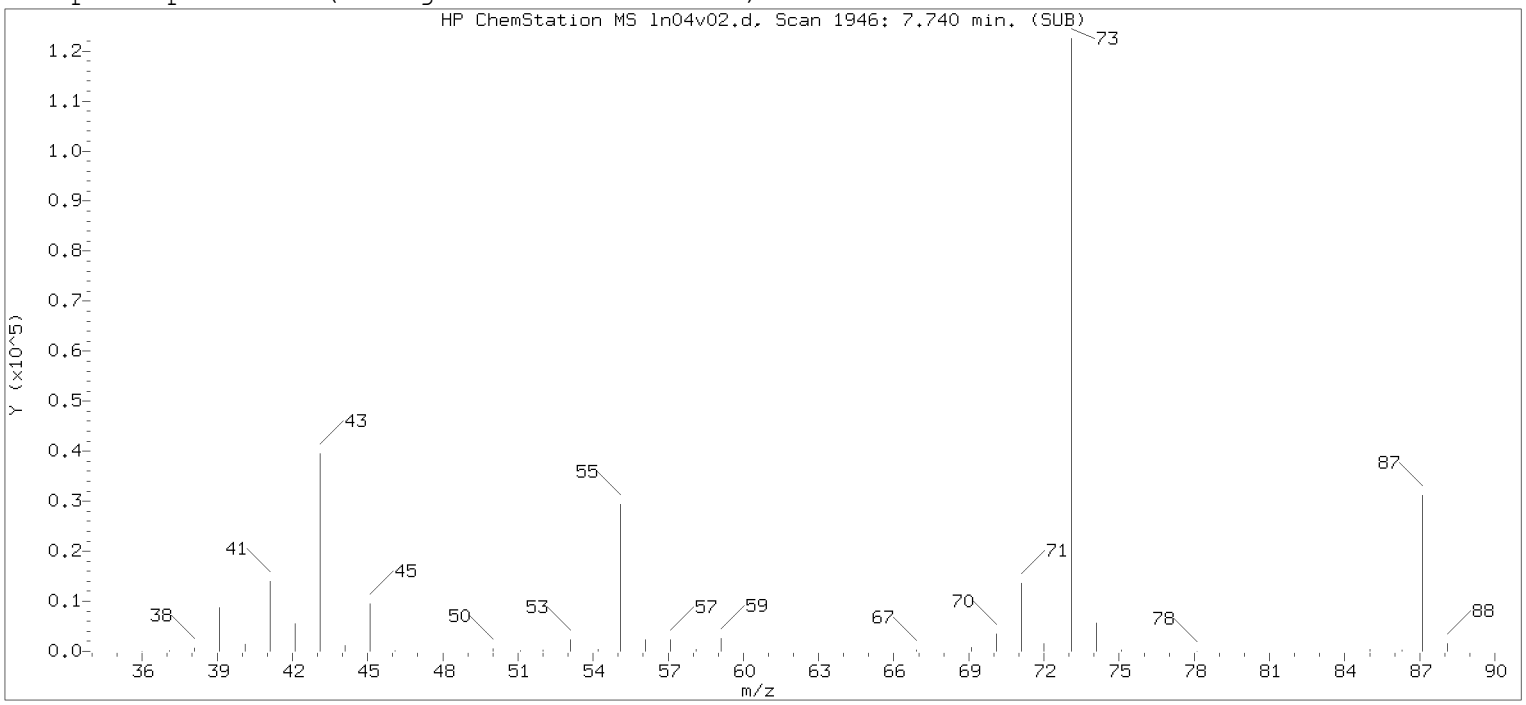
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2013
Retention Time (minutes): 7.956
Quant Ion : 43.00
Area (flag) : 163362M
On-Column Amount (ng) : 18.9476
Integration start scan : 1983 Integration stop scan: 2069
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

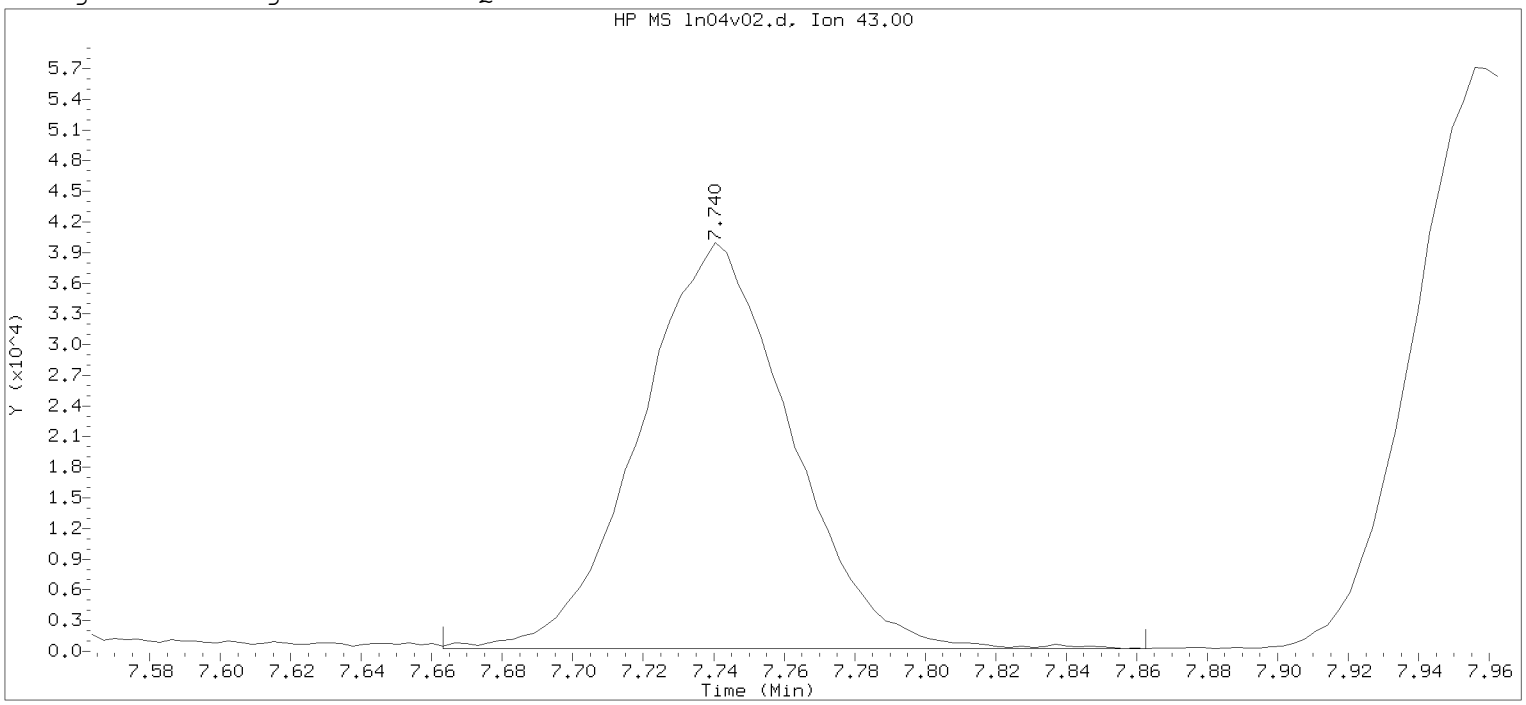
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

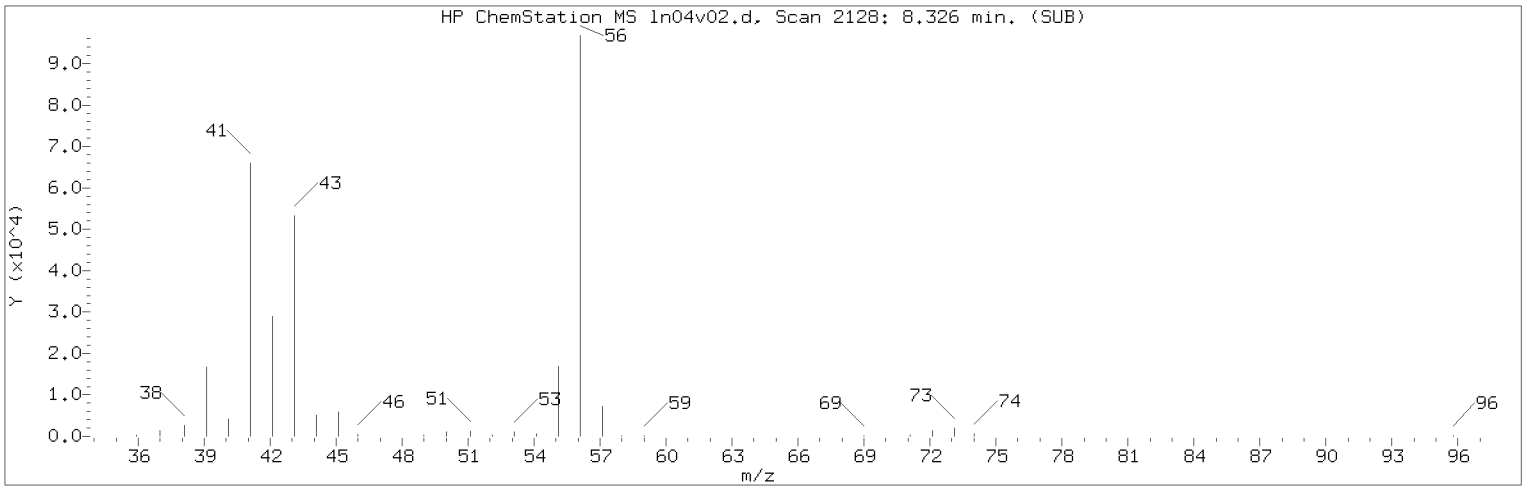
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

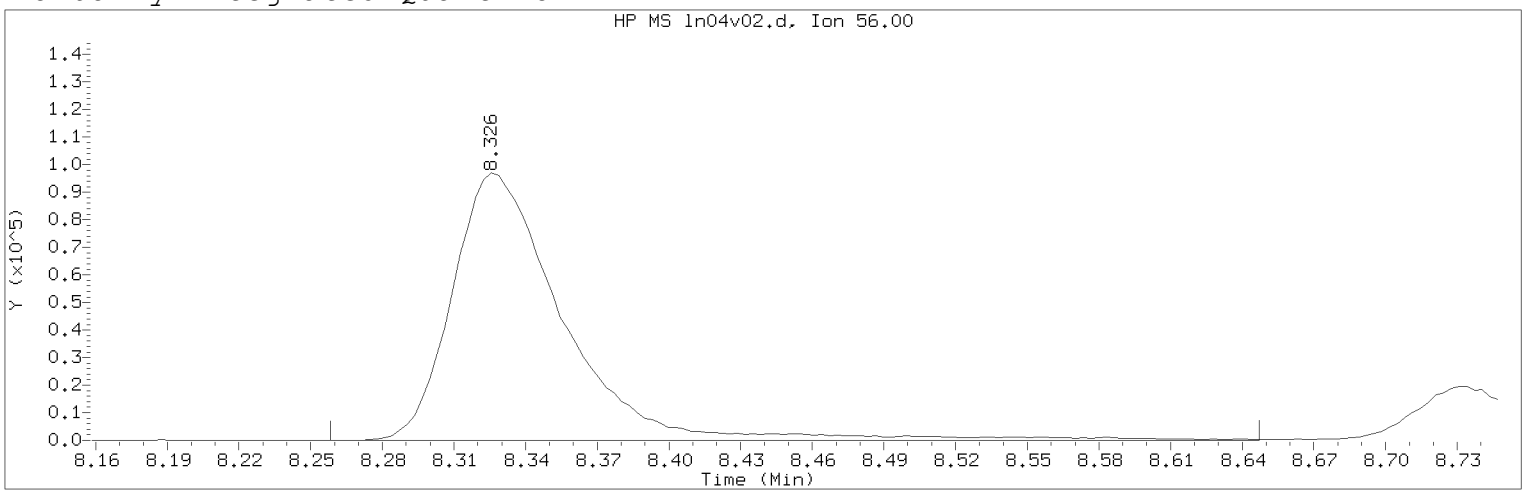
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.740
Quant Ion : 43.00
Area : 118529
On-column Amount (ng) : 18.5036
Integration start scan : 1921 Integration stop scan: 1983
Y at integration start : 255 Y at integration end: 255

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

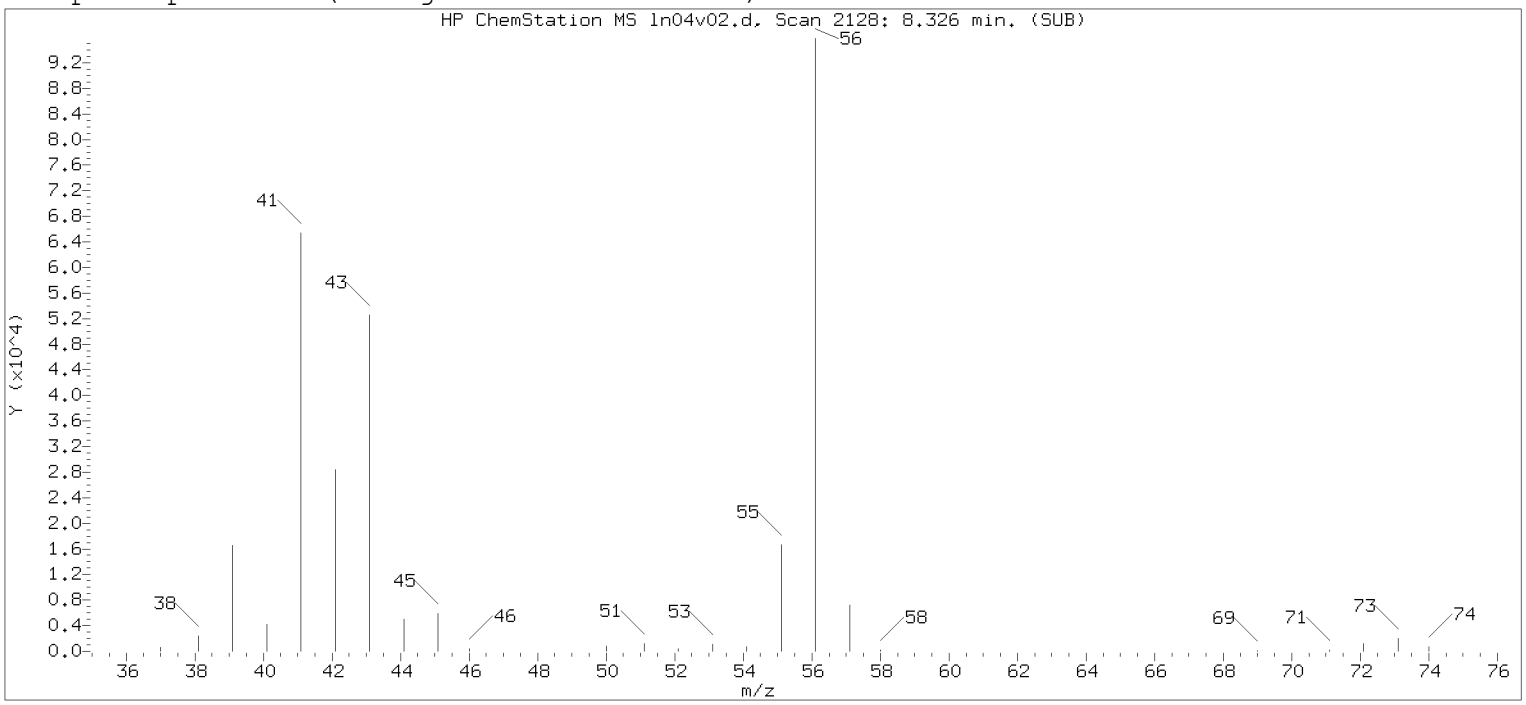
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area (flag) : 314470M
On-Column Amount (ng) : 911.9238
Integration start scan : 2106 Integration stop scan: 2227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

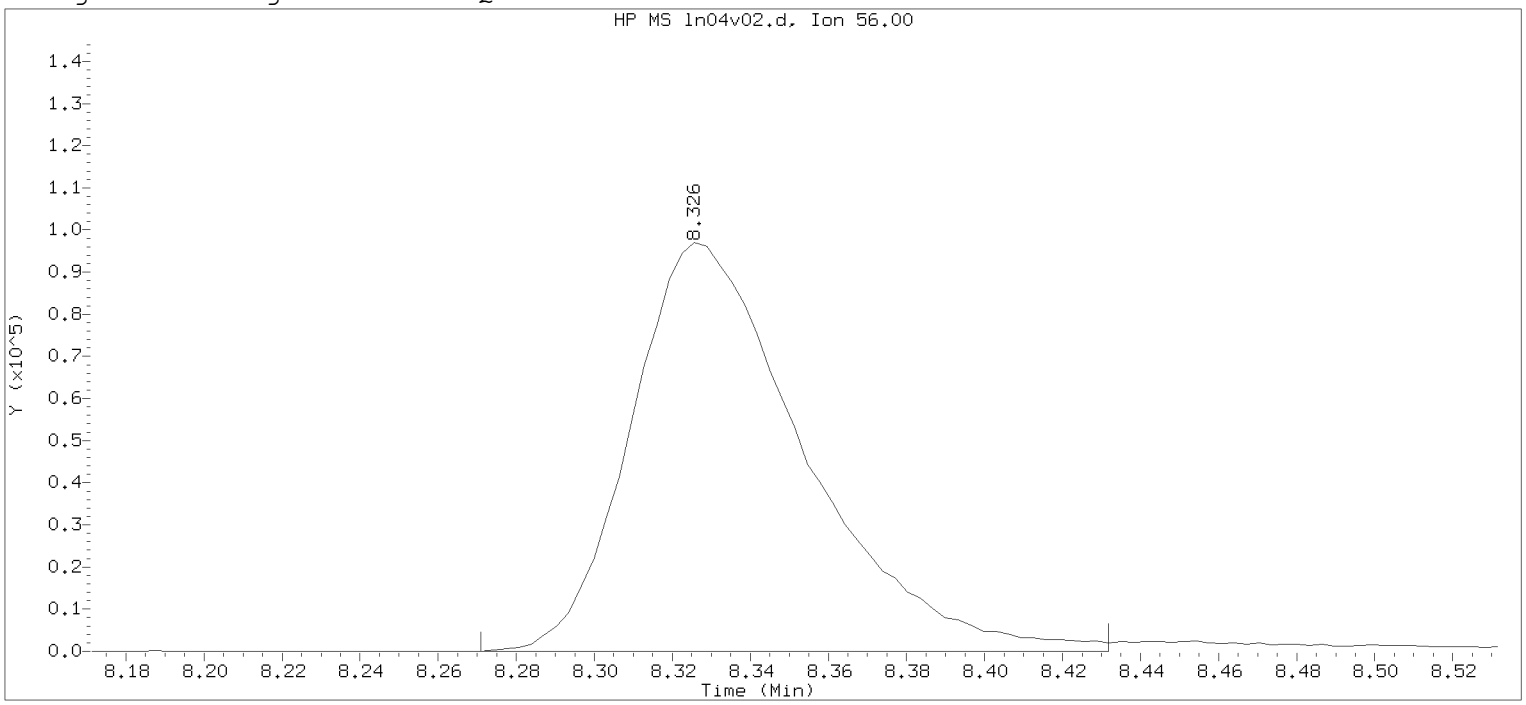
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

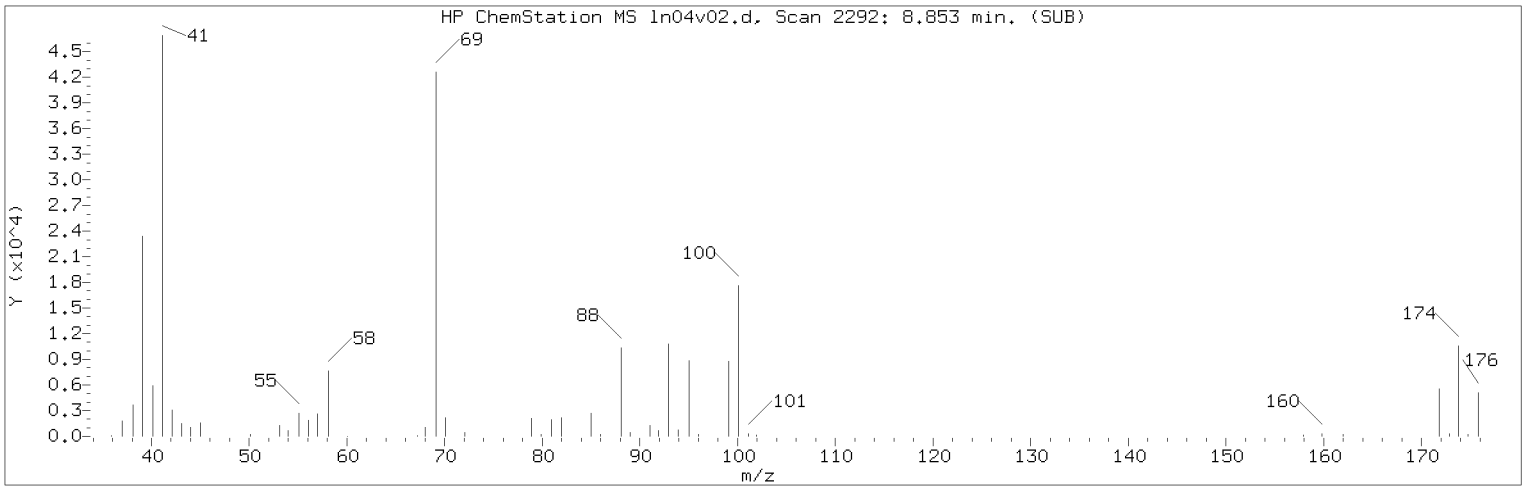
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

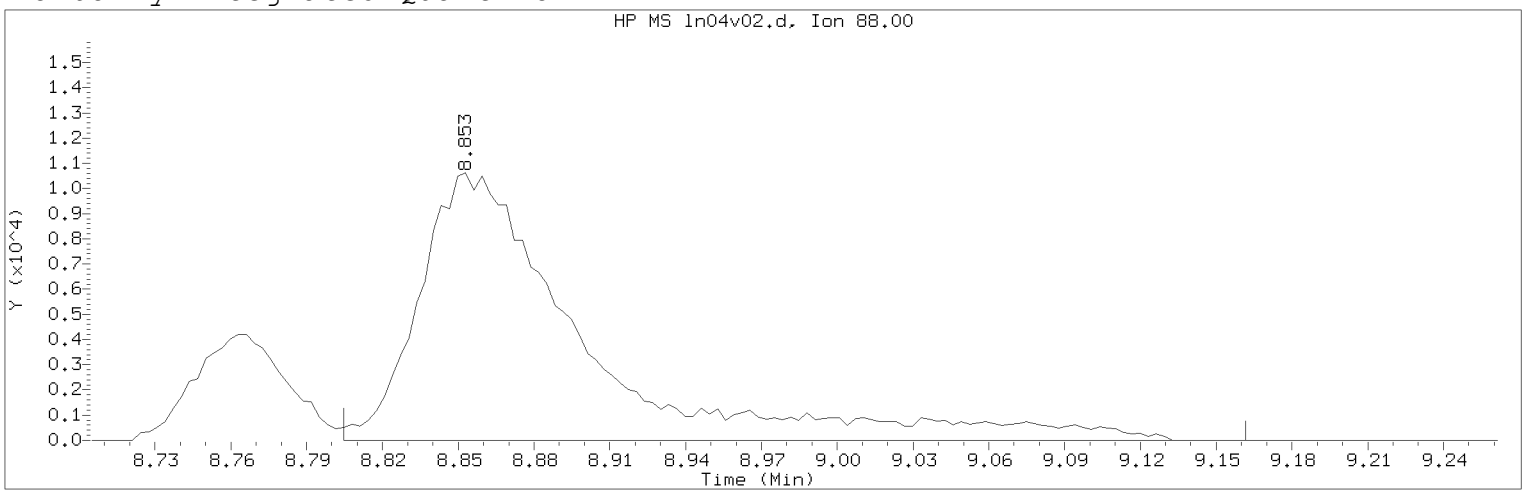
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area : 299611
On-column Amount (ng) : 906.8122
Integration start scan : 2110 Integration stop scan: 2160
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

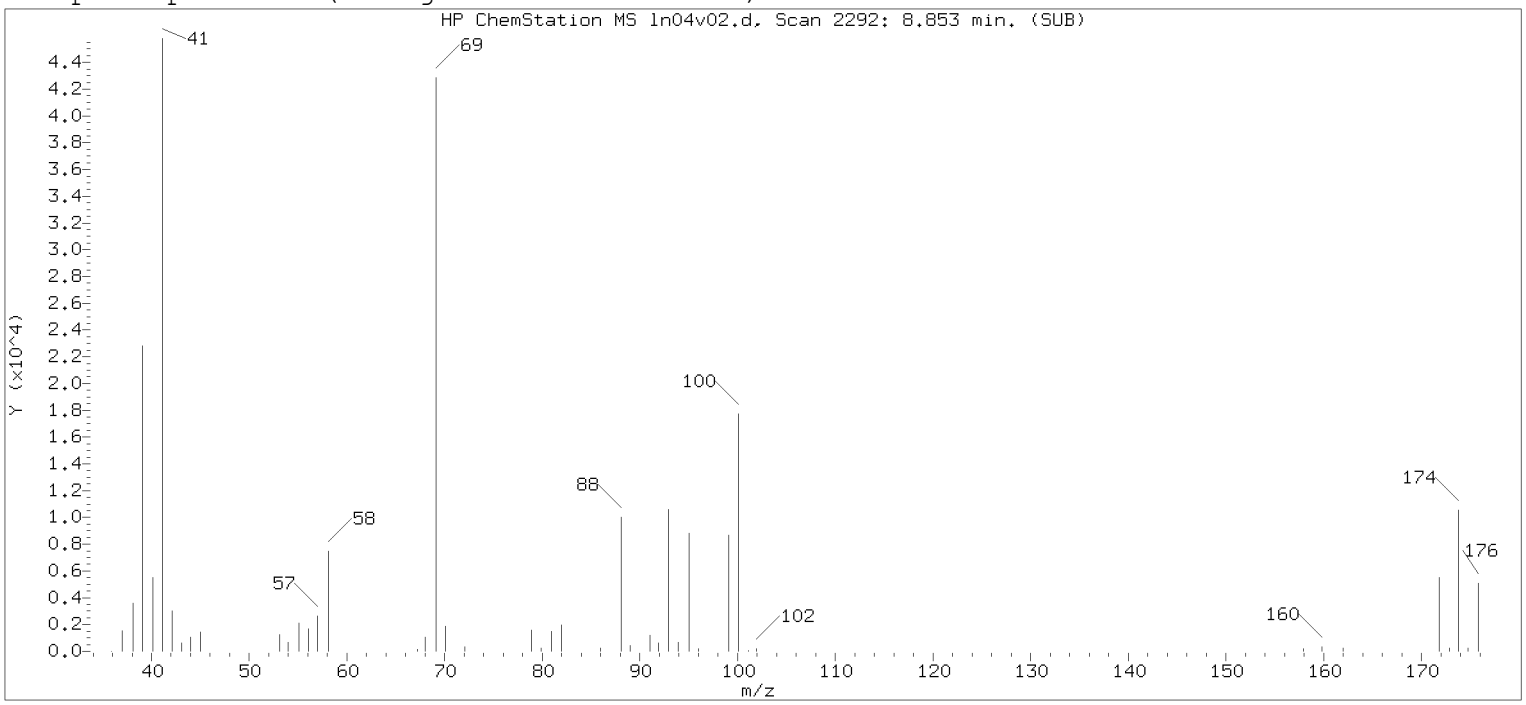
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area (flag) : 47747M
On-Column Amount (ng) : 503.7529
Integration start scan : 2276 Integration stop scan: 2387
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

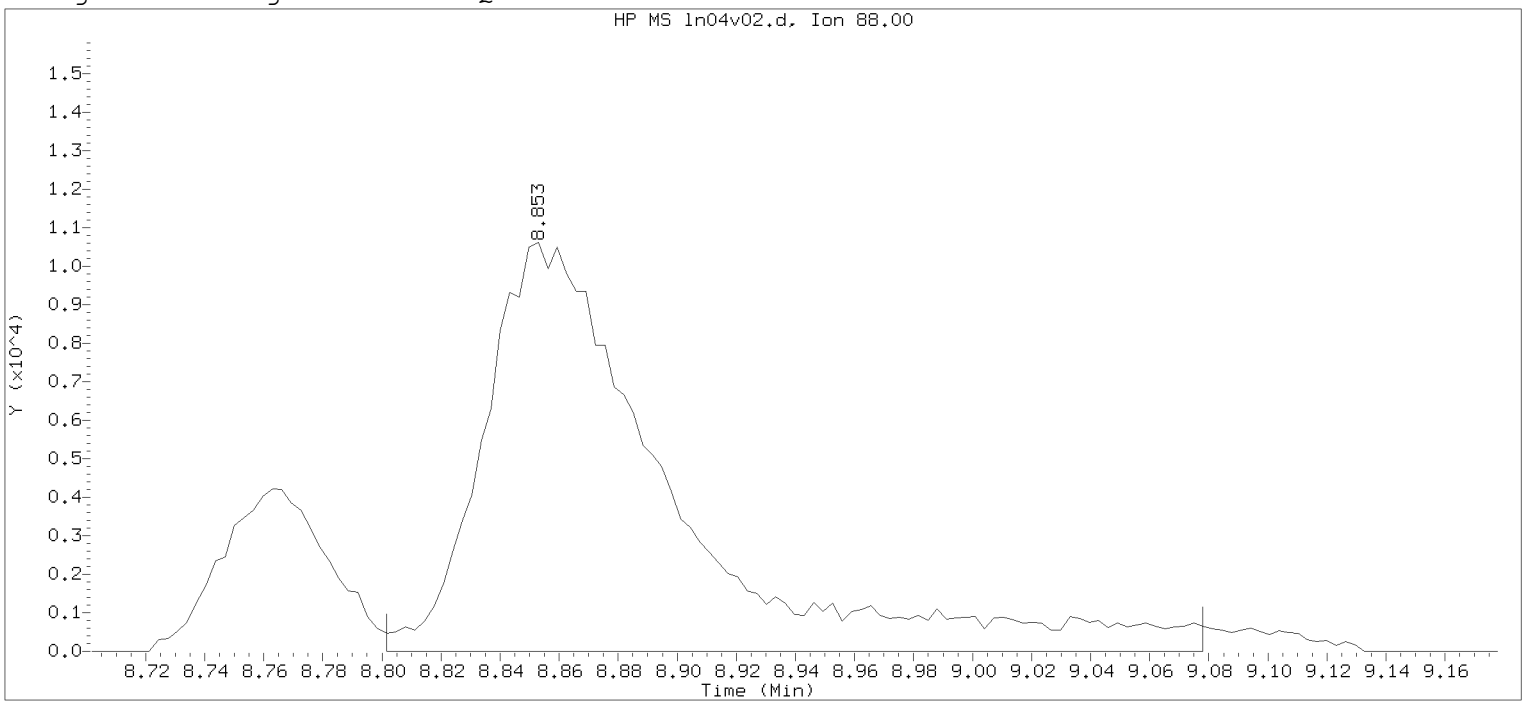
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

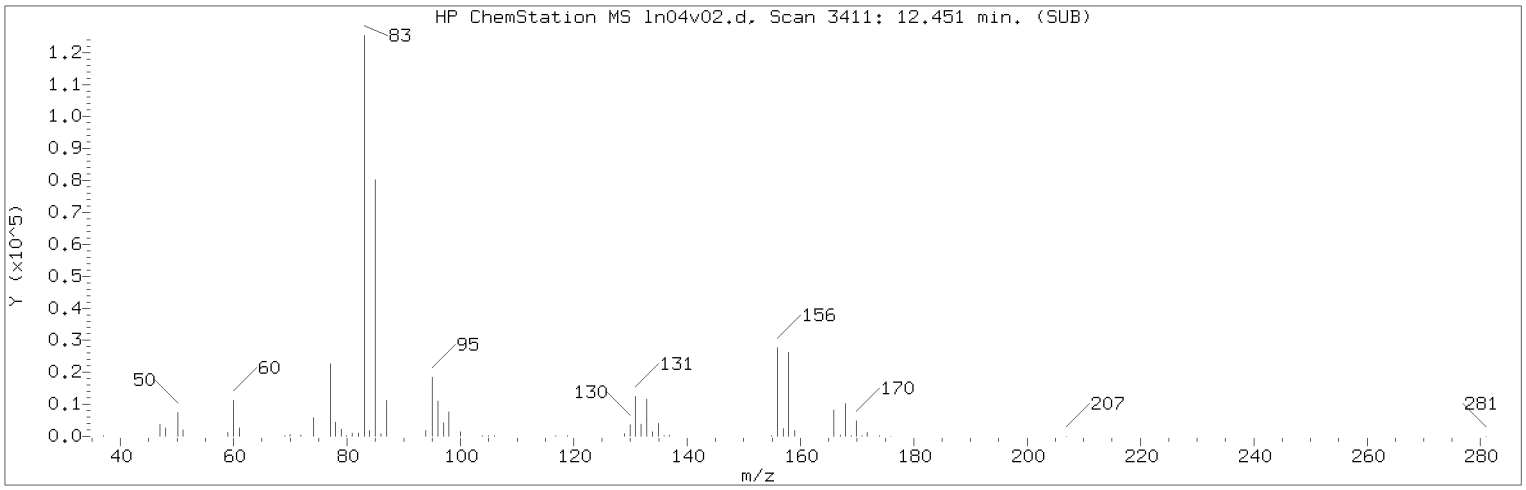
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

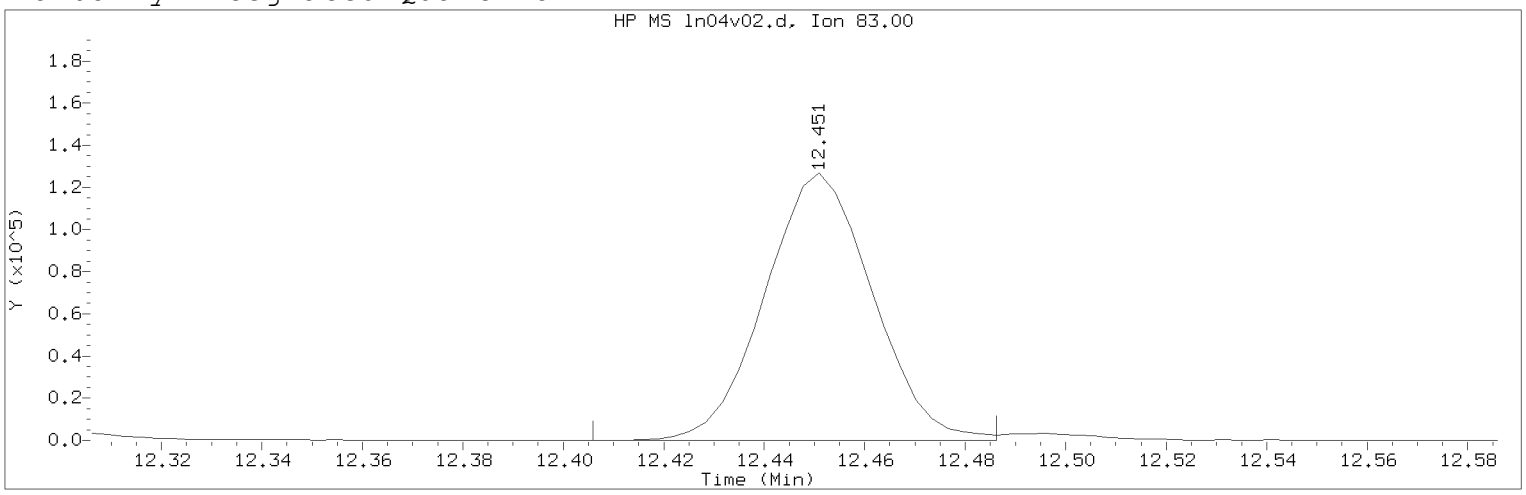
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2292		
Retention Time (minutes)	: 8.853		
Quant Ion	: 88.00		
Area	: 46453		
On-column Amount (ng)	: 511.5262		
Integration start scan	: 2275	Integration stop scan:	2361
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

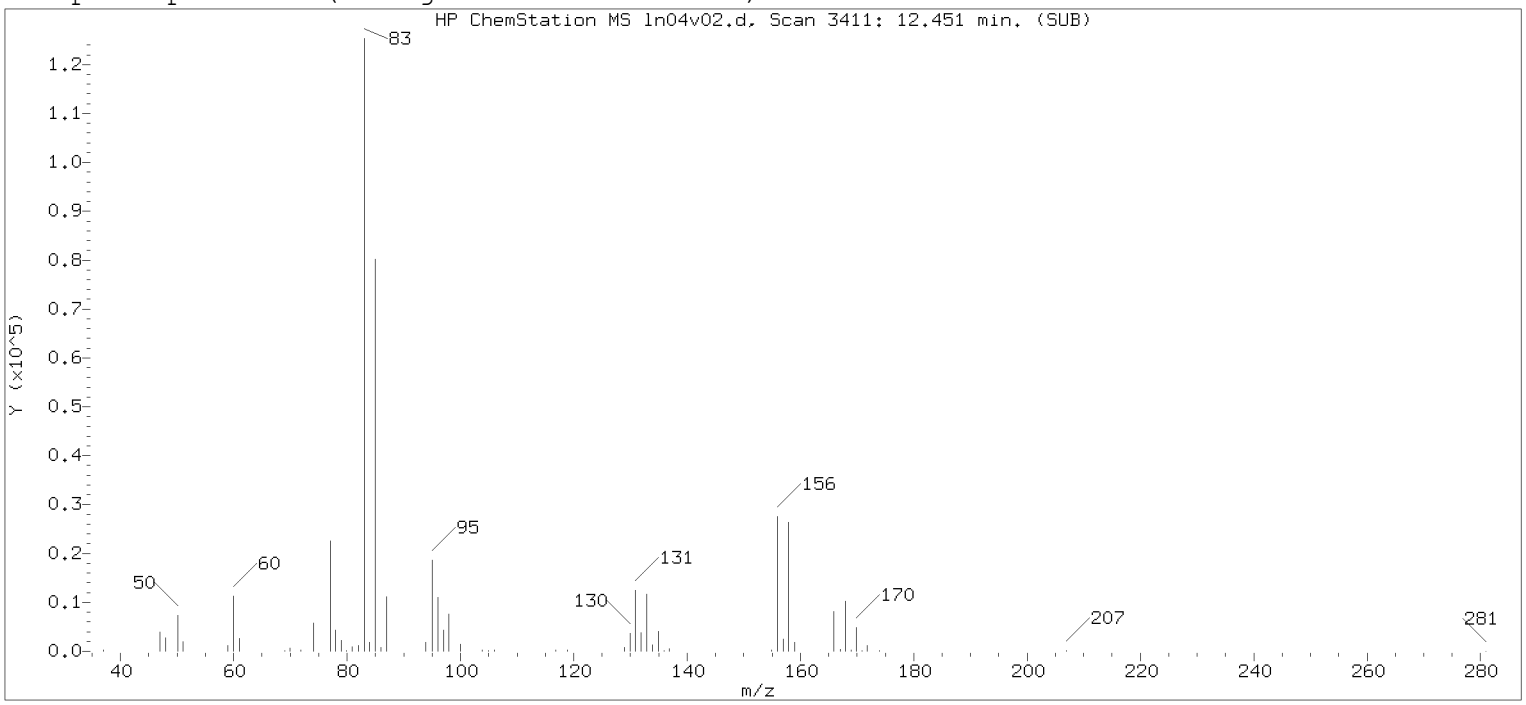
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 188446M
On-Column Amount (ng) : 19.5761
Integration start scan : 3396 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

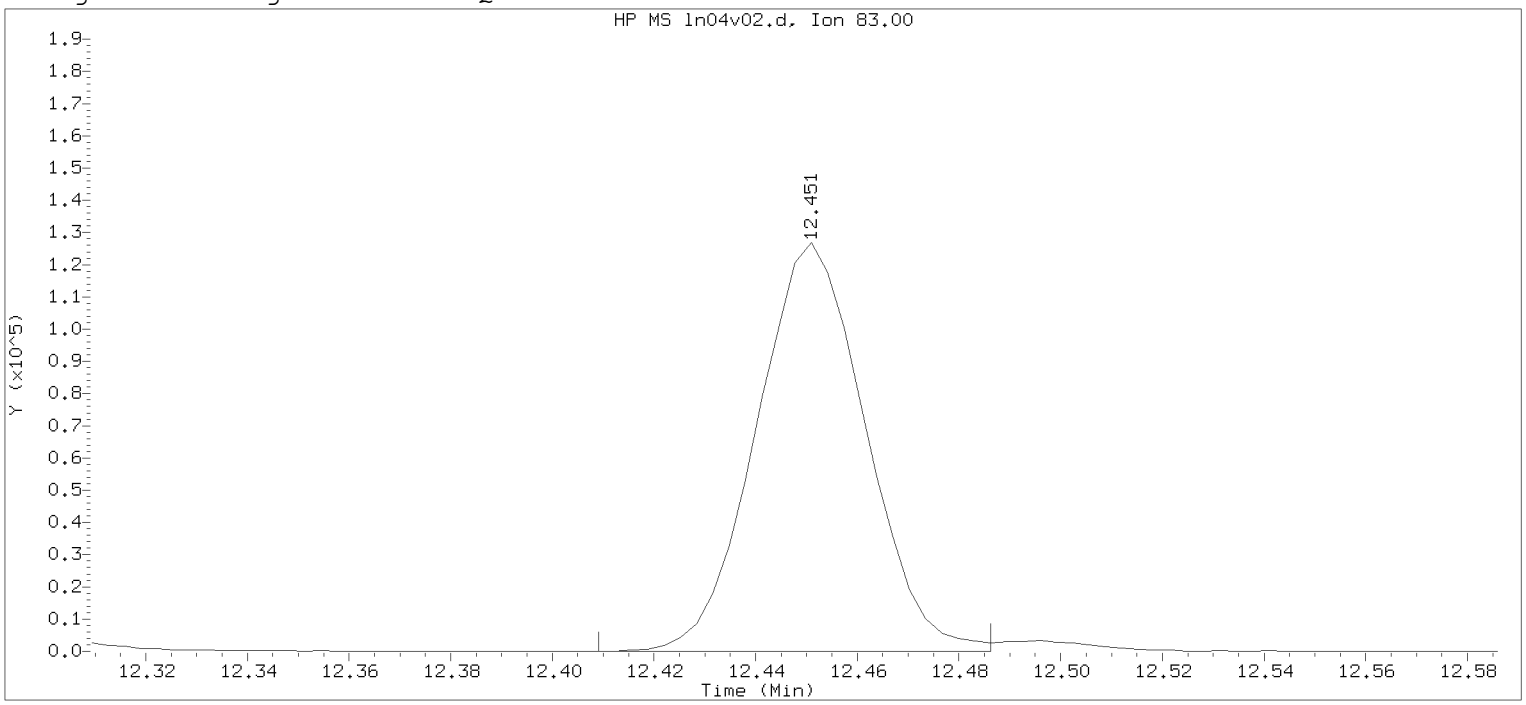
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

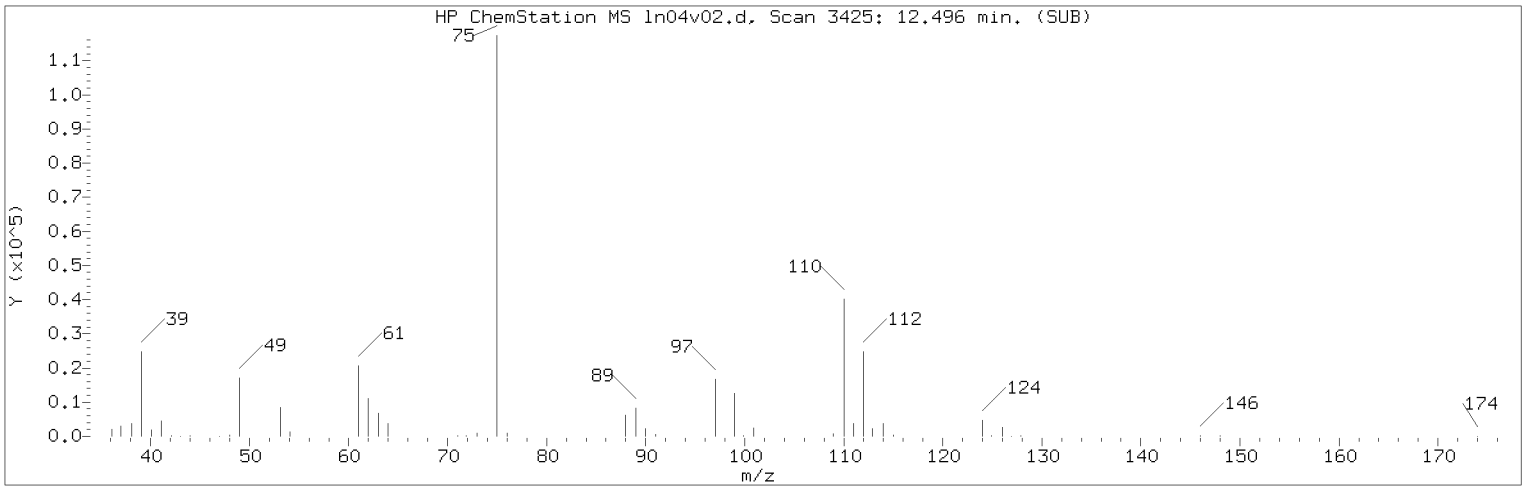
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

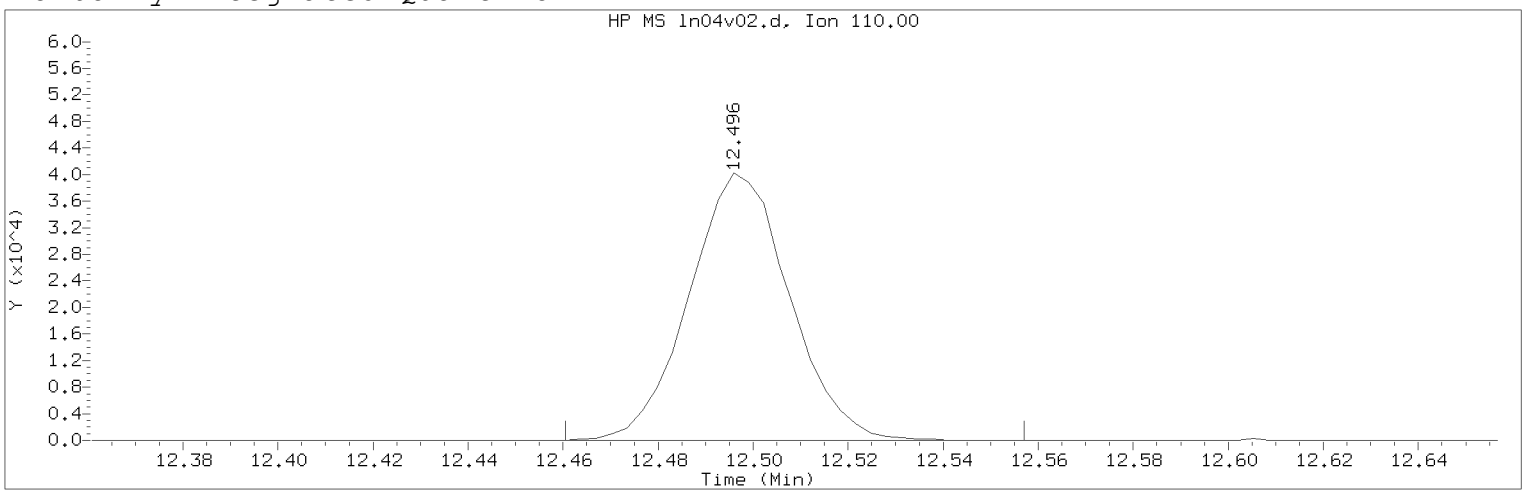
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 188196
On-column Amount (ng) : 19.2022
Integration start scan : 3397 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

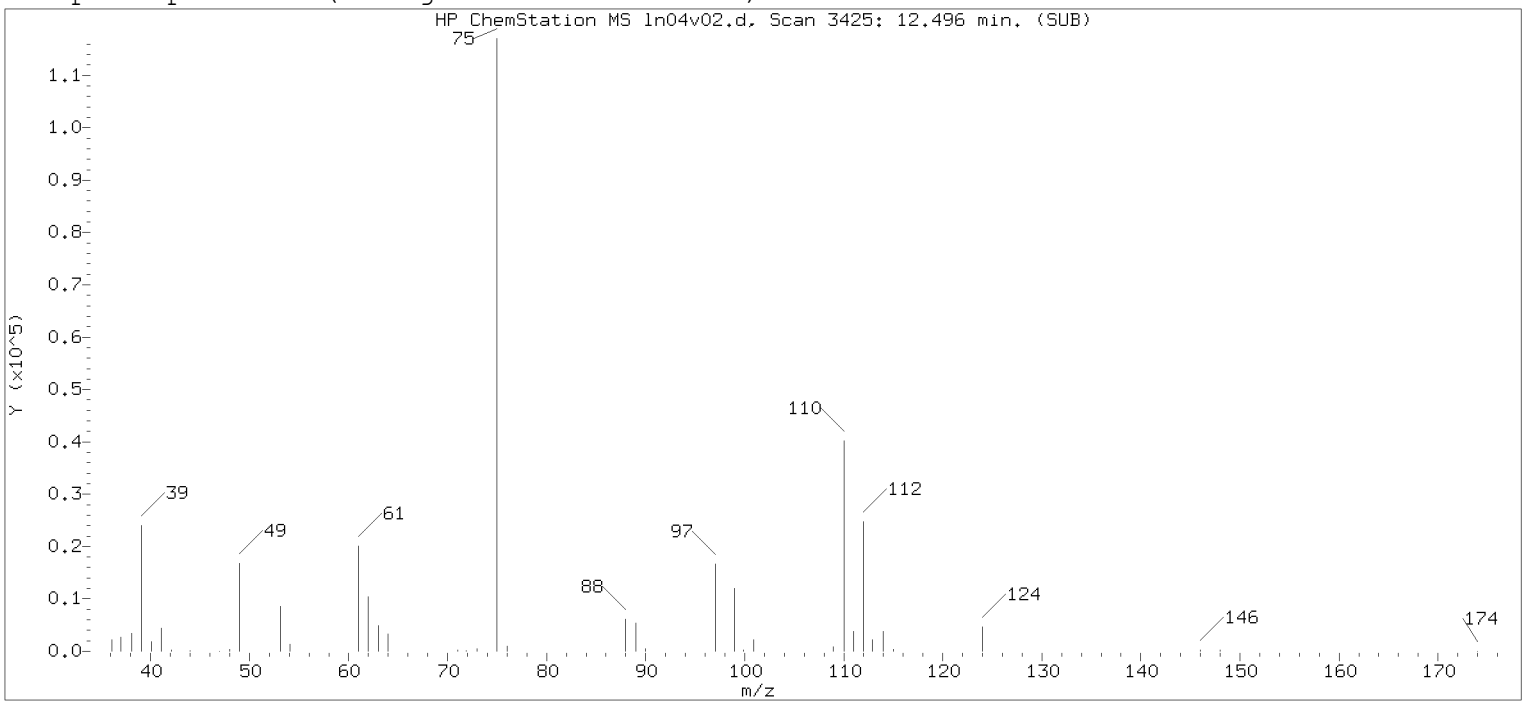
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 3425
Retention Time (minutes): 12.496
Quant Ion : 110.00
Area (flag) : 58902M
On-Column Amount (ng) : 19.9401
Integration start scan : 3413 Integration stop scan: 3443
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

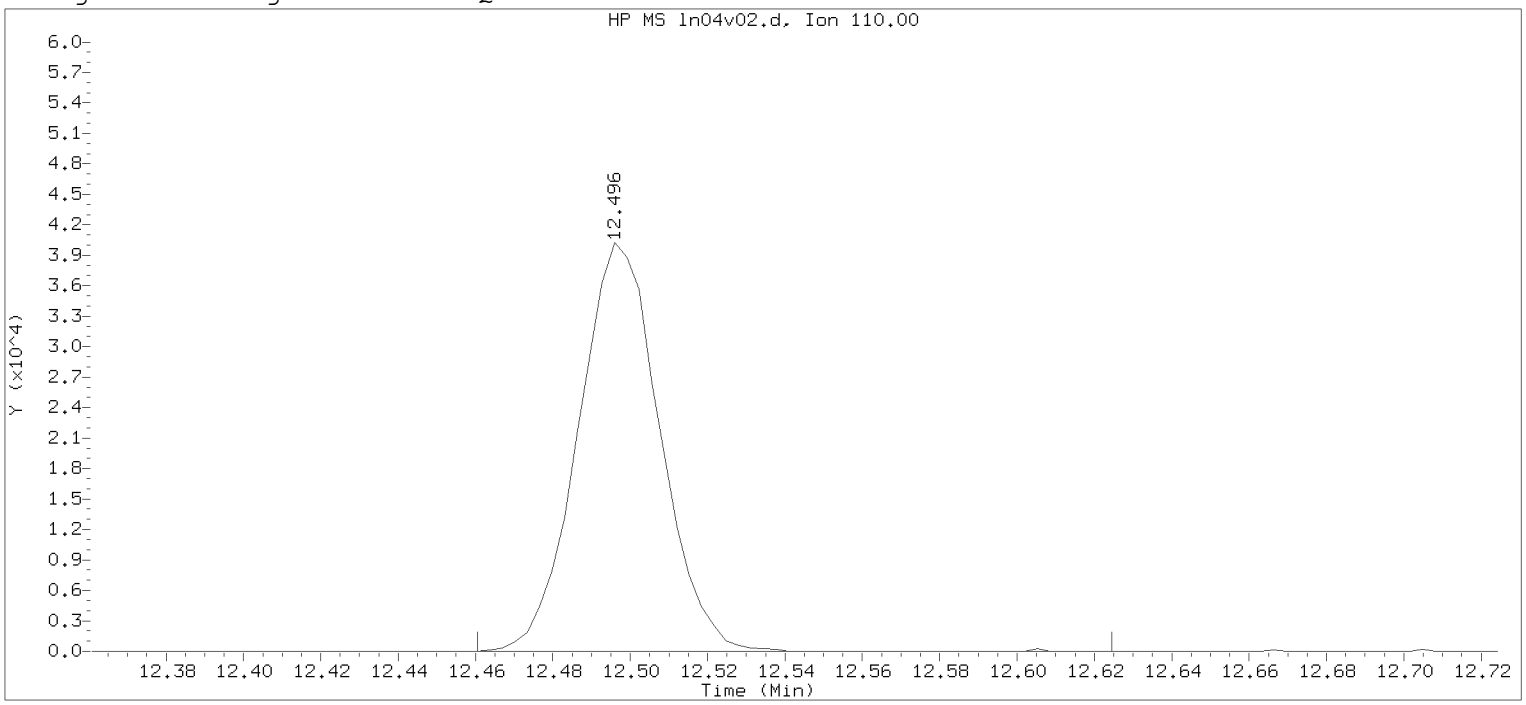
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

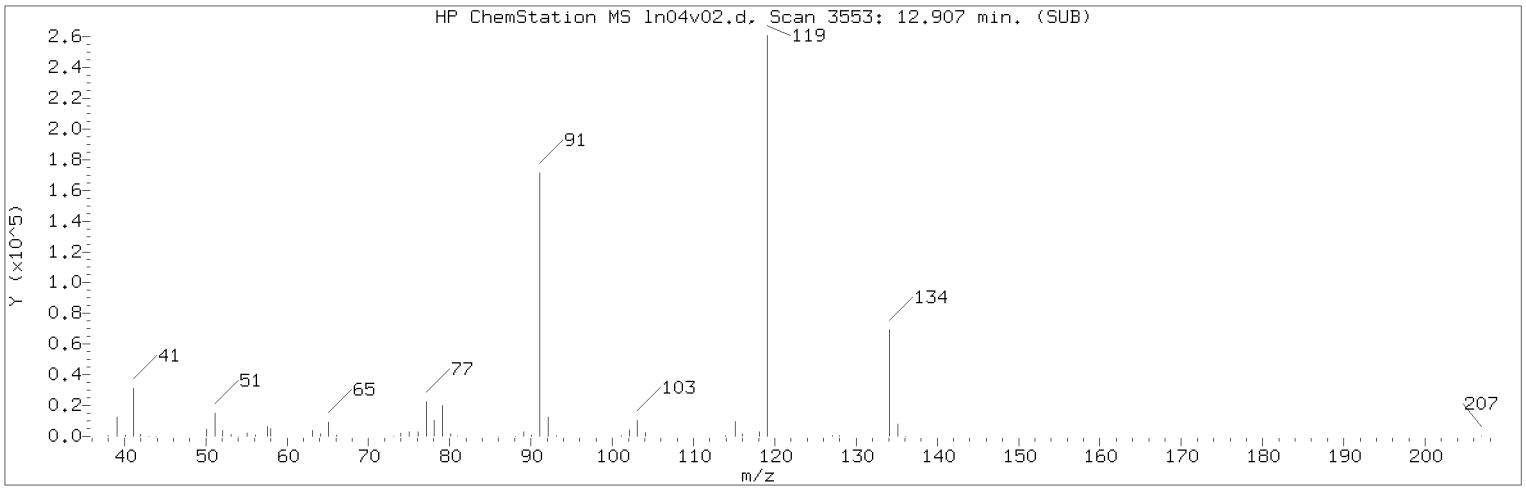
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

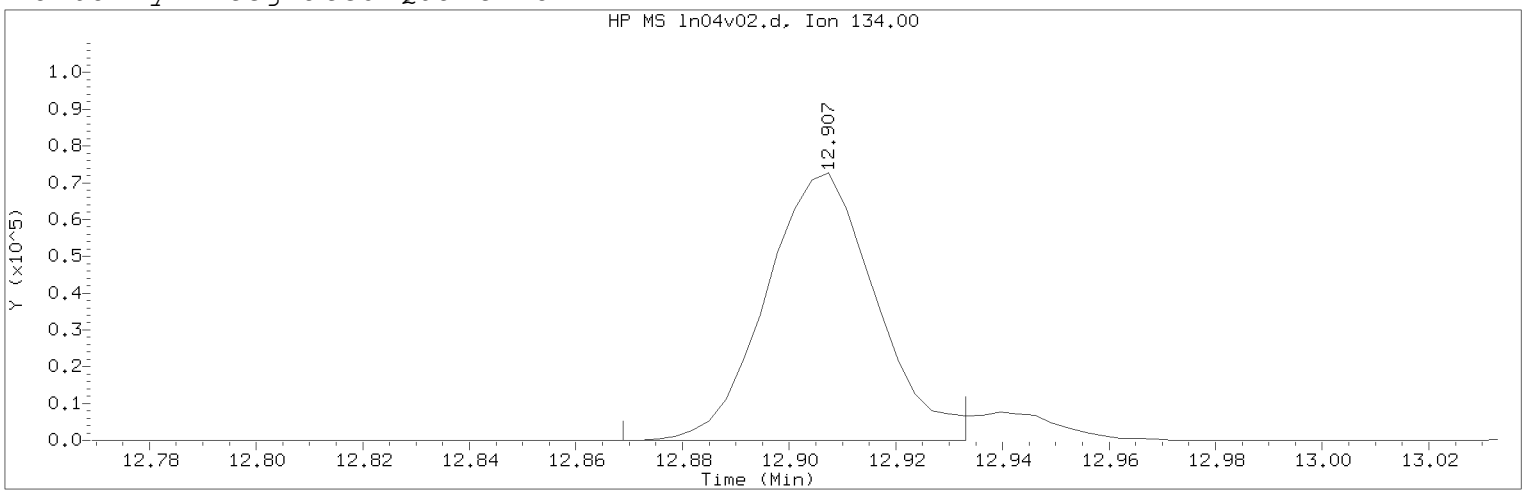
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 3425
Retention Time (minutes): 12.496
Quant Ion : 110.00
Area : 58948
On-column Amount (ng) : 19.9559
Integration start scan : 3413 Integration stop scan: 3464
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

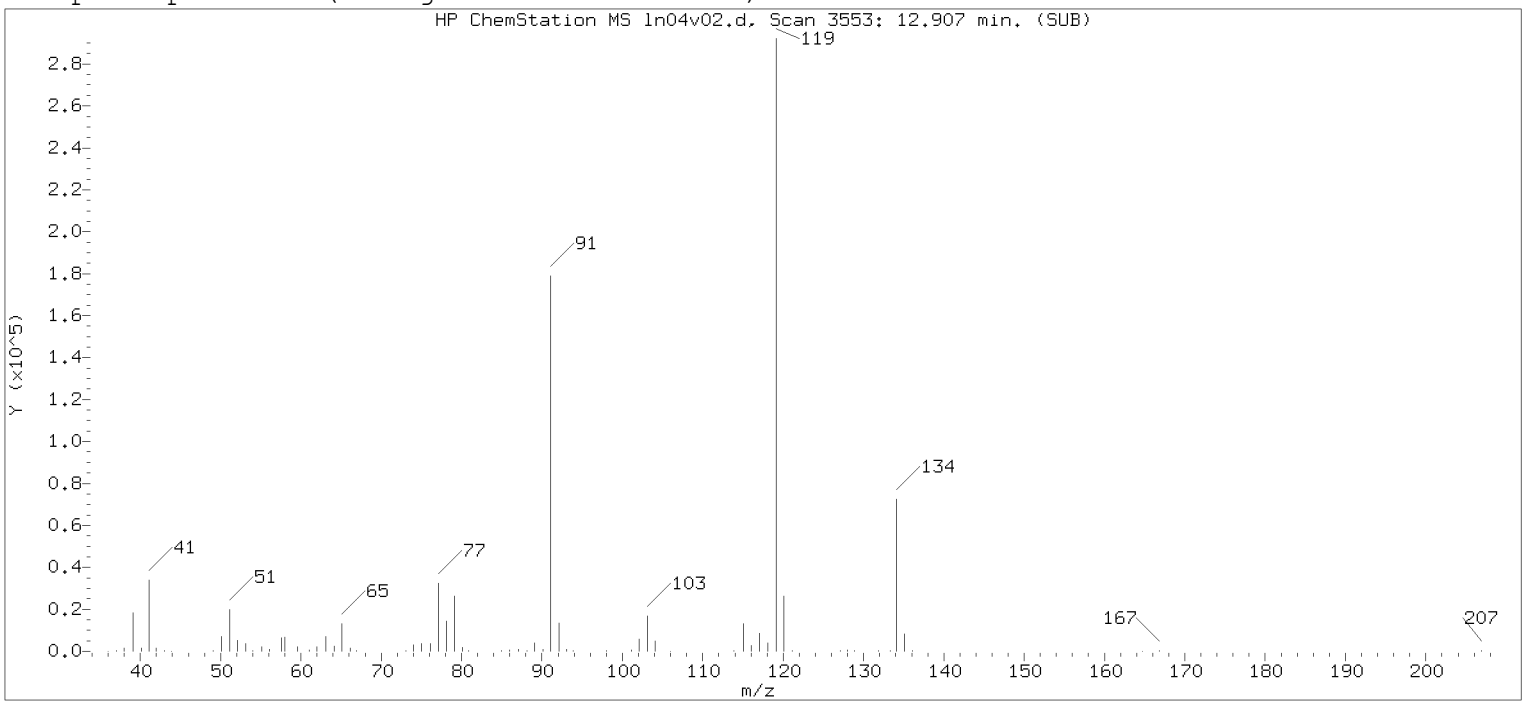
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area (flag) : 103762M
On-Column Amount (ng) : 20.6322
Integration start scan : 3540 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

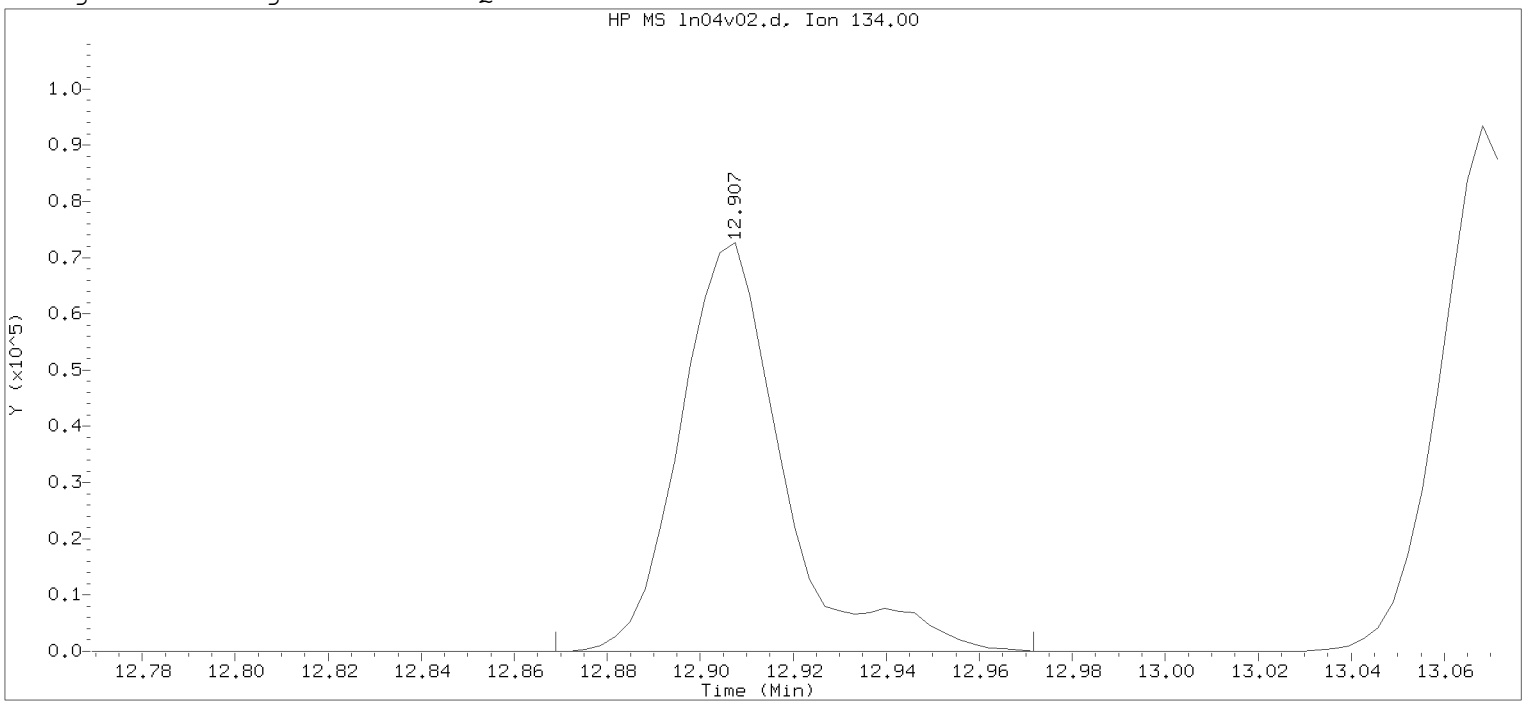
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area : 111654
On-column Amount (ng) : 22.2016
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KAS02648

Data File: /chem/HP09915.i/19nov21a.b/ln21t02.d

Date : 21-NOV-2019 07:42

Client ID: AUG02-19

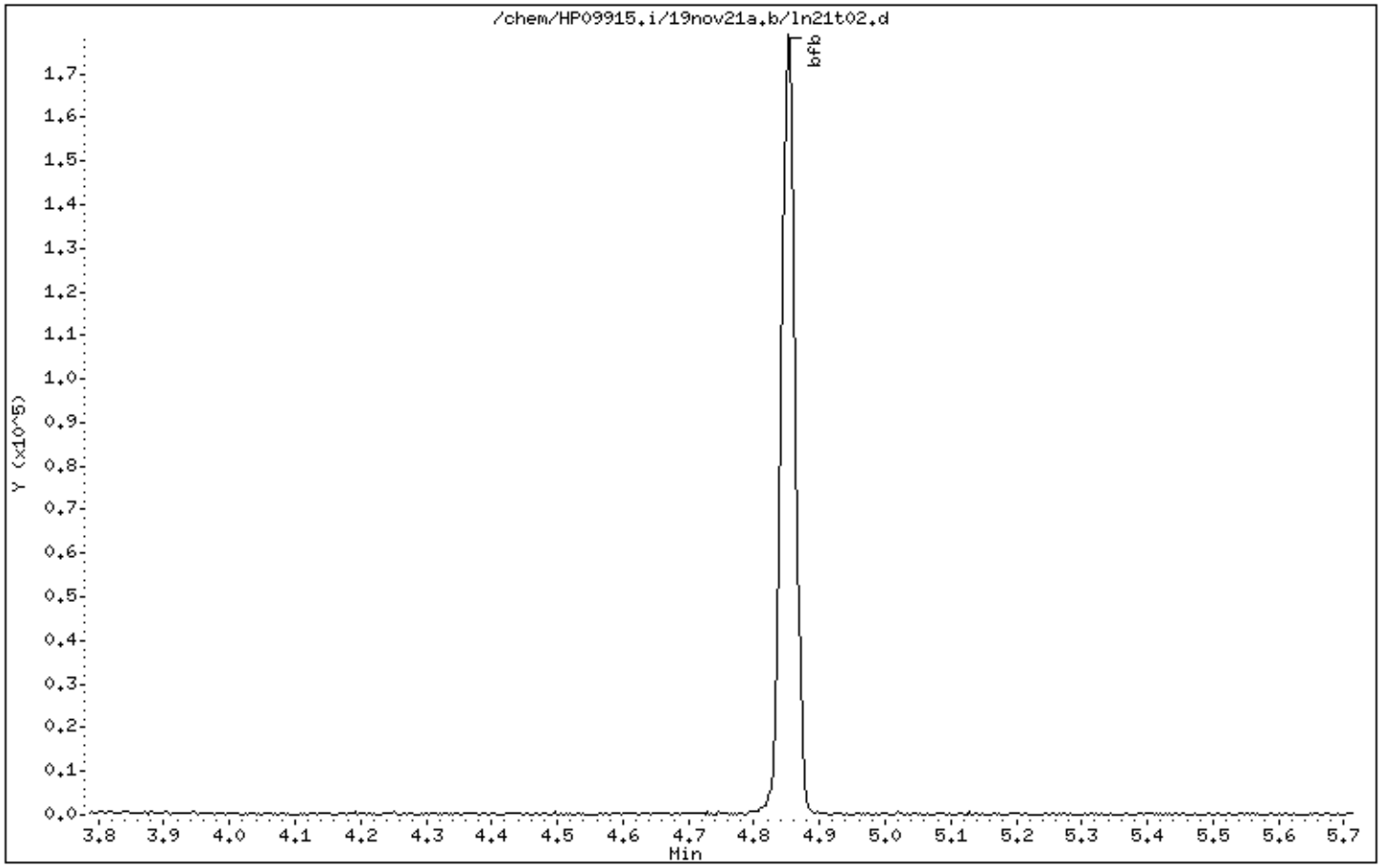
Instrument: HP09915.i

Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: lcp00895

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem/HP09915.i/19nov21a.b/ln21t02.d

Date : 21-NOV-2019 07:42

Client ID: AUG02-19

Instrument: HP09915.i

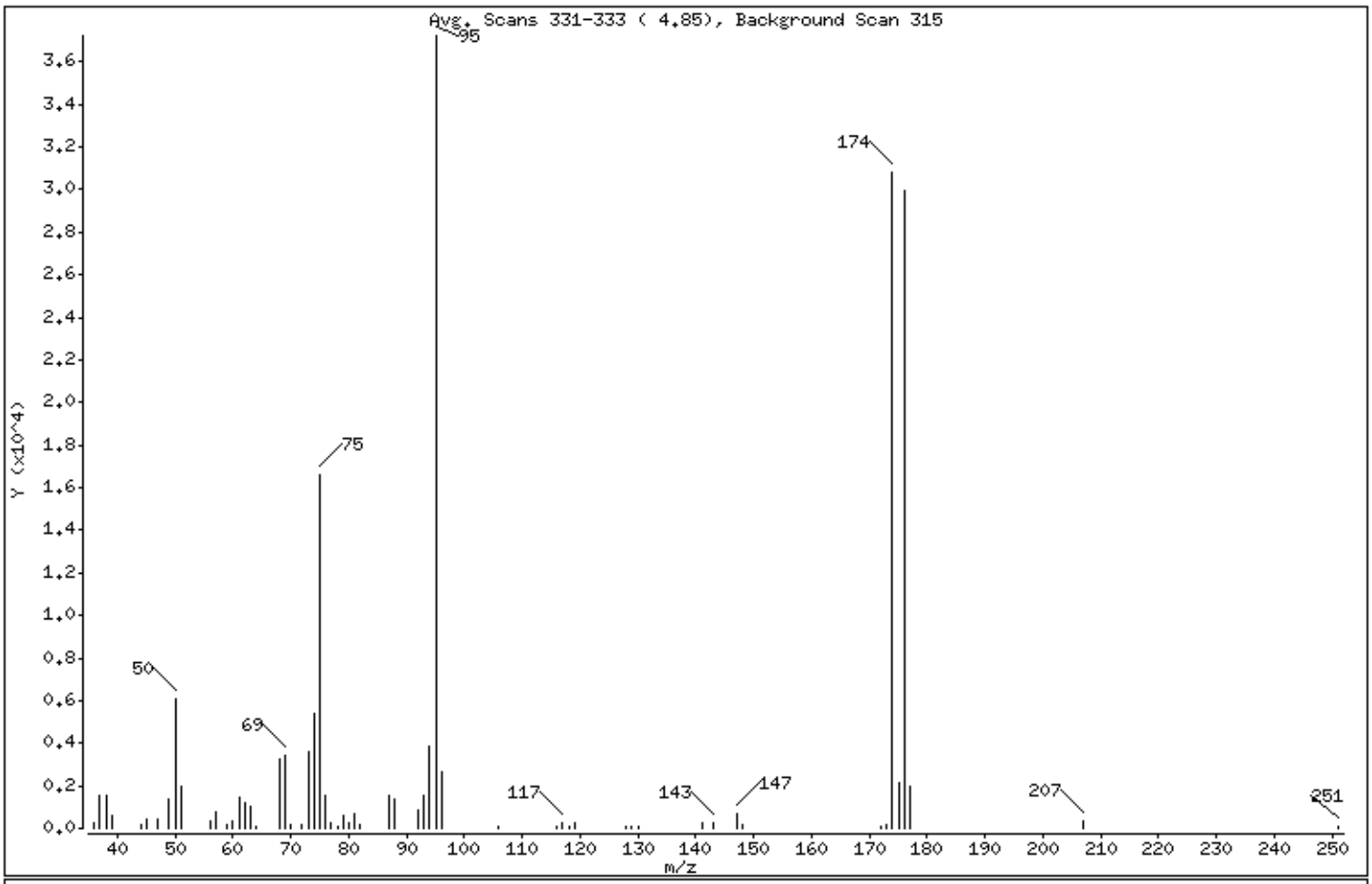
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: lcp00895

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.38
75	30.00 - 60.00% of mass 95	44.70
96	5.00 - 9.00% of mass 95	7.06
173	Less than 2.00% of mass 174	0.40 (0.48)
174	50.00 - 100.00% of mass 95	82.72
175	5.00 - 9.00% of mass 174	5.73 (6.92)
176	95.00 - 101.00% of mass 174	80.53 (97.35)
177	5.00 - 9.00% of mass 176	5.22 (6.48)

Date : 21-NOV-2019 07:42

Client ID: AUG02-19 Instrument: HP09915.i

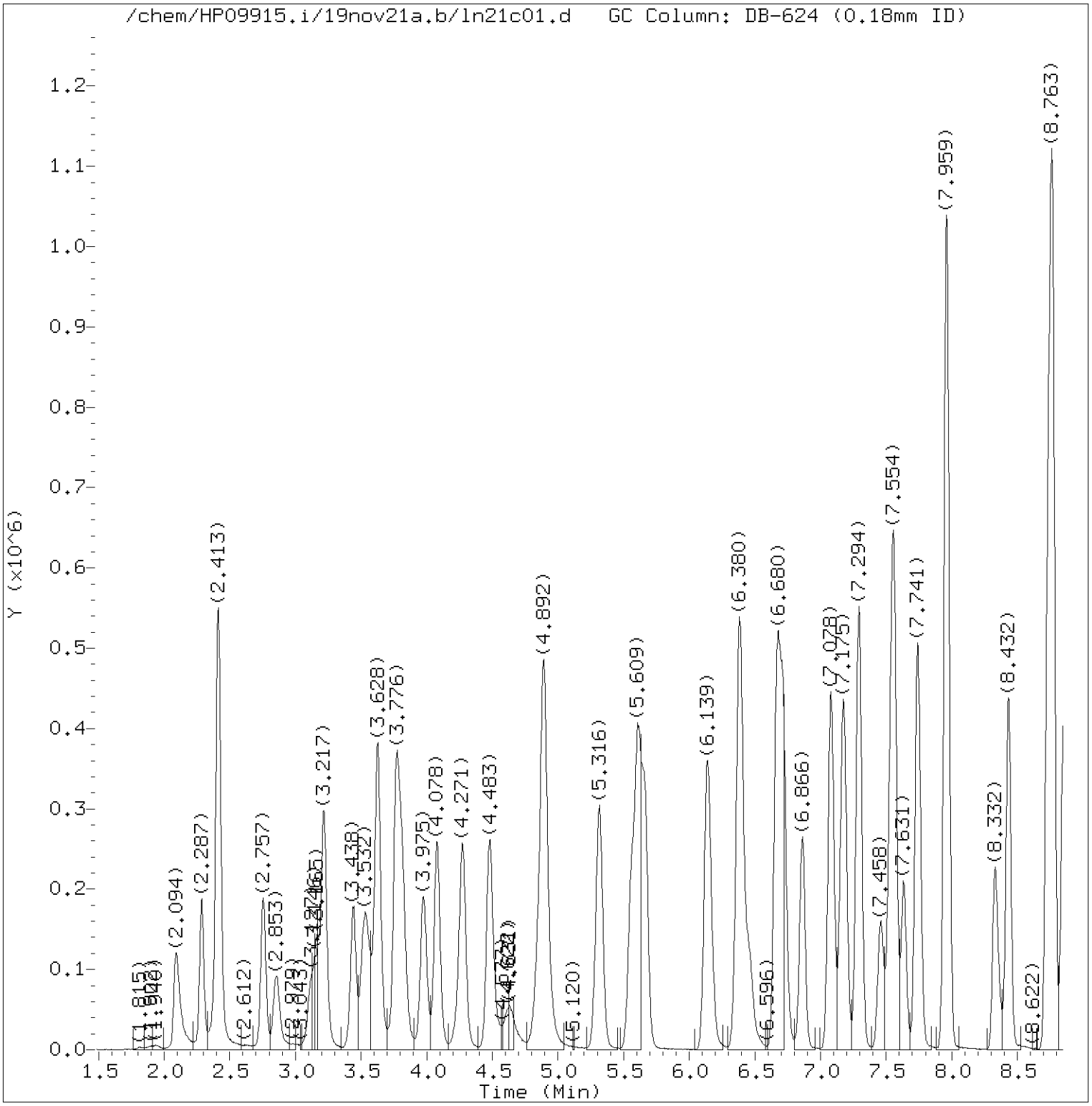
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: lcp00895

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: ln21t02.d
Spectrum: Avg. Scans 331-333 (4.85), Background Scan 315
Location of Maximum: 95.00
Number of points: 59

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	266	62.00	1237	81.00	704	129.00	55
37.00	1507	63.00	1057	82.00	134	130.00	50
38.00	1559	64.00	58	87.00	1579	141.00	232
39.00	563	68.00	3215	88.00	1366	143.00	261
44.00	205	69.00	3403	92.00	837	147.00	710
45.00	424	70.00	180	93.00	1531	148.00	131
47.00	411	72.00	185	94.00	3863	172.00	83
49.00	1346	73.00	3567	95.00	37224	173.00	148
50.00	6099	74.00	5365	96.00	2628	174.00	30792
51.00	1983	75.00	16640	106.00	61	175.00	2132
56.00	333	76.00	1498	116.00	50	176.00	29976
57.00	804	77.00	232	117.00	254	177.00	1942
59.00	179	78.00	72	118.00	61	207.00	371
60.00	309	79.00	604	119.00	246	251.00	50
61.00	1481	80.00	229	128.00	59		



Total Ion Chromatogram (TIC)

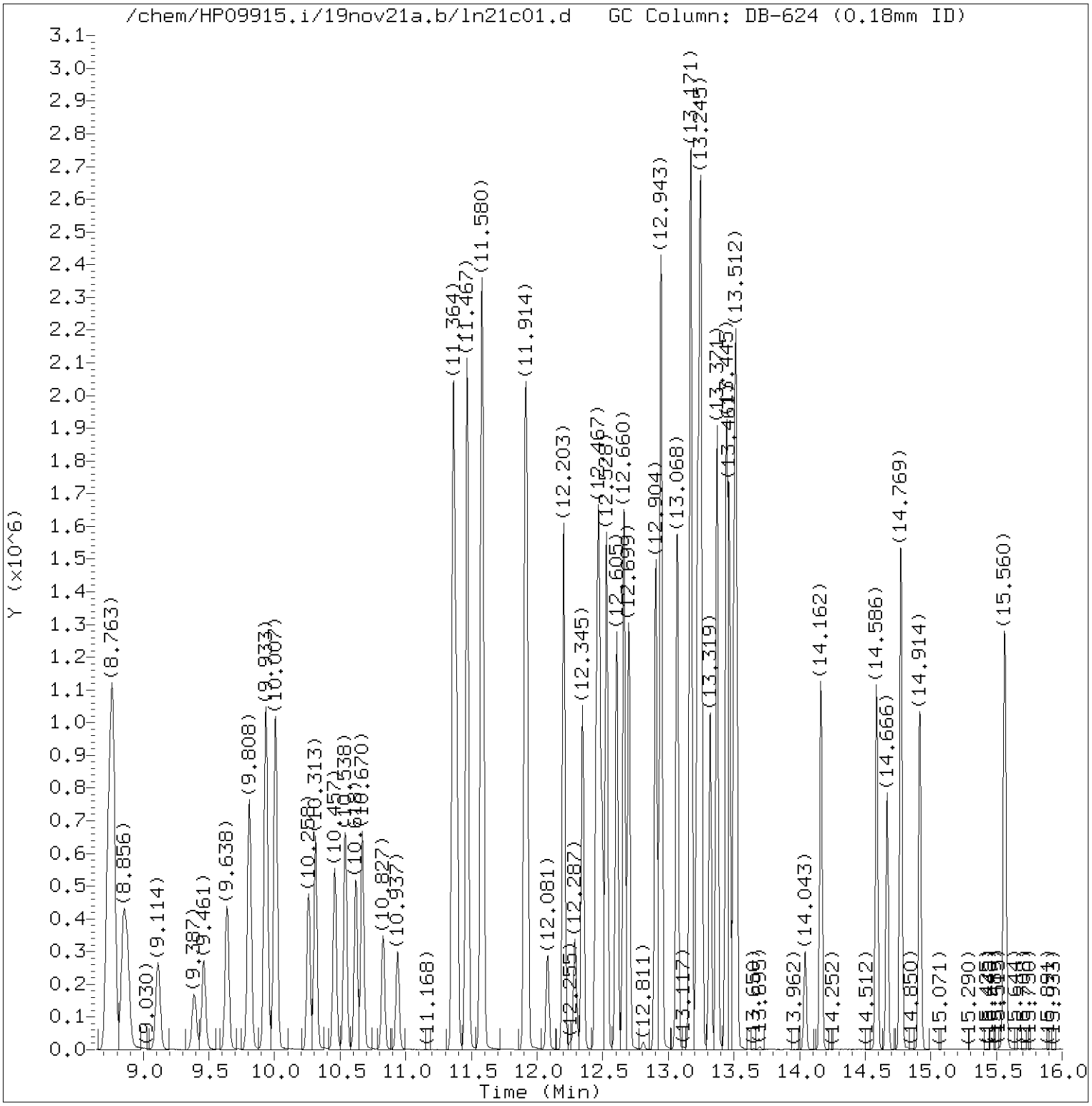
Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:48 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Linda C. Pape
on 11/21/2019 at 08:49.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:48 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Linda C. Pape
on 11/21/2019 at 08:49.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:48 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.091	85	269500	45.890
4) Chloromethane	(2)	2.287	50	266206	47.032
6) Vinyl Chloride	(2)	2.410	62	257324	45.552
5) 1,3-Butadiene	(2)	2.416	39	296686	63.129
8) Bromomethane	(2)	2.754	94	189066	46.690
9) Chloroethane	(2)	2.857	64	142003	45.742
12) Trichlorofluoromethane	(2)	3.162	101	286217	47.061
11) n-Pentane	(2)	3.217	43	302331	42.065
14) Ethyl ether	(2)	3.445	59	171366	43.605
15) Freon 123a	(2)	3.532	67	227759	46.554
16) Acrolein	(1)	3.628	56	616439	535.139
17) 1,1-Dichloroethene	(2)	3.763	96	167149	46.823
17) 1,1-Dichloroethene	(2)	3.770	63	80865	45.184
19) Freon 113	(2)	3.799	101	196955	48.358
18) Acetone	(1)	3.808	58	54264	105.076
22) Methyl Iodide	(2)	3.975	142	342801	46.341
21) 2-Propanol	(1)	3.998	45	91337	246.022
23) Carbon Disulfide	(2)	4.078	76	626326	46.558
27) Methyl Acetate	(2)	4.249	43	188364	40.969
25) Allyl Chloride	(2)	4.274	41	250788	39.162
28) Methylene Chloride	(2)	4.477	84	199725	47.007
29)*t-Butyl alcohol-d10	(1)	4.493	65	153538	250.000
30) t-Butyl alcohol	(1)	4.631	59	154437	238.915
31) Acrylonitrile	(2)	4.837	53	111178	44.946
33) Methyl Tertiary Butyl Ether	(2)	4.882	73	592117	43.681
32) trans-1,2-Dichloroethene	(2)	4.892	96	192144	46.528
34) n-Hexane	(2)	5.316	57	297489	46.302
36) 1,1-Dichloroethane	(2)	5.554	63	324254	45.009
38) di-Isopropyl ether	(2)	5.609	45	611174	43.987
39) 2-Chloro-1,3-butadiene	(2)	5.663	53	296084	45.809
40) Ethyl t-butyl ether	(2)	6.136	59	588145	43.618
43) 1,2-Dichloroethene (Total)	(2)		96	406684	92.812
44) 2-Butanone	(2)	6.364	43	272523	85.826
42) cis-1,2-Dichloroethene	(2)	6.380	96	214540	46.285
45) 2,2-Dichloropropane	(2)	6.397	77	248547	44.381
47) Propionitrile	(1)	6.458	54	226363	281.049
48) Methacrylonitrile	(2)	6.667	67	309152	115.861
49) Bromochloromethane	(2)	6.708	128	113854	46.323

* = Compound is an internal standard.

Digitally signed by Linda C. Pape
on 11/21/2019 at 08:49.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:48 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.718	71	80126	110.135
51) Chloroform	(2)	6.863	83	326006	47.313
52)$Dibromofluoromethane	(2)	7.075	113	197988	48.089
52)$Dibromofluoromethane	(2)	7.078	111	203853	48.561
53) 1,1,1-Trichloroethane	(2)	7.088	97	272281	46.299
54) Cyclohexane	(2)	7.171	56	359166	45.671
54) Cyclohexane	(2)	7.178	84	315259	46.149
54) Cyclohexane	(2)	7.178	69	111017	45.640
56) Carbon Tetrachloride	(2)	7.287	117	227872	45.686
55) 1,1-Dichloropropene	(2)	7.294	75	259369	45.534
58) Isobutyl Alcohol	(1)	7.464	41	137942	634.129
57)$1,2-Dichloroethane-d4	(2)	7.528	102	51359	48.946
57)$1,2-Dichloroethane-d4	(2)	7.532	65	232643	49.752
57)$1,2-Dichloroethane-d4	(2)	7.535	104	32790	48.924
60) Benzene	(2)	7.561	78	811232	47.359
61) 1,2-Dichloroethane	(2)	7.631	62	251951	45.729
61) 1,2-Dichloroethane	(2)	7.638	98	25548	46.857
65) t-Amyl methyl ether	(2)	7.741	73	601832	44.467
66)*Fluorobenzene	(2)	7.959	96	842128	50.000
67) n-Heptane	(2)	7.962	43	277613	46.252
69) n-Butanol	(1)	8.332	56	235235	1256.422
71) Trichloroethene	(2)	8.429	95	206241	47.818
72) Methylcyclohexane	(2)	8.734	83	363539	45.433
72) Methylcyclohexane	(2)	8.731	98	165844	45.803
73) 1,2-Dichloropropane	(2)	8.769	63	202513	46.559
76) Methyl Methacrylate	(2)	8.850	69	199229	47.366
75) 1,4-Dioxane	(1)	8.859	88	45382M	881.892
74) Dibromomethane	(2)	8.879	93	135467	48.135
78) Bromodichloromethane	(2)	9.114	83	239567	47.437
79) 2-Nitropropane	(2)	9.387	41	135200	88.386
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	150329	80.471
81) cis-1,3-Dichloropropene	(2)	9.638	75	312935	46.655
82) 4-Methyl-2-pentanone	(2)	9.808	43	593356	88.530
83)$Toluene-d8	(3)	9.933	98	873852	48.424
83)$Toluene-d8	(3)	9.933	100	563295	48.187
88) Toluene	(3)	10.007	92	526302	46.519
90) 1,3-Dichloropropene (total)	(3)		100	605159	92.157
89) trans-1,3-Dichloropropene	(3)	10.258	75	292224	45.502

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/21/2019 at 08:49.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:48 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	10.313	69	356547	45.682
92) 1,1,2-Trichloroethane	(3)	10.461	97	201587	46.997
93) Tetrachloroethene	(3)	10.538	166	218124	45.523
94) 1,3-Dichloropropane	(3)	10.621	76	336408	45.935
96) 2-Hexanone	(3)	10.670	43	432748	83.064
97) Dibromochloromethane	(3)	10.824	129	198248	45.119
99) 1,2-Dibromoethane	(3)	10.937	107	219712	47.171
100)*Chlorobenzene-d5	(3)	11.361	117	689674	50.000
101) 1-Chlorohexane	(3)	11.364	91	265174	43.630
102) Chlorobenzene	(3)	11.387	112	591870	46.262
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	193478	45.899
104) Ethylbenzene	(3)	11.467	91	1004961	46.474
106) m+p-Xylene	(3)	11.580	106	798833	93.906
108) Xylene (Total)	(3)		106	1187719	140.188
107) o-Xylene	(3)	11.908	106	388886	46.282
109) Styrene	(3)	11.924	104	662866	47.740
110) Bromoform	(3)	12.081	173	130378	39.710
111) Isopropylbenzene	(3)	12.203	105	991541	47.048
112) Cyclohexanone	(1)	12.287	55	143181	710.422
114)$4-Bromofluorobenzene	(3)	12.345	95	340502	49.831
114)$4-Bromofluorobenzene	(3)	12.348	174	281616	49.713
116) 1,1,2,2-Tetrachloroethane	(4)	12.448	83	328297	46.779
115) Bromobenzene	(4)	12.464	156	258502	46.296
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	151011	69.759
117) 1,2,3-Trichloropropane	(4)	12.496	110	97849	45.436
119) n-Propylbenzene	(4)	12.528	91	1157970	47.468
120) 2-Chlorotoluene	(4)	12.605	126	236208	45.578
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	846397	47.742
121) 4-Chlorotoluene	(4)	12.699	126	245639	45.536
124) tert-Butylbenzene	(4)	12.904	134	170518M	46.508
125) Pentachloroethane	(4)	12.940	167	147178	46.618
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	883458	47.282
127) sec-Butylbenzene	(4)	13.068	105	1026258	46.907
129) 1,3-Dichlorobenzene	(4)	13.168	146	473678	46.165
130) p-Isopropyltoluene	(4)	13.171	119	879731	46.479
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	371519	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	488046	45.882
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	937888	47.386

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/21/2019 at 08:49.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

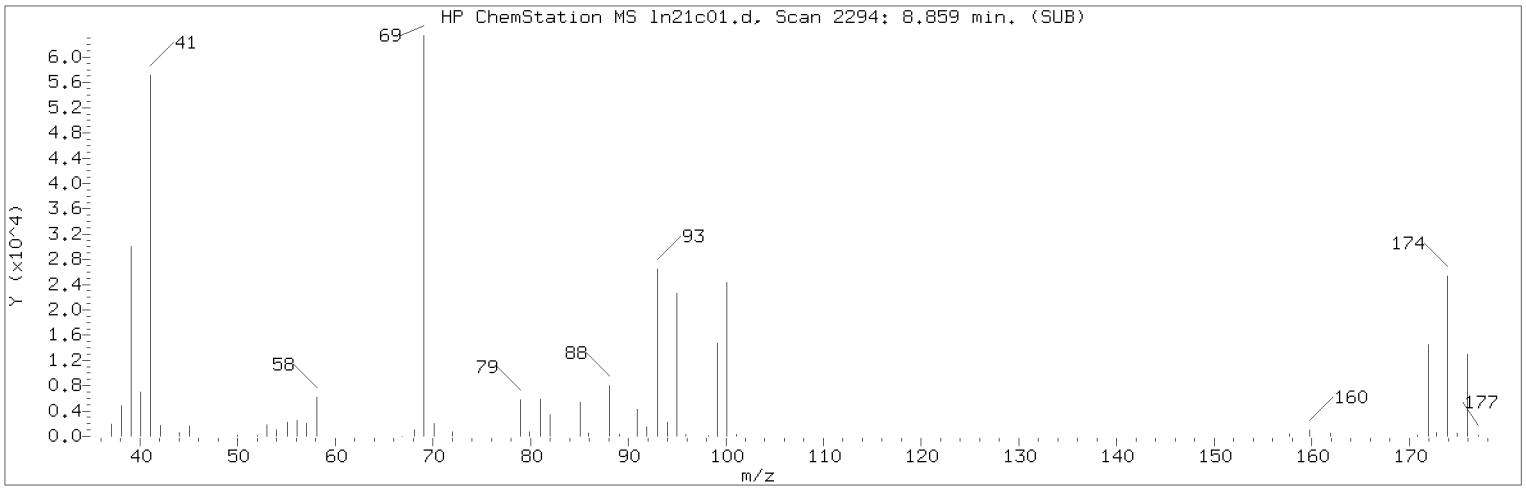
Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:48 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

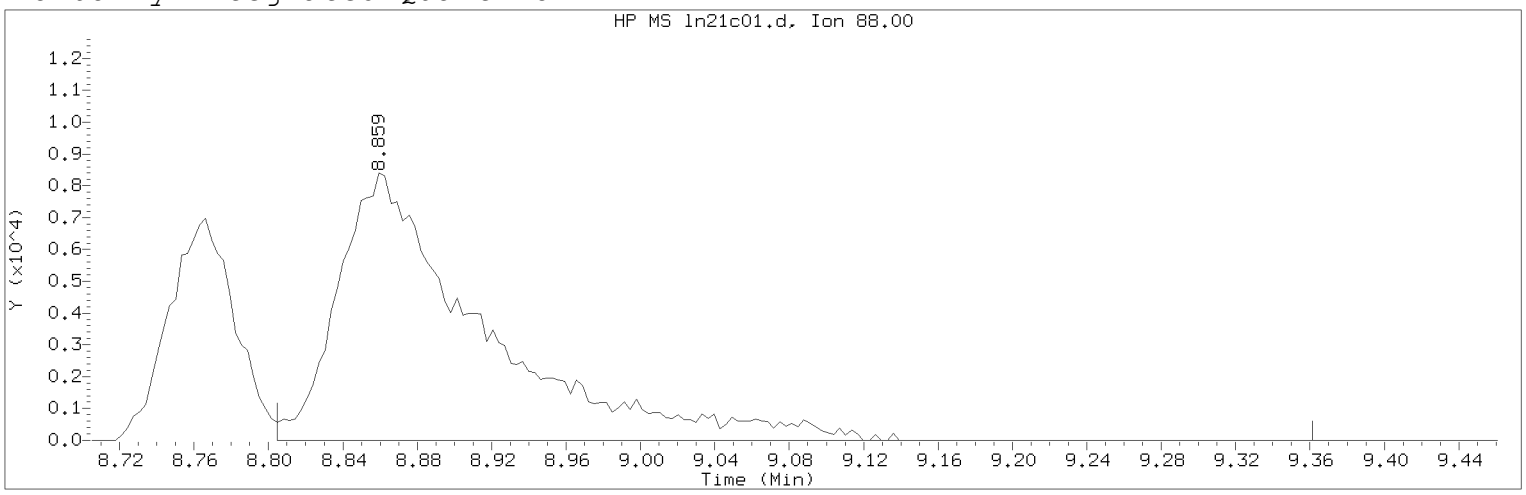
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.319	91	673087	44.916
136) 1,3-Diethylbenzene	(4)	13.371	119	564691	45.843
141) Diethylbenzene (total)	(4)		100	1635457	137.370
137) 1,4-Diethylbenzene	(4)	13.441	119	588988	45.131
139) n-Butylbenzene	(4)	13.464	92	431653	44.603
138) 1,2-Dichlorobenzene	(4)	13.499	146	466125	46.038
140) 1,2-Diethylbenzene	(4)	13.515	119	481778	46.396
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	66725	43.432
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	329988	42.421
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	313458	41.443
147) Hexachlorobutadiene	(4)	14.666	225	129620	36.296
148) Naphthalene	(4)	14.772	128	1124833	46.259
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	308707	41.945
150) 2-Methylnaphthalene	(4)	15.560	142	637684	42.587

Digitally signed by Linda C. Pape
on 11/21/2019 at 08:49.
Target 3.5 esignature user ID: lcp00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:48 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

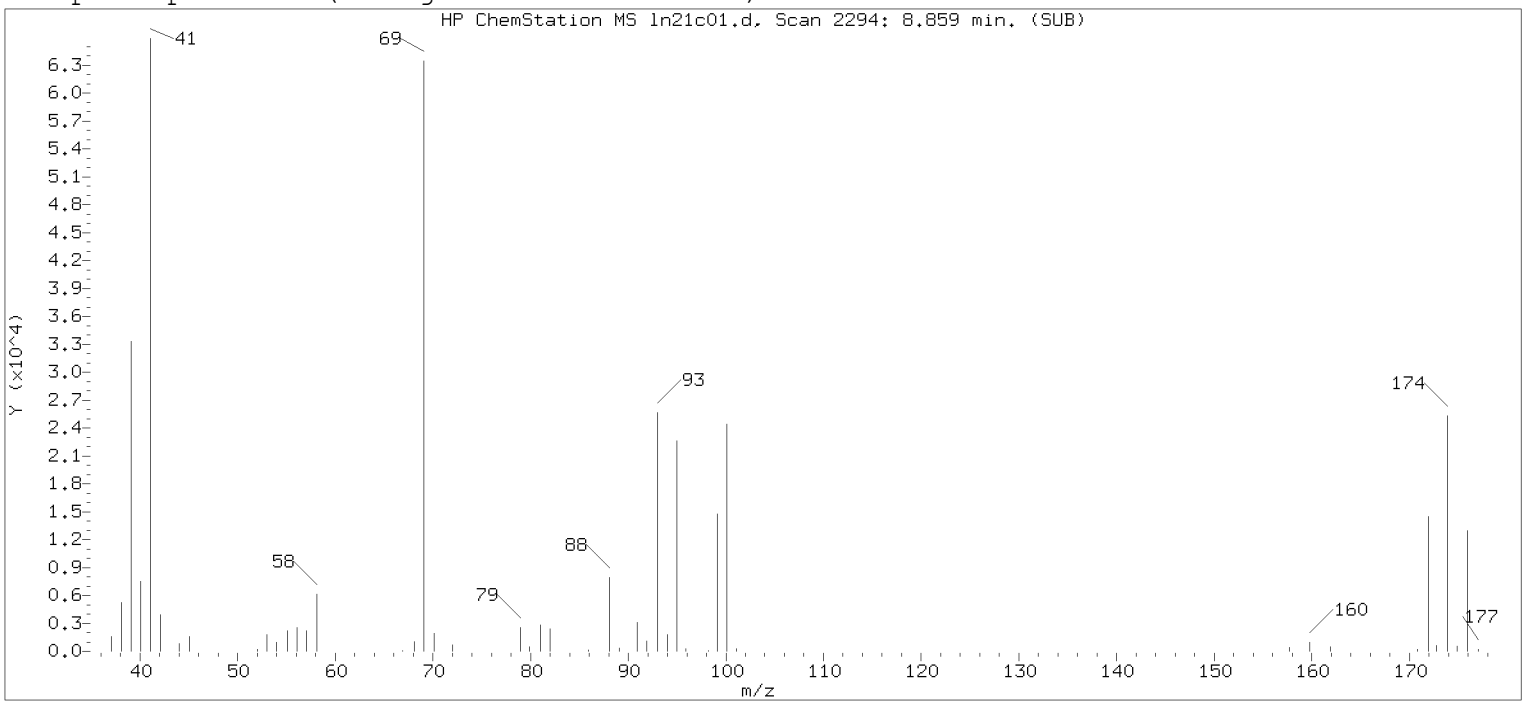
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2294
Retention Time (minutes): 8.859
Quant Ion : 88.00
Area (flag) : 45382M
On-Column Amount (ng) : 881.8916
Integration start scan : 2276 Integration stop scan: 2449
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

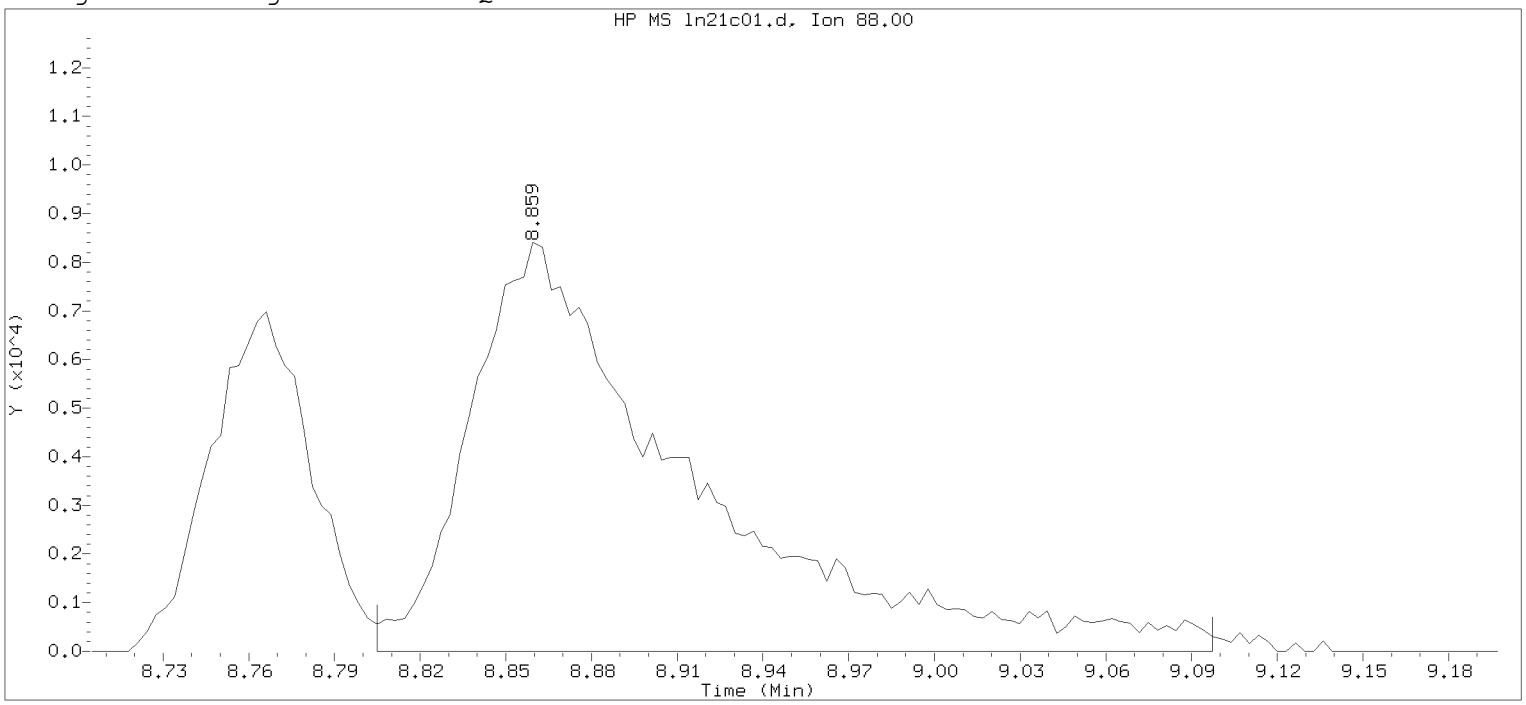
Analyst responsible for change: Digitally signed by Linda C. Pape
on 11/21/2019 at 08:49.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:40.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

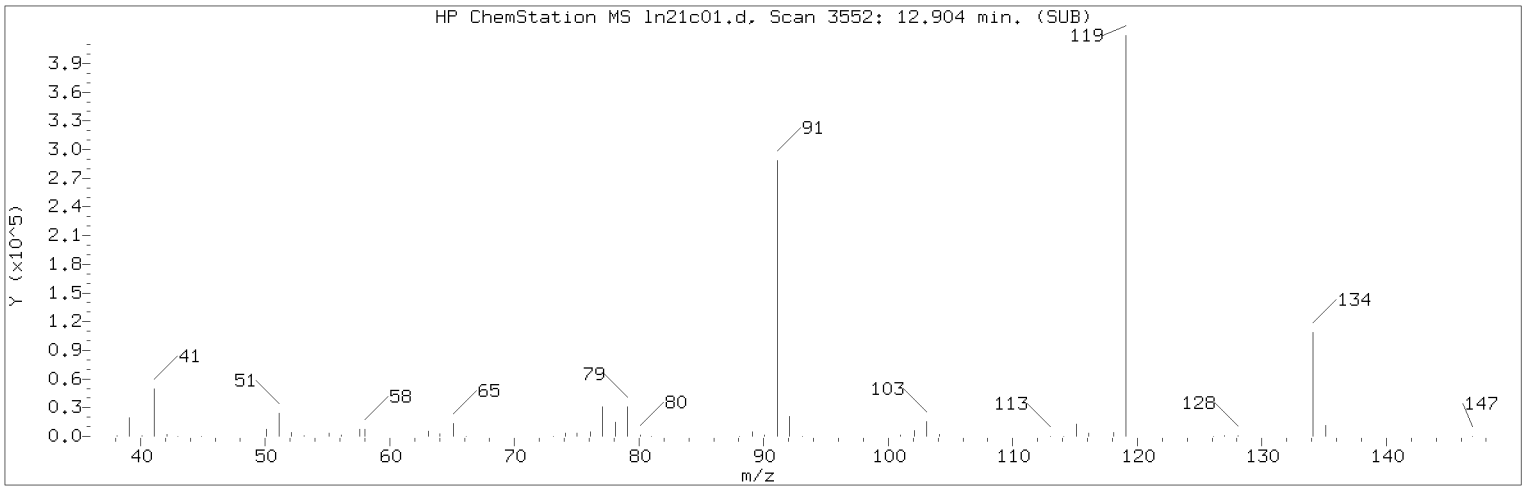
Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:46 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

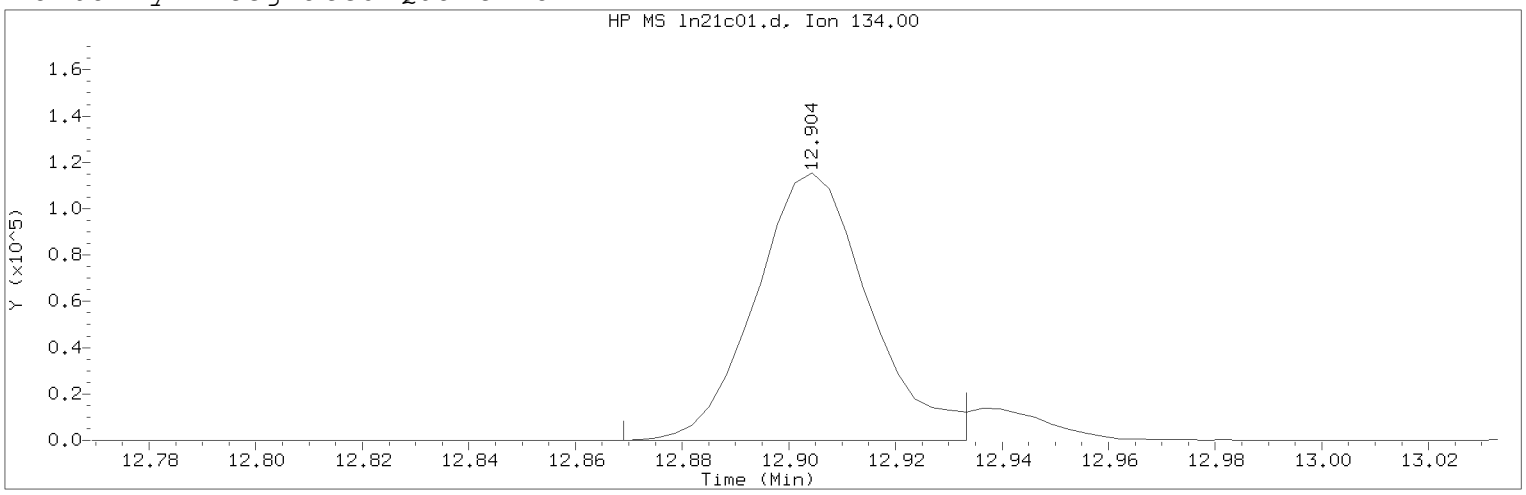
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2294
Retention Time (minutes): 8.859
Quant Ion : 88.00
Area : 44934
On-column Amount (ng) : 873.1754
Integration start scan : 2276 Integration stop scan: 2367
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 11/21/2019 at 08:49.
Target 3.5 esignature user: LCP00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:48 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

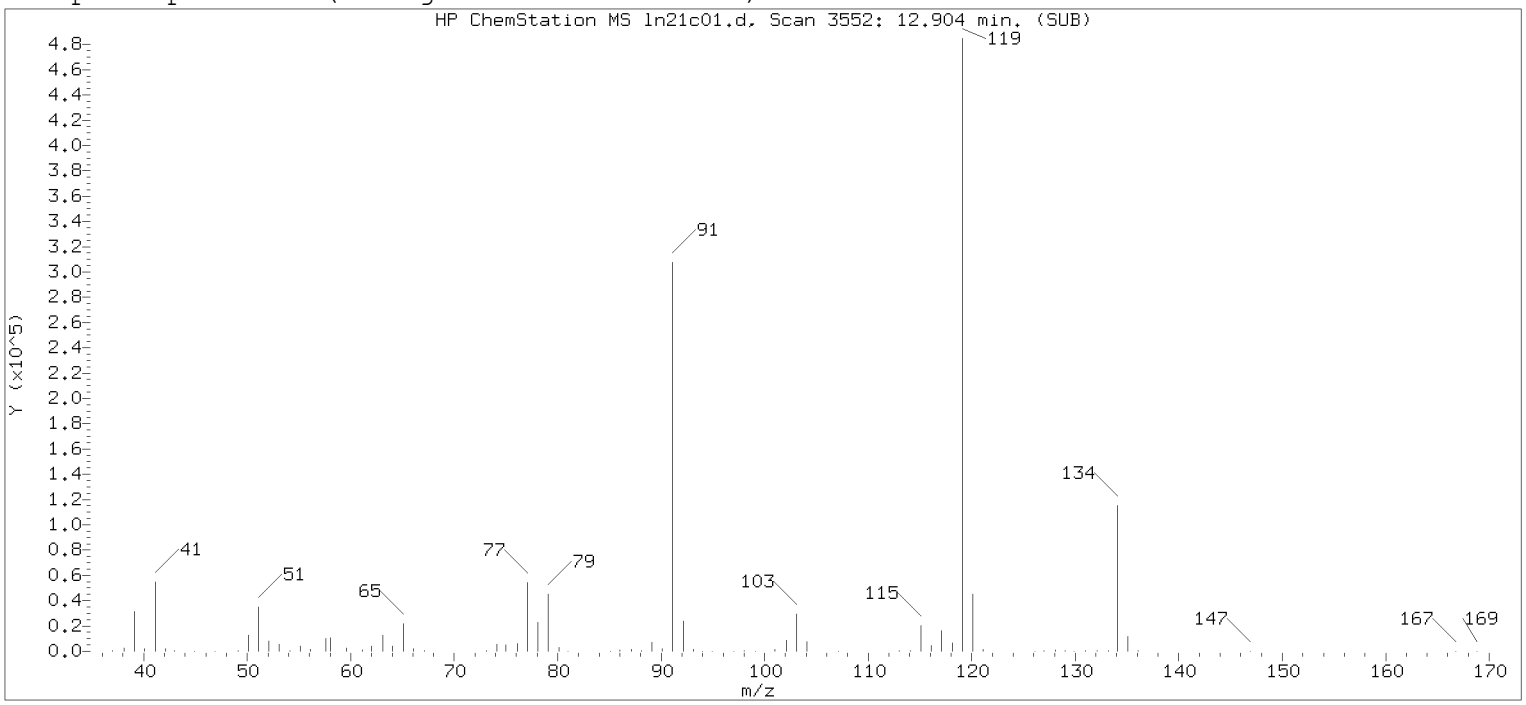
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 170518M
On-Column Amount (ng) : 46.5076
Integration start scan : 3540 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

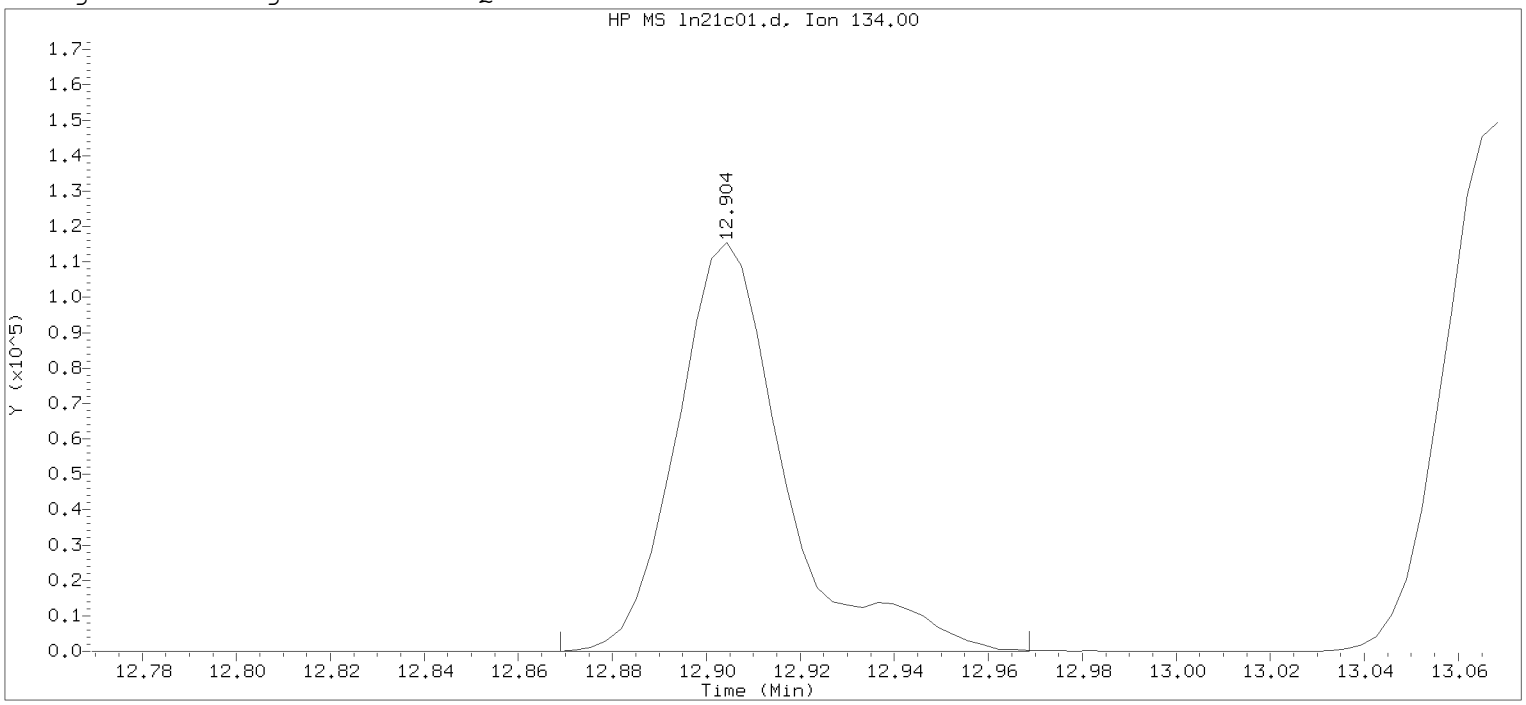
Analyst responsible for change: Digitally signed by Linda C. Pape
on 11/21/2019 at 08:49.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:40.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov21a.b/ln21c01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 08:18 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:46
Date, time and analyst ID of latest file update: 21-Nov-2019 08:46 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 183305
On-column Amount (ng) : 49.9951
Integration start scan : 3540 Integration stop scan: 3571
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 11/21/2019 at 08:49.
Target 3.5 esignature user: LCP00895

RLVL83 Lancaster Laboratories RVLL83
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov21a.b/ln21r01.d Injection date and time: **21-NOV-2019 09:02**
Data file Sample Info. Line: RLVL83;RVLL83;1;3;MDL/LOQ;;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 10:16 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **MDLY325**
Calibration date and time (Last Method Edit): 21-NOV-2019 10:15
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	Qlon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493	(0.000)	936	65	163145	(6)	250.00	
66) Fluorobenzene	7.956	(0.003)	2013	96	871784	(4)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	717899	(4)	50.00	
131) 1,4-Dichlorobenzene-d4	13.220	(0.003)	3650	152	380162	(2)	50.00	

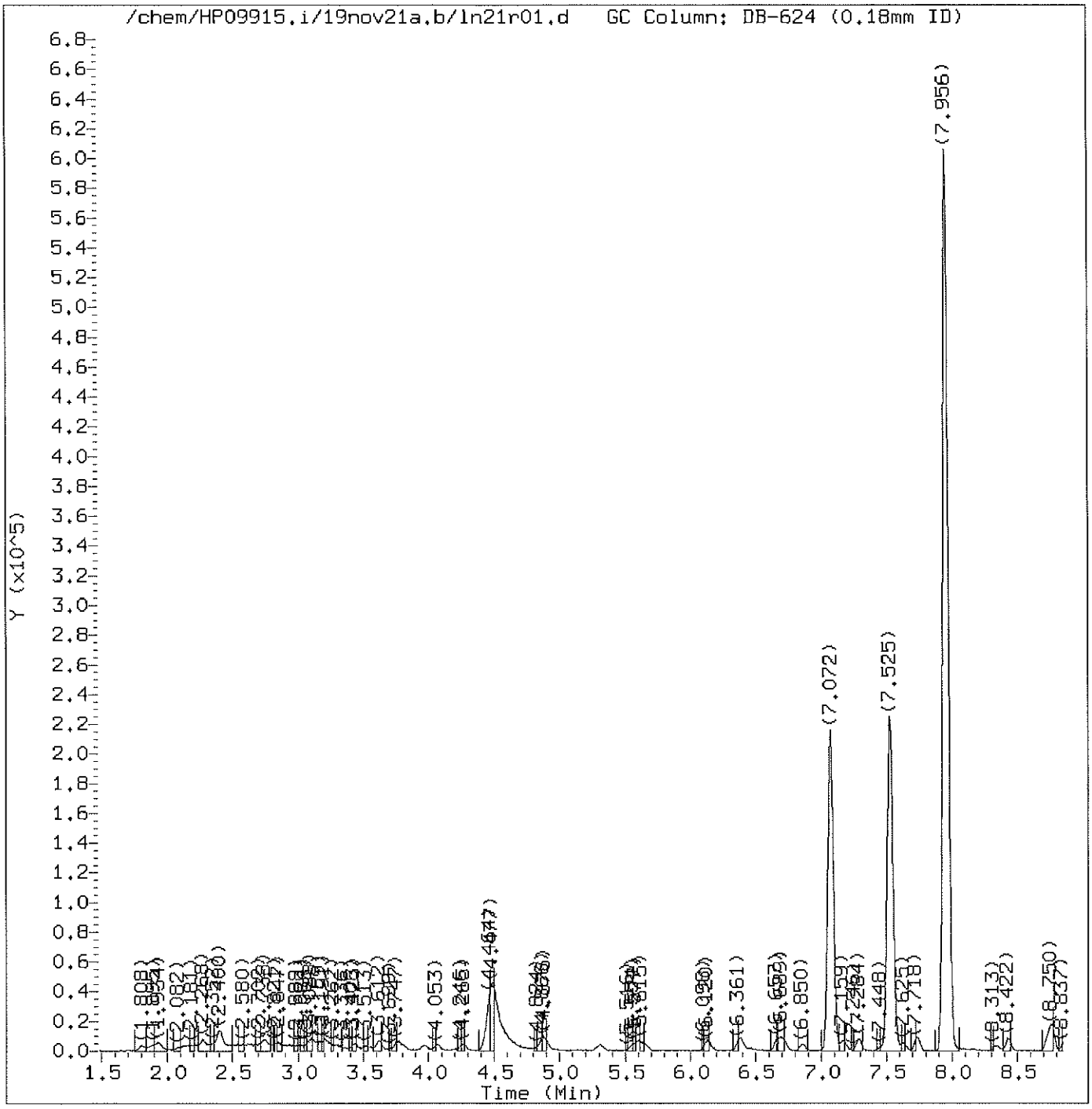
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072	(0.000)	113	203622	47.775	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.529	(0.000)	102	55485	51.080	102%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	901116	47.972	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	348356	48.976	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
110) Bromoform	(3)	12.078	(-0.000)	173	1568	0.459	0.46		J	1	4

Total number of targets = 1

Digitally signed by Linda C. Pape on 11/21/2019 at 10:16. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:40. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

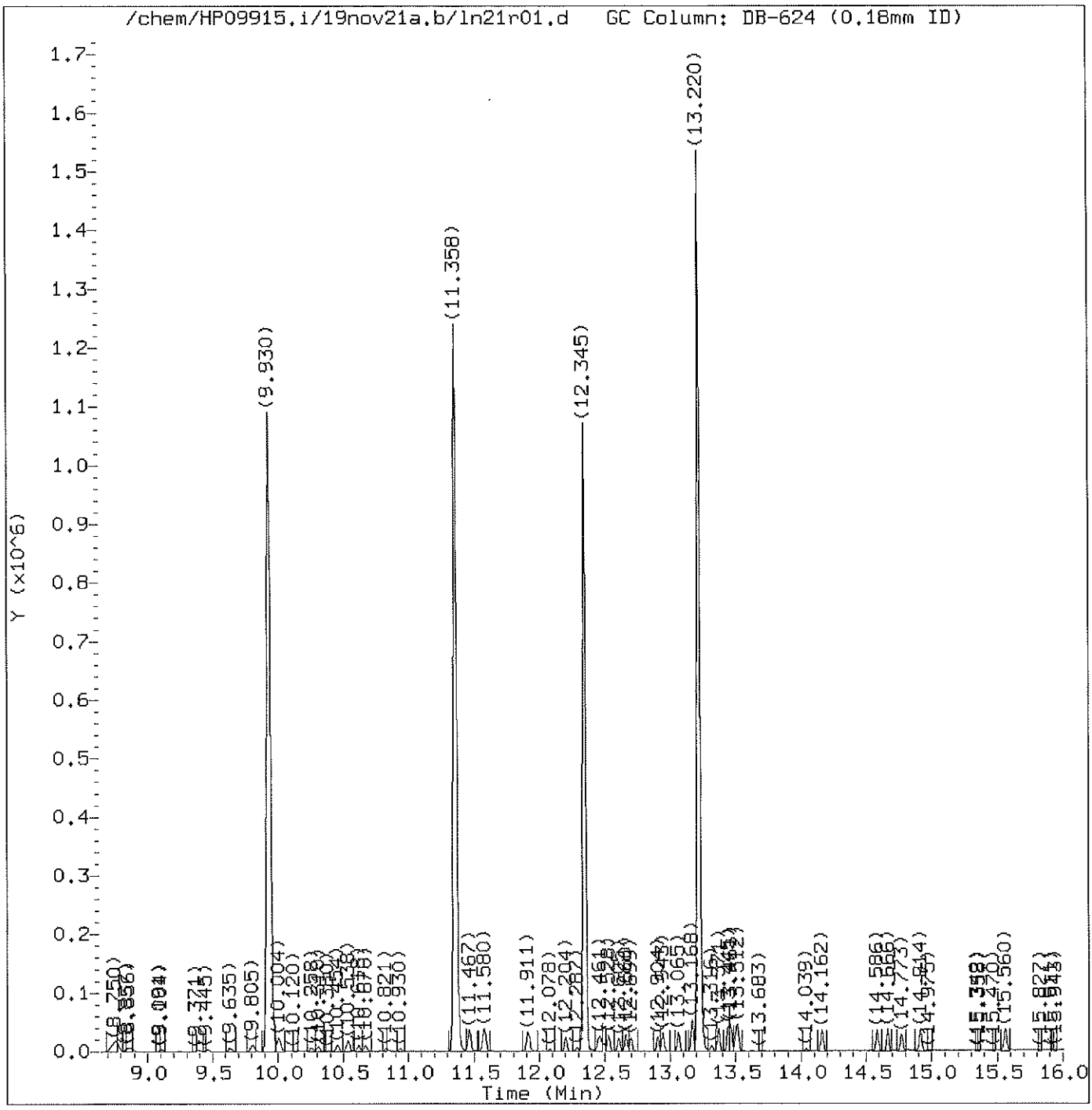
Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/1n21r01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:02 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: MDLY325
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 10:16 lcp00895

Sample Name: RLVL83 Lab Sample ID: RVLL83

Digitally signed by Linda C. Pape
on 11/21/2019 at 10:16.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21r01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:02 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: MDLY325
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 10:16 lcp00895

Sample Name: RLVL83 Lab Sample ID: RVLL83

Digitally signed by Linda C. Pape
on 11/21/2019 at 10:16.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21r01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:02 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: MDLY325
Calibration date and time: 21-NOV-2019 10:15
Date, time and analyst ID of latest file update: 21-Nov-2019 10:16 lcp00895

Sample Name: RLVL83 Lab Sample ID: RVLL83

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.493	65	163145	250.000
52)$Dibromofluoromethane	(2)	7.072	113	203622	47.775
57)$1,2-Dichloroethane-d4	(2)	7.529	102	55485	51.080
66)*Fluorobenzene	(2)	7.956	96	871784	50.000
83)$Toluene-d8	(3)	9.930	98	901116	47.972
100)*Chlorobenzene-d5	(3)	11.358	117	717899	50.000
110) Bromoform	(3)	12.078	173	1568	0.459
114)$4-Bromofluorobenzene	(3)	12.345	95	348356	48.976
131)*1,4-Dichlorobenzene-d4	(4)	13.220	152	380162	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/21/2019 at 10:16.
Target 3.5 esignature user ID: lcp00895

Raw QC Data

Volatiles by GC/MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKL83

Data file: /chem/HP09915.i/19nov21a.b/ln21b01.d
Injection date and time: **21-NOV-2019 09:24**
Data file Sample Info. Line: VBLKL83;VBLKL83;1;3;;;;;;
Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 09:41 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 21-NOV-2019 08:49
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.509	(-0.016)	941	65	158112	(3)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	860082	(2)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	701132	(2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	371721	(0)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.078	(0.000)	113	199192	47.371	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.535	(-0.001)	102	54120	50.501	101%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	879921	47.963	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	336566	48.450	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)				Not Detected					0.2	1
4) Chloromethane	(2)				Not Detected					0.2	1
5) 1,3-Butadiene	(2)				Not Detected					1	3
6) Vinyl Chloride	(2)				Not Detected					0.2	1
8) Bromomethane	(2)				Not Detected					0.3	1
9) Chloroethane	(2)				Not Detected					0.2	1
11) n-Pentane	(2)				Not Detected					0.4	10
12) Trichlorofluoromethane	(2)				Not Detected					0.2	1
14) Ethyl ether	(2)				Not Detected					0.2	5
15) Freon 123a	(2)				Not Detected					0.4	5
16) Acrolein	(1)				Not Detected					2	100
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
21) 2-Propanol	(1)				Not Detected					18	100
22) Methyl Iodide	(2)				Not Detected					0.2	1
23) Carbon Disulfide	(2)				Not Detected					0.2	5
25) Allyl Chloride	(2)				Not Detected					0.3	5
27) Methyl Acetate	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
30) t-Butyl alcohol	(1)				Not Detected					12	50
31) Acrylonitrile	(2)				Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.2	1
34) n-Hexane	(2)				Not Detected					2	5
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
38) di-Isopropyl ether	(2)				Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)				Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)				Not Detected					0.4	2

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov21a.b/ln21b01.d Injection date and time: **21-NOV-2019 09:24**
Data file Sample Info. Line: VBLKL83;VBLKL83;1;3;;;;;; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 09:41 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 21-NOV-2019 08:49
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)				Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					1	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
72) Methylcyclohexane	(2)				Not Detected					0.5	5
73) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
74) Dibromomethane	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
76) Methyl Methacrylate	(2)				Not Detected					0.2	5
78) Bromodichloromethane	(2)				Not Detected					0.2	1
79) 2-Nitropropane	(2)				Not Detected					0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
81) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
82) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
88) Toluene	(3)				Not Detected					0.2	1
89) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
90) 1,3-Dichloropropene (total)	(3)				Not Detected					0.4	2
91) Ethyl Methacrylate	(3)				Not Detected					0.2	5
92) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
94) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
96) 2-Hexanone	(3)				Not Detected					0.3	10
97) Dibromochloromethane	(3)				Not Detected					0.2	1
99) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
101) 1-Chlorohexane	(3)				Not Detected					0.3	5
102) Chlorobenzene	(3)				Not Detected					0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
109) Styrene	(3)				Not Detected					0.2	5
110) Bromoform	(3)				Not Detected					1	4
111) Isopropylbenzene	(3)				Not Detected					0.2	5
112) Cyclohexanone	(1)				Not Detected					25	100
115) Bromobenzene	(4)				Not Detected					0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
117) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
118) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50
119) n-Propylbenzene	(4)				Not Detected					0.2	5

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKL83

Data file: /chem/HP09915.i/19nov21a.b/ln21b01.d Injection date and time: **21-NOV-2019 09:24**
Data file Sample Info. Line: VBLKL83;VBLKL83;1;3;;;;;; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 09:41 Automation

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 21-NOV-2019 08:49
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

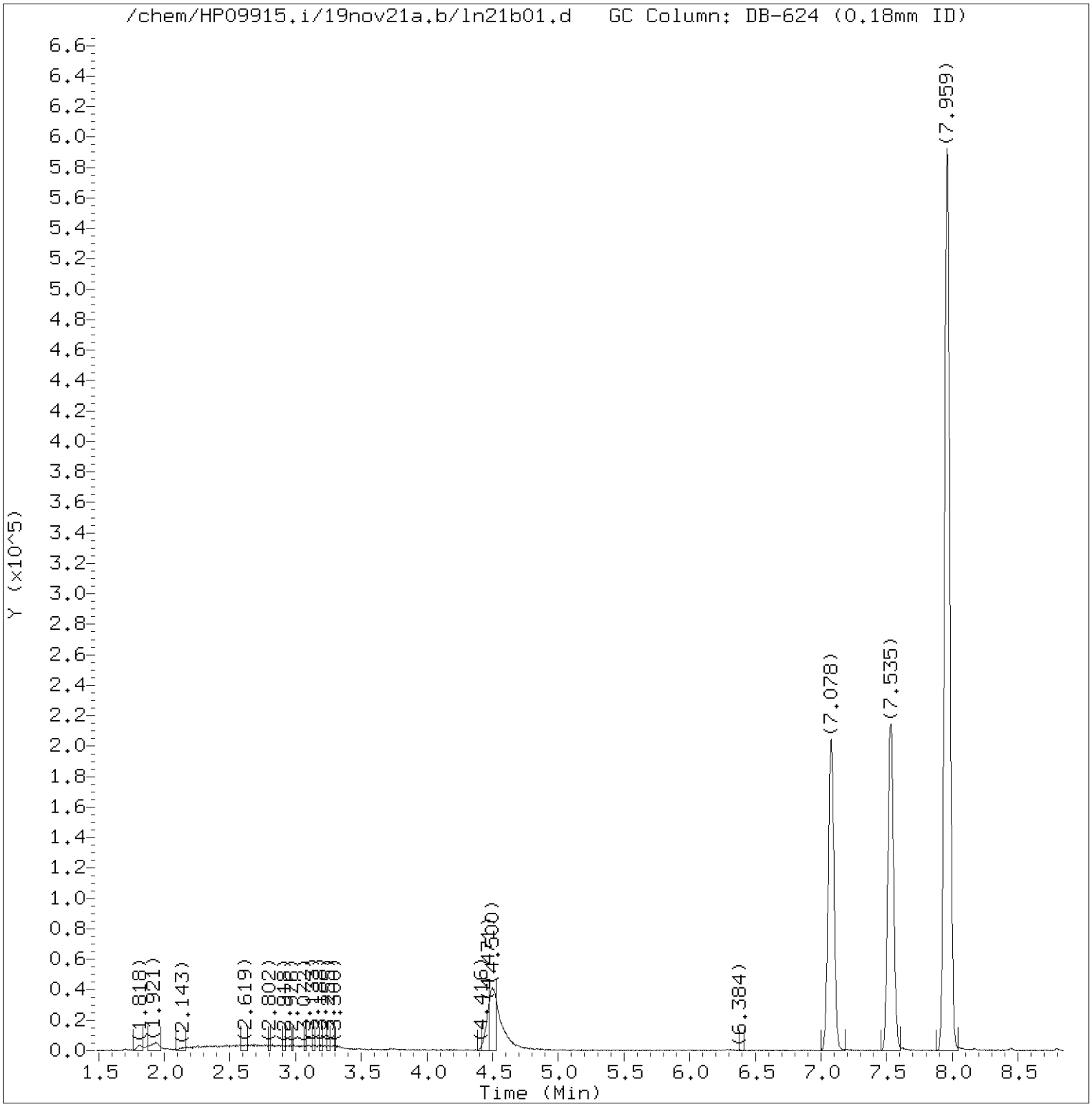
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)				Not Detected					0.2	5
121) 4-Chlorotoluene	(4)				Not Detected					0.2	5
122) 1,3,5-Trimethylbenzene	(4)				Not Detected					0.3	5
124) tert-Butylbenzene	(4)				Not Detected					0.3	5
125) Pentachloroethane	(4)				Not Detected					0.2	5
126) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5
127) sec-Butylbenzene	(4)				Not Detected					0.2	5
129) 1,3-Dichlorobenzene	(4)				Not Detected					0.2	5
130) p-Isopropyltoluene	(4)				Not Detected					0.2	5
133) 1,4-Dichlorobenzene	(4)				Not Detected					0.2	5
134) 1,2,3-Trimethylbenzene	(4)				Not Detected					0.3	5
135) Benzyl Chloride	(4)				Not Detected					1	5
136) 1,3-Diethylbenzene	(4)				Not Detected					0.2	5
137) 1,4-Diethylbenzene	(4)				Not Detected					0.2	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
139) n-Butylbenzene	(4)				Not Detected					0.2	5
140) 1,2-Diethylbenzene	(4)				Not Detected					0.2	5
141) Diethylbenzene (total)	(4)				Not Detected					0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.3	5
144) 1,3,5-Trichlorobenzene	(4)				Not Detected					0.2	5
146) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	5
147) Hexachlorobutadiene	(4)				Not Detected					2	5
148) Naphthalene	(4)				Not Detected					1	5
149) 1,2,3-Trichlorobenzene	(4)				Not Detected					0.4	5
150) 2-Methylnaphthalene	(4)				Not Detected					2	4

Total number of targets = 110

Digitally signed by Linda C. Pape on 11/21/2019 at 10:13. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:40. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

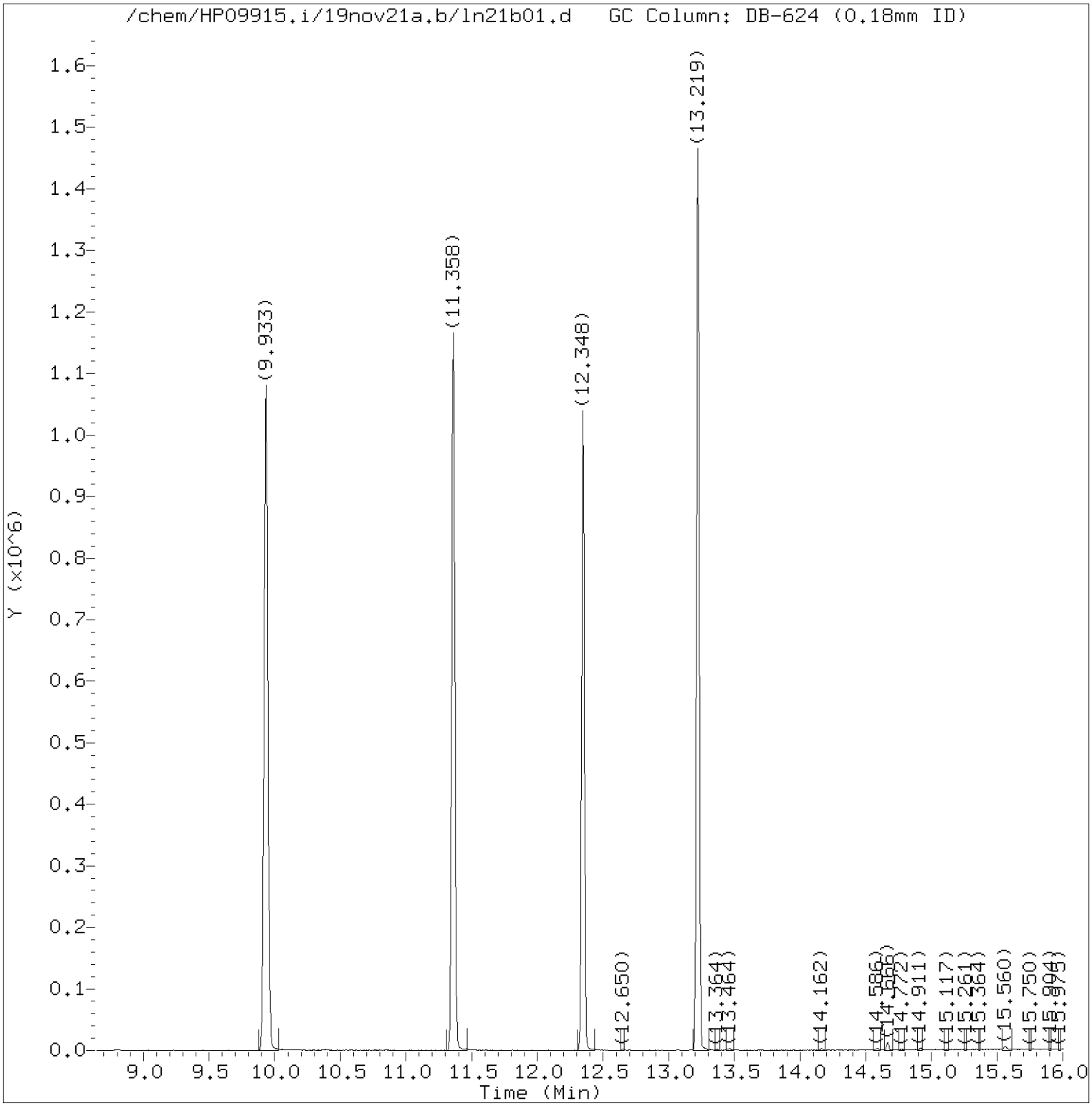
Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21b01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:24 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 09:41 Automation

Sample Name: VBLKL83 Lab Sample ID: VBLKL83

Digitally signed by Linda C. Pape
on 11/21/2019 at 10:13.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21b01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:24 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 09:41 Automation

Sample Name: VBLKL83 Lab Sample ID: VBLKL83

Digitally signed by Linda C. Pape
on 11/21/2019 at 10:13.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21b01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:24 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 09:41 Automation

Sample Name: VBLKL83 Lab Sample ID: VBLKL83

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.509	65	158112	250.000
52)$Dibromofluoromethane	(2)	7.078	113	199192	47.371
57)$1,2-Dichloroethane-d4	(2)	7.535	102	54120	50.501
66)*Fluorobenzene	(2)	7.959	96	860082	50.000
83)$Toluene-d8	(3)	9.933	98	879921	47.963
100)*Chlorobenzene-d5	(3)	11.358	117	701132	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	336566	48.450
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	371721	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/21/2019 at 10:13.
Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL83

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL83

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov21a.b/ln21l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	19	
74-87-3	Chloromethane	19	
106-99-0	1,3-Butadiene	29	
75-01-4	Vinyl Chloride	19	
74-83-9	Bromomethane	16	
75-00-3	Chloroethane	17	
109-66-0	n-Pentane	15	
75-69-4	Trichlorofluoromethane	21	
60-29-7	Ethyl ether	20	
354-23-4	Freon 123a	19	
107-02-8	Acrolein	150	
75-35-4	1,1-Dichloroethene	19	
67-64-1	Acetone	150	
76-13-1	Freon 113	18	
67-63-0	2-Propanol	140	
74-88-4	Methyl Iodide	17	
75-15-0	Carbon Disulfide	16	
107-05-1	Allyl Chloride	17	
79-20-9	Methyl Acetate	18	
75-09-2	Methylene Chloride	20	
75-65-0	t-Butyl alcohol	190	
107-13-1	Acrylonitrile	89	
156-60-5	trans-1,2-Dichloroethene	19	
1634-04-4	Methyl Tertiary Butyl Ether	18	
110-54-3	n-Hexane	18	
75-34-3	1,1-Dichloroethane	19	
108-20-3	di-Isopropyl ether	18	
126-99-8	2-Chloro-1,3-butadiene	17	
637-92-3	Ethyl t-butyl ether	18	
156-59-2	cis-1,2-Dichloroethene	21	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL83

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL83

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov21a.b/ln21l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	40	
78-93-3	2-Butanone	130	
594-20-7	2,2-Dichloropropane	19	
107-12-0	Propionitrile	160	
126-98-7	Methacrylonitrile	140	
74-97-5	Bromochloromethane	19	
109-99-9	Tetrahydrofuran	110	
67-66-3	Chloroform	20	
71-55-6	1,1,1-Trichloroethane	19	
110-82-7	Cyclohexane	17	
563-58-6	1,1-Dichloropropene	19	
56-23-5	Carbon Tetrachloride	18	
78-83-1	Isobutyl Alcohol	500	
71-43-2	Benzene	20	
107-06-2	1,2-Dichloroethane	20	
994-05-8	t-Amyl methyl ether	18	
142-82-5	n-Heptane	17	
71-36-3	n-Butanol	960	
79-01-6	Trichloroethene	20	
108-87-2	Methylcyclohexane	19	
78-87-5	1,2-Dichloropropane	20	
74-95-3	Dibromomethane	20	
123-91-1	1,4-Dioxane	620	
80-62-6	Methyl Methacrylate	18	
75-27-4	Bromodichloromethane	19	
79-46-9	2-Nitropropane	14	
110-75-8	2-Chloroethyl Vinyl Ether	30	
10061-01-5	cis-1,3-Dichloropropene	19	
108-10-1	4-Methyl-2-pentanone	87	
108-88-3	Toluene	20	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL83

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL83

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov21a.b/ln21l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	18	
542-75-6	1,3-Dichloropropene (total)	37	
97-63-2	Ethyl Methacrylate	17	
79-00-5	1,1,2-Trichloroethane	21	
127-18-4	Tetrachloroethene	20	
142-28-9	1,3-Dichloropropane	19	
591-78-6	2-Hexanone	85	
124-48-1	Dibromochloromethane	18	
106-93-4	1,2-Dibromoethane	20	
544-10-5	1-Chlorohexane	19	
108-90-7	Chlorobenzene	20	
630-20-6	1,1,1,2-Tetrachloroethane	19	
100-41-4	Ethylbenzene	20	
179601-23-1	m+p-Xylene	42	
95-47-6	o-Xylene	20	
1330-20-7	Xylene (Total)	62	
100-42-5	Styrene	20	
75-25-2	Bromoform	15	
98-82-8	Isopropylbenzene	21	
108-94-1	Cyclohexanone	480	
108-86-1	Bromobenzene	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	
96-18-4	1,2,3-Trichloropropane	19	
110-57-6	trans-1,4-Dichloro-2-butene	58	
103-65-1	n-Propylbenzene	21	
95-49-8	2-Chlorotoluene	20	
106-43-4	4-Chlorotoluene	20	
108-67-8	1,3,5-Trimethylbenzene	21	
98-06-6	tert-Butylbenzene	20	
76-01-7	Pentachloroethane	18	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL83

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL83

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov21a.b/ln21l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/21/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
95-63-6	1,2,4-Trimethylbenzene	20	
135-98-8	sec-Butylbenzene	20	
541-73-1	1,3-Dichlorobenzene	20	
99-87-6	p-Isopropyltoluene	20	
106-46-7	1,4-Dichlorobenzene	21	
526-73-8	1,2,3-Trimethylbenzene	20	
100-44-7	Benzyl Chloride	15	
141-93-5	1,3-Diethylbenzene	19	
105-05-5	1,4-Diethylbenzene	19	
95-50-1	1,2-Dichlorobenzene	20	
104-51-8	n-Butylbenzene	20	
135-01-3	1,2-Diethylbenzene	19	
25340-17-4	Diethylbenzene (total)	56	
96-12-8	1,2-Dibromo-3-chloropropane	18	
108-70-3	1,3,5-Trichlorobenzene	19	
120-82-1	1,2,4-Trichlorobenzene	18	
87-68-3	Hexachlorobutadiene	16	
91-20-3	Naphthalene	19	
87-61-6	1,2,3-Trichlorobenzene	18	
91-57-6	2-Methylnaphthalene	16	

Data file: /chem/HP09915.i/19nov21a.b/ln21l01.d Injection date and time: **21-NOV-2019 09:50**
Data file Sample Info. Line: LCSL83;LCSL83;1;3;LCS;;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 21-NOV-2019 08:49
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.496(-0.003)	937	65	170757 (11)	250.00	
66) Fluorobenzene	7.959(0.000)	2014	96	895510 (6)	50.00	
100) Chlorobenzene-d5	11.361(0.000)	3072	117	731089 (6)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223(0.000)	3651	152	395685 (7)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075(0.000)	113	208873	47.708	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.529(0.000)	102	55217	49.486	99%		80 - 120
83) Toluene-d8	(3)	9.934(0.000)	98	926555	48.436	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345(0.000)	95	362022	49.979	100%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	2.088(0.000)	85	118879	19.036	19.04			0.2	1
4) Chloromethane	(2)	2.281(0.000)	50	113496	18.857	18.86			0.2	1
5) 1,3-Butadiene	(2)	2.413(0.000)	39	146875	29.389	29.39			1	3
6) Vinyl Chloride	(2)	2.403(0.000)	62	113623	18.915	18.91			0.2	1
8) Bromomethane	(2)	2.747(0.000)	94	67718	15.726	15.73			0.3	1
9) Chloroethane	(2)	2.847(0.001)	64	55454	16.798	16.80			0.2	1
11) n-Pentane	(2)	3.210(0.000)	43	112271	14.690	14.69			0.4	10
12) Trichlorofluoromethane	(2)	3.156(0.000)	101	133402	20.627	20.63			0.2	1
14) Ethyl ether	(2)	3.435(0.001)	59	84003	20.101	20.10			0.2	5
15) Freon 123a	(2)	3.525(0.000)	67	99452	19.116	19.12			0.4	5
16) Acrolein	(1)	3.625(0.001)	56	190688	148.846	148.85			2	100
17) 1,1-Dichloroethene	(2)	3.767(-0.000)	96	73082	19.252	19.25			0.2	1
18) Acetone	(1)	3.805(0.001)	58	83980	146.219	146.22			0.7	20
19) Freon 113	(2)	3.802(-0.000)	101	77803	17.964	17.96			0.2	10
21) 2-Propanol	(1)	3.992(0.002)	45	56775	137.506	137.51			18	100
22) Methyl Iodide	(2)	3.969(0.000)	142	131428	16.708	16.71			0.2	1
23) Carbon Disulfide	(2)	4.075(0.000)	76	225161	15.740	15.74			0.2	5
25) Allyl Chloride	(2)	4.268(0.000)	41	118427	17.391	17.39			0.3	5
27) Methyl Acetate	(2)	4.249(-0.000)	43	88270	18.054	18.05			0.2	5
28) Methylene Chloride	(2)	4.471(0.000)	84	90359	19.999	20.00			0.3	1
30) t-Butyl alcohol	(1)	4.638(-0.000)	59	137540	191.319	191.32			12	50
31) Acrylonitrile	(2)	4.831(0.000)	53	234895	89.300	89.30			0.3	20
32) trans-1,2-Dichloroethene	(2)	4.889(0.000)	96	85560	19.483	19.48			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	4.882(-0.000)	73	257047	17.832	17.83			0.2	1
34) n-Hexane	(2)	5.313(0.000)	57	119870	17.545	17.54			2	5
36) 1,1-Dichloroethane	(2)	5.548(0.000)	63	143445	18.725	18.72			0.2	1
38) di-Isopropyl ether	(2)	5.612(-0.000)	45	261090	17.671	17.67			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	5.657(0.000)	53	118366	17.221	17.22			0.2	5
40) Ethyl t-butyl ether	(2)	6.133(0.000)	59	253354	17.669	17.67			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.384(-0.000)	96	102179	20.730	20.73			0.2	1
43) 1,2-Dichloroethene (Total)	(2)		96	187739	40.213	40.21			0.4	2

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov21a.b/ln21l01.d Injection date and time: **21-NOV-2019 09:50**
Data file Sample Info. Line: LCSL83;LCSL83;1;3;LCS;;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 21-NOV-2019 08:49
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	6.361(0.000)	43	442351	131.006	131.01			0.3	10
45) 2,2-Dichloropropane	(2)	6.394(0.000)	77	111627	18.744	18.74			0.3	1
47) Propionitrile	(1)	6.461(0.000)	54	146275	163.299	163.30			14	100
48) Methacrylonitrile	(2)	6.667(-0.000)	67	400873	141.279	141.28			6	50
49) Bromochloromethane	(2)	6.709(-0.000)	128	49407	18.904	18.90			0.2	5
50) Tetrahydrofuran	(1)	6.721(0.000)	71	87199	107.771	107.77			0.7	10
51) Chloroform	(2)	6.860(0.000)	83	146586	20.006	20.01			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.082(0.000)	97	119018	19.032	19.03			0.3	1
54) Cyclohexane	(2)	7.178(-0.000)	56	141265	16.892	16.89			1	5
55) 1,1-Dichloropropene	(2)	7.294(-0.000)	75	116105	19.168	19.17			0.2	5
56) Carbon Tetrachloride	(2)	7.284(0.000)	117	97222	18.330	18.33			0.2	1
58) Isobutyl Alcohol	(1)	7.454(0.003)	41	121599	502.630	502.63			36	250
60) Benzene	(2)	7.561(0.000)	78	367758	20.189	20.19			0.2	1
61) 1,2-Dichloroethane	(2)	7.631(0.000)	62	119034	20.317	20.32			0.3	1
65) t-Amyl methyl ether	(2)	7.738(0.000)	73	254601	17.690	17.69			0.8	5
67) n-Heptane	(2)	7.956(0.000)	43	109713	17.189	17.19			2	5
69) n-Butanol	(1)	8.326(0.002)	56	199622	958.693	958.69			61	250
71) Trichloroethene	(2)	8.429(0.000)	95	92501	20.168	20.17			0.2	1
72) Methylcyclohexane	(2)	8.731(0.000)	83	160259	18.834	18.83			0.5	5
73) 1,2-Dichloropropane	(2)	8.766(0.000)	63	92469	19.992	19.99			0.2	1
74) Dibromomethane	(2)	8.876(0.000)	93	59478	19.874	19.87			0.2	1
75) 1,4-Dioxane	(1)	8.853(0.002)	88	35274	616.336	616.34			29	250
76) Methyl Methacrylate	(2)	8.847(0.000)	69	82115	18.359	18.36			0.2	5
78) Bromodichloromethane	(2)	9.107(0.000)	83	103992	19.364	19.36			0.2	1
79) 2-Nitropropane	(2)	9.384(0.000)	41	23405	14.389	14.39			0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)	9.458(0.000)	63	60340	30.375	30.37			0.2	10
81) cis-1,3-Dichloropropene	(2)	9.638(0.000)	75	135603	19.012	19.01			0.2	1
82) 4-Methyl-2-pentanone	(2)	9.808(0.000)	43	621984	87.269	87.27			0.5	10
88) Toluene	(3)	10.004(0.000)	92	241061	20.100	20.10			0.2	1
89) trans-1,3-Dichloropropene	(3)	10.258(-0.000)	75	120804	17.745	17.74			0.2	1
90) 1,3-Dichloropropene (total)	(3)		100	256407	36.756	36.76			0.4	2
91) Ethyl Methacrylate	(3)	10.313(0.000)	69	140443	16.975	16.97			0.2	5
92) 1,1,2-Trichloroethane	(3)	10.458(0.000)	97	93560	20.576	20.58			0.2	1
93) Tetrachloroethene	(3)	10.538(0.000)	166	99925	19.673	19.67			0.2	1
94) 1,3-Dichloropropane	(3)	10.618(0.000)	76	149885	19.307	19.31			0.2	1
96) 2-Hexanone	(3)	10.670(-0.000)	43	469593	85.030	85.03			0.3	10
97) Dibromochloromethane	(3)	10.827(-0.000)	129	83867	18.006	18.01			0.2	1
99) 1,2-Dibromoethane	(3)	10.937(0.000)	107	97408	19.728	19.73			0.2	1
101) 1-Chlorohexane	(3)	11.364(0.000)	91	121373	18.839	18.84			0.3	5
102) Chlorobenzene	(3)	11.387(0.000)	112	270985	19.981	19.98			0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)	11.464(0.000)	131	82916	18.556	18.56			0.2	1
104) Ethylbenzene	(3)	11.467(0.000)	91	466291	20.342	20.34			0.4	1
106) m+p-Xylene	(3)	11.580(0.000)	106	374583	41.539	41.54			1	5
107) o-Xylene	(3)	11.904(0.000)	106	180611	20.277	20.28			0.4	1
108) Xylene (Total)	(3)		106	555194	61.817	61.82			1	6
109) Styrene	(3)	11.921(0.000)	104	297281	20.197	20.20			0.2	5
110) Bromoform	(3)	12.078(0.000)	173	51595	14.824	14.82			1	4
111) Isopropylbenzene	(3)	12.204(0.000)	105	464963	20.813	20.81			0.2	5
112) Cyclohexanone	(1)	12.287(0.002)	55	108072	482.149	482.15			25	100
115) Bromobenzene	(4)	12.464(-0.000)	156	118387	19.907	19.91			0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	12.448(-0.000)	83	145855	19.514	19.51			0.2	1
117) 1,2,3-Trichloropropane	(4)	12.496(-0.000)	110	44405	19.360	19.36			0.2	5
118) trans-1,4-Dichloro-2-butene	(4)	12.474(-0.000)	53	133192	57.770	57.77			6	50
119) n-Propylbenzene	(4)	12.528(-0.000)	91	548025	21.093	21.09			0.2	5

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov21a.b/ln21l01.d Injection date and time: **21-NOV-2019 09:50**
Data file Sample Info. Line: LCSL83;LCSL83;1;3;LCS;;;;ln21b01; Instrument ID: **HP09915.i** Batch: **L193251AA**
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov21a.b/ln21b01.d**

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 21-NOV-2019 08:49
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov21a.b/ln21c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

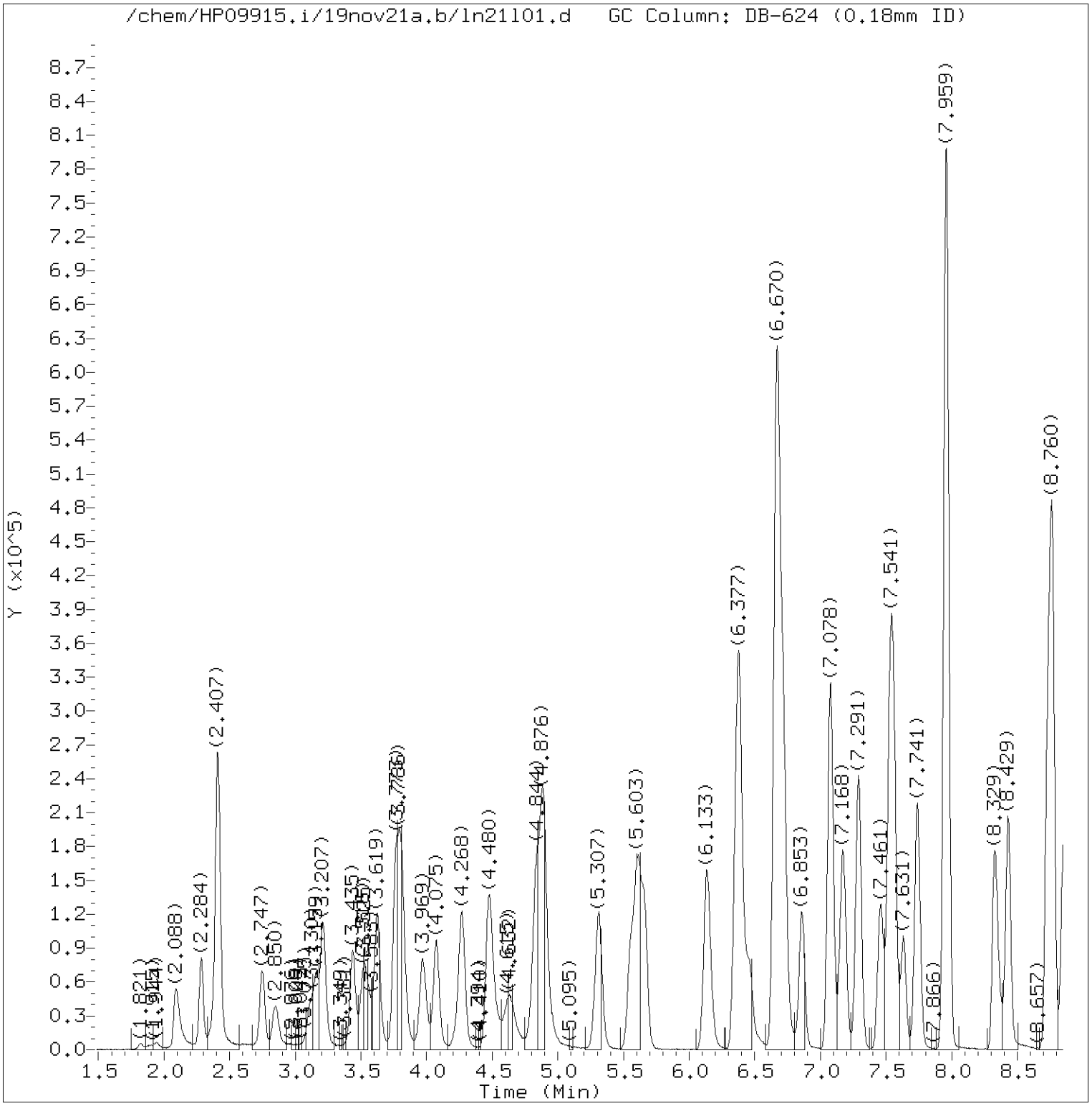
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)	12.605(-0.000)	126	109908	19.912	19.91			0.2	5
121) 4-Chlorotoluene	(4)	12.699(-0.000)	126	113526	19.760	19.76			0.2	5
122) 1,3,5-Trimethylbenzene	(4)	12.663(-0.000)	105	393837	20.858	20.86			0.3	5
124) tert-Butylbenzene	(4)	12.904(-0.000)	134	77963M	19.965	19.97			0.3	5
125) Pentachloroethane	(4)	12.940(-0.000)	167	60994	18.140	18.14			0.2	5
126) 1,2,4-Trimethylbenzene	(4)	12.946(-0.000)	105	407466	20.475	20.48			1	5
127) sec-Butylbenzene	(4)	13.065(0.000)	105	474978	20.384	20.38			0.2	5
129) 1,3-Dichlorobenzene	(4)	13.168(-0.000)	146	223060	20.412	20.41			0.2	5
130) p-Isopropyltoluene	(4)	13.171(-0.000)	119	410287	20.353	20.35			0.2	5
133) 1,4-Dichlorobenzene	(4)	13.239(-0.000)	146	232976	20.565	20.56			0.2	5
134) 1,2,3-Trimethylbenzene	(4)	13.248(-0.000)	105	419667	19.908	19.91			0.3	5
135) Benzyl Chloride	(4)	13.319(-0.000)	91	247243	15.491	15.49			1	5
136) 1,3-Diethylbenzene	(4)	13.371(0.000)	119	245308	18.698	18.70			0.2	5
137) 1,4-Diethylbenzene	(4)	13.441(-0.000)	119	257150	18.501	18.50			0.2	5
138) 1,2-Dichlorobenzene	(4)	13.499(0.000)	146	220908	20.486	20.49			0.2	5
139) n-Butylbenzene	(4)	13.464(-0.000)	92	201574	19.557	19.56			0.2	5
140) 1,2-Diethylbenzene	(4)	13.515(-0.000)	119	206983	18.715	18.72			0.2	5
141) Diethylbenzene (total)	(4)		100	709441	55.914	55.91			0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)	14.039(0.000)	75	28853	17.634	17.63			0.3	5
144) 1,3,5-Trichlorobenzene	(4)	14.162(0.000)	180	153703	18.552	18.55			0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.586(-0.000)	180	146410	18.175	18.17			0.3	5
147) Hexachlorobutadiene	(4)	14.666(-0.000)	225	60761	15.975	15.98			2	5
148) Naphthalene	(4)	14.769(0.000)	128	503848	19.456	19.46			1	5
149) 1,2,3-Trichlorobenzene	(4)	14.914(0.000)	180	143184	18.267	18.27			0.4	5
150) 2-Methylnaphthalene	(4)	15.560(0.000)	142	248524	15.584	15.58			2	4

M = Compound was manually integrated.

Total number of targets = 110

Digitally signed by Linda C. Pape on 11/21/2019 at 10:30. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:40. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

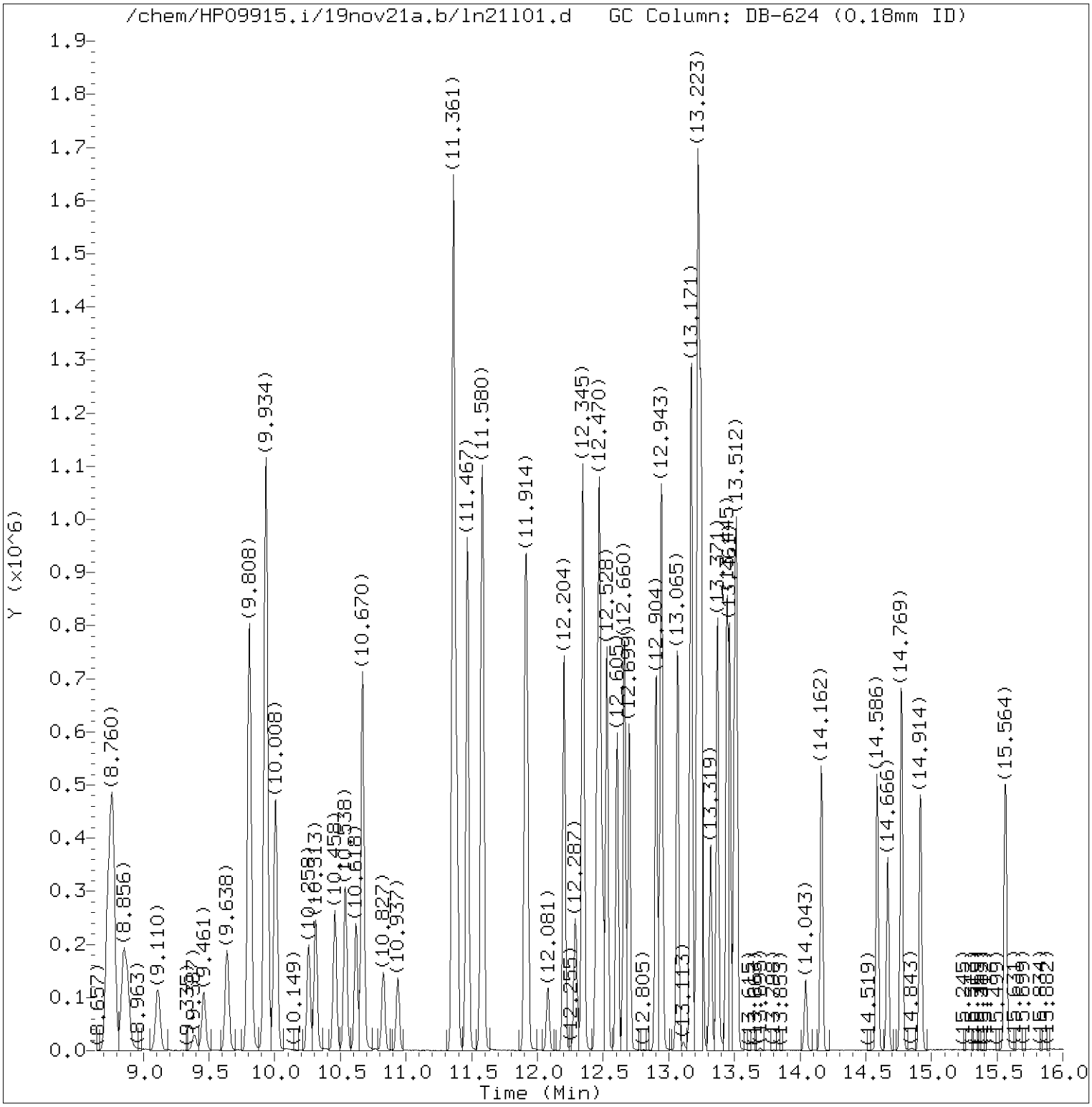
Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21l01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:50 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Sample Name: LCSL83 Lab Sample ID: LCSL83

Digitally signed by Linda C. Pape
on 11/21/2019 at 10:30.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21l01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:50 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Sample Name: LCSL83 Lab Sample ID: LCSL83

Digitally signed by Linda C. Pape
on 11/21/2019 at 10:30.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21l01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:50 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Sample Name: LCSL83 Lab Sample ID: LCSL83

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.088	85	118879	19.036
4) Chloromethane	(2)	2.281	50	113496	18.857
6) Vinyl Chloride	(2)	2.403	62	113623	18.915
5) 1,3-Butadiene	(2)	2.413	39	146875	29.389
8) Bromomethane	(2)	2.747	94	67718	15.726
9) Chloroethane	(2)	2.847	64	55454	16.798
12) Trichlorofluoromethane	(2)	3.156	101	133402	20.627
11) n-Pentane	(2)	3.210	43	112271	14.690
14) Ethyl ether	(2)	3.435	59	84003	20.101
15) Freon 123a	(2)	3.525	67	99452	19.116
16) Acrolein	(1)	3.625	56	190688	148.846
17) 1,1-Dichloroethene	(2)	3.767	96	73082	19.252
19) Freon 113	(2)	3.802	101	77803	17.964
18) Acetone	(1)	3.805	58	83980	146.219
22) Methyl Iodide	(2)	3.969	142	131428	16.708
21) 2-Propanol	(1)	3.992	45	56775	137.506
23) Carbon Disulfide	(2)	4.075	76	225161	15.740
27) Methyl Acetate	(2)	4.249	43	88270	18.054
25) Allyl Chloride	(2)	4.268	41	118427	17.391
28) Methylene Chloride	(2)	4.471	84	90359	19.999
29)*t-Butyl alcohol-d10	(1)	4.496	65	170757	250.000
30) t-Butyl alcohol	(1)	4.638	59	137540	191.319
31) Acrylonitrile	(2)	4.831	53	234895	89.300
33) Methyl Tertiary Butyl Ether	(2)	4.882	73	257047	17.832
32) trans-1,2-Dichloroethene	(2)	4.889	96	85560	19.483
34) n-Hexane	(2)	5.313	57	119870	17.545
36) 1,1-Dichloroethane	(2)	5.548	63	143445	18.725
38) di-Isopropyl ether	(2)	5.612	45	261090	17.671
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	118366	17.221
40) Ethyl t-butyl ether	(2)	6.133	59	253354	17.669
43) 1,2-Dichloroethene (Total)	(2)		96	187739	40.213
44) 2-Butanone	(2)	6.361	43	442351	131.006
42) cis-1,2-Dichloroethene	(2)	6.384	96	102179	20.730
45) 2,2-Dichloropropane	(2)	6.394	77	111627	18.744
47) Propionitrile	(1)	6.461	54	146275	163.299
48) Methacrylonitrile	(2)	6.667	67	400873	141.279
49) Bromochloromethane	(2)	6.709	128	49407	18.904
50) Tetrahydrofuran	(1)	6.721	71	87199	107.771

* = Compound is an internal standard.

Digitally signed by Linda C. Pape
on 11/21/2019 at 10:30.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21l01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:50 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Sample Name: LCSL83 Lab Sample ID: LCSL83

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	6.860	83	146586	20.006
52)$Dibromofluoromethane	(2)	7.075	113	208873	47.708
53) 1,1,1-Trichloroethane	(2)	7.082	97	119018	19.032
54) Cyclohexane	(2)	7.178	56	141265	16.892
56) Carbon Tetrachloride	(2)	7.284	117	97222	18.330
55) 1,1-Dichloropropene	(2)	7.294	75	116105	19.168
58) Isobutyl Alcohol	(1)	7.455	41	121599	502.630
57)$1,2-Dichloroethane-d4	(2)	7.529	102	55217	49.486
60) Benzene	(2)	7.561	78	367758	20.189
61) 1,2-Dichloroethane	(2)	7.631	62	119034	20.317
65) t-Amyl methyl ether	(2)	7.737	73	254601	17.690
67) n-Heptane	(2)	7.956	43	109713	17.189
66)*Fluorobenzene	(2)	7.959	96	895510	50.000
69) n-Butanol	(1)	8.326	56	199622	958.693
71) Trichloroethene	(2)	8.429	95	92501	20.168
72) Methylcyclohexane	(2)	8.731	83	160259	18.834
73) 1,2-Dichloropropane	(2)	8.766	63	92469	19.992
76) Methyl Methacrylate	(2)	8.847	69	82115	18.359
75) 1,4-Dioxane	(1)	8.853	88	35274	616.336
74) Dibromomethane	(2)	8.876	93	59478	19.874
78) Bromodichloromethane	(2)	9.107	83	103992	19.364
79) 2-Nitropropane	(2)	9.384	41	23405	14.389
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	60340	30.375
81) cis-1,3-Dichloropropene	(2)	9.638	75	135603	19.012
82) 4-Methyl-2-pentanone	(2)	9.808	43	621984	87.269
83)$Toluene-d8	(3)	9.934	98	926555	48.436
88) Toluene	(3)	10.004	92	241061	20.100
90) 1,3-Dichloropropene (total)	(3)		100	256407	36.756
89) trans-1,3-Dichloropropene	(3)	10.258	75	120804	17.745
91) Ethyl Methacrylate	(3)	10.313	69	140443	16.975
92) 1,1,2-Trichloroethane	(3)	10.458	97	93560	20.576
93) Tetrachloroethene	(3)	10.538	166	99925	19.673
94) 1,3-Dichloropropane	(3)	10.618	76	149885	19.307
96) 2-Hexanone	(3)	10.670	43	469593	85.030
97) Dibromochloromethane	(3)	10.827	129	83867	18.006
99) 1,2-Dibromoethane	(3)	10.937	107	97408	19.728
100)*Chlorobenzene-d5	(3)	11.361	117	731089	50.000
101) 1-Chlorohexane	(3)	11.364	91	121373	18.839

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/21/2019 at 10:30.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21l01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:50 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Sample Name: LCSL83 Lab Sample ID: LCSL83

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
102) Chlorobenzene	(3)	11.387	112	270985	19.981
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	82916	18.556
104) Ethylbenzene	(3)	11.467	91	466291	20.342
106) m+p-Xylene	(3)	11.580	106	374583	41.539
108) Xylene (Total)	(3)		106	555194	61.817
107) o-Xylene	(3)	11.905	106	180611	20.277
109) Styrene	(3)	11.921	104	297281	20.197
110) Bromoform	(3)	12.078	173	51595	14.824
111) Isopropylbenzene	(3)	12.204	105	464963	20.813
112) Cyclohexanone	(1)	12.287	55	108072	482.149
114)$4-Bromofluorobenzene	(3)	12.345	95	362022	49.979
116) 1,1,2,2-Tetrachloroethane	(4)	12.448	83	145855	19.514
115) Bromobenzene	(4)	12.464	156	118387	19.907
118) trans-1,4-Dichloro-2-butene	(4)	12.474	53	133192	57.770
117) 1,2,3-Trichloropropane	(4)	12.496	110	44405	19.360
119) n-Propylbenzene	(4)	12.528	91	548025	21.093
120) 2-Chlorotoluene	(4)	12.605	126	109908	19.912
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	393837	20.858
121) 4-Chlorotoluene	(4)	12.699	126	113526	19.760
124) tert-Butylbenzene	(4)	12.904	134	77963M	19.965
125) Pentachloroethane	(4)	12.940	167	60994	18.140
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	407466	20.475
127) sec-Butylbenzene	(4)	13.065	105	474978	20.384
129) 1,3-Dichlorobenzene	(4)	13.168	146	223060	20.412
130) p-Isopropyltoluene	(4)	13.171	119	410287	20.353
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	395685	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	232976	20.565
134) 1,2,3-Trimethylbenzene	(4)	13.249	105	419667	19.908
135) Benzyl Chloride	(4)	13.319	91	247243	15.491
136) 1,3-Diethylbenzene	(4)	13.371	119	245308	18.698
141) Diethylbenzene (total)	(4)		100	709441	55.914
137) 1,4-Diethylbenzene	(4)	13.441	119	257150	18.501
139) n-Butylbenzene	(4)	13.464	92	201574	19.557
138) 1,2-Dichlorobenzene	(4)	13.499	146	220908	20.486
140) 1,2-Diethylbenzene	(4)	13.515	119	206983	18.715
142) 1,2-Dibromo-3-chloropropane	(4)	14.039	75	28853	17.634
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	153703	18.552
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	146410	18.175

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/21/2019 at 10:30.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov21a.b/ln21l01.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:50 Analyst ID: LCP00895

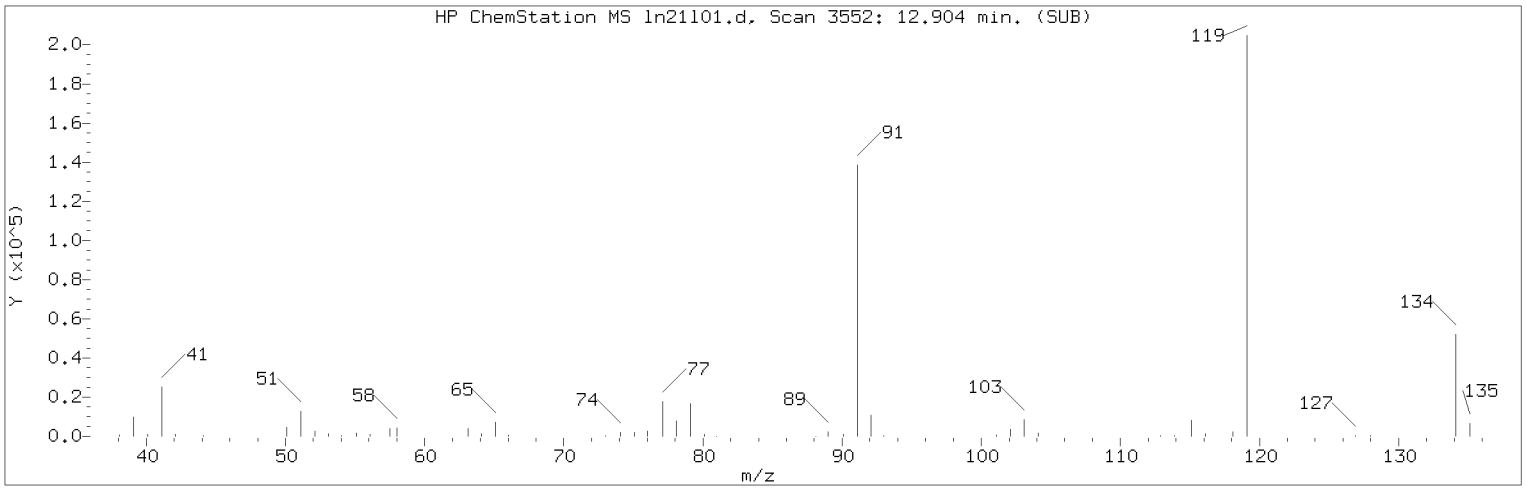
Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Sample Name: LCSL83 Lab Sample ID: LCSL83

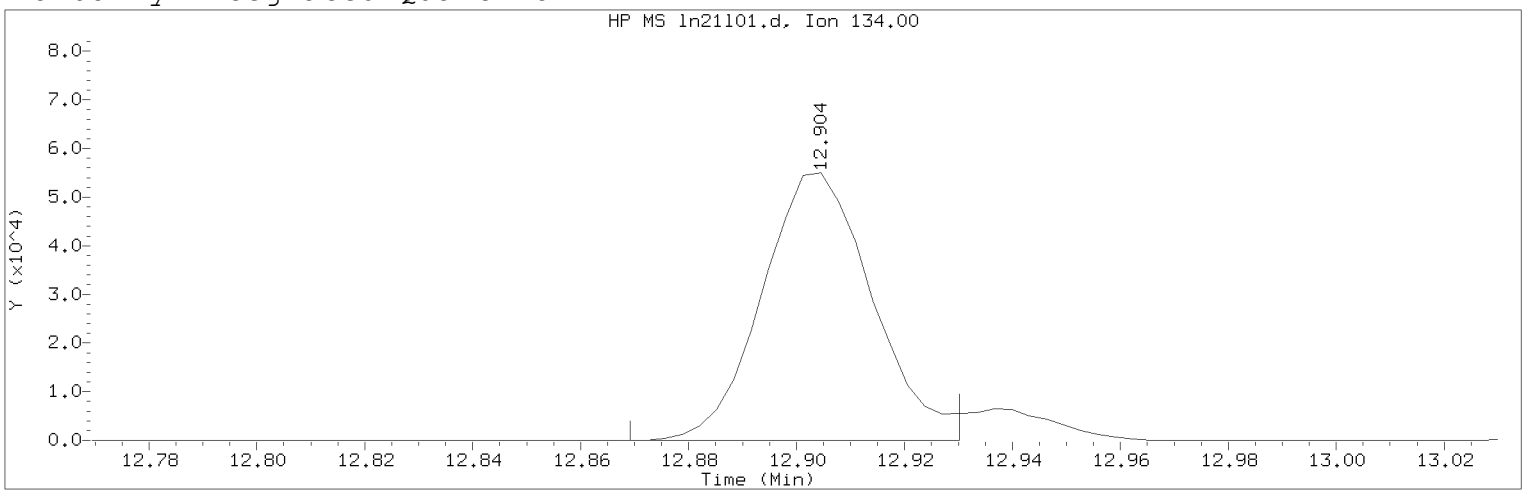
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Hexachlorobutadiene	(4)	14.666	225	60761	15.975
148) Naphthalene	(4)	14.769	128	503848	19.456
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	143184	18.267
150) 2-Methylnaphthalene	(4)	15.560	142	248524	15.584

Digitally signed by Linda C. Pape
on 11/21/2019 at 10:30.
Target 3.5 esignature user ID: lcp00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov21a.b/ln21101.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:50 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 10:28 lcp00895

Sample Name: LCSL83 Lab Sample ID: LCSL83

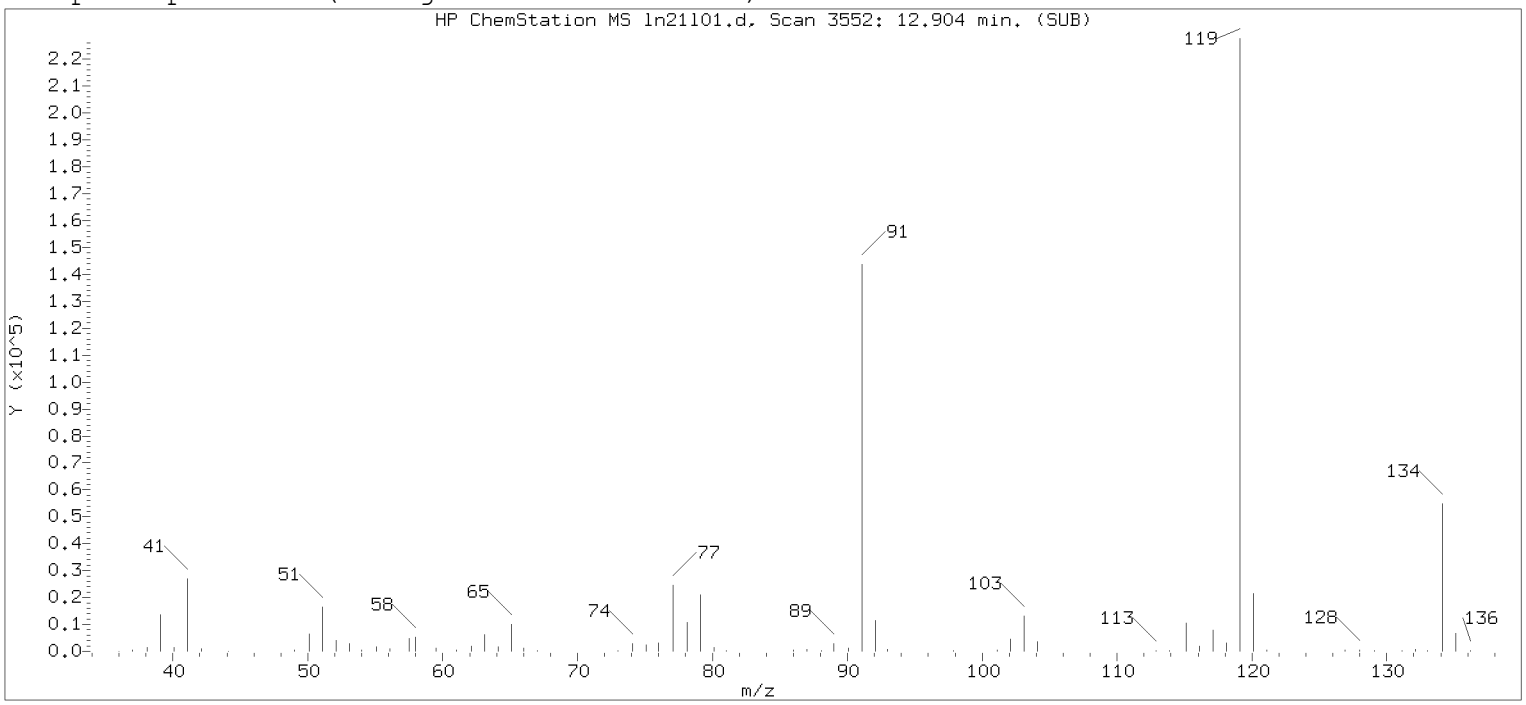
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 77963M
On-Column Amount (ng) : 19.9653
Integration start scan : 3540 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

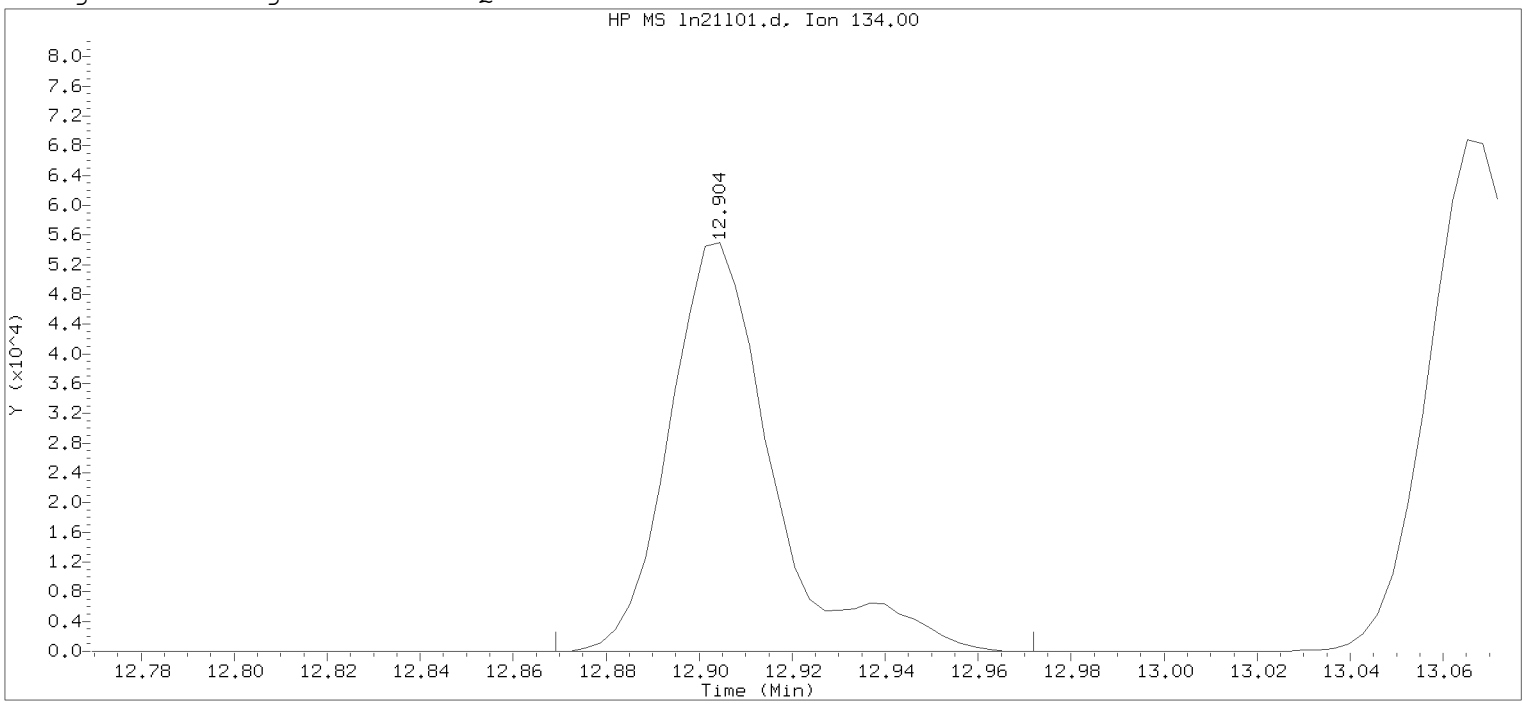
Analyst responsible for change: Digitally signed by Linda C. Pape
on 11/21/2019 at 10:30.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/23/2019 at 08:40.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov21a.b/ln21101.d Instrument ID: HP09915.i
Injection date and time: 21-NOV-2019 09:50 Analyst ID: LCP00895

Method used: /chem/HP09915.i/19nov21a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 21-NOV-2019 08:49
Date, time and analyst ID of latest file update: 21-Nov-2019 10:07 Automation

Sample Name: LCSL83 Lab Sample ID: LCSL83

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 84738
On-column Amount (ng) : 21.7003
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 11/21/2019 at 10:30.
Target 3.5 esignature user: LCP00895

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NYSDEC ASP Category B Data Package

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Project: AD-New Windsor, NY
Groundwater and Water Samples
Collected on 11/14/19-11/16/19

SDG# JCW22

GROUP	SAMPLE NUMBERS
2075494	1205892-1205905

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-18-27
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman **Date:** **12/17/2019**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Katherine Klinefelter at (717) 556-7256.

2425 New Holland Pike, Lancaster, PA 17601 | 717-656-2300 | Fax: 717-656-2681 | www.LancasterLabs.com

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Sample Reference List for SDG Number JCW22
with a Data Package Type of NYSDEC B

06556 - The Johnson Company, Inc.

Project: AD-New Windsor, NY

Lab Sample Number	Client Sample ID	Collection Date	Date Received	Lab Sample Code
1205892	J14-UC01	11/14/2019 08:52	11/19/2019 10:38	JCW01
1205893	J14-BR01	11/14/2019 10:25	11/19/2019 10:38	JCW02
1205894	J14-BR01 MS	11/14/2019 10:25	11/19/2019 10:38	JCW02
1205895	J14-BR01 MSD	11/14/2019 10:25	11/19/2019 10:38	JCW02
1205896	J14-BR02	11/14/2019 11:42	11/19/2019 10:38	JCW03
1205897	J14-UC02	11/14/2019 12:38	11/19/2019 10:38	JCW04
1205898	J15-UC01	11/14/2019 13:59	11/19/2019 10:38	JCW05
1205899	J15-UC02	11/14/2019 14:46	11/19/2019 10:38	JCW06
1205900	J18-UC02	11/14/2019 16:00	11/19/2019 10:38	JCW07
1205901	J18-UC02 MS	11/14/2019 16:00	11/19/2019 10:38	JCW07
1205902	J18-UC02 MSD	11/14/2019 16:00	11/19/2019 10:38	JCW07
1205903	J22-BR02	11/16/2019 11:37	11/19/2019 10:38	JCW08
1205904	J22-BR01	11/16/2019 13:07	11/19/2019 10:38	JCW09
1205905	TB-AWR-111419	11/14/2019 00:00	11/19/2019 10:38	JCW10

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Sample pH Log

SDG: JCW22

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
1205892	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/23/2019 11:13:10AM	27445
1205893	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/23/2019 11:13:08AM	27445
1205894	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/23/2019 11:13:08AM	27445
1205895	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/23/2019 11:13:08AM	27445
1205896	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/23/2019 11:13:08AM	27445
1205897	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/23/2019 11:13:08AM	27445
1205898	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/23/2019 11:13:08AM	27445
1205899	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/23/2019 11:13:08AM	27445
1205900	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/25/2019 1:55:03PM	895
1205901	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/25/2019 1:54:42PM	895
1205902	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/25/2019 1:54:42PM	895
1205903	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/25/2019 1:54:42PM	895
1205904	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/25/2019 1:54:42PM	895
1205905	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/25/2019 1:54:43PM	895

*pH Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

**Chlorine Present Code Key
NA = Chlorine Not Checked
Y = Chlorine Present
N = Chlorine Not Present

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11997 VOCs- 5ml Water by 8260C/D

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Report Date: December 10, 2019 14:51

Project: AD-New Windsor, NY

Account #: 06556
Group Number: 2075494
SDG: JCW22
PO Number: 1-0145-05
Release Number: 58300.00
State of Sample Origin: NY

Electronic Copy To	The Johnson Company, Inc.	Attn: Tristan Hardy
Electronic Copy To	The Johnson Company, Inc.	Attn: George Lester
Electronic Copy To	VHB	Attn: Quinn Ledak

Respectfully Submitted,

Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
J14-UC01 Grab Groundwater	11/14/2019 08:52	1205892
J14-BR01 Grab Groundwater	11/14/2019 10:25	1205893
J14-BR01 MS Grab Groundwater	11/14/2019 10:25	1205894
J14-BR01 MSD Grab Groundwater	11/14/2019 10:25	1205895
J14-BR02 Grab Groundwater	11/14/2019 11:42	1205896
J14-UC02 Grab Groundwater	11/14/2019 12:38	1205897
J15-UC01 Grab Groundwater	11/14/2019 13:59	1205898
J15-UC02 Grab Groundwater	11/14/2019 14:46	1205899
J18-UC02 Grab Groundwater	11/14/2019 16:00	1205900
J18-UC02 MS Grab Groundwater	11/14/2019 16:00	1205901
J18-UC02 MSD Grab Groundwater	11/14/2019 16:00	1205902
J22-BR02 Grab Groundwater	11/16/2019 11:37	1205903
J22-BR01 Grab Groundwater	11/16/2019 13:07	1205904
TB-AWR-111419 Water	11/14/2019	1205905

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **J14-UC01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/14/2019 08:52
SDG#: JCW22-01

The Johnson Company, Inc.
ELLE Sample #: GW 1205892
ELLE Group #: 2075494
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.3 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	0.7 J	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193262AA	11/22/2019 13:26	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193262AA	11/22/2019 13:25	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **J14-BR01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/14/2019 10:25
SDG#: JCW22-02BKG

The Johnson Company, Inc.
ELLE Sample #: GW 1205893
ELLE Group #: 2075494
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.8 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	0.2 J	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	4	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193262AA	11/22/2019 12:19	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193262AA	11/22/2019 12:18	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **J14-BR01 MS Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/14/2019 10:25
SDG#: JCW22-02MS

The Johnson Company, Inc.
ELLE Sample #: GW 1205894
ELLE Group #: 2075494
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	160	0.7	20	1
11997	Benzene	71-43-2	22	0.2	1	1
11997	2-Butanone	78-93-3	130	0.3	10	1
11997	Carbon Disulfide	75-15-0	19	0.2	5	1
11997	Chloroform	67-66-3	22	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	21	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	22	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	21	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	23	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	23	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	22	0.2	1	1
11997	1,4-Dioxane	123-91-1	660	29	250	1
11997	Ethylbenzene	100-41-4	22	0.4	1	1
11997	Freon 113	76-13-1	21	0.2	10	1
11997	Methylene Chloride	75-09-2	22	0.3	1	1
11997	Naphthalene	91-20-3	19	1	5	1
11997	Tetrachloroethene	127-18-4	21	0.2	1	1
11997	Toluene	108-88-3	22	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	25	0.3	1	1
11997	Trichloroethene	79-01-6	22	0.2	1	1
11997	Vinyl Chloride	75-01-4	20	0.2	1	1
11997	Xylene (Total)	1330-20-7	65	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193262AA	11/22/2019 12:42	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193262AA	11/22/2019 12:41	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **J14-BR01 MSD Grab Groundwater New Windsor, NY**

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/14/2019 10:25
SDG#: JCW22-02MSD

The Johnson Company, Inc.
ELLE Sample #: GW 1205895
ELLE Group #: 2075494
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	150	0.7	20	1
11997	Benzene	71-43-2	21	0.2	1	1
11997	2-Butanone	78-93-3	130	0.3	10	1
11997	Carbon Disulfide	75-15-0	18	0.2	5	1
11997	Chloroform	67-66-3	21	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	20	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	21	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	20	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	22	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	22	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	21	0.2	1	1
11997	1,4-Dioxane	123-91-1	640	29	250	1
11997	Ethylbenzene	100-41-4	21	0.4	1	1
11997	Freon 113	76-13-1	20	0.2	10	1
11997	Methylene Chloride	75-09-2	21	0.3	1	1
11997	Naphthalene	91-20-3	19	1	5	1
11997	Tetrachloroethene	127-18-4	20	0.2	1	1
11997	Toluene	108-88-3	21	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	25	0.3	1	1
11997	Trichloroethene	79-01-6	21	0.2	1	1
11997	Vinyl Chloride	75-01-4	19	0.2	1	1
11997	Xylene (Total)	1330-20-7	63	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193262AA	11/22/2019 13:04	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193262AA	11/22/2019 13:03	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **J14-BR02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/14/2019 11:42
SDG#: JCW22-03

The Johnson Company, Inc.
ELLE Sample #: GW 1205896
ELLE Group #: 2075494
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193262AA	11/22/2019 13:48	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193262AA	11/22/2019 13:47	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **J14-UC02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/14/2019 12:38
SDG#: JCW22-04

The Johnson Company, Inc.
ELLE Sample #: GW 1205897
ELLE Group #: 2075494
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193262AA	11/22/2019 14:10	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193262AA	11/22/2019 14:09	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **J15-UC01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/14/2019 13:59
SDG#: JCW22-05

The Johnson Company, Inc.
ELLE Sample #: GW 1205898
ELLE Group #: 2075494
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193262AA	11/22/2019 14:32	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193262AA	11/22/2019 14:31	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **J15-UC02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/14/2019 14:46
SDG#: JCW22-06

The Johnson Company, Inc.
ELLE Sample #: GW 1205899
ELLE Group #: 2075494
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193262AA	11/22/2019 14:54	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193262AA	11/22/2019 14:53	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **J18-UC02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/14/2019 16:00
SDG#: JCW22-07BKG

The Johnson Company, Inc.
ELLE Sample #: GW 1205900
ELLE Group #: 2075494
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	0.6 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.4 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	1	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	19	0.3	1	1
11997	Trichloroethene	79-01-6	36	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193271AA	11/23/2019 11:06	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193271AA	11/23/2019 11:05	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

Sample Description: **J18-UC02 MS Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/14/2019 16:00
SDG#: JCW22-07MS

The Johnson Company, Inc.
ELLE Sample #: GW 1205901
ELLE Group #: 2075494
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	160	0.7	20	1
11997	Benzene	71-43-2	22	0.2	1	1
11997	2-Butanone	78-93-3	130	0.3	10	1
11997	Carbon Disulfide	75-15-0	18	0.2	5	1
11997	Chloroform	67-66-3	22	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	21	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	21	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	21	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	23	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	23	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	22	0.2	1	1
11997	1,4-Dioxane	123-91-1	530	29	250	1
11997	Ethylbenzene	100-41-4	22	0.4	1	1
11997	Freon 113	76-13-1	21	0.2	10	1
11997	Methylene Chloride	75-09-2	22	0.3	1	1
11997	Naphthalene	91-20-3	19	1	5	1
11997	Tetrachloroethene	127-18-4	22	0.2	1	1
11997	Toluene	108-88-3	22	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	41	0.3	1	1
11997	Trichloroethene	79-01-6	60	0.2	1	1
11997	Vinyl Chloride	75-01-4	21	0.2	1	1
11997	Xylene (Total)	1330-20-7	66	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193271AA	11/23/2019 11:28	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193271AA	11/23/2019 11:27	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

Sample Description: **J18-UC02 MSD Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/14/2019 16:00
SDG#: JCW22-07MSD

The Johnson Company, Inc.
ELLE Sample #: GW 1205902
ELLE Group #: 2075494
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	150	0.7	20	1
11997	Benzene	71-43-2	22	0.2	1	1
11997	2-Butanone	78-93-3	140	0.3	10	1
11997	Carbon Disulfide	75-15-0	19	0.2	5	1
11997	Chloroform	67-66-3	22	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	21	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	21	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	22	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	23	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	23	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	22	0.2	1	1
11997	1,4-Dioxane	123-91-1	550	29	250	1
11997	Ethylbenzene	100-41-4	22	0.4	1	1
11997	Freon 113	76-13-1	21	0.2	10	1
11997	Methylene Chloride	75-09-2	22	0.3	1	1
11997	Naphthalene	91-20-3	19	1	5	1
11997	Tetrachloroethene	127-18-4	21	0.2	1	1
11997	Toluene	108-88-3	22	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	41	0.3	1	1
11997	Trichloroethene	79-01-6	59	0.2	1	1
11997	Vinyl Chloride	75-01-4	21	0.2	1	1
11997	Xylene (Total)	1330-20-7	65	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193271AA	11/23/2019 11:50	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193271AA	11/23/2019 11:49	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

Sample Description: **J22-BR02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/16/2019 11:37
SDG#: JCW22-08

The Johnson Company, Inc.
ELLE Sample #: GW 1205903
ELLE Group #: 2075494
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193271AA	11/23/2019 12:12	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193271AA	11/23/2019 12:11	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

Sample Description: **J22-BR01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/16/2019 13:07
SDG#: JCW22-09

The Johnson Company, Inc.
ELLE Sample #: GW 1205904
ELLE Group #: 2075494
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193271AA	11/23/2019 12:34	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193271AA	11/23/2019 12:33	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB-AWR-111419 Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/14/2019
SDG#: JCW22-10TB

The Johnson Company, Inc.
ELLE Sample #: GW 1205905
ELLE Group #: 2075494
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193271AA	11/23/2019 10:44	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193271AA	11/23/2019 10:43	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2075494
Reported: 12/10/2019 14:51

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: L193262AA	Sample number(s): 1205892-1205899		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	6
Batch number: L193271AA	Sample number(s): 1205900-1205905		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2075494
Reported: 12/10/2019 14:51

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	6

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: L193262AA	Sample number(s): 1205892-1205899								
Acetone	150	154.37	150	152.78	103	102	54-157	1	30
Benzene	20	21.01	20	21.29	105	106	80-120	1	30
2-Butanone	150	143.28	150	142.02	96	95	59-135	1	30
Carbon Disulfide	20	17.27	20	17.52	86	88	65-128	1	30
Chloroform	20	20.84	20	20.79	104	104	80-120	0	30
1,2-Dichlorobenzene	20	21.1	20	20.8	105	104	80-120	1	30
1,1-Dichloroethane	20	20.32	20	20.42	102	102	80-120	0	30
1,2-Dichloroethane	20	20.71	20	20.63	104	103	73-124	0	30
1,1-Dichloroethene	20	20.77	20	21.17	104	106	80-131	2	30
cis-1,2-Dichloroethene	20	21.7	20	21.72	108	109	80-125	0	30
trans-1,2-Dichloroethene	20	20.35	20	20.3	102	102	80-126	0	30
1,4-Dioxane	500	641.66	500	646.1	128	129	63-146	1	30
Ethylbenzene	20	20.94	20	20.95	105	105	80-120	0	30
Freon 113	20	18.67	20	19.05	93	95	73-139	2	30
Methylene Chloride	20	21.25	20	20.95	106	105	80-120	1	30
Naphthalene	20	20.46	20	20.46	102	102	53-124	0	30
Tetrachloroethene	20	20.24	20	20.48	101	102	80-120	1	30
Toluene	20	20.95	20	21.23	105	106	80-120	1	30
1,1,1-Trichloroethane	20	19.84	20	20.02	99	100	67-126	1	30
Trichloroethene	20	20.7	20	21.11	104	106	80-120	2	30
Vinyl Chloride	20	18.12	20	18.42	91	92	56-120	2	30
Xylene (Total)	60	63.16	60	63.66	105	106	80-120	1	30
Batch number: L193271AA	Sample number(s): 1205900-1205905								
Acetone	150	165.78			111		54-157		
Benzene	20	20.61			103		80-120		
2-Butanone	150	137.59			92		59-135		
Carbon Disulfide	20	16.81			84		65-128		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2075494
Reported: 12/10/2019 14:51

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Chloroform	20	20.73			104		80-120		
1,2-Dichlorobenzene	20	20.05			100		80-120		
1,1-Dichloroethane	20	19.91			100		80-120		
1,2-Dichloroethane	20	20.97			105		73-124		
1,1-Dichloroethene	20	20.27			101		80-131		
cis-1,2-Dichloroethene	20	21.25			106		80-125		
trans-1,2-Dichloroethene	20	20.1			100		80-126		
1,4-Dioxane	500	538.96			108		63-146		
Ethylbenzene	20	19.96			100		80-120		
Freon 113	20	18.28			91		73-139		
Methylene Chloride	20	20.76			104		80-120		
Naphthalene	20	18.37			92		53-124		
Tetrachloroethene	20	19.5			98		80-120		
Toluene	20	20.05			100		80-120		
1,1,1-Trichloroethane	20	19.91			100		67-126		
Trichloroethene	20	20.69			103		80-120		
Vinyl Chloride	20	17.86			89		56-120		
Xylene (Total)	60	60.53			101		80-120		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: L193262AA	Sample number(s): 1205892-1205899 UNSPK: 1205893									
Acetone	N.D.	150	156.79	150	147.26	105	98	54-157	6	30
Benzene	N.D.	20	21.98	20	21.09	110	105	80-120	4	30
2-Butanone	N.D.	150	134.08	150	129.45	89	86	59-135	4	30
Carbon Disulfide	N.D.	20	18.89	20	18.25	94	91	65-128	3	30
Chloroform	N.D.	20	21.71	20	20.88	109	104	80-120	4	30
1,2-Dichlorobenzene	N.D.	20	20.81	20	19.97	104	100	80-120	4	30
1,1-Dichloroethane	0.833	20	21.95	20	21.36	106	103	80-120	3	30
1,2-Dichloroethane	N.D.	20	21.16	20	20.05	106	100	73-124	5	30
1,1-Dichloroethene	0.219	20	23.3	20	22.22	115	110	80-131	5	30
cis-1,2-Dichloroethene	N.D.	20	22.76	20	21.78	114	109	80-120	4	30
trans-1,2-Dichloroethene	N.D.	20	21.76	20	20.78	109	104	80-120	5	30
1,4-Dioxane	N.D.	500	663.58	500	635.57	133	127	63-146	4	30
Ethylbenzene	N.D.	20	21.59	20	20.92	108	105	80-120	3	30
Freon 113	N.D.	20	21.17	20	20.48	106	102	73-139	3	30
Methylene Chloride	N.D.	20	22.09	20	21.06	110	105	80-120	5	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2075494
Reported: 12/10/2019 14:51

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Naphthalene	N.D.	20	19.16	20	18.73	96	94	53-124	2	30
Tetrachloroethene	N.D.	20	21.37	20	20.42	107	102	80-120	5	30
Toluene	N.D.	20	21.66	20	20.84	108	104	80-120	4	30
1,1,1-Trichloroethane	3.89	20	25.43	20	24.63	108	104	67-126	3	30
Trichloroethene	N.D.	20	22.11	20	21.37	111	107	80-120	3	30
Vinyl Chloride	N.D.	20	19.8	20	19.06	99	95	56-120	4	30
Xylene (Total)	N.D.	60	65.05	60	62.52	108	104	80-120	4	30
Batch number: L193271AA	Sample number(s): 1205900-1205905 UNSPK: 1205900									
Acetone	N.D.	150	163.32	150	154.87	109	103	54-157	5	30
Benzene	N.D.	20	21.85	20	21.71	109	109	80-120	1	30
2-Butanone	N.D.	150	134.27	150	136.18	90	91	59-135	1	30
Carbon Disulfide	N.D.	20	18.5	20	18.53	92	93	65-128	0	30
Chloroform	0.605	20	22.33	20	22.46	109	109	80-120	1	30
1,2-Dichlorobenzene	N.D.	20	21.28	20	20.81	106	104	80-120	2	30
1,1-Dichloroethane	0.438	20	21.47	20	21.45	105	105	80-120	0	30
1,2-Dichloroethane	N.D.	20	21.45	20	21.54	107	108	73-124	0	30
1,1-Dichloroethene	1.07	20	23.3	20	23.09	111	110	80-131	1	30
cis-1,2-Dichloroethene	N.D.	20	22.63	20	22.69	113	113	80-120	0	30
trans-1,2-Dichloroethene	N.D.	20	21.66	20	21.57	108	108	80-120	0	30
1,4-Dioxane	N.D.	500	527.9	500	554.82	106	111	63-146	5	30
Ethylbenzene	N.D.	20	21.69	20	21.55	108	108	80-120	1	30
Freon 113	N.D.	20	21.19	20	21.01	106	105	73-139	1	30
Methylene Chloride	N.D.	20	21.68	20	21.66	108	108	80-120	0	30
Naphthalene	N.D.	20	18.87	20	19.25	94	96	53-124	2	30
Tetrachloroethene	N.D.	20	21.82	20	21.46	109	107	80-120	2	30
Toluene	N.D.	20	21.63	20	21.51	108	108	80-120	1	30
1,1,1-Trichloroethane	18.62	20	41.34	20	41.07	114	112	67-126	1	30
Trichloroethene	36.36	20	59.64	20	59.38	116	115	80-120	0	30
Vinyl Chloride	N.D.	20	21.47	20	21.06	107	105	56-120	2	30
Xylene (Total)	N.D.	60	65.88	60	64.83	110	108	80-120	2	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2075494
Reported: 12/10/2019 14:51

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: L193262AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1205892	95	101	98	99
1205893	96	102	97	99
1205894	96	101	99	101
1205895	96	101	99	102
1205896	95	102	97	98
1205897	95	99	98	99
1205898	96	101	97	97
1205899	96	101	98	98
Blank	95	101	98	99
LCS	95	99	100	101
LCSD	95	101	99	101
MS	96	101	99	101
MSD	96	101	99	102
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: L193271AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1205900	98	103	98	99
1205901	97	100	99	101
1205902	99	101	98	102
1205903	96	100	97	98
1205904	97	102	97	99
1205905	98	103	97	98
Blank	97	102	97	98
LCS	99	102	98	102
MS	97	100	99	101
MSD	99	101	98	102
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 06556 Group # 2075494 Sample # 1205892-1205905

COC # 596347

Client Information

Client: VHB / The Johnson Company	Acct. #: 06556
Project Name/#: AD-New Windsor / 58300	PWSID #:
Project Manager: George Lester	P.O. #:
Sampler: Adam Robtoy	Quote #:
State where samples were collected: NY	For Compliance: Yes ☐ No ☒

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water ☒ Potable ☐ Ground ☐ NPDES ☐ Surface ☐ | Other: ____

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	H	8260C-VOCs	Remarks
J14-UC01	11/14/19	852	X		3	X	X	
J14-BR01	11/14/19	1025	X		9	X	X	MS/MSD
J14-BR02	11/14/19	1142	X		3	X	X	
J14-UC02	11/14/19	1238	X		3	X	X	
J15-UC01	11/14/19	1359	X		3	X	X	
J15-UC02	11/14/19	1446	X		3	X	X	
J18-UC02	11/14/19	1606	X		9	X	X	MS/MSD
J22-BR02	11/16/19	1137	X		3	X	X	
J22-BR01	11/16/19	1307	X		3	X	X	
TB-AWR-111419	—	—	—		2	X	X	TRIP BLANK

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: ____

E-mail address: Glester@vhb.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	11/18/19	1600			
				11/19/19	1038

EDD Required? Yes No

If yes, format: Excel

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx Y Other ____

Temperature upon receipt 2.0 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 266924

Group Number(s): 205499

Client: VHB/ THE JOHNSON COMPANY

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	11/19/2019
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	New York		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Julissa Rivera-Santa

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192050133	2.0	IR	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17601-5994
T 717-656-2300
F 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCW22

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
1205892	J14-UC01	X		1	
1205893	J14-BR01	X		1	Unspiked
1205894	J14-BR01 MS	X		1	Matrix Spike
1205895	J14-BR01 MSD	X		1	Matrix Spike Duplicate
1205896	J14-BR02	X		1	
1205897	J14-UC02	X		1	
1205898	J15-UC01	X		1	
1205899	J15-UC02	X		1	
1205900	J18-UC02	X		1	
1205901	J18-UC02 MS	X		1	Matrix Spike
1205902	J18-UC02 MSD	X		1	Matrix Spike Duplicate
1205903	J22-BR02	X		1	
1205904	J22-BR01	X		1	
1205905	TB-AWR-111419	X		1	Trip Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

All QC is within specification.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCW22

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

1. Relative Response Factor (RRF)

$$RRF = \frac{AX}{Ais} \times \frac{Cis}{Cx}$$

Where:

Ax = Area of the characteristic ion for the compound to be measured
Ais = Area of the characteristic ion for the specific internal standard to be measured
Cis = Concentration of the internal standard
Cx = Concentration of the compound to be measured

2. % Relative Standard Deviation (%RSD)

$$\%RSD = \frac{standard\ deviation}{Mean} \times 100$$

3. % Difference

$$\%D = \frac{RRFc - RRFi}{RRFi} \times 100$$

Where:

RRFc = Relative response factor from the continuing calibration standard
RRFi = Mean relative response factor from the initial calibration

4. Concentration

$$Concentration\ (\mu g/L) = \frac{(Ax)(Is)(Df)}{(Ais)(RRF)}$$

Where:

Ax, Ais, and RRF are as given in 1. above
Is = Amount of internal standard added in parts per billion (µg/L)
Df = Dilution factor

5. % Recovery (% Rec)

$$\%Rec = \frac{SSR - SR}{SA} \times 100$$

Where:

SSR = Spiked sample result
SR = Sample result
SA = Spike added

6. Relative Percent Difference (RPD)

$$RPD = \frac{(MSR - MSRD)}{(1/2)(MSR + MSRD)} \times 100$$

Where:

MSR = Matrix spike recovery
MSRD = Matrix spike recovery duplicate

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: The Johnson Company, Inc.
SDG: JCW22

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
VOCs- 5ml Water by 8260C/D	L193262AA	VBLKL86	11/22/2019 10:07
		LCDL86	11/22/2019 09:00
		LCSL86	11/22/2019 09:22
		1205892	11/22/2019 13:26
		1205893 UNSPK	11/22/2019 12:19
		1205894 MS	11/22/2019 12:42
		1205895 MSD	11/22/2019 13:04
		1205896	11/22/2019 13:48
		1205897	11/22/2019 14:10
		1205898	11/22/2019 14:32
		1205899	11/22/2019 14:54
VOCs- 5ml Water by 8260C/D	L193271AA	VBLKL87	11/23/2019 09:48
		LCSL87	11/23/2019 09:26
		1205900 UNSPK	11/23/2019 11:06
		1205901 MS	11/23/2019 11:28
		1205902 MSD	11/23/2019 11:50
		1205903	11/23/2019 12:12
		1205904	11/23/2019 12:34
		1205905	11/23/2019 10:44

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: JCW22
Matrix: LIQUID

Fraction: Volatiles by GC/MS

L193262AA / VBLKL86 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	11/22/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	11/22/19	N.D.	ug/l	0.2	1
Acetone	11/22/19	N.D.	ug/l	0.7	20
Freon 113	11/22/19	N.D.	ug/l	0.2	10
Carbon Disulfide	11/22/19	N.D.	ug/l	0.2	5
Methylene Chloride	11/22/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	11/22/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	11/22/19	N.D.	ug/l	0.2	1
2-Butanone	11/22/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	11/22/19	N.D.	ug/l	0.2	1
Chloroform	11/22/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	11/22/19	N.D.	ug/l	0.3	1
Benzene	11/22/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	11/22/19	N.D.	ug/l	0.3	1
Trichloroethene	11/22/19	N.D.	ug/l	0.2	1
1,4-Dioxane	11/22/19	N.D.	ug/l	29	250
Toluene	11/22/19	N.D.	ug/l	0.2	1
Tetrachloroethene	11/22/19	N.D.	ug/l	0.2	1
Ethylbenzene	11/22/19	N.D.	ug/l	0.4	1
Xylene (Total)	11/22/19	N.D.	ug/l	1	6
1,2-Dichlorobenzene	11/22/19	N.D.	ug/l	0.2	5
Naphthalene	11/22/19	N.D.	ug/l	1	5

L193271AA / VBLKL87 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	11/23/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	11/23/19	N.D.	ug/l	0.2	1
Acetone	11/23/19	N.D.	ug/l	0.7	20
Freon 113	11/23/19	N.D.	ug/l	0.2	10
Carbon Disulfide	11/23/19	N.D.	ug/l	0.2	5
Methylene Chloride	11/23/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	11/23/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	11/23/19	N.D.	ug/l	0.2	1
2-Butanone	11/23/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	11/23/19	N.D.	ug/l	0.2	1
Chloroform	11/23/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	11/23/19	N.D.	ug/l	0.3	1
Benzene	11/23/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	11/23/19	N.D.	ug/l	0.3	1
Trichloroethene	11/23/19	N.D.	ug/l	0.2	1
1,4-Dioxane	11/23/19	N.D.	ug/l	29	250
Toluene	11/23/19	N.D.	ug/l	0.2	1
Tetrachloroethene	11/23/19	N.D.	ug/l	0.2	1
Ethylbenzene	11/23/19	N.D.	ug/l	0.4	1
Xylene (Total)	11/23/19	N.D.	ug/l	1	6

Fraction: Volatiles by GC/MS

L193271AA / VBLKL87 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
1,2-Dichlorobenzene	11/23/19	N.D.	ug/l	0.2	5
Naphthalene	11/23/19	N.D.	ug/l	1	5

Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: JCW22
Matrix: LIQUID

Fraction: Volatiles by GC/MS

L193262AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKL86	101	80 - 120	99	80 - 120	95	80 - 120	98	80 - 120
LCDL86	101	80 - 120	101	80 - 120	95	80 - 120	99	80 - 120
LCSL86	99	80 - 120	101	80 - 120	95	80 - 120	100	80 - 120
1205892	101	80 - 120	99	80 - 120	95	80 - 120	98	80 - 120
1205893 UNSPK	102	80 - 120	99	80 - 120	96	80 - 120	97	80 - 120
1205894 MS	101	80 - 120	101	80 - 120	96	80 - 120	99	80 - 120
1205895 MSD	101	80 - 120	102	80 - 120	96	80 - 120	99	80 - 120
1205896	102	80 - 120	98	80 - 120	95	80 - 120	97	80 - 120
1205897	99	80 - 120	99	80 - 120	95	80 - 120	98	80 - 120
1205898	101	80 - 120	97	80 - 120	96	80 - 120	97	80 - 120
1205899	101	80 - 120	98	80 - 120	96	80 - 120	98	80 - 120

L193271AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKL87	102	80 - 120	98	80 - 120	97	80 - 120	97	80 - 120
LCSL87	102	80 - 120	102	80 - 120	99	80 - 120	98	80 - 120
1205900 UNSPK	103	80 - 120	99	80 - 120	98	80 - 120	98	80 - 120
1205901 MS	100	80 - 120	101	80 - 120	97	80 - 120	99	80 - 120
1205902 MSD	101	80 - 120	102	80 - 120	99	80 - 120	98	80 - 120
1205903	100	80 - 120	98	80 - 120	96	80 - 120	97	80 - 120
1205904	102	80 - 120	99	80 - 120	97	80 - 120	97	80 - 120
1205905	103	80 - 120	98	80 - 120	98	80 - 120	97	80 - 120

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 1205893 MS: 1205894 MSD: 1205895 **Analyte**	Batch: **L193262AA** (Sample number(s): 1205892-1205899)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	N.D.	19.8	19.06	99	95	56-120	4	30
1,1-Dichloroethene	20	0.219 J	23.3	22.22	115	110	80-131	5	30
Acetone	150	N.D.	156.79	147.26	105	98	54-157	6	30
Freon 113	20	N.D.	21.17	20.48	106	102	73-139	3	30
Carbon Disulfide	20	N.D.	18.89	18.25	94	91	65-128	3	30
Methylene Chloride	20	N.D.	22.09	21.06	110	105	80-120	5	30
trans-1,2-Dichloroethene	20	N.D.	21.76	20.78	109	104	80-120	5	30
1,1-Dichloroethane	20	0.833 J	21.95	21.36	106	103	80-120	3	30
2-Butanone	150	N.D.	134.08	129.45	89	86	59-135	4	30
cis-1,2-Dichloroethene	20	N.D.	22.76	21.78	114	109	80-120	4	30
1,1,1-Trichloroethane	20	3.89	25.43	24.63	108	104	67-126	3	30
Chloroform	20	N.D.	21.71	20.88	109	104	80-120	4	30
1,2-Dichloroethane	20	N.D.	21.16	20.05	106	100	73-124	5	30
Benzene	20	N.D.	21.98	21.09	110	105	80-120	4	30
Trichloroethene	20	N.D.	22.11	21.37	111	107	80-120	3	30
1,4-Dioxane	500	N.D.	663.58	635.57	133	127	63-146	4	30
Toluene	20	N.D.	21.66	20.84	108	104	80-120	4	30
Tetrachloroethene	20	N.D.	21.37	20.42	107	102	80-120	5	30
Ethylbenzene	20	N.D.	21.59	20.92	108	105	80-120	3	30
Xylene (Total)	60	N.D.	65.05	62.52	108	104	80-120	4	30
1,2-Dichlorobenzene	20	N.D.	20.81	19.97	104	100	80-120	4	30
Naphthalene	20	N.D.	19.16	18.73	96	94	53-124	2	30

UNSPK: 1205900 MS: 1205901 MSD: 1205902 **Analyte**	Batch: **L193271AA** (Sample number(s): 1205900-1205905)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	N.D.	21.47	21.06	107	105	56-120	2	30
1,1-Dichloroethene	20	1.07	23.3	23.09	111	110	80-131	1	30
Acetone	150	N.D.	163.32	154.87	109	103	54-157	5	30
Freon 113	20	N.D.	21.19	21.01	106	105	73-139	1	30
Carbon Disulfide	20	N.D.	18.5	18.53	92	93	65-128	0	30
Methylene Chloride	20	N.D.	21.68	21.66	108	108	80-120	0	30
trans-1,2-Dichloroethene	20	N.D.	21.66	21.57	108	108	80-120	0	30
1,1-Dichloroethane	20	0.438 J	21.47	21.45	105	105	80-120	0	30
2-Butanone	150	N.D.	134.27	136.18	90	91	59-135	1	30
cis-1,2-Dichloroethene	20	N.D.	22.63	22.69	113	113	80-120	0	30
1,1,1-Trichloroethane	20	18.61	41.34	41.07	114	112	67-126	1	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 1205900 MS: 1205901 MSD: 1205902 **Analyte**	Batch: **L193271AA** (Sample number(s): 1205900-1205905)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Chloroform	20	0.605 J	22.33	22.46	109	109	80-120	1	30
1,2-Dichloroethane	20	N.D.	21.45	21.54	107	108	73-124	0	30
Benzene	20	N.D.	21.85	21.71	109	109	80-120	1	30
Trichloroethene	20	36.35	59.64	59.38	116	115	80-120	0	30
1,4-Dioxane	500	N.D.	527.9	554.82	106	111	63-146	5	30
Toluene	20	N.D.	21.63	21.51	108	108	80-120	1	30
Tetrachloroethene	20	N.D.	21.82	21.46	109	107	80-120	2	30
Ethylbenzene	20	N.D.	21.69	21.55	108	108	80-120	1	30
Xylene (Total)	60	N.D.	65.88	64.83	110	108	80-120	2	30
1,2-Dichlorobenzene	20	N.D.	21.28	20.81	106	104	80-120	2	30
Naphthalene	20	N.D.	18.87	19.25	94	96	53-124	2	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: JCW22
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSL86 LCSD: LCDL86	Batch: **L193262AA** (Sample number(s): 1205892-1205899)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	18.12	18.42	91	92	56-120	2	30
1,1-Dichloroethene	20	20.77	21.17	104	106	80-131	2	30
Acetone	150	154.37	152.78	103	102	54-157	1	30
Freon 113	20	18.67	19.05	93	95	73-139	2	30
Carbon Disulfide	20	17.27	17.52	86	88	65-128	1	30
Methylene Chloride	20	21.25	20.95	106	105	80-120	1	30
trans-1,2-Dichloroethene	20	20.35	20.3	102	102	80-126	0	30
1,1-Dichloroethane	20	20.32	20.42	102	102	80-120	0	30
2-Butanone	150	143.28	142.02	96	95	59-135	1	30
cis-1,2-Dichloroethene	20	21.7	21.72	108	109	80-125	0	30
1,1,1-Trichloroethane	20	19.84	20.02	99	100	67-126	1	30
Chloroform	20	20.84	20.79	104	104	80-120	0	30
1,2-Dichloroethane	20	20.71	20.63	104	103	73-124	0	30
Benzene	20	21.01	21.29	105	106	80-120	1	30
Trichloroethene	20	20.7	21.11	104	106	80-120	2	30
1,4-Dioxane	500	641.66	646.1	128	129	63-146	1	30
Toluene	20	20.95	21.23	105	106	80-120	1	30
Tetrachloroethene	20	20.24	20.48	101	102	80-120	1	30
Ethylbenzene	20	20.94	20.95	105	105	80-120	0	30
Xylene (Total)	60	63.16	63.66	105	106	80-120	1	30
1,2-Dichlorobenzene	20	21.1	20.8	105	104	80-120	1	30
Naphthalene	20	20.46	20.46	102	102	53-124	0	30

LCS: LCSL87	Batch: **L193271AA** (Sample number(s): 1205900-1205905)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	17.86	NA	89	NA	56-120	NA	NA
1,1-Dichloroethene	20	20.27	NA	101	NA	80-131	NA	NA
Acetone	150	165.78	NA	111	NA	54-157	NA	NA
Freon 113	20	18.28	NA	91	NA	73-139	NA	NA
Carbon Disulfide	20	16.81	NA	84	NA	65-128	NA	NA
Methylene Chloride	20	20.76	NA	104	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	20.1	NA	100	NA	80-126	NA	NA
1,1-Dichloroethane	20	19.91	NA	100	NA	80-120	NA	NA
2-Butanone	150	137.59	NA	92	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	21.25	NA	106	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	19.91	NA	100	NA	67-126	NA	NA
Chloroform	20	20.73	NA	104	NA	80-120	NA	NA
1,2-Dichloroethane	20	20.97	NA	105	NA	73-124	NA	NA
Benzene	20	20.61	NA	103	NA	80-120	NA	NA
Trichloroethene	20	20.69	NA	103	NA	80-120	NA	NA

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: JCW22
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSL87	Batch: **L193271AA** (Sample number(s): 1205900-1205905)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
1,4-Dioxane	500	538.96	NA	108	NA	63-146	NA	NA
Toluene	20	20.05	NA	100	NA	80-120	NA	NA
Tetrachloroethene	20	19.5	NA	98	NA	80-120	NA	NA
Ethylbenzene	20	19.96	NA	100	NA	80-120	NA	NA
Xylene (Total)	60	60.53	NA	101	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	20.05	NA	100	NA	80-120	NA	NA
Naphthalene	20	18.37	NA	92	NA	53-124	NA	NA

Fraction: Volatiles by GC/MS

11997: VOCs- 5ml Water by 8260C/D Analyte Name	Default MDL	Default LOQ	Units
Vinyl Chloride	0.2	1	ug/l
1,1-Dichloroethene	0.2	1	ug/l
Acetone	0.7	20	ug/l
Freon 113	0.2	10	ug/l
Carbon Disulfide	0.2	5	ug/l
Methylene Chloride	0.3	1	ug/l
trans-1,2-Dichloroethene	0.2	1	ug/l
1,1-Dichloroethane	0.2	1	ug/l
2-Butanone	0.3	10	ug/l
cis-1,2-Dichloroethene	0.2	1	ug/l
Chloroform	0.2	1	ug/l
1,1,1-Trichloroethane	0.3	1	ug/l
Benzene	0.2	1	ug/l
1,2-Dichloroethane	0.3	1	ug/l
Trichloroethene	0.2	1	ug/l
1,4-Dioxane	29	250	ug/l
Toluene	0.2	1	ug/l
Tetrachloroethene	0.2	1	ug/l
Ethylbenzene	0.4	1	ug/l
Xylene (Total)	1	6	ug/l
1,2-Dichlorobenzene	0.2	5	ug/l
Naphthalene	1	5	ug/l

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln04t06.d BFB Injection Date: 11/04/19

Instrument ID: HP09915 BFB Injection Time: 14:18

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.48
75	30.0 - 60.0% of mass 95	44.65
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.22
173	Less than 2.0% of mass 174	0.51 (0.61)1
174	Greater than 50.0% of mass 95	83.73
175	5.0 - 9.0% of mass 174	5.92 (7.07)1
176	Greater than 95.0%, but less than 101.0% of mass 174	82.66 (98.72)1
177	5.0 - 9.0% of mass 176	5.37 (6.49)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	ln04i01.d	11/04/19	14:51
02	VSTD100	ln04i02.d	11/04/19	15:13
03	VSTD50	ln04i03.d	11/04/19	15:35
04	VSTD20	ln04i04.d	11/04/19	15:57
05	VSTD10	ln04i05.d	11/04/19	16:19
06	VSTD4	ln04i06.d	11/04/19	16:41
07	VSTD1	ln04i07.d	11/04/19	17:03
08	ICVLLG	ln04v02.d	11/04/19	18:42

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln22t01.d BFB Injection Date: 11/22/19

Instrument ID: HP09915 BFB Injection Time: 07:53

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.57
75	30.0 - 60.0% of mass 95	43.97
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.56
173	Less than 2.0% of mass 174	0.57 (0.70)1
174	Greater than 50.0% of mass 95	81.03
175	5.0 - 9.0% of mass 174	5.38 (6.64)1
176	Greater than 95.0%, but less than 101.0% of mass 174	78.59 (96.99)1
177	5.0 - 9.0% of mass 176	5.36 (6.82)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	ln22c01.d	11/22/19	08:38
02	LCDL85	ln22s02.d	11/22/19	09:00
03	LCDL86	ln22s32.d	11/22/19	09:00
04	LCSL85	ln22s01.d	11/22/19	09:22
05	LCSL86	ln22s31.d	11/22/19	09:22
06	VBLKL85	ln22b01.d	11/22/19	10:07
07	VBLKL86	ln22b05.d	11/22/19	10:07
08	1202250	ln22s03.d	11/22/19	10:29
09	1202251	ln22s04.d	11/22/19	10:51
10	1202252	ln22s05.d	11/22/19	11:13
11	1202253	ln22s06.d	11/22/19	11:35
12	1205927	ln22s33.d	11/22/19	11:57
13	1205893	ln22s34.d	11/22/19	12:19
14	1205894MS	ln22s35.d	11/22/19	12:42
15	1205895MSD	ln22s36.d	11/22/19	13:04
16	1205892	ln22s37.d	11/22/19	13:26
17	1205896	ln22s38.d	11/22/19	13:48
18	1205897	ln22s39.d	11/22/19	14:10
19	1205898	ln22s40.d	11/22/19	14:32
20	1205899	ln22s41.d	11/22/19	14:54
21	1205919	ln22s42.d	11/22/19	15:16
22	1205920	ln22s43.d	11/22/19	15:38

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln22t01.d BFB Injection Date: 11/22/19

Instrument ID: HP09915 BFB Injection Time: 07:53

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.57
75	30.0 - 60.0% of mass 95	43.97
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.56
173	Less than 2.0% of mass 174	0.57 (0.70)1
174	Greater than 50.0% of mass 95	81.03
175	5.0 - 9.0% of mass 174	5.38 (6.64)1
176	Greater than 95.0%, but less than 101.0% of mass 174	78.59 (96.99)1
177	5.0 - 9.0% of mass 176	5.36 (6.82)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1205921	ln22s44.d	11/22/19	16:00
24	1205922	ln22s45.d	11/22/19	16:22
25	1205923	ln22s46.d	11/22/19	16:44
26	1205924	ln22s47.d	11/22/19	17:06
27	1205925	ln22s48.d	11/22/19	17:28
28	1205926	ln22s49.d	11/22/19	17:50

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln23t02.d BFB Injection Date: 11/23/19

Instrument ID: HP09915 BFB Injection Time: 07:57

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.16
75	30.0 - 60.0% of mass 95	43.53
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.39
173	Less than 2.0% of mass 174	0.55 (0.66)1
174	Greater than 50.0% of mass 95	83.68
175	5.0 - 9.0% of mass 174	6.06 (7.25)1
176	Greater than 95.0%, but less than 101.0% of mass 174	80.15 (95.78)1
177	5.0 - 9.0% of mass 176	5.44 (6.78)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	ln23c01.d	11/23/19	08:42
02	LCSL87	ln23s01.d	11/23/19	09:26
03	VBLKL87	ln23b01.d	11/23/19	09:48
04	1205905	ln23s02.d	11/23/19	10:44
05	1205900	ln23s03.d	11/23/19	11:06
06	1205901MS	ln23s04.d	11/23/19	11:28
07	1205902MSD	ln23s05.d	11/23/19	11:50
08	1205903	ln23s06.d	11/23/19	12:12
09	1205904	ln23s07.d	11/23/19	12:34
10	1205910	ln23s08.d	11/23/19	12:56
11	1205911	ln23s09.d	11/23/19	13:18
12	1205912	ln23s10.d	11/23/19	13:40
13	1205913	ln23s11.d	11/23/19	14:02
14	1205914	ln23s12.d	11/23/19	14:24
15	1205915	ln23s13.d	11/23/19	14:46
16	1205916	ln23s14.d	11/23/19	15:08
17	1205917	ln23s15.d	11/23/19	15:31
18	1205918	ln23s16.d	11/23/19	15:53
19	1205928	ln23s17.d	11/23/19	16:15
20	1205929	ln23s18.d	11/23/19	16:37
21	1206738	ln23s19.d	11/23/19	16:59
22	1206739	ln23s20.d	11/23/19	17:21

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln23t02.d BFB Injection Date: 11/23/19

Instrument ID: HP09915 BFB Injection Time: 07:57

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.16
75	30.0 - 60.0% of mass 95	43.53
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.39
173	Less than 2.0% of mass 174	0.55 (0.66)1
174	Greater than 50.0% of mass 95	83.68
175	5.0 - 9.0% of mass 174	6.06 (7.25)1
176	Greater than 95.0%, but less than 101.0% of mass 174	80.15 (95.78)1
177	5.0 - 9.0% of mass 176	5.44 (6.78)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1206740	ln23s21.d	11/23/19	17:43

FORM V VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 11/04/19 11/04/19

Heated Purge: (Y/N) Y Calibration Times: 14:51 17:03

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ln04i07.d RRF 4 = ln04i06.d RRF 10= ln04i05.d
RRF 20= ln04i04.d RRF 50= ln04i03.d RRF100= ln04i02.d RRF300= ln04i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
Dichlorodifluoromethane	#0.2770	0.3398	0.3322	0.3567	0.3683	0.3624	0.4044	0.3487	11	AVG	#
Chloromethane	#0.3032	0.3486	0.3309	0.3441	0.3366	0.3315	0.3574	0.3361	5	AVG	#
1,3-Butadiene	0.3190	0.2966	0.2596	0.2831	0.2680	0.2614	0.2655	0.2790	8	AVG	
Vinyl Chloride	#0.3148	0.3359	0.3281	0.3461	0.3340	0.3300	0.3588	0.3354	4	AVG	#
Bromomethane	#0.2465	0.2525	0.2338	0.2435	0.2351	0.2280	0.2436	0.2404	4	AVG	#
Chloroethane	#0.1829	0.1883	0.1826	0.1903	0.1829	0.1768	0.1864	0.1843	2	AVG	#
Dichlorofluoromethane	0.4438	0.4434	0.4617	0.4547	0.4393	0.4194	0.4429	0.4436	3	AVG	
n-Pentane	0.4515	0.4661	0.3729	0.4321	0.4220	0.4236	0.4188	0.4267	7	AVG	
Trichlorofluoromethane	#0.3135	0.3650	0.3480	0.3680	0.3738	0.3637	0.3957	0.3611	7	AVG	#
Ethyl ether	0.2040	0.2292	0.2248	0.2407	0.2462	0.2325	0.2560	0.2333	7	AVG	
Freon 123a	0.2731	0.2973	0.2841	0.3052	0.2905	0.2871	0.2961	0.2905	4	AVG	
Acrolein	1.8108	1.7178	1.8759	1.9357	1.9501	1.9507	1.8885	1.8756	5	AVG	
1,1-Dichloroethene	#0.1836	0.2109	0.2092	0.2256	0.2170	0.2158	0.2215	0.2120	6	AVG	#
1,1-Dichloroethene(2)	#0.1023	0.1059	0.1045	0.1117	0.1063	0.1059	0.1072	0.1063	3	AVG	#
Acetone	#0.8149	0.8065	0.8248	0.8719	0.8448	0.8521	0.8711	0.8409	3	AVG	#
Freon 113	#0.2090	0.2460	0.2241	0.2555	0.2493	0.2512	0.2576	0.2418	8	AVG	#
2-Propanol	0.6190	0.5470	0.6059	0.5854	0.6149	0.6455	0.6138	0.6045	5	AVG	
Methyl Iodide	0.3896	0.4318	0.4390	0.4699	0.4471	0.4440	0.4531	0.4392	6	AVG	
Carbon Disulfide	#0.6790	0.7802	0.7759	0.8606	0.8244	0.8268	0.8441	0.7987	8	AVG	#
Allyl Chloride	0.3592	0.3785	0.3741	0.3853	0.3781	0.3777	0.4087	0.3802	4	AVG	
Methyl Acetate	#0.2759	0.2713	0.2678	0.2699	0.2708	0.2665	0.2887	0.2730	3	AVG	#
Methylene Chloride	#0.2376	0.2470	0.2510	0.2643	0.2542	0.2521	0.2596	0.2523	3	AVG	#
t-Butyl alcohol	0.9987	0.9567	1.0535	1.0361	1.0823	1.1654	1.0751	1.0525	6	AVG	
Acrylonitrile	0.1302	0.1382	0.1473	0.1543	0.1516	0.1518	0.1546	0.1469	6	AVG	
trans-1,2-Dichloroethene	#0.2214	0.2420	0.2423	0.2603	0.2478	0.2478	0.2548	0.2452	5	AVG	#
Methyl Tertiary Butyl Ether	#0.7408	0.7784	0.8166	0.8514	0.8245	0.8033	0.8186	0.8048	4	AVG	#
n-Hexane	0.3287	0.3697	0.3246	0.4104	0.3995	0.4116	0.4257	0.3815	11	AVG	
1,1-Dichloroethane	#0.3709	0.4279	0.4277	0.4500	0.4356	0.4348	0.4472	0.4277	6	AVG	#
di-Isopropyl ether	0.7323	0.7905	0.8261	0.8844	0.8488	0.8391	0.8535	0.8250	6	AVG	
2-Chloro-1,3-butadiene	0.3275	0.3721	0.3665	0.4087	0.3982	0.4003	0.4129	0.3838	8	AVG	
Ethyl t-butyl ether	0.7062	0.7711	0.8131	0.8688	0.8314	0.8069	0.8067	0.8006	6	AVG	
cis-1,2-Dichloroethene	#0.2518	0.2724	0.2701	0.2905	0.2780	0.2764	0.2874	0.2752	5	AVG	#
2-Butanone	#0.1780	0.1771	0.1844	0.1937	0.1954	0.1945	0.1965	0.1885	4	AVG	#
2,2-Dichloropropane	0.2822	0.3252	0.3231	0.3546	0.3451	0.3438	0.3535	0.3325	8	AVG	
Propionitrile	1.2429	1.2037	1.2978	1.3520	1.3266	1.3641	1.3930	1.3114	5	AVG	
Methacrylonitrile	0.1422	0.1460	0.1564	0.1674	0.1637	0.1633	0.1700	0.1584	7	AVG	
Bromochloromethane	0.1253	0.1402	0.1475	0.1518	0.1494	0.1475	0.1599	0.1459	7	AVG	
Tetrahydrofuran	1.1900	1.0886	1.1667	1.2087	1.1678	1.2286	1.2418	1.1846	4	AVG	
Chloroform	#0.3565	0.3938	0.4037	0.4404	0.4177	0.4181	0.4336	0.4091	7	AVG	#
1,1,1-Trichloroethane	#0.2897	0.3392	0.3356	0.3727	0.3627	0.3635	0.3807	0.3492	9	AVG	#
Cyclohexane	#0.3956	0.4609	0.4169	0.5022	0.4885	0.4944	0.5099	0.4669	10	AVG	#
Cyclohexane(2)	#0.3456	0.3987	0.3627	0.4329	0.4236	0.4319	0.4438	0.4056	9	AVG	#
Cyclohexane(3)	#0.1219	0.1428	0.1291	0.1542	0.1510	0.1531	0.1588	0.1444	10	AVG	#
1,1-Dichloropropene	0.2907	0.3348	0.3278	0.3579	0.3462	0.3479	0.3620	0.3382	7	AVG	
Carbon Tetrachloride	#0.2440	0.2777	0.2747	0.3128	0.3114	0.3175	0.3350	0.2961	11	AVG	#
Isobutyl Alcohol	0.3485	0.3107	0.3595	0.3421	0.3590	0.3974	0.3623	0.3542	7	AVG	
Benzene	#0.8990	1.0067	1.0148	1.0842	1.0359	1.0238	1.0549	1.0170	6	AVG	#
1,2-Dichloroethane	#0.3434	0.3191	0.3218	0.3337	0.3212	0.3202	0.3304	0.3271	3	AVG	#
1,2-Dichloroethane(2)	#0.0306	0.0316	0.0313	0.0343	0.0326	0.0322	0.0340	0.0324	4	AVG	#<-
t-Amyl methyl ether	0.7161	0.7648	0.8115	0.8675	0.8369	0.8221	0.8061	0.8036	6	AVG	
n-Heptane	0.3313	0.3538	0.2821	0.3843	0.3724	0.3852	0.3855	0.3564	11	AVG	
n-Butanol	0.2496	0.2624	0.3164	0.3024	0.3250	0.3551	0.3230	0.3049	12	AVG	

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 11/04/19 11/04/19

Heated Purge: (Y/N) Y Calibration Times: 14:51 17:03

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ln04i07.d RRF 4 = ln04i06.d RRF 10= ln04i05.d
RRF 20= ln04i04.d RRF 50= ln04i03.d RRF100= ln04i02.d RRF300= ln04i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Trichloroethene	#0.2300	0.2478	0.2477	0.2710	0.2607	0.2615	0.2739	0.2561	6	AVG #
Methylcyclohexane	#0.4066	0.4619	0.4494	0.4907	0.4946	0.4918	0.5306	0.4751	8	AVG #
Methylcyclohexane(2)	#0.1773	0.2158	0.2019	0.2198	0.2245	0.2228	0.2428	0.2150	10	AVG #
1,2-Dichloropropane	#0.2299	0.2478	0.2567	0.2731	0.2644	0.2644	0.2715	0.2582	6	AVG #
Dibromomethane	0.1450	0.1593	0.1638	0.1764	0.1719	0.1732	0.1801	0.1671	7	AVG
1,4-Dioxane	0.0728	0.0772	0.0845	0.0860	0.0888	0.0886	0.0887	0.0838	8	AVG
Methyl Methacrylate	0.2026	0.2254	0.2423	0.2604	0.2637	0.2705	0.2832	0.2497	11	AVG
Bromodichloromethane	#0.2483	0.2630	0.2867	0.3150	0.3161	0.3256	0.3442	0.2998	12	AVG #
2-Nitropropane	0.0733	0.0770	0.0825	0.0914	0.1013	0.1033	0.1070	0.0908	15	AVG
2-Chloroethyl Vinyl Ether	0.0882	0.0977	0.1040	0.1130	0.1155	0.1203	0.1378	0.1109	15	AVG
cis-1,3-Dichloropropene	#0.3066	0.3495	0.3874	0.4270	0.4265	0.4334	0.4572	0.3982	13	AVG #
4-Methyl-2-pentanone	#0.3519	0.3696	0.3930	0.4183	0.4328	0.4167	0.4032	0.3979	7	AVG #
Toluene	#0.7332	0.7931	0.8181	0.8731	0.8456	0.8312	0.8473	0.8202	6	AVG #
trans-1,3-Dichloropropene	#0.3482	0.3965	0.4507	0.4938	0.5103	0.5177	0.5421	0.4656	15	AVG #
Ethyl Methacrylate	0.4474	0.4901	0.5672	0.5969	0.6125	0.6196	0.6273	0.5659	12	AVG
1,1,2-Trichloroethane	#0.2783	0.2901	0.3087	0.3230	0.3222	0.3239	0.3306	0.3110	6	AVG #
Tetrachloroethene	#0.3162	0.3426	0.3214	0.3690	0.3559	0.3544	0.3721	0.3474	6	AVG #
1,3-Dichloropropane	0.4832	0.4915	0.5312	0.5551	0.5463	0.5472	0.5620	0.5309	6	AVG
2-Hexanone	#0.3356	0.3575	0.3750	0.3917	0.4210	0.3894	0.3737	0.3777	7	AVG #
Dibromochloromethane	#0.2335	0.2673	0.3027	0.3338	0.3491	0.3626	0.3808	0.3185	17	AVG #
1,2-Dibromoethane	#0.2934	0.3052	0.3308	0.3537	0.3534	0.3557	0.3715	0.3377	9	AVG #
1-Chlorohexane	0.4605	0.4391	0.3819	0.4601	0.4417	0.4418	0.4594	0.4406	6	AVG
Chlorobenzene	#0.8164	0.9033	0.9335	0.9825	0.9556	0.9405	0.9609	0.9275	6	AVG #
1,1,1,2-Tetrachloroethane	0.2351	0.2774	0.2999	0.3286	0.3310	0.3327	0.3346	0.3056	12	AVG
Ethylbenzene	#1.3747	1.5457	1.5220	1.6801	1.6314	1.6113	1.6087	1.5677	6	AVG #
m+p-Xylene	#0.5374	0.6016	0.5976	0.6715	0.6453	0.6383	0.6253	0.6167	7	AVG #
o-Xylene	#0.5399	0.5806	0.5978	0.6590	0.6427	0.6294	0.6148	0.6092	7	AVG #
Styrene	#0.8016	0.9301	1.0102	1.0972	1.0847	1.0669	1.0557	1.0066	11	AVG #
Bromoform	#	0.1724	0.2151	0.2312	0.2542	0.2685	0.2868	0.2380	17	AVG #
Isopropylbenzene	#1.2910	1.5137	1.4363	1.6684	1.6105	1.5929	1.5825	1.5279	8	AVG #
Cyclohexanone	0.3281	0.3024	0.3195	0.3248	0.3437	0.3247	0.3541	0.3282	5	AVG
Bromobenzene	0.6787	0.7176	0.7360	0.7885	0.7819	0.7772	0.7803	0.7515	6	AVG
1,1,2,2-Tetrachloroethane	#0.8022	0.8637	0.9996	0.9771	0.9960	0.9947	0.9782	0.9445	8	AVG #
1,2,3-Trichloropropane	0.2561	0.2658	0.3031	0.2987	0.2999	0.3027	0.3026	0.2898	7	AVG
trans-1,4-Dichloro-2-butene	0.2392	0.2651	0.2913	0.3105	0.3171	0.3156	0.3005	0.2913	10	AVG
n-Propylbenzene	2.9207	3.2949	2.9806	3.5724	3.4357	3.4054	3.3722	3.2831	7	AVG
2-Chlorotoluene	0.6482	0.6609	0.6535	0.7438	0.7252	0.7177	0.7330	0.6975	6	AVG
4-Chlorotoluene	0.6762	0.7074	0.6870	0.7741	0.7474	0.7369	0.7530	0.7260	5	AVG
1,3,5-Trimethylbenzene	1.9893	2.3249	2.1852	2.6169	2.5322	2.5250	2.5281	2.3860	10	AVG
tert-Butylbenzene	0.4288	0.4845	0.4243	0.5332	0.5247	0.5261	0.5325	0.4934	10	AVG
Pentachloroethane	0.2905	0.3724	0.4105	0.4466	0.4692	0.4744	0.5106	0.4249	18	AVG
1,2,4-Trimethylbenzene	2.1648	2.4282	2.3275	2.7429	2.6696	2.6607	2.6088	2.5147	8	AVG
sec-Butylbenzene	2.5710	2.9123	2.5624	3.2580	3.1256	3.1495	3.0325	2.9444	9	AVG
1,3-Dichlorobenzene	#1.3168	1.3435	1.3443	1.4749	1.4337	1.4053	1.3479	1.3809	4	AVG #
p-Isopropyltoluene	2.2311	2.5145	2.2448	2.8322	2.7191	2.7434	2.5461	2.5473	9	AVG
1,4-Dichlorobenzene	#1.3913	1.3992	1.3855	1.5164	1.4765	1.4501	1.4018	1.4315	4	AVG #
1,2,3-Trimethylbenzene	2.3717	2.5881	2.6584	2.7814	2.7739	2.7079	2.7646	2.6637	6	AVG
Benzyl Chloride		1.4905	1.9042	2.0277	2.1892	2.2241	2.2651	2.0168	14	AVG
1,3-Diethylbenzene	1.4770	1.6040	1.6373	1.7518	1.7206	1.7031	1.7107	1.6578	6	AVG
1,4-Diethylbenzene	1.6313	1.7295	1.7208	1.8600	1.8134	1.7888	1.7510	1.7564	4	AVG
1,2-Dichlorobenzene	#1.2854	1.3272	1.3476	1.4407	1.4096	1.3800	1.3479	1.3626	4	AVG #
n-Butylbenzene	1.2635	1.3335	1.1354	1.4216	1.3485	1.3543	1.2604	1.3024	7	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 11/04/19 11/04/19

Heated Purge: (Y/N) Y Calibration Times: 14:51 17:03

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ln04i07.d RRF 4 = ln04i06.d RRF 10= ln04i05.d
RRF 20= ln04i04.d RRF 50= ln04i03.d RRF100= ln04i02.d RRF300= ln04i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
1,2-Diethylbenzene	1.2665	1.3513	1.3737	1.4741	1.4581	1.4365	1.4223	1.3975	5	AVG
1,2-Dibromo-3-chloropropane#	0.1653	0.1703	0.2163	0.2130	0.2240	0.2247	0.2337	0.2068	13	AVG #
1,3,5-Trichlorobenzene	1.0736	1.0363	0.9506	1.1293	1.0680	1.0728	0.9975	1.0469	6	AVG
1,2,4-Trichlorobenzene #	1.0928	0.9898	0.9467	1.0851	1.0411	1.0335	0.9366	1.0179	6	AVG #
Hexachlorobutadiene		0.6224	0.4463	0.5319	0.4489	0.4300	0.4042	0.4806	17	AVG
Naphthalene	2.9793	3.0036	3.3068	3.4936	3.4918	3.4237	3.2086	3.2725	7	AVG
1,2,3-Trichlorobenzene	1.0616	0.9674	0.9274	1.0684	1.0300	1.0095	0.8692	0.9905	7	AVG
2-Methylnaphthalene	1.9837	1.8879	2.0390	2.2209	2.2298	2.1150	1.6300	2.0152	10	AVG
Dibromofluoromethane	0.2407	0.2444	0.2426	0.2463	0.2437	0.2470	0.2465	0.2445	1	AVG
Dibromofluoromethane(2)	0.2457	0.2504	0.2472	0.2513	0.2494	0.2516	0.2491	0.2492	1	AVG
1,2-Dichloroethane-d4	0.0612	0.0629	0.0625	0.0629	0.0628	0.0627	0.0611	0.0623	1	AVG
1,2-Dichloroethane-d4(2)	0.2741	0.2818	0.2744	0.2819	0.2771	0.2799	0.2742	0.2776	1	AVG
1,2-Dichloroethane-d4(3)	0.0389	0.0398	0.0398	0.0408	0.0397	0.0402	0.0393	0.0398	2	AVG
Toluene-d8	1.3149	1.3039	1.3148	1.3125	1.3146	1.3005	1.2968	1.3083	1	AVG
Toluene-d8(2)	0.8480	0.8436	0.8547	0.8509	0.8480	0.8442	0.8428	0.8475	1	AVG
4-Bromofluorobenzene	0.4958	0.4982	0.5005	0.4967	0.4932	0.4898	0.4935	0.4954	1	AVG
4-Bromofluorobenzene(2)	0.4097	0.4154	0.4152	0.4118	0.4097	0.4065	0.4066	0.4107	1	AVG

Average %RSD 7

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

FORM VI VOA

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP09915.i/19nov04i.b/ln04i01.d	VSTD300
/chem/HP09915.i/19nov04i.b/ln04i02.d	VSTD100
/chem/HP09915.i/19nov04i.b/ln04i03.d	VSTD050
/chem/HP09915.i/19nov04i.b/ln04i04.d	VSTD020
/chem/HP09915.i/19nov04i.b/ln04i05.d	VSTD010
/chem/HP09915.i/19nov04i.b/ln04i06.d	VSTD004
/chem/HP09915.i/19nov04i.b/ln04i07.d	VSTD001

Area Summary

File ID:

Internal Standard Name	ln04i01.d	ln04i02.d	ln04i03.d	ln04i04.d	ln04i05.d	ln04i06.d	ln04i07.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	254406	265971	269779	258058	263427	262044	243591	259611	3	Yes
Fluorobenzene	1120873	1183605	1160755	1128743	1158257	1148427	1137124	1148255	2	Yes
Chlorobenzene-d5	891668	935628	904578	883281	897139	884065	879875	896605	2	Yes
1,4-Dichlorobenzene-d4	477171	500629	483927	476218	496298	480071	473433	483964	2	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	ln04i01.d	ln04i02.d	ln04i03.d	ln04i04.d	ln04i05.d	ln04i06.d	ln04i07.d	Avg. RT
t-Butyl alcohol-d10	4.503	4.509	4.509	4.512	4.509	4.512	4.496	4.507
Fluorobenzene	7.959	7.962	7.959	7.962	7.956	7.959	7.959	7.960
Chlorobenzene-d5	11.361	11.361	11.361	11.361	11.358	11.358	11.358	11.360
1,4-Dichlorobenzene-d4	13.223	13.223	13.223	13.223	13.223	13.223	13.223	13.223

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 11/05/2019 at 16:07.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 11/04/19 Time: 18:42

Lab File ID: ln04v02.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3487	0.3266	18.73	20	-6	#
# Chloromethane	0.3361	0.3180	18.93	20	-5	#
1,3-Butadiene	0.2790	0.2741	19.65	20	-2	
# Vinyl Chloride	0.3354	0.3245	19.35	20	-3	#
# Bromomethane	0.2404	0.2156	17.93	20	-10	#
# Chloroethane	0.1843	0.1704	18.49	20	-8	#
Dichlorofluoromethane	0.4436	0.3598	16.22	20	-19	
n-Pentane	0.4267	0.4057	19.01	20	-5	
# Trichlorofluoromethane	0.3611	0.3746	20.75	20	4	#
Ethyl ether	0.2333	0.1939	16.62	20	-17	
Freon 123a	0.2905	0.2825	19.45	20	-3	
Acrolein	1.8756	1.6896	135.12	150	-10	
# 1,1-Dichloroethene	0.2120	0.2216	20.91	20	5	#
# Acetone	0.8409	0.7666	136.75	150	-9	#
# Freon 113	0.2418	0.2394	19.80	20	-1	#
2-Propanol	0.6045	0.5806	144.06	150	-4	
Methyl Iodide	0.4392	0.4077	18.56	20	-7	
# Carbon Disulfide	0.7987	0.7452	18.66	20	-7	#
Allyl Chloride	0.3802	0.3535	18.59	20	-7	
# Methyl Acetate	0.2730	0.2606	19.09	20	-5	#
# Methylene Chloride	0.2523	0.2570	20.38	20	2	#
t-Butyl alcohol	1.0525	1.0046	190.90	200	-5	
Acrylonitrile	0.1469	0.1395	94.98	100	-5	
# trans-1,2-Dichloroethene	0.2452	0.2452	20.00	20	0	#
# Methyl Tertiary Butyl Ether	0.8048	0.7596	18.87	20	-6	#
n-Hexane	0.3815	0.3828	20.07	20	0	
# 1,1-Dichloroethane	0.4277	0.4163	19.46	20	-3	#
di-Isopropyl ether	0.8250	0.7868	19.08	20	-5	
2-Chloro-1,3-butadiene	0.3838	0.3659	19.07	20	-5	
Ethyl t-butyl ether	0.8006	0.7634	19.07	20	-5	
# cis-1,2-Dichloroethene	0.2752	0.2889	20.99	20	5	#
# 2-Butanone	0.1885	0.1794	142.74	150	-5	#
2,2-Dichloropropane	0.3325	0.3377	20.31	20	2	
Propionitrile	1.3114	1.2333	141.06	150	-6	
Methacrylonitrile	0.1584	0.1535	145.31	150	-3	
Bromochloromethane	0.1459	0.1368	18.75	20	-6	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 11/04/19 Time: 18:42

Lab File ID: ln04v02.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Tetrahydrofuran	1.1846	1.0959	92.51	100	-7	
#	Chloroform	0.4091	0.4123	20.16	20	1	#
#	1,1,1-Trichloroethane	0.3492	0.3558	20.38	20	2	#
#	Cyclohexane	0.4669	0.4442	19.02	20	-5	#
	1,1-Dichloropropene	0.3382	0.3393	20.07	20	0	
#	Carbon Tetrachloride	0.2961	0.2964	20.02	20	0	#
	Isobutyl Alcohol	0.3542	0.3198	451.41	500	-10	
#	Benzene	1.0170	1.0168	20.00	20	0	#
#	1,2-Dichloroethane	0.3271	0.3373	20.62	20	3	#
	t-Amyl methyl ether	0.8036	0.7630	18.99	20	-5	
	n-Heptane	0.3564	0.3376	18.95	20	-5	
	n-Butanol	0.3049	0.2780	911.92	1000	-9	
#	Trichloroethene	0.2561	0.2581	20.16	20	1	#
#	Methylcyclohexane	0.4751	0.4589	19.32	20	-3	#
#	1,2-Dichloropropane	0.2582	0.2641	20.45	20	2	#
	Dibromomethane	0.1671	0.1672	20.01	20	0	
	1,4-Dioxane	0.0838	0.0844	503.75	500	1	
	Methyl Methacrylate	0.2497	0.2388	19.13	20	-4	
#	Bromodichloromethane	0.2998	0.2984	19.91	20	0	#
	2-Nitropropane	0.0908	0.0741	16.32	20	-18	
	2-Chloroethyl Vinyl Ether	0.1109	0.1056	19.04	20	-5	
#	cis-1,3-Dichloropropene	0.3982	0.3957	19.87	20	-1	#
#	4-Methyl-2-pentanone	0.3979	0.3693	92.81	100	-7	#
#	Toluene	0.8202	0.8294	20.22	20	1	#
#	trans-1,3-Dichloropropene	0.4656	0.4472	19.21	20	-4	#
	Ethyl Methacrylate	0.5659	0.5138	18.16	20	-9	
#	1,1,2-Trichloroethane	0.3110	0.3171	20.39	20	2	#
#	Tetrachloroethene	0.3474	0.3842	22.12	20	11	#
	1,3-Dichloropropane	0.5309	0.5224	19.68	20	-2	
#	2-Hexanone	0.3777	0.3481	92.15	100	-8	#
#	Dibromochloromethane	0.3185	0.3147	19.76	20	-1	#
#	1,2-Dibromoethane	0.3377	0.3356	19.88	20	-1	#
	1-Chlorohexane	0.4406	0.4292	19.48	20	-3	
#	Chlorobenzene	0.9275	0.9379	20.22	20	1	#
	1,1,1,2-Tetrachloroethane	0.3056	0.3029	19.82	20	-1	
#	Ethylbenzene	1.5677	1.5899	20.28	20	1	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 11/04/19 Time: 18:42

Lab File ID: ln04v02.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# m+p-Xylene	0.6167	0.6315	40.96	40	2	#
# o-Xylene	0.6092	0.6189	20.32	20	2	#
# Styrene	1.0066	1.0350	20.56	20	3	#
# Bromoform	0.2380	0.2137	17.95	20	-10	#
# Isopropylbenzene	1.5279	1.5939	20.86	20	4	#
Cyclohexanone	0.3282	0.2949	449.36	500	-10	
Bromobenzene	0.7515	0.7447	19.82	20	-1	
# 1,1,2,2-Tetrachloroethane	0.9445	0.9245	19.58	20	-2	#
1,2,3-Trichloropropane	0.2898	0.2890	19.94	20	0	
trans-1,4-Dichloro-2-butene	0.2913	0.2850	97.83	100	-2	
n-Propylbenzene	3.2831	3.4091	20.77	20	4	
2-Chlorotoluene	0.6975	0.7037	20.18	20	1	
4-Chlorotoluene	0.7260	0.7301	20.11	20	1	
1,3,5-Trimethylbenzene	2.3860	2.4518	20.55	20	3	
tert-Butylbenzene	0.4934	0.5090	20.63	20	3	
Pentachloroethane	0.4249	0.3657	17.21	20	-14	
1,2,4-Trimethylbenzene	2.5147	2.5110	19.97	20	0	
sec-Butylbenzene	2.9444	3.0247	20.55	20	3	
# 1,3-Dichlorobenzene	1.3809	1.3855	20.07	20	0	#
p-Isopropyltoluene	2.5473	2.6162	20.54	20	3	
# 1,4-Dichlorobenzene	1.4315	1.4660	20.48	20	2	#
1,2,3-Trimethylbenzene	2.6637	2.6470	19.87	20	-1	
Benzyl Chloride	2.0168	1.6153	16.02	20	-20	
1,3-Diethylbenzene	1.6578	1.5827	19.09	20	-5	
1,4-Diethylbenzene	1.7564	1.6691	19.01	20	-5	
# 1,2-Dichlorobenzene	1.3626	1.3874	20.36	20	2	#
n-Butylbenzene	1.3024	1.2702	19.50	20	-2	
1,2-Diethylbenzene	1.3975	1.3386	19.16	20	-4	
# 1,2-Dibromo-3-chloropropane	0.2068	0.1994	19.29	20	-4	#
1,3,5-Trichlorobenzene	1.0469	0.9964	19.04	20	-5	
# 1,2,4-Trichlorobenzene	1.0179	0.9765	19.19	20	-4	#
Hexachlorobutadiene	0.4806	0.4071	16.94	20	-15	
Naphthalene	3.2725	3.2676	19.97	20	0	
1,2,3-Trichlorobenzene	0.9905	0.9443	19.07	20	-5	
2-Methylnaphthalene	2.0152	1.8367	18.23	20	-9	

Average %Drift 5

Compounds with required minimum RRF.
Maximum % Drift = 30 %

^

Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem/HP09915.i/19nov04i.b/ln04i07.d
/chem/HP09915.i/19nov04i.b/ln04i06.d
/chem/HP09915.i/19nov04i.b/ln04i05.d
/chem/HP09915.i/19nov04i.b/ln04i04.d
/chem/HP09915.i/19nov04i.b/ln04i03.d
/chem/HP09915.i/19nov04i.b/ln04i02.d
/chem/HP09915.i/19nov04i.b/ln04i01.d

File /chem/HP09915.i/19nov04i.b/ln04i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem/HP09915.i/19nov22a.b/ln22c01.d

RT Summary

Internal Standard Name	File ID: ln22c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	4.496	4.509	Yes
Fluorobenzene	7.959	7.959	Yes
Chlorobenzene-d5	11.361	11.361	Yes
1,4-Dichlorobenzene-d4	13.220	13.223	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: ln22c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	262815	269779	134890	539558	Yes
Fluorobenzene	1333599	1160755	580378	2321510	Yes
Chlorobenzene-d5	1075782	904578	452289	1809156	Yes
1,4-Dichlorobenzene-d4	573585	483927	241964	967854	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 11/22/2019 at 09:51

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/22/19 Time: 08:38

Lab File ID: ln22c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3487	0.3600	51.62	50	3	#
# Chloromethane	0.3361	0.3503	52.11	50	4	#
1,3-Butadiene	0.2790	0.3464	62.08	50	24	<-
# Vinyl Chloride	0.3354	0.3455	51.50	50	3	#
# Bromomethane	0.2404	0.2367	49.22	50	-2	#
# Chloroethane	0.1843	0.1846	50.07	50	0	#
n-Pentane	0.4267	0.3707	43.44	50	-13	
# Trichlorofluoromethane	0.3611	0.3652	50.57	50	1	#
Ethyl ether	0.2333	0.2417	51.79	50	4	
Freon 123a	0.2905	0.2698	46.44	50	-7	
Acrolein	1.8756	1.8332	488.68	500	-2	
# 1,1-Dichloroethene	0.2120	0.1984	46.79	50	-6	#
# 1,1-Dichloroethene(2)	0.1063	0.0958	45.09	50	-10	#<-
# Acetone	0.8409	0.8245	98.06	100	-2	#
# Freon 113	0.2418	0.2244	46.40	50	-7	#
2-Propanol	0.6045	0.5828	241.04	250	-4	
Methyl Iodide	0.4392	0.4025	45.82	50	-8	
# Carbon Disulfide	0.7987	0.7536	47.17	50	-6	#
Allyl Chloride	0.3802	0.3218	42.31	50	-15	
# Methyl Acetate	0.2730	0.2381	43.61	50	-13	#
# Methylene Chloride	0.2523	0.2380	47.18	50	-6	#
t-Butyl alcohol	1.0525	0.9808	232.96	250	-7	
Acrylonitrile	0.1469	0.1324	45.07	50	-10	
# trans-1,2-Dichloroethene	0.2452	0.2266	46.20	50	-8	#
# Methyl Tertiary Butyl Ether	0.8048	0.6960	43.24	50	-14	#
n-Hexane	0.3815	0.3683	48.28	50	-3	
# 1,1-Dichloroethane	0.4277	0.3952	46.20	50	-8	#
di-Isopropyl ether	0.8250	0.7567	45.87	50	-8	
2-Chloro-1,3-butadiene	0.3838	0.3491	45.49	50	-9	
Ethyl t-butyl ether	0.8006	0.7152	44.66	50	-11	
# cis-1,2-Dichloroethene	0.2752	0.2526	45.90	50	-8	#
# 2-Butanone	0.1885	0.1610	85.41	100	-15	#
2,2-Dichloropropane	0.3325	0.2920	43.90	50	-12	
Propionitrile	1.3114	1.4043	267.69	250	7	
Methacrylonitrile	0.1584	0.1511	119.19	125	-5	
Bromochloromethane	0.1459	0.1315	45.06	50	-10	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/22/19 Time: 08:38

Lab File ID: ln22c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
	COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
	Tetrahydrofuran	1.1846	1.1869	100.19	100	0	
#	Chloroform	0.4091	0.3760	45.95	50	-8	#
#	1,1,1-Trichloroethane	0.3492	0.3102	44.41	50	-11	#
#	Cyclohexane	0.4669	0.4389	47.00	50	-6	#
#	Cyclohexane(2)	0.4056	0.3847	47.43	50	-5	#
#	Cyclohexane(3)	0.1444	0.1362	47.17	50	-6	#
	1,1-Dichloropropene	0.3382	0.3081	45.55	50	-9	
#	Carbon Tetrachloride	0.2961	0.2604	43.96	50	-12	#
	Isobutyl Alcohol	0.3542	0.3399	599.76	625	-4	
#	Benzene	1.0170	0.9578	47.09	50	-6	#
#	1,2-Dichloroethane	0.3271	0.2944	44.99	50	-10	#
#	1,2-Dichloroethane(2)	0.0324	0.0307	47.38	50	-5	#<-
	t-Amyl methyl ether	0.8036	0.7270	45.24	50	-10	
	n-Heptane	0.3564	0.3424	48.04	50	-4	
	n-Butanol	0.3049	0.3008	1233.22	1250	-1	
#	Trichloroethene	0.2561	0.2368	46.25	50	-8	#
#	Methylcyclohexane	0.4751	0.4337	45.64	50	-9	#
#	Methylcyclohexane(2)	0.2150	0.1931	44.92	50	-10	#
#	1,2-Dichloropropane	0.2582	0.2445	47.34	50	-5	#
	Dibromomethane	0.1671	0.1578	47.22	50	-6	
	1,4-Dioxane	0.0838	0.1083	807.63	625	29	<-
	Methyl Methacrylate	0.2497	0.2445	48.95	50	-2	
#	Bromodichloromethane	0.2998	0.2770	46.19	50	-8	#
	2-Nitropropane	0.0908	0.0776	85.42	100	-15	
	2-Chloroethyl Vinyl Ether	0.1109	0.1759	79.27	50	59	<-
#	cis-1,3-Dichloropropene	0.3982	0.3785	47.52	50	-5	#
#	4-Methyl-2-pentanone	0.3979	0.3521	88.47	100	-12	#
#	Toluene	0.8202	0.7611	46.40	50	-7	#
#	trans-1,3-Dichloropropene	0.4656	0.4297	46.14	50	-8	#
	Ethyl Methacrylate	0.5659	0.5416	47.86	50	-4	
#	1,1,2-Trichloroethane	0.3110	0.2918	46.92	50	-6	#
#	Tetrachloroethene	0.3474	0.3041	43.78	50	-12	#
	1,3-Dichloropropane	0.5309	0.4992	47.01	50	-6	
#	2-Hexanone	0.3777	0.3192	84.50	100	-15	#
#	Dibromochloromethane	0.3185	0.2839	44.56	50	-11	#
#	1,2-Dibromoethane	0.3377	0.3188	47.21	50	-6	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/22/19 Time: 08:38

Lab File ID: ln22c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
1-Chlorohexane	0.4406	0.3926	44.55	50	-11	
# Chlorobenzene	0.9275	0.8507	45.86	50	-8	#
1,1,1,2-Tetrachloroethane	0.3056	0.2761	45.18	50	-10	
# Ethylbenzene	1.5677	1.4458	46.11	50	-8	#
# m+p-Xylene	0.6167	0.5729	92.90	100	-7	#
# o-Xylene	0.6092	0.5574	45.75	50	-8	#
# Styrene	1.0066	0.9560	47.48	50	-5	#
# Bromoform	0.2380	0.1889	39.69	50	-21	#<-
# Isopropylbenzene	1.5279	1.4091	46.11	50	-8	#
Cyclohexanone	0.3282	0.3075	585.66	625	-6	
Bromobenzene	0.7515	0.6763	45.00	50	-10	
# 1,1,2,2-Tetrachloroethane	0.9445	0.8947	47.37	50	-5	#
1,2,3-Trichloropropane	0.2898	0.2618	45.16	50	-10	
trans-1,4-Dichloro-2-butene	0.2913	0.1736	74.48	125	-40	<-
n-Propylbenzene	3.2831	3.0898	47.06	50	-6	
2-Chlorotoluene	0.6975	0.6351	45.53	50	-9	
4-Chlorotoluene	0.7260	0.6598	45.44	50	-9	
1,3,5-Trimethylbenzene	2.3860	2.2563	47.28	50	-5	
tert-Butylbenzene	0.4934	0.4486	45.45	50	-9	
Pentachloroethane	0.4249	0.3799	44.71	50	-11	
1,2,4-Trimethylbenzene	2.5147	2.3768	47.26	50	-5	
sec-Butylbenzene	2.9444	2.7412	46.55	50	-7	
# 1,3-Dichlorobenzene	1.3809	1.2481	45.19	50	-10	#
p-Isopropyltoluene	2.5473	2.3435	46.00	50	-8	
# 1,4-Dichlorobenzene	1.4315	1.2811	44.74	50	-11	#
1,2,3-Trimethylbenzene	2.6637	2.4210	45.44	50	-9	
Benzyl Chloride	2.0168	1.8351	45.49	50	-9	
1,3-Diethylbenzene	1.6578	1.4385	43.39	50	-13	
1,4-Diethylbenzene	1.7564	1.4939	42.53	50	-15	
# 1,2-Dichlorobenzene	1.3626	1.2278	45.05	50	-10	#
n-Butylbenzene	1.3024	1.1607	44.56	50	-11	
1,2-Diethylbenzene	1.3975	1.2168	43.53	50	-13	
# 1,2-Dibromo-3-chloropropane	0.2068	0.1803	43.61	50	-13	#
1,3,5-Trichlorobenzene	1.0469	0.8517	40.68	50	-19	
# 1,2,4-Trichlorobenzene	1.0179	0.8167	40.12	50	-20	#
Hexachlorobutadiene	0.4806	0.3271	34.03	50	-32	<-

Compounds with required minimum RRF.

All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/22/19 Time: 08:38

Lab File ID: ln22c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Naphthalene	3.2725	2.9668	45.33	50	-9
1,2,3-Trichlorobenzene	0.9905	0.7967	40.22	50	-20
2-Methylnaphthalene	2.0152	1.6360	40.59	50	-19
Dibromofluoromethane	0.2445	0.2361	48.29	50	-3
Dibromofluoromethane(2)	0.2492	0.2415	48.45	50	-3
1,2-Dichloroethane-d4	0.0623	0.0625	50.15	50	0
1,2-Dichloroethane-d4(2)	0.2776	0.2704	48.70	50	-3
1,2-Dichloroethane-d4(3)	0.0398	0.0398	49.97	50	0
Toluene-d8	1.3083	1.3013	49.73	50	-1
Toluene-d8(2)	0.8475	0.8419	49.67	50	-1
4-Bromofluorobenzene	0.4954	0.4998	50.44	50	1
4-Bromofluorobenzene(2)	0.4107	0.4025	49.00	50	-2

Average %Drift 9

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem/HP09915.i/19nov04i.b/ln04i07.d
/chem/HP09915.i/19nov04i.b/ln04i06.d
/chem/HP09915.i/19nov04i.b/ln04i05.d
/chem/HP09915.i/19nov04i.b/ln04i04.d
/chem/HP09915.i/19nov04i.b/ln04i03.d
/chem/HP09915.i/19nov04i.b/ln04i02.d
/chem/HP09915.i/19nov04i.b/ln04i01.d

File /chem/HP09915.i/19nov04i.b/ln04i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem/HP09915.i/19nov23a.b/ln23c01.d

RT Summary

Internal Standard Name	File ID: ln23c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	4.490	4.509	Yes
Fluorobenzene	7.956	7.959	Yes
Chlorobenzene-d5	11.358	11.361	Yes
1,4-Dichlorobenzene-d4	13.223	13.223	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: ln23c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	218843	269779	134890	539558	Yes
Fluorobenzene	1129387	1160755	580378	2321510	Yes
Chlorobenzene-d5	942140	904578	452289	1809156	Yes
1,4-Dichlorobenzene-d4	522095	483927	241964	967854	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments:_____

report generated on 11/23/2019 at 09:09

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/23/19 Time: 08:42

Lab File ID: ln23c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3487	0.3778	54.17	50	8	#
# Chloromethane	0.3361	0.3506	52.17	50	4	#
1,3-Butadiene	0.2790	0.2300	41.22	50	-18	
# Vinyl Chloride	0.3354	0.3453	51.48	50	3	#
# Bromomethane	0.2404	0.2446	50.87	50	2	#
# Chloroethane	0.1843	0.1857	50.37	50	1	#
Dichlorofluoromethane	0.4436	0.3536	39.86	50	-20	
n-Pentane	0.4267	0.3191	37.39	50	-25	<-
# Trichlorofluoromethane	0.3611	0.3972	55.00	50	10	#
Ethyl ether	0.2333	0.2418	51.81	50	4	
Freon 123a	0.2905	0.2668	45.93	50	-8	
Acrolein	1.8756	1.9223	512.44	500	2	
# 1,1-Dichloroethene	0.2120	0.1905	44.95	50	-10	#
# 1,1-Dichloroethene(2)	0.1063	0.0934	43.93	50	-12	#<-
# Acetone	0.8409	0.8803	104.68	100	5	#
# Freon 113	0.2418	0.2213	45.76	50	-8	#
2-Propanol	0.6045	0.6042	249.89	250	0	
Methyl Iodide	0.4392	0.4024	45.81	50	-8	
# Carbon Disulfide	0.7987	0.7079	44.31	50	-11	#
Allyl Chloride	0.3802	0.3373	44.35	50	-11	
# Methyl Acetate	0.2730	0.2512	46.02	50	-8	#
# Methylene Chloride	0.2523	0.2374	47.06	50	-6	#
t-Butyl alcohol	1.0525	1.0187	241.97	250	-3	
Acrylonitrile	0.1469	0.1350	45.97	50	-8	
# trans-1,2-Dichloroethene	0.2452	0.2271	46.31	50	-7	#
# Methyl Tertiary Butyl Ether	0.8048	0.6763	42.01	50	-16	#
n-Hexane	0.3815	0.3360	44.04	50	-12	
# 1,1-Dichloroethane	0.4277	0.3941	46.07	50	-8	#
di-Isopropyl ether	0.8250	0.7439	45.09	50	-10	
2-Chloro-1,3-butadiene	0.3838	0.3496	45.55	50	-9	
Ethyl t-butyl ether	0.8006	0.6948	43.39	50	-13	
# cis-1,2-Dichloroethene	0.2752	0.2594	47.13	50	-6	#
# 2-Butanone	0.1885	0.1658	87.94	100	-12	#
2,2-Dichloropropane	0.3325	0.3037	45.67	50	-9	
Propionitrile	1.3114	1.4890	283.85	250	14	
Methacrylonitrile	0.1584	0.1543	121.74	125	-3	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/23/19 Time: 08:42

Lab File ID: ln23c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
Bromochloromethane	0.1459	0.1473	50.47	50	1	
Tetrahydrofuran	1.1846	1.2548	105.93	100	6	
# Chloroform	0.4091	0.3942	48.18	50	-4	#
# 1,1,1-Trichloroethane	0.3492	0.3265	46.75	50	-6	#
# Cyclohexane	0.4669	0.4171	44.66	50	-11	#
# Cyclohexane(2)	0.4056	0.3697	45.58	50	-9	#
# Cyclohexane(3)	0.1444	0.1302	45.08	50	-10	#
1,1-Dichloropropene	0.3382	0.3142	46.45	50	-7	
# Carbon Tetrachloride	0.2961	0.2755	46.51	50	-7	#
Isobutyl Alcohol	0.3542	0.3650	644.14	625	3	
# Benzene	1.0170	0.9669	47.54	50	-5	#
# 1,2-Dichloroethane	0.3271	0.3138	47.96	50	-4	#
# 1,2-Dichloroethane(2)	0.0324	0.0313	48.30	50	-3	#<-
t-Amyl methyl ether	0.8036	0.7341	45.67	50	-9	
n-Heptane	0.3564	0.3253	45.64	50	-9	
n-Butanol	0.3049	0.3114	1276.85	1250	2	
# Trichloroethene	0.2561	0.2464	48.11	50	-4	#
# Methylcyclohexane	0.4751	0.4473	47.08	50	-6	#
# Methylcyclohexane(2)	0.2150	0.2030	47.22	50	-6	#
# 1,2-Dichloropropane	0.2582	0.2480	48.02	50	-4	#
Dibromomethane	0.1671	0.1655	49.53	50	-1	
1,4-Dioxane	0.0838	0.1190	887.57	625	42	<-
Methyl Methacrylate	0.2497	0.2483	49.71	50	-1	
# Bromodichloromethane	0.2998	0.2938	49.00	50	-2	#
2-Nitropropane	0.0908	0.0867	95.41	100	-5	
2-Chloroethyl Vinyl Ether	0.1109	0.1889	85.14	50	70	<-
# cis-1,3-Dichloropropene	0.3982	0.3984	50.02	50	0	#
# 4-Methyl-2-pentanone	0.3979	0.3634	91.32	100	-9	#
# Toluene	0.8202	0.7613	46.41	50	-7	#
# trans-1,3-Dichloropropene	0.4656	0.4483	48.14	50	-4	#
Ethyl Methacrylate	0.5659	0.5325	47.05	50	-6	
# 1,1,2-Trichloroethane	0.3110	0.2969	47.73	50	-5	#
# Tetrachloroethene	0.3474	0.3174	45.69	50	-9	#
1,3-Dichloropropane	0.5309	0.5012	47.20	50	-6	
# 2-Hexanone	0.3777	0.3228	85.46	100	-15	#
# Dibromochloromethane	0.3185	0.3047	47.83	50	-4	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/23/19 Time: 08:42

Lab File ID: ln23c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	1,2-Dibromoethane	0.3377	0.3247	48.08	50	-4	#
	1-Chlorohexane	0.4406	0.3794	43.06	50	-14	
#	Chlorobenzene	0.9275	0.8742	47.13	50	-6	#
	1,1,1,2-Tetrachloroethane	0.3056	0.2876	47.05	50	-6	
#	Ethylbenzene	1.5677	1.4737	47.00	50	-6	#
#	m+p-Xylene	0.6167	0.5842	94.73	100	-5	#
#	o-Xylene	0.6092	0.5730	47.03	50	-6	#
#	Styrene	1.0066	0.9778	48.57	50	-3	#
#	Bromoform	0.2380	0.2141	44.97	50	-10	#
#	Isopropylbenzene	1.5279	1.4423	47.20	50	-6	#
	Cyclohexanone	0.3282	0.3572	680.22	625	9	
	Bromobenzene	0.7515	0.6776	45.09	50	-10	
#	1,1,2,2-Tetrachloroethane	0.9445	0.8679	45.94	50	-8	#
	1,2,3-Trichloropropane	0.2898	0.2659	45.87	50	-8	
	trans-1,4-Dichloro-2-butene	0.2913	0.2546	109.22	125	-13	
	n-Propylbenzene	3.2831	3.0494	46.44	50	-7	
	2-Chlorotoluene	0.6975	0.6346	45.49	50	-9	
	4-Chlorotoluene	0.7260	0.6617	45.57	50	-9	
	1,3,5-Trimethylbenzene	2.3860	2.2484	47.12	50	-6	
	tert-Butylbenzene	0.4934	0.4419	44.78	50	-10	
	Pentachloroethane	0.4249	0.4084	48.06	50	-4	
	1,2,4-Trimethylbenzene	2.5147	2.3639	47.00	50	-6	
	sec-Butylbenzene	2.9444	2.6990	45.83	50	-8	
#	1,3-Dichlorobenzene	1.3809	1.2568	45.51	50	-9	#
	p-Isopropyltoluene	2.5473	2.3341	45.81	50	-8	
#	1,4-Dichlorobenzene	1.4315	1.2946	45.22	50	-10	#
	1,2,3-Trimethylbenzene	2.6637	2.5809	48.44	50	-3	
	Benzyl Chloride	2.0168	1.8579	46.06	50	-8	
	1,3-Diethylbenzene	1.6578	1.5316	46.19	50	-8	
	1,4-Diethylbenzene	1.7564	1.5980	45.49	50	-9	
#	1,2-Dichlorobenzene	1.3626	1.2475	45.78	50	-8	#
	n-Butylbenzene	1.3024	1.1477	44.06	50	-12	
	1,2-Diethylbenzene	1.3975	1.3117	46.93	50	-6	
#	1,2-Dibromo-3-chloropropane	0.2068	0.1902	45.99	50	-8	#
	1,3,5-Trichlorobenzene	1.0469	0.8659	41.36	50	-17	
#	1,2,4-Trichlorobenzene	1.0179	0.8248	40.51	50	-19	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/23/19 Time: 08:42

Lab File ID: ln23c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
Hexachlorobutadiene	0.4806	0.3367	35.02	50	-30	<-
Naphthalene	3.2725	3.0219	46.17	50	-8	
1,2,3-Trichlorobenzene	0.9905	0.8126	41.02	50	-18	
2-Methylnaphthalene	2.0152	1.7393	43.16	50	-14	
Dibromofluoromethane	0.2445	0.2440	49.90	50	0	
Dibromofluoromethane(2)	0.2492	0.2471	49.58	50	-1	
1,2-Dichloroethane-d4	0.0623	0.0629	50.46	50	1	
1,2-Dichloroethane-d4(2)	0.2776	0.2843	51.20	50	2	
1,2-Dichloroethane-d4(3)	0.0398	0.0405	50.92	50	2	
Toluene-d8	1.3083	1.2807	48.94	50	-2	
Toluene-d8(2)	0.8475	0.8200	48.38	50	-3	
4-Bromofluorobenzene	0.4954	0.5051	50.98	50	2	
4-Bromofluorobenzene(2)	0.4107	0.4142	50.43	50	1	

Average %Drift 8

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ln22c01.d Date Analyzed: 11/22/19

Instrument ID: HP09915 Time Analyzed: 08:38

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	262815	4.496	1333599	7.959	1075782	11.361	573585	13.220
UPPER LIMIT	525630	4.996	2667198	8.459	2151564	11.861	1147170	13.720
LOWER LIMIT	131408	3.996	666800	7.459	537891	10.861	286792	12.720
LAB SAMPLE ID								
01 LCDL85	281432	4.496	1358142	7.956	1094093	11.358	582660	13.223
02 LCDL86	281432	4.496	1358142	7.956	1094093	11.358	582660	13.223
03 LCSL85	276041	4.499	1351151	7.956	1085726	11.358	574419	13.222
04 LCSL86	276041	4.499	1351151	7.956	1085726	11.358	574419	13.222
05 VBLKL85	256566	4.503	1310742	7.959	1059508	11.361	558840	13.219
06 VBLKL86	256566	4.503	1310742	7.959	1059508	11.361	558840	13.219
07 1202250	256006	4.503	1332832	7.959	1070085	11.361	573880	13.223
08 1202251	258157	4.506	1308965	7.959	1050899	11.358	556538	13.219
09 1202252	249298	4.493	1275839	7.959	1036825	11.358	548600	13.220
10 1202253	247395	4.487	1265289	7.956	1023473	11.358	548114	13.223
11 1205927	239601	4.493	1278548	7.959	1037547	11.361	555387	13.223
12 1205893	223451	4.503	1222267	7.959	995575	11.361	536618	13.223
13 1205894MS	245468	4.509	1259980	7.962	1026081	11.358	552658	13.223
14 1205895MSD	266719	4.506	1340904	7.959	1091224	11.358	586501	13.219
15 1205892	239630	4.493	1265572	7.959	1030528	11.358	544015	13.223
16 1205896	235546	4.509	1249813	7.959	1016147	11.361	538193	13.219
17 1205897	234861	4.490	1238869	7.959	998318	11.358	527441	13.223
18 1205898	226944	4.512	1214920	7.959	991383	11.358	530268	13.223
19 1205899	217495	4.493	1185061	7.956	962498	11.358	511399	13.223
20 1205919	221072	4.496	1184916	7.953	966692	11.358	521743	13.223
21 1205920	213399	4.499	1168199	7.956	952579	11.358	511464	13.219
22 1205921	212522	4.499	1177689	7.959	971431	11.358	518839	13.219

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ln22c01.d Date Analyzed: 11/22/19

Instrument ID: HP09915 Time Analyzed: 08:38

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA) AREA #	RT #	IS2(FBZ) AREA #	RT #	IS3(CBZ) AREA #	RT #	IS4(DCB) AREA #	RT #
12 HOUR STD	262815	4.496	1333599	7.959	1075782	11.361	573585	13.220
UPPER LIMIT	525630	4.996	2667198	8.459	2151564	11.861	1147170	13.720
LOWER LIMIT	131408	3.996	666800	7.459	537891	10.861	286792	12.720
LAB SAMPLE ID								
23 1205922	213211	4.509	1167766	7.959	964104	11.358	519696	13.222
24 1205923	211192	4.490	1151218	7.956	938235	11.358	504861	13.222
25 1205924	212897	4.493	1152100	7.956	949027	11.358	511495	13.219
26 1205925	201724	4.509	1126493	7.962	926858	11.358	495701	13.222
27 1205926	204897	4.487	1116734	7.956	917879	11.358	496362	13.223

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

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8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ln23c01.d Date Analyzed: 11/23/19

Instrument ID: HP09915 Time Analyzed: 08:42

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	218843	4.490	1129387	7.956	942140	11.358	522095	13.223
UPPER LIMIT	437686	4.990	2258774	8.456	1884280	11.858	1044190	13.723
LOWER LIMIT	109422	3.990	564694	7.456	471070	10.858	261048	12.723
LAB SAMPLE ID								
01 LCSL87	219124	4.493	1149568	7.956	954034	11.358	518331	13.219
02 VBLKL87	224793	4.493	1154568	7.953	947038	11.358	506608	13.220
03 1205905	243725	4.496	1211224	7.956	996466	11.358	533216	13.223
04 1205900	220082	4.503	1136731	7.959	925300	11.361	497134	13.223
05 1205901MS	215519	4.493	1138753	7.956	930333	11.358	508418	13.220
06 1205902MSD	233889	4.493	1180531	7.956	965531	11.358	526780	13.219
07 1205903	229063	4.500	1158906	7.956	945973	11.361	499869	13.223
08 1205904	224307	4.499	1139589	7.959	935660	11.361	499734	13.219
09 1205910	220711	4.503	1143515	7.956	932224	11.358	501787	13.223
10 1205911	215340	4.490	1115518	7.953	916138	11.361	490394	13.222
11 1205912	211986	4.512	1107133	7.962	918426	11.361	498430	13.222
12 1205913	203330	4.503	1115082	7.959	907956	11.358	482597	13.223
13 1205914	203647	4.503	1085952	7.959	899726	11.358	482459	13.223
14 1205915	210558	4.493	1104338	7.956	909387	11.358	493457	13.223
15 1205916	205783	4.493	1080825	7.956	894854	11.358	483096	13.219
16 1205917	200795	4.493	1098052	7.956	912322	11.358	495866	13.220
17 1205918	195105	4.493	1064106	7.956	883986	11.358	478718	13.223
18 1205928	196703	4.496	1065783	7.962	880752	11.361	479141	13.223
19 1205929	194903	4.493	1055579	7.959	877530	11.358	479286	13.222
20 1206738	196772	4.509	1059926	7.962	880492	11.361	482281	13.223
21 1206739	194579	4.506	1027064	7.962	860023	11.361	466803	13.222
22 1206740	209748	4.506	1073027	7.959	886519	11.361	491209	13.223

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

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Sample Data

Volatiles by GC/MS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JCW01

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205892

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s37.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.3	J
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	0.7	J
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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JCW01 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1205892

Data file: /chem/HP09915.i/19nov22a.b/ln22s37.d Injection date and time: **22-NOV-2019 13:26**
Data file Sample Info. Line: JCW01;1205892;1;0;;JCW22;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 13:43 Automation

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493	(0.003)	936	65	239630	(-9)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	1265572	(-5)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	1030528	(-4)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(-0.003)	3651	152	544015	(-5)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(-0.001)	113	292930	47.343	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.529	(0.000)	102	79966	50.711	101%		80 - 120
83) Toluene-d8	(3)	9.934	(0.000)	98	1318595	48.901	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	503185	49.282	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.551	(-0.000)	63	2972	0.275	0.27		J	0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	7.078	(0.000)	97	6189	0.700	0.70		J	0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:02. Target 3.5 esignature user ID: clm27445

Data file: /chem/HP09915.i/19nov22a.b/ln22s37.d Injection date and time: **22-NOV-2019 13:26**
Data file Sample Info. Line: JCW01;1205892;1;0;;JCW22;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 13:43 Automation

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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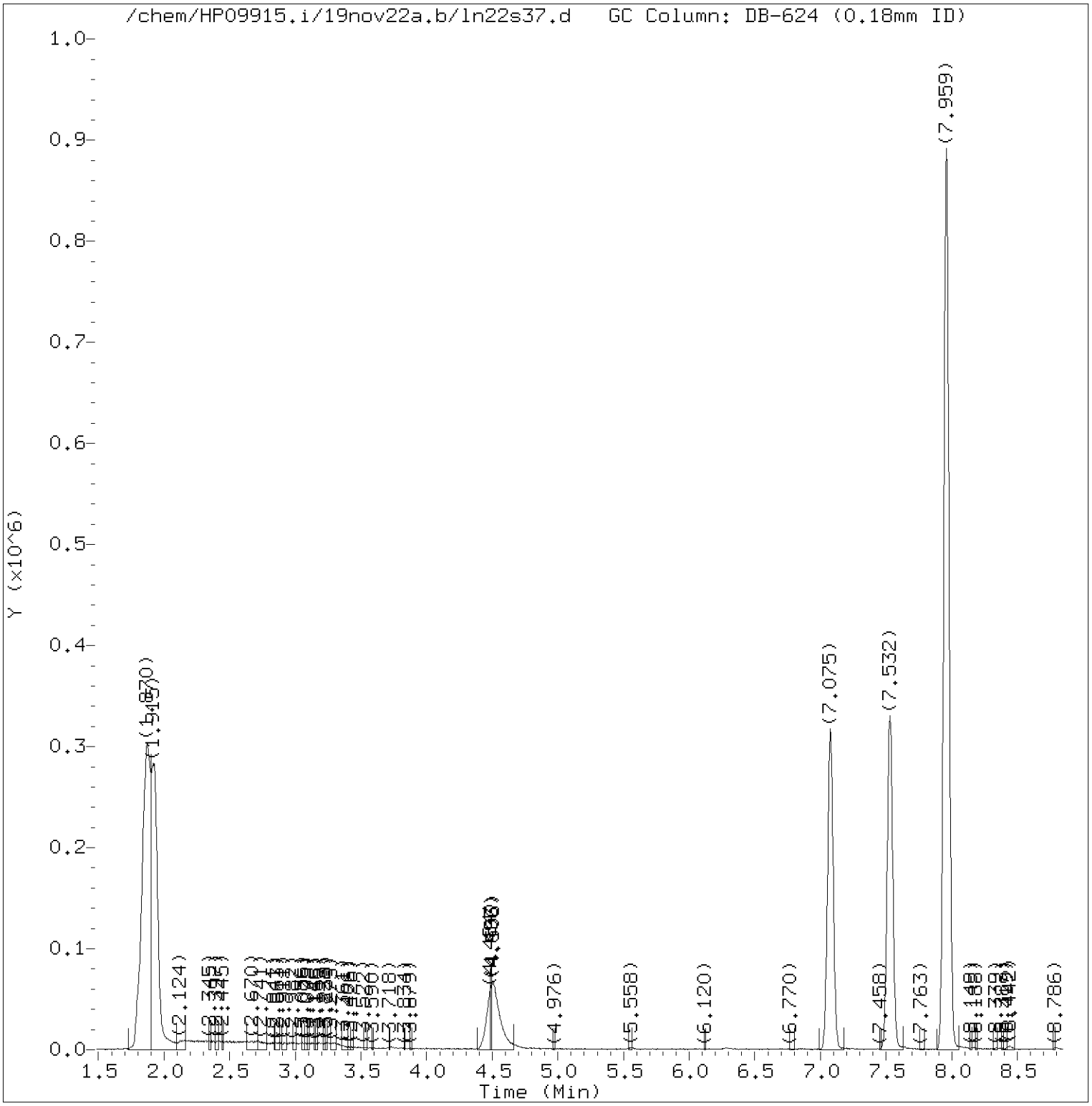
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:02. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:02. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

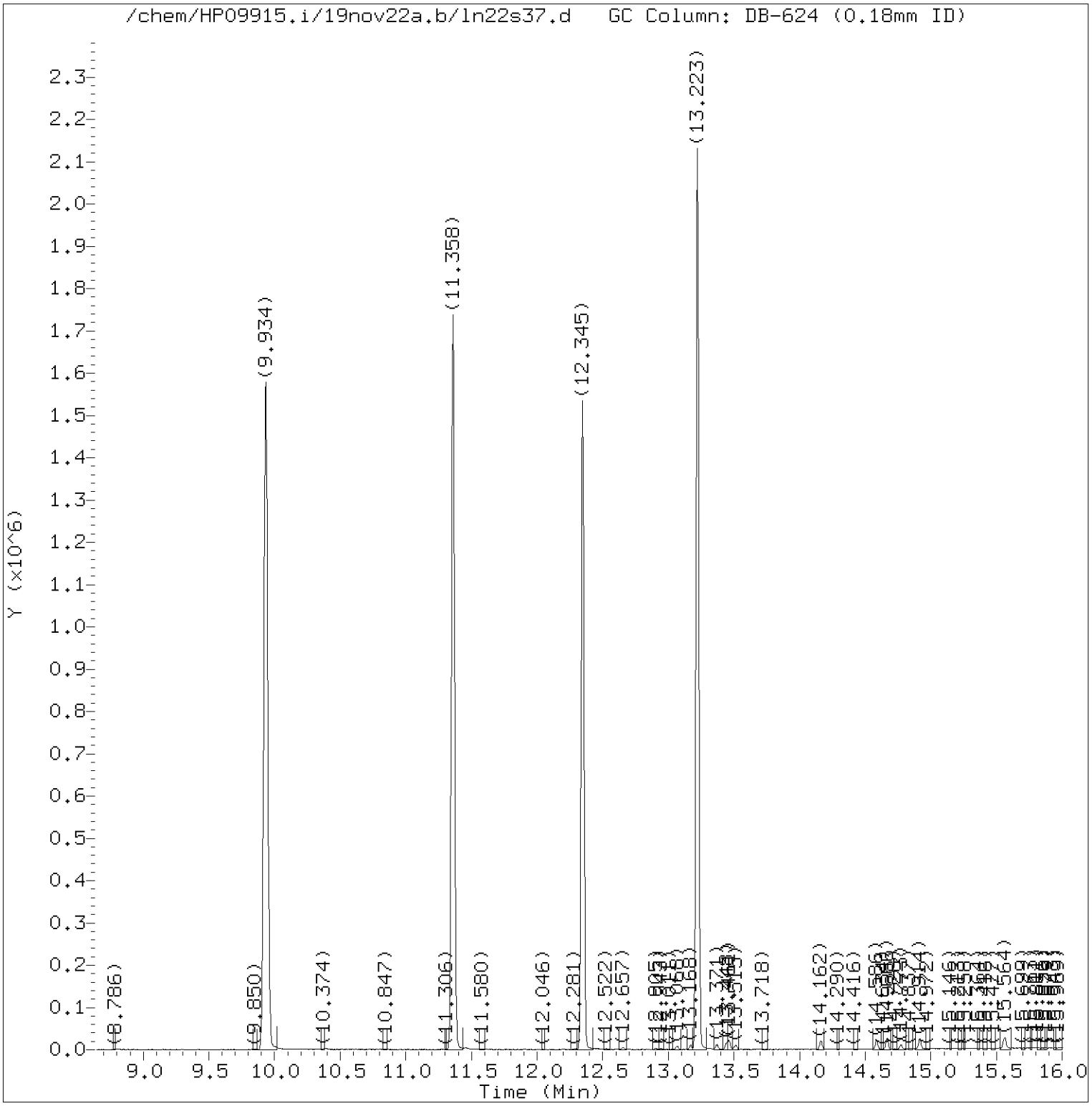
Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s37.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 13:26 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 13:43 Automation

Sample Name: JCW01 Lab Sample ID: 1205892

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:02.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s37.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 13:26 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 13:43 Automation

Sample Name: JCW01 Lab Sample ID: 1205892

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:02.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s37.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 13:26 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 13:43 Automation

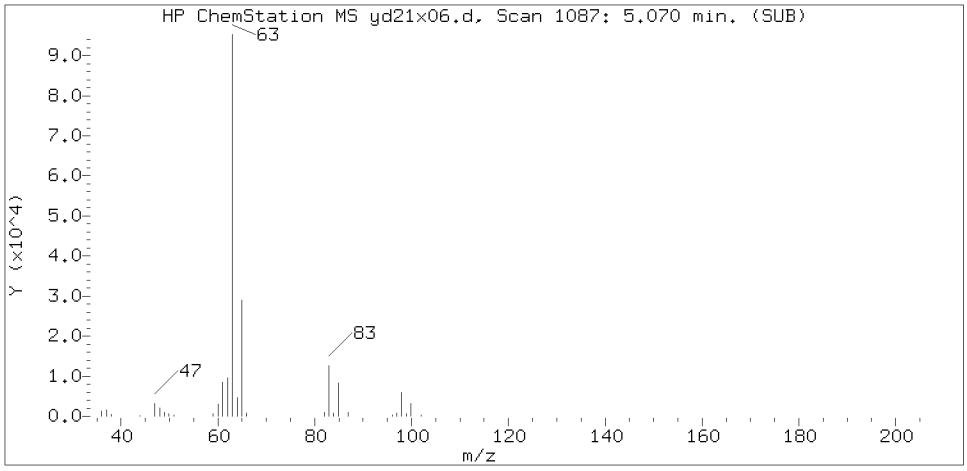
Sample Name: JCW01 Lab Sample ID: 1205892

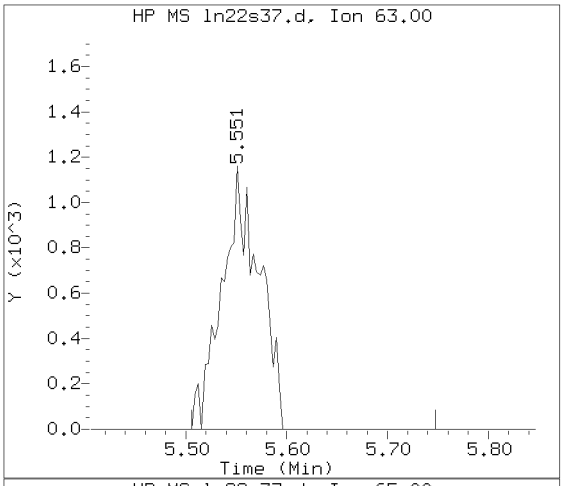
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.493	65	239630	250.000
36) 1,1-Dichloroethane	(2)	5.551	63	2972	0.275
52)$Dibromofluoromethane	(2)	7.075	113	292930	47.343
53) 1,1,1-Trichloroethane	(2)	7.078	97	6189	0.700
57)$1,2-Dichloroethane-d4	(2)	7.529	102	79966	50.711
66)*Fluorobenzene	(2)	7.959	96	1265572	50.000
83)$Toluene-d8	(3)	9.934	98	1318595	48.901
100)*Chlorobenzene-d5	(3)	11.358	117	1030528	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	503185	49.282
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	544015	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

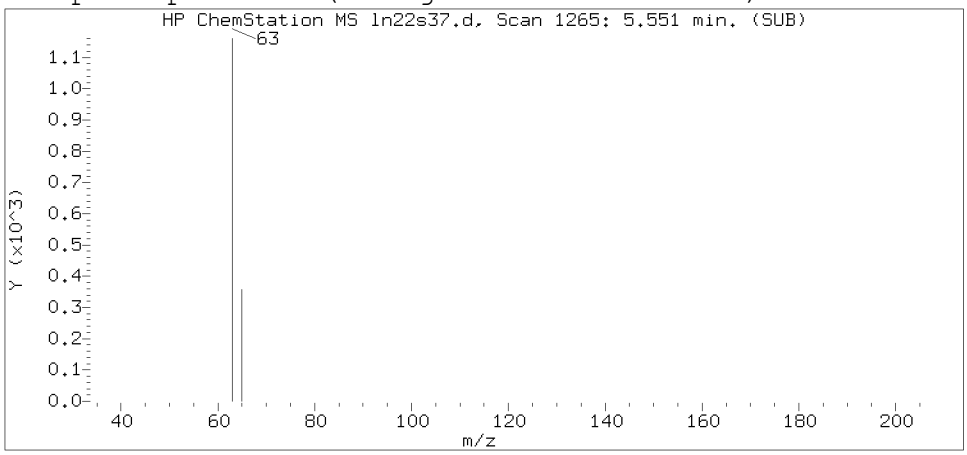
Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:02.
Target 3.5 esignature user ID: clm27445

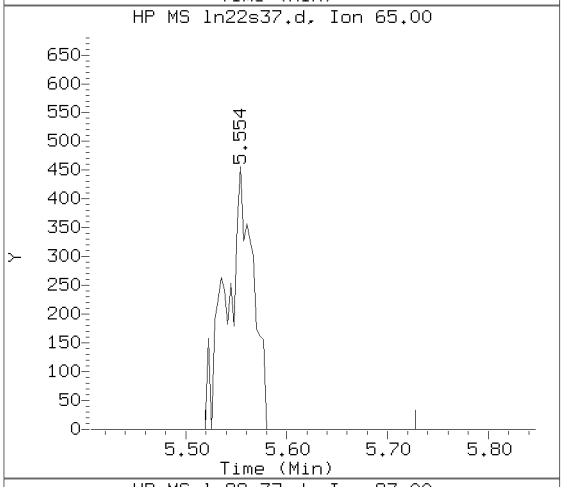
Reference Standard Spectrum for 1,1-Dichloroethane



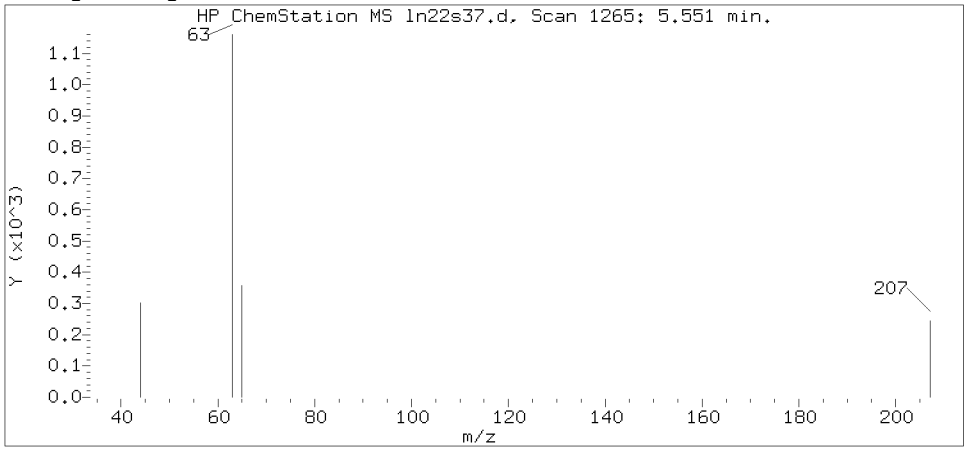


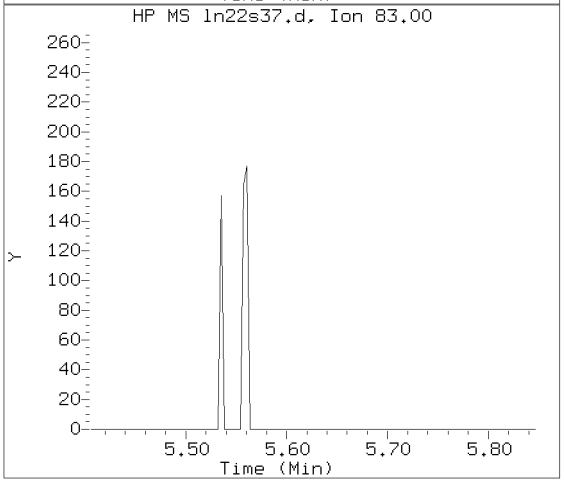
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov22a.b/ln22s37.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 13:26 Analyst ID: lcp00895

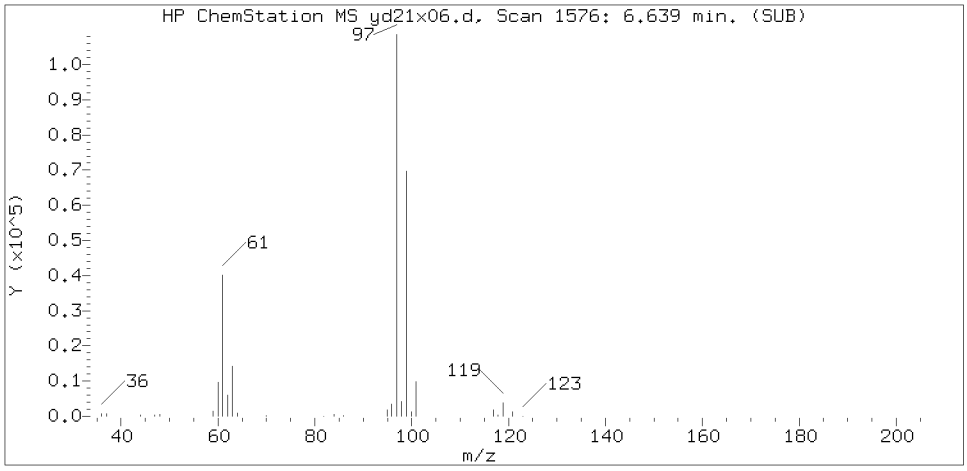
Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 13:43 Automation

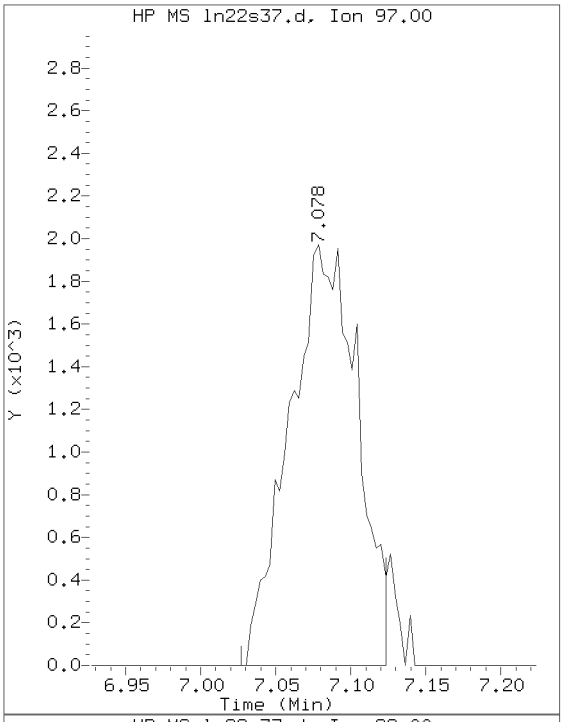
Sample Name: JCW01 Lab Sample ID: 1205892

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 1265
Retention Time (minutes): 5.551
Relative Retention Time :-0.00000
Quant Ion : 63.00
Area (flag) : 2972
On-Column Amount (ng) : 0.2745

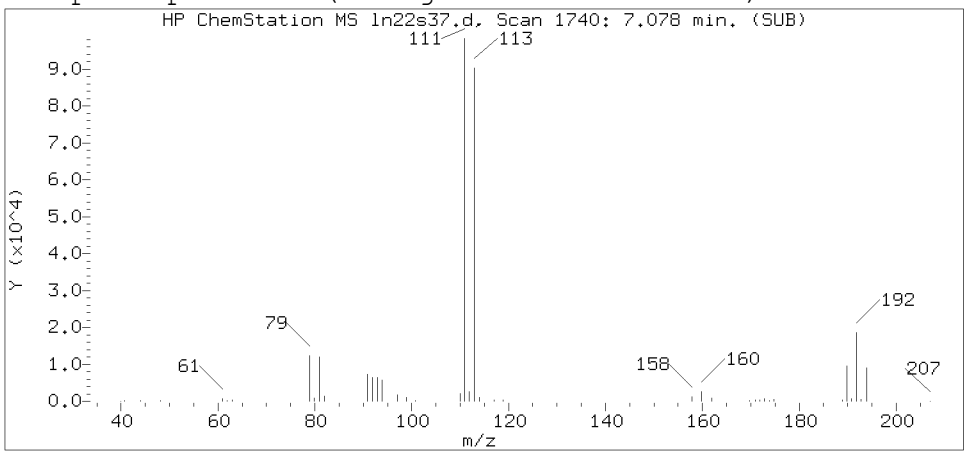
Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:02.
Target 3.5 esignature user ID: clm27445

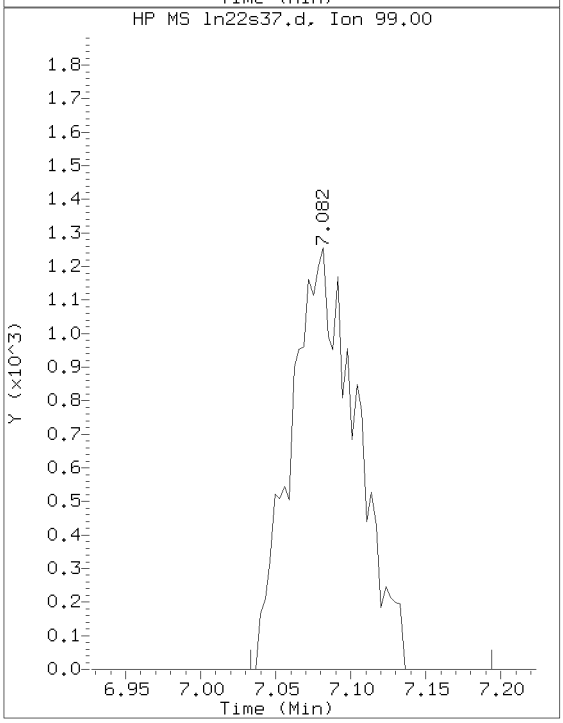
Reference Standard Spectrum for 1,1,1-Trichloroethane



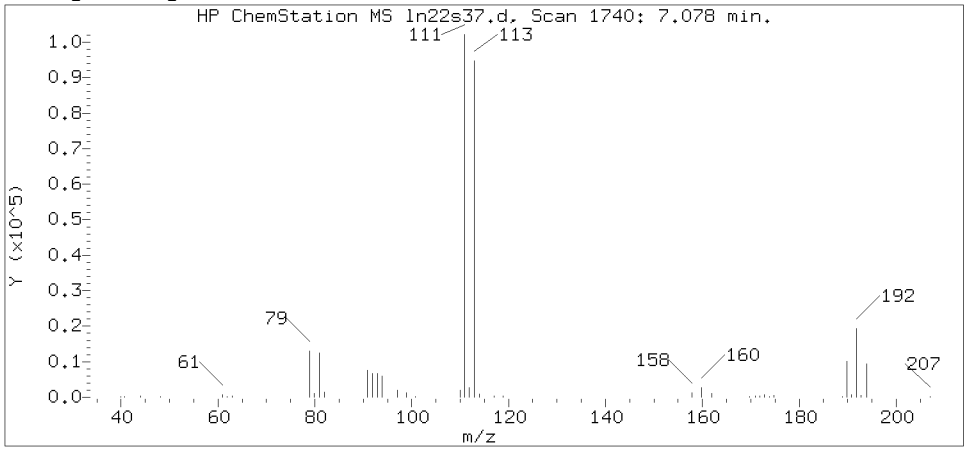


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov22a.b/ln22s37.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 13:26 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 13:43 Automation

Sample Name: JCW01 Lab Sample ID: 1205892

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1740
Retention Time (minutes)	: 7.078
Relative Retention Time	: 0.00040
Quant Ion	: 97.00
Area (flag)	: 6189
On-Column Amount (ng)	: 0.7004

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:02.
Target 3.5 esignature user ID: clm27445

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JCW02

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205893

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s34.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	0.2	J
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.8	J
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	4	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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JCW02 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1205893

Data file: /chem/HP09915.i/19nov22a.b/ln22s34.d Injection date and time: **22-NOV-2019 12:19**
Data file Sample Info. Line: JCW02;1205893;1;0;;JCW22;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 11:00 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.503	(-0.006)	939	65	223451	(-15)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	1222267	(-8)	50.00	
100) Chlorobenzene-d5	11.361	(0.000)	3072	117	995575	(-7)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(-0.003)	3651	152	536618	(-6)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(-0.001)	113	287492	48.111	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.532	(-0.001)	102	77675	51.003	102%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	1269708	48.741	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	487775	49.450	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	3.754	(0.000)	96	1135	0.219	0.22		J	0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.557	(-0.000)	63	8707	0.833	0.83		J	0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	7.081	(0.000)	97	33185	3.888	3.89			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:00. Target 3.5 esignature user ID: clm27445

Data file: /chem/HP09915.i/19nov22a.b/ln22s34.d Injection date and time: **22-NOV-2019 12:19**
Data file Sample Info. Line: JCW02;1205893;1;0;;JCW22;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 11:00 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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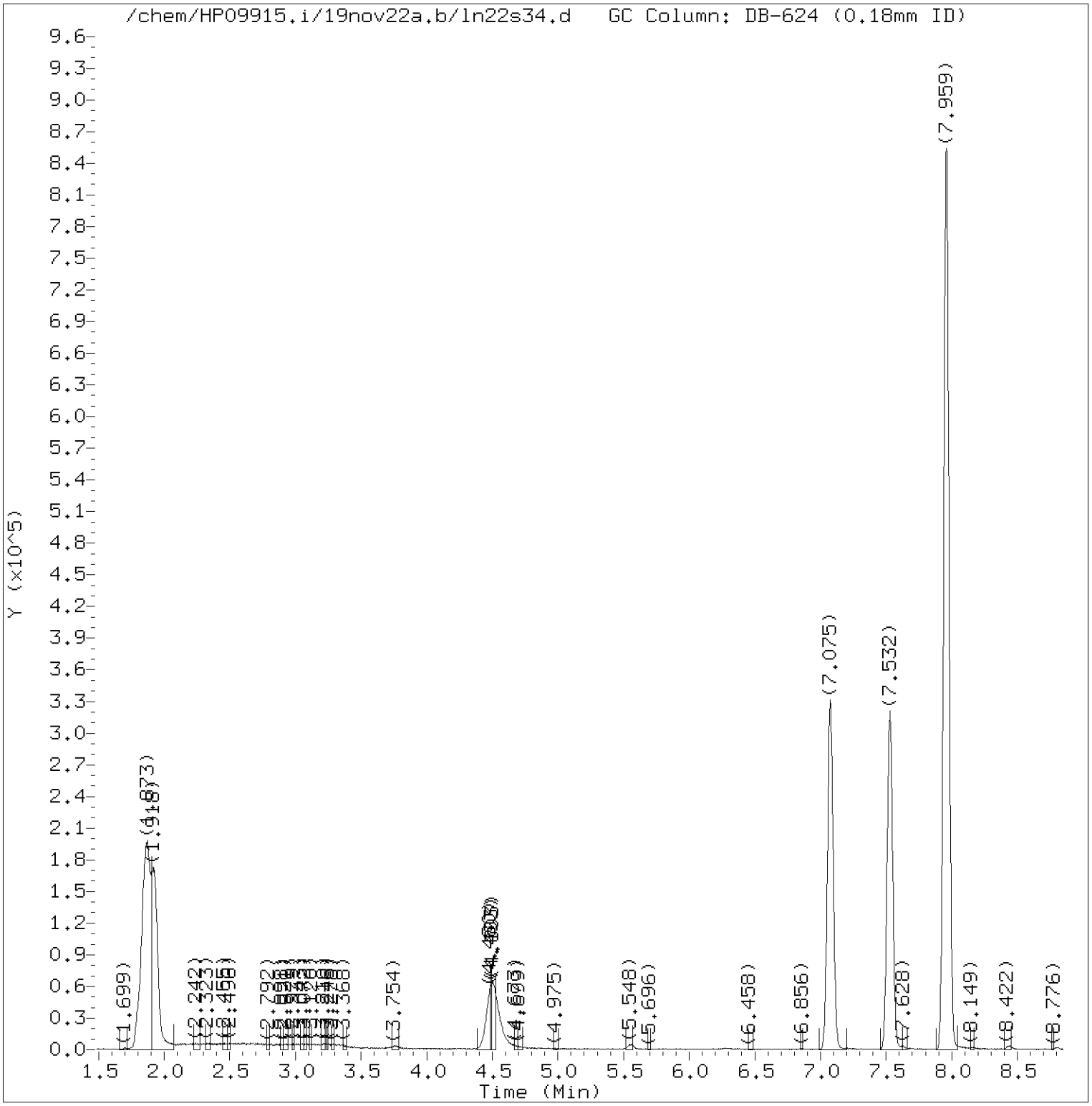
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:00. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:02. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

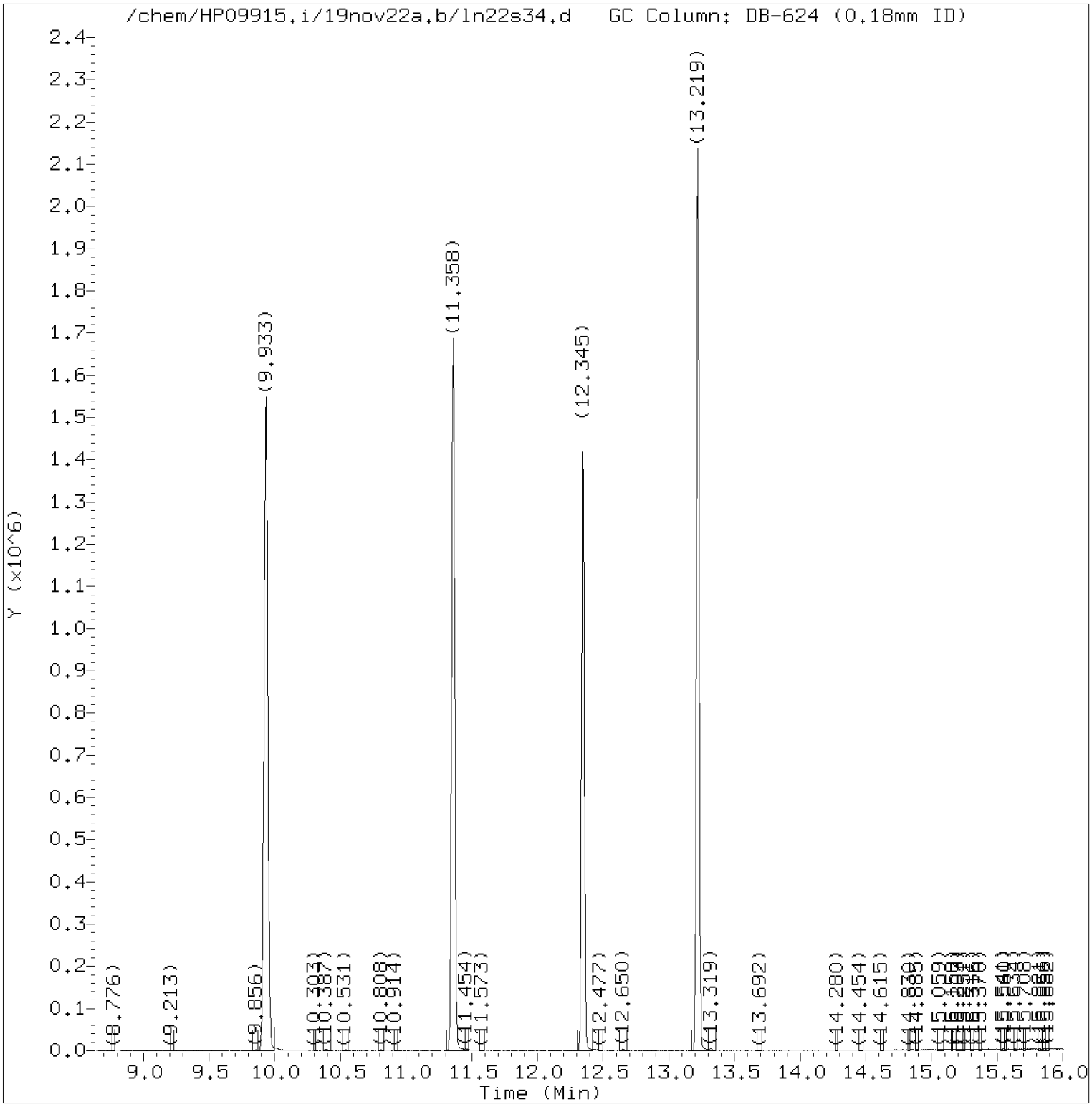
Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s34.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 12:19 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 23-Nov-2019 11:00 clm27445

Sample Name: JCW02 Lab Sample ID: 1205893

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:00.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s34.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 12:19 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 23-Nov-2019 11:00 clm27445

Sample Name: JCW02 Lab Sample ID: 1205893

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:00.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s34.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 12:19 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 23-Nov-2019 11:00 clm27445

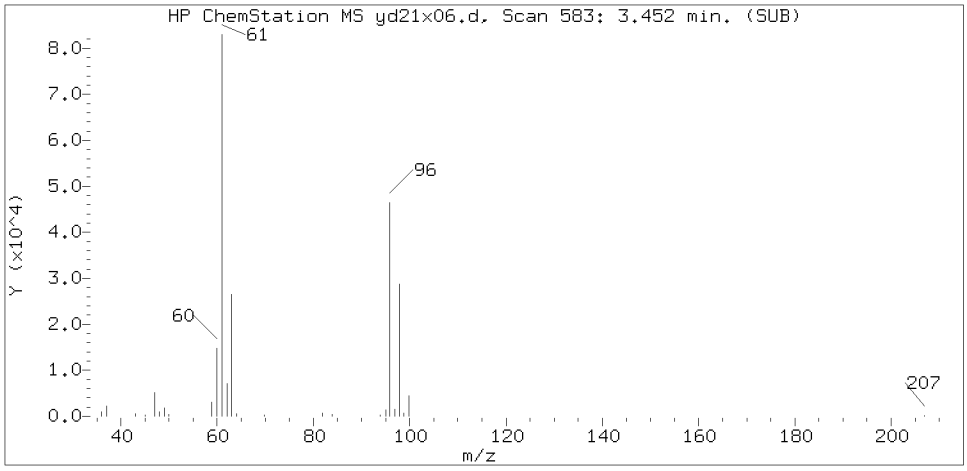
Sample Name: JCW02 Lab Sample ID: 1205893

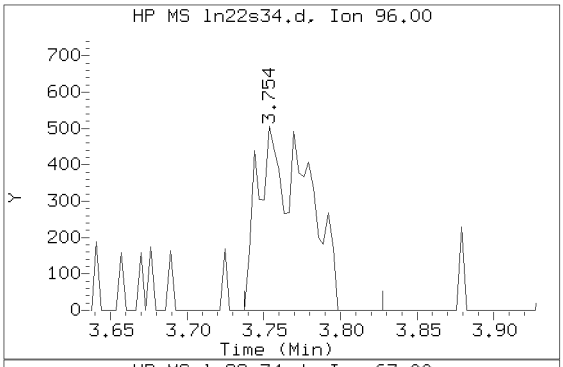
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	3.754	96	1135	0.219
29)*t-Butyl alcohol-d10	(1)	4.503	65	223451	250.000
36) 1,1-Dichloroethane	(2)	5.557	63	8707	0.833
52)$Dibromofluoromethane	(2)	7.075	113	287492	48.111
53) 1,1,1-Trichloroethane	(2)	7.081	97	33185	3.888
57)$1,2-Dichloroethane-d4	(2)	7.532	102	77675	51.003
66)*Fluorobenzene	(2)	7.959	96	1222267	50.000
83)$Toluene-d8	(3)	9.933	98	1269708	48.741
100)*Chlorobenzene-d5	(3)	11.361	117	995575	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	487775	49.450
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	536618	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

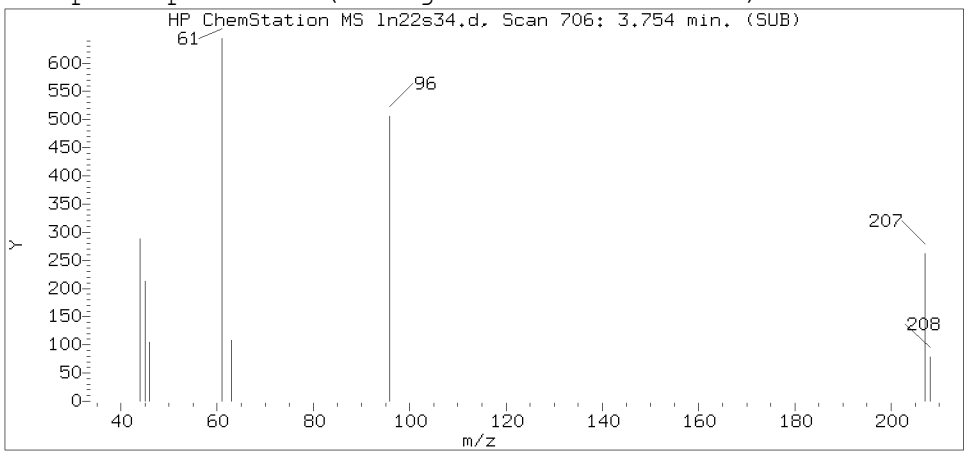
Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:00.
Target 3.5 esignature user ID: clm27445

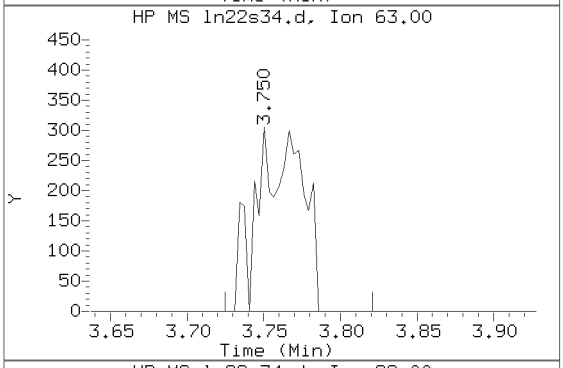
Reference Standard Spectrum for 1,1-Dichloroethene

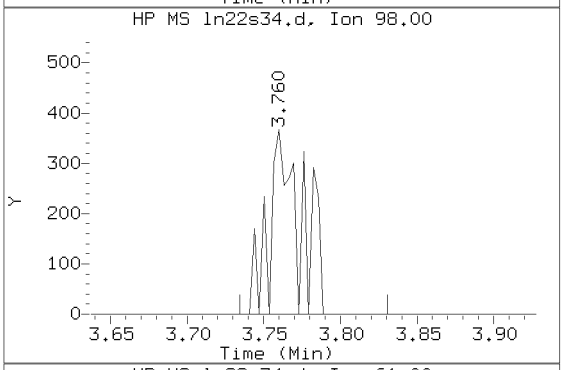




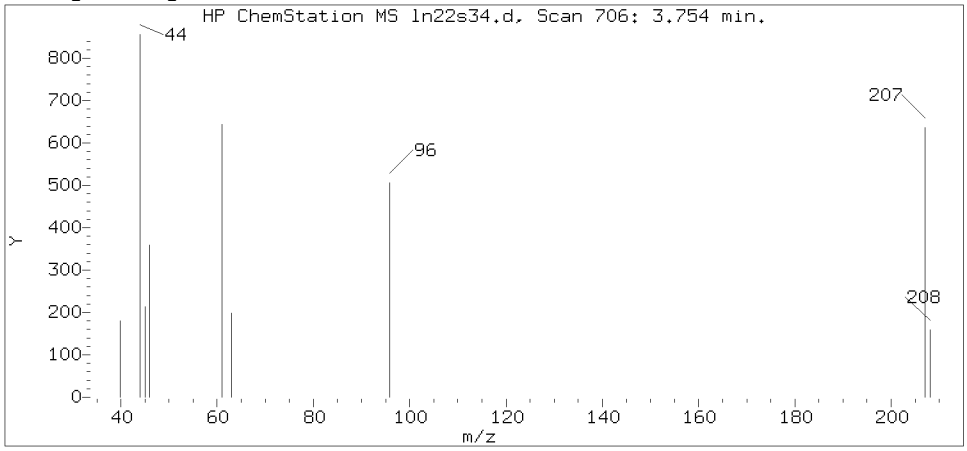
Sample Spectrum (Background Subtracted)

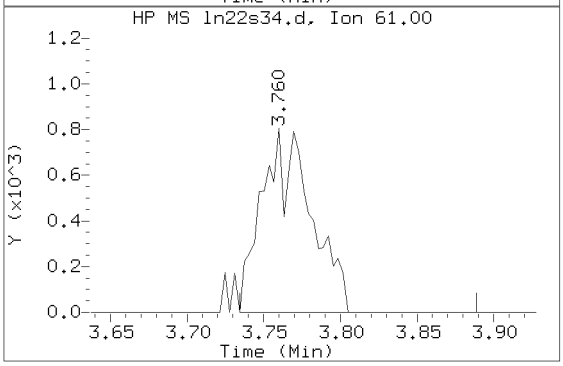






Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov22a.b/ln22s34.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 12:19 Analyst ID: lcp00895

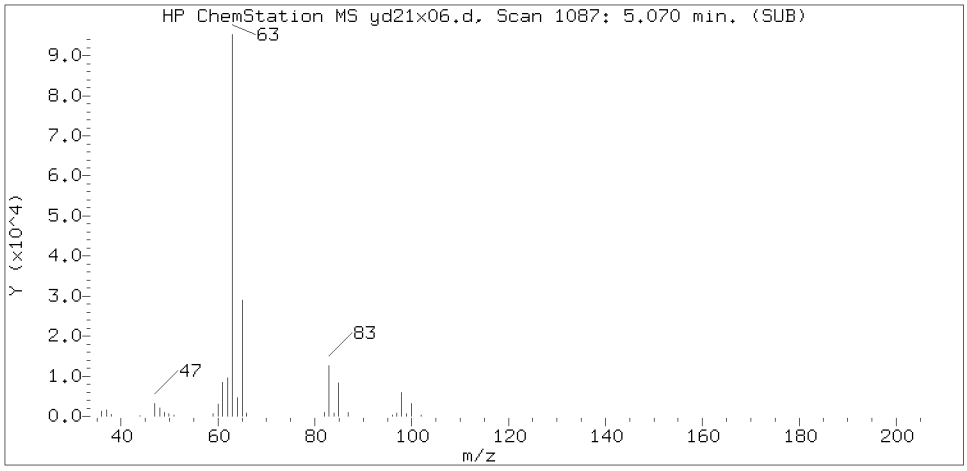
Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 23-Nov-2019 11:00 clm27445

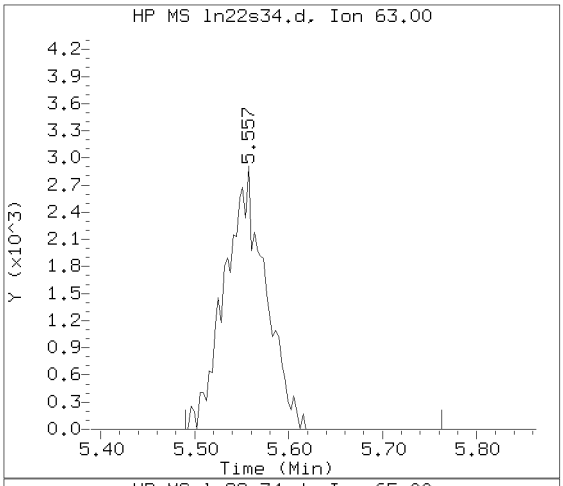
Sample Name: JCW02 Lab Sample ID: 1205893

Compound Number	: 17
Compound Name	: 1,1-Dichloroethene
Scan Number	: 706
Retention Time (minutes)	: 3.754
Relative Retention Time	: 0.00042
Quant Ion	: 96.00
Area (flag)	: 1135
On-Column Amount (ng)	: 0.2191

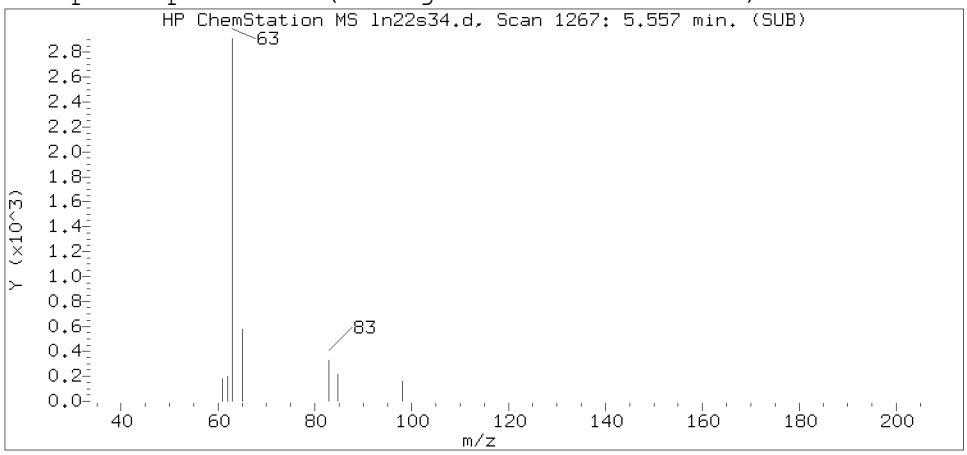
Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:00.
Target 3.5 esignature user ID: clm27445

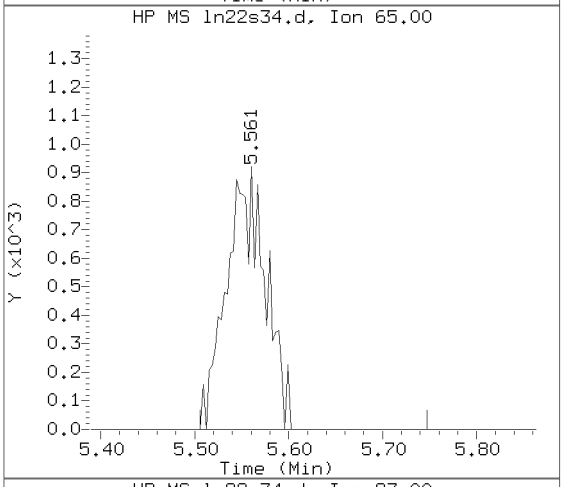
Reference Standard Spectrum for 1,1-Dichloroethane



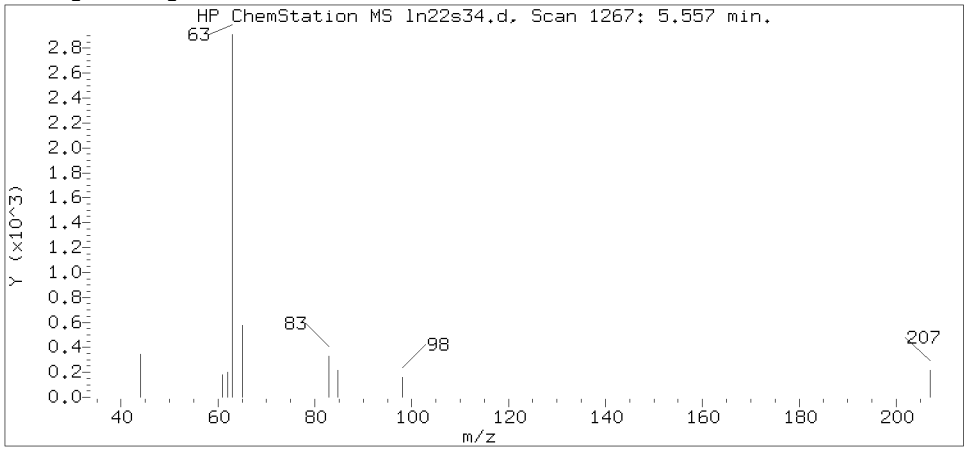


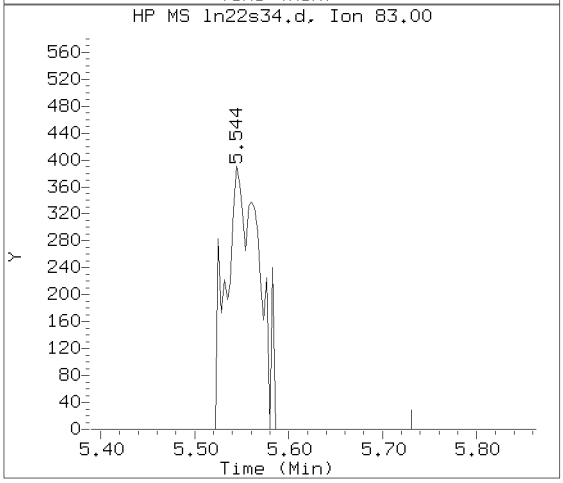
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov22a.b/ln22s34.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 12:19 Analyst ID: lcp00895

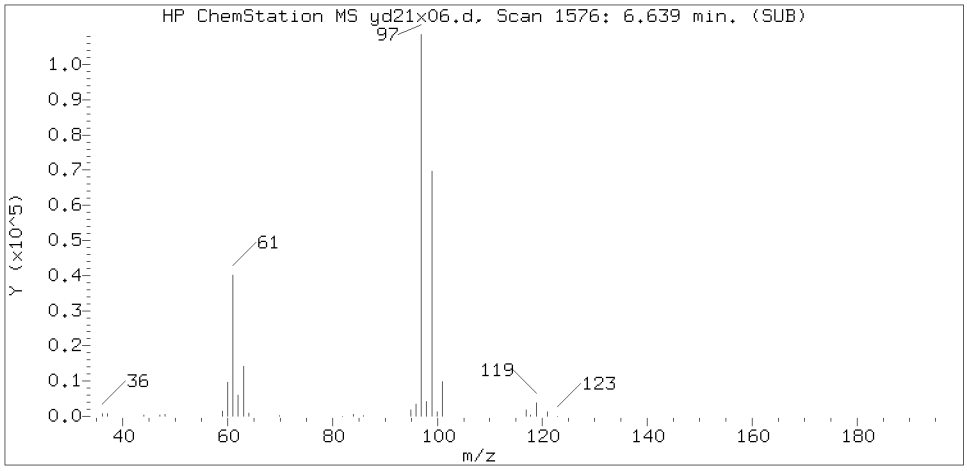
Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 23-Nov-2019 11:00 clm27445

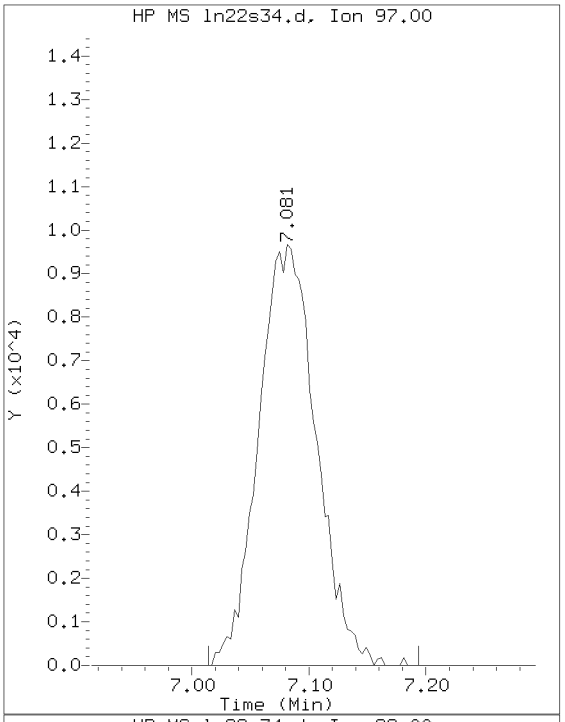
Sample Name: JCW02 Lab Sample ID: 1205893

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 1267
Retention Time (minutes): 5.557
Relative Retention Time :-0.00080
Quant Ion : 63.00
Area (flag) : 8707
On-Column Amount (ng) : 0.8327

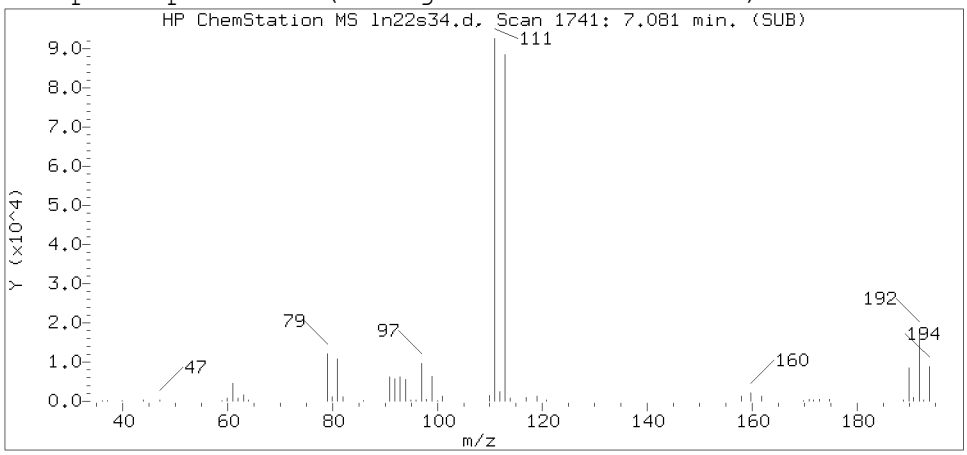
Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:00.
Target 3.5 esignature user ID: clm27445

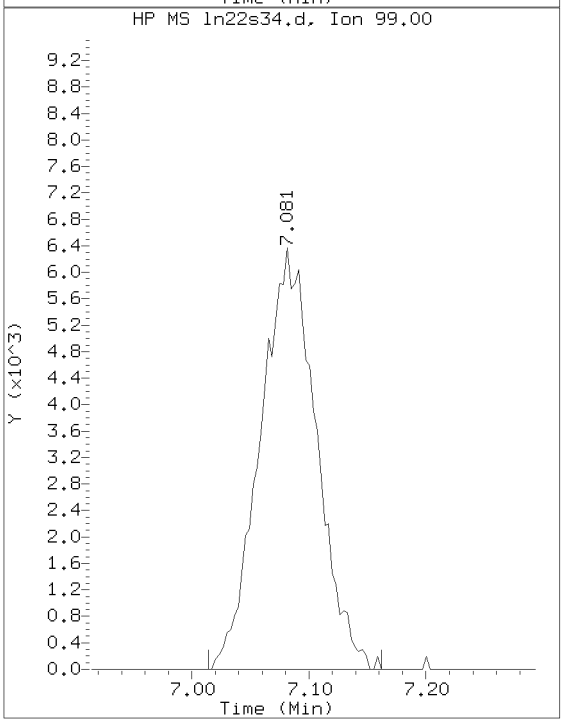
Reference Standard Spectrum for 1,1,1-Trichloroethane



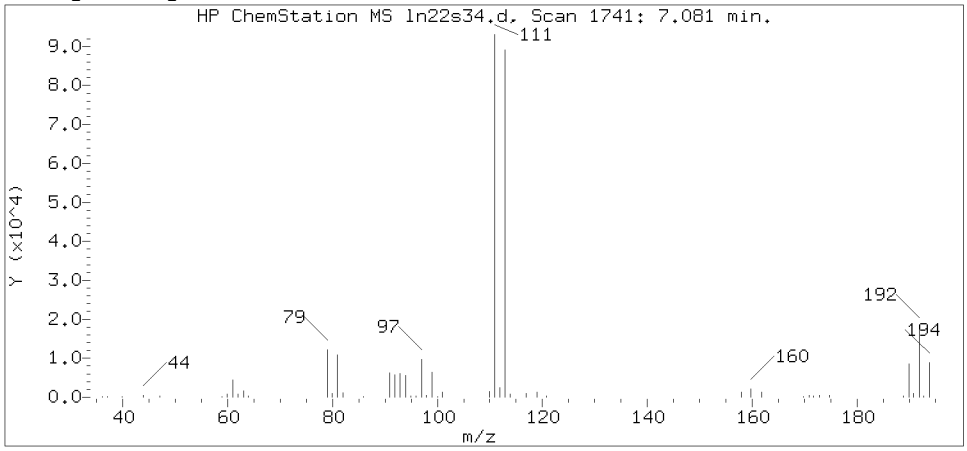


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov22a.b/ln22s34.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 12:19 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 23-Nov-2019 11:00 clm27445

Sample Name: JCW02 Lab Sample ID: 1205893

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1741
Retention Time (minutes)	: 7.081
Relative Retention Time	: 0.00000
Quant Ion	: 97.00
Area (flag)	: 33185
On-Column Amount (ng)	: 3.8879

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:00.
Target 3.5 esignature user ID: clm27445

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JCW03

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205896

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s38.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1205896

Data file: /chem/HP09915.i/19nov22a.b/ln22s38.d Injection date and time: **22-NOV-2019 13:48**
Data file Sample Info. Line: JCW03;1205896;1;0;;JCW22;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 14:05 Automation

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.509	(-0.013)	941	65	235546	(-10)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	1249813	(-6)	50.00	
100) Chlorobenzene-d5	11.361	(0.000)	3072	117	1016147	(-6)	50.00	
131) 1,4-Dichlorobenzene-d4	13.219	(0.000)	3650	152	538193	(-6)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(-0.001)	113	290484	47.540	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.535	(-0.001)	102	79692	51.174	102%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	1292476	48.611	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	495451	49.211	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:02. Target 3.5 esignature user ID: clm27445

Data file: /chem/HP09915.i/19nov22a.b/ln22s38.d Injection date and time: **22-NOV-2019 13:48**
Data file Sample Info. Line: JCW03;1205896;1;0;;JCW22;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 14:05 Automation

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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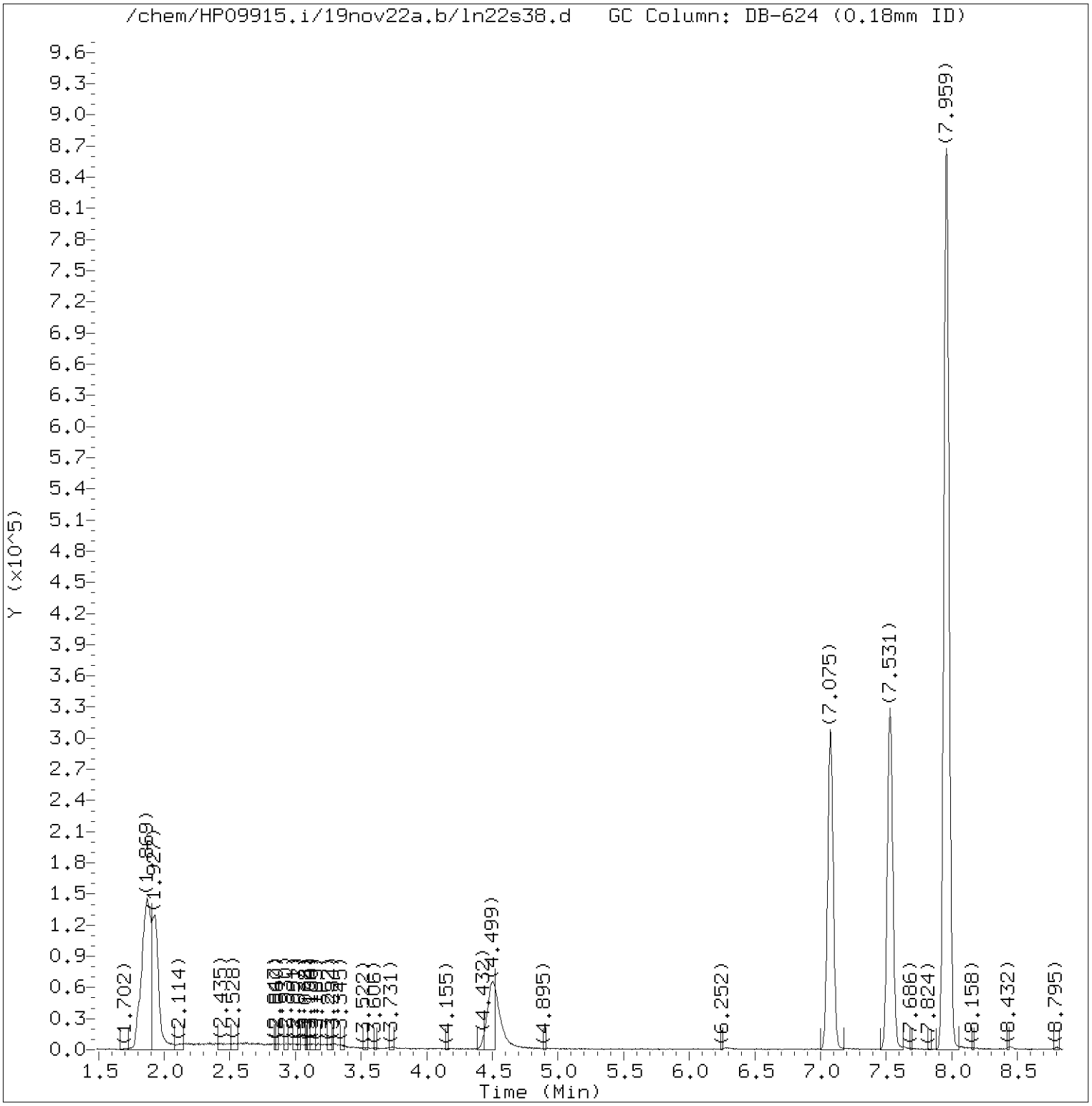
Total number of targets = 24

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:02. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:06. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

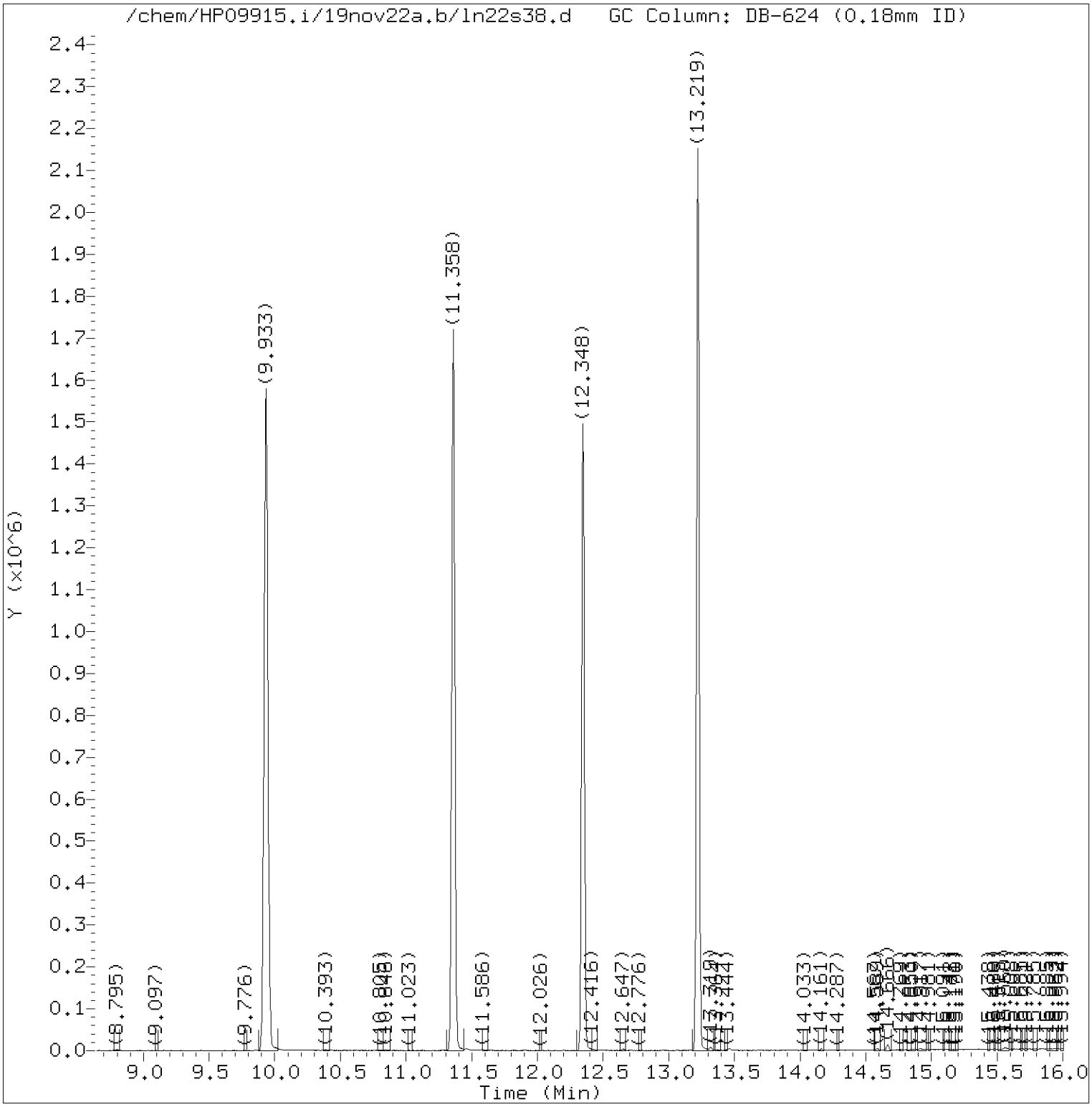
Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s38.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 13:48 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 14:05 Automation

Sample Name: JCW03 Lab Sample ID: 1205896

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:02.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s38.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 13:48 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 14:05 Automation

Sample Name: JCW03 Lab Sample ID: 1205896

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:02.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s38.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 13:48 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 14:05 Automation

Sample Name: JCW03 Lab Sample ID: 1205896

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.509	65	235546	250.000
52)$Dibromofluoromethane	(2)	7.075	113	290484	47.540
57)$1,2-Dichloroethane-d4	(2)	7.535	102	79692	51.174
66)*Fluorobenzene	(2)	7.959	96	1249813	50.000
83)$Toluene-d8	(3)	9.933	98	1292476	48.611
100)*Chlorobenzene-d5	(3)	11.361	117	1016147	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	495451	49.211
131)*1,4-Dichlorobenzene-d4	(4)	13.219	152	538193	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:02.
Target 3.5 esignature user ID: clm27445

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JCW04

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205897

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s39.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1205897

Data file: /chem/HP09915.i/19nov22a.b/ln22s39.d Injection date and time: **22-NOV-2019 14:10**
Data file Sample Info. Line: JCW04;1205897;1;0;;JCW22;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 11:03 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.490	(0.007)	935	65	234861	(-11)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	1238869	(-7)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	998318	(-7)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(-0.003)	3651	152	527441	(-8)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.069	(0.000)	113	287756	47.509	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	76295	49.425	99%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	1279170	48.970	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	489139	49.452	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:03. Target 3.5 esignature user ID: clm27445

Data file: /chem/HP09915.i/19nov22a.b/ln22s39.d Injection date and time: **22-NOV-2019 14:10**
Data file Sample Info. Line: JCW04;1205897;1;0;;JCW22;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 11:03 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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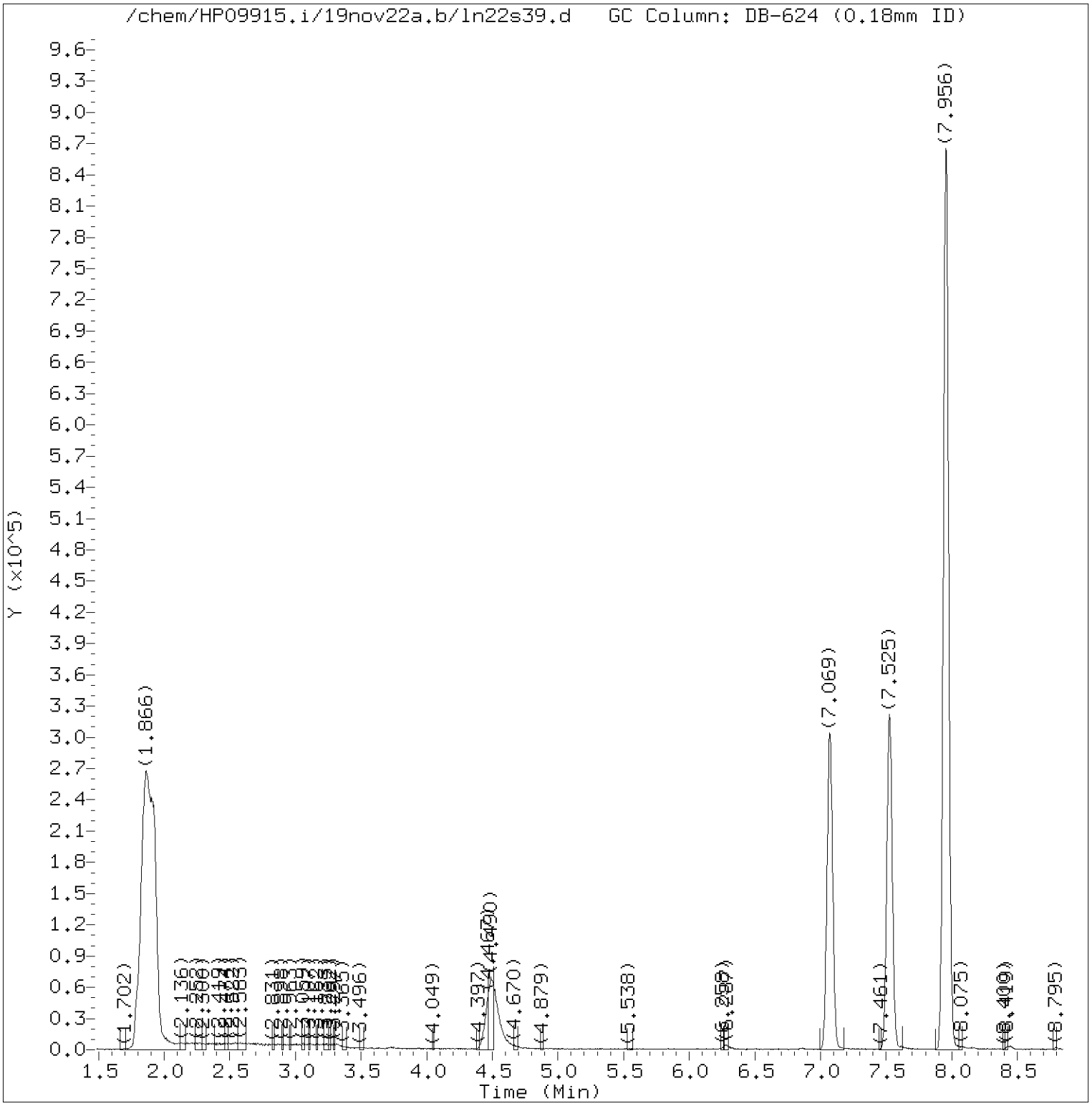
Total number of targets = 24

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:03. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:06. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

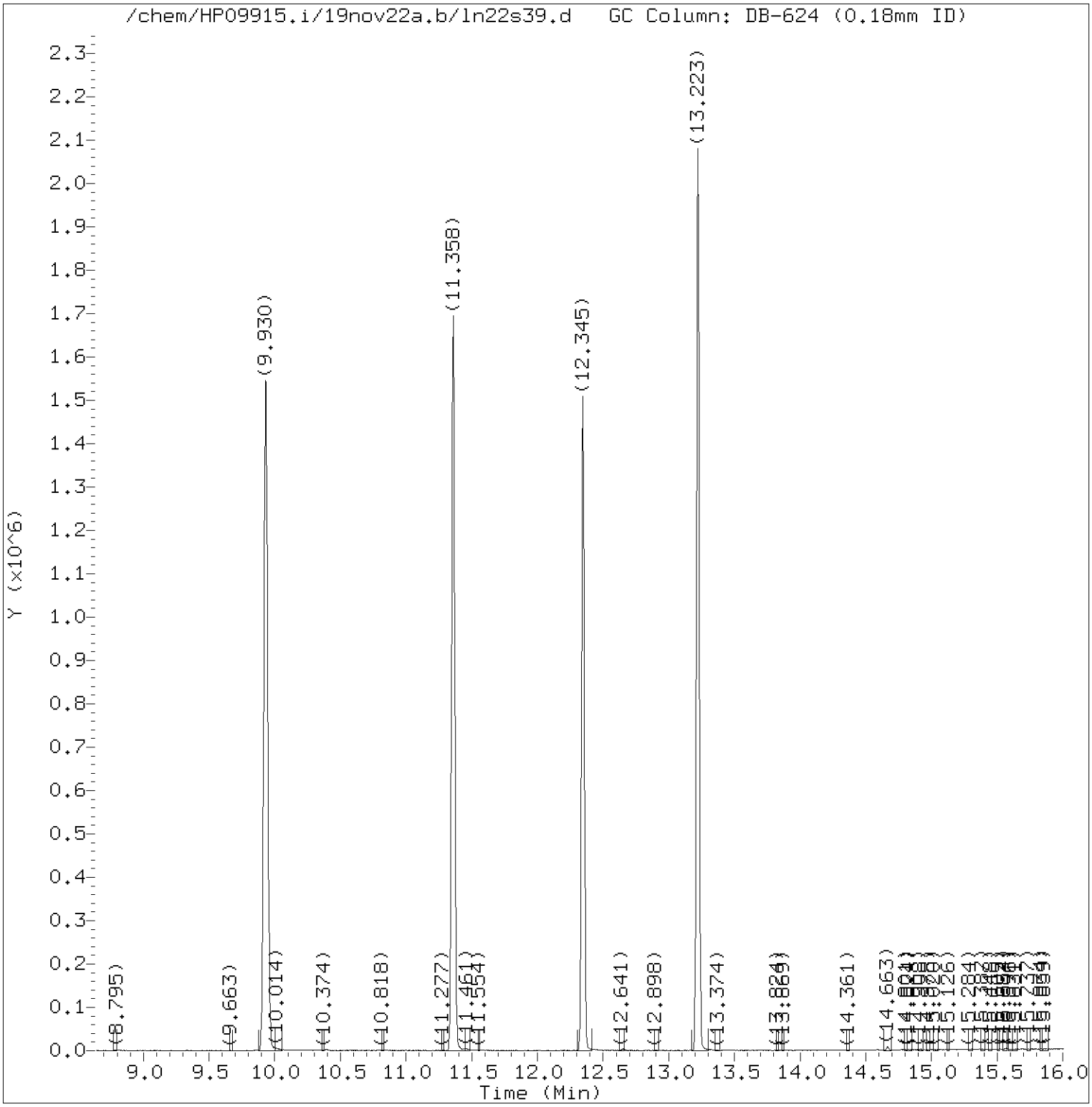
Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s39.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 14:10 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 23-Nov-2019 11:03 clm27445

Sample Name: JCW04 Lab Sample ID: 1205897

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:03.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s39.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 14:10 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 23-Nov-2019 11:03 clm27445

Sample Name: JCW04 Lab Sample ID: 1205897

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:03.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s39.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 14:10 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 23-Nov-2019 11:03 clm27445

Sample Name: JCW04 Lab Sample ID: 1205897

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.490	65	234861	250.000
52)$Dibromofluoromethane	(2)	7.069	113	287756	47.509
57)$1,2-Dichloroethane-d4	(2)	7.525	102	76295	49.425
66)*Fluorobenzene	(2)	7.959	96	1238869	50.000
83)$Toluene-d8	(3)	9.930	98	1279170	48.970
100)*Chlorobenzene-d5	(3)	11.358	117	998318	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	489139	49.452
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	527441	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:03.
Target 3.5 esignature user ID: clm27445

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JCW05

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205898

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s40.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1205898

Data file: /chem/HP09915.i/19nov22a.b/ln22s40.d Injection date and time: **22-NOV-2019 14:32**
Data file Sample Info. Line: JCW05;1205898;1;0;;JCW22;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 14:49 Automation

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.513	(-0.016)	942	65	226944	(-14)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	1214920	(-9)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	991383	(-8)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(-0.003)	3651	152	530268	(-8)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(-0.001)	113	284442	47.888	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.535	(-0.001)	102	76322	50.418	101%		80 - 120
83) Toluene-d8	(3)	9.934	(0.000)	98	1264045	48.729	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	478824	48.748	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:04. Target 3.5 esignature user ID: clm27445

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov22a.b/ln22s40.d Injection date and time: **22-NOV-2019 14:32**
Data file Sample Info. Line: JCW05;1205898;1;0;;JCW22;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 14:49 Automation

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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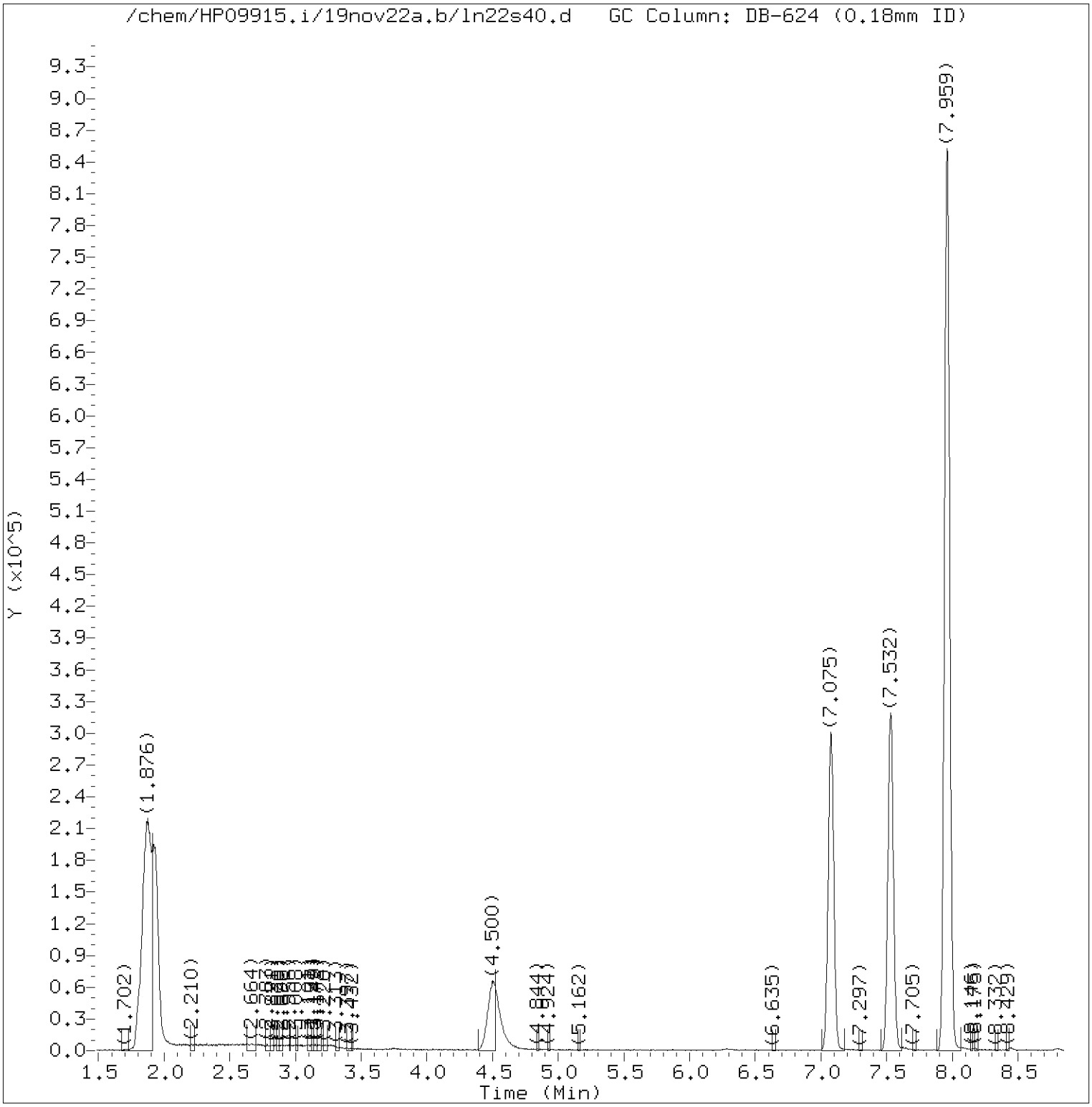
Total number of targets = 24

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:04. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:06. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

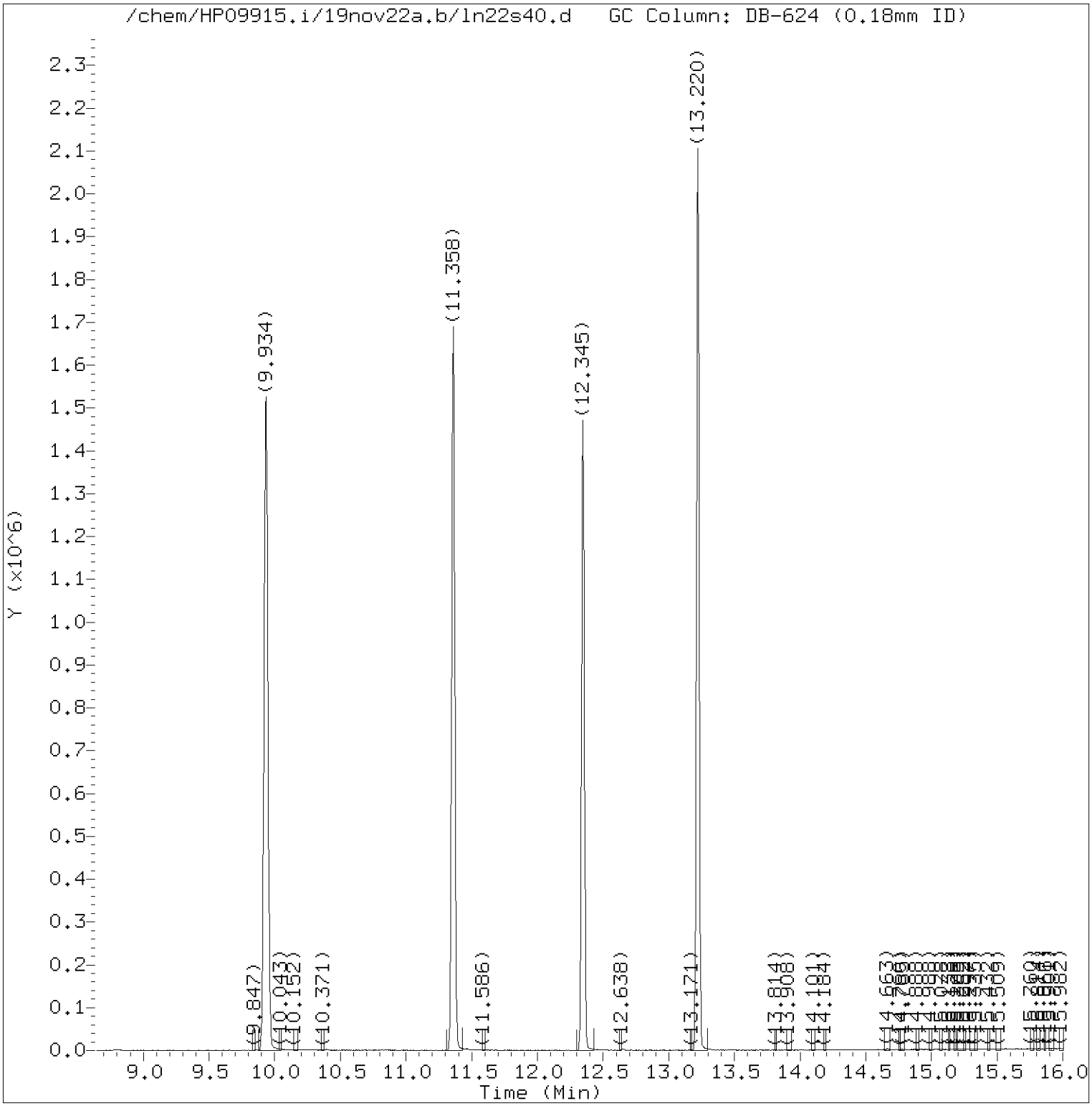
Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s40.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 14:32 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 14:49 Automation

Sample Name: JCW05 Lab Sample ID: 1205898

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:04.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s40.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 14:32 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 14:49 Automation

Sample Name: JCW05 Lab Sample ID: 1205898

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:04.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s40.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 14:32 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 14:49 Automation

Sample Name: JCW05 Lab Sample ID: 1205898

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.513	65	226944	250.000
52)$Dibromofluoromethane	(2)	7.075	113	284442	47.888
57)$1,2-Dichloroethane-d4	(2)	7.535	102	76322	50.418
66)*Fluorobenzene	(2)	7.959	96	1214920	50.000
83)$Toluene-d8	(3)	9.934	98	1264045	48.729
100)*Chlorobenzene-d5	(3)	11.358	117	991383	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	478824	48.748
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	530268	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:04.
Target 3.5 esignature user ID: clm27445

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JCW06

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205899

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s41.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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JCW06 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1205899

Data file: /chem/HP09915.i/19nov22a.b/ln22s41.d Injection date and time: **22-NOV-2019 14:54**
Data file Sample Info. Line: JCW06;1205899;1;0;;JCW22;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 15:11 Automation

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493	(0.003)	936	65	217495	(-17)	250.00	
66) Fluorobenzene	7.956	(0.003)	2013	96	1185061	(-11)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	962498	(-11)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(-0.003)	3651	152	511399	(-11)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072	(-0.001)	113	278491	48.068	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	74452	50.422	101%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	1235975	49.077	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	469388	49.221	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:04. Target 3.5 esignature user ID: clm27445

Data file: /chem/HP09915.i/19nov22a.b/ln22s41.d Injection date and time: **22-NOV-2019 14:54**
Data file Sample Info. Line: JCW06;1205899;1;0;;JCW22;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 15:11 Automation

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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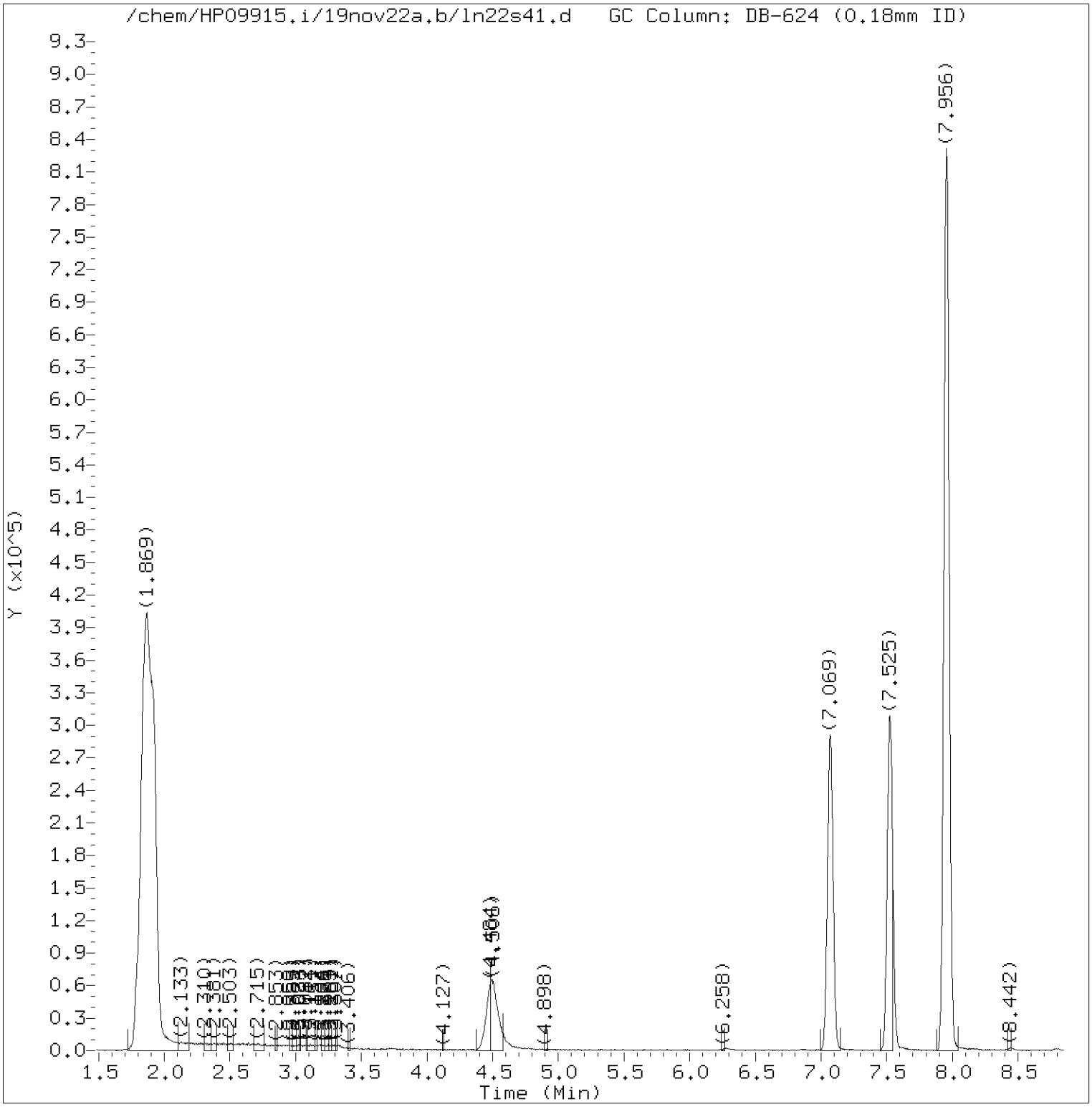
Total number of targets = 24

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:04. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:06. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

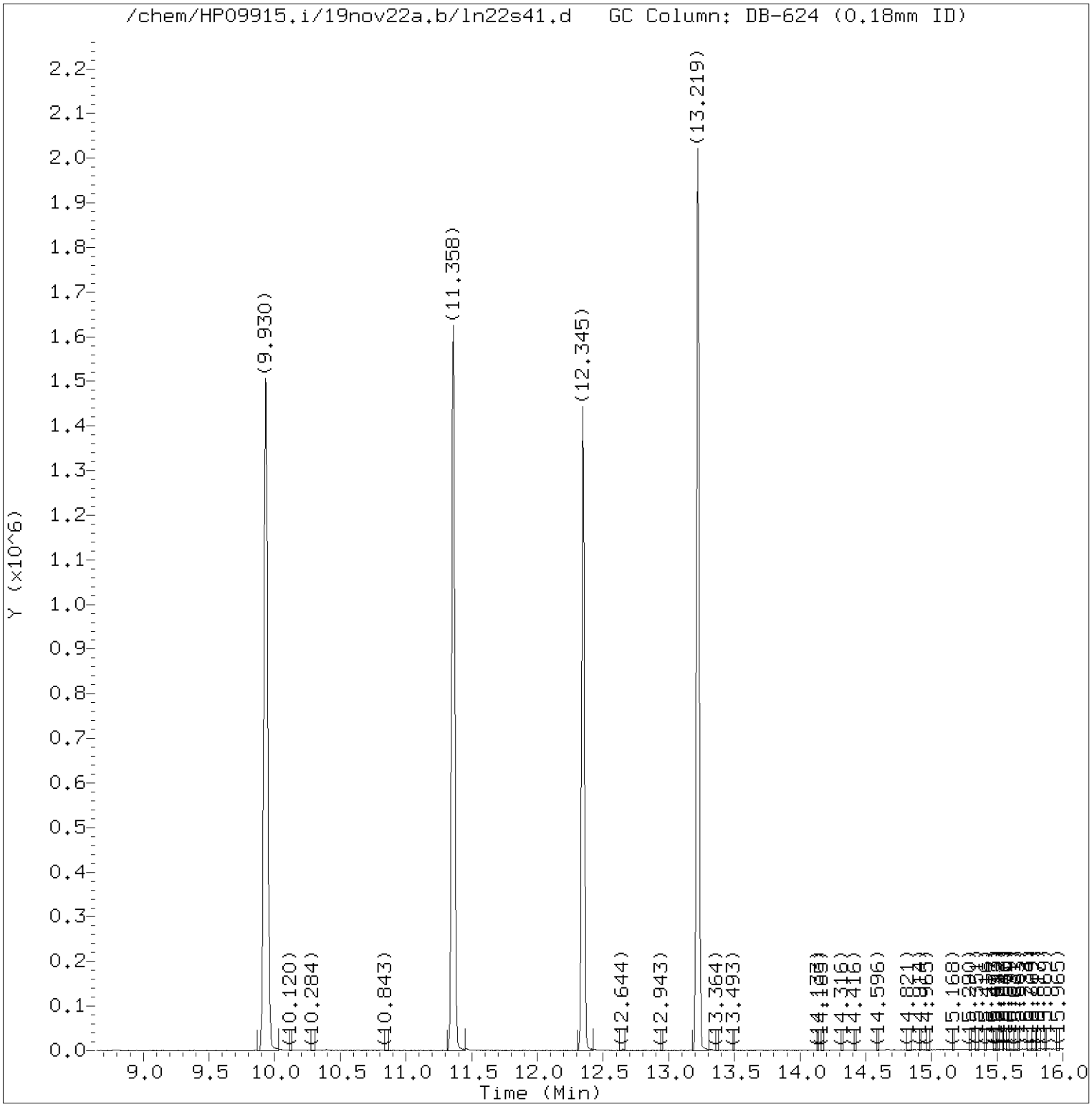
Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s41.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 14:54 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 15:11 Automation

Sample Name: JCW06 Lab Sample ID: 1205899

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:04.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s41.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 14:54 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 15:11 Automation

Sample Name: JCW06 Lab Sample ID: 1205899

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:04.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s41.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 14:54 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 15:11 Automation

Sample Name: JCW06 Lab Sample ID: 1205899

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.493	65	217495	250.000
52)$Dibromofluoromethane	(2)	7.072	113	278491	48.068
57)$1,2-Dichloroethane-d4	(2)	7.525	102	74452	50.422
66)*Fluorobenzene	(2)	7.956	96	1185061	50.000
83)$Toluene-d8	(3)	9.930	98	1235975	49.077
100)*Chlorobenzene-d5	(3)	11.358	117	962498	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	469388	49.221
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	511399	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:04.
Target 3.5 esignature user ID: clm27445

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JCW07

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205900

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s03.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.4	J
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	0.6	J
71-55-6	1,1,1-Trichloroethane	19	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	36	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1205900

Data file: /chem/HP09915.i/19nov23a.b/ln23s03.d Injection date and time: **23-NOV-2019 11:06**
Data file Sample Info. Line: JCW07;1205900;1;0;;JCW22;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 11:23 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.503(-0.013)	939	65	220082 (1)	250.00	
66) Fluorobenzene	7.959(-0.003)	2014	96	1136731 (1)	50.00	
100) Chlorobenzene-d5	11.361(-0.003)	3072	117	925300 (-2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223(0.000)	3651	152	497134 (-5)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075(0.000)	113	272763	49.081	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.532(0.000)	102	72952	51.506	103%		80 - 120
83) Toluene-d8	(3)	9.933(0.000)	98	1183342	48.876	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345(0.000)	95	451616	49.262	99%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	3.766(-0.001)	96	5141	1.067	1.07			0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.551(-0.000)	63	4260	0.438	0.44		J	0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)	6.856(0.000)	83	5625	0.605	0.60		J	0.2	1
53) 1,1,1-Trichloroethane	(2)	7.081(0.000)	97	147766	18.615	18.61			0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	8.429(0.000)	95	211651	36.355	36.35			0.2	1
75) 1,4-Dioxane	(1)			Not Detected					29	250
88) Toluene	(3)			Not Detected					0.2	1
93) Tetrachloroethene	(3)			Not Detected					0.2	1
104) Ethylbenzene	(3)			Not Detected					0.4	1
106) m+p-Xylene	(3)			Not Detected					1	5
107) o-Xylene	(3)			Not Detected					0.4	1
108) Xylene (Total)	(3)			Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
148) Naphthalene	(4)			Not Detected					1	5

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23s03.d Injection date and time: **23-NOV-2019 11:06**
Data file Sample Info. Line: JCW07;1205900;1;0;;JCW22;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 11:23 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

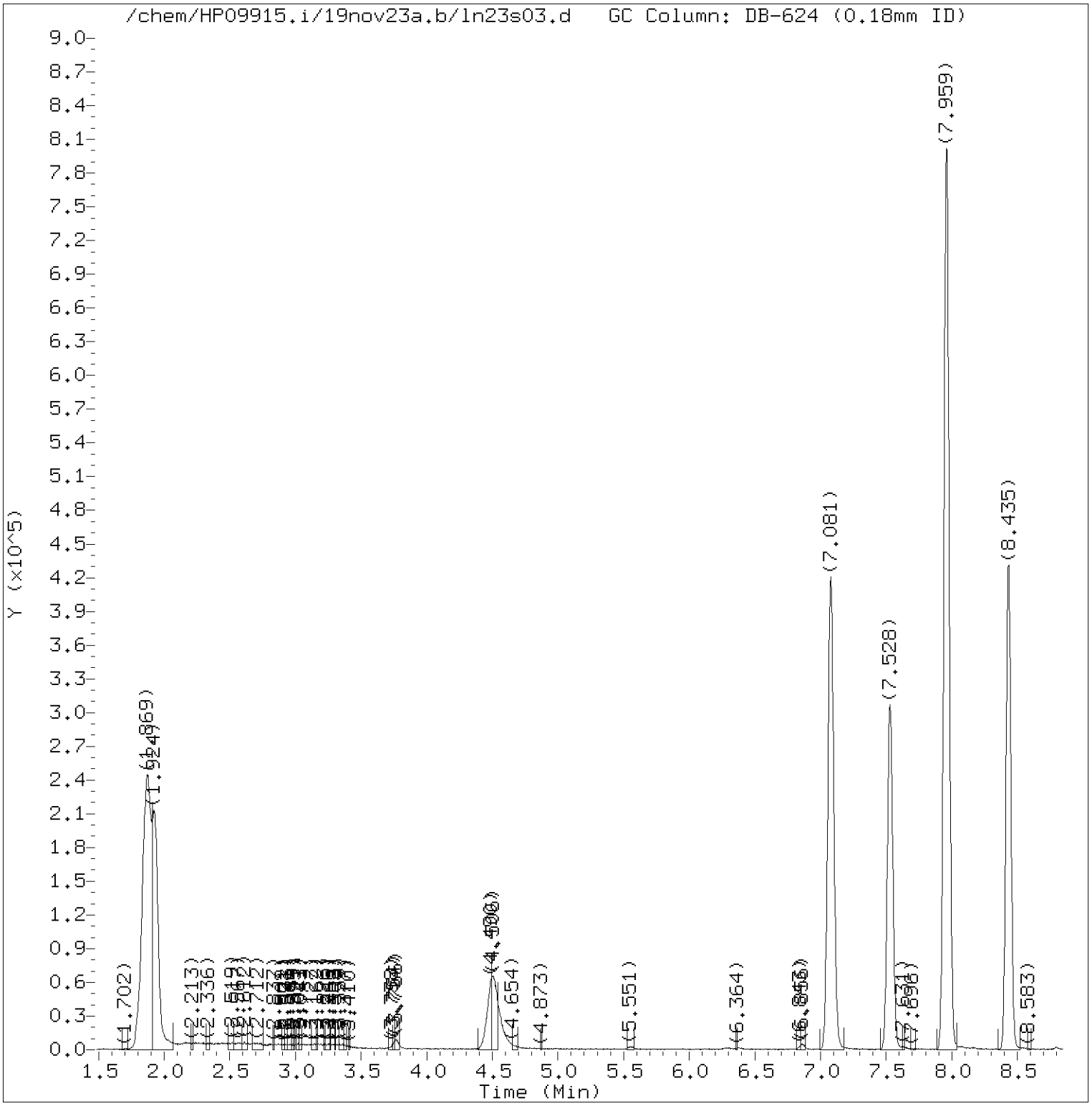
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Linda C. Pape on 11/25/2019 at 13:20. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:45. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

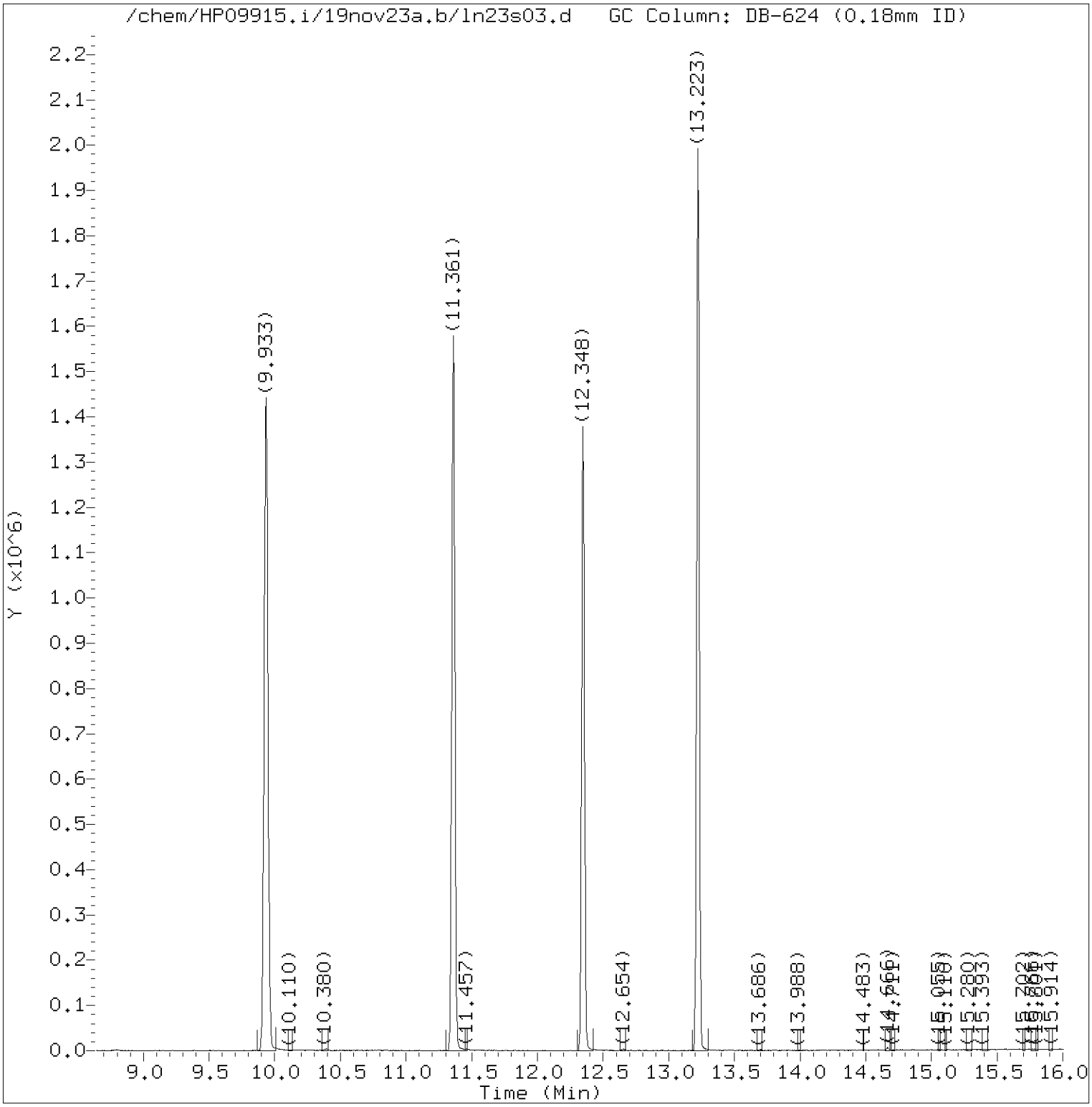
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s03.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 11:06 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 11:23 Automation

Sample Name: JCW07 Lab Sample ID: 1205900

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:20.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s03.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 11:06 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 11:23 Automation

Sample Name: JCW07 Lab Sample ID: 1205900

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on 11/25/2019 at 13:20.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s03.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 11:06 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 11:23 Automation

Sample Name: JCW07 Lab Sample ID: 1205900

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	3.766	96	5141	1.067
29)*t-Butyl alcohol-d10	(1)	4.503	65	220082	250.000
36) 1,1-Dichloroethane	(2)	5.551	63	4260	0.438
51) Chloroform	(2)	6.856	83	5625	0.605
52)$Dibromofluoromethane	(2)	7.075	113	272763	49.081
53) 1,1,1-Trichloroethane	(2)	7.081	97	147766	18.615
57)$1,2-Dichloroethane-d4	(2)	7.532	102	72952	51.506
66)*Fluorobenzene	(2)	7.959	96	1136731	50.000
71) Trichloroethene	(2)	8.429	95	211651	36.355
83)$Toluene-d8	(3)	9.933	98	1183342	48.876
100)*Chlorobenzene-d5	(3)	11.361	117	925300	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	451616	49.262
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	497134	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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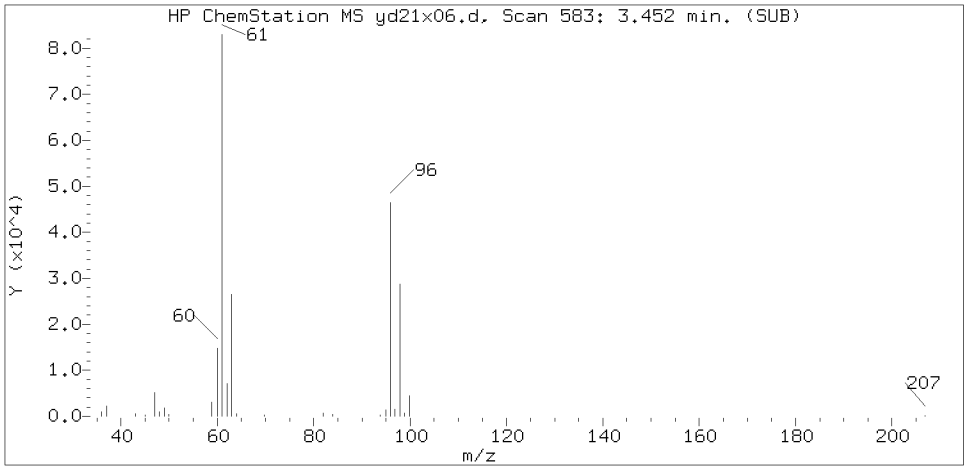
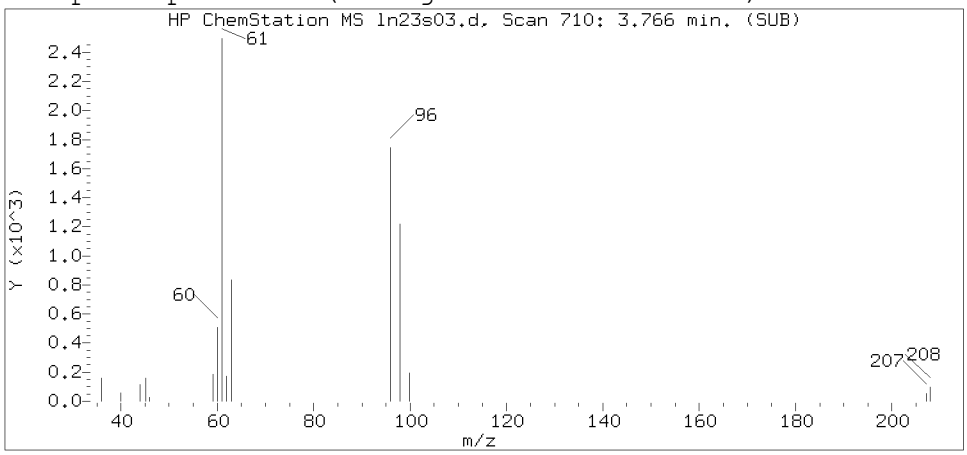
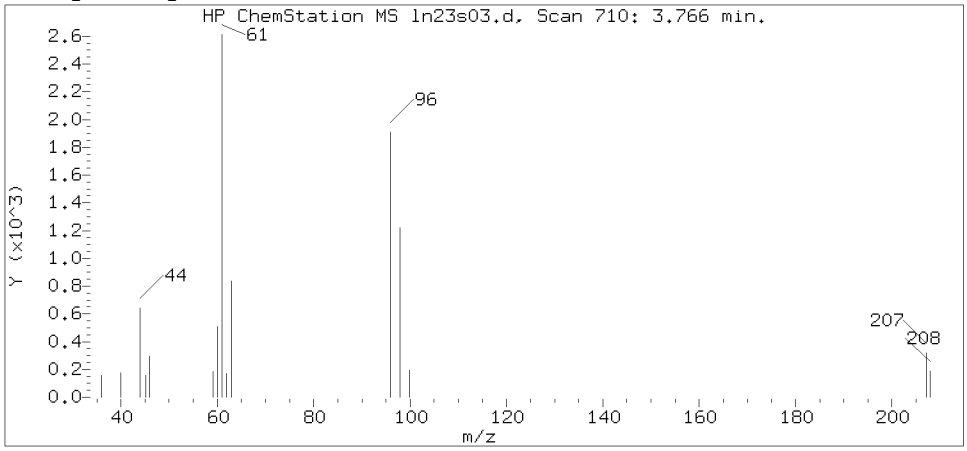
Reference Standard Spectrum for 1,1-Dichloroethene

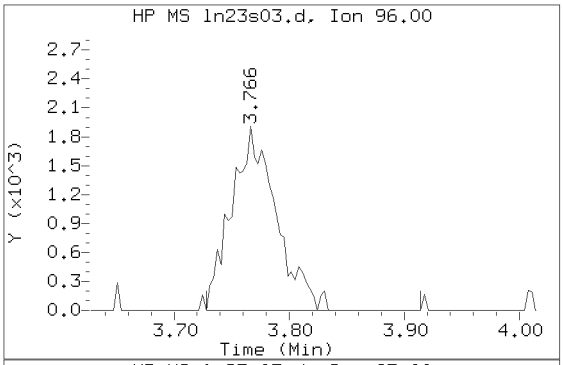


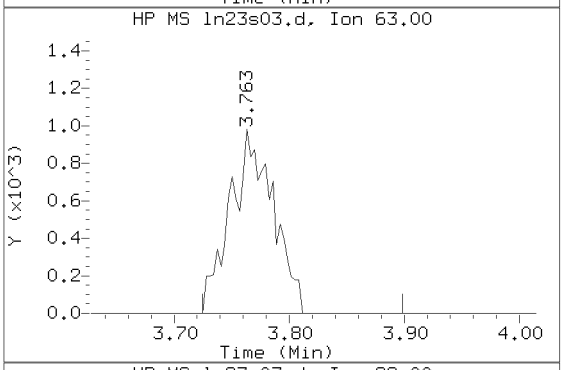
Sample Spectrum (Background Subtracted)

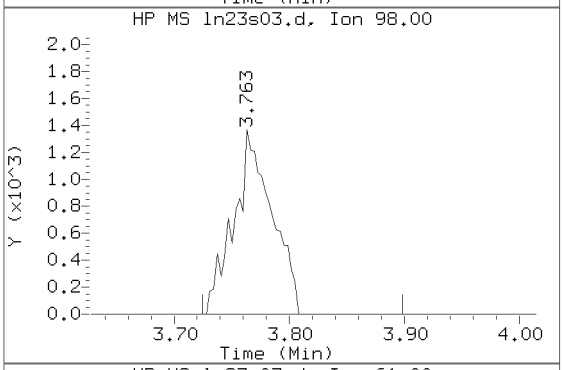


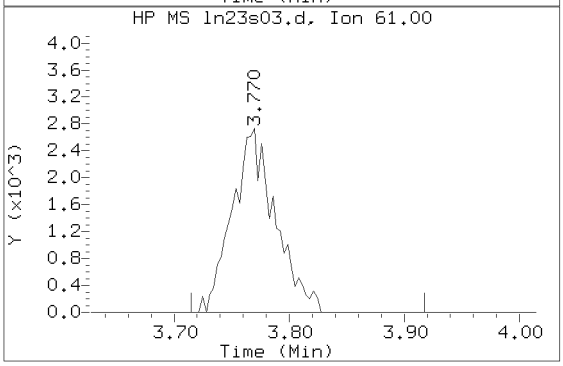
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23s03.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 11:06 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 11:23 Automation

Sample Name: JCW07 Lab Sample ID: 1205900

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 710
Retention Time (minutes): 3.766
Relative Retention Time :-0.00142
Quant Ion : 96.00
Area (flag) : 5141
On-Column Amount (ng) : 1.0669

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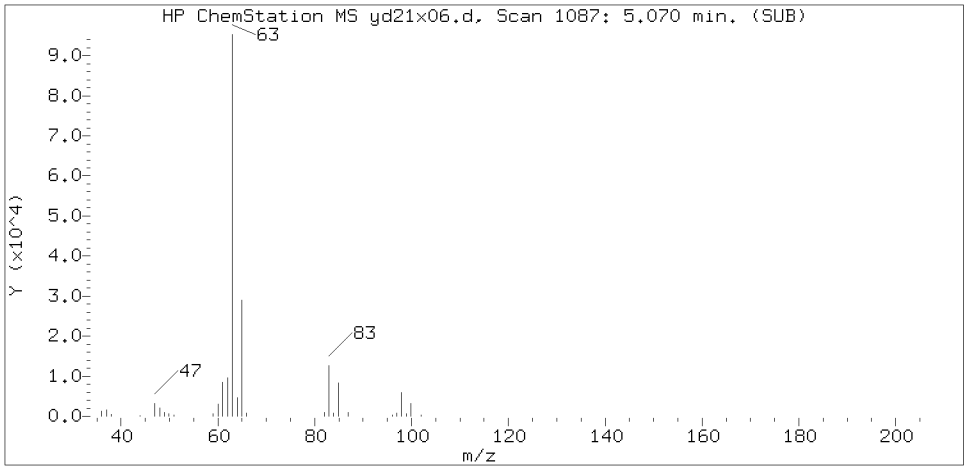
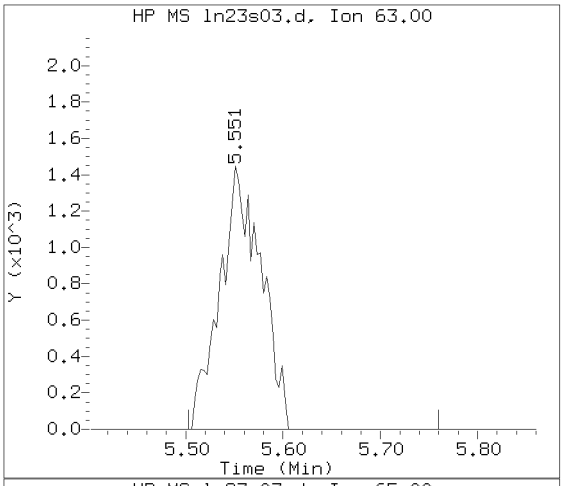
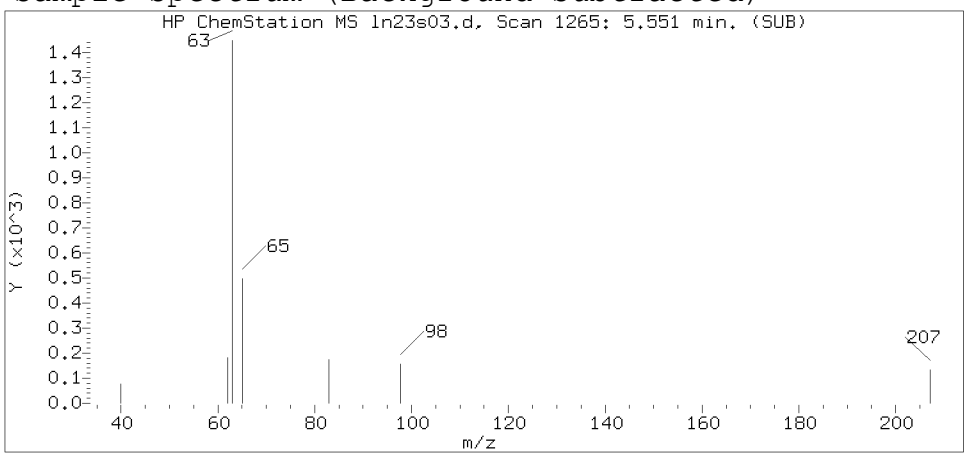
Target 3.5 esignature user ID: lcp00895

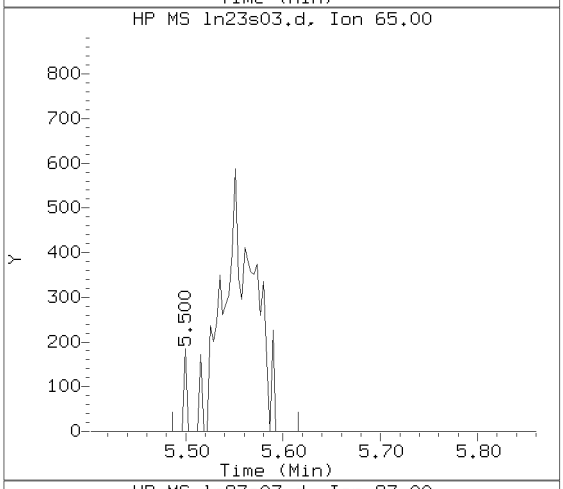
Reference Standard Spectrum for 1,1-Dichloroethane



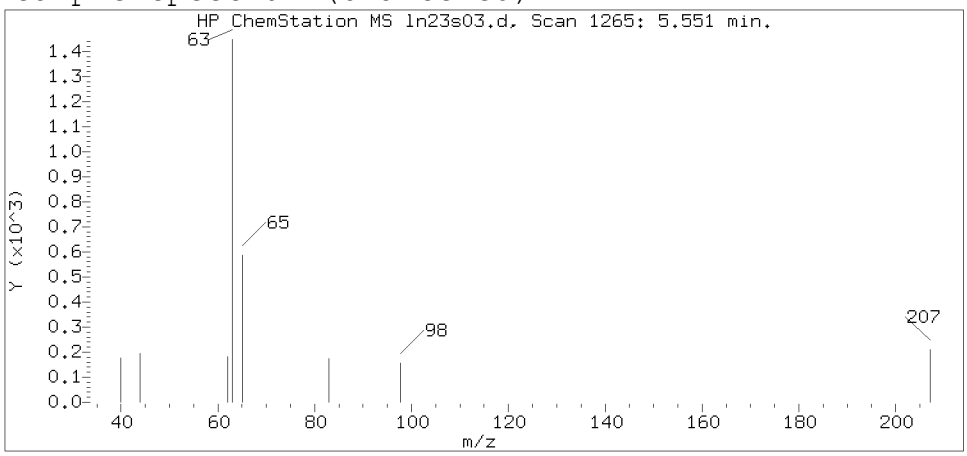


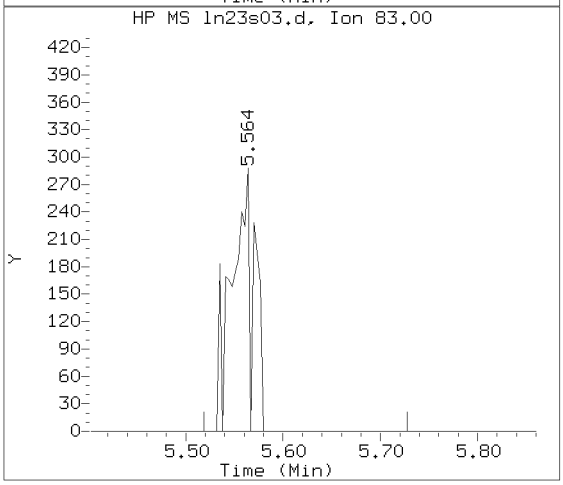
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov23a.b/ln23s03.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 11:06 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 11:23 Automation

Sample Name: JCW07 Lab Sample ID: 1205900

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 1265
Retention Time (minutes): 5.551
Relative Retention Time :-0.00053
Quant Ion : 63.00
Area (flag) : 4260
On-Column Amount (ng) : 0.4381

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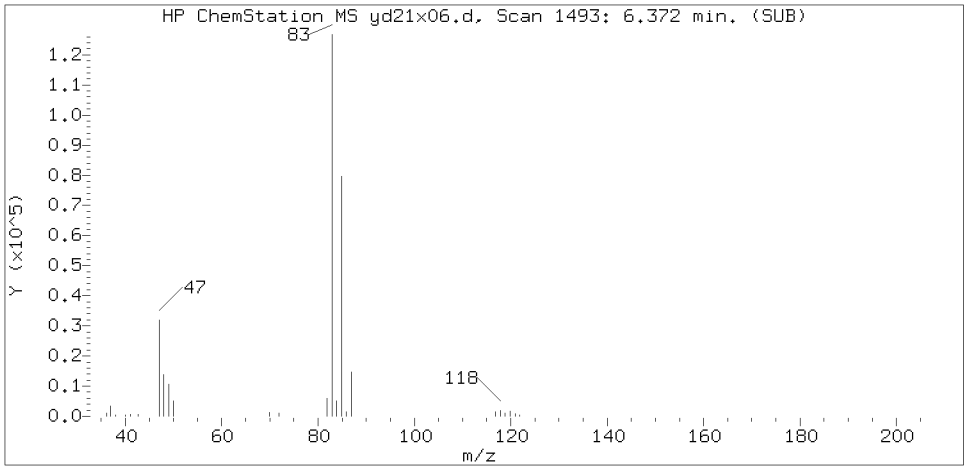
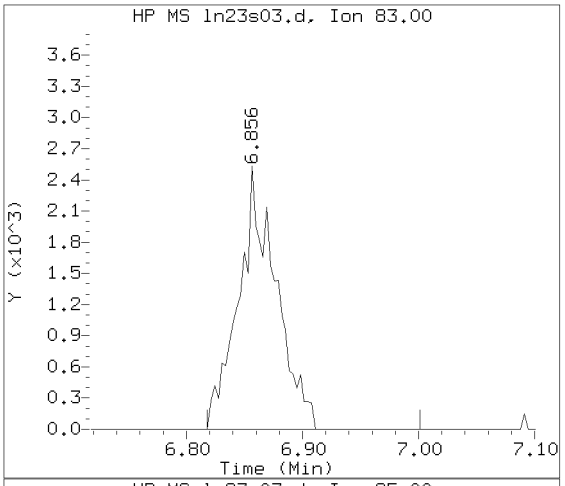
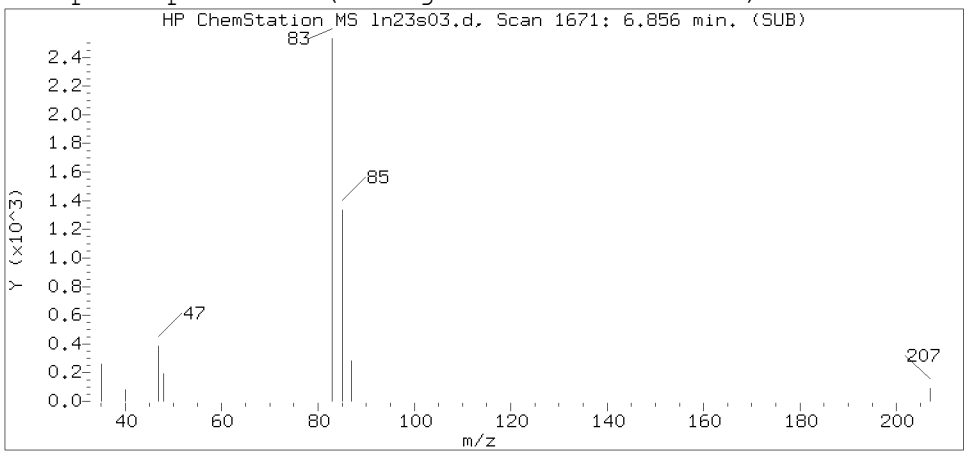
Target 3.5 esignature user ID: lcp00895

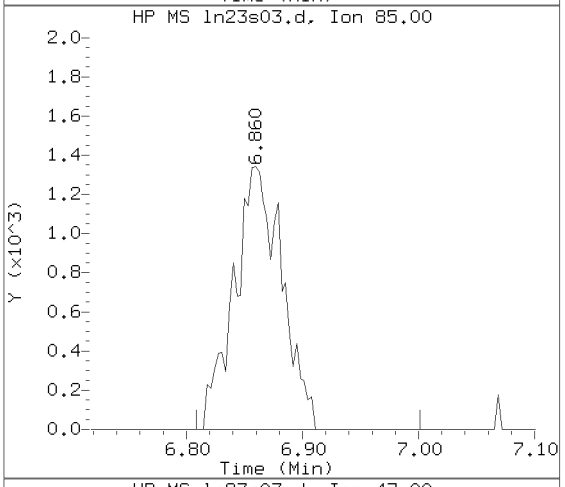
Reference Standard Spectrum for Chloroform



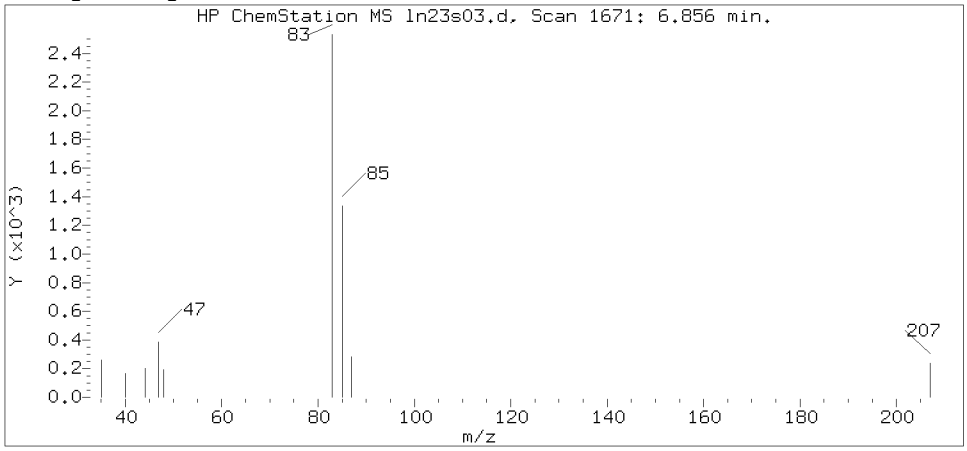


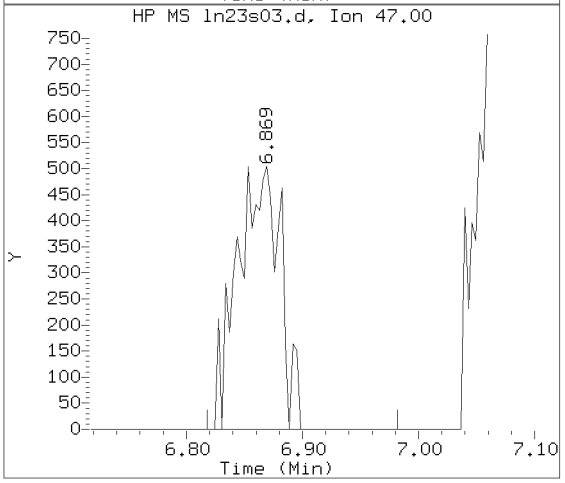
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov23a.b/ln23s03.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 11:06 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 11:23 Automation

Sample Name: JCW07 Lab Sample ID: 1205900

Compound Number : 51
Compound Name : Chloroform
Scan Number : 1671
Retention Time (minutes): 6.856
Relative Retention Time : 0.00035
Quant Ion : 83.00
Area (flag) : 5625
On-Column Amount (ng) : 0.6048

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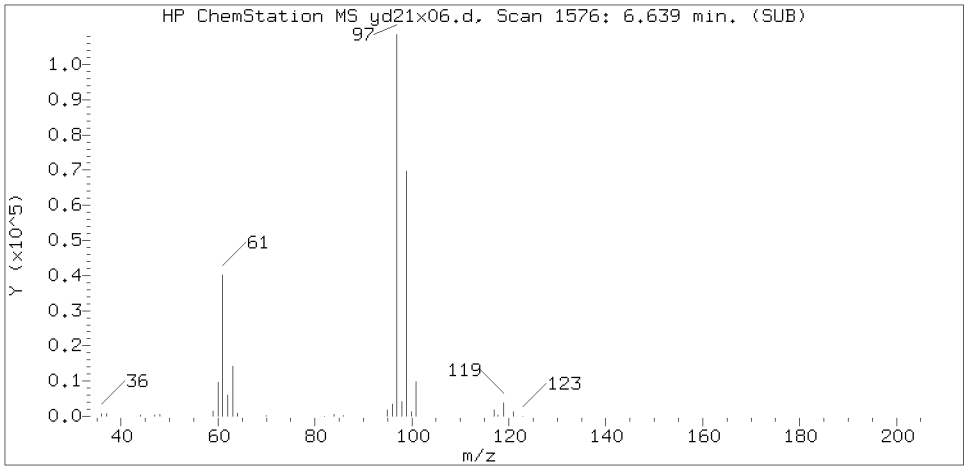
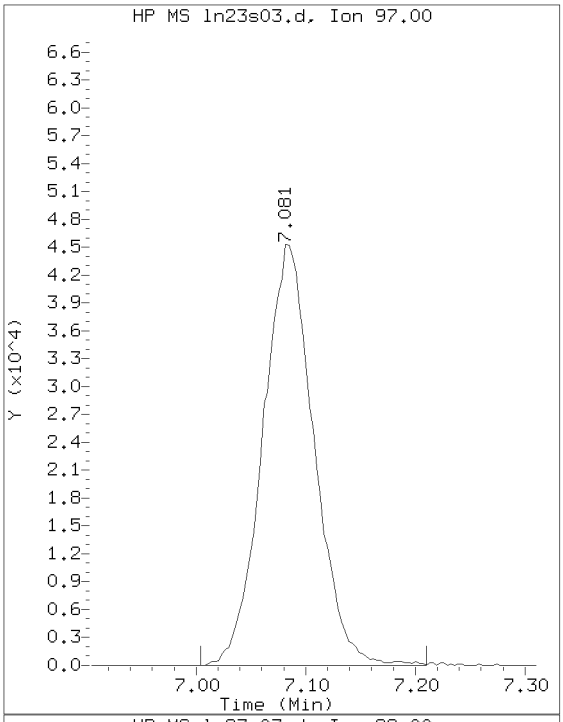
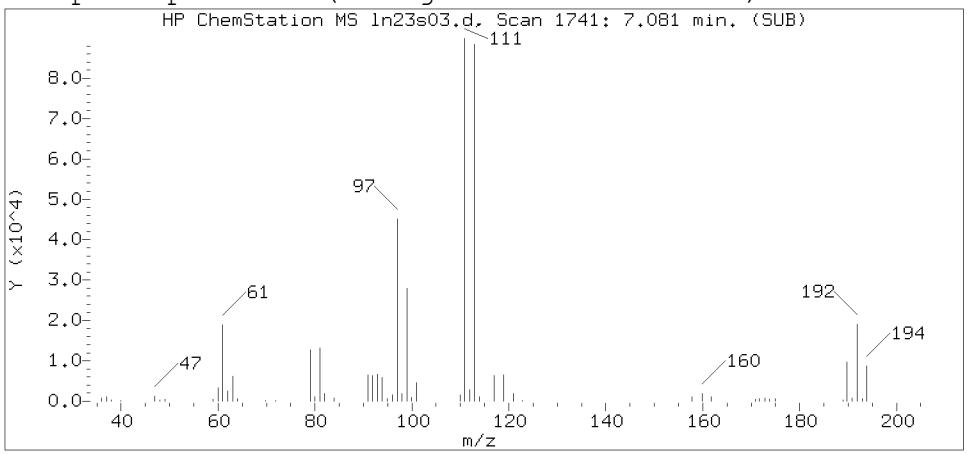
Target 3.5 esignature user ID: lcp00895

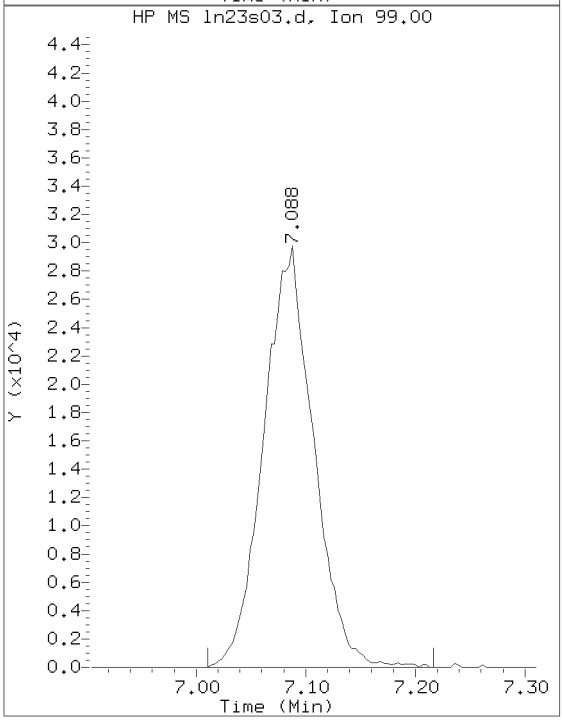
Reference Standard Spectrum for 1,1,1-Trichloroethane



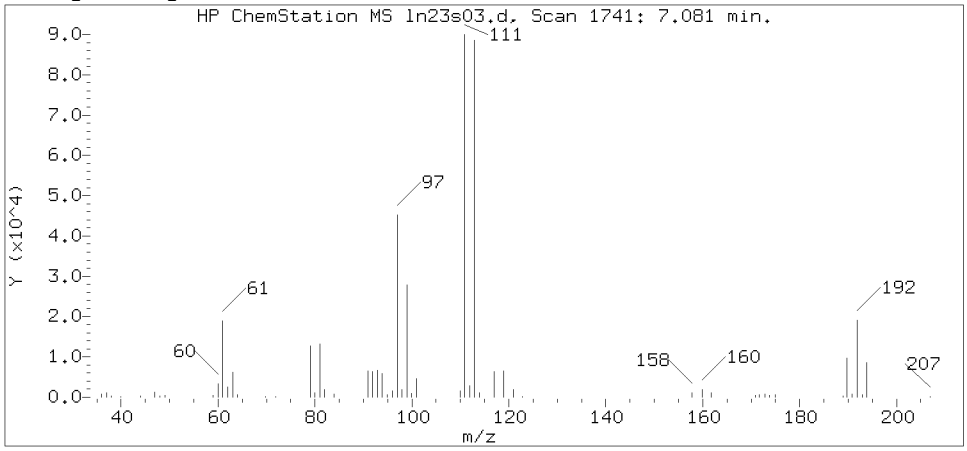


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov23a.b/ln23s03.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 11:06 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 11:23 Automation

Sample Name: JCW07 Lab Sample ID: 1205900

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1741
Retention Time (minutes)	: 7.081
Relative Retention Time	: 0.00036
Quant Ion	: 97.00
Area (flag)	: 147766
On-Column Amount (ng)	: 18.6146

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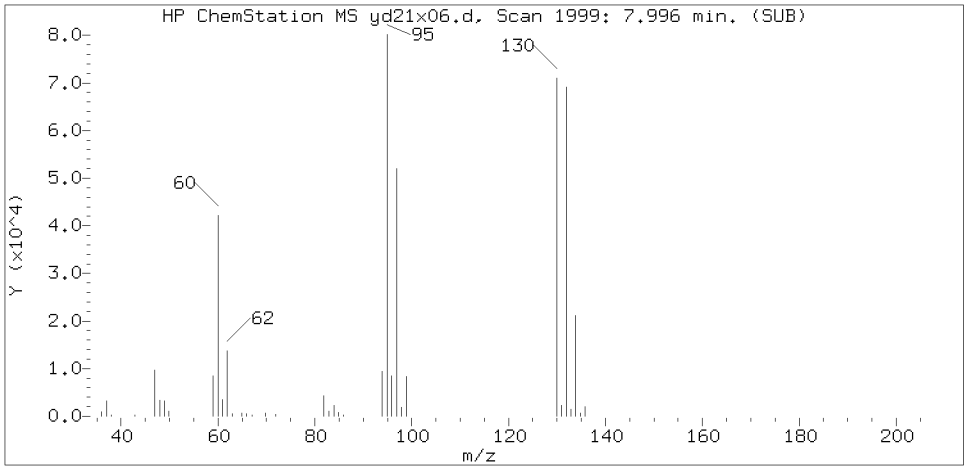
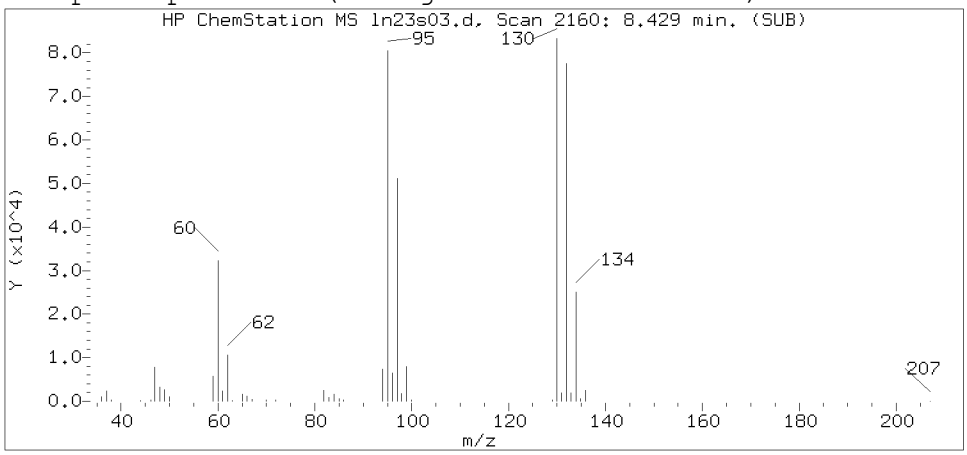
Target 3.5 esignature user ID: lcp00895

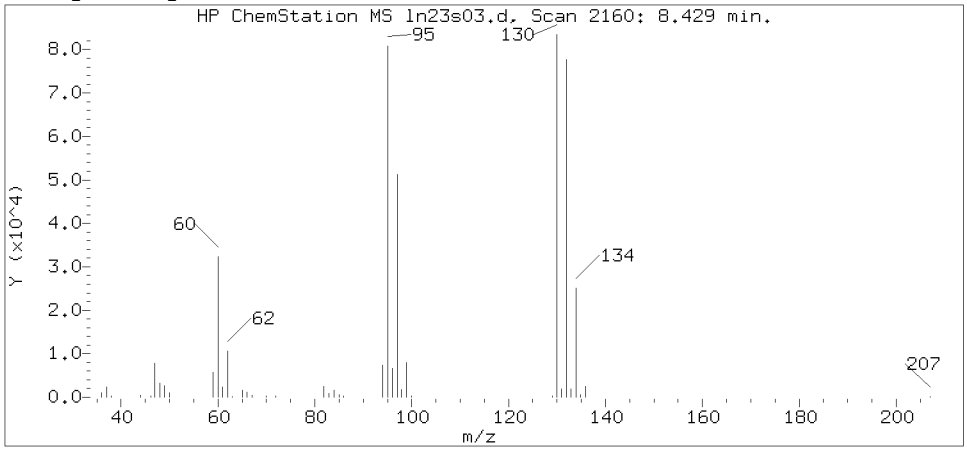
Reference Standard Spectrum for Trichloroethene

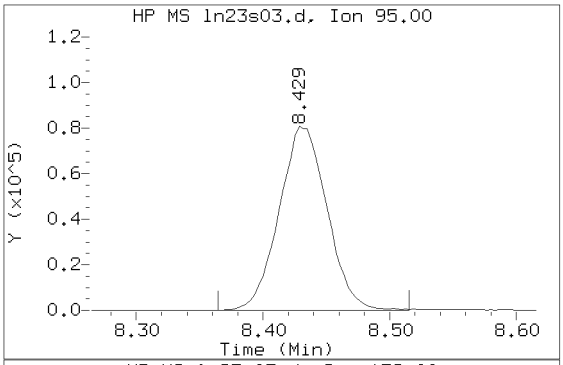


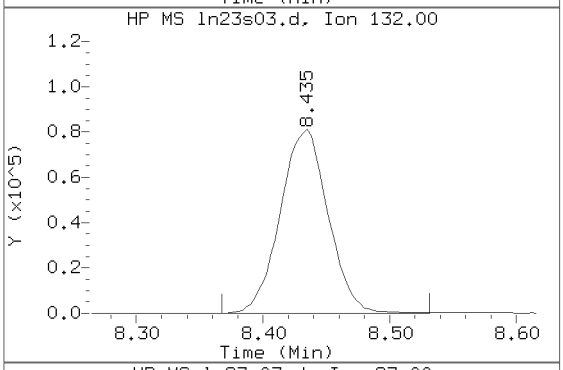
Sample Spectrum (Background Subtracted)

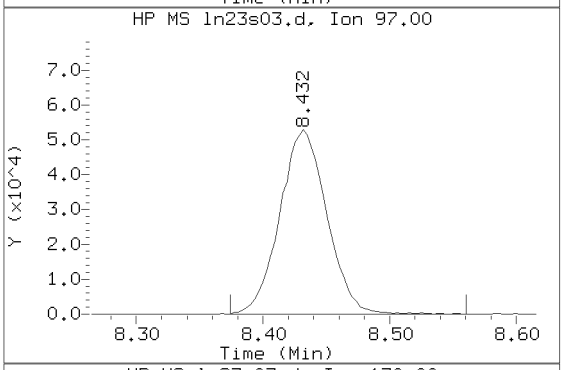


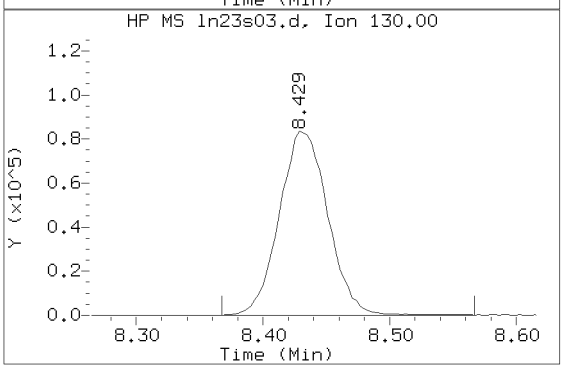
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23s03.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 11:06 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 11:23 Automation

Sample Name: JCW07 Lab Sample ID: 1205900

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 2160
Retention Time (minutes)	: 8.429
Relative Retention Time	: 0.00002
Quant Ion	: 95.00
Area (flag)	: 211651
On-Column Amount (ng)	: 36.3546

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Target 3.5 esignature user ID: lcp00895

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
JCW08

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205903

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s06.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1205903

Data file: /chem/HP09915.i/19nov23a.b/ln23s06.d Injection date and time: **23-NOV-2019 12:12**
Data file Sample Info. Line: JCW08;1205903;1;0;;JCW22;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 12:29 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.500	(-0.010)	938	65	229063	(5)	250.00	
66) Fluorobenzene	7.956	(0.000)	2013	96	1158906	(3)	50.00	
100) Chlorobenzene-d5	11.361	(-0.003)	3072	117	945973	(0)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	499869	(-4)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.069	(0.000)	113	270641	47.767	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	72150	49.965	100%		80 - 120
83) Toluene-d8	(3)	9.930	(0.001)	98	1205725	48.712	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	459683	49.046	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Linda C. Pape on 11/25/2019 at 13:21. Target 3.5 esignature user ID: lcp00895

Data file: /chem/HP09915.i/19nov23a.b/ln23s06.d Injection date and time: **23-NOV-2019 12:12**
Data file Sample Info. Line: JCW08;1205903;1;0;;JCW22;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 12:29 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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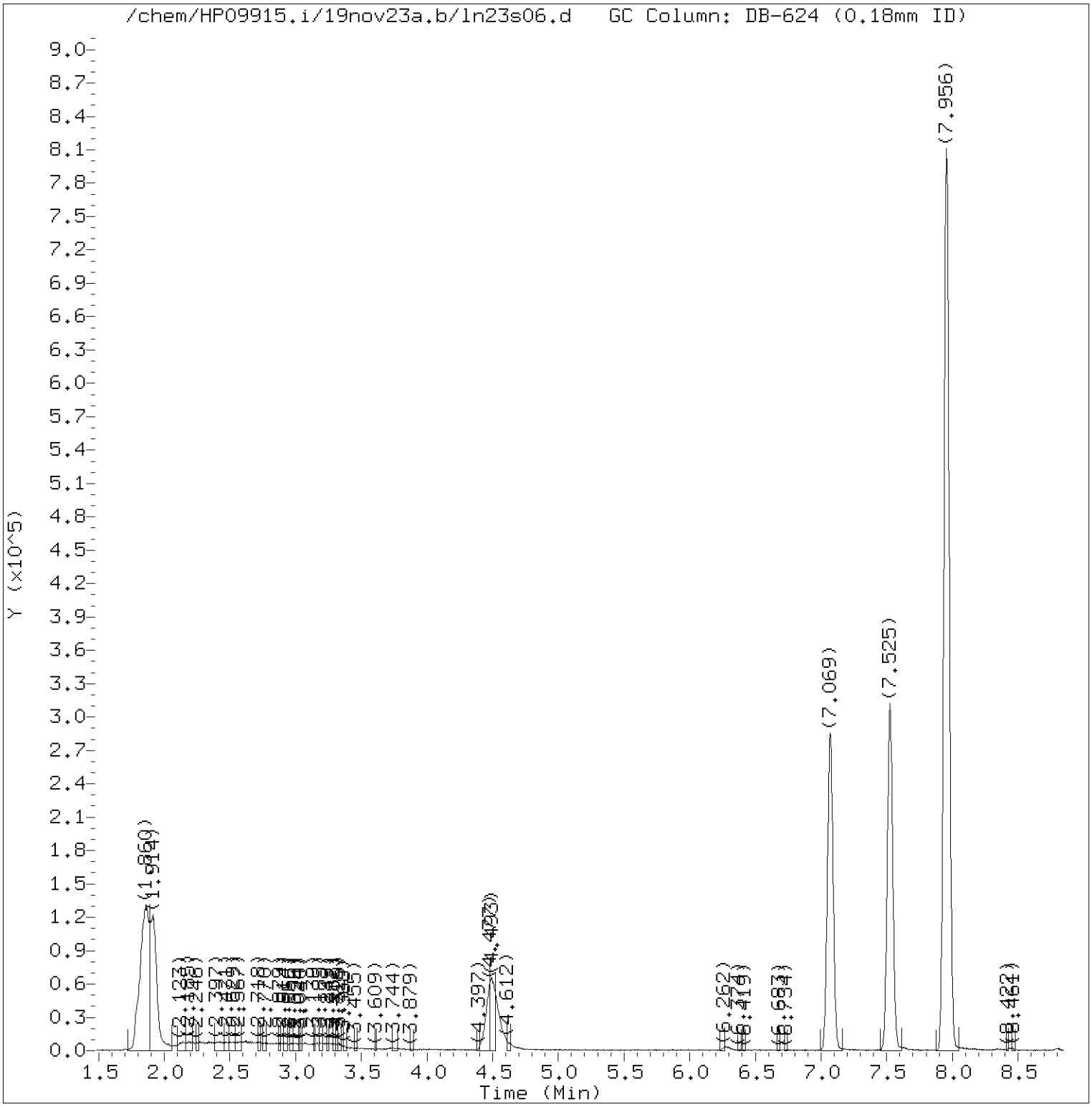
Total number of targets = 24

Digitally signed by Linda C. Pape on 11/25/2019 at 13:21. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

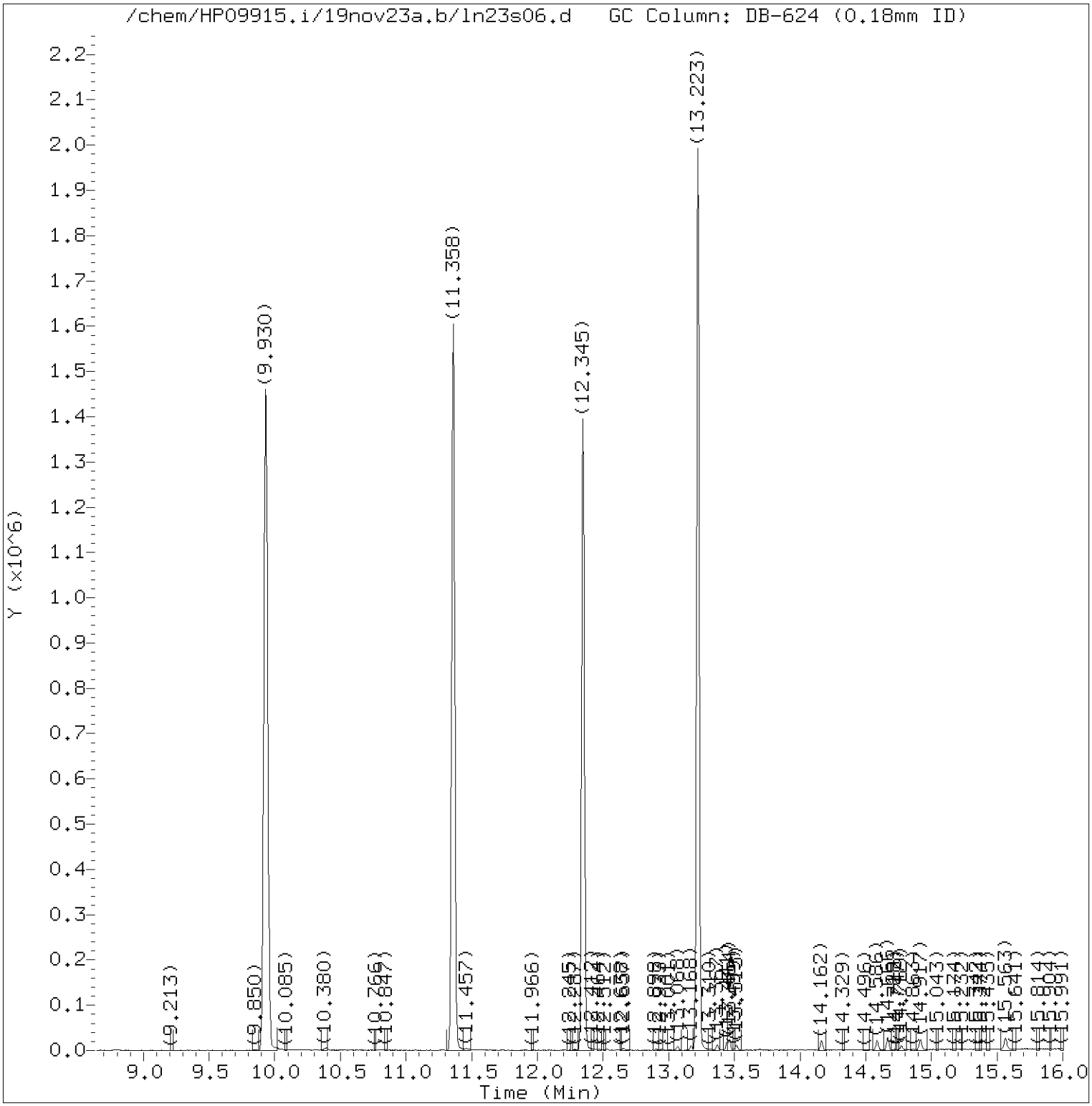
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s06.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 12:12 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 12:29 Automation

Sample Name: JCW08 Lab Sample ID: 1205903

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:21.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s06.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 12:12 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 12:29 Automation

Sample Name: JCW08 Lab Sample ID: 1205903

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:21.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s06.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 12:12 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 12:29 Automation

Sample Name: JCW08 Lab Sample ID: 1205903

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.500	65	229063	250.000
52)$Dibromofluoromethane	(2)	7.069	113	270641	47.767
57)$1,2-Dichloroethane-d4	(2)	7.525	102	72150	49.965
66)*Fluorobenzene	(2)	7.956	96	1158906	50.000
83)$Toluene-d8	(3)	9.930	98	1205725	48.712
100)*Chlorobenzene-d5	(3)	11.361	117	945973	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	459683	49.046
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	499869	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:21.
Target 3.5 esignature user ID: lcp00895

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JCW09

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205904

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s07.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1205904

Data file: /chem/HP09915.i/19nov23a.b/ln23s07.d Injection date and time: **23-NOV-2019 12:34**
Data file Sample Info. Line: JCW09;1205904;1;0;;JCW22;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 12:51 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.499	(-0.010)	938	65	224307	(2)	250.00	
66) Fluorobenzene	7.959	(-0.003)	2014	96	1139589	(1)	50.00	
100) Chlorobenzene-d5	11.361	(-0.003)	3072	117	935660	(-1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.219	(0.003)	3650	152	499734	(-4)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(0.000)	113	271186	48.674	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(0.000)	102	72144	50.808	102%		80 - 120
83) Toluene-d8	(3)	9.930	(0.001)	98	1185185	48.410	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.348	(0.000)	95	457339	49.333	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Linda C. Pape on 11/25/2019 at 13:21. Target 3.5 esignature user ID: lcp00895

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23s07.d Injection date and time: **23-NOV-2019 12:34**
Data file Sample Info. Line: JCW09;1205904;1;0;;JCW22;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 12:51 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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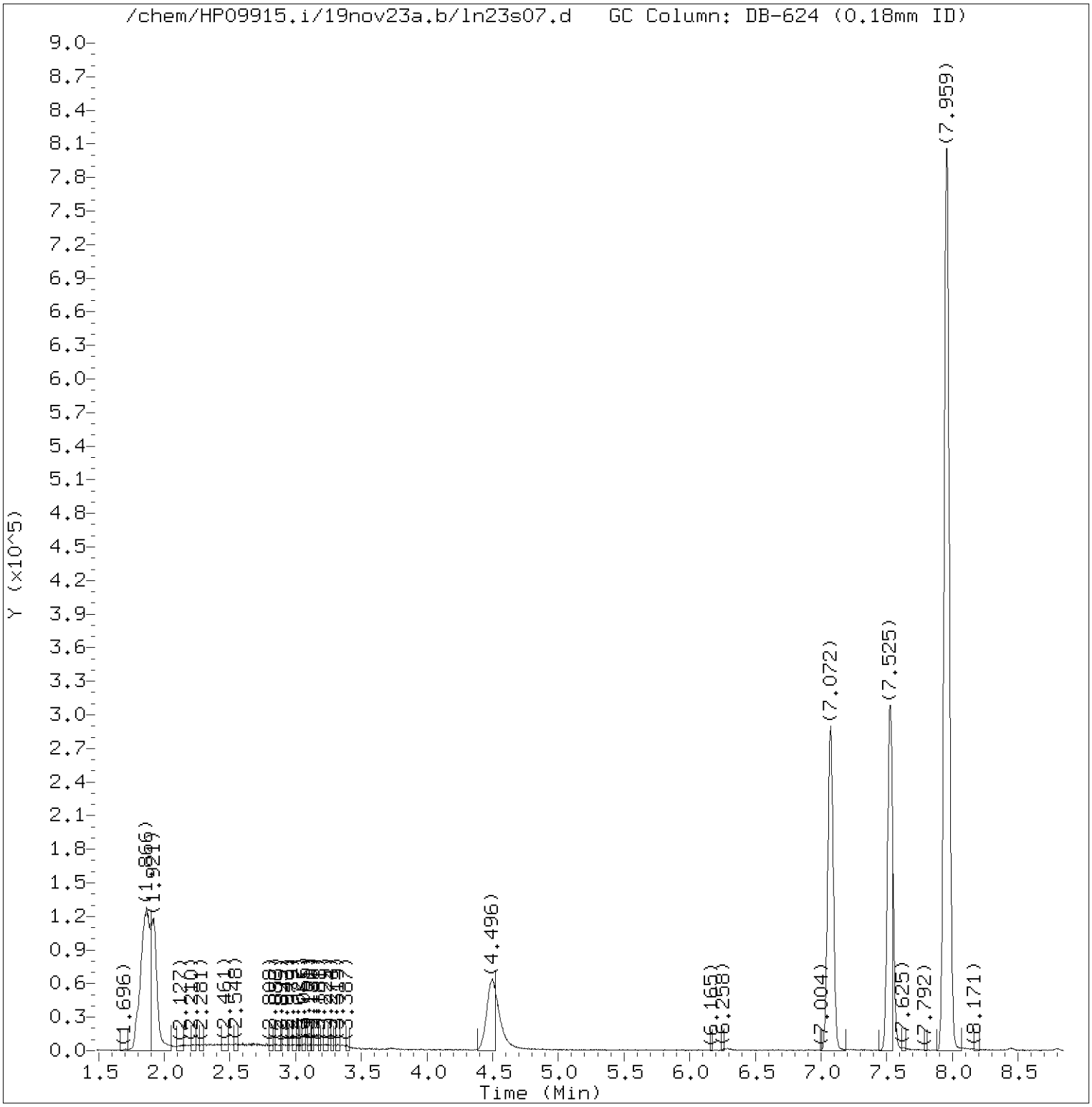
Total number of targets = 24

Digitally signed by Linda C. Pape on 11/25/2019 at 13:21. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

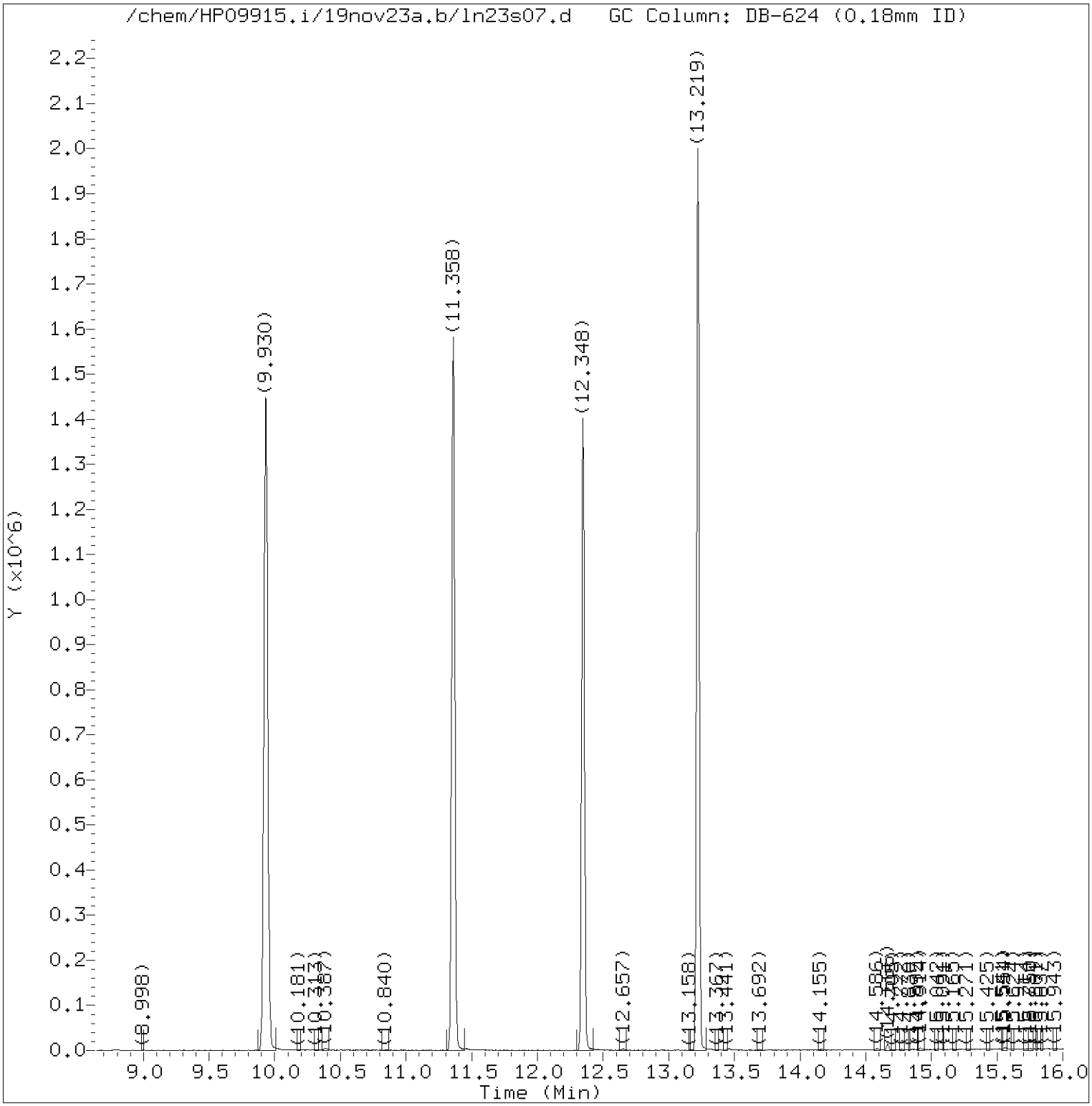
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s07.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 12:34 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 12:51 Automation

Sample Name: JCW09 Lab Sample ID: 1205904

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:21.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s07.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 12:34 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 12:51 Automation

Sample Name: JCW09 Lab Sample ID: 1205904

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:21.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s07.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 12:34 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 12:51 Automation

Sample Name: JCW09 Lab Sample ID: 1205904

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.499	65	224307	250.000
52)$Dibromofluoromethane	(2)	7.075	113	271186	48.674
57)$1,2-Dichloroethane-d4	(2)	7.528	102	72144	50.808
66)*Fluorobenzene	(2)	7.959	96	1139589	50.000
83)$Toluene-d8	(3)	9.930	98	1185185	48.410
100)*Chlorobenzene-d5	(3)	11.361	117	935660	50.000
114)$4-Bromofluorobenzene	(3)	12.348	95	457339	49.333
131)*1,4-Dichlorobenzene-d4	(4)	13.219	152	499734	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:21.
Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JCW10

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205905

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s02.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1205905

Data file: /chem/HP09915.i/19nov23a.b/ln23s02.d Injection date and time: **23-NOV-2019 10:44**
Data file Sample Info. Line: JCW10;1205905;1;0;;JCW22;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 11:02 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.496	(-0.006)	937	65	243725	(11)	250.00	
66) Fluorobenzene	7.956	(0.000)	2013	96	1211224	(7)	50.00	
100) Chlorobenzene-d5	11.358	(0.000)	3071	117	996466	(6)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	533216	(2)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072	(0.000)	113	288795	48.769	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.522	(0.001)	102	77486	51.343	103%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	1264949	48.515	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.348	(0.000)	95	481774	48.798	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Linda C. Pape on 11/25/2019 at 13:19. Target 3.5 esignature user ID: lcp00895

Data file: /chem/HP09915.i/19nov23a.b/ln23s02.d Injection date and time: **23-NOV-2019 10:44**
Data file Sample Info. Line: JCW10;1205905;1;0;;JCW22;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 11:02 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

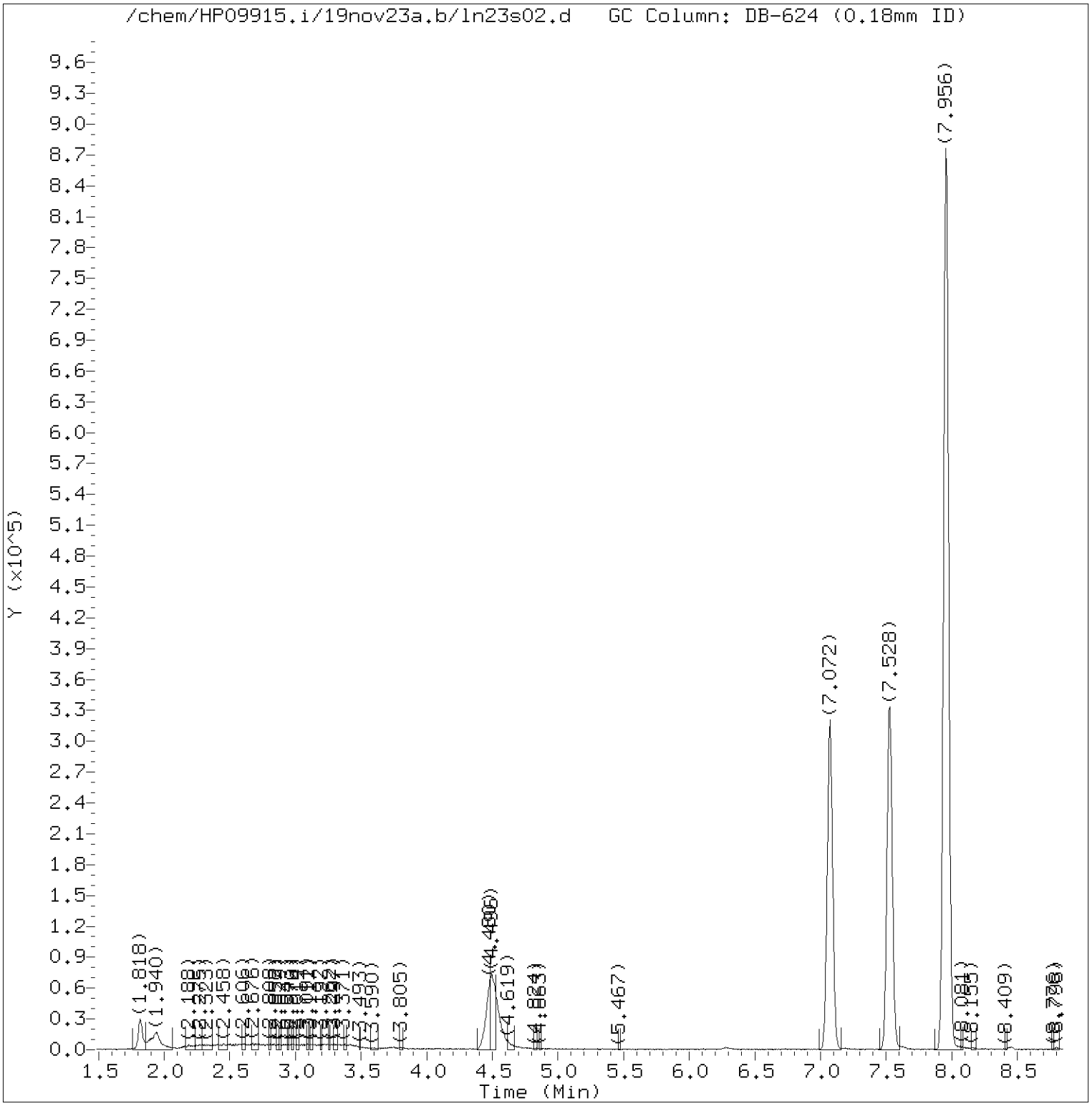
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Linda C. Pape on 11/25/2019 at 13:19. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:45. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

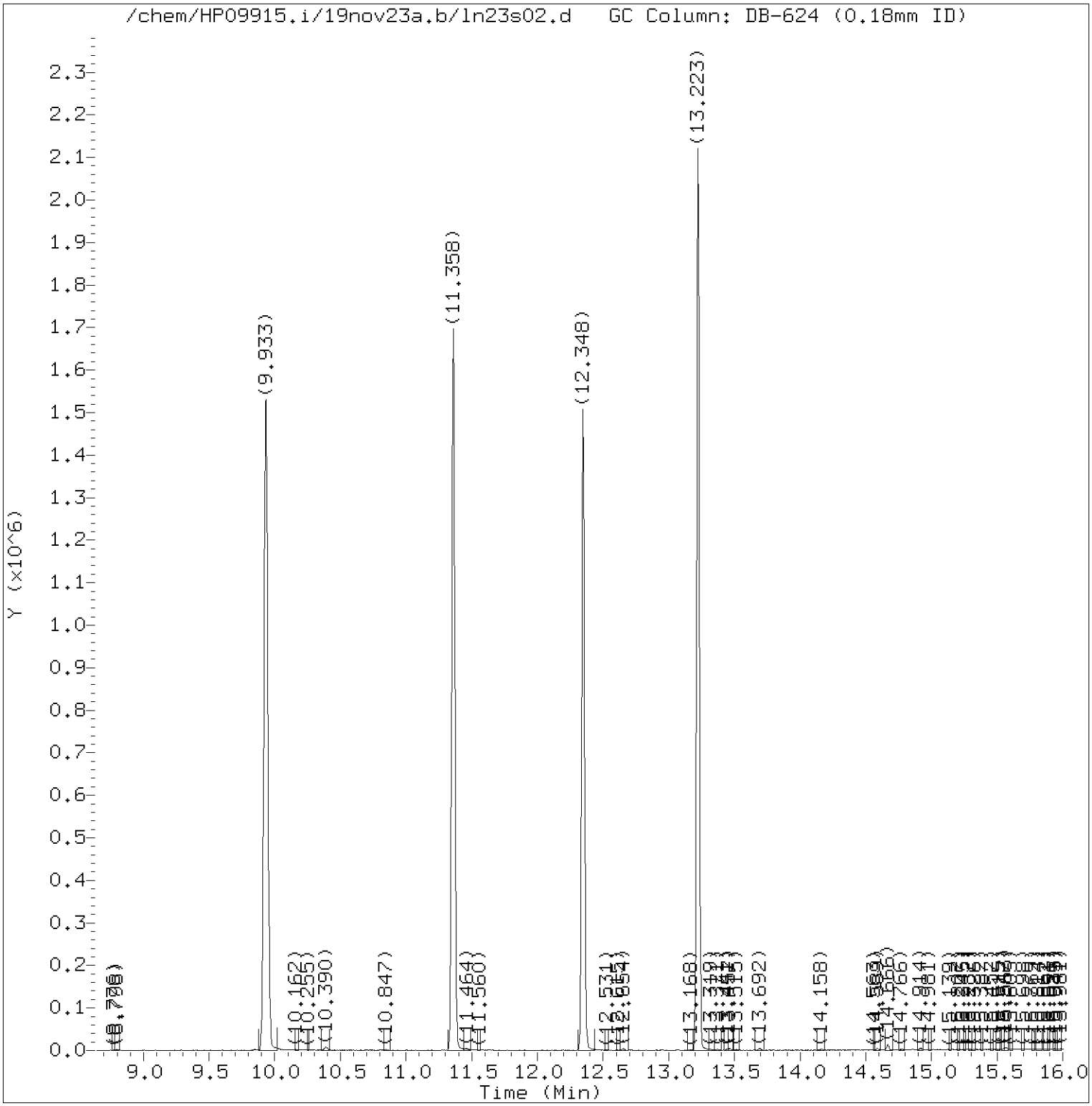
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s02.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 10:44 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 11:02 Automation

Sample Name: JCW10 Lab Sample ID: 1205905

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:19.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s02.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 10:44 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 11:02 Automation

Sample Name: JCW10 Lab Sample ID: 1205905

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:19.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s02.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 10:44 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 11:02 Automation

Sample Name: JCW10 Lab Sample ID: 1205905

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.496	65	243725	250.000
52)$Dibromofluoromethane	(2)	7.072	113	288795	48.769
57)$1,2-Dichloroethane-d4	(2)	7.522	102	77486	51.343
66)*Fluorobenzene	(2)	7.956	96	1211224	50.000
83)$Toluene-d8	(3)	9.933	98	1264949	48.515
100)*Chlorobenzene-d5	(3)	11.358	117	996466	50.000
114)$4-Bromofluorobenzene	(3)	12.348	95	481774	48.798
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	533216	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:19.
Target 3.5 esignature user ID: lcp00895

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\19nov04i\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
KAS02648	LN04T01.D	50NGBFB	11/04/2019	12:52	L191821AA	
KAS02648	LN04T02.D	50NGBFB	11/04/2019	13:05	L191821AA	
KAS02648	LN04T03.D	50NGBFB	11/04/2019	13:27	L191821AA	
KAS02648	LN04T04.D	50NGBFB	11/04/2019	13:45	L191821AA	
KAS02648	LN04T05.D	50NGBFB	11/04/2019	14:07	L191821AA	
KAS02648	LN04T06.D	50NGBFB	11/04/2019	14:18	L191821AA	
KAS02648	LN04X01.D	CLNBLK	11/04/2019	14:29		
KAS02648	LN04I01.D	VSTD300	11/04/2019	14:51		
KAS02648	LN04I02.D	VSTD100	11/04/2019	15:13		
KAS02648	LN04I03.D	VSTD050	11/04/2019	15:35		
KAS02648	LN04I04.D	VSTD020	11/04/2019	15:57		
KAS02648	LN04I05.D	VSTD010	11/04/2019	16:19		
KAS02648	LN04I06.D	VSTD004	11/04/2019	16:41		
KAS02648	LN04I07.D	VSTD001	11/04/2019	17:03		
KAS02648	LN04V01.D	ICVLLG	11/04/2019	17:25		
KAS02648	LN04V02.D	ICVLLG	11/04/2019	18:42		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\19NOV22a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
lcp00895	LN22T01.D	50NGBFB	11/22/2019	07:53	L191821AA	
lcp00895	LN22X01.D	CBLK	11/22/2019	08:16	L193261AA	
lcp00895	LN22C01.D	VSTD050	11/22/2019	08:38	L193261AA	
lcp00895	LN22S02.D	LCDL85	11/22/2019	09:00	L193261AA	
lcp00895	LN22S01.D	LCSL85	11/22/2019	09:22	L193261AA	
lcp00895	LN22R01.D	RLVL85	11/22/2019	09:45	L193261AA	
lcp00895	LN22B01.D	VBLKL85	11/22/2019	10:07	L193261AA	
lcp00895	LN22S03.D	1202250	11/22/2019	10:29	L193261AA	
lcp00895	LN22S04.D	1202251	11/22/2019	10:51	L193261AA	
lcp00895	LN22S05.D	1202252	11/22/2019	11:13	L193261AA	
lcp00895	LN22S06.D	1202253	11/22/2019	11:35	L193261AA	
lcp00895	LN22S33.D	1205927	11/22/2019	11:57	L193262AA	
lcp00895	LN22S34.D	1205893	11/22/2019	12:19	L193262AA	
lcp00895	LN22S35.D	1205894MS	11/22/2019	12:42	L193262AA	
lcp00895	LN22S36.D	1205895MSD	11/22/2019	13:04	L193262AA	
lcp00895	LN22S37.D	1205892	11/22/2019	13:26	L193262AA	
lcp00895	LN22S38.D	1205896	11/22/2019	13:48	L193262AA	
lcp00895	LN22S39.D	1205897	11/22/2019	14:10	L193262AA	
lcp00895	LN22S40.D	1205898	11/22/2019	14:32	L193262AA	
lcp00895	LN22S41.D	1205899	11/22/2019	14:54	L193262AA	
lcp00895	LN22S42.D	1205919	11/22/2019	15:16	L193262AA	
lcp00895	LN22S43.D	1205920	11/22/2019	15:38	L193262AA	
lcp00895	LN22S44.D	1205921	11/22/2019	16:00	L193262AA	
lcp00895	LN22S45.D	1205922	11/22/2019	16:22	L193262AA	
lcp00895	LN22S46.D	1205923	11/22/2019	16:44	L193262AA	
lcp00895	LN22S47.D	1205924	11/22/2019	17:06	L193262AA	
lcp00895	LN22S48.D	1205925	11/22/2019	17:28	L193262AA	
lcp00895	LN22S49.D	1205926	11/22/2019	17:50	L193262AA	

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\19nov23a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
CLM27445	LN23X55.D	VBLKL85	11/23/2019	06:24	L193261AA	
CLM27445	LN23T01.D	50NGBFB	11/23/2019	07:45	L193271AA	
CLM27445	LN23T02.D	50NGBFB	11/23/2019	07:57	L193271AA	
CLM27445	LN23X00.D	VBLKL87	11/23/2019	08:20	L193271AA	
CLM27445	LN23C01.D	VSTD050	11/23/2019	08:42	L193271AA	
CLM27445	LN23X60.D	VBLKL87	11/23/2019	09:04	L193271AA	
CLM27445	LN23S01.D	LCSL87	11/23/2019	09:26	L193271AA	
CLM27445	LN23B01.D	VBLKL87	11/23/2019	09:48	L193271AA	
CLM27445	LN23S02.D	1205905	11/23/2019	10:44	L193271AA	
CLM27445	LN23S03.D	1205900	11/23/2019	11:06	L193271AA	
CLM27445	LN23S04.D	1205901MS	11/23/2019	11:28	L193271AA	
CLM27445	LN23S05.D	1205902MSD	11/23/2019	11:50	L193271AA	
CLM27445	LN23S06.D	1205903	11/23/2019	12:12	L193271AA	
CLM27445	LN23S07.D	1205904	11/23/2019	12:34	L193271AA	
CLM27445	LN23S08.D	1205910	11/23/2019	12:56	L193271AA	
CLM27445	LN23S09.D	1205911	11/23/2019	13:18	L193271AA	
CLM27445	LN23S10.D	1205912	11/23/2019	13:40	L193271AA	
CLM27445	LN23S11.D	1205913	11/23/2019	14:02	L193271AA	
CLM27445	LN23S12.D	1205914	11/23/2019	14:24	L193271AA	
CLM27445	LN23S13.D	1205915	11/23/2019	14:46	L193271AA	
CLM27445	LN23S14.D	1205916	11/23/2019	15:08	L193271AA	
CLM27445	LN23S15.D	1205917	11/23/2019	15:31	L193271AA	
CLM27445	LN23S16.D	1205918	11/23/2019	15:53	L193271AA	
CLM27445	LN23S17.D	1205928	11/23/2019	16:15	L193271AA	
CLM27445	LN23S18.D	1205929	11/23/2019	16:37	L193271AA	
CLM27445	LN23S19.D	1206738	11/23/2019	16:59	L193271AA	
CLM27445	LN23S20.D	1206739	11/23/2019	17:21	L193271AA	
CLM27445	LN23S21.D	1206740	11/23/2019	17:43	L193271AA	

Data File: /chem/HP09915.i/19nov04i.b/ln04t06.d

Date : 04-NOV-2019 14:18

Client ID: AUG02-19

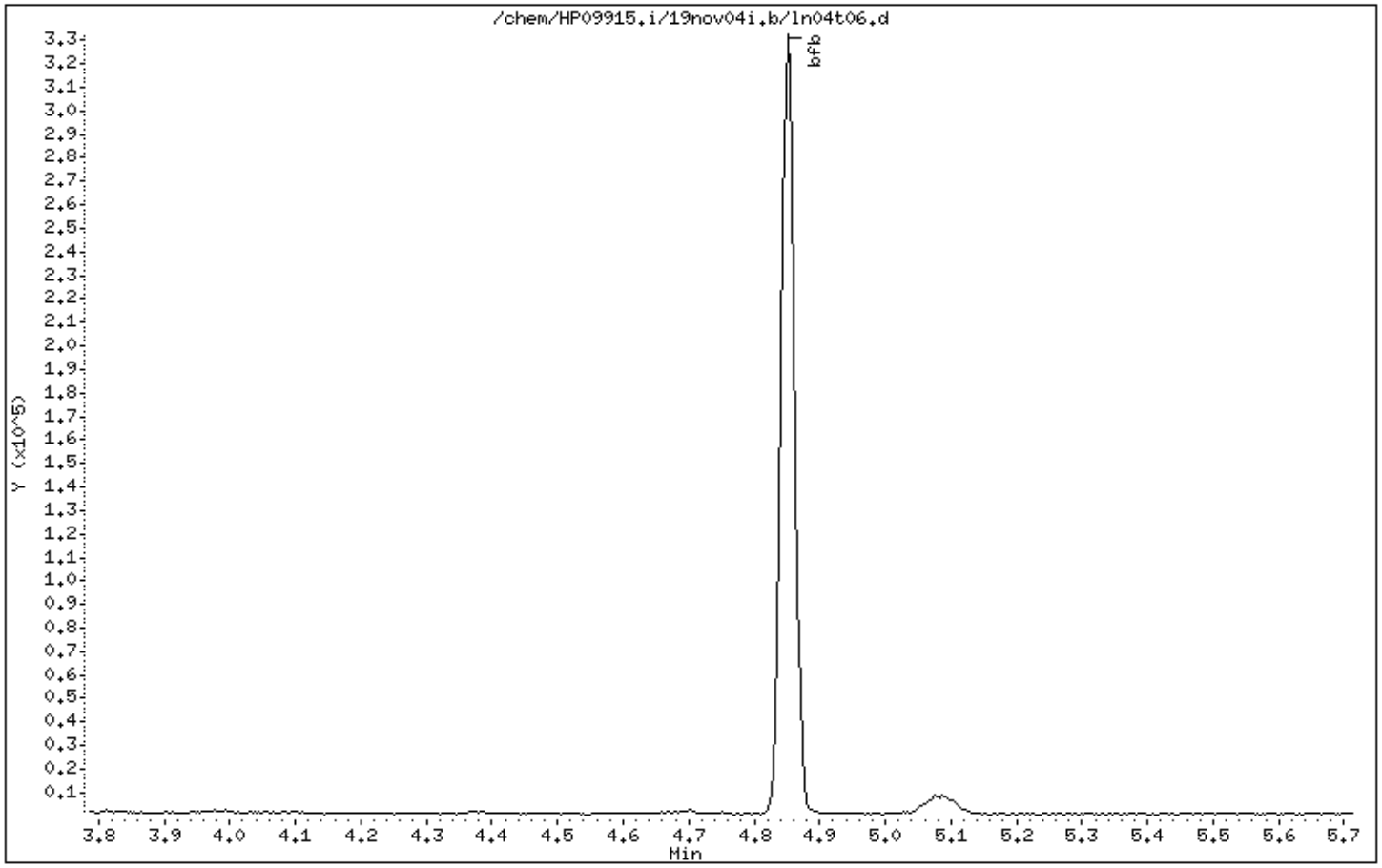
Instrument: HP09915.i

Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem/HP09915.i/19nov04i.b/ln04t06.d

Date : 04-NOV-2019 14:18

Client ID: AUG02-19

Instrument: HP09915.i

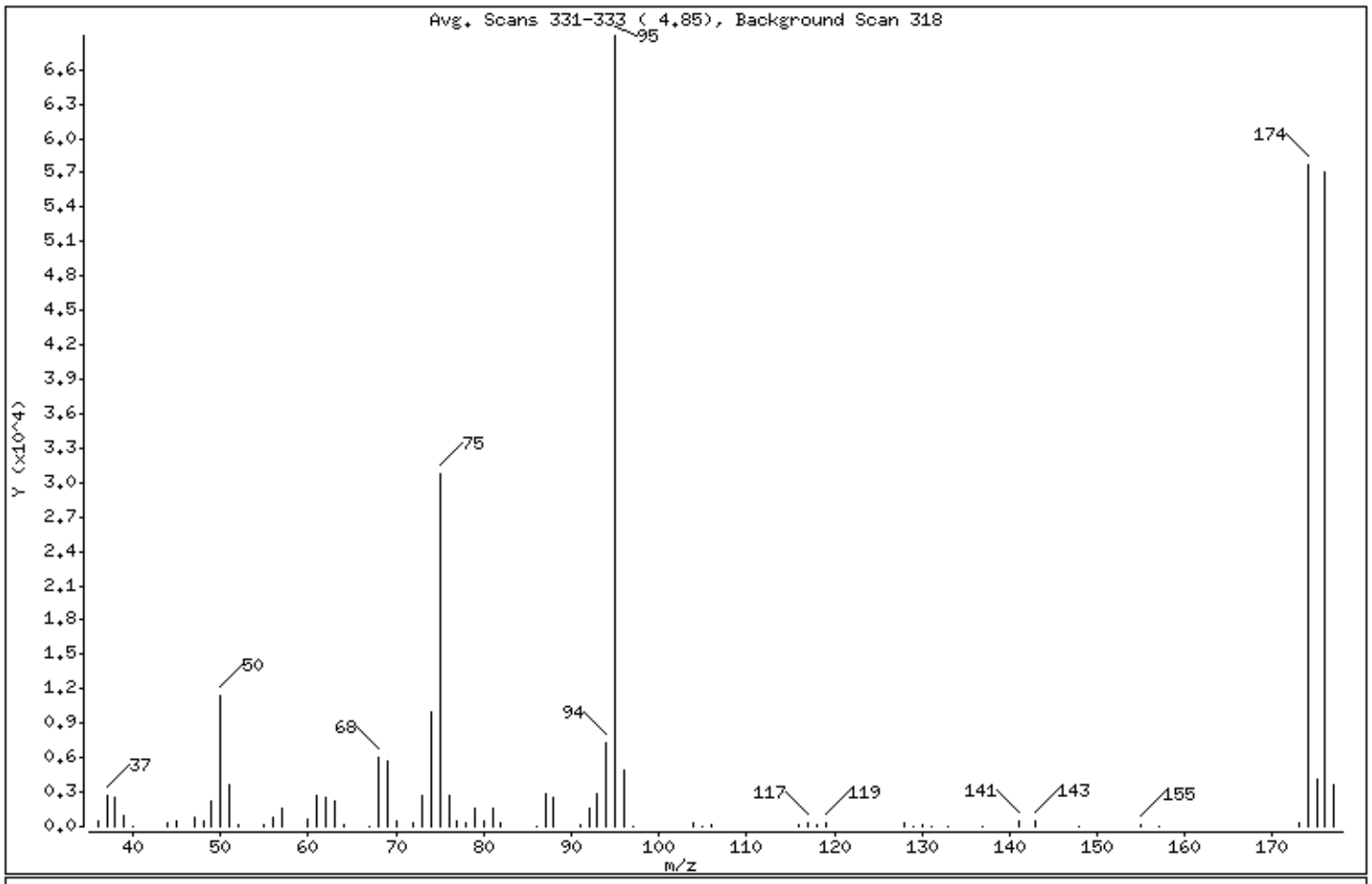
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.48
75	30.00 - 60.00% of mass 95	44.65
96	5.00 - 9.00% of mass 95	7.22
173	Less than 2.00% of mass 174	0.51 (0.61)
174	50.00 - 100.00% of mass 95	83.73
175	5.00 - 9.00% of mass 174	5.92 (7.07)
176	95.00 - 101.00% of mass 174	82.66 (98.72)
177	5.00 - 9.00% of mass 176	5.37 (6.49)

Date : 04-NOV-2019 14:18

Client ID: AUG02-19 Instrument: HP09915.i

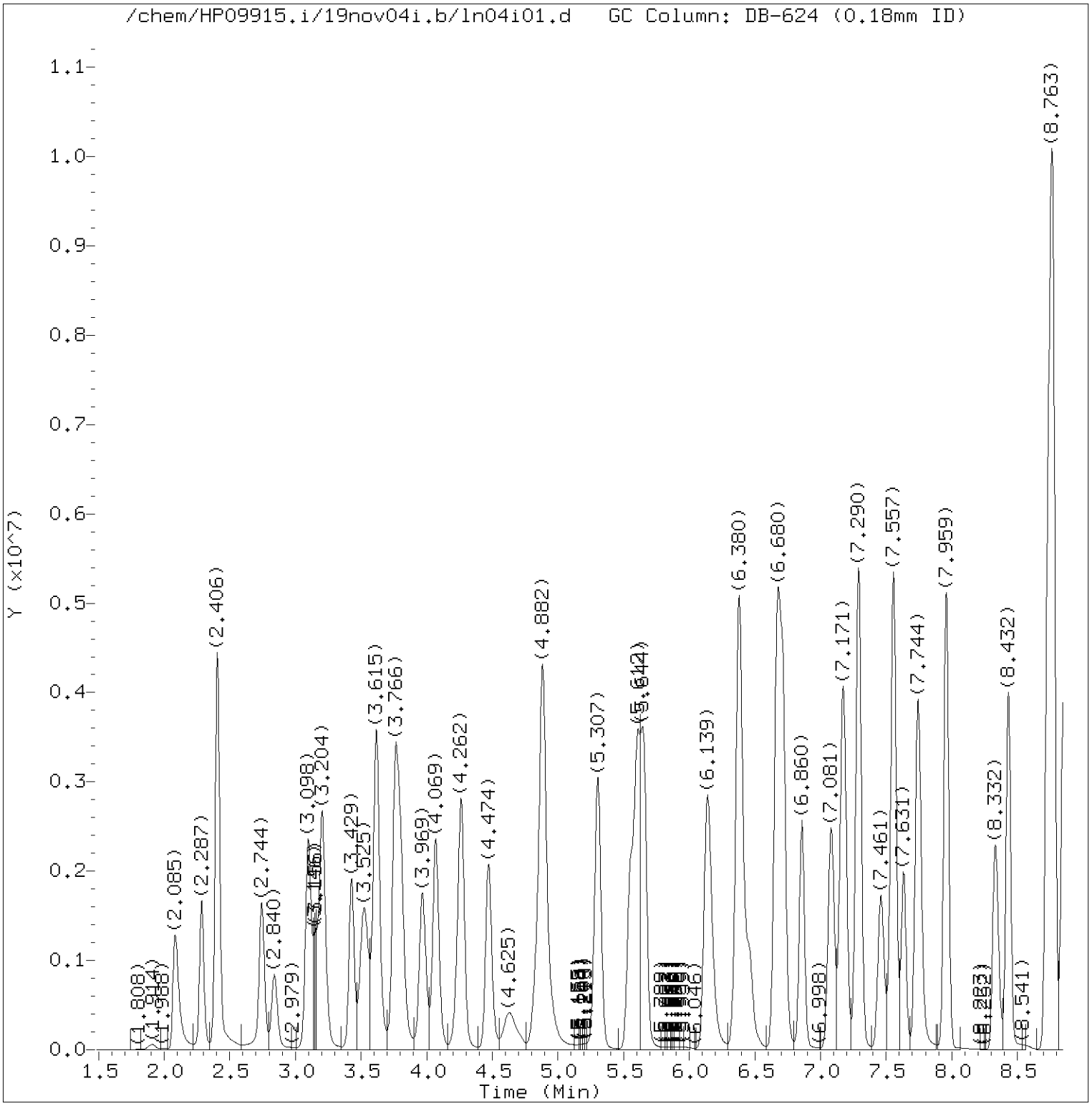
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: ln04t06.d
Spectrum: Avg. Scans 331-333 (4.85), Background Scan 318
Location of Maximum: 95.00
Number of points: 69

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	529	62.00	2498	86.00	55	129.00	53
37.00	2736	63.00	2218	87.00	2840	130.00	112
38.00	2557	64.00	150	88.00	2593	131.00	53
39.00	971	67.00	71	91.00	144	133.00	52
40.00	22	68.00	6076	92.00	1588	137.00	53
44.00	270	69.00	5647	93.00	2845	141.00	538
45.00	457	70.00	476	94.00	7275	143.00	484
47.00	784	72.00	322	95.00	68968	148.00	77
48.00	424	73.00	2656	96.00	4977	155.00	162
49.00	2292	74.00	10024	97.00	62	157.00	63
50.00	11364	75.00	30792	104.00	284	173.00	350
51.00	3586	76.00	2712	105.00	50	174.00	57744
52.00	134	77.00	405	106.00	233	175.00	4082
55.00	217	78.00	267	116.00	189	176.00	57008
56.00	871	79.00	1601	117.00	348	177.00	3701
57.00	1629	80.00	440	118.00	231		
60.00	555	81.00	1543	119.00	348		
61.00	2700	82.00	307	128.00	239		



Total Ion Chromatogram (TIC)

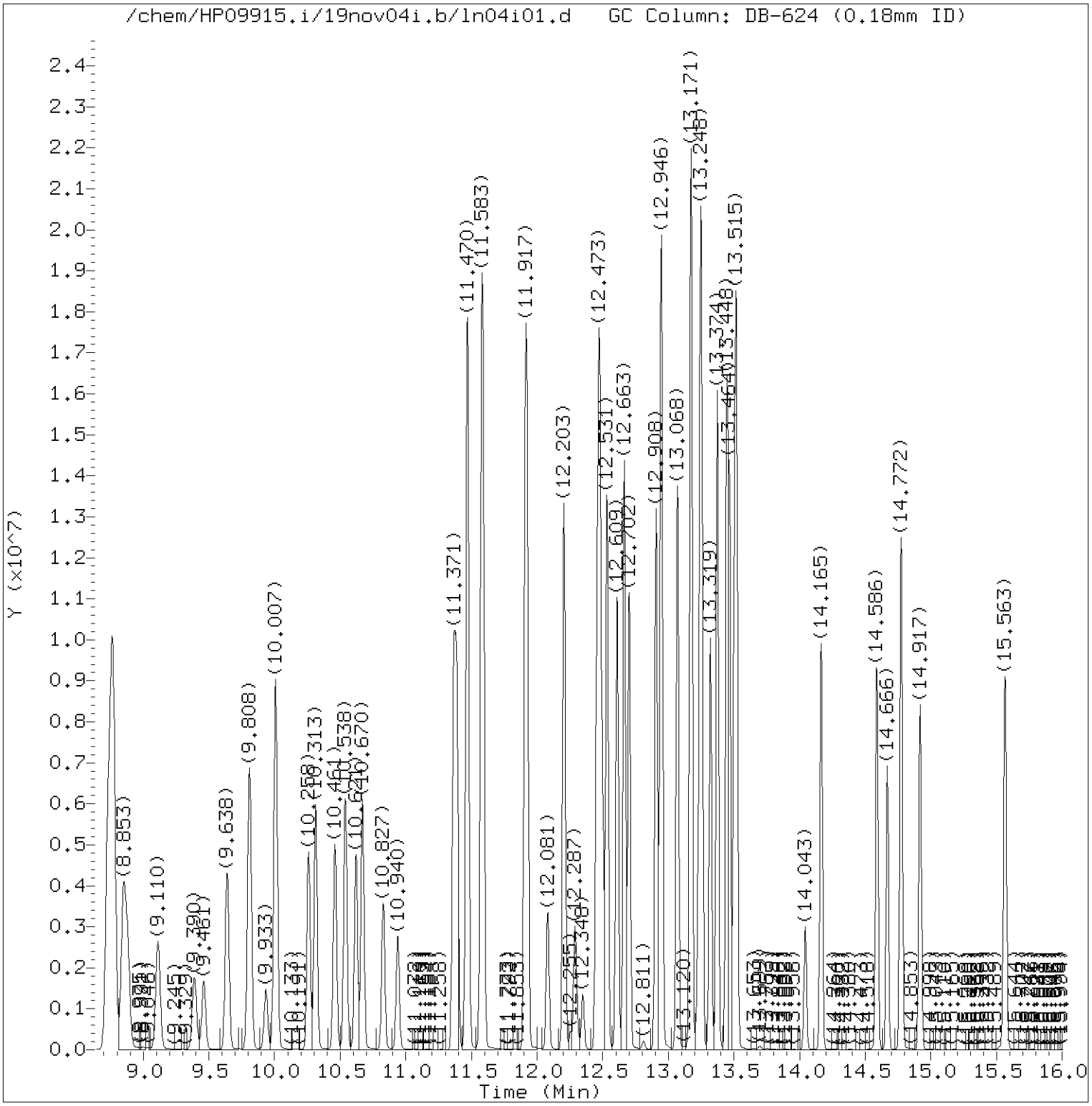
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.085	85	2719746M	347.943
4) Chloromethane	(2)	2.287	50	2403581	319.051
5) 1,3-Butadiene	(2)	2.406	39	1785787M	285.486
6) Vinyl Chloride	(2)	2.406	62	2412855	320.904
8) Bromomethane	(2)	2.744	94	1638575	304.015
9) Chloroethane	(2)	2.837	64	1253478	303.356
12) Trichlorofluoromethane	(2)	3.152	101	2661050	328.734
11) n-Pentane	(2)	3.204	43	2816823	294.455
14) Ethyl ether	(2)	3.429	59	1721693	329.146
15) Freon 123a	(2)	3.525	67	1991616	305.852
16) Acrolein	(1)	3.615	56	5765354	3020.583
17) 1,1-Dichloroethene	(2)	3.760	96	1489890	313.570
17) 1,1-Dichloroethene	(2)	3.757	63	721205	302.767
19) Freon 113	(2)	3.792	101	1732433	319.583
18) Acetone	(1)	3.802	58	531845	621.534
22) Methyl Iodide	(2)	3.966	142	3047145	309.483
21) 2-Propanol	(1)	3.995	45	936919	1523.065
23) Carbon Disulfide	(2)	4.069	76	5676465	317.027
27) Methyl Acetate	(2)	4.239	43	1941315	317.230
25) Allyl Chloride	(2)	4.265	41	2748698	322.482
28) Methylene Chloride	(2)	4.474	84	1745840	308.716
29)*t-Butyl alcohol-d10	(1)	4.503	65	254406M	250.000
30) t-Butyl alcohol	(1)	4.638	59	1641037	1532.140
31) Acrylonitrile	(2)	4.827	53	1039800	315.820
32) trans-1,2-Dichloroethene	(2)	4.885	96	1713357	311.714
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	5505439	305.143
34) n-Hexane	(2)	5.307	57	2863189M	334.811
36) 1,1-Dichloroethane	(2)	5.548	63	3007196	313.618
38) di-Isopropyl ether	(2)	5.609	45	5739955	310.377
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	2776921	322.788
40) Ethyl t-butyl ether	(2)	6.139	59	5425034	302.275
43) 1,2-Dichloroethene (Total)	(2)		96	3646040	624.977
44) 2-Butanone	(2)	6.364	43	2642793	625.317
42) cis-1,2-Dichloroethene	(2)	6.380	96	1932683	313.263
45) 2,2-Dichloropropane	(2)	6.397	77	2377411	318.945
47) Propionitrile	(1)	6.458	54	2126389	1593.336
48) Methacrylonitrile	(2)	6.670	67	2858148	804.768
49) Bromochloromethane	(2)	6.708	128	1075154	328.655

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.718	71	758236	628.991
51) Chloroform	(2)	6.860	83	2916299	317.988
52)$Dibromofluoromethane	(2)	7.075	113	276322	50.424
52)$Dibromofluoromethane	(2)	7.075	111	279197	49.969
53) 1,1,1-Trichloroethane	(2)	7.081	97	2560601	327.130
54) Cyclohexane	(2)	7.171	56	3429211	327.611
54) Cyclohexane	(2)	7.171	84	2984908	328.282
54) Cyclohexane	(2)	7.171	69	1068201	329.937
56) Carbon Tetrachloride	(2)	7.287	117	2252864	339.350
55) 1,1-Dichloropropene	(2)	7.294	75	2434619	321.125
58) Isobutyl Alcohol	(1)	7.461	41	1382486	3835.573
57)$1,2-Dichloroethane-d4	(2)	7.528	102	68480	49.033
57)$1,2-Dichloroethane-d4	(2)	7.532	65	307306	49.375
57)$1,2-Dichloroethane-d4	(2)	7.528	104	44002	49.326
60) Benzene	(2)	7.557	78	7094466	311.169
61) 1,2-Dichloroethane	(2)	7.634	62	2222342	303.049
61) 1,2-Dichloroethane	(2)	7.634	98	228988	315.535
65) t-Amyl methyl ether	(2)	7.744	73	5421278	300.945
67) n-Heptane	(2)	7.959	43	2592531MA	324.518
66)*Fluorobenzene	(2)	7.959	96	1120873	50.000
69) n-Butanol	(1)	8.332	56	2465385M	7947.068
71) Trichloroethene	(2)	8.432	95	1841720	320.821
72) Methylcyclohexane	(2)	8.734	83	3568410	335.054
72) Methylcyclohexane	(2)	8.734	98	1632993	338.844
73) 1,2-Dichloropropane	(2)	8.769	63	1825943	315.397
76) Methyl Methacrylate	(2)	8.850	69	1904896A	340.256
75) 1,4-Dioxane	(1)	8.856	88	338379M	3968.421
74) Dibromomethane	(2)	8.879	93	1210939	323.274
78) Bromodichloromethane	(2)	9.113	83	2314651	344.351
79) 2-Nitropropane	(2)	9.390	41	1438925	706.755
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	926413	372.584
81) cis-1,3-Dichloropropene	(2)	9.638	75	3074664	344.402
82) 4-Methyl-2-pentanone	(2)	9.808	43	5422938	607.899
83)$Toluene-d8	(3)	9.933	98	1156351	49.563
83)$Toluene-d8	(3)	9.933	100	751534	49.726
88) Toluene	(3)	10.007	92	4532879	309.894
90) 1,3-Dichloropropene (total)	(3)		100	5974636	693.659
89) trans-1,3-Dichloropropene	(3)	10.258	75	2899972	349.257

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	10.313	69	3356305	332.603
92) 1,1,2-Trichloroethane	(3)	10.461	97	1768710	318.935
93) Tetrachloroethene	(3)	10.541	166	1990565	321.327
94) 1,3-Dichloropropane	(3)	10.621	76	3006585	317.532
96) 2-Hexanone	(3)	10.670	43	3998423	593.616
97) Dibromochloromethane	(3)	10.827	129	2037523	358.670
99) 1,2-Dibromoethane	(3)	10.940	107	1987783	330.088
100)*Chlorobenzene-d5	(3)	11.361	117	891668	50.000
101) 1-Chlorohexane	(3)	11.364	91	2458057	312.814
102) Chlorobenzene	(3)	11.387	112	5140609	310.783
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	1789998	328.446
104) Ethylbenzene	(3)	11.470	91	8606821	307.854
106) m+p-Xylene	(3)	11.583	106	6690837	608.359
108) Xylene (Total)	(3)		106	9979970	911.130
107) o-Xylene	(3)	11.908	106	3289133	302.771
109) Styrene	(3)	11.924	104	5647939	314.619
110) Bromoform	(3)	12.081	173	1534520	361.500
111) Isopropylbenzene	(3)	12.203	105	8466138	310.714
112) Cyclohexanone	(1)	12.287	55	1351186	4046.080
114)$4-Bromofluorobenzene	(3)	12.348	95	440049	49.810
114)$4-Bromofluorobenzene	(3)	12.348	174	362553	49.502
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	2800639M	310.705
115) Bromobenzene	(4)	12.467	156	2234066	311.517
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	2150976	773.637
117) 1,2,3-Trichloropropane	(4)	12.499	110	866230	313.172
119) n-Propylbenzene	(4)	12.531	91	9654812	308.142
120) 2-Chlorotoluene	(4)	12.609	126	2098494	315.266
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	7238022	317.873
121) 4-Chlorotoluene	(4)	12.702	126	2155793	311.148
124) tert-Butylbenzene	(4)	12.908	134	1524421M	323.717
125) Pentachloroethane	(4)	12.940	167	1461833	360.511
126) 1,2,4-Trimethylbenzene	(4)	12.949	105	7469187	311.236
127) sec-Butylbenzene	(4)	13.068	105	8682126	308.971
129) 1,3-Dichlorobenzene	(4)	13.168	146	3858953	292.822
130) p-Isopropyltoluene	(4)	13.174	119	7289488	299.854
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	477171	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	4013510	293.777
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	7915203	311.364

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Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.319	91	6484944	336.931
136) 1,3-Diethylbenzene	(4)	13.374	119	4897725	309.573
141) Diethylbenzene (total)	(4)		100	13982971	913.975
137) 1,4-Diethylbenzene	(4)	13.444	119	5013123	299.077
139) n-Butylbenzene	(4)	13.467	92	3608595	290.316
138) 1,2-Dichlorobenzene	(4)	13.502	146	3859125	296.761
140) 1,2-Diethylbenzene	(4)	13.518	119	4072123	305.325
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	669008	339.050
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	2855960	285.855
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	2681523	276.030
147) Hexachlorobutadiene	(4)	14.670	225	1157297	252.311
148) Naphthalene	(4)	14.772	128	9186333	294.145
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	2488608	263.270
150) 2-Methylnaphthalene	(4)	15.563	142	4666682	242.655

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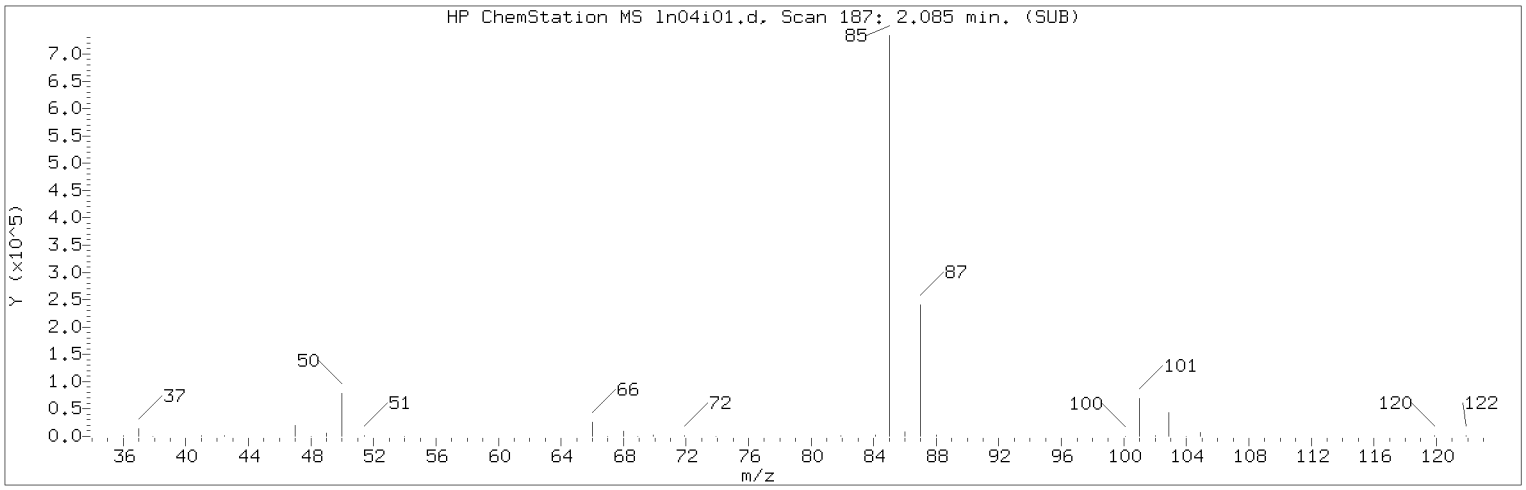
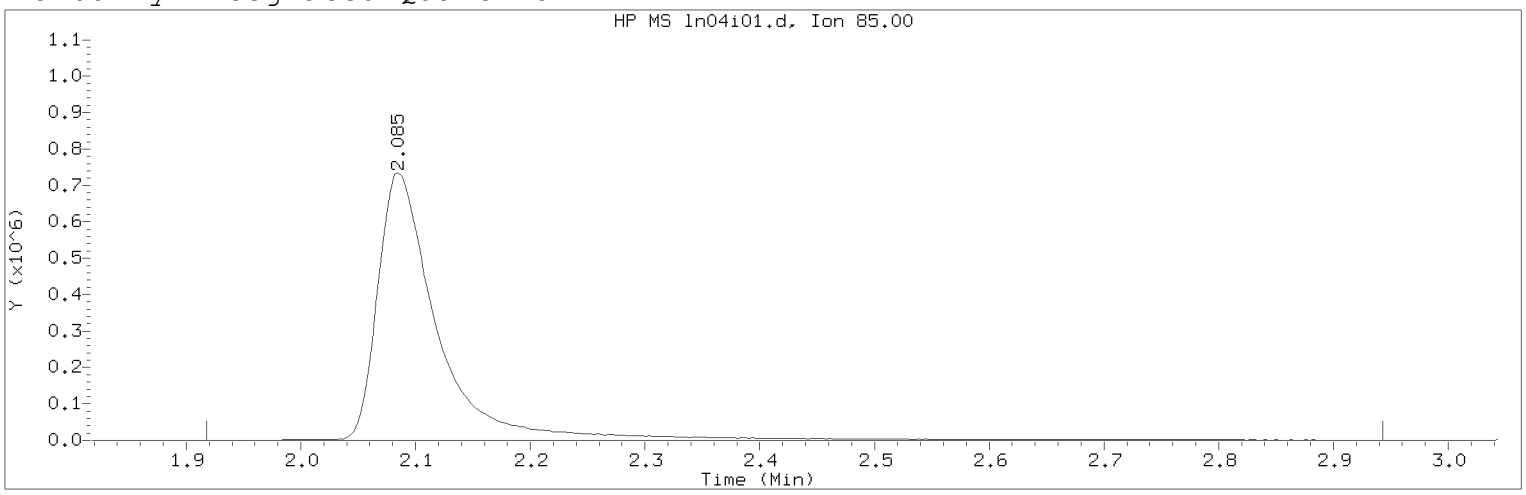
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

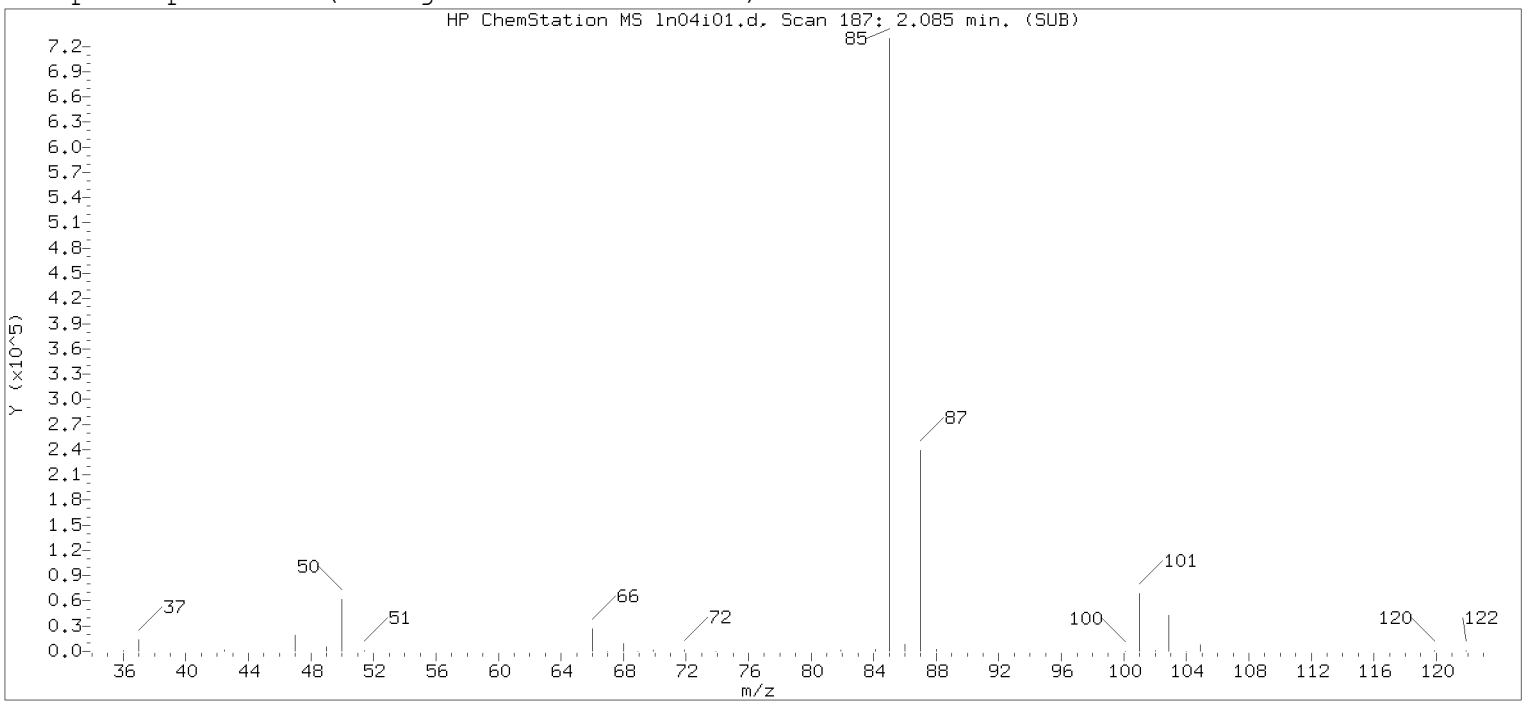
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area (flag) : 2719746M
On-Column Amount (ng) : 347.9426
Integration start scan : 134 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

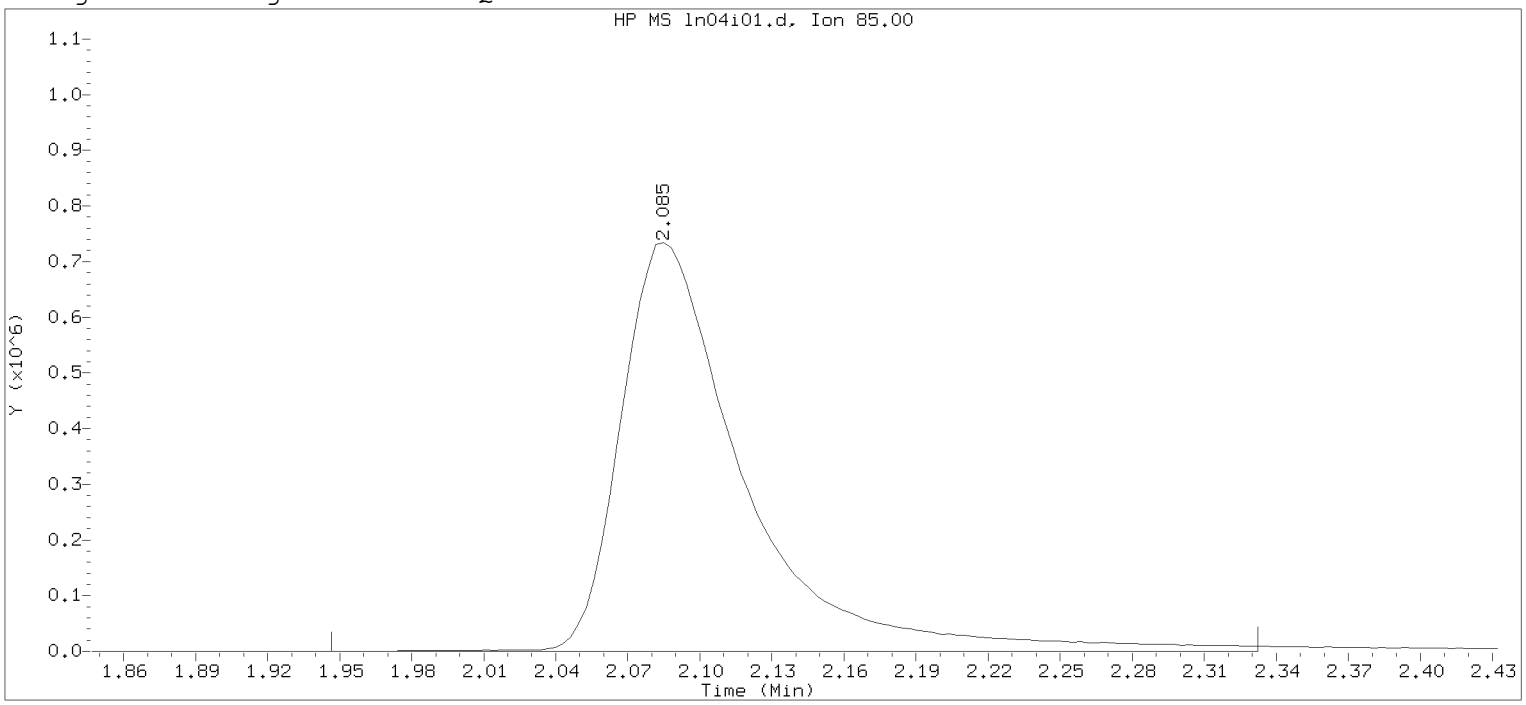
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

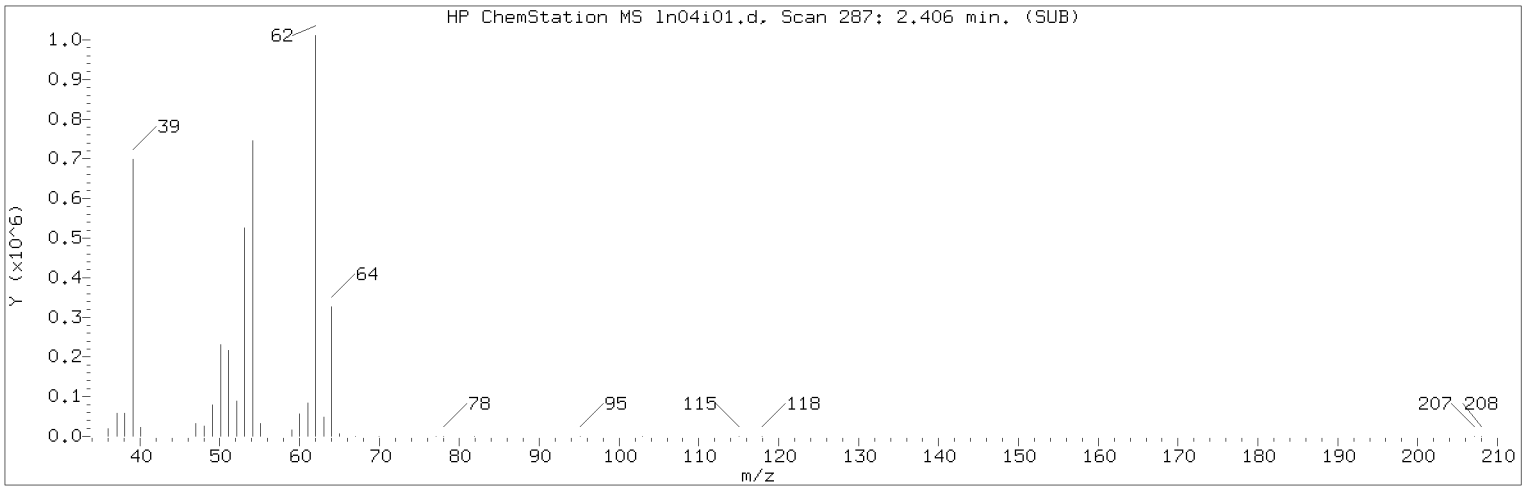
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

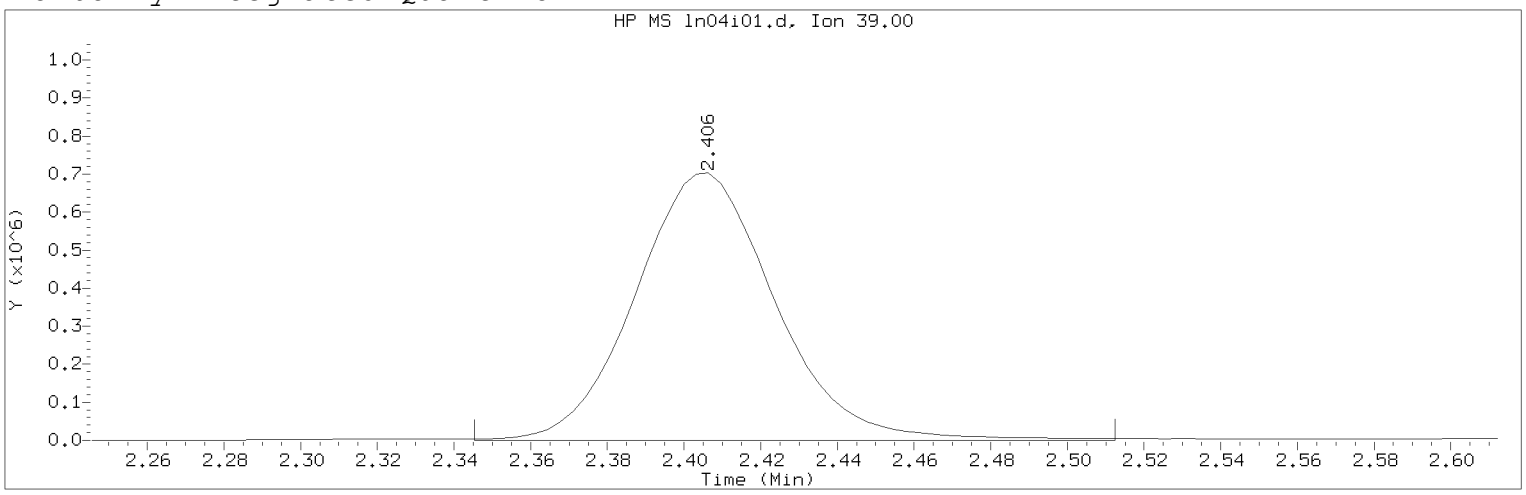
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area : 2624212
On-column Amount (ng) : 308.6520
Integration start scan : 143 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

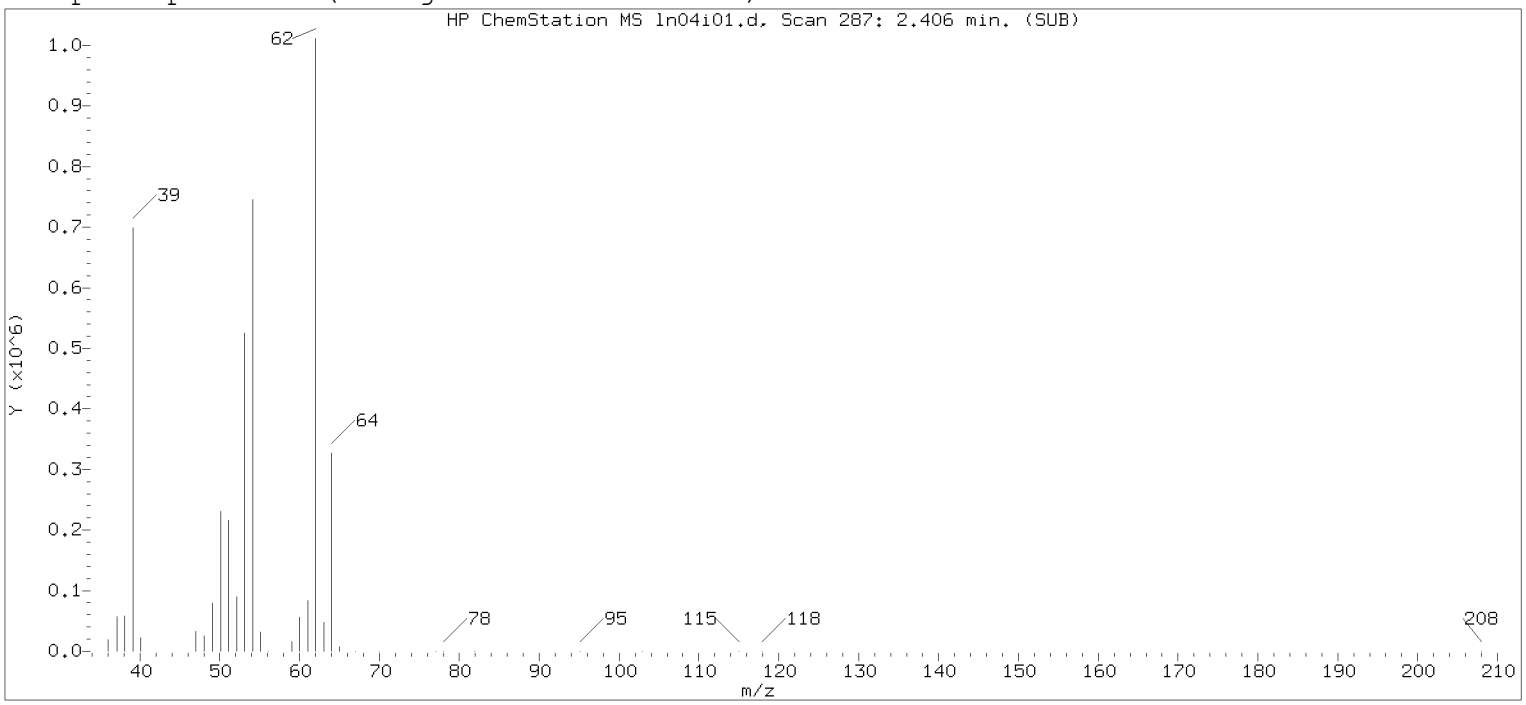
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 1785787M
On-Column Amount (ng) : 285.4858
Integration start scan : 267 Integration stop scan: 319
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

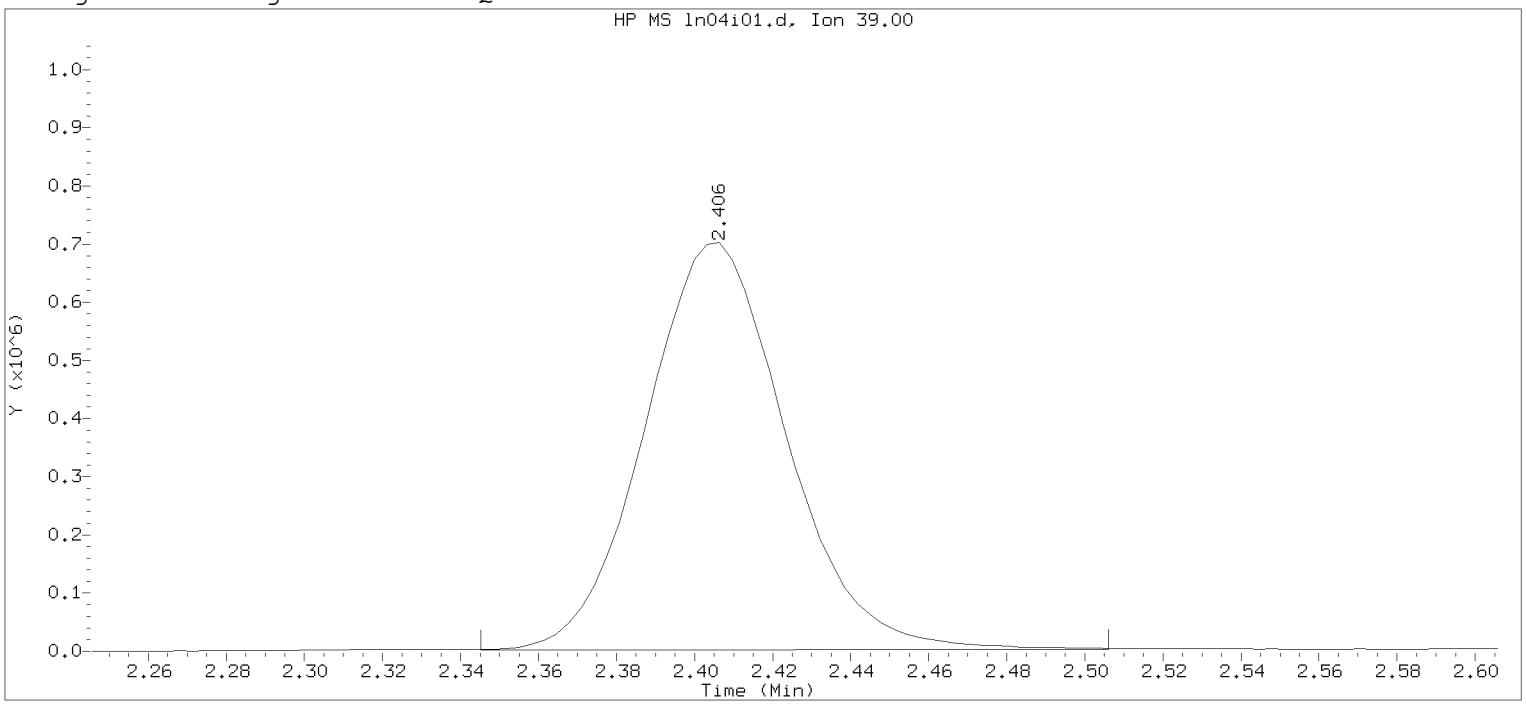
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

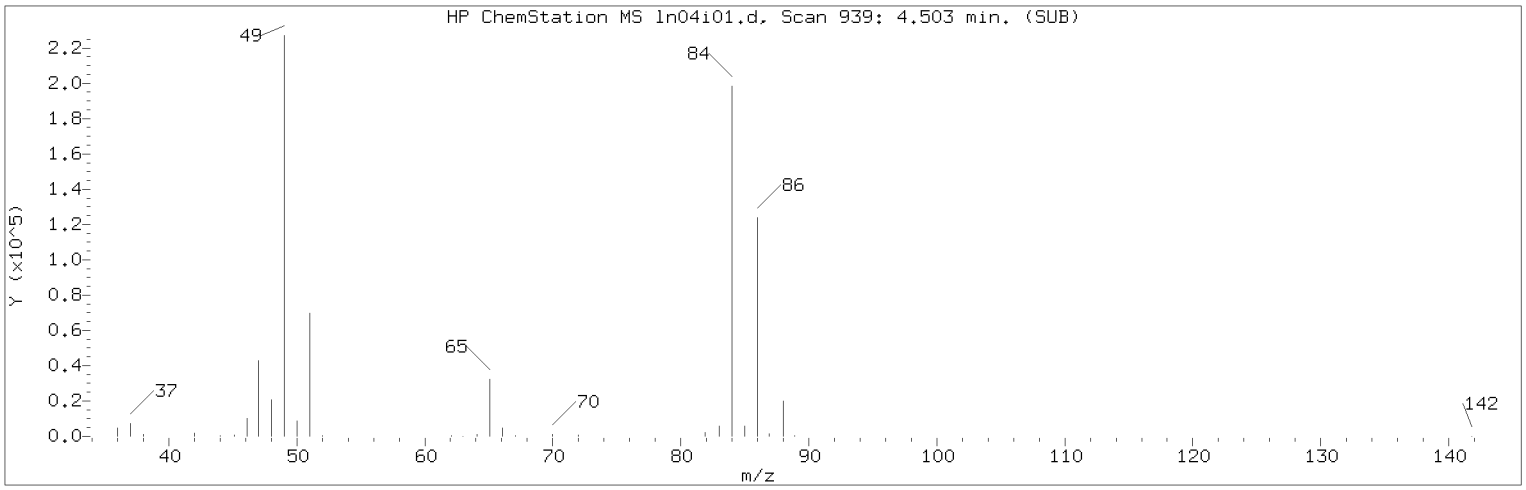
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

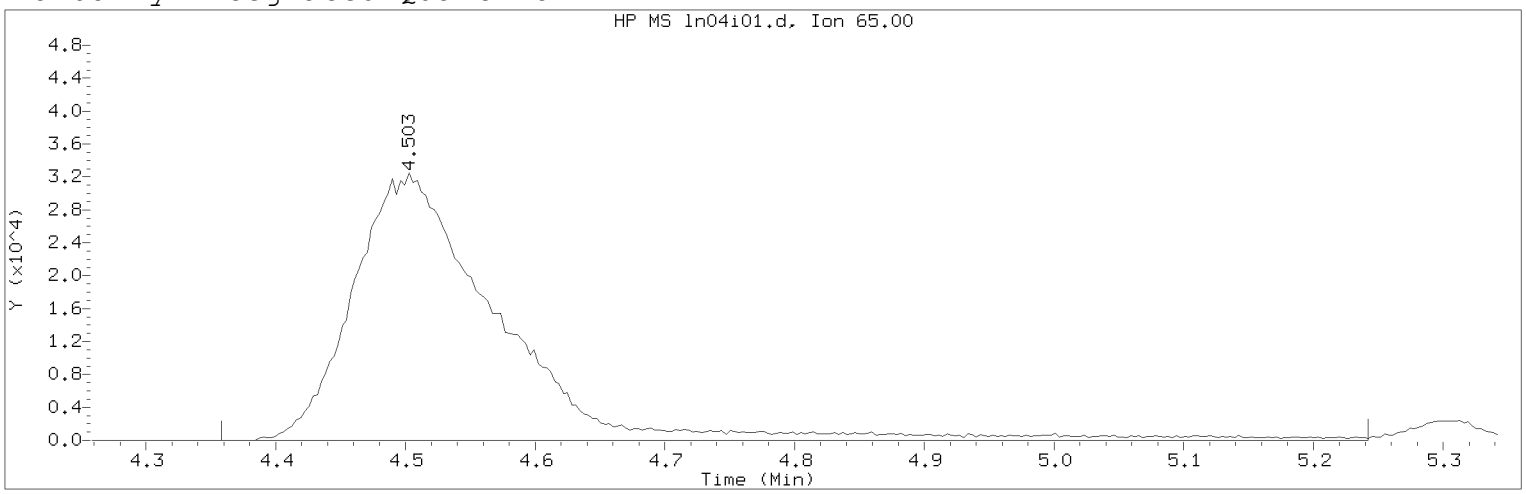
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 1755596
On-column Amount (ng) : 295.0708
Integration start scan : 267 Integration stop scan: 317
Y at integration start : 2196 Y at integration end: 3553

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

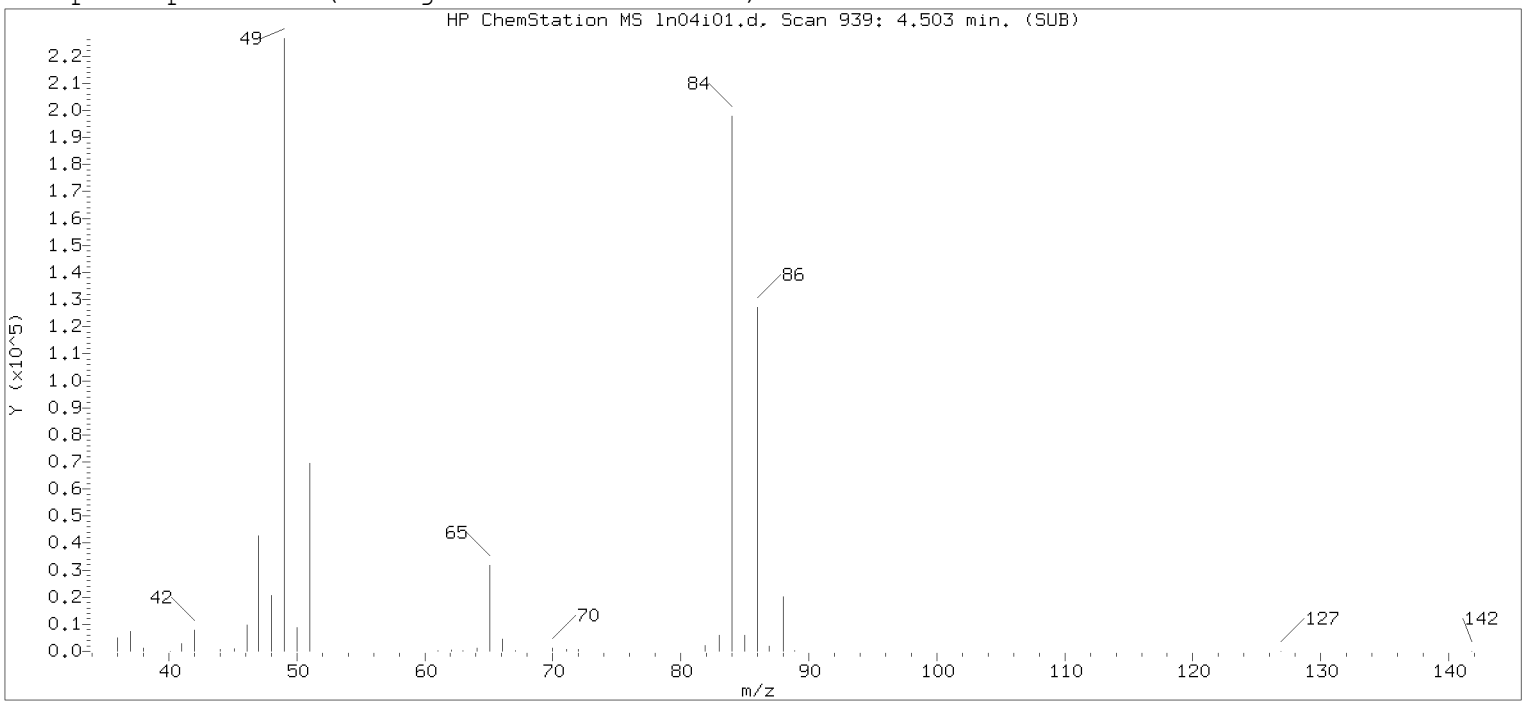
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area (flag) : 254406M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1168
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

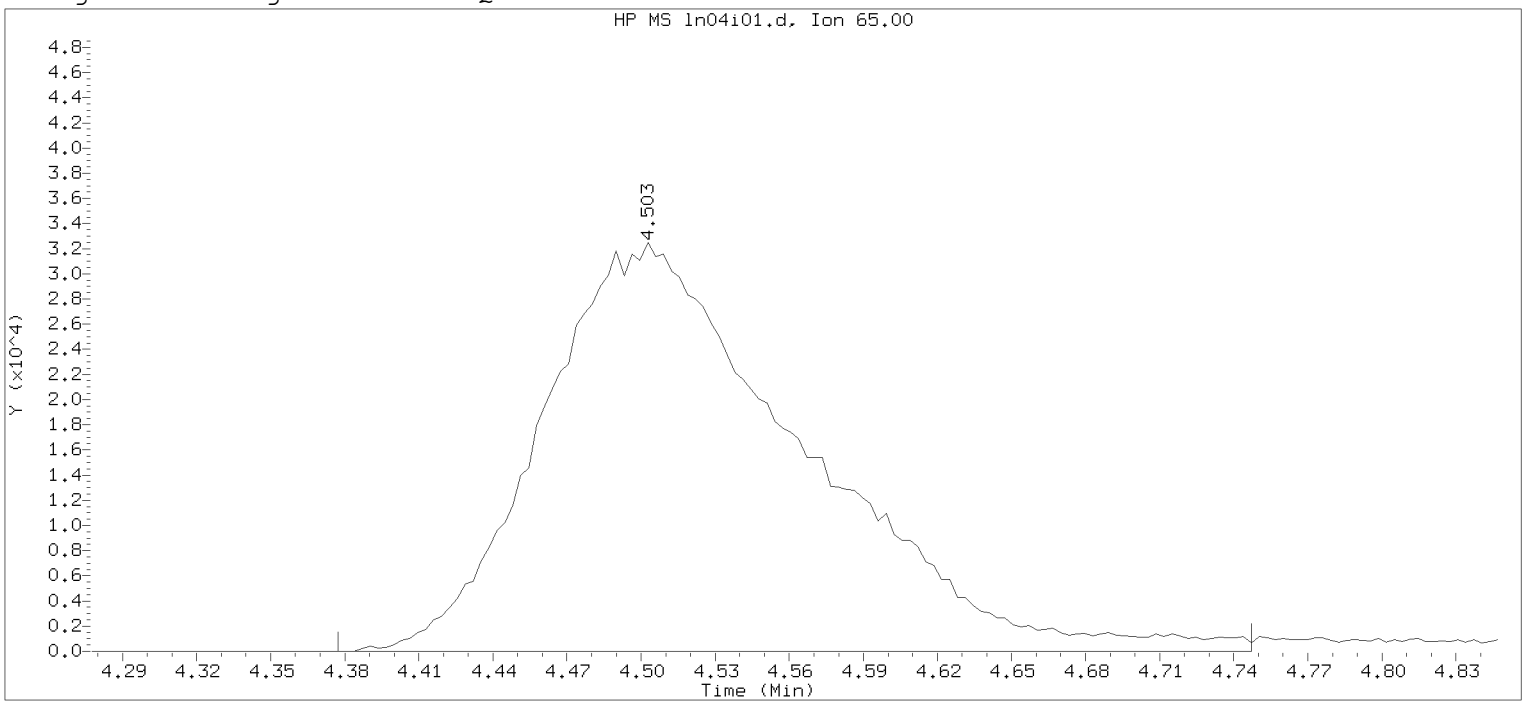
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

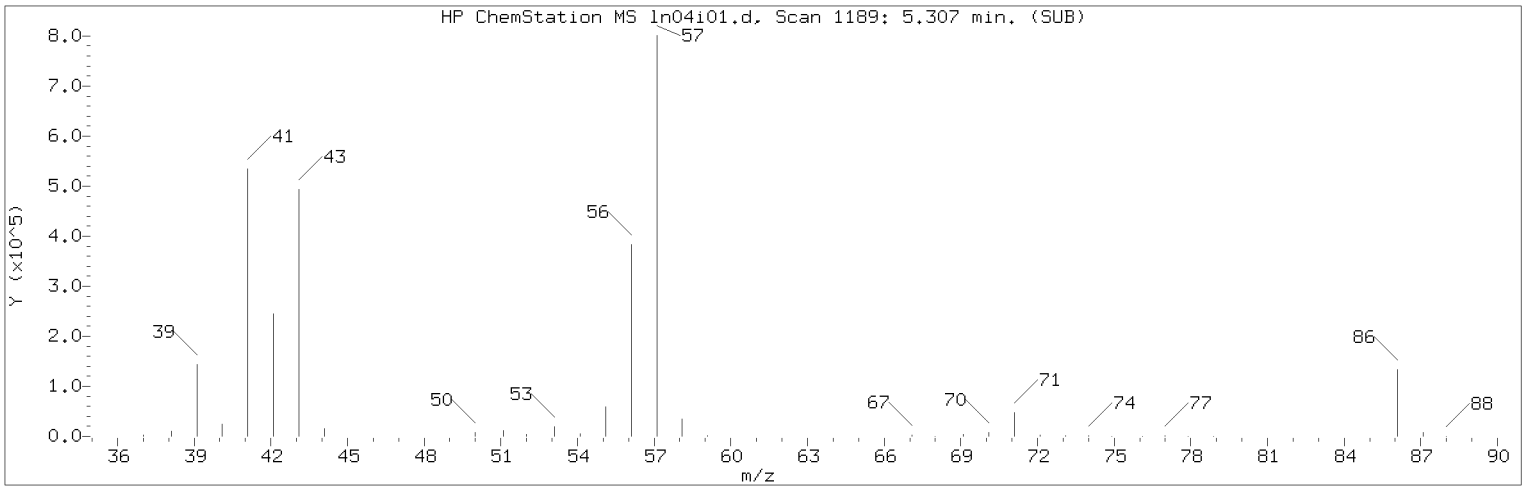
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

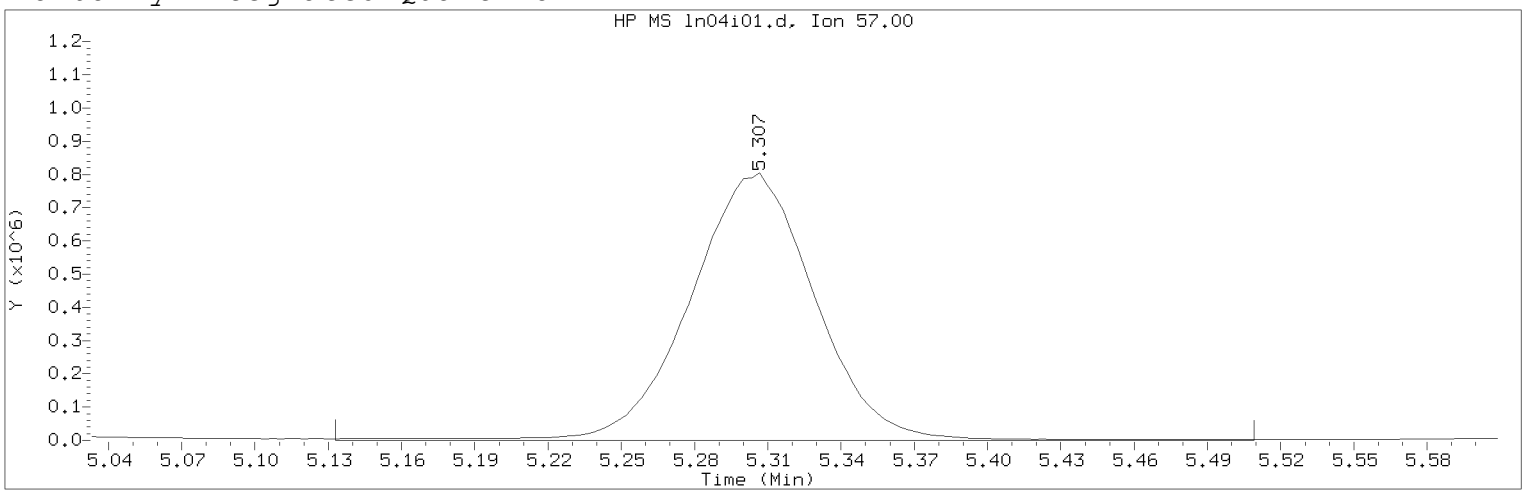
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area : 237264
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user: JKHowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

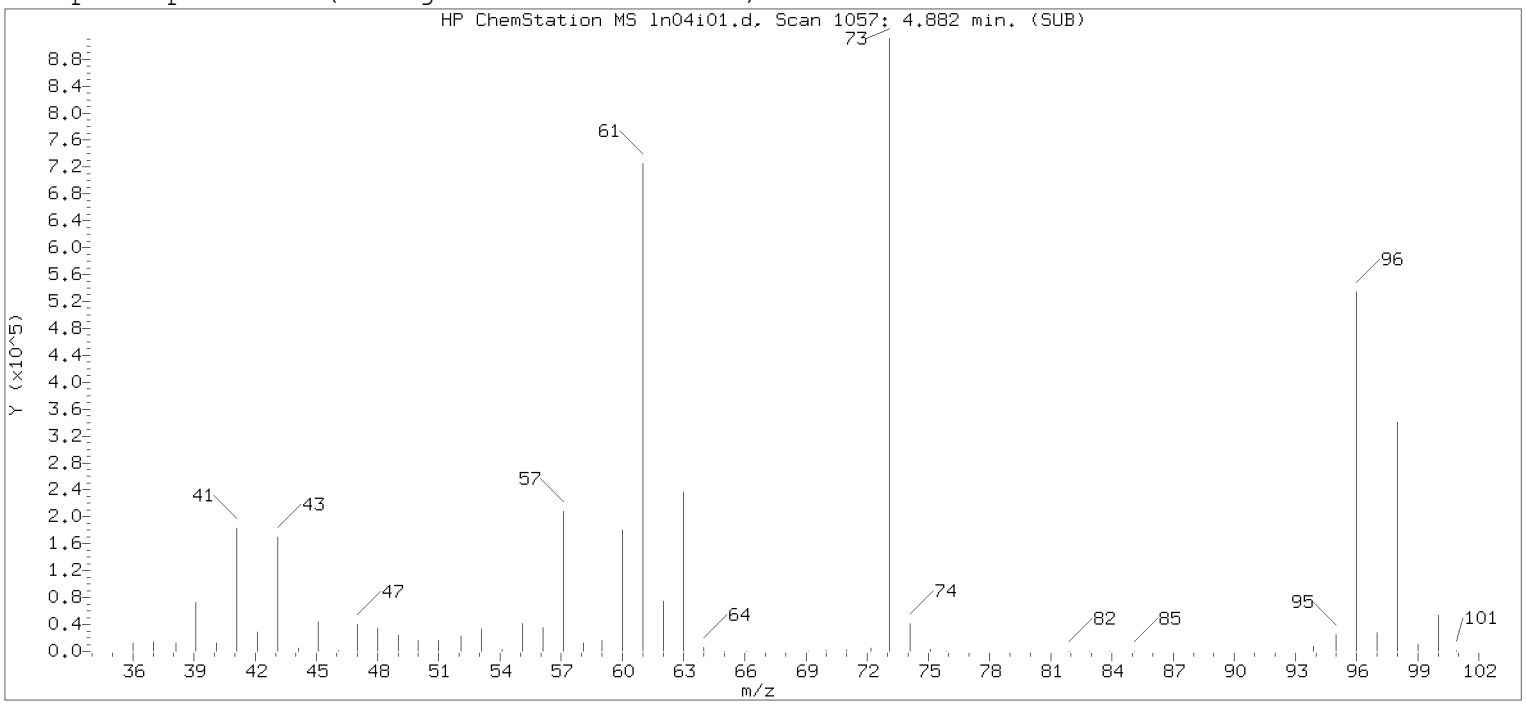
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1189
Retention Time (minutes): 5.307
Quant Ion : 57.00
Area (flag) : 2863189M
On-Column Amount (ng) : 334.8105
Integration start scan : 1134 Integration stop scan: 1251
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

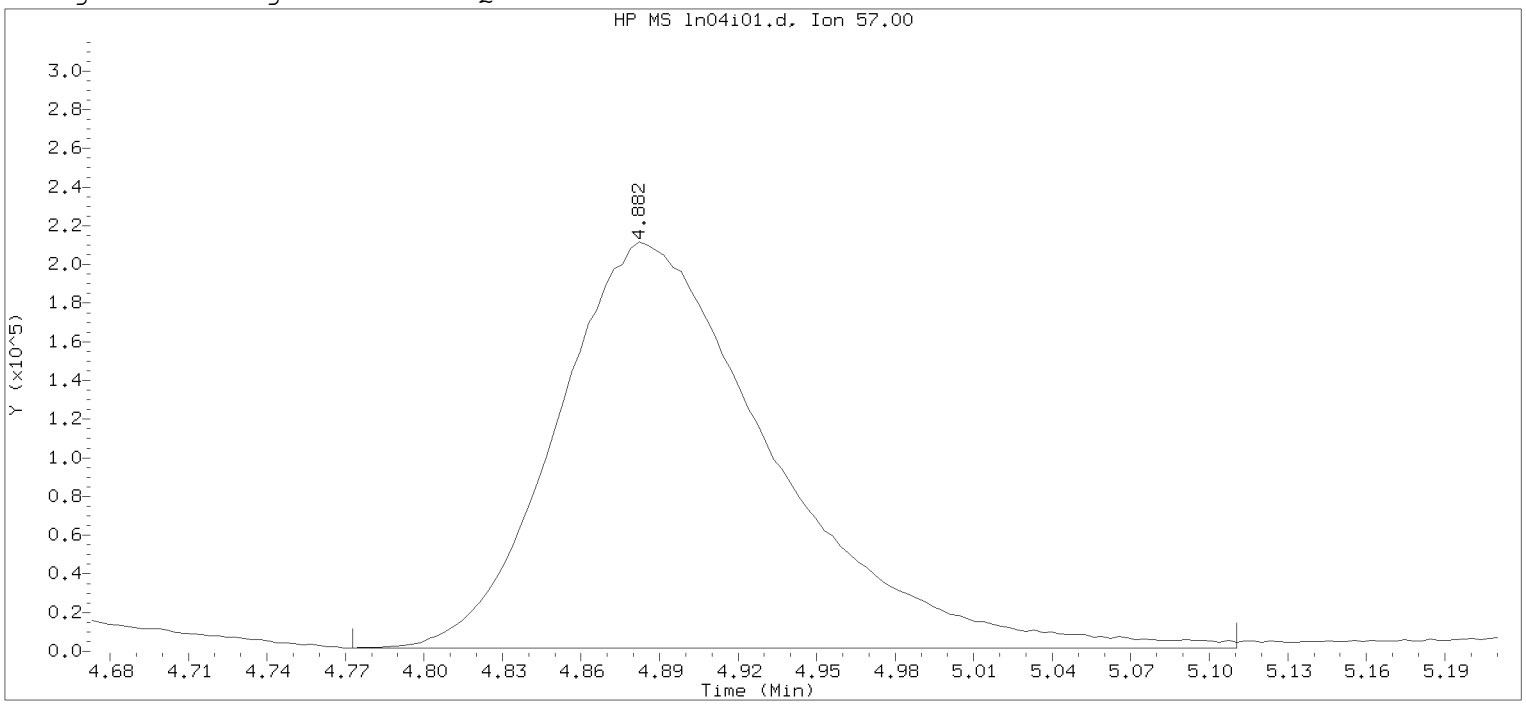
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

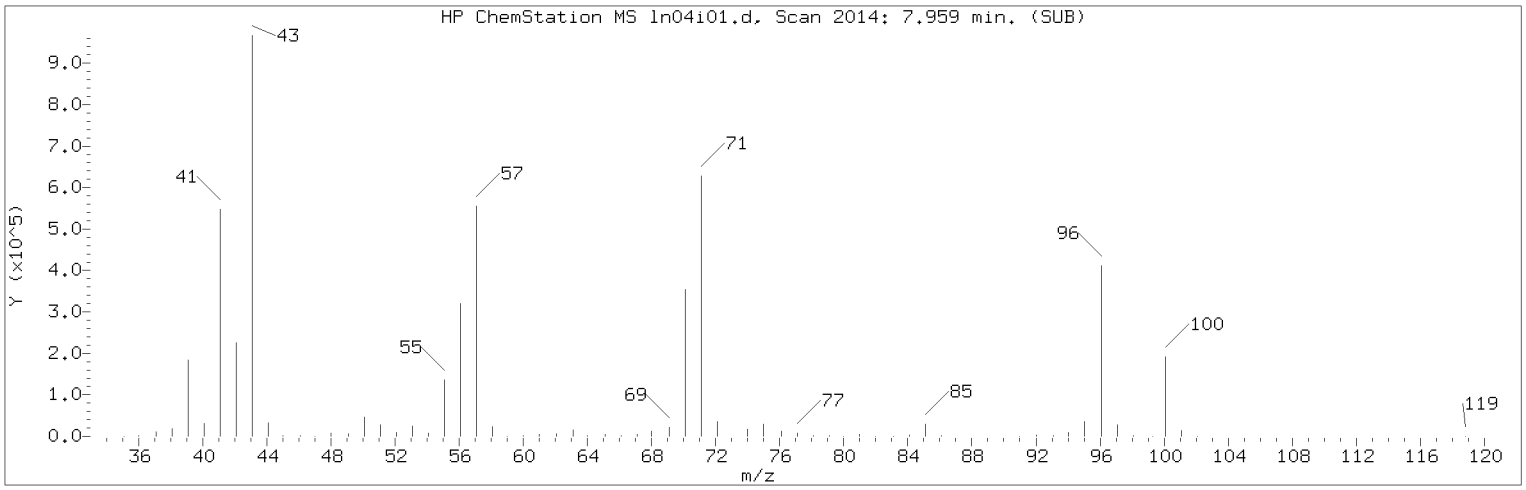
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

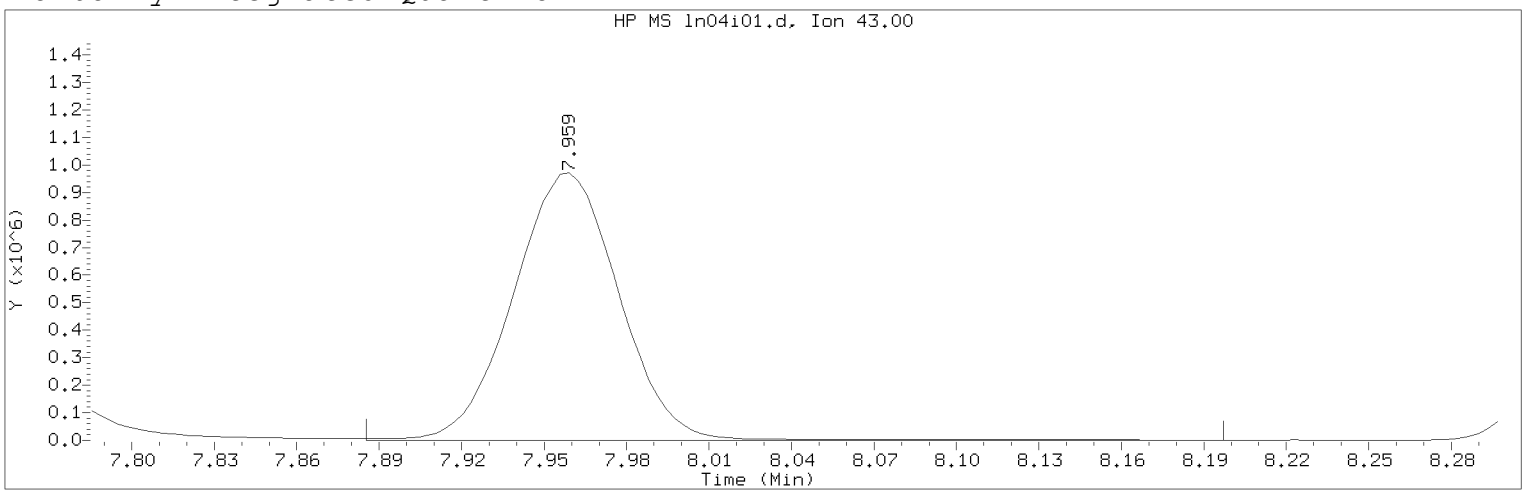
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1057
Retention Time (minutes): 4.882
Quant Ion : 57.00
Area : 1202378
On-column Amount (ng) : 301.4561
Integration start scan : 1022 Integration stop scan: 1127
Y at integration start : 1806 Y at integration end: 1806

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

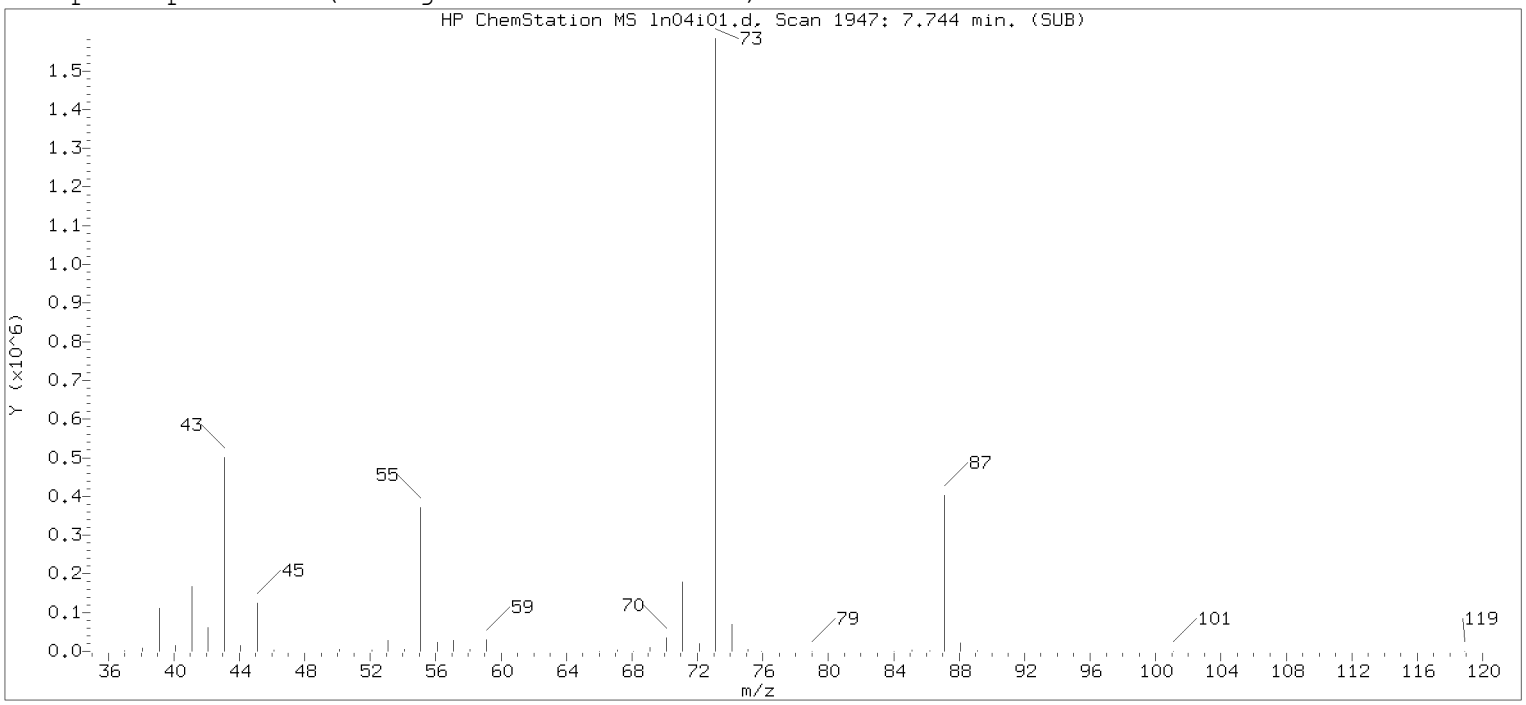
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2014
Retention Time (minutes): 7.959
Quant Ion : 43.00
Area (flag) : 2592531MA
On-Column Amount (ng) : 324.5176
Integration start scan : 1990 Integration stop scan: 2087
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

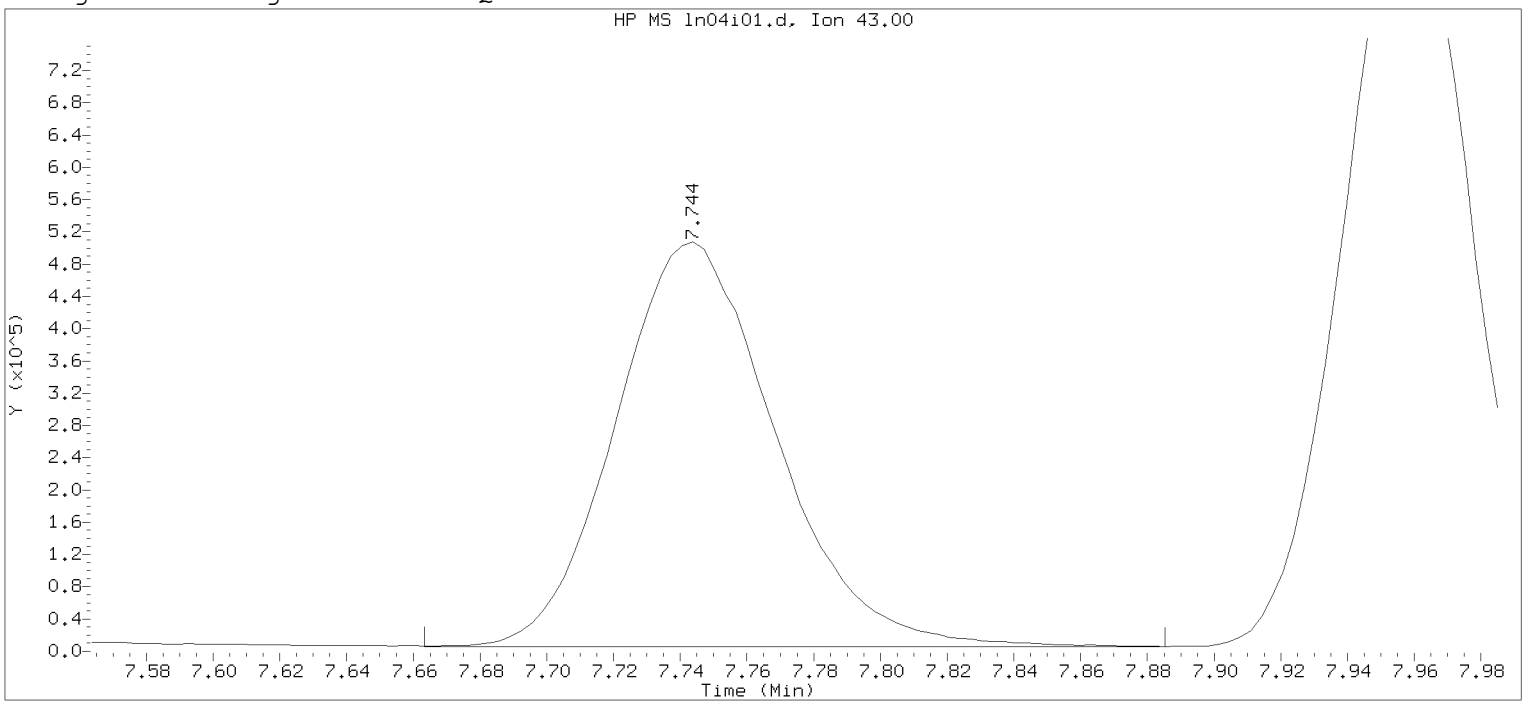
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

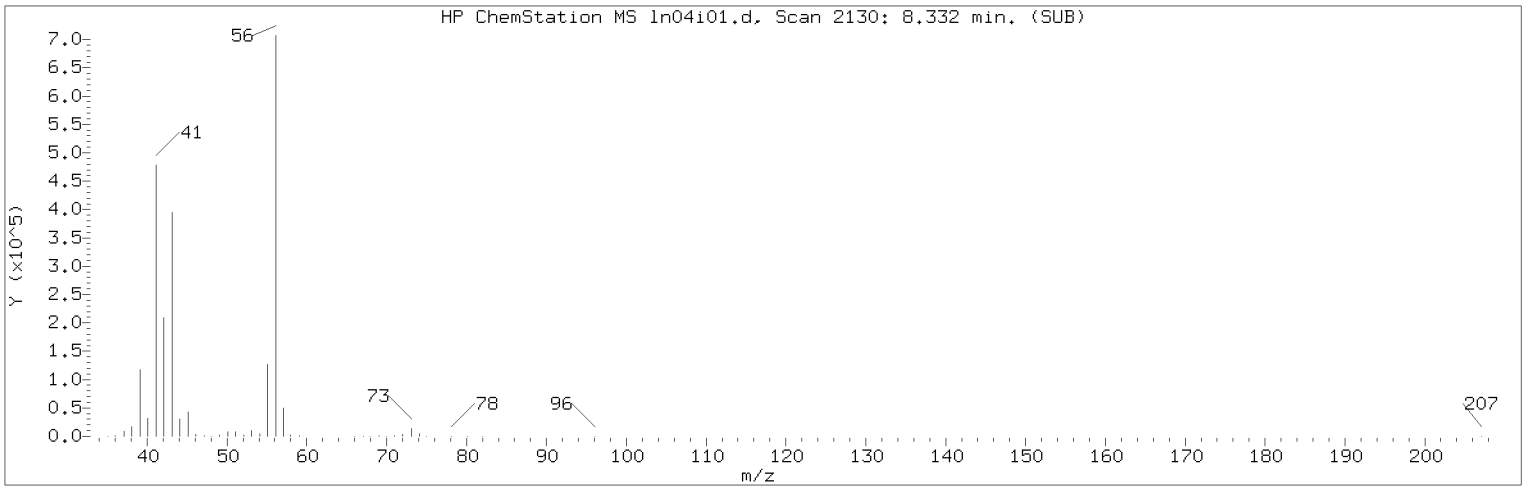
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

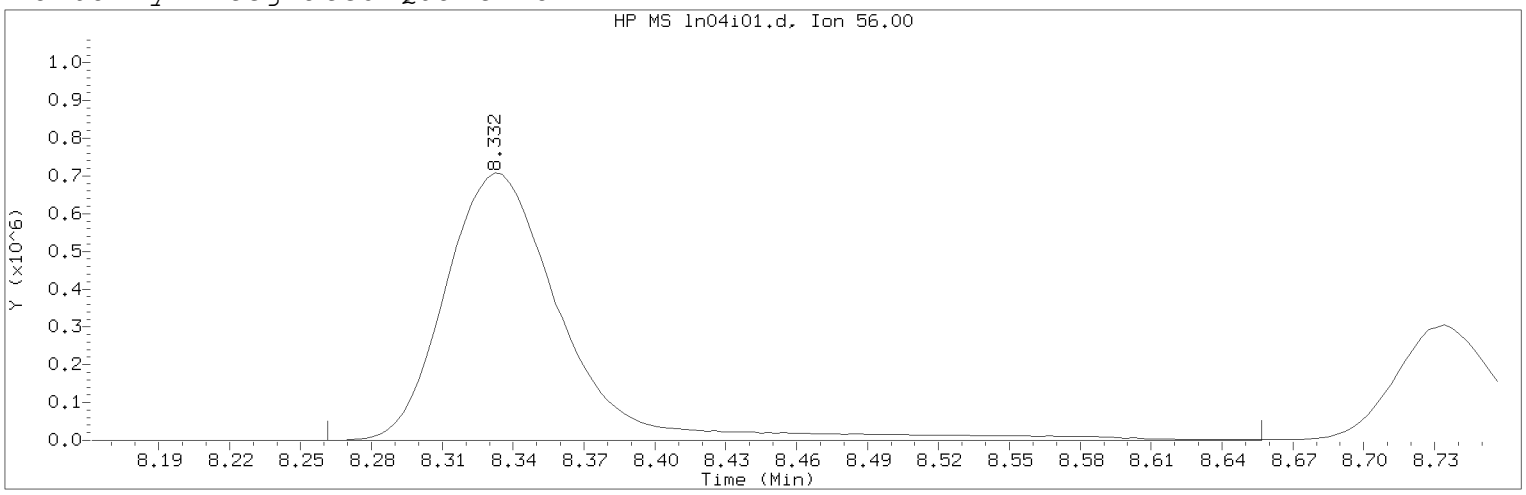
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1947
Retention Time (minutes): 7.744
Quant Ion : 43.00
Area : 1668813
On-column Amount (ng) : 288.4319
Integration start scan : 1921 Integration stop scan: 1990
Y at integration start : 5866 Y at integration end: 5866

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh00058

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

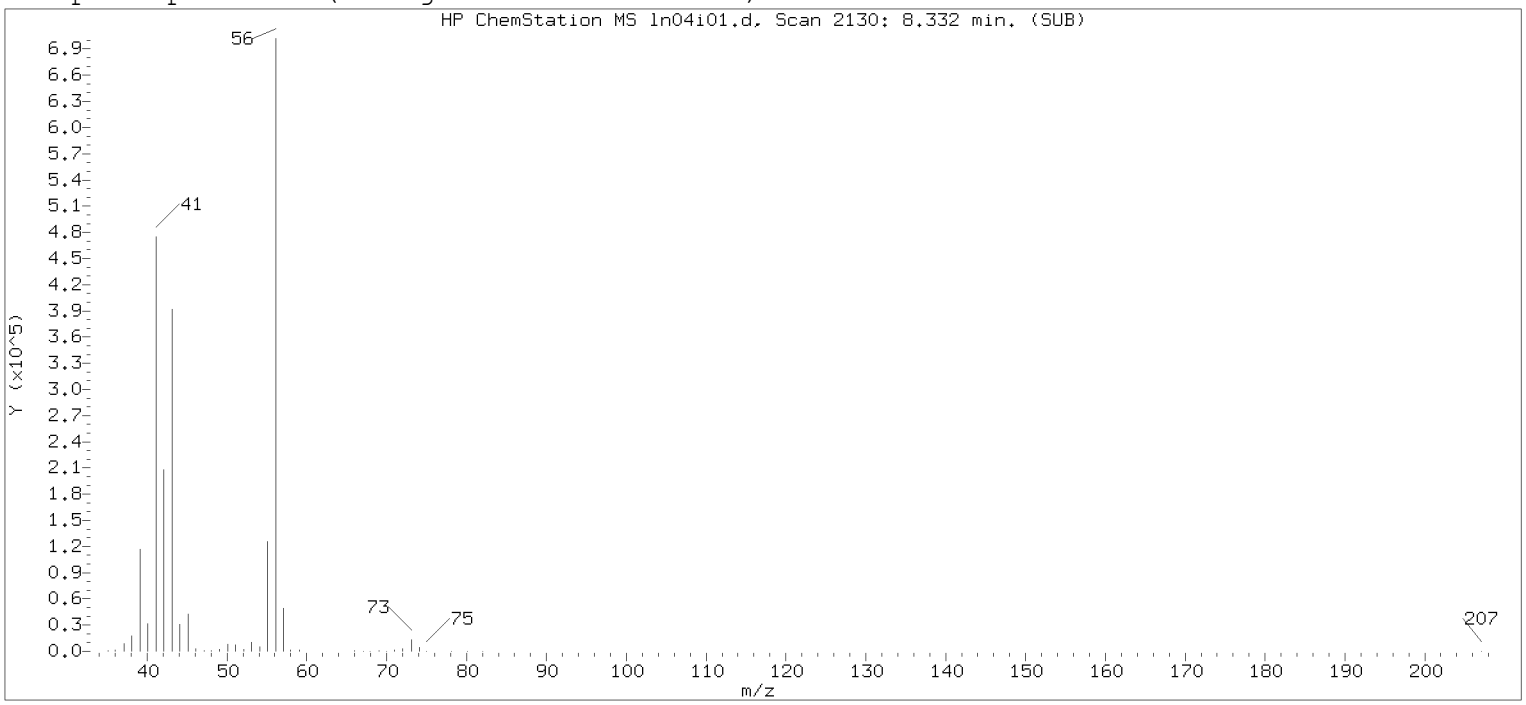
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area (flag) : 2465385M
On-Column Amount (ng) : 7947.0678
Integration start scan : 2107 Integration stop scan: 2230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

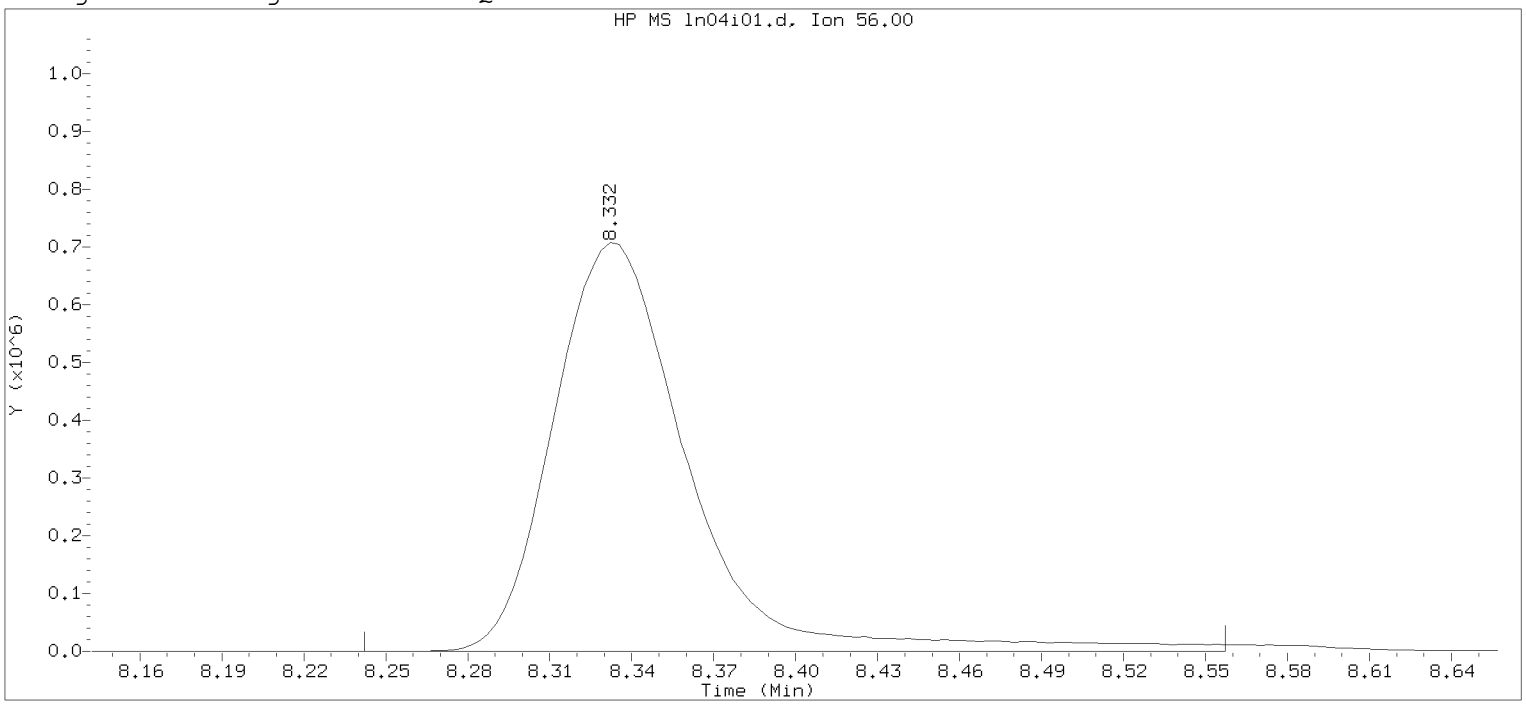
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

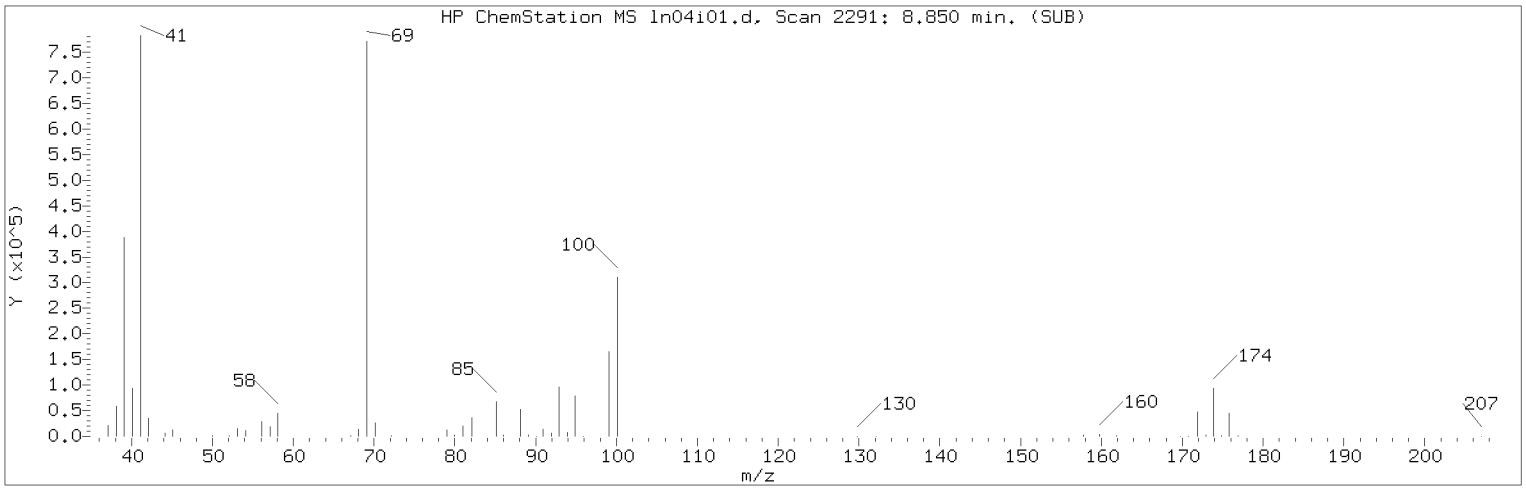
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

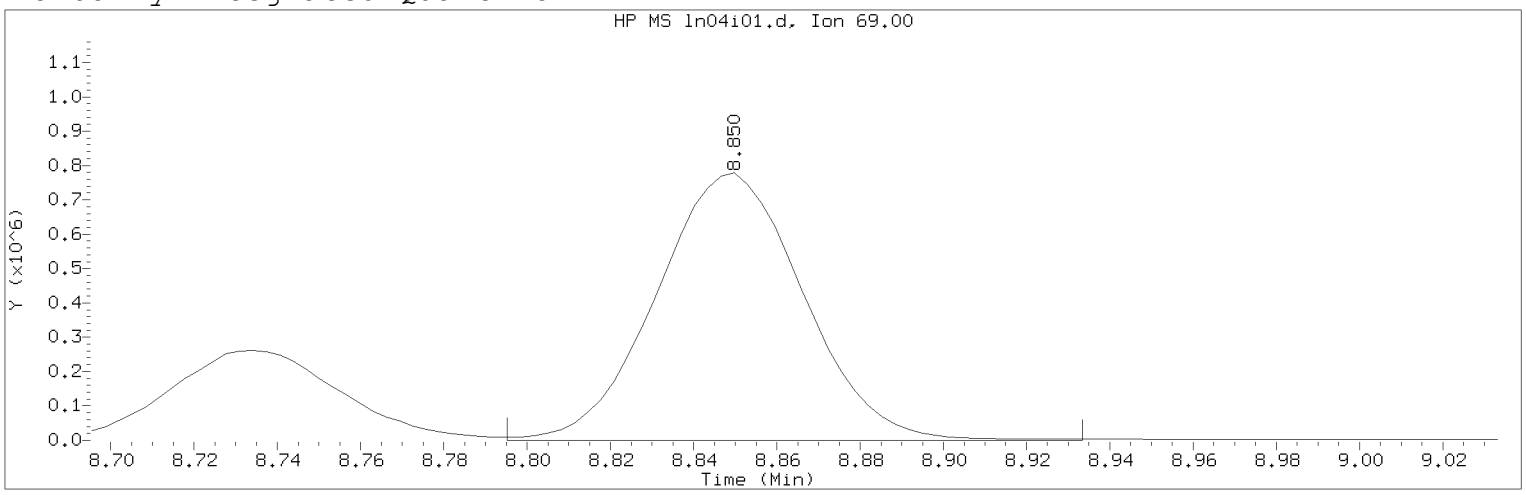
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area : 2429255
On-column Amount (ng) : 7682.9381
Integration start scan : 2101 Integration stop scan: 2199
Y at integration start : 176 Y at integration end: 176

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user id: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

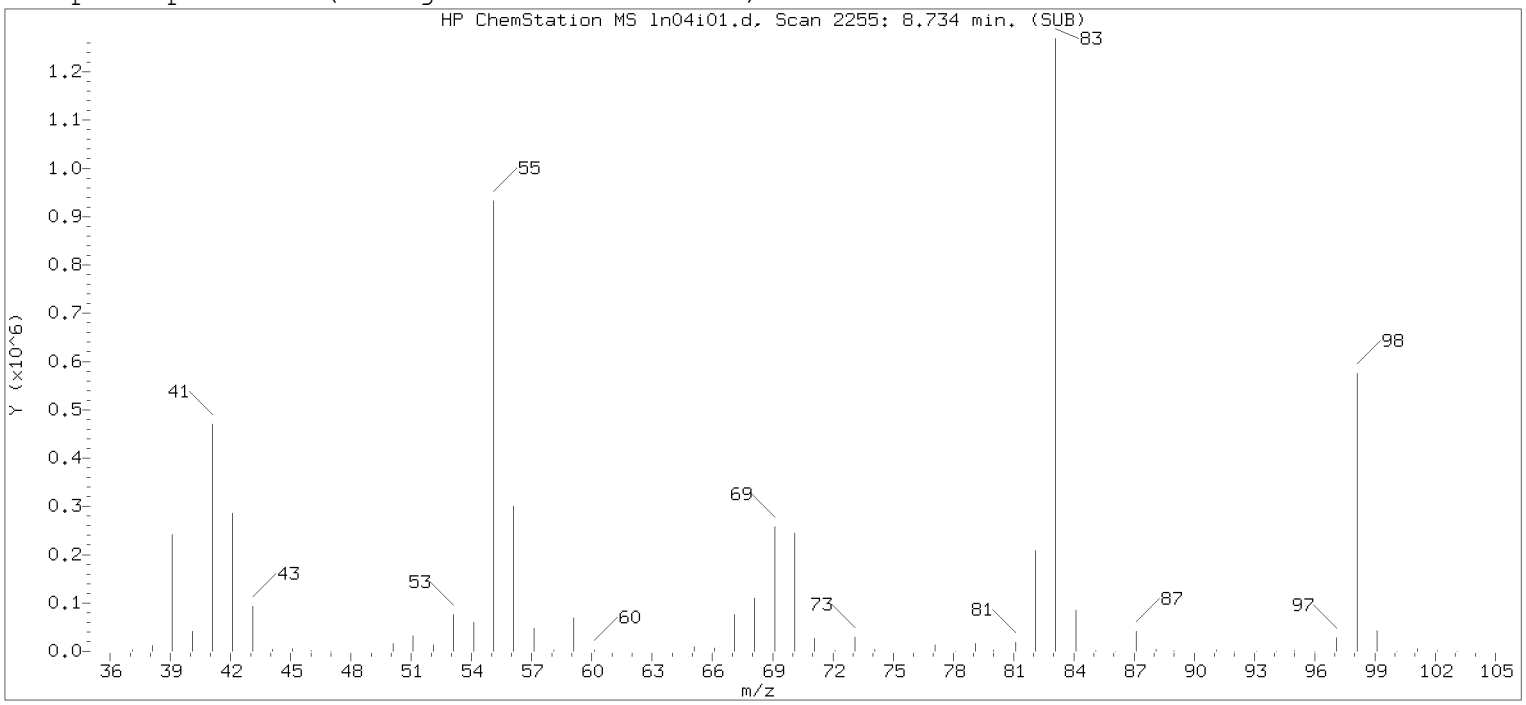
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2291
Retention Time (minutes): 8.850
Quant Ion : 69.00
Area (flag) : 1904896A
On-Column Amount (ng) : 340.2564
Integration start scan : 2273 Integration stop scan: 2316
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

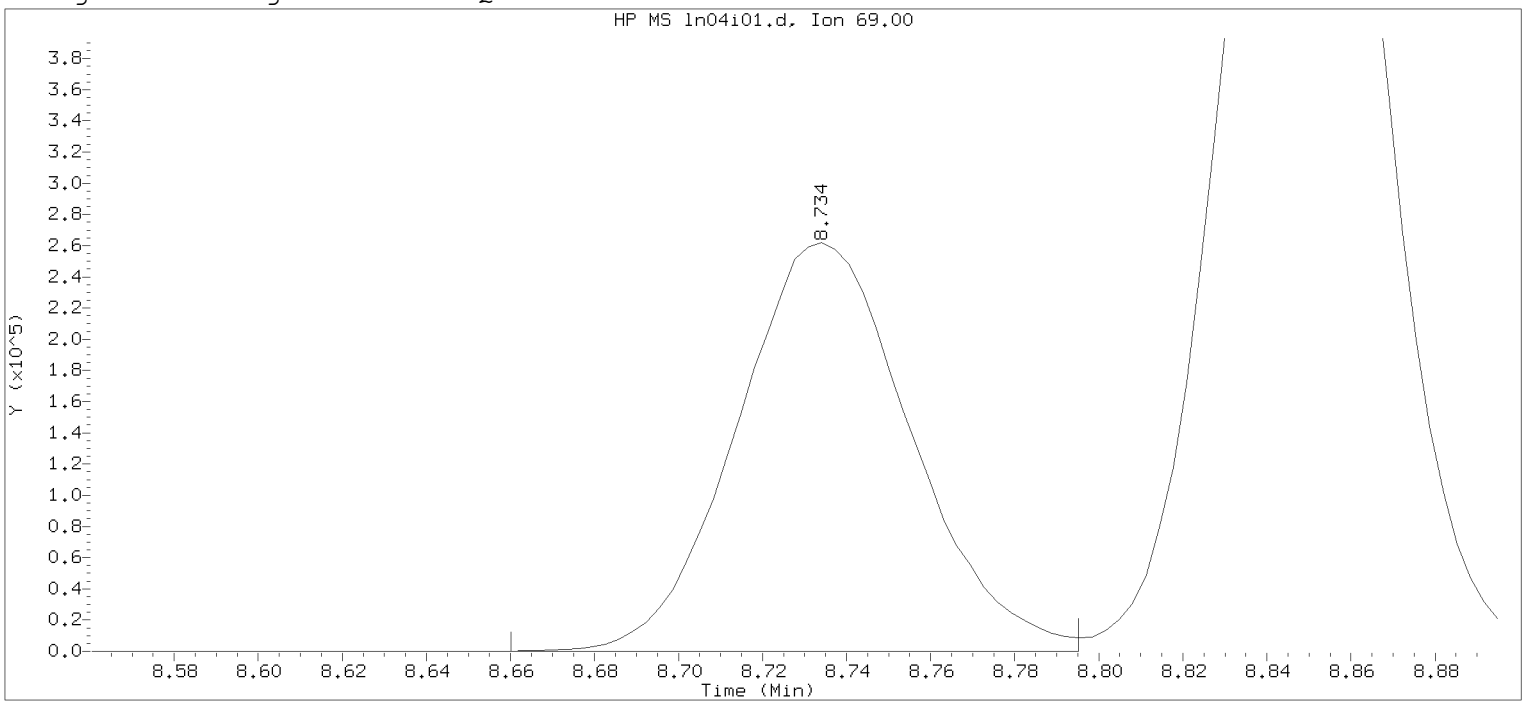
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

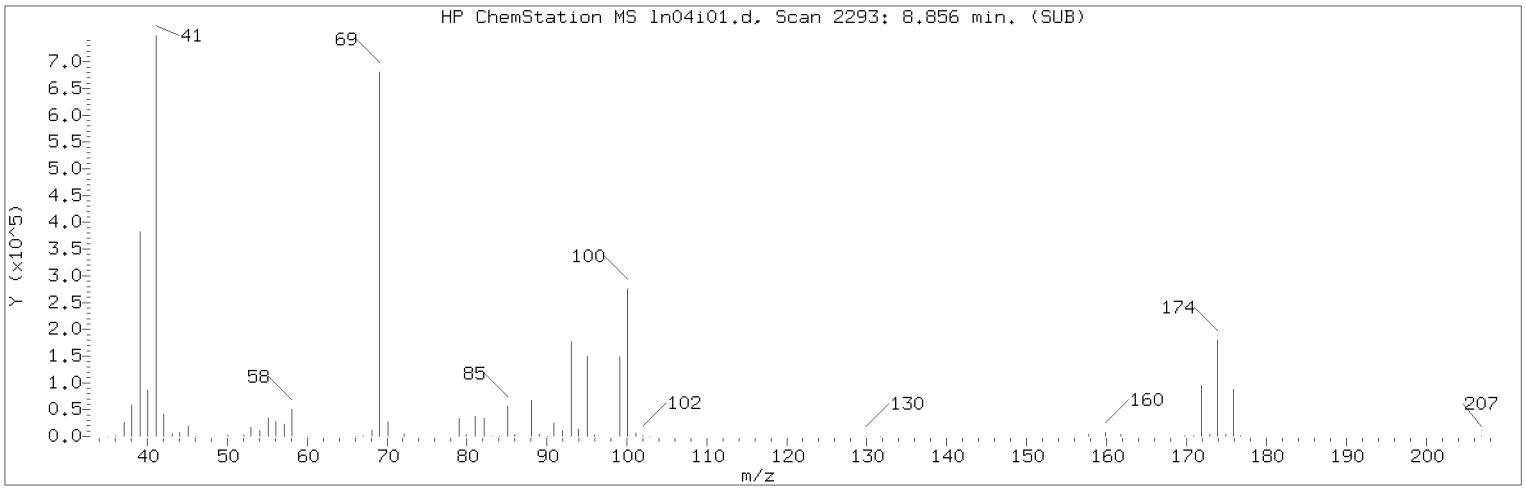
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

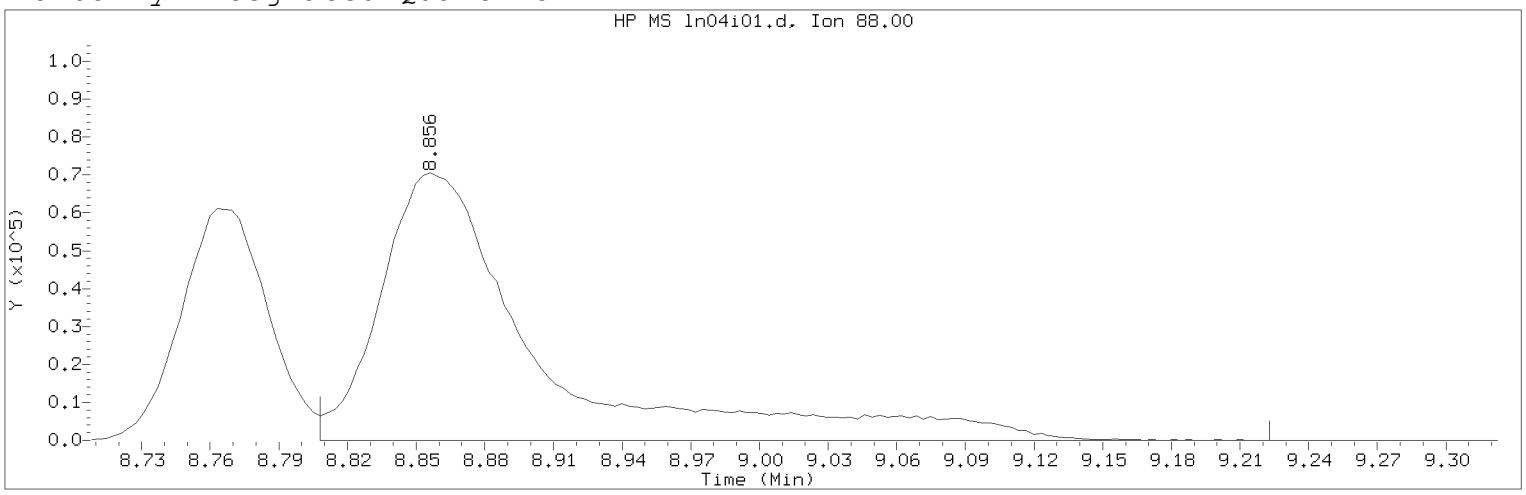
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 752058
On-column Amount (ng) : 311.1363
Integration start scan : 2231 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

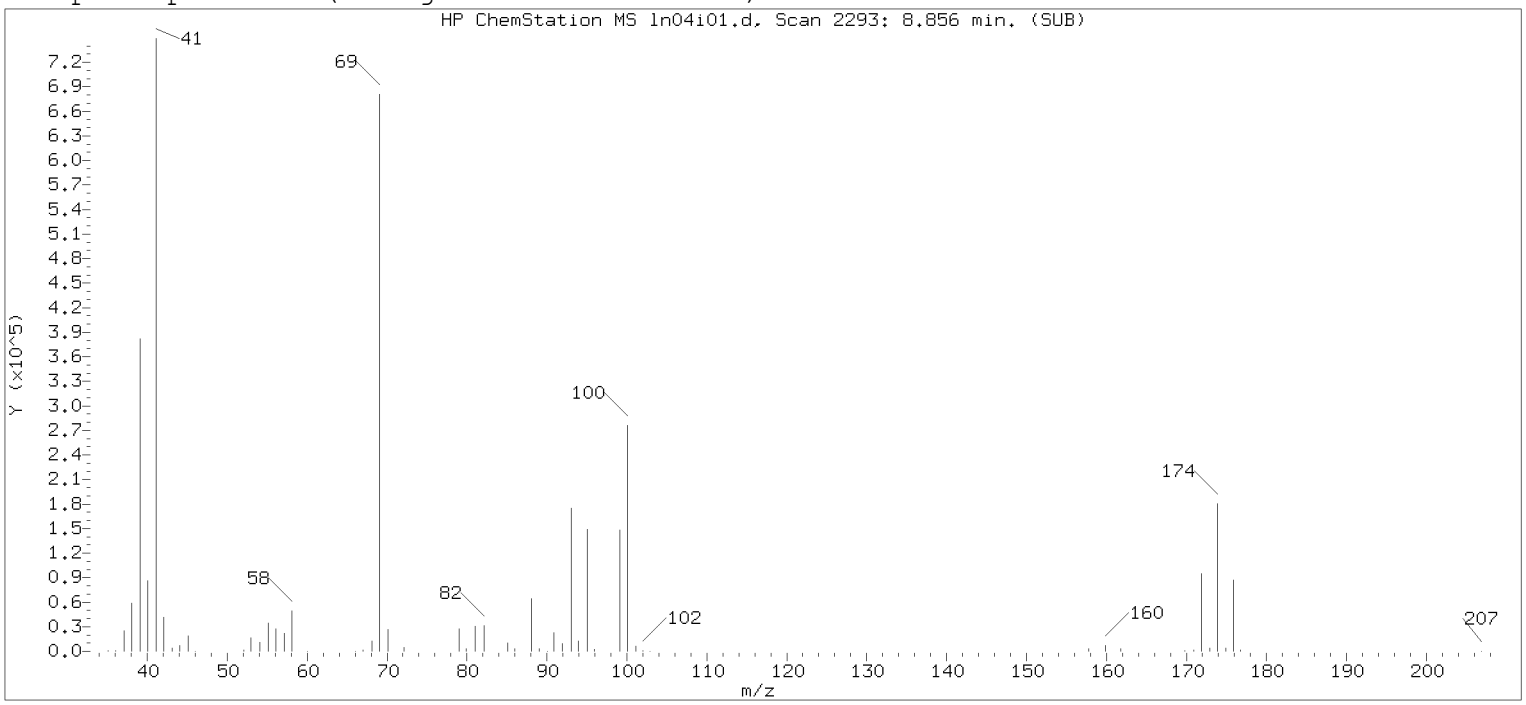
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 338379M
On-Column Amount (ng) : 3968.4208
Integration start scan : 2277 Integration stop scan: 2406
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

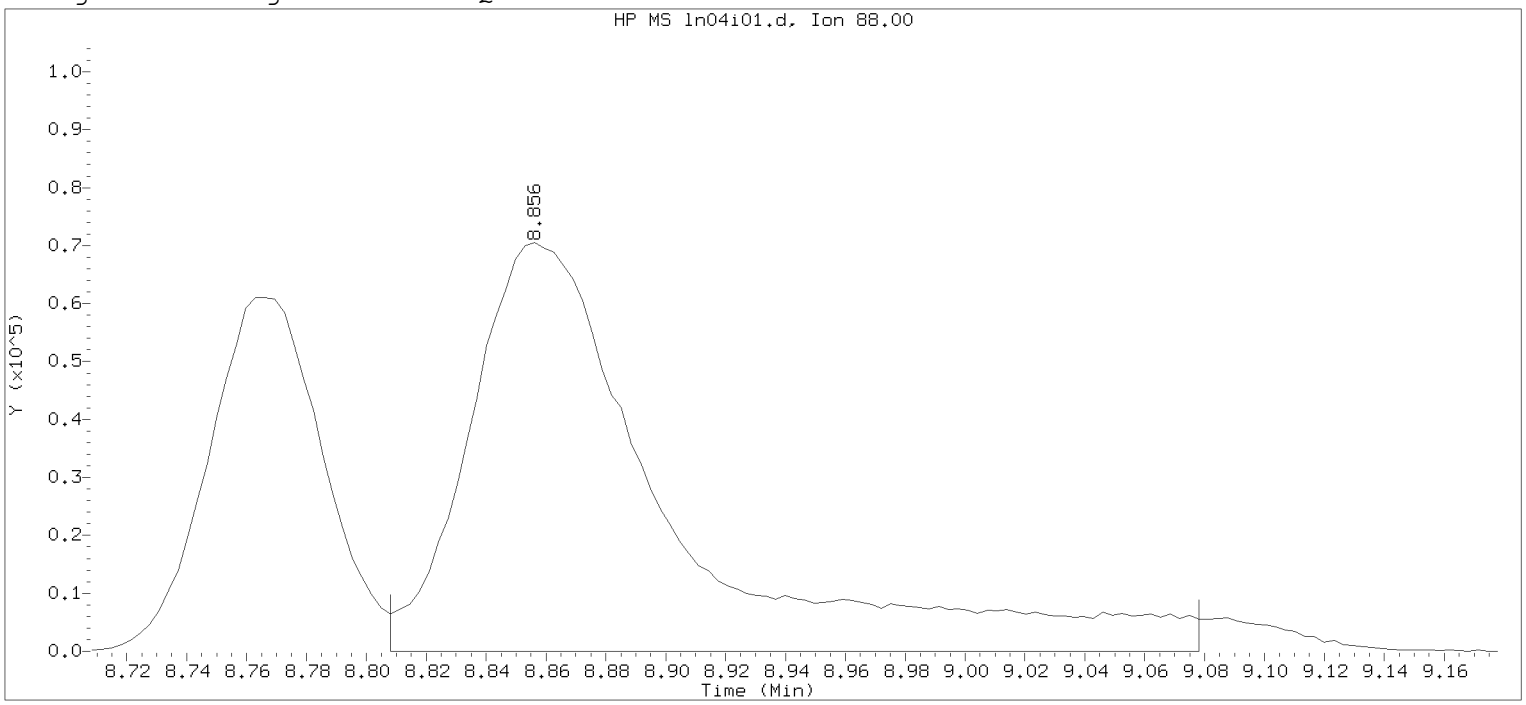
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

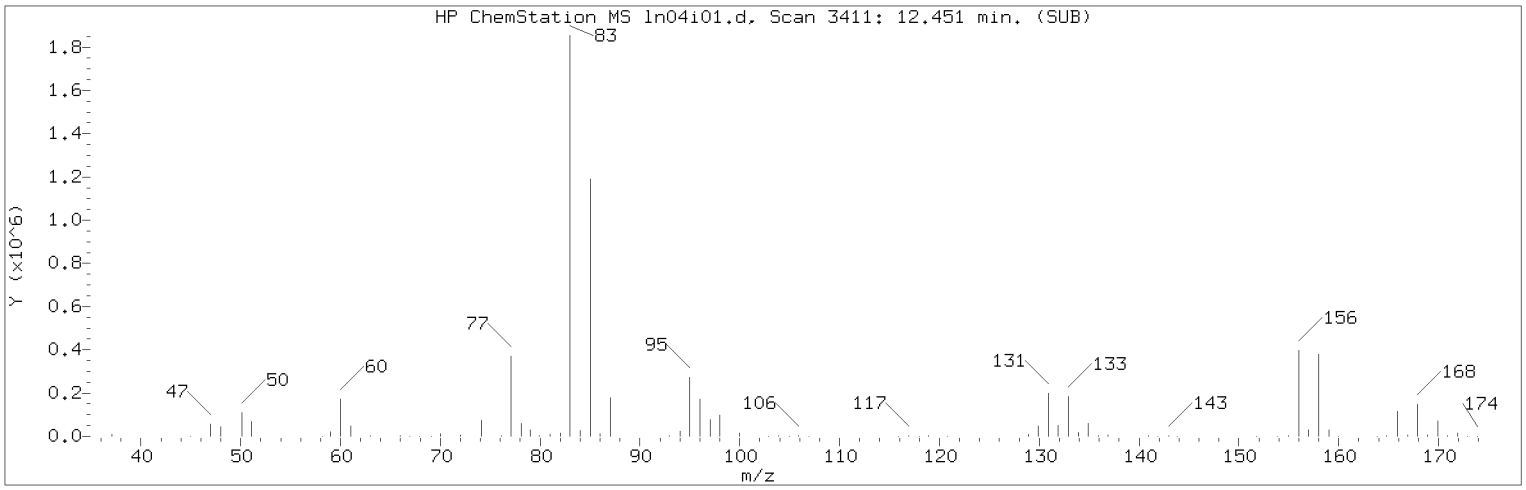
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

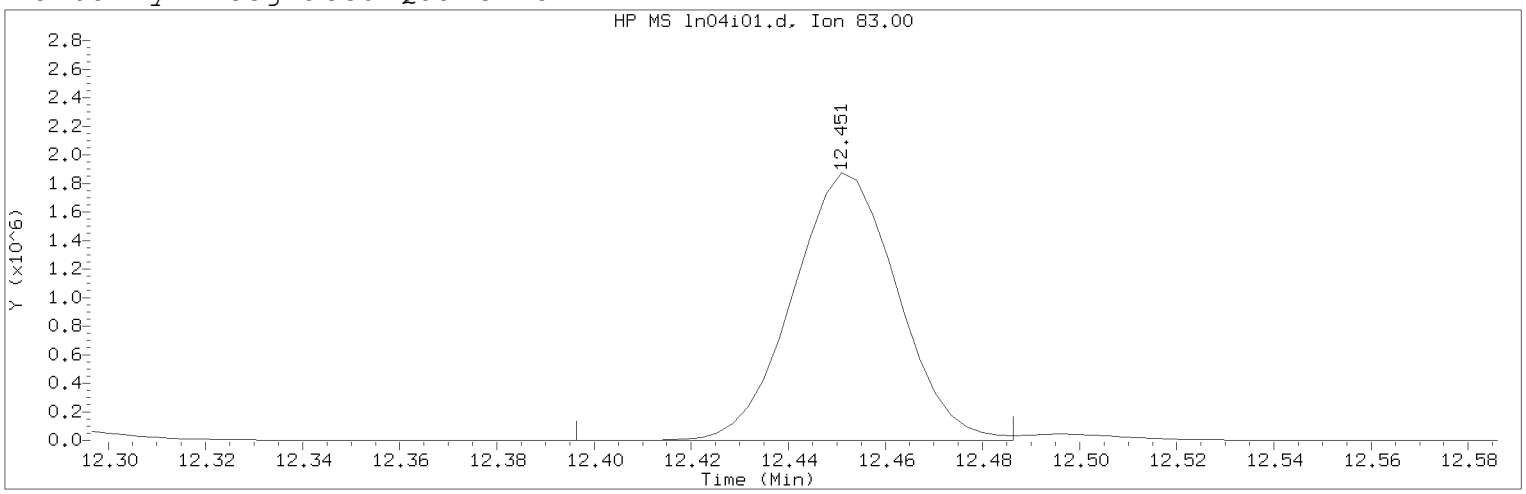
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2293		
Retention Time (minutes)	: 8.856		
Quant Ion	: 88.00		
Area	: 325164		
On-column Amount (ng)	: 3803.8575		
Integration start scan	: 2277	Integration stop scan:	2361
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user id: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

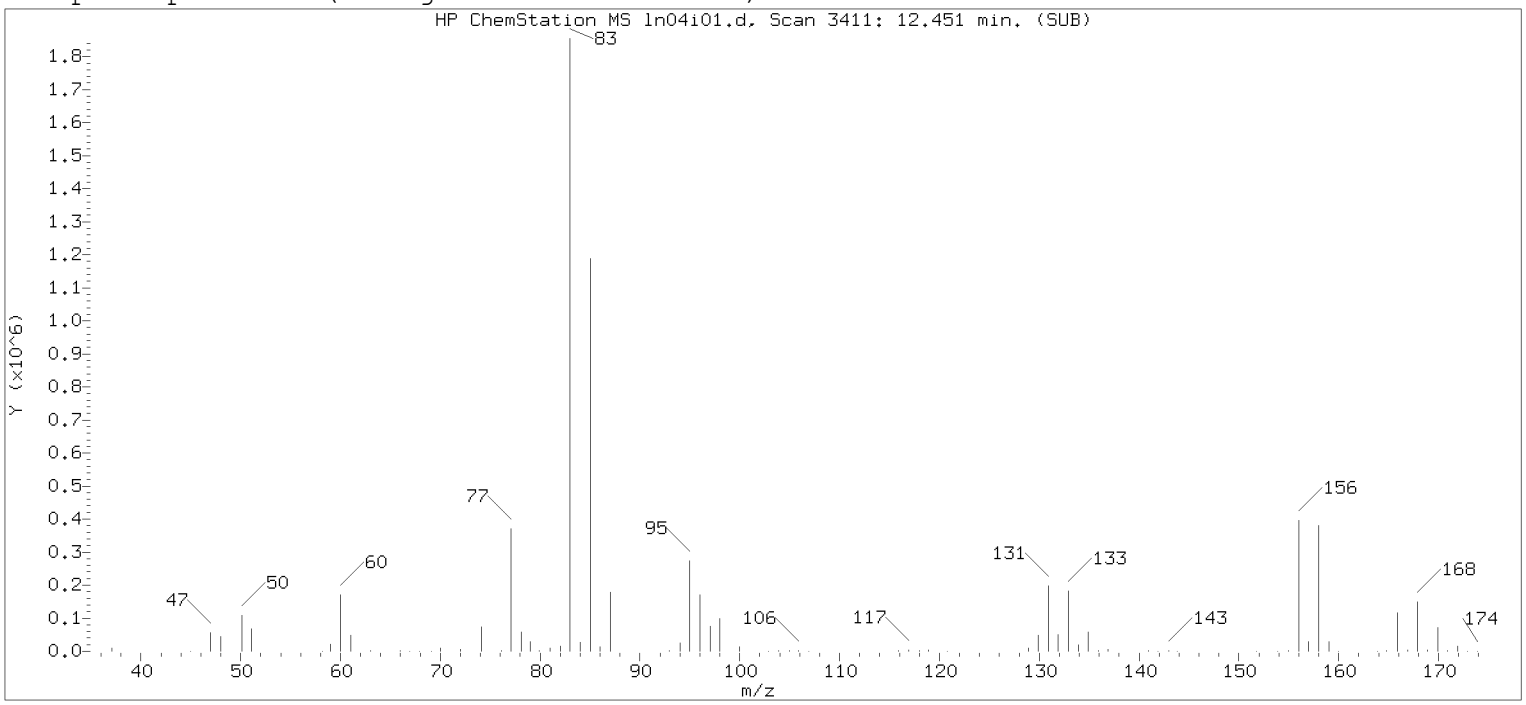
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 2800639M
On-Column Amount (ng) : 310.7054
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

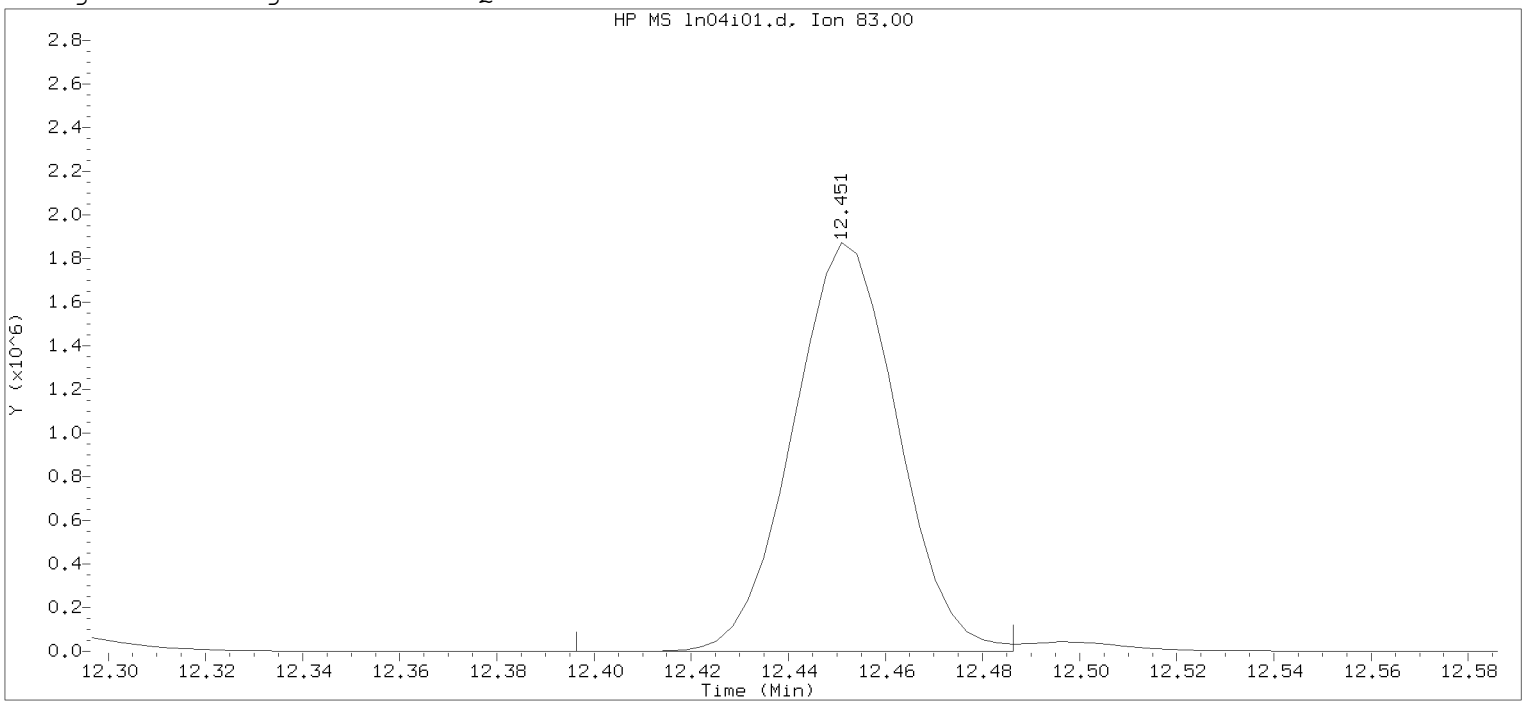
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

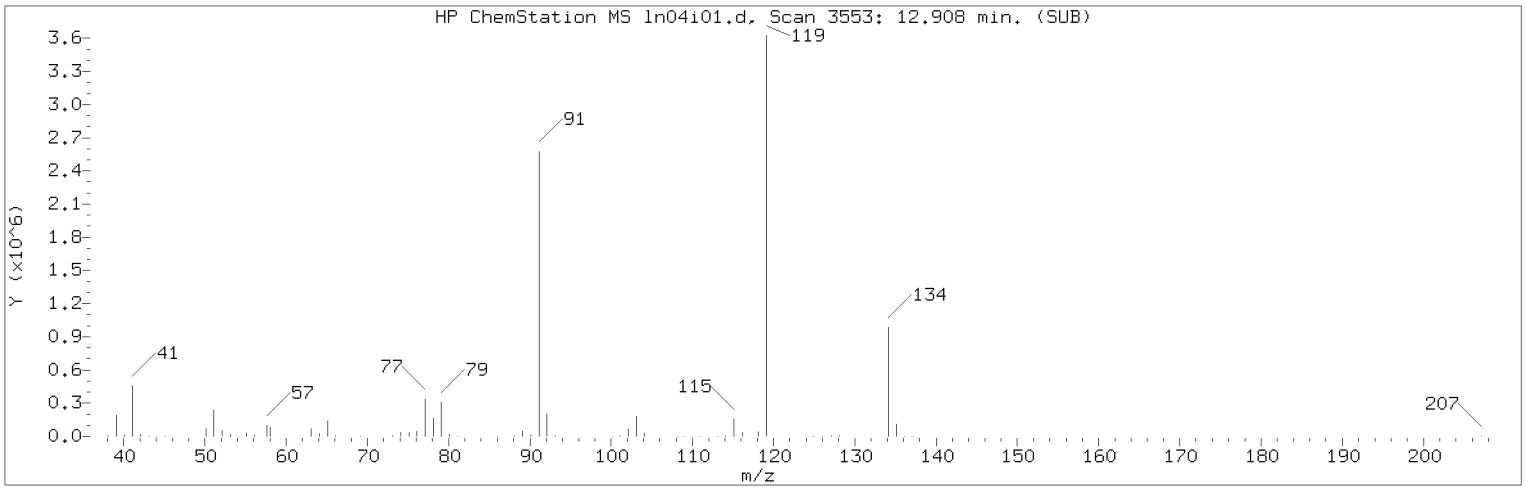
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

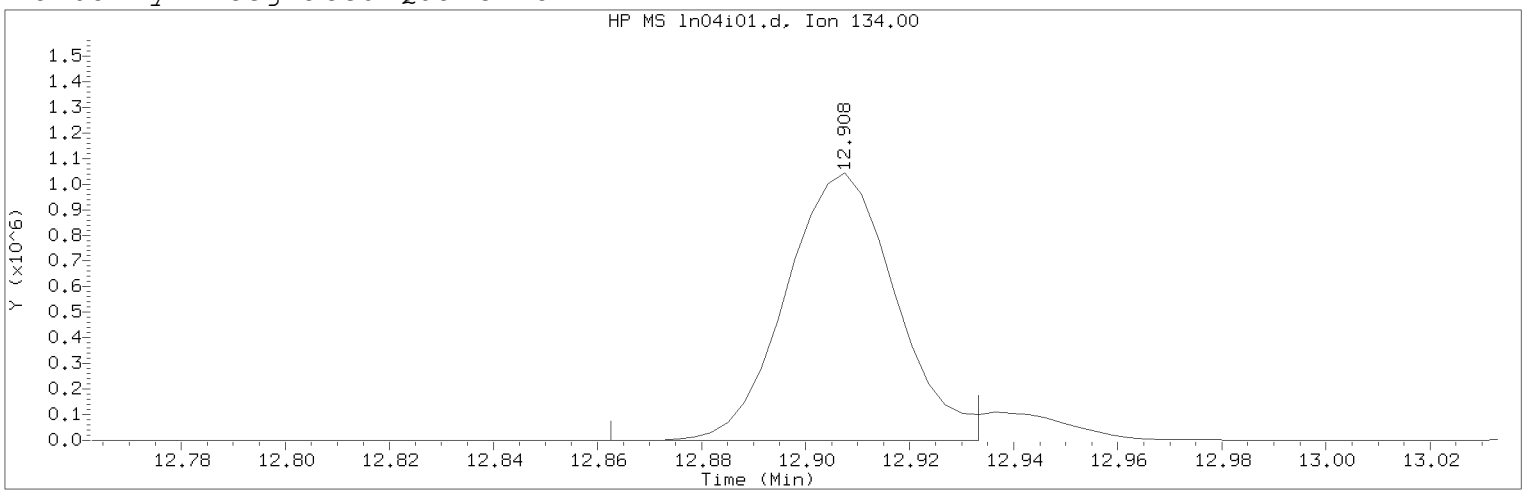
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 2797364
On-column Amount (ng) : 294.0638
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh00076

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

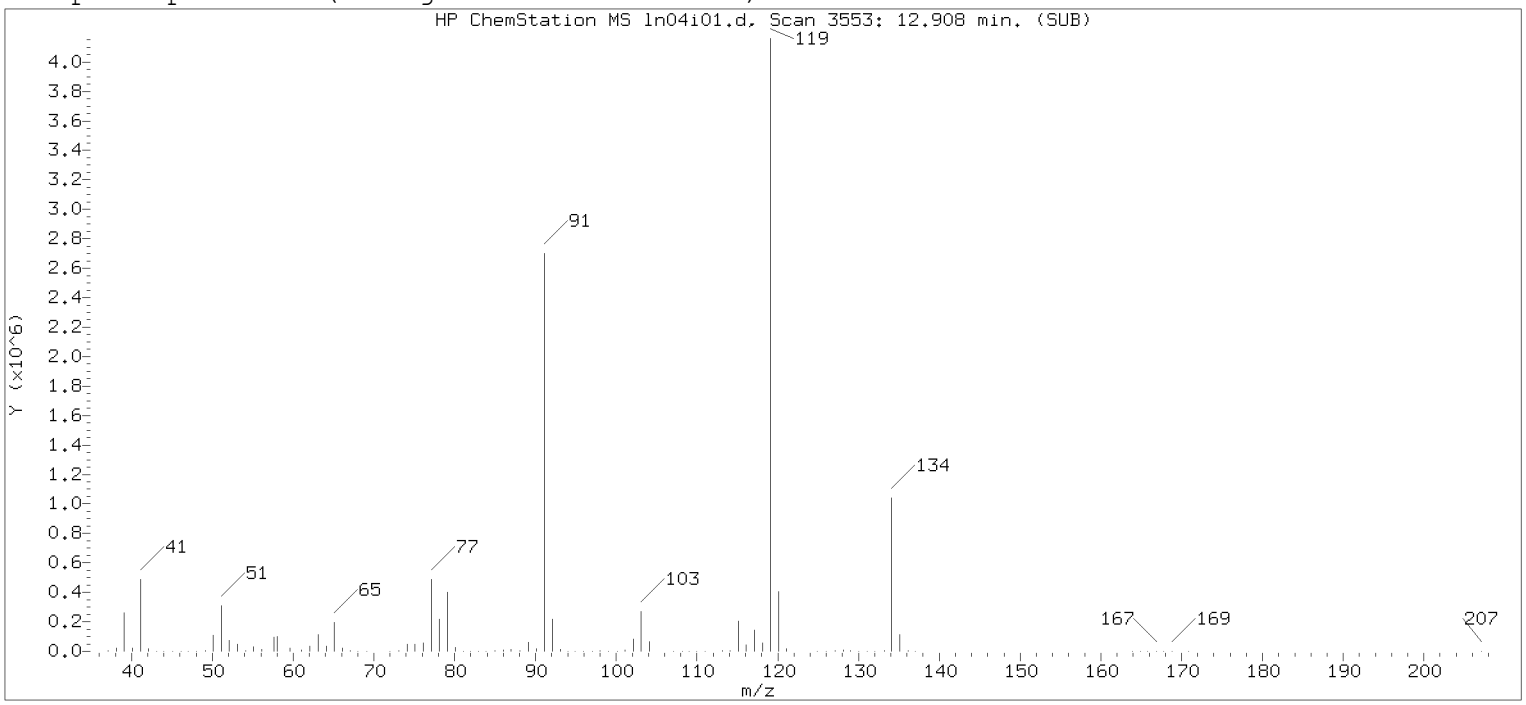
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area (flag) : 1524421M
On-Column Amount (ng) : 323.7167
Integration start scan : 3538 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

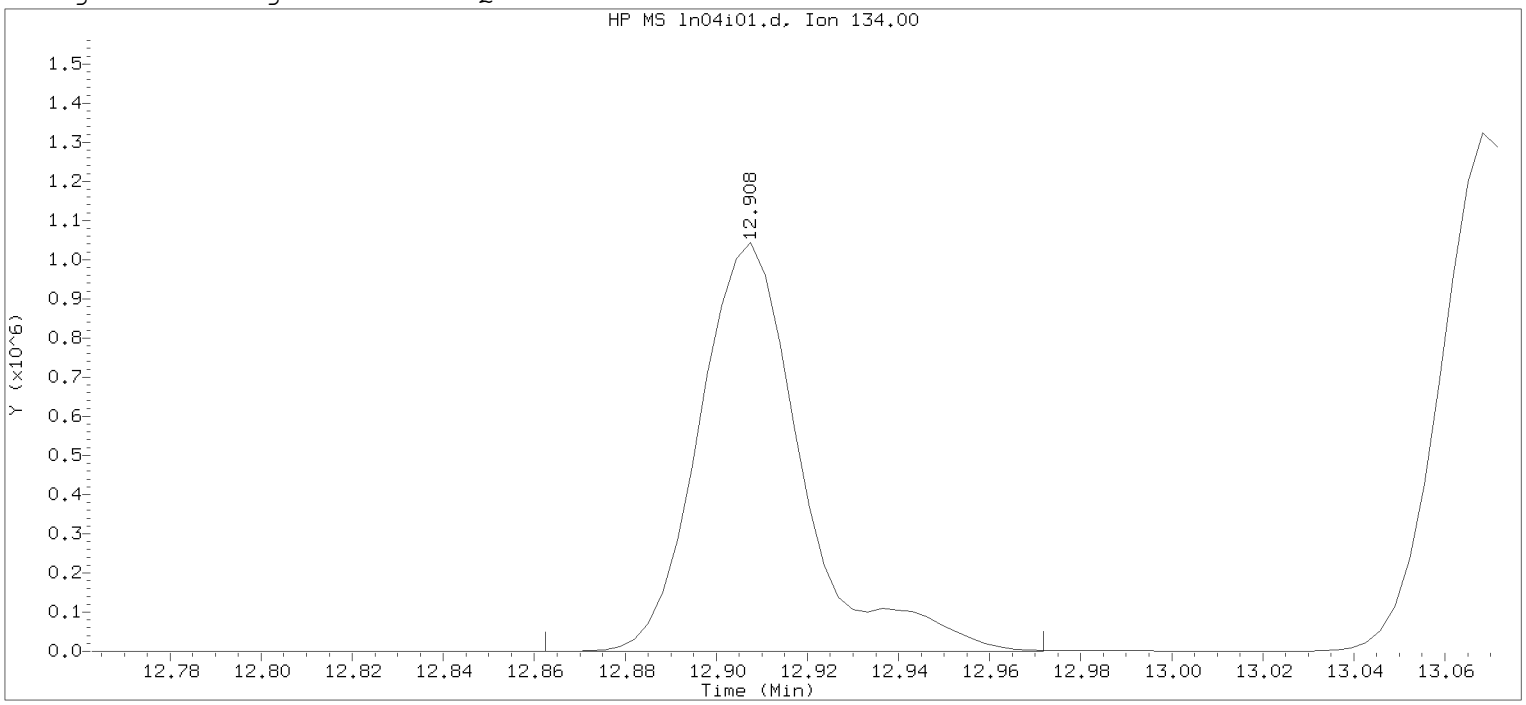
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



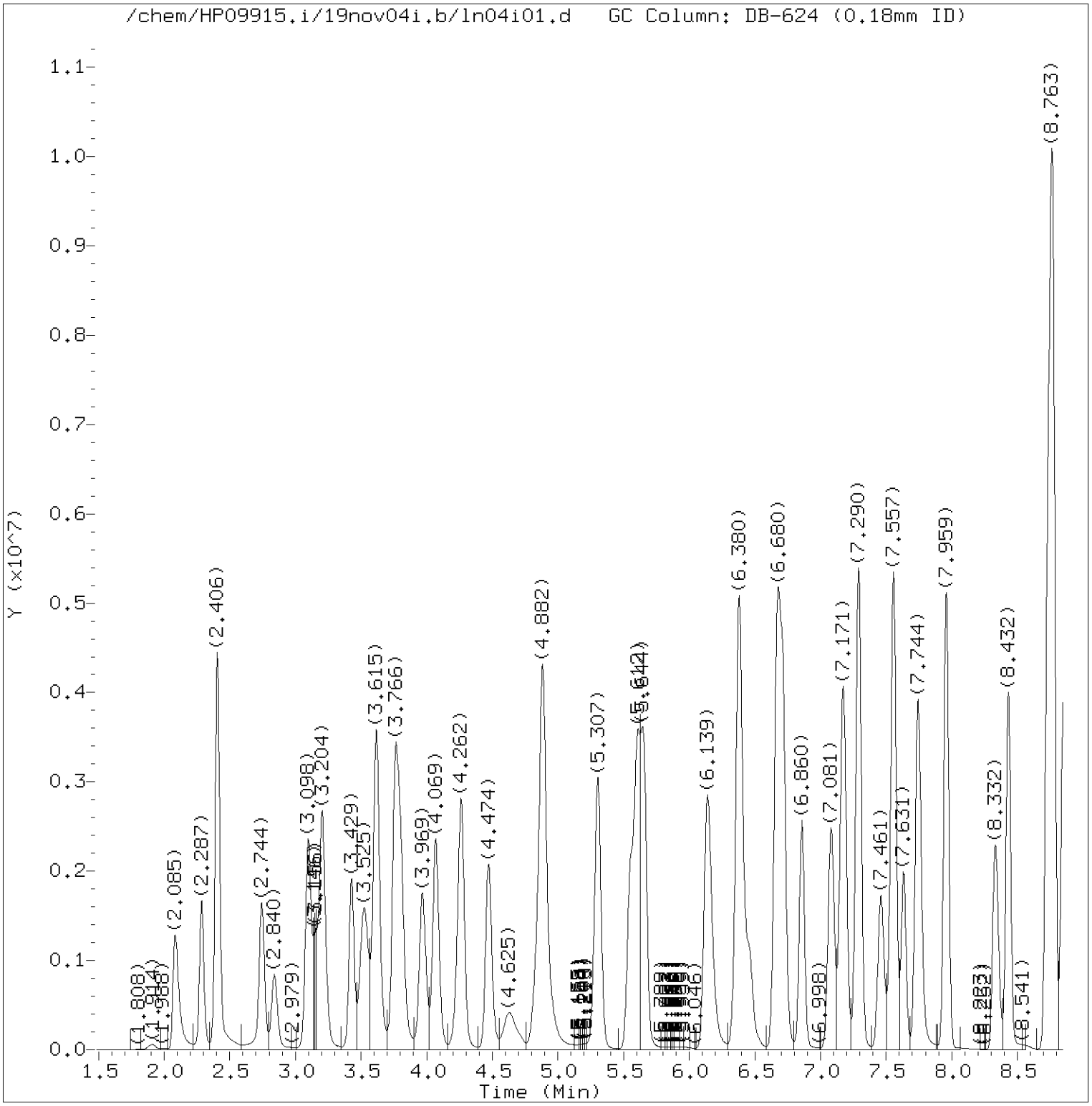
Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area : 1639624
On-column Amount (ng) : 313.1253
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user: JKHowe



Total Ion Chromatogram (TIC)

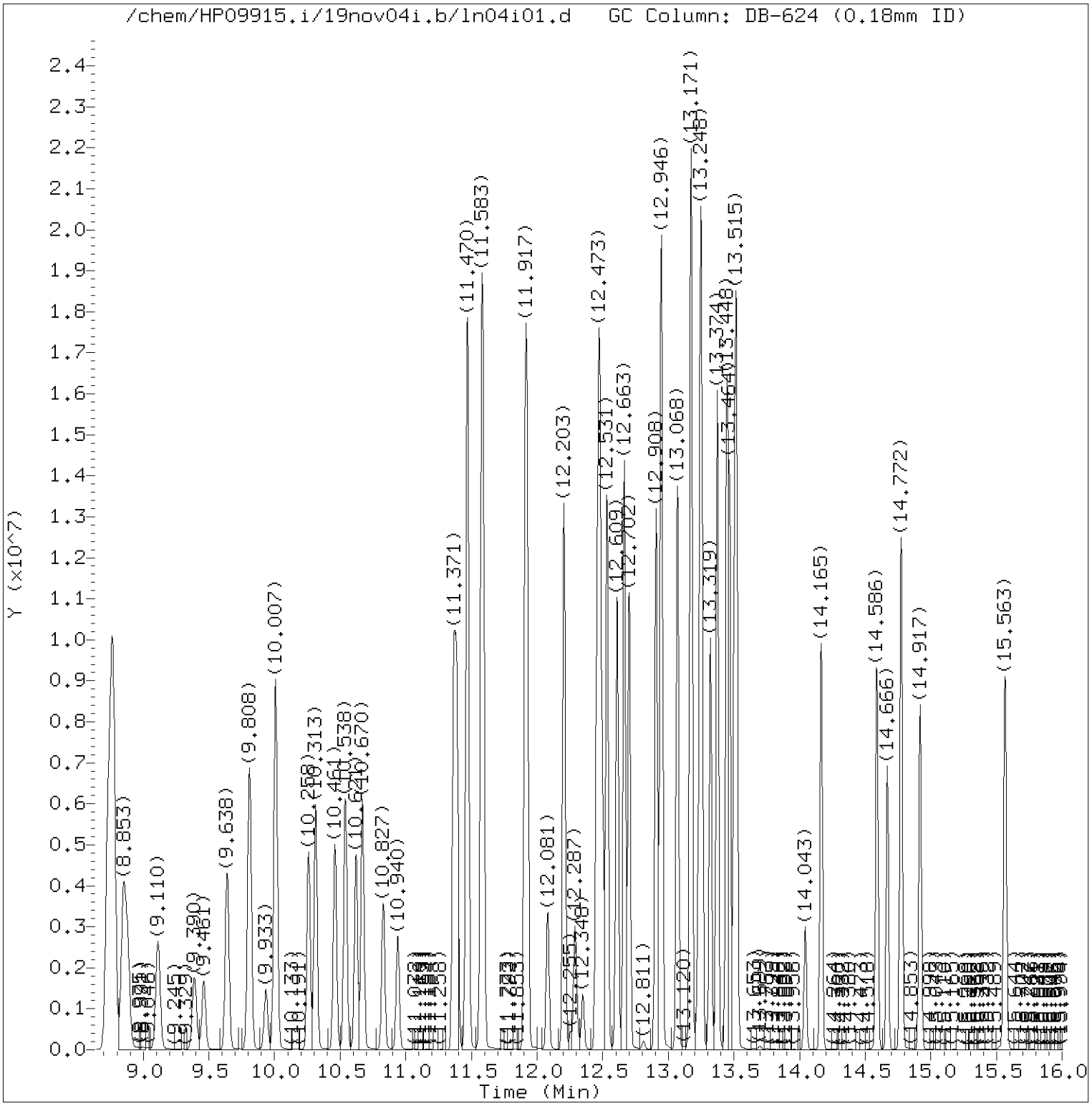
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.085	85	2719746M	347.943
4) Chloromethane	(2)	2.287	50	2403581	319.051
5) 1,3-Butadiene	(2)	2.406	39	1785787M	285.486
6) Vinyl Chloride	(2)	2.406	62	2412855	320.904
8) Bromomethane	(2)	2.744	94	1638575	304.015
9) Chloroethane	(2)	2.837	64	1253478	303.356
10) Dichlorofluoromethane	(2)	3.098	67	2978303M	300.258
12) Trichlorofluoromethane	(2)	3.152	101	2661050	328.734
11) n-Pentane	(2)	3.204	43	2816823	294.455
14) Ethyl ether	(2)	3.429	59	1721693	329.146
15) Freon 123a	(2)	3.525	67	1991616	305.852
16) Acrolein	(1)	3.615	56	5765354	3020.583
17) 1,1-Dichloroethene	(2)	3.760	96	1489890	313.570
17) 1,1-Dichloroethene	(2)	3.757	63	721205	302.767
19) Freon 113	(2)	3.792	101	1732433	319.583
18) Acetone	(1)	3.802	58	531845	621.534
22) Methyl Iodide	(2)	3.966	142	3047145	309.483
21) 2-Propanol	(1)	3.995	45	936919	1523.065
23) Carbon Disulfide	(2)	4.069	76	5676465	317.027
27) Methyl Acetate	(2)	4.239	43	1941315	317.230
25) Allyl Chloride	(2)	4.265	41	2748698	322.482
28) Methylene Chloride	(2)	4.474	84	1745840	308.716
29)*t-Butyl alcohol-d10	(1)	4.503	65	254406M	250.000
30) t-Butyl alcohol	(1)	4.638	59	1641037	1532.140
31) Acrylonitrile	(2)	4.827	53	1039800	315.820
32) trans-1,2-Dichloroethene	(2)	4.885	96	1713357	311.714
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	5505439	305.143
34) n-Hexane	(2)	5.307	57	2863189M	334.811
36) 1,1-Dichloroethane	(2)	5.548	63	3007196	313.618
38) di-Isopropyl ether	(2)	5.609	45	5739955	310.377
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	2776921	322.788
40) Ethyl t-butyl ether	(2)	6.139	59	5425034	302.275
43) 1,2-Dichloroethene (Total)	(2)		96	3646040	624.977
44) 2-Butanone	(2)	6.364	43	2642793	625.317
42) cis-1,2-Dichloroethene	(2)	6.380	96	1932683	313.263
45) 2,2-Dichloropropane	(2)	6.397	77	2377411	318.945
47) Propionitrile	(1)	6.458	54	2126389	1593.336
48) Methacrylonitrile	(2)	6.670	67	2858148	804.768

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.708	128	1075154	328.655
50) Tetrahydrofuran	(1)	6.718	71	758236	628.991
51) Chloroform	(2)	6.860	83	2916299	317.988
52)$Dibromofluoromethane	(2)	7.075	113	276322	50.424
52)$Dibromofluoromethane	(2)	7.075	111	279197	49.969
53) 1,1,1-Trichloroethane	(2)	7.081	97	2560601	327.130
54) Cyclohexane	(2)	7.171	56	3429211	327.611
54) Cyclohexane	(2)	7.171	84	2984908	328.282
54) Cyclohexane	(2)	7.171	69	1068201	329.937
56) Carbon Tetrachloride	(2)	7.287	117	2252864	339.350
55) 1,1-Dichloropropene	(2)	7.294	75	2434619	321.125
58) Isobutyl Alcohol	(1)	7.461	41	1382486	3835.573
57)$1,2-Dichloroethane-d4	(2)	7.528	102	68480	49.033
57)$1,2-Dichloroethane-d4	(2)	7.532	65	307306	49.375
57)$1,2-Dichloroethane-d4	(2)	7.528	104	44002	49.326
60) Benzene	(2)	7.557	78	7094466	311.169
61) 1,2-Dichloroethane	(2)	7.634	62	2222342	303.049
61) 1,2-Dichloroethane	(2)	7.634	98	228988	315.535
65) t-Amyl methyl ether	(2)	7.744	73	5421278	300.945
67) n-Heptane	(2)	7.959	43	2592531MA	324.518
66)*Fluorobenzene	(2)	7.959	96	1120873	50.000
69) n-Butanol	(1)	8.332	56	2465385M	7947.068
71) Trichloroethene	(2)	8.432	95	1841720	320.821
72) Methylcyclohexane	(2)	8.734	83	3568410	335.054
72) Methylcyclohexane	(2)	8.734	98	1632993	338.844
73) 1,2-Dichloropropane	(2)	8.769	63	1825943	315.397
76) Methyl Methacrylate	(2)	8.850	69	1904896A	340.256
75) 1,4-Dioxane	(1)	8.856	88	338379M	3968.421
74) Dibromomethane	(2)	8.879	93	1210939	323.274
78) Bromodichloromethane	(2)	9.113	83	2314651	344.351
79) 2-Nitropropane	(2)	9.390	41	1438925	706.755
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	926413	372.584
81) cis-1,3-Dichloropropene	(2)	9.638	75	3074664	344.402
82) 4-Methyl-2-pentanone	(2)	9.808	43	5422938	607.899
83)$Toluene-d8	(3)	9.933	98	1156351	49.563
83)$Toluene-d8	(3)	9.933	100	751534	49.726
88) Toluene	(3)	10.007	92	4532879	309.894
90) 1,3-Dichloropropene (total)	(3)		100	5974636	693.659

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	2899972	349.257
91) Ethyl Methacrylate	(3)	10.313	69	3356305	332.603
92) 1,1,2-Trichloroethane	(3)	10.461	97	1768710	318.935
93) Tetrachloroethene	(3)	10.541	166	1990565	321.327
94) 1,3-Dichloropropane	(3)	10.621	76	3006585	317.532
96) 2-Hexanone	(3)	10.670	43	3998423	593.616
97) Dibromochloromethane	(3)	10.827	129	2037523	358.670
99) 1,2-Dibromoethane	(3)	10.940	107	1987783	330.088
100)*Chlorobenzene-d5	(3)	11.361	117	891668	50.000
101) 1-Chlorohexane	(3)	11.364	91	2458057	312.814
102) Chlorobenzene	(3)	11.387	112	5140609	310.783
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	1789998	328.446
104) Ethylbenzene	(3)	11.470	91	8606821	307.854
106) m+p-Xylene	(3)	11.583	106	6690837	608.359
108) Xylene (Total)	(3)		106	9979970	911.130
107) o-Xylene	(3)	11.908	106	3289133	302.771
109) Styrene	(3)	11.924	104	5647939	314.619
110) Bromoform	(3)	12.081	173	1534520	361.500
111) Isopropylbenzene	(3)	12.203	105	8466138	310.714
112) Cyclohexanone	(1)	12.287	55	1351186	4046.080
114)$4-Bromofluorobenzene	(3)	12.348	95	440049	49.810
114)$4-Bromofluorobenzene	(3)	12.348	174	362553	49.502
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	2800639M	310.705
115) Bromobenzene	(4)	12.467	156	2234066	311.517
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	2150976	773.637
117) 1,2,3-Trichloropropane	(4)	12.499	110	866230	313.172
119) n-Propylbenzene	(4)	12.531	91	9654812	308.142
120) 2-Chlorotoluene	(4)	12.609	126	2098494	315.266
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	7238022	317.873
121) 4-Chlorotoluene	(4)	12.702	126	2155793	311.148
124) tert-Butylbenzene	(4)	12.908	134	1524421M	323.717
125) Pentachloroethane	(4)	12.940	167	1461833	360.511
126) 1,2,4-Trimethylbenzene	(4)	12.949	105	7469187	311.236
127) sec-Butylbenzene	(4)	13.068	105	8682126	308.971
129) 1,3-Dichlorobenzene	(4)	13.168	146	3858953	292.822
130) p-Isopropyltoluene	(4)	13.174	119	7289488	299.854
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	477171	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	4013510	293.777

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

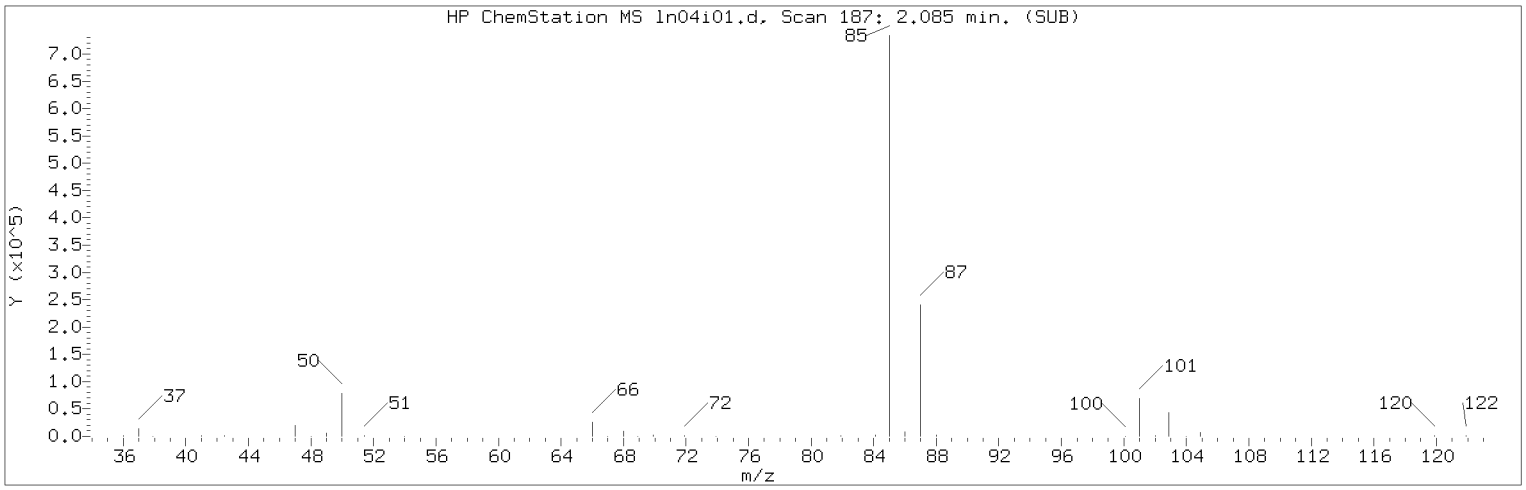
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

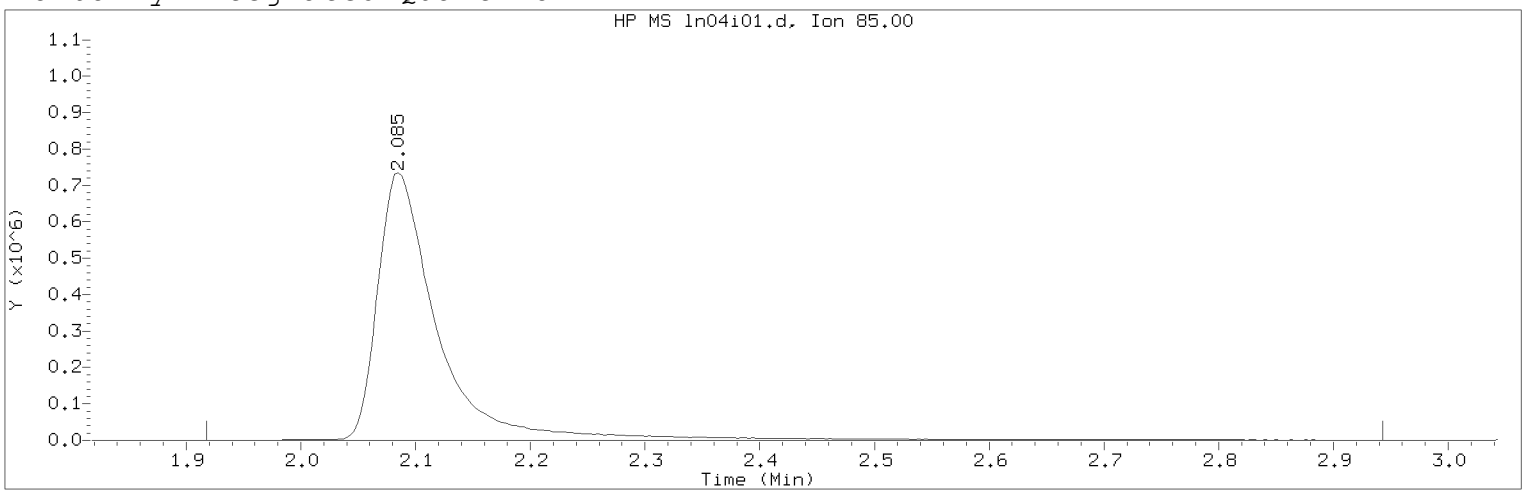
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	7915203	311.364
135) Benzyl Chloride	(4)	13.319	91	6484944	336.931
136) 1,3-Diethylbenzene	(4)	13.374	119	4897725	309.573
141) Diethylbenzene (total)	(4)		100	13982971	913.975
137) 1,4-Diethylbenzene	(4)	13.444	119	5013123	299.077
139) n-Butylbenzene	(4)	13.467	92	3608595	290.316
138) 1,2-Dichlorobenzene	(4)	13.502	146	3859125	296.761
140) 1,2-Diethylbenzene	(4)	13.518	119	4072123	305.325
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	669008	339.050
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	2855960	285.855
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	2681523	276.030
147) Hexachlorobutadiene	(4)	14.670	225	1157297	252.311
148) Naphthalene	(4)	14.772	128	9186333	294.145
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	2488608	263.270
150) 2-Methylnaphthalene	(4)	15.563	142	4666682	242.655

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

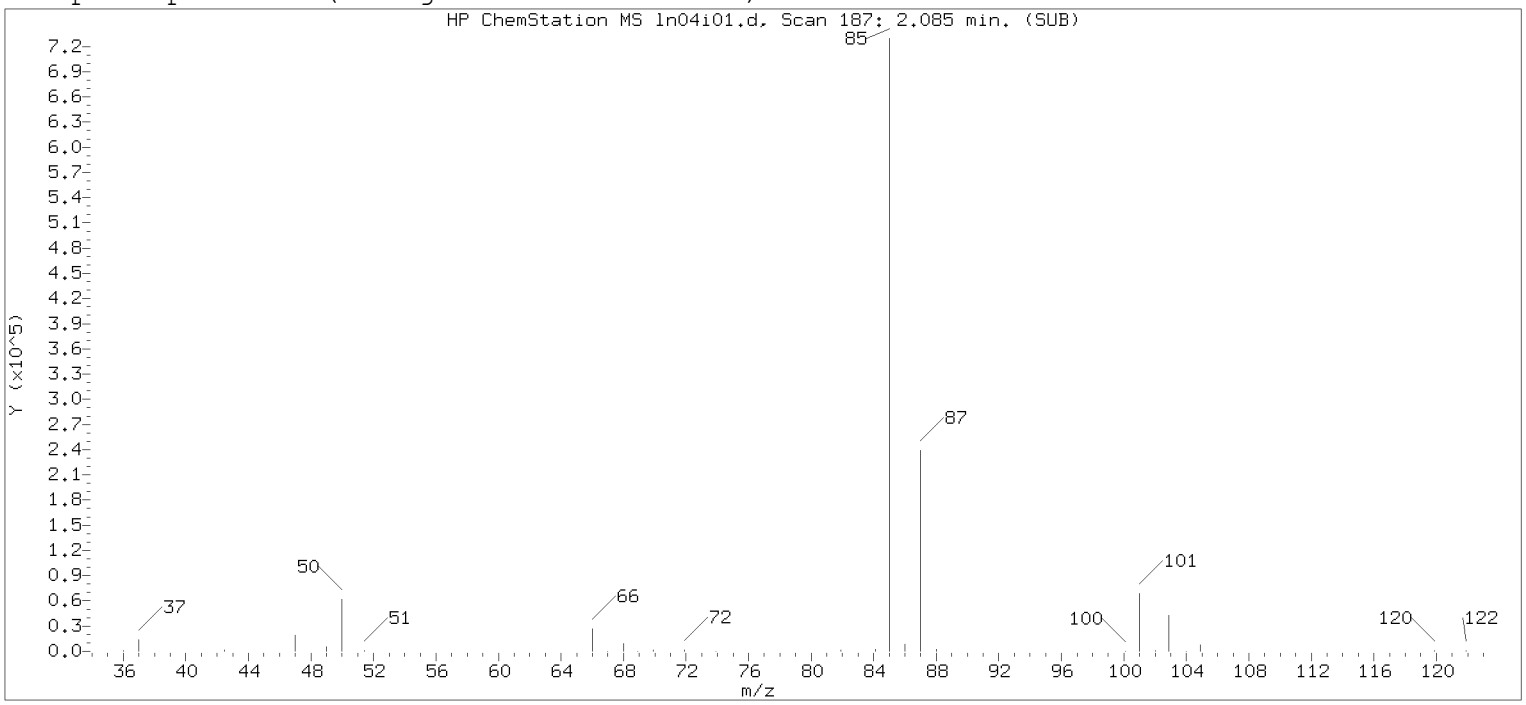
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area (flag) : 2719746M
On-Column Amount (ng) : 347.9426
Integration start scan : 134 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

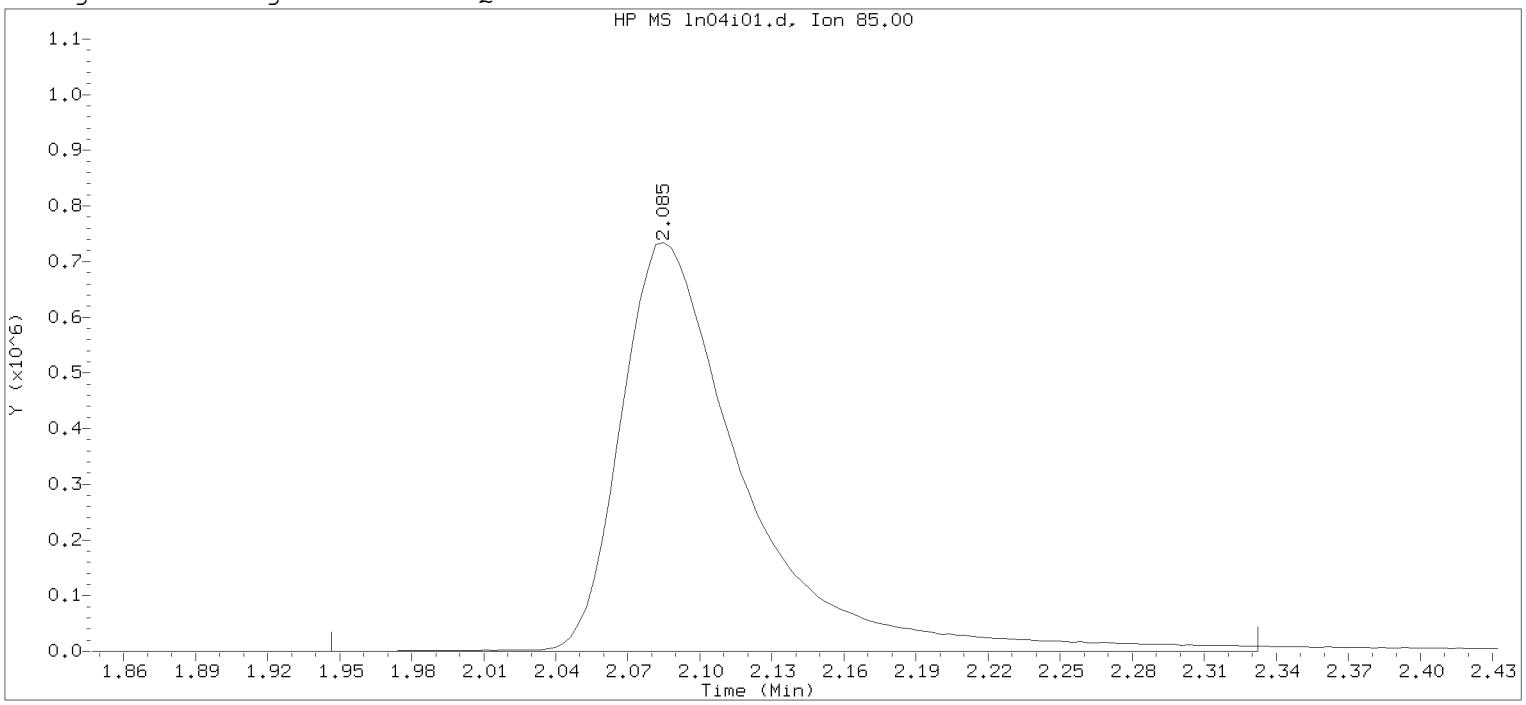
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

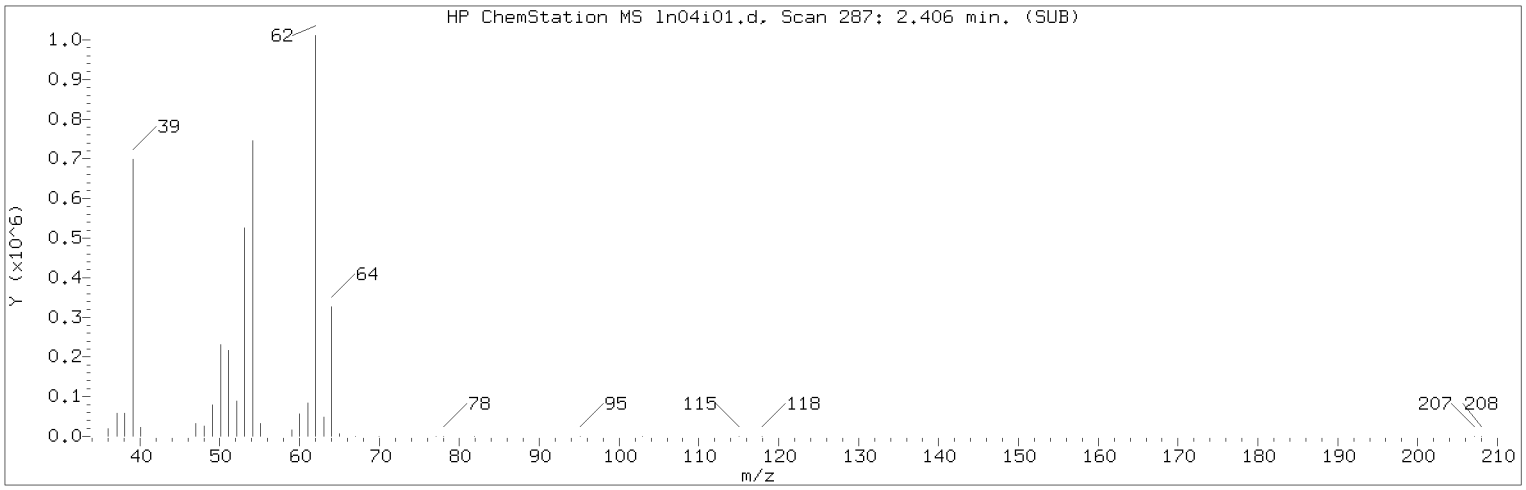
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

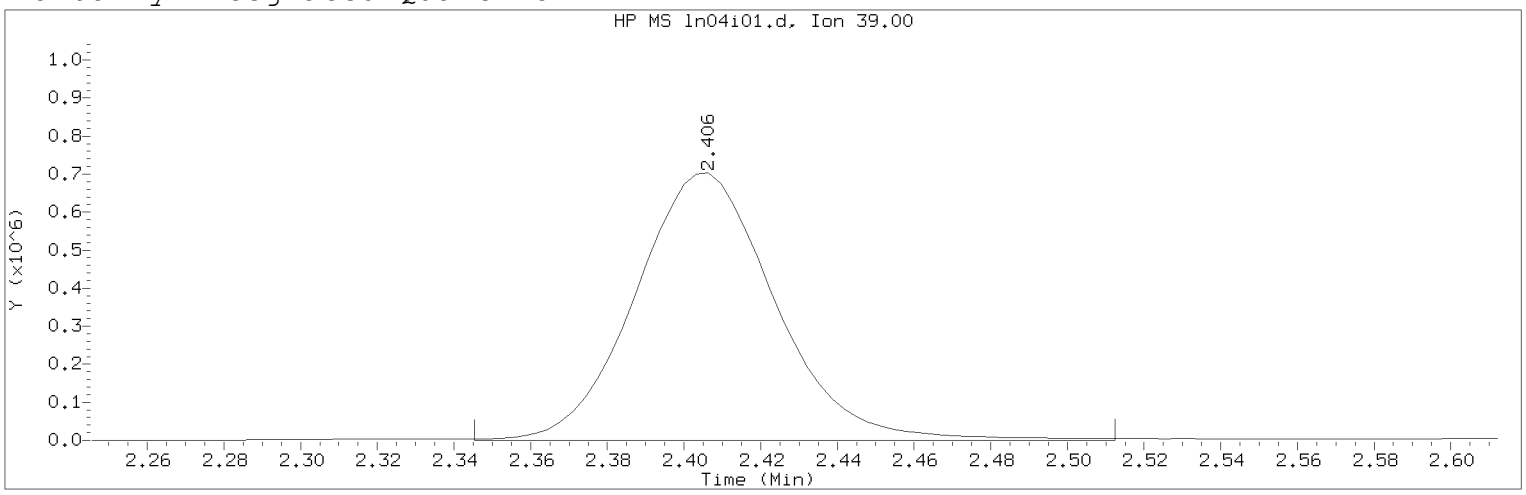
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area : 2624212
On-column Amount (ng) : 308.6520
Integration start scan : 143 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

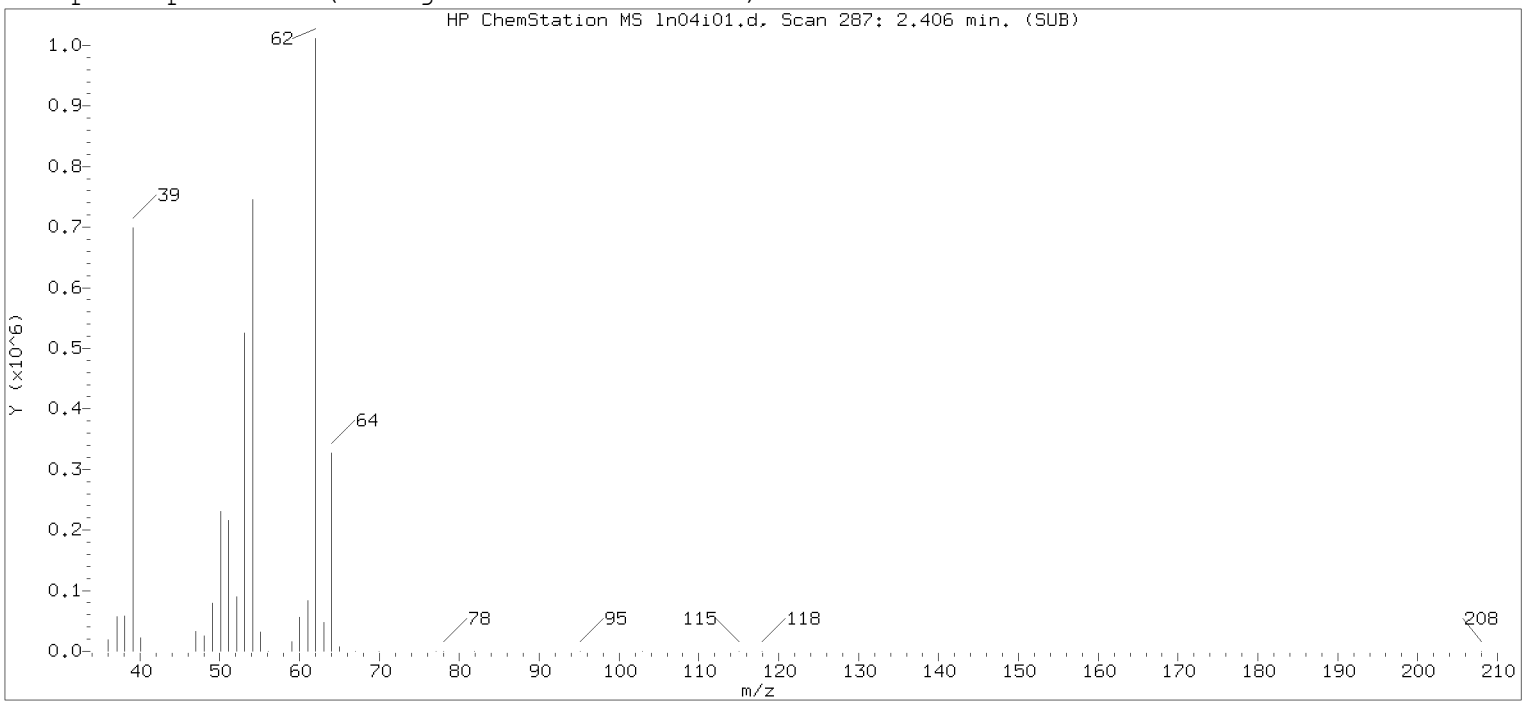
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 1785787M
On-Column Amount (ng) : 285.4858
Integration start scan : 267 Integration stop scan: 319
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

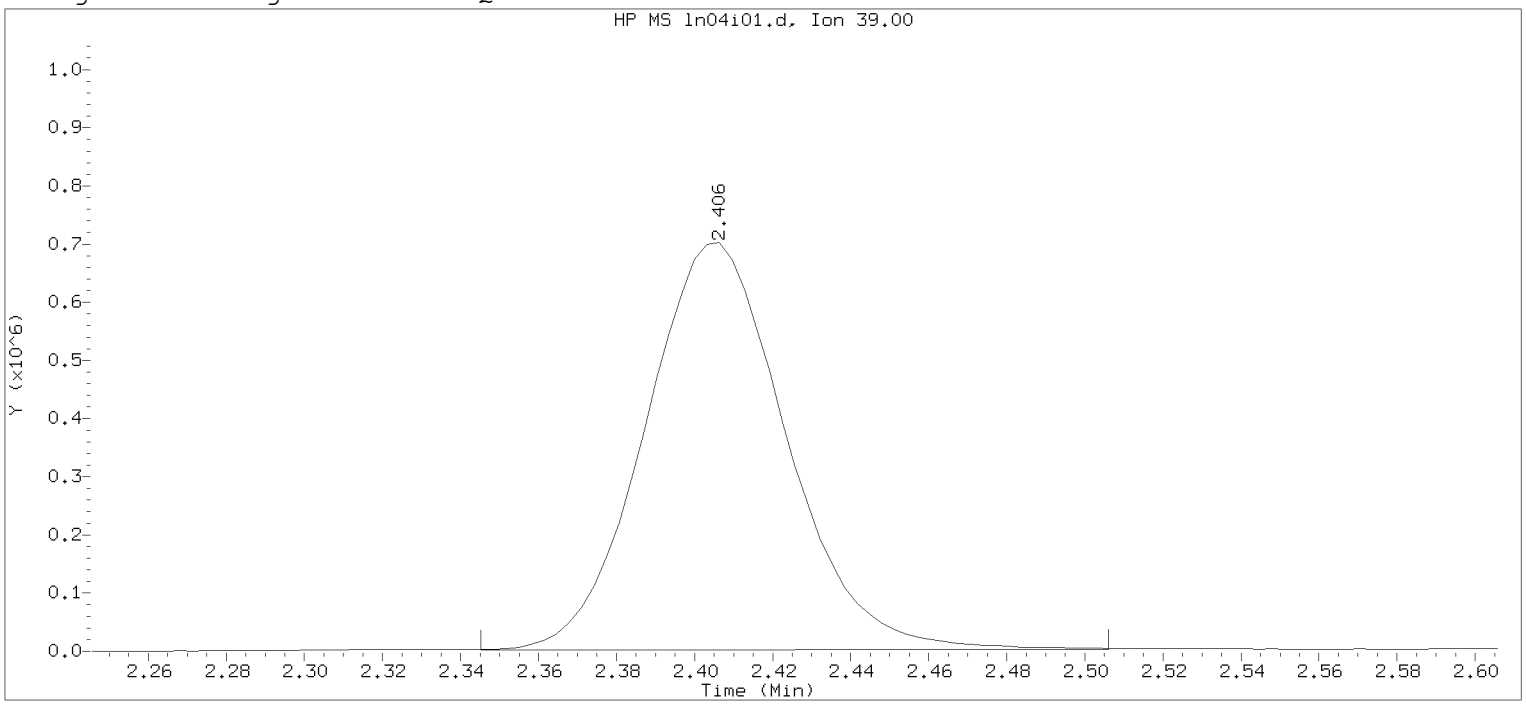
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

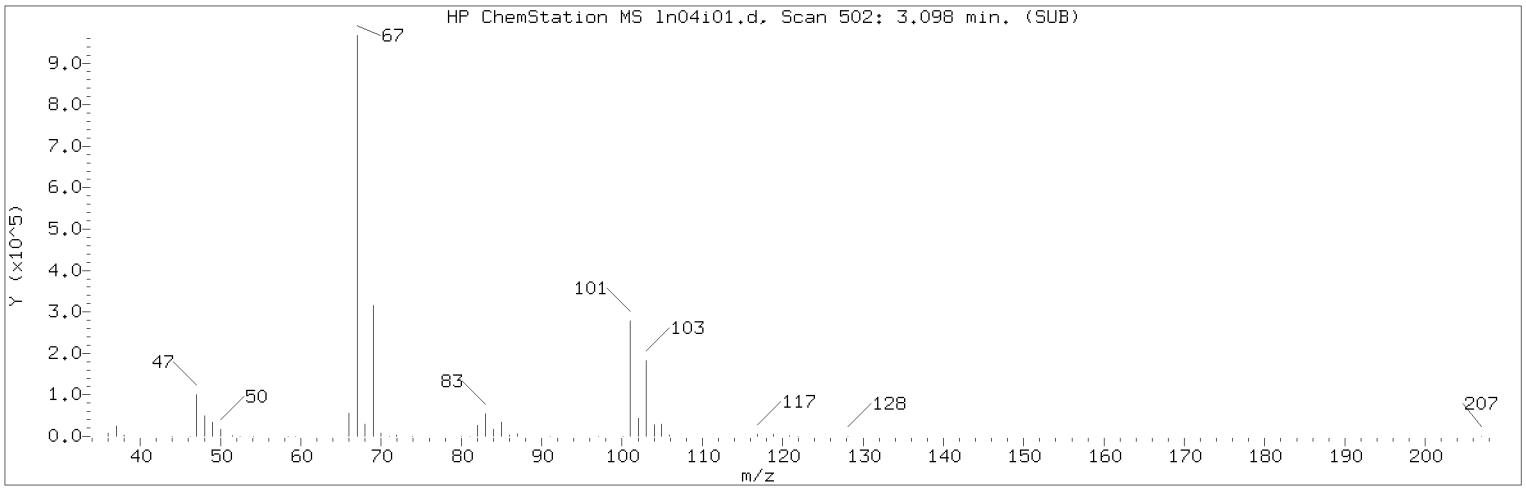
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

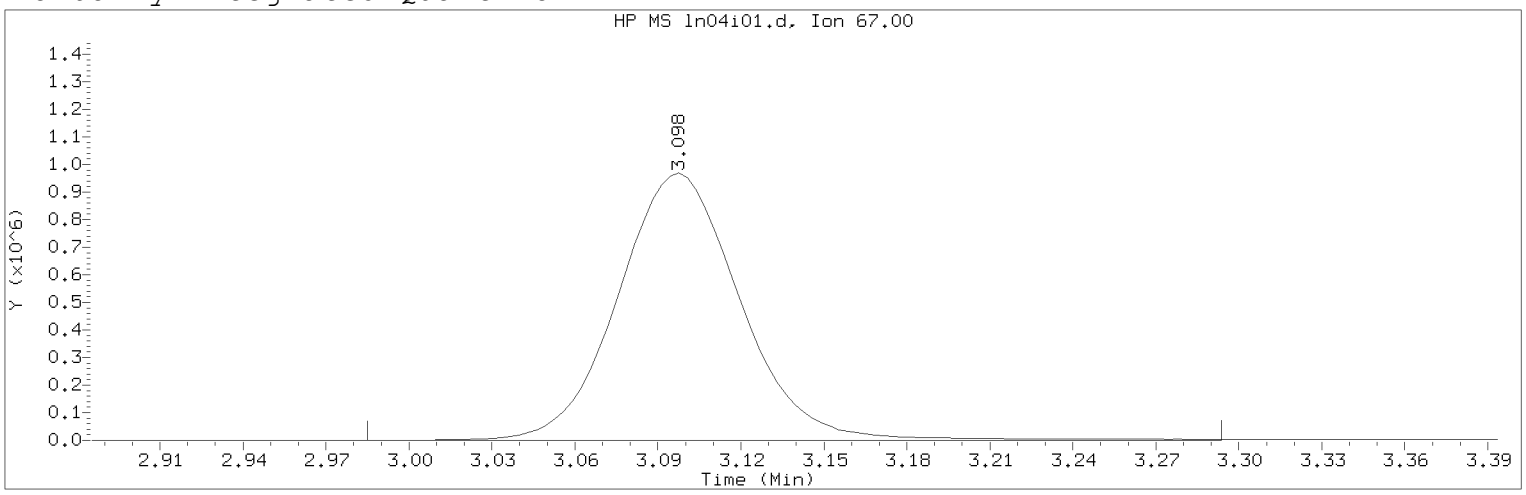
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 1755596
On-column Amount (ng) : 295.0708
Integration start scan : 267 Integration stop scan: 317
Y at integration start : 2196 Y at integration end: 3553

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

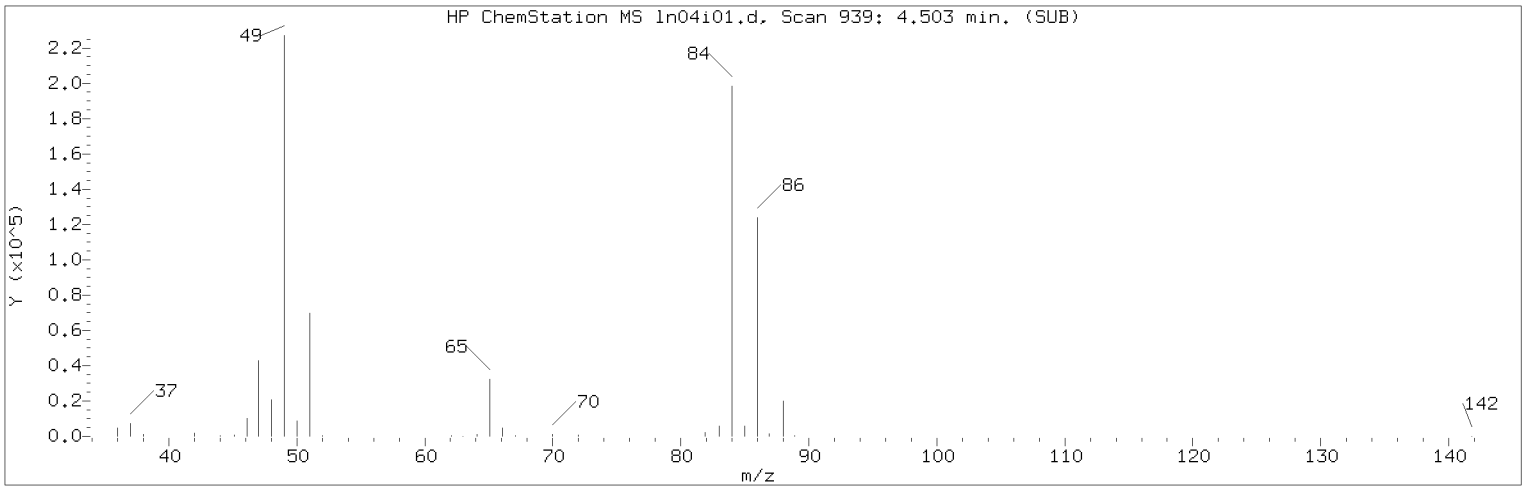
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 502
Retention Time (minutes): 3.098
Quant Ion : 67.00
Area (flag) : 2978303M
On-Column Amount (ng) : 300.2583
Integration start scan : 466 Integration stop scan: 562
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

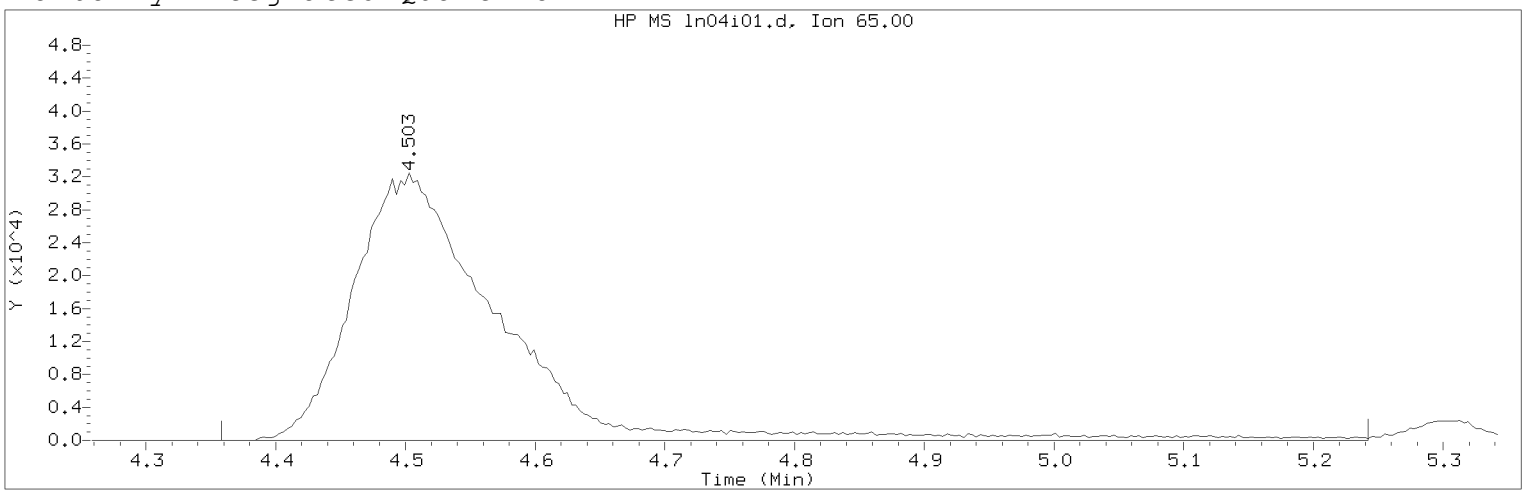
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

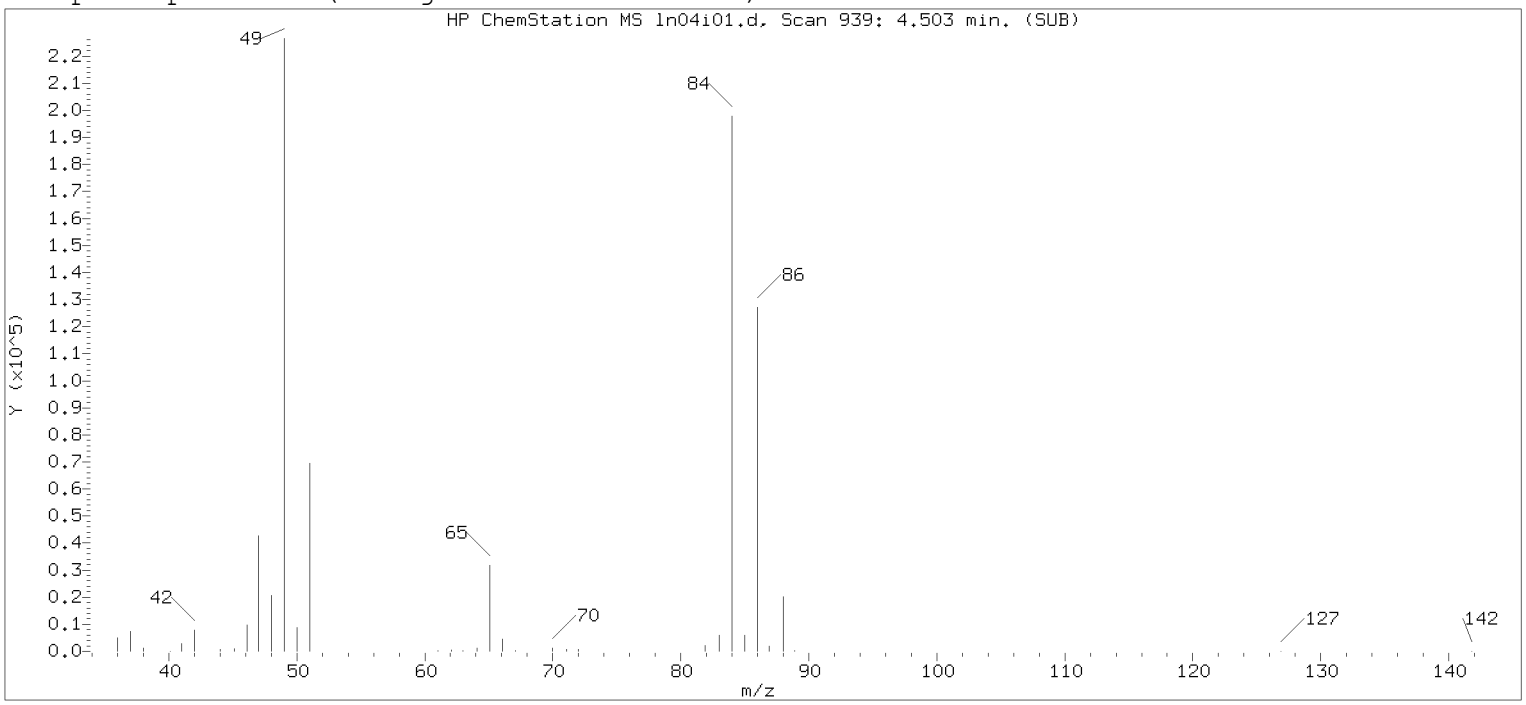
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area (flag) : 254406M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1168
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

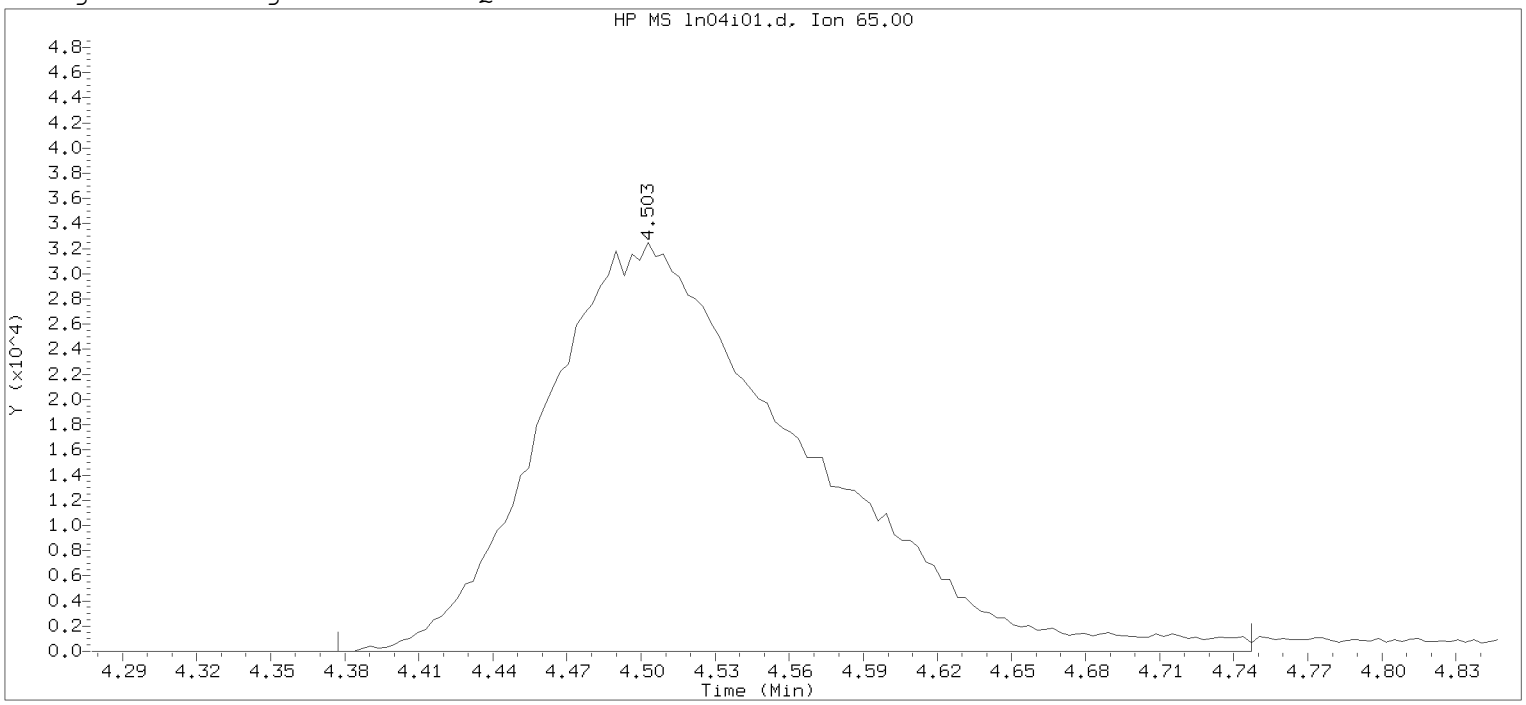
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

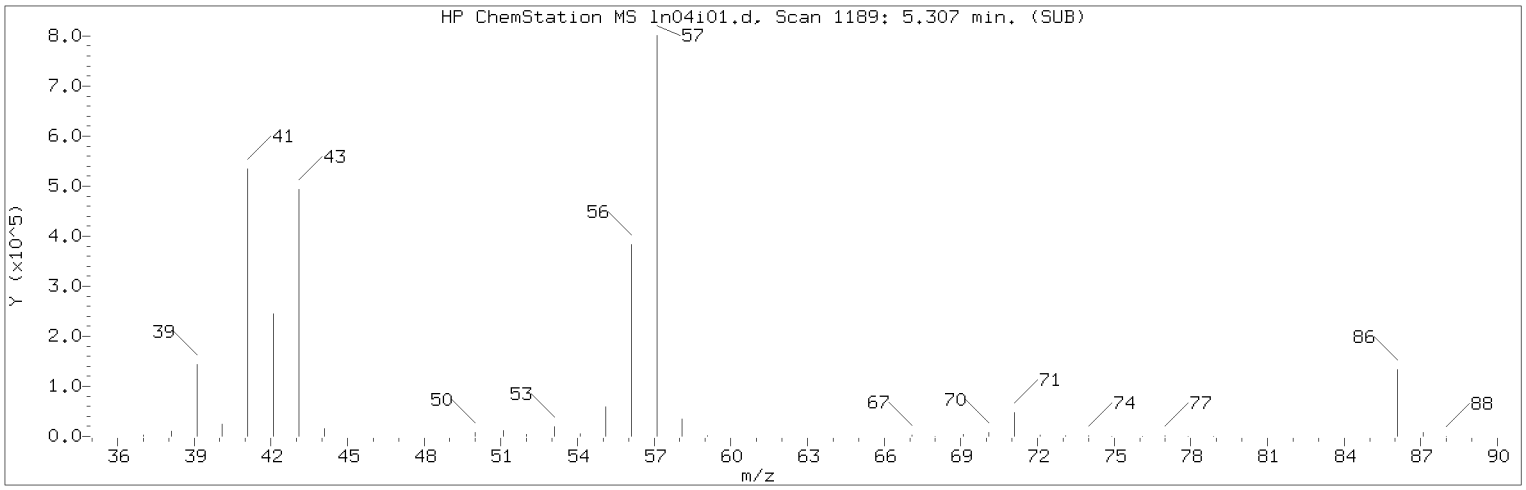
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

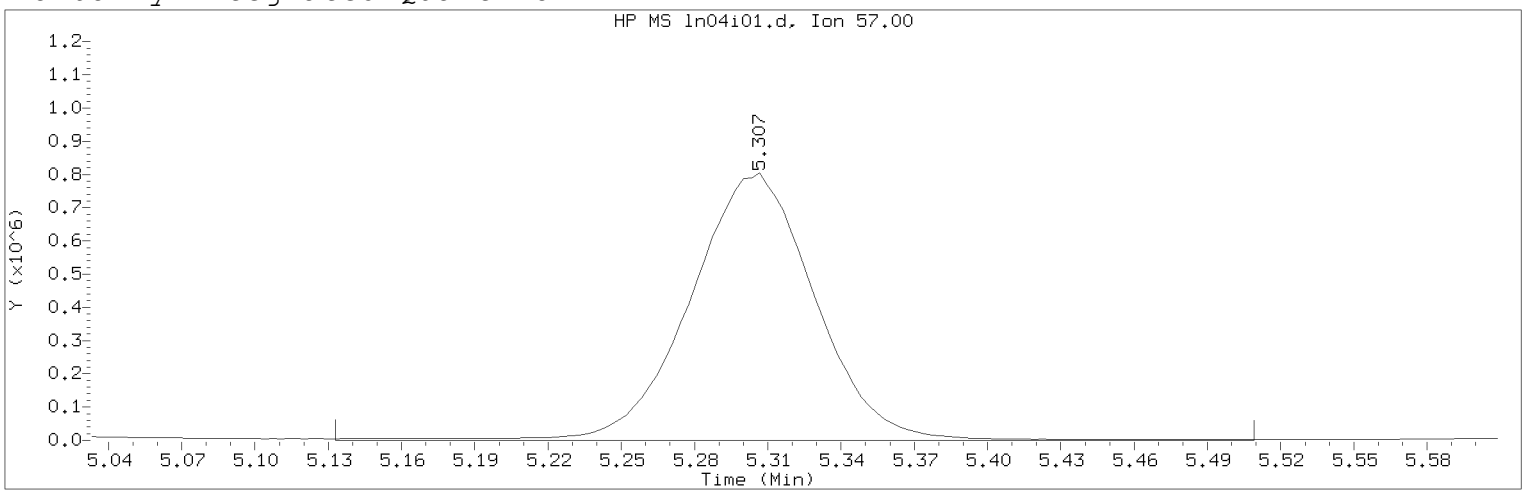
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area : 237264
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

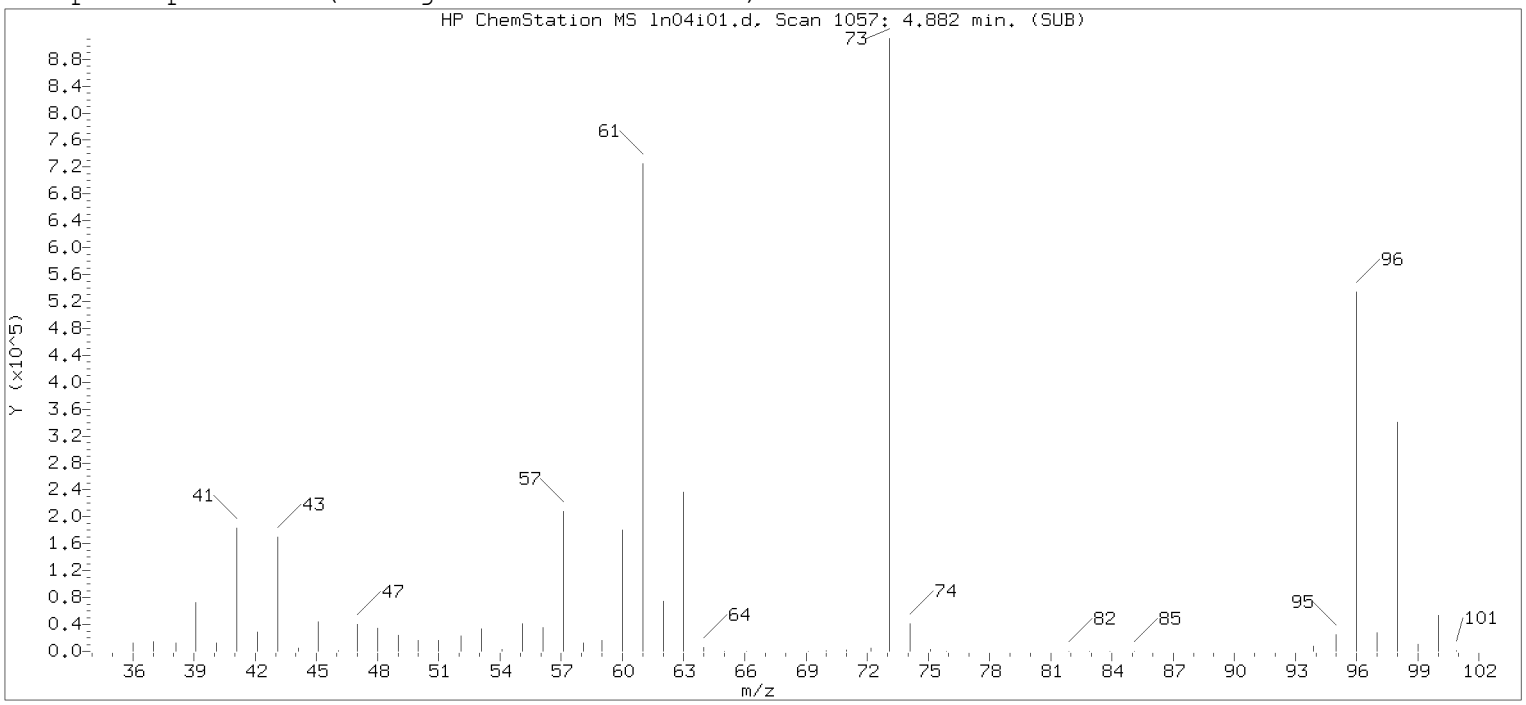
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1189
Retention Time (minutes): 5.307
Quant Ion : 57.00
Area (flag) : 2863189M
On-Column Amount (ng) : 334.8105
Integration start scan : 1134 Integration stop scan: 1251
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

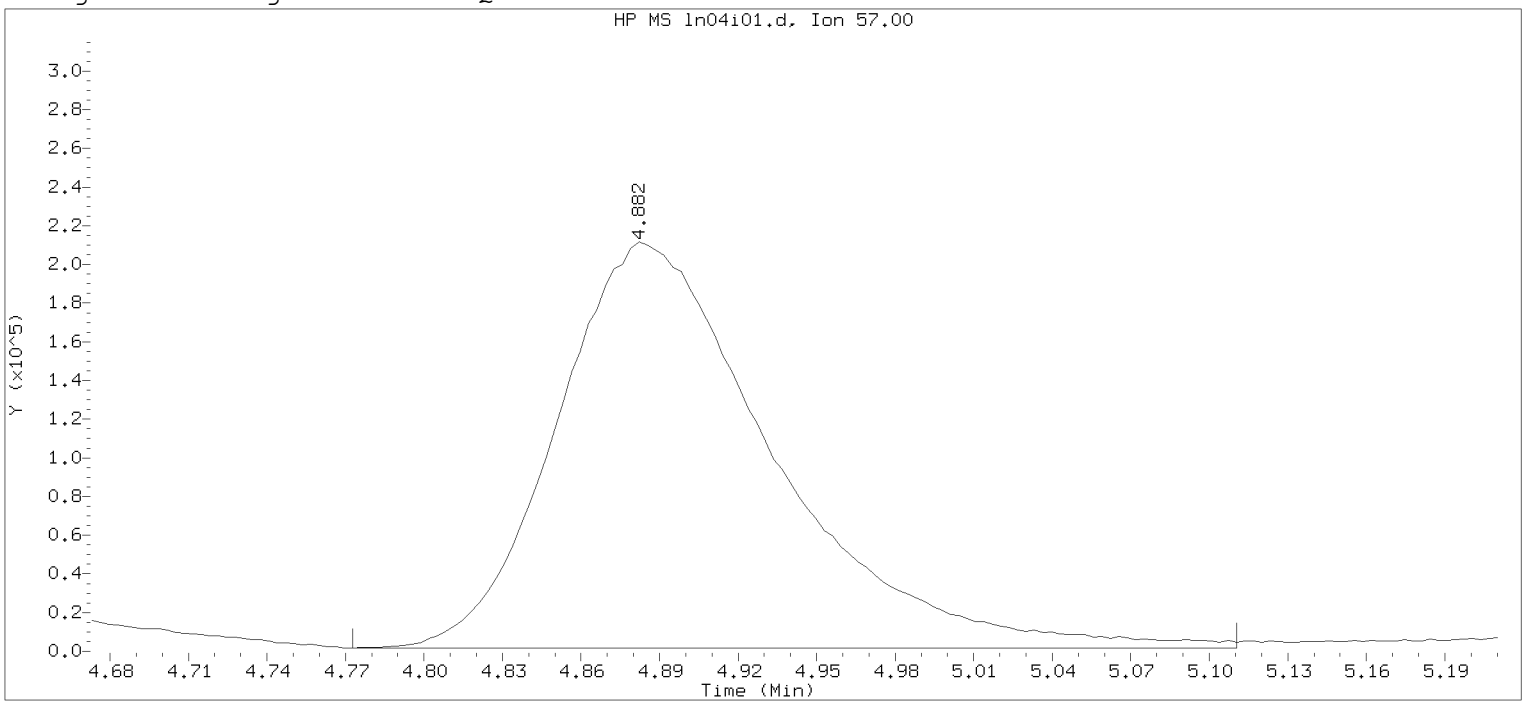
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

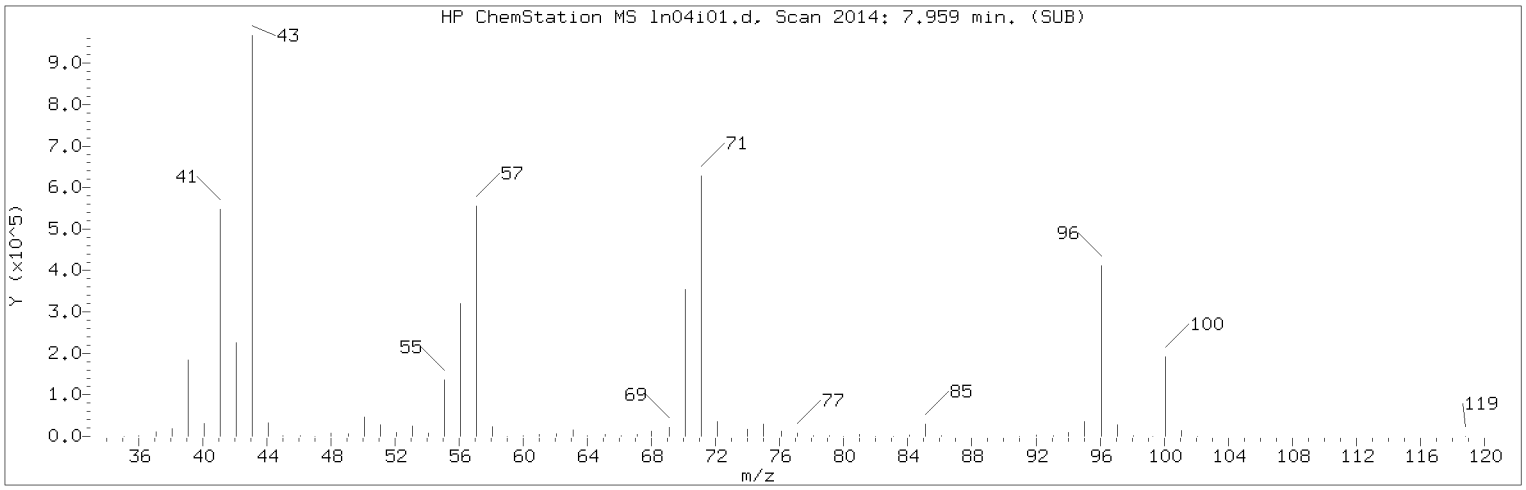
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

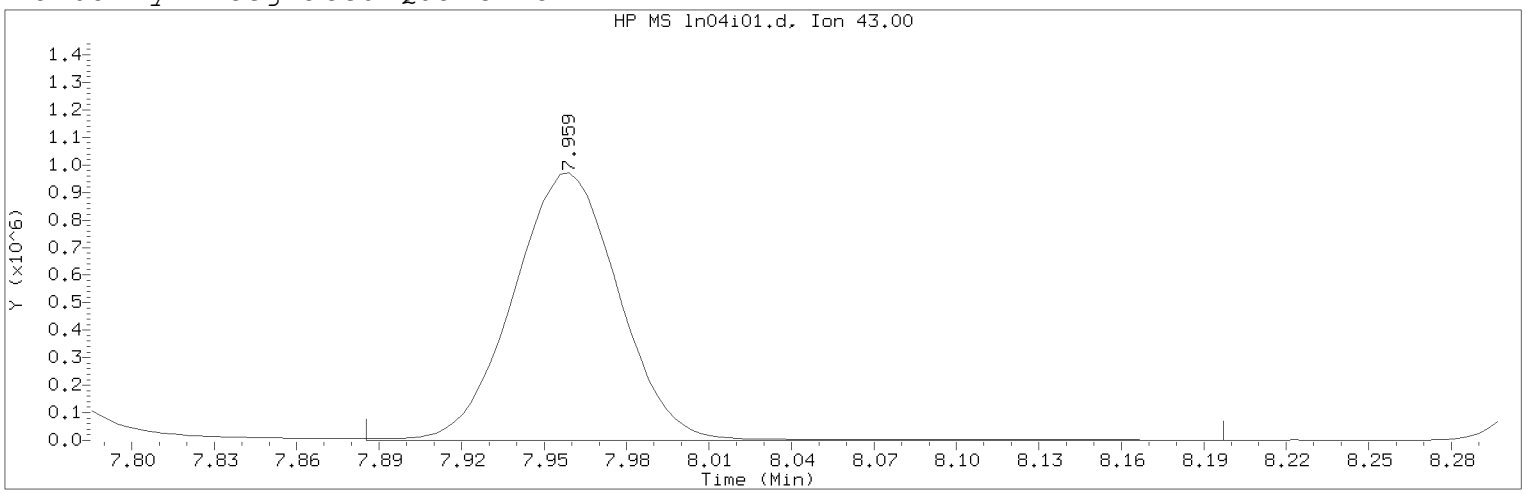
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1057
Retention Time (minutes): 4.882
Quant Ion : 57.00
Area : 1202378
On-column Amount (ng) : 301.4561
Integration start scan : 1022 Integration stop scan: 1127
Y at integration start : 1806 Y at integration end: 1806

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

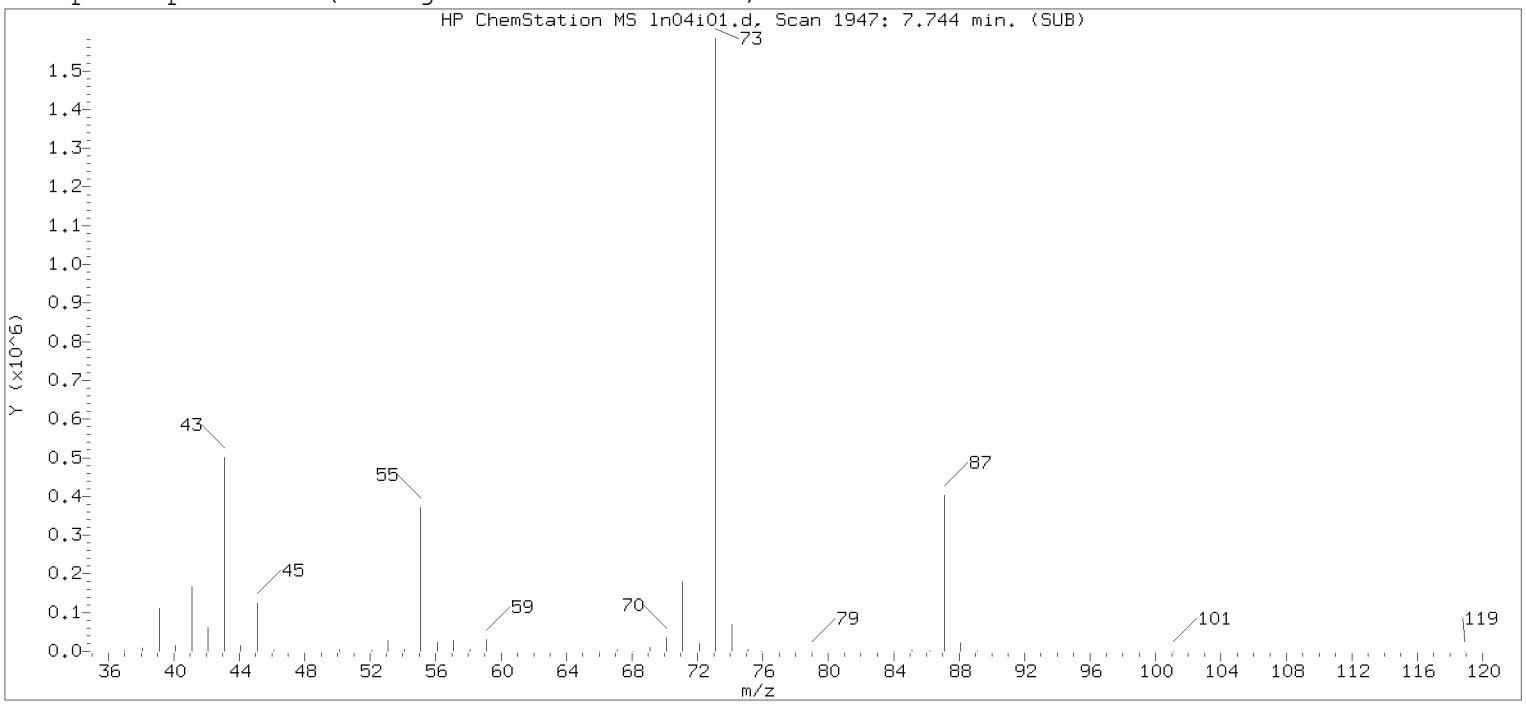
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2014
Retention Time (minutes): 7.959
Quant Ion : 43.00
Area (flag) : 2592531MA
On-Column Amount (ng) : 324.5176
Integration start scan : 1990 Integration stop scan: 2087
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

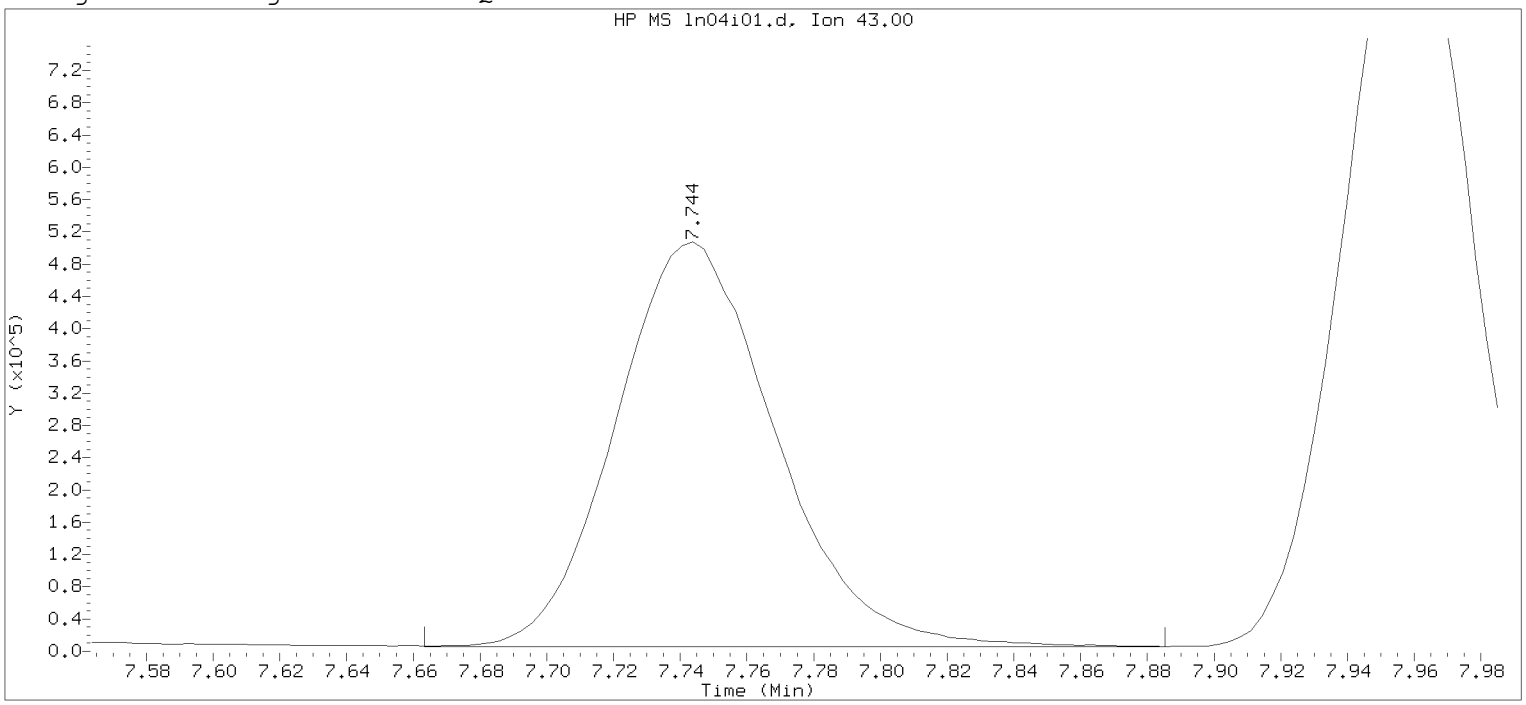
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

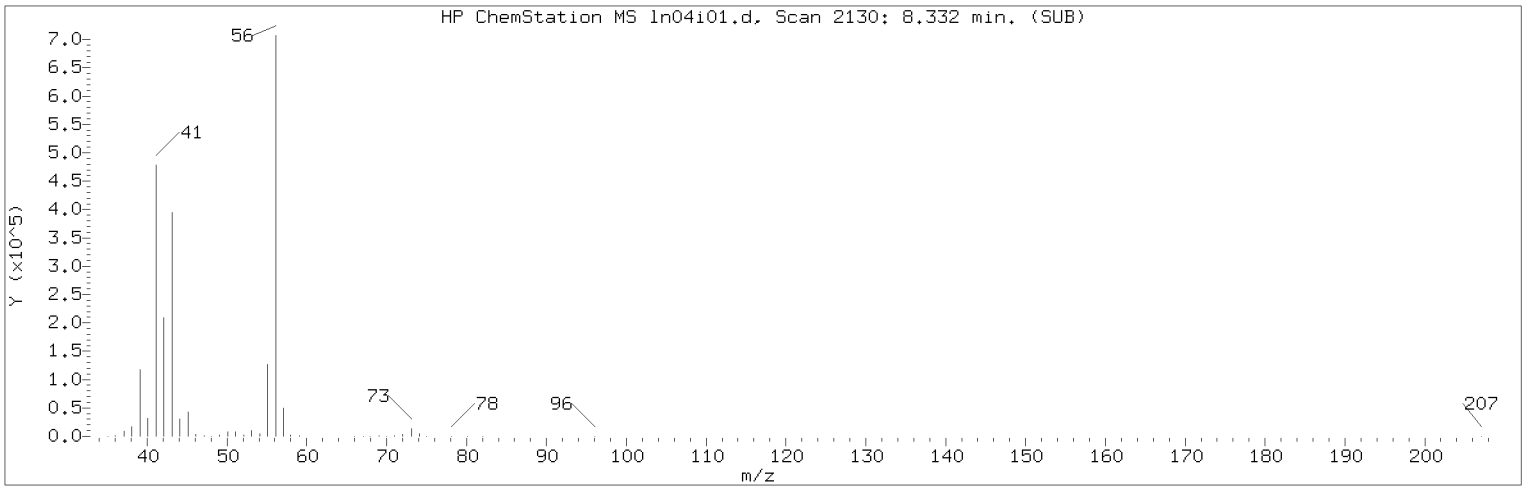
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

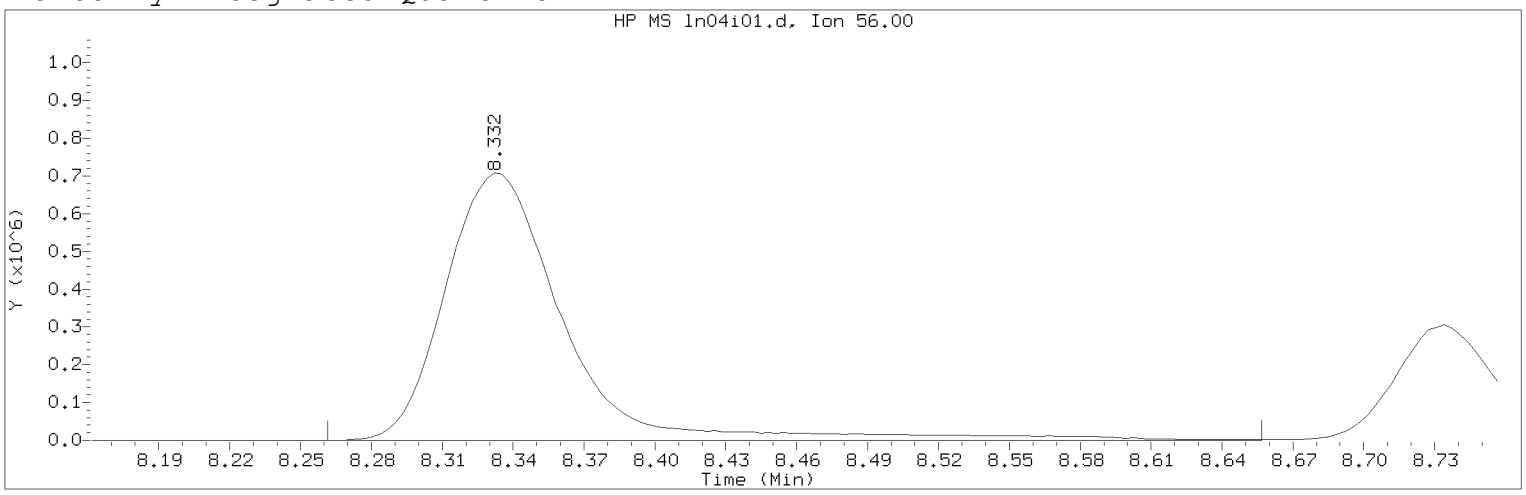
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1947
Retention Time (minutes): 7.744
Quant Ion : 43.00
Area : 1668813
On-column Amount (ng) : 288.4319
Integration start scan : 1921 Integration stop scan: 1990
Y at integration start : 5866 Y at integration end: 5866

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

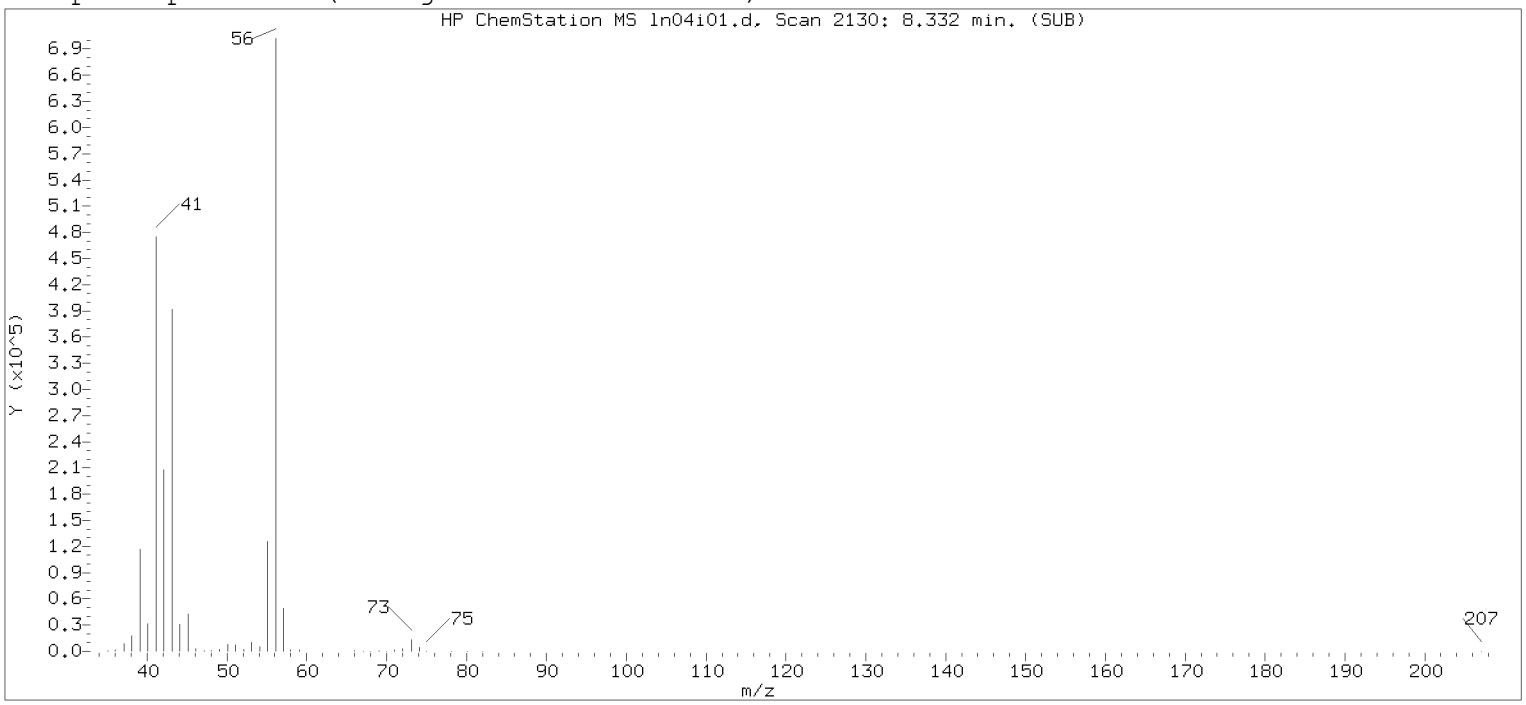
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area (flag) : 2465385M
On-Column Amount (ng) : 7947.0678
Integration start scan : 2107 Integration stop scan: 2230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

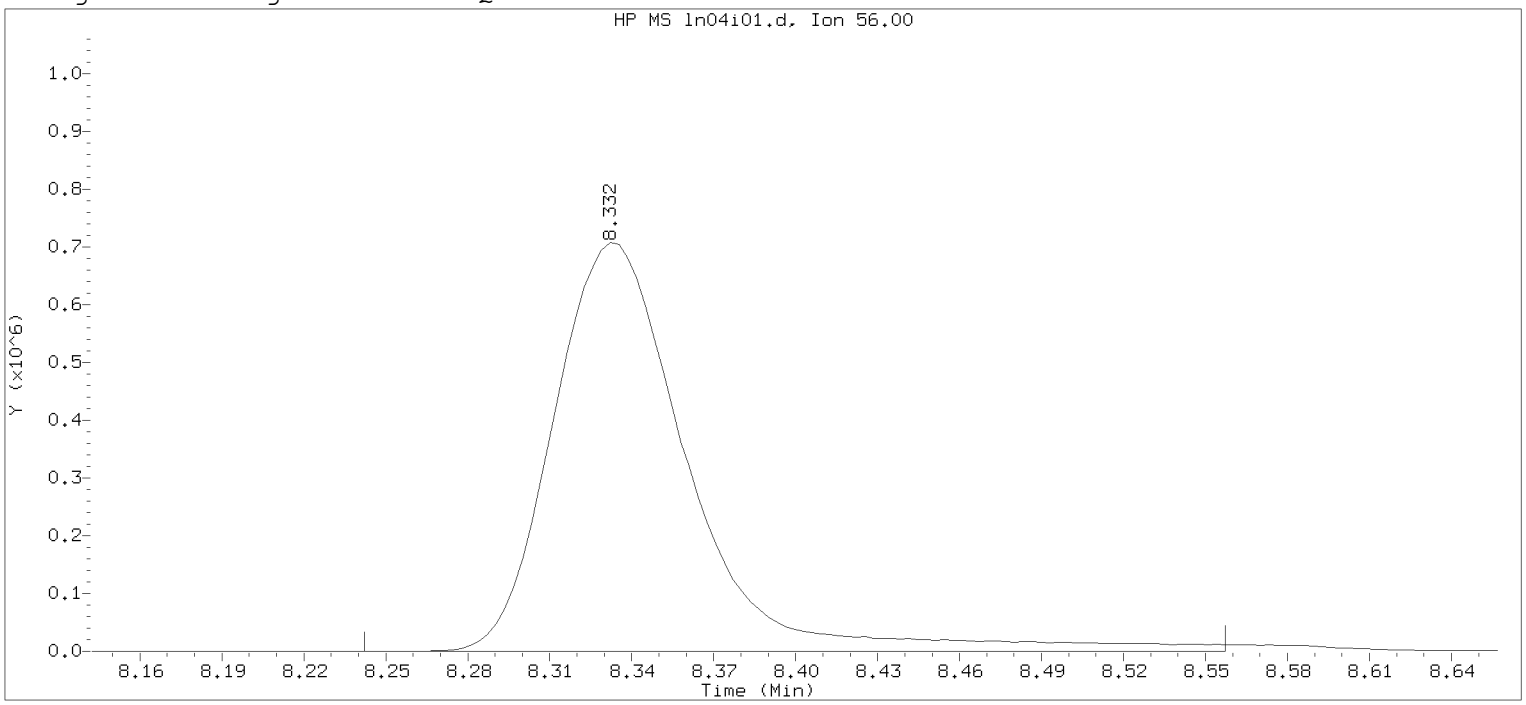
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

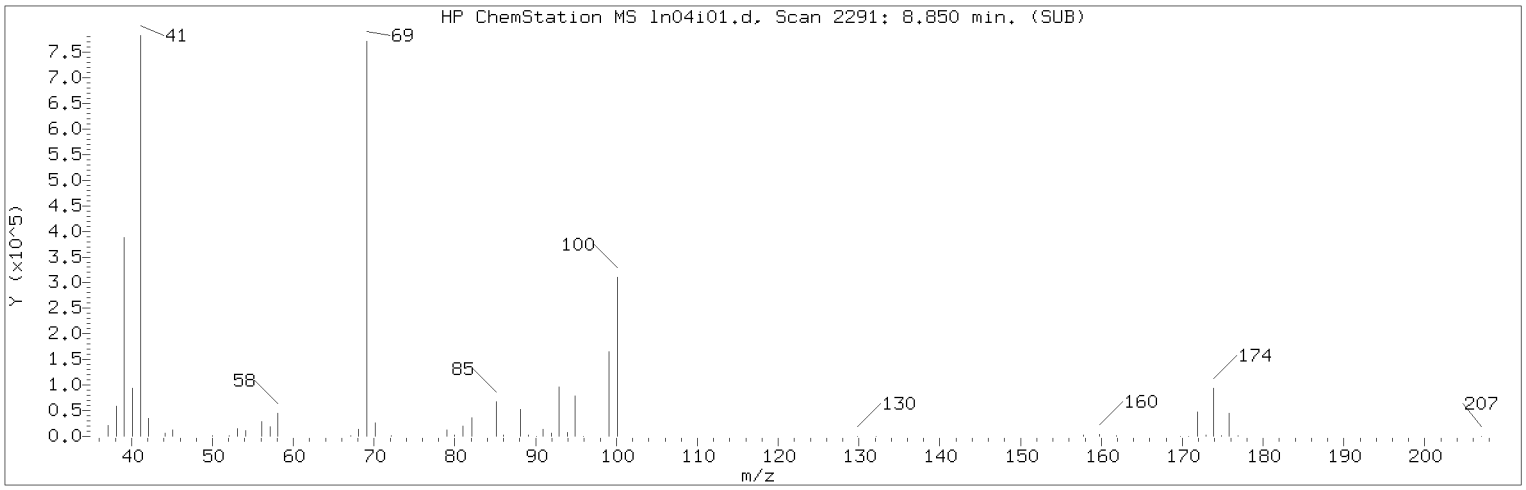
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

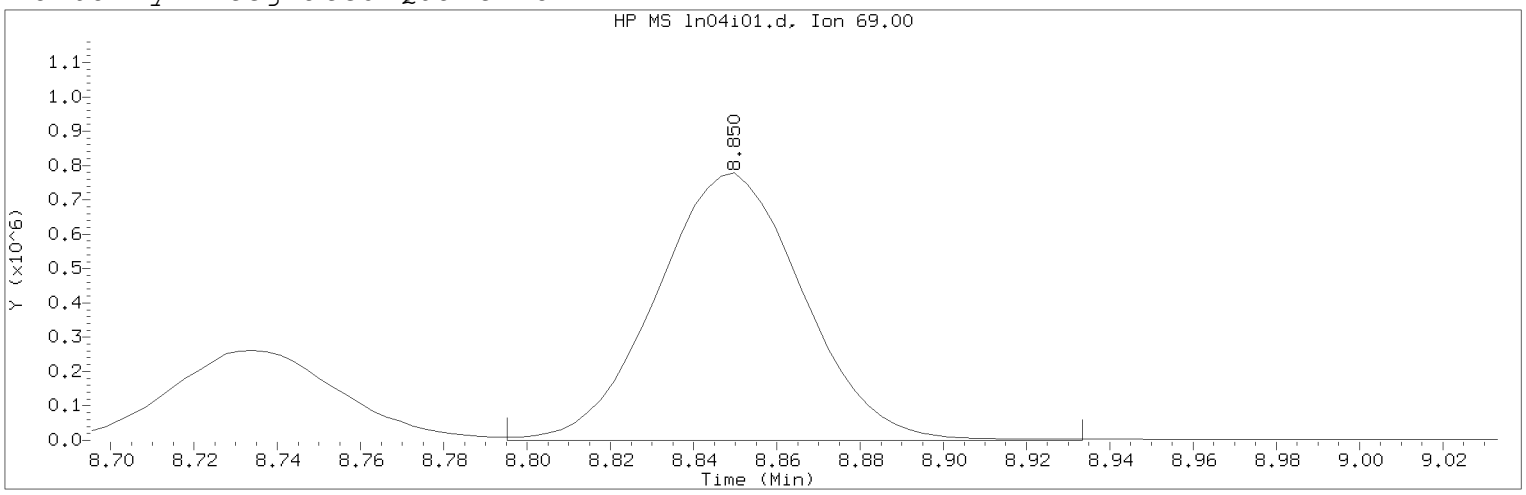
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area : 2429255
On-column Amount (ng) : 7682.9381
Integration start scan : 2101 Integration stop scan: 2199
Y at integration start : 176 Y at integration end: 176

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

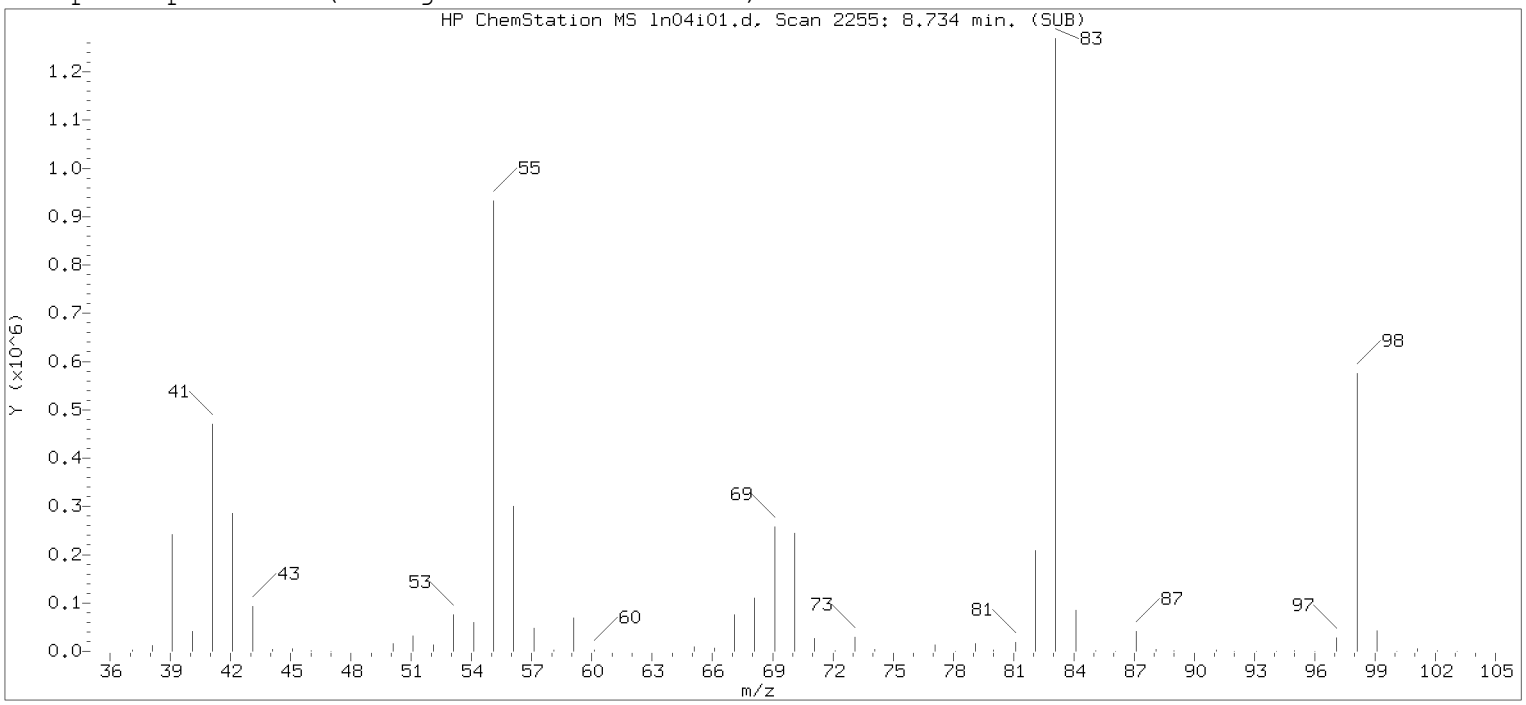
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2291
Retention Time (minutes): 8.850
Quant Ion : 69.00
Area (flag) : 1904896A
On-Column Amount (ng) : 340.2564
Integration start scan : 2273 Integration stop scan: 2316
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

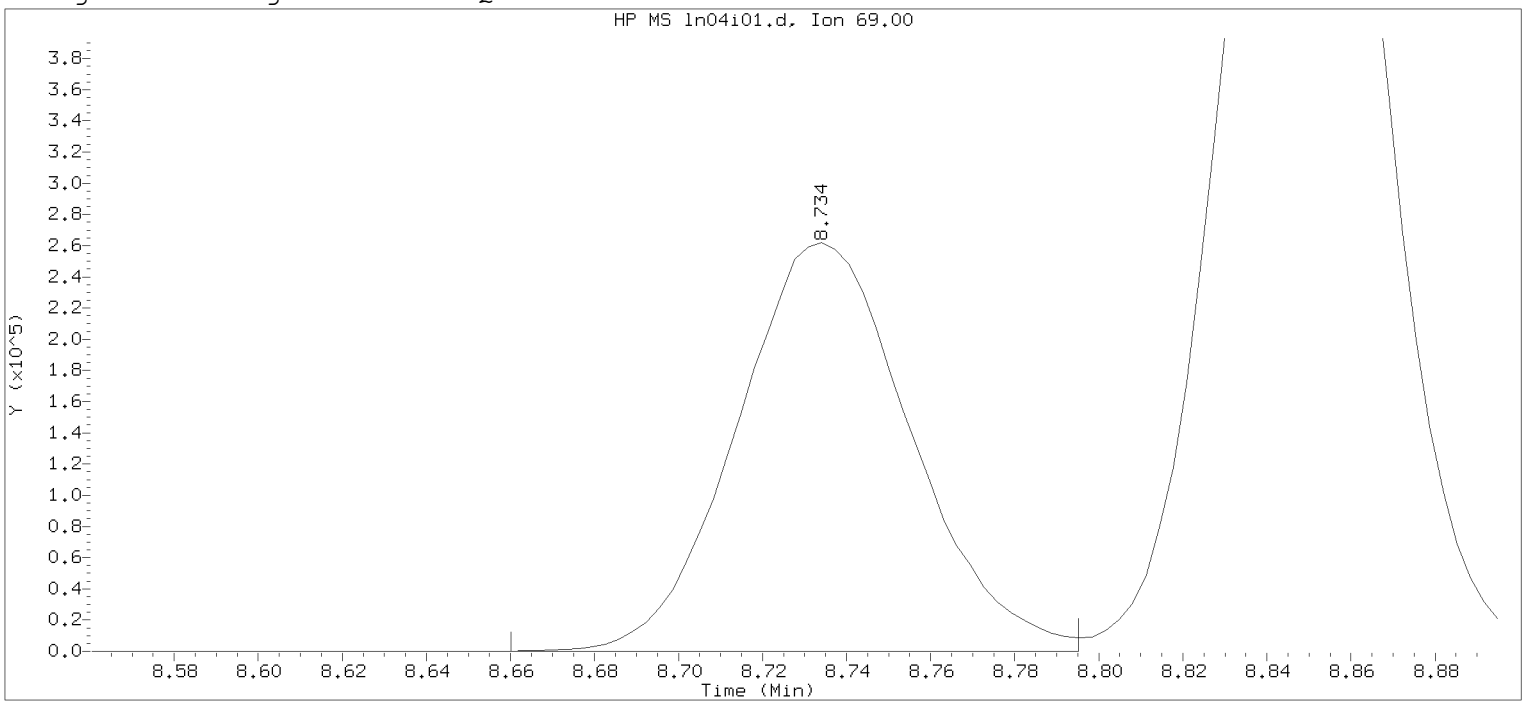
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

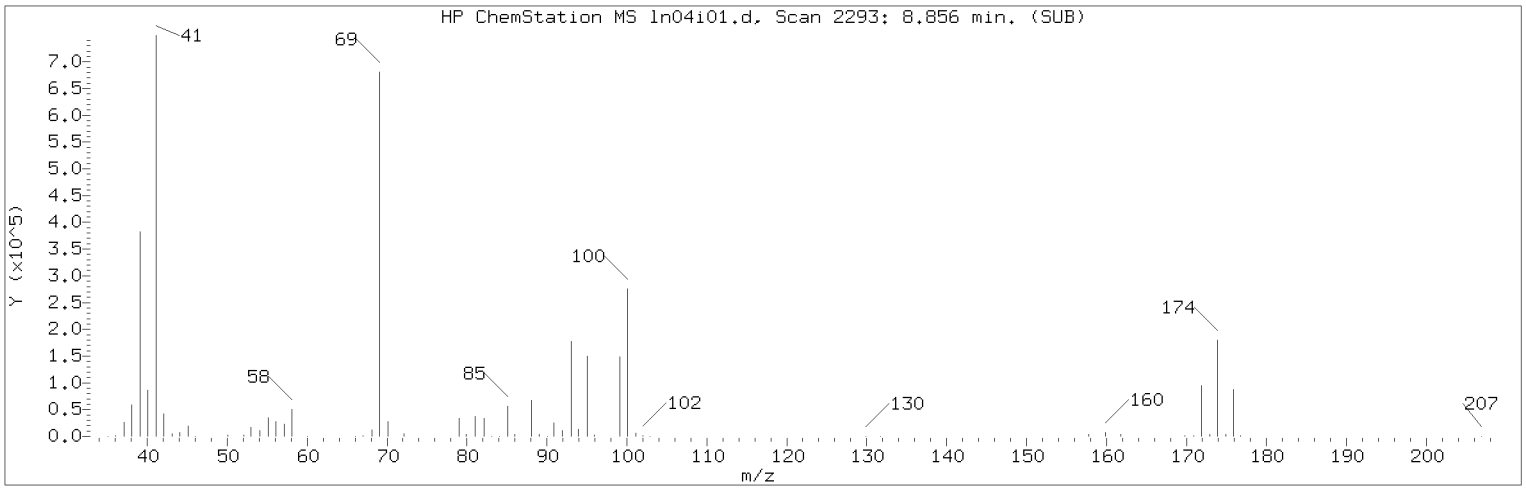
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

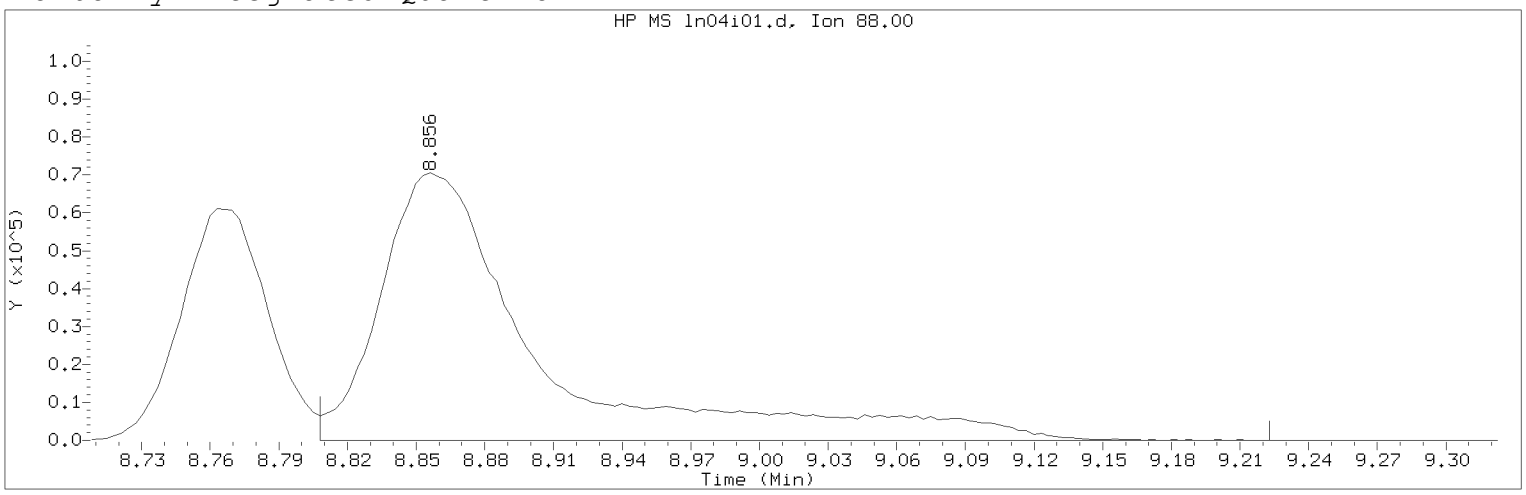
Compound Number	: 76		
Compound Name	: Methyl Methacrylate		
Scan Number	: 2255		
Retention Time (minutes)	: 8.734		
Quant Ion	: 69.00		
Area	: 752058		
On-column Amount (ng)	: 311.1363		
Integration start scan	: 2231	Integration stop scan:	2273
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

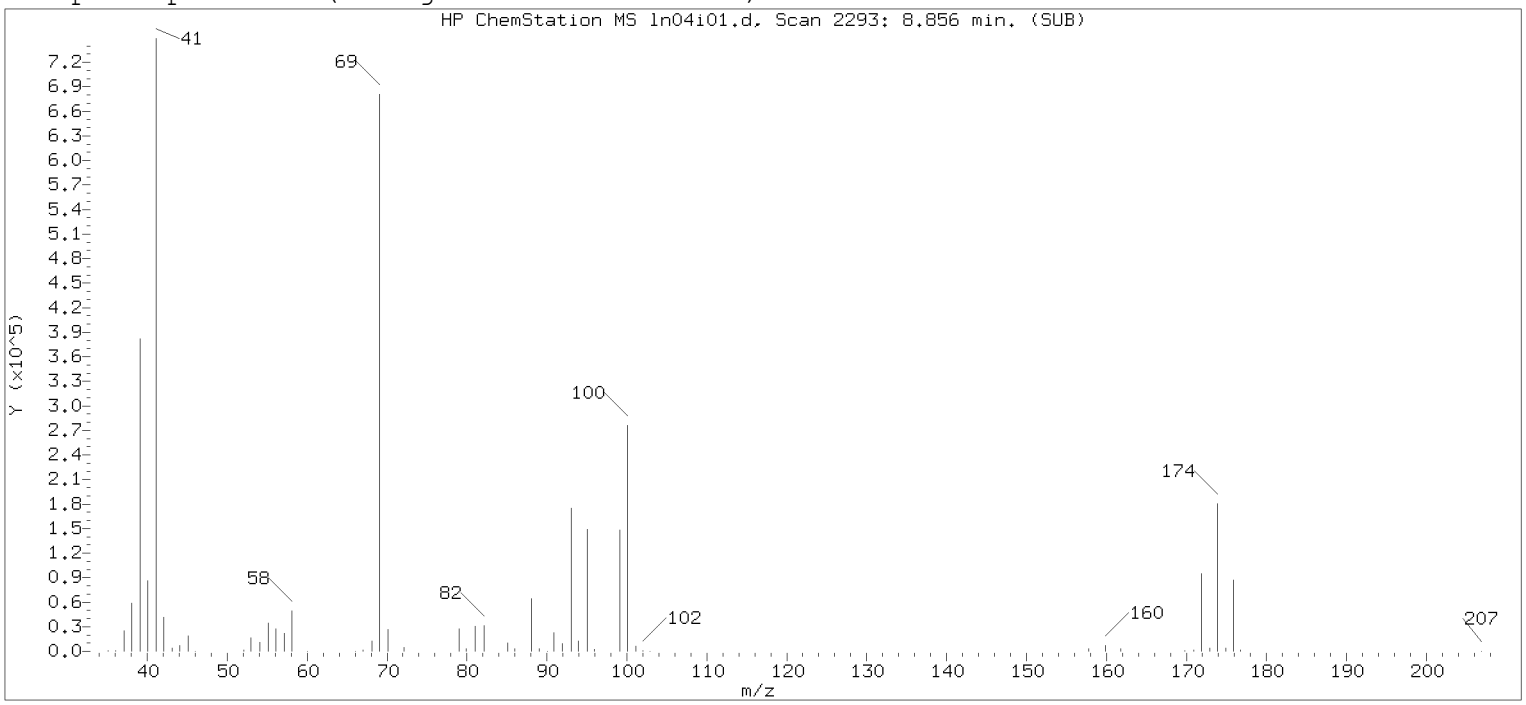
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 338379M
On-Column Amount (ng) : 3968.4208
Integration start scan : 2277 Integration stop scan: 2406
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

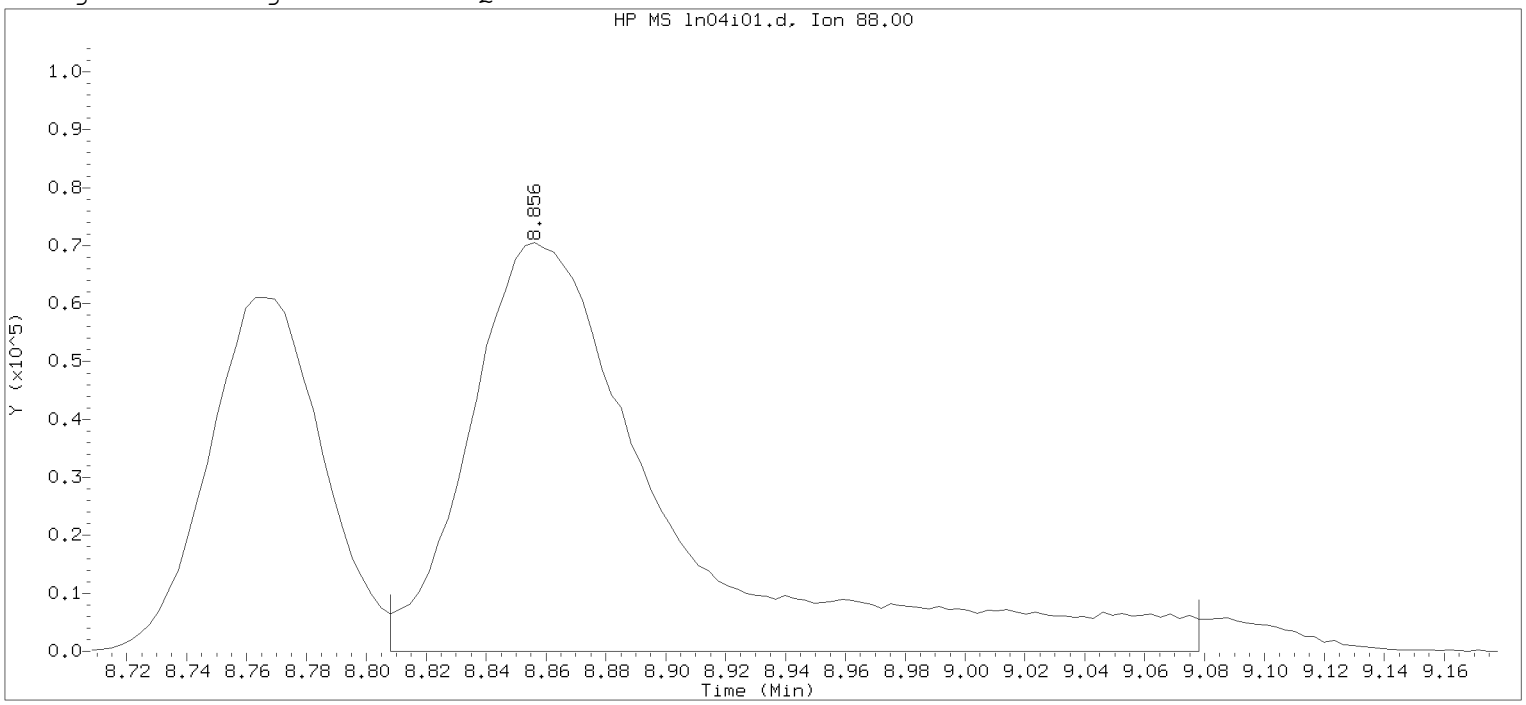
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

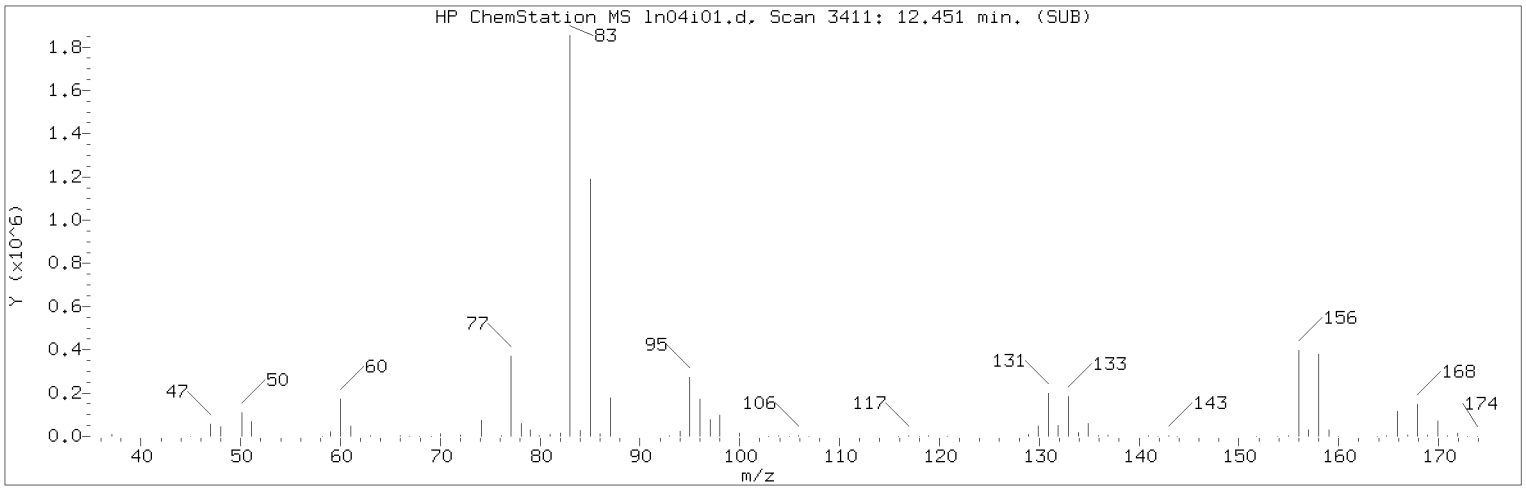
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

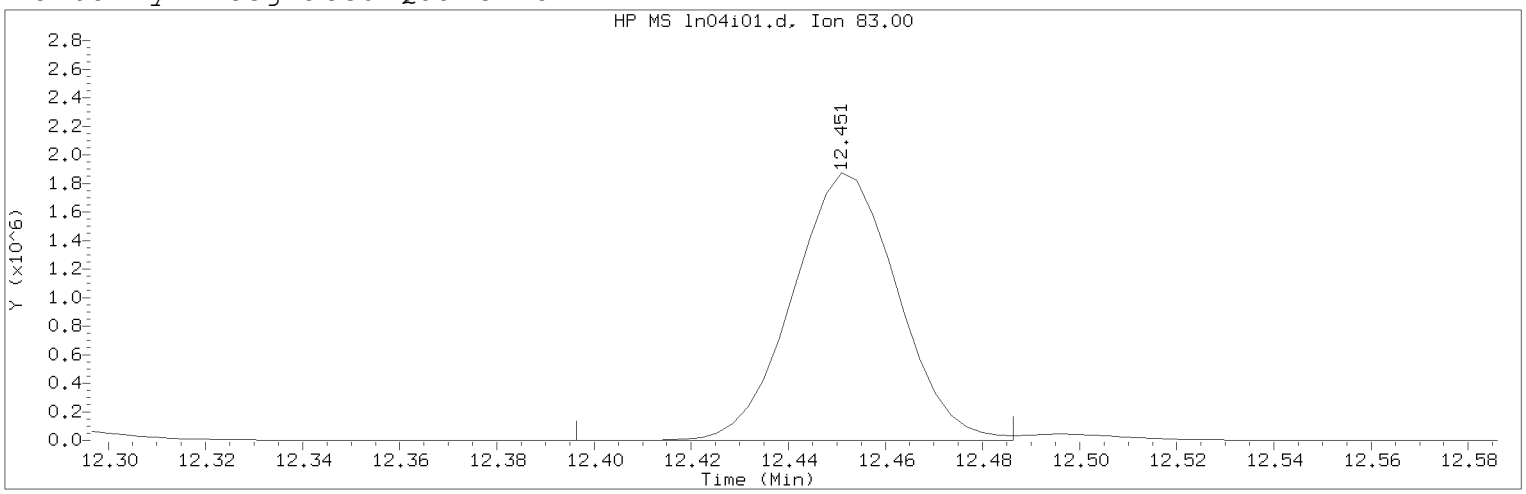
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2293		
Retention Time (minutes)	: 8.856		
Quant Ion	: 88.00		
Area	: 325164		
On-column Amount (ng)	: 3803.8575		
Integration start scan	: 2277	Integration stop scan:	2361
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

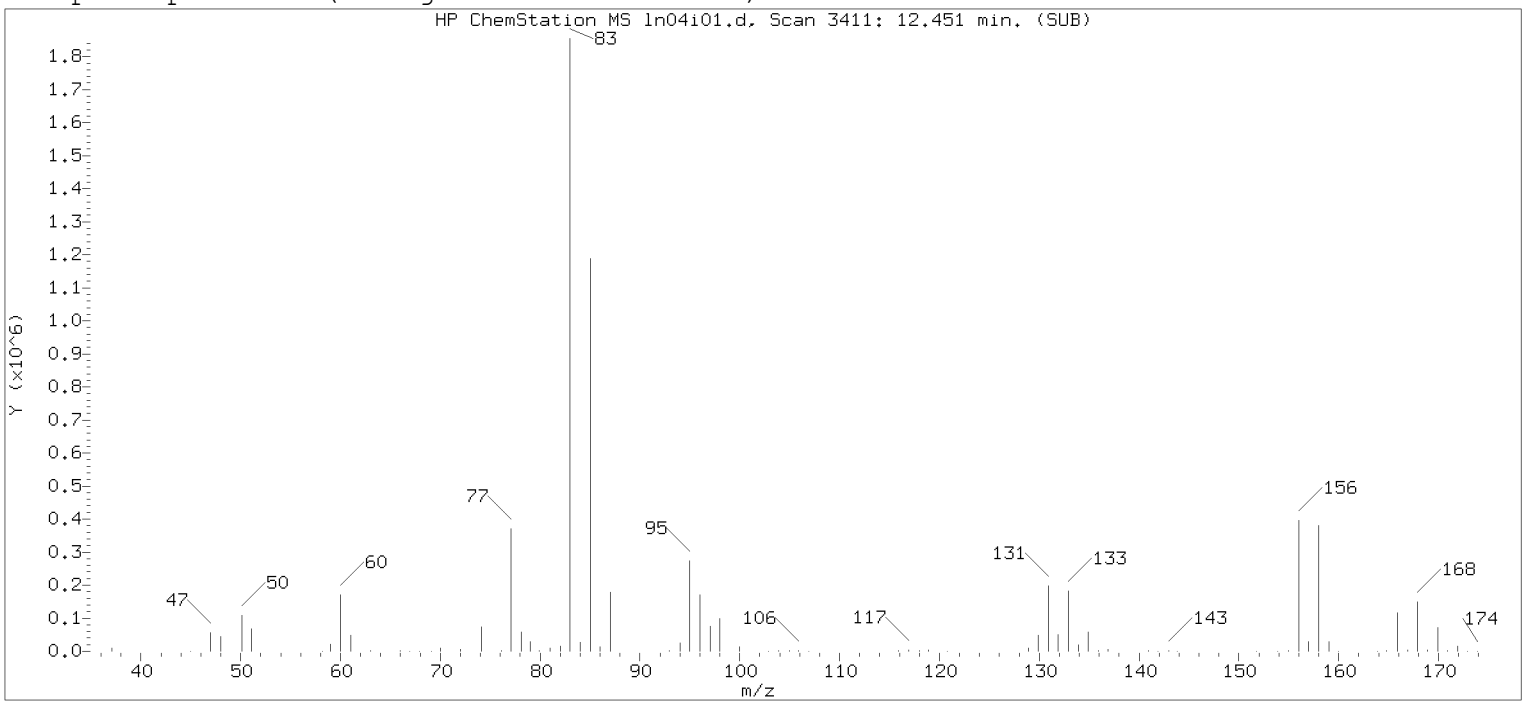
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 2800639M
On-Column Amount (ng) : 310.7054
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

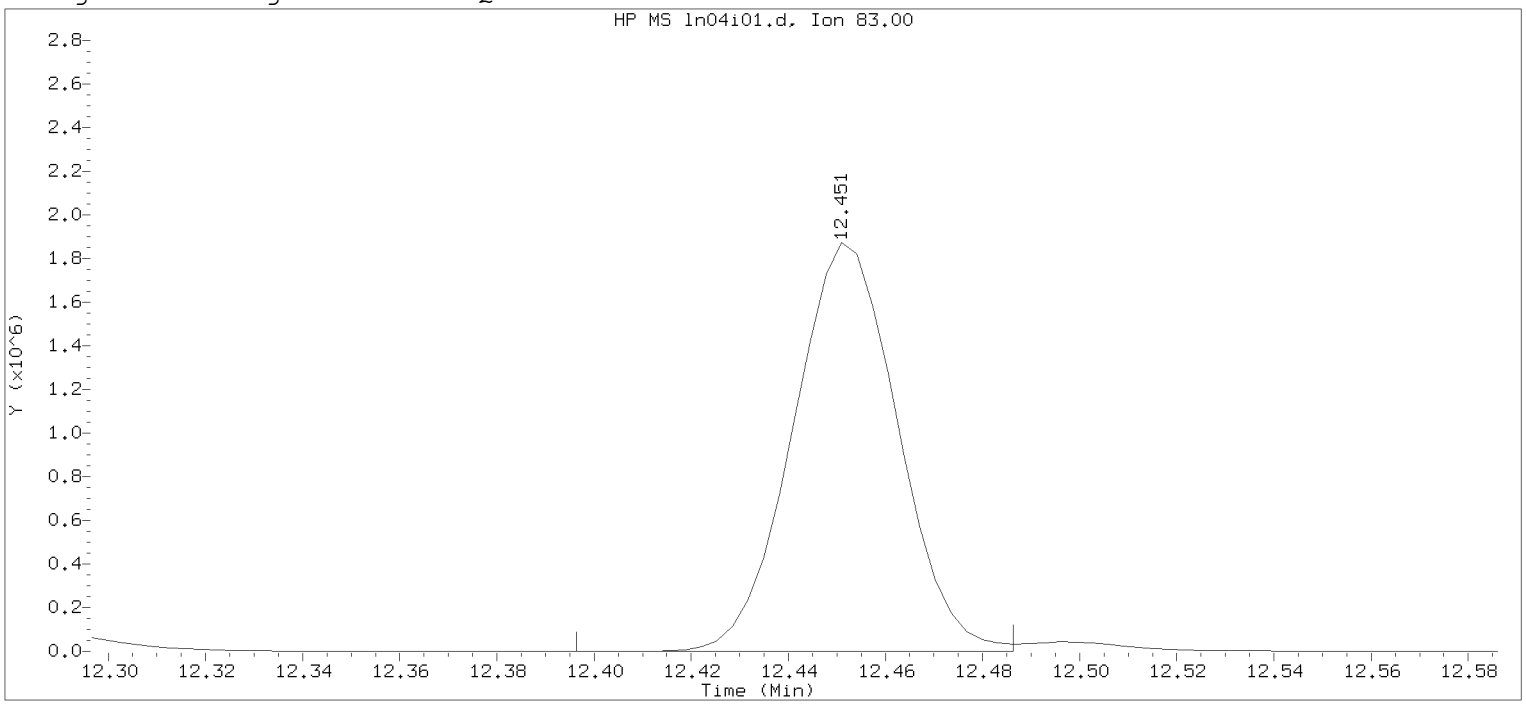
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

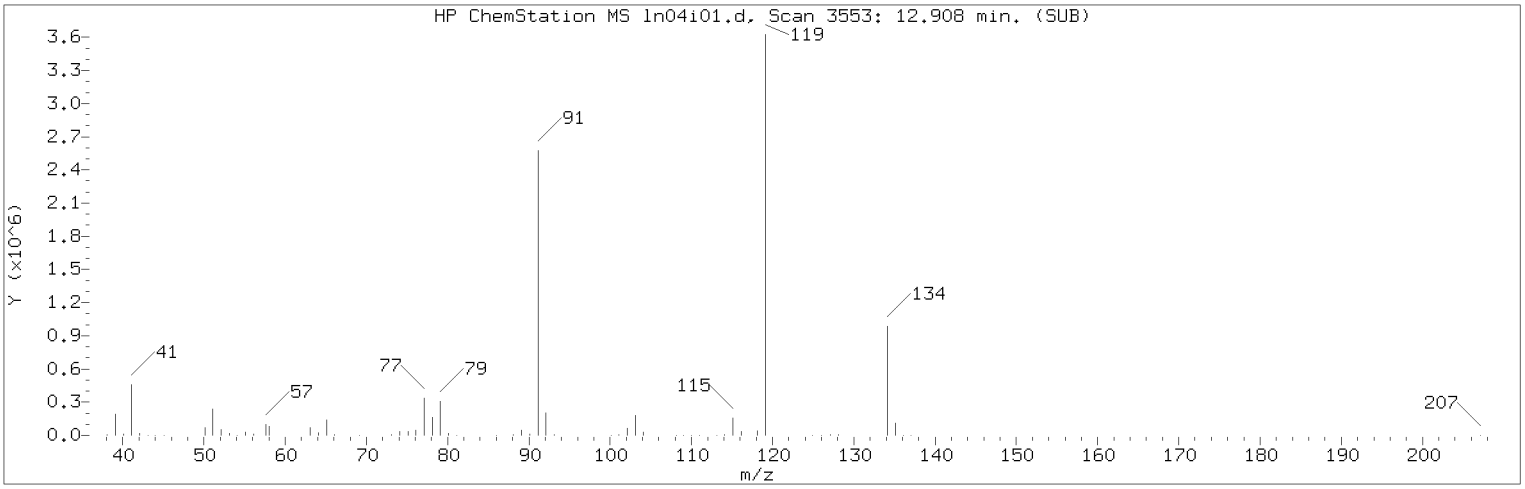
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

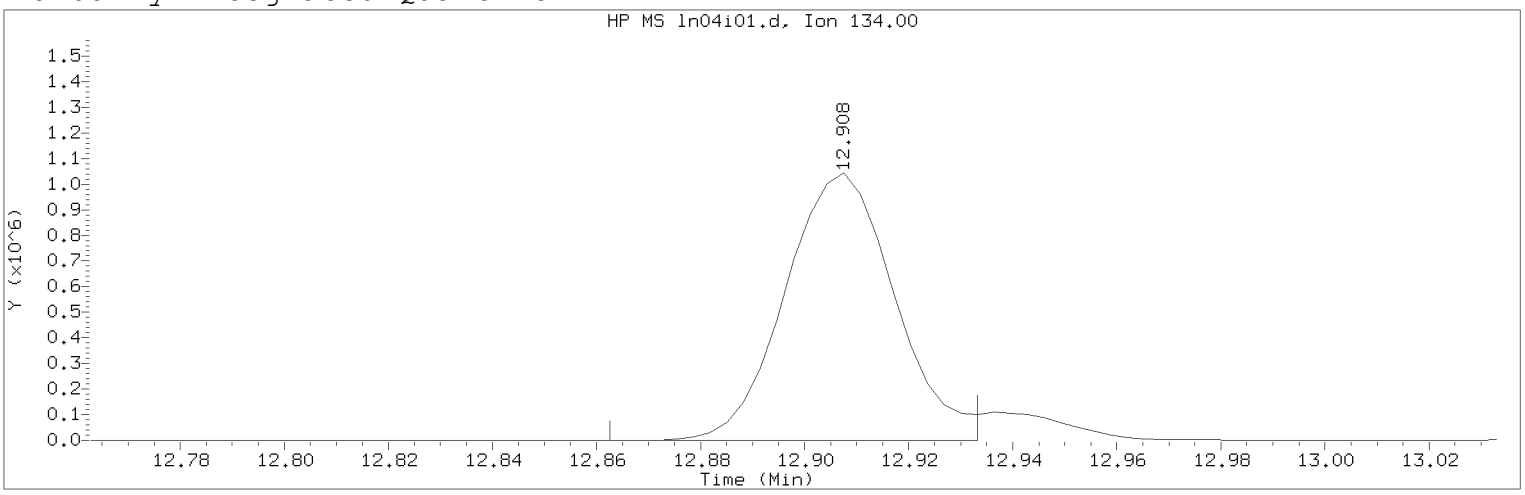
Compound Number	: 116		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 3411		
Retention Time (minutes)	: 12.451		
Quant Ion	: 83.00		
Area	: 2797364		
On-column Amount (ng)	: 294.0638		
Integration start scan	: 3393	Integration stop scan:	3421
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

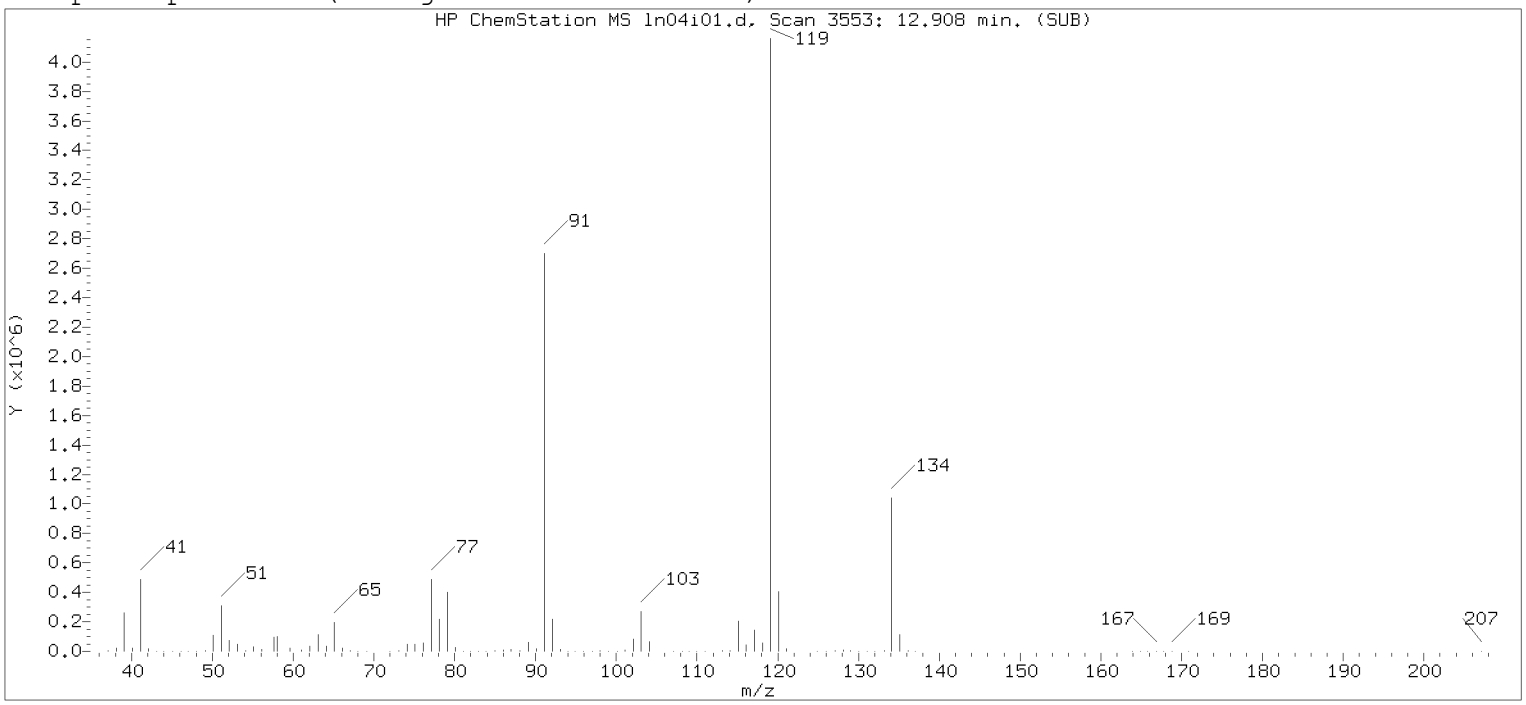
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area (flag) : 1524421M
On-Column Amount (ng) : 323.7167
Integration start scan : 3538 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

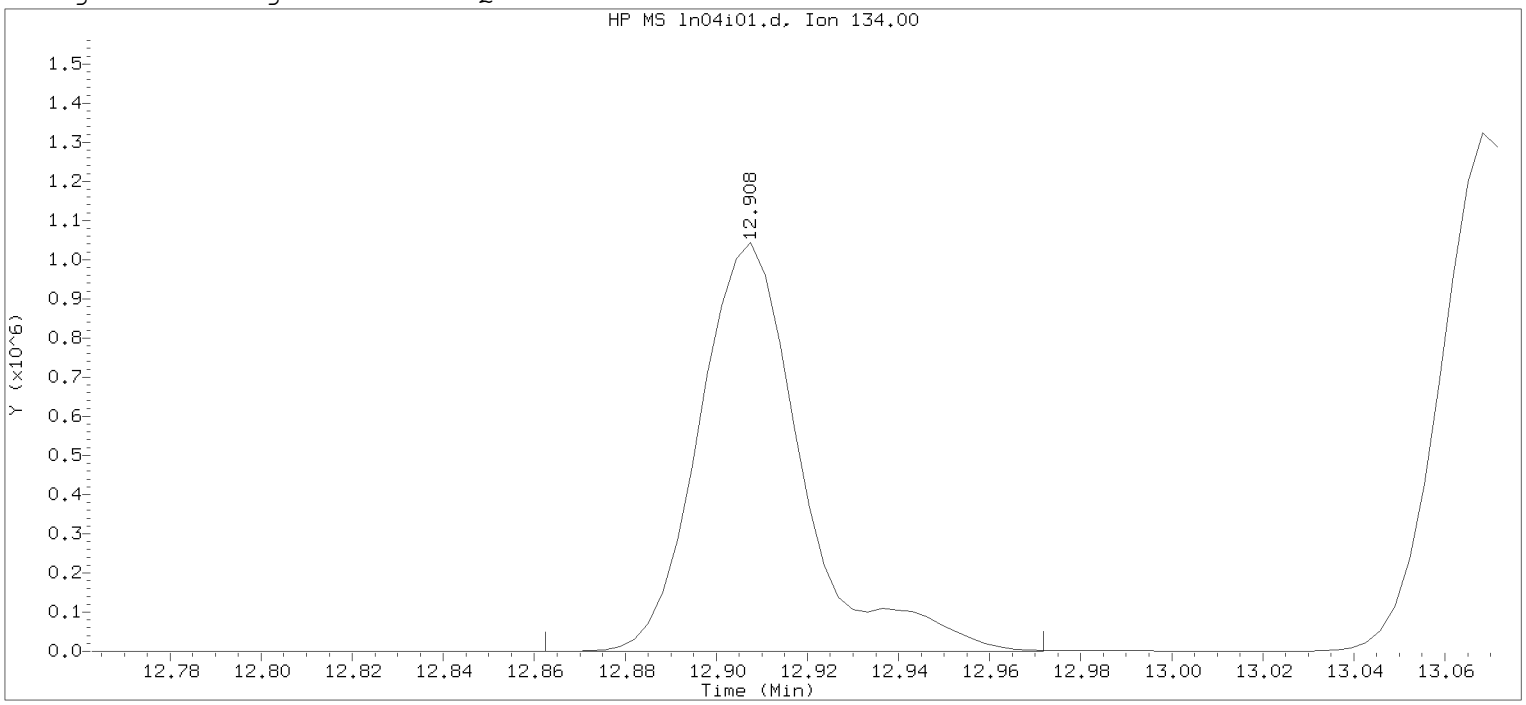
Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



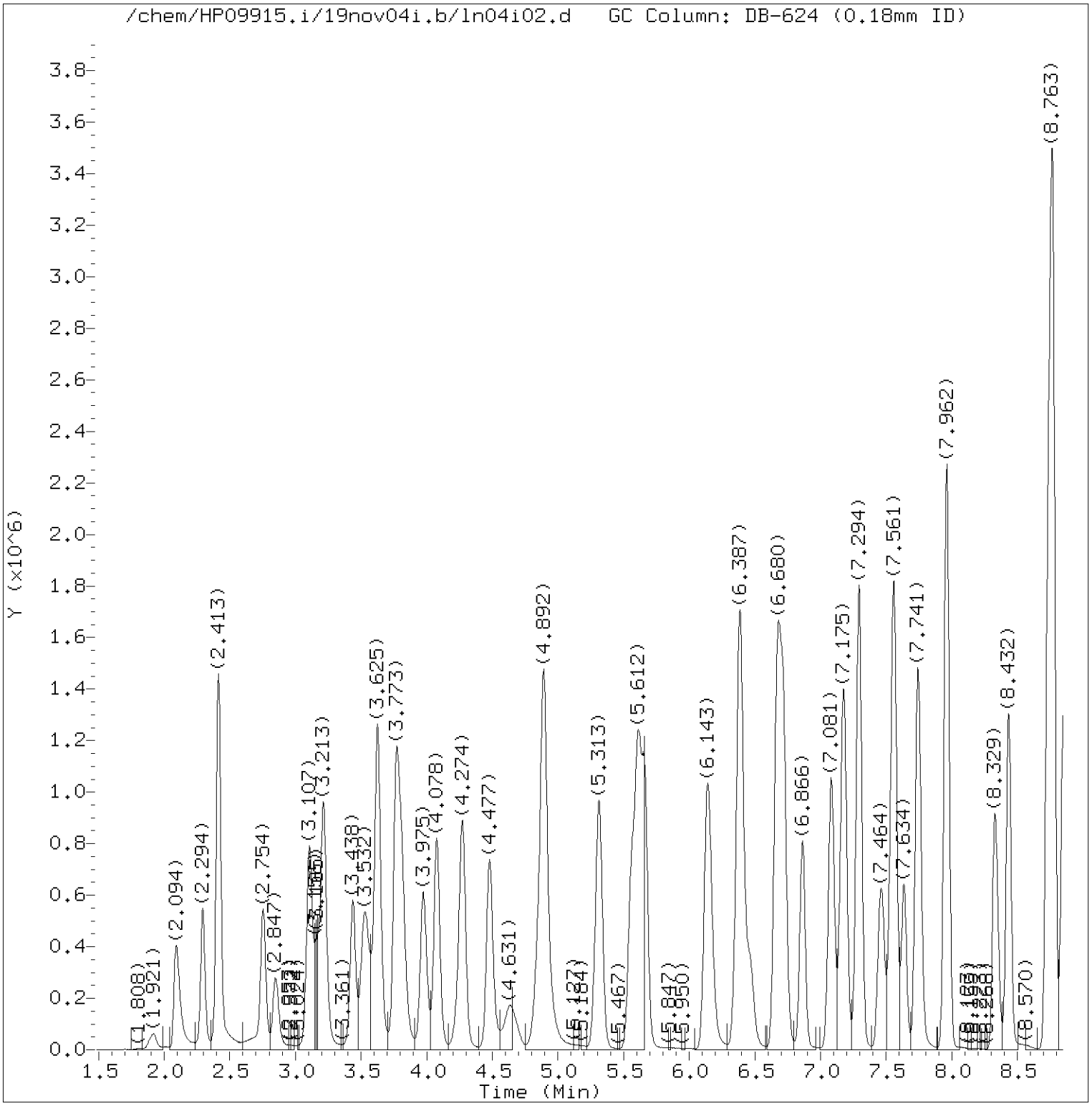
Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area : 1639624
On-column Amount (ng) : 313.1253
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

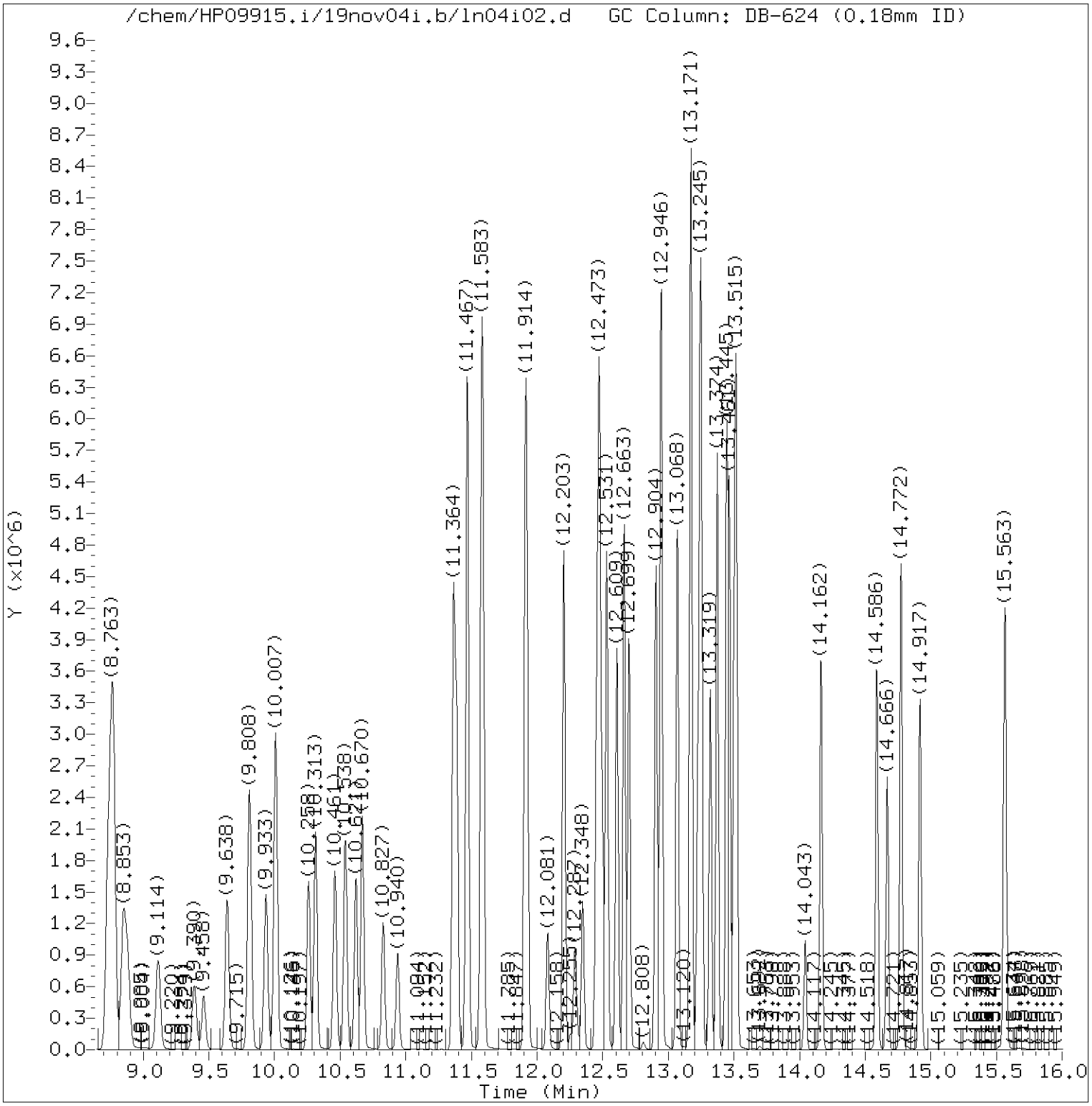
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.094	85	857961M	103.943
4) Chloromethane	(2)	2.294	50	784780	98.650
5) 1,3-Butadiene	(2)	2.413	39	618713M	93.669
6) Vinyl Chloride	(2)	2.416	62	781267	98.400
8) Bromomethane	(2)	2.754	94	539686	94.824
9) Chloroethane	(2)	2.847	64	418524	95.919
10) Dichlorofluoromethane	(2)	3.104	67	992796M	94.678
12) Trichlorofluoromethane	(2)	3.162	101	860893	100.714
11) n-Pentane	(2)	3.217	43	1002713	99.263
14) Ethyl ether	(2)	3.435	59	550266	99.622
15) Freon 123a	(2)	3.532	67	679642	98.841
16) Acrolein	(1)	3.625	56	2075331	1040.029
17) 1,1-Dichloroethene	(2)	3.763	96	510815	101.811
17) 1,1-Dichloroethene	(2)	3.766	63	250669	99.655
19) Freon 113	(2)	3.799	101	594686	103.888
18) Acetone	(1)	3.805	58	181313	202.676
22) Methyl Iodide	(2)	3.972	142	1051103	101.097
21) 2-Propanol	(1)	4.001	45	343390	533.946
23) Carbon Disulfide	(2)	4.078	76	1957296	103.520
27) Methyl Acetate	(2)	4.252	43	630892	97.630
25) Allyl Chloride	(2)	4.274	41	894091	99.337
28) Methylene Chloride	(2)	4.477	84	596882	99.952
29)*t-Butyl alcohol-d10	(1)	4.509	65	265971M	250.000
30) t-Butyl alcohol	(1)	4.631	59	619917	553.614
31) Acrylonitrile	(2)	4.837	53	359403	103.376
33) Methyl Tertiary Butyl Ether	(2)	4.889	73	1901626	99.813
32) trans-1,2-Dichloroethene	(2)	4.892	96	586662	101.076
34) n-Hexane	(2)	5.313	57	974442M	107.908
36) 1,1-Dichloroethane	(2)	5.557	63	1029230	101.649
38) di-Isopropyl ether	(2)	5.609	45	1986383	101.717
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	947614	104.312
40) Ethyl t-butyl ether	(2)	6.143	59	1910218	100.794
43) 1,2-Dichloroethene (Total)	(2)		96	1240957	201.508
44) 2-Butanone	(2)	6.364	43	920731	206.310
42) cis-1,2-Dichloroethene	(2)	6.384	96	654295	100.432
45) 2,2-Dichloropropane	(2)	6.400	77	813782	103.388
47) Propionitrile	(1)	6.464	54	725632	520.085
48) Methacrylonitrile	(2)	6.676	67	966183	257.629

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	349204	101.088
50) Tetrahydrofuran	(1)	6.721	71	261419	207.429
51) Chloroform	(2)	6.866	83	989698	102.195
52)$Dibromofluoromethane	(2)	7.078	113	292391	50.529
52)$Dibromofluoromethane	(2)	7.078	111	297764	50.467
53) 1,1,1-Trichloroethane	(2)	7.088	97	860519	104.109
54) Cyclohexane	(2)	7.175	56	1170449	105.893
54) Cyclohexane	(2)	7.181	84	1022362	106.481
54) Cyclohexane	(2)	7.175	69	362451	106.017
56) Carbon Tetrachloride	(2)	7.290	117	751477	107.196
55) 1,1-Dichloropropene	(2)	7.297	75	823627	102.878
58) Isobutyl Alcohol	(1)	7.461	41	528441	1402.358
57)$1,2-Dichloroethane-d4	(2)	7.535	102	74158	50.284
57)$1,2-Dichloroethane-d4	(2)	7.535	65	331294	50.408
57)$1,2-Dichloroethane-d4	(2)	7.535	104	47551	50.479
60) Benzene	(2)	7.561	78	2423634	100.668
61) 1,2-Dichloroethane	(2)	7.638	62	757974	97.883
61) 1,2-Dichloroethane	(2)	7.641	98	76152	99.373
65) t-Amyl methyl ether	(2)	7.741	73	1946110	102.306
67) n-Heptane	(2)	7.962	43	911962MA	108.104
66)*Fluorobenzene	(2)	7.962	96	1183605	50.000
69) n-Butanol	(1)	8.329	56	944383M	2911.812
71) Trichloroethene	(2)	8.432	95	618983	102.110
72) Methylcyclohexane	(2)	8.734	83	1164174	103.516
72) Methylcyclohexane	(2)	8.734	98	527428	103.640
73) 1,2-Dichloropropane	(2)	8.773	63	625914	102.385
76) Methyl Methacrylate	(2)	8.847	69	640445A	108.334
75) 1,4-Dioxane	(1)	8.856	88	117817M	1321.647
74) Dibromomethane	(2)	8.882	93	410059	103.668
78) Bromodichloromethane	(2)	9.114	83	770805	108.595
79) 2-Nitropropane	(2)	9.390	41	488862	227.388
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	284759	108.454
81) cis-1,3-Dichloropropene	(2)	9.638	75	1026055	108.840
82) 4-Methyl-2-pentanone	(2)	9.808	43	1972651	209.410
83)$Toluene-d8	(3)	9.933	98	1216793	49.703
83)$Toluene-d8	(3)	9.933	100	789846	49.806
88) Toluene	(3)	10.007	92	1555339	101.336
90) 1,3-Dichloropropene (total)	(3)		100	1994775	220.026

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	968720	111.186
91) Ethyl Methacrylate	(3)	10.313	69	1159403	109.496
92) 1,1,2-Trichloroethane	(3)	10.461	97	606132	104.163
93) Tetrachloroethene	(3)	10.541	166	663260	102.036
94) 1,3-Dichloropropane	(3)	10.621	76	1023947	103.060
96) 2-Hexanone	(3)	10.670	43	1457165	206.170
97) Dibromochloromethane	(3)	10.827	129	678552	113.835
99) 1,2-Dibromoethane	(3)	10.940	107	665574	105.331
100)*Chlorobenzene-d5	(3)	11.361	117	935628	50.000
101) 1-Chlorohexane	(3)	11.364	91	826713	100.265
102) Chlorobenzene	(3)	11.387	112	1760002	101.404
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	622547	108.864
104) Ethylbenzene	(3)	11.470	91	3015086	102.779
106) m+p-Xylene	(3)	11.583	106	2388845	206.999
108) Xylene (Total)	(3)		106	3566525	310.313
107) o-Xylene	(3)	11.908	106	1177680	103.314
109) Styrene	(3)	11.924	104	1996461	105.988
110) Bromoform	(3)	12.081	173	502388	112.791
111) Isopropylbenzene	(3)	12.203	105	2980812	104.258
112) Cyclohexanone	(1)	12.287	55	431750	1236.644
114)$4-Bromofluorobenzene	(3)	12.348	95	458263	49.435
114)$4-Bromofluorobenzene	(3)	12.348	174	380301	49.485
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	995972M	105.317
115) Bromobenzene	(4)	12.464	156	778170	103.423
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	790040	270.837
117) 1,2,3-Trichloropropane	(4)	12.496	110	303037	104.425
119) n-Propylbenzene	(4)	12.531	91	3409679	103.724
120) 2-Chlorotoluene	(4)	12.609	126	718635	102.905
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	2528195	105.828
121) 4-Chlorotoluene	(4)	12.699	126	737830	101.502
124) tert-Butylbenzene	(4)	12.904	134	526781M	106.622
125) Pentachloroethane	(4)	12.940	167	474988	111.651
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	2664001	105.806
127) sec-Butylbenzene	(4)	13.068	105	3153429	106.963
129) 1,3-Dichlorobenzene	(4)	13.168	146	1407080	101.768
130) p-Isopropyltoluene	(4)	13.171	119	2746850	107.698
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	500629	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	1451933	101.297

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Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

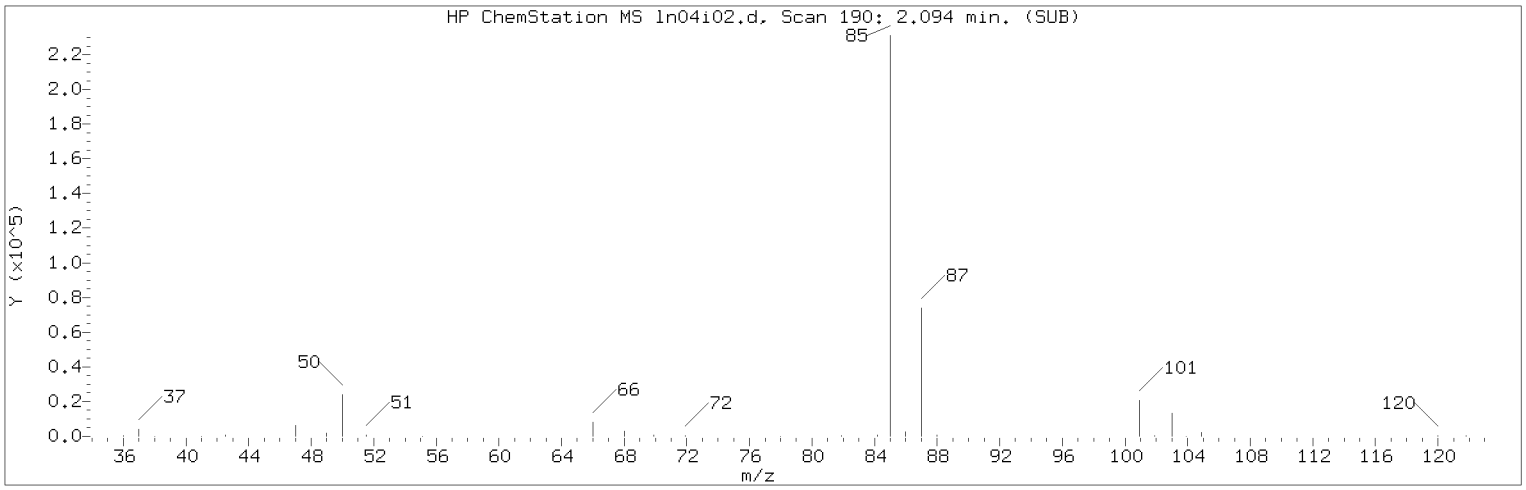
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

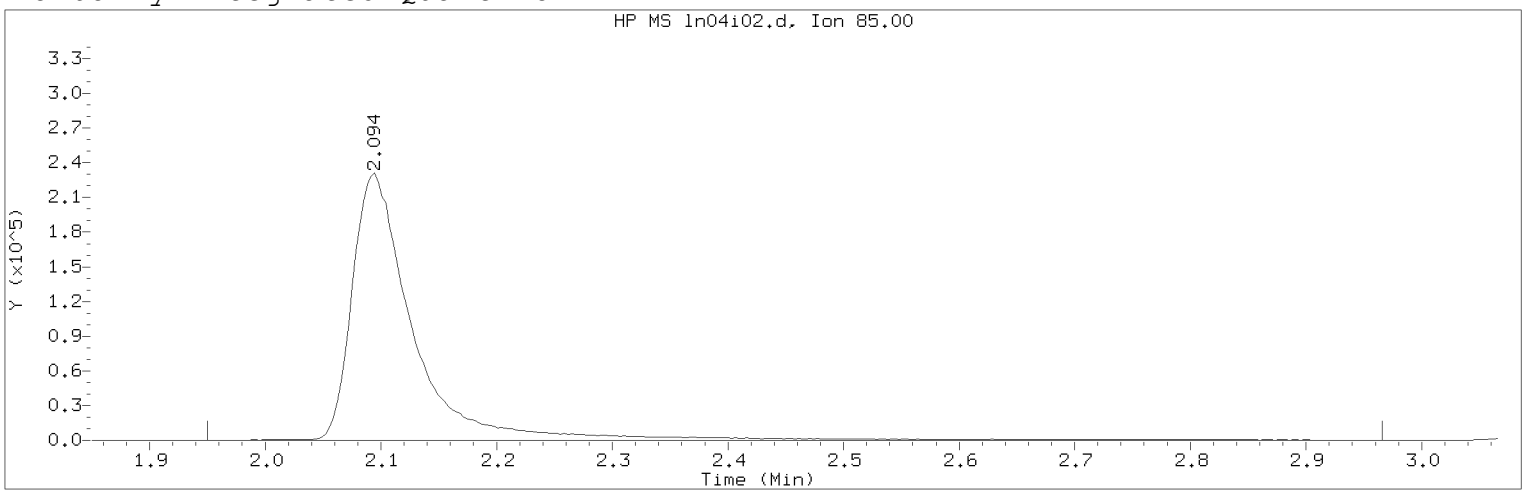
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	2711349	101.660
135) Benzyl Chloride	(4)	13.319	91	2226905	110.280
136) 1,3-Diethylbenzene	(4)	13.374	119	1705244	102.734
141) Diethylbenzene (total)	(4)		100	4934627	307.371
137) 1,4-Diethylbenzene	(4)	13.445	119	1791059	101.846
139) n-Butylbenzene	(4)	13.464	92	1355994	103.980
138) 1,2-Dichlorobenzene	(4)	13.502	146	1381717	101.273
140) 1,2-Diethylbenzene	(4)	13.518	119	1438324	102.791
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	224965	108.669
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	1074198	102.479
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	1034842	101.533
147) Hexachlorobutadiene	(4)	14.666	225	430531	89.465
148) Naphthalene	(4)	14.772	128	3428000	104.621
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	1010801	101.922
150) 2-Methylnaphthalene	(4)	15.563	142	2117626	104.952

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

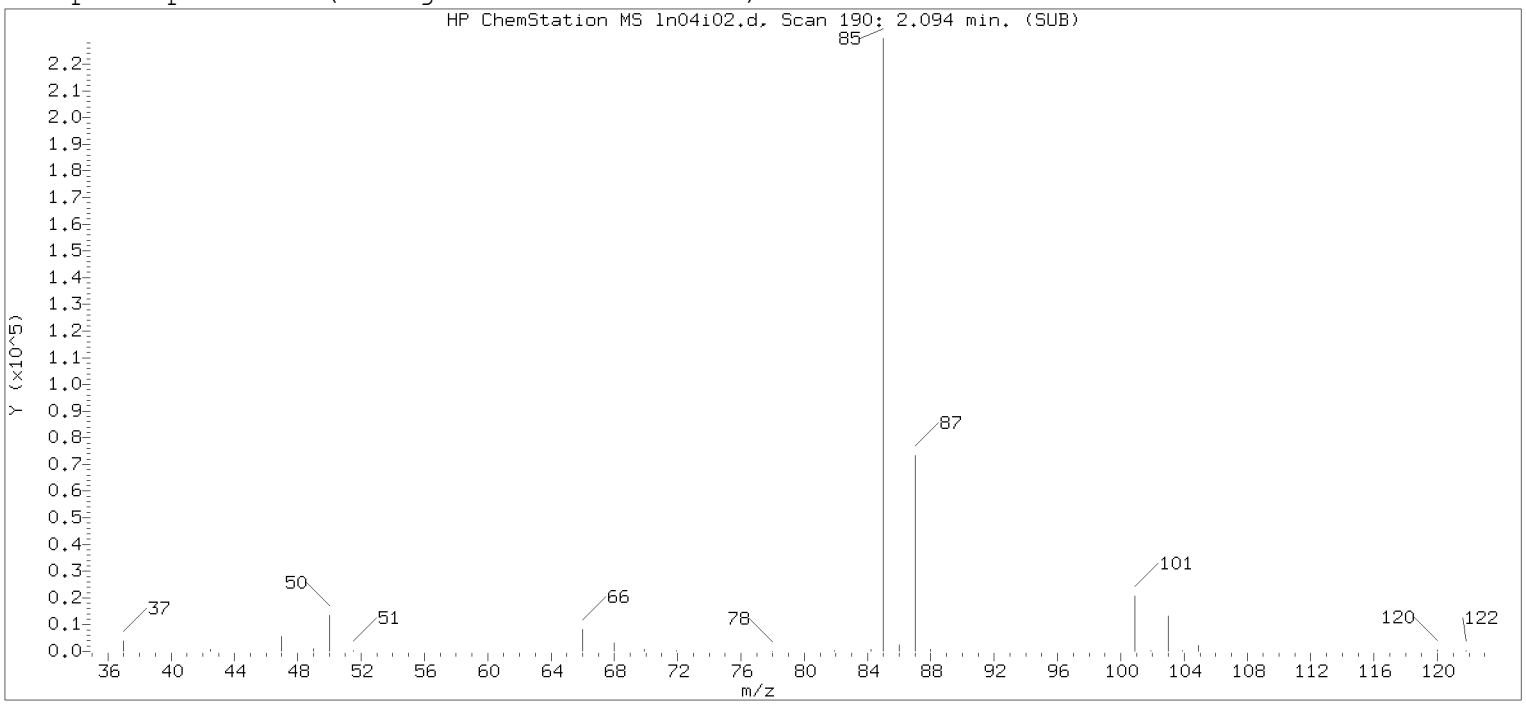
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area (flag) : 857961M
On-Column Amount (ng) : 103.9433
Integration start scan : 144 Integration stop scan: 460
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

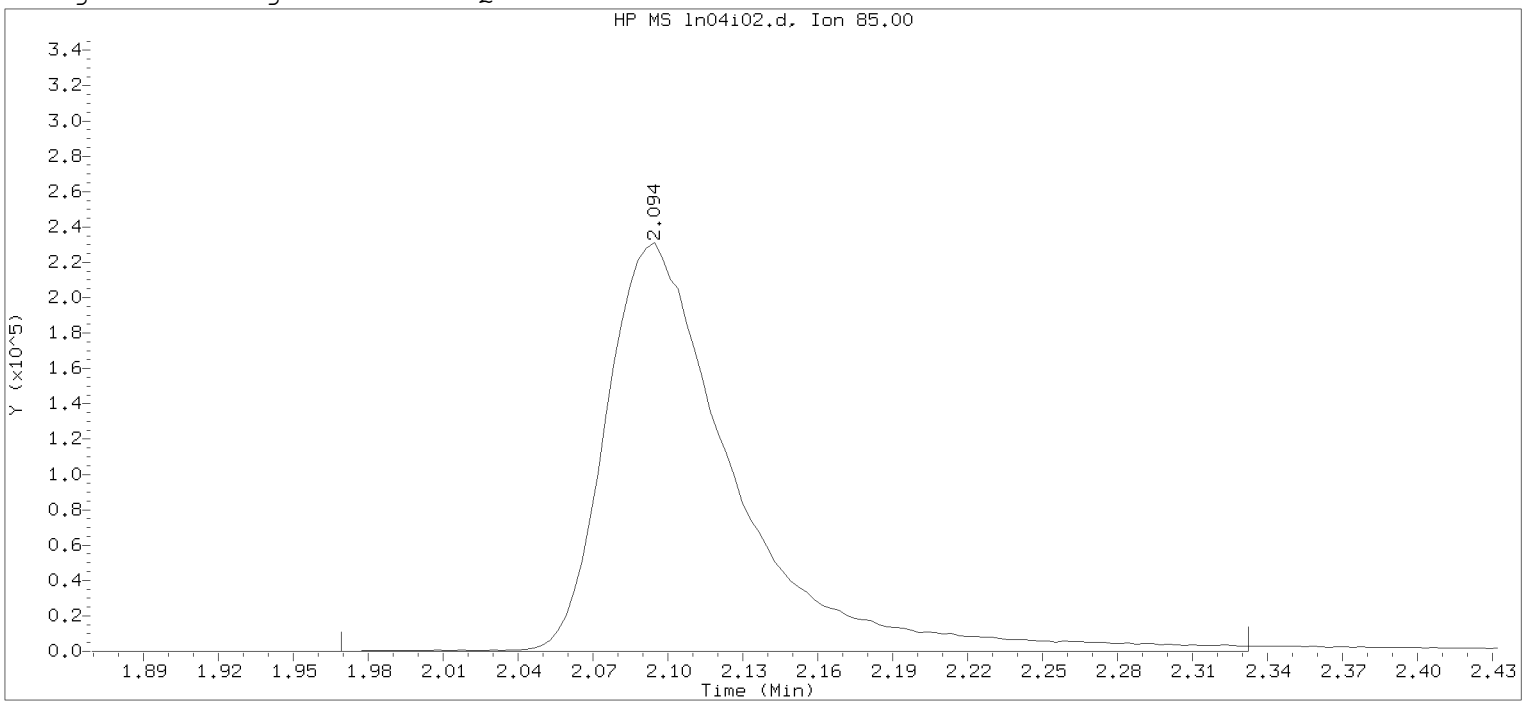
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

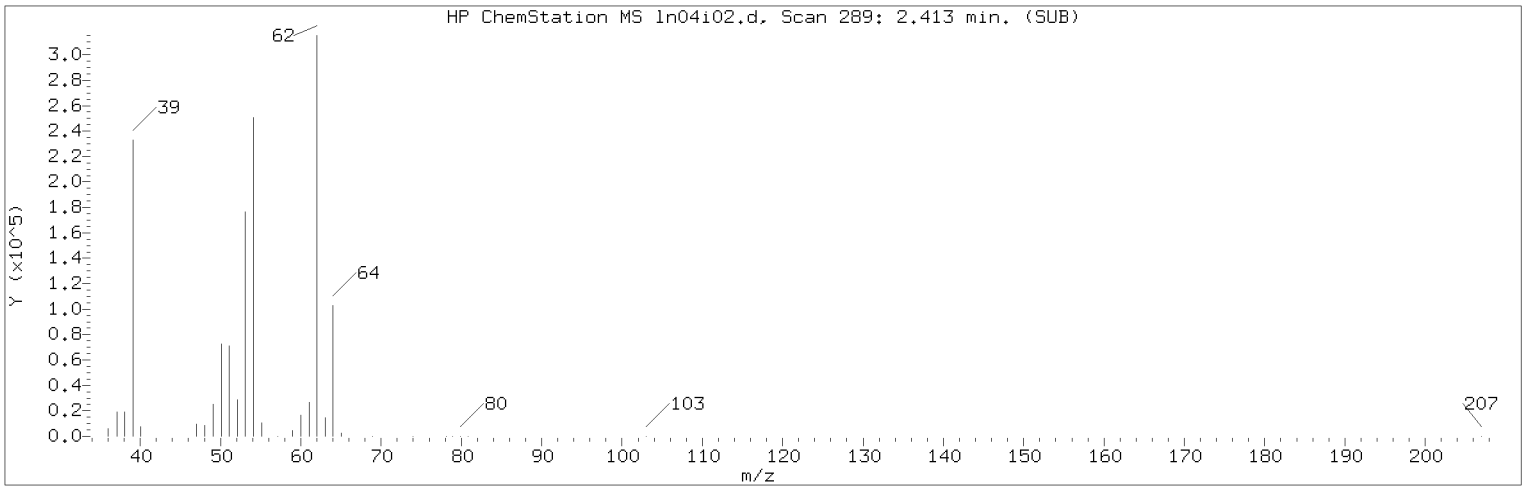
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

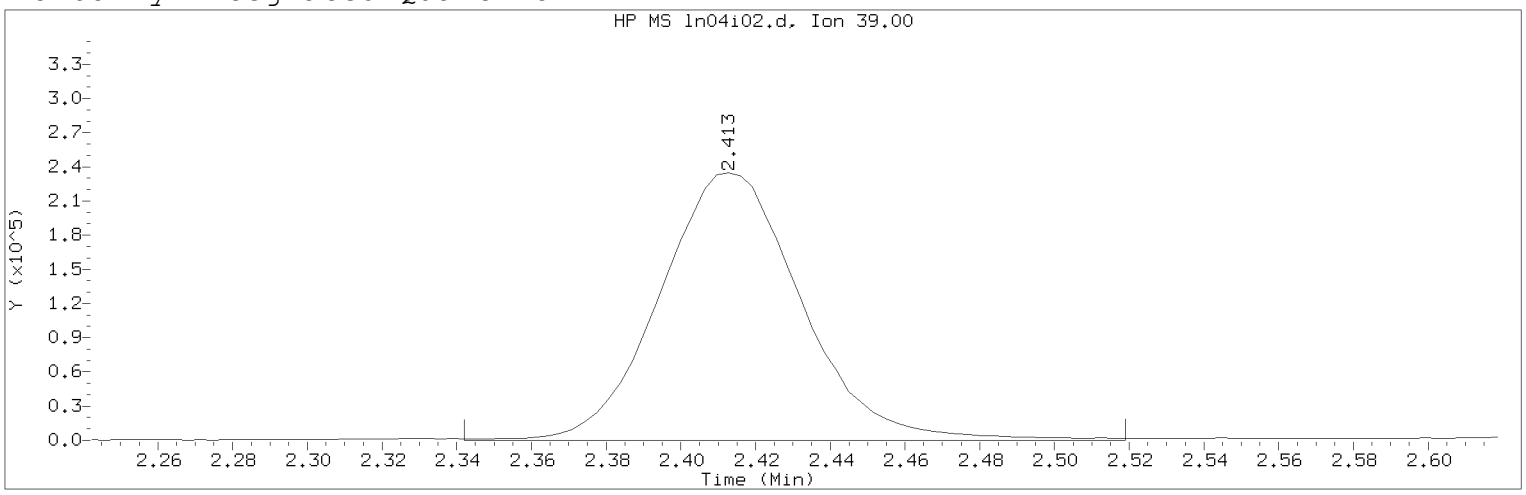
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area : 824639
On-column Amount (ng) : 94.4157
Integration start scan : 150 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

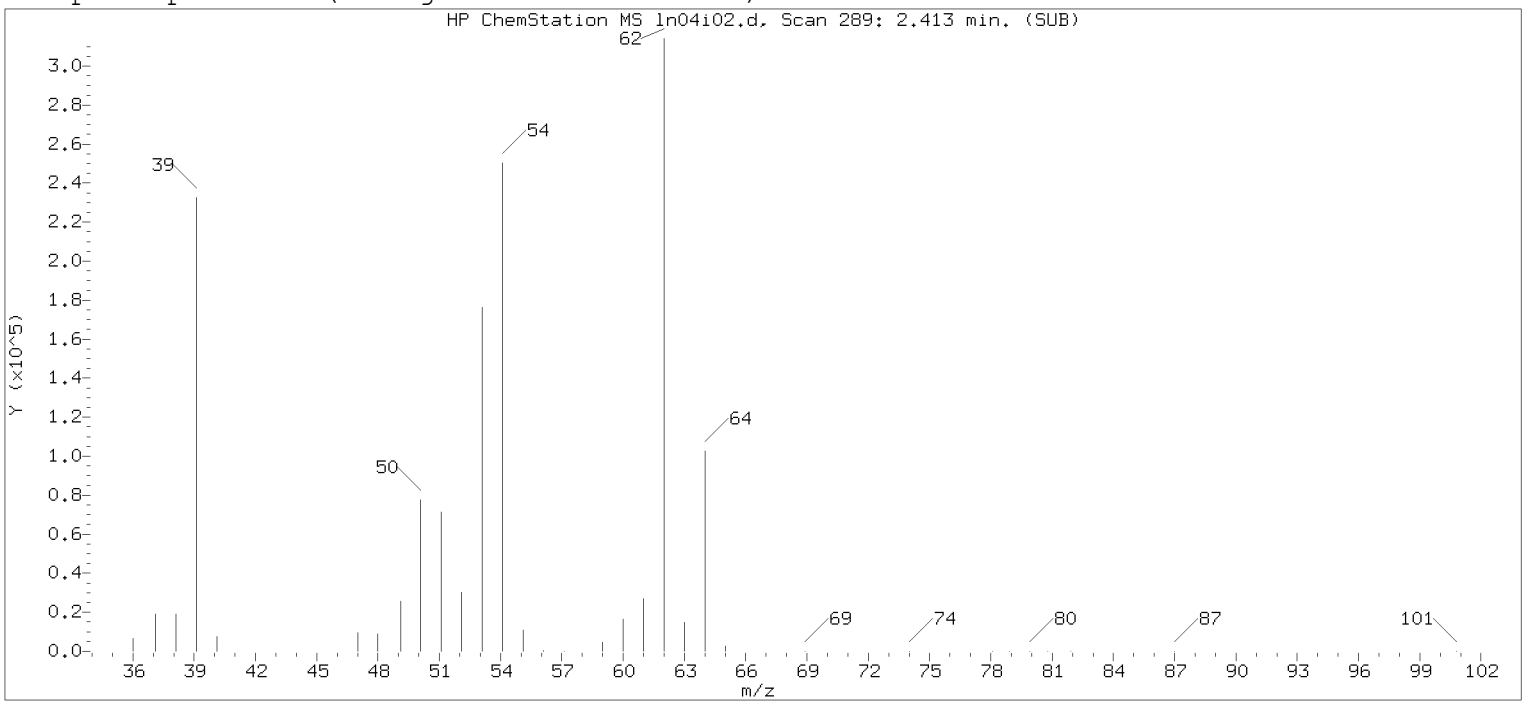
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area (flag) : 618713M
On-Column Amount (ng) : 93.6685
Integration start scan : 266 Integration stop scan: 321
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

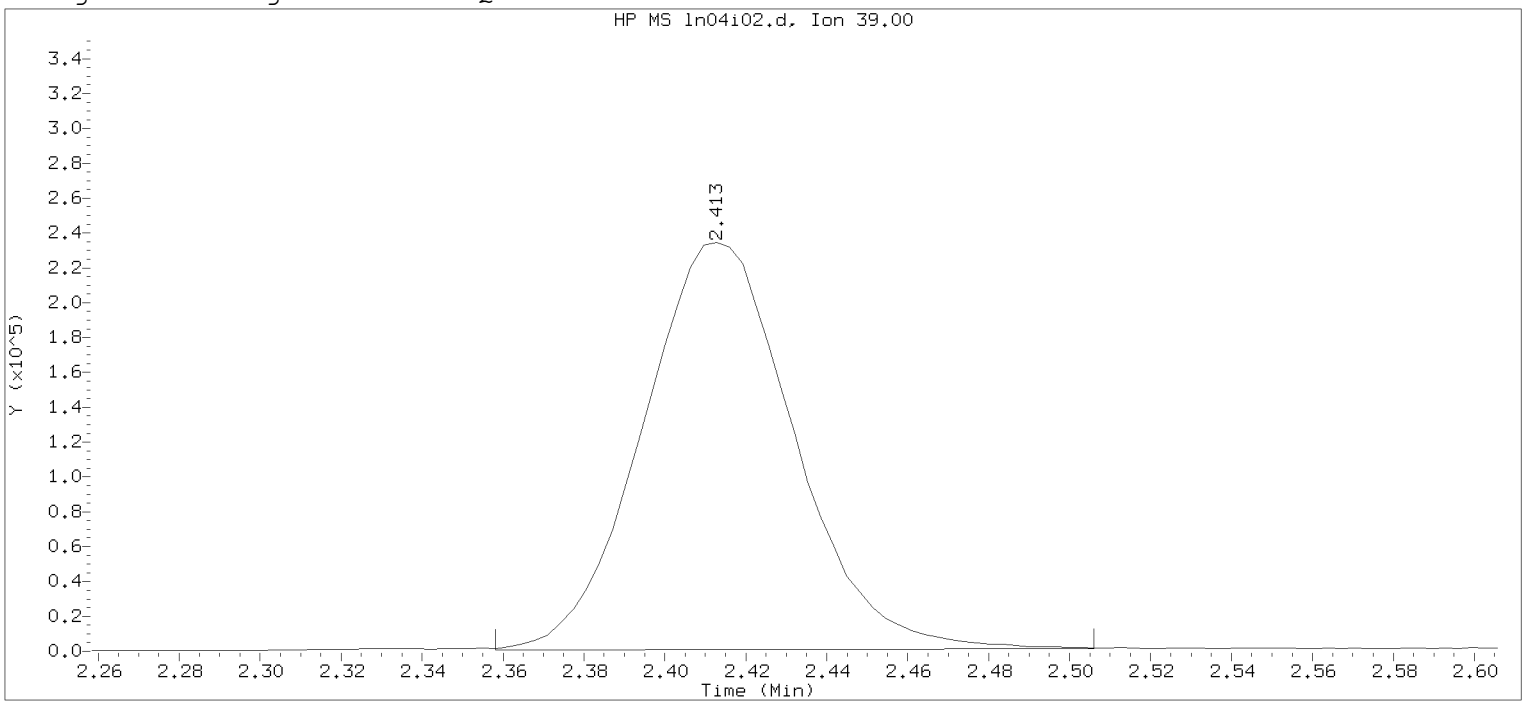
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

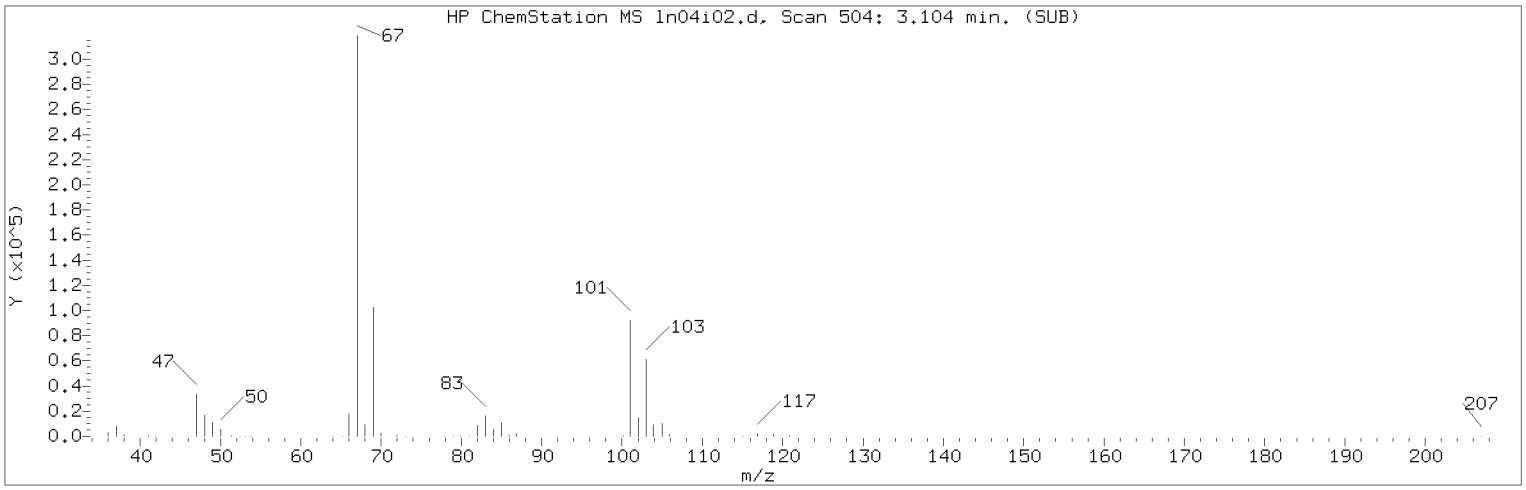
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

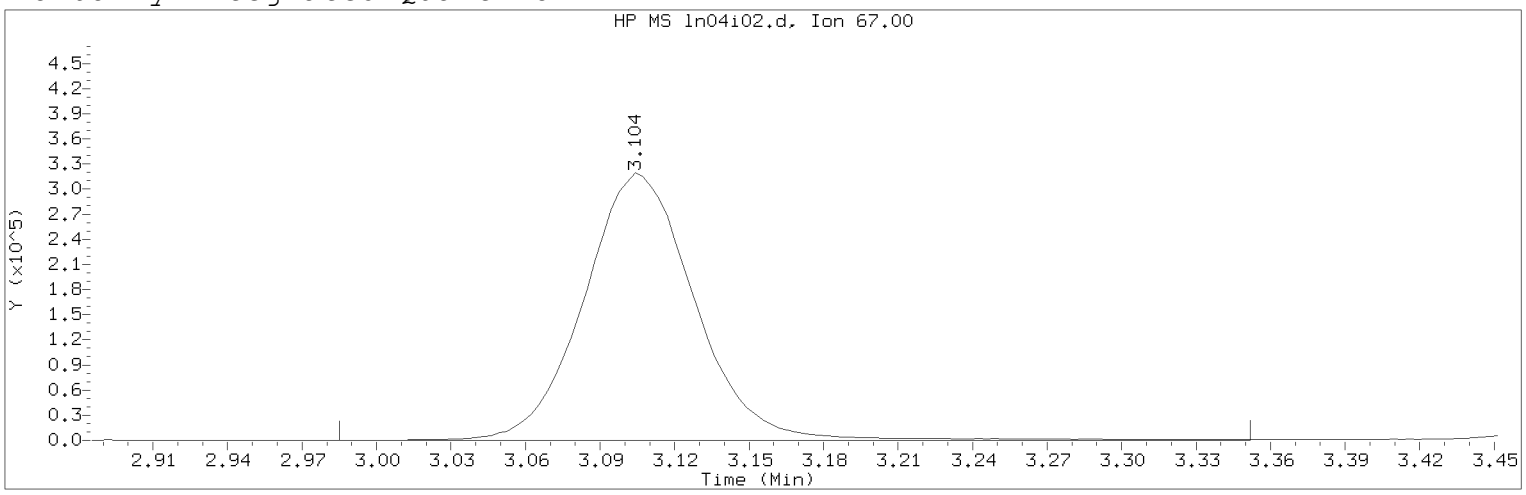
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area : 605602
On-column Amount (ng) : 97.5651
Integration start scan : 271 Integration stop scan: 317
Y at integration start : 806 Y at integration end: 1441

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

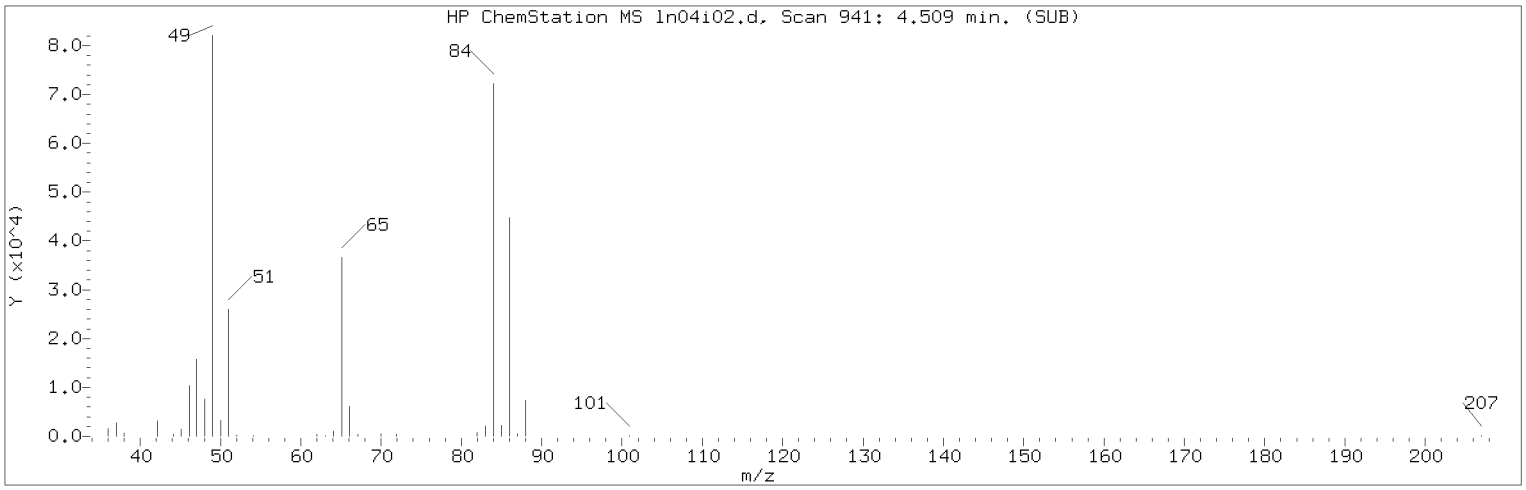
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 504
Retention Time (minutes): 3.104
Quant Ion : 67.00
Area (flag) : 992796M
On-Column Amount (ng) : 94.6777
Integration start scan : 466 Integration stop scan: 580
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

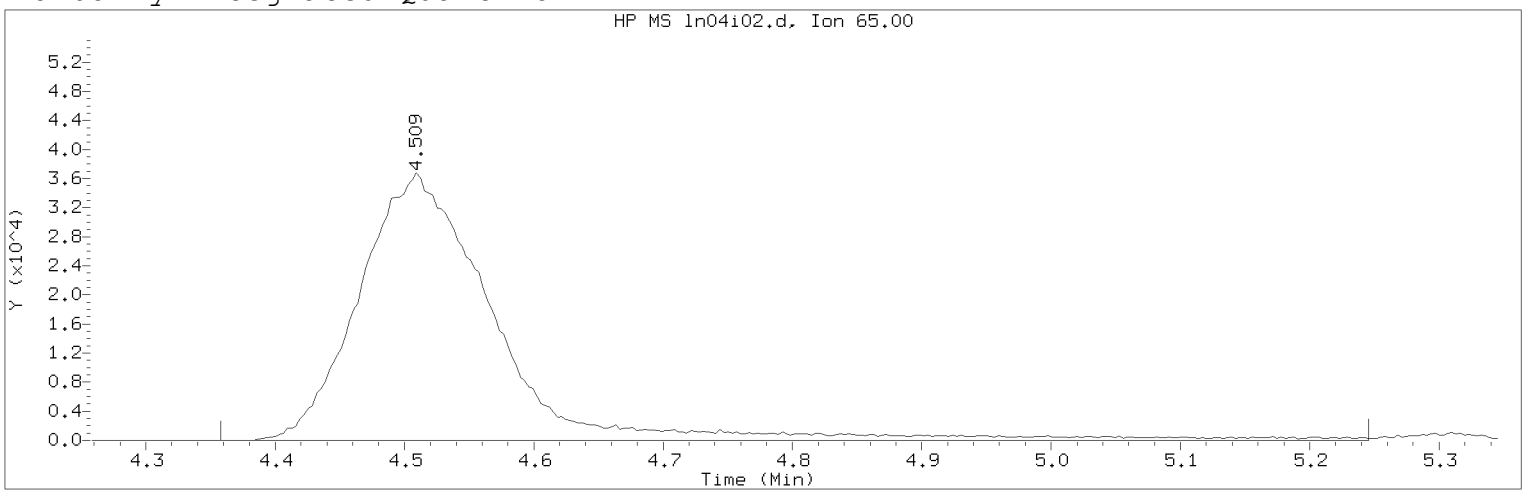
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

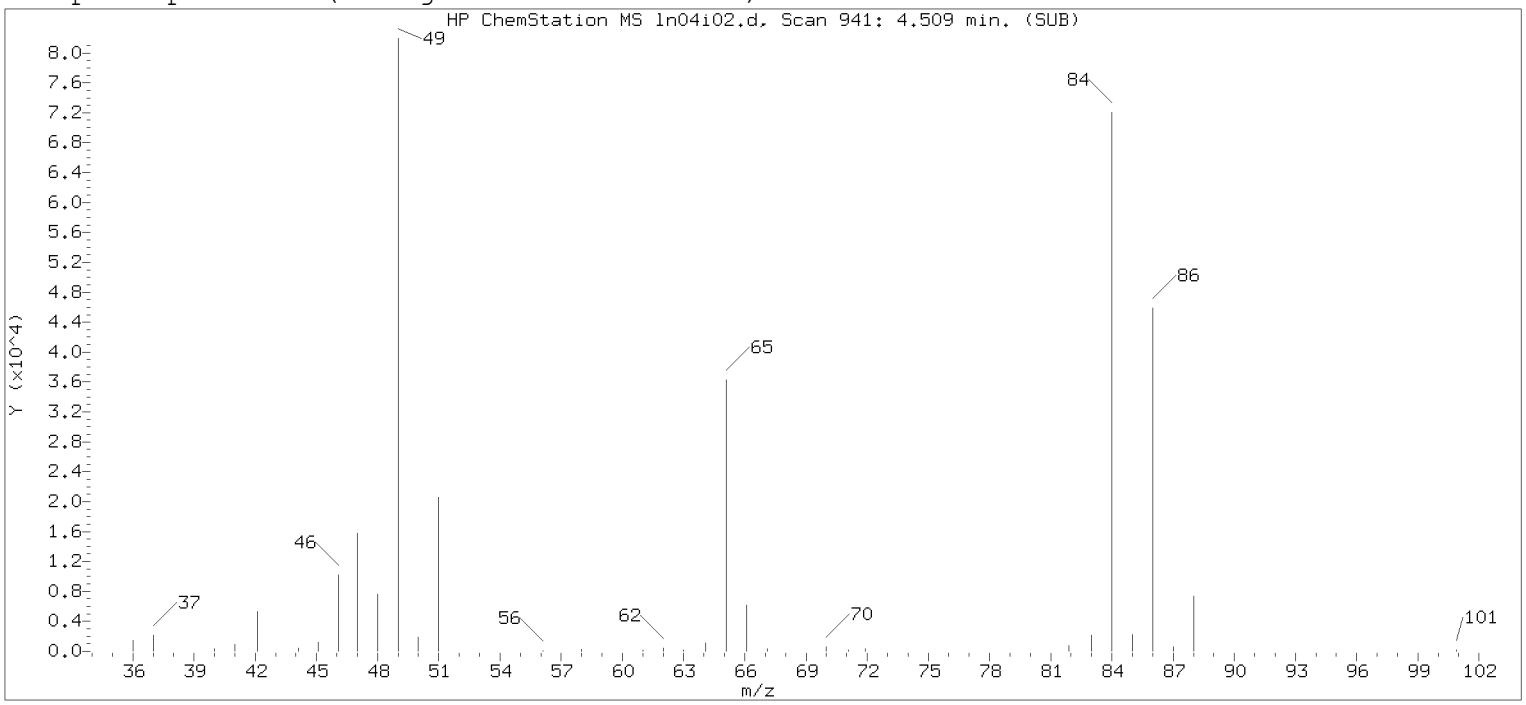
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 265971M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1169
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

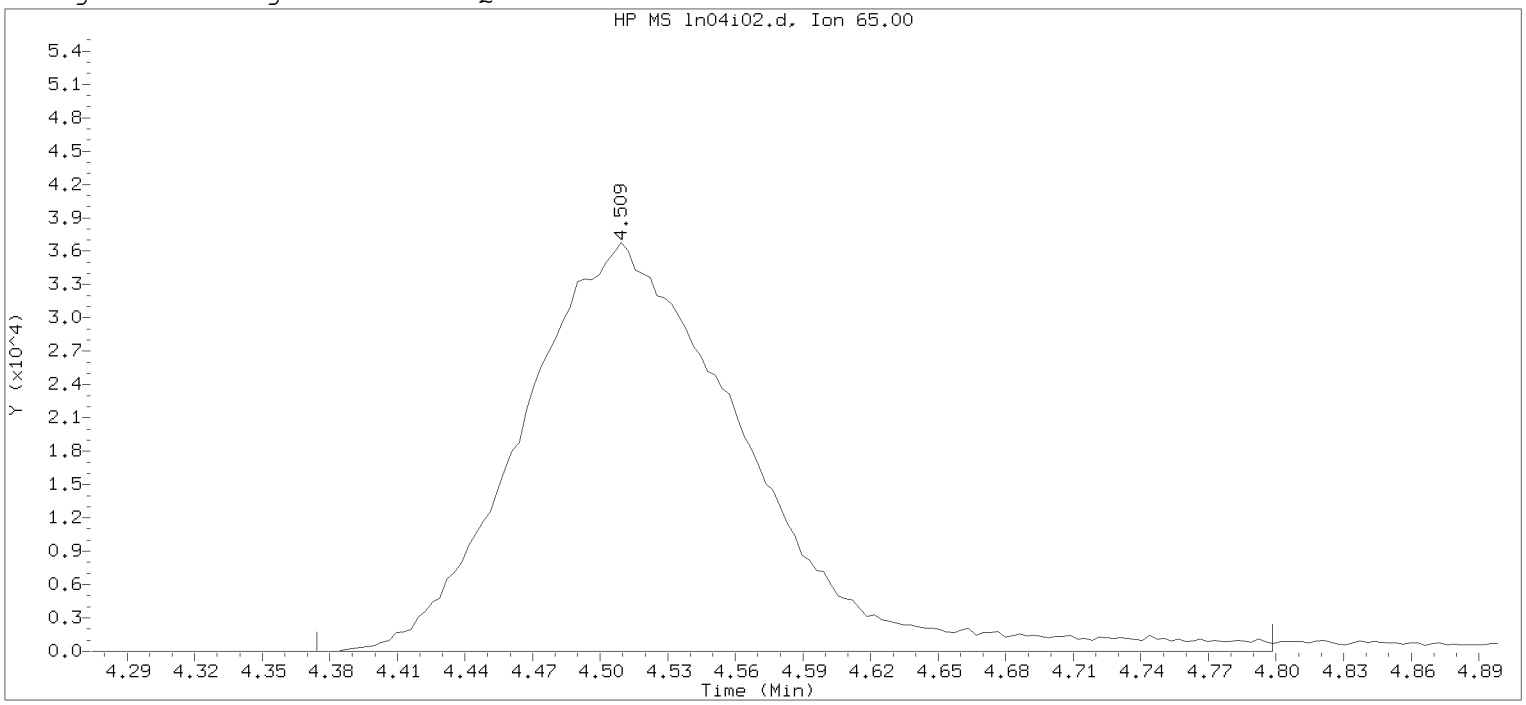
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

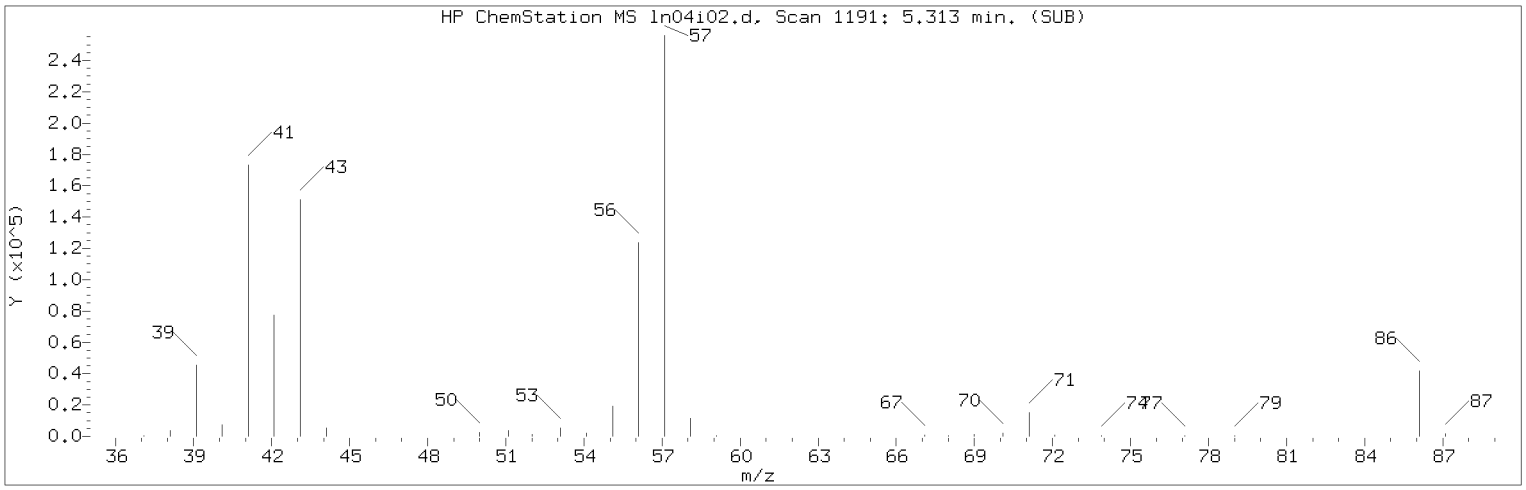
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

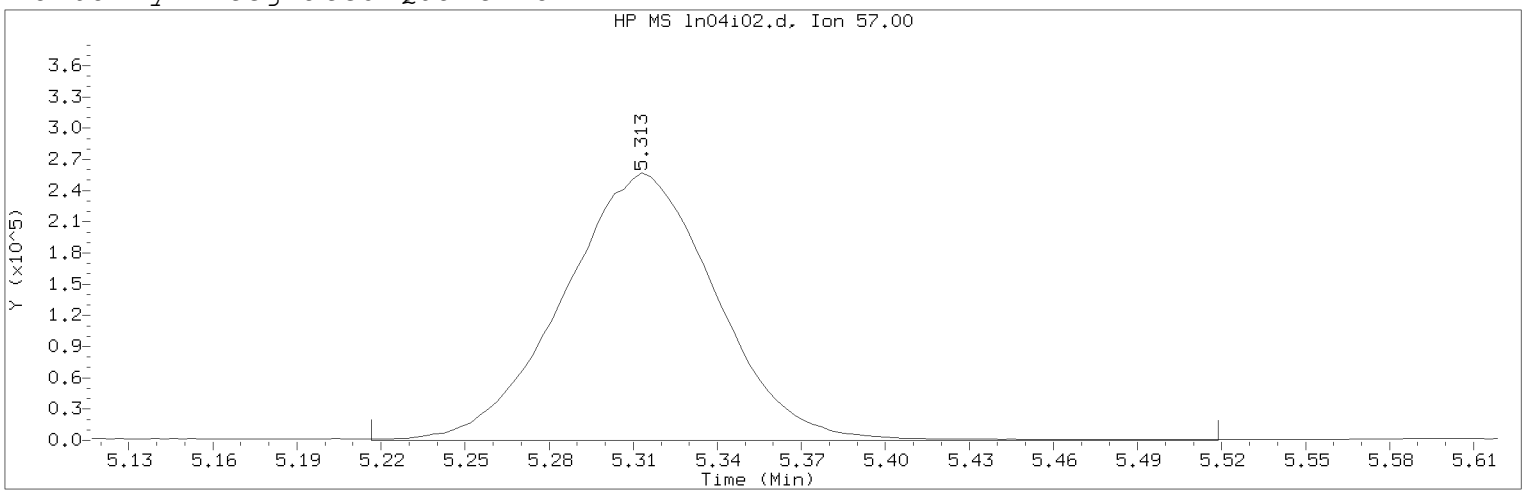
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 252632
On-column Amount (ng) : 250.0000
Integration start scan : 898 Integration stop scan: 1030
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

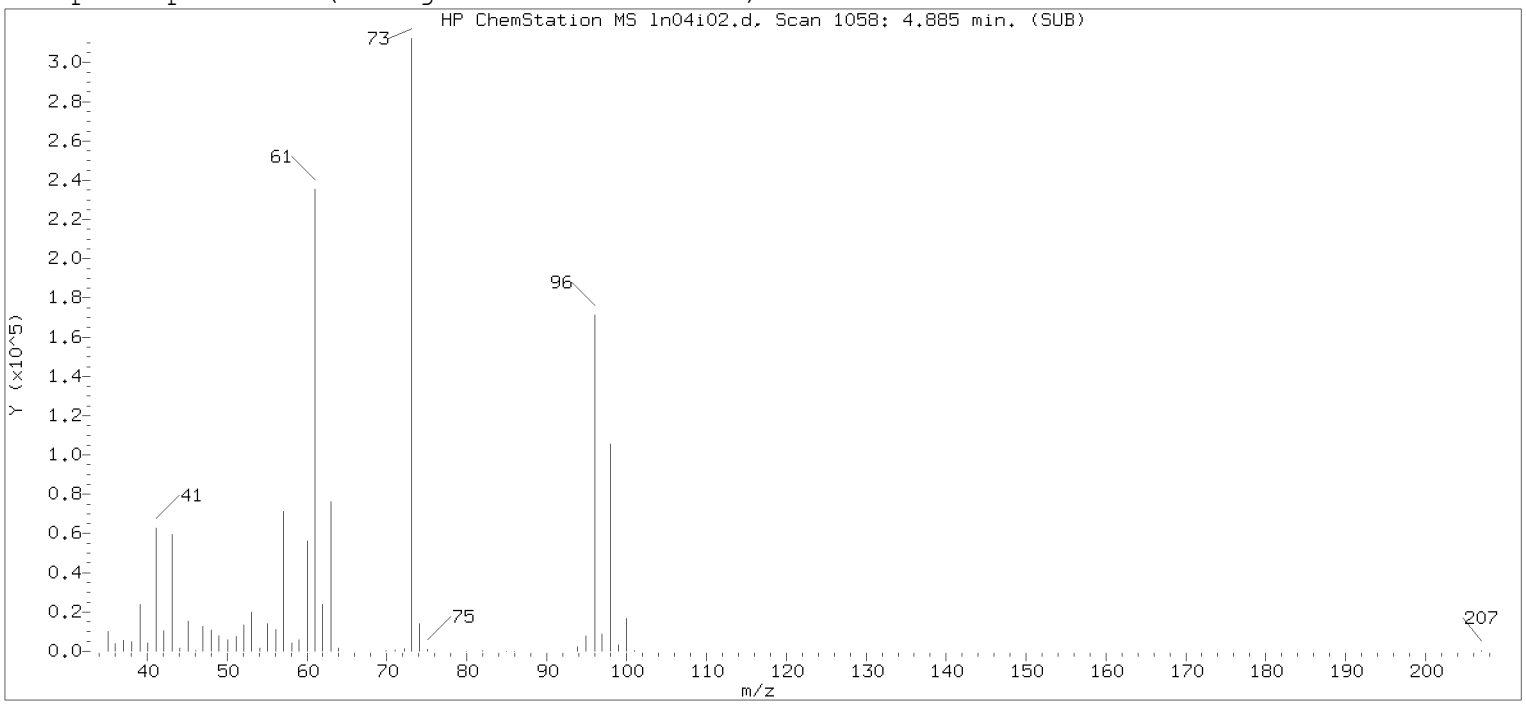
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1191
Retention Time (minutes): 5.313
Quant Ion : 57.00
Area (flag) : 974442M
On-Column Amount (ng) : 107.9083
Integration start scan : 1160 Integration stop scan: 1254
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

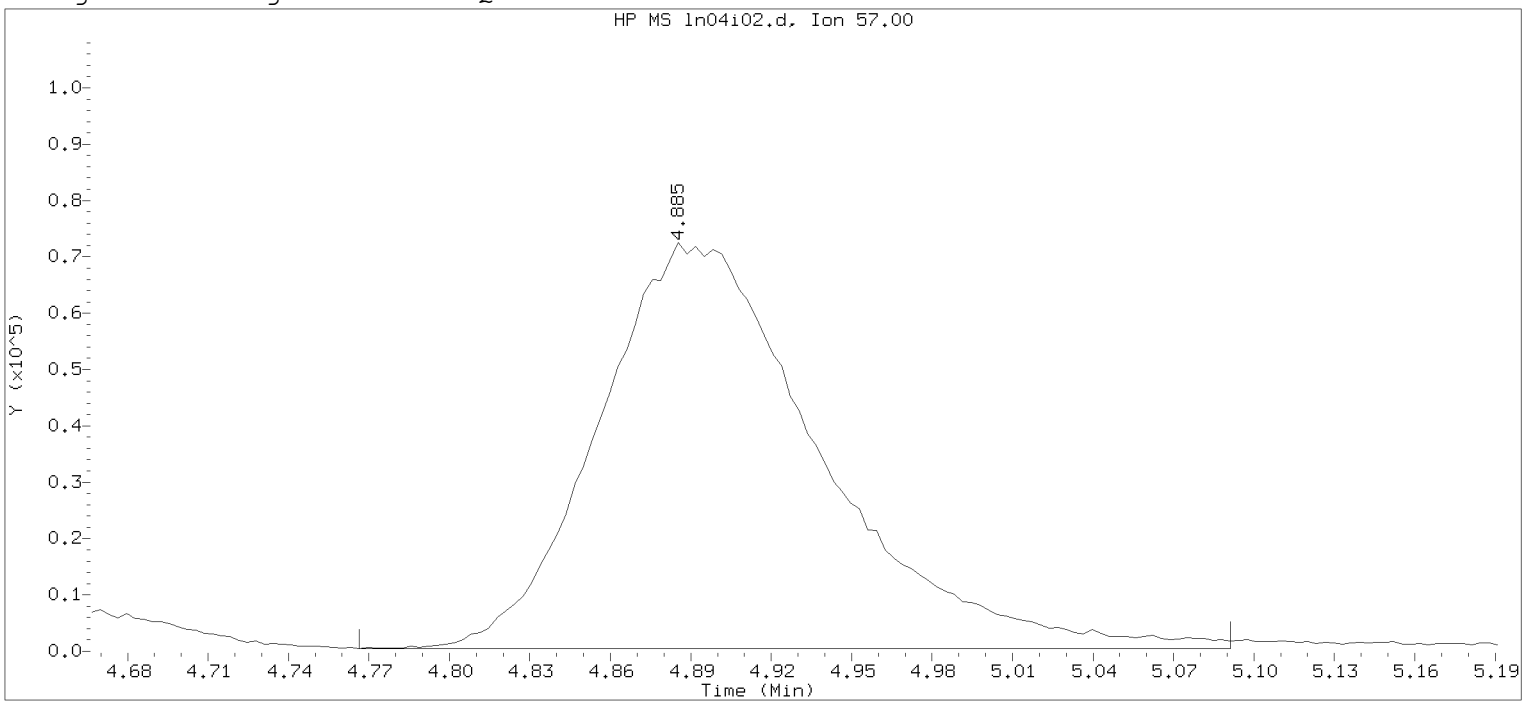
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

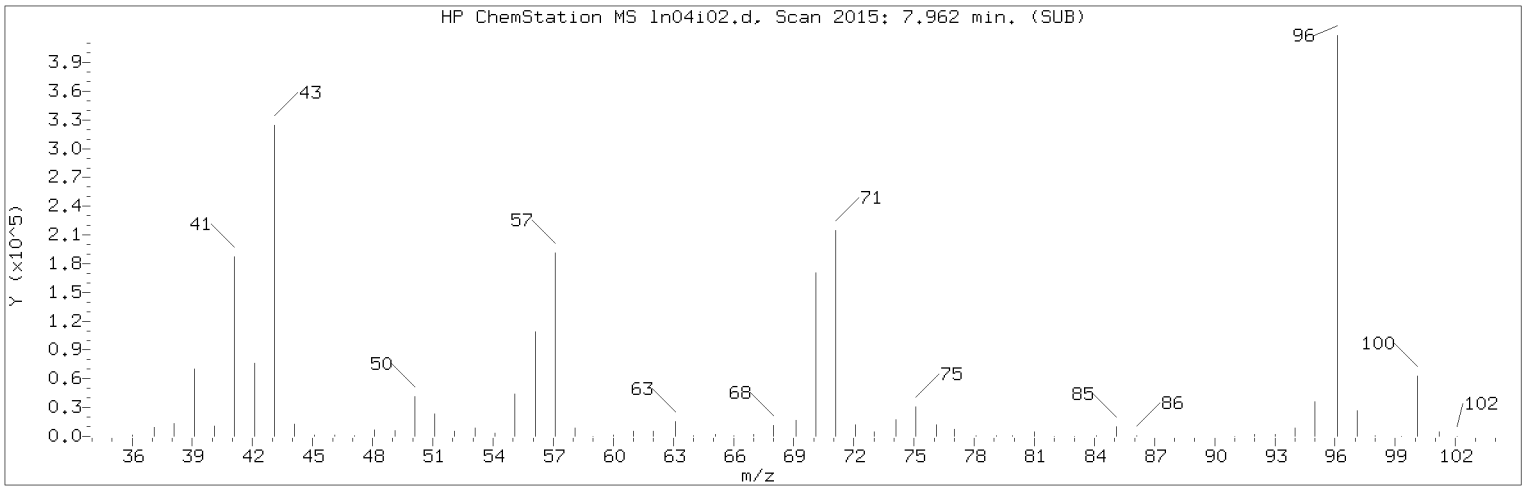
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

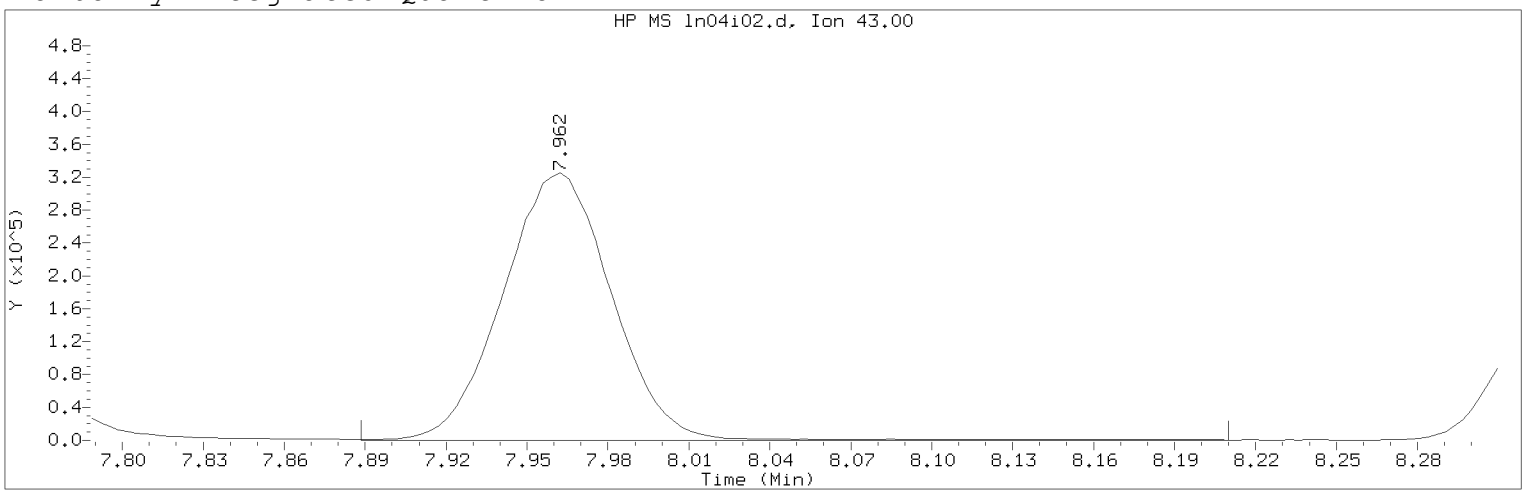
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1058
Retention Time (minutes): 4.885
Quant Ion : 57.00
Area : 414312
On-column Amount (ng) : 98.9070
Integration start scan : 1020 Integration stop scan: 1121
Y at integration start : 485 Y at integration end: 485

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

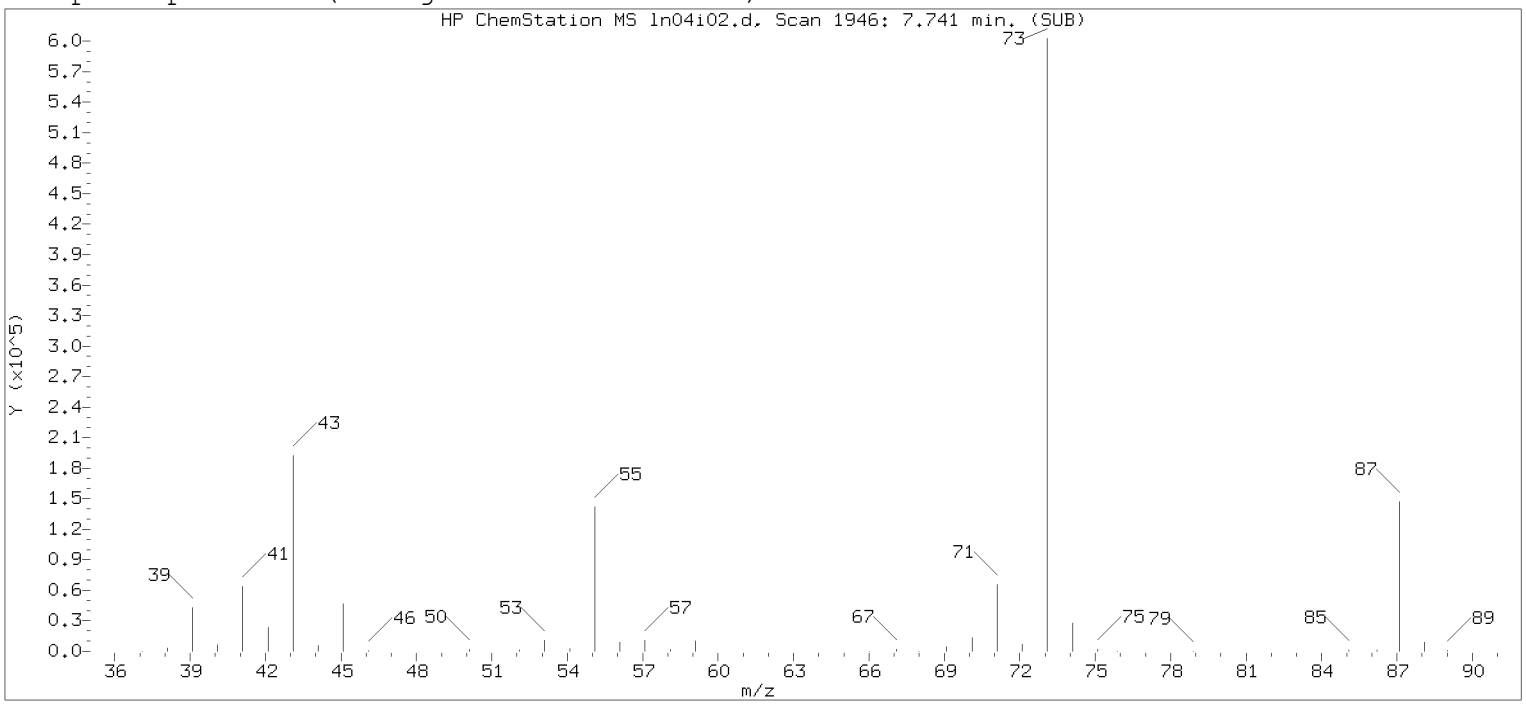
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2015
Retention Time (minutes): 7.962
Quant Ion : 43.00
Area (flag) : 911962MA
On-Column Amount (ng) : 108.1037
Integration start scan : 1991 Integration stop scan: 2091
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

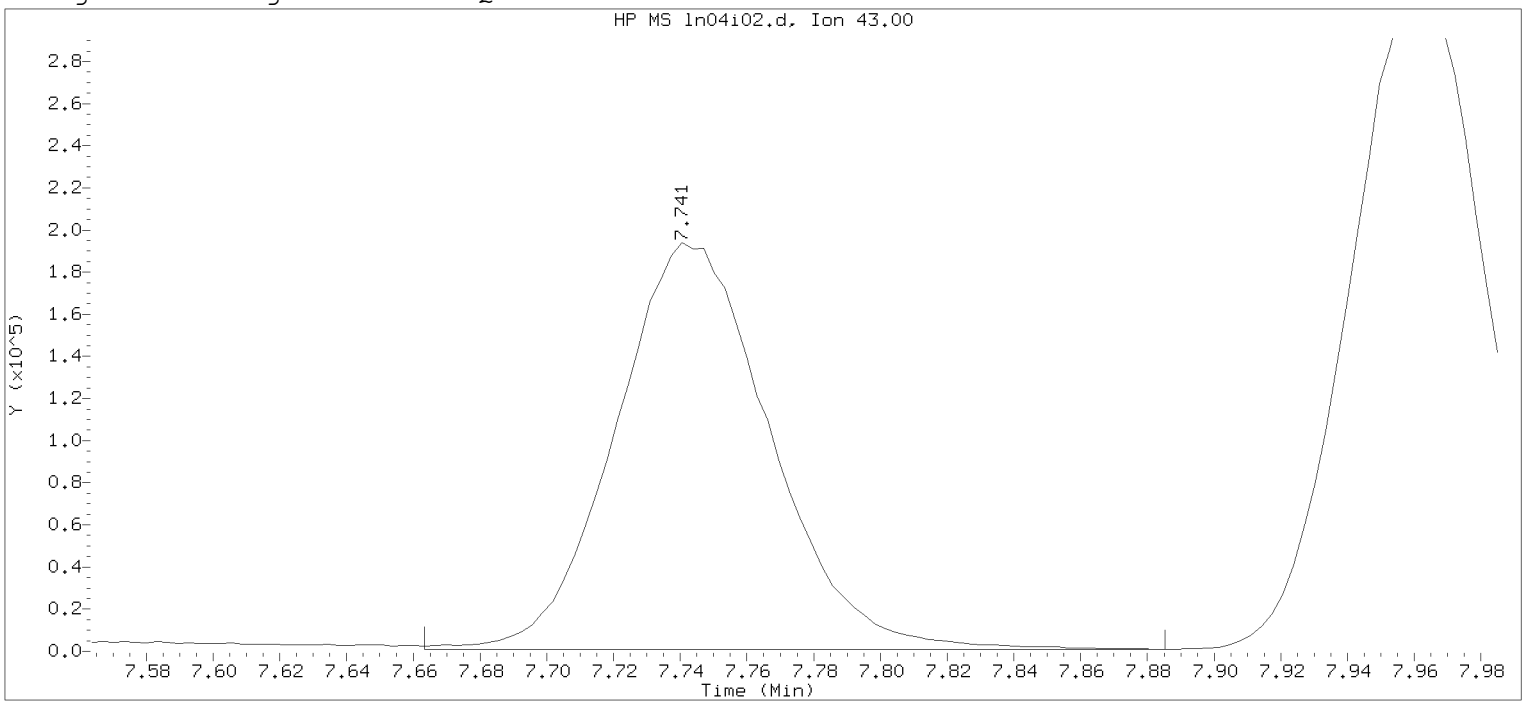
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

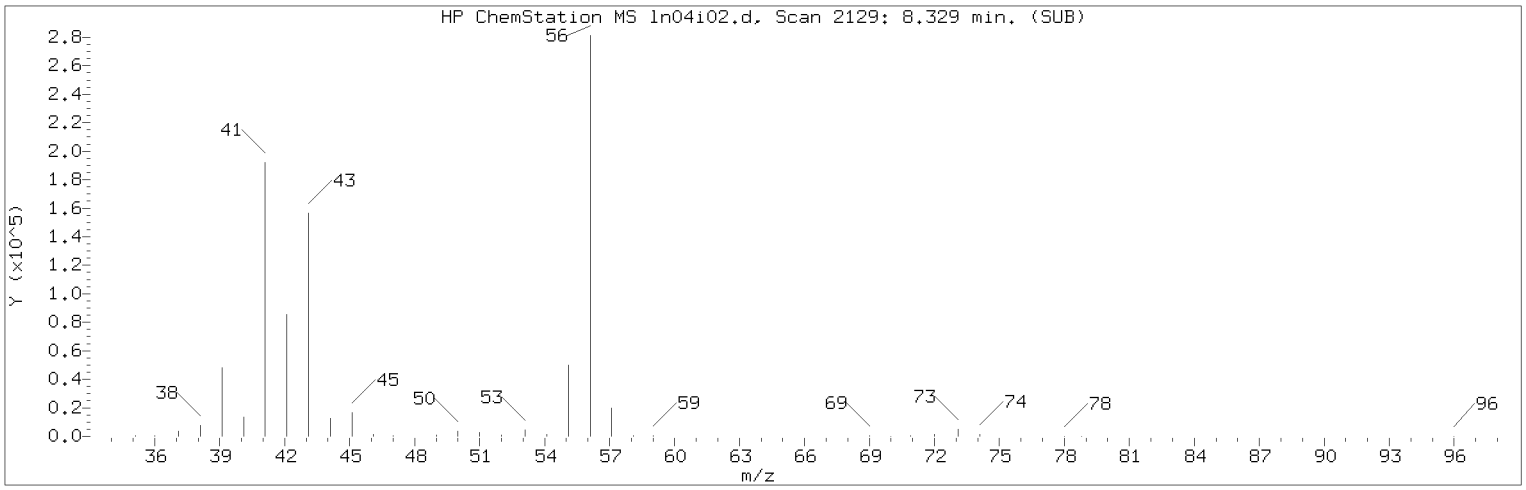
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

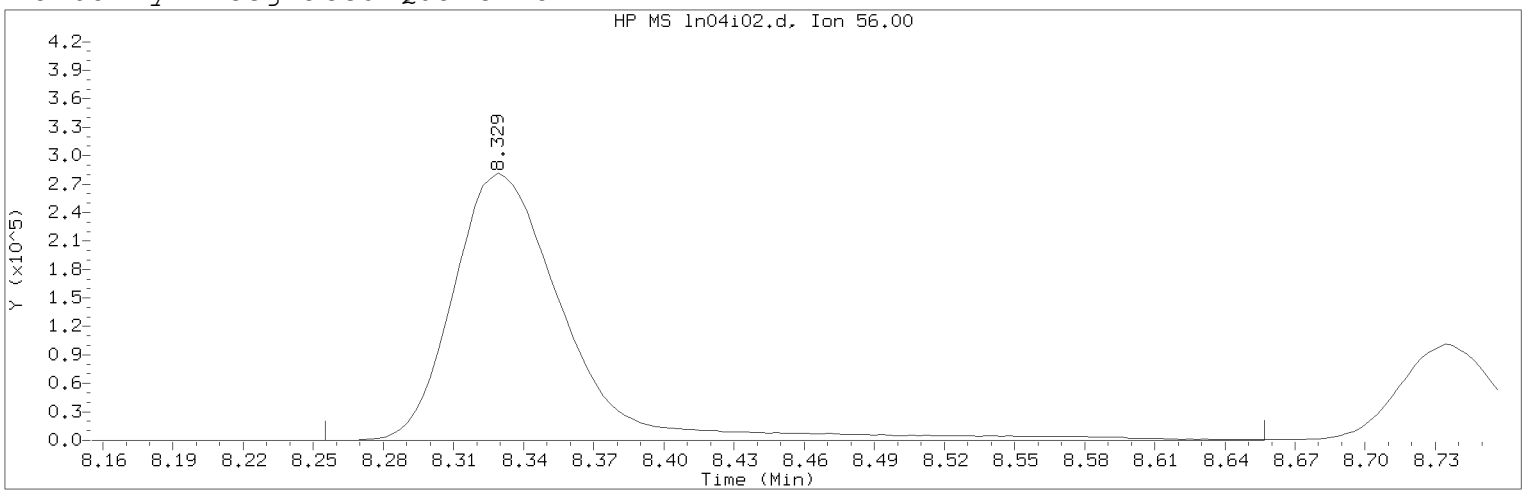
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.741
Quant Ion : 43.00
Area : 623358
On-column Amount (ng) : 101.3435
Integration start scan : 1921 Integration stop scan: 1990
Y at integration start : 845 Y at integration end: 845

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

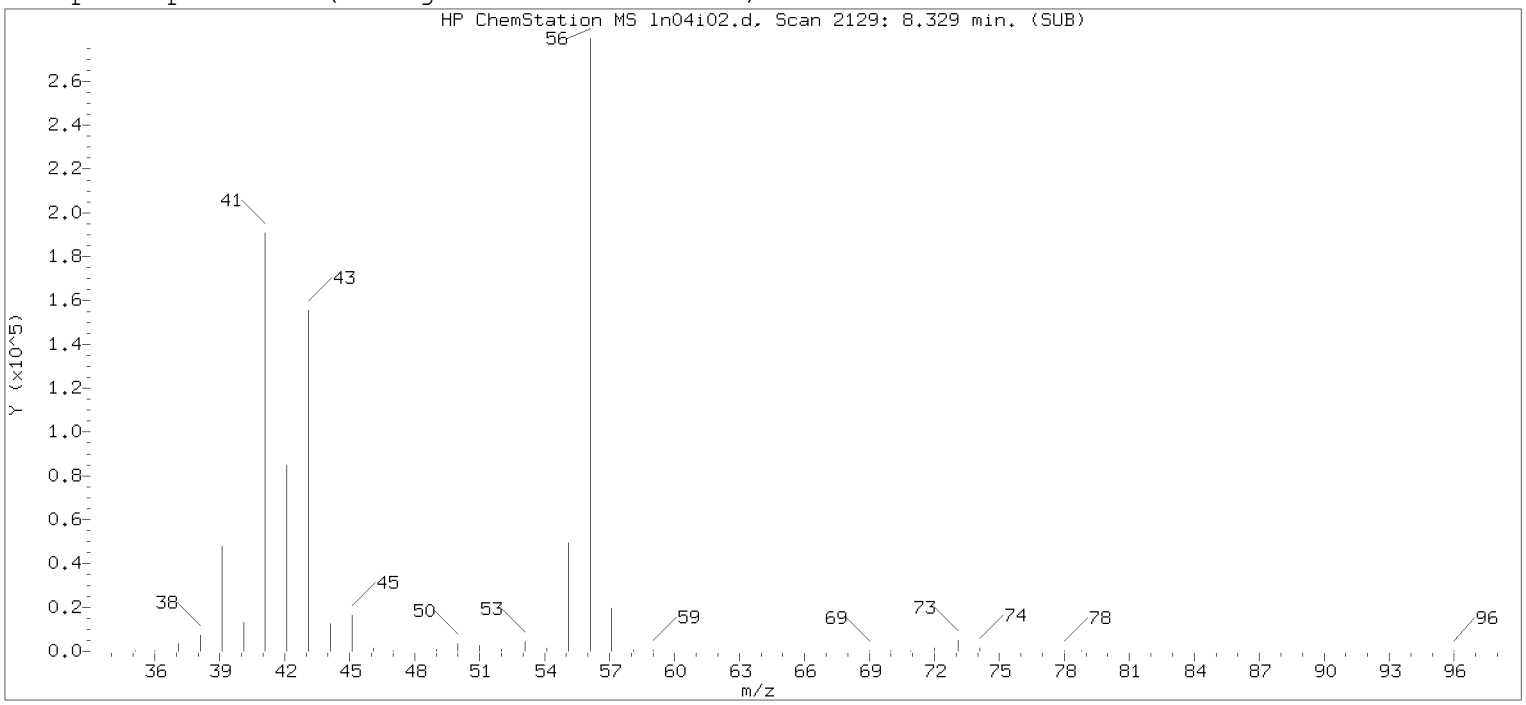
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area (flag) : 944383M
On-Column Amount (ng) : 2911.8124
Integration start scan : 2105 Integration stop scan: 2230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

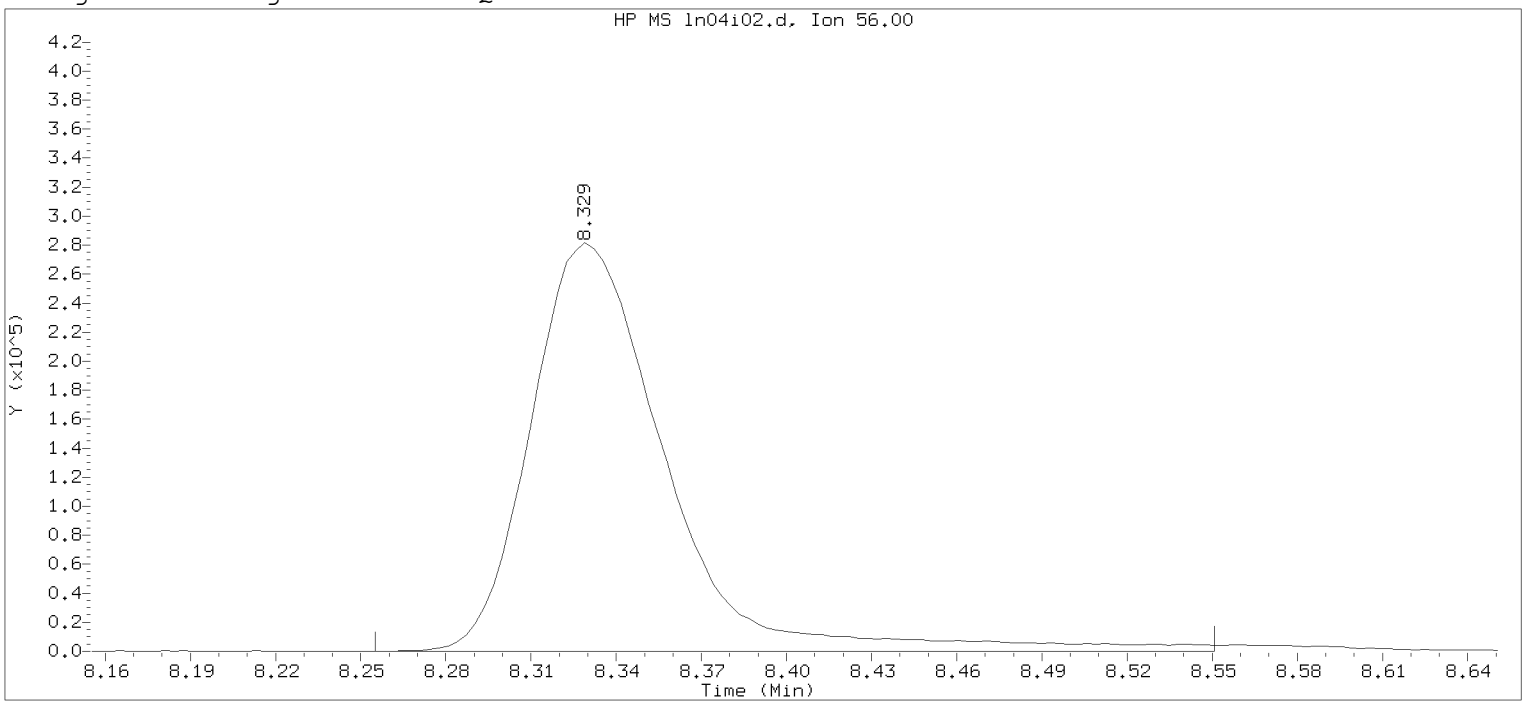
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

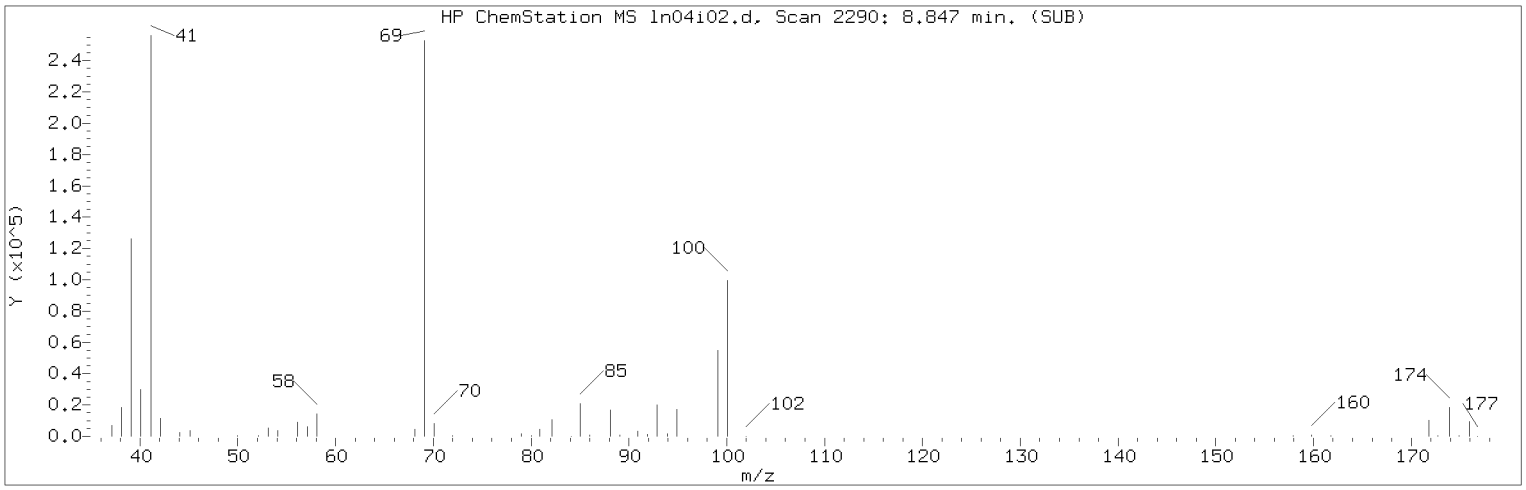
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

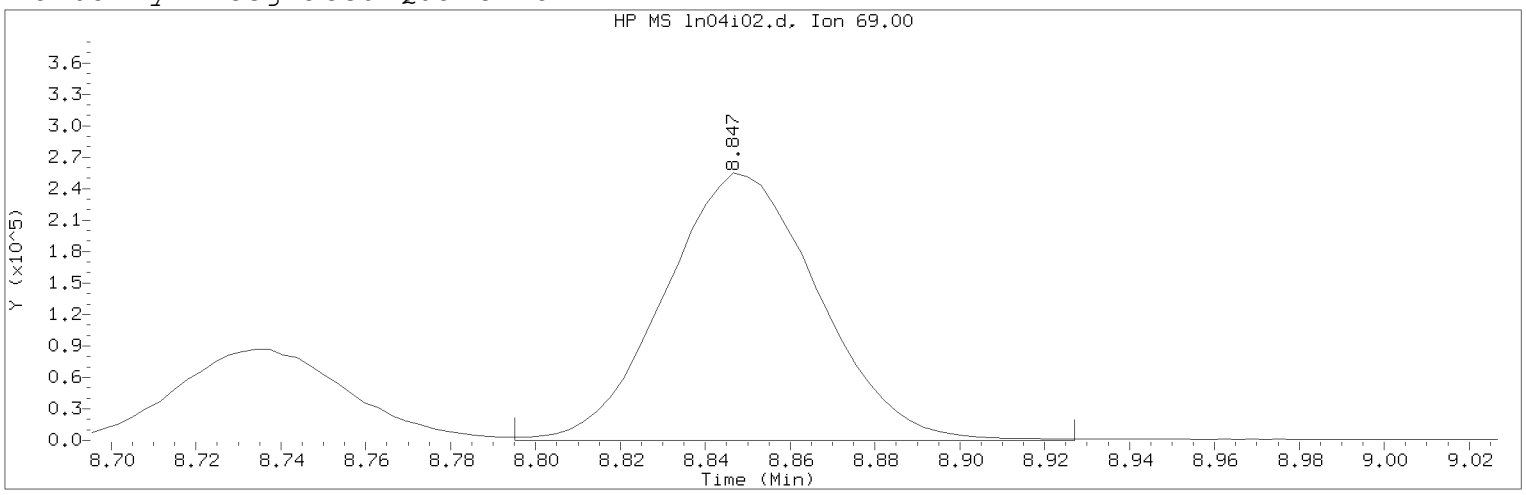
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area : 929615
On-column Amount (ng) : 2668.2803
Integration start scan : 2105 Integration stop scan: 2197
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

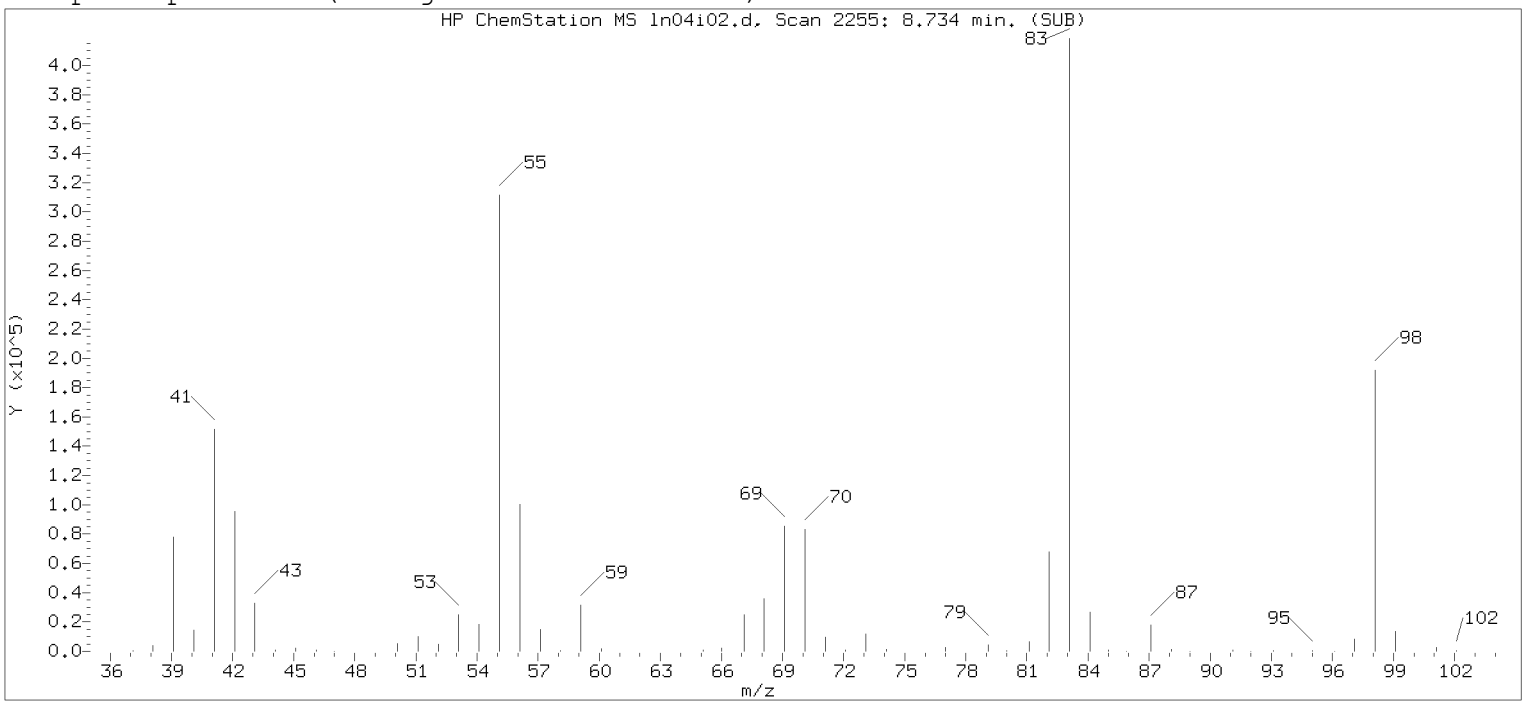
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2290
Retention Time (minutes): 8.847
Quant Ion : 69.00
Area (flag) : 640445A
On-Column Amount (ng) : 108.3344
Integration start scan : 2273 Integration stop scan: 2314
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

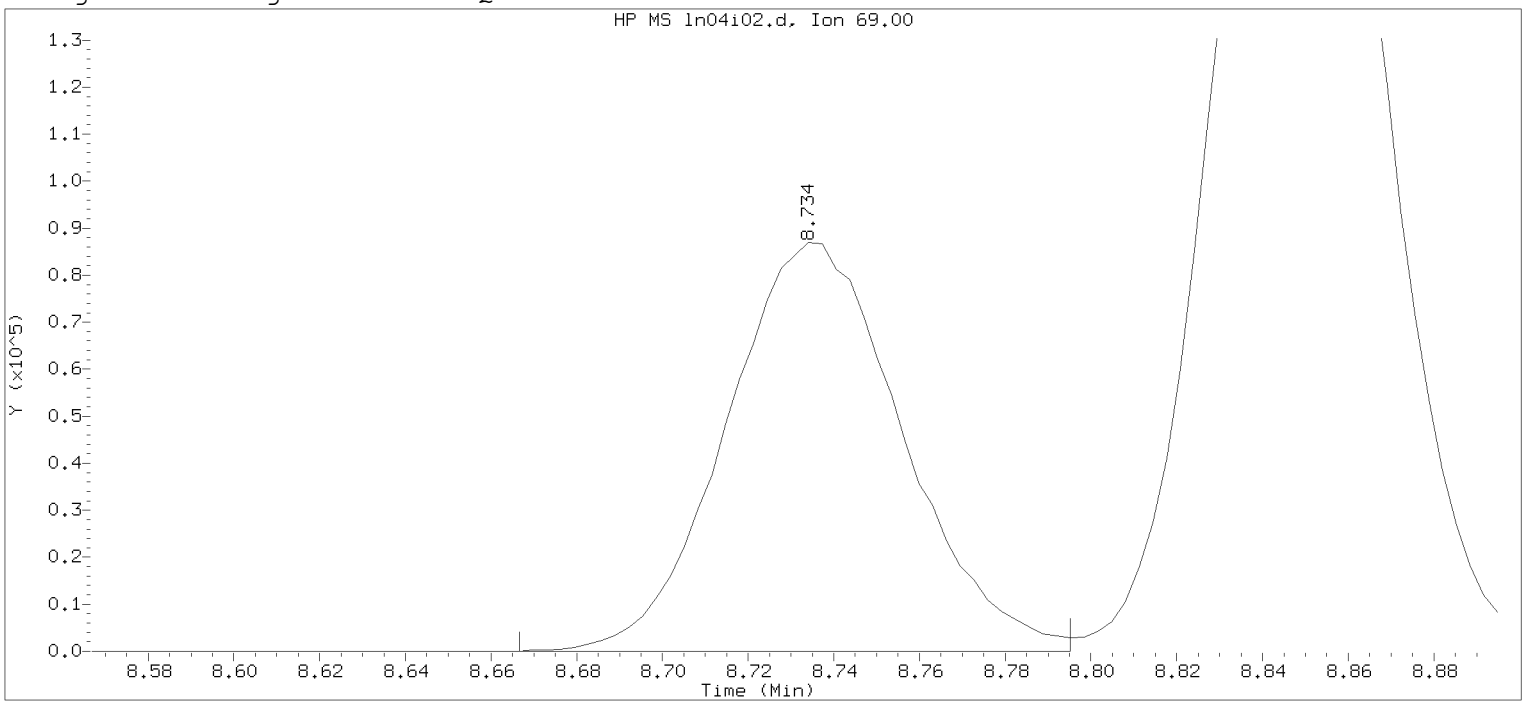
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

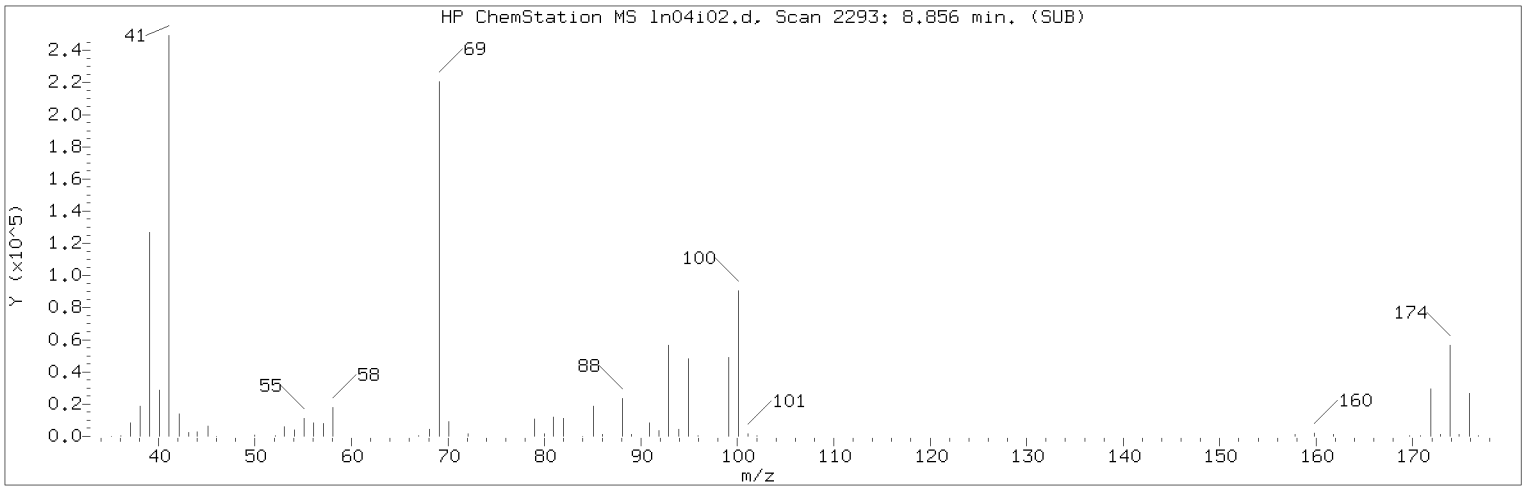
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

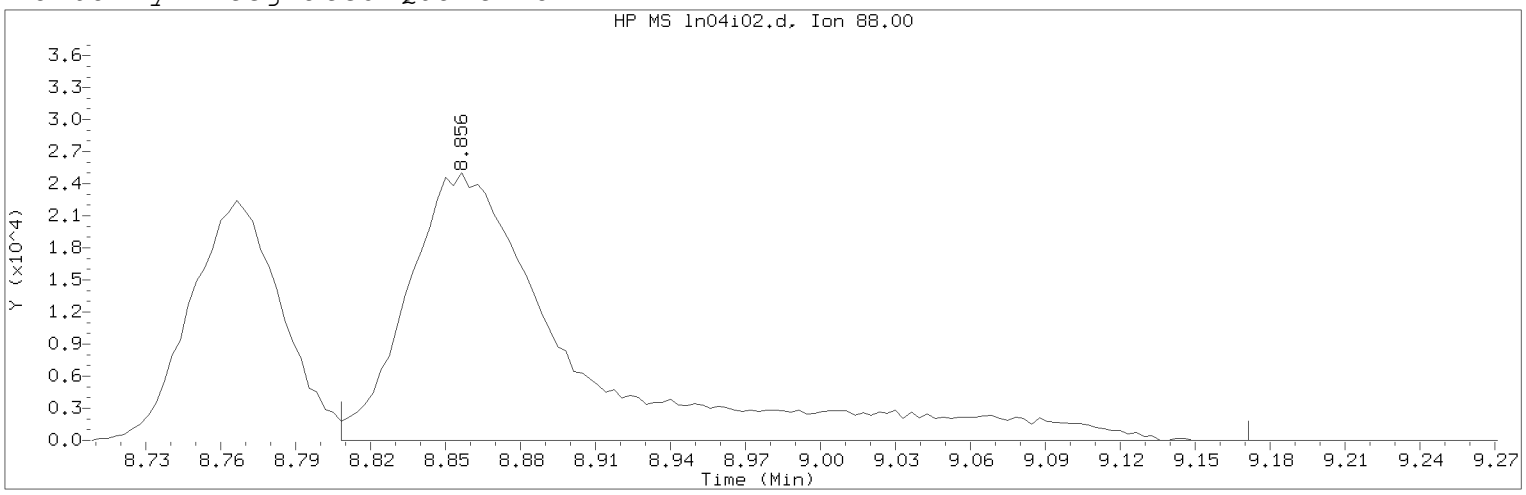
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 247190
On-column Amount (ng) : 97.8749
Integration start scan : 2233 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

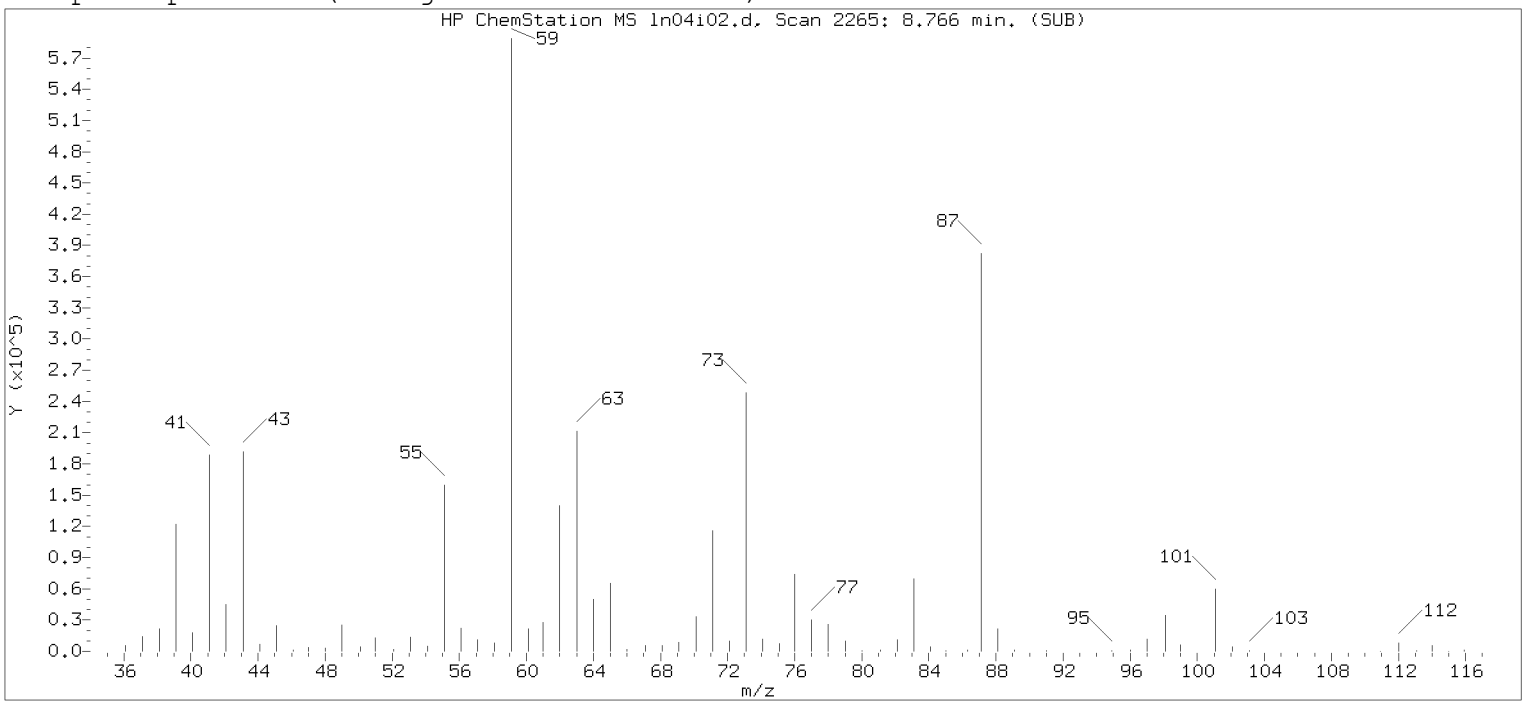
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 117817M
On-Column Amount (ng) : 1321.6466
Integration start scan : 2277 Integration stop scan: 2390
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

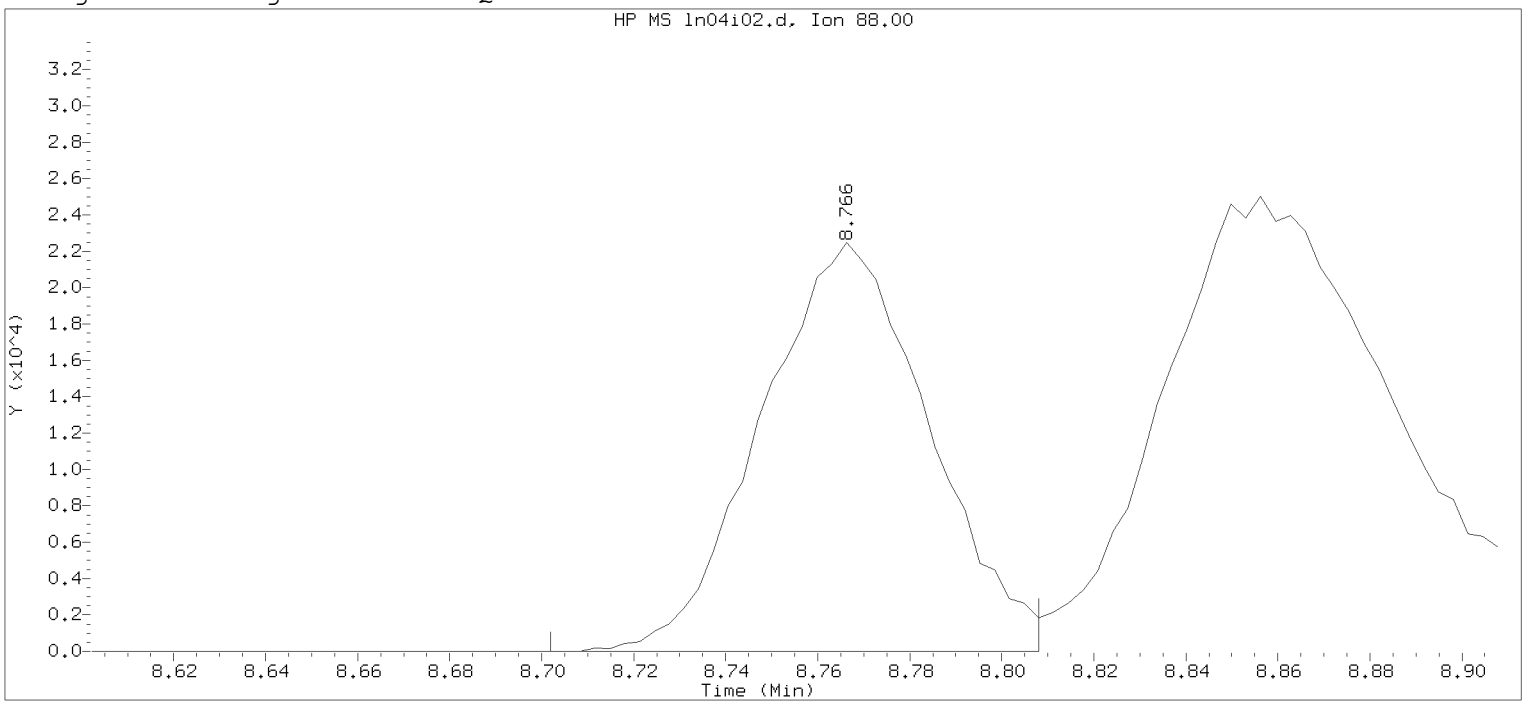
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

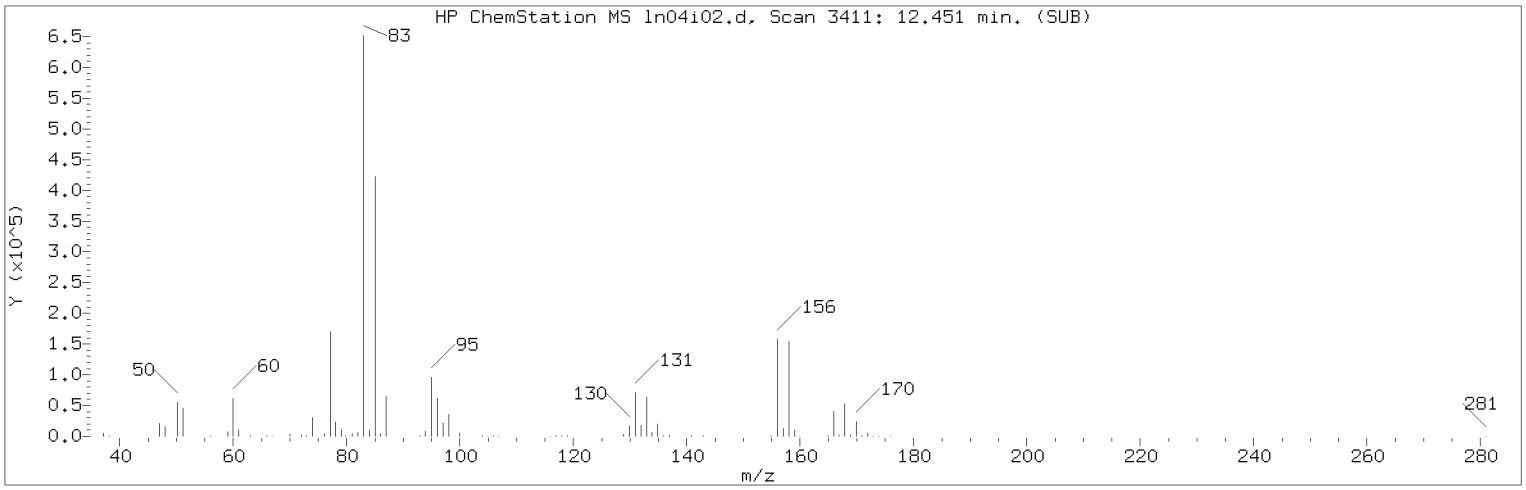
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

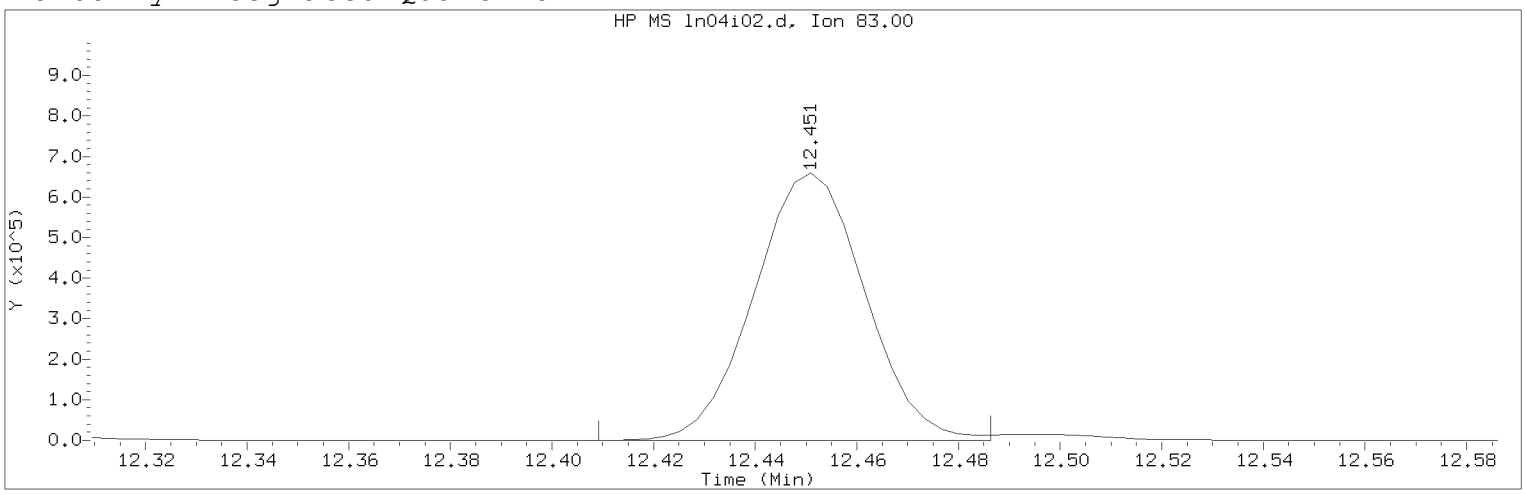
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2265
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area : 56534
On-column Amount (ng) : 746.2694
Integration start scan : 2244 Integration stop scan: 2277
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

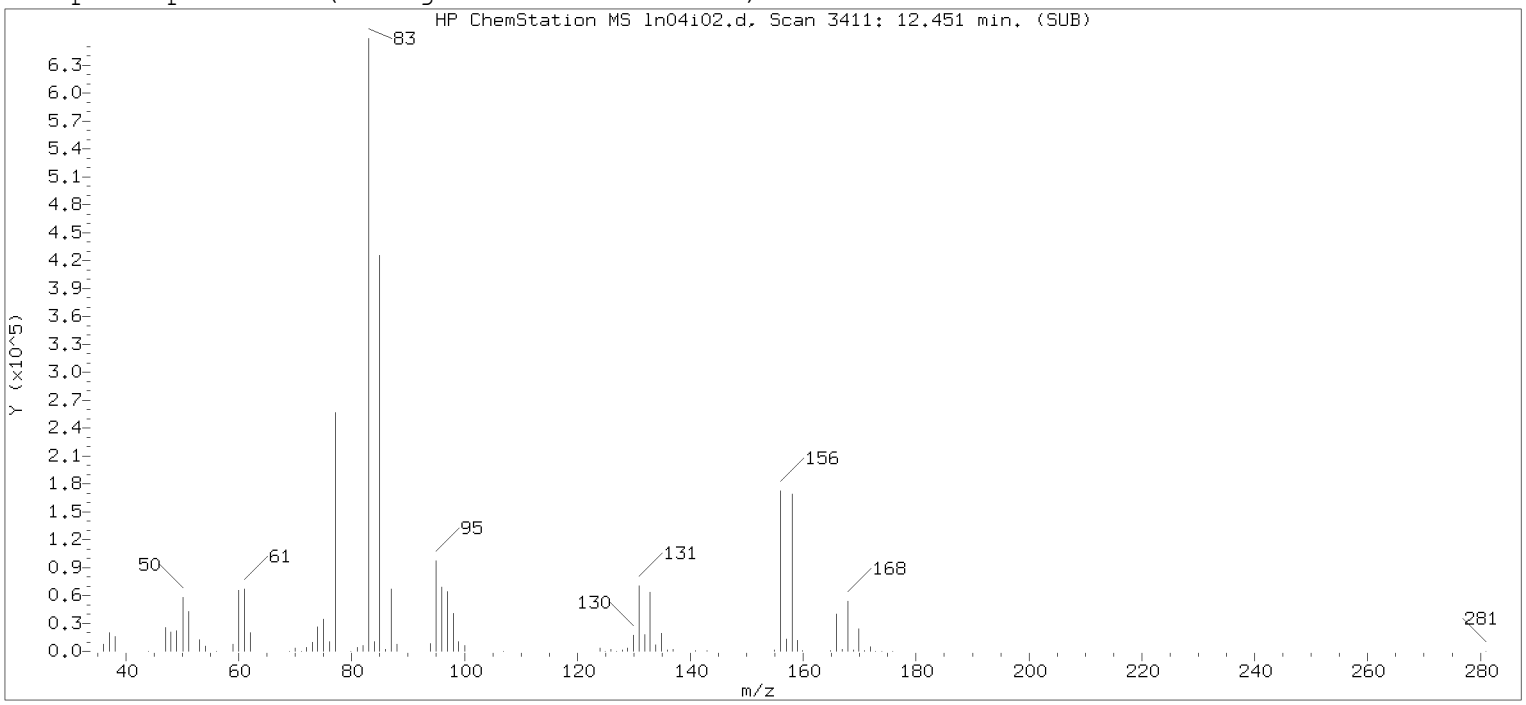
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 995972M
On-Column Amount (ng) : 105.3166
Integration start scan : 3397 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

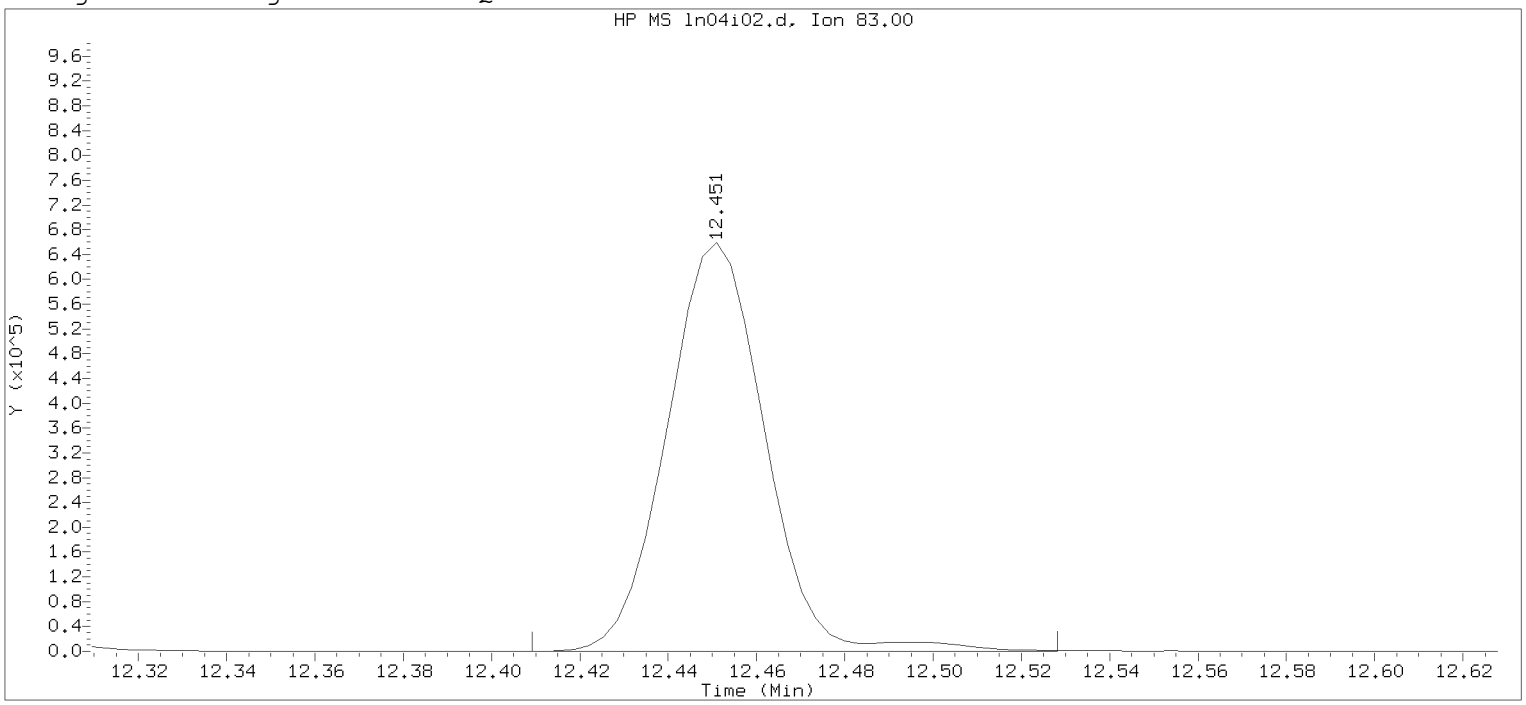
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

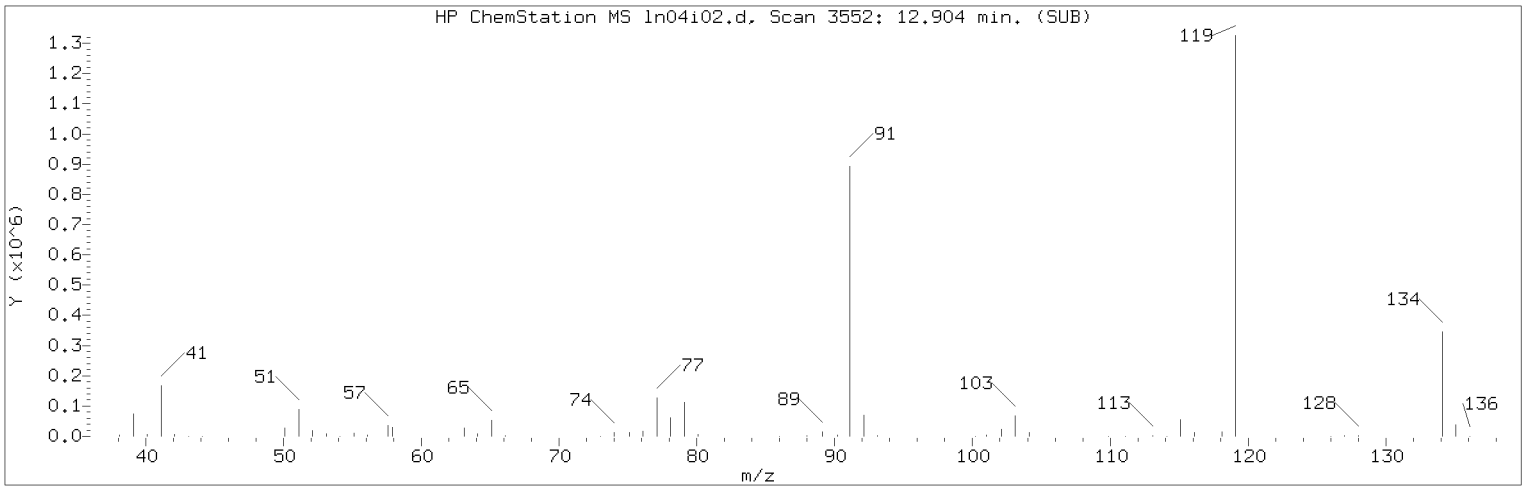
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

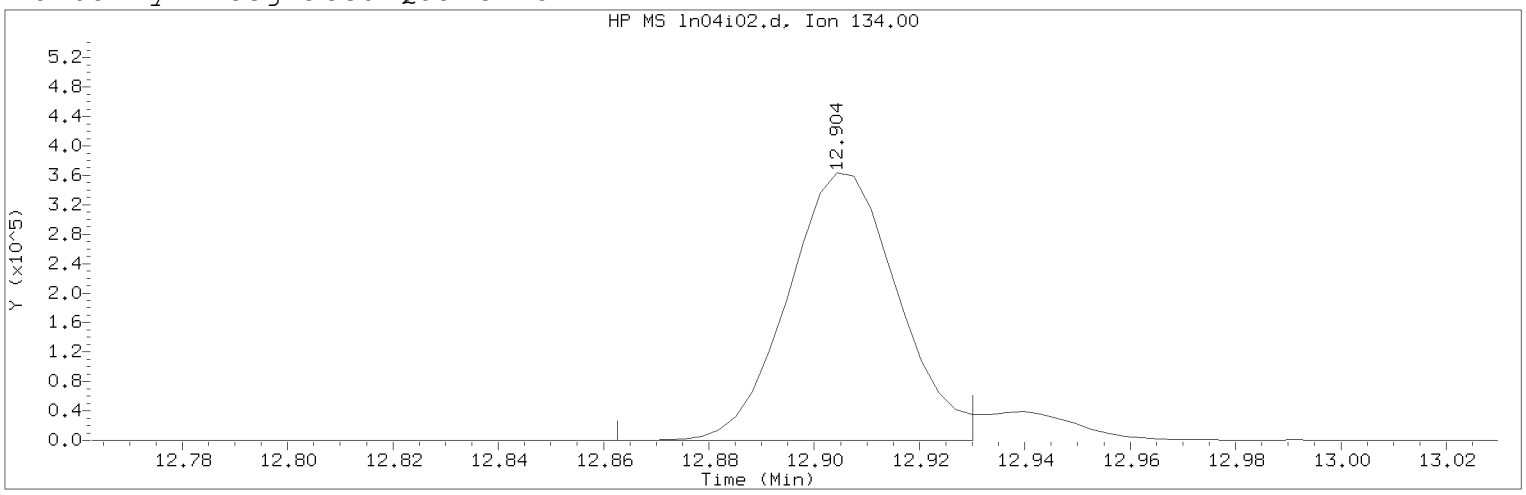
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 1015846
On-column Amount (ng) : 101.1821
Integration start scan : 3397 Integration stop scan: 3434
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

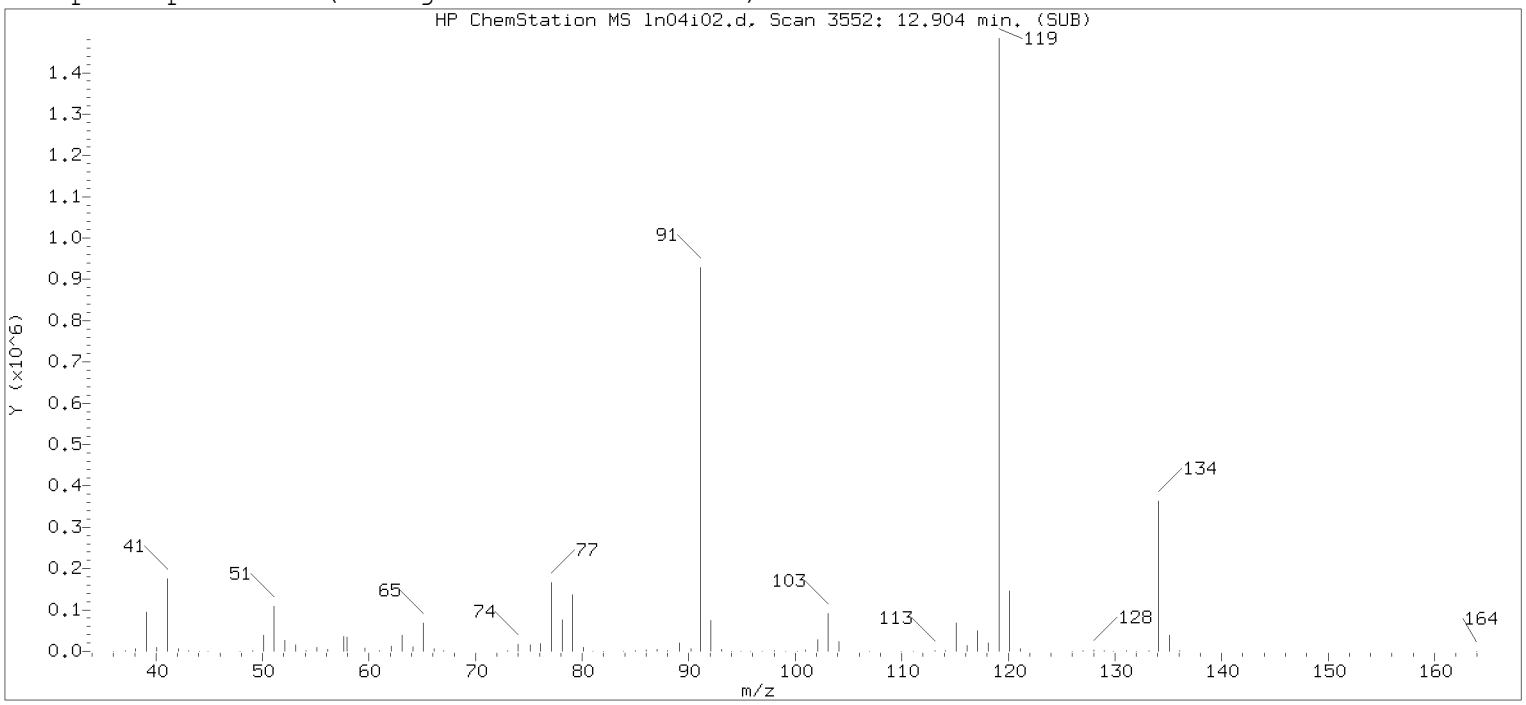
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 526781M
On-Column Amount (ng) : 106.6224
Integration start scan : 3538 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

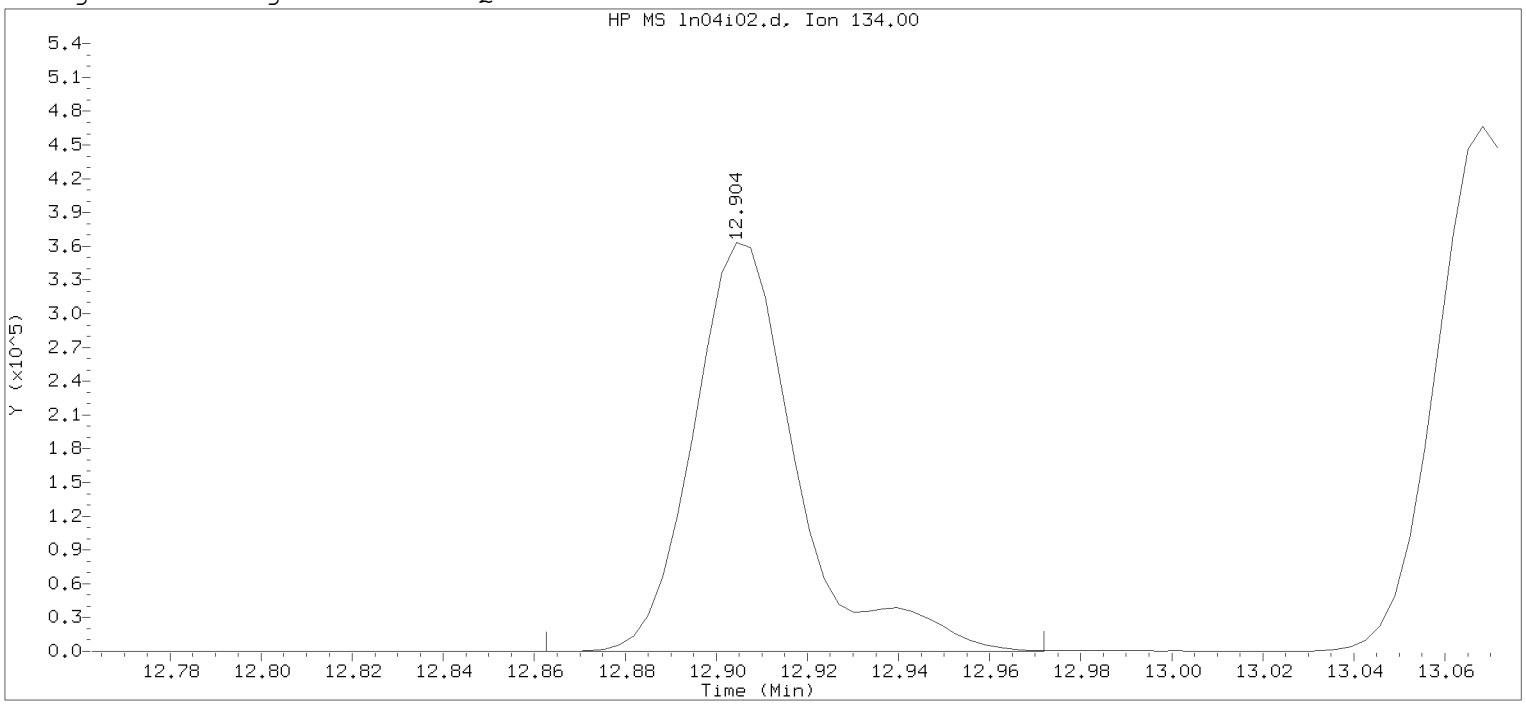
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



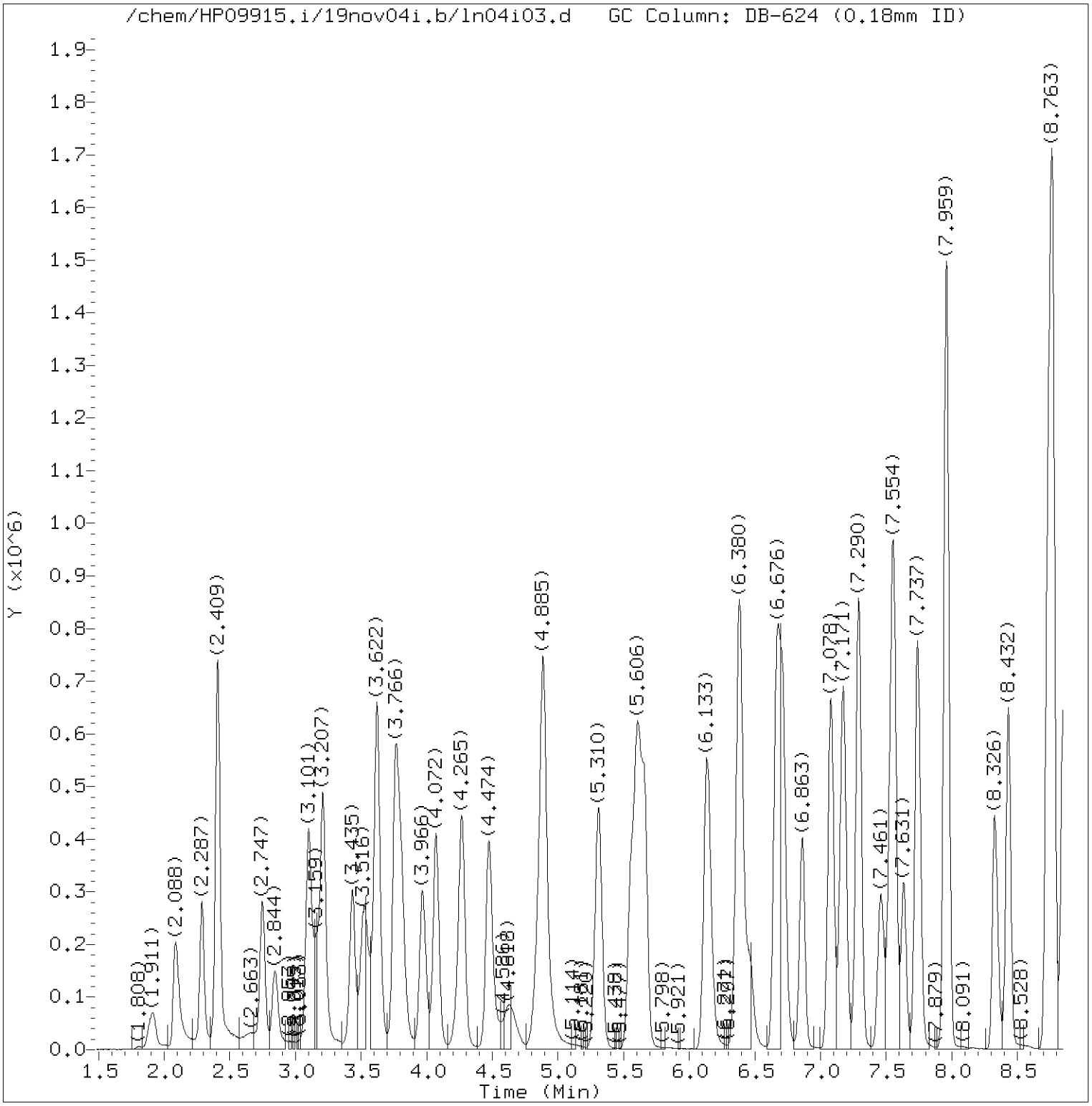
Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 572341
On-column Amount (ng) : 102.7487
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

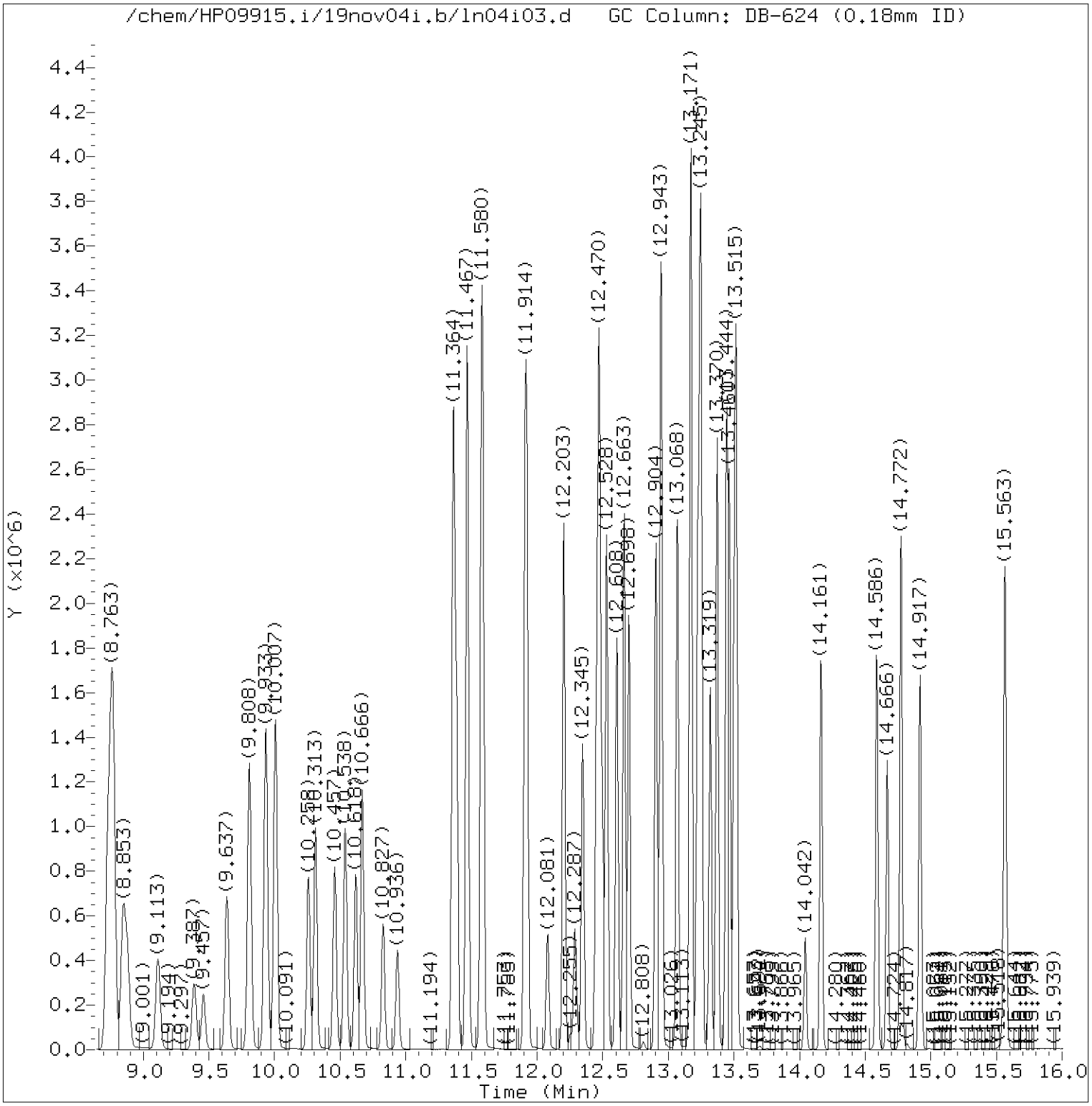
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.088	85	427538M	52.817
4) Chloromethane	(2)	2.287	50	390734	50.084
5) 1,3-Butadiene	(2)	2.406	39	311095M	48.025
6) Vinyl Chloride	(2)	2.409	62	387720	49.794
8) Bromomethane	(2)	2.747	94	272873	48.888
9) Chloroethane	(2)	2.844	64	212325	49.620
10) Dichlorofluoromethane	(2)	3.098	67	509913MA	49.515
12) Trichlorofluoromethane	(2)	3.152	101	433881	51.758
11) n-Pentane	(2)	3.207	43	489872	49.449
14) Ethyl ether	(2)	3.432	59	285731	52.748
15) Freon 123a	(2)	3.525	67	337192	50.003
16) Acrolein	(1)	3.622	56	1052176	519.843
17) 1,1-Dichloroethene	(2)	3.760	96	251911	51.197
17) 1,1-Dichloroethene	(2)	3.760	63	123343	50.001
19) Freon 113	(2)	3.795	101	289343	51.541
18) Acetone	(1)	3.802	58	91161	100.464
22) Methyl Iodide	(2)	3.966	142	518954	50.897
21) 2-Propanol	(1)	3.998	45	165875M	254.283
23) Carbon Disulfide	(2)	4.072	76	956902	51.606
27) Methyl Acetate	(2)	4.245	43	314348	49.603
25) Allyl Chloride	(2)	4.271	41	438915	49.725
28) Methylene Chloride	(2)	4.474	84	295055	50.382
29)*t-Butyl alcohol-d10	(1)	4.509	65	269779M	250.000
30) t-Butyl alcohol	(1)	4.625	59	291988	257.078
31) Acrylonitrile	(2)	4.834	53	175969	51.611
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	957096	51.225
32) trans-1,2-Dichloroethene	(2)	4.888	96	287617	50.529
34) n-Hexane	(2)	5.313	57	463732M	52.364
36) 1,1-Dichloroethane	(2)	5.551	63	505667	50.924
38) di-Isopropyl ether	(2)	5.609	45	985238	51.444
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	462216	51.882
40) Ethyl t-butyl ether	(2)	6.133	59	965104	51.927
43) 1,2-Dichloroethene (Total)	(2)		96	610267	101.029
44) 2-Butanone	(2)	6.361	43	453665	103.655
42) cis-1,2-Dichloroethene	(2)	6.380	96	322650	50.501
45) 2,2-Dichloropropane	(2)	6.400	77	400546	51.890
47) Propionitrile	(1)	6.464	54	357876	252.881
48) Methacrylonitrile	(2)	6.670	67	475036	129.160

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	173386	51.180
50) Tetrahydrofuran	(1)	6.721	71	126019	98.581
51) Chloroform	(2)	6.859	83	484828	51.048
52)$Dibromofluoromethane	(2)	7.075	113	282824	49.838
52)$Dibromofluoromethane	(2)	7.075	111	289462	50.026
53) 1,1,1-Trichloroethane	(2)	7.085	97	420986	51.935
54) Cyclohexane	(2)	7.171	56	567043	52.311
54) Cyclohexane	(2)	7.175	84	491699	52.219
54) Cyclohexane	(2)	7.175	69	175289	52.282
56) Carbon Tetrachloride	(2)	7.284	117	361443	52.574
55) 1,1-Dichloropropene	(2)	7.294	75	401799	51.176
58) Isobutyl Alcohol	(1)	7.461	41	242114	633.444
57)$1,2-Dichloroethane-d4	(2)	7.528	102	72846	50.367
57)$1,2-Dichloroethane-d4	(2)	7.531	65	321603	49.897
57)$1,2-Dichloroethane-d4	(2)	7.531	104	46134	49.939
60) Benzene	(2)	7.557	78	1202424	50.927
61) 1,2-Dichloroethane	(2)	7.638	62	372805	49.091
61) 1,2-Dichloroethane	(2)	7.634	98	37850	50.364
65) t-Amyl methyl ether	(2)	7.737	73	971399	52.071
67) n-Heptane	(2)	7.956	43	432248MA	52.247
66)*Fluorobenzene	(2)	7.959	96	1160755	50.000
69) n-Butanol	(1)	8.326	56	438437M	1332.750
71) Trichloroethene	(2)	8.432	95	302634	50.906
72) Methylcyclohexane	(2)	8.734	83	574135	52.056
72) Methylcyclohexane	(2)	8.731	98	260583	52.213
73) 1,2-Dichloropropane	(2)	8.773	63	306937	51.196
76) Methyl Methacrylate	(2)	8.847	69	306086A	52.795
75) 1,4-Dioxane	(1)	8.853	88	59876M	662.196
74) Dibromomethane	(2)	8.879	93	199498	51.428
78) Bromodichloromethane	(2)	9.113	83	366892	52.707
79) 2-Nitropropane	(2)	9.390	41	235097	111.505
80) 2-Chloroethyl Vinyl Ether	(2)	9.457	63	134015	52.046
81) cis-1,3-Dichloropropene	(2)	9.637	75	495055	53.547
82) 4-Methyl-2-pentanone	(2)	9.808	43	1004831	108.769
83)$Toluene-d8	(3)	9.933	98	1189125	50.240
83)$Toluene-d8	(3)	9.933	100	767119	50.033
88) Toluene	(3)	10.007	92	764927	51.549
90) 1,3-Dichloropropene (total)	(3)		100	956669	108.348

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	461614	54.801
91) Ethyl Methacrylate	(3)	10.313	69	554039	54.121
92) 1,1,2-Trichloroethane	(3)	10.461	97	291480	51.810
93) Tetrachloroethene	(3)	10.538	166	321895	51.220
94) 1,3-Dichloropropane	(3)	10.618	76	494204	51.449
96) 2-Hexanone	(3)	10.670	43	761734	111.475
97) Dibromochloromethane	(3)	10.827	129	315765	54.792
99) 1,2-Dibromoethane	(3)	10.936	107	319699	52.331
100)*Chlorobenzene-d5	(3)	11.361	117	904578	50.000
101) 1-Chlorohexane	(3)	11.364	91	399510	50.116
102) Chlorobenzene	(3)	11.387	112	864419	51.514
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	299375	54.148
104) Ethylbenzene	(3)	11.467	91	1475718	52.031
106) m+p-Xylene	(3)	11.580	106	1167470	104.636
108) Xylene (Total)	(3)		106	1748839	157.389
107) o-Xylene	(3)	11.907	106	581369	52.752
109) Styrene	(3)	11.924	104	981189	53.877
110) Bromoform	(3)	12.081	173	229903	53.387
111) Isopropylbenzene	(3)	12.203	105	1456789	52.702
112) Cyclohexanone	(1)	12.287	55	231776	654.496
114)$4-Bromofluorobenzene	(3)	12.345	95	446156	49.781
114)$4-Bromofluorobenzene	(3)	12.348	174	370576	49.875
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	482004M	52.727
115) Bromobenzene	(4)	12.464	156	378400	52.027
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	383692	136.075
117) 1,2,3-Trichloropropane	(4)	12.496	110	145151	51.744
119) n-Propylbenzene	(4)	12.528	91	1662625	52.323
120) 2-Chlorotoluene	(4)	12.608	126	350943	51.988
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	1225419	53.065
121) 4-Chlorotoluene	(4)	12.698	126	361669	51.471
124) tert-Butylbenzene	(4)	12.904	134	253906M	53.165
125) Pentachloroethane	(4)	12.940	167	227064	55.216
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	1291883	53.080
127) sec-Butylbenzene	(4)	13.068	105	1512547	53.076
129) 1,3-Dichlorobenzene	(4)	13.168	146	693790	51.911
130) p-Isopropyltoluene	(4)	13.174	119	1315828	53.371
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	483927	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	714495	51.569

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

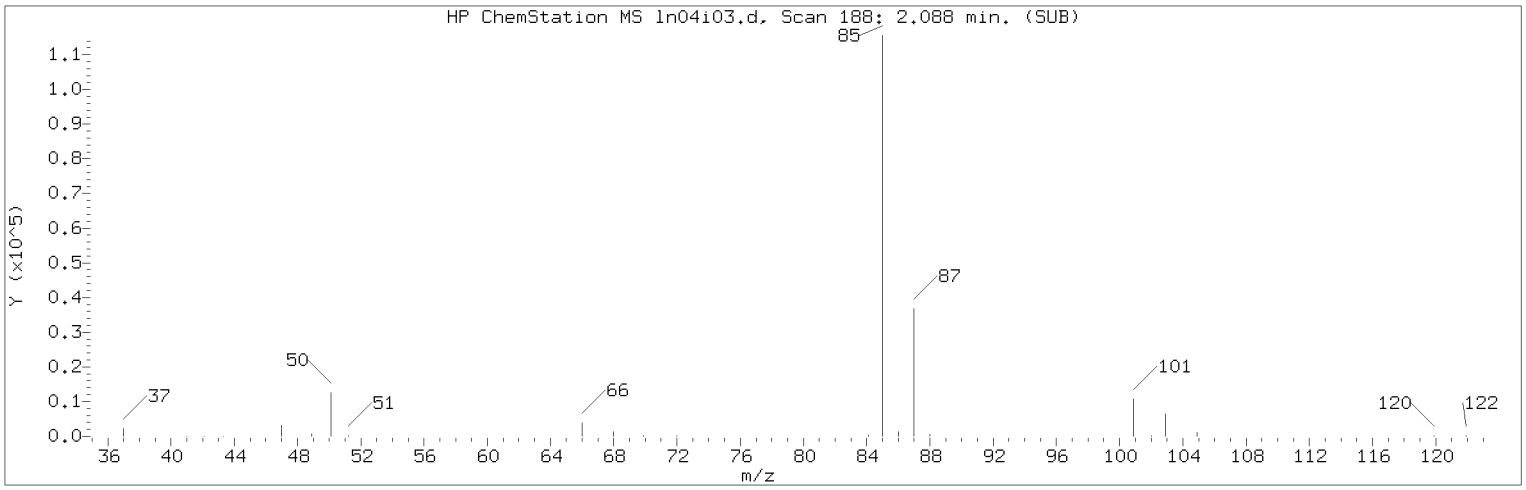
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

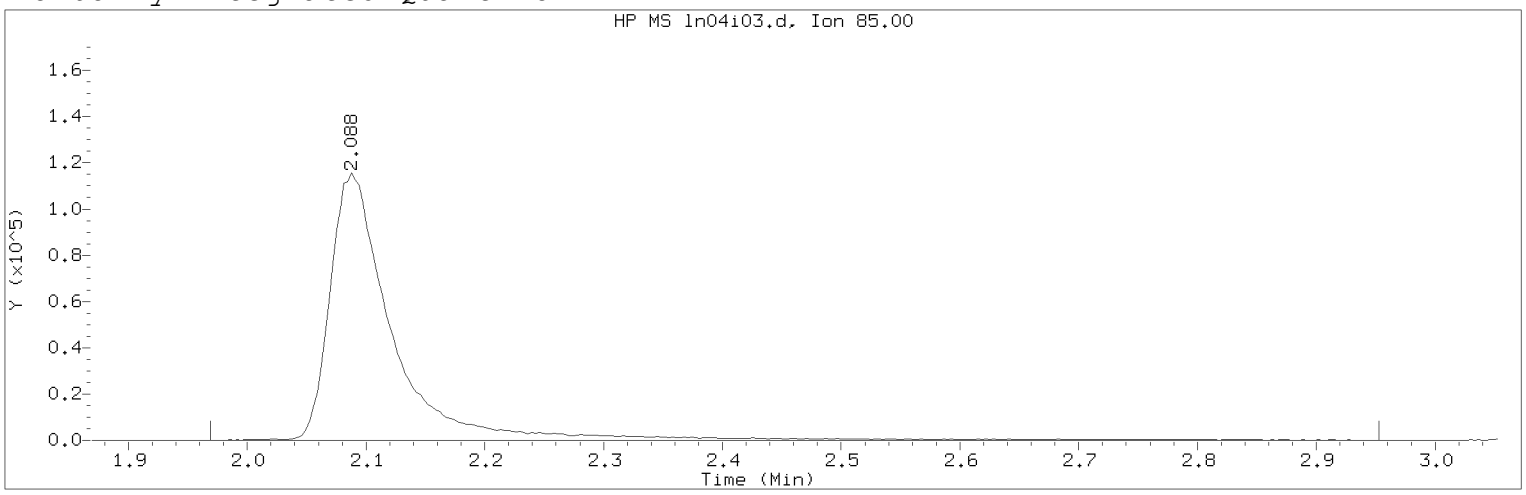
	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134)	1,2,3-Trimethylbenzene	(4)	13.251	105	1342367	52.068
135)	Benzyl Chloride	(4)	13.319	91	1059398	54.274
136)	1,3-Diethylbenzene	(4)	13.370	119	832647	51.895
141)	Diethylbenzene (total)	(4)		100	2415817	155.686
137)	1,4-Diethylbenzene	(4)	13.441	119	877553	51.623
139)	n-Butylbenzene	(4)	13.464	92	652599	51.769
138)	1,2-Dichlorobenzene	(4)	13.502	146	682120	51.722
140)	1,2-Diethylbenzene	(4)	13.518	119	705617	52.168
142)	1,2-Dibromo-3-chloropropane	(4)	14.042	75	108388	54.164
144)	1,3,5-Trichlorobenzene	(4)	14.165	180	516839	51.009
146)	1,2,4-Trichlorobenzene	(4)	14.586	180	503797	51.136
147)	Hexachlorobutadiene	(4)	14.666	225	217236	46.700
148)	Naphthalene	(4)	14.772	128	1689758	53.350
149)	1,2,3-Trichlorobenzene	(4)	14.917	180	498430	51.993
150)	2-Methylnaphthalene	(4)	15.563	142	1079055	55.325

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

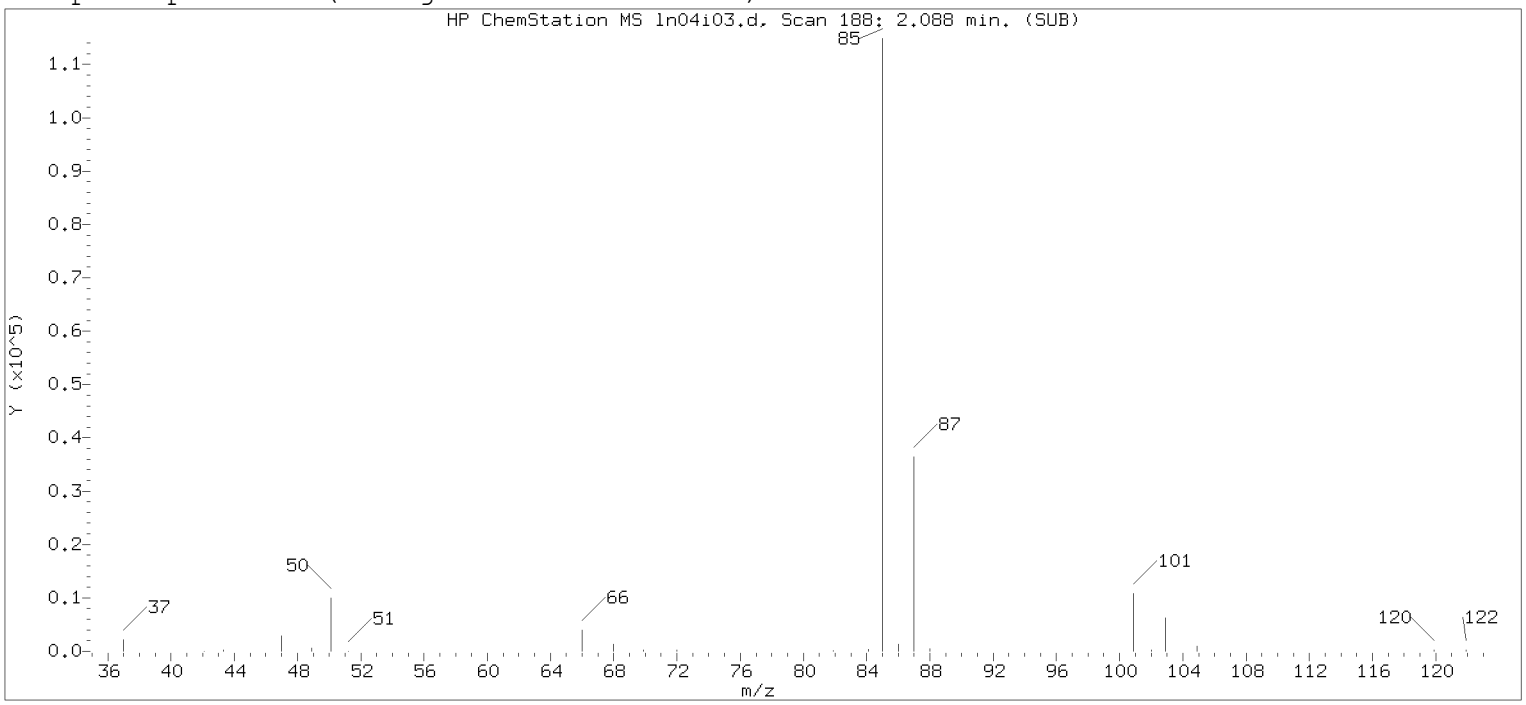
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 188
Retention Time (minutes): 2.088
Quant Ion : 85.00
Area (flag) : 427538M
On-Column Amount (ng) : 52.8165
Integration start scan : 150 Integration stop scan: 456
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

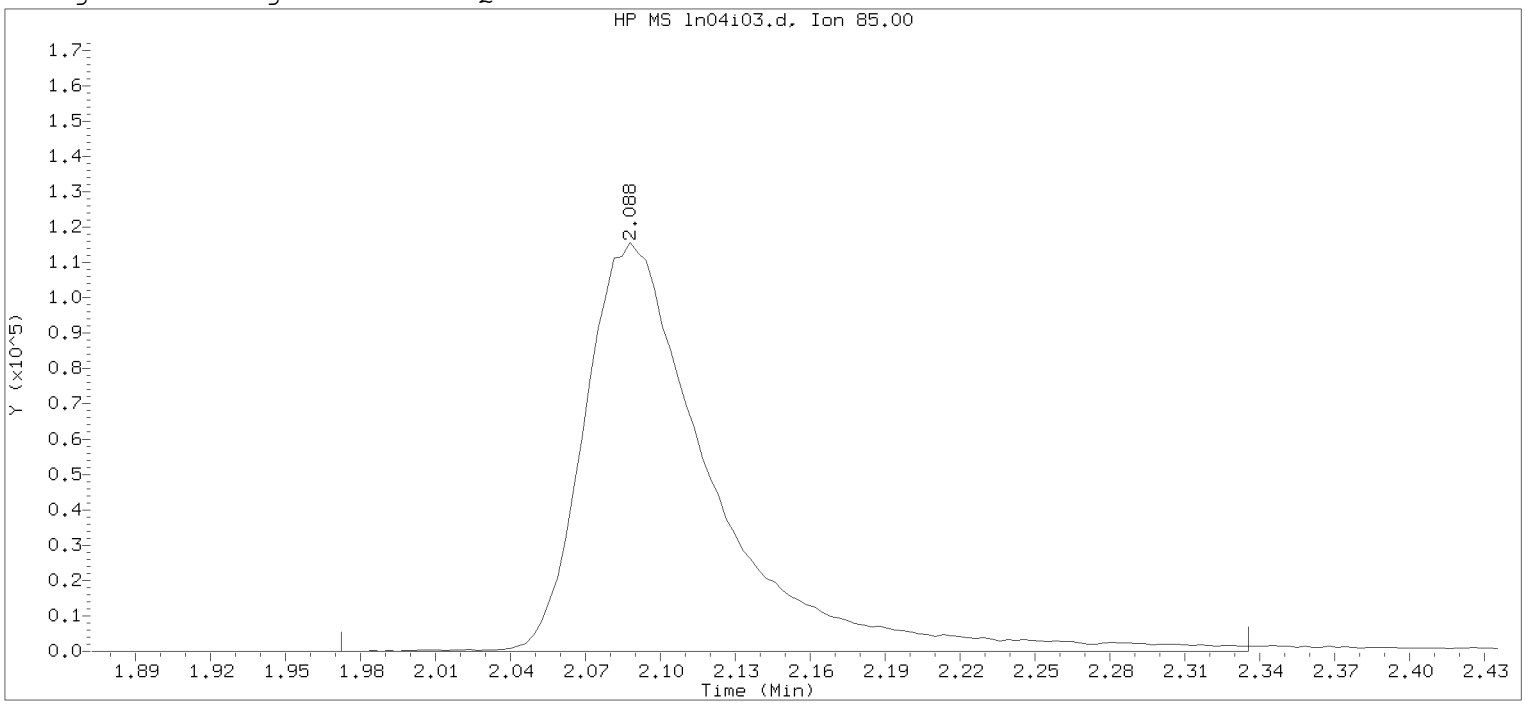
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

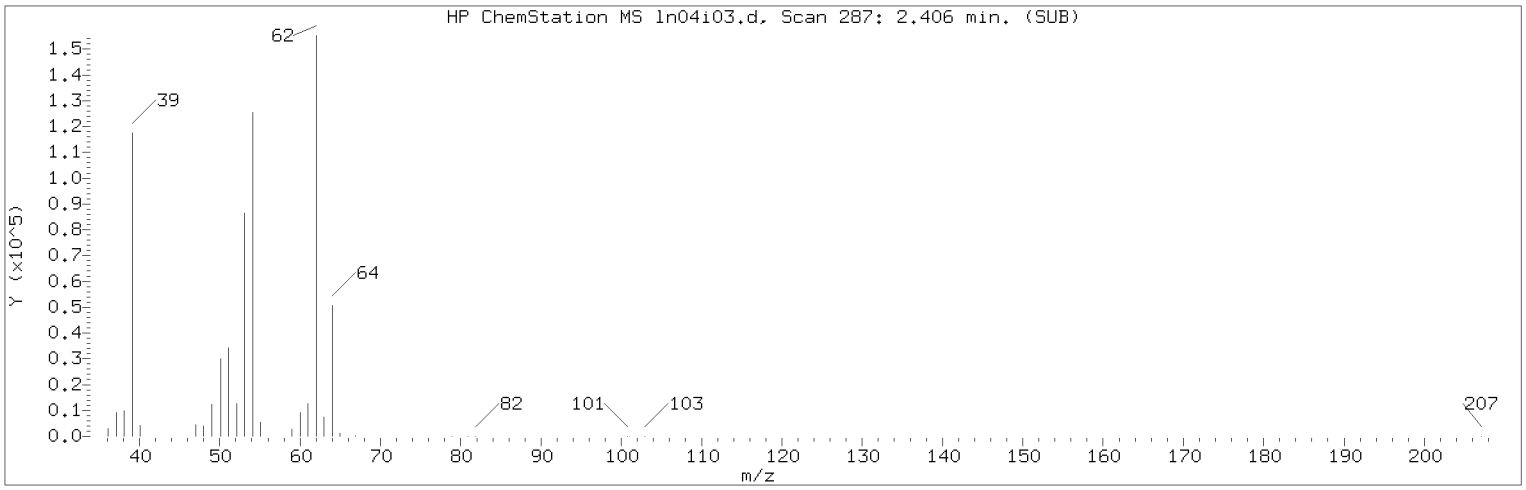
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

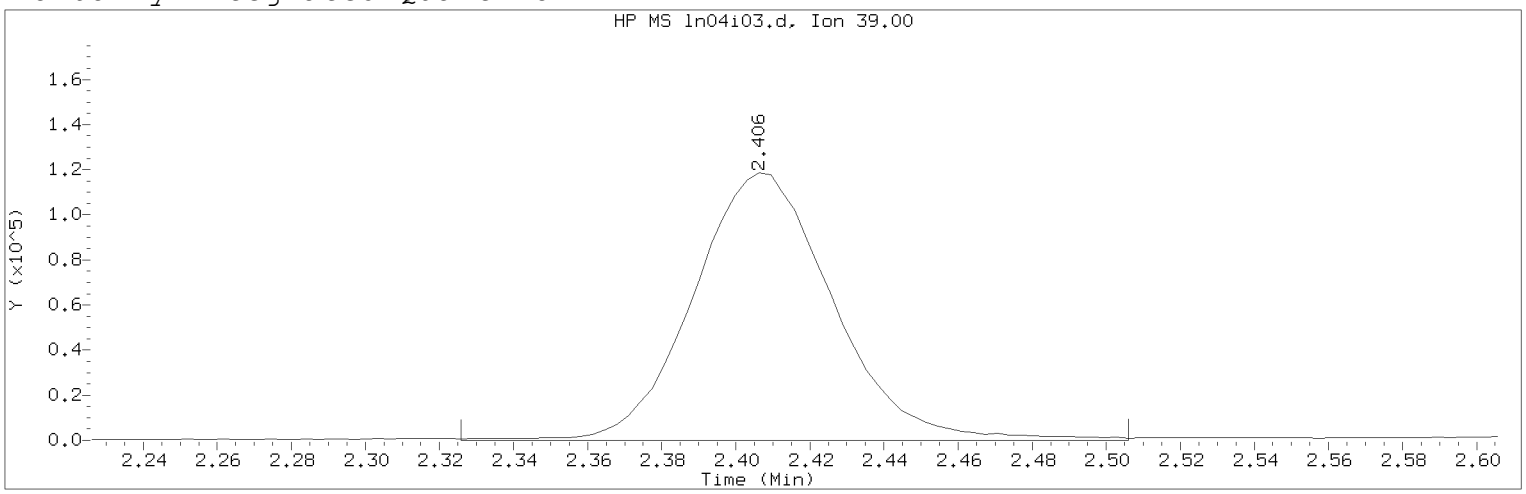
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 188
Retention Time (minutes): 2.088
Quant Ion : 85.00
Area : 411065
On-column Amount (ng) : 48.5918
Integration start scan : 151 Integration stop scan: 264
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: me20284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

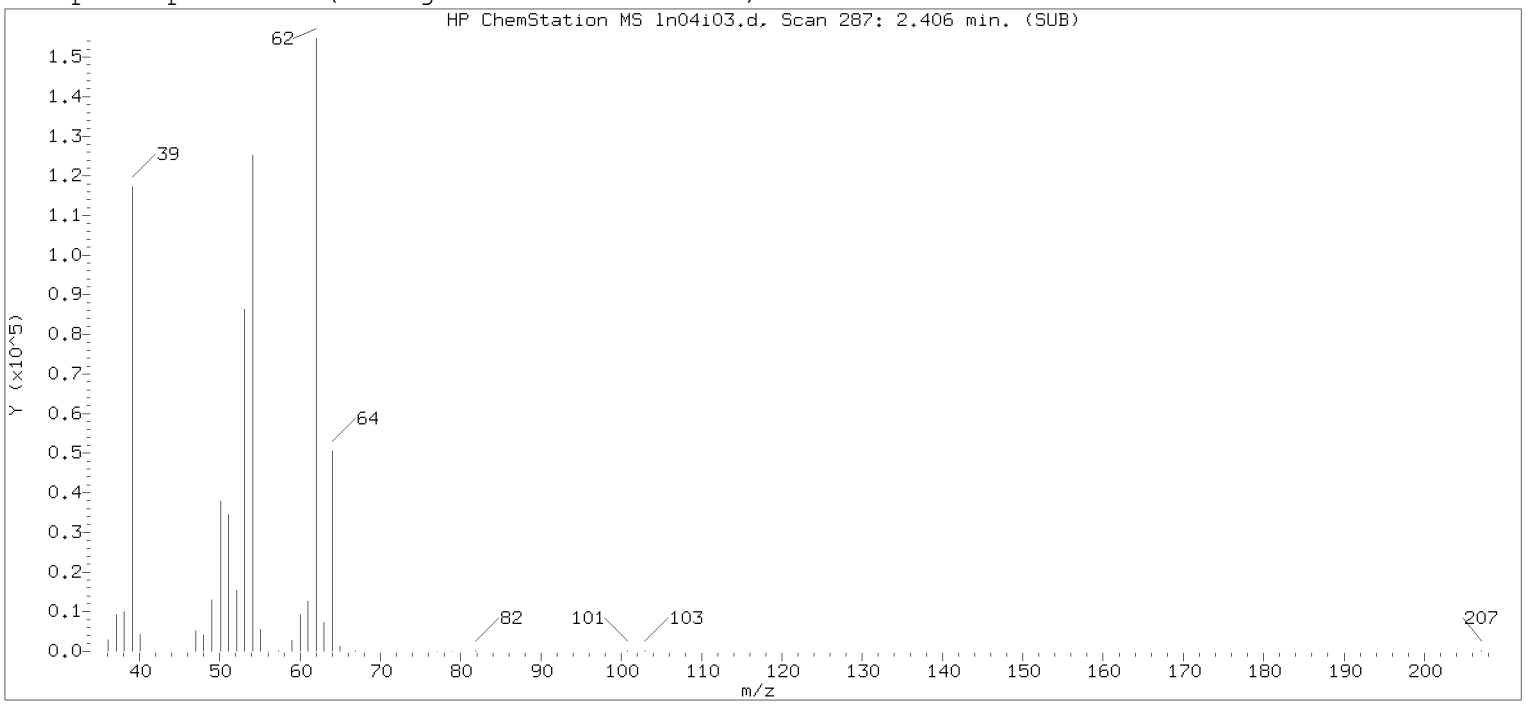
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 311095M
On-Column Amount (ng) : 48.0246
Integration start scan : 261 Integration stop scan: 317
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

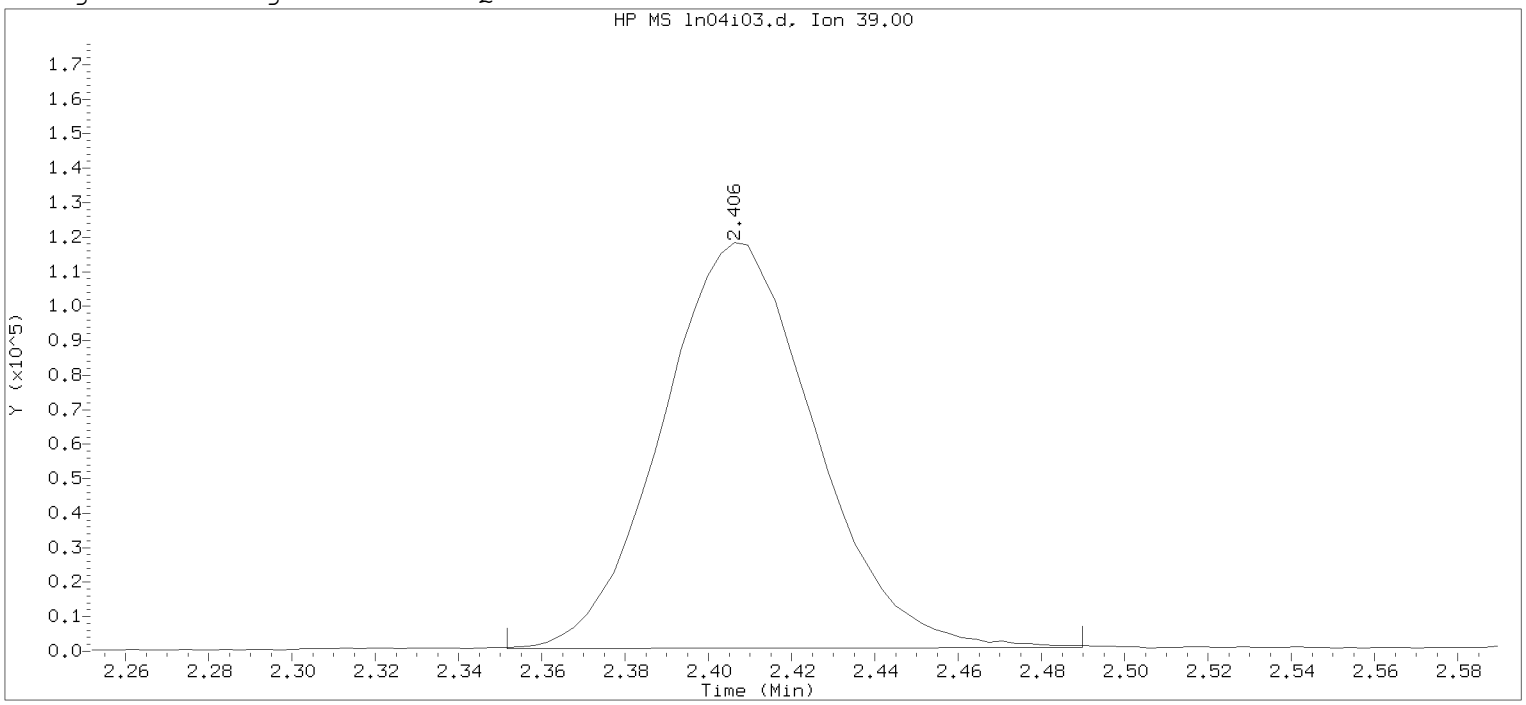
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 300667
On-column Amount (ng) : 50.0756
Integration start scan : 269 Integration stop scan: 312
Y at integration start : 752 Y at integration end: 1063

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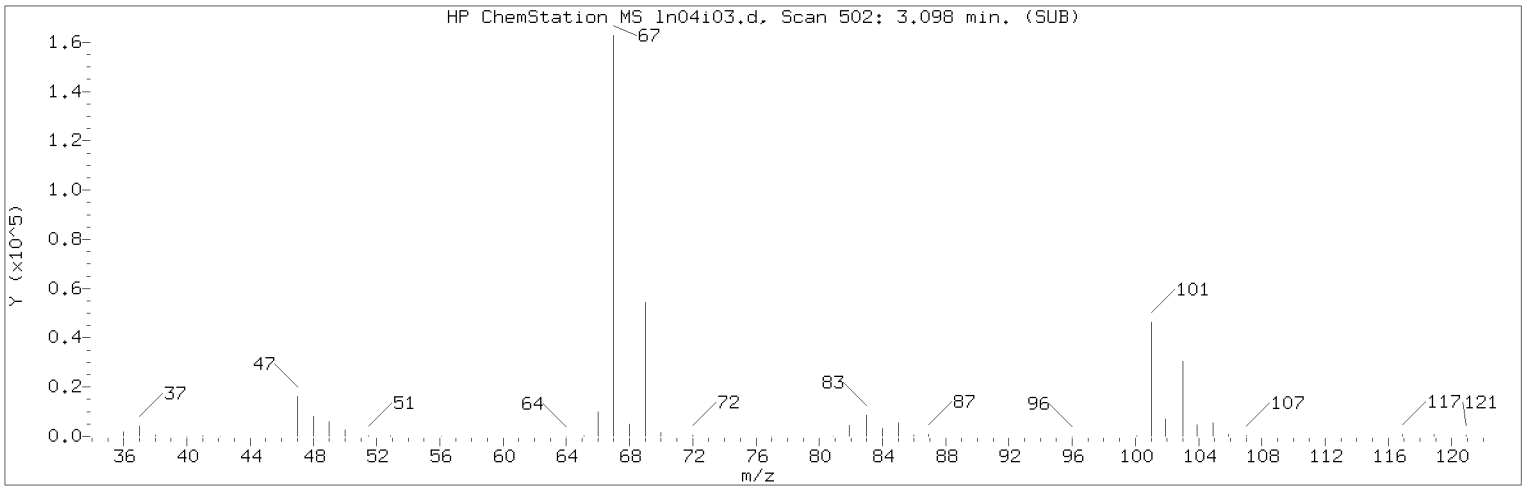
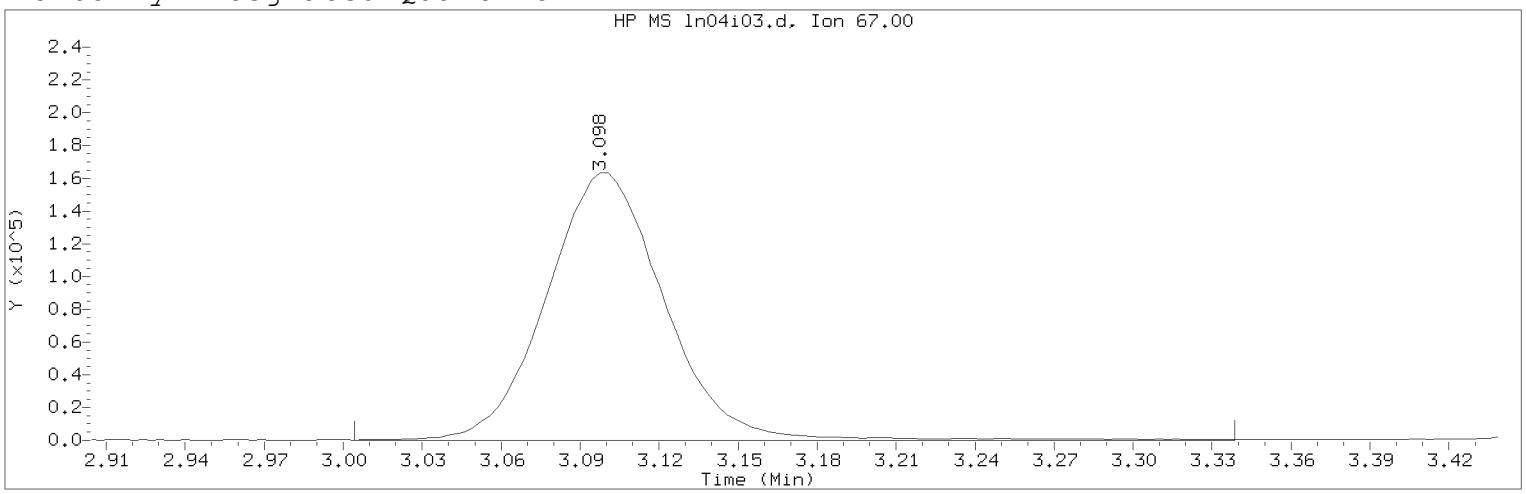
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

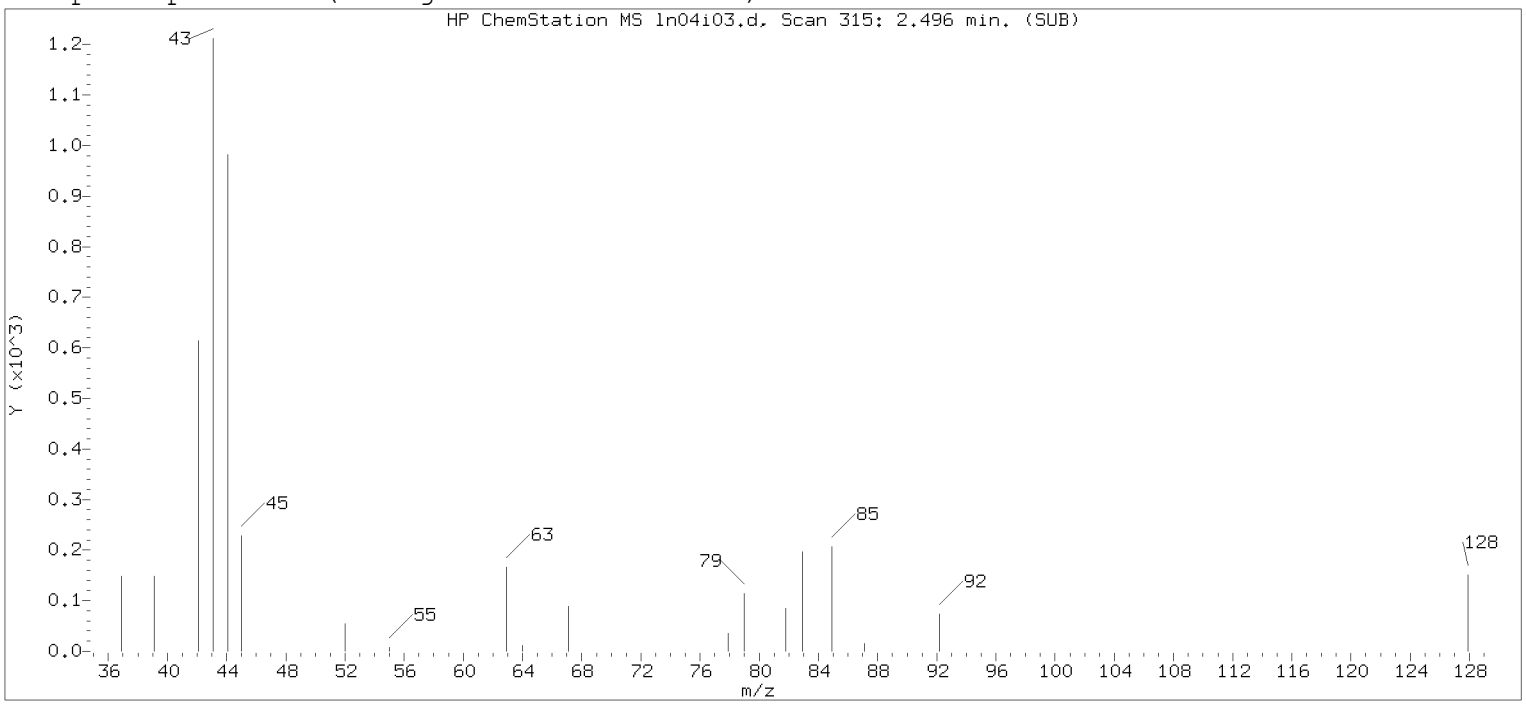
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 502
Retention Time (minutes): 3.098
Quant Ion : 67.00
Area (flag) : 509913MA
On-Column Amount (ng) : 49.5150
Integration start scan : 472 Integration stop scan: 576
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

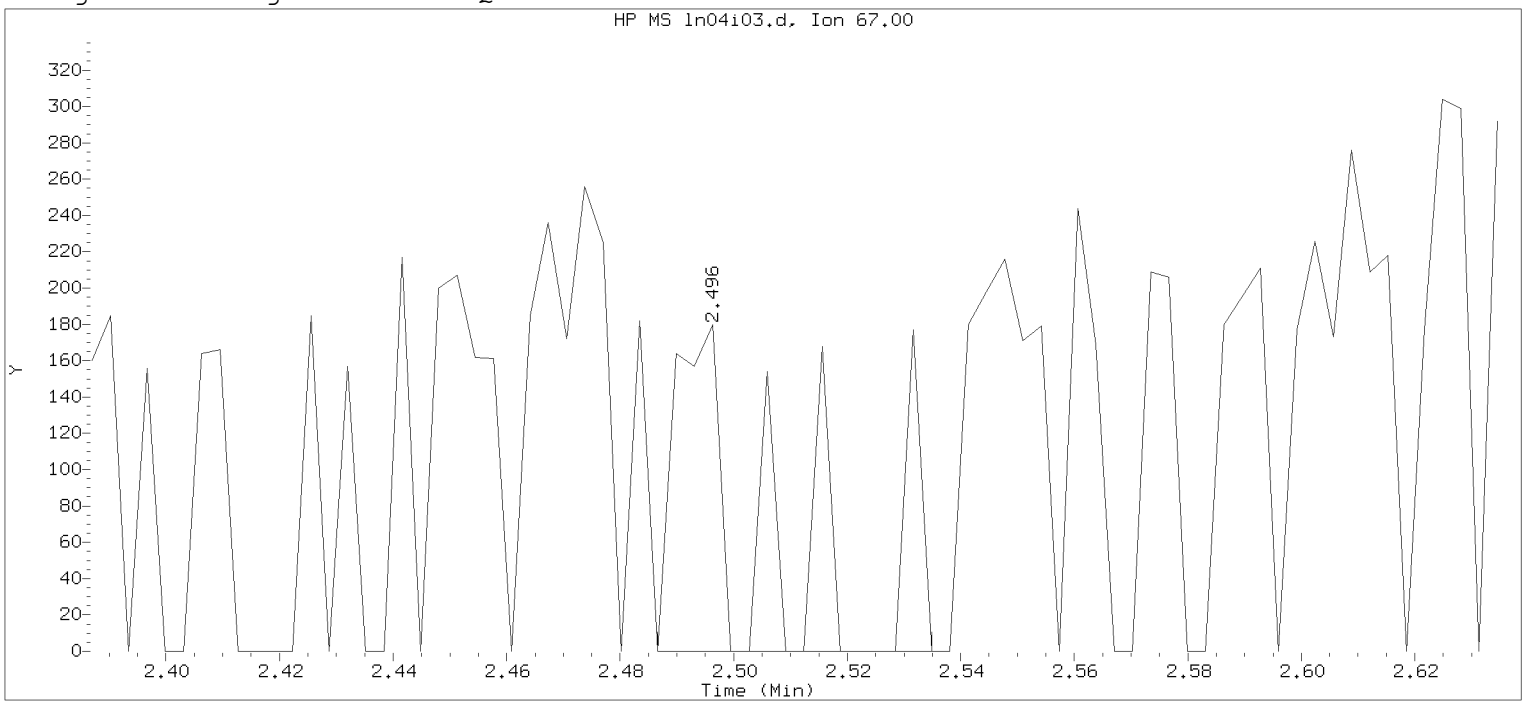
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 315
Retention Time (minutes): 2.496
Quant Ion : 67.00
Area : 192
On-column Amount (ng) : 0.0562
Integration start scan : 311 Integration stop scan: 326
Y at integration start : 0 Y at integration end: 0

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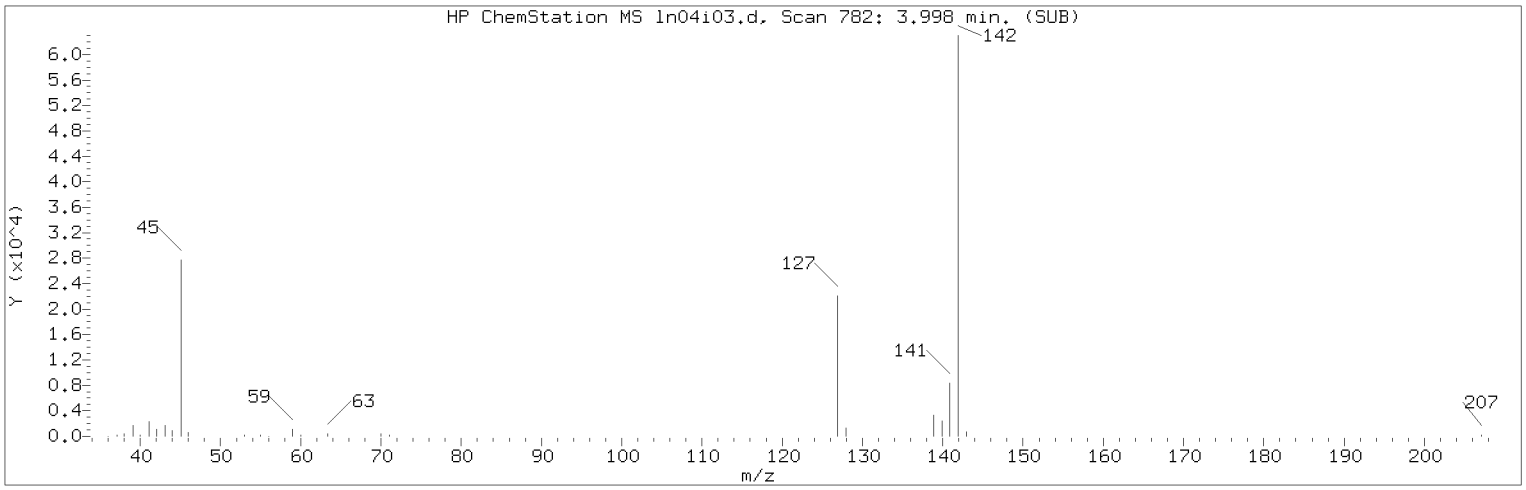
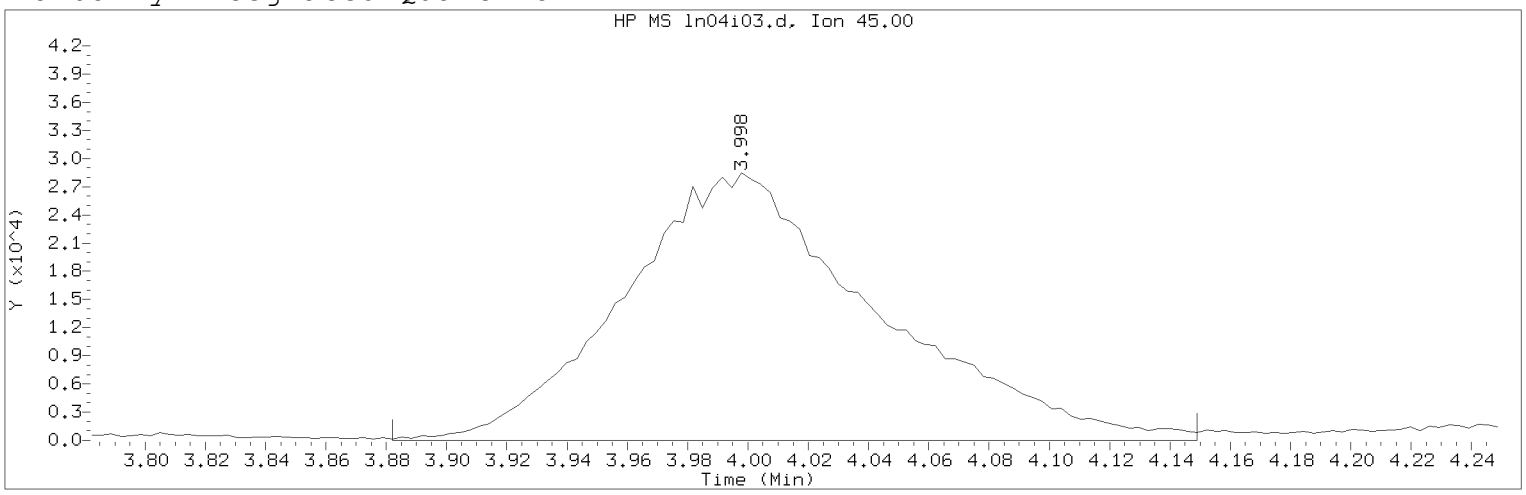
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

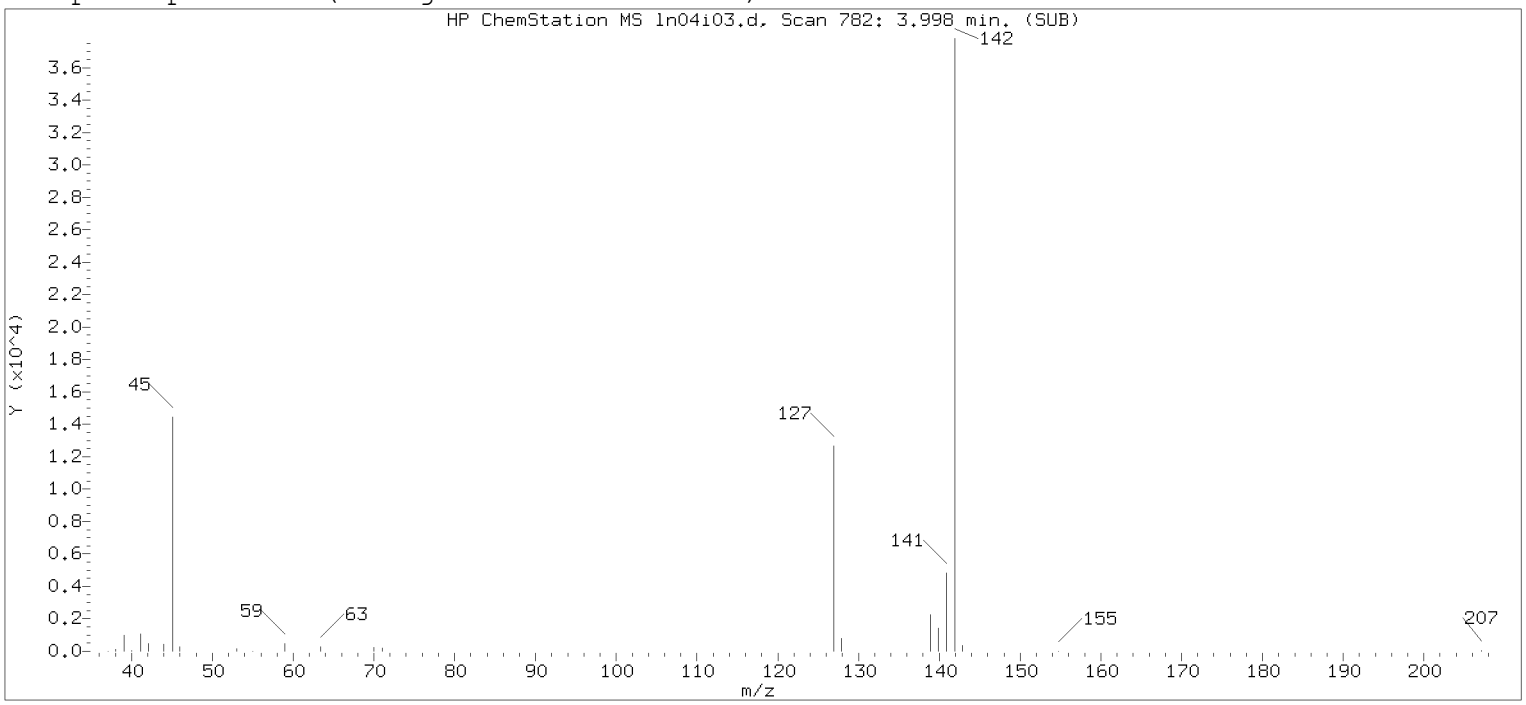
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 782
Retention Time (minutes): 3.998
Quant Ion : 45.00
Area (flag) : 165875M
On-Column Amount (ng) : 254.2825
Integration start scan : 745 Integration stop scan: 828
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

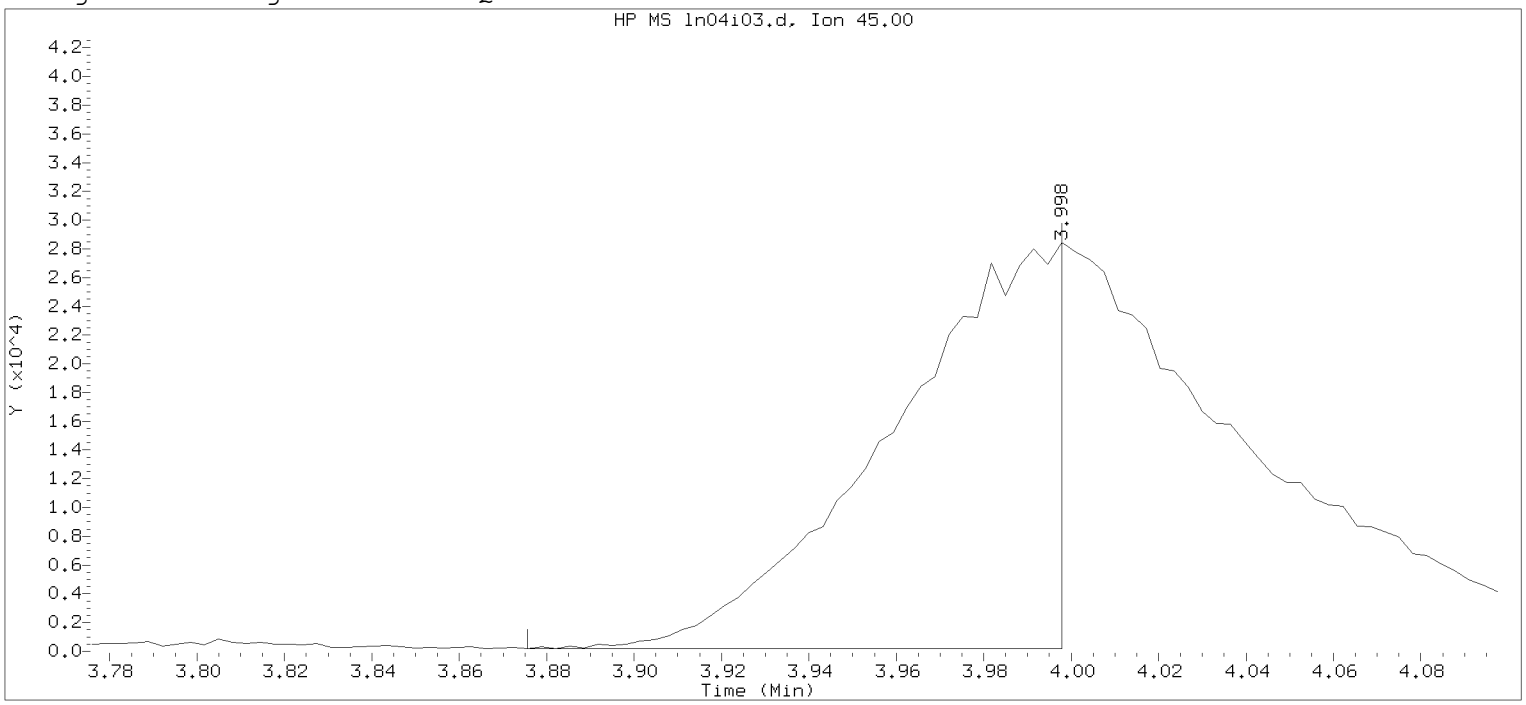
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

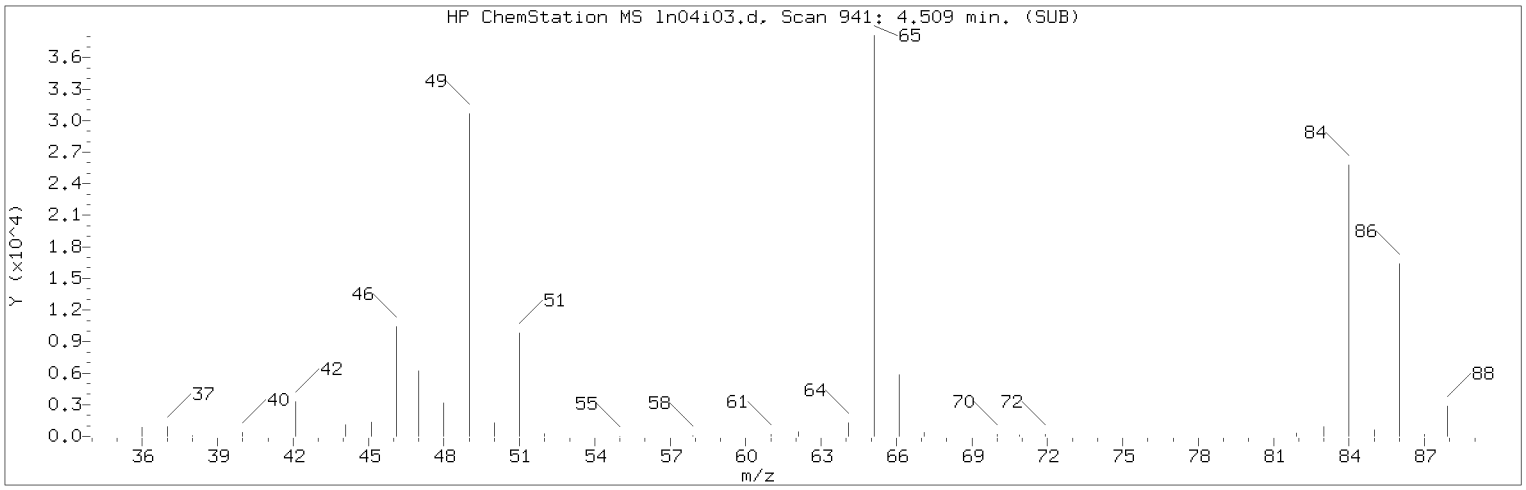
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

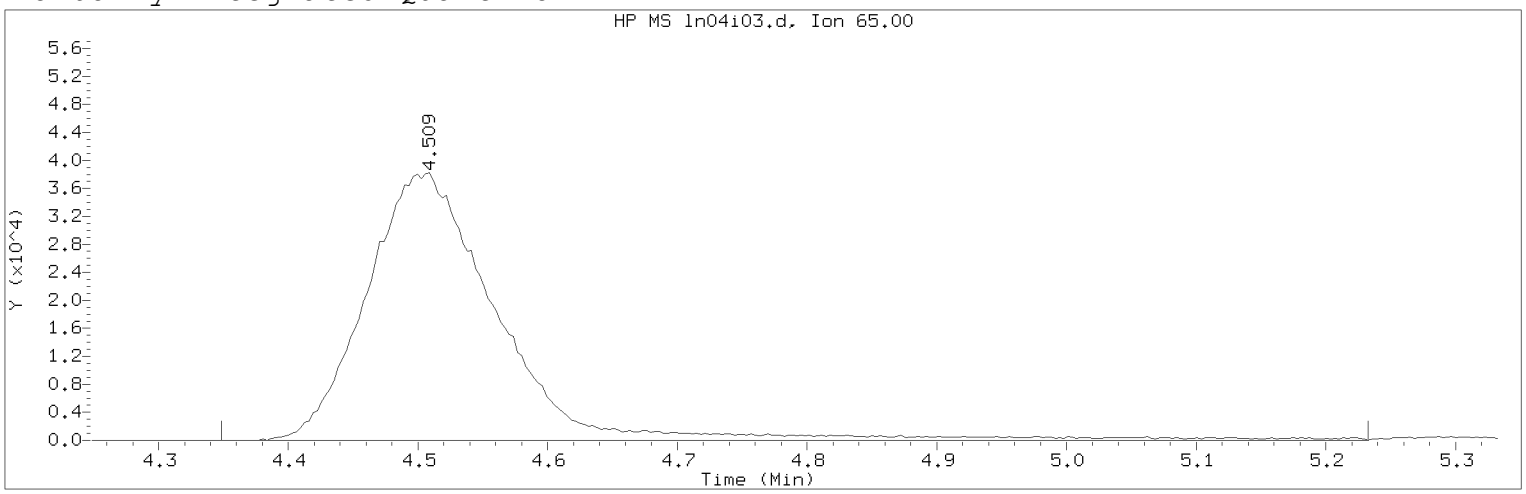
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 782
Retention Time (minutes): 3.998
Quant Ion : 45.00
Area : 74713
On-column Amount (ng) : 135.4026
Integration start scan : 743 Integration stop scan: 781
Y at integration start : 167 Y at integration end: 167

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

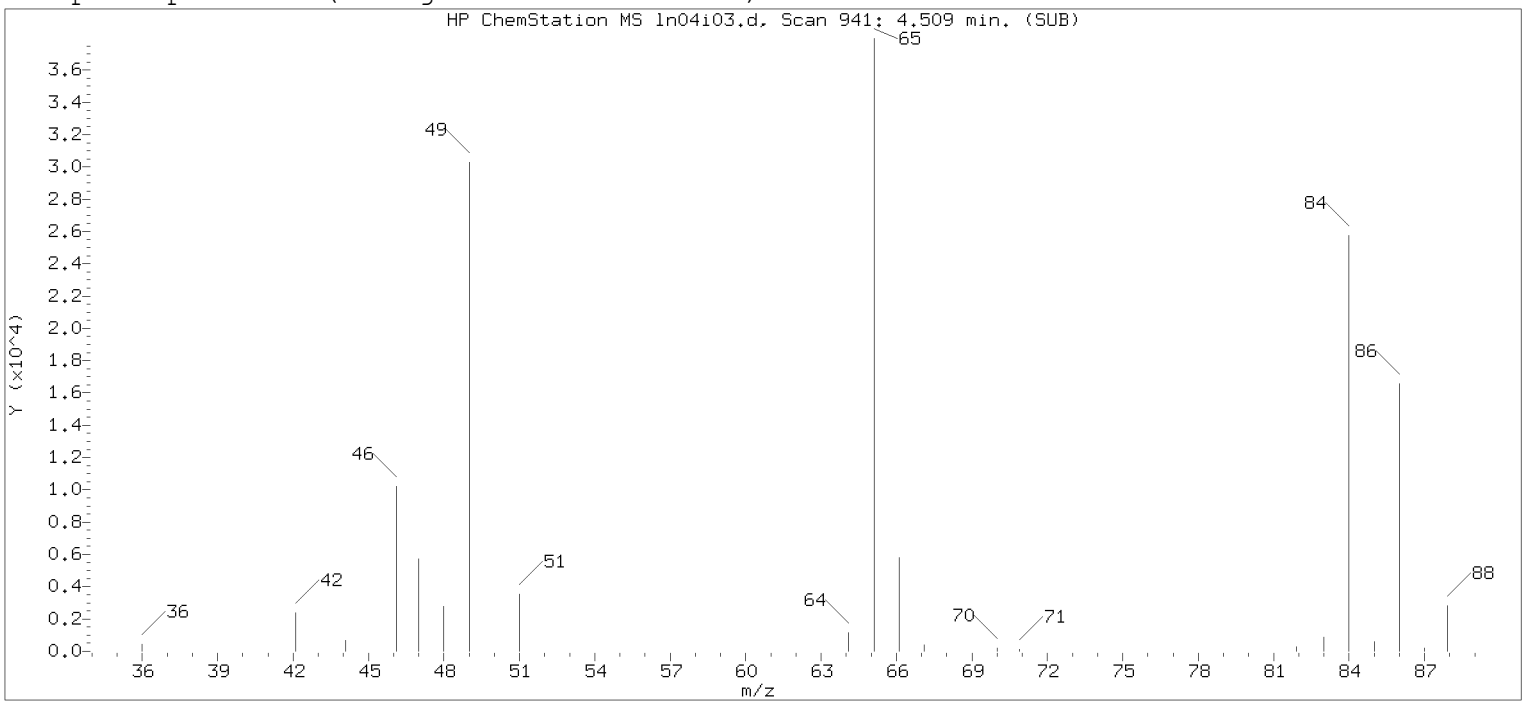
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 269779M
On-Column Amount (ng) : 250.0000
Integration start scan : 890 Integration stop scan: 1165
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

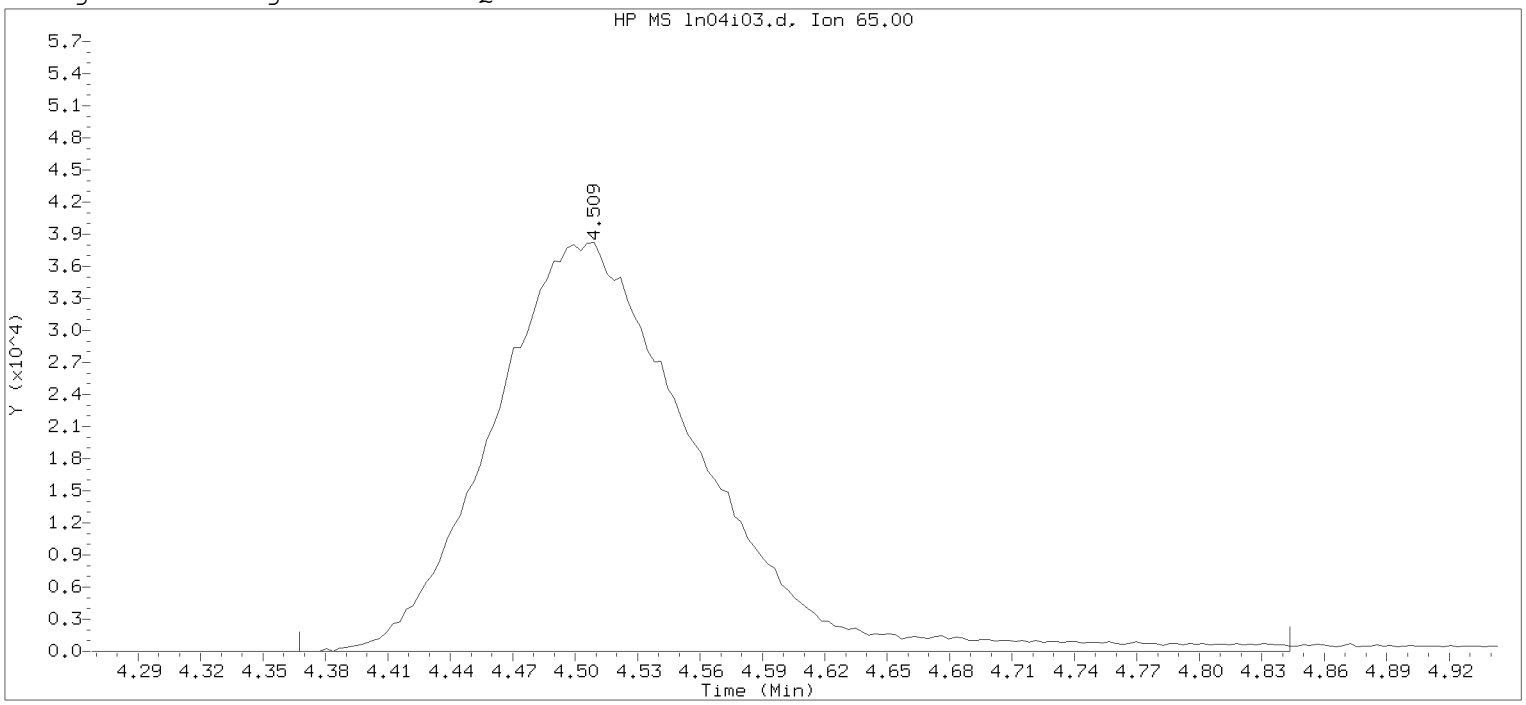
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

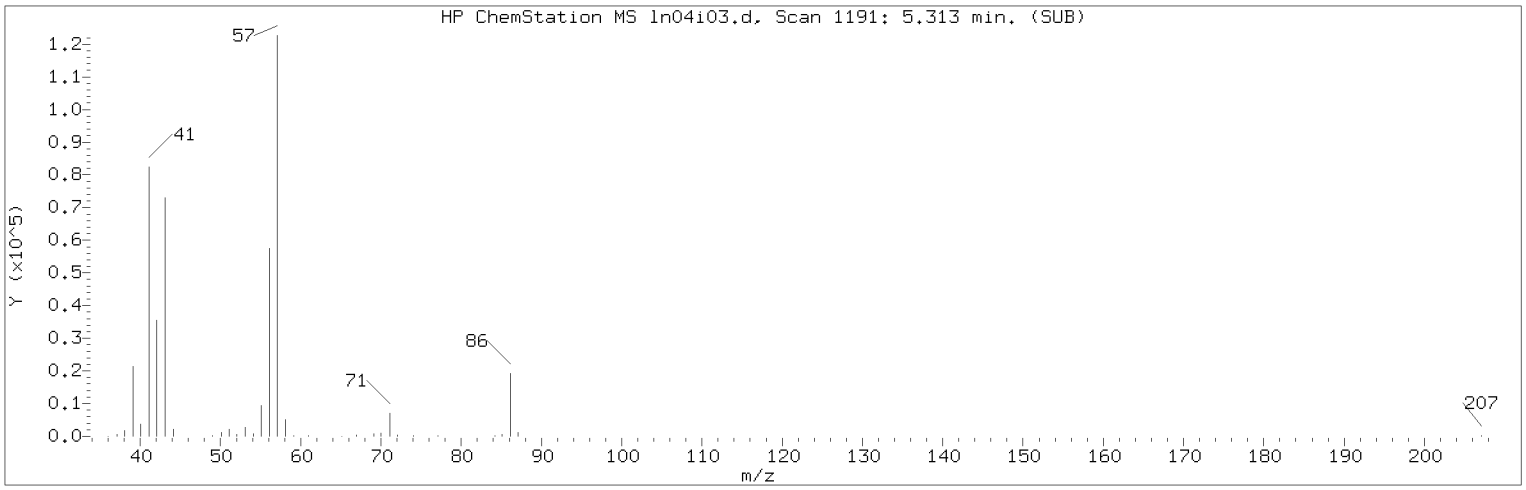
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

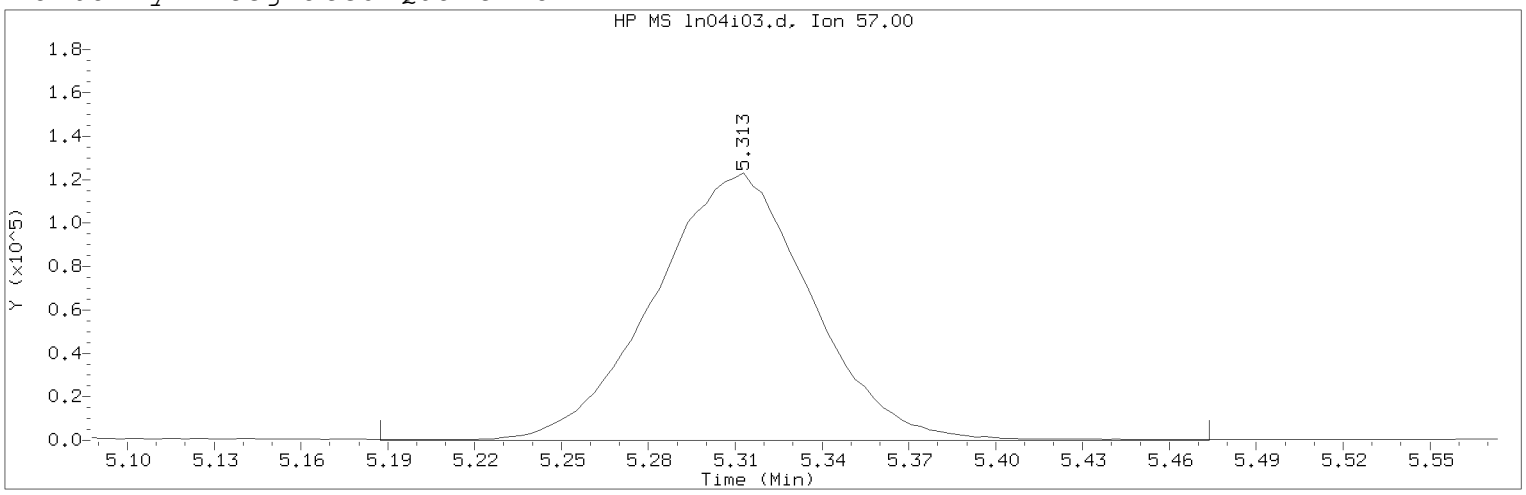
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 261144
On-column Amount (ng) : 250.0000
Integration start scan : 896 Integration stop scan: 1044
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

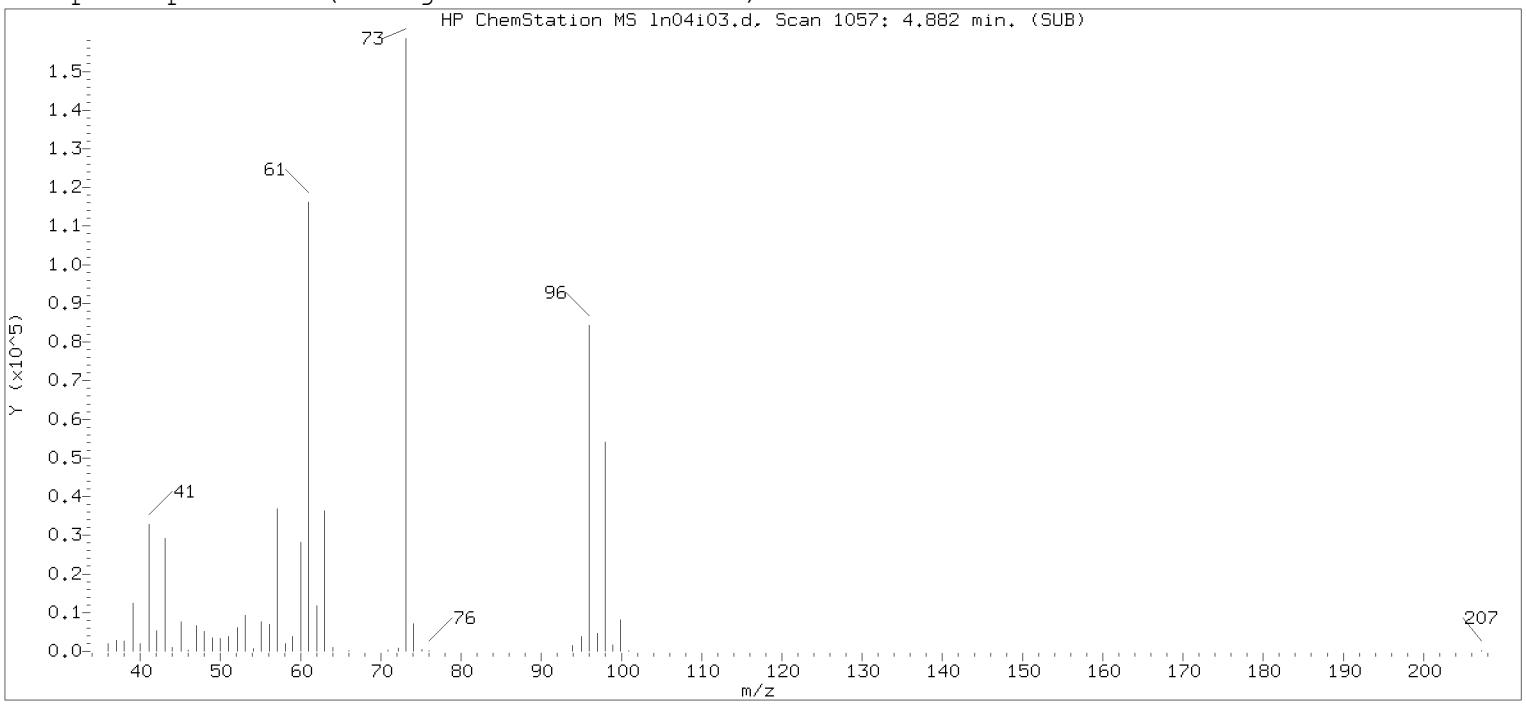
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1191
Retention Time (minutes): 5.313
Quant Ion : 57.00
Area (flag) : 463732M
On-Column Amount (ng) : 52.3639
Integration start scan : 1151 Integration stop scan: 1240
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

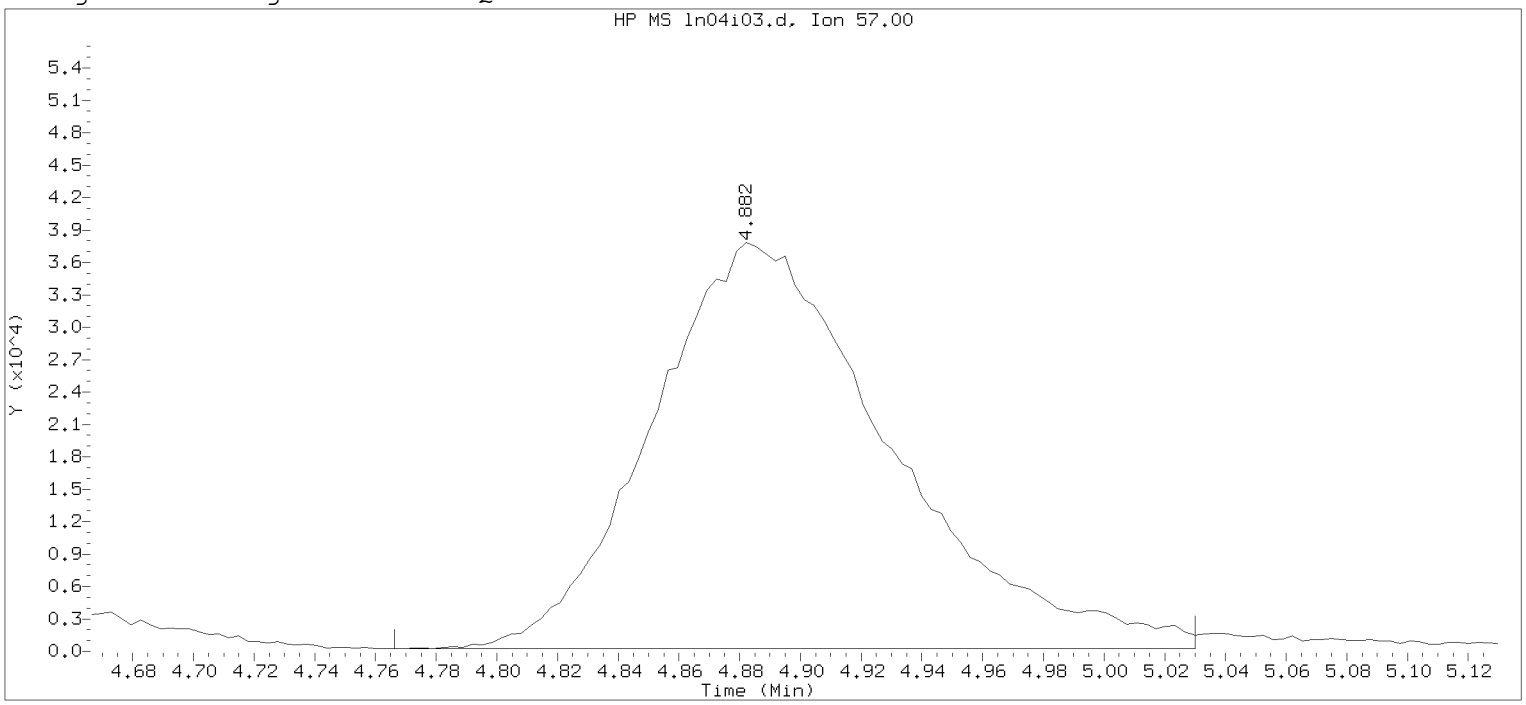
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

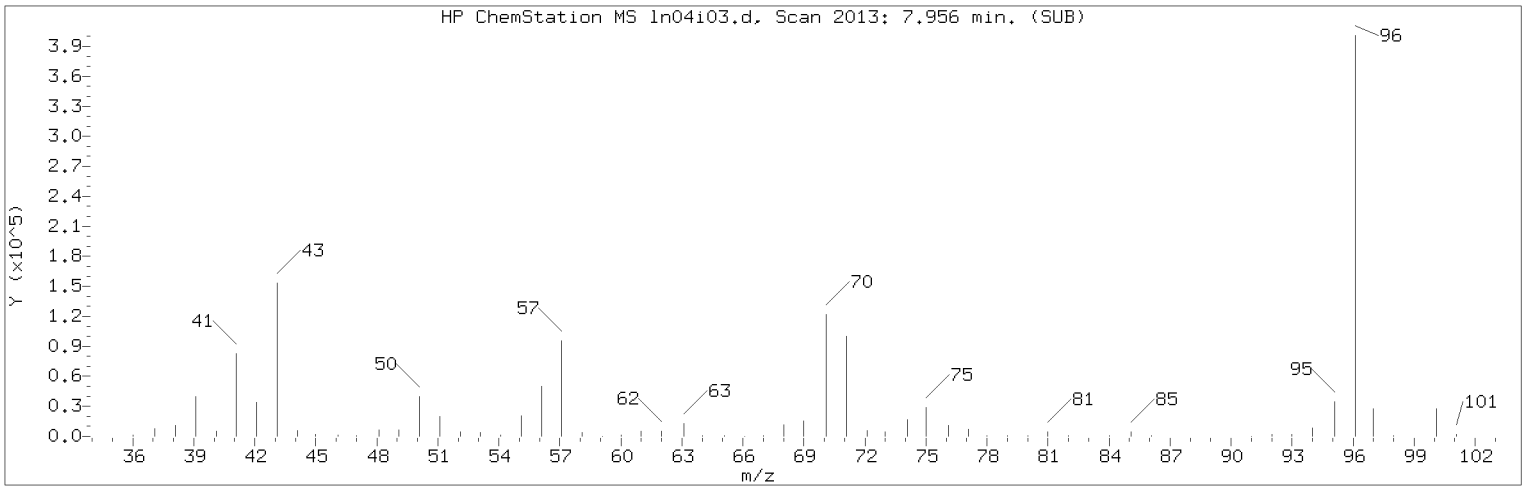
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

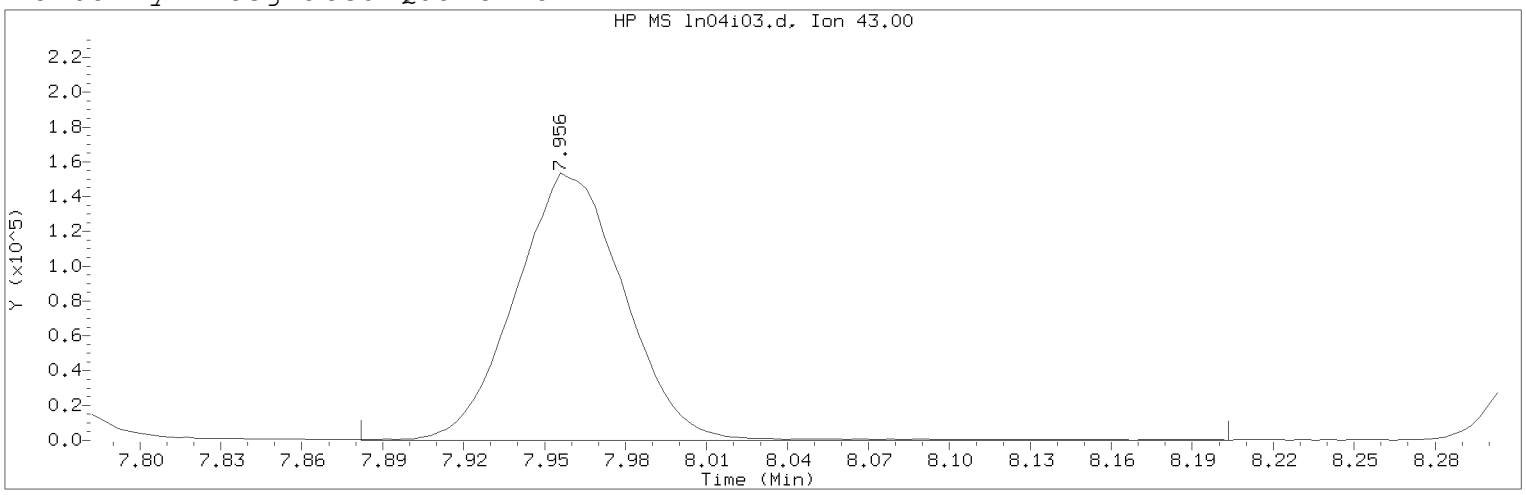
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1057
Retention Time (minutes): 4.882
Quant Ion : 57.00
Area : 205522
On-column Amount (ng) : 50.0557
Integration start scan : 1020 Integration stop scan: 1102
Y at integration start : 228 Y at integration end: 228

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

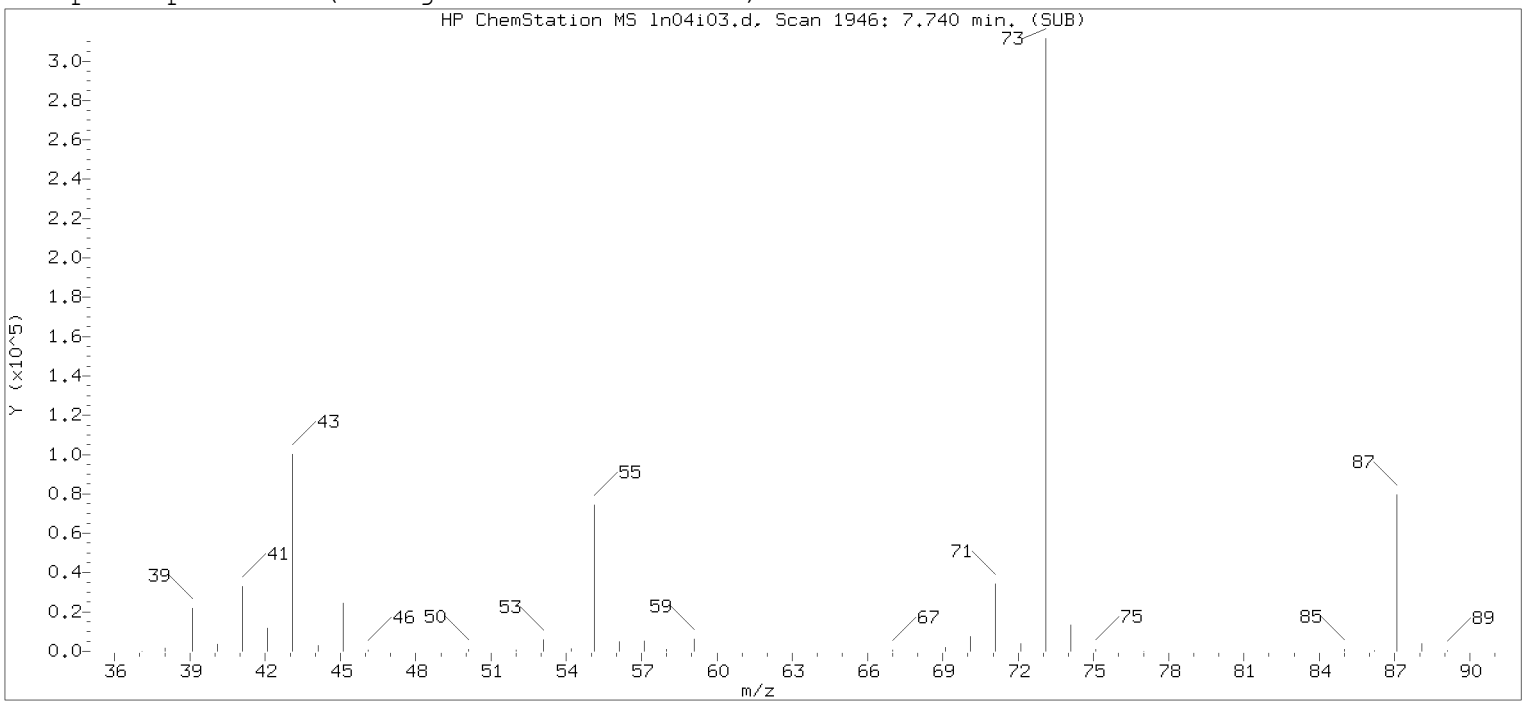
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2013
Retention Time (minutes): 7.956
Quant Ion : 43.00
Area (flag) : 432248MA
On-Column Amount (ng) : 52.2472
Integration start scan : 1989 Integration stop scan: 2089
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

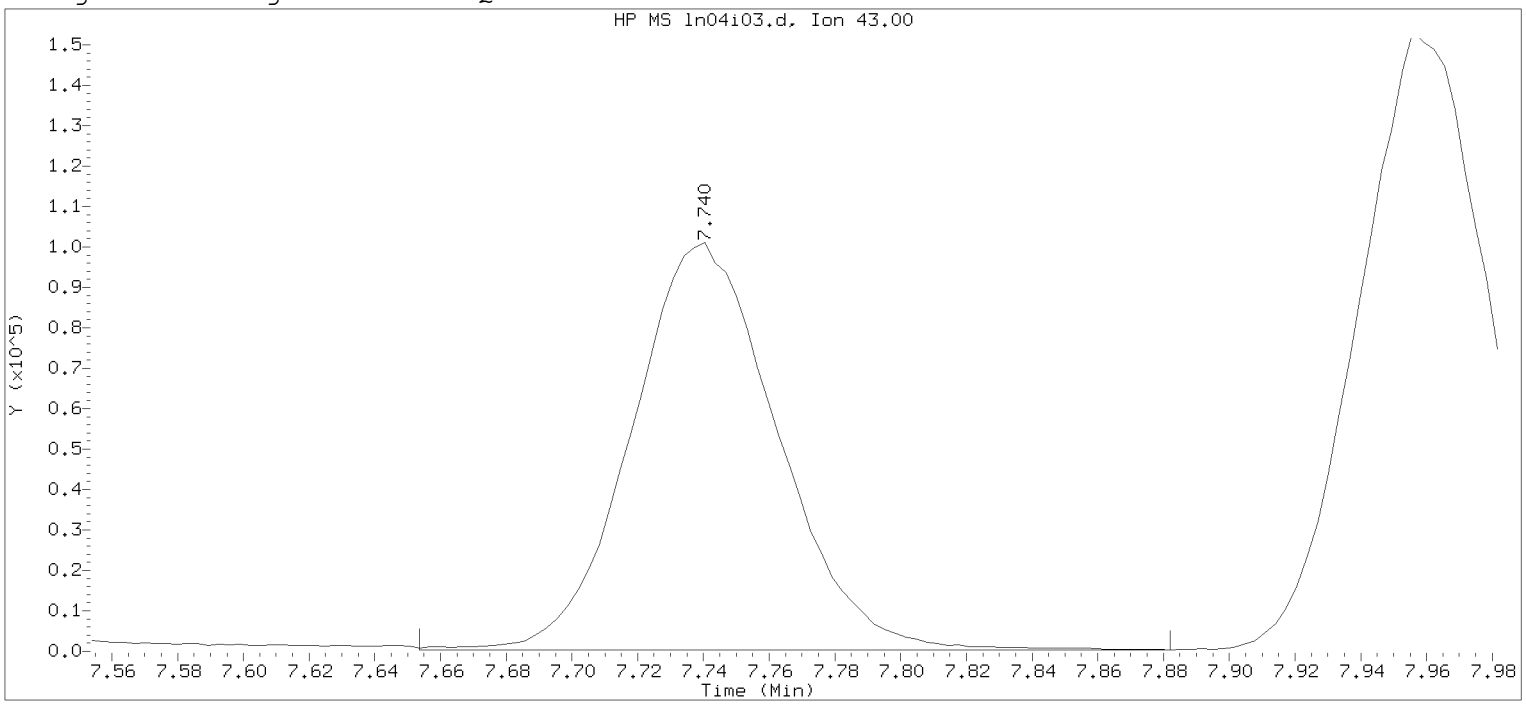
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

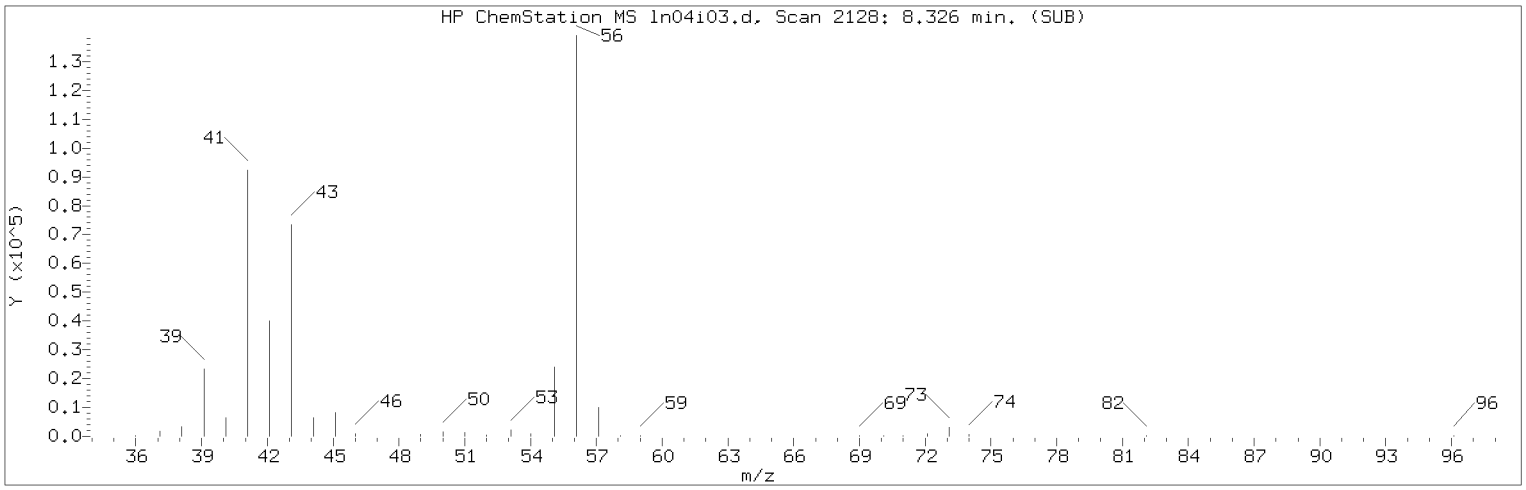
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

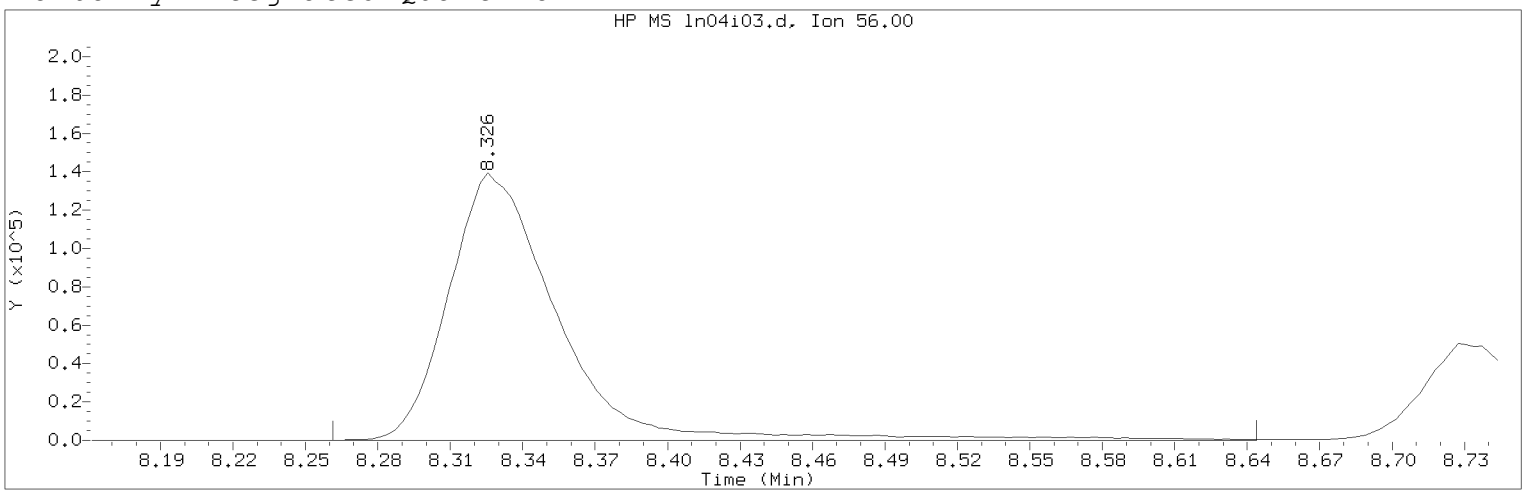
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.740
Quant Ion : 43.00
Area : 311136
On-column Amount (ng) : 51.5793
Integration start scan : 1918 Integration stop scan: 1989
Y at integration start : 288 Y at integration end: 288

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

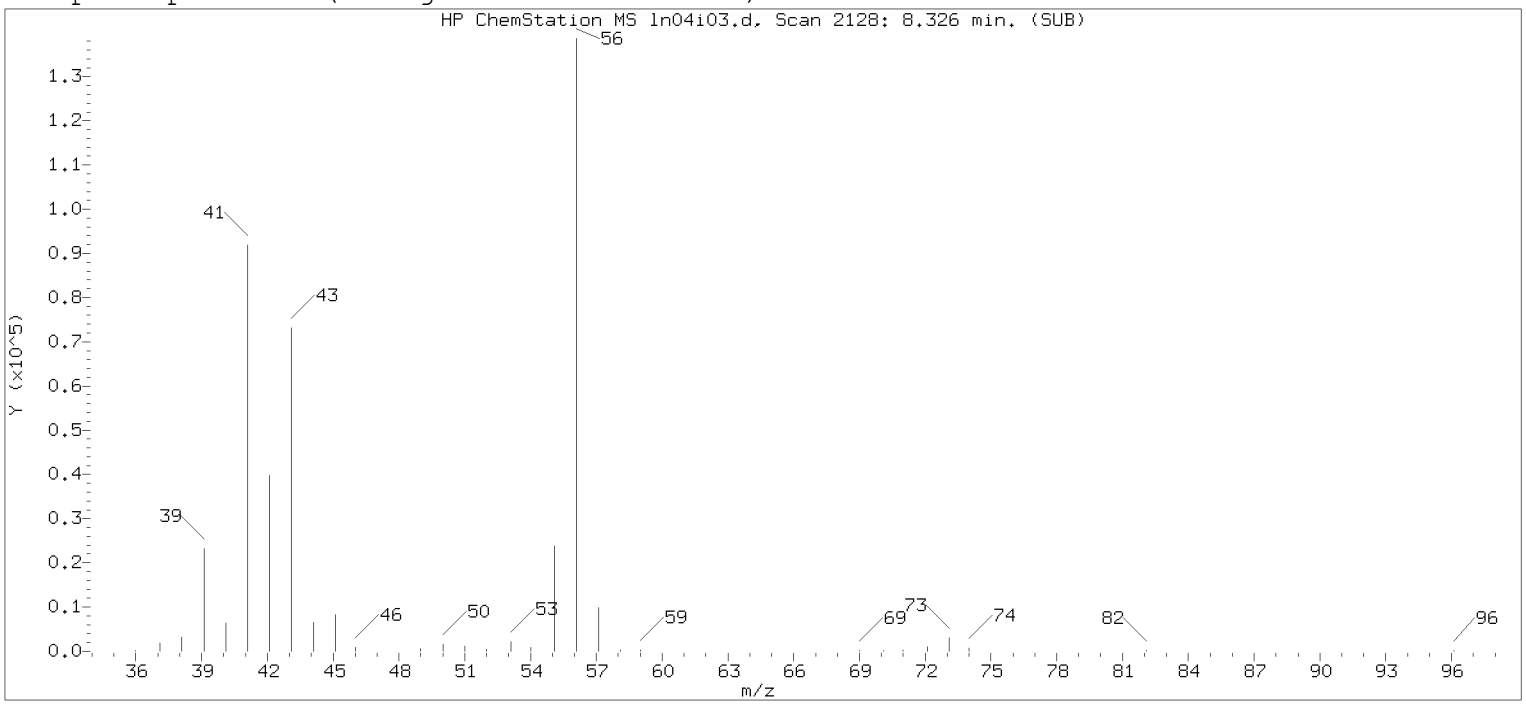
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area (flag) : 438437M
On-Column Amount (ng) : 1332.7496
Integration start scan : 2107 Integration stop scan: 2226
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

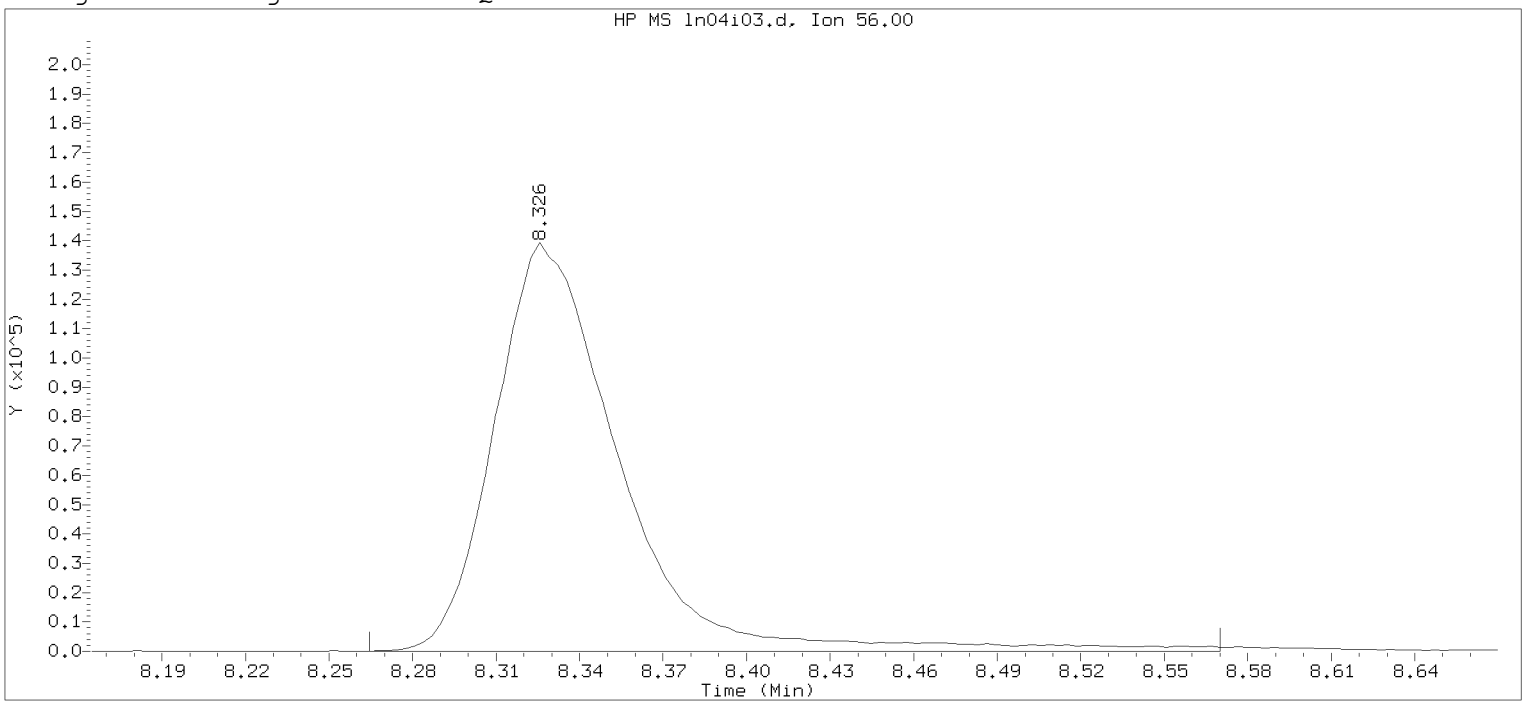
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

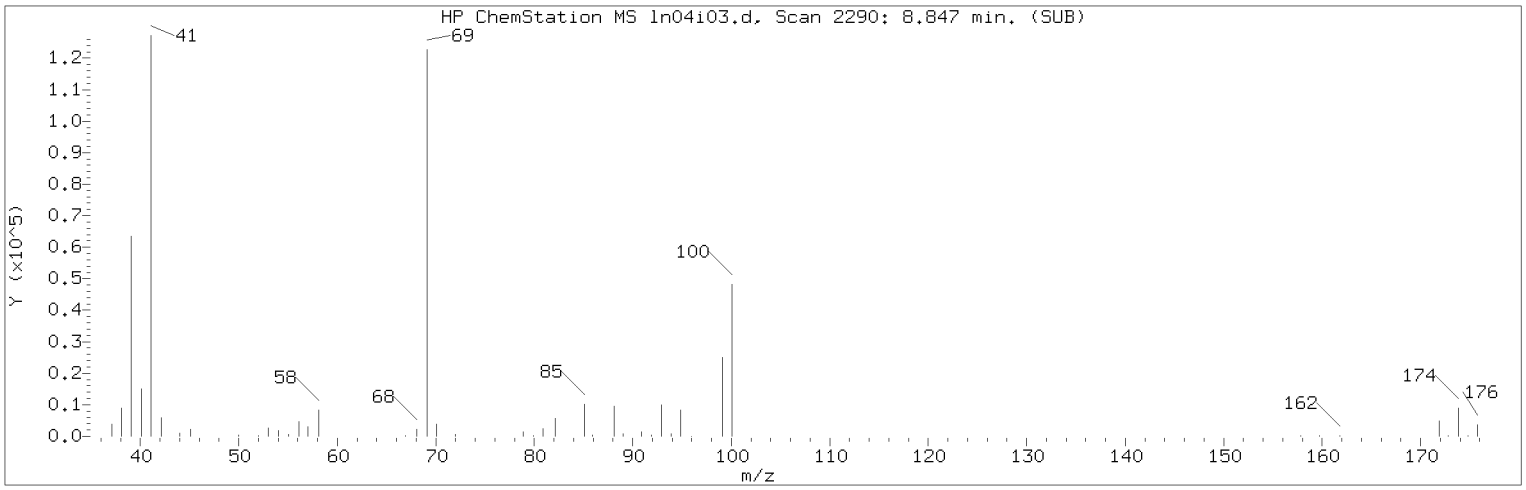
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

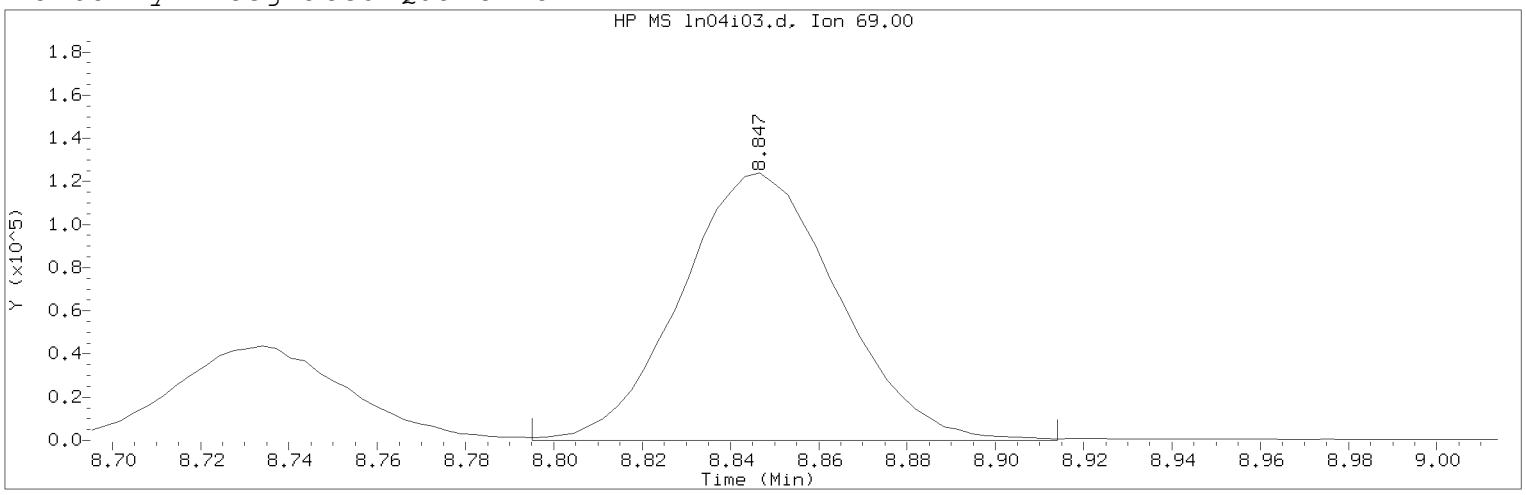
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area : 434385
On-column Amount (ng) : 1223.8707
Integration start scan : 2108 Integration stop scan: 2203
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: me20254

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

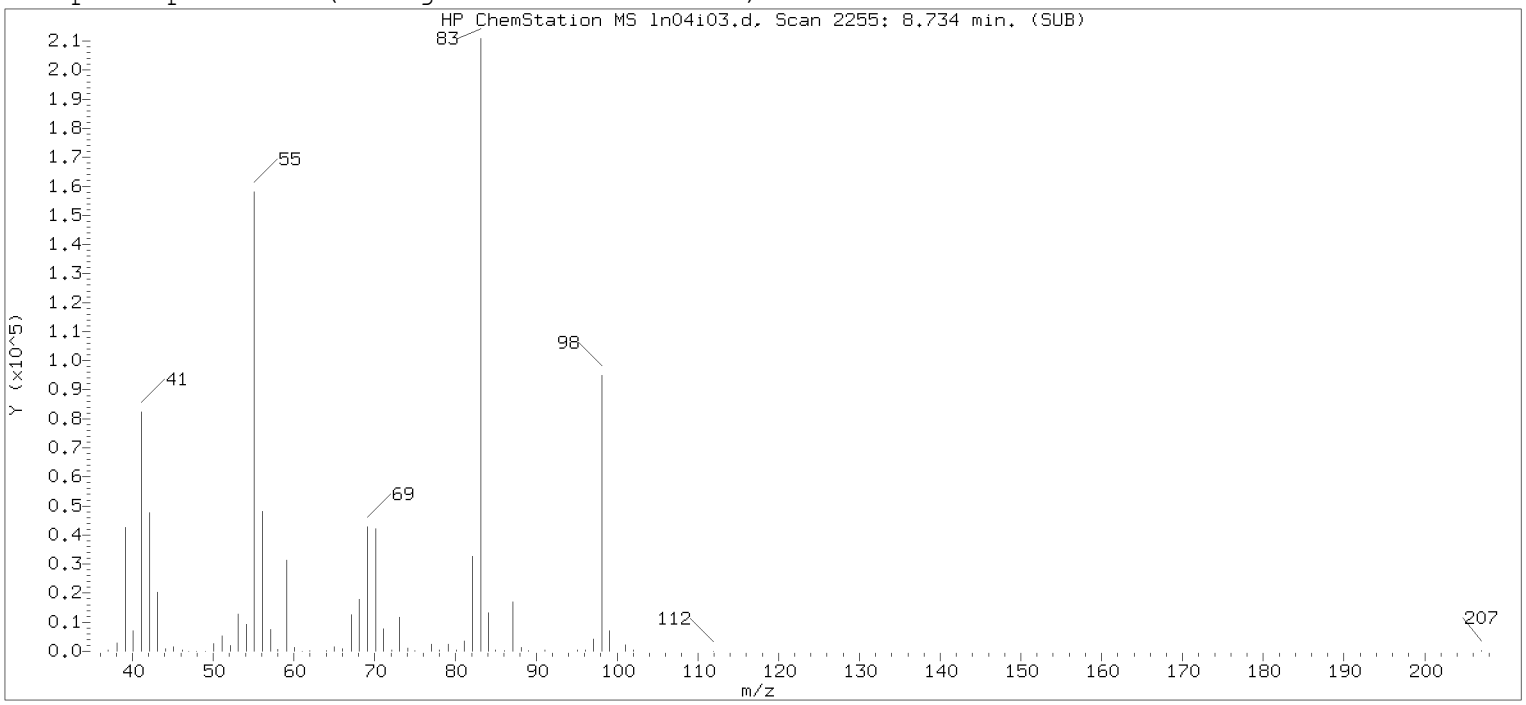
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2290
Retention Time (minutes): 8.847
Quant Ion : 69.00
Area (flag) : 306086A
On-Column Amount (ng) : 52.7952
Integration start scan : 2273 Integration stop scan: 2310
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

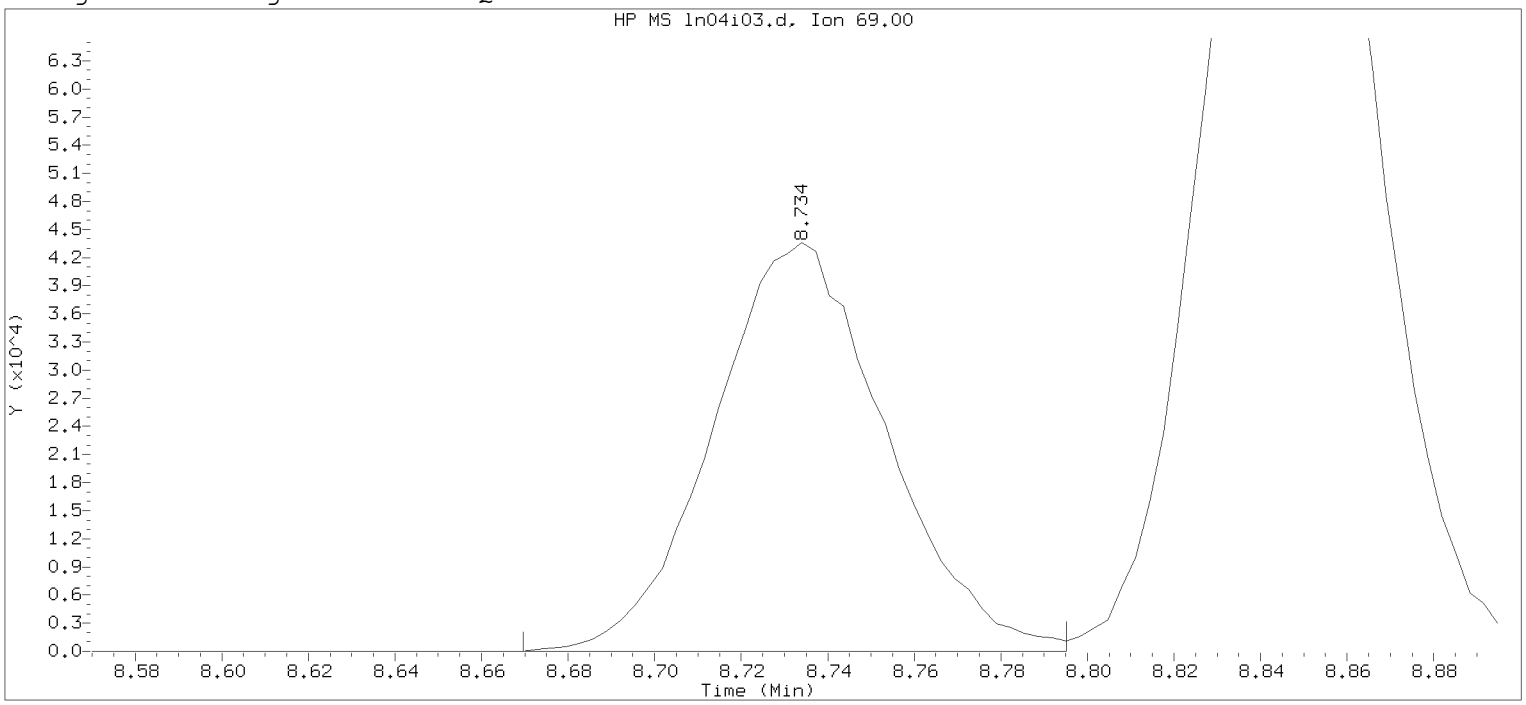
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

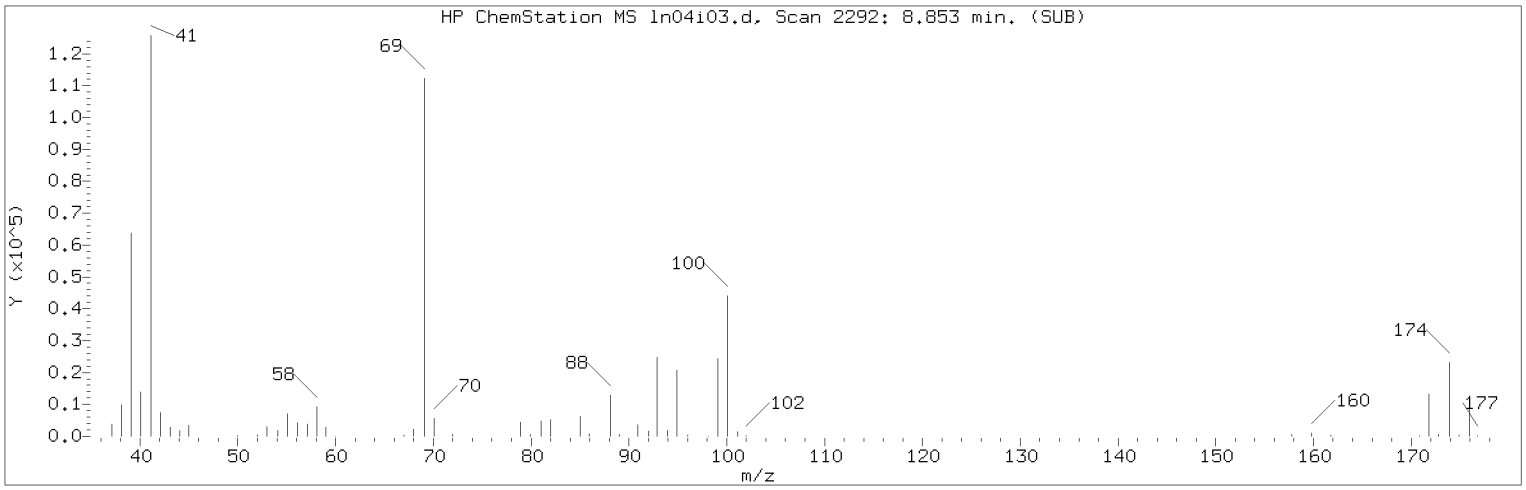
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

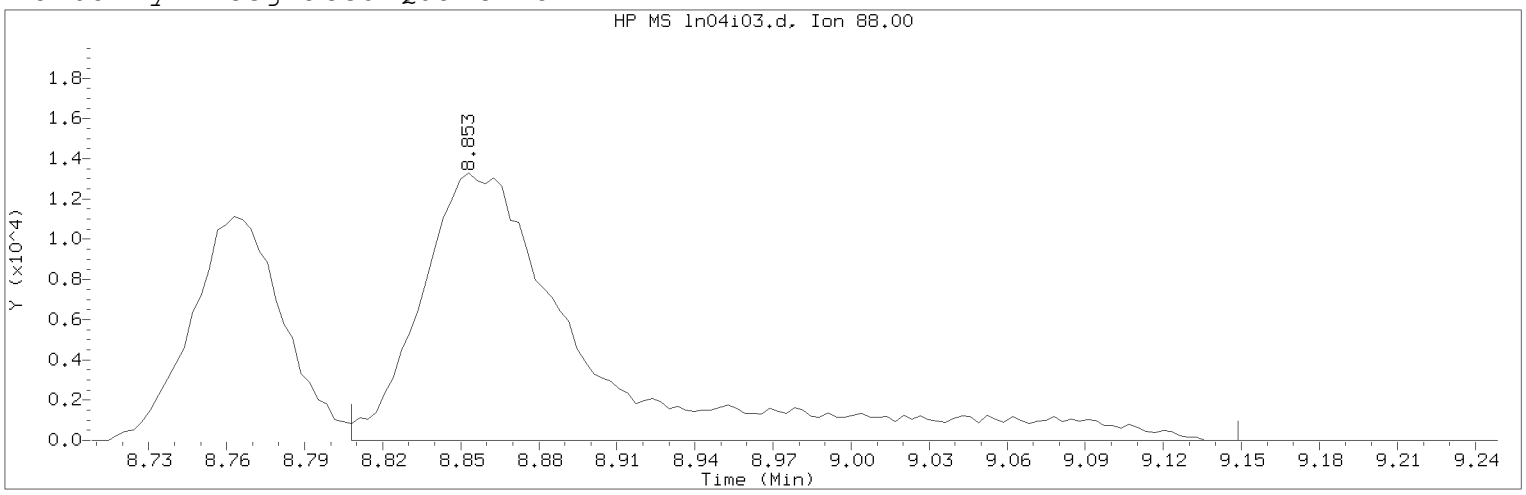
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 120511
On-column Amount (ng) : 48.6556
Integration start scan : 2234 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

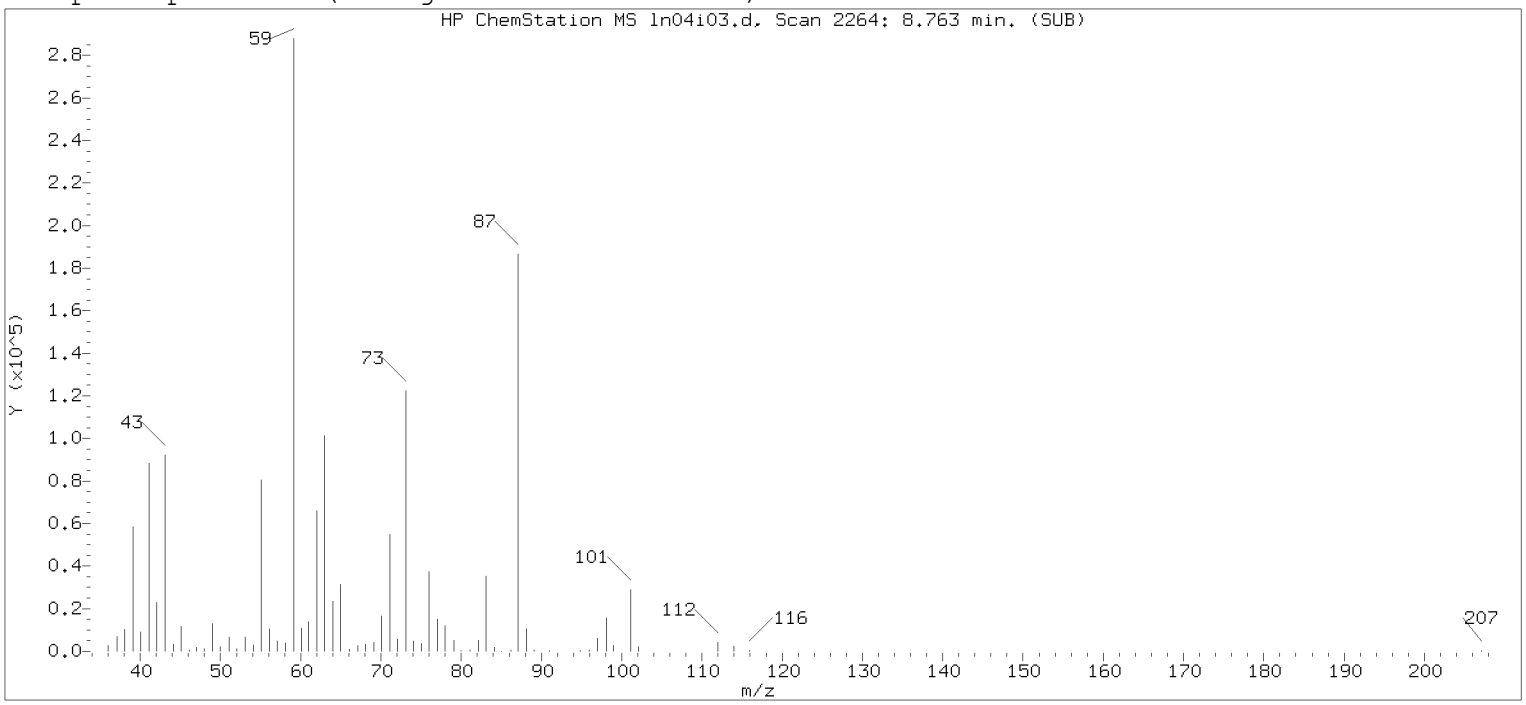
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area (flag) : 59876M
On-Column Amount (ng) : 662.1956
Integration start scan : 2277 Integration stop scan: 2383
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

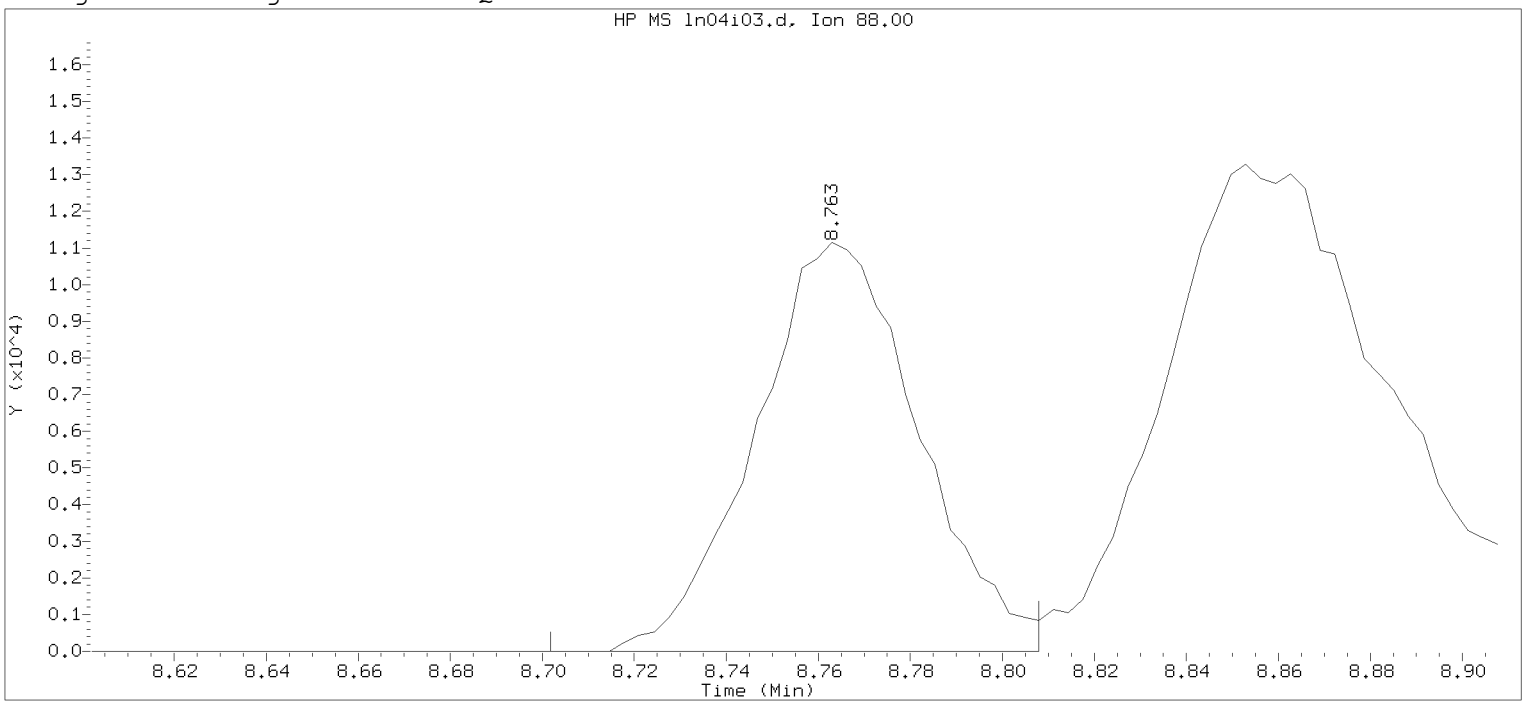
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

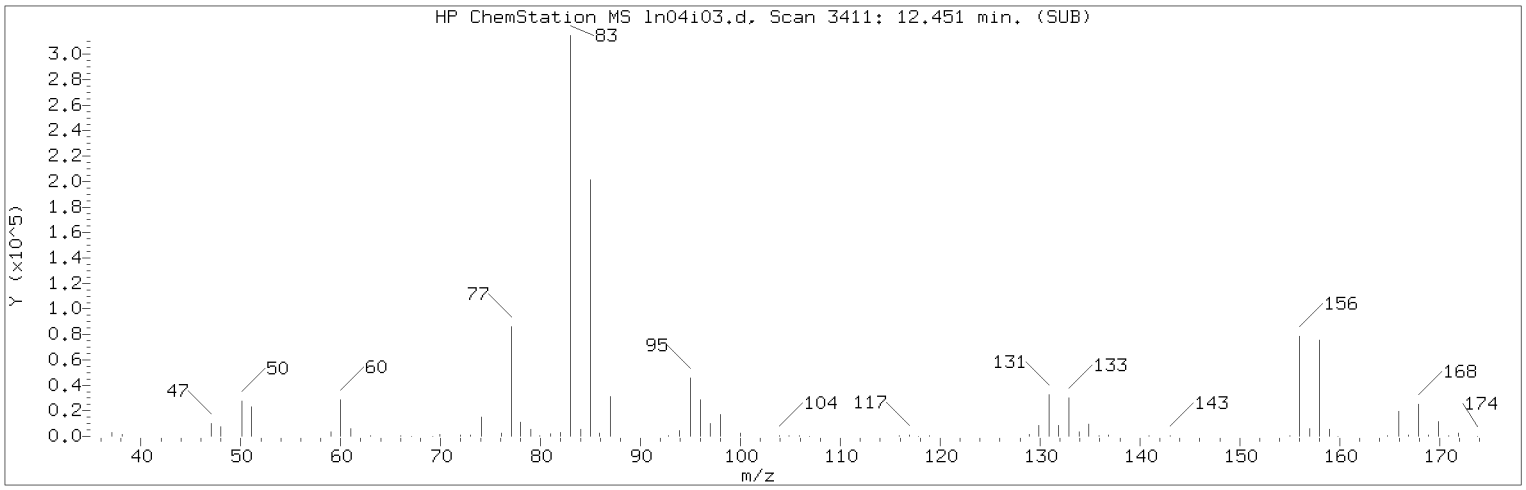
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

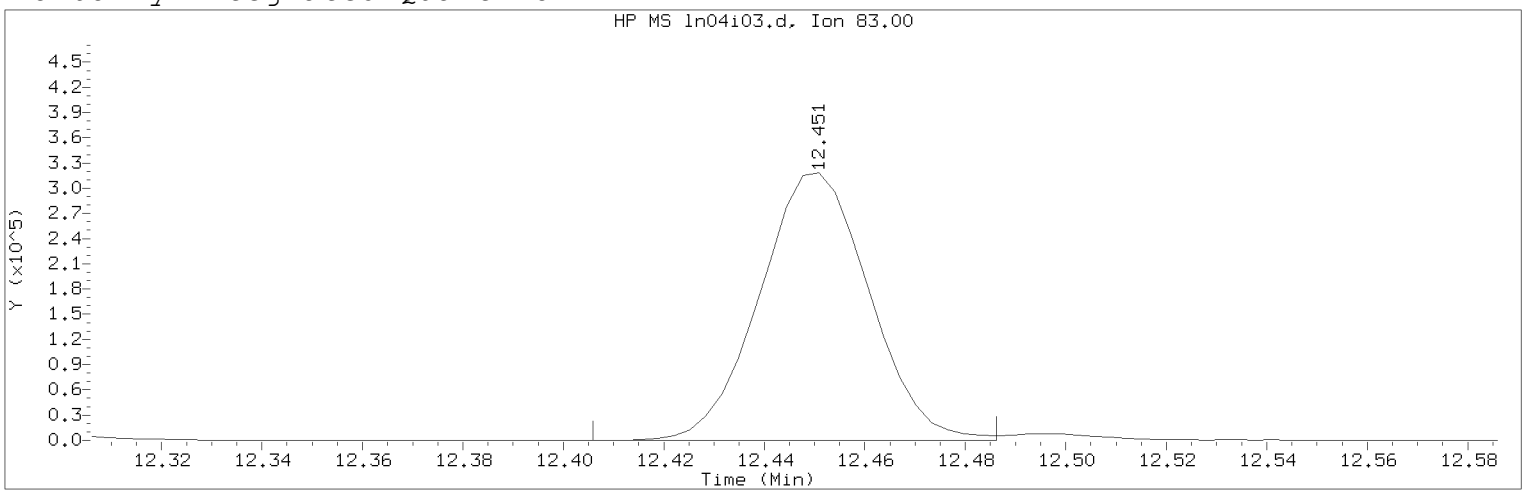
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2264		
Retention Time (minutes)	: 8.763		
Quant Ion	: 88.00		
Area	: 27334		
On-column Amount (ng)	: 447.5530		
Integration start scan	: 2244	Integration stop scan:	2277
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

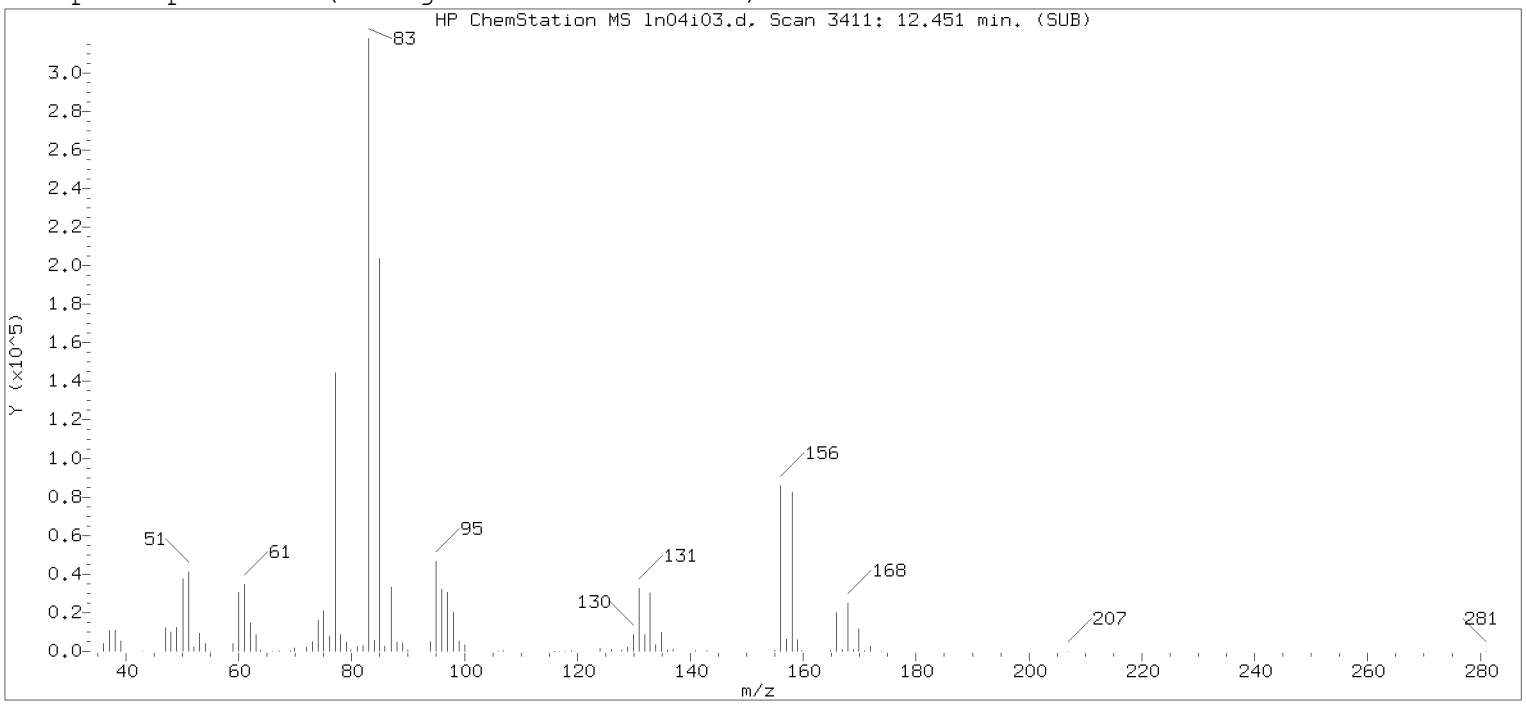
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 482004M
On-Column Amount (ng) : 52.7274
Integration start scan : 3396 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

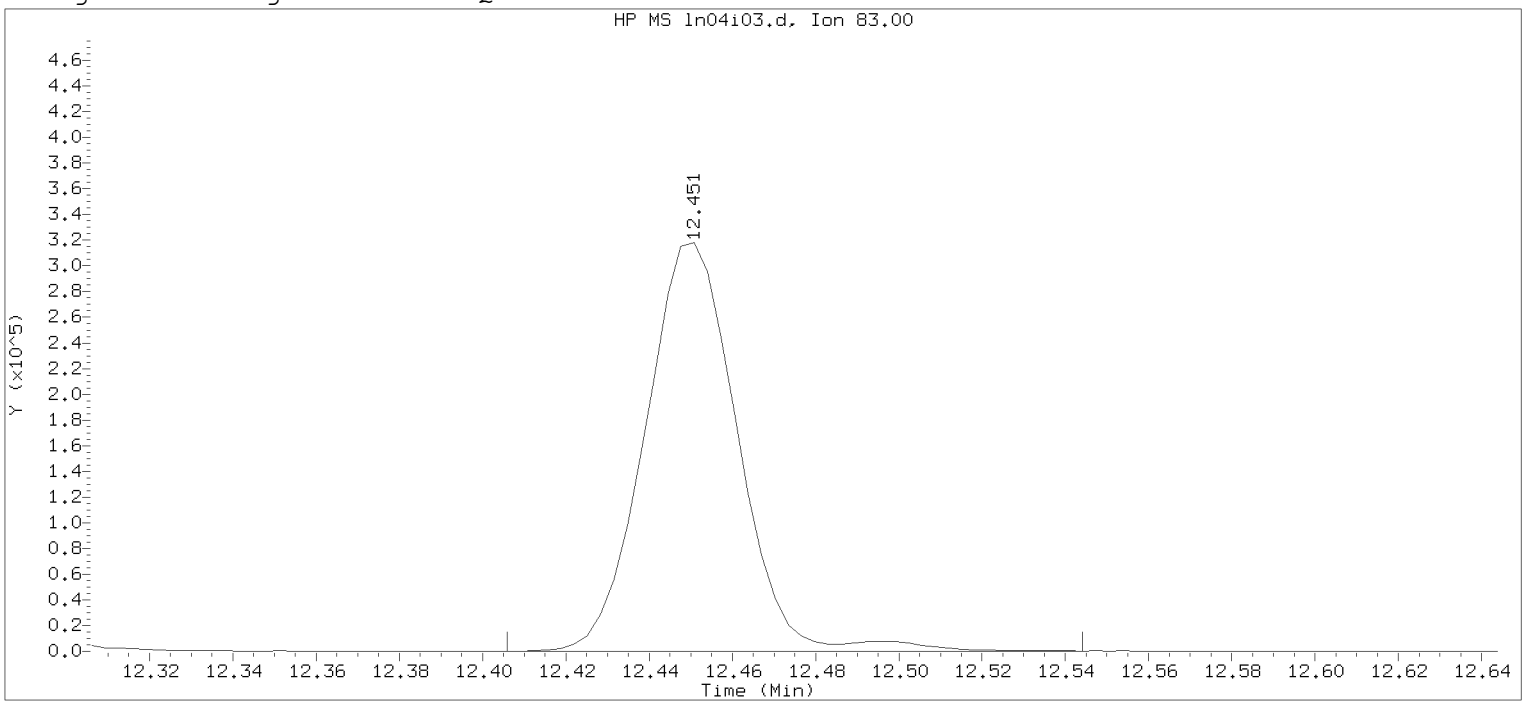
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

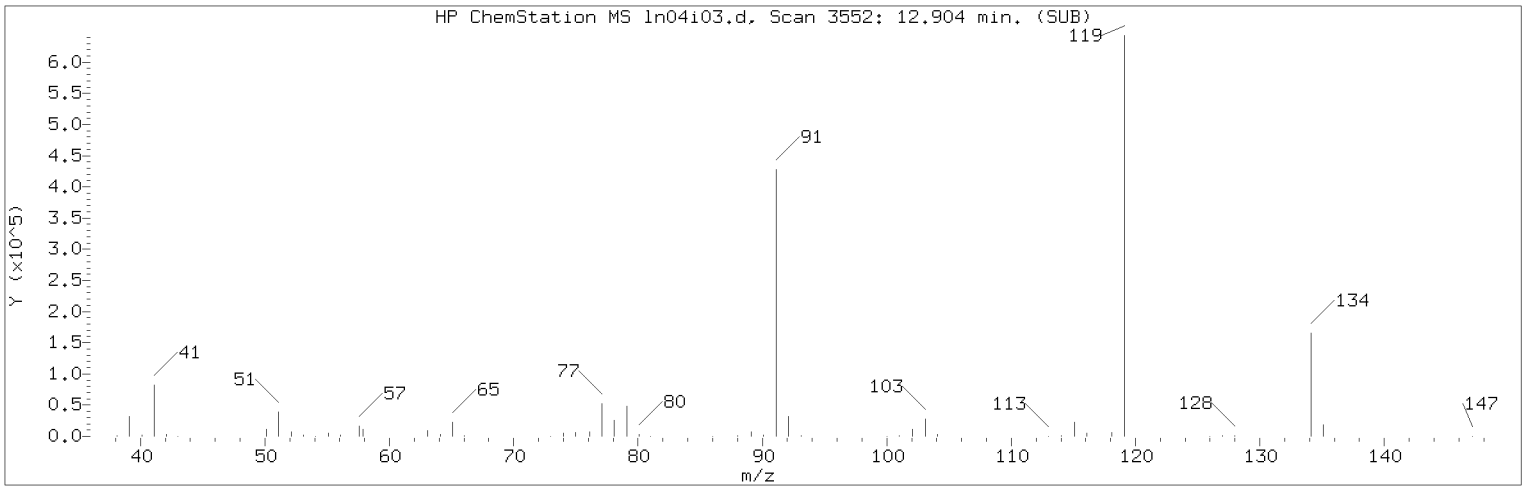
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

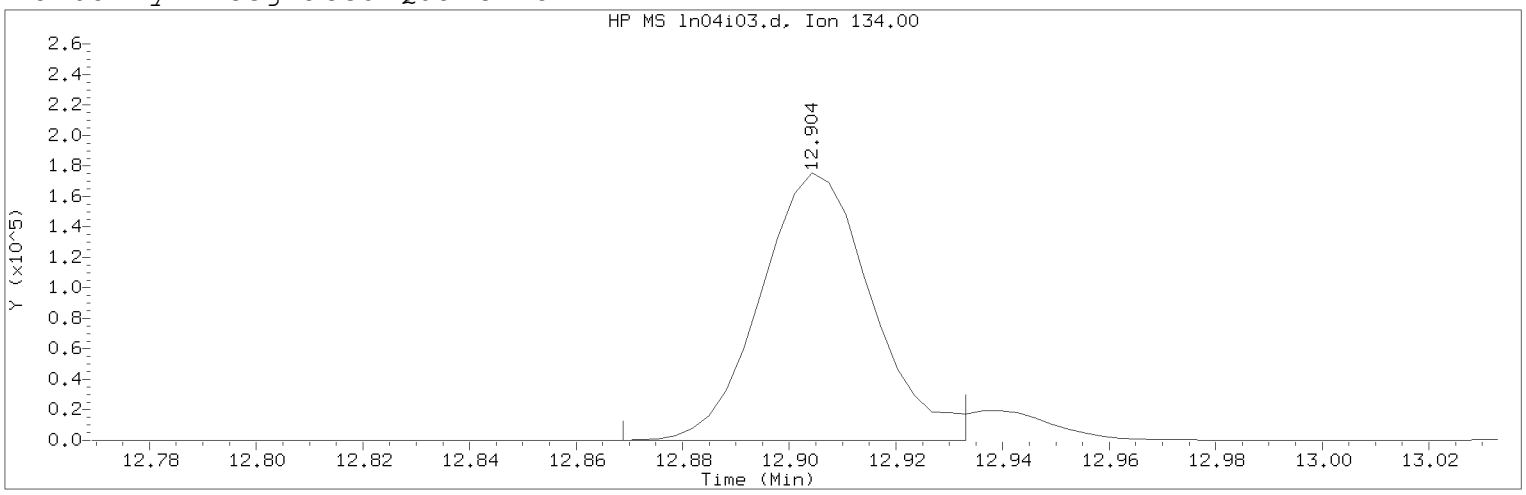
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 491918
On-column Amount (ng) : 50.7154
Integration start scan : 3396 Integration stop scan: 3439
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

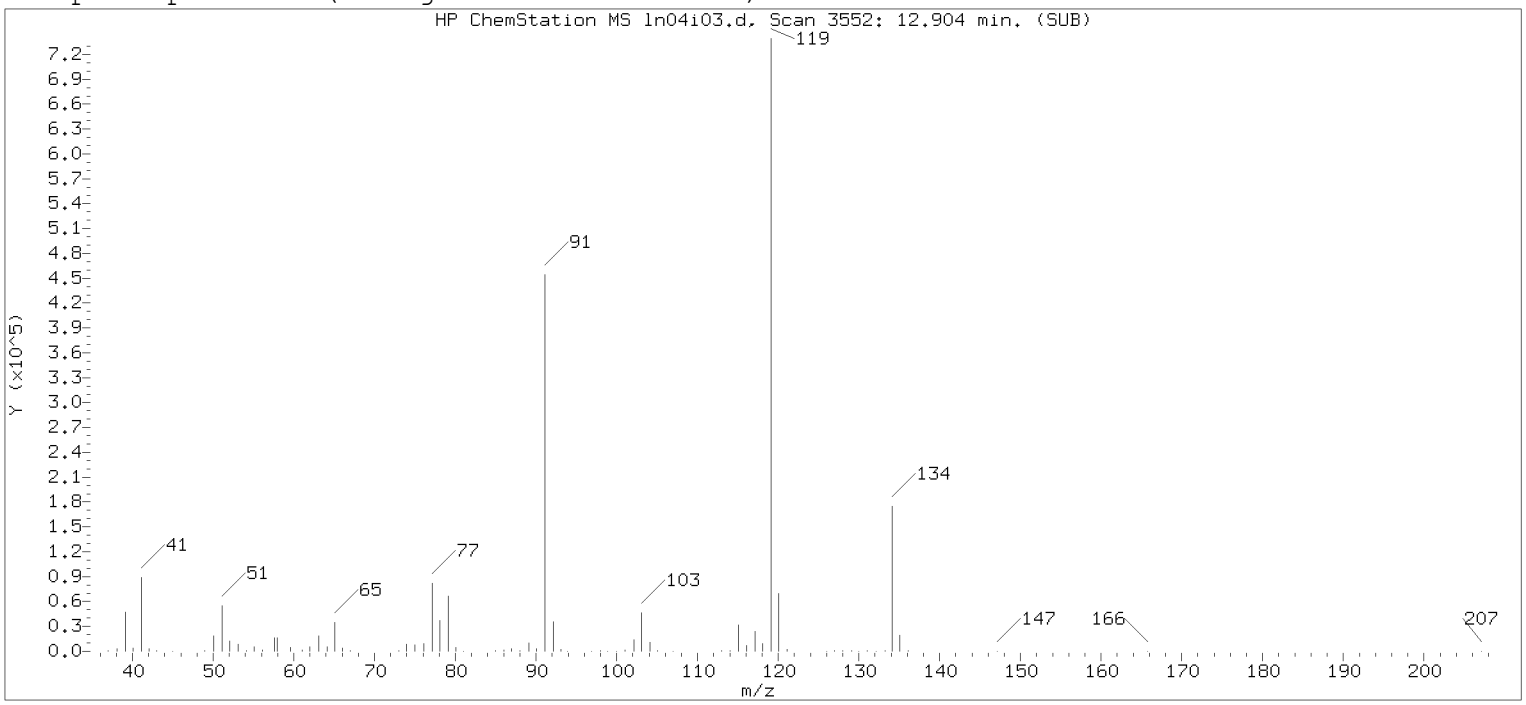
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 253906M
On-Column Amount (ng) : 53.1652
Integration start scan : 3540 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

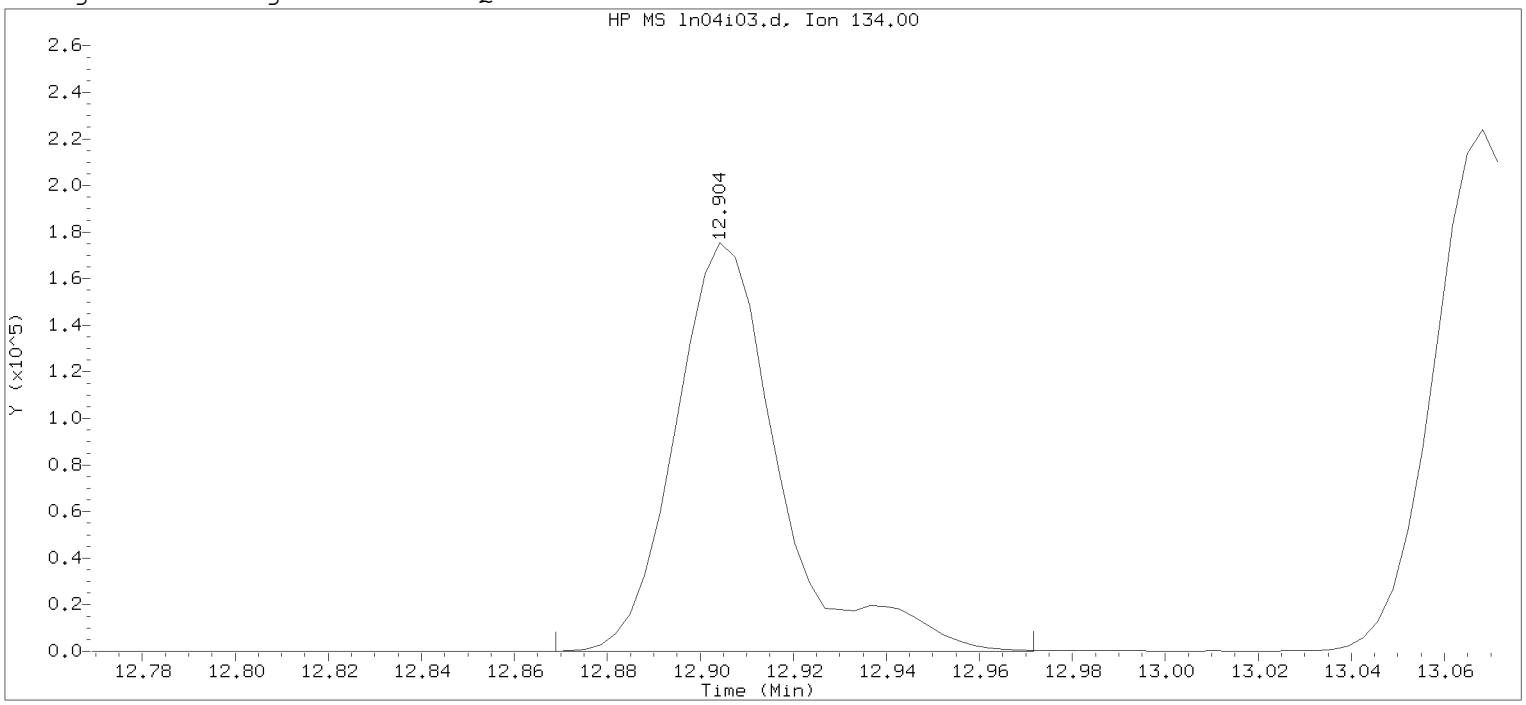
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



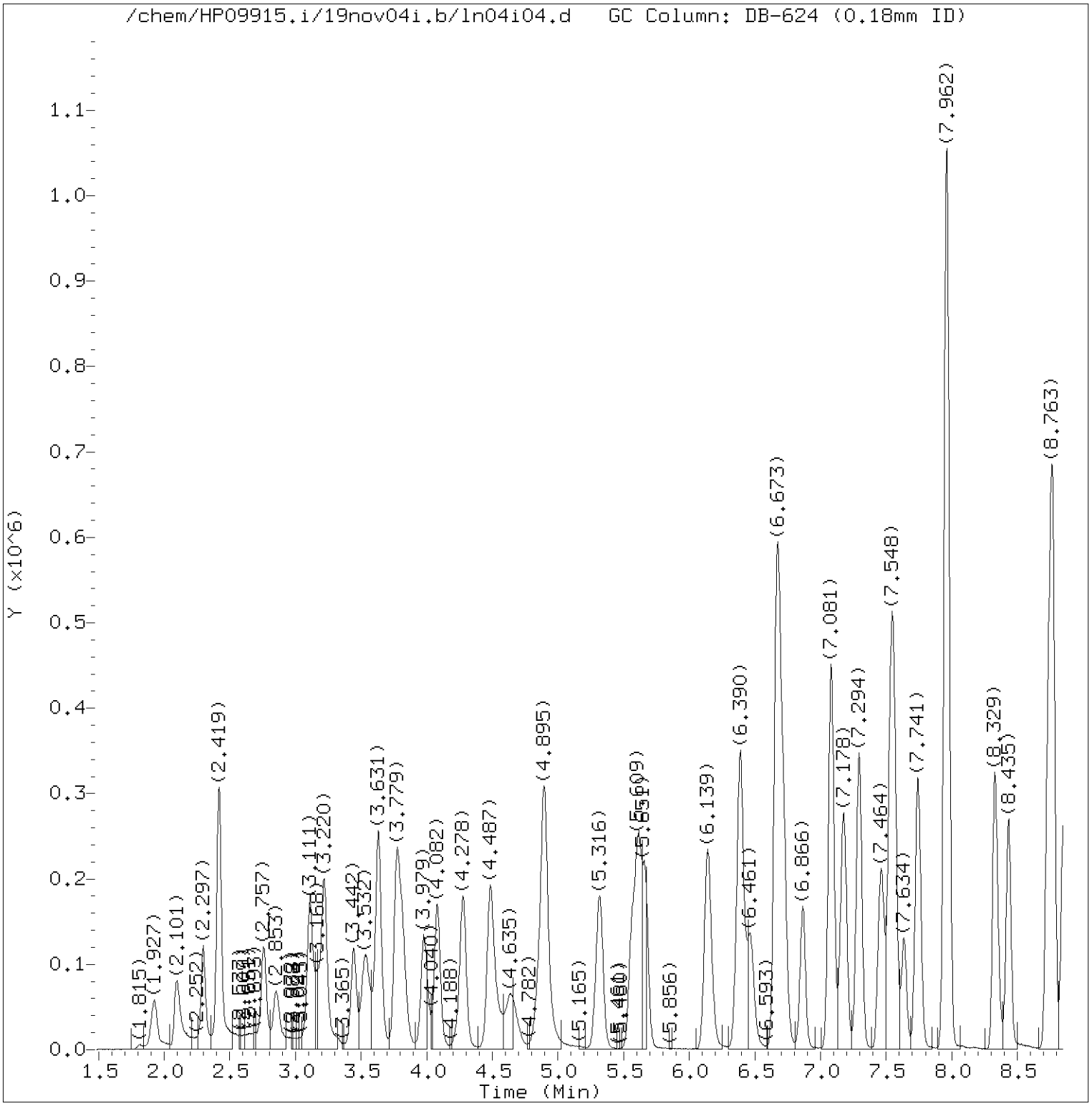
Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 273047
On-column Amount (ng) : 50.7591
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: me20284



Total Ion Chromatogram (TIC)

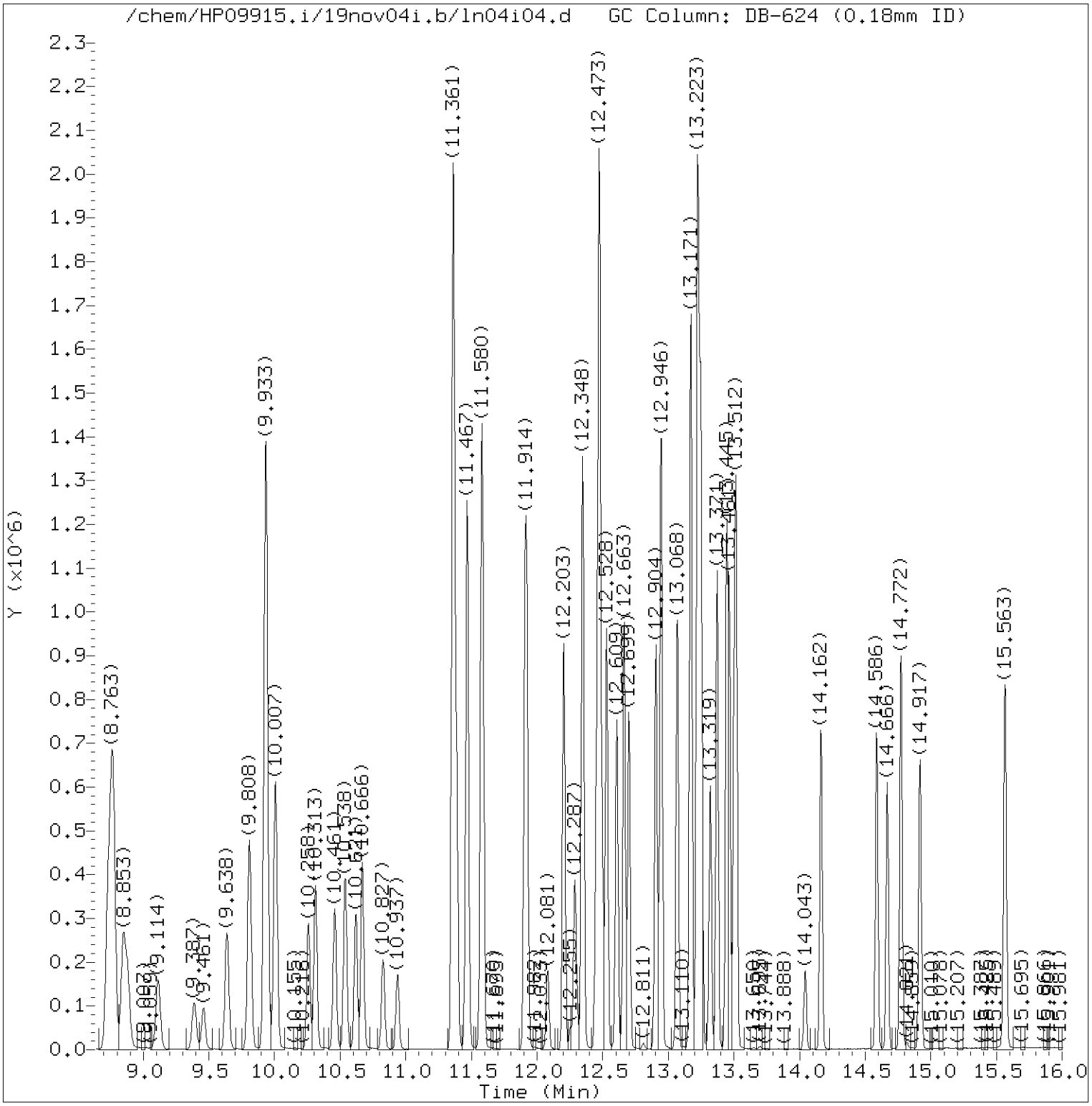
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.095	85	161054M	20.460
4) Chloromethane	(2)	2.297	50	155347	20.477
5) 1,3-Butadiene	(2)	2.416	39	127826M	20.292
6) Vinyl Chloride	(2)	2.419	62	156255	20.637
8) Bromomethane	(2)	2.757	94	109945	20.257
9) Chloroethane	(2)	2.853	64	85938	20.653
10) Dichlorofluoromethane	(2)	3.111	67	205276M	20.838
12) Trichlorofluoromethane	(2)	3.168	101	166167	20.384
11) n-Pentane	(2)	3.220	43	195074	20.250
14) Ethyl ether	(2)	3.442	59	108665	20.629
15) Freon 123a	(2)	3.532	67	137784	21.012
16) Acrolein	(1)	3.631	56	399615	206.403
17) 1,1-Dichloroethene	(2)	3.773	96	101858	21.288
17) 1,1-Dichloroethene	(2)	3.773	63	50444	21.029
19) Freon 113	(2)	3.805	101	115335	21.128
18) Acetone	(1)	3.815	58	36001	41.477
22) Methyl Iodide	(2)	3.979	142	212163	21.398
21) 2-Propanol	(1)	4.004	45	120851	193.676
23) Carbon Disulfide	(2)	4.082	76	388574	21.550
27) Methyl Acetate	(2)	4.255	43	121876	19.777
25) Allyl Chloride	(2)	4.281	41	173950	20.266
28) Methylene Chloride	(2)	4.483	84	119344	20.956
29)*t-Butyl alcohol-d10	(1)	4.512	65	258058M	250.000
30) t-Butyl alcohol	(1)	4.644	59	213903	196.882
31) Acrylonitrile	(2)	4.844	53	69677	21.016
32) trans-1,2-Dichloroethene	(2)	4.898	96	117516	21.231
33) Methyl Tertiary Butyl Ether	(2)	4.898	73	384426	21.159
34) n-Hexane	(2)	5.323	57	185314M	21.519
36) 1,1-Dichloroethane	(2)	5.561	63	203176	21.041
38) di-Isopropyl ether	(2)	5.615	45	399314	21.442
39) 2-Chloro-1,3-butadiene	(2)	5.670	53	184546	21.302
40) Ethyl t-butyl ether	(2)	6.146	59	392243	21.703
43) 1,2-Dichloroethene (Total)	(2)		96	248665	42.340
44) 2-Butanone	(2)	6.371	43	174937	41.104
42) cis-1,2-Dichloroethene	(2)	6.390	96	131149	21.109
45) 2,2-Dichloropropane	(2)	6.397	77	160123	21.332
47) Propionitrile	(1)	6.471	54	279106	206.179
48) Methacrylonitrile	(2)	6.673	67	377980	105.686

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	68547	20.807
50) Tetrahydrofuran	(1)	6.728	71	49905	40.813
51) Chloroform	(2)	6.863	83	198842	21.530
52)$Dibromofluoromethane	(2)	7.078	113	277983	50.374
52)$Dibromofluoromethane	(2)	7.081	111	283696	50.420
53) 1,1,1-Trichloroethane	(2)	7.081	97	168285	21.349
54) Cyclohexane	(2)	7.178	56	226762	21.513
54) Cyclohexane	(2)	7.178	84	195470	21.348
54) Cyclohexane	(2)	7.171	69	69608	21.350
56) Carbon Tetrachloride	(2)	7.290	117	141234	21.126
55) 1,1-Dichloropropene	(2)	7.297	75	161608	21.167
58) Isobutyl Alcohol	(1)	7.464	41	176564	482.927
57)$1,2-Dichloroethane-d4	(2)	7.535	102	71029	50.503
57)$1,2-Dichloroethane-d4	(2)	7.532	65	318244	50.776
57)$1,2-Dichloroethane-d4	(2)	7.535	104	46070	51.284
60) Benzene	(2)	7.561	78	489494	21.320
61) 1,2-Dichloroethane	(2)	7.634	62	150643	20.399
61) 1,2-Dichloroethane	(2)	7.634	98	15487	21.192
65) t-Amyl methyl ether	(2)	7.744	73	391674	21.591
67) n-Heptane	(2)	7.962	43	173500MA	21.566
66)*Fluorobenzene	(2)	7.962	96	1128743	50.000
69) n-Butanol	(1)	8.329	56	312189M	992.087
71) Trichloroethene	(2)	8.435	95	122357	21.166
72) Methylcyclohexane	(2)	8.737	83	221554	20.658
72) Methylcyclohexane	(2)	8.737	98	99234	20.447
73) 1,2-Dichloropropane	(2)	8.769	63	123290	21.148
76) Methyl Methacrylate	(2)	8.850	69	117550A	20.851
75) 1,4-Dioxane	(1)	8.856	88	44376M	513.065
74) Dibromomethane	(2)	8.879	93	79643	21.113
78) Bromodichloromethane	(2)	9.114	83	142226	21.011
79) 2-Nitropropane	(2)	9.390	41	82517M	40.247
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	51005	20.370
81) cis-1,3-Dichloropropene	(2)	9.634	75	192808	21.446
82) 4-Methyl-2-pentanone	(2)	9.808	43	377728	42.047
83)$Toluene-d8	(3)	9.933	98	1159273	50.160
83)$Toluene-d8	(3)	9.933	100	751601	50.203
88) Toluene	(3)	10.007	92	308466	21.289
90) 1,3-Dichloropropene (total)	(3)		100	367273	42.658

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	174465	21.211
91) Ethyl Methacrylate	(3)	10.313	69	210882	21.096
92) 1,1,2-Trichloroethane	(3)	10.461	97	114106	20.771
93) Tetrachloroethene	(3)	10.538	166	130358	21.243
94) 1,3-Dichloropropane	(3)	10.618	76	196136	20.911
96) 2-Hexanone	(3)	10.666	43	276801	41.485
97) Dibromochloromethane	(3)	10.827	129	117920	20.955
99) 1,2-Dibromoethane	(3)	10.940	107	124981	20.951
100)*Chlorobenzene-d5	(3)	11.361	117	883281	50.000
101) 1-Chlorohexane	(3)	11.364	91	162552	20.883
102) Chlorobenzene	(3)	11.387	112	347116	21.185
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	116096	21.505
104) Ethylbenzene	(3)	11.467	91	593614	21.434
106) m+p-Xylene	(3)	11.580	106	474524	43.555
108) Xylene (Total)	(3)		106	707354	65.191
107) o-Xylene	(3)	11.908	106	232830	21.636
109) Styrene	(3)	11.924	104	387652	21.799
110) Bromoform	(3)	12.081	173	81670	19.422
111) Isopropylbenzene	(3)	12.203	105	589458	21.839
112) Cyclohexanone	(1)	12.287	55	167626	494.847
114)$4-Bromofluorobenzene	(3)	12.348	95	438766	50.137
114)$4-Bromofluorobenzene	(3)	12.348	174	363757	50.138
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	186119M	20.690
115) Bromobenzene	(4)	12.464	156	150208	20.987
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	295707	106.569
117) 1,2,3-Trichloropropane	(4)	12.499	110	56899	20.612
119) n-Propylbenzene	(4)	12.528	91	680502	21.762
120) 2-Chlorotoluene	(4)	12.609	126	141675	21.327
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	498486	21.936
121) 4-Chlorotoluene	(4)	12.699	126	147463	21.326
124) tert-Butylbenzene	(4)	12.904	134	101571M	21.612
125) Pentachloroethane	(4)	12.940	167	85065	21.020
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	522495	21.816
127) sec-Butylbenzene	(4)	13.068	105	620603	22.130
129) 1,3-Dichlorobenzene	(4)	13.168	146	280954	21.362
130) p-Isopropyltoluene	(4)	13.171	119	539497	22.237
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	476218	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	288857	21.186

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

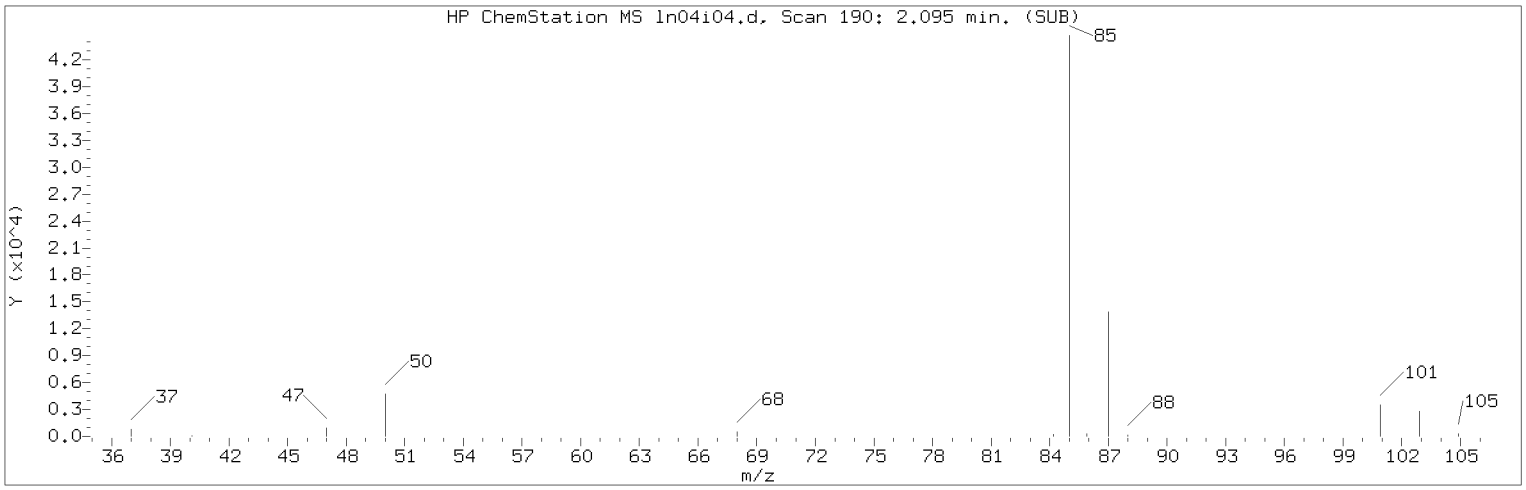
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

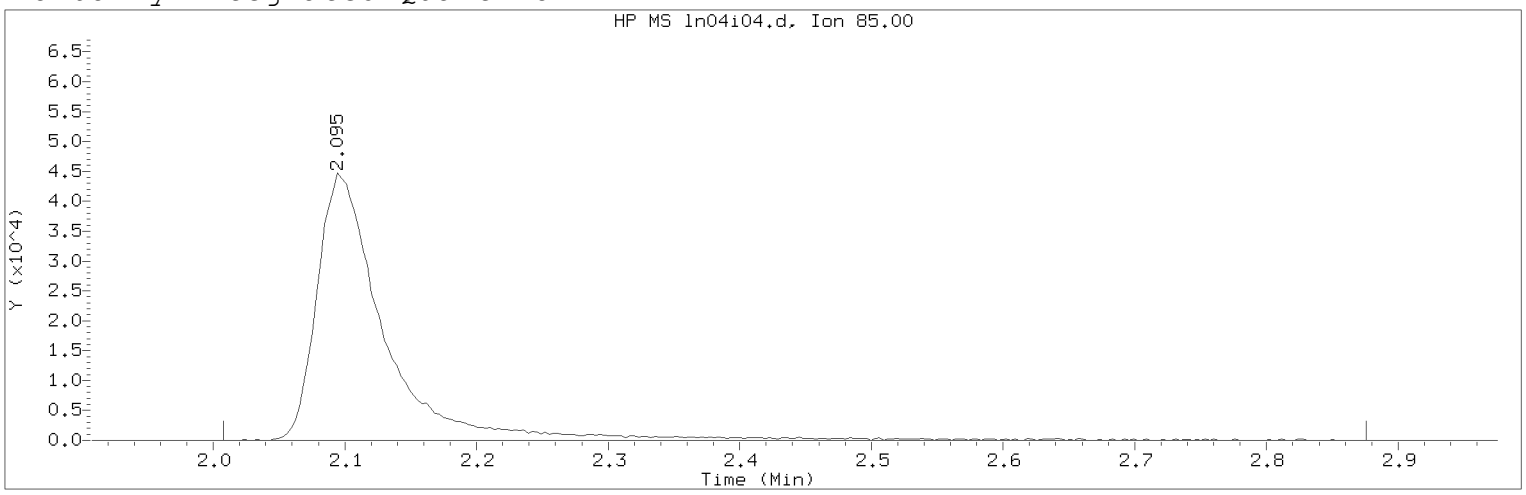
	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134)	1,2,3-Trimethylbenzene	(4)	13.252	105	529814	20.883
135)	Benzyl Chloride	(4)	13.319	91	386244	20.108
136)	1,3-Diethylbenzene	(4)	13.371	119	333696	21.134
141)	Diethylbenzene (total)	(4)		100	968804	63.411
137)	1,4-Diethylbenzene	(4)	13.445	119	354305	21.180
139)	n-Butylbenzene	(4)	13.464	92	270790	21.829
138)	1,2-Dichlorobenzene	(4)	13.502	146	274435	21.146
140)	1,2-Diethylbenzene	(4)	13.518	119	280803	21.097
142)	1,2-Dibromo-3-chloropropane	(4)	14.043	75	40583	20.608
144)	1,3,5-Trichlorobenzene	(4)	14.162	180	215108	21.573
146)	1,2,4-Trichlorobenzene	(4)	14.586	180	206700	21.320
147)	Hexachlorobutadiene	(4)	14.666	225	101324	22.135
148)	Naphthalene	(4)	14.772	128	665482	21.351
149)	1,2,3-Trichlorobenzene	(4)	14.917	180	203518	21.573
150)	2-Methylnaphthalene	(4)	15.563	142	423056	22.042

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

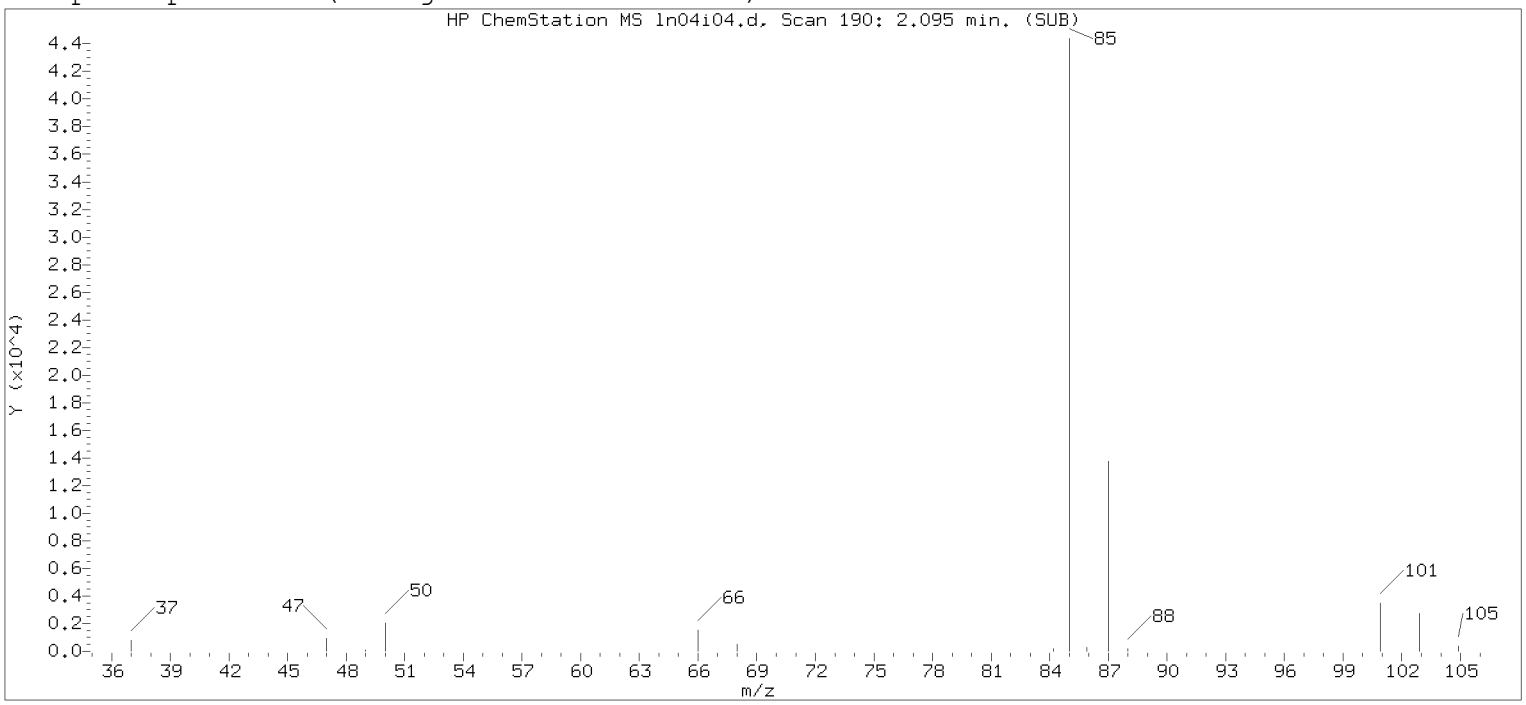
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.095
Quant Ion : 85.00
Area (flag) : 161054M
On-Column Amount (ng) : 20.4603
Integration start scan : 162 Integration stop scan: 432
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

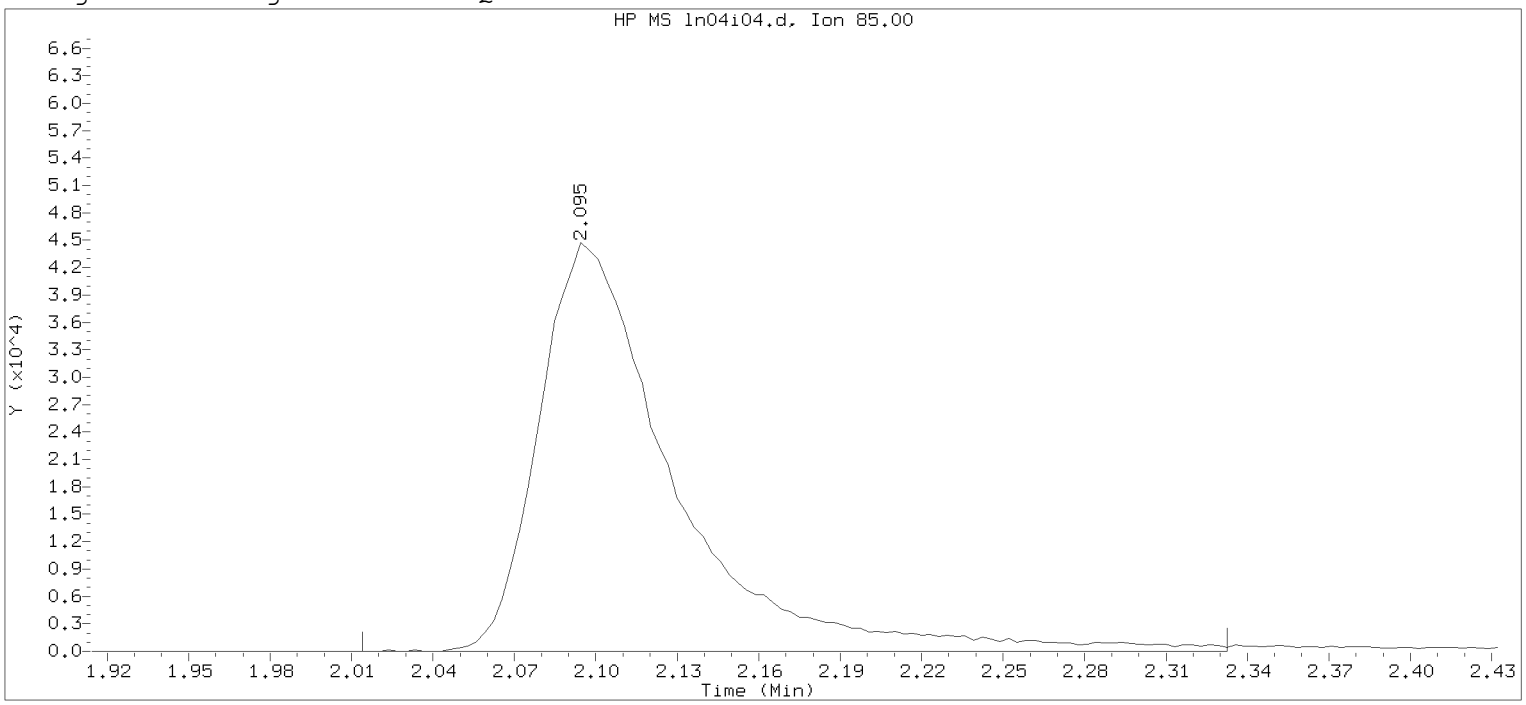
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

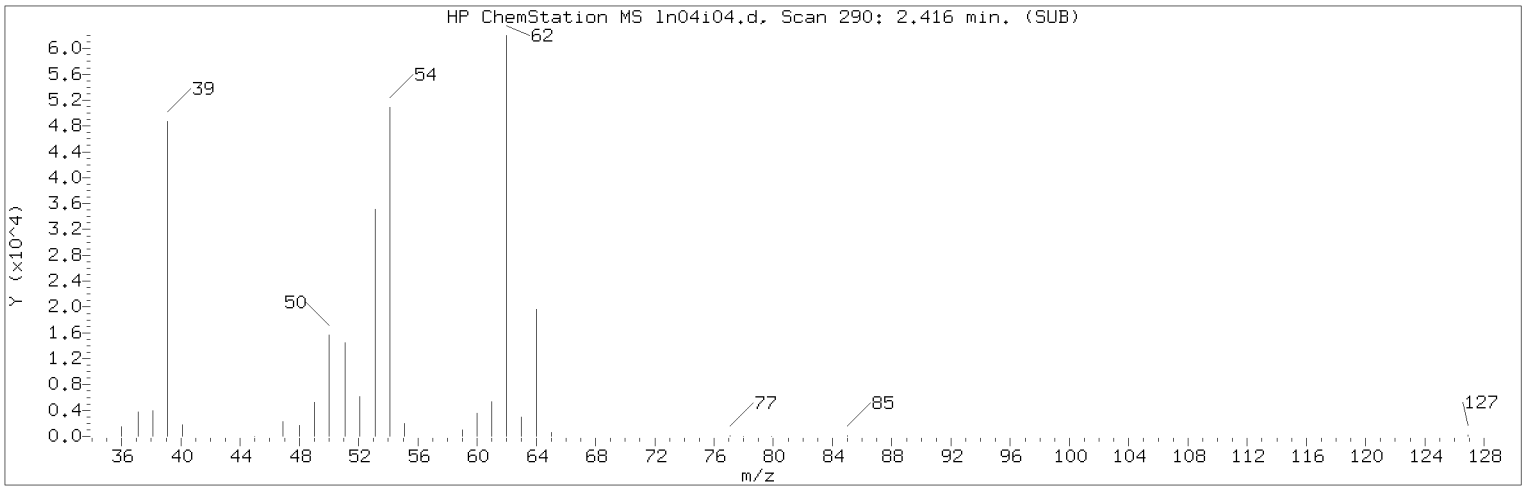
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

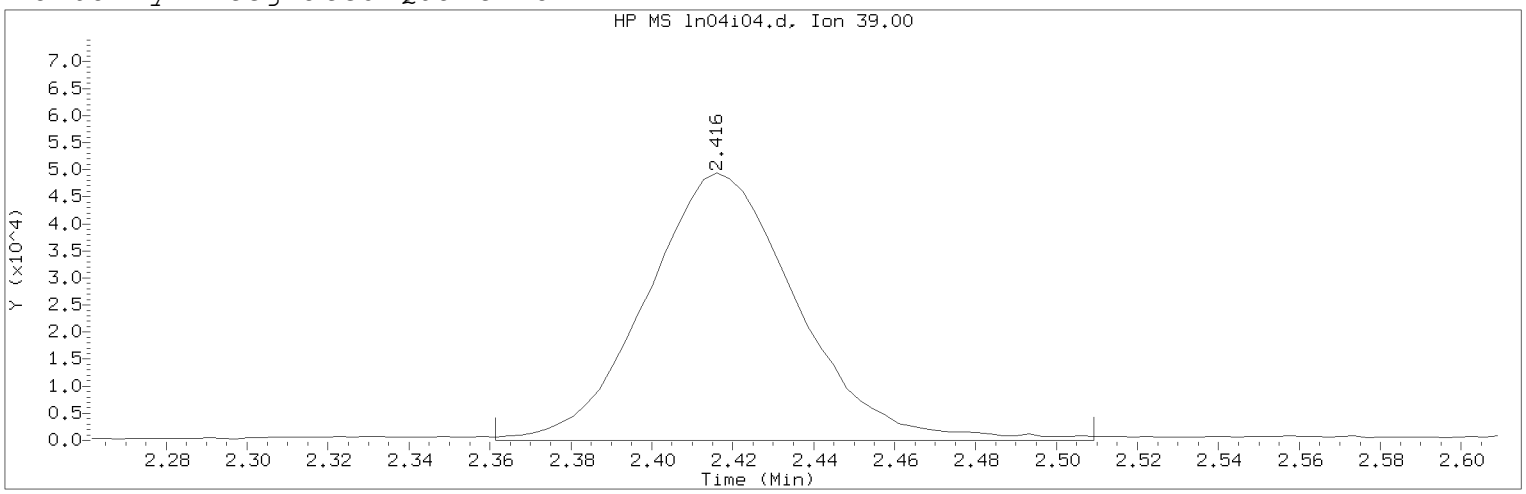
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.095
Quant Ion : 85.00
Area : 154796
On-column Amount (ng) : 18.9193
Integration start scan : 164 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user: CW mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

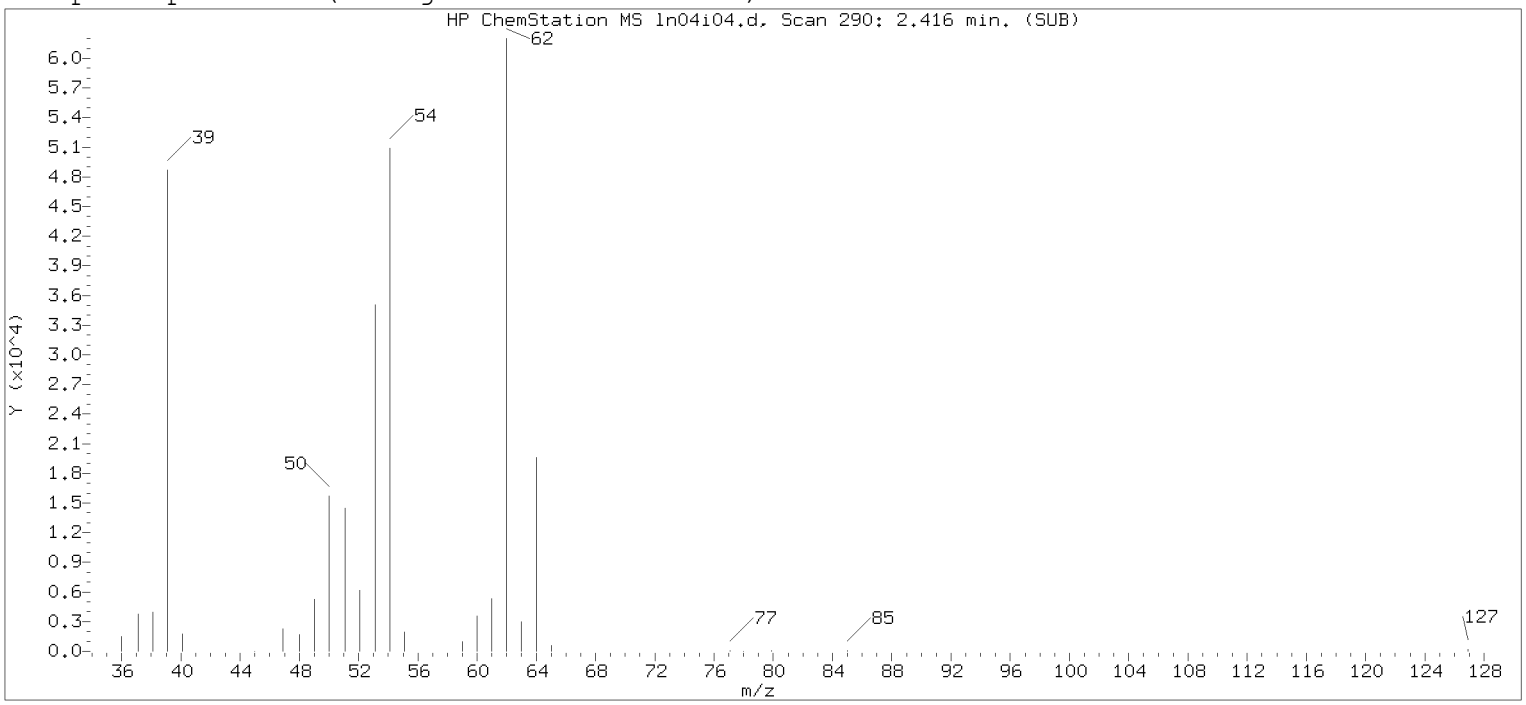
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 290
Retention Time (minutes): 2.416
Quant Ion : 39.00
Area (flag) : 127826M
On-Column Amount (ng) : 20.2925
Integration start scan : 272 Integration stop scan: 318
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

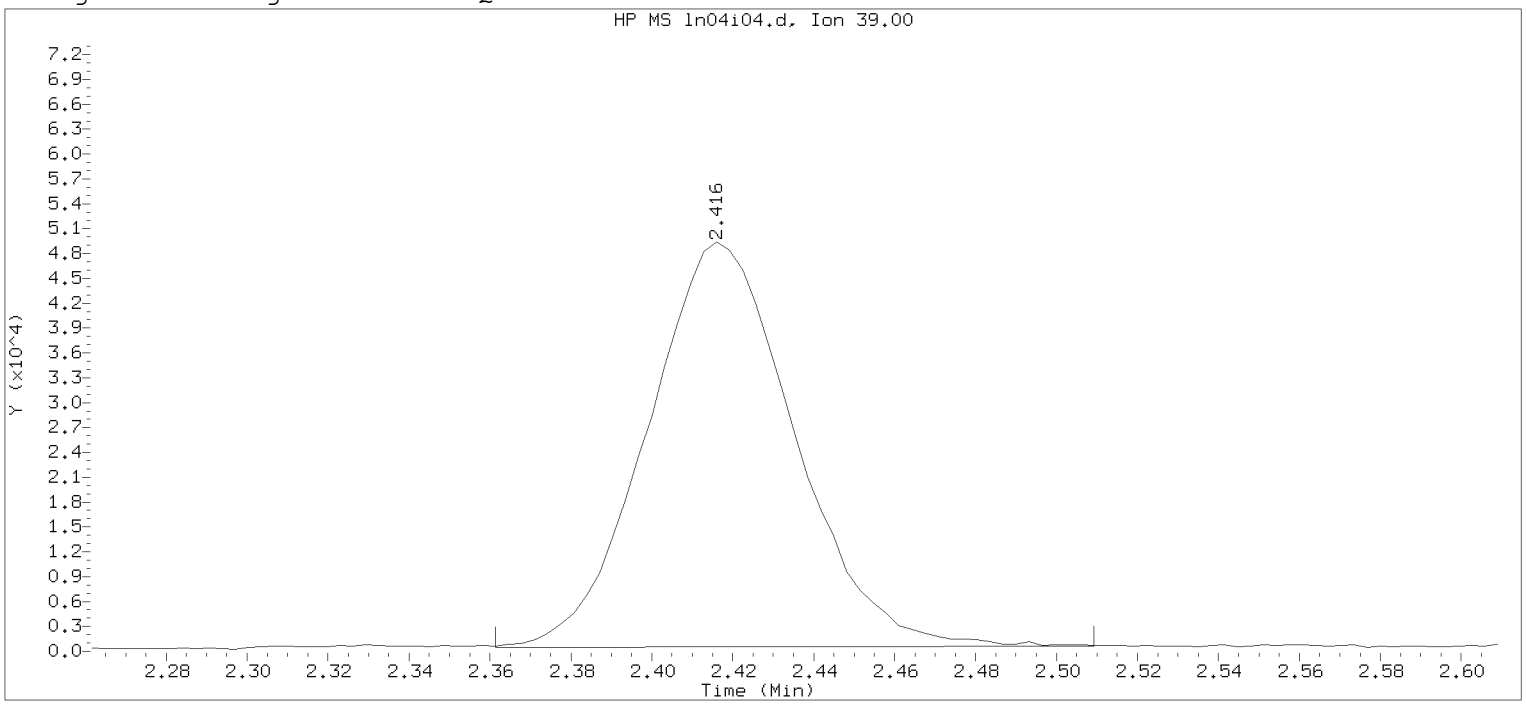
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

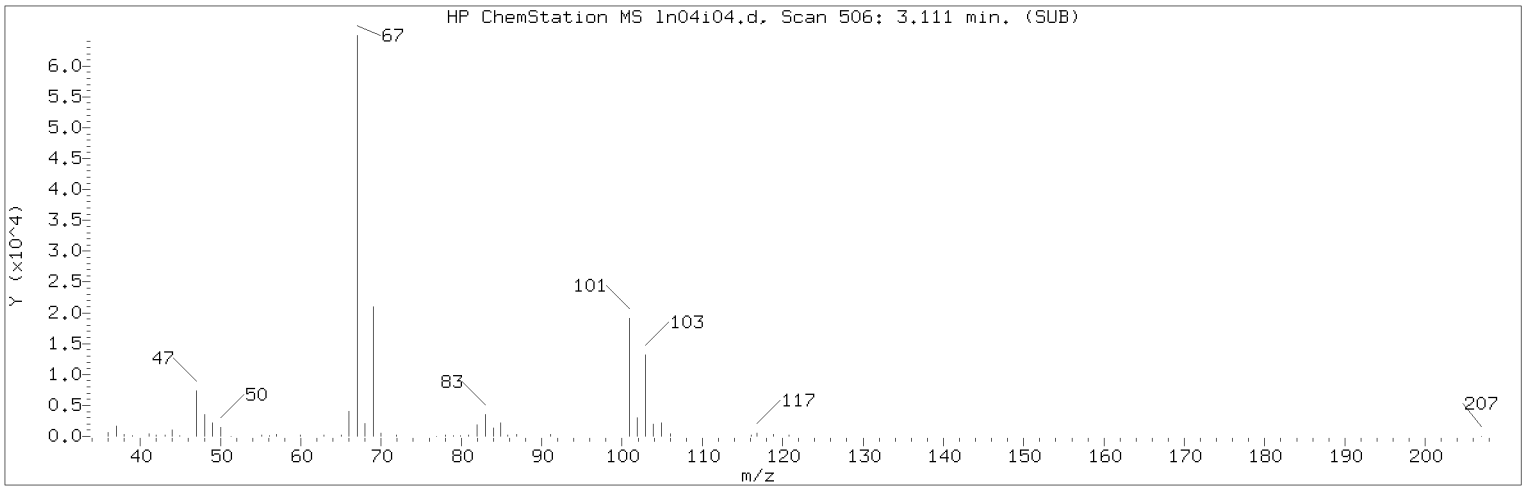
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

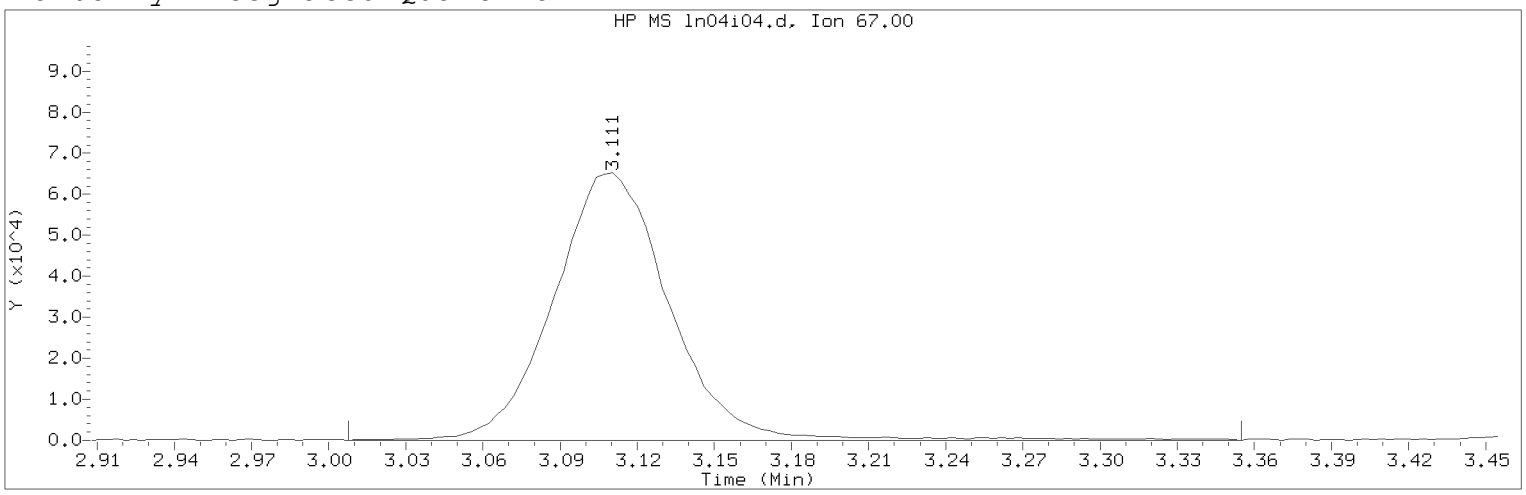
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 290
Retention Time (minutes): 2.416
Quant Ion : 39.00
Area : 122801
On-column Amount (ng) : 20.5539
Integration start scan : 272 Integration stop scan: 318
Y at integration start : 477 Y at integration end: 628

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

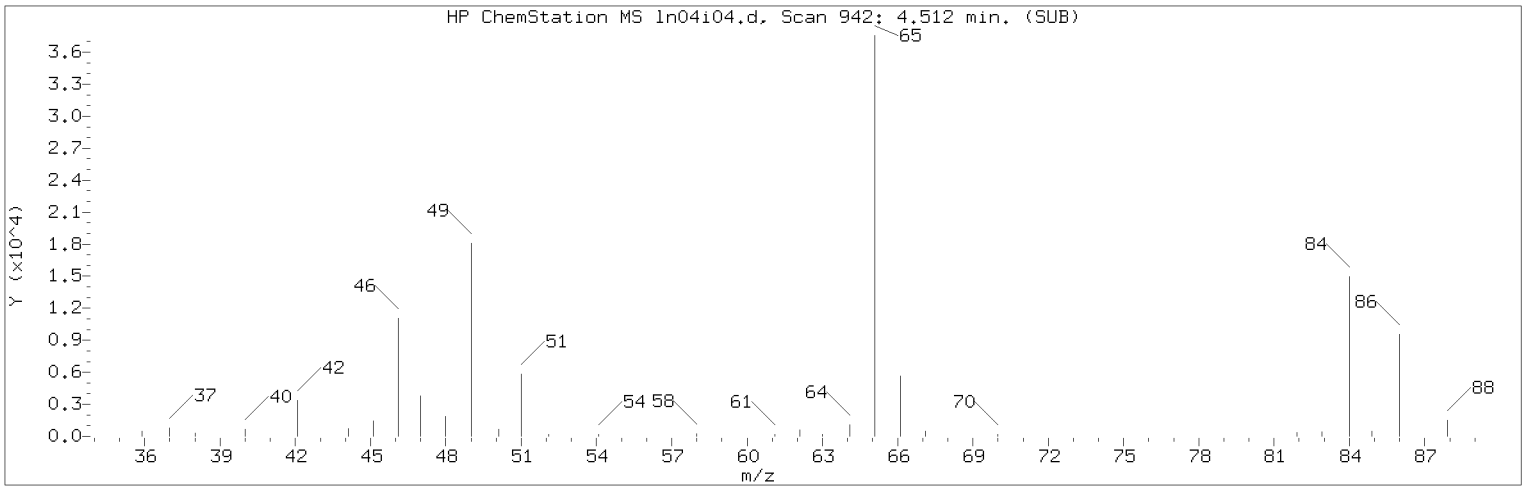
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 506
Retention Time (minutes): 3.111
Quant Ion : 67.00
Area (flag) : 205276M
On-Column Amount (ng) : 20.8381
Integration start scan : 473 Integration stop scan: 581
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

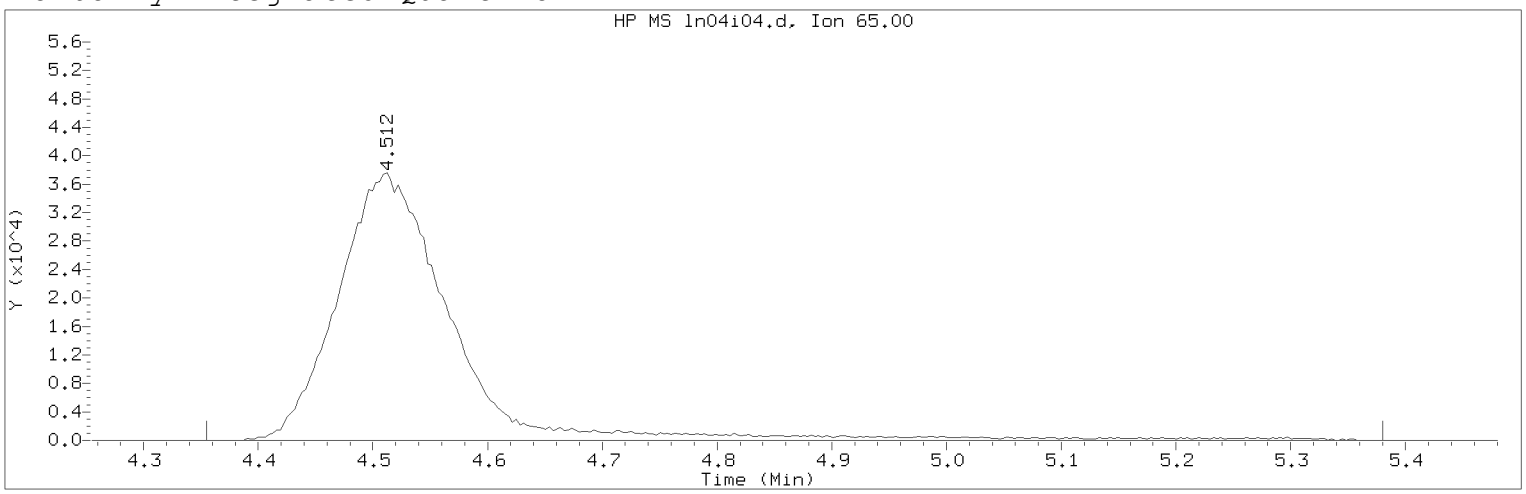
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

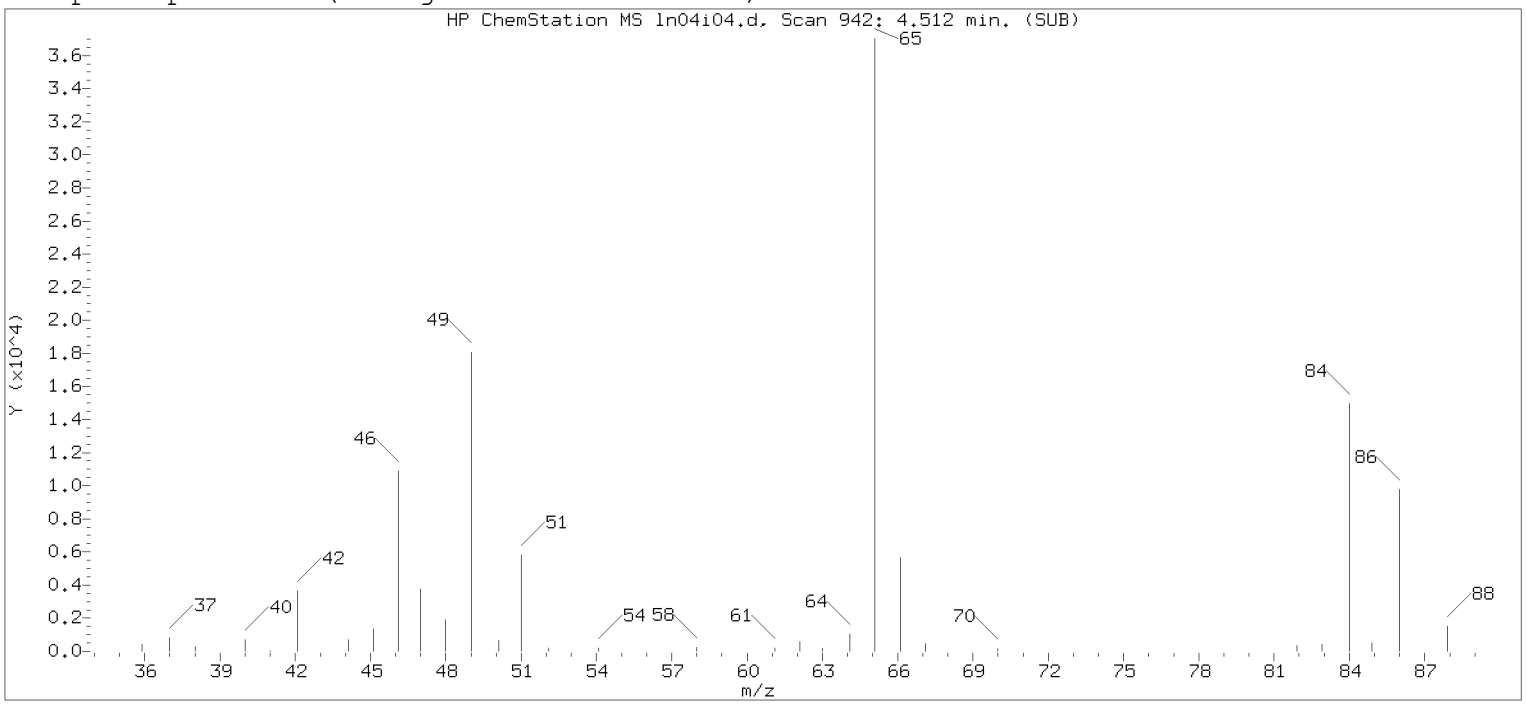
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area (flag) : 258058M
On-Column Amount (ng) : 250.0000
Integration start scan : 892 Integration stop scan: 1211
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

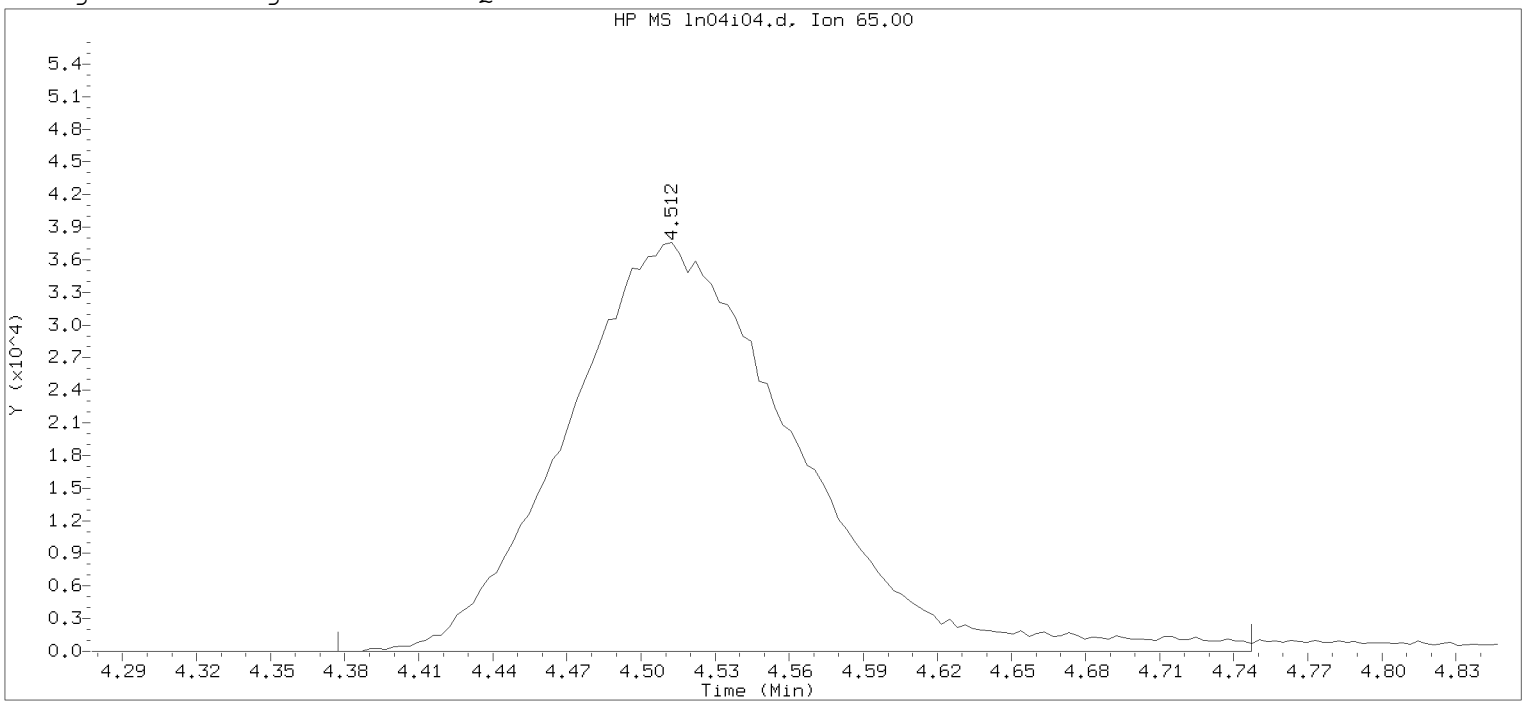
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

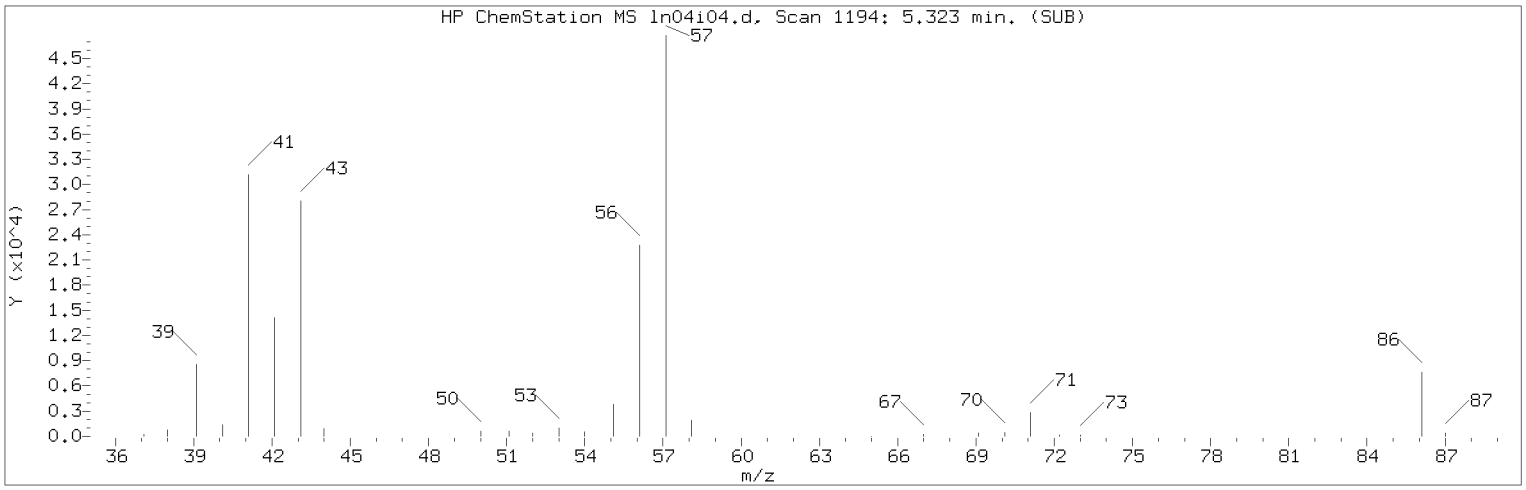
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

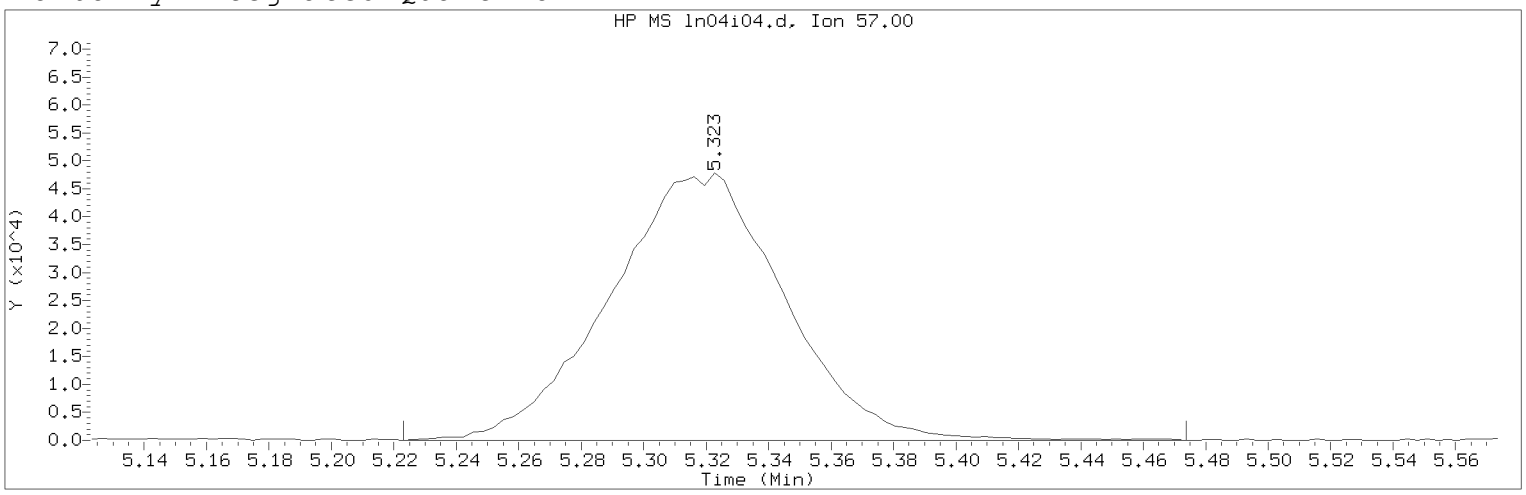
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area : 242565
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

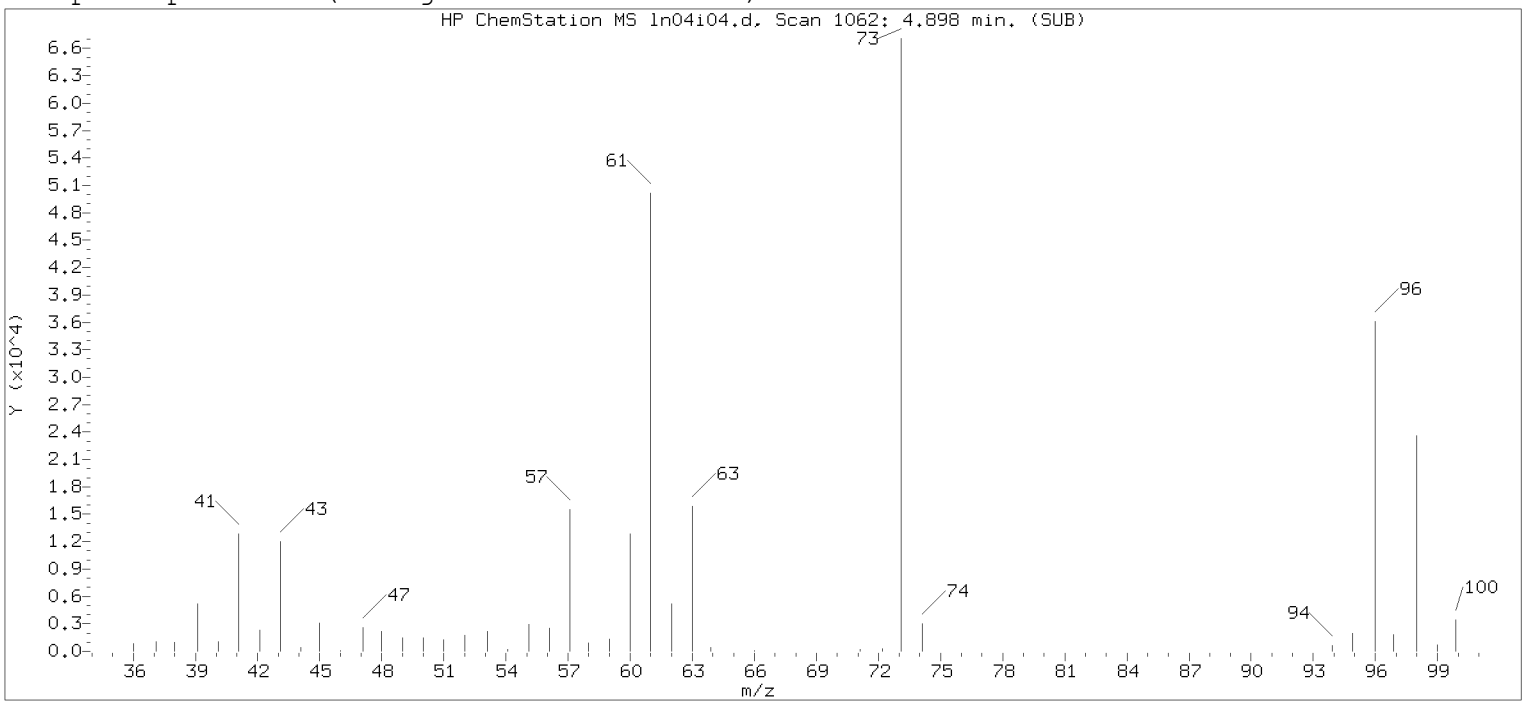
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1194
Retention Time (minutes): 5.323
Quant Ion : 57.00
Area (flag) : 185314M
On-Column Amount (ng) : 21.5188
Integration start scan : 1162 Integration stop scan: 1240
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

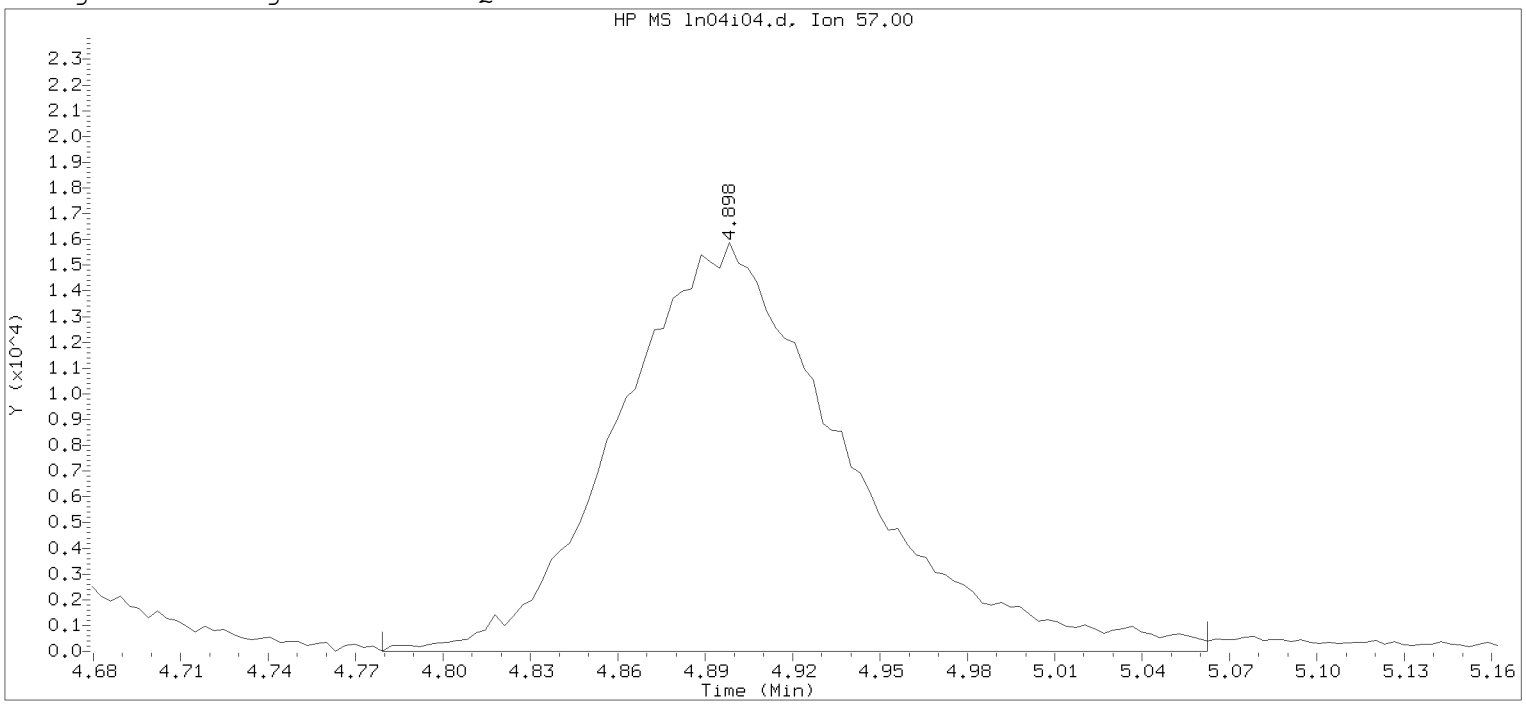
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

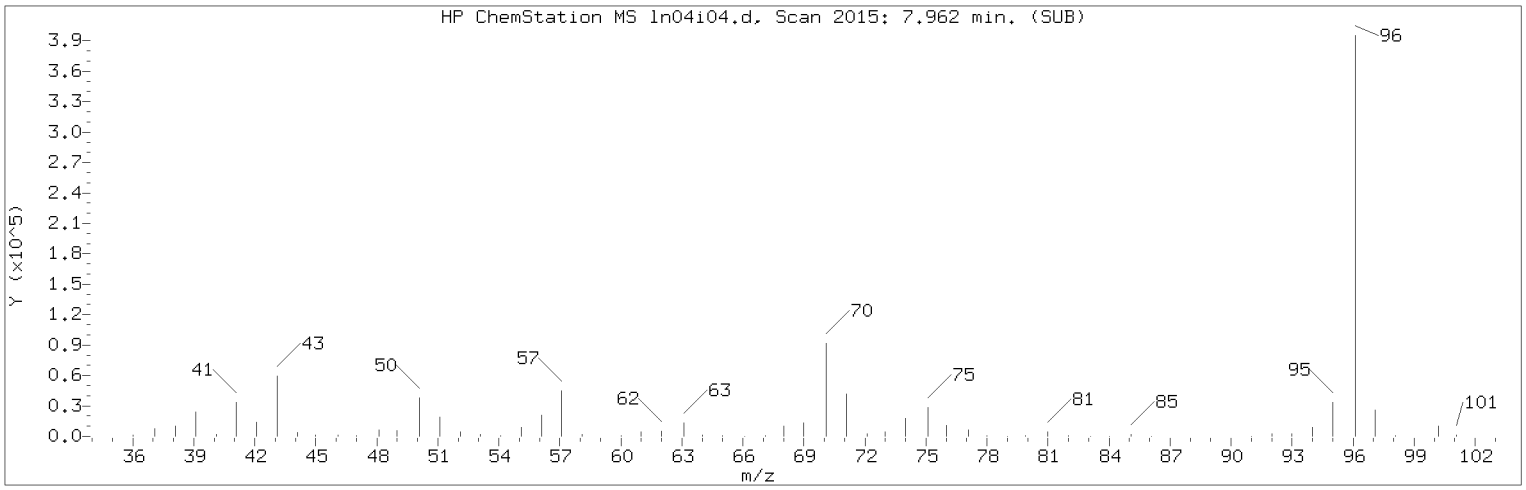
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

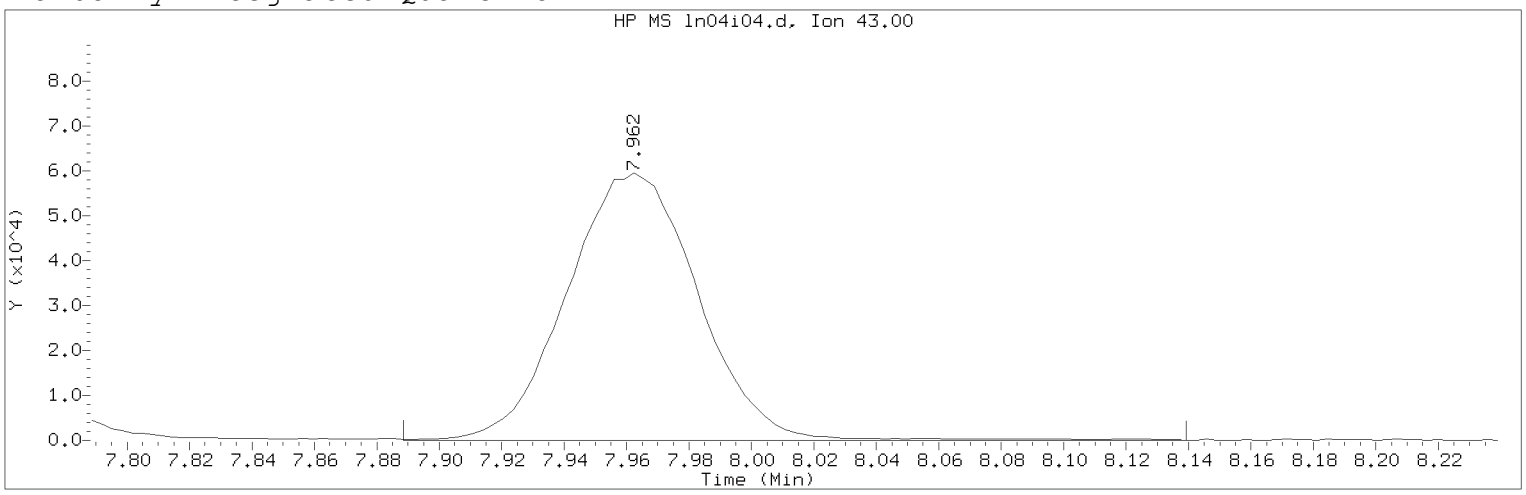
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1062
Retention Time (minutes): 4.898
Quant Ion : 57.00
Area : 86496
On-column Amount (ng) : 21.2144
Integration start scan : 1024 Integration stop scan: 1112
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user: CW mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

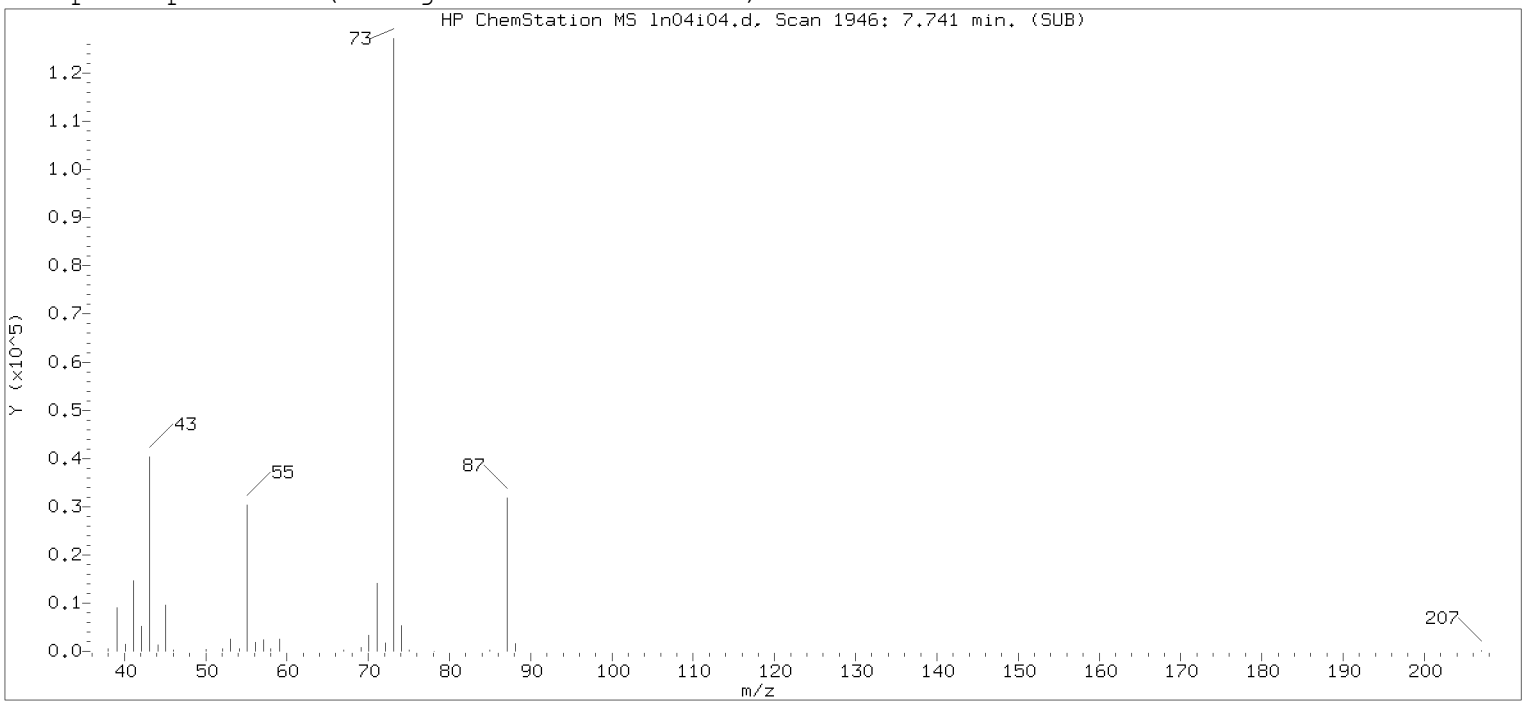
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2015
Retention Time (minutes): 7.962
Quant Ion : 43.00
Area (flag) : 173500MA
On-Column Amount (ng) : 21.5663
Integration start scan : 1991 Integration stop scan: 2069
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

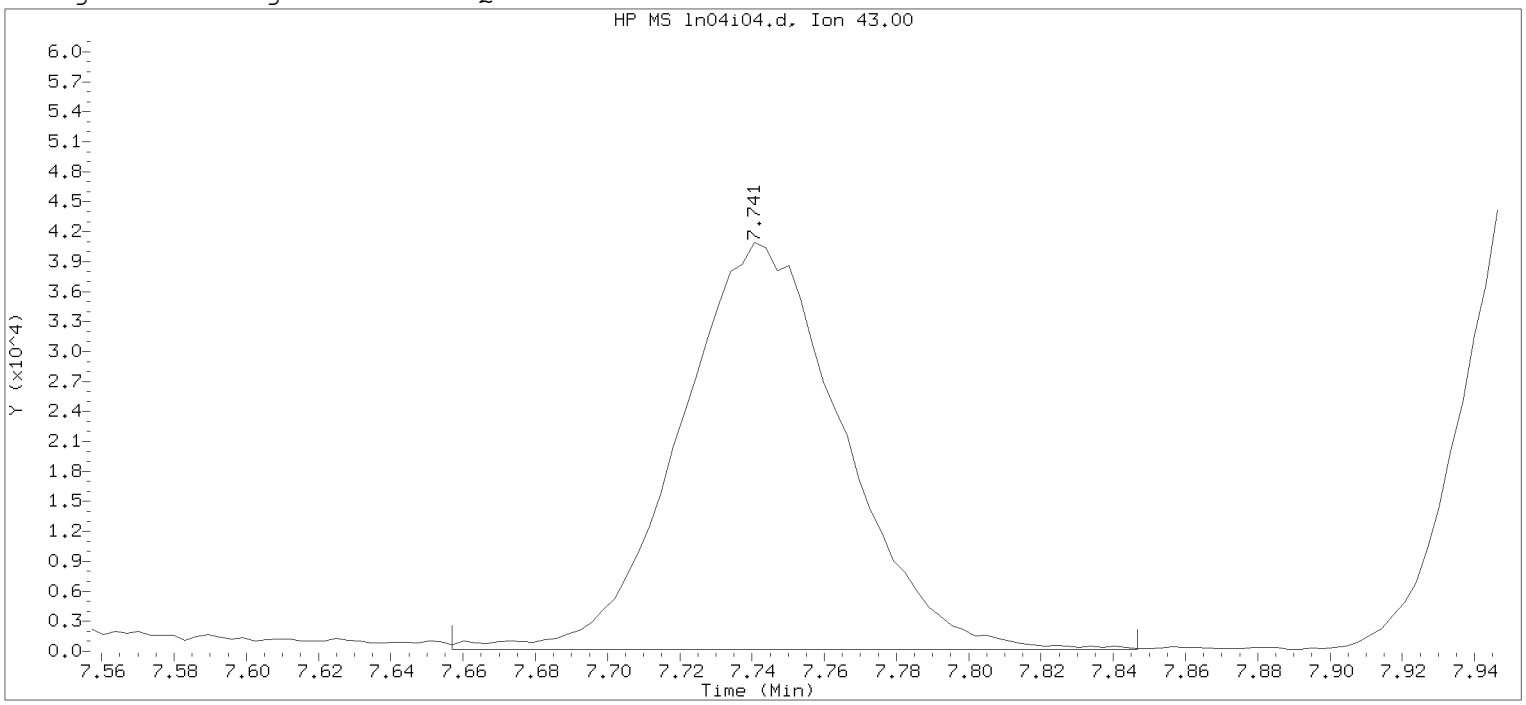
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

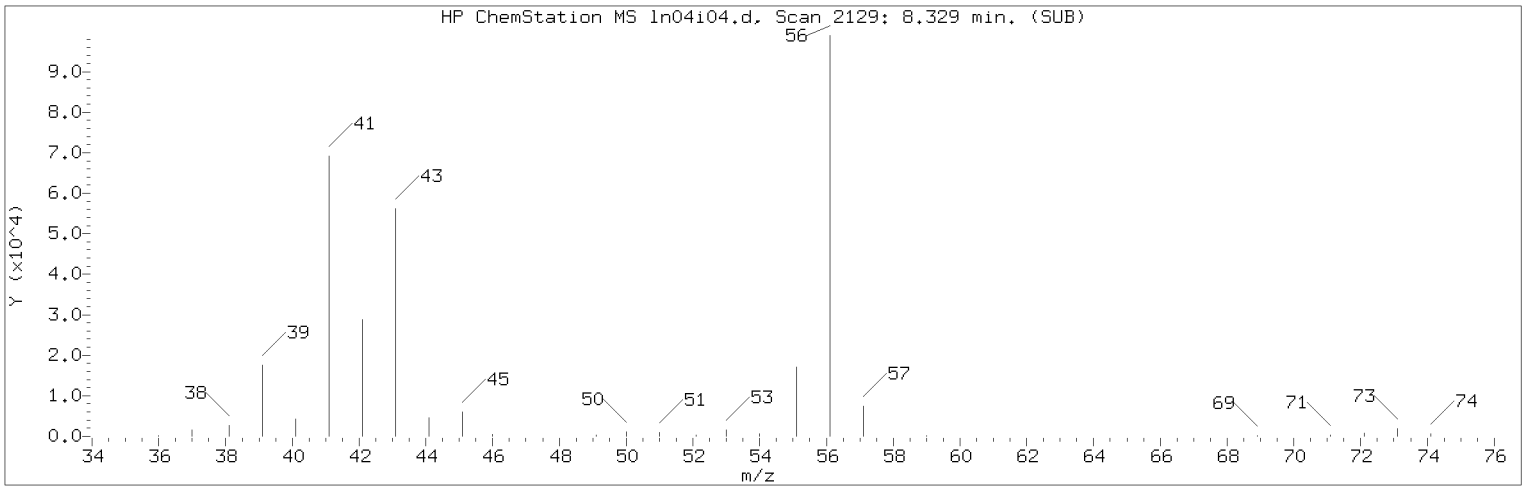
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

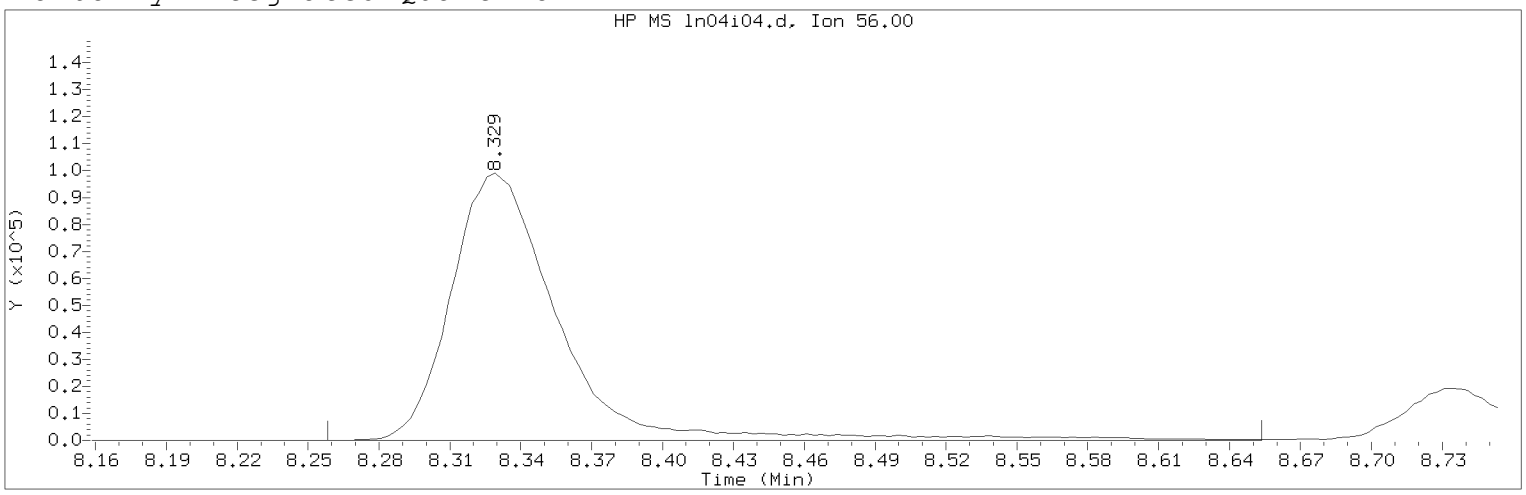
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.741
Quant Ion : 43.00
Area : 127386
On-column Amount (ng) : 21.2604
Integration start scan : 1919 Integration stop scan: 1978
Y at integration start : 203 Y at integration end: 203

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

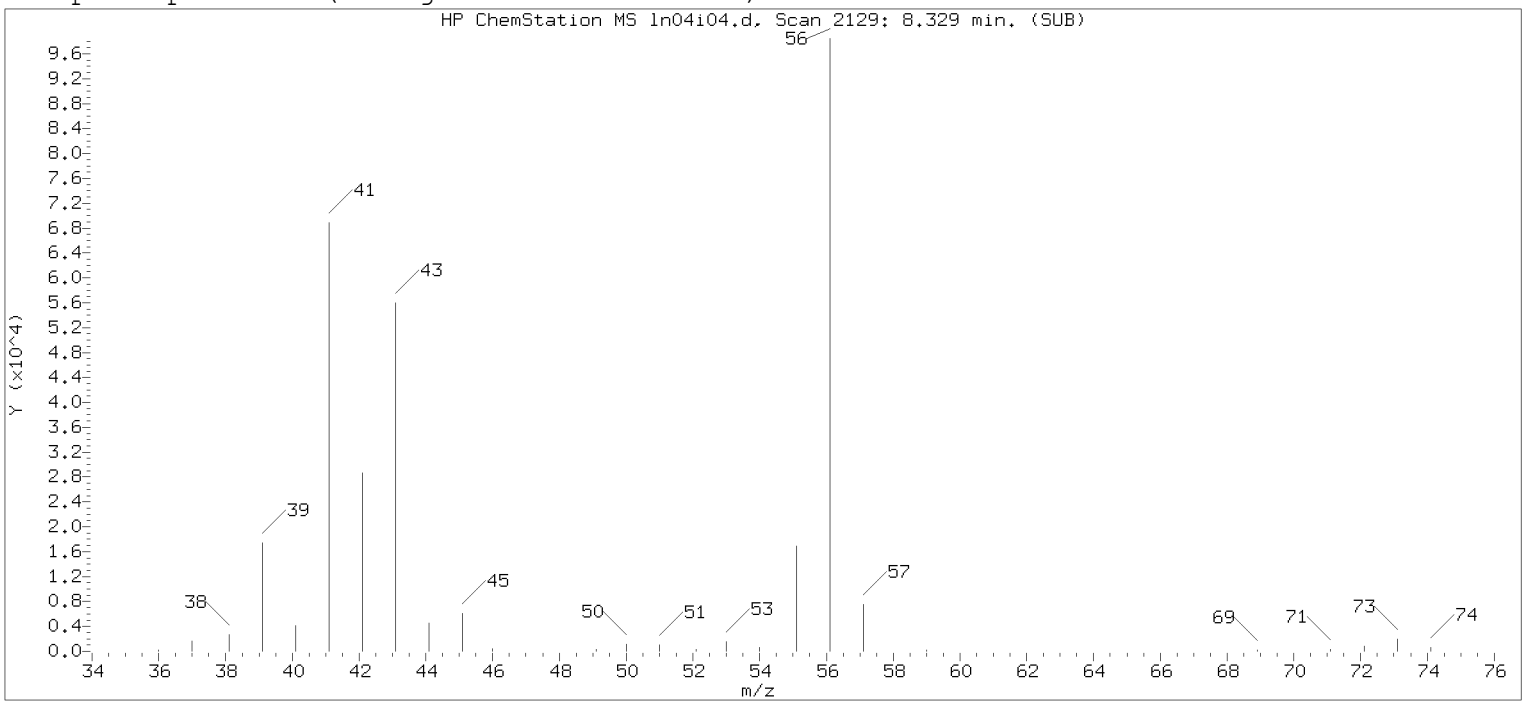
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area (flag) : 312189M
On-Column Amount (ng) : 992.0871
Integration start scan : 2106 Integration stop scan: 2229
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

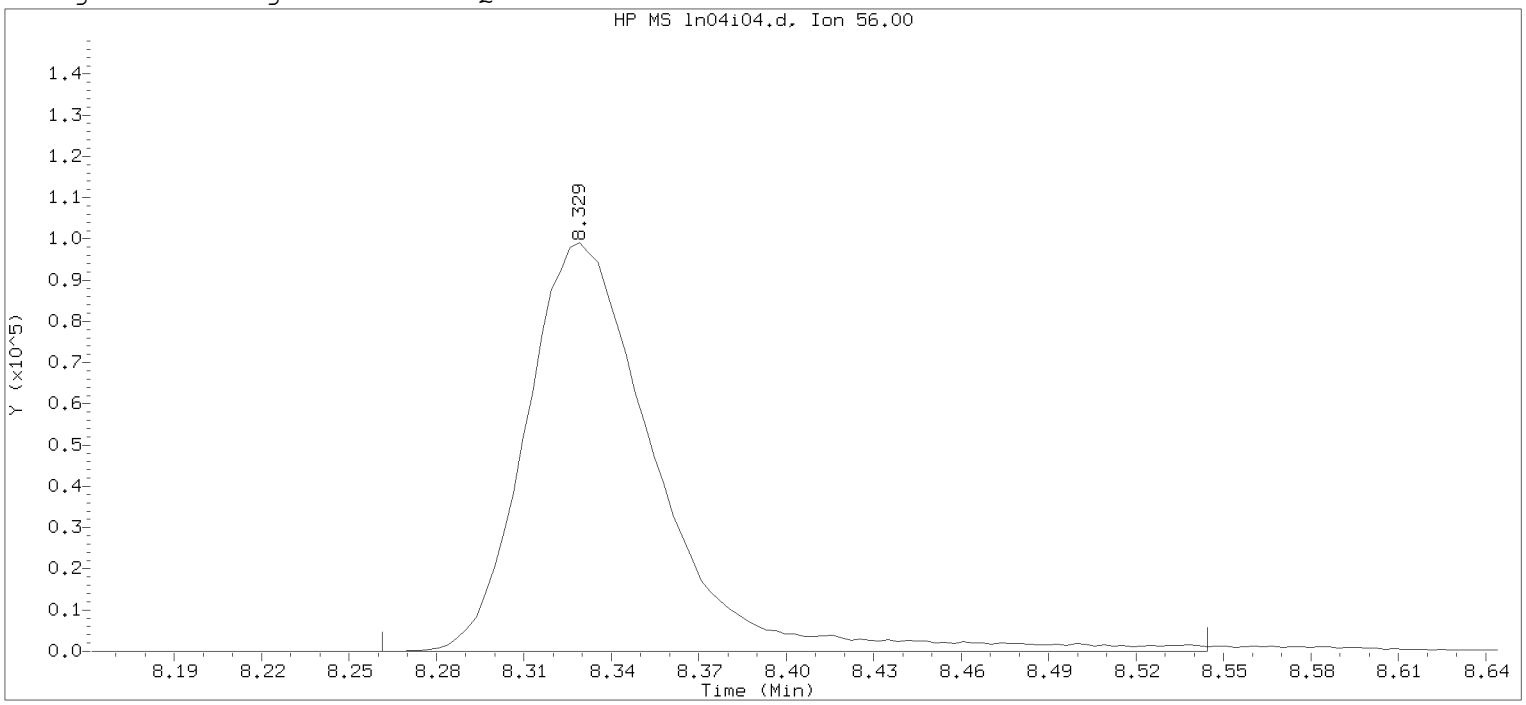
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

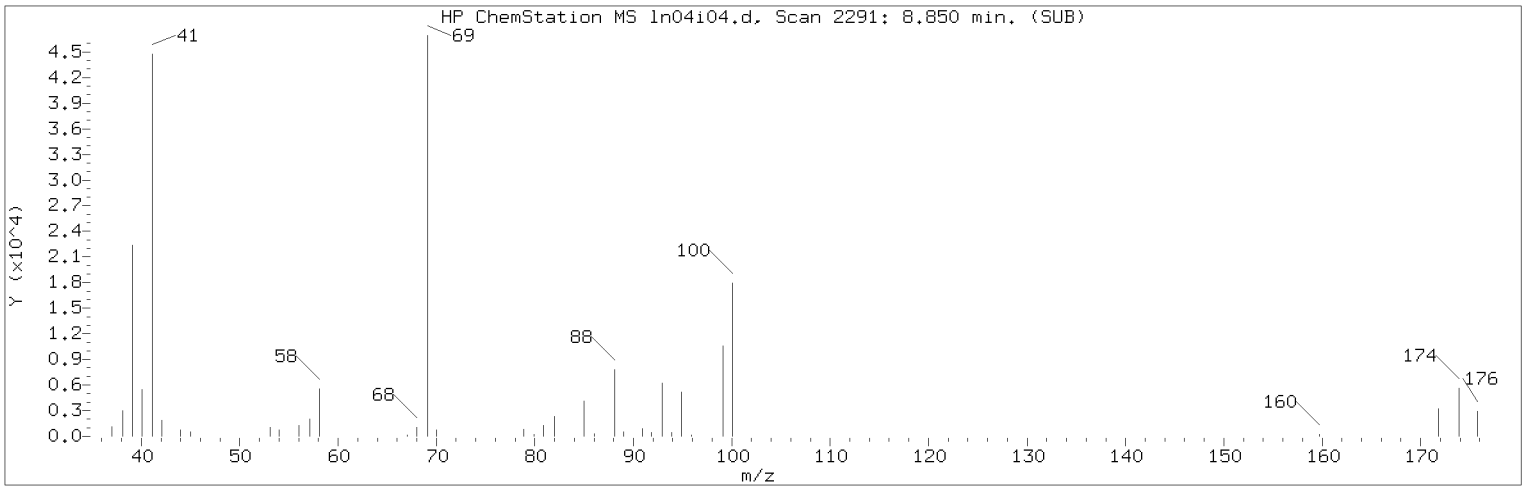
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

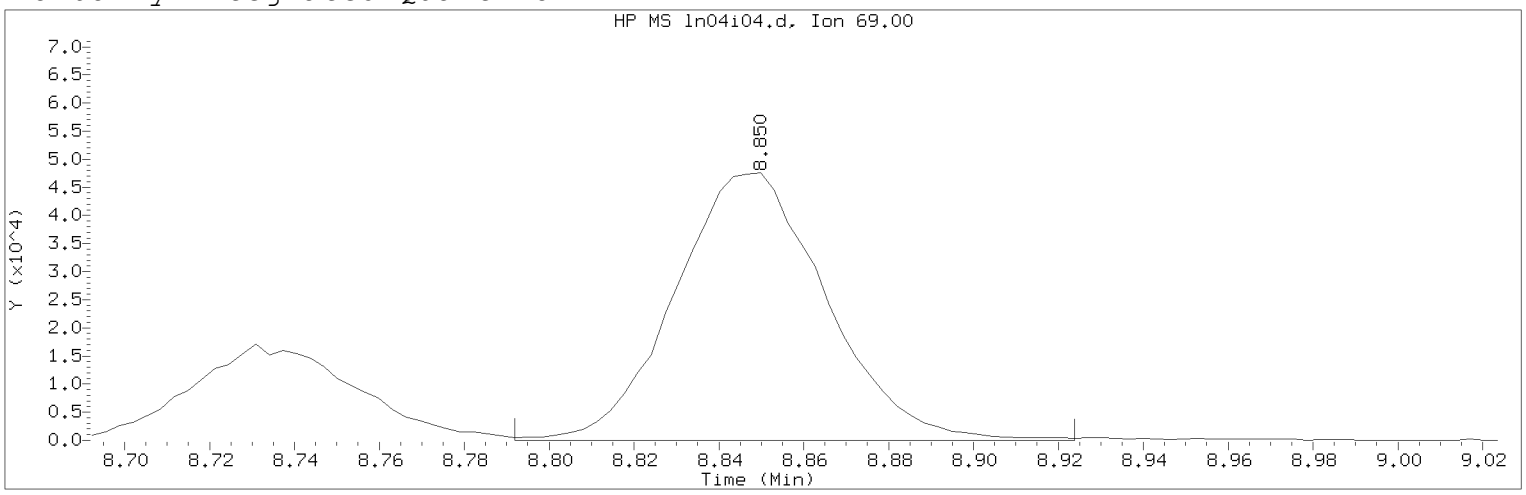
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area : 307443
On-column Amount (ng) : 938.0571
Integration start scan : 2107 Integration stop scan: 2195
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

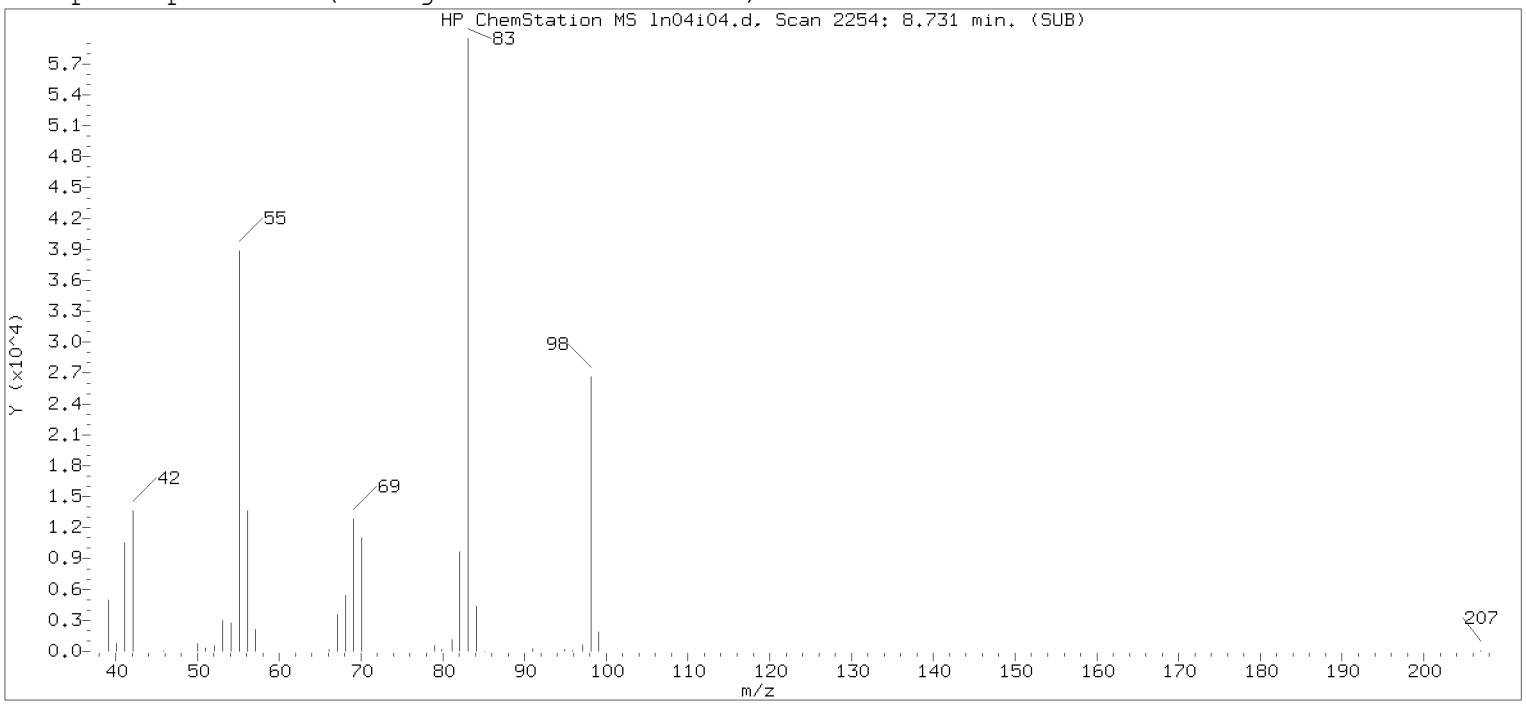
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2291
Retention Time (minutes): 8.850
Quant Ion : 69.00
Area (flag) : 117550A
On-Column Amount (ng) : 20.8506
Integration start scan : 2272 Integration stop scan: 2313
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

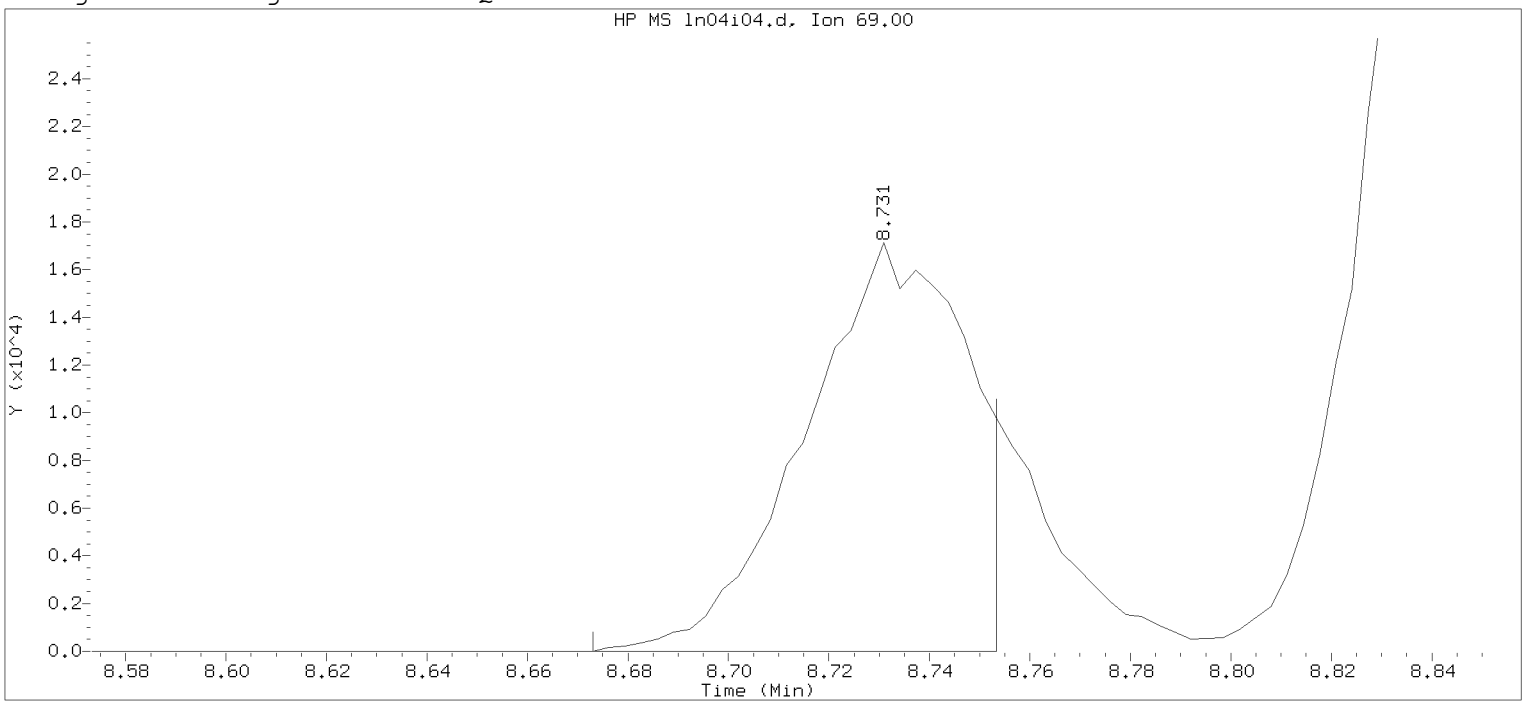
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

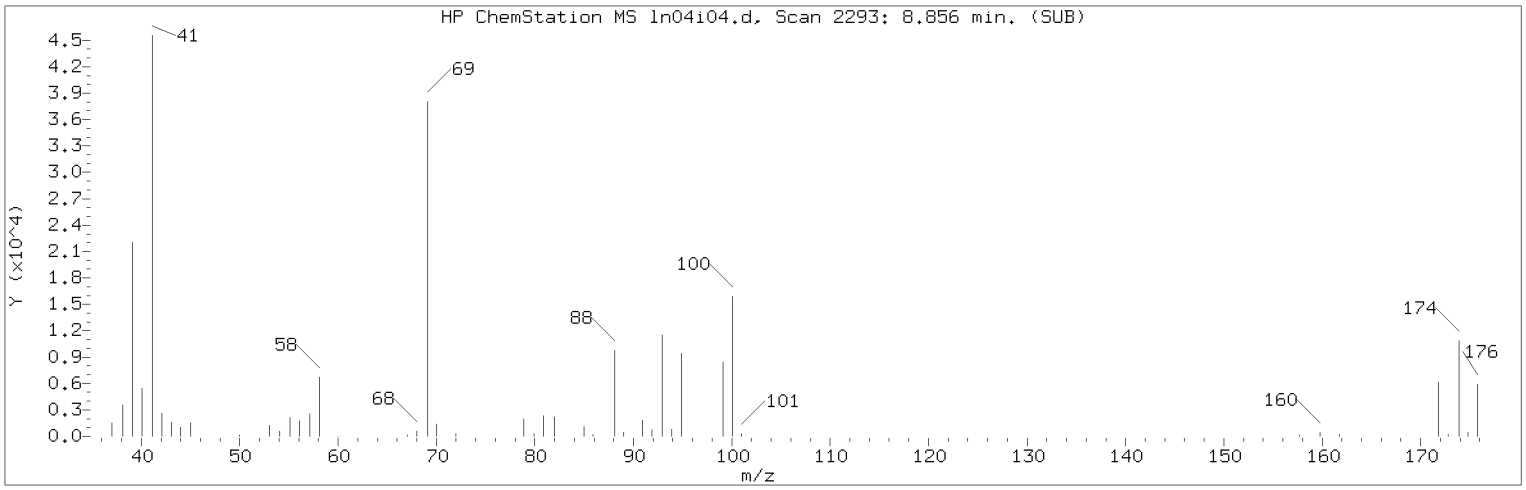
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

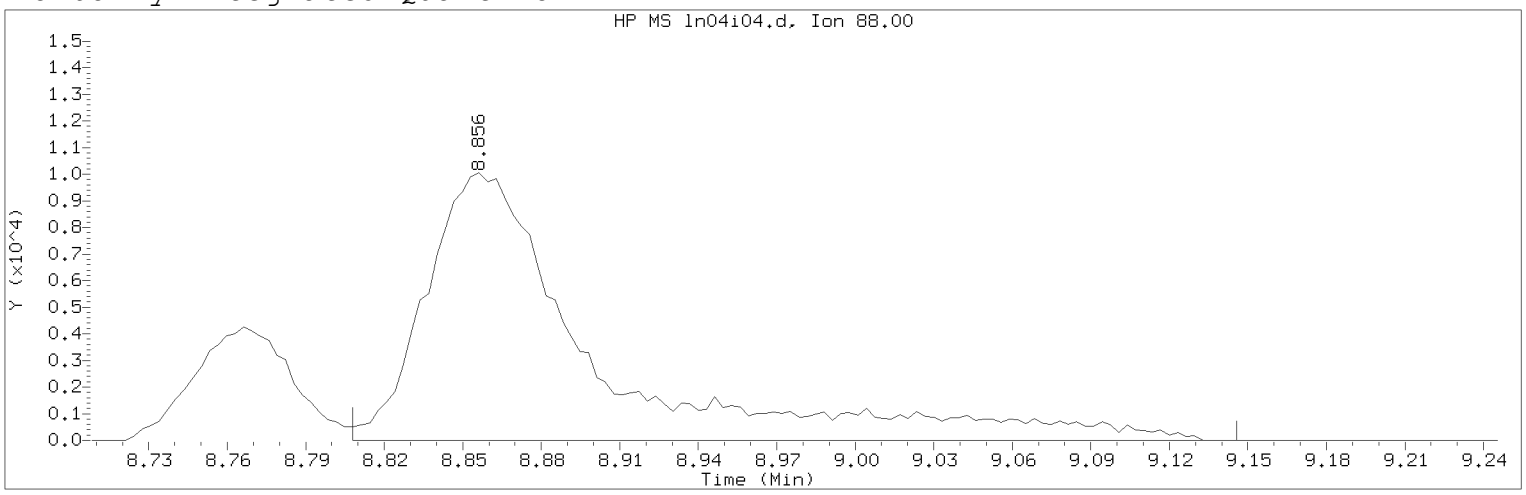
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2254
Retention Time (minutes): 8.731
Quant Ion : 69.00
Area : 37815
On-column Amount (ng) : 16.5923
Integration start scan : 2235 Integration stop scan: 2260
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

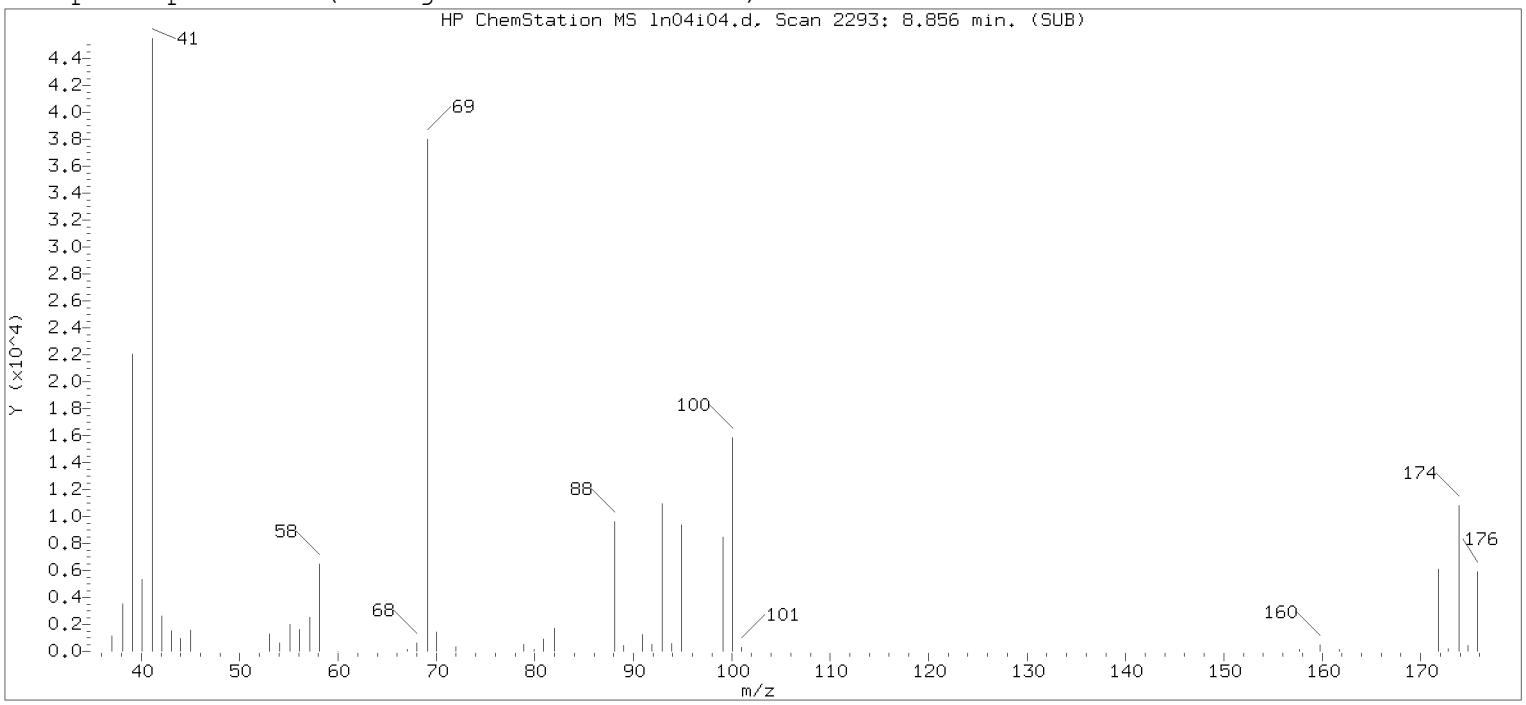
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 44376M
On-Column Amount (ng) : 513.0651
Integration start scan : 2277 Integration stop scan: 2382
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

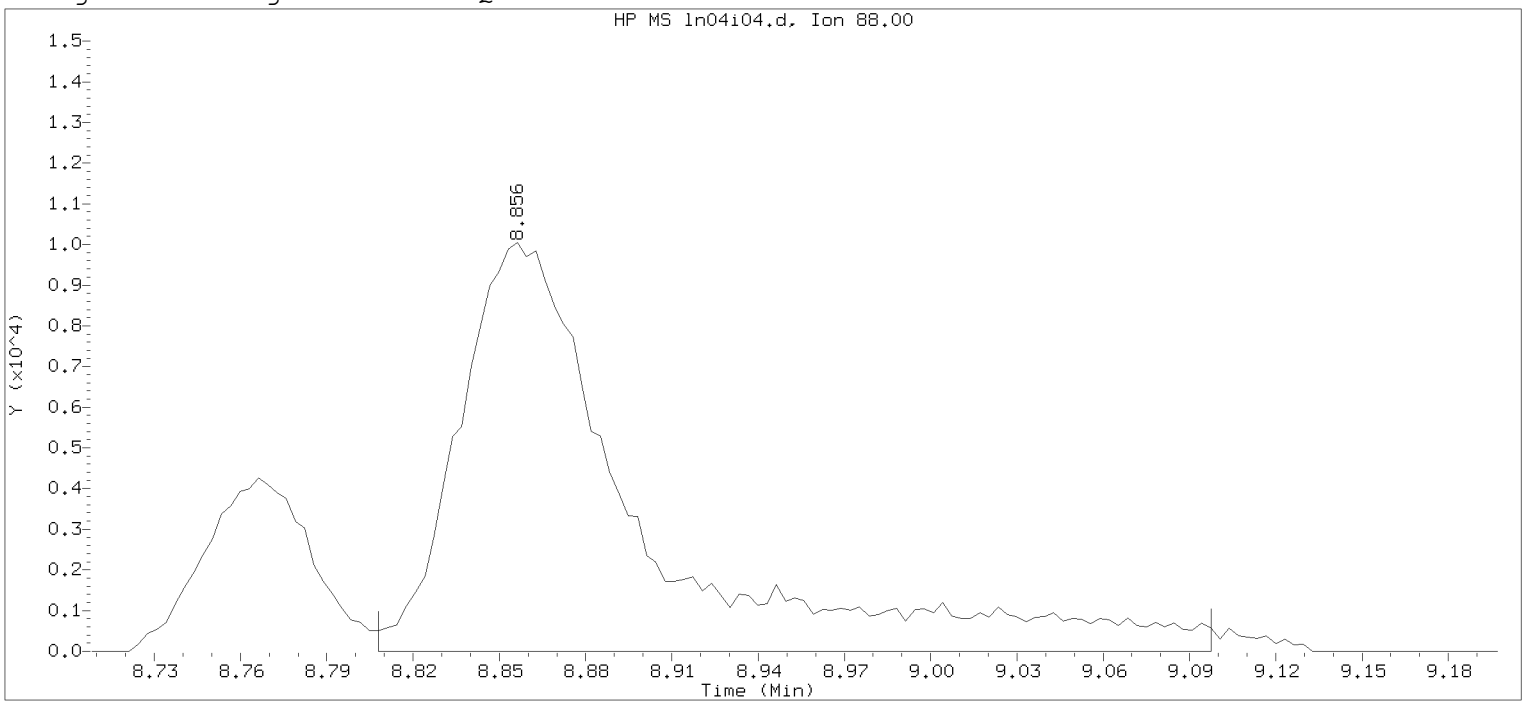
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

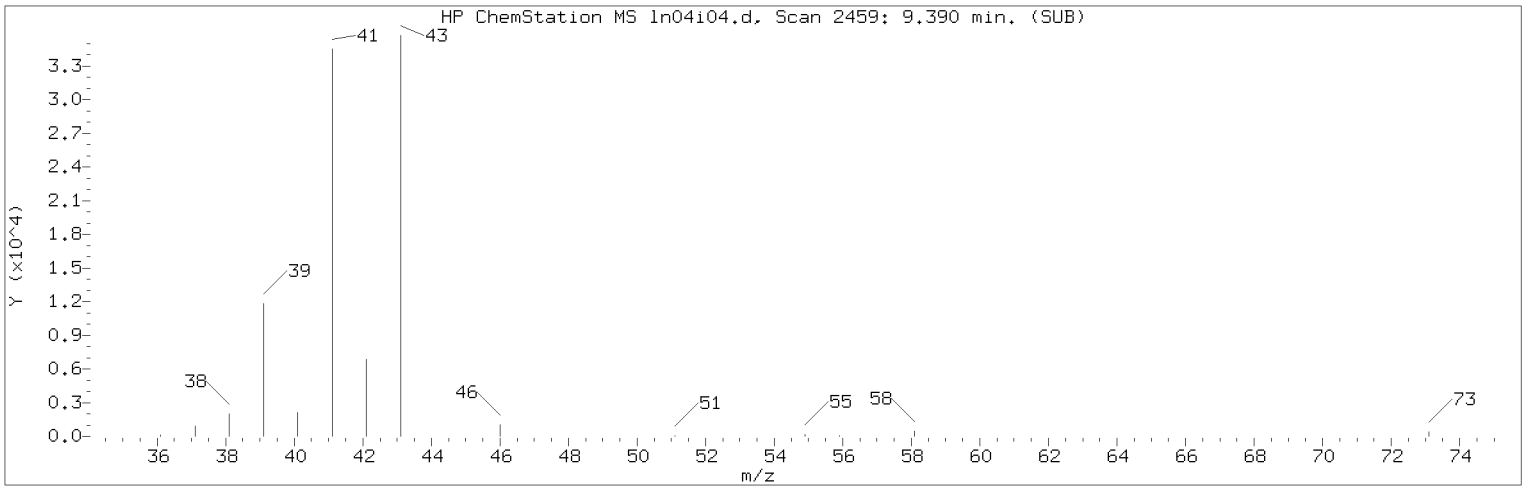
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

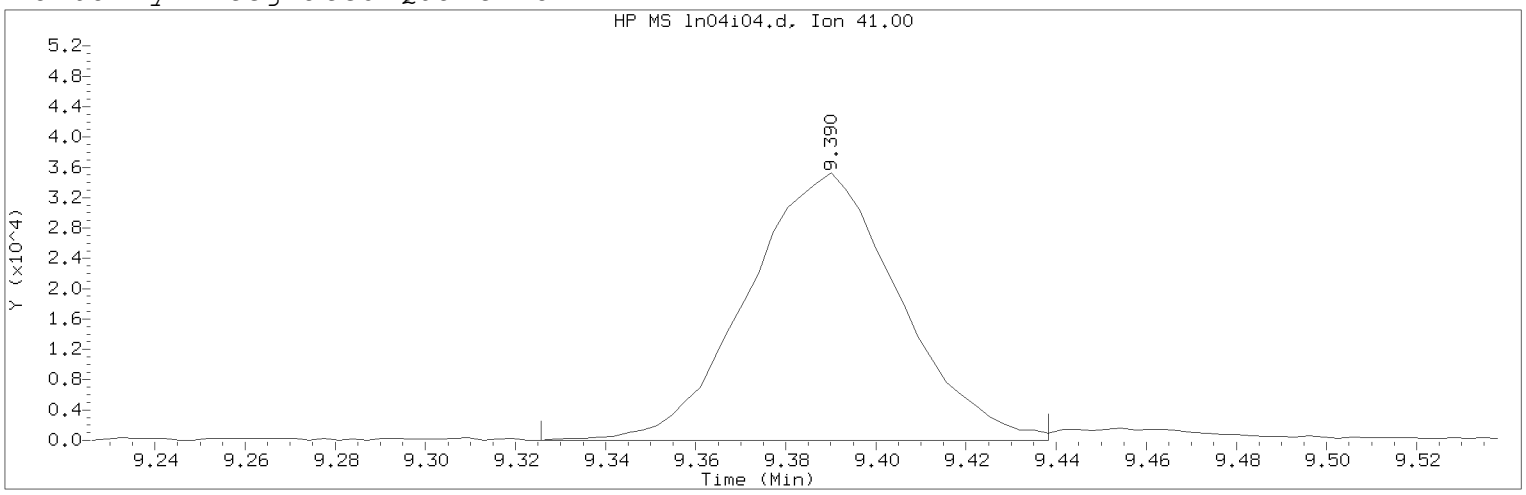
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area : 43671
On-column Amount (ng) : 571.7062
Integration start scan : 2277 Integration stop scan: 2367
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

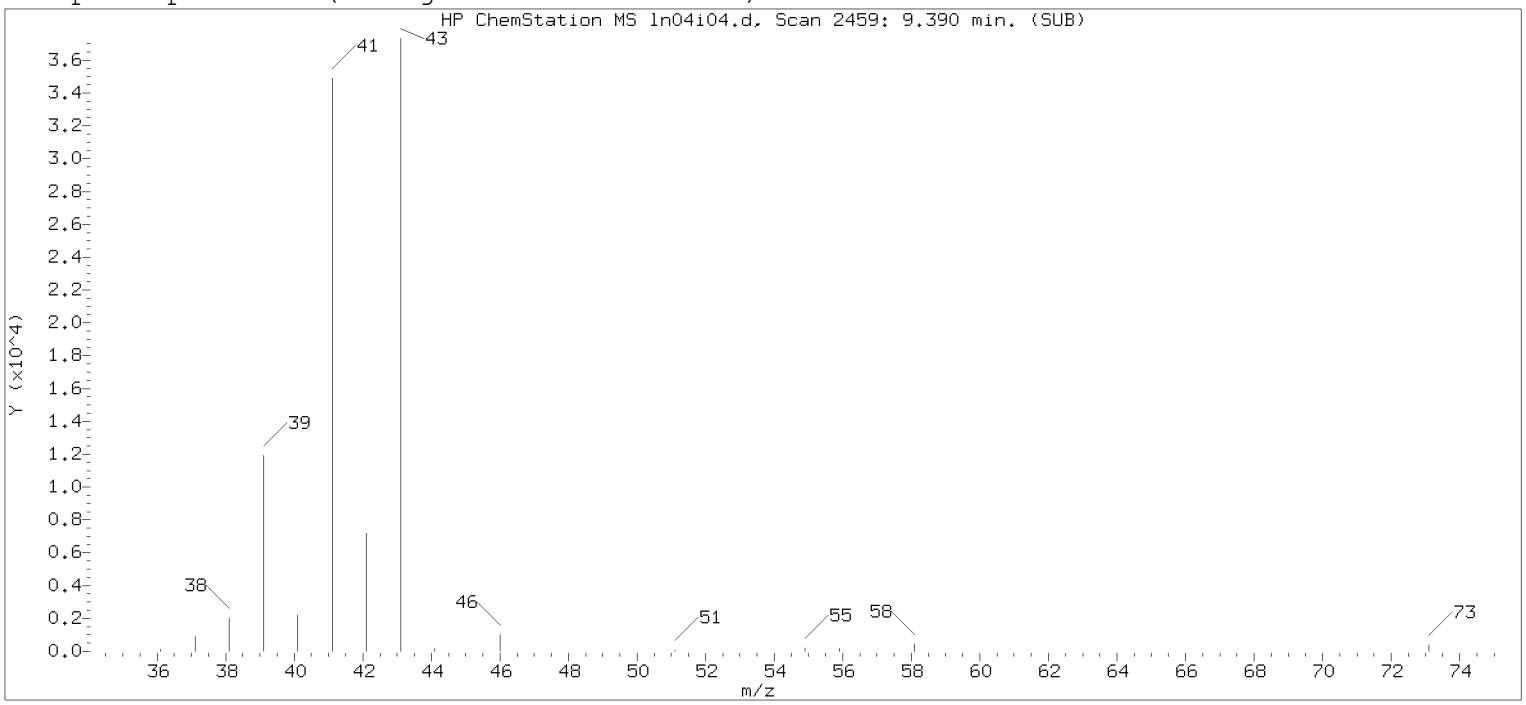
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2459
Retention Time (minutes): 9.390
Quant Ion : 41.00
Area (flag) : 82517M
On-Column Amount (ng) : 40.2472
Integration start scan : 2438 Integration stop scan: 2473
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

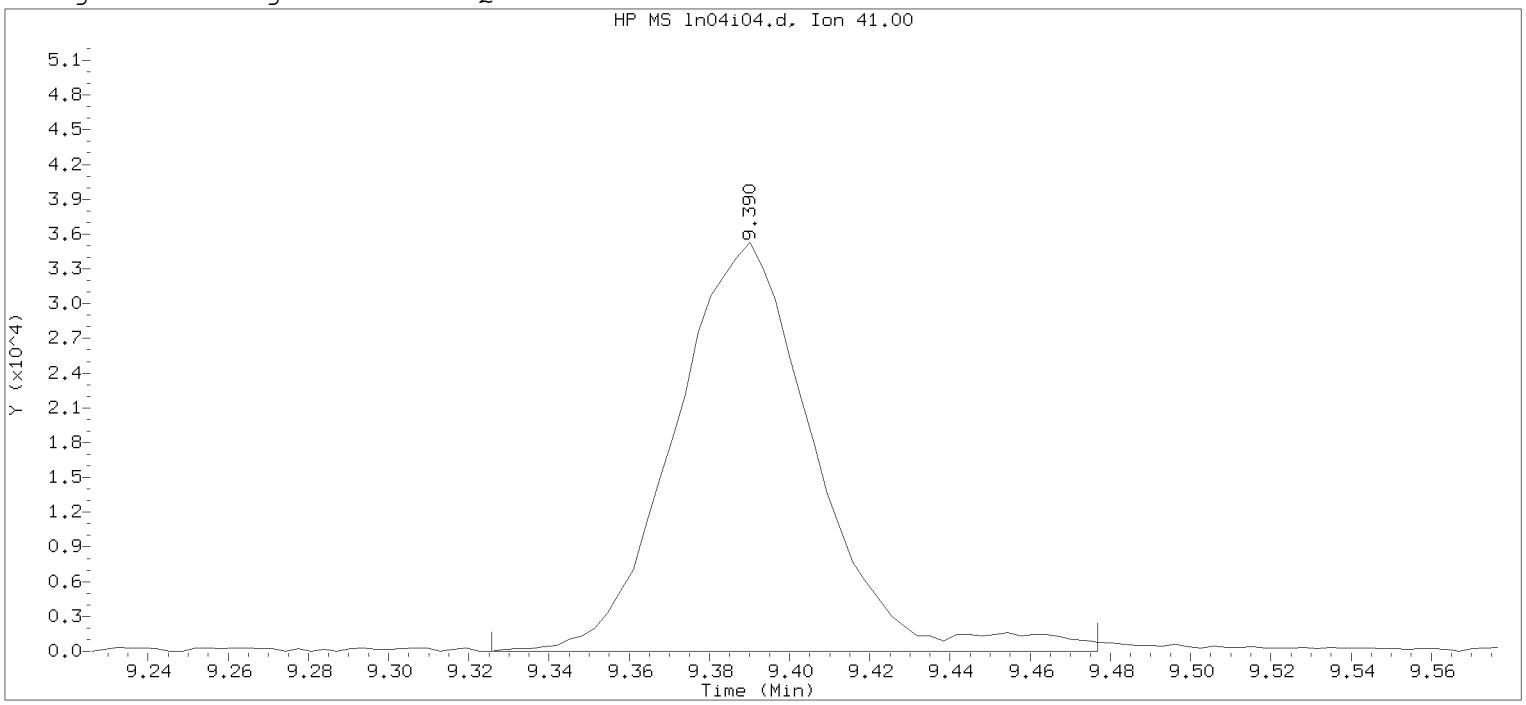
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

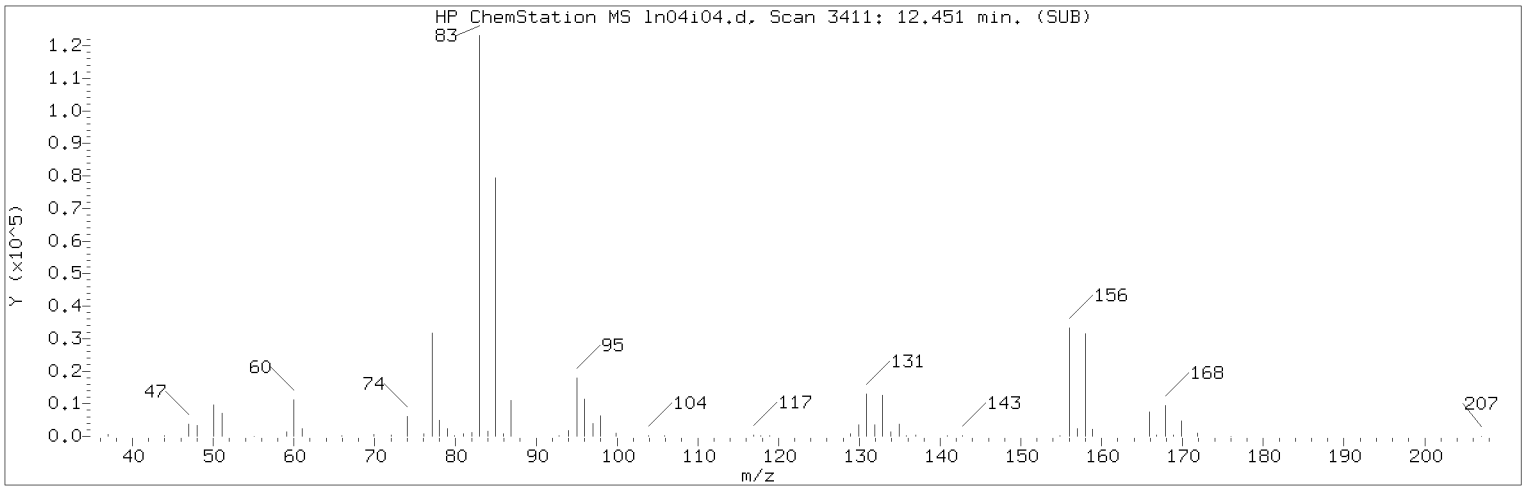
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

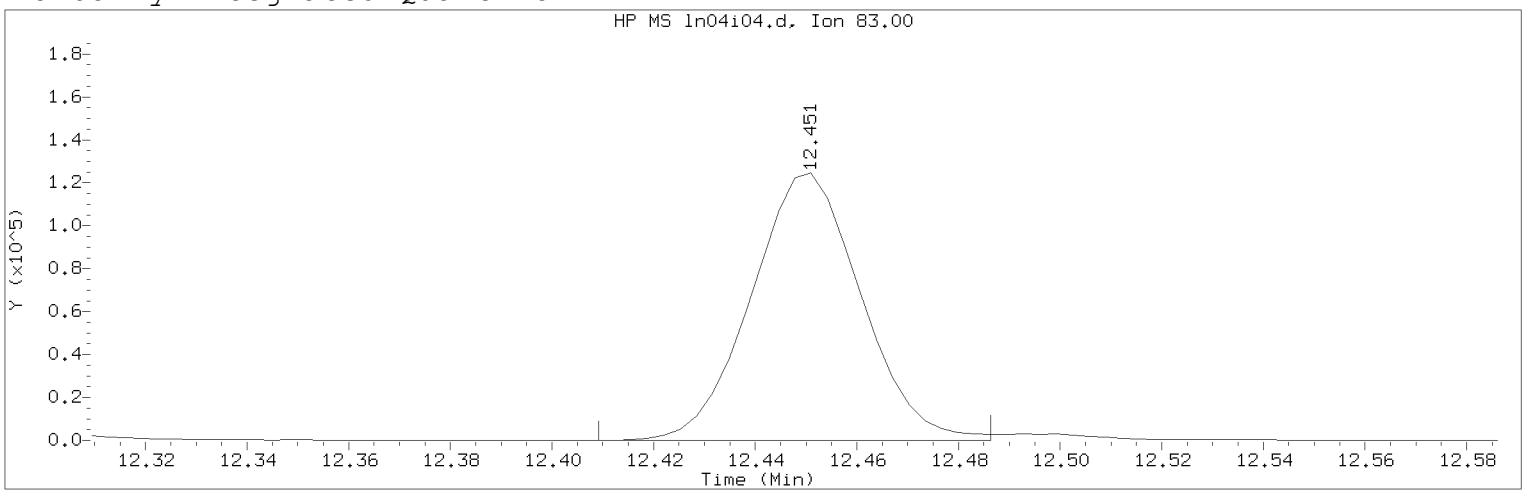
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2459
Retention Time (minutes): 9.390
Quant Ion : 41.00
Area : 85427
On-column Amount (ng) : 37.2727
Integration start scan : 2438 Integration stop scan: 2485
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

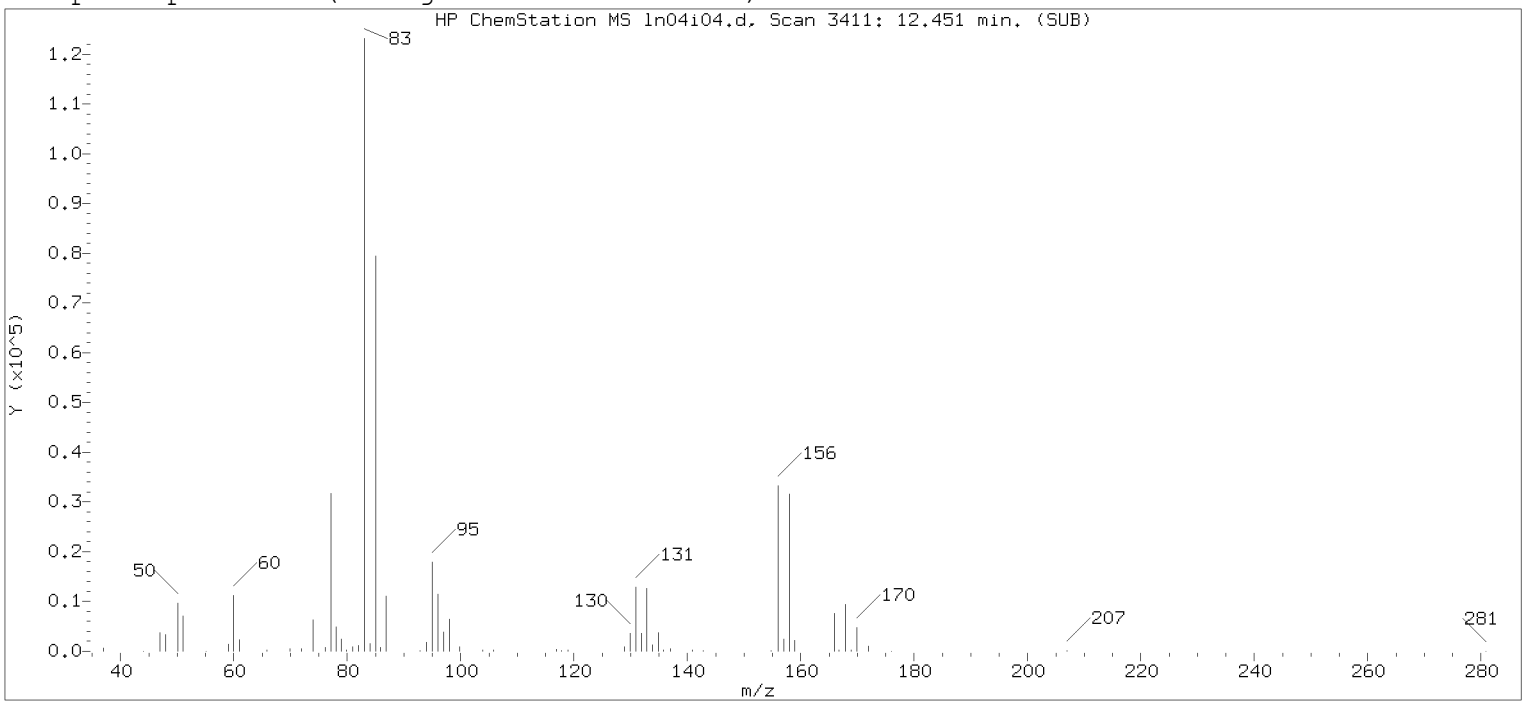
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 186119M
On-Column Amount (ng) : 20.6895
Integration start scan : 3397 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

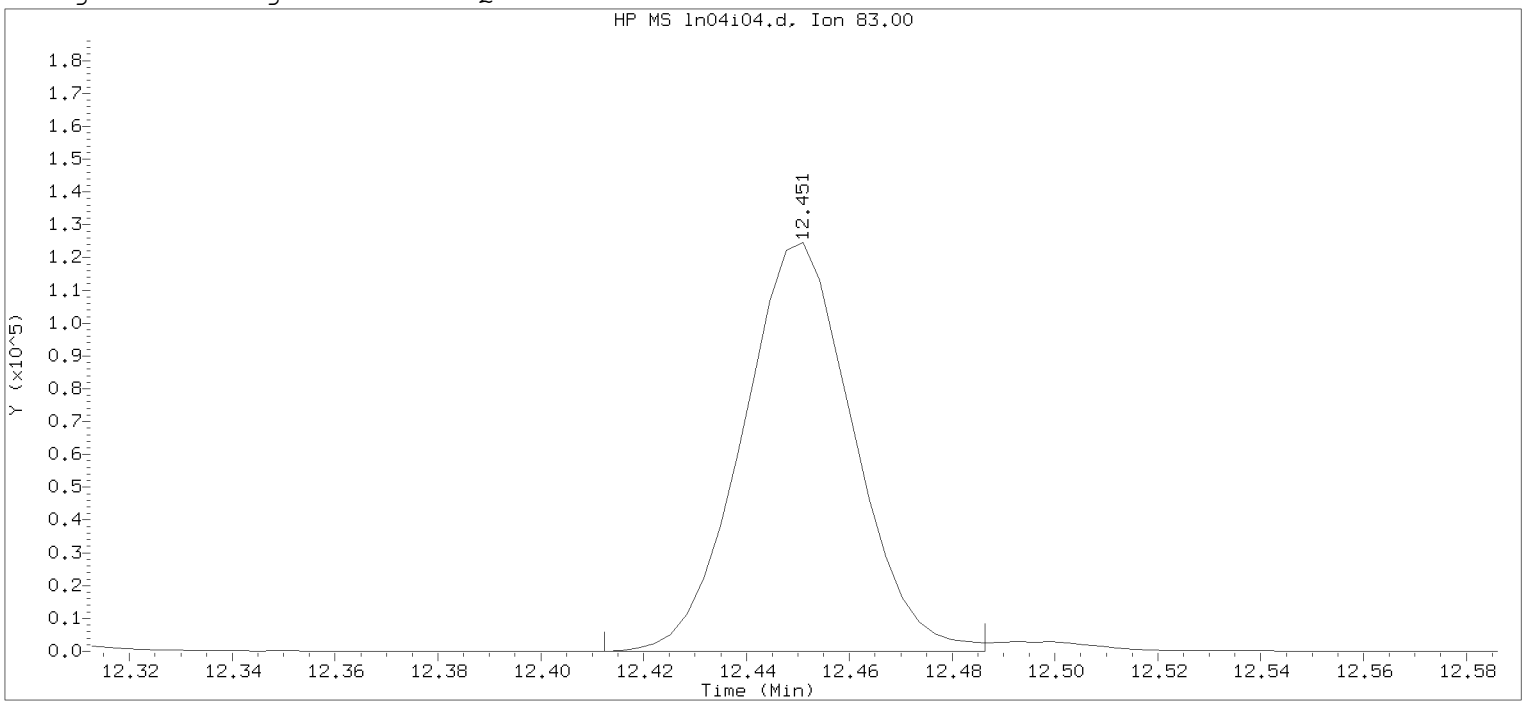
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

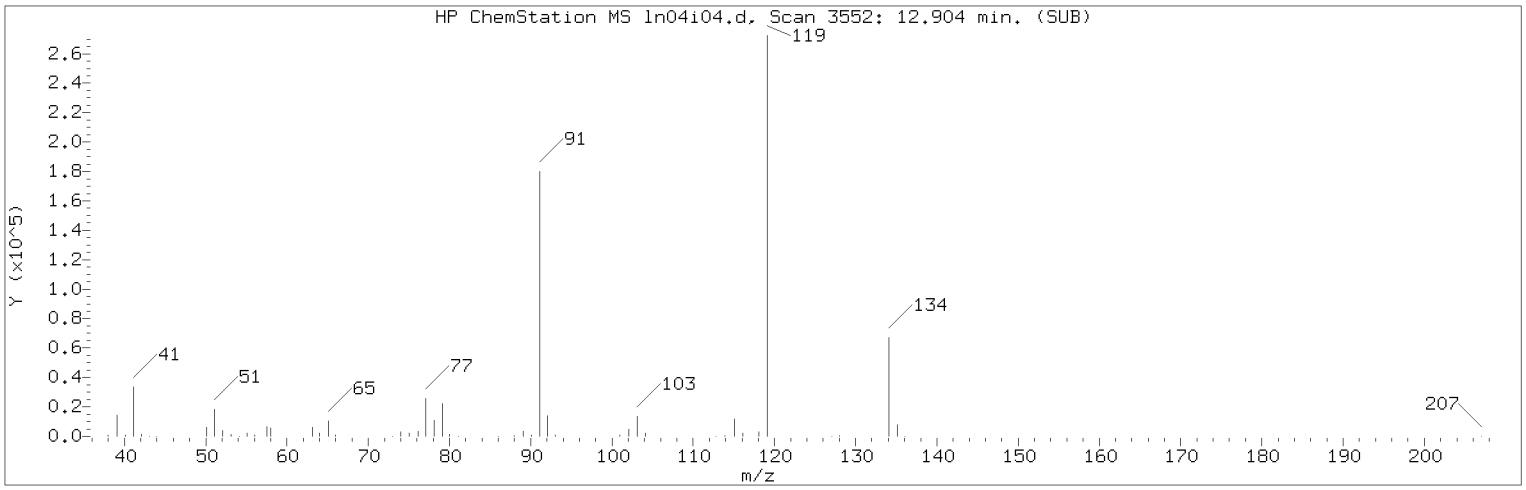
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

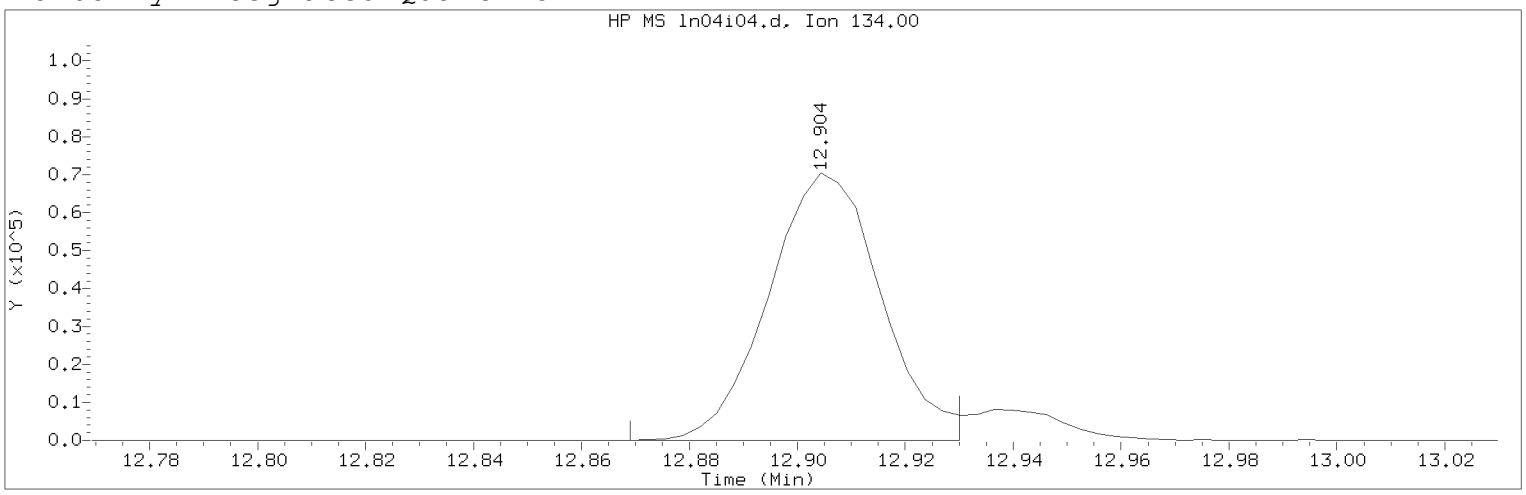
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 185866
On-column Amount (ng) : 19.5938
Integration start scan : 3398 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

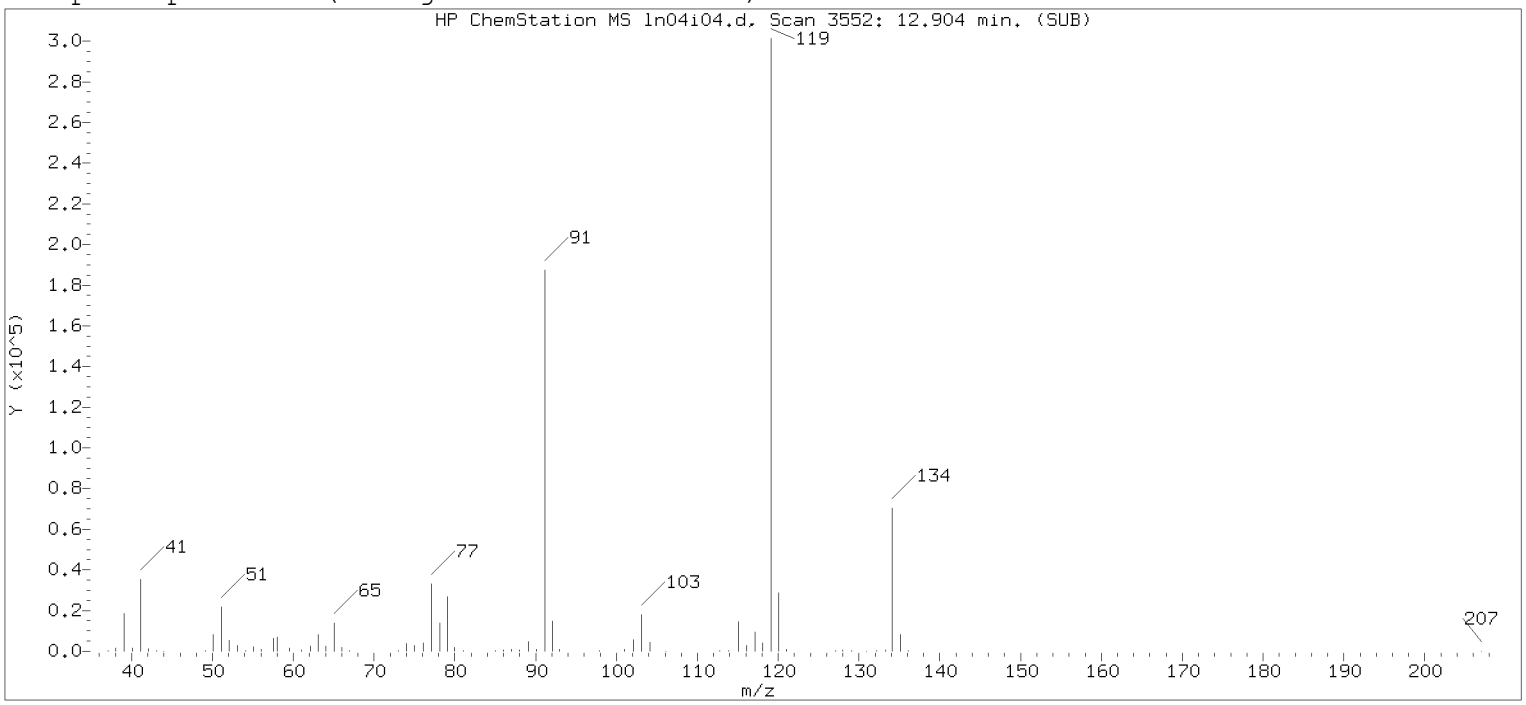
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 101571M
On-Column Amount (ng) : 21.6122
Integration start scan : 3540 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

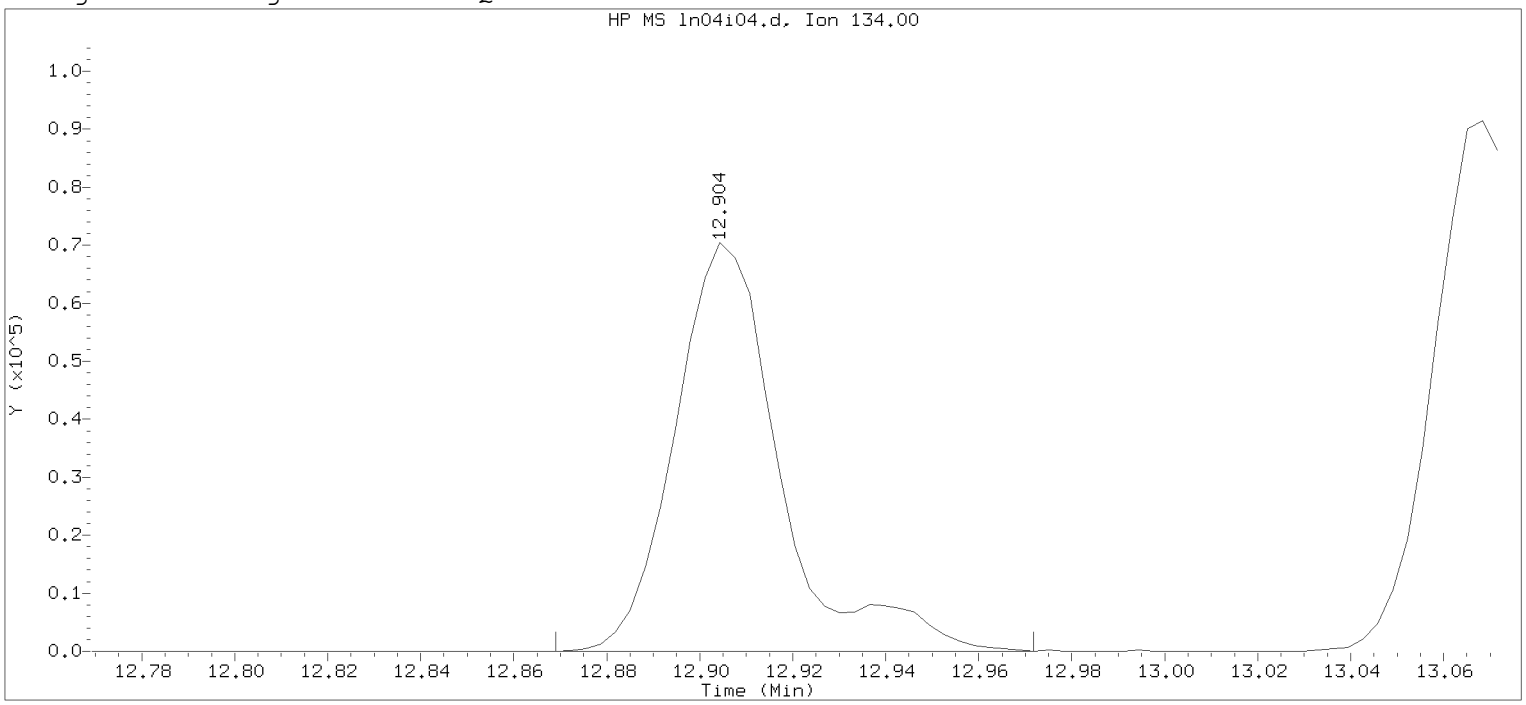
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



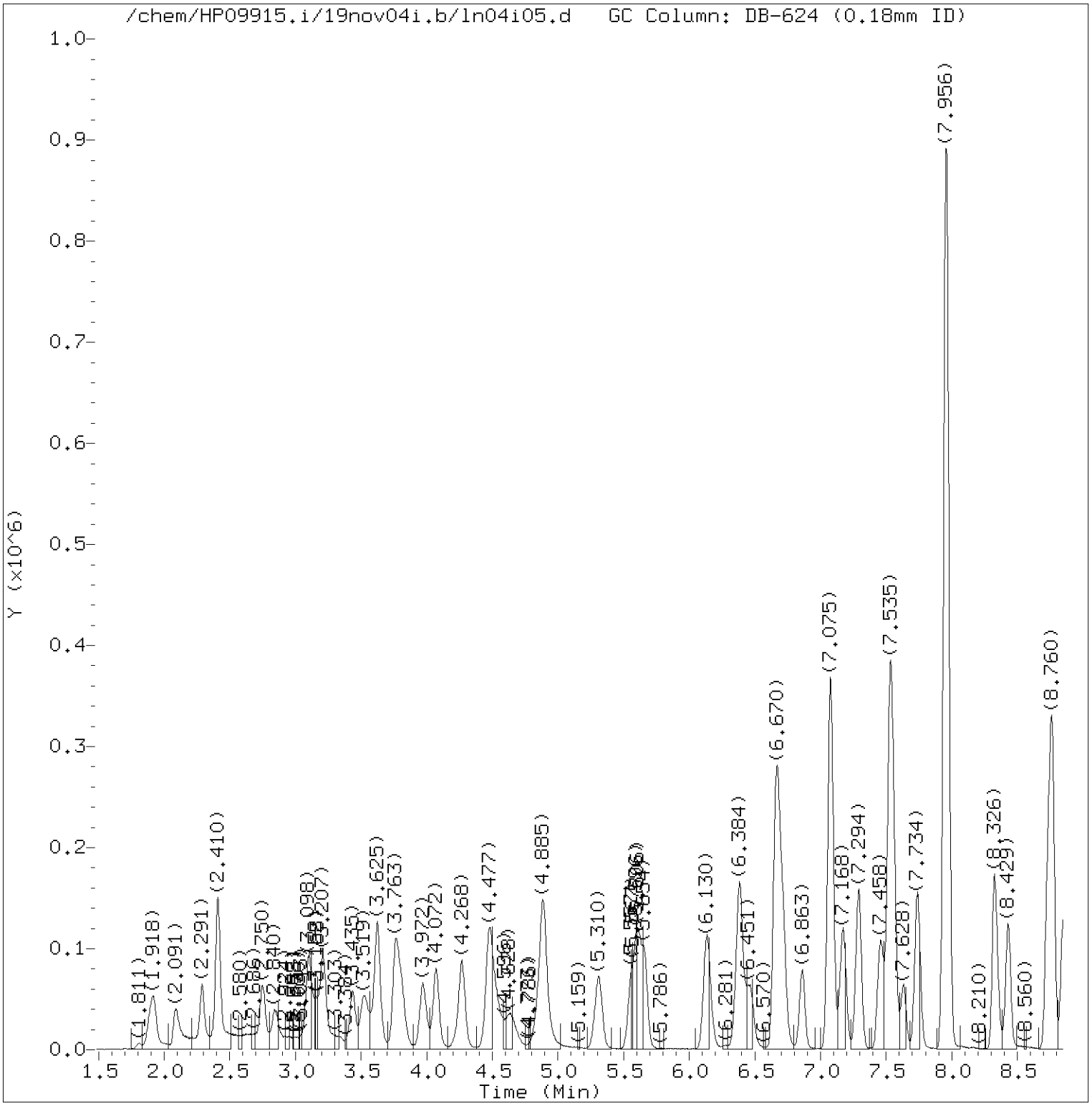
Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 110902
On-column Amount (ng) : 20.6897
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user [illegible]



Total Ion Chromatogram (TIC)

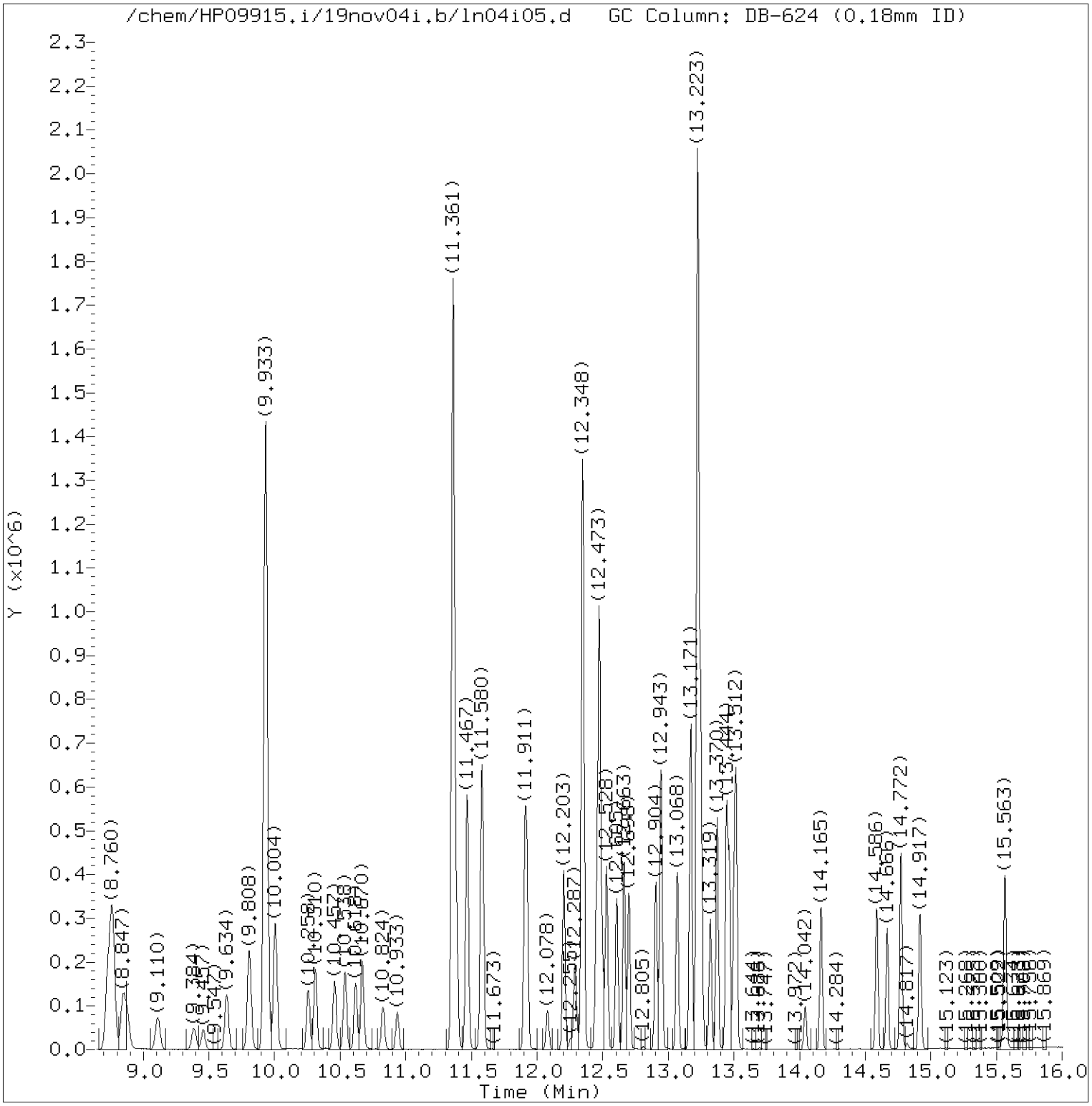
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.091	85	76947M	9.526
4) Chloromethane	(2)	2.291	50	76659	9.847
5) 1,3-Butadiene	(2)	2.406	39	60141M	9.304
6) Vinyl Chloride	(2)	2.413	62	76016	9.784
8) Bromomethane	(2)	2.750	94	54155	9.723
9) Chloroethane	(2)	2.853	64	42303	9.907
10) Dichlorofluoromethane	(2)	3.104	67	106956M	10.459
12) Trichlorofluoromethane	(2)	3.152	101	80624	9.638
11) n-Pentane	(2)	3.213	43	86389	8.739
14) Ethyl ether	(2)	3.438	59	52079	9.635
15) Freon 123a	(2)	3.519	67	65806	9.780
16) Acrolein	(1)	3.625	56	197662	100.013
17) 1,1-Dichloroethene	(2)	3.763	96	48467	9.871
17) 1,1-Dichloroethene	(2)	3.763	63	24200	9.831
19) Freon 113	(2)	3.792	101	51923	9.269
18) Acetone	(1)	3.805	58	17383	19.619
22) Methyl Iodide	(2)	3.969	142	101688	9.995
21) 2-Propanol	(1)	4.001	45	63841	100.227
23) Carbon Disulfide	(2)	4.075	76	179738	9.714
27) Methyl Acetate	(2)	4.245	43	62026	9.809
25) Allyl Chloride	(2)	4.268	41	86653	9.838
28) Methylene Chloride	(2)	4.474	84	58140	9.949
29)*t-Butyl alcohol-d10	(1)	4.509	65	263427M	250.000
30) t-Butyl alcohol	(1)	4.644	59	111005	100.090
31) Acrylonitrile	(2)	4.840	53	34130	10.032
33) Methyl Tertiary Butyl Ether	(2)	4.882	73	189173	10.147
32) trans-1,2-Dichloroethene	(2)	4.889	96	56133	9.883
34) n-Hexane	(2)	5.306	57	75187M	8.508
36) 1,1-Dichloroethane	(2)	5.557	63	99074	9.999
38) di-Isopropyl ether	(2)	5.606	45	191363	10.014
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	84906	9.551
40) Ethyl t-butyl ether	(2)	6.136	59	188350	10.156
43) 1,2-Dichloroethene (Total)	(2)		96	118698	19.696
44) 2-Butanone	(2)	6.364	43	85445	19.565
42) cis-1,2-Dichloroethene	(2)	6.387	96	62565	9.814
45) 2,2-Dichloropropane	(2)	6.396	77	74849	9.717
47) Propionitrile	(1)	6.464	54	136751	98.961
48) Methacrylonitrile	(2)	6.663	67	181171	49.366

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	34163	10.106
50) Tetrahydrofuran	(1)	6.724	71	24588	19.698
51) Chloroform	(2)	6.863	83	93507	9.867
52)$Dibromofluoromethane	(2)	7.072	113	280960	49.616
52)$Dibromofluoromethane	(2)	7.075	111	286315	49.589
53) 1,1,1-Trichloroethane	(2)	7.078	97	77742	9.611
54) Cyclohexane	(2)	7.175	56	96567	8.928
54) Cyclohexane	(2)	7.175	84	84021	8.942
54) Cyclohexane	(2)	7.175	69	29917	8.942
56) Carbon Tetrachloride	(2)	7.287	117	63638	9.276
55) 1,1-Dichloropropene	(2)	7.294	75	75943	9.694
58) Isobutyl Alcohol	(1)	7.458	41	94699	253.736
57)$1,2-Dichloroethane-d4	(2)	7.532	102	72410	50.173
57)$1,2-Dichloroethane-d4	(2)	7.528	65	317862	49.423
57)$1,2-Dichloroethane-d4	(2)	7.528	104	46131	50.043
60) Benzene	(2)	7.557	78	235083	9.978
61) 1,2-Dichloroethane	(2)	7.634	62	74555	9.839
61) 1,2-Dichloroethane	(2)	7.634	98	7256	9.676
65) t-Amyl methyl ether	(2)	7.740	73	187995	10.099
66)*Fluorobenzene	(2)	7.956	96	1158257	50.000
67) n-Heptane	(2)	7.959	43	65347MA	7.916
69) n-Butanol	(1)	8.326	56	166674M	518.868
71) Trichloroethene	(2)	8.425	95	57378	9.672
72) Methylcyclohexane	(2)	8.731	83	104101	9.459
72) Methylcyclohexane	(2)	8.731	98	46774	9.392
73) 1,2-Dichloropropane	(2)	8.766	63	59459	9.939
76) Methyl Methacrylate	(2)	8.843	69	56123	9.701
75) 1,4-Dioxane	(1)	8.859	88	22251M	252.018
74) Dibromomethane	(2)	8.875	93	37949	9.804
78) Bromodichloromethane	(2)	9.110	83	66403	9.560
79) 2-Nitropropane	(2)	9.387	41	38245M	18.178
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	24083	9.373
81) cis-1,3-Dichloropropene	(2)	9.638	75	89740	9.728
82) 4-Methyl-2-pentanone	(2)	9.808	43	182101	19.754
83)$Toluene-d8	(3)	9.933	98	1179588	50.250
83)$Toluene-d8	(3)	9.933	100	766795	50.427
88) Toluene	(3)	10.004	92	146792	9.974
90) 1,3-Dichloropropene (total)	(3)		100	170602	19.407

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.255	75	80862	9.679
91) Ethyl Methacrylate	(3)	10.310	69	101774	10.024
92) 1,1,2-Trichloroethane	(3)	10.457	97	55397	9.928
93) Tetrachloroethene	(3)	10.538	166	57668	9.252
94) 1,3-Dichloropropane	(3)	10.615	76	95319	10.005
96) 2-Hexanone	(3)	10.670	43	134577	19.858
97) Dibromochloromethane	(3)	10.824	129	54317	9.503
99) 1,2-Dibromoethane	(3)	10.937	107	59349	9.795
100)*Chlorobenzene-d5	(3)	11.358	117	897139	50.000
101) 1-Chlorohexane	(3)	11.364	91	68517	8.666
102) Chlorobenzene	(3)	11.383	112	167497	10.065
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	53804	9.812
104) Ethylbenzene	(3)	11.467	91	273085	9.708
106) m+p-Xylene	(3)	11.583	106	214450	19.380
108) Xylene (Total)	(3)		106	321712	29.193
107) o-Xylene	(3)	11.908	106	107262	9.813
109) Styrene	(3)	11.924	104	181265	10.036
110) Bromoform	(3)	12.078	173	38599	9.038
111) Isopropylbenzene	(3)	12.203	105	257704	9.400
112) Cyclohexanone	(1)	12.290	55	84173	243.422
114)$4-Bromofluorobenzene	(3)	12.348	95	448980	50.511
114)$4-Bromofluorobenzene	(3)	12.348	174	372460	50.544
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	99221M	10.583
115) Bromobenzene	(4)	12.464	156	73059	9.795
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	144573	49.994
117) 1,2,3-Trichloropropane	(4)	12.496	110	30082	10.457
119) n-Propylbenzene	(4)	12.528	91	295857	9.079
120) 2-Chlorotoluene	(4)	12.608	126	64871	9.370
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	216905	9.159
121) 4-Chlorotoluene	(4)	12.698	126	68187	9.462
124) tert-Butylbenzene	(4)	12.907	134	42119M	8.599
125) Pentachloroethane	(4)	12.936	167	40747	9.662
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	231031	9.256
127) sec-Butylbenzene	(4)	13.068	105	254340	8.702
129) 1,3-Dichlorobenzene	(4)	13.168	146	133435	9.735
130) p-Isopropyltoluene	(4)	13.171	119	222820	8.812
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	496298	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	137520	9.678

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	263873	9.980
135) Benzyl Chloride	(4)	13.319	91	189013	9.442
136) 1,3-Diethylbenzene	(4)	13.370	119	162518	9.876
141) Diethylbenzene (total)	(4)		100	469676	29.503
137) 1,4-Diethylbenzene	(4)	13.444	119	170802	9.797
139) n-Butylbenzene	(4)	13.464	92	112696	8.717
138) 1,2-Dichlorobenzene	(4)	13.502	146	133767	9.890
140) 1,2-Diethylbenzene	(4)	13.518	119	136356	9.830
142) 1,2-Dibromo-3-chloropropane	(4)	14.042	75	21471	10.462
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	94358	9.080
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	93971	9.300
147) Hexachlorobutadiene	(4)	14.666	225	44299	9.286
148) Naphthalene	(4)	14.772	128	328233	10.105
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	92049	9.363
150) 2-Methylnaphthalene	(4)	15.563	142	202392	10.118

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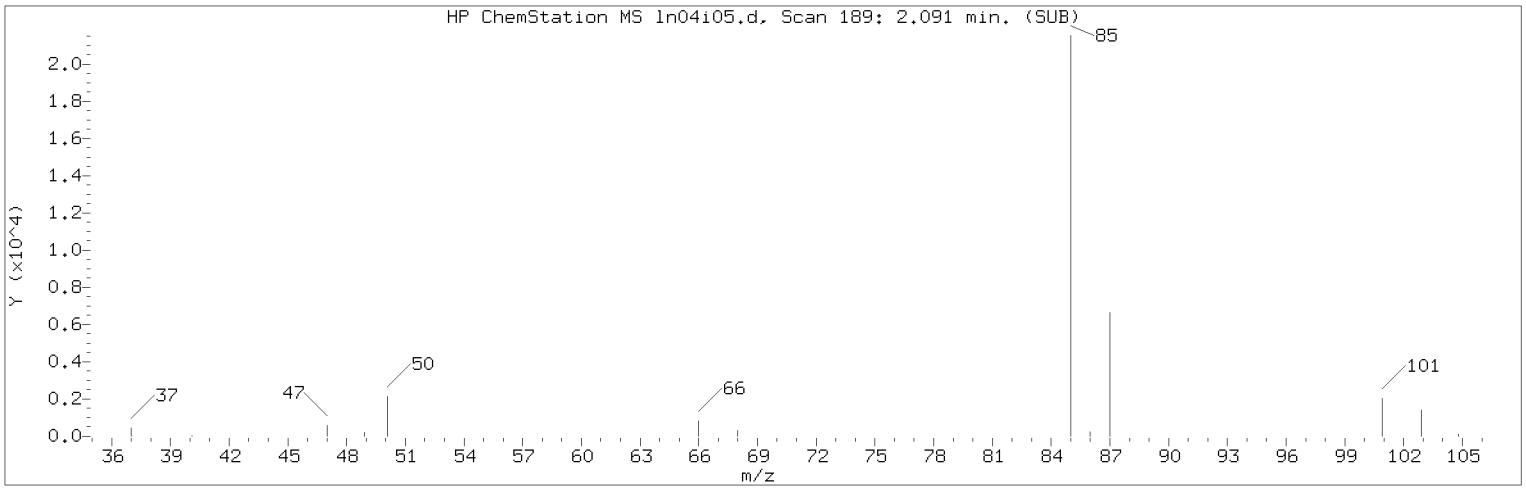
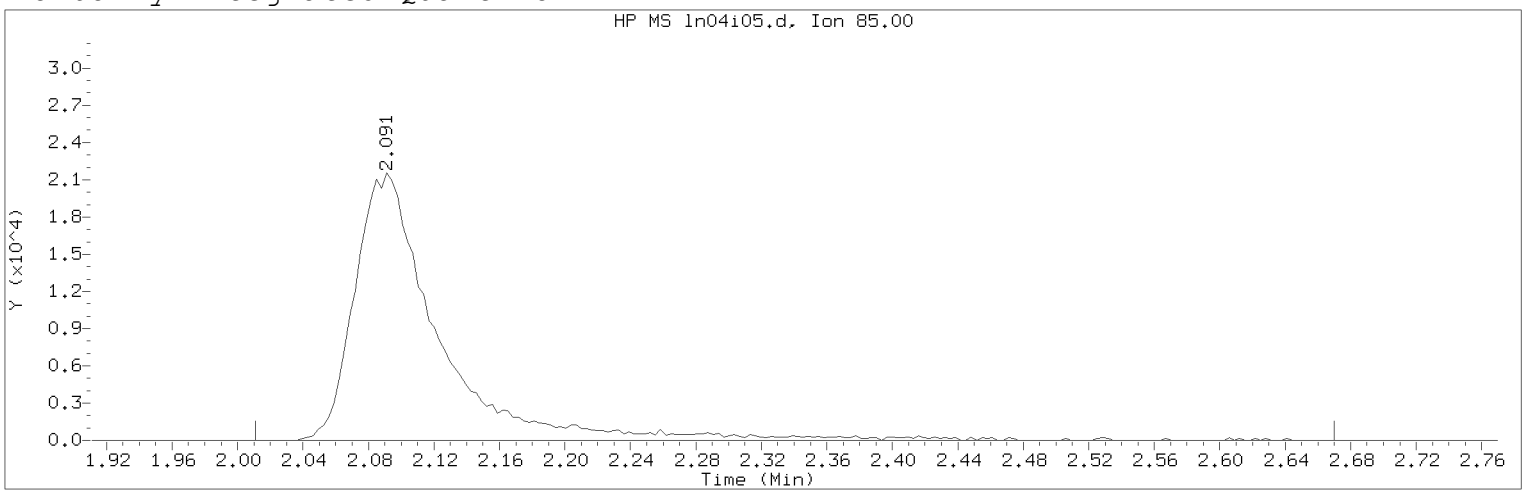
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

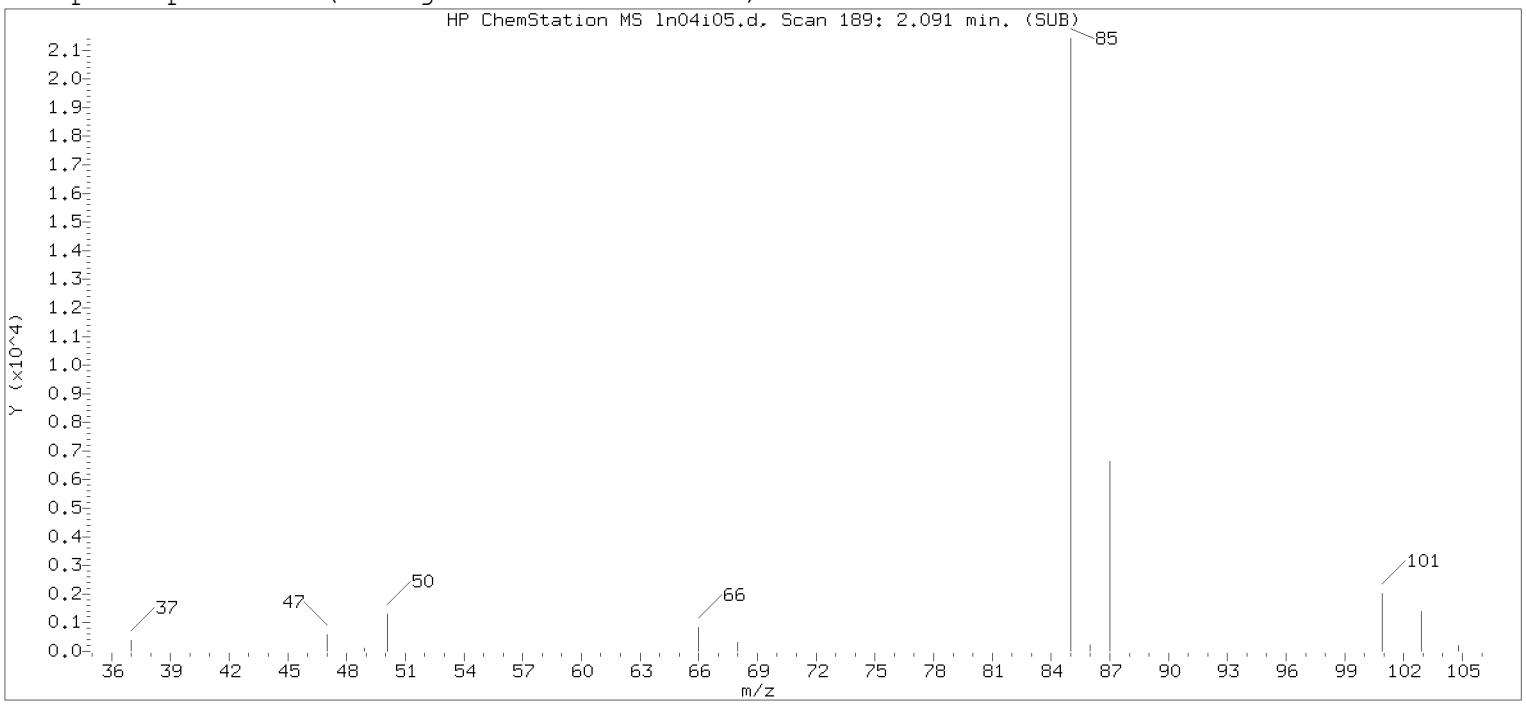
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 189
Retention Time (minutes): 2.091
Quant Ion : 85.00
Area (flag) : 76947M
On-Column Amount (ng) : 9.5263
Integration start scan : 163 Integration stop scan: 368
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

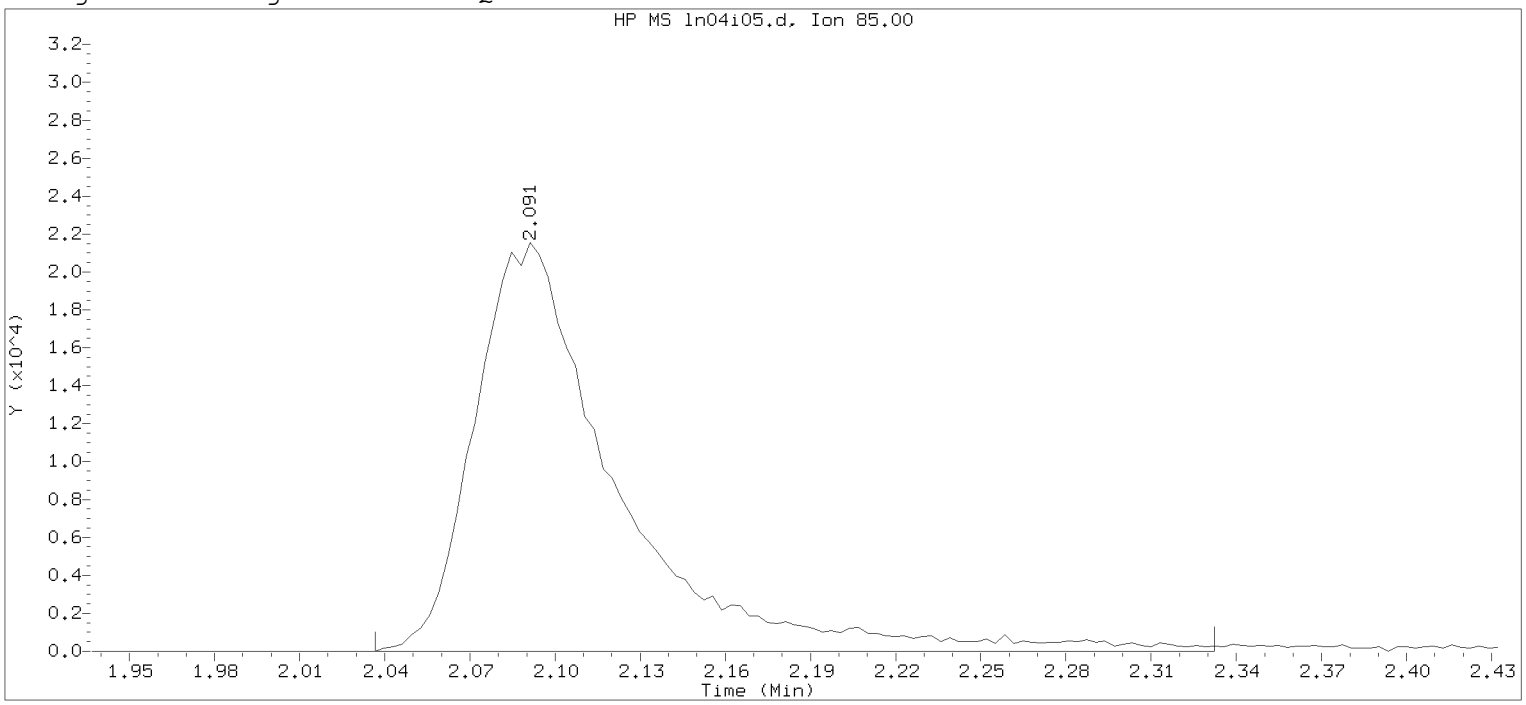
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

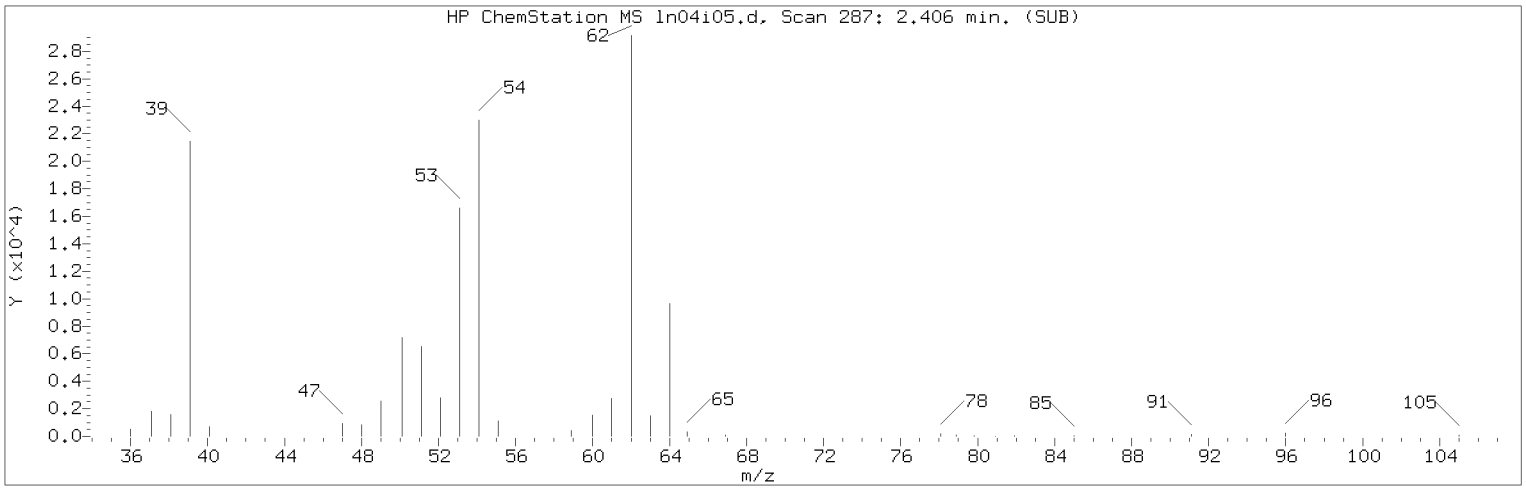
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

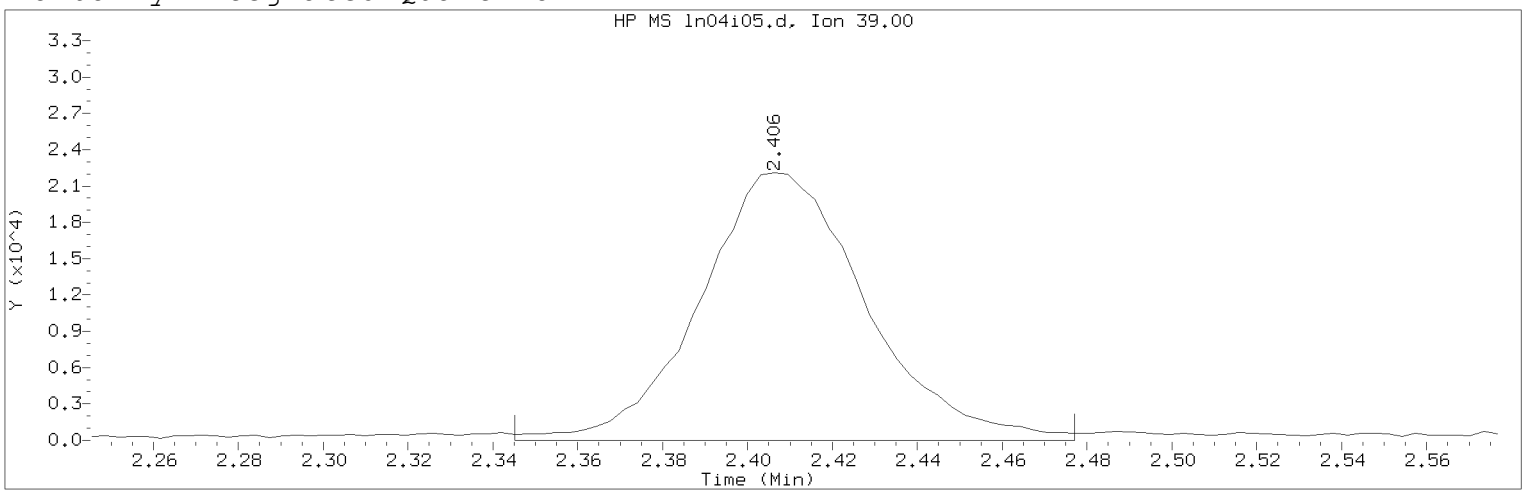
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 189
Retention Time (minutes): 2.091
Quant Ion : 85.00
Area : 74877
On-column Amount (ng) : 9.3136
Integration start scan : 171 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user: CW mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

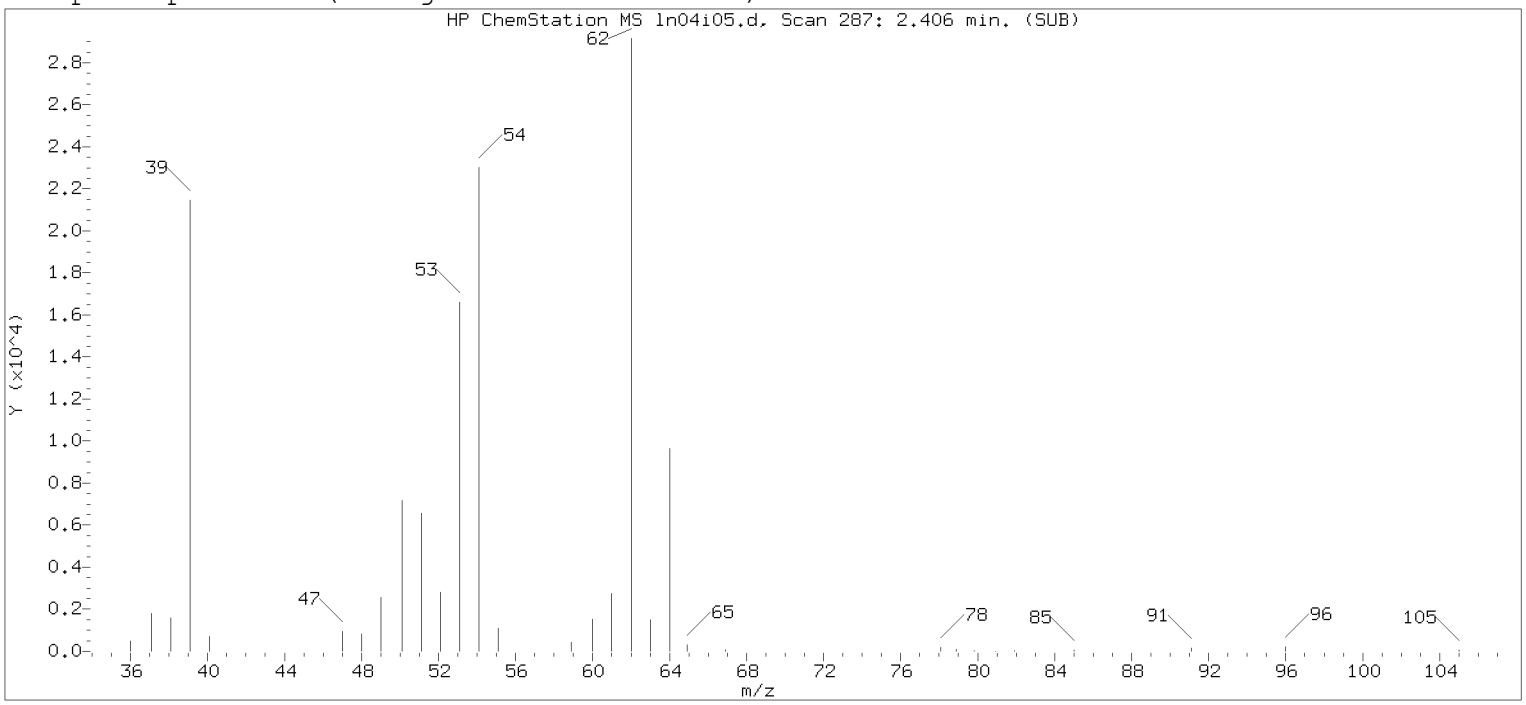
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 60141M
On-Column Amount (ng) : 9.3042
Integration start scan : 267 Integration stop scan: 308
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

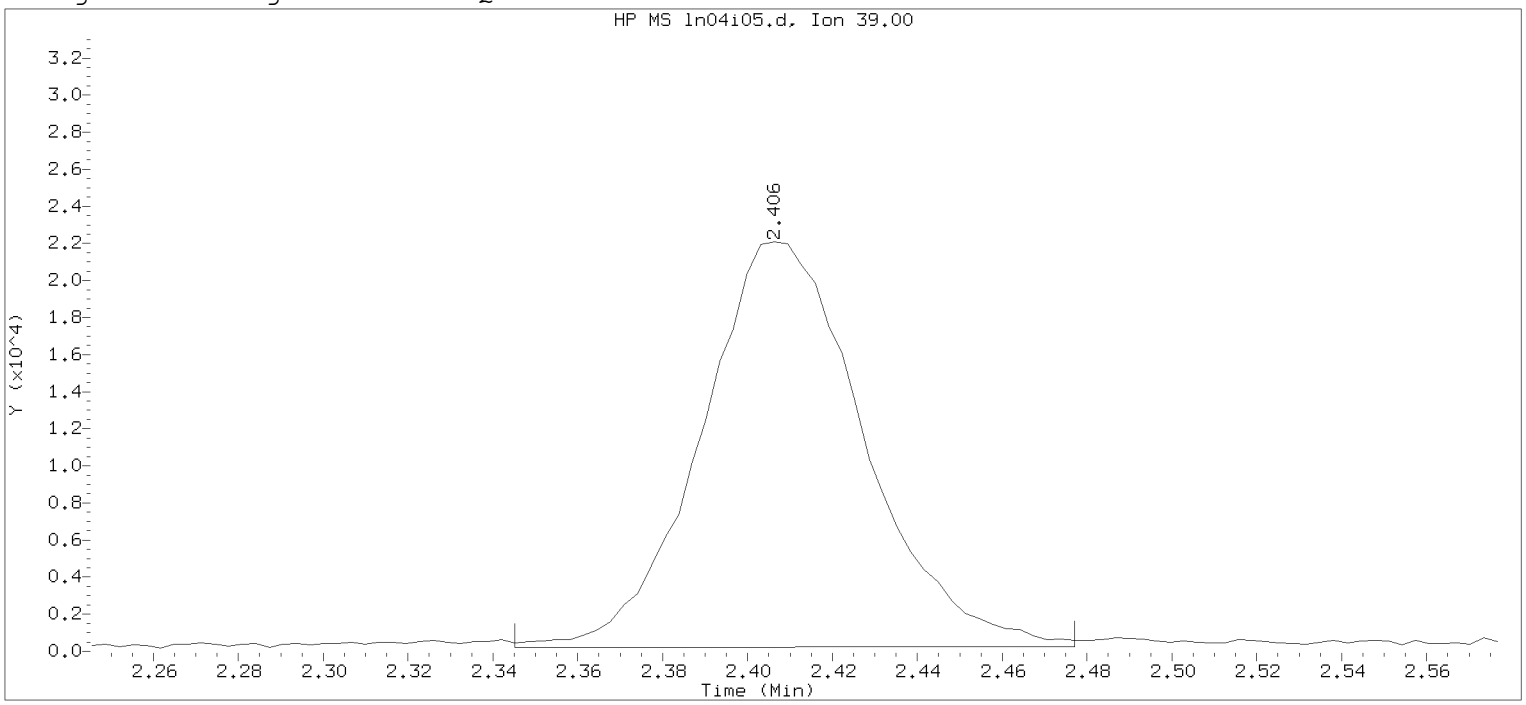
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 58240
On-column Amount (ng) : 9.5707
Integration start scan : 267 Integration stop scan: 308
Y at integration start : 206 Y at integration end: 250

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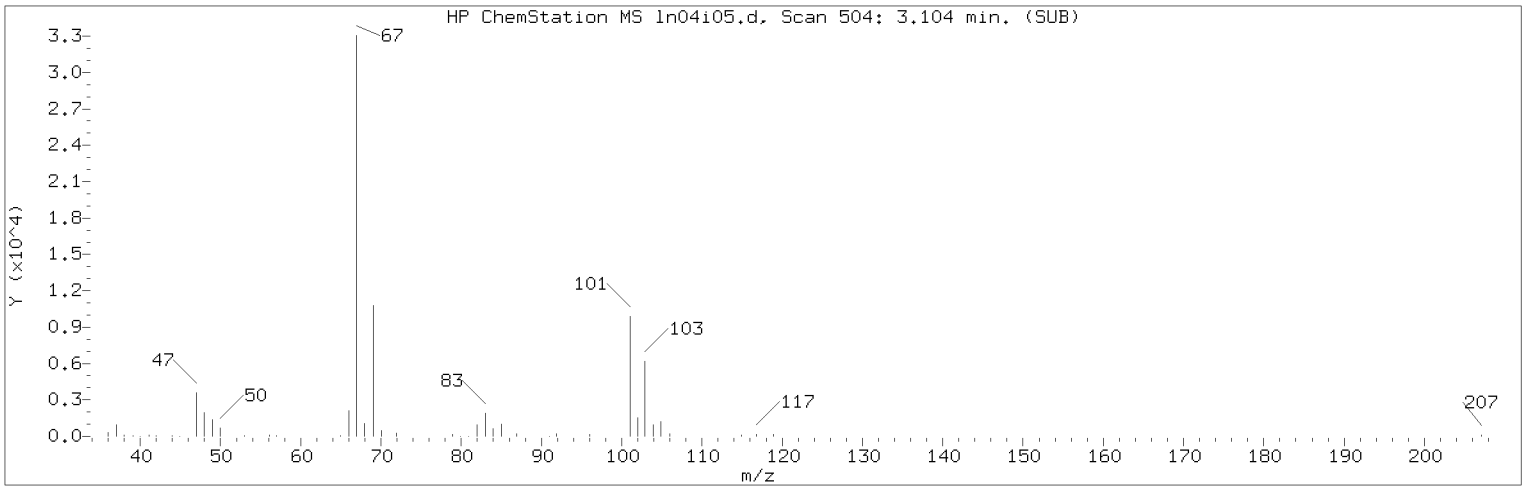
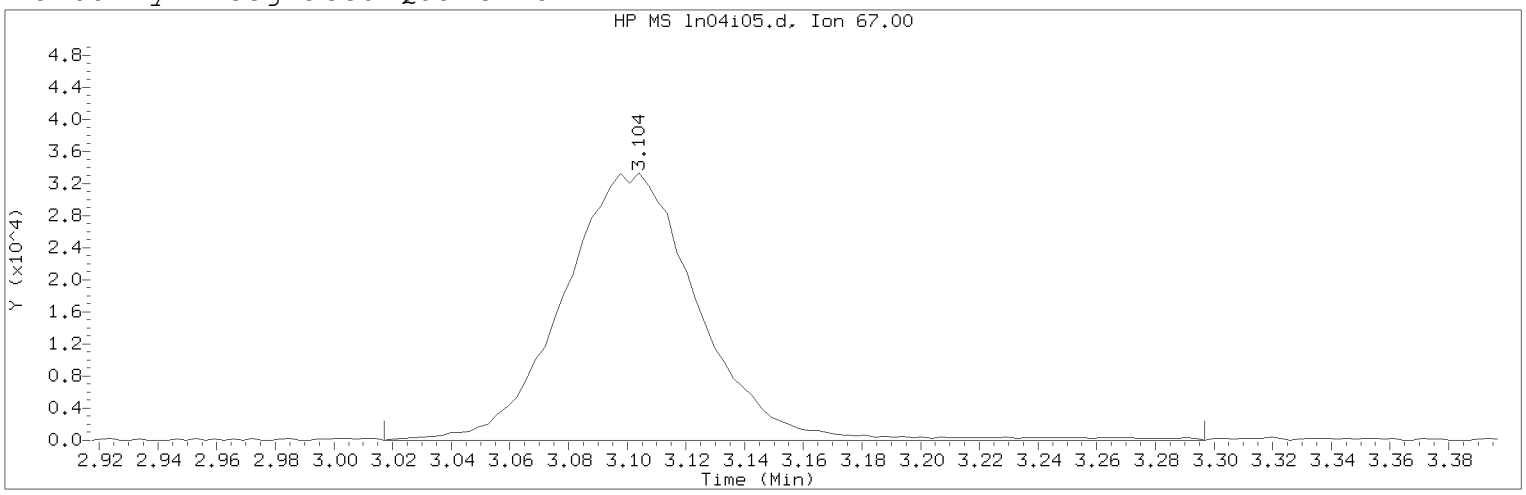
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

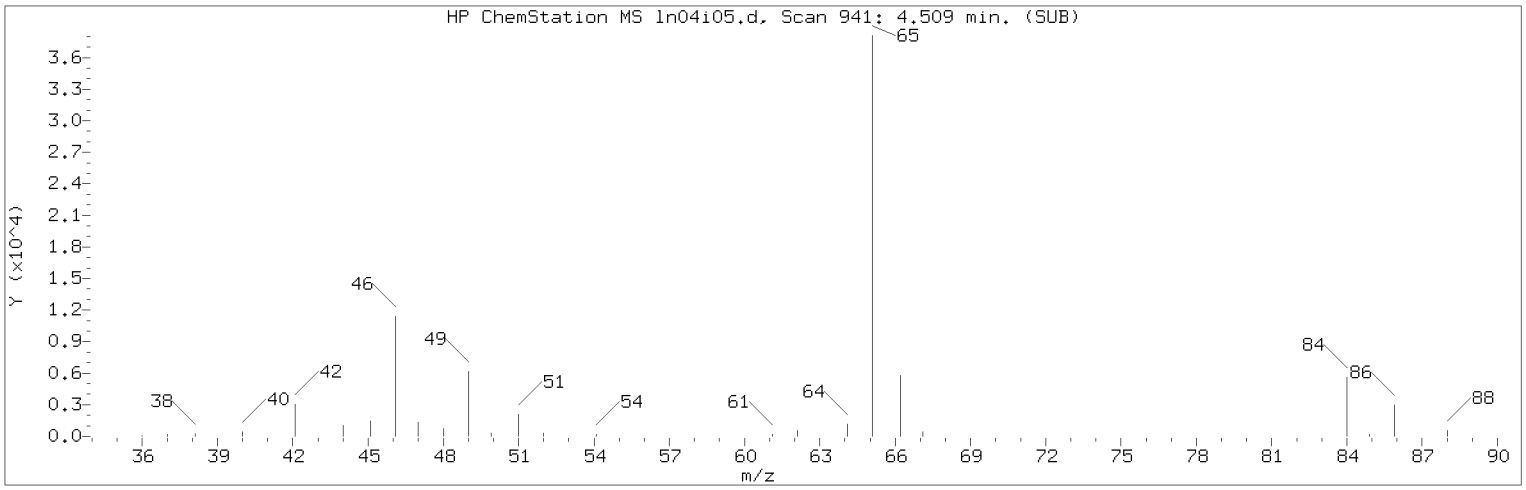
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 504
Retention Time (minutes): 3.104
Quant Ion : 67.00
Area (flag) : 106956M
On-Column Amount (ng) : 10.4593
Integration start scan : 476 Integration stop scan: 563
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

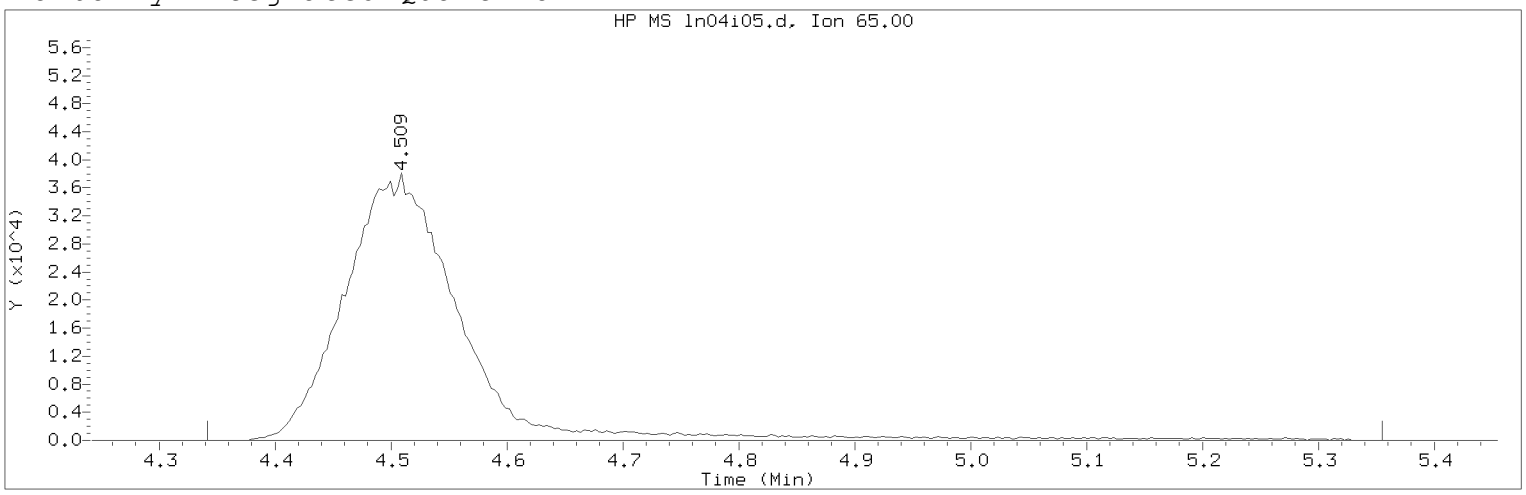
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

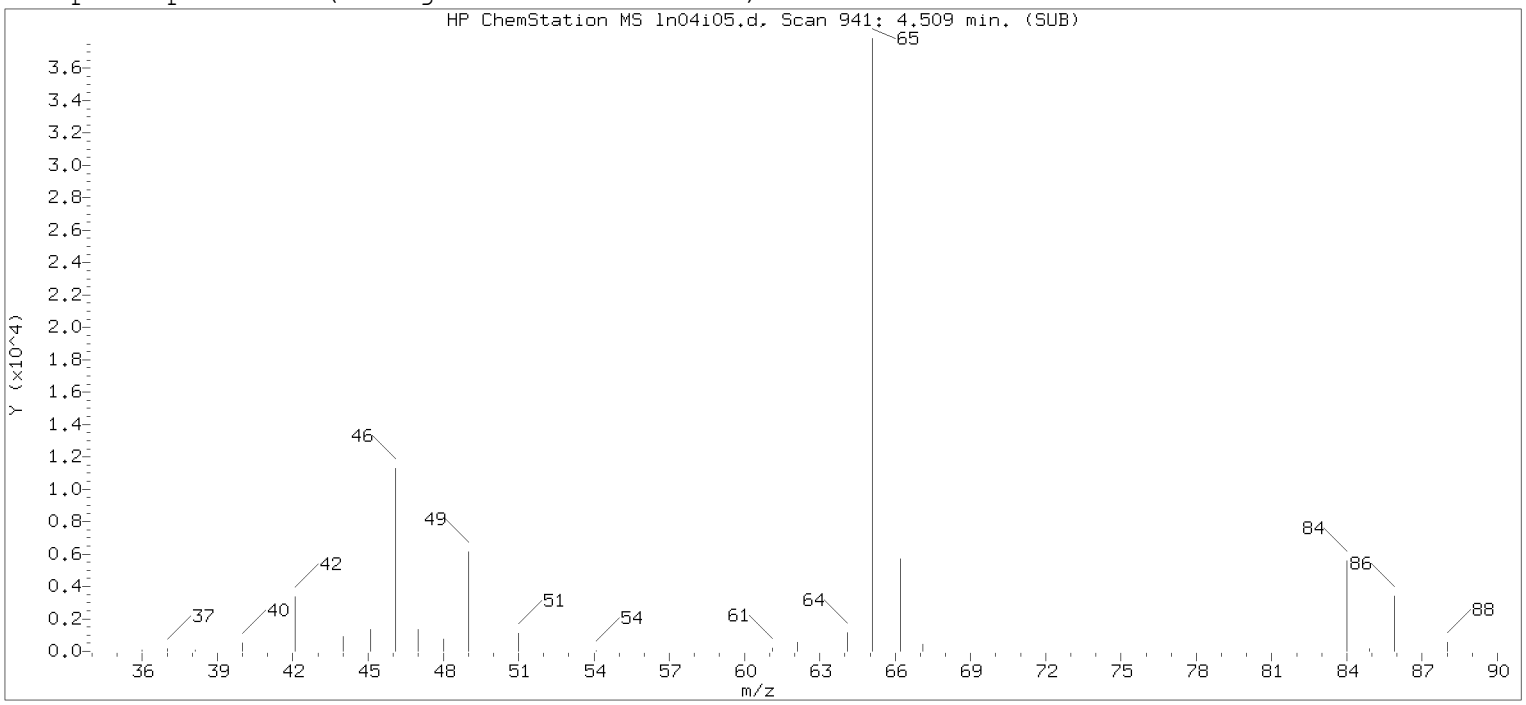
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 263427M
On-Column Amount (ng) : 250.0000
Integration start scan : 888 Integration stop scan: 1203
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

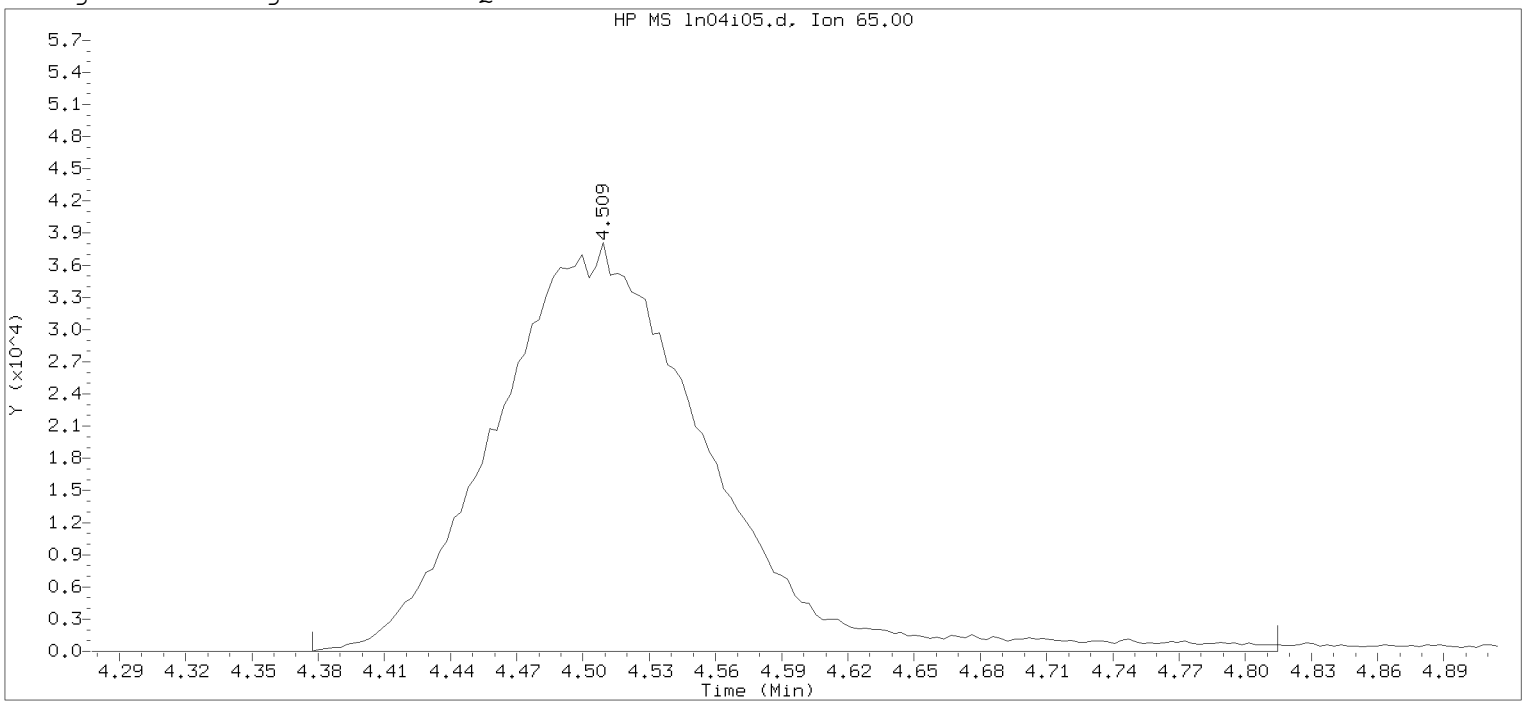
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

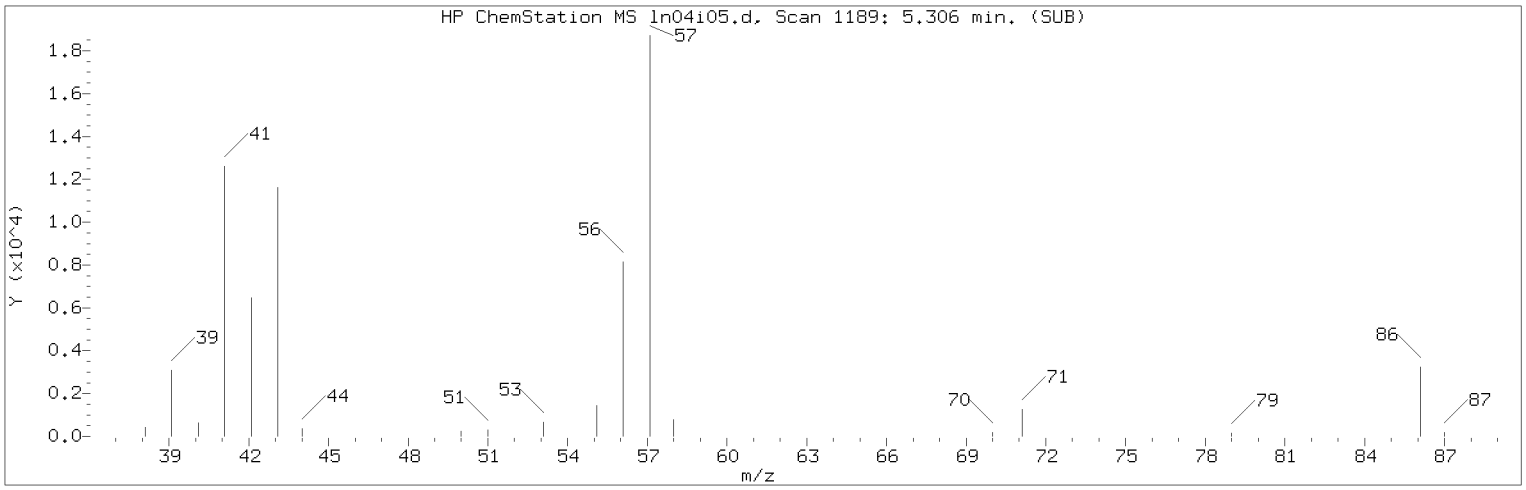
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

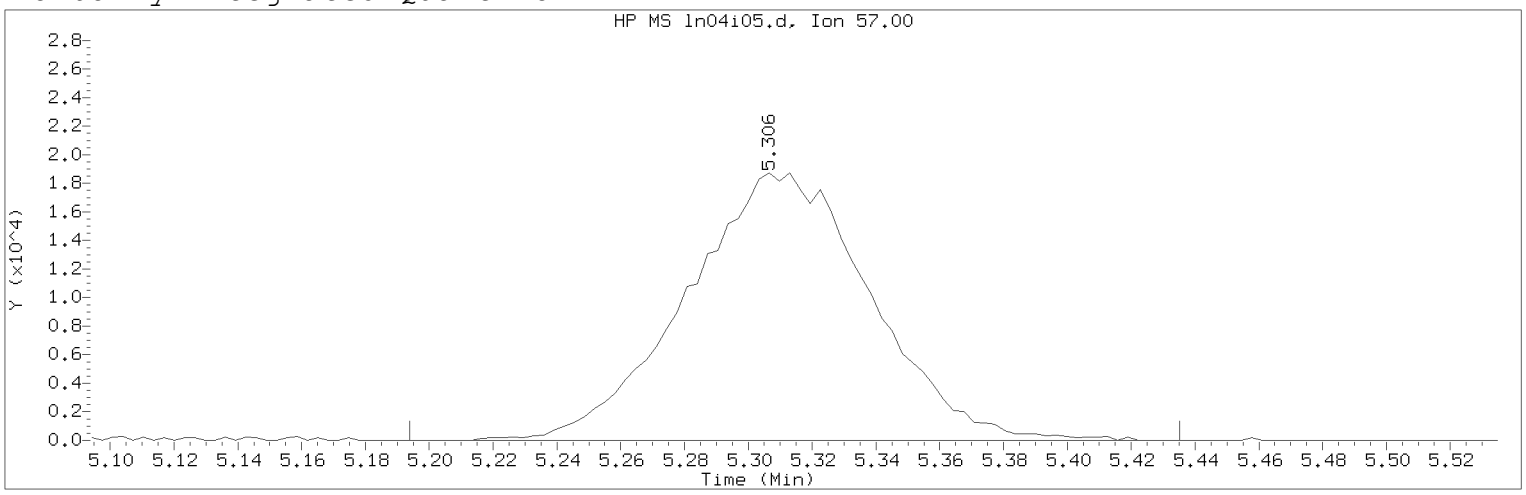
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 253092
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1035
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

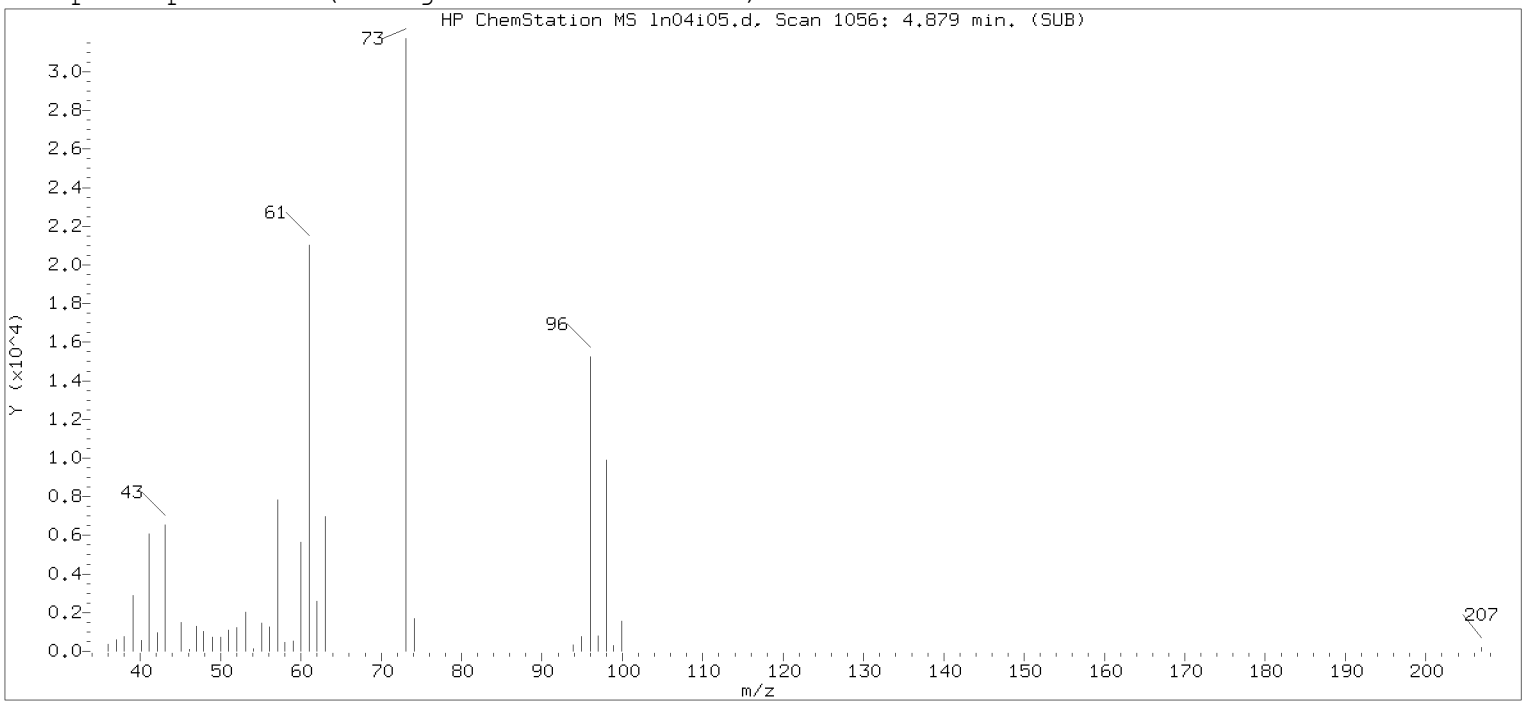
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1189
Retention Time (minutes): 5.306
Quant Ion : 57.00
Area (flag) : 75187M
On-Column Amount (ng) : 8.5083
Integration start scan : 1153 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

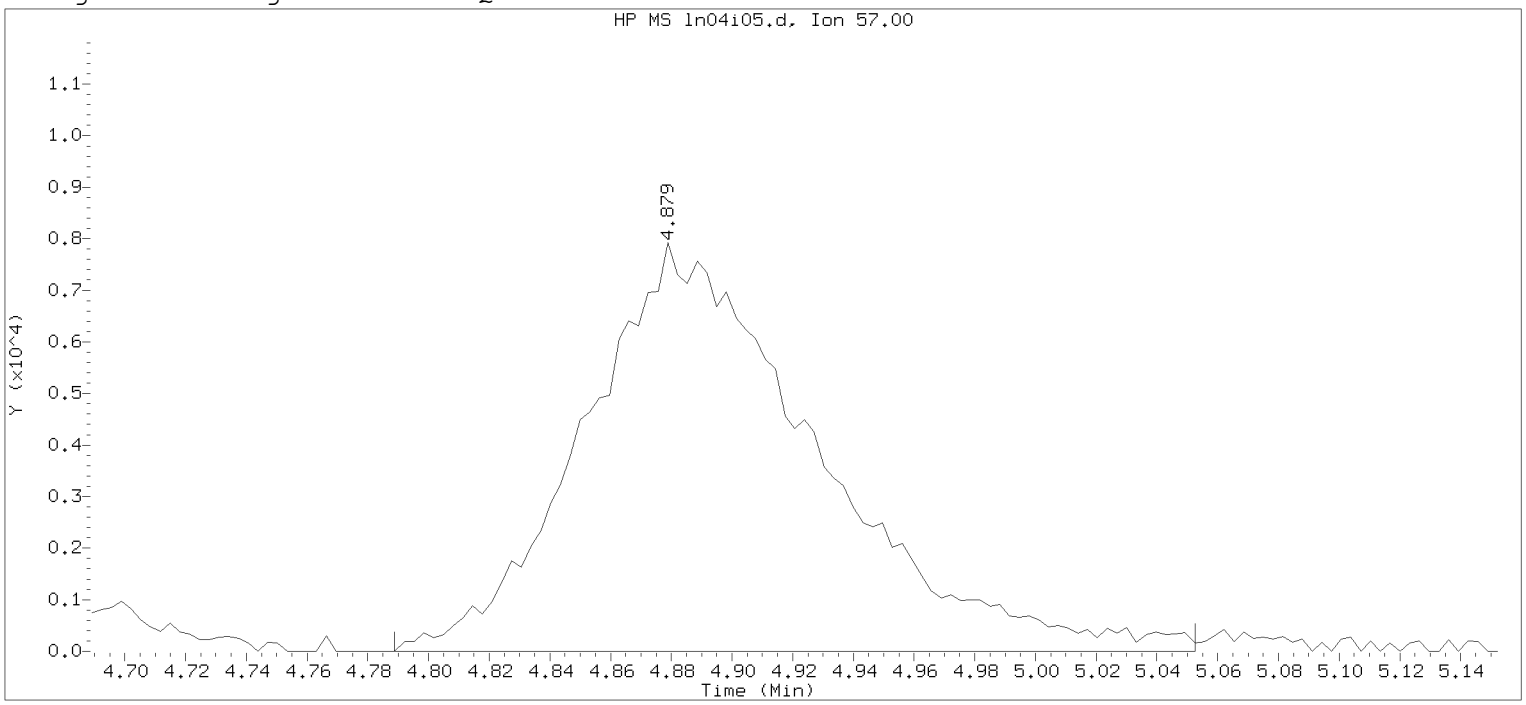
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

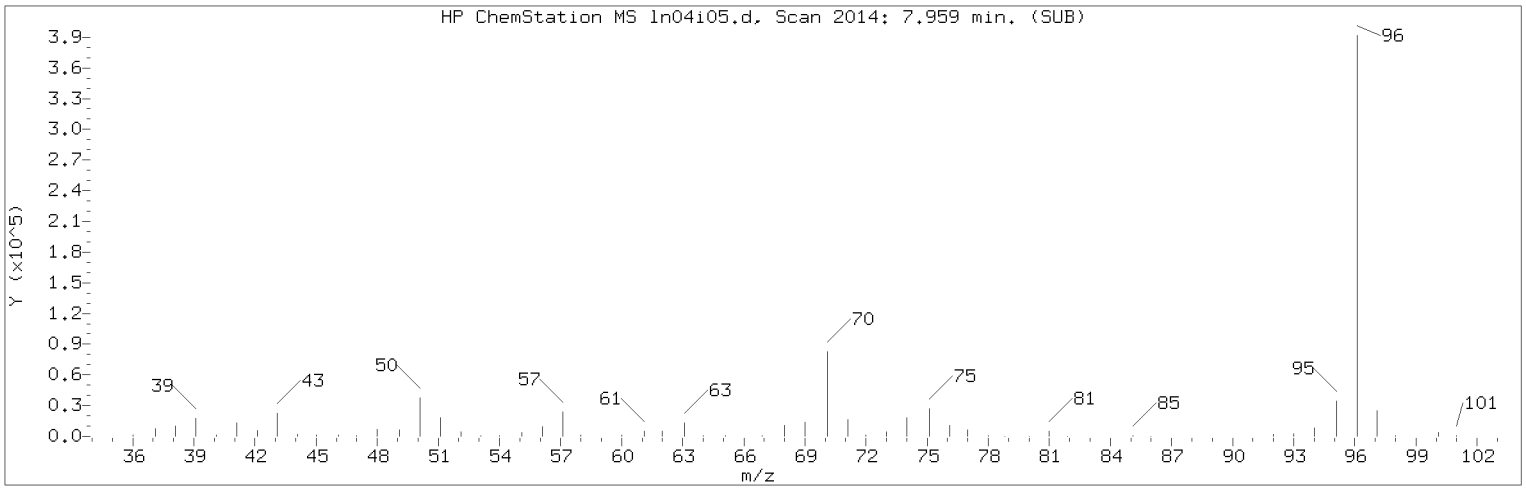
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

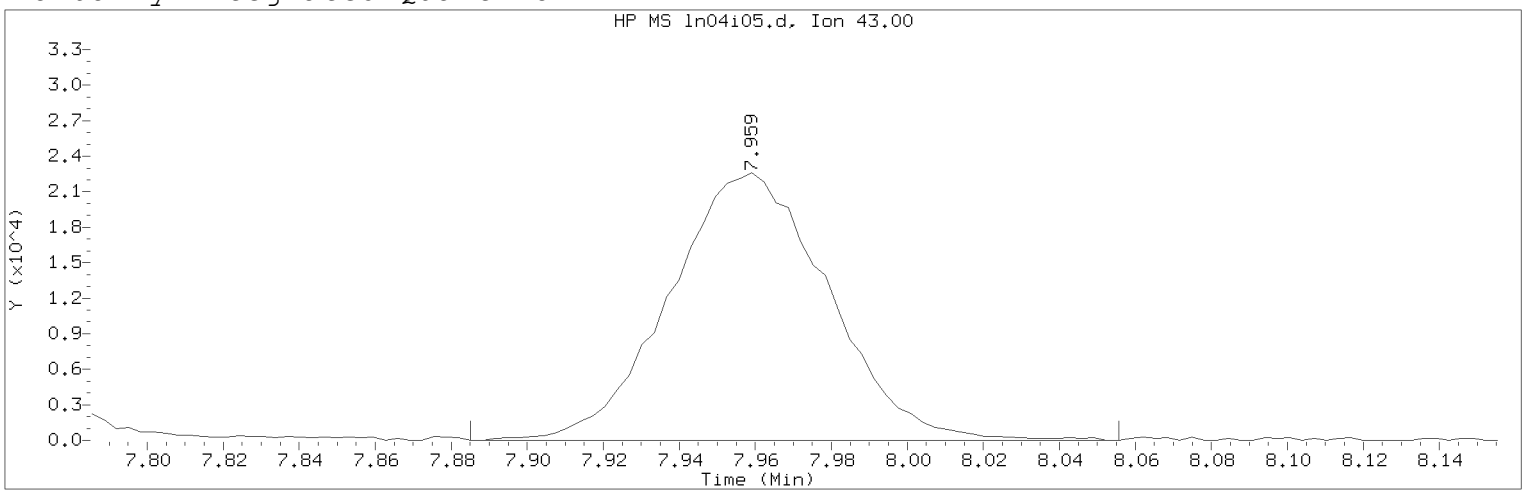
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1056		
Retention Time (minutes)	: 4.879		
Quant Ion	: 57.00		
Area	: 42116		
On-column Amount (ng)	: 11.5193		
Integration start scan	: 1027	Integration stop scan:	1109
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

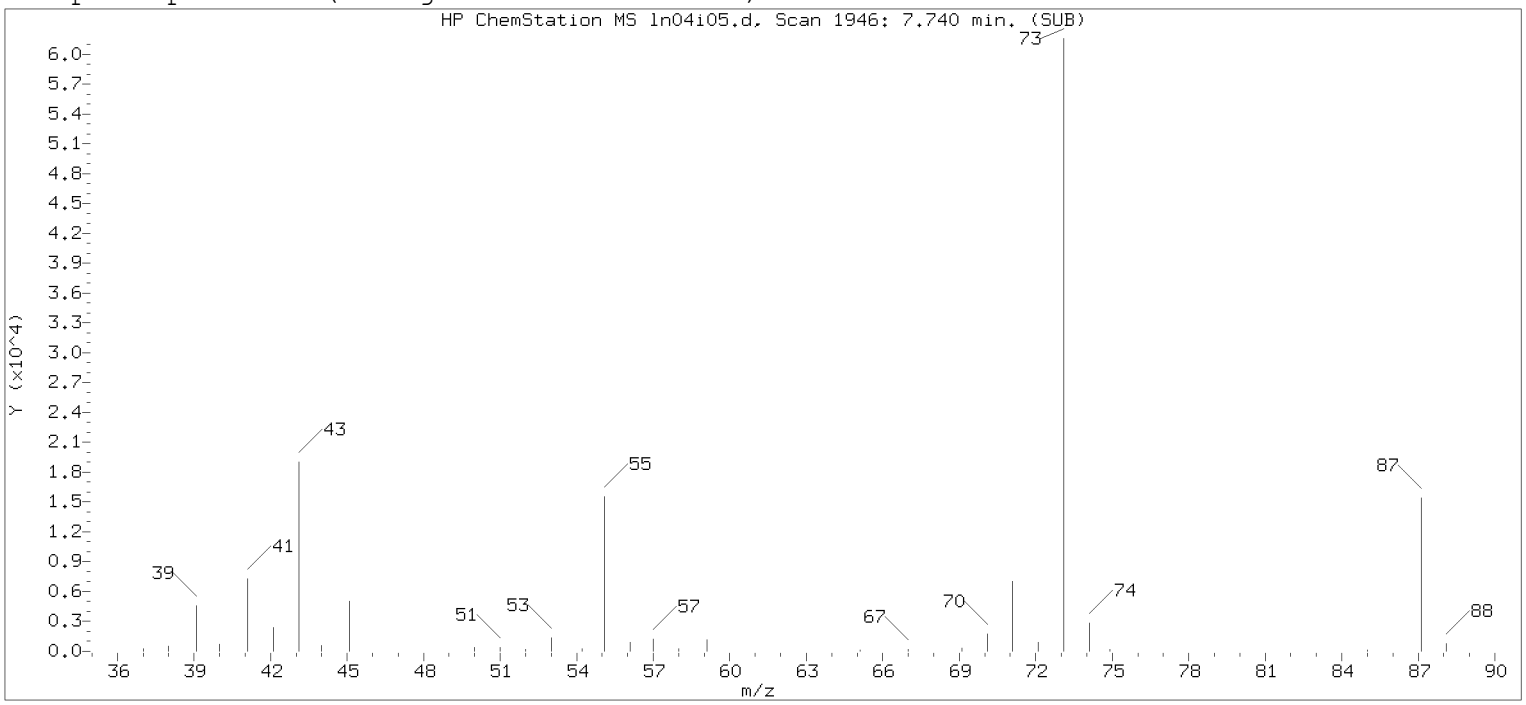
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2014
Retention Time (minutes): 7.959
Quant Ion : 43.00
Area (flag) : 65347MA
On-Column Amount (ng) : 7.9157
Integration start scan : 1990 Integration stop scan: 2043
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

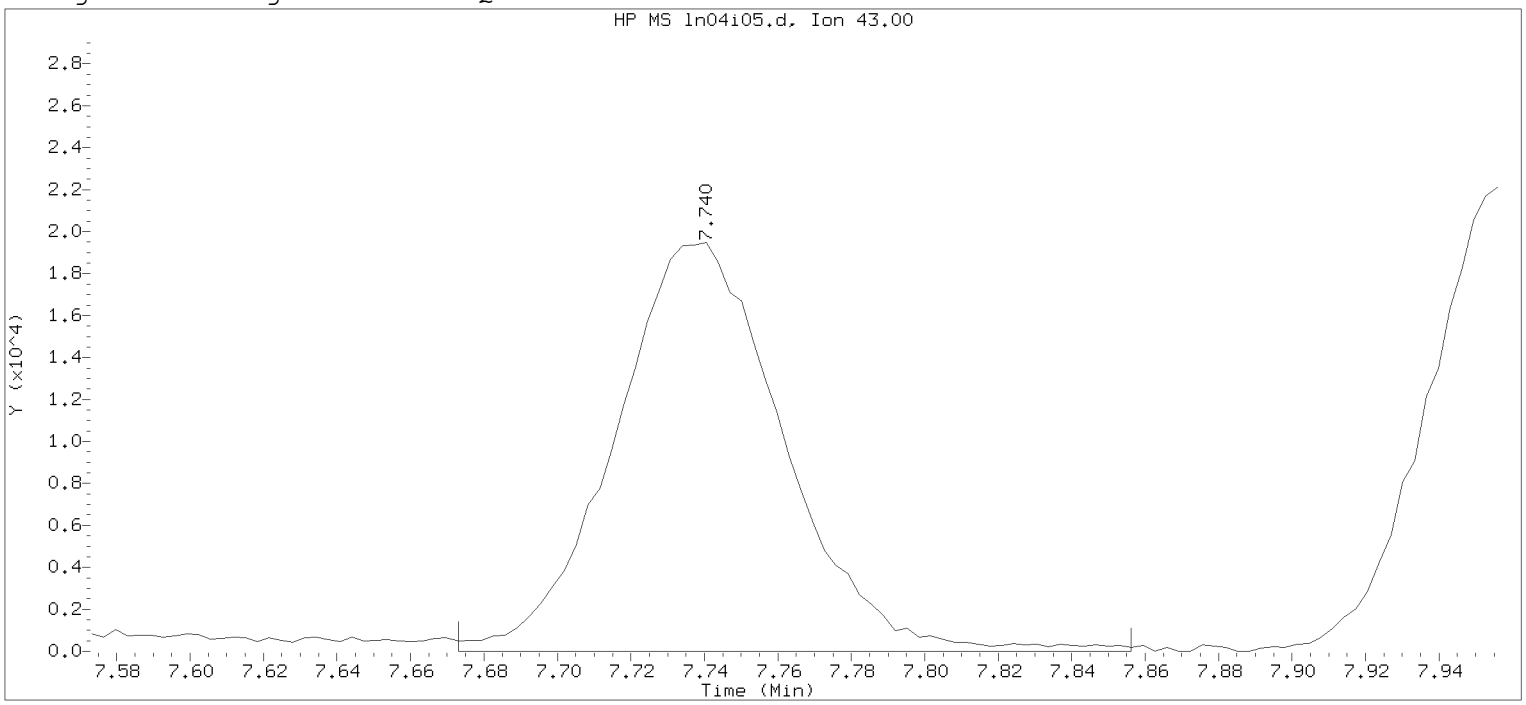
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

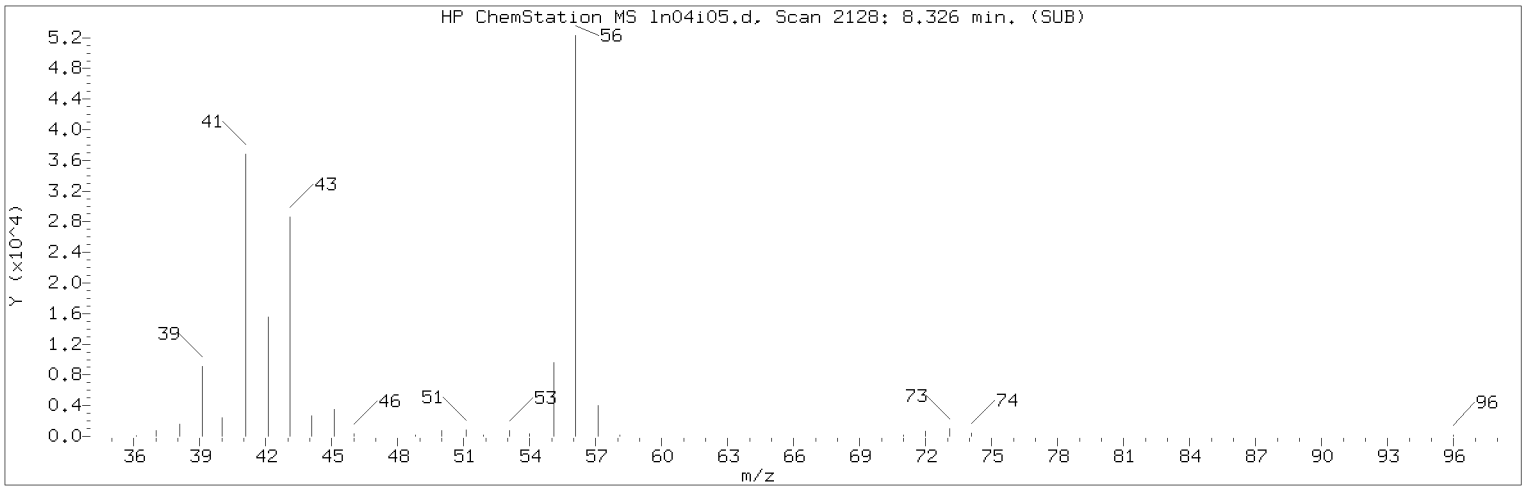
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

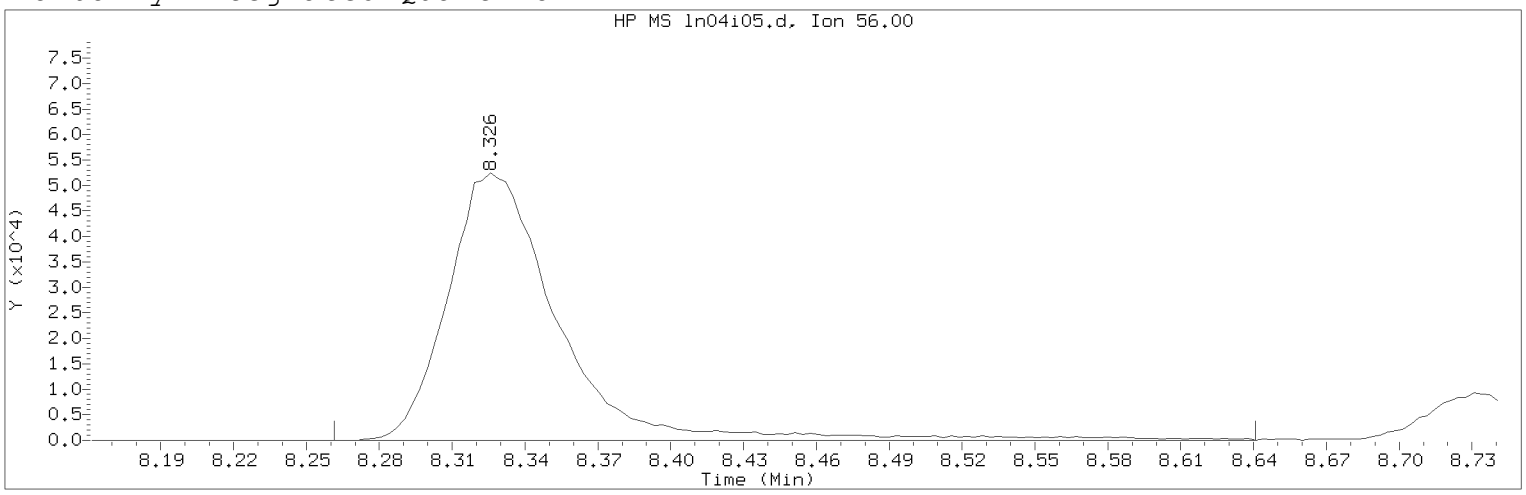
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.740
Quant Ion : 43.00
Area : 62104
On-column Amount (ng) : 10.1613
Integration start scan : 1924 Integration stop scan: 1981
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

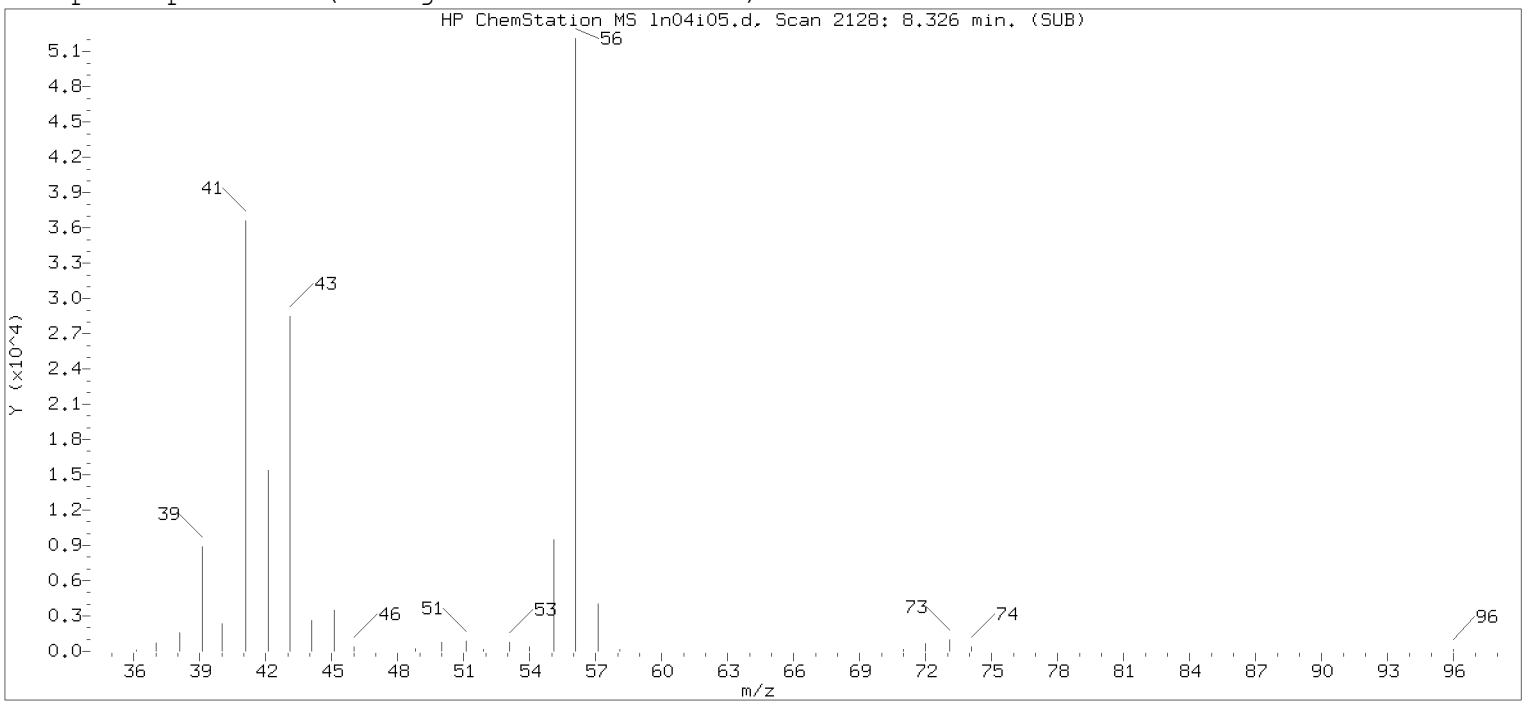
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area (flag) : 166674M
On-Column Amount (ng) : 518.8682
Integration start scan : 2107 Integration stop scan: 2225
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

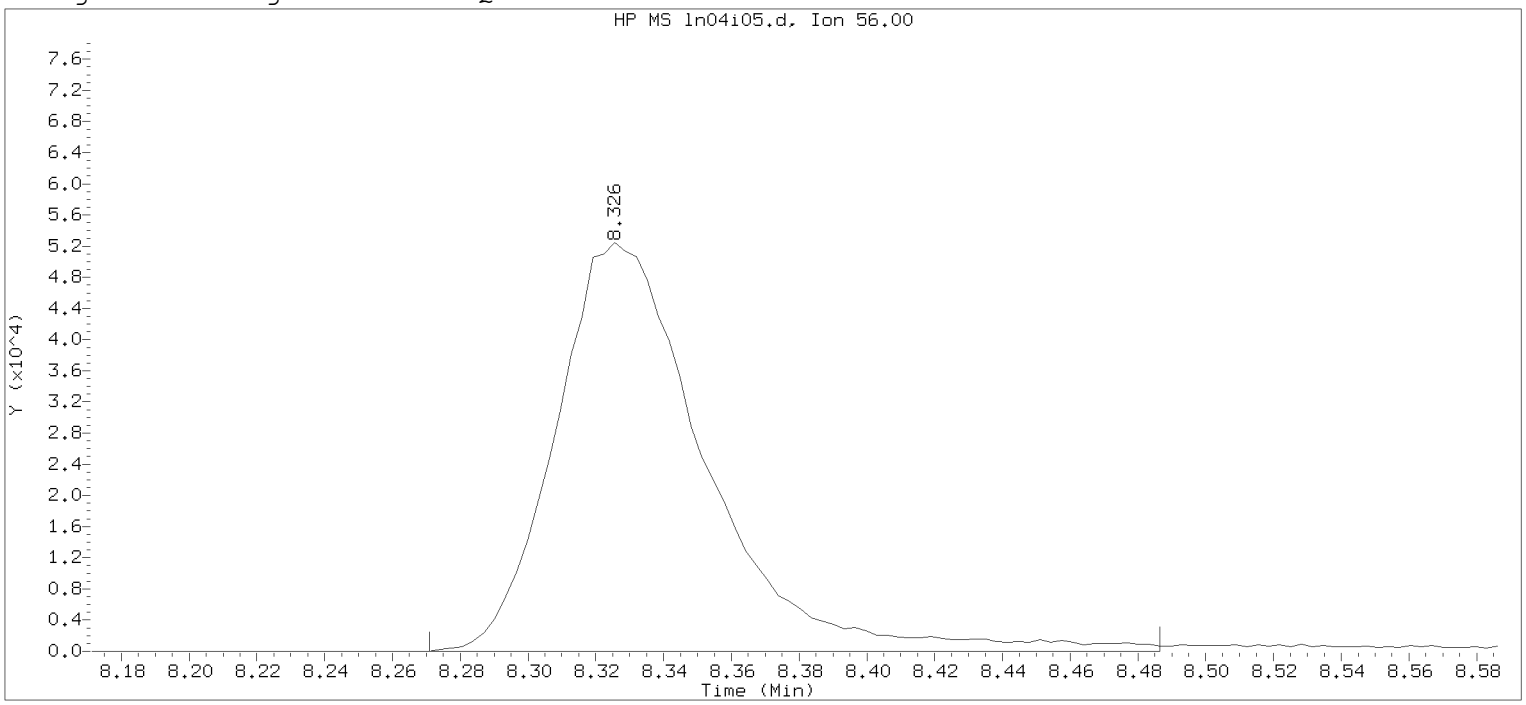
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

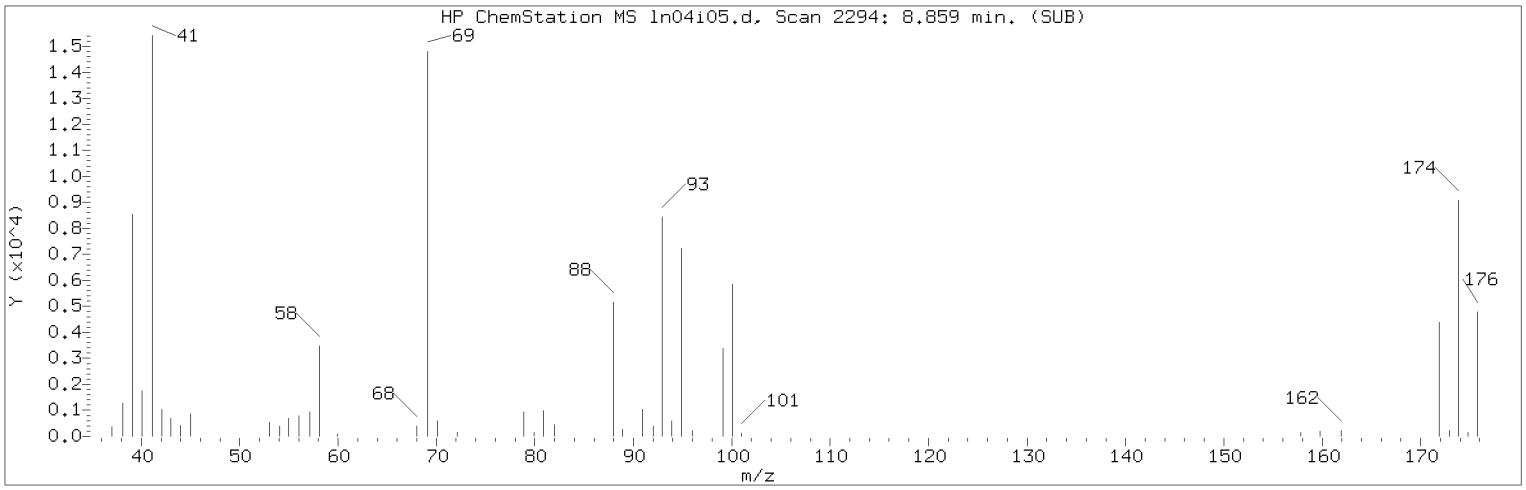
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

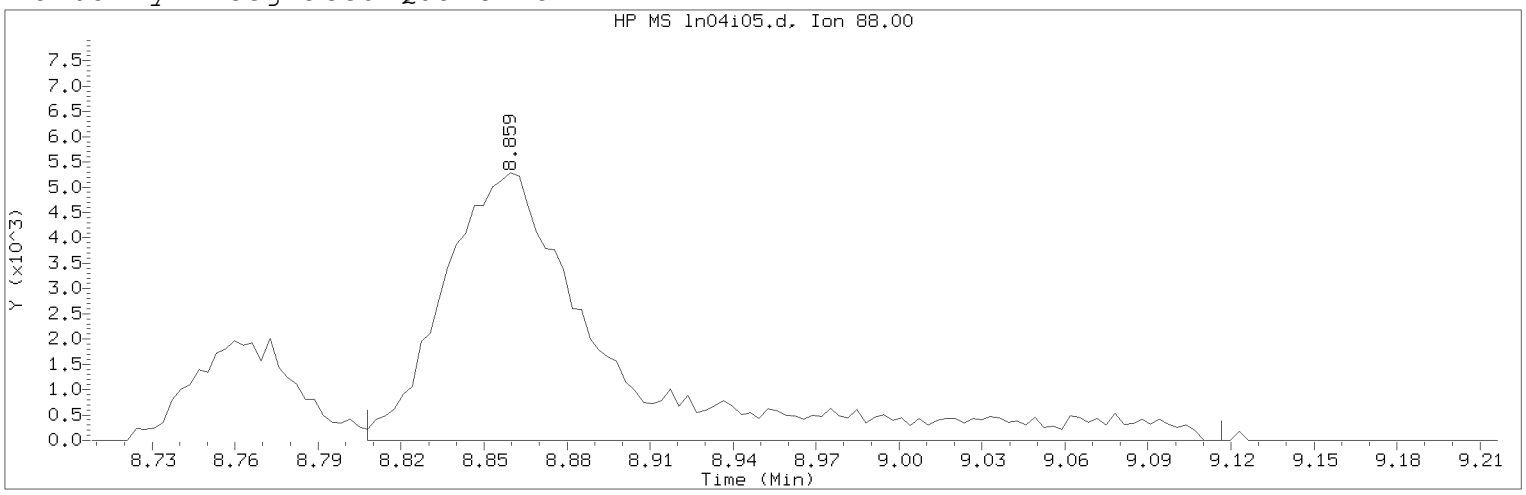
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area : 161642
On-column Amount (ng) : 524.2963
Integration start scan : 2110 Integration stop scan: 2177
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

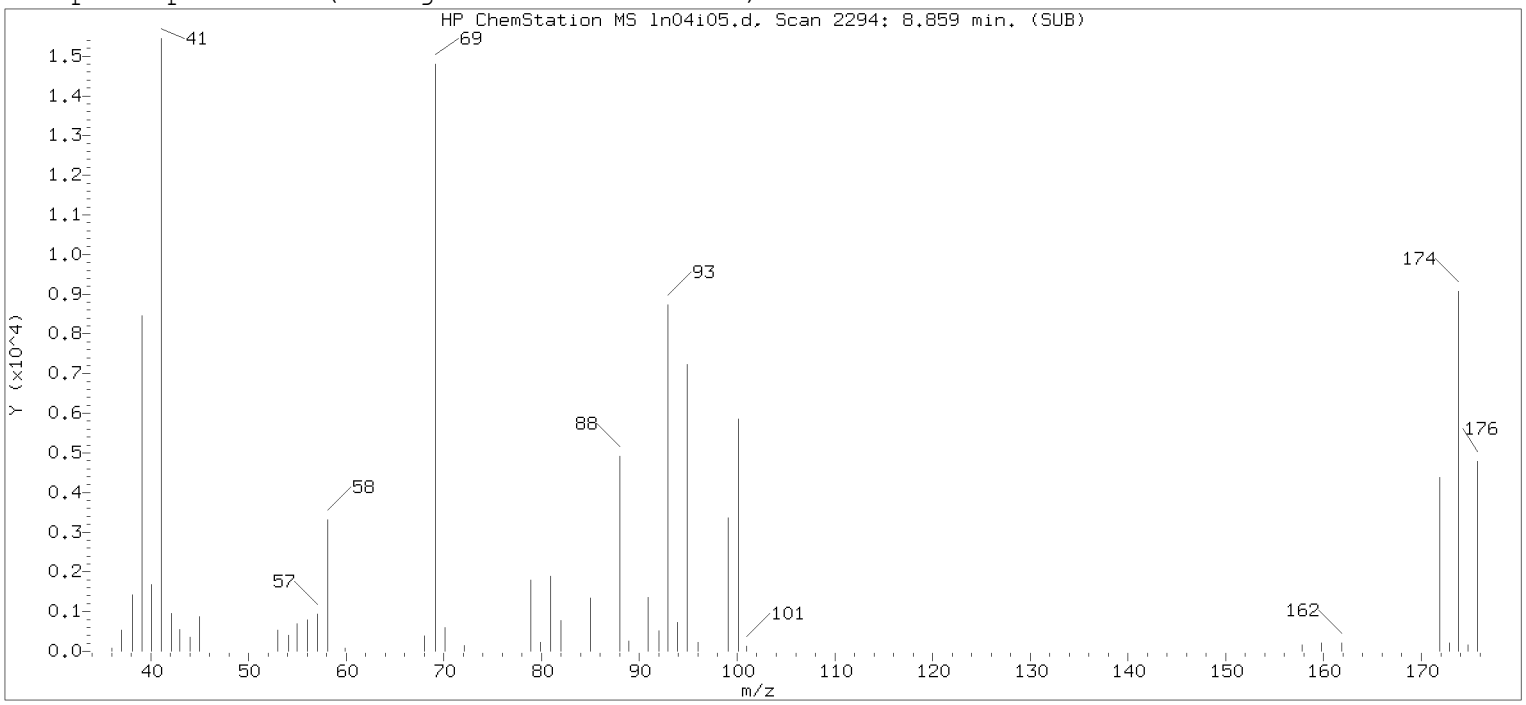
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2294
Retention Time (minutes): 8.859
Quant Ion : 88.00
Area (flag) : 22251M
On-Column Amount (ng) : 252.0176
Integration start scan : 2277 Integration stop scan: 2373
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

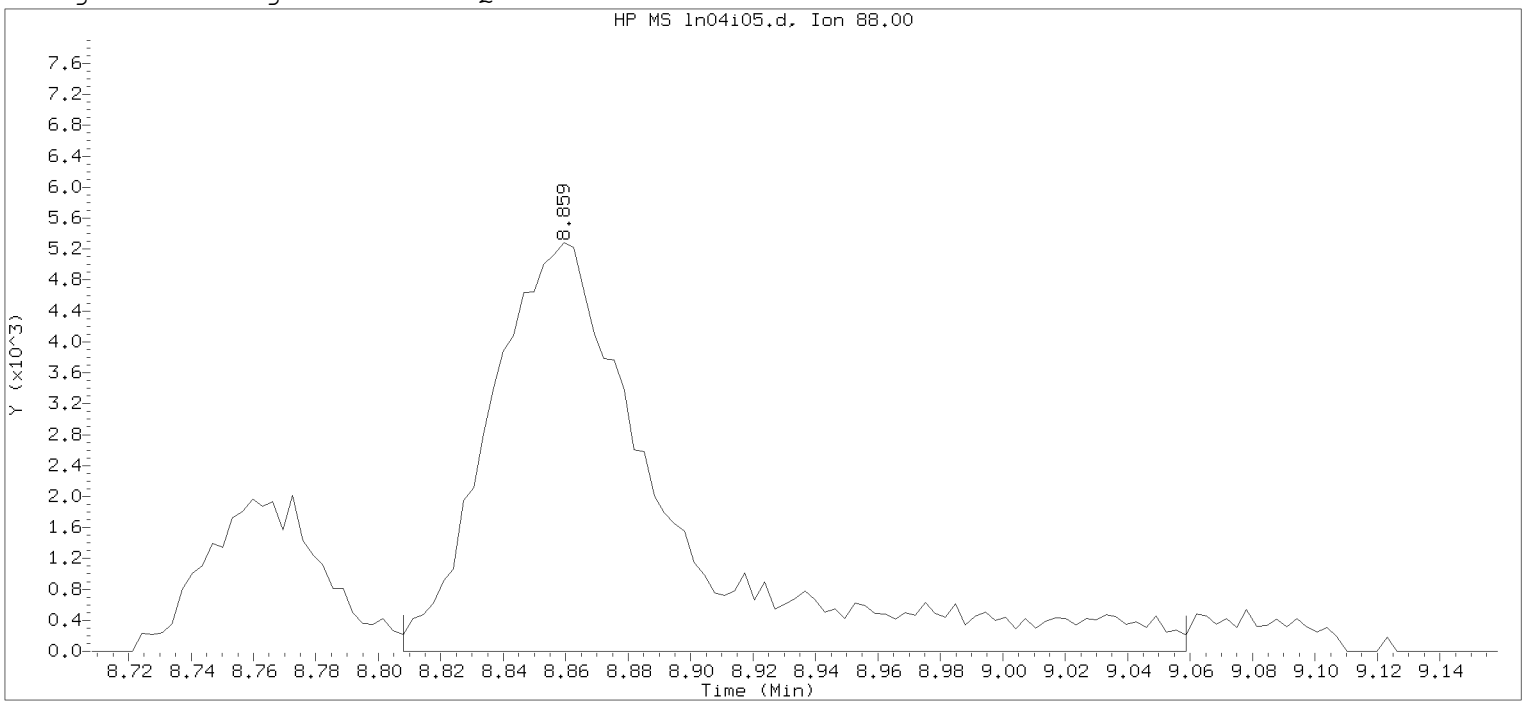
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

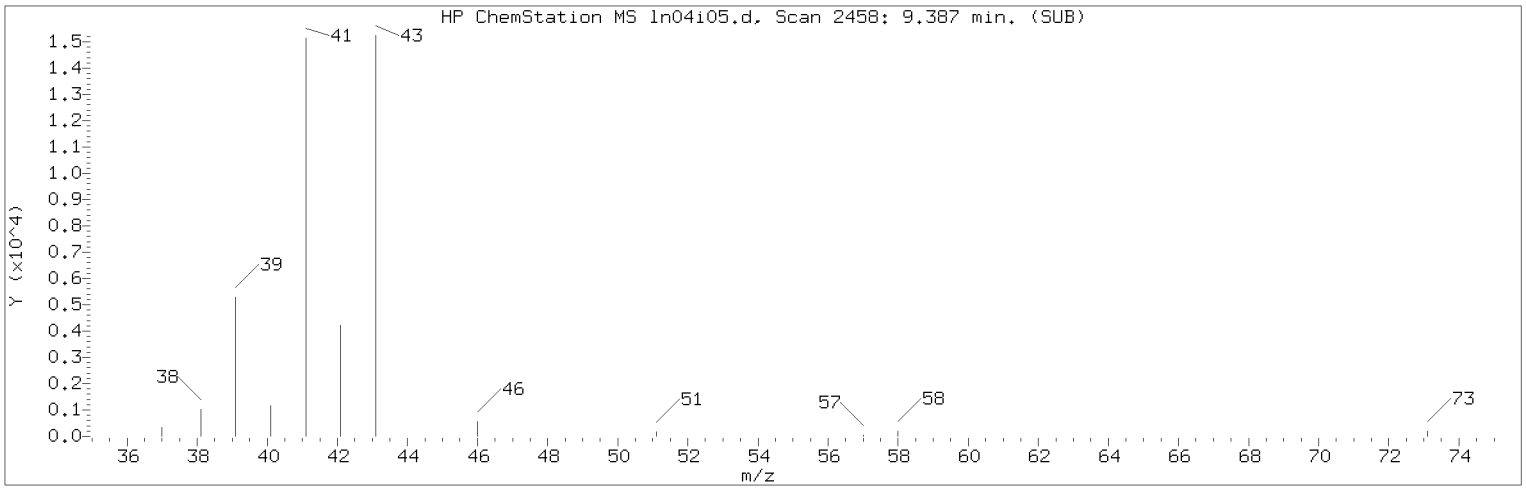
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

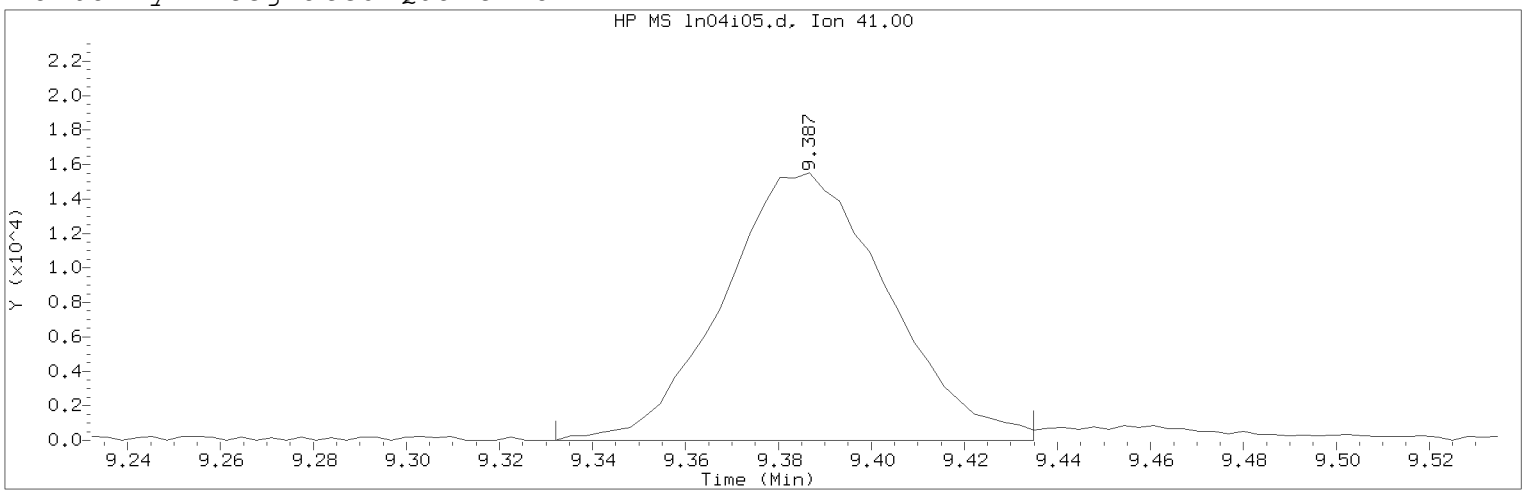
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2294
Retention Time (minutes): 8.859
Quant Ion : 88.00
Area : 21165
On-column Amount (ng) : 248.6410
Integration start scan : 2277 Integration stop scan: 2355
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

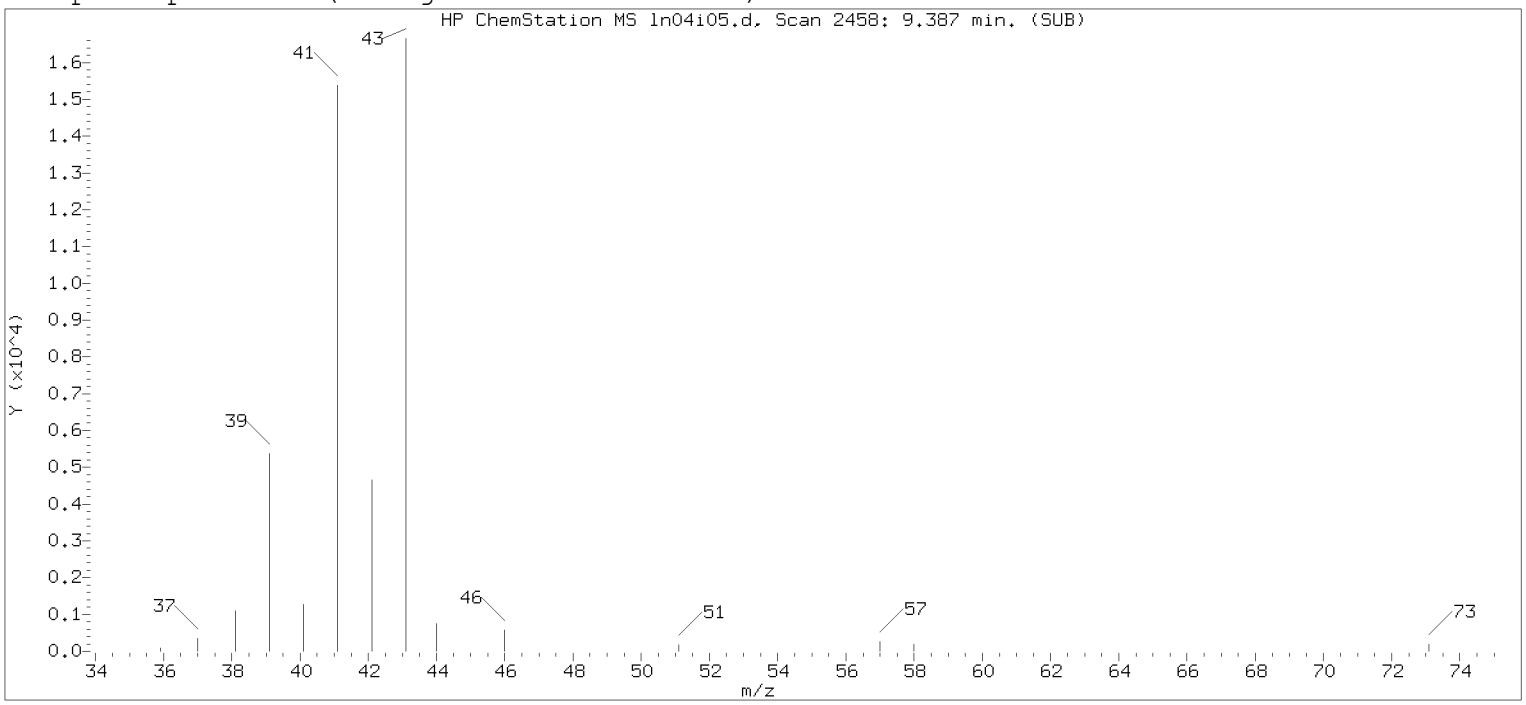
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2458
Retention Time (minutes): 9.387
Quant Ion : 41.00
Area (flag) : 38245M
On-Column Amount (ng) : 18.1785
Integration start scan : 2440 Integration stop scan: 2472
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

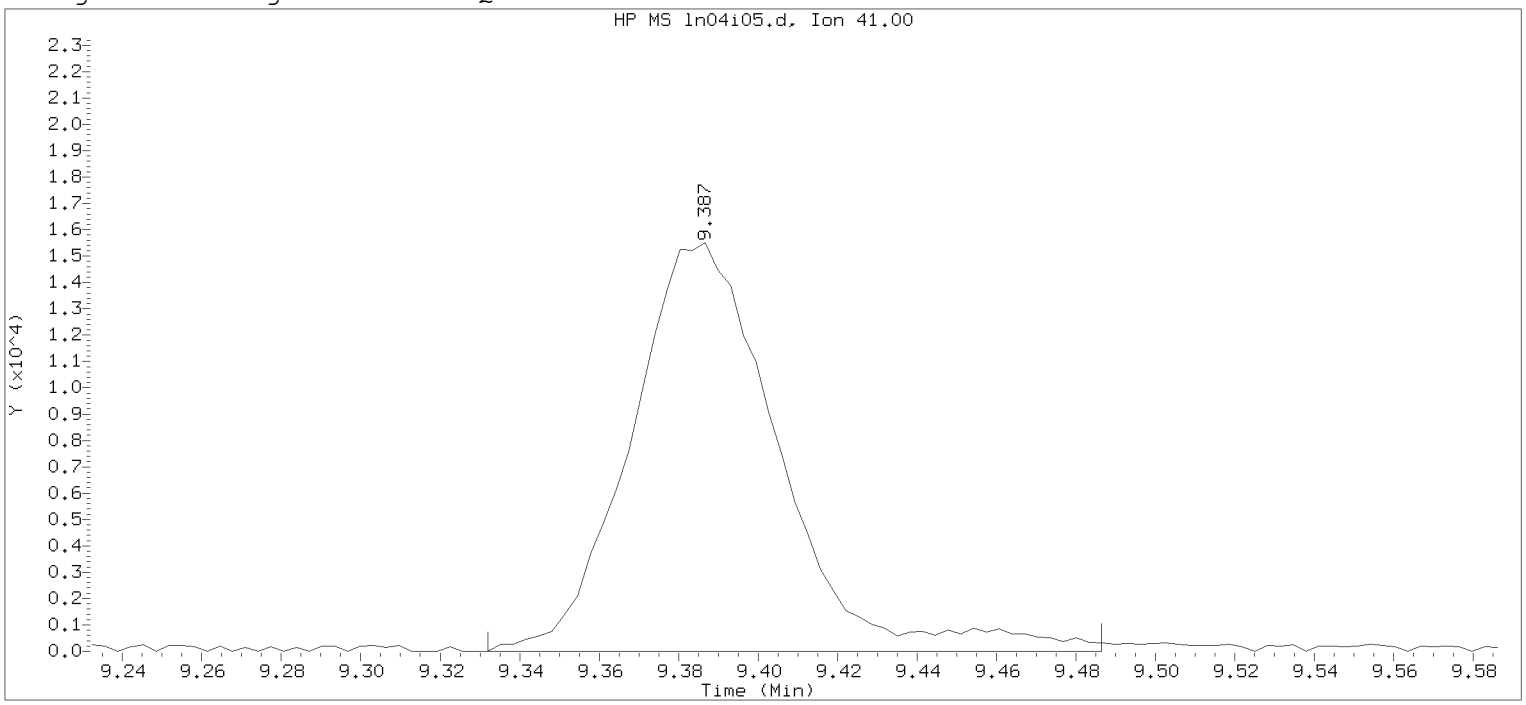
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

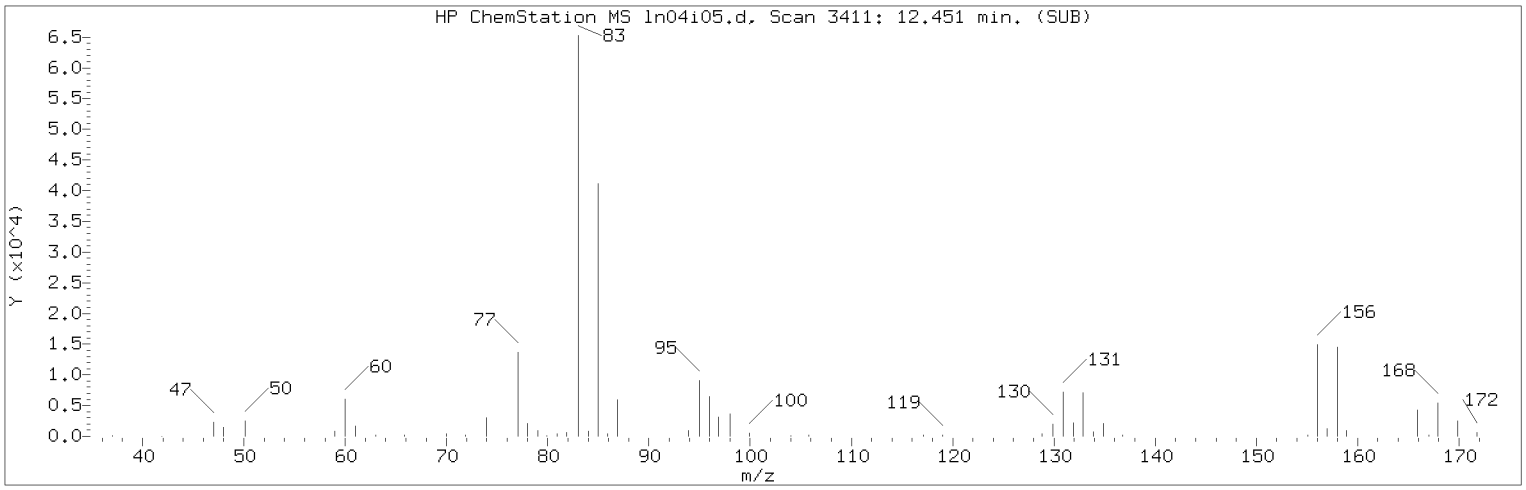
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

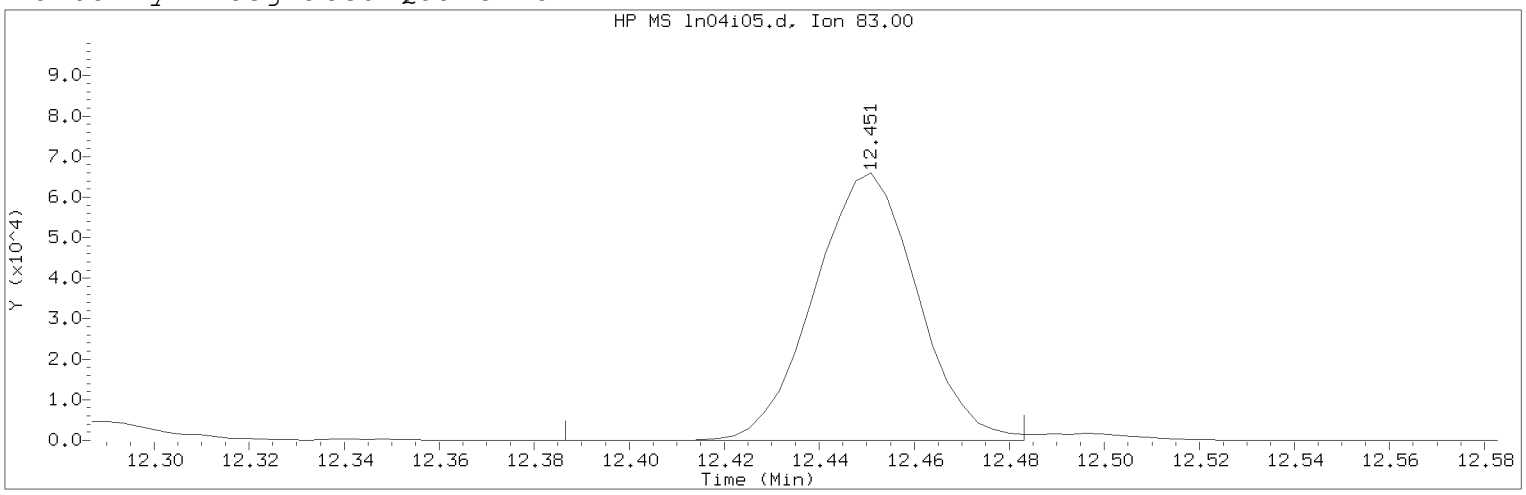
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2458
Retention Time (minutes): 9.387
Quant Ion : 41.00
Area : 40127
On-column Amount (ng) : 18.9522
Integration start scan : 2440 Integration stop scan: 2488
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

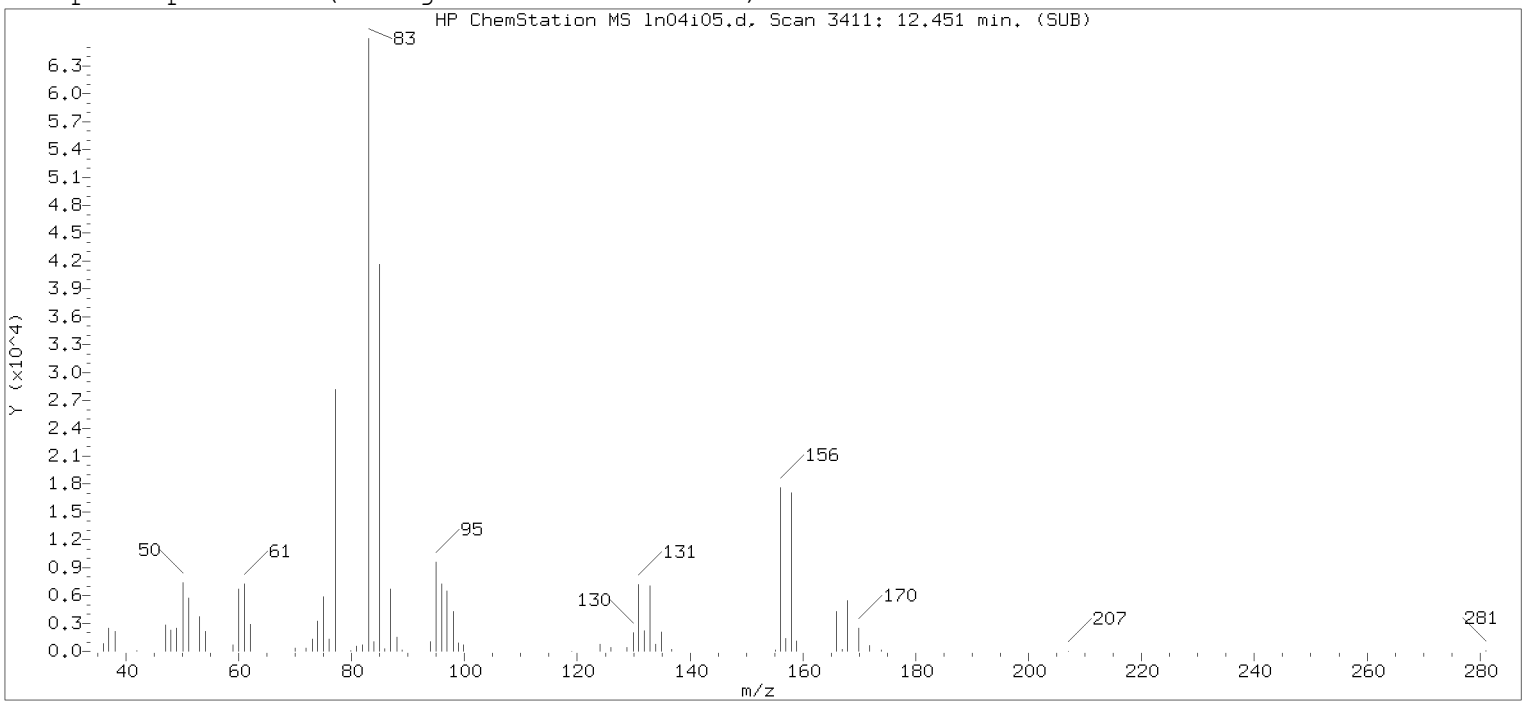
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 99221M
On-Column Amount (ng) : 10.5834
Integration start scan : 3390 Integration stop scan: 3420
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

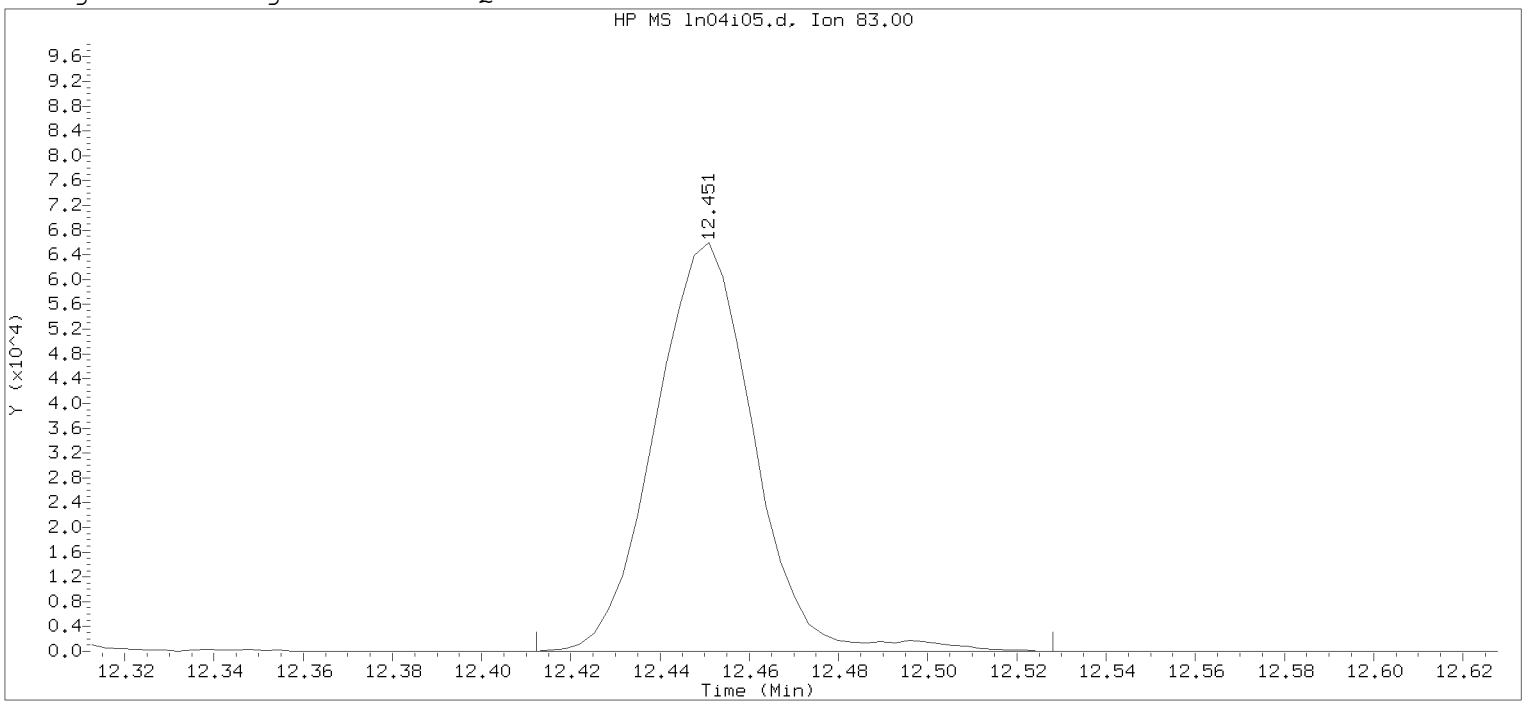
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

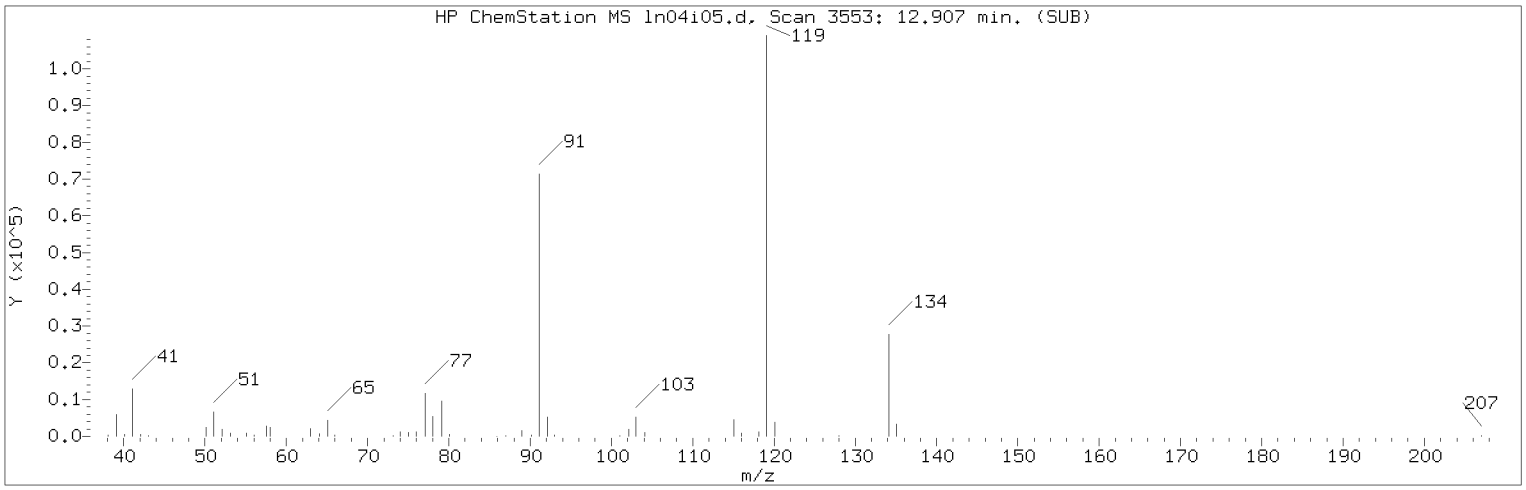
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

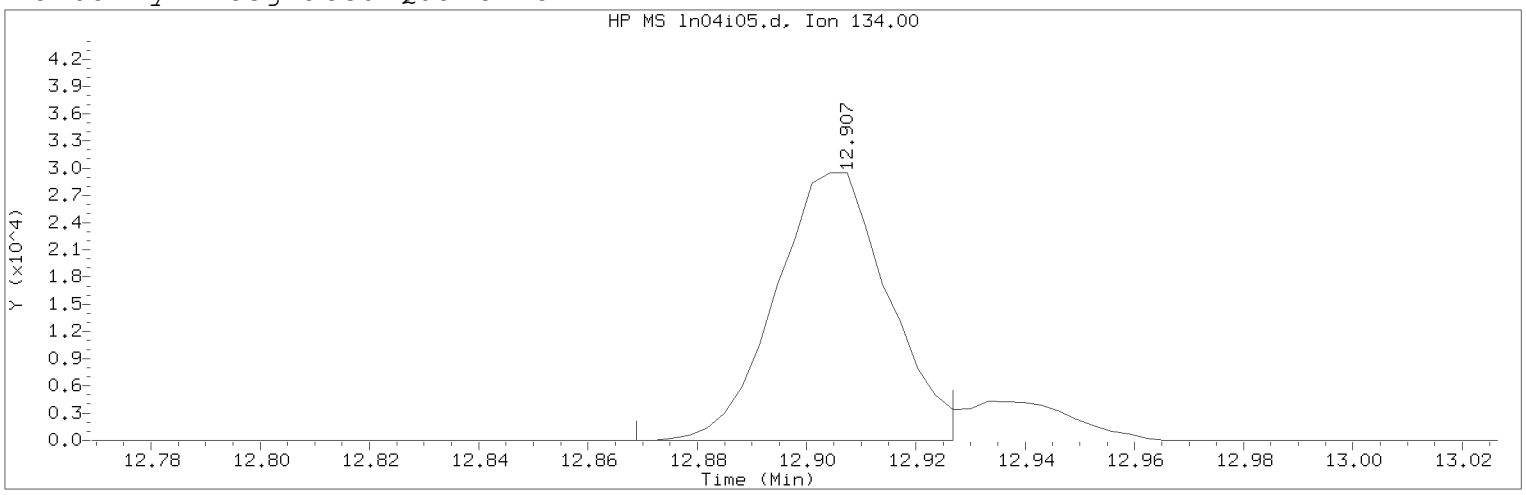
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 101487
On-column Amount (ng) : 10.6325
Integration start scan : 3398 Integration stop scan: 3434
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

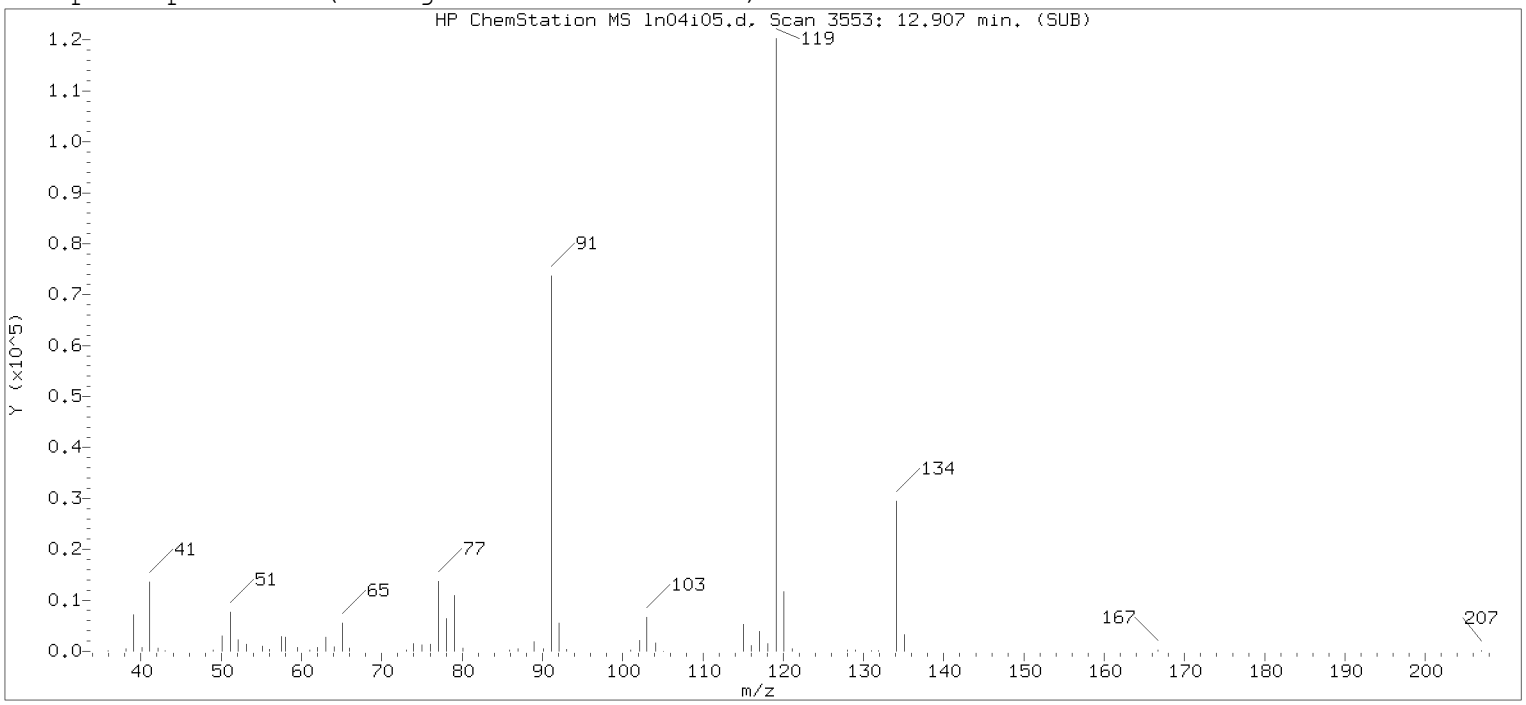
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area (flag) : 42119M
On-Column Amount (ng) : 8.5994
Integration start scan : 3540 Integration stop scan: 3558
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

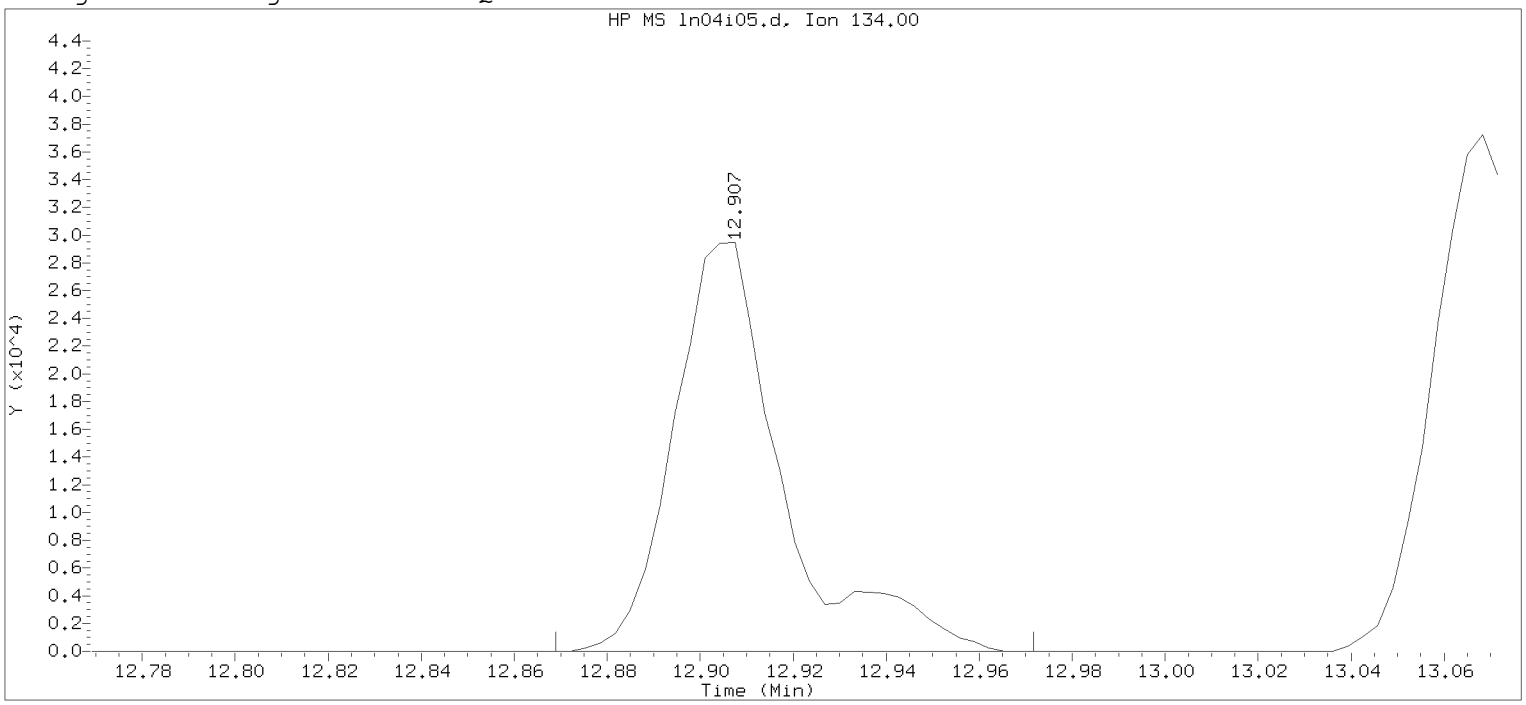
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



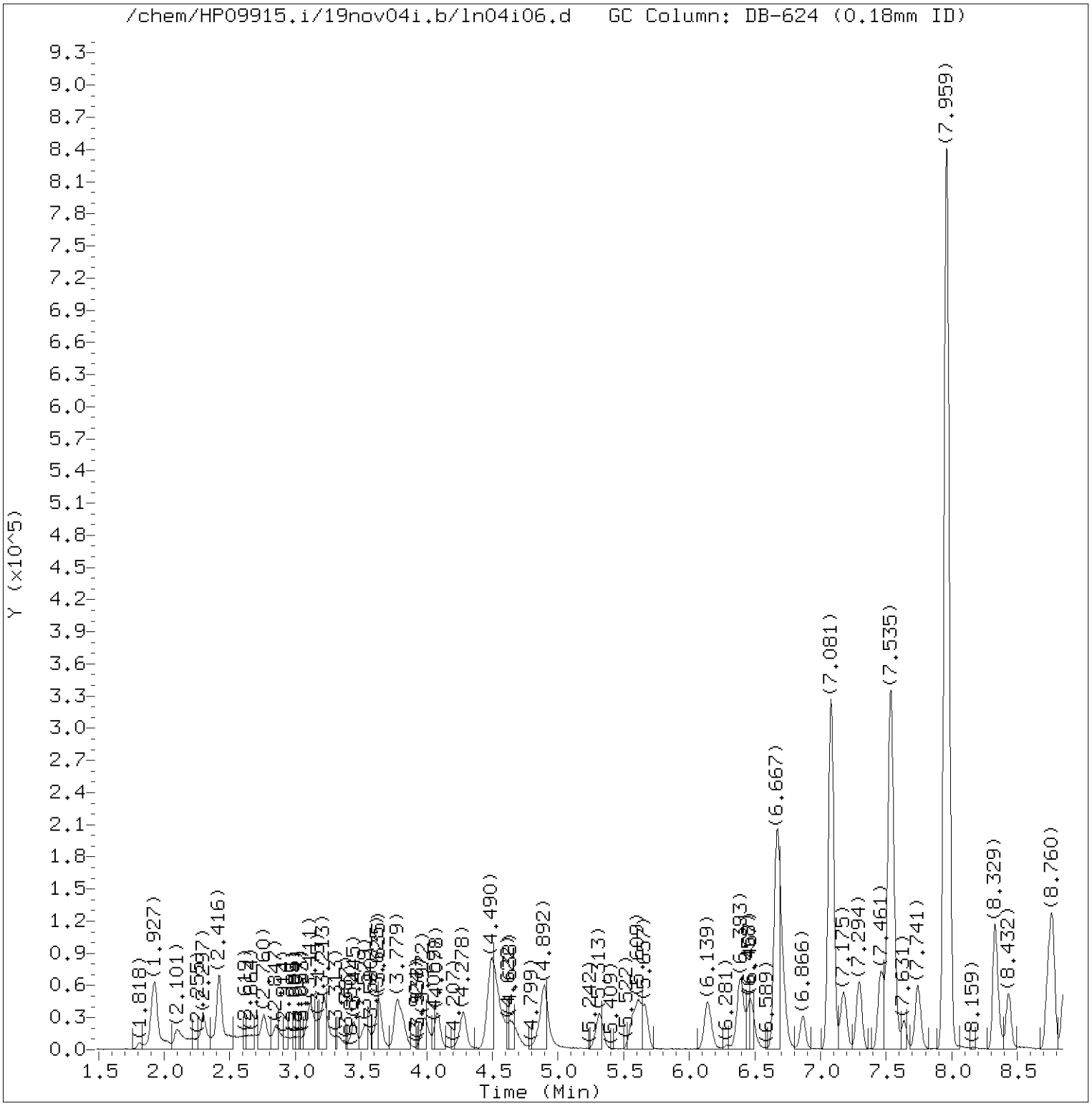
Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area : 47747
On-column Amount (ng) : 9.3569
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

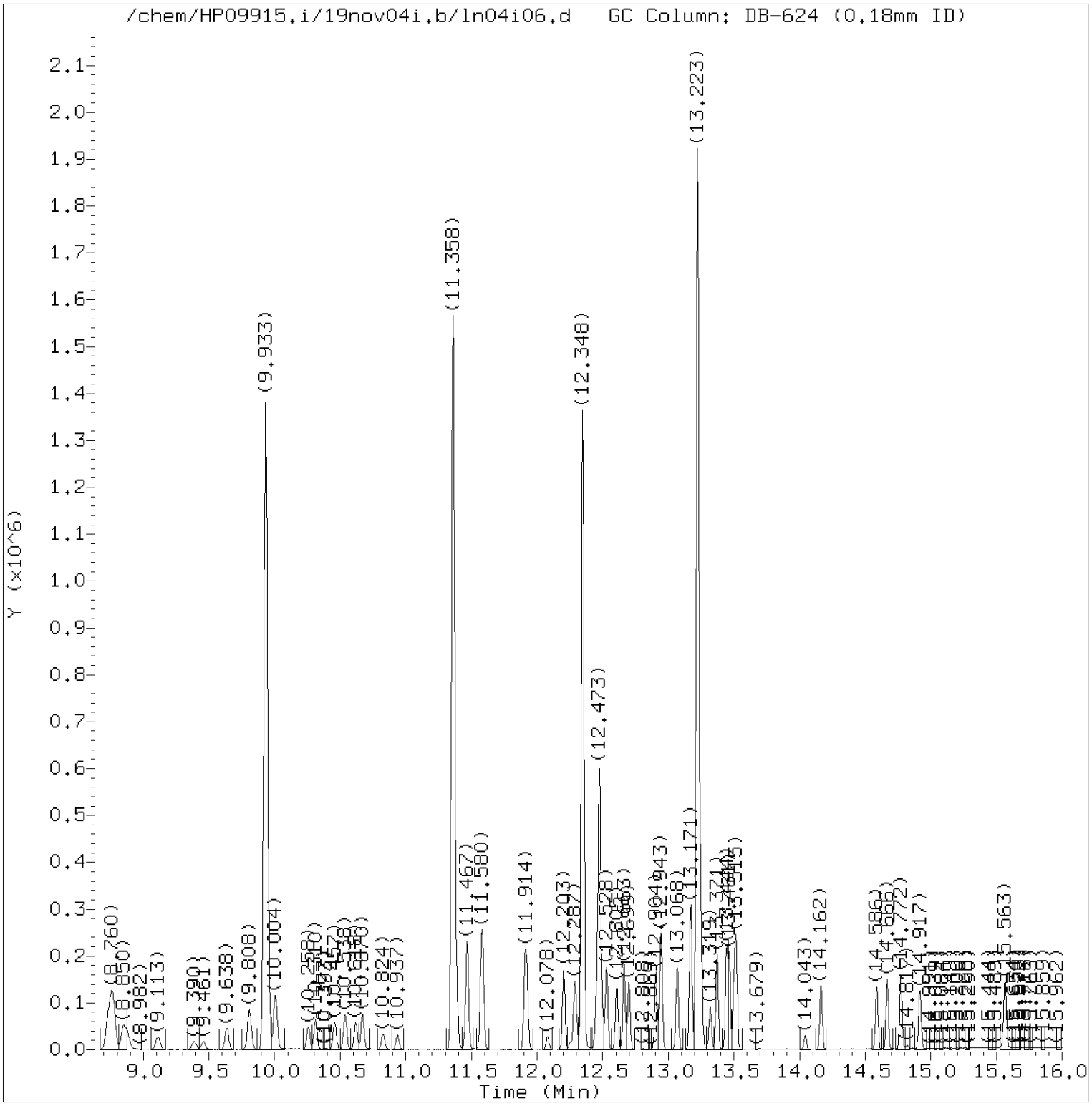
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.098	85	31217M	3.898
4) Chloromethane	(2)	2.297	50	32031	4.150
6) Vinyl Chloride	(2)	2.416	62	30864	4.006
5) 1,3-Butadiene	(2)	2.419	39	27249M	4.252
8) Bromomethane	(2)	2.760	94	23202	4.202
9) Chloroethane	(2)	2.860	64	17298	4.086
10) Dichlorofluoromethane	(2)	3.107	67	40740M	4.015
12) Trichlorofluoromethane	(2)	3.168	101	33532	4.043
11) n-Pentane	(2)	3.223	43	42826M	4.369
14) Ethyl ether	(2)	3.445	59	21059	3.929
15) Freon 123a	(2)	3.538	67	27312	4.094
16) Acrolein	(1)	3.635	56	72021	36.633
17) 1,1-Dichloroethene	(2)	3.773	96	19372	3.979
17) 1,1-Dichloroethene	(2)	3.773	63	9734	3.988
19) Freon 113	(2)	3.805	101	22601	4.069
18) Acetone	(1)	3.815	58	6763M	7.673
22) Methyl Iodide	(2)	3.972	142	39671	3.933
21) 2-Propanol	(1)	4.004	45	45871	72.395
23) Carbon Disulfide	(2)	4.082	76	71681	3.907
27) Methyl Acetate	(2)	4.258	43	24928M	3.976
25) Allyl Chloride	(2)	4.281	41	34775	3.982
28) Methylene Chloride	(2)	4.477	84	22693	3.917
29)*t-Butyl alcohol-d10	(1)	4.512	65	262044M	250.000
30) t-Butyl alcohol	(1)	4.638	59	80219	72.713
31) Acrylonitrile	(2)	4.840	53	12699	3.765
32) trans-1,2-Dichloroethene	(2)	4.901	96	22231	3.947
33) Methyl Tertiary Butyl Ether	(2)	4.901	73	71515	3.869
34) n-Hexane	(2)	5.323	57	33969M	3.877
36) 1,1-Dichloroethane	(2)	5.564	63	39317	4.002
38) di-Isopropyl ether	(2)	5.615	45	72628	3.833
39) 2-Chloro-1,3-butadiene	(2)	5.663	53	34190	3.879
40) Ethyl t-butyl ether	(2)	6.139	59	70845	3.853
43) 1,2-Dichloroethene (Total)	(2)		96	47253	7.906
44) 2-Butanone	(2)	6.371	43	32547	7.516
42) cis-1,2-Dichloroethene	(2)	6.390	96	25022	3.958
45) 2,2-Dichloropropane	(2)	6.400	77	29877	3.912
47) Propionitrile	(1)	6.467	54	100934	73.427
48) Methacrylonitrile	(2)	6.670	67	134092	36.850

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.718	128	12879	3.842
50) Tetrahydrofuran	(1)	6.734	71	9128	7.351
51) Chloroform	(2)	6.869	83	36176	3.850
52)$Dibromofluoromethane	(2)	7.081	113	280667	49.988
52)$Dibromofluoromethane	(2)	7.078	111	287593	50.237
53) 1,1,1-Trichloroethane	(2)	7.091	97	31167	3.886
54) Cyclohexane	(2)	7.178	56	42347	3.949
54) Cyclohexane	(2)	7.175	84	36627	3.932
54) Cyclohexane	(2)	7.181	69	13119	3.955
56) Carbon Tetrachloride	(2)	7.287	117	25509	3.750
55) 1,1-Dichloropropene	(2)	7.297	75	30762	3.960
58) Isobutyl Alcohol	(1)	7.464	41	65125	175.416
57)$1,2-Dichloroethane-d4	(2)	7.532	102	72246	50.488
57)$1,2-Dichloroethane-d4	(2)	7.535	65	323654	50.754
57)$1,2-Dichloroethane-d4	(2)	7.538	104	45694	49.994
60) Benzene	(2)	7.564	78	92488	3.959
61) 1,2-Dichloroethane	(2)	7.638	62	29321	3.902
61) 1,2-Dichloroethane	(2)	7.628	98	2899	3.899
65) t-Amyl methyl ether	(2)	7.744	73	70267	3.807
66)*Fluorobenzene	(2)	7.959	96	1148427	50.000
67) n-Heptane	(2)	7.962	43	32502MA	3.971
69) n-Butanol	(1)	8.329	56	110027M	344.330
71) Trichloroethene	(2)	8.435	95	22766	3.871
72) Methylcyclohexane	(2)	8.737	83	42437	3.889
72) Methylcyclohexane	(2)	8.731	98	19822	4.014
73) 1,2-Dichloropropane	(2)	8.773	63	22762	3.837
76) Methyl Methacrylate	(2)	8.843	69	20713M	3.611
75) 1,4-Dioxane	(1)	8.850	88	16188	184.315
74) Dibromomethane	(2)	8.879	93	14634	3.813
78) Bromodichloromethane	(2)	9.110	83	24167	3.509
79) 2-Nitropropane	(2)	9.387	41	14154	6.785
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	8979	3.525
81) cis-1,3-Dichloropropene	(2)	9.638	75	32112	3.511
82) 4-Methyl-2-pentanone	(2)	9.808	43	67922	7.431
83)$Toluene-d8	(3)	9.933	98	1152733	49.832
83)$Toluene-d8	(3)	9.933	100	745821	49.773
88) Toluene	(3)	10.004	92	56092	3.868
90) 1,3-Dichloropropene (total)	(3)		100	60153	6.917

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	28041	3.406
91) Ethyl Methacrylate	(3)	10.310	69	34660	3.464
92) 1,1,2-Trichloroethane	(3)	10.457	97	20516	3.731
93) Tetrachloroethene	(3)	10.538	166	24234	3.946
94) 1,3-Dichloropropane	(3)	10.618	76	34762	3.703
96) 2-Hexanone	(3)	10.670	43	50570	7.572
97) Dibromochloromethane	(3)	10.824	129	18906	3.357
99) 1,2-Dibromoethane	(3)	10.937	107	21586	3.615
100)*Chlorobenzene-d5	(3)	11.358	117	884065	50.000
101) 1-Chlorohexane	(3)	11.364	91	31055	3.986
102) Chlorobenzene	(3)	11.387	112	63883	3.895
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	19618	3.631
104) Ethylbenzene	(3)	11.467	91	109318	3.944
106) m+p-Xylene	(3)	11.580	106	85093	7.804
108) Xylene (Total)	(3)		106	126157	11.616
107) o-Xylene	(3)	11.908	106	41064	3.813
109) Styrene	(3)	11.924	104	65784	3.696
110) Bromoform	(3)	12.078	173	12196	2.898
111) Isopropylbenzene	(3)	12.203	105	107056	3.963
112) Cyclohexanone	(1)	12.287	55	63391	184.289
114)$4-Bromofluorobenzene	(3)	12.348	95	440415	50.280
114)$4-Bromofluorobenzene	(3)	12.348	174	367241	50.573
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	33170M	3.658
115) Bromobenzene	(4)	12.467	156	27559	3.820
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	101806	36.395
117) 1,2,3-Trichloropropane	(4)	12.496	110	10208	3.668
119) n-Propylbenzene	(4)	12.528	91	126543	4.014
120) 2-Chlorotoluene	(4)	12.609	126	25381	3.790
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	89290	3.898
121) 4-Chlorotoluene	(4)	12.699	126	27169	3.898
124) tert-Butylbenzene	(4)	12.904	134	18608M	3.928
125) Pentachloroethane	(4)	12.940	167	14303	3.506
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	93258	3.863
127) sec-Butylbenzene	(4)	13.068	105	111847	3.956
129) 1,3-Dichlorobenzene	(4)	13.168	146	51597	3.892
130) p-Isopropyltoluene	(4)	13.174	119	96571	3.948
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	480071	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	53736	3.910

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134)	1,2,3-Trimethylbenzene	(4)	13.248	105	99398	3.886
135)	Benzyl Chloride	(4)	13.319	91	57244	2.956
136)	1,3-Diethylbenzene	(4)	13.371	119	61603	3.870
141)	Diethylbenzene (total)	(4)		100	179922	11.677
137)	1,4-Diethylbenzene	(4)	13.444	119	66423	3.939
139)	n-Butylbenzene	(4)	13.464	92	51213	4.095
138)	1,2-Dichlorobenzene	(4)	13.502	146	50972	3.896
140)	1,2-Diethylbenzene	(4)	13.518	119	51896	3.868
142)	1,2-Dibromo-3-chloropropane	(4)	14.043	75	6542	3.295
144)	1,3,5-Trichlorobenzene	(4)	14.165	180	39801	3.960
146)	1,2,4-Trichlorobenzene	(4)	14.586	180	38013	3.889
147)	Hexachlorobutadiene	(4)	14.670	225	23904	5.180
148)	Naphthalene	(4)	14.772	128	115354	3.671
149)	1,2,3-Trichlorobenzene	(4)	14.917	180	37152	3.907
150)	2-Methylnaphthalene	(4)	15.563	142	72506	3.747

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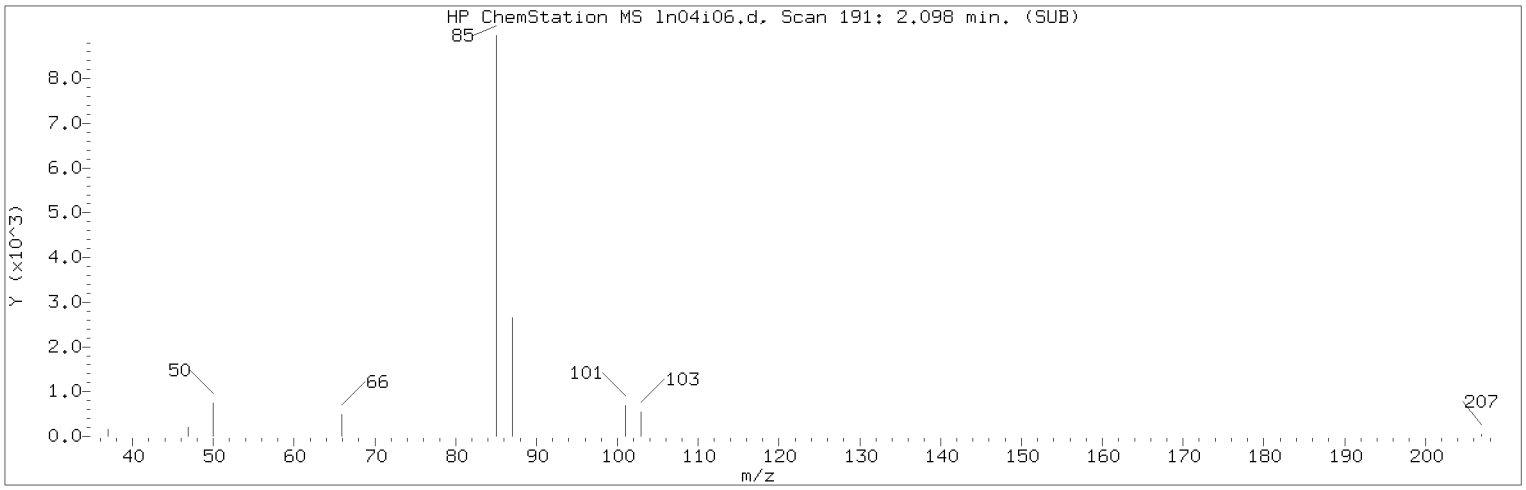
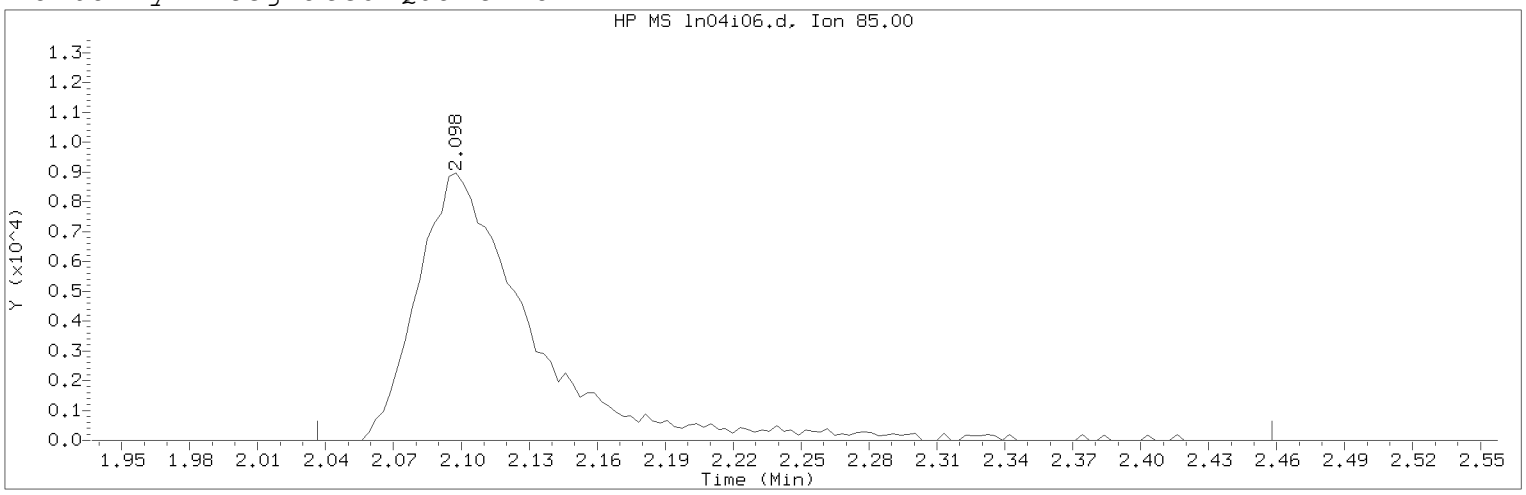
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

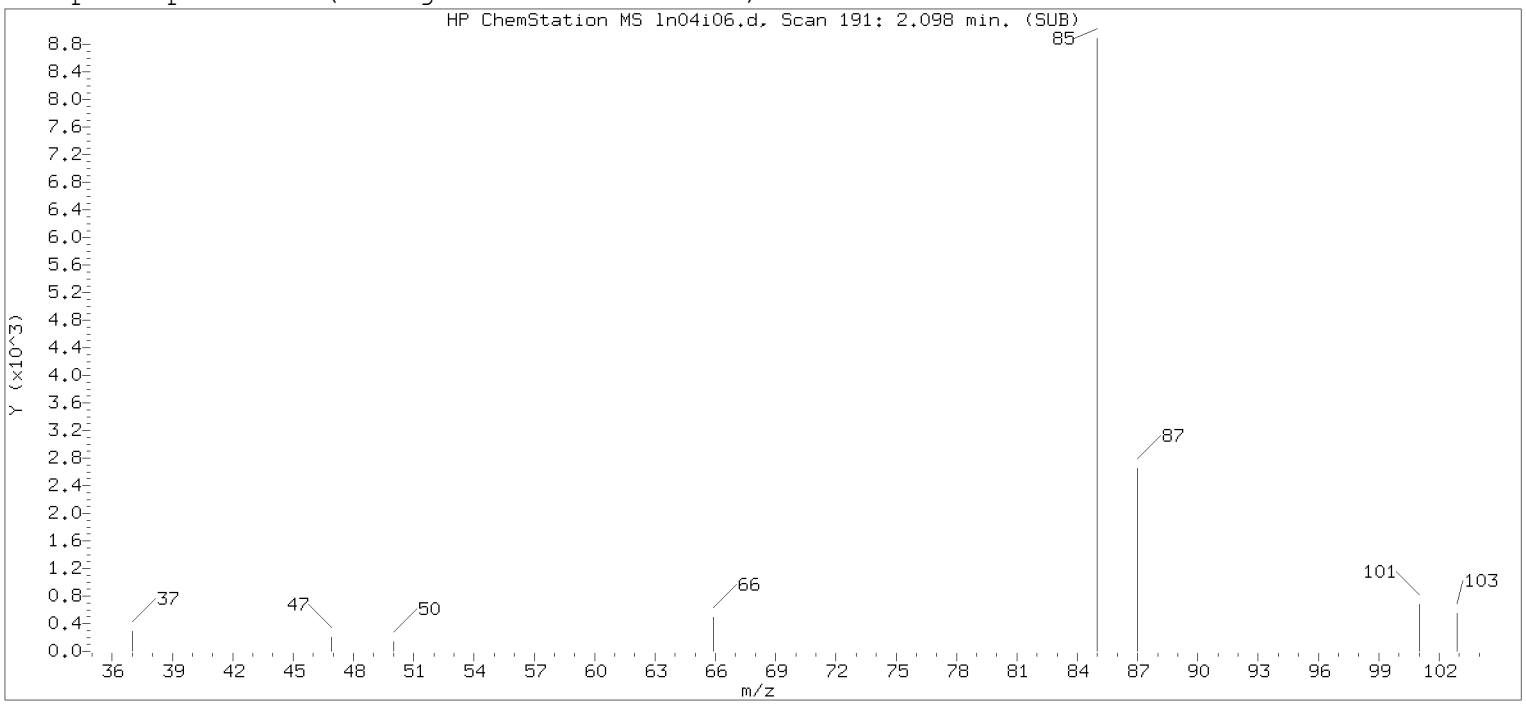
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 191
Retention Time (minutes): 2.098
Quant Ion : 85.00
Area (flag) : 31217M
On-Column Amount (ng) : 3.8978
Integration start scan : 171 Integration stop scan: 302
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

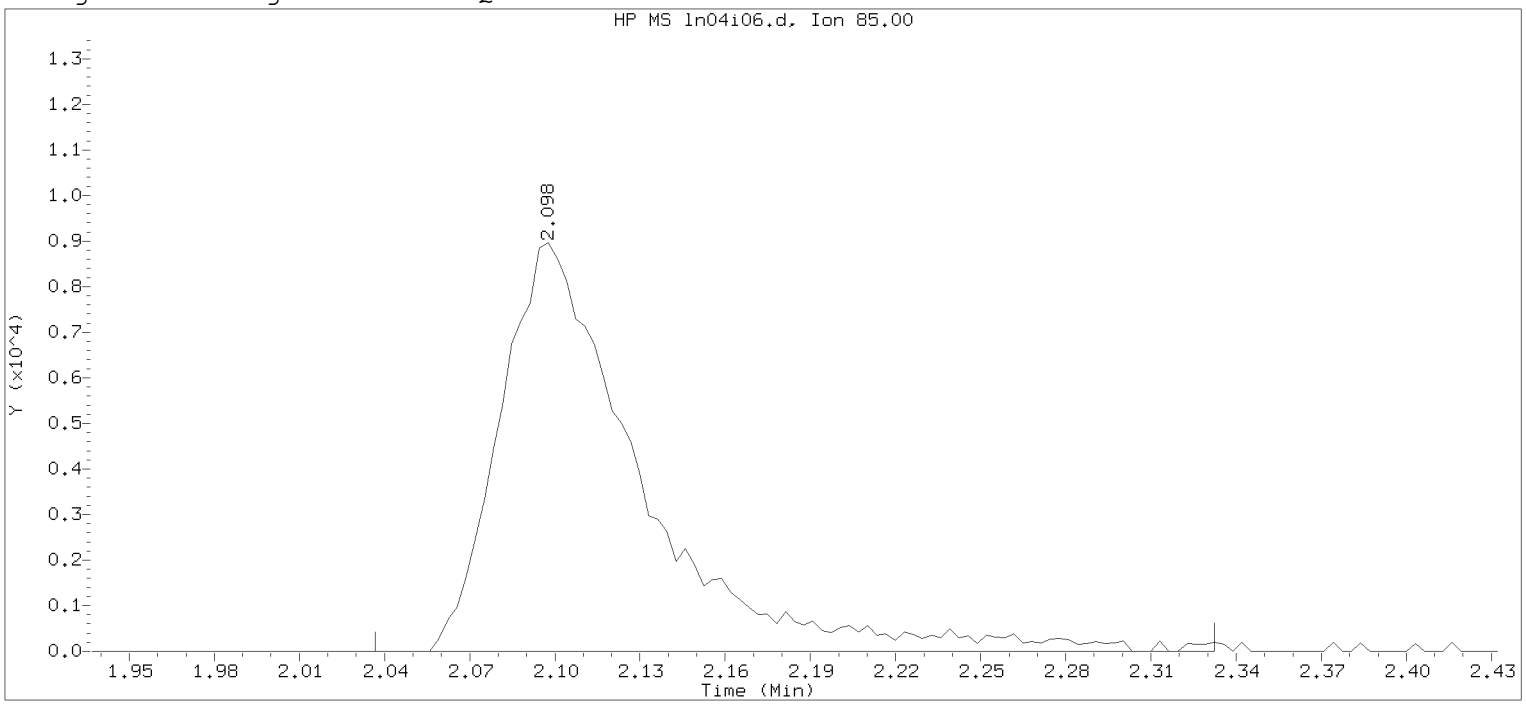
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

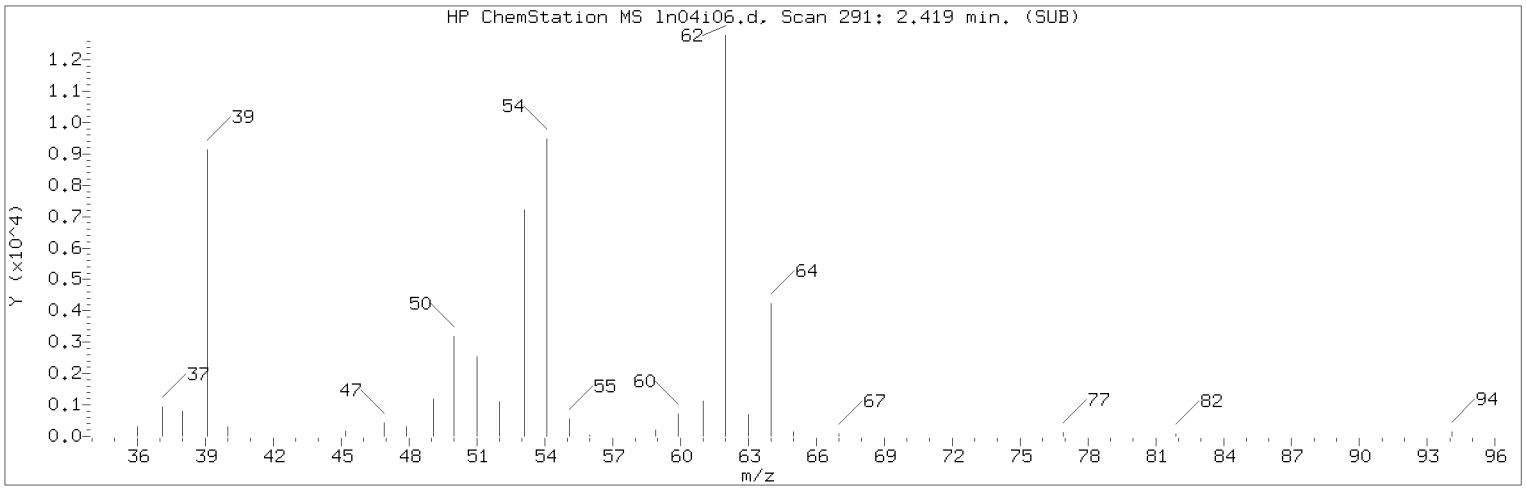
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

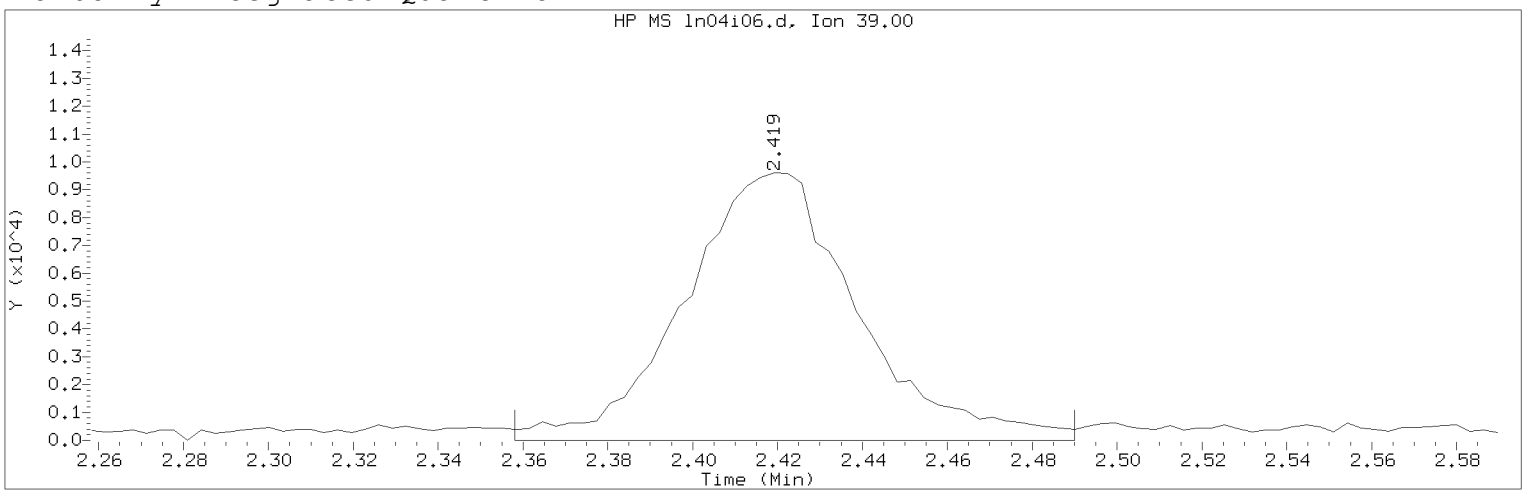
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 191
Retention Time (minutes): 2.098
Quant Ion : 85.00
Area : 30987
On-column Amount (ng) : 3.8874
Integration start scan : 171 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

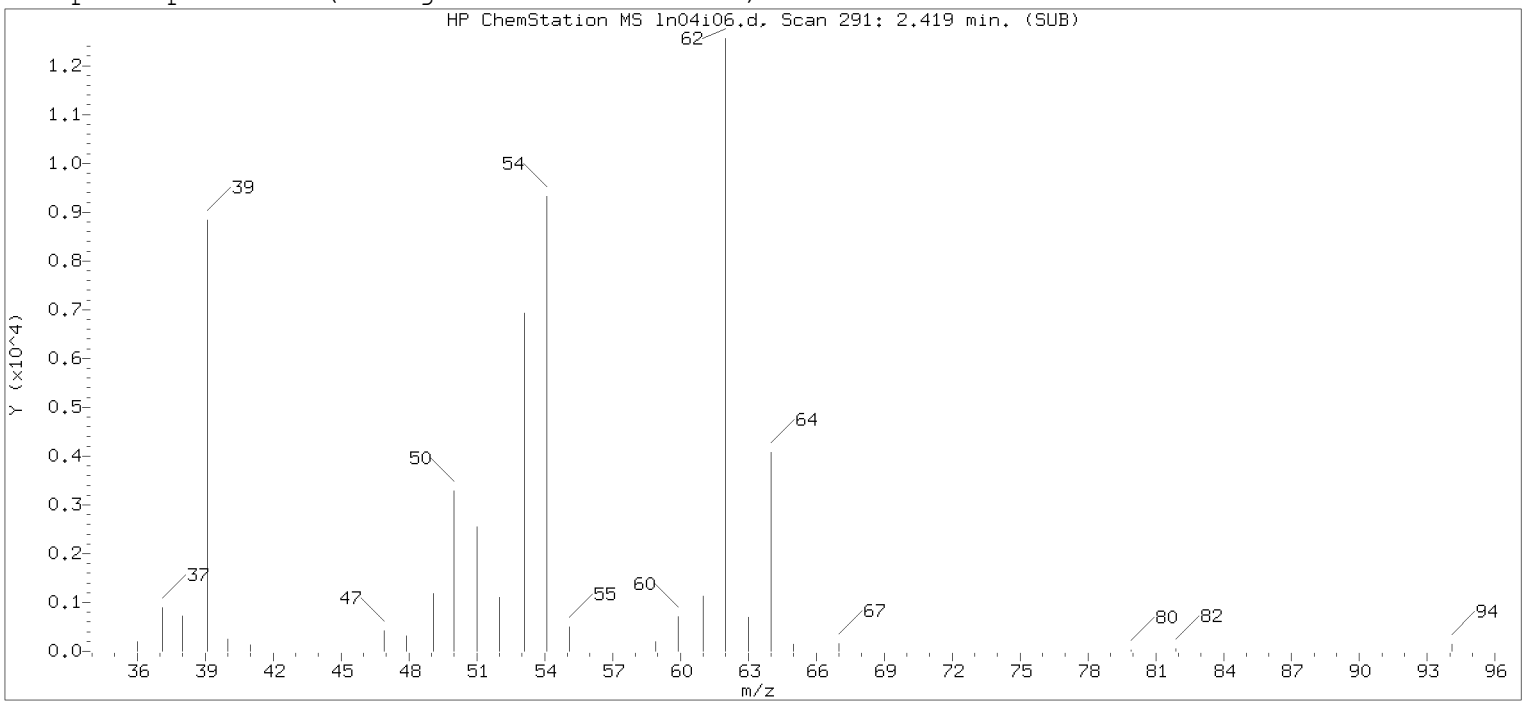
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 291
Retention Time (minutes): 2.419
Quant Ion : 39.00
Area (flag) : 27249M
On-Column Amount (ng) : 4.2517
Integration start scan : 271 Integration stop scan: 312
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

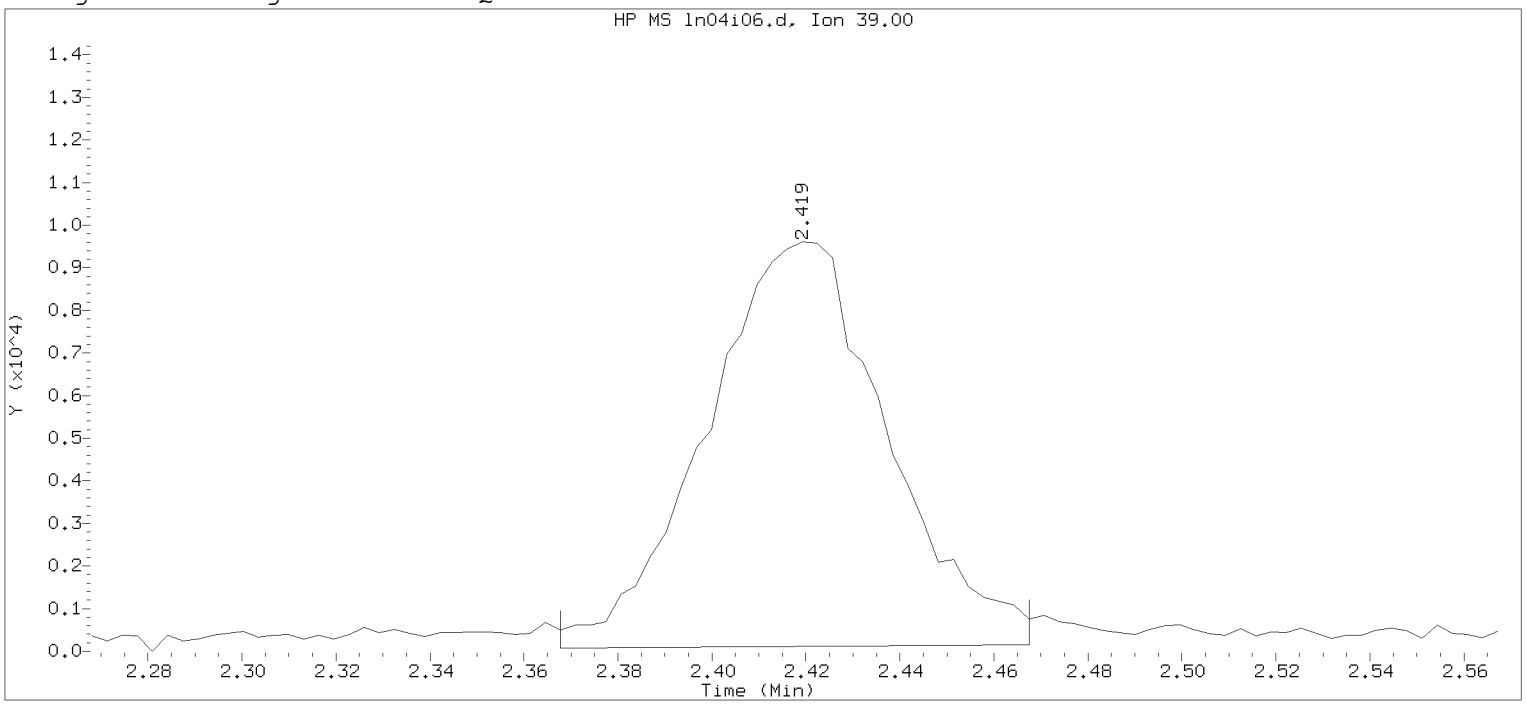
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 291
Retention Time (minutes): 2.419
Quant Ion : 39.00
Area : 25391
On-column Amount (ng) : 4.2082
Integration start scan : 274 Integration stop scan: 305
Y at integration start : 76 Y at integration end: 147

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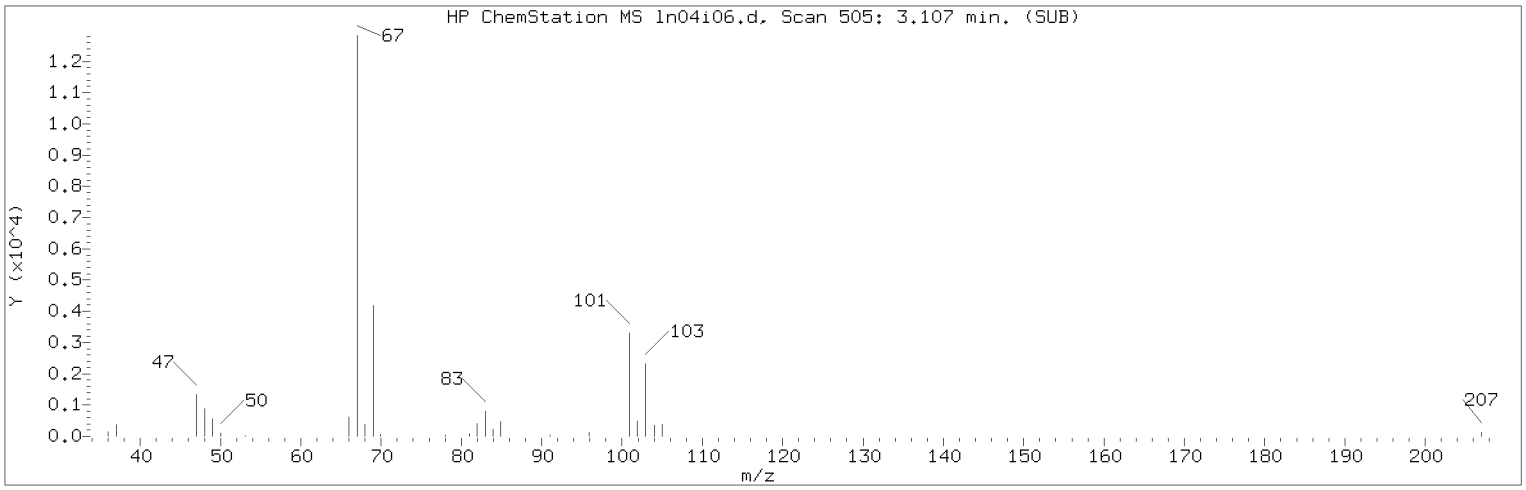
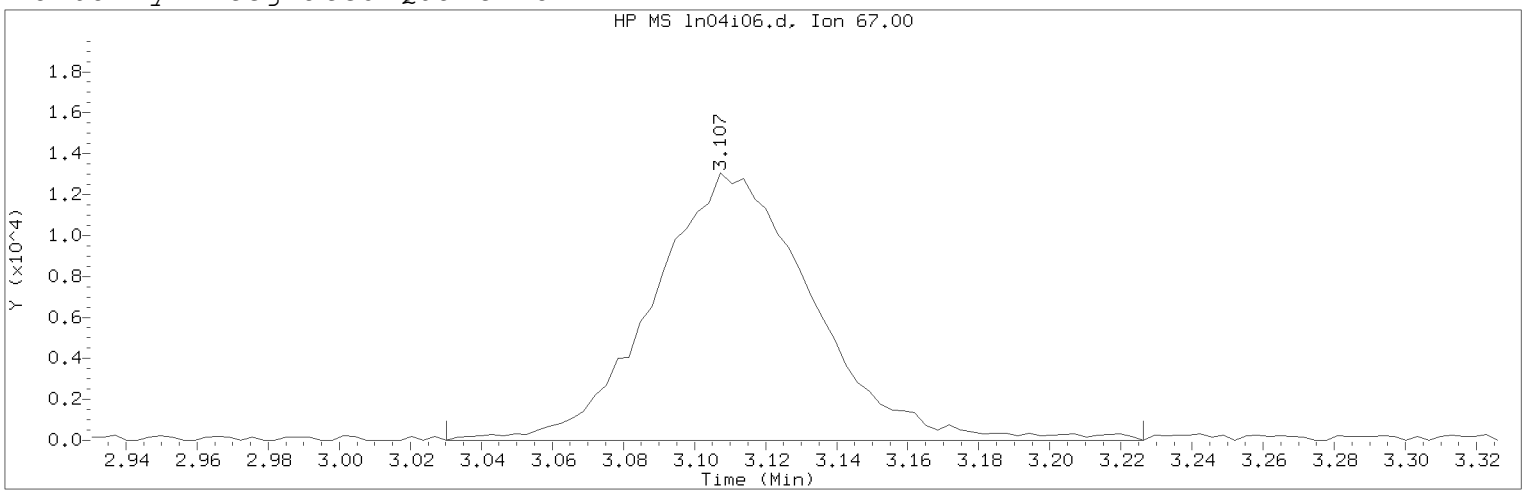
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

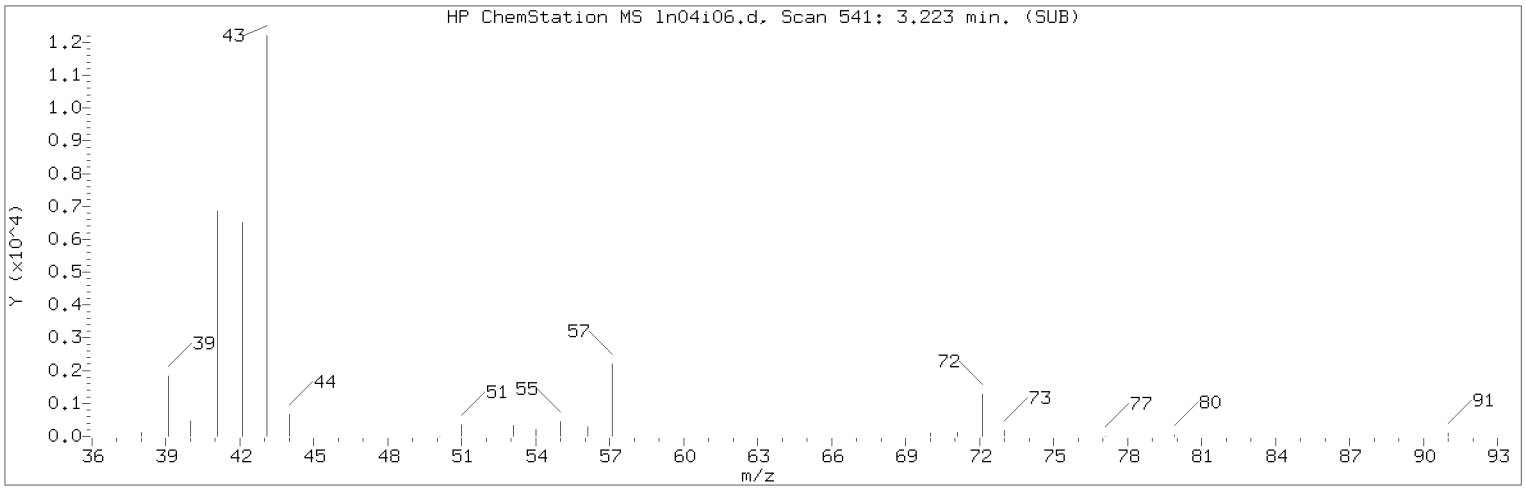
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 505
Retention Time (minutes): 3.107
Quant Ion : 67.00
Area (flag) : 40740M
On-Column Amount (ng) : 4.0151
Integration start scan : 480 Integration stop scan: 541
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

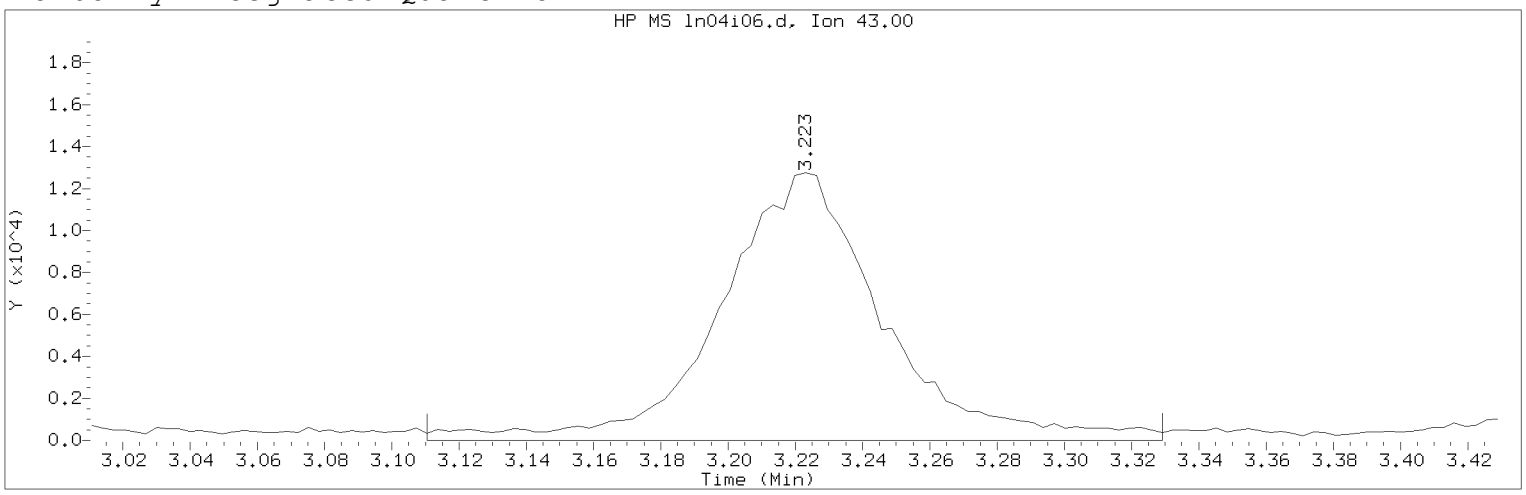
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

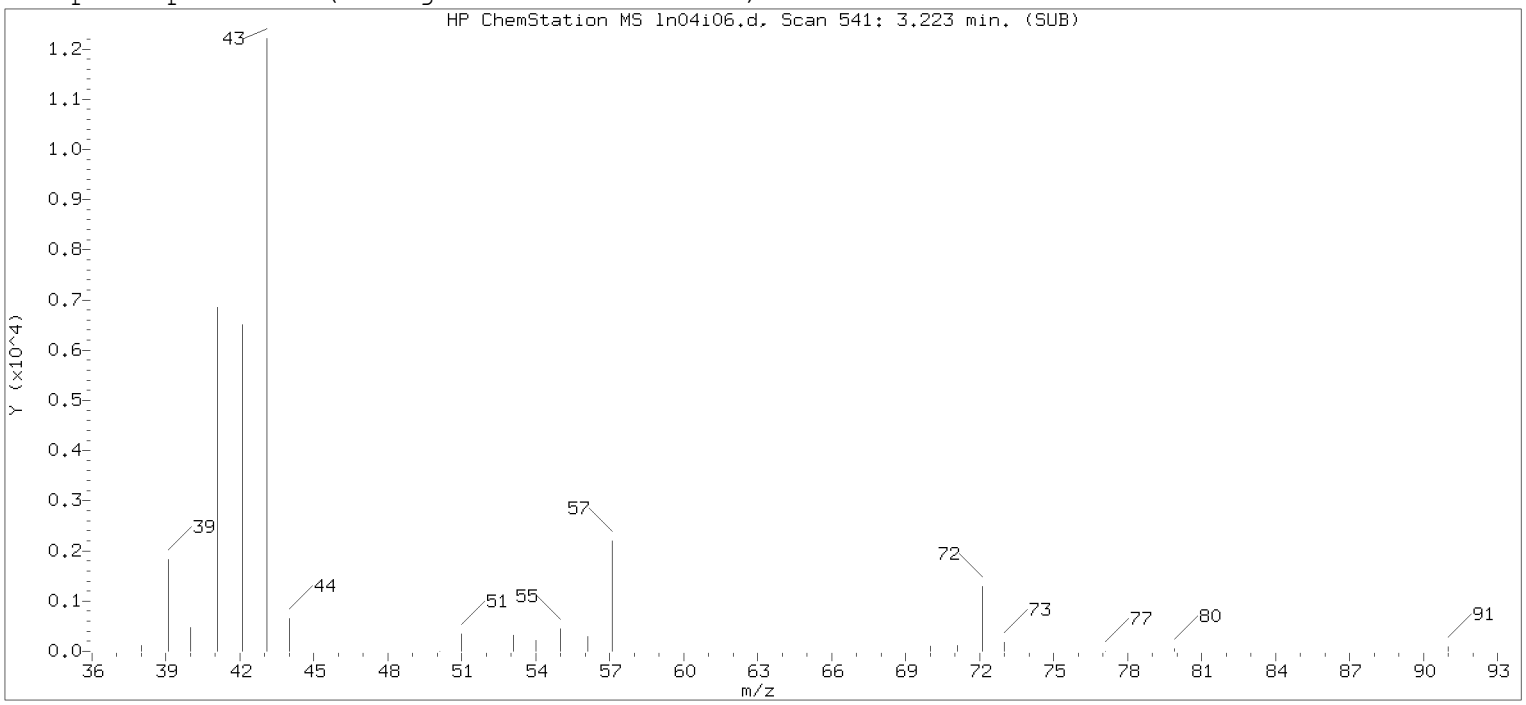
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 541
Retention Time (minutes): 3.223
Quant Ion : 43.00
Area (flag) : 42826M
On-Column Amount (ng) : 4.3694
Integration start scan : 505 Integration stop scan: 573
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

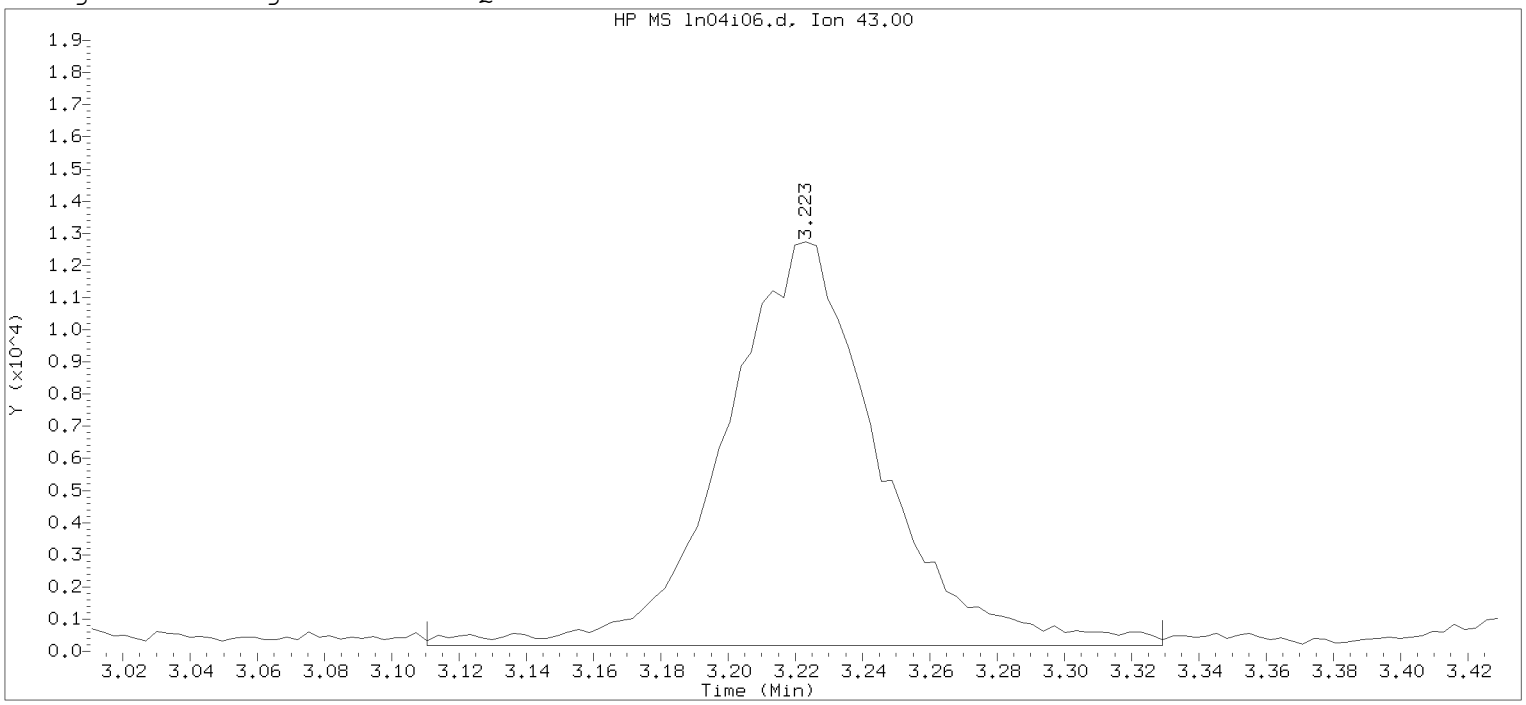
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

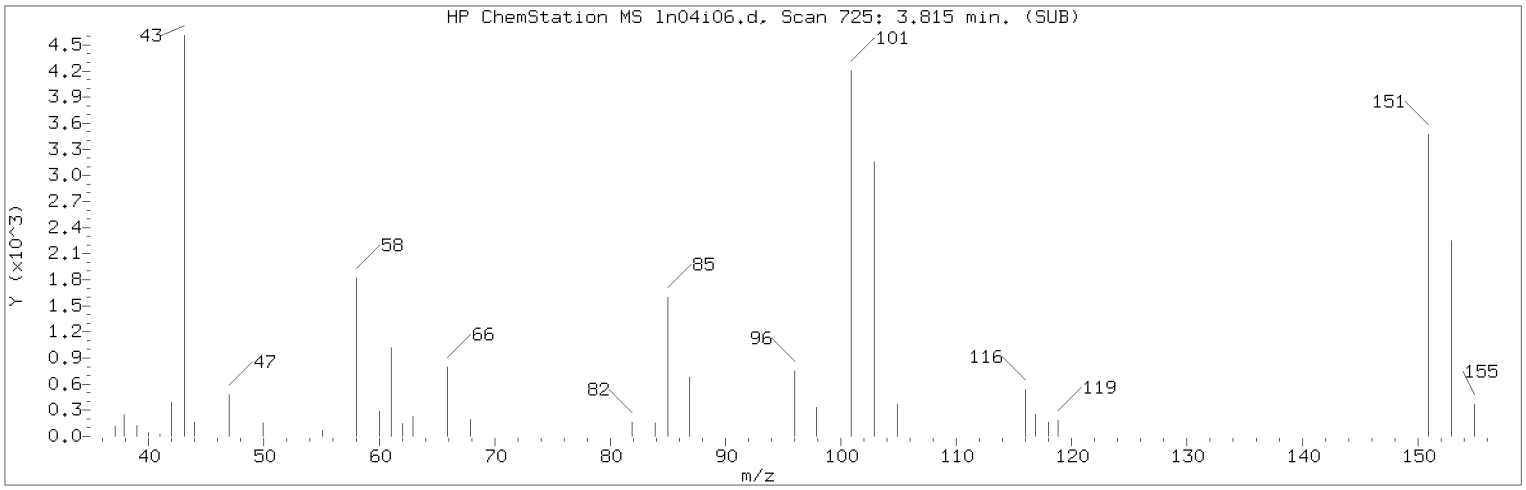
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

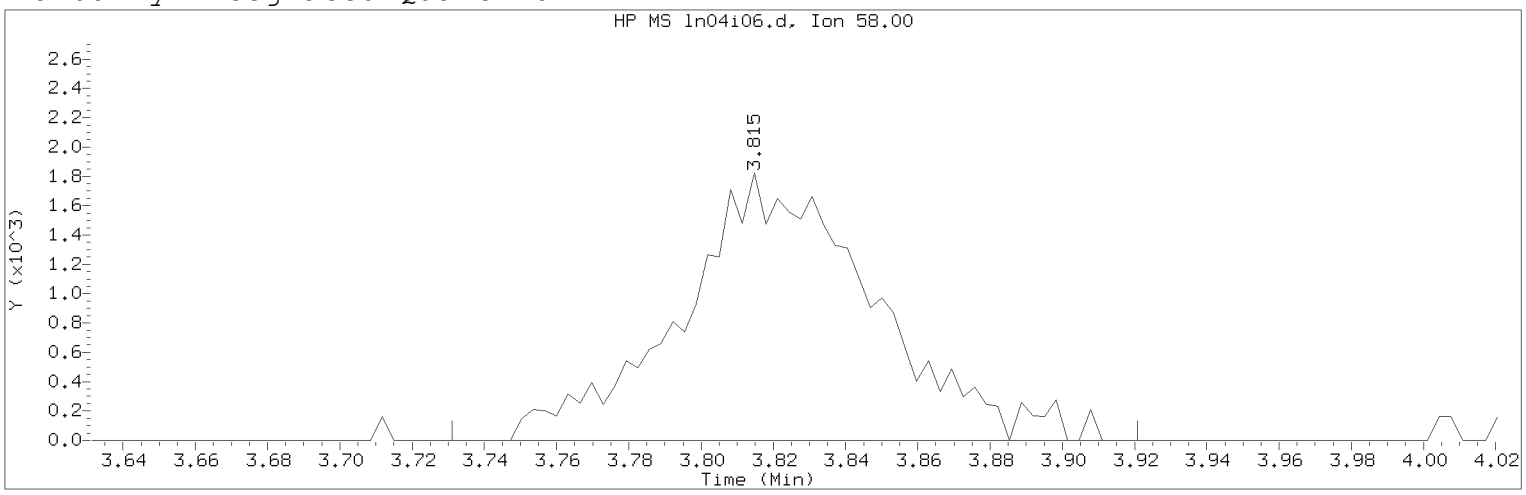
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 541
Retention Time (minutes): 3.223
Quant Ion : 43.00
Area : 40359
On-column Amount (ng) : 4.1550
Integration start scan : 505 Integration stop scan: 573
Y at integration start : 183 Y at integration end: 183

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

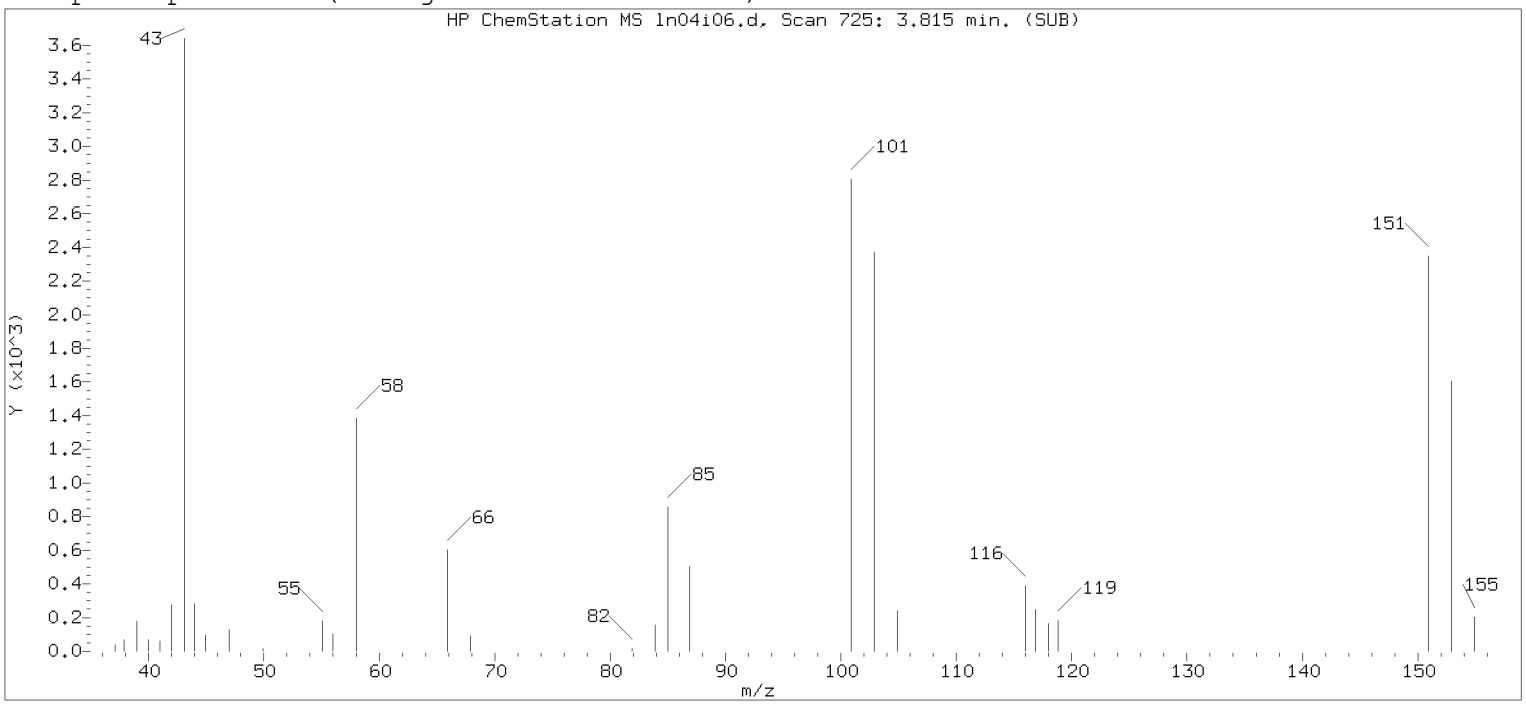
Compound Number : 18
Compound Name : Acetone
Scan Number : 725
Retention Time (minutes): 3.815
Quant Ion : 58.00
Area (flag) : 6763M
On-Column Amount (ng) : 7.6731
Integration start scan : 698 Integration stop scan: 757
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

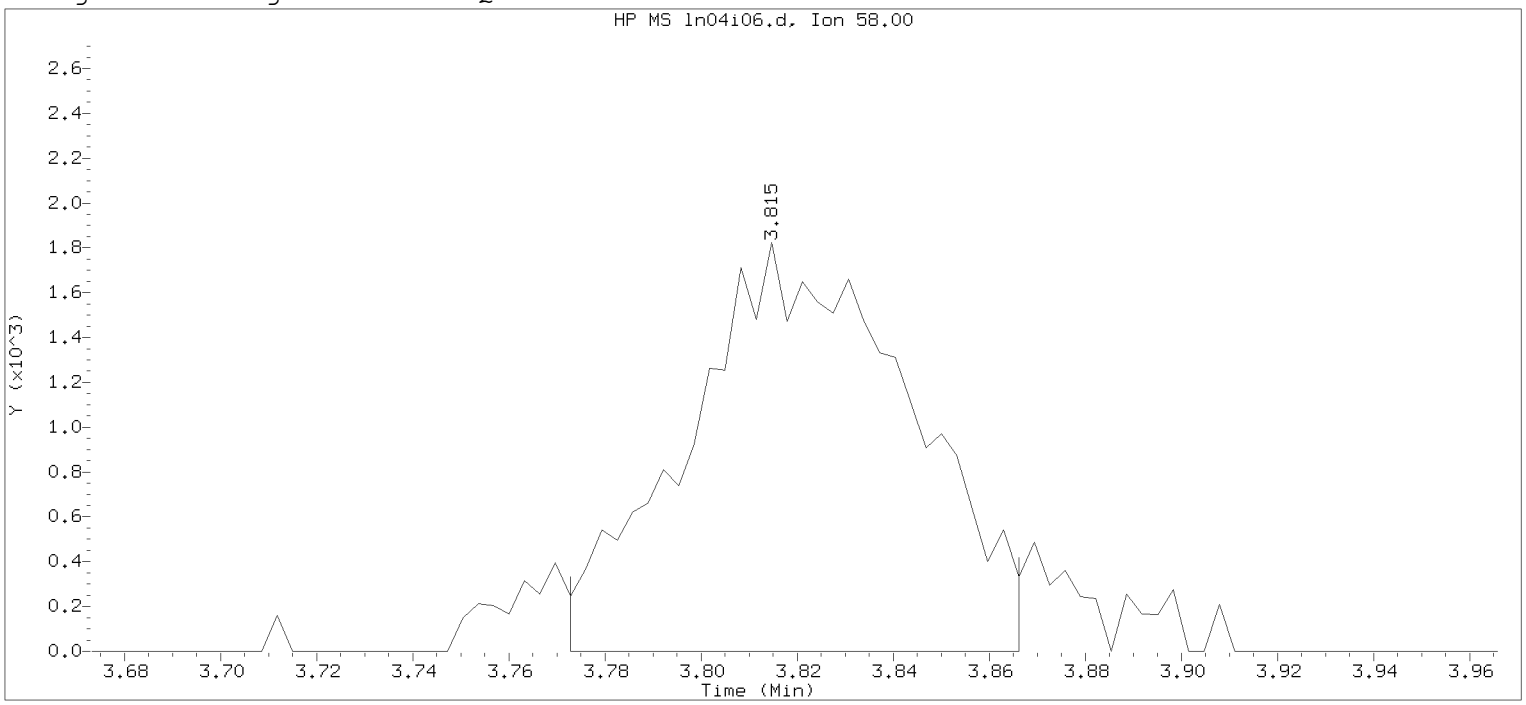
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

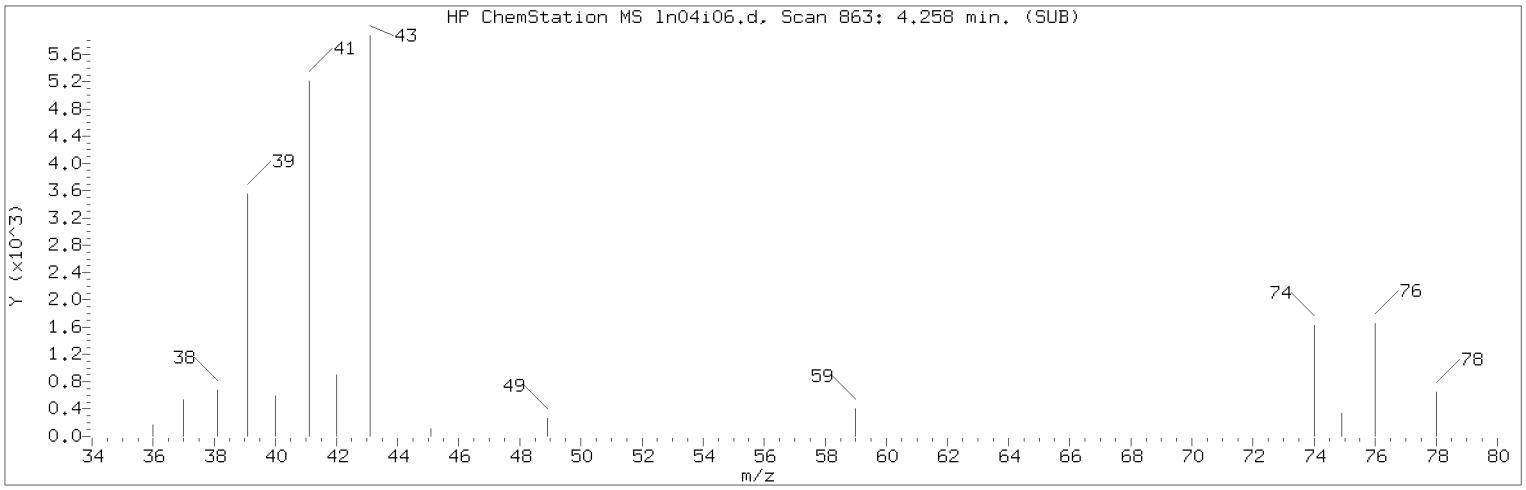
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

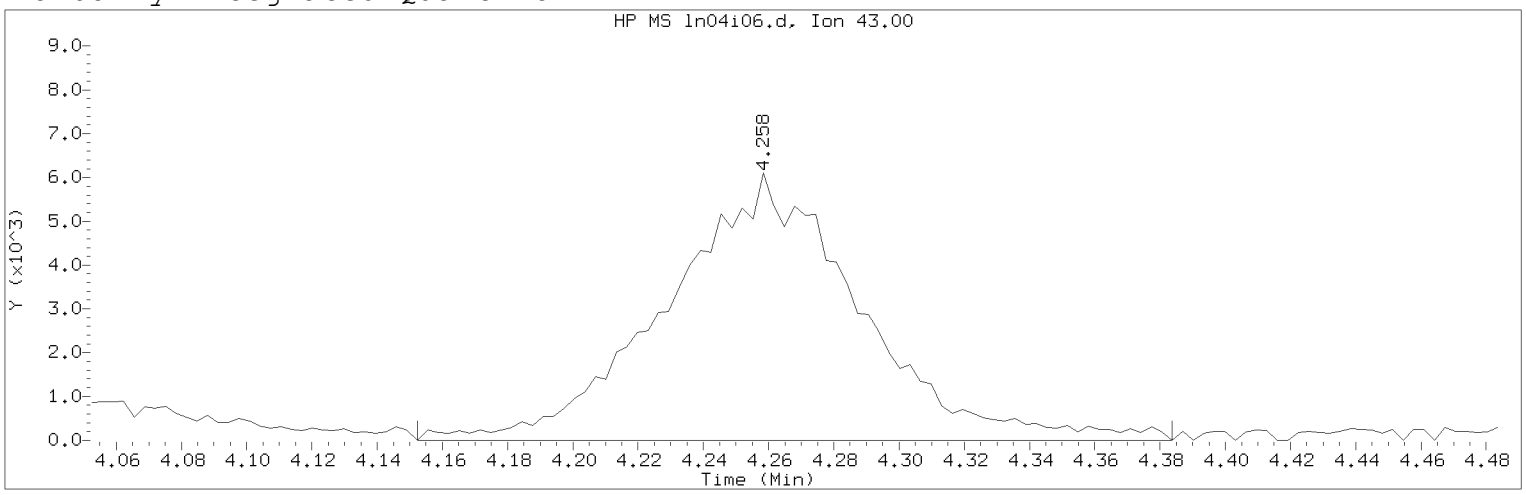
Compound Number : 18
Compound Name : Acetone
Scan Number : 725
Retention Time (minutes): 3.815
Quant Ion : 58.00
Area : 5862
On-column Amount (ng) : 7.7134
Integration start scan : 711 Integration stop scan: 740
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

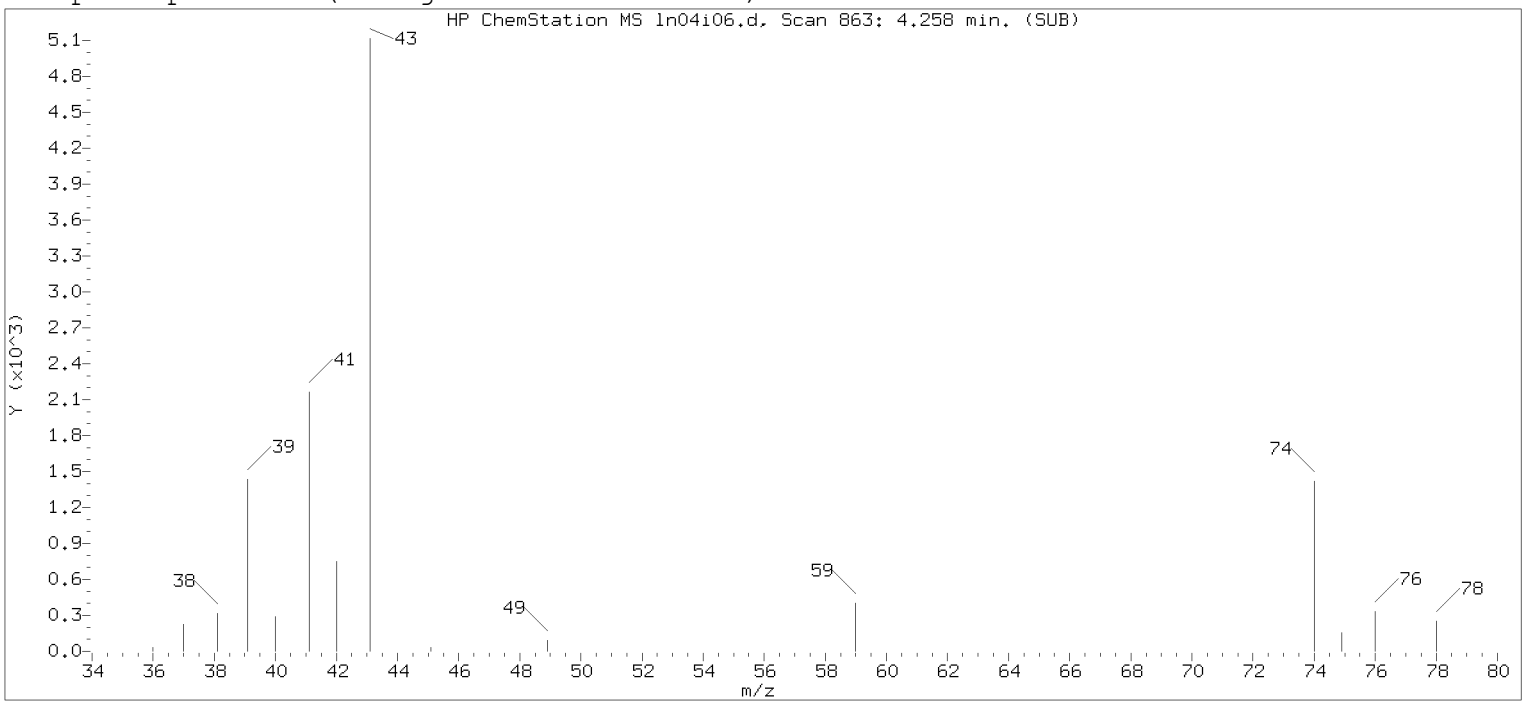
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 863
Retention Time (minutes): 4.258
Quant Ion : 43.00
Area (flag) : 24928M
On-Column Amount (ng) : 3.9757
Integration start scan : 829 Integration stop scan: 901
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

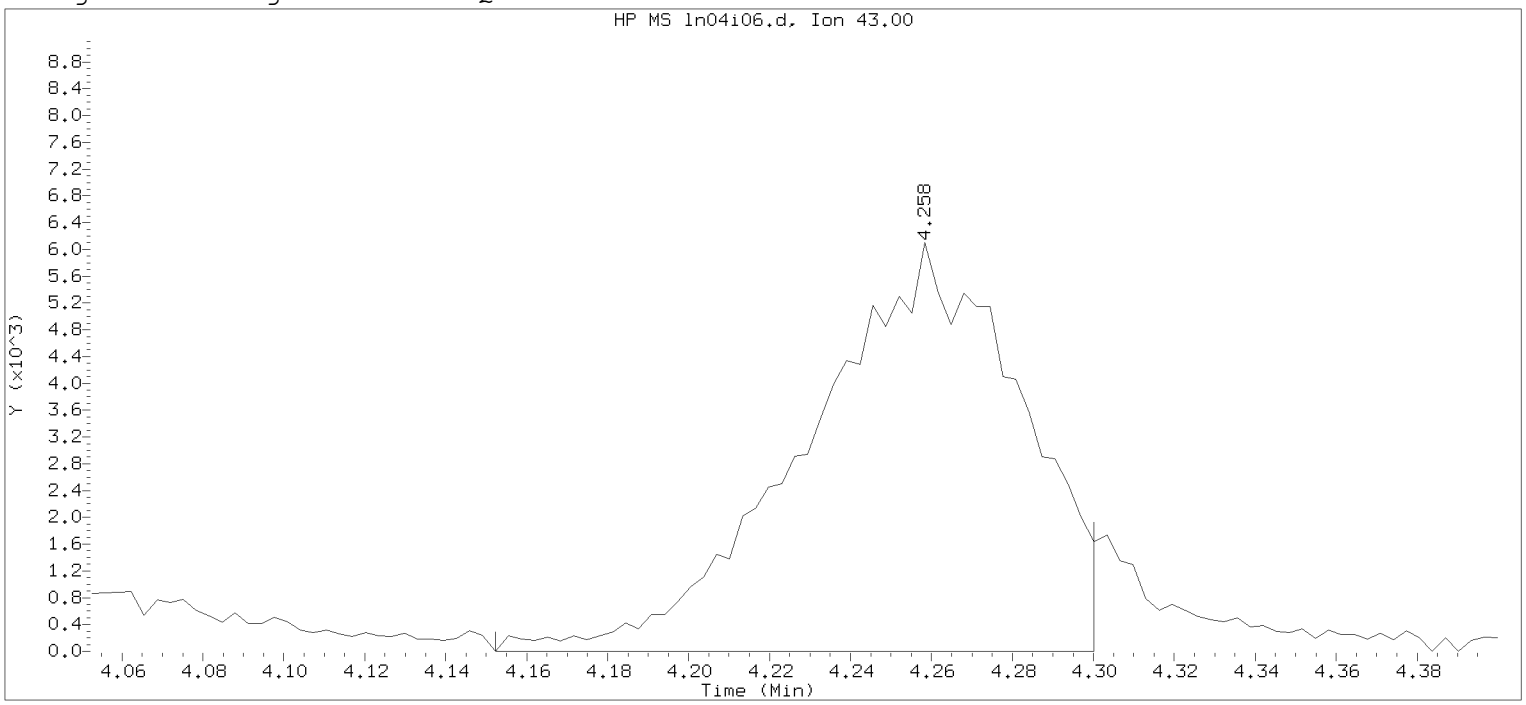
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

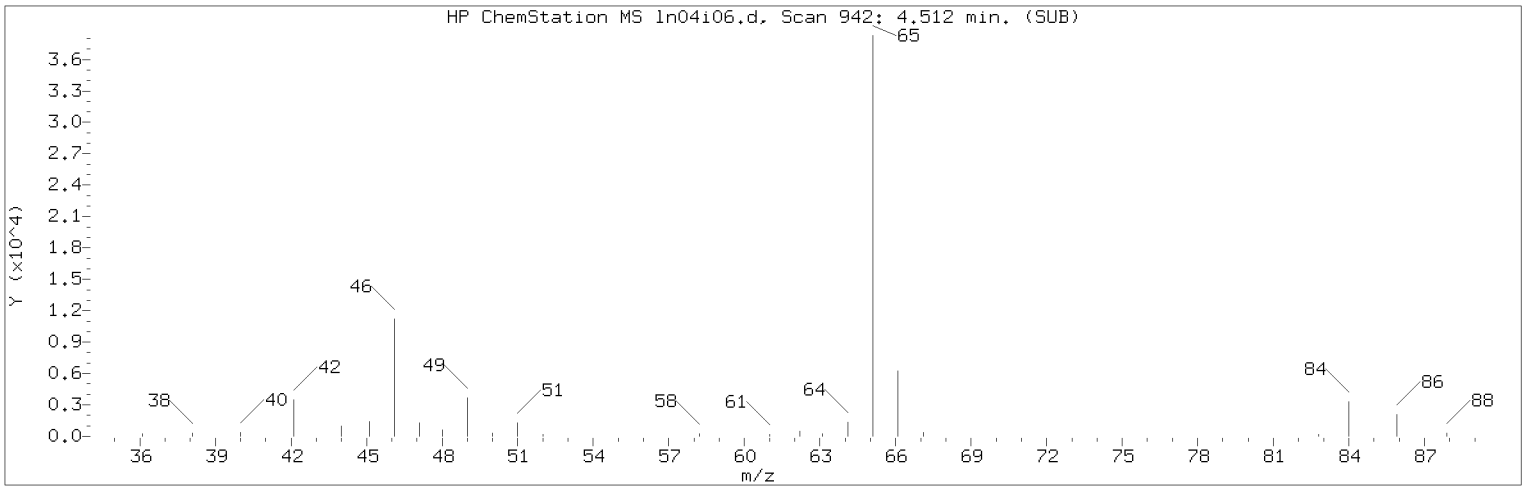
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

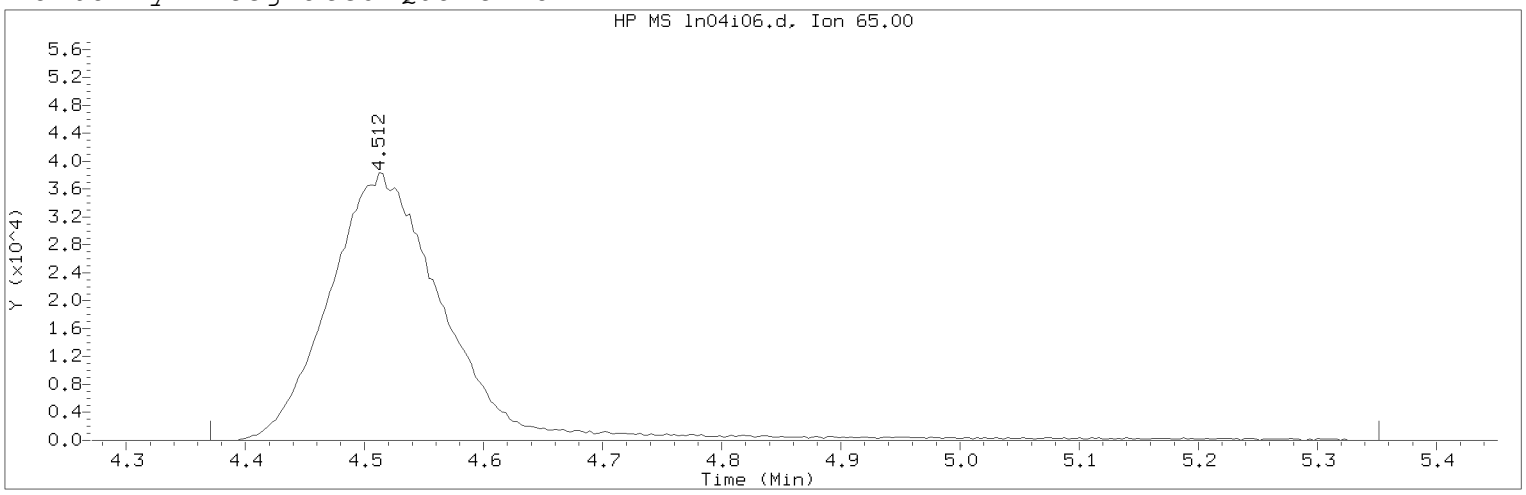
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 863
Retention Time (minutes): 4.258
Quant Ion : 43.00
Area : 22302
On-column Amount (ng) : 3.7243
Integration start scan : 829 Integration stop scan: 875
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

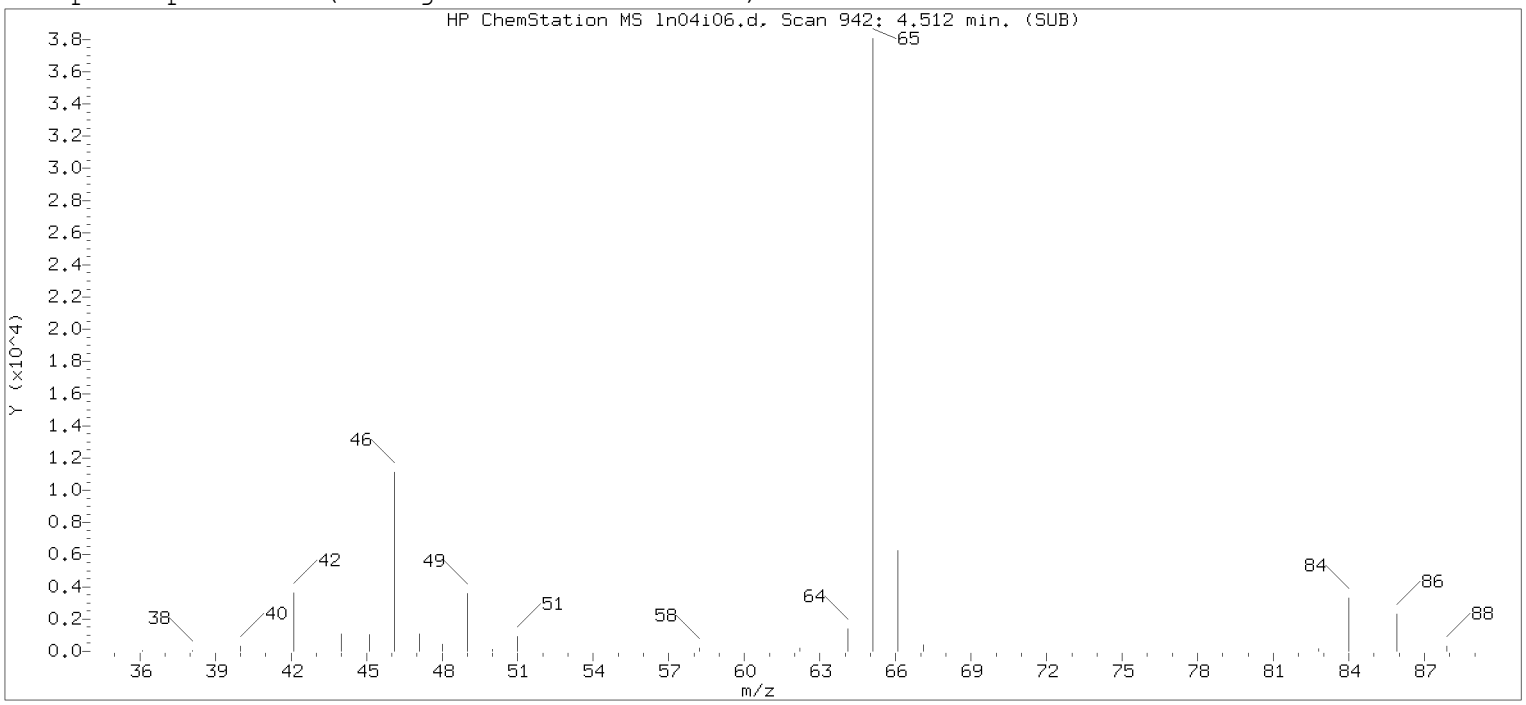
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area (flag) : 262044M
On-Column Amount (ng) : 250.0000
Integration start scan : 897 Integration stop scan: 1202
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

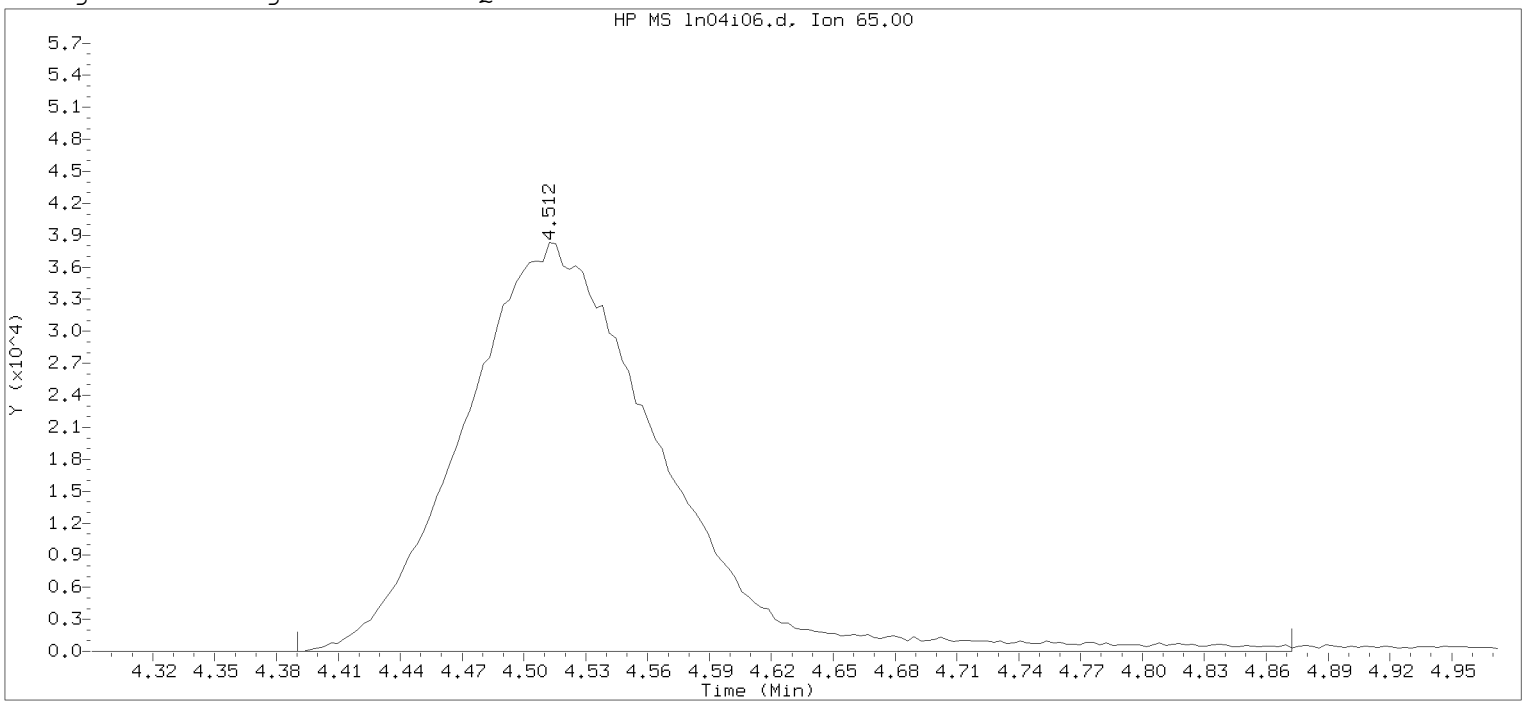
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

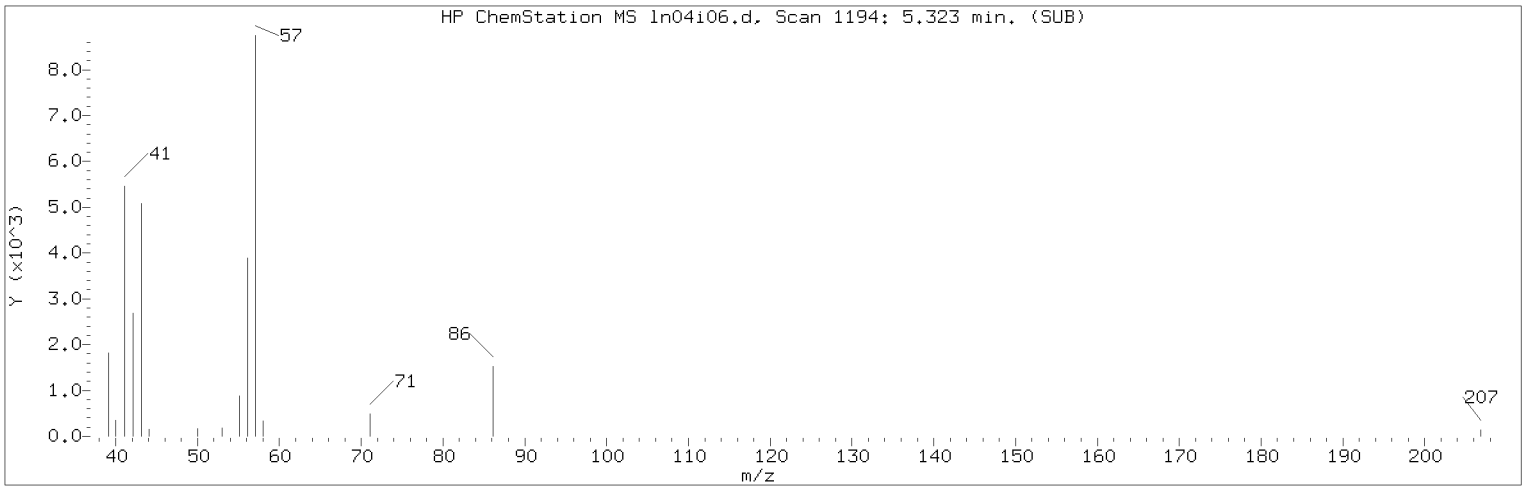
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

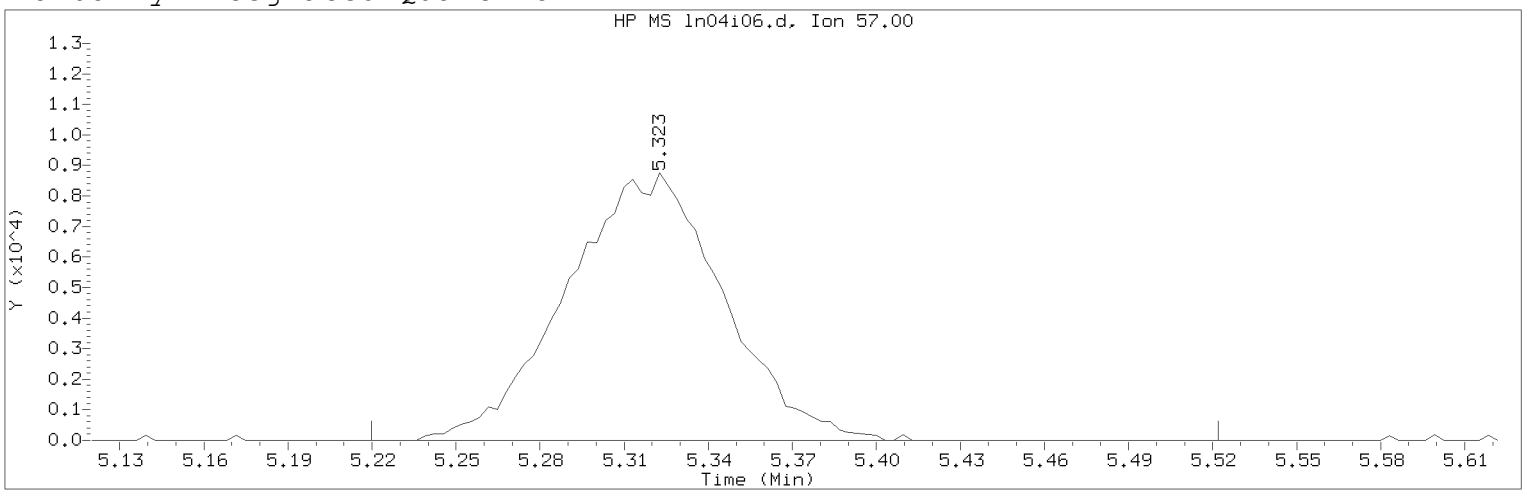
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area : 254362
On-column Amount (ng) : 250.0000
Integration start scan : 903 Integration stop scan: 1053
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

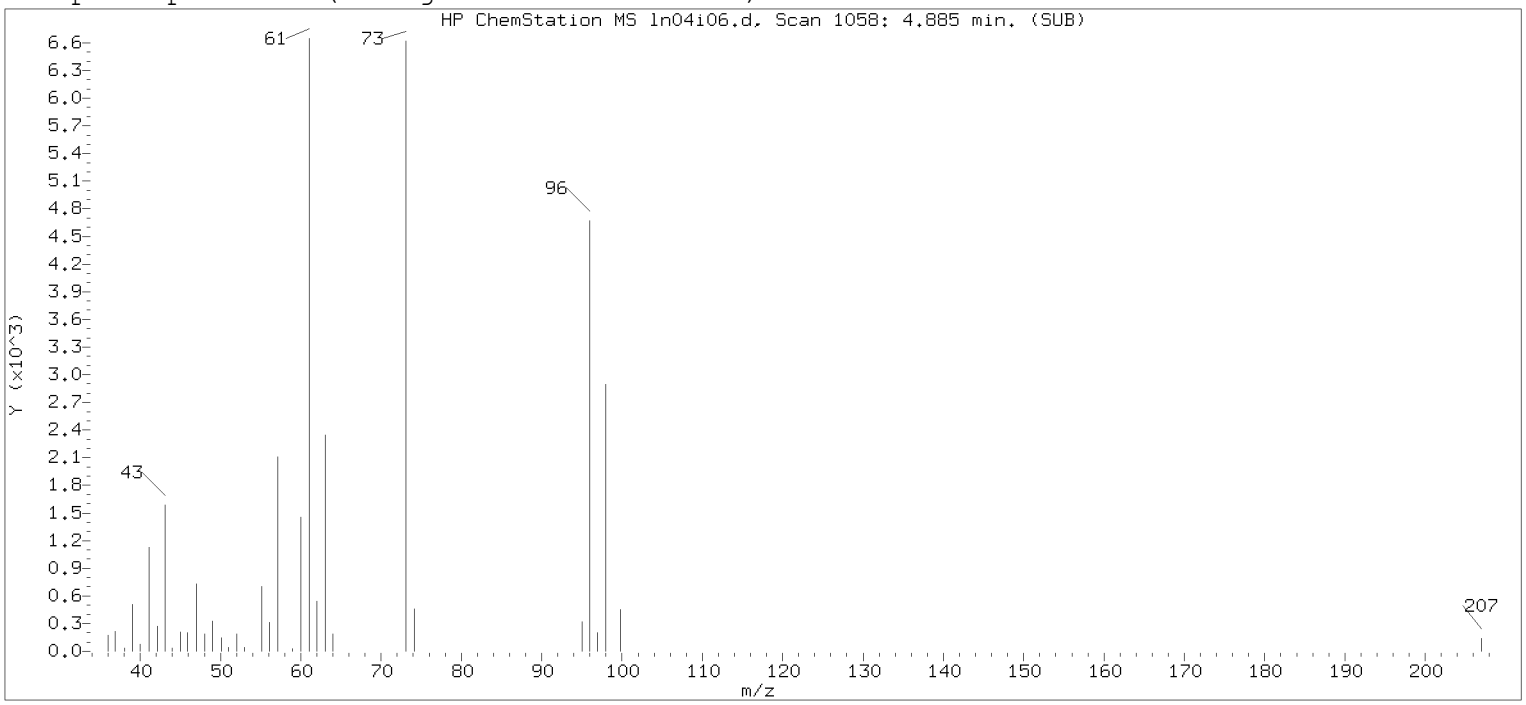
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1194
Retention Time (minutes): 5.323
Quant Ion : 57.00
Area (flag) : 33969M
On-Column Amount (ng) : 3.8769
Integration start scan : 1161 Integration stop scan: 1255
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

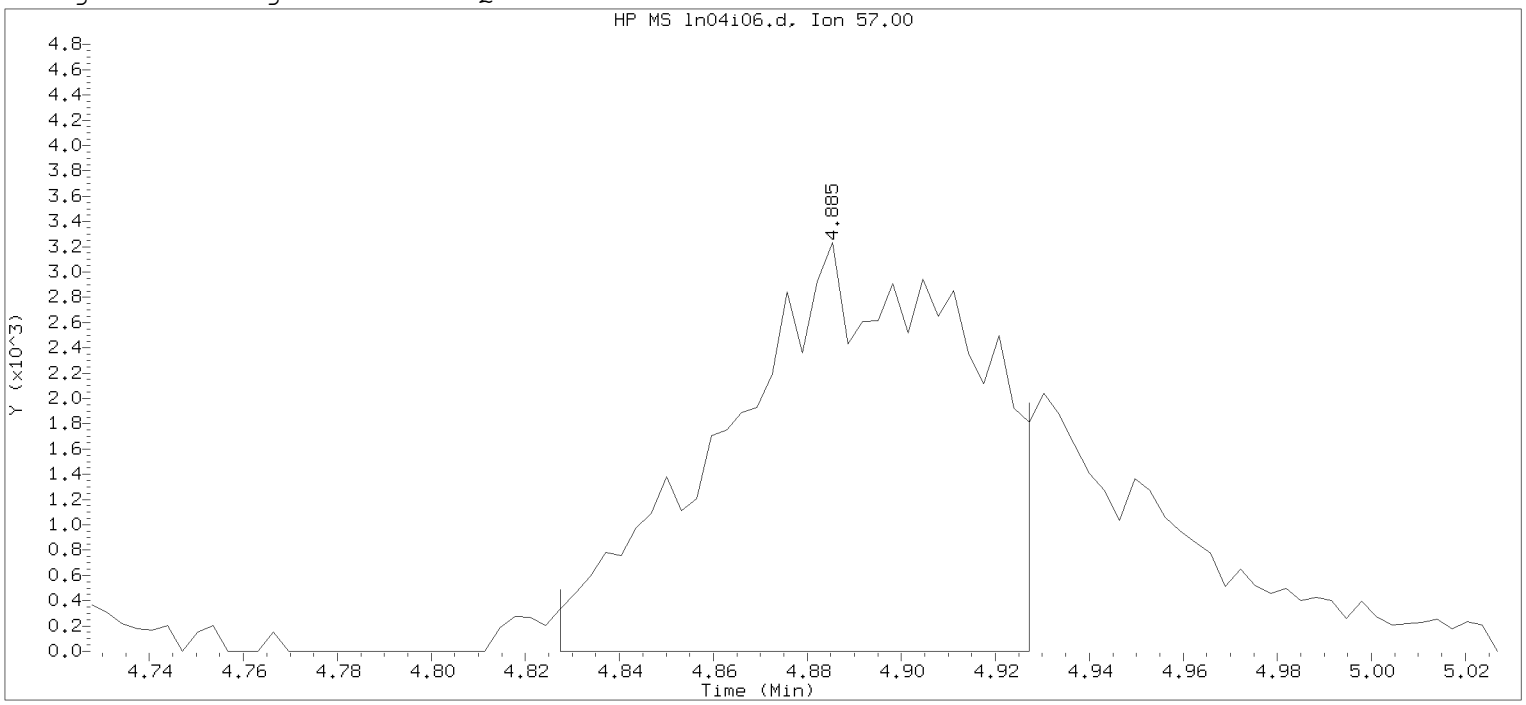
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

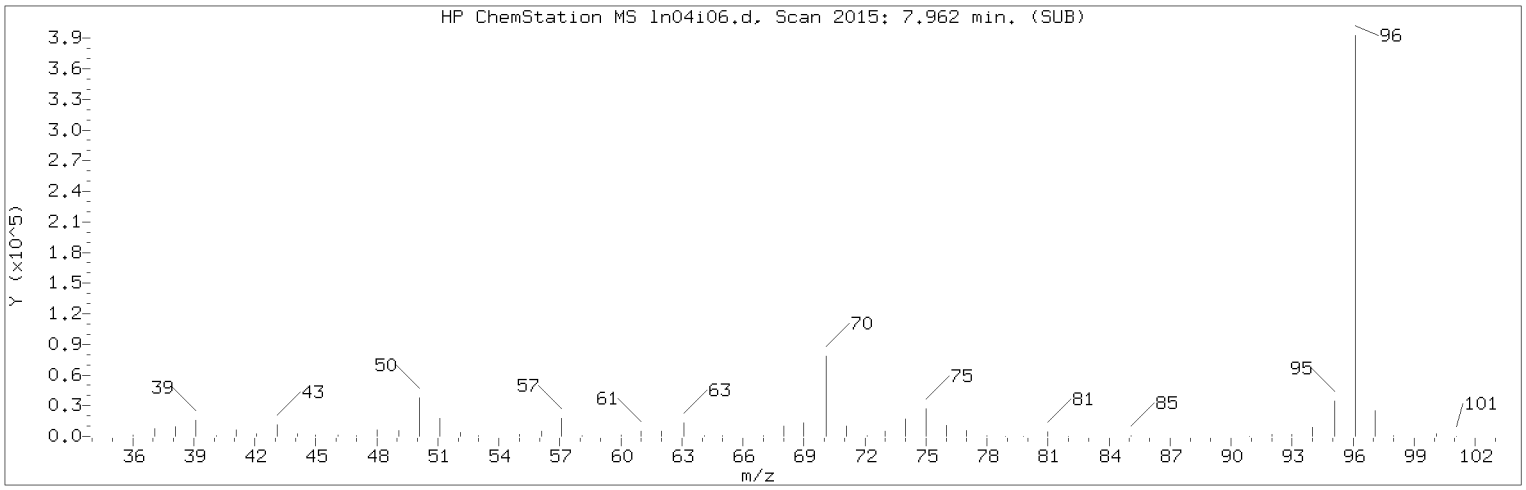
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

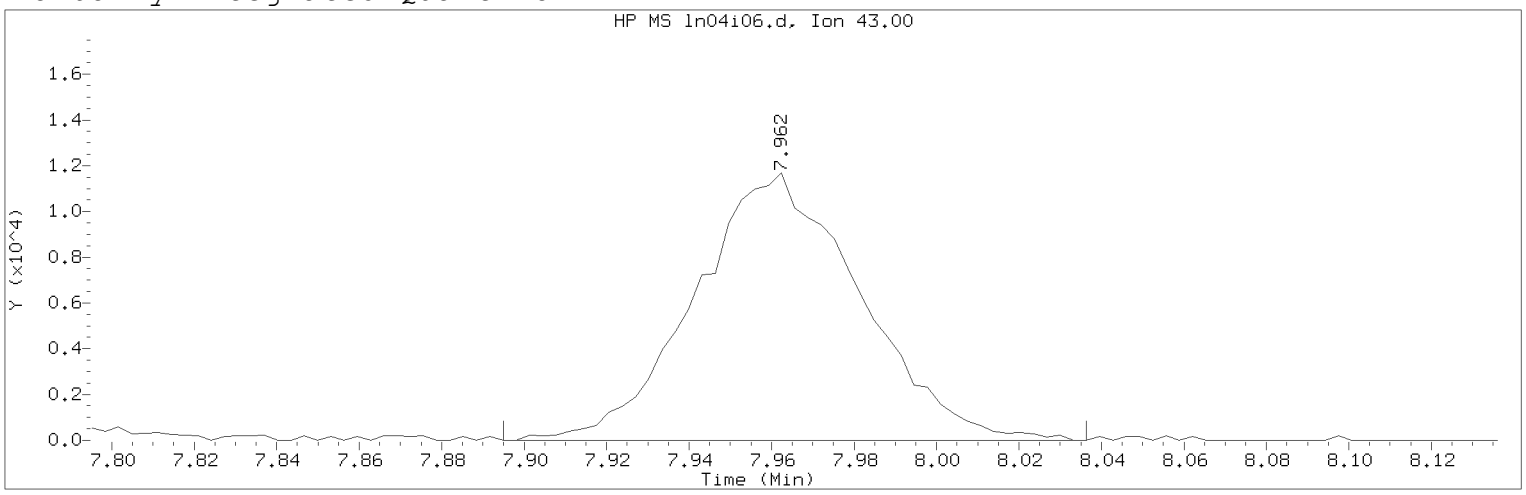
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1058		
Retention Time (minutes)	: 4.885		
Quant Ion	: 57.00		
Area	: 11708		
On-column Amount (ng)	: 3.2297		
Integration start scan	: 1039	Integration stop scan:	1070
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

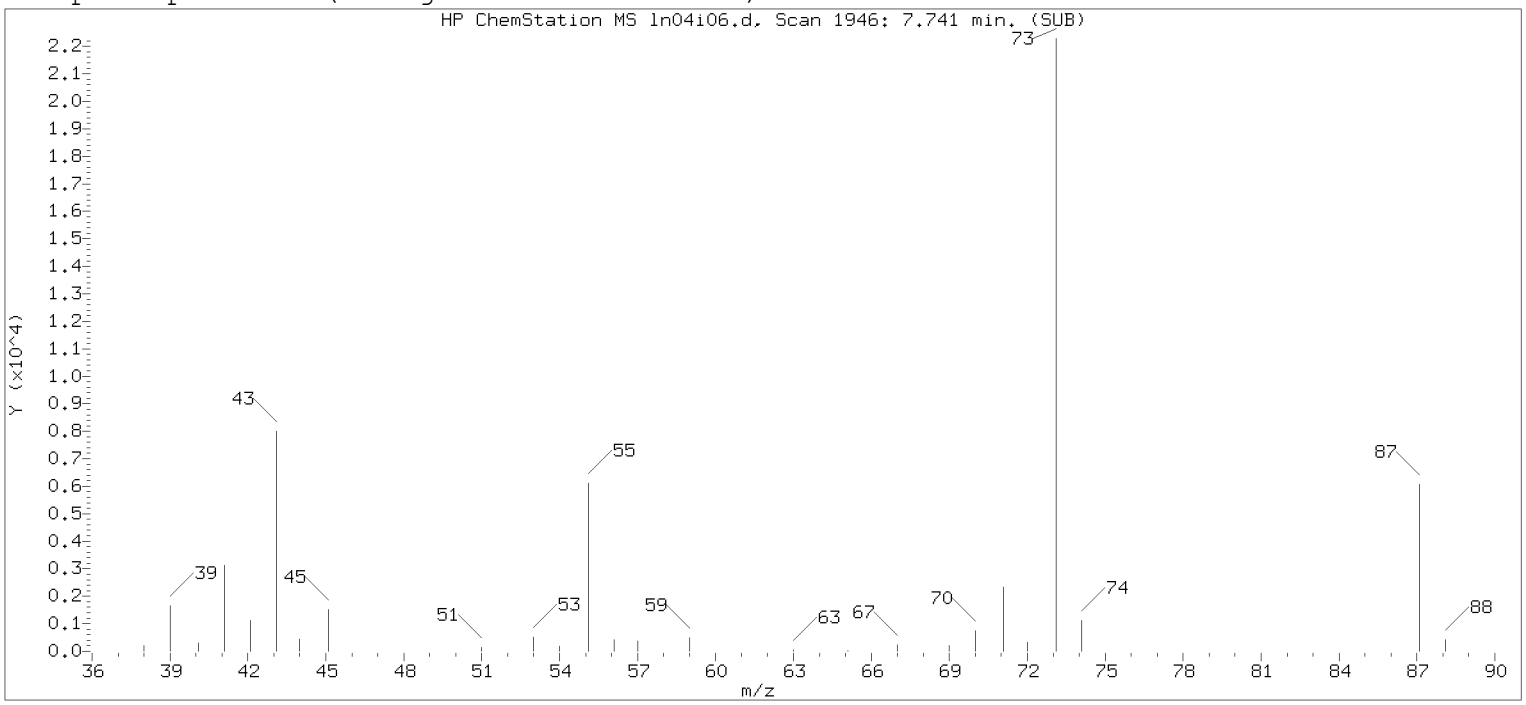
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2015
Retention Time (minutes): 7.962
Quant Ion : 43.00
Area (flag) : 32502MA
On-Column Amount (ng) : 3.9708
Integration start scan : 1993 Integration stop scan: 2037
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

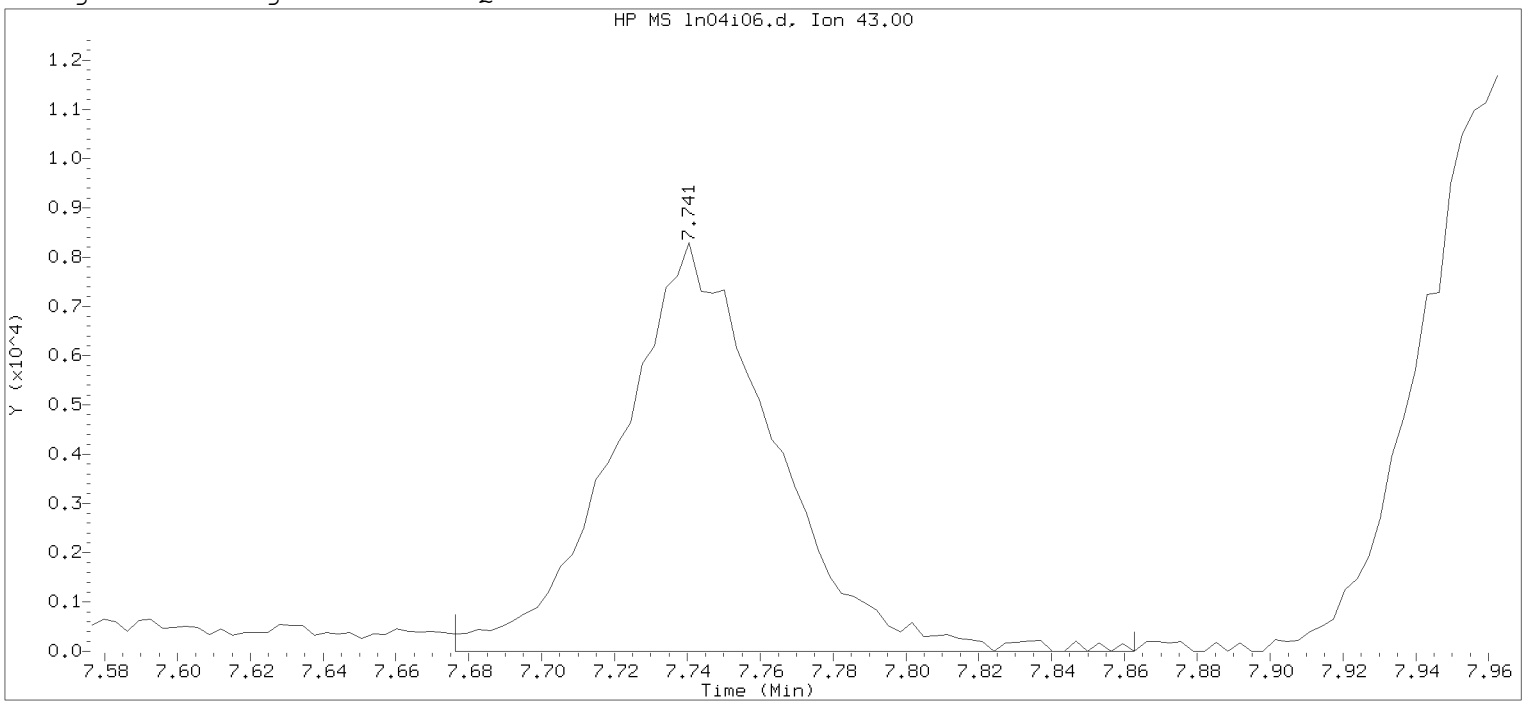
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

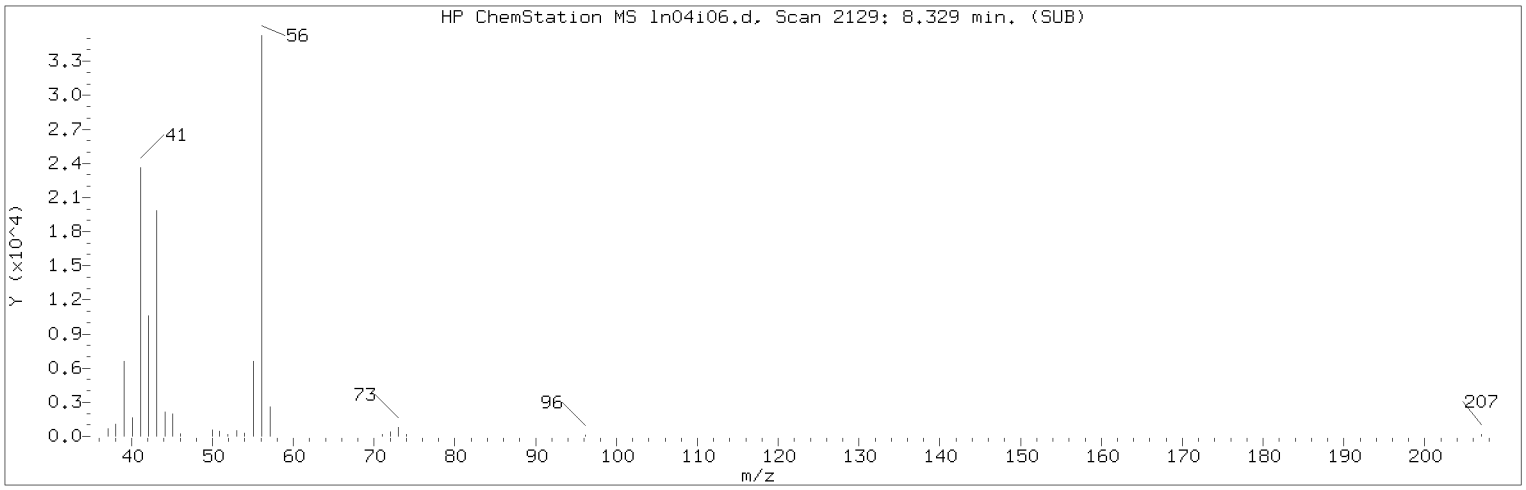
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

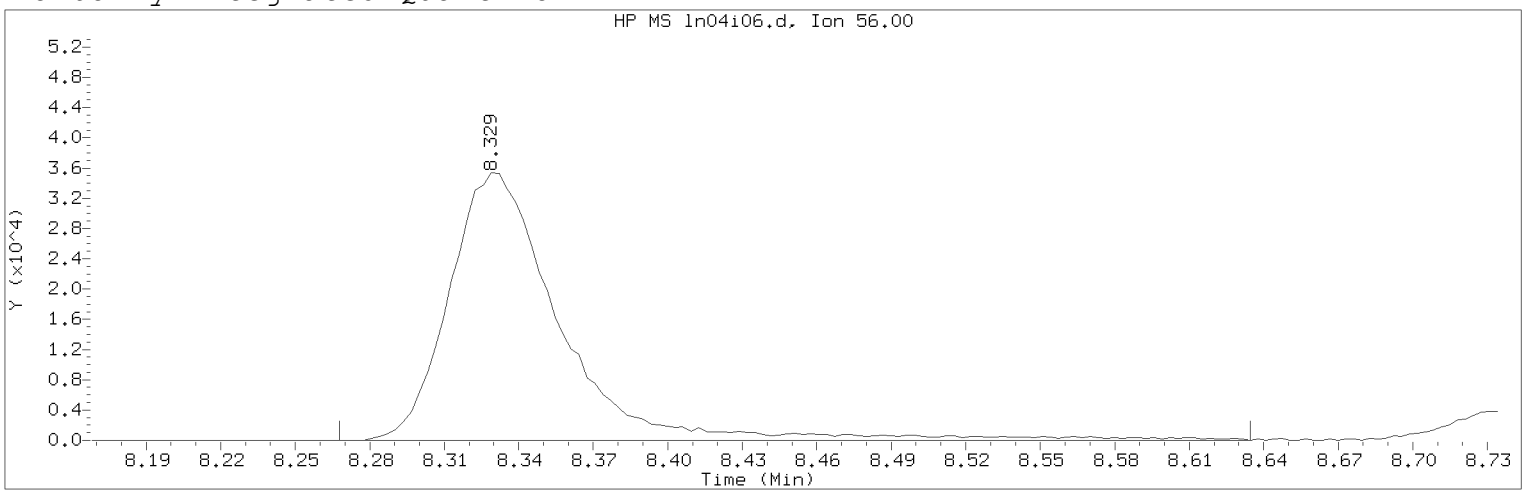
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.741
Quant Ion : 43.00
Area : 24793
On-column Amount (ng) : 4.0913
Integration start scan : 1925 Integration stop scan: 1983
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user[illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

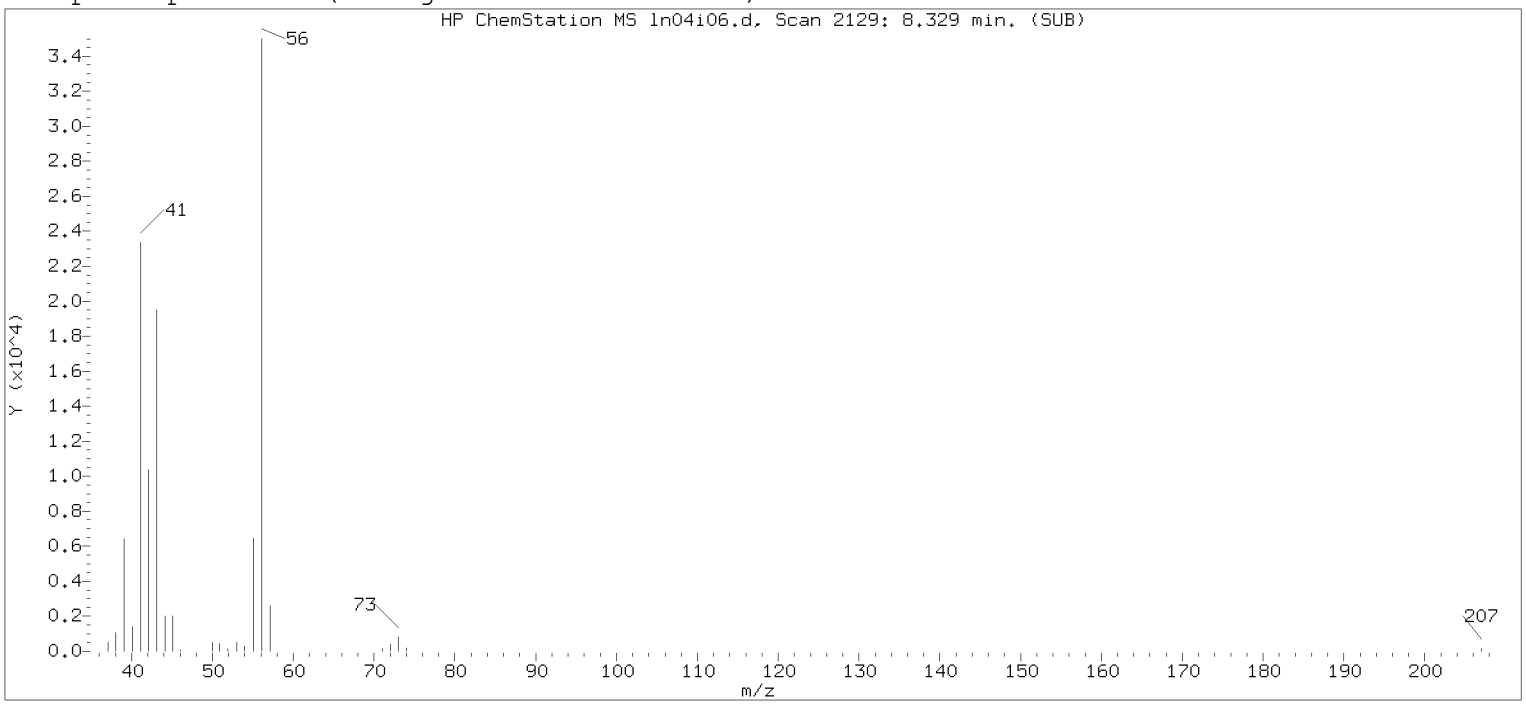
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area (flag) : 110027M
On-Column Amount (ng) : 344.3298
Integration start scan : 2109 Integration stop scan: 2223
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

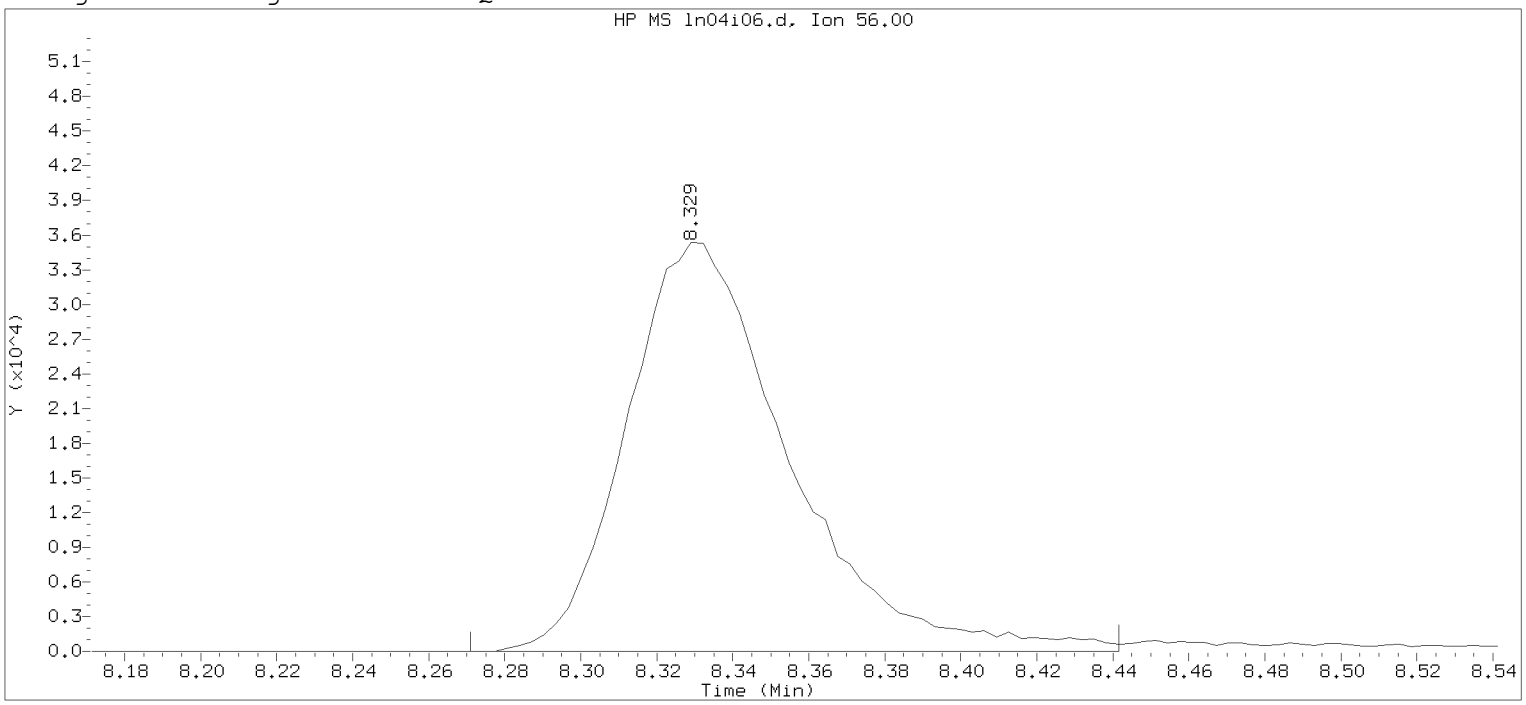
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

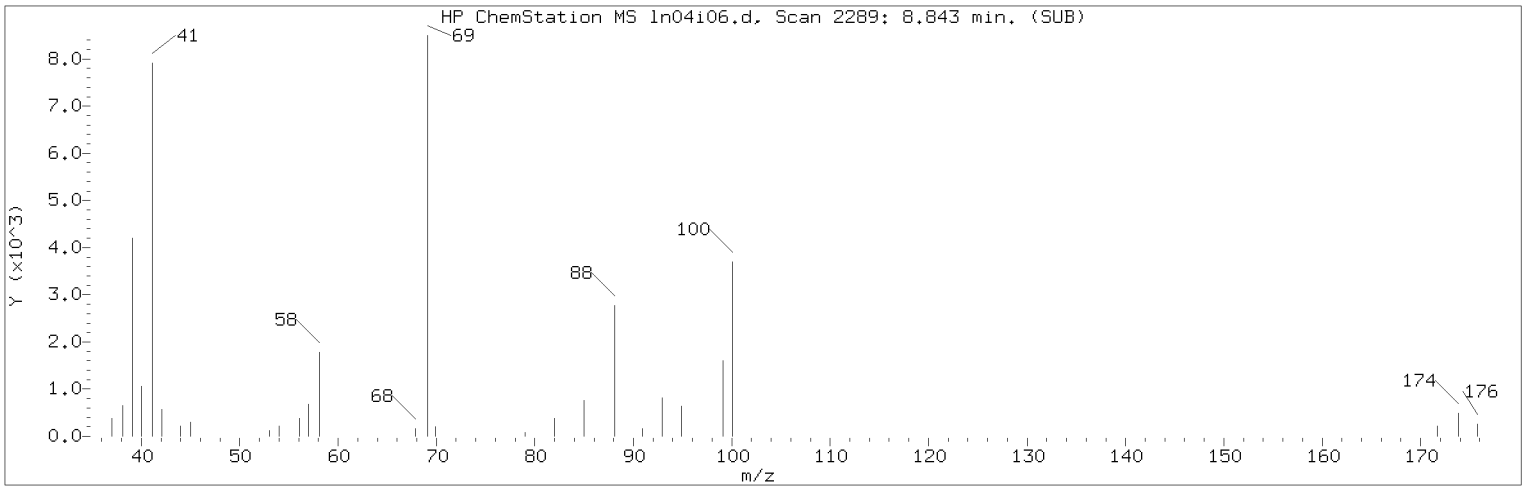
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

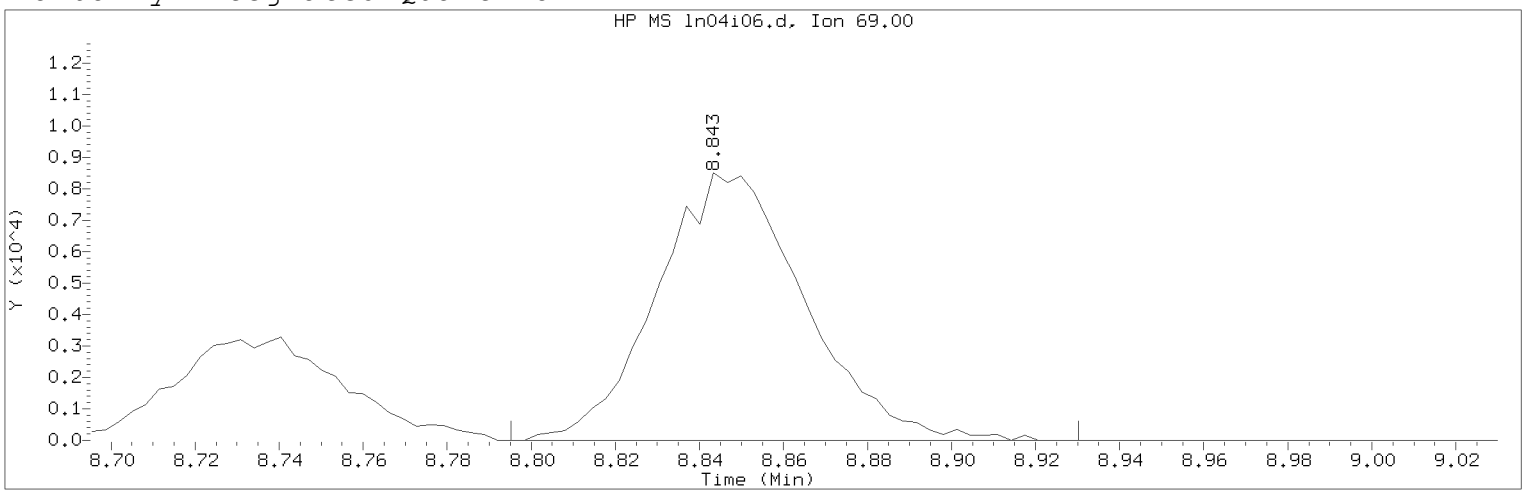
Compound Number	: 69		
Compound Name	: n-Butanol		
Scan Number	: 2129		
Retention Time (minutes)	: 8.329		
Quant Ion	: 56.00		
Area	: 104688		
On-column Amount (ng)	: 337.8676		
Integration start scan	: 2110	Integration stop scan:	2163
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

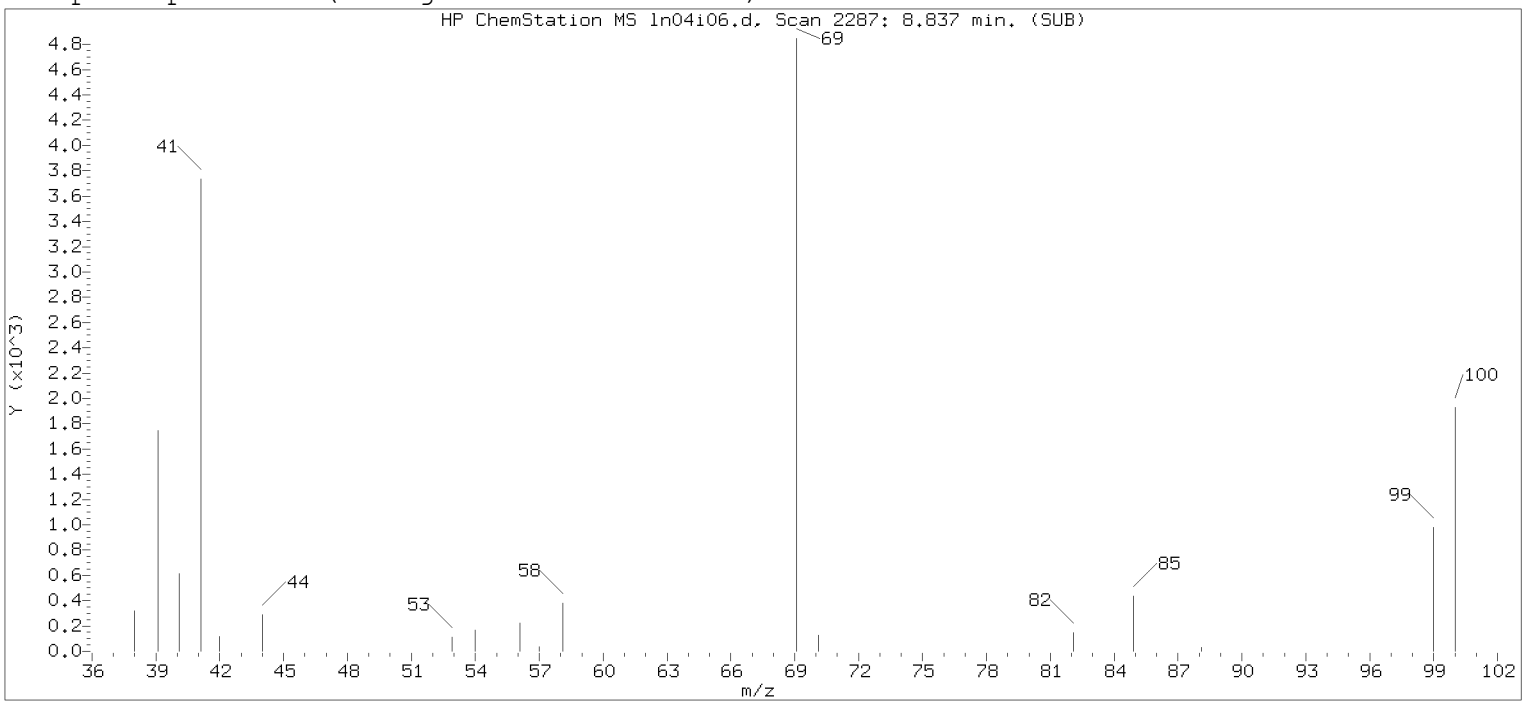
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2289
Retention Time (minutes): 8.843
Quant Ion : 69.00
Area (flag) : 20713M
On-Column Amount (ng) : 3.6110
Integration start scan : 2273 Integration stop scan: 2315
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

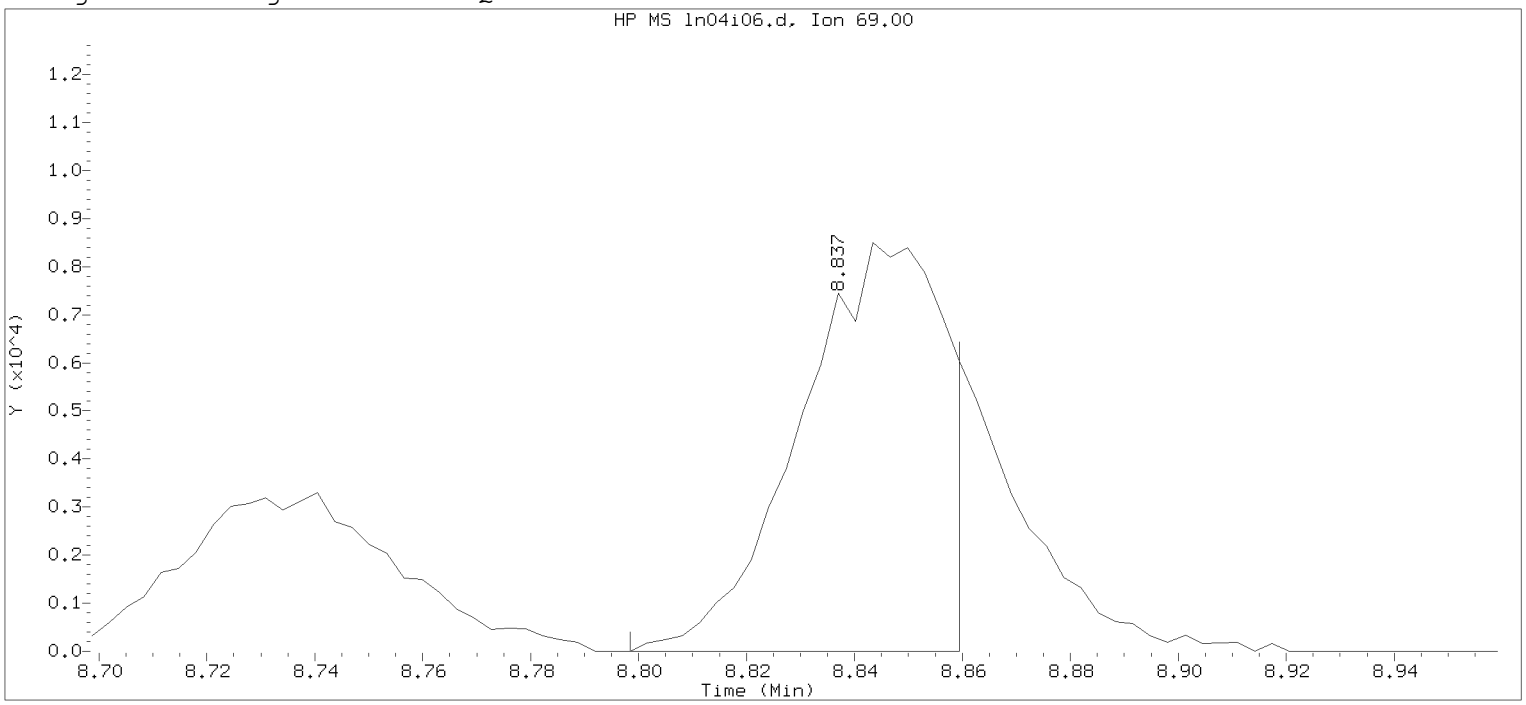
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

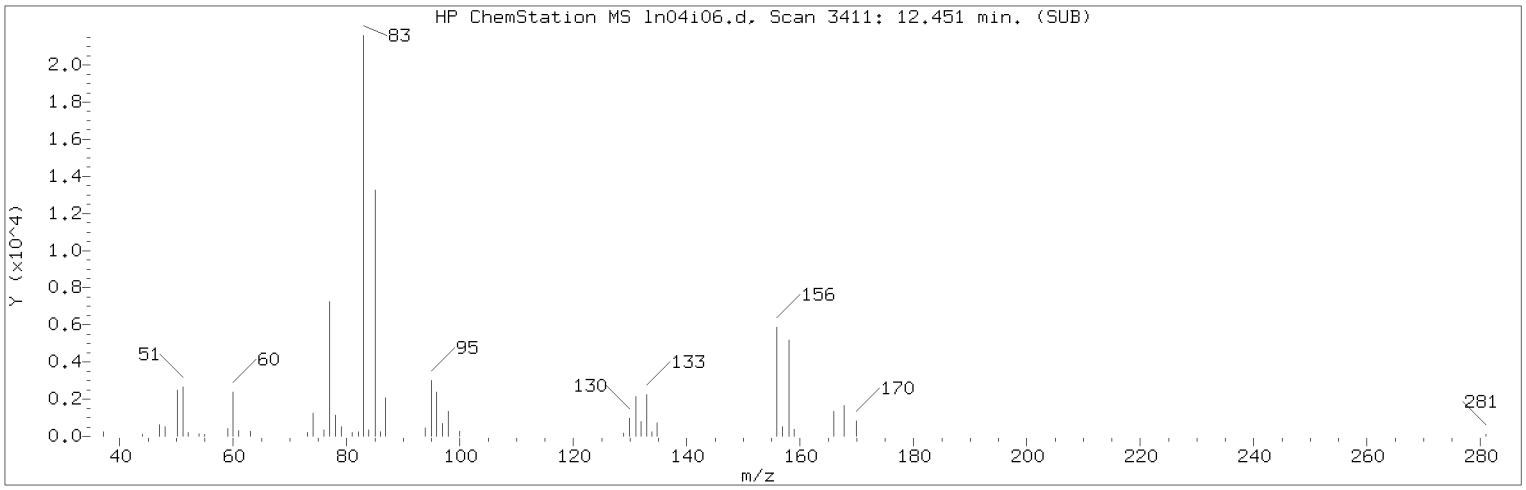
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

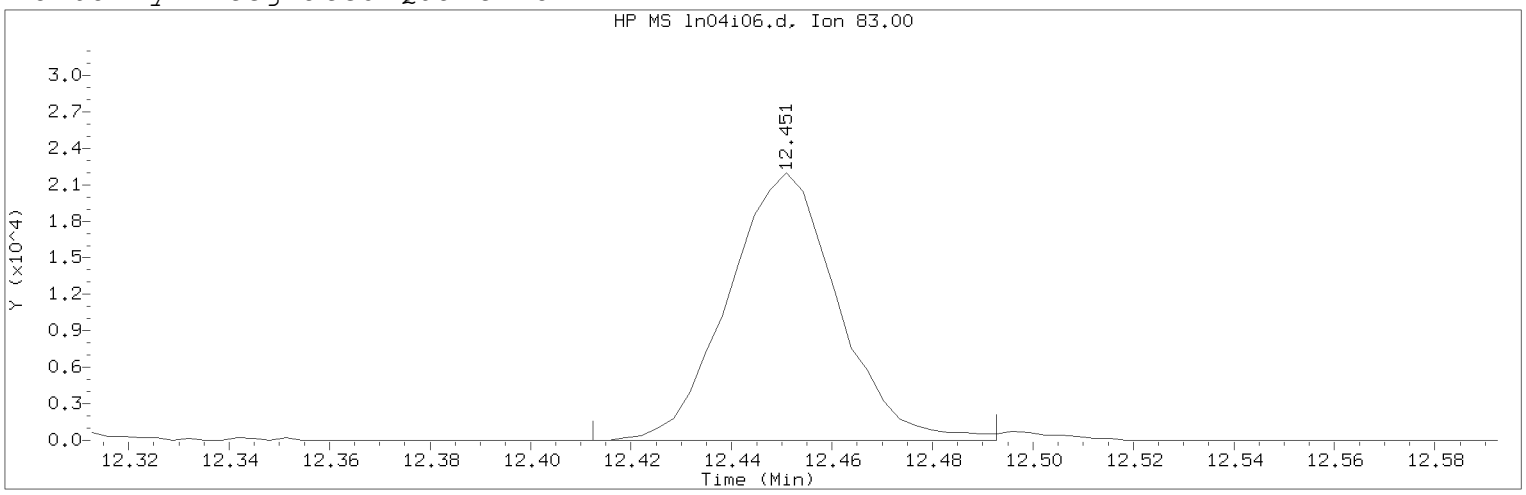
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2287
Retention Time (minutes): 8.837
Quant Ion : 69.00
Area : 15546
On-column Amount (ng) : 2.8548
Integration start scan : 2274 Integration stop scan: 2293
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

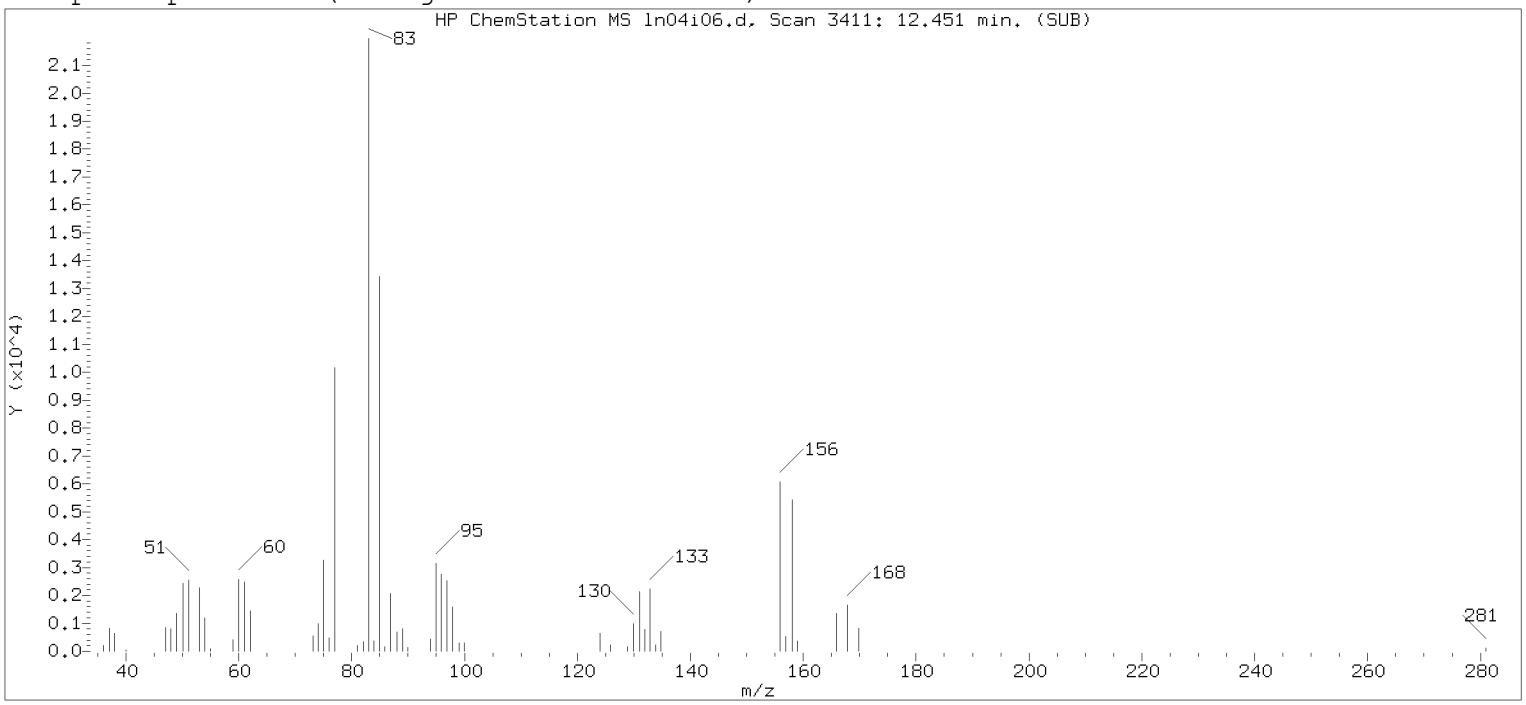
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 33170M
On-Column Amount (ng) : 3.6577
Integration start scan : 3398 Integration stop scan: 3423
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

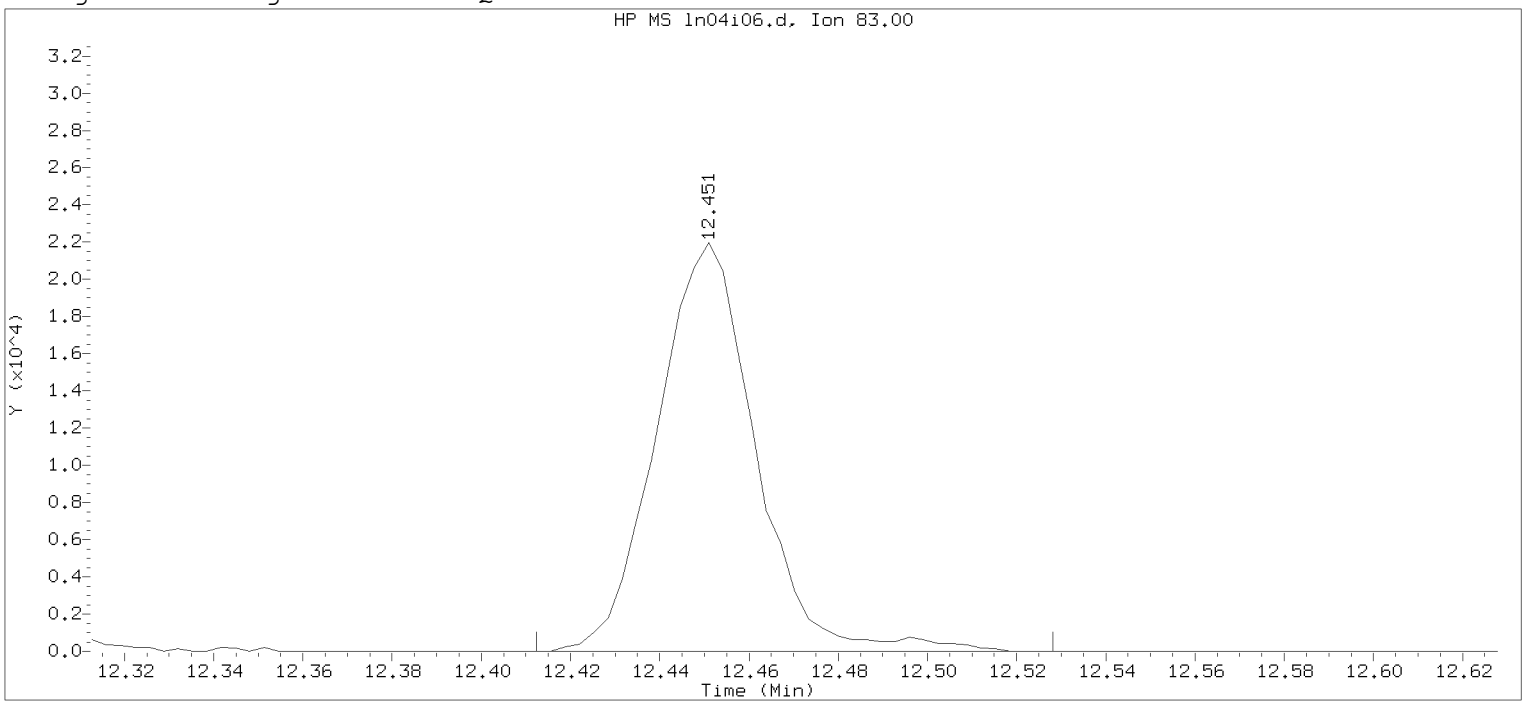
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

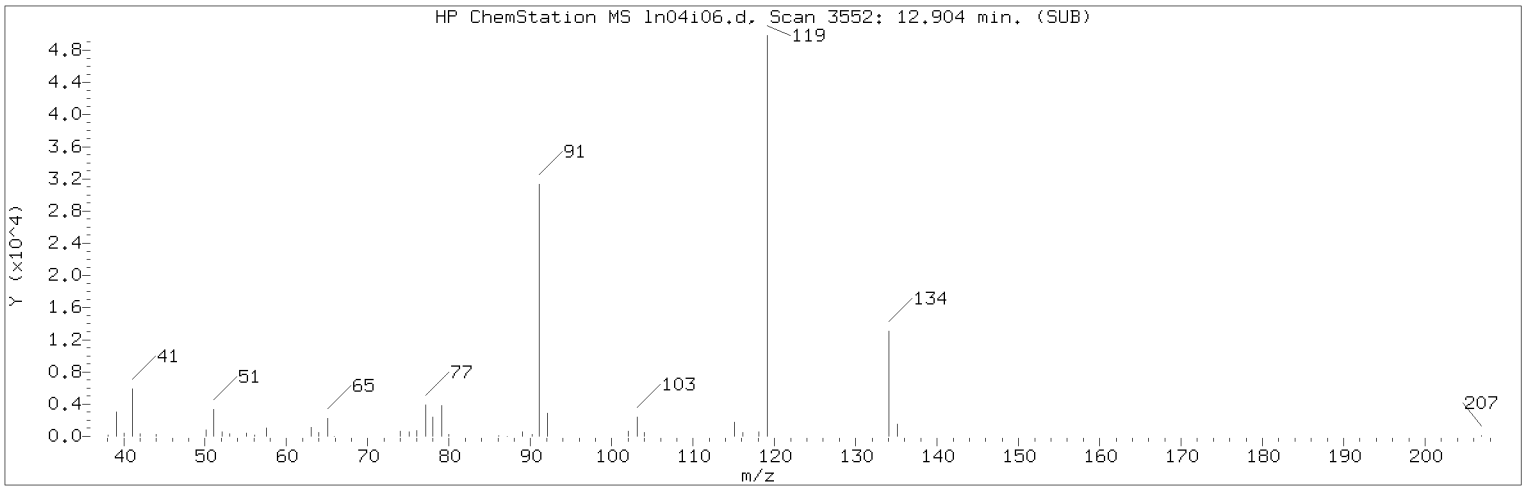
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

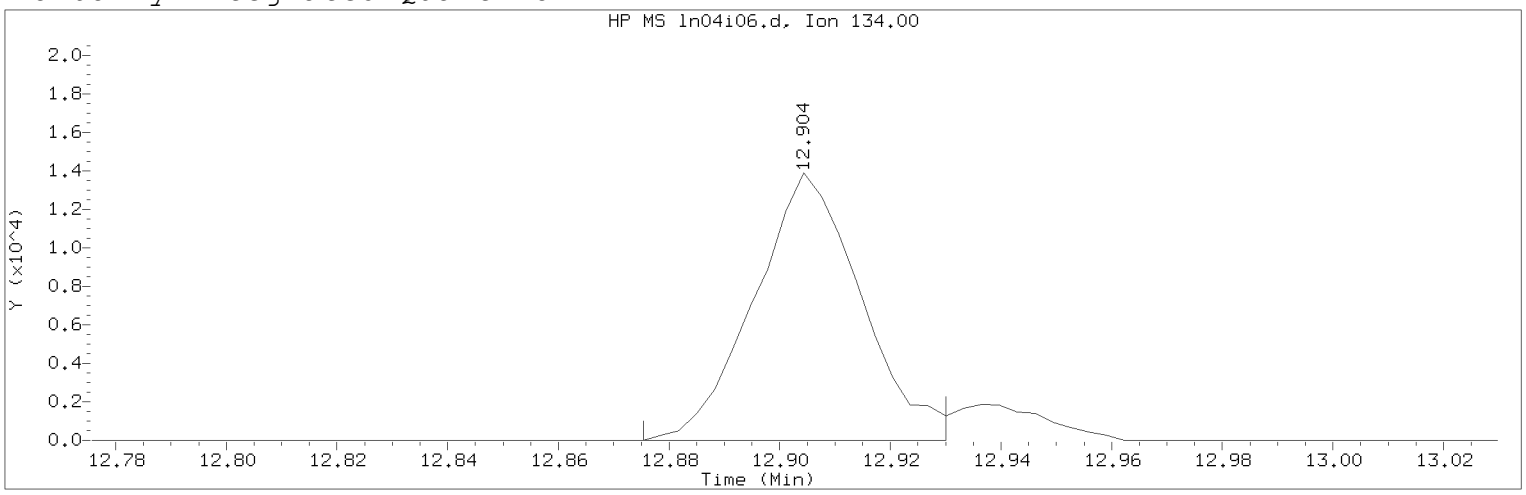
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 33718
On-column Amount (ng) : 3.6520
Integration start scan : 3398 Integration stop scan: 3434
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

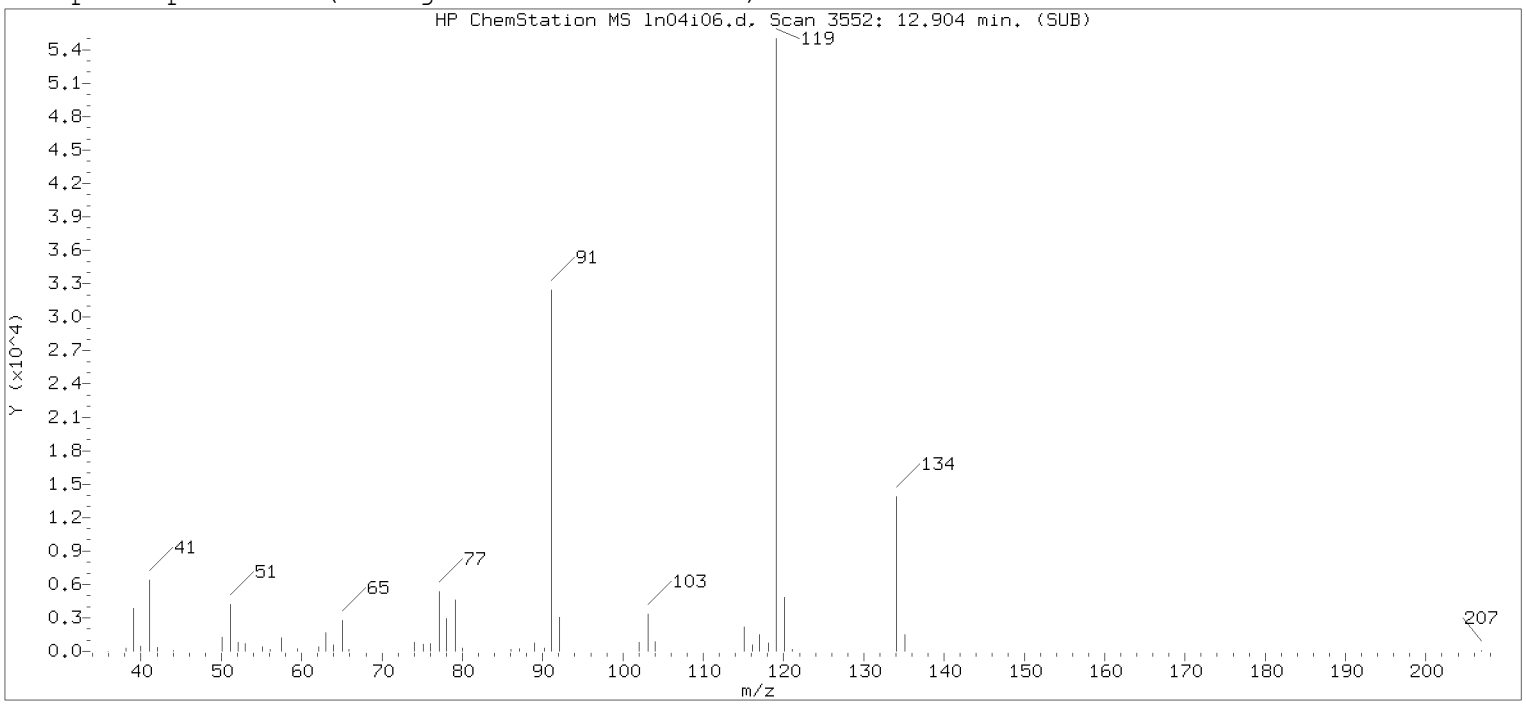
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 18608M
On-Column Amount (ng) : 3.9276
Integration start scan : 3542 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

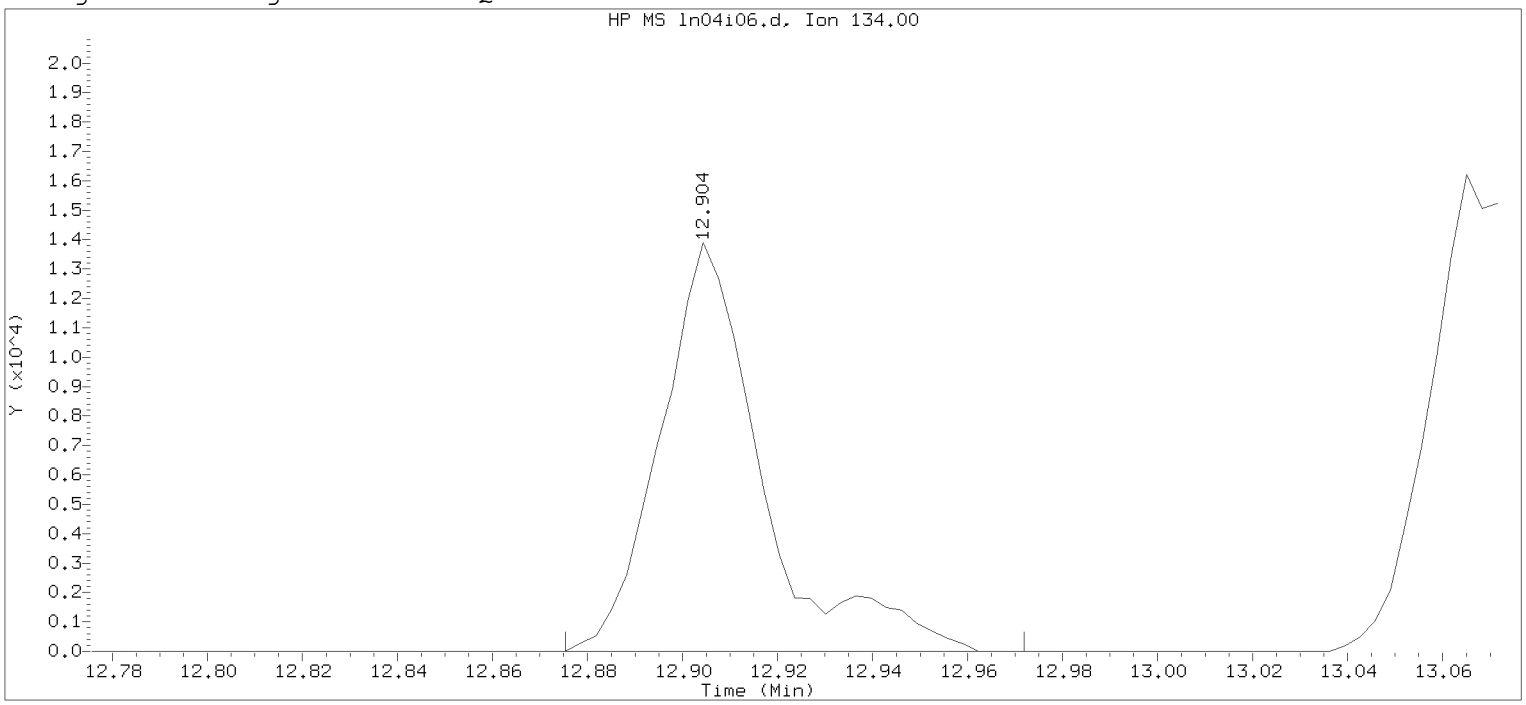
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



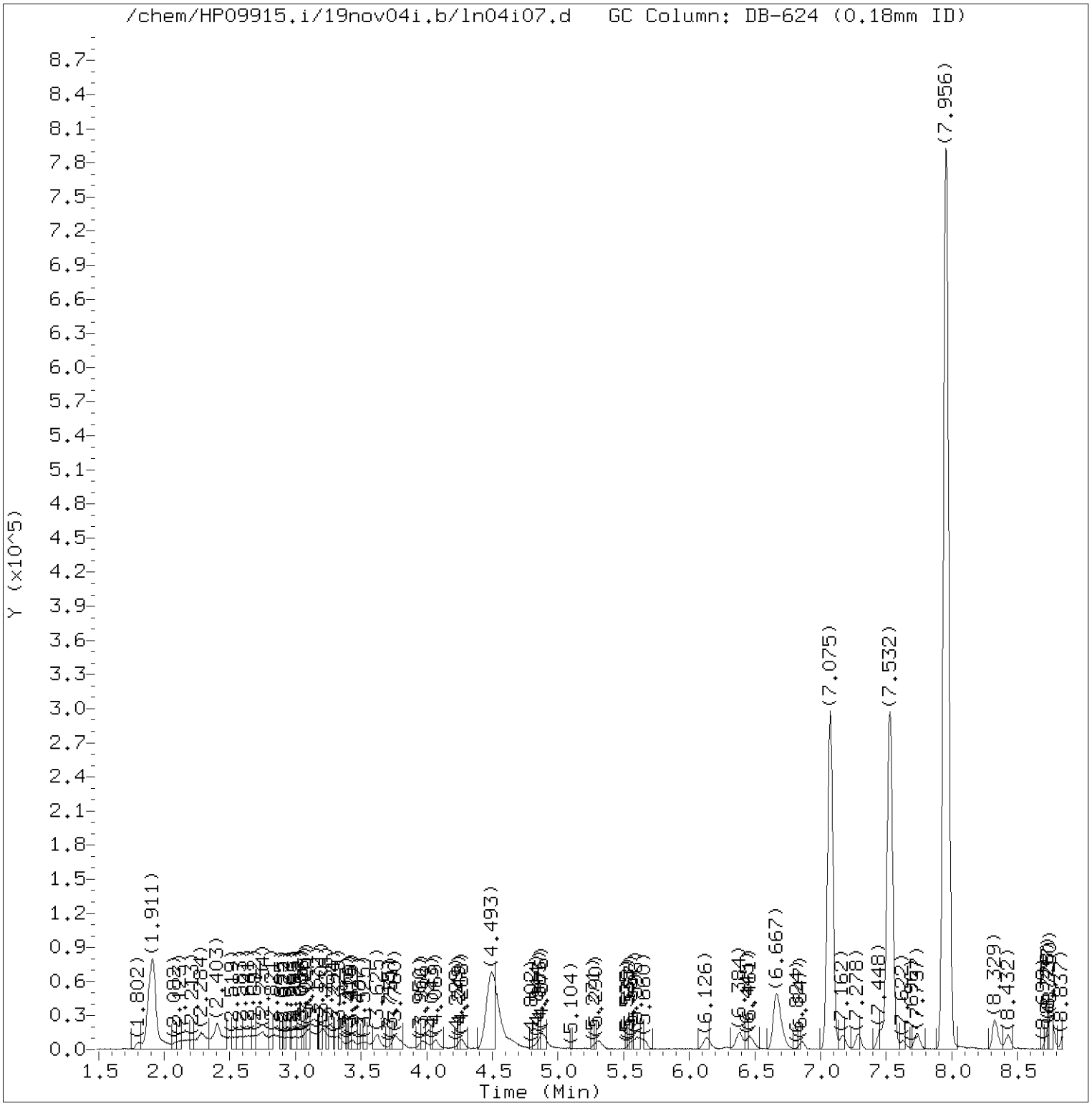
Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 20636
On-column Amount (ng) : 4.1808
Integration start scan : 3542 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

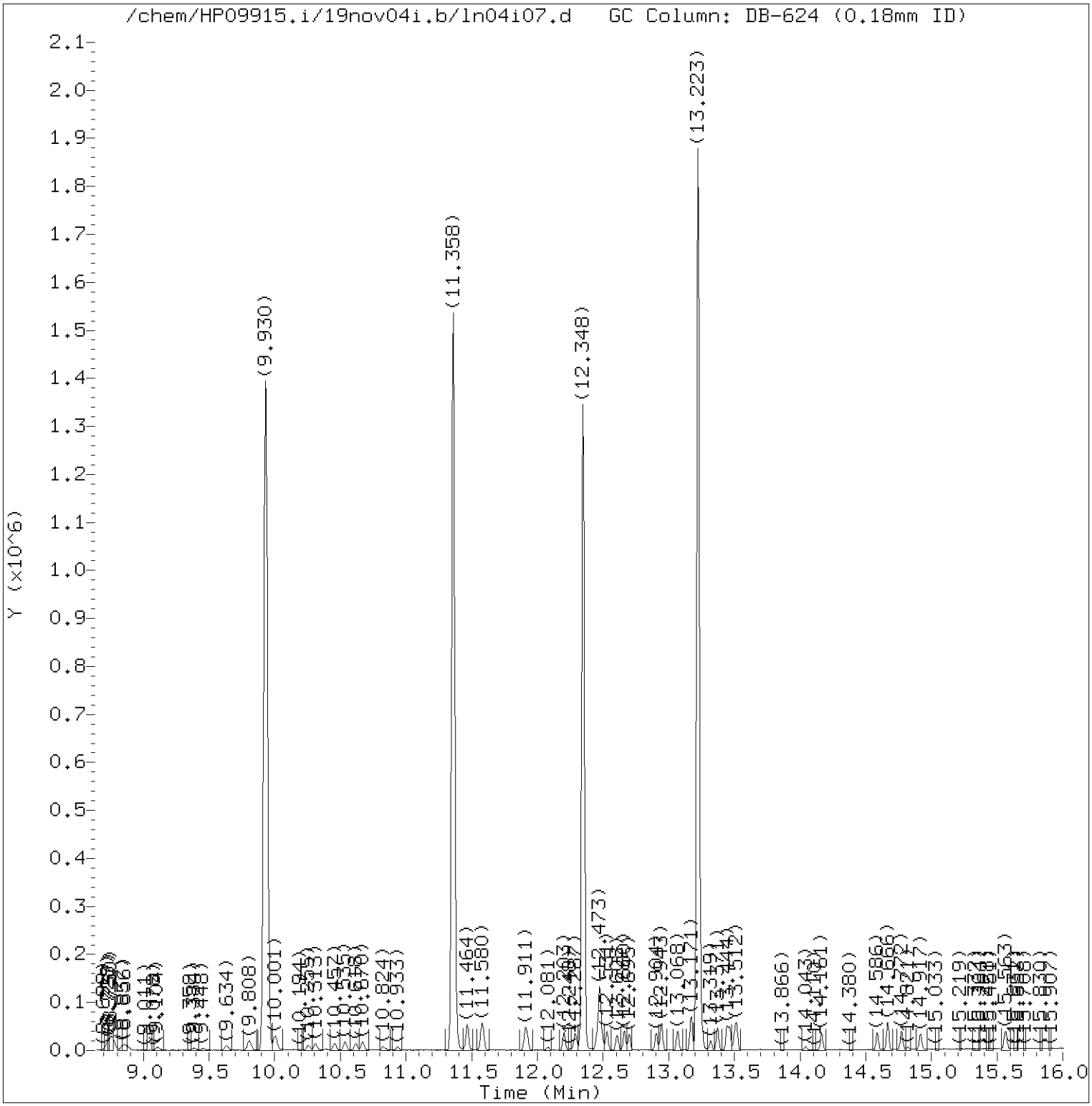
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

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Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.078	85	6299	0.794
4) Chloromethane	(2)	2.284	50	6896	0.902
5) 1,3-Butadiene	(2)	2.403	39	7255M	1.143
6) Vinyl Chloride	(2)	2.410	62	7160	0.939
8) Bromomethane	(2)	2.744	94	5605	1.025
9) Chloroethane	(2)	2.840	64	4160M	0.992
10) Dichlorofluoromethane	(2)	3.094	67	10094M	1.004
12) Trichlorofluoromethane	(2)	3.146	101	7129	0.868
11) n-Pentane	(2)	3.204	43	10269	1.058
14) Ethyl ether	(2)	3.429	59	4640M	0.874
15) Freon 123a	(2)	3.516	67	6210	0.940
16) Acrolein	(1)	3.622	56	17644	9.654
17) 1,1-Dichloroethene	(2)	3.750	96	4176	0.866
17) 1,1-Dichloroethene	(2)	3.754	63	2326	0.963
19) Freon 113	(2)	3.779	101	4754	0.864
18) Acetone	(1)	3.831	58	1588M	1.938
22) Methyl Iodide	(2)	3.966	142	8860	0.887
21) 2-Propanol	(1)	4.011	45	12063	20.480
23) Carbon Disulfide	(2)	4.075	76	15443	0.850
27) Methyl Acetate	(2)	4.255	43	6274M	1.011
25) Allyl Chloride	(2)	4.271	41	8168	0.945
28) Methylene Chloride	(2)	4.474	84	5404	0.942
29)*t-Butyl alcohol-d10	(1)	4.496	65	243591	250.000
30) t-Butyl alcohol	(1)	4.622	59	19461	18.976
31) Acrylonitrile	(2)	4.856	53	2960	0.886
33) Methyl Tertiary Butyl Ether	(2)	4.879	73	16848	0.920
32) trans-1,2-Dichloroethene	(2)	4.885	96	5035	0.903
34) n-Hexane	(2)	5.316	57	7475M	0.862
36) 1,1-Dichloroethane	(2)	5.548	63	8436	0.867
38) di-Isopropyl ether	(2)	5.606	45	16654	0.888
39) 2-Chloro-1,3-butadiene	(2)	5.663	53	7448	0.853
40) Ethyl t-butyl ether	(2)	6.126	59	16060	0.882
43) 1,2-Dichloroethene (Total)	(2)		96	10762	1.818
44) 2-Butanone	(2)	6.361	43	8098	1.889
42) cis-1,2-Dichloroethene	(2)	6.377	96	5727	0.915
45) 2,2-Dichloropropane	(2)	6.390	77	6419M	0.849
47) Propionitrile	(1)	6.461	54	24221	18.955
48) Methacrylonitrile	(2)	6.670	67	32346	8.977

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	2849	0.858
50) Tetrahydrofuran	(1)	6.728	71	2319	2.009
51) Chloroform	(2)	6.860	83	8108	0.871
52)$Dibromofluoromethane	(2)	7.075	113	273696	49.231
52)$Dibromofluoromethane	(2)	7.075	111	279412	49.293
53) 1,1,1-Trichloroethane	(2)	7.078	97	6588	0.830
54) Cyclohexane	(2)	7.171	56	8997	0.847
54) Cyclohexane	(2)	7.178	84	7859	0.852
54) Cyclohexane	(2)	7.178	69	2772	0.844
56) Carbon Tetrachloride	(2)	7.284	117	5549	0.824
55) 1,1-Dichloropropene	(2)	7.287	75	6611	0.860
58) Isobutyl Alcohol	(1)	7.458	41	16978	49.195
57)$1,2-Dichloroethane-d4	(2)	7.528	102	69641	49.151
57)$1,2-Dichloroethane-d4	(2)	7.528	65	311703	49.366
57)$1,2-Dichloroethane-d4	(2)	7.535	104	44286	48.935
60) Benzene	(2)	7.551	78	20445	0.884
61) 1,2-Dichloroethane	(2)	7.631	62	7810	1.050
61) 1,2-Dichloroethane	(2)	7.631	98	696	0.945
65) t-Amyl methyl ether	(2)	7.741	73	16286	0.891
67) n-Heptane	(2)	7.956	43	7535M	0.930
66)*Fluorobenzene	(2)	7.959	96	1137124	50.000
69) n-Butanol	(1)	8.329	56	24322	81.882
71) Trichloroethene	(2)	8.432	95	5231	0.898
72) Methylcyclohexane	(2)	8.737	83	9247	0.856
72) Methylcyclohexane	(2)	8.731	98	4032	0.825
73) 1,2-Dichloropropane	(2)	8.760	63	5229	0.890
76) Methyl Methacrylate	(2)	8.837	69	4607M	0.811
75) 1,4-Dioxane	(1)	8.856	88	3548M	43.457
74) Dibromomethane	(2)	8.866	93	3298	0.868
78) Bromodichloromethane	(2)	9.107	83	5648	0.828
79) 2-Nitropropane	(2)	9.384	41	3333	1.614
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	2007	0.796
81) cis-1,3-Dichloropropene	(2)	9.638	75	6973	0.770
82) 4-Methyl-2-pentanone	(2)	9.808	43	16006	1.769
83)$Toluene-d8	(3)	9.930	98	1156948	50.253
83)$Toluene-d8	(3)	9.930	100	746174	50.033
88) Toluene	(3)	10.007	92	12902	0.894
90) 1,3-Dichloropropene (total)	(3)		100	13101	1.518

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.255	75	6128	0.748
91) Ethyl Methacrylate	(3)	10.313	69	7873	0.791
92) 1,1,2-Trichloroethane	(3)	10.461	97	4897	0.895
93) Tetrachloroethene	(3)	10.538	166	5565	0.910
94) 1,3-Dichloropropane	(3)	10.618	76	8504	0.910
96) 2-Hexanone	(3)	10.670	43	11811	1.777
97) Dibromochloromethane	(3)	10.827	129	4109	0.733
99) 1,2-Dibromoethane	(3)	10.937	107	5163	0.869
100)*Chlorobenzene-d5	(3)	11.358	117	879875	50.000
101) 1-Chlorohexane	(3)	11.361	91	8103	1.045
102) Chlorobenzene	(3)	11.383	112	14367	0.880
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	4138	0.769
104) Ethylbenzene	(3)	11.464	91	24192	0.877
106) m+p-Xylene	(3)	11.583	106	18914	1.743
108) Xylene (Total)	(3)		106	28415	2.629
107) o-Xylene	(3)	11.908	106	9501	0.886
109) Styrene	(3)	11.917	104	14106	0.796
110) Bromoform	(3)	12.081	173	2729	0.652
111) Isopropylbenzene	(3)	12.203	105	22719	0.845
112) Cyclohexanone	(1)	12.287	55	15983	49.985
114)$4-Bromofluorobenzene	(3)	12.348	95	436282	50.046
114)$4-Bromofluorobenzene	(3)	12.348	174	360511	49.883
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	7596	0.849
115) Bromobenzene	(4)	12.461	156	6426	0.903
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	22650	8.211
117) 1,2,3-Trichloropropane	(4)	12.496	110	2425	0.884
119) n-Propylbenzene	(4)	12.528	91	27655	0.890
120) 2-Chlorotoluene	(4)	12.612	126	6138M	0.929
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	18836	0.834
121) 4-Chlorotoluene	(4)	12.702	126	6403M	0.931
124) tert-Butylbenzene	(4)	12.904	134	4060M	0.869
125) Pentachloroethane	(4)	12.940	167	2751	0.684
126) 1,2,4-Trimethylbenzene	(4)	12.943	105	20498	0.861
127) sec-Butylbenzene	(4)	13.065	105	24344	0.873
129) 1,3-Dichlorobenzene	(4)	13.165	146	12468	0.954
130) p-Isopropyltoluene	(4)	13.174	119	21126	0.876
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	473433	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	13174	0.972

M = Compound was manually integrated.
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Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

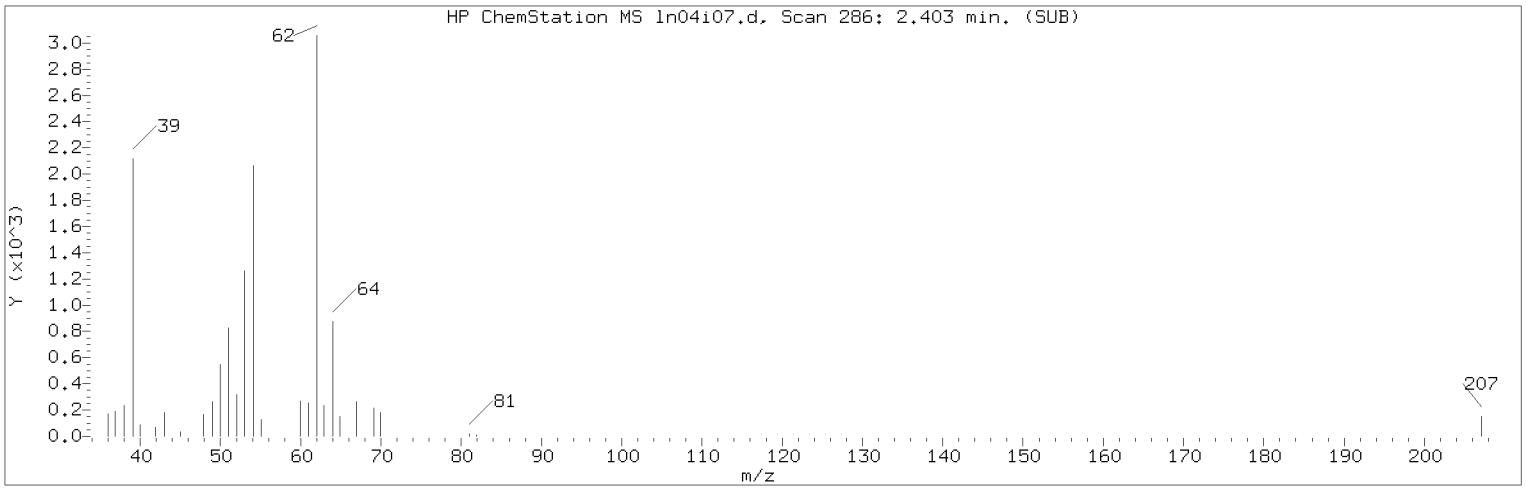
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	22457	0.890
135) Benzyl Chloride	(4)	13.319	91	11494	0.602
136) 1,3-Diethylbenzene	(4)	13.374	119	13985	0.891
141) Diethylbenzene (total)	(4)		100	41423	2.726
137) 1,4-Diethylbenzene	(4)	13.441	119	15446	0.929
139) n-Butylbenzene	(4)	13.464	92	11964M	0.970
138) 1,2-Dichlorobenzene	(4)	13.502	146	12171	0.943
140) 1,2-Diethylbenzene	(4)	13.515	119	11992	0.906
142) 1,2-Dibromo-3-chloropropane	(4)	14.046	75	1565	0.799
144) 1,3,5-Trichlorobenzene	(4)	14.161	180	10166	1.026
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	10347	1.074
147) Hexachlorobutadiene	(4)	14.666	225	9370	2.059
148) Naphthalene	(4)	14.772	128	28210	0.910
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	10052	1.072
150) 2-Methylnaphthalene	(4)	15.567	142	18783M	0.984

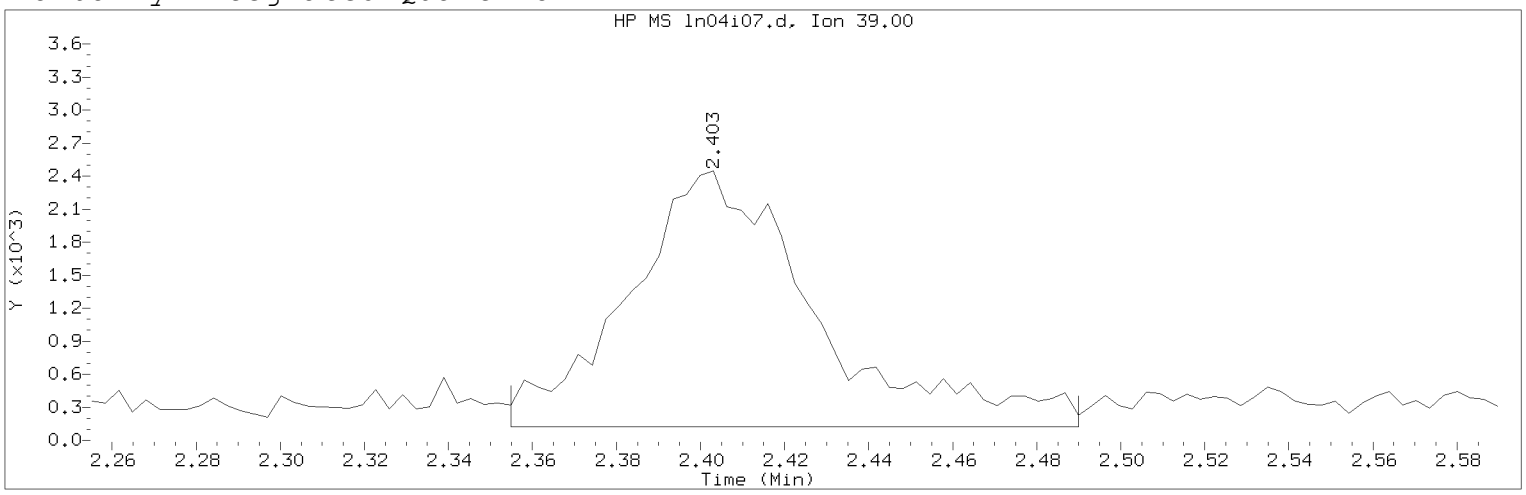
M = Compound was manually integrated.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

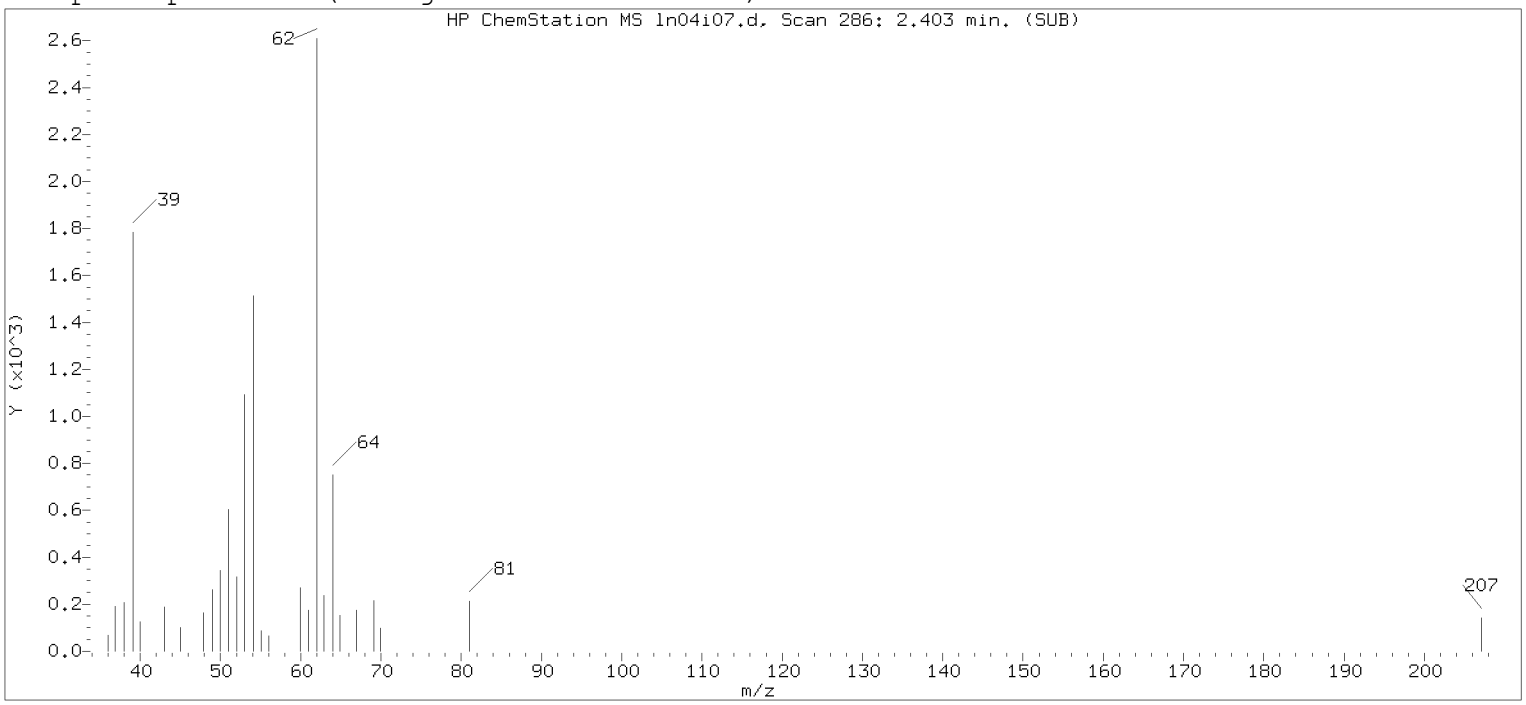
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 286
Retention Time (minutes): 2.403
Quant Ion : 39.00
Area (flag) : 7255M
On-Column Amount (ng) : 1.1432
Integration start scan : 270 Integration stop scan: 312
Y at integration start : 120 Y at integration end: 120

Reason for manual integration: improper integration

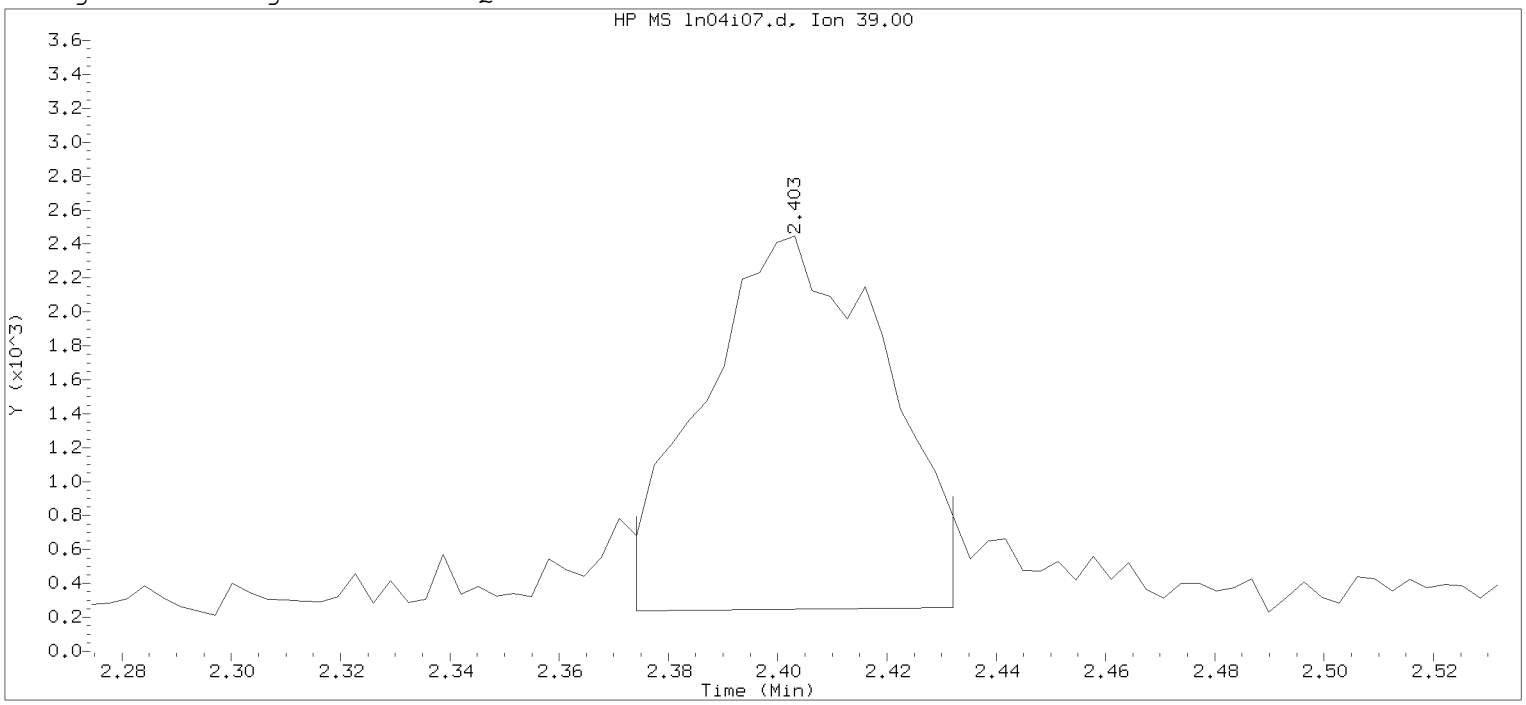
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

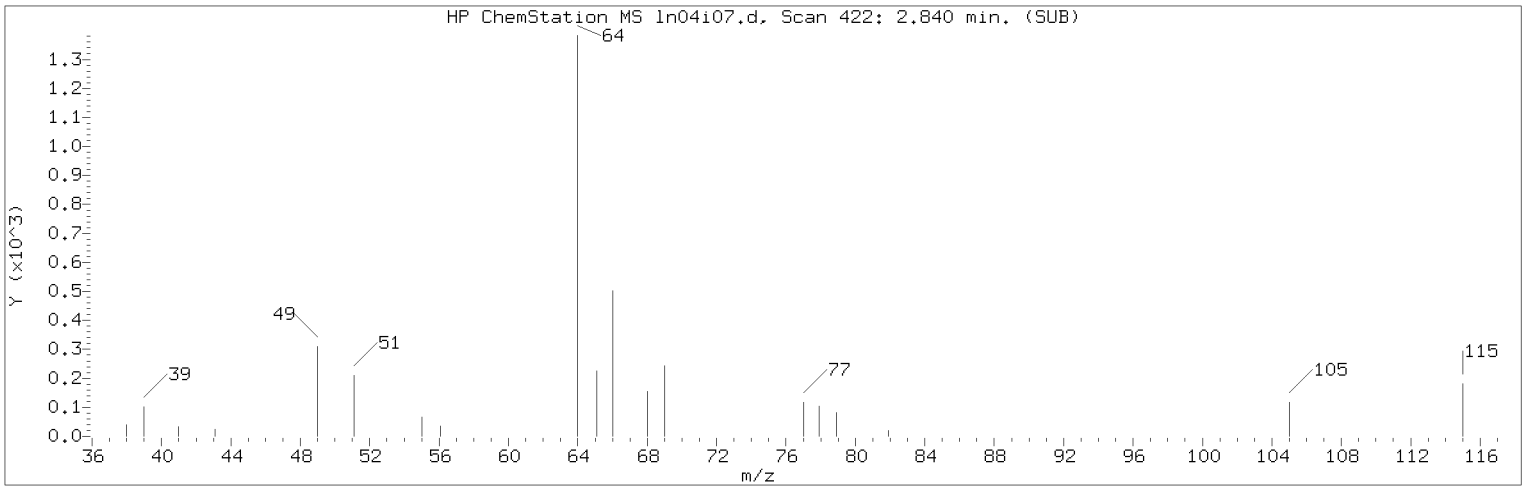
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

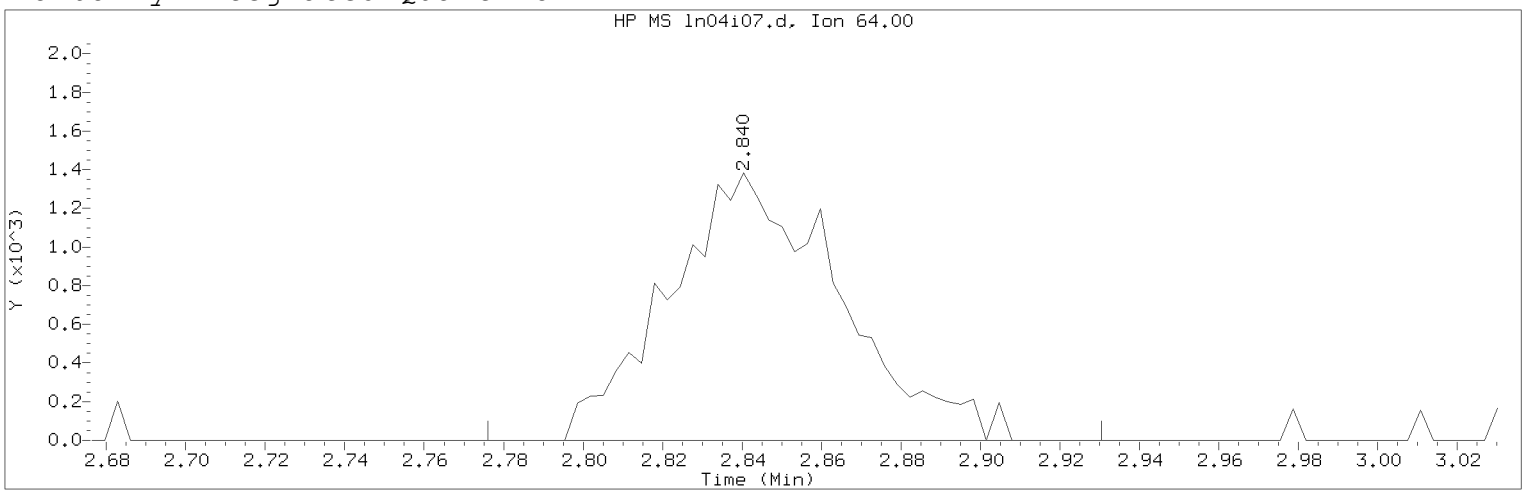
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 286
Retention Time (minutes): 2.403
Quant Ion : 39.00
Area : 5073
On-column Amount (ng) : 0.8493
Integration start scan : 276 Integration stop scan: 294
Y at integration start : 239 Y at integration end: 258

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

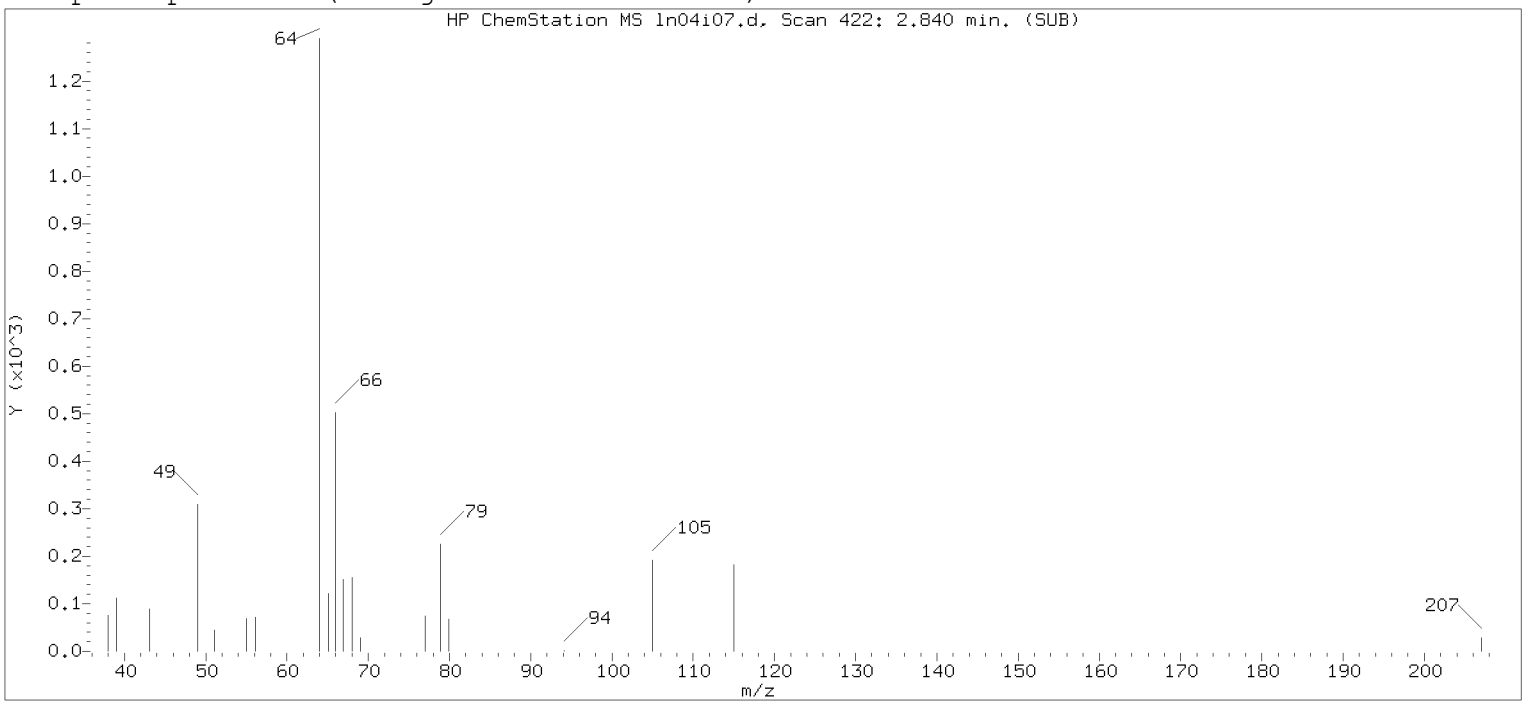
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 422
Retention Time (minutes): 2.840
Quant Ion : 64.00
Area (flag) : 4160M
On-Column Amount (ng) : 0.9924
Integration start scan : 401 Integration stop scan: 449
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

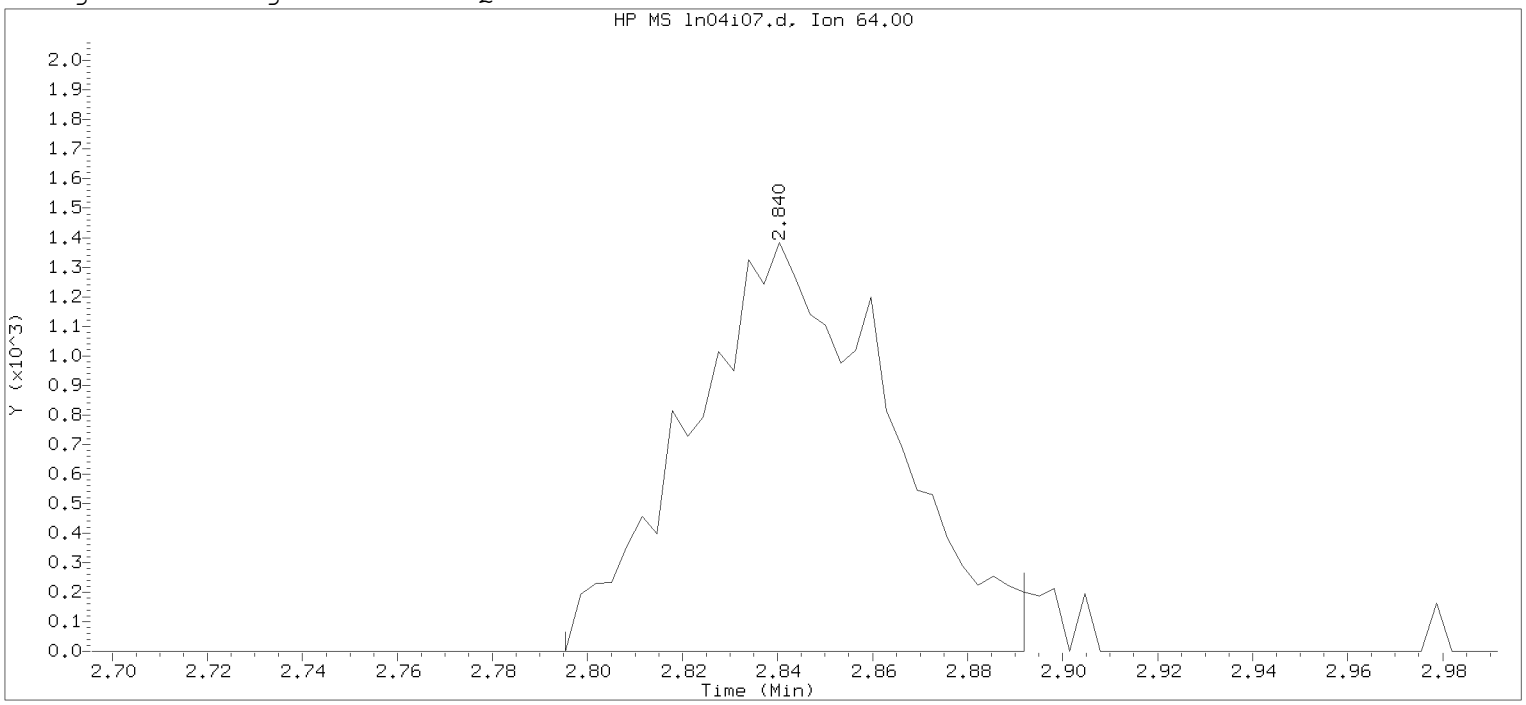
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

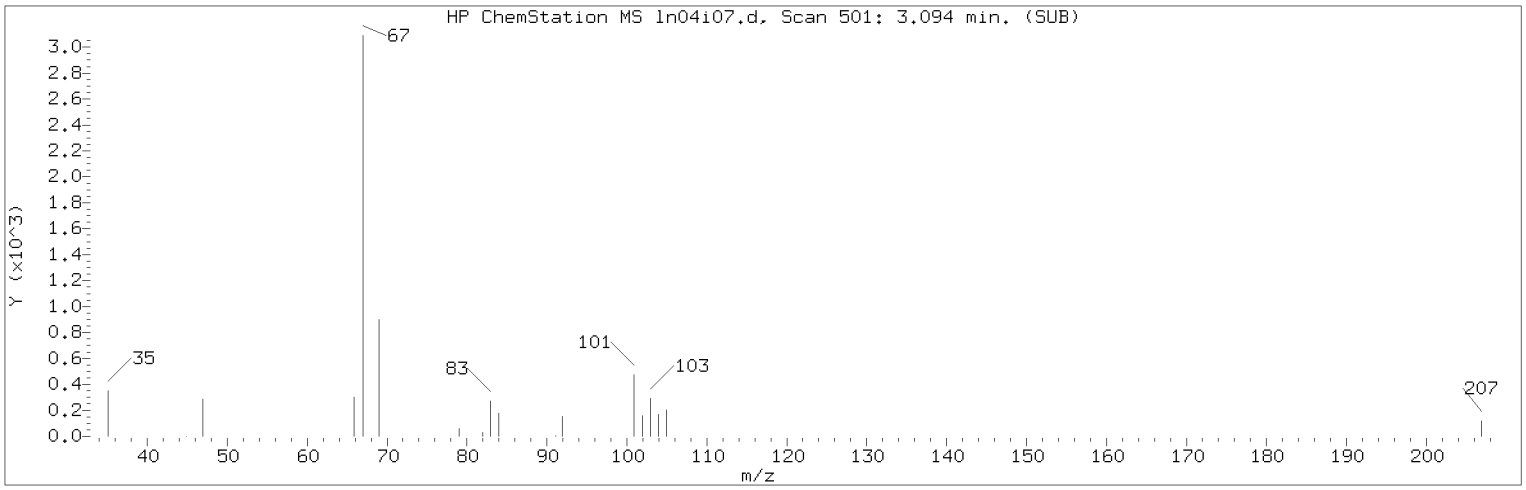
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

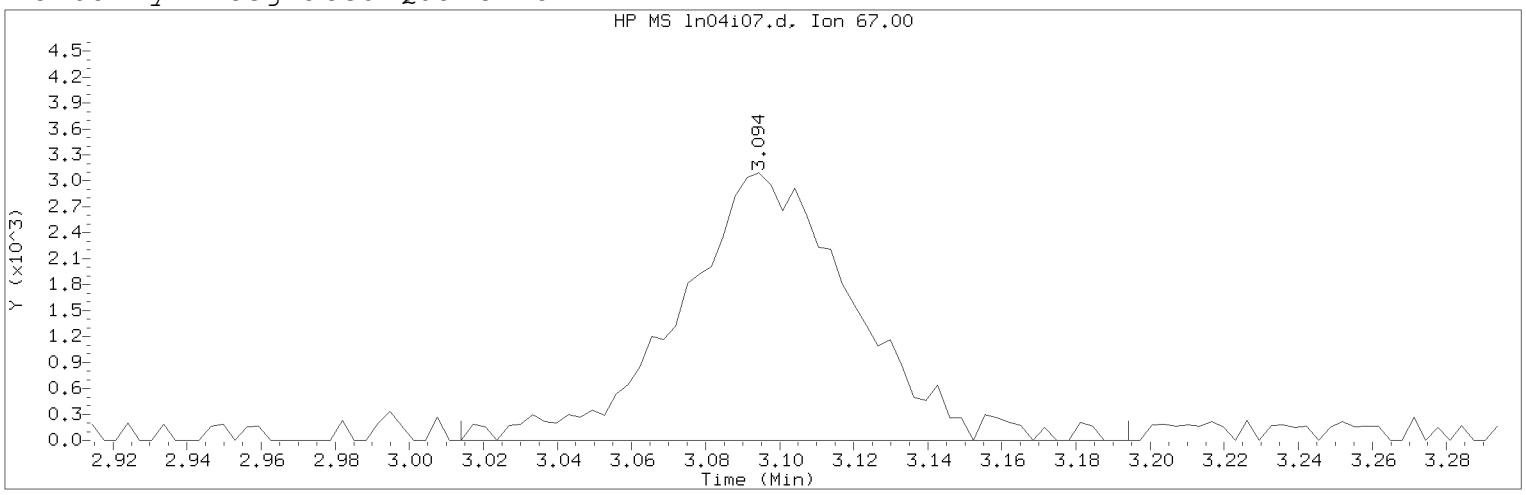
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 422
Retention Time (minutes): 2.840
Quant Ion : 64.00
Area : 4026
On-column Amount (ng) : 0.9650
Integration start scan : 407 Integration stop scan: 437
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

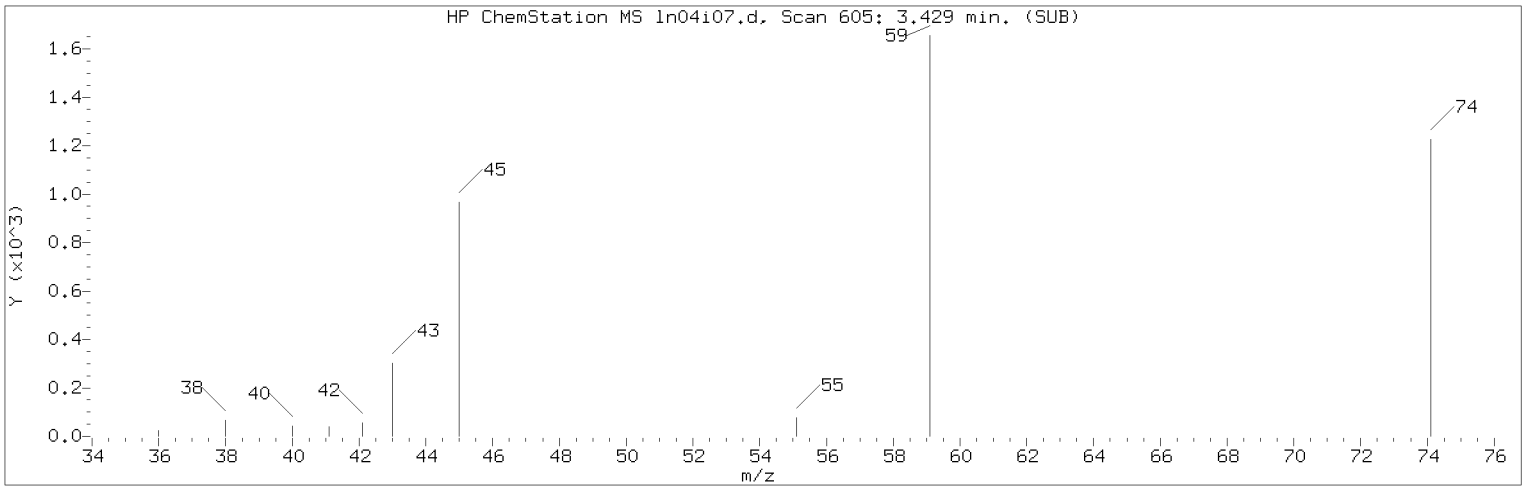
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 501
Retention Time (minutes): 3.094
Quant Ion : 67.00
Area (flag) : 10094M
On-Column Amount (ng) : 1.0040
Integration start scan : 475 Integration stop scan: 531
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

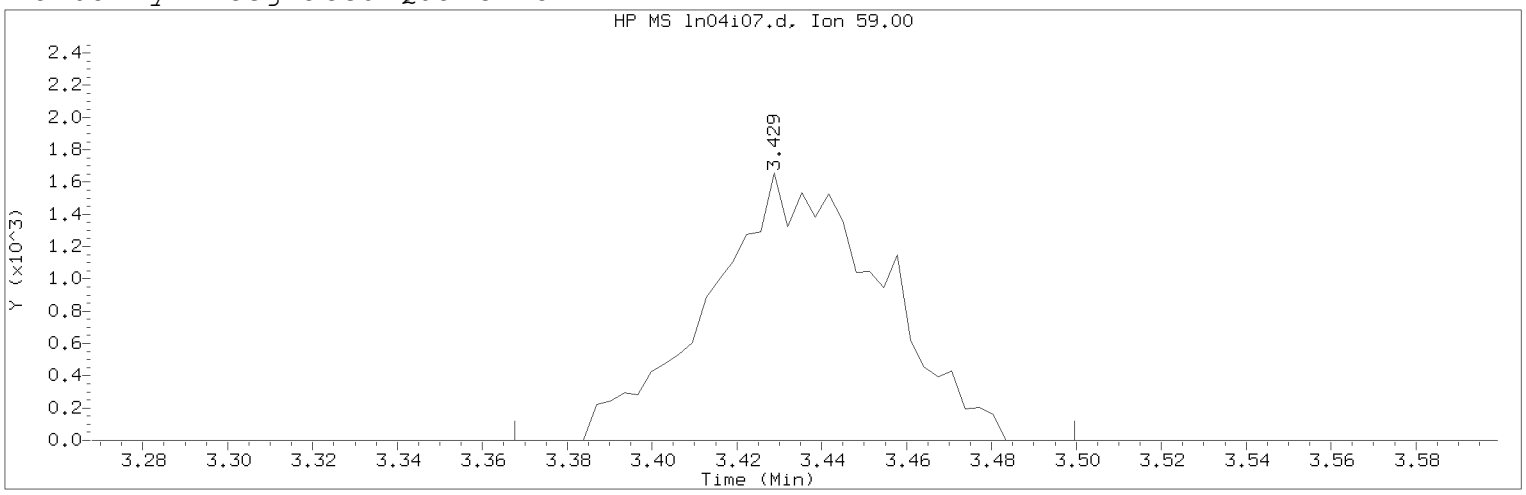
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

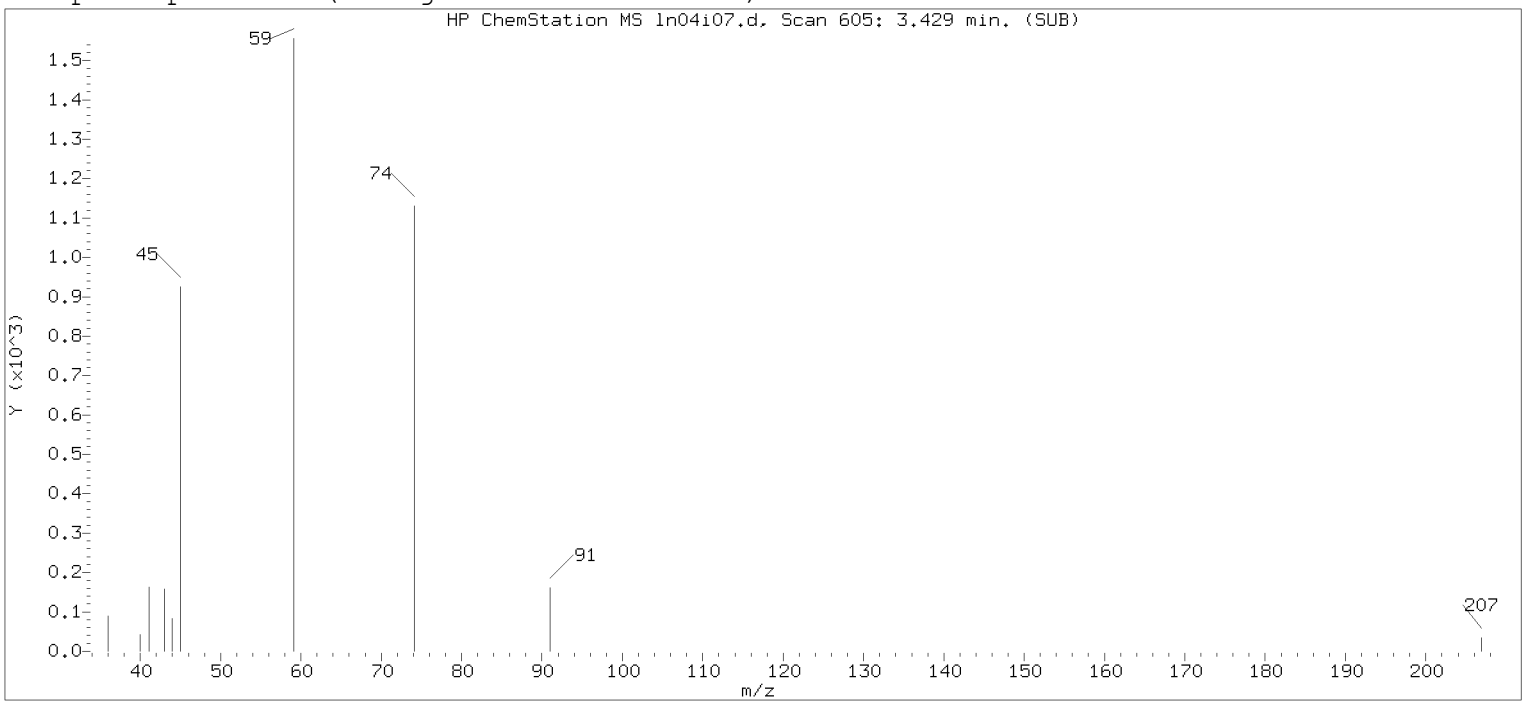
Compound Number : 14
Compound Name : Ethyl ether
Scan Number : 605
Retention Time (minutes): 3.429
Quant Ion : 59.00
Area (flag) : 4640M
On-Column Amount (ng) : 0.8744
Integration start scan : 585 Integration stop scan: 626
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

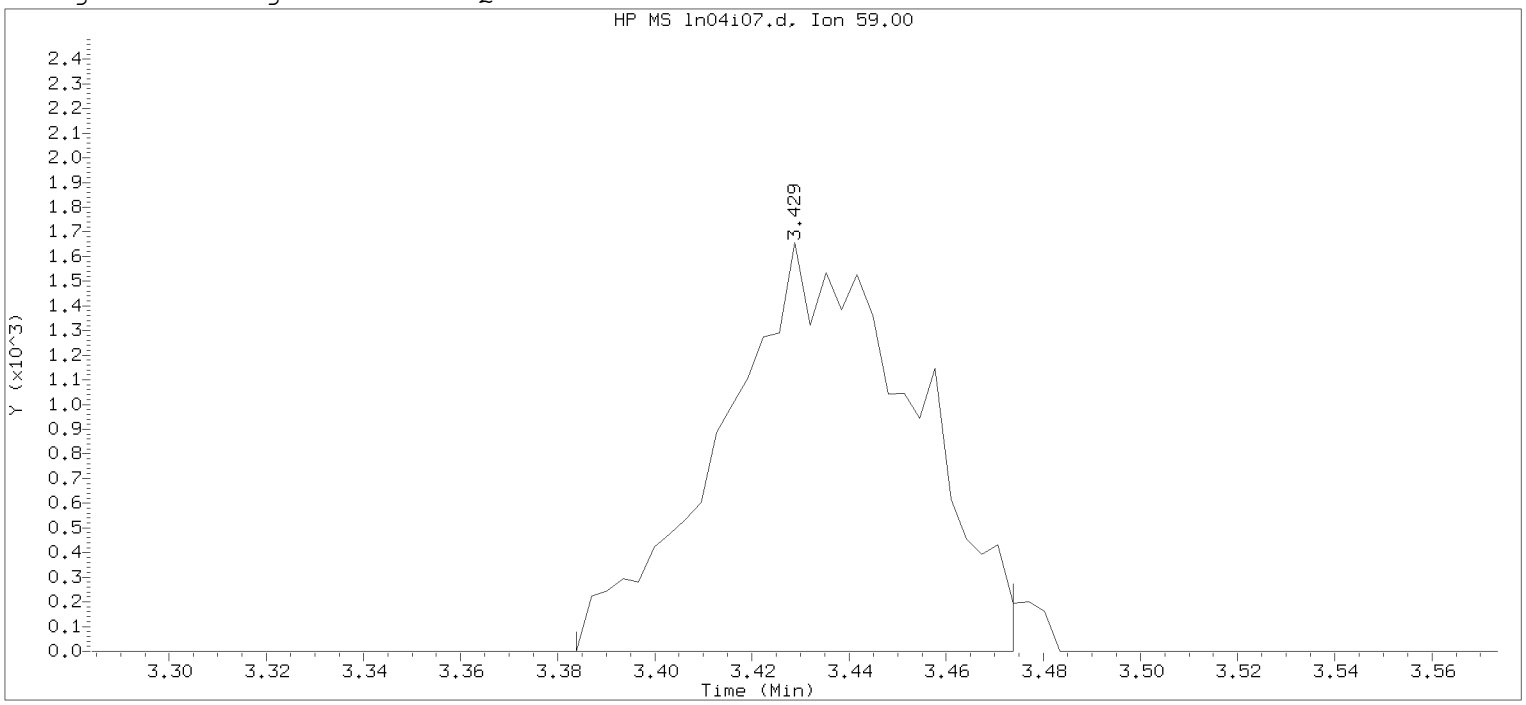
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

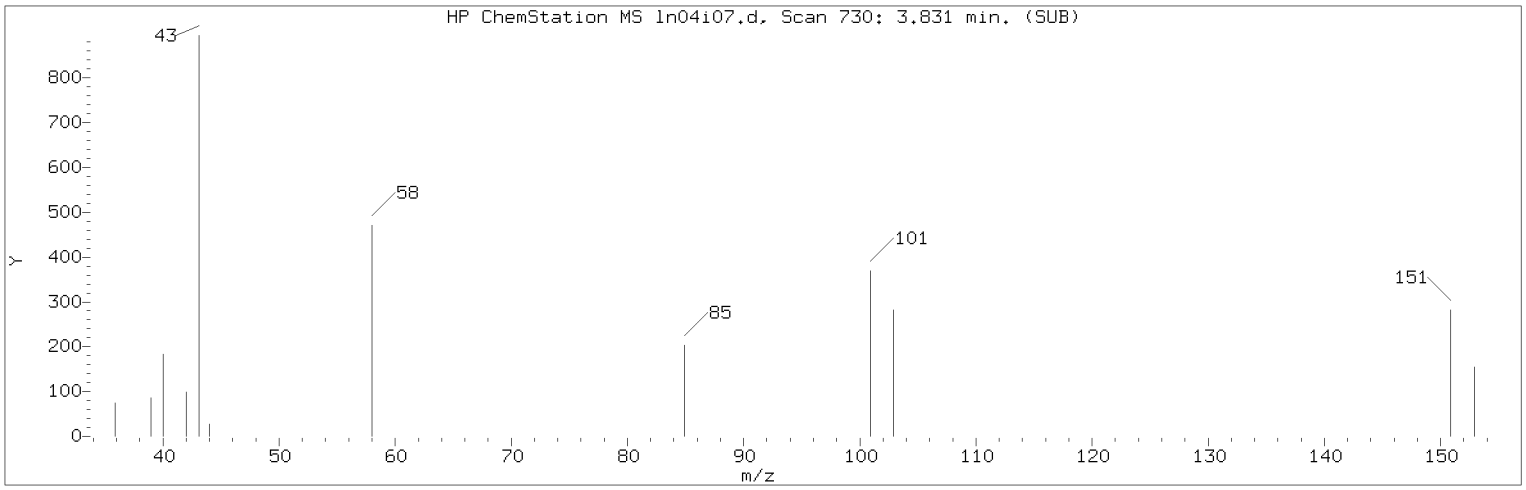
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

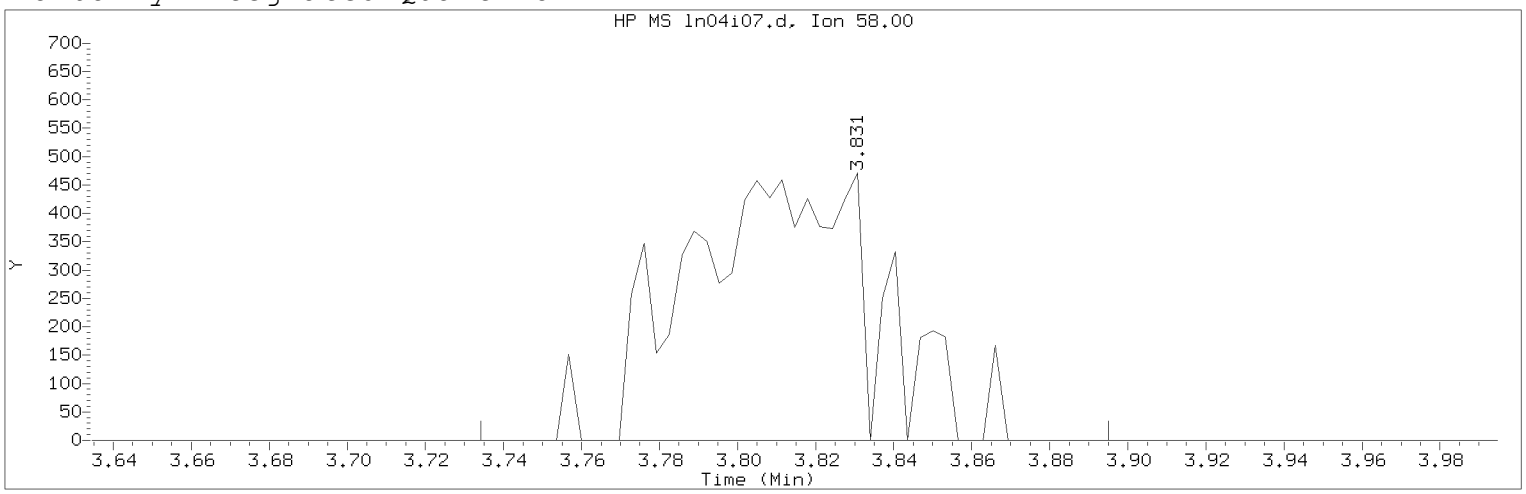
Compound Number : 14
Compound Name : Ethyl ether
Scan Number : 605
Retention Time (minutes): 3.429
Quant Ion : 59.00
Area : 4552
On-column Amount (ng) : 0.8599
Integration start scan : 590 Integration stop scan: 618
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

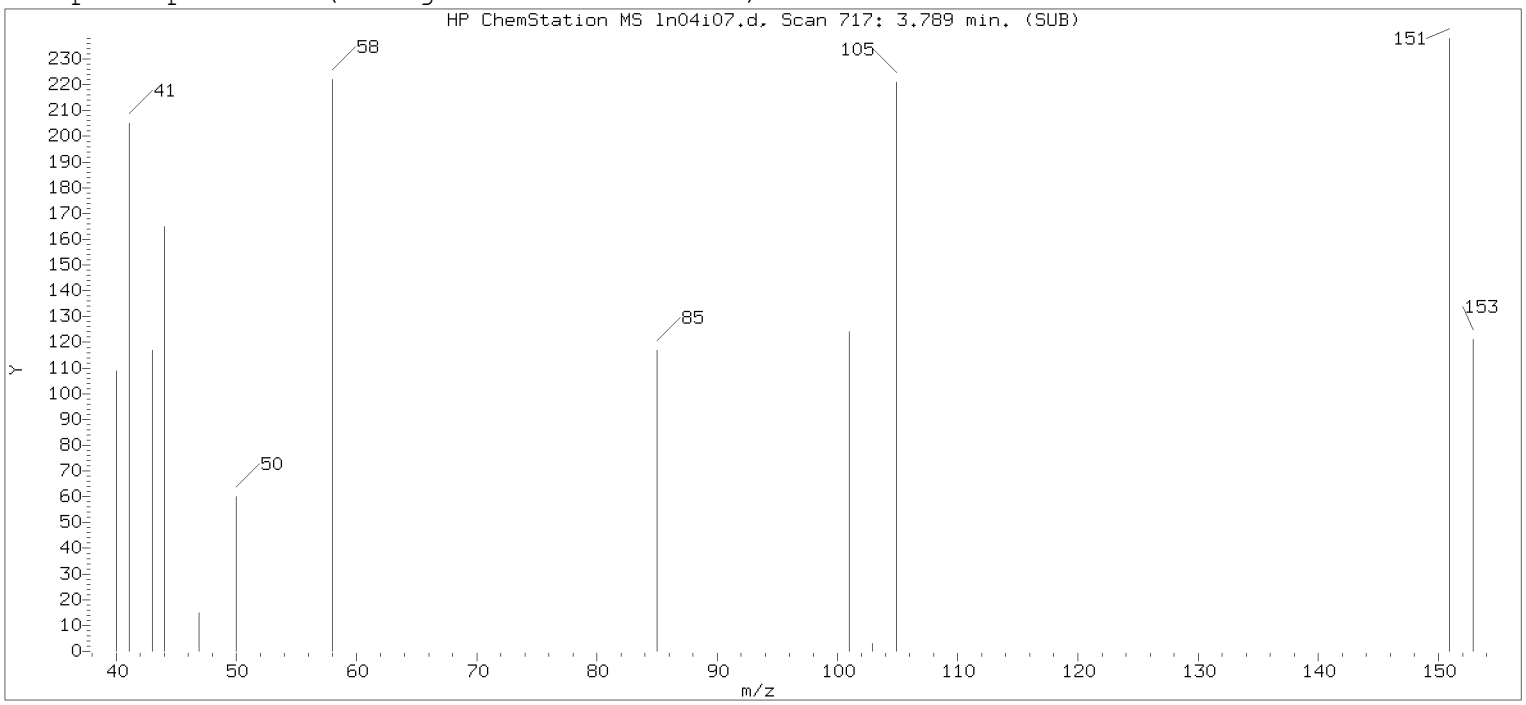
Compound Number : 18
Compound Name : Acetone
Scan Number : 730
Retention Time (minutes): 3.831
Quant Ion : 58.00
Area (flag) : 1588M
On-Column Amount (ng) : 1.9382
Integration start scan : 699 Integration stop scan: 749
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

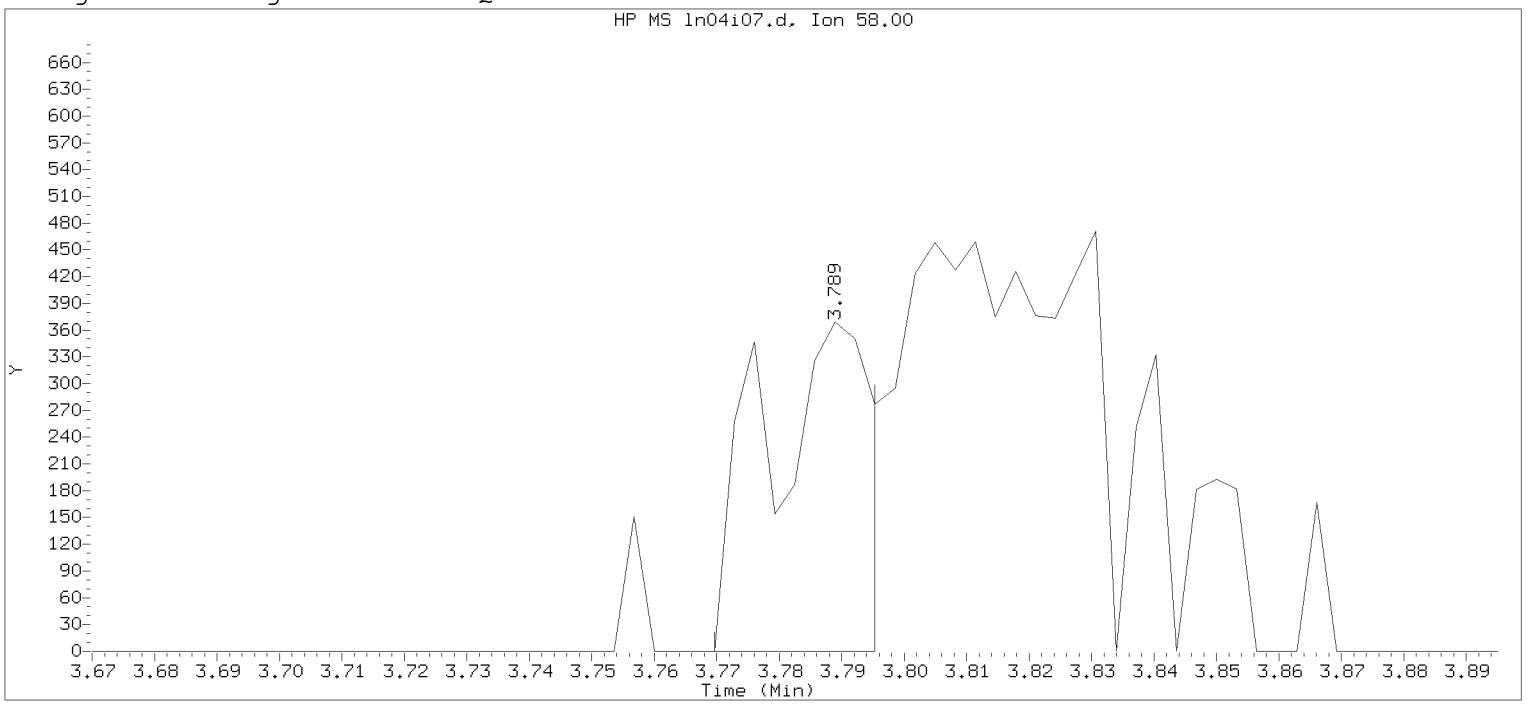
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

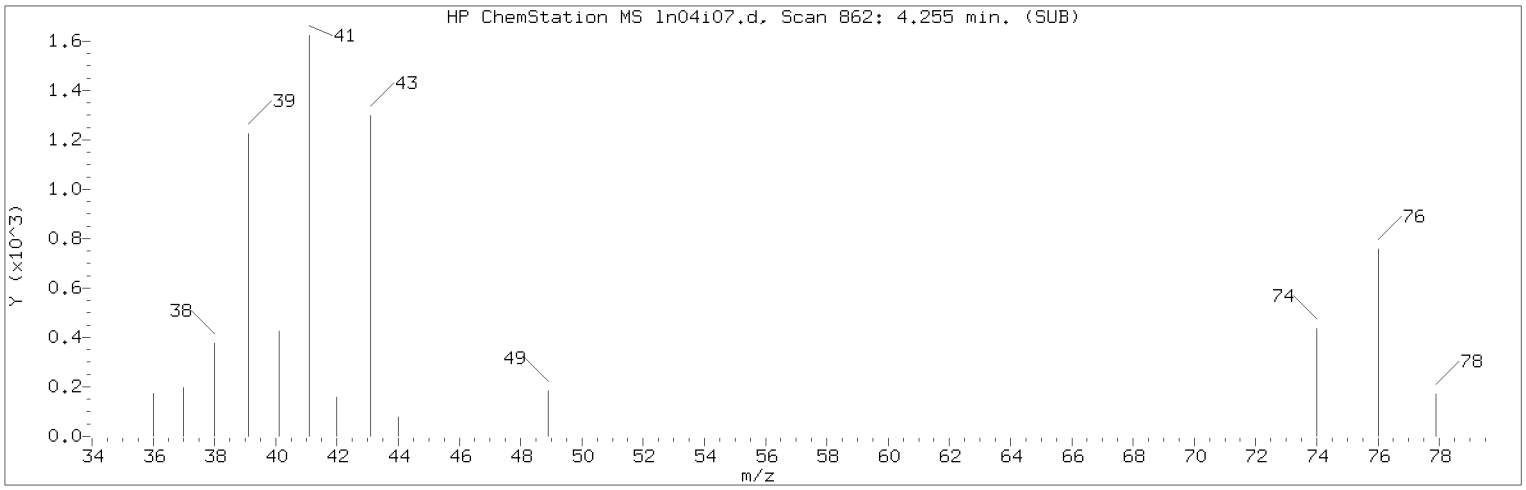
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

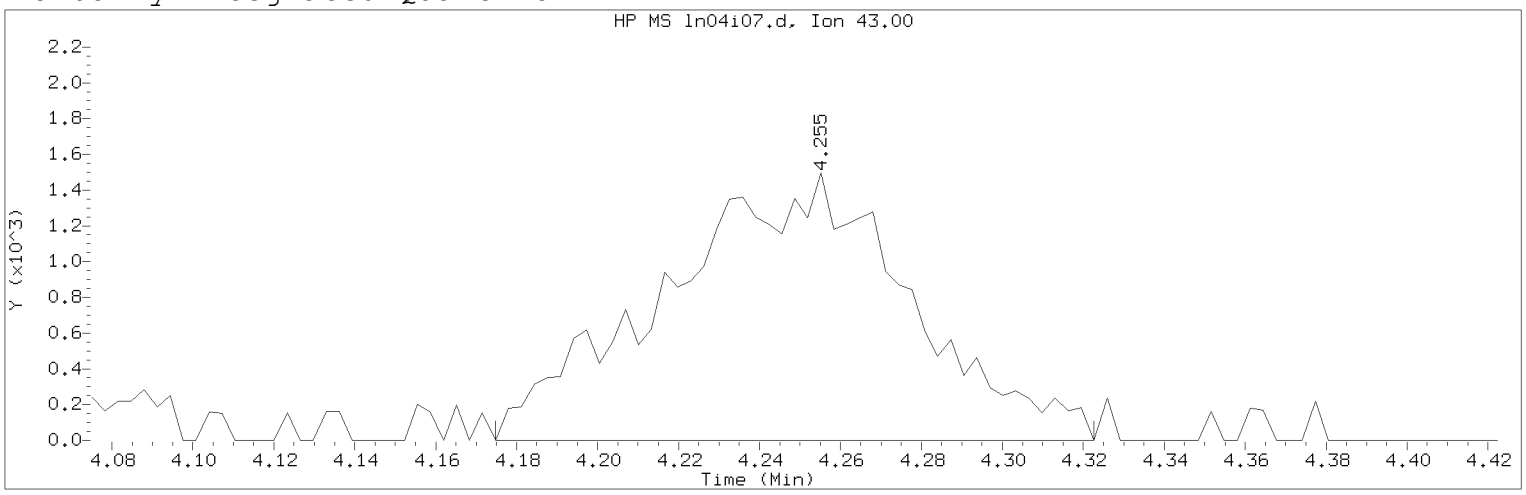
Compound Number : 18
Compound Name : Acetone
Scan Number : 717
Retention Time (minutes): 3.789
Quant Ion : 58.00
Area : 410
On-column Amount (ng) : 0.5644
Integration start scan : 710 Integration stop scan: 718
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

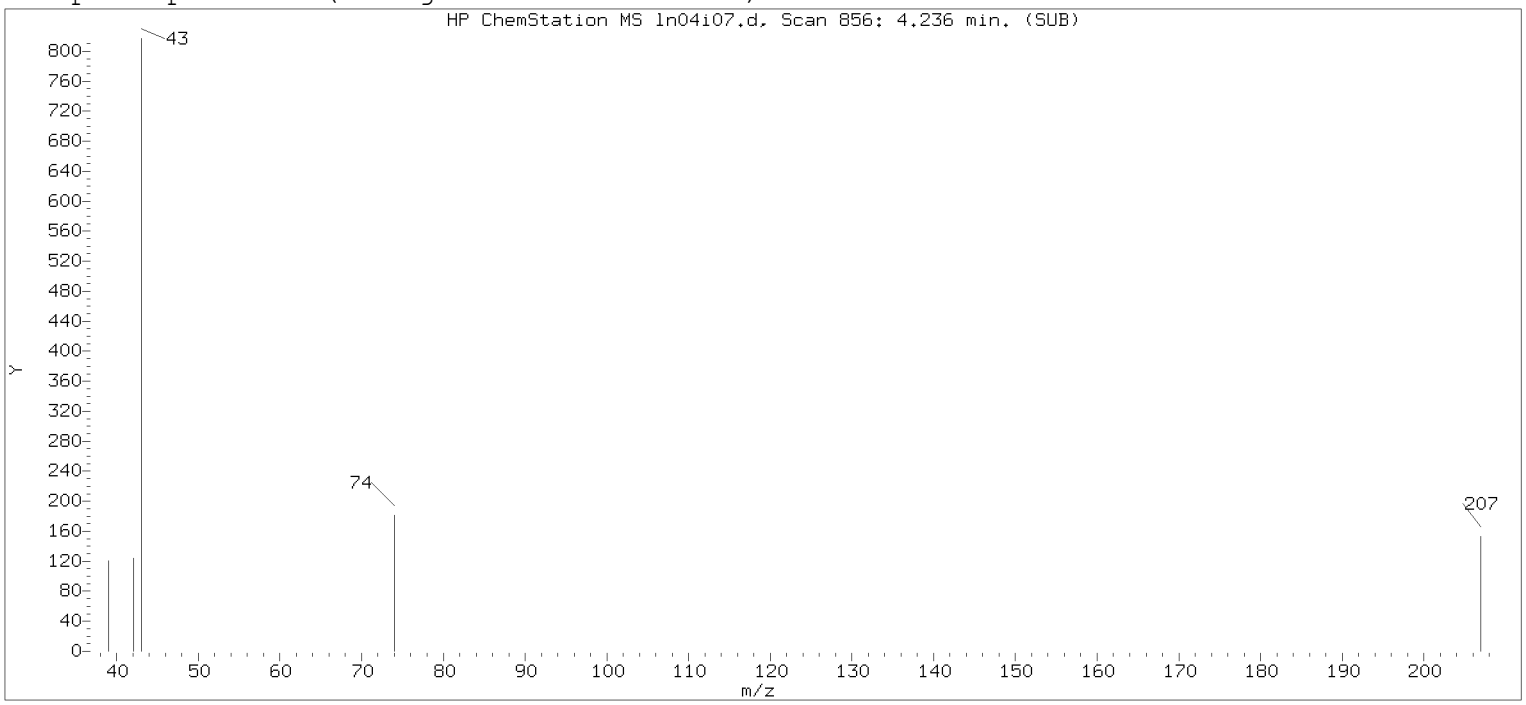
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 862
Retention Time (minutes): 4.255
Quant Ion : 43.00
Area (flag) : 6274M
On-Column Amount (ng) : 1.0106
Integration start scan : 836 Integration stop scan: 882
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

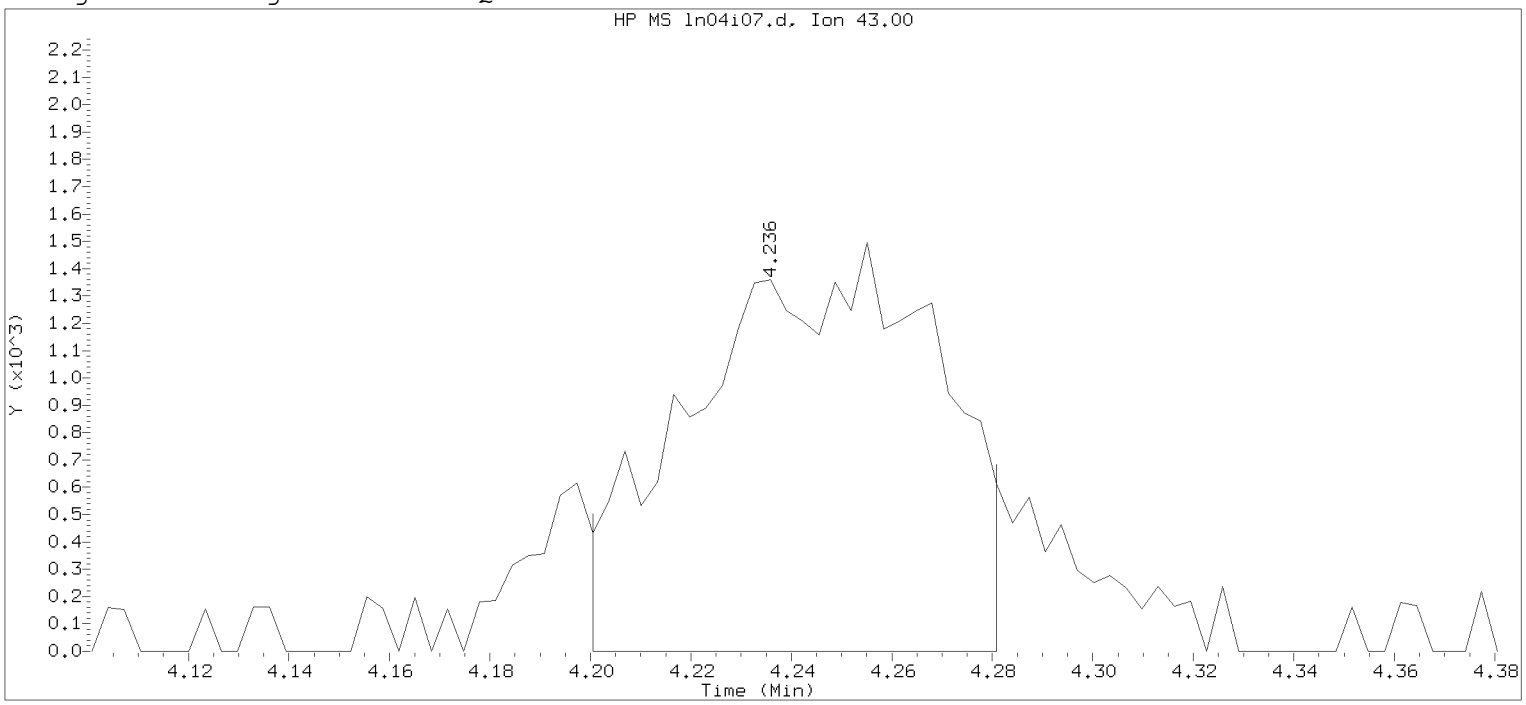
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

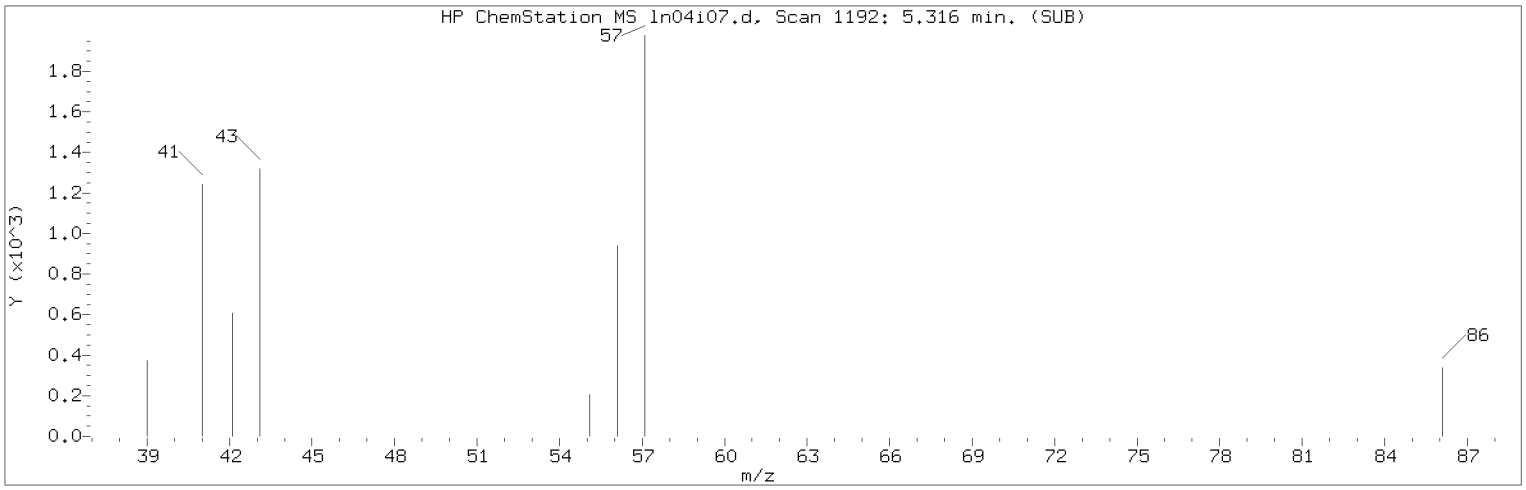
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

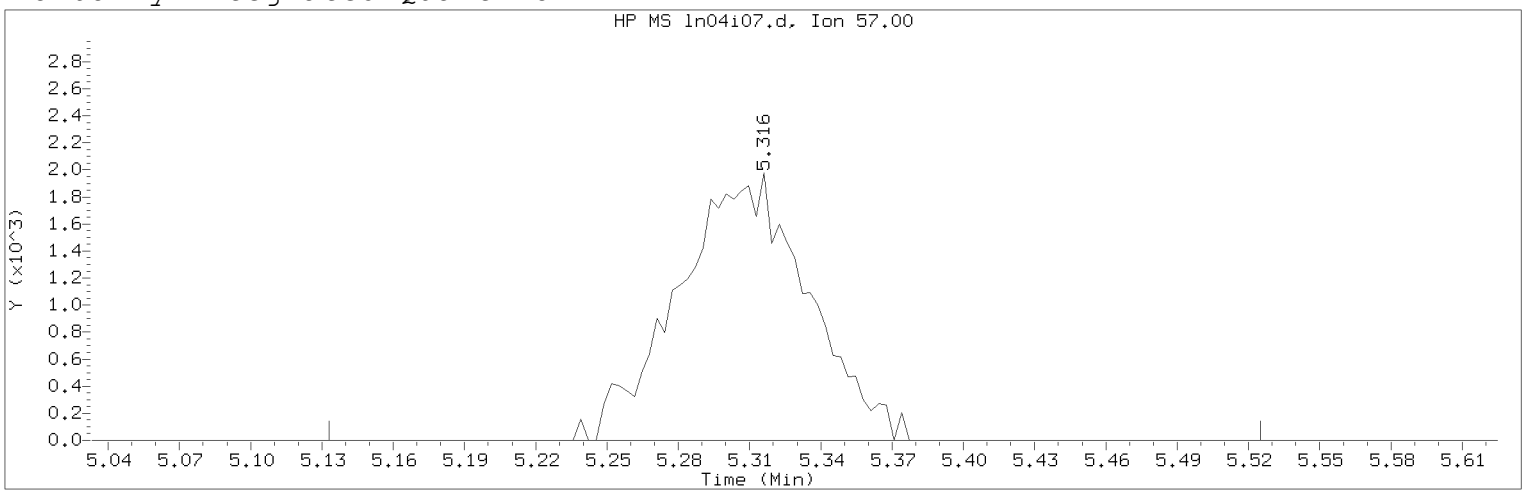
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 856
Retention Time (minutes): 4.236
Quant Ion : 43.00
Area : 4972
On-column Amount (ng) : 0.8386
Integration start scan : 844 Integration stop scan: 869
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

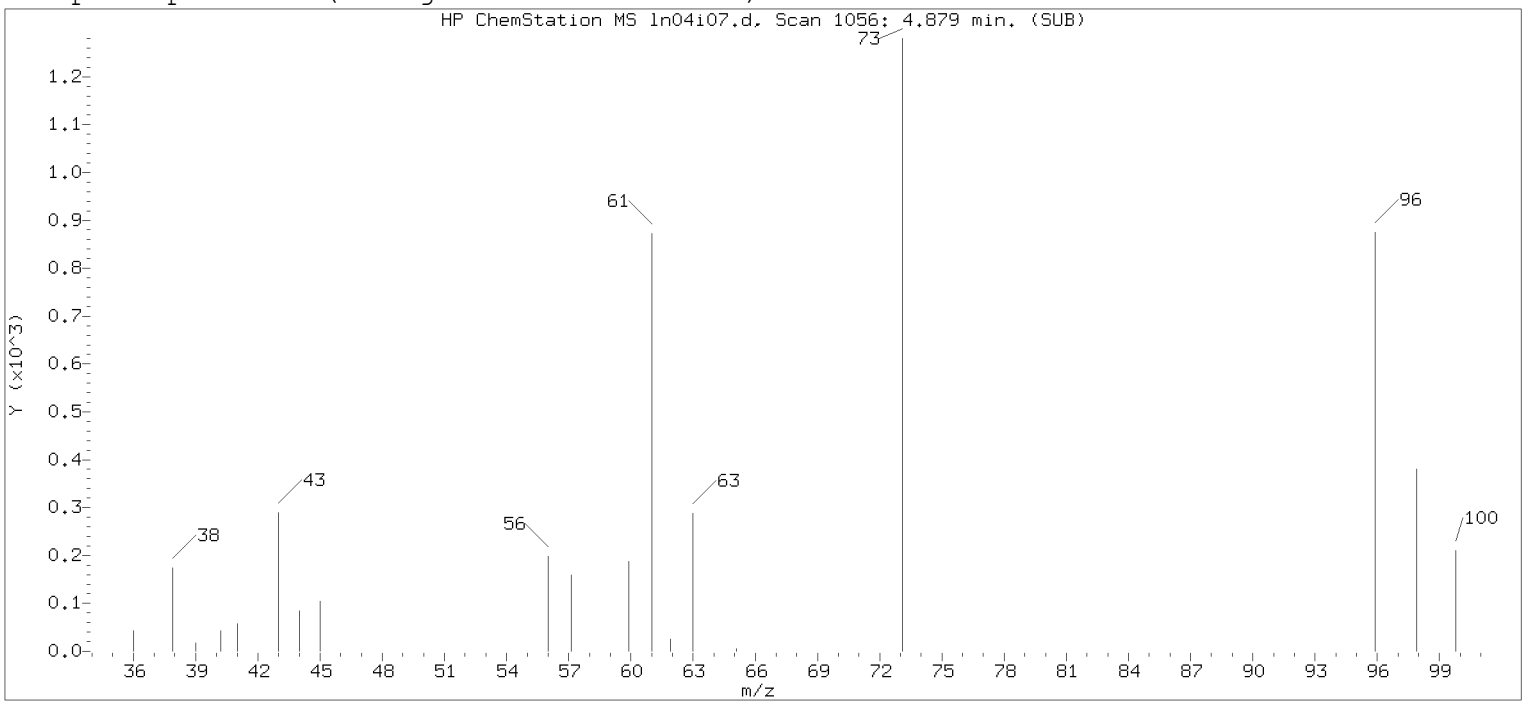
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1192
Retention Time (minutes): 5.316
Quant Ion : 57.00
Area (flag) : 7475M
On-Column Amount (ng) : 0.8616
Integration start scan : 1134 Integration stop scan: 1256
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

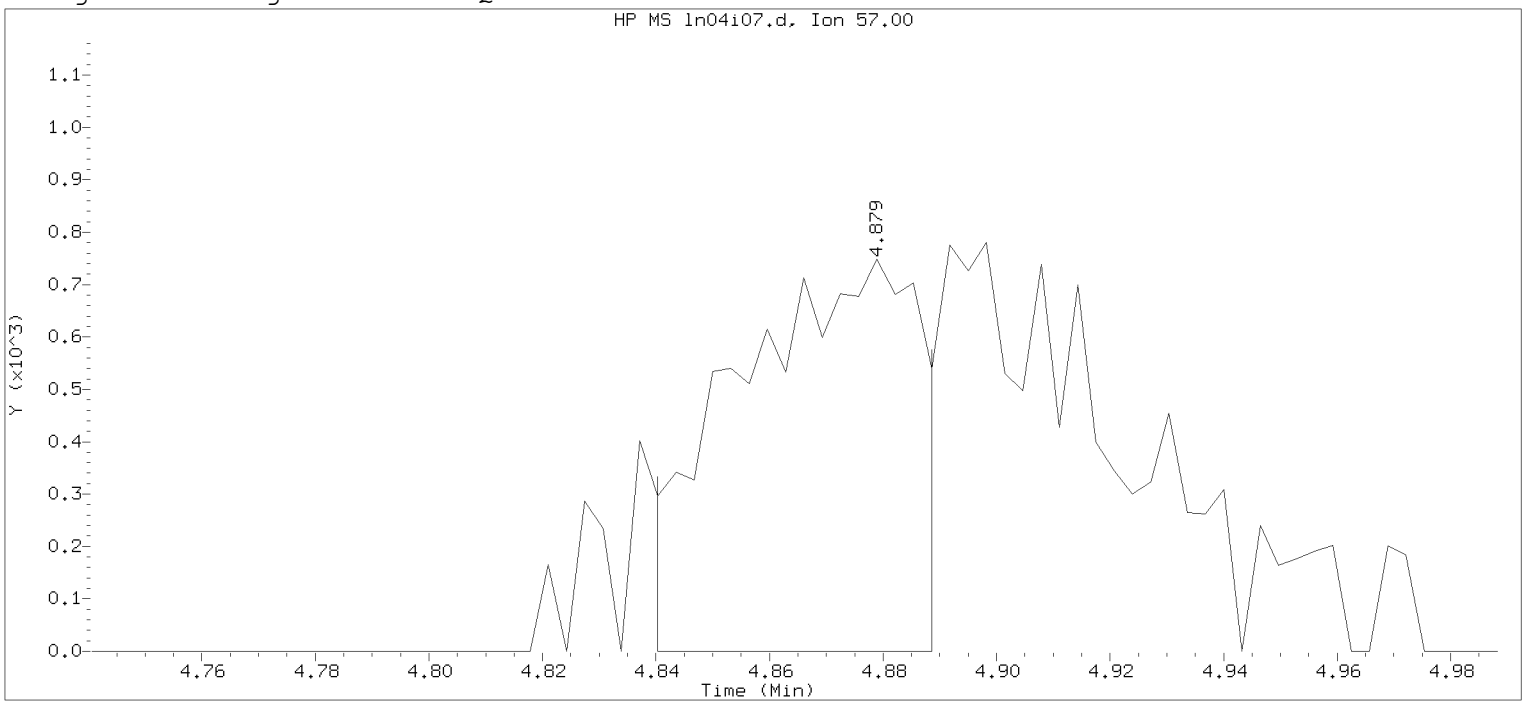
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

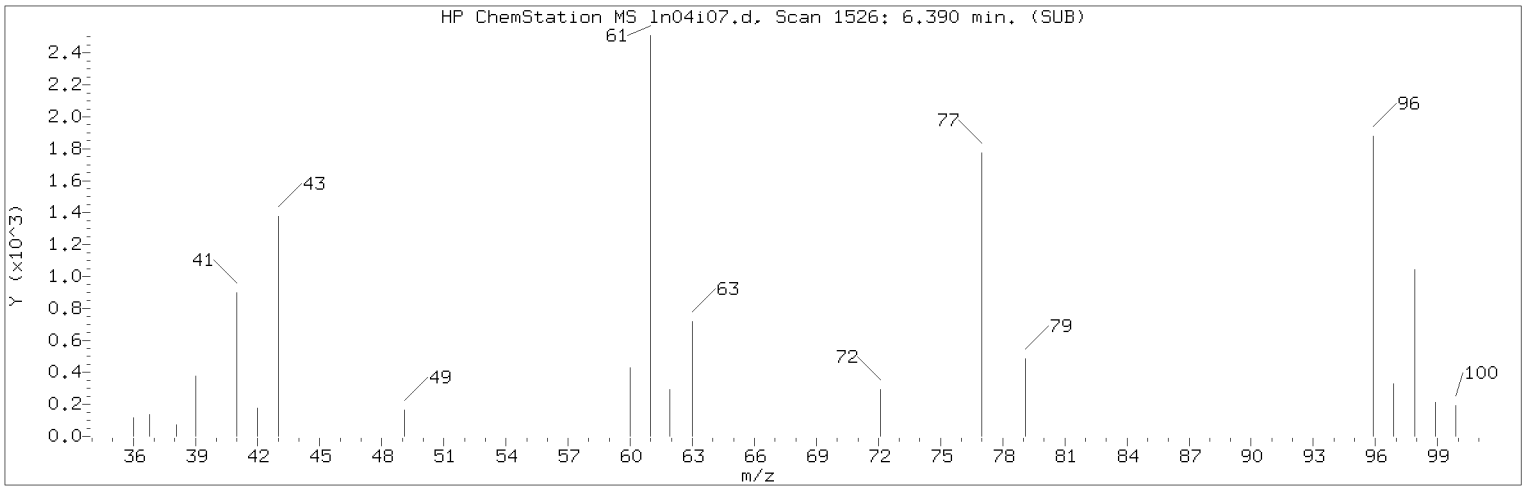
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

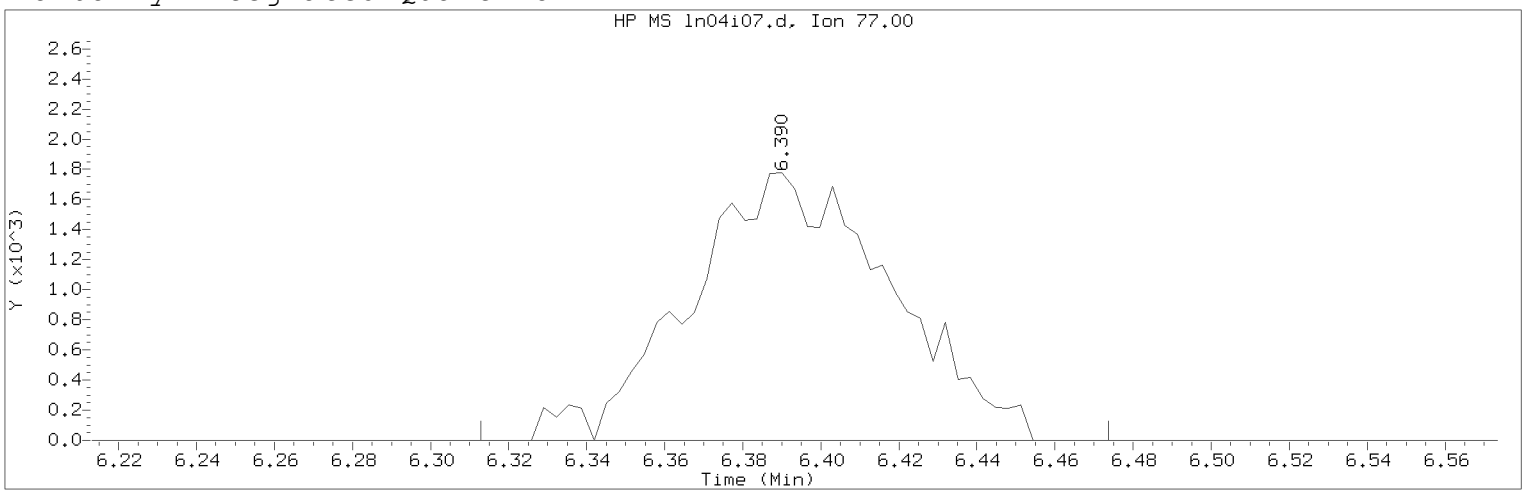
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1056		
Retention Time (minutes)	: 4.879		
Quant Ion	: 57.00		
Area	: 1663		
On-column Amount (ng)	: 0.4635		
Integration start scan	: 1043	Integration stop scan:	1058
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

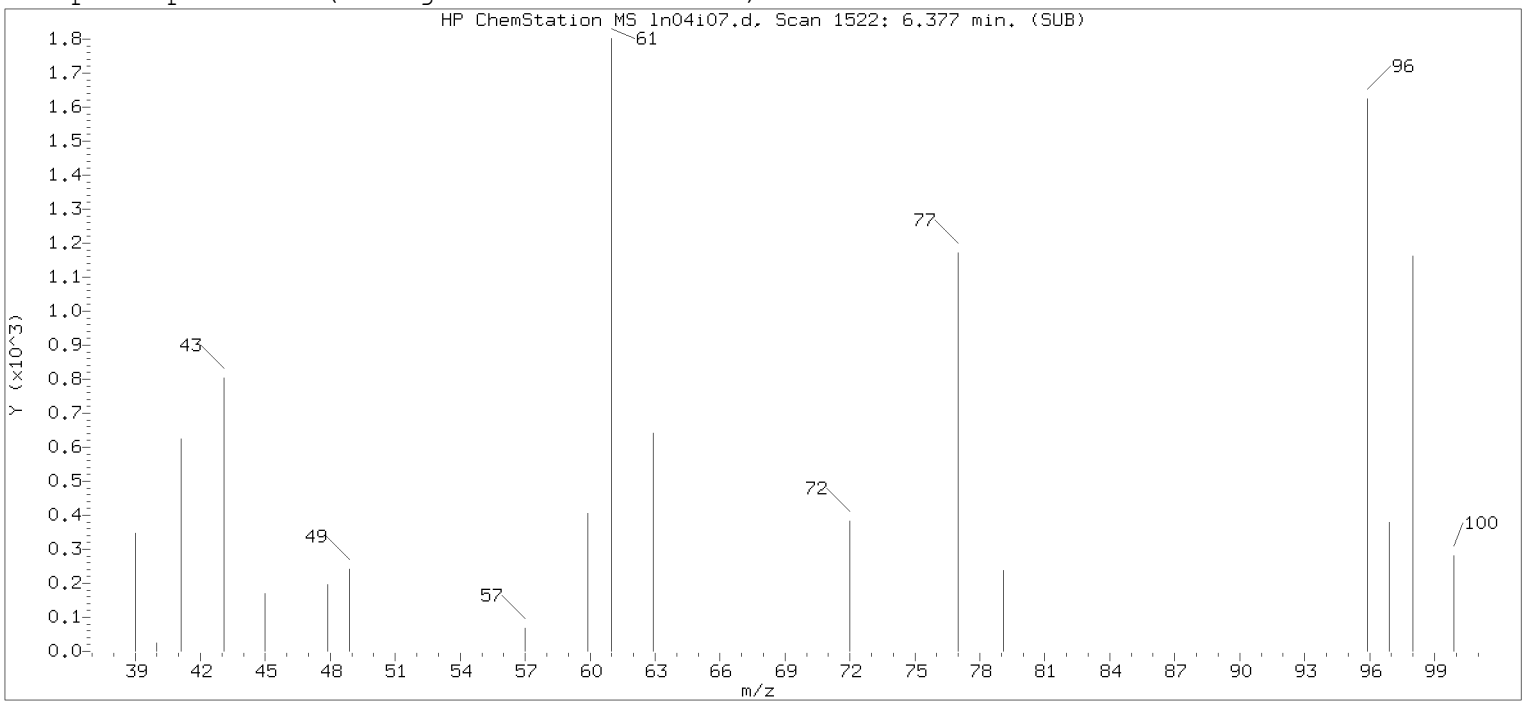
Compound Number : 45
Compound Name : 2,2-Dichloropropane
Scan Number : 1526
Retention Time (minutes): 6.390
Quant Ion : 77.00
Area (flag) : 6419M
On-Column Amount (ng) : 0.8488
Integration start scan : 1501 Integration stop scan: 1551
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

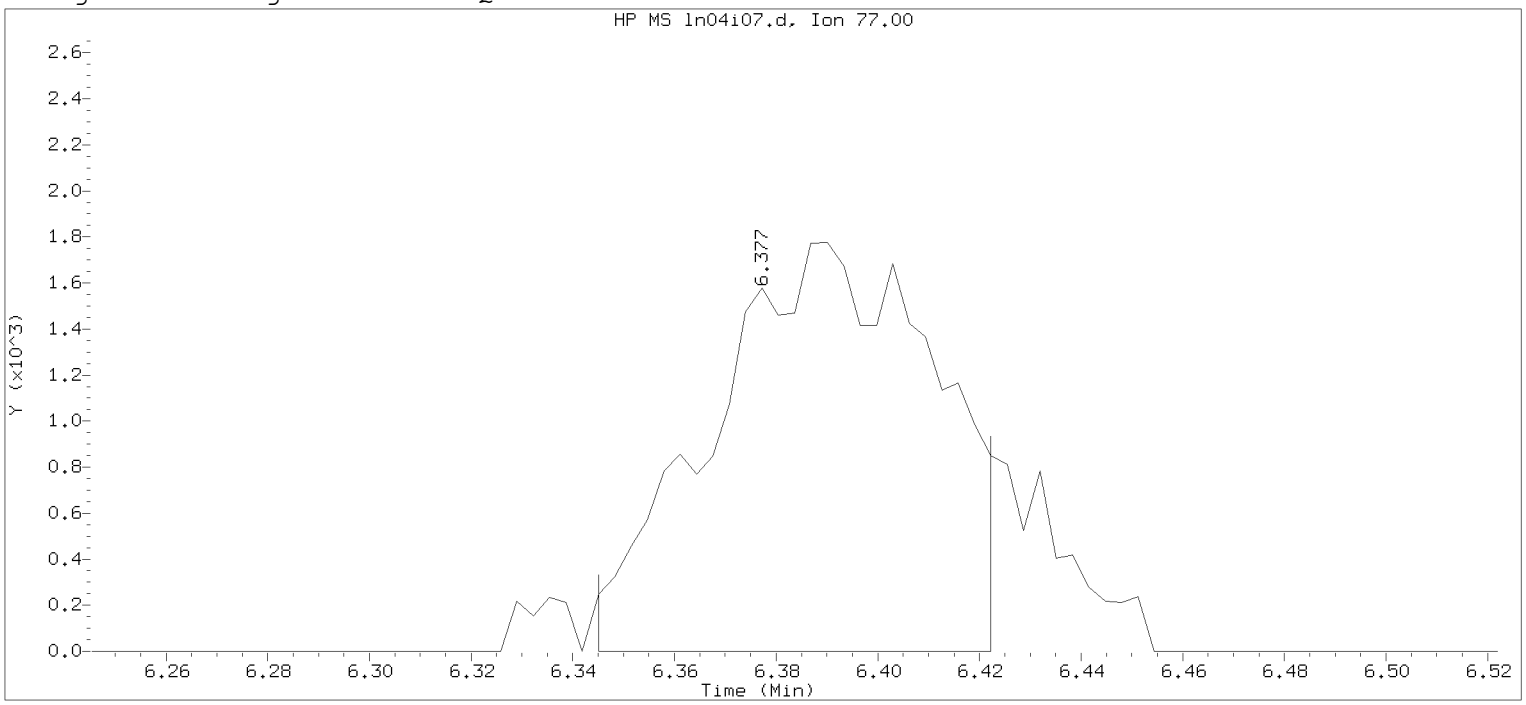
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

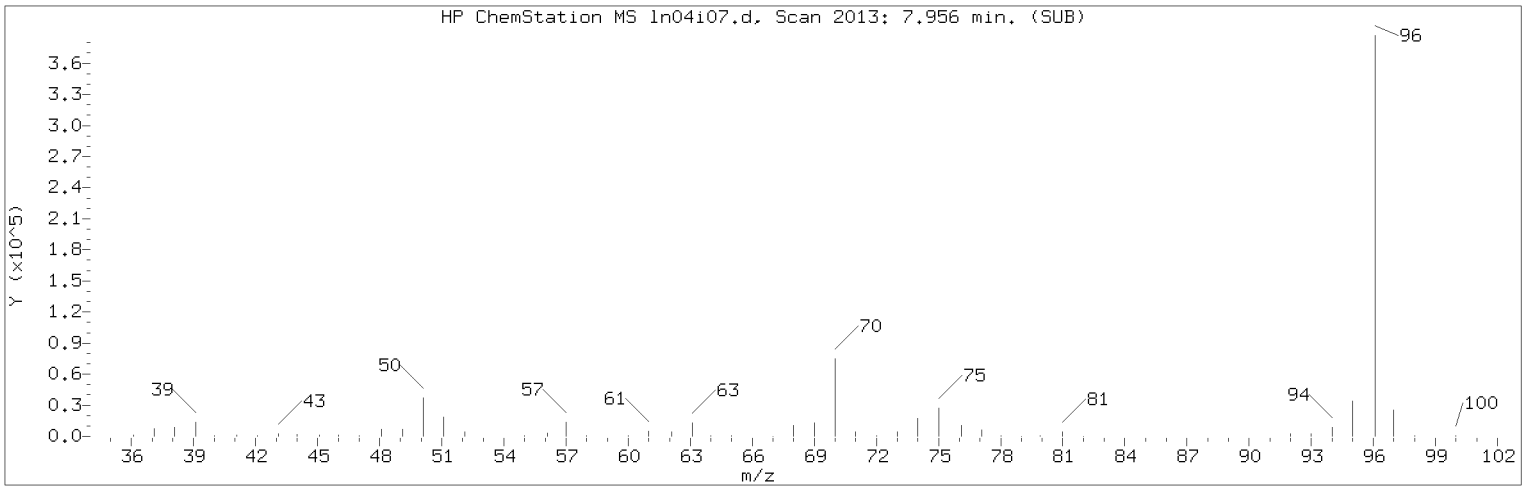
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

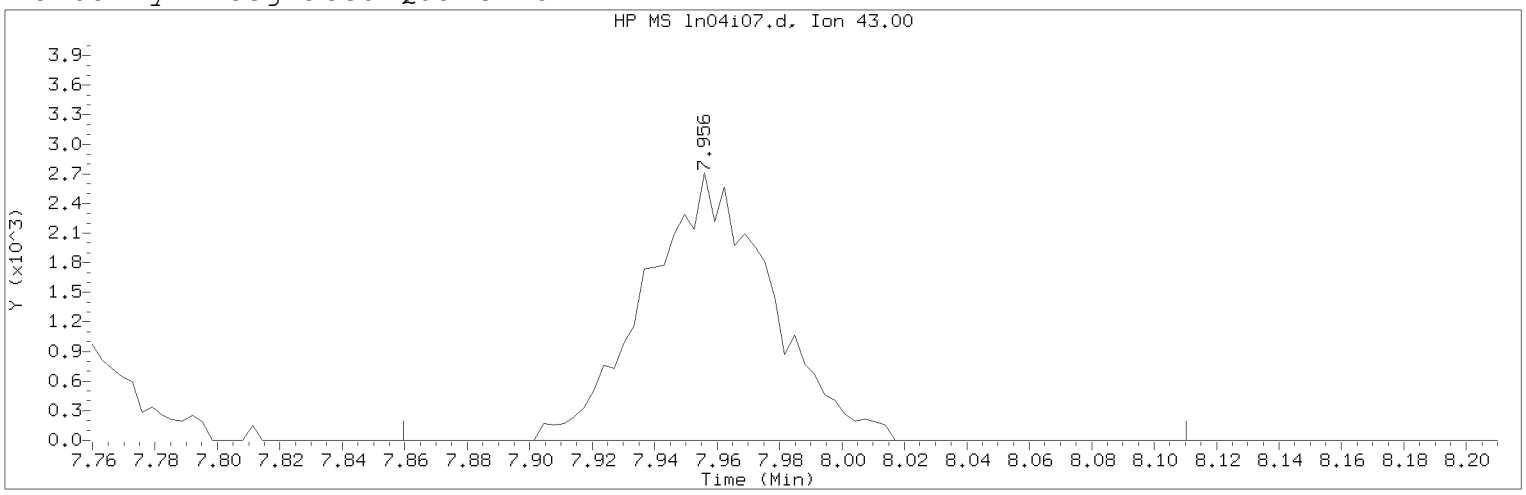
Compound Number : 45
Compound Name : 2,2-Dichloropropane
Scan Number : 1522
Retention Time (minutes): 6.377
Quant Ion : 77.00
Area : 5406
On-column Amount (ng) : 0.7289
Integration start scan : 1511 Integration stop scan: 1535
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

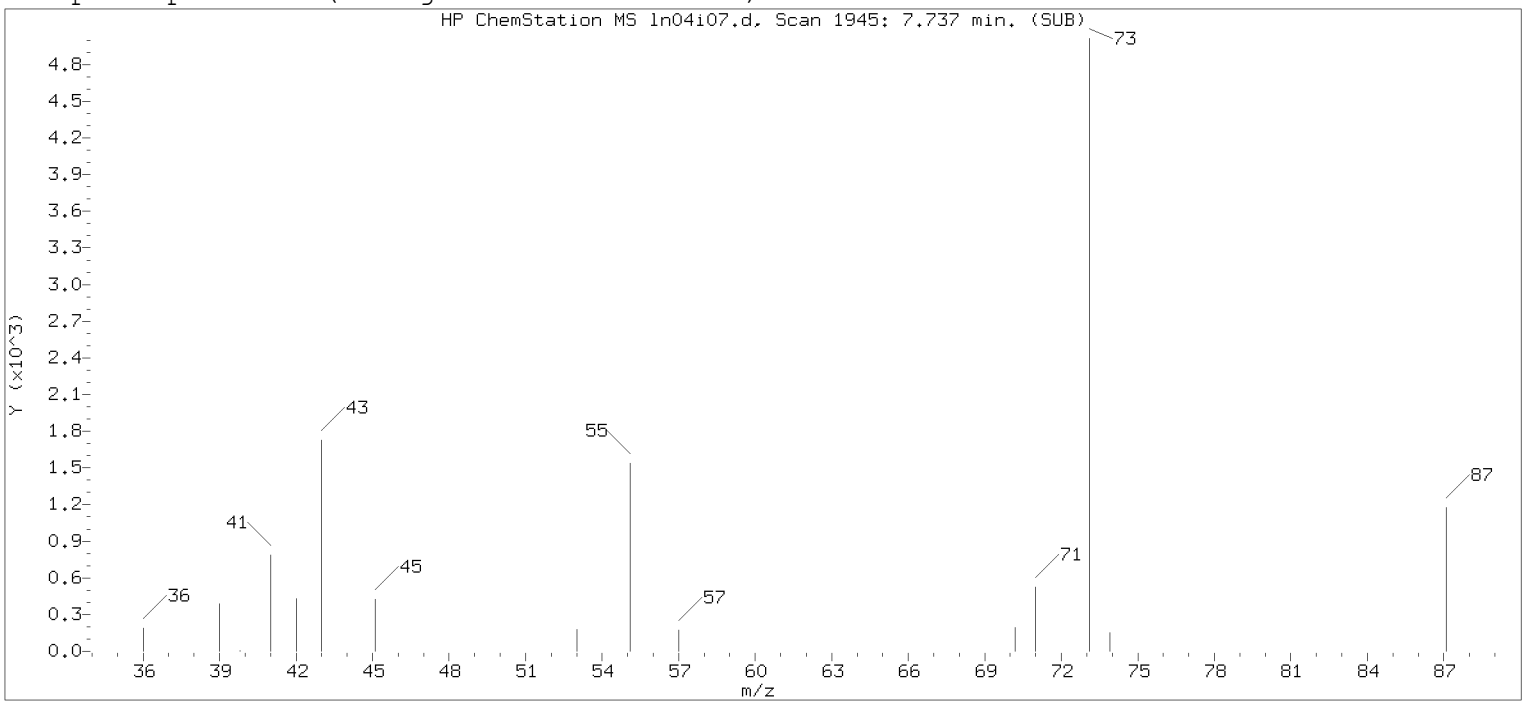
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2013
Retention Time (minutes): 7.956
Quant Ion : 43.00
Area (flag) : 7535M
On-Column Amount (ng) : 0.9297
Integration start scan : 1982 Integration stop scan: 2060
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

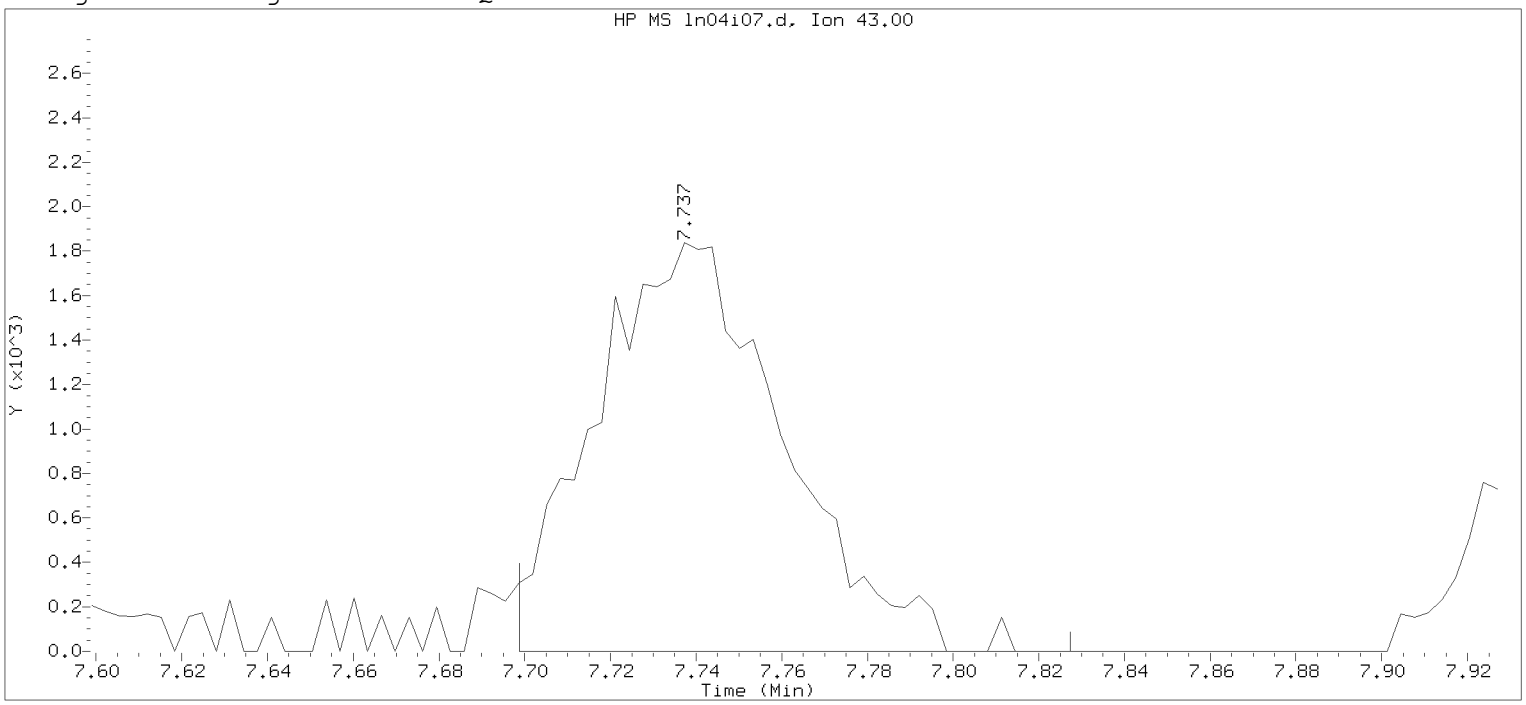
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

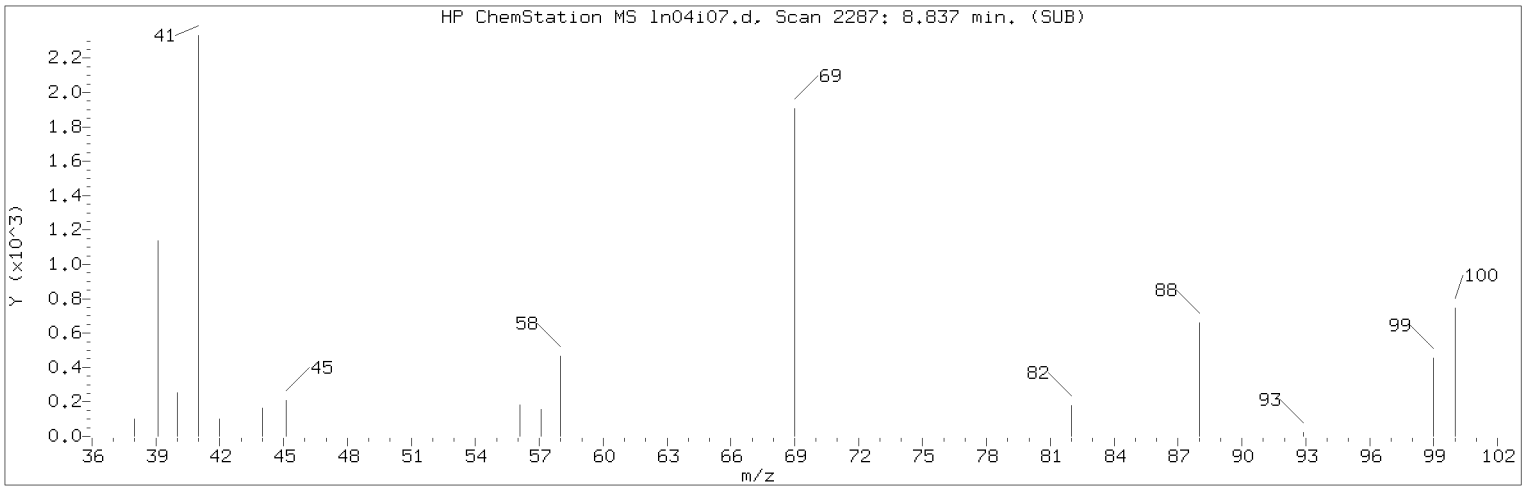
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

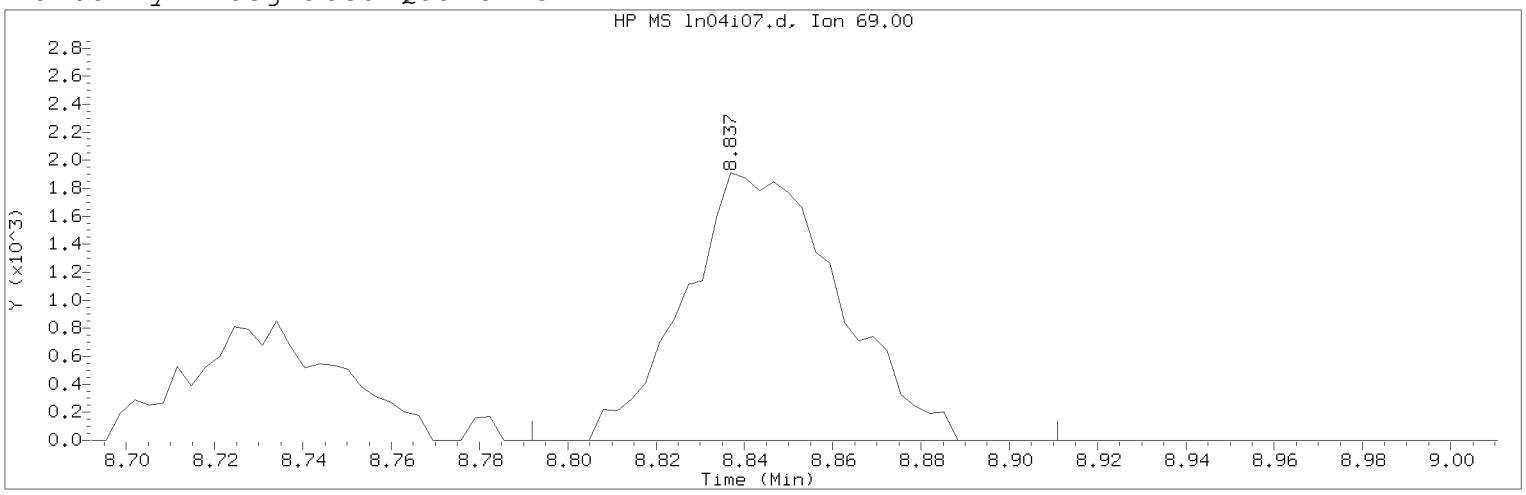
Compound Number	: 67		
Compound Name	: n-Heptane		
Scan Number	: 1945		
Retention Time (minutes)	: 7.737		
Quant Ion	: 43.00		
Area	: 5623		
On-column Amount (ng)	: 0.9372		
Integration start scan	: 1932	Integration stop scan:	1972
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

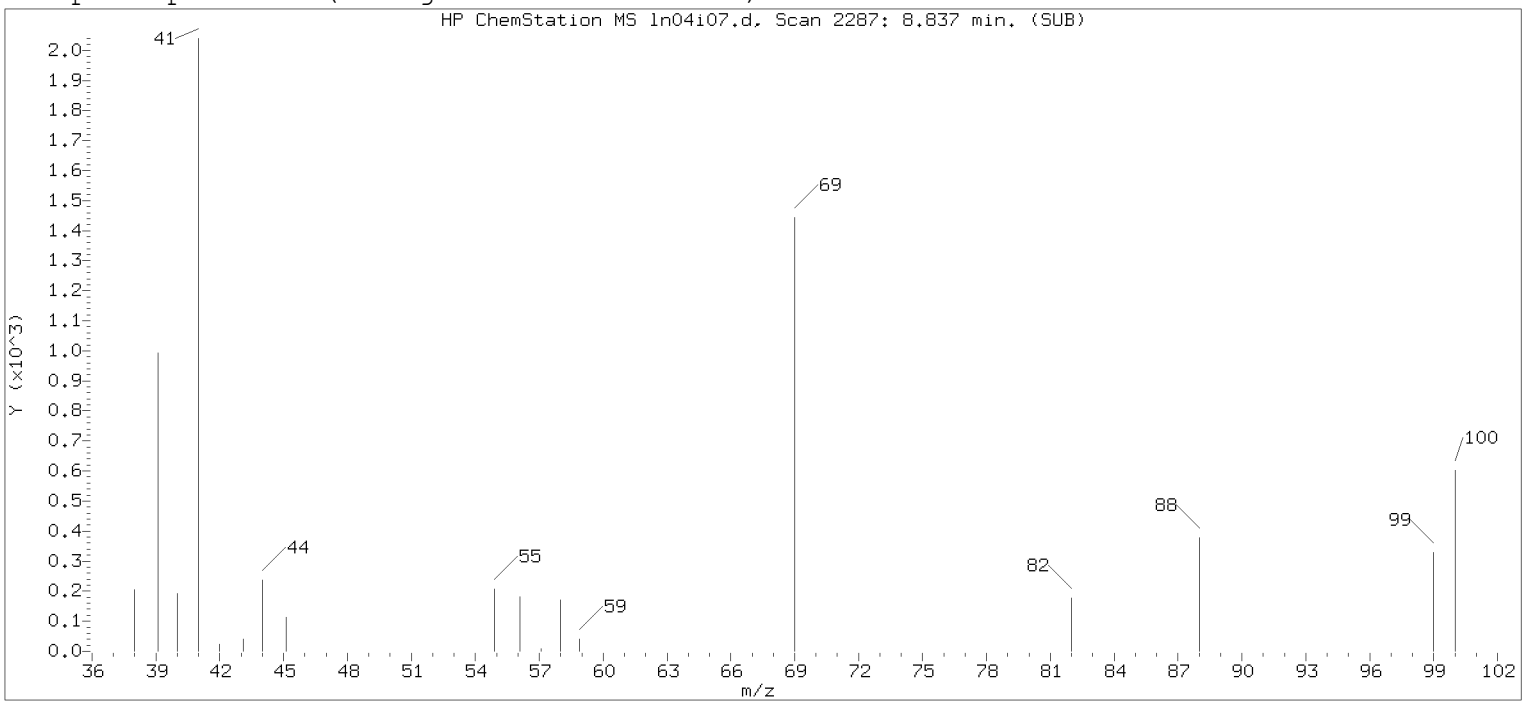
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2287
Retention Time (minutes): 8.837
Quant Ion : 69.00
Area (flag) : 4607M
On-Column Amount (ng) : 0.8112
Integration start scan : 2272 Integration stop scan: 2309
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

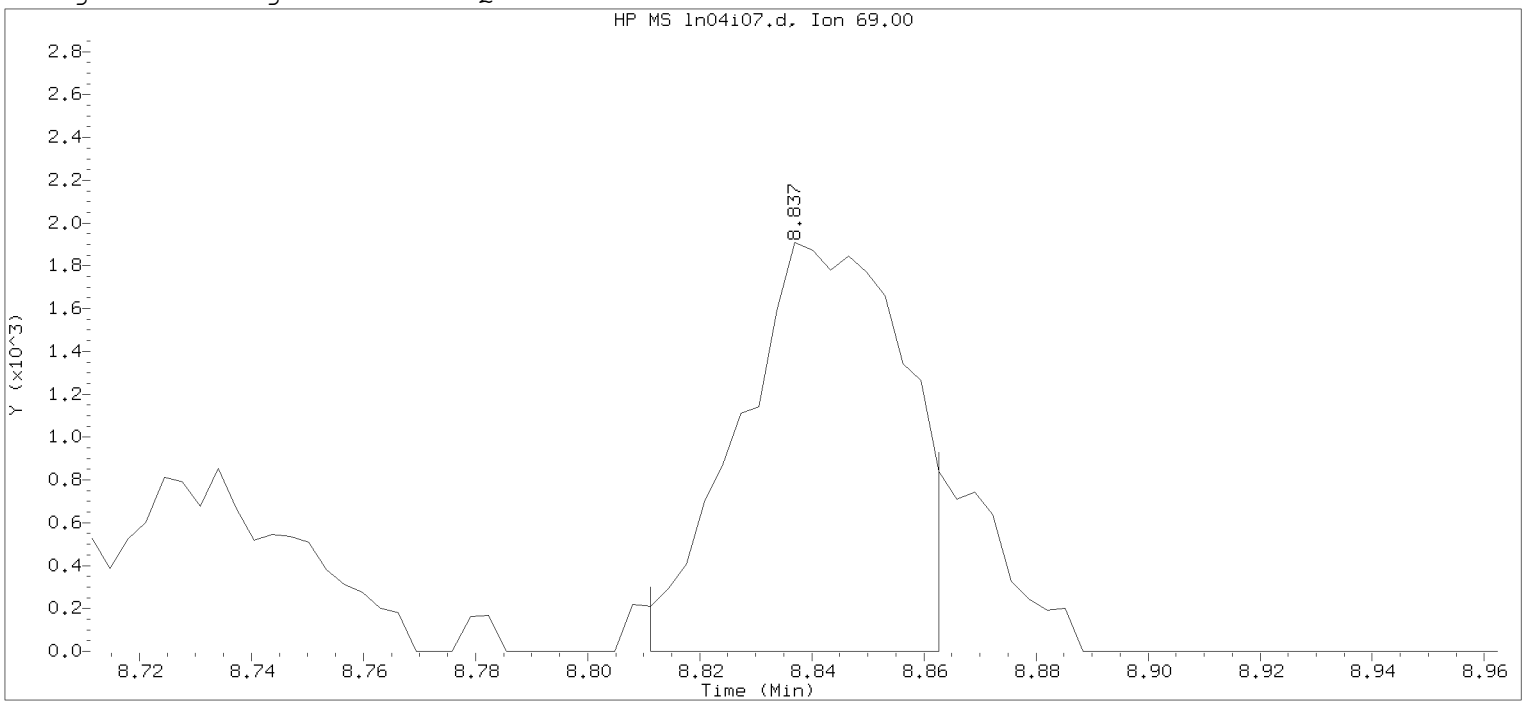
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

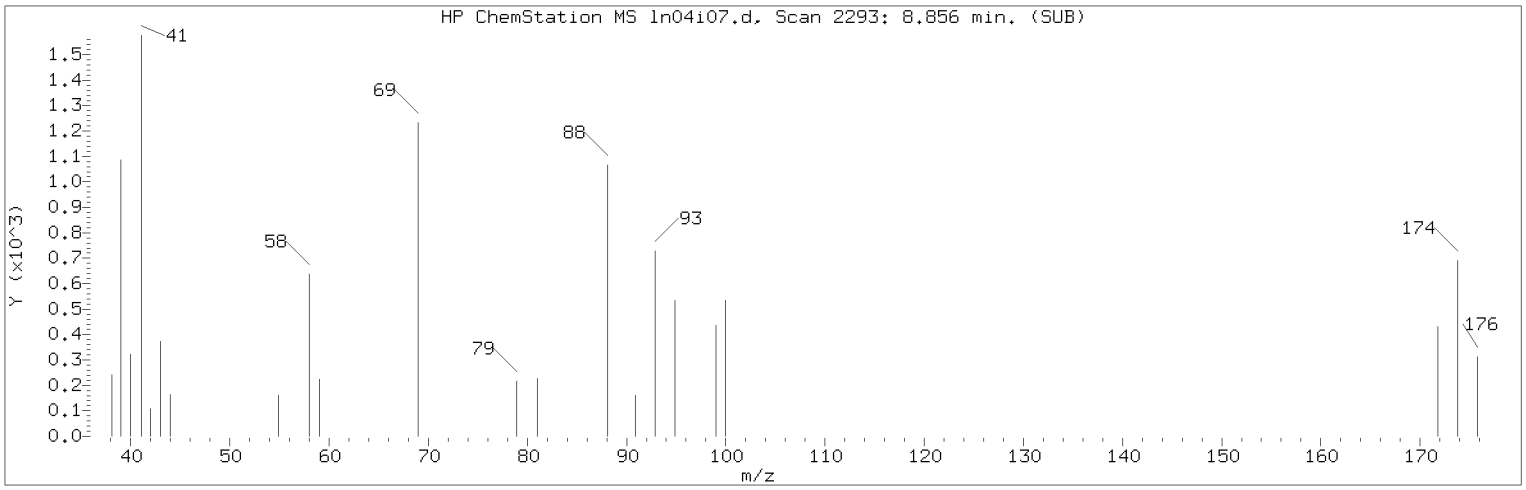
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

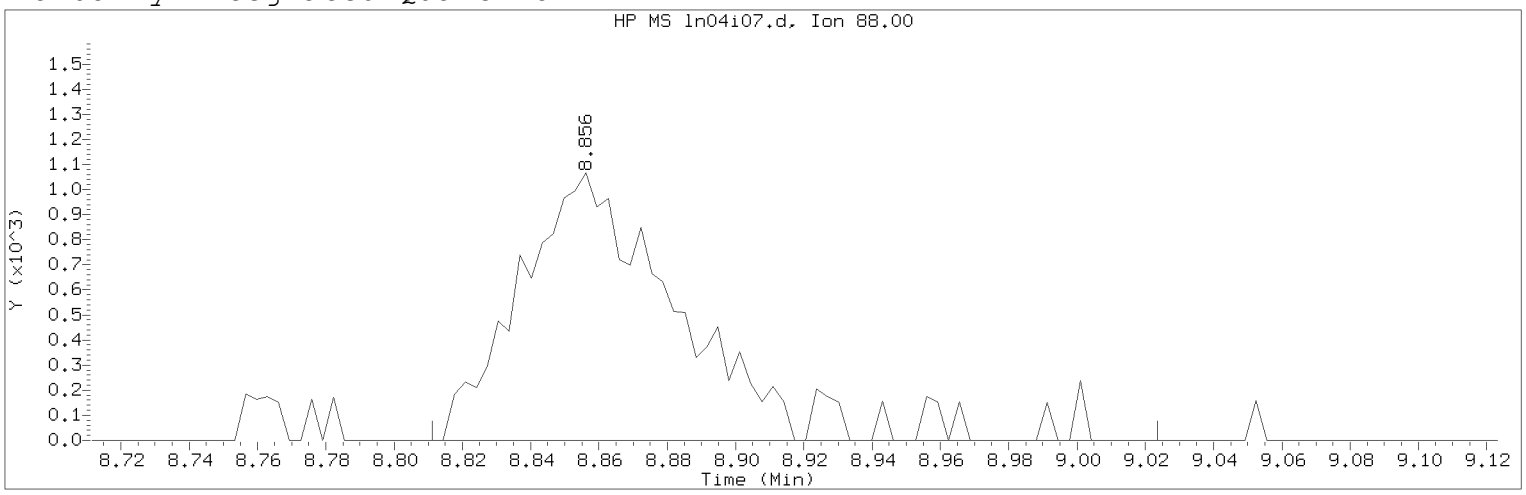
Compound Number	: 76		
Compound Name	: Methyl Methacrylate		
Scan Number	: 2287		
Retention Time (minutes)	: 8.837		
Quant Ion	: 69.00		
Area	: 3874		
On-column Amount (ng)	: 0.7186		
Integration start scan	: 2278	Integration stop scan:	2294
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

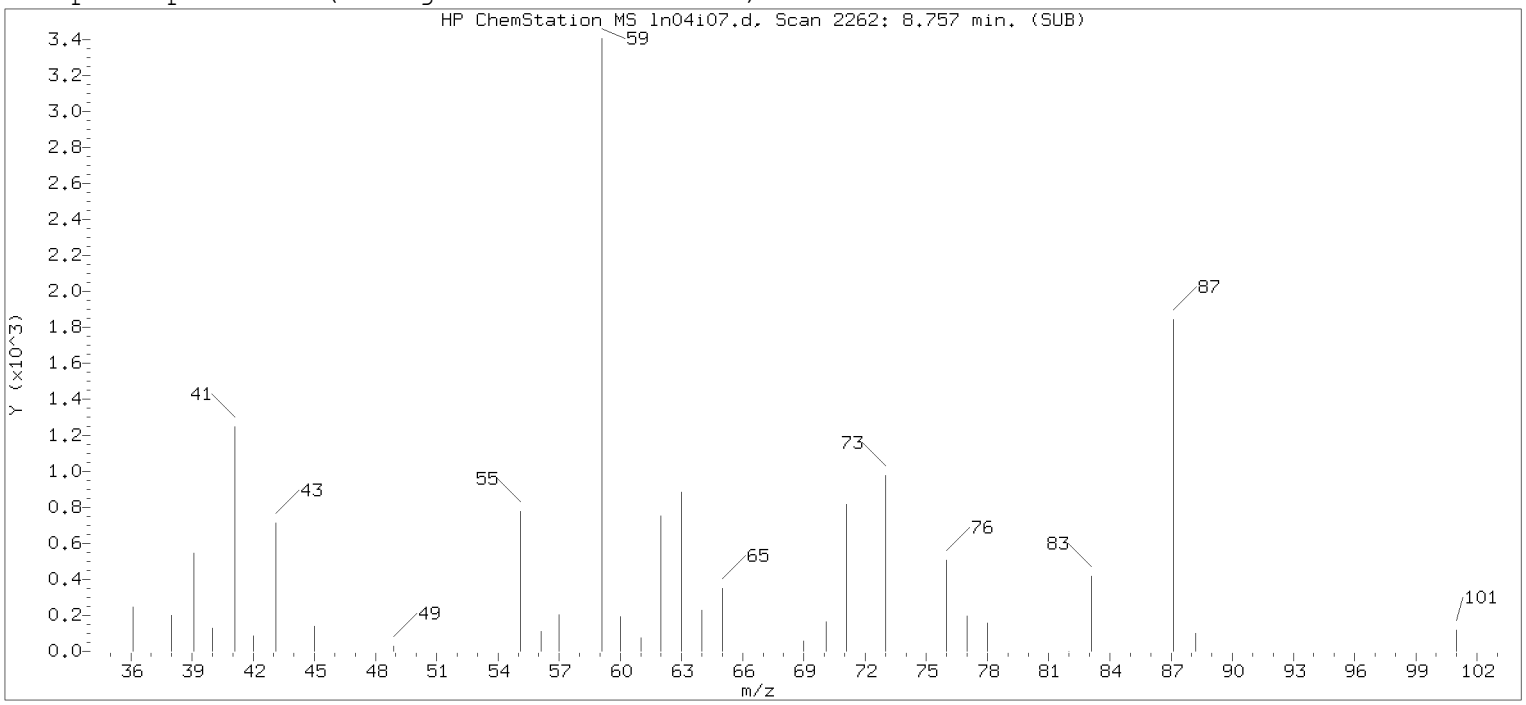
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 3548M
On-Column Amount (ng) : 43.4574
Integration start scan : 2278 Integration stop scan: 2344
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

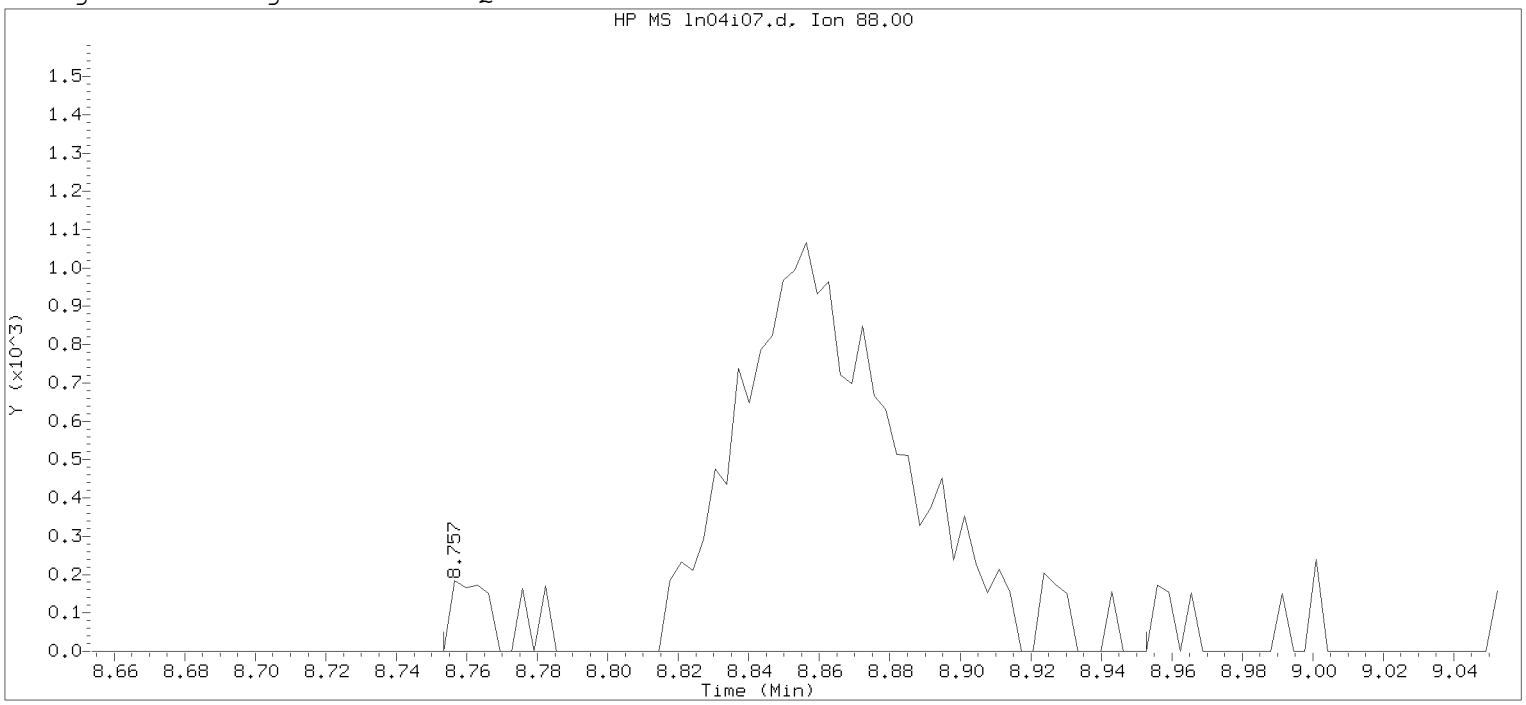
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

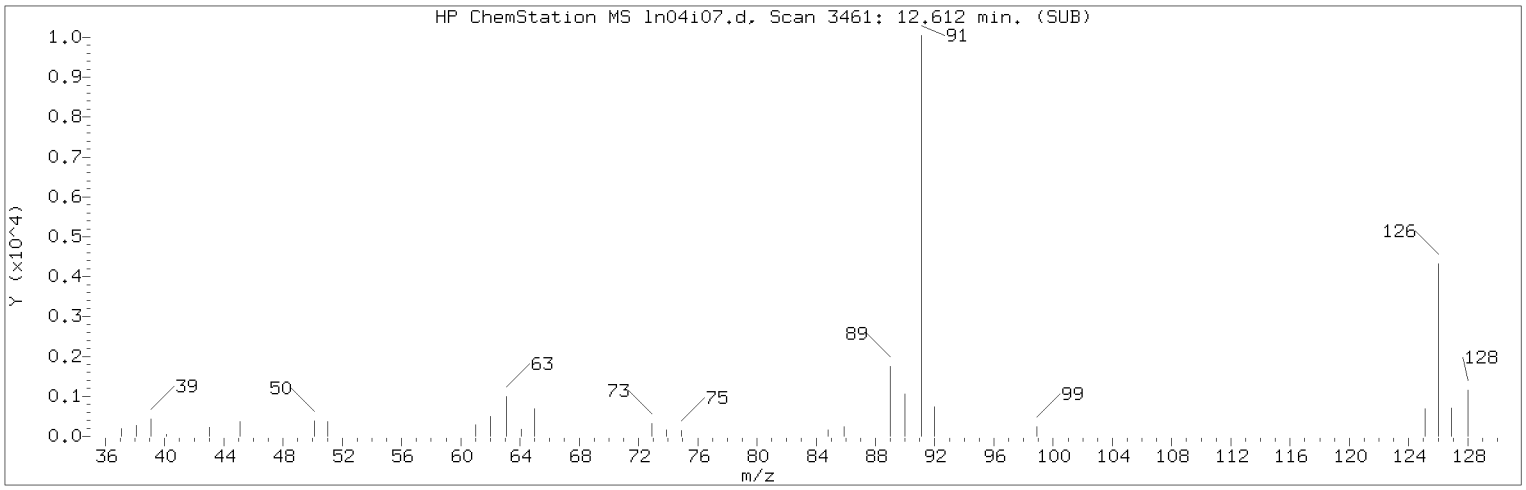
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

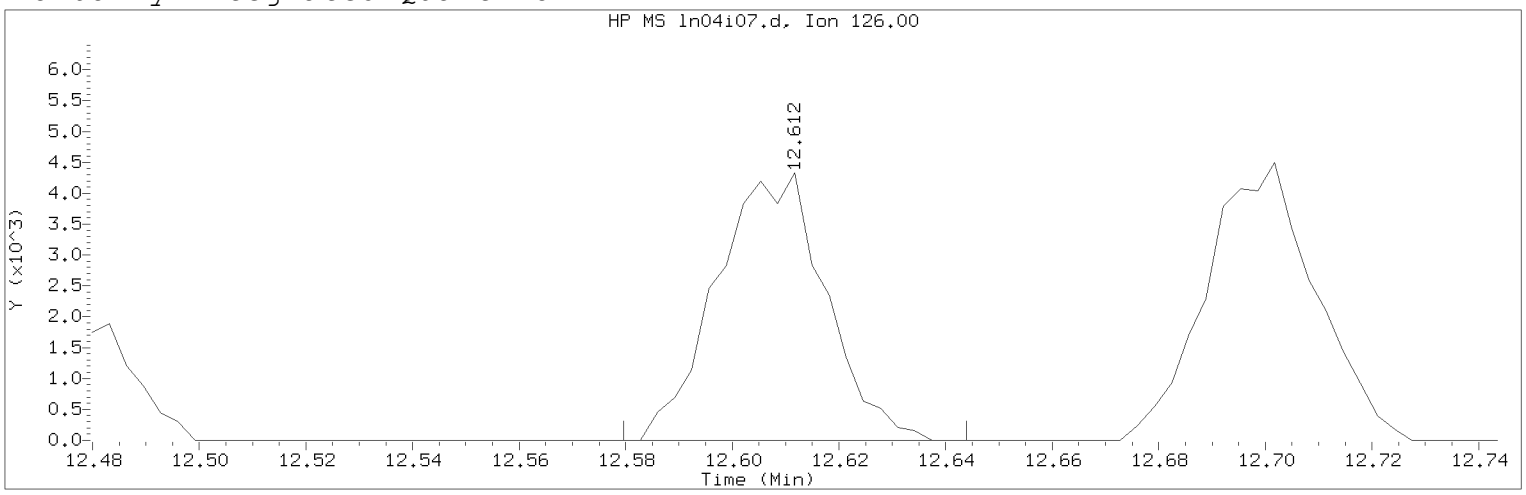
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2262
Retention Time (minutes): 8.757
Quant Ion : 88.00
Area : 3575
On-column Amount (ng) : 43.6406
Integration start scan : 2260 Integration stop scan: 2322
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

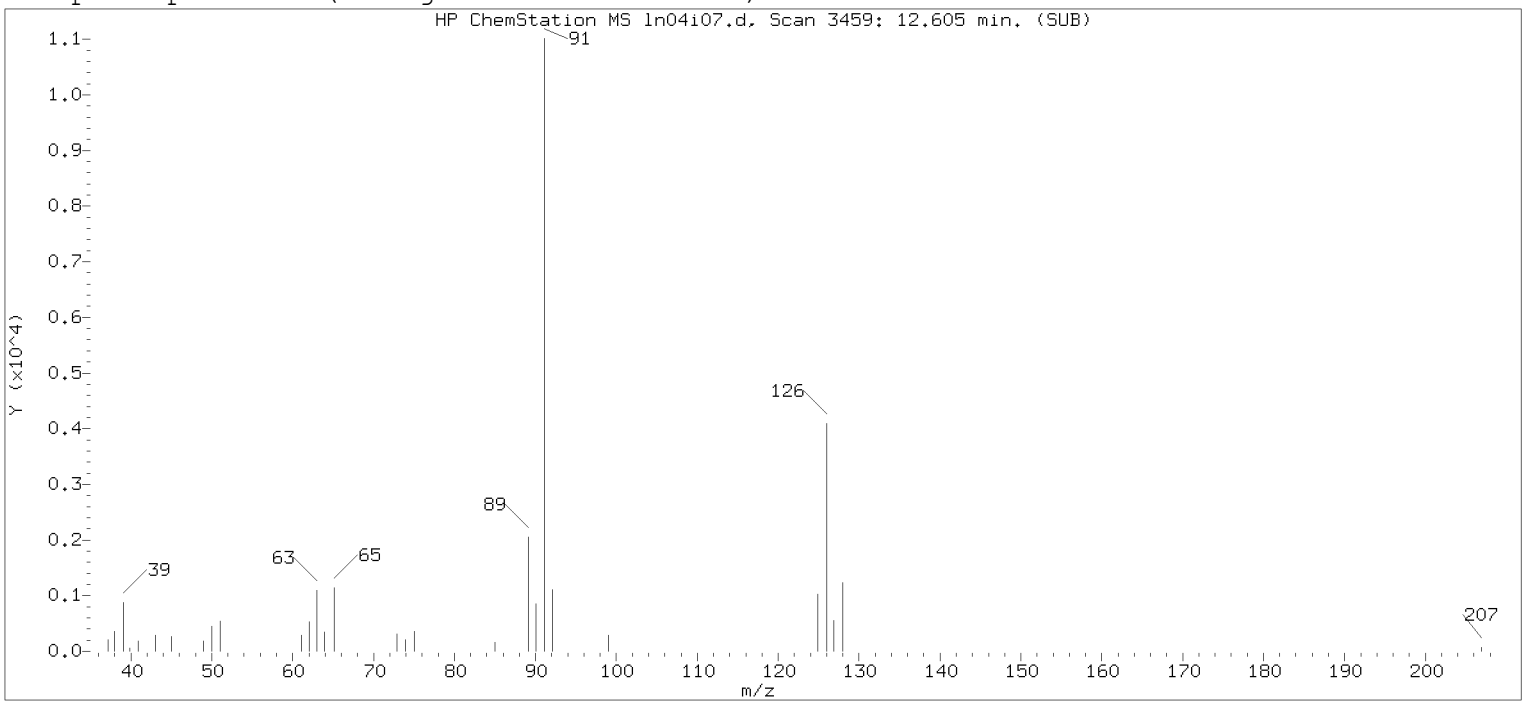
Compound Number : 120
Compound Name : 2-Chlorotoluene
Scan Number : 3461
Retention Time (minutes): 12.612
Quant Ion : 126.00
Area (flag) : 6138M
On-Column Amount (ng) : 0.9294
Integration start scan : 3450 Integration stop scan: 3470
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

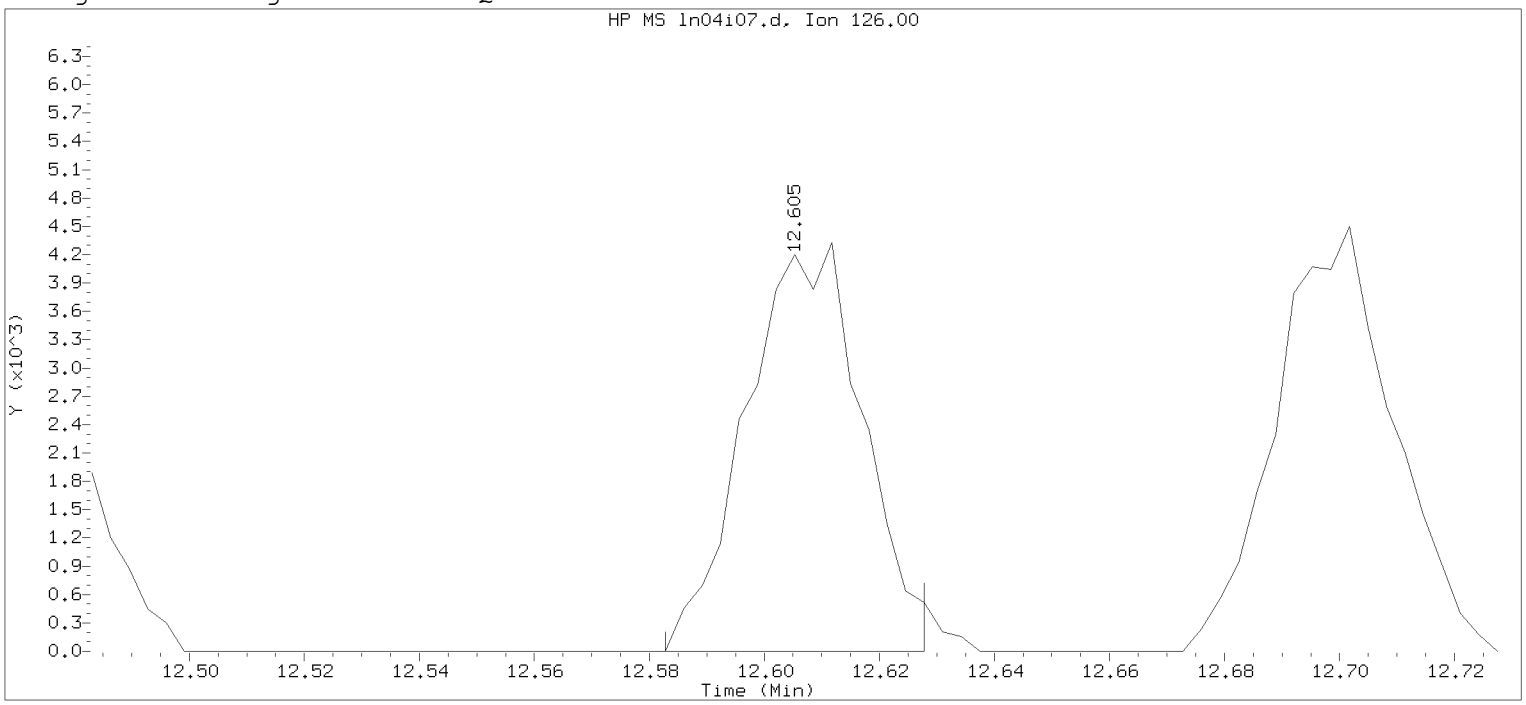
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

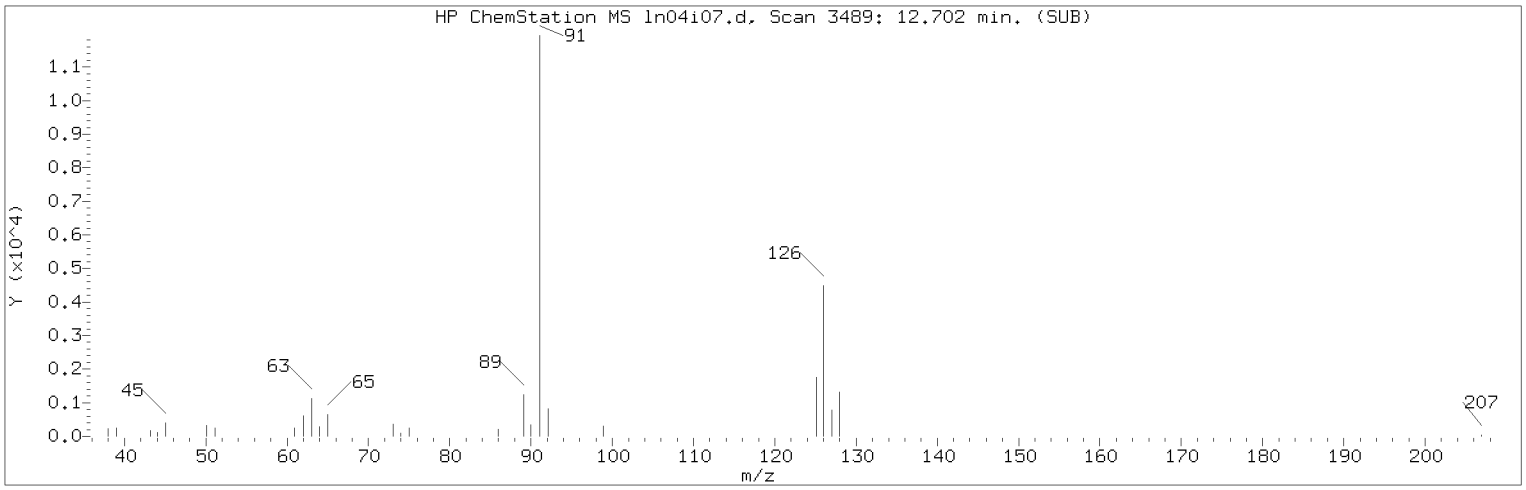
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

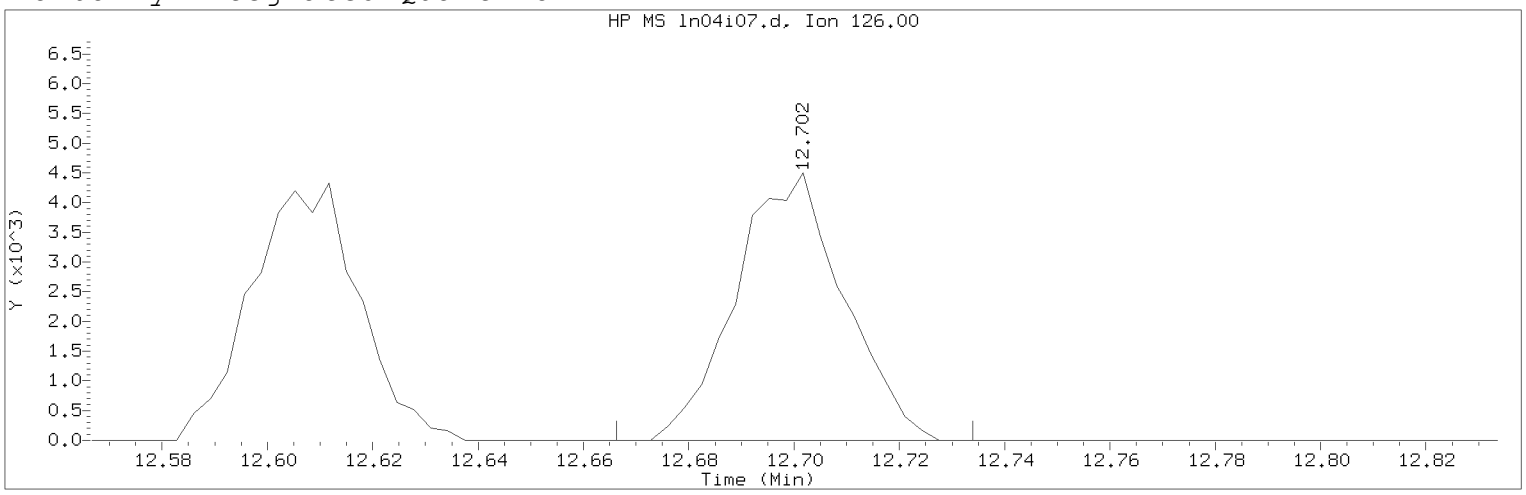
Compound Number : 120
Compound Name : 2-Chlorotoluene
Scan Number : 3459
Retention Time (minutes): 12.605
Quant Ion : 126.00
Area : 6018
On-column Amount (ng) : 0.9136
Integration start scan : 3451 Integration stop scan: 3465
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

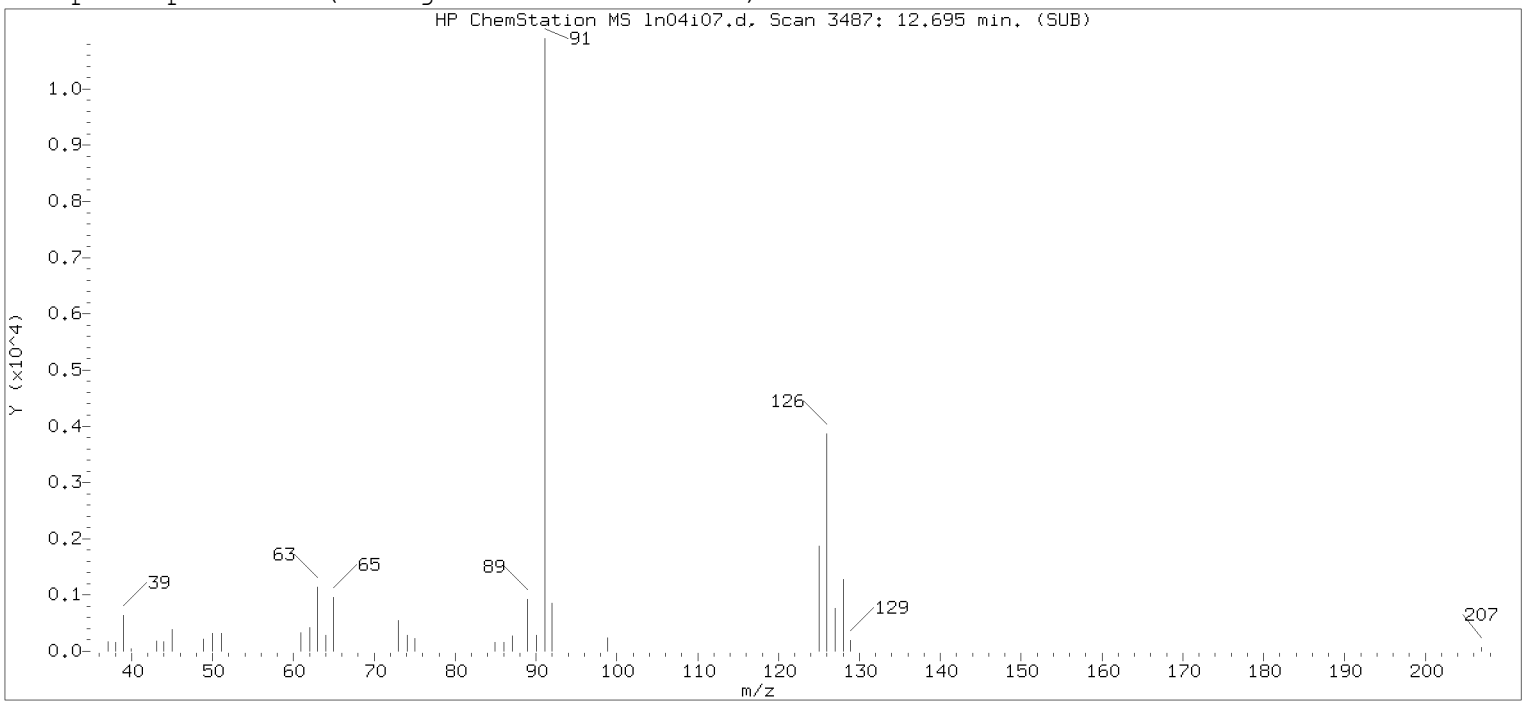
Compound Number : 121
Compound Name : 4-Chlorotoluene
Scan Number : 3489
Retention Time (minutes): 12.702
Quant Ion : 126.00
Area (flag) : 6403M
On-Column Amount (ng) : 0.9314
Integration start scan : 3477 Integration stop scan: 3498
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

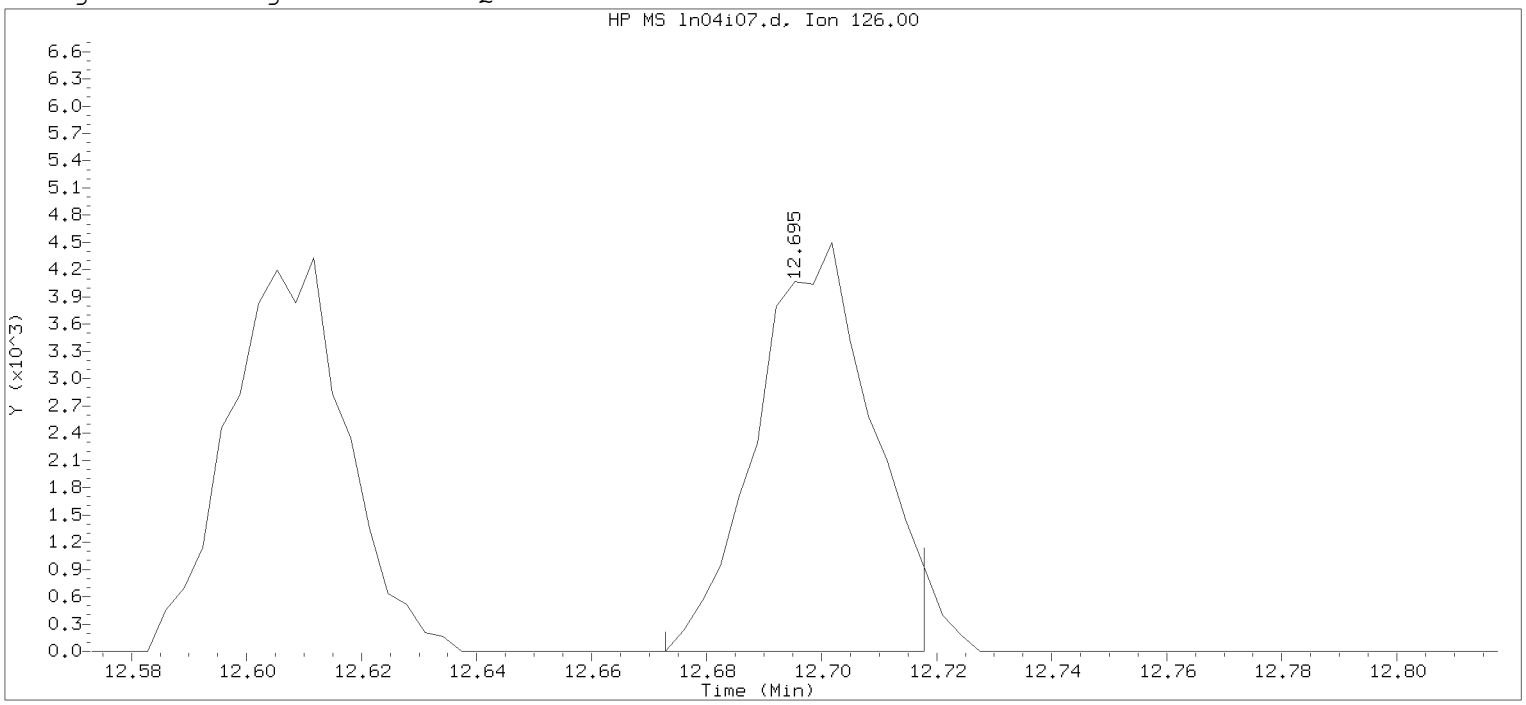
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

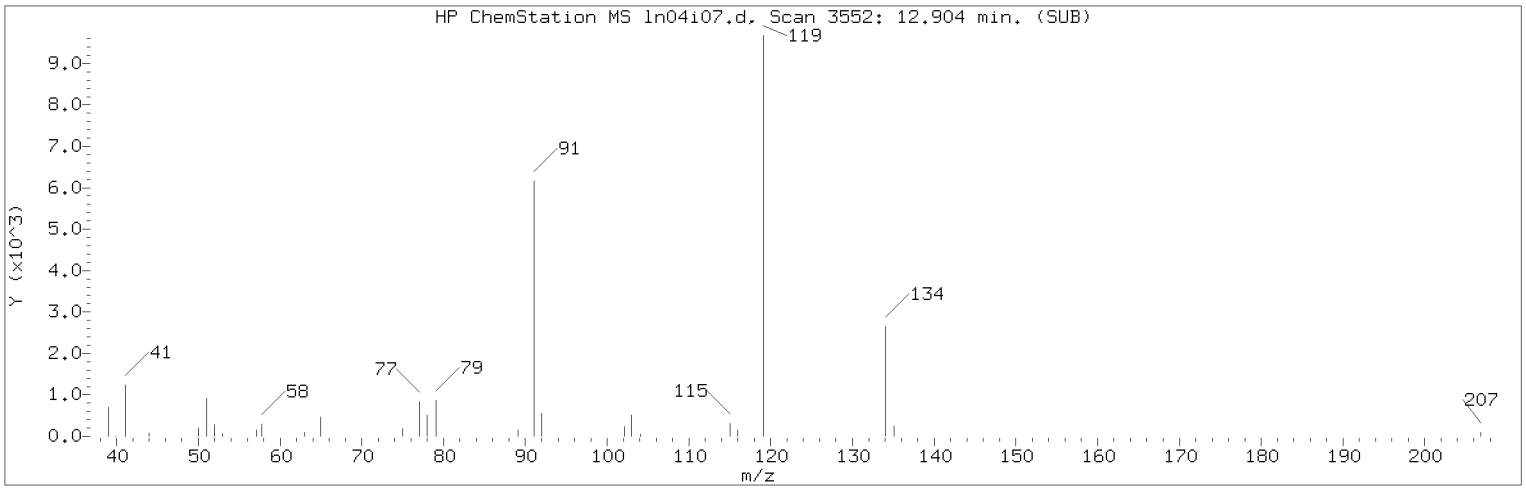
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

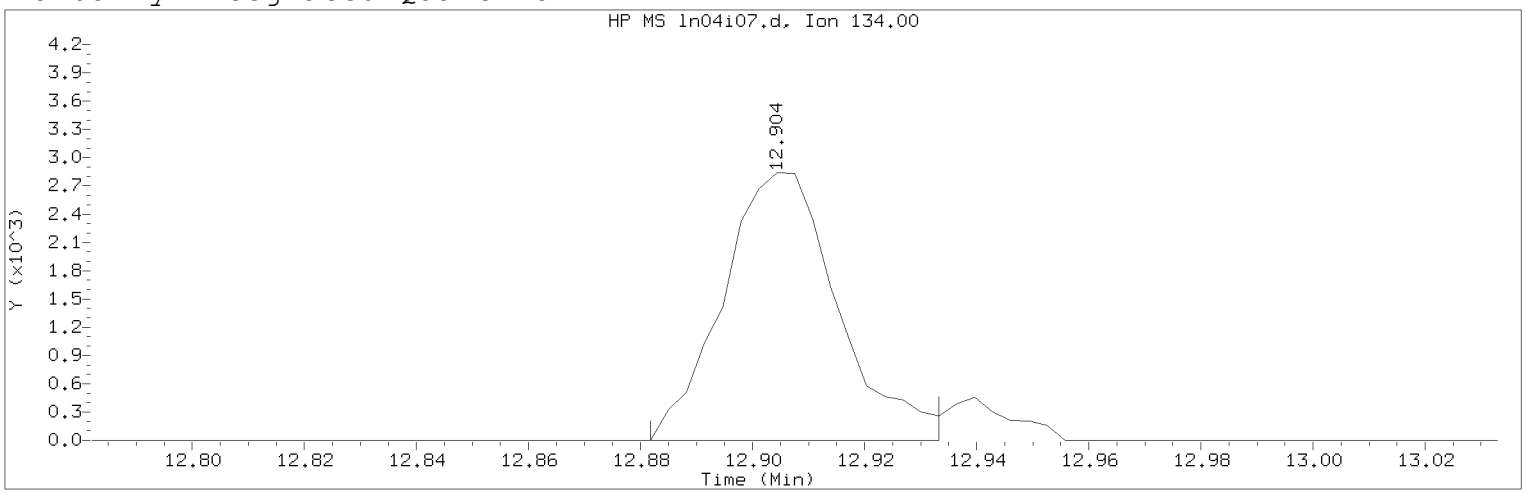
Compound Number : 121
Compound Name : 4-Chlorotoluene
Scan Number : 3487
Retention Time (minutes): 12.695
Quant Ion : 126.00
Area : 6203
On-column Amount (ng) : 0.9062
Integration start scan : 3479 Integration stop scan: 3493
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

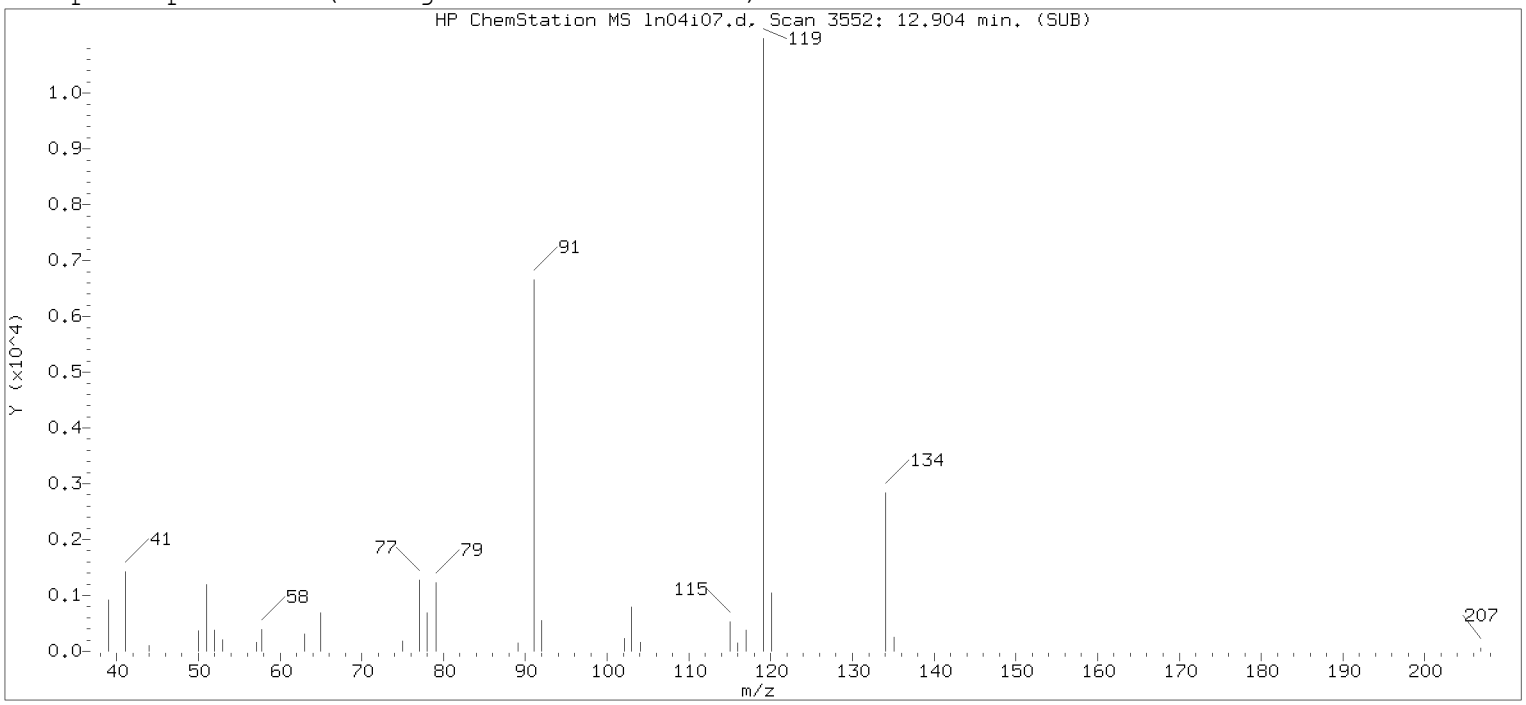
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 4060M
On-Column Amount (ng) : 0.8690
Integration start scan : 3544 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

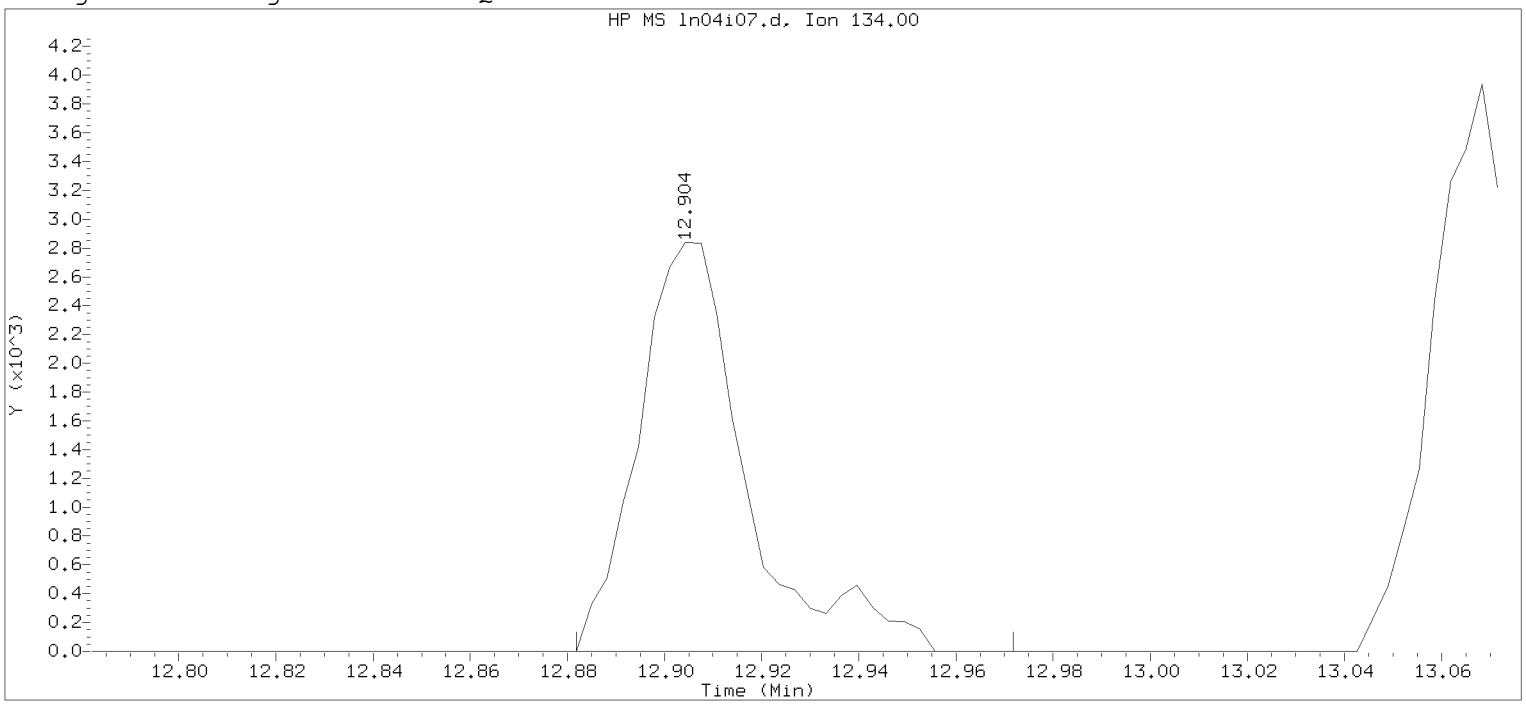
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

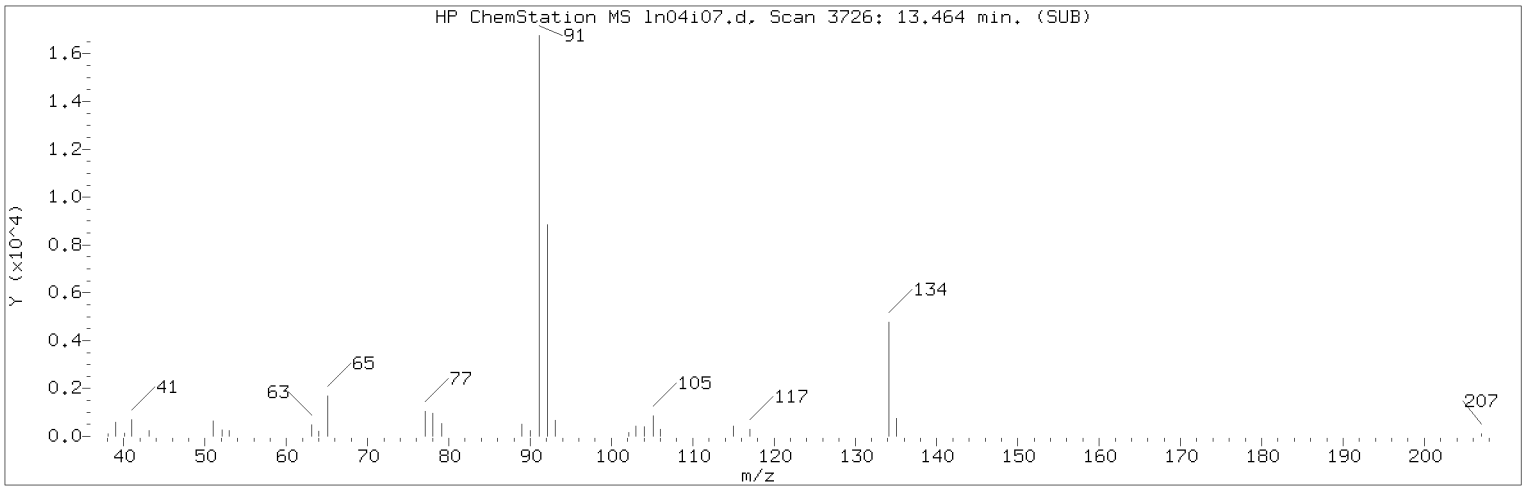
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

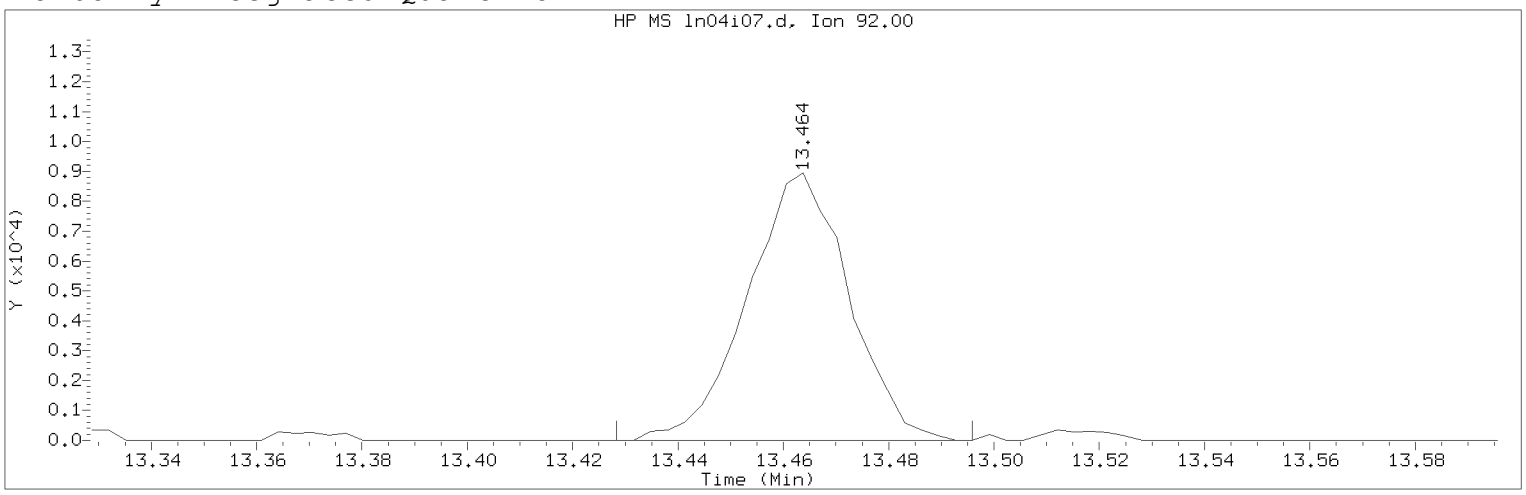
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 4392
On-column Amount (ng) : 0.9024
Integration start scan : 3544 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

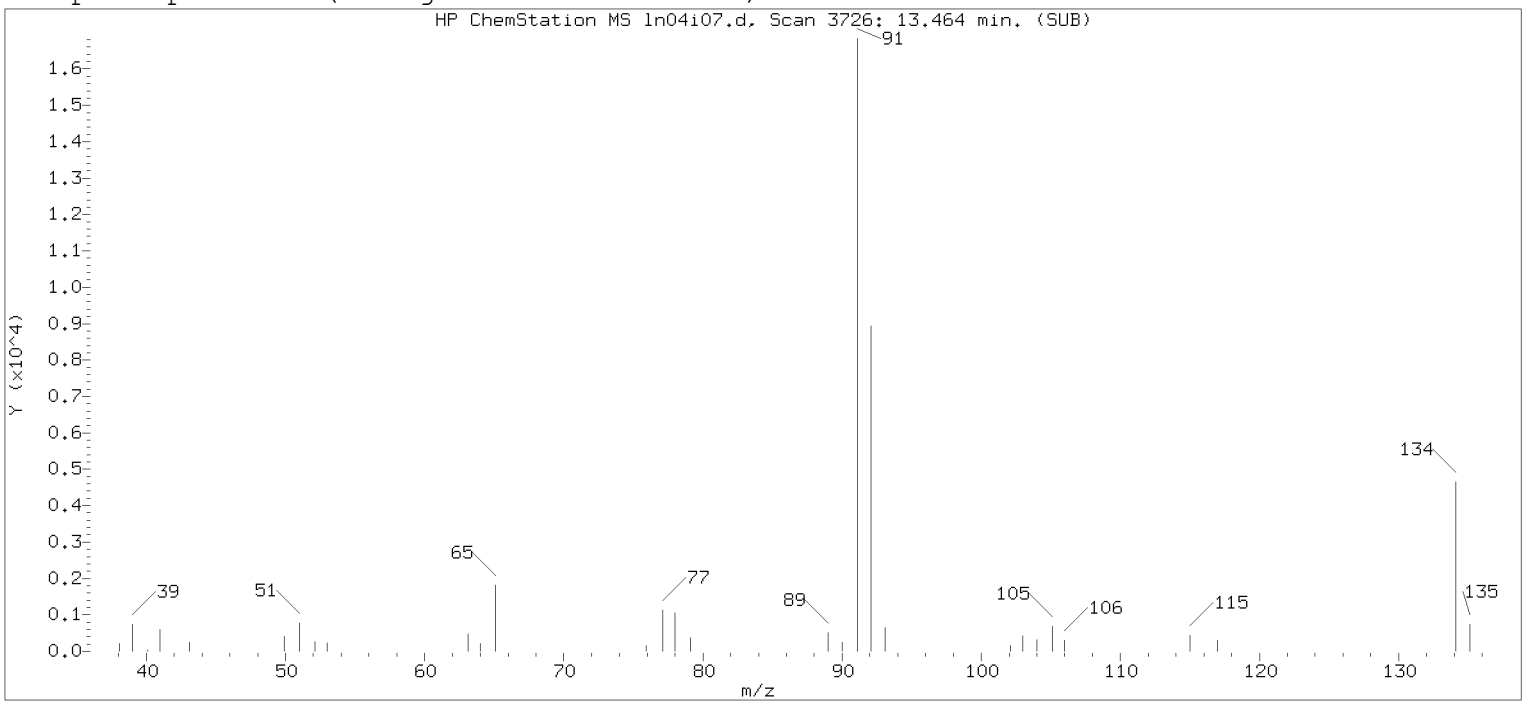
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 3726
Retention Time (minutes): 13.464
Quant Ion : 92.00
Area (flag) : 11964M
On-Column Amount (ng) : 0.9701
Integration start scan : 3714 Integration stop scan: 3735
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

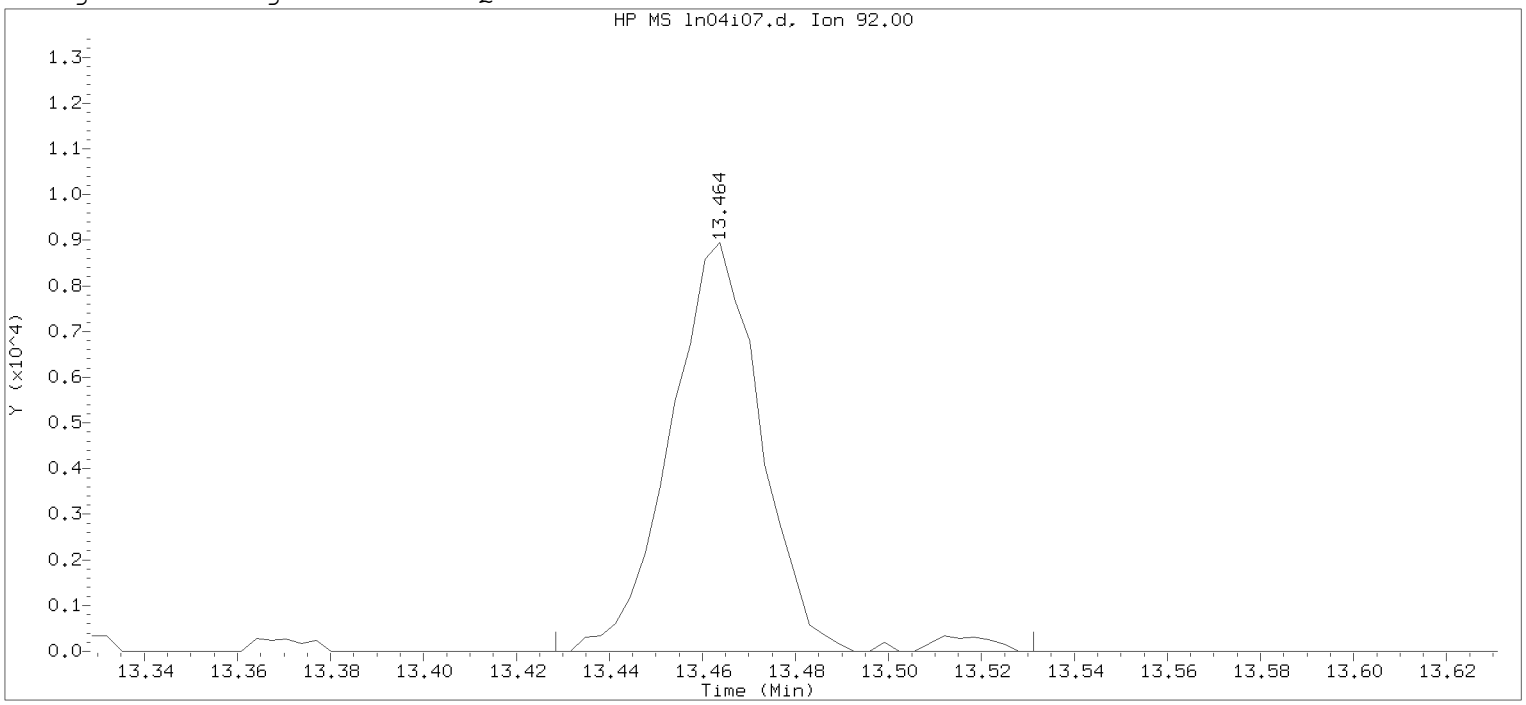
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

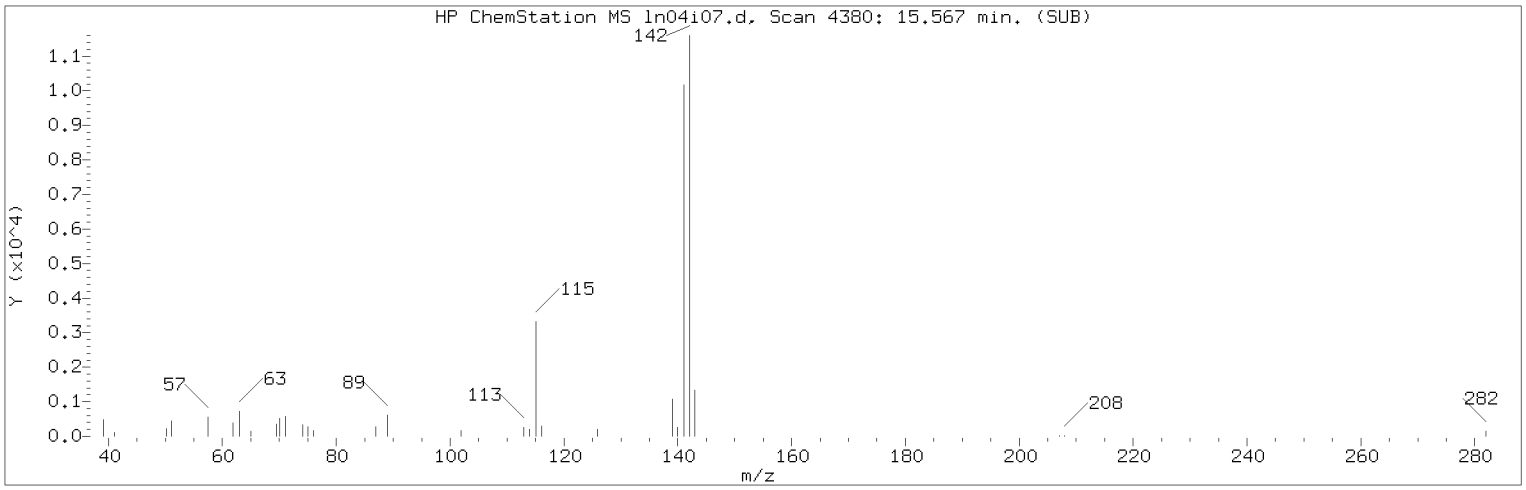
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

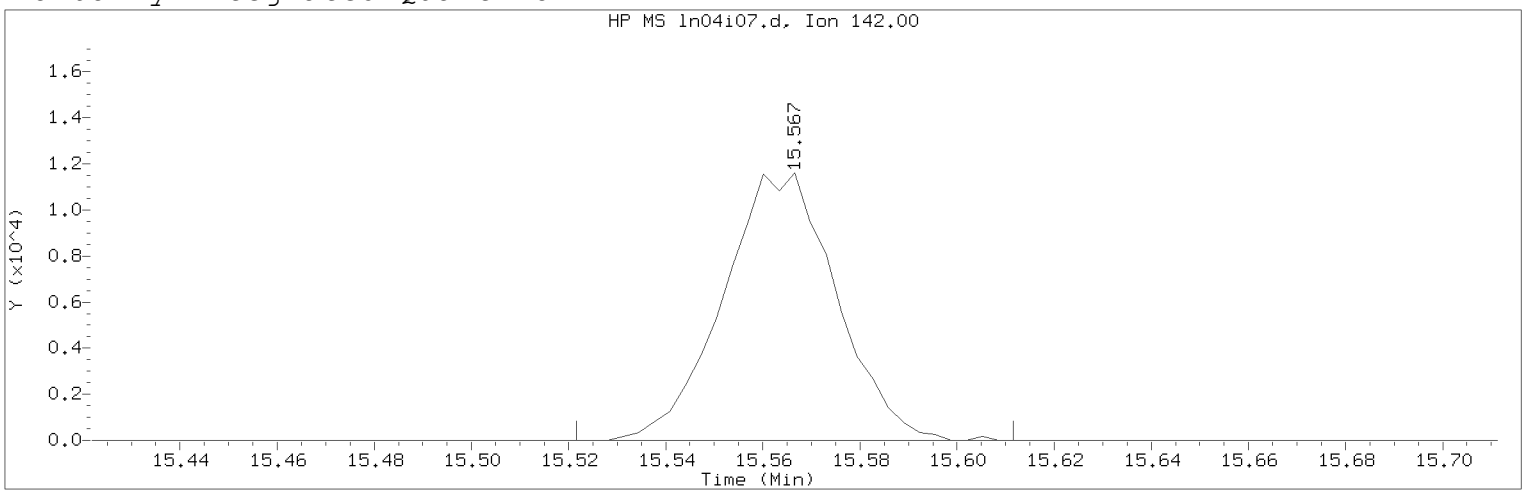
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 3726
Retention Time (minutes): 13.464
Quant Ion : 92.00
Area : 12291
On-column Amount (ng) : 0.9929
Integration start scan : 3714 Integration stop scan: 3746
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

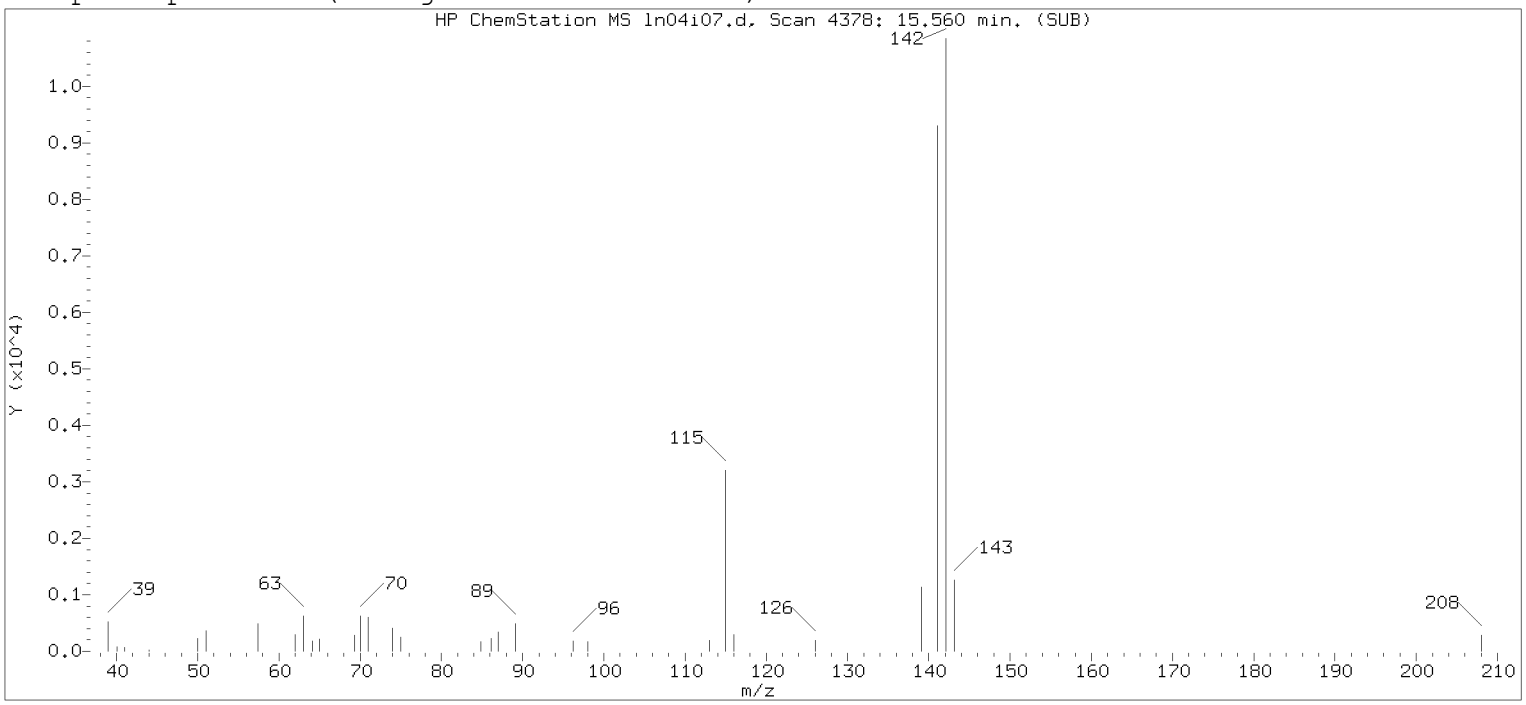
Compound Number : 150
Compound Name : 2-Methylnaphthalene
Scan Number : 4380
Retention Time (minutes): 15.567
Quant Ion : 142.00
Area (flag) : 18783M
On-Column Amount (ng) : 0.9844
Integration start scan : 4365 Integration stop scan: 4393
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

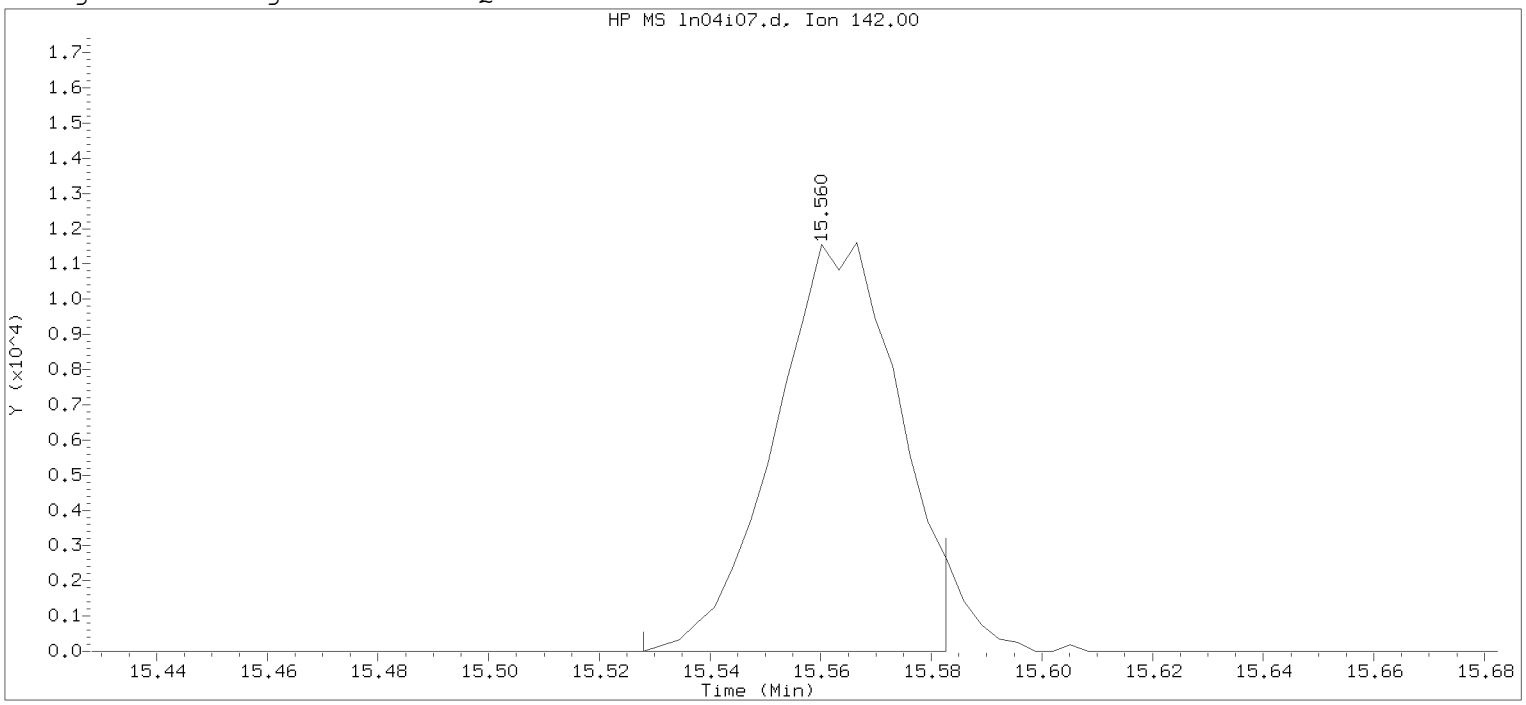
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



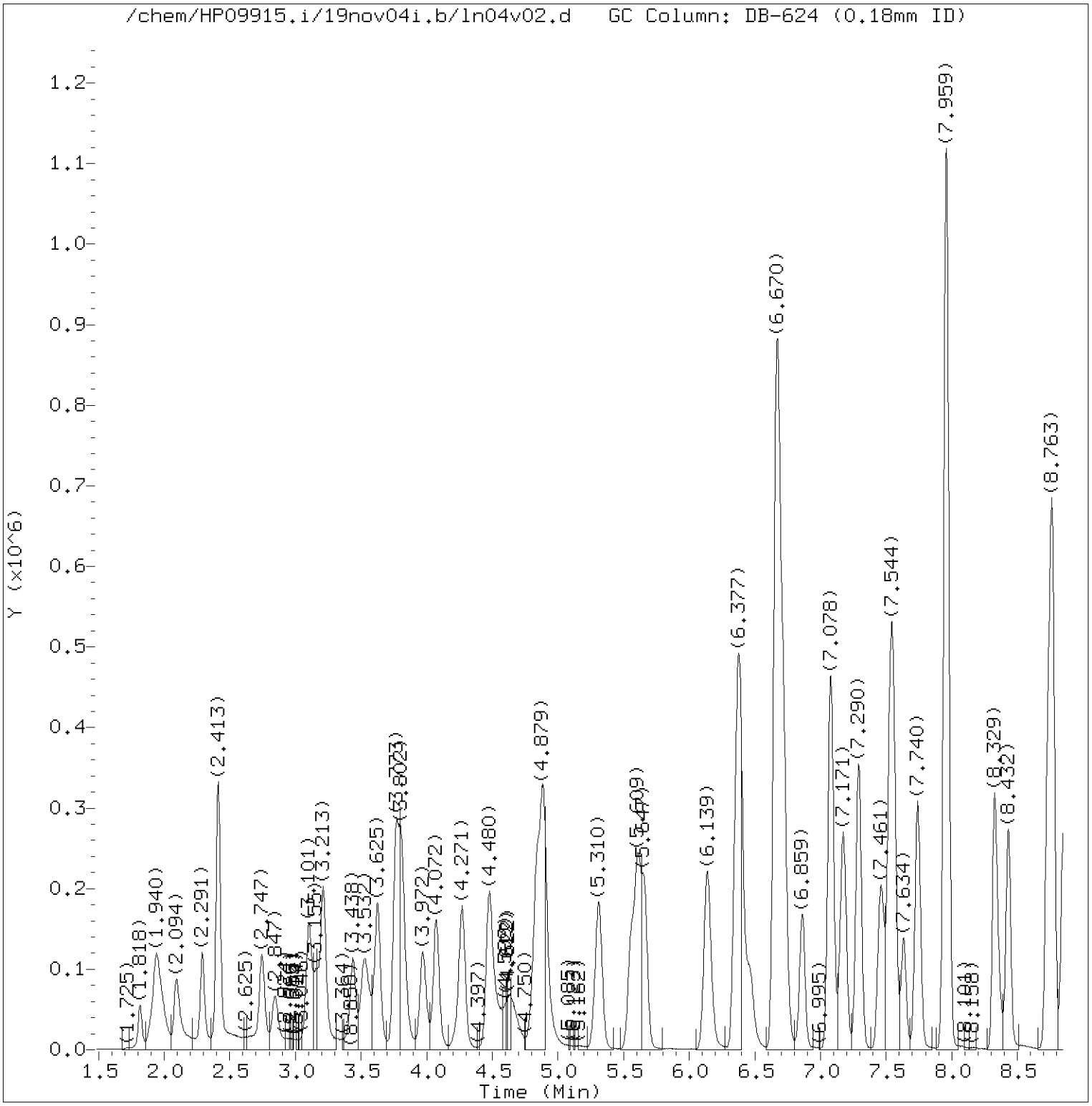
Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 150
Compound Name : 2-Methylnaphthalene
Scan Number : 4378
Retention Time (minutes): 15.560
Quant Ion : 142.00
Area : 17962
On-column Amount (ng) : 0.9472
Integration start scan : 4367 Integration stop scan: 4384
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

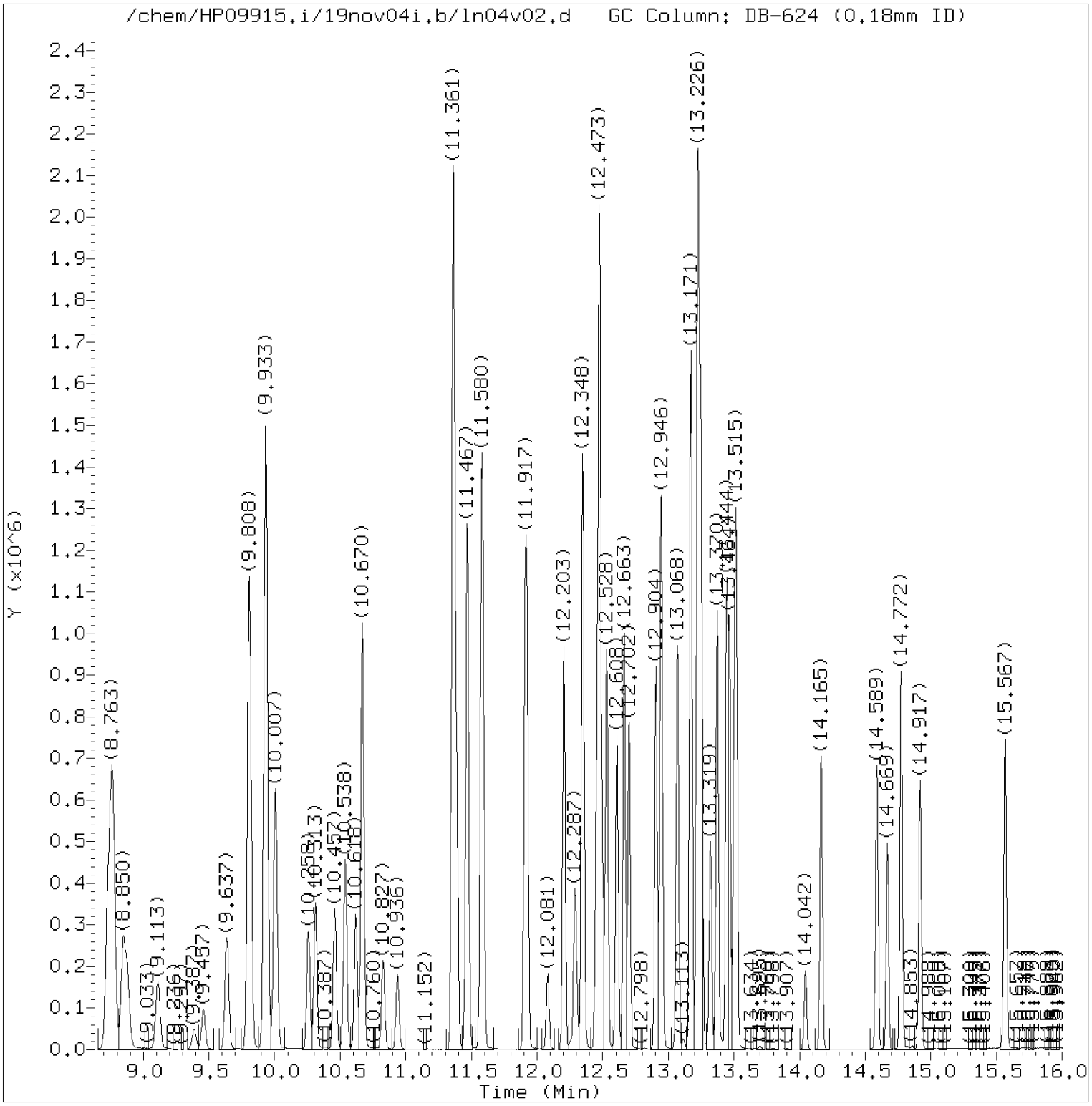
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.094	85	158021M	18.732
4) Chloromethane	(2)	2.291	50	153886	18.927
5) 1,3-Butadiene	(2)	2.413	39	132622M	19.645
6) Vinyl Chloride	(2)	2.413	62	157013	19.349
8) Bromomethane	(2)	2.747	94	104324	17.935
9) Chloroethane	(2)	2.847	64	82467	18.493
10) Dichlorofluoromethane	(2)	3.101	67	174118M	16.224
12) Trichlorofluoromethane	(2)	3.159	101	181238	20.746
11) n-Pentane	(2)	3.213	43	196297	19.014
14) Ethyl ether	(2)	3.438	59	93832	16.622
15) Freon 123a	(2)	3.528	67	136689	19.450
16) Acrolein	(1)	3.625	56	286690	135.125
17) 1,1-Dichloroethene	(2)	3.766	96	107244	20.914
19) Freon 113	(2)	3.795	101	115842	19.801
18) Acetone	(1)	3.805	58	130076	136.752
22) Methyl Iodide	(2)	3.969	142	197263	18.564
21) 2-Propanol	(1)	4.008	45	98510	144.063
23) Carbon Disulfide	(2)	4.075	76	360582	18.660
27) Methyl Acetate	(2)	4.249	43	126109	19.095
25) Allyl Chloride	(2)	4.271	41	171048	18.595
28) Methylene Chloride	(2)	4.474	84	124367	20.377
29)*t-Butyl alcohol-d10	(1)	4.503	65	282794M	250.000
30) t-Butyl alcohol	(1)	4.641	59	227283	190.899
31) Acrylonitrile	(2)	4.834	53	337483	94.980
32) trans-1,2-Dichloroethene	(2)	4.888	96	118658	20.003
33) Methyl Tertiary Butyl Ether	(2)	4.892	73	367523	18.875
34) n-Hexane	(2)	5.310	57	185206M	20.067
36) 1,1-Dichloroethane	(2)	5.554	63	201428	19.465
38) di-Isopropyl ether	(2)	5.609	45	380712	19.075
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	177031	19.067
40) Ethyl t-butyl ether	(2)	6.139	59	369375	19.070
43) 1,2-Dichloroethene (Total)	(2)		96	258427	40.995
44) 2-Butanone	(2)	6.361	43	651073	142.743
42) cis-1,2-Dichloroethene	(2)	6.384	96	139769	20.992
45) 2,2-Dichloropropane	(2)	6.396	77	163413	20.314
47) Propionitrile	(1)	6.461	54	209265	141.065
48) Methacrylonitrile	(2)	6.670	67	556962	145.312
49) Bromochloromethane	(2)	6.712	128	66215	18.755

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.721	71	123960	92.508
51) Chloroform	(2)	6.866	83	199497	20.156
52)$Dibromofluoromethane	(2)	7.075	113	293558	49.637
53) 1,1,1-Trichloroethane	(2)	7.081	97	172182	20.382
54) Cyclohexane	(2)	7.171	56	214913	19.025
56) Carbon Tetrachloride	(2)	7.287	117	143405	20.016
55) 1,1-Dichloropropene	(2)	7.294	75	164177	20.065
58) Isobutyl Alcohol	(1)	7.461	41	180862	451.413
57)$1,2-Dichloroethane-d4	(2)	7.531	102	74610	49.500
60) Benzene	(2)	7.560	78	492012	19.996
61) 1,2-Dichloroethane	(2)	7.638	62	163231	20.625
65) t-Amyl methyl ether	(2)	7.740	73	369180	18.989
67) n-Heptane	(2)	7.956	43	163362M	18.948
66)*Fluorobenzene	(2)	7.959	96	1209671	50.000
69) n-Butanol	(1)	8.326	56	314470M	911.924
71) Trichloroethene	(2)	8.429	95	124893	20.159
72) Methylcyclohexane	(2)	8.731	83	222042	19.318
73) 1,2-Dichloropropane	(2)	8.769	63	127774	20.450
76) Methyl Methacrylate	(2)	8.847	69	115569	19.128
75) 1,4-Dioxane	(1)	8.853	88	47747M	503.753
74) Dibromomethane	(2)	8.879	93	80909	20.014
78) Bromodichloromethane	(2)	9.113	83	144408	19.907
79) 2-Nitropropane	(2)	9.383	41	35869	16.324
80) 2-Chloroethyl Vinyl Ether	(2)	9.457	63	51088	19.038
81) cis-1,3-Dichloropropene	(2)	9.637	75	191486	19.874
82) 4-Methyl-2-pentanone	(2)	9.808	43	893533	92.810
83)$Toluene-d8	(3)	9.933	98	1243931	50.214
88) Toluene	(3)	10.007	92	314091	20.224
90) 1,3-Dichloropropene (total)	(3)		100	360855	39.085
89) trans-1,3-Dichloropropene	(3)	10.258	75	169369	19.211
91) Ethyl Methacrylate	(3)	10.313	69	194593	18.162
92) 1,1,2-Trichloroethane	(3)	10.457	97	120085	20.394
93) Tetrachloroethene	(3)	10.538	166	145489	22.119
94) 1,3-Dichloropropane	(3)	10.618	76	197817	19.676
96) 2-Hexanone	(3)	10.670	43	659041	92.150
97) Dibromochloromethane	(3)	10.827	129	119169	19.757
99) 1,2-Dibromoethane	(3)	10.936	107	127100	19.878
100)*Chlorobenzene-d5	(3)	11.361	117	946755	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) 1-Chlorohexane	(3)	11.364	91	162531	19.480
102) Chlorobenzene	(3)	11.387	112	355167	20.223
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	114709	19.823
104) Ethylbenzene	(3)	11.470	91	602093	20.283
106) m+p-Xylene	(3)	11.583	106	478306	40.959
108) Xylene (Total)	(3)		106	712690	61.279
107) o-Xylene	(3)	11.908	106	234384	20.320
109) Styrene	(3)	11.924	104	391950	20.563
110) Bromoform	(3)	12.081	173	80910	17.952
111) Isopropylbenzene	(3)	12.203	105	603598	20.864
112) Cyclohexanone	(1)	12.287	55	166810	449.364
114)$4-Bromofluorobenzene	(3)	12.348	95	469009	49.999
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	188446M	19.576
115) Bromobenzene	(4)	12.467	156	151805	19.821
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	290498	97.834
117) 1,2,3-Trichloropropane	(4)	12.496	110	58902M	19.940
119) n-Propylbenzene	(4)	12.531	91	694916	20.768
120) 2-Chlorotoluene	(4)	12.608	126	143440	20.178
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	499772	20.552
121) 4-Chlorotoluene	(4)	12.702	126	148830	20.114
124) tert-Butylbenzene	(4)	12.907	134	103762M	20.632
125) Pentachloroethane	(4)	12.943	167	74538	17.213
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	511834	19.971
127) sec-Butylbenzene	(4)	13.068	105	616554	20.545
129) 1,3-Dichlorobenzene	(4)	13.168	146	282424	20.067
130) p-Isopropyltoluene	(4)	13.174	119	533278	20.541
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	509597	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	298831	20.482
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	539562	19.874
135) Benzyl Chloride	(4)	13.319	91	329267	16.019
136) 1,3-Diethylbenzene	(4)	13.374	119	322622	19.095
141) Diethylbenzene (total)	(4)		100	935720	57.258
137) 1,4-Diethylbenzene	(4)	13.444	119	340230	19.006
139) n-Butylbenzene	(4)	13.464	92	258920	19.505
138) 1,2-Dichlorobenzene	(4)	13.502	146	282807	20.364
140) 1,2-Diethylbenzene	(4)	13.518	119	272868	19.158
142) 1,2-Dibromo-3-chloropropane	(4)	14.042	75	40654	19.292
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	203102	19.035

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

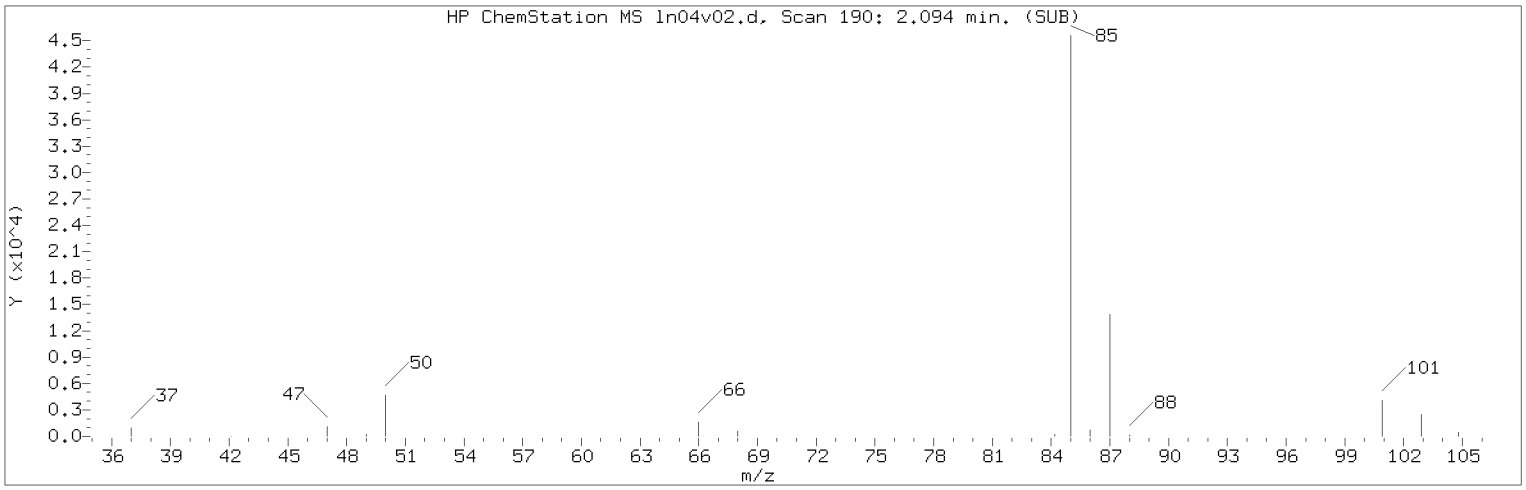
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

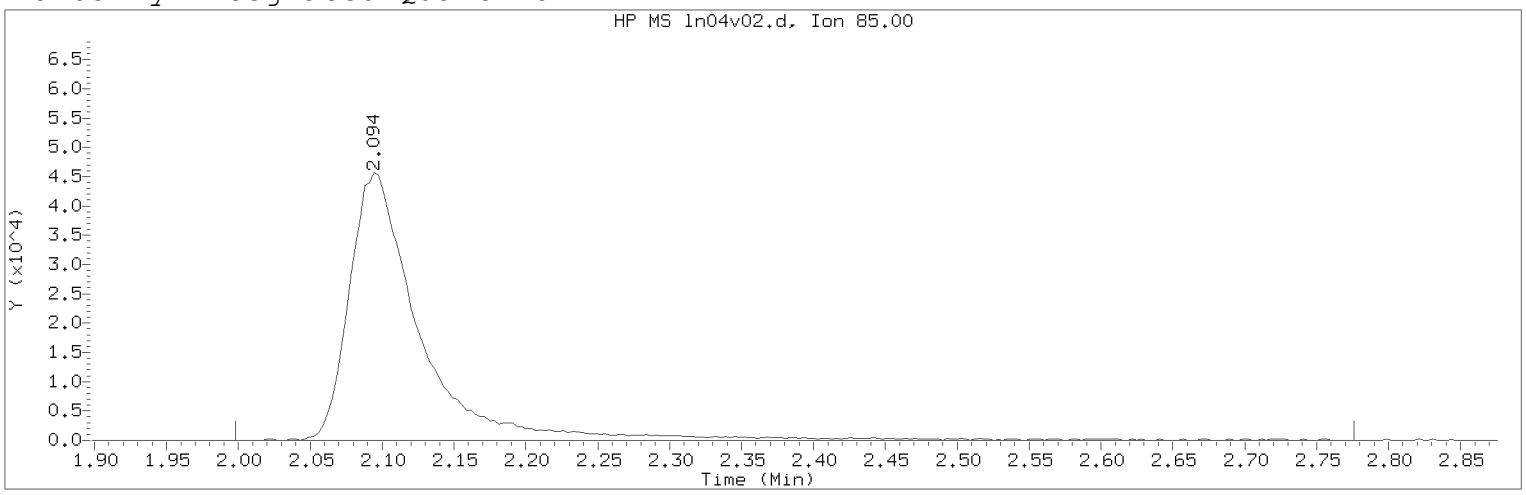
	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146)	1,2,4-Trichlorobenzene	(4)	14.589	180	199046	19.186
147)	Hexachlorobutadiene	(4)	14.666	225	82991	16.942
148)	Naphthalene	(4)	14.772	128	666056	19.970
149)	1,2,3-Trichlorobenzene	(4)	14.917	180	192487	19.067
150)	2-Methylnaphthalene	(4)	15.567	142	374385	18.228

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

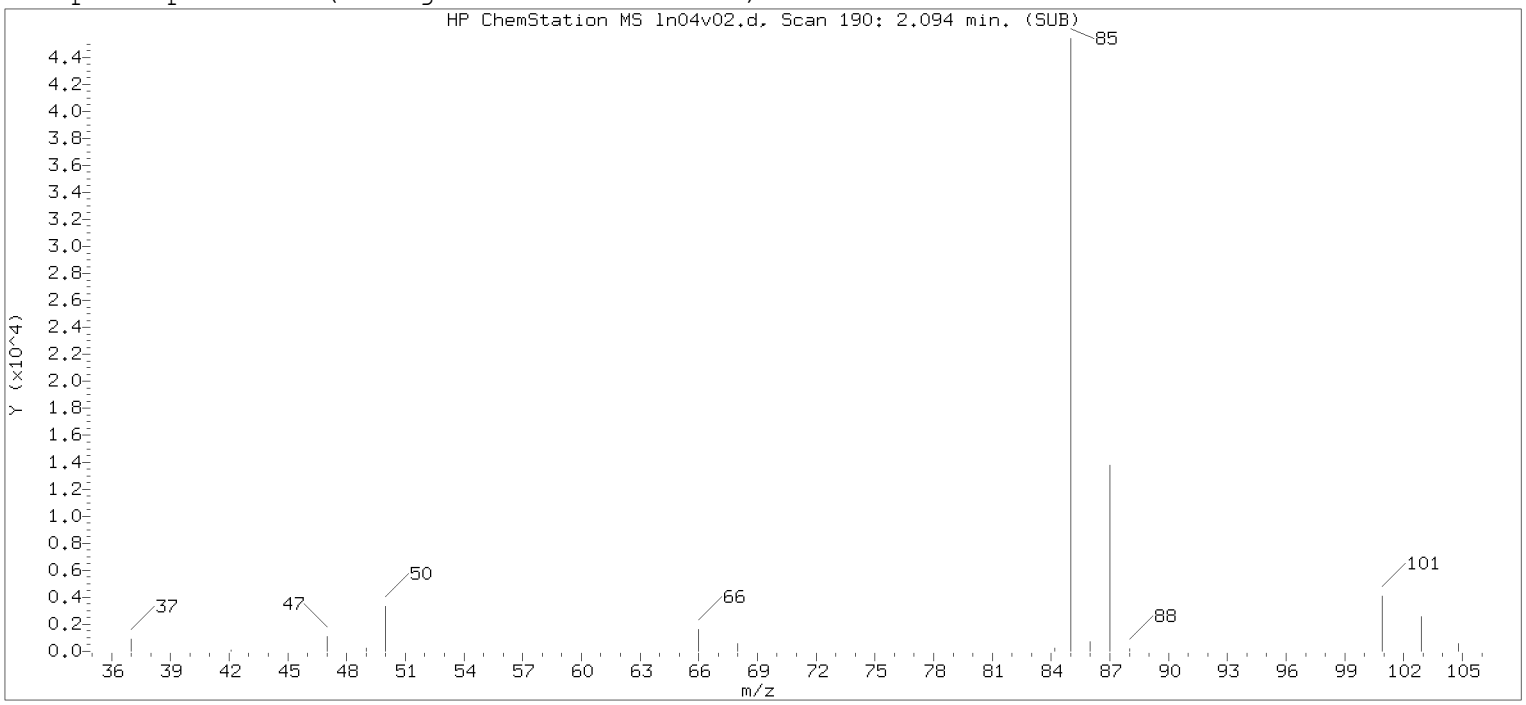
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area (flag) : 158021M
On-Column Amount (ng) : 18.7320
Integration start scan : 159 Integration stop scan: 401
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

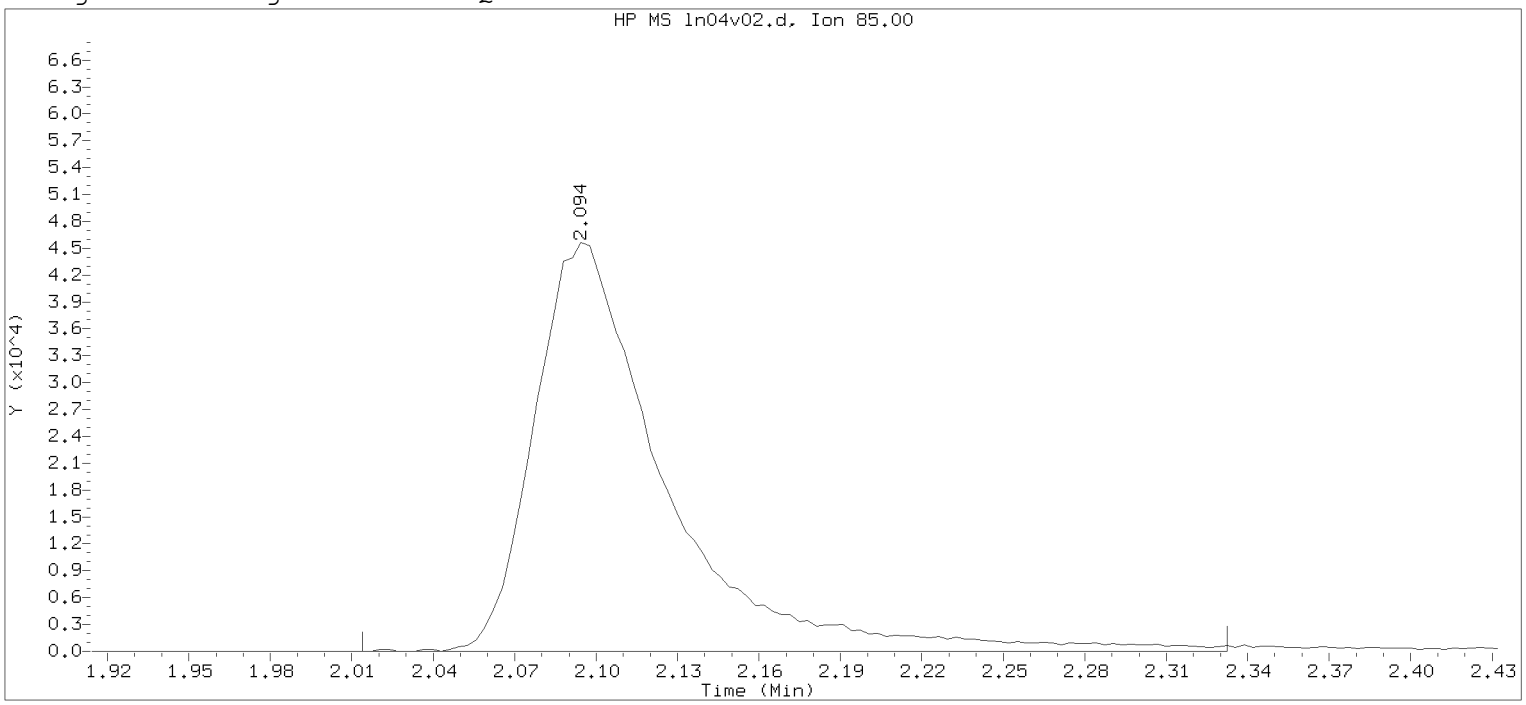
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

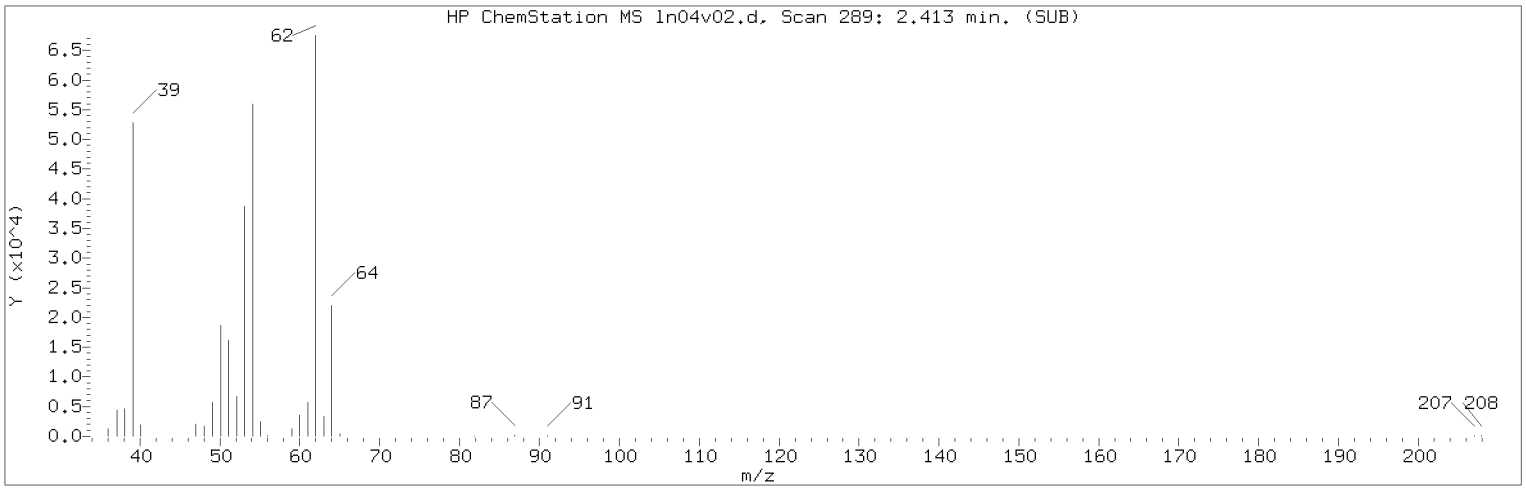
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

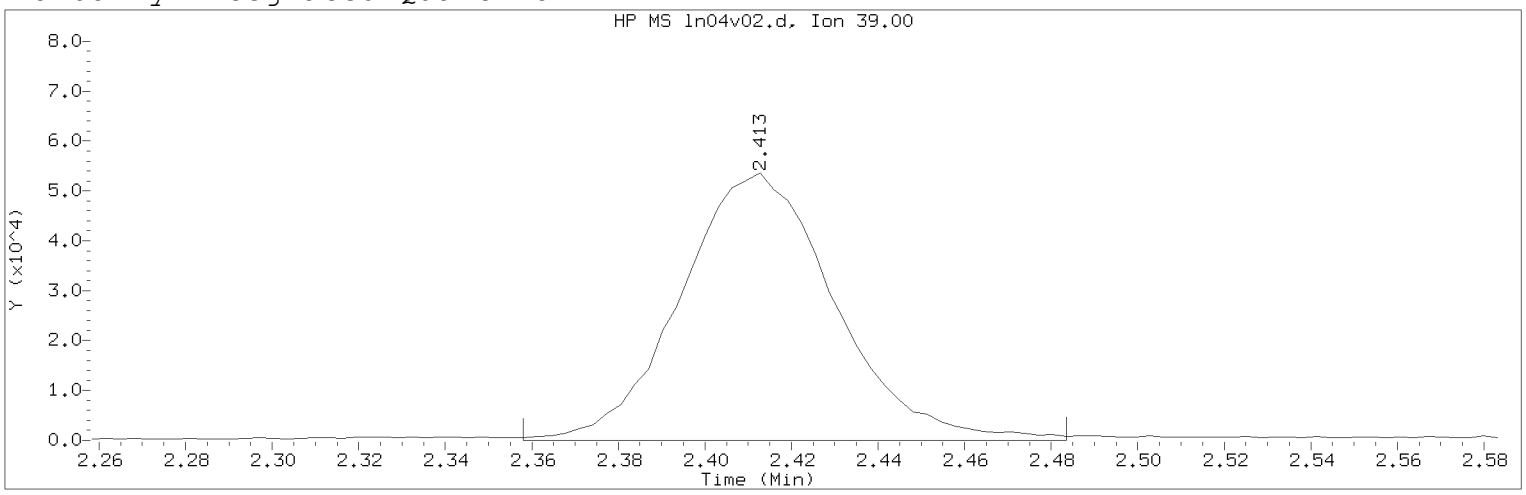
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area : 152845
On-column Amount (ng) : 18.1184
Integration start scan : 164 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

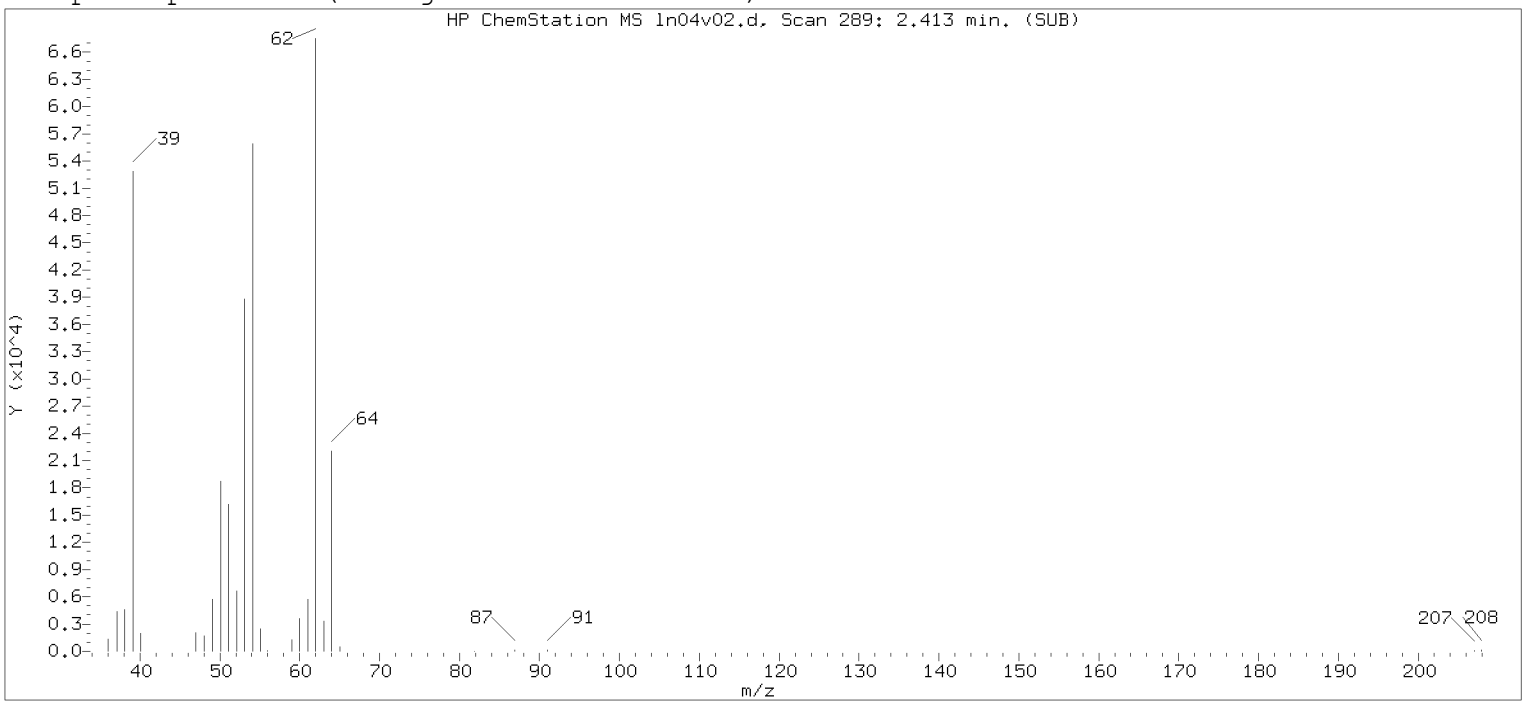
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area (flag) : 132622M
On-Column Amount (ng) : 19.6453
Integration start scan : 271 Integration stop scan: 310
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

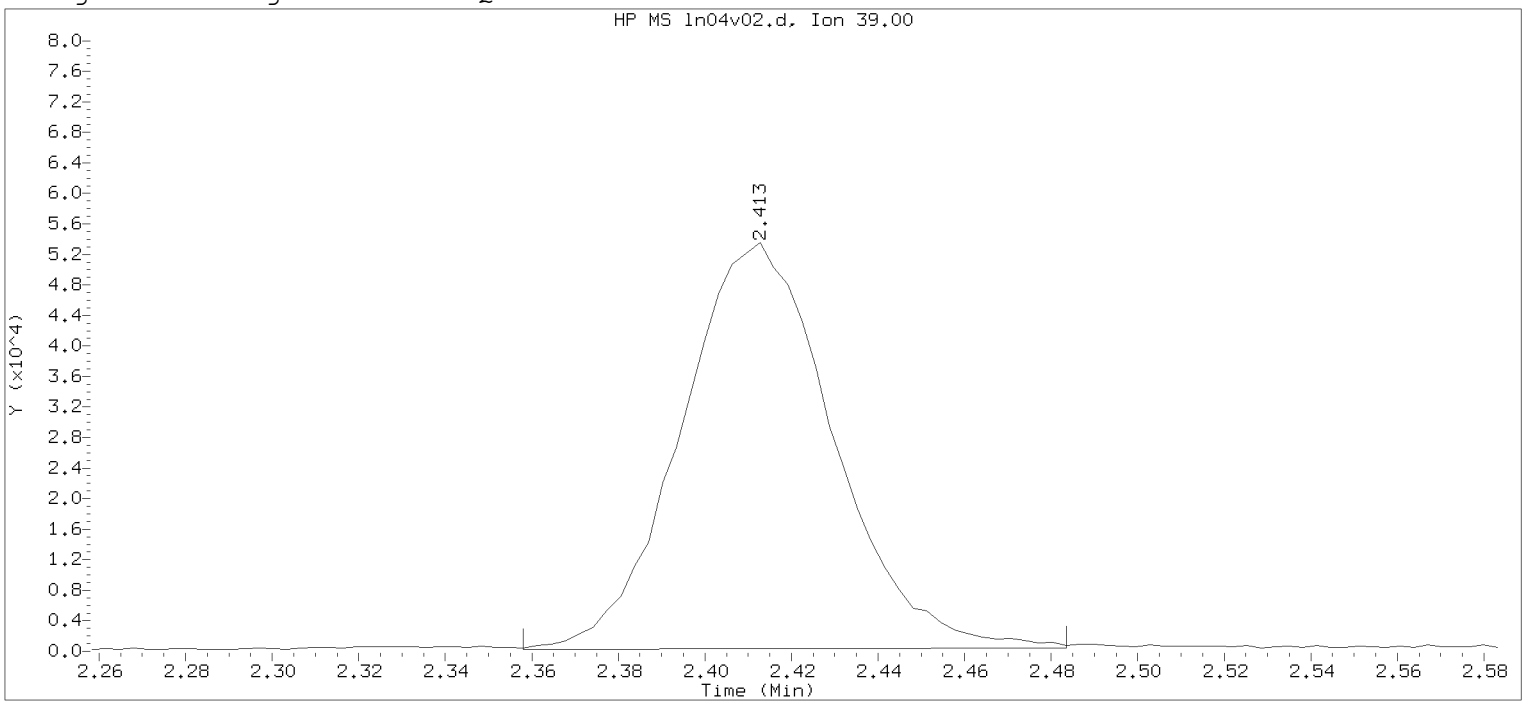
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

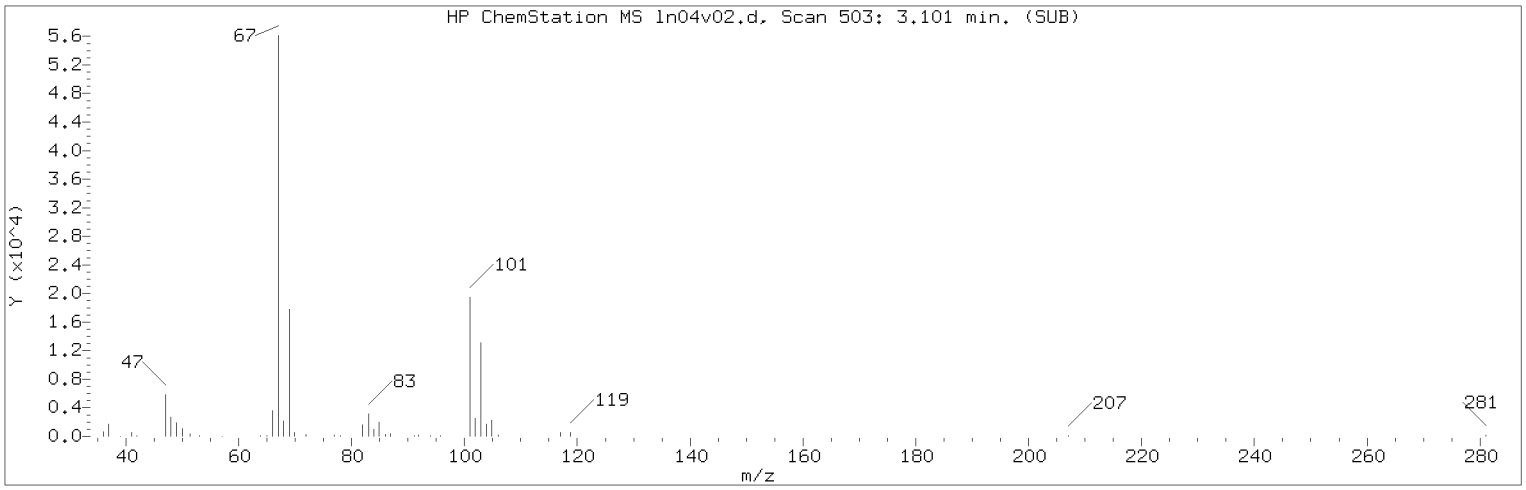
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

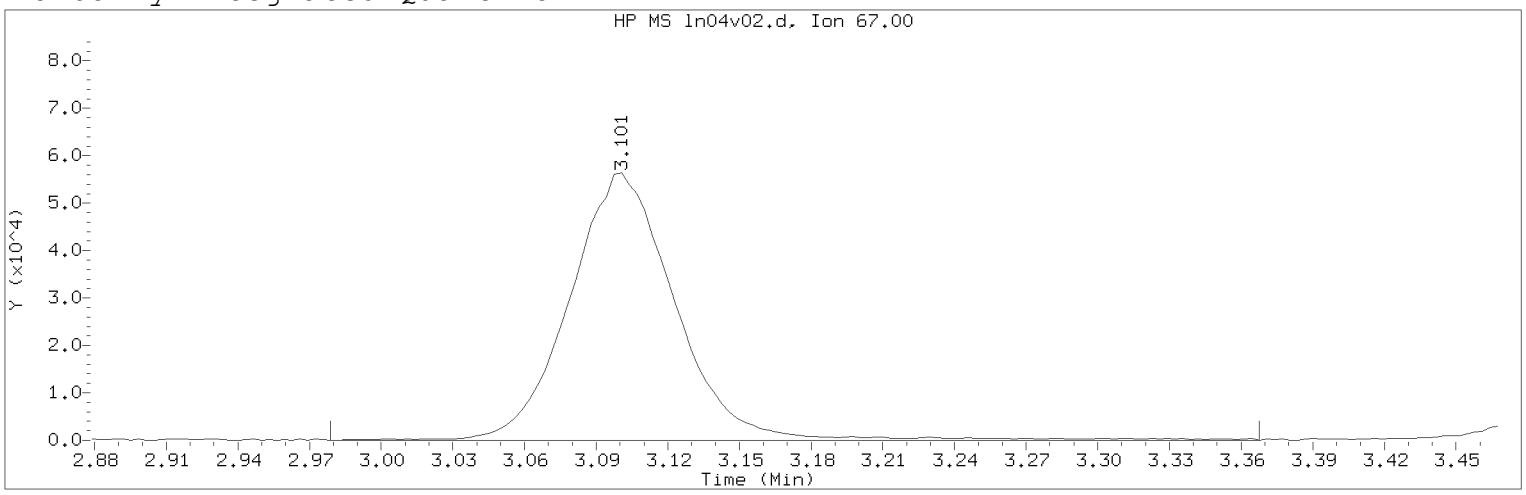
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area : 129885
On-column Amount (ng) : 19.2400
Integration start scan : 271 Integration stop scan: 310
Y at integration start : 283 Y at integration end: 414

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

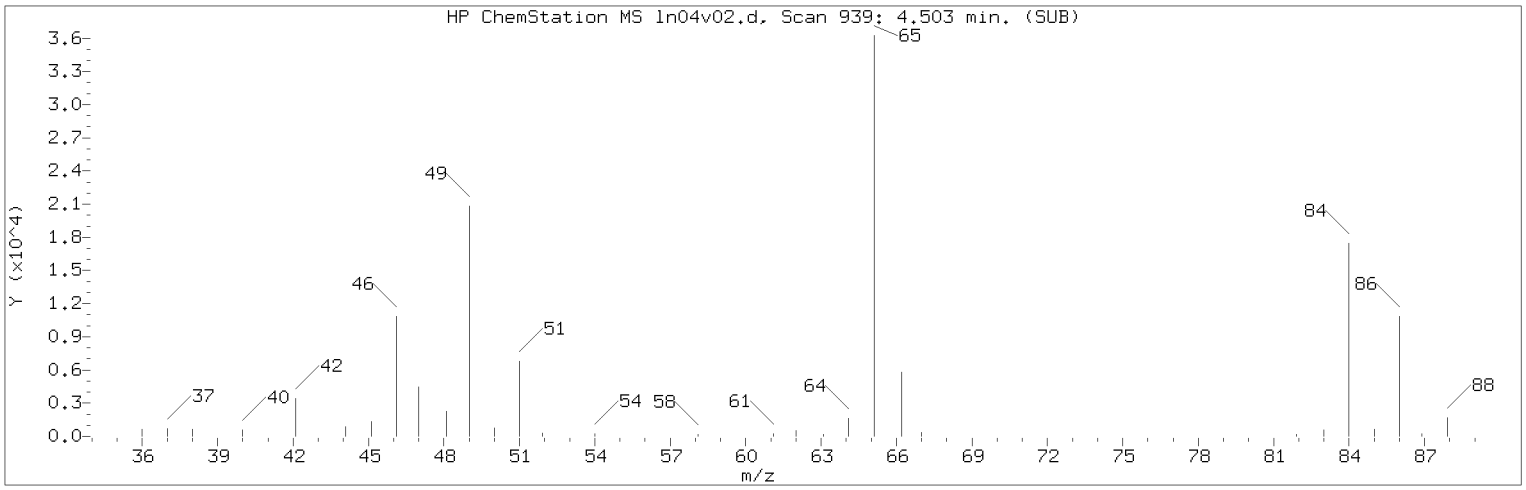
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 503
Retention Time (minutes): 3.101
Quant Ion : 67.00
Area (flag) : 174118M
On-Column Amount (ng) : 16.2240
Integration start scan : 464 Integration stop scan: 585
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

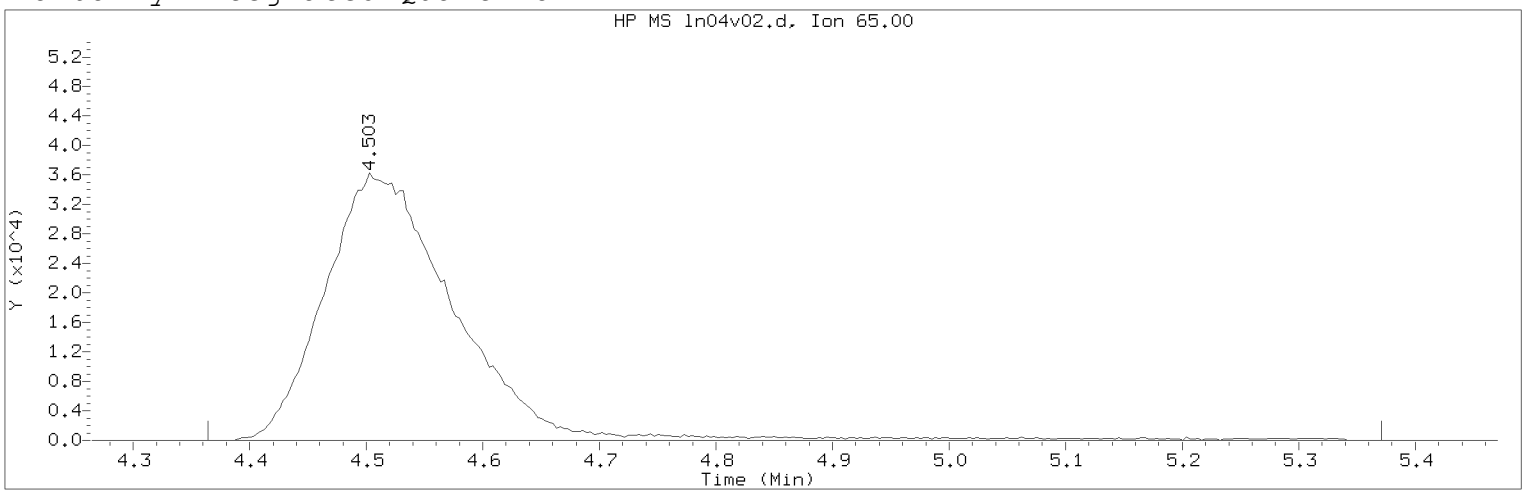
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

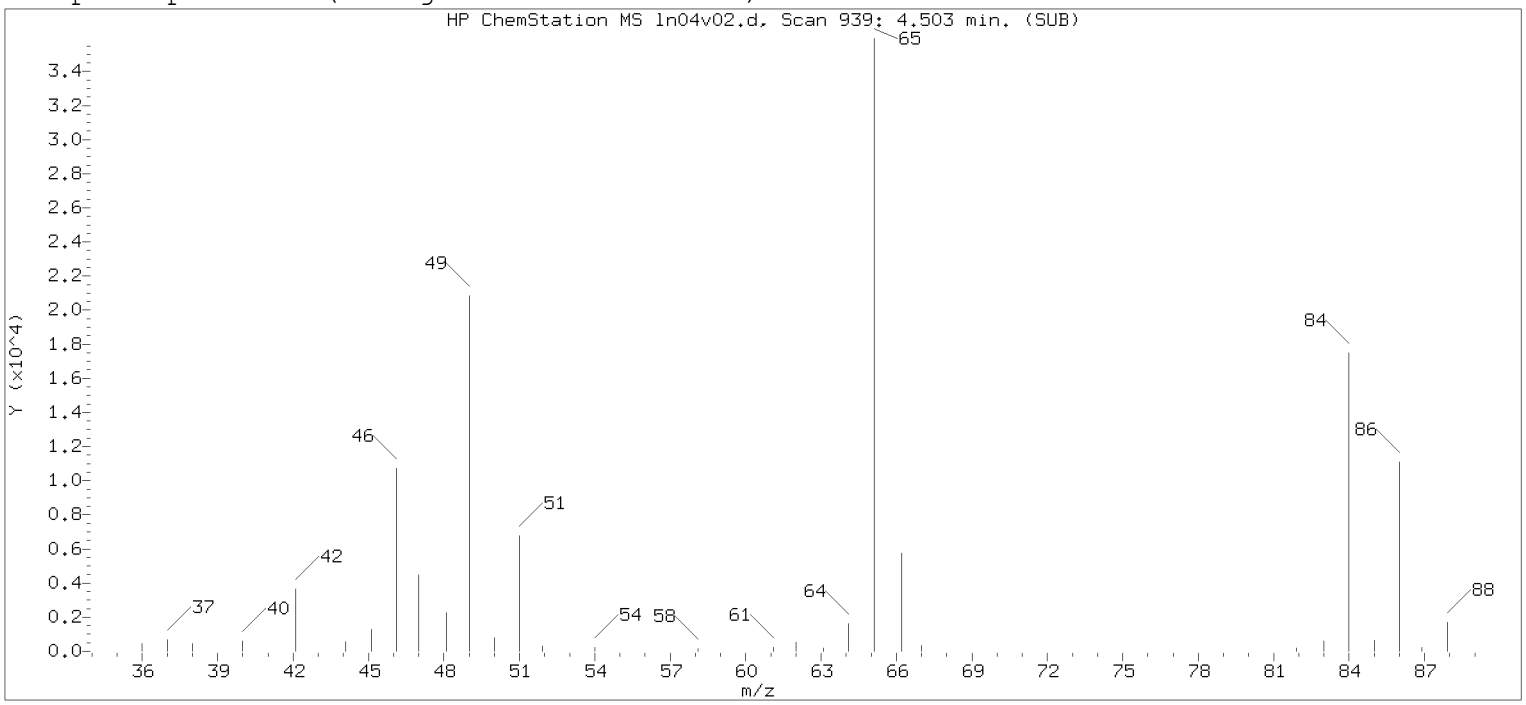
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area (flag) : 282794M
On-Column Amount (ng) : 250.0000
Integration start scan : 895 Integration stop scan: 1208
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

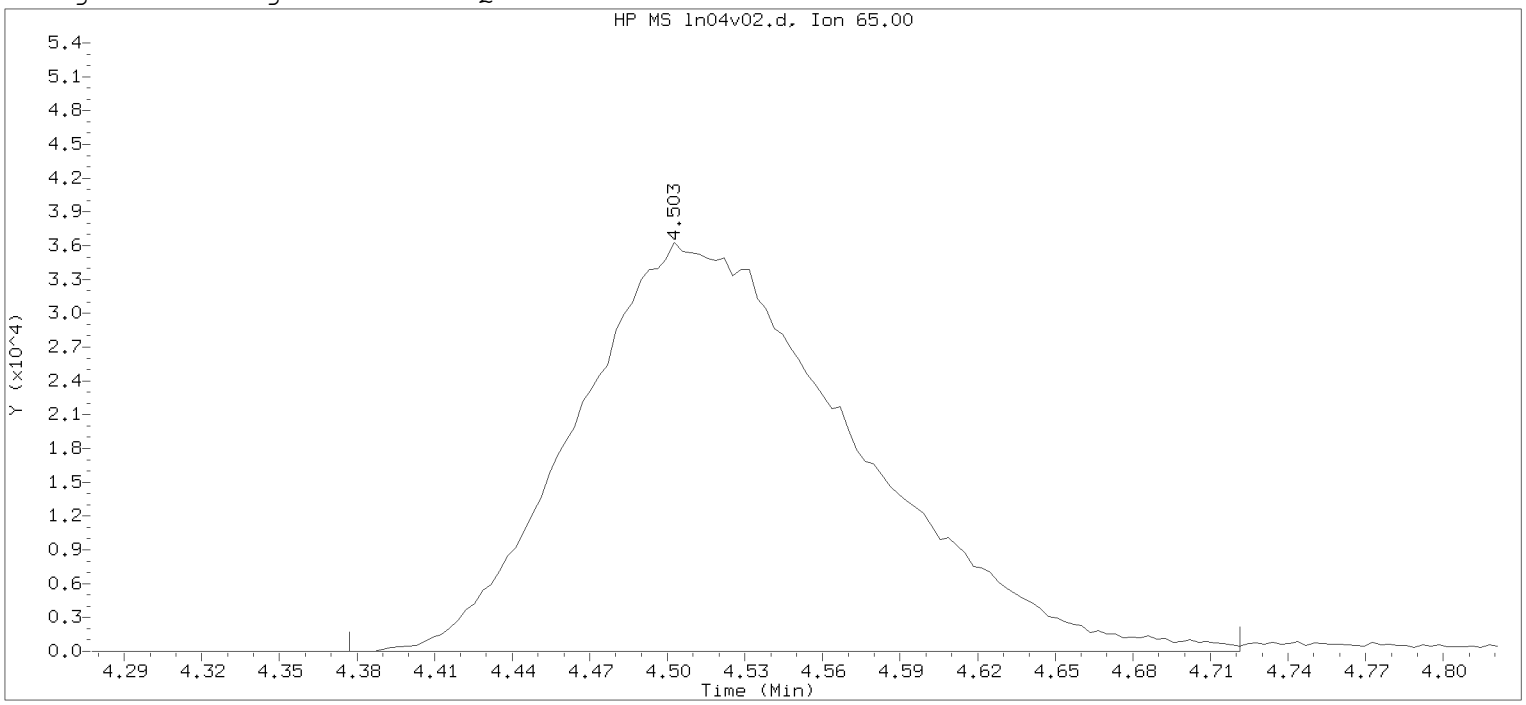
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

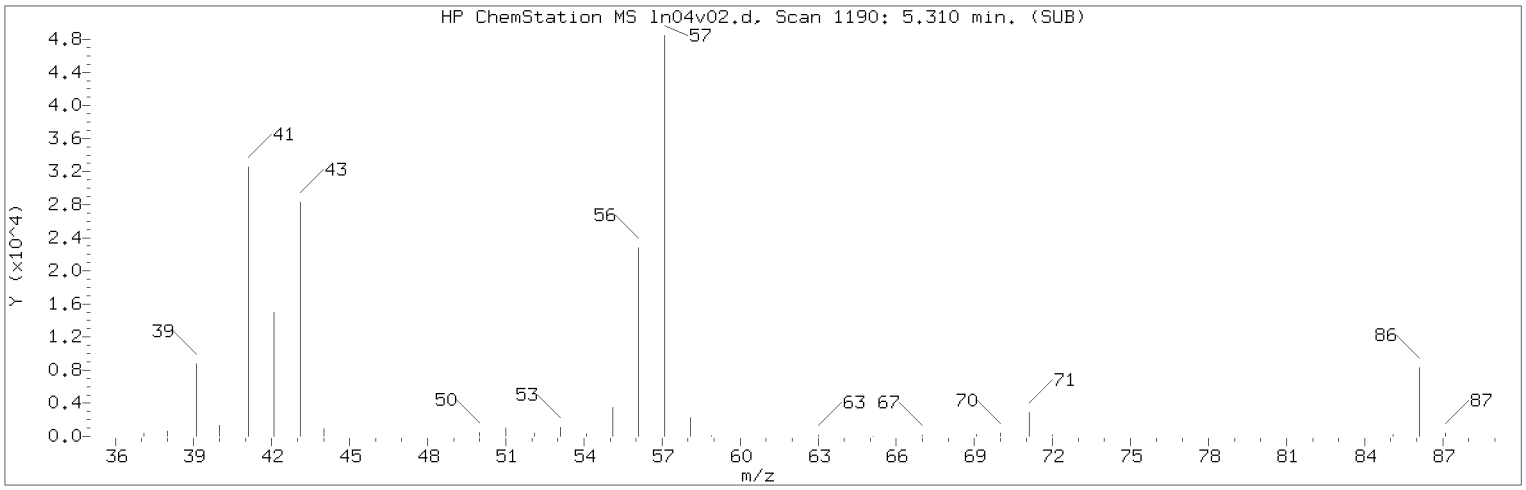
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

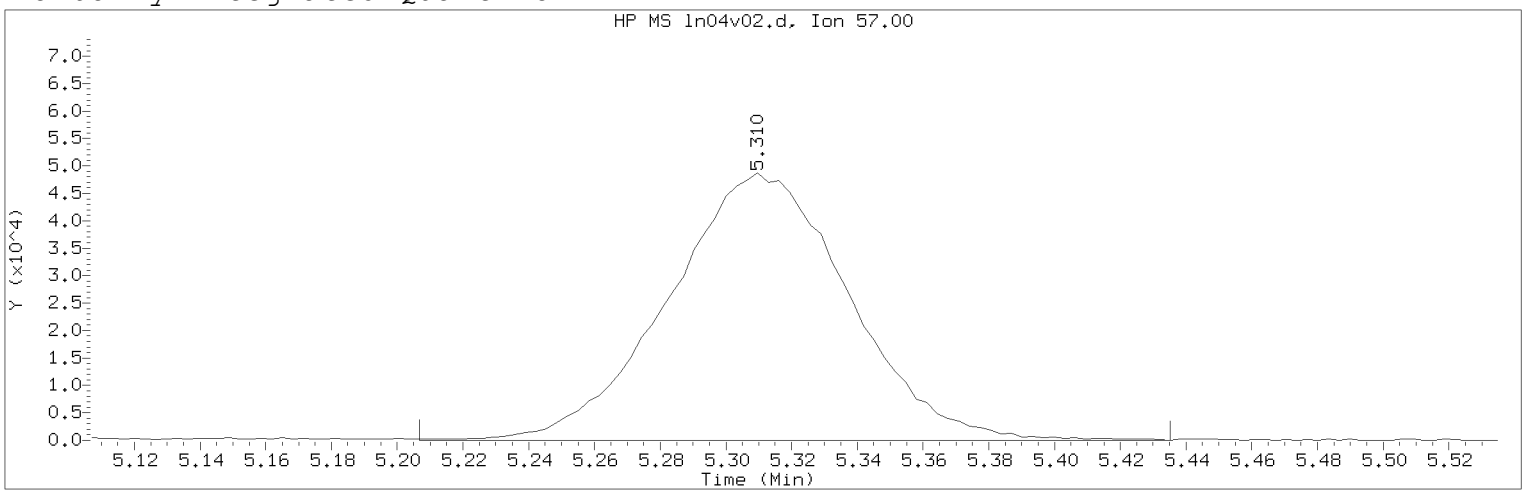
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area : 270950
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1006
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

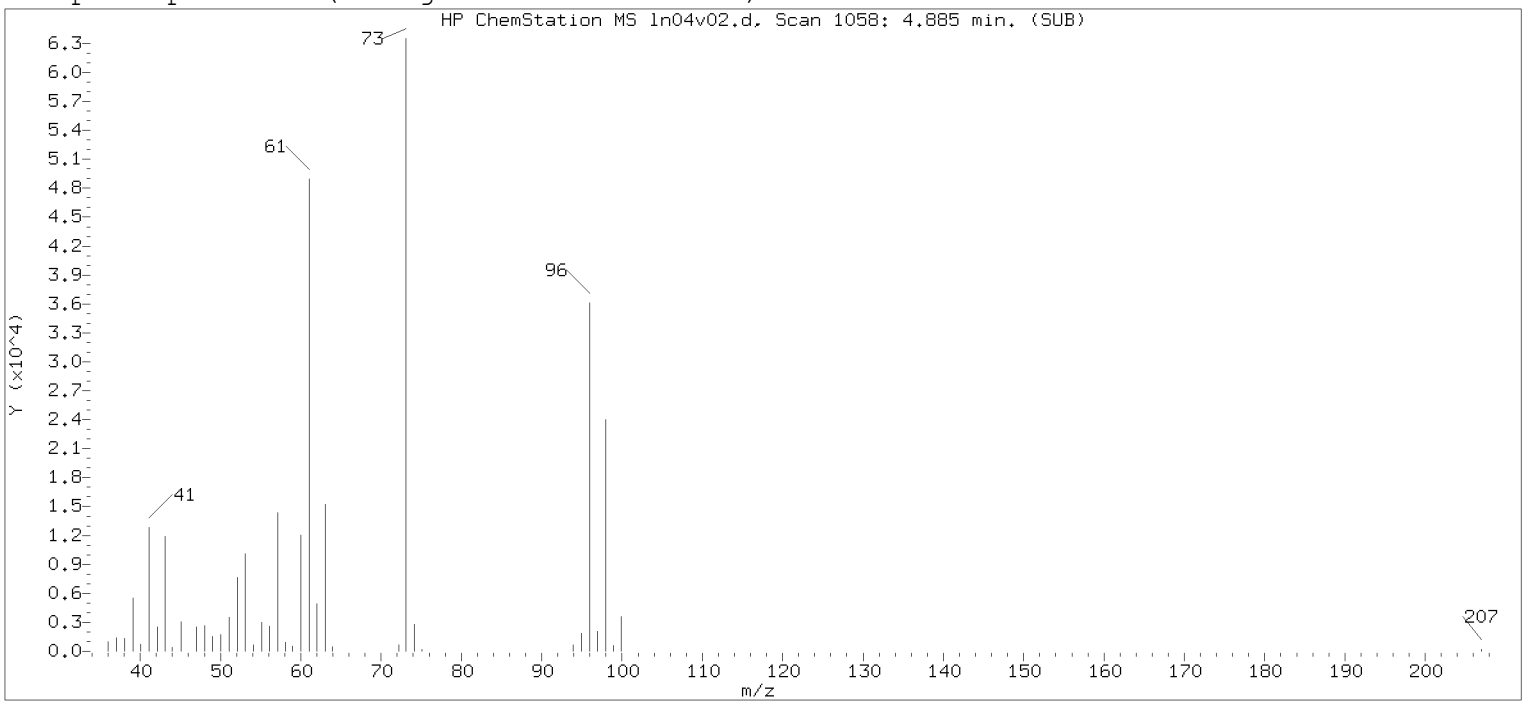
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1190
Retention Time (minutes): 5.310
Quant Ion : 57.00
Area (flag) : 185206M
On-Column Amount (ng) : 20.0675
Integration start scan : 1157 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

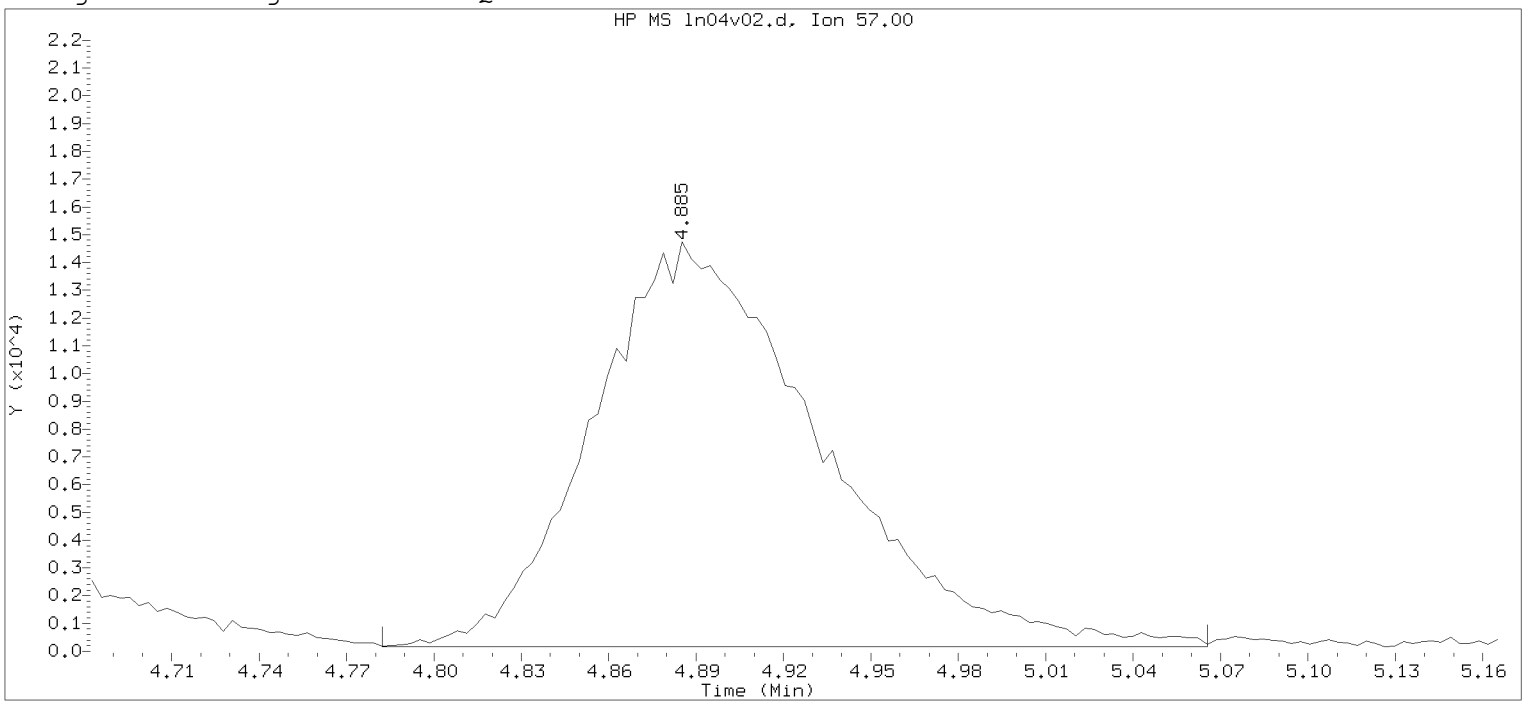
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

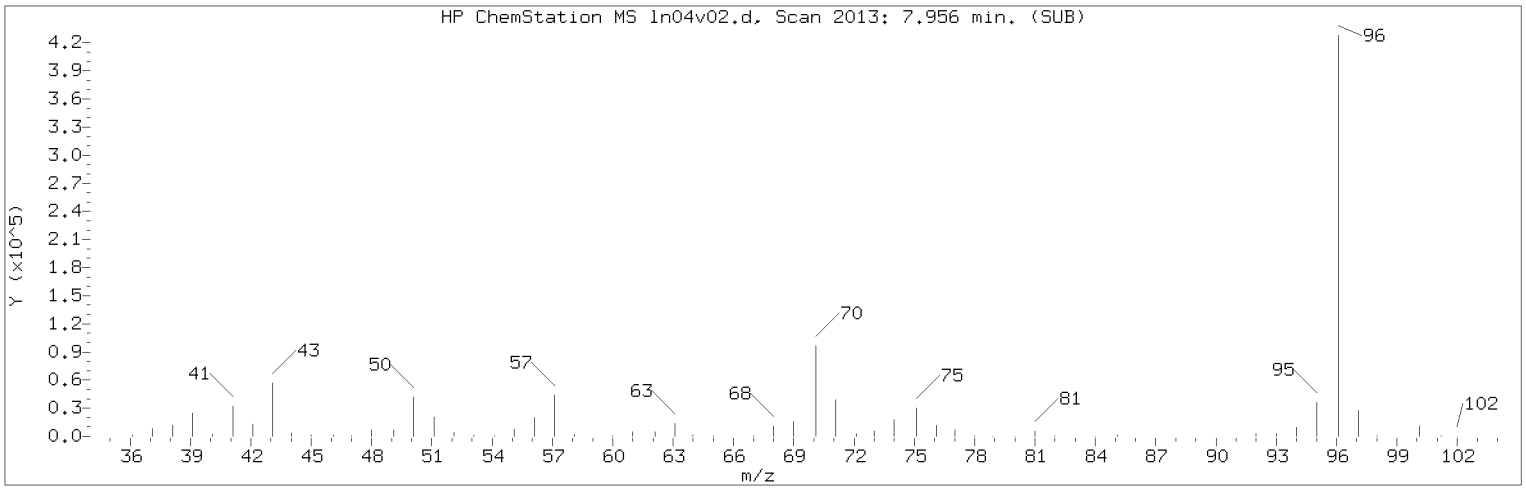
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

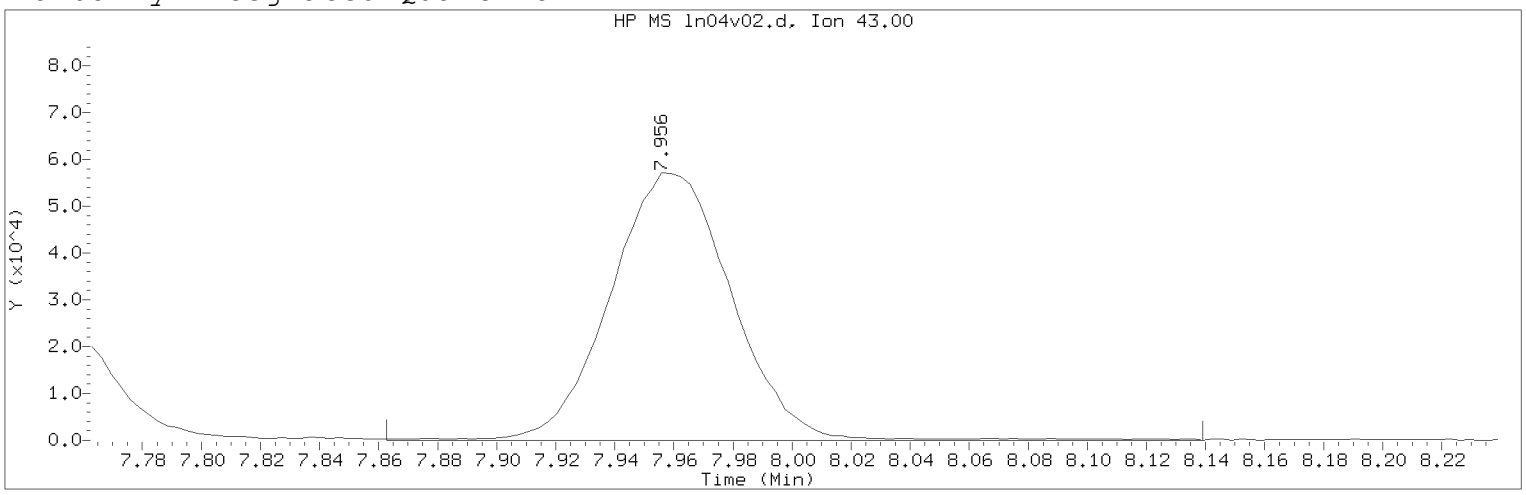
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1058		
Retention Time (minutes)	: 4.885		
Quant Ion	: 57.00		
Area	: 79381		
On-column Amount (ng)	: 18.4374		
Integration start scan	: 1025	Integration stop scan:	1113
Y at integration start	: 160	Y at integration end:	160

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

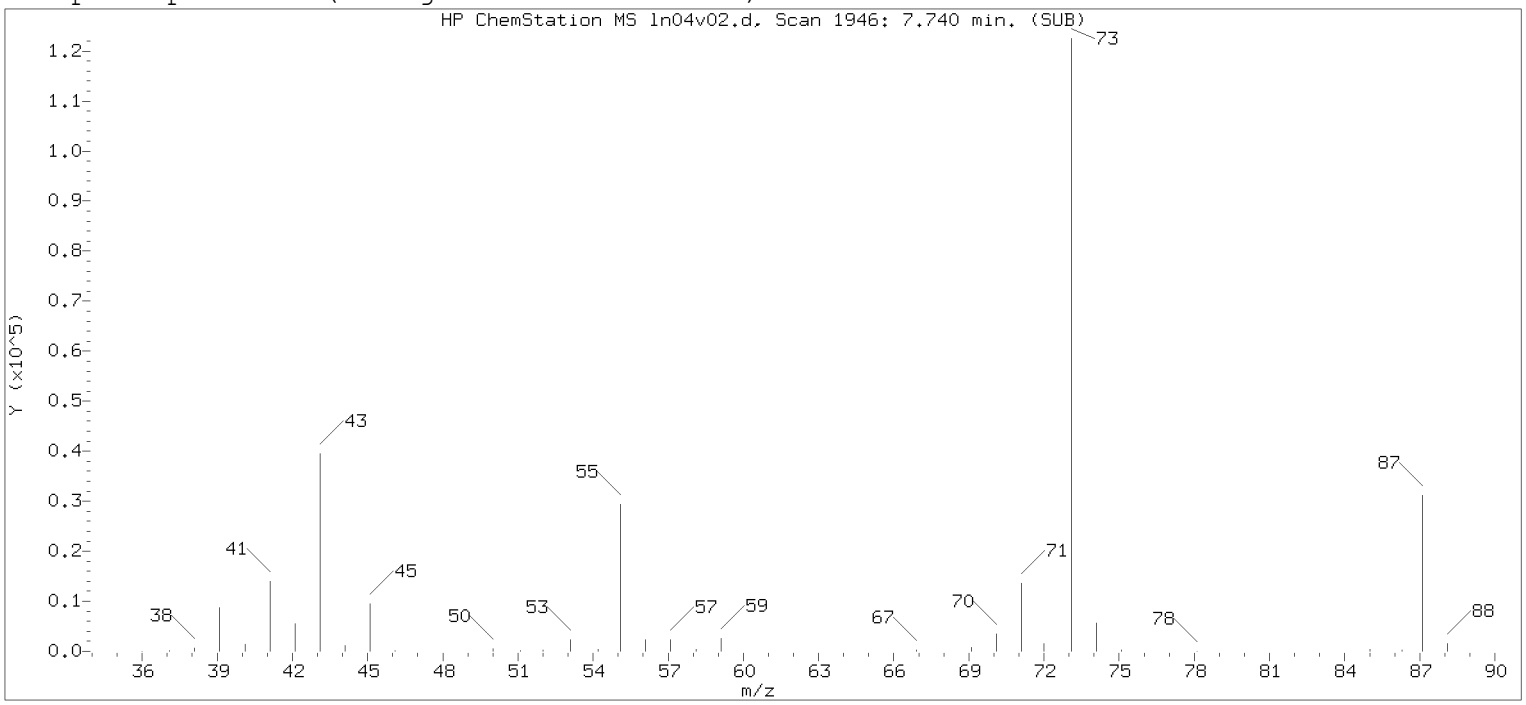
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2013
Retention Time (minutes): 7.956
Quant Ion : 43.00
Area (flag) : 163362M
On-Column Amount (ng) : 18.9476
Integration start scan : 1983 Integration stop scan: 2069
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

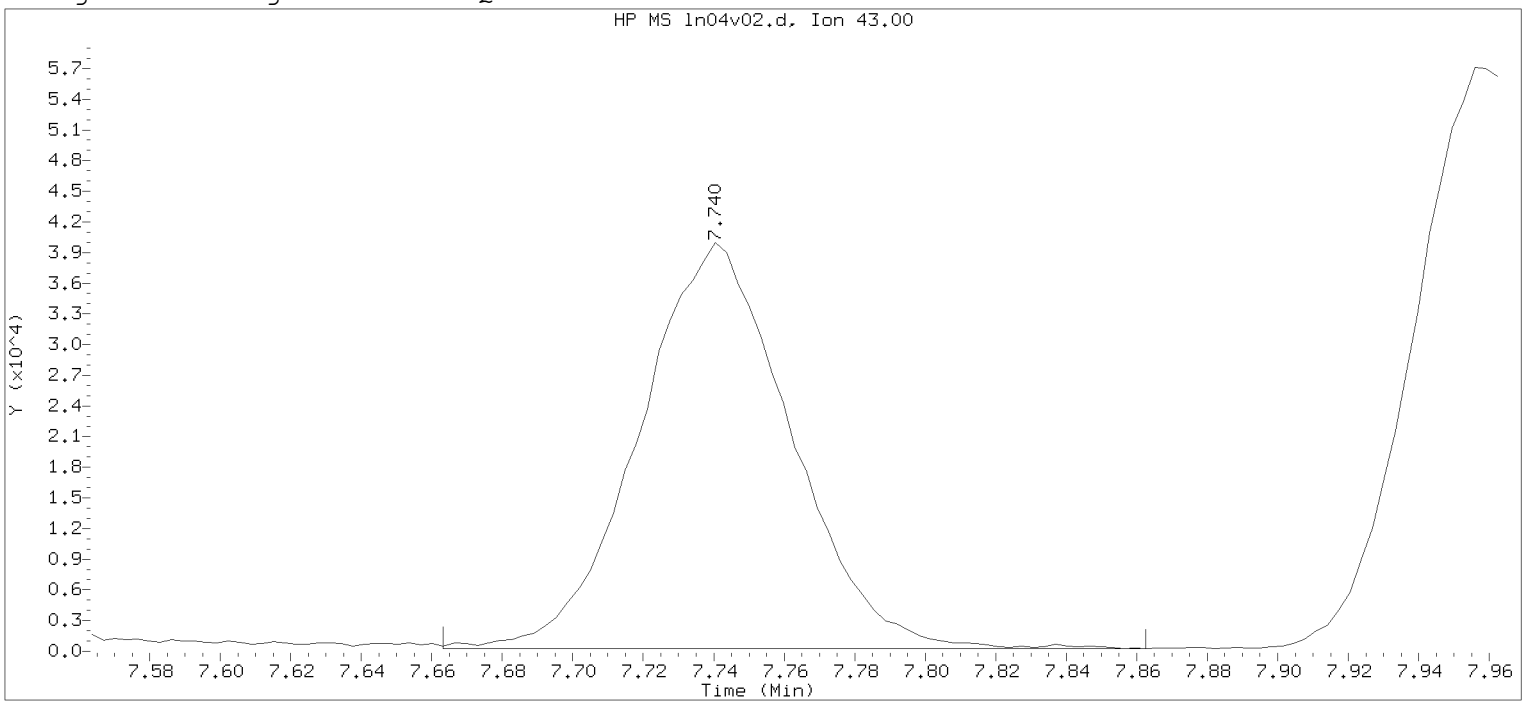
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

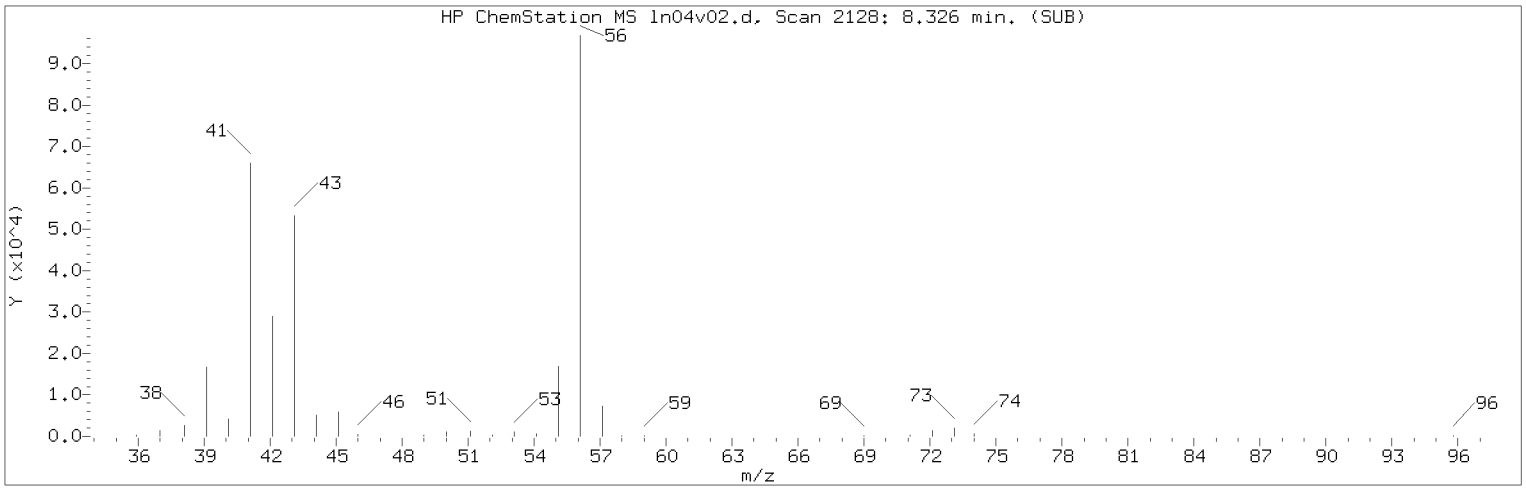
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

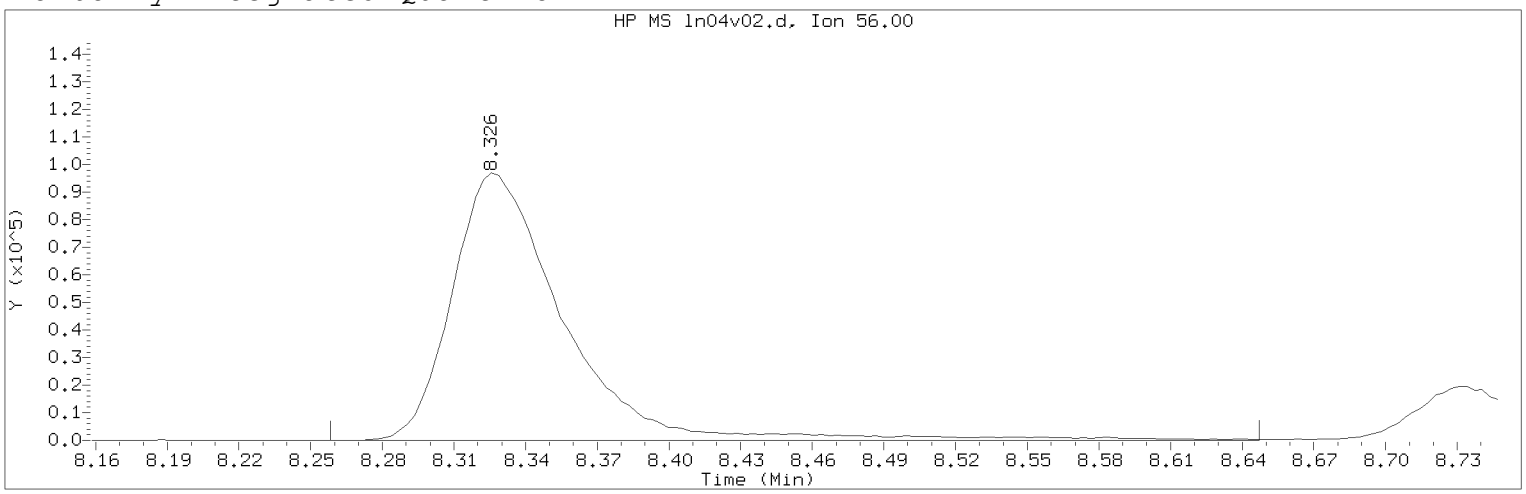
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.740
Quant Ion : 43.00
Area : 118529
On-column Amount (ng) : 18.5036
Integration start scan : 1921 Integration stop scan: 1983
Y at integration start : 255 Y at integration end: 255

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

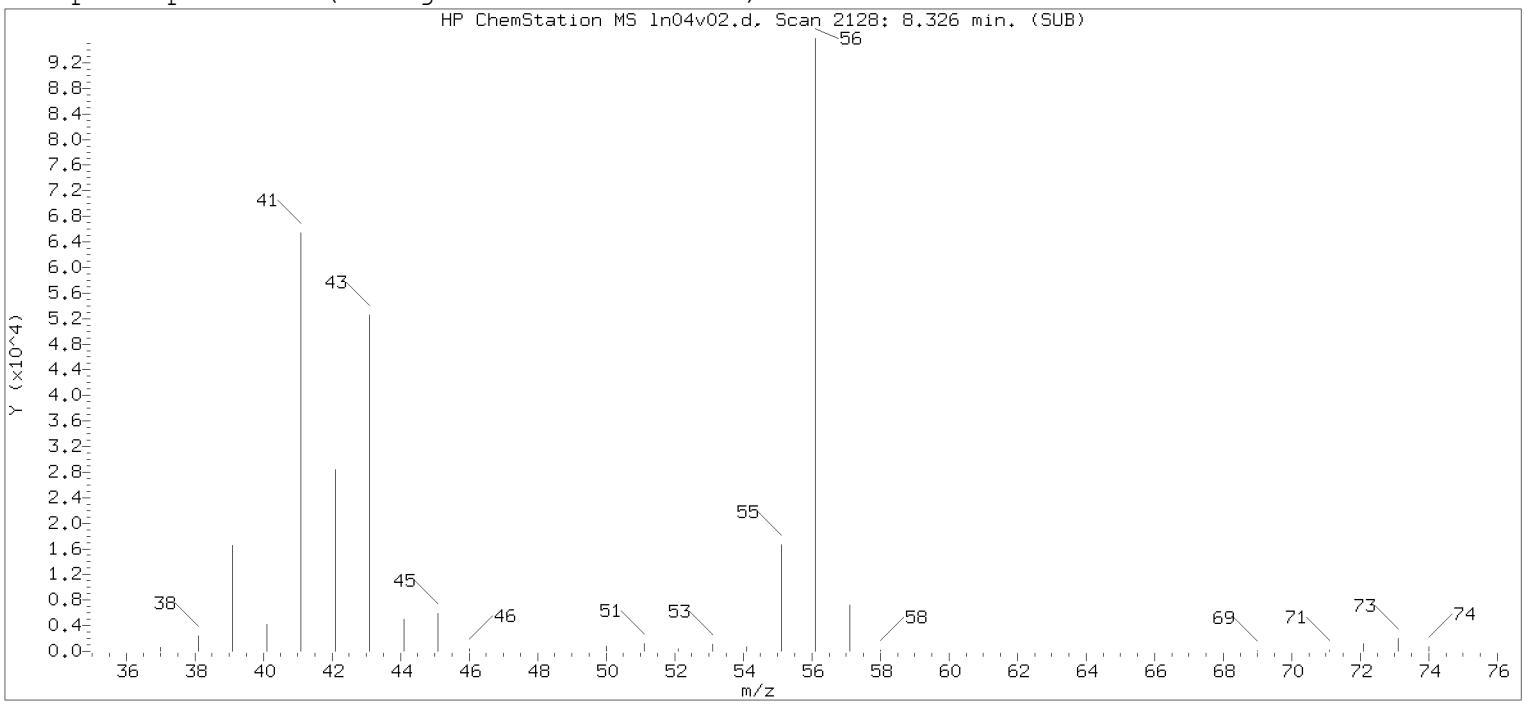
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area (flag) : 314470M
On-Column Amount (ng) : 911.9238
Integration start scan : 2106 Integration stop scan: 2227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

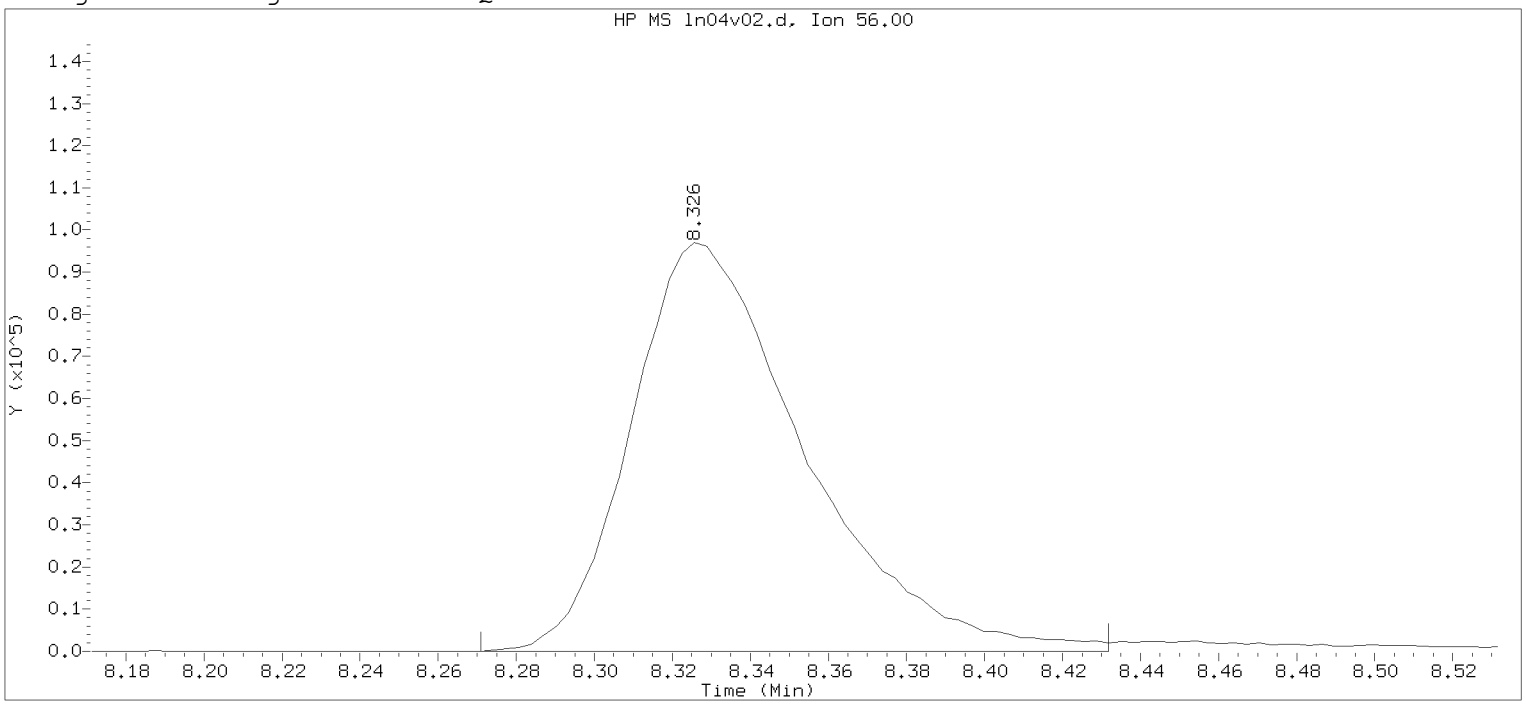
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

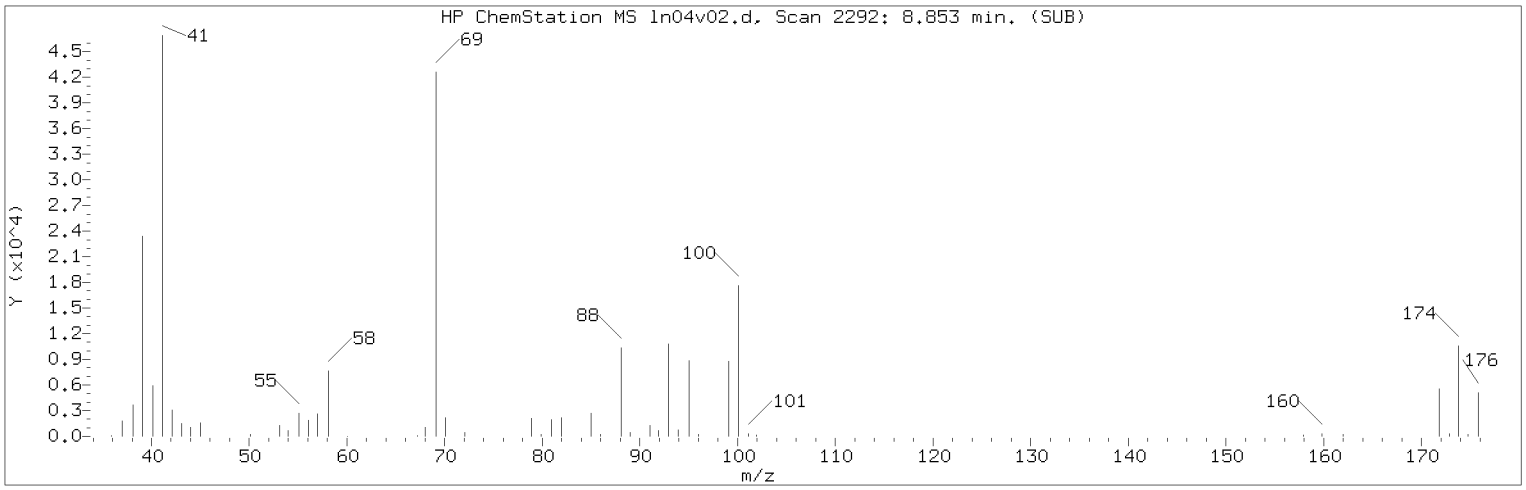
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

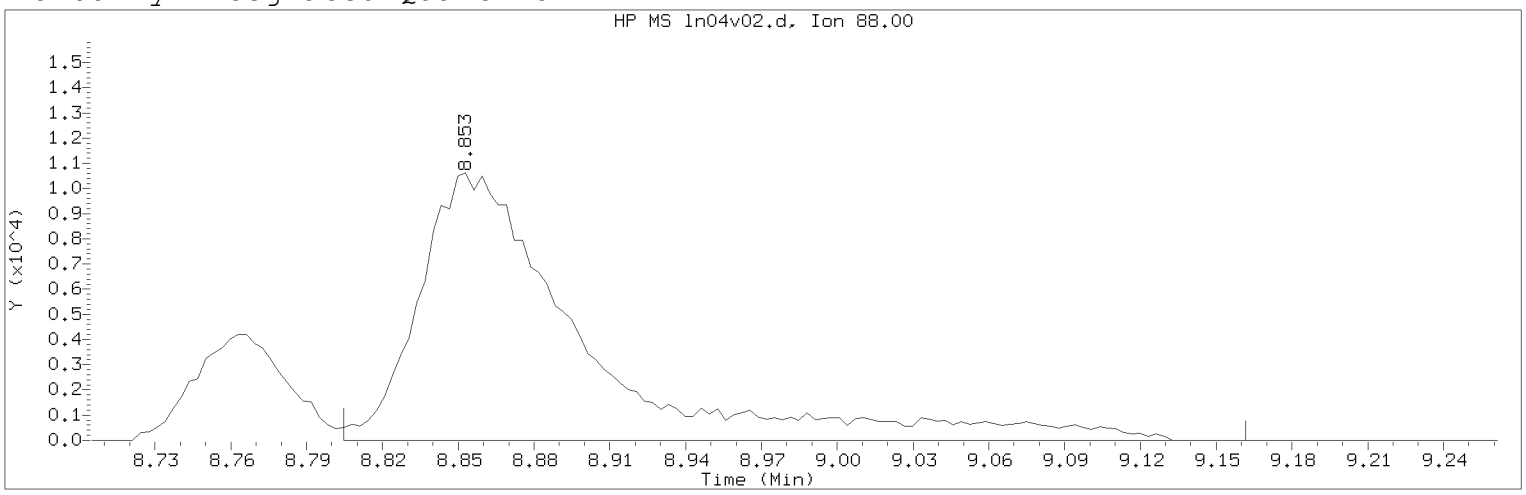
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area : 299611
On-column Amount (ng) : 906.8122
Integration start scan : 2110 Integration stop scan: 2160
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

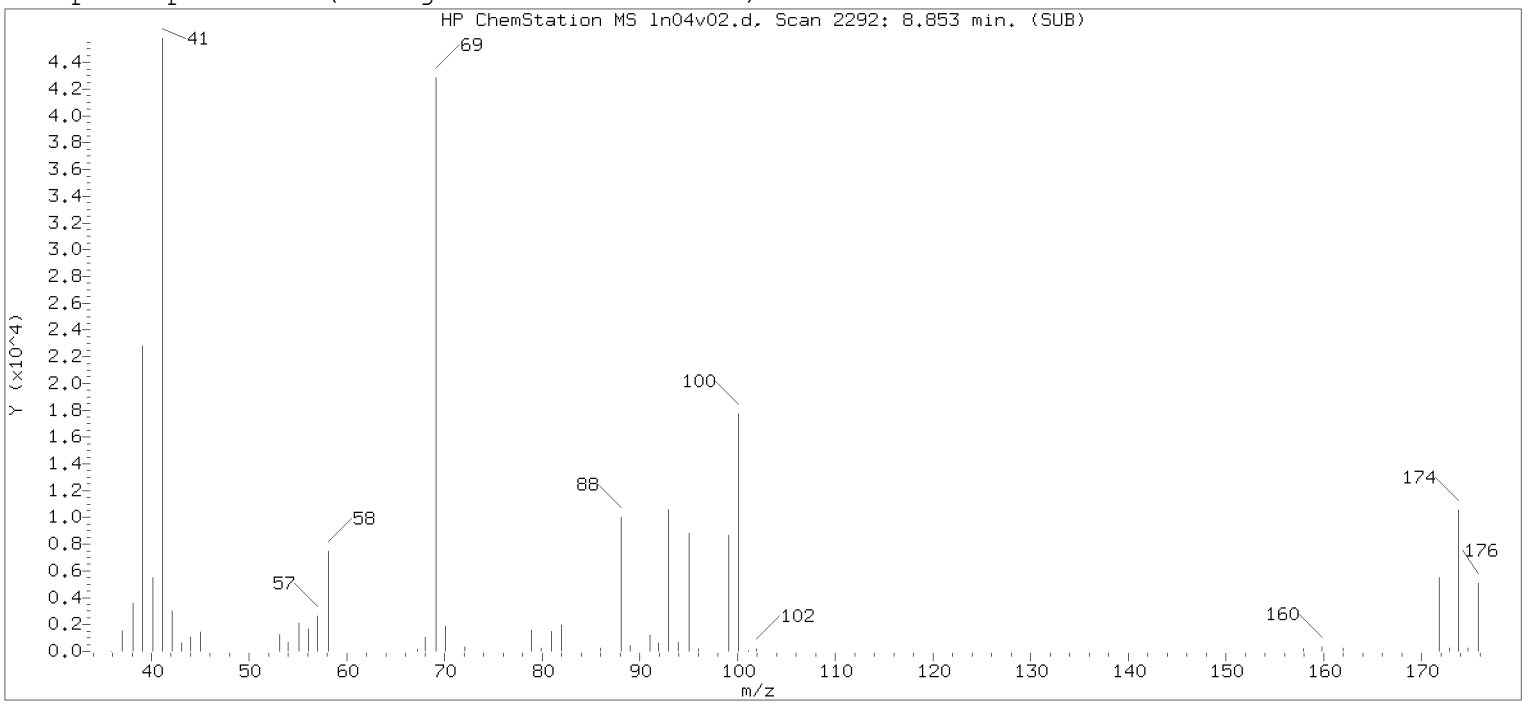
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area (flag) : 47747M
On-Column Amount (ng) : 503.7529
Integration start scan : 2276 Integration stop scan: 2387
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

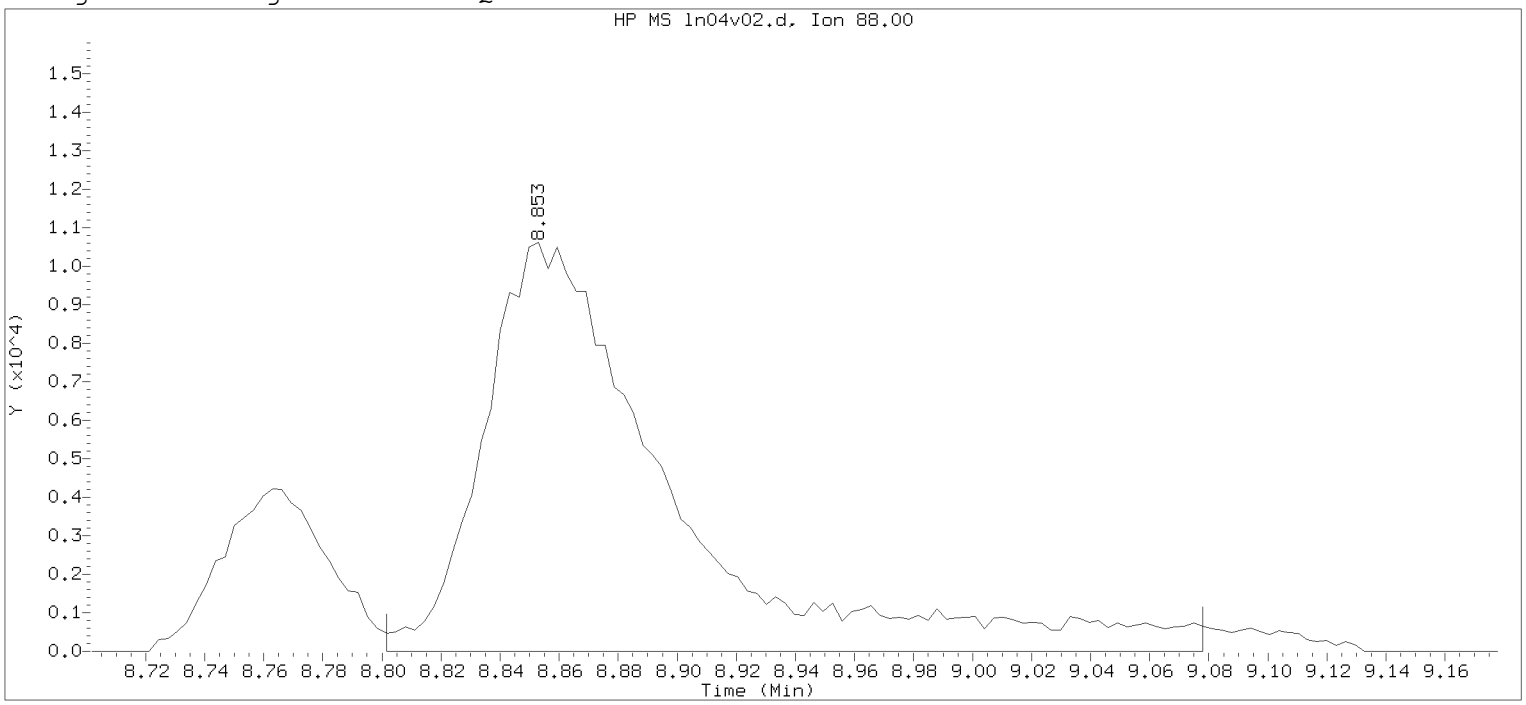
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

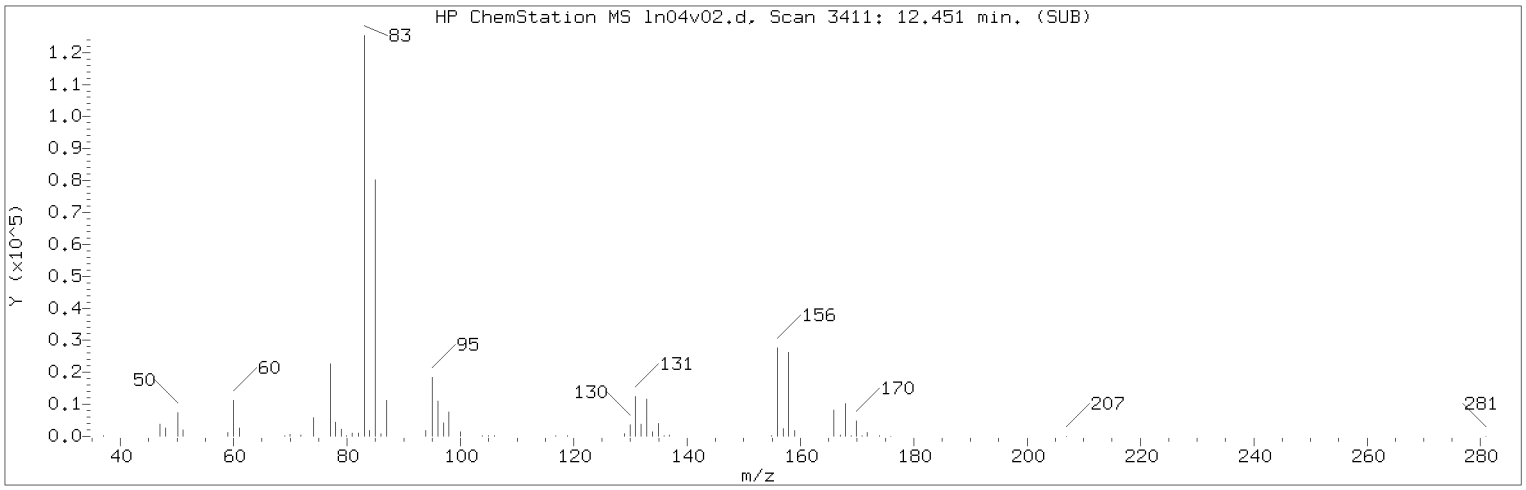
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

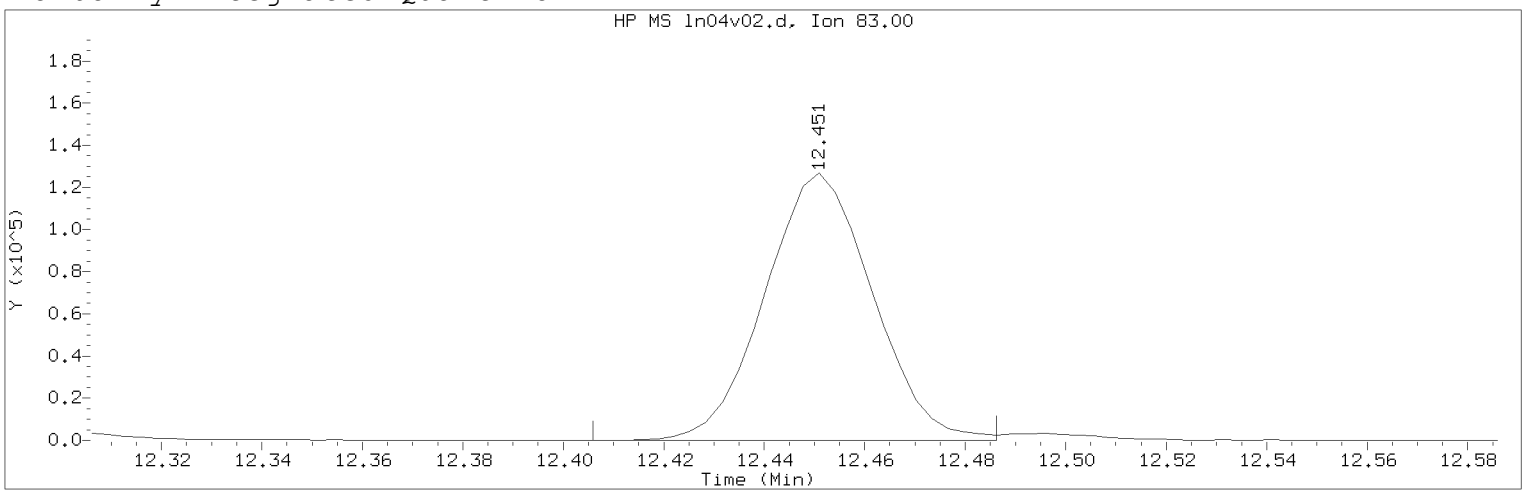
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2292		
Retention Time (minutes)	: 8.853		
Quant Ion	: 88.00		
Area	: 46453		
On-column Amount (ng)	: 511.5262		
Integration start scan	: 2275	Integration stop scan:	2361
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

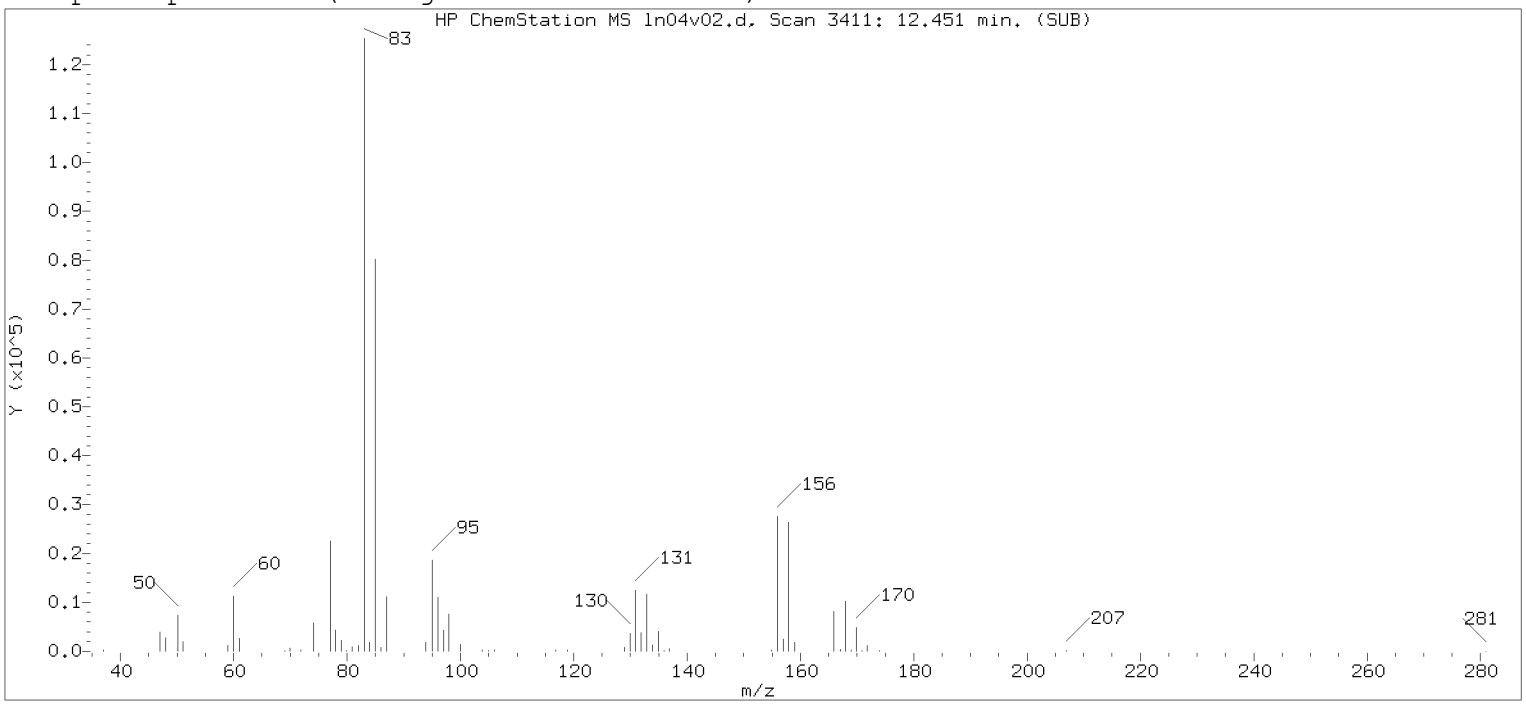
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 188446M
On-Column Amount (ng) : 19.5761
Integration start scan : 3396 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

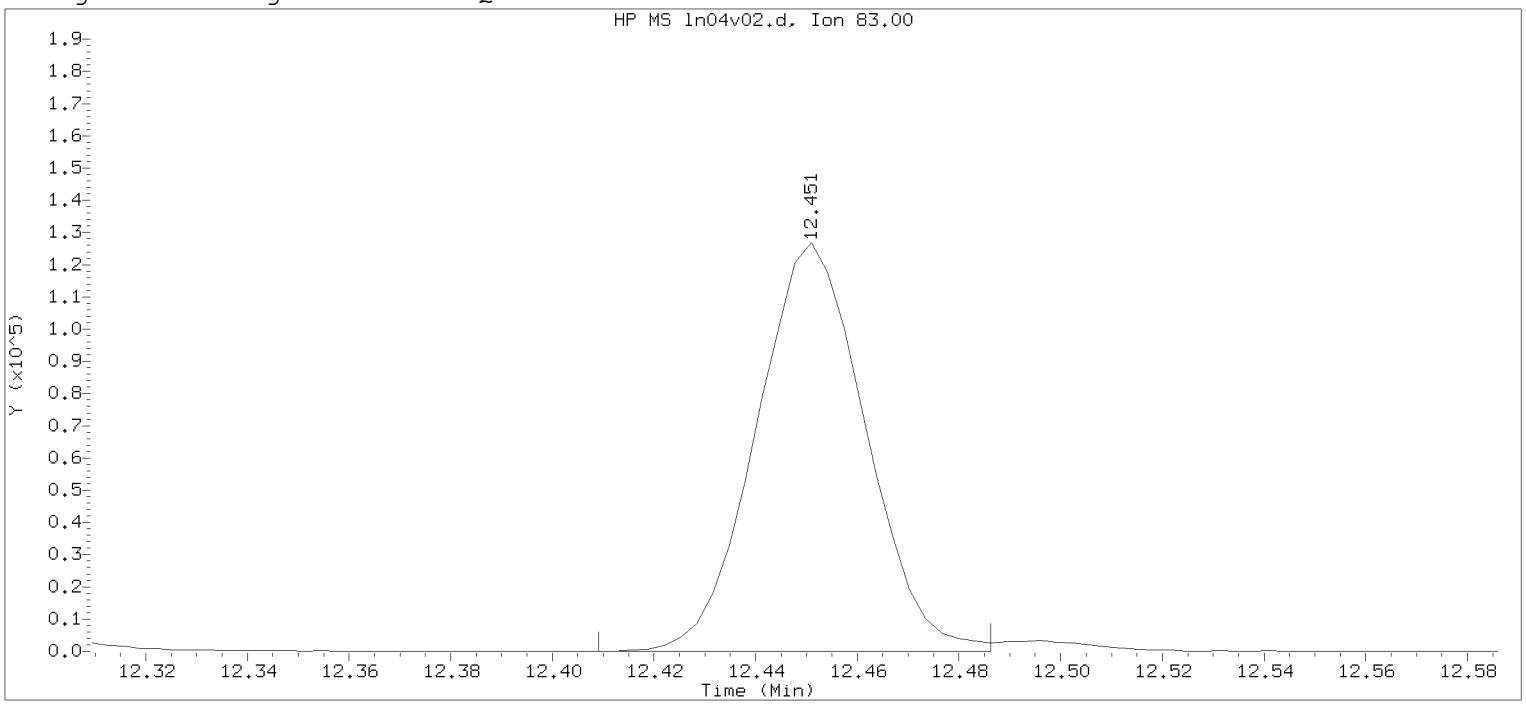
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

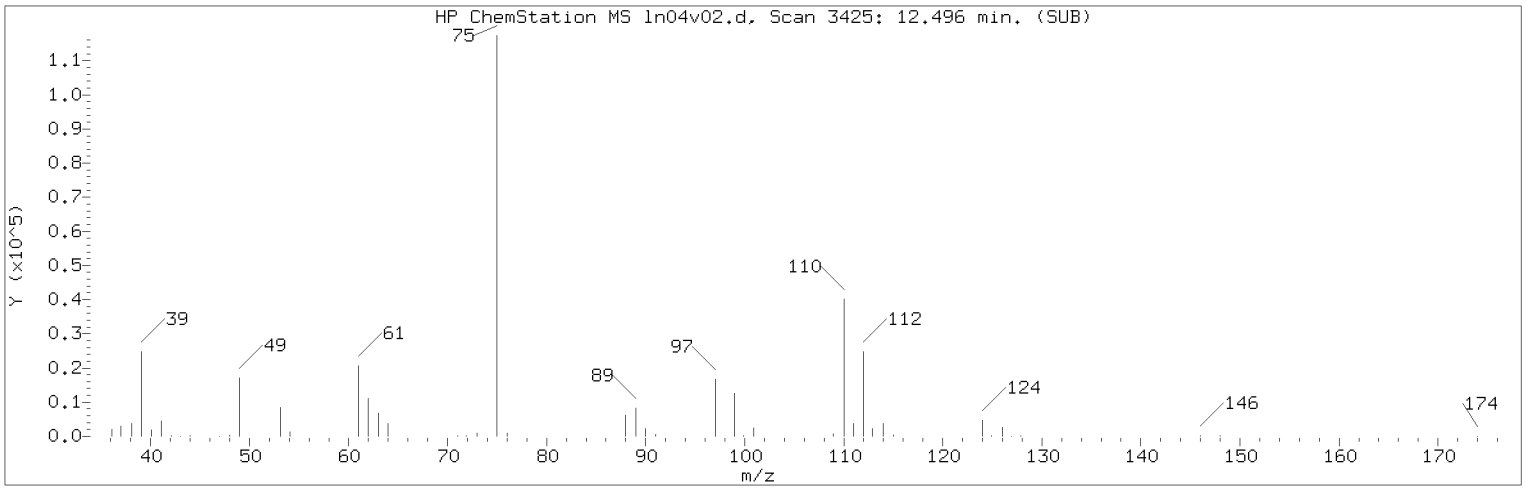
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

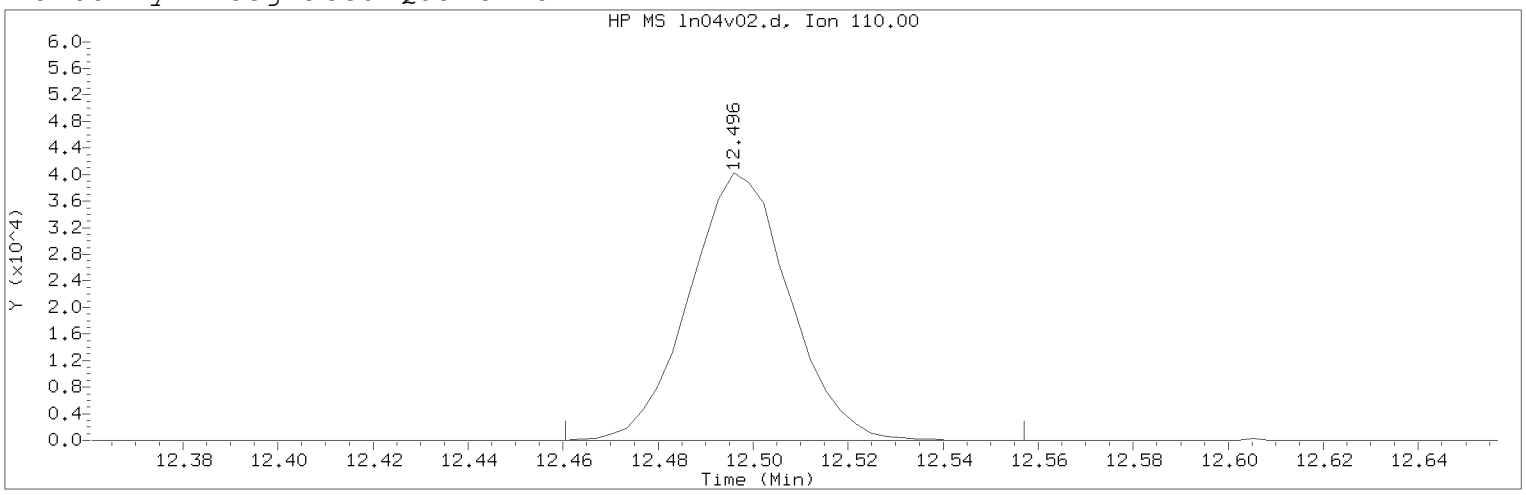
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 188196
On-column Amount (ng) : 19.2022
Integration start scan : 3397 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

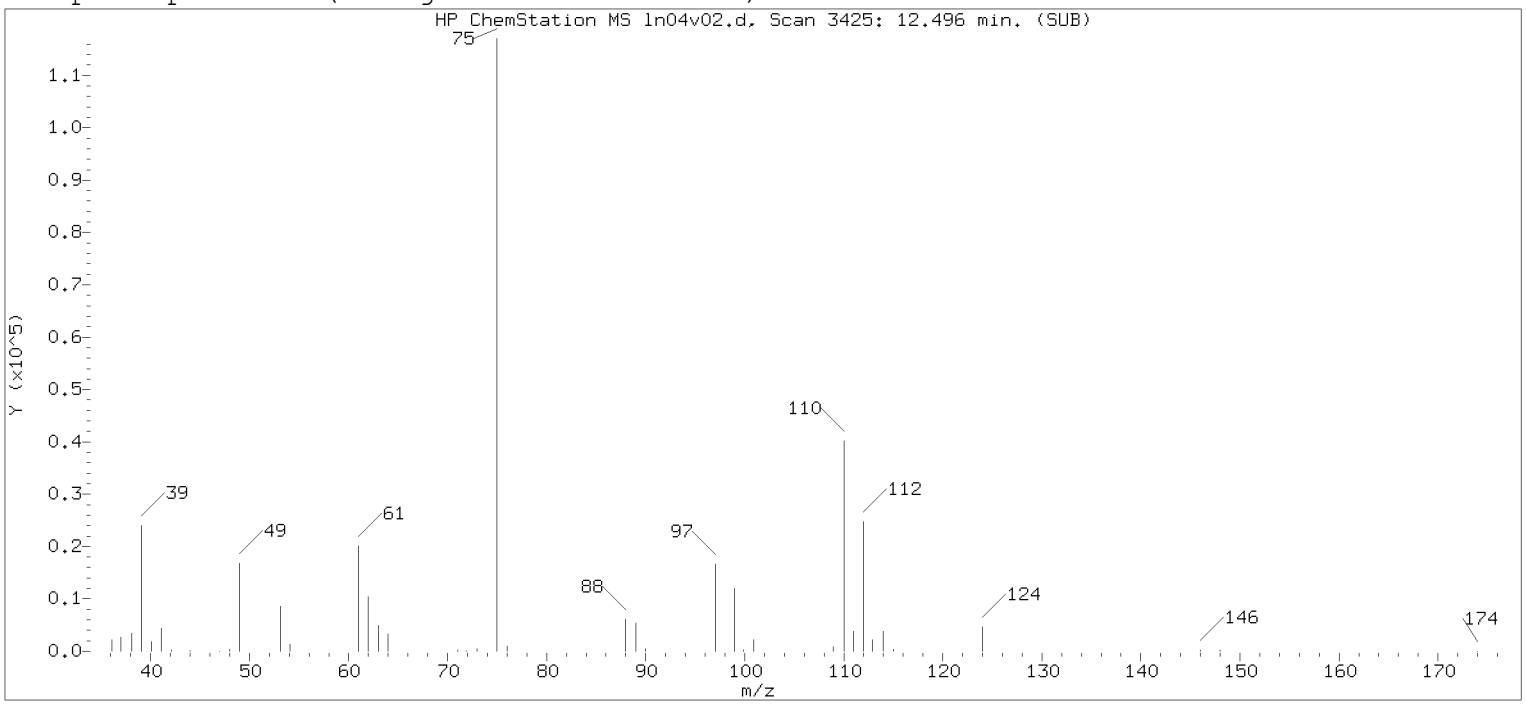
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 3425
Retention Time (minutes): 12.496
Quant Ion : 110.00
Area (flag) : 58902M
On-Column Amount (ng) : 19.9401
Integration start scan : 3413 Integration stop scan: 3443
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

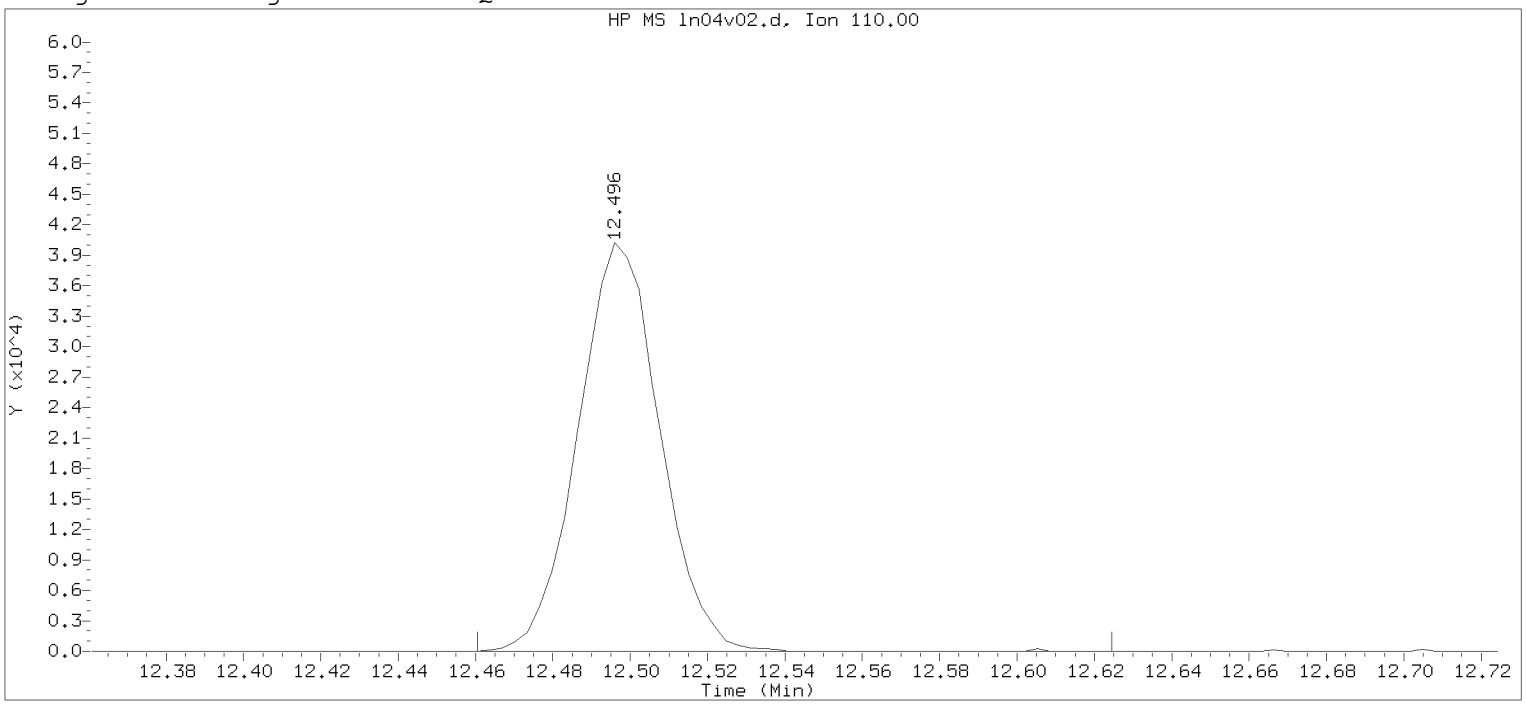
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

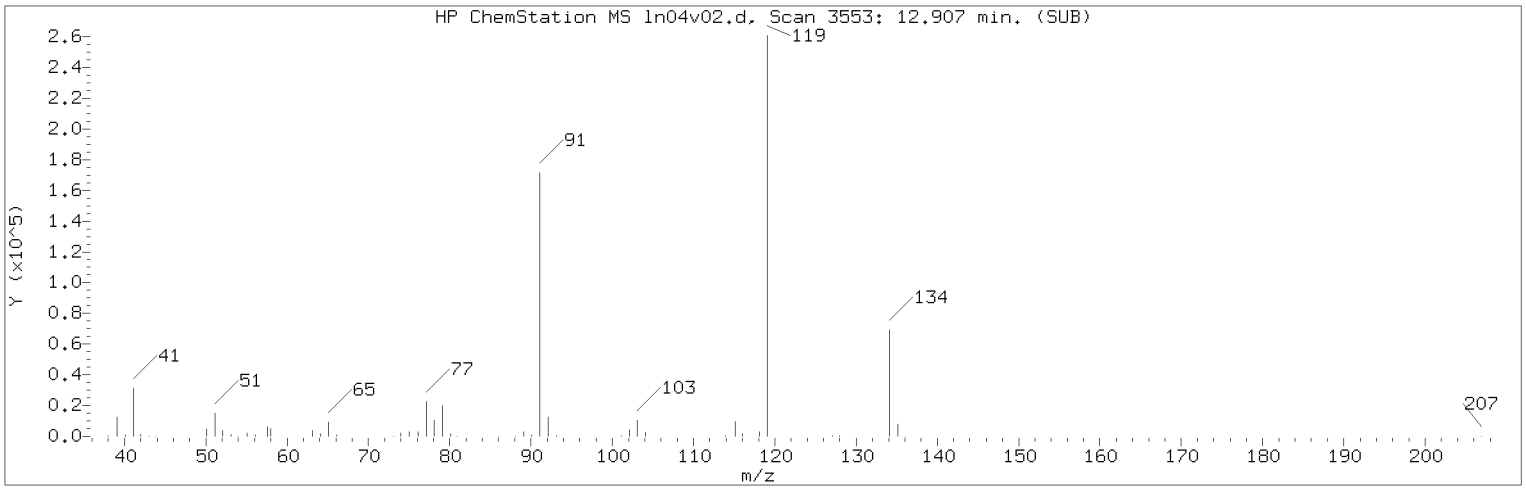
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

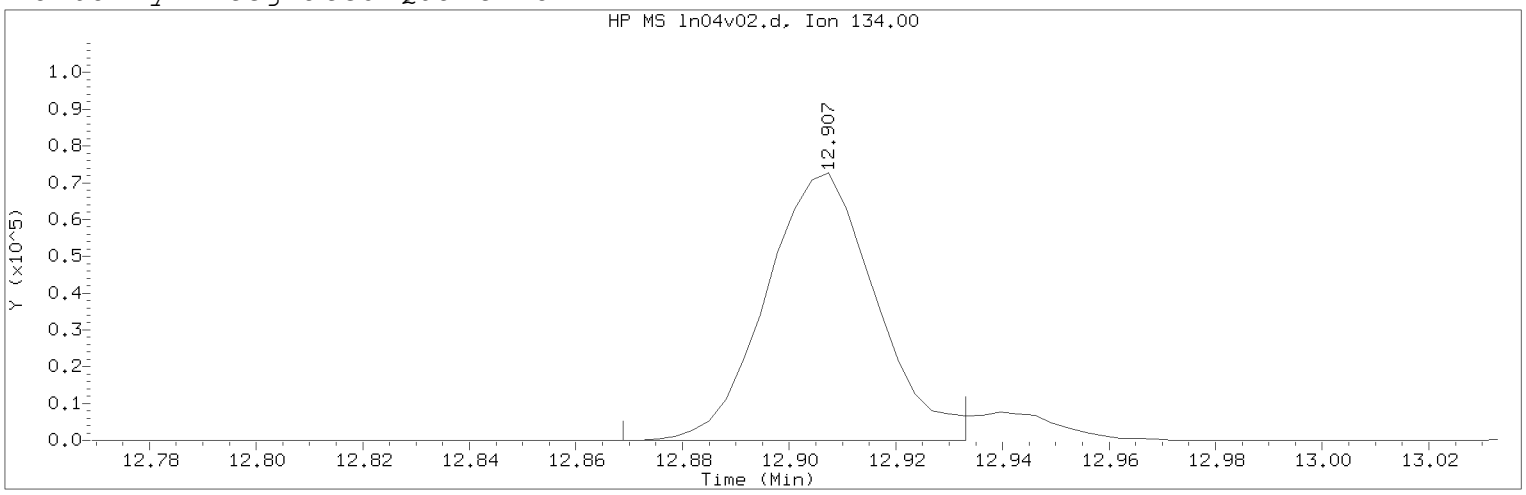
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 3425
Retention Time (minutes): 12.496
Quant Ion : 110.00
Area : 58948
On-column Amount (ng) : 19.9559
Integration start scan : 3413 Integration stop scan: 3464
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

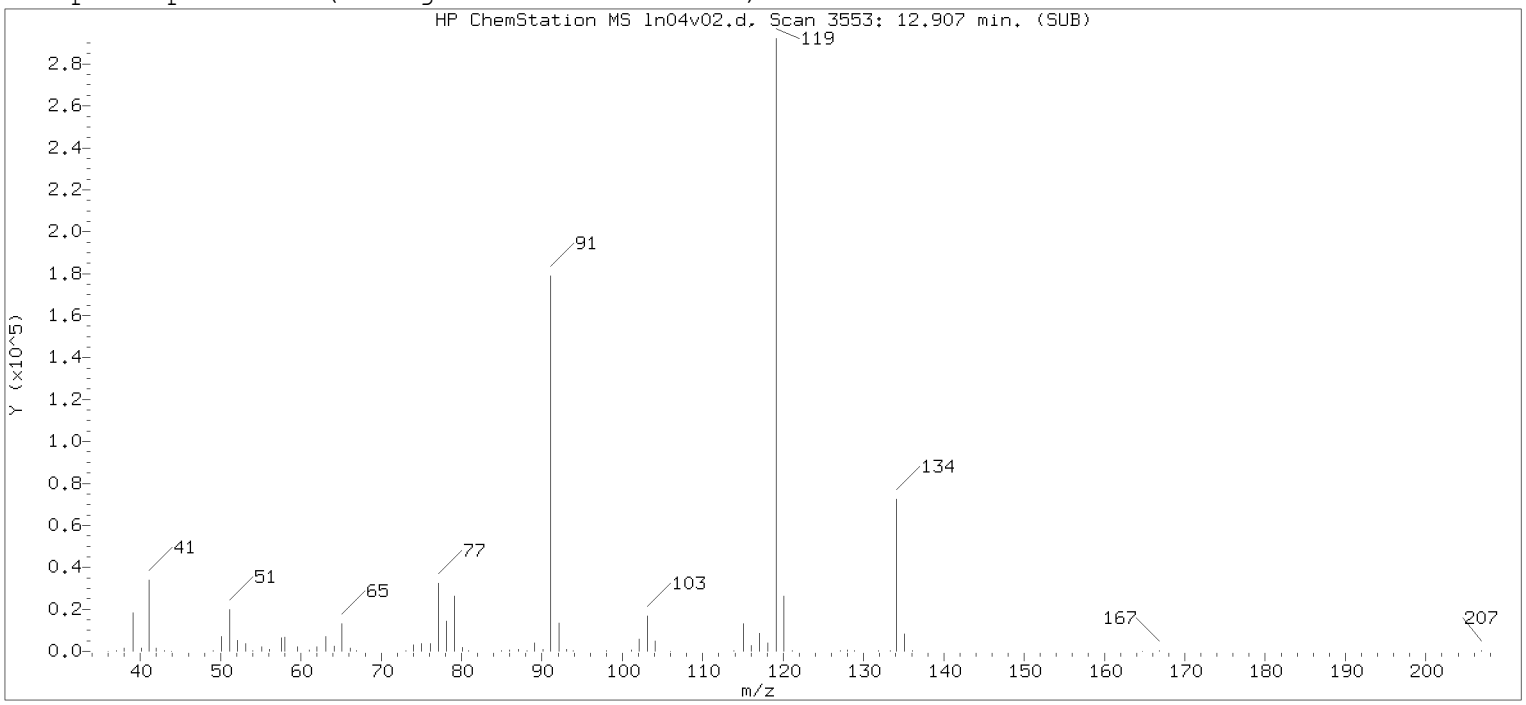
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area (flag) : 103762M
On-Column Amount (ng) : 20.6322
Integration start scan : 3540 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

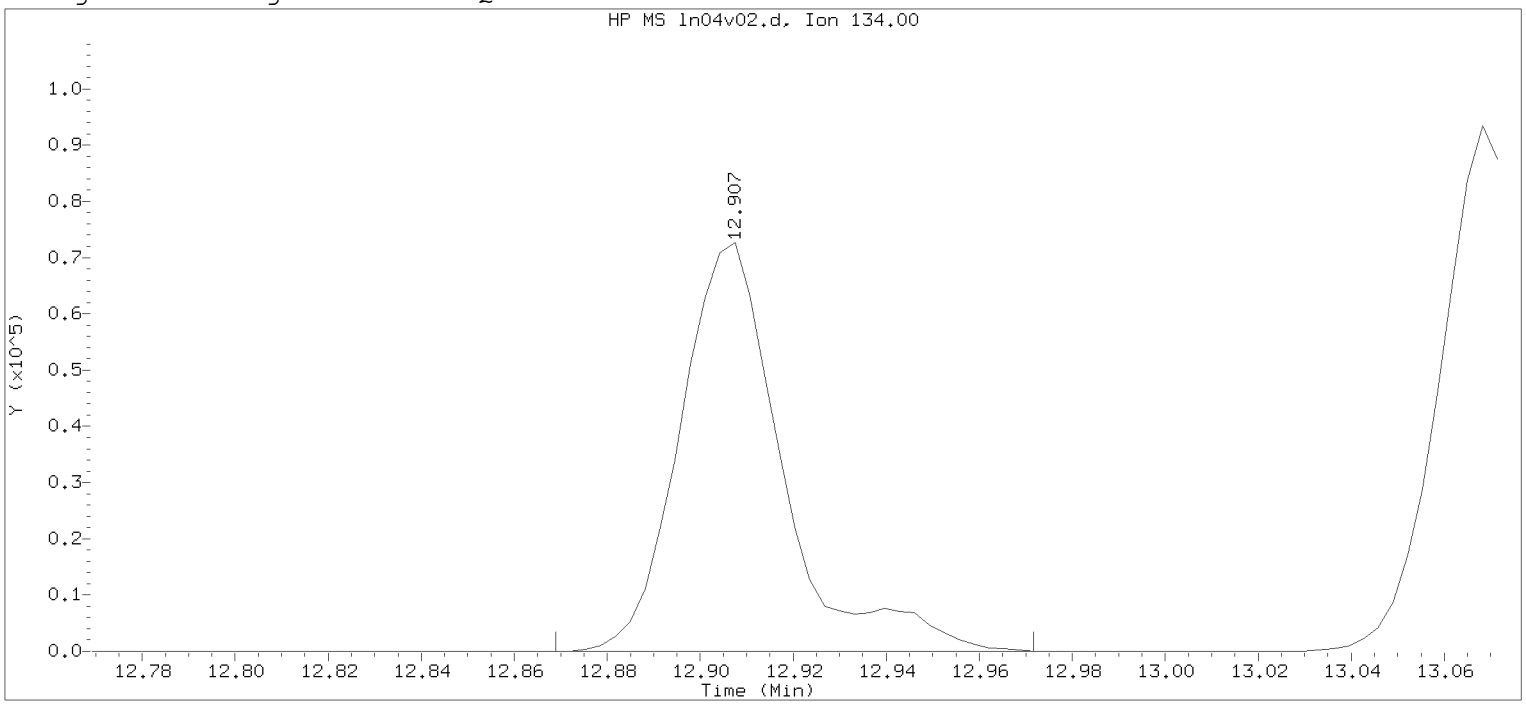
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area : 111654
On-column Amount (ng) : 22.2016
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASPOSITO

Data File: /chem/HP09915.i/19nov22a.b/ln22t01.d

Date : 22-NOV-2019 07:53

Client ID: AUG02-19

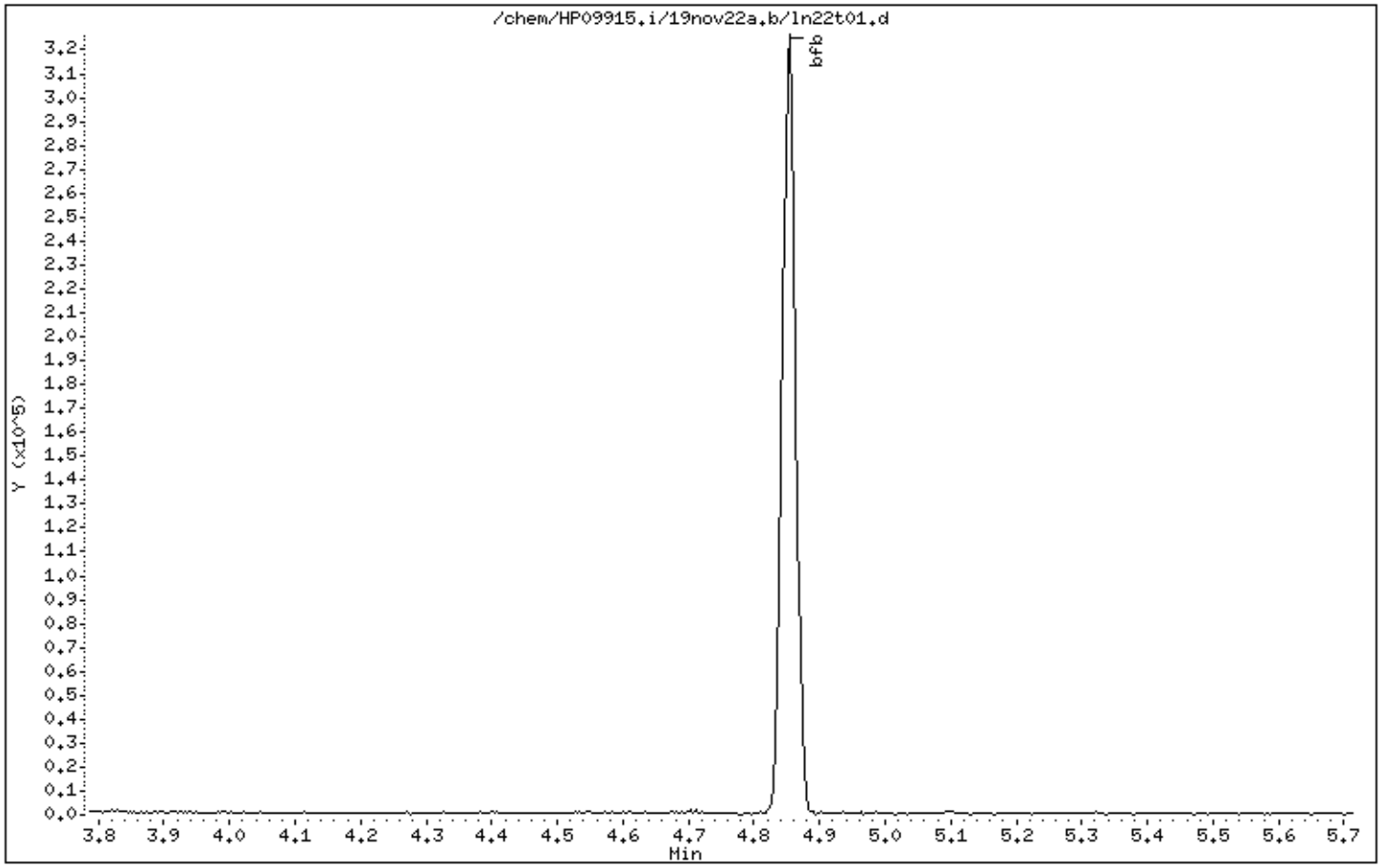
Instrument: HP09915.i

Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: lcp00895

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem/HP09915.i/19nov22a.b/ln22t01.d

Date : 22-NOV-2019 07:53

Client ID: AUG02-19

Instrument: HP09915.i

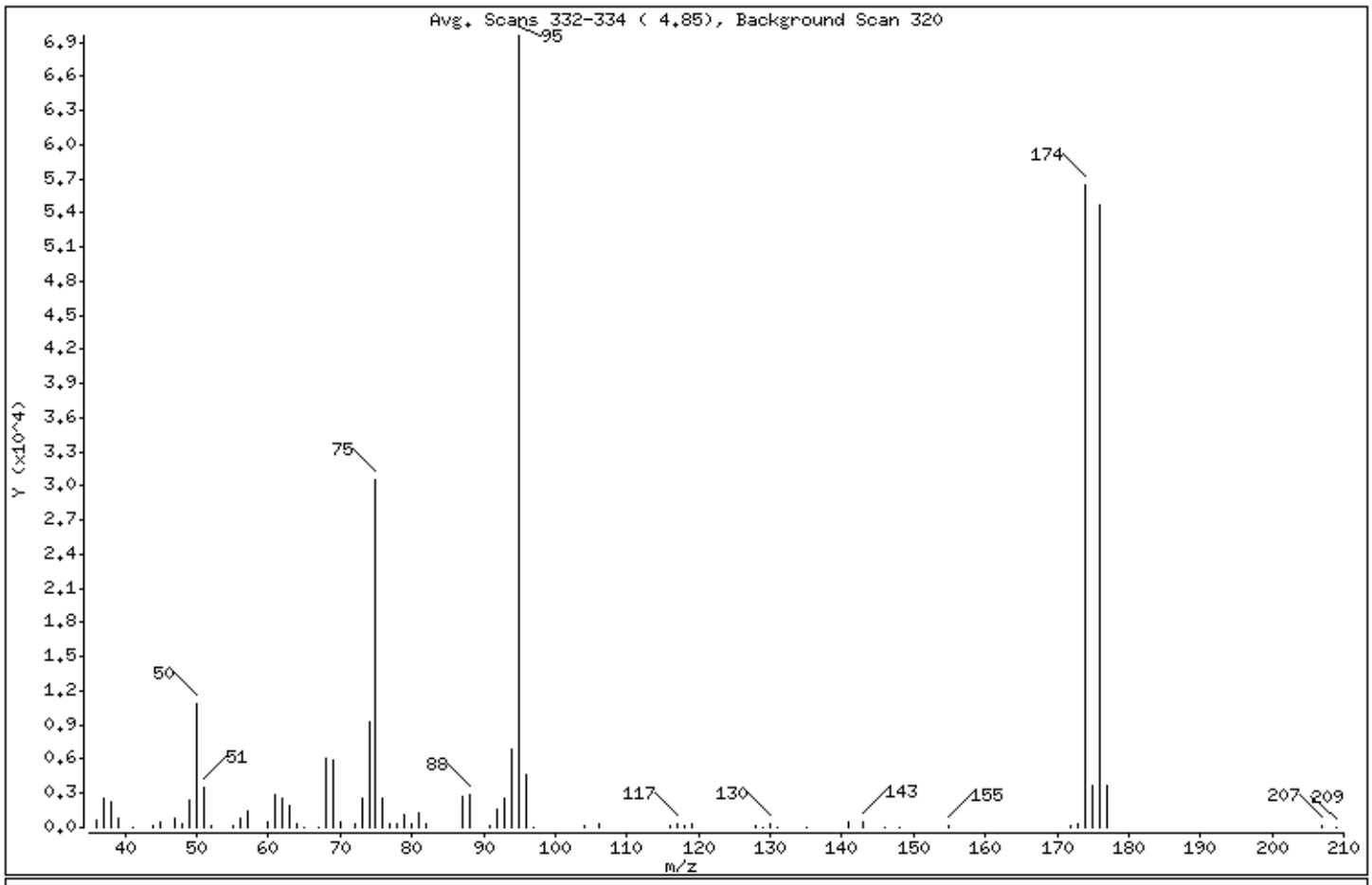
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: lcp00895

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.57
75	30.00 - 60.00% of mass 95	43.97
96	5.00 - 9.00% of mass 95	6.56
173	Less than 2.00% of mass 174	0.57 (0.70)
174	50.00 - 100.00% of mass 95	81.03
175	5.00 - 9.00% of mass 174	5.38 (6.64)
176	95.00 - 101.00% of mass 174	78.59 (96.99)
177	5.00 - 9.00% of mass 176	5.36 (6.82)

Date : 22-NOV-2019 07:53

Client ID: AUG02-19 Instrument: HP09915.i

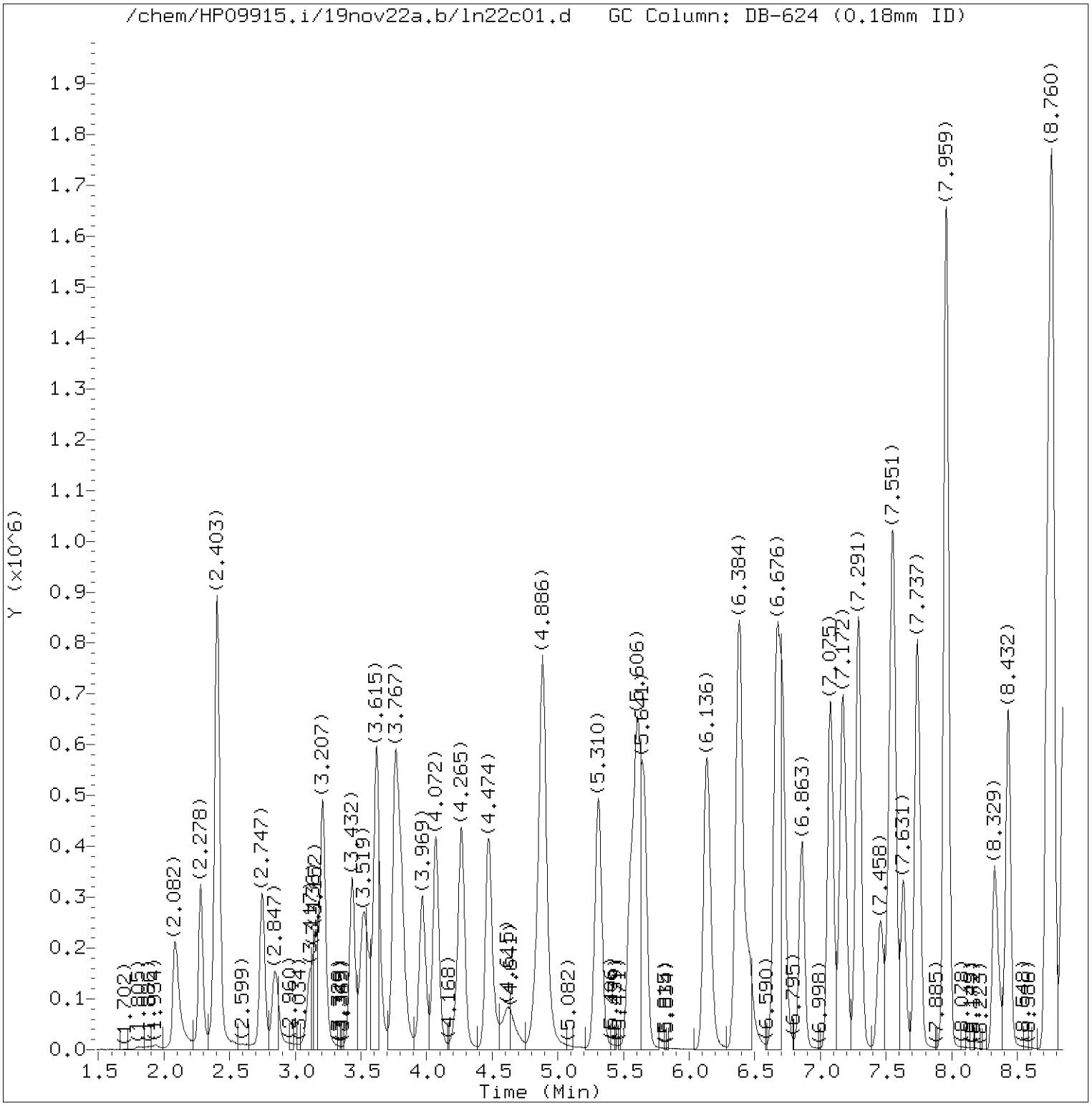
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: lcp00895

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: ln22t01.d
Spectrum: Avg. Scans 332-334 (4.85), Background Scan 320
Location of Maximum: 95.00
Number of points: 70

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	588	62.00	2503	82.00	289	130.00	254
37.00	2531	63.00	1872	87.00	2738	131.00	54
38.00	2252	64.00	251	88.00	2925	135.00	69
39.00	789	65.00	69	91.00	219	141.00	451
41.00	54	67.00	60	92.00	1554	143.00	530
44.00	192	68.00	6078	93.00	2614	146.00	50
45.00	524	69.00	5883	94.00	6831	148.00	65
47.00	732	70.00	543	95.00	69568	155.00	120
48.00	364	72.00	398	96.00	4567	172.00	97
49.00	2353	73.00	2541	97.00	72	173.00	394
50.00	10831	74.00	9215	104.00	192	174.00	56376
51.00	3530	75.00	30584	106.00	278	175.00	3741
52.00	149	76.00	2524	116.00	134	176.00	54680
55.00	205	77.00	391	117.00	315	177.00	3729
56.00	828	78.00	283	118.00	133	207.00	139
57.00	1498	79.00	1176	119.00	309	209.00	52
60.00	484	80.00	361	128.00	239		
61.00	2832	81.00	1203	129.00	61		



Total Ion Chromatogram (TIC)

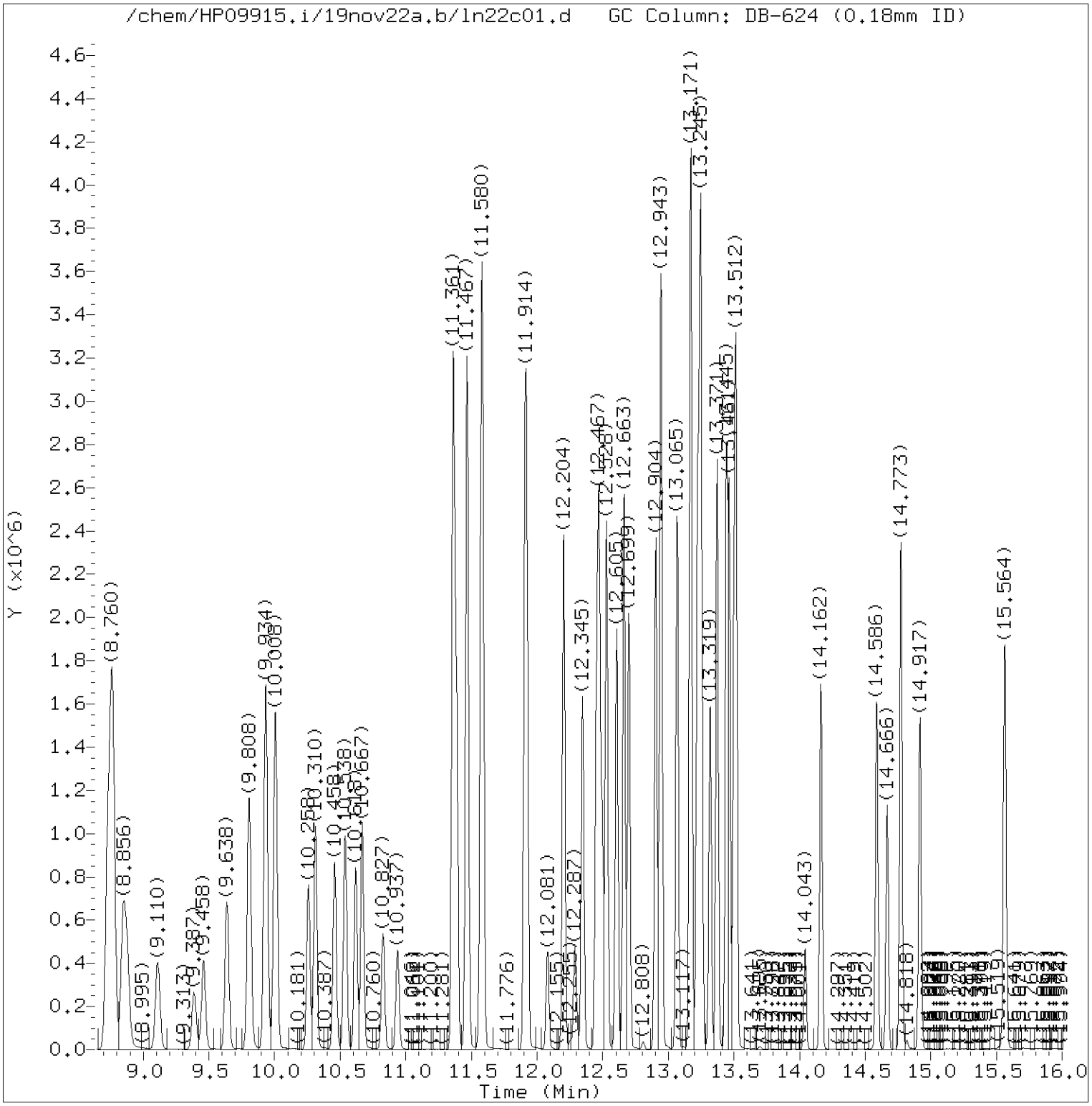
Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22c01.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 08:38 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-NOV-2019 08:56
Date, time and analyst ID of latest file update: 22-Nov-2019 09:50 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Linda C. Pape
on 11/22/2019 at 09:50.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22c01.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 08:38 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-NOV-2019 08:56
Date, time and analyst ID of latest file update: 22-Nov-2019 09:50 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Linda C. Pape
on 11/22/2019 at 09:50.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22c01.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 08:38 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-NOV-2019 08:56
Date, time and analyst ID of latest file update: 22-Nov-2019 09:50 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.085	85	480107	51.624
4) Chloromethane	(2)	2.278	50	467113	52.114
5) 1,3-Butadiene	(2)	2.403	39	462024M	62.080
6) Vinyl Chloride	(2)	2.403	62	460736	51.502
8) Bromomethane	(2)	2.751	94	315610	49.216
9) Chloroethane	(2)	2.844	64	246155	50.070
12) Trichlorofluoromethane	(2)	3.149	101	487002	50.565
11) n-Pentane	(2)	3.210	43	494430	43.441
14) Ethyl ether	(2)	3.432	59	322330	51.792
15) Freon 123a	(2)	3.522	67	359769	46.437
16) Acrolein	(1)	3.622	56	963559	488.675
17) 1,1-Dichloroethene	(2)	3.757	96	264521	46.792
17) 1,1-Dichloroethene	(2)	3.757	63	127800	45.093
19) Freon 113	(2)	3.796	101	299236	46.395
18) Acetone	(1)	3.802	58	86679	98.055
22) Methyl Iodide	(2)	3.966	142	536783	45.822
21) 2-Propanol	(1)	3.988	45	153178	241.040
23) Carbon Disulfide	(2)	4.069	76	1004958	47.173
27) Methyl Acetate	(2)	4.242	43	317491	43.605
25) Allyl Chloride	(2)	4.268	41	429111	42.314
28) Methylene Chloride	(2)	4.474	84	317453	47.181
29)*t-Butyl alcohol-d10	(1)	4.496	65	262815	250.000
30) t-Butyl alcohol	(1)	4.635	59	257760	232.955
31) Acrylonitrile	(2)	4.831	53	176552	45.071
32) trans-1,2-Dichloroethene	(2)	4.882	96	302128	46.199
33) Methyl Tertiary Butyl Ether	(2)	4.886	73	928155	43.238
34) n-Hexane	(2)	5.307	57	491211	48.278
36) 1,1-Dichloroethane	(2)	5.551	63	527039	46.197
38) di-Isopropyl ether	(2)	5.603	45	1009197	45.866
39) 2-Chloro-1,3-butadiene	(2)	5.654	53	465589	45.487
40) Ethyl t-butyl ether	(2)	6.130	59	953734	44.664
43) 1,2-Dichloroethene (Total)	(2)		96	639058	92.100
44) 2-Butanone	(2)	6.365	43	429492	85.413
42) cis-1,2-Dichloroethene	(2)	6.384	96	336930	45.901
45) 2,2-Dichloropropane	(2)	6.394	77	389356	43.903
47) Propionitrile	(1)	6.461	54	369058	267.693
48) Methacrylonitrile	(2)	6.664	67	503657	119.193
49) Bromochloromethane	(2)	6.709	128	175368	45.056

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Linda C. Pape
on 11/22/2019 at 09:50.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22c01.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 08:38 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-NOV-2019 08:56
Date, time and analyst ID of latest file update: 22-Nov-2019 09:50 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.718	71	124775	100.195
51) Chloroform	(2)	6.860	83	501440	45.955
52)$Dibromofluoromethane	(2)	7.069	113	314848	48.290
52)$Dibromofluoromethane	(2)	7.069	111	322112	48.454
53) 1,1,1-Trichloroethane	(2)	7.082	97	413632	44.414
54) Cyclohexane	(2)	7.175	56	585361	47.002
54) Cyclohexane	(2)	7.168	84	513063	47.426
54) Cyclohexane	(2)	7.172	69	181699	47.170
56) Carbon Tetrachloride	(2)	7.287	117	347264	43.965
55) 1,1-Dichloropropene	(2)	7.294	75	410868	45.549
58) Isobutyl Alcohol	(1)	7.455	41	223320	599.756
57)$1,2-Dichloroethane-d4	(2)	7.525	102	83330	50.148
57)$1,2-Dichloroethane-d4	(2)	7.525	65	360595	48.696
57)$1,2-Dichloroethane-d4	(2)	7.529	104	53039	49.972
60) Benzene	(2)	7.557	78	1277337	47.088
61) 1,2-Dichloroethane	(2)	7.635	62	392568	44.993
61) 1,2-Dichloroethane	(2)	7.625	98	40908	47.378
65) t-Amyl methyl ether	(2)	7.737	73	969568	45.237
67) n-Heptane	(2)	7.959	43	456641	48.042
66)*Fluorobenzene	(2)	7.959	96	1333599	50.000
69) n-Butanol	(1)	8.326	56	395221	1233.217
71) Trichloroethene	(2)	8.429	95	315861	46.245
72) Methylcyclohexane	(2)	8.731	83	578323	45.640
72) Methylcyclohexane	(2)	8.731	98	257555	44.918
73) 1,2-Dichloropropane	(2)	8.766	63	326056	47.336
76) Methyl Methacrylate	(2)	8.847	69	326052	48.950
75) 1,4-Dioxane	(1)	8.856	88	71141	807.628
74) Dibromomethane	(2)	8.876	93	210438	47.218
78) Bromodichloromethane	(2)	9.110	83	369412	46.191
79) 2-Nitropropane	(2)	9.387	41	206906	85.415
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	234520	79.274
81) cis-1,3-Dichloropropene	(2)	9.638	75	504747	47.520
82) 4-Methyl-2-pentanone	(2)	9.805	43	938996	88.469
83)$Toluene-d8	(3)	9.934	98	1399870	49.731
83)$Toluene-d8	(3)	9.934	100	905719	49.672
88) Toluene	(3)	10.008	92	818756	46.395
90) 1,3-Dichloropropene (total)	(3)		100	966997	93.663
89) trans-1,3-Dichloropropene	(3)	10.258	75	462250	46.143

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/22/2019 at 09:50.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22c01.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 08:38 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-NOV-2019 08:56
Date, time and analyst ID of latest file update: 22-Nov-2019 09:50 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	10.313	69	582663	47.859
92) 1,1,2-Trichloroethane	(3)	10.458	97	313908	46.917
93) Tetrachloroethene	(3)	10.538	166	327187	43.777
94) 1,3-Dichloropropane	(3)	10.618	76	537074	47.014
96) 2-Hexanone	(3)	10.670	43	686707	84.502
97) Dibromochloromethane	(3)	10.827	129	305385	44.557
99) 1,2-Dibromoethane	(3)	10.937	107	342972	47.206
100)*Chlorobenzene-d5	(3)	11.361	117	1075782	50.000
101) 1-Chlorohexane	(3)	11.364	91	422321	44.547
102) Chlorobenzene	(3)	11.387	112	915188	45.860
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	297047	45.177
104) Ethylbenzene	(3)	11.467	91	1555418	46.114
106) m+p-Xylene	(3)	11.580	106	1232704	92.900
108) Xylene (Total)	(3)		106	1832376	138.654
107) o-Xylene	(3)	11.908	106	599672	45.754
109) Styrene	(3)	11.921	104	1028422	47.484
110) Bromoform	(3)	12.081	173	203248	39.686
111) Isopropylbenzene	(3)	12.204	105	1515930	46.114
112) Cyclohexanone	(1)	12.287	55	202045	585.659
114)$4-Bromofluorobenzene	(3)	12.345	95	537673	50.445
114)$4-Bromofluorobenzene	(3)	12.348	174	432986	49.001
116) 1,1,2,2-Tetrachloroethane	(4)	12.448	83	513210	47.366
115) Bromobenzene	(4)	12.464	156	387943	45.002
118) trans-1,4-Dichloro-2-butene	(4)	12.474	53	248921	74.480
117) 1,2,3-Trichloropropane	(4)	12.496	110	150142	45.157
119) n-Propylbenzene	(4)	12.528	91	1772277	47.056
120) 2-Chlorotoluene	(4)	12.605	126	364305	45.531
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	1294166	47.282
121) 4-Chlorotoluene	(4)	12.699	126	378434	45.439
124) tert-Butylbenzene	(4)	12.904	134	257299	45.454
125) Pentachloroethane	(4)	12.940	167	217930	44.711
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	1363269	47.258
127) sec-Butylbenzene	(4)	13.065	105	1572289	46.548
129) 1,3-Dichlorobenzene	(4)	13.165	146	715864	45.190
130) p-Isopropyltoluene	(4)	13.171	119	1344190	45.999
131)*1,4-Dichlorobenzene-d4	(4)	13.220	152	573585	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	734802	44.744
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	1388657	45.444

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$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/22/2019 at 09:50.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22c01.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 08:38 Analyst ID: lcp00895

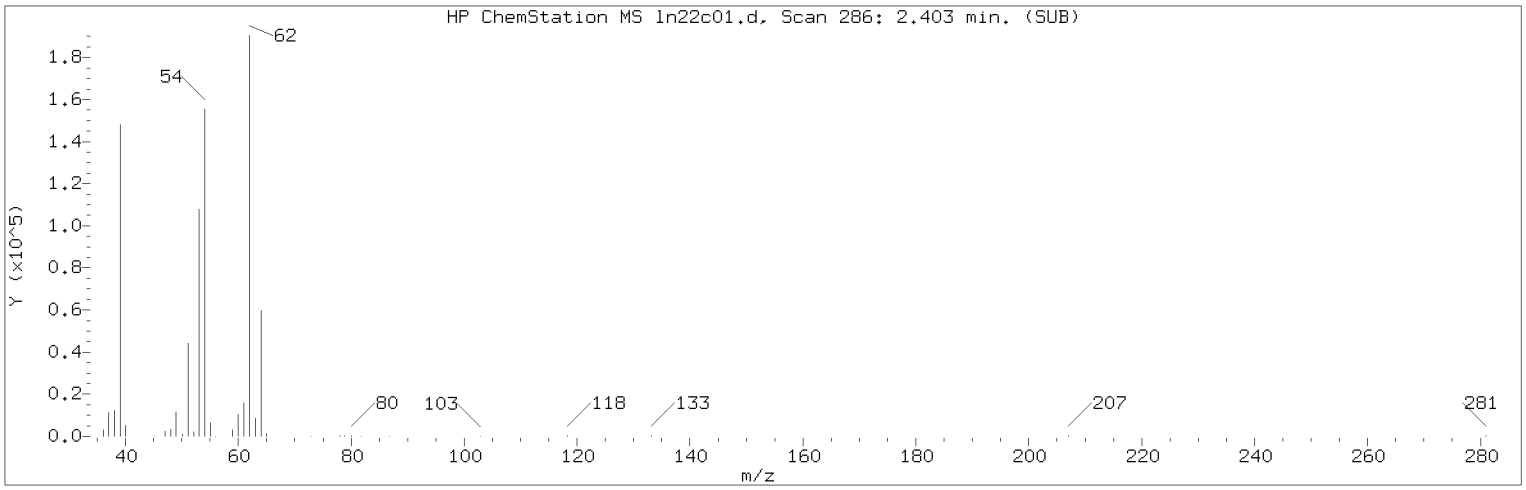
Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-NOV-2019 08:56
Date, time and analyst ID of latest file update: 22-Nov-2019 09:50 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

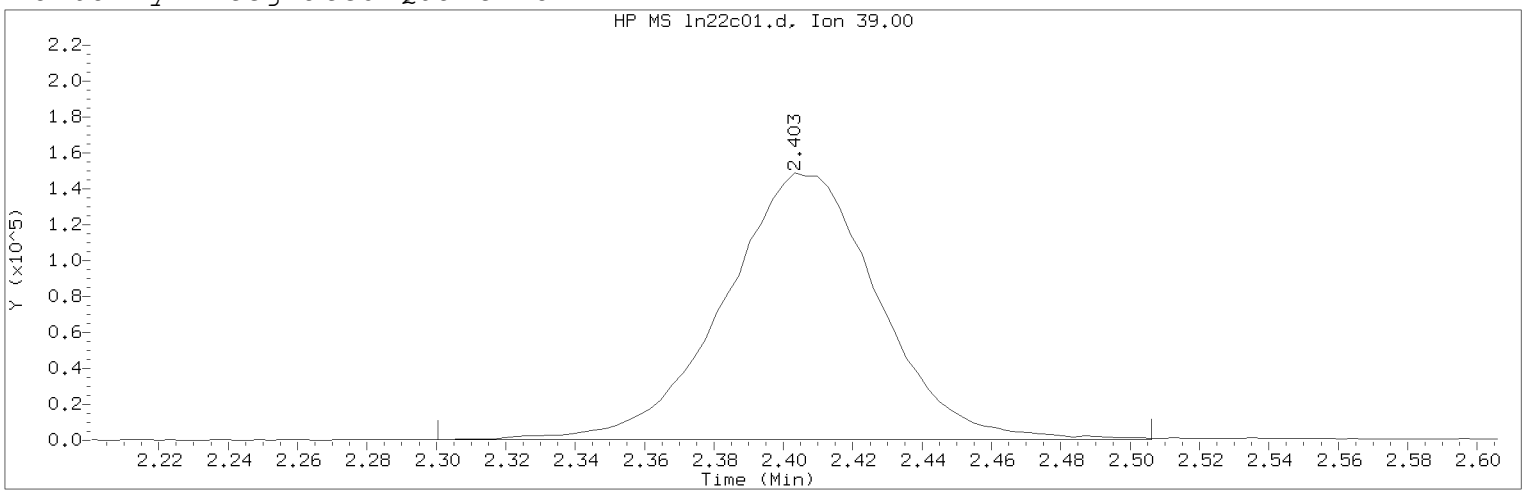
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.319	91	1052560	45.494
136) 1,3-Diethylbenzene	(4)	13.371	119	825108	43.387
141) Diethylbenzene (total)	(4)		100	2379922	129.449
137) 1,4-Diethylbenzene	(4)	13.441	119	856877	42.527
139) n-Butylbenzene	(4)	13.464	92	665758	44.558
138) 1,2-Dichlorobenzene	(4)	13.503	146	704250	45.053
140) 1,2-Diethylbenzene	(4)	13.515	119	697937	43.535
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	103445	43.613
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	488508	40.676
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	468472	40.118
147) Hexachlorobutadiene	(4)	14.666	225	187600	34.025
148) Naphthalene	(4)	14.773	128	1701690	45.329
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	457001	40.220
150) 2-Methylnaphthalene	(4)	15.564	142	938358	40.591

Digitally signed by Linda C. Pape
on 11/22/2019 at 09:50.
Target 3.5 esignature user ID: lcp00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov22a.b/ln22c01.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 08:38 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-NOV-2019 08:56
Date, time and analyst ID of latest file update: 22-Nov-2019 09:50 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

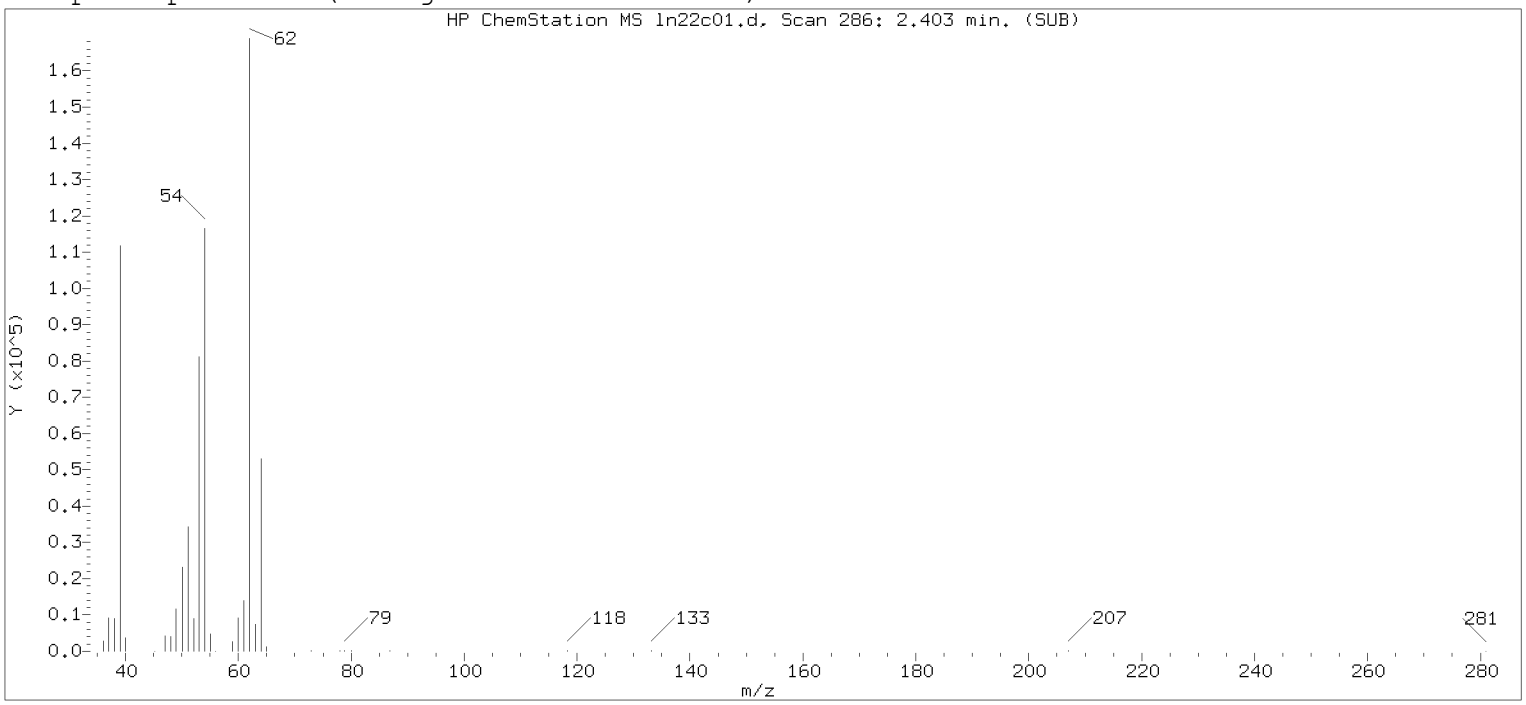
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 286
Retention Time (minutes): 2.403
Quant Ion : 39.00
Area (flag) : 462024M
On-Column Amount (ng) : 62.0799
Integration start scan : 253 Integration stop scan: 317
Y at integration start : 212 Y at integration end: 212

Reason for manual integration: improper integration

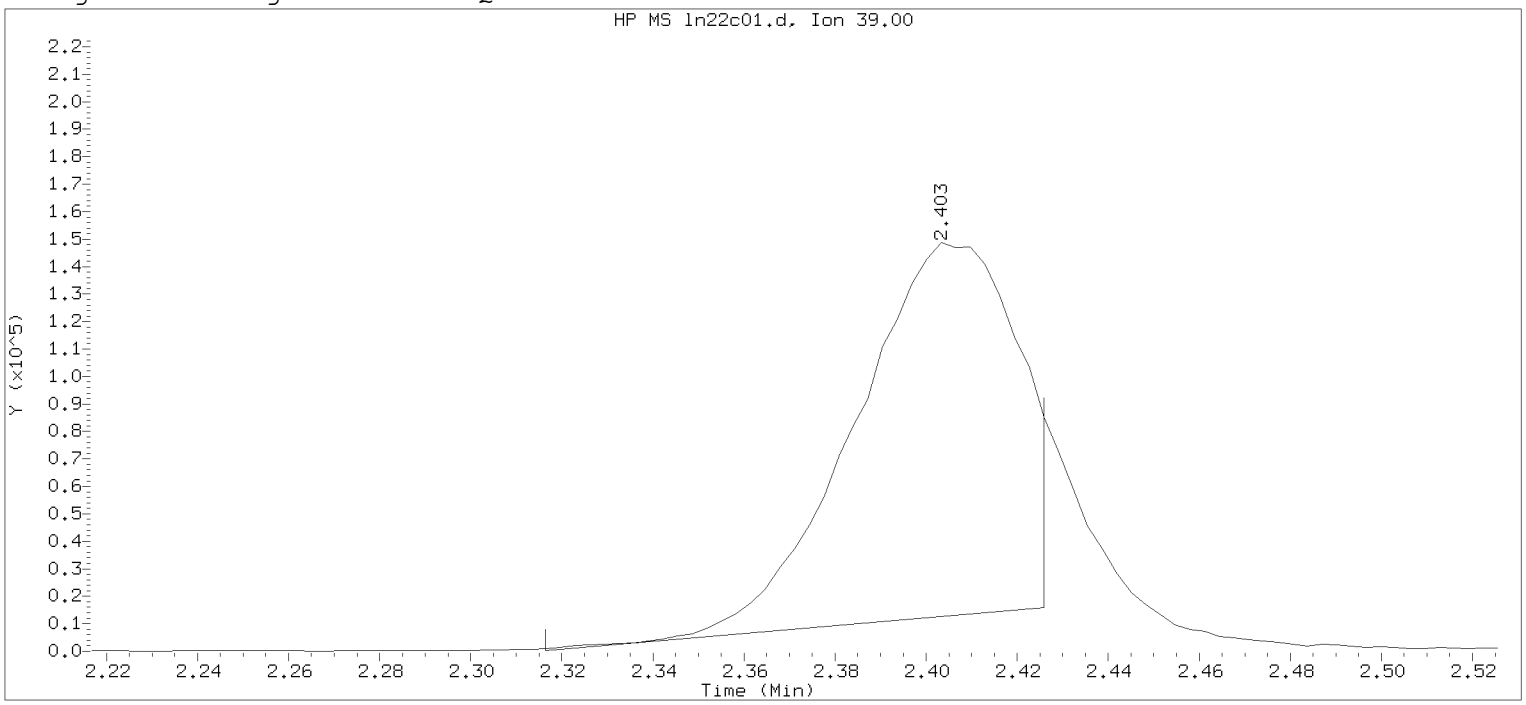
Analyst responsible for change: Digitally signed by Linda C. Pape
on 11/22/2019 at 09:50.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/24/2019 at 11:08.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov22a.b/ln22c01.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 08:38 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-NOV-2019 08:56
Date, time and analyst ID of latest file update: 22-Nov-2019 08:56 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 286
Retention Time (minutes): 2.403
Quant Ion : 39.00
Area : 334278
On-column Amount (ng) : 44.9153
Integration start scan : 258 Integration stop scan: 292
Y at integration start : 224 Y at integration end: 15792

Digitally signed by Linda C. Pape on 11/22/2019 at 09:50.
Target 3.5 esignature user ID: lcp00895

Data File: /chem/HP09915.i/19nov23a.b/ln23t02.d

Date : 23-NOV-2019 07:57

Client ID: aug-02-19

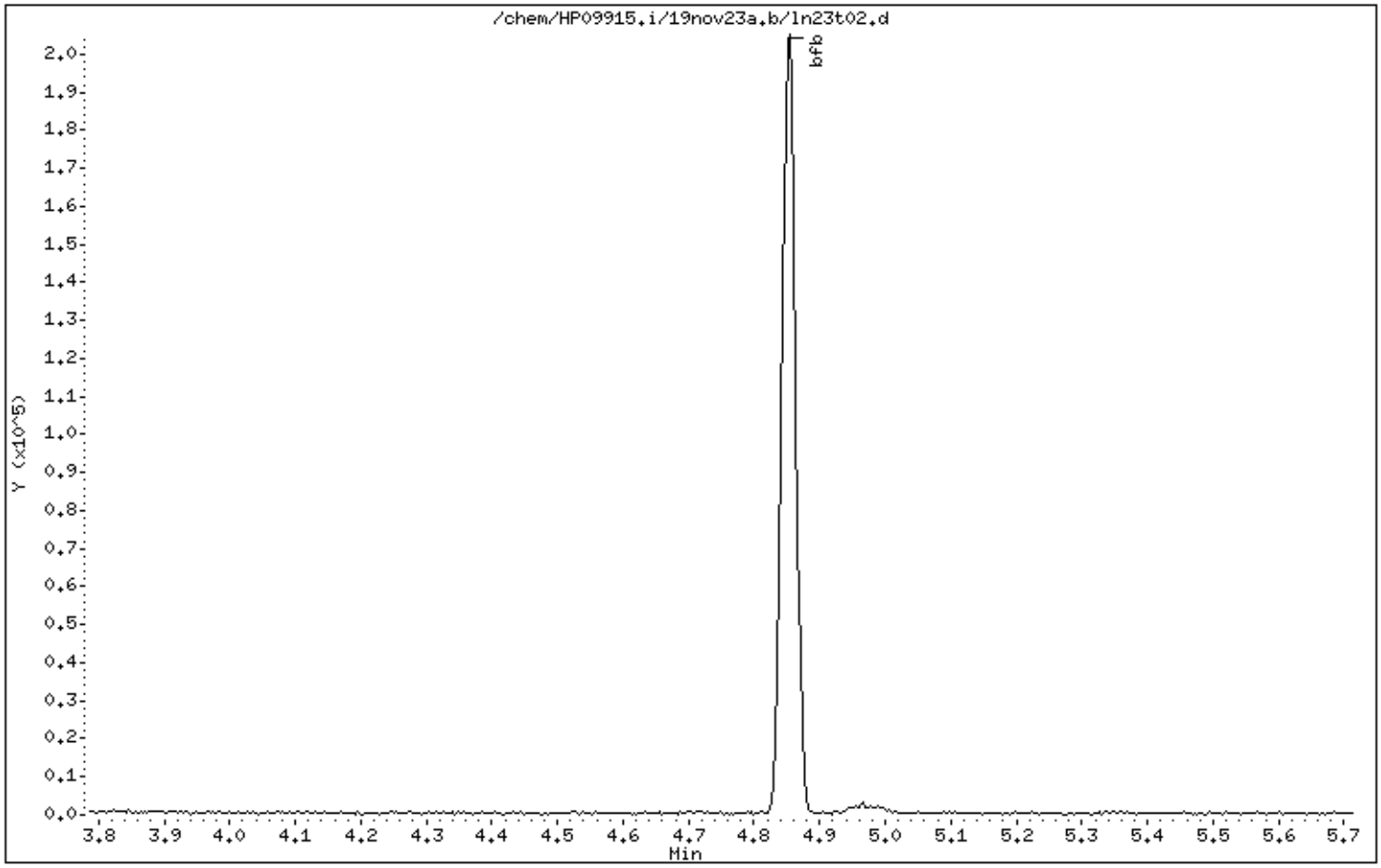
Instrument: HP09915.i

Sample Info: aug-02-19;50NGBFB;1;3;;;;;;

Operator: CLM27445

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem/HP09915.i/19nov23a.b/ln23t02.d

Date : 23-NOV-2019 07:57

Client ID: aug-02-19

Instrument: HP09915.i

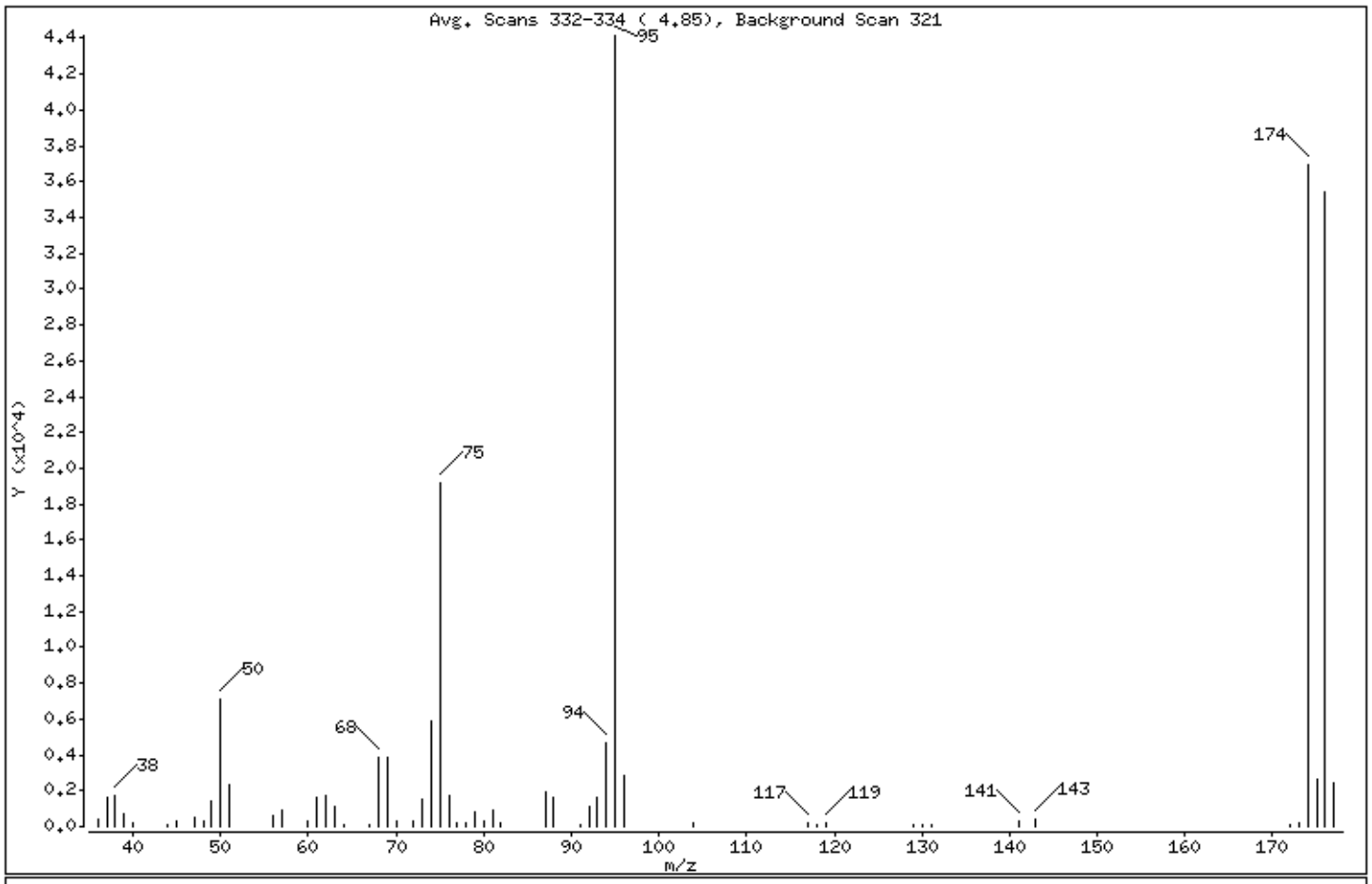
Sample Info: aug-02-19;50NGBFB;1;3;;;;;;

Operator: CLM27445

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.16
75	30.00 - 60.00% of mass 95	43.53
96	5.00 - 9.00% of mass 95	6.39
173	Less than 2.00% of mass 174	0.55 (0.66)
174	50.00 - 100.00% of mass 95	83.68
175	5.00 - 9.00% of mass 174	6.06 (7.25)
176	95.00 - 101.00% of mass 174	80.15 (95.78)
177	5.00 - 9.00% of mass 176	5.44 (6.78)

Date : 23-NOV-2019 07:57

Client ID: aug-02-19 Instrument: HP09915.i

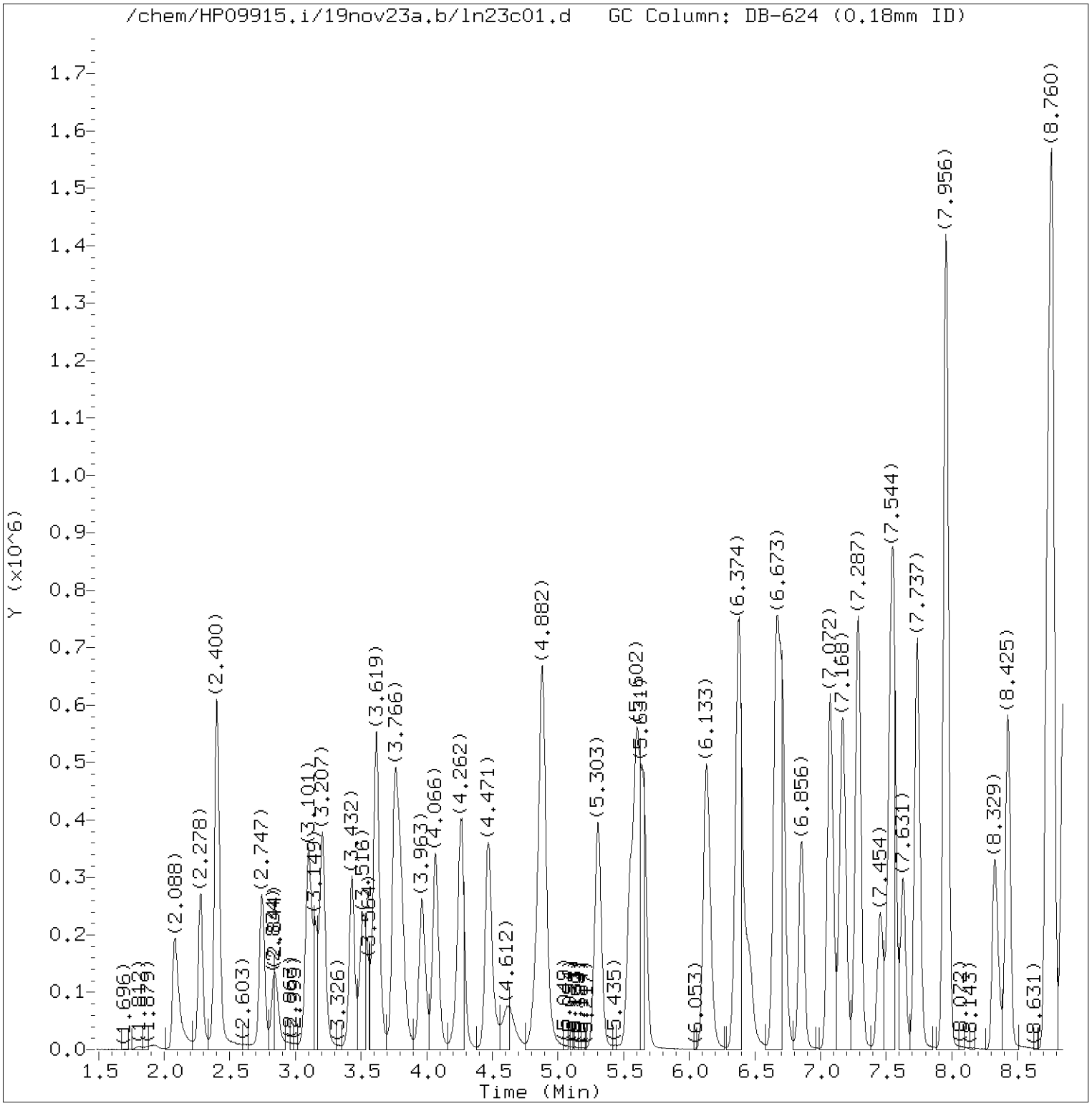
Sample Info: aug-02-19;50NGBFB;1;3;;;;;;

Operator: CLM27445

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: ln23t02.d
Spectrum: Avg. Scans 332-334 (4.85), Background Scan 321
Location of Maximum: 95.00
Number of points: 57

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	371	61.00	1626	79.00	835	119.00	198
37.00	1659	62.00	1729	80.00	340	129.00	55
38.00	1713	63.00	1142	81.00	937	130.00	83
39.00	697	64.00	132	82.00	206	131.00	58
40.00	168	67.00	144	87.00	1893	141.00	254
44.00	143	68.00	3907	88.00	1611	143.00	370
45.00	324	69.00	3810	91.00	54	172.00	143
47.00	460	70.00	306	92.00	1144	173.00	244
48.00	285	72.00	257	93.00	1645	174.00	36944
49.00	1402	73.00	1566	94.00	4717	175.00	2677
50.00	7136	74.00	5916	95.00	44152	176.00	35384
51.00	2379	75.00	19216	96.00	2820	177.00	2400
56.00	617	76.00	1741	104.00	191		
57.00	926	77.00	239	117.00	245		
60.00	342	78.00	218	118.00	59		



Total Ion Chromatogram (TIC)

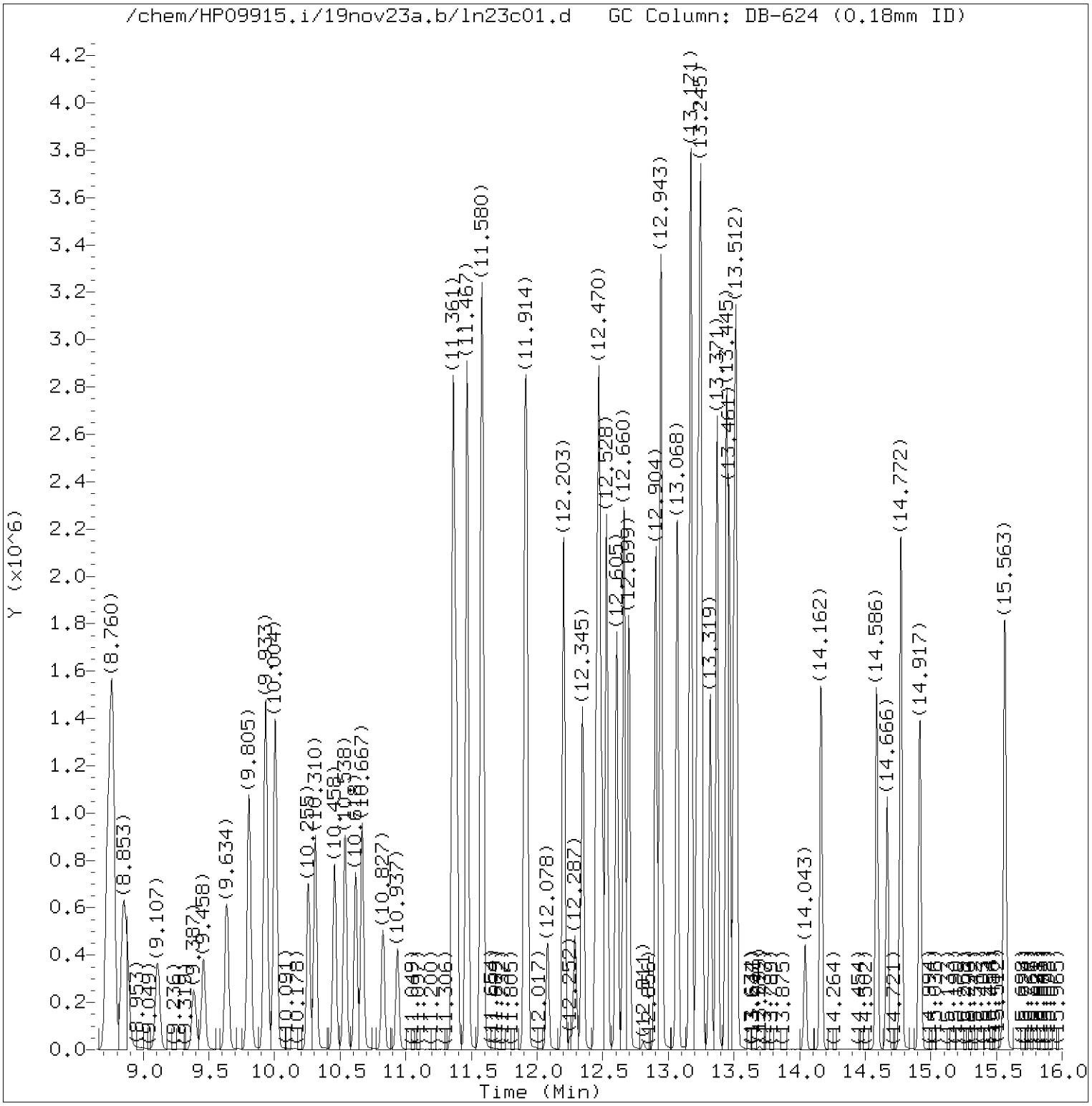
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.085	85	426647	54.170
4) Chloromethane	(2)	2.278	50	395979	52.166
6) Vinyl Chloride	(2)	2.400	62	390013	51.480
5) 1,3-Butadiene	(2)	2.406	39	259783	41.217
8) Bromomethane	(2)	2.741	94	276278	50.873
9) Chloroethane	(2)	2.844	64	209700	50.367
10) Dichlorofluoromethane	(2)	3.098	67	399390	39.860
12) Trichlorofluoromethane	(2)	3.149	101	448631	55.004
11) n-Pentane	(2)	3.204	43	360401	37.390
14) Ethyl ether	(2)	3.429	59	273084	51.813
15) Freon 123a	(2)	3.522	67	301358	45.931
16) Acrolein	(1)	3.615	56	841370	512.444
17) 1,1-Dichloroethene	(2)	3.754	96	215176	44.946
17) 1,1-Dichloroethene	(2)	3.754	63	105439	43.930
18) Acetone	(1)	3.795	58	77055	104.683
19) Freon 113	(2)	3.799	101	249953	45.761
22) Methyl Iodide	(2)	3.963	142	454457	45.809
21) 2-Propanol	(1)	3.985	45	132231	249.887
23) Carbon Disulfide	(2)	4.066	76	799496	44.315
27) Methyl Acetate	(2)	4.236	43	283759	46.019
25) Allyl Chloride	(2)	4.268	41	380893	44.350
28) Methylene Chloride	(2)	4.467	84	268162	47.062
29)*t-Butyl alcohol-d10	(1)	4.490	65	218843	250.000
30) t-Butyl alcohol	(1)	4.622	59	222936	241.966
31) Acrylonitrile	(2)	4.831	53	152489	45.967
33) Methyl Tertiary Butyl Ether	(2)	4.876	73	763776	42.014
32) trans-1,2-Dichloroethene	(2)	4.882	96	256465	46.307
34) n-Hexane	(2)	5.303	57	379461	44.038
36) 1,1-Dichloroethane	(2)	5.545	63	445094	46.069
38) di-Isopropyl ether	(2)	5.602	45	840159	45.088
39) 2-Chloro-1,3-butadiene	(2)	5.654	53	394866	45.553
40) Ethyl t-butyl ether	(2)	6.136	59	784651	43.390
43) 1,2-Dichloroethene (Total)	(2)		96	549419	93.434
44) 2-Butanone	(2)	6.361	43	374479	87.938
42) cis-1,2-Dichloroethene	(2)	6.377	96	292954	47.126
45) 2,2-Dichloropropane	(2)	6.390	77	342986	45.667
47) Propionitrile	(1)	6.451	54	325864	283.854
48) Methacrylonitrile	(2)	6.663	67	435635	121.737

* = Compound is an internal standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.702	128	166357	50.469
50) Tetrahydrofuran	(1)	6.718	71	109845	105.929
51) Chloroform	(2)	6.856	83	445256	48.184
52)$Dibromofluoromethane	(2)	7.072	113	275545	49.903
52)$Dibromofluoromethane	(2)	7.072	111	279116	49.578
53) 1,1,1-Trichloroethane	(2)	7.081	97	368717	46.750
54) Cyclohexane	(2)	7.168	56	471025	44.660
54) Cyclohexane	(2)	7.168	84	417552	45.576
54) Cyclohexane	(2)	7.175	69	147071	45.084
56) Carbon Tetrachloride	(2)	7.281	117	311124	46.511
55) 1,1-Dichloropropene	(2)	7.290	75	354863	46.453
58) Isobutyl Alcohol	(1)	7.454	41	199717	644.138
57)$1,2-Dichloroethane-d4	(2)	7.528	102	71008	50.460
57)$1,2-Dichloroethane-d4	(2)	7.528	65	321059	51.196
57)$1,2-Dichloroethane-d4	(2)	7.528	104	45768	50.919
60) Benzene	(2)	7.557	78	1092018	47.536
61) 1,2-Dichloroethane	(2)	7.631	62	354351	47.957
61) 1,2-Dichloroethane	(2)	7.628	98	35318	48.300
65) t-Amyl methyl ether	(2)	7.737	73	829046	45.675
66)*Fluorobenzene	(2)	7.956	96	1129387	50.000
67) n-Heptane	(2)	7.959	43	367404	45.643
69) n-Butanol	(1)	8.332	56	340740	1276.850
71) Trichloroethene	(2)	8.425	95	278257	48.106
72) Methylcyclohexane	(2)	8.728	83	505175	47.076
72) Methylcyclohexane	(2)	8.728	98	229307	47.222
73) 1,2-Dichloropropane	(2)	8.766	63	280113	48.019
76) Methyl Methacrylate	(2)	8.843	69	280393	49.707
75) 1,4-Dioxane	(1)	8.853	88	65102M	887.571
74) Dibromomethane	(2)	8.876	93	186925	49.526
78) Bromodichloromethane	(2)	9.107	83	331866	48.999
79) 2-Nitropropane	(2)	9.384	41	195731	95.412
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	213296	85.137
81) cis-1,3-Dichloropropene	(2)	9.634	75	449906	50.015
82) 4-Methyl-2-pentanone	(2)	9.805	43	820810	91.317
83)$Toluene-d8	(3)	9.933	98	1206568	48.944
83)$Toluene-d8	(3)	9.933	100	772586	48.381
88) Toluene	(3)	10.007	92	717271	46.410
90) 1,3-Dichloropropene (total)	(3)		100	872271	98.158

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.255	75	422365	48.142
91) Ethyl Methacrylate	(3)	10.310	69	501676	47.052
92) 1,1,2-Trichloroethane	(3)	10.458	97	279687	47.732
93) Tetrachloroethene	(3)	10.535	166	299047	45.688
94) 1,3-Dichloropropane	(3)	10.618	76	472234	47.202
96) 2-Hexanone	(3)	10.667	43	608236	85.463
97) Dibromochloromethane	(3)	10.827	129	287076	47.827
99) 1,2-Dibromoethane	(3)	10.937	107	305899	48.076
100)*Chlorobenzene-d5	(3)	11.358	117	942140	50.000
101) 1-Chlorohexane	(3)	11.364	91	357494	43.058
102) Chlorobenzene	(3)	11.387	112	823619	47.126
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	270952	47.053
104) Ethylbenzene	(3)	11.467	91	1388430	47.002
106) m+p-Xylene	(3)	11.580	106	1100827	94.730
108) Xylene (Total)	(3)		106	1640642	141.759
107) o-Xylene	(3)	11.908	106	539815	47.029
109) Styrene	(3)	11.920	104	921222	48.568
110) Bromoform	(3)	12.081	173	201677	44.966
111) Isopropylbenzene	(3)	12.203	105	1358883	47.200
112) Cyclohexanone	(1)	12.287	55	195406	680.224
114)$4-Bromofluorobenzene	(3)	12.345	95	475891	50.982
114)$4-Bromofluorobenzene	(3)	12.348	174	390248	50.429
116) 1,1,2,2-Tetrachloroethane	(4)	12.448	83	453102	45.942
115) Bromobenzene	(4)	12.464	156	353786	45.087
118) trans-1,4-Dichloro-2-butene	(4)	12.474	53	332260	109.220
117) 1,2,3-Trichloropropane	(4)	12.496	110	138812	45.867
119) n-Propylbenzene	(4)	12.528	91	1592058	46.440
120) 2-Chlorotoluene	(4)	12.609	126	331322	45.493
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	1173871	47.117
121) 4-Chlorotoluene	(4)	12.699	126	345450	45.569
124) tert-Butylbenzene	(4)	12.904	134	230705M	44.776
125) Pentachloroethane	(4)	12.937	167	213232	48.061
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	1234172	47.002
127) sec-Butylbenzene	(4)	13.068	105	1409138	45.832
129) 1,3-Dichlorobenzene	(4)	13.168	146	656157	45.506
130) p-Isopropyltoluene	(4)	13.171	119	1218604	45.814
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	522095	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	675899	45.217

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	1347453	48.445
135) Benzyl Chloride	(4)	13.319	91	969998	46.061
136) 1,3-Diethylbenzene	(4)	13.371	119	799617	46.193
141) Diethylbenzene (total)	(4)		100	2318753	138.613
137) 1,4-Diethylbenzene	(4)	13.441	119	834323	45.492
139) n-Butylbenzene	(4)	13.464	92	599219	44.060
138) 1,2-Dichlorobenzene	(4)	13.502	146	651315	45.776
140) 1,2-Diethylbenzene	(4)	13.515	119	684813	46.929
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	99289	45.989
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	452085	41.356
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	430638	40.515
147) Hexachlorobutadiene	(4)	14.666	225	175764	35.022
148) Naphthalene	(4)	14.772	128	1577744	46.172
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	424272	41.022
150) 2-Methylnaphthalene	(4)	15.563	142	908098	43.156

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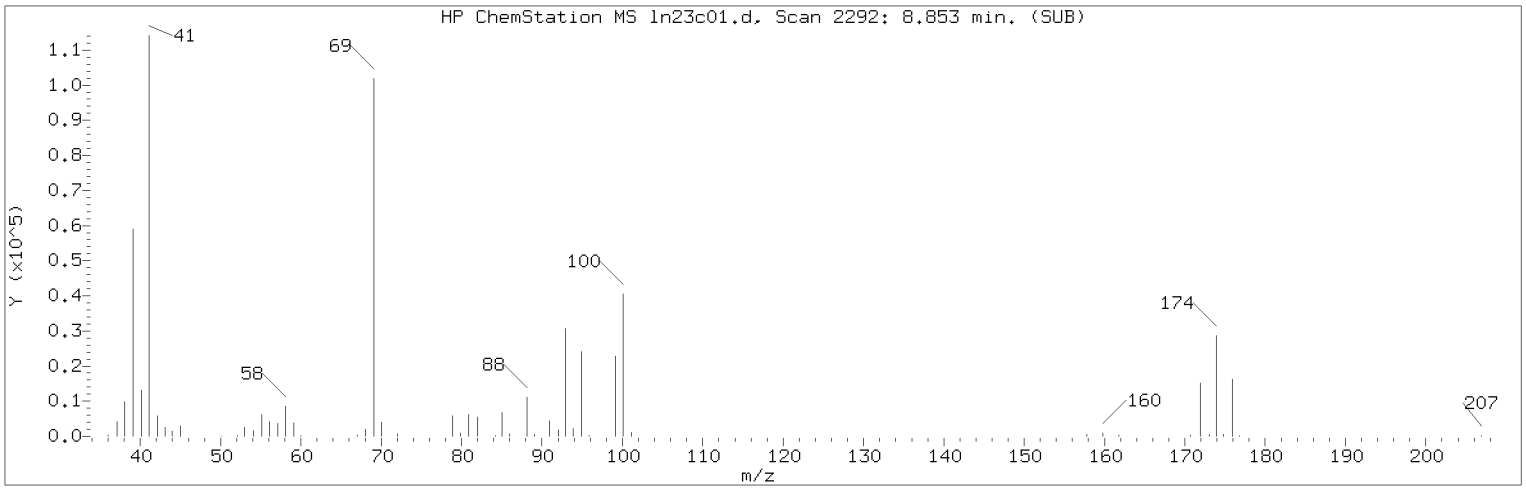
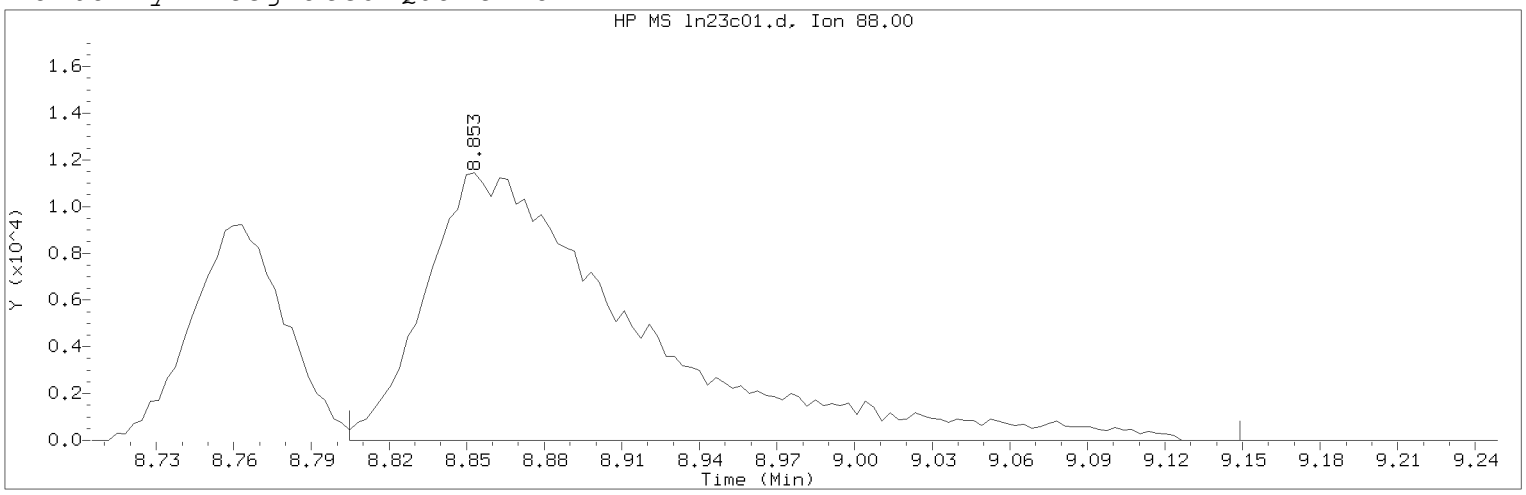
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

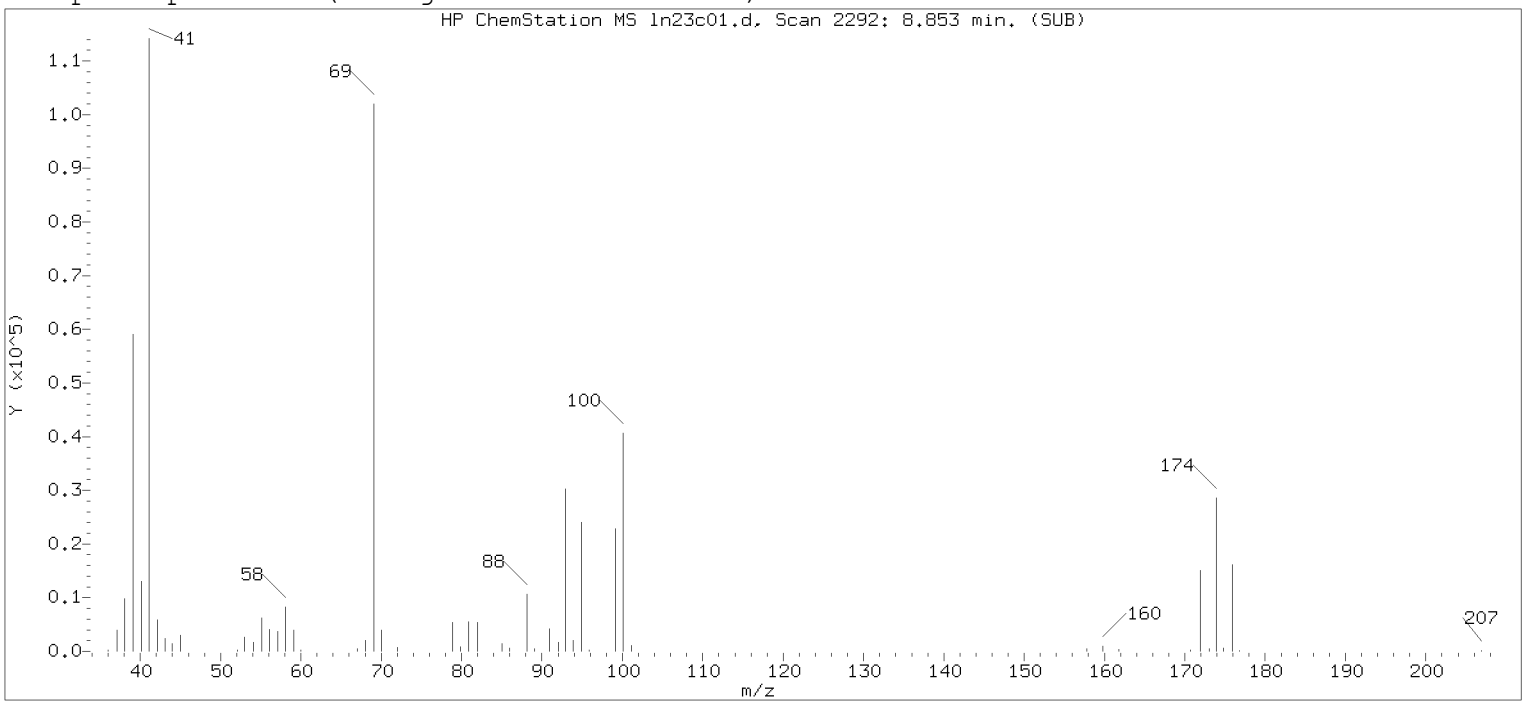
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area (flag) : 65102M
On-Column Amount (ng) : 887.5715
Integration start scan : 2276 Integration stop scan: 2383
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

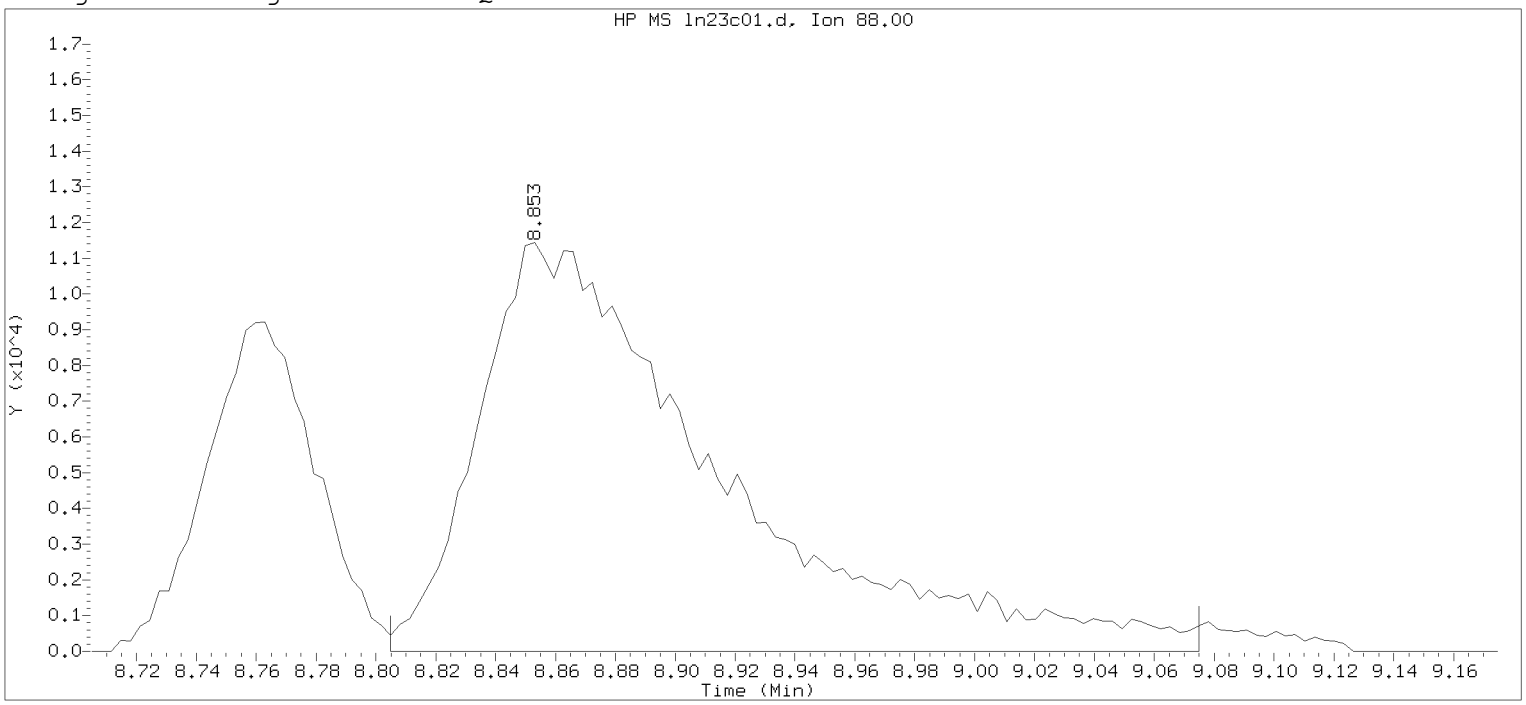
Analyst responsible for change: Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:45.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

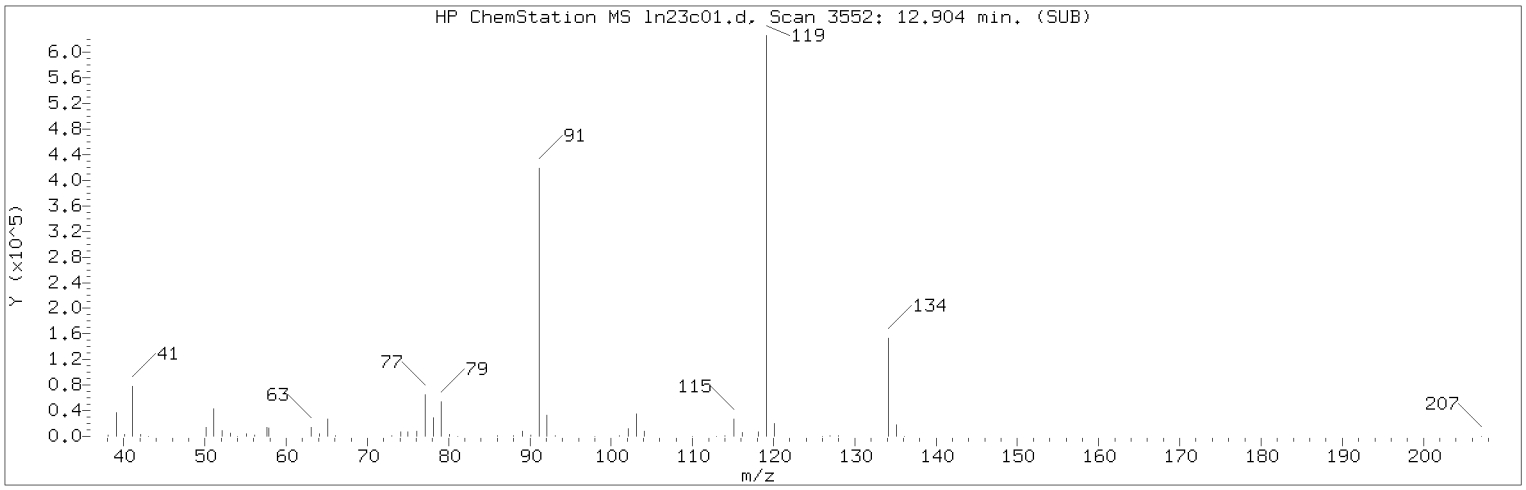
Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 08:59
Date, time and analyst ID of latest file update: 23-Nov-2019 08:59 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

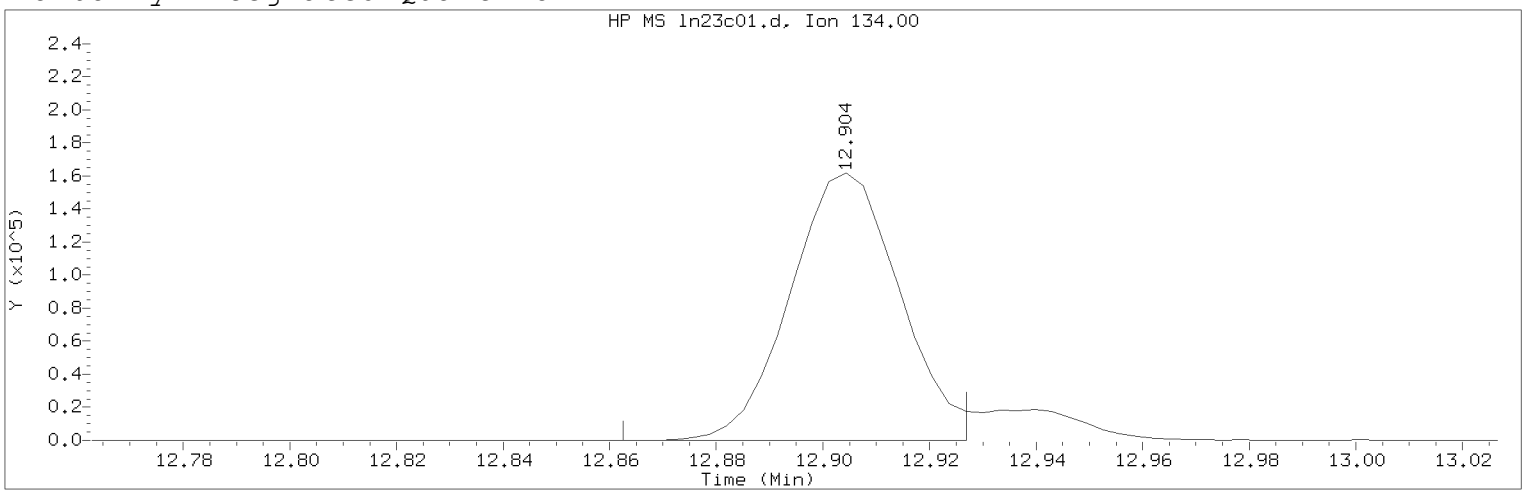
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area : 63644
On-column Amount (ng) : 867.7000
Integration start scan : 2276 Integration stop scan: 2360
Y at integration start : 0 Y at integration end: 0

Digitally signed by Corie L. Mellinger on 11/23/2019 at 09:09.
Target 3.5 esignature user: CLM27445

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

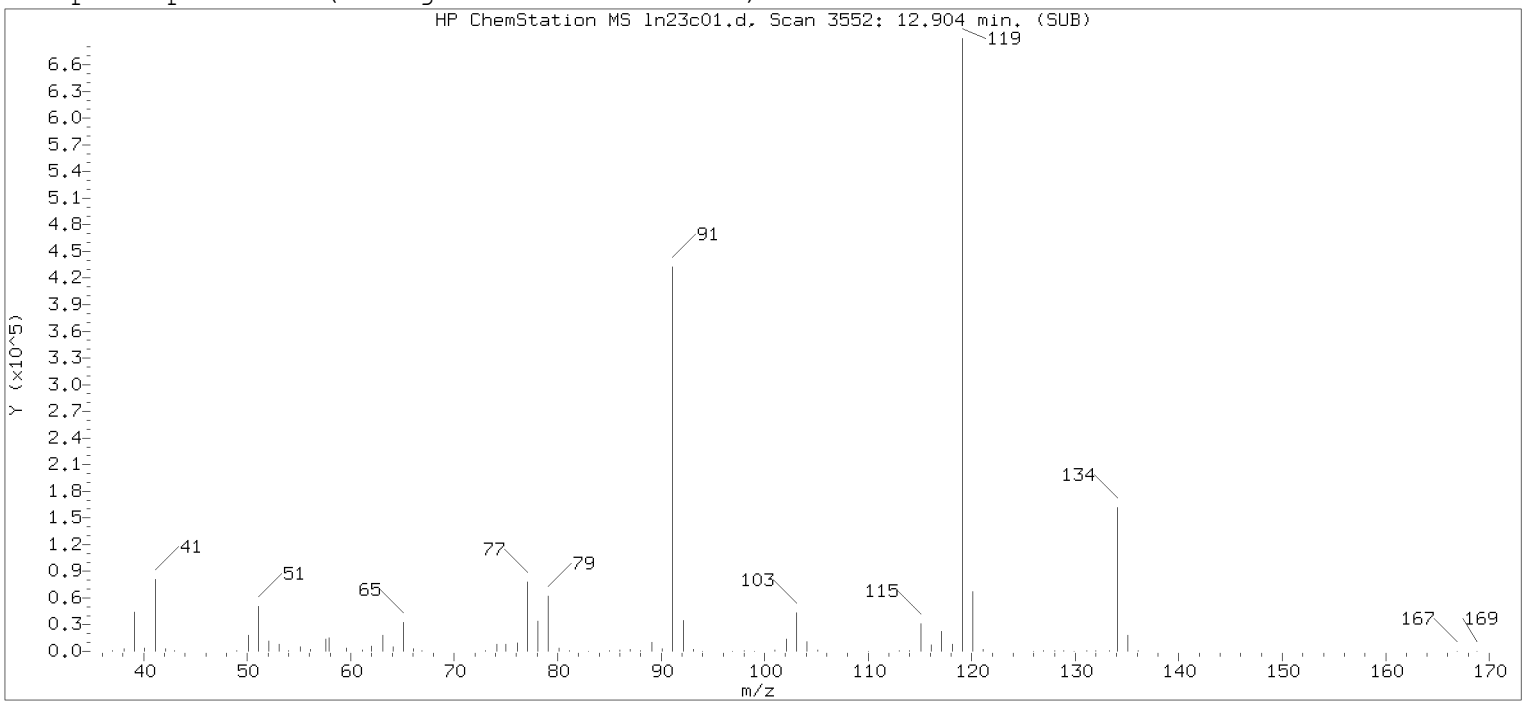
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 230705M
On-Column Amount (ng) : 44.7756
Integration start scan : 3538 Integration stop scan: 3558
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

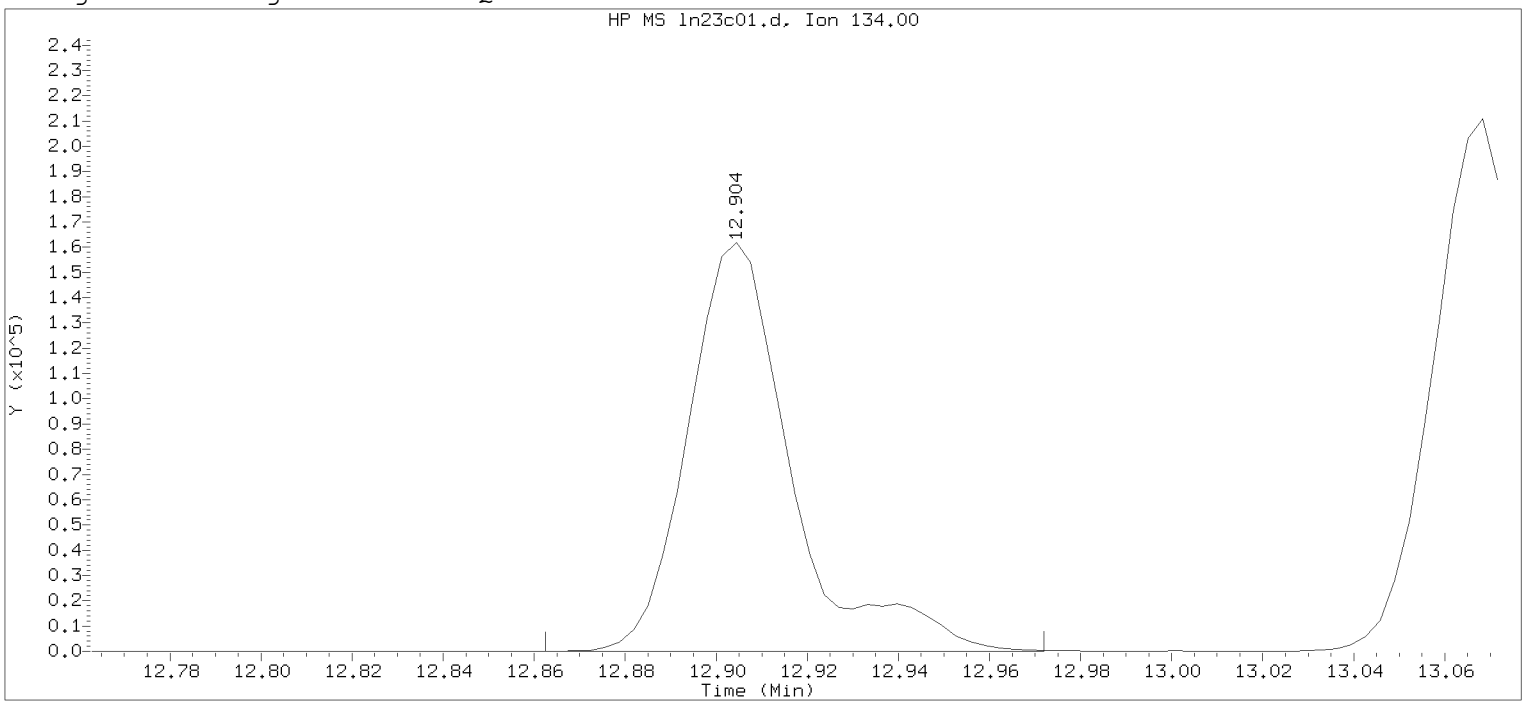
Analyst responsible for change: Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:45.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 08:59
Date, time and analyst ID of latest file update: 23-Nov-2019 08:59 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 255483
On-column Amount (ng) : 49.5846
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Corie L. Mellinger on 11/23/2019 at 09:09.
Target 3.5 esignature user: CLM27445

Raw QC Data

Volatiles by GC/MS

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov22a.b/ln22b05.d
Injection date and time: **22-NOV-2019 10:07**
Data file Sample Info. Line: VBLKL86;VBLKL86;1;3;;;;;;
Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 11:17 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.503	(-0.006)	939	65	256566	(-2)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	1310742	(-2)	50.00	
100) Chlorobenzene-d5	11.361	(0.000)	3072	117	1059508	(-2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.219	(0.000)	3650	152	558840	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(-0.001)	113	303488	47.359	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.532	(-0.001)	102	82856	50.733	101%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	1357743	48.976	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.348	(0.000)	95	519370	49.476	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)				Not Detected					0.2	1
4) Chloromethane	(2)				Not Detected					0.2	1
5) 1,3-Butadiene	(2)				Not Detected					1	3
6) Vinyl Chloride	(2)				Not Detected					0.2	1
8) Bromomethane	(2)				Not Detected					0.3	1
9) Chloroethane	(2)				Not Detected					0.2	1
11) n-Pentane	(2)				Not Detected					0.4	10
12) Trichlorofluoromethane	(2)				Not Detected					0.2	1
14) Ethyl ether	(2)				Not Detected					0.2	5
15) Freon 123a	(2)				Not Detected					0.4	5
16) Acrolein	(1)				Not Detected					2	100
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
21) 2-Propanol	(1)				Not Detected					18	100
22) Methyl Iodide	(2)				Not Detected					0.2	1
23) Carbon Disulfide	(2)				Not Detected					0.2	5
25) Allyl Chloride	(2)				Not Detected					0.3	5
27) Methyl Acetate	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
30) t-Butyl alcohol	(1)				Not Detected					12	50
31) Acrylonitrile	(2)				Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.2	1
34) n-Hexane	(2)				Not Detected					2	5
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
38) di-Isopropyl ether	(2)				Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)				Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)				Not Detected					0.4	2

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov22a.b/ln22b05.d Injection date and time: **22-NOV-2019 10:07**
Data file Sample Info. Line: VBLKL86;VBLKL86;1;3;;;;;; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 11:17 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)				Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					1	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
72) Methylcyclohexane	(2)				Not Detected					0.5	5
73) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
74) Dibromomethane	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
76) Methyl Methacrylate	(2)				Not Detected					0.2	5
78) Bromodichloromethane	(2)				Not Detected					0.2	1
79) 2-Nitropropane	(2)				Not Detected					0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
81) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
82) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
88) Toluene	(3)				Not Detected					0.2	1
89) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
90) 1,3-Dichloropropene (total)	(3)				Not Detected					0.4	2
91) Ethyl Methacrylate	(3)				Not Detected					0.2	5
92) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
94) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
96) 2-Hexanone	(3)				Not Detected					0.3	10
97) Dibromochloromethane	(3)				Not Detected					0.2	1
99) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
101) 1-Chlorohexane	(3)				Not Detected					0.3	5
102) Chlorobenzene	(3)				Not Detected					0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
109) Styrene	(3)				Not Detected					0.2	5
110) Bromoform	(3)				Not Detected					1	4
111) Isopropylbenzene	(3)				Not Detected					0.2	5
112) Cyclohexanone	(1)				Not Detected					25	100
115) Bromobenzene	(4)				Not Detected					0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
117) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
118) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50
119) n-Propylbenzene	(4)				Not Detected					0.2	5

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov22a.b/ln22b05.d Injection date and time: **22-NOV-2019 10:07**
Data file Sample Info. Line: VBLKL86;VBLKL86;1;3;;;;;; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 11:17 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

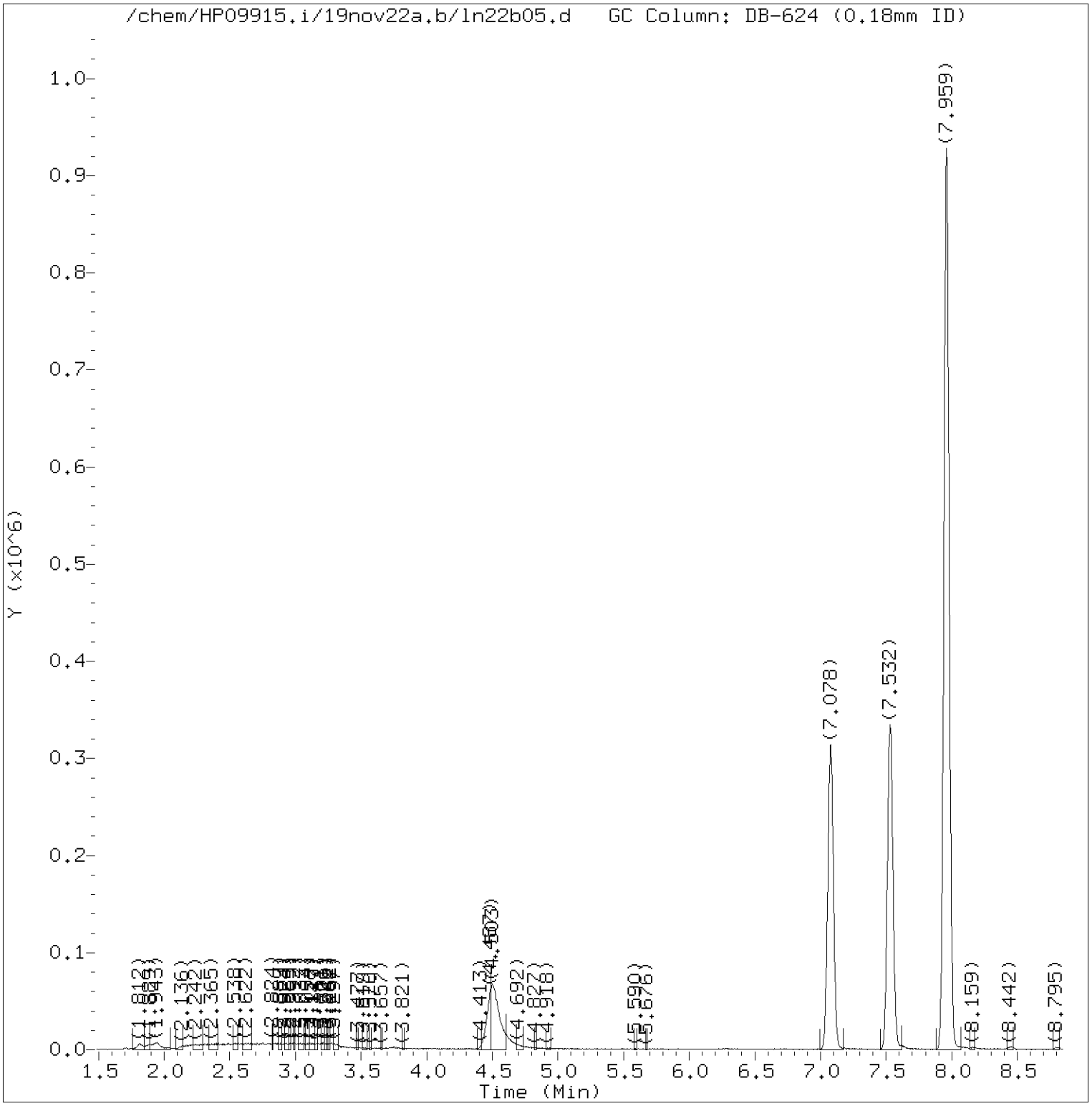
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)				Not Detected					0.2	5
121) 4-Chlorotoluene	(4)				Not Detected					0.2	5
122) 1,3,5-Trimethylbenzene	(4)				Not Detected					0.3	5
124) tert-Butylbenzene	(4)				Not Detected					0.3	5
125) Pentachloroethane	(4)				Not Detected					0.2	5
126) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5
127) sec-Butylbenzene	(4)				Not Detected					0.2	5
129) 1,3-Dichlorobenzene	(4)				Not Detected					0.2	5
130) p-Isopropyltoluene	(4)				Not Detected					0.2	5
133) 1,4-Dichlorobenzene	(4)				Not Detected					0.2	5
134) 1,2,3-Trimethylbenzene	(4)				Not Detected					0.3	5
135) Benzyl Chloride	(4)				Not Detected					1	5
136) 1,3-Diethylbenzene	(4)				Not Detected					0.2	5
137) 1,4-Diethylbenzene	(4)				Not Detected					0.2	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
139) n-Butylbenzene	(4)				Not Detected					0.2	5
140) 1,2-Diethylbenzene	(4)				Not Detected					0.2	5
141) Diethylbenzene (total)	(4)				Not Detected					0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.3	5
144) 1,3,5-Trichlorobenzene	(4)				Not Detected					0.2	5
146) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	5
147) Hexachlorobutadiene	(4)				Not Detected					2	5
148) Naphthalene	(4)				Not Detected					1	5
149) 1,2,3-Trichlorobenzene	(4)				Not Detected					0.4	5
150) 2-Methylnaphthalene	(4)				Not Detected					2	4

Total number of targets = 110

Digitally signed by Linda C. Pape on 11/22/2019 at 11:18. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:02. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

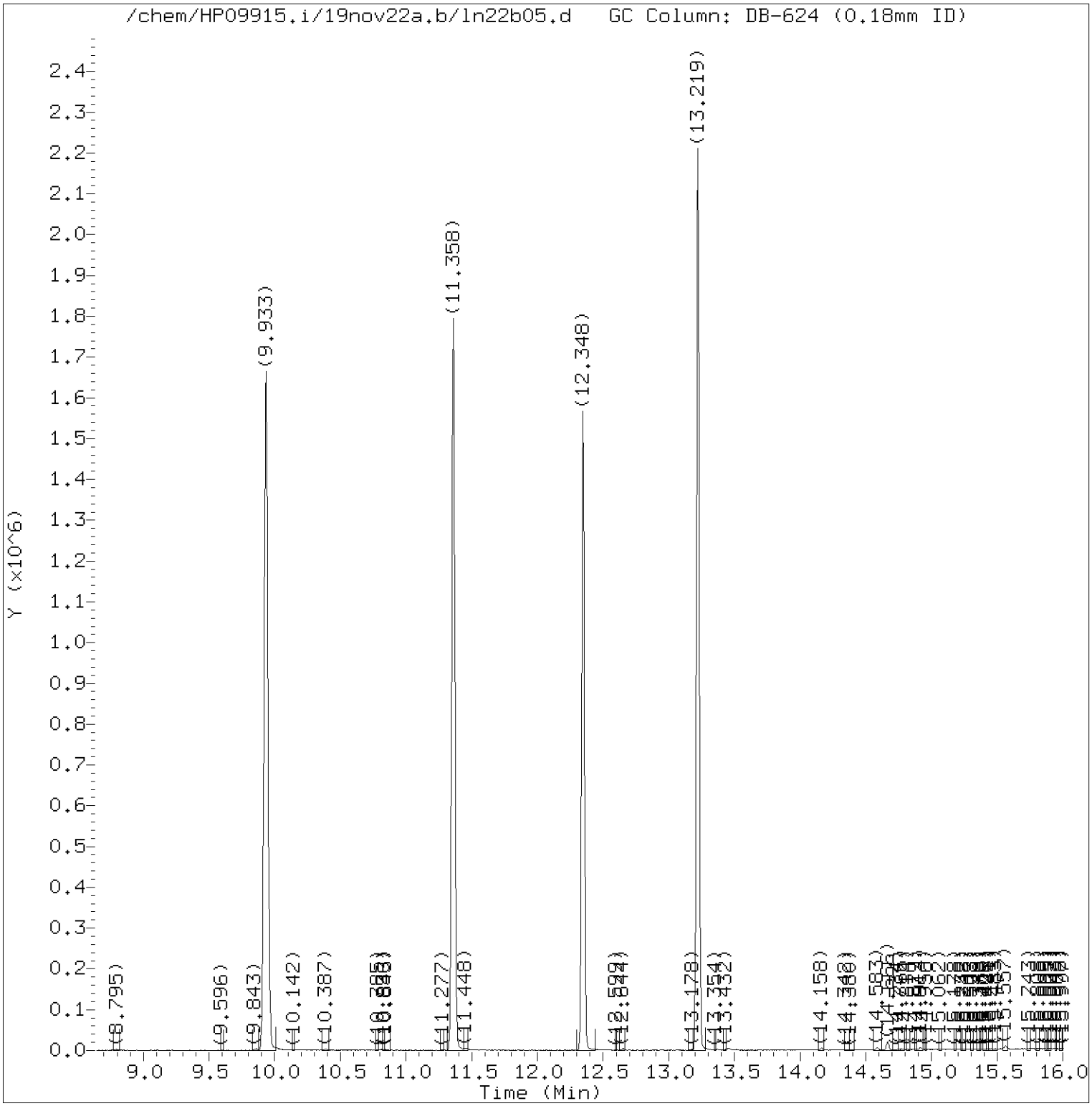
Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22b05.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 10:07 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:17 lcp00895

Sample Name: VBLKL86 Lab Sample ID: VBLKL86

Digitally signed by Linda C. Pape
on 11/22/2019 at 11:18.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22b05.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 10:07 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:17 lcp00895

Sample Name: VBLKL86 Lab Sample ID: VBLKL86

Digitally signed by Linda C. Pape
on 11/22/2019 at 11:18.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22b05.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 10:07 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:17 lcp00895

Sample Name: VBLKL86 Lab Sample ID: VBLKL86

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.503	65	256566	250.000
52)$Dibromofluoromethane	(2)	7.075	113	303488	47.359
57)$1,2-Dichloroethane-d4	(2)	7.532	102	82856	50.733
66)*Fluorobenzene	(2)	7.959	96	1310742	50.000
83)$Toluene-d8	(3)	9.933	98	1357743	48.976
100)*Chlorobenzene-d5	(3)	11.361	117	1059508	50.000
114)$4-Bromofluorobenzene	(3)	12.348	95	519370	49.476
131)*1,4-Dichlorobenzene-d4	(4)	13.219	152	558840	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/22/2019 at 11:18.
Target 3.5 esignature user ID: lcp00895

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKL87

Data file: /chem/HP09915.i/19nov23a.b/ln23b01.d
Data file Sample Info. Line: VBLKL87;VBLKL87;1;3;;;;;;
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Injection date and time: **23-NOV-2019 09:48**
Instrument ID: **HP09915.i** Batch: **L193271AA**

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493	(-0.003)	936	65	224793	(3)	250.00	
66) Fluorobenzene	7.953	(0.003)	2012	96	1154568	(2)	50.00	
100) Chlorobenzene-d5	11.358	(0.000)	3071	117	947038	(1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.220	(0.003)	3650	152	506608	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(-0.001)	113	273712	48.490	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	73640	51.189	102%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	1203589	48.571	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	460603	49.089	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)				Not Detected					0.2	1
4) Chloromethane	(2)				Not Detected					0.2	1
5) 1,3-Butadiene	(2)				Not Detected					1	3
6) Vinyl Chloride	(2)				Not Detected					0.2	1
8) Bromomethane	(2)				Not Detected					0.3	1
9) Chloroethane	(2)				Not Detected					0.2	1
11) n-Pentane	(2)				Not Detected					0.4	10
12) Trichlorofluoromethane	(2)				Not Detected					0.2	1
14) Ethyl ether	(2)				Not Detected					0.2	5
15) Freon 123a	(2)				Not Detected					0.4	5
16) Acrolein	(1)				Not Detected					2	100
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
21) 2-Propanol	(1)				Not Detected					18	100
22) Methyl Iodide	(2)				Not Detected					0.2	1
23) Carbon Disulfide	(2)				Not Detected					0.2	5
25) Allyl Chloride	(2)				Not Detected					0.3	5
27) Methyl Acetate	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
30) t-Butyl alcohol	(1)				Not Detected					12	50
31) Acrylonitrile	(2)				Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.2	1
34) n-Hexane	(2)				Not Detected					2	5
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
38) di-Isopropyl ether	(2)				Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)				Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)				Not Detected					0.4	2

Digitally signed by Linda C. Pape on 11/25/2019 at 13:55. Target 3.5 esignature user ID: lcp00895

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23b01.d Injection date and time: **23-NOV-2019 09:48**
Data file Sample Info. Line: VBLKL87;VBLKL87;1;3;;;;;; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)				Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					1	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
72) Methylcyclohexane	(2)				Not Detected					0.5	5
73) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
74) Dibromomethane	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
76) Methyl Methacrylate	(2)				Not Detected					0.2	5
78) Bromodichloromethane	(2)				Not Detected					0.2	1
79) 2-Nitropropane	(2)				Not Detected					0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
81) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
82) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
88) Toluene	(3)				Not Detected					0.2	1
89) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
90) 1,3-Dichloropropene (total)	(3)				Not Detected					0.4	2
91) Ethyl Methacrylate	(3)				Not Detected					0.2	5
92) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
94) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
96) 2-Hexanone	(3)				Not Detected					0.3	10
97) Dibromochloromethane	(3)				Not Detected					0.2	1
99) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
101) 1-Chlorohexane	(3)				Not Detected					0.3	5
102) Chlorobenzene	(3)				Not Detected					0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
109) Styrene	(3)				Not Detected					0.2	5
110) Bromoform	(3)				Not Detected					1	4
111) Isopropylbenzene	(3)				Not Detected					0.2	5
112) Cyclohexanone	(1)				Not Detected					25	100
115) Bromobenzene	(4)				Not Detected					0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
117) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
118) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50
119) n-Propylbenzene	(4)				Not Detected					0.2	5

Digitally signed by Linda C. Pape on 11/25/2019 at 13:55. Target 3.5 esignature user ID: lcp00895

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23b01.d Injection date and time: **23-NOV-2019 09:48**
Data file Sample Info. Line: VBLKL87;VBLKL87;1;3;;;;;; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

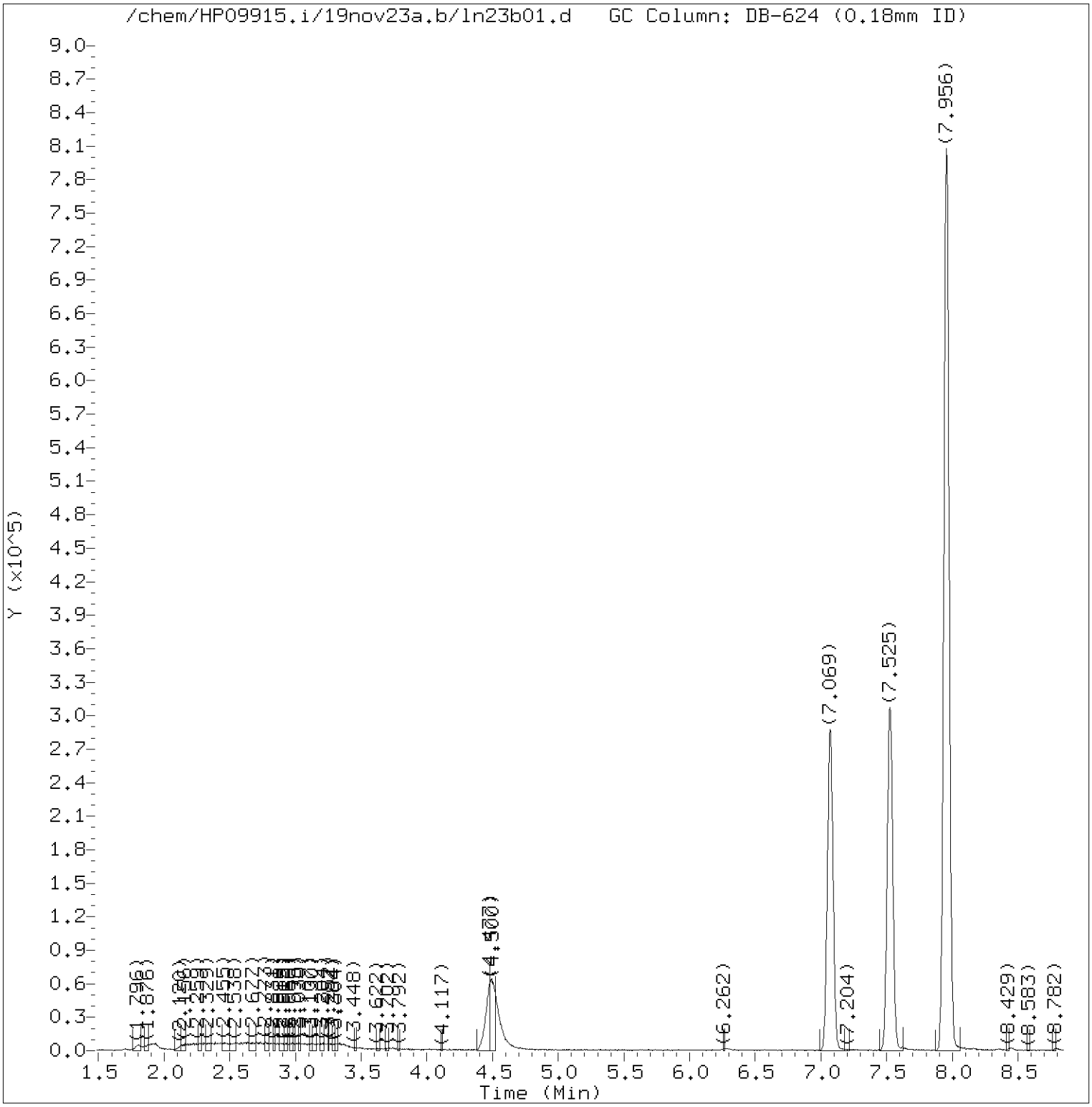
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)			Not Detected					0.2	5
121) 4-Chlorotoluene	(4)			Not Detected					0.2	5
122) 1,3,5-Trimethylbenzene	(4)			Not Detected					0.3	5
124) tert-Butylbenzene	(4)			Not Detected					0.3	5
125) Pentachloroethane	(4)			Not Detected					0.2	5
126) 1,2,4-Trimethylbenzene	(4)			Not Detected					1	5
127) sec-Butylbenzene	(4)			Not Detected					0.2	5
129) 1,3-Dichlorobenzene	(4)			Not Detected					0.2	5
130) p-Isopropyltoluene	(4)			Not Detected					0.2	5
133) 1,4-Dichlorobenzene	(4)			Not Detected					0.2	5
134) 1,2,3-Trimethylbenzene	(4)			Not Detected					0.3	5
135) Benzyl Chloride	(4)			Not Detected					1	5
136) 1,3-Diethylbenzene	(4)			Not Detected					0.2	5
137) 1,4-Diethylbenzene	(4)	13.441(-0.000)	119	3836	0.216	0.22		J	0.2	5
138) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
139) n-Butylbenzene	(4)	13.461(-0.000)	92	4540	0.344	0.34		J	0.2	5
140) 1,2-Diethylbenzene	(4)			Not Detected					0.2	5
141) Diethylbenzene (total)	(4)			Not Detected					0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)			Not Detected					0.3	5
144) 1,3,5-Trichlorobenzene	(4)	14.165(-0.000)	180	5851	0.552	0.55		J	0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.586(-0.000)	180	5468	0.530	0.53		J	0.3	5
147) Hexachlorobutadiene	(4)			Not Detected					2	5
148) Naphthalene	(4)			Not Detected					1	5
149) 1,2,3-Trichlorobenzene	(4)	14.914(-0.000)	180	5973	0.595	0.60		J	0.4	5
150) 2-Methylnaphthalene	(4)			Not Detected					2	4

Total number of targets = 110

Digitally signed by Linda C. Pape on 11/25/2019 at 13:55. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:45. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

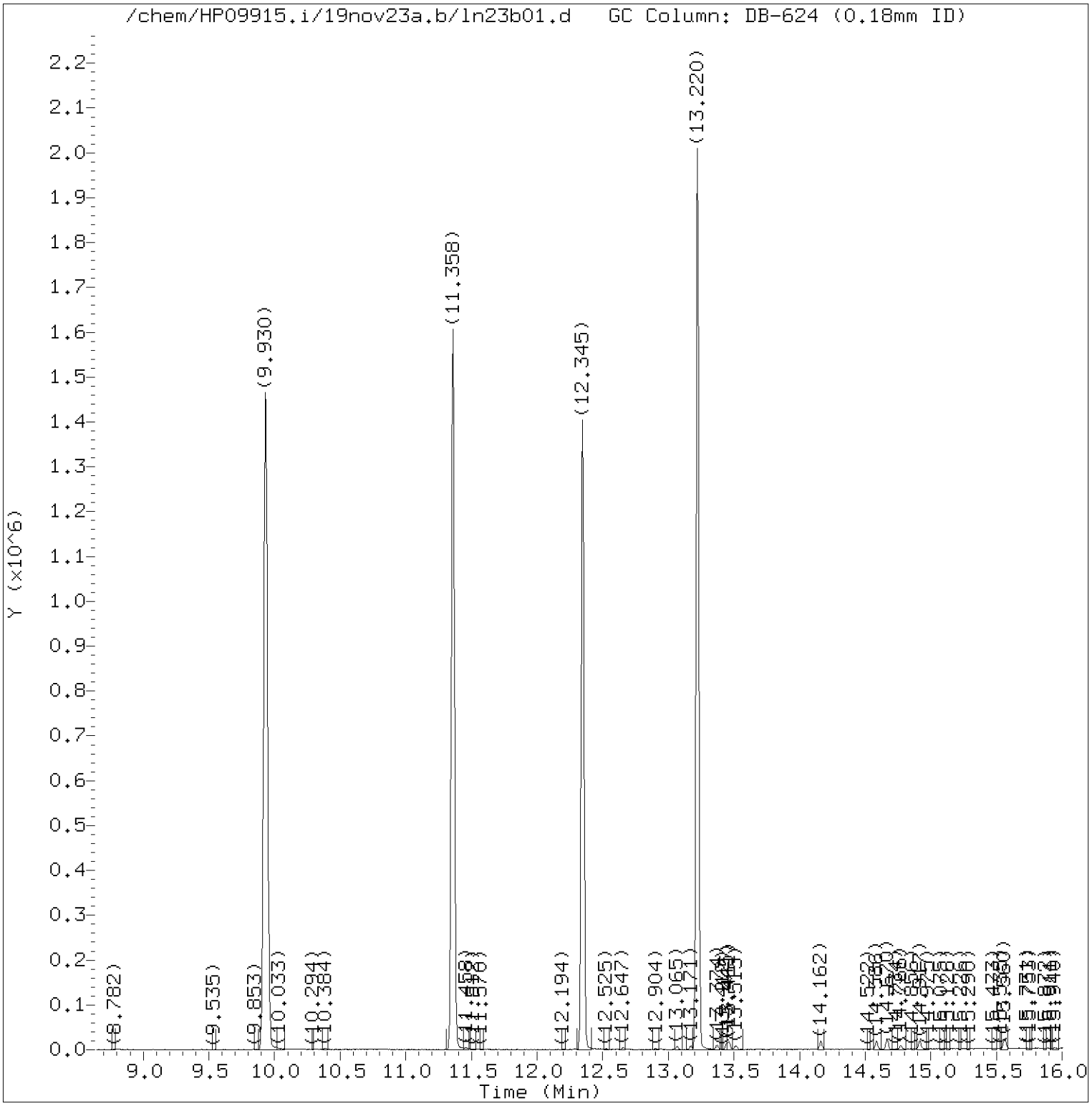
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:55.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:55.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

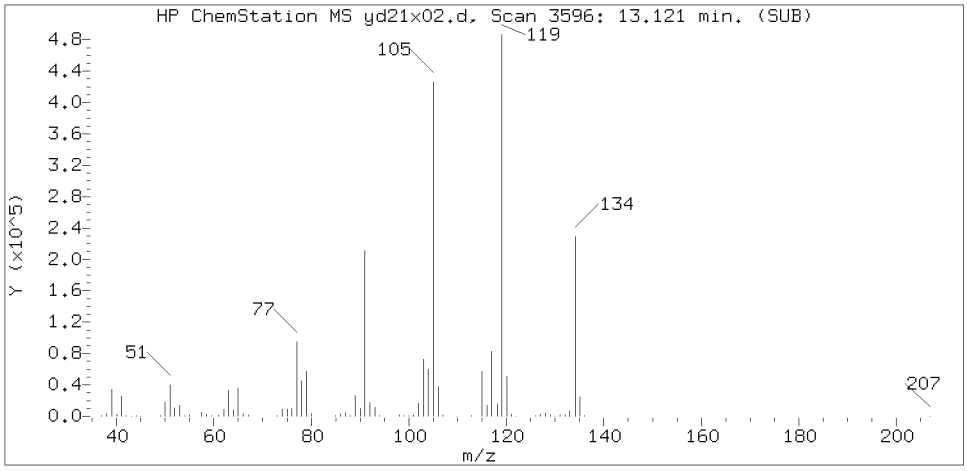
Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.493	65	224793	250.000
52)$Dibromofluoromethane	(2)	7.075	113	273712	48.490
57)$1,2-Dichloroethane-d4	(2)	7.525	102	73640	51.189
66)*Fluorobenzene	(2)	7.953	96	1154568	50.000
83)$Toluene-d8	(3)	9.930	98	1203589	48.571
100)*Chlorobenzene-d5	(3)	11.358	117	947038	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	460603	49.089
131)*1,4-Dichlorobenzene-d4	(4)	13.220	152	506608	50.000
137) 1,4-Diethylbenzene	(4)	13.441	119	3836	0.216
139) n-Butylbenzene	(4)	13.461	92	4540	0.344
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	5851	0.552
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	5468	0.530
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	5973	0.595

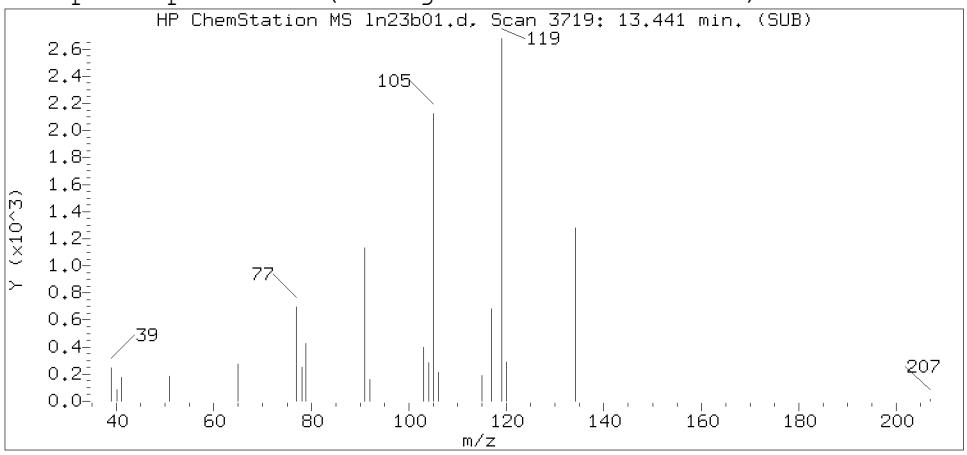
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:55.
Target 3.5 esignature user ID: lcp00895

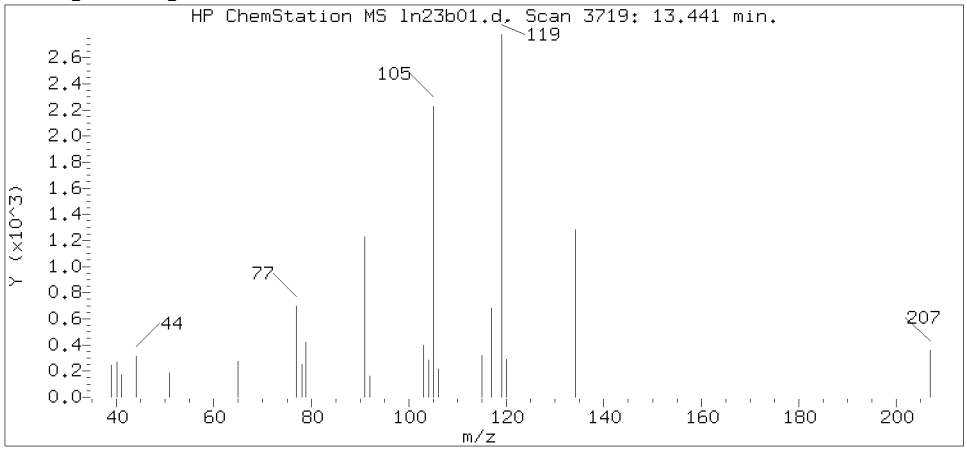
Reference Standard Spectrum for 1,4-Diethylbenzene

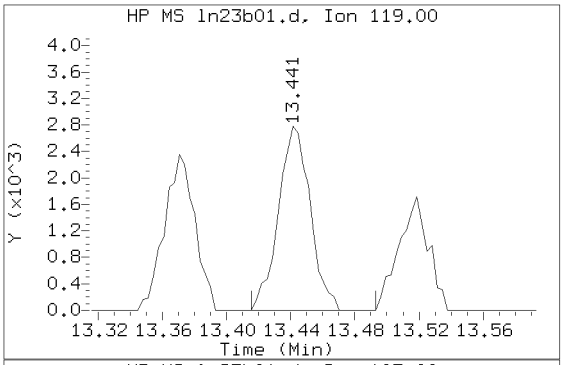


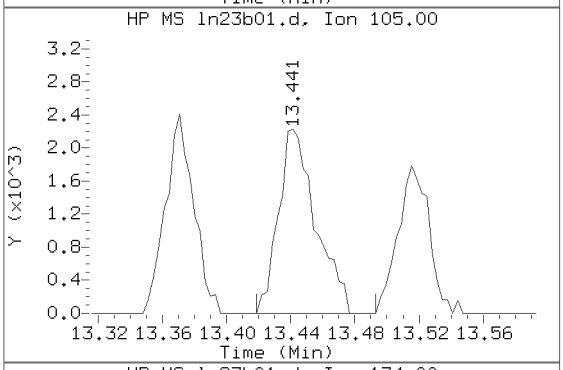
Sample Spectrum (Background Subtracted)

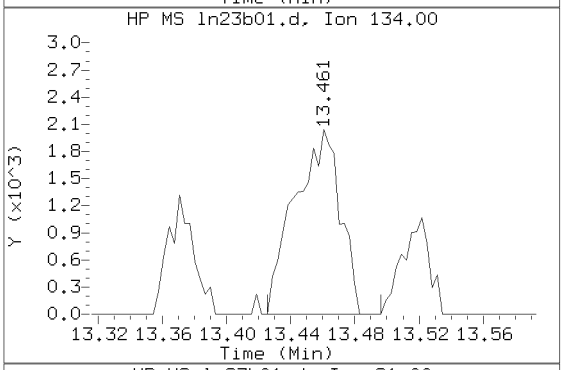


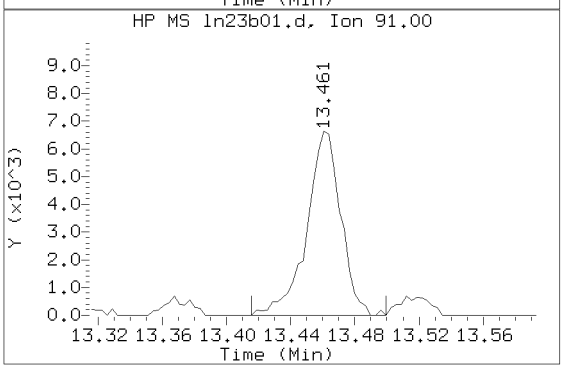
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compound Number : 137
Compound Name : 1,4-Diethylbenzene
Scan Number : 3719
Retention Time (minutes): 13.441
Relative Retention Time :-0.00025
Quant Ion : 119.00
Area (flag) : 3836
On-Column Amount (ng) : 0.2156

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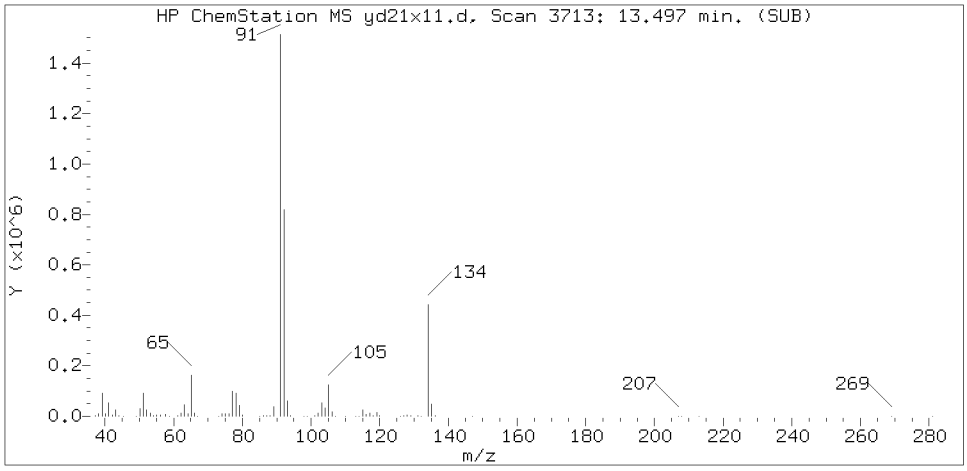
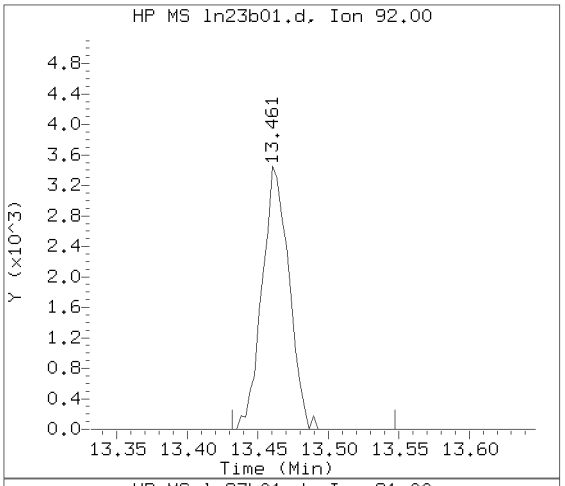
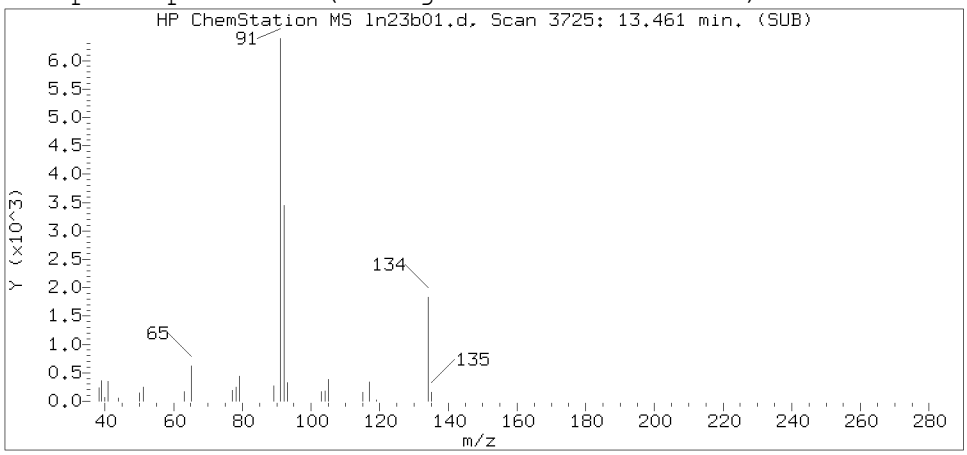
Target 3.5 esignature user ID: lcp00895

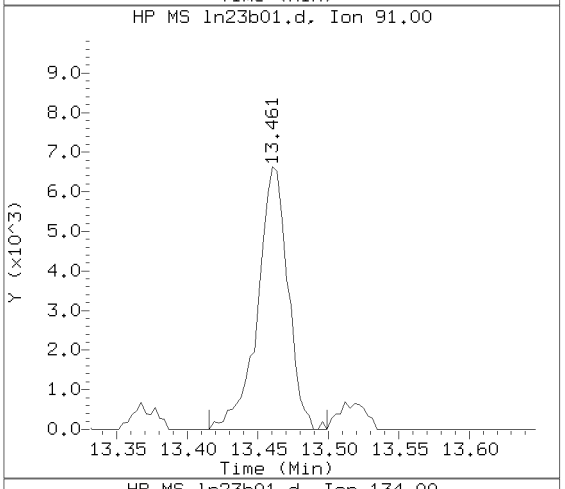
Reference Standard Spectrum for n-Butylbenzene



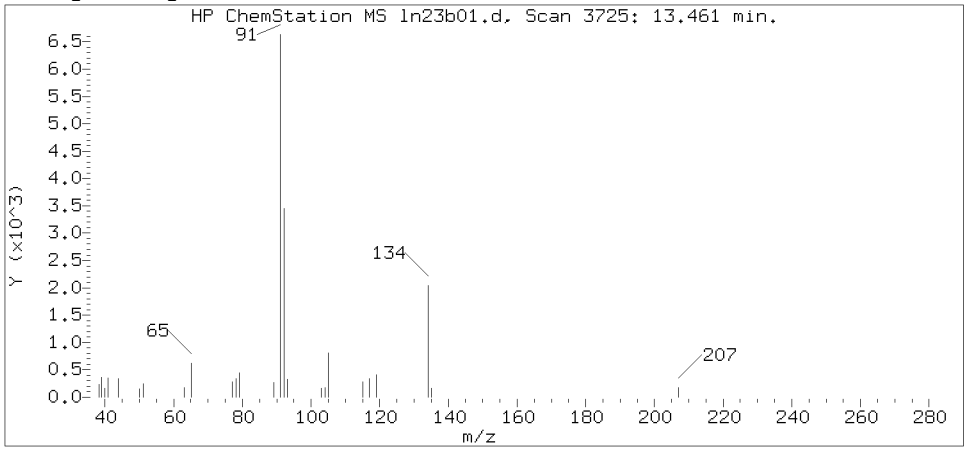


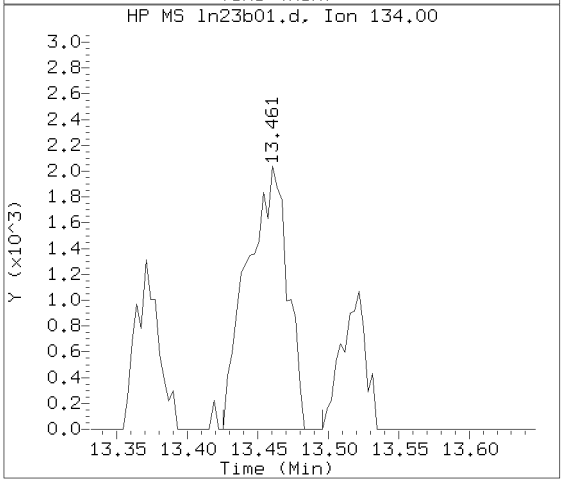
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 3725
Retention Time (minutes): 13.461
Relative Retention Time :-0.00000
Quant Ion : 92.00
Area (flag) : 4540
On-Column Amount (ng) : 0.3440

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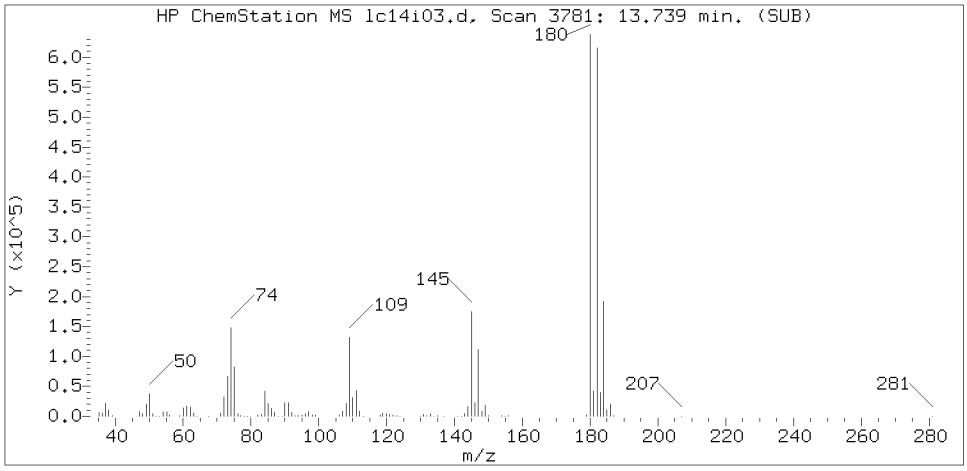
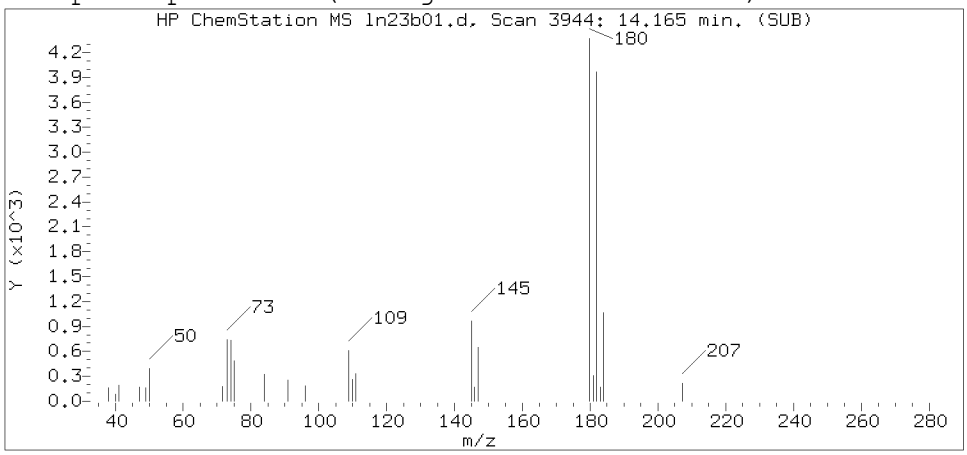
Target 3.5 esignature user ID: lcp00895

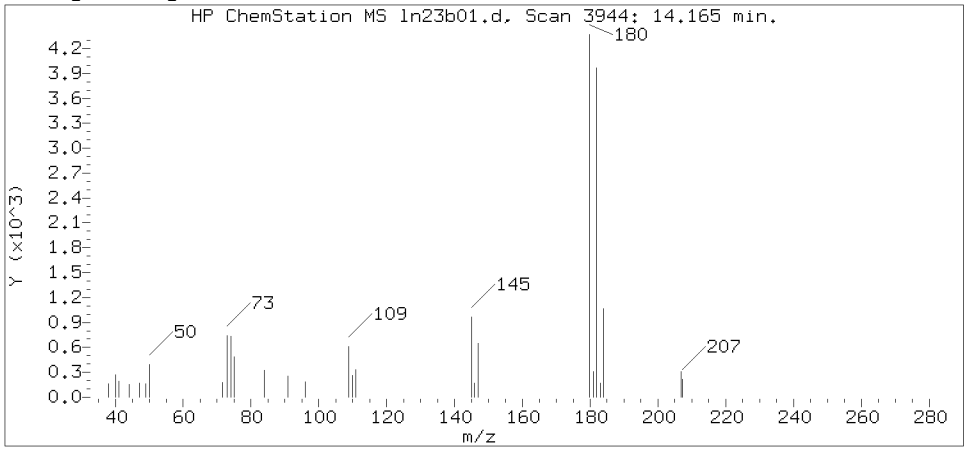
Reference Standard Spectrum for 1,3,5-Trichlorobenzene

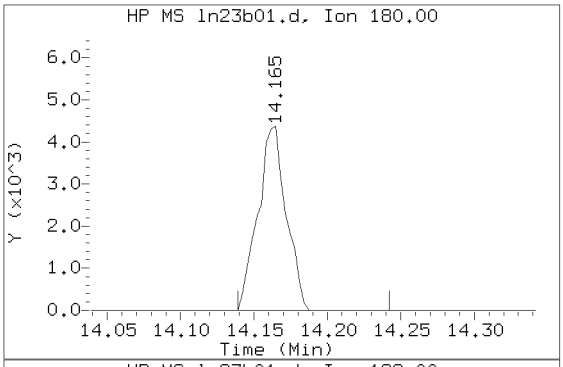


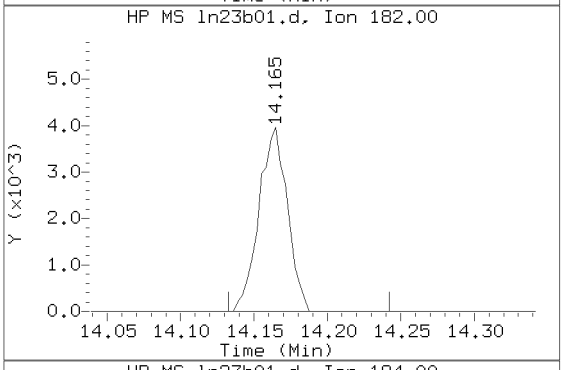
Sample Spectrum (Background Subtracted)

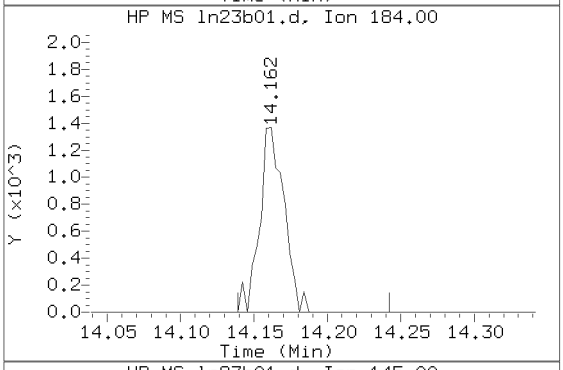


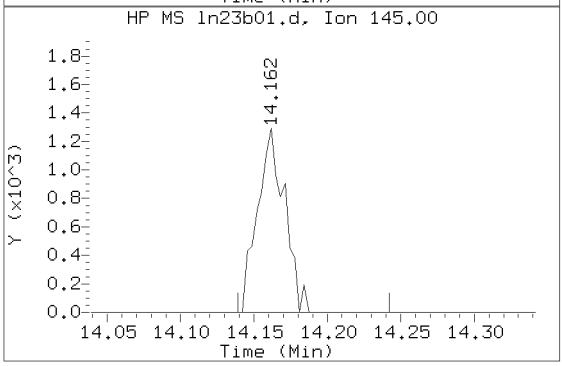
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compound Number : 144
Compound Name : 1,3,5-Trichlorobenzene
Scan Number : 3944
Retention Time (minutes): 14.165
Relative Retention Time :-0.00026
Quant Ion : 180.00
Area (flag) : 5851
On-Column Amount (ng) : 0.5516

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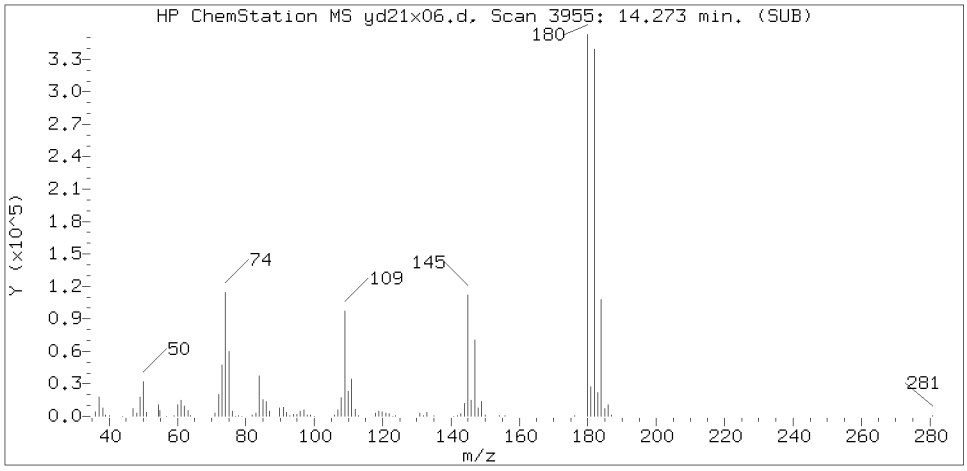
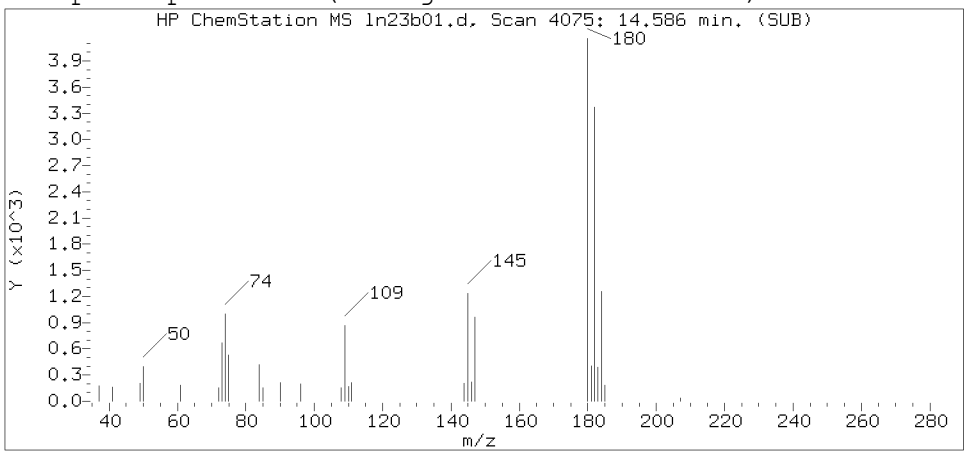
Target 3.5 esignature user ID: lcp00805

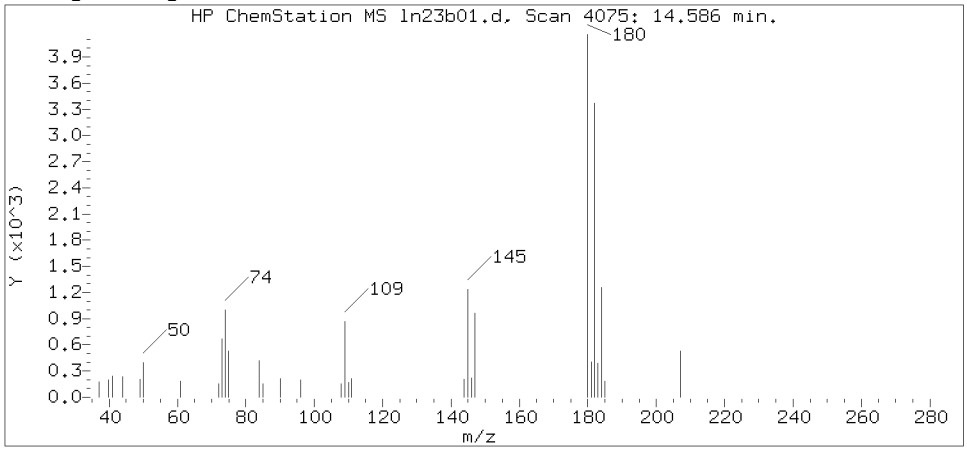
Reference Standard Spectrum for 1,2,4-Trichlorobenzene

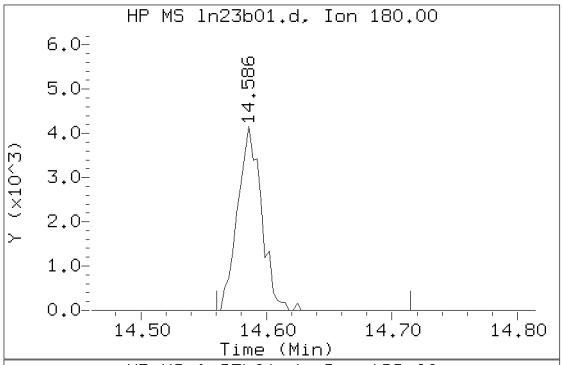


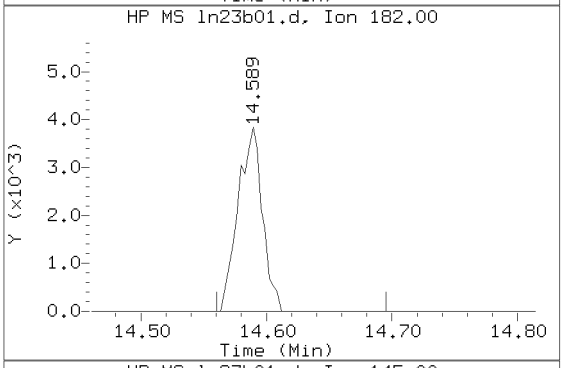
Sample Spectrum (Background Subtracted)

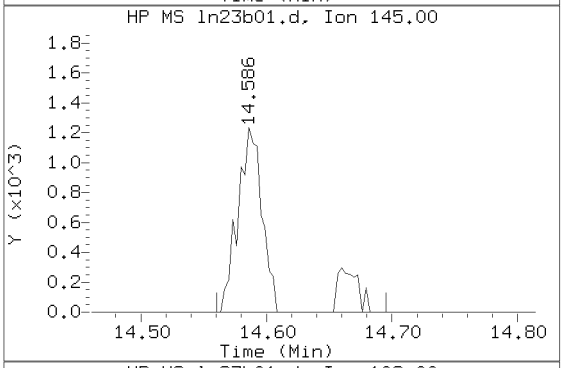


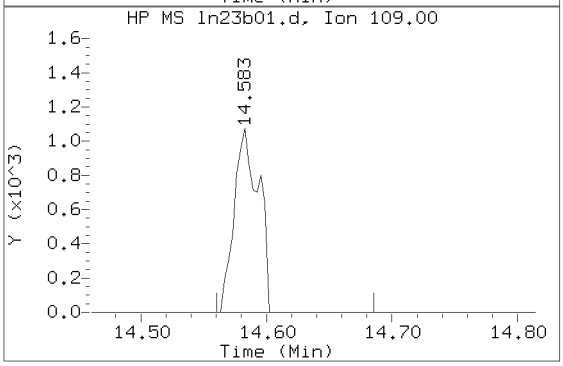
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compound Number : 146
Compound Name : 1,2,4-Trichlorobenzene
Scan Number : 4075
Retention Time (minutes): 14.586
Relative Retention Time :-0.00027
Quant Ion : 180.00
Area (flag) : 5468
On-Column Amount (ng) : 0.5302

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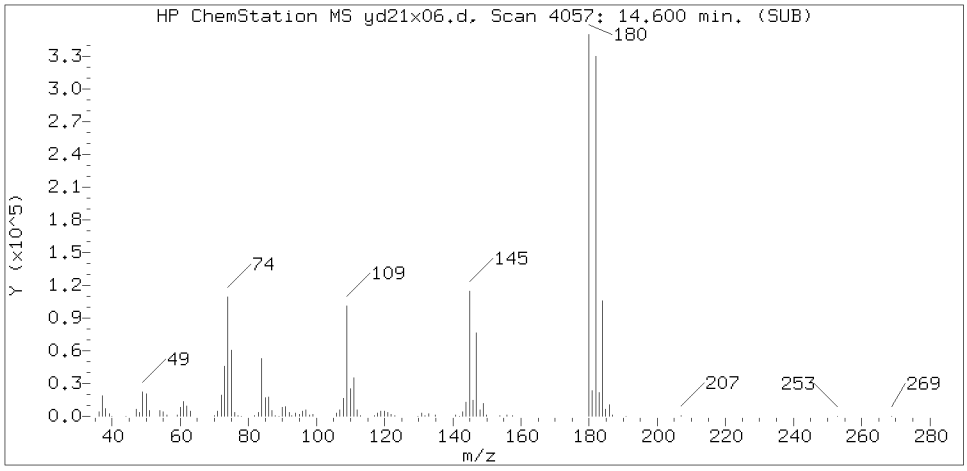
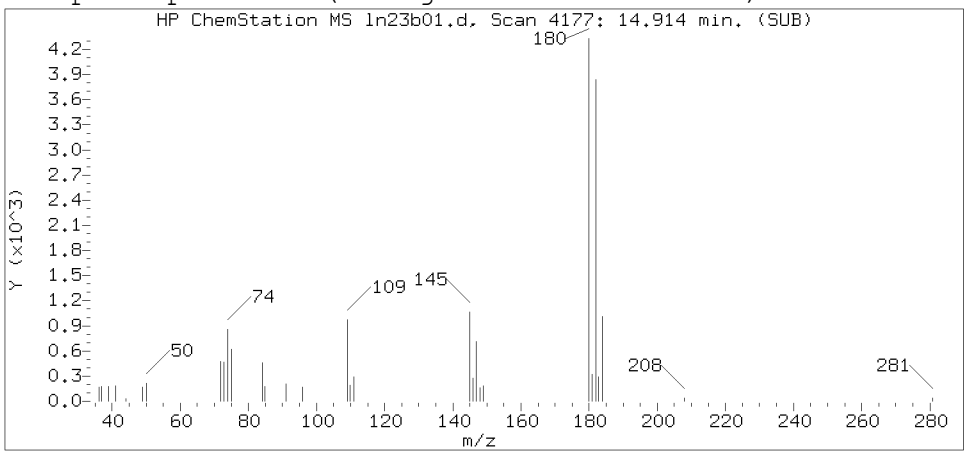
Target 3.5 esignature user ID: lcp00805

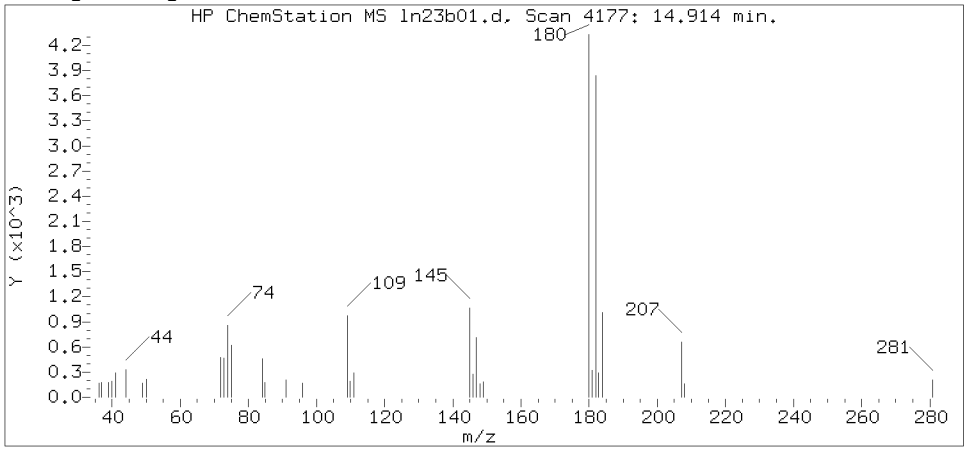
Reference Standard Spectrum for 1,2,3-Trichlorobenzene

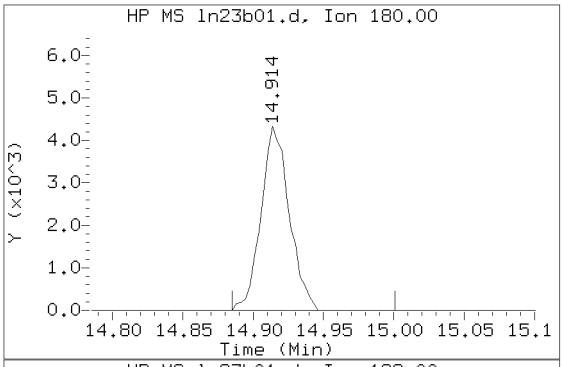


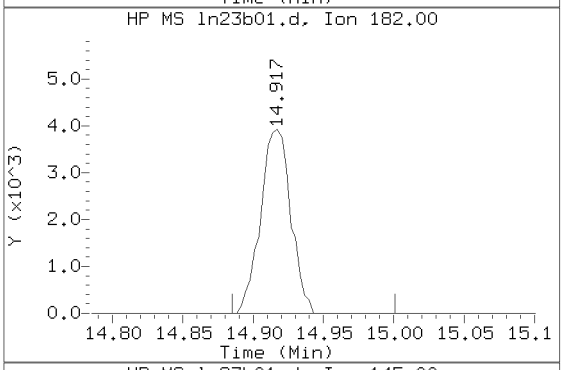
Sample Spectrum (Background Subtracted)

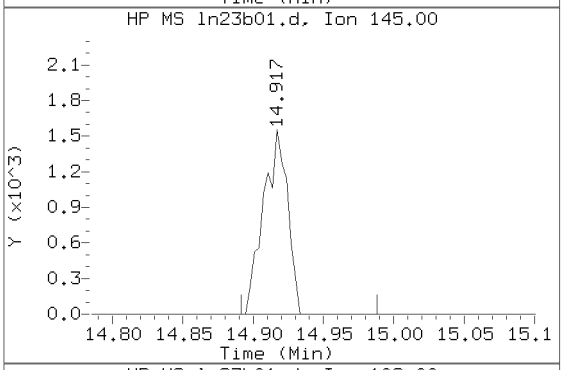


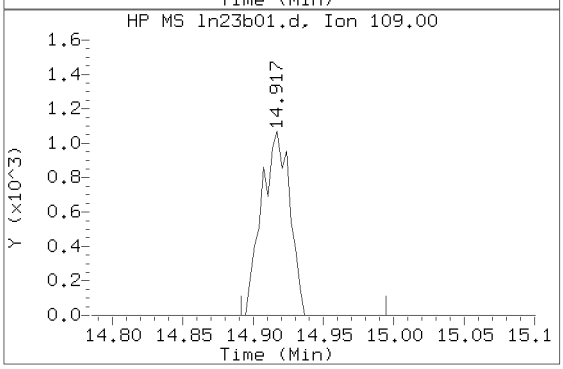
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compound Number : 149
Compound Name : 1,2,3-Trichlorobenzene
Scan Number : 4177
Retention Time (minutes): 14.914
Relative Retention Time :-0.00003
Quant Ion : 180.00
Area (flag) : 5973
On-Column Amount (ng) : 0.5952

Digitally signed by Linda C. Pape on 11/25/2019 at 13:55.
Target 3.5 esignature user ID: lcp00805

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JCW02MS

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205894

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s35.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	20	
75-35-4	1,1-Dichloroethene	23	
67-64-1	Acetone	160	
76-13-1	Freon 113	21	
75-15-0	Carbon Disulfide	19	
75-09-2	Methylene Chloride	22	
156-60-5	trans-1,2-Dichloroethene	22	
75-34-3	1,1-Dichloroethane	22	
156-59-2	cis-1,2-Dichloroethene	23	
78-93-3	2-Butanone	130	
67-66-3	Chloroform	22	
71-55-6	1,1,1-Trichloroethane	25	
71-43-2	Benzene	22	
107-06-2	1,2-Dichloroethane	21	
79-01-6	Trichloroethene	22	
123-91-1	1,4-Dioxane	660	
108-88-3	Toluene	22	
127-18-4	Tetrachloroethene	21	
100-41-4	Ethylbenzene	22	
1330-20-7	Xylene (Total)	65	
95-50-1	1,2-Dichlorobenzene	21	
91-20-3	Naphthalene	19	

FORM I VOA

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JCW02MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1205894MS

Data file: /chem/HP09915.i/19nov22a.b/ln22s35.d Injection date and time: **22-NOV-2019 12:42**
Data file Sample Info. Line: JCW02MS;1205894MS;1;3;MS;JCW22;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 11:00 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.509	(-0.013)	941	65	245468	(-7)	250.00	
66) Fluorobenzene	7.962	(-0.003)	2015	96	1259980	(-6)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	1026081	(-5)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(-0.003)	3651	152	552658	(-4)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(0.000)	113	294750	47.849	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.532	(0.000)	102	79008	50.325	101%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	1330517	49.557	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	513050	50.466	101%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)	2.410	(-0.000)	62	167386	19.804	19.80			0.2	1
17) 1,1-Dichloroethene	(2)	3.766	(-0.001)	96	124428	23.297	23.30			0.2	1
18) Acetone	(1)	3.808	(0.000)	58	129452	156.791	156.79			0.7	20
19) Freon 113	(2)	3.802	(-0.000)	101	129025	21.174	21.17			0.2	10
23) Carbon Disulfide	(2)	4.075	(-0.000)	76	380224	18.891	18.89			0.2	5
28) Methylene Chloride	(2)	4.474	(0.000)	84	140439	22.092	22.09			0.3	1
32) trans-1,2-Dichloroethene	(2)	4.888	(-0.000)	96	134435	21.758	21.76			0.2	1
36) 1,1-Dichloroethane	(2)	5.554	(-0.000)	63	236610	21.952	21.95			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.384	(0.000)	96	157877	22.765	22.76			0.2	1
44) 2-Butanone	(2)	6.364	(0.000)	43	636994	134.080	134.08			0.3	10
51) Chloroform	(2)	6.860	(0.000)	83	223850	21.713	21.71			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.081	(0.000)	97	223743	25.428	25.43			0.3	1
60) Benzene	(2)	7.557	(0.000)	78	563370	21.982	21.98			0.2	1
61) 1,2-Dichloroethane	(2)	7.634	(0.000)	62	174471	21.165	21.16			0.3	1
71) Trichloroethene	(2)	8.432	(0.000)	95	142667	22.108	22.11			0.2	1
75) 1,4-Dioxane	(1)	8.850	(0.007)	88	54594	663.578	663.58			29	250
88) Toluene	(3)	10.007	(-0.000)	92	364527	21.657	21.66			0.2	1
93) Tetrachloroethene	(3)	10.538	(-0.000)	166	152352	21.372	21.37			0.2	1
104) Ethylbenzene	(3)	11.470	(-0.000)	91	694508	21.587	21.59			0.4	1
106) m+p-Xylene	(3)	11.580	(-0.000)	106	556174	43.945	43.95			1	5
107) o-Xylene	(3)	11.908	(-0.000)	106	263825	21.104	21.10			0.4	1
108) Xylene (Total)	(3)			106	819999	65.049	65.05			1	6
138) 1,2-Dichlorobenzene	(4)	13.502	(0.000)	146	313433	20.810	20.81			0.2	5
148) Naphthalene	(4)	14.772	(0.000)	128	693090	19.161	19.16			1	5

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:00. Target 3.5 esignature user ID: clm27445

Data file: /chem/HP09915.i/19nov22a.b/ln22s35.d Injection date and time: **22-NOV-2019 12:42**
Data file Sample Info. Line: JCW02MS;1205894MS;1;3;MS;JCW22;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 11:00 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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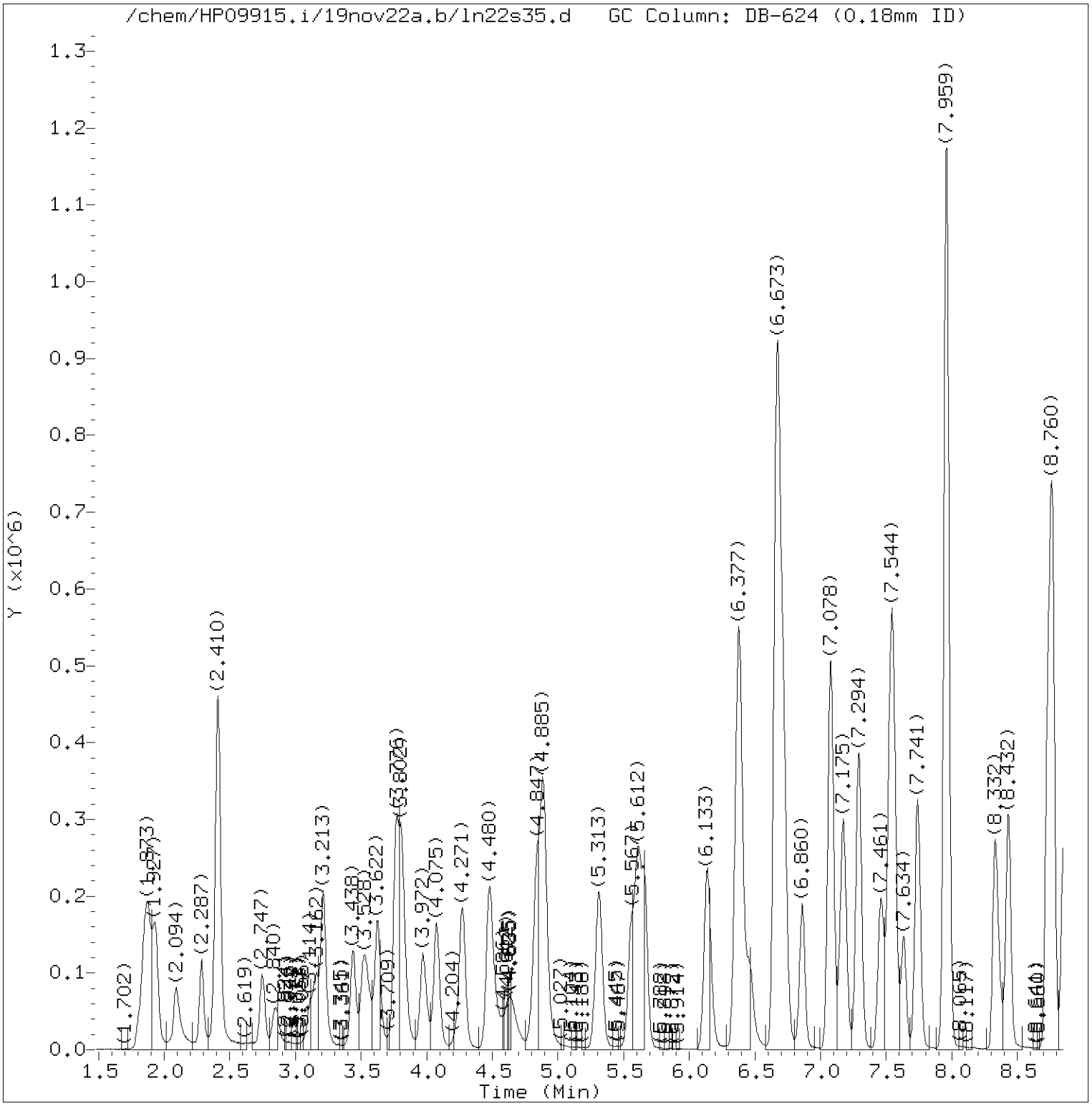
Total number of targets = 24

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:00. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:02. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

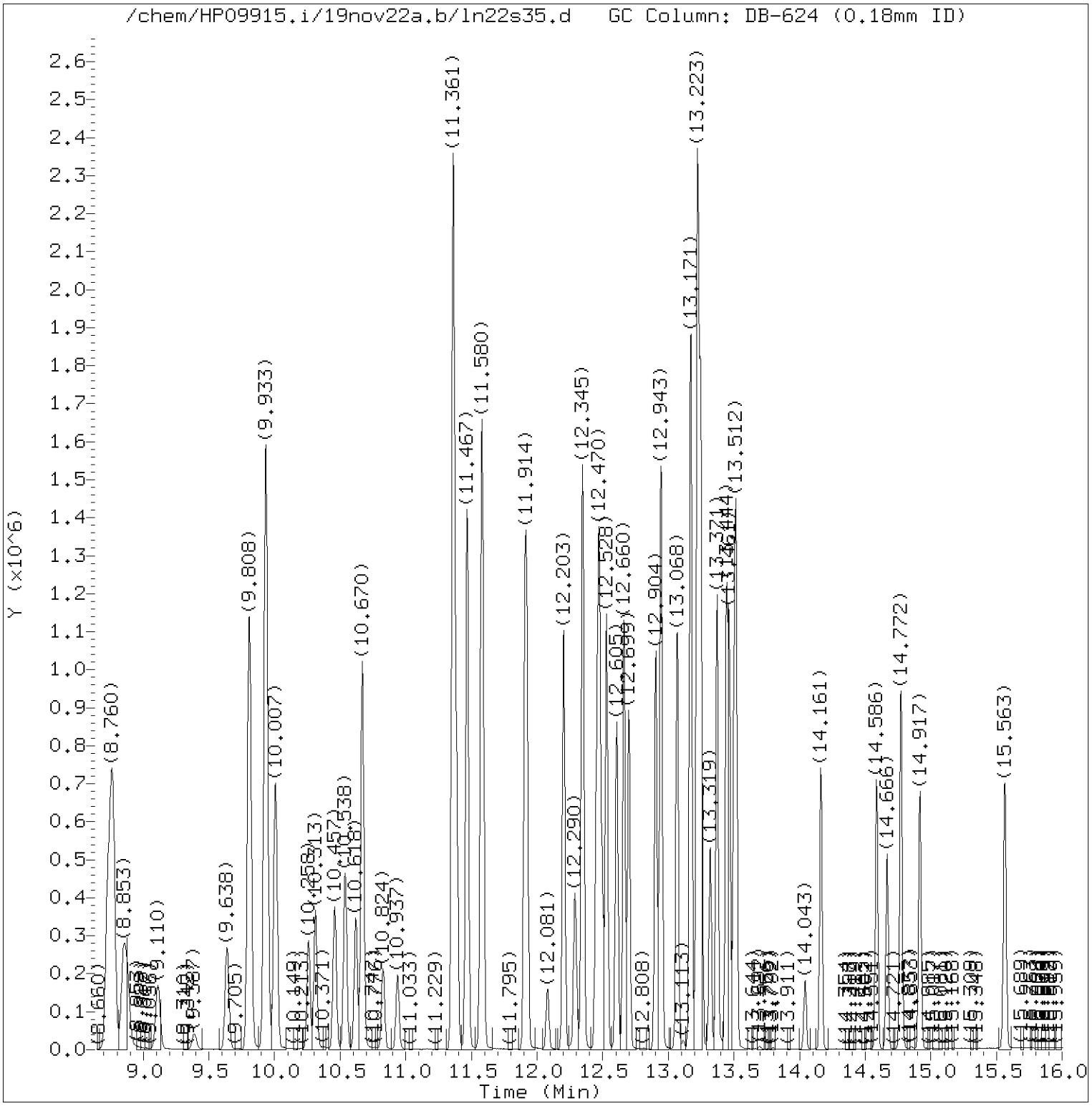
Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s35.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 12:42 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 23-Nov-2019 11:00 clm27445

Sample Name: JCW02MS Lab Sample ID: 1205894MS

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:00.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s35.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 12:42 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 23-Nov-2019 11:00 clm27445

Sample Name: JCW02MS Lab Sample ID: 1205894MS

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:00.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s35.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 12:42 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 23-Nov-2019 11:00 clm27445

Sample Name: JCW02MS Lab Sample ID: 1205894MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	2.410	62	167386	19.804
17) 1,1-Dichloroethene	(2)	3.766	96	124428	23.297
19) Freon 113	(2)	3.802	101	129025	21.174
18) Acetone	(1)	3.808	58	129452	156.791
23) Carbon Disulfide	(2)	4.075	76	380224	18.891
28) Methylene Chloride	(2)	4.474	84	140439	22.092
29)*t-Butyl alcohol-d10	(1)	4.509	65	245468	250.000
32) trans-1,2-Dichloroethene	(2)	4.889	96	134435	21.758
36) 1,1-Dichloroethane	(2)	5.554	63	236610	21.952
44) 2-Butanone	(2)	6.364	43	636994	134.080
42) cis-1,2-Dichloroethene	(2)	6.384	96	157877	22.765
51) Chloroform	(2)	6.860	83	223850	21.713
52)$Dibromofluoromethane	(2)	7.075	113	294750	47.849
53) 1,1,1-Trichloroethane	(2)	7.081	97	223743	25.428
57)$1,2-Dichloroethane-d4	(2)	7.532	102	79008	50.325
60) Benzene	(2)	7.557	78	563370	21.982
61) 1,2-Dichloroethane	(2)	7.634	62	174471	21.165
66)*Fluorobenzene	(2)	7.962	96	1259980	50.000
71) Trichloroethene	(2)	8.432	95	142667	22.108
75) 1,4-Dioxane	(1)	8.850	88	54594	663.578
83)$Toluene-d8	(3)	9.933	98	1330517	49.557
88) Toluene	(3)	10.007	92	364527	21.657
93) Tetrachloroethene	(3)	10.538	166	152352	21.372
100)*Chlorobenzene-d5	(3)	11.358	117	1026081	50.000
104) Ethylbenzene	(3)	11.470	91	694508	21.587
106) m+p-Xylene	(3)	11.580	106	556174	43.945
108) Xylene (Total)	(3)		106	819999	65.049
107) o-Xylene	(3)	11.908	106	263825	21.104
114)$4-Bromofluorobenzene	(3)	12.345	95	513050	50.466
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	552658	50.000
138) 1,2-Dichlorobenzene	(4)	13.502	146	313433	20.810
148) Naphthalene	(4)	14.772	128	693090	19.161

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:00.
Target 3.5 esignature user ID: clm27445

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JCW02MSD

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205895

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s36.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	19	
75-35-4	1,1-Dichloroethene	22	
67-64-1	Acetone	150	
76-13-1	Freon 113	20	
75-15-0	Carbon Disulfide	18	
75-09-2	Methylene Chloride	21	
156-60-5	trans-1,2-Dichloroethene	21	
75-34-3	1,1-Dichloroethane	21	
156-59-2	cis-1,2-Dichloroethene	22	
78-93-3	2-Butanone	130	
67-66-3	Chloroform	21	
71-55-6	1,1,1-Trichloroethane	25	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	20	
79-01-6	Trichloroethene	21	
123-91-1	1,4-Dioxane	640	
108-88-3	Toluene	21	
127-18-4	Tetrachloroethene	20	
100-41-4	Ethylbenzene	21	
1330-20-7	Xylene (Total)	63	
95-50-1	1,2-Dichlorobenzene	20	
91-20-3	Naphthalene	19	

FORM I VOA

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Data file: /chem/HP09915.i/19nov22a.b/ln22s36.d Injection date and time: **22-NOV-2019 13:04**
Data file Sample Info. Line: JCW02MSD;1205895MSD;1;3;MSD;JCW22;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 11:00 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.506	(-0.010)	940	65	266719	(1)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	1340904	(1)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	1091224	(1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.220	(0.000)	3650	152	586501	(2)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(-0.001)	113	314213	47.930	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	84165	50.375	101%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	1413864	49.518	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	548943	50.773	102%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)	2.406	(-0.000)	62	171468	19.063	19.06			0.2	1
17) 1,1-Dichloroethene	(2)	3.760	(-0.000)	96	126322	22.224	22.22			0.2	1
18) Acetone	(1)	3.805	(0.001)	58	132111	147.263	147.26			0.7	20
19) Freon 113	(2)	3.802	(-0.000)	101	132820	20.481	20.48			0.2	10
23) Carbon Disulfide	(2)	4.075	(-0.000)	76	390813	18.245	18.25			0.2	5
28) Methylene Chloride	(2)	4.477	(-0.000)	84	142489	21.062	21.06			0.3	1
32) trans-1,2-Dichloroethene	(2)	4.889	(-0.000)	96	136663	20.783	20.78			0.2	1
36) 1,1-Dichloroethane	(2)	5.554	(-0.000)	63	245066	21.364	21.36			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.384	(0.000)	96	160724	21.777	21.78			0.2	1
44) 2-Butanone	(2)	6.364	(0.000)	43	654472	129.445	129.45			0.3	10
51) Chloroform	(2)	6.860	(0.000)	83	229054	20.877	20.88			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.085	(-0.000)	97	230652	24.632	24.63			0.3	1
60) Benzene	(2)	7.557	(0.000)	78	575337	21.094	21.09			0.2	1
61) 1,2-Dichloroethane	(2)	7.631	(0.000)	62	175919	20.053	20.05			0.3	1
71) Trichloroethene	(2)	8.429	(-0.000)	95	146726	21.365	21.37			0.2	1
75) 1,4-Dioxane	(1)	8.856	(0.004)	88	56817M	635.574	635.57			29	250
88) Toluene	(3)	10.007	(-0.000)	92	373056	20.840	20.84			0.2	1
93) Tetrachloroethene	(3)	10.538	(-0.000)	166	154799	20.419	20.42			0.2	1
104) Ethylbenzene	(3)	11.467	(-0.000)	91	715704	20.918	20.92			0.4	1
106) m+p-Xylene	(3)	11.580	(-0.000)	106	566568	42.094	42.09			1	5
107) o-Xylene	(3)	11.908	(-0.000)	106	271510	20.422	20.42			0.4	1
108) Xylene (Total)	(3)			106	838078	62.516	62.52			1	6
138) 1,2-Dichlorobenzene	(4)	13.499	(0.000)	146	319225	19.972	19.97			0.2	5
148) Naphthalene	(4)	14.769	(0.000)	128	719165	18.735	18.73			1	5

M = Compound was manually integrated.

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:00. Target 3.5 esignature user ID: clm27445

Data file: /chem/HP09915.i/19nov22a.b/ln22s36.d Injection date and time: **22-NOV-2019 13:04**
Data file Sample Info. Line: JCW02MSD;1205895MSD;1;3;MSD;JCW22;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 11:00 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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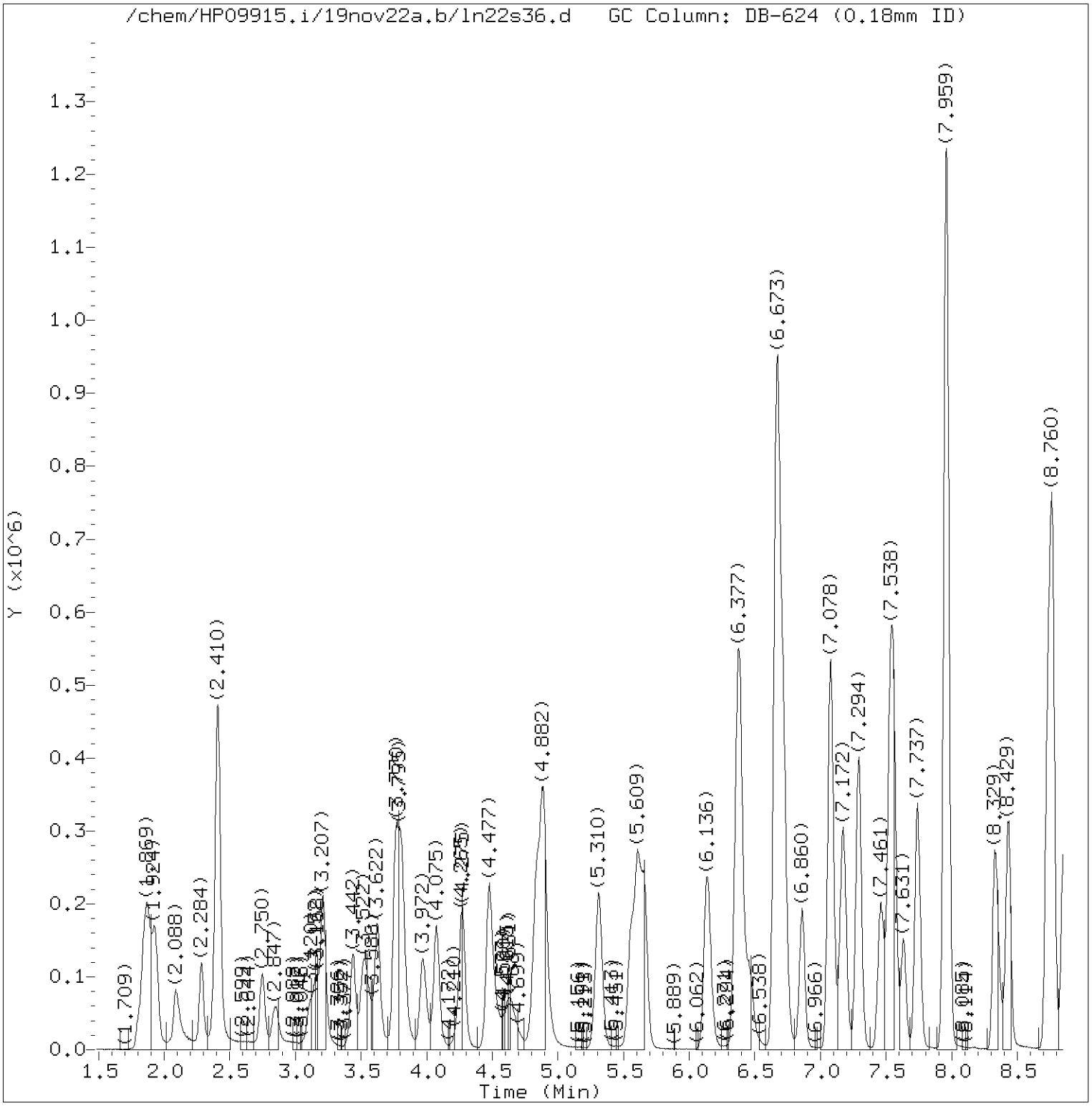
Total number of targets = 24

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:00. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:02. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

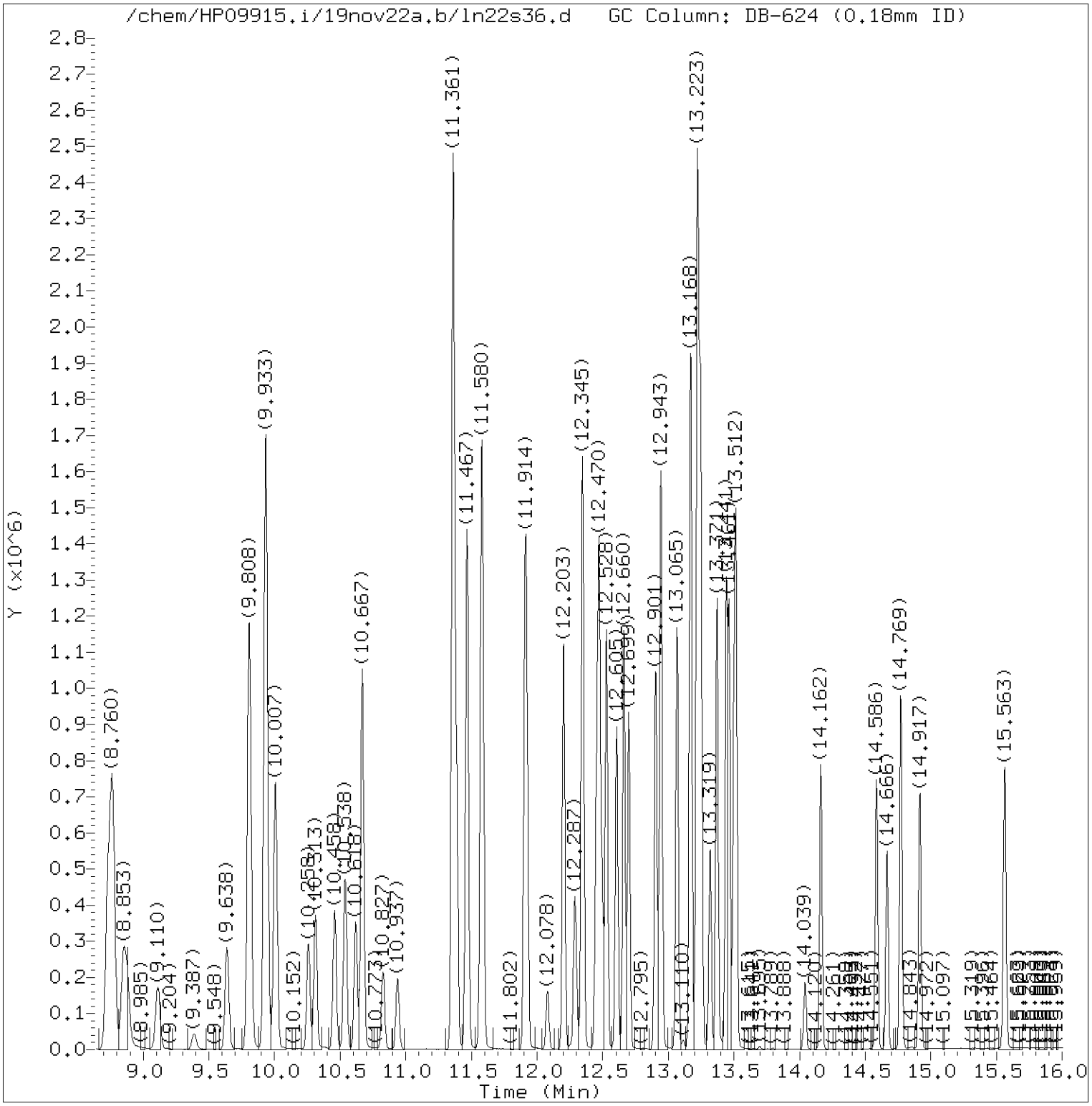
Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s36.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 13:04 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 23-Nov-2019 11:00 clm27445

Sample Name: JCW02MSD Lab Sample ID: 1205895MSD

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:00.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s36.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 13:04 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 23-Nov-2019 11:00 clm27445

Sample Name: JCW02MSD Lab Sample ID: 1205895MSD

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:00.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s36.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 13:04 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 23-Nov-2019 11:00 clm27445

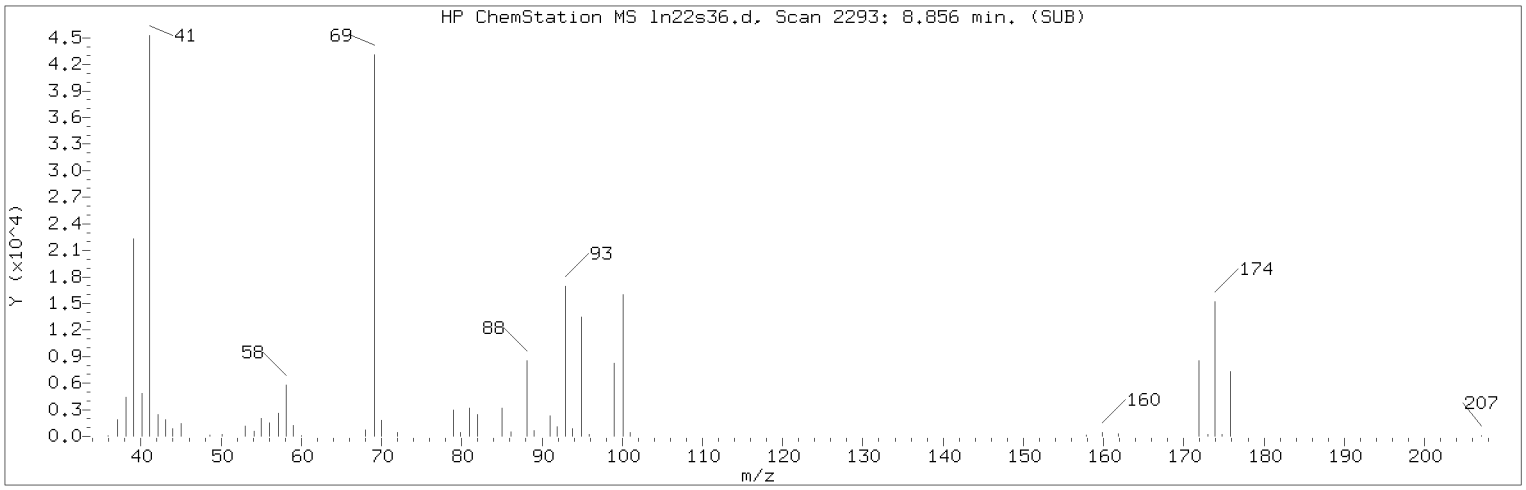
Sample Name: JCW02MSD Lab Sample ID: 1205895MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	2.406	62	171468	19.063
17) 1,1-Dichloroethene	(2)	3.760	96	126322	22.224
19) Freon 113	(2)	3.802	101	132820	20.481
18) Acetone	(1)	3.805	58	132111	147.263
23) Carbon Disulfide	(2)	4.075	76	390813	18.245
28) Methylene Chloride	(2)	4.477	84	142489	21.062
29)*t-Butyl alcohol-d10	(1)	4.506	65	266719	250.000
32) trans-1,2-Dichloroethene	(2)	4.889	96	136663	20.783
36) 1,1-Dichloroethane	(2)	5.554	63	245066	21.364
44) 2-Butanone	(2)	6.364	43	654472	129.445
42) cis-1,2-Dichloroethene	(2)	6.384	96	160724	21.777
51) Chloroform	(2)	6.860	83	229054	20.877
52)$Dibromofluoromethane	(2)	7.075	113	314213	47.930
53) 1,1,1-Trichloroethane	(2)	7.085	97	230652	24.632
57)$1,2-Dichloroethane-d4	(2)	7.525	102	84165	50.375
60) Benzene	(2)	7.557	78	575337	21.094
61) 1,2-Dichloroethane	(2)	7.631	62	175919	20.053
66)*Fluorobenzene	(2)	7.959	96	1340904	50.000
71) Trichloroethene	(2)	8.429	95	146726	21.365
75) 1,4-Dioxane	(1)	8.856	88	56817M	635.574
83)$Toluene-d8	(3)	9.933	98	1413864	49.518
88) Toluene	(3)	10.007	92	373056	20.840
93) Tetrachloroethene	(3)	10.538	166	154799	20.419
100)*Chlorobenzene-d5	(3)	11.358	117	1091224	50.000
104) Ethylbenzene	(3)	11.467	91	715704	20.918
106) m+p-Xylene	(3)	11.580	106	566568	42.094
108) Xylene (Total)	(3)		106	838078	62.516
107) o-Xylene	(3)	11.908	106	271510	20.422
114)$4-Bromofluorobenzene	(3)	12.345	95	548943	50.773
131)*1,4-Dichlorobenzene-d4	(4)	13.220	152	586501	50.000
138) 1,2-Dichlorobenzene	(4)	13.499	146	319225	19.972
148) Naphthalene	(4)	14.769	128	719165	18.735

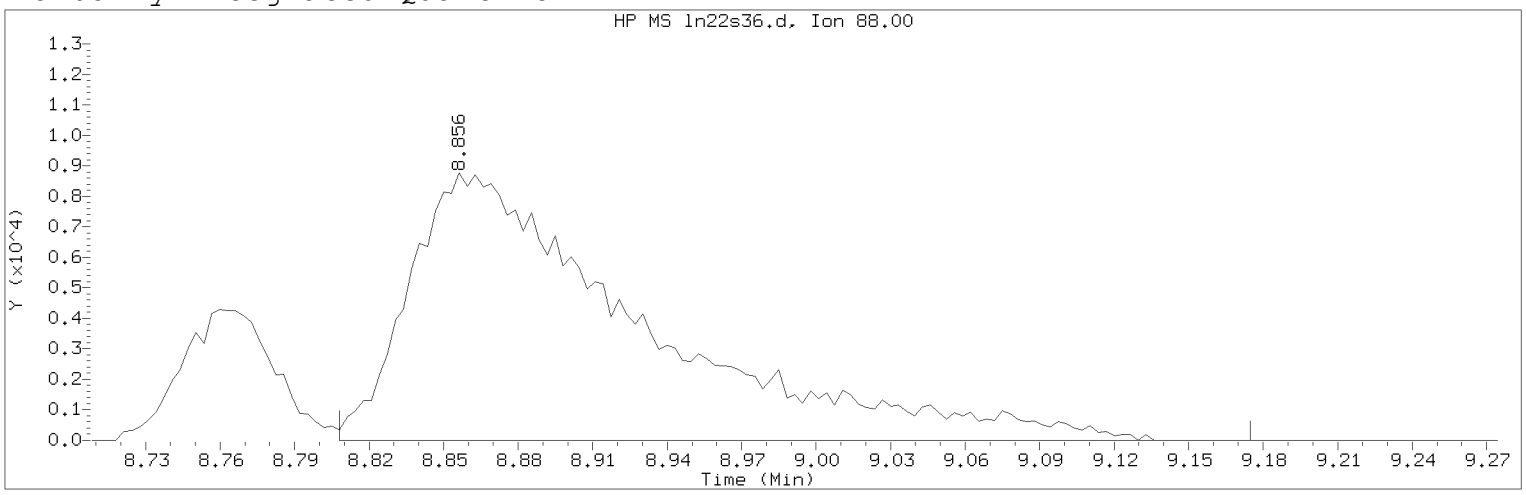
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:00.
Target 3.5 esignature user ID: clm27445

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov22a.b/ln22s36.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 13:04 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 23-Nov-2019 11:00 clm27445

Sample Name: JCW02MSD Lab Sample ID: 1205895MSD

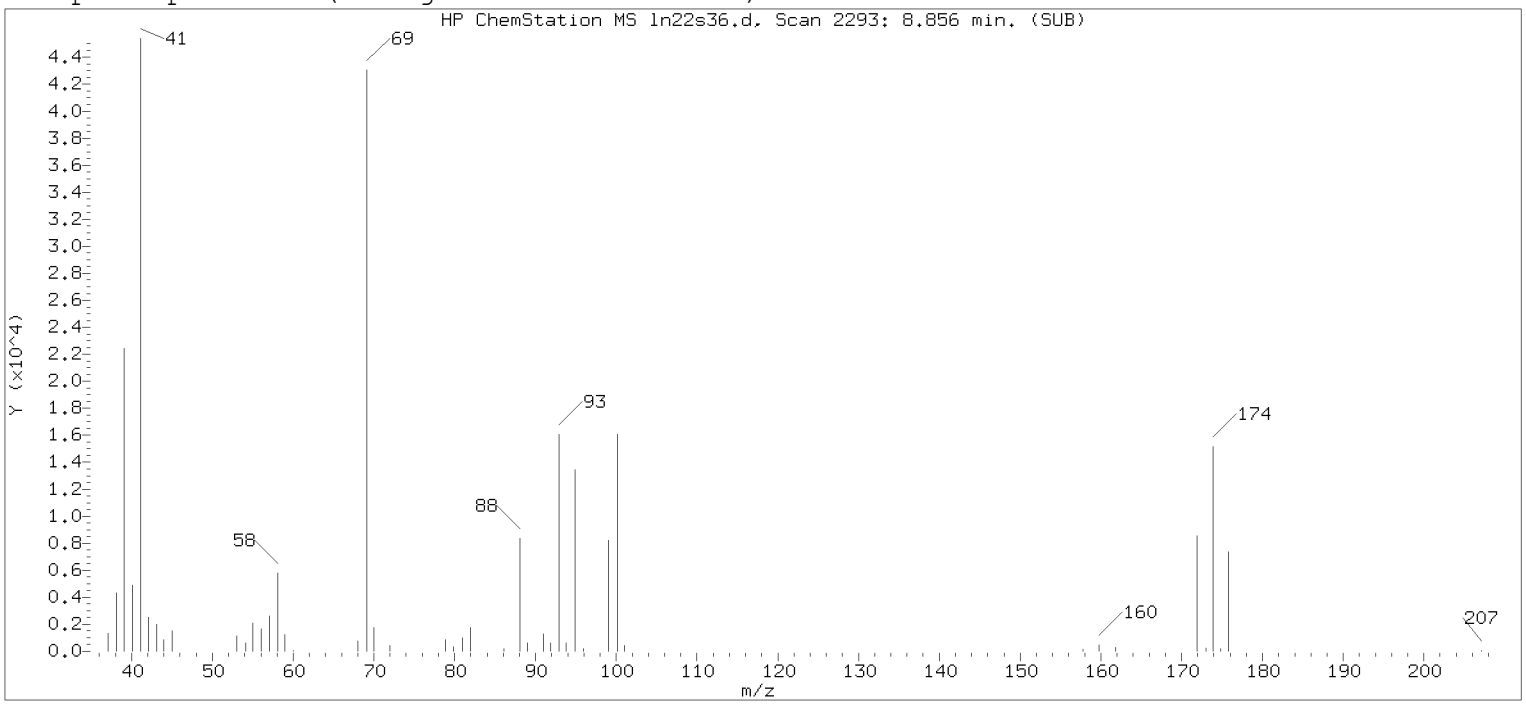
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 56817M
On-Column Amount (ng) : 635.5738
Integration start scan : 2277 Integration stop scan: 2391
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

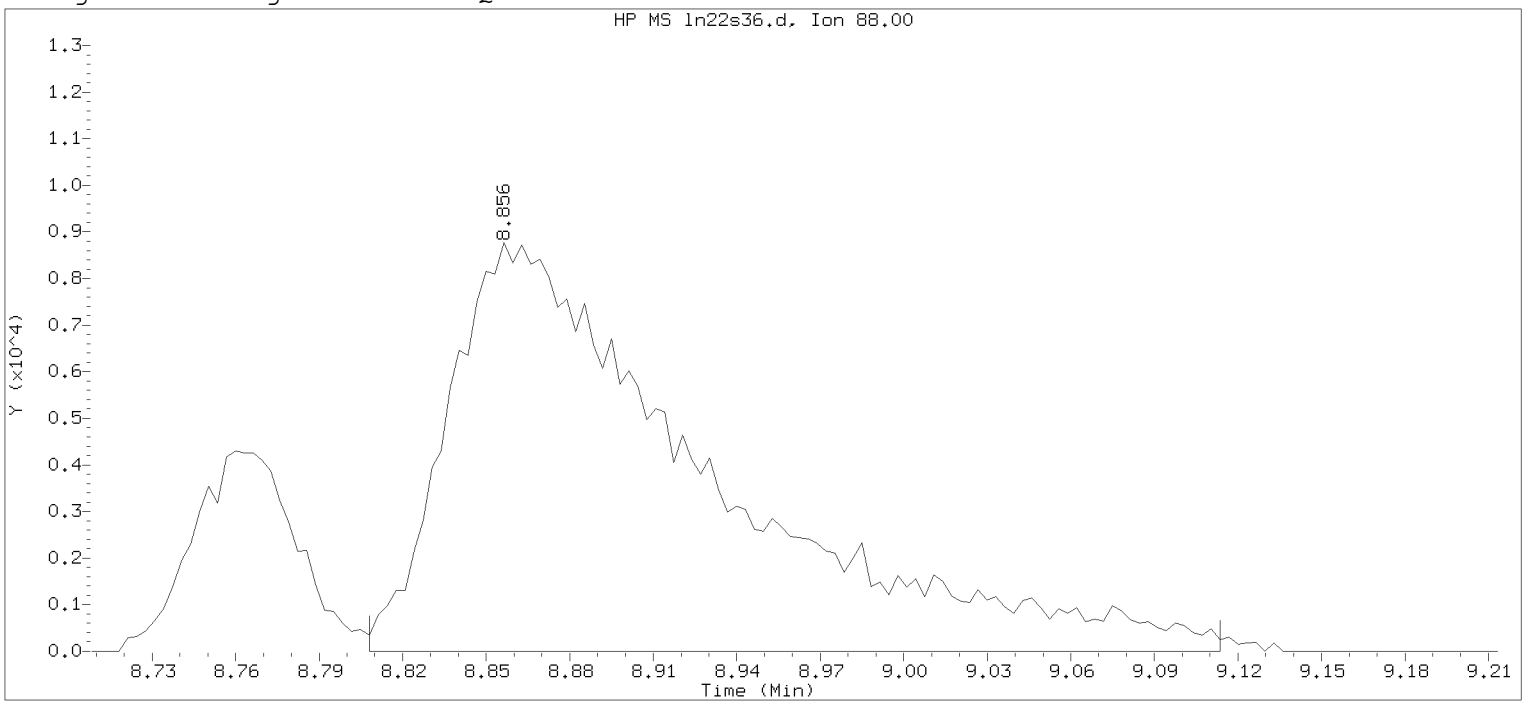
Analyst responsible for change: Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:00.
Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:02.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov22a.b/ln22s36.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 13:04 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 23-Nov-2019 10:54 clm27445

Sample Name: JCW02MSD Lab Sample ID: 1205895MSD

Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2293		
Retention Time (minutes)	: 8.856		
Quant Ion	: 88.00		
Area	: 56561		
On-column Amount (ng)	: 632.7173		
Integration start scan	: 2277	Integration stop scan:	2372
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:00.
Target 3.5 esignature user: clm27445

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JCW07MS

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205901

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s04.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	21	
75-35-4	1,1-Dichloroethene	23	
67-64-1	Acetone	160	
76-13-1	Freon 113	21	
75-15-0	Carbon Disulfide	18	
75-09-2	Methylene Chloride	22	
156-60-5	trans-1,2-Dichloroethene	22	
75-34-3	1,1-Dichloroethane	21	
156-59-2	cis-1,2-Dichloroethene	23	
78-93-3	2-Butanone	130	
67-66-3	Chloroform	22	
71-55-6	1,1,1-Trichloroethane	41	
71-43-2	Benzene	22	
107-06-2	1,2-Dichloroethane	21	
79-01-6	Trichloroethene	60	
123-91-1	1,4-Dioxane	530	
108-88-3	Toluene	22	
127-18-4	Tetrachloroethene	22	
100-41-4	Ethylbenzene	22	
1330-20-7	Xylene (Total)	66	
95-50-1	1,2-Dichlorobenzene	21	
91-20-3	Naphthalene	19	

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23s04.d Injection date and time: **23-NOV-2019 11:28**
Data file Sample Info. Line: JCW07MS;1205901MS;1;3;MS;JCW22;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 11:45 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493(-0.003)	936	65	215519 (-2)	250.00	
66) Fluorobenzene	7.956(0.000)	2013	96	1138753 (1)	50.00	
100) Chlorobenzene-d5	11.358(0.000)	3071	117	930333 (-1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.220(0.003)	3650	152	508418 (-3)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.069(0.000)	113	268913	48.302	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525(0.000)	102	71105	50.113	100%		80 - 120
83) Toluene-d8	(3)	9.930(0.000)	98	1202781	49.410	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345(0.000)	95	467100	50.675	101%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)	2.394(0.000)	62	163977	21.466	21.47			0.2	1
17) 1,1-Dichloroethene	(2)	3.750(0.000)	96	112489	23.303	23.30			0.2	1
18) Acetone	(1)	3.802(-0.000)	58	118392	163.322	163.32			0.7	20
19) Freon 113	(2)	3.789(0.001)	101	116724	21.194	21.19			0.2	10
23) Carbon Disulfide	(2)	4.069(-0.000)	76	336491	18.498	18.50			0.2	5
28) Methylene Chloride	(2)	4.468(-0.000)	84	124534	21.676	21.68			0.3	1
32) trans-1,2-Dichloroethene	(2)	4.879(0.000)	96	120954	21.660	21.66			0.2	1
36) 1,1-Dichloroethane	(2)	5.548(-0.000)	63	209152	21.470	21.47			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.374(0.000)	96	141844	22.630	22.63			0.2	1
44) 2-Butanone	(2)	6.361(-0.000)	43	576535	134.273	134.27			0.3	10
51) Chloroform	(2)	6.853(0.000)	83	208045	22.329	22.33			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.078(0.000)	97	328727	41.337	41.34			0.3	1
60) Benzene	(2)	7.554(0.000)	78	506134	21.851	21.85			0.2	1
61) 1,2-Dichloroethane	(2)	7.631(-0.000)	62	159826	21.452	21.45			0.3	1
71) Trichloroethene	(2)	8.426(0.000)	95	347833	59.640	59.64			0.2	1
75) 1,4-Dioxane	(1)	8.856(0.000)	88	38132	527.896	527.90			29	250
88) Toluene	(3)	10.004(0.000)	92	330039	21.626	21.63			0.2	1
93) Tetrachloroethene	(3)	10.538(-0.000)	166	141015	21.817	21.82			0.2	1
104) Ethylbenzene	(3)	11.467(0.000)	91	632711	21.691	21.69			0.4	1
106) m+p-Xylene	(3)	11.580(0.000)	106	511029	44.534	44.53			1	5
107) o-Xylene	(3)	11.904(0.000)	106	241985	21.349	21.35			0.4	1
108) Xylene (Total)	(3)		106	753014	65.883	65.88			1	6
138) 1,2-Dichlorobenzene	(4)	13.499(-0.000)	146	294802	21.277	21.28			0.2	5
148) Naphthalene	(4)	14.769(-0.000)	128	627957	18.871	18.87			1	5

Digitally signed by Linda C. Pape on 11/25/2019 at 13:20. Target 3.5 esignature user ID: lcp00895

Data file: /chem/HP09915.i/19nov23a.b/ln23s04.d Injection date and time: **23-NOV-2019 11:28**
Data file Sample Info. Line: JCW07MS;1205901MS;1;3;MS;JCW22;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 11:45 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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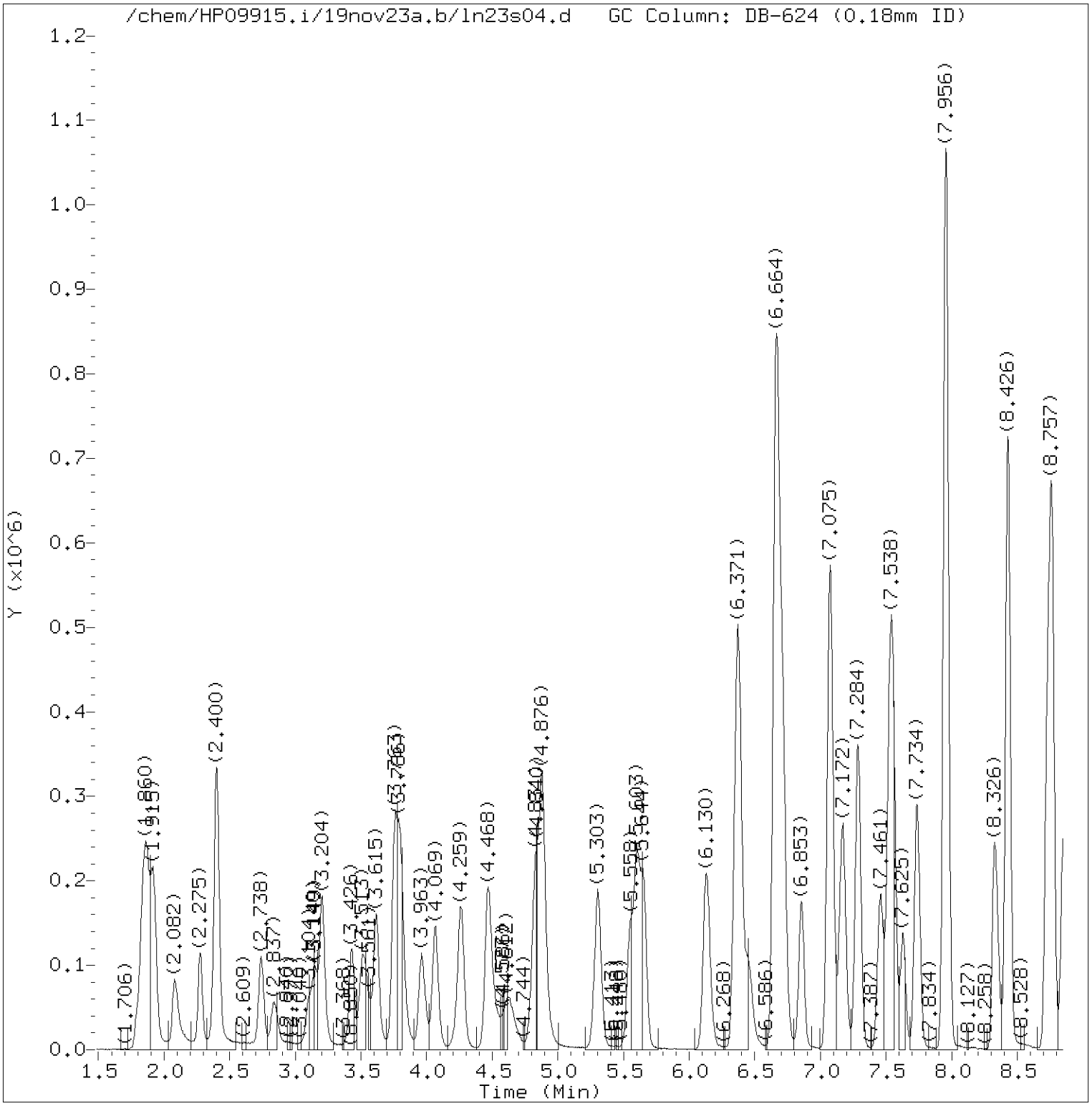
Total number of targets = 24

Digitally signed by Linda C. Pape on 11/25/2019 at 13:20. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

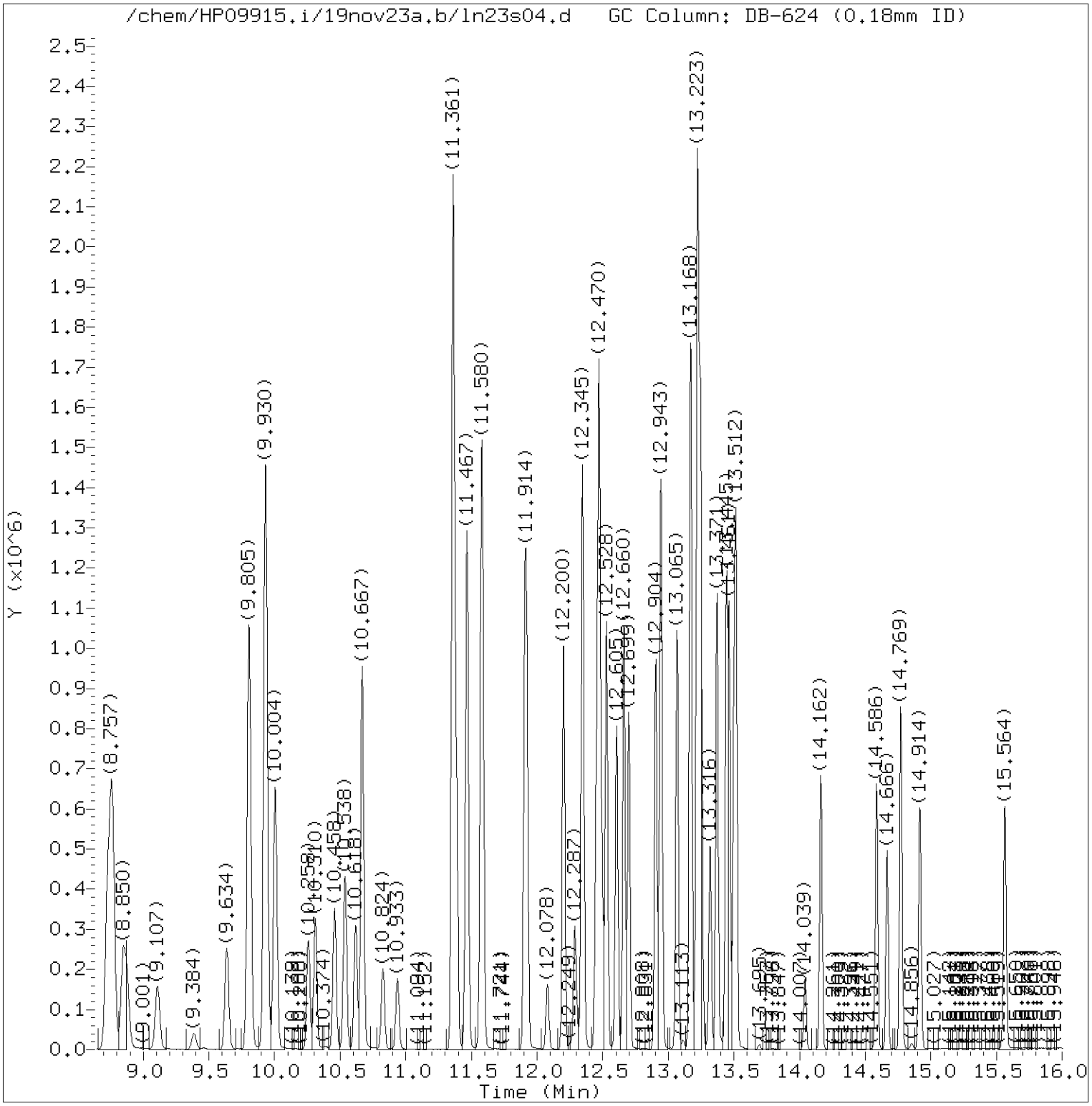
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s04.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 11:28 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 11:45 Automation

Sample Name: JCW07MS Lab Sample ID: 1205901MS

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:20.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s04.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 11:28 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 11:45 Automation

Sample Name: JCW07MS Lab Sample ID: 1205901MS

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:20.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s04.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 11:28 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 11:45 Automation

Sample Name: JCW07MS Lab Sample ID: 1205901MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	2.394	62	163977	21.466
17) 1,1-Dichloroethene	(2)	3.751	96	112489	23.303
19) Freon 113	(2)	3.789	101	116724	21.194
18) Acetone	(1)	3.802	58	118392	163.322
23) Carbon Disulfide	(2)	4.069	76	336491	18.498
28) Methylene Chloride	(2)	4.468	84	124534	21.676
29)*t-Butyl alcohol-d10	(1)	4.493	65	215519	250.000
32) trans-1,2-Dichloroethene	(2)	4.879	96	120954	21.660
36) 1,1-Dichloroethane	(2)	5.548	63	209152	21.470
44) 2-Butanone	(2)	6.361	43	576535	134.273
42) cis-1,2-Dichloroethene	(2)	6.374	96	141844	22.630
51) Chloroform	(2)	6.853	83	208045	22.329
52)$Dibromofluoromethane	(2)	7.069	113	268913	48.302
53) 1,1,1-Trichloroethane	(2)	7.078	97	328727	41.337
57)$1,2-Dichloroethane-d4	(2)	7.525	102	71105	50.113
60) Benzene	(2)	7.554	78	506134	21.851
61) 1,2-Dichloroethane	(2)	7.631	62	159826	21.452
66)*Fluorobenzene	(2)	7.956	96	1138753	50.000
71) Trichloroethene	(2)	8.426	95	347833	59.640
75) 1,4-Dioxane	(1)	8.856	88	38132	527.896
83)$Toluene-d8	(3)	9.930	98	1202781	49.410
88) Toluene	(3)	10.004	92	330039	21.626
93) Tetrachloroethene	(3)	10.538	166	141015	21.817
100)*Chlorobenzene-d5	(3)	11.358	117	930333	50.000
104) Ethylbenzene	(3)	11.467	91	632711	21.691
106) m+p-Xylene	(3)	11.580	106	511029	44.534
108) Xylene (Total)	(3)		106	753014	65.883
107) o-Xylene	(3)	11.905	106	241985	21.349
114)$4-Bromofluorobenzene	(3)	12.345	95	467100	50.675
131)*1,4-Dichlorobenzene-d4	(4)	13.220	152	508418	50.000
138) 1,2-Dichlorobenzene	(4)	13.499	146	294802	21.277
148) Naphthalene	(4)	14.769	128	627957	18.871

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:20.
Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JCW07MSD

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205902

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s05.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	21	
75-35-4	1,1-Dichloroethene	23	
67-64-1	Acetone	150	
76-13-1	Freon 113	21	
75-15-0	Carbon Disulfide	19	
75-09-2	Methylene Chloride	22	
156-60-5	trans-1,2-Dichloroethene	22	
75-34-3	1,1-Dichloroethane	21	
156-59-2	cis-1,2-Dichloroethene	23	
78-93-3	2-Butanone	140	
67-66-3	Chloroform	22	
71-55-6	1,1,1-Trichloroethane	41	
71-43-2	Benzene	22	
107-06-2	1,2-Dichloroethane	22	
79-01-6	Trichloroethene	59	
123-91-1	1,4-Dioxane	550	
108-88-3	Toluene	22	
127-18-4	Tetrachloroethene	21	
100-41-4	Ethylbenzene	22	
1330-20-7	Xylene (Total)	65	
95-50-1	1,2-Dichlorobenzene	21	
91-20-3	Naphthalene	19	

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23s05.d Injection date and time: **23-NOV-2019 11:50**
Data file Sample Info. Line: JCW07MSD;1205902MSD;1;3;MSD;JCW22;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 12:07 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493(-0.003)	936	65	233889 (7)	250.00	
66) Fluorobenzene	7.956(0.000)	2013	96	1180531 (5)	50.00	
100) Chlorobenzene-d5	11.358(0.000)	3071	117	965531 (2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.219(0.003)	3650	152	526780 (1)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.069(0.000)	113	284546	49.301	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528(0.000)	102	74084	50.365	101%		80 - 120
83) Toluene-d8	(3)	9.930(0.000)	98	1243721	49.229	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345(0.000)	95	486926	50.900	102%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)	2.397(0.000)	62	166803	21.063	21.06			0.2	1
17) 1,1-Dichloroethene	(2)	3.754(0.000)	96	115547	23.090	23.09			0.2	1
18) Acetone	(1)	3.798(-0.000)	58	121833	154.869	154.87			0.7	20
19) Freon 113	(2)	3.795(0.000)	101	119952	21.009	21.01			0.2	10
23) Carbon Disulfide	(2)	4.062(0.000)	76	349523	18.534	18.53			0.2	5
28) Methylene Chloride	(2)	4.464(0.000)	84	128992	21.657	21.66			0.3	1
32) trans-1,2-Dichloroethene	(2)	4.879(0.000)	96	124885	21.572	21.57			0.2	1
36) 1,1-Dichloroethane	(2)	5.548(-0.000)	63	216655	21.453	21.45			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.377(0.000)	96	147438	22.690	22.69			0.2	1
44) 2-Butanone	(2)	6.355(0.000)	43	606190	136.184	136.18			0.3	10
51) Chloroform	(2)	6.853(0.000)	83	216916	22.457	22.46			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.075(0.000)	97	338547	41.065	41.07			0.3	1
60) Benzene	(2)	7.551(0.000)	78	521362	21.712	21.71			0.2	1
61) 1,2-Dichloroethane	(2)	7.628(0.000)	62	166378	21.542	21.54			0.3	1
71) Trichloroethene	(2)	8.428(-0.000)	95	359039	59.383	59.38			0.2	1
75) 1,4-Dioxane	(1)	8.853(0.001)	88	43493	554.822	554.82			29	250
88) Toluene	(3)	10.007(-0.000)	92	340762	21.514	21.51			0.2	1
93) Tetrachloroethene	(3)	10.538(-0.000)	166	143935	21.457	21.46			0.2	1
104) Ethylbenzene	(3)	11.467(-0.000)	91	652490	21.553	21.55			0.4	1
106) m+p-Xylene	(3)	11.580(-0.000)	106	520681	43.721	43.72			1	5
107) o-Xylene	(3)	11.908(-0.000)	106	248315	21.109	21.11			0.4	1
108) Xylene (Total)	(3)		106	768996	64.830	64.83			1	6
138) 1,2-Dichlorobenzene	(4)	13.502(-0.000)	146	298812	20.814	20.81			0.2	5
148) Naphthalene	(4)	14.772(-0.000)	128	663606	19.248	19.25			1	5

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23s05.d Injection date and time: **23-NOV-2019 11:50**
Data file Sample Info. Line: JCW07MSD;1205902MSD;1;3;MSD;JCW22;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 12:07 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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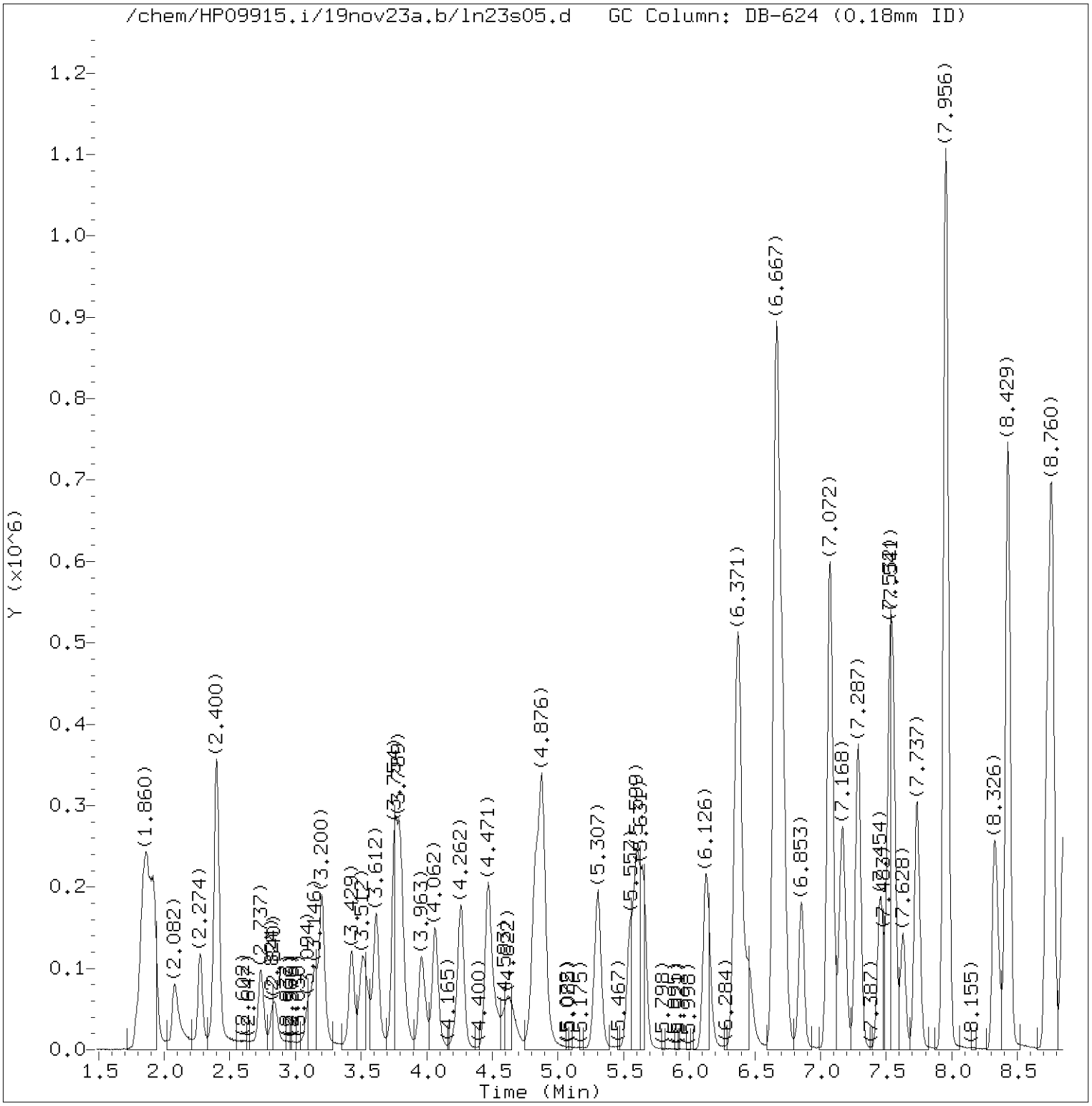
Total number of targets = 24

Digitally signed by Linda C. Pape on 11/25/2019 at 13:21. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

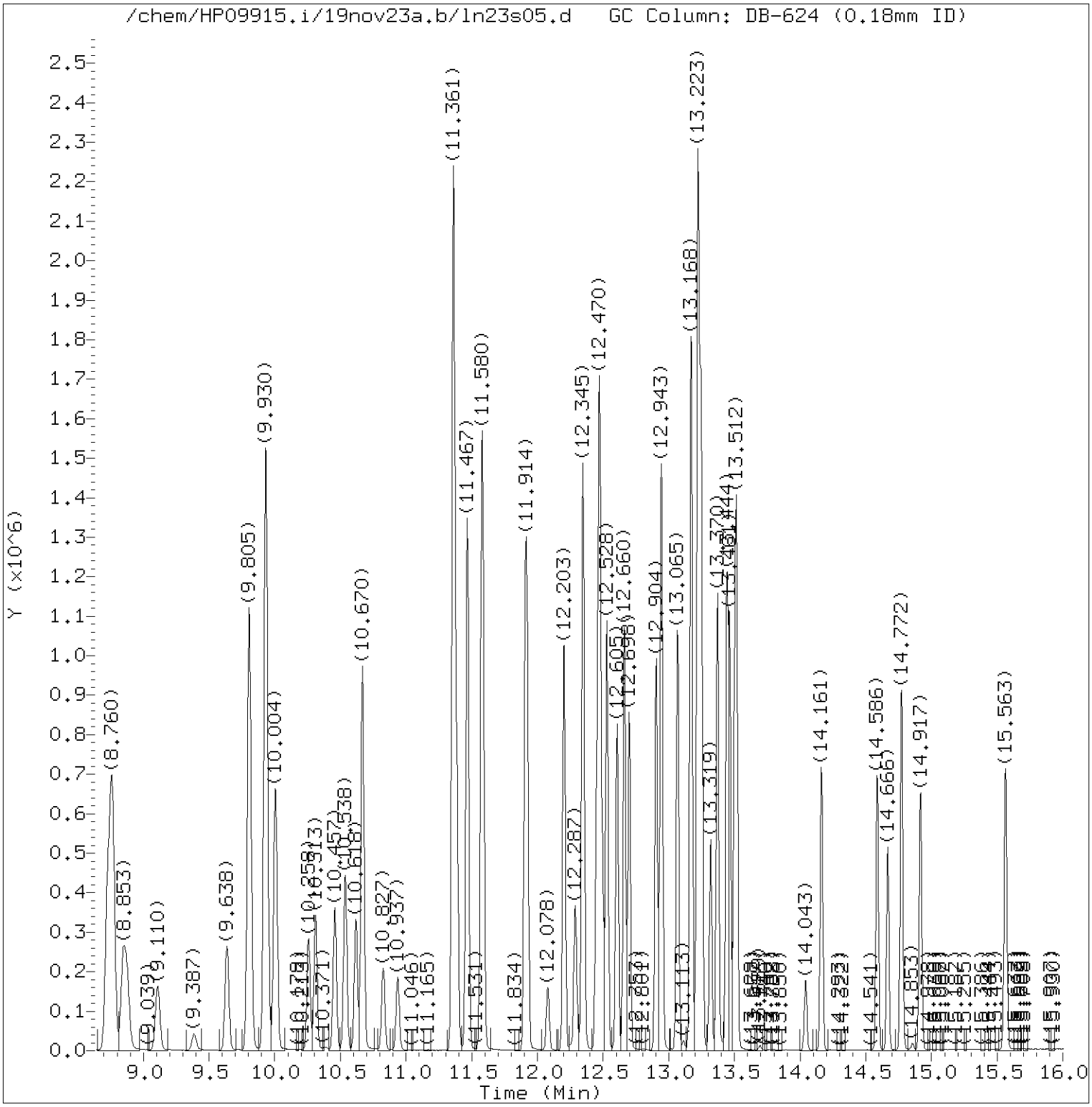
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s05.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 11:50 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 12:07 Automation

Sample Name: JCW07MSD Lab Sample ID: 1205902MSD

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:21.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s05.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 11:50 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 12:07 Automation

Sample Name: JCW07MSD Lab Sample ID: 1205902MSD

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:21.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s05.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 11:50 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 12:07 Automation

Sample Name: JCW07MSD Lab Sample ID: 1205902MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	2.397	62	166803	21.063
17) 1,1-Dichloroethene	(2)	3.754	96	115547	23.090
19) Freon 113	(2)	3.795	101	119952	21.009
18) Acetone	(1)	3.799	58	121833	154.869
23) Carbon Disulfide	(2)	4.062	76	349523	18.534
28) Methylene Chloride	(2)	4.464	84	128992	21.657
29)*t-Butyl alcohol-d10	(1)	4.493	65	233889	250.000
32) trans-1,2-Dichloroethene	(2)	4.879	96	124885	21.572
36) 1,1-Dichloroethane	(2)	5.548	63	216655	21.453
44) 2-Butanone	(2)	6.355	43	606190	136.184
42) cis-1,2-Dichloroethene	(2)	6.377	96	147438	22.690
51) Chloroform	(2)	6.853	83	216916	22.457
52)$Dibromofluoromethane	(2)	7.069	113	284546	49.301
53) 1,1,1-Trichloroethane	(2)	7.075	97	338547	41.065
57)$1,2-Dichloroethane-d4	(2)	7.528	102	74084	50.365
60) Benzene	(2)	7.551	78	521362	21.712
61) 1,2-Dichloroethane	(2)	7.628	62	166378	21.542
66)*Fluorobenzene	(2)	7.956	96	1180531	50.000
71) Trichloroethene	(2)	8.429	95	359039	59.383
75) 1,4-Dioxane	(1)	8.853	88	43493	554.822
83)$Toluene-d8	(3)	9.930	98	1243721	49.229
88) Toluene	(3)	10.007	92	340762	21.514
93) Tetrachloroethene	(3)	10.538	166	143935	21.457
100)*Chlorobenzene-d5	(3)	11.358	117	965531	50.000
104) Ethylbenzene	(3)	11.467	91	652490	21.553
106) m+p-Xylene	(3)	11.580	106	520681	43.721
108) Xylene (Total)	(3)		106	768996	64.830
107) o-Xylene	(3)	11.908	106	248315	21.109
114)$4-Bromofluorobenzene	(3)	12.345	95	486926	50.900
131)*1,4-Dichlorobenzene-d4	(4)	13.219	152	526780	50.000
138) 1,2-Dichlorobenzene	(4)	13.502	146	298812	20.814
148) Naphthalene	(4)	14.772	128	663606	19.248

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:21.
Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL86

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL86

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s31.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	16	
74-87-3	Chloromethane	19	
106-99-0	1,3-Butadiene	24	
75-01-4	Vinyl Chloride	18	
74-83-9	Bromomethane	15	
75-00-3	Chloroethane	16	
109-66-0	n-Pentane	16	
75-69-4	Trichlorofluoromethane	18	
60-29-7	Ethyl ether	21	
354-23-4	Freon 123a	20	
107-02-8	Acrolein	150	
75-35-4	1,1-Dichloroethene	21	
67-64-1	Acetone	150	
76-13-1	Freon 113	19	
67-63-0	2-Propanol	150	
74-88-4	Methyl Iodide	18	
75-15-0	Carbon Disulfide	17	
107-05-1	Allyl Chloride	19	
79-20-9	Methyl Acetate	19	
75-09-2	Methylene Chloride	21	
75-65-0	t-Butyl alcohol	200	
107-13-1	Acrylonitrile	98	
156-60-5	trans-1,2-Dichloroethene	20	
1634-04-4	Methyl Tertiary Butyl Ether	19	
110-54-3	n-Hexane	19	
75-34-3	1,1-Dichloroethane	20	
108-20-3	di-Isopropyl ether	19	
126-99-8	2-Chloro-1,3-butadiene	19	
637-92-3	Ethyl t-butyl ether	19	
156-59-2	cis-1,2-Dichloroethene	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL86

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL86

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s31.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	42	
78-93-3	2-Butanone	140	
594-20-7	2,2-Dichloropropane	20	
107-12-0	Propionitrile	170	
126-98-7	Methacrylonitrile	150	
74-97-5	Bromochloromethane	19	
109-99-9	Tetrahydrofuran	110	
67-66-3	Chloroform	21	
71-55-6	1,1,1-Trichloroethane	20	
110-82-7	Cyclohexane	19	
563-58-6	1,1-Dichloropropene	20	
56-23-5	Carbon Tetrachloride	19	
78-83-1	Isobutyl Alcohol	510	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	21	
994-05-8	t-Amyl methyl ether	19	
142-82-5	n-Heptane	18	
71-36-3	n-Butanol	1000	
79-01-6	Trichloroethene	21	
108-87-2	Methylcyclohexane	19	
78-87-5	1,2-Dichloropropane	22	
74-95-3	Dibromomethane	21	
123-91-1	1,4-Dioxane	640	
80-62-6	Methyl Methacrylate	20	
75-27-4	Bromodichloromethane	20	
79-46-9	2-Nitropropane	15	
110-75-8	2-Chloroethyl Vinyl Ether	34	
10061-01-5	cis-1,3-Dichloropropene	20	
108-10-1	4-Methyl-2-pentanone	95	
108-88-3	Toluene	21	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL86

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL86

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s31.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	19	
542-75-6	1,3-Dichloropropene (total)	40	
97-63-2	Ethyl Methacrylate	19	
79-00-5	1,1,2-Trichloroethane	22	
127-18-4	Tetrachloroethene	20	
142-28-9	1,3-Dichloropropane	21	
591-78-6	2-Hexanone	93	
124-48-1	Dibromochloromethane	19	
106-93-4	1,2-Dibromoethane	21	
544-10-5	1-Chlorohexane	20	
108-90-7	Chlorobenzene	21	
630-20-6	1,1,1,2-Tetrachloroethane	20	
100-41-4	Ethylbenzene	21	
179601-23-1	m+p-Xylene	42	
95-47-6	o-Xylene	21	
1330-20-7	Xylene (Total)	63	
100-42-5	Styrene	21	
75-25-2	Bromoform	16	
98-82-8	Isopropylbenzene	21	
108-94-1	Cyclohexanone	540	
108-86-1	Bromobenzene	21	
79-34-5	1,1,2,2-Tetrachloroethane	21	
96-18-4	1,2,3-Trichloropropane	21	
110-57-6	trans-1,4-Dichloro-2-butene	62	
103-65-1	n-Propylbenzene	22	
95-49-8	2-Chlorotoluene	21	
106-43-4	4-Chlorotoluene	21	
108-67-8	1,3,5-Trimethylbenzene	21	
98-06-6	tert-Butylbenzene	21	
76-01-7	Pentachloroethane	19	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL86

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL86

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s31.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
95-63-6	1,2,4-Trimethylbenzene	21	
135-98-8	sec-Butylbenzene	21	
541-73-1	1,3-Dichlorobenzene	21	
99-87-6	p-Isopropyltoluene	21	
106-46-7	1,4-Dichlorobenzene	21	
526-73-8	1,2,3-Trimethylbenzene	21	
100-44-7	Benzyl Chloride	17	
141-93-5	1,3-Diethylbenzene	19	
105-05-5	1,4-Diethylbenzene	19	
95-50-1	1,2-Dichlorobenzene	21	
104-51-8	n-Butylbenzene	21	
135-01-3	1,2-Diethylbenzene	20	
25340-17-4	Diethylbenzene (total)	59	
96-12-8	1,2-Dibromo-3-chloropropane	19	
108-70-3	1,3,5-Trichlorobenzene	19	
120-82-1	1,2,4-Trichlorobenzene	19	
87-68-3	Hexachlorobutadiene	17	
91-20-3	Naphthalene	20	
87-61-6	1,2,3-Trichlorobenzene	19	
91-57-6	2-Methylnaphthalene	18	

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov22a.b/ln22s31.d Injection date and time: **22-NOV-2019 09:22**
Data file Sample Info. Line: LCSL86;LCSL86;1;3;LCS;;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.499	(-0.003)	938	65	276041	(5)	250.00	
66) Fluorobenzene	7.956	(0.003)	2013	96	1351151	(1)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	1085726	(1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(-0.003)	3651	152	574419	(0)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.068	(0.000)	113	314109	47.551	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(-0.001)	102	83540	49.622	99%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	1421656	50.043	100%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	545321	50.694	101%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	2.088	(-0.000)	85	146439	15.541	15.54			0.2	1
4) Chloromethane	(2)	2.278	(-0.000)	50	168430	18.547	18.55			0.2	1
5) 1,3-Butadiene	(2)	2.400	(0.000)	39	178682	23.697	23.70			1	3
6) Vinyl Chloride	(2)	2.400	(0.000)	62	164260	18.123	18.12			0.2	1
8) Bromomethane	(2)	2.741	(0.001)	94	99770	15.356	15.36			0.3	1
9) Chloroethane	(2)	2.840	(0.000)	64	80610	16.184	16.18			0.2	1
11) n-Pentane	(2)	3.200	(0.001)	43	187289	16.241	16.24			0.4	10
12) Trichlorofluoromethane	(2)	3.149	(-0.000)	101	177789	18.220	18.22			0.2	1
14) Ethyl ether	(2)	3.432	(-0.000)	59	129822	20.589	20.59			0.2	5
15) Freon 123a	(2)	3.512	(0.001)	67	157834	20.108	20.11			0.4	5
16) Acrolein	(1)	3.615	(0.002)	56	300884	145.284	145.28			2	100
17) 1,1-Dichloroethene	(2)	3.753	(0.000)	96	118960	20.770	20.77			0.2	1
18) Acetone	(1)	3.805	(-0.000)	58	143327	154.370	154.37			0.7	20
19) Freon 113	(2)	3.795	(-0.000)	101	121983	18.667	18.67			0.2	10
21) 2-Propanol	(1)	3.988	(0.000)	45	97709	146.388	146.39			18	100
22) Methyl Iodide	(2)	3.959	(0.000)	142	209322	17.636	17.64			0.2	1
23) Carbon Disulfide	(2)	4.065	(0.000)	76	372728	17.269	17.27			0.2	5
25) Allyl Chloride	(2)	4.262	(0.000)	41	192420	18.728	18.73			0.3	5
27) Methyl Acetate	(2)	4.236	(0.000)	43	141243	19.147	19.15			0.2	5
28) Methylene Chloride	(2)	4.467	(0.000)	84	144865	21.251	21.25			0.3	1
30) t-Butyl alcohol	(1)	4.625	(0.002)	59	230834	198.625	198.62			12	50
31) Acrylonitrile	(2)	4.827	(0.000)	53	387984	97.759	97.76			0.3	20
32) trans-1,2-Dichloroethene	(2)	4.882	(-0.000)	96	134818	20.347	20.35			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	4.876	(0.000)	73	402470	18.505	18.51			0.2	1
34) n-Hexane	(2)	5.313	(-0.001)	57	198447	19.251	19.25			2	5
36) 1,1-Dichloroethane	(2)	5.548	(0.000)	63	234881	20.321	20.32			0.2	1
38) di-Isopropyl ether	(2)	5.602	(-0.000)	45	434007	19.468	19.47			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	5.657	(-0.000)	53	194244	18.731	18.73			0.2	5
40) Ethyl t-butyl ether	(2)	6.136	(-0.001)	59	411175	19.005	19.01			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.380	(0.000)	96	161379	21.699	21.70			0.2	1
43) 1,2-Dichloroethene (Total)	(2)			96	296197	42.047	42.05			0.4	2

Digitally signed by Linda C. Pape on 11/22/2019 at 11:19. Target 3.5 esignature user ID: lcp00895

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov22a.b/ln22s31.d Injection date and time: **22-NOV-2019 09:22**
Data file Sample Info. Line: LCSL86;LCSL86;1;3;LCS;;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	6.358(0.000)	43	729939	143.277	143.28			0.3	10
45) 2,2-Dichloropropane	(2)	6.390(0.000)	77	178131	19.825	19.82			0.3	1
47) Propionitrile	(1)	6.454(0.002)	54	240646	166.187	166.19			14	100
48) Methacrylonitrile	(2)	6.663(-0.000)	67	653880	152.734	152.73			6	50
49) Bromochloromethane	(2)	6.705(0.000)	128	75696	19.195	19.20			0.2	5
50) Tetrahydrofuran	(1)	6.715(0.001)	71	141054	107.840	107.84			0.7	10
51) Chloroform	(2)	6.856(0.000)	83	230393	20.840	20.84			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.081(-0.000)	97	187230	19.843	19.84			0.3	1
54) Cyclohexane	(2)	7.171(0.000)	56	237690	18.838	18.84			1	5
55) 1,1-Dichloropropene	(2)	7.290(0.000)	75	187307	20.495	20.50			0.2	5
56) Carbon Tetrachloride	(2)	7.281(0.000)	117	152272	19.028	19.03			0.2	1
58) Isobutyl Alcohol	(1)	7.451(0.001)	41	199143	509.200	509.20			36	250
60) Benzene	(2)	7.554(0.000)	78	577494	21.012	21.01			0.2	1
61) 1,2-Dichloroethane	(2)	7.631(0.000)	62	183049	20.707	20.71			0.3	1
65) t-Amyl methyl ether	(2)	7.737(-0.000)	73	417025	19.204	19.20			0.8	5
67) n-Heptane	(2)	7.956(0.000)	43	177798	18.463	18.46			2	5
69) n-Butanol	(1)	8.329(0.000)	56	345915	1027.650	1027.65			61	250
71) Trichloroethene	(2)	8.425(-0.000)	95	143279	20.705	20.70			0.2	1
72) Methylcyclohexane	(2)	8.731(-0.000)	83	250326	19.498	19.50			0.5	5
73) 1,2-Dichloropropane	(2)	8.763(-0.000)	63	151775	21.748	21.75			0.2	1
74) Dibromomethane	(2)	8.875(-0.000)	93	94760	20.986	20.99			0.2	1
75) 1,4-Dioxane	(1)	8.853(0.002)	88	59366	641.661	641.66			29	250
76) Methyl Methacrylate	(2)	8.843(-0.000)	69	135867	20.133	20.13			0.2	5
78) Bromodichloromethane	(2)	9.110(-0.000)	83	163717	20.205	20.21			0.2	1
79) 2-Nitropropane	(2)	9.383(-0.000)	41	37702	15.362	15.36			0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)	9.461(-0.000)	63	101485	33.859	33.86			0.2	10
81) cis-1,3-Dichloropropene	(2)	9.638(-0.000)	75	218744	20.326	20.33			0.2	1
82) 4-Methyl-2-pentanone	(2)	9.805(-0.000)	43	1023165	95.147	95.15			0.5	10
88) Toluene	(3)	10.007(-0.000)	92	373186	20.953	20.95			0.2	1
89) trans-1,3-Dichloropropene	(3)	10.255(0.000)	75	193929	19.181	19.18			0.2	1
90) 1,3-Dichloropropene (total)	(3)		100	412673	39.507	39.51			0.4	2
91) Ethyl Methacrylate	(3)	10.313(-0.000)	69	232684	18.937	18.94			0.2	5
92) 1,1,2-Trichloroethane	(3)	10.457(-0.000)	97	146523	21.699	21.70			0.2	1
93) Tetrachloroethene	(3)	10.538(-0.000)	166	152684	20.242	20.24			0.2	1
94) 1,3-Dichloropropane	(3)	10.615(0.000)	76	242124	21.001	21.00			0.2	1
96) 2-Hexanone	(3)	10.670(-0.000)	43	764524	93.216	93.22			0.3	10
97) Dibromochloromethane	(3)	10.824(0.000)	129	131597	19.025	19.02			0.2	1
99) 1,2-Dibromoethane	(3)	10.936(-0.000)	107	152685	20.823	20.82			0.2	1
101) 1-Chlorohexane	(3)	11.364(-0.000)	91	190403	19.900	19.90			0.3	5
102) Chlorobenzene	(3)	11.387(-0.000)	112	422592	20.982	20.98			0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)	11.464(-0.000)	131	130507	19.667	19.67			0.2	1
104) Ethylbenzene	(3)	11.467(-0.000)	91	712911	20.942	20.94			0.4	1
106) m+p-Xylene	(3)	11.580(-0.000)	106	567789	42.398	42.40			1	5
107) o-Xylene	(3)	11.908(-0.000)	106	274633	20.762	20.76			0.4	1
108) Xylene (Total)	(3)		106	842422	63.160	63.16			1	6
109) Styrene	(3)	11.920(-0.000)	104	463800	21.218	21.22			0.2	5
110) Bromoform	(3)	12.081(-0.000)	173	81624	15.792	15.79			1	4
111) Isopropylbenzene	(3)	12.203(-0.000)	105	702182	21.164	21.16			0.2	5
112) Cyclohexanone	(1)	12.287(0.001)	55	194471	536.696	536.70			25	100
115) Bromobenzene	(4)	12.467(-0.000)	156	177923	20.609	20.61			0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	12.448(0.000)	83	229750	21.173	21.17			0.2	1
117) 1,2,3-Trichloropropane	(4)	12.496(0.000)	110	68439	20.554	20.55			0.2	5
118) trans-1,4-Dichloro-2-butene	(4)	12.473(0.000)	53	206621	61.734	61.73			6	50
119) n-Propylbenzene	(4)	12.528(0.000)	91	825345	21.882	21.88			0.2	5

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov22a.b/ln22s31.d Injection date and time: **22-NOV-2019 09:22**
Data file Sample Info. Line: LCSL86;LCSL86;1;3;LCS;;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)	12.605(0.000)	126	164379	20.514	20.51			0.2	5
121) 4-Chlorotoluene	(4)	12.698(0.000)	126	173549	20.808	20.81			0.2	5
122) 1,3,5-Trimethylbenzene	(4)	12.663(0.000)	105	587226	21.423	21.42			0.3	5
124) tert-Butylbenzene	(4)	12.904(0.000)	134	118320M	20.872	20.87			0.3	5
125) Pentachloroethane	(4)	12.936(0.000)	167	92382	18.926	18.93			0.2	5
126) 1,2,4-Trimethylbenzene	(4)	12.946(0.000)	105	612068	21.187	21.19			1	5
127) sec-Butylbenzene	(4)	13.065(0.000)	105	722217	21.350	21.35			0.2	5
129) 1,3-Dichlorobenzene	(4)	13.165(0.000)	146	328392	20.700	20.70			0.2	5
130) p-Isopropyltoluene	(4)	13.171(0.000)	119	616210	21.057	21.06			0.2	5
133) 1,4-Dichlorobenzene	(4)	13.239(0.000)	146	342298	20.813	20.81			0.2	5
134) 1,2,3-Trimethylbenzene	(4)	13.248(0.000)	105	634740	20.742	20.74			0.3	5
135) Benzyl Chloride	(4)	13.319(0.000)	91	388635	16.773	16.77			1	5
136) 1,3-Diethylbenzene	(4)	13.370(0.000)	119	371063	19.483	19.48			0.2	5
137) 1,4-Diethylbenzene	(4)	13.441(0.000)	119	392281	19.441	19.44			0.2	5
138) 1,2-Dichlorobenzene	(4)	13.499(0.000)	146	330293	21.099	21.10			0.2	5
139) n-Butylbenzene	(4)	13.464(0.000)	92	307732	20.566	20.57			0.2	5
140) 1,2-Diethylbenzene	(4)	13.515(0.000)	119	316183	19.694	19.69			0.2	5
141) Diethylbenzene (total)	(4)		100	1079527	58.618	58.62			0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)	14.042(0.000)	75	45003	18.946	18.95			0.3	5
144) 1,3,5-Trichlorobenzene	(4)	14.161(0.000)	180	231556	19.253	19.25			0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.586(0.000)	180	224584	19.204	19.20			0.3	5
147) Hexachlorobutadiene	(4)	14.666(0.000)	225	93404	16.916	16.92			2	5
148) Naphthalene	(4)	14.772(0.000)	128	769169	20.459	20.46			1	5
149) 1,2,3-Trichlorobenzene	(4)	14.914(0.000)	180	221335	19.451	19.45			0.4	5
150) 2-Methylnaphthalene	(4)	15.563(0.000)	142	413397	17.856	17.86			2	4

M = Compound was manually integrated.

Total number of targets = 110

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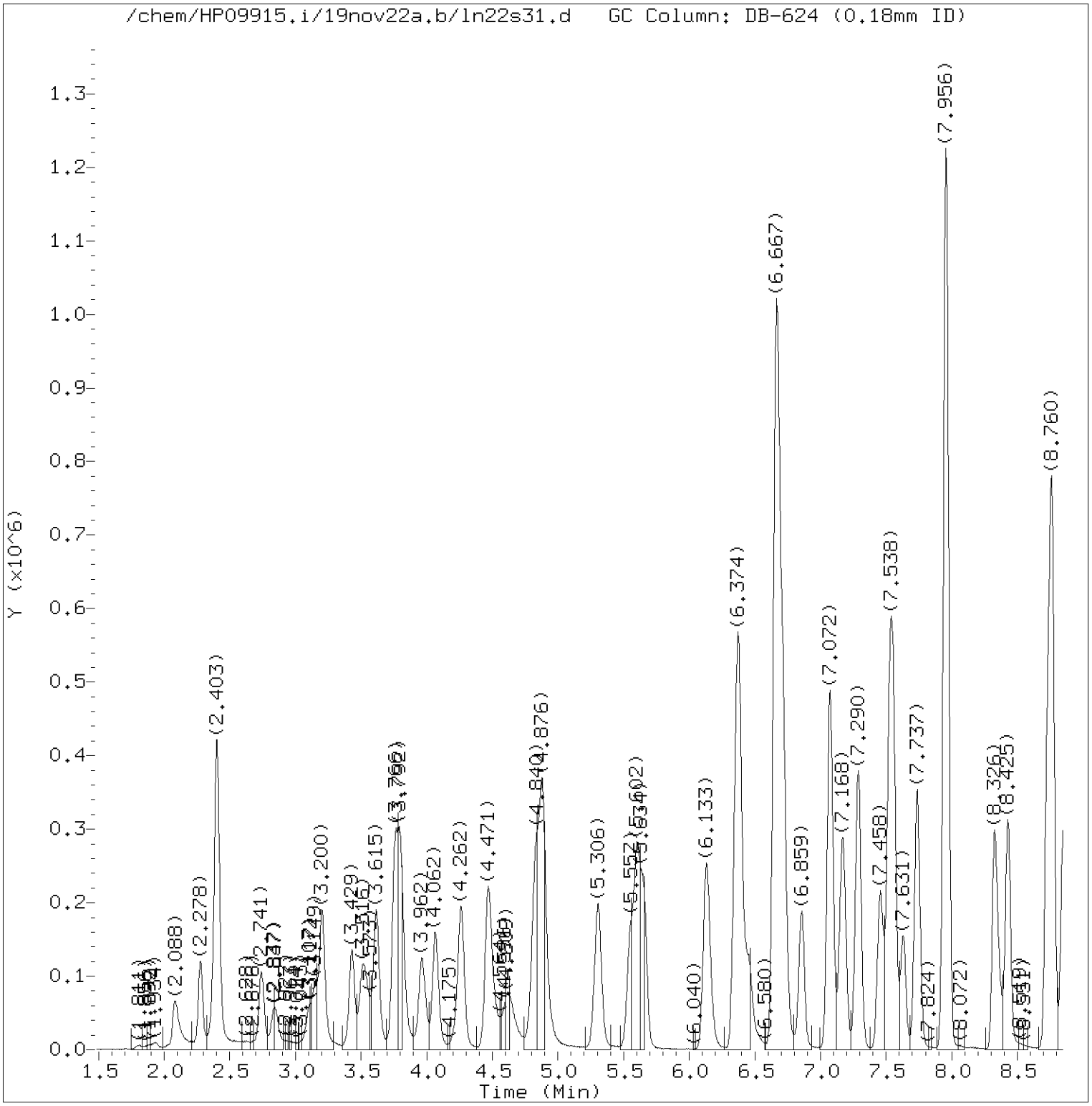
Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:02. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s31.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:22 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCSL86 Lab Sample ID: LCSL86

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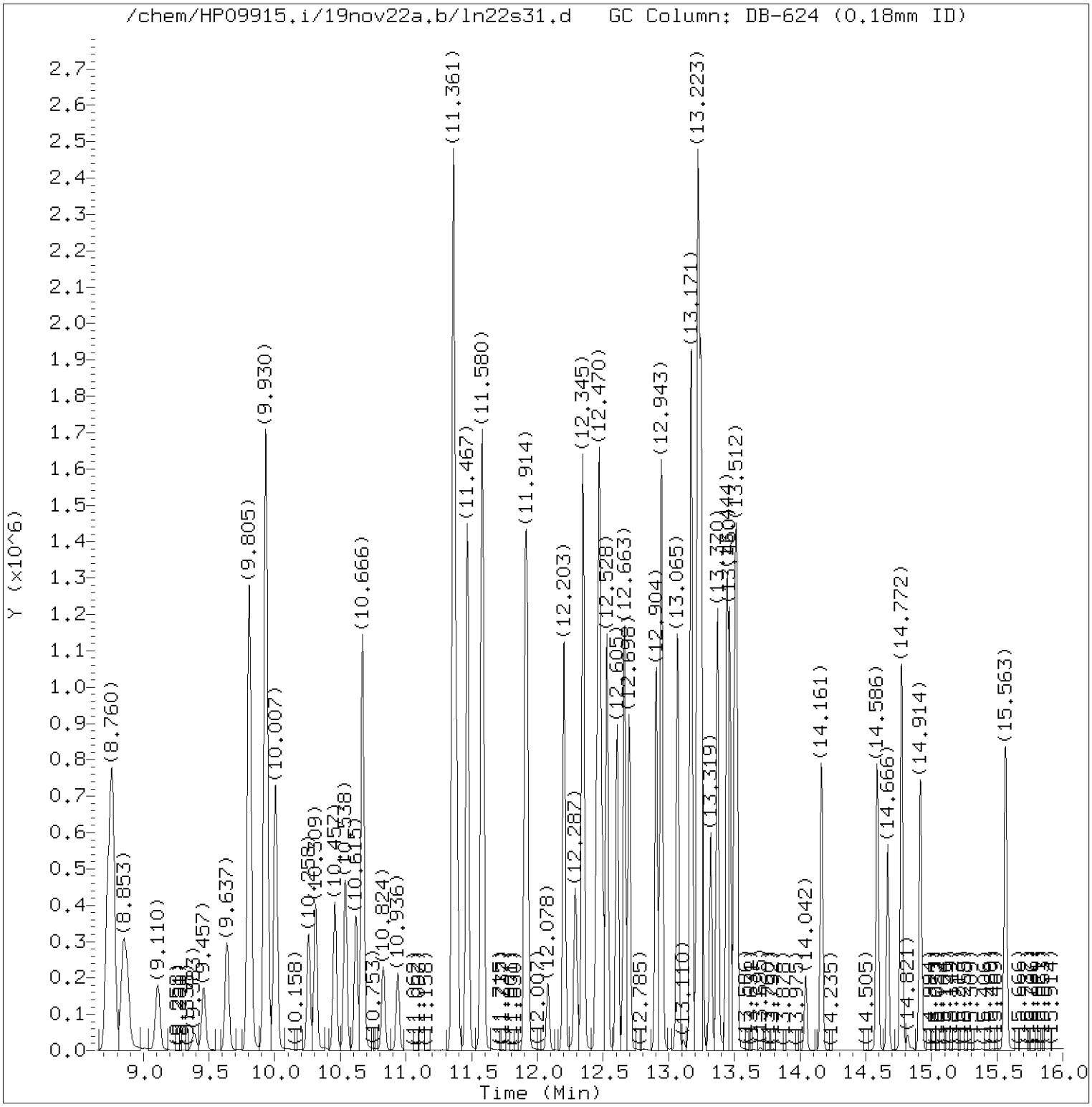
on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s31.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:22 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCSL86 Lab Sample ID: LCSL86

Digitally signed by Linda C. Pape
on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s31.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:22 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCSL86 Lab Sample ID: LCSL86

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.088	85	146439	15.541
4) Chloromethane	(2)	2.278	50	168430	18.547
5) 1,3-Butadiene	(2)	2.400	39	178682	23.697
6) Vinyl Chloride	(2)	2.400	62	164260	18.123
8) Bromomethane	(2)	2.741	94	99770	15.356
9) Chloroethane	(2)	2.840	64	80610	16.184
12) Trichlorofluoromethane	(2)	3.149	101	177789	18.220
11) n-Pentane	(2)	3.200	43	187289	16.241
14) Ethyl ether	(2)	3.432	59	129822	20.589
15) Freon 123a	(2)	3.512	67	157834	20.108
16) Acrolein	(1)	3.615	56	300884	145.284
17) 1,1-Dichloroethene	(2)	3.753	96	118960	20.770
19) Freon 113	(2)	3.795	101	121983	18.667
18) Acetone	(1)	3.805	58	143327	154.370
22) Methyl Iodide	(2)	3.959	142	209322	17.636
21) 2-Propanol	(1)	3.988	45	97709	146.388
23) Carbon Disulfide	(2)	4.065	76	372728	17.269
27) Methyl Acetate	(2)	4.236	43	141243	19.147
25) Allyl Chloride	(2)	4.262	41	192420	18.728
28) Methylene Chloride	(2)	4.467	84	144865	21.251
29)*t-Butyl alcohol-d10	(1)	4.499	65	276041	250.000
30) t-Butyl alcohol	(1)	4.625	59	230834	198.625
31) Acrylonitrile	(2)	4.827	53	387984	97.759
33) Methyl Tertiary Butyl Ether	(2)	4.876	73	402470	18.505
32) trans-1,2-Dichloroethene	(2)	4.882	96	134818	20.347
34) n-Hexane	(2)	5.313	57	198447	19.251
36) 1,1-Dichloroethane	(2)	5.548	63	234881	20.321
38) di-Isopropyl ether	(2)	5.602	45	434007	19.468
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	194244	18.731
40) Ethyl t-butyl ether	(2)	6.136	59	411175	19.005
43) 1,2-Dichloroethene (Total)	(2)		96	296197	42.047
44) 2-Butanone	(2)	6.358	43	729939	143.277
42) cis-1,2-Dichloroethene	(2)	6.380	96	161379	21.699
45) 2,2-Dichloropropane	(2)	6.390	77	178131	19.825
47) Propionitrile	(1)	6.454	54	240646	166.187
48) Methacrylonitrile	(2)	6.663	67	653880	152.734
49) Bromochloromethane	(2)	6.705	128	75696	19.195
50) Tetrahydrofuran	(1)	6.715	71	141054	107.840

* = Compound is an internal standard.

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on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s31.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:22 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCSL86 Lab Sample ID: LCSL86

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	6.856	83	230393	20.840
52)$Dibromofluoromethane	(2)	7.068	113	314109	47.551
53) 1,1,1-Trichloroethane	(2)	7.081	97	187230	19.843
54) Cyclohexane	(2)	7.171	56	237690	18.838
56) Carbon Tetrachloride	(2)	7.281	117	152272	19.028
55) 1,1-Dichloropropene	(2)	7.290	75	187307	20.495
58) Isobutyl Alcohol	(1)	7.451	41	199143	509.200
57)$1,2-Dichloroethane-d4	(2)	7.528	102	83540	49.622
60) Benzene	(2)	7.554	78	577494	21.012
61) 1,2-Dichloroethane	(2)	7.631	62	183049	20.707
65) t-Amyl methyl ether	(2)	7.737	73	417025	19.204
67) n-Heptane	(2)	7.956	43	177798	18.463
66)*Fluorobenzene	(2)	7.956	96	1351151	50.000
69) n-Butanol	(1)	8.329	56	345915	1027.650
71) Trichloroethene	(2)	8.425	95	143279	20.705
72) Methylcyclohexane	(2)	8.731	83	250326	19.498
73) 1,2-Dichloropropane	(2)	8.763	63	151775	21.748
76) Methyl Methacrylate	(2)	8.843	69	135867	20.133
75) 1,4-Dioxane	(1)	8.853	88	59366	641.661
74) Dibromomethane	(2)	8.875	93	94760	20.986
78) Bromodichloromethane	(2)	9.110	83	163717	20.205
79) 2-Nitropropane	(2)	9.383	41	37702	15.362
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	101485	33.859
81) cis-1,3-Dichloropropene	(2)	9.637	75	218744	20.326
82) 4-Methyl-2-pentanone	(2)	9.805	43	1023165	95.147
83)$Toluene-d8	(3)	9.930	98	1421656	50.043
88) Toluene	(3)	10.007	92	373186	20.953
90) 1,3-Dichloropropene (total)	(3)		100	412673	39.507
89) trans-1,3-Dichloropropene	(3)	10.255	75	193929	19.181
91) Ethyl Methacrylate	(3)	10.313	69	232684	18.937
92) 1,1,2-Trichloroethane	(3)	10.457	97	146523	21.699
93) Tetrachloroethene	(3)	10.538	166	152684	20.242
94) 1,3-Dichloropropane	(3)	10.615	76	242124	21.001
96) 2-Hexanone	(3)	10.670	43	764524	93.216
97) Dibromochloromethane	(3)	10.824	129	131597	19.025
99) 1,2-Dibromoethane	(3)	10.936	107	152685	20.823
100)*Chlorobenzene-d5	(3)	11.358	117	1085726	50.000
101) 1-Chlorohexane	(3)	11.364	91	190403	19.900

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s31.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:22 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCSL86 Lab Sample ID: LCSL86

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
102) Chlorobenzene	(3)	11.387	112	422592	20.982
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	130507	19.667
104) Ethylbenzene	(3)	11.467	91	712911	20.942
106) m+p-Xylene	(3)	11.580	106	567789	42.398
108) Xylene (Total)	(3)		106	842422	63.160
107) o-Xylene	(3)	11.908	106	274633	20.762
109) Styrene	(3)	11.920	104	463800	21.218
110) Bromoform	(3)	12.081	173	81624	15.792
111) Isopropylbenzene	(3)	12.203	105	702182	21.164
112) Cyclohexanone	(1)	12.287	55	194471	536.696
114)$4-Bromofluorobenzene	(3)	12.345	95	545321	50.694
116) 1,1,2,2-Tetrachloroethane	(4)	12.448	83	229750	21.173
115) Bromobenzene	(4)	12.467	156	177923	20.609
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	206621	61.734
117) 1,2,3-Trichloropropane	(4)	12.496	110	68439	20.554
119) n-Propylbenzene	(4)	12.528	91	825345	21.882
120) 2-Chlorotoluene	(4)	12.605	126	164379	20.514
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	587226	21.423
121) 4-Chlorotoluene	(4)	12.698	126	173549	20.808
124) tert-Butylbenzene	(4)	12.904	134	118320M	20.872
125) Pentachloroethane	(4)	12.936	167	92382	18.926
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	612068	21.187
127) sec-Butylbenzene	(4)	13.065	105	722217	21.350
129) 1,3-Dichlorobenzene	(4)	13.165	146	328392	20.700
130) p-Isopropyltoluene	(4)	13.171	119	616210	21.057
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	574419	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	342298	20.813
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	634740	20.742
135) Benzyl Chloride	(4)	13.319	91	388635	16.773
136) 1,3-Diethylbenzene	(4)	13.370	119	371063	19.483
141) Diethylbenzene (total)	(4)		100	1079527	58.618
137) 1,4-Diethylbenzene	(4)	13.441	119	392281	19.441
139) n-Butylbenzene	(4)	13.464	92	307732	20.566
138) 1,2-Dichlorobenzene	(4)	13.499	146	330293	21.099
140) 1,2-Diethylbenzene	(4)	13.515	119	316183	19.694
142) 1,2-Dibromo-3-chloropropane	(4)	14.042	75	45003	18.946
144) 1,3,5-Trichlorobenzene	(4)	14.161	180	231556	19.253
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	224584	19.204

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s31.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:22 Analyst ID: lcp00895

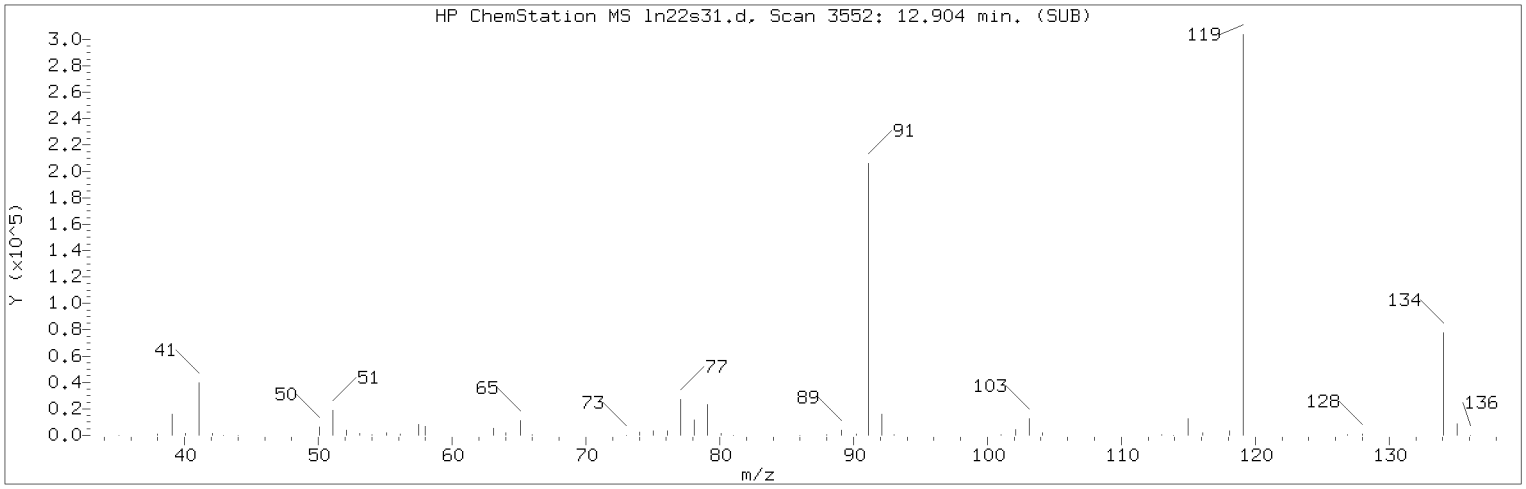
Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCSL86 Lab Sample ID: LCSL86

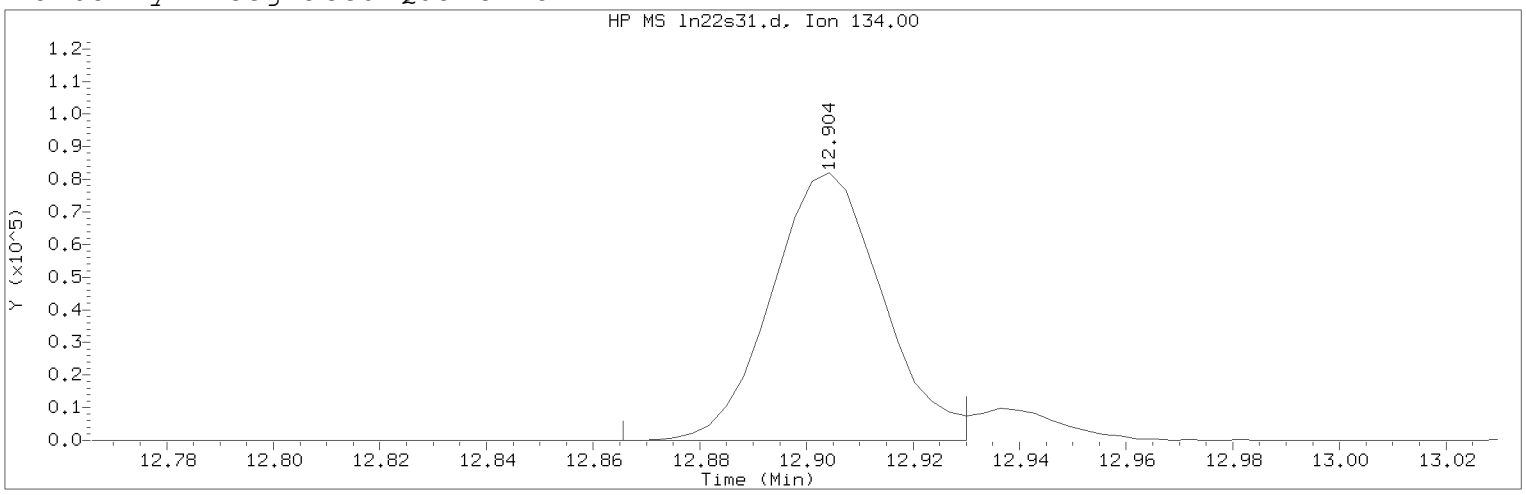
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Hexachlorobutadiene	(4)	14.666	225	93404	16.916
148) Naphthalene	(4)	14.772	128	769169	20.459
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	221335	19.451
150) 2-Methylnaphthalene	(4)	15.563	142	413397	17.856

Digitally signed by Linda C. Pape
on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov22a.b/ln22s31.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:22 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCSL86 Lab Sample ID: LCSL86

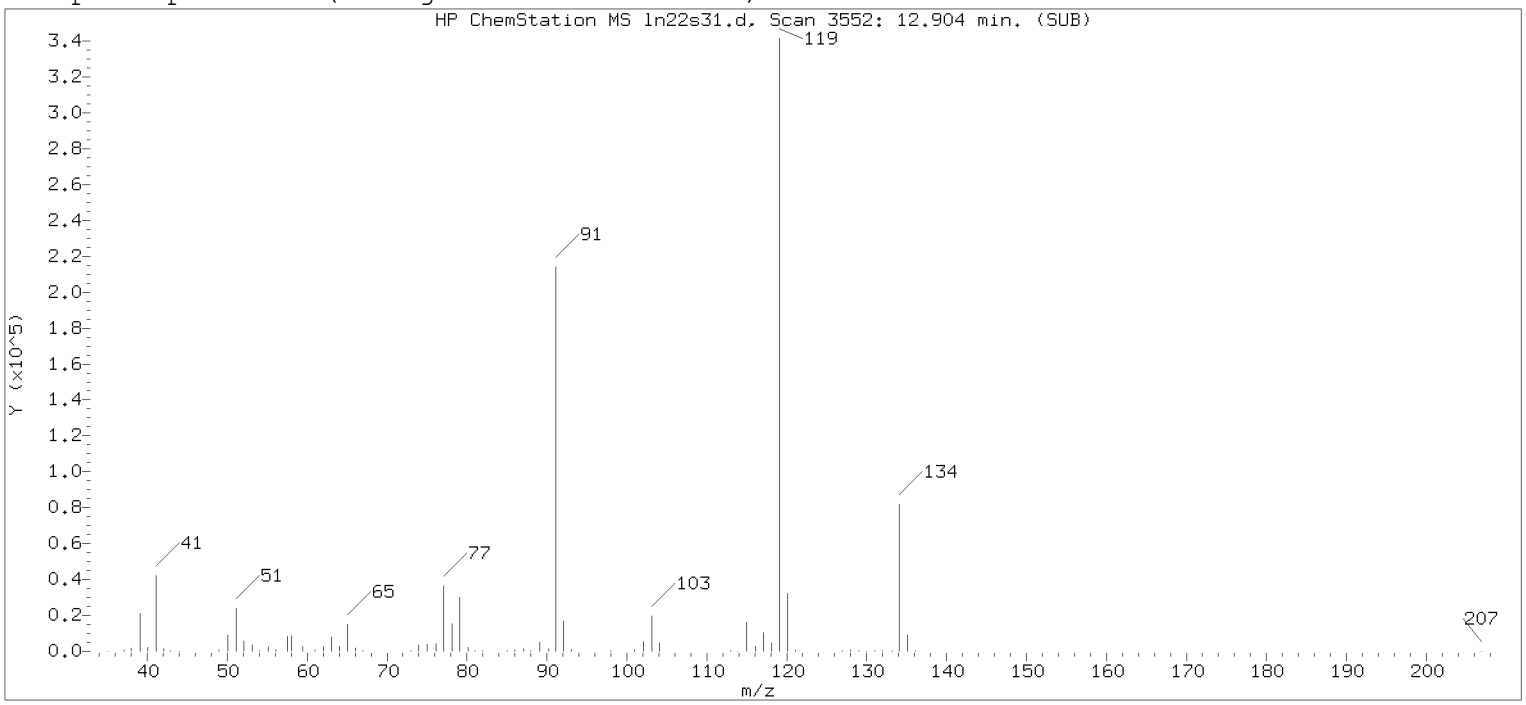
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 118320M
On-Column Amount (ng) : 20.8720
Integration start scan : 3539 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

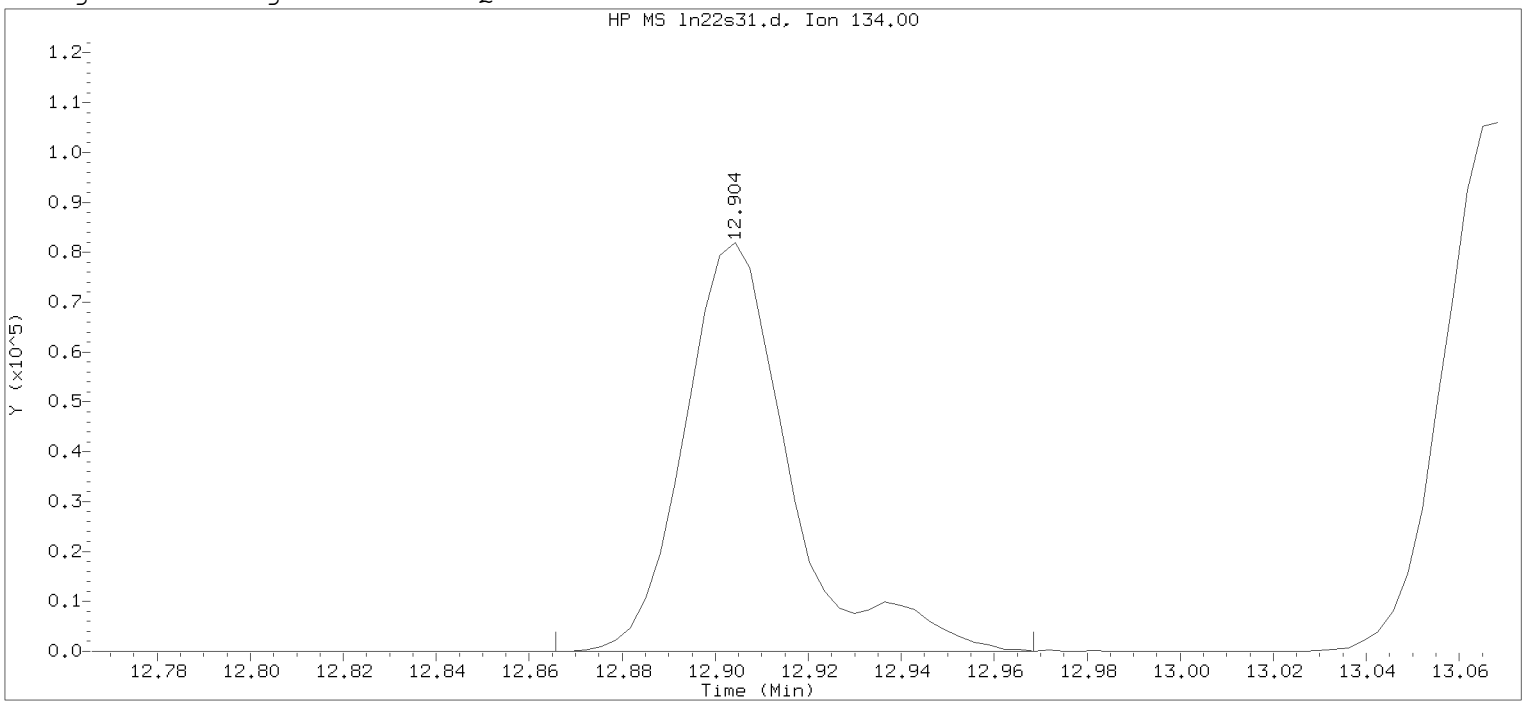
Analyst responsible for change: Digitally signed by Linda C. Pape
on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:02.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov22a.b/ln22s31.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:22 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 10:25 lcp00895

Sample Name: LCSL86 Lab Sample ID: LCSL86

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 128564
On-column Amount (ng) : 22.6791
Integration start scan : 3539 Integration stop scan: 3571
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 11/22/2019 at 11:19.
Target 3.5 esignature user: LINDA.PAPE

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCDL86

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDL86

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s32.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	16	
74-87-3	Chloromethane	18	
106-99-0	1,3-Butadiene	21	
75-01-4	Vinyl Chloride	18	
74-83-9	Bromomethane	16	
75-00-3	Chloroethane	17	
109-66-0	n-Pentane	16	
75-69-4	Trichlorofluoromethane	18	
60-29-7	Ethyl ether	21	
354-23-4	Freon 123a	20	
107-02-8	Acrolein	140	
75-35-4	1,1-Dichloroethene	21	
67-64-1	Acetone	150	
76-13-1	Freon 113	19	
67-63-0	2-Propanol	140	
74-88-4	Methyl Iodide	18	
75-15-0	Carbon Disulfide	18	
107-05-1	Allyl Chloride	18	
79-20-9	Methyl Acetate	20	
75-09-2	Methylene Chloride	21	
75-65-0	t-Butyl alcohol	200	
107-13-1	Acrylonitrile	97	
156-60-5	trans-1,2-Dichloroethene	20	
1634-04-4	Methyl Tertiary Butyl Ether	18	
110-54-3	n-Hexane	20	
75-34-3	1,1-Dichloroethane	20	
108-20-3	di-Isopropyl ether	19	
126-99-8	2-Chloro-1,3-butadiene	19	
637-92-3	Ethyl t-butyl ether	19	
156-59-2	cis-1,2-Dichloroethene	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCDL86

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDL86

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s32.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	42	
78-93-3	2-Butanone	140	
594-20-7	2,2-Dichloropropane	20	
107-12-0	Propionitrile	160	
126-98-7	Methacrylonitrile	150	
74-97-5	Bromochloromethane	19	
109-99-9	Tetrahydrofuran	110	
67-66-3	Chloroform	21	
71-55-6	1,1,1-Trichloroethane	20	
110-82-7	Cyclohexane	19	
563-58-6	1,1-Dichloropropene	21	
56-23-5	Carbon Tetrachloride	20	
78-83-1	Isobutyl Alcohol	520	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	21	
994-05-8	t-Amyl methyl ether	19	
142-82-5	n-Heptane	19	
71-36-3	n-Butanol	1000	
79-01-6	Trichloroethene	21	
108-87-2	Methylcyclohexane	20	
78-87-5	1,2-Dichloropropane	22	
74-95-3	Dibromomethane	21	
123-91-1	1,4-Dioxane	650	
80-62-6	Methyl Methacrylate	20	
75-27-4	Bromodichloromethane	20	
79-46-9	2-Nitropropane	16	
110-75-8	2-Chloroethyl Vinyl Ether	34	
10061-01-5	cis-1,3-Dichloropropene	20	
108-10-1	4-Methyl-2-pentanone	95	
108-88-3	Toluene	21	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCDL86

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDL86

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s32.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	19	
542-75-6	1,3-Dichloropropene (total)	40	
97-63-2	Ethyl Methacrylate	19	
79-00-5	1,1,2-Trichloroethane	22	
127-18-4	Tetrachloroethene	20	
142-28-9	1,3-Dichloropropane	21	
591-78-6	2-Hexanone	93	
124-48-1	Dibromochloromethane	19	
106-93-4	1,2-Dibromoethane	21	
544-10-5	1-Chlorohexane	20	
108-90-7	Chlorobenzene	21	
630-20-6	1,1,1,2-Tetrachloroethane	20	
100-41-4	Ethylbenzene	21	
179601-23-1	m+p-Xylene	43	
95-47-6	o-Xylene	21	
1330-20-7	Xylene (Total)	64	
100-42-5	Styrene	21	
75-25-2	Bromoform	16	
98-82-8	Isopropylbenzene	21	
108-94-1	Cyclohexanone	530	
108-86-1	Bromobenzene	21	
79-34-5	1,1,2,2-Tetrachloroethane	21	
96-18-4	1,2,3-Trichloropropane	20	
110-57-6	trans-1,4-Dichloro-2-butene	61	
103-65-1	n-Propylbenzene	22	
95-49-8	2-Chlorotoluene	21	
106-43-4	4-Chlorotoluene	21	
108-67-8	1,3,5-Trimethylbenzene	22	
98-06-6	tert-Butylbenzene	21	
76-01-7	Pentachloroethane	19	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCDL86

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDL86

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s32.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
95-63-6	1,2,4-Trimethylbenzene	21	
135-98-8	sec-Butylbenzene	21	
541-73-1	1,3-Dichlorobenzene	21	
99-87-6	p-Isopropyltoluene	21	
106-46-7	1,4-Dichlorobenzene	21	
526-73-8	1,2,3-Trimethylbenzene	21	
100-44-7	Benzyl Chloride	17	
141-93-5	1,3-Diethylbenzene	20	
105-05-5	1,4-Diethylbenzene	19	
95-50-1	1,2-Dichlorobenzene	21	
104-51-8	n-Butylbenzene	21	
135-01-3	1,2-Diethylbenzene	20	
25340-17-4	Diethylbenzene (total)	59	
96-12-8	1,2-Dibromo-3-chloropropane	18	
108-70-3	1,3,5-Trichlorobenzene	20	
120-82-1	1,2,4-Trichlorobenzene	20	
87-68-3	Hexachlorobutadiene	17	
91-20-3	Naphthalene	20	
87-61-6	1,2,3-Trichlorobenzene	20	
91-57-6	2-Methylnaphthalene	19	

FORM I VOA

^

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov22a.b/ln22s32.d Injection date and time: **22-NOV-2019 09:00**
Data file Sample Info. Line: LCDL86;LCDL86;1;3;LCSD;;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.496	(0.000)	937	65	281432	(7)	250.00	
66) Fluorobenzene	7.956	(0.003)	2013	96	1358142	(2)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	1094093	(2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(-0.003)	3651	152	582660	(2)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072	(-0.001)	113	313787	47.258	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(-0.001)	102	85277	50.393	101%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	1424089	49.745	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	547780	50.533	101%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
3) Dichlorodifluoromethane	(2)	2.088	(-0.000)	85	150176	15.856	15.86			0.2	1
4) Chloromethane	(2)	2.281	(-0.000)	50	167814	18.384	18.38			0.2	1
5) 1,3-Butadiene	(2)	2.397	(0.000)	39	157771	20.816	20.82			1	3
6) Vinyl Chloride	(2)	2.400	(0.000)	62	167850	18.424	18.42			0.2	1
8) Bromomethane	(2)	2.741	(0.001)	94	101921	15.606	15.61			0.3	1
9) Chloroethane	(2)	2.840	(0.000)	64	84037	16.785	16.78			0.2	1
11) n-Pentane	(2)	3.204	(0.000)	43	189377	16.338	16.34			0.4	10
12) Trichlorofluoromethane	(2)	3.149	(-0.000)	101	181086	18.462	18.46			0.2	1
14) Ethyl ether	(2)	3.432	(-0.000)	59	130168	20.538	20.54			0.2	5
15) Freon 123a	(2)	3.525	(-0.000)	67	161423	20.459	20.46			0.4	5
16) Acrolein	(1)	3.618	(0.000)	56	305206	144.548	144.55			2	100
17) 1,1-Dichloroethene	(2)	3.757	(-0.000)	96	121866	21.168	21.17			0.2	1
18) Acetone	(1)	3.802	(0.000)	58	144617	152.775	152.78			0.7	20
19) Freon 113	(2)	3.792	(0.000)	101	125120	19.049	19.05			0.2	10
21) 2-Propanol	(1)	3.985	(0.000)	45	93909	137.999	138.00			18	100
22) Methyl Iodide	(2)	3.966	(-0.000)	142	210714	17.662	17.66			0.2	1
23) Carbon Disulfide	(2)	4.069	(-0.000)	76	380115	17.520	17.52			0.2	5
25) Allyl Chloride	(2)	4.268	(-0.000)	41	189084	18.308	18.31			0.3	5
27) Methyl Acetate	(2)	4.239	(0.000)	43	145088	19.567	19.57			0.2	5
28) Methylene Chloride	(2)	4.474	(-0.000)	84	143588	20.955	20.95			0.3	1
30) t-Butyl alcohol	(1)	4.628	(0.001)	59	235398	198.672	198.67			12	50
31) Acrylonitrile	(2)	4.828	(0.000)	53	387159	97.049	97.05			0.3	20
32) trans-1,2-Dichloroethene	(2)	4.885	(-0.000)	96	135213	20.302	20.30			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	4.876	(0.000)	73	399905	18.293	18.29			0.2	1
34) n-Hexane	(2)	5.307	(-0.000)	57	205015	19.785	19.79			2	5
36) 1,1-Dichloroethane	(2)	5.548	(0.000)	63	237258	20.421	20.42			0.2	1
38) di-Isopropyl ether	(2)	5.602	(-0.000)	45	435590	19.439	19.44			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	5.654	(-0.000)	53	196554	18.856	18.86			0.2	5
40) Ethyl t-butyl ether	(2)	6.133	(-0.000)	59	409704	18.840	18.84			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.377	(0.000)	96	162391	21.723	21.72			0.2	1
43) 1,2-Dichloroethene (Total)	(2)			96	297604	42.025	42.03			0.4	2

Digitally signed by Linda C. Pape on 11/22/2019 at 11:19. Target 3.5 esignature user ID: lcp00895

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov22a.b/ln22s32.d Injection date and time: **22-NOV-2019 09:00**
Data file Sample Info. Line: LCDL86;LCDL86;1;3;LCSD;;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	6.361(0.000)	43	727298	142.024	142.02			0.3	10
45) 2,2-Dichloropropane	(2)	6.387(0.000)	77	181003	20.041	20.04			0.3	1
47) Propionitrile	(1)	6.454(0.001)	54	243550	164.971	164.97			14	100
48) Methacrylonitrile	(2)	6.667(-0.000)	67	650118	151.074	151.07			6	50
49) Bromochloromethane	(2)	6.708(-0.000)	128	76164	19.215	19.21			0.2	5
50) Tetrahydrofuran	(1)	6.721(-0.000)	71	142023	106.501	106.50			0.7	10
51) Chloroform	(2)	6.856(0.000)	83	231074	20.794	20.79			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.081(-0.000)	97	189865	20.019	20.02			0.3	1
54) Cyclohexane	(2)	7.175(-0.000)	56	242028	19.083	19.08			1	5
55) 1,1-Dichloropropene	(2)	7.290(0.000)	75	190070	20.690	20.69			0.2	5
56) Carbon Tetrachloride	(2)	7.284(0.000)	117	157805	19.618	19.62			0.2	1
58) Isobutyl Alcohol	(1)	7.458(-0.000)	41	206106	516.909	516.91			36	250
60) Benzene	(2)	7.554(0.000)	78	588185	21.291	21.29			0.2	1
61) 1,2-Dichloroethane	(2)	7.631(0.000)	62	183312	20.630	20.63			0.3	1
65) t-Amyl methyl ether	(2)	7.737(-0.000)	73	416032	19.060	19.06			0.8	5
67) n-Heptane	(2)	7.959(-0.000)	43	181967	18.798	18.80			2	5
69) n-Butanol	(1)	8.326(-0.000)	56	352973	1028.531	1028.53			61	250
71) Trichloroethene	(2)	8.429(-0.000)	95	146857	21.113	21.11			0.2	1
72) Methylcyclohexane	(2)	8.731(-0.000)	83	254892	19.752	19.75			0.5	5
73) 1,2-Dichloropropane	(2)	8.770(-0.000)	63	152148	21.689	21.69			0.2	1
74) Dibromomethane	(2)	8.879(-0.000)	93	94472	20.814	20.81			0.2	1
75) 1,4-Dioxane	(1)	8.856(-0.000)	88	60944	646.099	646.10			29	250
76) Methyl Methacrylate	(2)	8.847(-0.000)	69	136858	20.175	20.18			0.2	5
78) Bromodichloromethane	(2)	9.110(-0.000)	83	166163	20.401	20.40			0.2	1
79) 2-Nitropropane	(2)	9.384(-0.000)	41	38377	15.557	15.56			0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)	9.461(-0.000)	63	101757	33.775	33.78			0.2	10
81) cis-1,3-Dichloropropene	(2)	9.634(-0.000)	75	221734	20.498	20.50			0.2	1
82) 4-Methyl-2-pentanone	(2)	9.805(-0.000)	43	1028880	95.186	95.19			0.5	10
88) Toluene	(3)	10.004(0.000)	92	381006	21.229	21.23			0.2	1
89) trans-1,3-Dichloropropene	(3)	10.255(0.000)	75	193643	19.007	19.01			0.2	1
90) 1,3-Dichloropropene (total)	(3)		100	415377	39.505	39.50			0.4	2
91) Ethyl Methacrylate	(3)	10.313(-0.000)	69	232222	18.755	18.75			0.2	5
92) 1,1,2-Trichloroethane	(3)	10.458(-0.000)	97	149205	21.927	21.93			0.2	1
93) Tetrachloroethene	(3)	10.538(-0.000)	166	155709	20.485	20.48			0.2	1
94) 1,3-Dichloropropane	(3)	10.618(-0.000)	76	241857	20.817	20.82			0.2	1
96) 2-Hexanone	(3)	10.666(0.000)	43	766740	92.771	92.77			0.3	10
97) Dibromochloromethane	(3)	10.827(-0.000)	129	132677	19.034	19.03			0.2	1
99) 1,2-Dibromoethane	(3)	10.937(-0.000)	107	153468	20.770	20.77			0.2	1
101) 1-Chlorohexane	(3)	11.361(-0.000)	91	193321	20.050	20.05			0.3	5
102) Chlorobenzene	(3)	11.387(-0.000)	112	423885	20.885	20.89			0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)	11.464(-0.000)	131	131978	19.736	19.74			0.2	1
104) Ethylbenzene	(3)	11.467(-0.000)	91	718835	20.955	20.95			0.4	1
106) m+p-Xylene	(3)	11.580(-0.000)	106	577348	42.782	42.78			1	5
107) o-Xylene	(3)	11.904(-0.000)	106	278239	20.874	20.87			0.4	1
108) Xylene (Total)	(3)		106	855587	63.656	63.66			1	6
109) Styrene	(3)	11.924(-0.000)	104	464467	21.086	21.09			0.2	5
110) Bromoform	(3)	12.081(-0.000)	173	81887	15.722	15.72			1	4
111) Isopropylbenzene	(3)	12.203(-0.000)	105	712799	21.320	21.32			0.2	5
112) Cyclohexanone	(1)	12.287(-0.000)	55	197253	533.945	533.95			25	100
115) Bromobenzene	(4)	12.464(0.000)	156	180276	20.587	20.59			0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	12.448(0.000)	83	230369	20.930	20.93			0.2	1
117) 1,2,3-Trichloropropane	(4)	12.496(0.000)	110	68080	20.157	20.16			0.2	5
118) trans-1,4-Dichloro-2-butene	(4)	12.474(0.000)	53	208707	61.475	61.47			6	50
119) n-Propylbenzene	(4)	12.528(0.000)	91	843191	22.039	22.04			0.2	5

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov22a.b/ln22s32.d Injection date and time: **22-NOV-2019 09:00**
Data file Sample Info. Line: LCDL86;LCDL86;1;3;LCSD;;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)	12.605(0.000)	126	167926	20.661	20.66			0.2	5
121) 4-Chlorotoluene	(4)	12.699(0.000)	126	174928	20.677	20.68			0.2	5
122) 1,3,5-Trimethylbenzene	(4)	12.660(0.000)	105	598061	21.510	21.51			0.3	5
124) tert-Butylbenzene	(4)	12.904(0.000)	134	118749M	20.651	20.65			0.3	5
125) Pentachloroethane	(4)	12.936(0.000)	167	93474	18.879	18.88			0.2	5
126) 1,2,4-Trimethylbenzene	(4)	12.946(0.000)	105	614335	20.964	20.96			1	5
127) sec-Butylbenzene	(4)	13.065(0.000)	105	736795	21.473	21.47			0.2	5
129) 1,3-Dichlorobenzene	(4)	13.168(-0.000)	146	333024	20.695	20.70			0.2	5
130) p-Isopropyltoluene	(4)	13.171(0.000)	119	628953	21.188	21.19			0.2	5
133) 1,4-Dichlorobenzene	(4)	13.239(0.000)	146	346801	20.789	20.79			0.2	5
134) 1,2,3-Trimethylbenzene	(4)	13.248(0.000)	105	637942	20.552	20.55			0.3	5
135) Benzyl Chloride	(4)	13.316(0.000)	91	389772	16.585	16.58			1	5
136) 1,3-Diethylbenzene	(4)	13.371(0.000)	119	378903	19.614	19.61			0.2	5
137) 1,4-Diethylbenzene	(4)	13.441(0.000)	119	398384	19.464	19.46			0.2	5
138) 1,2-Dichlorobenzene	(4)	13.502(0.000)	146	330244	20.798	20.80			0.2	5
139) n-Butylbenzene	(4)	13.464(0.000)	92	317038	20.888	20.89			0.2	5
140) 1,2-Diethylbenzene	(4)	13.515(0.000)	119	322275	19.789	19.79			0.2	5
141) Diethylbenzene (total)	(4)		100	1099562	58.867	58.87			0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)	14.039(0.000)	75	44163	18.329	18.33			0.3	5
144) 1,3,5-Trichlorobenzene	(4)	14.165(0.000)	180	238510	19.551	19.55			0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.589(0.000)	180	231617	19.526	19.53			0.3	5
147) Hexachlorobutadiene	(4)	14.666(0.000)	225	93571	16.707	16.71			2	5
148) Naphthalene	(4)	14.772(0.000)	128	780279	20.461	20.46			1	5
149) 1,2,3-Trichlorobenzene	(4)	14.914(0.000)	180	226994	19.666	19.67			0.4	5
150) 2-Methylnaphthalene	(4)	15.563(0.000)	142	436409	18.584	18.58			2	4

M = Compound was manually integrated.

Total number of targets = 110

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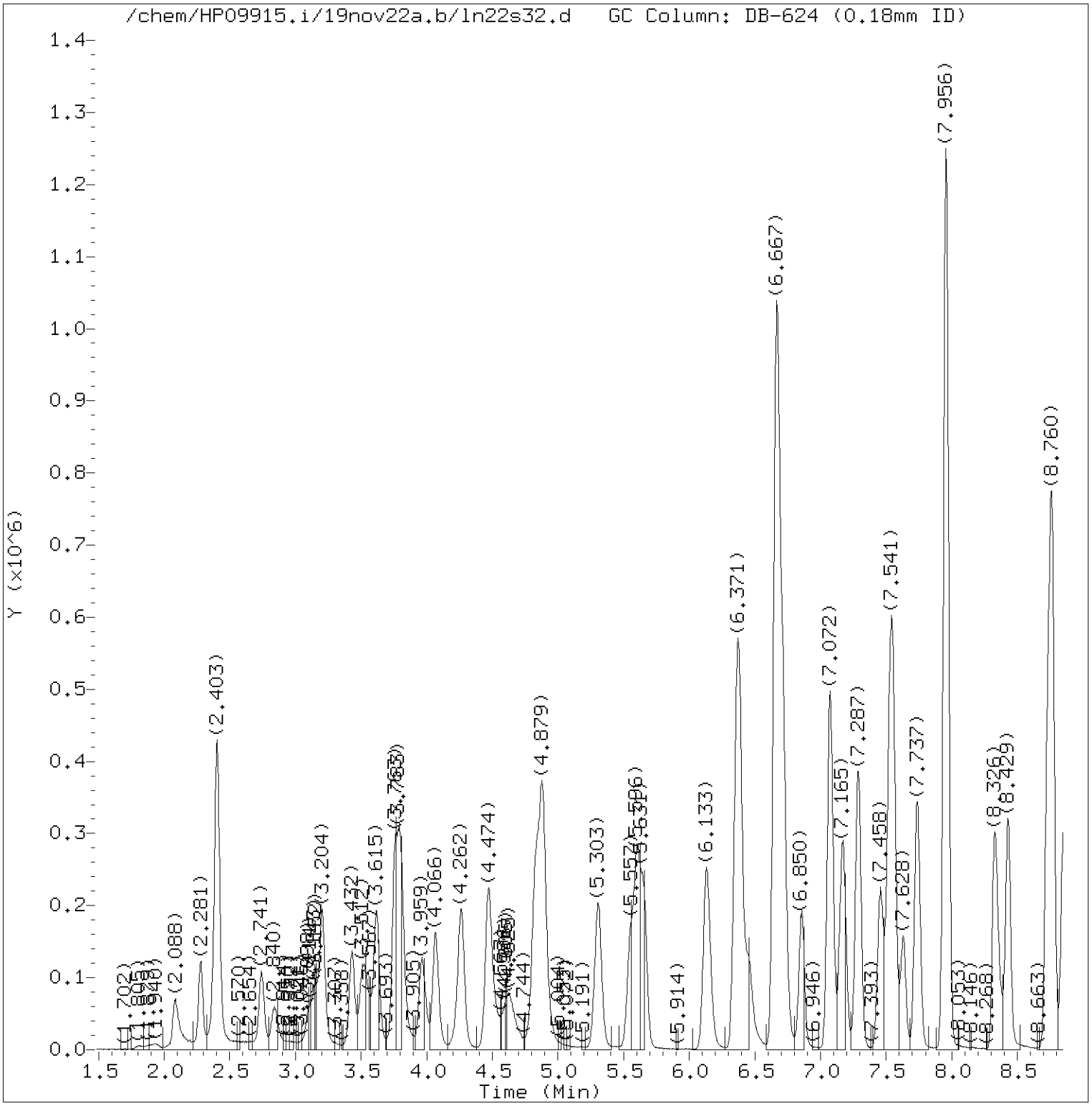
Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:02. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

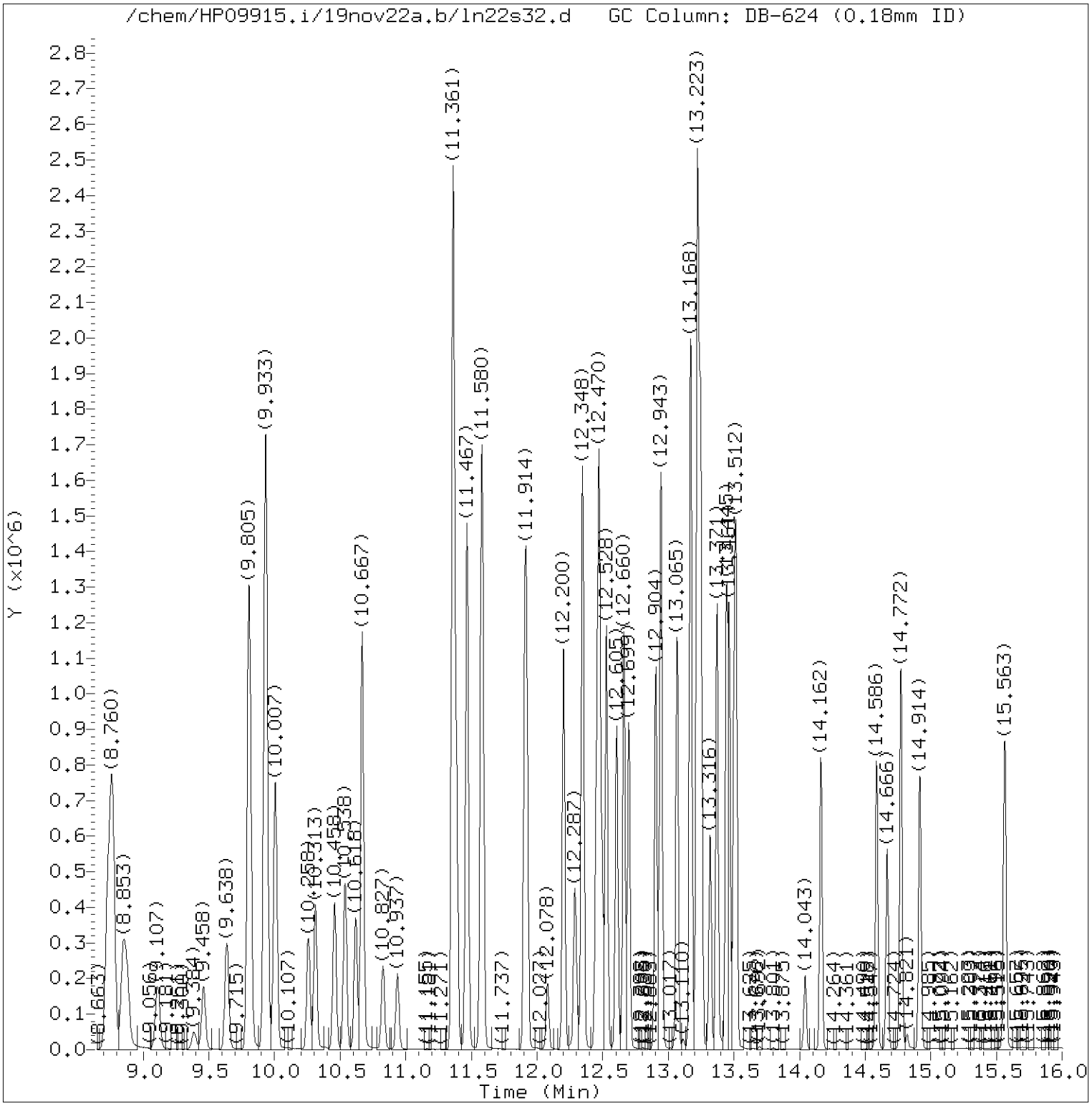
Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s32.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:00 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCDL86 Lab Sample ID: LCDL86

Digitally signed by Linda C. Pape
on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s32.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:00 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCDL86 Lab Sample ID: LCDL86

Digitally signed by Linda C. Pape
on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s32.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:00 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCDL86 Lab Sample ID: LCDL86

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.088	85	150176	15.856
4) Chloromethane	(2)	2.281	50	167814	18.384
5) 1,3-Butadiene	(2)	2.397	39	157771	20.816
6) Vinyl Chloride	(2)	2.400	62	167850	18.424
8) Bromomethane	(2)	2.741	94	101921	15.606
9) Chloroethane	(2)	2.840	64	84037	16.785
12) Trichlorofluoromethane	(2)	3.149	101	181086	18.462
11) n-Pentane	(2)	3.204	43	189377	16.338
14) Ethyl ether	(2)	3.432	59	130168	20.538
15) Freon 123a	(2)	3.525	67	161423	20.459
16) Acrolein	(1)	3.619	56	305206	144.548
17) 1,1-Dichloroethene	(2)	3.757	96	121866	21.168
19) Freon 113	(2)	3.792	101	125120	19.049
18) Acetone	(1)	3.802	58	144617	152.775
22) Methyl Iodide	(2)	3.966	142	210714	17.662
21) 2-Propanol	(1)	3.985	45	93909	137.999
23) Carbon Disulfide	(2)	4.069	76	380115	17.520
27) Methyl Acetate	(2)	4.239	43	145088	19.567
25) Allyl Chloride	(2)	4.268	41	189084	18.308
28) Methylene Chloride	(2)	4.474	84	143588	20.955
29)*t-Butyl alcohol-d10	(1)	4.496	65	281432	250.000
30) t-Butyl alcohol	(1)	4.628	59	235398	198.672
31) Acrylonitrile	(2)	4.828	53	387159	97.049
33) Methyl Tertiary Butyl Ether	(2)	4.876	73	399905	18.293
32) trans-1,2-Dichloroethene	(2)	4.885	96	135213	20.302
34) n-Hexane	(2)	5.307	57	205015	19.785
36) 1,1-Dichloroethane	(2)	5.548	63	237258	20.421
38) di-Isopropyl ether	(2)	5.602	45	435590	19.439
39) 2-Chloro-1,3-butadiene	(2)	5.654	53	196554	18.856
40) Ethyl t-butyl ether	(2)	6.133	59	409704	18.840
43) 1,2-Dichloroethene (Total)	(2)		96	297604	42.025
44) 2-Butanone	(2)	6.361	43	727298	142.024
42) cis-1,2-Dichloroethene	(2)	6.377	96	162391	21.723
45) 2,2-Dichloropropane	(2)	6.387	77	181003	20.041
47) Propionitrile	(1)	6.454	54	243550	164.971
48) Methacrylonitrile	(2)	6.667	67	650118	151.074
49) Bromochloromethane	(2)	6.708	128	76164	19.215
50) Tetrahydrofuran	(1)	6.721	71	142023	106.501

* = Compound is an internal standard.

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on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s32.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:00 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCDL86 Lab Sample ID: LCDL86

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	6.856	83	231074	20.794
52)$Dibromofluoromethane	(2)	7.072	113	313787	47.258
53) 1,1,1-Trichloroethane	(2)	7.081	97	189865	20.019
54) Cyclohexane	(2)	7.175	56	242028	19.083
56) Carbon Tetrachloride	(2)	7.284	117	157805	19.618
55) 1,1-Dichloropropene	(2)	7.290	75	190070	20.690
58) Isobutyl Alcohol	(1)	7.458	41	206106	516.909
57)$1,2-Dichloroethane-d4	(2)	7.528	102	85277	50.393
60) Benzene	(2)	7.554	78	588185	21.291
61) 1,2-Dichloroethane	(2)	7.631	62	183312	20.630
65) t-Amyl methyl ether	(2)	7.737	73	416032	19.060
66)*Fluorobenzene	(2)	7.956	96	1358142	50.000
67) n-Heptane	(2)	7.959	43	181967	18.798
69) n-Butanol	(1)	8.326	56	352973	1028.531
71) Trichloroethene	(2)	8.429	95	146857	21.113
72) Methylcyclohexane	(2)	8.731	83	254892	19.752
73) 1,2-Dichloropropane	(2)	8.770	63	152148	21.689
76) Methyl Methacrylate	(2)	8.847	69	136858	20.175
75) 1,4-Dioxane	(1)	8.856	88	60944	646.099
74) Dibromomethane	(2)	8.879	93	94472	20.814
78) Bromodichloromethane	(2)	9.110	83	166163	20.401
79) 2-Nitropropane	(2)	9.384	41	38377	15.557
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	101757	33.775
81) cis-1,3-Dichloropropene	(2)	9.634	75	221734	20.498
82) 4-Methyl-2-pentanone	(2)	9.805	43	1028880	95.186
83)$Toluene-d8	(3)	9.933	98	1424089	49.745
88) Toluene	(3)	10.004	92	381006	21.229
90) 1,3-Dichloropropene (total)	(3)		100	415377	39.505
89) trans-1,3-Dichloropropene	(3)	10.255	75	193643	19.007
91) Ethyl Methacrylate	(3)	10.313	69	232222	18.755
92) 1,1,2-Trichloroethane	(3)	10.458	97	149205	21.927
93) Tetrachloroethene	(3)	10.538	166	155709	20.485
94) 1,3-Dichloropropane	(3)	10.618	76	241857	20.817
96) 2-Hexanone	(3)	10.667	43	766740	92.771
97) Dibromochloromethane	(3)	10.827	129	132677	19.034
99) 1,2-Dibromoethane	(3)	10.937	107	153468	20.770
100)*Chlorobenzene-d5	(3)	11.358	117	1094093	50.000
101) 1-Chlorohexane	(3)	11.361	91	193321	20.050

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s32.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:00 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCDL86 Lab Sample ID: LCDL86

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
102) Chlorobenzene	(3)	11.387	112	423885	20.885
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	131978	19.736
104) Ethylbenzene	(3)	11.467	91	718835	20.955
106) m+p-Xylene	(3)	11.580	106	577348	42.782
108) Xylene (Total)	(3)		106	855587	63.656
107) o-Xylene	(3)	11.904	106	278239	20.874
109) Styrene	(3)	11.924	104	464467	21.086
110) Bromoform	(3)	12.081	173	81887	15.722
111) Isopropylbenzene	(3)	12.203	105	712799	21.320
112) Cyclohexanone	(1)	12.287	55	197253	533.945
114)$4-Bromofluorobenzene	(3)	12.345	95	547780	50.533
116) 1,1,2,2-Tetrachloroethane	(4)	12.448	83	230369	20.930
115) Bromobenzene	(4)	12.464	156	180276	20.587
118) trans-1,4-Dichloro-2-butene	(4)	12.474	53	208707	61.475
117) 1,2,3-Trichloropropane	(4)	12.496	110	68080	20.157
119) n-Propylbenzene	(4)	12.528	91	843191	22.039
120) 2-Chlorotoluene	(4)	12.605	126	167926	20.661
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	598061	21.510
121) 4-Chlorotoluene	(4)	12.699	126	174928	20.677
124) tert-Butylbenzene	(4)	12.904	134	118749M	20.651
125) Pentachloroethane	(4)	12.937	167	93474	18.879
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	614335	20.964
127) sec-Butylbenzene	(4)	13.065	105	736795	21.473
129) 1,3-Dichlorobenzene	(4)	13.168	146	333024	20.695
130) p-Isopropyltoluene	(4)	13.171	119	628953	21.188
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	582660	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	346801	20.789
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	637942	20.552
135) Benzyl Chloride	(4)	13.316	91	389772	16.585
136) 1,3-Diethylbenzene	(4)	13.371	119	378903	19.614
141) Diethylbenzene (total)	(4)		100	1099562	58.867
137) 1,4-Diethylbenzene	(4)	13.441	119	398384	19.464
139) n-Butylbenzene	(4)	13.464	92	317038	20.888
138) 1,2-Dichlorobenzene	(4)	13.502	146	330244	20.798
140) 1,2-Diethylbenzene	(4)	13.515	119	322275	19.789
142) 1,2-Dibromo-3-chloropropane	(4)	14.039	75	44163	18.329
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	238510	19.551
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	231617	19.526

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s32.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:00 Analyst ID: lcp00895

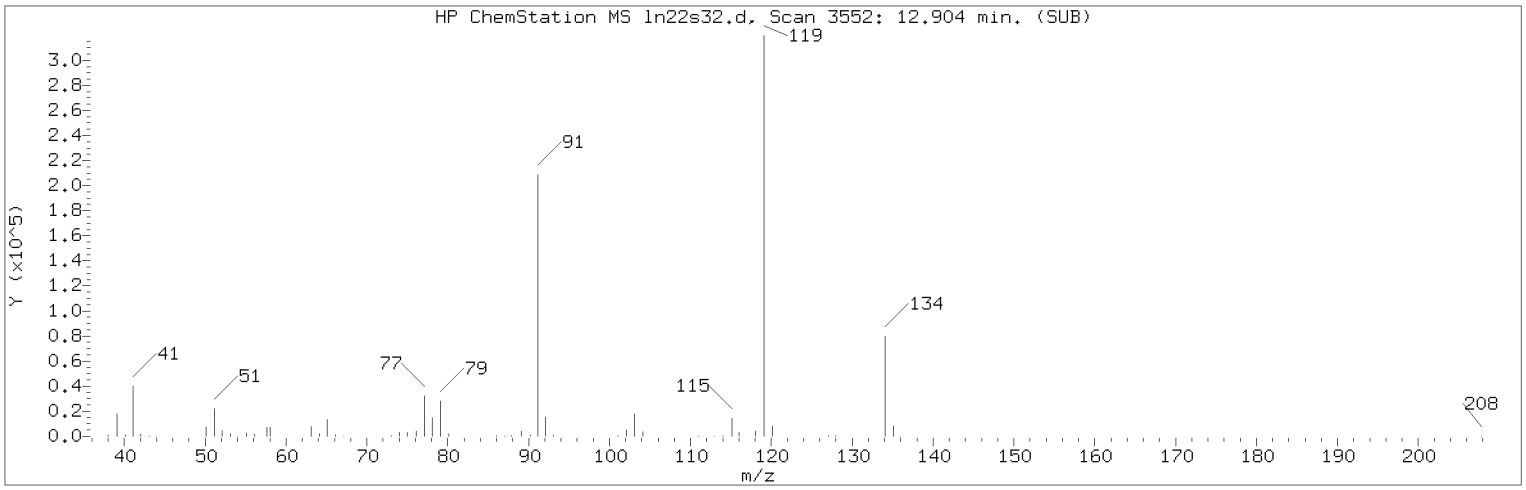
Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCDL86 Lab Sample ID: LCDL86

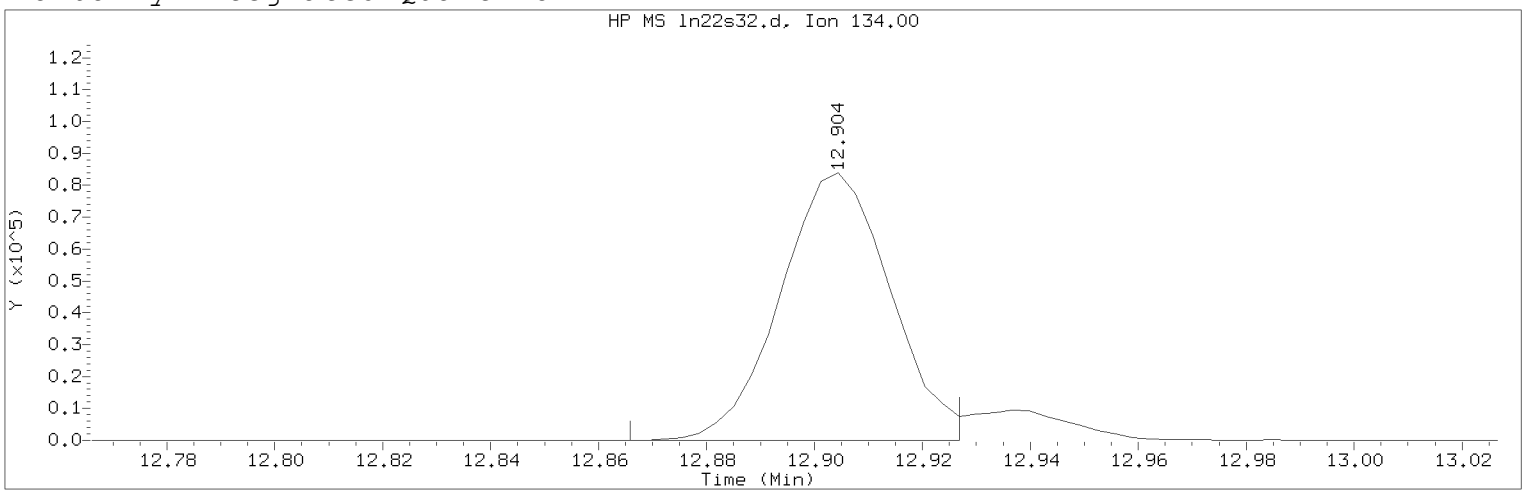
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Hexachlorobutadiene	(4)	14.666	225	93571	16.707
148) Naphthalene	(4)	14.772	128	780279	20.461
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	226994	19.666
150) 2-Methylnaphthalene	(4)	15.563	142	436409	18.584

Digitally signed by Linda C. Pape
on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov22a.b/ln22s32.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:00 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCDL86 Lab Sample ID: LCDL86

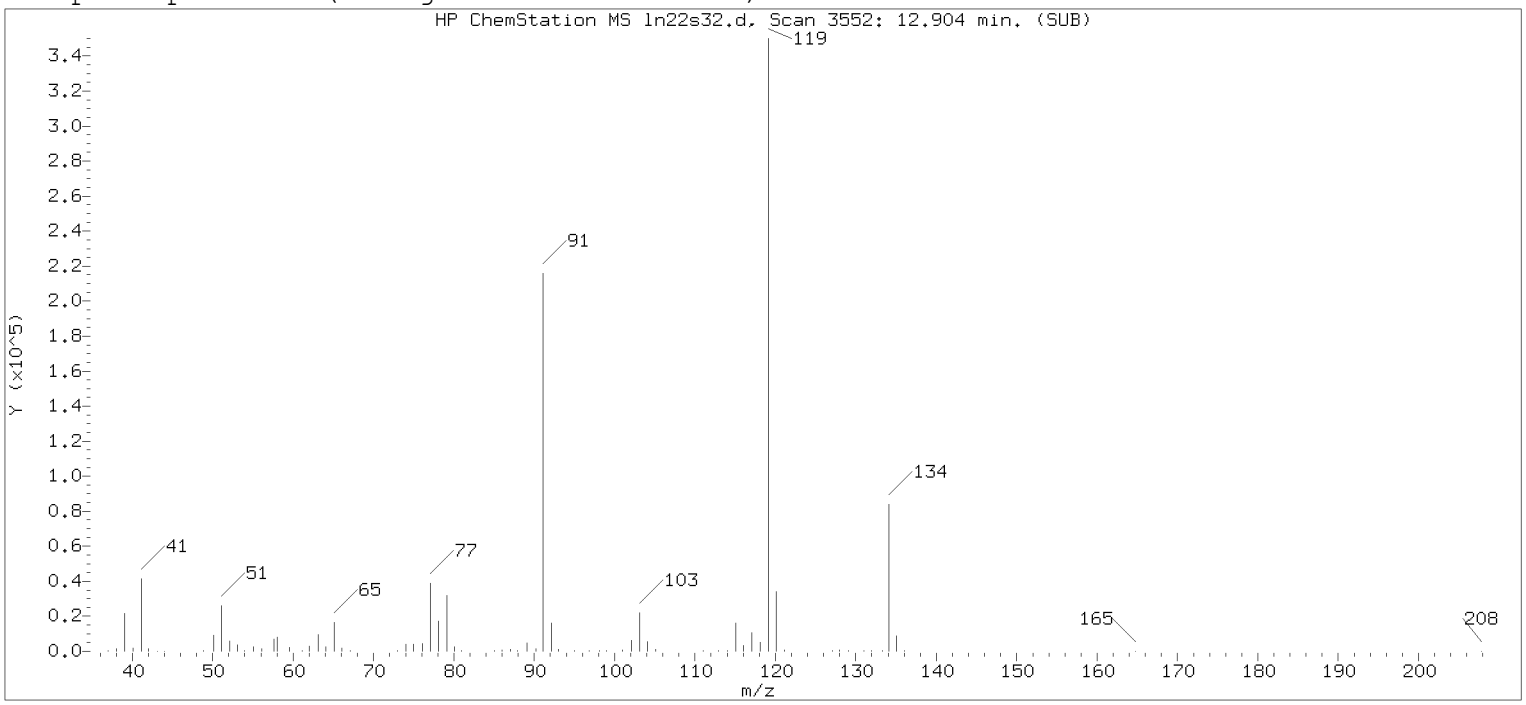
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 118749M
On-Column Amount (ng) : 20.6514
Integration start scan : 3539 Integration stop scan: 3558
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

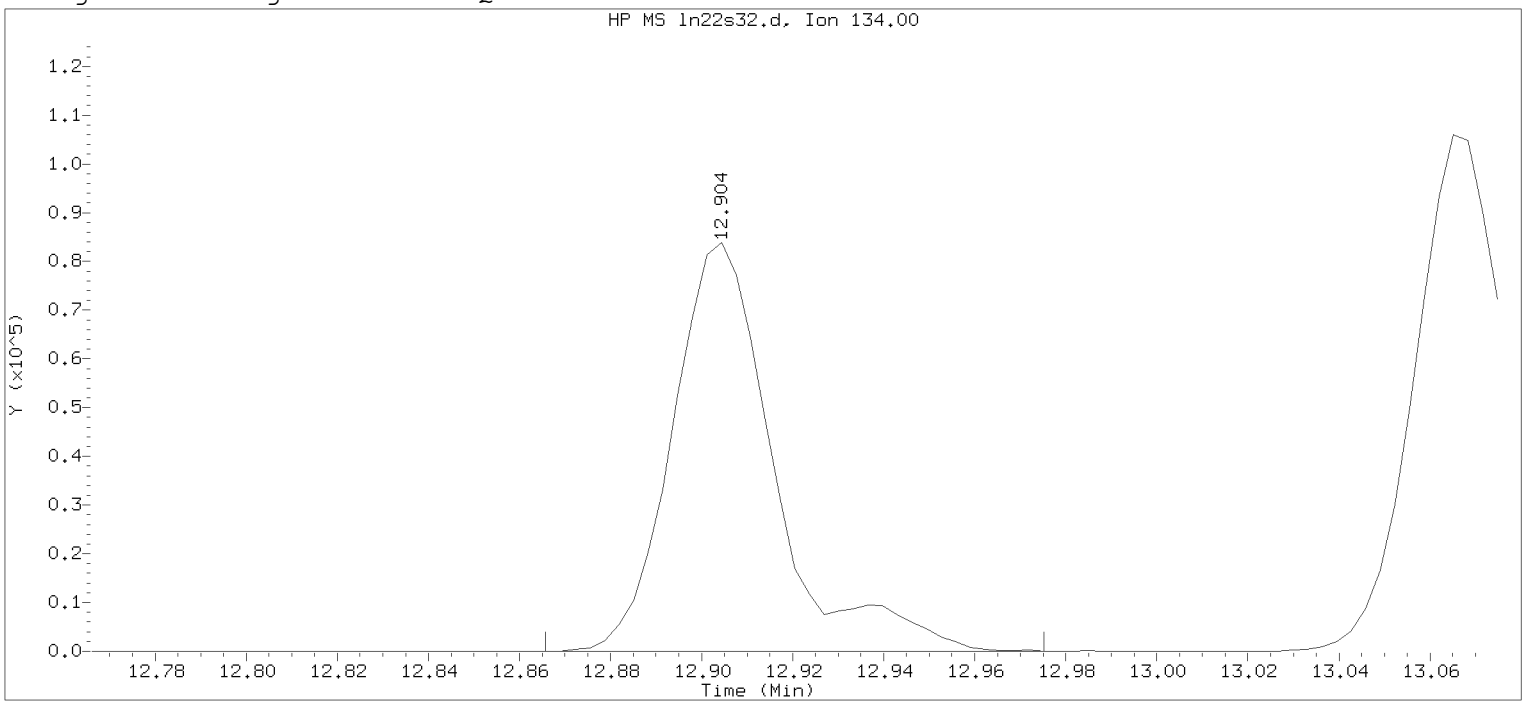
Analyst responsible for change: Digitally signed by Linda C. Pape
on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:02.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov22a.b/ln22s32.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:00 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 10:25 lcp00895

Sample Name: LCDL86 Lab Sample ID: LCDL86

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 130430
On-column Amount (ng) : 22.6828
Integration start scan : 3539 Integration stop scan: 3573
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL87

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL87

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	17	
74-87-3	Chloromethane	18	
106-99-0	1,3-Butadiene	20	
75-01-4	Vinyl Chloride	18	
74-83-9	Bromomethane	18	
75-00-3	Chloroethane	18	
109-66-0	n-Pentane	15	
75-69-4	Trichlorofluoromethane	20	
60-29-7	Ethyl ether	20	
354-23-4	Freon 123a	20	
107-02-8	Acrolein	150	
75-35-4	1,1-Dichloroethene	20	
67-64-1	Acetone	170	
76-13-1	Freon 113	18	
67-63-0	2-Propanol	150	
74-88-4	Methyl Iodide	18	
75-15-0	Carbon Disulfide	17	
107-05-1	Allyl Chloride	18	
79-20-9	Methyl Acetate	19	
75-09-2	Methylene Chloride	21	
75-65-0	t-Butyl alcohol	200	
107-13-1	Acrylonitrile	94	
156-60-5	trans-1,2-Dichloroethene	20	
1634-04-4	Methyl Tertiary Butyl Ether	17	
110-54-3	n-Hexane	18	
75-34-3	1,1-Dichloroethane	20	
108-20-3	di-Isopropyl ether	18	
126-99-8	2-Chloro-1,3-butadiene	18	
637-92-3	Ethyl t-butyl ether	17	
156-59-2	cis-1,2-Dichloroethene	21	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL87

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL87

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	41	
78-93-3	2-Butanone	140	
594-20-7	2,2-Dichloropropane	19	
107-12-0	Propionitrile	170	
126-98-7	Methacrylonitrile	150	
74-97-5	Bromochloromethane	20	
109-99-9	Tetrahydrofuran	110	
67-66-3	Chloroform	21	
71-55-6	1,1,1-Trichloroethane	20	
110-82-7	Cyclohexane	17	
563-58-6	1,1-Dichloropropene	20	
56-23-5	Carbon Tetrachloride	19	
78-83-1	Isobutyl Alcohol	520	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	21	
994-05-8	t-Amyl methyl ether	18	
142-82-5	n-Heptane	17	
71-36-3	n-Butanol	960	
79-01-6	Trichloroethene	21	
108-87-2	Methylcyclohexane	19	
78-87-5	1,2-Dichloropropane	21	
74-95-3	Dibromomethane	21	
123-91-1	1,4-Dioxane	540	
80-62-6	Methyl Methacrylate	19	
75-27-4	Bromodichloromethane	20	
79-46-9	2-Nitropropane	15	
110-75-8	2-Chloroethyl Vinyl Ether	31	
10061-01-5	cis-1,3-Dichloropropene	20	
108-10-1	4-Methyl-2-pentanone	91	
108-88-3	Toluene	20	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL87

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL87

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	19	
542-75-6	1,3-Dichloropropene (total)	39	
97-63-2	Ethyl Methacrylate	17	
79-00-5	1,1,2-Trichloroethane	21	
127-18-4	Tetrachloroethene	20	
142-28-9	1,3-Dichloropropane	20	
591-78-6	2-Hexanone	87	
124-48-1	Dibromochloromethane	19	
106-93-4	1,2-Dibromoethane	20	
544-10-5	1-Chlorohexane	18	
108-90-7	Chlorobenzene	20	
630-20-6	1,1,1,2-Tetrachloroethane	19	
100-41-4	Ethylbenzene	20	
179601-23-1	m+p-Xylene	41	
95-47-6	o-Xylene	20	
1330-20-7	Xylene (Total)	61	
100-42-5	Styrene	20	
75-25-2	Bromoform	17	
98-82-8	Isopropylbenzene	20	
108-94-1	Cyclohexanone	480	
108-86-1	Bromobenzene	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	
96-18-4	1,2,3-Trichloropropane	20	
110-57-6	trans-1,4-Dichloro-2-butene	86	
103-65-1	n-Propylbenzene	20	
95-49-8	2-Chlorotoluene	20	
106-43-4	4-Chlorotoluene	20	
108-67-8	1,3,5-Trimethylbenzene	20	
98-06-6	tert-Butylbenzene	19	
76-01-7	Pentachloroethane	18	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL87

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL87

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
95-63-6	1,2,4-Trimethylbenzene	20	
135-98-8	sec-Butylbenzene	20	
541-73-1	1,3-Dichlorobenzene	20	
99-87-6	p-Isopropyltoluene	20	
106-46-7	1,4-Dichlorobenzene	20	
526-73-8	1,2,3-Trimethylbenzene	19	
100-44-7	Benzyl Chloride	16	
141-93-5	1,3-Diethylbenzene	18	
105-05-5	1,4-Diethylbenzene	18	B
95-50-1	1,2-Dichlorobenzene	20	
104-51-8	n-Butylbenzene	19	B
135-01-3	1,2-Diethylbenzene	18	
25340-17-4	Diethylbenzene (total)	54	
96-12-8	1,2-Dibromo-3-chloropropane	18	
108-70-3	1,3,5-Trichlorobenzene	18	B
120-82-1	1,2,4-Trichlorobenzene	17	B
87-68-3	Hexachlorobutadiene	15	
91-20-3	Naphthalene	18	
87-61-6	1,2,3-Trichlorobenzene	17	B
91-57-6	2-Methylnaphthalene	14	

Data file: /chem/HP09915.i/19nov23a.b/ln23s01.d Injection date and time: **23-NOV-2019 09:26**
Data file Sample Info. Line: LCSL87;LCSL87;1;3;LCS;;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493	(-0.003)	936	65	219124	(0)	250.00	
66) Fluorobenzene	7.956	(0.000)	2013	96	1149568	(2)	50.00	
100) Chlorobenzene-d5	11.358	(0.000)	3071	117	954034	(1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.219	(0.003)	3650	152	518331	(-1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.065	(0.001)	113	279543	49.739	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	73161	51.077	102%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	1224920	49.069	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	482775	51.074	102%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	2.082	(0.000)	85	136297	17.002	17.00			0.2	1
4) Chloromethane	(2)	2.278	(0.000)	50	138166	17.882	17.88			0.2	1
5) 1,3-Butadiene	(2)	2.406	(0.000)	39	130178	20.291	20.29			1	3
6) Vinyl Chloride	(2)	2.397	(0.000)	62	137718	17.859	17.86			0.2	1
8) Bromomethane	(2)	2.741	(0.000)	94	97922	17.715	17.71			0.3	1
9) Chloroethane	(2)	2.837	(0.000)	64	75570	17.832	17.83			0.2	1
11) n-Pentane	(2)	3.200	(0.000)	43	151384	15.430	15.43			0.4	10
12) Trichlorofluoromethane	(2)	3.149	(0.000)	101	168712	20.322	20.32			0.2	1
14) Ethyl ether	(2)	3.432	(-0.000)	59	105121	19.595	19.59			0.2	5
15) Freon 123a	(2)	3.519	(0.000)	67	132374	19.821	19.82			0.4	5
16) Acrolein	(1)	3.612	(0.001)	56	249441	151.730	151.73			2	100
17) 1,1-Dichloroethene	(2)	3.750	(0.000)	96	98797	20.274	20.27			0.2	1
18) Acetone	(1)	3.798	(-0.000)	58	122187	165.784	165.78			0.7	20
19) Freon 113	(2)	3.795	(0.000)	101	101611	18.276	18.28			0.2	10
21) 2-Propanol	(1)	3.985	(0.000)	45	78385	147.940	147.94			18	100
22) Methyl Iodide	(2)	3.962	(0.000)	142	179282	17.754	17.75			0.2	1
23) Carbon Disulfide	(2)	4.065	(0.000)	76	308657	16.808	16.81			0.2	5
25) Allyl Chloride	(2)	4.265	(0.000)	41	157036	17.964	17.96			0.3	5
27) Methyl Acetate	(2)	4.242	(-0.000)	43	118037	18.807	18.81			0.2	5
28) Methylene Chloride	(2)	4.464	(0.000)	84	120393	20.758	20.76			0.3	1
30) t-Butyl alcohol	(1)	4.622	(0.000)	59	183342	198.737	198.74			12	50
31) Acrylonitrile	(2)	4.831	(0.000)	53	316407	93.704	93.70			0.3	20
32) trans-1,2-Dichloroethene	(2)	4.882	(0.000)	96	113295	20.097	20.10			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	4.872	(0.000)	73	315427	17.046	17.05			0.2	1
34) n-Hexane	(2)	5.306	(-0.000)	57	153781	17.534	17.53			2	5
36) 1,1-Dichloroethane	(2)	5.544	(0.000)	63	195838	19.914	19.91			0.2	1
38) di-Isopropyl ether	(2)	5.599	(0.000)	45	343897	18.131	18.13			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	5.657	(-0.000)	53	159972	18.131	18.13			0.2	5
40) Ethyl t-butyl ether	(2)	6.133	(0.000)	59	320696	17.423	17.42			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.374	(0.000)	96	134446	21.248	21.25			0.2	1
43) 1,2-Dichloroethene (Total)	(2)			96	247741	41.345	41.35			0.4	2

Digitally signed by Corie L. Mellinger on 11/23/2019 at 10:16. Target 3.5 esignature user ID: clm27445

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23s01.d Injection date and time: **23-NOV-2019 09:26**
Data file Sample Info. Line: LCSL87;LCSL87;1;3;LCS;;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	6.358(0.000)	43	596366	137.585	137.59			0.3	10
45) 2,2-Dichloropropane	(2)	6.387(0.000)	77	147462	19.289	19.29			0.3	1
47) Propionitrile	(1)	6.458(-0.000)	54	195546	170.118	170.12			14	100
48) Methacrylonitrile	(2)	6.666(-0.000)	67	536833	147.383	147.38			6	50
49) Bromochloromethane	(2)	6.708(-0.000)	128	65482	19.517	19.52			0.2	5
50) Tetrahydrofuran	(1)	6.718(0.001)	71	116538	112.239	112.24			0.7	10
51) Chloroform	(2)	6.856(0.000)	83	194950	20.726	20.73			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.078(0.000)	97	159852	19.912	19.91			0.3	1
54) Cyclohexane	(2)	7.165(0.000)	56	186666	17.388	17.39			1	5
55) 1,1-Dichloropropene	(2)	7.290(0.000)	75	153454	19.735	19.74			0.2	5
56) Carbon Tetrachloride	(2)	7.277(0.000)	117	131745	19.349	19.35			0.2	1
58) Isobutyl Alcohol	(1)	7.454(0.001)	41	160914	518.323	518.32			36	250
60) Benzene	(2)	7.551(0.000)	78	482008	20.614	20.61			0.2	1
61) 1,2-Dichloroethane	(2)	7.625(0.000)	62	157726	20.971	20.97			0.3	1
65) t-Amyl methyl ether	(2)	7.734(0.000)	73	332235	17.983	17.98			0.8	5
67) n-Heptane	(2)	7.959(0.000)	43	138196	16.867	16.87			2	5
69) n-Butanol	(1)	8.329(0.002)	56	256065	958.318	958.32			61	250
71) Trichloroethene	(2)	8.428(-0.000)	95	121790	20.686	20.69			0.2	1
72) Methylcyclohexane	(2)	8.728(-0.000)	83	204135	18.689	18.69			0.5	5
73) 1,2-Dichloropropane	(2)	8.763(0.000)	63	123397	20.782	20.78			0.2	1
74) Dibromomethane	(2)	8.875(0.000)	93	79710	20.748	20.75			0.2	1
75) 1,4-Dioxane	(1)	8.856(0.000)	88	39582M	538.951	538.95			29	250
76) Methyl Methacrylate	(2)	8.846(-0.000)	69	111030	19.337	19.34			0.2	5
78) Bromodichloromethane	(2)	9.110(-0.000)	83	140364	20.361	20.36			0.2	1
79) 2-Nitropropane	(2)	9.390(-0.000)	41	31840	15.248	15.25			0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)	9.461(-0.000)	63	78938	30.955	30.95			0.2	10
81) cis-1,3-Dichloropropene	(2)	9.634(-0.000)	75	185790	20.291	20.29			0.2	1
82) 4-Methyl-2-pentanone	(2)	9.805(-0.000)	43	832198	90.959	90.96			0.5	10
88) Toluene	(3)	10.007(0.000)	92	313711	20.045	20.05			0.2	1
89) trans-1,3-Dichloropropene	(3)	10.258(-0.000)	75	165350	18.612	18.61			0.2	1
90) 1,3-Dichloropropene (total)	(3)		100	351140	38.903	38.90			0.4	2
91) Ethyl Methacrylate	(3)	10.310(-0.000)	69	185379	17.170	17.17			0.2	5
92) 1,1,2-Trichloroethane	(3)	10.457(-0.000)	97	123325	20.784	20.78			0.2	1
93) Tetrachloroethene	(3)	10.538(-0.000)	166	129265	19.503	19.50			0.2	1
94) 1,3-Dichloropropane	(3)	10.618(-0.000)	76	201364	19.876	19.88			0.2	1
96) 2-Hexanone	(3)	10.666(-0.000)	43	627871	87.122	87.12			0.3	10
97) Dibromochloromethane	(3)	10.824(0.000)	129	115965	19.079	19.08			0.2	1
99) 1,2-Dibromoethane	(3)	10.933(0.000)	107	129008	20.022	20.02			0.2	1
101) 1-Chlorohexane	(3)	11.361(0.000)	91	154355	18.359	18.36			0.3	5
102) Chlorobenzene	(3)	11.383(0.000)	112	359998	20.341	20.34			0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)	11.464(-0.000)	131	112152	19.233	19.23			0.2	1
104) Ethylbenzene	(3)	11.467(-0.000)	91	597136	19.963	19.96			0.4	1
106) m+p-Xylene	(3)	11.580(-0.000)	106	479979	40.789	40.79			1	5
107) o-Xylene	(3)	11.908(-0.000)	106	229466	19.742	19.74			0.4	1
108) Xylene (Total)	(3)		106	709445	60.531	60.53			1	6
109) Styrene	(3)	11.920(-0.000)	104	386872	20.142	20.14			0.2	5
110) Bromoform	(3)	12.078(0.000)	173	75317	16.583	16.58			1	4
111) Isopropylbenzene	(3)	12.203(-0.000)	105	586751	20.127	20.13			0.2	5
112) Cyclohexanone	(1)	12.287(0.001)	55	136932	476.060	476.06			25	100
115) Bromobenzene	(4)	12.464(-0.000)	156	152936	19.632	19.63			0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	12.448(-0.000)	83	197038	20.124	20.12			0.2	1
117) 1,2,3-Trichloropropane	(4)	12.496(-0.000)	110	59005	19.638	19.64			0.2	5
118) trans-1,4-Dichloro-2-butene	(4)	12.473(-0.000)	53	259700	85.988	85.99			6	50
119) n-Propylbenzene	(4)	12.528(-0.000)	91	696154	20.454	20.45			0.2	5

M = Compound was manually integrated.

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23s01.d Injection date and time: **23-NOV-2019 09:26**
Data file Sample Info. Line: LCSL87;LCSL87;1;3;LCS;;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)	12.605(0.000)	126	141098	19.514	19.51			0.2	5
121) 4-Chlorotoluene	(4)	12.698(-0.000)	126	147115	19.547	19.55			0.2	5
122) 1,3,5-Trimethylbenzene	(4)	12.660(0.000)	105	498236	20.144	20.14			0.3	5
124) tert-Butylbenzene	(4)	12.904(-0.000)	134	97397	19.040	19.04			0.3	5
125) Pentachloroethane	(4)	12.936(-0.000)	167	80055	18.175	18.18			0.2	5
126) 1,2,4-Trimethylbenzene	(4)	12.946(-0.000)	105	516617	19.818	19.82			1	5
127) sec-Butylbenzene	(4)	13.065(0.000)	105	596790	19.552	19.55			0.2	5
129) 1,3-Dichlorobenzene	(4)	13.168(-0.000)	146	284643	19.884	19.88			0.2	5
130) p-Isopropyltoluene	(4)	13.171(-0.000)	119	516072	19.543	19.54			0.2	5
133) 1,4-Dichlorobenzene	(4)	13.239(-0.000)	146	297218	20.028	20.03			0.2	5
134) 1,2,3-Trimethylbenzene	(4)	13.248(-0.000)	105	535390	19.388	19.39			0.3	5
135) Benzyl Chloride	(4)	13.319(-0.000)	91	324287	15.511	15.51			1	5
136) 1,3-Diethylbenzene	(4)	13.370(-0.000)	119	312049	18.158	18.16			0.2	5
137) 1,4-Diethylbenzene	(4)	13.441(-0.000)	119	327147	17.967	17.97	0.216	B	0.2	5
138) 1,2-Dichlorobenzene	(4)	13.499(-0.000)	146	283246	20.052	20.05			0.2	5
139) n-Butylbenzene	(4)	13.464(-0.000)	92	251889	18.656	18.66	0.344	B	0.2	5
140) 1,2-Diethylbenzene	(4)	13.515(-0.000)	119	265561	18.330	18.33			0.2	5
141) Diethylbenzene (total)	(4)		100	904757	54.455	54.46			0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)	14.039(-0.000)	75	39020	18.205	18.20			0.3	5
144) 1,3,5-Trichlorobenzene	(4)	14.161(-0.000)	180	191170	17.615	17.61	0.552	B	0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.586(-0.000)	180	179583	17.018	17.02	0.530	B	0.3	5
147) Hexachlorobutadiene	(4)	14.666(-0.000)	225	75520	15.157	15.16			2	5
148) Naphthalene	(4)	14.772(-0.000)	128	623142	18.368	18.37			1	5
149) 1,2,3-Trichlorobenzene	(4)	14.914(-0.000)	180	174866	17.030	17.03	0.595	B	0.4	5
150) 2-Methylnaphthalene	(4)	15.563(-0.000)	142	295754	14.157	14.16			2	4

B = Compound detected in referenced method blank.

Total number of targets = 110

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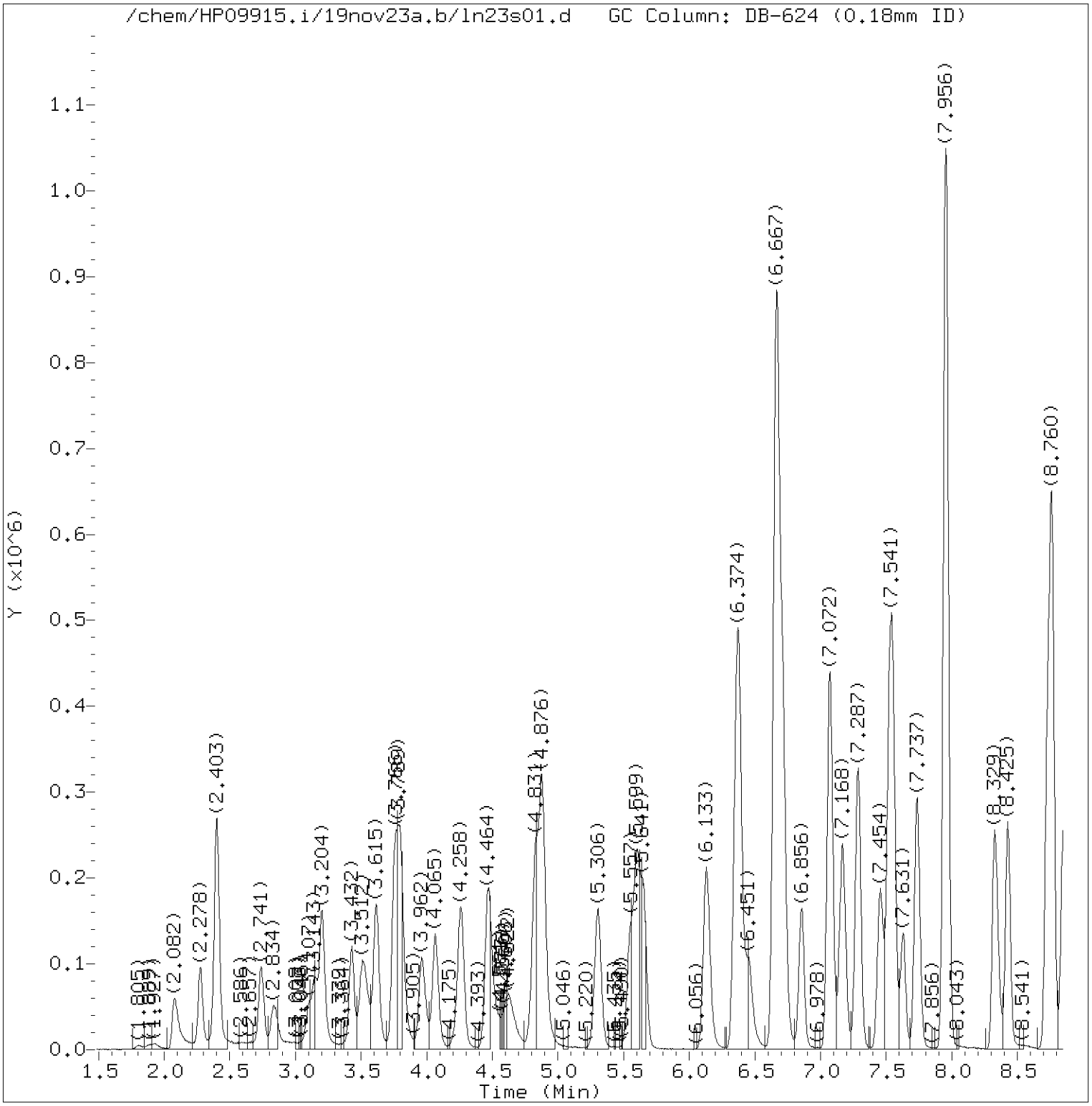
Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:45. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

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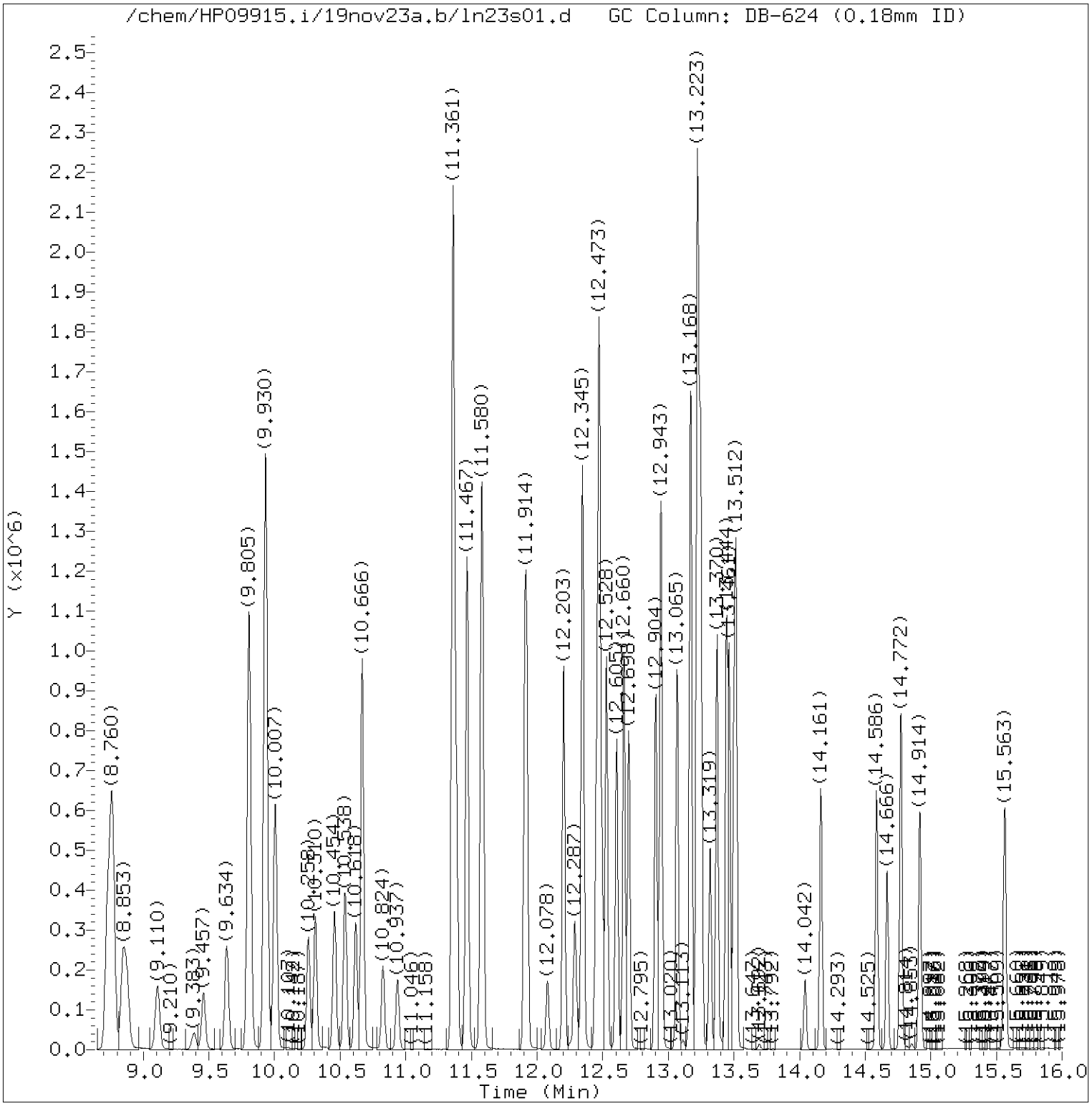
on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.082	85	136297	17.002
4) Chloromethane	(2)	2.278	50	138166	17.882
6) Vinyl Chloride	(2)	2.397	62	137718	17.859
5) 1,3-Butadiene	(2)	2.406	39	130178	20.291
8) Bromomethane	(2)	2.741	94	97922	17.715
9) Chloroethane	(2)	2.837	64	75570	17.832
12) Trichlorofluoromethane	(2)	3.149	101	168712	20.322
11) n-Pentane	(2)	3.200	43	151384	15.430
14) Ethyl ether	(2)	3.432	59	105121	19.595
15) Freon 123a	(2)	3.519	67	132374	19.821
16) Acrolein	(1)	3.612	56	249441	151.730
17) 1,1-Dichloroethene	(2)	3.750	96	98797	20.274
19) Freon 113	(2)	3.795	101	101611	18.276
18) Acetone	(1)	3.799	58	122187	165.784
22) Methyl Iodide	(2)	3.962	142	179282	17.754
21) 2-Propanol	(1)	3.985	45	78385	147.940
23) Carbon Disulfide	(2)	4.065	76	308657	16.808
27) Methyl Acetate	(2)	4.242	43	118037	18.807
25) Allyl Chloride	(2)	4.265	41	157036	17.964
28) Methylene Chloride	(2)	4.464	84	120393	20.758
29)*t-Butyl alcohol-d10	(1)	4.493	65	219124	250.000
30) t-Butyl alcohol	(1)	4.622	59	183342	198.737
31) Acrylonitrile	(2)	4.831	53	316407	93.704
33) Methyl Tertiary Butyl Ether	(2)	4.872	73	315427	17.046
32) trans-1,2-Dichloroethene	(2)	4.882	96	113295	20.097
34) n-Hexane	(2)	5.306	57	153781	17.534
36) 1,1-Dichloroethane	(2)	5.544	63	195838	19.914
38) di-Isopropyl ether	(2)	5.599	45	343897	18.131
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	159972	18.131
40) Ethyl t-butyl ether	(2)	6.133	59	320696	17.423
43) 1,2-Dichloroethene (Total)	(2)		96	247741	41.345
44) 2-Butanone	(2)	6.358	43	596366	137.585
42) cis-1,2-Dichloroethene	(2)	6.374	96	134446	21.248
45) 2,2-Dichloropropane	(2)	6.387	77	147462	19.289
47) Propionitrile	(1)	6.458	54	195546	170.118
48) Methacrylonitrile	(2)	6.667	67	536833	147.383
49) Bromochloromethane	(2)	6.708	128	65482	19.517
50) Tetrahydrofuran	(1)	6.718	71	116538	112.239

* = Compound is an internal standard.

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on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	6.856	83	194950	20.726
52)$Dibromofluoromethane	(2)	7.065	113	279543	49.739
53) 1,1,1-Trichloroethane	(2)	7.078	97	159852	19.912
54) Cyclohexane	(2)	7.165	56	186666	17.388
56) Carbon Tetrachloride	(2)	7.277	117	131745	19.349
55) 1,1-Dichloropropene	(2)	7.290	75	153454	19.735
58) Isobutyl Alcohol	(1)	7.454	41	160914	518.323
57)$1,2-Dichloroethane-d4	(2)	7.525	102	73161	51.077
60) Benzene	(2)	7.551	78	482008	20.614
61) 1,2-Dichloroethane	(2)	7.625	62	157726	20.971
65) t-Amyl methyl ether	(2)	7.734	73	332235	17.983
66)*Fluorobenzene	(2)	7.956	96	1149568	50.000
67) n-Heptane	(2)	7.959	43	138196	16.867
69) n-Butanol	(1)	8.329	56	256065	958.318
71) Trichloroethene	(2)	8.429	95	121790	20.686
72) Methylcyclohexane	(2)	8.728	83	204135	18.689
73) 1,2-Dichloropropane	(2)	8.763	63	123397	20.782
76) Methyl Methacrylate	(2)	8.847	69	111030	19.337
75) 1,4-Dioxane	(1)	8.856	88	39582M	538.951
74) Dibromomethane	(2)	8.875	93	79710	20.748
78) Bromodichloromethane	(2)	9.110	83	140364	20.361
79) 2-Nitropropane	(2)	9.390	41	31840	15.248
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	78938	30.955
81) cis-1,3-Dichloropropene	(2)	9.634	75	185790	20.291
82) 4-Methyl-2-pentanone	(2)	9.805	43	832198	90.959
83)$Toluene-d8	(3)	9.930	98	1224920	49.069
88) Toluene	(3)	10.007	92	313711	20.045
90) 1,3-Dichloropropene (total)	(3)		100	351140	38.903
89) trans-1,3-Dichloropropene	(3)	10.258	75	165350	18.612
91) Ethyl Methacrylate	(3)	10.310	69	185379	17.170
92) 1,1,2-Trichloroethane	(3)	10.457	97	123325	20.784
93) Tetrachloroethene	(3)	10.538	166	129265	19.503
94) 1,3-Dichloropropane	(3)	10.618	76	201364	19.876
96) 2-Hexanone	(3)	10.666	43	627871	87.122
97) Dibromochloromethane	(3)	10.824	129	115965	19.079
99) 1,2-Dibromoethane	(3)	10.933	107	129008	20.022
100)*Chlorobenzene-d5	(3)	11.358	117	954034	50.000
101) 1-Chlorohexane	(3)	11.361	91	154355	18.359

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
102) Chlorobenzene	(3)	11.383	112	359998	20.341
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	112152	19.233
104) Ethylbenzene	(3)	11.467	91	597136	19.963
106) m+p-Xylene	(3)	11.580	106	479979	40.789
108) Xylene (Total)	(3)		106	709445	60.531
107) o-Xylene	(3)	11.908	106	229466	19.742
109) Styrene	(3)	11.920	104	386872	20.142
110) Bromoform	(3)	12.078	173	75317	16.583
111) Isopropylbenzene	(3)	12.203	105	586751	20.127
112) Cyclohexanone	(1)	12.287	55	136932	476.060
114)$4-Bromofluorobenzene	(3)	12.345	95	482775	51.074
116) 1,1,2,2-Tetrachloroethane	(4)	12.448	83	197038	20.124
115) Bromobenzene	(4)	12.464	156	152936	19.632
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	259700	85.988
117) 1,2,3-Trichloropropane	(4)	12.496	110	59005	19.638
119) n-Propylbenzene	(4)	12.528	91	696154	20.454
120) 2-Chlorotoluene	(4)	12.605	126	141098	19.514
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	498236	20.144
121) 4-Chlorotoluene	(4)	12.698	126	147115	19.547
124) tert-Butylbenzene	(4)	12.904	134	97397	19.040
125) Pentachloroethane	(4)	12.936	167	80055	18.175
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	516617	19.818
127) sec-Butylbenzene	(4)	13.065	105	596790	19.552
129) 1,3-Dichlorobenzene	(4)	13.168	146	284643	19.884
130) p-Isopropyltoluene	(4)	13.171	119	516072	19.543
131)*1,4-Dichlorobenzene-d4	(4)	13.219	152	518331	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	297218	20.028
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	535390	19.388
135) Benzyl Chloride	(4)	13.319	91	324287	15.511
136) 1,3-Diethylbenzene	(4)	13.370	119	312049	18.158
141) Diethylbenzene (total)	(4)		100	904757	54.455
137) 1,4-Diethylbenzene	(4)	13.441	119	327147	17.967
139) n-Butylbenzene	(4)	13.464	92	251889	18.656
138) 1,2-Dichlorobenzene	(4)	13.499	146	283246	20.052
140) 1,2-Diethylbenzene	(4)	13.515	119	265561	18.330
142) 1,2-Dibromo-3-chloropropane	(4)	14.039	75	39020	18.205
144) 1,3,5-Trichlorobenzene	(4)	14.161	180	191170	17.615
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	179583	17.018

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

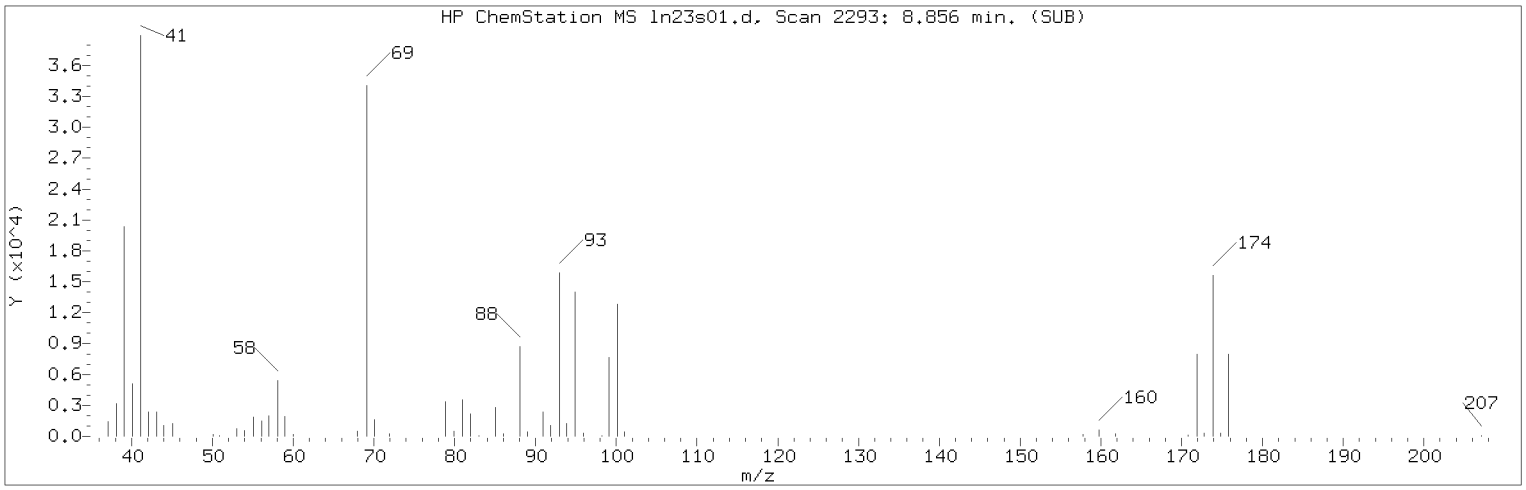
Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

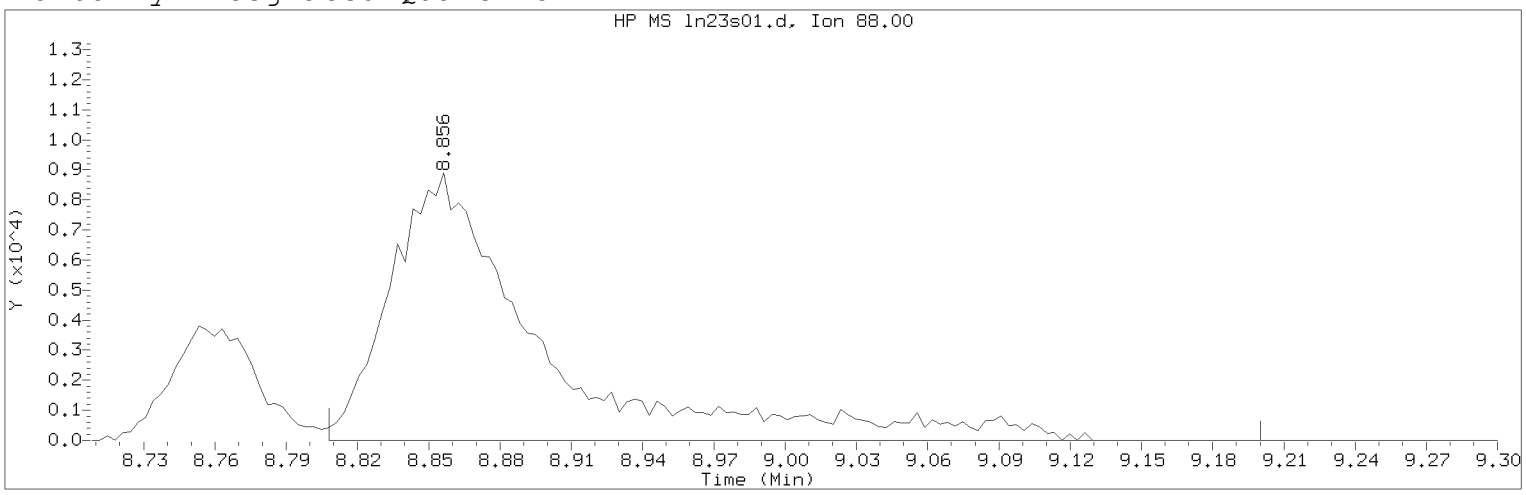
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Hexachlorobutadiene	(4)	14.666	225	75520	15.157
148) Naphthalene	(4)	14.772	128	623142	18.368
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	174866	17.030
150) 2-Methylnaphthalene	(4)	15.563	142	295754	14.157

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

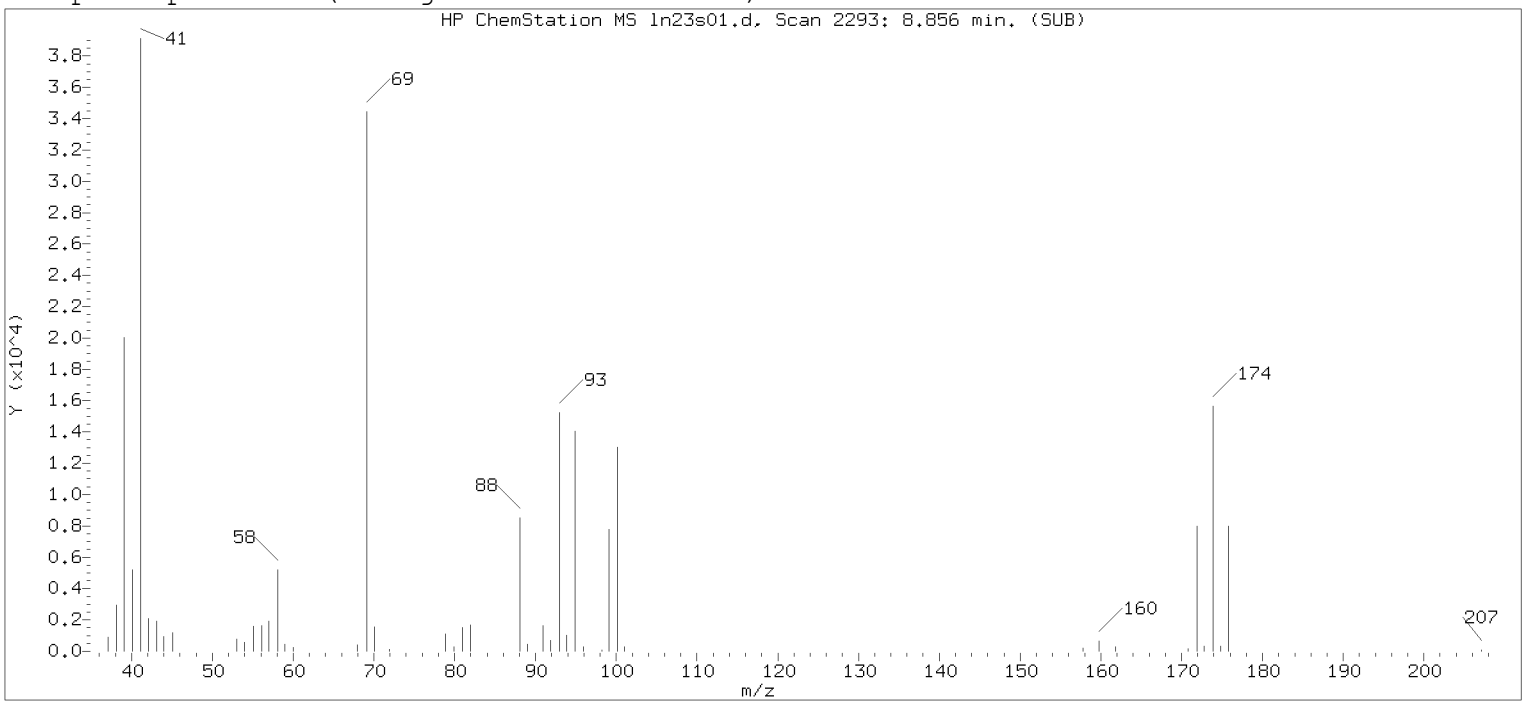
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 39582M
On-Column Amount (ng) : 538.9512
Integration start scan : 2277 Integration stop scan: 2399
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

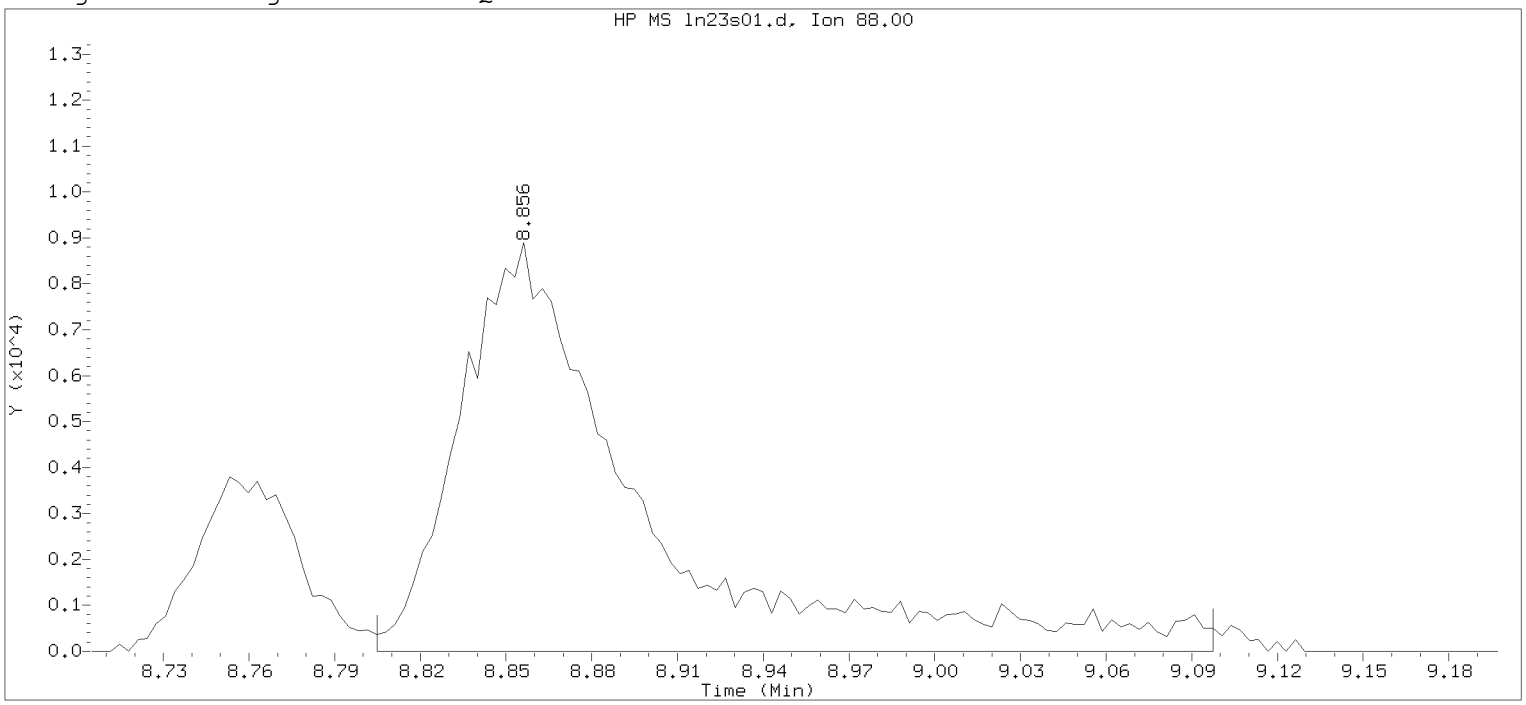
Analyst responsible for change: Digitally signed by Corie L. Mellinger
on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:45.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:43 Automation

Sample Name: LCSL87 Lab Sample ID: LCSL87

Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2293		
Retention Time (minutes)	: 8.856		
Quant Ion	: 88.00		
Area	: 39126		
On-column Amount (ng)	: 532.7524		
Integration start scan	: 2276	Integration stop scan:	2367
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Corie L. Mellinger on 11/23/2019 at 10:16.
Target 3.5 esignature user: CLM27445

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NYSDEC ASP Category B Data Package

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Project: AD-New Windsor, NY
Groundwater Samples
Collected on 11/15/19-11/16/19

SDG# JCW23

GROUP	SAMPLE NUMBERS
2075496	1205910-1205917

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-18-27
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M. Kauffman **Date:** **12/17/2019**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Katherine Klinefelter at (717) 556-7256.

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Sample Reference List for SDG Number JCW23 with a Data Package Type of NYSDEC B

06556 - The Johnson Company, Inc.

Project: AD-New Windsor, NY

Lab Sample Number	Client Sample ID	Collection Date	Date Received	Lab Sample Code
1205910	J20-UC02	11/15/2019 09:55	11/19/2019 10:38	JCW11
1205911	J20-UC01	11/15/2019 10:36	11/19/2019 10:38	JCW12
1205912	J20-BR02	11/15/2019 11:52	11/19/2019 10:38	JCW13
1205913	J20-BR01	11/15/2019 14:07	11/19/2019 10:38	JCW14
1205914	J06-UC01	11/15/2019 15:48	11/19/2019 10:38	JCW15
1205915	J19-UC02	11/16/2019 14:23	11/19/2019 10:38	JCW16
1205916	J19-UC01	11/16/2019 15:15	11/19/2019 10:38	JCW17
1205917	RIZ-7	11/16/2019 16:17	11/19/2019 10:38	JCW18

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Sample pH Log

SDG: JCW23

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
1205910	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/25/2019 1:54:43PM	895
1205911	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/25/2019 1:54:43PM	895
1205912	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/25/2019 1:54:43PM	895
1205913	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/25/2019 1:54:43PM	895
1205914	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/25/2019 1:54:43PM	895
1205915	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/25/2019 1:54:44PM	895
1205916	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/25/2019 1:54:44PM	895
1205917	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/25/2019 1:54:44PM	895

*pH Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

**Chlorine Present Code Key
NA = Chlorine Not Checked
Y = Chlorine Present
N = Chlorine Not Present

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11997 VOCs- 5ml Water by 8260C/D

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Report Date: November 27, 2019 22:05

Project: AD-New Windsor, NY

Account #: 06556
Group Number: 2075496
SDG: JCW23
PO Number: 1-0145-05
Release Number: 58300.00
State of Sample Origin: NY

Electronic Copy To	The Johnson Company, Inc.	Attn: Tristan Hardy
Electronic Copy To	The Johnson Company, Inc.	Attn: George Lester
Electronic Copy To	VHB	Attn: Quinn Ledak

Respectfully Submitted,

Katherine A. Klinefelter

Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
J20-UC02 Grab Groundwater	11/15/2019 09:55	1205910
J20-UC01 Grab Groundwater	11/15/2019 10:36	1205911
J20-BR02 Grab Groundwater	11/15/2019 11:52	1205912
J20-BR01 Grab Groundwater	11/15/2019 14:07	1205913
J06-UC01 Grab Groundwater	11/15/2019 15:48	1205914
J19-UC02 Grab Groundwater	11/16/2019 14:23	1205915
J19-UC01 Grab Groundwater	11/16/2019 15:15	1205916
RIZ-7 Grab Groundwater	11/16/2019 16:17	1205917

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **J20-UC02 Grab Groundwater**
AD-New Windsor/58300

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/15/2019 09:55
SDG#: JCW23-01

The Johnson Company, Inc.
ELLE Sample #: GW 1205910
ELLE Group #: 2075496
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.9 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	0.8 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	0.4 J	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	0.4 J	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193271AA	11/23/2019 12:56	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193271AA	11/23/2019 12:55	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

Sample Description: **J20-UC01 Grab Groundwater**
AD-New Windsor/58300

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/15/2019 10:36
SDG#: JCW23-02

The Johnson Company, Inc.
ELLE Sample #: GW 1205911
ELLE Group #: 2075496
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.4 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	0.6 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	1	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193271AA	11/23/2019 13:18	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193271AA	11/23/2019 13:17	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

Sample Description: **J20-BR02 Grab Groundwater**
AD-New Windsor/58300

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/15/2019 11:52
SDG#: JCW23-03

The Johnson Company, Inc.
ELLE Sample #: GW 1205912
ELLE Group #: 2075496
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	1	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193271AA	11/23/2019 13:40	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193271AA	11/23/2019 13:39	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

Sample Description: **J20-BR01 Grab Groundwater**
AD-New Windsor/58300

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/15/2019 14:07
SDG#: JCW23-04

The Johnson Company, Inc.
ELLE Sample #: GW 1205913
ELLE Group #: 2075496
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193271AA	11/23/2019 14:02	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193271AA	11/23/2019 14:01	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

Sample Description: **J06-UC01 Grab Groundwater**
AD-New Windsor/58300

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/15/2019 15:48
SDG#: JCW23-05

The Johnson Company, Inc.
ELLE Sample #: GW 1205914
ELLE Group #: 2075496
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	0.7 J	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193271AA	11/23/2019 14:24	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193271AA	11/23/2019 14:23	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

Sample Description: **J19-UC02 Grab Groundwater**
AD-New Windsor/58300

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/16/2019 14:23
SDG#: JCW23-06

The Johnson Company, Inc.
ELLE Sample #: GW 1205915
ELLE Group #: 2075496
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.4 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	0.8 J	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193271AA	11/23/2019 14:46	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193271AA	11/23/2019 14:45	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

Sample Description: **J19-UC01 Grab Groundwater**
AD-New Windsor/58300

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/16/2019 15:15
SDG#: JCW23-07

The Johnson Company, Inc.
ELLE Sample #: GW 1205916
ELLE Group #: 2075496
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.3 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193271AA	11/23/2019 15:08	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193271AA	11/23/2019 15:07	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

Sample Description: **RIZ-7 Grab Groundwater**
AD-New Windsor/58300

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/16/2019 16:17
SDG#: JCW23-08

The Johnson Company, Inc.
ELLE Sample #: GW 1205917
ELLE Group #: 2075496
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	0.4 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	0.5 J	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	1	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193271AA	11/23/2019 15:31	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193271AA	11/23/2019 15:30	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2075496
Reported: 11/27/2019 22:05

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: L193271AA	Sample number(s): 1205910-1205917		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	6

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: L193271AA	Sample number(s): 1205910-1205917								
Acetone	150	165.78			111		54-157		
Benzene	20	20.61			103		80-120		
2-Butanone	150	137.59			92		59-135		
Carbon Disulfide	20	16.81			84		65-128		
Chloroform	20	20.73			104		80-120		
1,2-Dichlorobenzene	20	20.05			100		80-120		
1,1-Dichloroethane	20	19.91			100		80-120		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2075496
Reported: 11/27/2019 22:05

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,2-Dichloroethane	20	20.97			105		73-124		
1,1-Dichloroethene	20	20.27			101		80-131		
cis-1,2-Dichloroethene	20	21.25			106		80-125		
trans-1,2-Dichloroethene	20	20.1			100		80-126		
1,4-Dioxane	500	538.96			108		63-146		
Ethylbenzene	20	19.96			100		80-120		
Freon 113	20	18.28			91		73-139		
Methylene Chloride	20	20.76			104		80-120		
Naphthalene	20	18.37			92		53-124		
Tetrachloroethene	20	19.5			98		80-120		
Toluene	20	20.05			100		80-120		
1,1,1-Trichloroethane	20	19.91			100		67-126		
Trichloroethene	20	20.69			103		80-120		
Vinyl Chloride	20	17.86			89		56-120		
Xylene (Total)	60	60.53			101		80-120		

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: L193271AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1205910	98	102	97	98
1205911	98	102	97	98
1205912	99	104	97	98
1205913	98	102	98	97
1205914	100	103	97	98
1205915	100	102	98	98
1205916	99	102	97	98
1205917	100	103	97	98
Blank	97	102	97	98
LCS	99	102	98	102
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 06556 Group # 2075496 Sample # 1205910-17

COC # 596348

Client Information

Client: VHB/The Johnson Company	Acct. #: 06556
Project Name/#: AD-New Windsor / 58300	PWSID #:
Project Manager: George Lester	P.O. #:
Sampler: Adam Rodtog	Quote #:
State where samples were collected: NY	For Compliance: Yes ☐ No ☒

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☒ Surface ☐ NPDES ☐ | Other: ☐

Analysis Requested — Preservation and Filtration Codes: H

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	8260C-VOCs
J20-UC02	11/15/19	955	X		3	X
J20-UC01	11/15/19	1036	X		3	X
J20-BR02	11/15/19	1152	X		3	X
J20-BR01	11/15/19	1407	X		3	X
J06-UC01	11/15/19	1548	X		3	X
J19-UC02	11/16/19	1423	X		3	X
J19-UC01	11/16/19	1515	X		3	X
RIZ-7	11/16/19	1617	X		3	X

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days:

E-mail address: Glester@vhb.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	11/18/19	1600			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	11/19/19 Date	1038 Time

EDD Required? Yes No

If yes, format: Excel

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx Y Other ____

Temperature upon receipt 2.0 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 266924

Group Number(s): 2075496

Client: VHB/ THE JOHNSON COMPANY

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	11/19/2019
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	New York		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Julissa Rivera-Santa

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192050133	2.0	IR	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17601-5994
T 717-656-2300
F 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCW23

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Solid	DF	Comments
1205910	J20-UC02	X		1	
1205911	J20-UC01	X		1	
1205912	J20-BR02	X		1	
1205913	J20-BR01	X		1	
1205914	J06-UC01	X		1	
1205915	J19-UC02	X		1	
1205916	J19-UC01	X		1	
1205917	RIZ-7	X		1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

SAMPLE ANALYSIS:

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCW23

GC/MS Volatiles

Fraction: Volatiles by GC/MS

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

1. Relative Response Factor (RRF)

$$RRF = \frac{AX}{Ais} \times \frac{Cis}{Cx}$$

Where:

Ax = Area of the characteristic ion for the compound to be measured
Ais = Area of the characteristic ion for the specific internal standard to be measured
Cis = Concentration of the internal standard
Cx = Concentration of the compound to be measured

2. % Relative Standard Deviation (%RSD)

$$\%RSD = \frac{standard\ deviation}{Mean} \times 100$$

3. % Difference

$$\%D = \frac{RRFc - RRFi}{RRFi} \times 100$$

Where:

RRFc = Relative response factor from the continuing calibration standard
RRFi = Mean relative response factor from the initial calibration

4. Concentration

$$Concentration\ (\mu g / L) = \frac{(Ax)(Is)(Df)}{(Ais)(RRF)}$$

Where:

Ax, Ais, and RRF are as given in 1. above
Is = Amount of internal standard added in parts per billion (µg/L)
Df = Dilution factor

5. % Recovery (% Rec)

$$\%Rec = \frac{SSR - SR}{SA} \times 100$$

Where:

SSR = Spiked sample result
SR = Sample result
SA = Spike added

6. Relative Percent Difference (RPD)

$$RPD = \frac{(MSR - MSRD)}{(1/2)(MSR + MSRD)} \times 100$$

Where:

MSR = Matrix spike recovery
MSRD = Matrix spike recovery duplicate

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: The Johnson Company, Inc.
SDG: JCW23

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
VOCs- 5ml Water by 8260C/D	L193271AA	VBLKL87	11/23/2019 09:48
		LCSL87	11/23/2019 09:26
		1205910	11/23/2019 12:56
		1205911	11/23/2019 13:18
		1205912	11/23/2019 13:40
		1205913	11/23/2019 14:02
		1205914	11/23/2019 14:24
		1205915	11/23/2019 14:46
		1205916	11/23/2019 15:08
		1205917	11/23/2019 15:31

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: JCW23
Matrix: LIQUID

Fraction: Volatiles by GC/MS

L193271AA / VBLKL87 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	11/23/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	11/23/19	N.D.	ug/l	0.2	1
Acetone	11/23/19	N.D.	ug/l	0.7	20
Freon 113	11/23/19	N.D.	ug/l	0.2	10
Carbon Disulfide	11/23/19	N.D.	ug/l	0.2	5
Methylene Chloride	11/23/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	11/23/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	11/23/19	N.D.	ug/l	0.2	1
2-Butanone	11/23/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	11/23/19	N.D.	ug/l	0.2	1
Chloroform	11/23/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	11/23/19	N.D.	ug/l	0.3	1
Benzene	11/23/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	11/23/19	N.D.	ug/l	0.3	1
Trichloroethene	11/23/19	N.D.	ug/l	0.2	1
1,4-Dioxane	11/23/19	N.D.	ug/l	29	250
Toluene	11/23/19	N.D.	ug/l	0.2	1
Tetrachloroethene	11/23/19	N.D.	ug/l	0.2	1
Ethylbenzene	11/23/19	N.D.	ug/l	0.4	1
Xylene (Total)	11/23/19	N.D.	ug/l	1	6
1,2-Dichlorobenzene	11/23/19	N.D.	ug/l	0.2	5
Naphthalene	11/23/19	N.D.	ug/l	1	5

Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: JCW23
Matrix: LIQUID

Fraction: Volatiles by GC/MS

L193271AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKL87	102	80 - 120	98	80 - 120	97	80 - 120	97	80 - 120
LCSL87	102	80 - 120	102	80 - 120	99	80 - 120	98	80 - 120
1205910	102	80 - 120	98	80 - 120	98	80 - 120	97	80 - 120
1205911	102	80 - 120	98	80 - 120	98	80 - 120	97	80 - 120
1205912	104	80 - 120	98	80 - 120	99	80 - 120	97	80 - 120
1205913	102	80 - 120	97	80 - 120	98	80 - 120	98	80 - 120
1205914	103	80 - 120	98	80 - 120	100	80 - 120	97	80 - 120
1205915	102	80 - 120	98	80 - 120	100	80 - 120	98	80 - 120
1205916	102	80 - 120	98	80 - 120	99	80 - 120	97	80 - 120
1205917	103	80 - 120	98	80 - 120	100	80 - 120	97	80 - 120

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: JCW23
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSL87	Batch: **L193271AA** (Sample number(s): 1205910-1205917)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	17.86	NA	89	NA	56-120	NA	NA
1,1-Dichloroethene	20	20.27	NA	101	NA	80-131	NA	NA
Acetone	150	165.78	NA	111	NA	54-157	NA	NA
Freon 113	20	18.28	NA	91	NA	73-139	NA	NA
Carbon Disulfide	20	16.81	NA	84	NA	65-128	NA	NA
Methylene Chloride	20	20.76	NA	104	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	20.1	NA	100	NA	80-126	NA	NA
1,1-Dichloroethane	20	19.91	NA	100	NA	80-120	NA	NA
2-Butanone	150	137.59	NA	92	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	21.25	NA	106	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	19.91	NA	100	NA	67-126	NA	NA
Chloroform	20	20.73	NA	104	NA	80-120	NA	NA
1,2-Dichloroethane	20	20.97	NA	105	NA	73-124	NA	NA
Benzene	20	20.61	NA	103	NA	80-120	NA	NA
Trichloroethene	20	20.69	NA	103	NA	80-120	NA	NA
1,4-Dioxane	500	538.96	NA	108	NA	63-146	NA	NA
Toluene	20	20.05	NA	100	NA	80-120	NA	NA
Tetrachloroethene	20	19.5	NA	98	NA	80-120	NA	NA
Ethylbenzene	20	19.96	NA	100	NA	80-120	NA	NA
Xylene (Total)	60	60.53	NA	101	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	20.05	NA	100	NA	80-120	NA	NA
Naphthalene	20	18.37	NA	92	NA	53-124	NA	NA

Fraction: Volatiles by GC/MS

11997: VOCs- 5ml Water by 8260C/D Analyte Name	Default MDL	Default LOQ	Units
Vinyl Chloride	0.2	1	ug/l
1,1-Dichloroethene	0.2	1	ug/l
Acetone	0.7	20	ug/l
Freon 113	0.2	10	ug/l
Carbon Disulfide	0.2	5	ug/l
Methylene Chloride	0.3	1	ug/l
trans-1,2-Dichloroethene	0.2	1	ug/l
1,1-Dichloroethane	0.2	1	ug/l
2-Butanone	0.3	10	ug/l
cis-1,2-Dichloroethene	0.2	1	ug/l
Chloroform	0.2	1	ug/l
1,1,1-Trichloroethane	0.3	1	ug/l
Benzene	0.2	1	ug/l
1,2-Dichloroethane	0.3	1	ug/l
Trichloroethene	0.2	1	ug/l
1,4-Dioxane	29	250	ug/l
Toluene	0.2	1	ug/l
Tetrachloroethene	0.2	1	ug/l
Ethylbenzene	0.4	1	ug/l
Xylene (Total)	1	6	ug/l
1,2-Dichlorobenzene	0.2	5	ug/l
Naphthalene	1	5	ug/l

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln04t06.d BFB Injection Date: 11/04/19

Instrument ID: HP09915 BFB Injection Time: 14:18

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.48
75	30.0 - 60.0% of mass 95	44.65
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.22
173	Less than 2.0% of mass 174	0.51 (0.61)1
174	Greater than 50.0% of mass 95	83.73
175	5.0 - 9.0% of mass 174	5.92 (7.07)1
176	Greater than 95.0%, but less than 101.0% of mass 174	82.66 (98.72)1
177	5.0 - 9.0% of mass 176	5.37 (6.49)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	ln04i01.d	11/04/19	14:51
02	VSTD100	ln04i02.d	11/04/19	15:13
03	VSTD50	ln04i03.d	11/04/19	15:35
04	VSTD20	ln04i04.d	11/04/19	15:57
05	VSTD10	ln04i05.d	11/04/19	16:19
06	VSTD4	ln04i06.d	11/04/19	16:41
07	VSTD1	ln04i07.d	11/04/19	17:03
08	ICVLLG	ln04v02.d	11/04/19	18:42

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln23t02.d BFB Injection Date: 11/23/19

Instrument ID: HP09915 BFB Injection Time: 07:57

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.16
75	30.0 - 60.0% of mass 95	43.53
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.39
173	Less than 2.0% of mass 174	0.55 (0.66)1
174	Greater than 50.0% of mass 95	83.68
175	5.0 - 9.0% of mass 174	6.06 (7.25)1
176	Greater than 95.0%, but less than 101.0% of mass 174	80.15 (95.78)1
177	5.0 - 9.0% of mass 176	5.44 (6.78)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	ln23c01.d	11/23/19	08:42
02	LCSL87	ln23s01.d	11/23/19	09:26
03	VBLKL87	ln23b01.d	11/23/19	09:48
04	1205905	ln23s02.d	11/23/19	10:44
05	1205900	ln23s03.d	11/23/19	11:06
06	1205901MS	ln23s04.d	11/23/19	11:28
07	1205902MSD	ln23s05.d	11/23/19	11:50
08	1205903	ln23s06.d	11/23/19	12:12
09	1205904	ln23s07.d	11/23/19	12:34
10	1205910	ln23s08.d	11/23/19	12:56
11	1205911	ln23s09.d	11/23/19	13:18
12	1205912	ln23s10.d	11/23/19	13:40
13	1205913	ln23s11.d	11/23/19	14:02
14	1205914	ln23s12.d	11/23/19	14:24
15	1205915	ln23s13.d	11/23/19	14:46
16	1205916	ln23s14.d	11/23/19	15:08
17	1205917	ln23s15.d	11/23/19	15:31
18	1205918	ln23s16.d	11/23/19	15:53
19	1205928	ln23s17.d	11/23/19	16:15
20	1205929	ln23s18.d	11/23/19	16:37
21	1206738	ln23s19.d	11/23/19	16:59
22	1206739	ln23s20.d	11/23/19	17:21

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln23t02.d BFB Injection Date: 11/23/19

Instrument ID: HP09915 BFB Injection Time: 07:57

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.16
75	30.0 - 60.0% of mass 95	43.53
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.39
173	Less than 2.0% of mass 174	0.55 (0.66)1
174	Greater than 50.0% of mass 95	83.68
175	5.0 - 9.0% of mass 174	6.06 (7.25)1
176	Greater than 95.0%, but less than 101.0% of mass 174	80.15 (95.78)1
177	5.0 - 9.0% of mass 176	5.44 (6.78)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1206740	ln23s21.d	11/23/19	17:43

FORM V VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 11/04/19 11/04/19

Heated Purge: (Y/N) Y Calibration Times: 14:51 17:03

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ln04i07.d RRF 4 = ln04i06.d RRF 10= ln04i05.d
RRF 20= ln04i04.d RRF 50= ln04i03.d RRF100= ln04i02.d RRF300= ln04i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
Dichlorodifluoromethane	#0.2770	0.3398	0.3322	0.3567	0.3683	0.3624	0.4044	0.3487	11	AVG	#
Chloromethane	#0.3032	0.3486	0.3309	0.3441	0.3366	0.3315	0.3574	0.3361	5	AVG	#
1,3-Butadiene	0.3190	0.2966	0.2596	0.2831	0.2680	0.2614	0.2655	0.2790	8	AVG	
Vinyl Chloride	#0.3148	0.3359	0.3281	0.3461	0.3340	0.3300	0.3588	0.3354	4	AVG	#
Bromomethane	#0.2465	0.2525	0.2338	0.2435	0.2351	0.2280	0.2436	0.2404	4	AVG	#
Chloroethane	#0.1829	0.1883	0.1826	0.1903	0.1829	0.1768	0.1864	0.1843	2	AVG	#
Dichlorofluoromethane	0.4438	0.4434	0.4617	0.4547	0.4393	0.4194	0.4429	0.4436	3	AVG	
n-Pentane	0.4515	0.4661	0.3729	0.4321	0.4220	0.4236	0.4188	0.4267	7	AVG	
Trichlorofluoromethane	#0.3135	0.3650	0.3480	0.3680	0.3738	0.3637	0.3957	0.3611	7	AVG	#
Ethyl ether	0.2040	0.2292	0.2248	0.2407	0.2462	0.2325	0.2560	0.2333	7	AVG	
Freon 123a	0.2731	0.2973	0.2841	0.3052	0.2905	0.2871	0.2961	0.2905	4	AVG	
Acrolein	1.8108	1.7178	1.8759	1.9357	1.9501	1.9507	1.8885	1.8756	5	AVG	
1,1-Dichloroethene	#0.1836	0.2109	0.2092	0.2256	0.2170	0.2158	0.2215	0.2120	6	AVG	#
1,1-Dichloroethene(2)	#0.1023	0.1059	0.1045	0.1117	0.1063	0.1059	0.1072	0.1063	3	AVG	#
Acetone	#0.8149	0.8065	0.8248	0.8719	0.8448	0.8521	0.8711	0.8409	3	AVG	#
Freon 113	#0.2090	0.2460	0.2241	0.2555	0.2493	0.2512	0.2576	0.2418	8	AVG	#
2-Propanol	0.6190	0.5470	0.6059	0.5854	0.6149	0.6455	0.6138	0.6045	5	AVG	
Methyl Iodide	0.3896	0.4318	0.4390	0.4699	0.4471	0.4440	0.4531	0.4392	6	AVG	
Carbon Disulfide	#0.6790	0.7802	0.7759	0.8606	0.8244	0.8268	0.8441	0.7987	8	AVG	#
Allyl Chloride	0.3592	0.3785	0.3741	0.3853	0.3781	0.3777	0.4087	0.3802	4	AVG	
Methyl Acetate	#0.2759	0.2713	0.2678	0.2699	0.2708	0.2665	0.2887	0.2730	3	AVG	#
Methylene Chloride	#0.2376	0.2470	0.2510	0.2643	0.2542	0.2521	0.2596	0.2523	3	AVG	#
t-Butyl alcohol	0.9987	0.9567	1.0535	1.0361	1.0823	1.1654	1.0751	1.0525	6	AVG	
Acrylonitrile	0.1302	0.1382	0.1473	0.1543	0.1516	0.1518	0.1546	0.1469	6	AVG	
trans-1,2-Dichloroethene	#0.2214	0.2420	0.2423	0.2603	0.2478	0.2478	0.2548	0.2452	5	AVG	#
Methyl Tertiary Butyl Ether	#0.7408	0.7784	0.8166	0.8514	0.8245	0.8033	0.8186	0.8048	4	AVG	#
n-Hexane	0.3287	0.3697	0.3246	0.4104	0.3995	0.4116	0.4257	0.3815	11	AVG	
1,1-Dichloroethane	#0.3709	0.4279	0.4277	0.4500	0.4356	0.4348	0.4472	0.4277	6	AVG	#
di-Isopropyl ether	0.7323	0.7905	0.8261	0.8844	0.8488	0.8391	0.8535	0.8250	6	AVG	
2-Chloro-1,3-butadiene	0.3275	0.3721	0.3665	0.4087	0.3982	0.4003	0.4129	0.3838	8	AVG	
Ethyl t-butyl ether	0.7062	0.7711	0.8131	0.8688	0.8314	0.8069	0.8067	0.8006	6	AVG	
cis-1,2-Dichloroethene	#0.2518	0.2724	0.2701	0.2905	0.2780	0.2764	0.2874	0.2752	5	AVG	#
2-Butanone	#0.1780	0.1771	0.1844	0.1937	0.1954	0.1945	0.1965	0.1885	4	AVG	#
2,2-Dichloropropane	0.2822	0.3252	0.3231	0.3546	0.3451	0.3438	0.3535	0.3325	8	AVG	
Propionitrile	1.2429	1.2037	1.2978	1.3520	1.3266	1.3641	1.3930	1.3114	5	AVG	
Methacrylonitrile	0.1422	0.1460	0.1564	0.1674	0.1637	0.1633	0.1700	0.1584	7	AVG	
Bromochloromethane	0.1253	0.1402	0.1475	0.1518	0.1494	0.1475	0.1599	0.1459	7	AVG	
Tetrahydrofuran	1.1900	1.0886	1.1667	1.2087	1.1678	1.2286	1.2418	1.1846	4	AVG	
Chloroform	#0.3565	0.3938	0.4037	0.4404	0.4177	0.4181	0.4336	0.4091	7	AVG	#
1,1,1-Trichloroethane	#0.2897	0.3392	0.3356	0.3727	0.3627	0.3635	0.3807	0.3492	9	AVG	#
Cyclohexane	#0.3956	0.4609	0.4169	0.5022	0.4885	0.4944	0.5099	0.4669	10	AVG	#
Cyclohexane(2)	#0.3456	0.3987	0.3627	0.4329	0.4236	0.4319	0.4438	0.4056	9	AVG	#
Cyclohexane(3)	#0.1219	0.1428	0.1291	0.1542	0.1510	0.1531	0.1588	0.1444	10	AVG	#
1,1-Dichloropropene	0.2907	0.3348	0.3278	0.3579	0.3462	0.3479	0.3620	0.3382	7	AVG	
Carbon Tetrachloride	#0.2440	0.2777	0.2747	0.3128	0.3114	0.3175	0.3350	0.2961	11	AVG	#
Isobutyl Alcohol	0.3485	0.3107	0.3595	0.3421	0.3590	0.3974	0.3623	0.3542	7	AVG	
Benzene	#0.8990	1.0067	1.0148	1.0842	1.0359	1.0238	1.0549	1.0170	6	AVG	#
1,2-Dichloroethane	#0.3434	0.3191	0.3218	0.3337	0.3212	0.3202	0.3304	0.3271	3	AVG	#
1,2-Dichloroethane(2)	#0.0306	0.0316	0.0313	0.0343	0.0326	0.0322	0.0340	0.0324	4	AVG	#<-
t-Amyl methyl ether	0.7161	0.7648	0.8115	0.8675	0.8369	0.8221	0.8061	0.8036	6	AVG	
n-Heptane	0.3313	0.3538	0.2821	0.3843	0.3724	0.3852	0.3855	0.3564	11	AVG	
n-Butanol	0.2496	0.2624	0.3164	0.3024	0.3250	0.3551	0.3230	0.3049	12	AVG	

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 11/04/19 11/04/19

Heated Purge: (Y/N) Y Calibration Times: 14:51 17:03

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ln04i07.d RRF 4 = ln04i06.d RRF 10= ln04i05.d
RRF 20= ln04i04.d RRF 50= ln04i03.d RRF100= ln04i02.d RRF300= ln04i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Trichloroethene	#0.2300	0.2478	0.2477	0.2710	0.2607	0.2615	0.2739	0.2561	6	AVG #
Methylcyclohexane	#0.4066	0.4619	0.4494	0.4907	0.4946	0.4918	0.5306	0.4751	8	AVG #
Methylcyclohexane(2)	#0.1773	0.2158	0.2019	0.2198	0.2245	0.2228	0.2428	0.2150	10	AVG #
1,2-Dichloropropane	#0.2299	0.2478	0.2567	0.2731	0.2644	0.2644	0.2715	0.2582	6	AVG #
Dibromomethane	0.1450	0.1593	0.1638	0.1764	0.1719	0.1732	0.1801	0.1671	7	AVG
1,4-Dioxane	0.0728	0.0772	0.0845	0.0860	0.0888	0.0886	0.0887	0.0838	8	AVG
Methyl Methacrylate	0.2026	0.2254	0.2423	0.2604	0.2637	0.2705	0.2832	0.2497	11	AVG
Bromodichloromethane	#0.2483	0.2630	0.2867	0.3150	0.3161	0.3256	0.3442	0.2998	12	AVG #
2-Nitropropane	0.0733	0.0770	0.0825	0.0914	0.1013	0.1033	0.1070	0.0908	15	AVG
2-Chloroethyl Vinyl Ether	0.0882	0.0977	0.1040	0.1130	0.1155	0.1203	0.1378	0.1109	15	AVG
cis-1,3-Dichloropropene	#0.3066	0.3495	0.3874	0.4270	0.4265	0.4334	0.4572	0.3982	13	AVG #
4-Methyl-2-pentanone	#0.3519	0.3696	0.3930	0.4183	0.4328	0.4167	0.4032	0.3979	7	AVG #
Toluene	#0.7332	0.7931	0.8181	0.8731	0.8456	0.8312	0.8473	0.8202	6	AVG #
trans-1,3-Dichloropropene	#0.3482	0.3965	0.4507	0.4938	0.5103	0.5177	0.5421	0.4656	15	AVG #
Ethyl Methacrylate	0.4474	0.4901	0.5672	0.5969	0.6125	0.6196	0.6273	0.5659	12	AVG
1,1,2-Trichloroethane	#0.2783	0.2901	0.3087	0.3230	0.3222	0.3239	0.3306	0.3110	6	AVG #
Tetrachloroethene	#0.3162	0.3426	0.3214	0.3690	0.3559	0.3544	0.3721	0.3474	6	AVG #
1,3-Dichloropropane	0.4832	0.4915	0.5312	0.5551	0.5463	0.5472	0.5620	0.5309	6	AVG
2-Hexanone	#0.3356	0.3575	0.3750	0.3917	0.4210	0.3894	0.3737	0.3777	7	AVG #
Dibromochloromethane	#0.2335	0.2673	0.3027	0.3338	0.3491	0.3626	0.3808	0.3185	17	AVG #
1,2-Dibromoethane	#0.2934	0.3052	0.3308	0.3537	0.3534	0.3557	0.3715	0.3377	9	AVG #
1-Chlorohexane	0.4605	0.4391	0.3819	0.4601	0.4417	0.4418	0.4594	0.4406	6	AVG
Chlorobenzene	#0.8164	0.9033	0.9335	0.9825	0.9556	0.9405	0.9609	0.9275	6	AVG #
1,1,1,2-Tetrachloroethane	0.2351	0.2774	0.2999	0.3286	0.3310	0.3327	0.3346	0.3056	12	AVG
Ethylbenzene	#1.3747	1.5457	1.5220	1.6801	1.6314	1.6113	1.6087	1.5677	6	AVG #
m+p-Xylene	#0.5374	0.6016	0.5976	0.6715	0.6453	0.6383	0.6253	0.6167	7	AVG #
o-Xylene	#0.5399	0.5806	0.5978	0.6590	0.6427	0.6294	0.6148	0.6092	7	AVG #
Styrene	#0.8016	0.9301	1.0102	1.0972	1.0847	1.0669	1.0557	1.0066	11	AVG #
Bromoform	#	0.1724	0.2151	0.2312	0.2542	0.2685	0.2868	0.2380	17	AVG #
Isopropylbenzene	#1.2910	1.5137	1.4363	1.6684	1.6105	1.5929	1.5825	1.5279	8	AVG #
Cyclohexanone	0.3281	0.3024	0.3195	0.3248	0.3437	0.3247	0.3541	0.3282	5	AVG
Bromobenzene	0.6787	0.7176	0.7360	0.7885	0.7819	0.7772	0.7803	0.7515	6	AVG
1,1,2,2-Tetrachloroethane	#0.8022	0.8637	0.9996	0.9771	0.9960	0.9947	0.9782	0.9445	8	AVG #
1,2,3-Trichloropropane	0.2561	0.2658	0.3031	0.2987	0.2999	0.3027	0.3026	0.2898	7	AVG
trans-1,4-Dichloro-2-butene	0.2392	0.2651	0.2913	0.3105	0.3171	0.3156	0.3005	0.2913	10	AVG
n-Propylbenzene	2.9207	3.2949	2.9806	3.5724	3.4357	3.4054	3.3722	3.2831	7	AVG
2-Chlorotoluene	0.6482	0.6609	0.6535	0.7438	0.7252	0.7177	0.7330	0.6975	6	AVG
4-Chlorotoluene	0.6762	0.7074	0.6870	0.7741	0.7474	0.7369	0.7530	0.7260	5	AVG
1,3,5-Trimethylbenzene	1.9893	2.3249	2.1852	2.6169	2.5322	2.5250	2.5281	2.3860	10	AVG
tert-Butylbenzene	0.4288	0.4845	0.4243	0.5332	0.5247	0.5261	0.5325	0.4934	10	AVG
Pentachloroethane	0.2905	0.3724	0.4105	0.4466	0.4692	0.4744	0.5106	0.4249	18	AVG
1,2,4-Trimethylbenzene	2.1648	2.4282	2.3275	2.7429	2.6696	2.6607	2.6088	2.5147	8	AVG
sec-Butylbenzene	2.5710	2.9123	2.5624	3.2580	3.1256	3.1495	3.0325	2.9444	9	AVG
1,3-Dichlorobenzene	#1.3168	1.3435	1.3443	1.4749	1.4337	1.4053	1.3479	1.3809	4	AVG #
p-Isopropyltoluene	2.2311	2.5145	2.2448	2.8322	2.7191	2.7434	2.5461	2.5473	9	AVG
1,4-Dichlorobenzene	#1.3913	1.3992	1.3855	1.5164	1.4765	1.4501	1.4018	1.4315	4	AVG #
1,2,3-Trimethylbenzene	2.3717	2.5881	2.6584	2.7814	2.7739	2.7079	2.7646	2.6637	6	AVG
Benzyl Chloride		1.4905	1.9042	2.0277	2.1892	2.2241	2.2651	2.0168	14	AVG
1,3-Diethylbenzene	1.4770	1.6040	1.6373	1.7518	1.7206	1.7031	1.7107	1.6578	6	AVG
1,4-Diethylbenzene	1.6313	1.7295	1.7208	1.8600	1.8134	1.7888	1.7510	1.7564	4	AVG
1,2-Dichlorobenzene	#1.2854	1.3272	1.3476	1.4407	1.4096	1.3800	1.3479	1.3626	4	AVG #
n-Butylbenzene	1.2635	1.3335	1.1354	1.4216	1.3485	1.3543	1.2604	1.3024	7	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 11/04/19 11/04/19

Heated Purge: (Y/N) Y Calibration Times: 14:51 17:03

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ln04i07.d RRF 4 = ln04i06.d RRF 10= ln04i05.d
RRF 20= ln04i04.d RRF 50= ln04i03.d RRF100= ln04i02.d RRF300= ln04i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
1,2-Diethylbenzene	1.2665	1.3513	1.3737	1.4741	1.4581	1.4365	1.4223	1.3975	5	AVG
1,2-Dibromo-3-chloropropane#	0.1653	0.1703	0.2163	0.2130	0.2240	0.2247	0.2337	0.2068	13	AVG #
1,3,5-Trichlorobenzene	1.0736	1.0363	0.9506	1.1293	1.0680	1.0728	0.9975	1.0469	6	AVG
1,2,4-Trichlorobenzene	#1.0928	0.9898	0.9467	1.0851	1.0411	1.0335	0.9366	1.0179	6	AVG #
Hexachlorobutadiene		0.6224	0.4463	0.5319	0.4489	0.4300	0.4042	0.4806	17	AVG
Naphthalene	2.9793	3.0036	3.3068	3.4936	3.4918	3.4237	3.2086	3.2725	7	AVG
1,2,3-Trichlorobenzene	1.0616	0.9674	0.9274	1.0684	1.0300	1.0095	0.8692	0.9905	7	AVG
2-Methylnaphthalene	1.9837	1.8879	2.0390	2.2209	2.2298	2.1150	1.6300	2.0152	10	AVG
Dibromofluoromethane	0.2407	0.2444	0.2426	0.2463	0.2437	0.2470	0.2465	0.2445	1	AVG
Dibromofluoromethane(2)	0.2457	0.2504	0.2472	0.2513	0.2494	0.2516	0.2491	0.2492	1	AVG
1,2-Dichloroethane-d4	0.0612	0.0629	0.0625	0.0629	0.0628	0.0627	0.0611	0.0623	1	AVG
1,2-Dichloroethane-d4(2)	0.2741	0.2818	0.2744	0.2819	0.2771	0.2799	0.2742	0.2776	1	AVG
1,2-Dichloroethane-d4(3)	0.0389	0.0398	0.0398	0.0408	0.0397	0.0402	0.0393	0.0398	2	AVG
Toluene-d8	1.3149	1.3039	1.3148	1.3125	1.3146	1.3005	1.2968	1.3083	1	AVG
Toluene-d8(2)	0.8480	0.8436	0.8547	0.8509	0.8480	0.8442	0.8428	0.8475	1	AVG
4-Bromofluorobenzene	0.4958	0.4982	0.5005	0.4967	0.4932	0.4898	0.4935	0.4954	1	AVG
4-Bromofluorobenzene(2)	0.4097	0.4154	0.4152	0.4118	0.4097	0.4065	0.4066	0.4107	1	AVG

Average %RSD 7

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP09915.i/19nov04i.b/ln04i01.d	VSTD300
/chem/HP09915.i/19nov04i.b/ln04i02.d	VSTD100
/chem/HP09915.i/19nov04i.b/ln04i03.d	VSTD050
/chem/HP09915.i/19nov04i.b/ln04i04.d	VSTD020
/chem/HP09915.i/19nov04i.b/ln04i05.d	VSTD010
/chem/HP09915.i/19nov04i.b/ln04i06.d	VSTD004
/chem/HP09915.i/19nov04i.b/ln04i07.d	VSTD001

Area Summary

File ID:

Internal Standard Name	ln04i01.d	ln04i02.d	ln04i03.d	ln04i04.d	ln04i05.d	ln04i06.d	ln04i07.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	254406	265971	269779	258058	263427	262044	243591	259611	3	Yes
Fluorobenzene	1120873	1183605	1160755	1128743	1158257	1148427	1137124	1148255	2	Yes
Chlorobenzene-d5	891668	935628	904578	883281	897139	884065	879875	896605	2	Yes
1,4-Dichlorobenzene-d4	477171	500629	483927	476218	496298	480071	473433	483964	2	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	ln04i01.d	ln04i02.d	ln04i03.d	ln04i04.d	ln04i05.d	ln04i06.d	ln04i07.d	Avg. RT
t-Butyl alcohol-d10	4.503	4.509	4.509	4.512	4.509	4.512	4.496	4.507
Fluorobenzene	7.959	7.962	7.959	7.962	7.956	7.959	7.959	7.960
Chlorobenzene-d5	11.361	11.361	11.361	11.361	11.358	11.358	11.358	11.360
1,4-Dichlorobenzene-d4	13.223	13.223	13.223	13.223	13.223	13.223	13.223	13.223

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 11/05/2019 at 16:07.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 11/04/19 Time: 18:42

Lab File ID: ln04v02.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3487	0.3266	18.73	20	-6	#
# Chloromethane	0.3361	0.3180	18.93	20	-5	#
1,3-Butadiene	0.2790	0.2741	19.65	20	-2	
# Vinyl Chloride	0.3354	0.3245	19.35	20	-3	#
# Bromomethane	0.2404	0.2156	17.93	20	-10	#
# Chloroethane	0.1843	0.1704	18.49	20	-8	#
Dichlorofluoromethane	0.4436	0.3598	16.22	20	-19	
n-Pentane	0.4267	0.4057	19.01	20	-5	
# Trichlorofluoromethane	0.3611	0.3746	20.75	20	4	#
Ethyl ether	0.2333	0.1939	16.62	20	-17	
Freon 123a	0.2905	0.2825	19.45	20	-3	
Acrolein	1.8756	1.6896	135.12	150	-10	
# 1,1-Dichloroethene	0.2120	0.2216	20.91	20	5	#
# Acetone	0.8409	0.7666	136.75	150	-9	#
# Freon 113	0.2418	0.2394	19.80	20	-1	#
2-Propanol	0.6045	0.5806	144.06	150	-4	
Methyl Iodide	0.4392	0.4077	18.56	20	-7	
# Carbon Disulfide	0.7987	0.7452	18.66	20	-7	#
Allyl Chloride	0.3802	0.3535	18.59	20	-7	
# Methyl Acetate	0.2730	0.2606	19.09	20	-5	#
# Methylene Chloride	0.2523	0.2570	20.38	20	2	#
t-Butyl alcohol	1.0525	1.0046	190.90	200	-5	
Acrylonitrile	0.1469	0.1395	94.98	100	-5	
# trans-1,2-Dichloroethene	0.2452	0.2452	20.00	20	0	#
# Methyl Tertiary Butyl Ether	0.8048	0.7596	18.87	20	-6	#
n-Hexane	0.3815	0.3828	20.07	20	0	
# 1,1-Dichloroethane	0.4277	0.4163	19.46	20	-3	#
di-Isopropyl ether	0.8250	0.7868	19.08	20	-5	
2-Chloro-1,3-butadiene	0.3838	0.3659	19.07	20	-5	
Ethyl t-butyl ether	0.8006	0.7634	19.07	20	-5	
# cis-1,2-Dichloroethene	0.2752	0.2889	20.99	20	5	#
# 2-Butanone	0.1885	0.1794	142.74	150	-5	#
2,2-Dichloropropane	0.3325	0.3377	20.31	20	2	
Propionitrile	1.3114	1.2333	141.06	150	-6	
Methacrylonitrile	0.1584	0.1535	145.31	150	-3	
Bromochloromethane	0.1459	0.1368	18.75	20	-6	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 11/04/19 Time: 18:42

Lab File ID: ln04v02.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
	COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
	Tetrahydrofuran	1.1846	1.0959	92.51	100	-7	
#	Chloroform	0.4091	0.4123	20.16	20	1	#
#	1,1,1-Trichloroethane	0.3492	0.3558	20.38	20	2	#
#	Cyclohexane	0.4669	0.4442	19.02	20	-5	#
	1,1-Dichloropropene	0.3382	0.3393	20.07	20	0	
#	Carbon Tetrachloride	0.2961	0.2964	20.02	20	0	#
	Isobutyl Alcohol	0.3542	0.3198	451.41	500	-10	
#	Benzene	1.0170	1.0168	20.00	20	0	#
#	1,2-Dichloroethane	0.3271	0.3373	20.62	20	3	#
	t-Amyl methyl ether	0.8036	0.7630	18.99	20	-5	
	n-Heptane	0.3564	0.3376	18.95	20	-5	
	n-Butanol	0.3049	0.2780	911.92	1000	-9	
#	Trichloroethene	0.2561	0.2581	20.16	20	1	#
#	Methylcyclohexane	0.4751	0.4589	19.32	20	-3	#
#	1,2-Dichloropropane	0.2582	0.2641	20.45	20	2	#
	Dibromomethane	0.1671	0.1672	20.01	20	0	
	1,4-Dioxane	0.0838	0.0844	503.75	500	1	
	Methyl Methacrylate	0.2497	0.2388	19.13	20	-4	
#	Bromodichloromethane	0.2998	0.2984	19.91	20	0	#
	2-Nitropropane	0.0908	0.0741	16.32	20	-18	
	2-Chloroethyl Vinyl Ether	0.1109	0.1056	19.04	20	-5	
#	cis-1,3-Dichloropropene	0.3982	0.3957	19.87	20	-1	#
#	4-Methyl-2-pentanone	0.3979	0.3693	92.81	100	-7	#
#	Toluene	0.8202	0.8294	20.22	20	1	#
#	trans-1,3-Dichloropropene	0.4656	0.4472	19.21	20	-4	#
	Ethyl Methacrylate	0.5659	0.5138	18.16	20	-9	
#	1,1,2-Trichloroethane	0.3110	0.3171	20.39	20	2	#
#	Tetrachloroethene	0.3474	0.3842	22.12	20	11	#
	1,3-Dichloropropane	0.5309	0.5224	19.68	20	-2	
#	2-Hexanone	0.3777	0.3481	92.15	100	-8	#
#	Dibromochloromethane	0.3185	0.3147	19.76	20	-1	#
#	1,2-Dibromoethane	0.3377	0.3356	19.88	20	-1	#
	1-Chlorohexane	0.4406	0.4292	19.48	20	-3	
#	Chlorobenzene	0.9275	0.9379	20.22	20	1	#
	1,1,1,2-Tetrachloroethane	0.3056	0.3029	19.82	20	-1	
#	Ethylbenzene	1.5677	1.5899	20.28	20	1	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 11/04/19 Time: 18:42

Lab File ID: ln04v02.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	m+p-Xylene	0.6167	0.6315	40.96	40	2	#
#	o-Xylene	0.6092	0.6189	20.32	20	2	#
#	Styrene	1.0066	1.0350	20.56	20	3	#
#	Bromoform	0.2380	0.2137	17.95	20	-10	#
#	Isopropylbenzene	1.5279	1.5939	20.86	20	4	#
	Cyclohexanone	0.3282	0.2949	449.36	500	-10	
	Bromobenzene	0.7515	0.7447	19.82	20	-1	
#	1,1,2,2-Tetrachloroethane	0.9445	0.9245	19.58	20	-2	#
	1,2,3-Trichloropropane	0.2898	0.2890	19.94	20	0	
	trans-1,4-Dichloro-2-butene	0.2913	0.2850	97.83	100	-2	
	n-Propylbenzene	3.2831	3.4091	20.77	20	4	
	2-Chlorotoluene	0.6975	0.7037	20.18	20	1	
	4-Chlorotoluene	0.7260	0.7301	20.11	20	1	
	1,3,5-Trimethylbenzene	2.3860	2.4518	20.55	20	3	
	tert-Butylbenzene	0.4934	0.5090	20.63	20	3	
	Pentachloroethane	0.4249	0.3657	17.21	20	-14	
	1,2,4-Trimethylbenzene	2.5147	2.5110	19.97	20	0	
	sec-Butylbenzene	2.9444	3.0247	20.55	20	3	
#	1,3-Dichlorobenzene	1.3809	1.3855	20.07	20	0	#
	p-Isopropyltoluene	2.5473	2.6162	20.54	20	3	
#	1,4-Dichlorobenzene	1.4315	1.4660	20.48	20	2	#
	1,2,3-Trimethylbenzene	2.6637	2.6470	19.87	20	-1	
	Benzyl Chloride	2.0168	1.6153	16.02	20	-20	
	1,3-Diethylbenzene	1.6578	1.5827	19.09	20	-5	
	1,4-Diethylbenzene	1.7564	1.6691	19.01	20	-5	
#	1,2-Dichlorobenzene	1.3626	1.3874	20.36	20	2	#
	n-Butylbenzene	1.3024	1.2702	19.50	20	-2	
	1,2-Diethylbenzene	1.3975	1.3386	19.16	20	-4	
#	1,2-Dibromo-3-chloropropane	0.2068	0.1994	19.29	20	-4	#
	1,3,5-Trichlorobenzene	1.0469	0.9964	19.04	20	-5	
#	1,2,4-Trichlorobenzene	1.0179	0.9765	19.19	20	-4	#
	Hexachlorobutadiene	0.4806	0.4071	16.94	20	-15	
	Naphthalene	3.2725	3.2676	19.97	20	0	
	1,2,3-Trichlorobenzene	0.9905	0.9443	19.07	20	-5	
	2-Methylnaphthalene	2.0152	1.8367	18.23	20	-9	

Average %Drift 5

Compounds with required minimum RRF.
Maximum % Drift = 30 %

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Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem/HP09915.i/19nov04i.b/ln04i07.d
/chem/HP09915.i/19nov04i.b/ln04i06.d
/chem/HP09915.i/19nov04i.b/ln04i05.d
/chem/HP09915.i/19nov04i.b/ln04i04.d
/chem/HP09915.i/19nov04i.b/ln04i03.d
/chem/HP09915.i/19nov04i.b/ln04i02.d
/chem/HP09915.i/19nov04i.b/ln04i01.d

File /chem/HP09915.i/19nov04i.b/ln04i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem/HP09915.i/19nov23a.b/ln23c01.d

RT Summary

Internal Standard Name	File ID: ln23c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	4.490	4.509	Yes
Fluorobenzene	7.956	7.959	Yes
Chlorobenzene-d5	11.358	11.361	Yes
1,4-Dichlorobenzene-d4	13.223	13.223	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: ln23c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	218843	269779	134890	539558	Yes
Fluorobenzene	1129387	1160755	580378	2321510	Yes
Chlorobenzene-d5	942140	904578	452289	1809156	Yes
1,4-Dichlorobenzene-d4	522095	483927	241964	967854	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments:_____

report generated on 11/23/2019 at 09:09

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/23/19 Time: 08:42

Lab File ID: ln23c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3487	0.3778	54.17	50	8	#
# Chloromethane	0.3361	0.3506	52.17	50	4	#
1,3-Butadiene	0.2790	0.2300	41.22	50	-18	
# Vinyl Chloride	0.3354	0.3453	51.48	50	3	#
# Bromomethane	0.2404	0.2446	50.87	50	2	#
# Chloroethane	0.1843	0.1857	50.37	50	1	#
Dichlorofluoromethane	0.4436	0.3536	39.86	50	-20	
n-Pentane	0.4267	0.3191	37.39	50	-25	<-
# Trichlorofluoromethane	0.3611	0.3972	55.00	50	10	#
Ethyl ether	0.2333	0.2418	51.81	50	4	
Freon 123a	0.2905	0.2668	45.93	50	-8	
Acrolein	1.8756	1.9223	512.44	500	2	
# 1,1-Dichloroethene	0.2120	0.1905	44.95	50	-10	#
# 1,1-Dichloroethene(2)	0.1063	0.0934	43.93	50	-12	#<-
# Acetone	0.8409	0.8803	104.68	100	5	#
# Freon 113	0.2418	0.2213	45.76	50	-8	#
2-Propanol	0.6045	0.6042	249.89	250	0	
Methyl Iodide	0.4392	0.4024	45.81	50	-8	
# Carbon Disulfide	0.7987	0.7079	44.31	50	-11	#
Allyl Chloride	0.3802	0.3373	44.35	50	-11	
# Methyl Acetate	0.2730	0.2512	46.02	50	-8	#
# Methylene Chloride	0.2523	0.2374	47.06	50	-6	#
t-Butyl alcohol	1.0525	1.0187	241.97	250	-3	
Acrylonitrile	0.1469	0.1350	45.97	50	-8	
# trans-1,2-Dichloroethene	0.2452	0.2271	46.31	50	-7	#
# Methyl Tertiary Butyl Ether	0.8048	0.6763	42.01	50	-16	#
n-Hexane	0.3815	0.3360	44.04	50	-12	
# 1,1-Dichloroethane	0.4277	0.3941	46.07	50	-8	#
di-Isopropyl ether	0.8250	0.7439	45.09	50	-10	
2-Chloro-1,3-butadiene	0.3838	0.3496	45.55	50	-9	
Ethyl t-butyl ether	0.8006	0.6948	43.39	50	-13	
# cis-1,2-Dichloroethene	0.2752	0.2594	47.13	50	-6	#
# 2-Butanone	0.1885	0.1658	87.94	100	-12	#
2,2-Dichloropropane	0.3325	0.3037	45.67	50	-9	
Propionitrile	1.3114	1.4890	283.85	250	14	
Methacrylonitrile	0.1584	0.1543	121.74	125	-3	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/23/19 Time: 08:42

Lab File ID: ln23c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
Bromochloromethane	0.1459	0.1473	50.47	50	1	
Tetrahydrofuran	1.1846	1.2548	105.93	100	6	
# Chloroform	0.4091	0.3942	48.18	50	-4	#
# 1,1,1-Trichloroethane	0.3492	0.3265	46.75	50	-6	#
# Cyclohexane	0.4669	0.4171	44.66	50	-11	#
# Cyclohexane(2)	0.4056	0.3697	45.58	50	-9	#
# Cyclohexane(3)	0.1444	0.1302	45.08	50	-10	#
1,1-Dichloropropene	0.3382	0.3142	46.45	50	-7	
# Carbon Tetrachloride	0.2961	0.2755	46.51	50	-7	#
Isobutyl Alcohol	0.3542	0.3650	644.14	625	3	
# Benzene	1.0170	0.9669	47.54	50	-5	#
# 1,2-Dichloroethane	0.3271	0.3138	47.96	50	-4	#
# 1,2-Dichloroethane(2)	0.0324	0.0313	48.30	50	-3	#<-
t-Amyl methyl ether	0.8036	0.7341	45.67	50	-9	
n-Heptane	0.3564	0.3253	45.64	50	-9	
n-Butanol	0.3049	0.3114	1276.85	1250	2	
# Trichloroethene	0.2561	0.2464	48.11	50	-4	#
# Methylcyclohexane	0.4751	0.4473	47.08	50	-6	#
# Methylcyclohexane(2)	0.2150	0.2030	47.22	50	-6	#
# 1,2-Dichloropropane	0.2582	0.2480	48.02	50	-4	#
Dibromomethane	0.1671	0.1655	49.53	50	-1	
1,4-Dioxane	0.0838	0.1190	887.57	625	42	<-
Methyl Methacrylate	0.2497	0.2483	49.71	50	-1	
# Bromodichloromethane	0.2998	0.2938	49.00	50	-2	#
2-Nitropropane	0.0908	0.0867	95.41	100	-5	
2-Chloroethyl Vinyl Ether	0.1109	0.1889	85.14	50	70	<-
# cis-1,3-Dichloropropene	0.3982	0.3984	50.02	50	0	#
# 4-Methyl-2-pentanone	0.3979	0.3634	91.32	100	-9	#
# Toluene	0.8202	0.7613	46.41	50	-7	#
# trans-1,3-Dichloropropene	0.4656	0.4483	48.14	50	-4	#
Ethyl Methacrylate	0.5659	0.5325	47.05	50	-6	
# 1,1,2-Trichloroethane	0.3110	0.2969	47.73	50	-5	#
# Tetrachloroethene	0.3474	0.3174	45.69	50	-9	#
1,3-Dichloropropane	0.5309	0.5012	47.20	50	-6	
# 2-Hexanone	0.3777	0.3228	85.46	100	-15	#
# Dibromochloromethane	0.3185	0.3047	47.83	50	-4	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/23/19 Time: 08:42

Lab File ID: ln23c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	1,2-Dibromoethane	0.3377	0.3247	48.08	50	-4	#
	1-Chlorohexane	0.4406	0.3794	43.06	50	-14	
#	Chlorobenzene	0.9275	0.8742	47.13	50	-6	#
	1,1,1,2-Tetrachloroethane	0.3056	0.2876	47.05	50	-6	
#	Ethylbenzene	1.5677	1.4737	47.00	50	-6	#
#	m+p-Xylene	0.6167	0.5842	94.73	100	-5	#
#	o-Xylene	0.6092	0.5730	47.03	50	-6	#
#	Styrene	1.0066	0.9778	48.57	50	-3	#
#	Bromoform	0.2380	0.2141	44.97	50	-10	#
#	Isopropylbenzene	1.5279	1.4423	47.20	50	-6	#
	Cyclohexanone	0.3282	0.3572	680.22	625	9	
	Bromobenzene	0.7515	0.6776	45.09	50	-10	
#	1,1,2,2-Tetrachloroethane	0.9445	0.8679	45.94	50	-8	#
	1,2,3-Trichloropropane	0.2898	0.2659	45.87	50	-8	
	trans-1,4-Dichloro-2-butene	0.2913	0.2546	109.22	125	-13	
	n-Propylbenzene	3.2831	3.0494	46.44	50	-7	
	2-Chlorotoluene	0.6975	0.6346	45.49	50	-9	
	4-Chlorotoluene	0.7260	0.6617	45.57	50	-9	
	1,3,5-Trimethylbenzene	2.3860	2.2484	47.12	50	-6	
	tert-Butylbenzene	0.4934	0.4419	44.78	50	-10	
	Pentachloroethane	0.4249	0.4084	48.06	50	-4	
	1,2,4-Trimethylbenzene	2.5147	2.3639	47.00	50	-6	
	sec-Butylbenzene	2.9444	2.6990	45.83	50	-8	
#	1,3-Dichlorobenzene	1.3809	1.2568	45.51	50	-9	#
	p-Isopropyltoluene	2.5473	2.3341	45.81	50	-8	
#	1,4-Dichlorobenzene	1.4315	1.2946	45.22	50	-10	#
	1,2,3-Trimethylbenzene	2.6637	2.5809	48.44	50	-3	
	Benzyl Chloride	2.0168	1.8579	46.06	50	-8	
	1,3-Diethylbenzene	1.6578	1.5316	46.19	50	-8	
	1,4-Diethylbenzene	1.7564	1.5980	45.49	50	-9	
#	1,2-Dichlorobenzene	1.3626	1.2475	45.78	50	-8	#
	n-Butylbenzene	1.3024	1.1477	44.06	50	-12	
	1,2-Diethylbenzene	1.3975	1.3117	46.93	50	-6	
#	1,2-Dibromo-3-chloropropane	0.2068	0.1902	45.99	50	-8	#
	1,3,5-Trichlorobenzene	1.0469	0.8659	41.36	50	-17	
#	1,2,4-Trichlorobenzene	1.0179	0.8248	40.51	50	-19	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/23/19 Time: 08:42

Lab File ID: ln23c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
Hexachlorobutadiene	0.4806	0.3367	35.02	50	-30	<-
Naphthalene	3.2725	3.0219	46.17	50	-8	
1,2,3-Trichlorobenzene	0.9905	0.8126	41.02	50	-18	
2-Methylnaphthalene	2.0152	1.7393	43.16	50	-14	
Dibromofluoromethane	0.2445	0.2440	49.90	50	0	
Dibromofluoromethane(2)	0.2492	0.2471	49.58	50	-1	
1,2-Dichloroethane-d4	0.0623	0.0629	50.46	50	1	
1,2-Dichloroethane-d4(2)	0.2776	0.2843	51.20	50	2	
1,2-Dichloroethane-d4(3)	0.0398	0.0405	50.92	50	2	
Toluene-d8	1.3083	1.2807	48.94	50	-2	
Toluene-d8(2)	0.8475	0.8200	48.38	50	-3	
4-Bromofluorobenzene	0.4954	0.5051	50.98	50	2	
4-Bromofluorobenzene(2)	0.4107	0.4142	50.43	50	1	

Average %Drift 8

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ln23c01.d Date Analyzed: 11/23/19

Instrument ID: HP09915 Time Analyzed: 08:42

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	218843	4.490	1129387	7.956	942140	11.358	522095	13.223
UPPER LIMIT	437686	4.990	2258774	8.456	1884280	11.858	1044190	13.723
LOWER LIMIT	109422	3.990	564694	7.456	471070	10.858	261048	12.723
LAB SAMPLE ID								
01 LCSL87	219124	4.493	1149568	7.956	954034	11.358	518331	13.219
02 VBLKL87	224793	4.493	1154568	7.953	947038	11.358	506608	13.220
03 1205905	243725	4.496	1211224	7.956	996466	11.358	533216	13.223
04 1205900	220082	4.503	1136731	7.959	925300	11.361	497134	13.223
05 1205901MS	215519	4.493	1138753	7.956	930333	11.358	508418	13.220
06 1205902MSD	233889	4.493	1180531	7.956	965531	11.358	526780	13.219
07 1205903	229063	4.500	1158906	7.956	945973	11.361	499869	13.223
08 1205904	224307	4.499	1139589	7.959	935660	11.361	499734	13.219
09 1205910	220711	4.503	1143515	7.956	932224	11.358	501787	13.223
10 1205911	215340	4.490	1115518	7.953	916138	11.361	490394	13.222
11 1205912	211986	4.512	1107133	7.962	918426	11.361	498430	13.222
12 1205913	203330	4.503	1115082	7.959	907956	11.358	482597	13.223
13 1205914	203647	4.503	1085952	7.959	899726	11.358	482459	13.223
14 1205915	210558	4.493	1104338	7.956	909387	11.358	493457	13.223
15 1205916	205783	4.493	1080825	7.956	894854	11.358	483096	13.219
16 1205917	200795	4.493	1098052	7.956	912322	11.358	495866	13.220
17 1205918	195105	4.493	1064106	7.956	883986	11.358	478718	13.223
18 1205928	196703	4.496	1065783	7.962	880752	11.361	479141	13.223
19 1205929	194903	4.493	1055579	7.959	877530	11.358	479286	13.222
20 1206738	196772	4.509	1059926	7.962	880492	11.361	482281	13.223
21 1206739	194579	4.506	1027064	7.962	860023	11.361	466803	13.222
22 1206740	209748	4.506	1073027	7.959	886519	11.361	491209	13.223

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

Sample Data

Volatiles by GC/MS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JCW11

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205910

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s08.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	0.4	J
75-34-3	1,1-Dichloroethane	0.9	J
156-59-2	cis-1,2-Dichloroethene	0.8	J
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	0.4	J
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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JCW11 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1205910

Data file: /chem/HP09915.i/19nov23a.b/ln23s08.d Injection date and time: **23-NOV-2019 12:56**
Data file Sample Info. Line: JCW11;1205910;1;0;;JCW23;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 13:13 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.503	(-0.013)	939	65	220711	(1)	250.00	
66) Fluorobenzene	7.956	(0.000)	2013	96	1143515	(1)	50.00	
100) Chlorobenzene-d5	11.358	(0.000)	3071	117	932224	(-1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	501787	(-4)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072	(0.000)	113	273339	48.892	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(0.000)	102	72413	50.822	102%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	1186179	48.629	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	454129	49.168	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)	4.892	(-0.001)	96	2133	0.380	0.38		J	0.2	1
36) 1,1-Dichloroethane	(2)	5.554	(-0.001)	63	8460	0.865	0.86		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	6.384	(-0.000)	96	5029	0.799	0.80		J	0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.426	(0.000)	95	2524	0.431	0.43		J	0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

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Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

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Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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BLANK INTENTIONALLY

Total number of targets = 24

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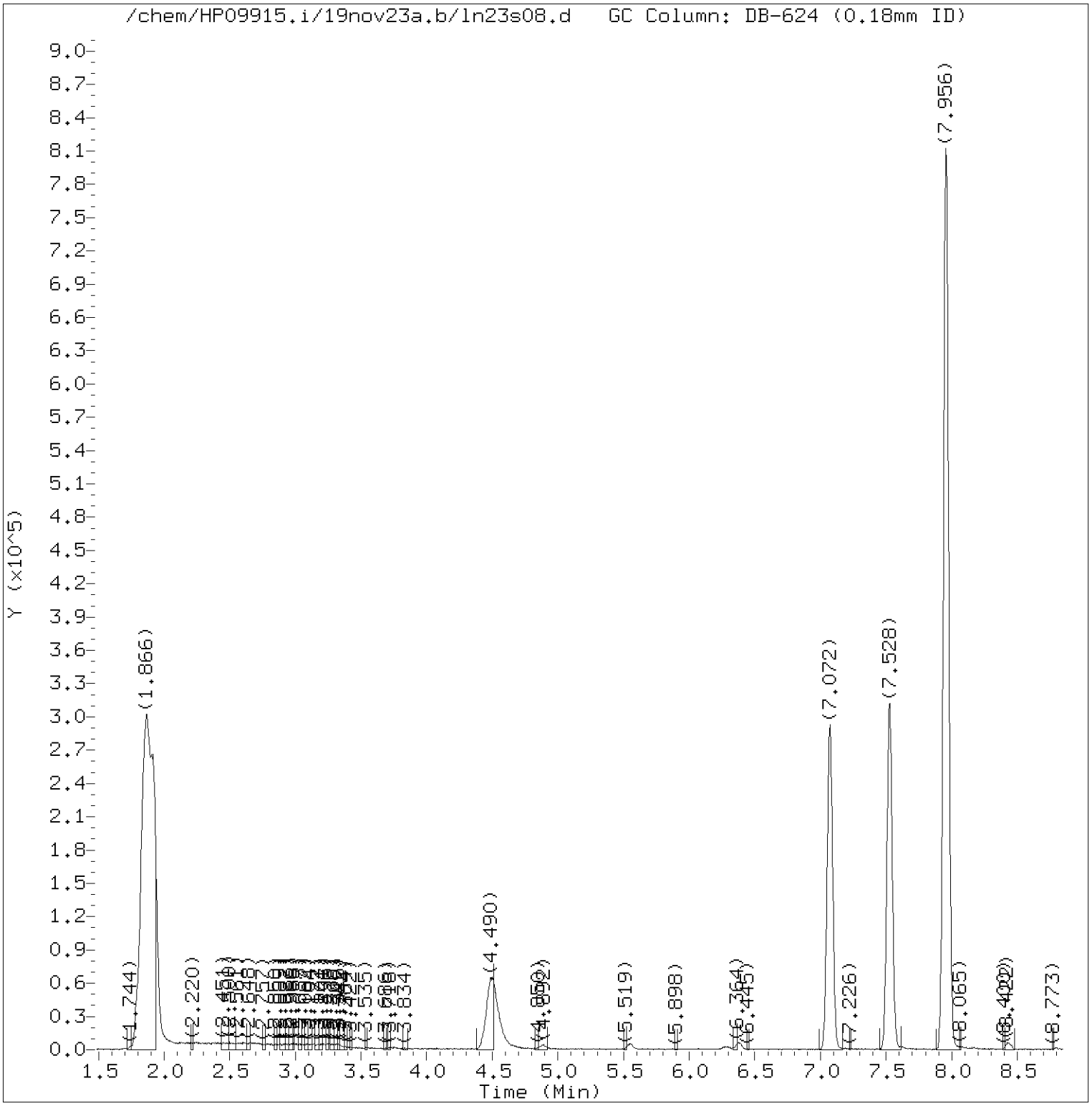
Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

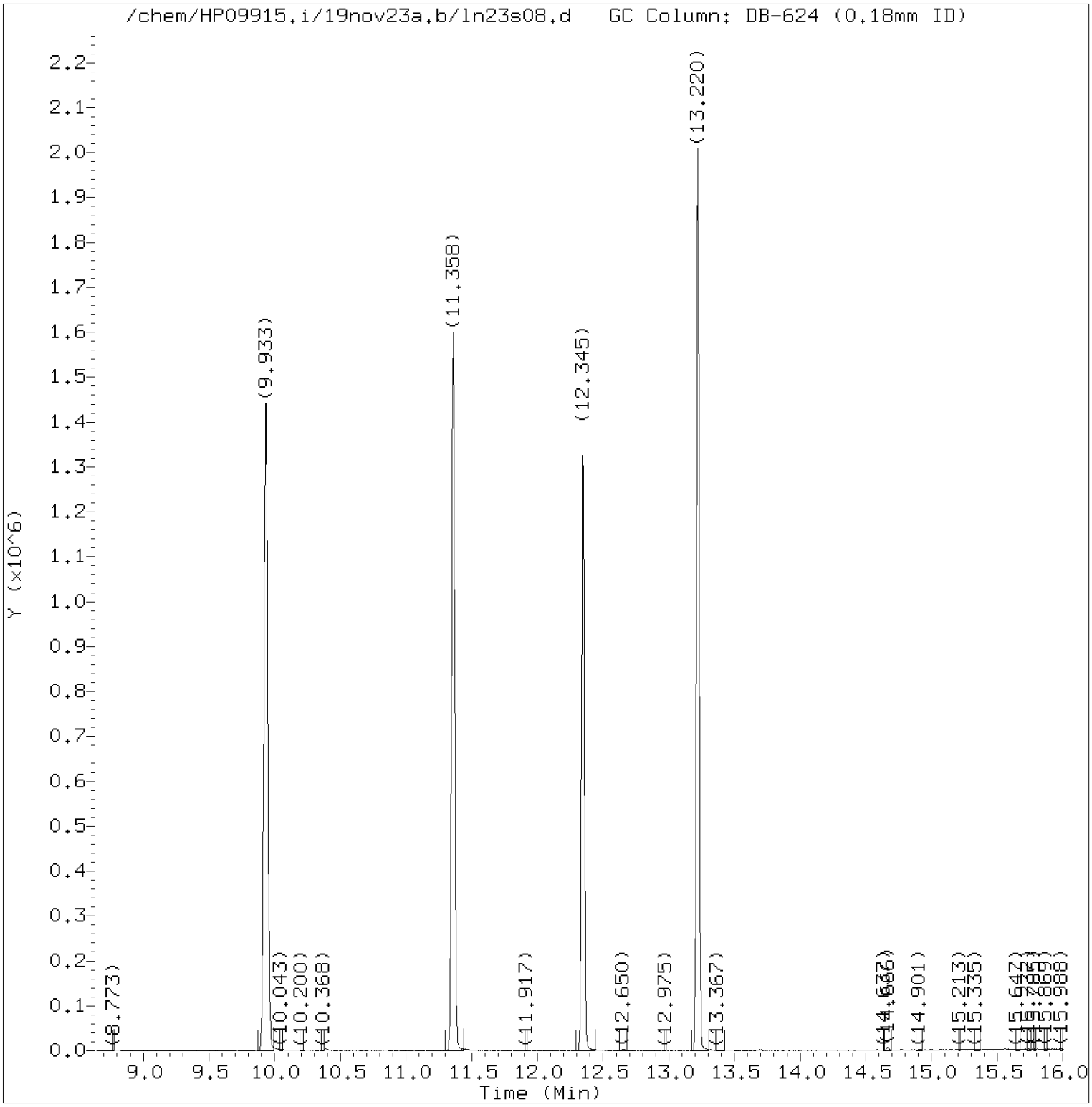
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s08.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 12:56 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 13:13 Automation

Sample Name: JCW11 Lab Sample ID: 1205910

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:22.
Target 3.5 esignature user ID: lcp00895



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Quant Report

Target Revision 3.5

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Date, time and analyst ID of latest file update: 23-Nov-2019 13:13 Automation

Sample Name: JCW11 Lab Sample ID: 1205910

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.503	65	220711	250.000
32) trans-1,2-Dichloroethene	(2)	4.892	96	2133	0.380
36) 1,1-Dichloroethane	(2)	5.554	63	8460	0.865
42) cis-1,2-Dichloroethene	(2)	6.384	96	5029	0.799
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57)$1,2-Dichloroethane-d4	(2)	7.528	102	72413	50.822
66)*Fluorobenzene	(2)	7.956	96	1143515	50.000
71) Trichloroethene	(2)	8.425	95	2524	0.431
83)$Toluene-d8	(3)	9.930	98	1186179	48.629
100)*Chlorobenzene-d5	(3)	11.358	117	932224	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	454129	49.168
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	501787	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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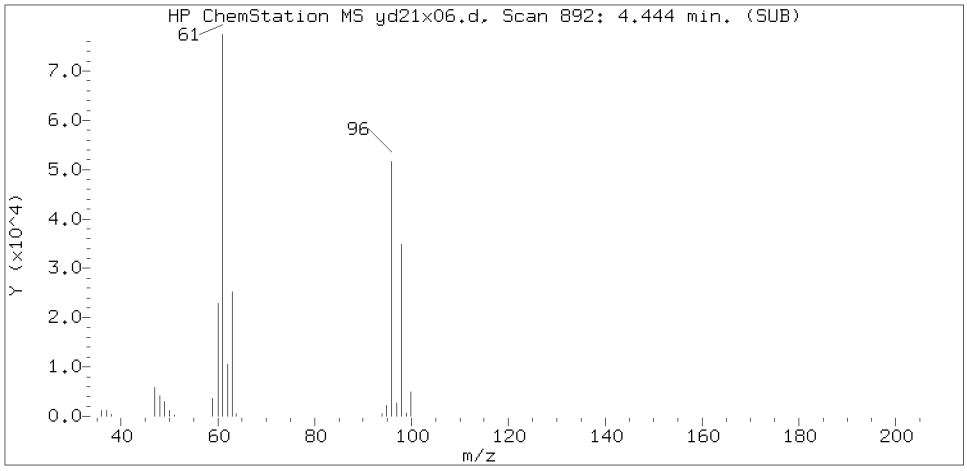
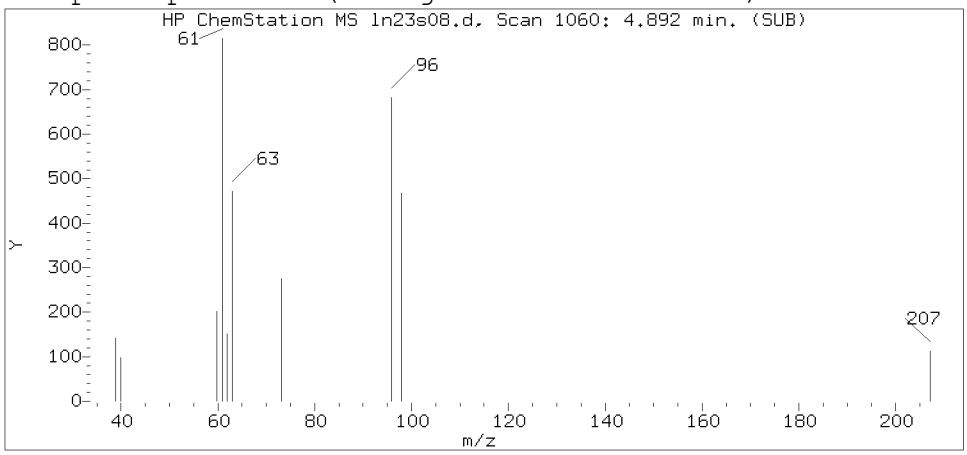
Target 3.5 esignature user ID: lcp00895

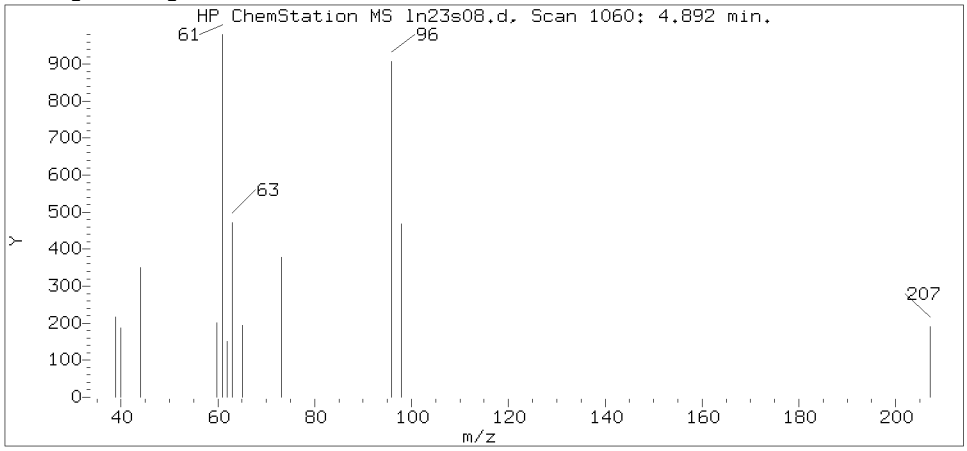
Reference Standard Spectrum for trans-1,2-Dichloroethene

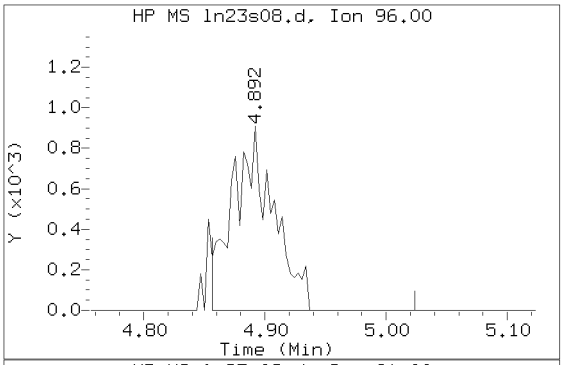


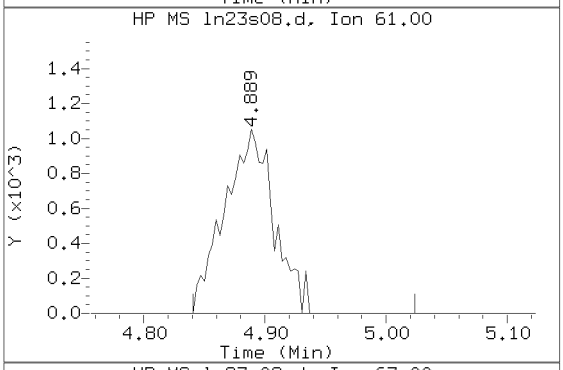
Sample Spectrum (Background Subtracted)

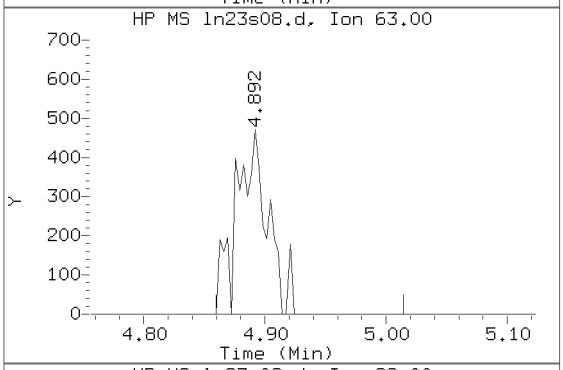


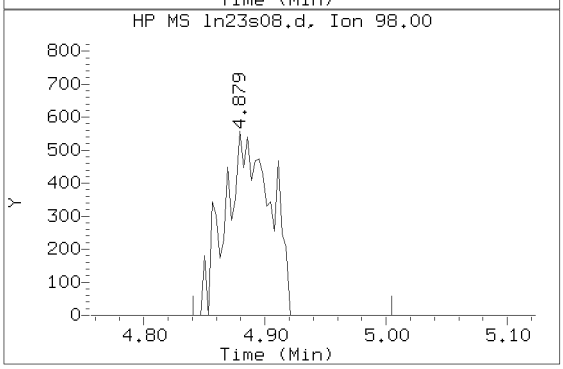
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23s08.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 12:56 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 13:13 Automation

Sample Name: JCW11 Lab Sample ID: 1205910

Compound Number : 32
Compound Name : trans-1,2-Dichloroethene
Scan Number : 1060
Retention Time (minutes): 4.892
Relative Retention Time :-0.00122
Quant Ion : 96.00
Area (flag) : 2133
On-Column Amount (ng) : 0.3804

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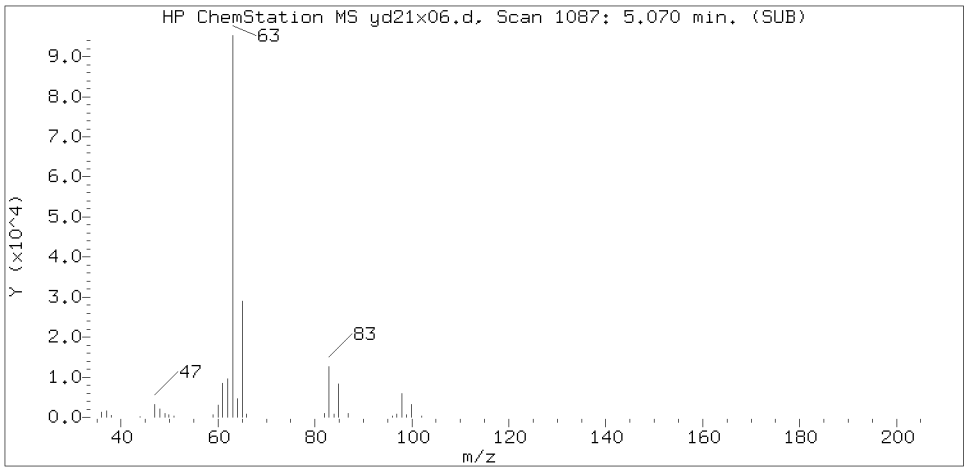
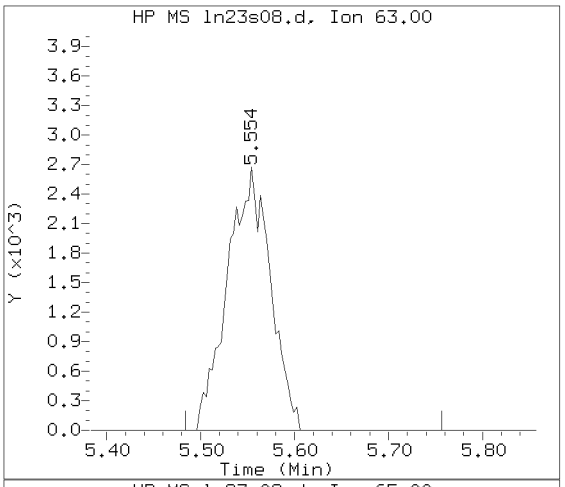
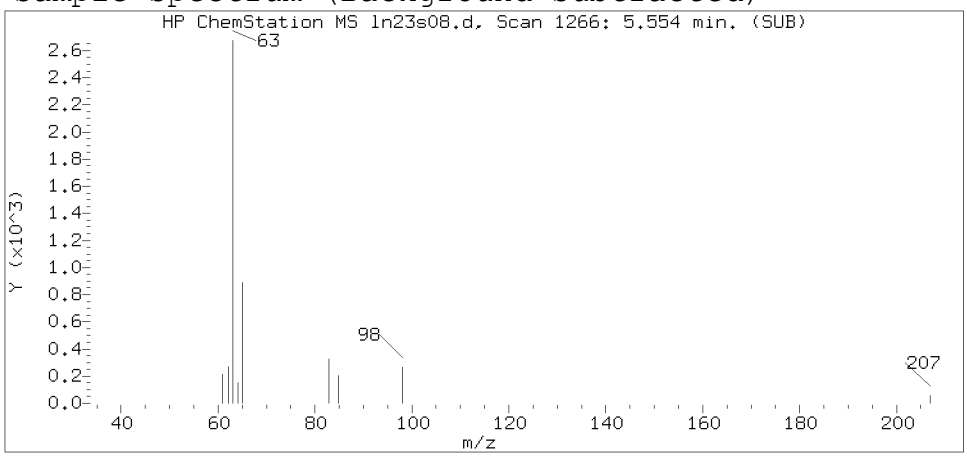
Target 3.5 esignature user ID: lcp00805

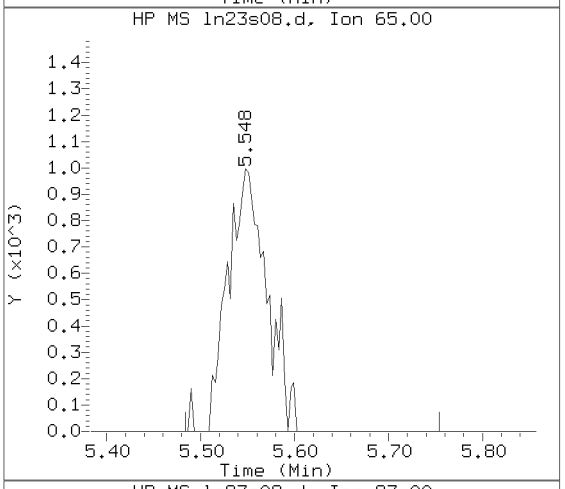
Reference Standard Spectrum for 1,1-Dichloroethane



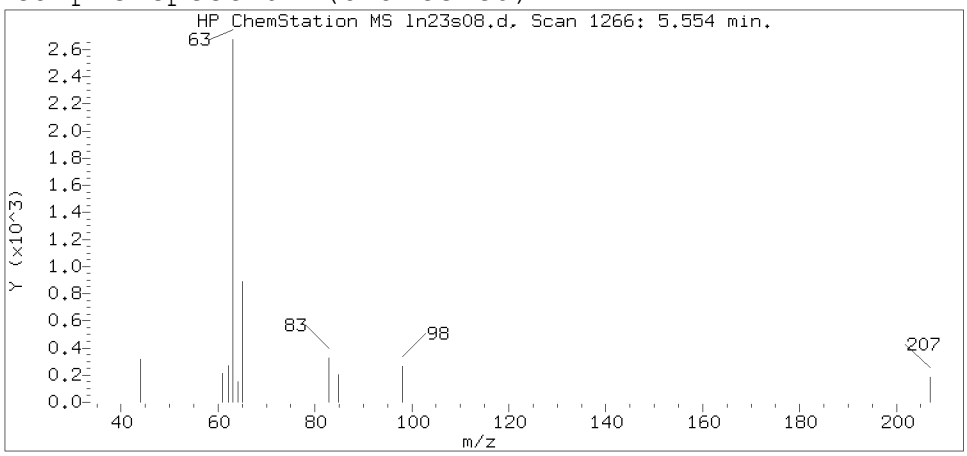


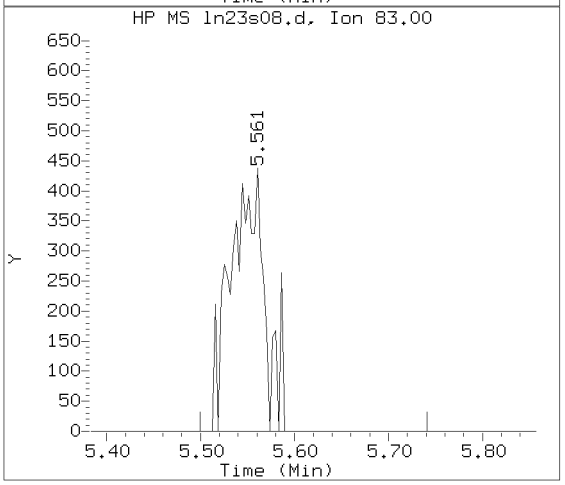
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





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Sample Name: JCW11 Lab Sample ID: 1205910

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 1266
Retention Time (minutes): 5.554
Relative Retention Time :-0.00121
Quant Ion : 63.00
Area (flag) : 8460
On-Column Amount (ng) : 0.8649

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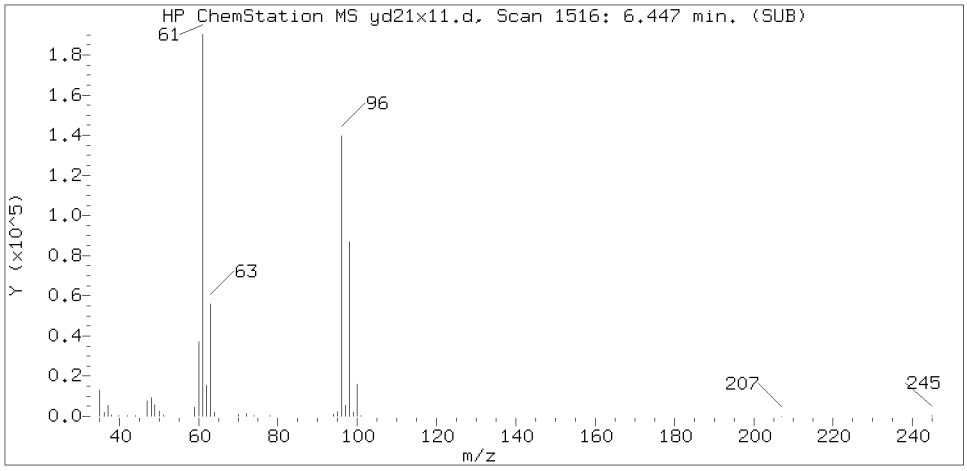
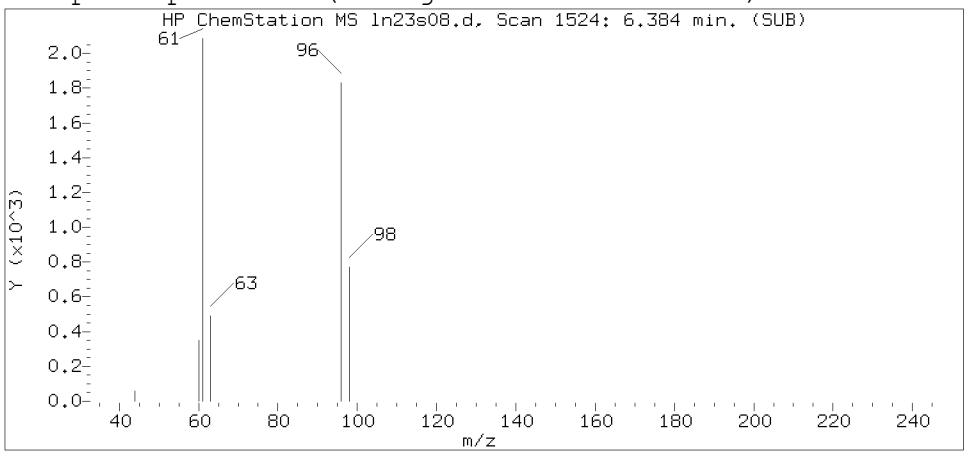
Target 3.5 esignature user ID: lcp00805

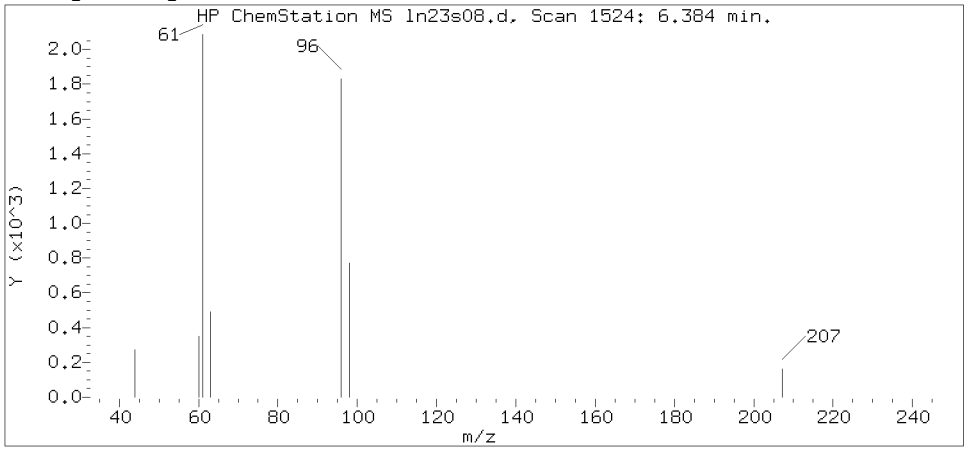
Reference Standard Spectrum for cis-1,2-Dichloroethene

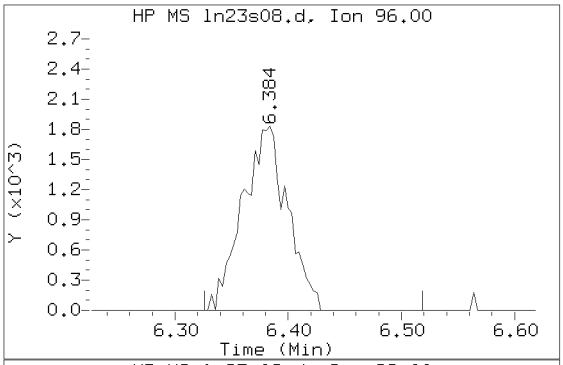


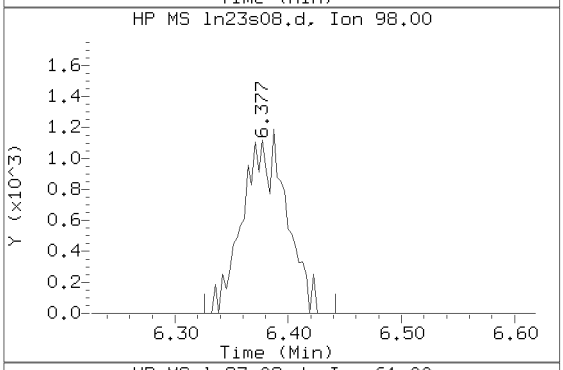
Sample Spectrum (Background Subtracted)

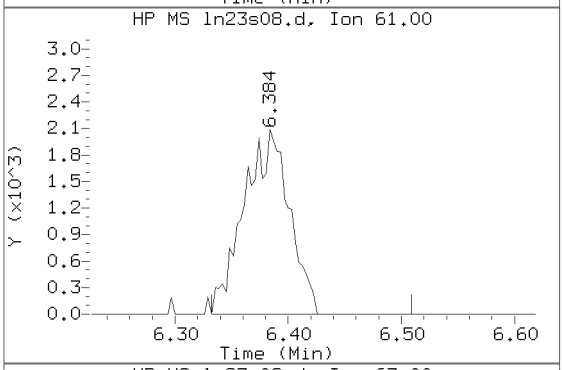


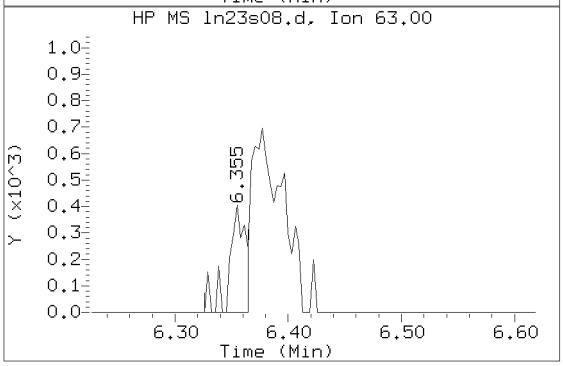
Sample Spectrum (Unaltered)











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Sample Name: JCW11 Lab Sample ID: 1205910

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 1524
Retention Time (minutes): 6.384
Relative Retention Time :-0.00081
Quant Ion : 96.00
Area (flag) : 5029
On-Column Amount (ng) : 0.7991

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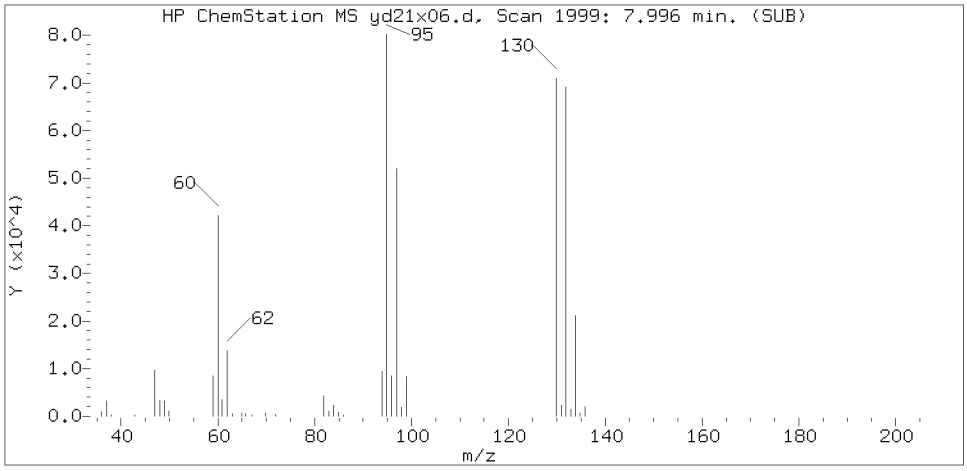
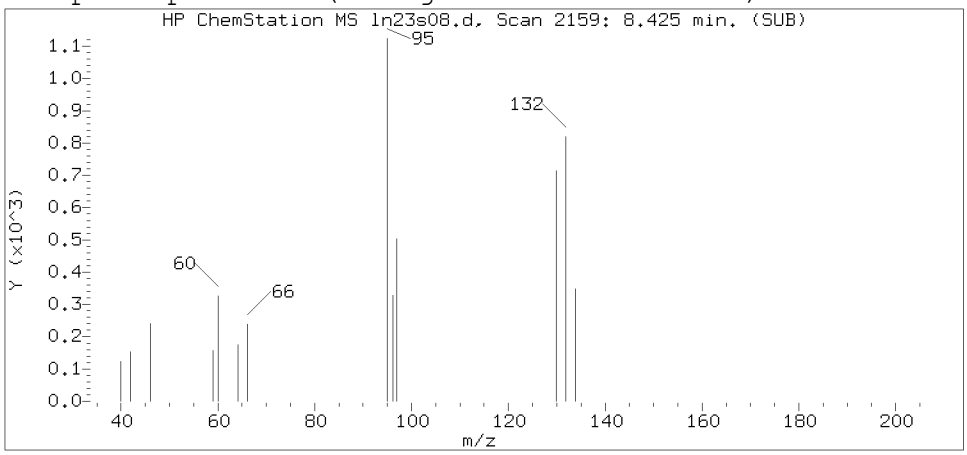
Target 3.5 esignature user ID: lcp00805

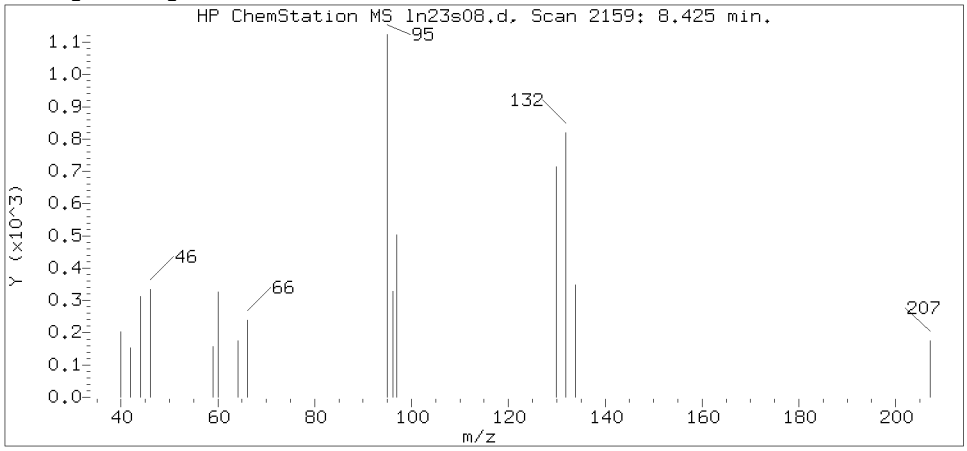
Reference Standard Spectrum for Trichloroethene

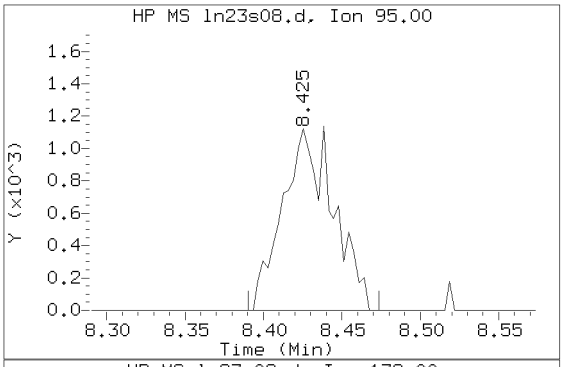


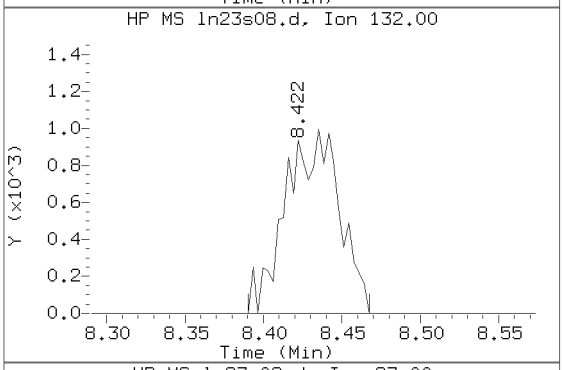
Sample Spectrum (Background Subtracted)

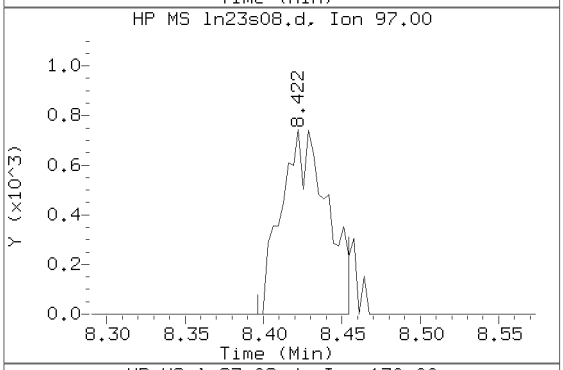


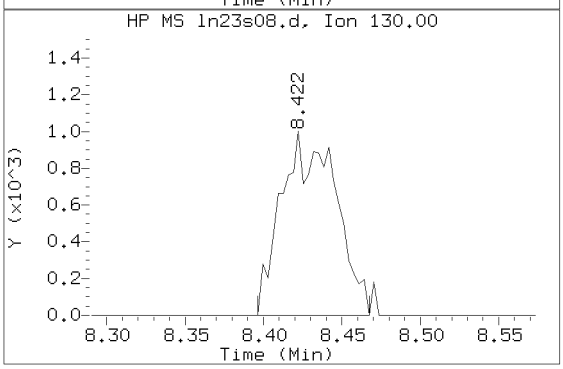
Sample Spectrum (Unaltered)











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Sample Name: JCW11 Lab Sample ID: 1205910

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 2159
Retention Time (minutes)	: 8.425
Relative Retention Time	: 0.00000
Quant Ion	: 95.00
Area (flag)	: 2524
On-Column Amount (ng)	: 0.4311

Digitally signed by Linda C. Pape on 11/25/2019 at 13:22.
Target 3.5 esignature user ID: lcp00805

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JCW12

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205911

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s09.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.4	J
156-59-2	cis-1,2-Dichloroethene	0.6	J
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1205911

Data file: /chem/HP09915.i/19nov23a.b/ln23s09.d Injection date and time: **23-NOV-2019 13:18**
Data file Sample Info. Line: JCW12;1205911;1;0;;JCW23;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 13:35 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.490	(0.000)	935	65	215340	(-2)	250.00	
66) Fluorobenzene	7.953	(0.003)	2012	96	1115518	(-1)	50.00	
100) Chlorobenzene-d5	11.361	(-0.003)	3072	117	916138	(-3)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	490394	(-6)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072	(0.000)	113	267117	48.979	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	70754	50.904	102%		80 - 120
83) Toluene-d8	(3)	9.930	(0.001)	98	1164866	48.594	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	446413	49.181	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.551	(-0.001)	63	3850	0.404	0.40		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	6.387	(-0.001)	96	3795	0.618	0.62		J	0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.425	(-0.000)	95	6107	1.069	1.07			0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

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Data file: /chem/HP09915.i/19nov23a.b/ln23s09.d Injection date and time: **23-NOV-2019 13:18**
Data file Sample Info. Line: JCW12;1205911;1;0;;JCW23;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 13:35 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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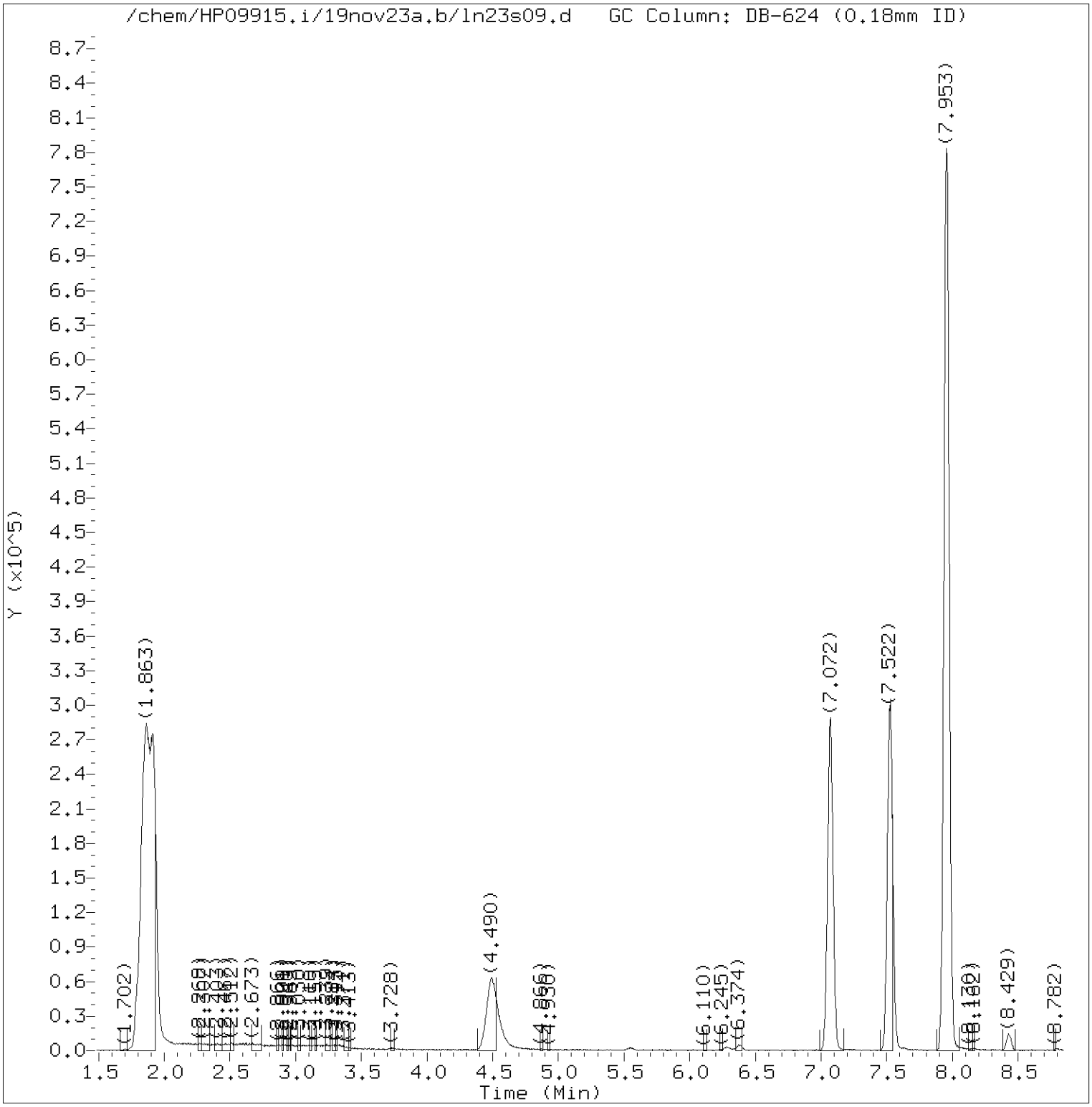
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Linda C. Pape on 11/25/2019 at 13:23. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

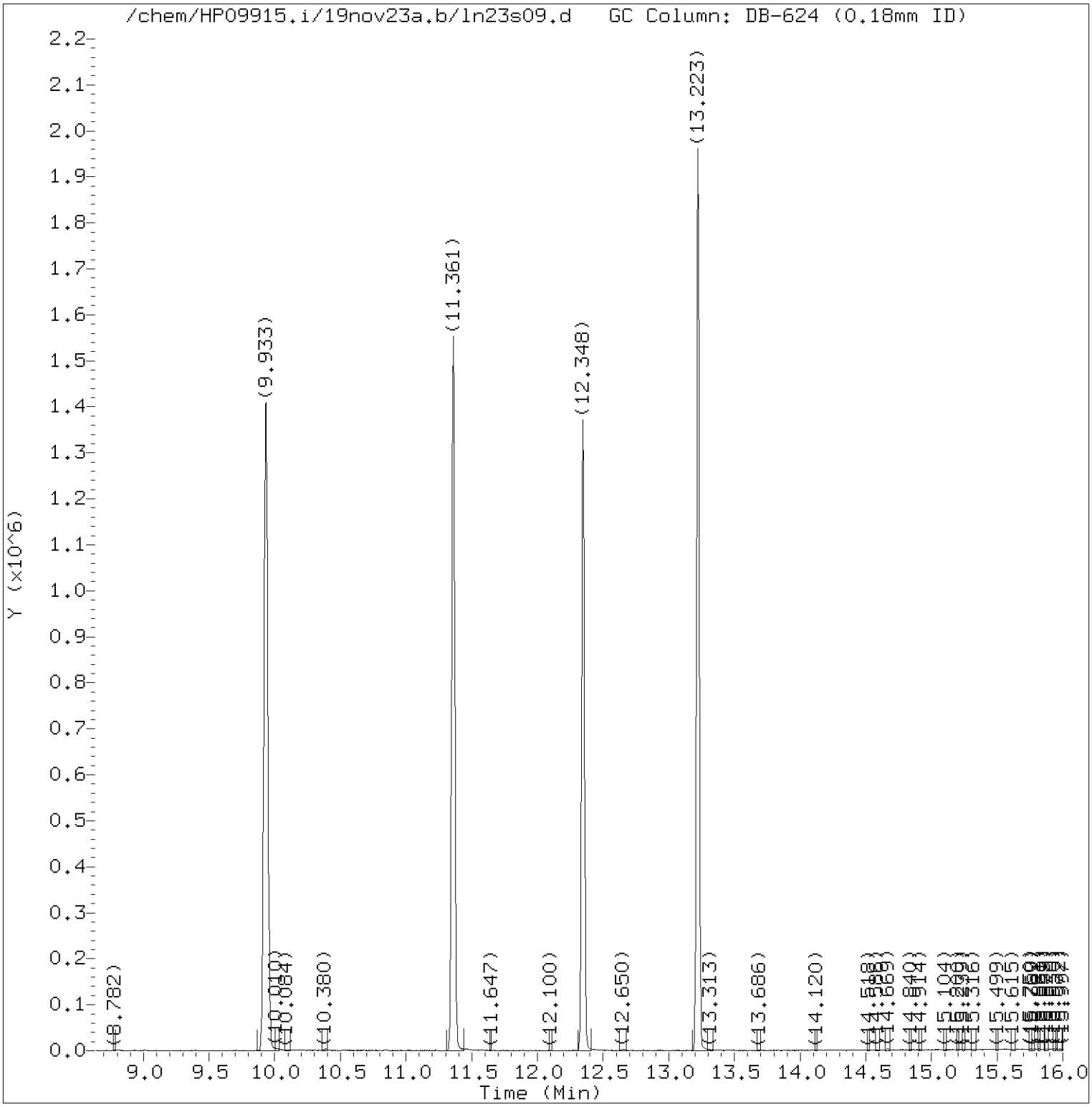
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s09.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 13:18 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 13:35 Automation

Sample Name: JCW12 Lab Sample ID: 1205911

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:23.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s09.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 13:18 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 13:35 Automation

Sample Name: JCW12 Lab Sample ID: 1205911

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:23.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s09.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 13:18 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 13:35 Automation

Sample Name: JCW12 Lab Sample ID: 1205911

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.490	65	215340	250.000
36) 1,1-Dichloroethane	(2)	5.551	63	3850	0.404
42) cis-1,2-Dichloroethene	(2)	6.387	96	3795	0.618
52)$Dibromofluoromethane	(2)	7.072	113	267117	48.979
57)$1,2-Dichloroethane-d4	(2)	7.525	102	70754	50.904
66)*Fluorobenzene	(2)	7.953	96	1115518	50.000
71) Trichloroethene	(2)	8.425	95	6107	1.069
83)$Toluene-d8	(3)	9.930	98	1164866	48.594
100)*Chlorobenzene-d5	(3)	11.361	117	916138	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	446413	49.181
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	490394	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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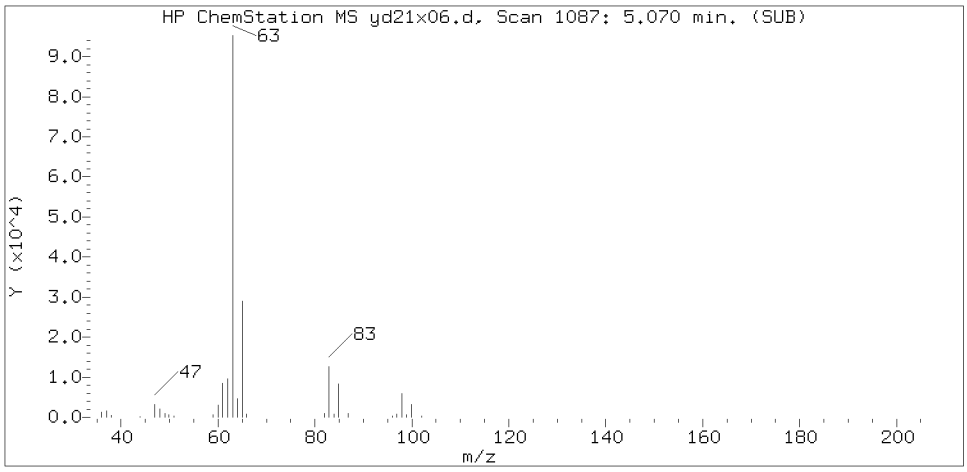
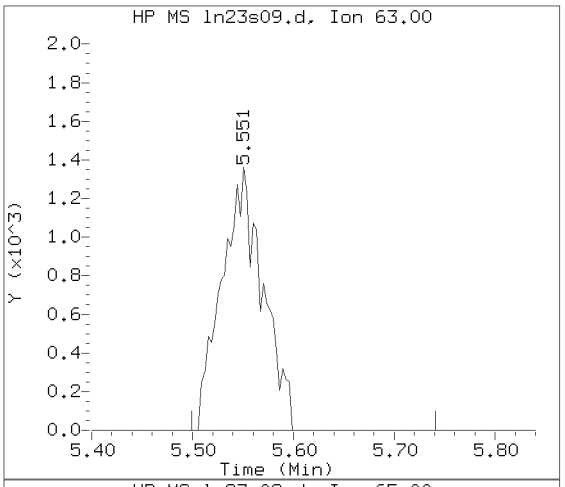
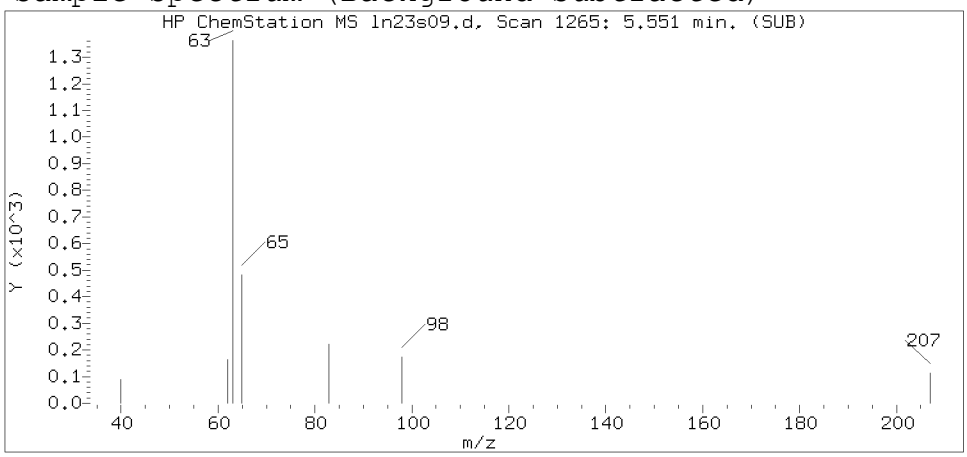
on 11/25/2019 at 13:23.
Target 3.5 esignature user ID: lcp00895

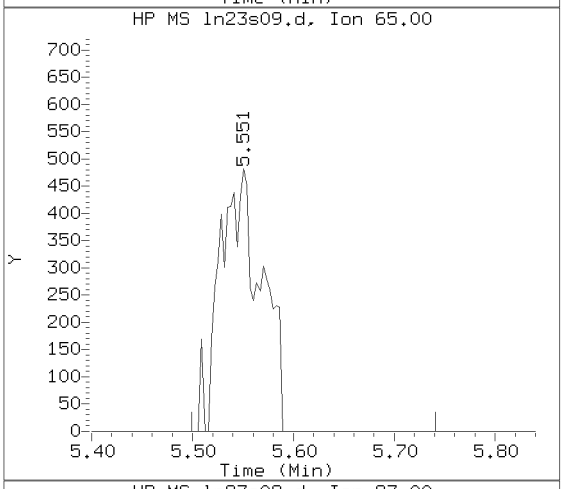
Reference Standard Spectrum for 1,1-Dichloroethane



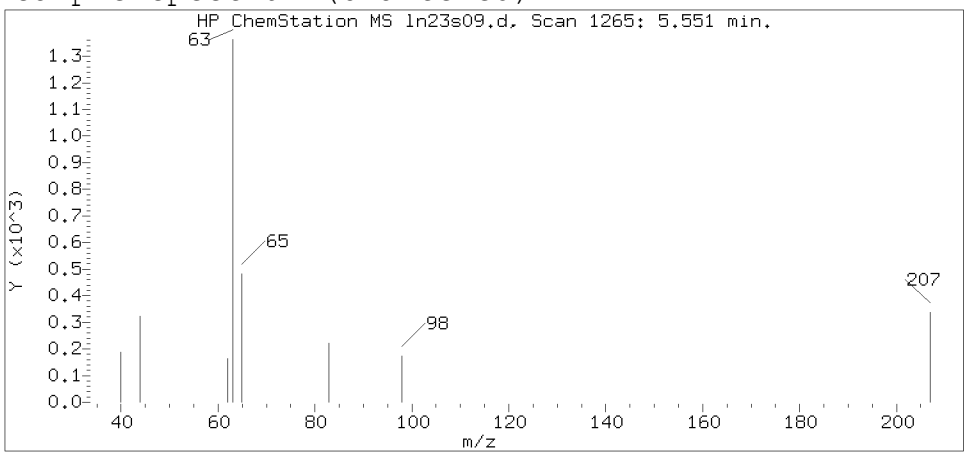


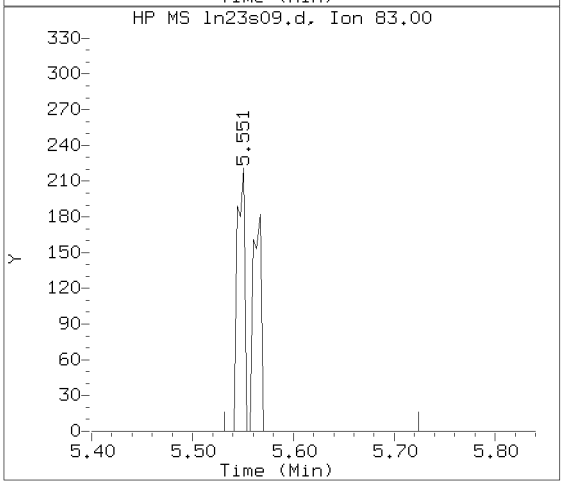
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov23a.b/ln23s09.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 13:18 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 13:35 Automation

Sample Name: JCW12 Lab Sample ID: 1205911

Compound Number	: 36
Compound Name	: 1,1-Dichloroethane
Scan Number	: 1265
Retention Time (minutes)	: 5.551
Relative Retention Time	:-0.00109
Quant Ion	: 63.00
Area (flag)	: 3850
On-Column Amount (ng)	: 0.4035

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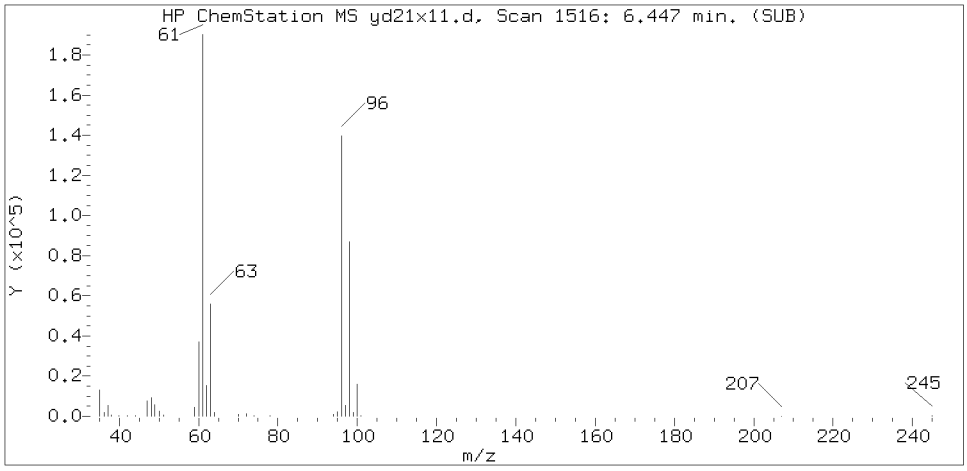
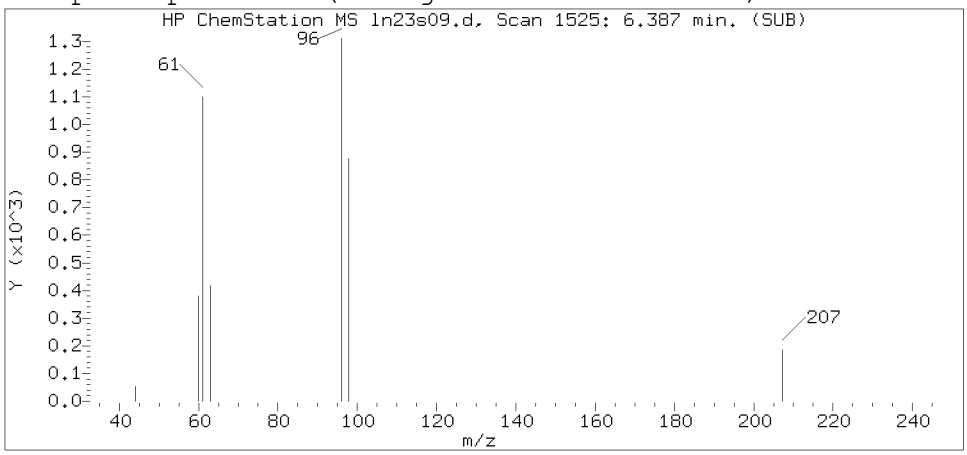
Target 3.5 esignature user ID: lcp00805

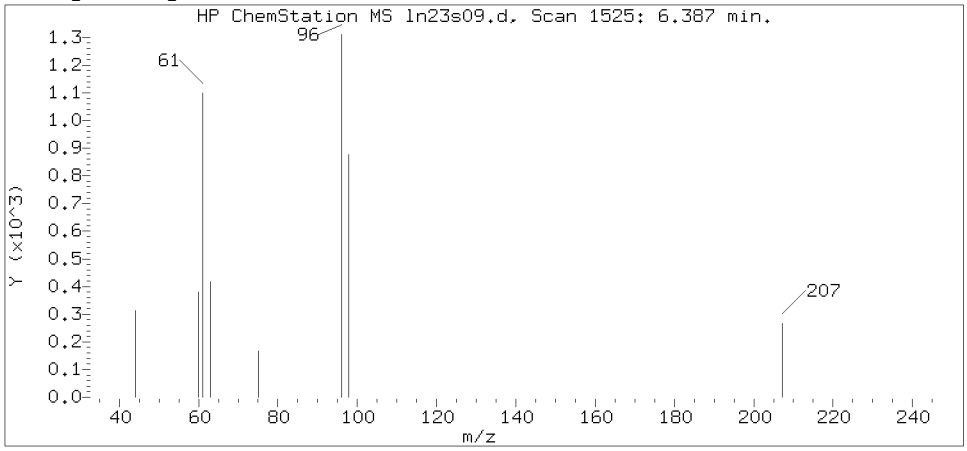
Reference Standard Spectrum for cis-1,2-Dichloroethene

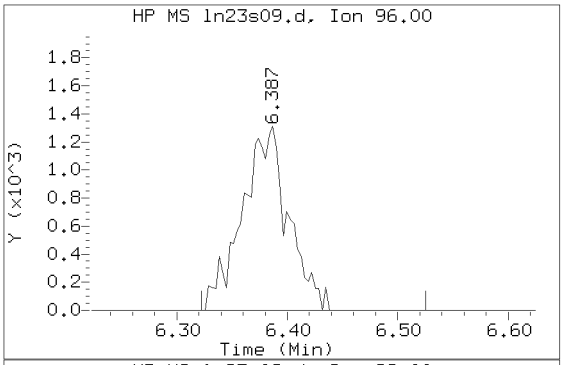


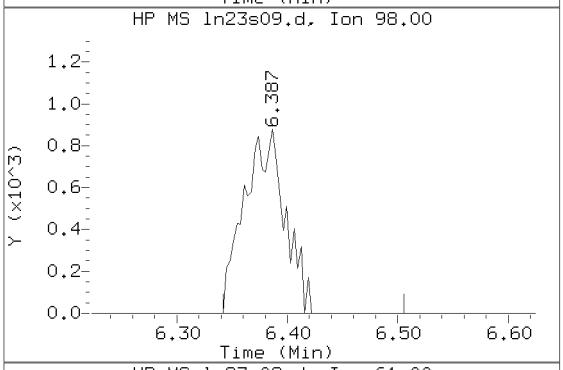
Sample Spectrum (Background Subtracted)

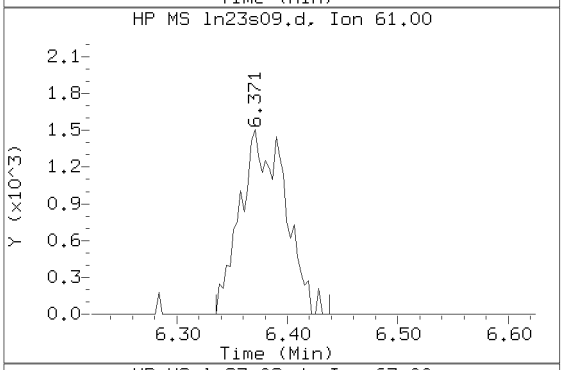


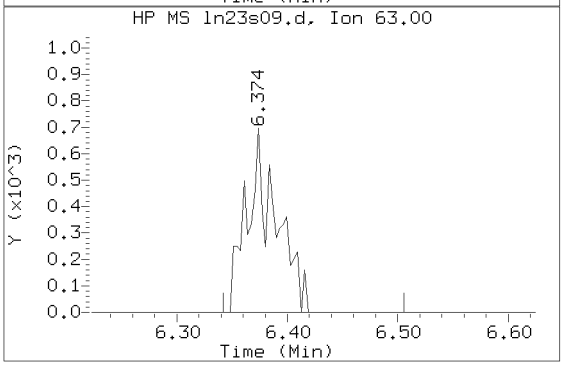
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23s09.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 13:18 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 13:35 Automation

Sample Name: JCW12 Lab Sample ID: 1205911

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 1525
Retention Time (minutes): 6.387
Relative Retention Time :-0.00153
Quant Ion : 96.00
Area (flag) : 3795
On-Column Amount (ng) : 0.6181

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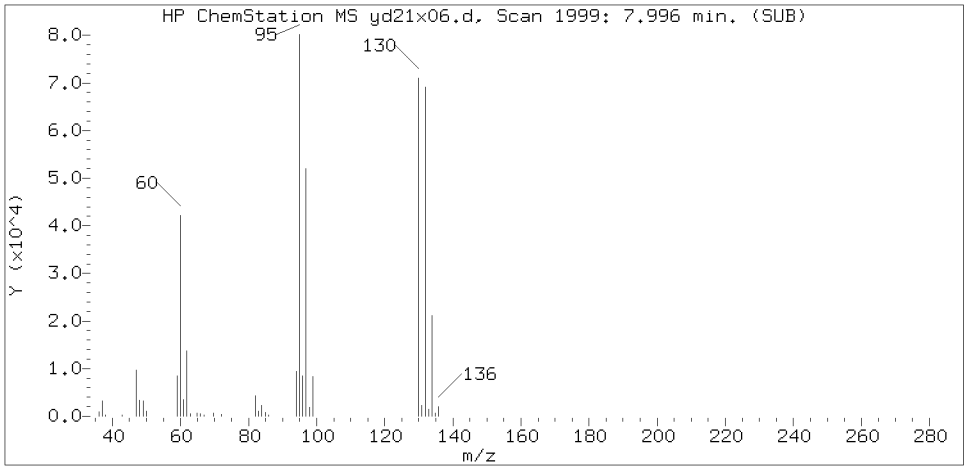
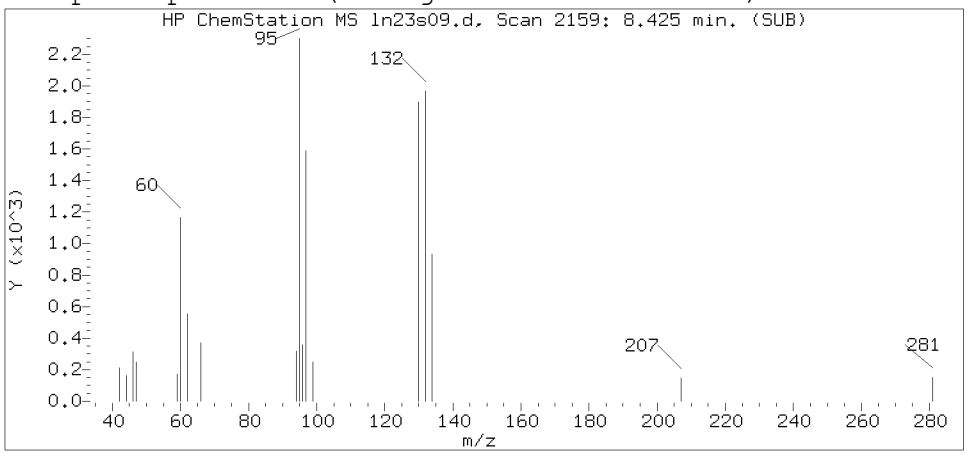
Target 3.5 esignature user ID: lcp00895

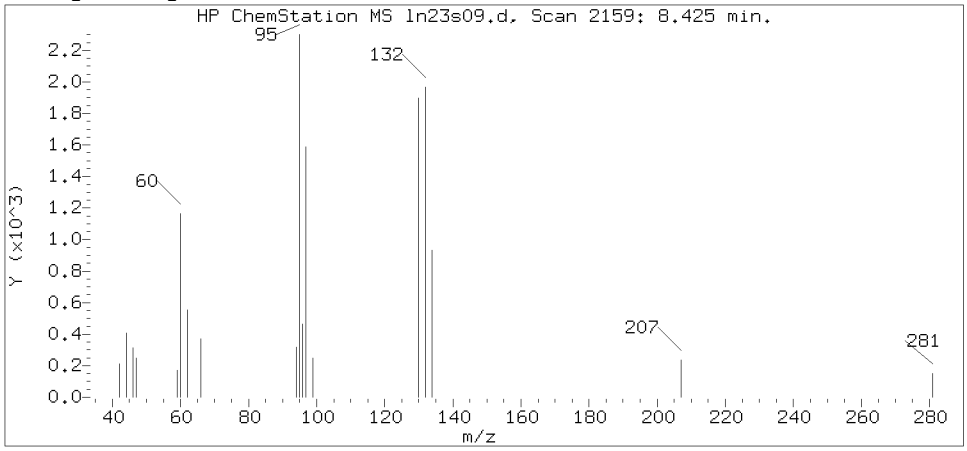
Reference Standard Spectrum for Trichloroethene

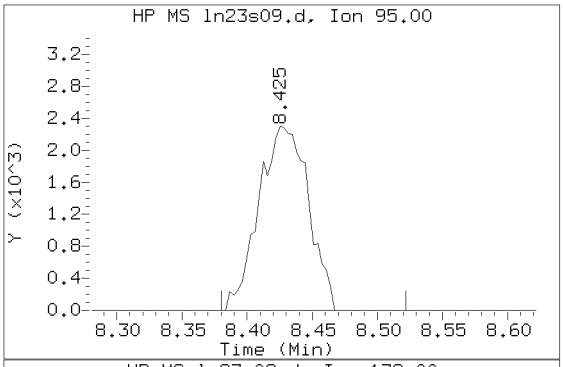


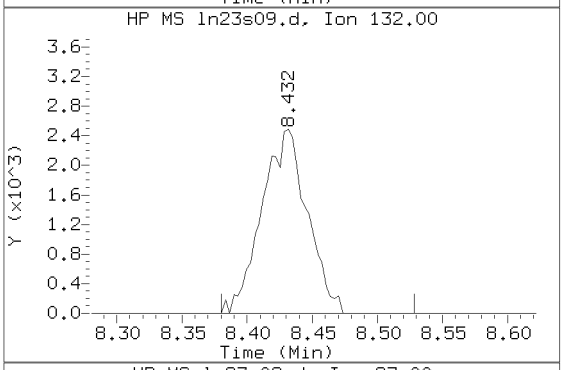
Sample Spectrum (Background Subtracted)

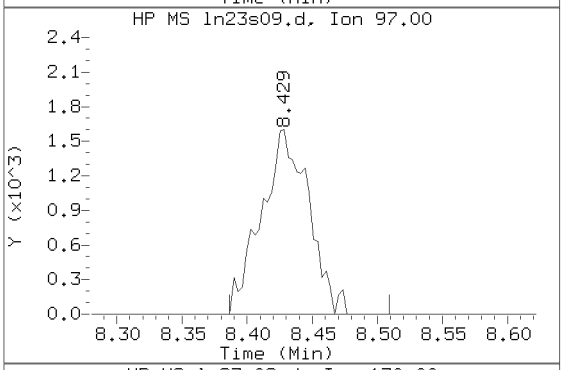


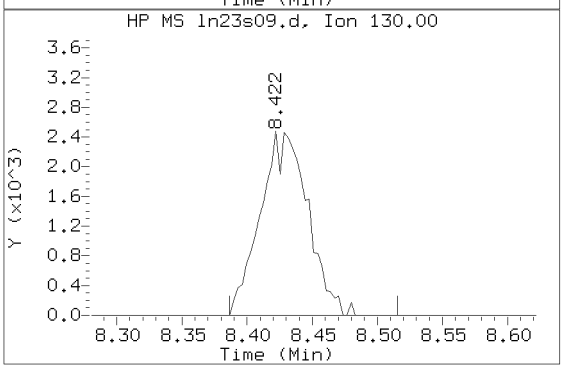
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23s09.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 13:18 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 13:35 Automation

Sample Name: JCW12 Lab Sample ID: 1205911

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 2159
Retention Time (minutes)	: 8.425
Relative Retention Time	:-0.00043
Quant Ion	: 95.00
Area (flag)	: 6107
On-Column Amount (ng)	: 1.0691

Digitally signed by Linda C. Pape on 11/25/2019 at 13:23.
Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JCW13

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205912

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s10.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L		Q
75-01-4	Vinyl Chloride		1	U
75-35-4	1,1-Dichloroethene		1	U
67-64-1	Acetone		20	U
76-13-1	Freon 113		10	U
75-15-0	Carbon Disulfide		5	U
75-09-2	Methylene Chloride		1	U
156-60-5	trans-1,2-Dichloroethene		1	U
75-34-3	1,1-Dichloroethane		1	U
156-59-2	cis-1,2-Dichloroethene		1	U
78-93-3	2-Butanone		10	U
67-66-3	Chloroform		1	U
71-55-6	1,1,1-Trichloroethane		1	
71-43-2	Benzene		1	U
107-06-2	1,2-Dichloroethane		1	U
79-01-6	Trichloroethene		1	U
123-91-1	1,4-Dioxane		250	U
108-88-3	Toluene		1	U
127-18-4	Tetrachloroethene		1	U
100-41-4	Ethylbenzene		1	U
1330-20-7	Xylene (Total)		6	U
95-50-1	1,2-Dichlorobenzene		5	U
91-20-3	Naphthalene		5	U

FORM I VOA

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JCW13 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1205912

Data file: /chem/HP09915.i/19nov23a.b/ln23s10.d Injection date and time: **23-NOV-2019 13:40**
Data file Sample Info. Line: JCW13;1205912;1;0;;JCW23;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 25-Nov-2019 13:24 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.512	(-0.022)	942	65	211986	(-3)	250.00	
66) Fluorobenzene	7.962	(-0.006)	2015	96	1107133	(-2)	50.00	
100) Chlorobenzene-d5	11.361	(-0.003)	3072	117	918426	(-3)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	498430	(-5)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(0.000)	113	268022	49.517	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.532	(0.000)	102	71494	51.826	104%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	1164652	48.464	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.348	(0.000)	95	448122	49.246	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	7.075	(0.001)	97	8818M	1.141	1.14			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

M = Compound was manually integrated.

Digitally signed by Linda C. Pape on 11/25/2019 at 13:24. Target 3.5 esignature user ID: lcp00895

Data file: /chem/HP09915.i/19nov23a.b/ln23s10.d Injection date and time: **23-NOV-2019 13:40**
Data file Sample Info. Line: JCW13;1205912;1;0;;JCW23;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 25-Nov-2019 13:24 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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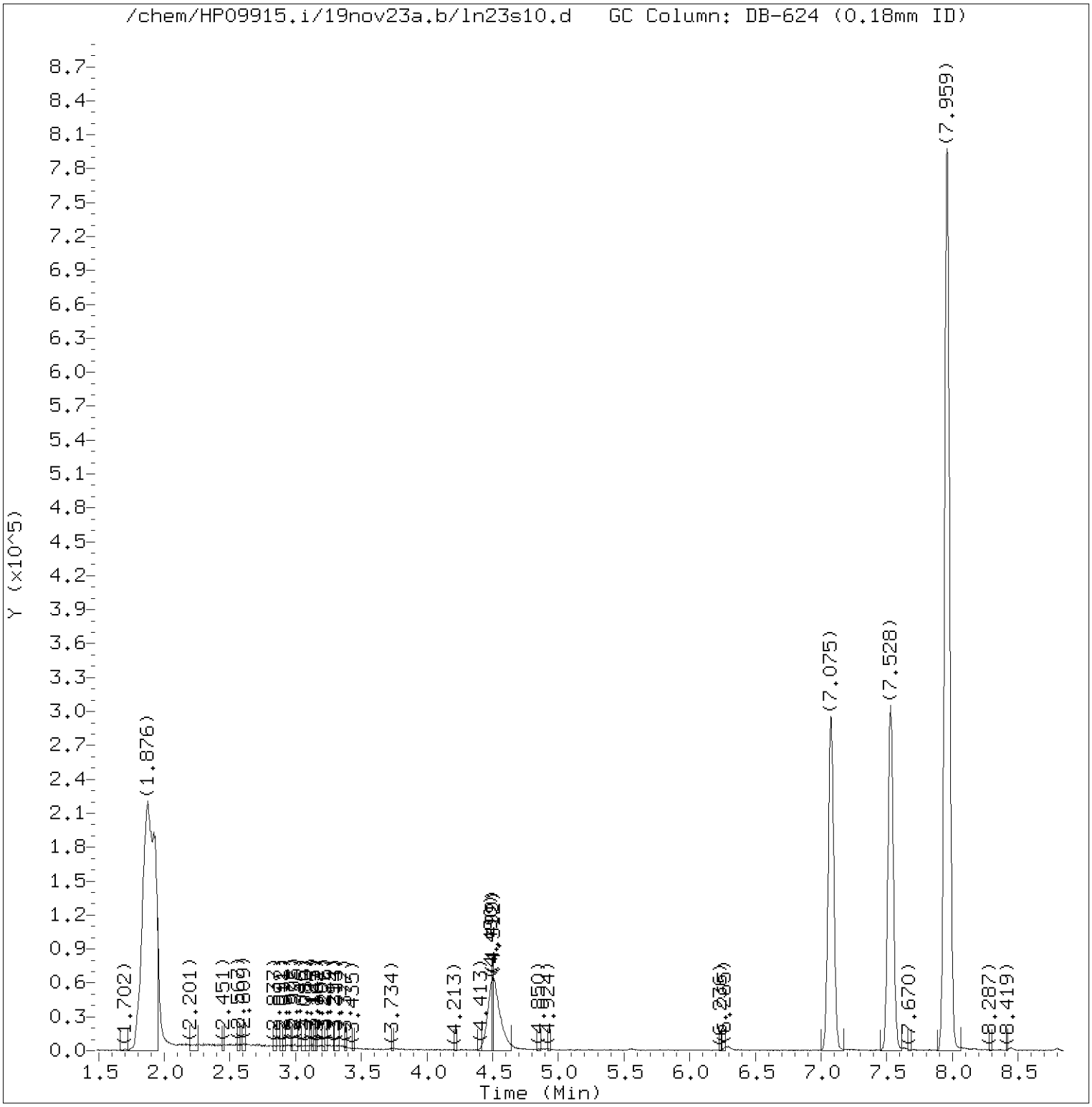
Total number of targets = 24

Digitally signed by Linda C. Pape on 11/25/2019 at 13:24. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

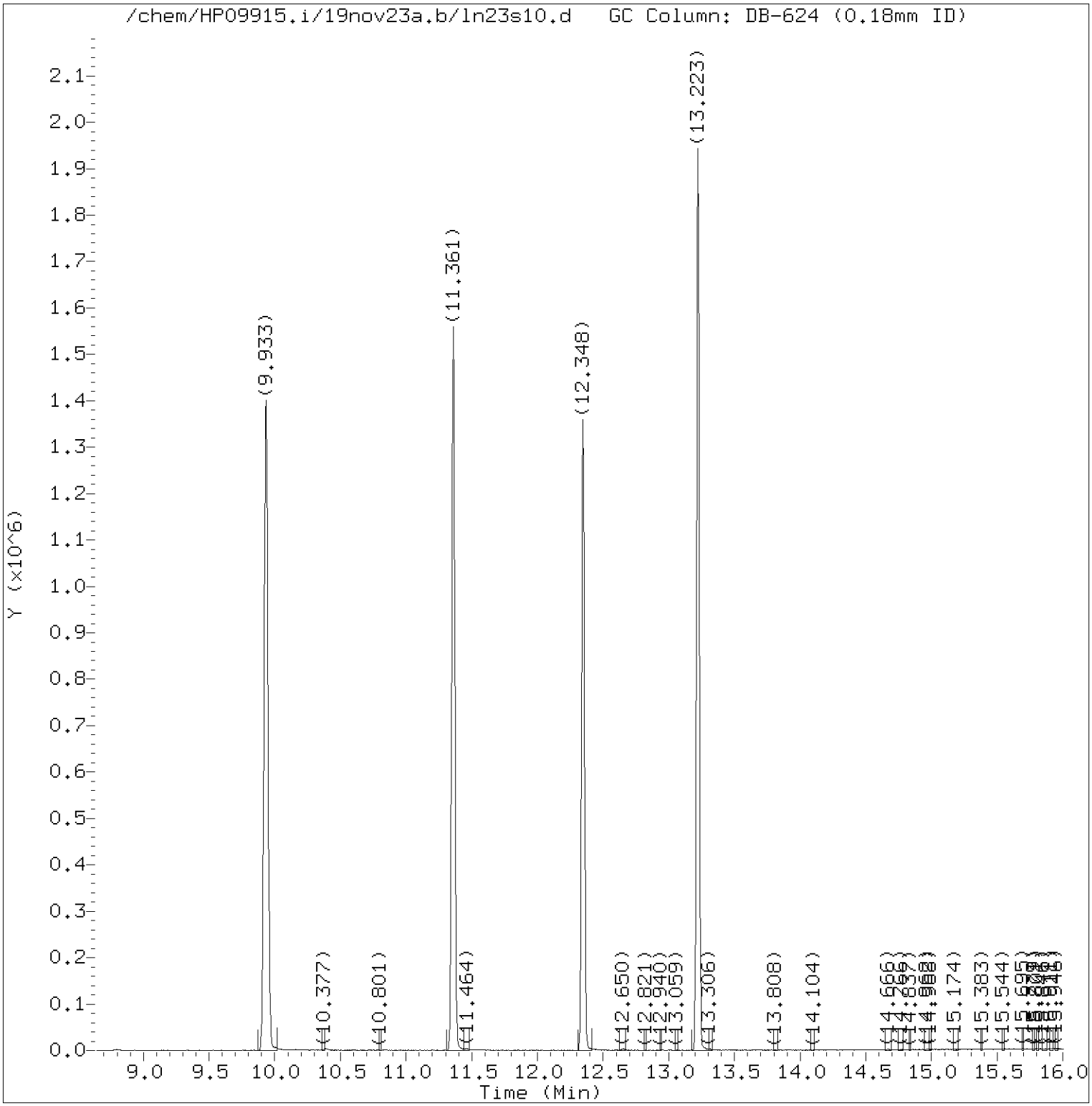
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s10.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 13:40 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 25-Nov-2019 13:24 lcp00895

Sample Name: JCW13 Lab Sample ID: 1205912

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:24.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s10.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 13:40 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 25-Nov-2019 13:24 lcp00895

Sample Name: JCW13 Lab Sample ID: 1205912

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:24.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s10.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 13:40 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 25-Nov-2019 13:24 lcp00895

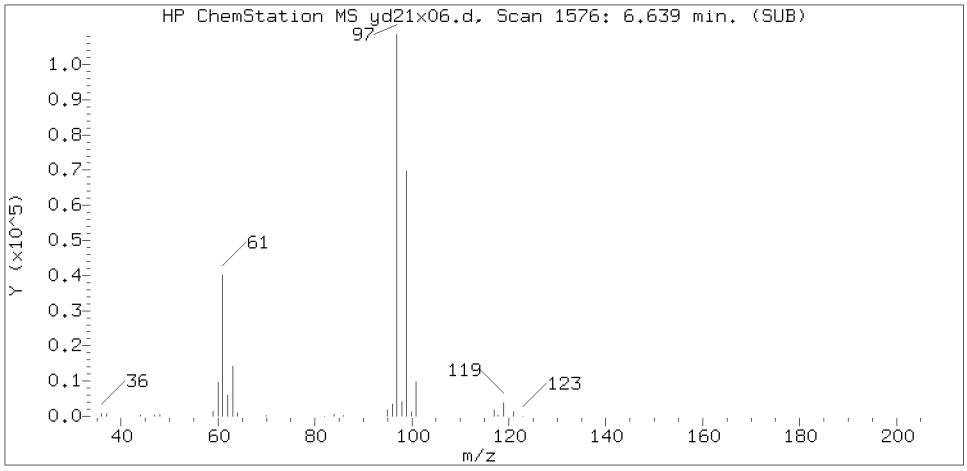
Sample Name: JCW13 Lab Sample ID: 1205912

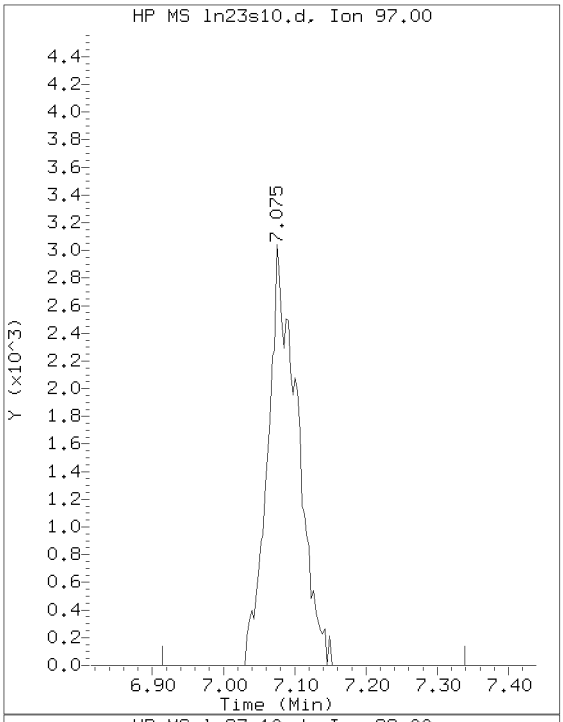
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.512	65	211986	250.000
53) 1,1,1-Trichloroethane	(2)	7.075	97	8818M	1.141
52)$Dibromofluoromethane	(2)	7.075	113	268022	49.517
57)$1,2-Dichloroethane-d4	(2)	7.532	102	71494	51.826
66)*Fluorobenzene	(2)	7.962	96	1107133	50.000
83)$Toluene-d8	(3)	9.933	98	1164652	48.464
100)*Chlorobenzene-d5	(3)	11.361	117	918426	50.000
114)$4-Bromofluorobenzene	(3)	12.348	95	448122	49.246
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	498430	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

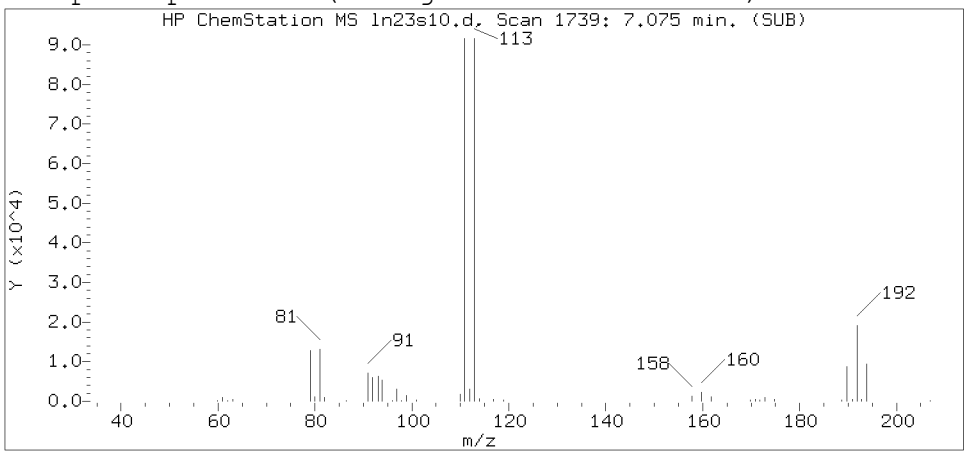
Digitally signed by Linda C. Pape
on 11/25/2019 at 13:24.
Target 3.5 esignature user ID: lcp00895

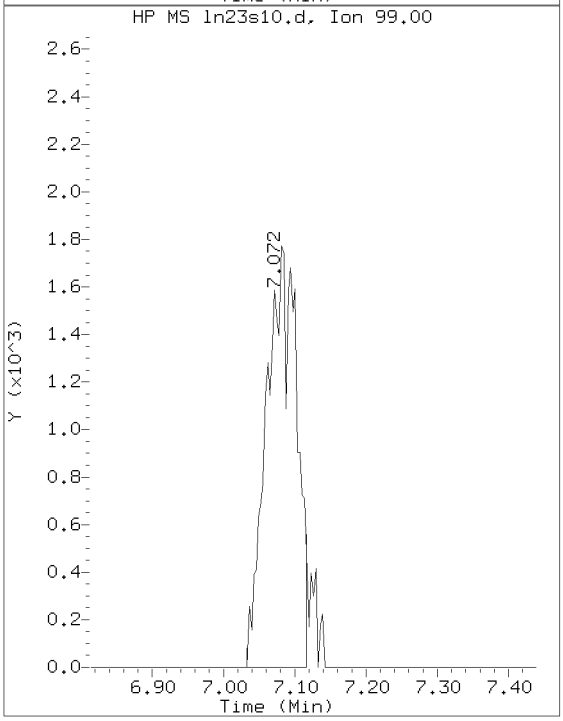
Reference Standard Spectrum for 1,1,1-Trichloroethane



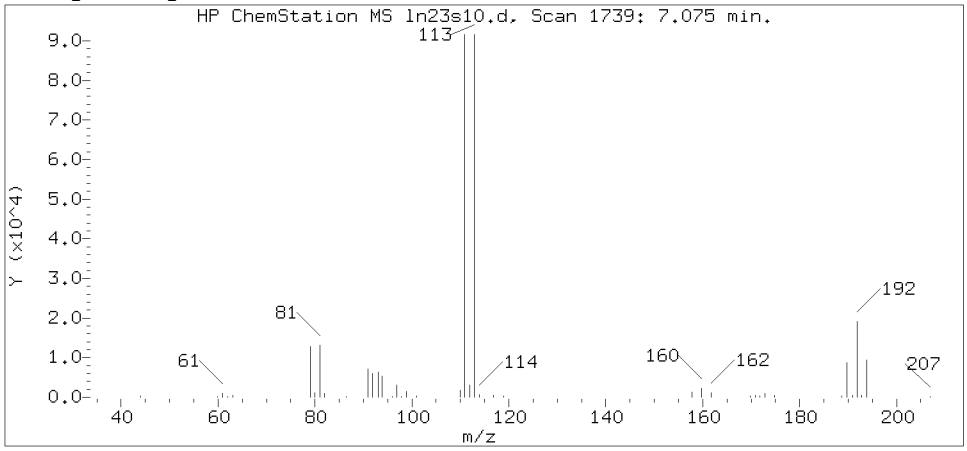


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov23a.b/ln23s10.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 13:40 Analyst ID: CLM27445

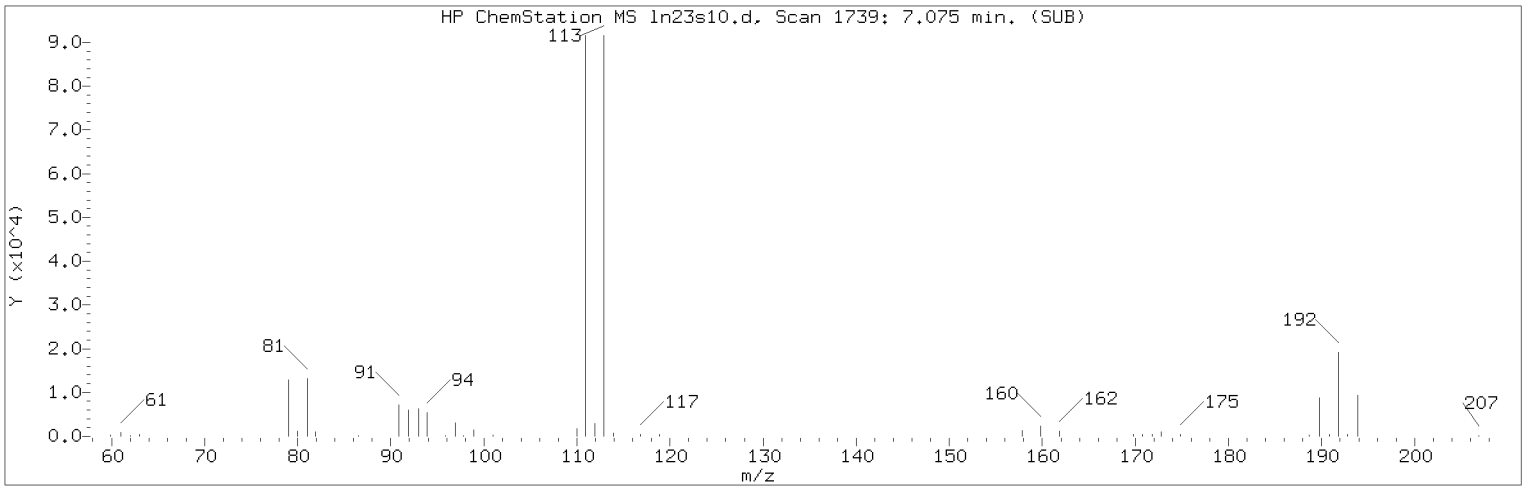
Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 25-Nov-2019 13:24 lcp00895

Sample Name: JCW13 Lab Sample ID: 1205912

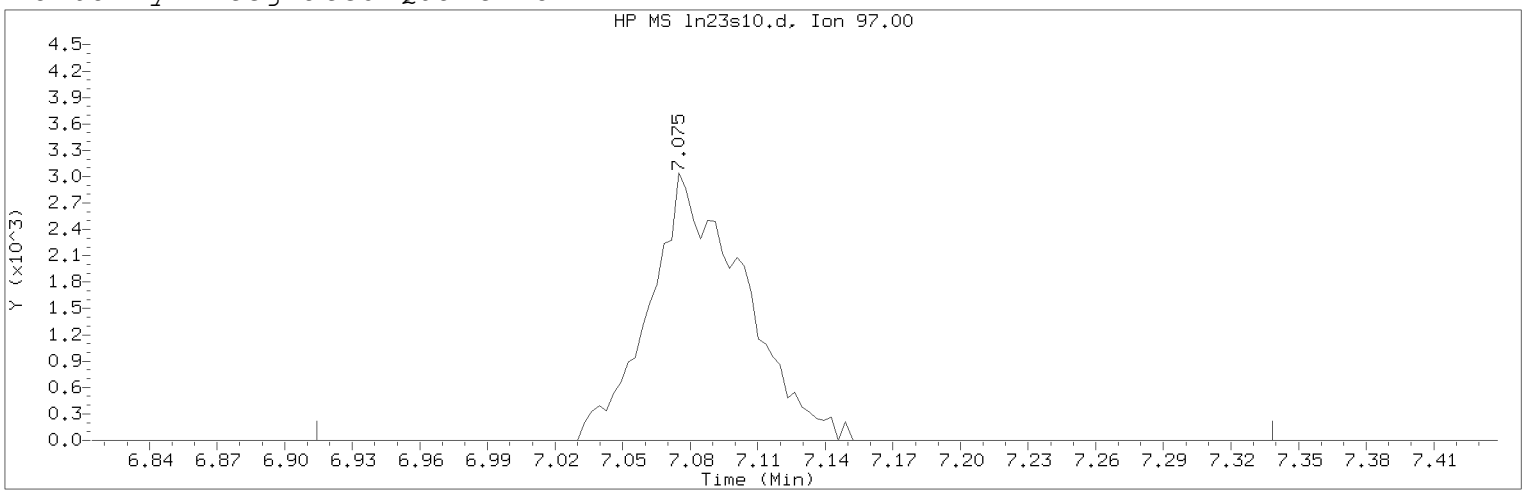
Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1739
Retention Time (minutes)	: 7.075
Relative Retention Time	: 0.00153
Quant Ion	: 97.00
Area (flag)	: 8818M
On-Column Amount (ng)	: 1.1406

Digitally signed by Linda C. Pape on 11/25/2019 at 13:24.
Target 3.5 esignature user ID: lcp00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23s10.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 13:40 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 25-Nov-2019 13:24 lcp00895

Sample Name: JCW13 Lab Sample ID: 1205912

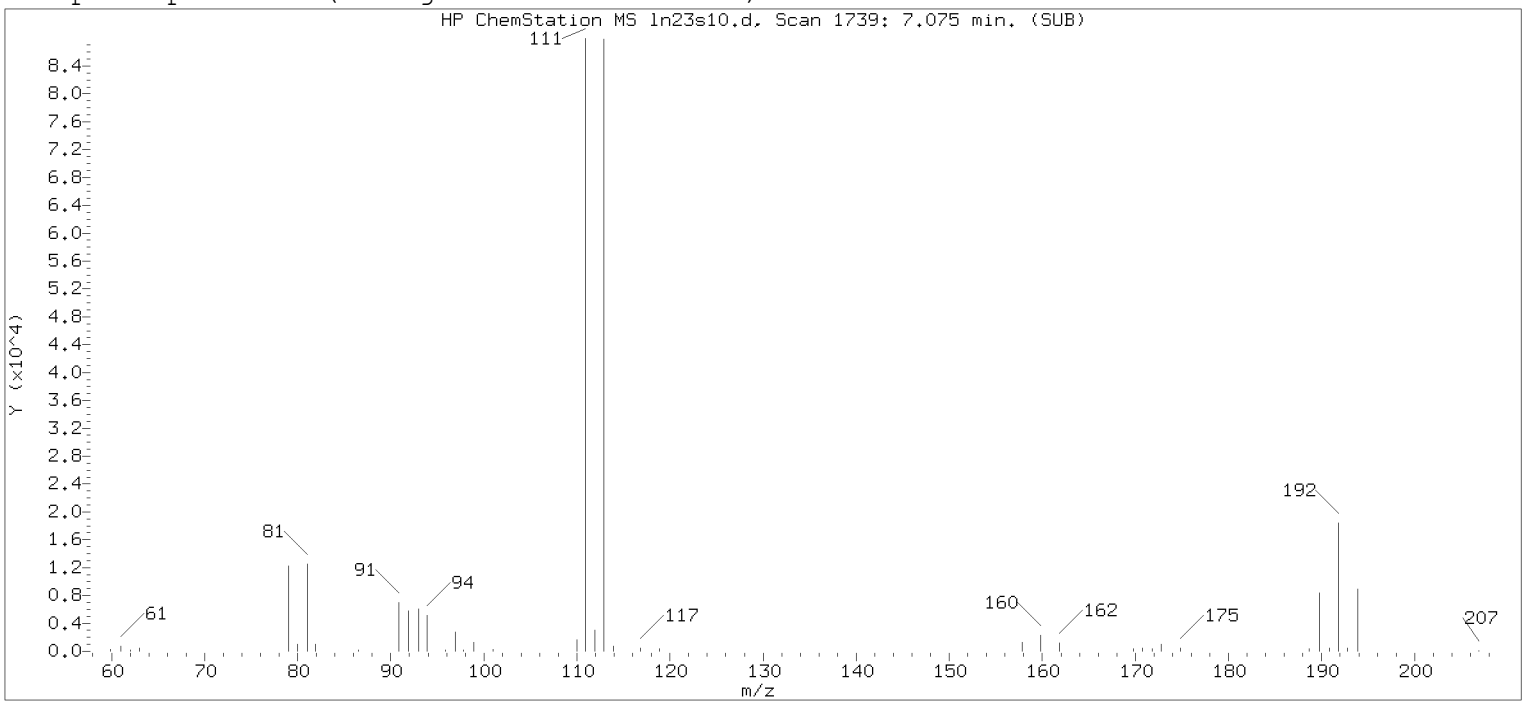
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 1739
Retention Time (minutes): 7.075
Quant Ion : 97.00
Area (flag) : 8818M
On-Column Amount (ng) : 1.1406
Integration start scan : 1688 Integration stop scan: 1820
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

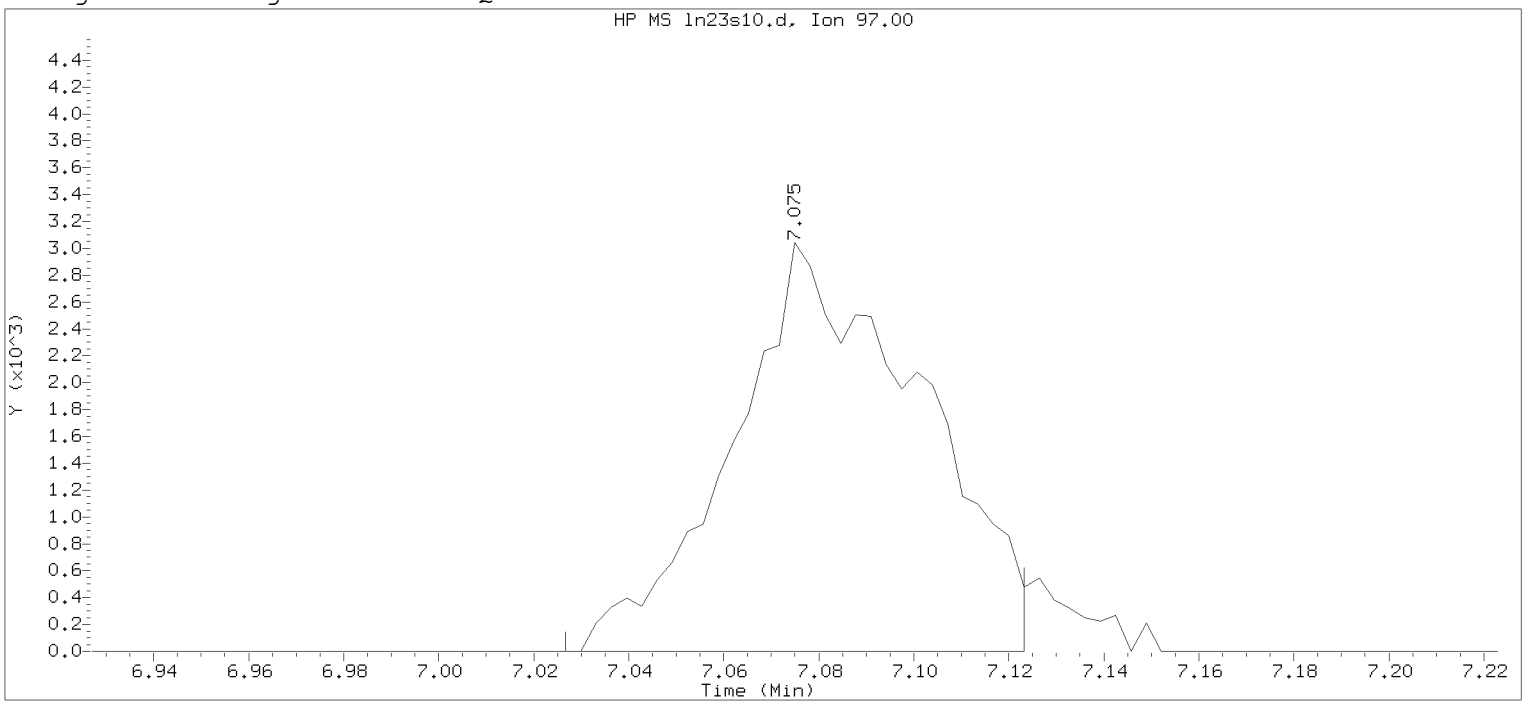
Analyst responsible for change: Digitally signed by Linda C. Pape
on 11/25/2019 at 13:24.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:53.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23s10.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 13:40 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 13:58 Automation

Sample Name: JCW13 Lab Sample ID: 1205912

Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 1739
Retention Time (minutes): 7.075
Quant Ion : 97.00
Area : 8348
On-column Amount (ng) : 1.0798
Integration start scan : 1723 Integration stop scan: 1753
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 11/25/2019 at 13:24.
Target 3.5 esignature user id = lpape

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JCW14

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205913

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s11.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1205913

Data file: /chem/HP09915.i/19nov23a.b/ln23s11.d Injection date and time: **23-NOV-2019 14:02**
Data file Sample Info. Line: JCW14;1205913;1;0;;JCW23;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 14:20 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.503	(-0.013)	939	65	203330	(-7)	250.00	
66) Fluorobenzene	7.959	(-0.003)	2014	96	1115082	(-1)	50.00	
100) Chlorobenzene-d5	11.358	(0.000)	3071	117	907956	(-4)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	482597	(-8)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072	(0.000)	113	267208	49.015	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.001)	102	70862	51.002	102%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	1159692	48.814	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.348	(0.000)	95	435117	48.369	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Linda C. Pape on 11/25/2019 at 13:24. Target 3.5 esignature user ID: lcp00895

Data file: /chem/HP09915.i/19nov23a.b/ln23s11.d Injection date and time: **23-NOV-2019 14:02**
Data file Sample Info. Line: JCW14;1205913;1;0;;JCW23;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 14:20 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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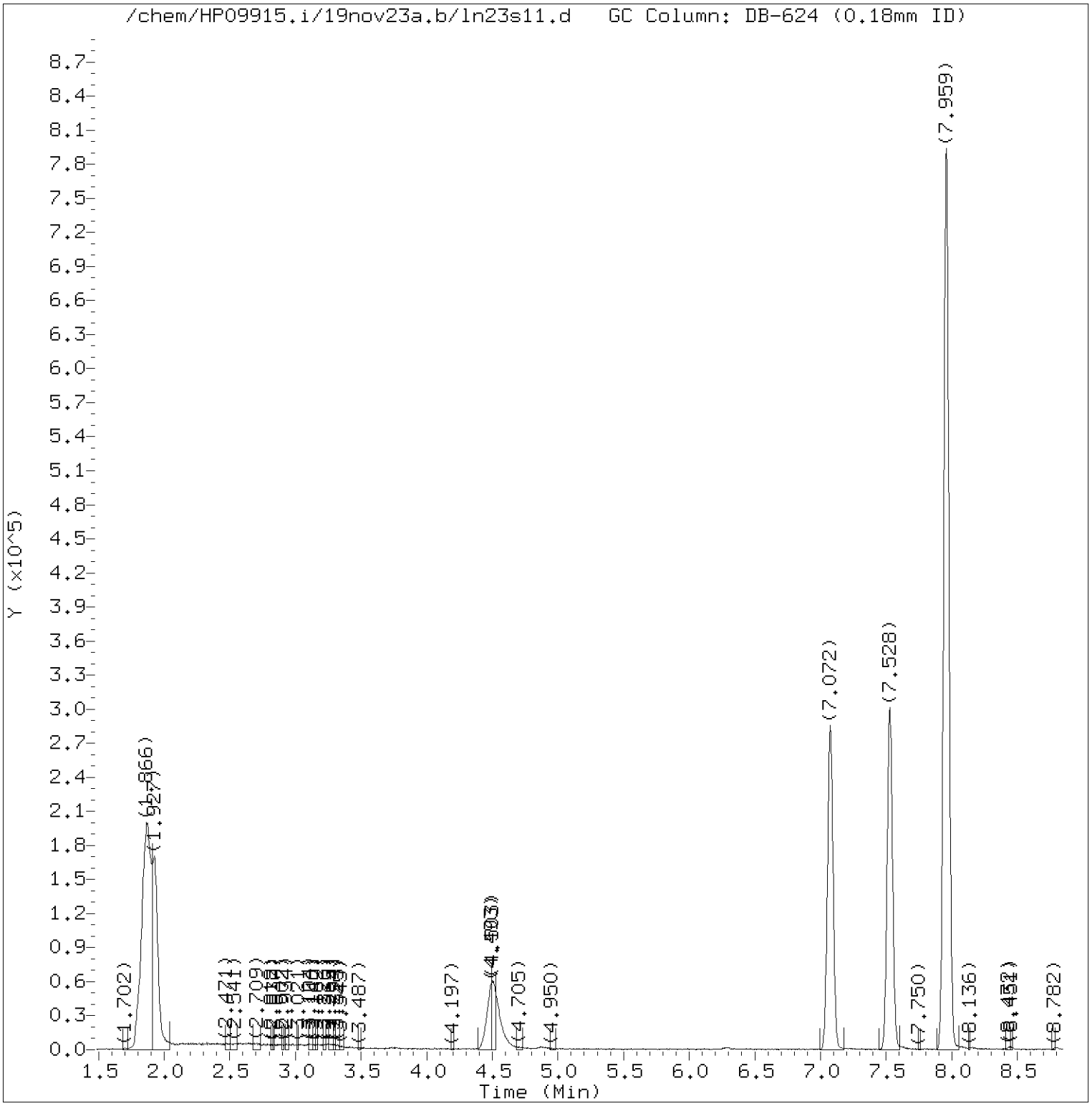
Total number of targets = 24

Digitally signed by Linda C. Pape on 11/25/2019 at 13:24. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

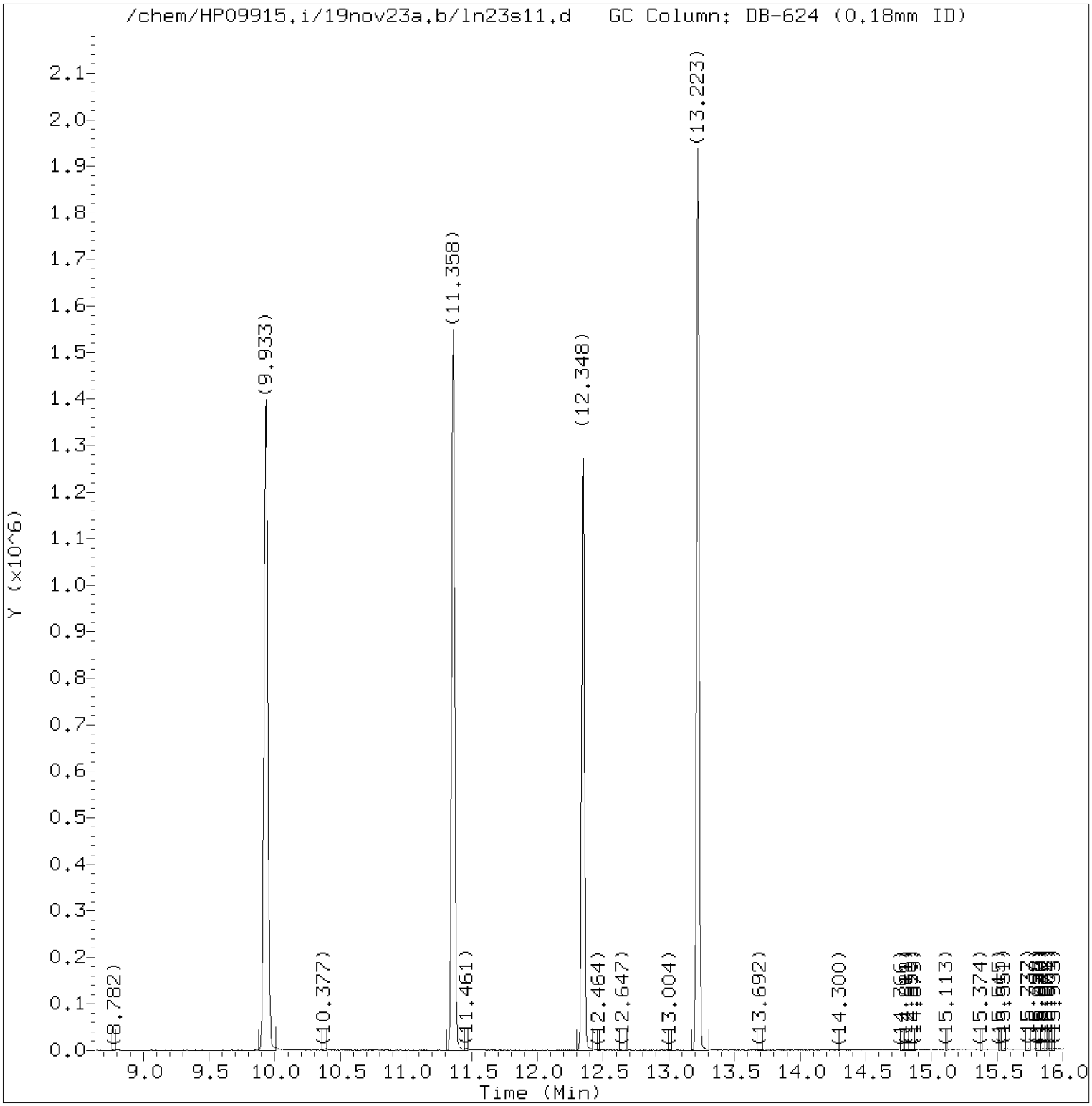
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s11.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 14:02 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 14:20 Automation

Sample Name: JCW14 Lab Sample ID: 1205913

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:24.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s11.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 14:02 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 14:20 Automation

Sample Name: JCW14 Lab Sample ID: 1205913

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:24.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s11.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 14:02 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 14:20 Automation

Sample Name: JCW14 Lab Sample ID: 1205913

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.503	65	203330	250.000
52)$Dibromofluoromethane	(2)	7.072	113	267208	49.015
57)$1,2-Dichloroethane-d4	(2)	7.525	102	70862	51.002
66)*Fluorobenzene	(2)	7.959	96	1115082	50.000
83)$Toluene-d8	(3)	9.933	98	1159692	48.814
100)*Chlorobenzene-d5	(3)	11.358	117	907956	50.000
114)$4-Bromofluorobenzene	(3)	12.348	95	435117	48.369
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	482597	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:24.
Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JCW15

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205914

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s12.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	0.7	J
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1205914

Data file: /chem/HP09915.i/19nov23a.b/ln23s12.d Injection date and time: **23-NOV-2019 14:24**
Data file Sample Info. Line: JCW15;1205914;1;0;;JCW23;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 14:42 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.503	(-0.013)	939	65	203647	(-7)	250.00	
66) Fluorobenzene	7.959	(-0.003)	2014	96	1085952	(-4)	50.00	
100) Chlorobenzene-d5	11.358	(0.000)	3071	117	899726	(-5)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	482459	(-8)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.078	(0.000)	113	264388	49.798	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(0.000)	102	69409	51.296	103%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	1138414	48.357	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.348	(0.000)	95	437088	49.032	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.425	(0.000)	95	3756	0.675	0.68		J	0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

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Data file: /chem/HP09915.i/19nov23a.b/ln23s12.d Injection date and time: **23-NOV-2019 14:24**
Data file Sample Info. Line: JCW15;1205914;1;0;;JCW23;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 14:42 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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Total number of targets = 24

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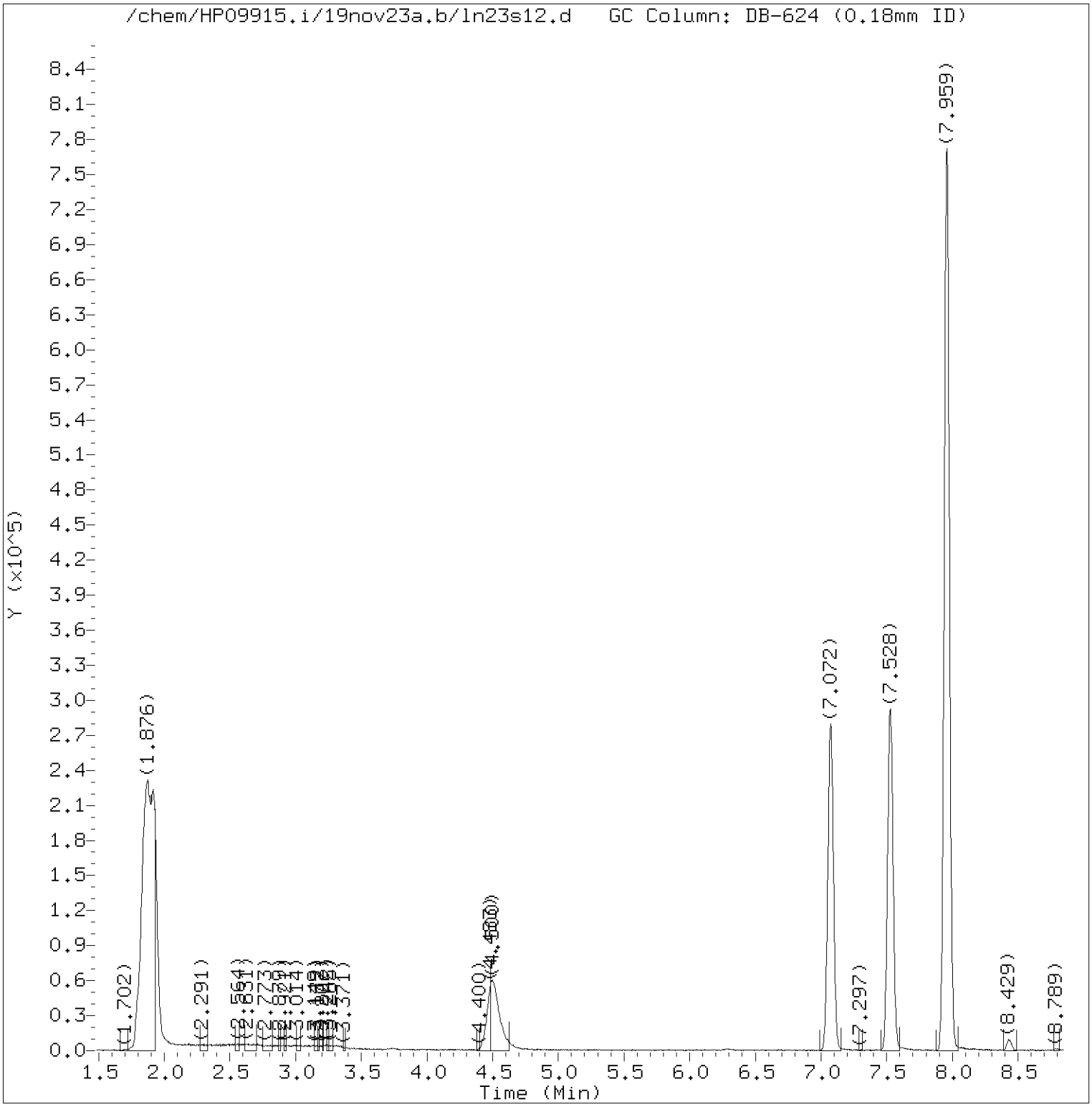
Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

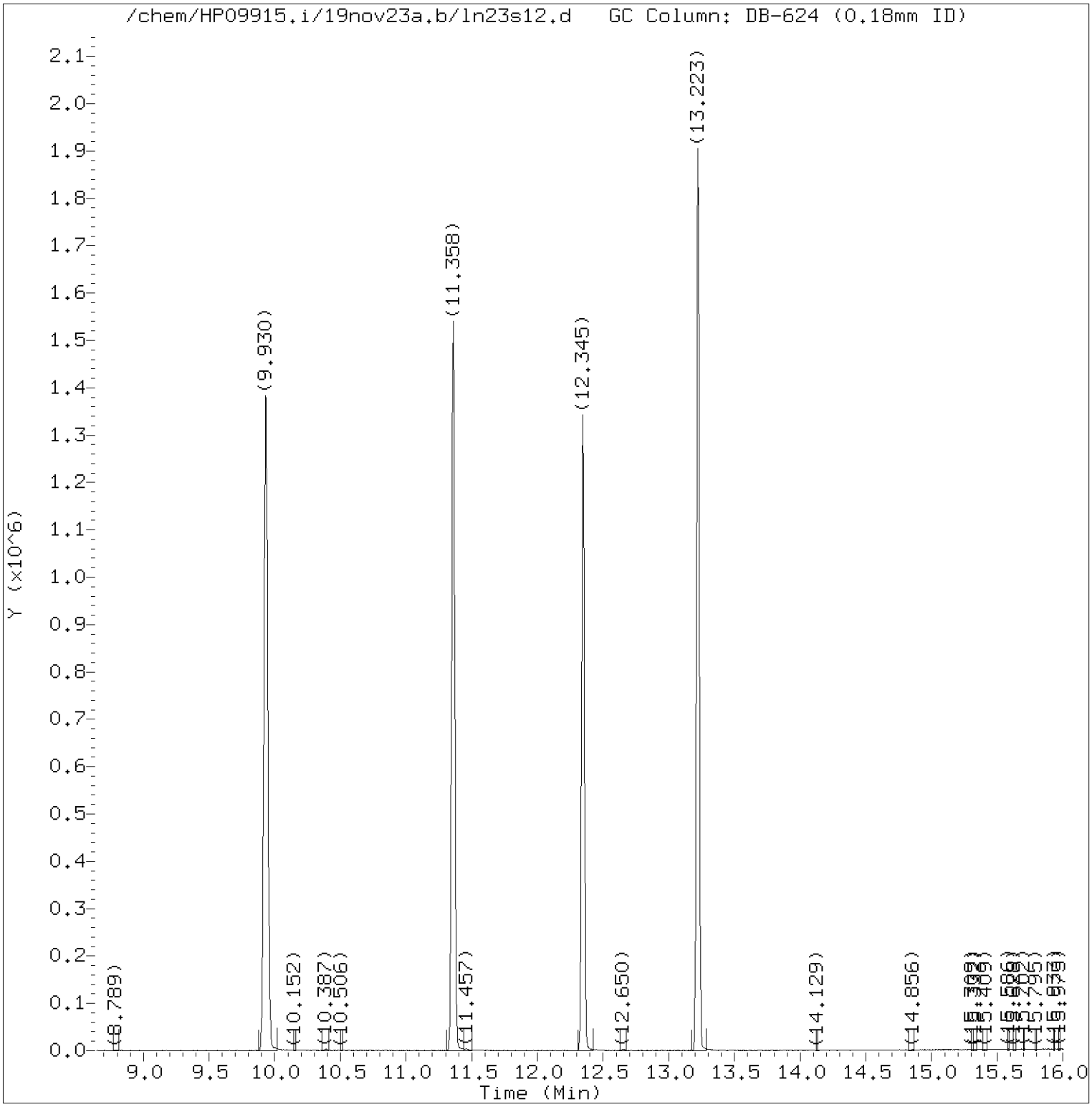
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s12.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 14:24 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 14:42 Automation

Sample Name: JCW15 Lab Sample ID: 1205914

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:28.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s12.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 14:24 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 14:42 Automation

Sample Name: JCW15 Lab Sample ID: 1205914

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:28.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s12.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 14:24 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 14:42 Automation

Sample Name: JCW15 Lab Sample ID: 1205914

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.503	65	203647	250.000
52)$Dibromofluoromethane	(2)	7.078	113	264388	49.798
57)$1,2-Dichloroethane-d4	(2)	7.528	102	69409	51.296
66)*Fluorobenzene	(2)	7.959	96	1085952	50.000
71) Trichloroethene	(2)	8.425	95	3756	0.675
83)$Toluene-d8	(3)	9.930	98	1138414	48.357
100)*Chlorobenzene-d5	(3)	11.358	117	899726	50.000
114)$4-Bromofluorobenzene	(3)	12.348	95	437088	49.032
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	482459	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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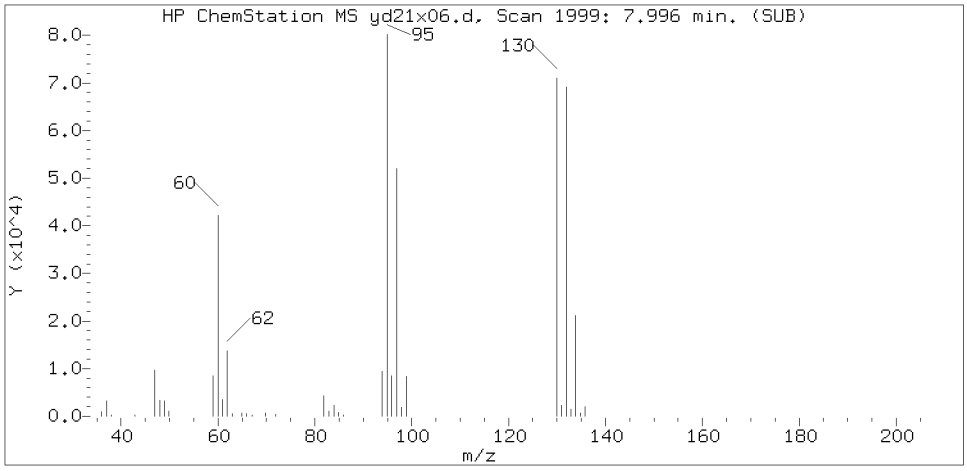
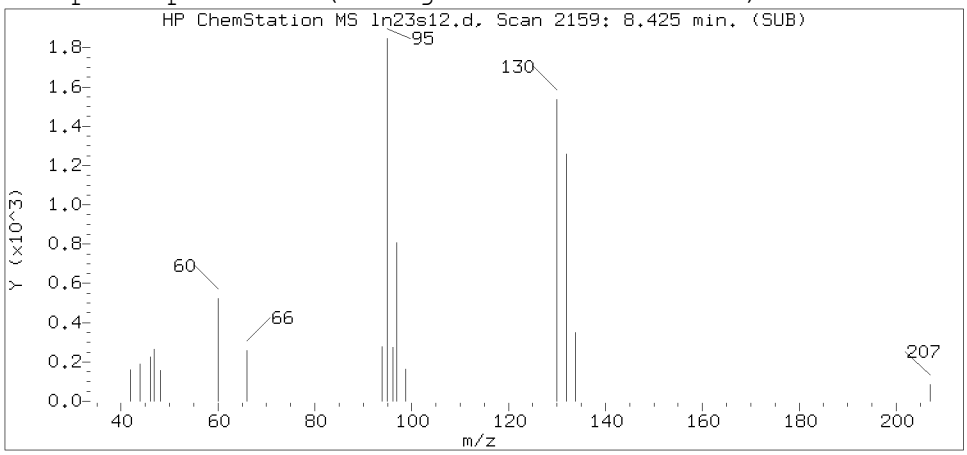
on 11/25/2019 at 13:28.
Target 3.5 esignature user ID: lcp00895

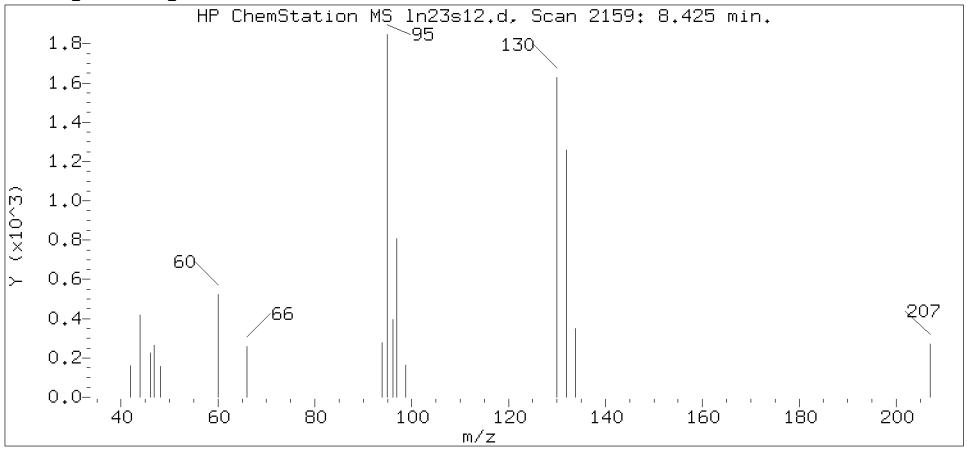
Reference Standard Spectrum for Trichloroethene

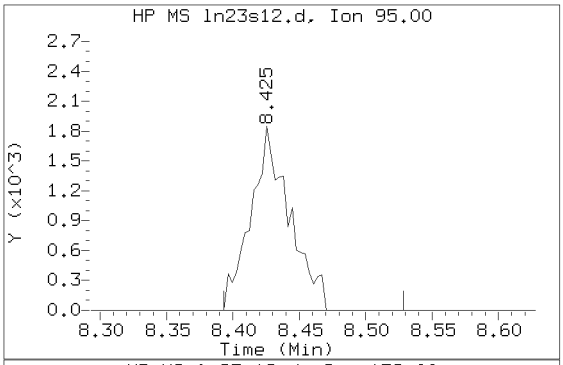


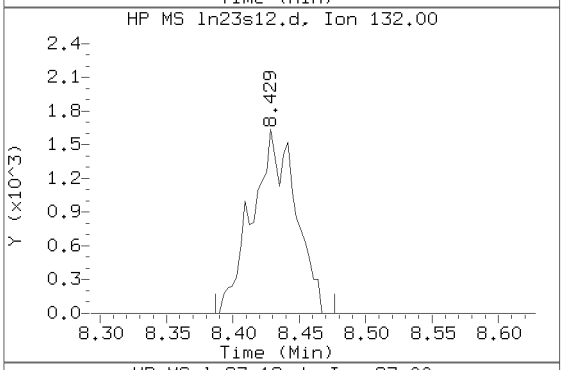
Sample Spectrum (Background Subtracted)

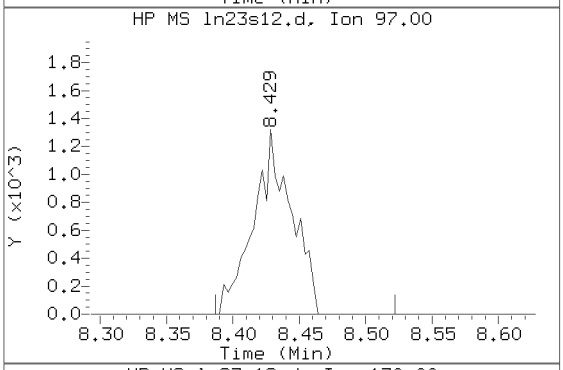


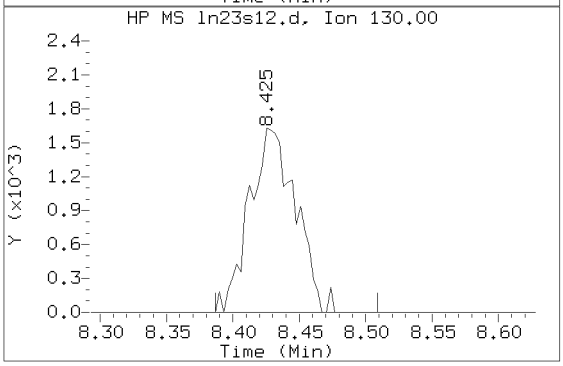
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23s12.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 14:24 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 14:42 Automation

Sample Name: JCW15 Lab Sample ID: 1205914

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 2159
Retention Time (minutes)	: 8.425
Relative Retention Time	: 0.00043
Quant Ion	: 95.00
Area (flag)	: 3756
On-Column Amount (ng)	: 0.6754

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Target 3.5 esignature user ID: lcp00805

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JCW16

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205915

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s13.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.4	J
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	0.8	J
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1205915

Data file: /chem/HP09915.i/19nov23a.b/ln23s13.d Injection date and time: **23-NOV-2019 14:46**
Data file Sample Info. Line: JCW16;1205915;1;0;;JCW23;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 15:04 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493	(-0.003)	936	65	210558	(-4)	250.00	
66) Fluorobenzene	7.956	(0.000)	2013	96	1104338	(-2)	50.00	
100) Chlorobenzene-d5	11.358	(0.000)	3071	117	909387	(-3)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	493457	(-5)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.069	(0.000)	113	269025	49.828	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	70008	50.878	102%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	1163280	48.888	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	441341	48.983	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.551	(-0.000)	63	3894	0.412	0.41		J	0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	7.072	(0.001)	97	6546	0.849	0.85		J	0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Linda C. Pape on 11/25/2019 at 13:30. Target 3.5 esignature user ID: lcp00895

Data file: /chem/HP09915.i/19nov23a.b/ln23s13.d Injection date and time: **23-NOV-2019 14:46**
Data file Sample Info. Line: JCW16;1205915;1;0;;JCW23;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 15:04 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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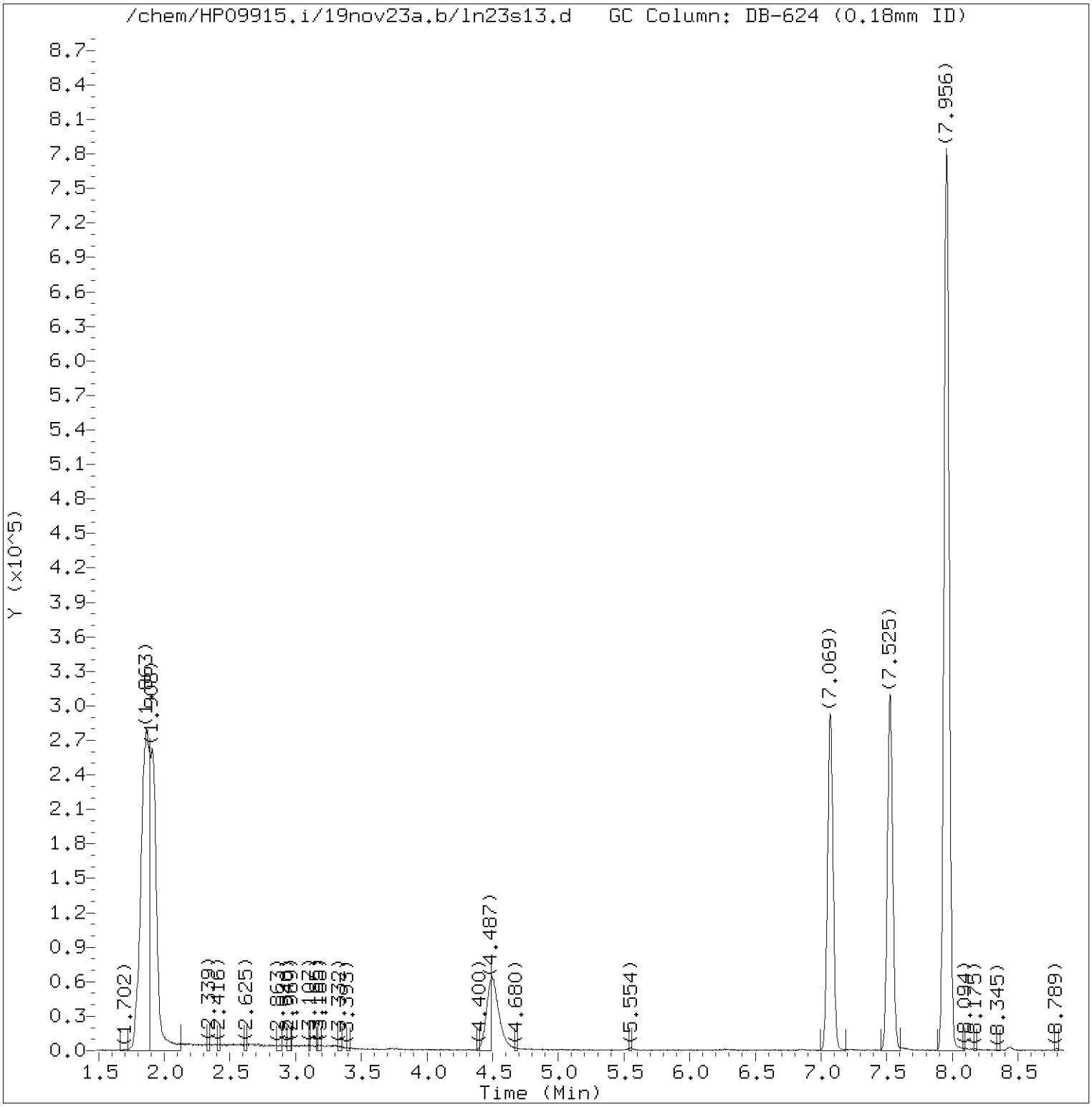
Total number of targets = 24

Digitally signed by Linda C. Pape on 11/25/2019 at 13:30. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

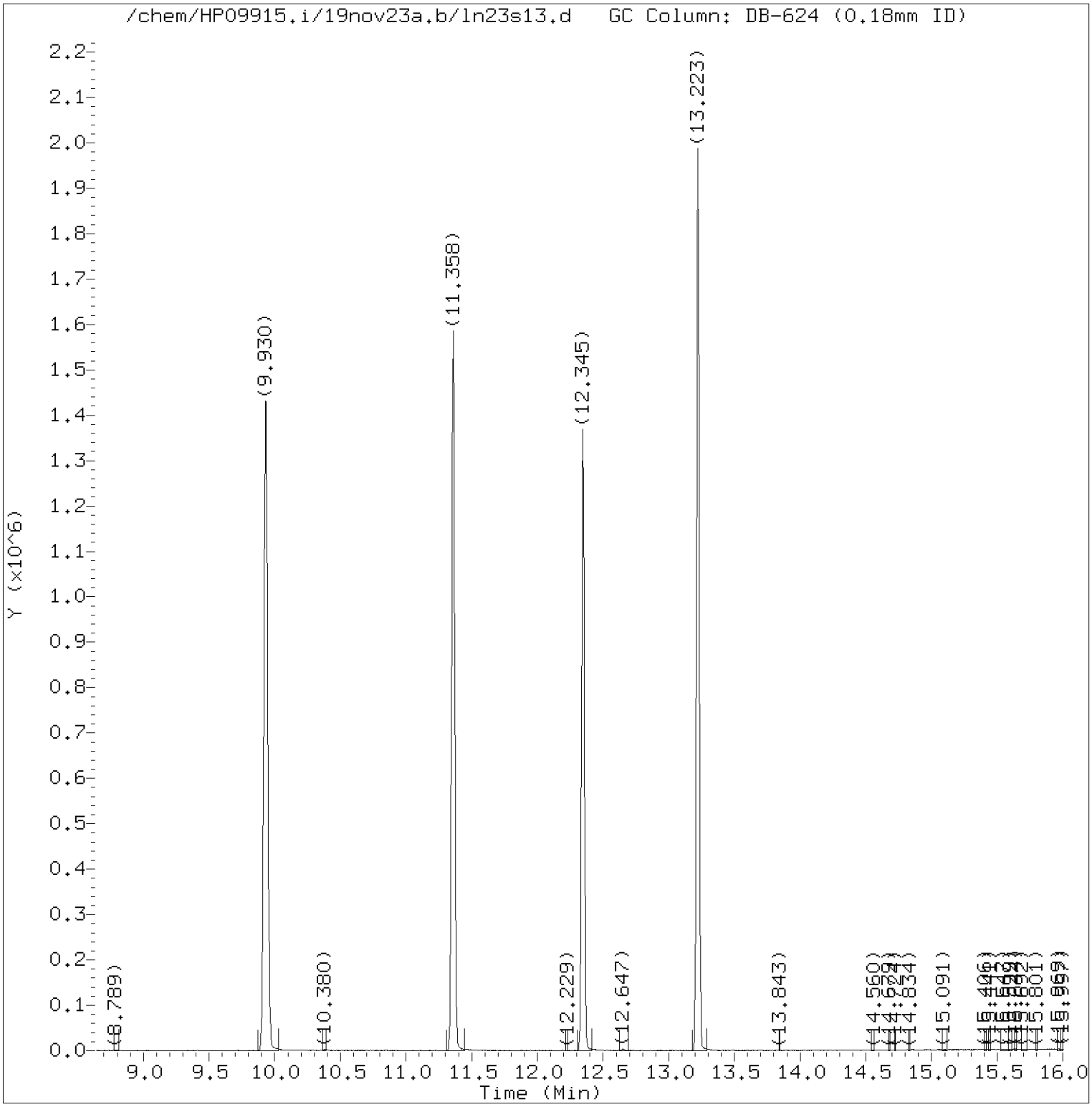
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s13.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 14:46 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 15:04 Automation

Sample Name: JCW16 Lab Sample ID: 1205915

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:30.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s13.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 14:46 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 15:04 Automation

Sample Name: JCW16 Lab Sample ID: 1205915

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:30.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s13.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 14:46 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 15:04 Automation

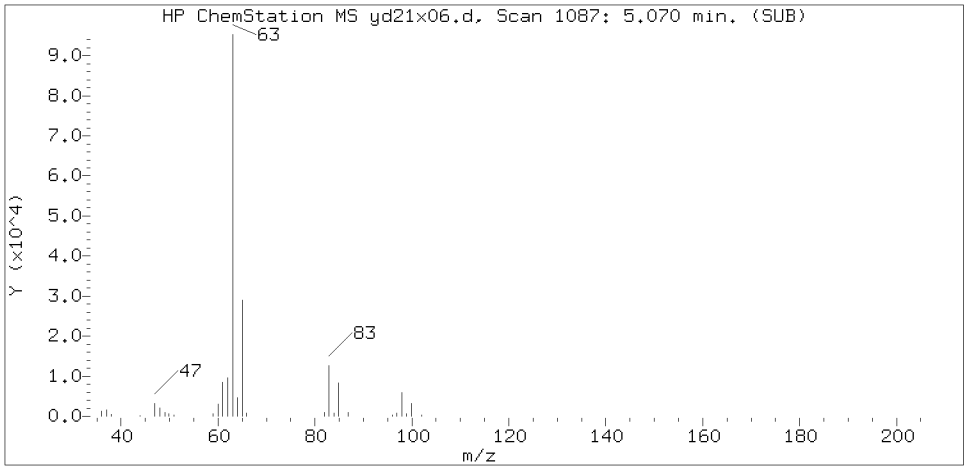
Sample Name: JCW16 Lab Sample ID: 1205915

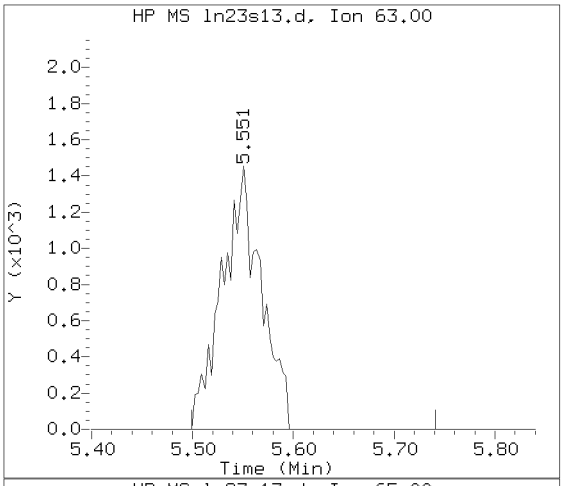
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.493	65	210558	250.000
36) 1,1-Dichloroethane	(2)	5.551	63	3894	0.412
52)$Dibromofluoromethane	(2)	7.069	113	269025	49.828
53) 1,1,1-Trichloroethane	(2)	7.072	97	6546	0.849
57)$1,2-Dichloroethane-d4	(2)	7.525	102	70008	50.878
66)*Fluorobenzene	(2)	7.956	96	1104338	50.000
83)$Toluene-d8	(3)	9.930	98	1163280	48.888
100)*Chlorobenzene-d5	(3)	11.358	117	909387	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	441341	48.983
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	493457	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

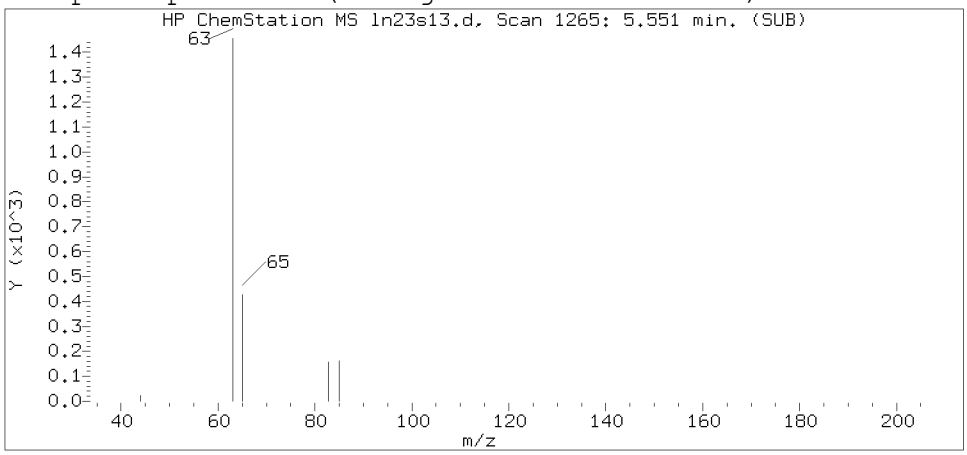
Digitally signed by Linda C. Pape
on 11/25/2019 at 13:30.
Target 3.5 esignature user ID: lcp00895

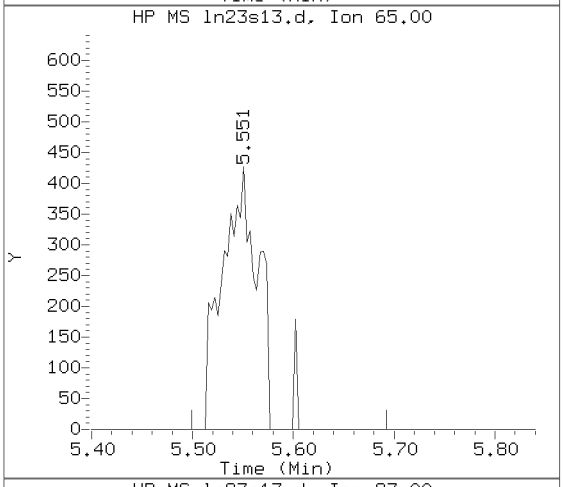
Reference Standard Spectrum for 1,1-Dichloroethane



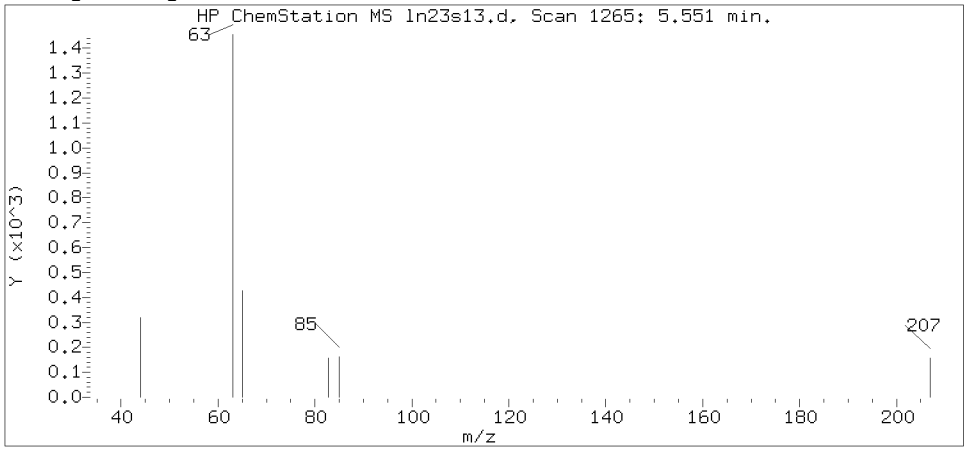


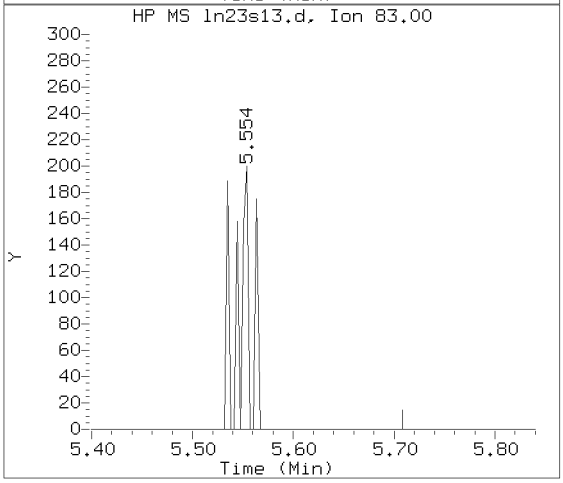
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov23a.b/ln23s13.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 14:46 Analyst ID: CLM27445

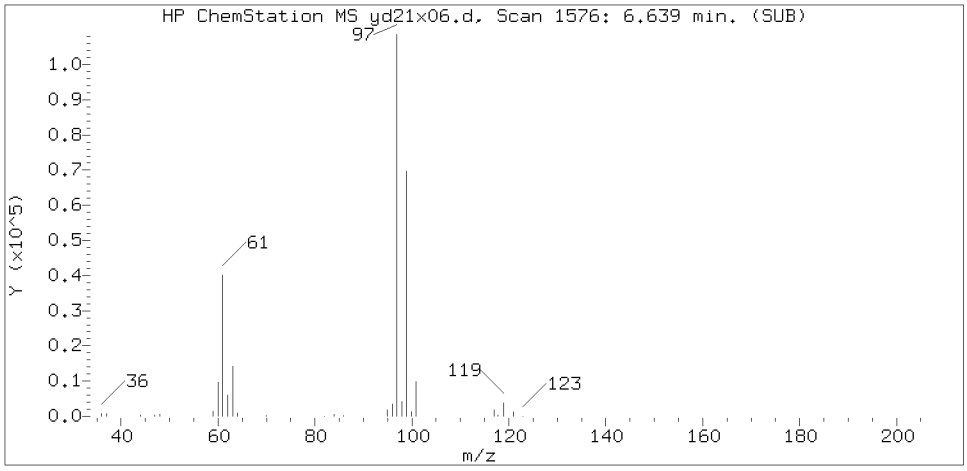
Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 15:04 Automation

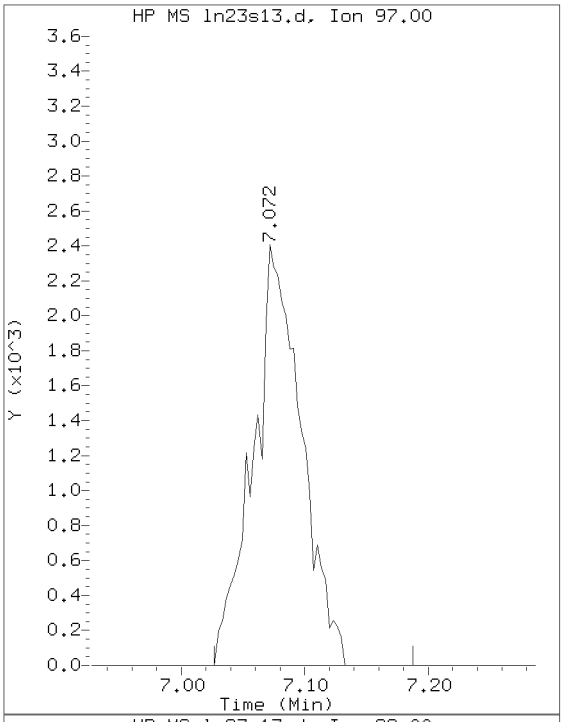
Sample Name: JCW16 Lab Sample ID: 1205915

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 1265
Retention Time (minutes): 5.551
Relative Retention Time :-0.00081
Quant Ion : 63.00
Area (flag) : 3894
On-Column Amount (ng) : 0.4122

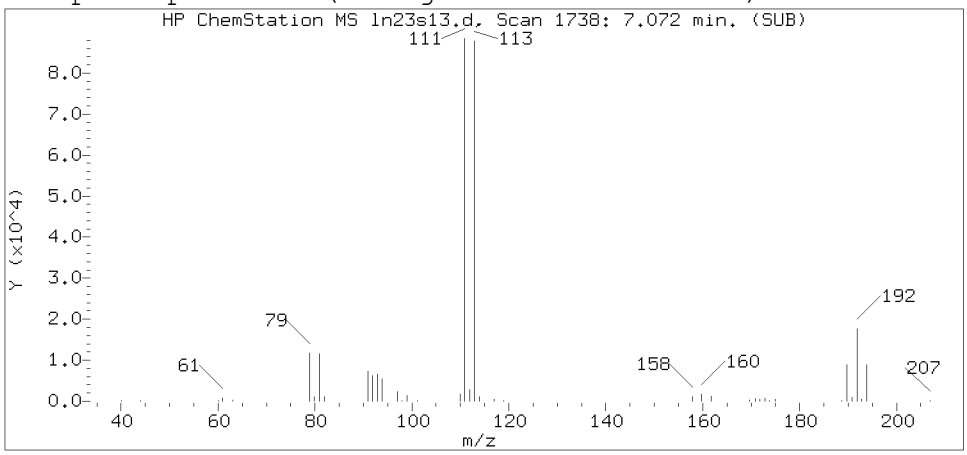
Digitally signed by Linda C. Pape on 11/25/2019 at 13:30.
Target 3.5 esignature user ID: lcp00895

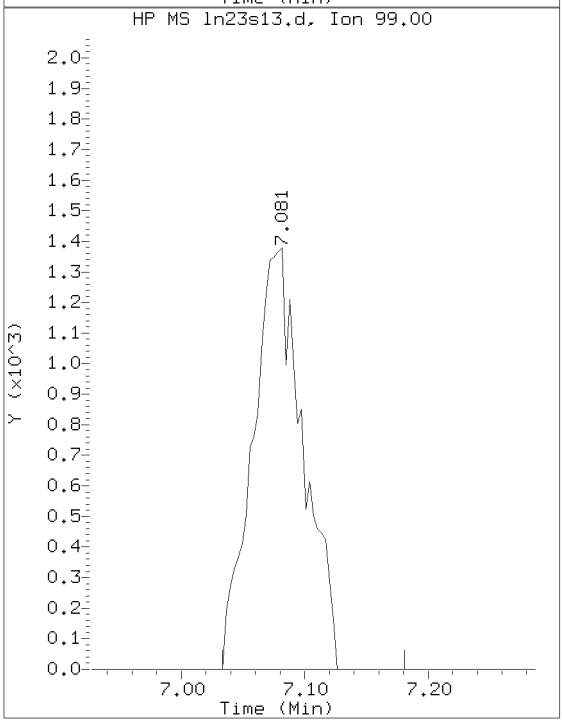
Reference Standard Spectrum for 1,1,1-Trichloroethane



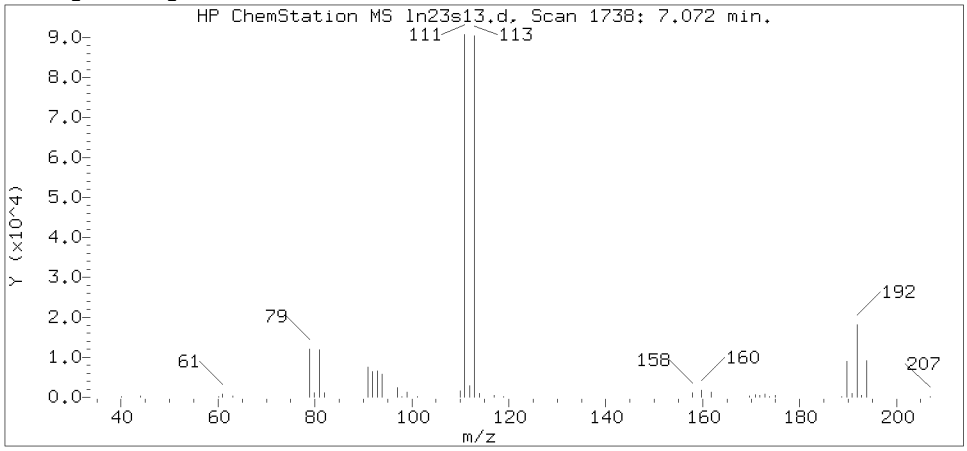


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov23a.b/ln23s13.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 14:46 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 15:04 Automation

Sample Name: JCW16 Lab Sample ID: 1205915

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1738
Retention Time (minutes)	: 7.072
Relative Retention Time	: 0.00121
Quant Ion	: 97.00
Area (flag)	: 6546
On-Column Amount (ng)	: 0.8488

Digitally signed by Linda C. Pape on 11/25/2019 at 13:30.
Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JCW17

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205916

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s14.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.3	J
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1205916

Data file: /chem/HP09915.i/19nov23a.b/ln23s14.d Injection date and time: **23-NOV-2019 15:08**
Data file Sample Info. Line: JCW17;1205916;1;0;;JCW23;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 15:26 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493	(-0.003)	936	65	205783	(-6)	250.00	
66) Fluorobenzene	7.956	(0.000)	2013	96	1080825	(-4)	50.00	
100) Chlorobenzene-d5	11.358	(0.000)	3071	117	894854	(-5)	50.00	
131) 1,4-Dichlorobenzene-d4	13.220	(0.003)	3650	152	483096	(-7)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(0.000)	113	261494	49.487	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	68587	50.929	102%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	1133677	48.418	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	434648	49.024	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.551	(-0.000)	63	2634	0.285	0.28		J	0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Linda C. Pape on 11/25/2019 at 13:31. Target 3.5 esignature user ID: lcp00895

Data file: /chem/HP09915.i/19nov23a.b/ln23s14.d Injection date and time: **23-NOV-2019 15:08**
Data file Sample Info. Line: JCW17;1205916;1;0;;JCW23;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 15:26 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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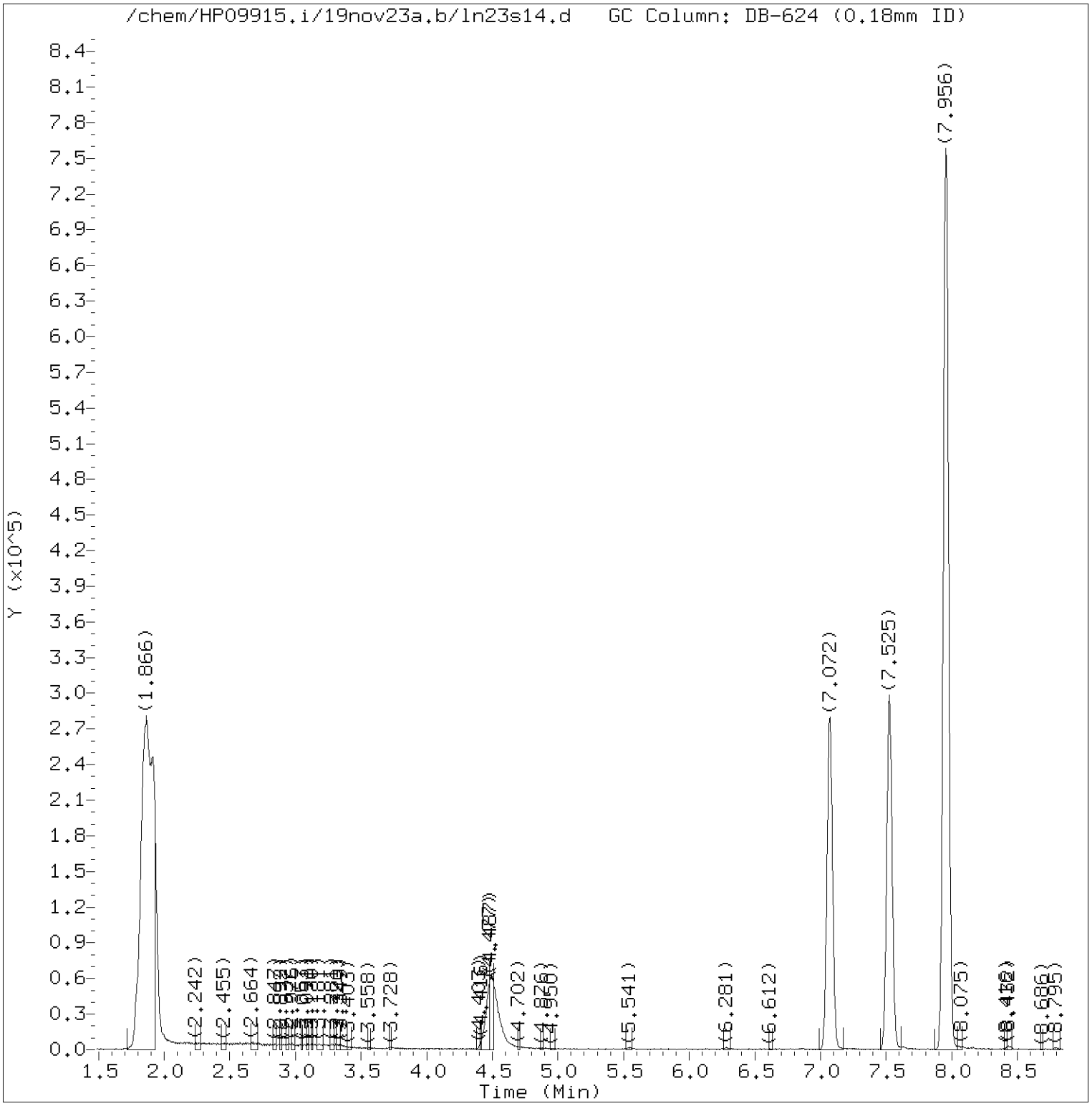
Total number of targets = 24

Digitally signed by Linda C. Pape on 11/25/2019 at 13:31. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

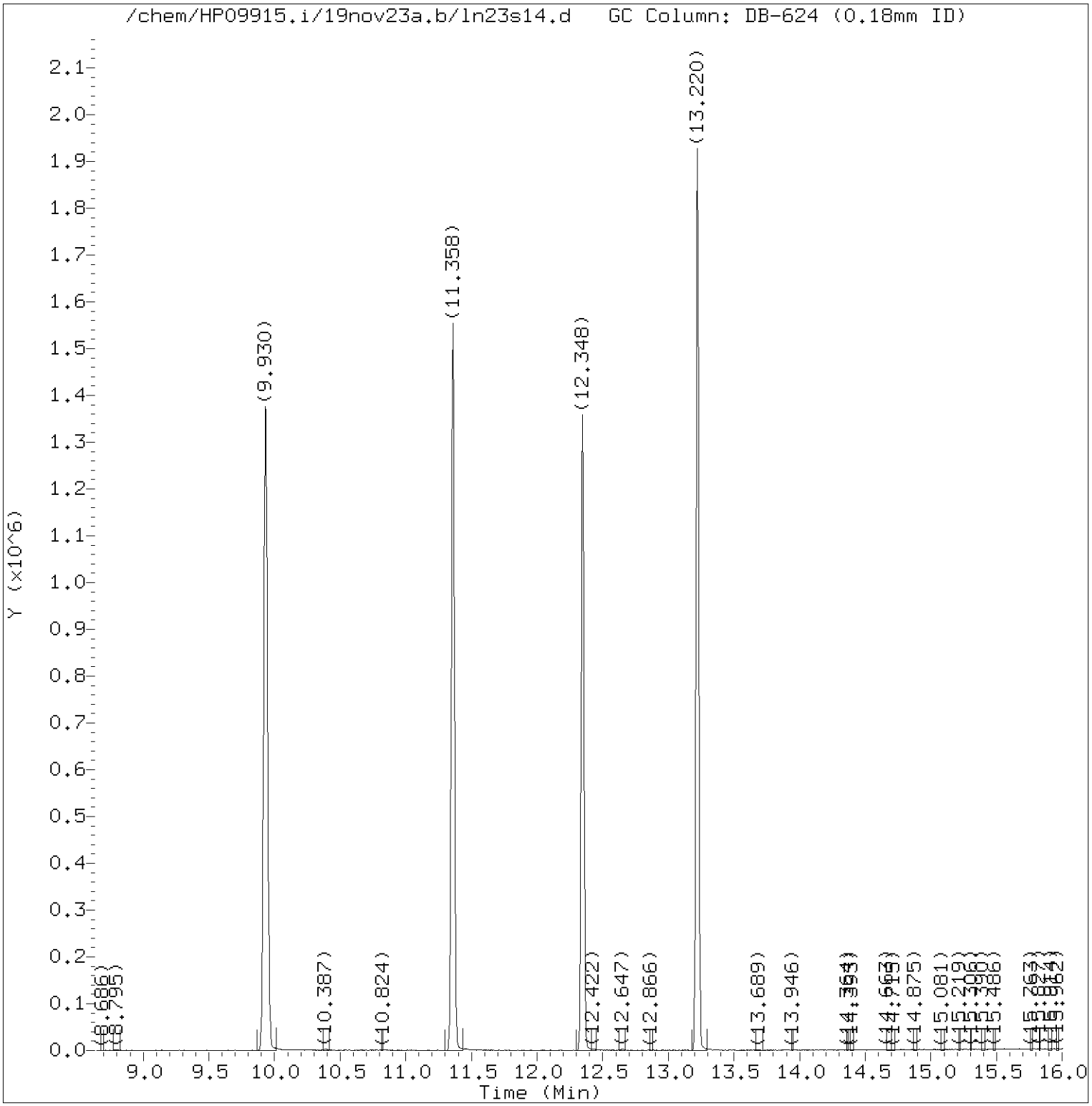
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s14.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 15:08 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 15:26 Automation

Sample Name: JCW17 Lab Sample ID: 1205916

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:31.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s14.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 15:08 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 15:26 Automation

Sample Name: JCW17 Lab Sample ID: 1205916

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:31.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s14.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 15:08 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 15:26 Automation

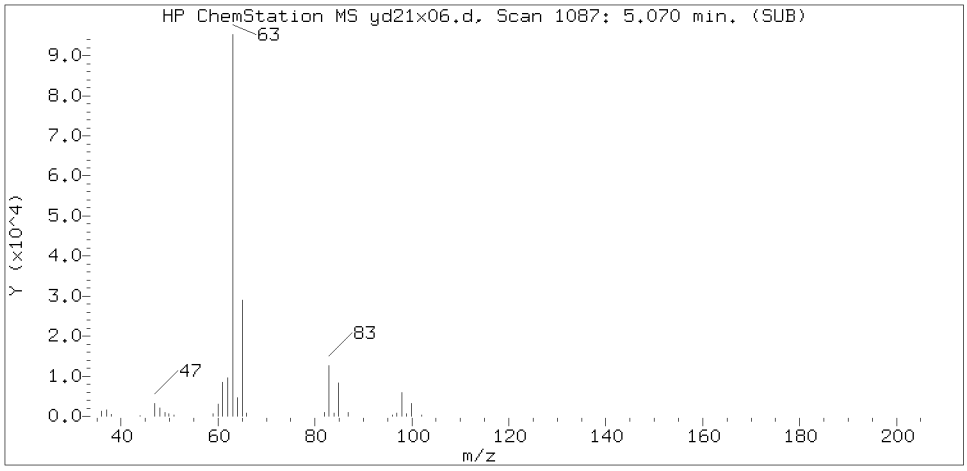
Sample Name: JCW17 Lab Sample ID: 1205916

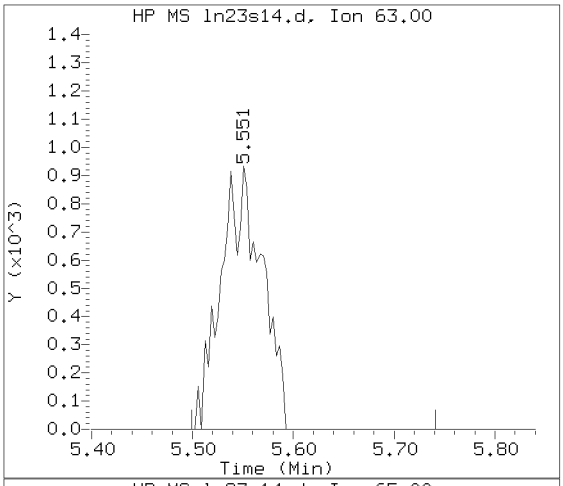
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.493	65	205783	250.000
36) 1,1-Dichloroethane	(2)	5.551	63	2634	0.285
52)$Dibromofluoromethane	(2)	7.075	113	261494	49.487
57)$1,2-Dichloroethane-d4	(2)	7.525	102	68587	50.929
66)*Fluorobenzene	(2)	7.956	96	1080825	50.000
83)$Toluene-d8	(3)	9.930	98	1133677	48.418
100)*Chlorobenzene-d5	(3)	11.358	117	894854	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	434648	49.024
131)*1,4-Dichlorobenzene-d4	(4)	13.220	152	483096	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

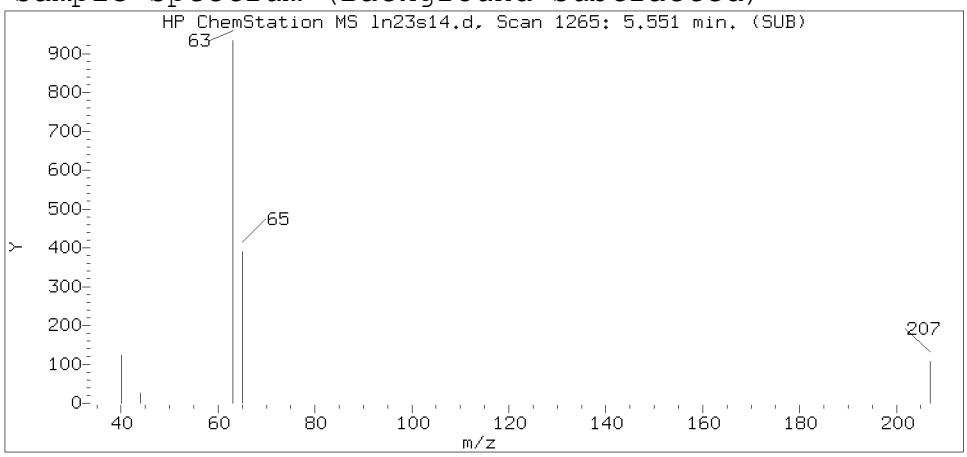
Digitally signed by Linda C. Pape
on 11/25/2019 at 13:31.
Target 3.5 esignature user ID: lcp00895

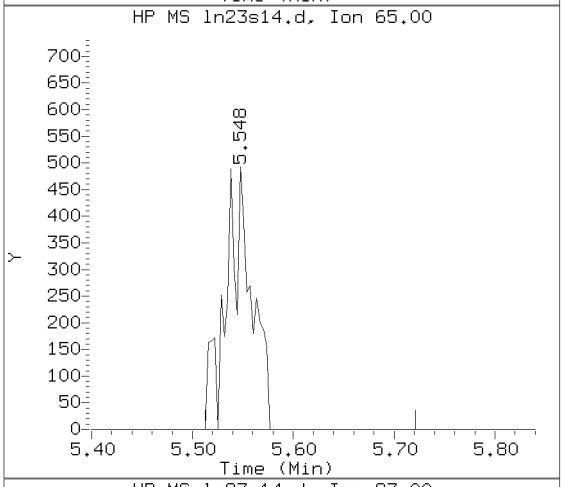
Reference Standard Spectrum for 1,1-Dichloroethane



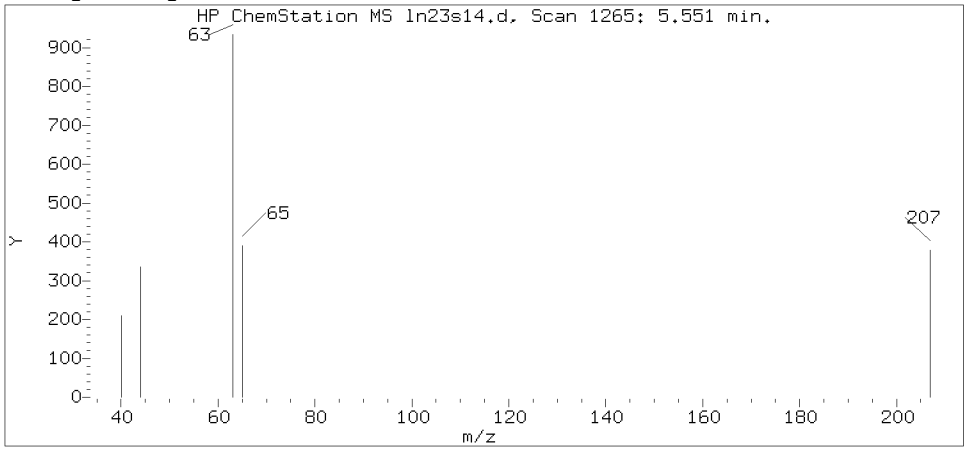


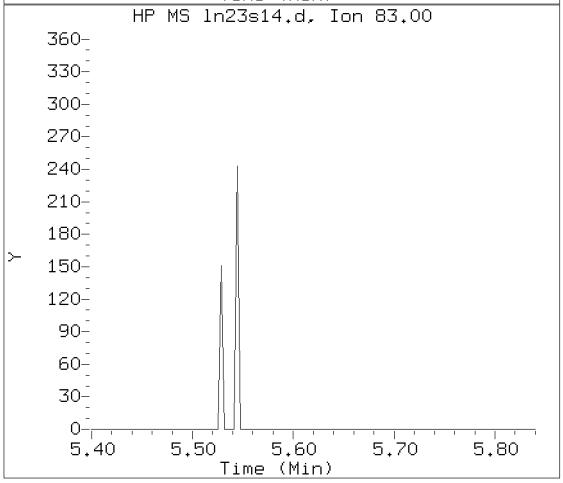
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov23a.b/ln23s14.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 15:08 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 15:26 Automation

Sample Name: JCW17 Lab Sample ID: 1205916

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 1265
Retention Time (minutes): 5.551
Relative Retention Time :-0.00081
Quant Ion : 63.00
Area (flag) : 2634
On-Column Amount (ng) : 0.2849

Digitally signed by Linda C. Pape on 11/25/2019 at 13:31.
Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JCW18

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205917

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s15.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	0.4	J
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	0.5	J
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1205917

Data file: /chem/HP09915.i/19nov23a.b/ln23s15.d Injection date and time: **23-NOV-2019 15:31**
Data file Sample Info. Line: JCW18;1205917;1;0;;JCW23;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 25-Nov-2019 13:32 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493(-0.003)	936	65	200795	(-8)	250.00	
66) Fluorobenzene	7.956(0.000)	2013	96	1098052	(-3)	50.00	
100) Chlorobenzene-d5	11.358(0.000)	3071	117	912322	(-3)	50.00	
131) 1,4-Dichlorobenzene-d4	13.220(0.003)	3650	152	495866	(-5)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072(0.000)	113	268644	50.042	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528(0.000)	102	70657	51.643	103%		80 - 120
83) Toluene-d8	(3)	9.934(0.000)	98	1156297	48.438	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345(0.000)	95	444013	49.121	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)	6.371(0.000)	96	2393M	0.396	0.40		J	0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	8.429(-0.000)	95	6209	1.104	1.10			0.2	1
75) 1,4-Dioxane	(1)			Not Detected					29	250
88) Toluene	(3)			Not Detected					0.2	1
93) Tetrachloroethene	(3)	10.541(-0.000)	166	3470	0.547	0.55		J	0.2	1
104) Ethylbenzene	(3)			Not Detected					0.4	1
106) m+p-Xylene	(3)			Not Detected					1	5
107) o-Xylene	(3)			Not Detected					0.4	1
108) Xylene (Total)	(3)			Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
148) Naphthalene	(4)			Not Detected					1	5

M = Compound was manually integrated.

Digitally signed by Linda C. Pape on 11/25/2019 at 13:32. Target 3.5 esignature user ID: lcp00895

Data file: /chem/HP09915.i/19nov23a.b/ln23s15.d Injection date and time: **23-NOV-2019 15:31**
Data file Sample Info. Line: JCW18;1205917;1;0;;JCW23;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 25-Nov-2019 13:32 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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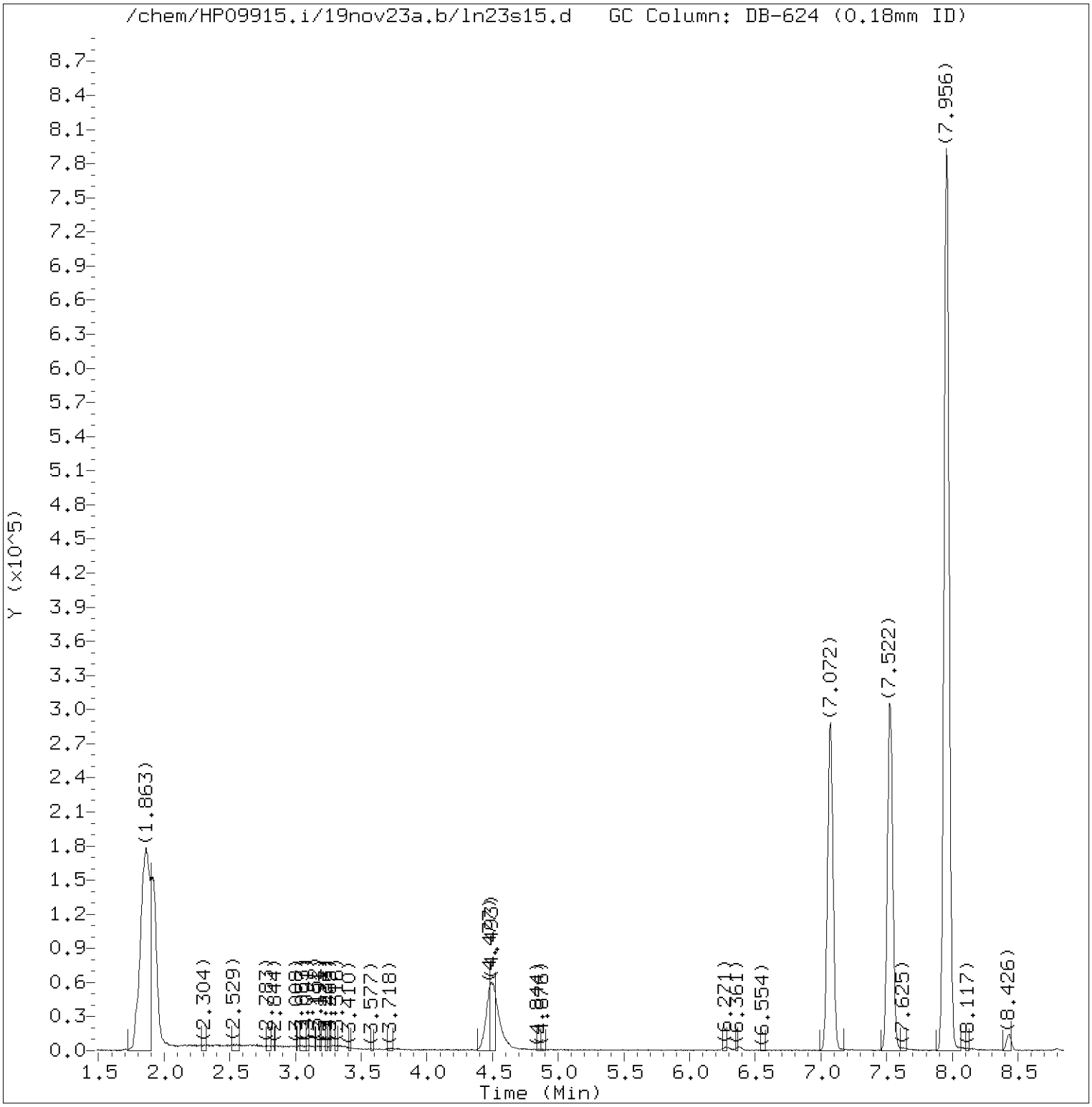
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Linda C. Pape on 11/25/2019 at 13:32. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

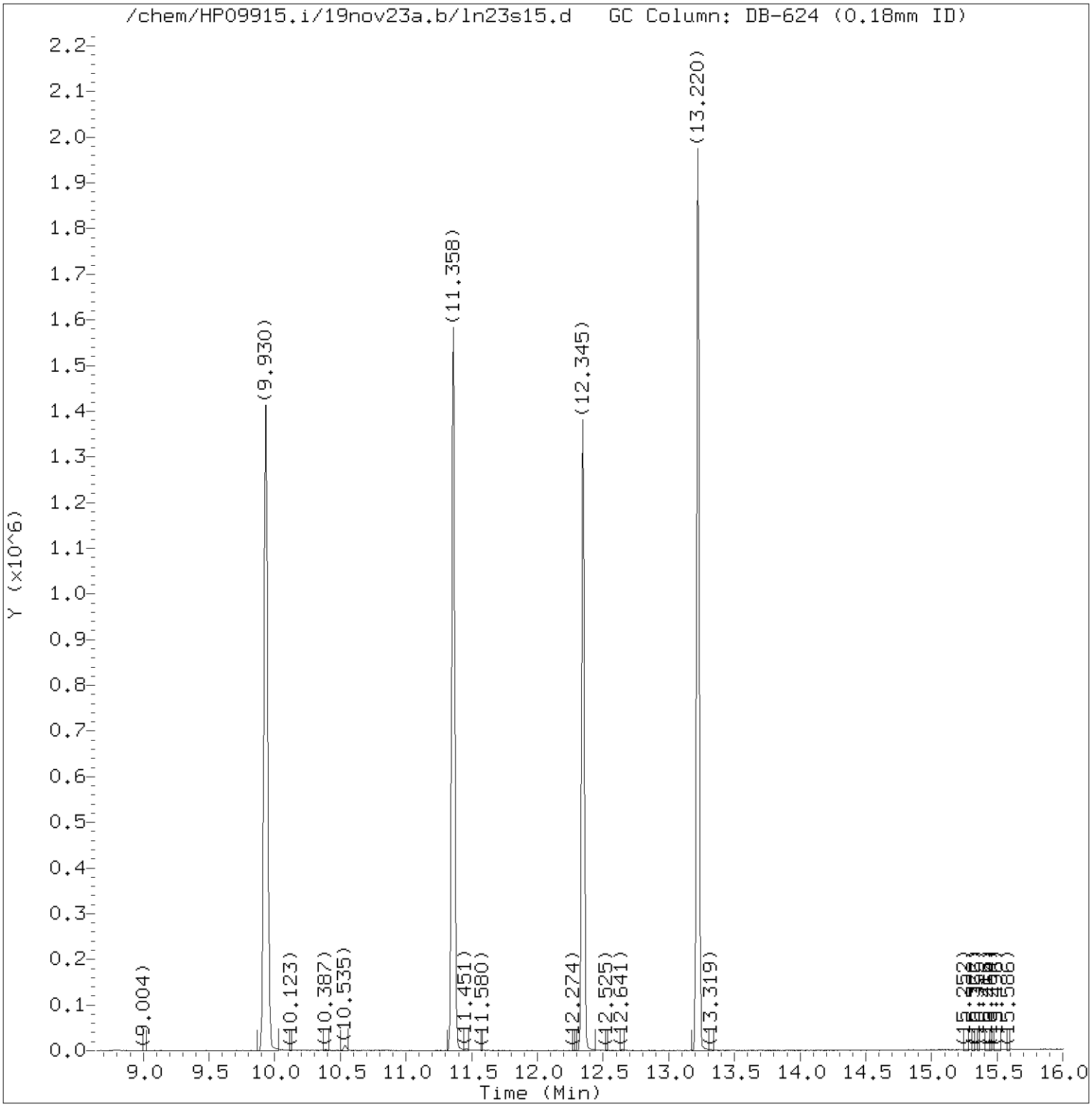
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s15.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 15:31 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 25-Nov-2019 13:32 lcp00895

Sample Name: JCW18 Lab Sample ID: 1205917

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:32.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s15.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 15:31 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 25-Nov-2019 13:32 lcp00895

Sample Name: JCW18 Lab Sample ID: 1205917

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:32.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s15.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 15:31 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 25-Nov-2019 13:32 lcp00895

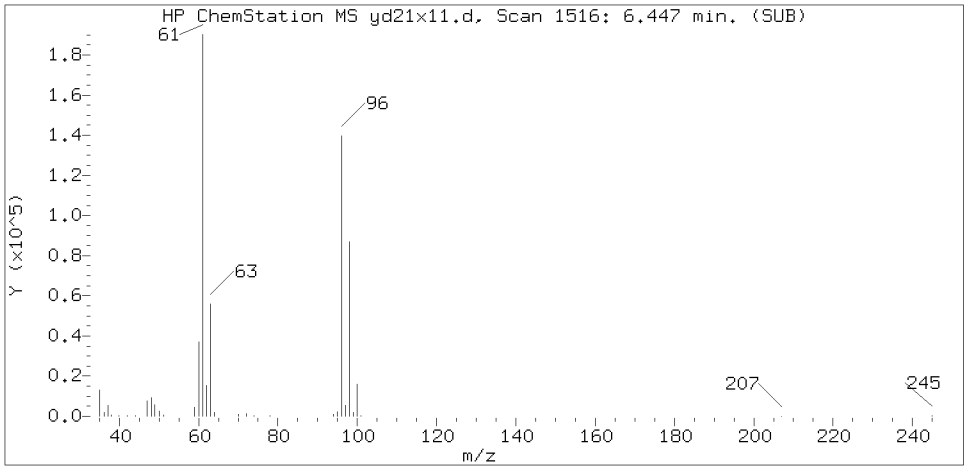
Sample Name: JCW18 Lab Sample ID: 1205917

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.493	65	200795	250.000
42) cis-1,2-Dichloroethene	(2)	6.371	96	2393M	0.396
52)$Dibromofluoromethane	(2)	7.072	113	268644	50.042
57)$1,2-Dichloroethane-d4	(2)	7.528	102	70657	51.643
66)*Fluorobenzene	(2)	7.956	96	1098052	50.000
71) Trichloroethene	(2)	8.429	95	6209	1.104
83)$Toluene-d8	(3)	9.934	98	1156297	48.438
93) Tetrachloroethene	(3)	10.541	166	3470	0.547
100)*Chlorobenzene-d5	(3)	11.358	117	912322	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	444013	49.121
131)*1,4-Dichlorobenzene-d4	(4)	13.220	152	495866	50.000

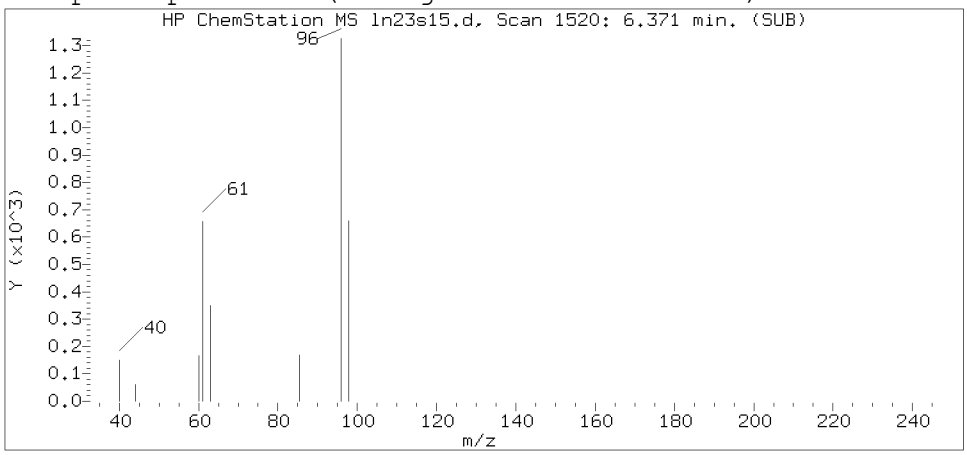
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:32.
Target 3.5 esignature user ID: lcp00895

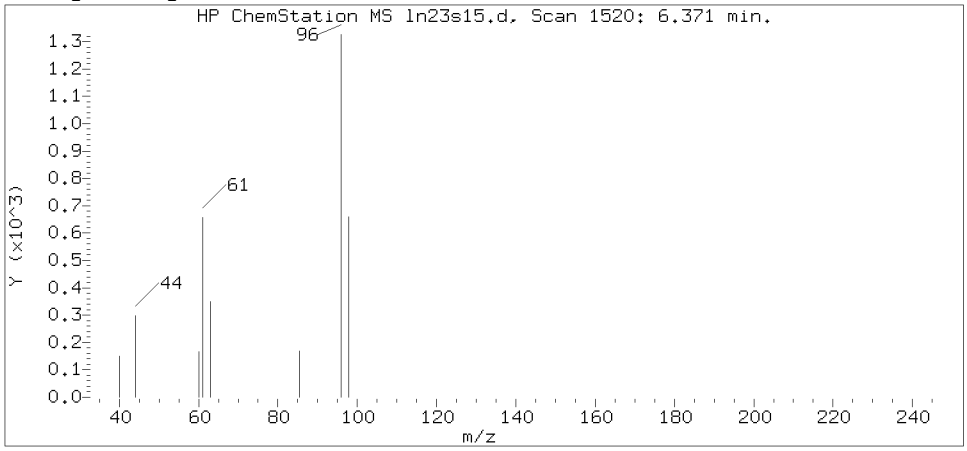
Reference Standard Spectrum for cis-1,2-Dichloroethene

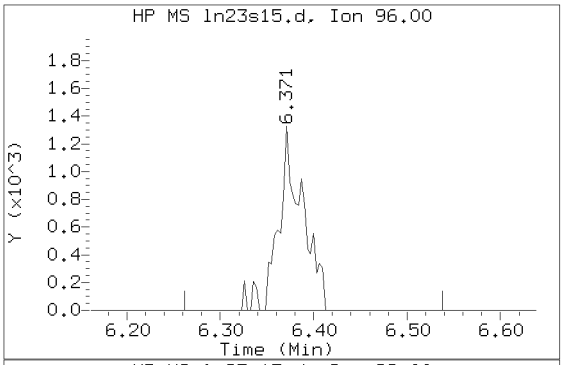


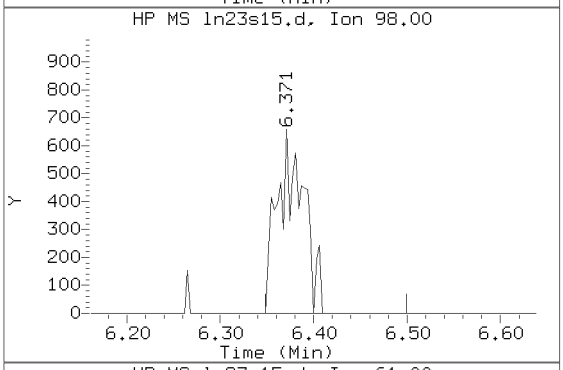
Sample Spectrum (Background Subtracted)

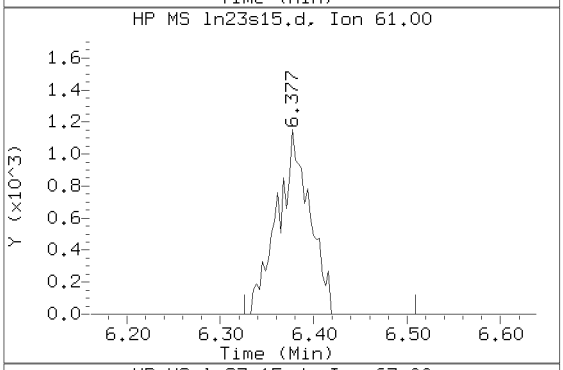


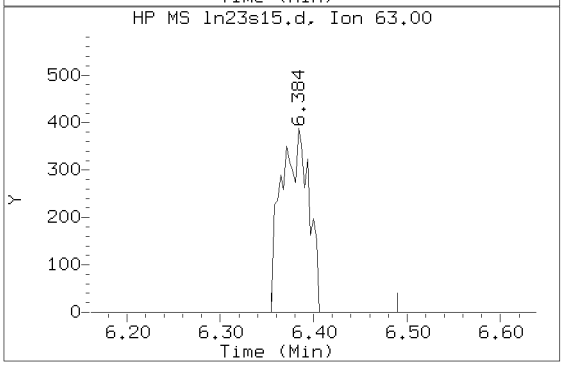
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23s15.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 15:31 Analyst ID: CLM27445

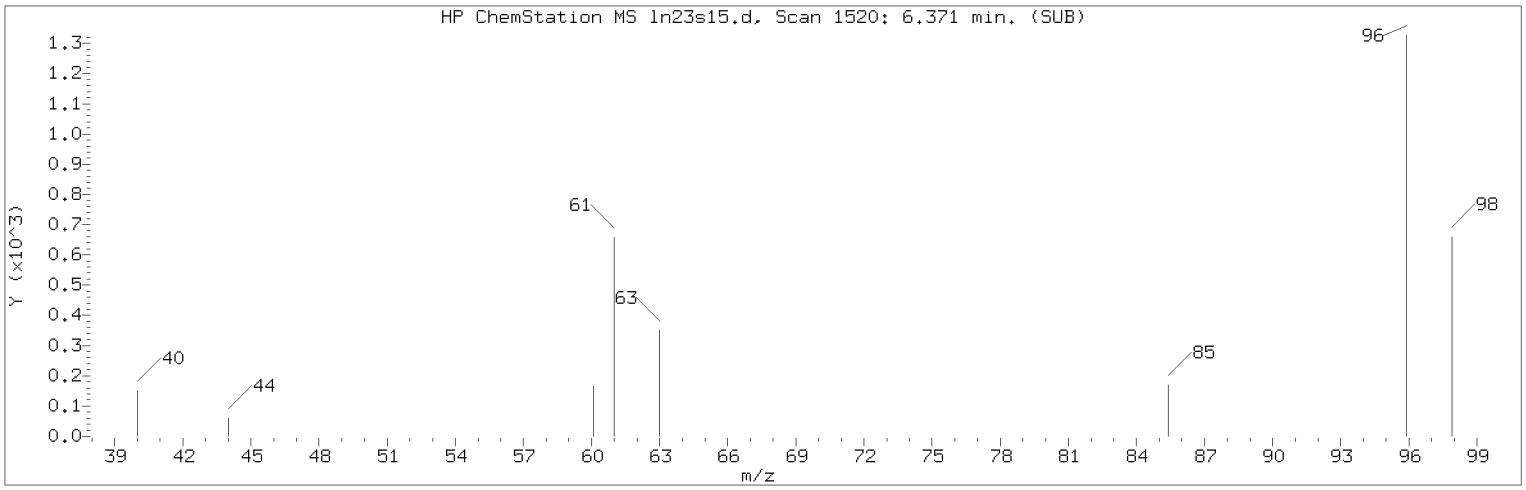
Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 25-Nov-2019 13:32 lcp00895

Sample Name: JCW18 Lab Sample ID: 1205917

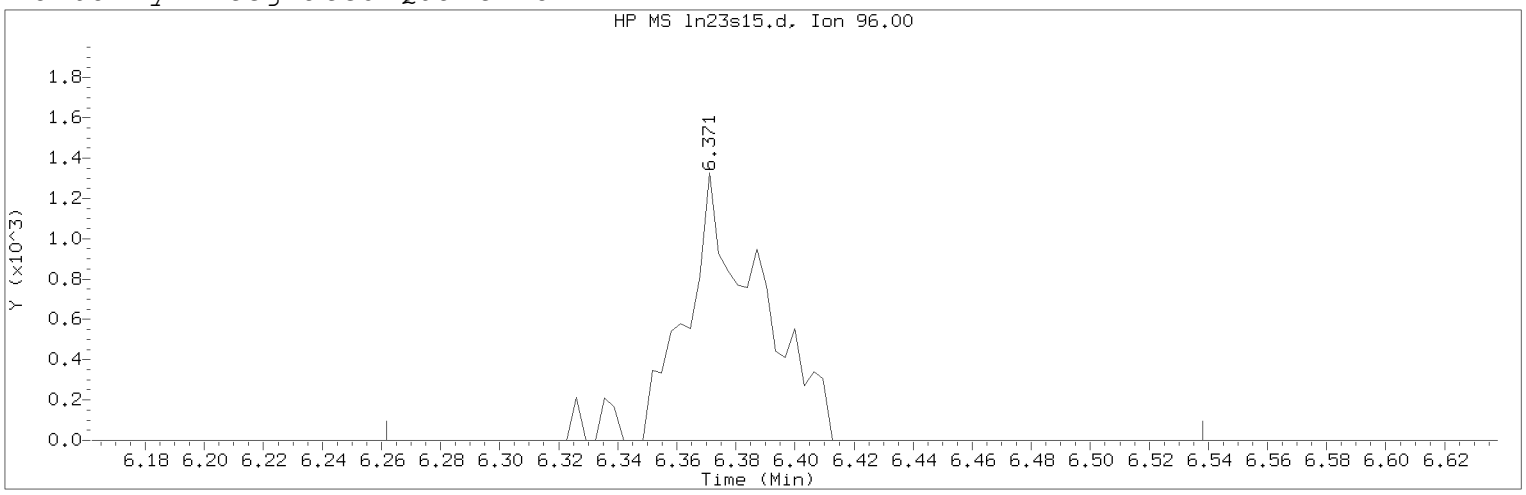
Compound Number	: 42
Compound Name	: cis-1,2-Dichloroethene
Scan Number	: 1520
Retention Time (minutes)	: 6.371
Relative Retention Time	: 0.00081
Quant Ion	: 96.00
Area (flag)	: 2393M
On-Column Amount (ng)	: 0.3961

Digitally signed by Linda C. Pape on 11/25/2019 at 13:32.
Target 3.5 esignature user ID: lcp00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23s15.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 15:31 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 25-Nov-2019 13:32 lcp00895

Sample Name: JCW18 Lab Sample ID: 1205917

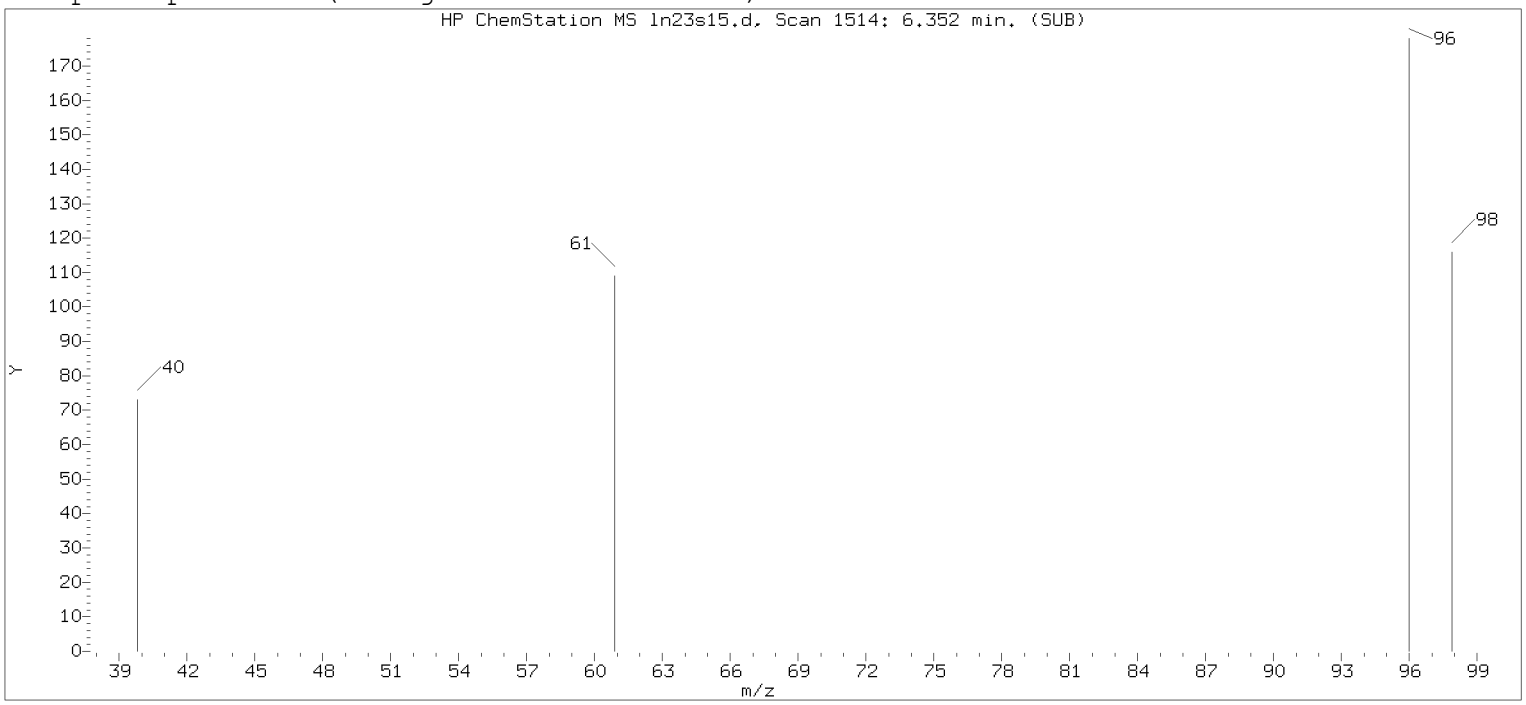
Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 1520
Retention Time (minutes): 6.371
Quant Ion : 96.00
Area (flag) : 2393M
On-Column Amount (ng) : 0.3961
Integration start scan : 1485 Integration stop scan: 1571
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

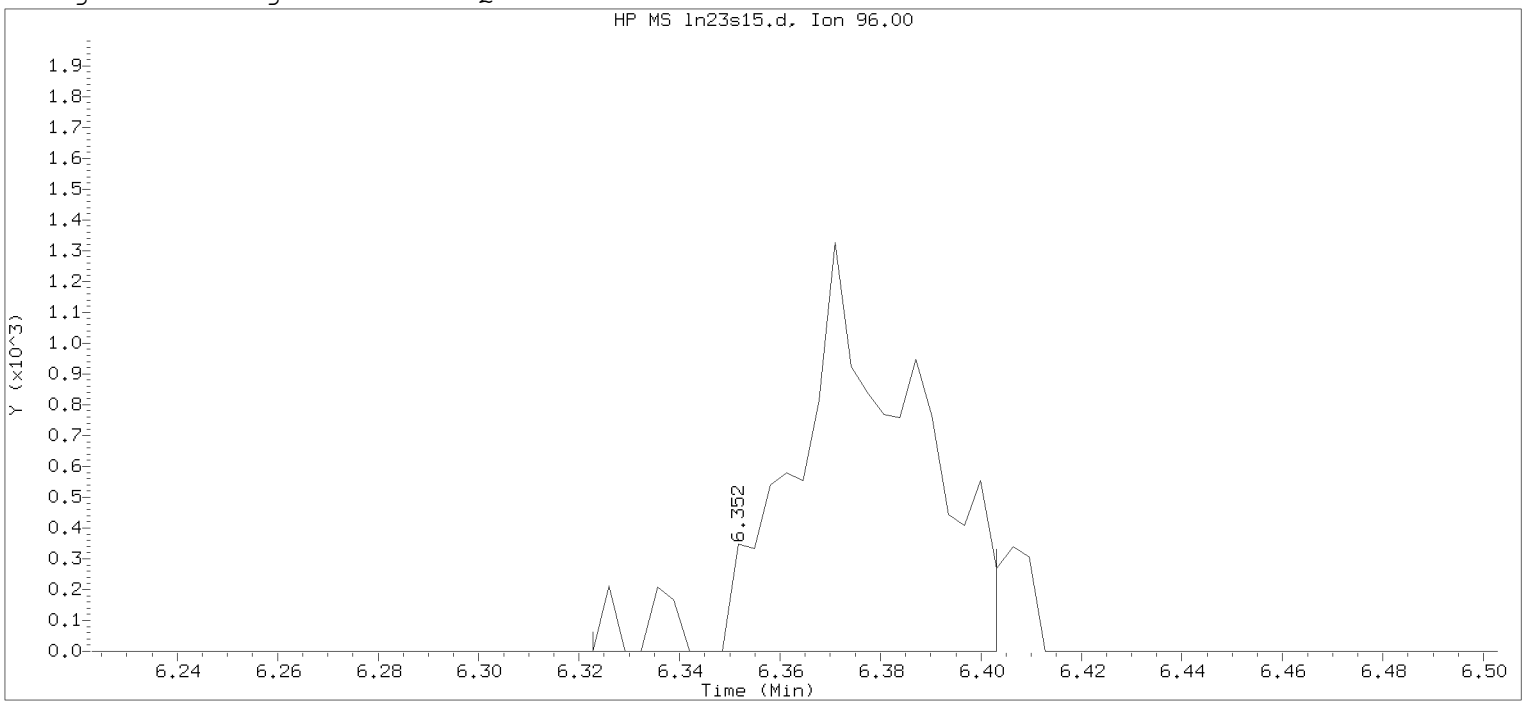
Analyst responsible for change: Digitally signed by Linda C. Pape
on 11/25/2019 at 13:32.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:53.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23s15.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 15:31 Analyst ID: CLM27445

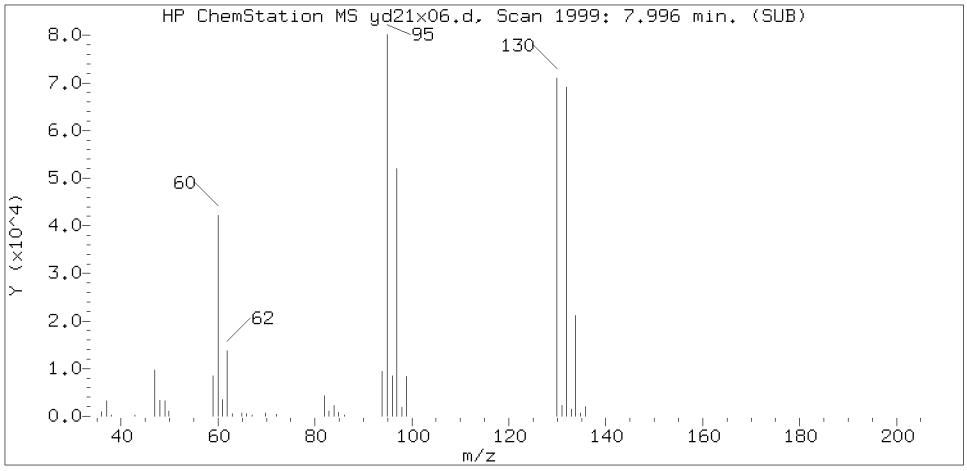
Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 15:48 Automation

Sample Name: JCW18 Lab Sample ID: 1205917

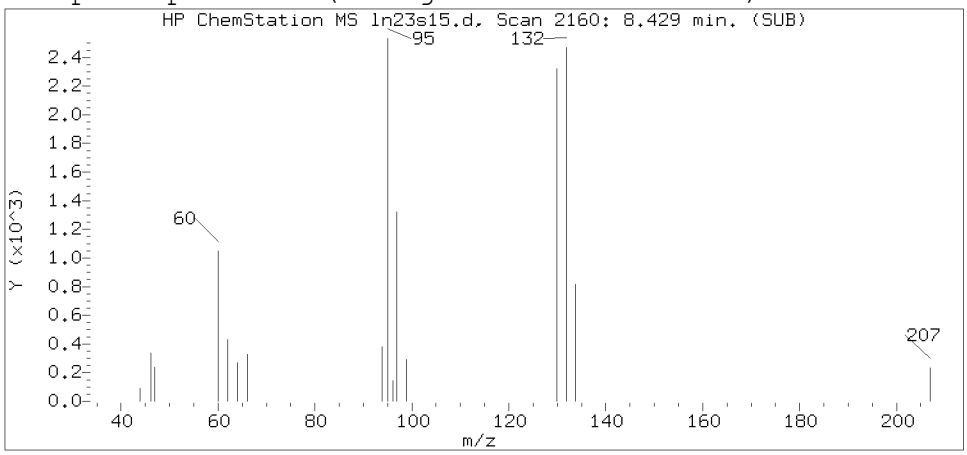
Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 1514
Retention Time (minutes): 6.352
Quant Ion : 96.00
Area : 2243
On-column Amount (ng) : 0.3712
Integration start scan : 1504 Integration stop scan: 1529
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 11/25/2019 at 13:32.
Target 3.5 esignature user: CLM27445

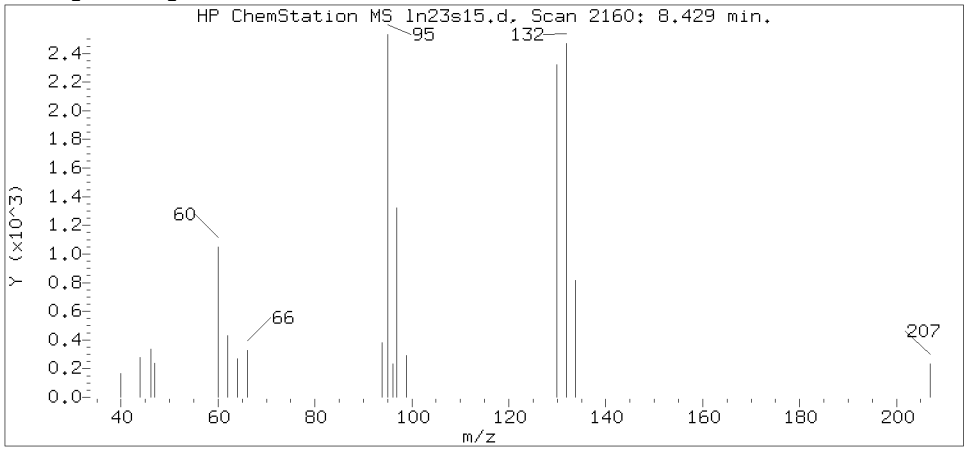
Reference Standard Spectrum for Trichloroethene

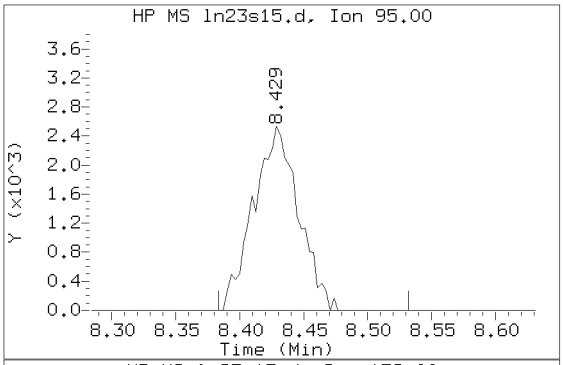


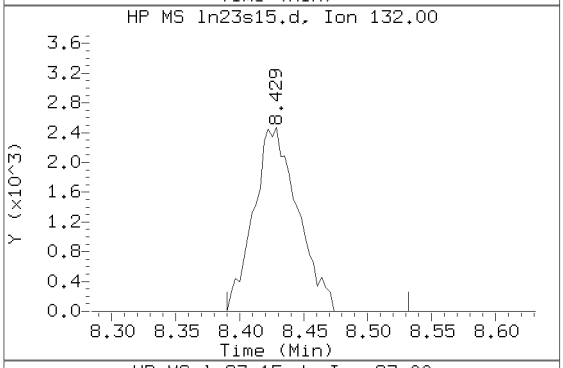
Sample Spectrum (Background Subtracted)

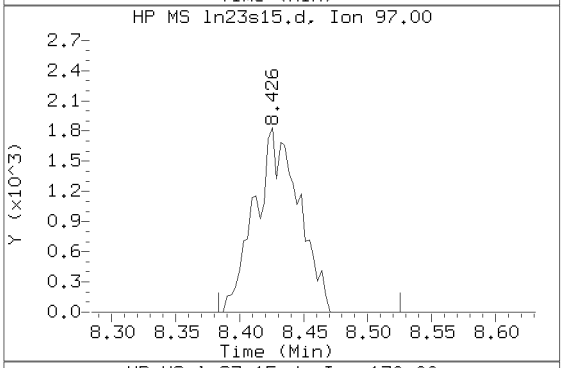


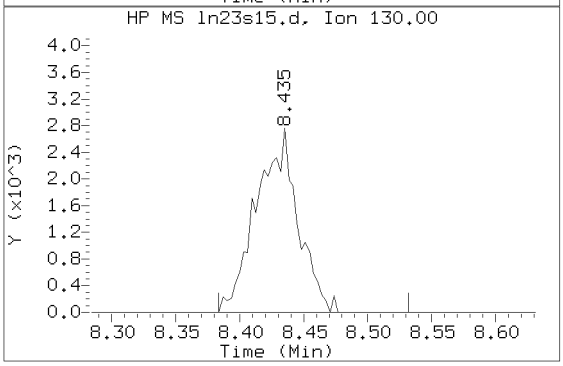
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23s15.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 15:31 Analyst ID: CLM27445

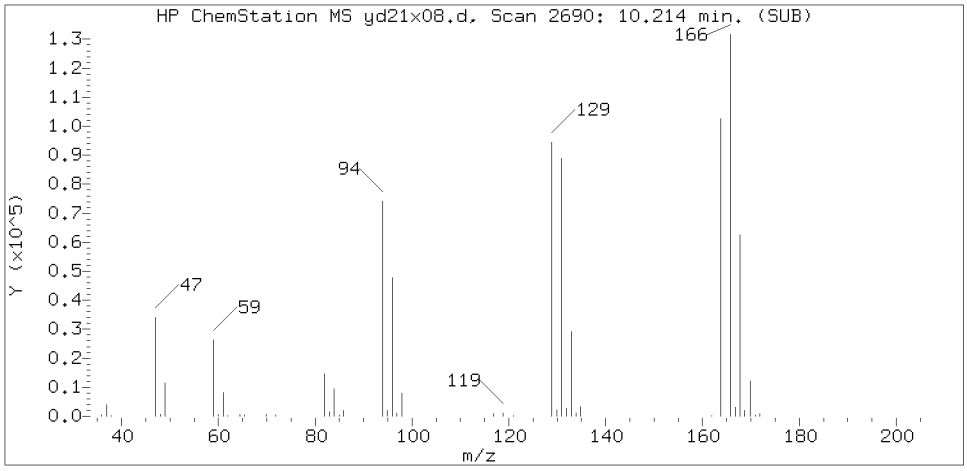
Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 25-Nov-2019 13:32 lcp00895

Sample Name: JCW18 Lab Sample ID: 1205917

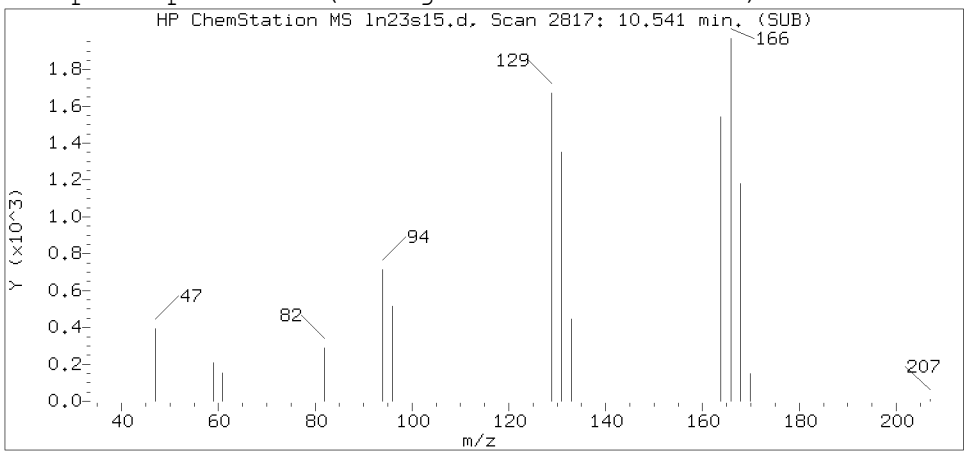
Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 2160
Retention Time (minutes): 8.429
Relative Retention Time :-0.00040
Quant Ion : 95.00
Area (flag) : 6209
On-Column Amount (ng) : 1.1041

Digitally signed by Linda C. Pape on 11/25/2019 at 13:32.
Target 3.5 esignature user ID: lcp00895

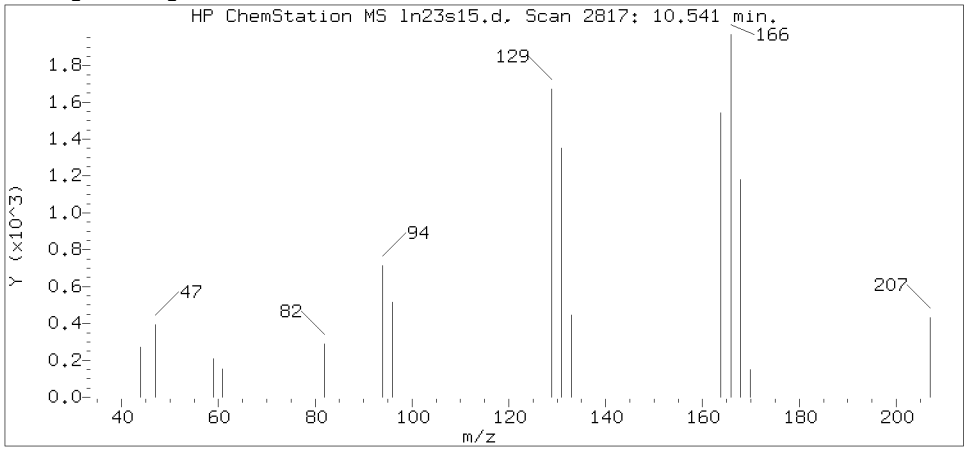
Reference Standard Spectrum for Tetrachloroethene

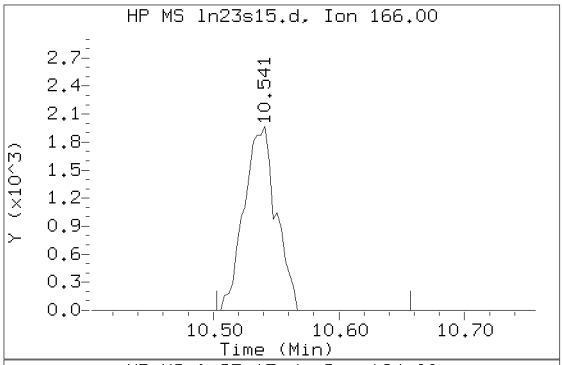


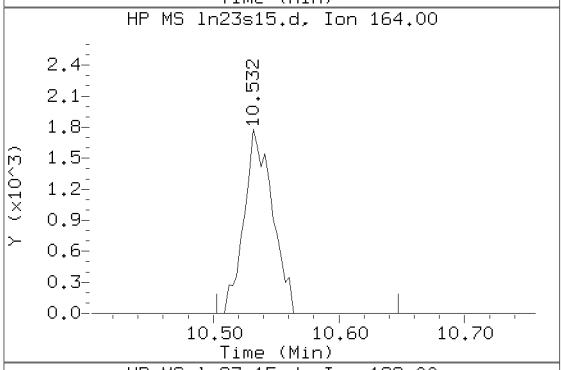
Sample Spectrum (Background Subtracted)

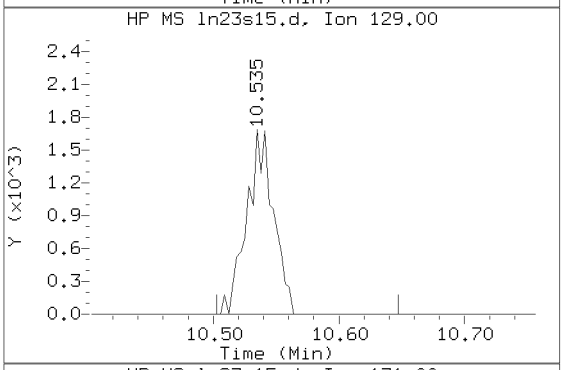


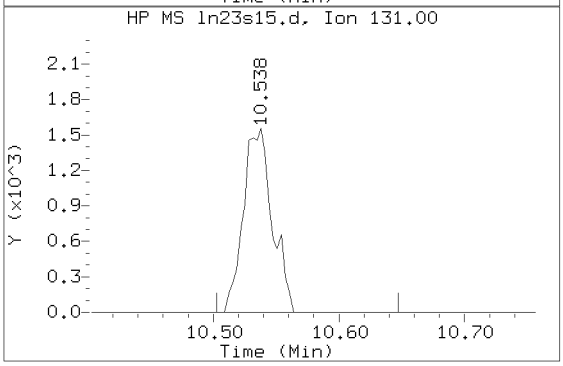
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23s15.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 15:31 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 25-Nov-2019 13:32 lcp00895

Sample Name: JCW18 Lab Sample ID: 1205917

Compound Number : 93
Compound Name : Tetrachloroethene
Scan Number : 2817
Retention Time (minutes): 10.541
Relative Retention Time :-0.00057
Quant Ion : 166.00
Area (flag) : 3470
On-Column Amount (ng) : 0.5475

Digitally signed by Linda C. Pape on 11/25/2019 at 13:32.
Target 3.5 esignature user ID: lcp00895

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\19nov04i\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
KAS02648	LN04T01.D	50NGBFB	11/04/2019	12:52	L191821AA	
KAS02648	LN04T02.D	50NGBFB	11/04/2019	13:05	L191821AA	
KAS02648	LN04T03.D	50NGBFB	11/04/2019	13:27	L191821AA	
KAS02648	LN04T04.D	50NGBFB	11/04/2019	13:45	L191821AA	
KAS02648	LN04T05.D	50NGBFB	11/04/2019	14:07	L191821AA	
KAS02648	LN04T06.D	50NGBFB	11/04/2019	14:18	L191821AA	
KAS02648	LN04X01.D	CLNBLK	11/04/2019	14:29		
KAS02648	LN04I01.D	VSTD300	11/04/2019	14:51		
KAS02648	LN04I02.D	VSTD100	11/04/2019	15:13		
KAS02648	LN04I03.D	VSTD050	11/04/2019	15:35		
KAS02648	LN04I04.D	VSTD020	11/04/2019	15:57		
KAS02648	LN04I05.D	VSTD010	11/04/2019	16:19		
KAS02648	LN04I06.D	VSTD004	11/04/2019	16:41		
KAS02648	LN04I07.D	VSTD001	11/04/2019	17:03		
KAS02648	LN04V01.D	ICVLLG	11/04/2019	17:25		
KAS02648	LN04V02.D	ICVLLG	11/04/2019	18:42		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\19nov23a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
CLM27445	LN23X55.D	VBLKL85	11/23/2019	06:24	L193261AA	
CLM27445	LN23T01.D	50NGBFB	11/23/2019	07:45	L193271AA	
CLM27445	LN23T02.D	50NGBFB	11/23/2019	07:57	L193271AA	
CLM27445	LN23X00.D	VBLKL87	11/23/2019	08:20	L193271AA	
CLM27445	LN23C01.D	VSTD050	11/23/2019	08:42	L193271AA	
CLM27445	LN23X60.D	VBLKL87	11/23/2019	09:04	L193271AA	
CLM27445	LN23S01.D	LCSL87	11/23/2019	09:26	L193271AA	
CLM27445	LN23B01.D	VBLKL87	11/23/2019	09:48	L193271AA	
CLM27445	LN23S02.D	1205905	11/23/2019	10:44	L193271AA	
CLM27445	LN23S03.D	1205900	11/23/2019	11:06	L193271AA	
CLM27445	LN23S04.D	1205901MS	11/23/2019	11:28	L193271AA	
CLM27445	LN23S05.D	1205902MSD	11/23/2019	11:50	L193271AA	
CLM27445	LN23S06.D	1205903	11/23/2019	12:12	L193271AA	
CLM27445	LN23S07.D	1205904	11/23/2019	12:34	L193271AA	
CLM27445	LN23S08.D	1205910	11/23/2019	12:56	L193271AA	
CLM27445	LN23S09.D	1205911	11/23/2019	13:18	L193271AA	
CLM27445	LN23S10.D	1205912	11/23/2019	13:40	L193271AA	
CLM27445	LN23S11.D	1205913	11/23/2019	14:02	L193271AA	
CLM27445	LN23S12.D	1205914	11/23/2019	14:24	L193271AA	
CLM27445	LN23S13.D	1205915	11/23/2019	14:46	L193271AA	
CLM27445	LN23S14.D	1205916	11/23/2019	15:08	L193271AA	
CLM27445	LN23S15.D	1205917	11/23/2019	15:31	L193271AA	
CLM27445	LN23S16.D	1205918	11/23/2019	15:53	L193271AA	
CLM27445	LN23S17.D	1205928	11/23/2019	16:15	L193271AA	
CLM27445	LN23S18.D	1205929	11/23/2019	16:37	L193271AA	
CLM27445	LN23S19.D	1206738	11/23/2019	16:59	L193271AA	
CLM27445	LN23S20.D	1206739	11/23/2019	17:21	L193271AA	
CLM27445	LN23S21.D	1206740	11/23/2019	17:43	L193271AA	

Data File: /chem/HP09915.i/19nov04i.b/ln04t06.d

Date : 04-NOV-2019 14:18

Client ID: AUG02-19

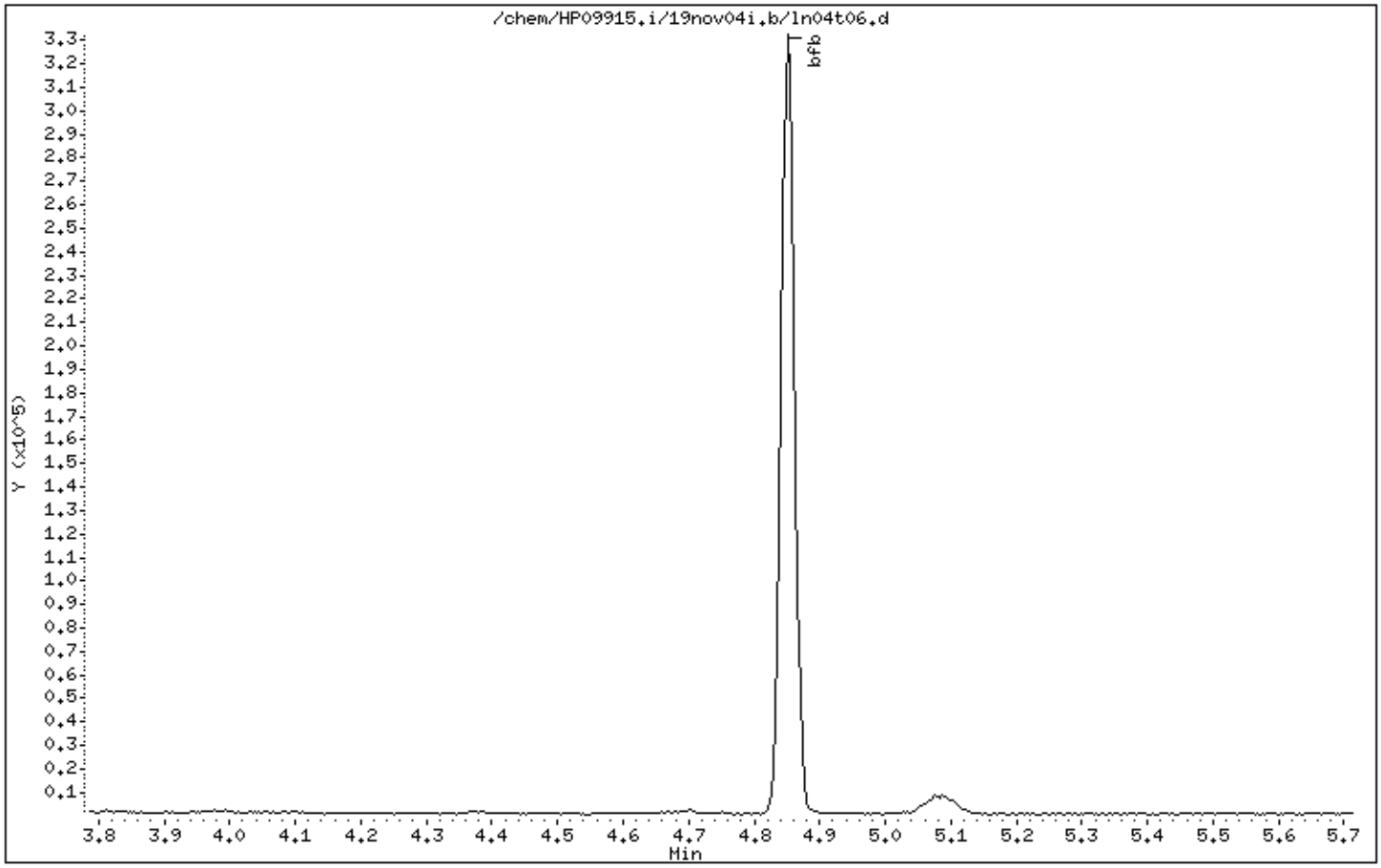
Instrument: HP09915.i

Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem/HP09915.i/19nov04i.b/ln04t06.d

Date : 04-NOV-2019 14:18

Client ID: AUG02-19

Instrument: HP09915.i

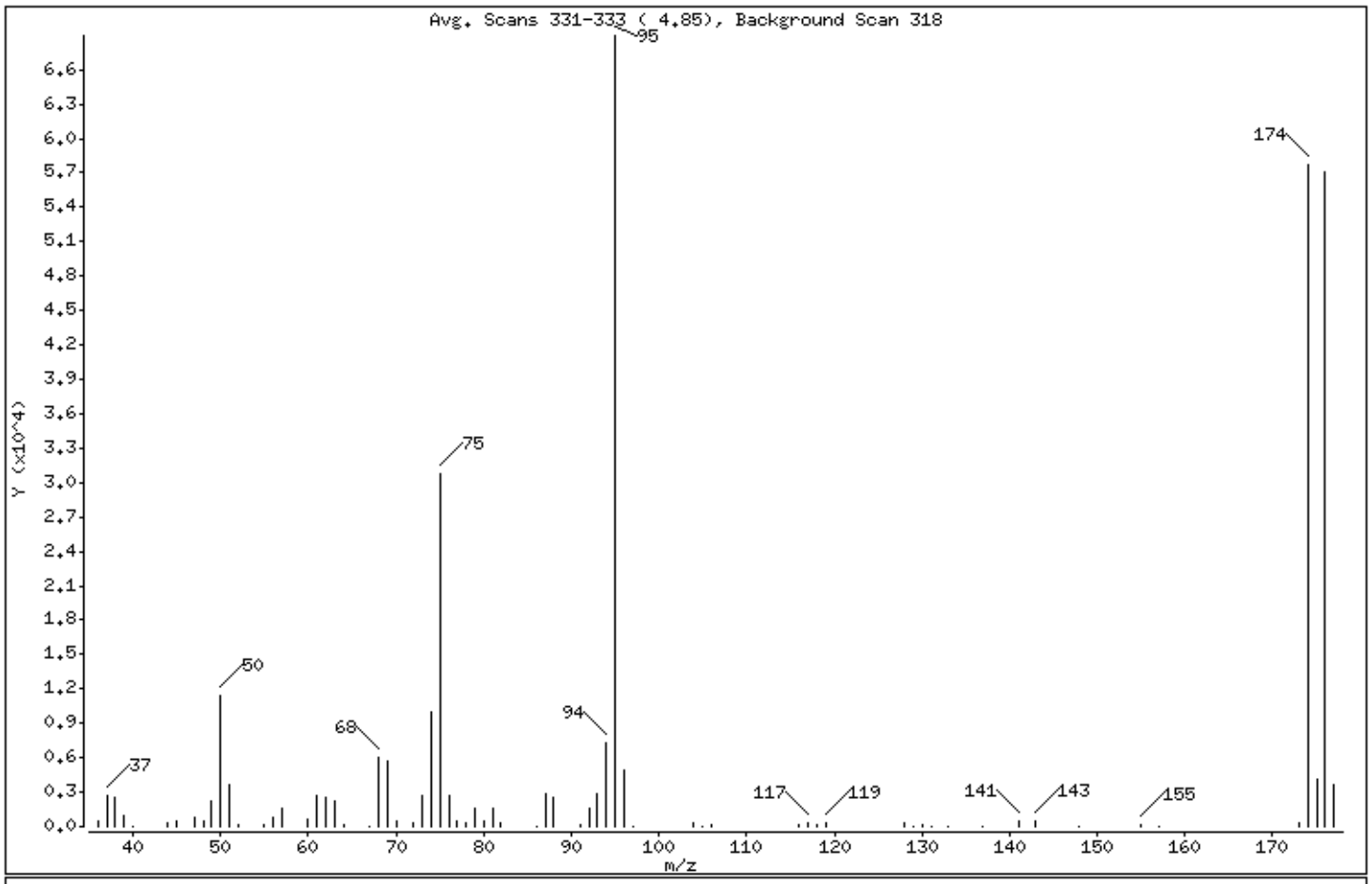
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.48
75	30.00 - 60.00% of mass 95	44.65
96	5.00 - 9.00% of mass 95	7.22
173	Less than 2.00% of mass 174	0.51 (0.61)
174	50.00 - 100.00% of mass 95	83.73
175	5.00 - 9.00% of mass 174	5.92 (7.07)
176	95.00 - 101.00% of mass 174	82.66 (98.72)
177	5.00 - 9.00% of mass 176	5.37 (6.49)

Date : 04-NOV-2019 14:18

Client ID: AUG02-19 Instrument: HP09915.i

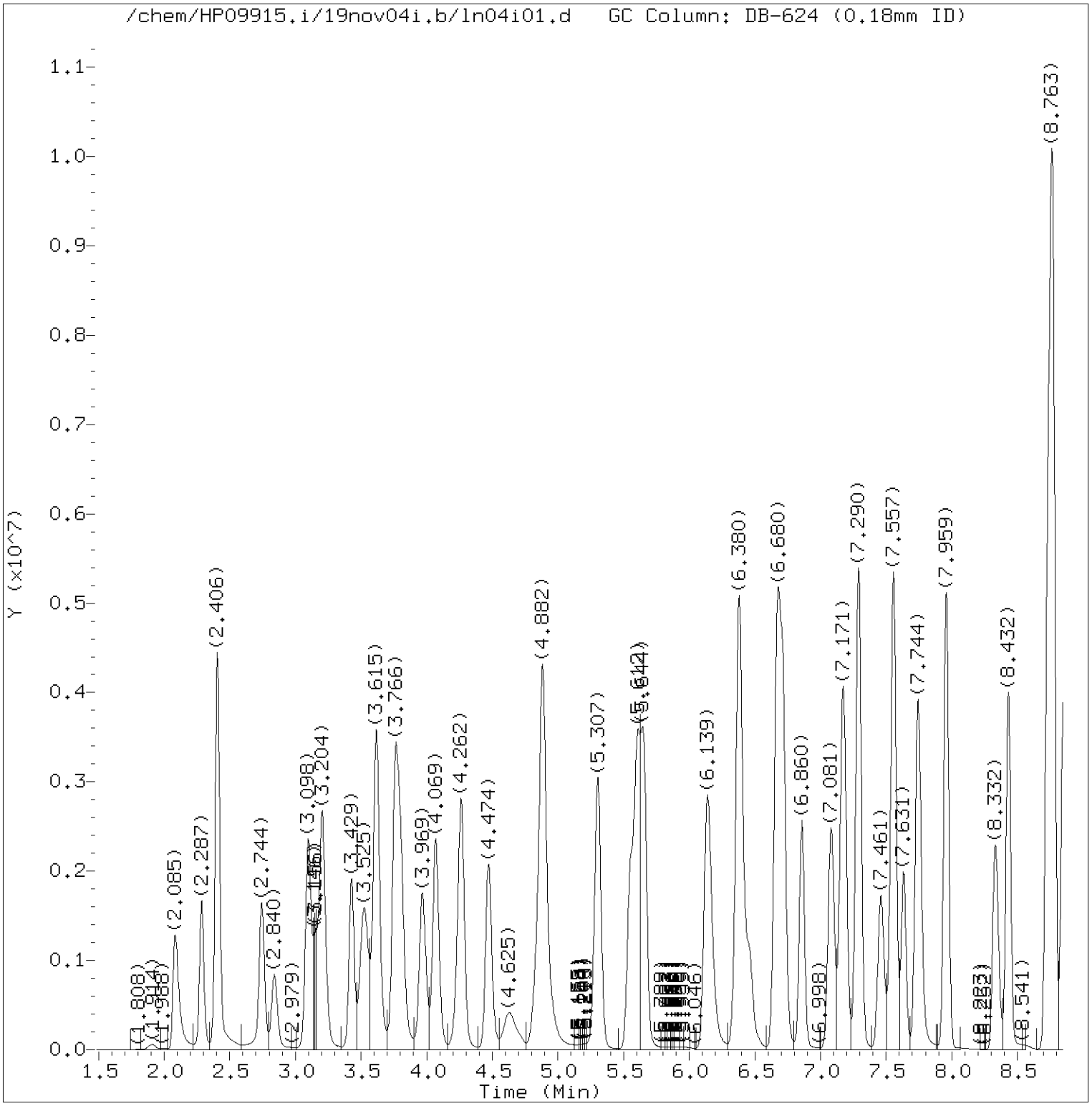
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: ln04t06.d
Spectrum: Avg. Scans 331-333 (4.85), Background Scan 318
Location of Maximum: 95.00
Number of points: 69

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	529	62.00	2498	86.00	55	129.00	53
37.00	2736	63.00	2218	87.00	2840	130.00	112
38.00	2557	64.00	150	88.00	2593	131.00	53
39.00	971	67.00	71	91.00	144	133.00	52
40.00	22	68.00	6076	92.00	1588	137.00	53
44.00	270	69.00	5647	93.00	2845	141.00	538
45.00	457	70.00	476	94.00	7275	143.00	484
47.00	784	72.00	322	95.00	68968	148.00	77
48.00	424	73.00	2656	96.00	4977	155.00	162
49.00	2292	74.00	10024	97.00	62	157.00	63
50.00	11364	75.00	30792	104.00	284	173.00	350
51.00	3586	76.00	2712	105.00	50	174.00	57744
52.00	134	77.00	405	106.00	233	175.00	4082
55.00	217	78.00	267	116.00	189	176.00	57008
56.00	871	79.00	1601	117.00	348	177.00	3701
57.00	1629	80.00	440	118.00	231		
60.00	555	81.00	1543	119.00	348		
61.00	2700	82.00	307	128.00	239		



Total Ion Chromatogram (TIC)

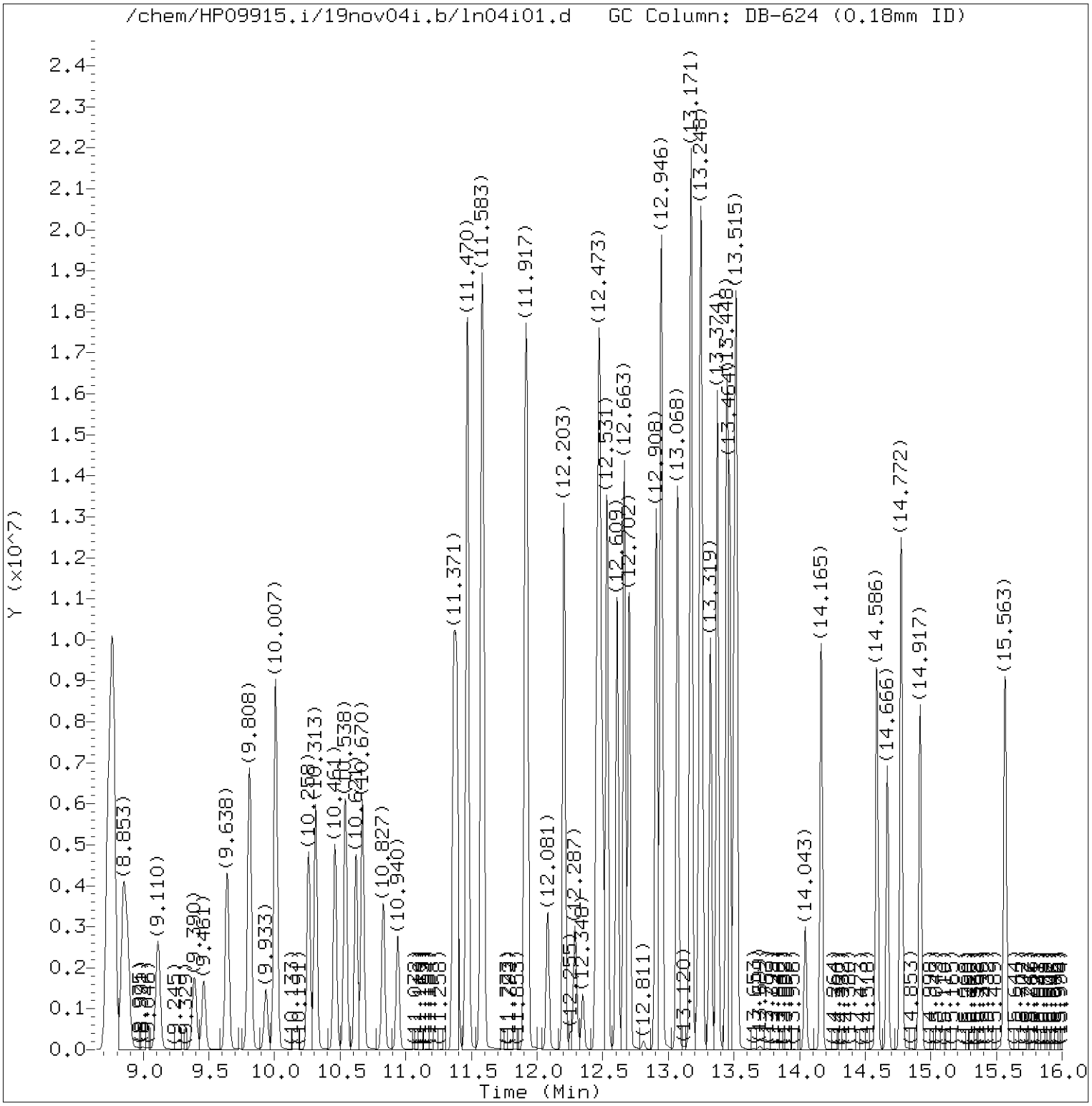
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.085	85	2719746M	347.943
4) Chloromethane	(2)	2.287	50	2403581	319.051
5) 1,3-Butadiene	(2)	2.406	39	1785787M	285.486
6) Vinyl Chloride	(2)	2.406	62	2412855	320.904
8) Bromomethane	(2)	2.744	94	1638575	304.015
9) Chloroethane	(2)	2.837	64	1253478	303.356
12) Trichlorofluoromethane	(2)	3.152	101	2661050	328.734
11) n-Pentane	(2)	3.204	43	2816823	294.455
14) Ethyl ether	(2)	3.429	59	1721693	329.146
15) Freon 123a	(2)	3.525	67	1991616	305.852
16) Acrolein	(1)	3.615	56	5765354	3020.583
17) 1,1-Dichloroethene	(2)	3.760	96	1489890	313.570
17) 1,1-Dichloroethene	(2)	3.757	63	721205	302.767
19) Freon 113	(2)	3.792	101	1732433	319.583
18) Acetone	(1)	3.802	58	531845	621.534
22) Methyl Iodide	(2)	3.966	142	3047145	309.483
21) 2-Propanol	(1)	3.995	45	936919	1523.065
23) Carbon Disulfide	(2)	4.069	76	5676465	317.027
27) Methyl Acetate	(2)	4.239	43	1941315	317.230
25) Allyl Chloride	(2)	4.265	41	2748698	322.482
28) Methylene Chloride	(2)	4.474	84	1745840	308.716
29)*t-Butyl alcohol-d10	(1)	4.503	65	254406M	250.000
30) t-Butyl alcohol	(1)	4.638	59	1641037	1532.140
31) Acrylonitrile	(2)	4.827	53	1039800	315.820
32) trans-1,2-Dichloroethene	(2)	4.885	96	1713357	311.714
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	5505439	305.143
34) n-Hexane	(2)	5.307	57	2863189M	334.811
36) 1,1-Dichloroethane	(2)	5.548	63	3007196	313.618
38) di-Isopropyl ether	(2)	5.609	45	5739955	310.377
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	2776921	322.788
40) Ethyl t-butyl ether	(2)	6.139	59	5425034	302.275
43) 1,2-Dichloroethene (Total)	(2)		96	3646040	624.977
44) 2-Butanone	(2)	6.364	43	2642793	625.317
42) cis-1,2-Dichloroethene	(2)	6.380	96	1932683	313.263
45) 2,2-Dichloropropane	(2)	6.397	77	2377411	318.945
47) Propionitrile	(1)	6.458	54	2126389	1593.336
48) Methacrylonitrile	(2)	6.670	67	2858148	804.768
49) Bromochloromethane	(2)	6.708	128	1075154	328.655

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.718	71	758236	628.991
51) Chloroform	(2)	6.860	83	2916299	317.988
52)$Dibromofluoromethane	(2)	7.075	113	276322	50.424
52)$Dibromofluoromethane	(2)	7.075	111	279197	49.969
53) 1,1,1-Trichloroethane	(2)	7.081	97	2560601	327.130
54) Cyclohexane	(2)	7.171	56	3429211	327.611
54) Cyclohexane	(2)	7.171	84	2984908	328.282
54) Cyclohexane	(2)	7.171	69	1068201	329.937
56) Carbon Tetrachloride	(2)	7.287	117	2252864	339.350
55) 1,1-Dichloropropene	(2)	7.294	75	2434619	321.125
58) Isobutyl Alcohol	(1)	7.461	41	1382486	3835.573
57)$1,2-Dichloroethane-d4	(2)	7.528	102	68480	49.033
57)$1,2-Dichloroethane-d4	(2)	7.532	65	307306	49.375
57)$1,2-Dichloroethane-d4	(2)	7.528	104	44002	49.326
60) Benzene	(2)	7.557	78	7094466	311.169
61) 1,2-Dichloroethane	(2)	7.634	62	2222342	303.049
61) 1,2-Dichloroethane	(2)	7.634	98	228988	315.535
65) t-Amyl methyl ether	(2)	7.744	73	5421278	300.945
67) n-Heptane	(2)	7.959	43	2592531MA	324.518
66)*Fluorobenzene	(2)	7.959	96	1120873	50.000
69) n-Butanol	(1)	8.332	56	2465385M	7947.068
71) Trichloroethene	(2)	8.432	95	1841720	320.821
72) Methylcyclohexane	(2)	8.734	83	3568410	335.054
72) Methylcyclohexane	(2)	8.734	98	1632993	338.844
73) 1,2-Dichloropropane	(2)	8.769	63	1825943	315.397
76) Methyl Methacrylate	(2)	8.850	69	1904896A	340.256
75) 1,4-Dioxane	(1)	8.856	88	338379M	3968.421
74) Dibromomethane	(2)	8.879	93	1210939	323.274
78) Bromodichloromethane	(2)	9.113	83	2314651	344.351
79) 2-Nitropropane	(2)	9.390	41	1438925	706.755
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	926413	372.584
81) cis-1,3-Dichloropropene	(2)	9.638	75	3074664	344.402
82) 4-Methyl-2-pentanone	(2)	9.808	43	5422938	607.899
83)$Toluene-d8	(3)	9.933	98	1156351	49.563
83)$Toluene-d8	(3)	9.933	100	751534	49.726
88) Toluene	(3)	10.007	92	4532879	309.894
90) 1,3-Dichloropropene (total)	(3)		100	5974636	693.659
89) trans-1,3-Dichloropropene	(3)	10.258	75	2899972	349.257

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	10.313	69	3356305	332.603
92) 1,1,2-Trichloroethane	(3)	10.461	97	1768710	318.935
93) Tetrachloroethene	(3)	10.541	166	1990565	321.327
94) 1,3-Dichloropropane	(3)	10.621	76	3006585	317.532
96) 2-Hexanone	(3)	10.670	43	3998423	593.616
97) Dibromochloromethane	(3)	10.827	129	2037523	358.670
99) 1,2-Dibromoethane	(3)	10.940	107	1987783	330.088
100)*Chlorobenzene-d5	(3)	11.361	117	891668	50.000
101) 1-Chlorohexane	(3)	11.364	91	2458057	312.814
102) Chlorobenzene	(3)	11.387	112	5140609	310.783
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	1789998	328.446
104) Ethylbenzene	(3)	11.470	91	8606821	307.854
106) m+p-Xylene	(3)	11.583	106	6690837	608.359
108) Xylene (Total)	(3)		106	9979970	911.130
107) o-Xylene	(3)	11.908	106	3289133	302.771
109) Styrene	(3)	11.924	104	5647939	314.619
110) Bromoform	(3)	12.081	173	1534520	361.500
111) Isopropylbenzene	(3)	12.203	105	8466138	310.714
112) Cyclohexanone	(1)	12.287	55	1351186	4046.080
114)$4-Bromofluorobenzene	(3)	12.348	95	440049	49.810
114)$4-Bromofluorobenzene	(3)	12.348	174	362553	49.502
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	2800639M	310.705
115) Bromobenzene	(4)	12.467	156	2234066	311.517
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	2150976	773.637
117) 1,2,3-Trichloropropane	(4)	12.499	110	866230	313.172
119) n-Propylbenzene	(4)	12.531	91	9654812	308.142
120) 2-Chlorotoluene	(4)	12.609	126	2098494	315.266
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	7238022	317.873
121) 4-Chlorotoluene	(4)	12.702	126	2155793	311.148
124) tert-Butylbenzene	(4)	12.908	134	1524421M	323.717
125) Pentachloroethane	(4)	12.940	167	1461833	360.511
126) 1,2,4-Trimethylbenzene	(4)	12.949	105	7469187	311.236
127) sec-Butylbenzene	(4)	13.068	105	8682126	308.971
129) 1,3-Dichlorobenzene	(4)	13.168	146	3858953	292.822
130) p-Isopropyltoluene	(4)	13.174	119	7289488	299.854
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	477171	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	4013510	293.777
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	7915203	311.364

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

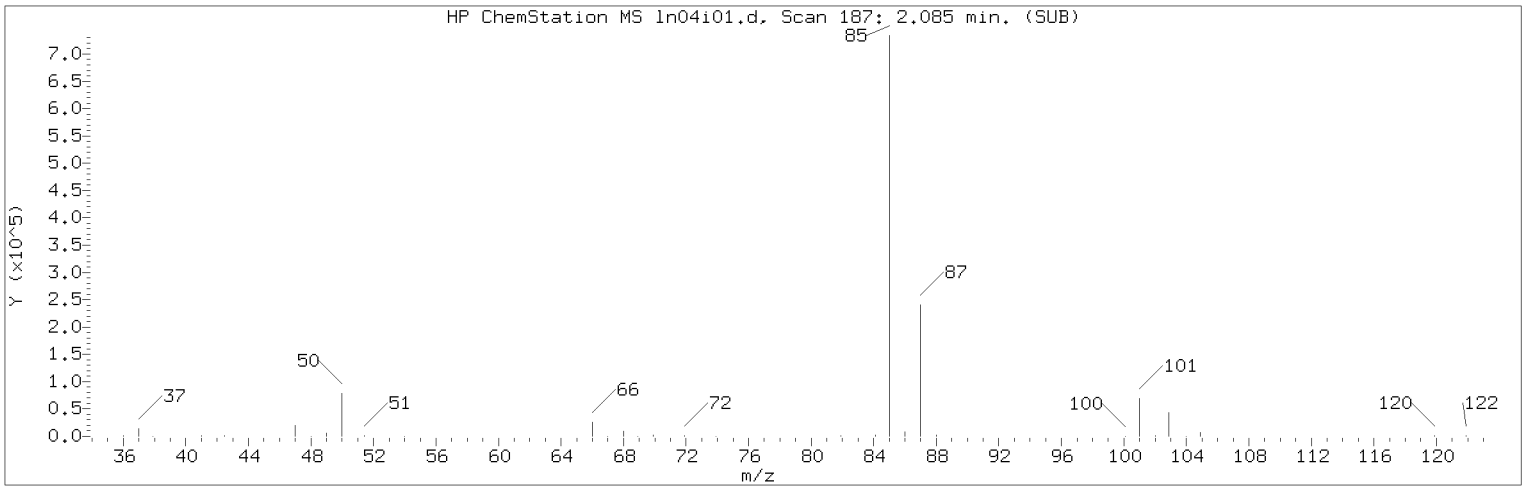
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

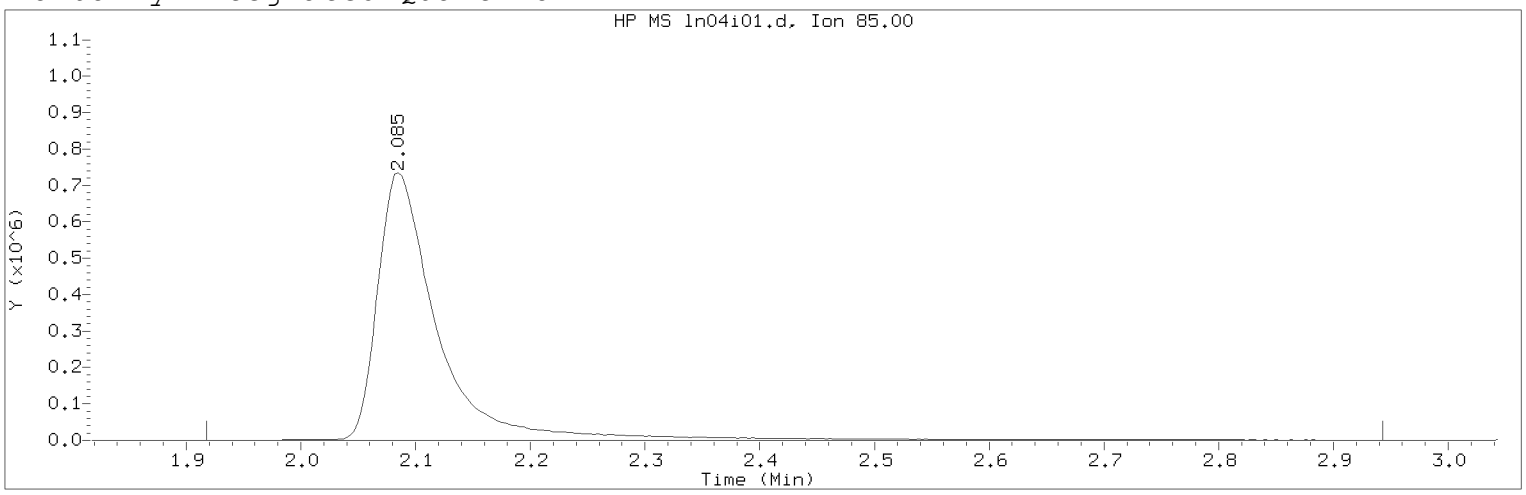
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.319	91	6484944	336.931
136) 1,3-Diethylbenzene	(4)	13.374	119	4897725	309.573
141) Diethylbenzene (total)	(4)		100	13982971	913.975
137) 1,4-Diethylbenzene	(4)	13.444	119	5013123	299.077
139) n-Butylbenzene	(4)	13.467	92	3608595	290.316
138) 1,2-Dichlorobenzene	(4)	13.502	146	3859125	296.761
140) 1,2-Diethylbenzene	(4)	13.518	119	4072123	305.325
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	669008	339.050
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	2855960	285.855
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	2681523	276.030
147) Hexachlorobutadiene	(4)	14.670	225	1157297	252.311
148) Naphthalene	(4)	14.772	128	9186333	294.145
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	2488608	263.270
150) 2-Methylnaphthalene	(4)	15.563	142	4666682	242.655

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

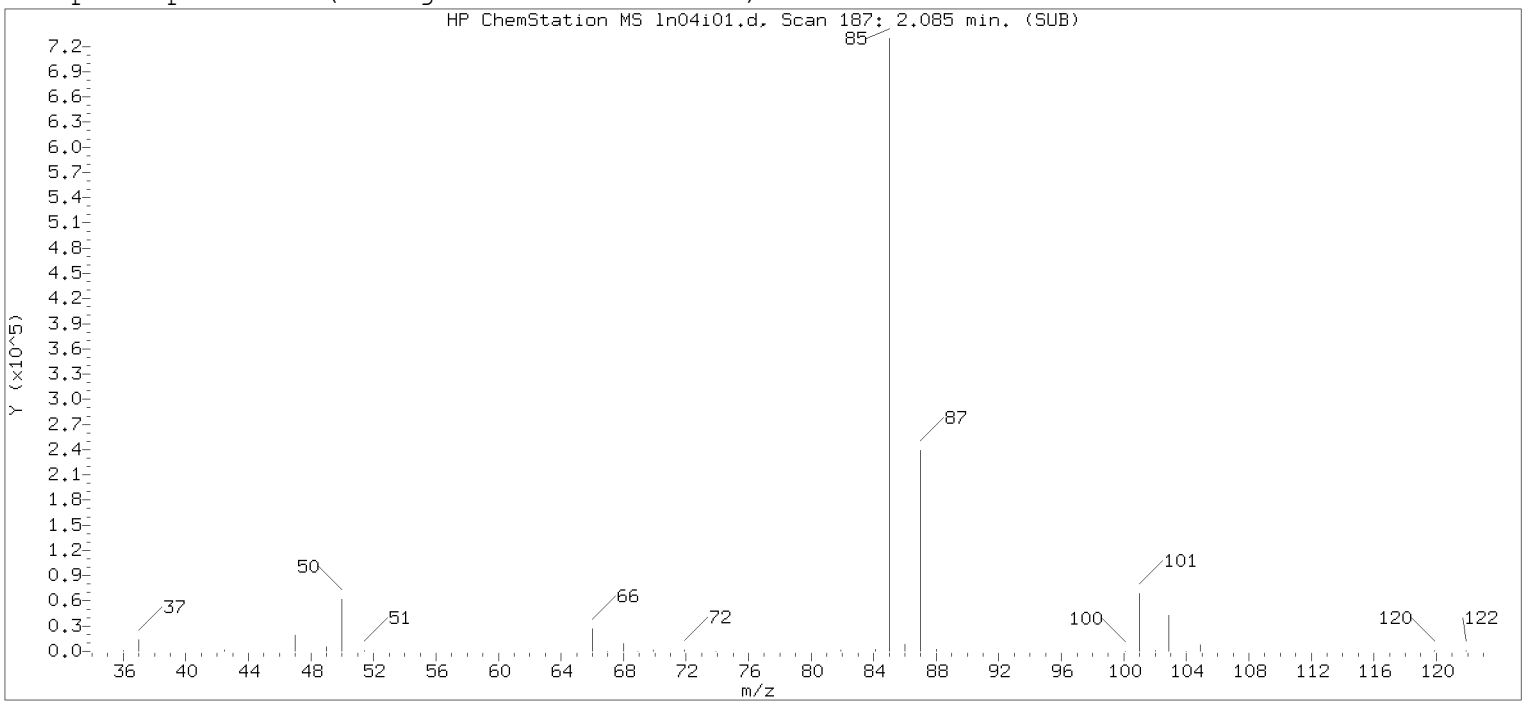
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area (flag) : 2719746M
On-Column Amount (ng) : 347.9426
Integration start scan : 134 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

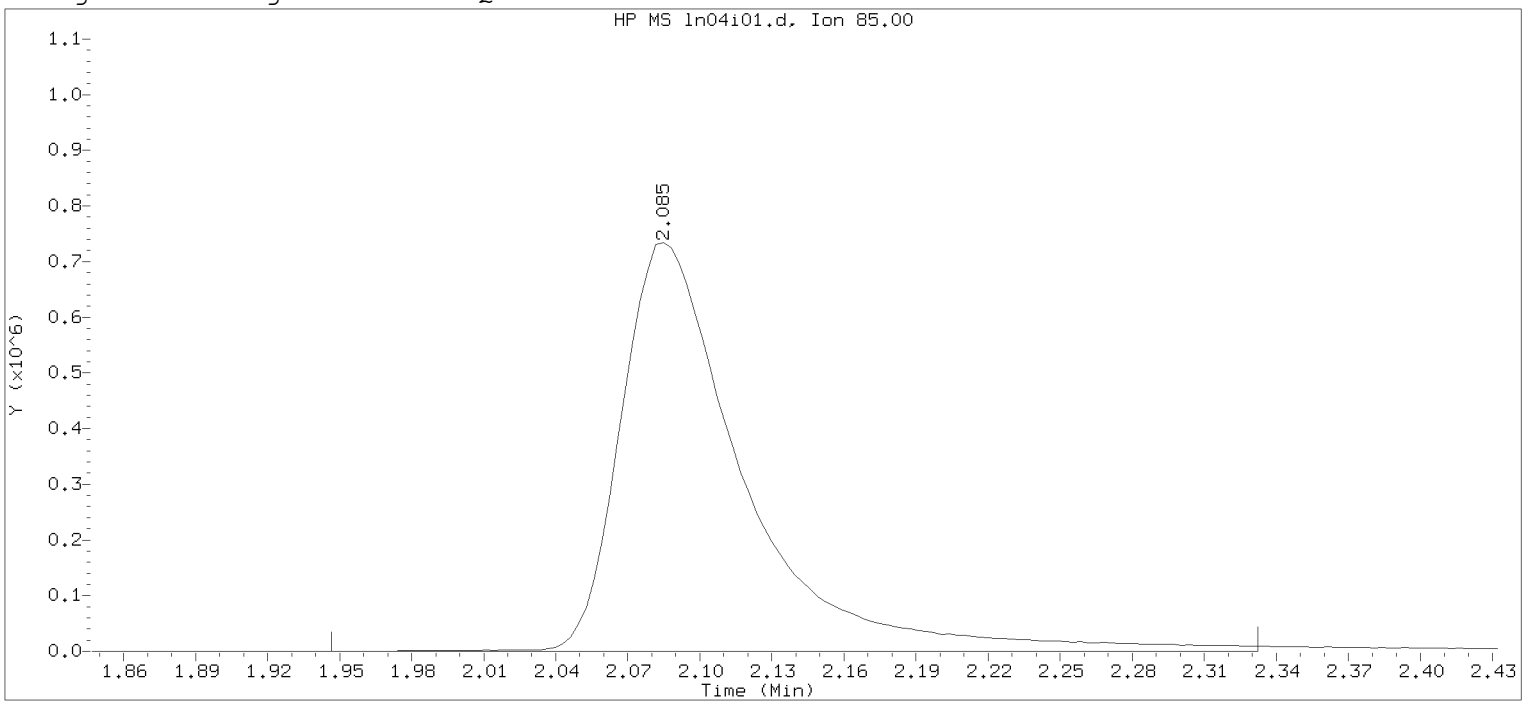
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

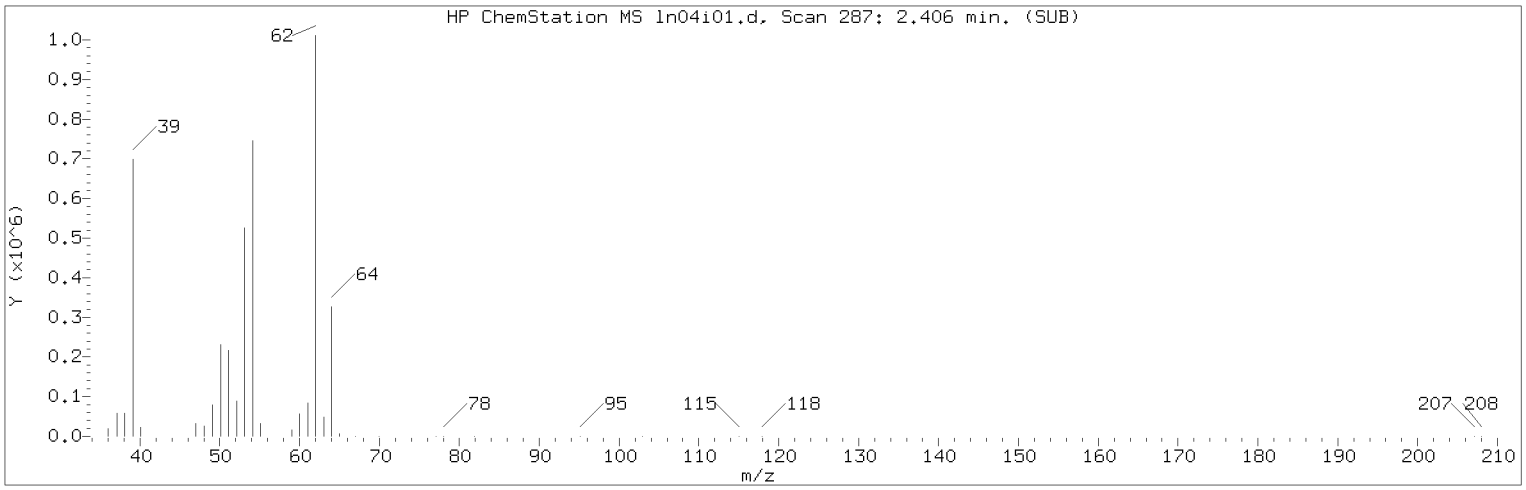
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

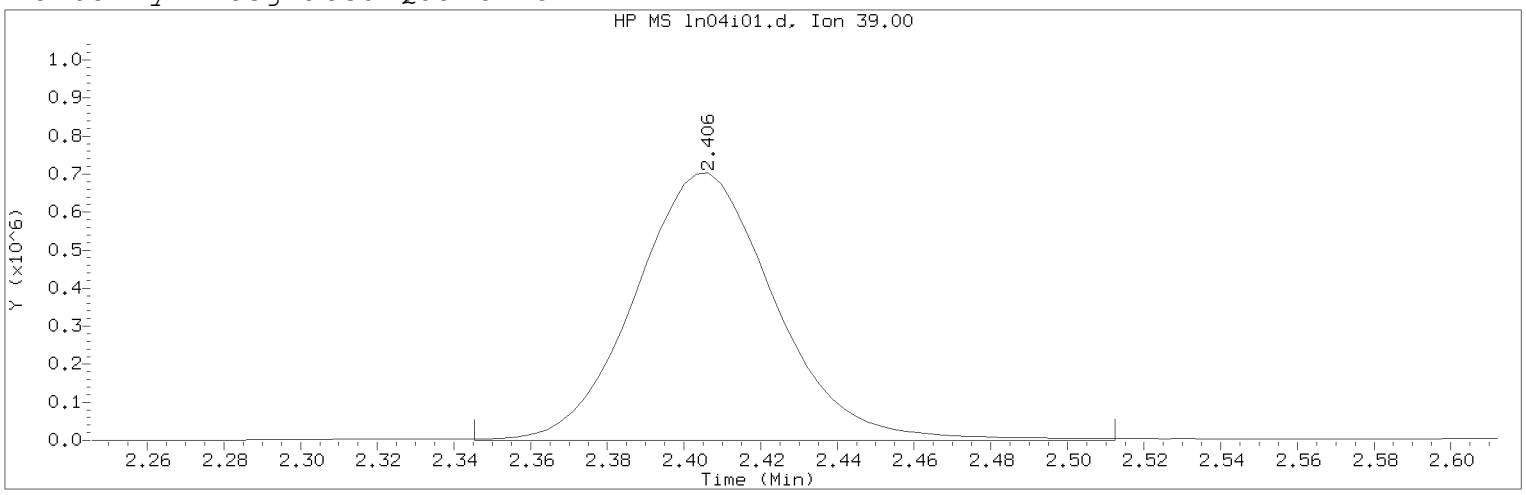
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area : 2624212
On-column Amount (ng) : 308.6520
Integration start scan : 143 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

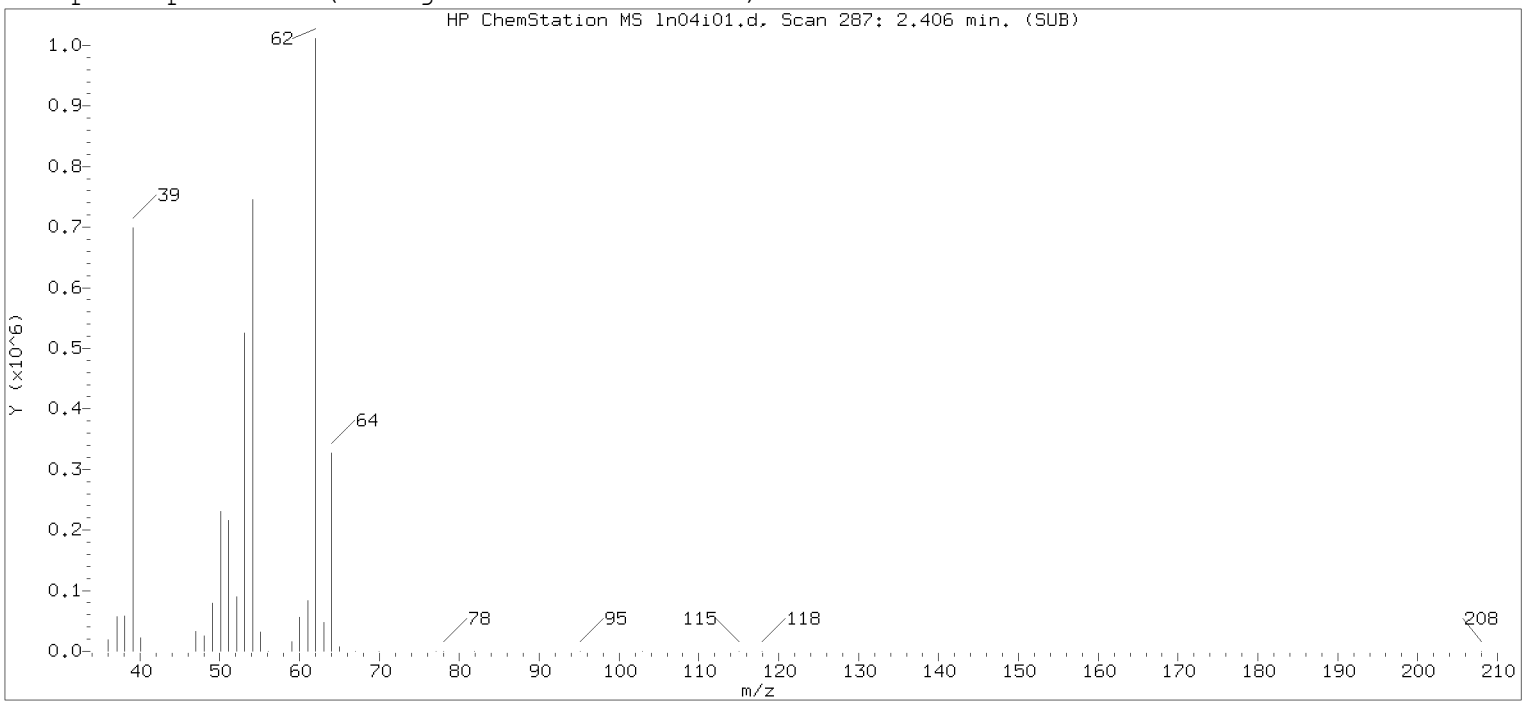
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 1785787M
On-Column Amount (ng) : 285.4858
Integration start scan : 267 Integration stop scan: 319
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

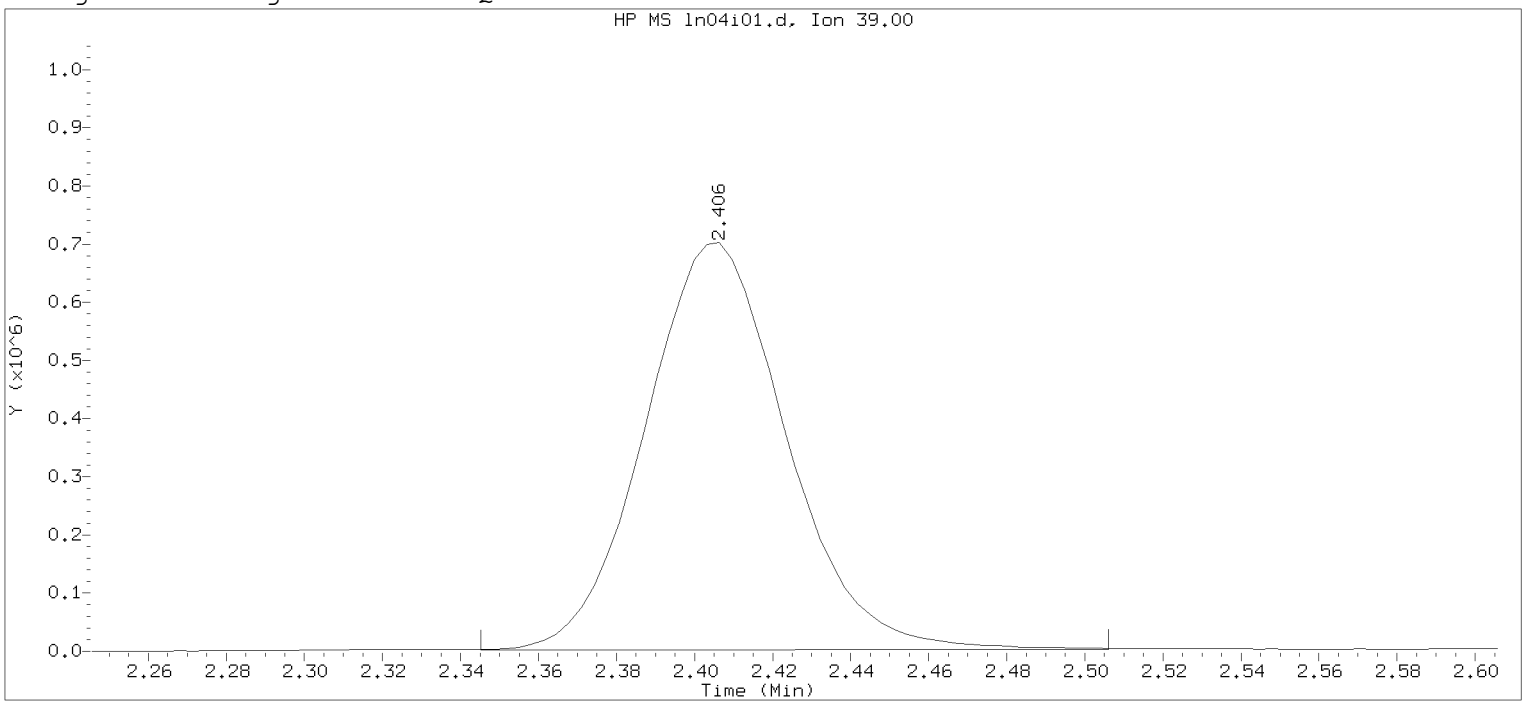
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 1755596
On-column Amount (ng) : 295.0708
Integration start scan : 267 Integration stop scan: 317
Y at integration start : 2196 Y at integration end: 3553

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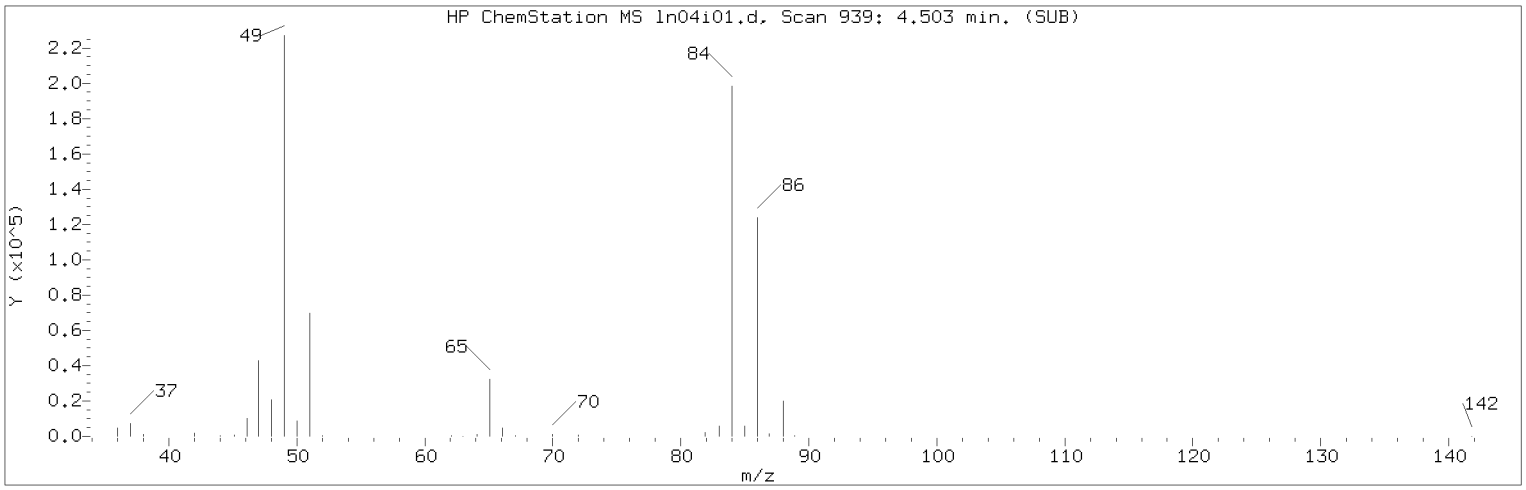
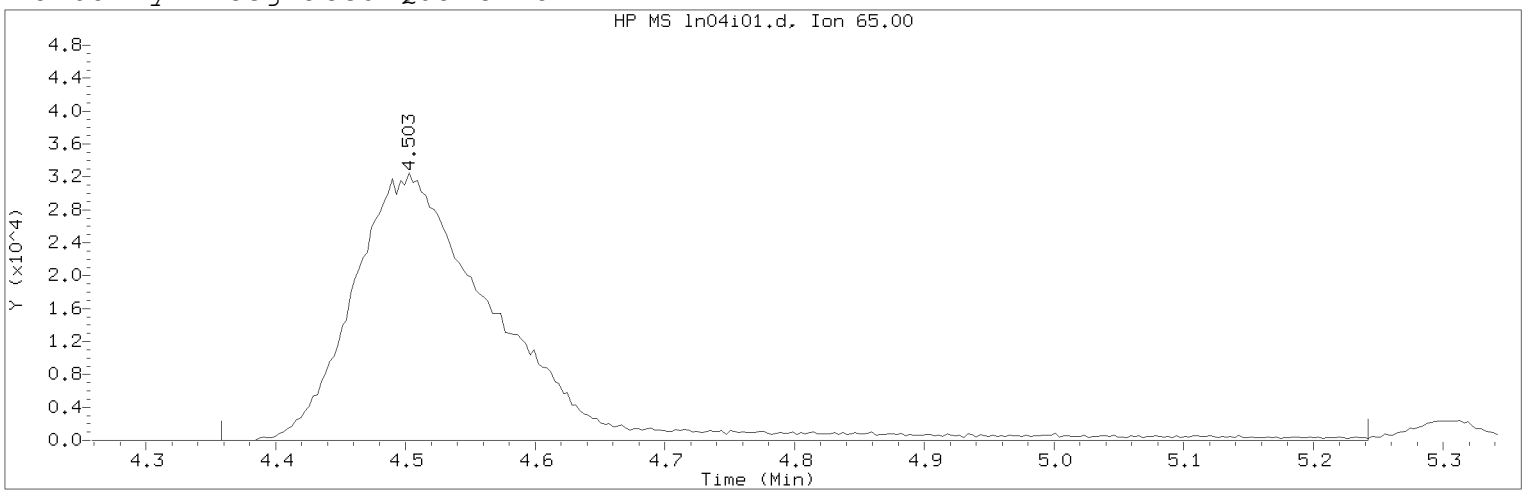
Target 3.5 esignature user ID: jkh00035

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

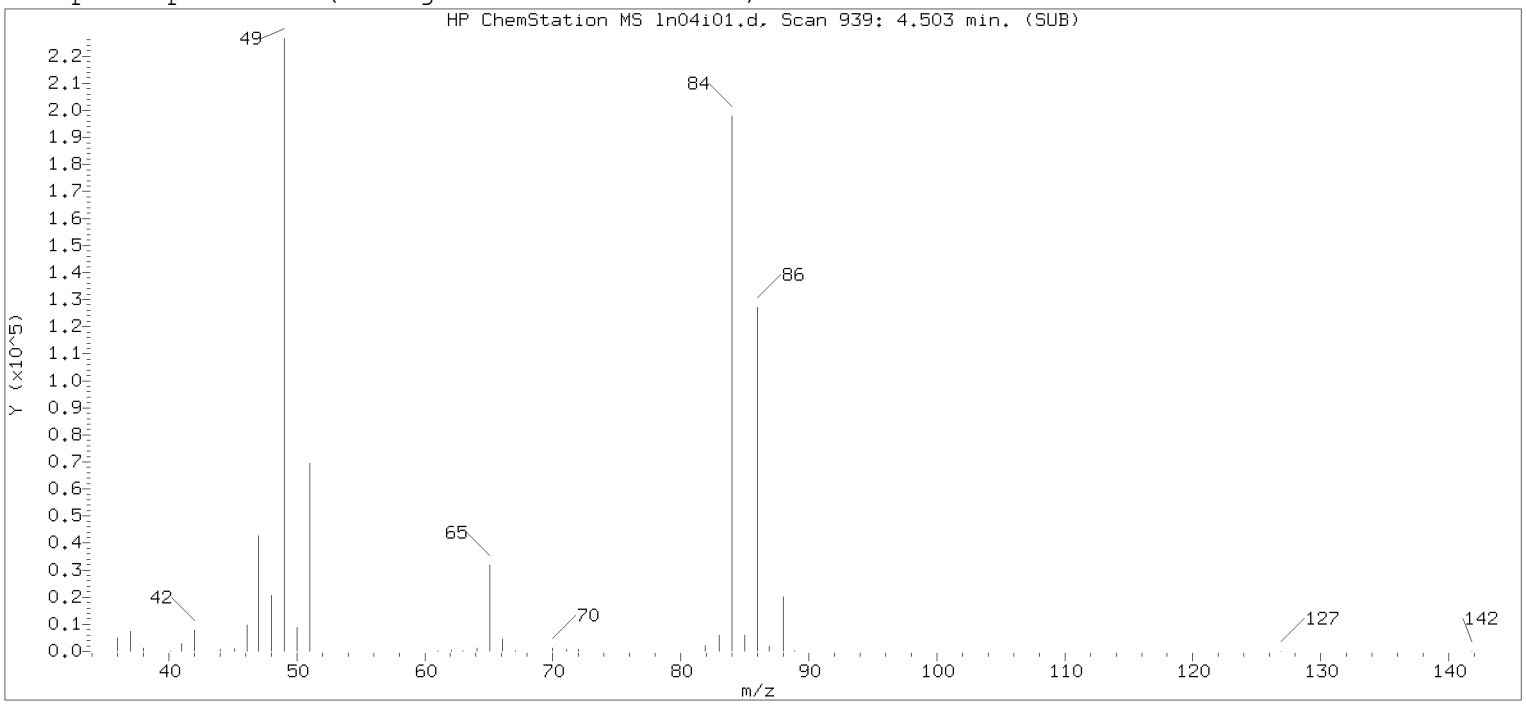
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area (flag) : 254406M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1168
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

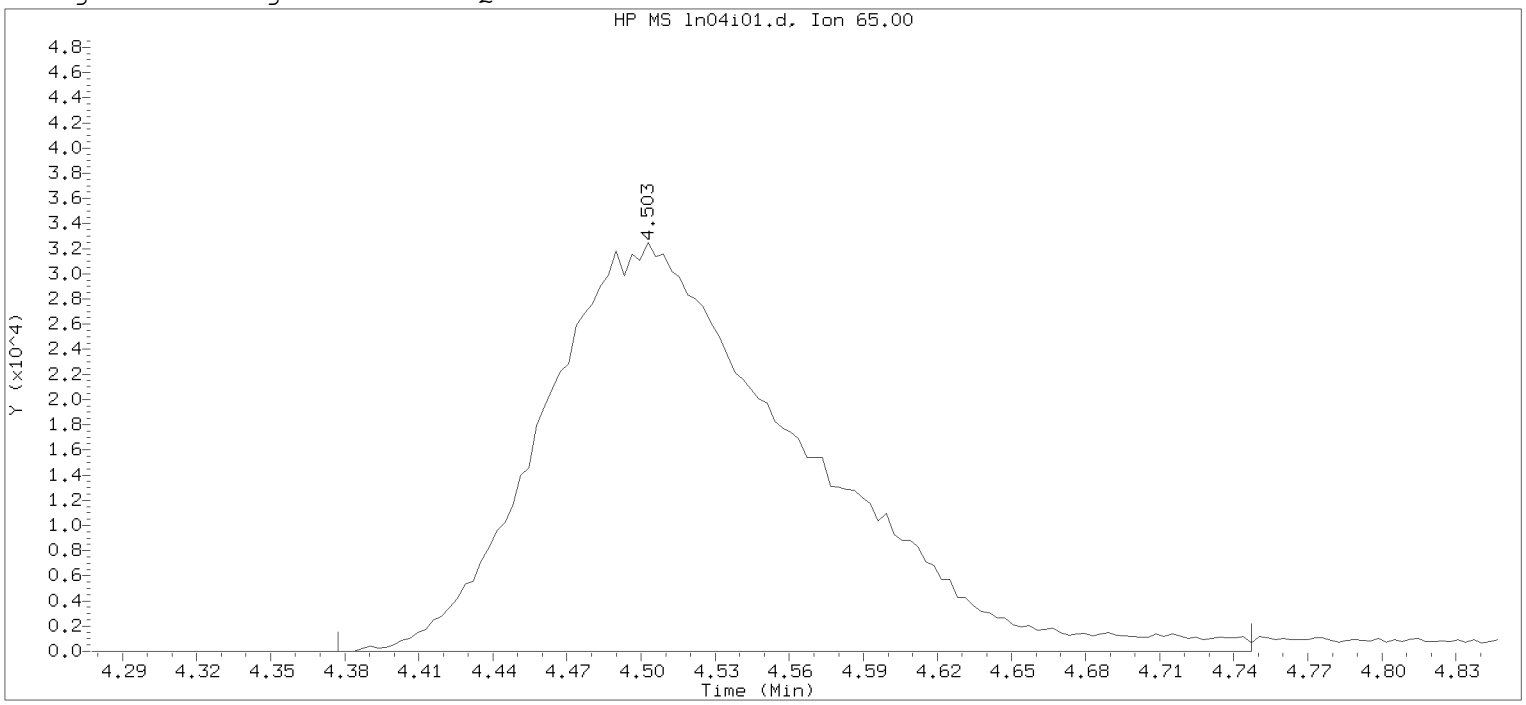
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

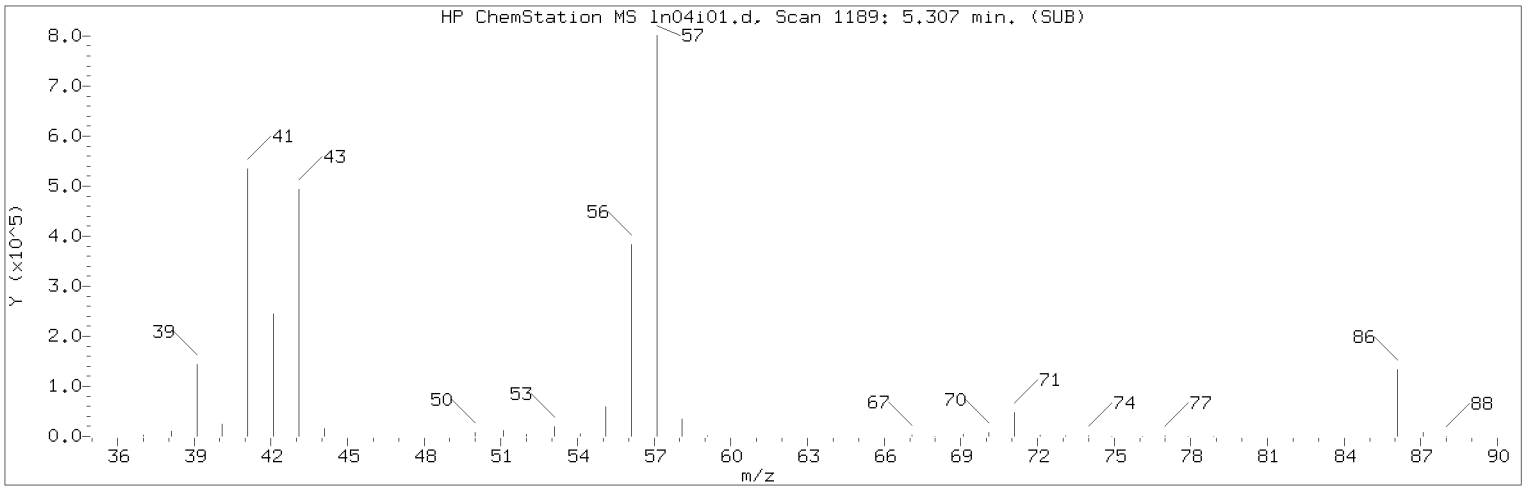
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

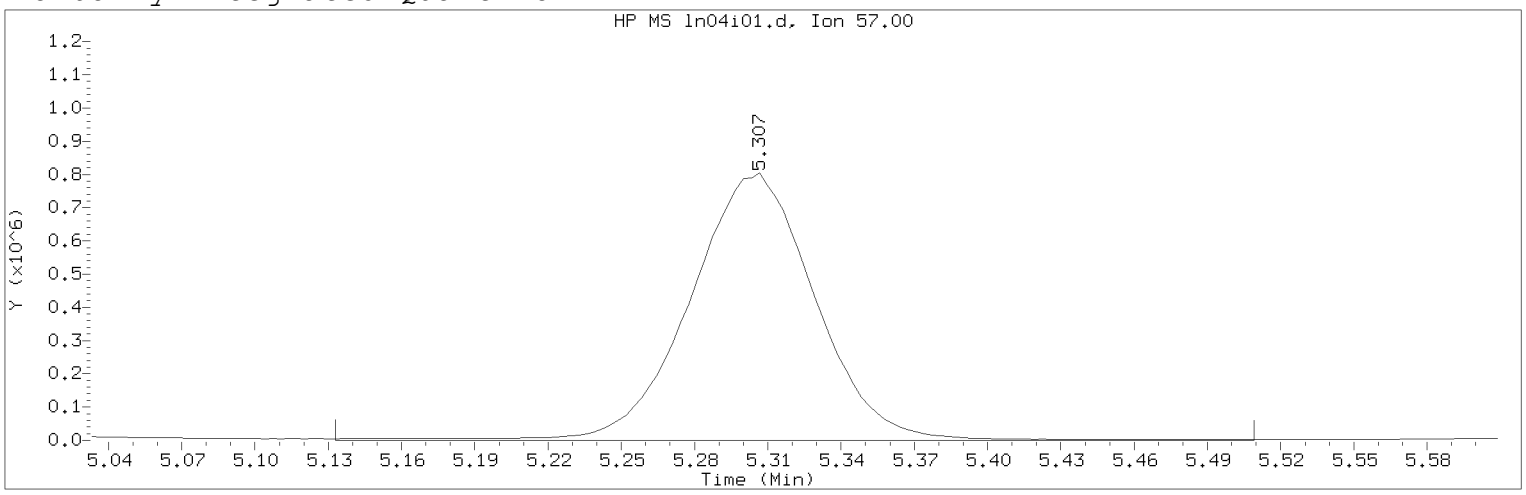
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area : 237264
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user: JKHowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

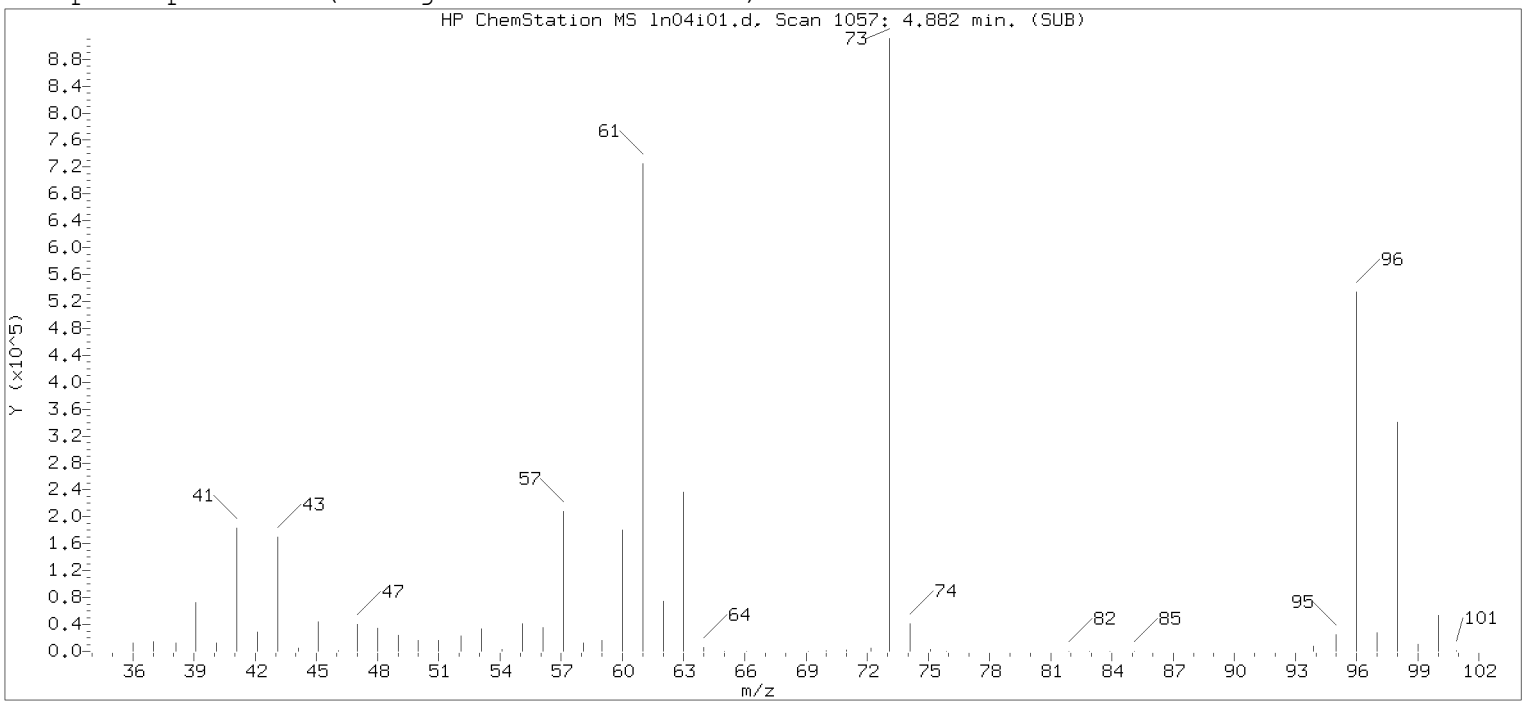
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1189
Retention Time (minutes): 5.307
Quant Ion : 57.00
Area (flag) : 2863189M
On-Column Amount (ng) : 334.8105
Integration start scan : 1134 Integration stop scan: 1251
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

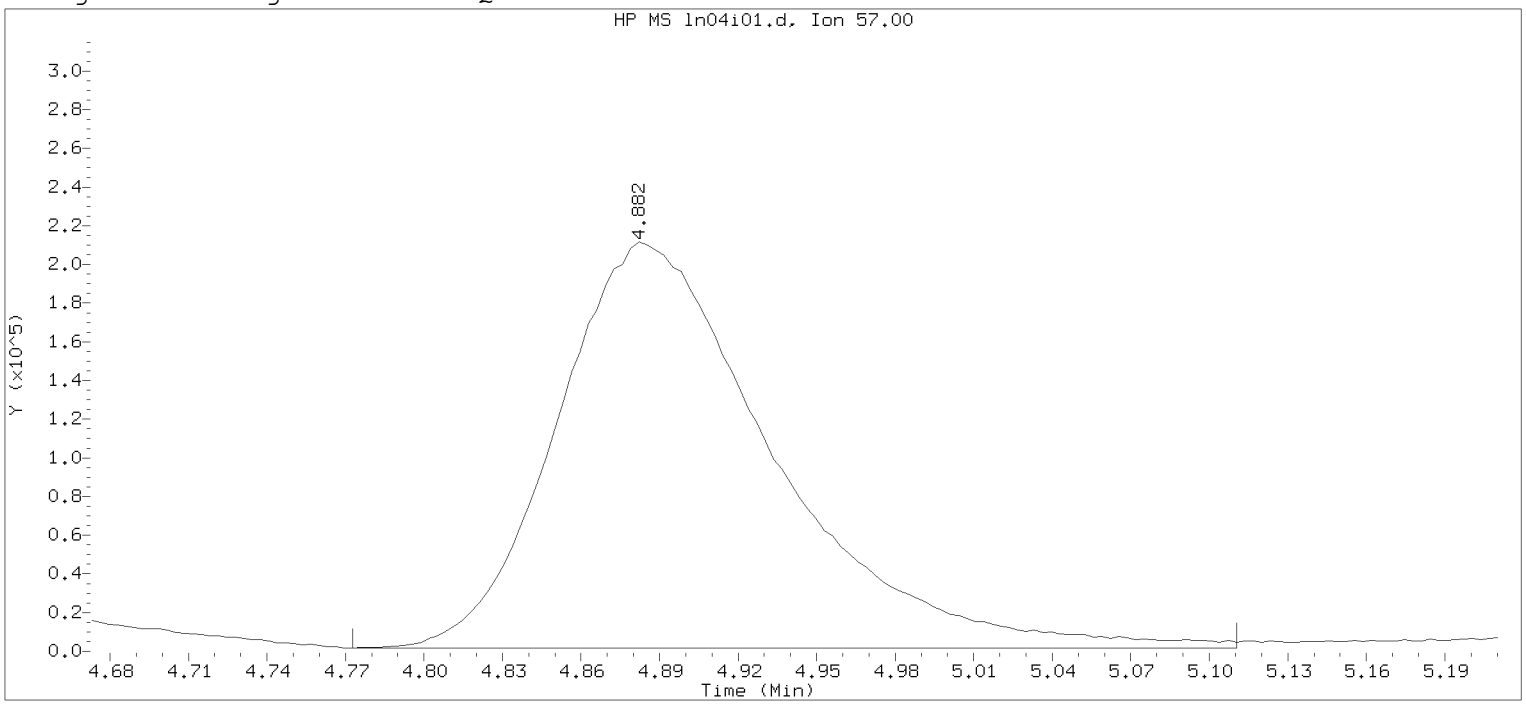
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

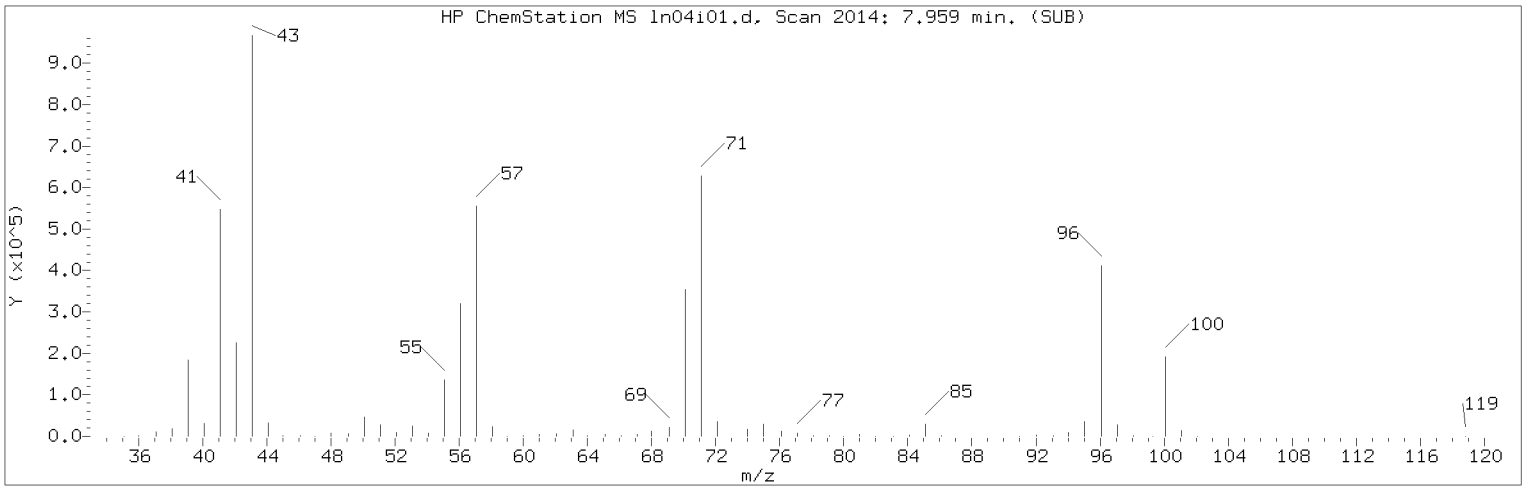
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

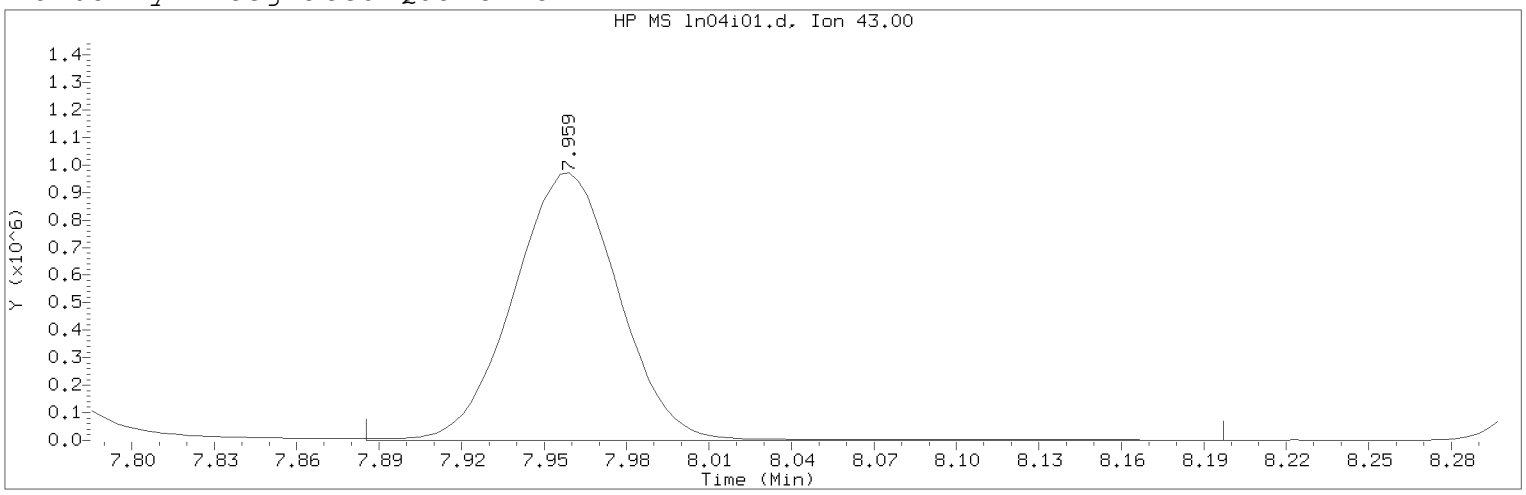
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1057
Retention Time (minutes): 4.882
Quant Ion : 57.00
Area : 1202378
On-column Amount (ng) : 301.4561
Integration start scan : 1022 Integration stop scan: 1127
Y at integration start : 1806 Y at integration end: 1806

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user id: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

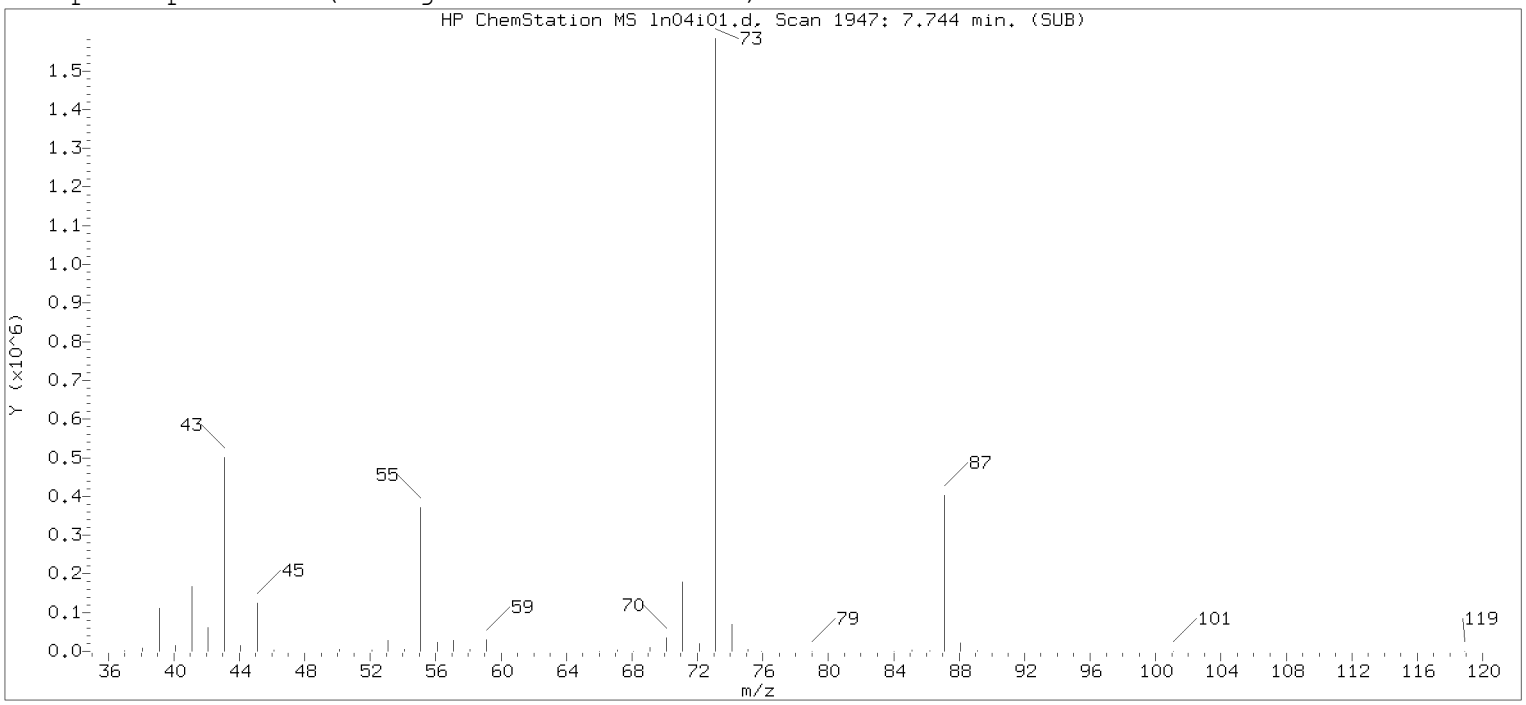
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2014
Retention Time (minutes): 7.959
Quant Ion : 43.00
Area (flag) : 2592531MA
On-Column Amount (ng) : 324.5176
Integration start scan : 1990 Integration stop scan: 2087
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

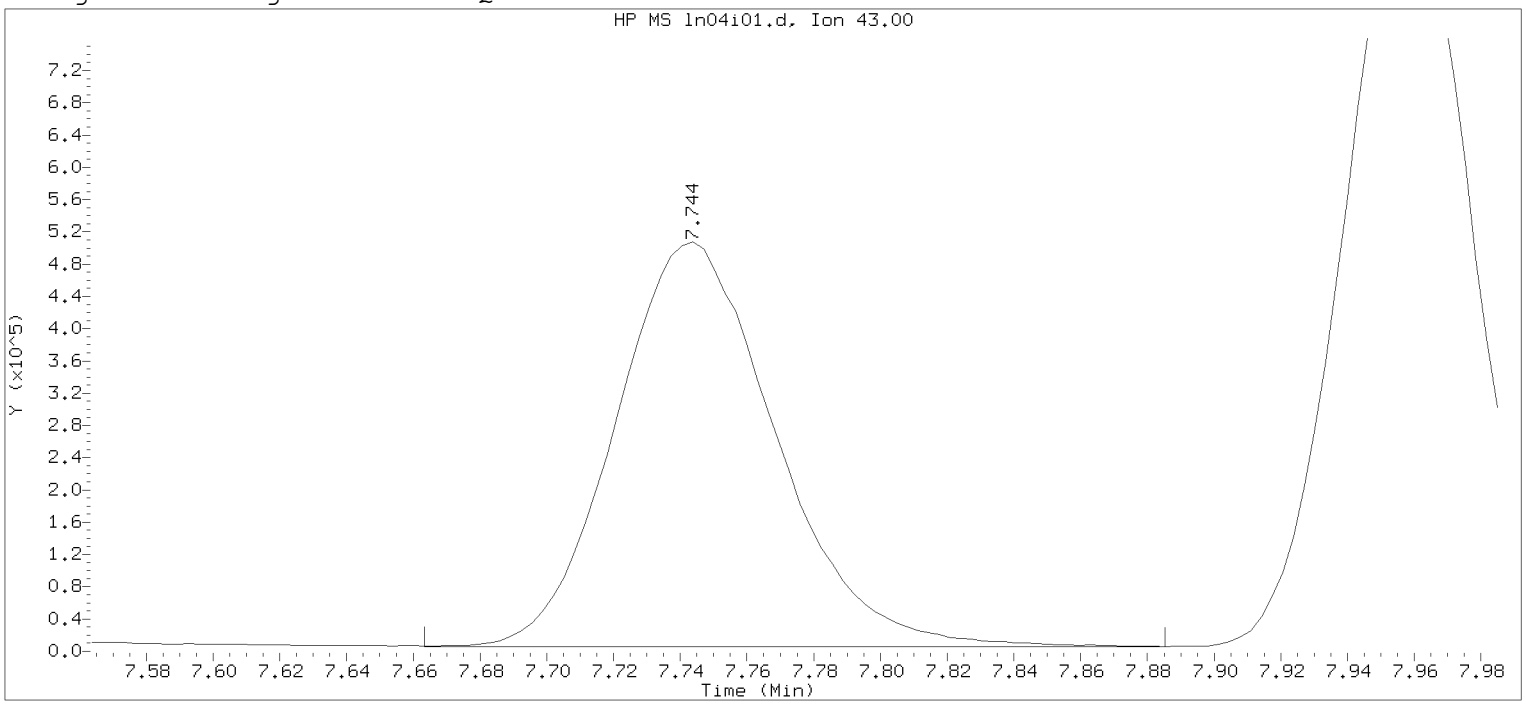
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

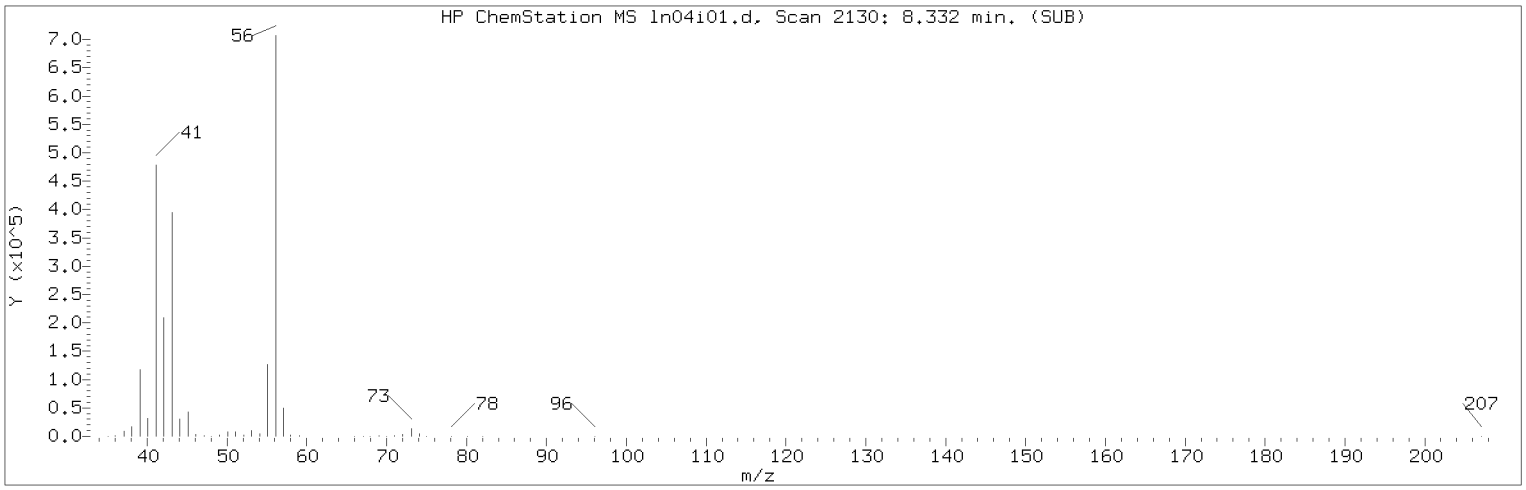
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

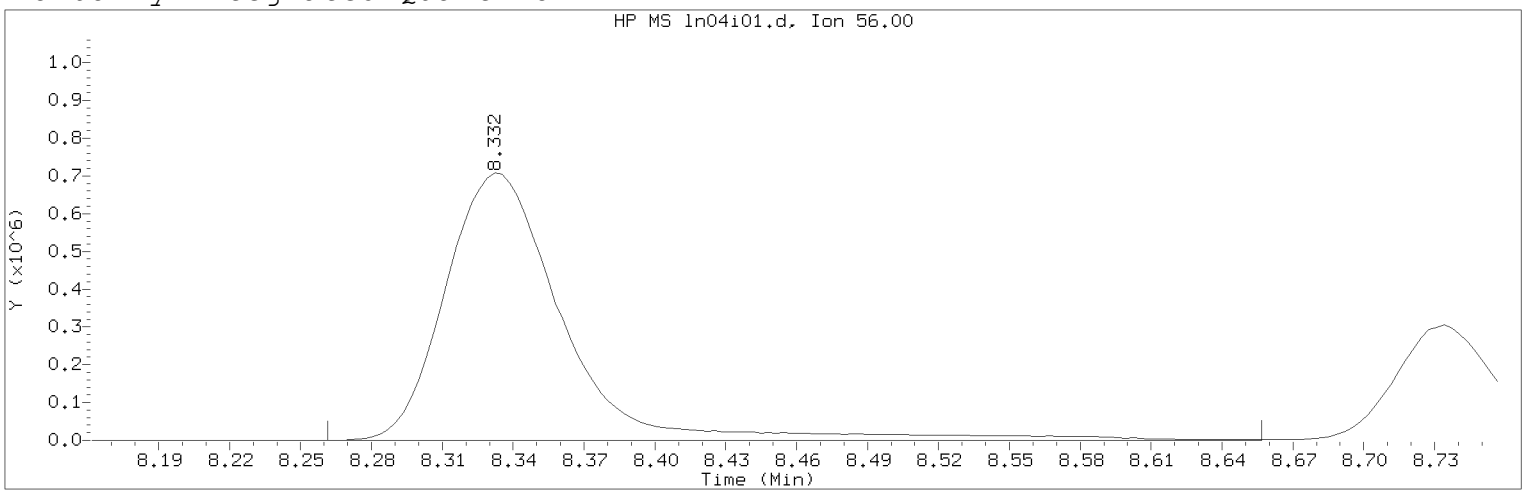
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1947
Retention Time (minutes): 7.744
Quant Ion : 43.00
Area : 1668813
On-column Amount (ng) : 288.4319
Integration start scan : 1921 Integration stop scan: 1990
Y at integration start : 5866 Y at integration end: 5866

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09051

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

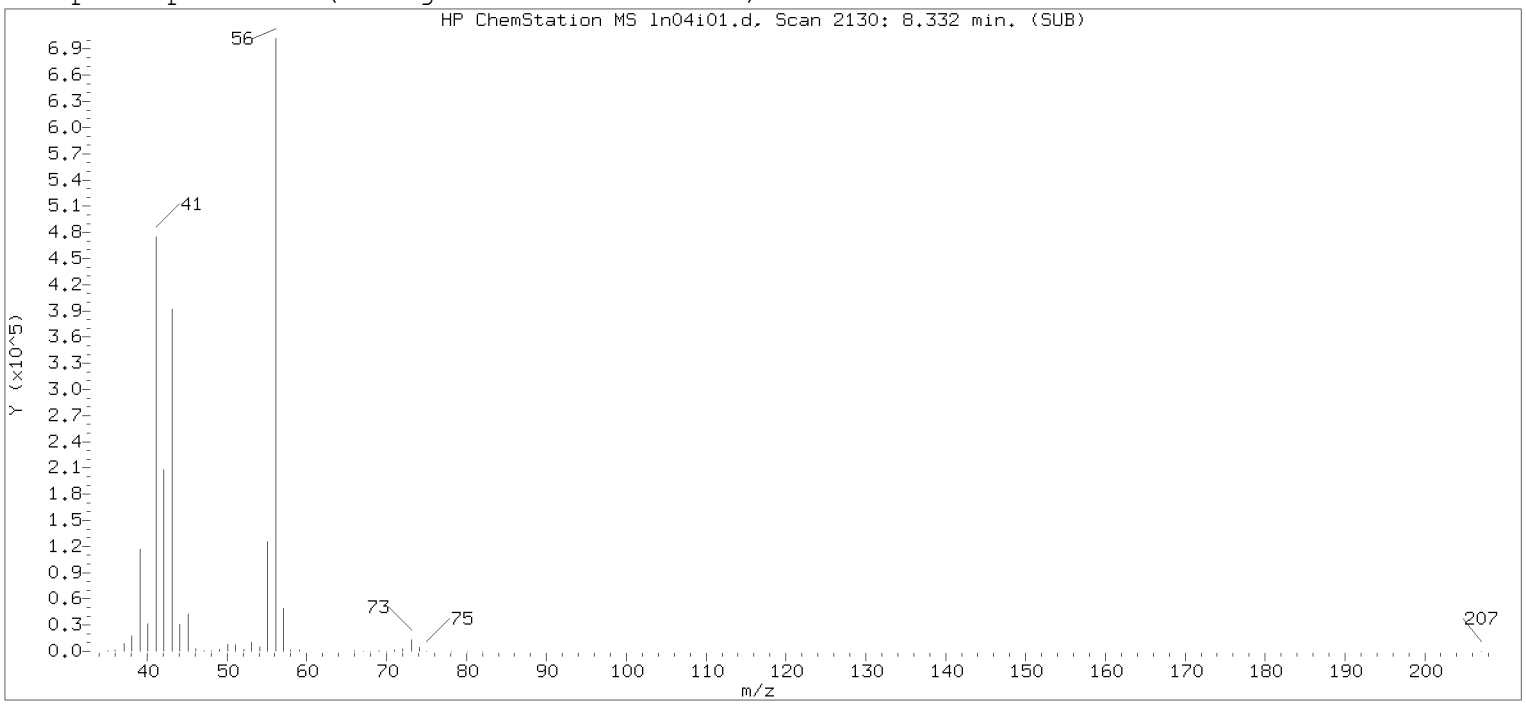
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area (flag) : 2465385M
On-Column Amount (ng) : 7947.0678
Integration start scan : 2107 Integration stop scan: 2230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

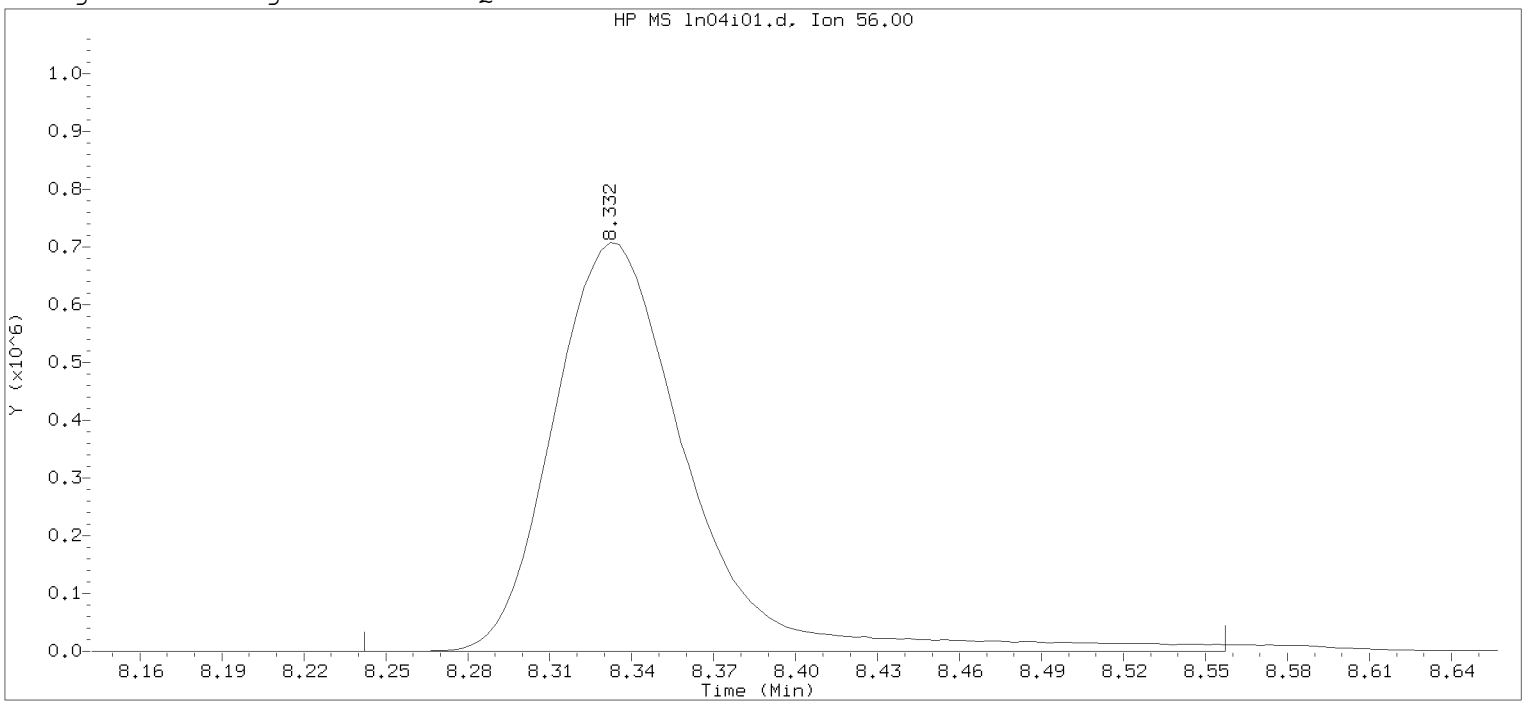
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

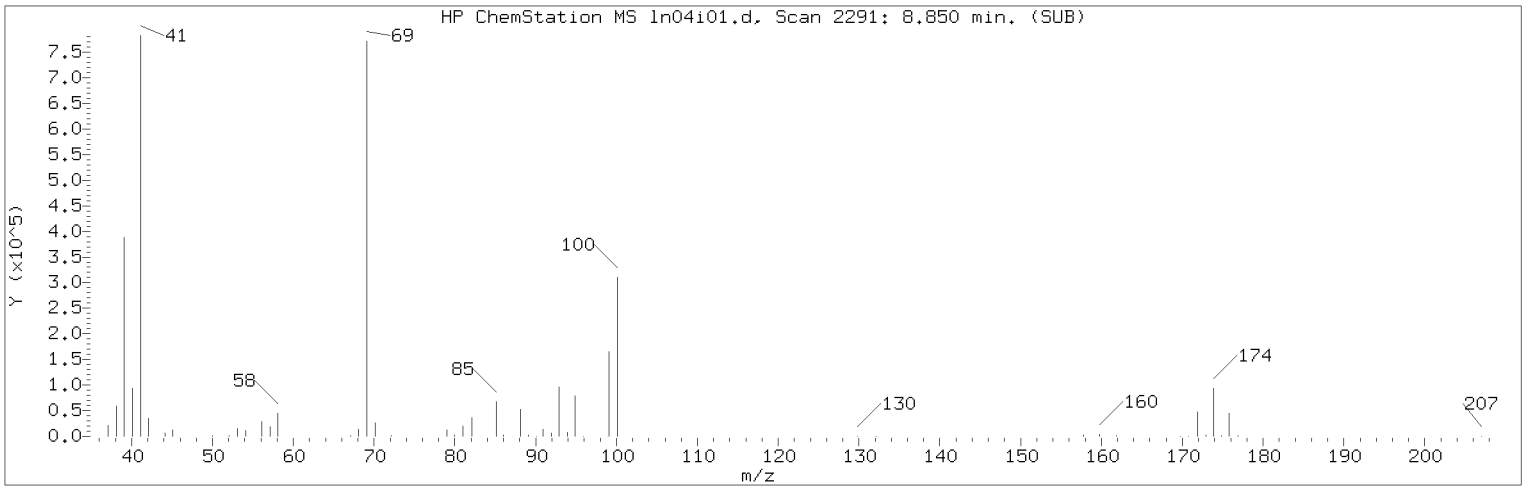
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

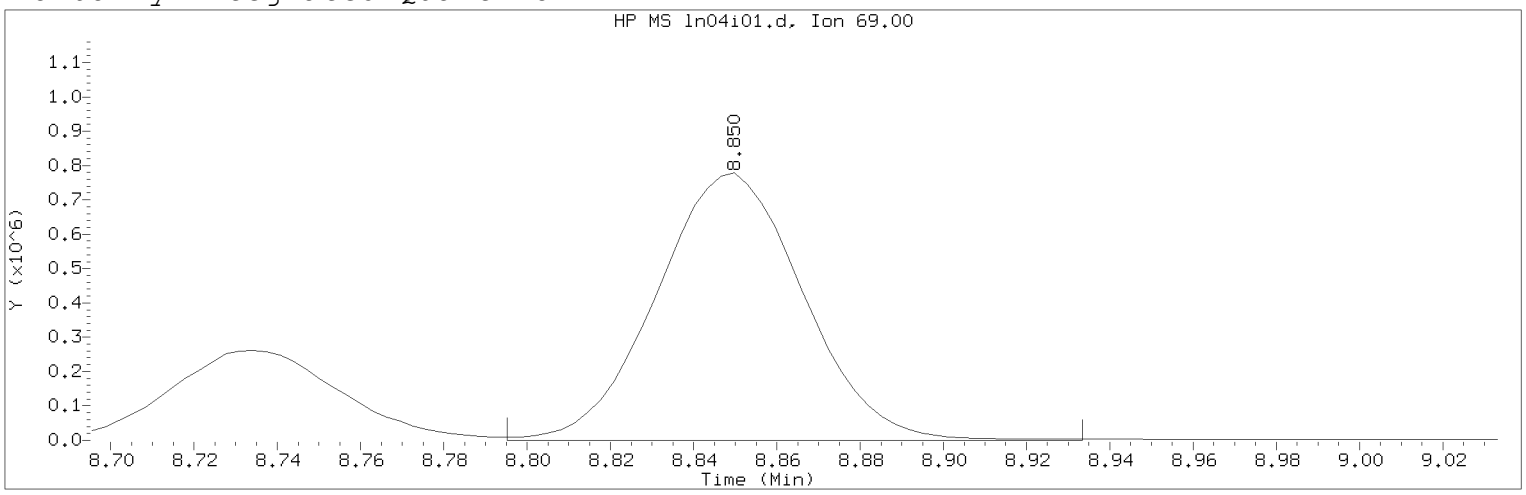
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area : 2429255
On-column Amount (ng) : 7682.9381
Integration start scan : 2101 Integration stop scan: 2199
Y at integration start : 176 Y at integration end: 176

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user id: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

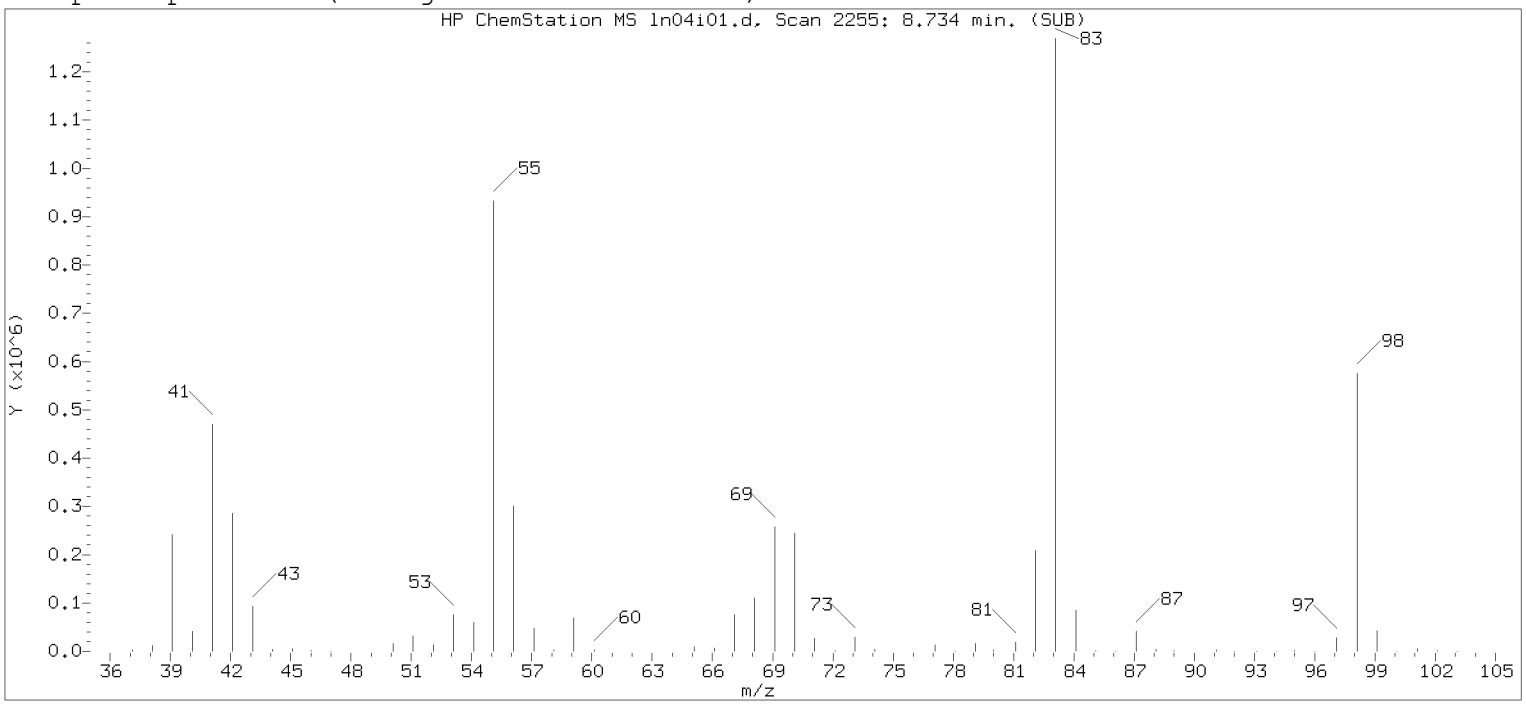
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2291
Retention Time (minutes): 8.850
Quant Ion : 69.00
Area (flag) : 1904896A
On-Column Amount (ng) : 340.2564
Integration start scan : 2273 Integration stop scan: 2316
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

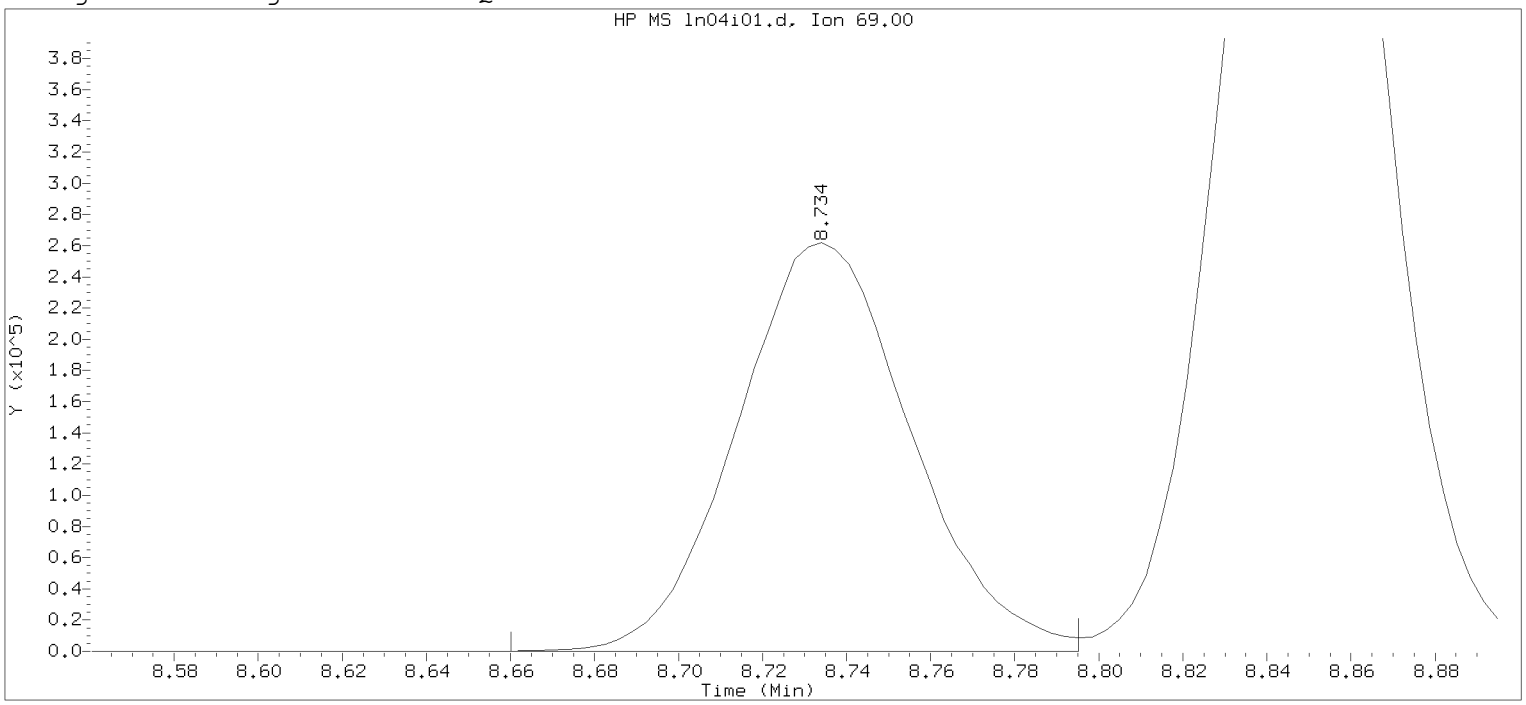
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 752058
On-column Amount (ng) : 311.1363
Integration start scan : 2231 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

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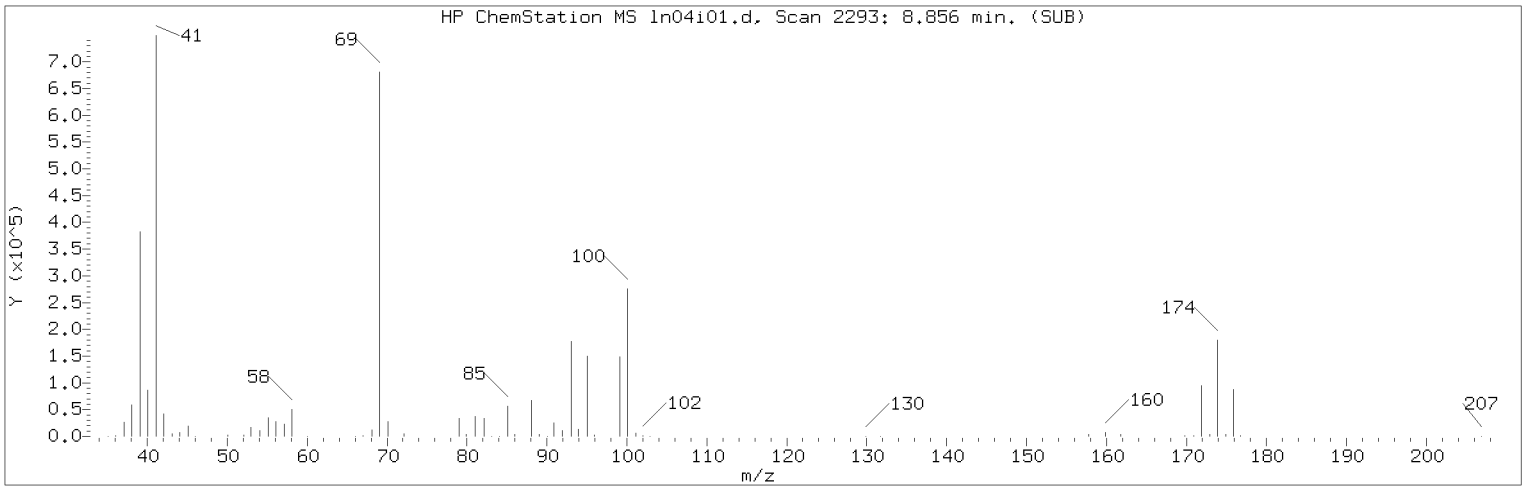
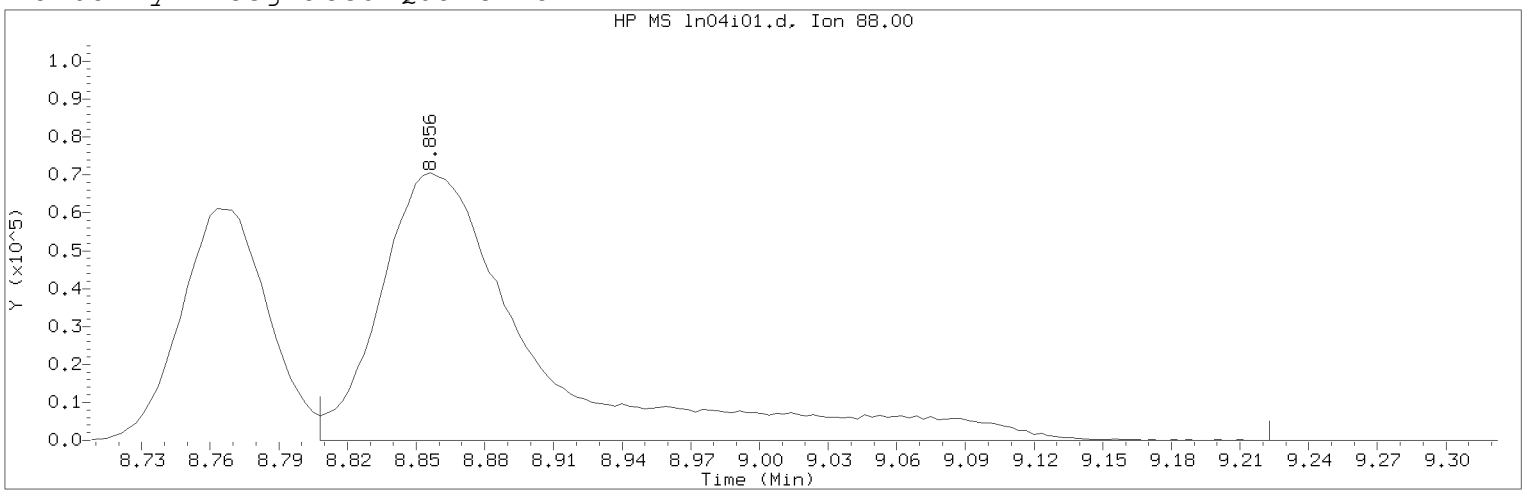
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

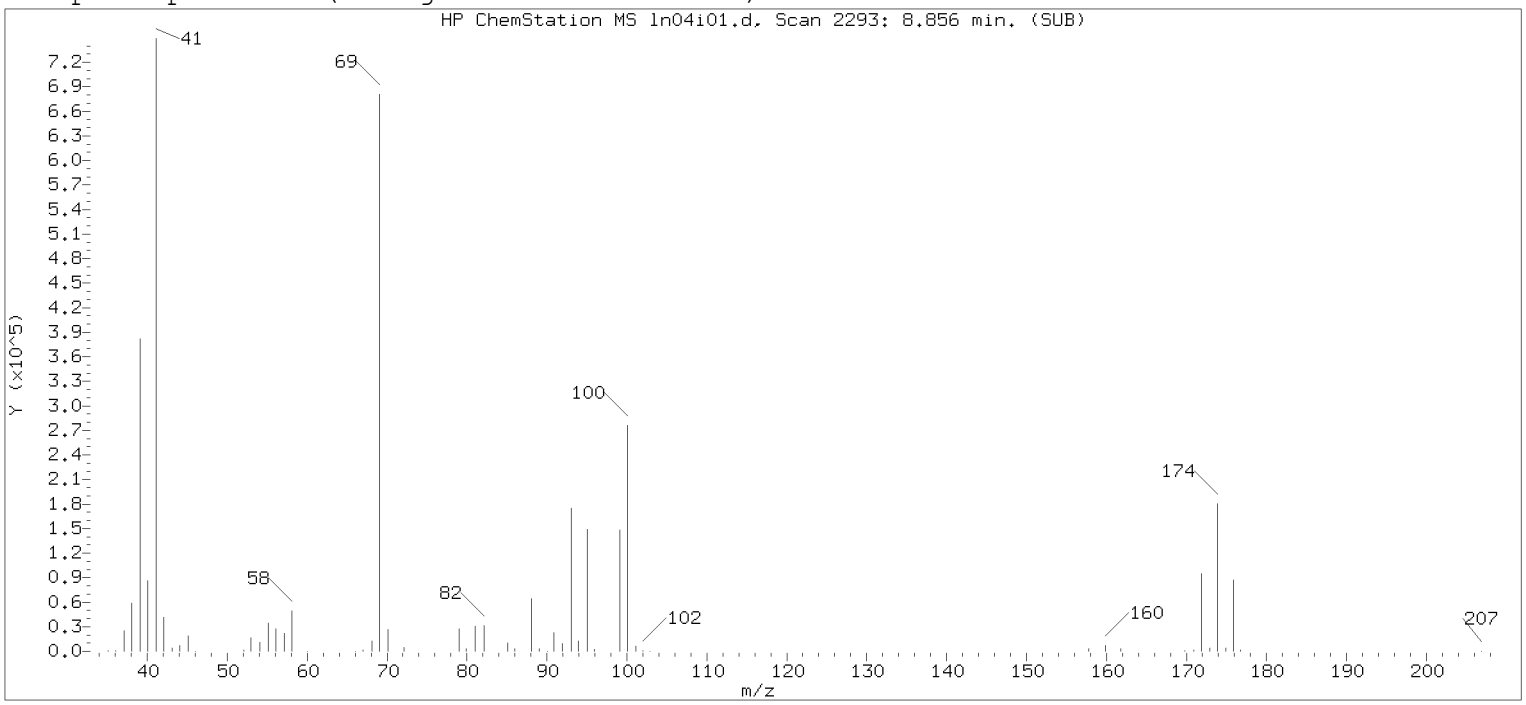
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 338379M
On-Column Amount (ng) : 3968.4208
Integration start scan : 2277 Integration stop scan: 2406
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

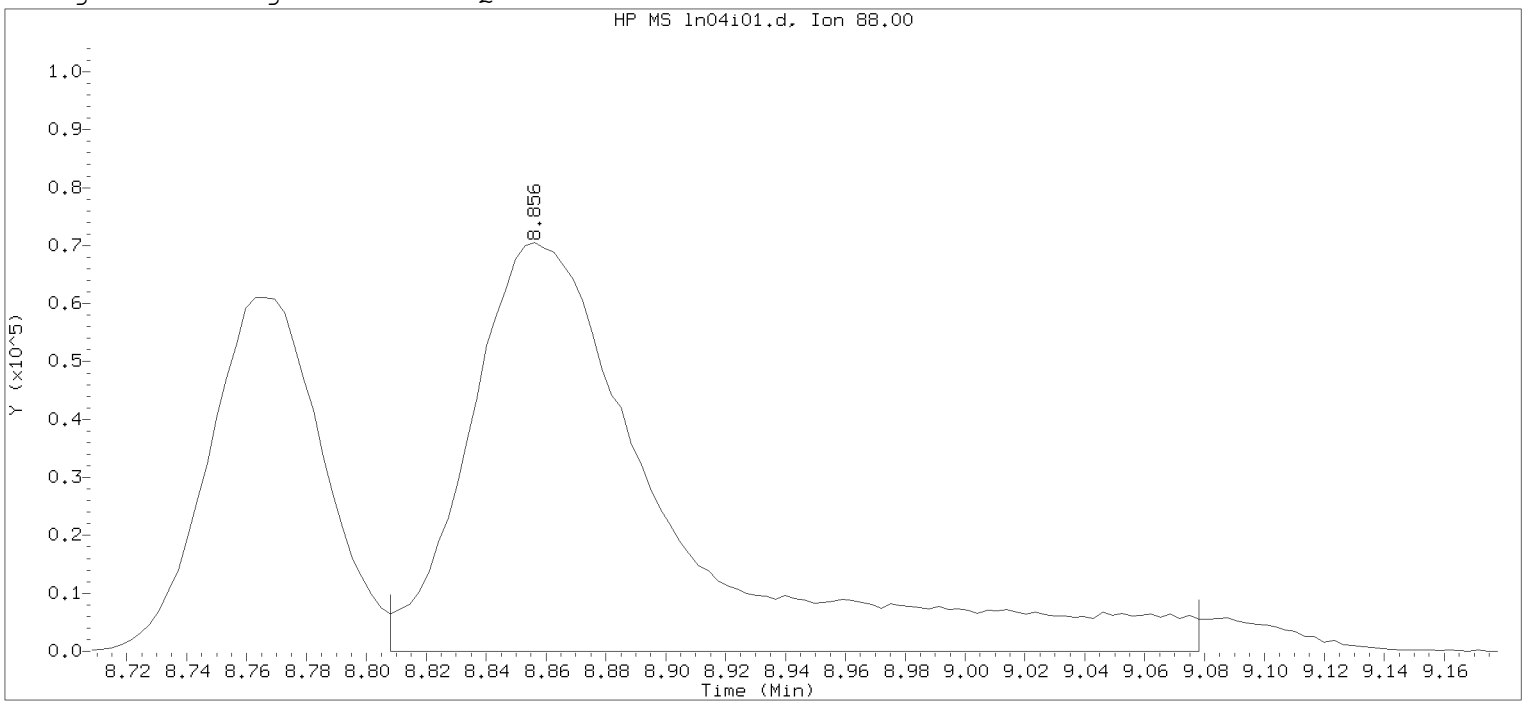
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

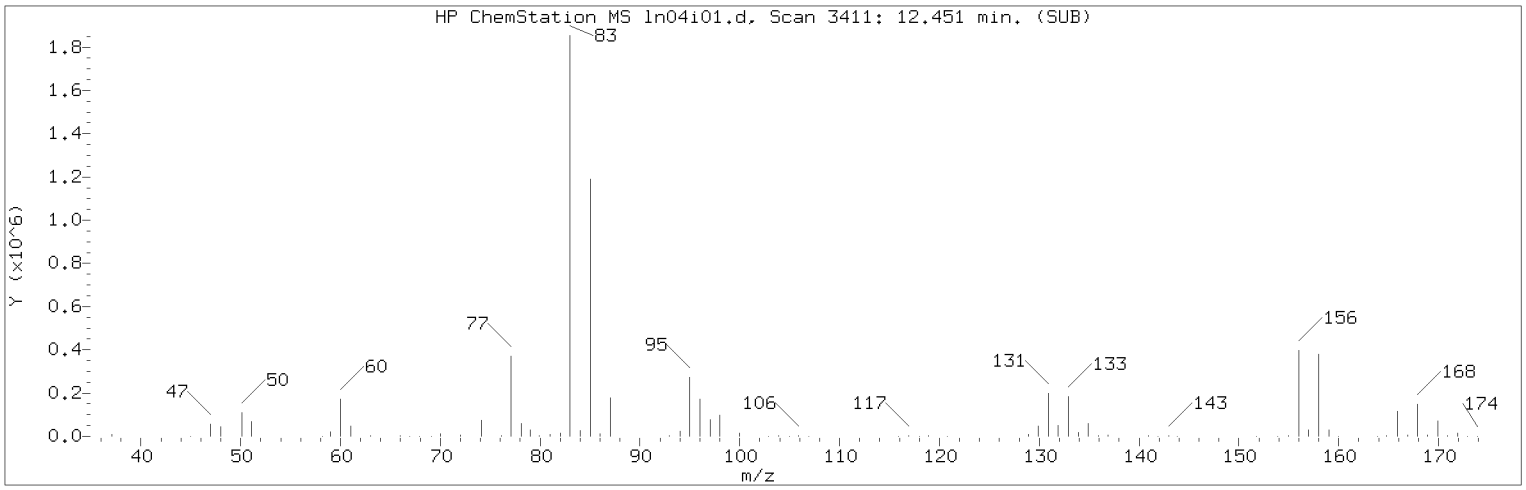
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

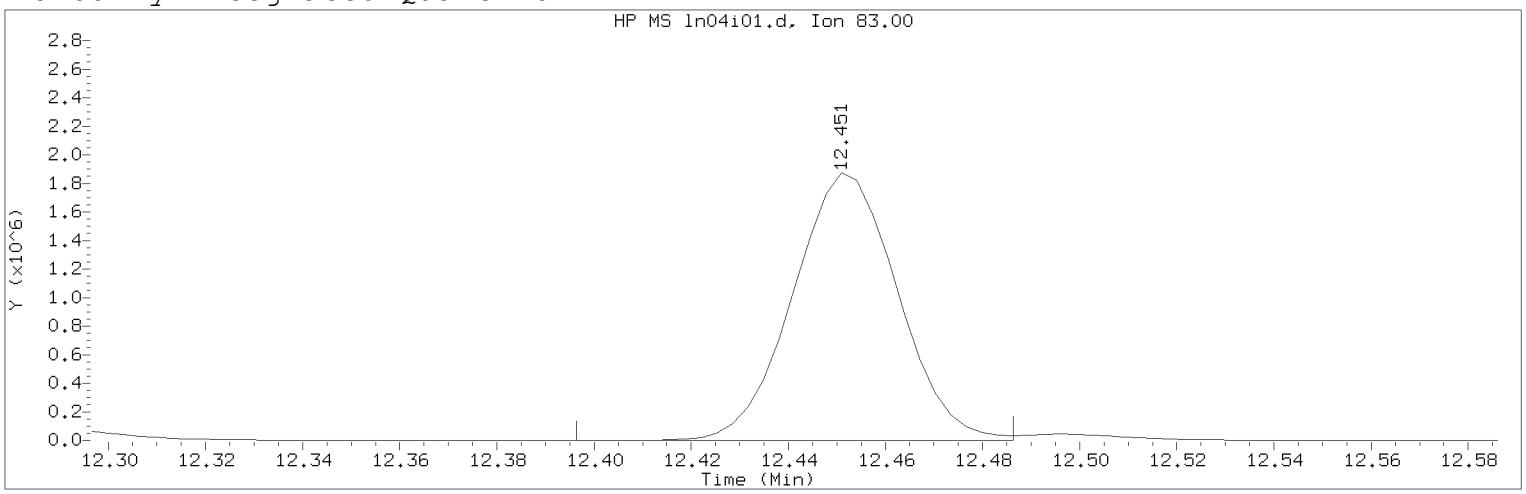
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area : 325164
On-column Amount (ng) : 3803.8575
Integration start scan : 2277 Integration stop scan: 2361
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user id: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

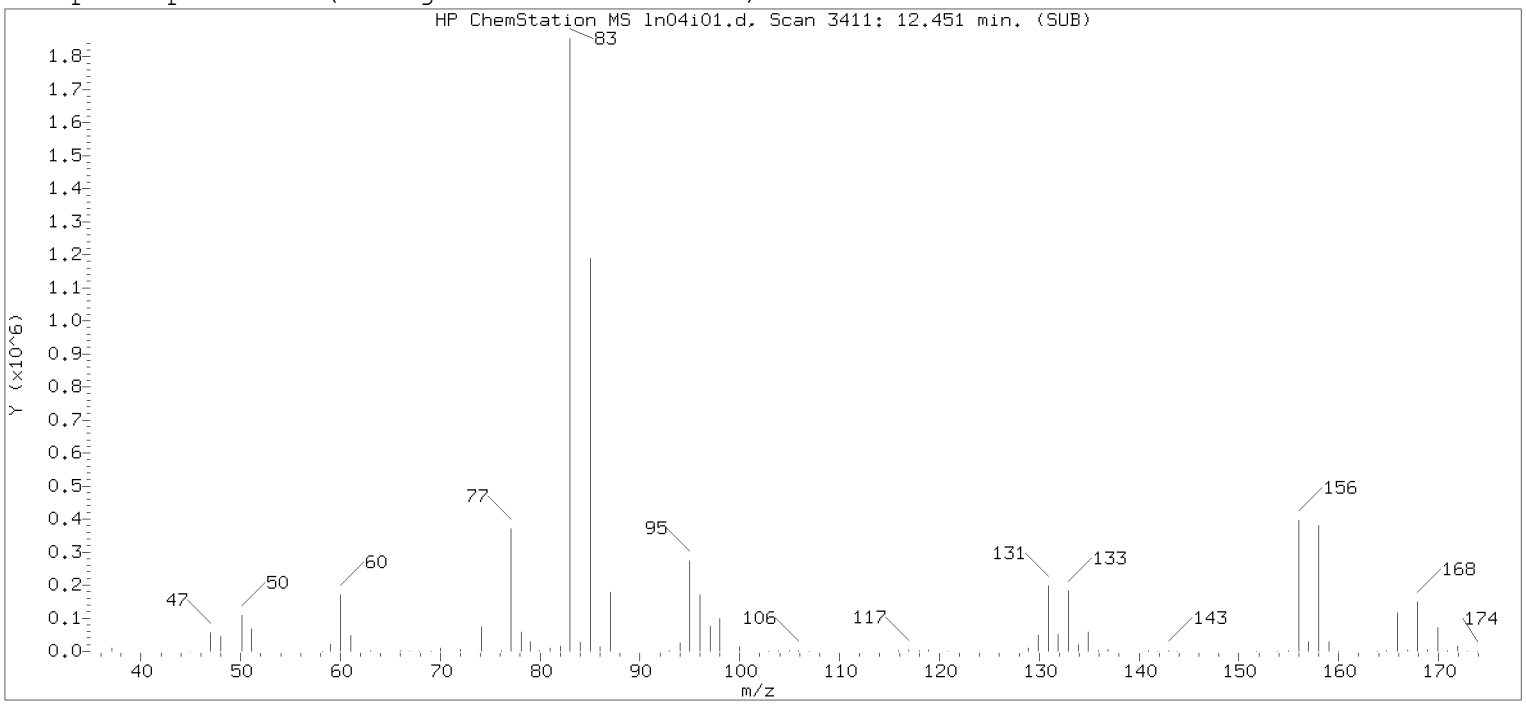
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 2800639M
On-Column Amount (ng) : 310.7054
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

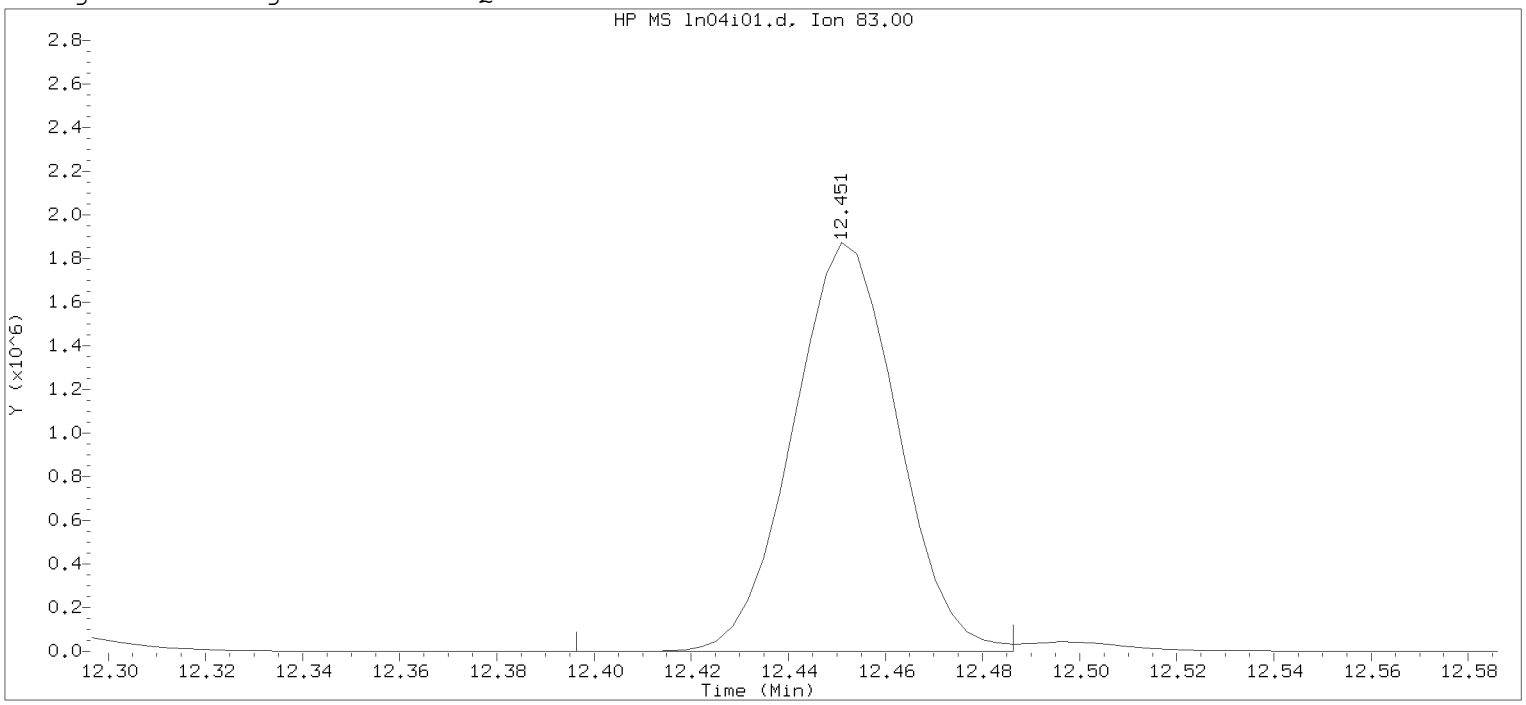
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

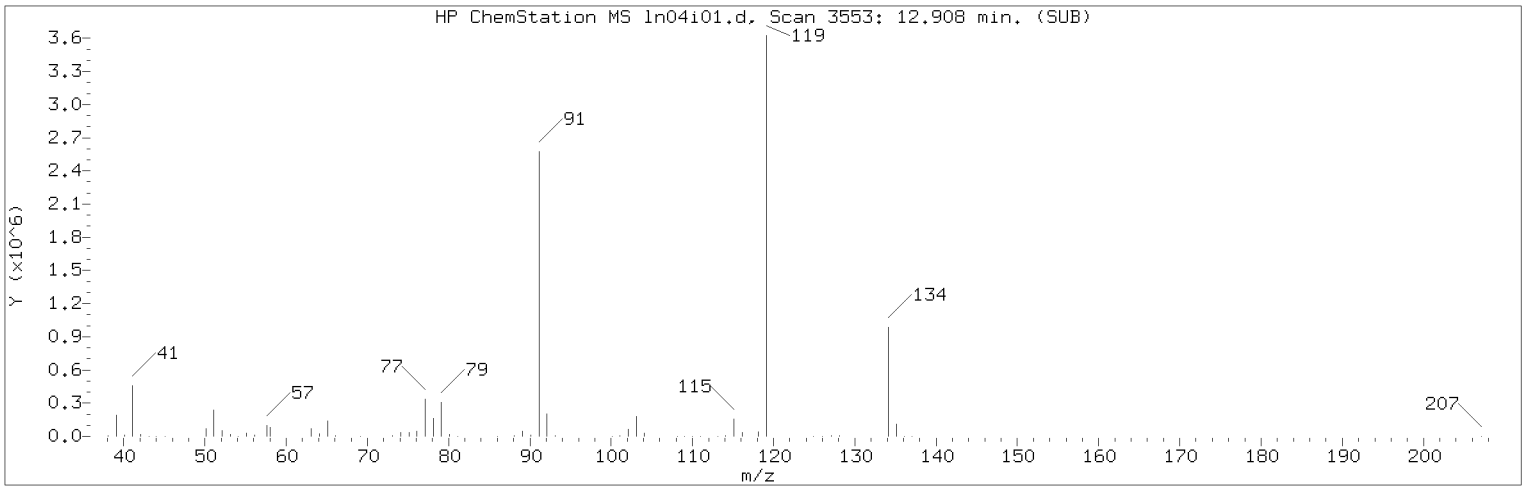
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

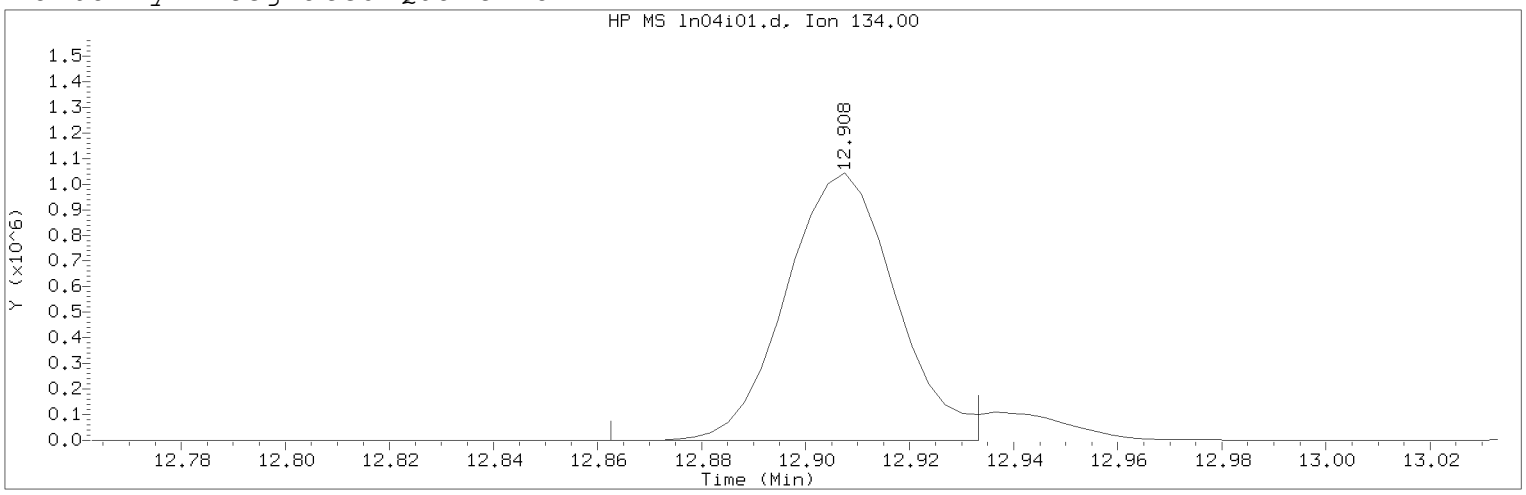
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 2797364
On-column Amount (ng) : 294.0638
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user id: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

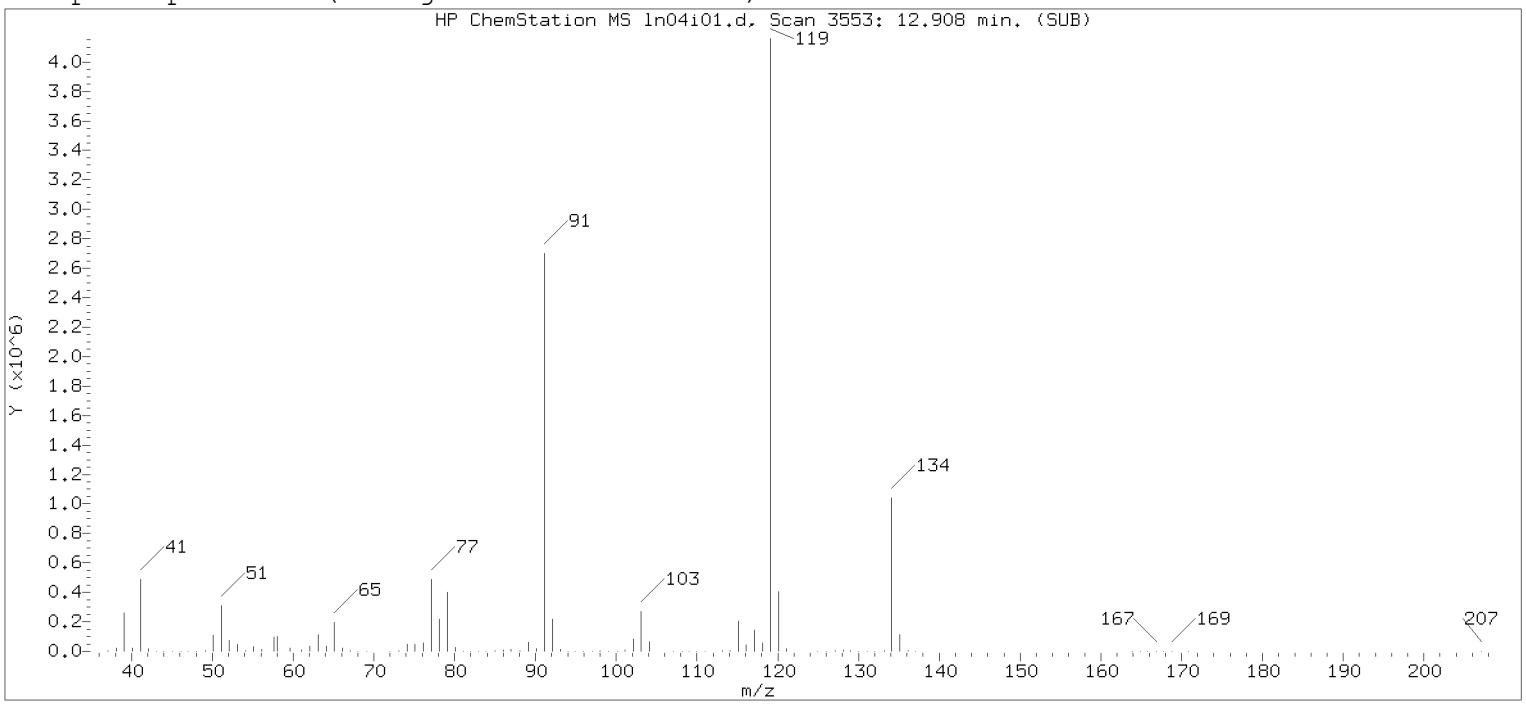
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area (flag) : 1524421M
On-Column Amount (ng) : 323.7167
Integration start scan : 3538 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

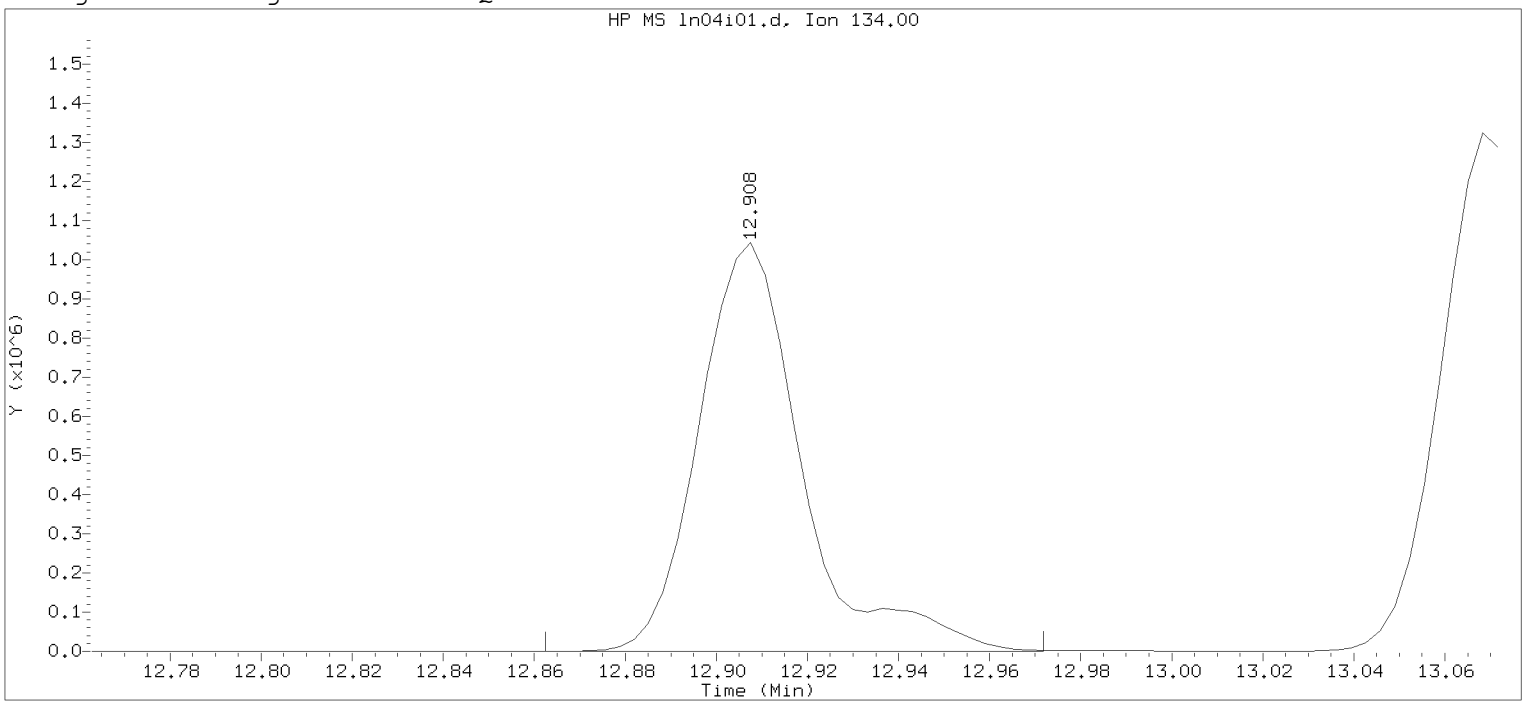
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



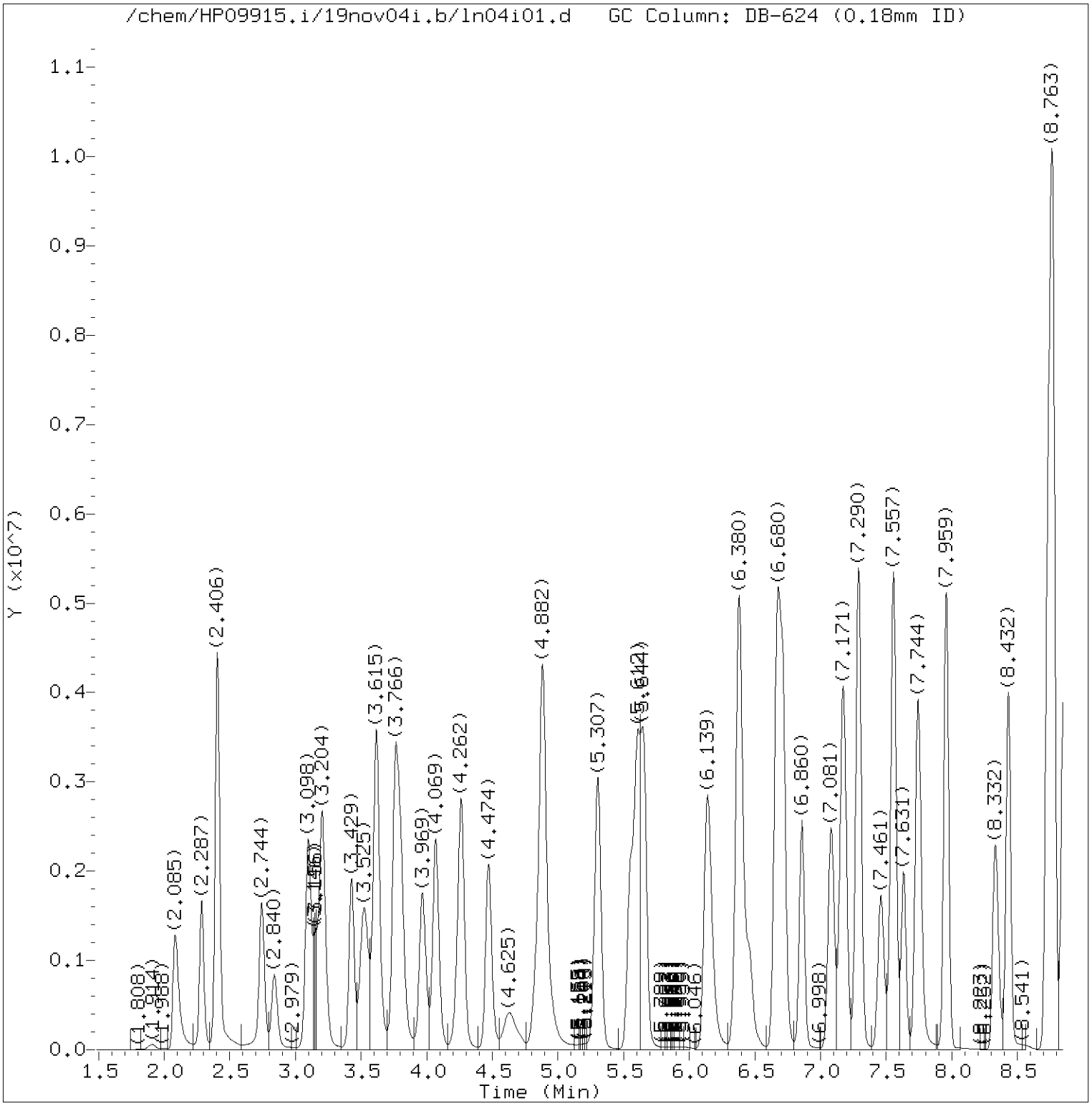
Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area : 1639624
On-column Amount (ng) : 313.1253
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09051



Total Ion Chromatogram (TIC)

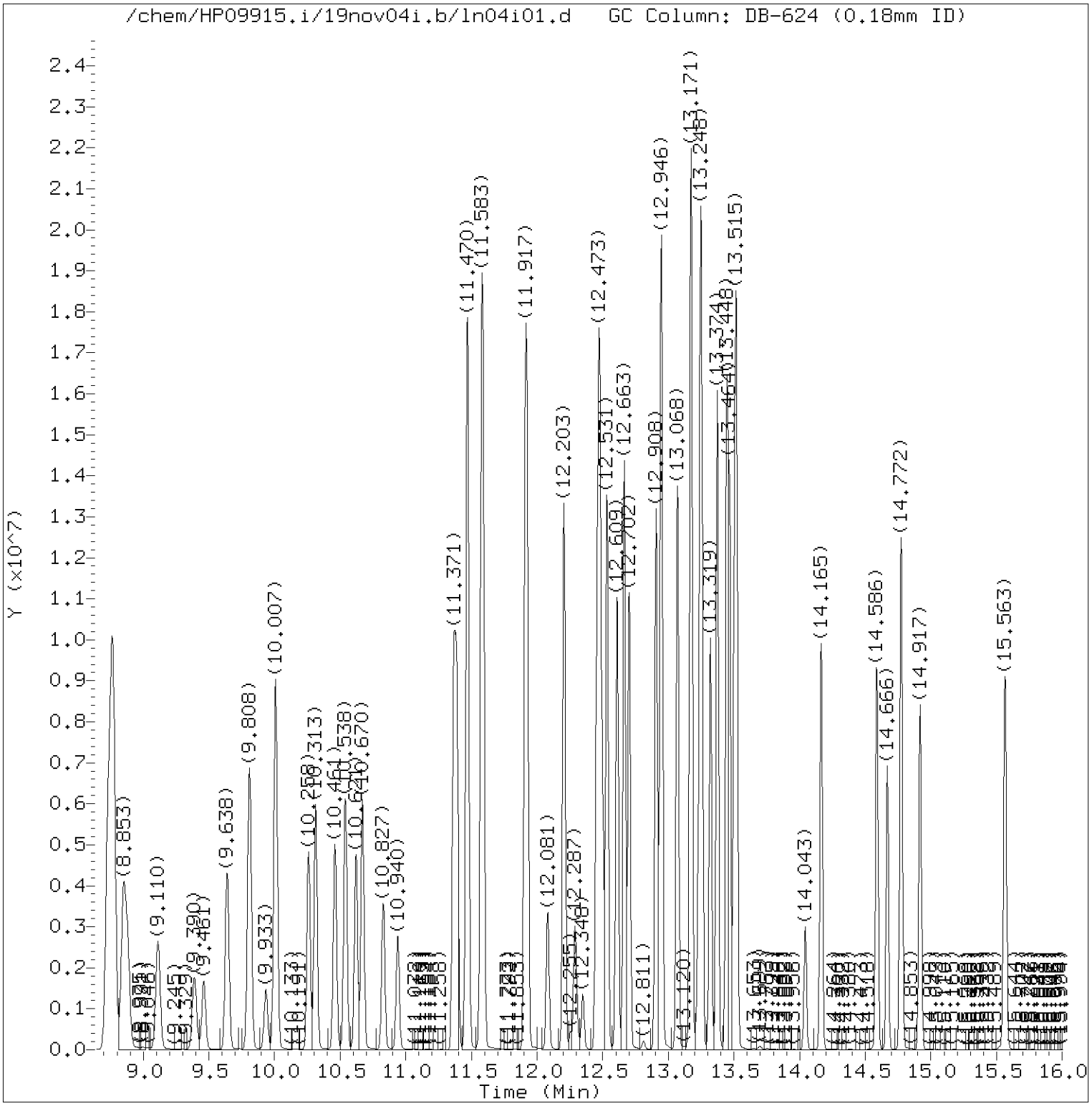
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.085	85	2719746M	347.943
4) Chloromethane	(2)	2.287	50	2403581	319.051
5) 1,3-Butadiene	(2)	2.406	39	1785787M	285.486
6) Vinyl Chloride	(2)	2.406	62	2412855	320.904
8) Bromomethane	(2)	2.744	94	1638575	304.015
9) Chloroethane	(2)	2.837	64	1253478	303.356
10) Dichlorofluoromethane	(2)	3.098	67	2978303M	300.258
12) Trichlorofluoromethane	(2)	3.152	101	2661050	328.734
11) n-Pentane	(2)	3.204	43	2816823	294.455
14) Ethyl ether	(2)	3.429	59	1721693	329.146
15) Freon 123a	(2)	3.525	67	1991616	305.852
16) Acrolein	(1)	3.615	56	5765354	3020.583
17) 1,1-Dichloroethene	(2)	3.760	96	1489890	313.570
17) 1,1-Dichloroethene	(2)	3.757	63	721205	302.767
19) Freon 113	(2)	3.792	101	1732433	319.583
18) Acetone	(1)	3.802	58	531845	621.534
22) Methyl Iodide	(2)	3.966	142	3047145	309.483
21) 2-Propanol	(1)	3.995	45	936919	1523.065
23) Carbon Disulfide	(2)	4.069	76	5676465	317.027
27) Methyl Acetate	(2)	4.239	43	1941315	317.230
25) Allyl Chloride	(2)	4.265	41	2748698	322.482
28) Methylene Chloride	(2)	4.474	84	1745840	308.716
29)*t-Butyl alcohol-d10	(1)	4.503	65	254406M	250.000
30) t-Butyl alcohol	(1)	4.638	59	1641037	1532.140
31) Acrylonitrile	(2)	4.827	53	1039800	315.820
32) trans-1,2-Dichloroethene	(2)	4.885	96	1713357	311.714
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	5505439	305.143
34) n-Hexane	(2)	5.307	57	2863189M	334.811
36) 1,1-Dichloroethane	(2)	5.548	63	3007196	313.618
38) di-Isopropyl ether	(2)	5.609	45	5739955	310.377
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	2776921	322.788
40) Ethyl t-butyl ether	(2)	6.139	59	5425034	302.275
43) 1,2-Dichloroethene (Total)	(2)		96	3646040	624.977
44) 2-Butanone	(2)	6.364	43	2642793	625.317
42) cis-1,2-Dichloroethene	(2)	6.380	96	1932683	313.263
45) 2,2-Dichloropropane	(2)	6.397	77	2377411	318.945
47) Propionitrile	(1)	6.458	54	2126389	1593.336
48) Methacrylonitrile	(2)	6.670	67	2858148	804.768

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.708	128	1075154	328.655
50) Tetrahydrofuran	(1)	6.718	71	758236	628.991
51) Chloroform	(2)	6.860	83	2916299	317.988
52)$Dibromofluoromethane	(2)	7.075	113	276322	50.424
52)$Dibromofluoromethane	(2)	7.075	111	279197	49.969
53) 1,1,1-Trichloroethane	(2)	7.081	97	2560601	327.130
54) Cyclohexane	(2)	7.171	56	3429211	327.611
54) Cyclohexane	(2)	7.171	84	2984908	328.282
54) Cyclohexane	(2)	7.171	69	1068201	329.937
56) Carbon Tetrachloride	(2)	7.287	117	2252864	339.350
55) 1,1-Dichloropropene	(2)	7.294	75	2434619	321.125
58) Isobutyl Alcohol	(1)	7.461	41	1382486	3835.573
57)$1,2-Dichloroethane-d4	(2)	7.528	102	68480	49.033
57)$1,2-Dichloroethane-d4	(2)	7.532	65	307306	49.375
57)$1,2-Dichloroethane-d4	(2)	7.528	104	44002	49.326
60) Benzene	(2)	7.557	78	7094466	311.169
61) 1,2-Dichloroethane	(2)	7.634	62	2222342	303.049
61) 1,2-Dichloroethane	(2)	7.634	98	228988	315.535
65) t-Amyl methyl ether	(2)	7.744	73	5421278	300.945
67) n-Heptane	(2)	7.959	43	2592531MA	324.518
66)*Fluorobenzene	(2)	7.959	96	1120873	50.000
69) n-Butanol	(1)	8.332	56	2465385M	7947.068
71) Trichloroethene	(2)	8.432	95	1841720	320.821
72) Methylcyclohexane	(2)	8.734	83	3568410	335.054
72) Methylcyclohexane	(2)	8.734	98	1632993	338.844
73) 1,2-Dichloropropane	(2)	8.769	63	1825943	315.397
76) Methyl Methacrylate	(2)	8.850	69	1904896A	340.256
75) 1,4-Dioxane	(1)	8.856	88	338379M	3968.421
74) Dibromomethane	(2)	8.879	93	1210939	323.274
78) Bromodichloromethane	(2)	9.113	83	2314651	344.351
79) 2-Nitropropane	(2)	9.390	41	1438925	706.755
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	926413	372.584
81) cis-1,3-Dichloropropene	(2)	9.638	75	3074664	344.402
82) 4-Methyl-2-pentanone	(2)	9.808	43	5422938	607.899
83)$Toluene-d8	(3)	9.933	98	1156351	49.563
83)$Toluene-d8	(3)	9.933	100	751534	49.726
88) Toluene	(3)	10.007	92	4532879	309.894
90) 1,3-Dichloropropene (total)	(3)		100	5974636	693.659

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	2899972	349.257
91) Ethyl Methacrylate	(3)	10.313	69	3356305	332.603
92) 1,1,2-Trichloroethane	(3)	10.461	97	1768710	318.935
93) Tetrachloroethene	(3)	10.541	166	1990565	321.327
94) 1,3-Dichloropropane	(3)	10.621	76	3006585	317.532
96) 2-Hexanone	(3)	10.670	43	3998423	593.616
97) Dibromochloromethane	(3)	10.827	129	2037523	358.670
99) 1,2-Dibromoethane	(3)	10.940	107	1987783	330.088
100)*Chlorobenzene-d5	(3)	11.361	117	891668	50.000
101) 1-Chlorohexane	(3)	11.364	91	2458057	312.814
102) Chlorobenzene	(3)	11.387	112	5140609	310.783
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	1789998	328.446
104) Ethylbenzene	(3)	11.470	91	8606821	307.854
106) m+p-Xylene	(3)	11.583	106	6690837	608.359
108) Xylene (Total)	(3)		106	9979970	911.130
107) o-Xylene	(3)	11.908	106	3289133	302.771
109) Styrene	(3)	11.924	104	5647939	314.619
110) Bromoform	(3)	12.081	173	1534520	361.500
111) Isopropylbenzene	(3)	12.203	105	8466138	310.714
112) Cyclohexanone	(1)	12.287	55	1351186	4046.080
114)$4-Bromofluorobenzene	(3)	12.348	95	440049	49.810
114)$4-Bromofluorobenzene	(3)	12.348	174	362553	49.502
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	2800639M	310.705
115) Bromobenzene	(4)	12.467	156	2234066	311.517
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	2150976	773.637
117) 1,2,3-Trichloropropane	(4)	12.499	110	866230	313.172
119) n-Propylbenzene	(4)	12.531	91	9654812	308.142
120) 2-Chlorotoluene	(4)	12.609	126	2098494	315.266
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	7238022	317.873
121) 4-Chlorotoluene	(4)	12.702	126	2155793	311.148
124) tert-Butylbenzene	(4)	12.908	134	1524421M	323.717
125) Pentachloroethane	(4)	12.940	167	1461833	360.511
126) 1,2,4-Trimethylbenzene	(4)	12.949	105	7469187	311.236
127) sec-Butylbenzene	(4)	13.068	105	8682126	308.971
129) 1,3-Dichlorobenzene	(4)	13.168	146	3858953	292.822
130) p-Isopropyltoluene	(4)	13.174	119	7289488	299.854
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	477171	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	4013510	293.777

M = Compound was manually integrated.
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Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	7915203	311.364
135) Benzyl Chloride	(4)	13.319	91	6484944	336.931
136) 1,3-Diethylbenzene	(4)	13.374	119	4897725	309.573
141) Diethylbenzene (total)	(4)		100	13982971	913.975
137) 1,4-Diethylbenzene	(4)	13.444	119	5013123	299.077
139) n-Butylbenzene	(4)	13.467	92	3608595	290.316
138) 1,2-Dichlorobenzene	(4)	13.502	146	3859125	296.761
140) 1,2-Diethylbenzene	(4)	13.518	119	4072123	305.325
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	669008	339.050
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	2855960	285.855
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	2681523	276.030
147) Hexachlorobutadiene	(4)	14.670	225	1157297	252.311
148) Naphthalene	(4)	14.772	128	9186333	294.145
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	2488608	263.270
150) 2-Methylnaphthalene	(4)	15.563	142	4666682	242.655

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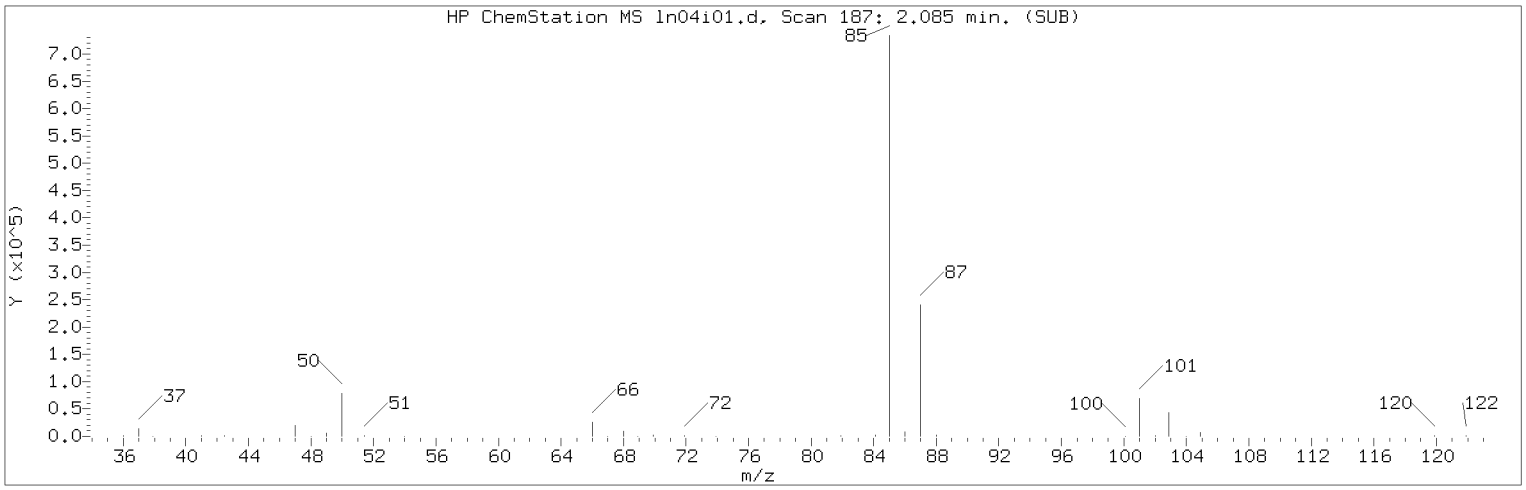
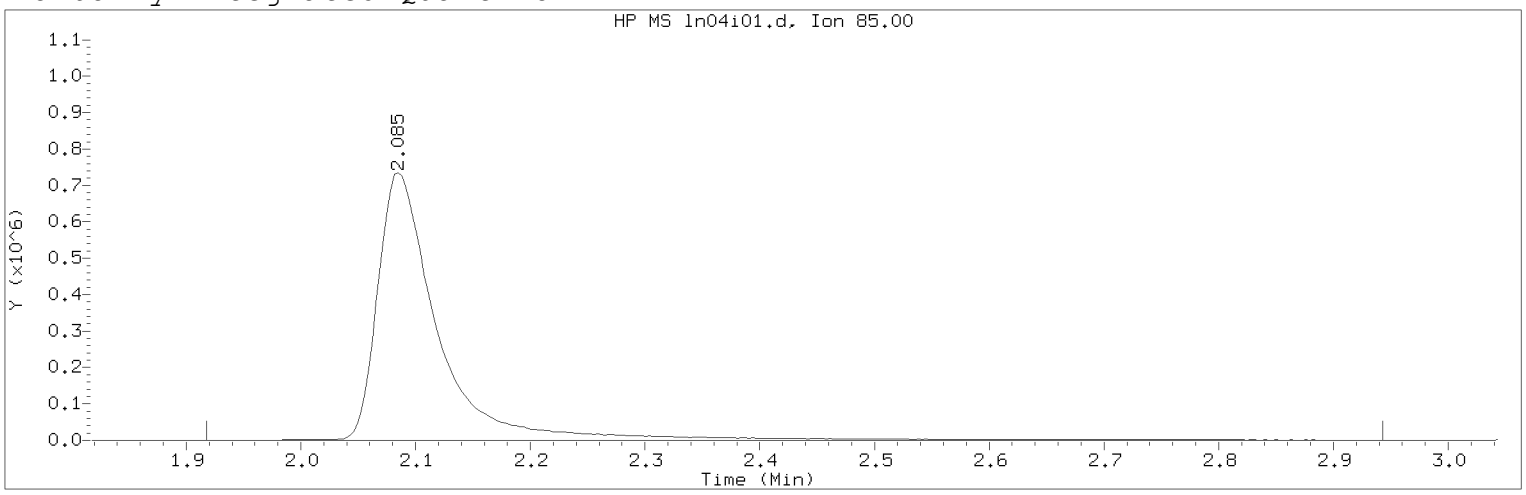
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

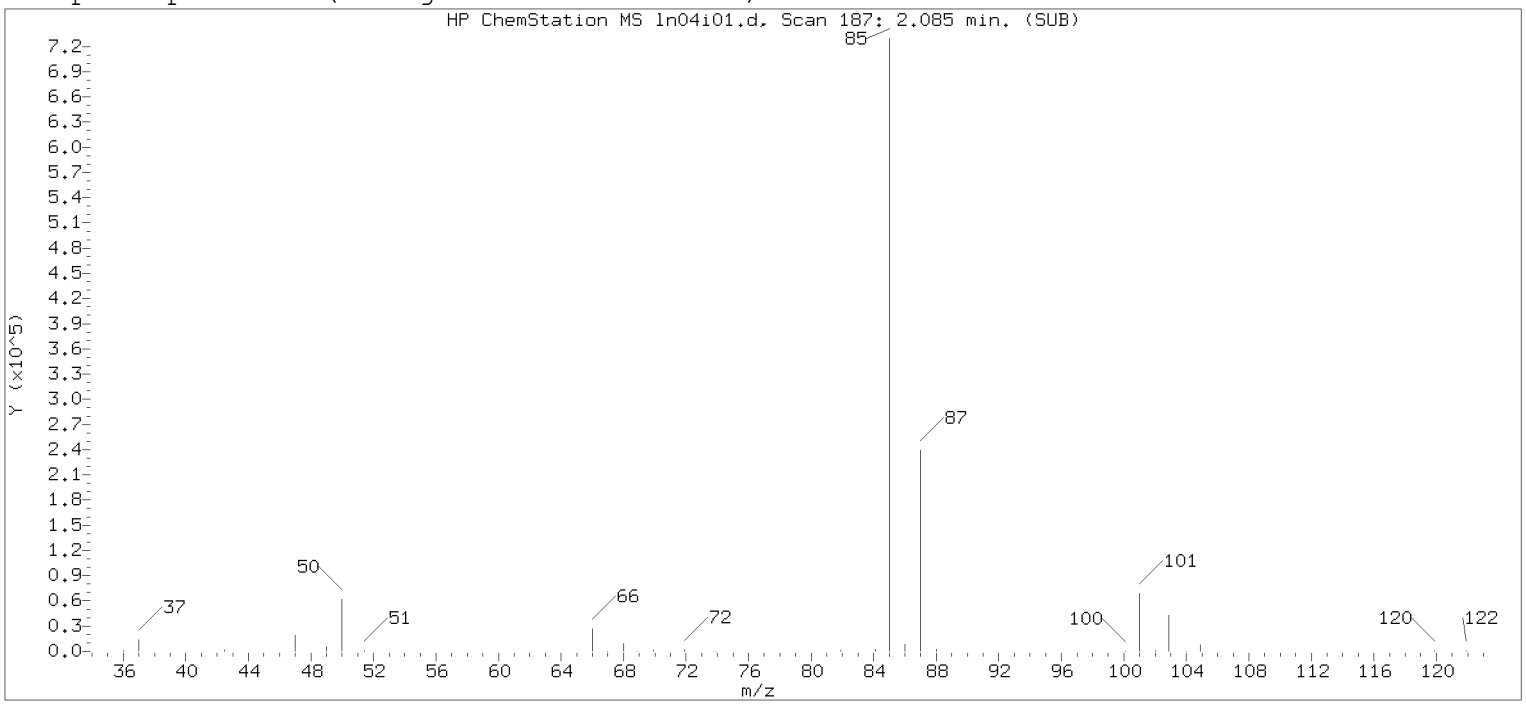
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area (flag) : 2719746M
On-Column Amount (ng) : 347.9426
Integration start scan : 134 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

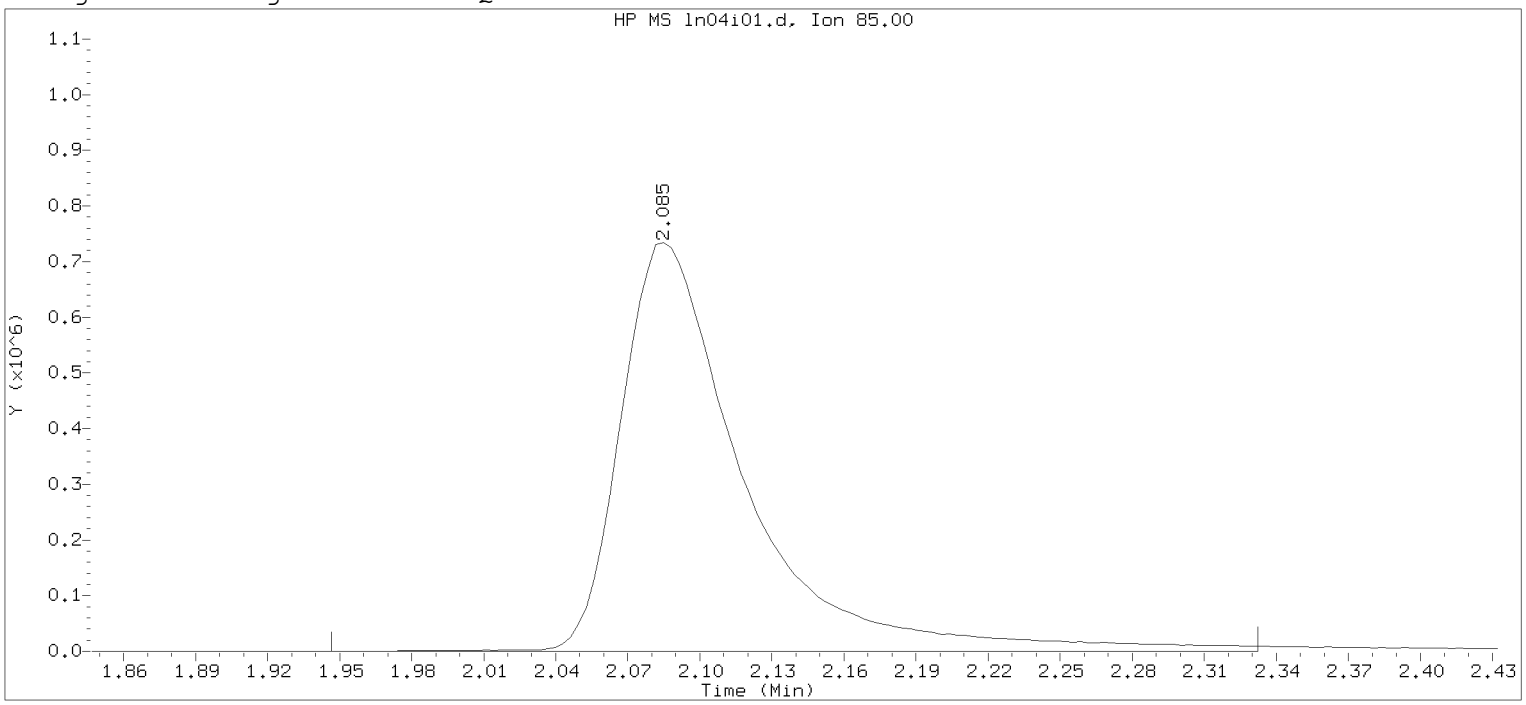
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area : 2624212
On-column Amount (ng) : 308.6520
Integration start scan : 143 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

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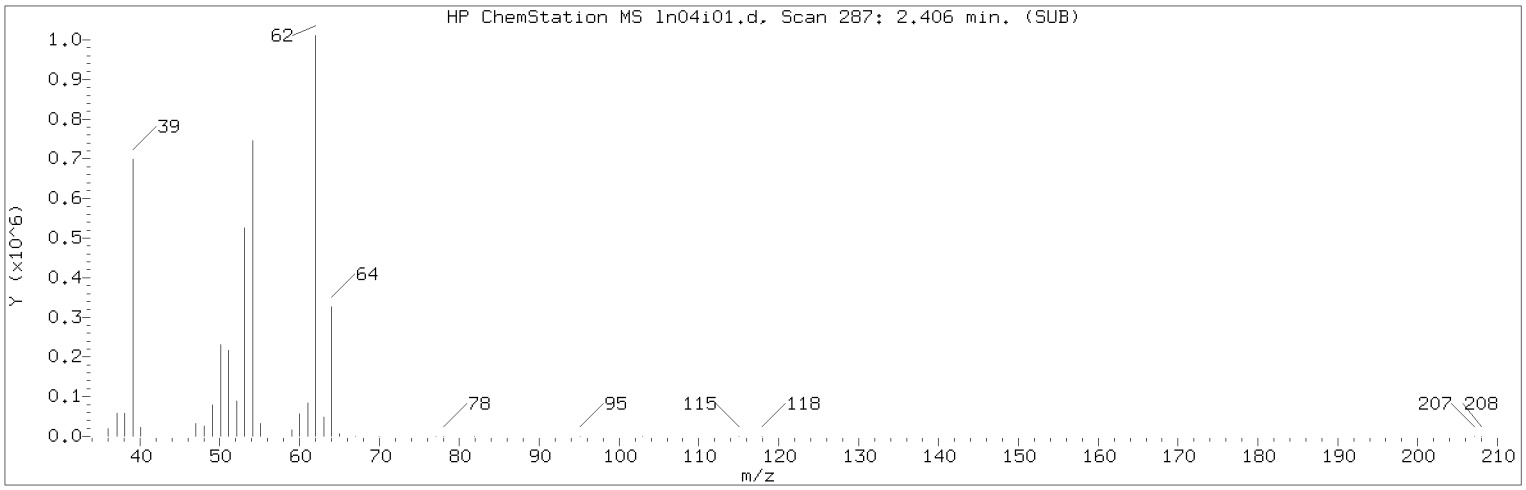
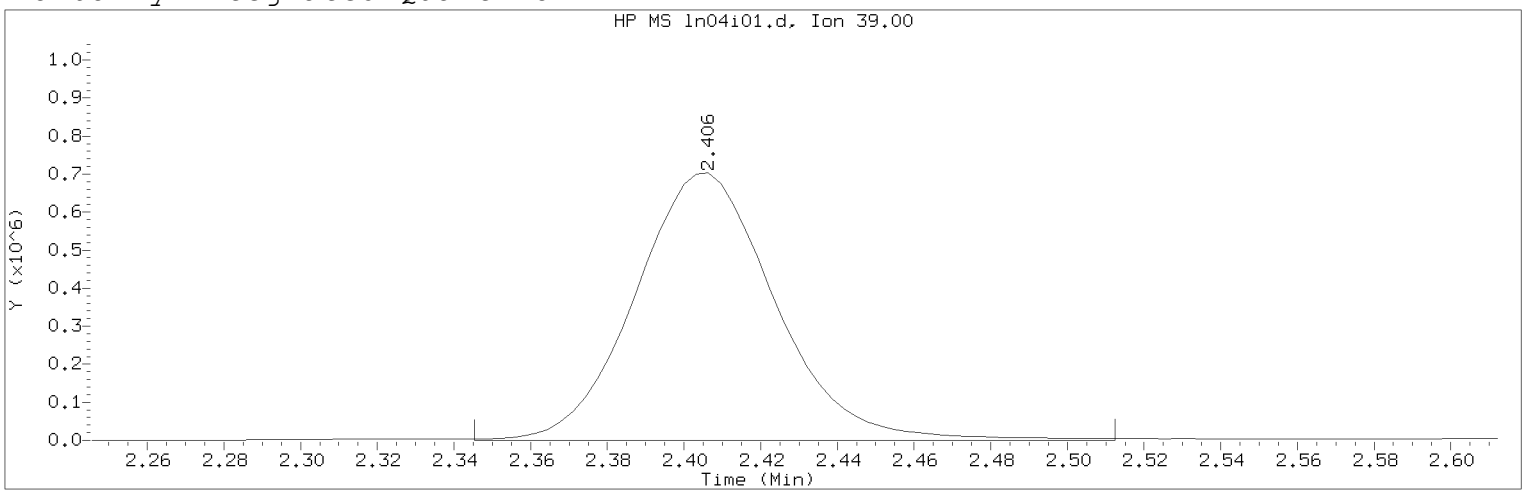
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

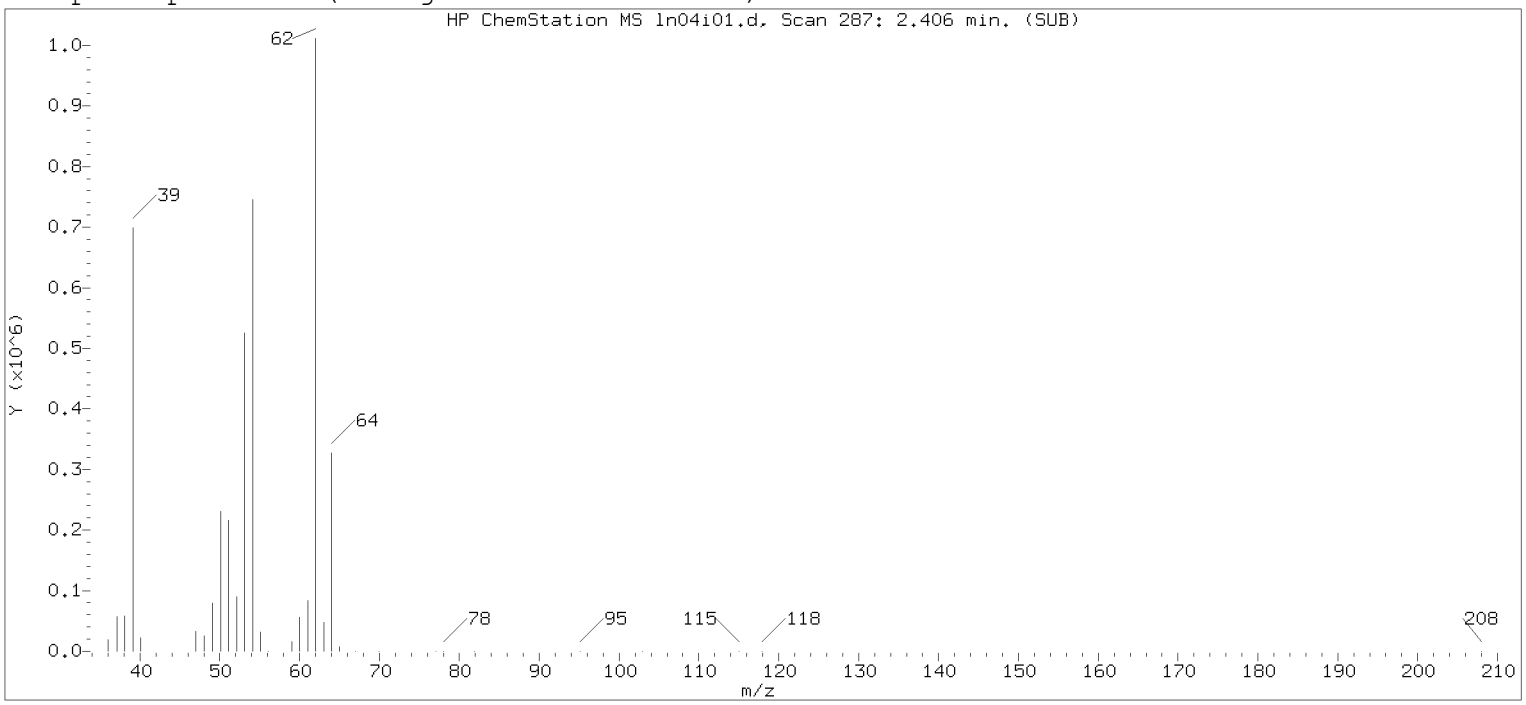
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 1785787M
On-Column Amount (ng) : 285.4858
Integration start scan : 267 Integration stop scan: 319
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

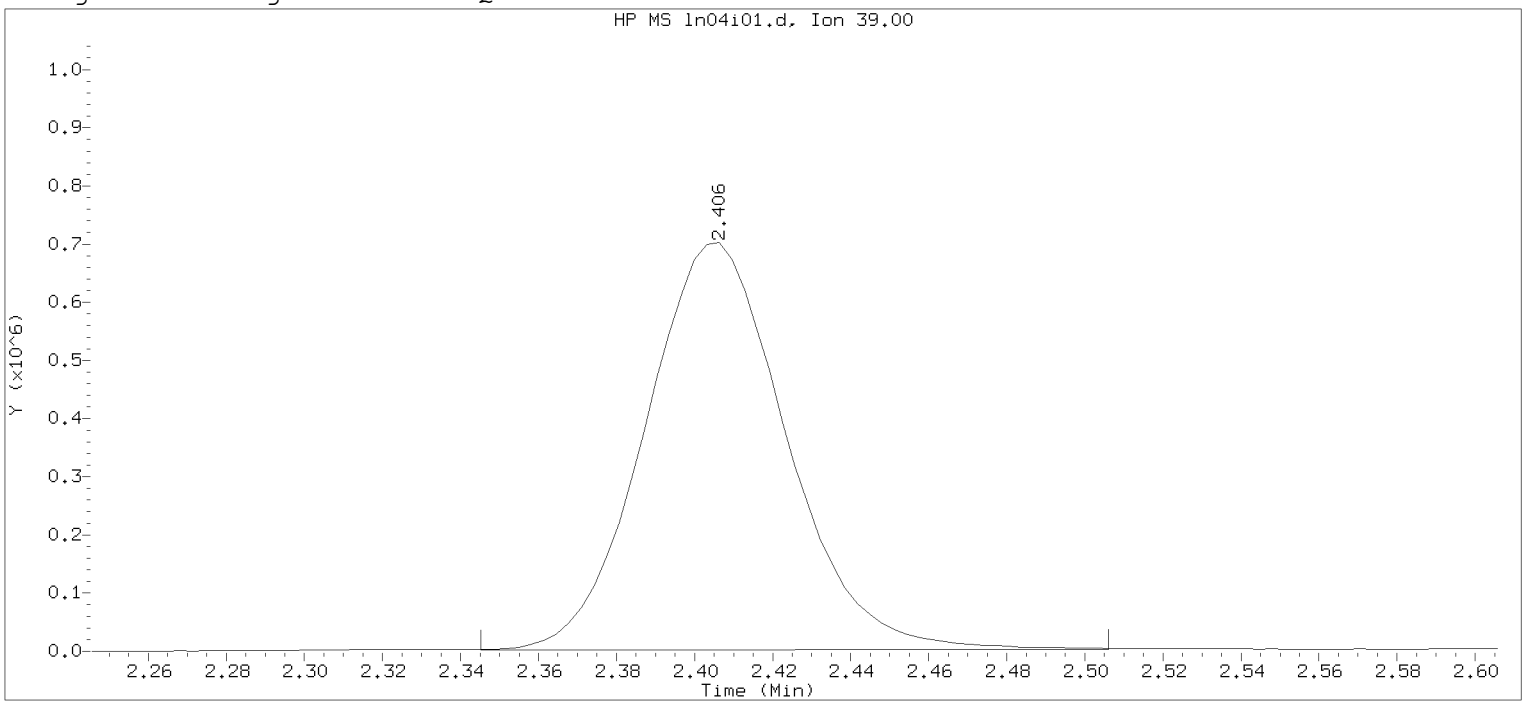
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 1755596
On-column Amount (ng) : 295.0708
Integration start scan : 267 Integration stop scan: 317
Y at integration start : 2196 Y at integration end: 3553

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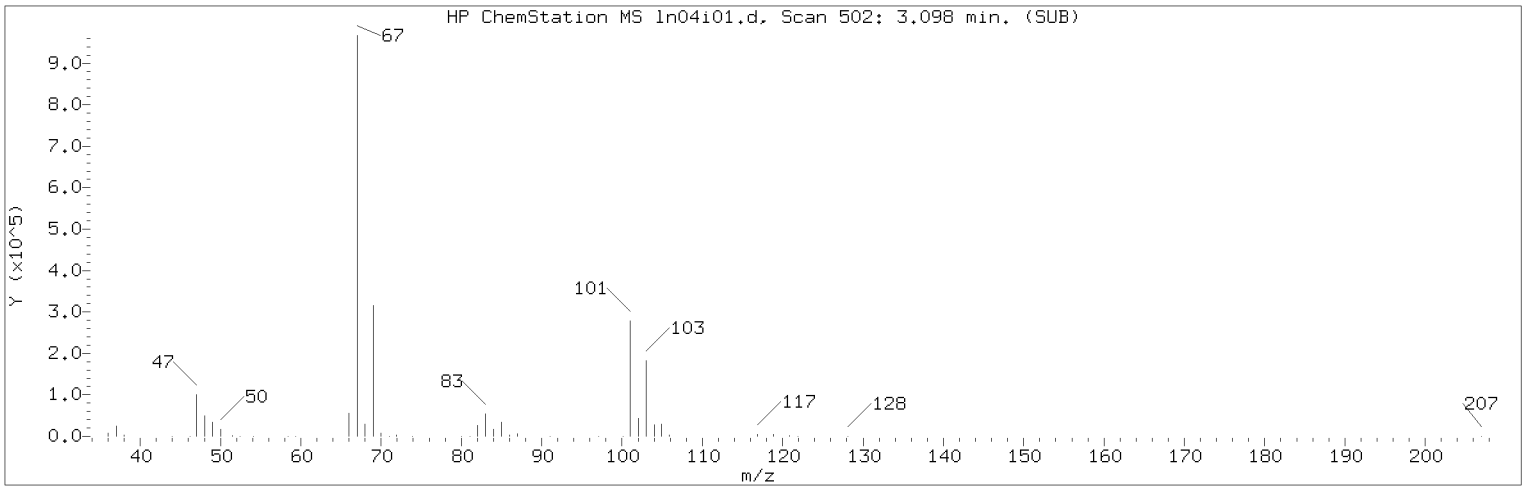
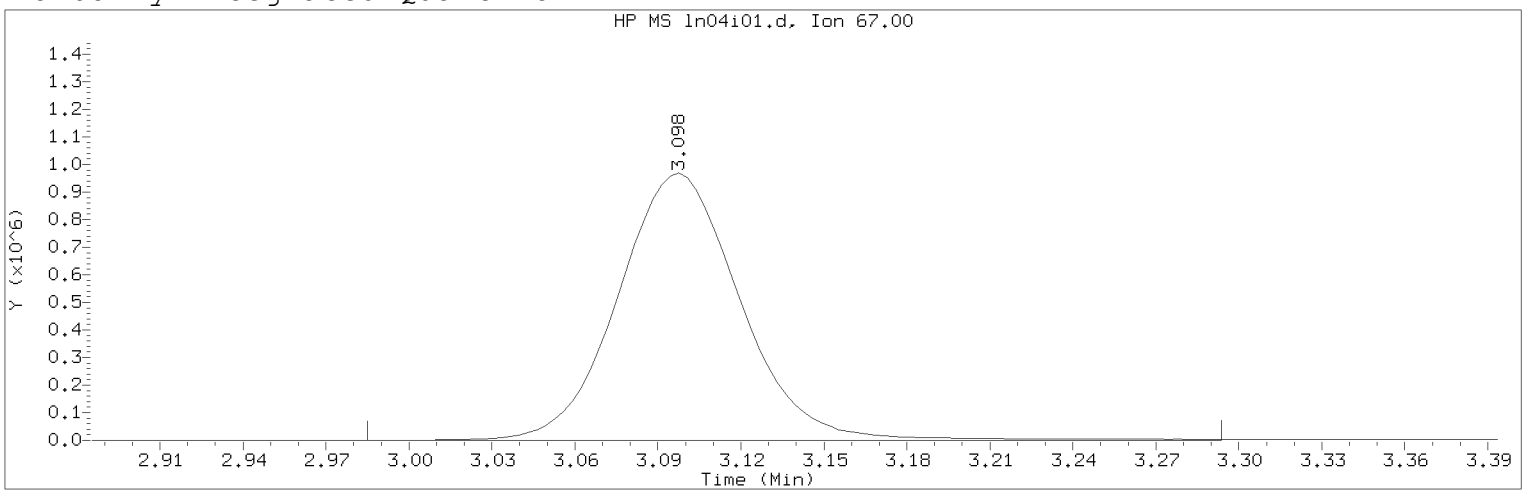
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

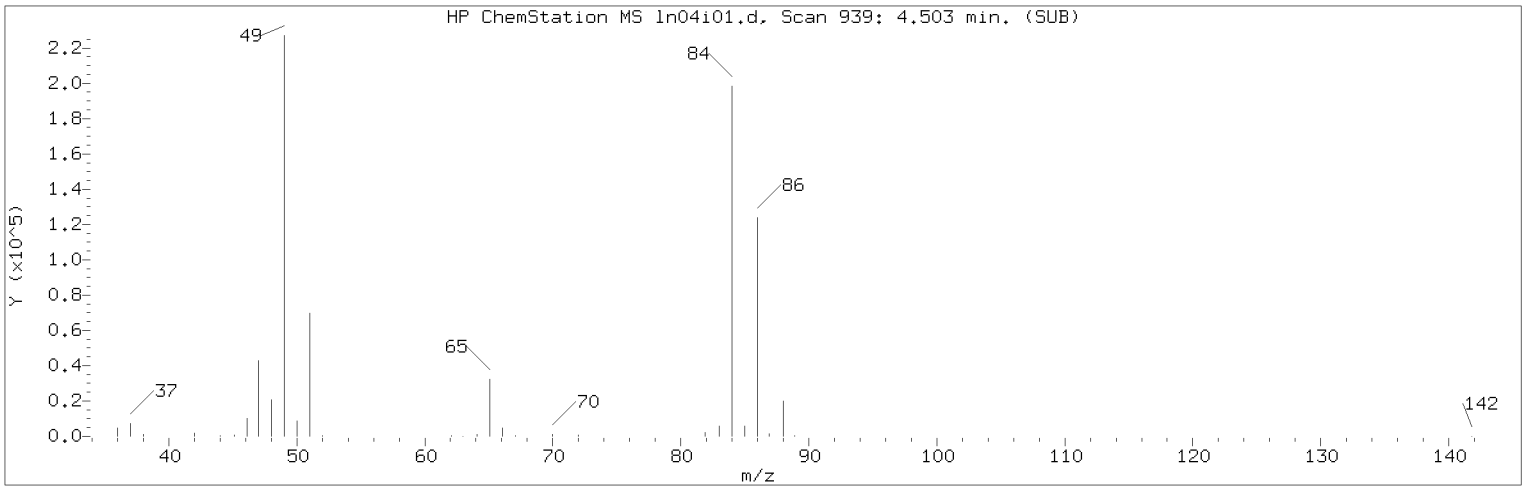
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 502
Retention Time (minutes): 3.098
Quant Ion : 67.00
Area (flag) : 2978303M
On-Column Amount (ng) : 300.2583
Integration start scan : 466 Integration stop scan: 562
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

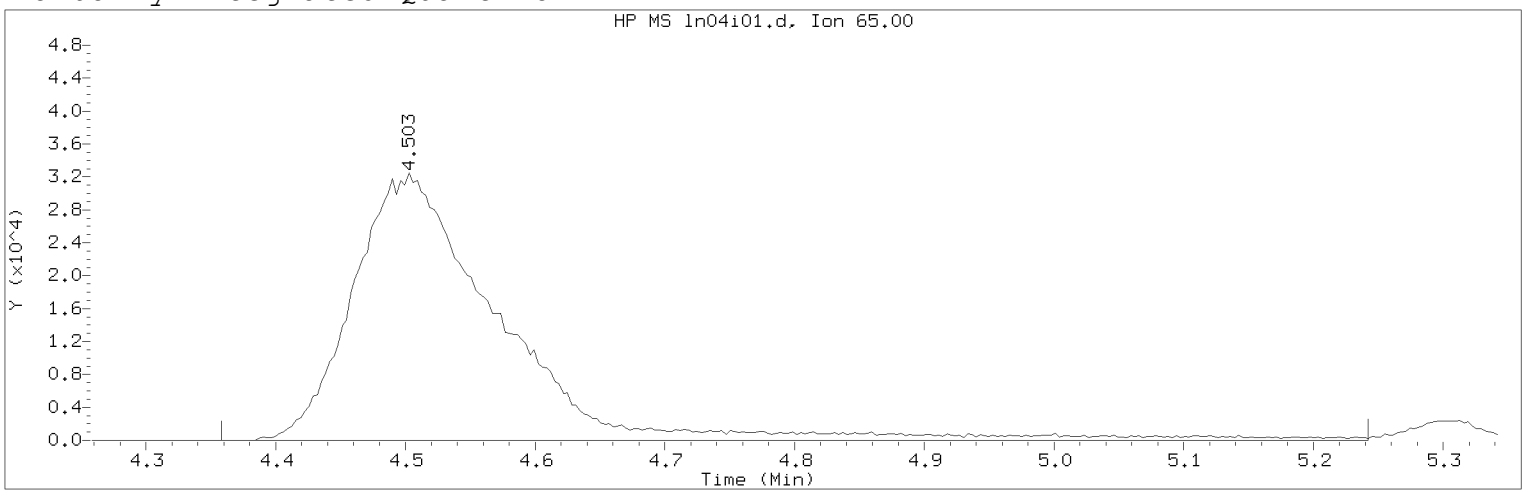
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

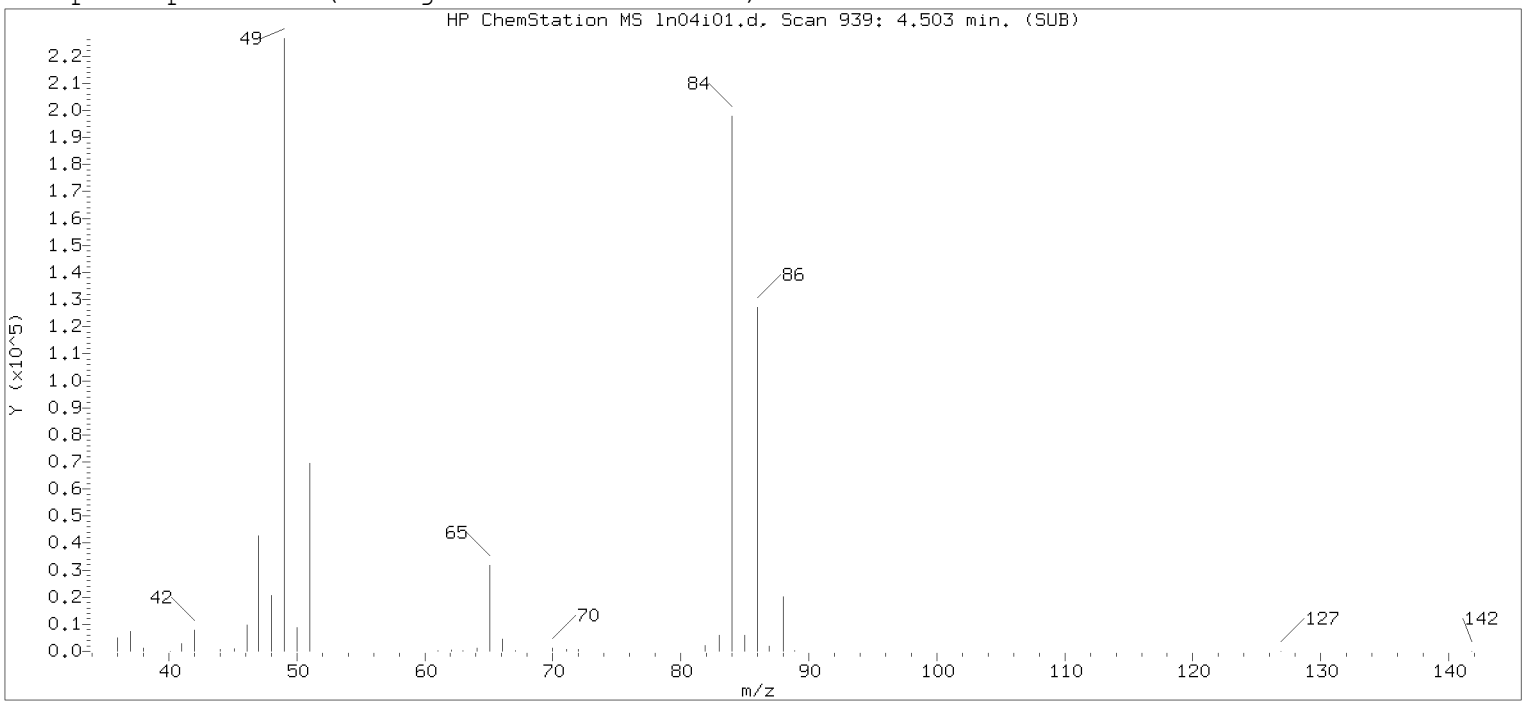
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area (flag) : 254406M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1168
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

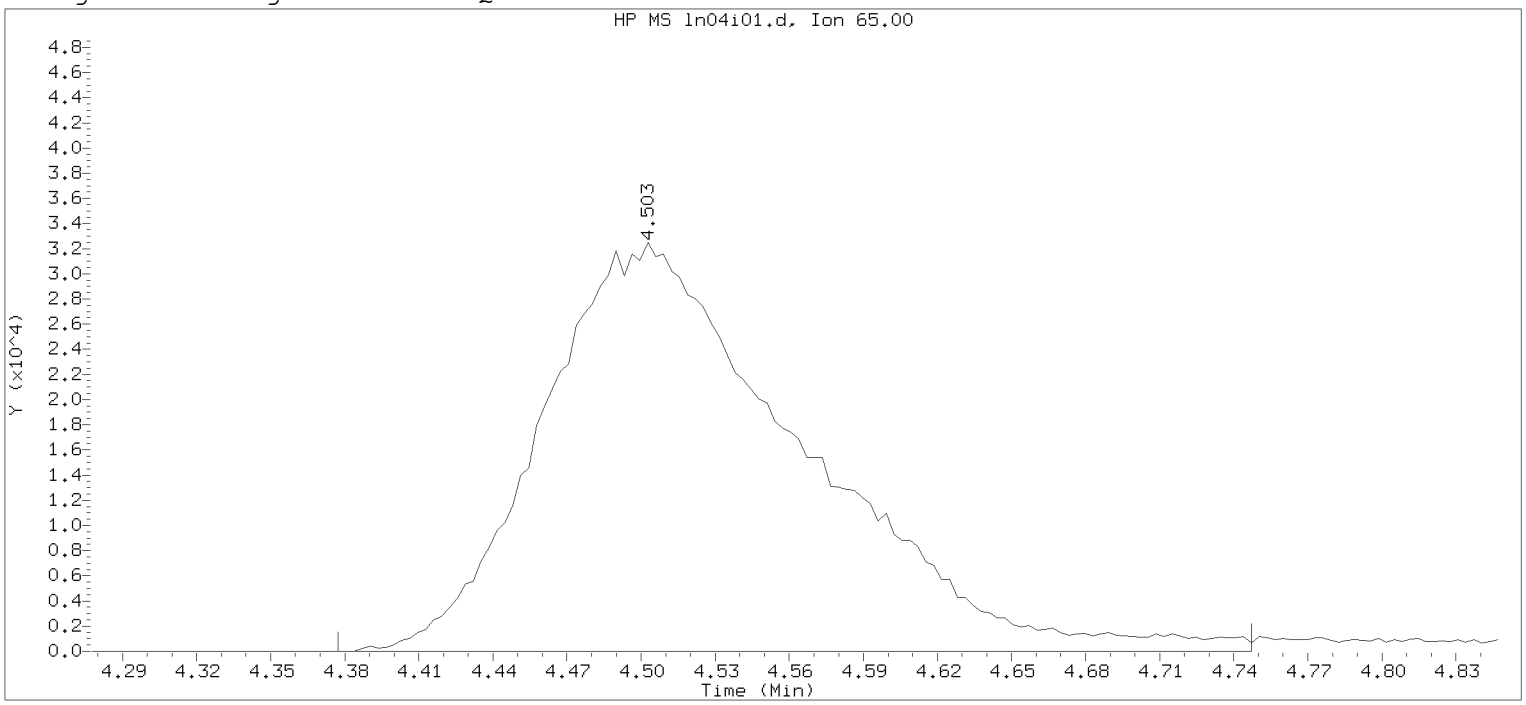
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

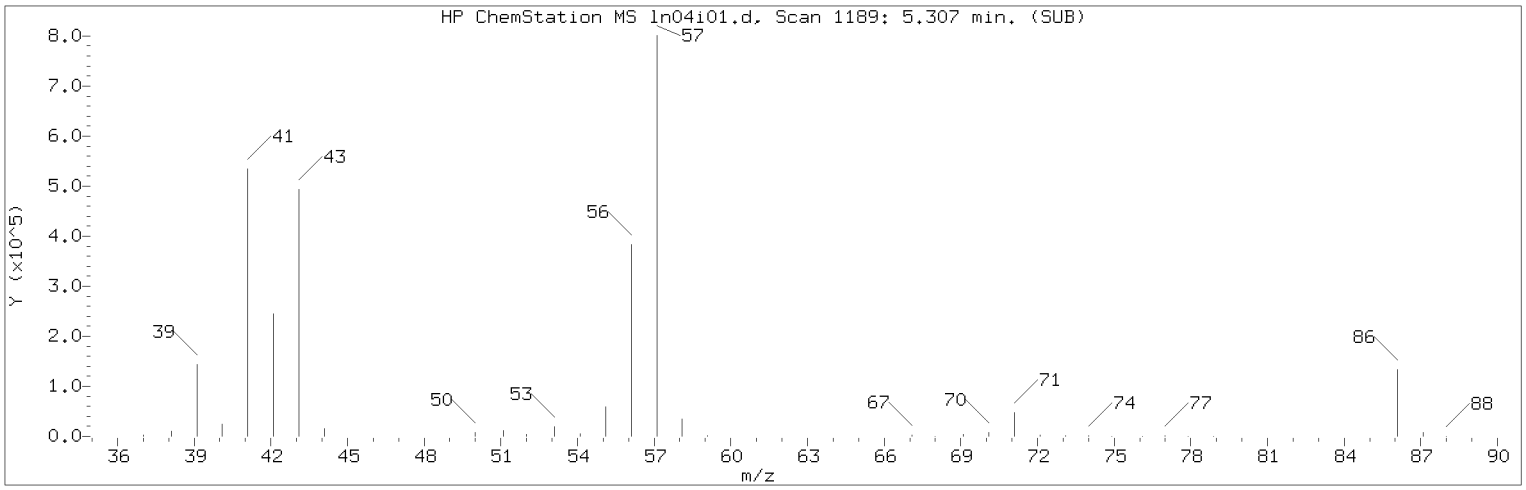
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

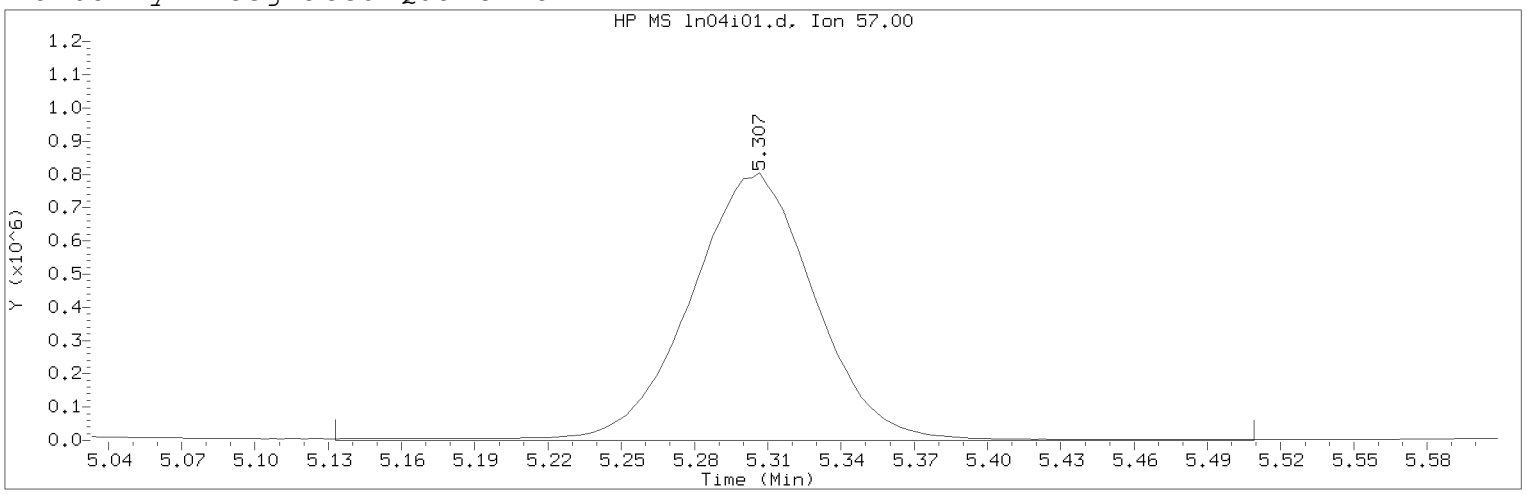
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area : 237264
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

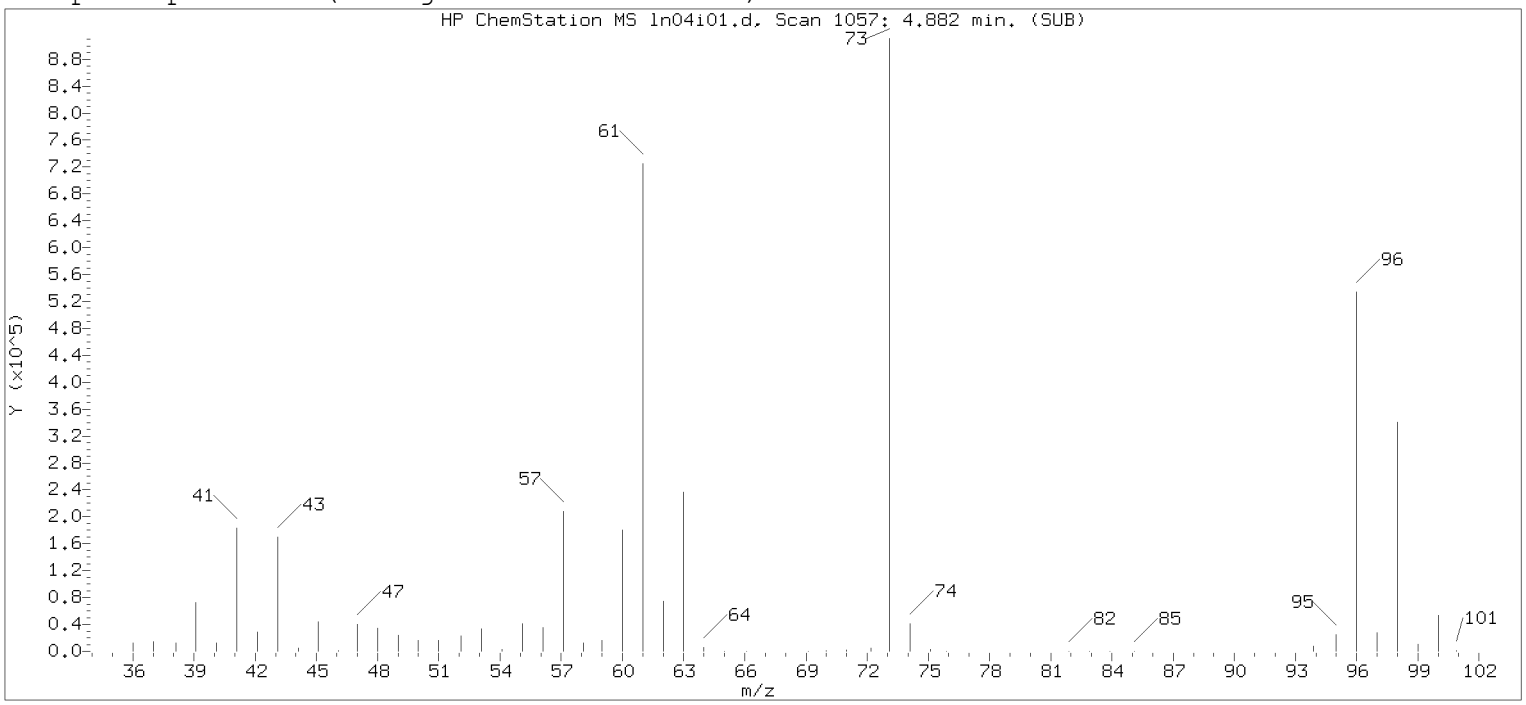
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1189
Retention Time (minutes): 5.307
Quant Ion : 57.00
Area (flag) : 2863189M
On-Column Amount (ng) : 334.8105
Integration start scan : 1134 Integration stop scan: 1251
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

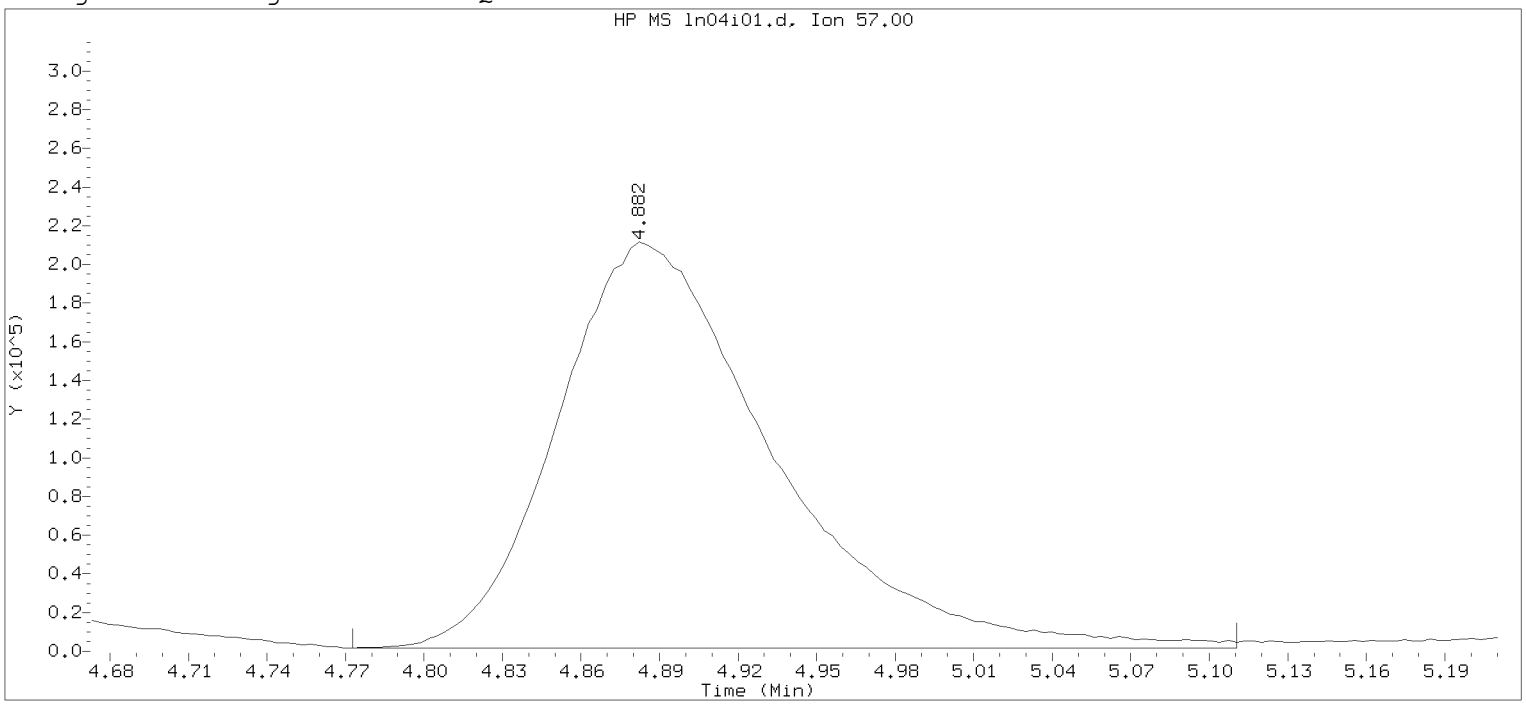
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

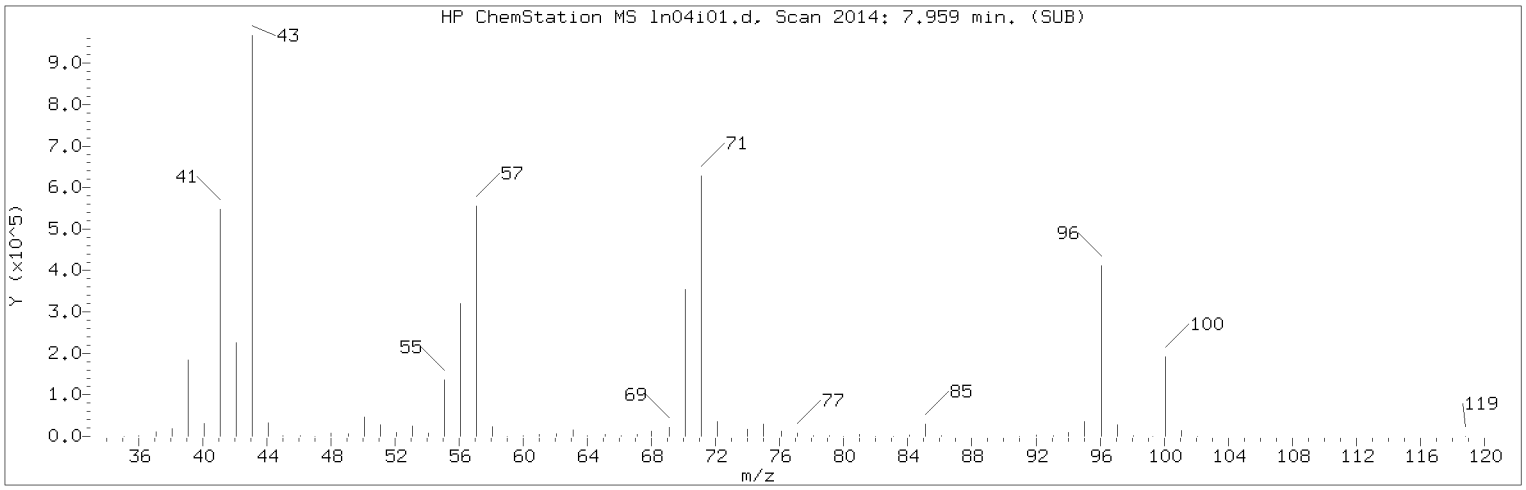
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

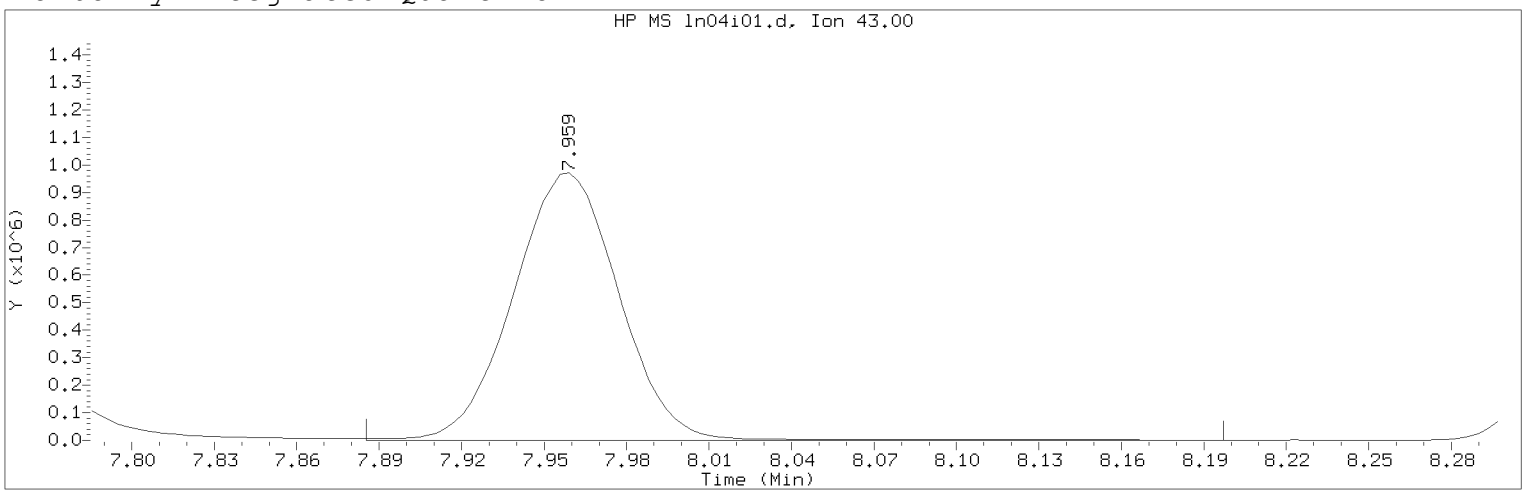
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1057
Retention Time (minutes): 4.882
Quant Ion : 57.00
Area : 1202378
On-column Amount (ng) : 301.4561
Integration start scan : 1022 Integration stop scan: 1127
Y at integration start : 1806 Y at integration end: 1806

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

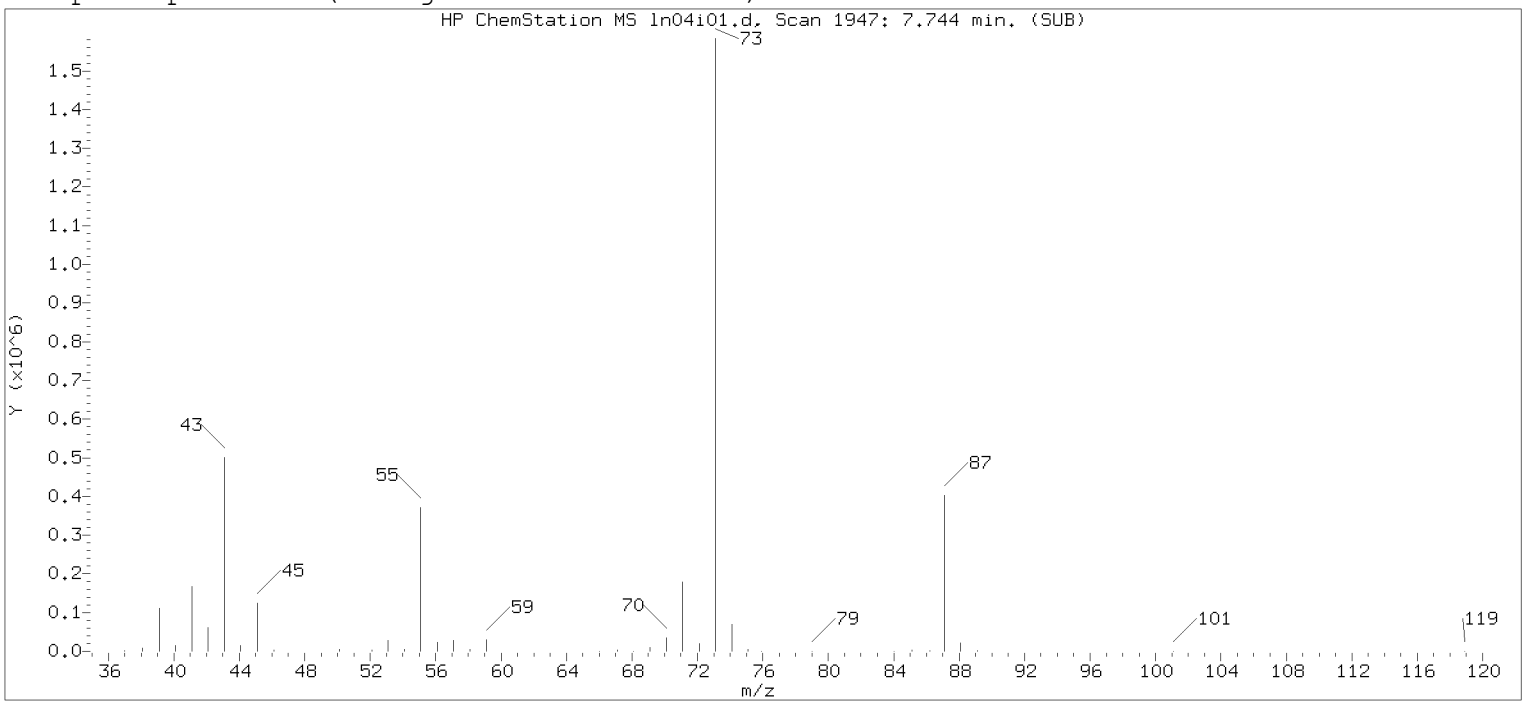
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2014
Retention Time (minutes): 7.959
Quant Ion : 43.00
Area (flag) : 2592531MA
On-Column Amount (ng) : 324.5176
Integration start scan : 1990 Integration stop scan: 2087
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

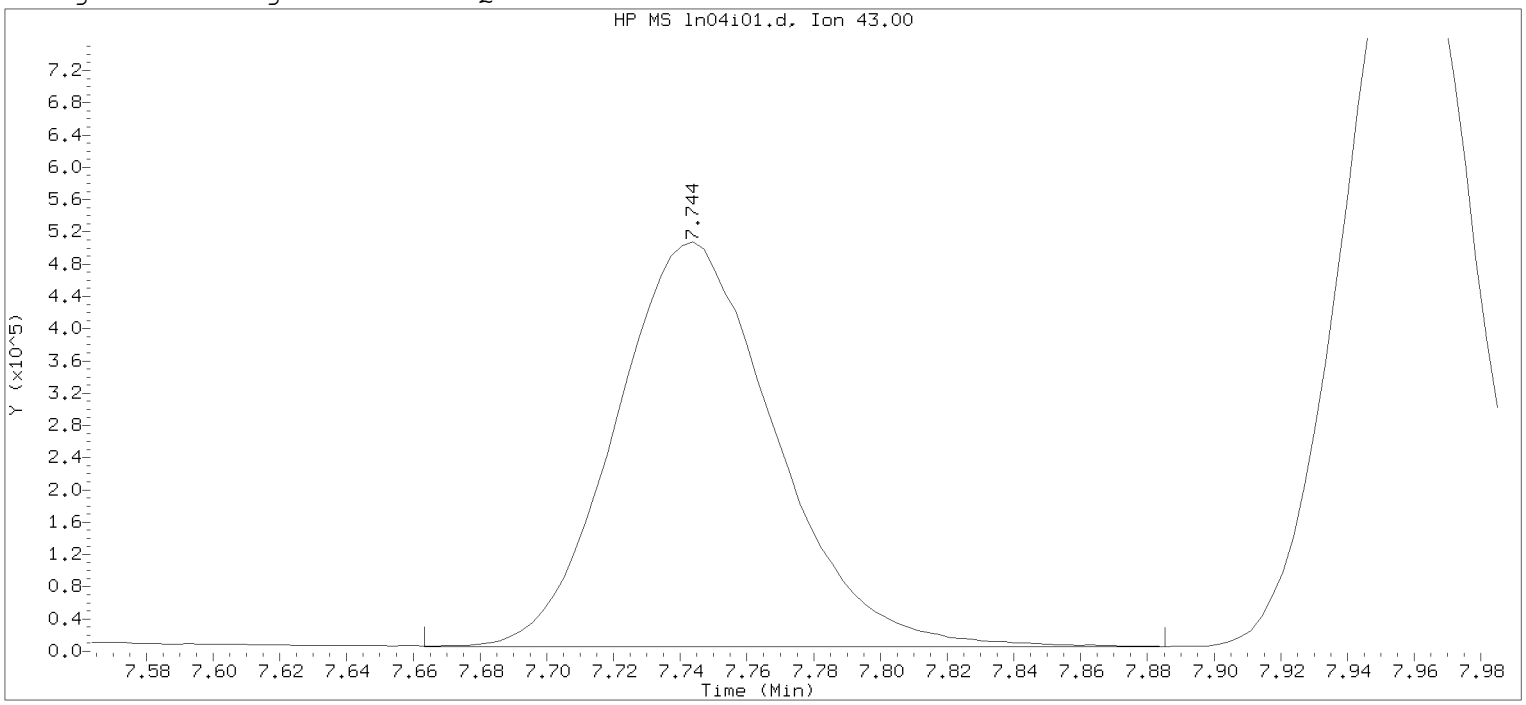
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

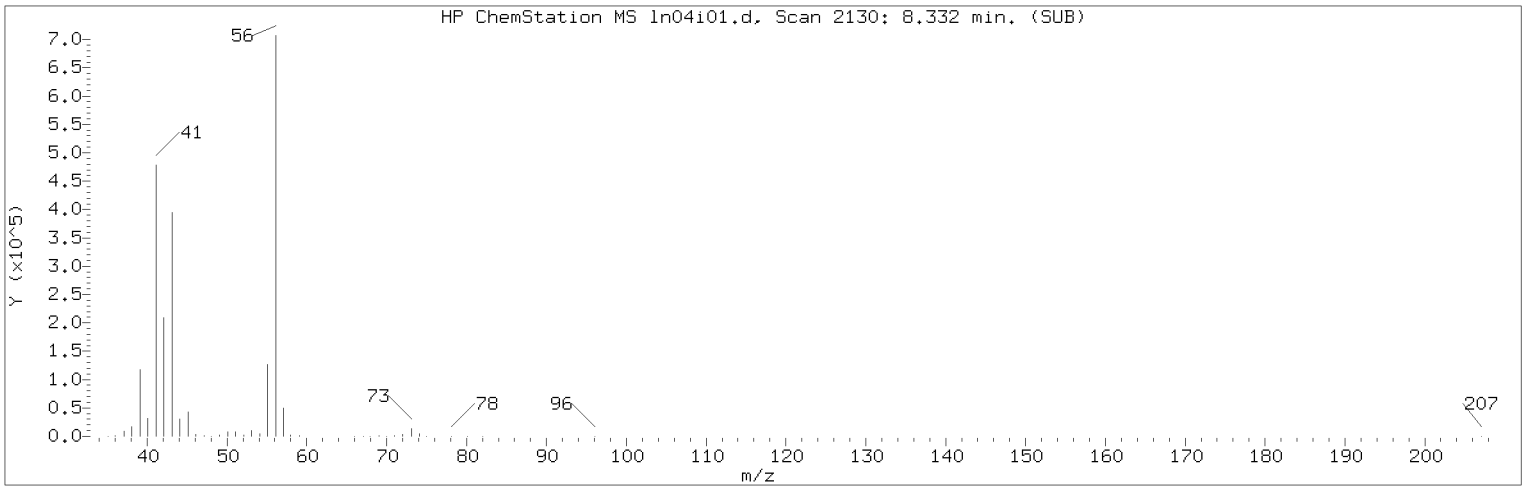
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

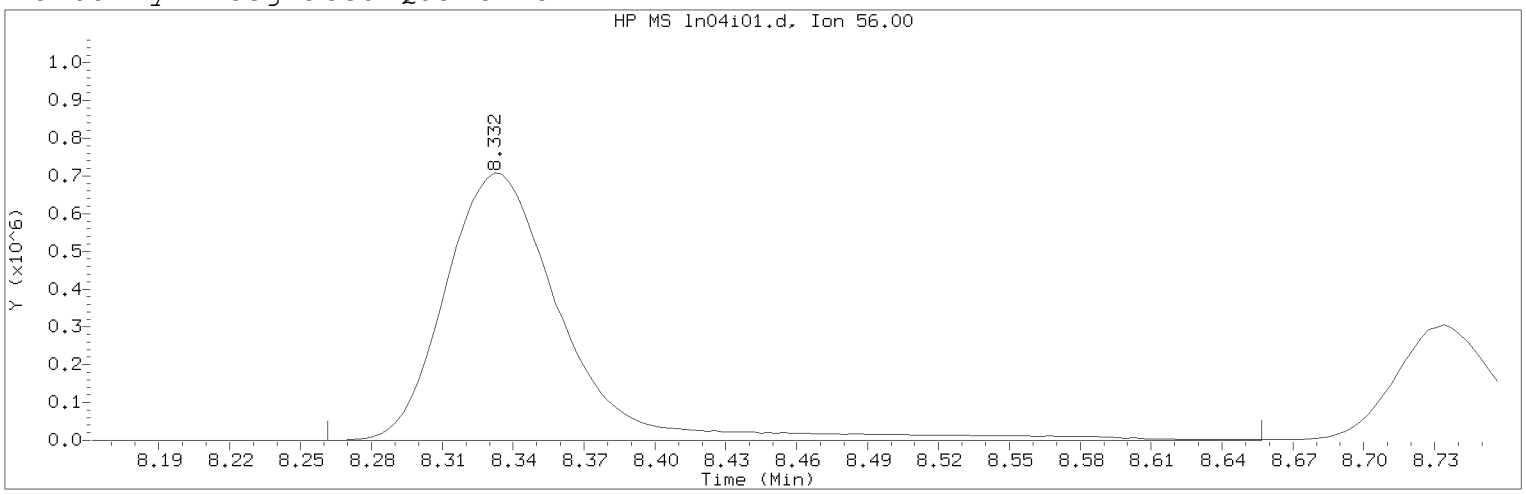
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1947
Retention Time (minutes): 7.744
Quant Ion : 43.00
Area : 1668813
On-column Amount (ng) : 288.4319
Integration start scan : 1921 Integration stop scan: 1990
Y at integration start : 5866 Y at integration end: 5866

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

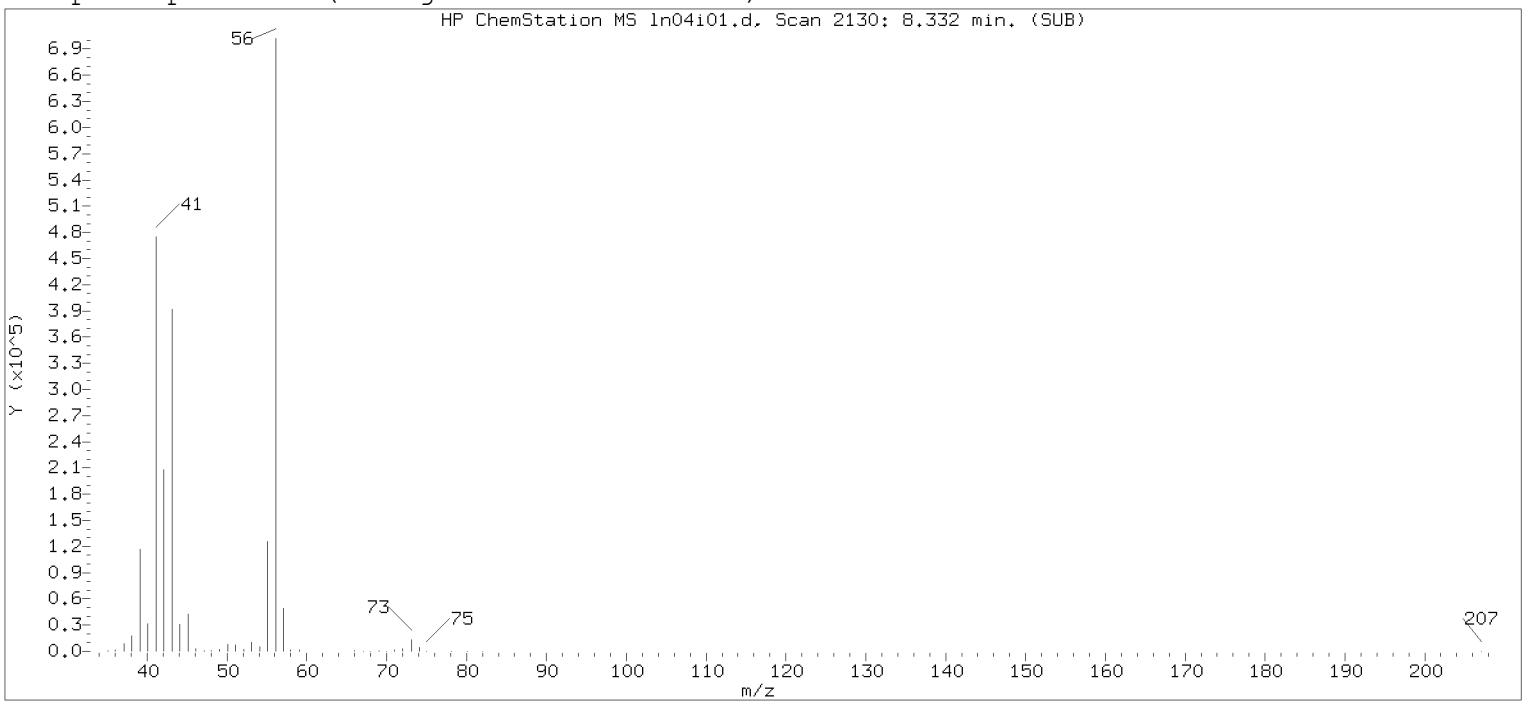
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area (flag) : 2465385M
On-Column Amount (ng) : 7947.0678
Integration start scan : 2107 Integration stop scan: 2230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

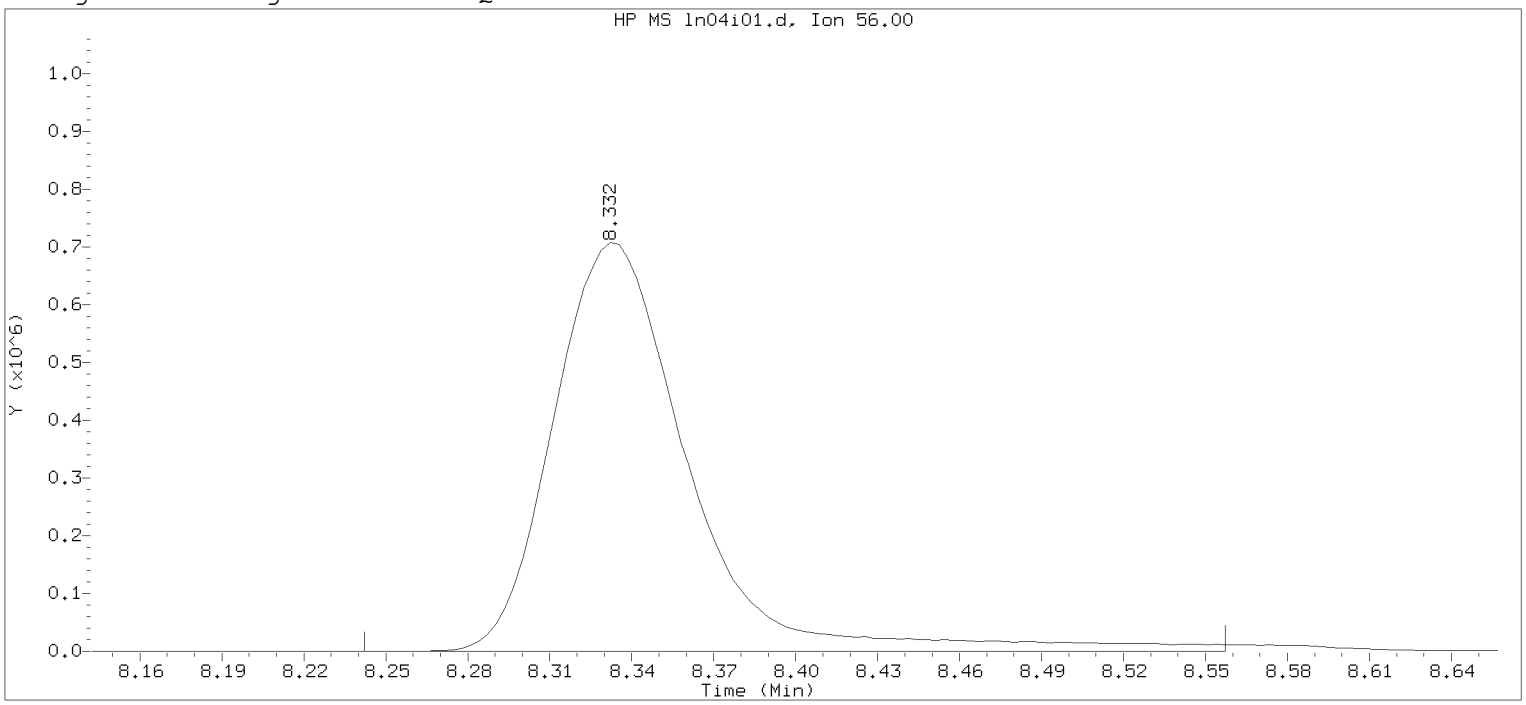
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

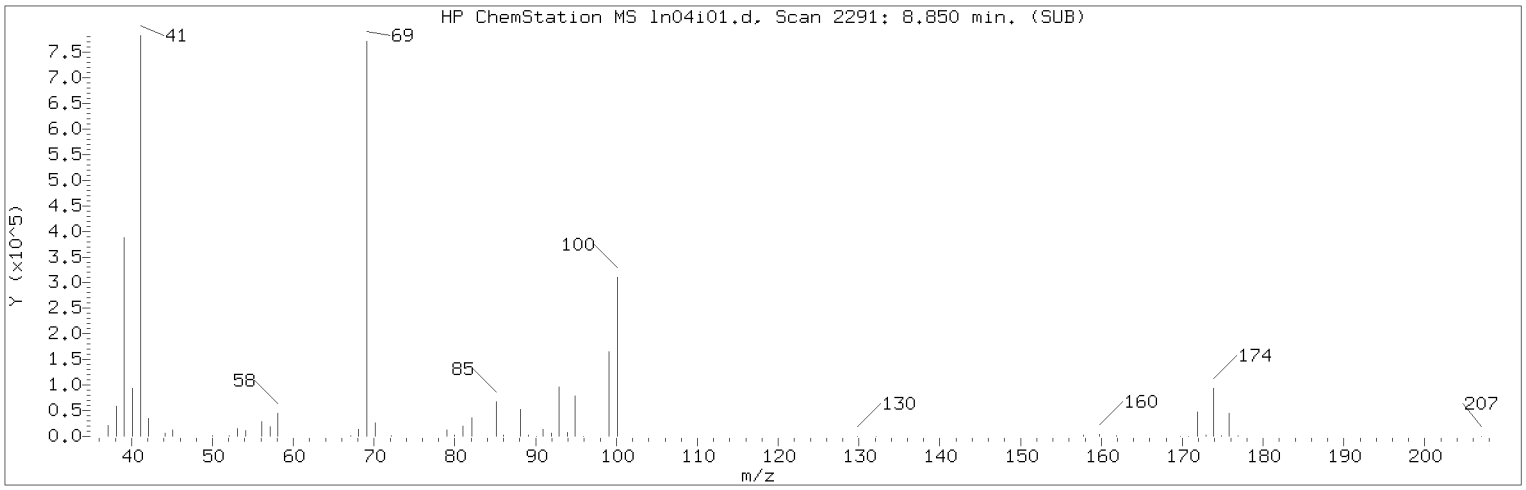
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

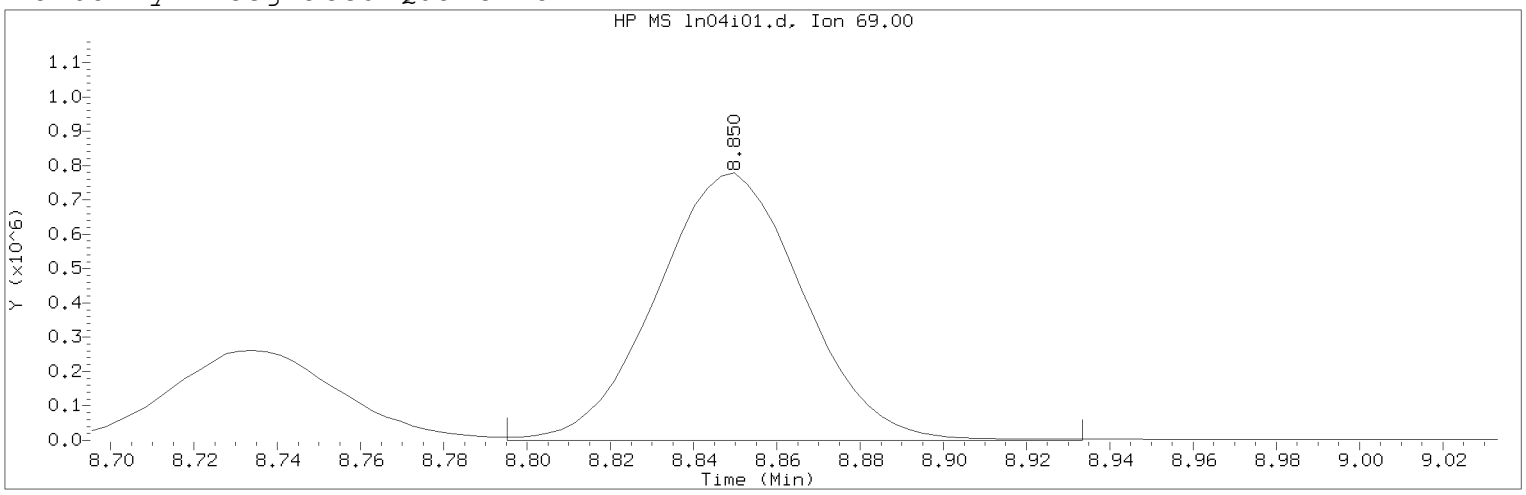
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area : 2429255
On-column Amount (ng) : 7682.9381
Integration start scan : 2101 Integration stop scan: 2199
Y at integration start : 176 Y at integration end: 176

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

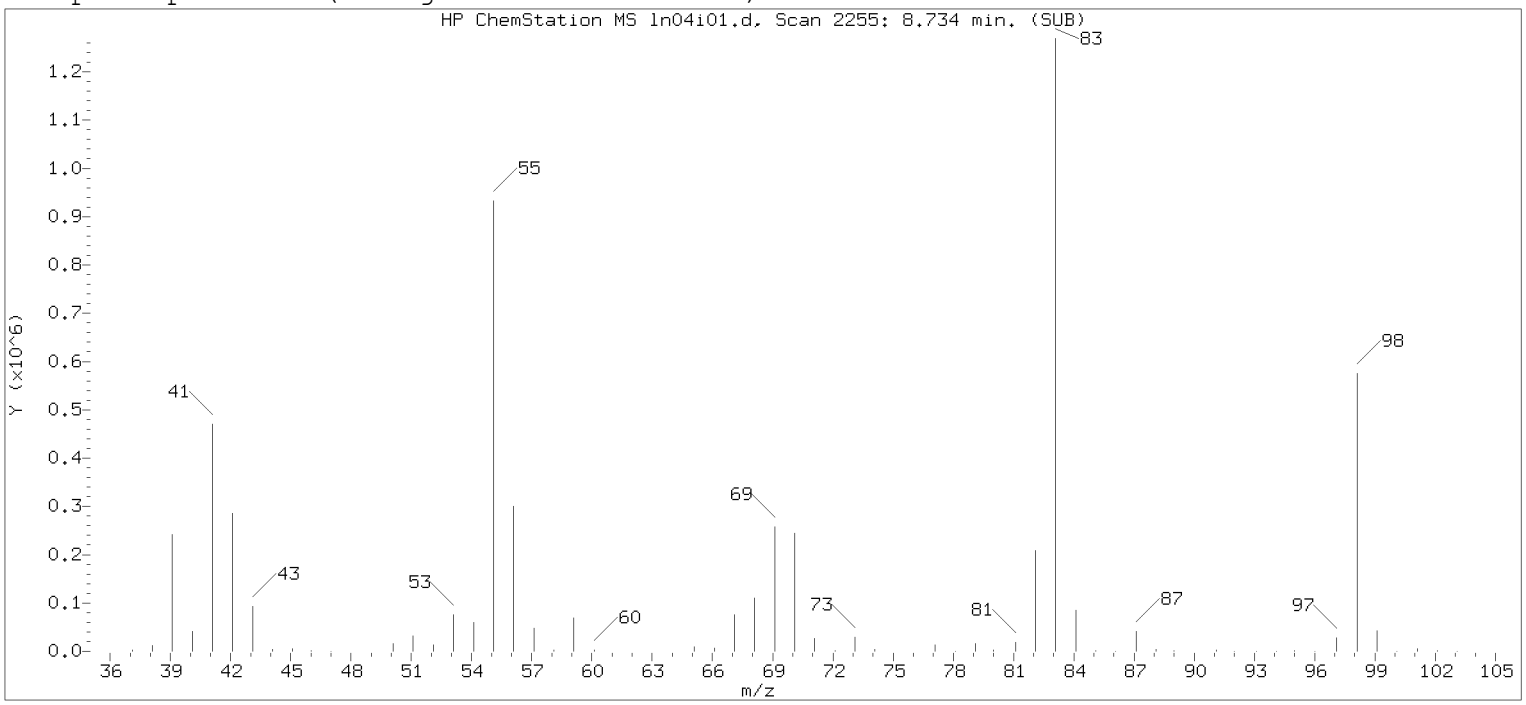
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2291
Retention Time (minutes): 8.850
Quant Ion : 69.00
Area (flag) : 1904896A
On-Column Amount (ng) : 340.2564
Integration start scan : 2273 Integration stop scan: 2316
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

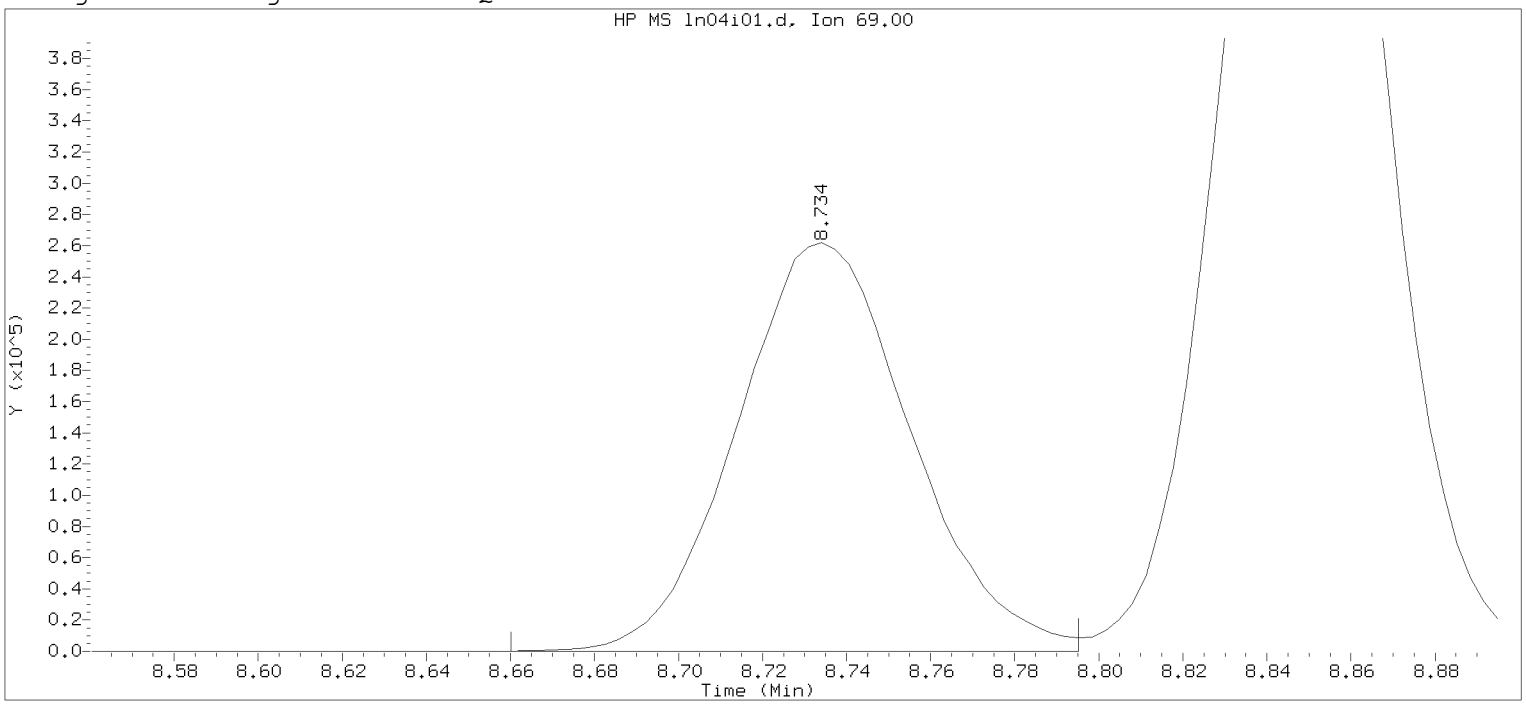
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

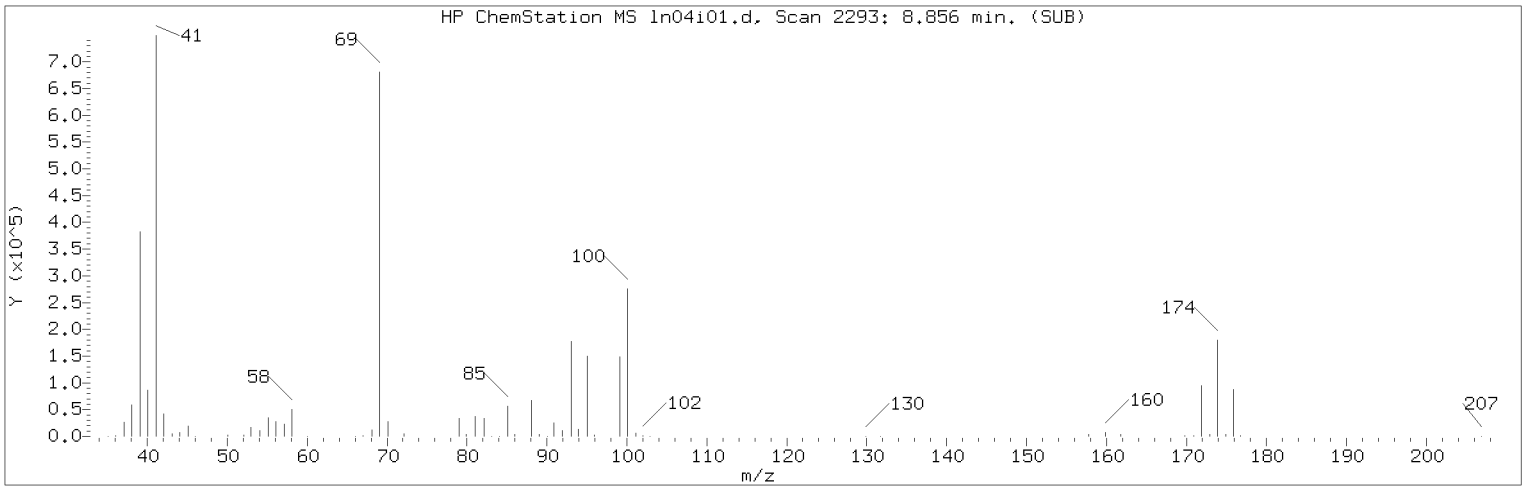
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

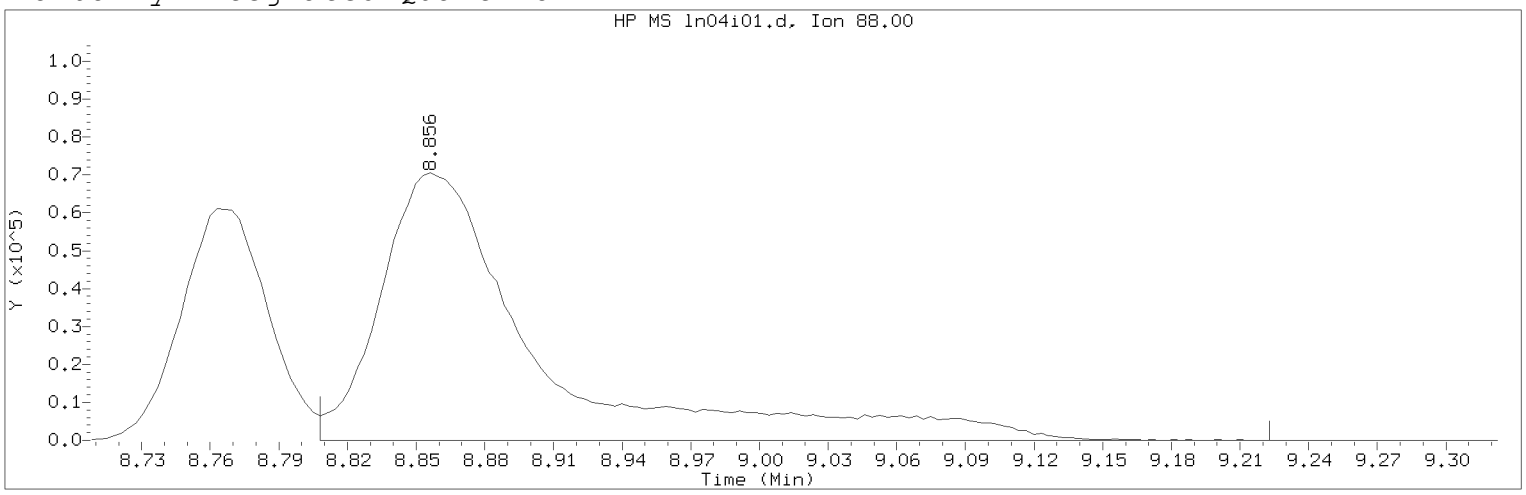
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 752058
On-column Amount (ng) : 311.1363
Integration start scan : 2231 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

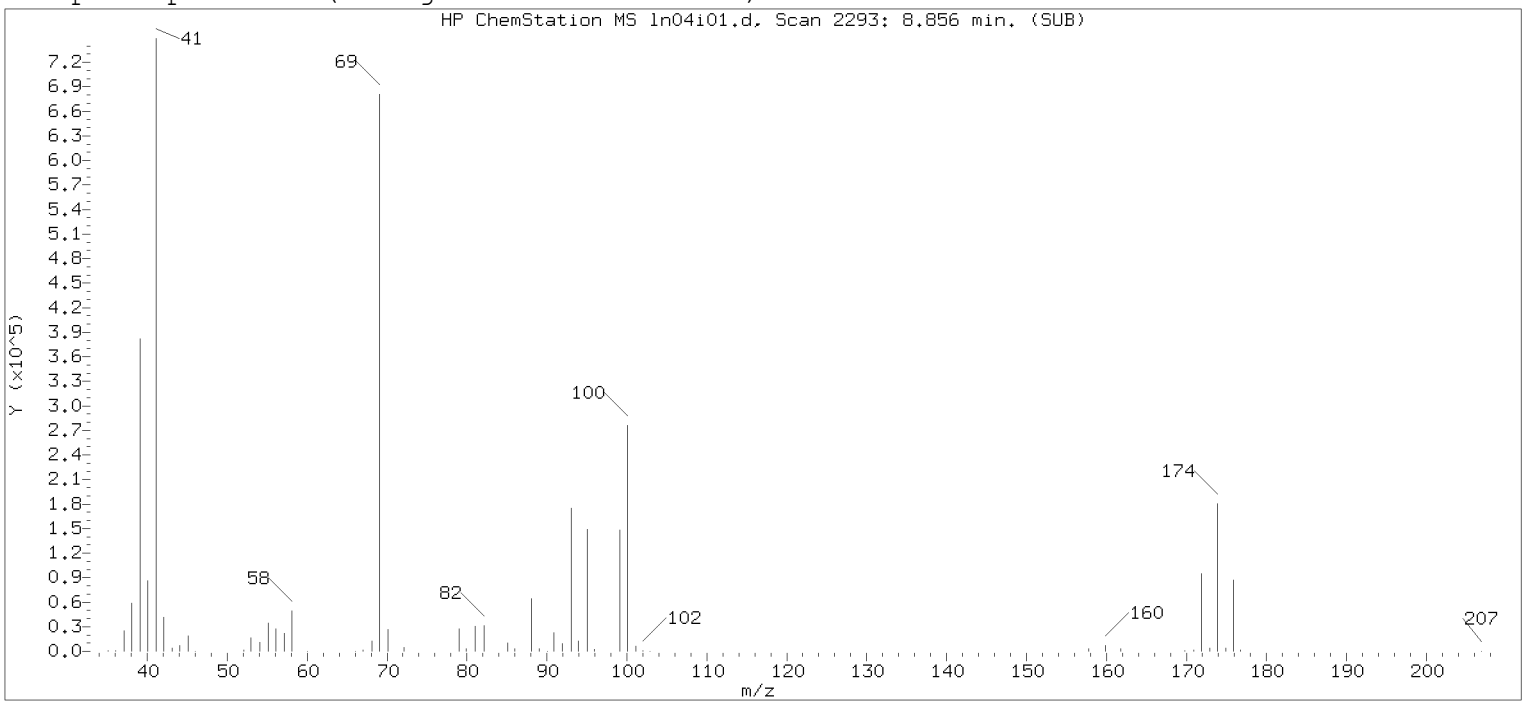
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 338379M
On-Column Amount (ng) : 3968.4208
Integration start scan : 2277 Integration stop scan: 2406
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

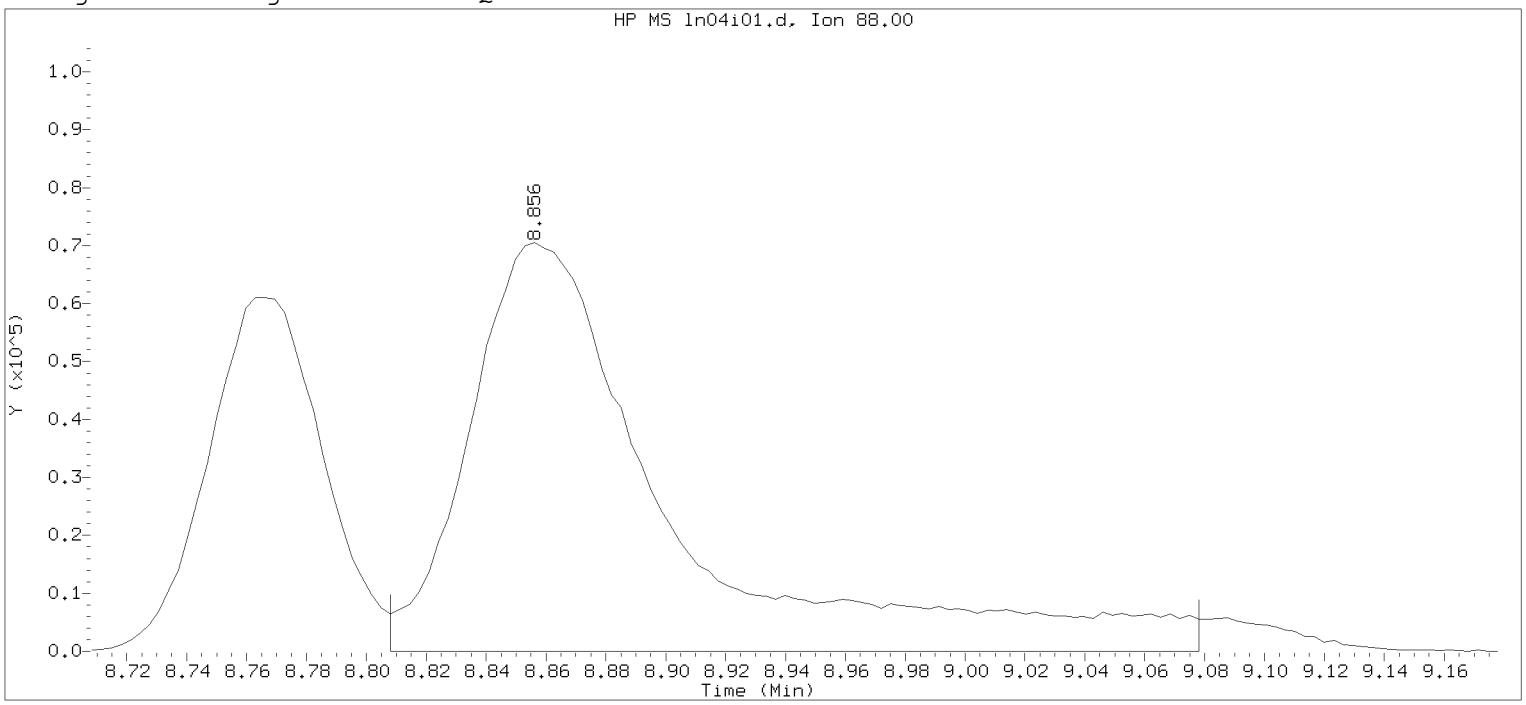
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

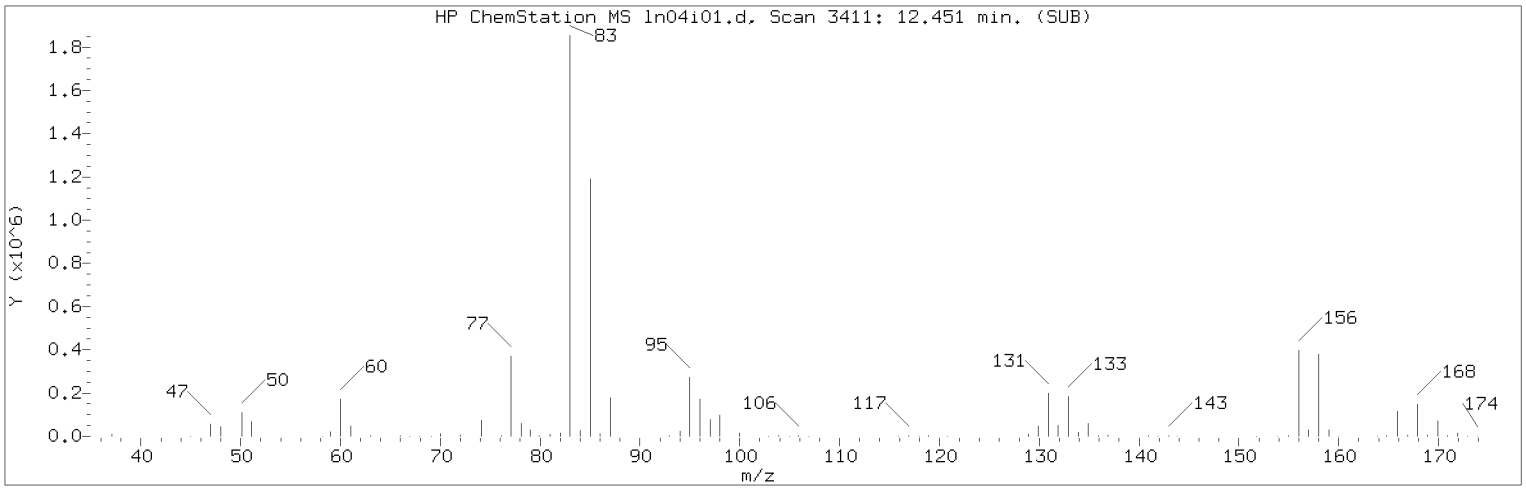
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

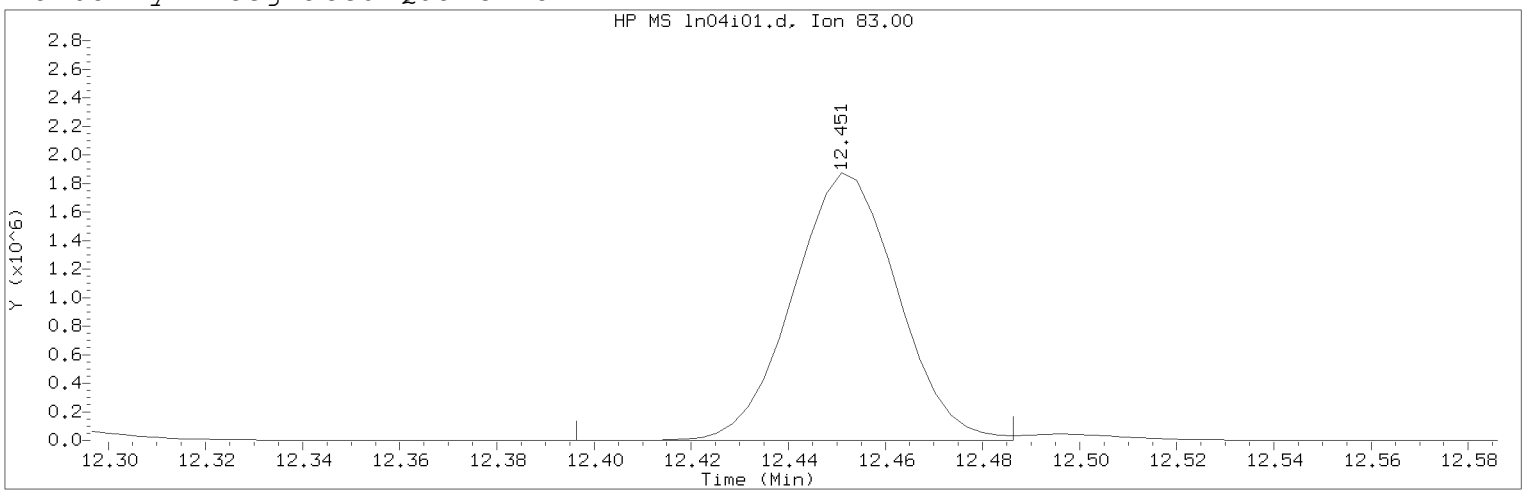
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2293		
Retention Time (minutes)	: 8.856		
Quant Ion	: 88.00		
Area	: 325164		
On-column Amount (ng)	: 3803.8575		
Integration start scan	: 2277	Integration stop scan:	2361
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

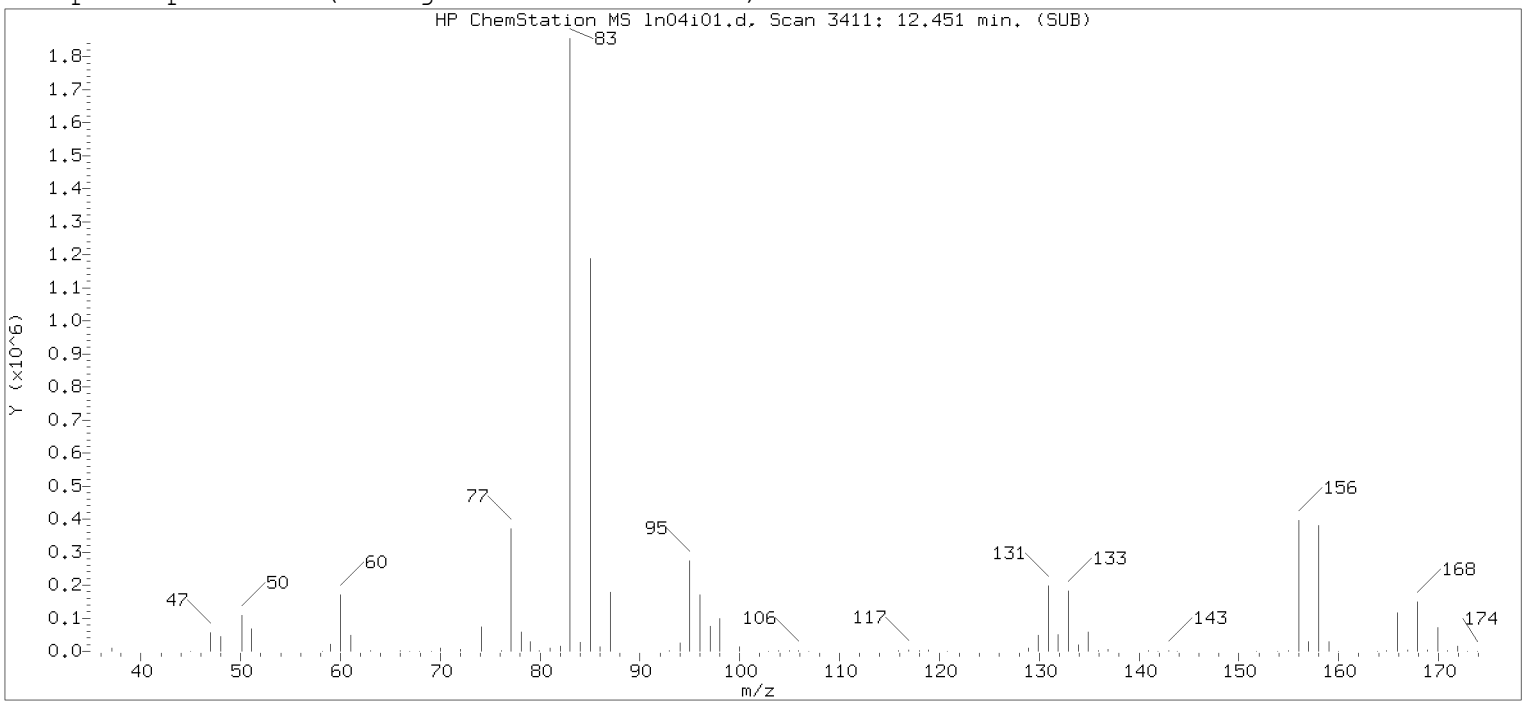
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 2800639M
On-Column Amount (ng) : 310.7054
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

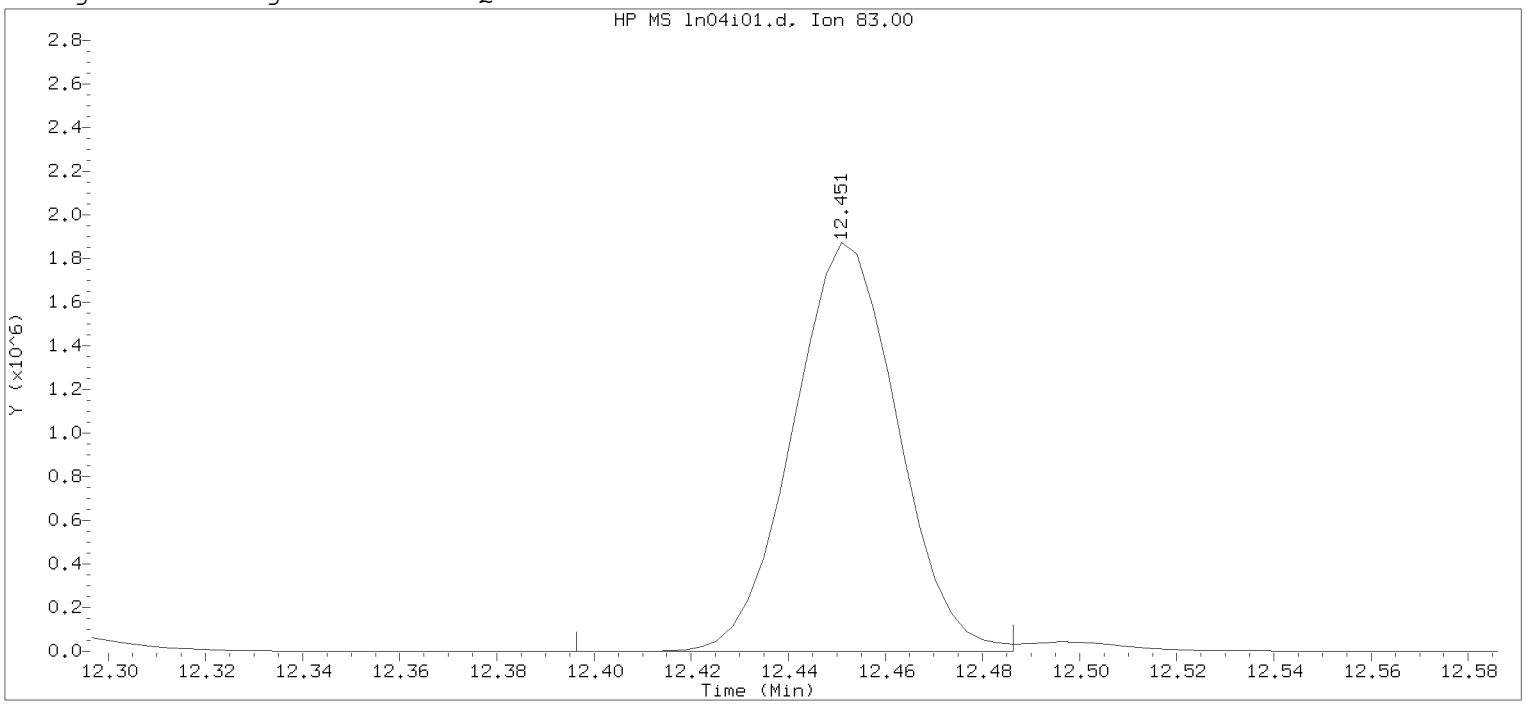
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

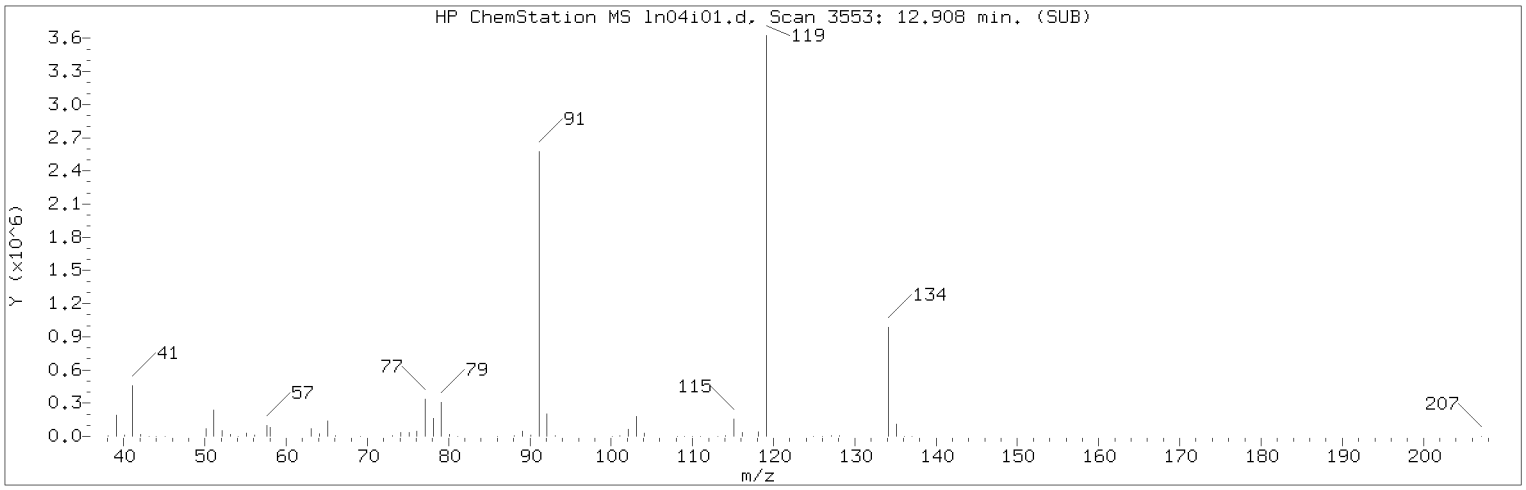
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

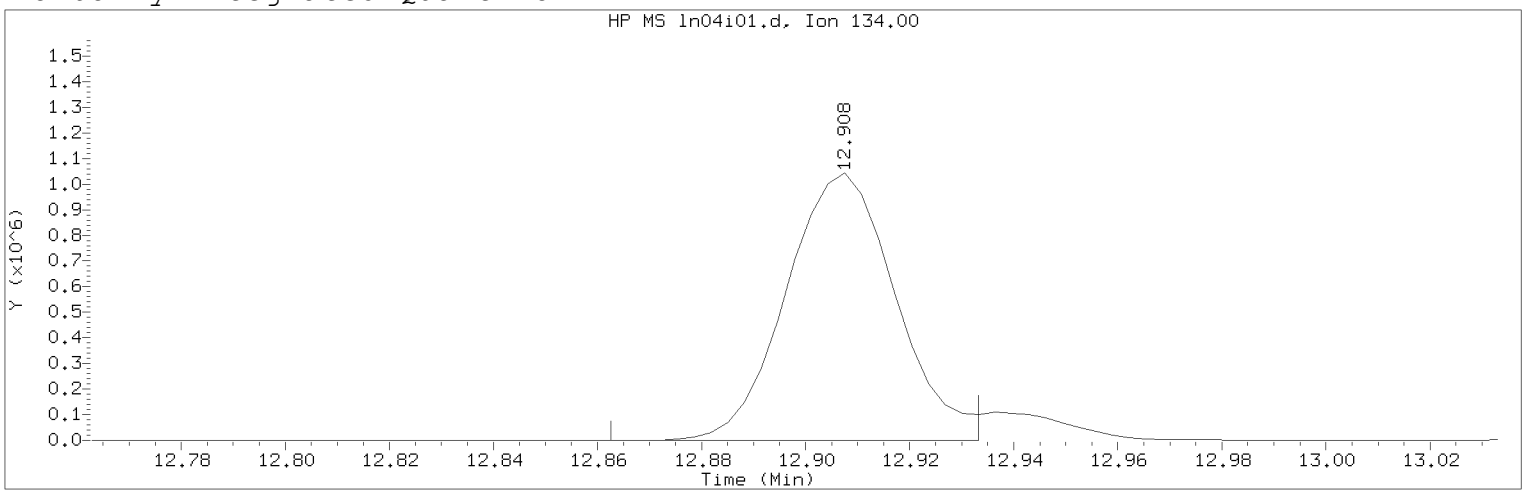
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 2797364
On-column Amount (ng) : 294.0638
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

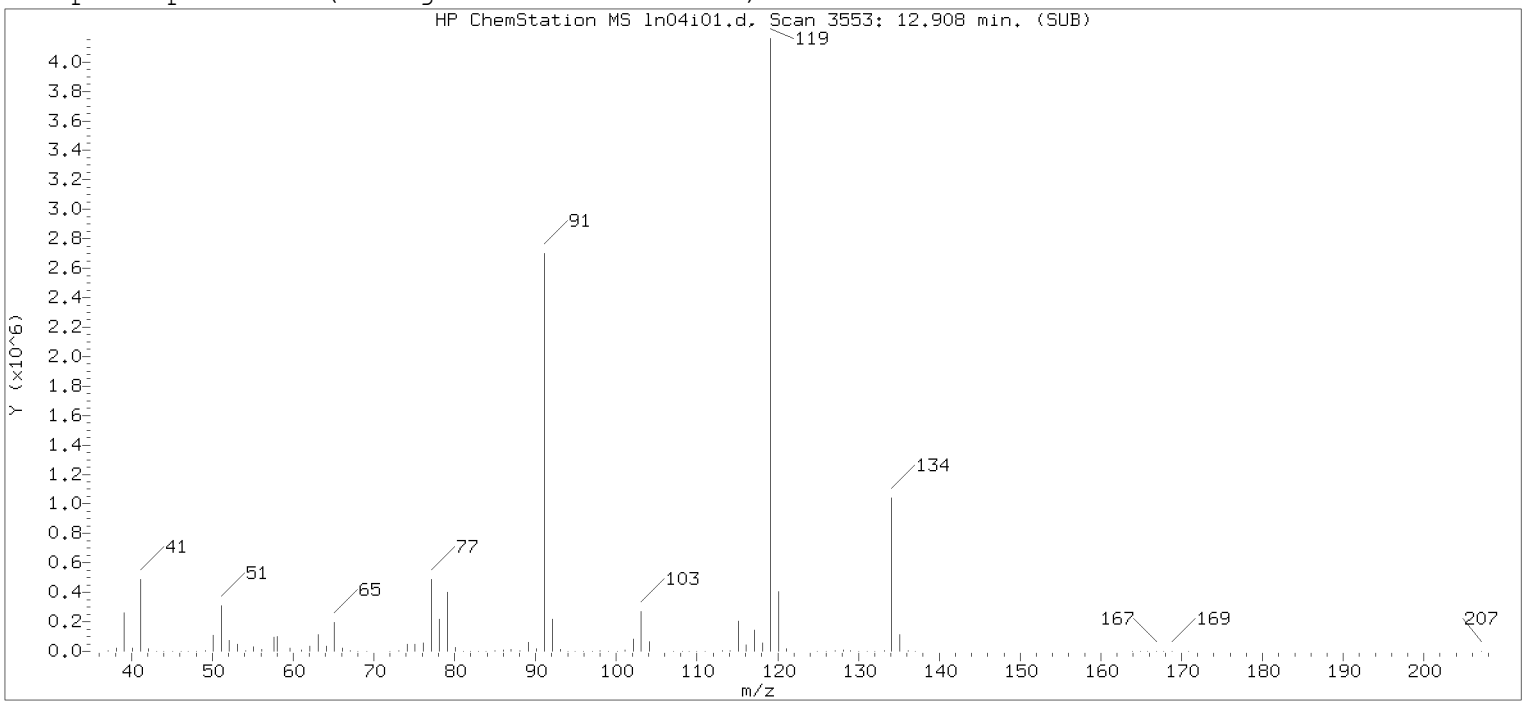
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area (flag) : 1524421M
On-Column Amount (ng) : 323.7167
Integration start scan : 3538 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

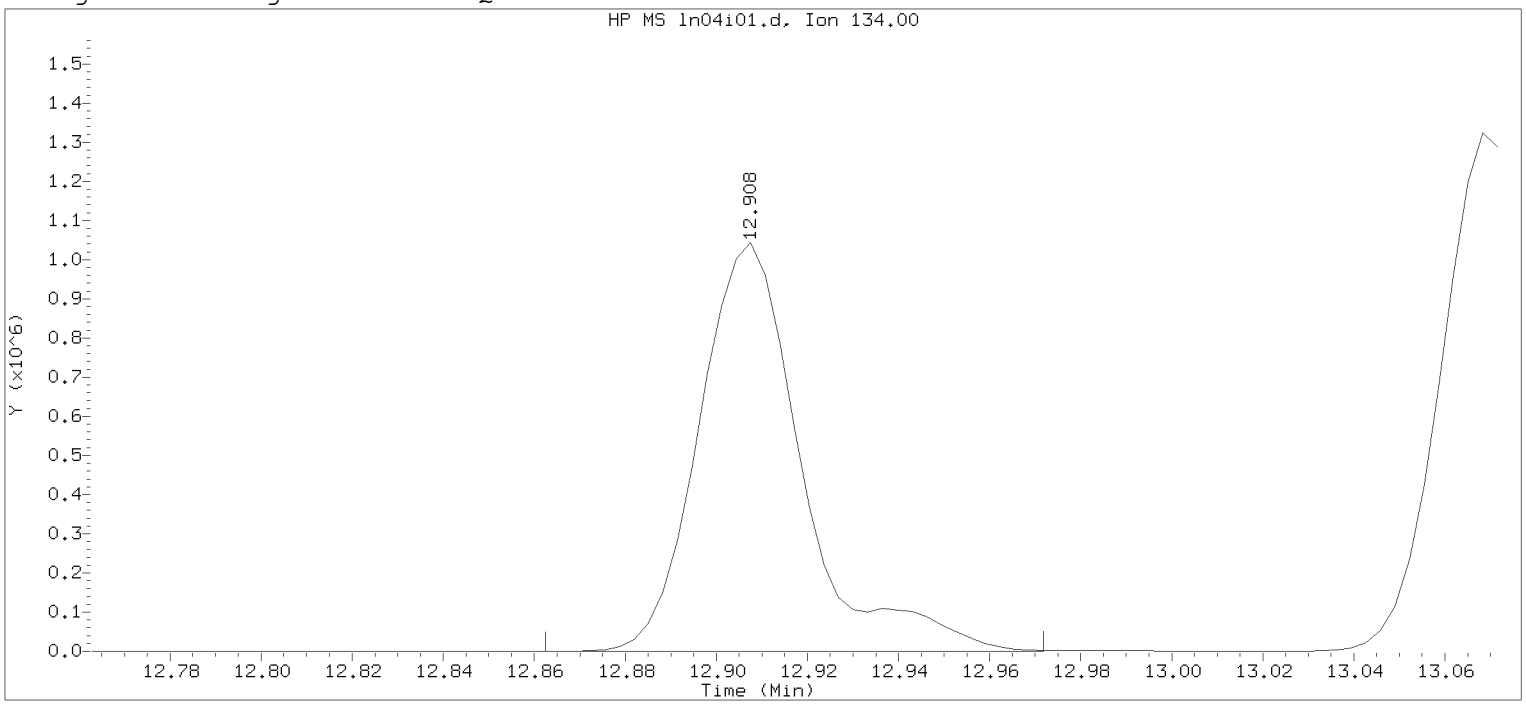
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



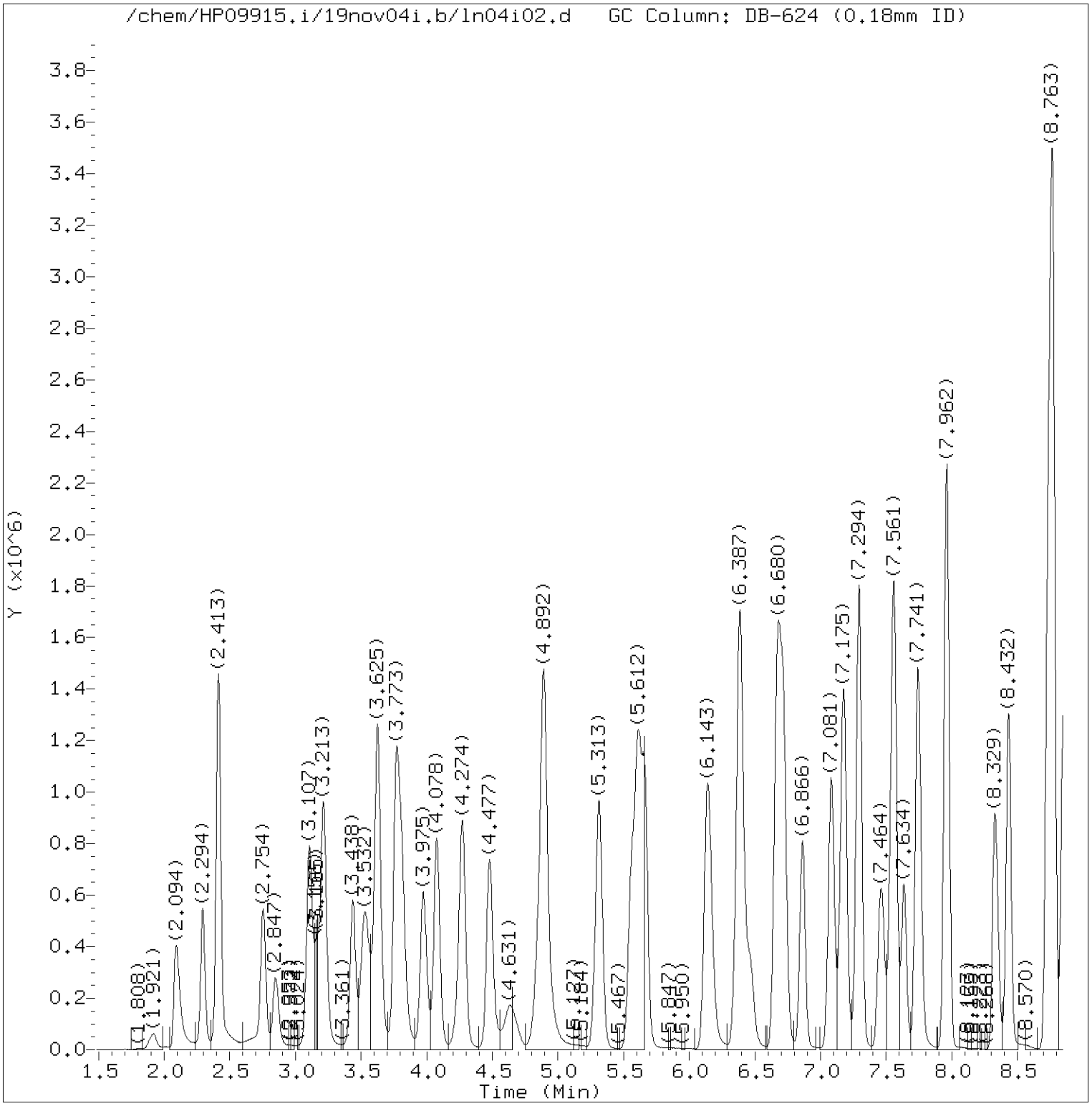
Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area : 1639624
On-column Amount (ng) : 313.1253
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

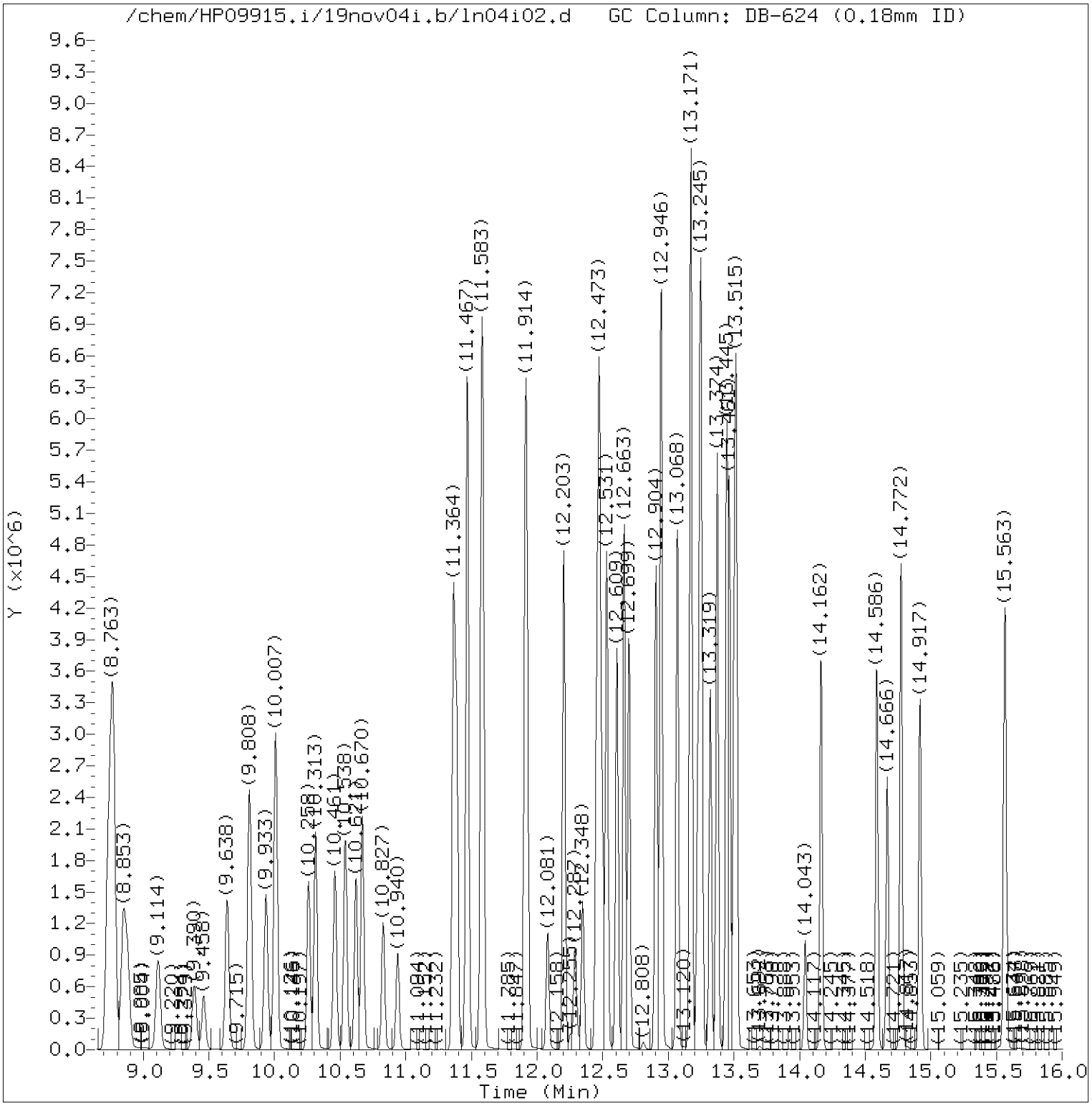
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.094	85	857961M	103.943
4) Chloromethane	(2)	2.294	50	784780	98.650
5) 1,3-Butadiene	(2)	2.413	39	618713M	93.669
6) Vinyl Chloride	(2)	2.416	62	781267	98.400
8) Bromomethane	(2)	2.754	94	539686	94.824
9) Chloroethane	(2)	2.847	64	418524	95.919
10) Dichlorofluoromethane	(2)	3.104	67	992796M	94.678
12) Trichlorofluoromethane	(2)	3.162	101	860893	100.714
11) n-Pentane	(2)	3.217	43	1002713	99.263
14) Ethyl ether	(2)	3.435	59	550266	99.622
15) Freon 123a	(2)	3.532	67	679642	98.841
16) Acrolein	(1)	3.625	56	2075331	1040.029
17) 1,1-Dichloroethene	(2)	3.763	96	510815	101.811
17) 1,1-Dichloroethene	(2)	3.766	63	250669	99.655
19) Freon 113	(2)	3.799	101	594686	103.888
18) Acetone	(1)	3.805	58	181313	202.676
22) Methyl Iodide	(2)	3.972	142	1051103	101.097
21) 2-Propanol	(1)	4.001	45	343390	533.946
23) Carbon Disulfide	(2)	4.078	76	1957296	103.520
27) Methyl Acetate	(2)	4.252	43	630892	97.630
25) Allyl Chloride	(2)	4.274	41	894091	99.337
28) Methylene Chloride	(2)	4.477	84	596882	99.952
29)*t-Butyl alcohol-d10	(1)	4.509	65	265971M	250.000
30) t-Butyl alcohol	(1)	4.631	59	619917	553.614
31) Acrylonitrile	(2)	4.837	53	359403	103.376
33) Methyl Tertiary Butyl Ether	(2)	4.889	73	1901626	99.813
32) trans-1,2-Dichloroethene	(2)	4.892	96	586662	101.076
34) n-Hexane	(2)	5.313	57	974442M	107.908
36) 1,1-Dichloroethane	(2)	5.557	63	1029230	101.649
38) di-Isopropyl ether	(2)	5.609	45	1986383	101.717
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	947614	104.312
40) Ethyl t-butyl ether	(2)	6.143	59	1910218	100.794
43) 1,2-Dichloroethene (Total)	(2)		96	1240957	201.508
44) 2-Butanone	(2)	6.364	43	920731	206.310
42) cis-1,2-Dichloroethene	(2)	6.384	96	654295	100.432
45) 2,2-Dichloropropane	(2)	6.400	77	813782	103.388
47) Propionitrile	(1)	6.464	54	725632	520.085
48) Methacrylonitrile	(2)	6.676	67	966183	257.629

M = Compound was manually integrated.
* = Compound is an internal standard.

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Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	349204	101.088
50) Tetrahydrofuran	(1)	6.721	71	261419	207.429
51) Chloroform	(2)	6.866	83	989698	102.195
52)$Dibromofluoromethane	(2)	7.078	113	292391	50.529
52)$Dibromofluoromethane	(2)	7.078	111	297764	50.467
53) 1,1,1-Trichloroethane	(2)	7.088	97	860519	104.109
54) Cyclohexane	(2)	7.175	56	1170449	105.893
54) Cyclohexane	(2)	7.181	84	1022362	106.481
54) Cyclohexane	(2)	7.175	69	362451	106.017
56) Carbon Tetrachloride	(2)	7.290	117	751477	107.196
55) 1,1-Dichloropropene	(2)	7.297	75	823627	102.878
58) Isobutyl Alcohol	(1)	7.461	41	528441	1402.358
57)$1,2-Dichloroethane-d4	(2)	7.535	102	74158	50.284
57)$1,2-Dichloroethane-d4	(2)	7.535	65	331294	50.408
57)$1,2-Dichloroethane-d4	(2)	7.535	104	47551	50.479
60) Benzene	(2)	7.561	78	2423634	100.668
61) 1,2-Dichloroethane	(2)	7.638	62	757974	97.883
61) 1,2-Dichloroethane	(2)	7.641	98	76152	99.373
65) t-Amyl methyl ether	(2)	7.741	73	1946110	102.306
67) n-Heptane	(2)	7.962	43	911962MA	108.104
66)*Fluorobenzene	(2)	7.962	96	1183605	50.000
69) n-Butanol	(1)	8.329	56	944383M	2911.812
71) Trichloroethene	(2)	8.432	95	618983	102.110
72) Methylcyclohexane	(2)	8.734	83	1164174	103.516
72) Methylcyclohexane	(2)	8.734	98	527428	103.640
73) 1,2-Dichloropropane	(2)	8.773	63	625914	102.385
76) Methyl Methacrylate	(2)	8.847	69	640445A	108.334
75) 1,4-Dioxane	(1)	8.856	88	117817M	1321.647
74) Dibromomethane	(2)	8.882	93	410059	103.668
78) Bromodichloromethane	(2)	9.114	83	770805	108.595
79) 2-Nitropropane	(2)	9.390	41	488862	227.388
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	284759	108.454
81) cis-1,3-Dichloropropene	(2)	9.638	75	1026055	108.840
82) 4-Methyl-2-pentanone	(2)	9.808	43	1972651	209.410
83)$Toluene-d8	(3)	9.933	98	1216793	49.703
83)$Toluene-d8	(3)	9.933	100	789846	49.806
88) Toluene	(3)	10.007	92	1555339	101.336
90) 1,3-Dichloropropene (total)	(3)		100	1994775	220.026

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	968720	111.186
91) Ethyl Methacrylate	(3)	10.313	69	1159403	109.496
92) 1,1,2-Trichloroethane	(3)	10.461	97	606132	104.163
93) Tetrachloroethene	(3)	10.541	166	663260	102.036
94) 1,3-Dichloropropane	(3)	10.621	76	1023947	103.060
96) 2-Hexanone	(3)	10.670	43	1457165	206.170
97) Dibromochloromethane	(3)	10.827	129	678552	113.835
99) 1,2-Dibromoethane	(3)	10.940	107	665574	105.331
100)*Chlorobenzene-d5	(3)	11.361	117	935628	50.000
101) 1-Chlorohexane	(3)	11.364	91	826713	100.265
102) Chlorobenzene	(3)	11.387	112	1760002	101.404
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	622547	108.864
104) Ethylbenzene	(3)	11.470	91	3015086	102.779
106) m+p-Xylene	(3)	11.583	106	2388845	206.999
108) Xylene (Total)	(3)		106	3566525	310.313
107) o-Xylene	(3)	11.908	106	1177680	103.314
109) Styrene	(3)	11.924	104	1996461	105.988
110) Bromoform	(3)	12.081	173	502388	112.791
111) Isopropylbenzene	(3)	12.203	105	2980812	104.258
112) Cyclohexanone	(1)	12.287	55	431750	1236.644
114)$4-Bromofluorobenzene	(3)	12.348	95	458263	49.435
114)$4-Bromofluorobenzene	(3)	12.348	174	380301	49.485
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	995972M	105.317
115) Bromobenzene	(4)	12.464	156	778170	103.423
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	790040	270.837
117) 1,2,3-Trichloropropane	(4)	12.496	110	303037	104.425
119) n-Propylbenzene	(4)	12.531	91	3409679	103.724
120) 2-Chlorotoluene	(4)	12.609	126	718635	102.905
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	2528195	105.828
121) 4-Chlorotoluene	(4)	12.699	126	737830	101.502
124) tert-Butylbenzene	(4)	12.904	134	526781M	106.622
125) Pentachloroethane	(4)	12.940	167	474988	111.651
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	2664001	105.806
127) sec-Butylbenzene	(4)	13.068	105	3153429	106.963
129) 1,3-Dichlorobenzene	(4)	13.168	146	1407080	101.768
130) p-Isopropyltoluene	(4)	13.171	119	2746850	107.698
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	500629	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	1451933	101.297

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	2711349	101.660
135) Benzyl Chloride	(4)	13.319	91	2226905	110.280
136) 1,3-Diethylbenzene	(4)	13.374	119	1705244	102.734
141) Diethylbenzene (total)	(4)		100	4934627	307.371
137) 1,4-Diethylbenzene	(4)	13.445	119	1791059	101.846
139) n-Butylbenzene	(4)	13.464	92	1355994	103.980
138) 1,2-Dichlorobenzene	(4)	13.502	146	1381717	101.273
140) 1,2-Diethylbenzene	(4)	13.518	119	1438324	102.791
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	224965	108.669
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	1074198	102.479
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	1034842	101.533
147) Hexachlorobutadiene	(4)	14.666	225	430531	89.465
148) Naphthalene	(4)	14.772	128	3428000	104.621
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	1010801	101.922
150) 2-Methylnaphthalene	(4)	15.563	142	2117626	104.952

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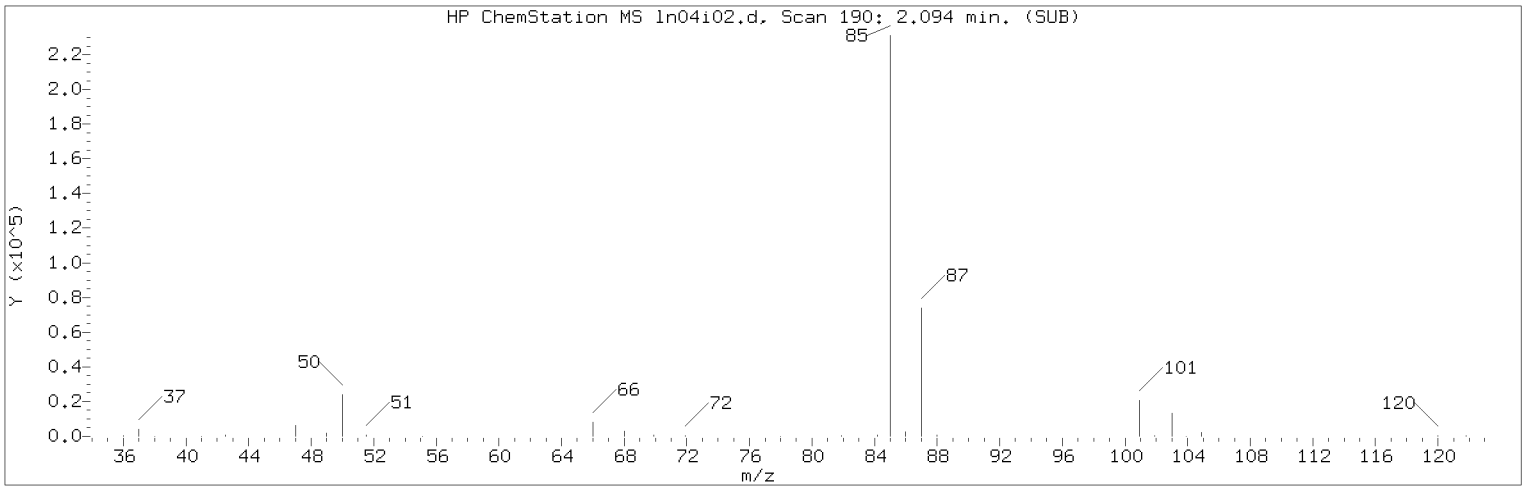
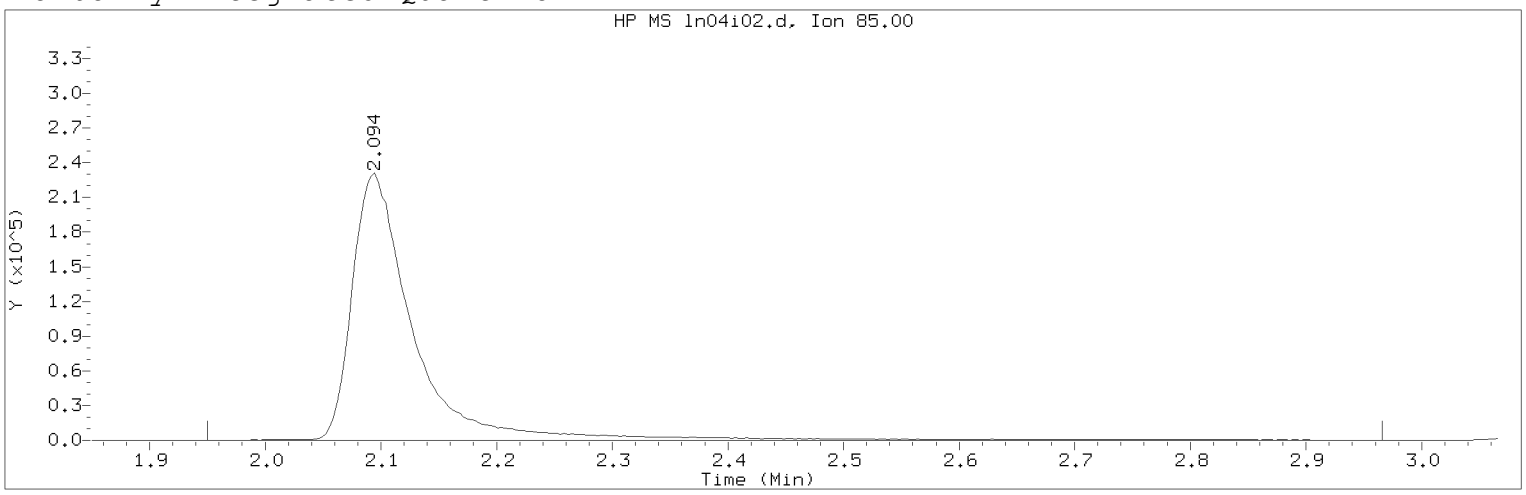
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

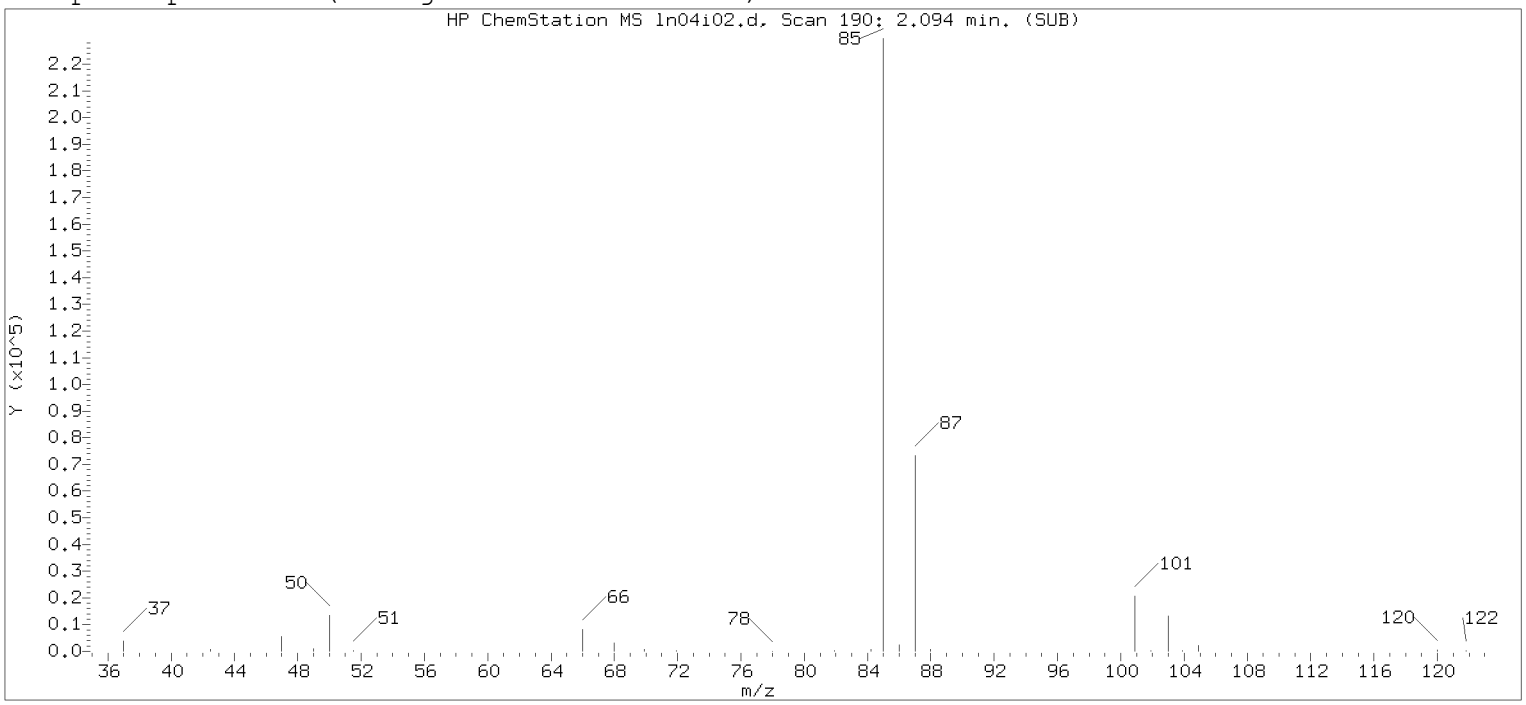
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area (flag) : 857961M
On-Column Amount (ng) : 103.9433
Integration start scan : 144 Integration stop scan: 460
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

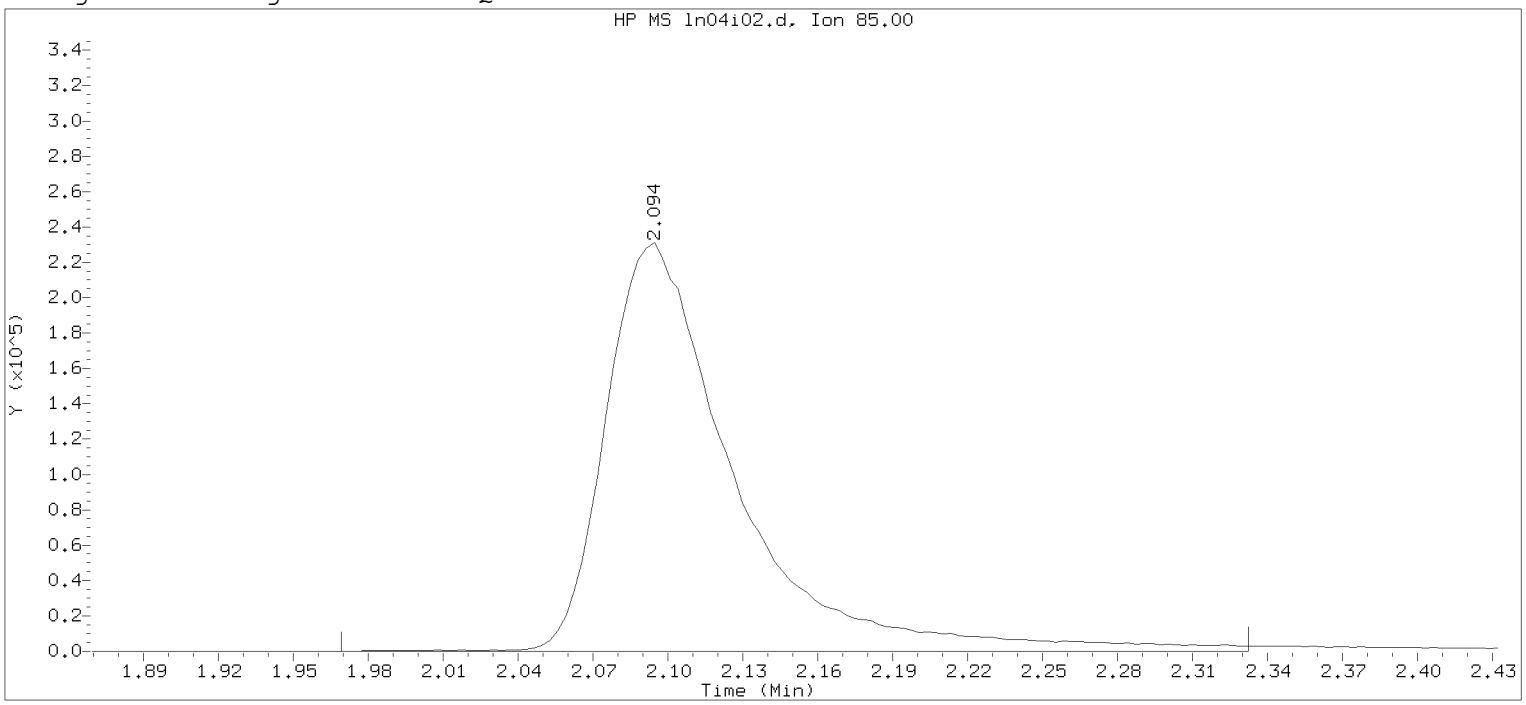
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

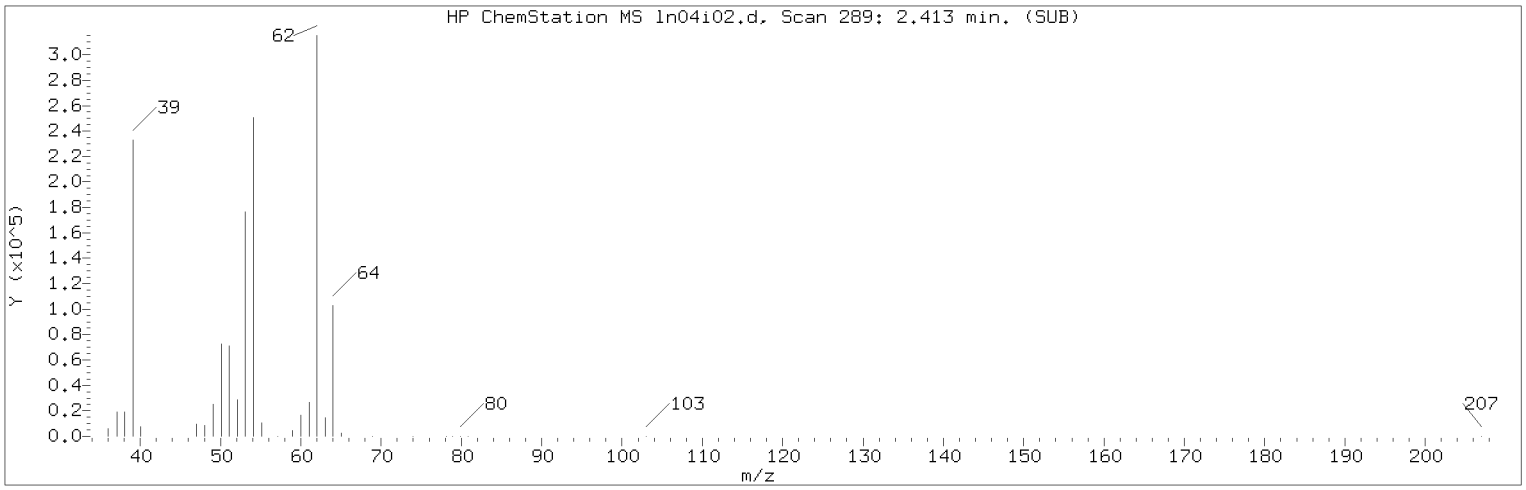
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

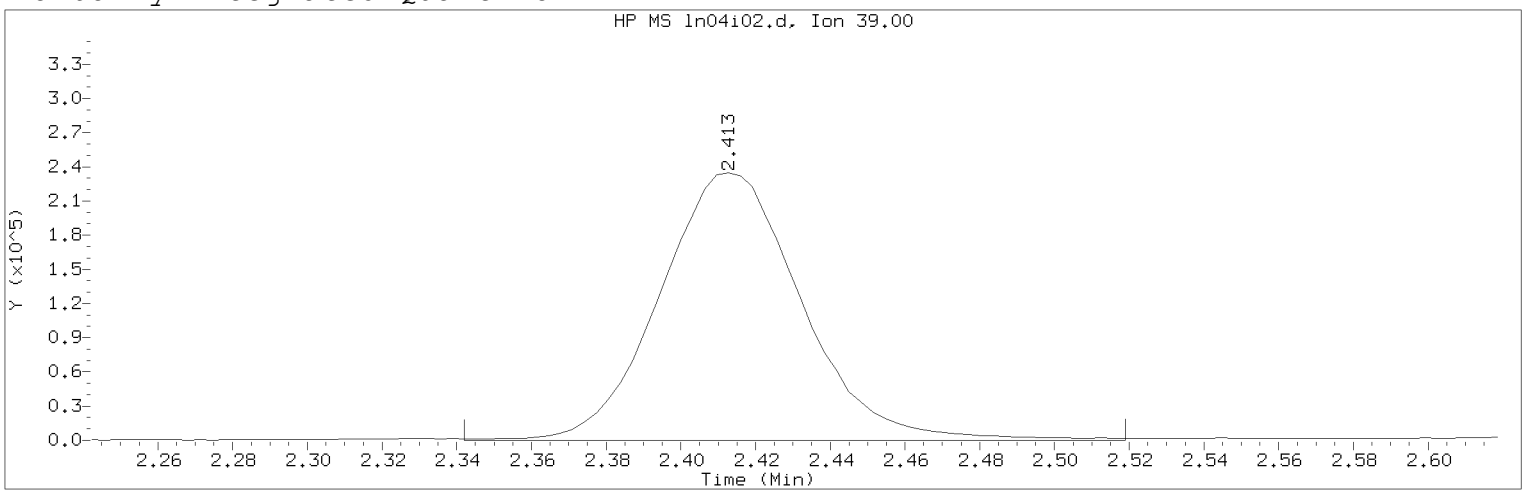
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area : 824639
On-column Amount (ng) : 94.4157
Integration start scan : 150 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

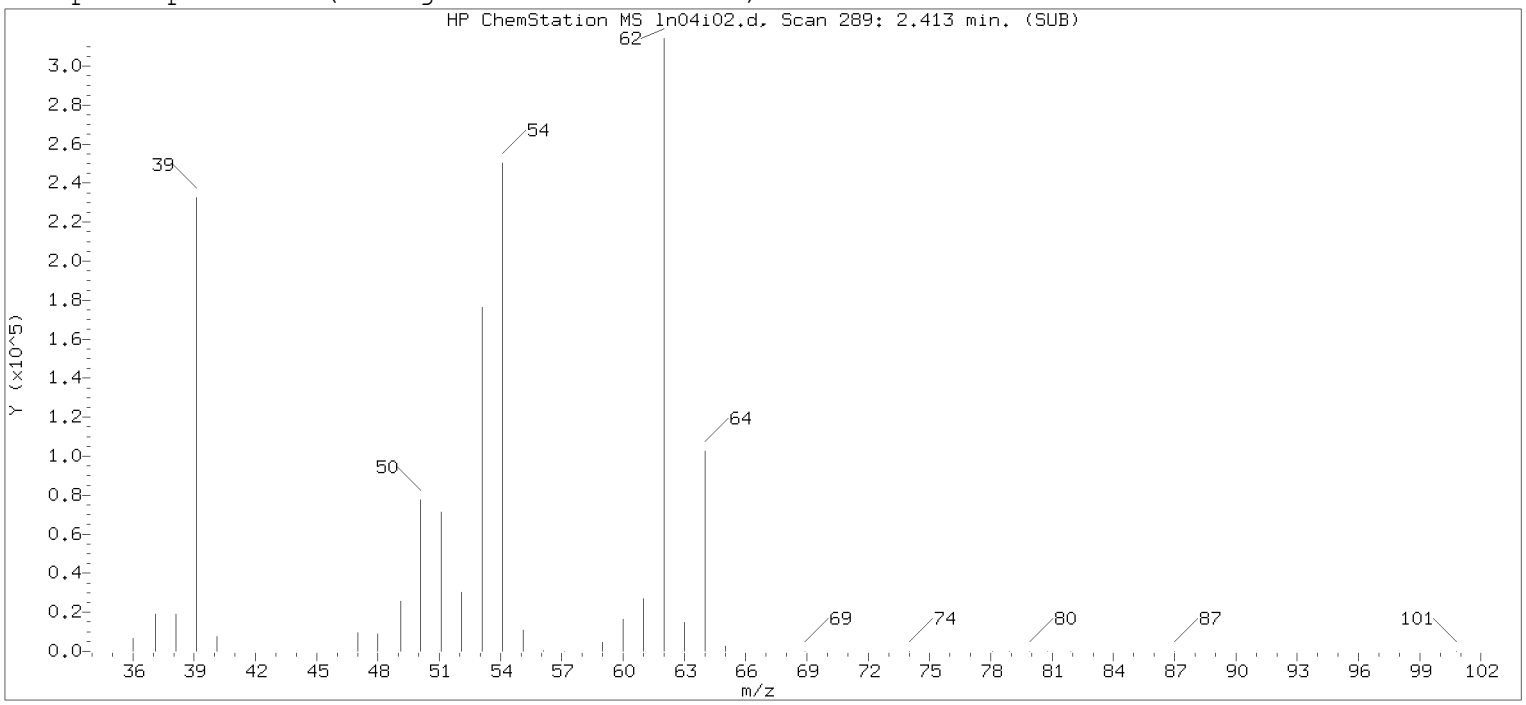
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area (flag) : 618713M
On-Column Amount (ng) : 93.6685
Integration start scan : 266 Integration stop scan: 321
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

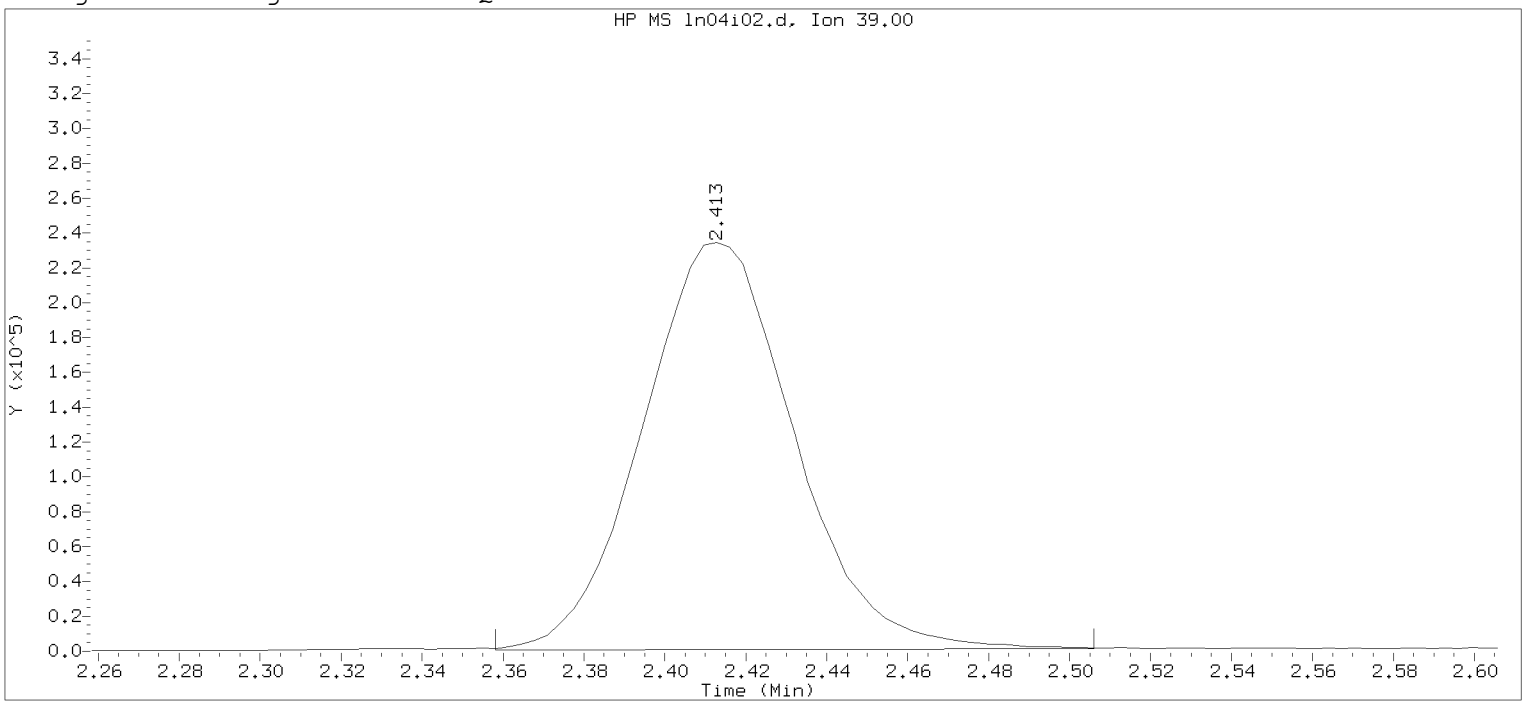
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

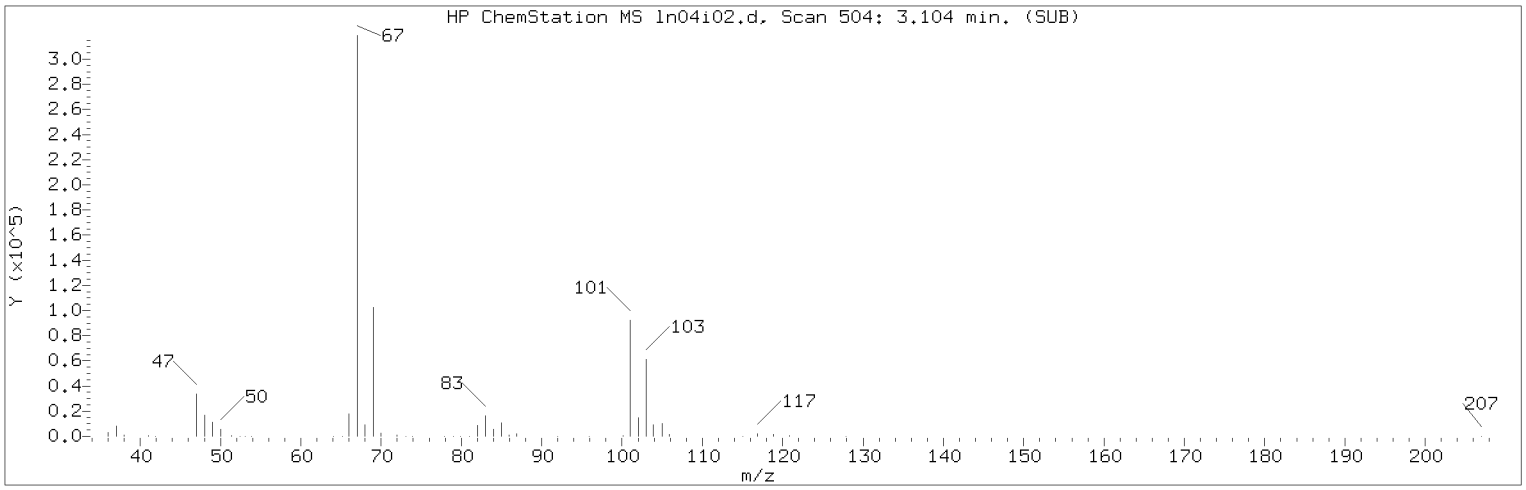
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

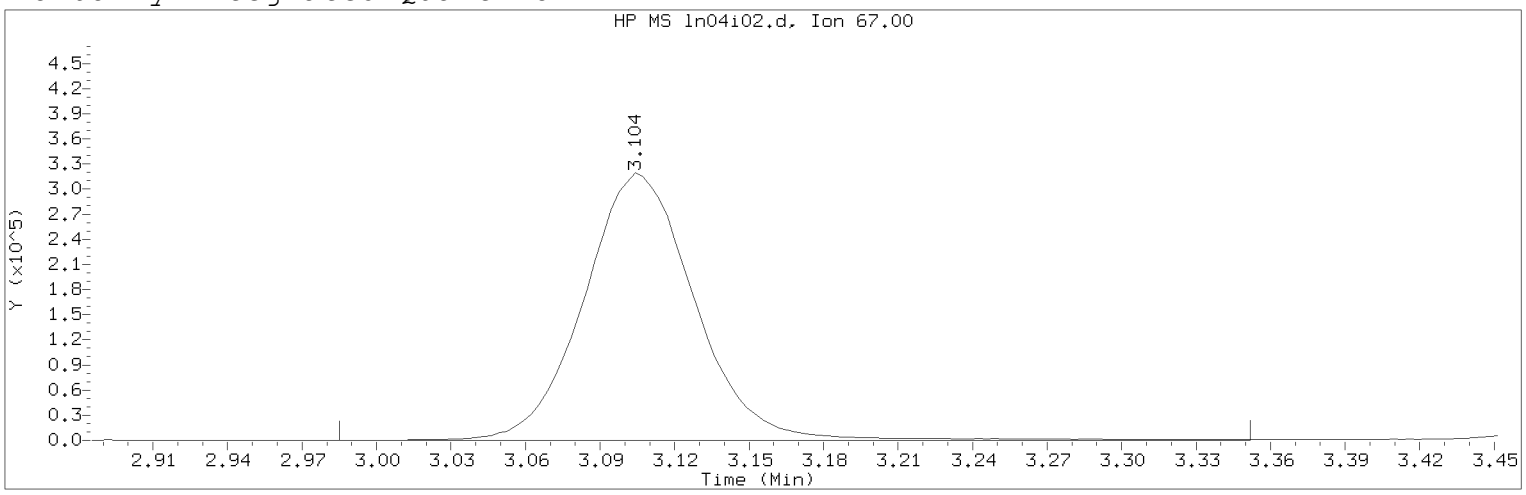
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area : 605602
On-column Amount (ng) : 97.5651
Integration start scan : 271 Integration stop scan: 317
Y at integration start : 806 Y at integration end: 1441

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

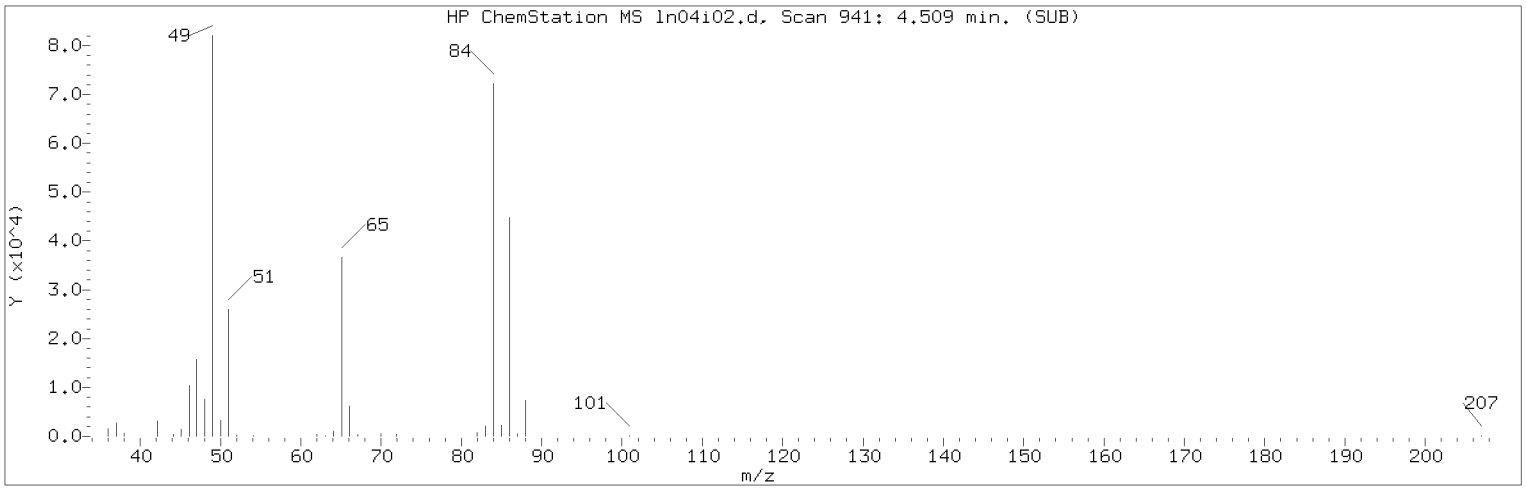
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 504
Retention Time (minutes): 3.104
Quant Ion : 67.00
Area (flag) : 992796M
On-Column Amount (ng) : 94.6777
Integration start scan : 466 Integration stop scan: 580
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

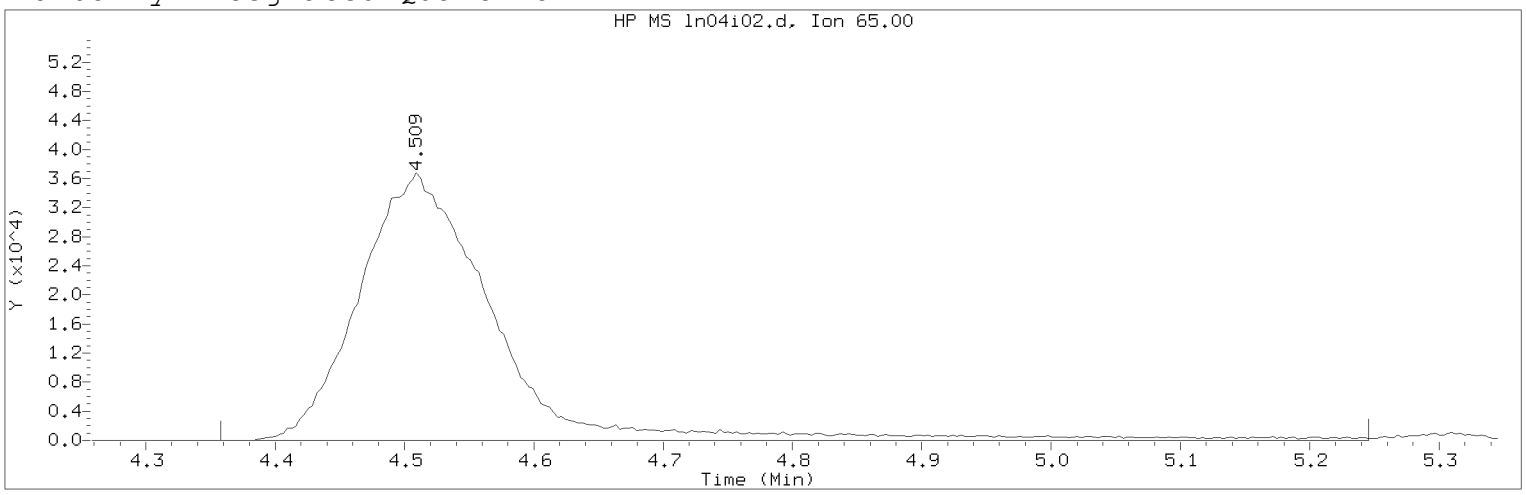
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

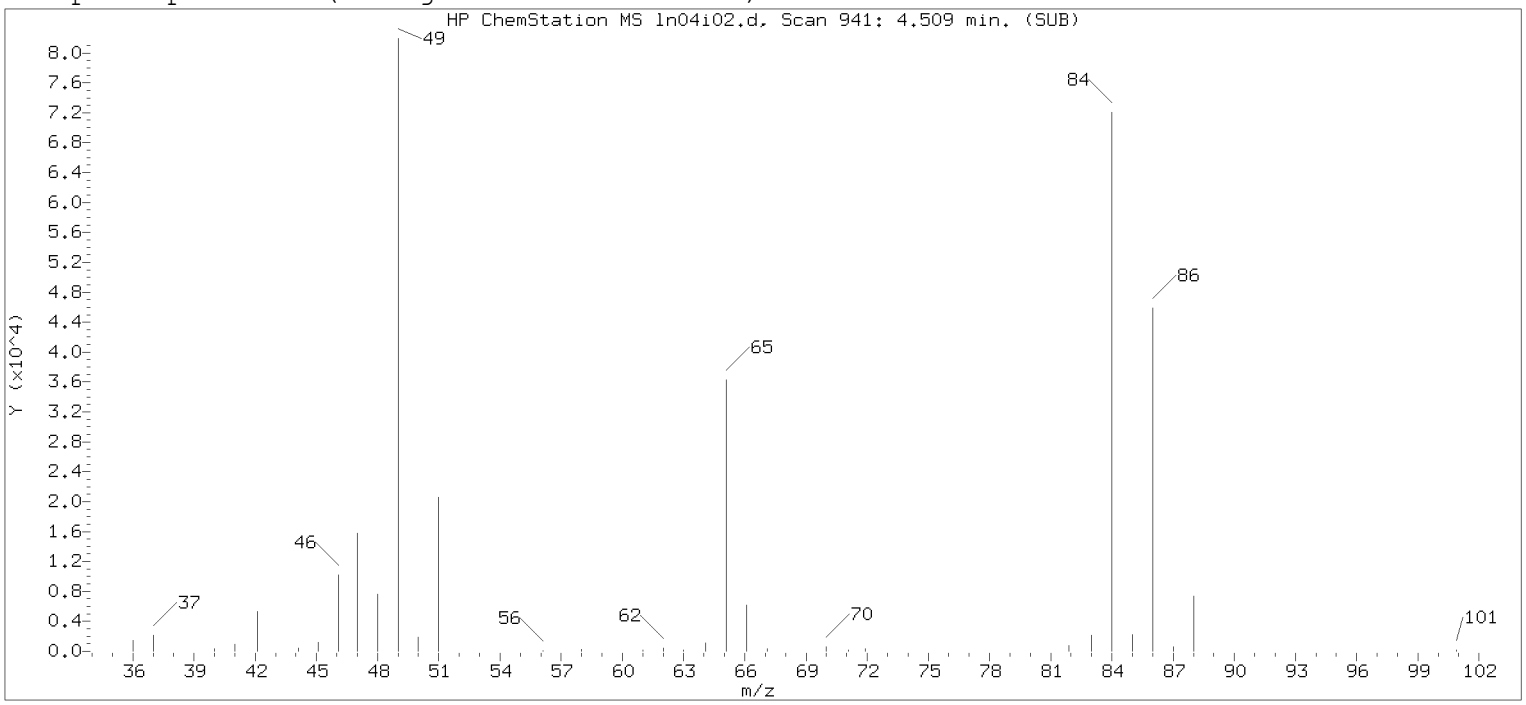
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 265971M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1169
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

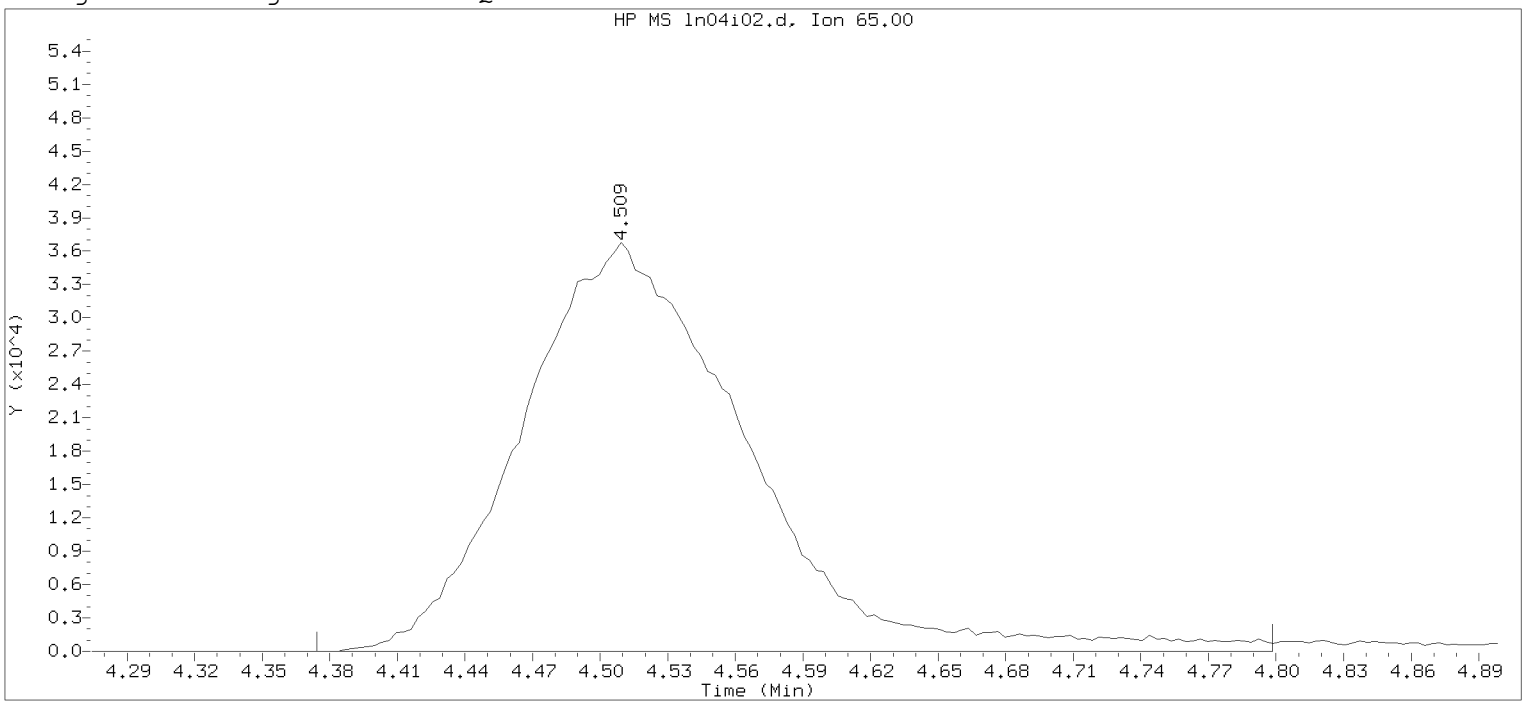
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

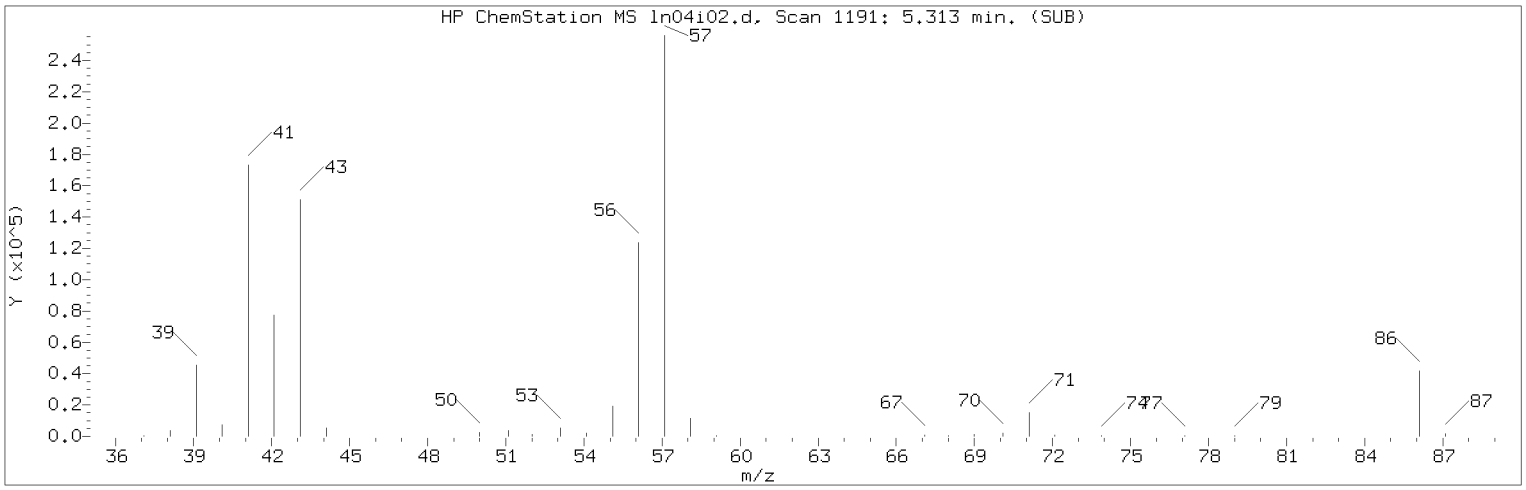
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

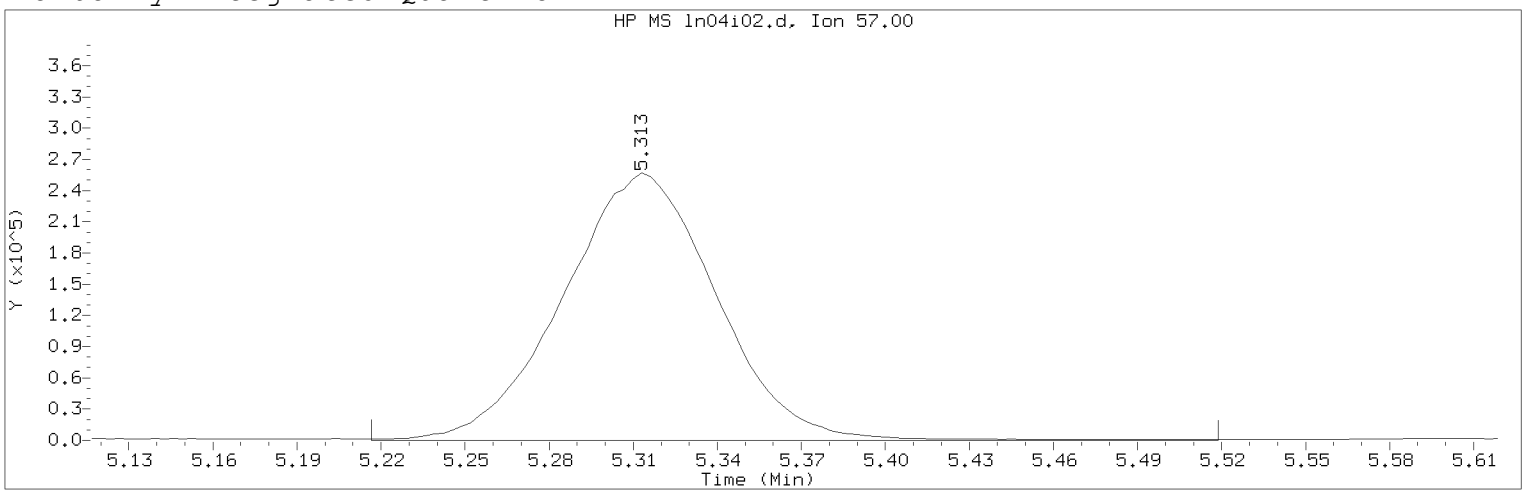
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 252632
On-column Amount (ng) : 250.0000
Integration start scan : 898 Integration stop scan: 1030
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

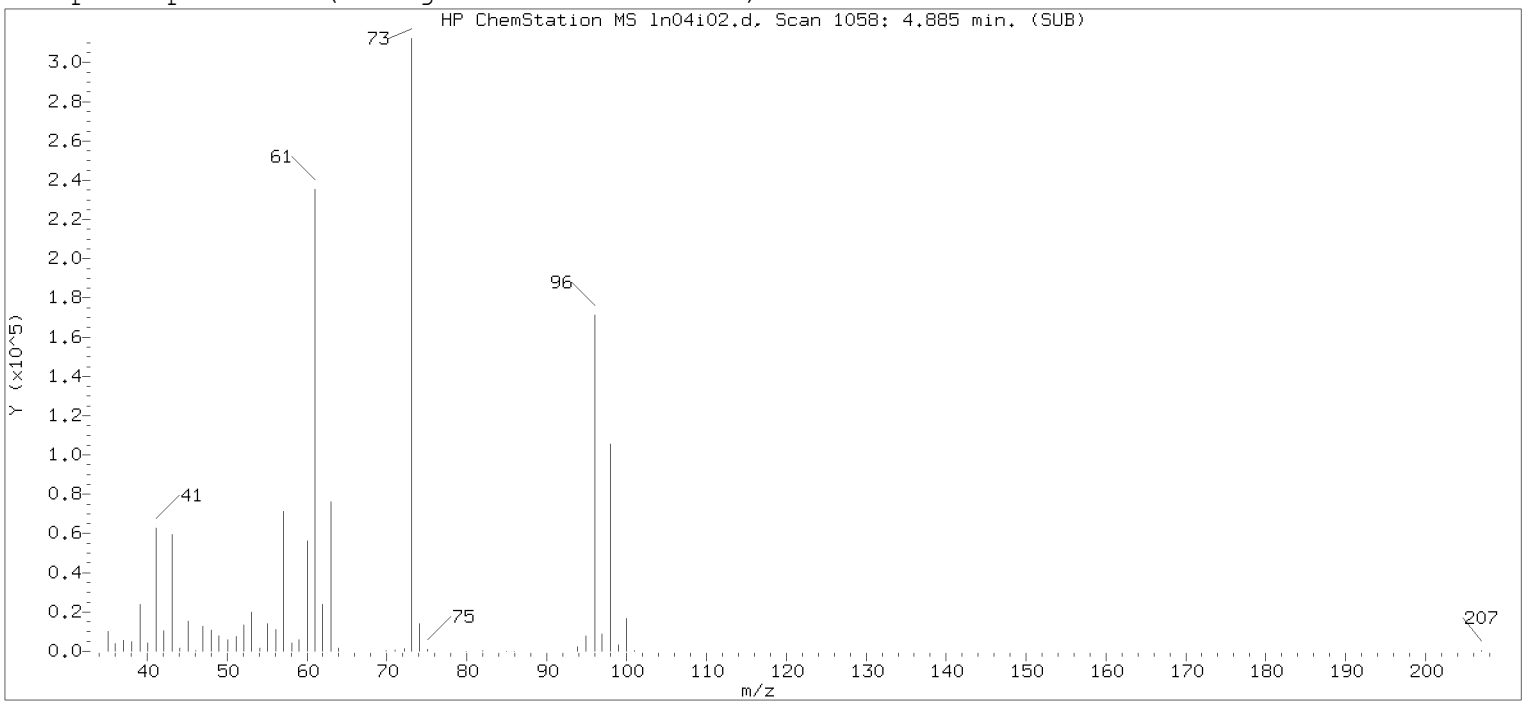
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1191
Retention Time (minutes): 5.313
Quant Ion : 57.00
Area (flag) : 974442M
On-Column Amount (ng) : 107.9083
Integration start scan : 1160 Integration stop scan: 1254
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

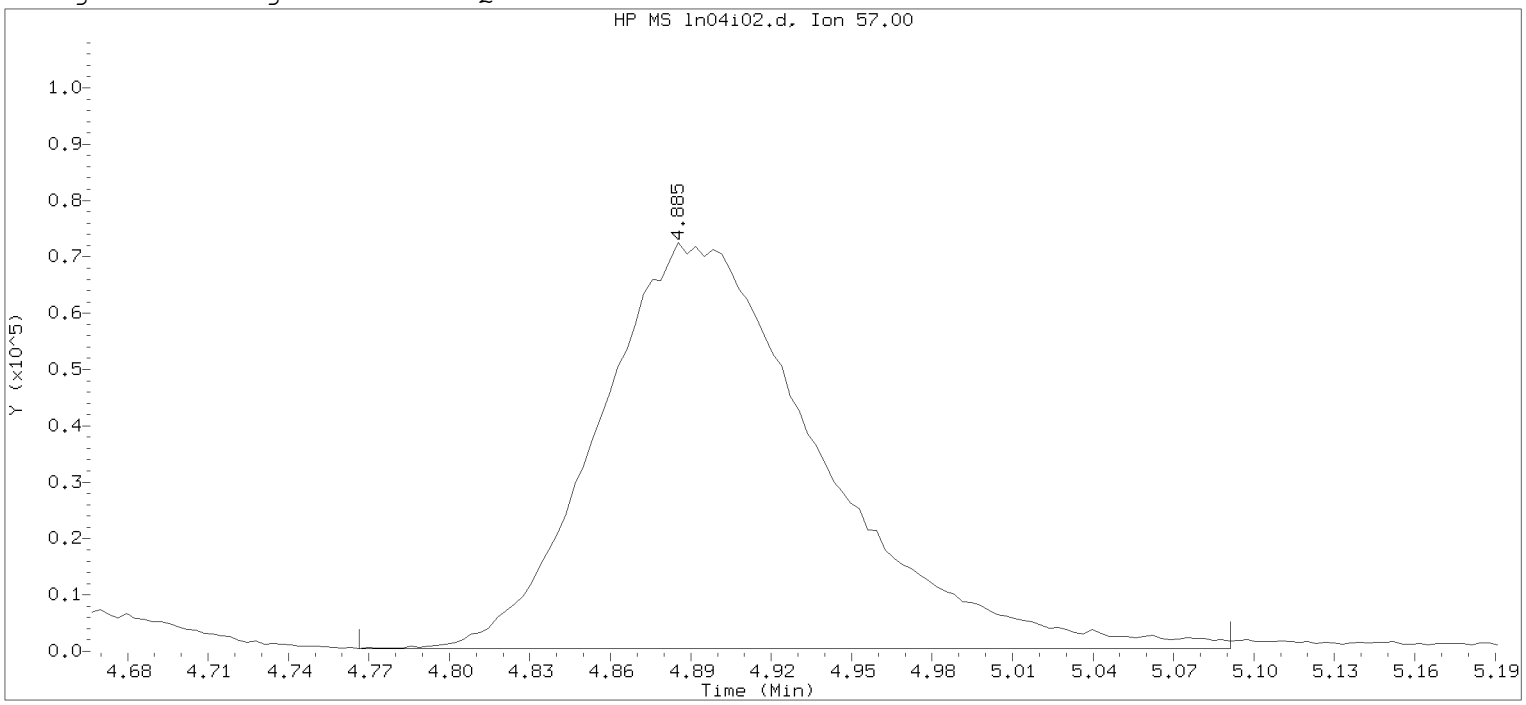
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

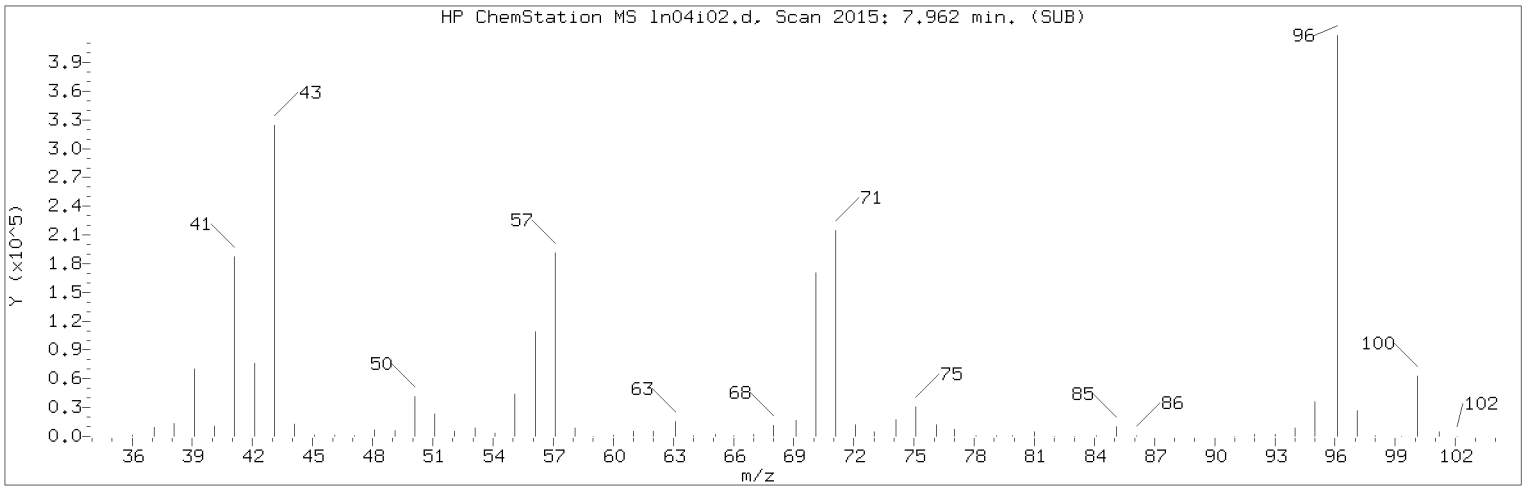
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

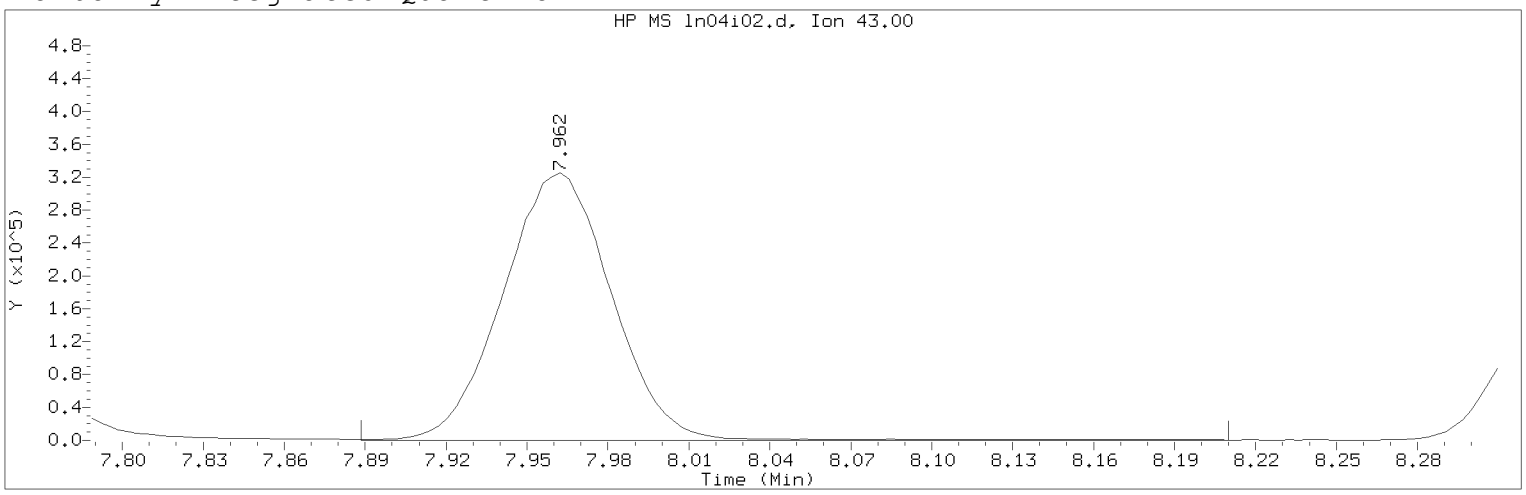
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1058
Retention Time (minutes): 4.885
Quant Ion : 57.00
Area : 414312
On-column Amount (ng) : 98.9070
Integration start scan : 1020 Integration stop scan: 1121
Y at integration start : 485 Y at integration end: 485

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

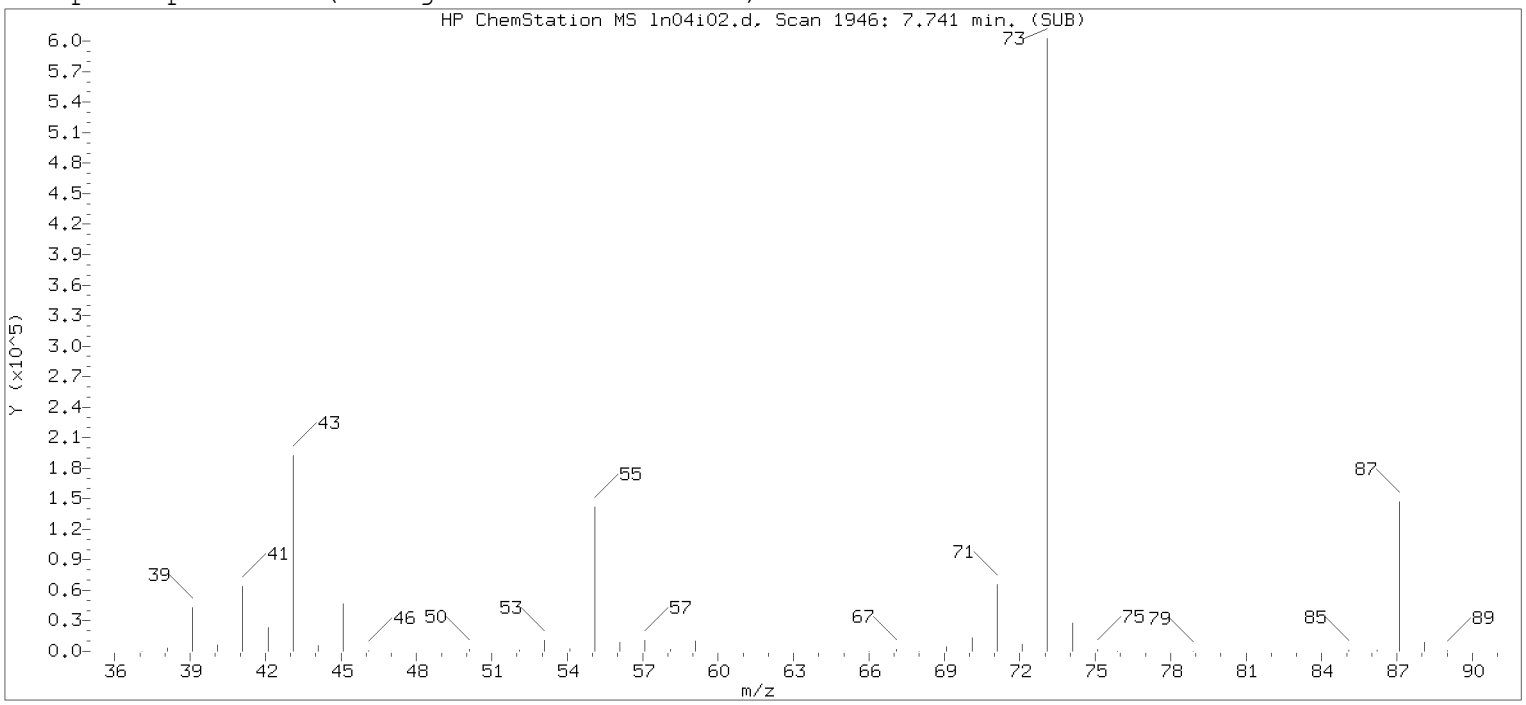
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2015
Retention Time (minutes): 7.962
Quant Ion : 43.00
Area (flag) : 911962MA
On-Column Amount (ng) : 108.1037
Integration start scan : 1991 Integration stop scan: 2091
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

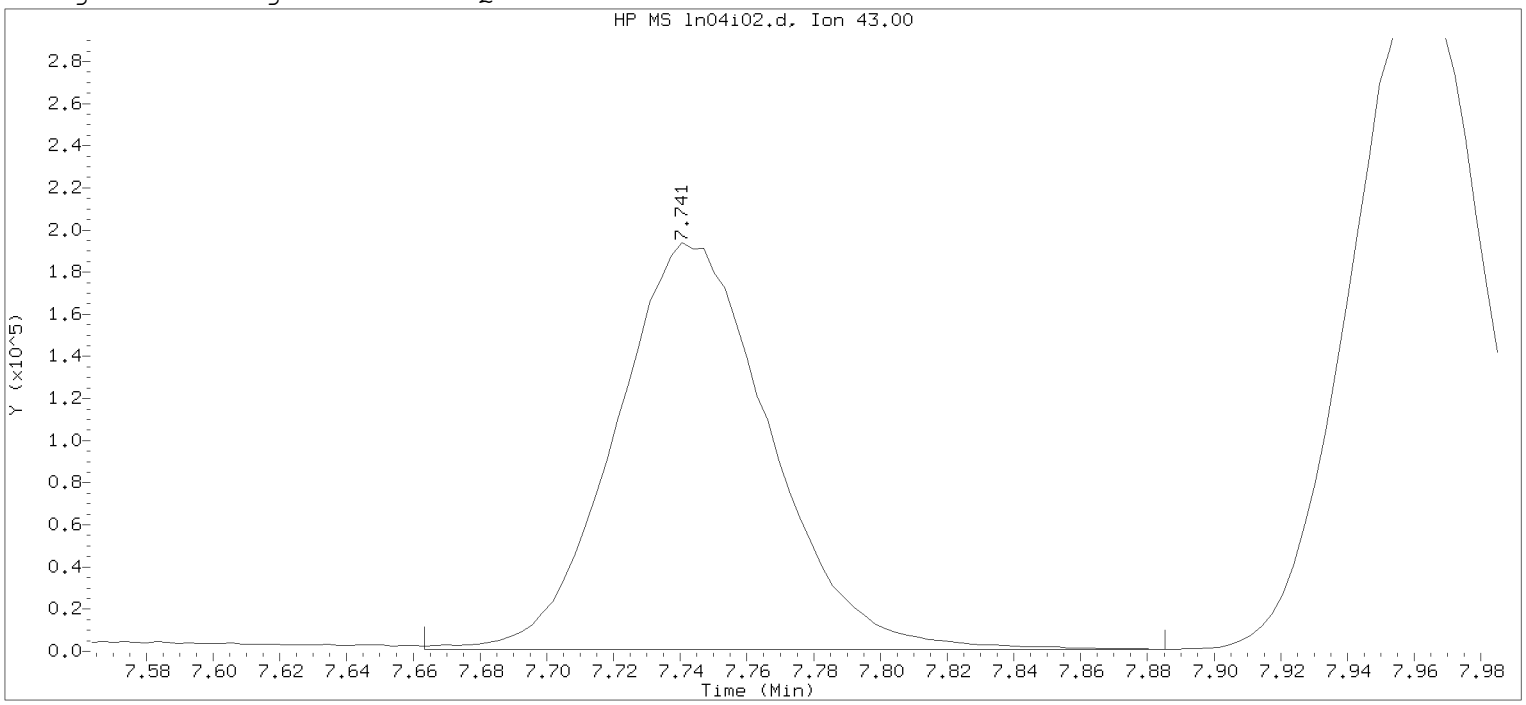
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

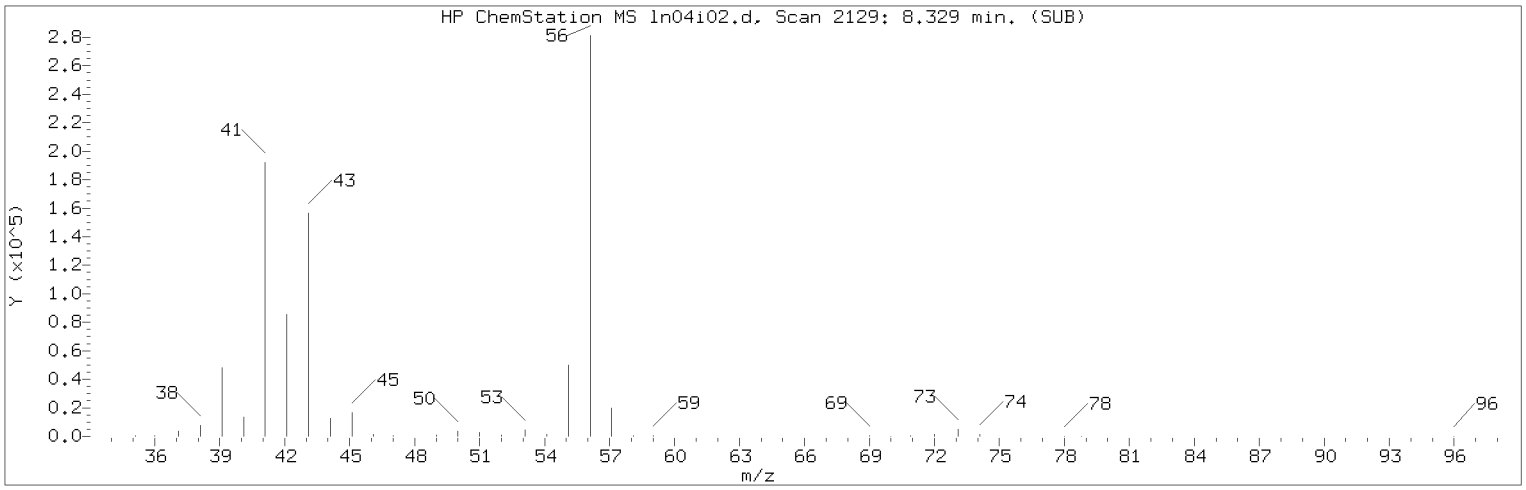
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

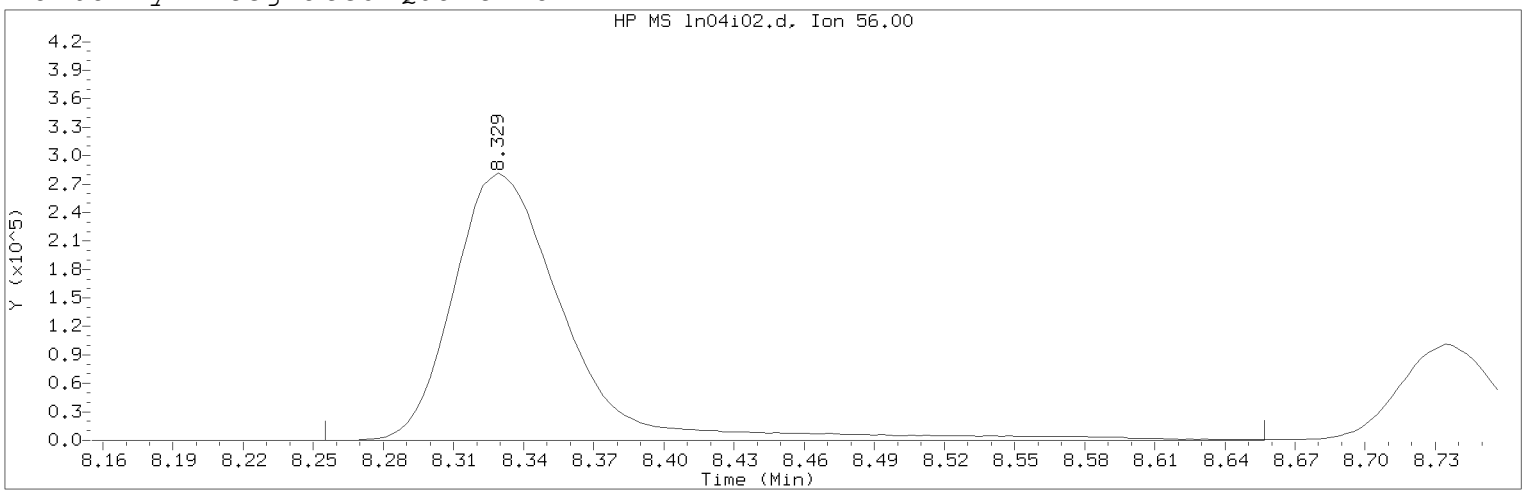
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.741
Quant Ion : 43.00
Area : 623358
On-column Amount (ng) : 101.3435
Integration start scan : 1921 Integration stop scan: 1990
Y at integration start : 845 Y at integration end: 845

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

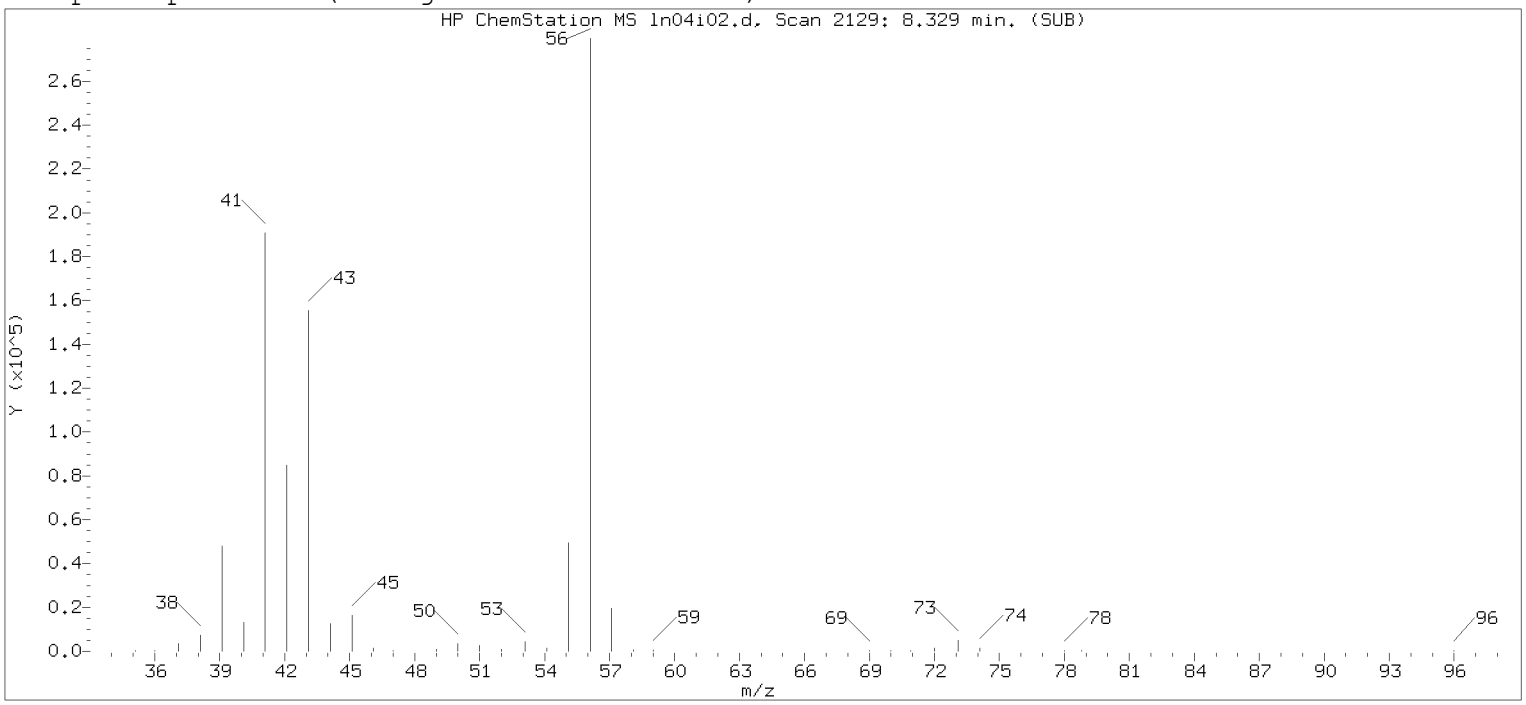
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area (flag) : 944383M
On-Column Amount (ng) : 2911.8124
Integration start scan : 2105 Integration stop scan: 2230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

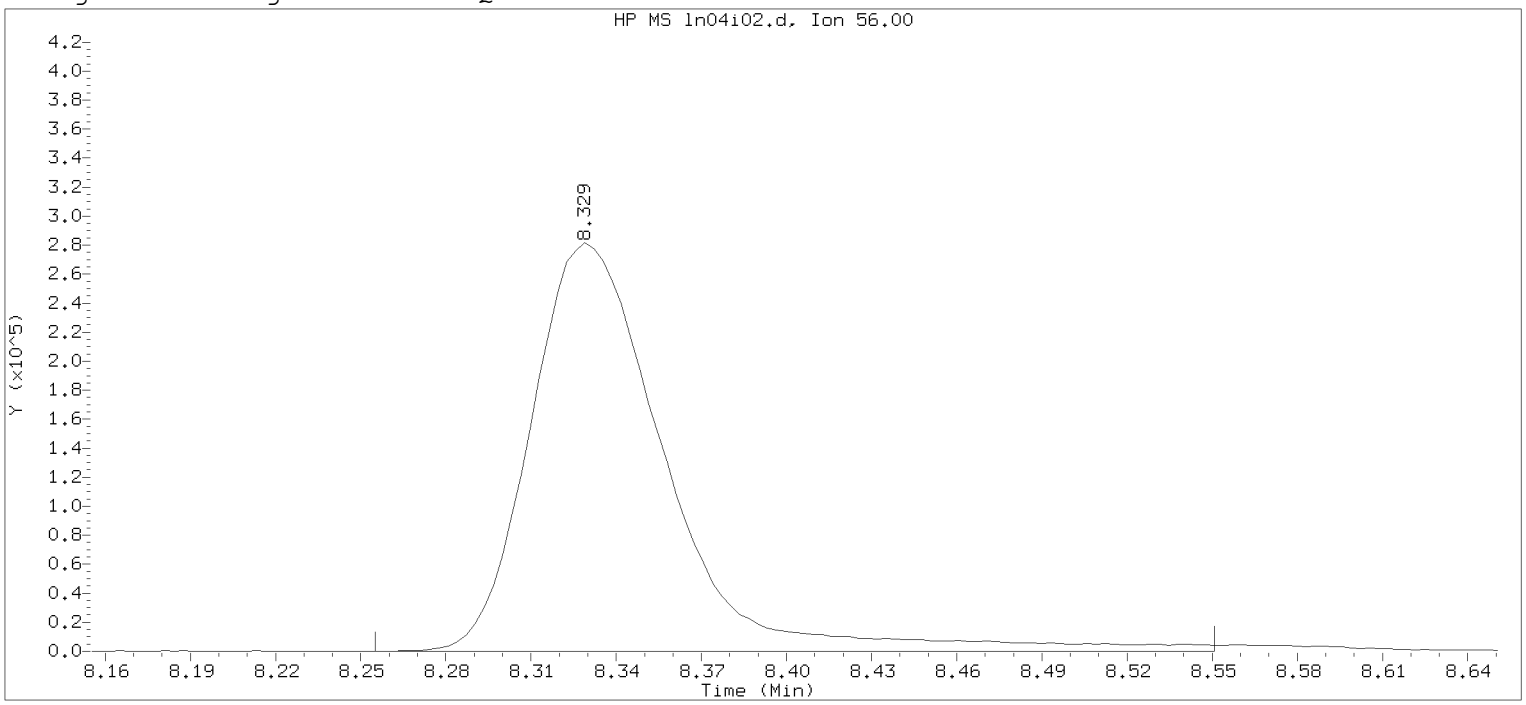
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

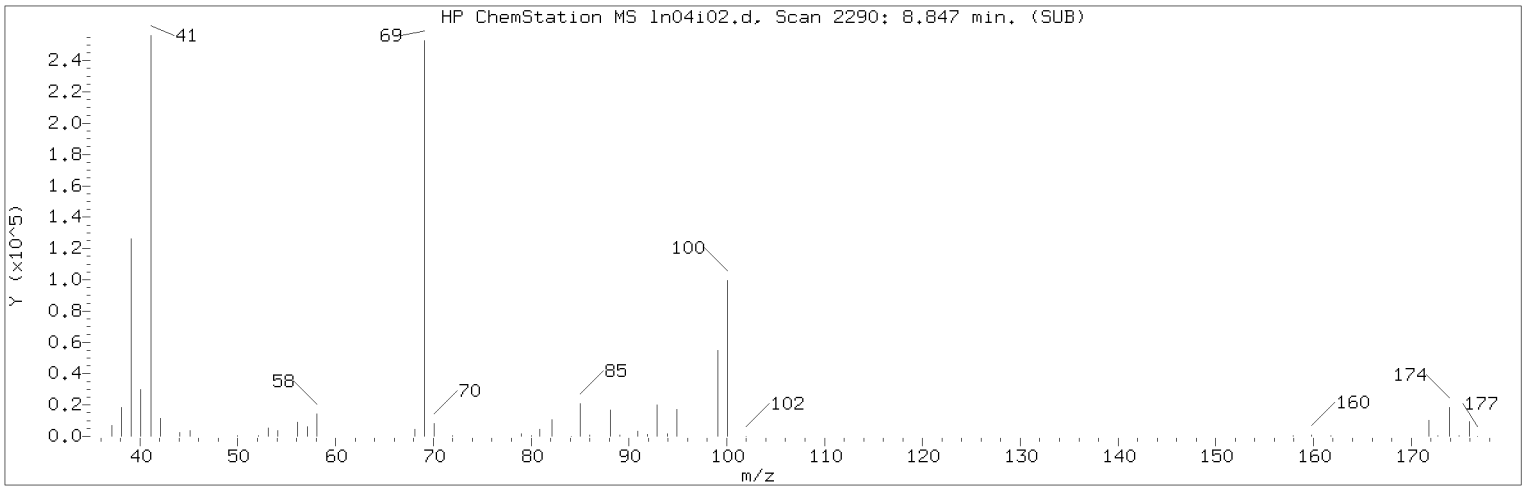
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

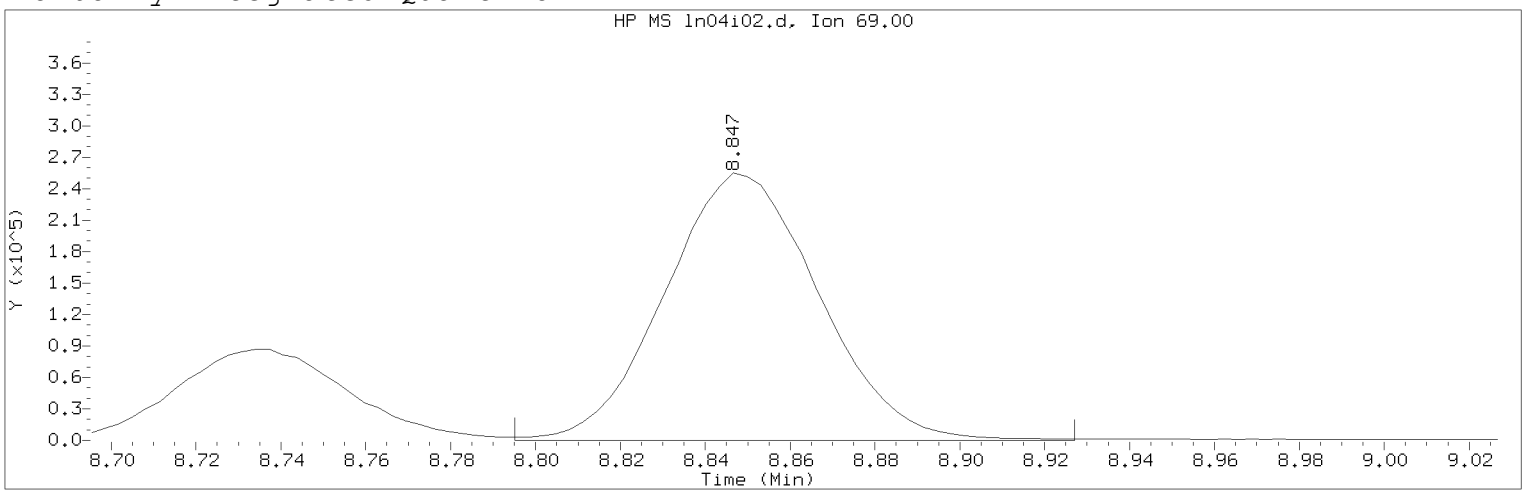
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area : 929615
On-column Amount (ng) : 2668.2803
Integration start scan : 2105 Integration stop scan: 2197
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

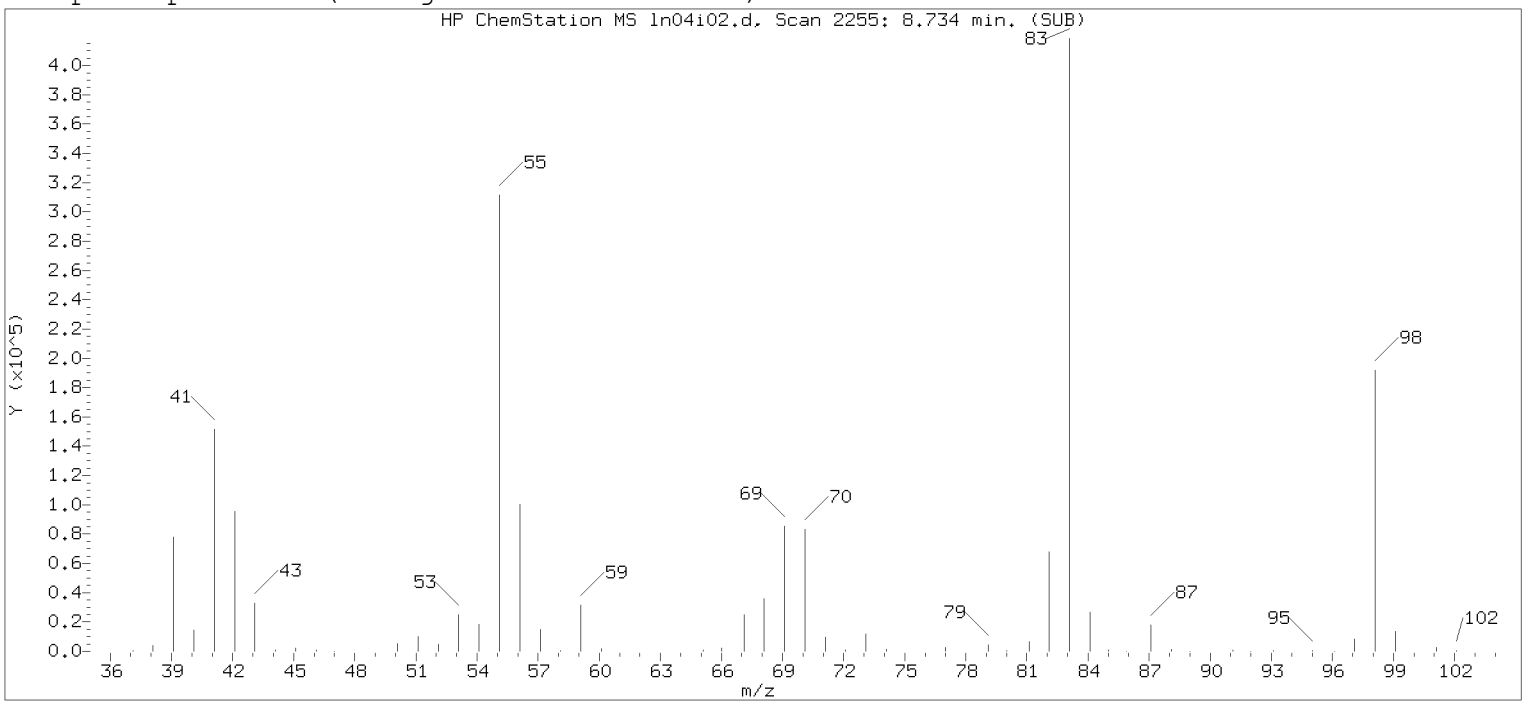
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2290
Retention Time (minutes): 8.847
Quant Ion : 69.00
Area (flag) : 640445A
On-Column Amount (ng) : 108.3344
Integration start scan : 2273 Integration stop scan: 2314
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

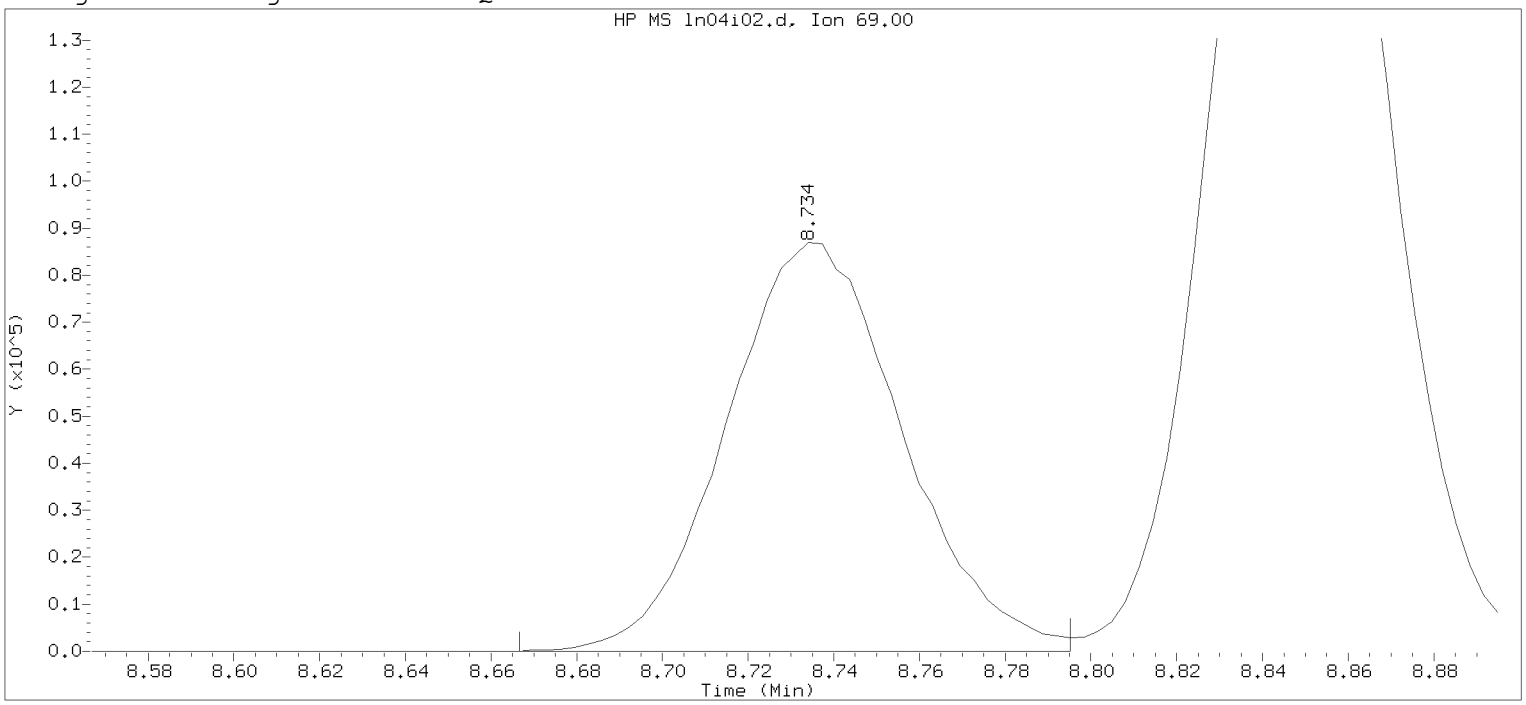
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

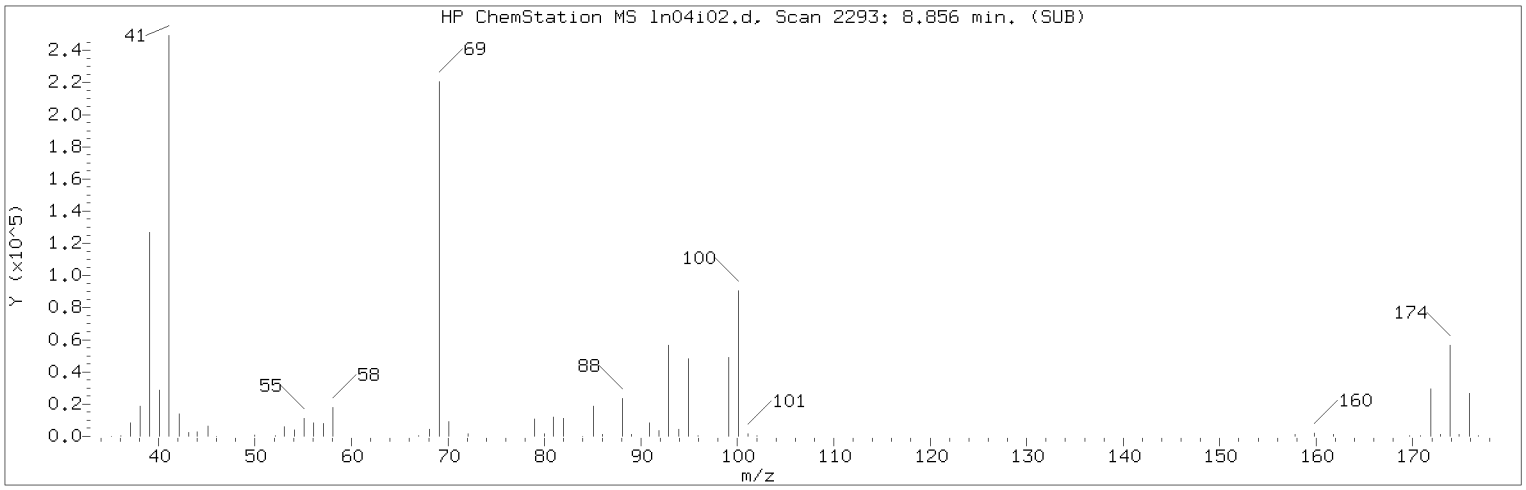
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

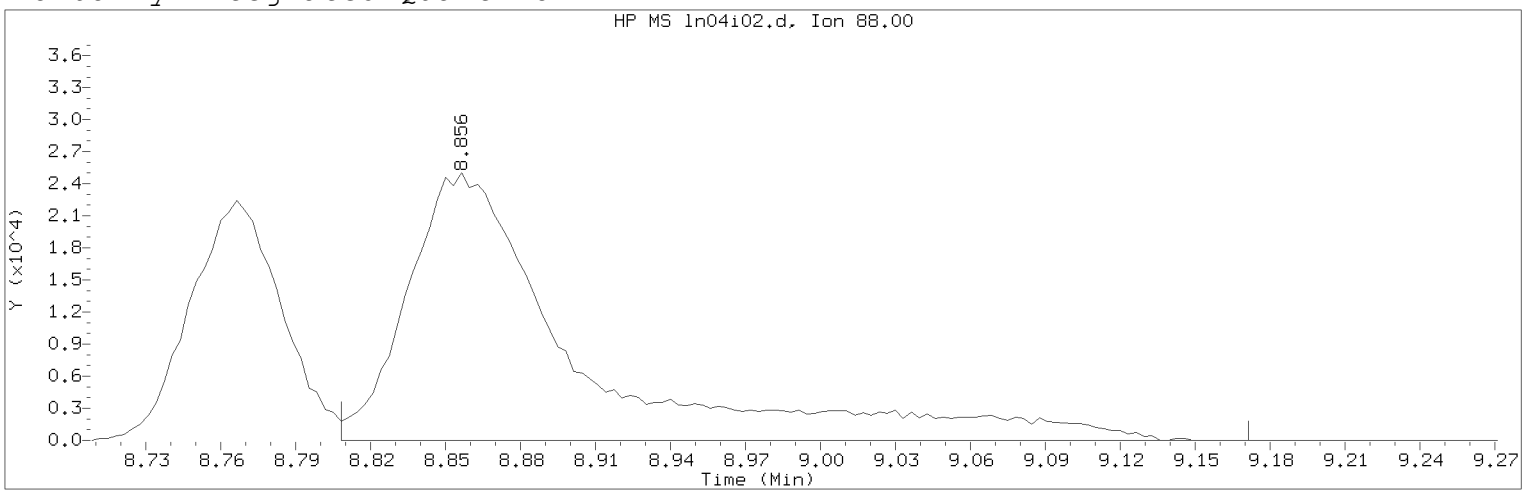
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 247190
On-column Amount (ng) : 97.8749
Integration start scan : 2233 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

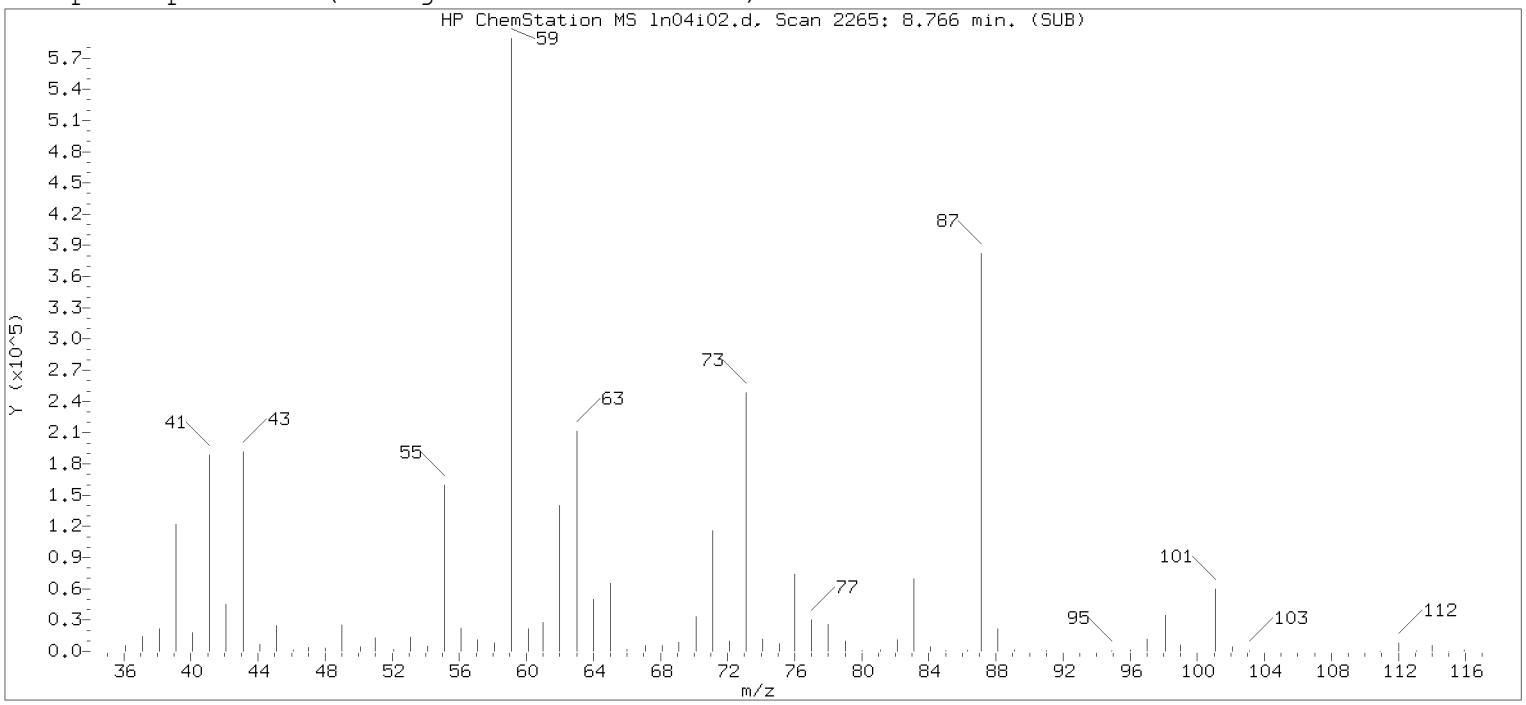
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 117817M
On-Column Amount (ng) : 1321.6466
Integration start scan : 2277 Integration stop scan: 2390
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

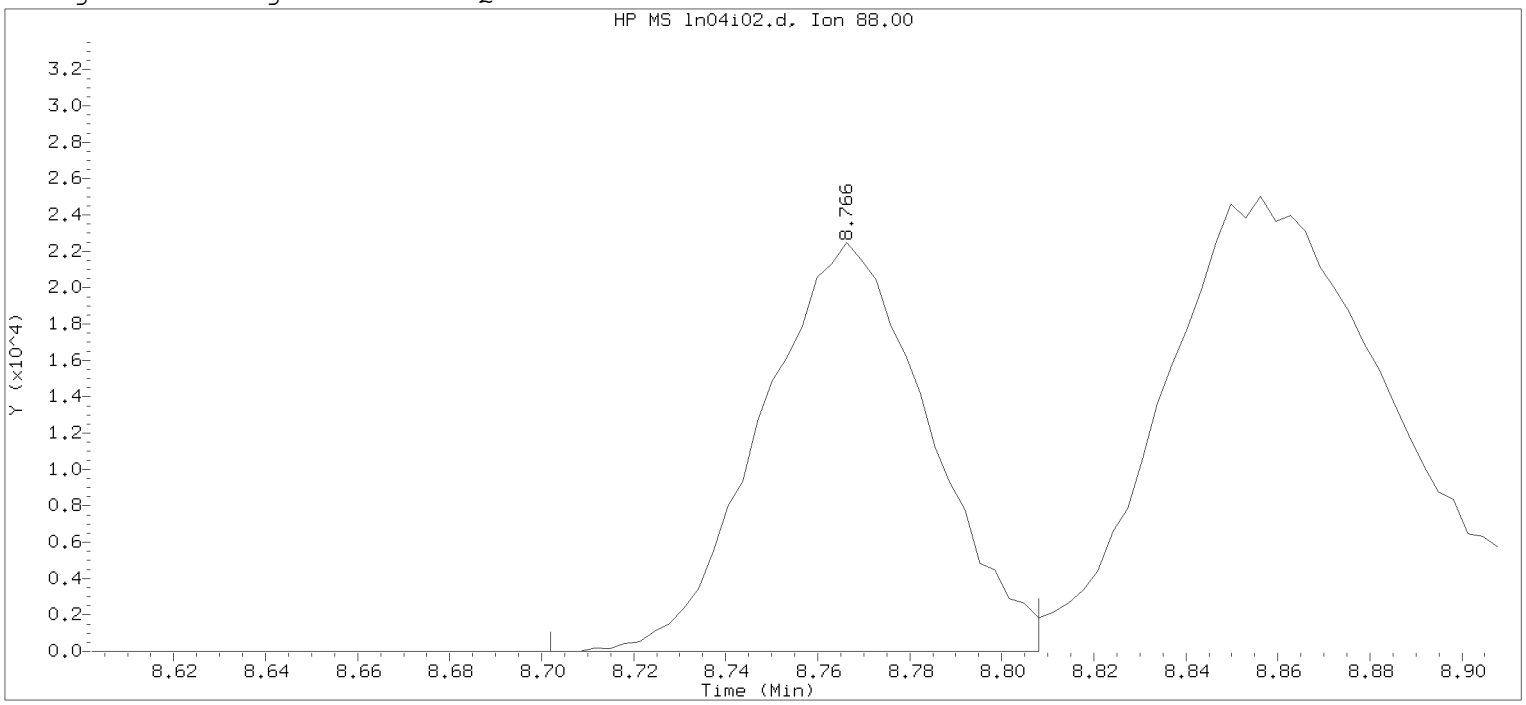
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

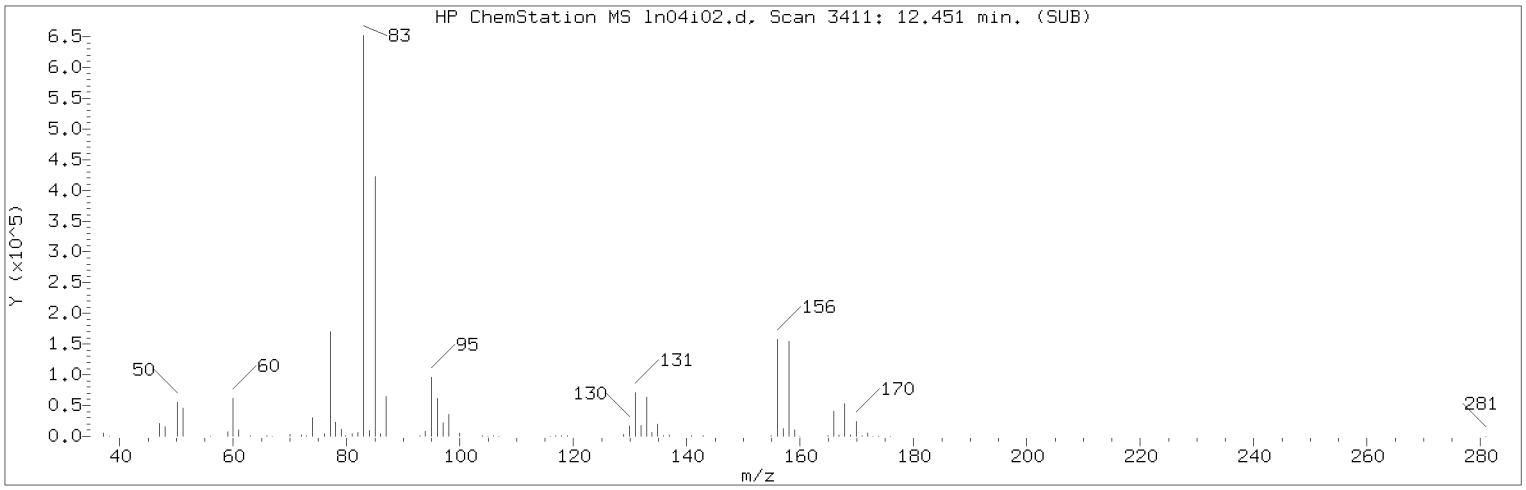
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

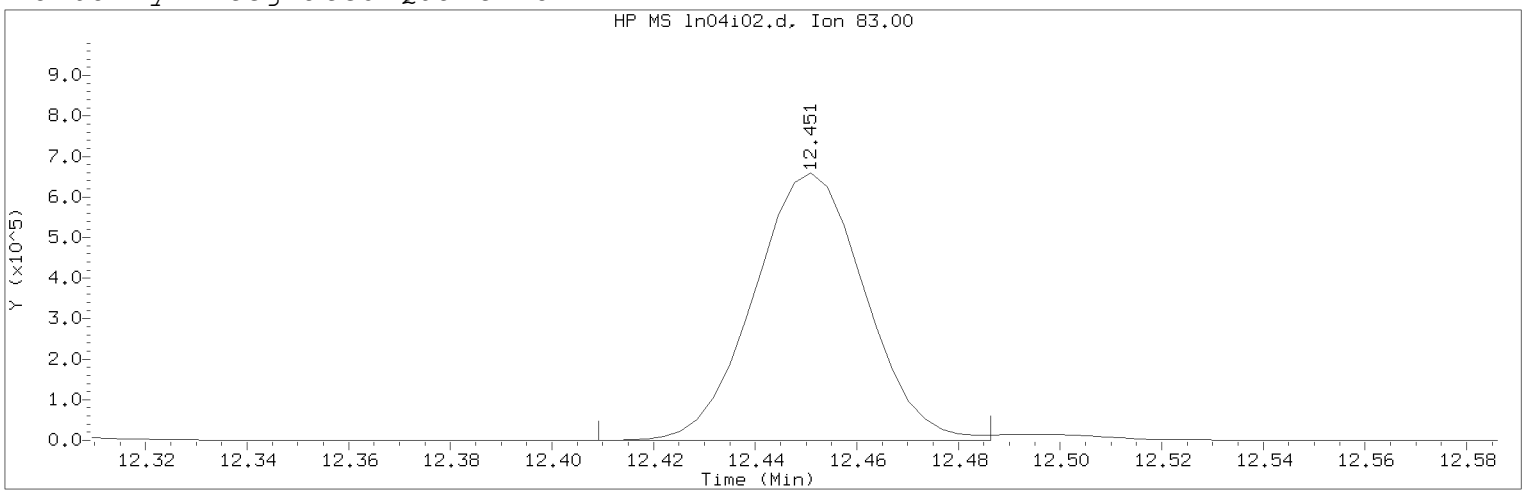
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2265
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area : 56534
On-column Amount (ng) : 746.2694
Integration start scan : 2244 Integration stop scan: 2277
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

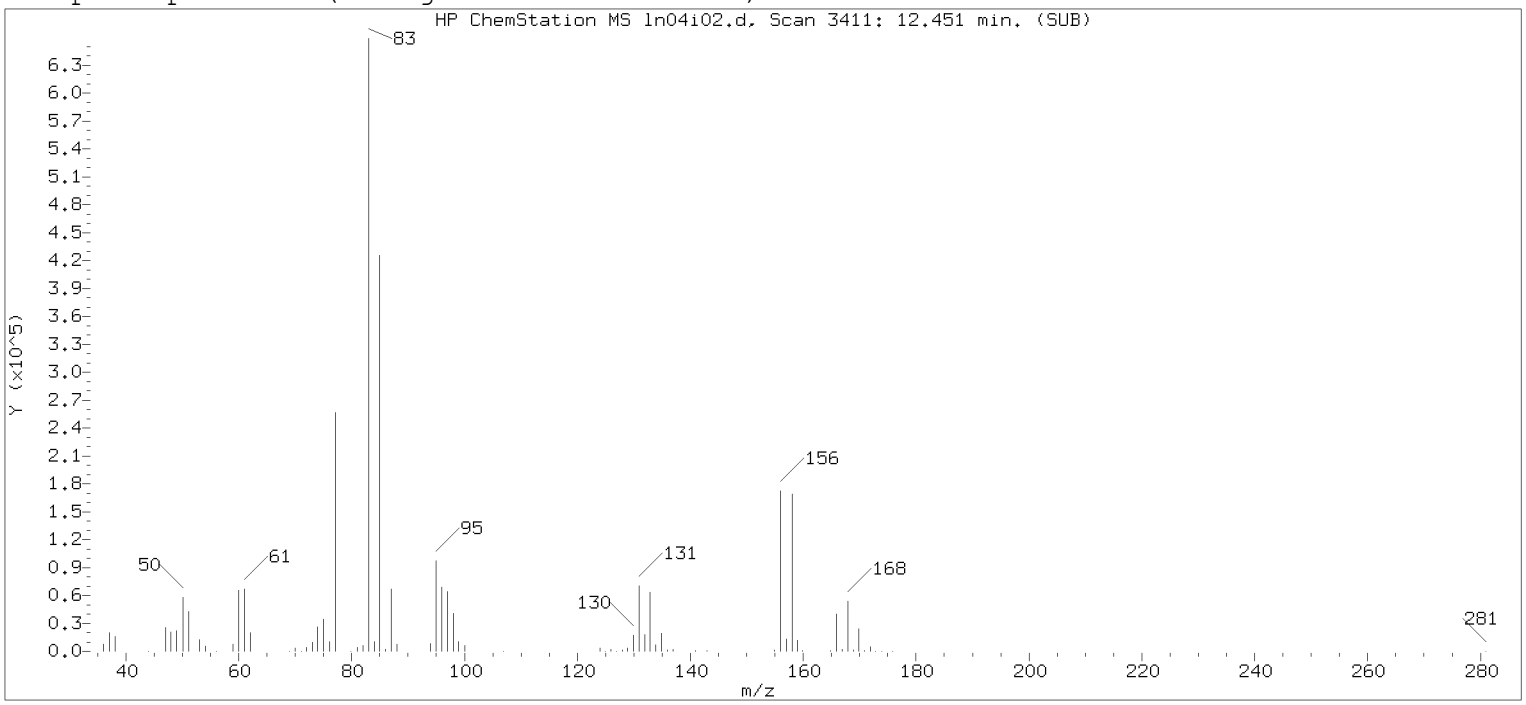
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 995972M
On-Column Amount (ng) : 105.3166
Integration start scan : 3397 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

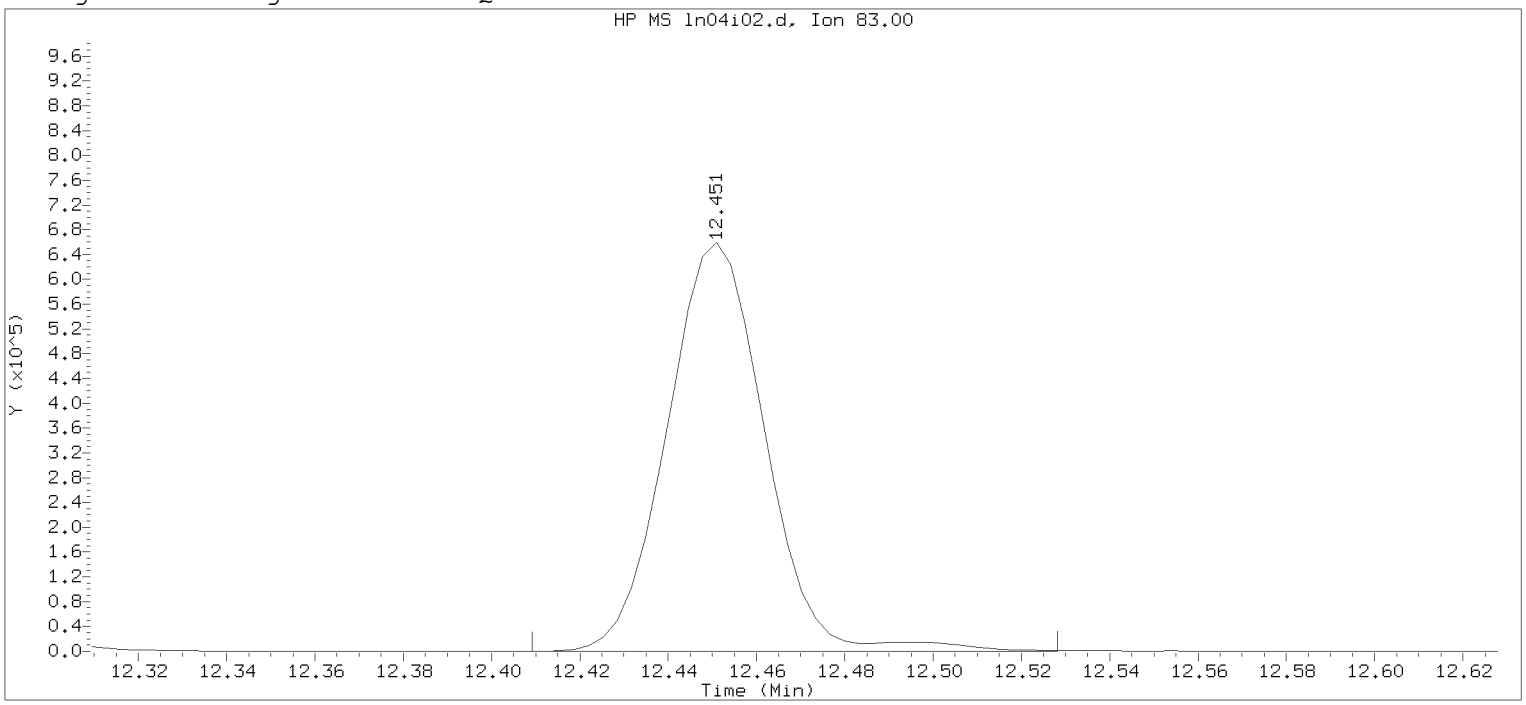
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

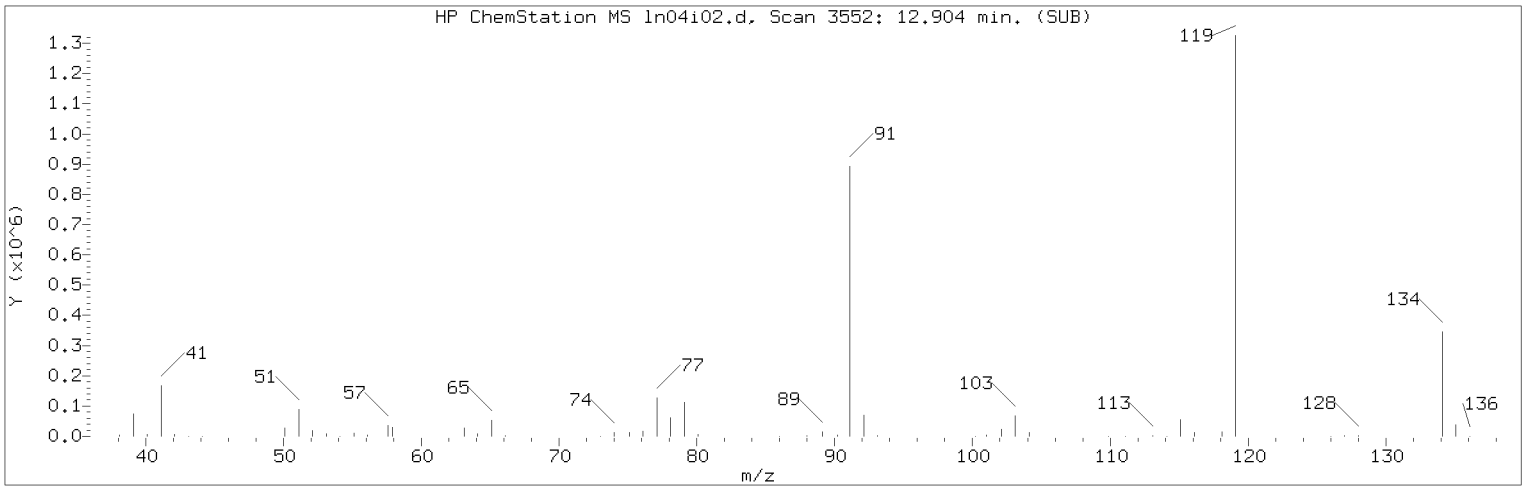
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

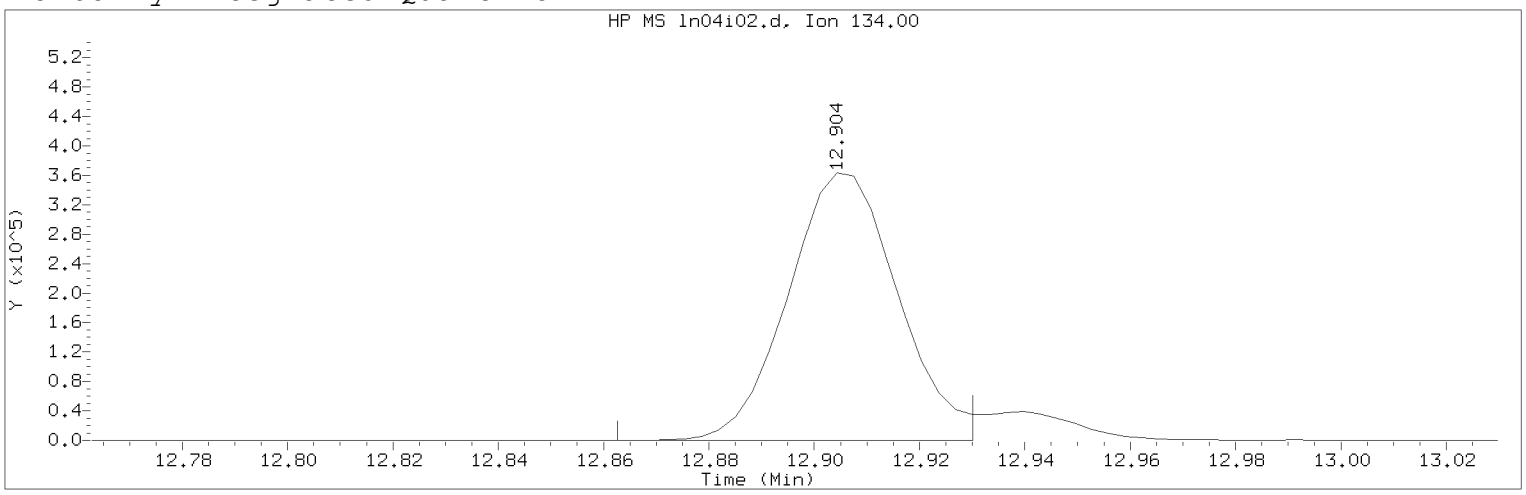
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 1015846
On-column Amount (ng) : 101.1821
Integration start scan : 3397 Integration stop scan: 3434
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

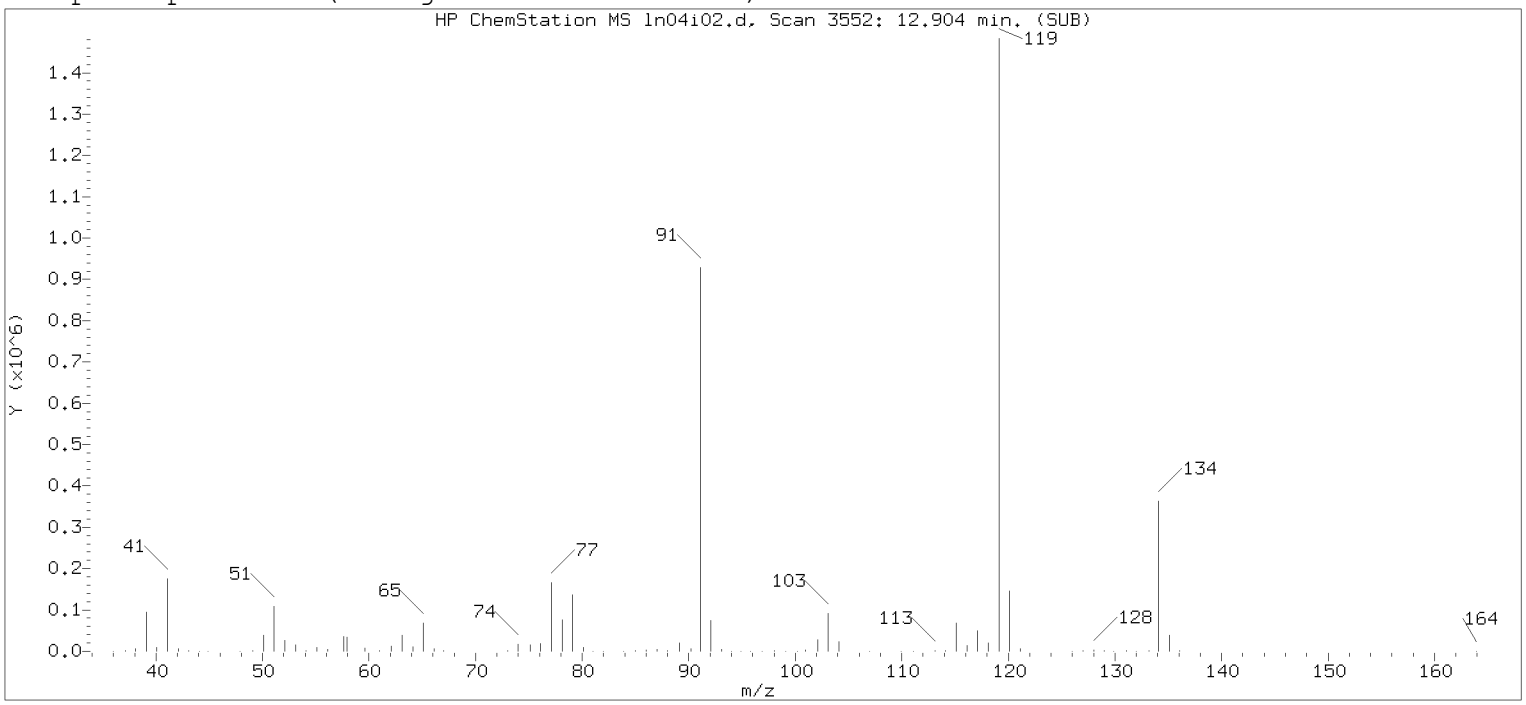
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 526781M
On-Column Amount (ng) : 106.6224
Integration start scan : 3538 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

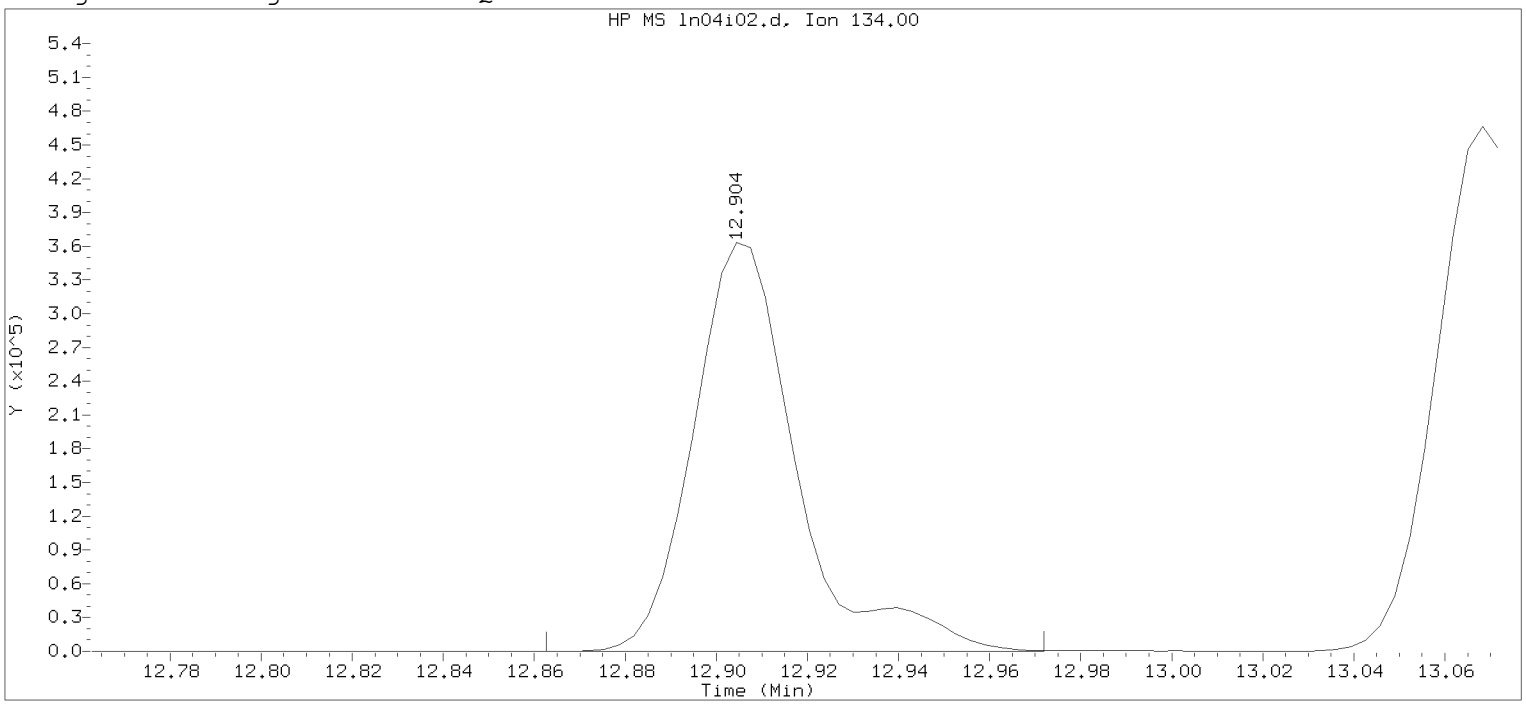
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



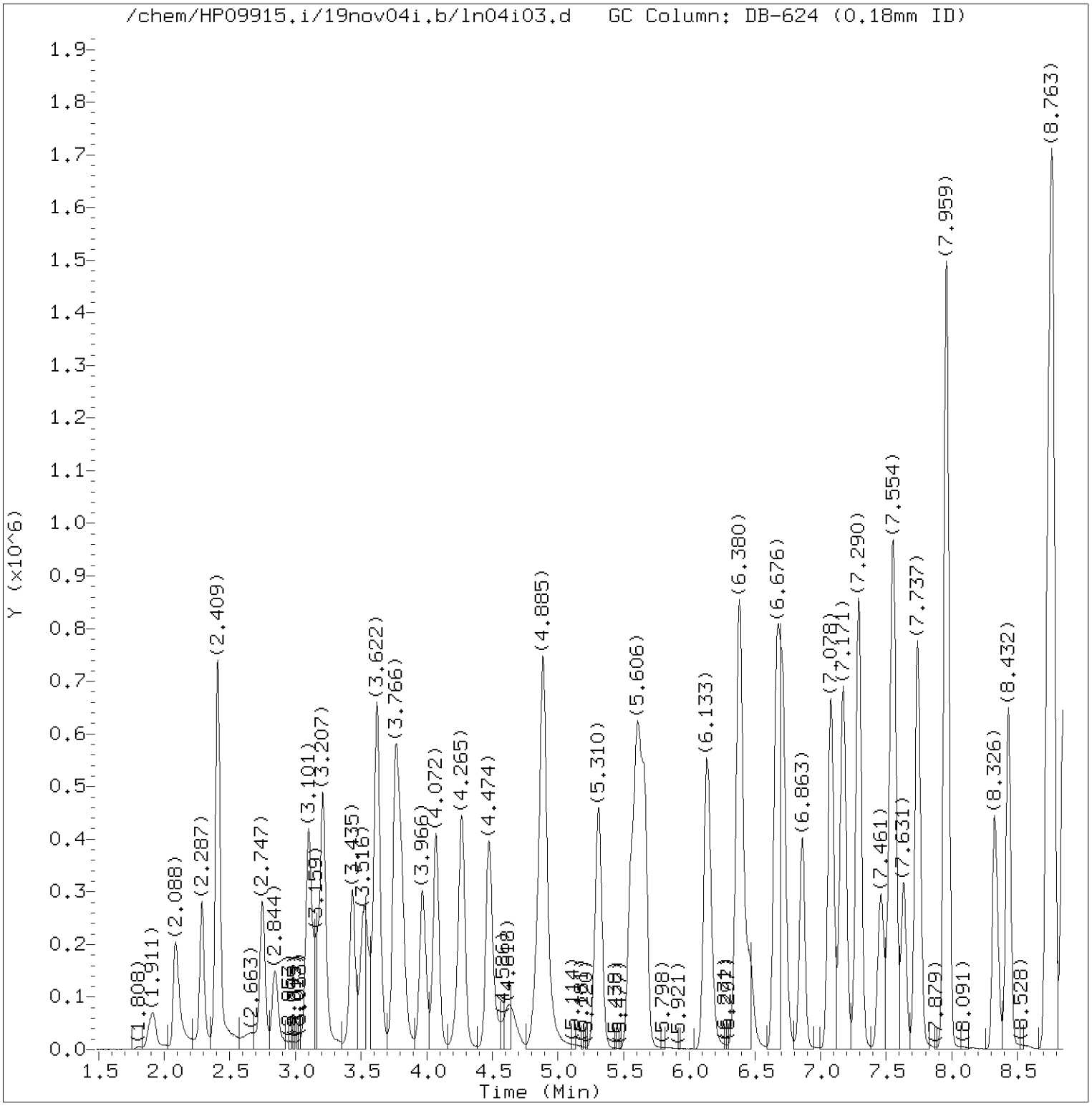
Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 572341
On-column Amount (ng) : 102.7487
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

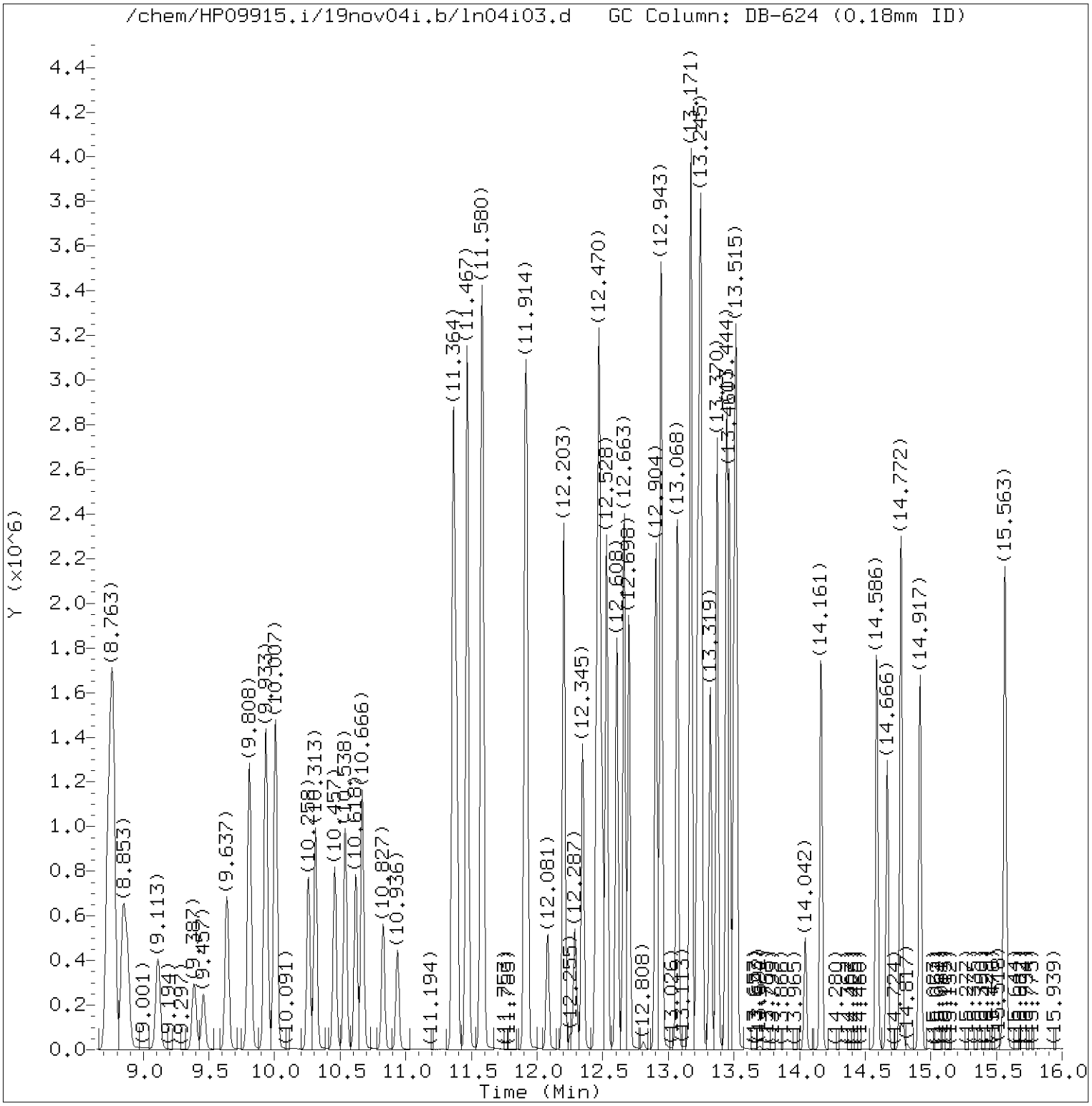
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.088	85	427538M	52.817
4) Chloromethane	(2)	2.287	50	390734	50.084
5) 1,3-Butadiene	(2)	2.406	39	311095M	48.025
6) Vinyl Chloride	(2)	2.409	62	387720	49.794
8) Bromomethane	(2)	2.747	94	272873	48.888
9) Chloroethane	(2)	2.844	64	212325	49.620
10) Dichlorofluoromethane	(2)	3.098	67	509913MA	49.515
12) Trichlorofluoromethane	(2)	3.152	101	433881	51.758
11) n-Pentane	(2)	3.207	43	489872	49.449
14) Ethyl ether	(2)	3.432	59	285731	52.748
15) Freon 123a	(2)	3.525	67	337192	50.003
16) Acrolein	(1)	3.622	56	1052176	519.843
17) 1,1-Dichloroethene	(2)	3.760	96	251911	51.197
17) 1,1-Dichloroethene	(2)	3.760	63	123343	50.001
19) Freon 113	(2)	3.795	101	289343	51.541
18) Acetone	(1)	3.802	58	91161	100.464
22) Methyl Iodide	(2)	3.966	142	518954	50.897
21) 2-Propanol	(1)	3.998	45	165875M	254.283
23) Carbon Disulfide	(2)	4.072	76	956902	51.606
27) Methyl Acetate	(2)	4.245	43	314348	49.603
25) Allyl Chloride	(2)	4.271	41	438915	49.725
28) Methylene Chloride	(2)	4.474	84	295055	50.382
29)*t-Butyl alcohol-d10	(1)	4.509	65	269779M	250.000
30) t-Butyl alcohol	(1)	4.625	59	291988	257.078
31) Acrylonitrile	(2)	4.834	53	175969	51.611
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	957096	51.225
32) trans-1,2-Dichloroethene	(2)	4.888	96	287617	50.529
34) n-Hexane	(2)	5.313	57	463732M	52.364
36) 1,1-Dichloroethane	(2)	5.551	63	505667	50.924
38) di-Isopropyl ether	(2)	5.609	45	985238	51.444
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	462216	51.882
40) Ethyl t-butyl ether	(2)	6.133	59	965104	51.927
43) 1,2-Dichloroethene (Total)	(2)		96	610267	101.029
44) 2-Butanone	(2)	6.361	43	453665	103.655
42) cis-1,2-Dichloroethene	(2)	6.380	96	322650	50.501
45) 2,2-Dichloropropane	(2)	6.400	77	400546	51.890
47) Propionitrile	(1)	6.464	54	357876	252.881
48) Methacrylonitrile	(2)	6.670	67	475036	129.160

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	173386	51.180
50) Tetrahydrofuran	(1)	6.721	71	126019	98.581
51) Chloroform	(2)	6.859	83	484828	51.048
52)$Dibromofluoromethane	(2)	7.075	113	282824	49.838
52)$Dibromofluoromethane	(2)	7.075	111	289462	50.026
53) 1,1,1-Trichloroethane	(2)	7.085	97	420986	51.935
54) Cyclohexane	(2)	7.171	56	567043	52.311
54) Cyclohexane	(2)	7.175	84	491699	52.219
54) Cyclohexane	(2)	7.175	69	175289	52.282
56) Carbon Tetrachloride	(2)	7.284	117	361443	52.574
55) 1,1-Dichloropropene	(2)	7.294	75	401799	51.176
58) Isobutyl Alcohol	(1)	7.461	41	242114	633.444
57)$1,2-Dichloroethane-d4	(2)	7.528	102	72846	50.367
57)$1,2-Dichloroethane-d4	(2)	7.531	65	321603	49.897
57)$1,2-Dichloroethane-d4	(2)	7.531	104	46134	49.939
60) Benzene	(2)	7.557	78	1202424	50.927
61) 1,2-Dichloroethane	(2)	7.638	62	372805	49.091
61) 1,2-Dichloroethane	(2)	7.634	98	37850	50.364
65) t-Amyl methyl ether	(2)	7.737	73	971399	52.071
67) n-Heptane	(2)	7.956	43	432248MA	52.247
66)*Fluorobenzene	(2)	7.959	96	1160755	50.000
69) n-Butanol	(1)	8.326	56	438437M	1332.750
71) Trichloroethene	(2)	8.432	95	302634	50.906
72) Methylcyclohexane	(2)	8.734	83	574135	52.056
72) Methylcyclohexane	(2)	8.731	98	260583	52.213
73) 1,2-Dichloropropane	(2)	8.773	63	306937	51.196
76) Methyl Methacrylate	(2)	8.847	69	306086A	52.795
75) 1,4-Dioxane	(1)	8.853	88	59876M	662.196
74) Dibromomethane	(2)	8.879	93	199498	51.428
78) Bromodichloromethane	(2)	9.113	83	366892	52.707
79) 2-Nitropropane	(2)	9.390	41	235097	111.505
80) 2-Chloroethyl Vinyl Ether	(2)	9.457	63	134015	52.046
81) cis-1,3-Dichloropropene	(2)	9.637	75	495055	53.547
82) 4-Methyl-2-pentanone	(2)	9.808	43	1004831	108.769
83)$Toluene-d8	(3)	9.933	98	1189125	50.240
83)$Toluene-d8	(3)	9.933	100	767119	50.033
88) Toluene	(3)	10.007	92	764927	51.549
90) 1,3-Dichloropropene (total)	(3)		100	956669	108.348

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	461614	54.801
91) Ethyl Methacrylate	(3)	10.313	69	554039	54.121
92) 1,1,2-Trichloroethane	(3)	10.461	97	291480	51.810
93) Tetrachloroethene	(3)	10.538	166	321895	51.220
94) 1,3-Dichloropropane	(3)	10.618	76	494204	51.449
96) 2-Hexanone	(3)	10.670	43	761734	111.475
97) Dibromochloromethane	(3)	10.827	129	315765	54.792
99) 1,2-Dibromoethane	(3)	10.936	107	319699	52.331
100)*Chlorobenzene-d5	(3)	11.361	117	904578	50.000
101) 1-Chlorohexane	(3)	11.364	91	399510	50.116
102) Chlorobenzene	(3)	11.387	112	864419	51.514
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	299375	54.148
104) Ethylbenzene	(3)	11.467	91	1475718	52.031
106) m+p-Xylene	(3)	11.580	106	1167470	104.636
108) Xylene (Total)	(3)		106	1748839	157.389
107) o-Xylene	(3)	11.907	106	581369	52.752
109) Styrene	(3)	11.924	104	981189	53.877
110) Bromoform	(3)	12.081	173	229903	53.387
111) Isopropylbenzene	(3)	12.203	105	1456789	52.702
112) Cyclohexanone	(1)	12.287	55	231776	654.496
114)$4-Bromofluorobenzene	(3)	12.345	95	446156	49.781
114)$4-Bromofluorobenzene	(3)	12.348	174	370576	49.875
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	482004M	52.727
115) Bromobenzene	(4)	12.464	156	378400	52.027
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	383692	136.075
117) 1,2,3-Trichloropropane	(4)	12.496	110	145151	51.744
119) n-Propylbenzene	(4)	12.528	91	1662625	52.323
120) 2-Chlorotoluene	(4)	12.608	126	350943	51.988
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	1225419	53.065
121) 4-Chlorotoluene	(4)	12.698	126	361669	51.471
124) tert-Butylbenzene	(4)	12.904	134	253906M	53.165
125) Pentachloroethane	(4)	12.940	167	227064	55.216
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	1291883	53.080
127) sec-Butylbenzene	(4)	13.068	105	1512547	53.076
129) 1,3-Dichlorobenzene	(4)	13.168	146	693790	51.911
130) p-Isopropyltoluene	(4)	13.174	119	1315828	53.371
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	483927	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	714495	51.569

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

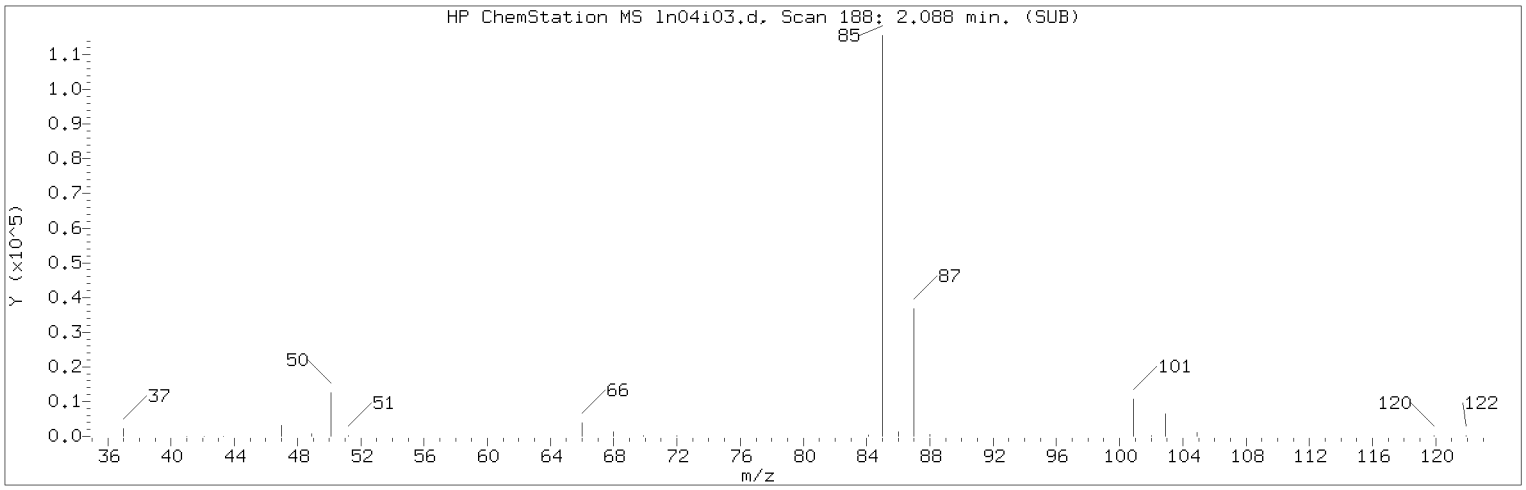
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

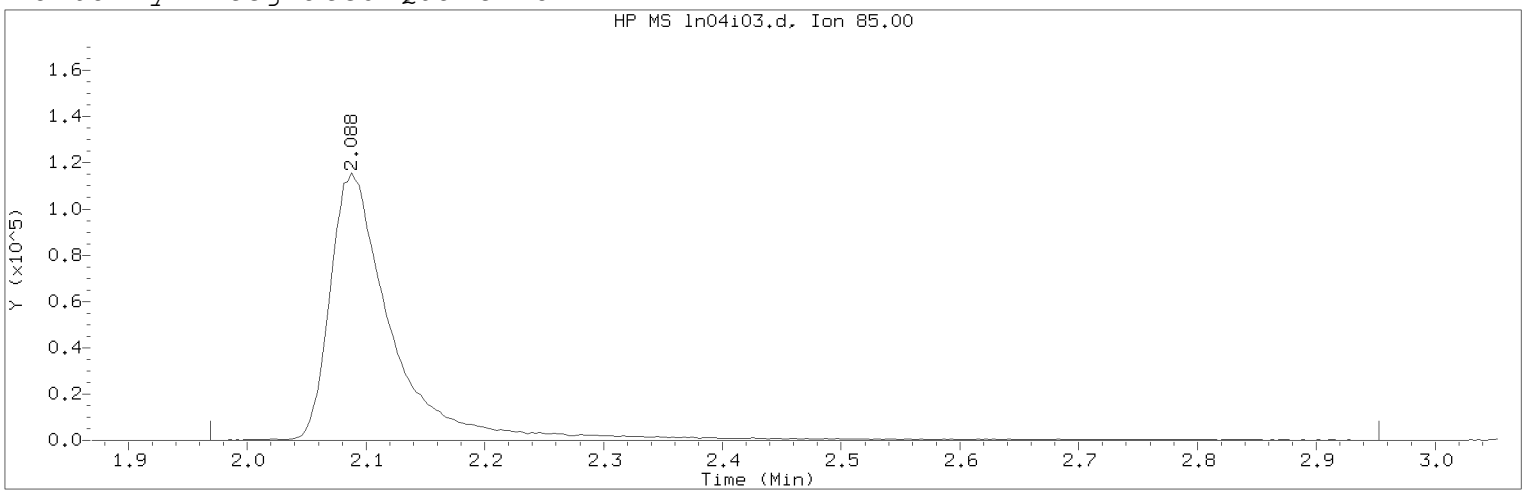
	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134)	1,2,3-Trimethylbenzene	(4)	13.251	105	1342367	52.068
135)	Benzyl Chloride	(4)	13.319	91	1059398	54.274
136)	1,3-Diethylbenzene	(4)	13.370	119	832647	51.895
141)	Diethylbenzene (total)	(4)		100	2415817	155.686
137)	1,4-Diethylbenzene	(4)	13.441	119	877553	51.623
139)	n-Butylbenzene	(4)	13.464	92	652599	51.769
138)	1,2-Dichlorobenzene	(4)	13.502	146	682120	51.722
140)	1,2-Diethylbenzene	(4)	13.518	119	705617	52.168
142)	1,2-Dibromo-3-chloropropane	(4)	14.042	75	108388	54.164
144)	1,3,5-Trichlorobenzene	(4)	14.165	180	516839	51.009
146)	1,2,4-Trichlorobenzene	(4)	14.586	180	503797	51.136
147)	Hexachlorobutadiene	(4)	14.666	225	217236	46.700
148)	Naphthalene	(4)	14.772	128	1689758	53.350
149)	1,2,3-Trichlorobenzene	(4)	14.917	180	498430	51.993
150)	2-Methylnaphthalene	(4)	15.563	142	1079055	55.325

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

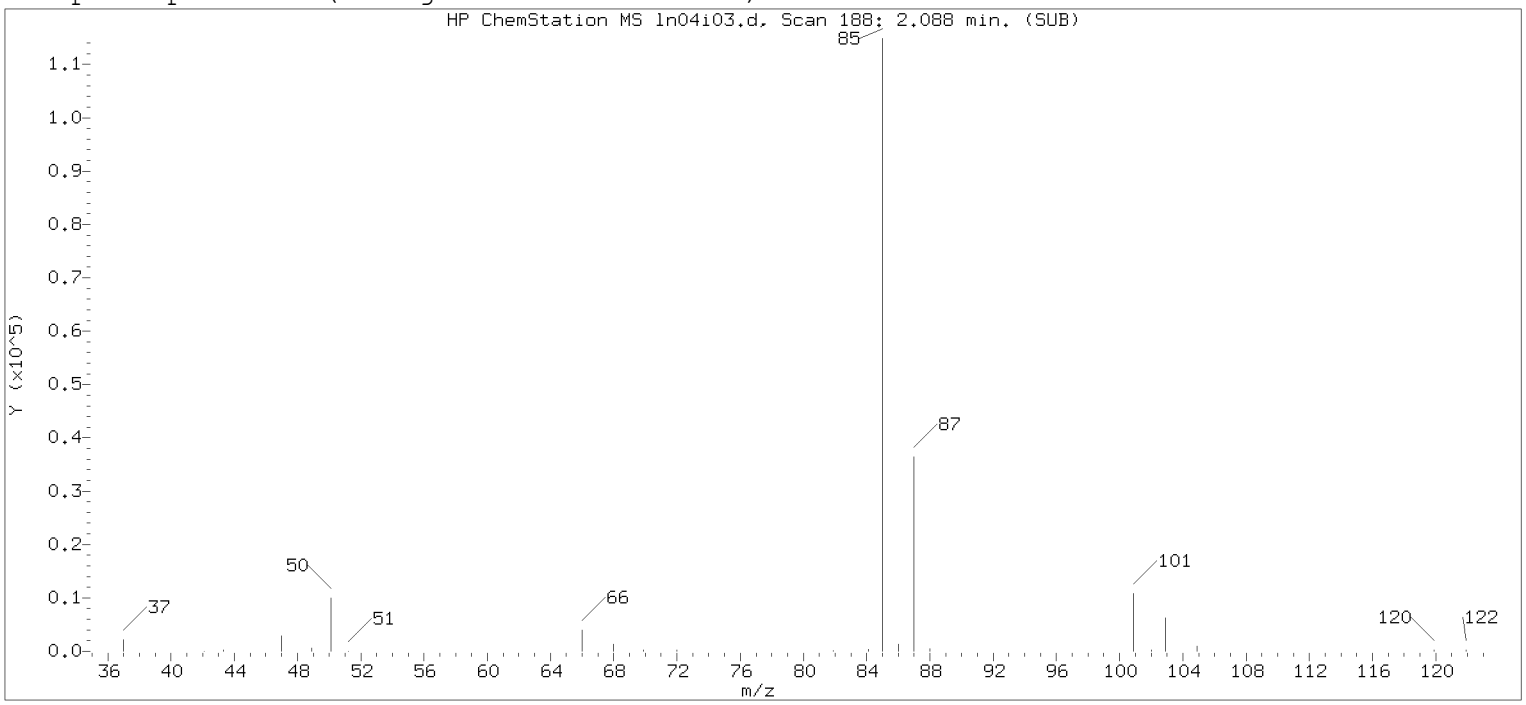
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 188
Retention Time (minutes): 2.088
Quant Ion : 85.00
Area (flag) : 427538M
On-Column Amount (ng) : 52.8165
Integration start scan : 150 Integration stop scan: 456
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

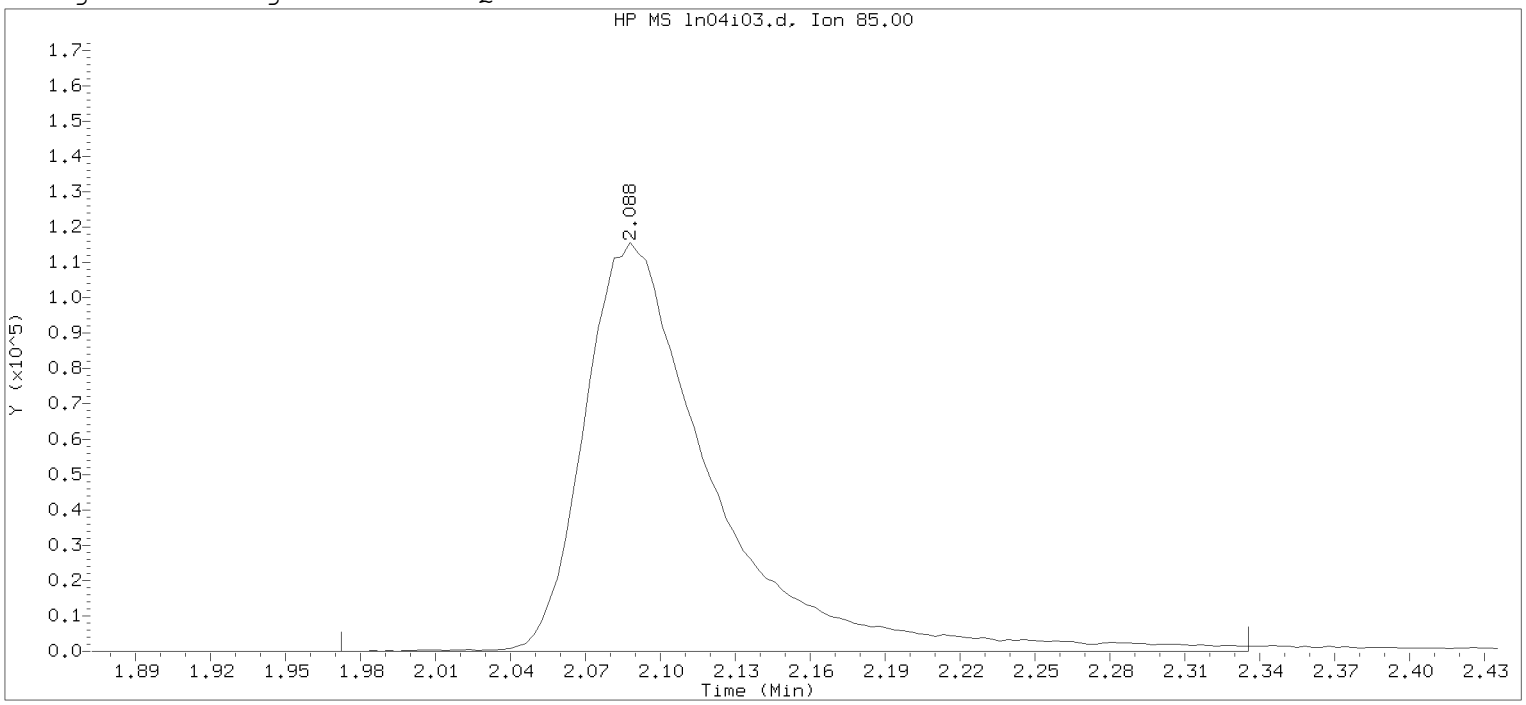
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

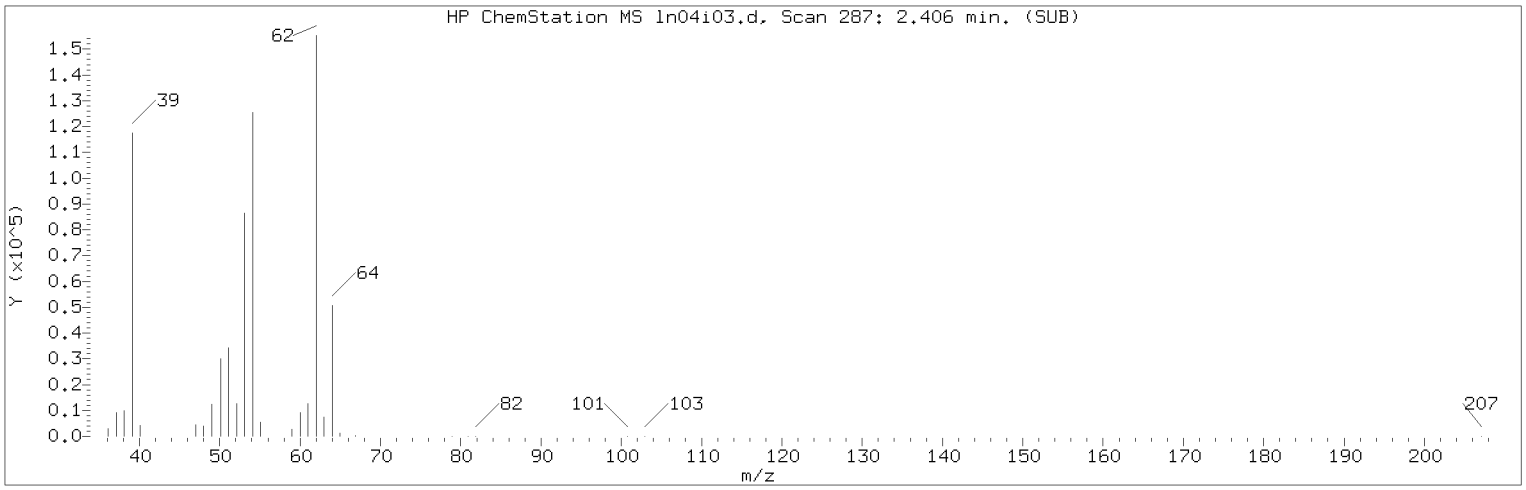
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

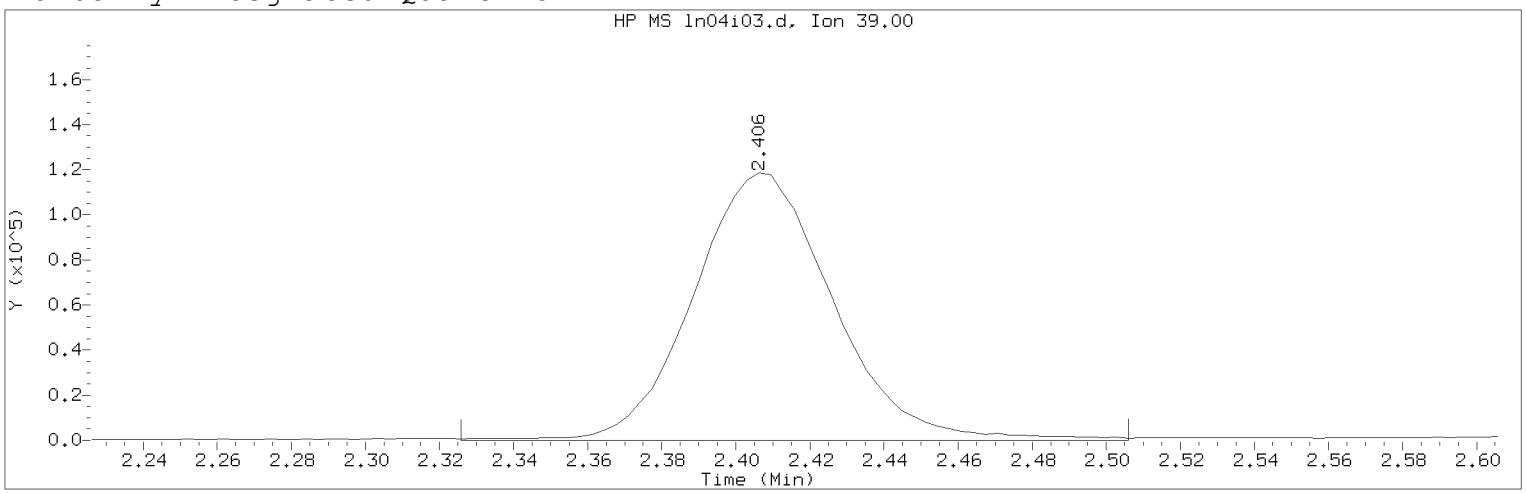
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 188
Retention Time (minutes): 2.088
Quant Ion : 85.00
Area : 411065
On-column Amount (ng) : 48.5918
Integration start scan : 151 Integration stop scan: 264
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

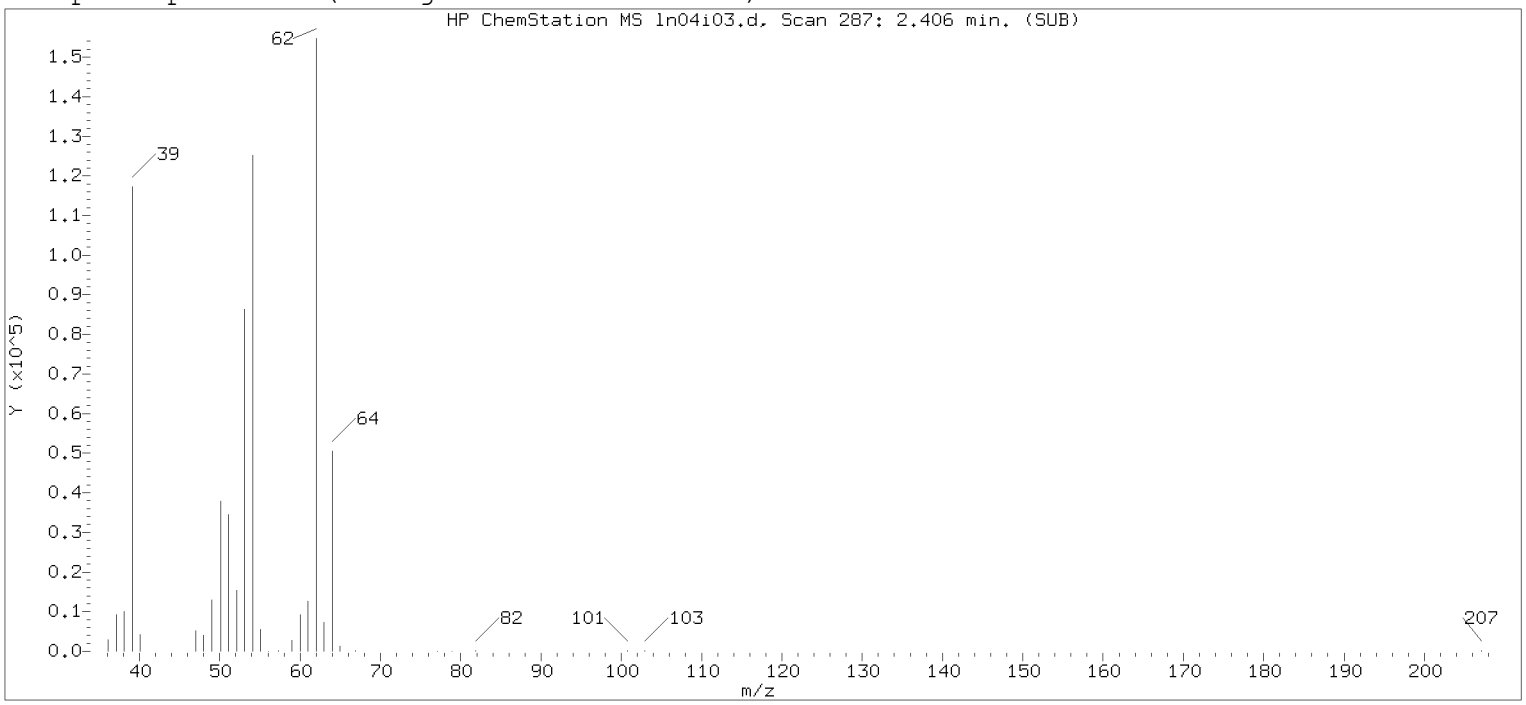
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 311095M
On-Column Amount (ng) : 48.0246
Integration start scan : 261 Integration stop scan: 317
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

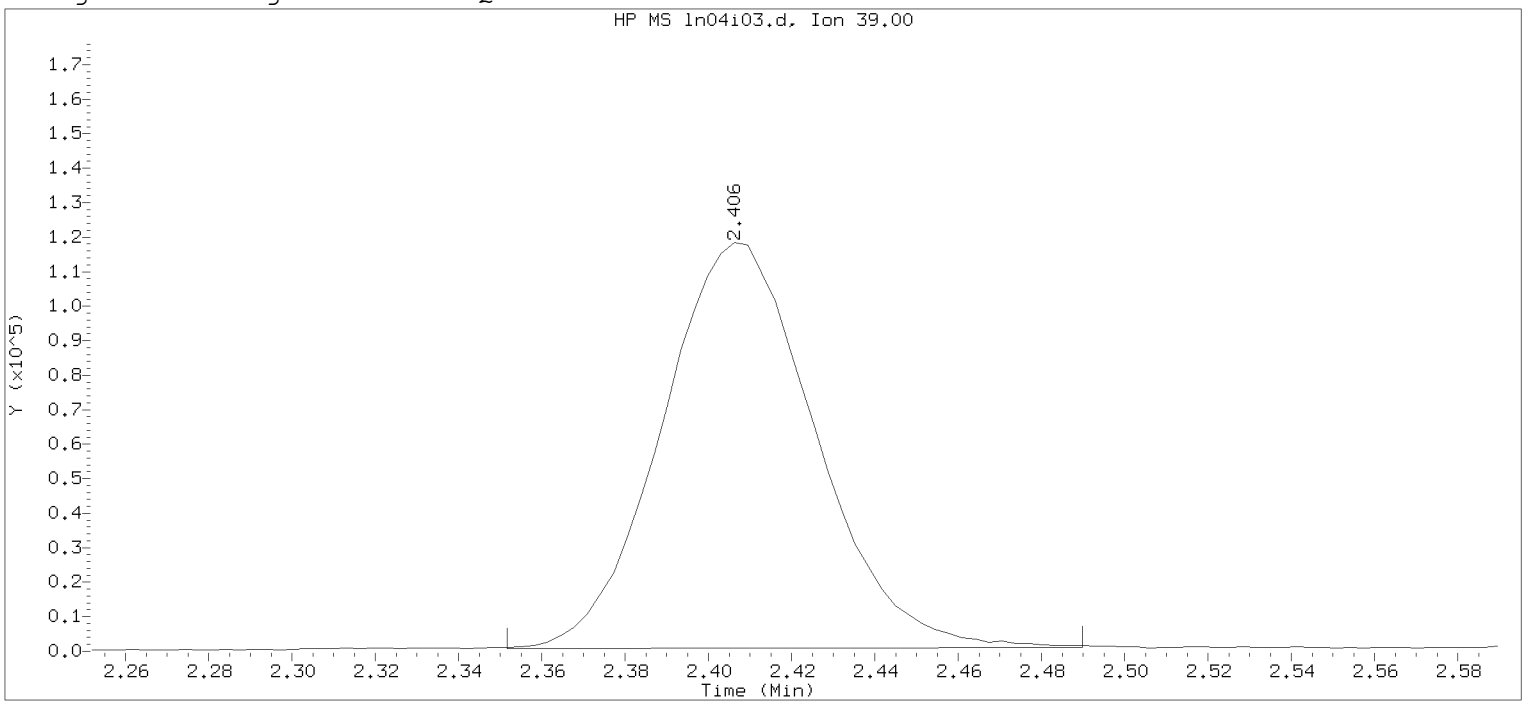
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

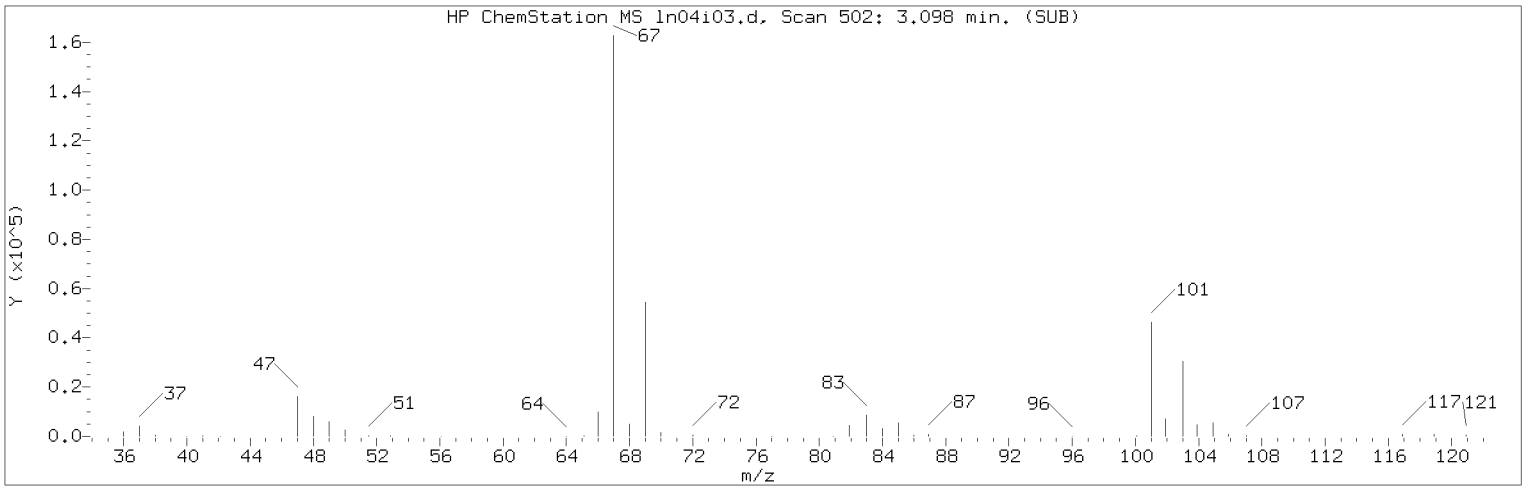
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

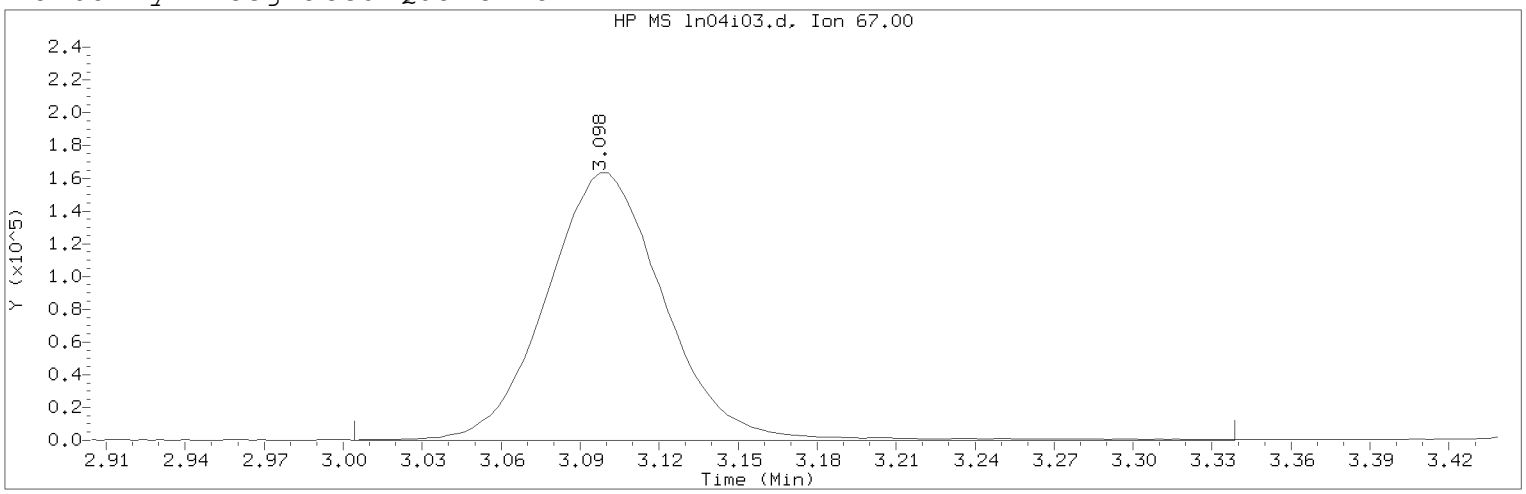
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 300667
On-column Amount (ng) : 50.0756
Integration start scan : 269 Integration stop scan: 312
Y at integration start : 752 Y at integration end: 1063

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

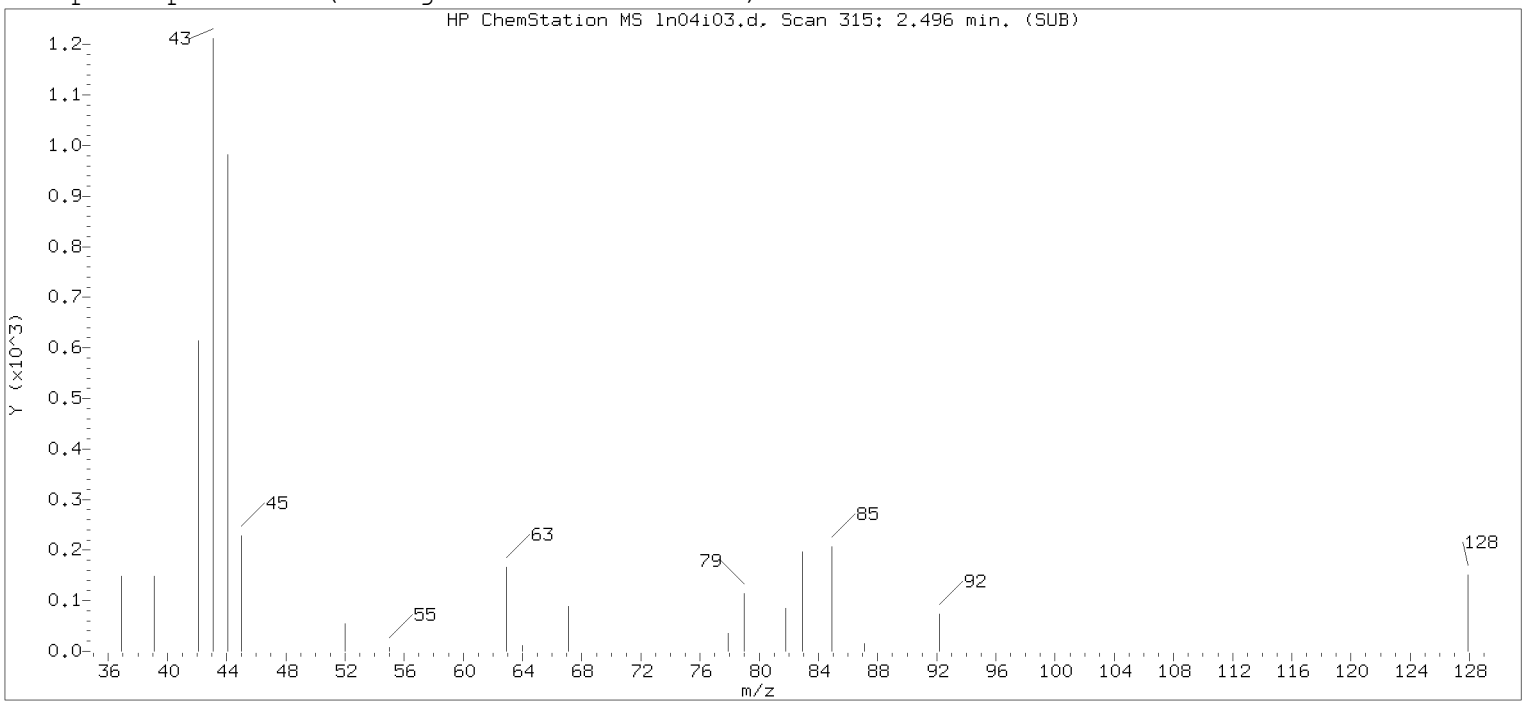
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 502
Retention Time (minutes): 3.098
Quant Ion : 67.00
Area (flag) : 509913MA
On-Column Amount (ng) : 49.5150
Integration start scan : 472 Integration stop scan: 576
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

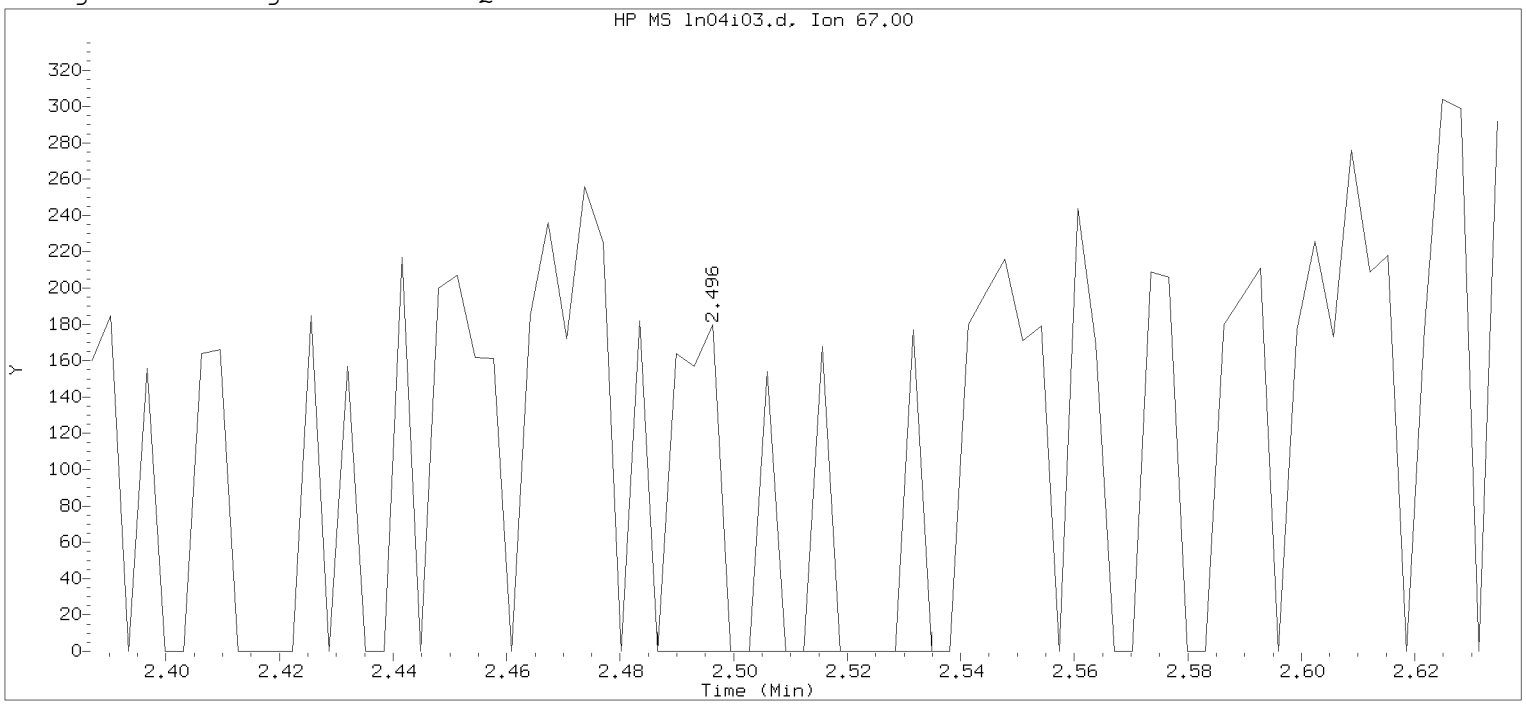
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

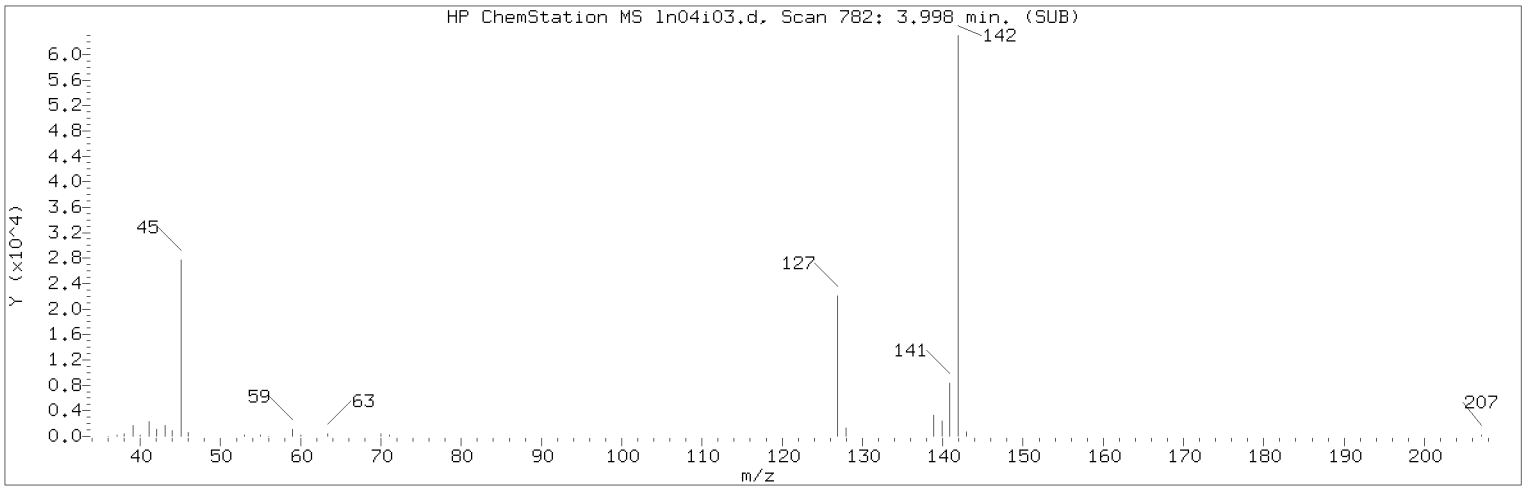
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

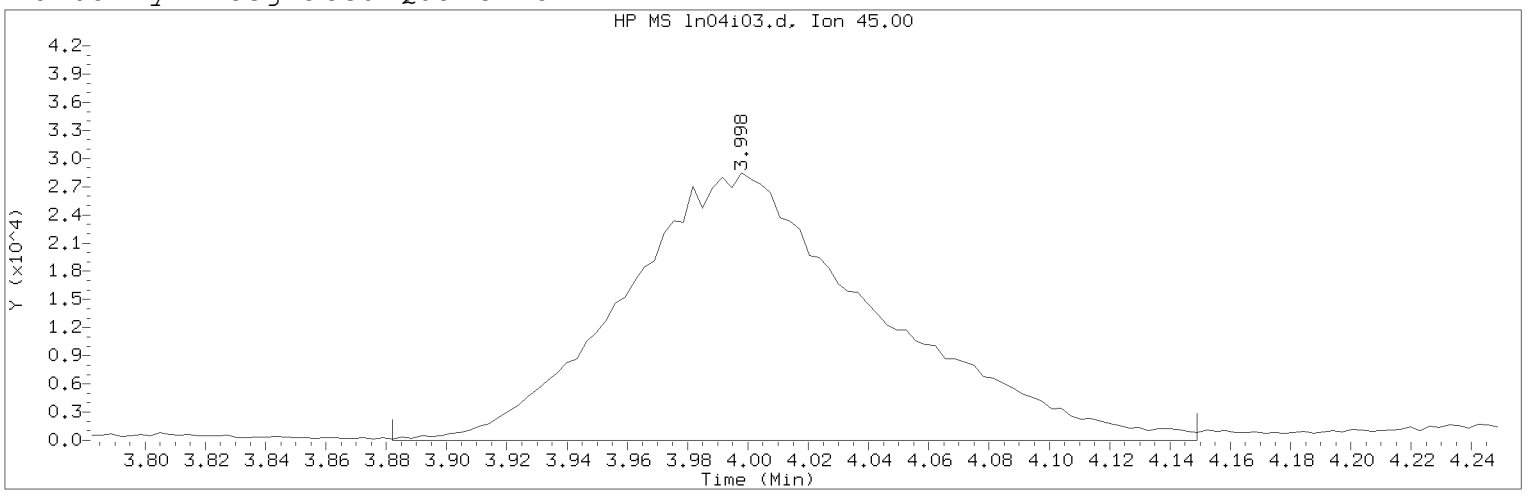
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 315
Retention Time (minutes): 2.496
Quant Ion : 67.00
Area : 192
On-column Amount (ng) : 0.0562
Integration start scan : 311 Integration stop scan: 326
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

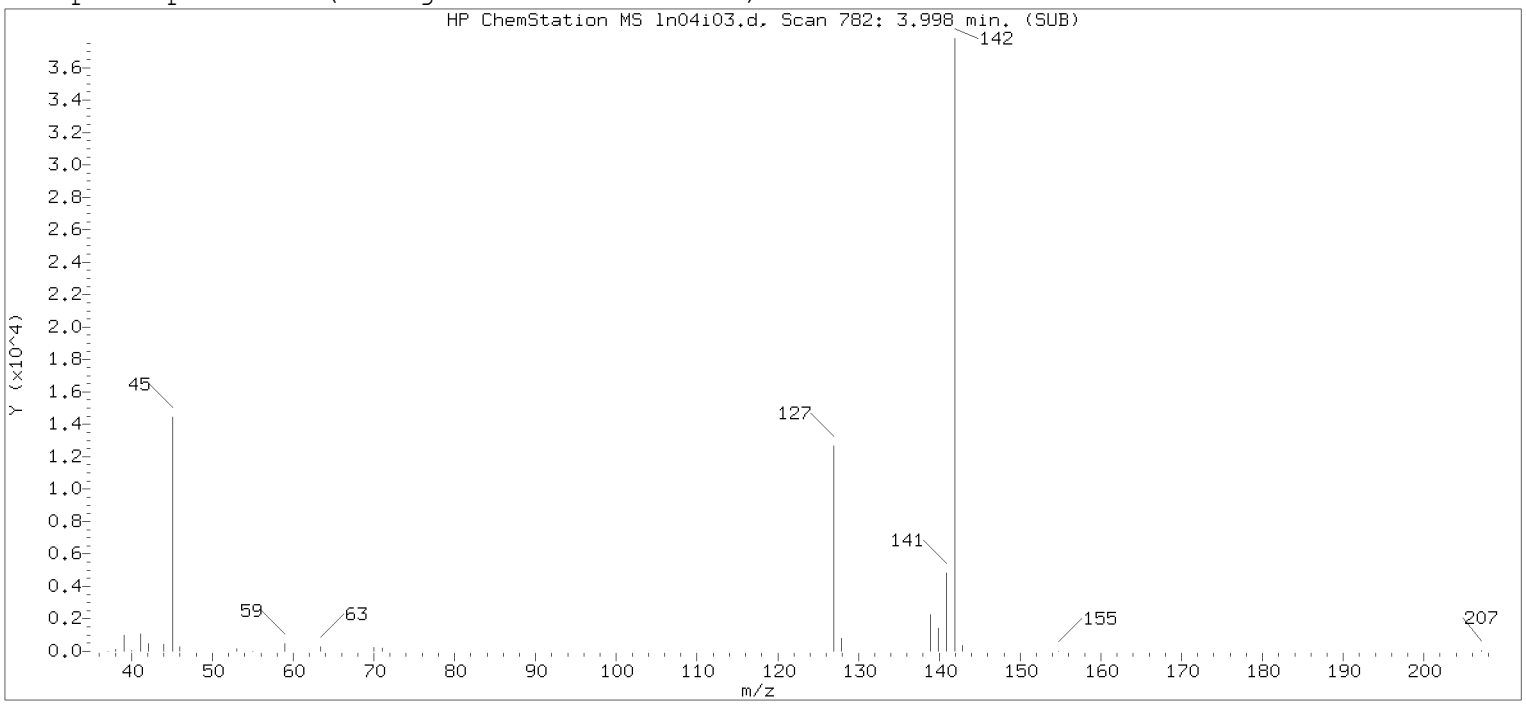
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 782
Retention Time (minutes): 3.998
Quant Ion : 45.00
Area (flag) : 165875M
On-Column Amount (ng) : 254.2825
Integration start scan : 745 Integration stop scan: 828
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

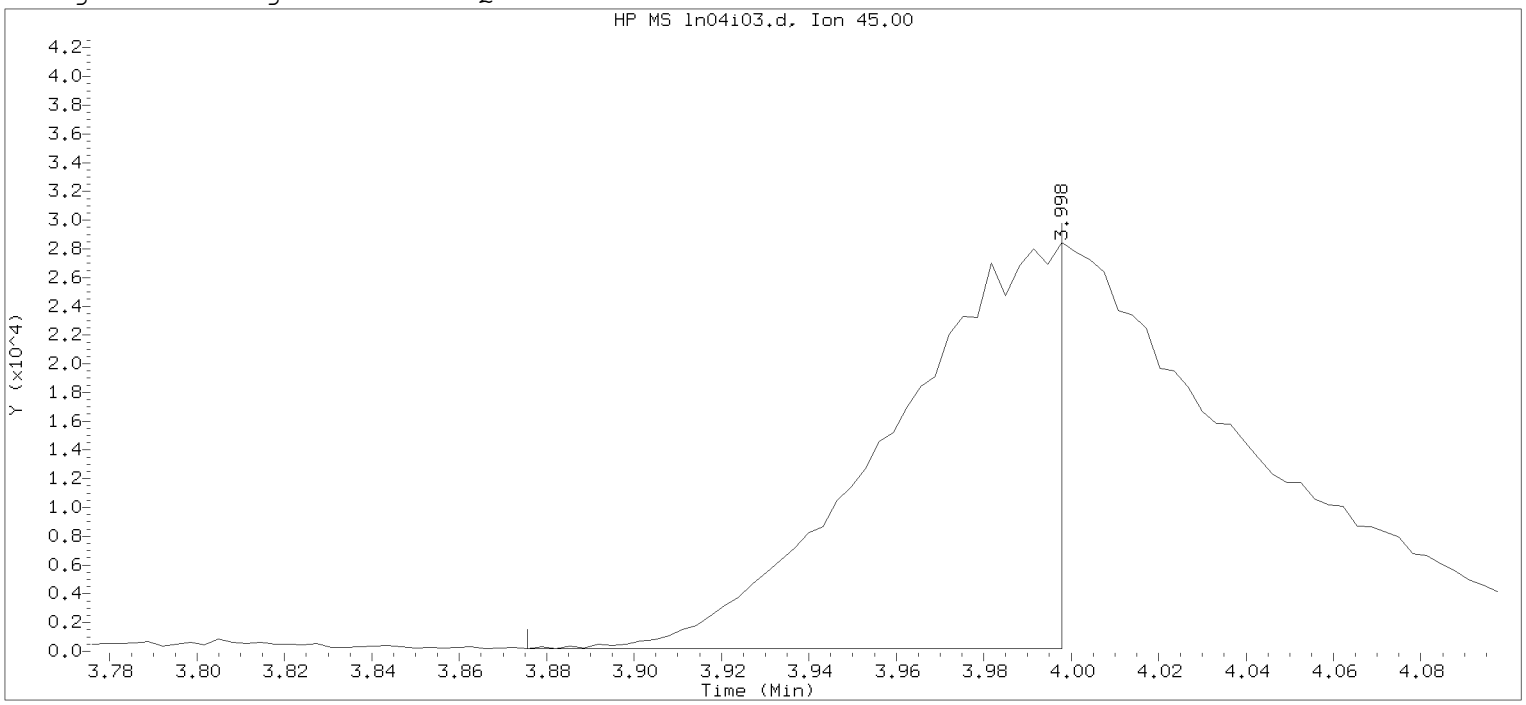
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

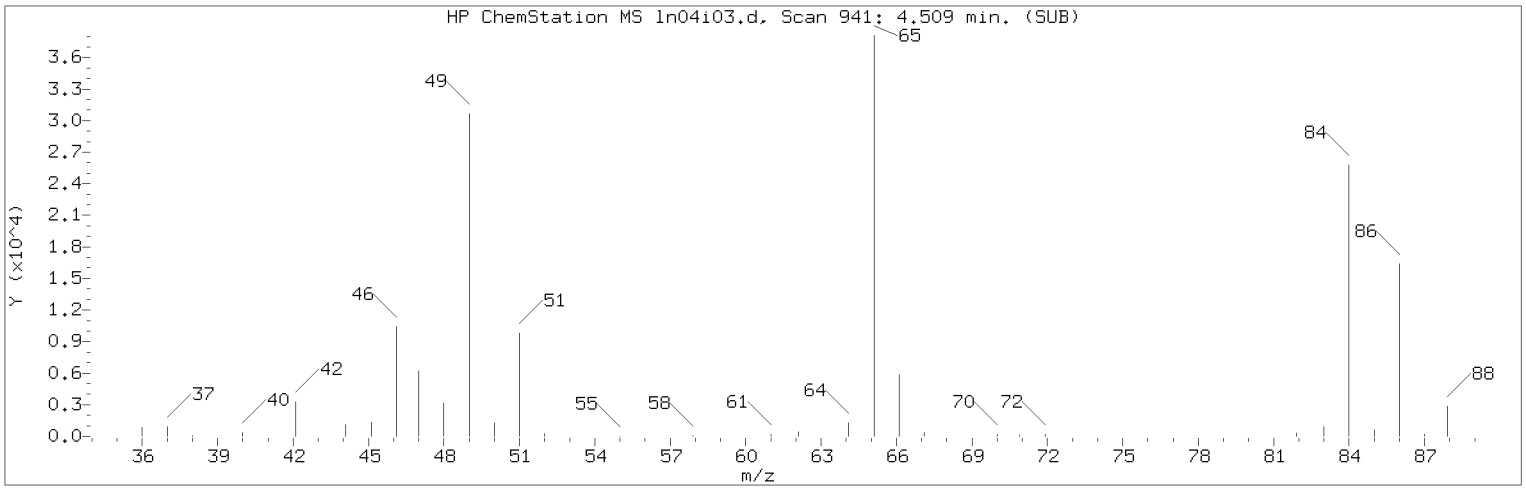
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

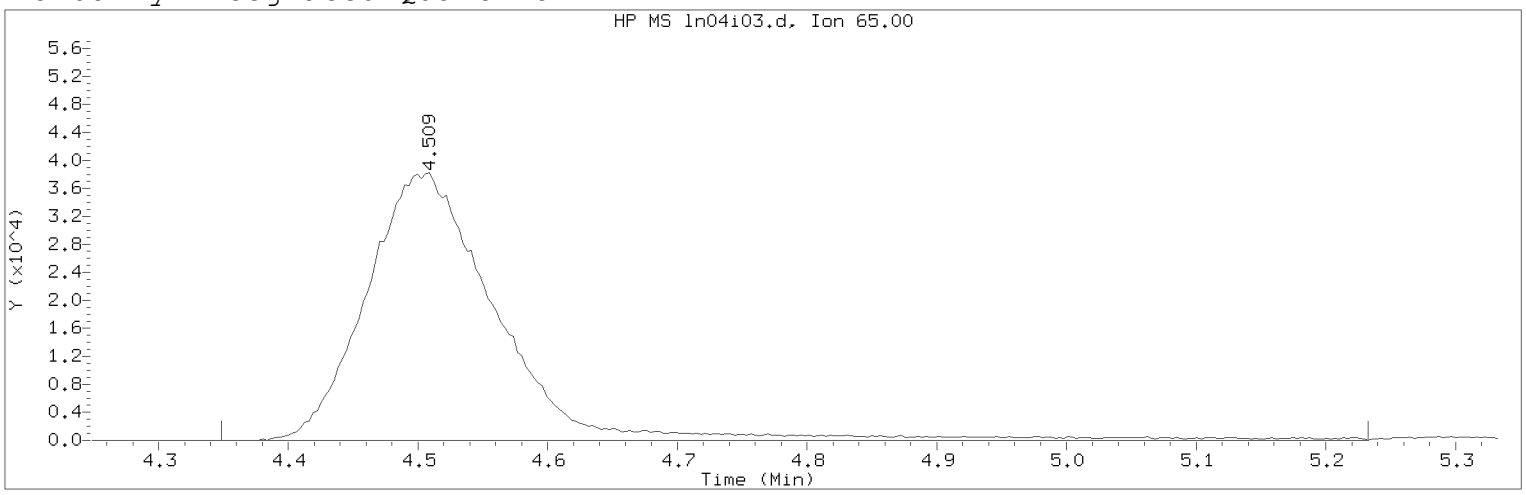
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 782
Retention Time (minutes): 3.998
Quant Ion : 45.00
Area : 74713
On-column Amount (ng) : 135.4026
Integration start scan : 743 Integration stop scan: 781
Y at integration start : 167 Y at integration end: 167

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

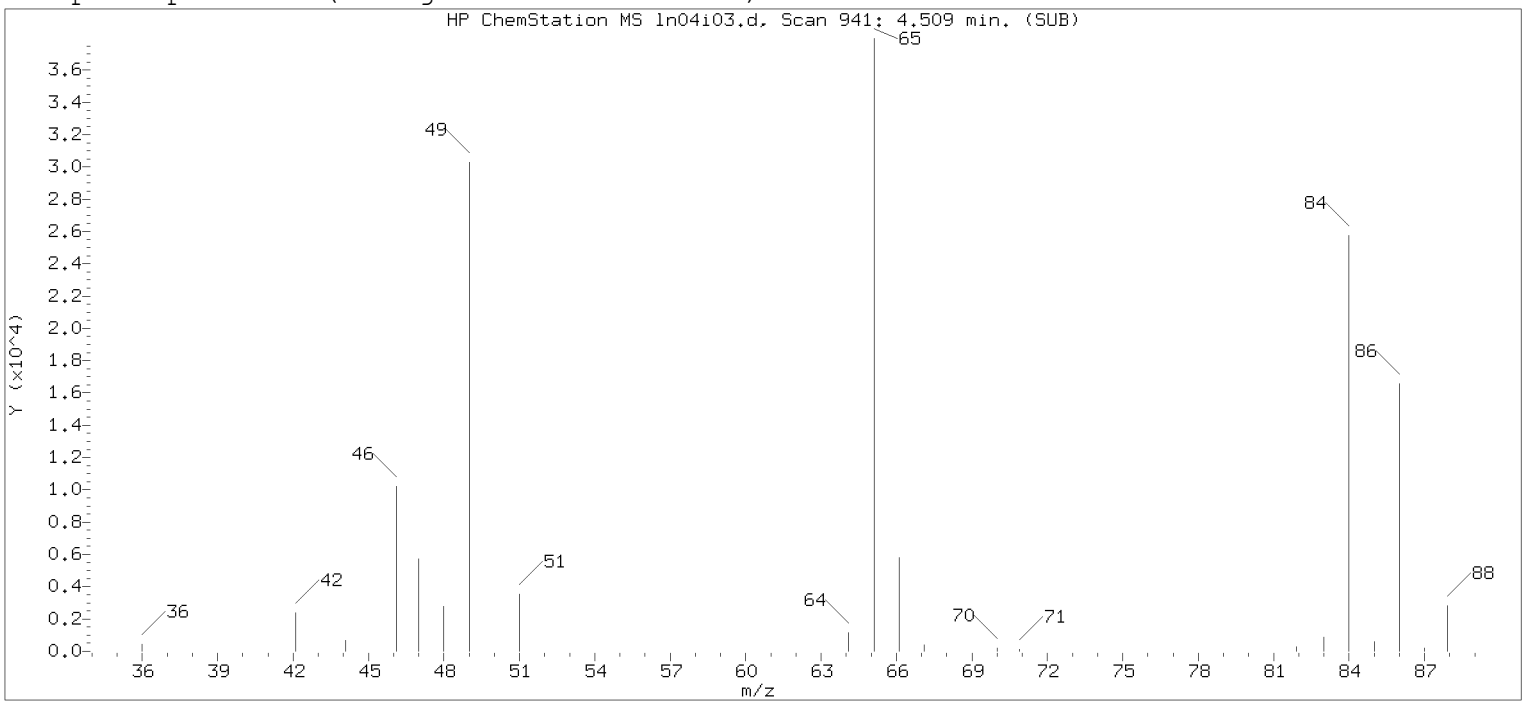
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 269779M
On-Column Amount (ng) : 250.0000
Integration start scan : 890 Integration stop scan: 1165
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

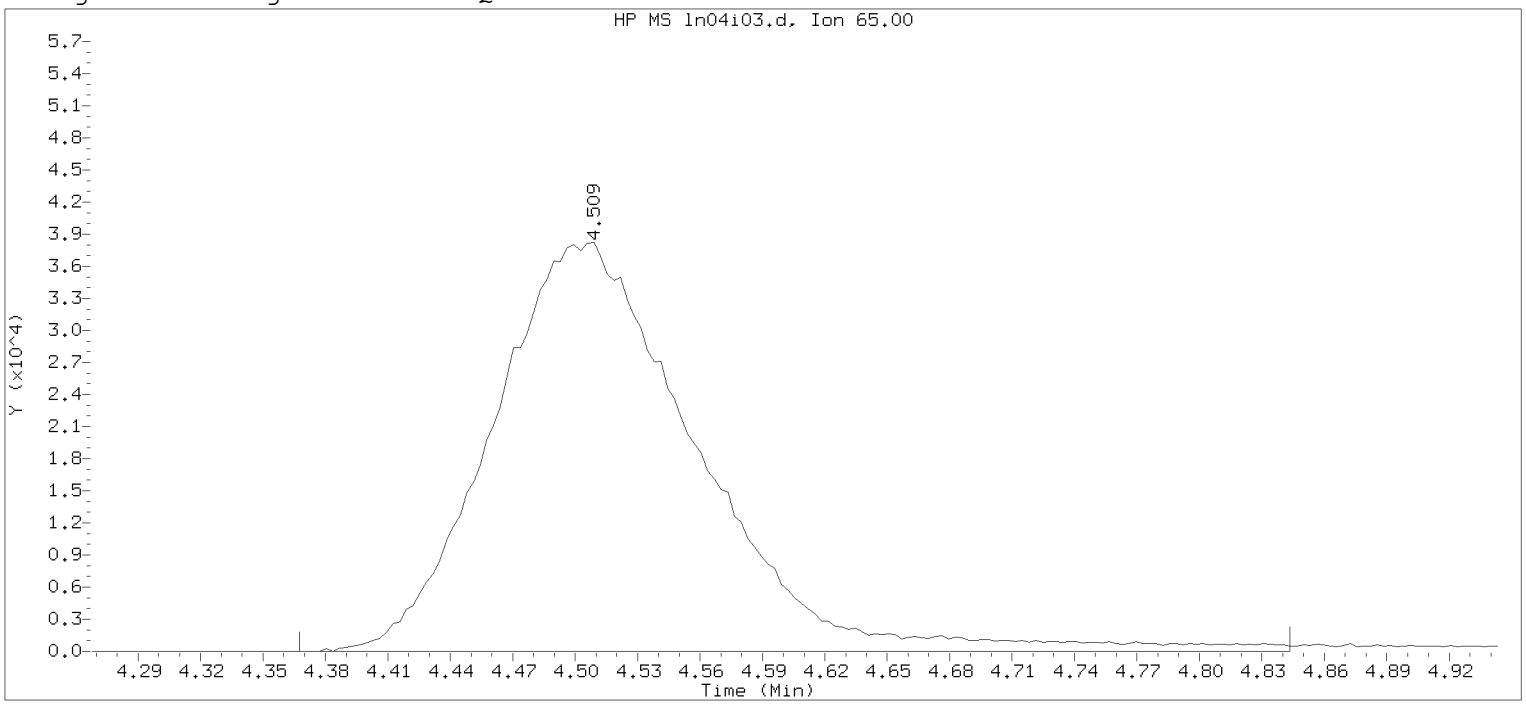
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

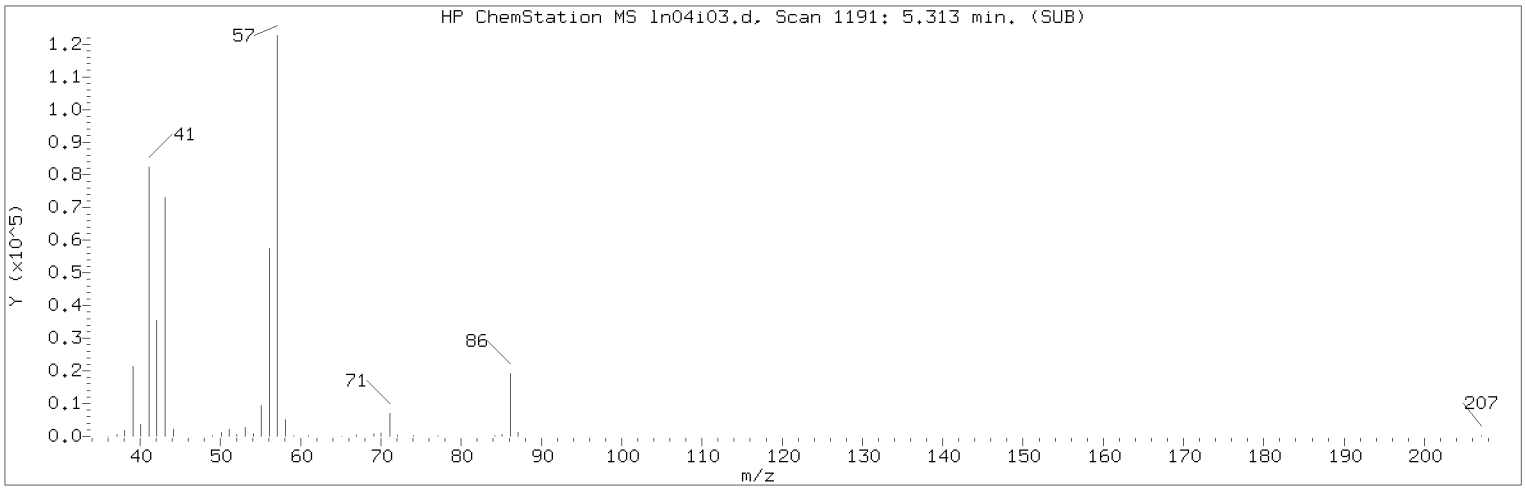
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

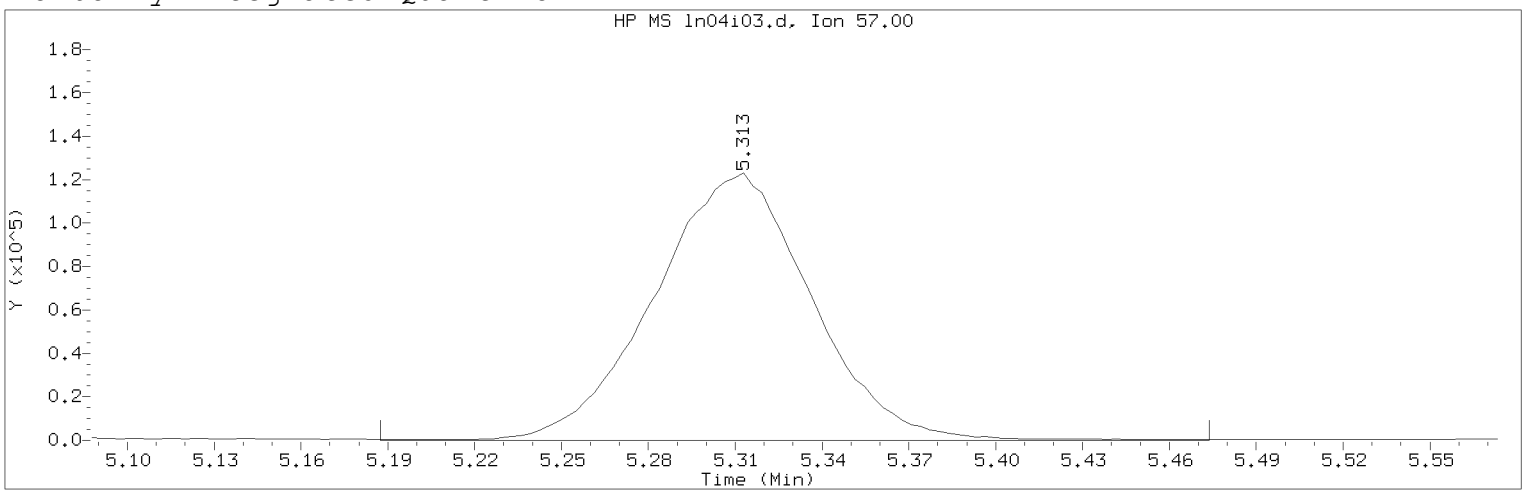
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 261144
On-column Amount (ng) : 250.0000
Integration start scan : 896 Integration stop scan: 1044
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

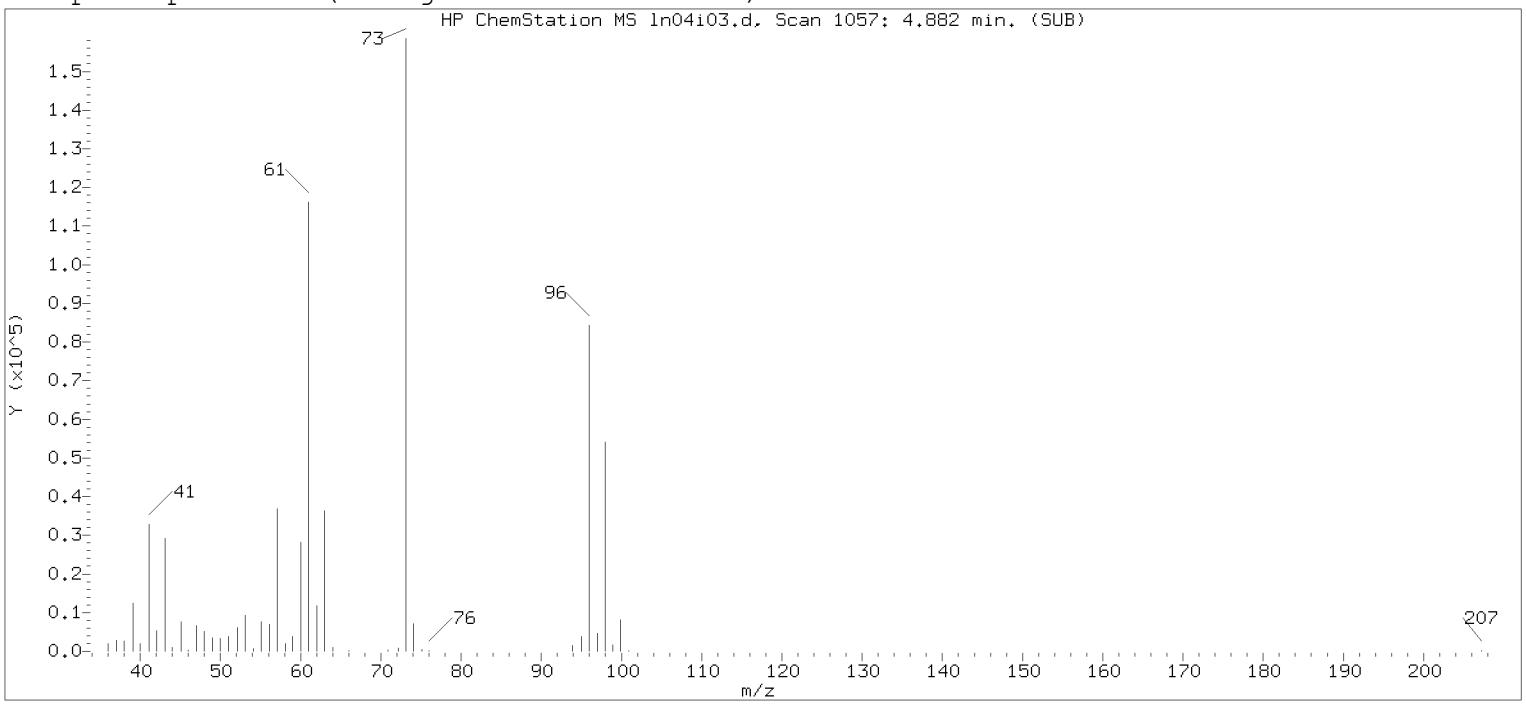
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1191
Retention Time (minutes): 5.313
Quant Ion : 57.00
Area (flag) : 463732M
On-Column Amount (ng) : 52.3639
Integration start scan : 1151 Integration stop scan: 1240
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

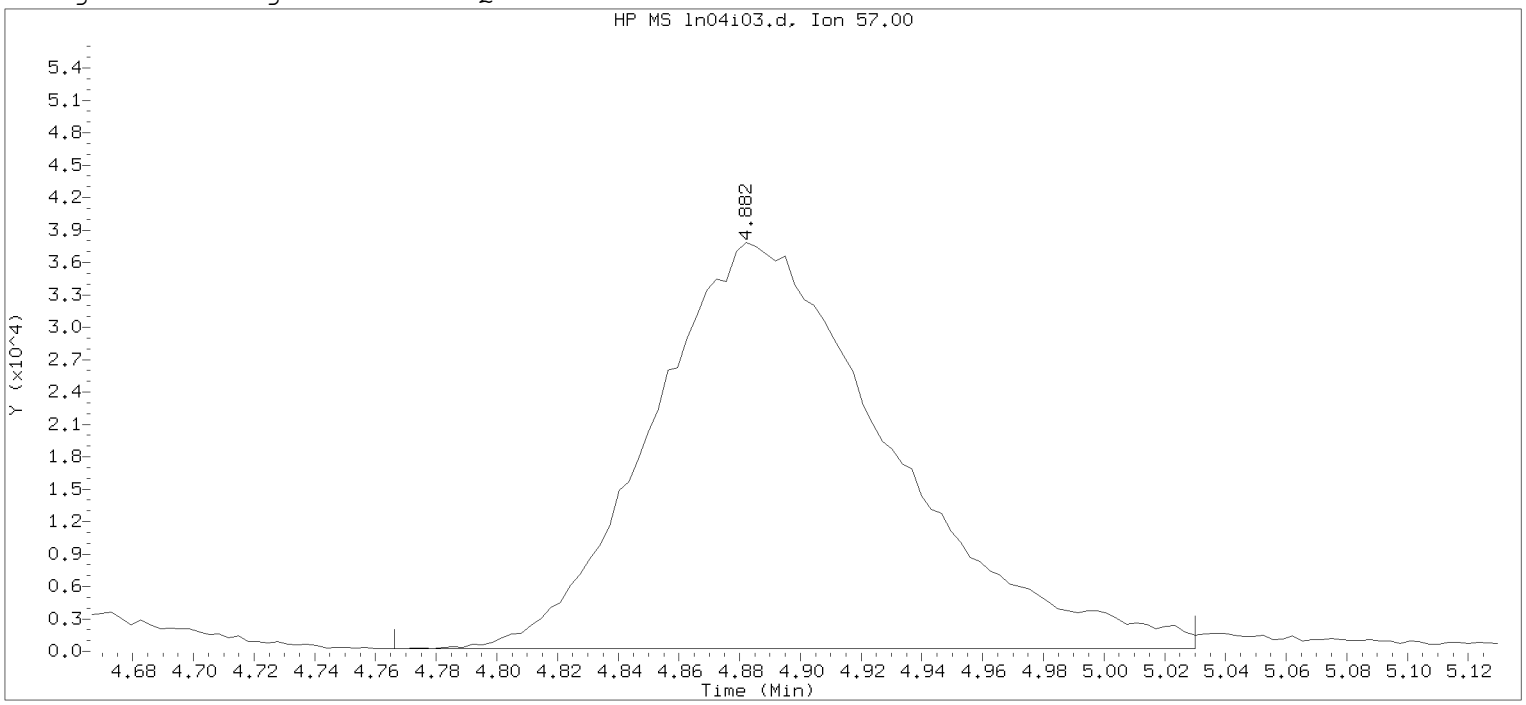
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

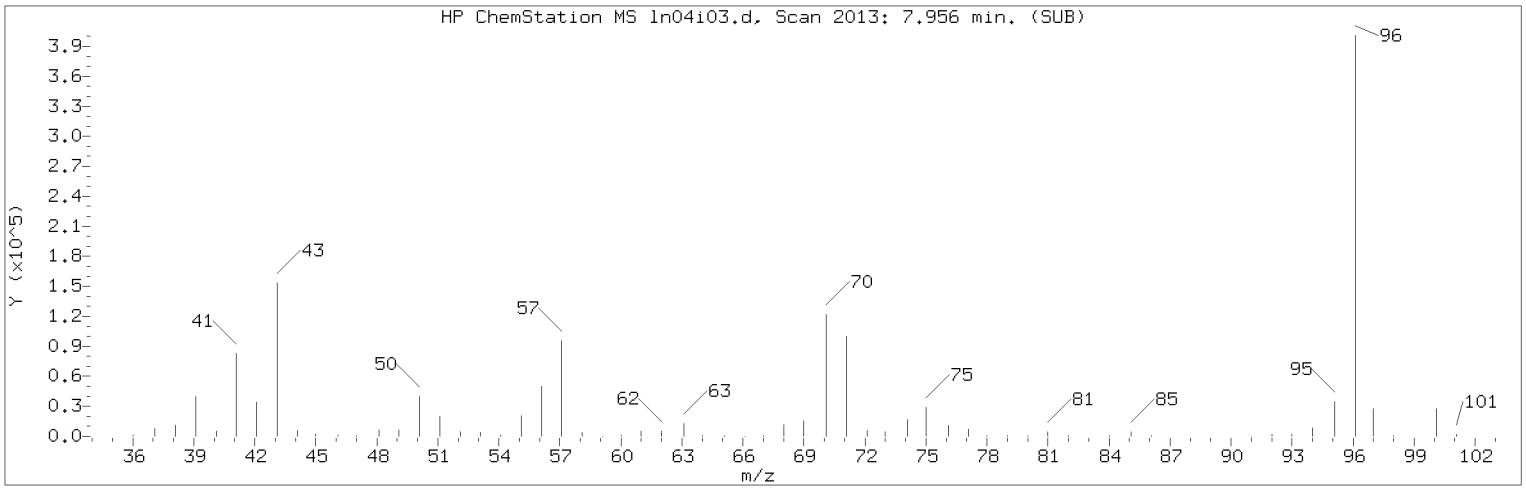
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

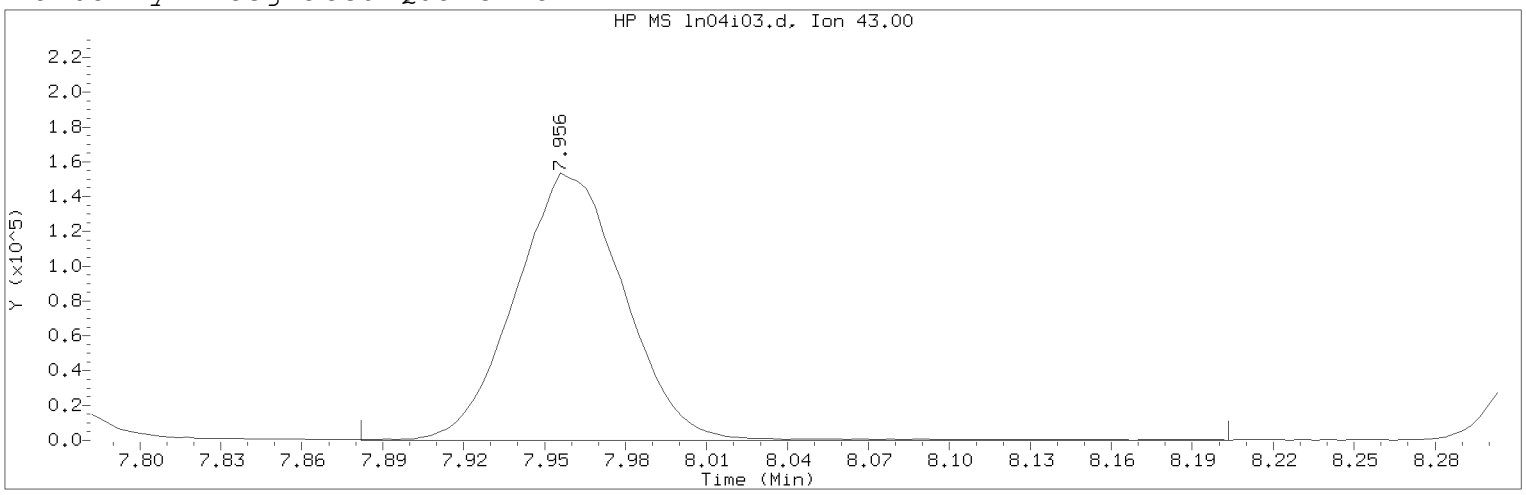
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1057		
Retention Time (minutes)	: 4.882		
Quant Ion	: 57.00		
Area	: 205522		
On-column Amount (ng)	: 50.0557		
Integration start scan	: 1020	Integration stop scan:	1102
Y at integration start	: 228	Y at integration end:	228

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

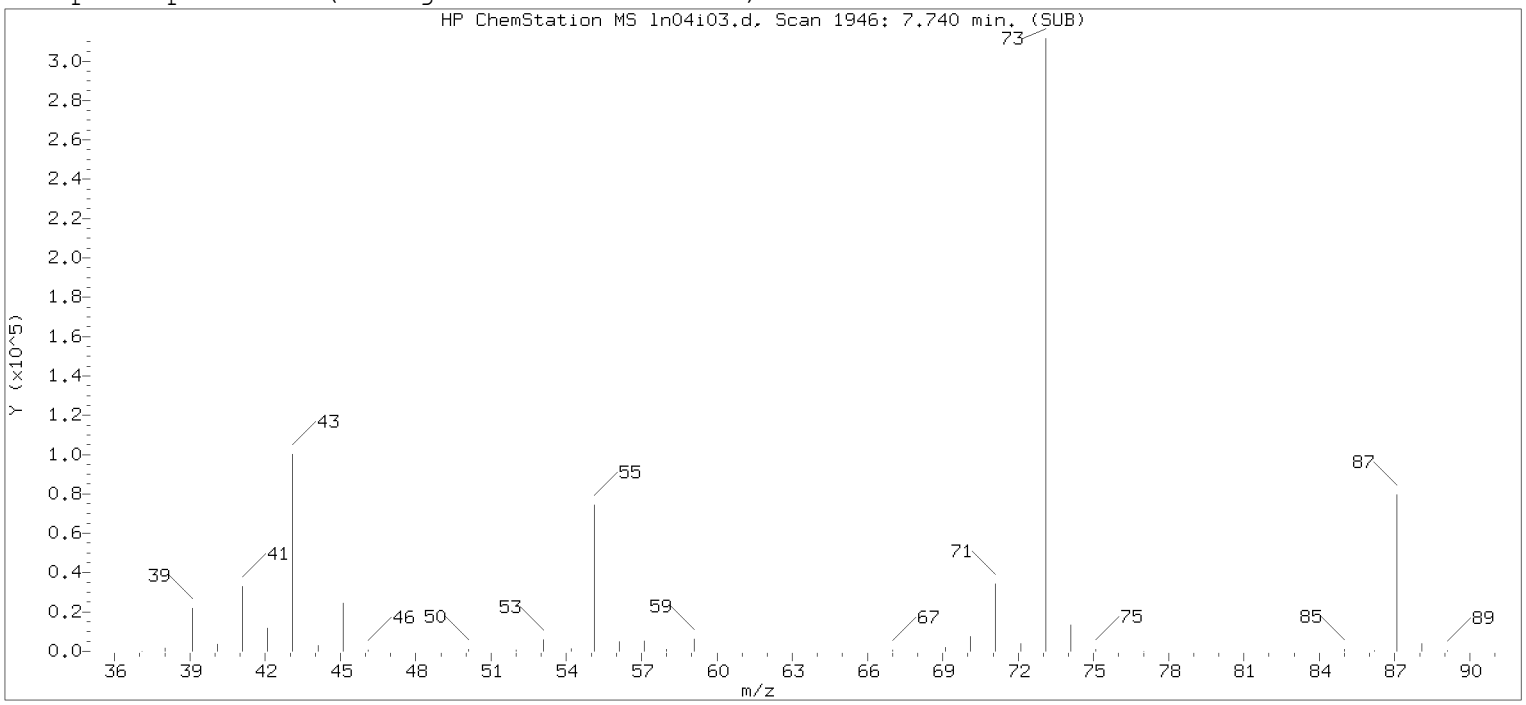
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2013
Retention Time (minutes): 7.956
Quant Ion : 43.00
Area (flag) : 432248MA
On-Column Amount (ng) : 52.2472
Integration start scan : 1989 Integration stop scan: 2089
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

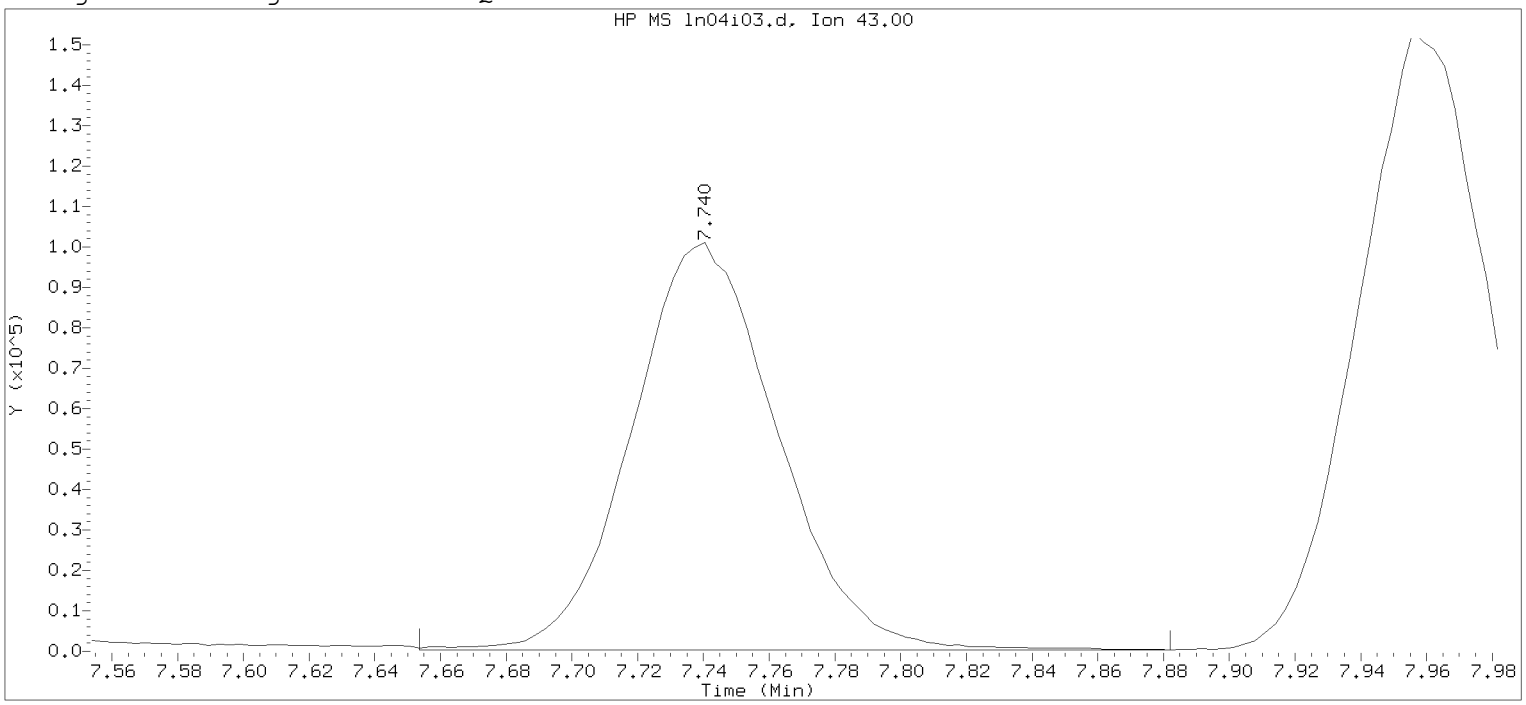
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

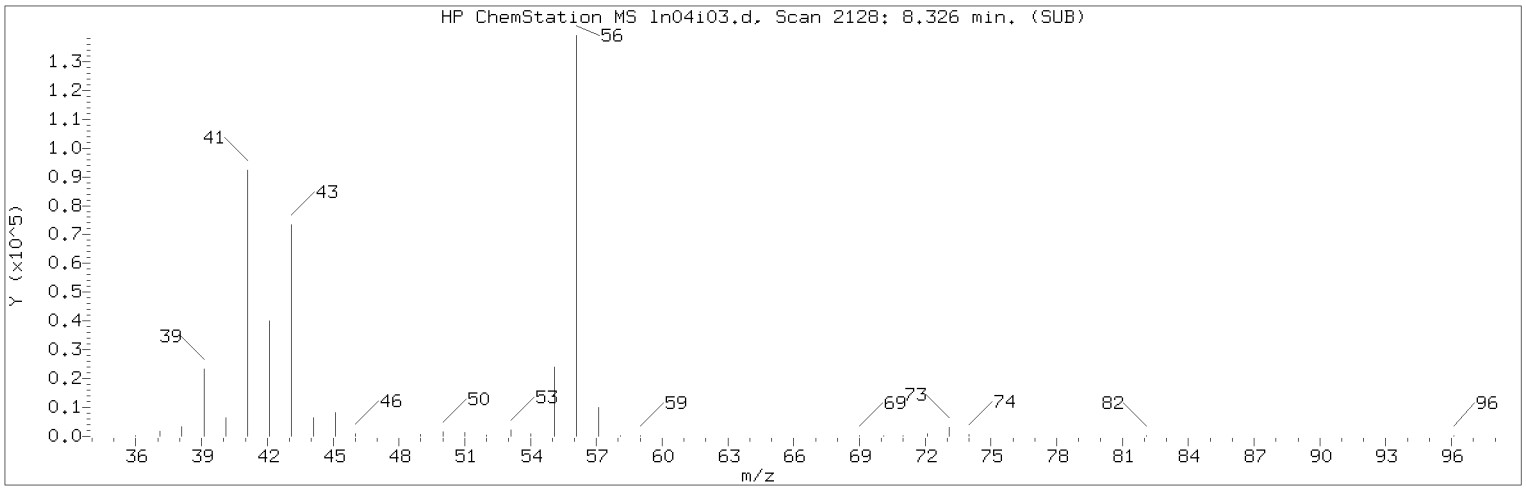
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

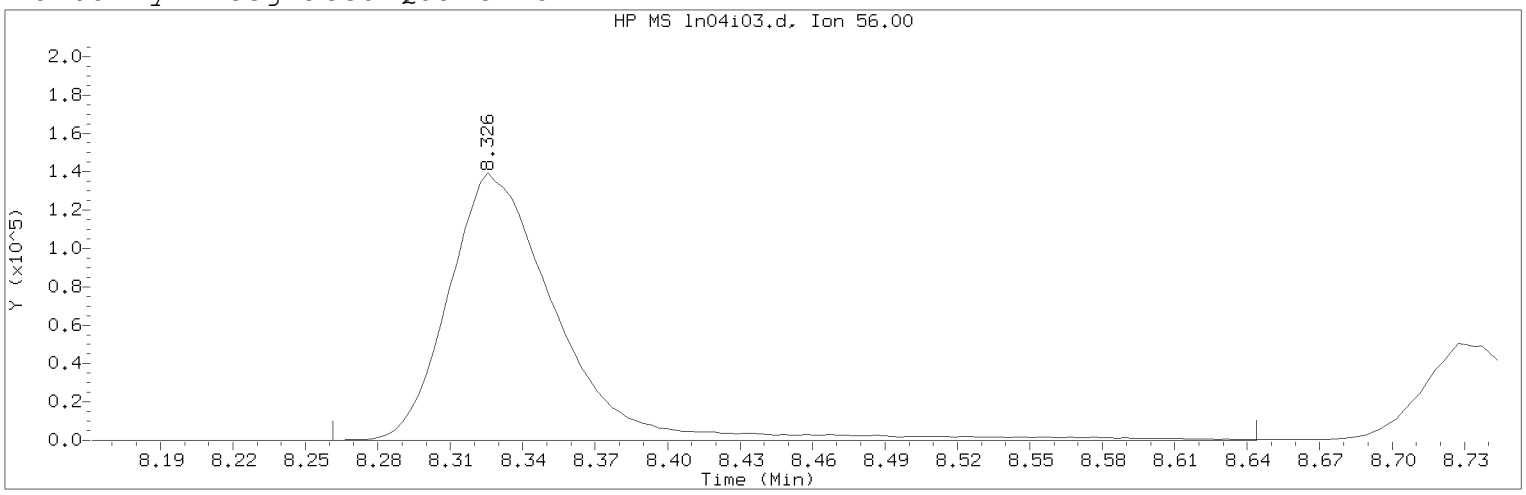
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.740
Quant Ion : 43.00
Area : 311136
On-column Amount (ng) : 51.5793
Integration start scan : 1918 Integration stop scan: 1989
Y at integration start : 288 Y at integration end: 288

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

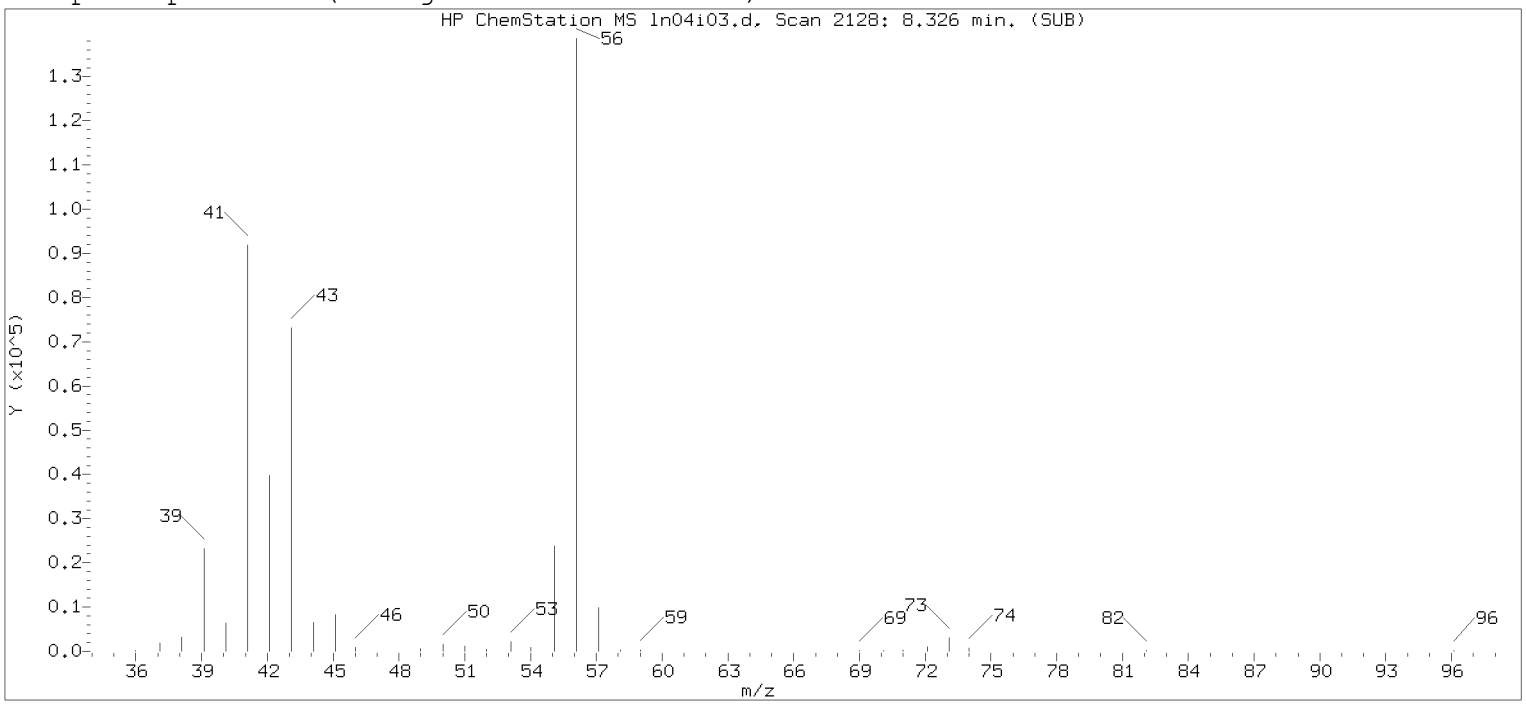
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area (flag) : 438437M
On-Column Amount (ng) : 1332.7496
Integration start scan : 2107 Integration stop scan: 2226
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

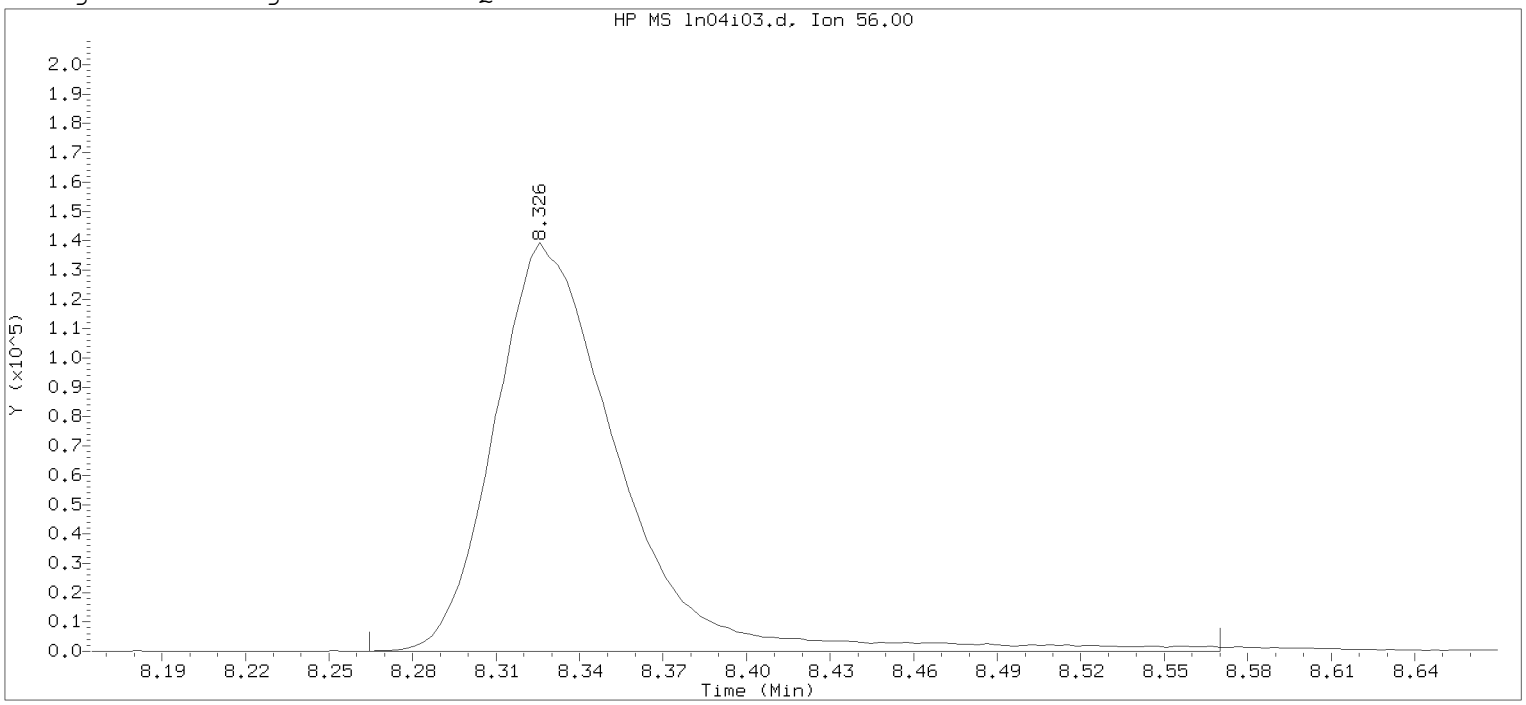
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

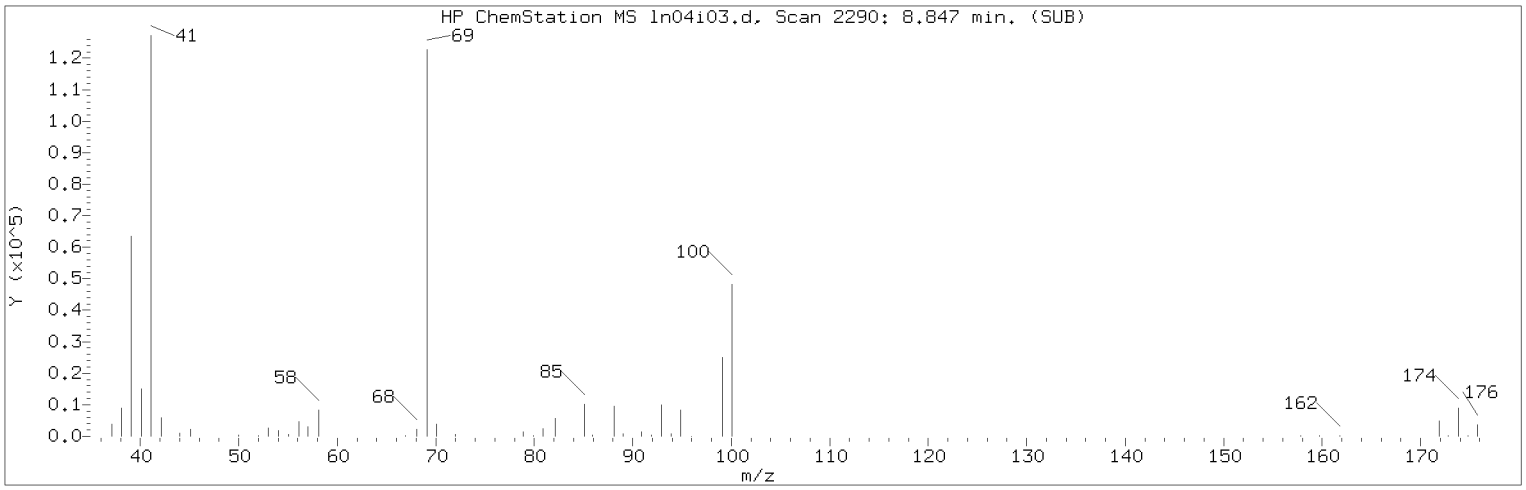
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

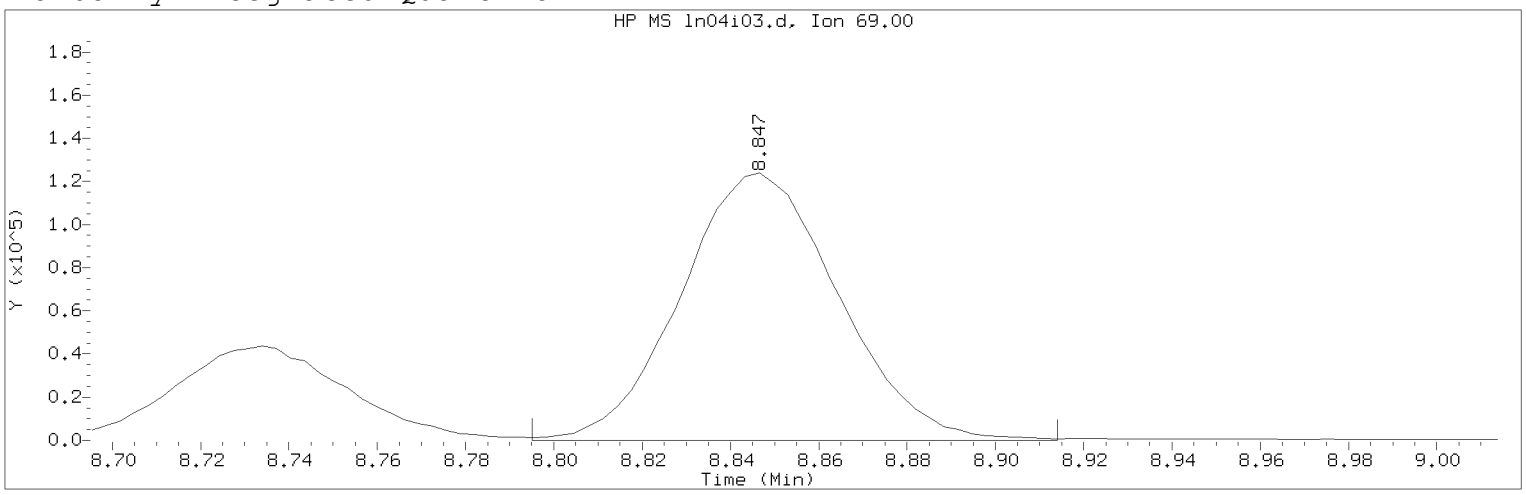
Compound Number	: 69		
Compound Name	: n-Butanol		
Scan Number	: 2128		
Retention Time (minutes)	: 8.326		
Quant Ion	: 56.00		
Area	: 434385		
On-column Amount (ng)	: 1223.8707		
Integration start scan	: 2108	Integration stop scan:	2203
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

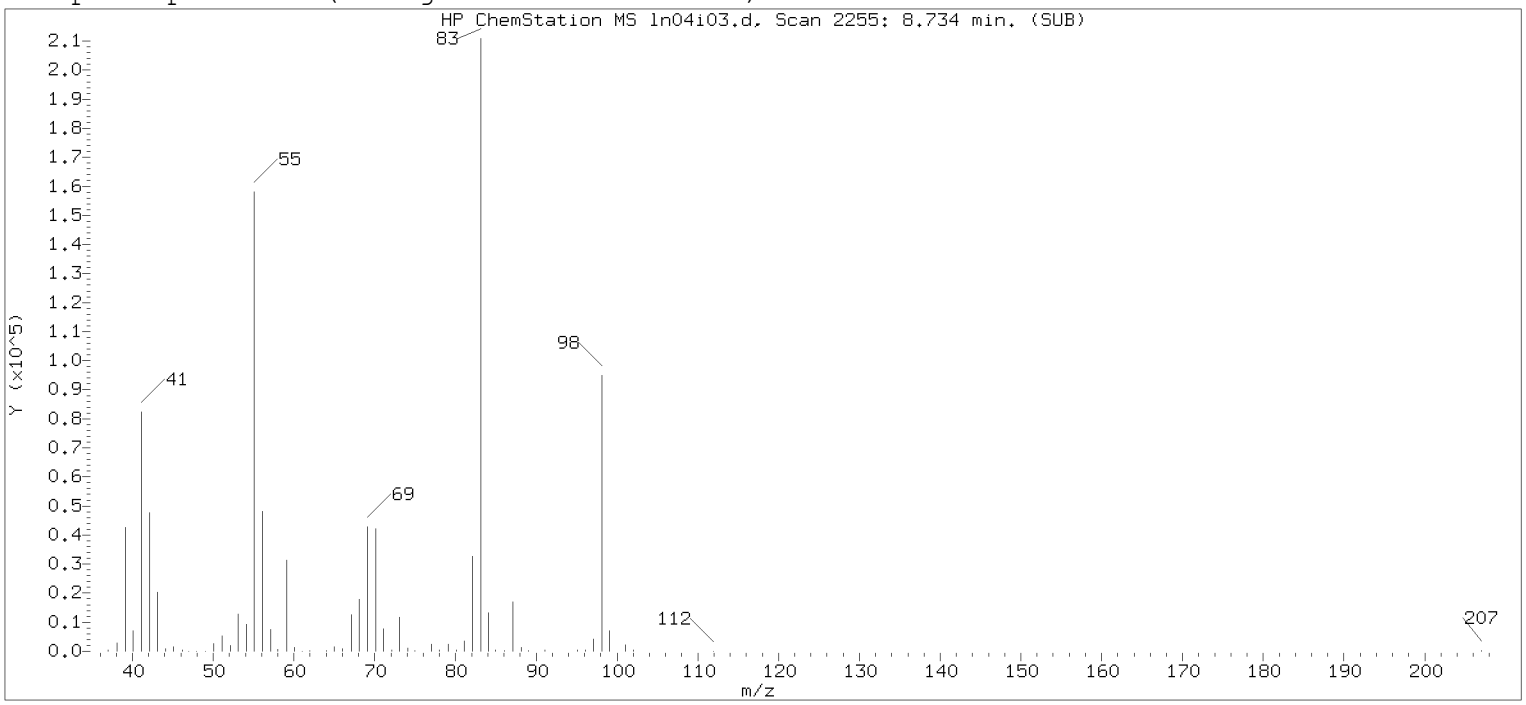
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2290
Retention Time (minutes): 8.847
Quant Ion : 69.00
Area (flag) : 306086A
On-Column Amount (ng) : 52.7952
Integration start scan : 2273 Integration stop scan: 2310
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

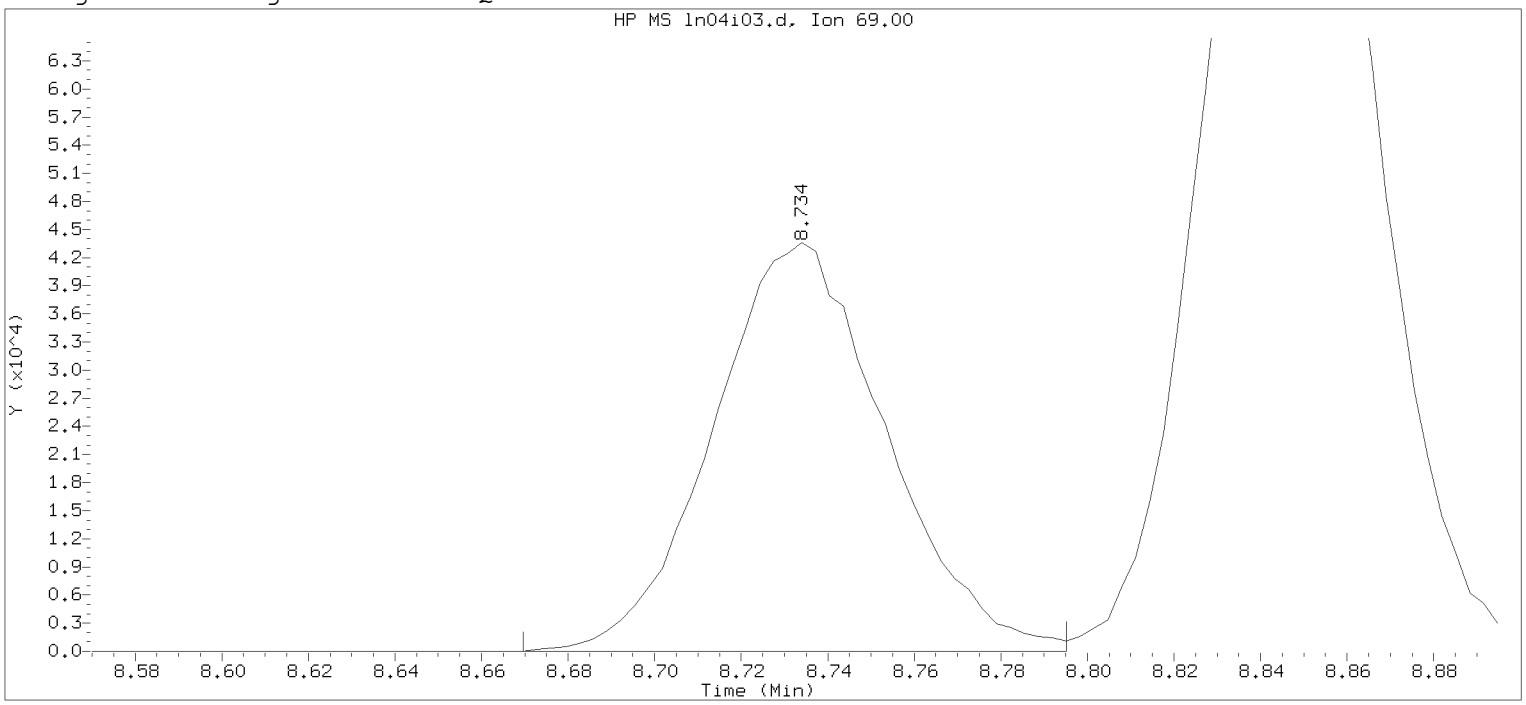
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

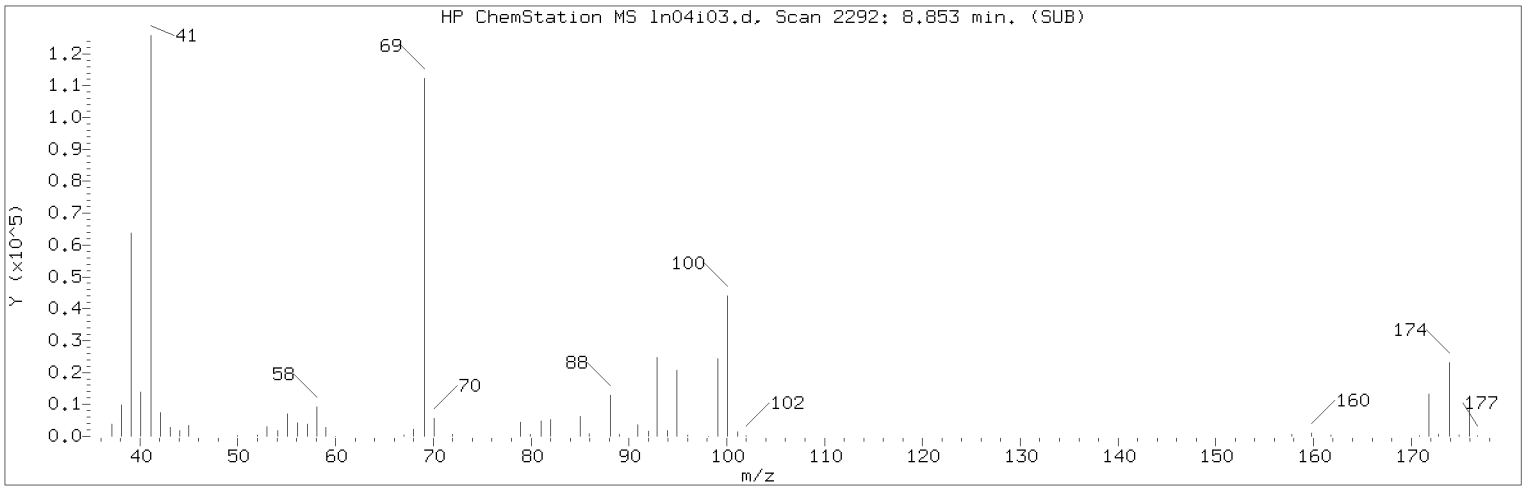
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

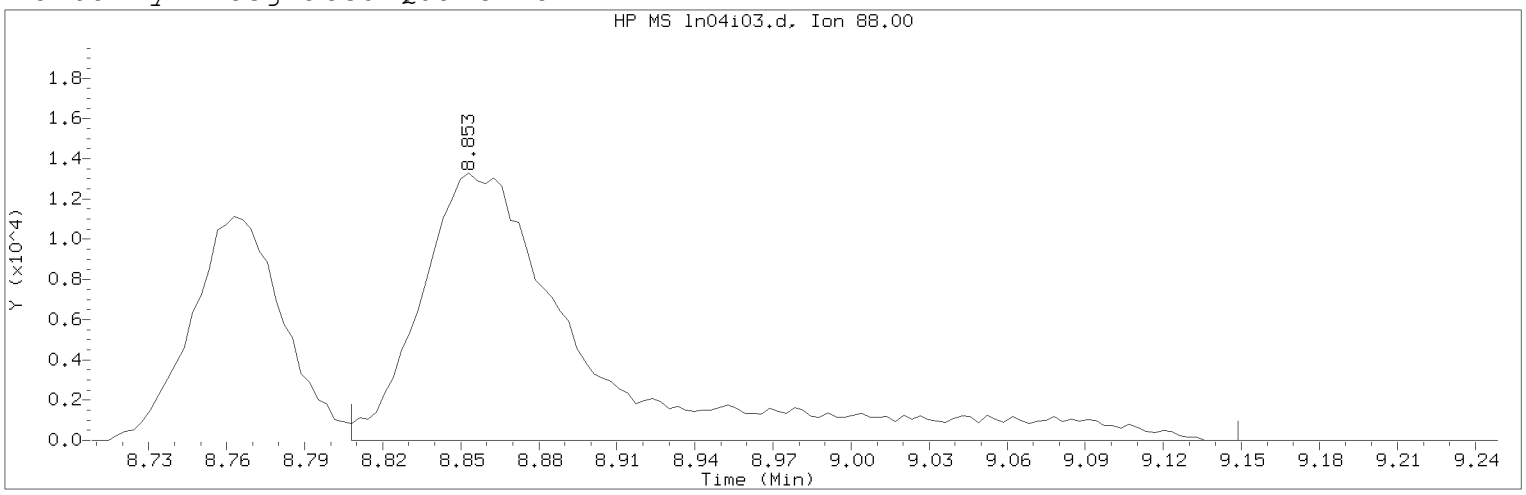
Compound Number	: 76		
Compound Name	: Methyl Methacrylate		
Scan Number	: 2255		
Retention Time (minutes)	: 8.734		
Quant Ion	: 69.00		
Area	: 120511		
On-column Amount (ng)	: 48.6556		
Integration start scan	: 2234	Integration stop scan:	2273
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

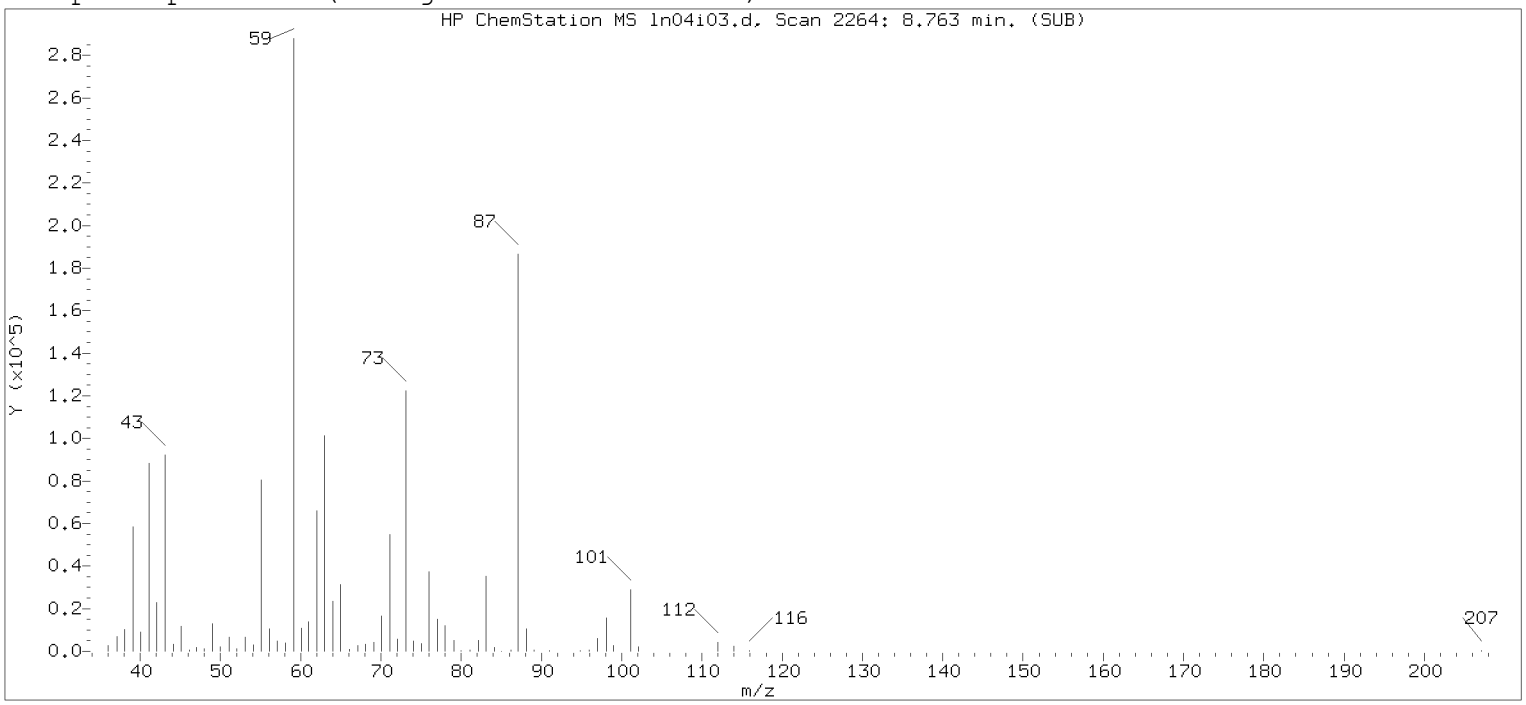
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area (flag) : 59876M
On-Column Amount (ng) : 662.1956
Integration start scan : 2277 Integration stop scan: 2383
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

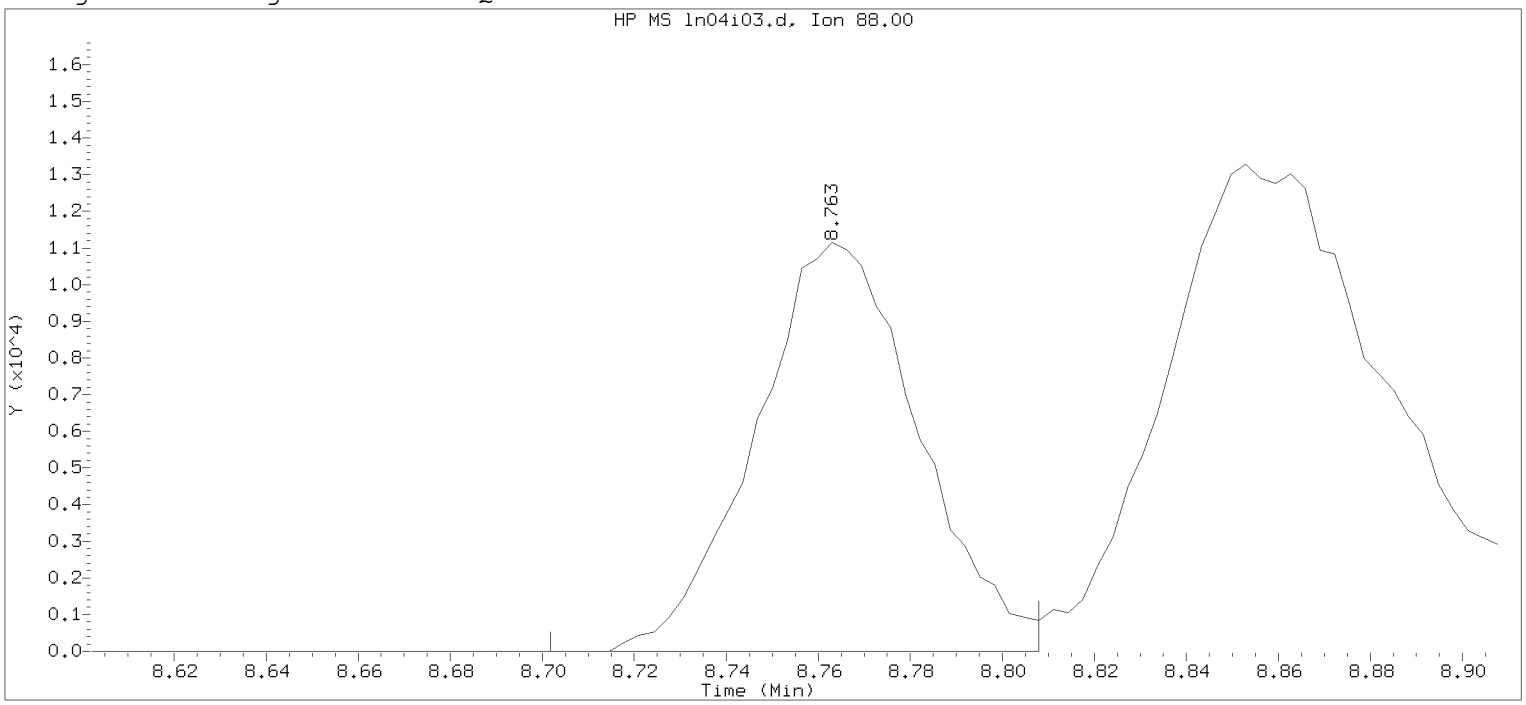
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

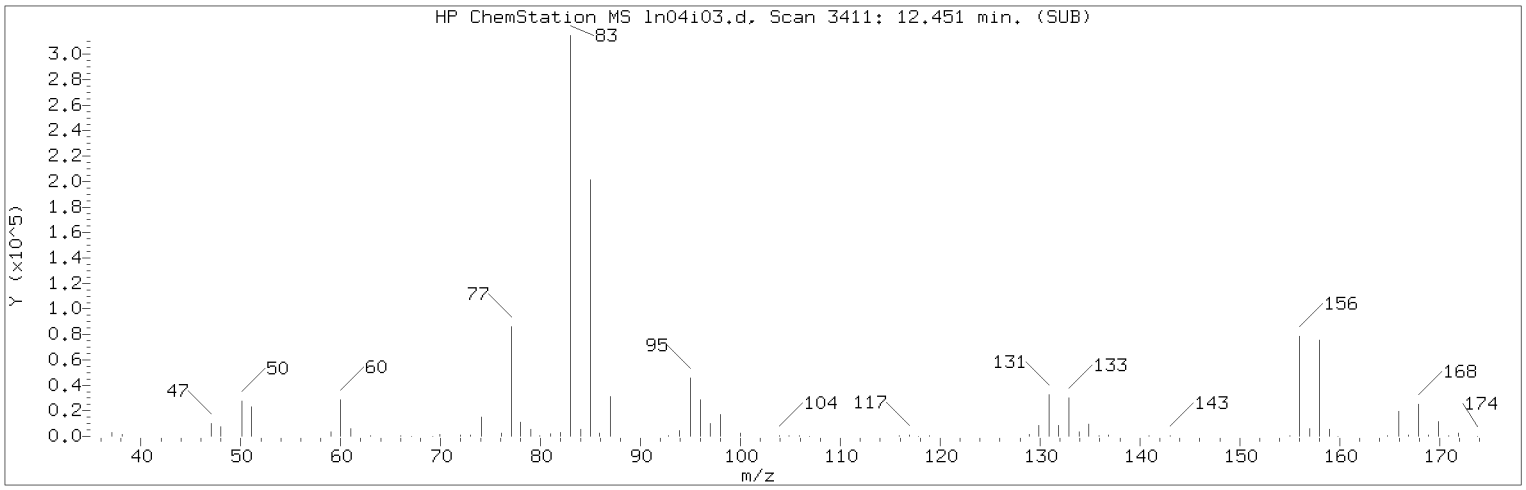
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

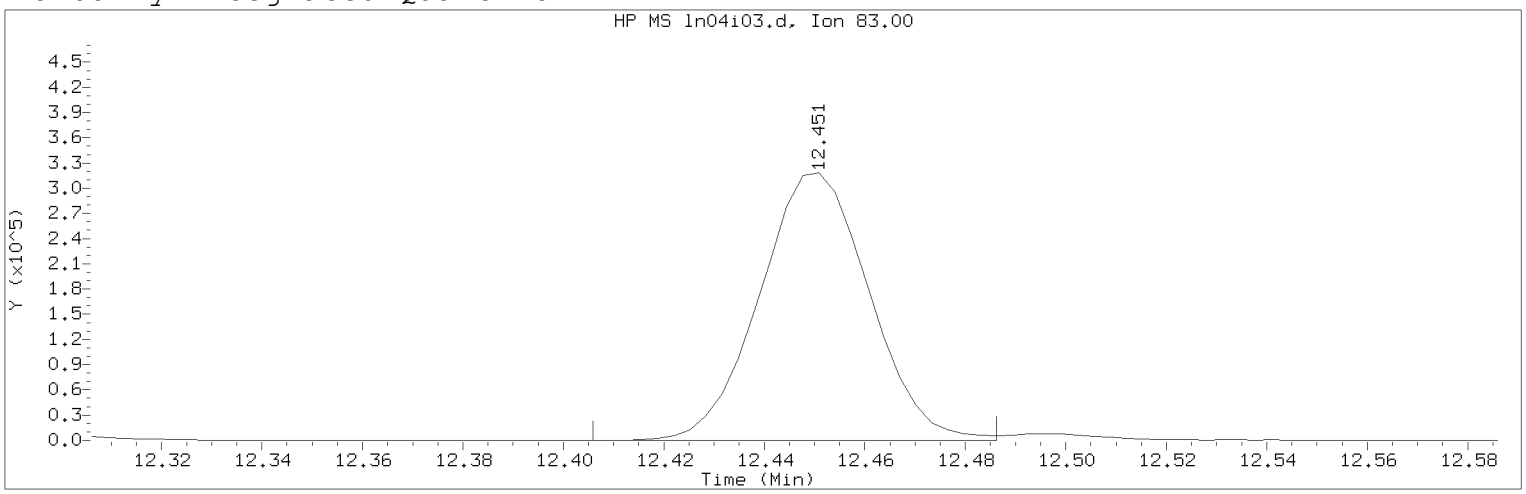
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2264
Retention Time (minutes): 8.763
Quant Ion : 88.00
Area : 27334
On-column Amount (ng) : 447.5530
Integration start scan : 2244 Integration stop scan: 2277
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

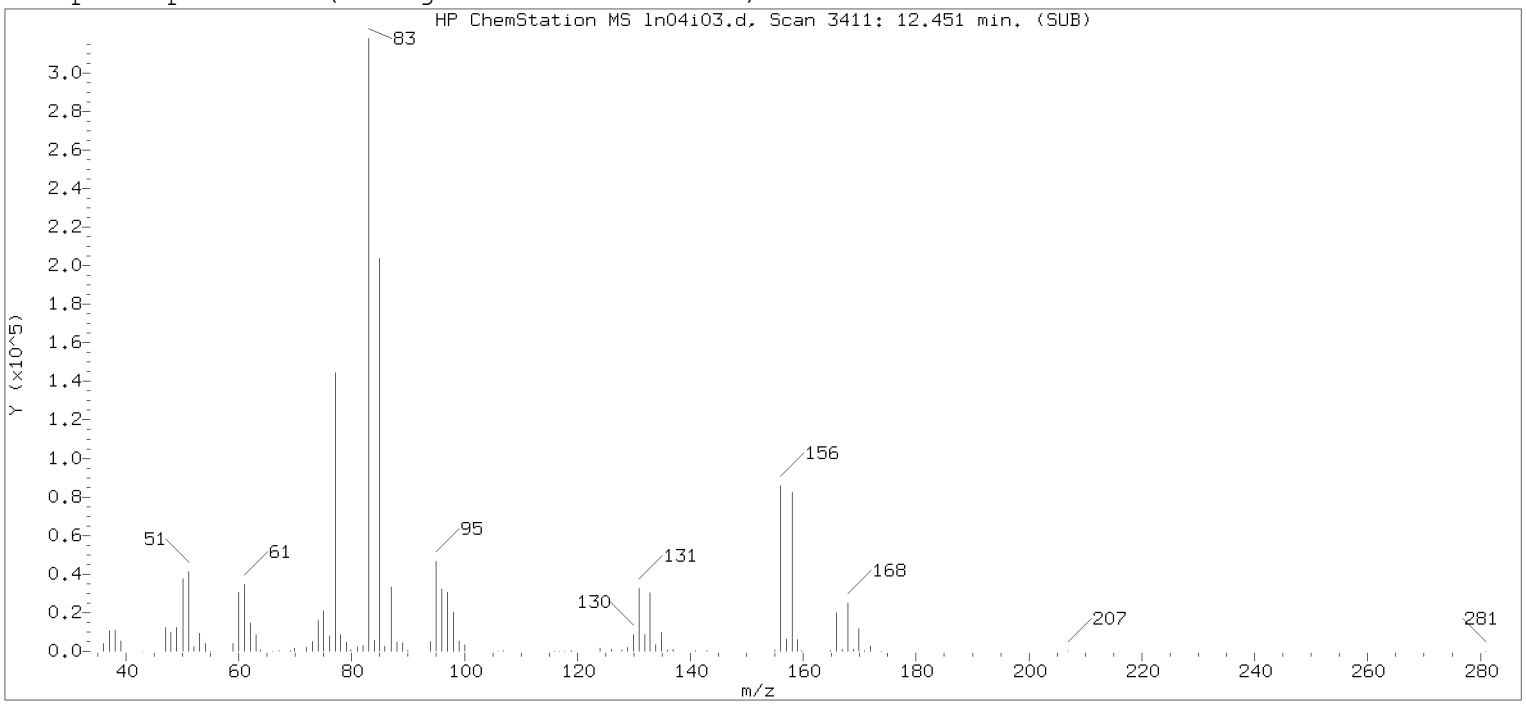
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 482004M
On-Column Amount (ng) : 52.7274
Integration start scan : 3396 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

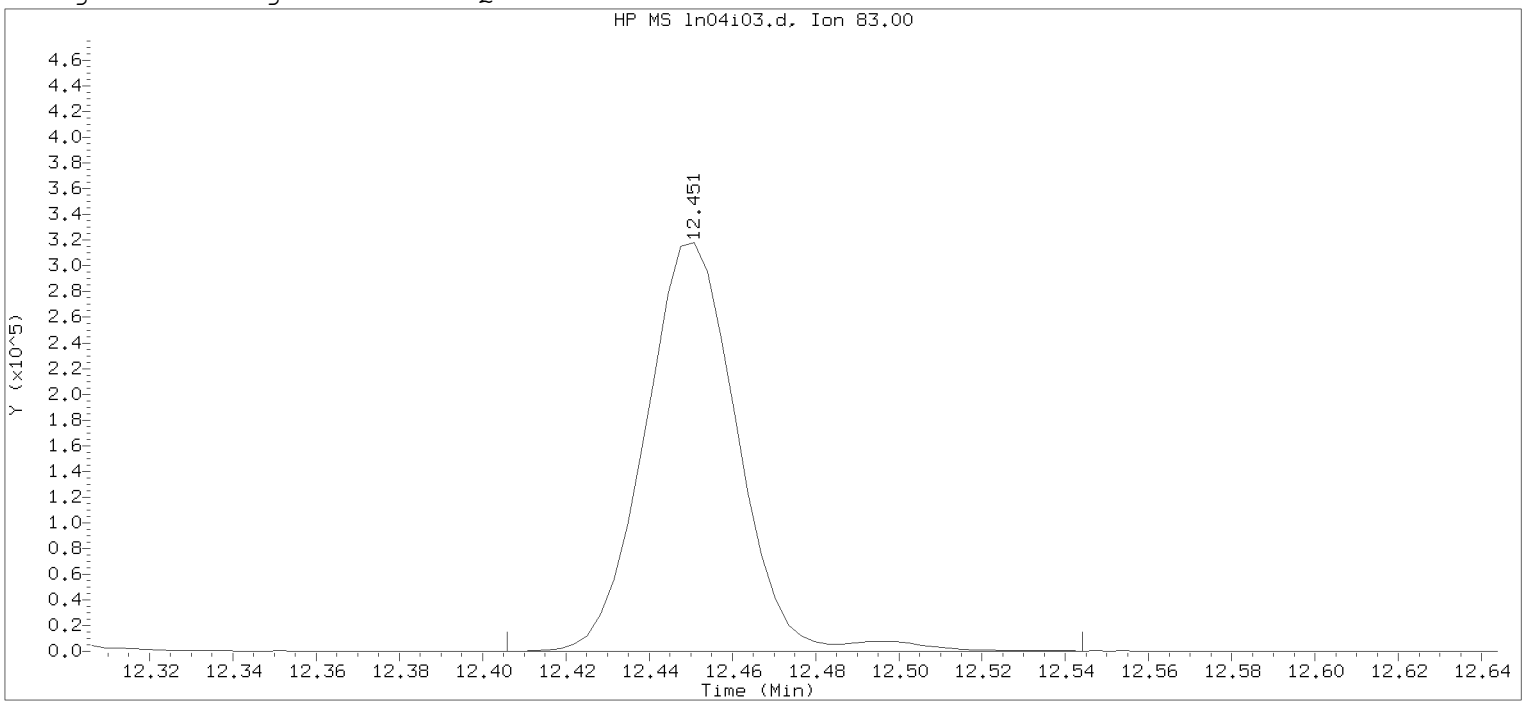
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

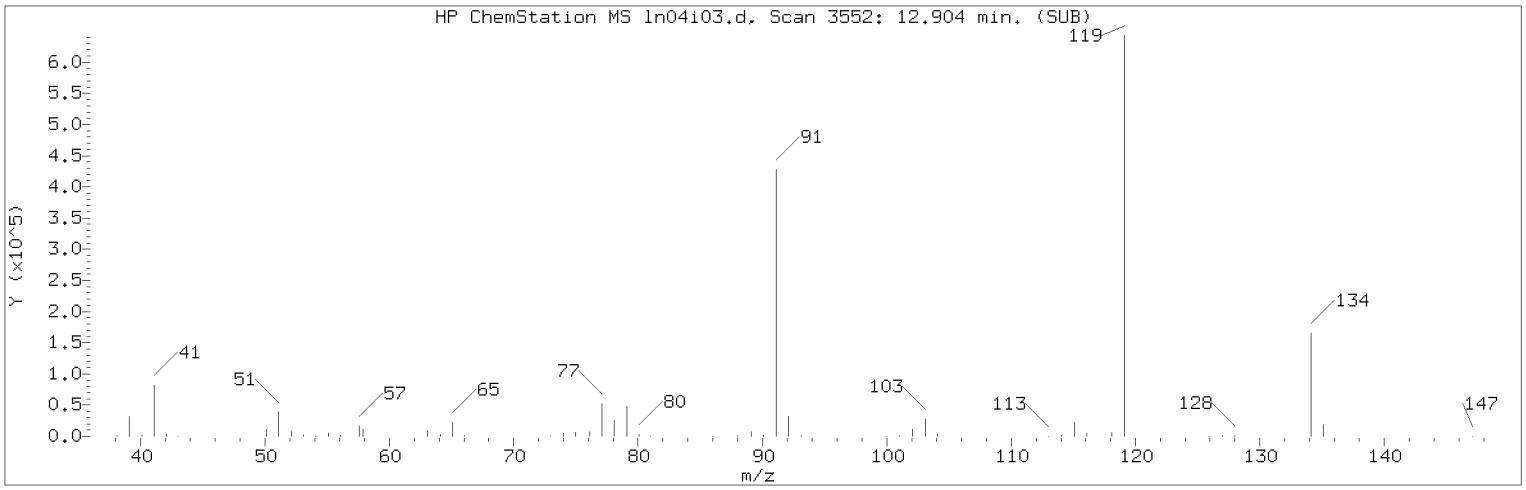
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

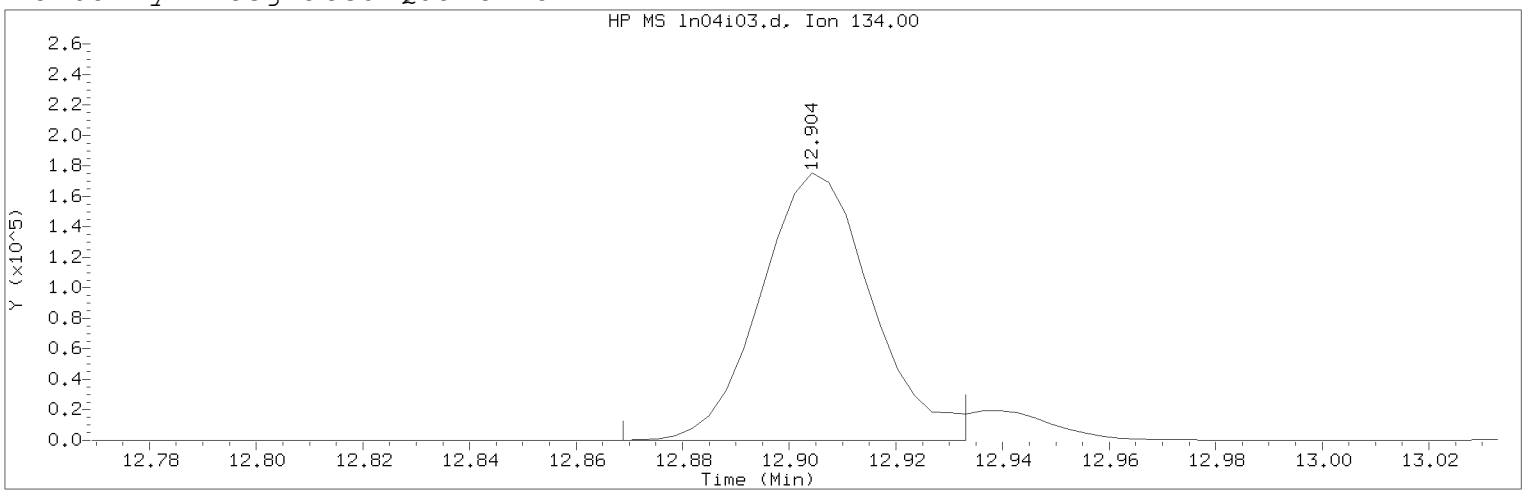
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 491918
On-column Amount (ng) : 50.7154
Integration start scan : 3396 Integration stop scan: 3439
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

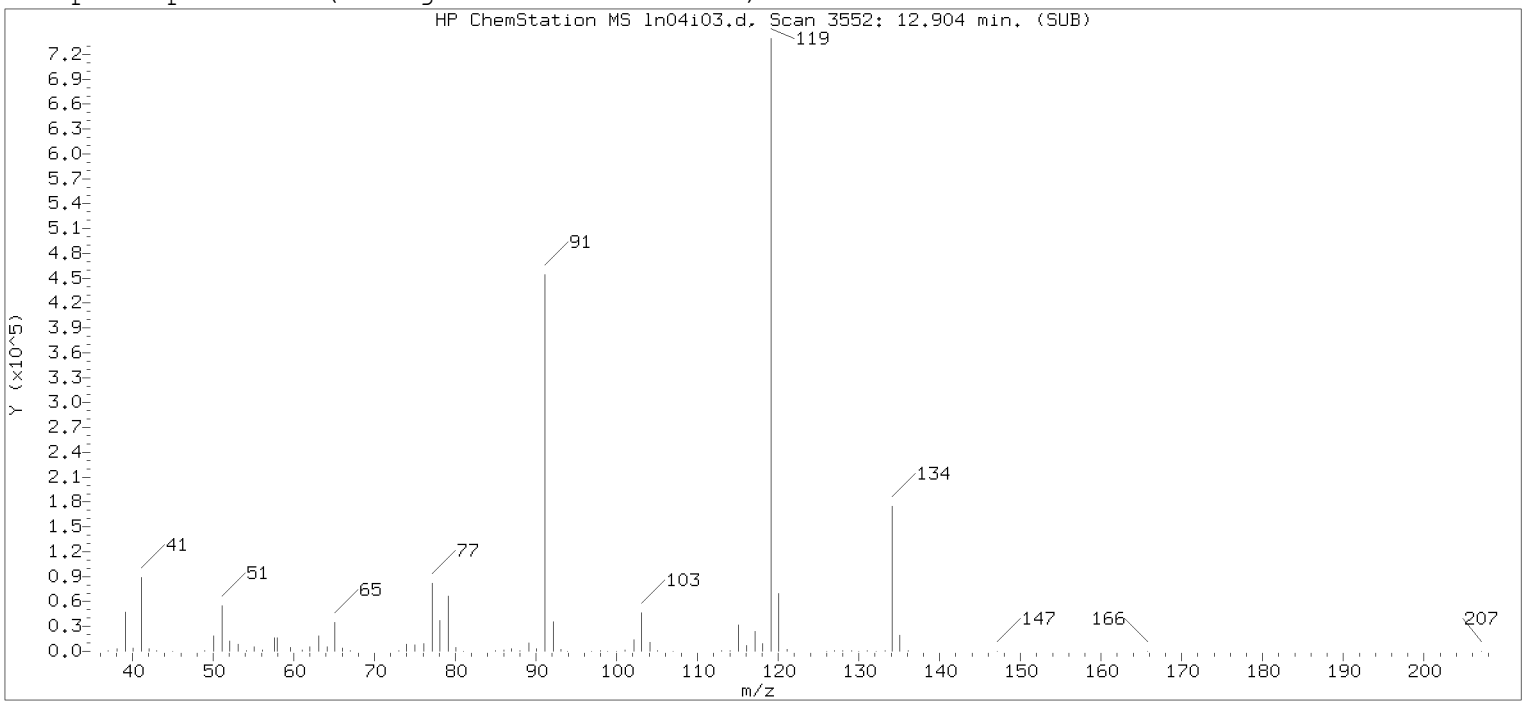
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 253906M
On-Column Amount (ng) : 53.1652
Integration start scan : 3540 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

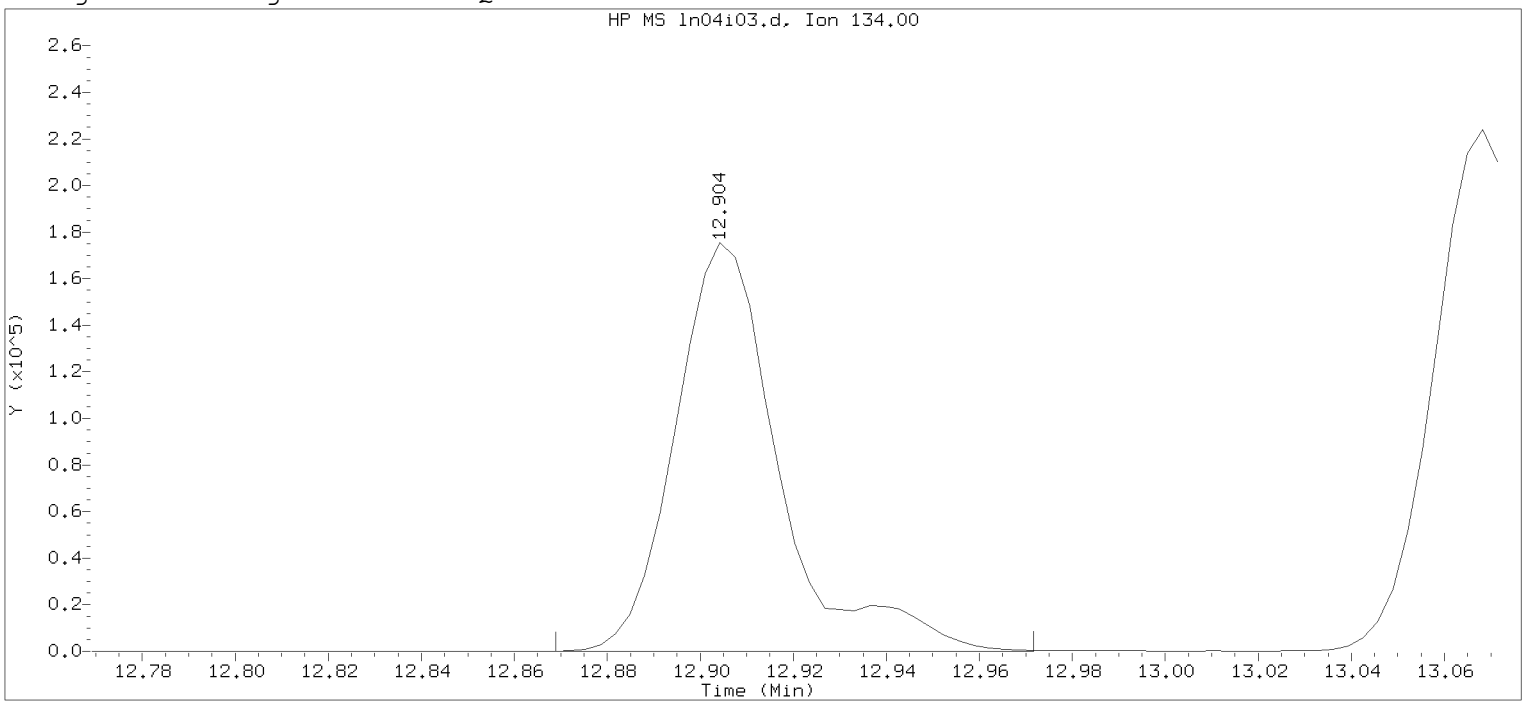
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



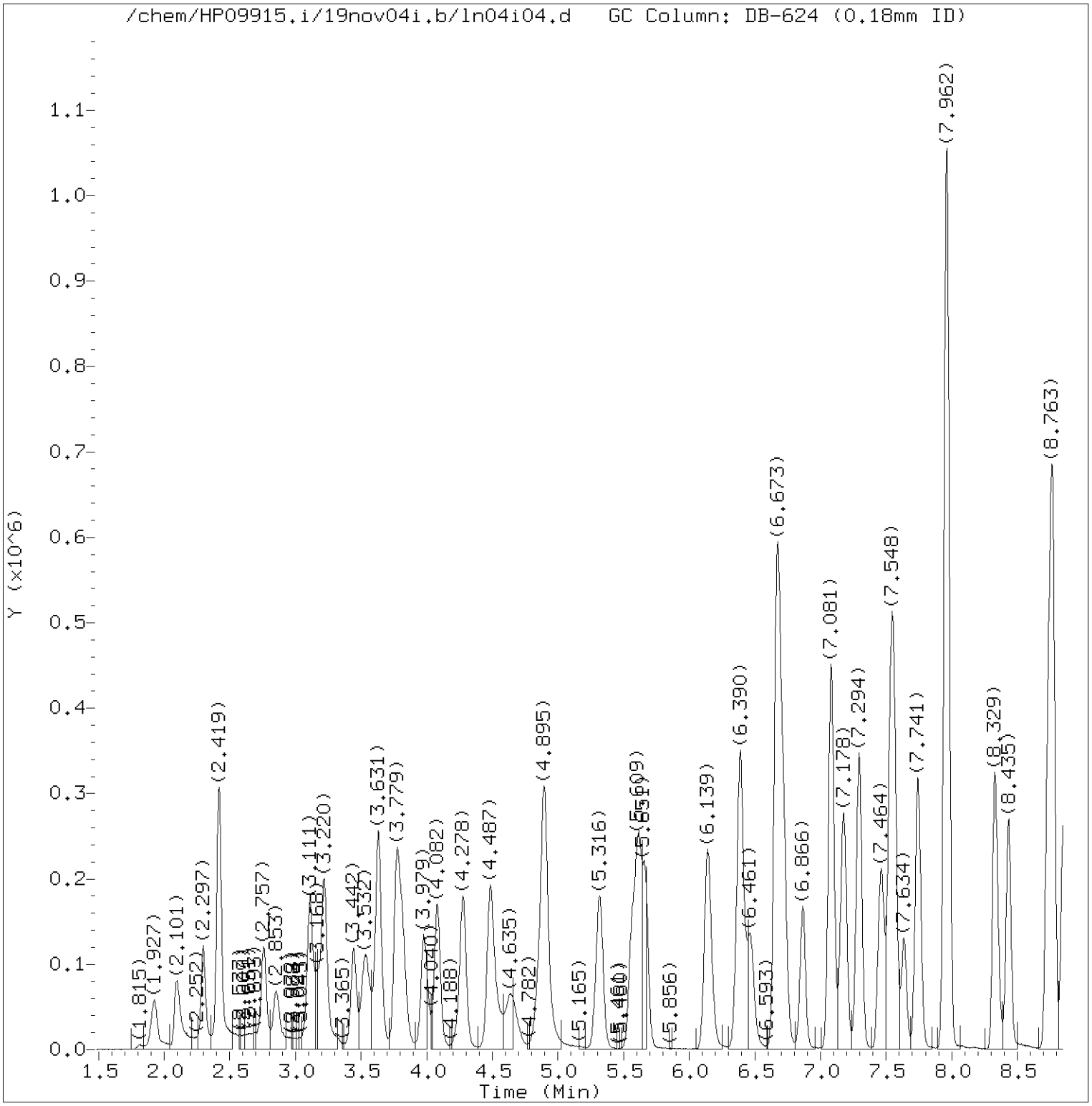
Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 273047
On-column Amount (ng) : 50.7591
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: me20285



Total Ion Chromatogram (TIC)

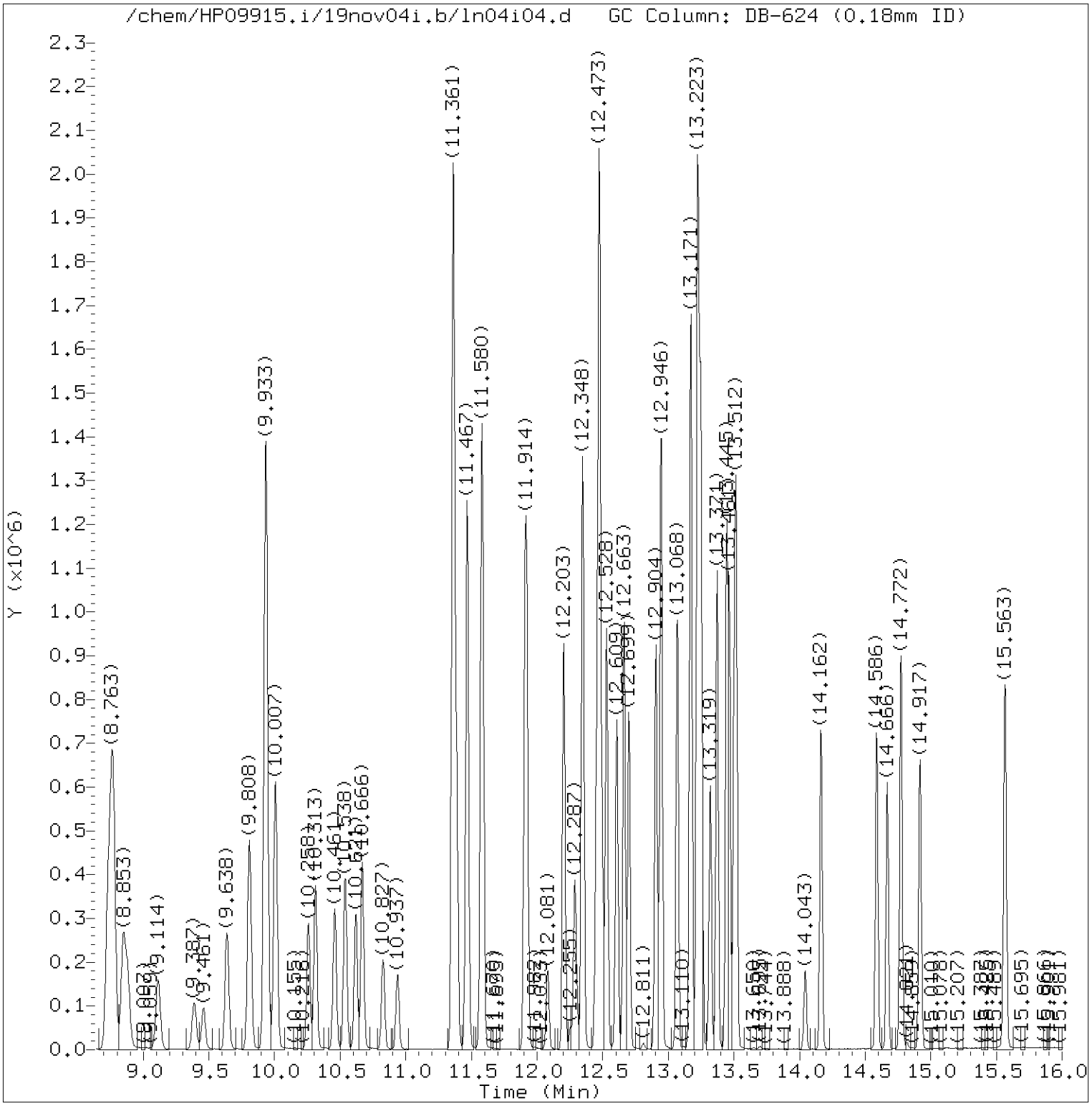
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.095	85	161054M	20.460
4) Chloromethane	(2)	2.297	50	155347	20.477
5) 1,3-Butadiene	(2)	2.416	39	127826M	20.292
6) Vinyl Chloride	(2)	2.419	62	156255	20.637
8) Bromomethane	(2)	2.757	94	109945	20.257
9) Chloroethane	(2)	2.853	64	85938	20.653
10) Dichlorofluoromethane	(2)	3.111	67	205276M	20.838
12) Trichlorofluoromethane	(2)	3.168	101	166167	20.384
11) n-Pentane	(2)	3.220	43	195074	20.250
14) Ethyl ether	(2)	3.442	59	108665	20.629
15) Freon 123a	(2)	3.532	67	137784	21.012
16) Acrolein	(1)	3.631	56	399615	206.403
17) 1,1-Dichloroethene	(2)	3.773	96	101858	21.288
17) 1,1-Dichloroethene	(2)	3.773	63	50444	21.029
19) Freon 113	(2)	3.805	101	115335	21.128
18) Acetone	(1)	3.815	58	36001	41.477
22) Methyl Iodide	(2)	3.979	142	212163	21.398
21) 2-Propanol	(1)	4.004	45	120851	193.676
23) Carbon Disulfide	(2)	4.082	76	388574	21.550
27) Methyl Acetate	(2)	4.255	43	121876	19.777
25) Allyl Chloride	(2)	4.281	41	173950	20.266
28) Methylene Chloride	(2)	4.483	84	119344	20.956
29)*t-Butyl alcohol-d10	(1)	4.512	65	258058M	250.000
30) t-Butyl alcohol	(1)	4.644	59	213903	196.882
31) Acrylonitrile	(2)	4.844	53	69677	21.016
32) trans-1,2-Dichloroethene	(2)	4.898	96	117516	21.231
33) Methyl Tertiary Butyl Ether	(2)	4.898	73	384426	21.159
34) n-Hexane	(2)	5.323	57	185314M	21.519
36) 1,1-Dichloroethane	(2)	5.561	63	203176	21.041
38) di-Isopropyl ether	(2)	5.615	45	399314	21.442
39) 2-Chloro-1,3-butadiene	(2)	5.670	53	184546	21.302
40) Ethyl t-butyl ether	(2)	6.146	59	392243	21.703
43) 1,2-Dichloroethene (Total)	(2)		96	248665	42.340
44) 2-Butanone	(2)	6.371	43	174937	41.104
42) cis-1,2-Dichloroethene	(2)	6.390	96	131149	21.109
45) 2,2-Dichloropropane	(2)	6.397	77	160123	21.332
47) Propionitrile	(1)	6.471	54	279106	206.179
48) Methacrylonitrile	(2)	6.673	67	377980	105.686

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	68547	20.807
50) Tetrahydrofuran	(1)	6.728	71	49905	40.813
51) Chloroform	(2)	6.863	83	198842	21.530
52)$Dibromofluoromethane	(2)	7.078	113	277983	50.374
52)$Dibromofluoromethane	(2)	7.081	111	283696	50.420
53) 1,1,1-Trichloroethane	(2)	7.081	97	168285	21.349
54) Cyclohexane	(2)	7.178	56	226762	21.513
54) Cyclohexane	(2)	7.178	84	195470	21.348
54) Cyclohexane	(2)	7.171	69	69608	21.350
56) Carbon Tetrachloride	(2)	7.290	117	141234	21.126
55) 1,1-Dichloropropene	(2)	7.297	75	161608	21.167
58) Isobutyl Alcohol	(1)	7.464	41	176564	482.927
57)$1,2-Dichloroethane-d4	(2)	7.535	102	71029	50.503
57)$1,2-Dichloroethane-d4	(2)	7.532	65	318244	50.776
57)$1,2-Dichloroethane-d4	(2)	7.535	104	46070	51.284
60) Benzene	(2)	7.561	78	489494	21.320
61) 1,2-Dichloroethane	(2)	7.634	62	150643	20.399
61) 1,2-Dichloroethane	(2)	7.634	98	15487	21.192
65) t-Amyl methyl ether	(2)	7.744	73	391674	21.591
67) n-Heptane	(2)	7.962	43	173500MA	21.566
66)*Fluorobenzene	(2)	7.962	96	1128743	50.000
69) n-Butanol	(1)	8.329	56	312189M	992.087
71) Trichloroethene	(2)	8.435	95	122357	21.166
72) Methylcyclohexane	(2)	8.737	83	221554	20.658
72) Methylcyclohexane	(2)	8.737	98	99234	20.447
73) 1,2-Dichloropropane	(2)	8.769	63	123290	21.148
76) Methyl Methacrylate	(2)	8.850	69	117550A	20.851
75) 1,4-Dioxane	(1)	8.856	88	44376M	513.065
74) Dibromomethane	(2)	8.879	93	79643	21.113
78) Bromodichloromethane	(2)	9.114	83	142226	21.011
79) 2-Nitropropane	(2)	9.390	41	82517M	40.247
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	51005	20.370
81) cis-1,3-Dichloropropene	(2)	9.634	75	192808	21.446
82) 4-Methyl-2-pentanone	(2)	9.808	43	377728	42.047
83)$Toluene-d8	(3)	9.933	98	1159273	50.160
83)$Toluene-d8	(3)	9.933	100	751601	50.203
88) Toluene	(3)	10.007	92	308466	21.289
90) 1,3-Dichloropropene (total)	(3)		100	367273	42.658

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	174465	21.211
91) Ethyl Methacrylate	(3)	10.313	69	210882	21.096
92) 1,1,2-Trichloroethane	(3)	10.461	97	114106	20.771
93) Tetrachloroethene	(3)	10.538	166	130358	21.243
94) 1,3-Dichloropropane	(3)	10.618	76	196136	20.911
96) 2-Hexanone	(3)	10.666	43	276801	41.485
97) Dibromochloromethane	(3)	10.827	129	117920	20.955
99) 1,2-Dibromoethane	(3)	10.940	107	124981	20.951
100)*Chlorobenzene-d5	(3)	11.361	117	883281	50.000
101) 1-Chlorohexane	(3)	11.364	91	162552	20.883
102) Chlorobenzene	(3)	11.387	112	347116	21.185
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	116096	21.505
104) Ethylbenzene	(3)	11.467	91	593614	21.434
106) m+p-Xylene	(3)	11.580	106	474524	43.555
108) Xylene (Total)	(3)		106	707354	65.191
107) o-Xylene	(3)	11.908	106	232830	21.636
109) Styrene	(3)	11.924	104	387652	21.799
110) Bromoform	(3)	12.081	173	81670	19.422
111) Isopropylbenzene	(3)	12.203	105	589458	21.839
112) Cyclohexanone	(1)	12.287	55	167626	494.847
114)$4-Bromofluorobenzene	(3)	12.348	95	438766	50.137
114)$4-Bromofluorobenzene	(3)	12.348	174	363757	50.138
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	186119M	20.690
115) Bromobenzene	(4)	12.464	156	150208	20.987
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	295707	106.569
117) 1,2,3-Trichloropropane	(4)	12.499	110	56899	20.612
119) n-Propylbenzene	(4)	12.528	91	680502	21.762
120) 2-Chlorotoluene	(4)	12.609	126	141675	21.327
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	498486	21.936
121) 4-Chlorotoluene	(4)	12.699	126	147463	21.326
124) tert-Butylbenzene	(4)	12.904	134	101571M	21.612
125) Pentachloroethane	(4)	12.940	167	85065	21.020
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	522495	21.816
127) sec-Butylbenzene	(4)	13.068	105	620603	22.130
129) 1,3-Dichlorobenzene	(4)	13.168	146	280954	21.362
130) p-Isopropyltoluene	(4)	13.171	119	539497	22.237
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	476218	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	288857	21.186

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	529814	20.883
135) Benzyl Chloride	(4)	13.319	91	386244	20.108
136) 1,3-Diethylbenzene	(4)	13.371	119	333696	21.134
141) Diethylbenzene (total)	(4)		100	968804	63.411
137) 1,4-Diethylbenzene	(4)	13.445	119	354305	21.180
139) n-Butylbenzene	(4)	13.464	92	270790	21.829
138) 1,2-Dichlorobenzene	(4)	13.502	146	274435	21.146
140) 1,2-Diethylbenzene	(4)	13.518	119	280803	21.097
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	40583	20.608
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	215108	21.573
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	206700	21.320
147) Hexachlorobutadiene	(4)	14.666	225	101324	22.135
148) Naphthalene	(4)	14.772	128	665482	21.351
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	203518	21.573
150) 2-Methylnaphthalene	(4)	15.563	142	423056	22.042

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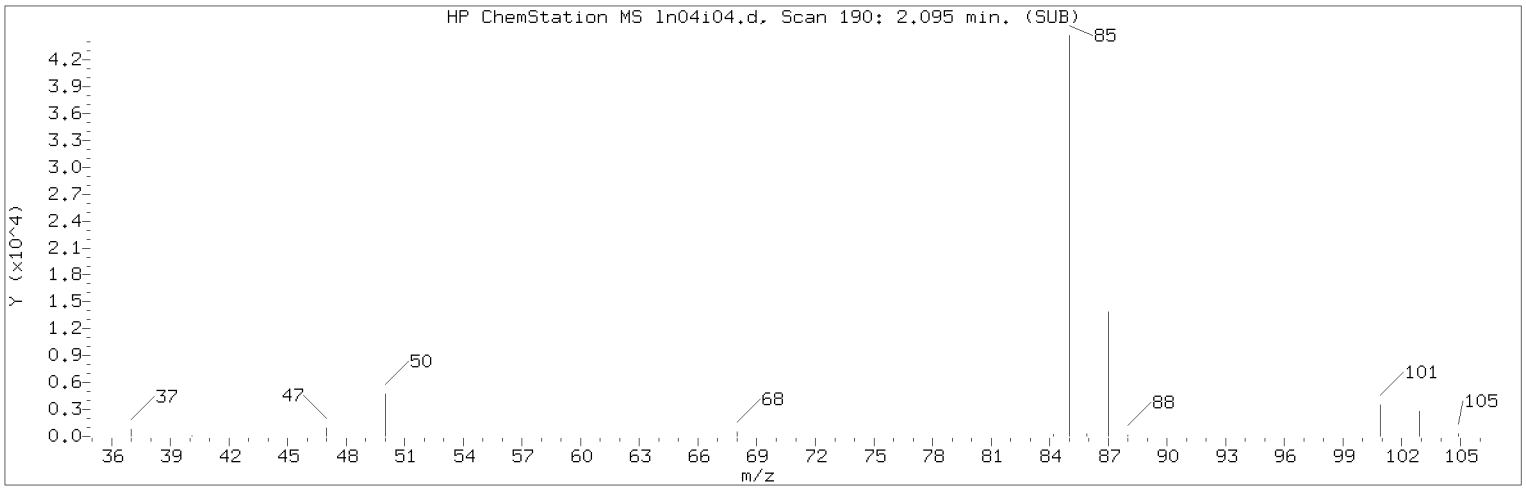
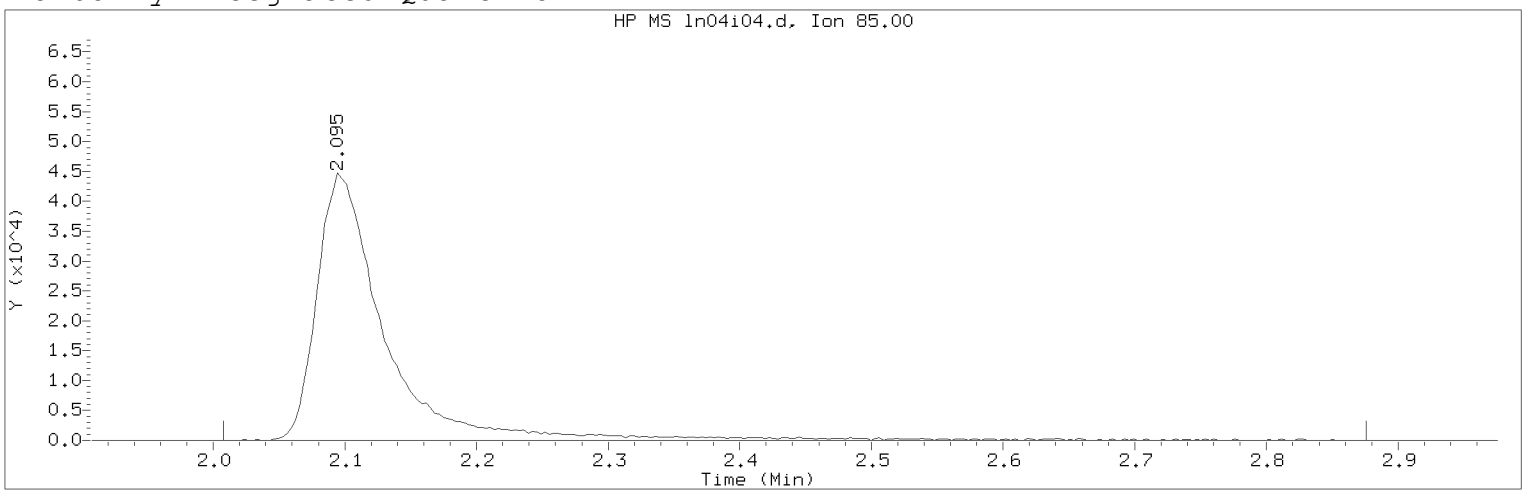
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

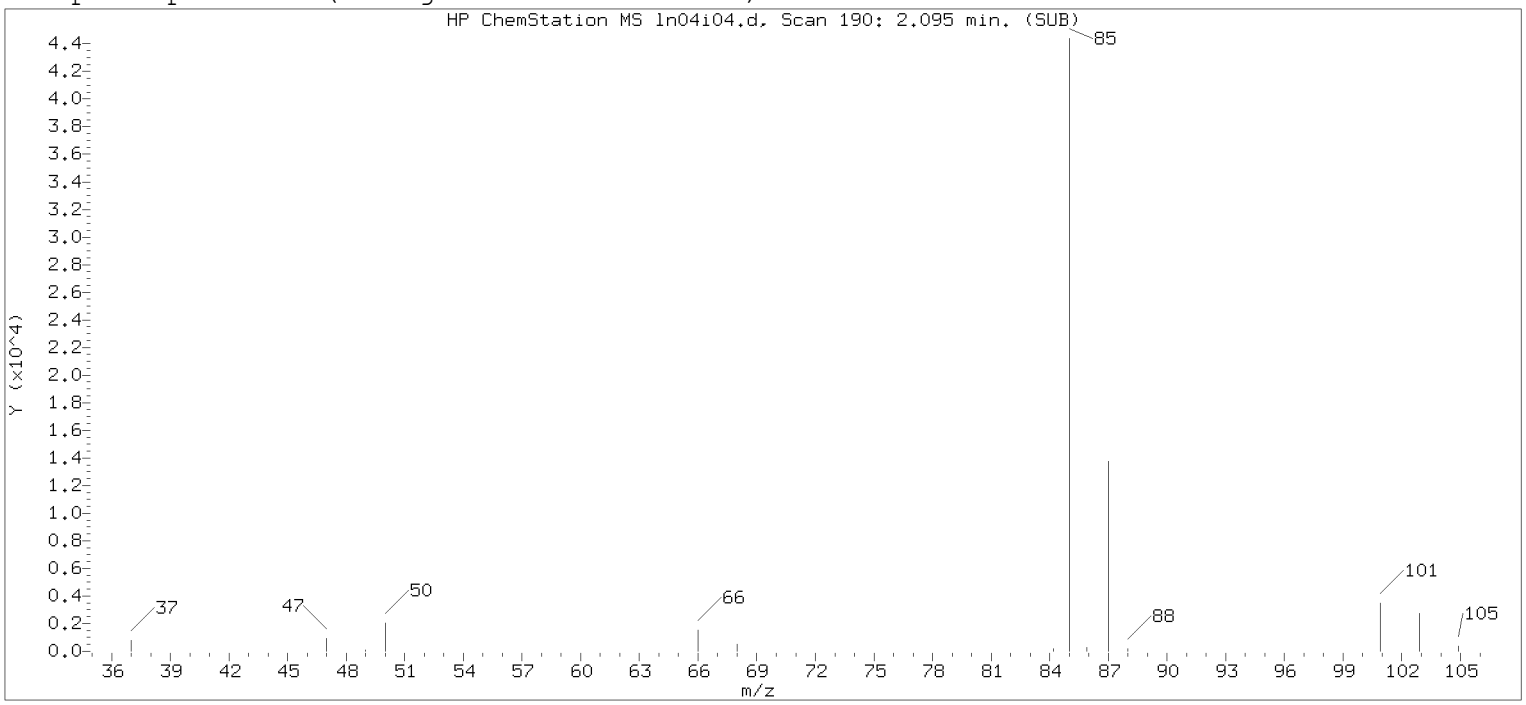
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.095
Quant Ion : 85.00
Area (flag) : 161054M
On-Column Amount (ng) : 20.4603
Integration start scan : 162 Integration stop scan: 432
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

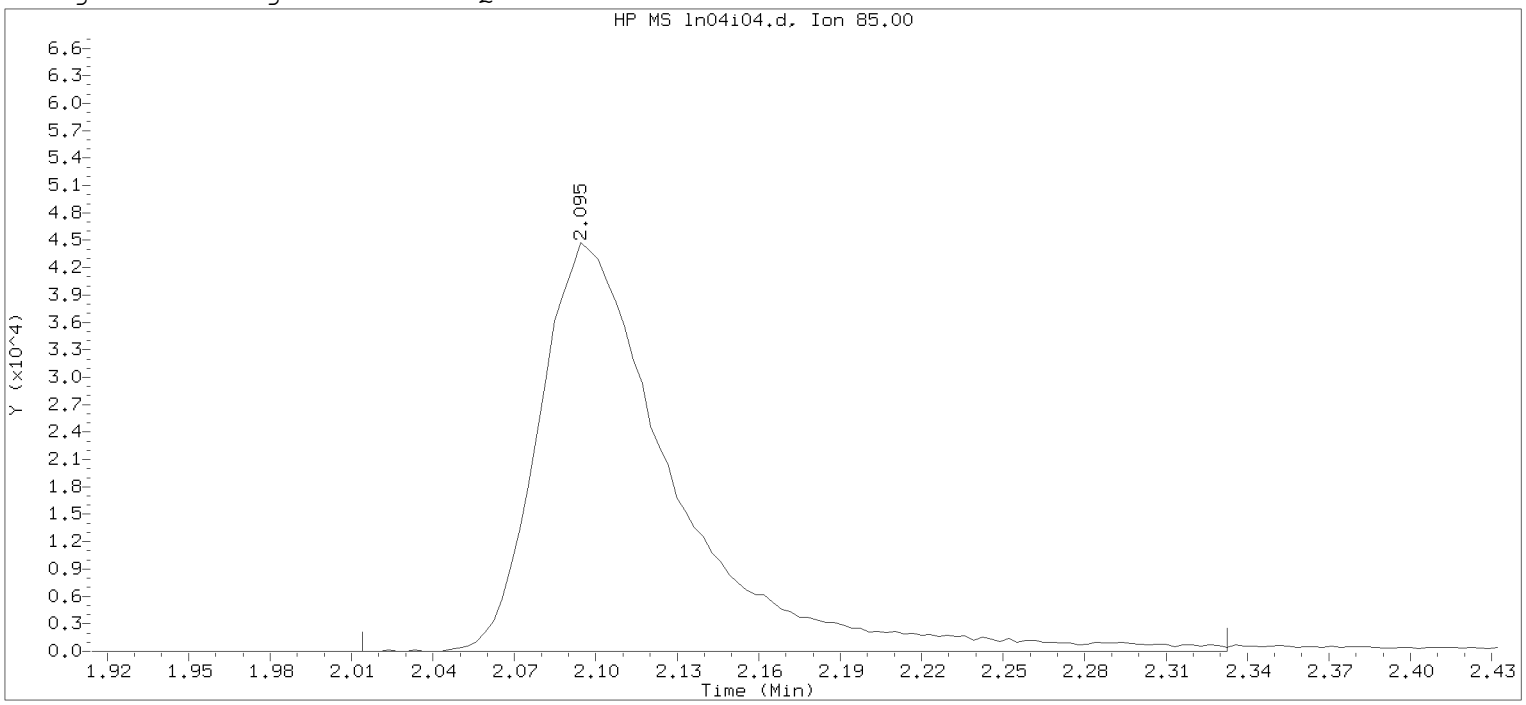
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

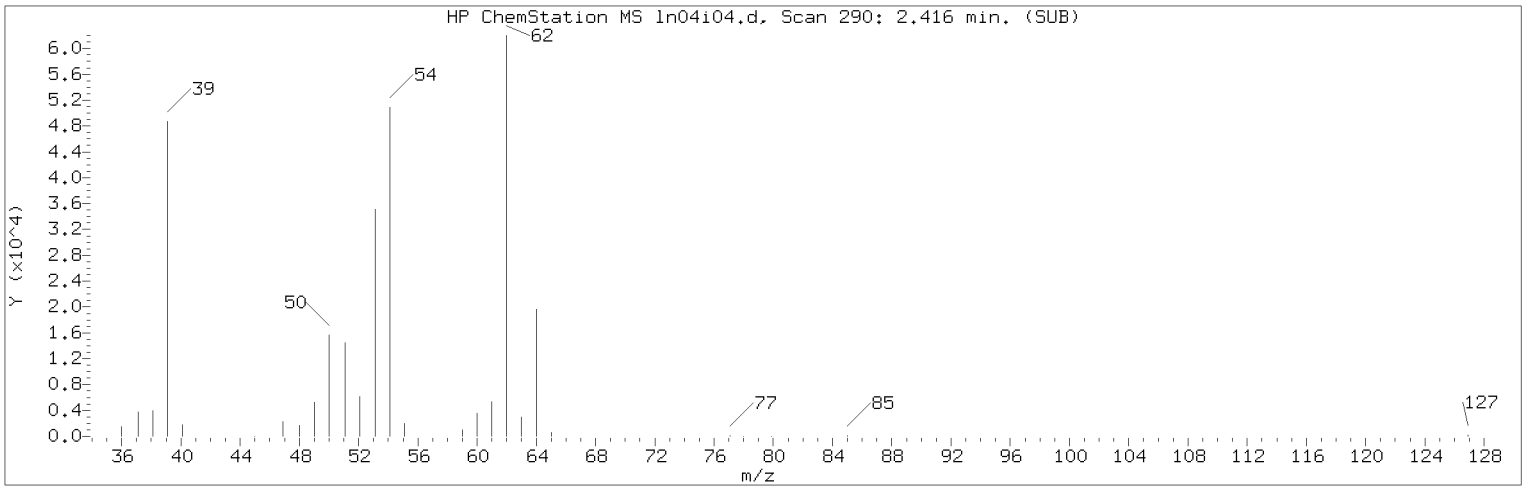
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

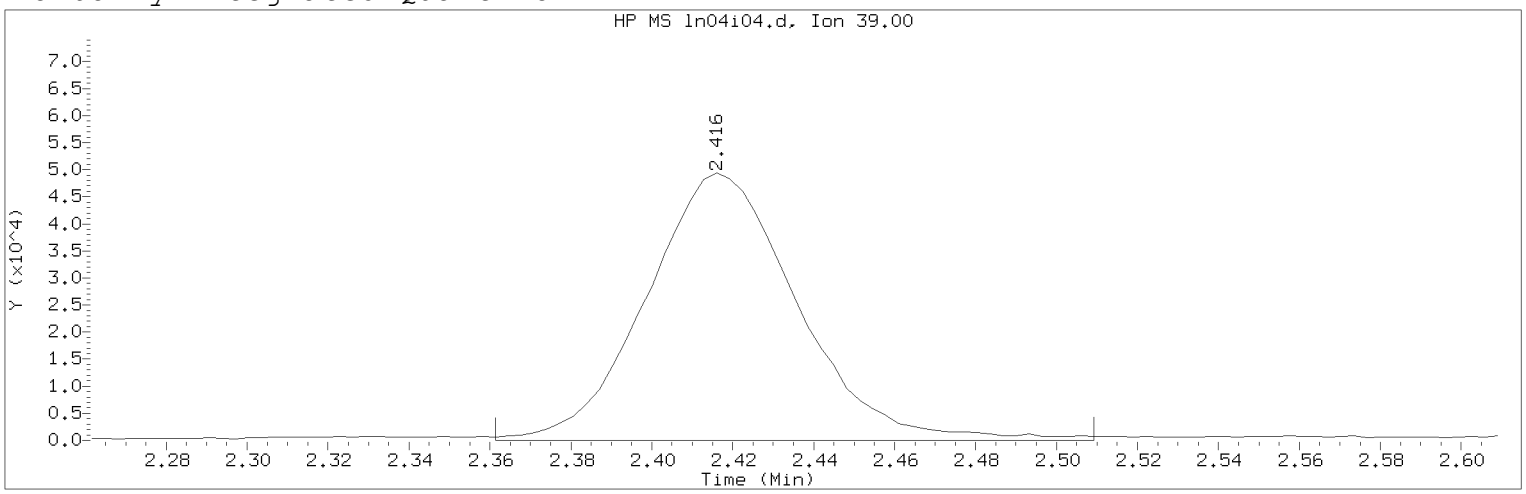
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.095
Quant Ion : 85.00
Area : 154796
On-column Amount (ng) : 18.9193
Integration start scan : 164 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

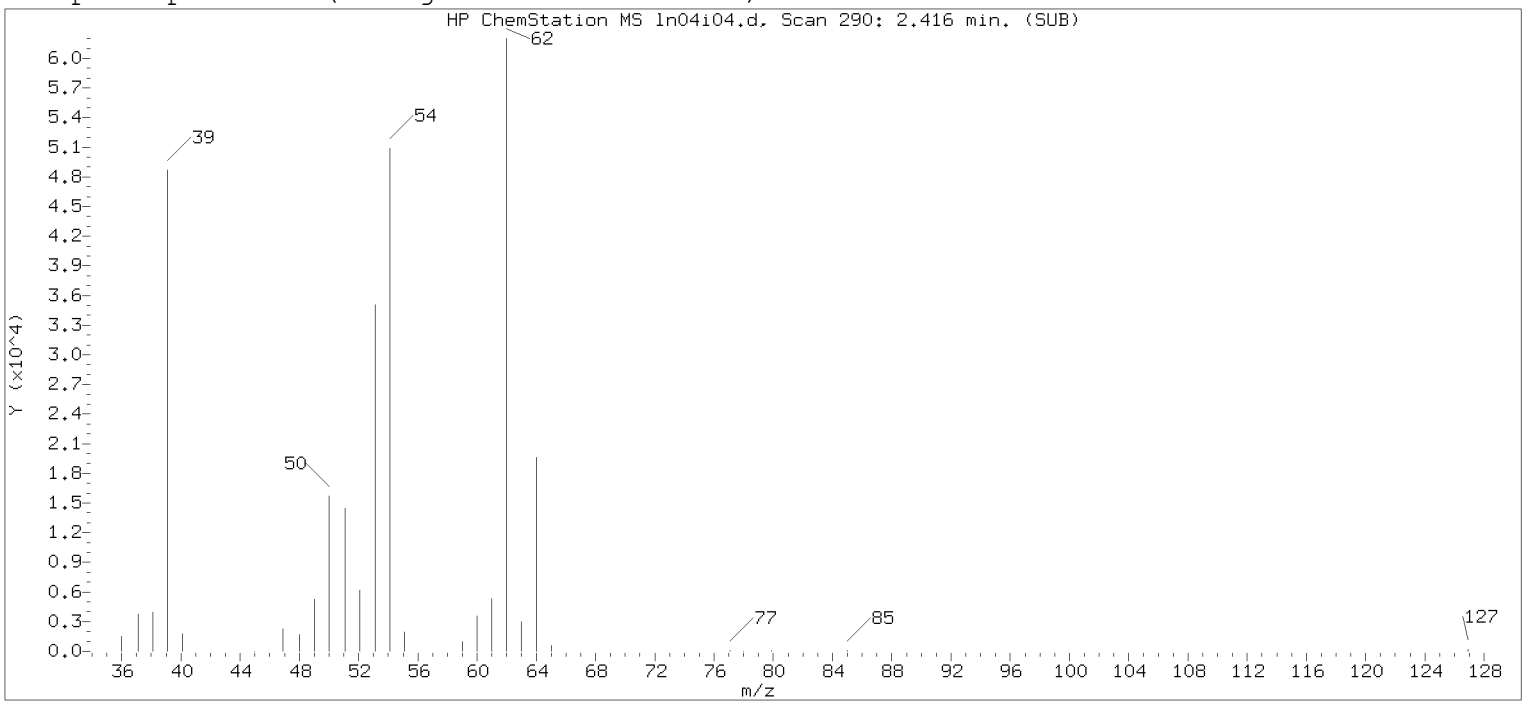
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 290
Retention Time (minutes): 2.416
Quant Ion : 39.00
Area (flag) : 127826M
On-Column Amount (ng) : 20.2925
Integration start scan : 272 Integration stop scan: 318
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

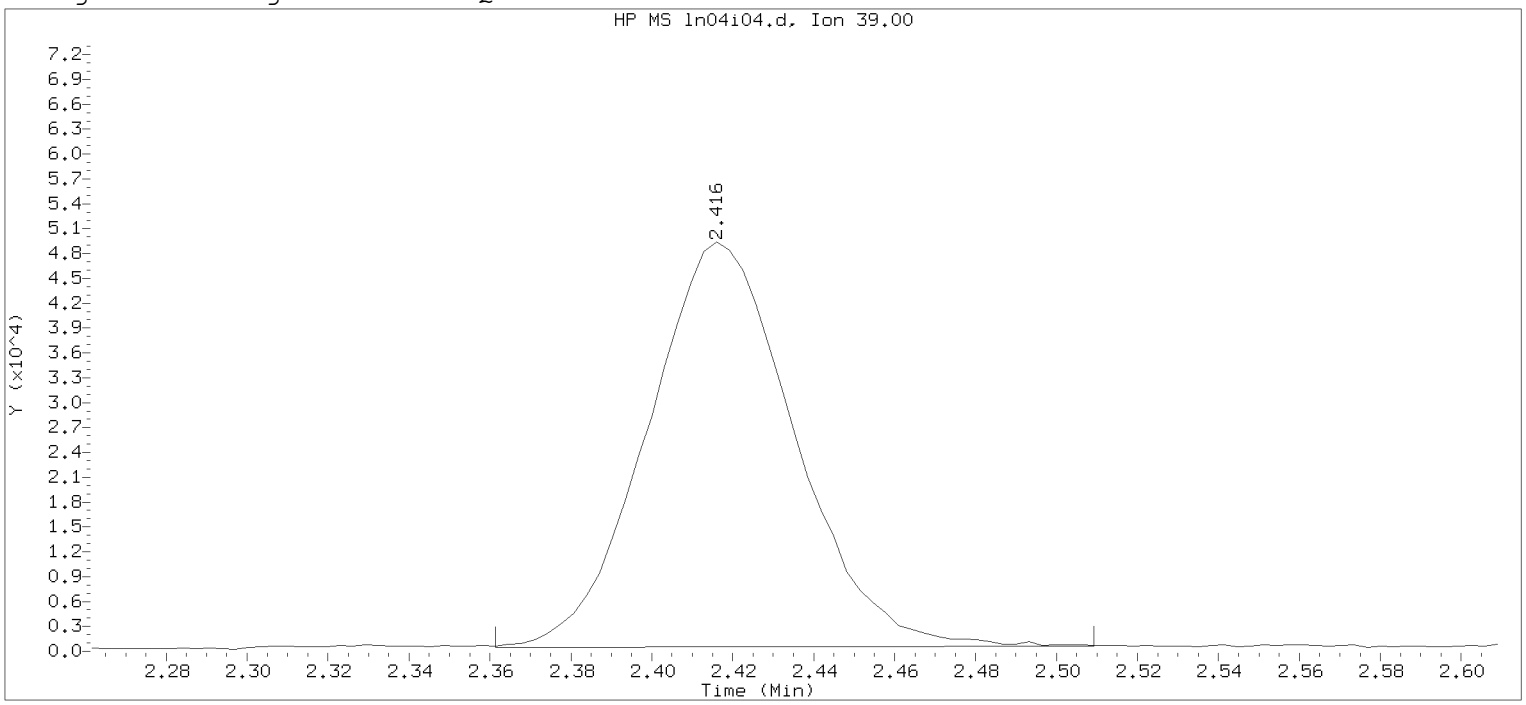
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

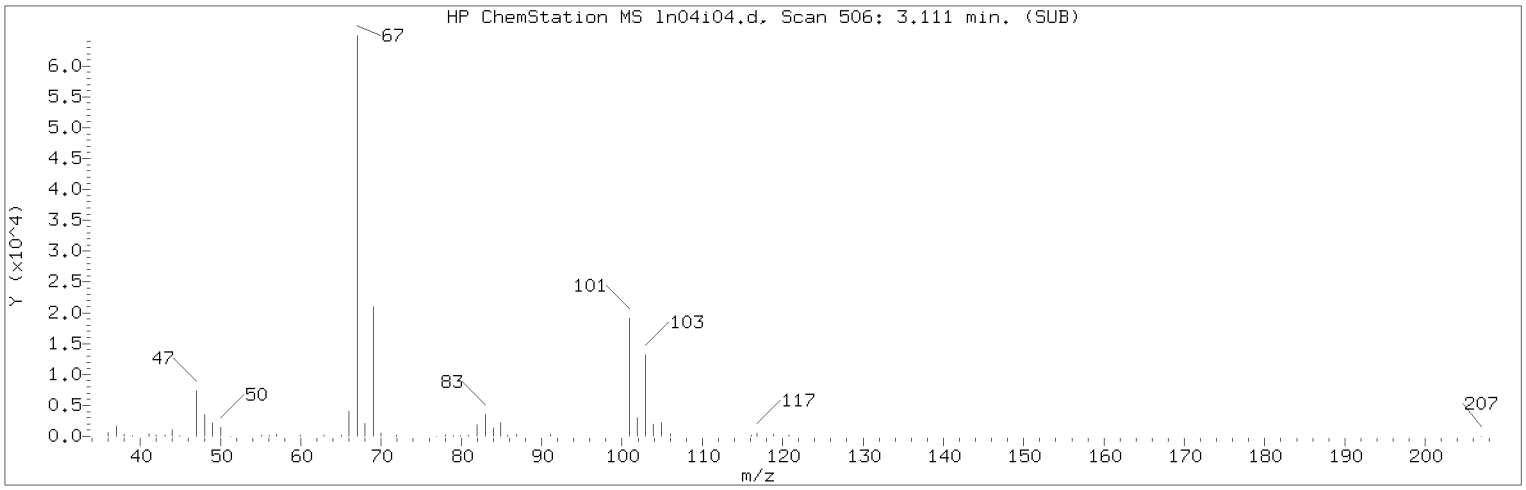
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

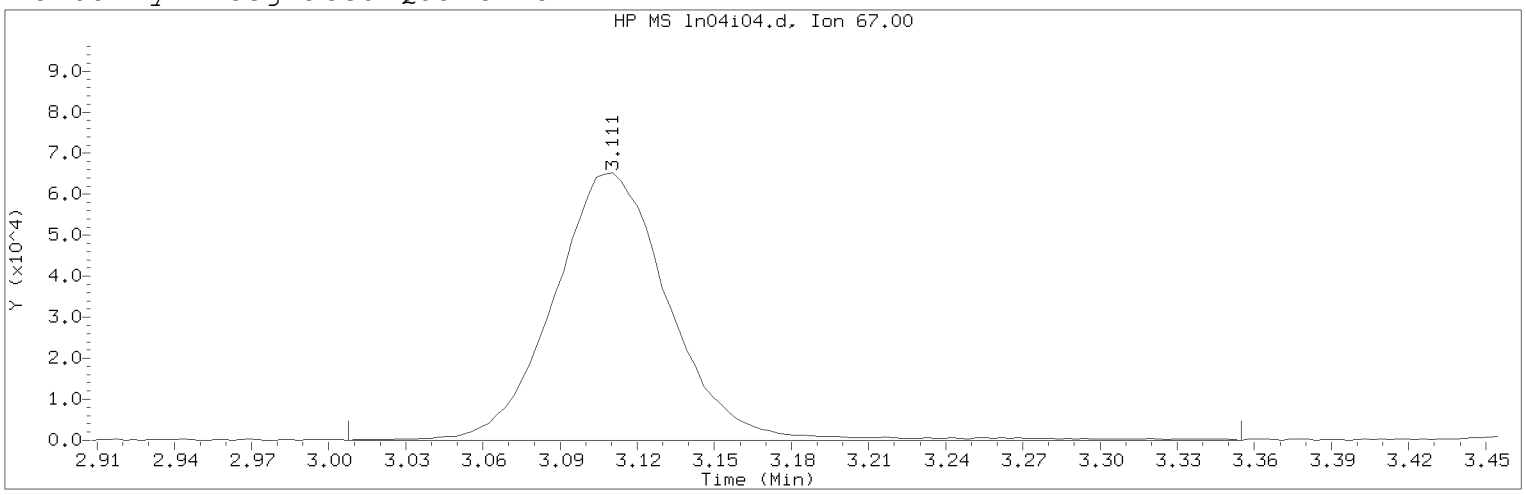
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 290
Retention Time (minutes): 2.416
Quant Ion : 39.00
Area : 122801
On-column Amount (ng) : 20.5539
Integration start scan : 272 Integration stop scan: 318
Y at integration start : 477 Y at integration end: 628

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

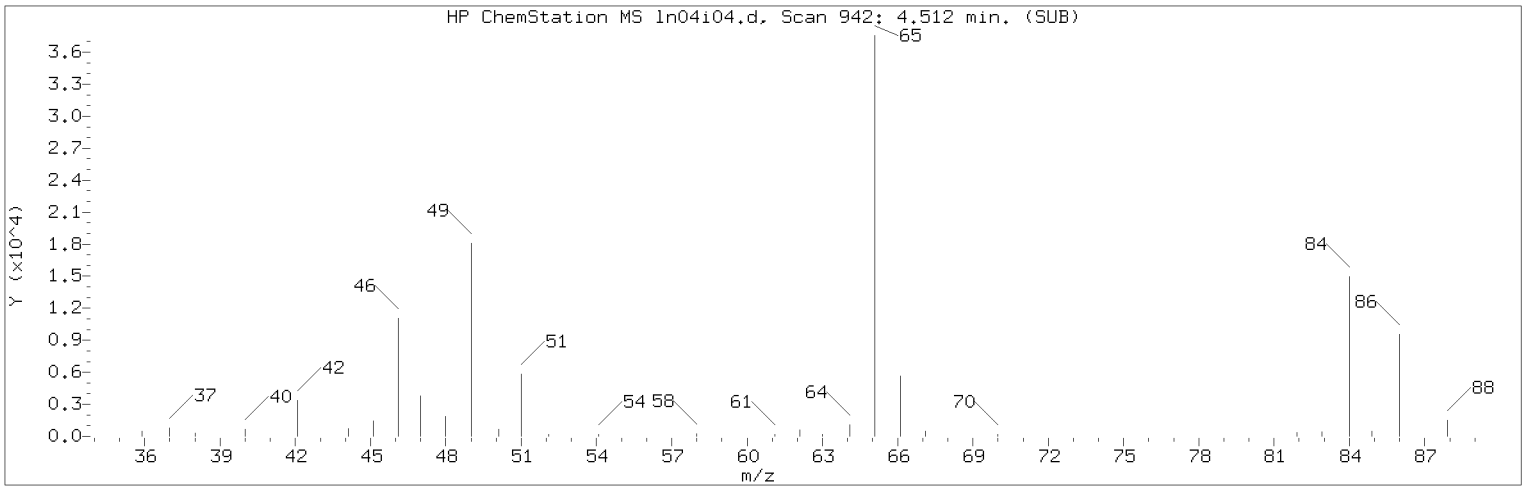
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 506
Retention Time (minutes): 3.111
Quant Ion : 67.00
Area (flag) : 205276M
On-Column Amount (ng) : 20.8381
Integration start scan : 473 Integration stop scan: 581
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

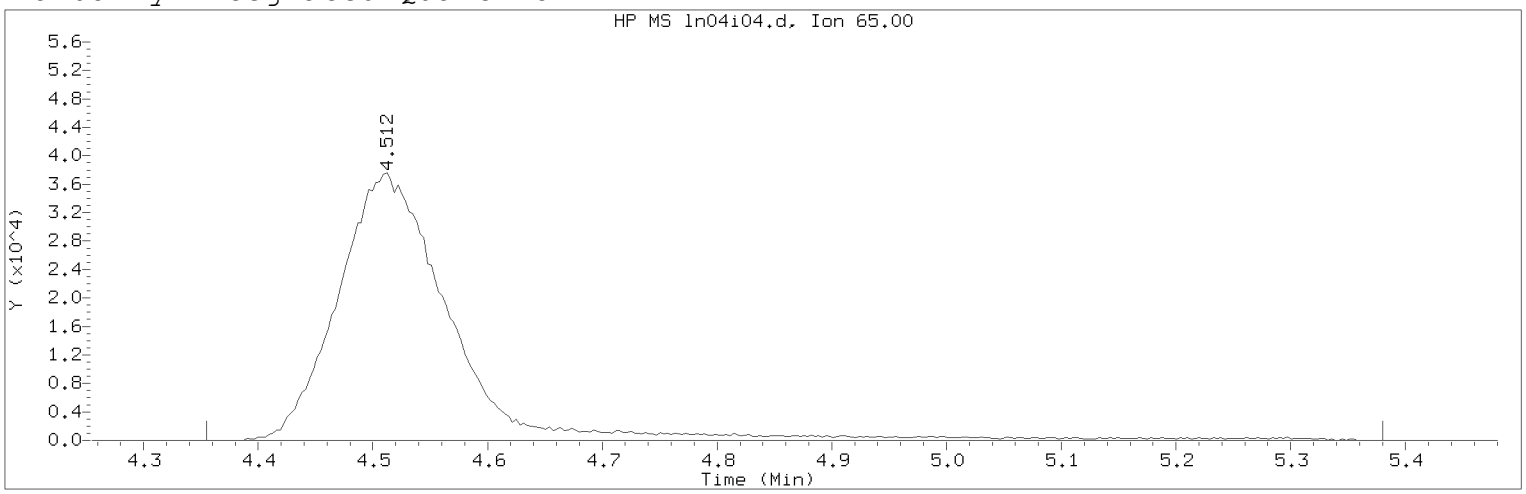
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

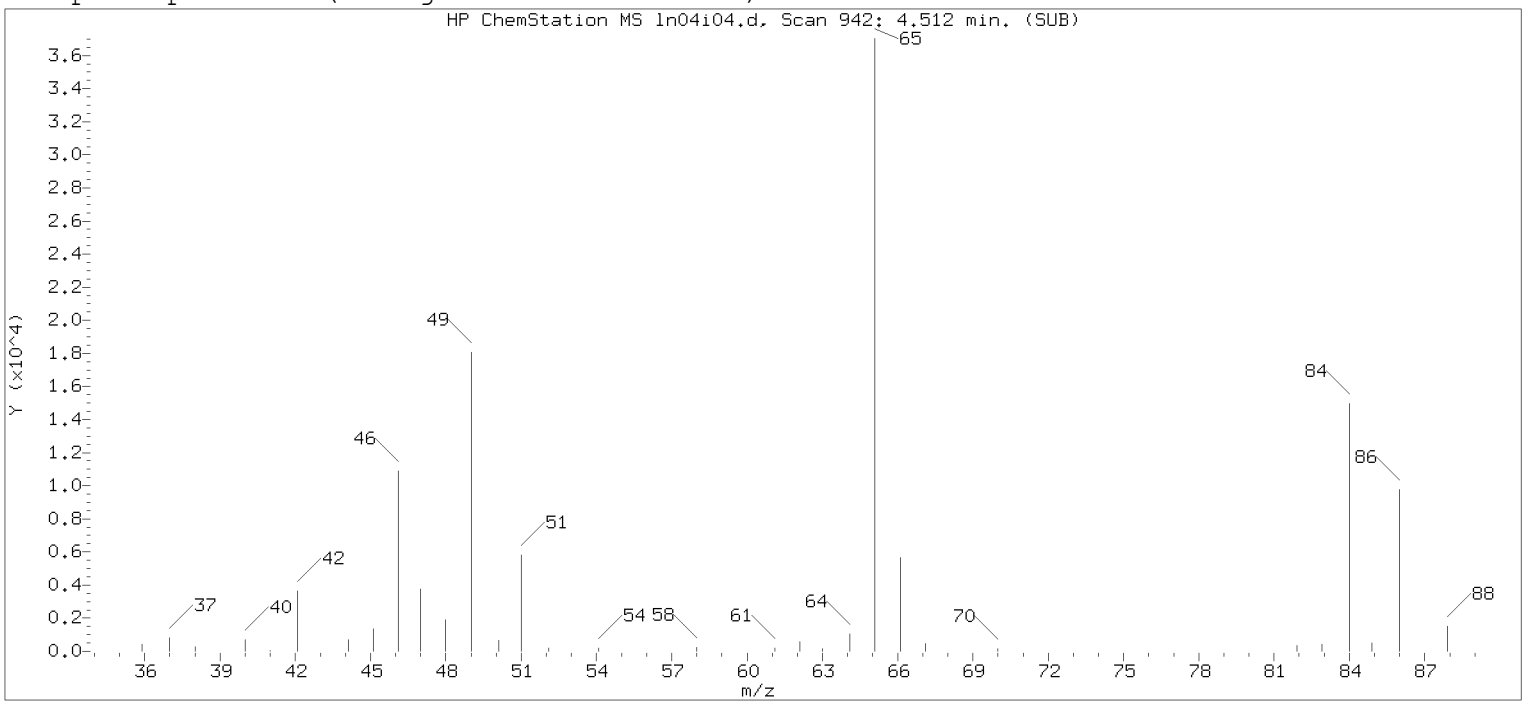
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area (flag) : 258058M
On-Column Amount (ng) : 250.0000
Integration start scan : 892 Integration stop scan: 1211
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

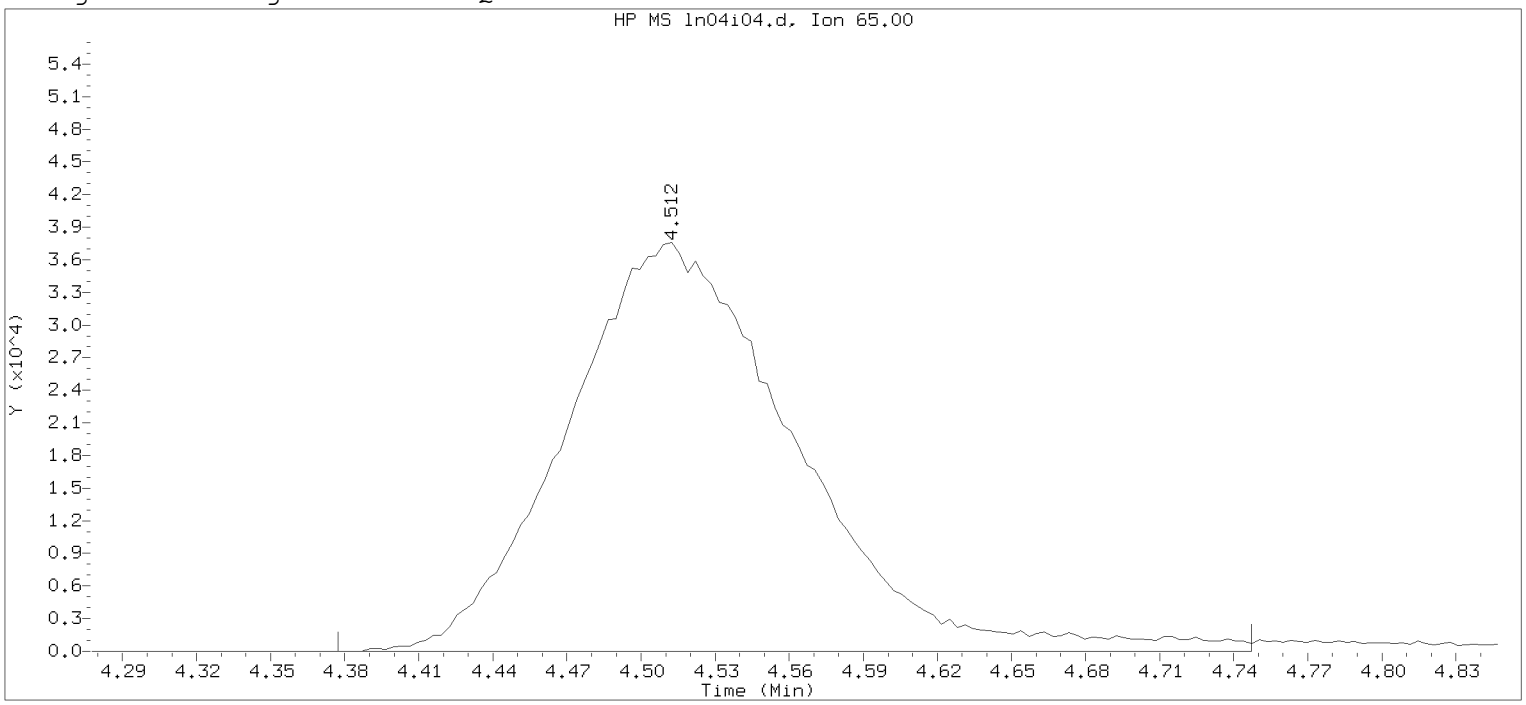
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

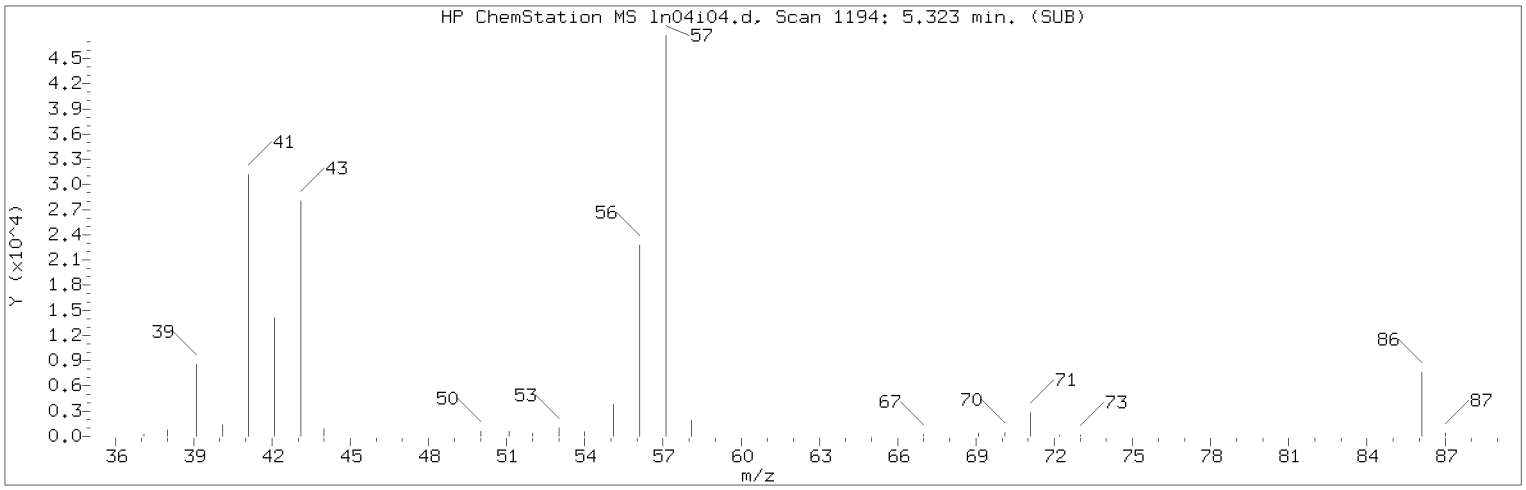
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

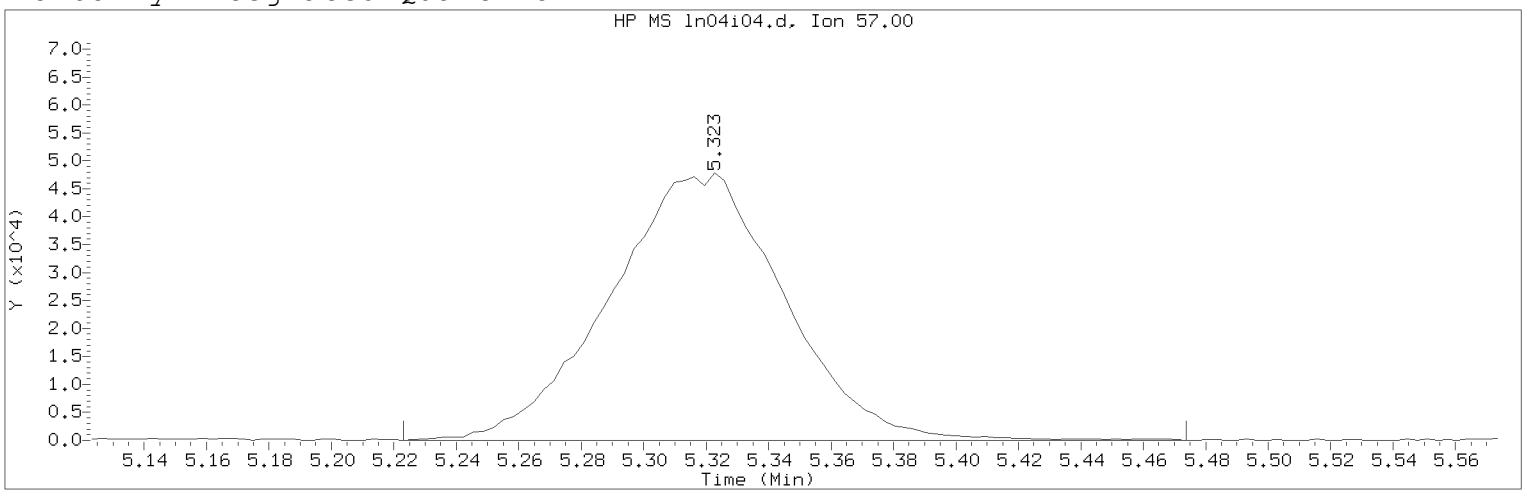
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area : 242565
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

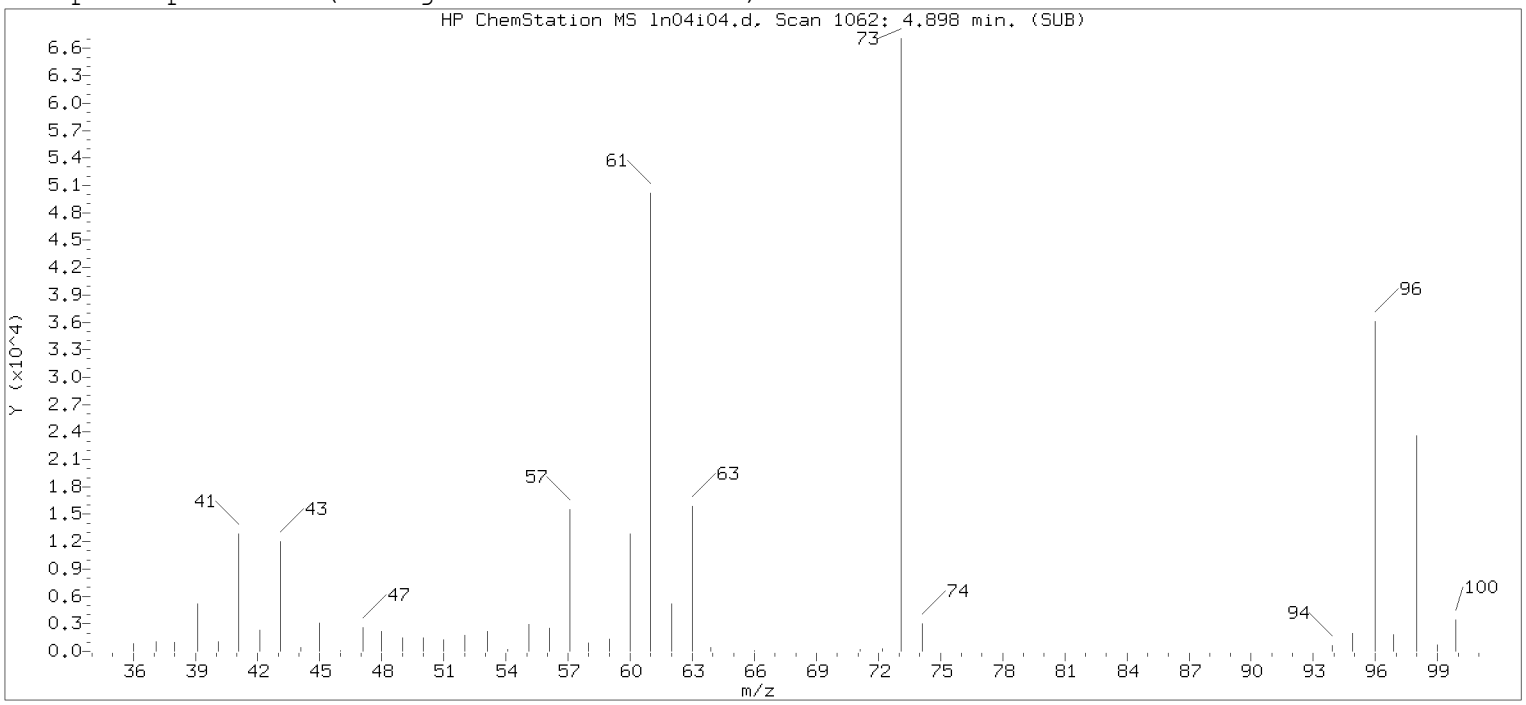
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1194
Retention Time (minutes): 5.323
Quant Ion : 57.00
Area (flag) : 185314M
On-Column Amount (ng) : 21.5188
Integration start scan : 1162 Integration stop scan: 1240
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

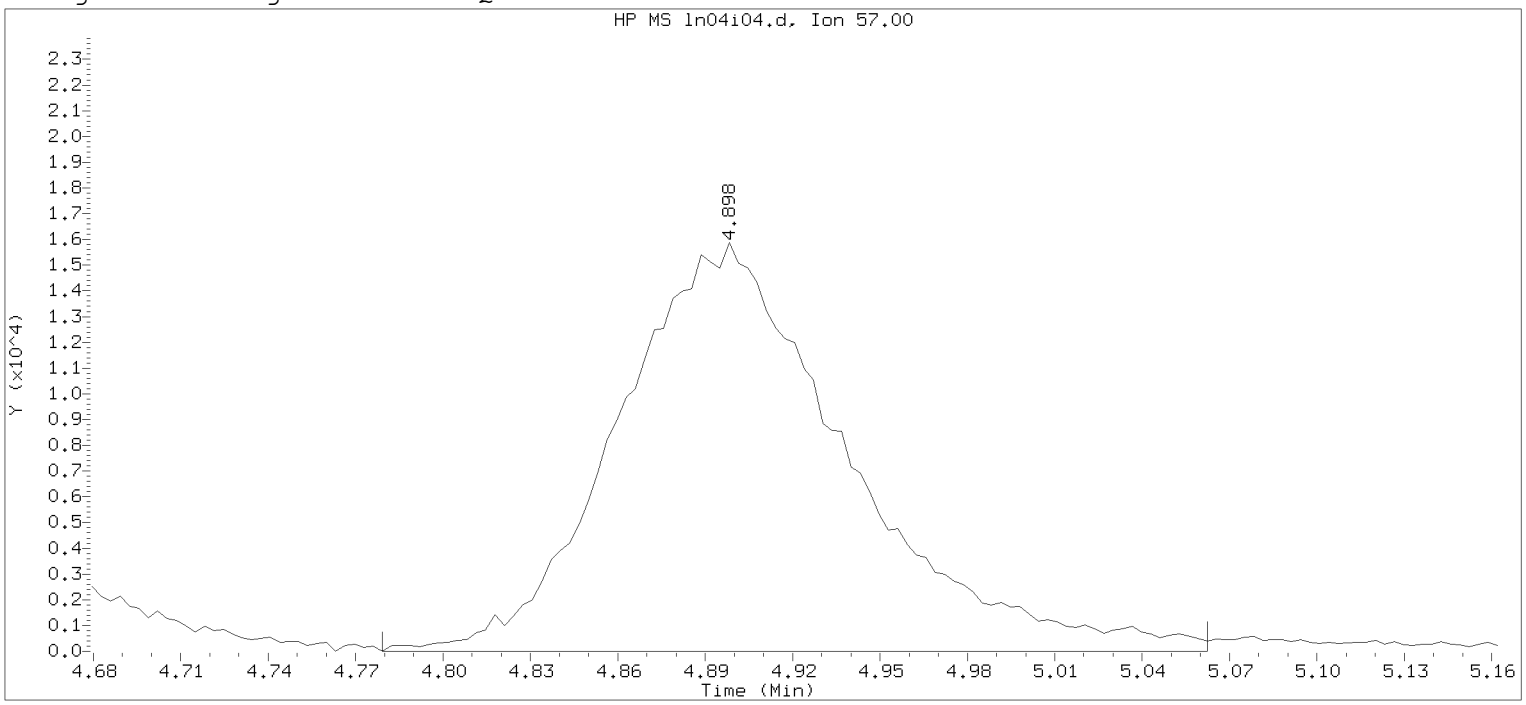
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

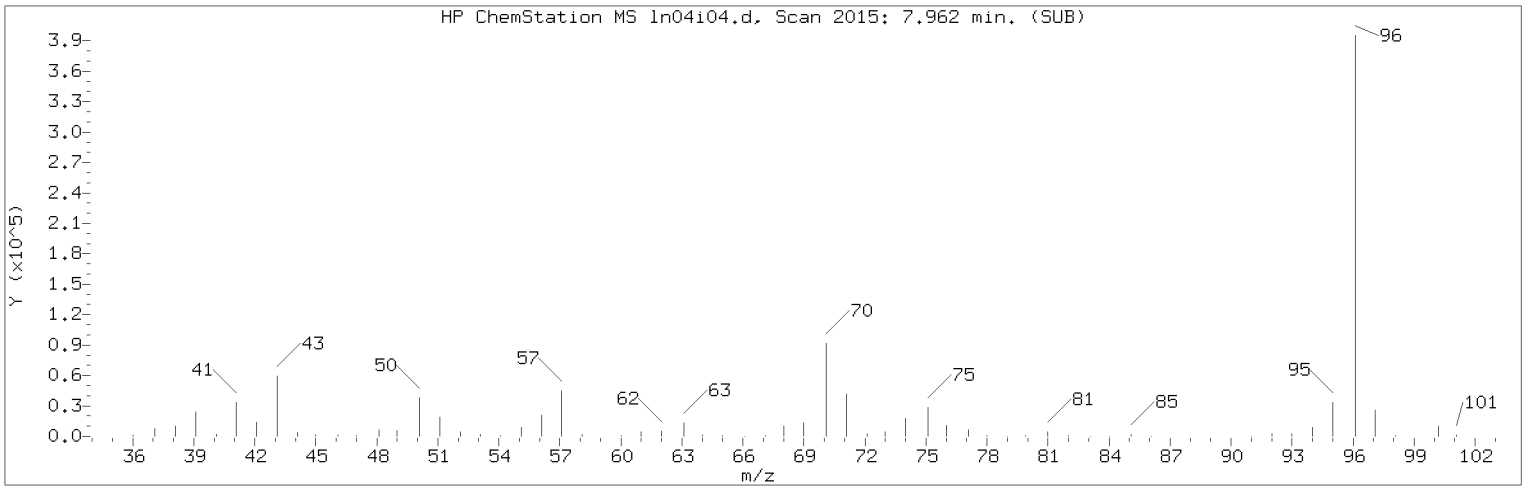
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

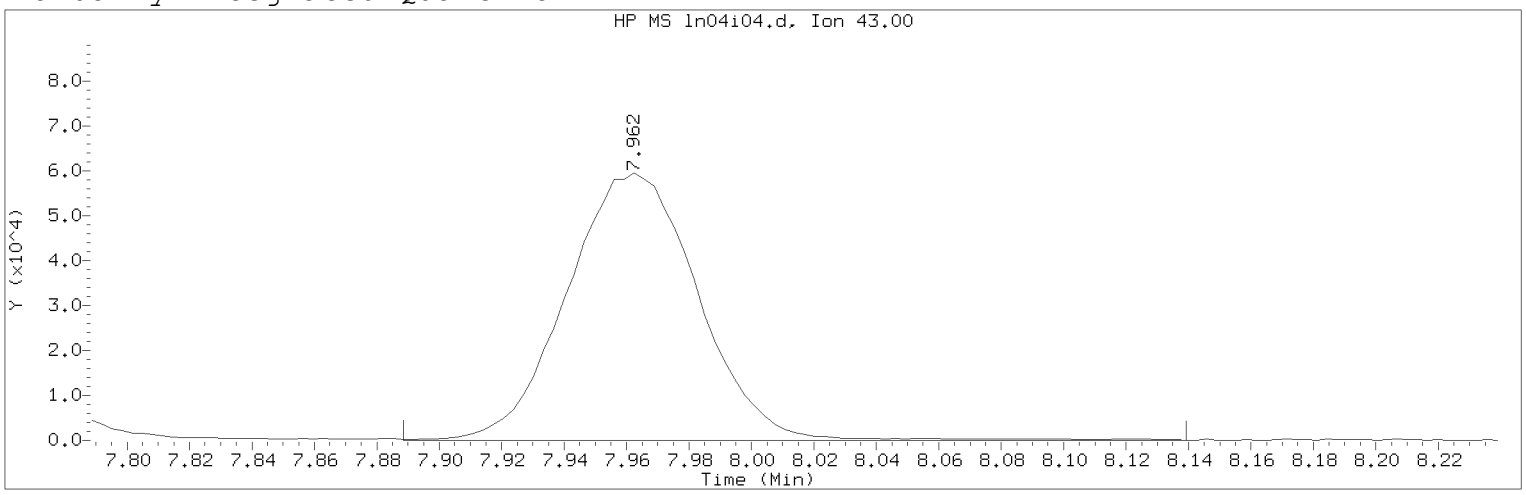
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1062		
Retention Time (minutes)	: 4.898		
Quant Ion	: 57.00		
Area	: 86496		
On-column Amount (ng)	: 21.2144		
Integration start scan	: 1024	Integration stop scan:	1112
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

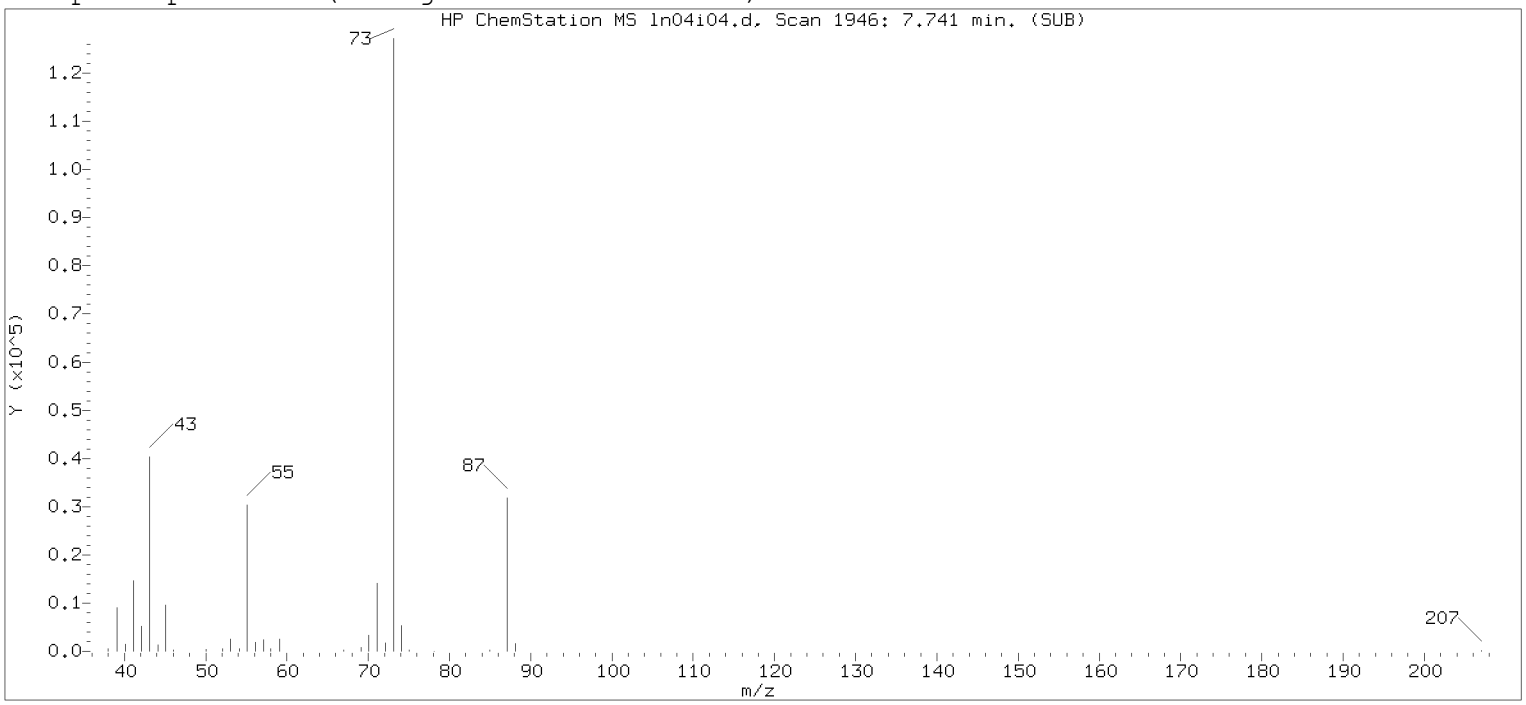
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2015
Retention Time (minutes): 7.962
Quant Ion : 43.00
Area (flag) : 173500MA
On-Column Amount (ng) : 21.5663
Integration start scan : 1991 Integration stop scan: 2069
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

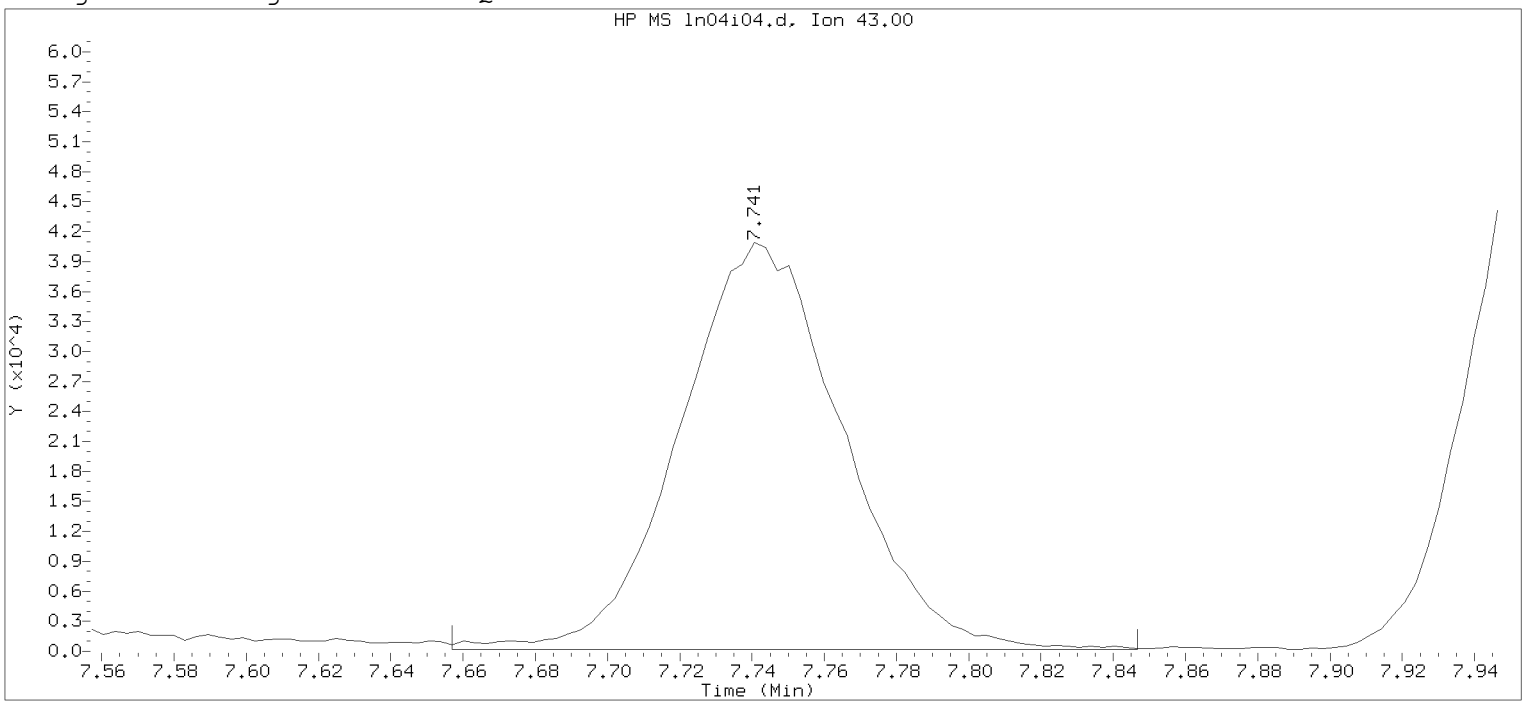
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

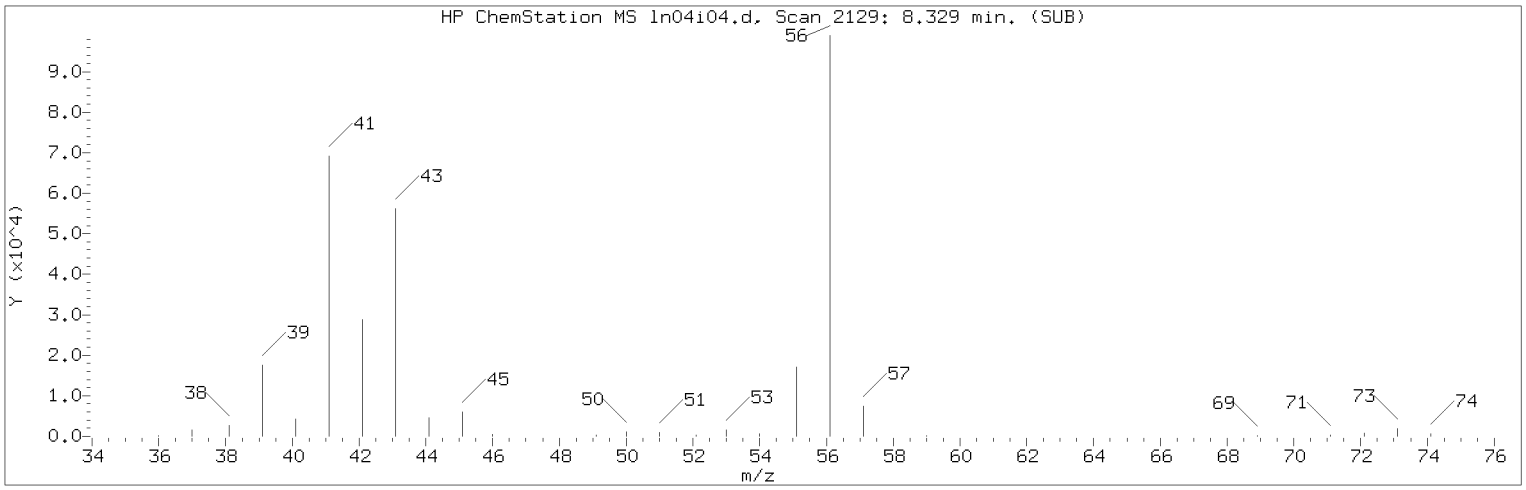
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

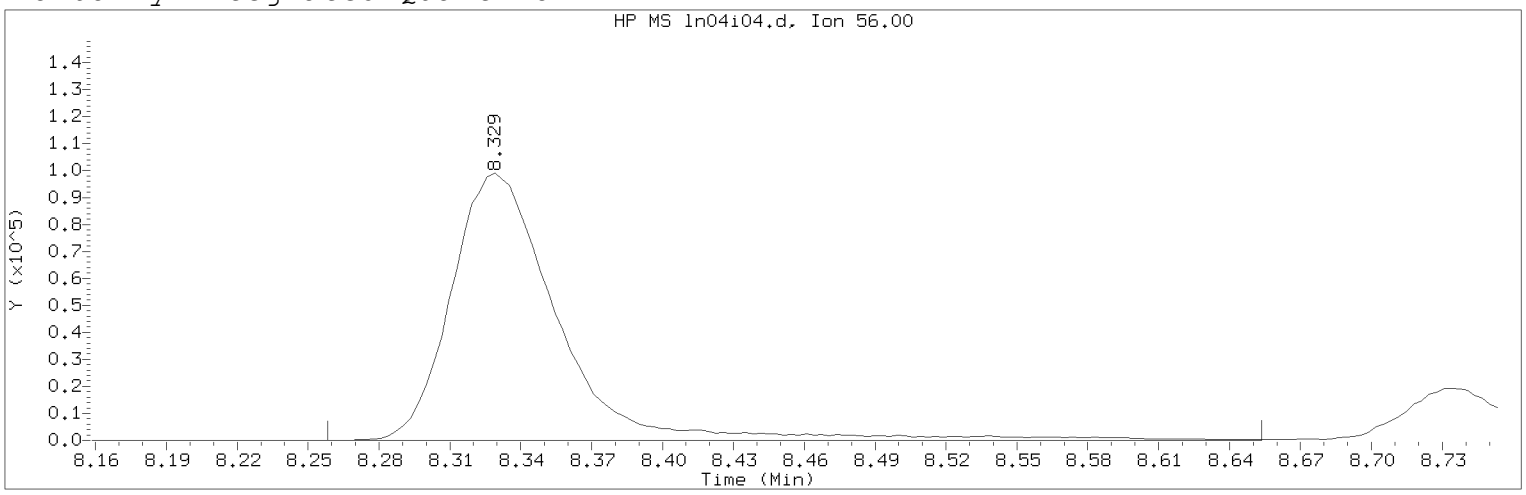
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.741
Quant Ion : 43.00
Area : 127386
On-column Amount (ng) : 21.2604
Integration start scan : 1919 Integration stop scan: 1978
Y at integration start : 203 Y at integration end: 203

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

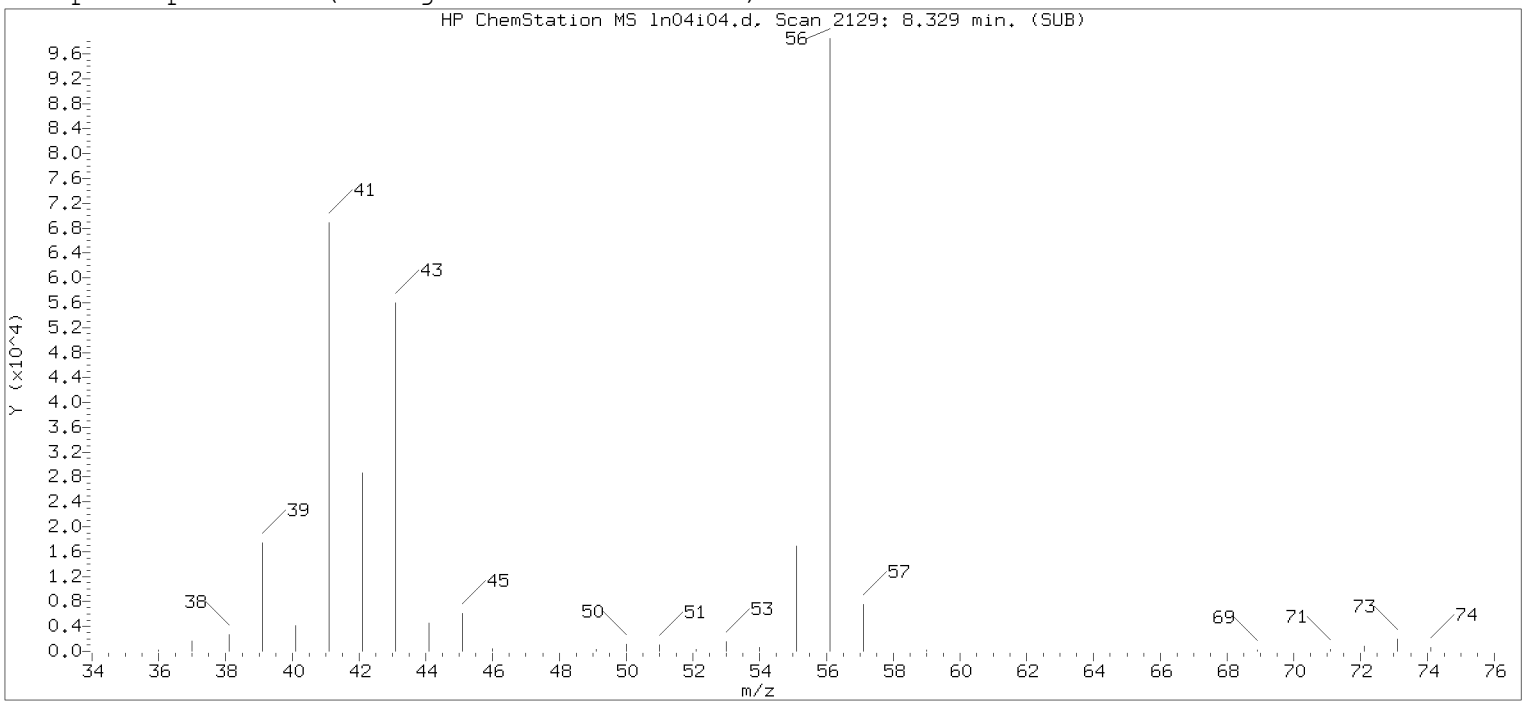
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area (flag) : 312189M
On-Column Amount (ng) : 992.0871
Integration start scan : 2106 Integration stop scan: 2229
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

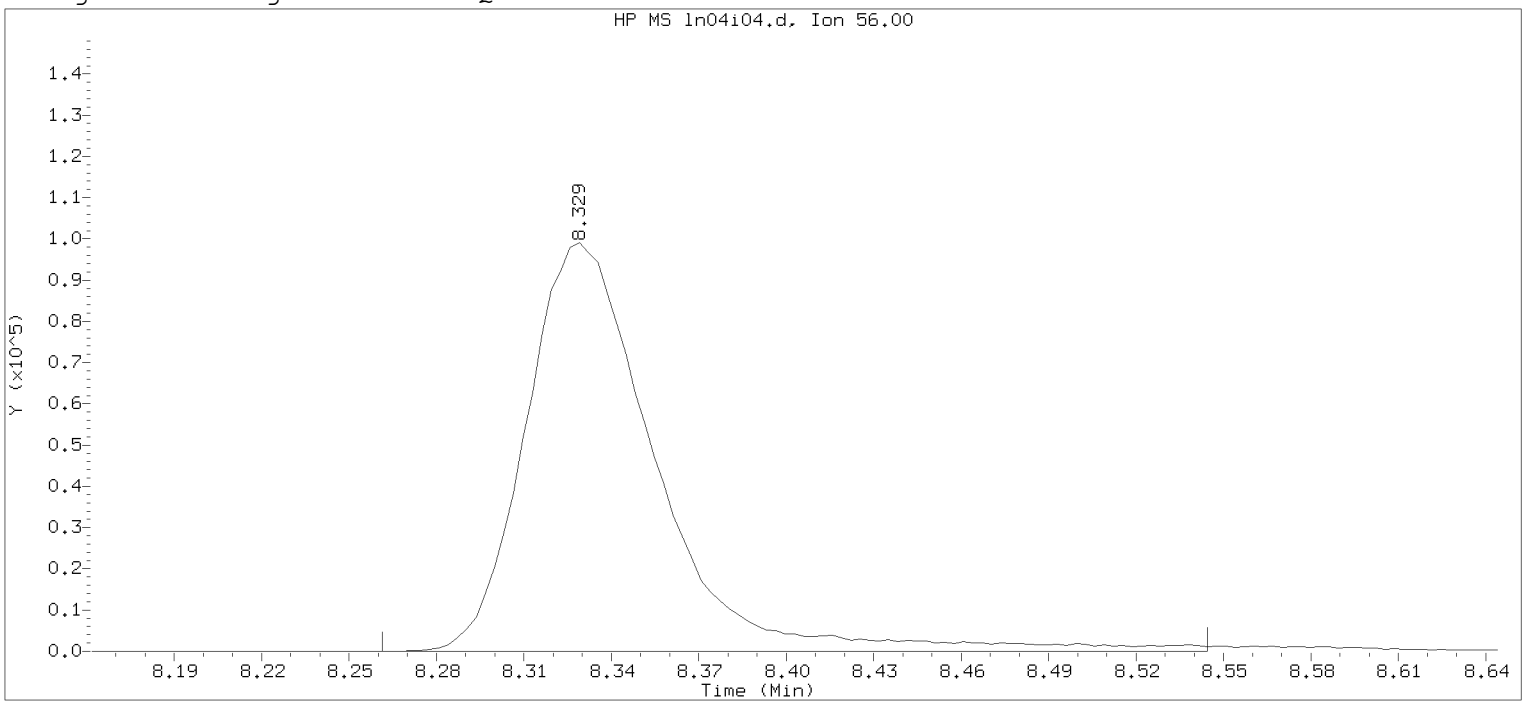
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

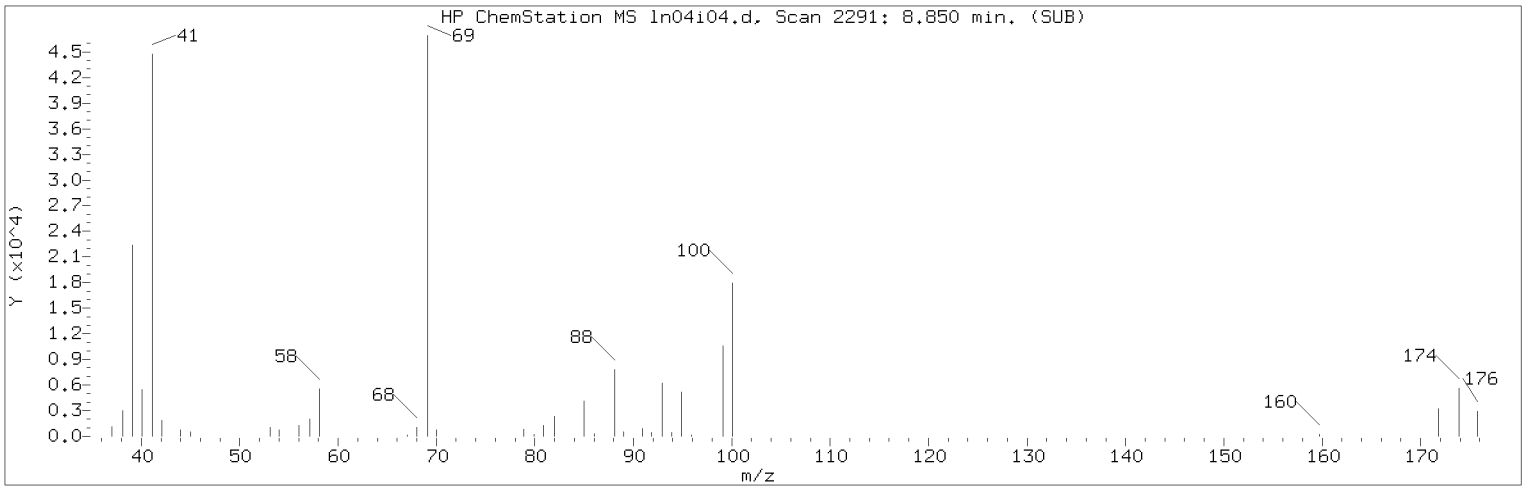
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

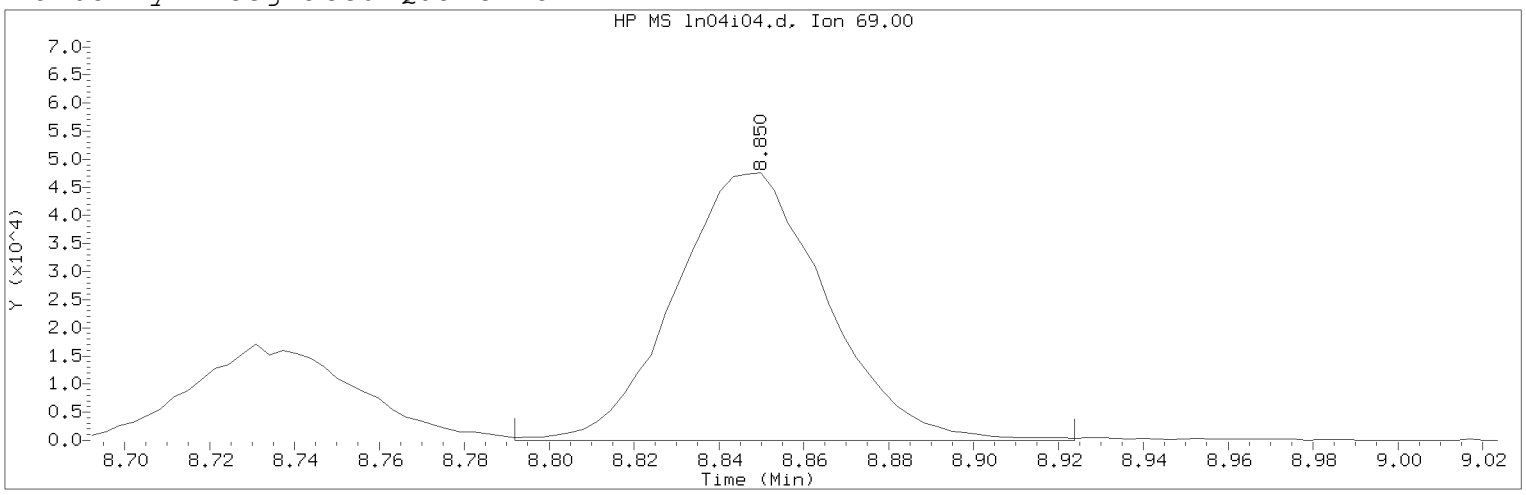
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area : 307443
On-column Amount (ng) : 938.0571
Integration start scan : 2107 Integration stop scan: 2195
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

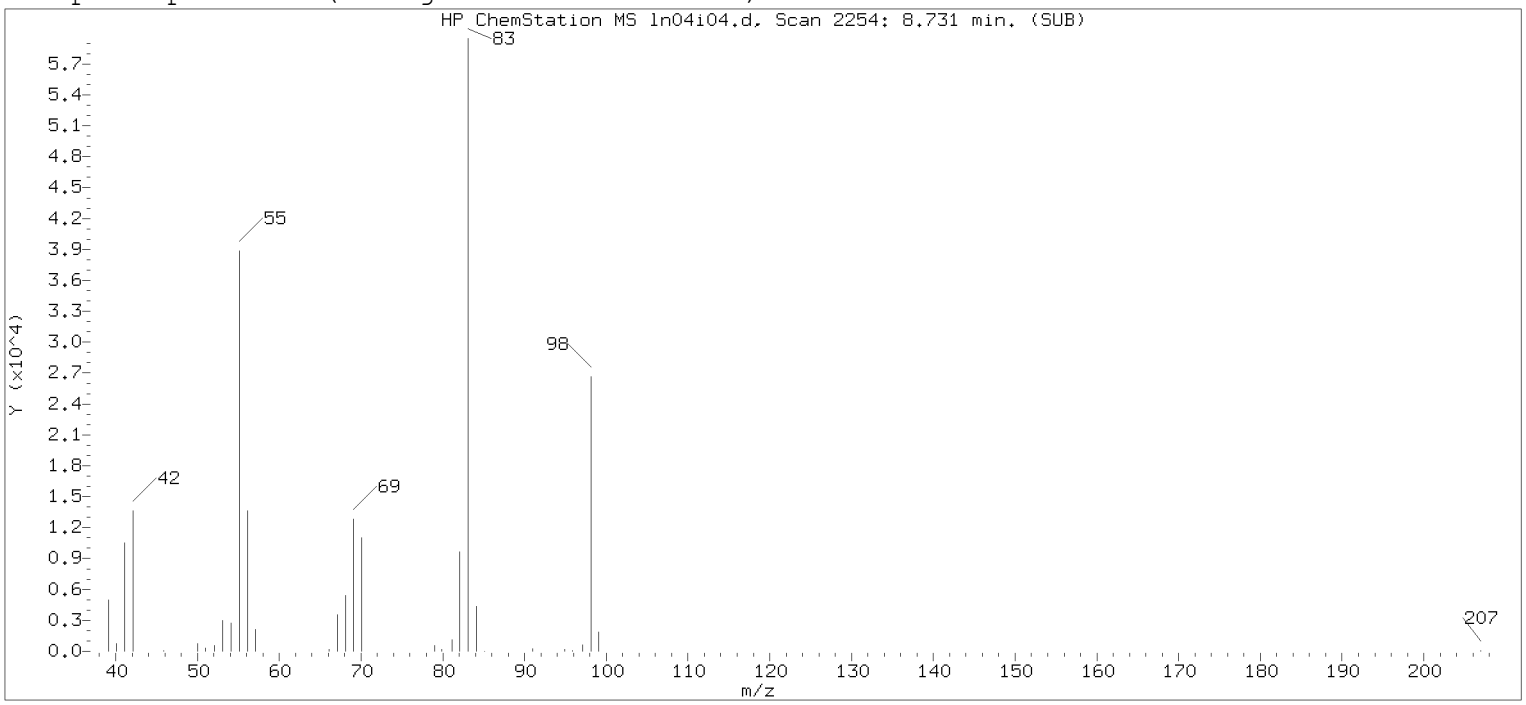
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2291
Retention Time (minutes): 8.850
Quant Ion : 69.00
Area (flag) : 117550A
On-Column Amount (ng) : 20.8506
Integration start scan : 2272 Integration stop scan: 2313
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

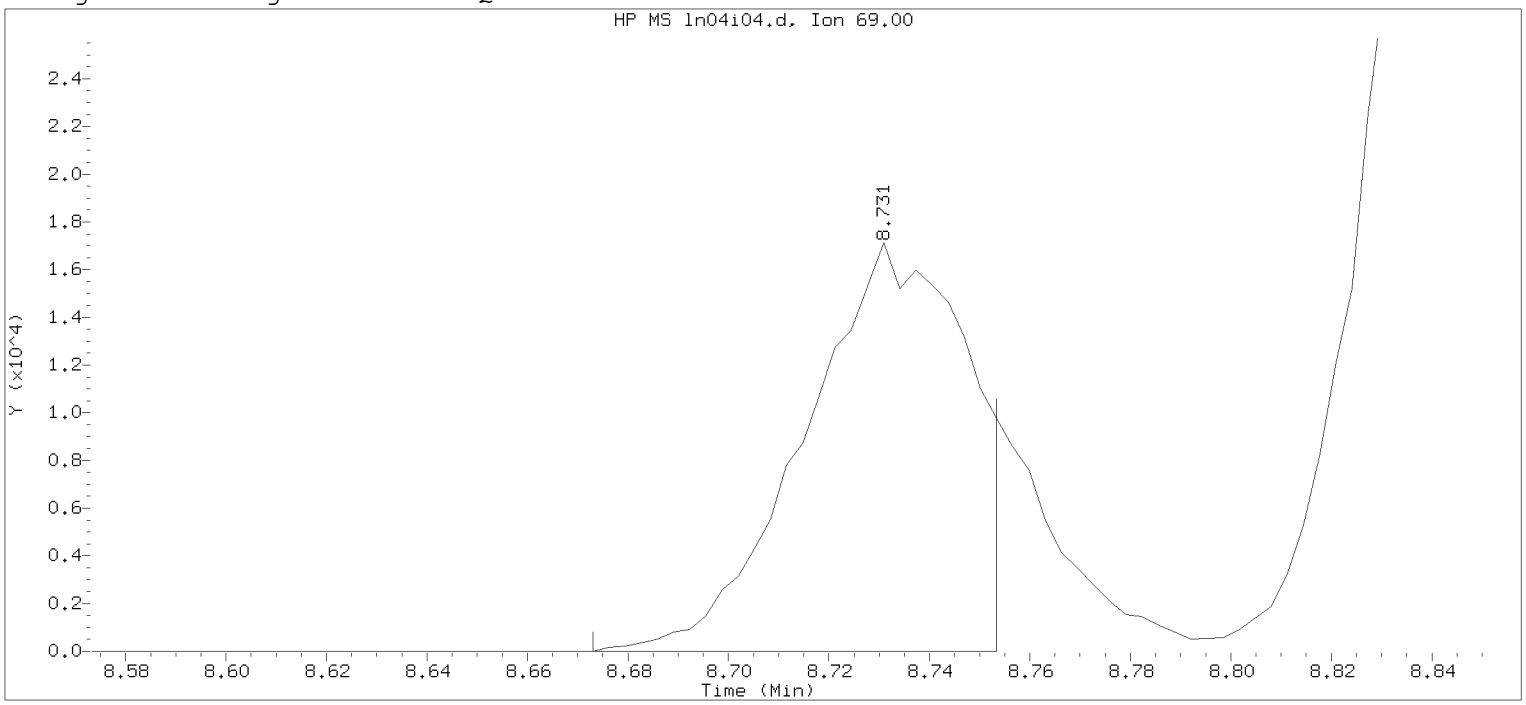
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

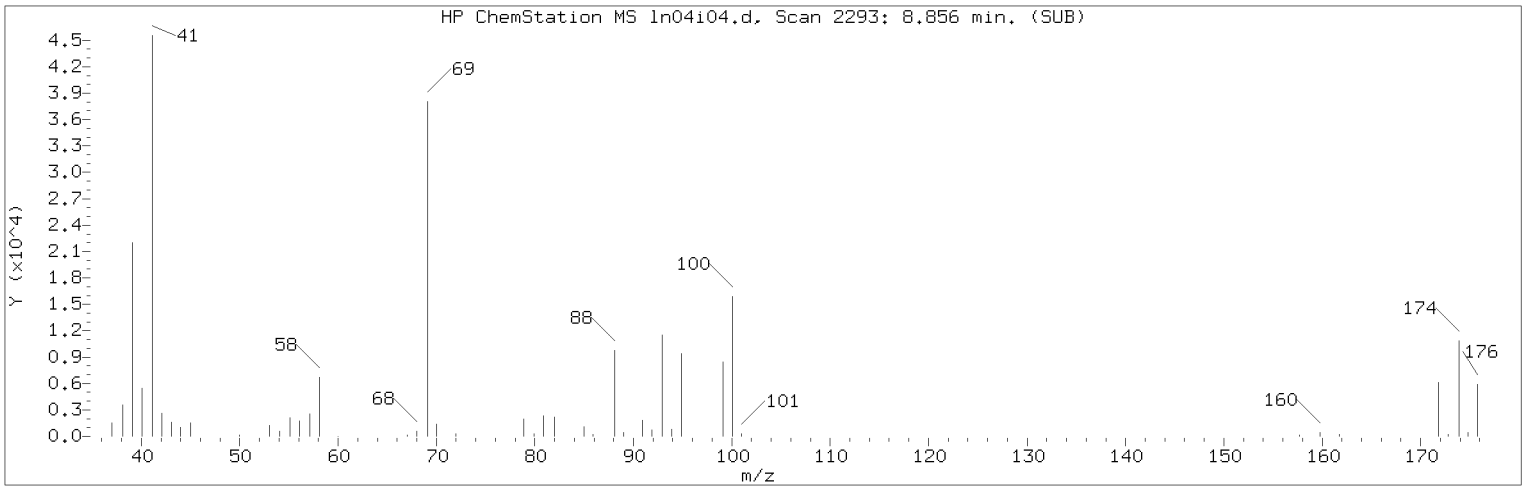
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

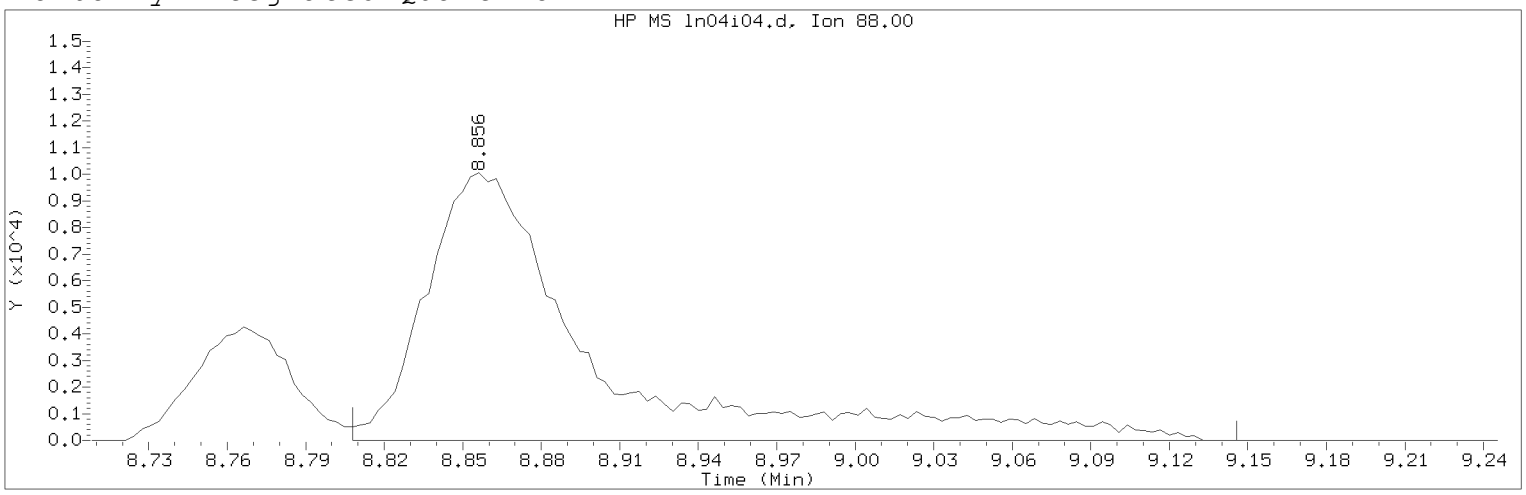
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2254
Retention Time (minutes): 8.731
Quant Ion : 69.00
Area : 37815
On-column Amount (ng) : 16.5923
Integration start scan : 2235 Integration stop scan: 2260
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

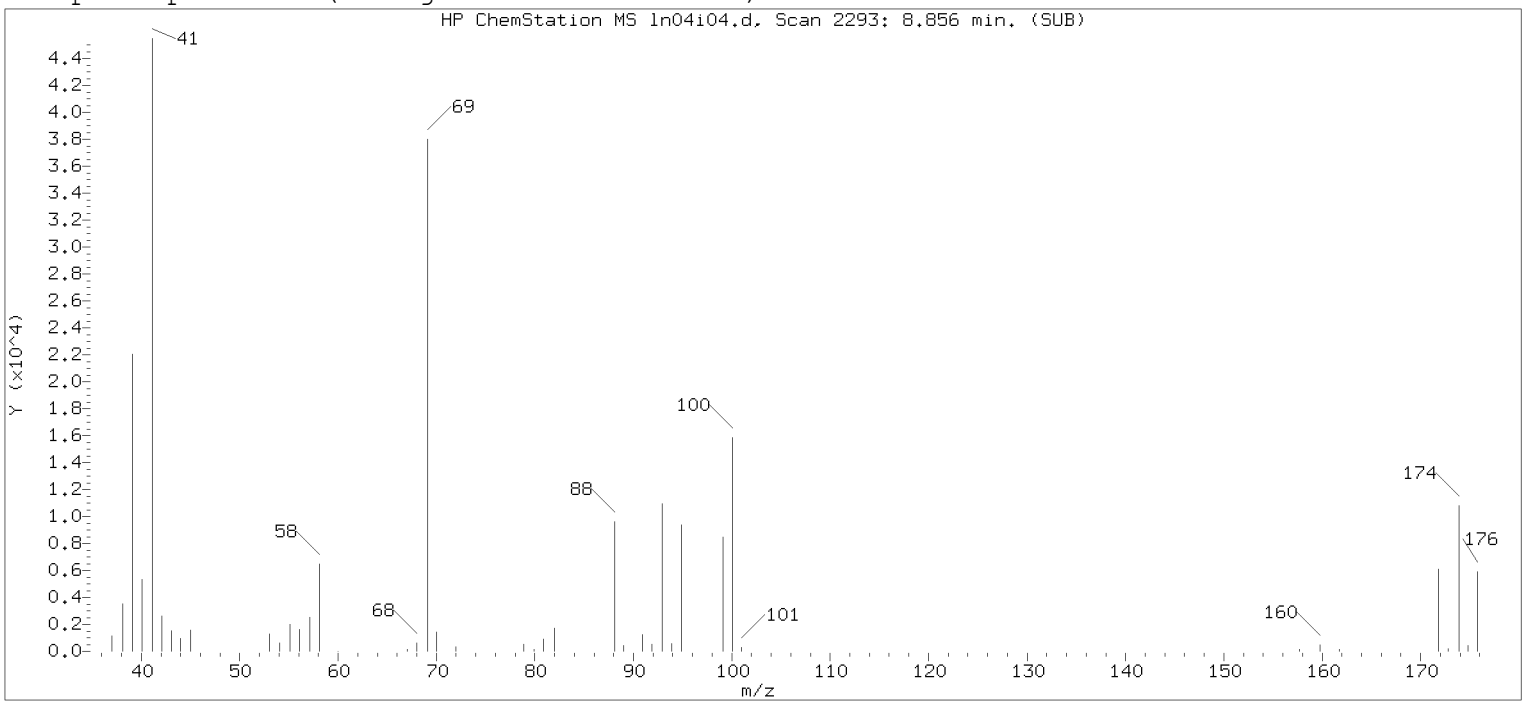
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 44376M
On-Column Amount (ng) : 513.0651
Integration start scan : 2277 Integration stop scan: 2382
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

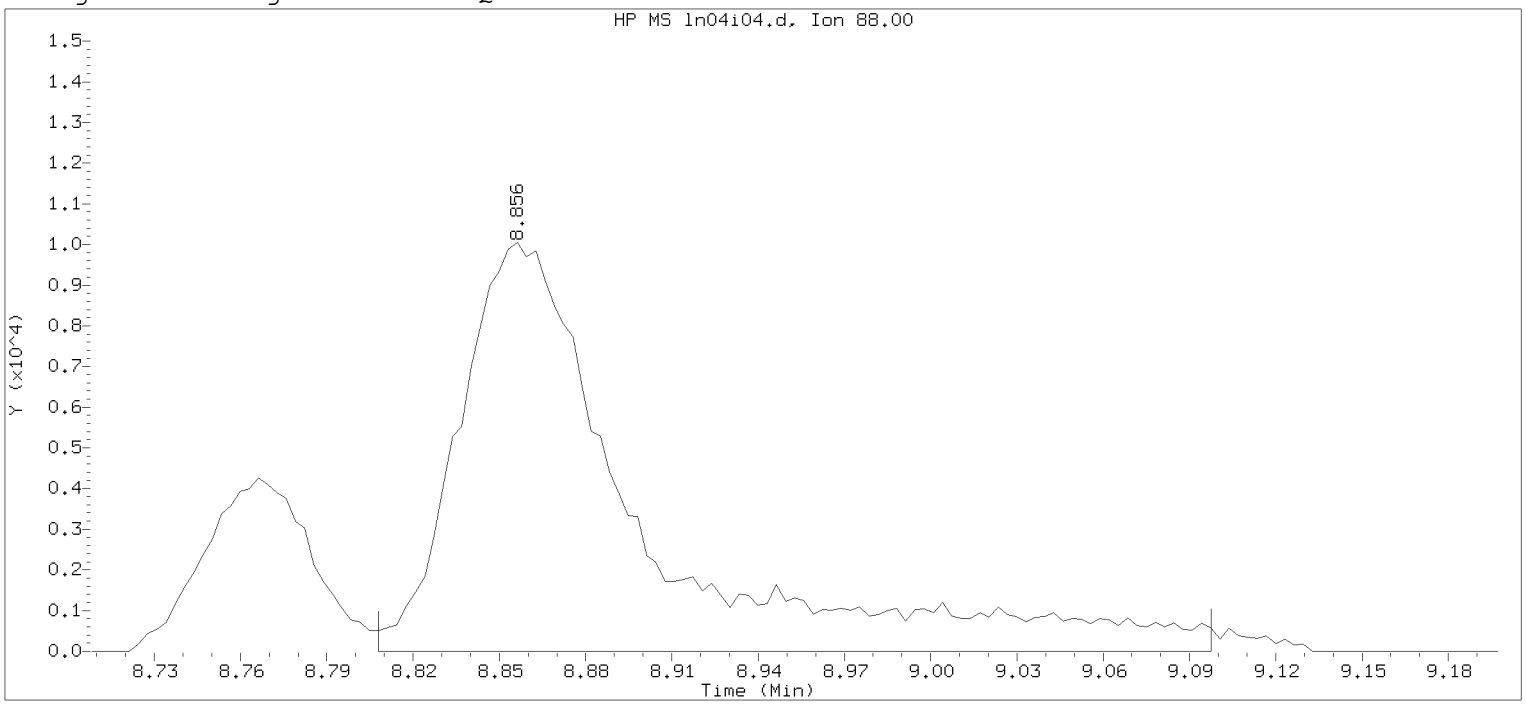
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

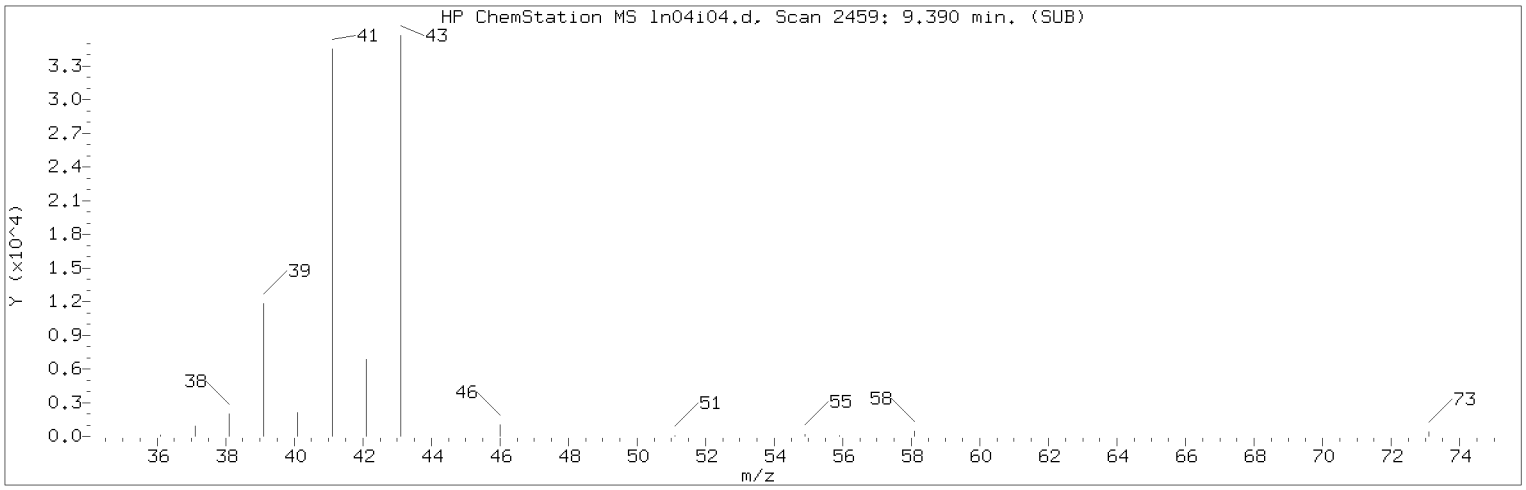
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

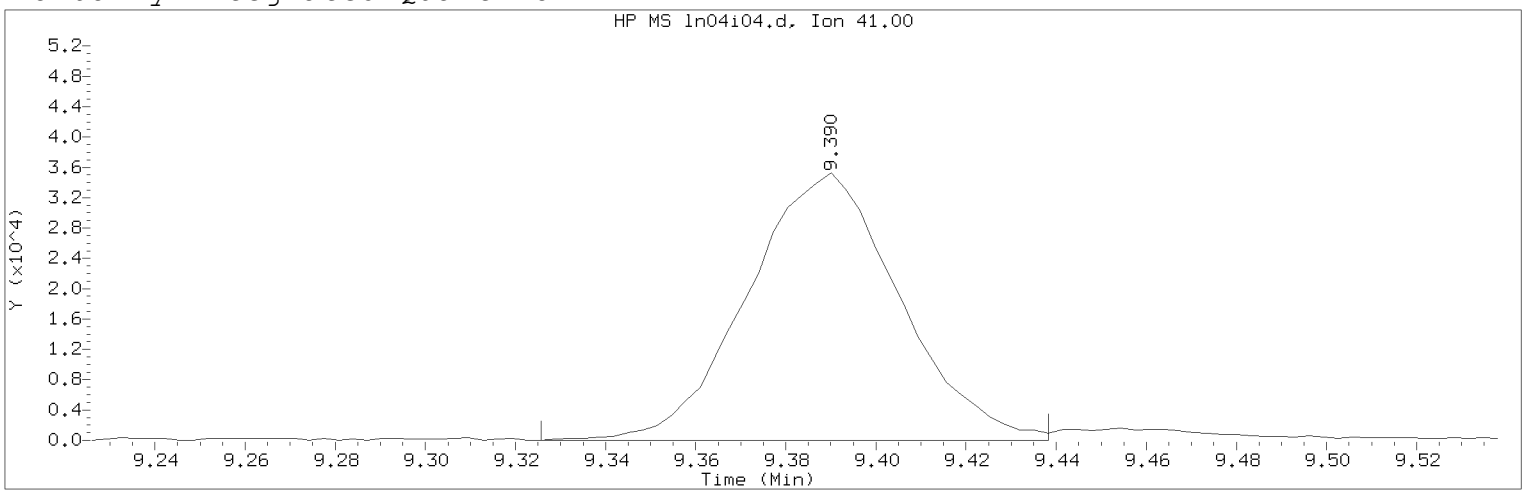
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area : 43671
On-column Amount (ng) : 571.7062
Integration start scan : 2277 Integration stop scan: 2367
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

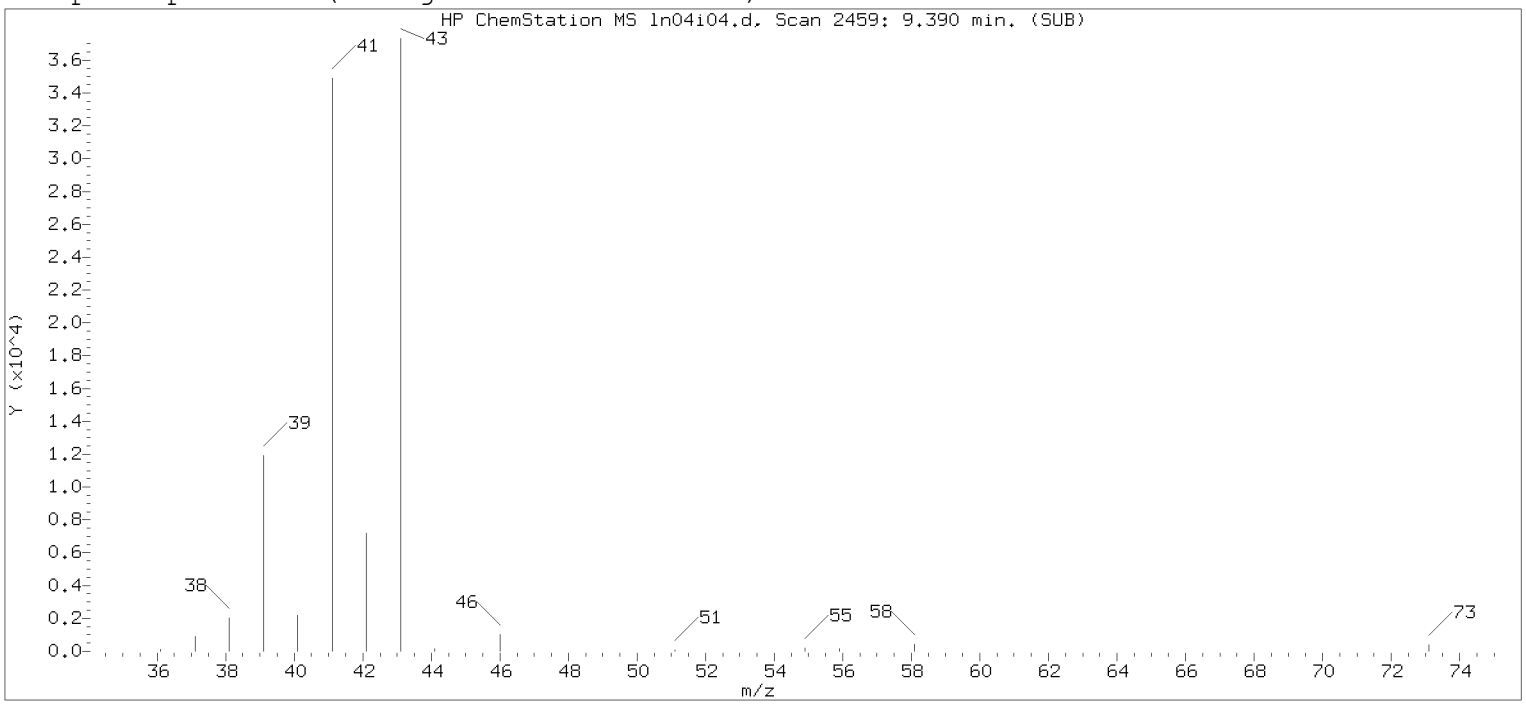
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2459
Retention Time (minutes): 9.390
Quant Ion : 41.00
Area (flag) : 82517M
On-Column Amount (ng) : 40.2472
Integration start scan : 2438 Integration stop scan: 2473
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

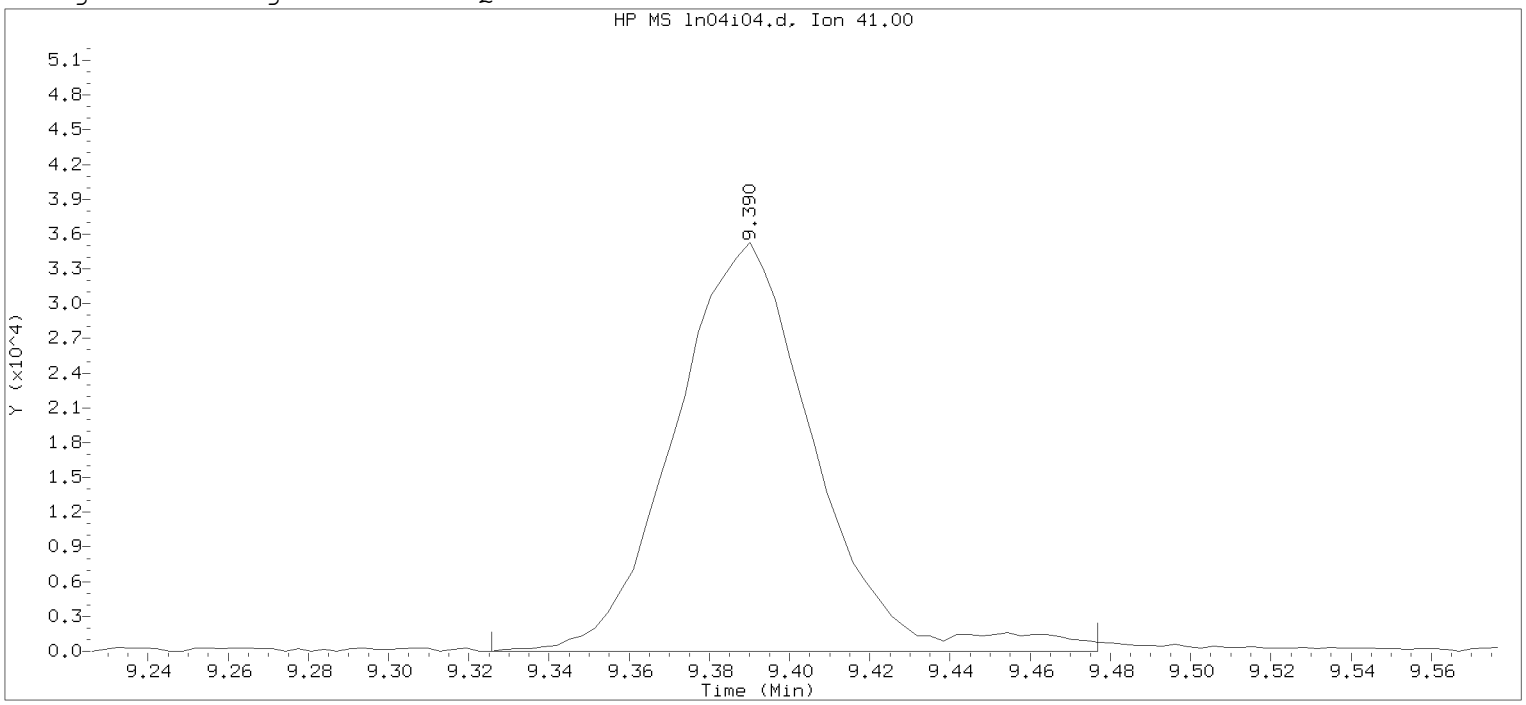
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

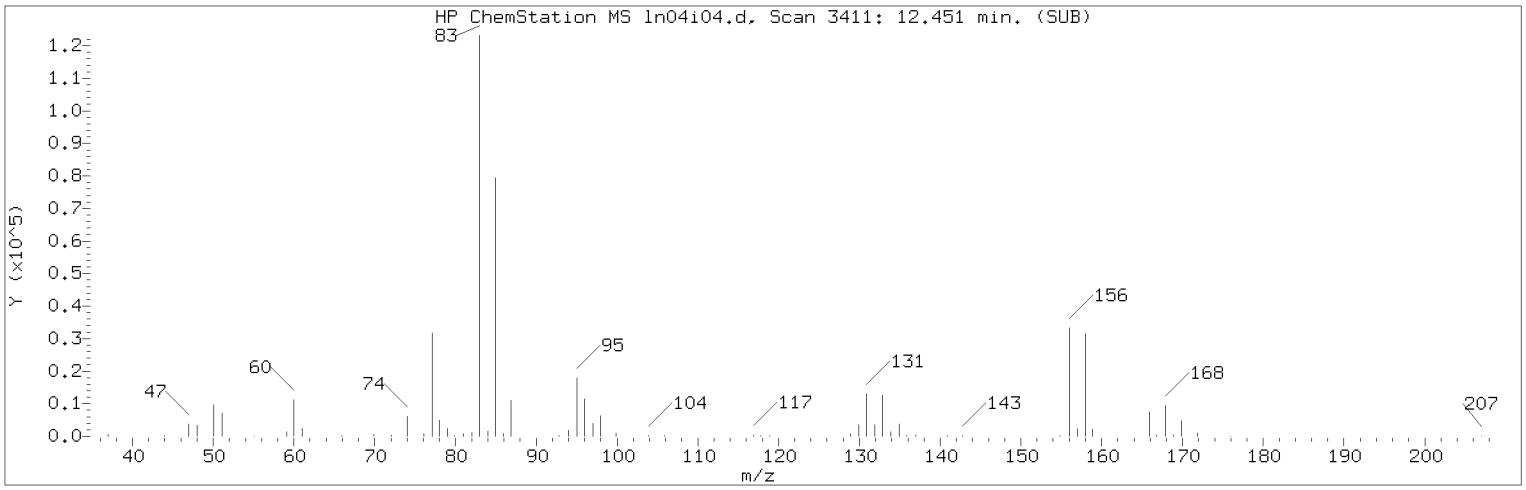
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

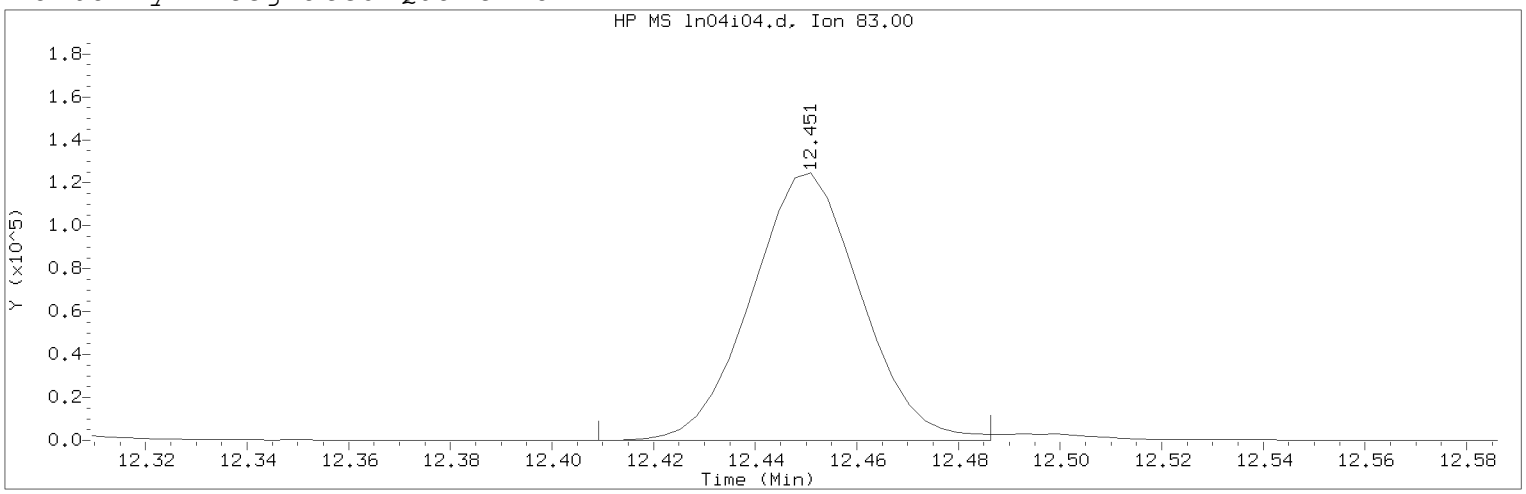
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2459
Retention Time (minutes): 9.390
Quant Ion : 41.00
Area : 85427
On-column Amount (ng) : 37.2727
Integration start scan : 2438 Integration stop scan: 2485
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

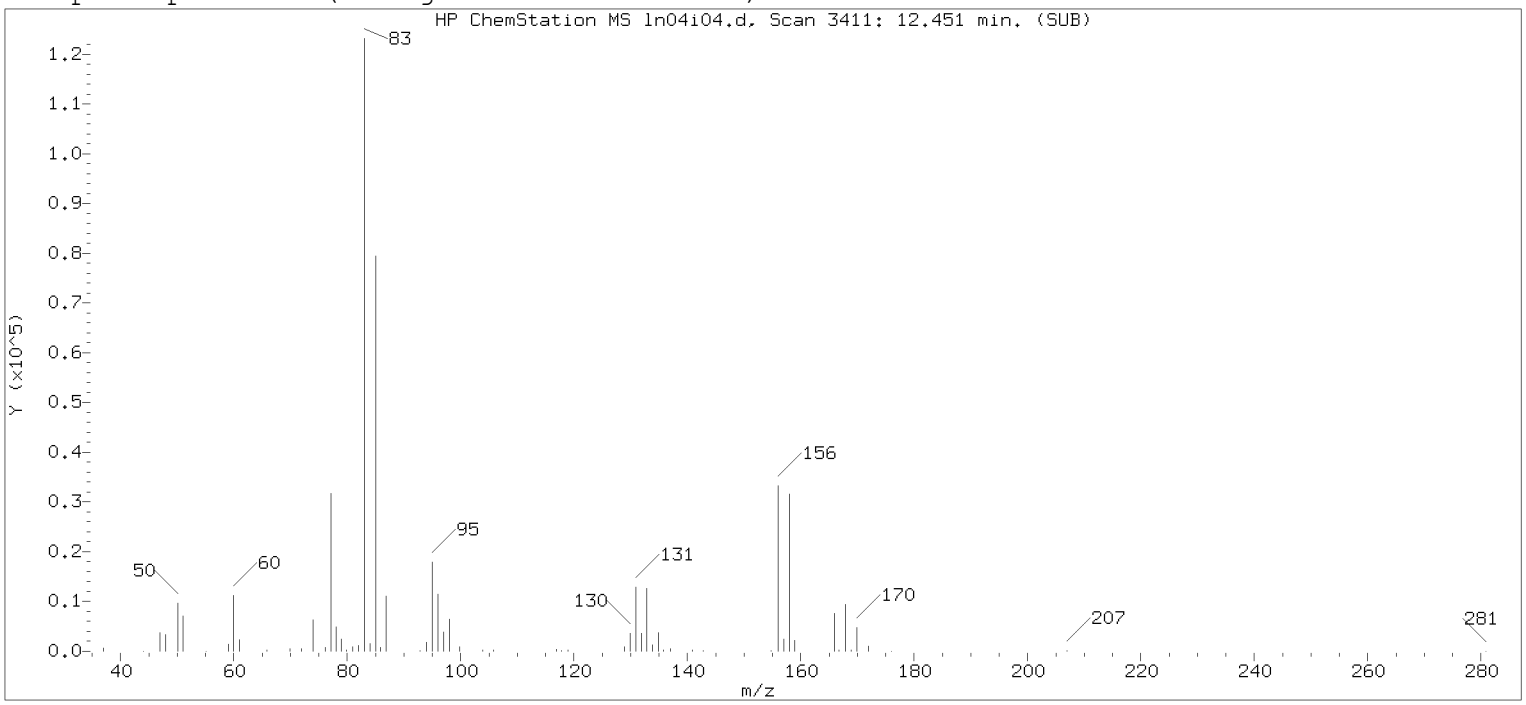
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 186119M
On-Column Amount (ng) : 20.6895
Integration start scan : 3397 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

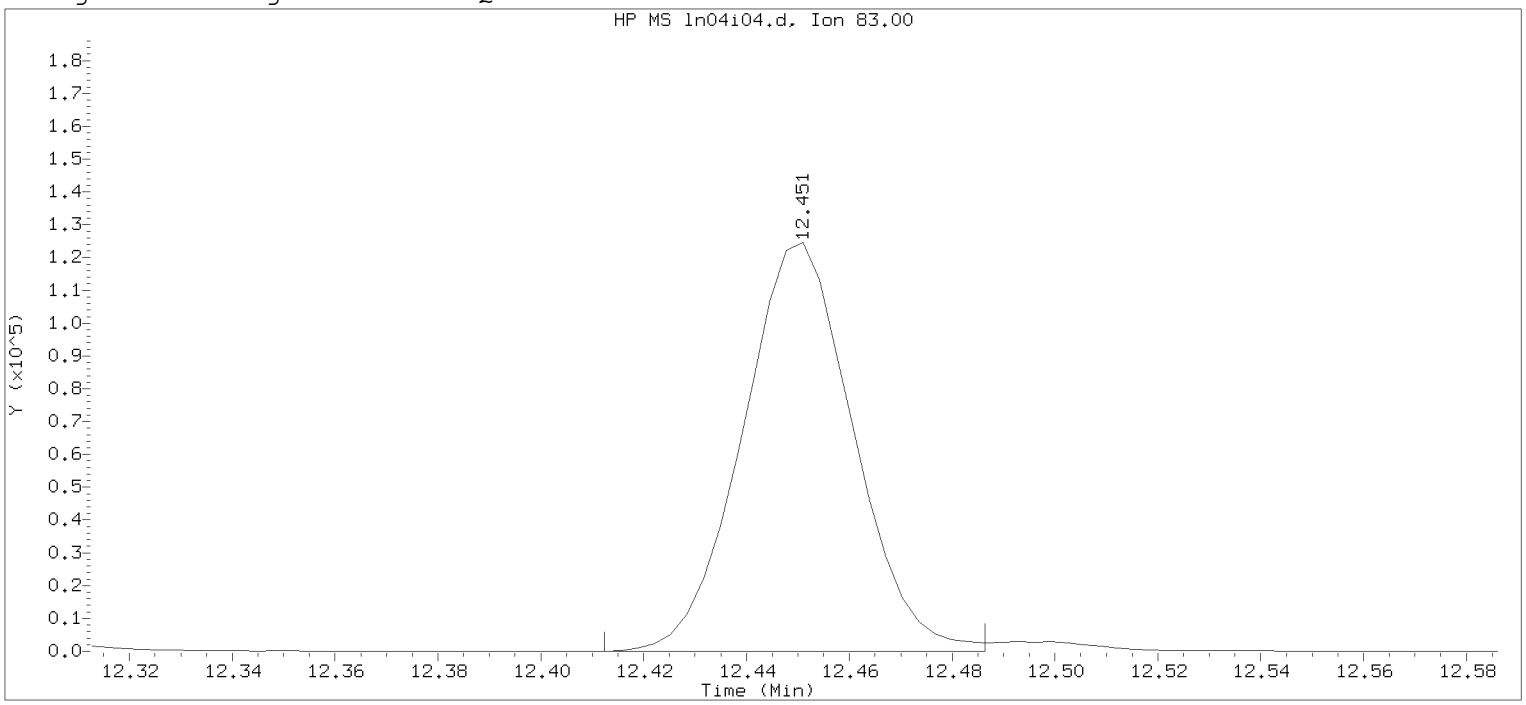
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

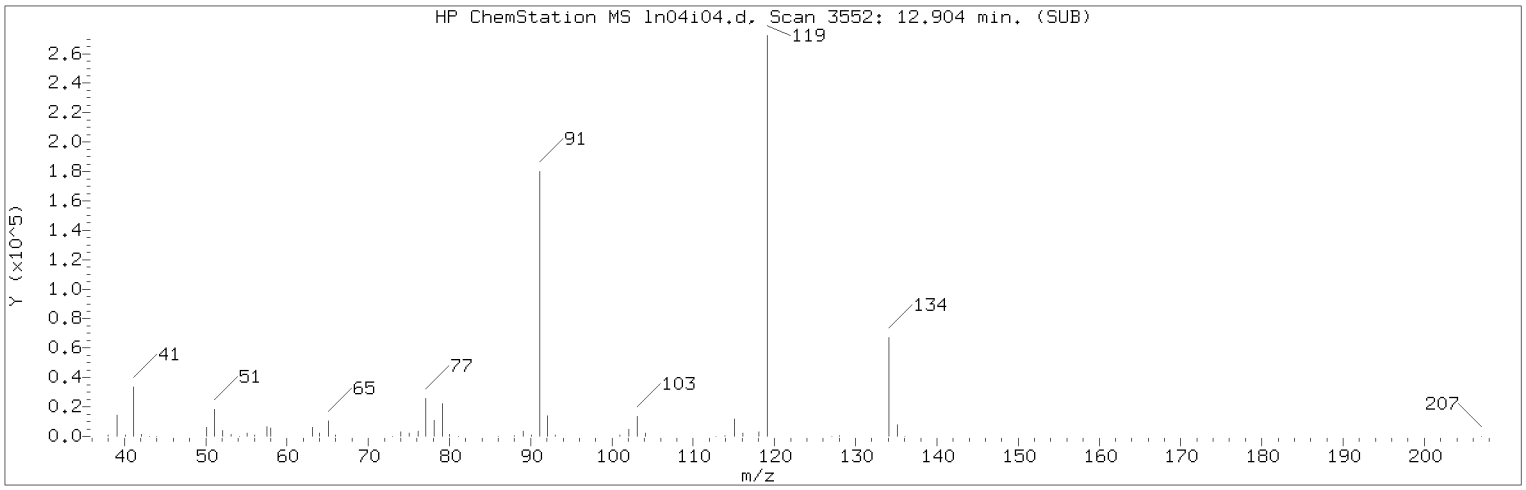
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

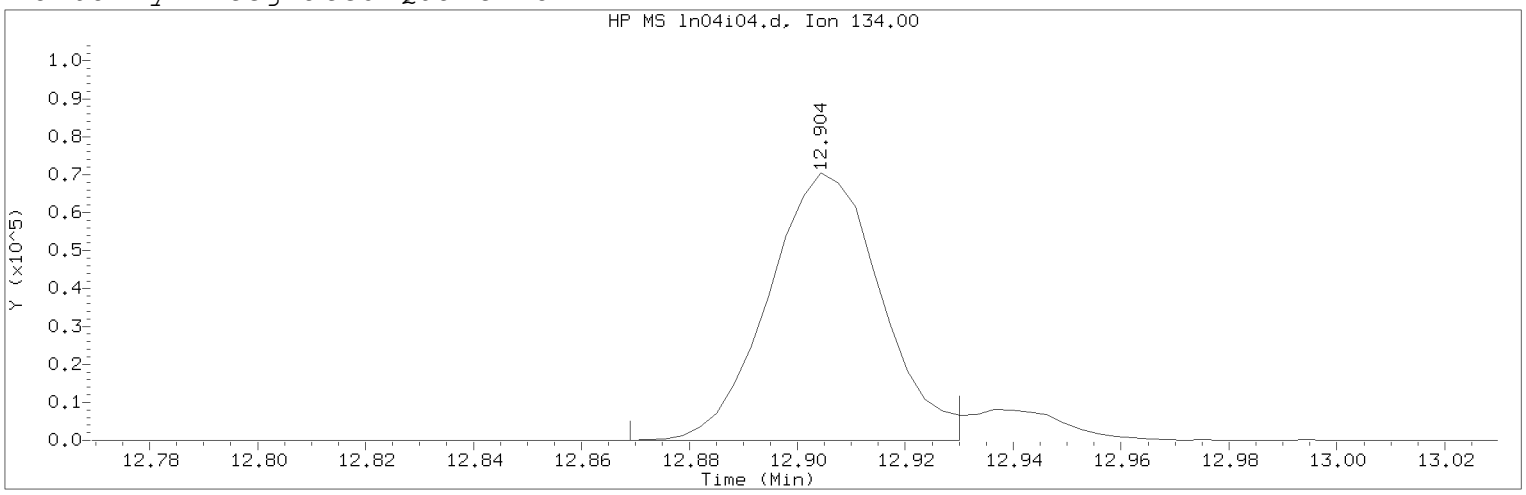
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 185866
On-column Amount (ng) : 19.5938
Integration start scan : 3398 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

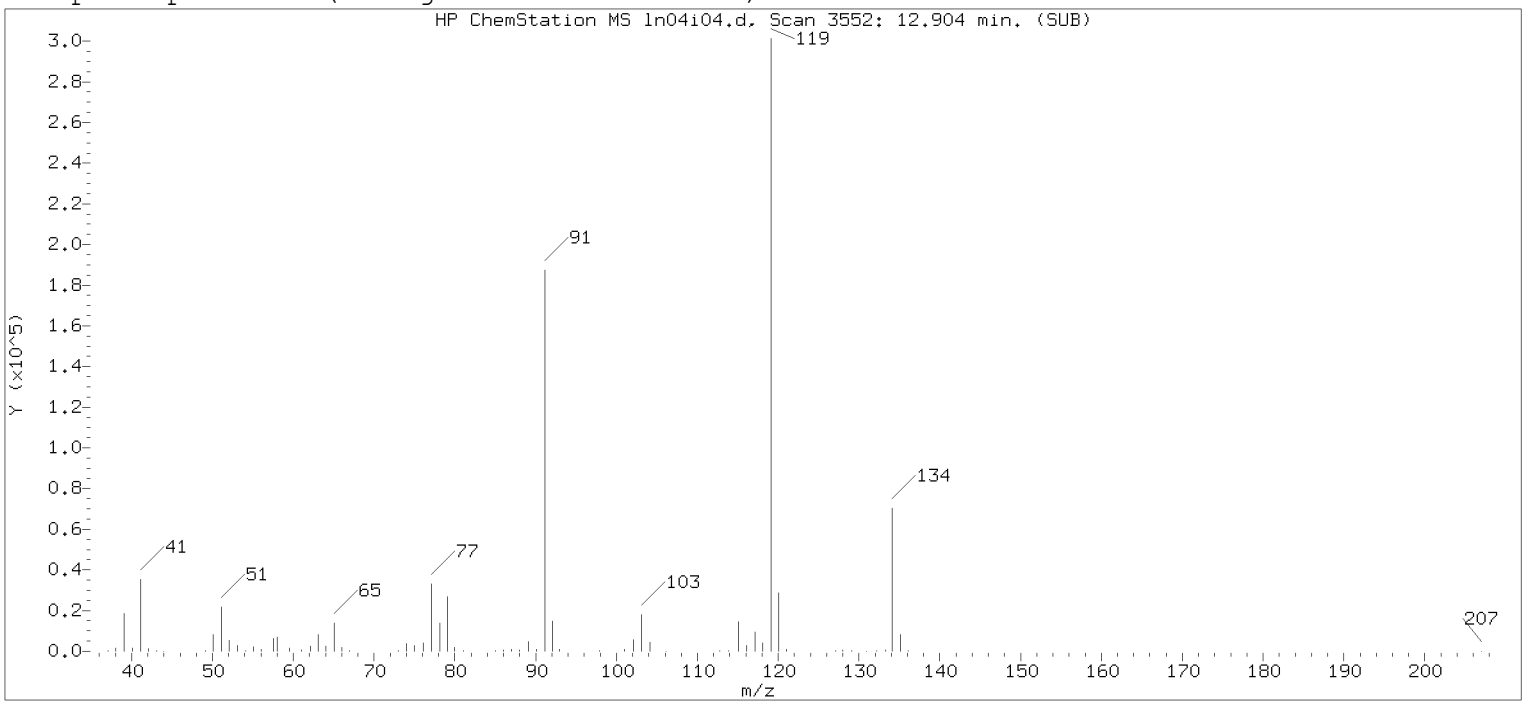
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 101571M
On-Column Amount (ng) : 21.6122
Integration start scan : 3540 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

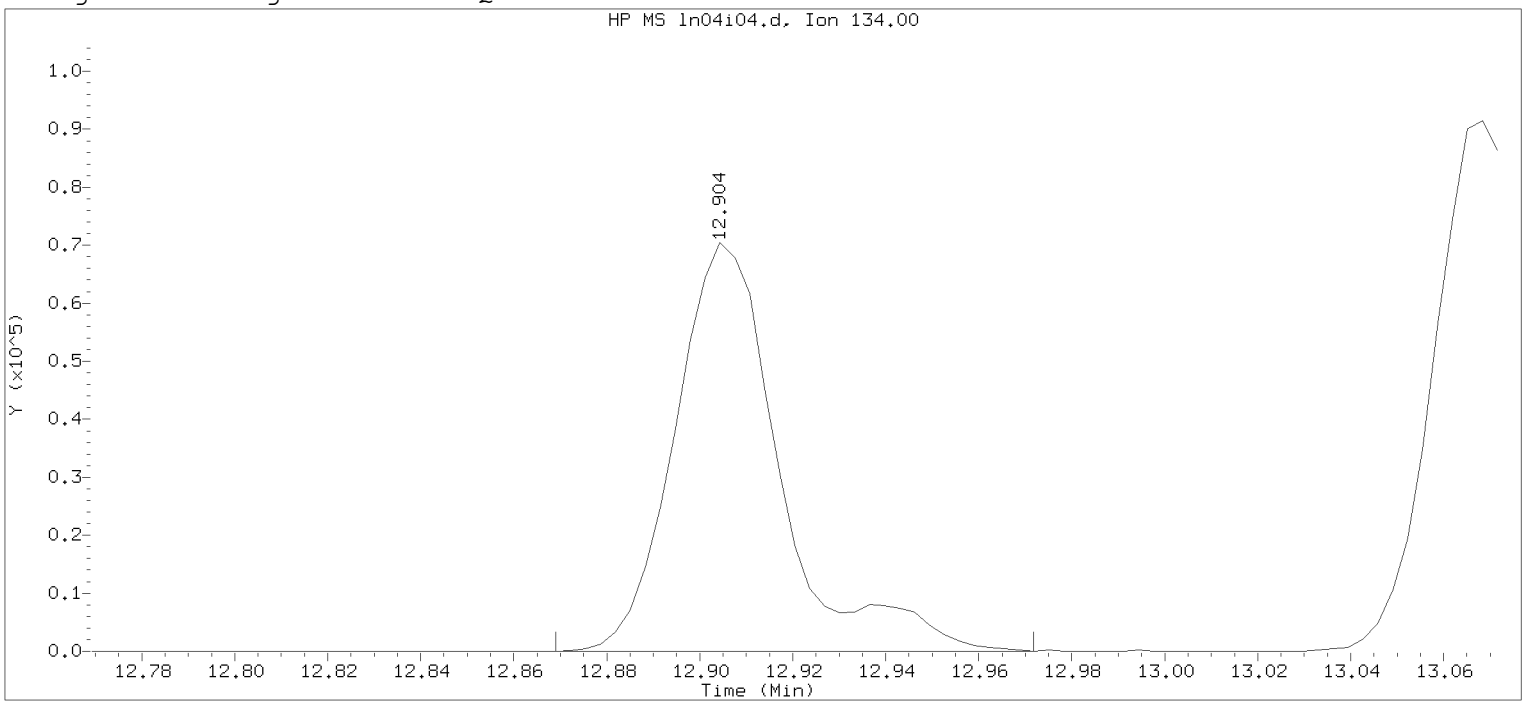
Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



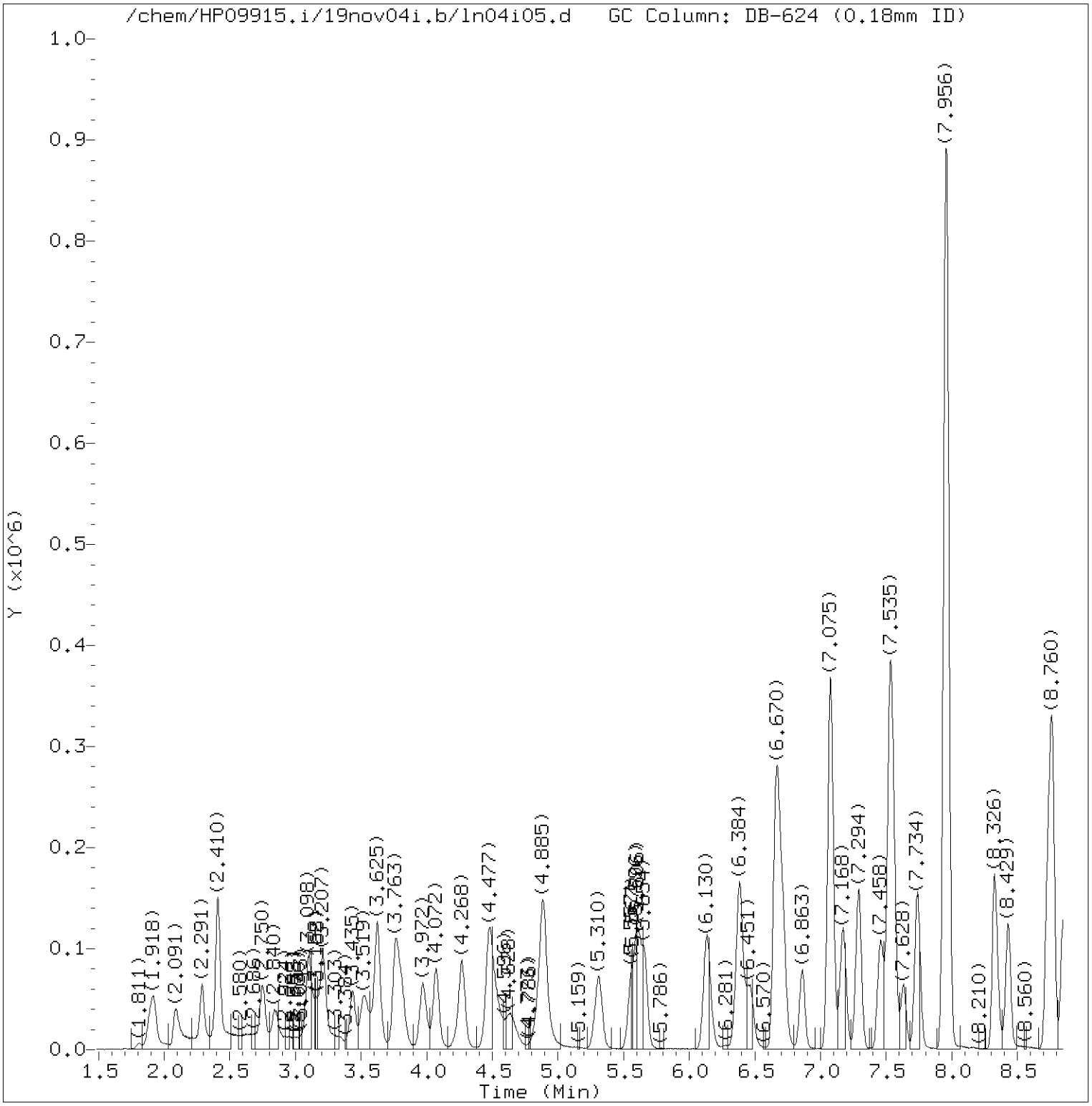
Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 110902
On-column Amount (ng) : 20.6897
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

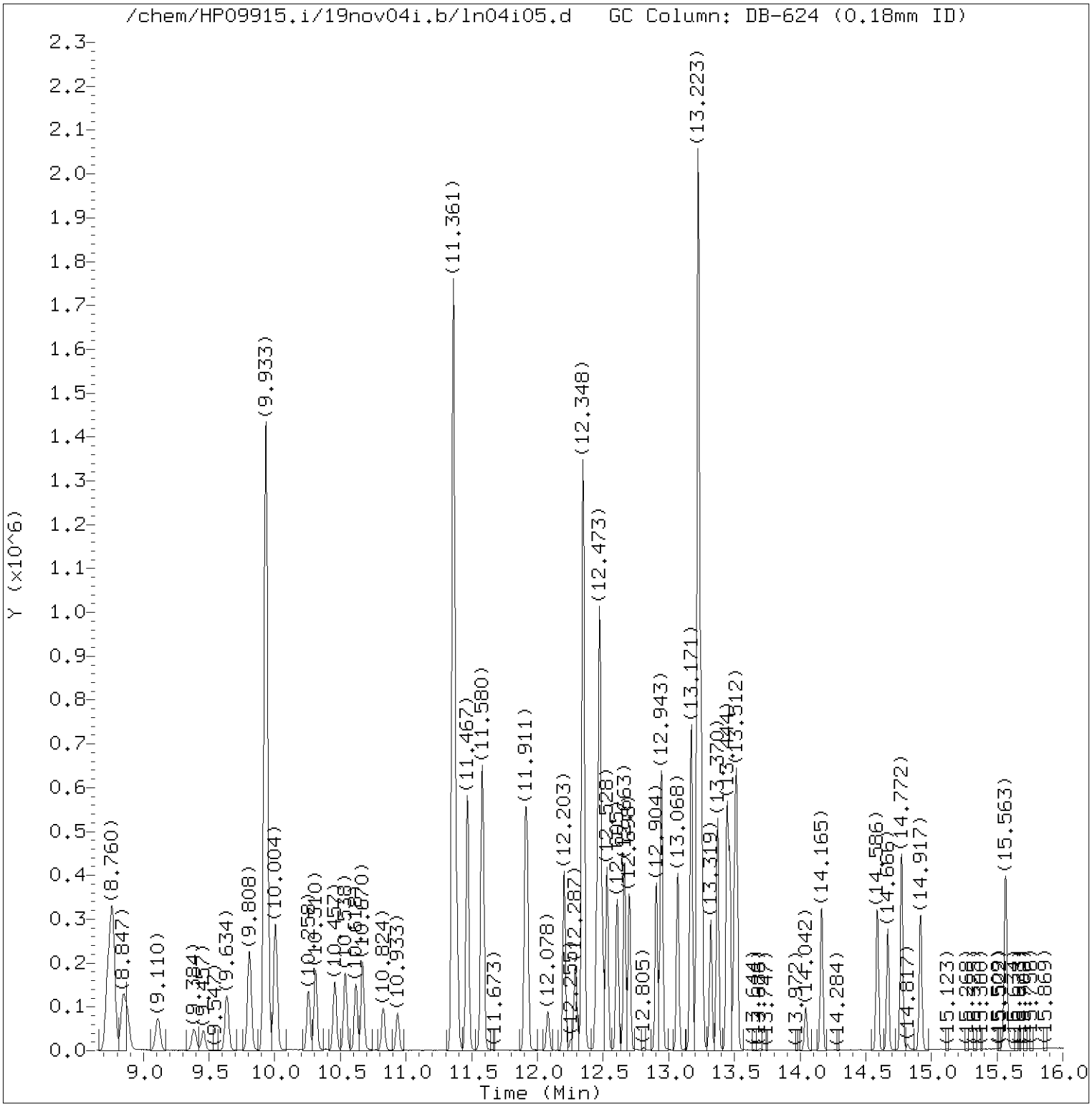
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.091	85	76947M	9.526
4) Chloromethane	(2)	2.291	50	76659	9.847
5) 1,3-Butadiene	(2)	2.406	39	60141M	9.304
6) Vinyl Chloride	(2)	2.413	62	76016	9.784
8) Bromomethane	(2)	2.750	94	54155	9.723
9) Chloroethane	(2)	2.853	64	42303	9.907
10) Dichlorofluoromethane	(2)	3.104	67	106956M	10.459
12) Trichlorofluoromethane	(2)	3.152	101	80624	9.638
11) n-Pentane	(2)	3.213	43	86389	8.739
14) Ethyl ether	(2)	3.438	59	52079	9.635
15) Freon 123a	(2)	3.519	67	65806	9.780
16) Acrolein	(1)	3.625	56	197662	100.013
17) 1,1-Dichloroethene	(2)	3.763	96	48467	9.871
17) 1,1-Dichloroethene	(2)	3.763	63	24200	9.831
19) Freon 113	(2)	3.792	101	51923	9.269
18) Acetone	(1)	3.805	58	17383	19.619
22) Methyl Iodide	(2)	3.969	142	101688	9.995
21) 2-Propanol	(1)	4.001	45	63841	100.227
23) Carbon Disulfide	(2)	4.075	76	179738	9.714
27) Methyl Acetate	(2)	4.245	43	62026	9.809
25) Allyl Chloride	(2)	4.268	41	86653	9.838
28) Methylene Chloride	(2)	4.474	84	58140	9.949
29)*t-Butyl alcohol-d10	(1)	4.509	65	263427M	250.000
30) t-Butyl alcohol	(1)	4.644	59	111005	100.090
31) Acrylonitrile	(2)	4.840	53	34130	10.032
33) Methyl Tertiary Butyl Ether	(2)	4.882	73	189173	10.147
32) trans-1,2-Dichloroethene	(2)	4.889	96	56133	9.883
34) n-Hexane	(2)	5.306	57	75187M	8.508
36) 1,1-Dichloroethane	(2)	5.557	63	99074	9.999
38) di-Isopropyl ether	(2)	5.606	45	191363	10.014
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	84906	9.551
40) Ethyl t-butyl ether	(2)	6.136	59	188350	10.156
43) 1,2-Dichloroethene (Total)	(2)		96	118698	19.696
44) 2-Butanone	(2)	6.364	43	85445	19.565
42) cis-1,2-Dichloroethene	(2)	6.387	96	62565	9.814
45) 2,2-Dichloropropane	(2)	6.396	77	74849	9.717
47) Propionitrile	(1)	6.464	54	136751	98.961
48) Methacrylonitrile	(2)	6.663	67	181171	49.366

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	34163	10.106
50) Tetrahydrofuran	(1)	6.724	71	24588	19.698
51) Chloroform	(2)	6.863	83	93507	9.867
52)$Dibromofluoromethane	(2)	7.072	113	280960	49.616
52)$Dibromofluoromethane	(2)	7.075	111	286315	49.589
53) 1,1,1-Trichloroethane	(2)	7.078	97	77742	9.611
54) Cyclohexane	(2)	7.175	56	96567	8.928
54) Cyclohexane	(2)	7.175	84	84021	8.942
54) Cyclohexane	(2)	7.175	69	29917	8.942
56) Carbon Tetrachloride	(2)	7.287	117	63638	9.276
55) 1,1-Dichloropropene	(2)	7.294	75	75943	9.694
58) Isobutyl Alcohol	(1)	7.458	41	94699	253.736
57)$1,2-Dichloroethane-d4	(2)	7.532	102	72410	50.173
57)$1,2-Dichloroethane-d4	(2)	7.528	65	317862	49.423
57)$1,2-Dichloroethane-d4	(2)	7.528	104	46131	50.043
60) Benzene	(2)	7.557	78	235083	9.978
61) 1,2-Dichloroethane	(2)	7.634	62	74555	9.839
61) 1,2-Dichloroethane	(2)	7.634	98	7256	9.676
65) t-Amyl methyl ether	(2)	7.740	73	187995	10.099
66)*Fluorobenzene	(2)	7.956	96	1158257	50.000
67) n-Heptane	(2)	7.959	43	65347MA	7.916
69) n-Butanol	(1)	8.326	56	166674M	518.868
71) Trichloroethene	(2)	8.425	95	57378	9.672
72) Methylcyclohexane	(2)	8.731	83	104101	9.459
72) Methylcyclohexane	(2)	8.731	98	46774	9.392
73) 1,2-Dichloropropane	(2)	8.766	63	59459	9.939
76) Methyl Methacrylate	(2)	8.843	69	56123	9.701
75) 1,4-Dioxane	(1)	8.859	88	22251M	252.018
74) Dibromomethane	(2)	8.875	93	37949	9.804
78) Bromodichloromethane	(2)	9.110	83	66403	9.560
79) 2-Nitropropane	(2)	9.387	41	38245M	18.178
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	24083	9.373
81) cis-1,3-Dichloropropene	(2)	9.638	75	89740	9.728
82) 4-Methyl-2-pentanone	(2)	9.808	43	182101	19.754
83)$Toluene-d8	(3)	9.933	98	1179588	50.250
83)$Toluene-d8	(3)	9.933	100	766795	50.427
88) Toluene	(3)	10.004	92	146792	9.974
90) 1,3-Dichloropropene (total)	(3)		100	170602	19.407

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.255	75	80862	9.679
91) Ethyl Methacrylate	(3)	10.310	69	101774	10.024
92) 1,1,2-Trichloroethane	(3)	10.457	97	55397	9.928
93) Tetrachloroethene	(3)	10.538	166	57668	9.252
94) 1,3-Dichloropropane	(3)	10.615	76	95319	10.005
96) 2-Hexanone	(3)	10.670	43	134577	19.858
97) Dibromochloromethane	(3)	10.824	129	54317	9.503
99) 1,2-Dibromoethane	(3)	10.937	107	59349	9.795
100)*Chlorobenzene-d5	(3)	11.358	117	897139	50.000
101) 1-Chlorohexane	(3)	11.364	91	68517	8.666
102) Chlorobenzene	(3)	11.383	112	167497	10.065
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	53804	9.812
104) Ethylbenzene	(3)	11.467	91	273085	9.708
106) m+p-Xylene	(3)	11.583	106	214450	19.380
108) Xylene (Total)	(3)		106	321712	29.193
107) o-Xylene	(3)	11.908	106	107262	9.813
109) Styrene	(3)	11.924	104	181265	10.036
110) Bromoform	(3)	12.078	173	38599	9.038
111) Isopropylbenzene	(3)	12.203	105	257704	9.400
112) Cyclohexanone	(1)	12.290	55	84173	243.422
114)$4-Bromofluorobenzene	(3)	12.348	95	448980	50.511
114)$4-Bromofluorobenzene	(3)	12.348	174	372460	50.544
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	99221M	10.583
115) Bromobenzene	(4)	12.464	156	73059	9.795
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	144573	49.994
117) 1,2,3-Trichloropropane	(4)	12.496	110	30082	10.457
119) n-Propylbenzene	(4)	12.528	91	295857	9.079
120) 2-Chlorotoluene	(4)	12.608	126	64871	9.370
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	216905	9.159
121) 4-Chlorotoluene	(4)	12.698	126	68187	9.462
124) tert-Butylbenzene	(4)	12.907	134	42119M	8.599
125) Pentachloroethane	(4)	12.936	167	40747	9.662
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	231031	9.256
127) sec-Butylbenzene	(4)	13.068	105	254340	8.702
129) 1,3-Dichlorobenzene	(4)	13.168	146	133435	9.735
130) p-Isopropyltoluene	(4)	13.171	119	222820	8.812
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	496298	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	137520	9.678

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

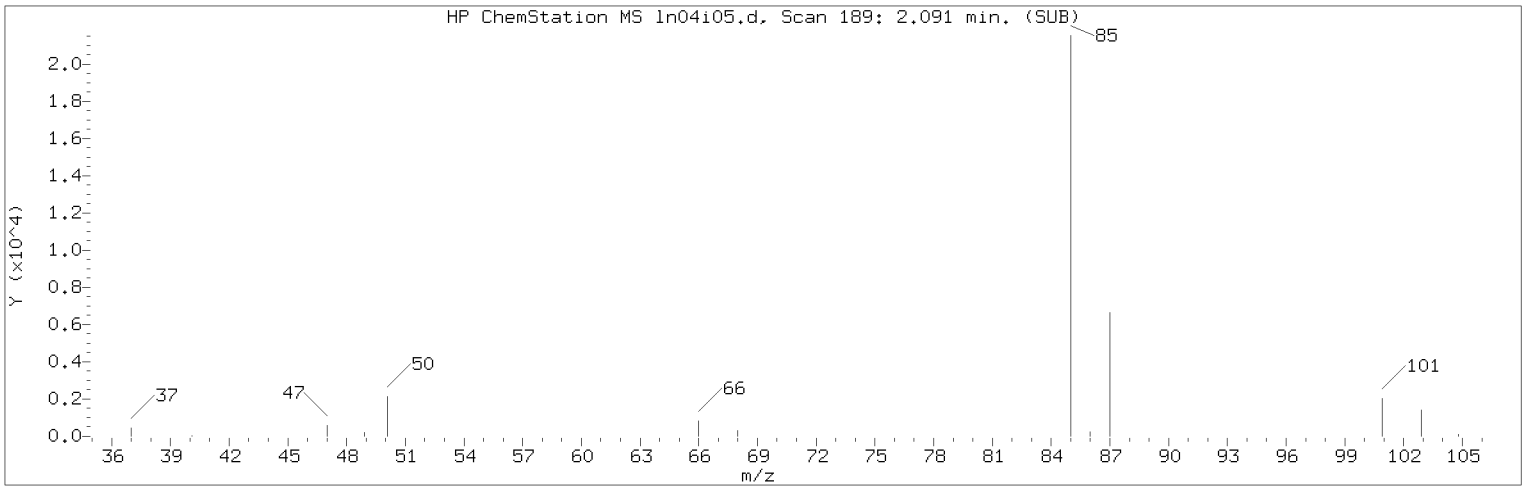
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

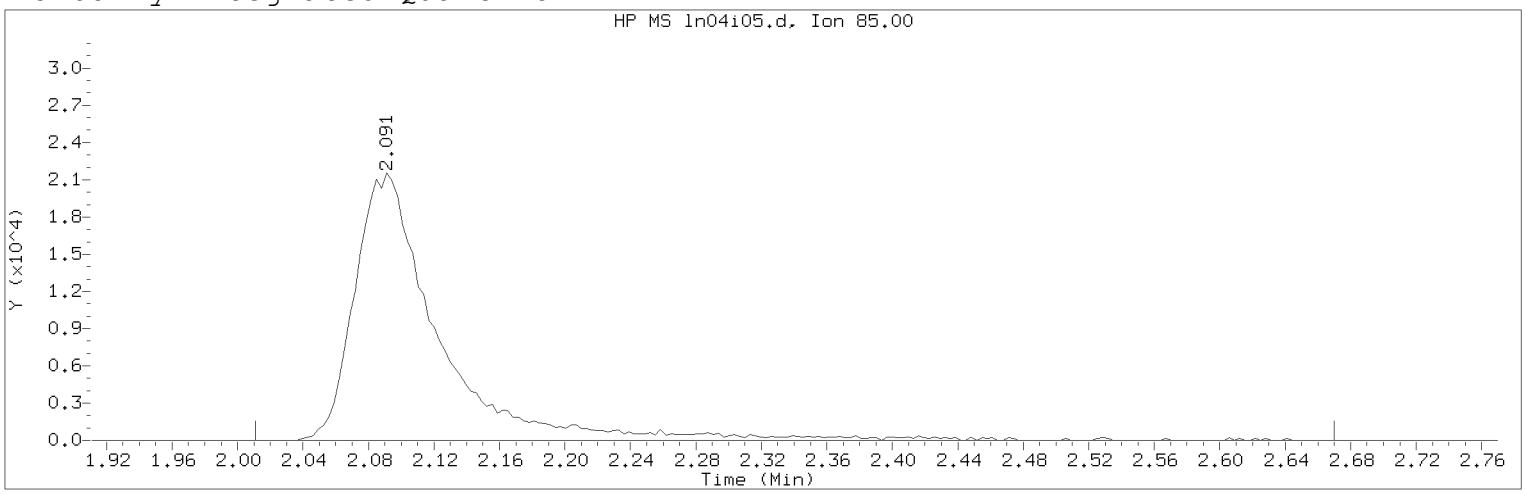
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	263873	9.980
135) Benzyl Chloride	(4)	13.319	91	189013	9.442
136) 1,3-Diethylbenzene	(4)	13.370	119	162518	9.876
141) Diethylbenzene (total)	(4)		100	469676	29.503
137) 1,4-Diethylbenzene	(4)	13.444	119	170802	9.797
139) n-Butylbenzene	(4)	13.464	92	112696	8.717
138) 1,2-Dichlorobenzene	(4)	13.502	146	133767	9.890
140) 1,2-Diethylbenzene	(4)	13.518	119	136356	9.830
142) 1,2-Dibromo-3-chloropropane	(4)	14.042	75	21471	10.462
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	94358	9.080
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	93971	9.300
147) Hexachlorobutadiene	(4)	14.666	225	44299	9.286
148) Naphthalene	(4)	14.772	128	328233	10.105
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	92049	9.363
150) 2-Methylnaphthalene	(4)	15.563	142	202392	10.118

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

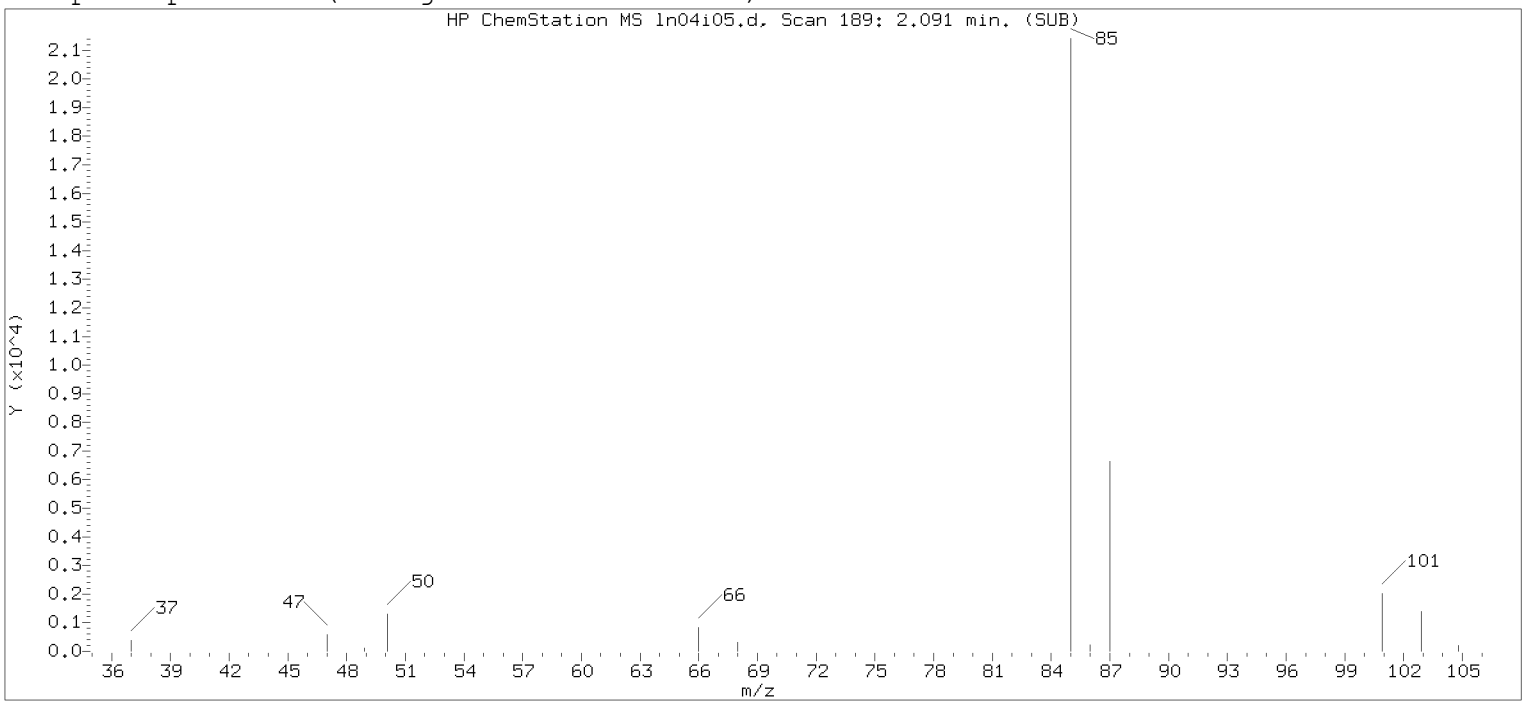
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 189
Retention Time (minutes): 2.091
Quant Ion : 85.00
Area (flag) : 76947M
On-Column Amount (ng) : 9.5263
Integration start scan : 163 Integration stop scan: 368
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

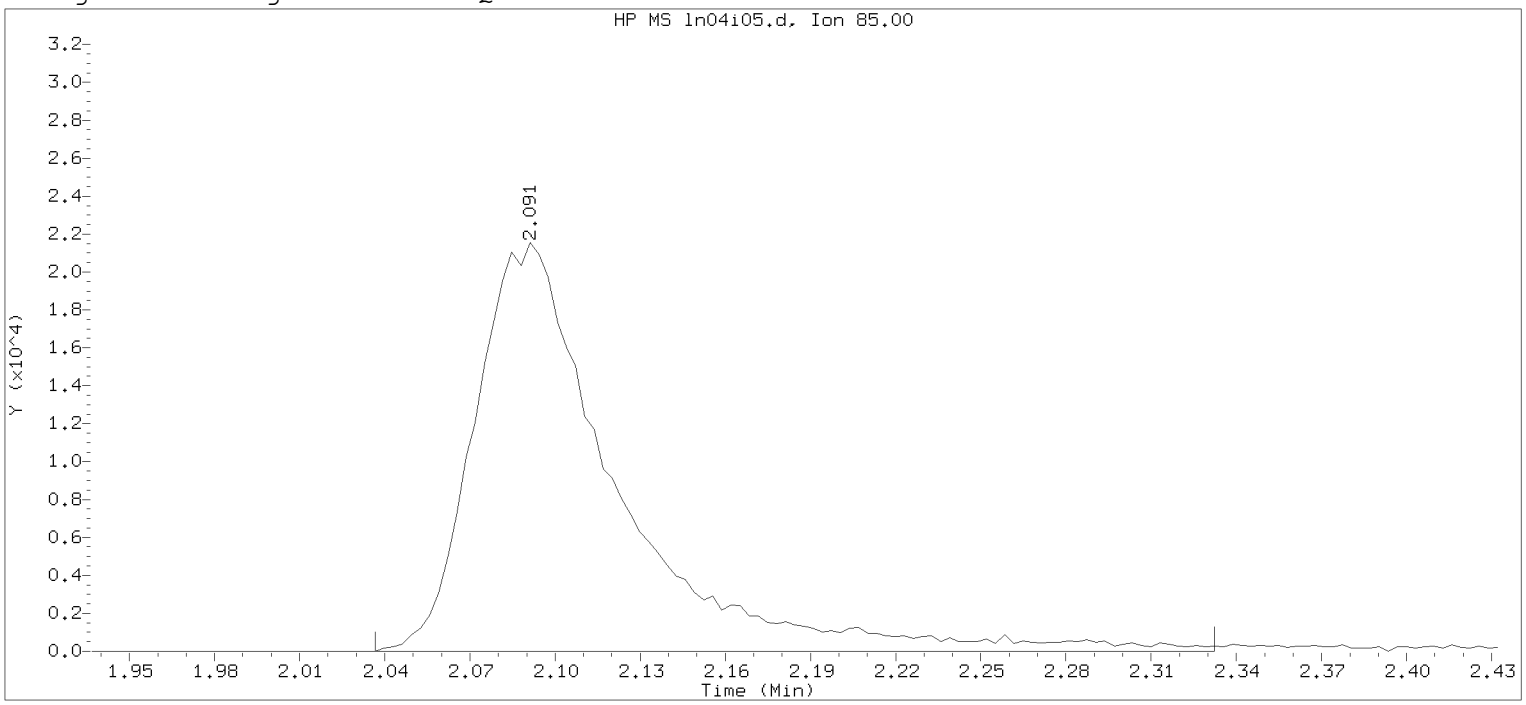
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

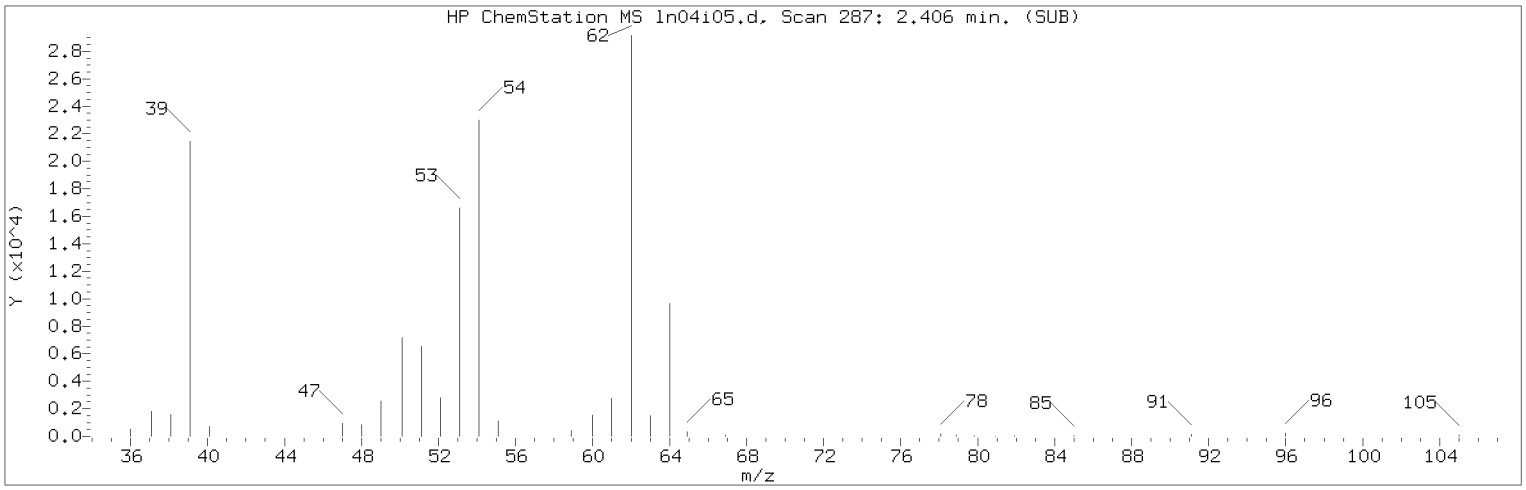
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

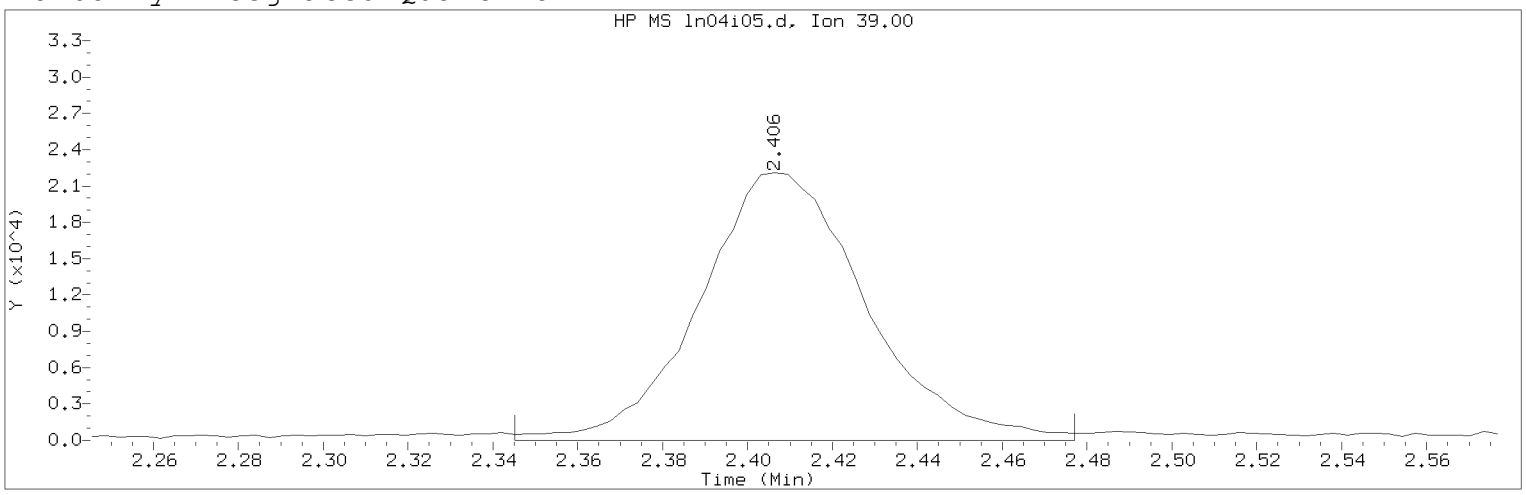
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 189
Retention Time (minutes): 2.091
Quant Ion : 85.00
Area : 74877
On-column Amount (ng) : 9.3136
Integration start scan : 171 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user: CW mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

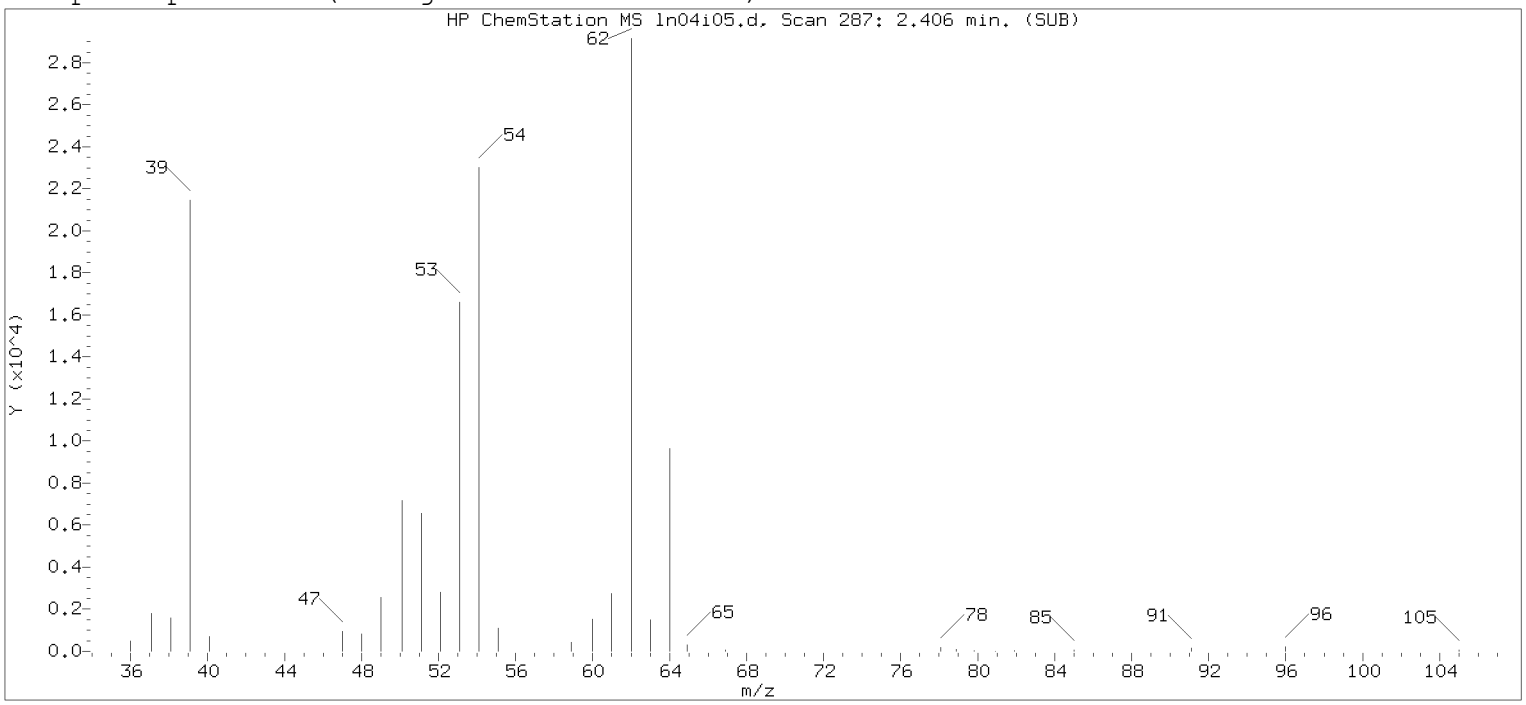
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 60141M
On-Column Amount (ng) : 9.3042
Integration start scan : 267 Integration stop scan: 308
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

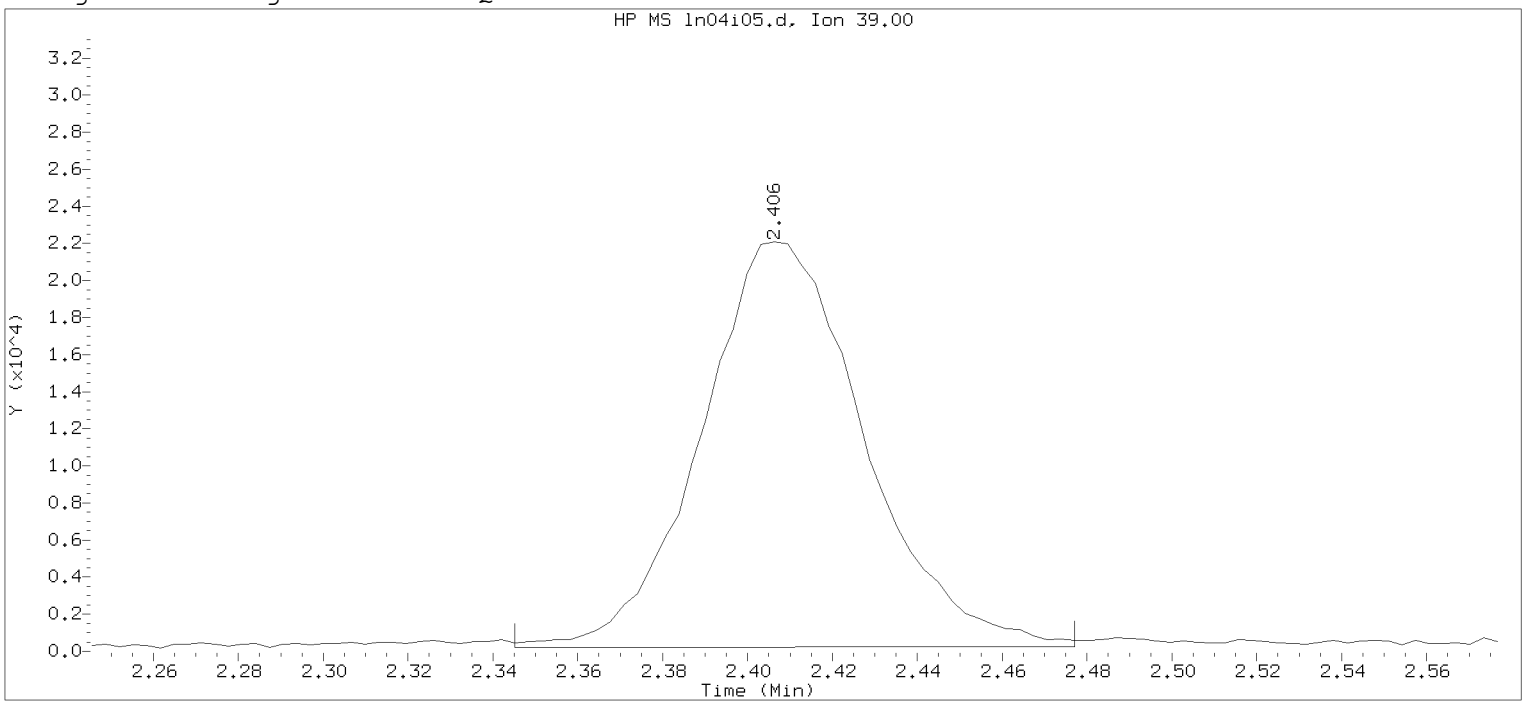
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

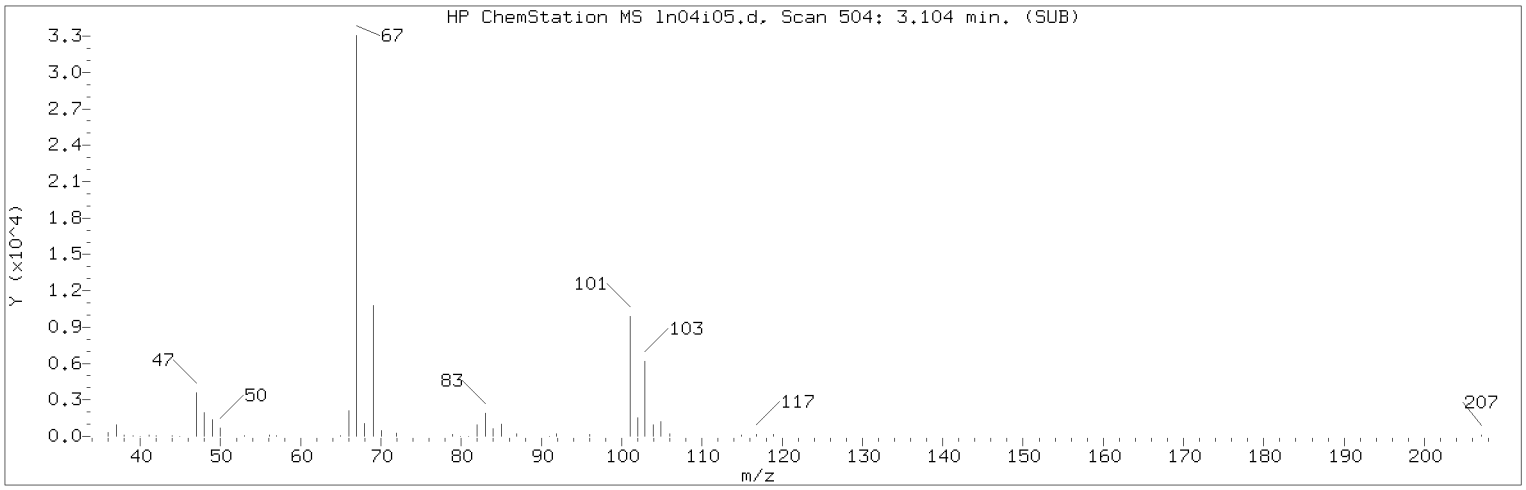
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

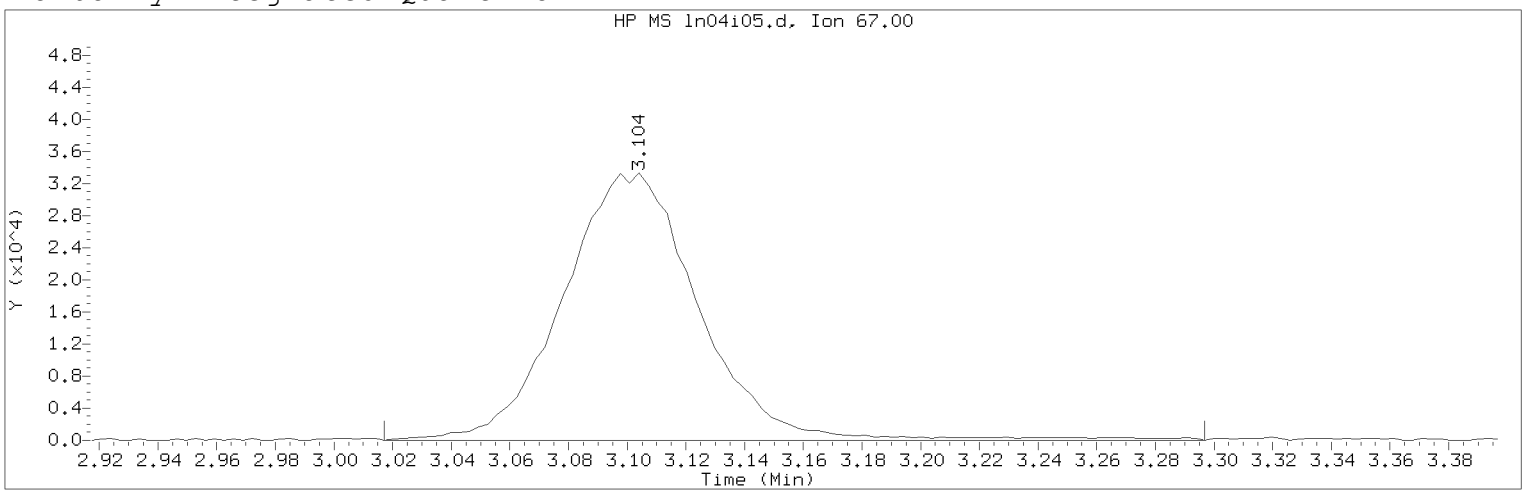
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 58240
On-column Amount (ng) : 9.5707
Integration start scan : 267 Integration stop scan: 308
Y at integration start : 206 Y at integration end: 250

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

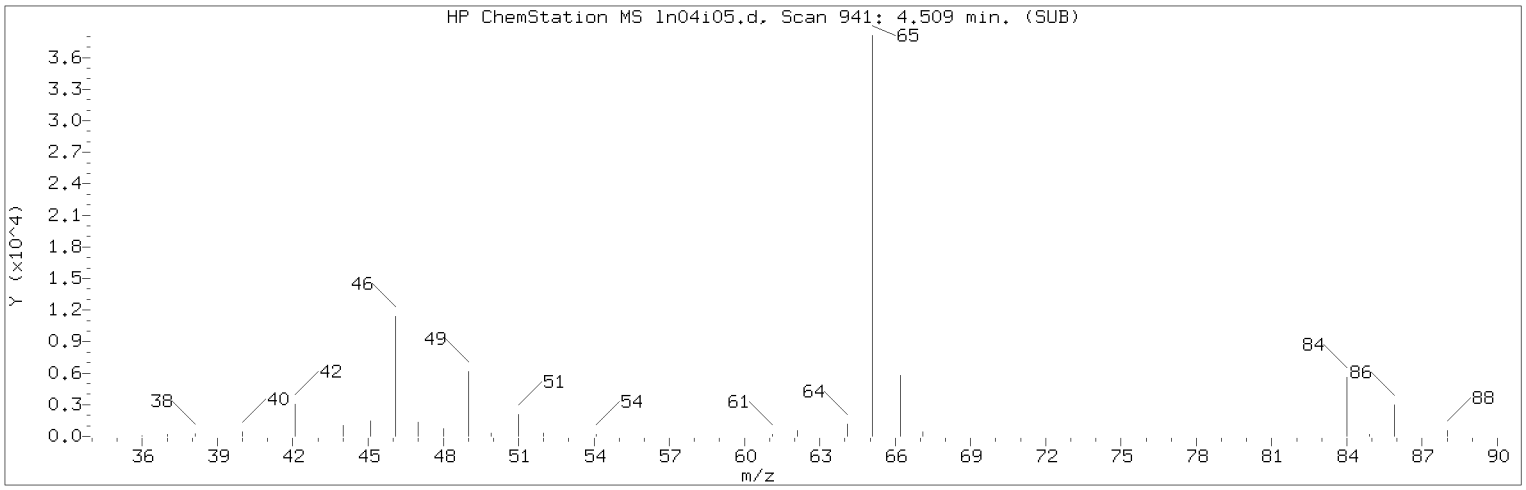
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 504
Retention Time (minutes): 3.104
Quant Ion : 67.00
Area (flag) : 106956M
On-Column Amount (ng) : 10.4593
Integration start scan : 476 Integration stop scan: 563
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

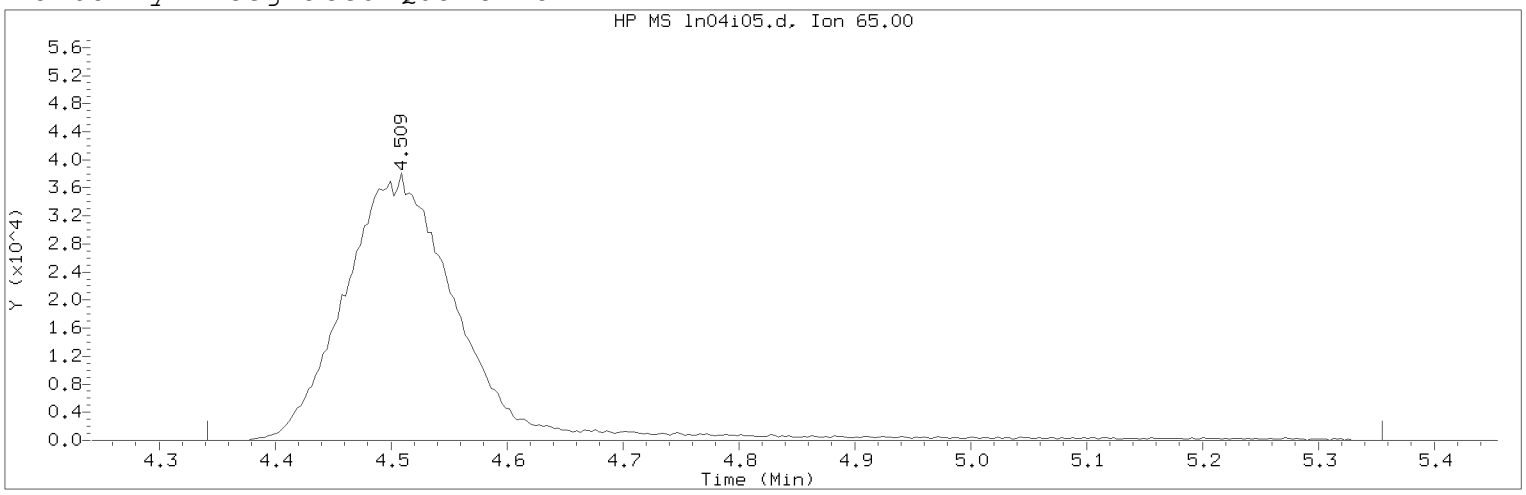
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

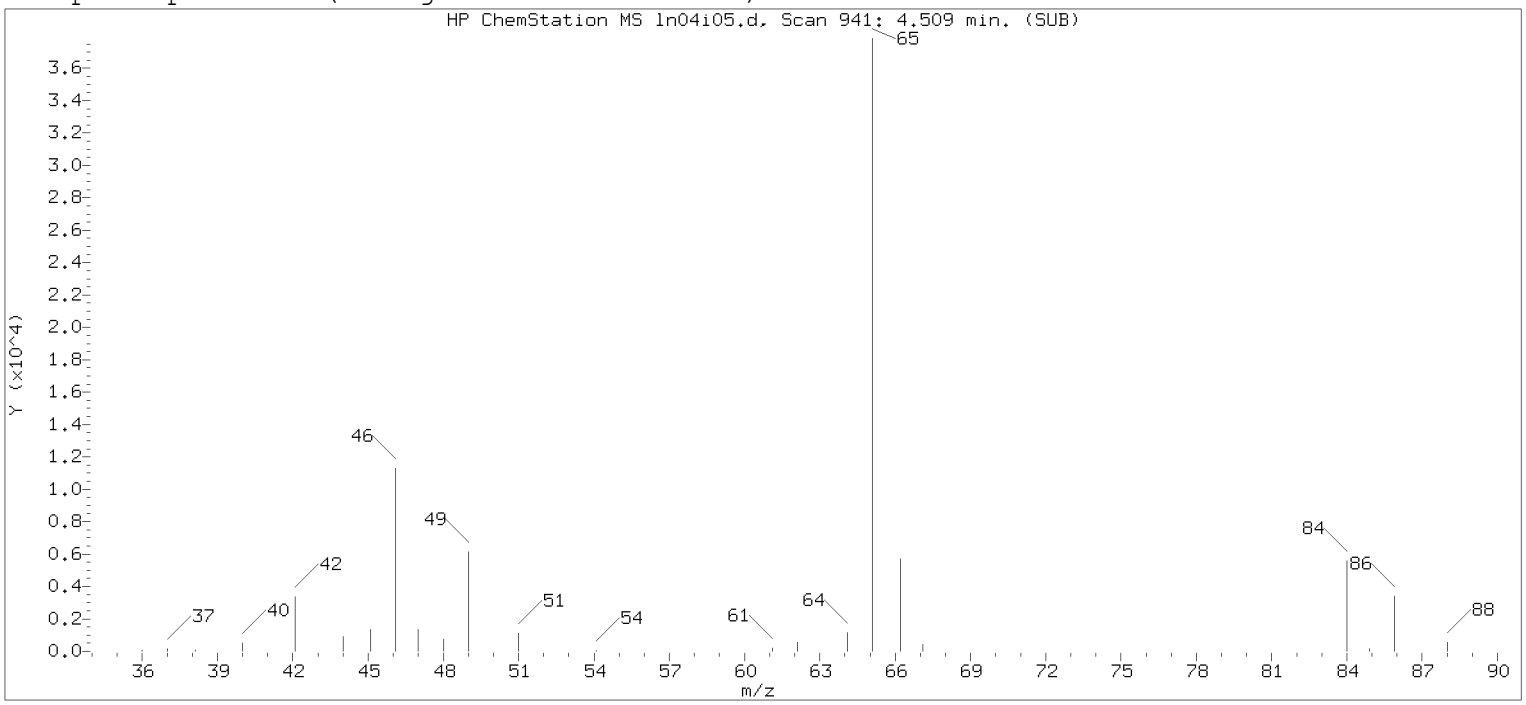
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 263427M
On-Column Amount (ng) : 250.0000
Integration start scan : 888 Integration stop scan: 1203
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

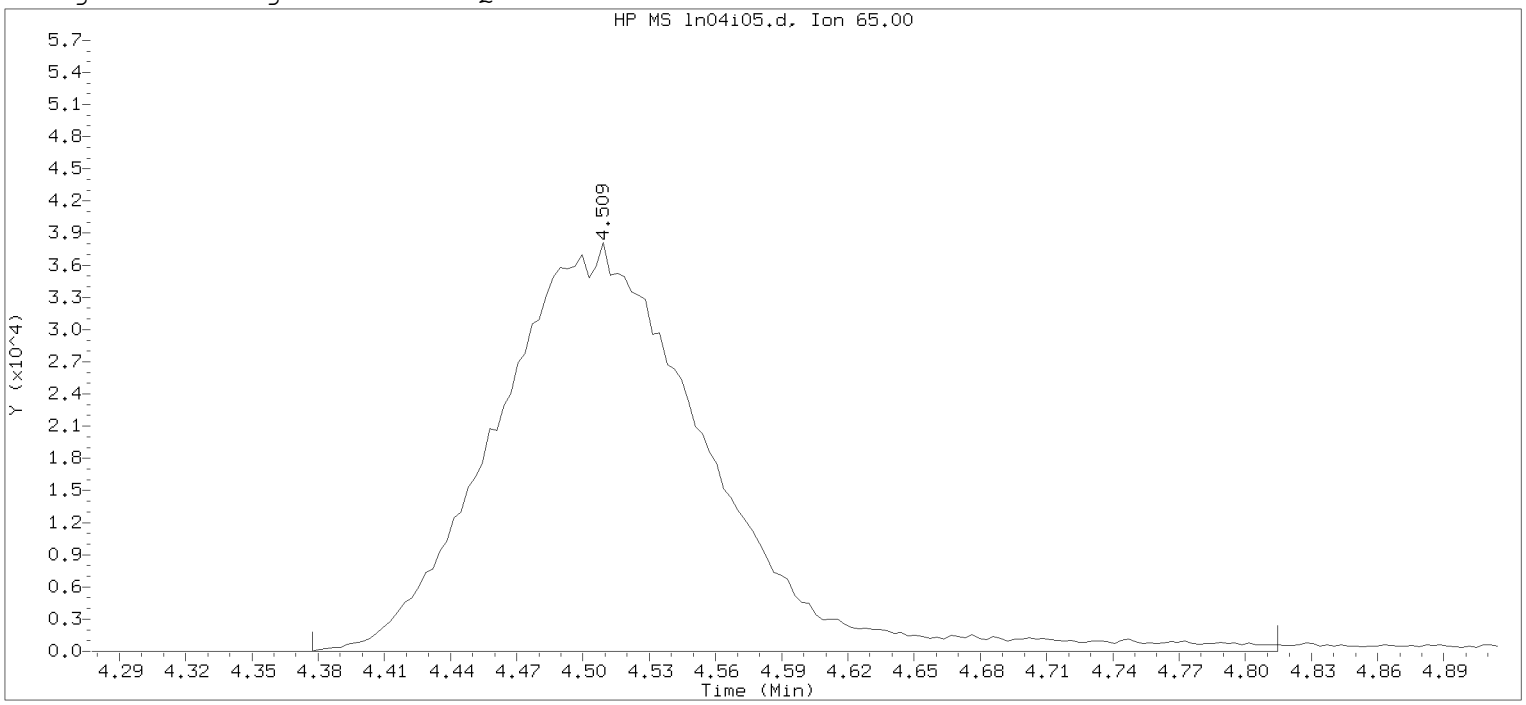
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

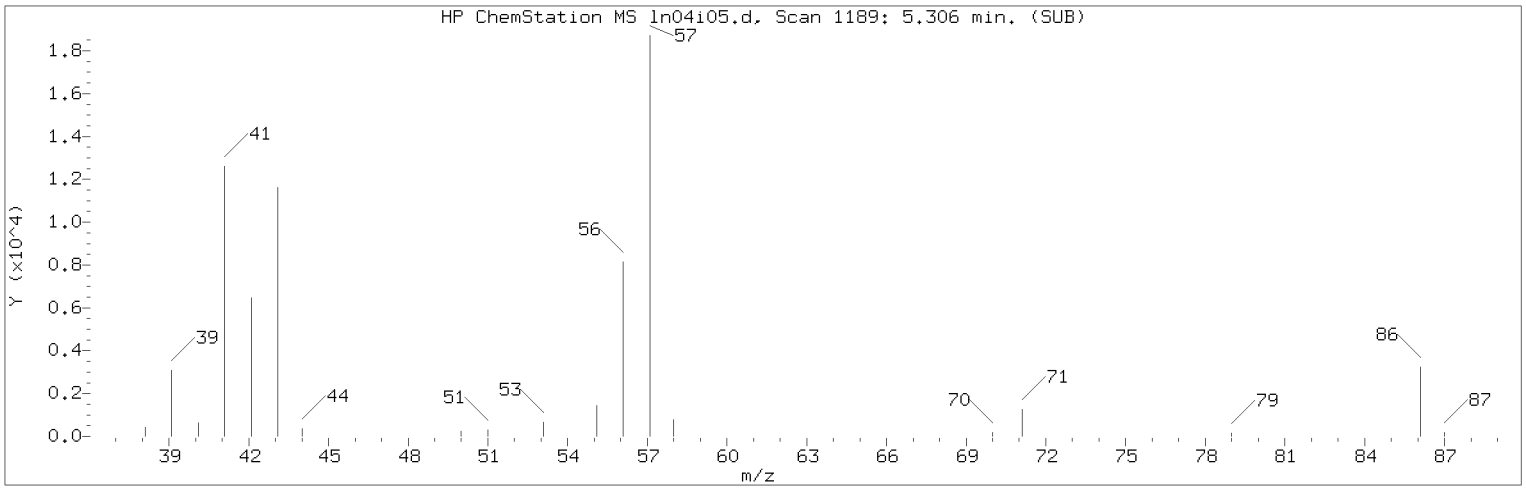
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

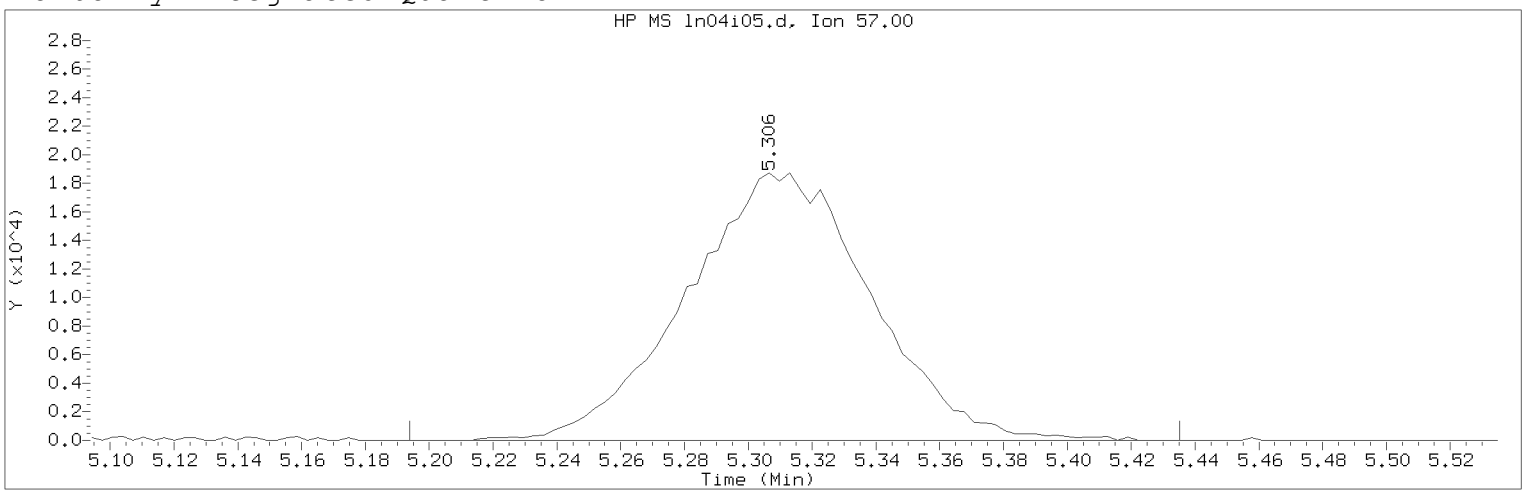
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 253092
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1035
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

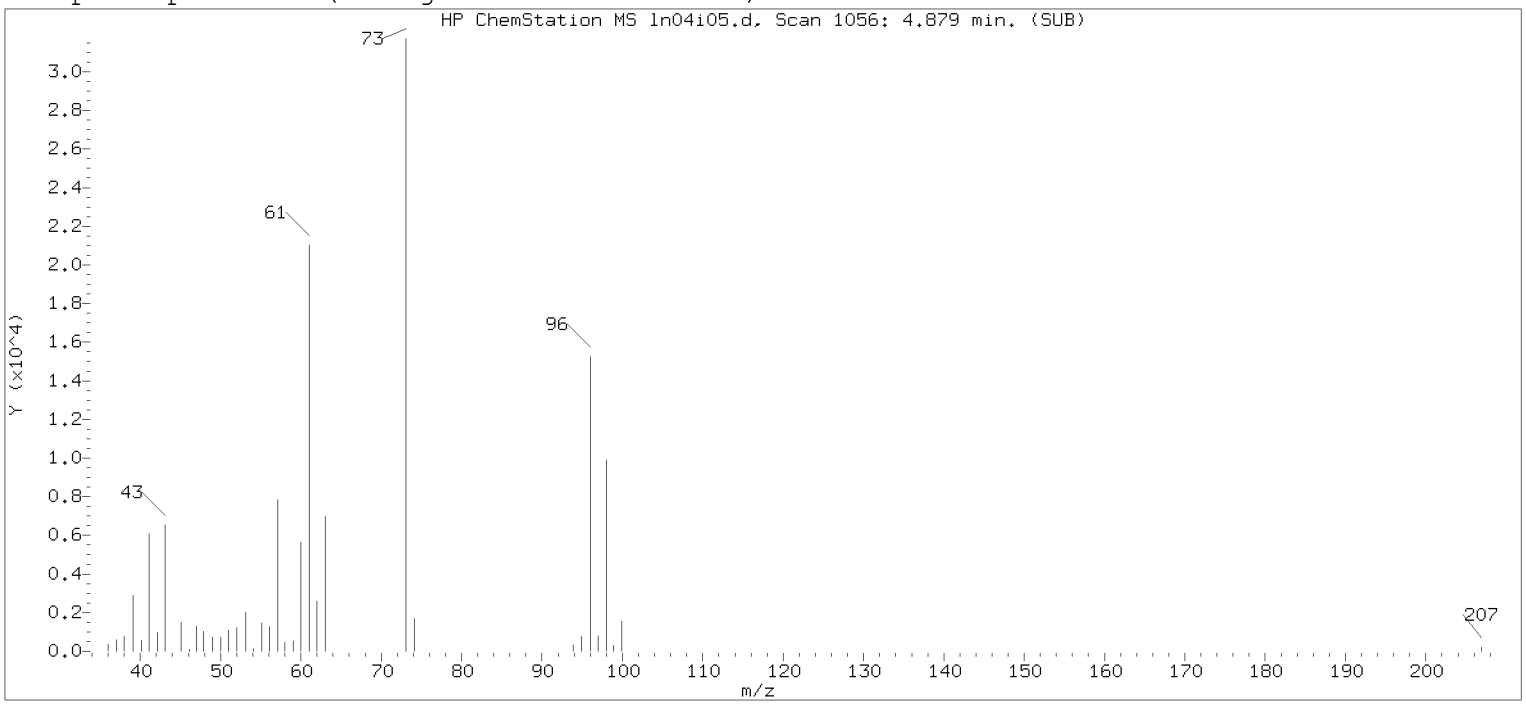
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1189
Retention Time (minutes): 5.306
Quant Ion : 57.00
Area (flag) : 75187M
On-Column Amount (ng) : 8.5083
Integration start scan : 1153 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

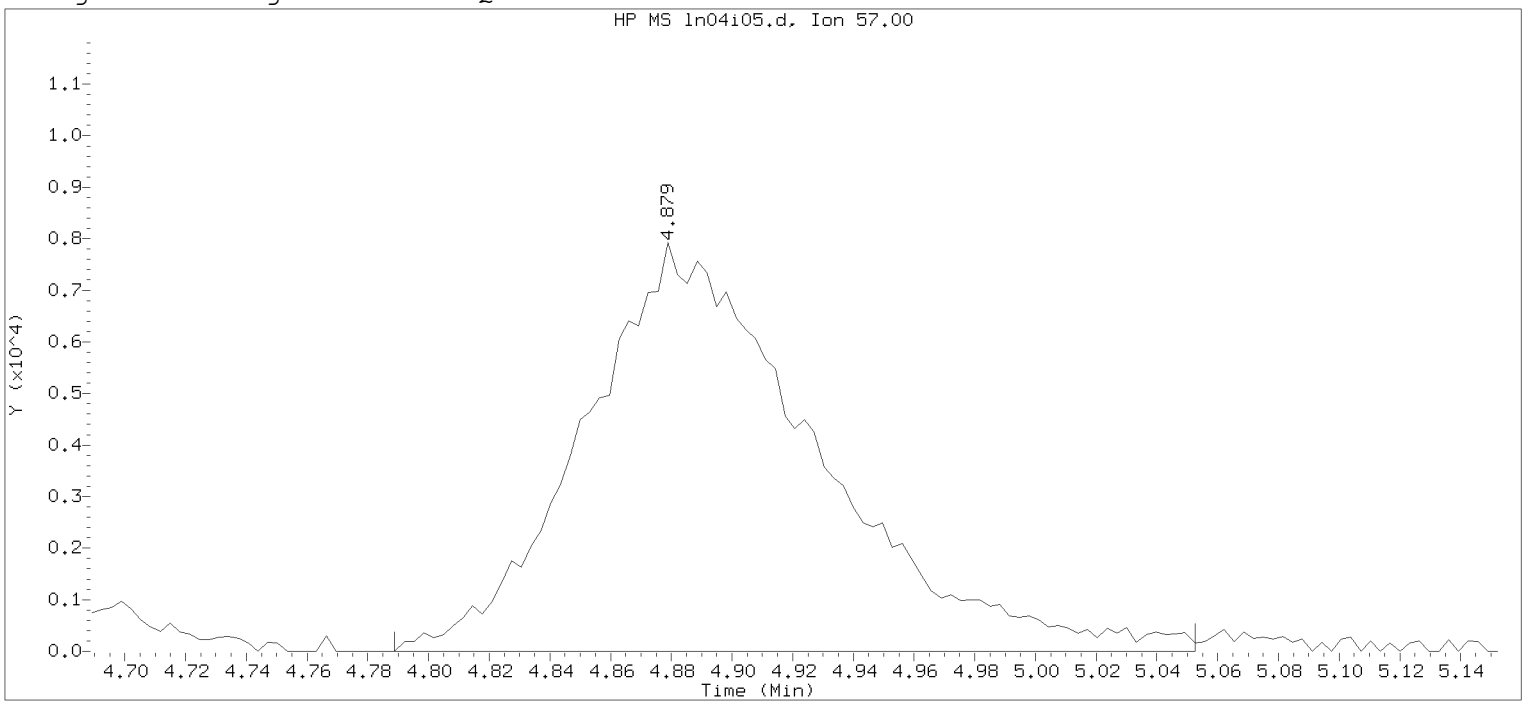
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

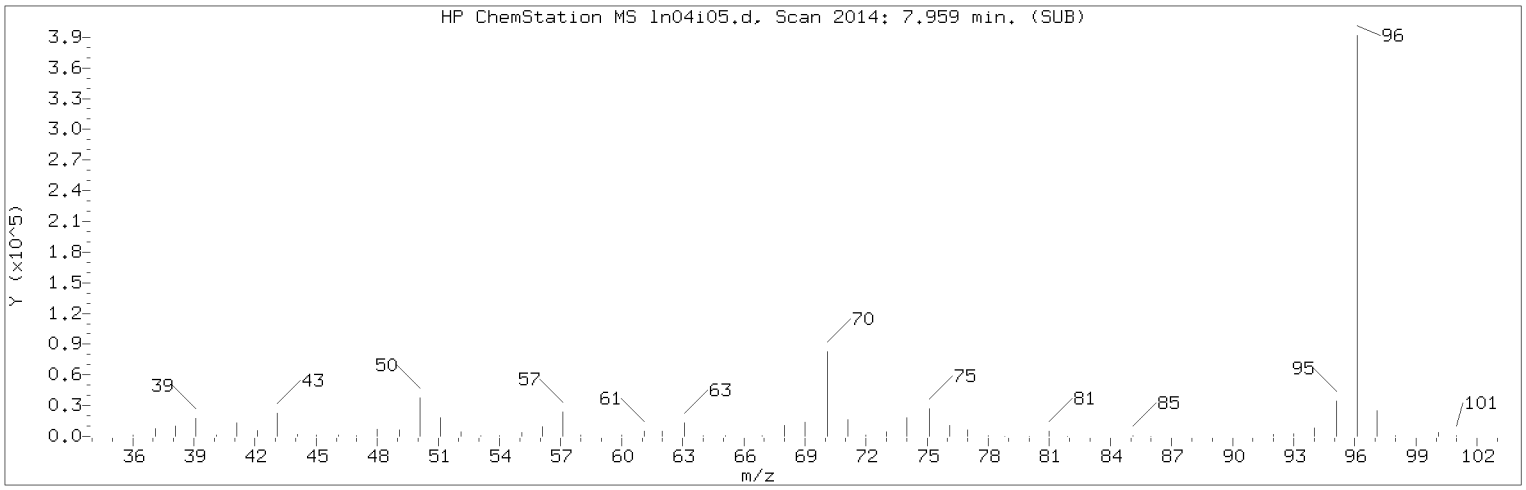
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

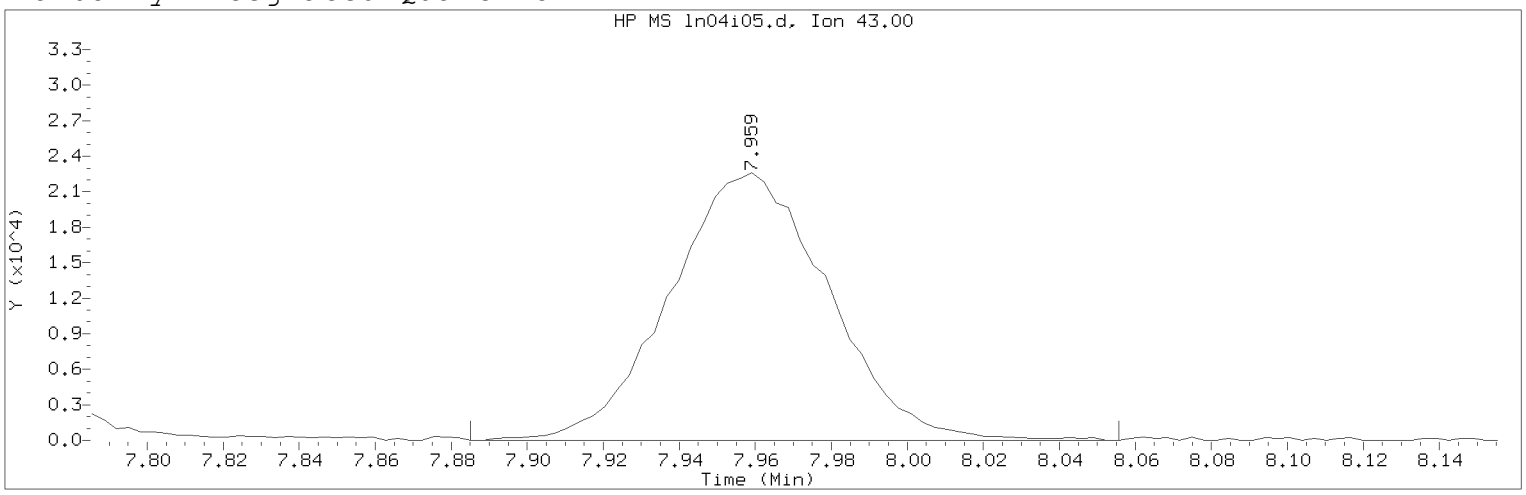
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1056		
Retention Time (minutes)	: 4.879		
Quant Ion	: 57.00		
Area	: 42116		
On-column Amount (ng)	: 11.5193		
Integration start scan	: 1027	Integration stop scan:	1109
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

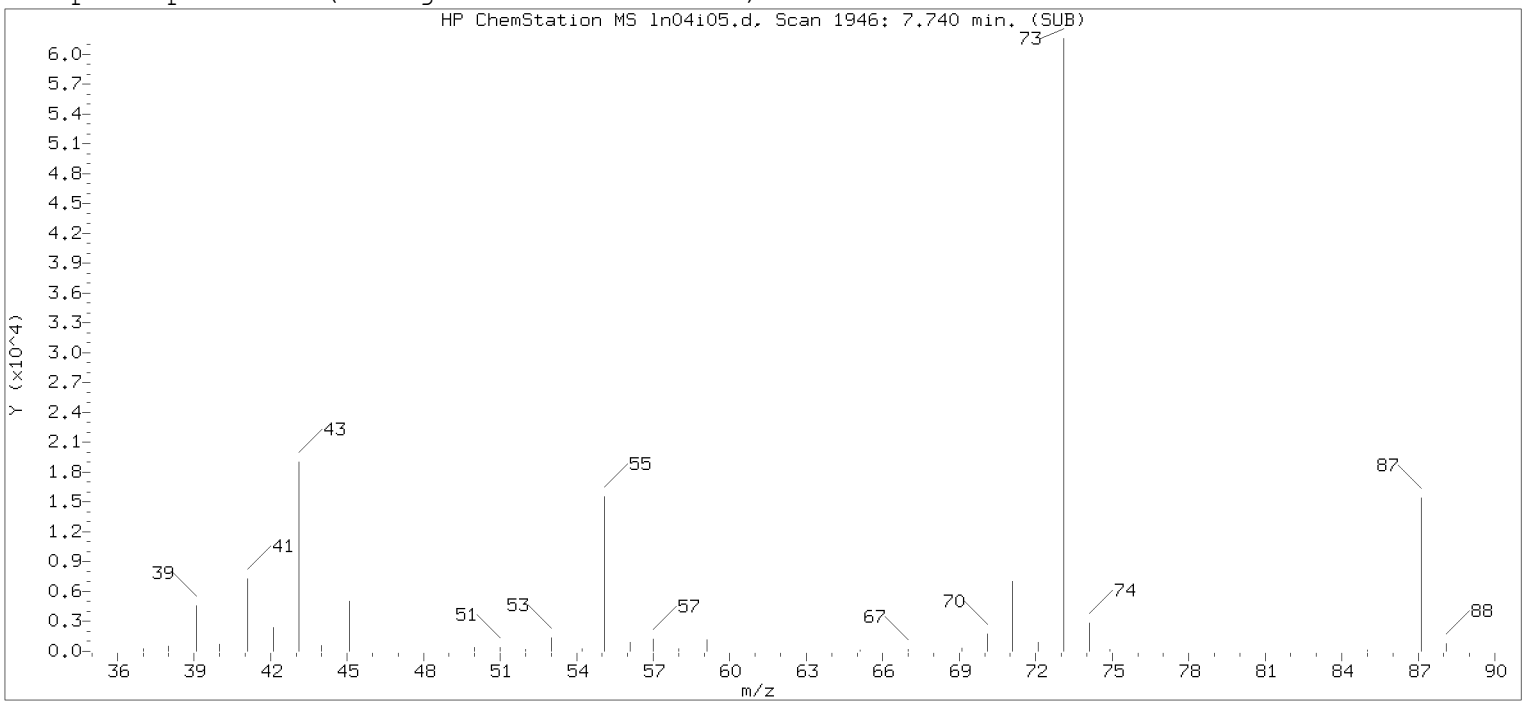
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2014
Retention Time (minutes): 7.959
Quant Ion : 43.00
Area (flag) : 65347MA
On-Column Amount (ng) : 7.9157
Integration start scan : 1990 Integration stop scan: 2043
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

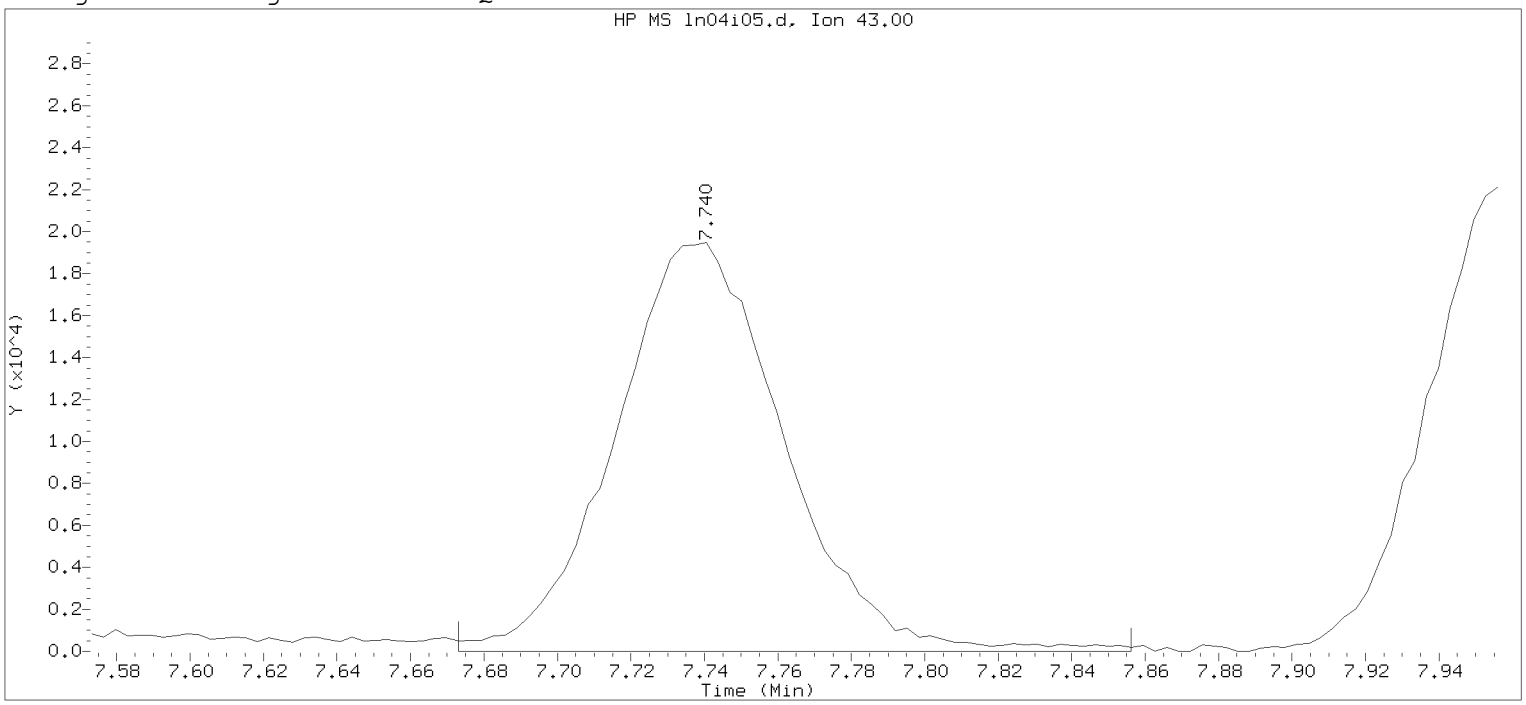
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

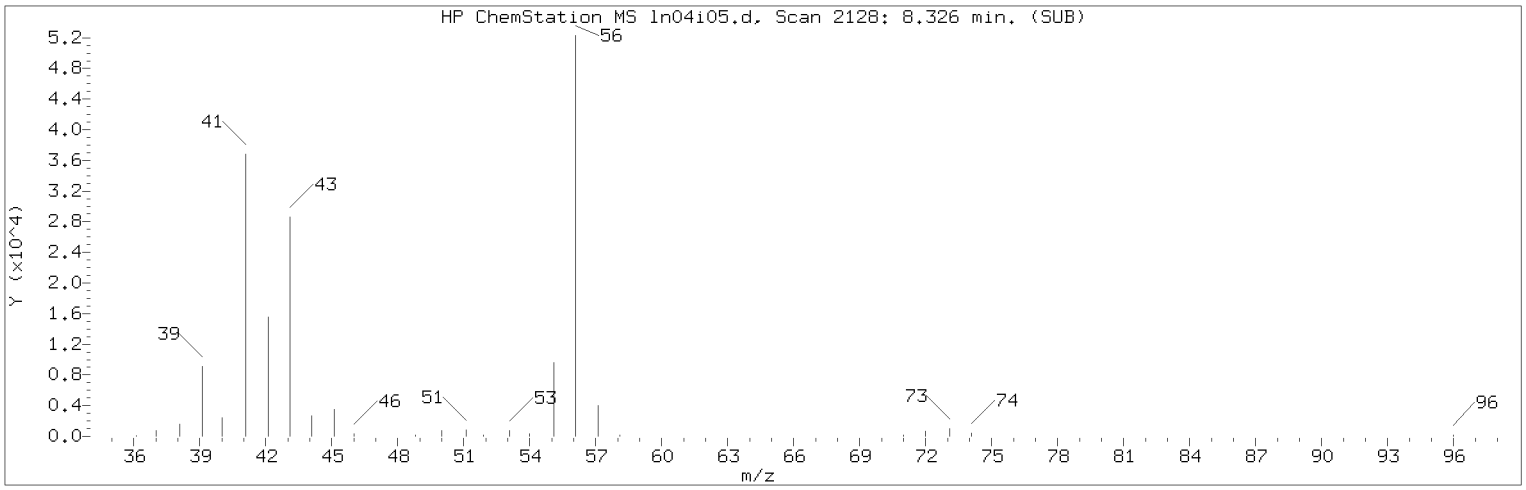
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

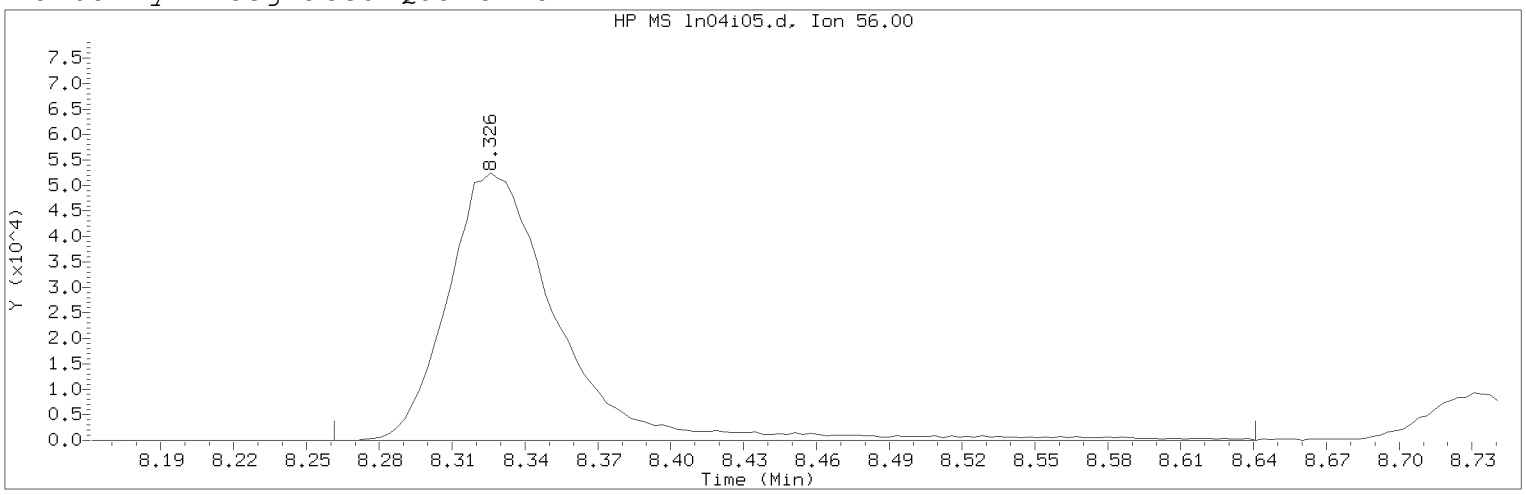
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.740
Quant Ion : 43.00
Area : 62104
On-column Amount (ng) : 10.1613
Integration start scan : 1924 Integration stop scan: 1981
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

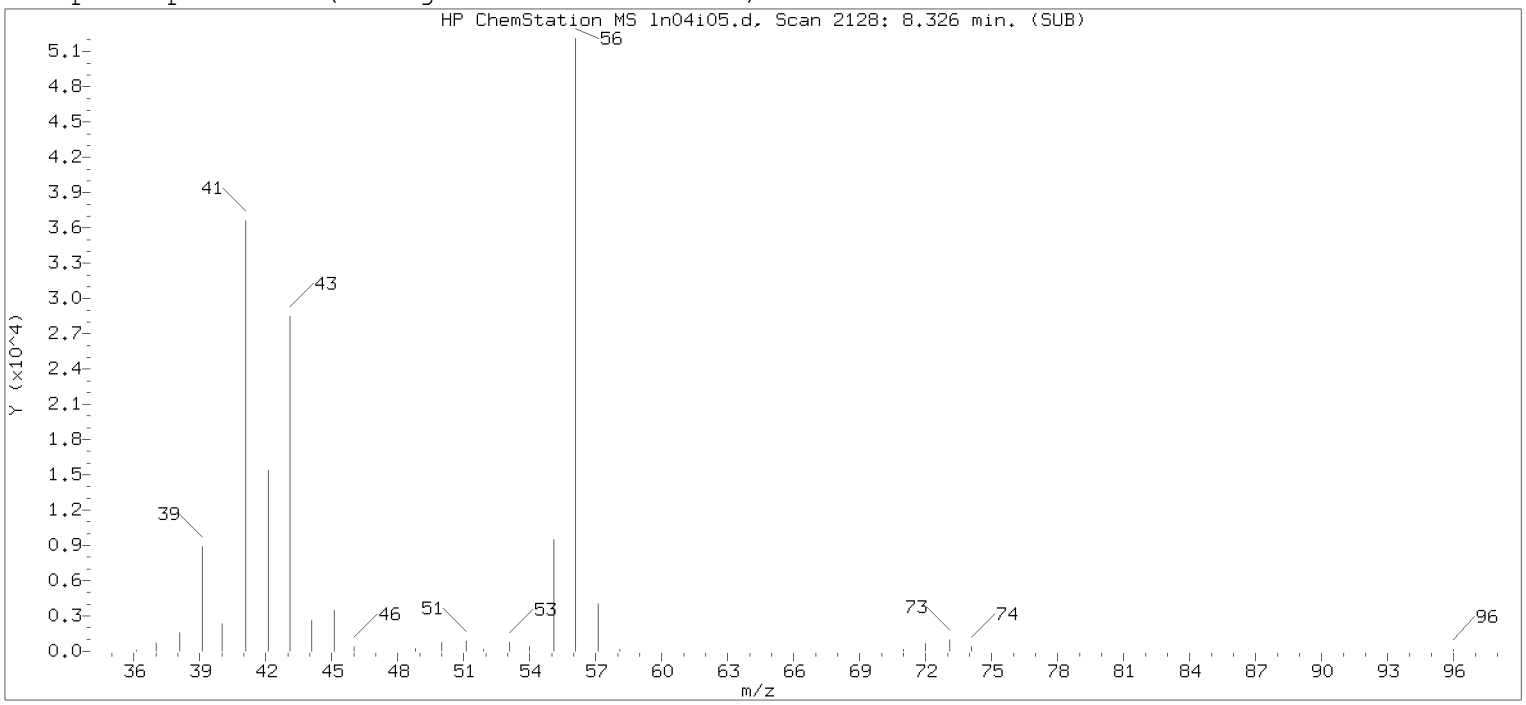
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area (flag) : 166674M
On-Column Amount (ng) : 518.8682
Integration start scan : 2107 Integration stop scan: 2225
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

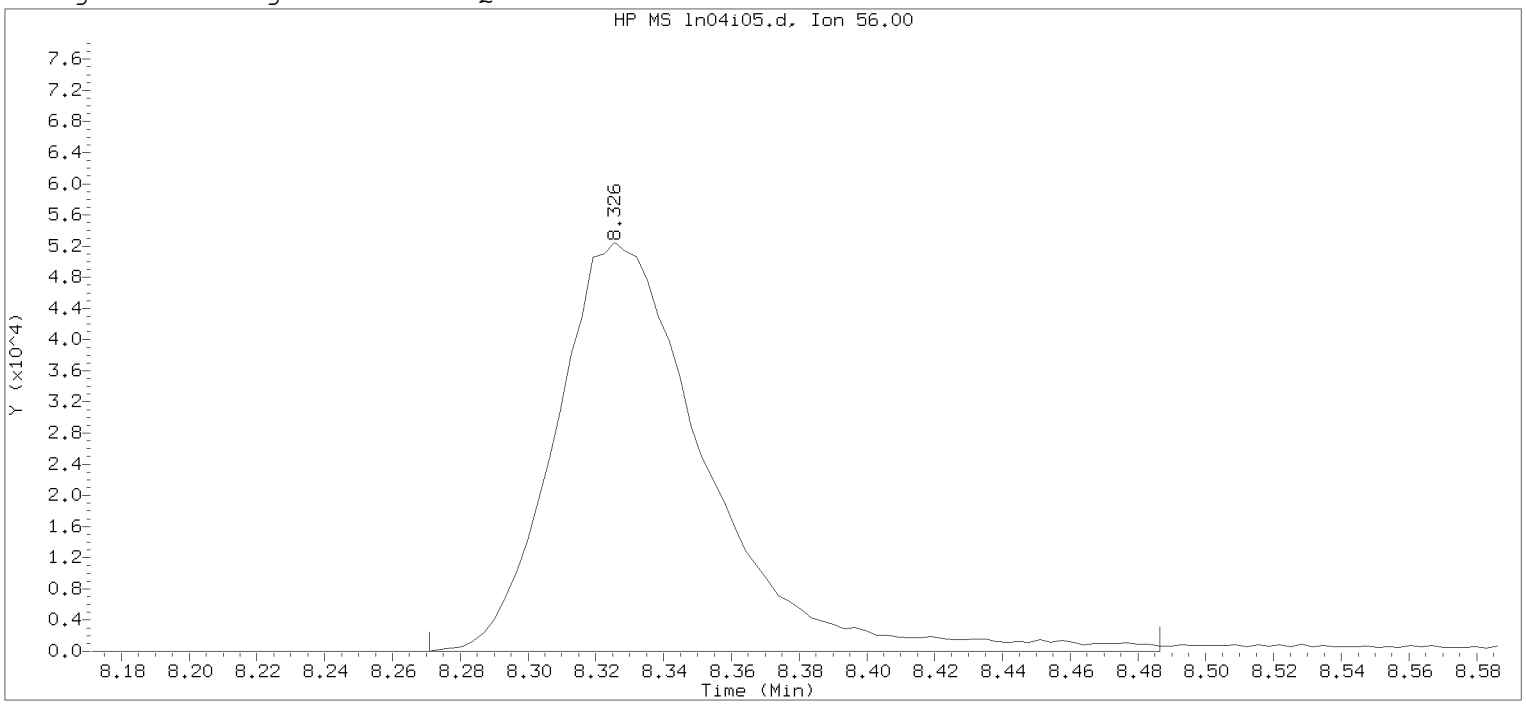
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

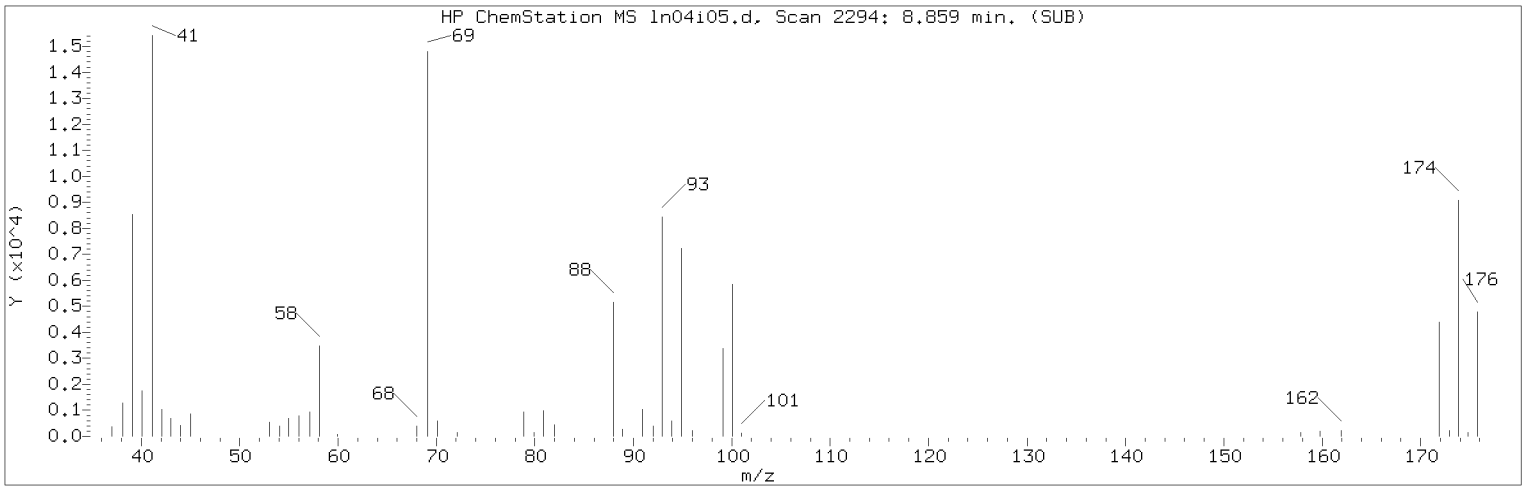
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

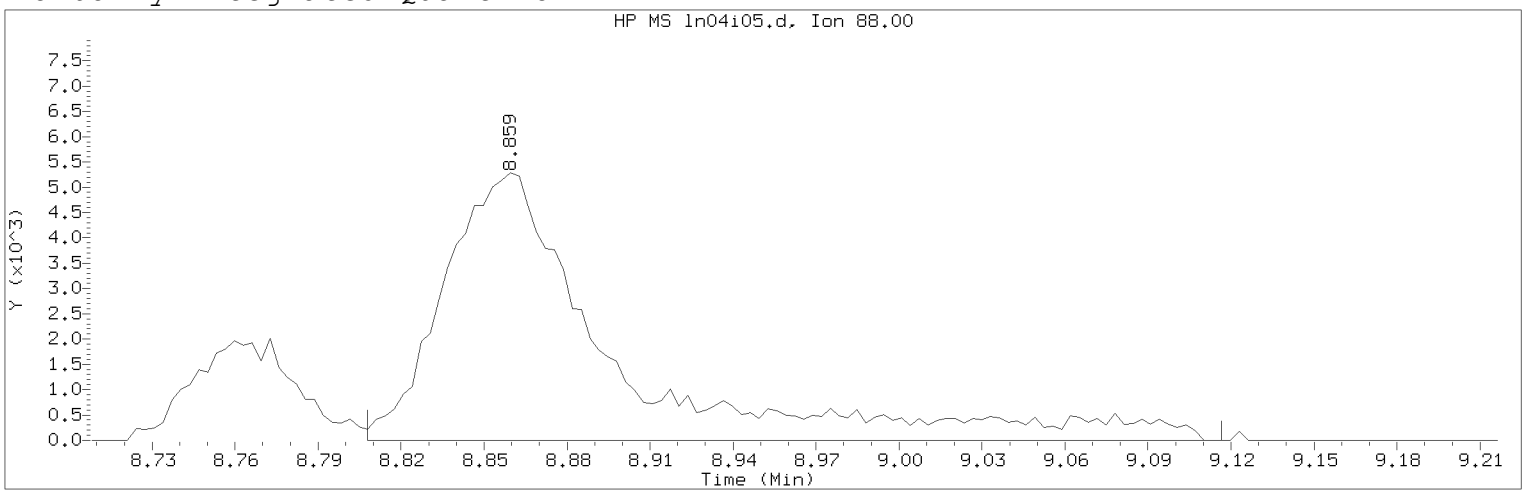
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area : 161642
On-column Amount (ng) : 524.2963
Integration start scan : 2110 Integration stop scan: 2177
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

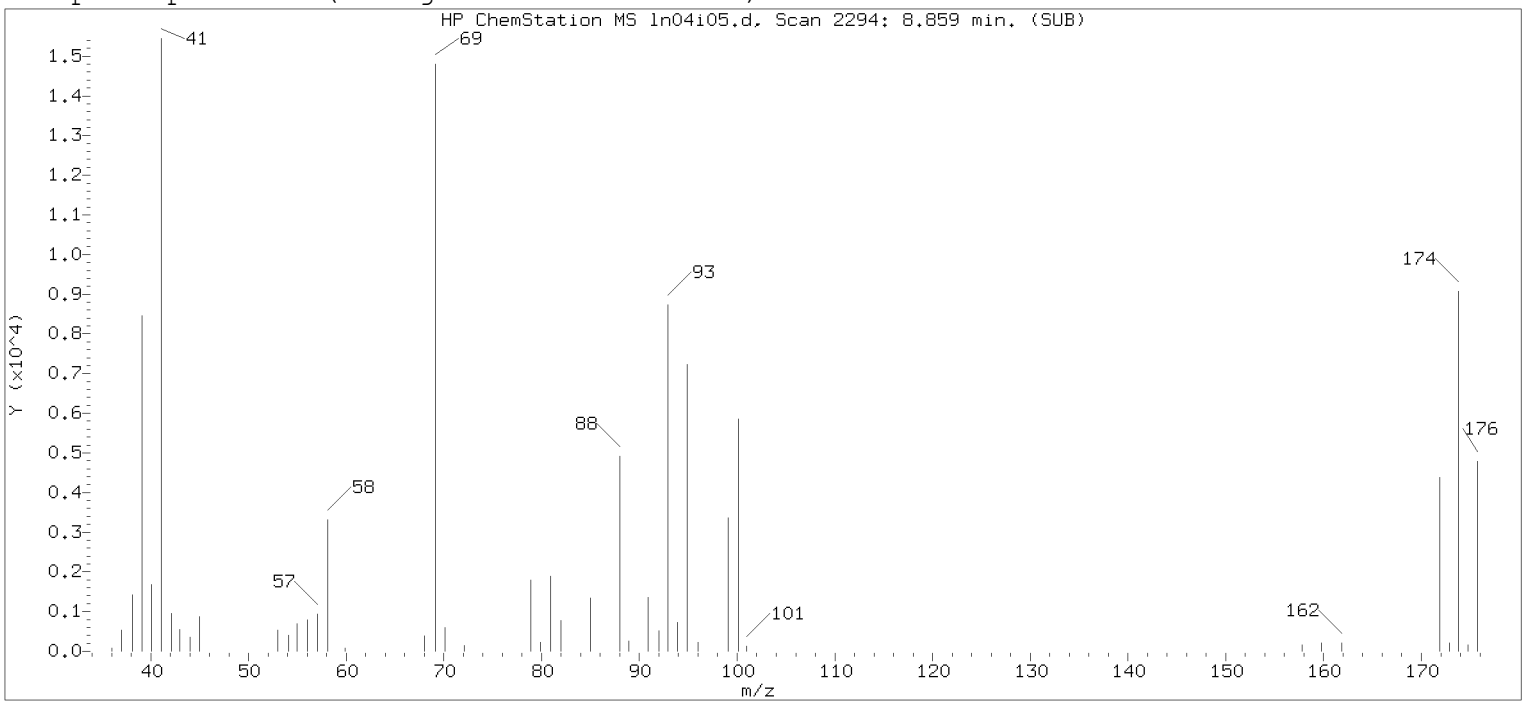
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2294
Retention Time (minutes): 8.859
Quant Ion : 88.00
Area (flag) : 22251M
On-Column Amount (ng) : 252.0176
Integration start scan : 2277 Integration stop scan: 2373
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

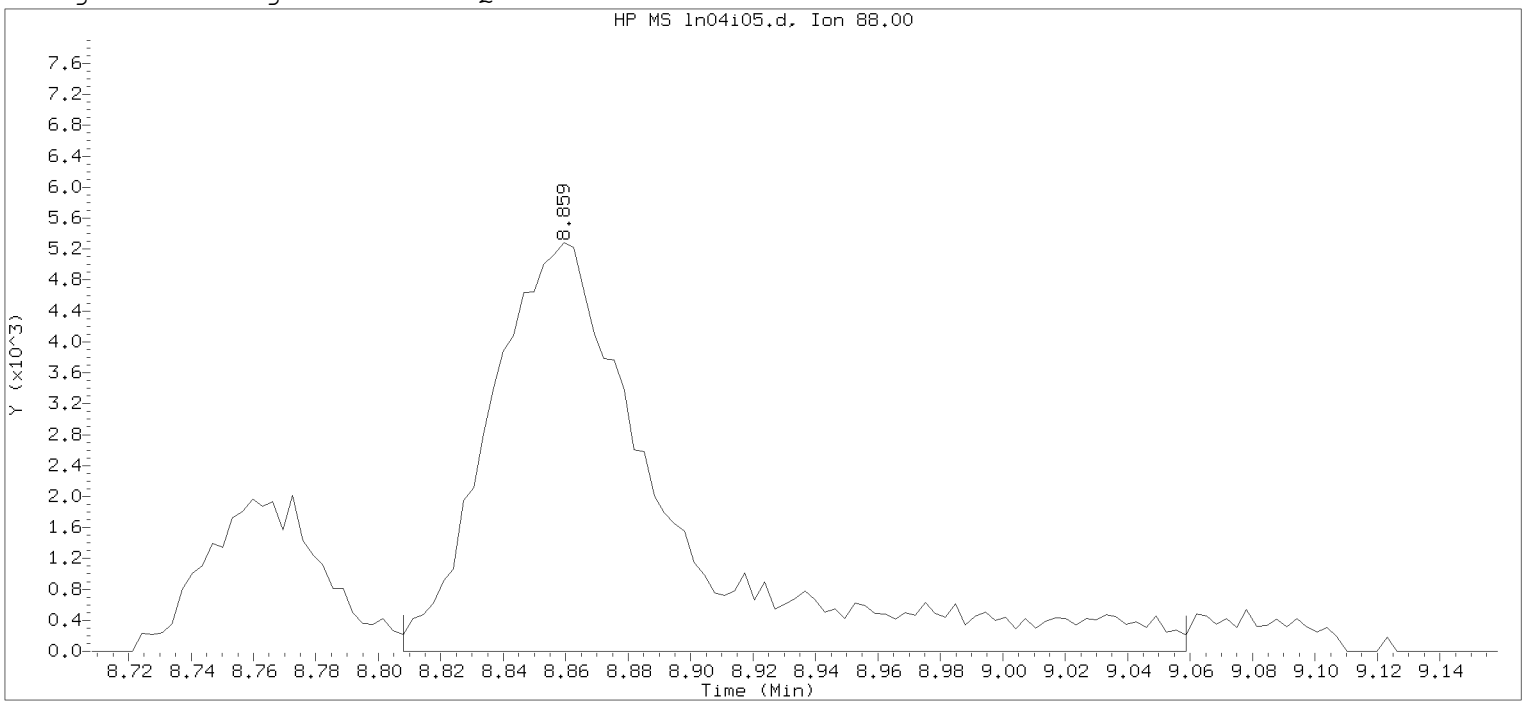
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

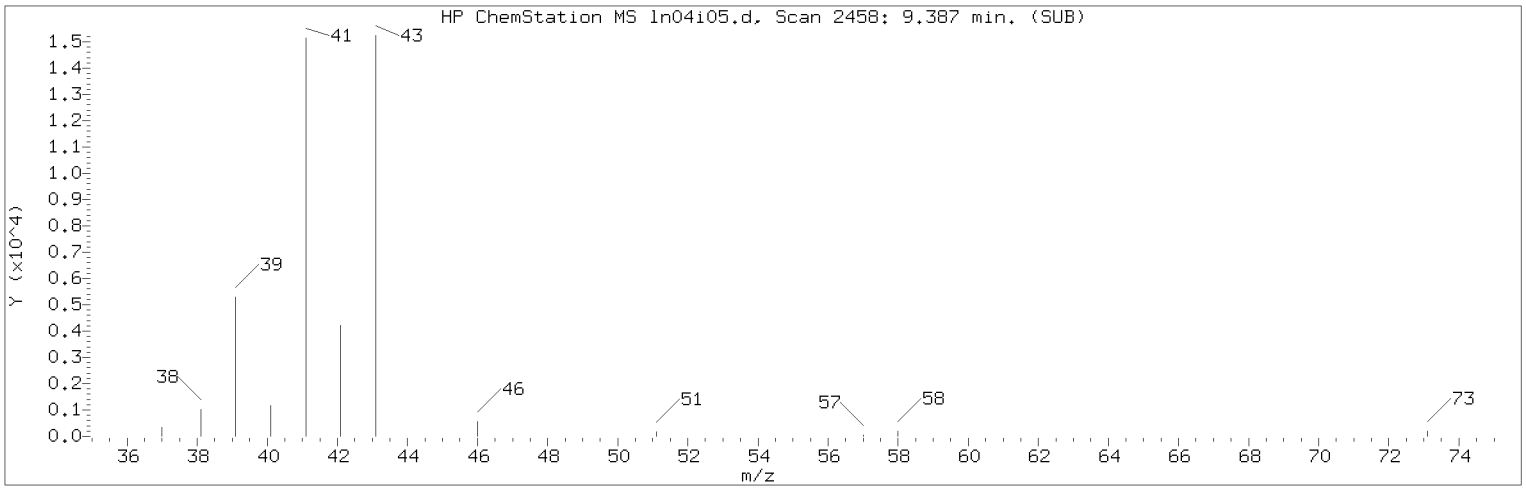
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

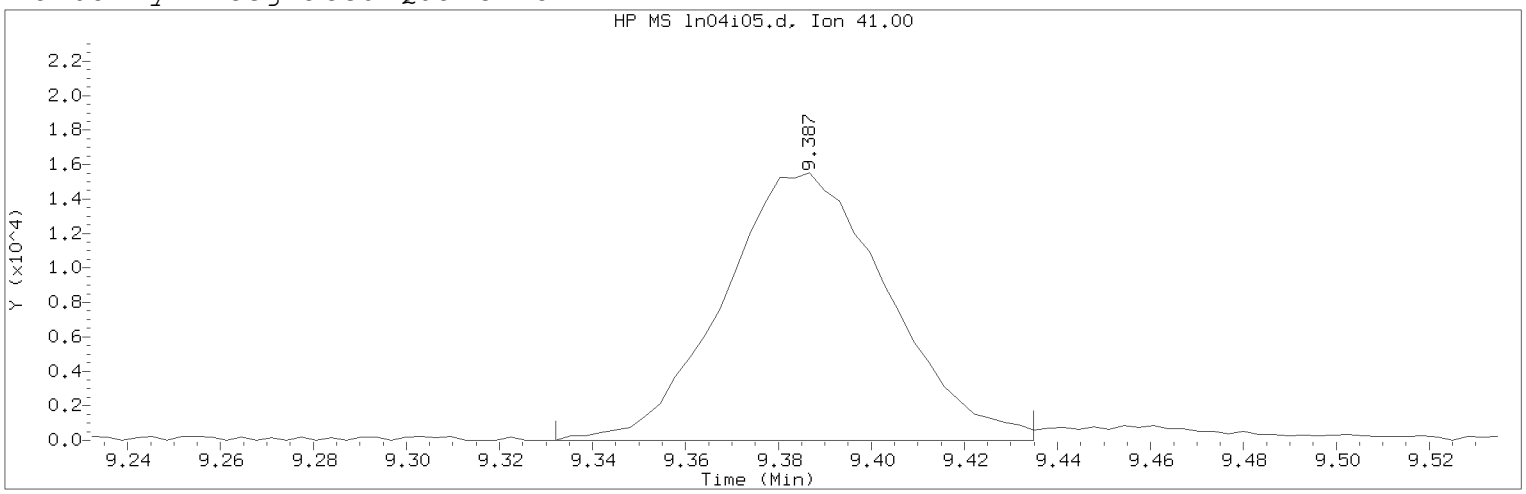
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2294
Retention Time (minutes): 8.859
Quant Ion : 88.00
Area : 21165
On-column Amount (ng) : 248.6410
Integration start scan : 2277 Integration stop scan: 2355
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

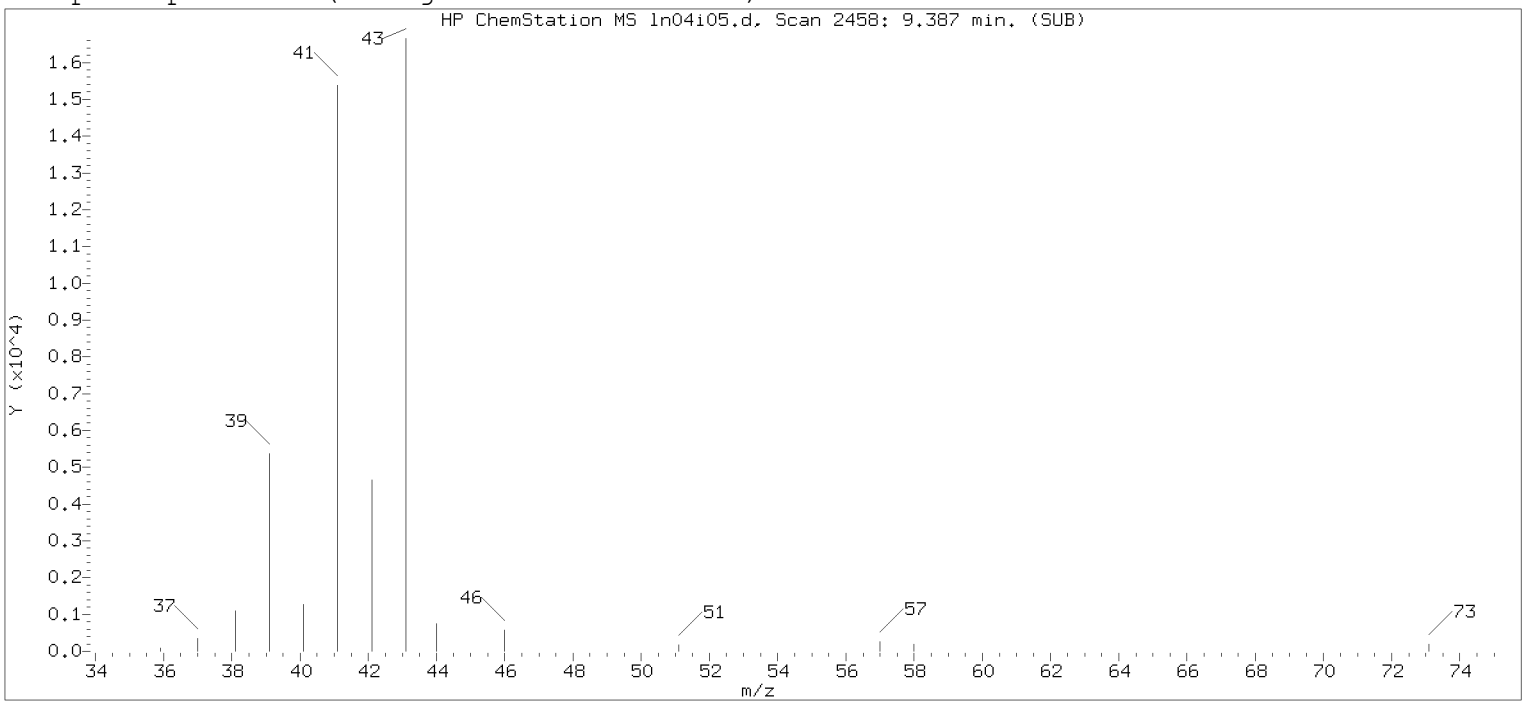
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2458
Retention Time (minutes): 9.387
Quant Ion : 41.00
Area (flag) : 38245M
On-Column Amount (ng) : 18.1785
Integration start scan : 2440 Integration stop scan: 2472
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

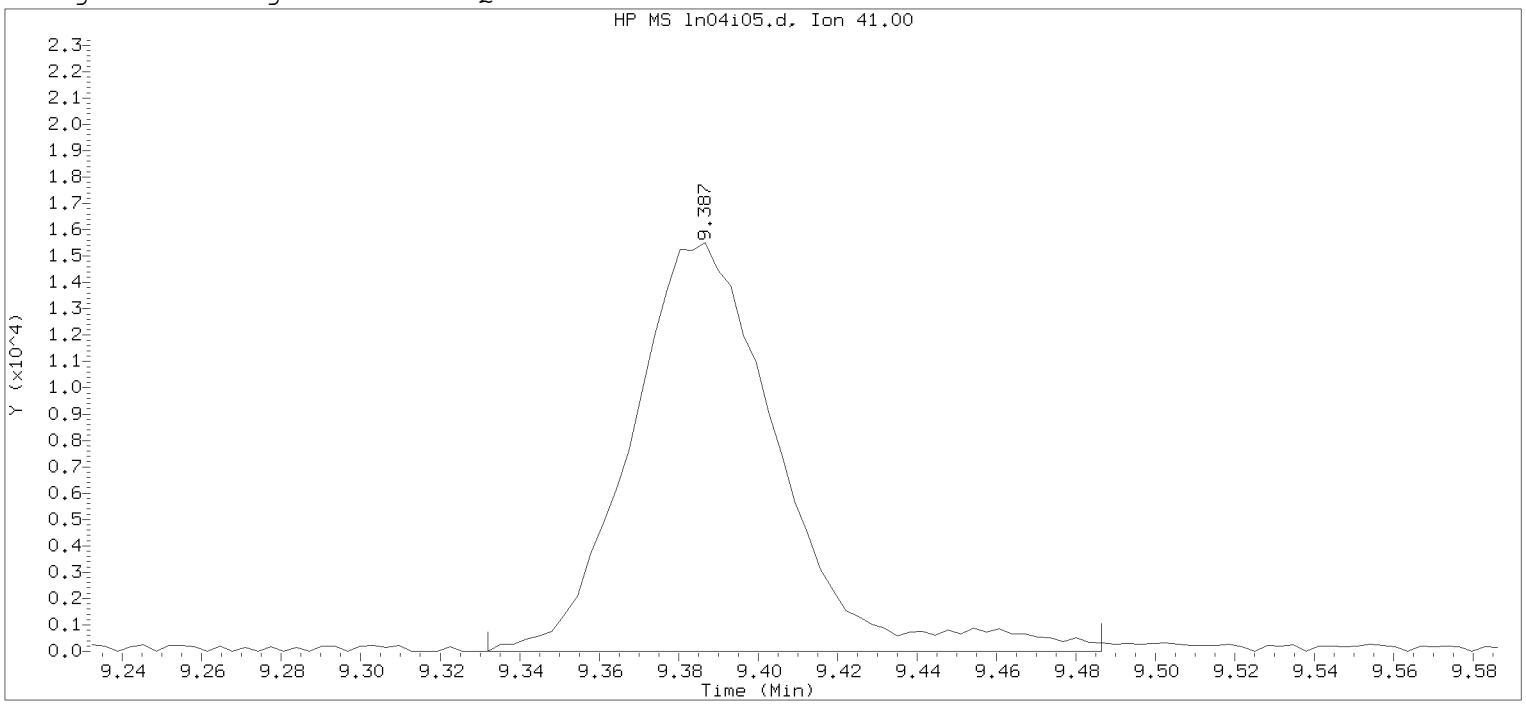
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

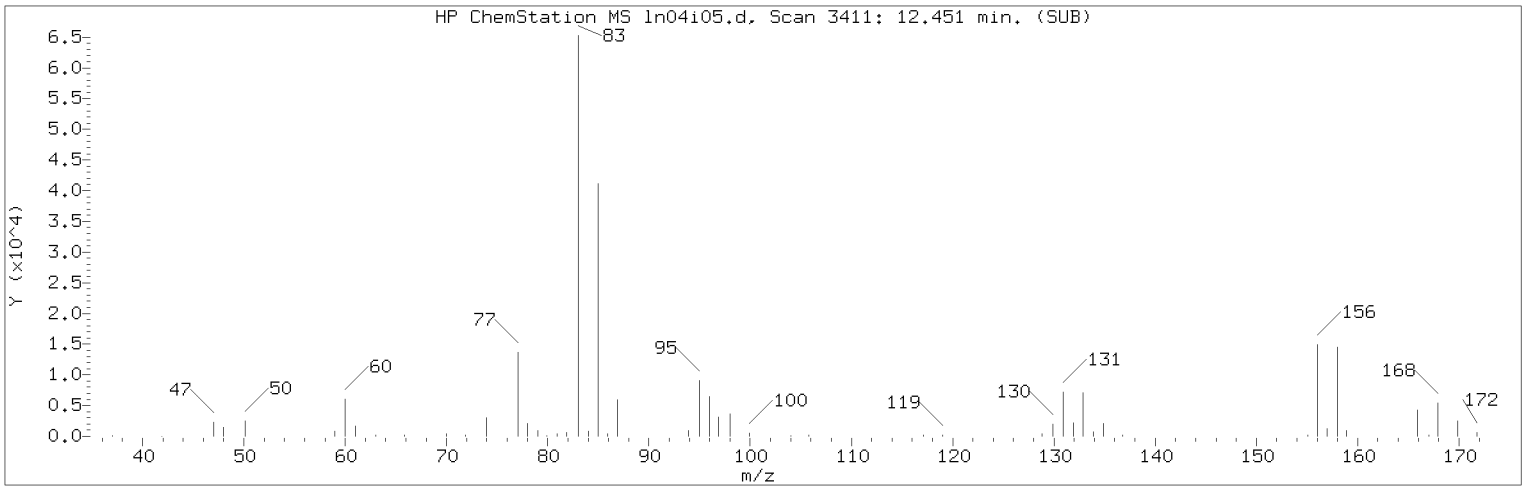
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

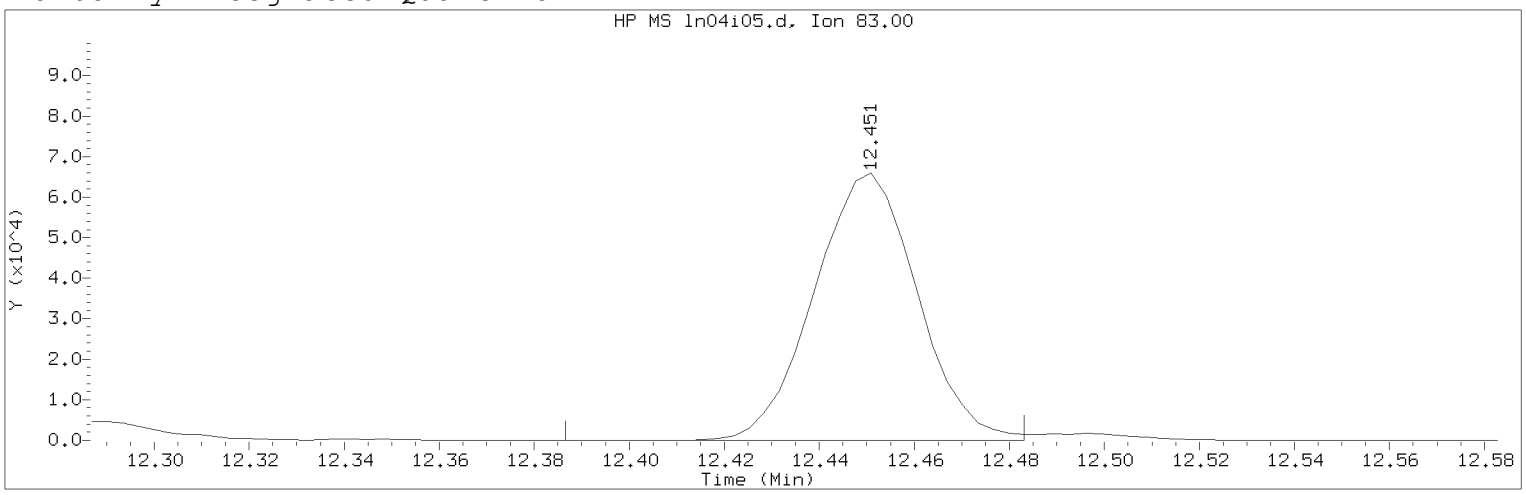
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2458
Retention Time (minutes): 9.387
Quant Ion : 41.00
Area : 40127
On-column Amount (ng) : 18.9522
Integration start scan : 2440 Integration stop scan: 2488
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

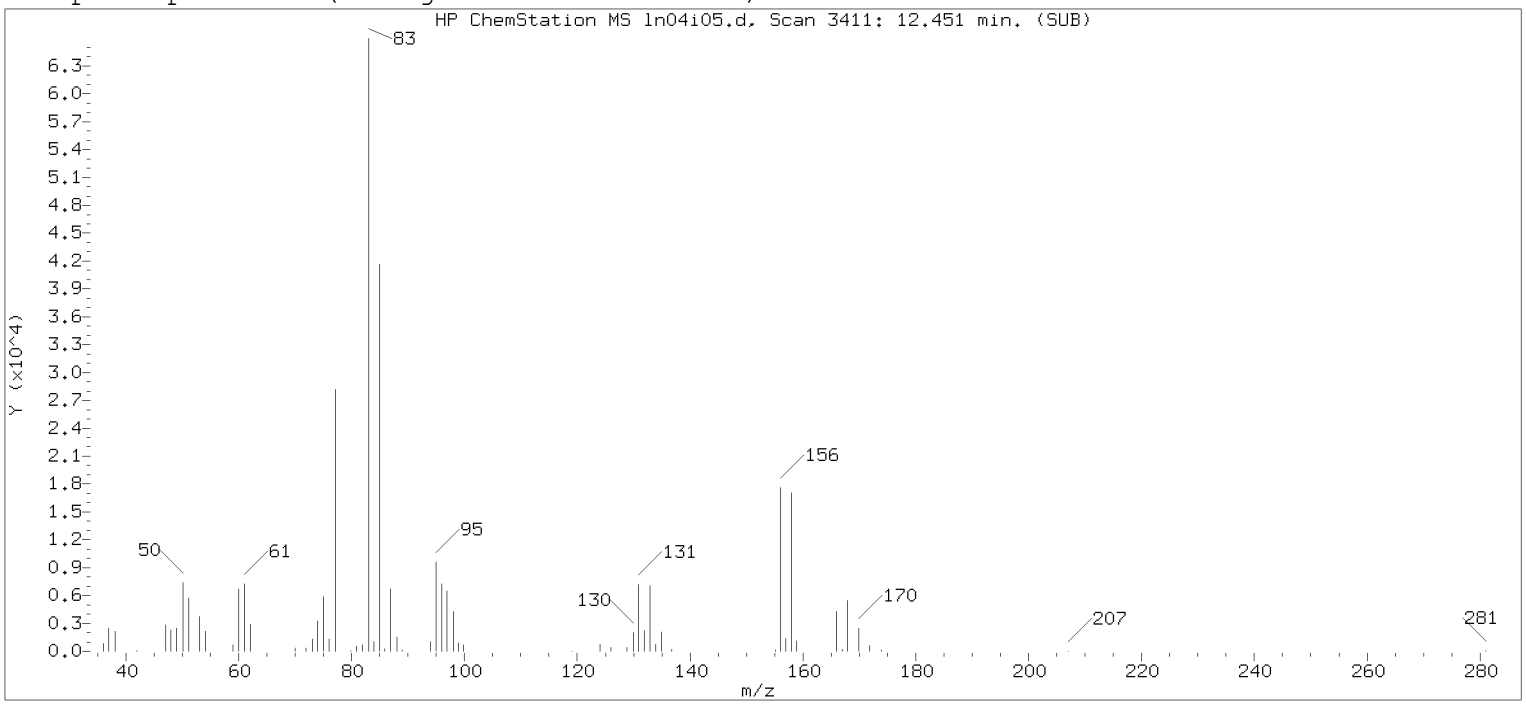
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 99221M
On-Column Amount (ng) : 10.5834
Integration start scan : 3390 Integration stop scan: 3420
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

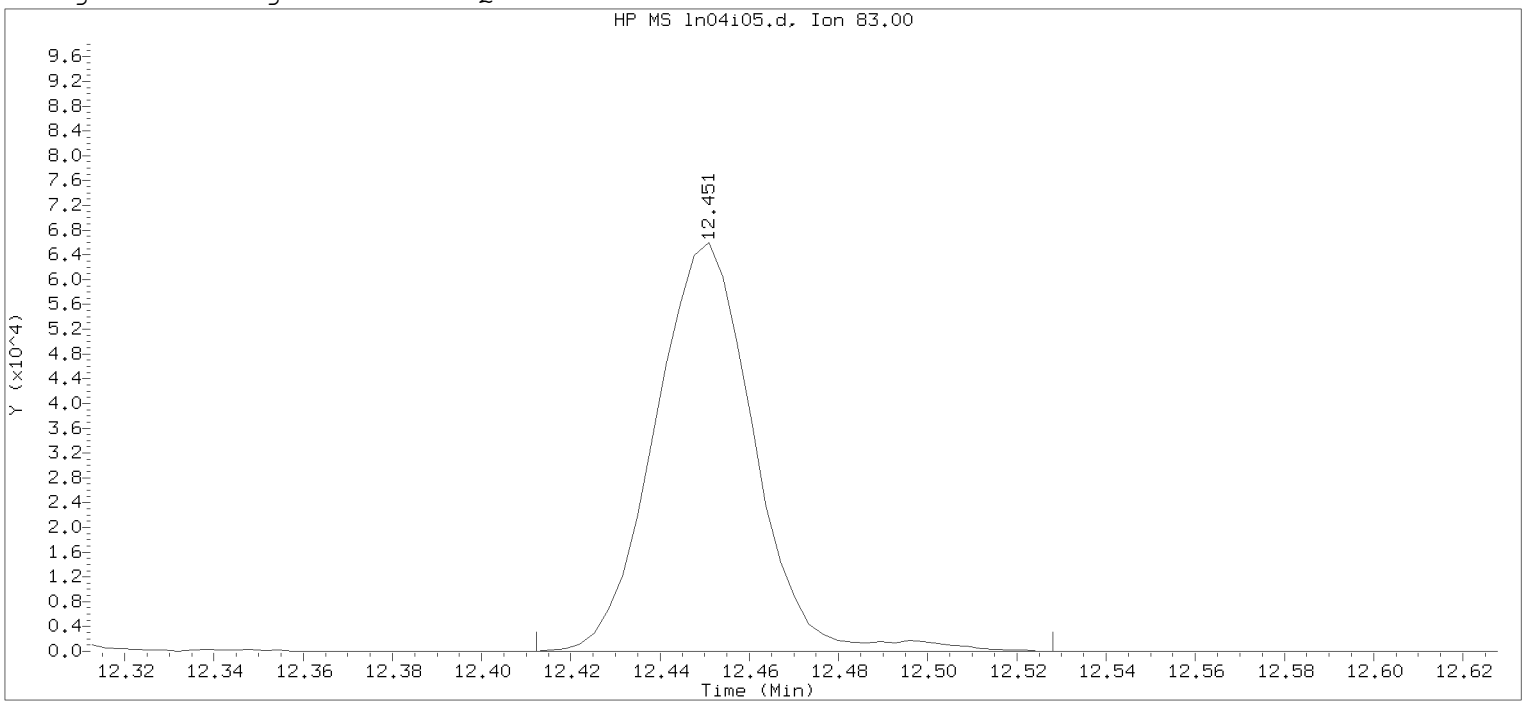
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

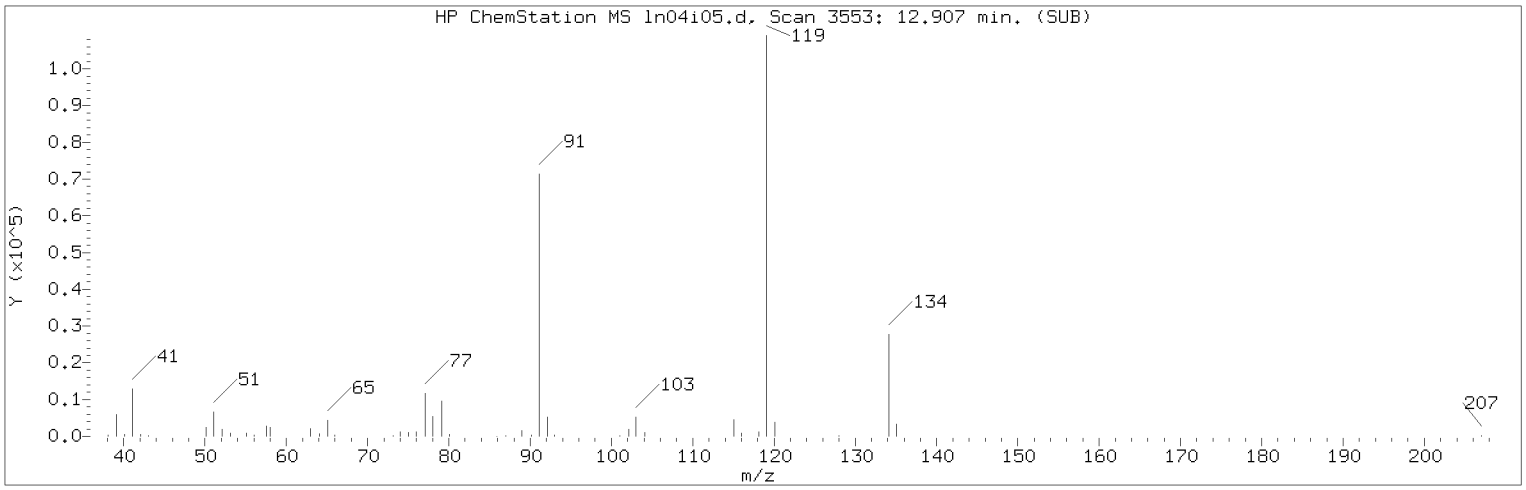
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

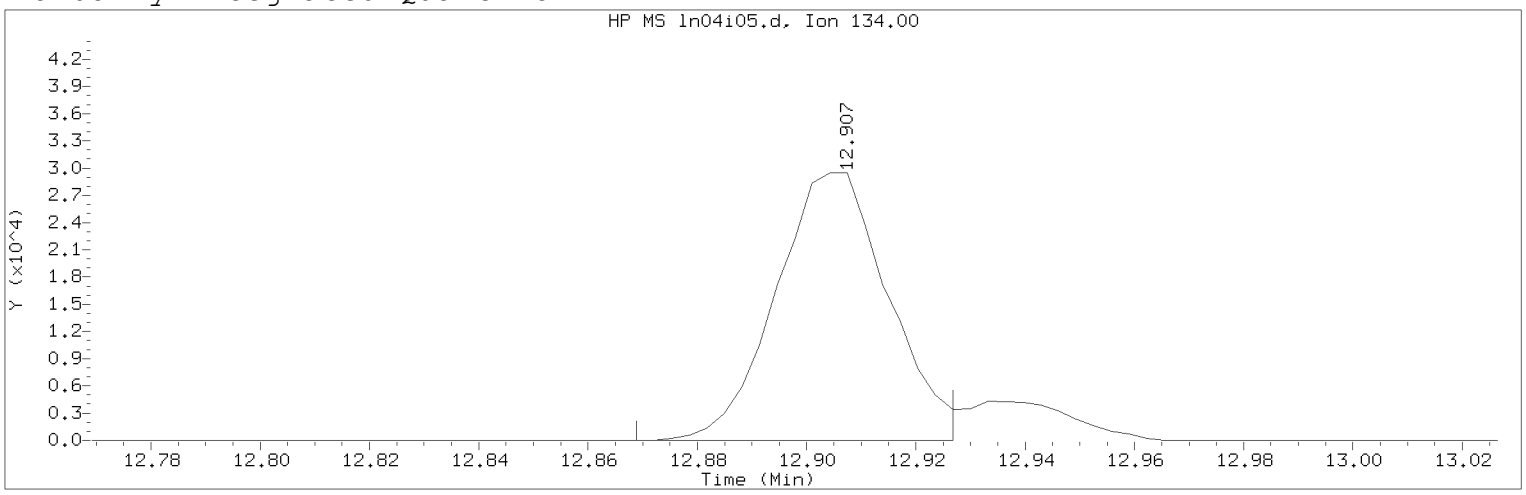
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 101487
On-column Amount (ng) : 10.6325
Integration start scan : 3398 Integration stop scan: 3434
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

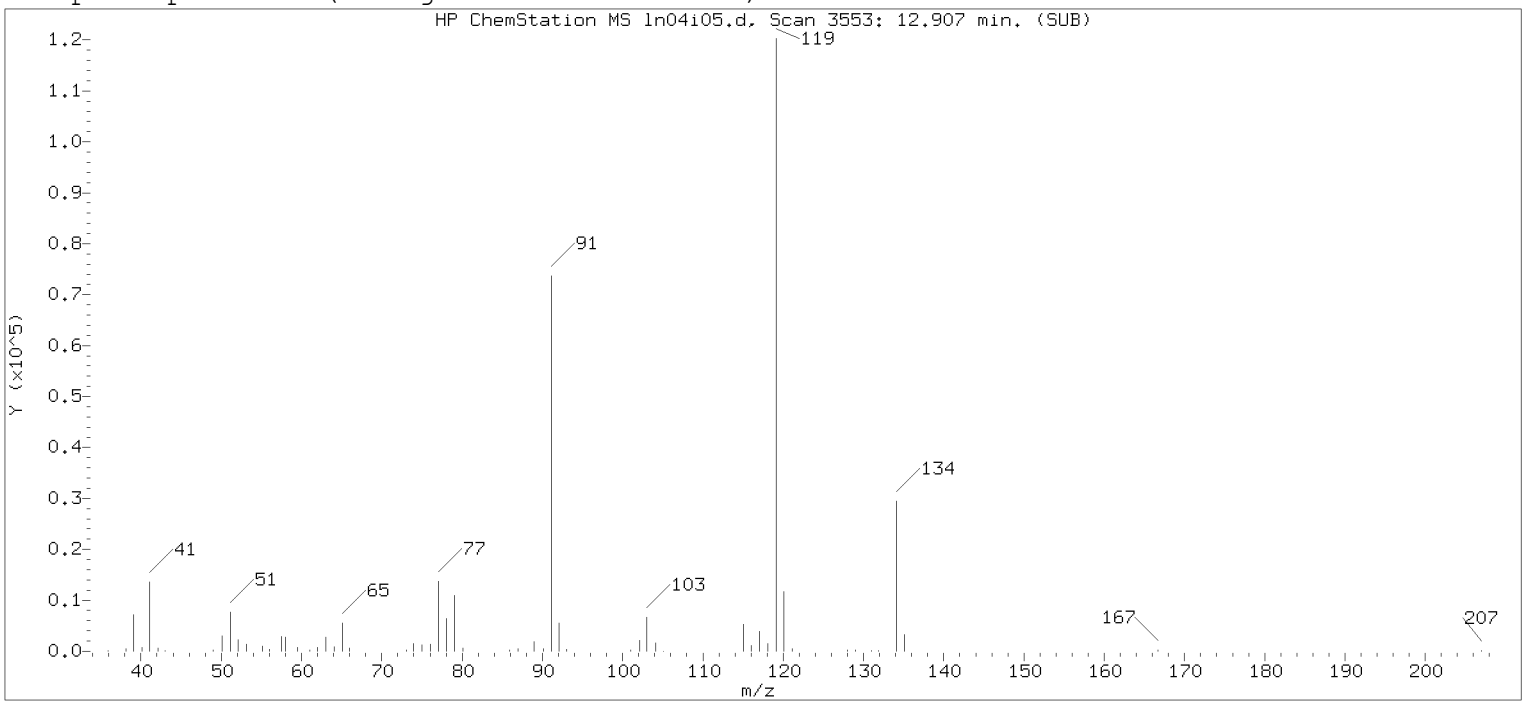
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area (flag) : 42119M
On-Column Amount (ng) : 8.5994
Integration start scan : 3540 Integration stop scan: 3558
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

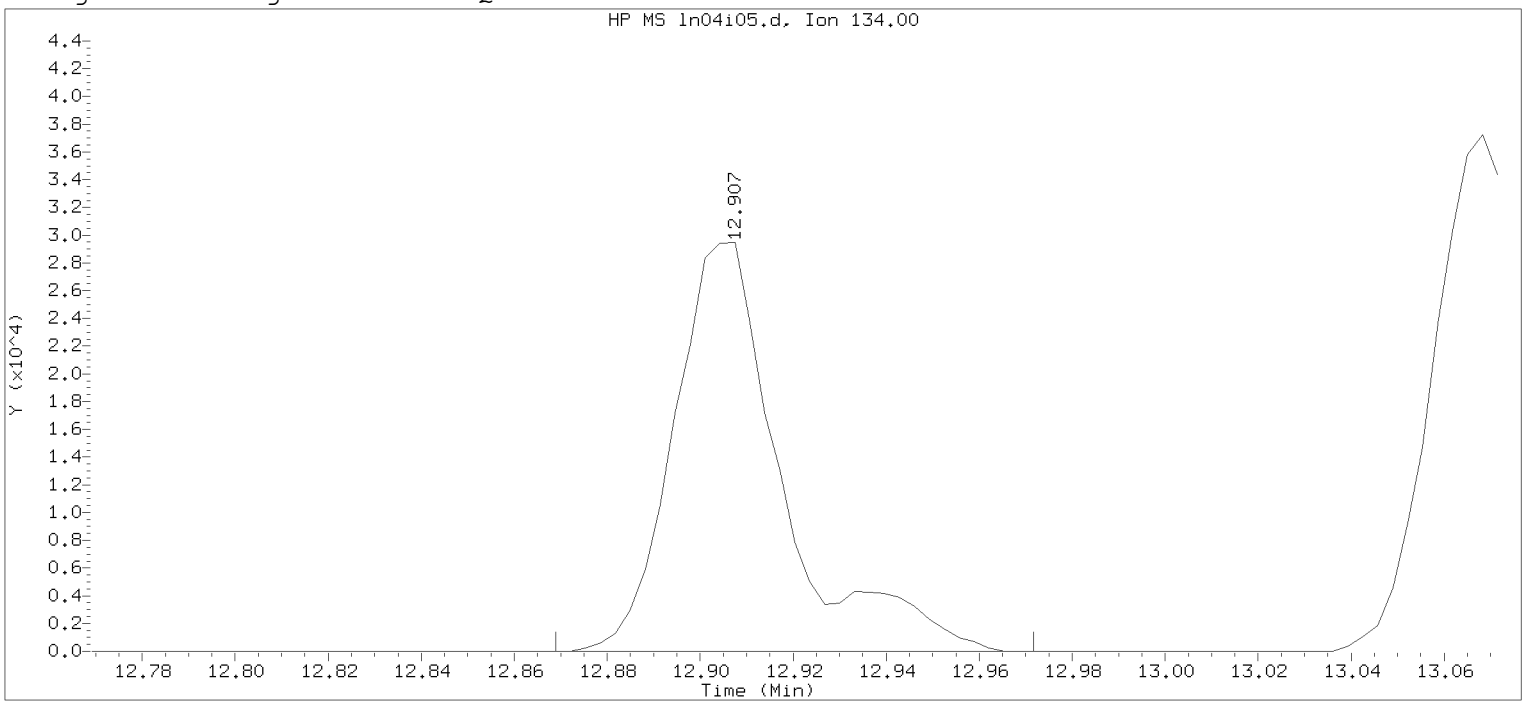
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



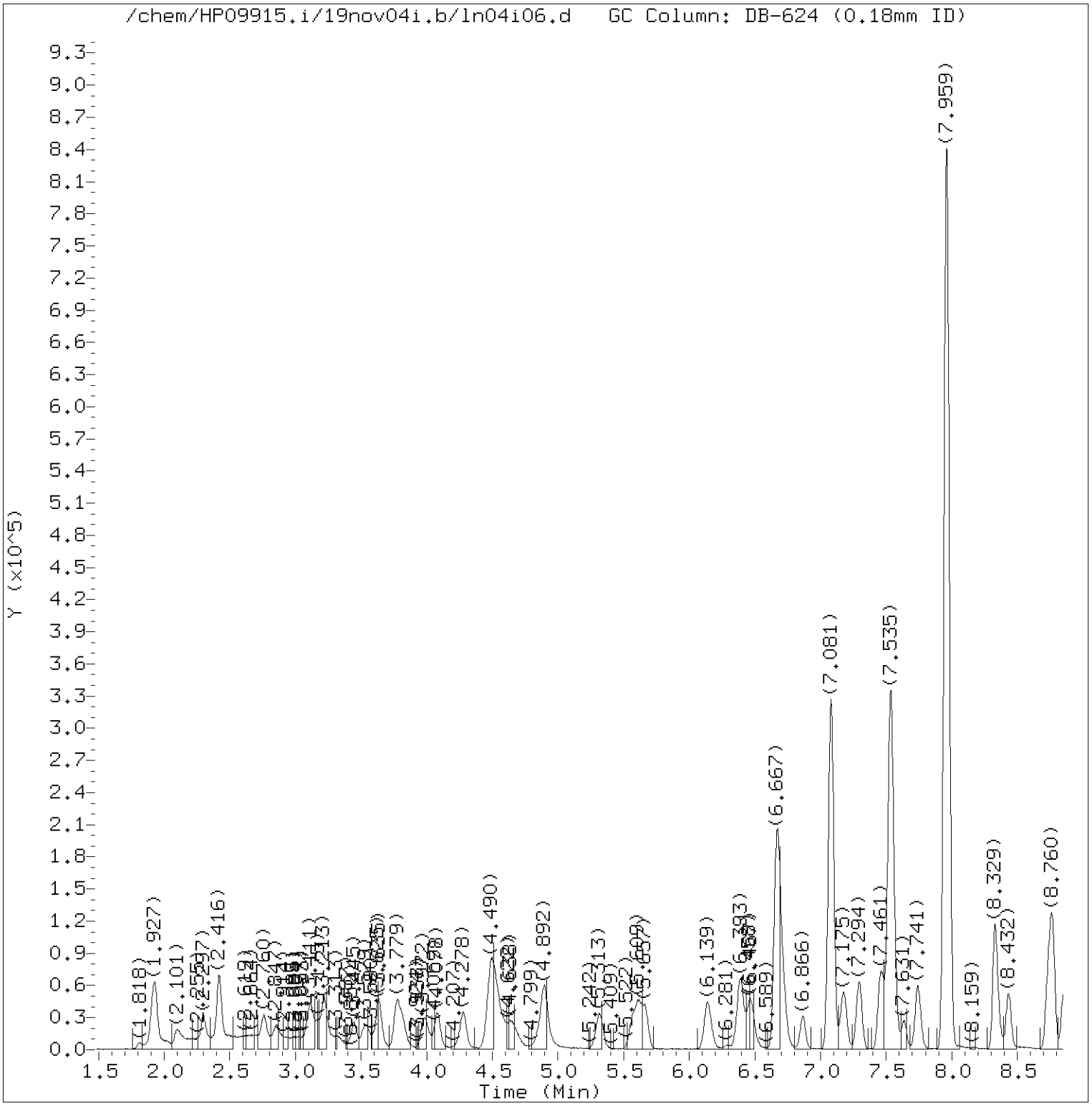
Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area : 47747
On-column Amount (ng) : 9.3569
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

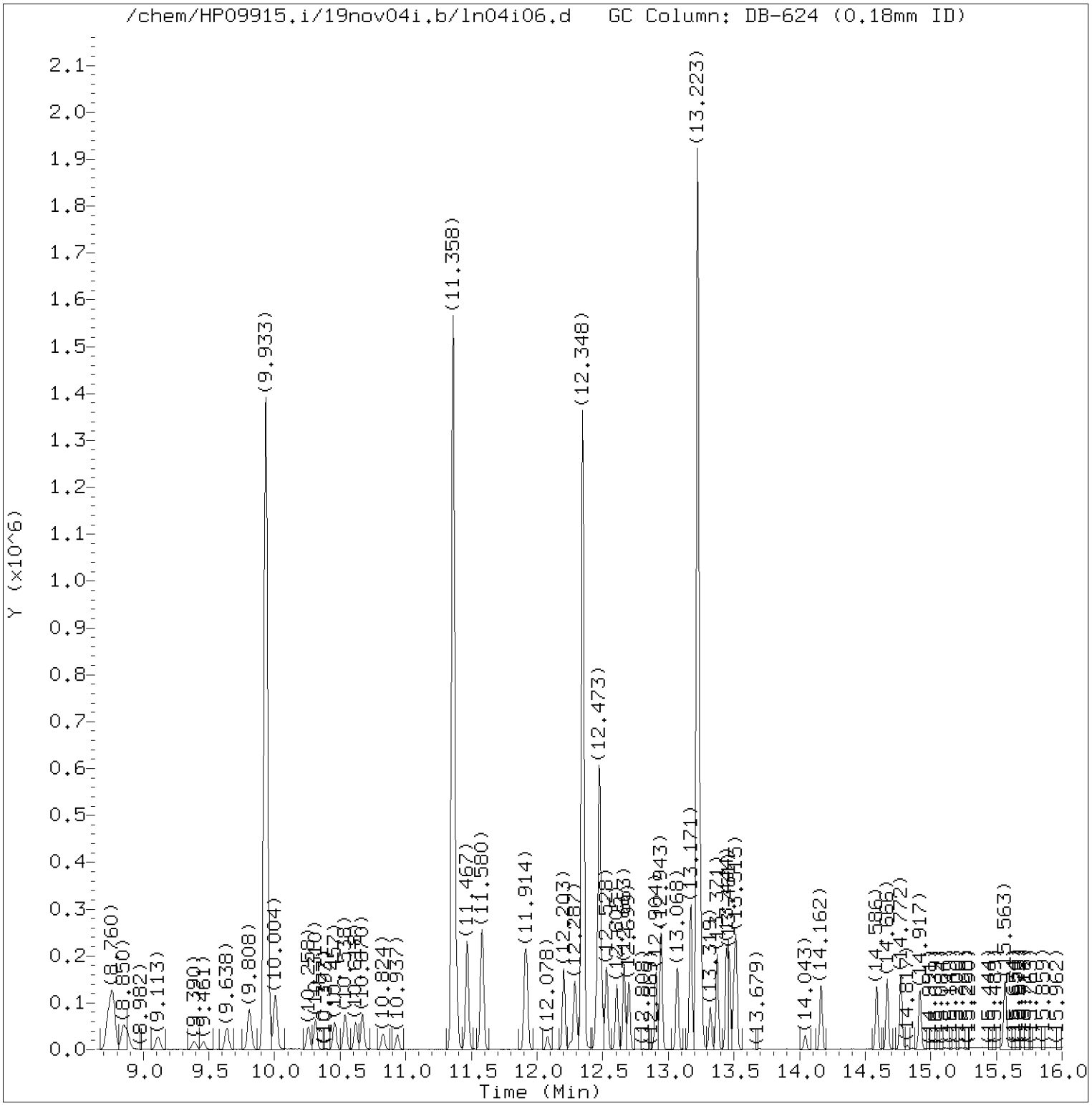
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.098	85	31217M	3.898
4) Chloromethane	(2)	2.297	50	32031	4.150
6) Vinyl Chloride	(2)	2.416	62	30864	4.006
5) 1,3-Butadiene	(2)	2.419	39	27249M	4.252
8) Bromomethane	(2)	2.760	94	23202	4.202
9) Chloroethane	(2)	2.860	64	17298	4.086
10) Dichlorofluoromethane	(2)	3.107	67	40740M	4.015
12) Trichlorofluoromethane	(2)	3.168	101	33532	4.043
11) n-Pentane	(2)	3.223	43	42826M	4.369
14) Ethyl ether	(2)	3.445	59	21059	3.929
15) Freon 123a	(2)	3.538	67	27312	4.094
16) Acrolein	(1)	3.635	56	72021	36.633
17) 1,1-Dichloroethene	(2)	3.773	96	19372	3.979
17) 1,1-Dichloroethene	(2)	3.773	63	9734	3.988
19) Freon 113	(2)	3.805	101	22601	4.069
18) Acetone	(1)	3.815	58	6763M	7.673
22) Methyl Iodide	(2)	3.972	142	39671	3.933
21) 2-Propanol	(1)	4.004	45	45871	72.395
23) Carbon Disulfide	(2)	4.082	76	71681	3.907
27) Methyl Acetate	(2)	4.258	43	24928M	3.976
25) Allyl Chloride	(2)	4.281	41	34775	3.982
28) Methylene Chloride	(2)	4.477	84	22693	3.917
29)*t-Butyl alcohol-d10	(1)	4.512	65	262044M	250.000
30) t-Butyl alcohol	(1)	4.638	59	80219	72.713
31) Acrylonitrile	(2)	4.840	53	12699	3.765
32) trans-1,2-Dichloroethene	(2)	4.901	96	22231	3.947
33) Methyl Tertiary Butyl Ether	(2)	4.901	73	71515	3.869
34) n-Hexane	(2)	5.323	57	33969M	3.877
36) 1,1-Dichloroethane	(2)	5.564	63	39317	4.002
38) di-Isopropyl ether	(2)	5.615	45	72628	3.833
39) 2-Chloro-1,3-butadiene	(2)	5.663	53	34190	3.879
40) Ethyl t-butyl ether	(2)	6.139	59	70845	3.853
43) 1,2-Dichloroethene (Total)	(2)		96	47253	7.906
44) 2-Butanone	(2)	6.371	43	32547	7.516
42) cis-1,2-Dichloroethene	(2)	6.390	96	25022	3.958
45) 2,2-Dichloropropane	(2)	6.400	77	29877	3.912
47) Propionitrile	(1)	6.467	54	100934	73.427
48) Methacrylonitrile	(2)	6.670	67	134092	36.850

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.718	128	12879	3.842
50) Tetrahydrofuran	(1)	6.734	71	9128	7.351
51) Chloroform	(2)	6.869	83	36176	3.850
52)$Dibromofluoromethane	(2)	7.081	113	280667	49.988
52)$Dibromofluoromethane	(2)	7.078	111	287593	50.237
53) 1,1,1-Trichloroethane	(2)	7.091	97	31167	3.886
54) Cyclohexane	(2)	7.178	56	42347	3.949
54) Cyclohexane	(2)	7.175	84	36627	3.932
54) Cyclohexane	(2)	7.181	69	13119	3.955
56) Carbon Tetrachloride	(2)	7.287	117	25509	3.750
55) 1,1-Dichloropropene	(2)	7.297	75	30762	3.960
58) Isobutyl Alcohol	(1)	7.464	41	65125	175.416
57)$1,2-Dichloroethane-d4	(2)	7.532	102	72246	50.488
57)$1,2-Dichloroethane-d4	(2)	7.535	65	323654	50.754
57)$1,2-Dichloroethane-d4	(2)	7.538	104	45694	49.994
60) Benzene	(2)	7.564	78	92488	3.959
61) 1,2-Dichloroethane	(2)	7.638	62	29321	3.902
61) 1,2-Dichloroethane	(2)	7.628	98	2899	3.899
65) t-Amyl methyl ether	(2)	7.744	73	70267	3.807
66)*Fluorobenzene	(2)	7.959	96	1148427	50.000
67) n-Heptane	(2)	7.962	43	32502MA	3.971
69) n-Butanol	(1)	8.329	56	110027M	344.330
71) Trichloroethene	(2)	8.435	95	22766	3.871
72) Methylcyclohexane	(2)	8.737	83	42437	3.889
72) Methylcyclohexane	(2)	8.731	98	19822	4.014
73) 1,2-Dichloropropane	(2)	8.773	63	22762	3.837
76) Methyl Methacrylate	(2)	8.843	69	20713M	3.611
75) 1,4-Dioxane	(1)	8.850	88	16188	184.315
74) Dibromomethane	(2)	8.879	93	14634	3.813
78) Bromodichloromethane	(2)	9.110	83	24167	3.509
79) 2-Nitropropane	(2)	9.387	41	14154	6.785
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	8979	3.525
81) cis-1,3-Dichloropropene	(2)	9.638	75	32112	3.511
82) 4-Methyl-2-pentanone	(2)	9.808	43	67922	7.431
83)$Toluene-d8	(3)	9.933	98	1152733	49.832
83)$Toluene-d8	(3)	9.933	100	745821	49.773
88) Toluene	(3)	10.004	92	56092	3.868
90) 1,3-Dichloropropene (total)	(3)		100	60153	6.917

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	28041	3.406
91) Ethyl Methacrylate	(3)	10.310	69	34660	3.464
92) 1,1,2-Trichloroethane	(3)	10.457	97	20516	3.731
93) Tetrachloroethene	(3)	10.538	166	24234	3.946
94) 1,3-Dichloropropane	(3)	10.618	76	34762	3.703
96) 2-Hexanone	(3)	10.670	43	50570	7.572
97) Dibromochloromethane	(3)	10.824	129	18906	3.357
99) 1,2-Dibromoethane	(3)	10.937	107	21586	3.615
100)*Chlorobenzene-d5	(3)	11.358	117	884065	50.000
101) 1-Chlorohexane	(3)	11.364	91	31055	3.986
102) Chlorobenzene	(3)	11.387	112	63883	3.895
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	19618	3.631
104) Ethylbenzene	(3)	11.467	91	109318	3.944
106) m+p-Xylene	(3)	11.580	106	85093	7.804
108) Xylene (Total)	(3)		106	126157	11.616
107) o-Xylene	(3)	11.908	106	41064	3.813
109) Styrene	(3)	11.924	104	65784	3.696
110) Bromoform	(3)	12.078	173	12196	2.898
111) Isopropylbenzene	(3)	12.203	105	107056	3.963
112) Cyclohexanone	(1)	12.287	55	63391	184.289
114)$4-Bromofluorobenzene	(3)	12.348	95	440415	50.280
114)$4-Bromofluorobenzene	(3)	12.348	174	367241	50.573
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	33170M	3.658
115) Bromobenzene	(4)	12.467	156	27559	3.820
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	101806	36.395
117) 1,2,3-Trichloropropane	(4)	12.496	110	10208	3.668
119) n-Propylbenzene	(4)	12.528	91	126543	4.014
120) 2-Chlorotoluene	(4)	12.609	126	25381	3.790
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	89290	3.898
121) 4-Chlorotoluene	(4)	12.699	126	27169	3.898
124) tert-Butylbenzene	(4)	12.904	134	18608M	3.928
125) Pentachloroethane	(4)	12.940	167	14303	3.506
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	93258	3.863
127) sec-Butylbenzene	(4)	13.068	105	111847	3.956
129) 1,3-Dichlorobenzene	(4)	13.168	146	51597	3.892
130) p-Isopropyltoluene	(4)	13.174	119	96571	3.948
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	480071	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	53736	3.910

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

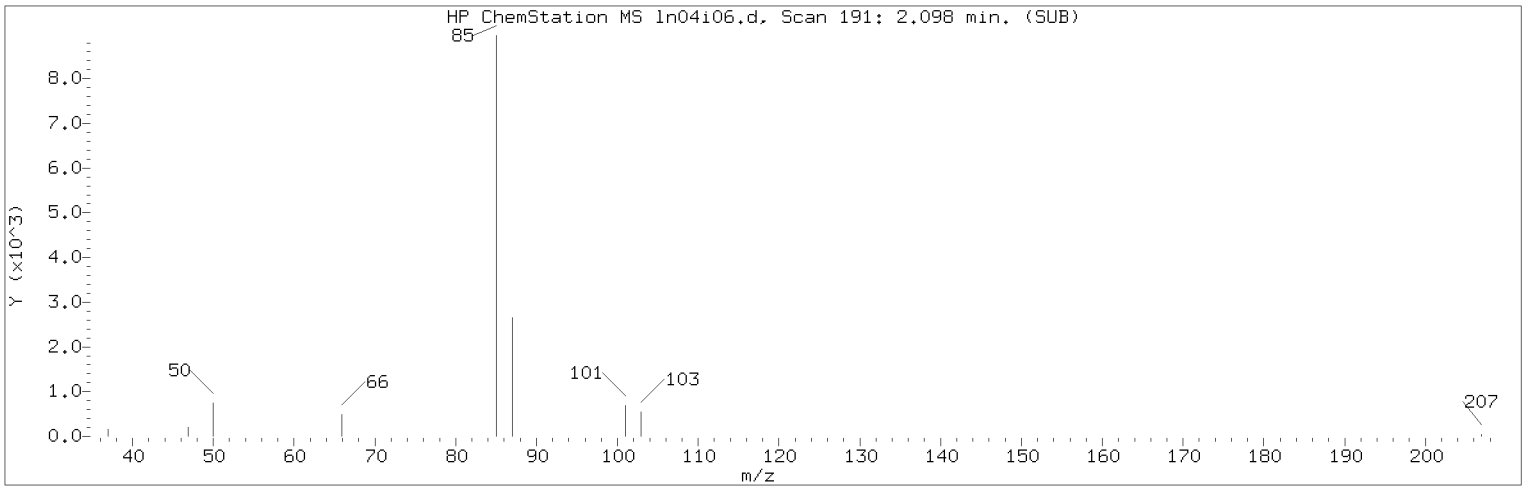
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

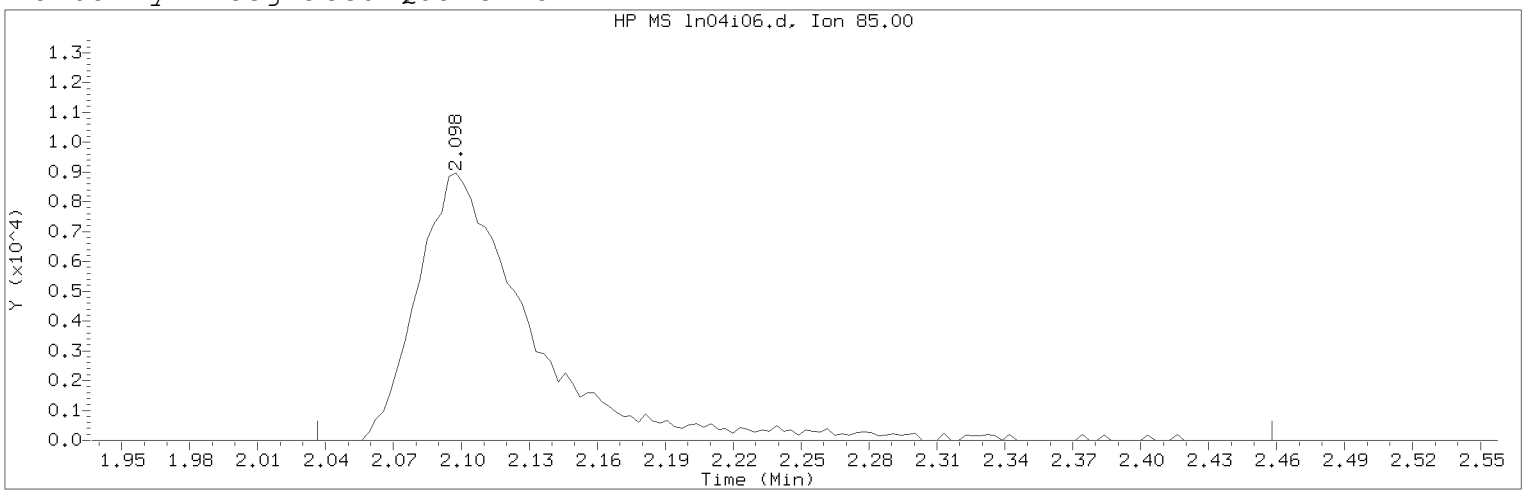
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	99398	3.886
135) Benzyl Chloride	(4)	13.319	91	57244	2.956
136) 1,3-Diethylbenzene	(4)	13.371	119	61603	3.870
141) Diethylbenzene (total)	(4)		100	179922	11.677
137) 1,4-Diethylbenzene	(4)	13.444	119	66423	3.939
139) n-Butylbenzene	(4)	13.464	92	51213	4.095
138) 1,2-Dichlorobenzene	(4)	13.502	146	50972	3.896
140) 1,2-Diethylbenzene	(4)	13.518	119	51896	3.868
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	6542	3.295
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	39801	3.960
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	38013	3.889
147) Hexachlorobutadiene	(4)	14.670	225	23904	5.180
148) Naphthalene	(4)	14.772	128	115354	3.671
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	37152	3.907
150) 2-Methylnaphthalene	(4)	15.563	142	72506	3.747

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

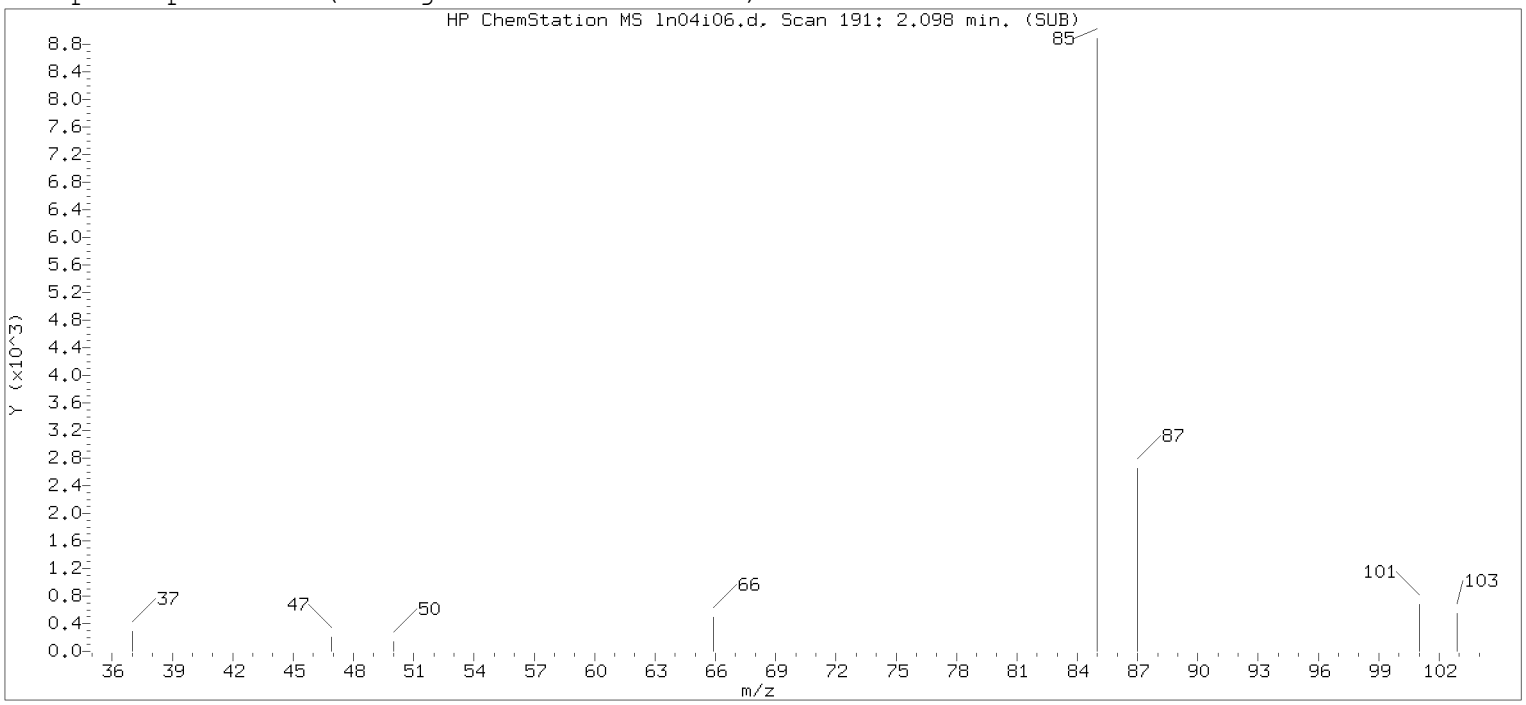
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 191
Retention Time (minutes): 2.098
Quant Ion : 85.00
Area (flag) : 31217M
On-Column Amount (ng) : 3.8978
Integration start scan : 171 Integration stop scan: 302
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

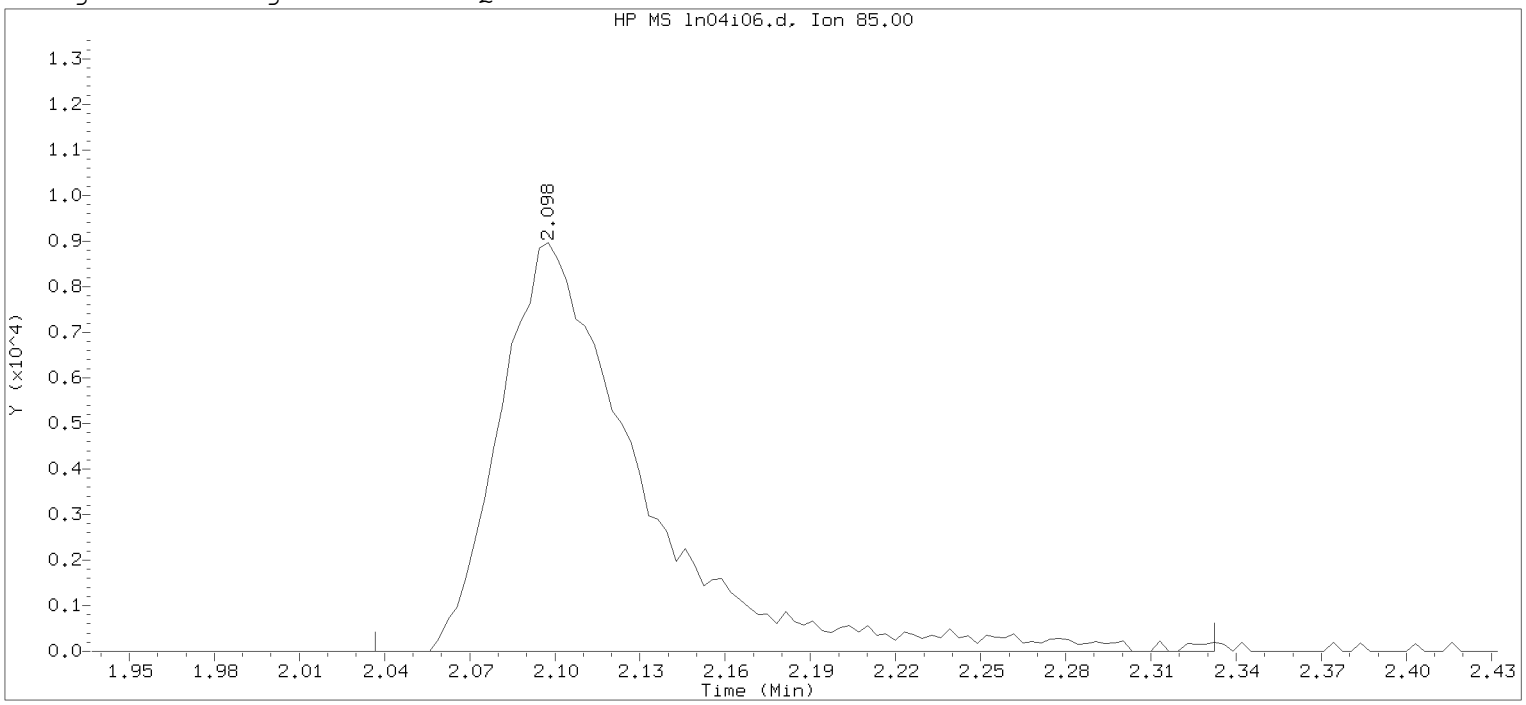
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

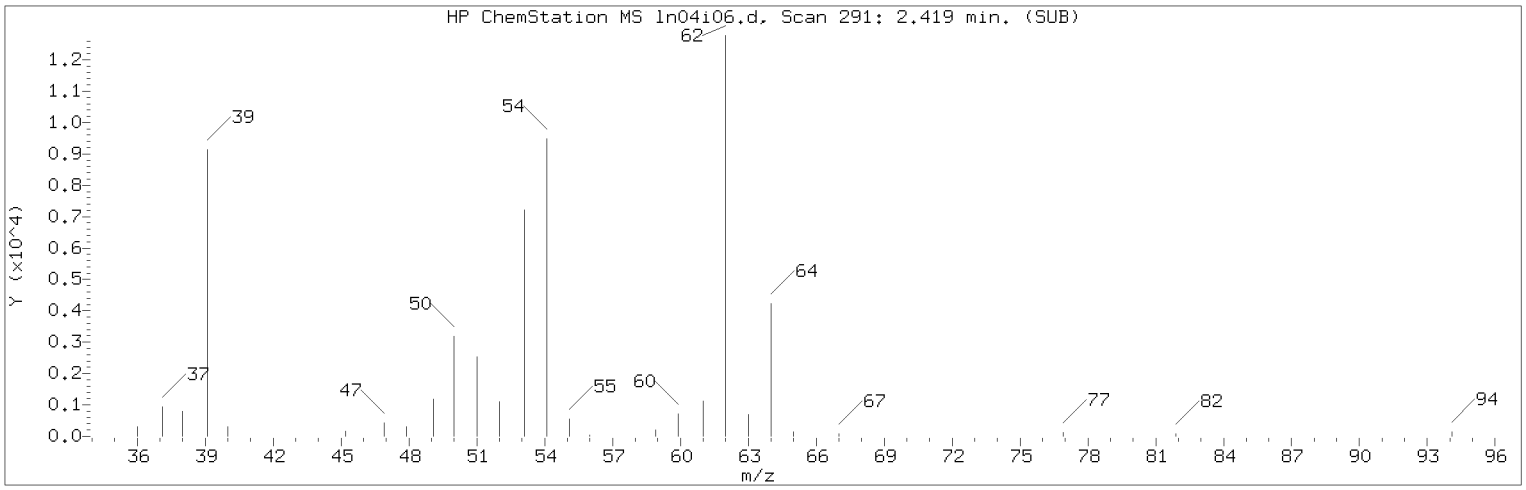
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

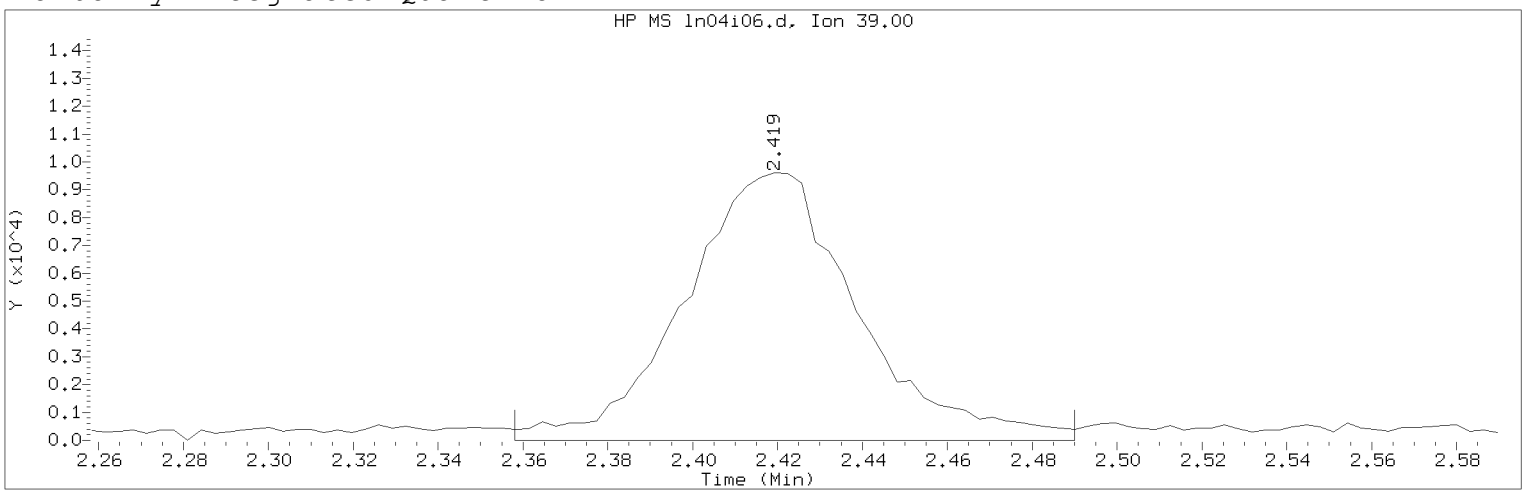
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 191
Retention Time (minutes): 2.098
Quant Ion : 85.00
Area : 30987
On-column Amount (ng) : 3.8874
Integration start scan : 171 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

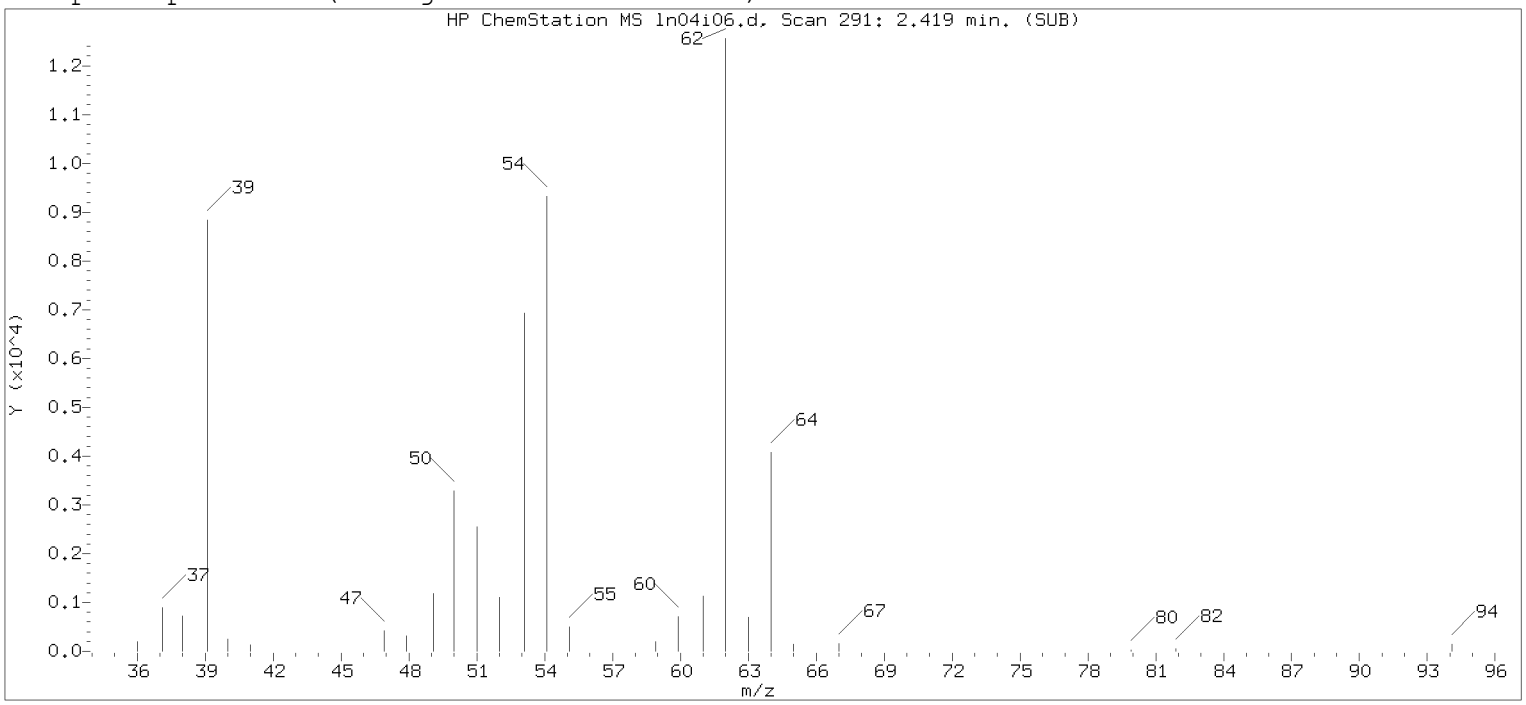
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 291
Retention Time (minutes): 2.419
Quant Ion : 39.00
Area (flag) : 27249M
On-Column Amount (ng) : 4.2517
Integration start scan : 271 Integration stop scan: 312
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

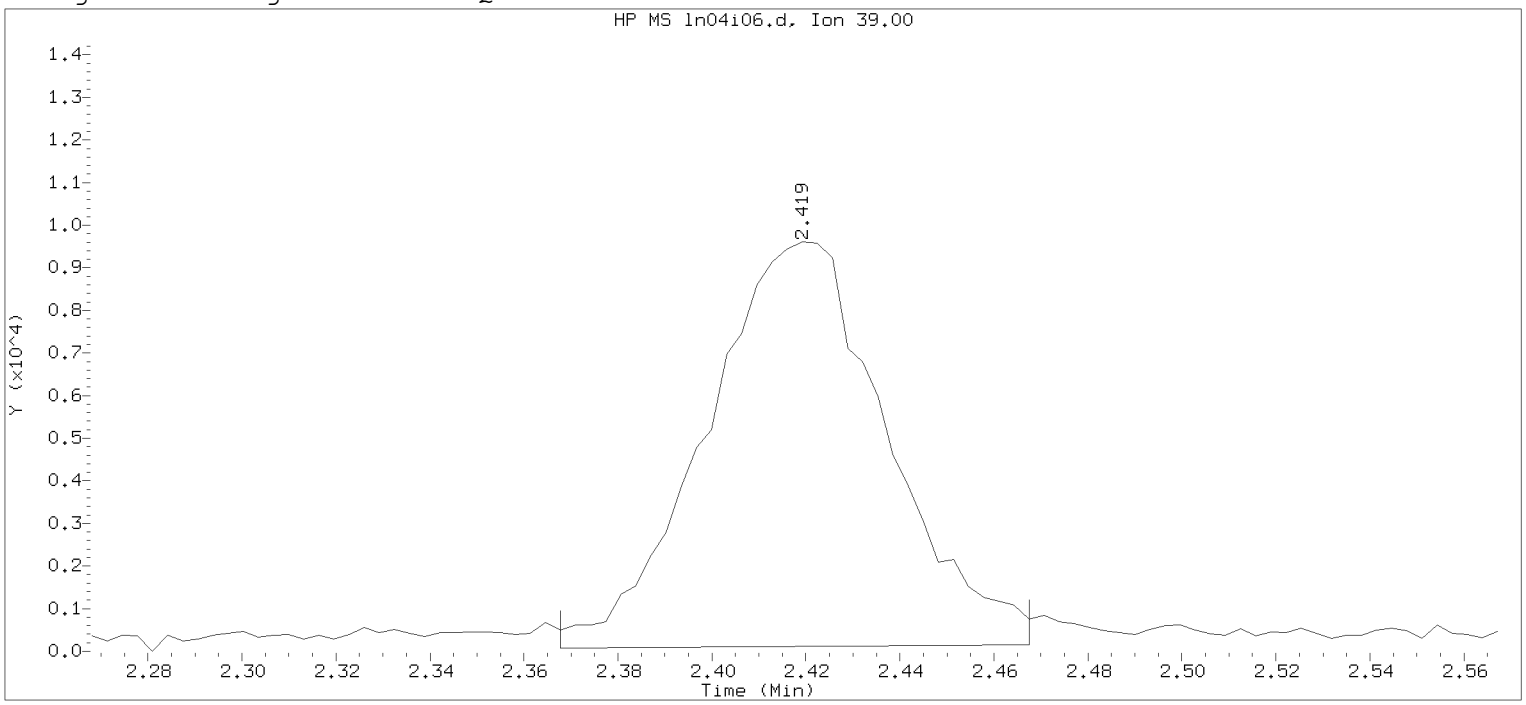
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

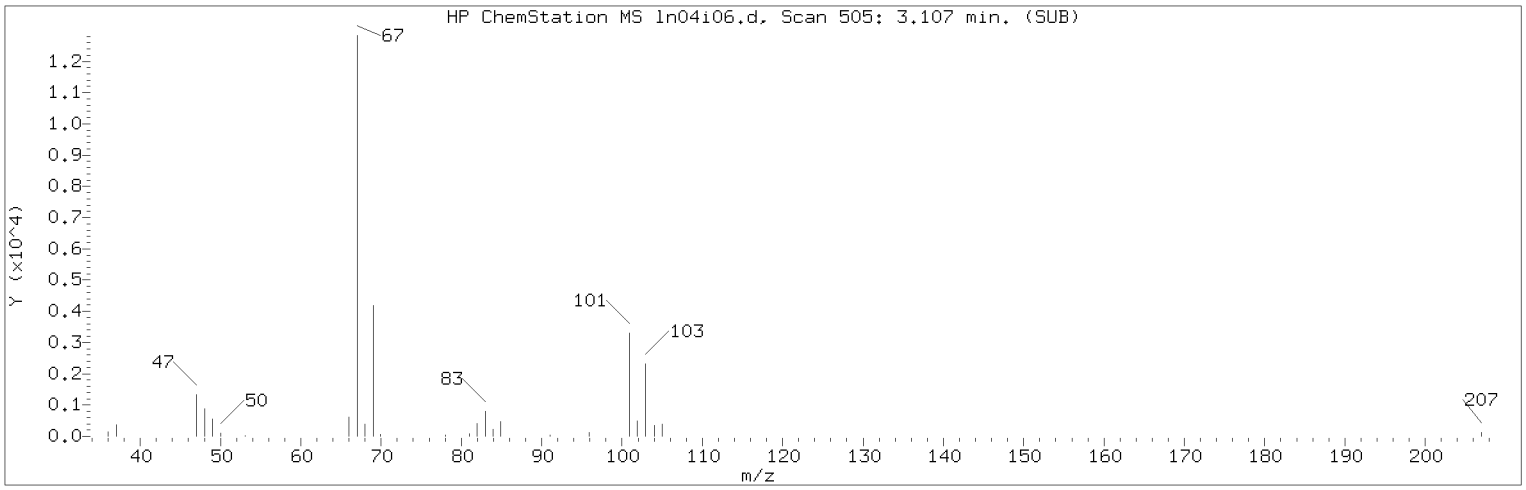
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

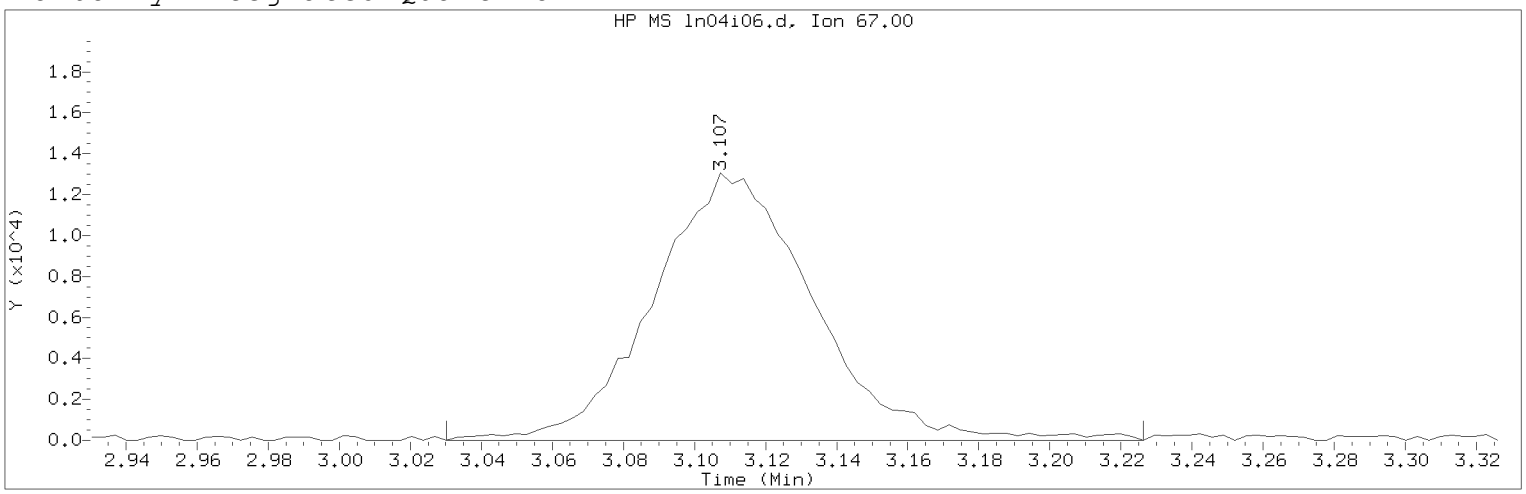
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 291
Retention Time (minutes): 2.419
Quant Ion : 39.00
Area : 25391
On-column Amount (ng) : 4.2082
Integration start scan : 274 Integration stop scan: 305
Y at integration start : 76 Y at integration end: 147

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

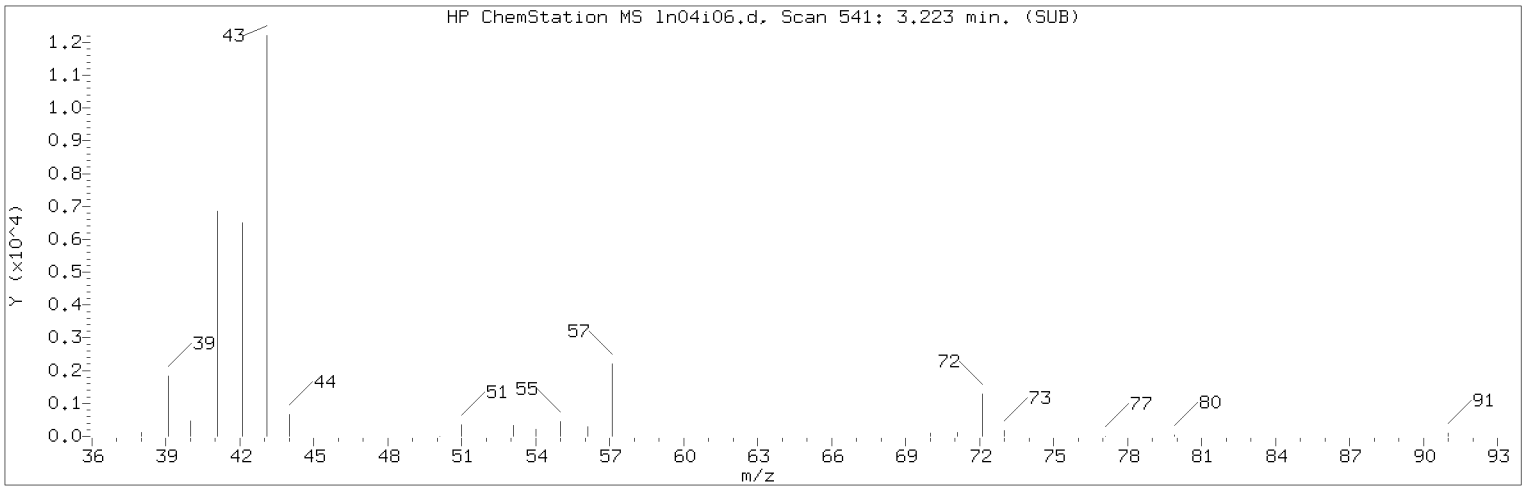
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 505
Retention Time (minutes): 3.107
Quant Ion : 67.00
Area (flag) : 40740M
On-Column Amount (ng) : 4.0151
Integration start scan : 480 Integration stop scan: 541
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

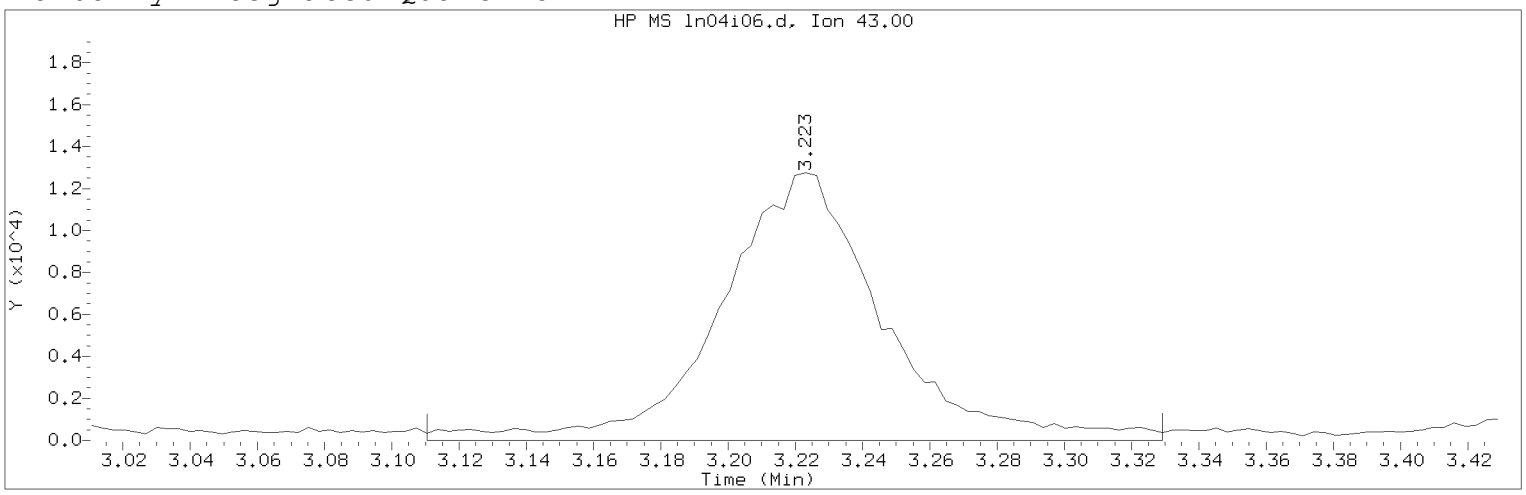
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

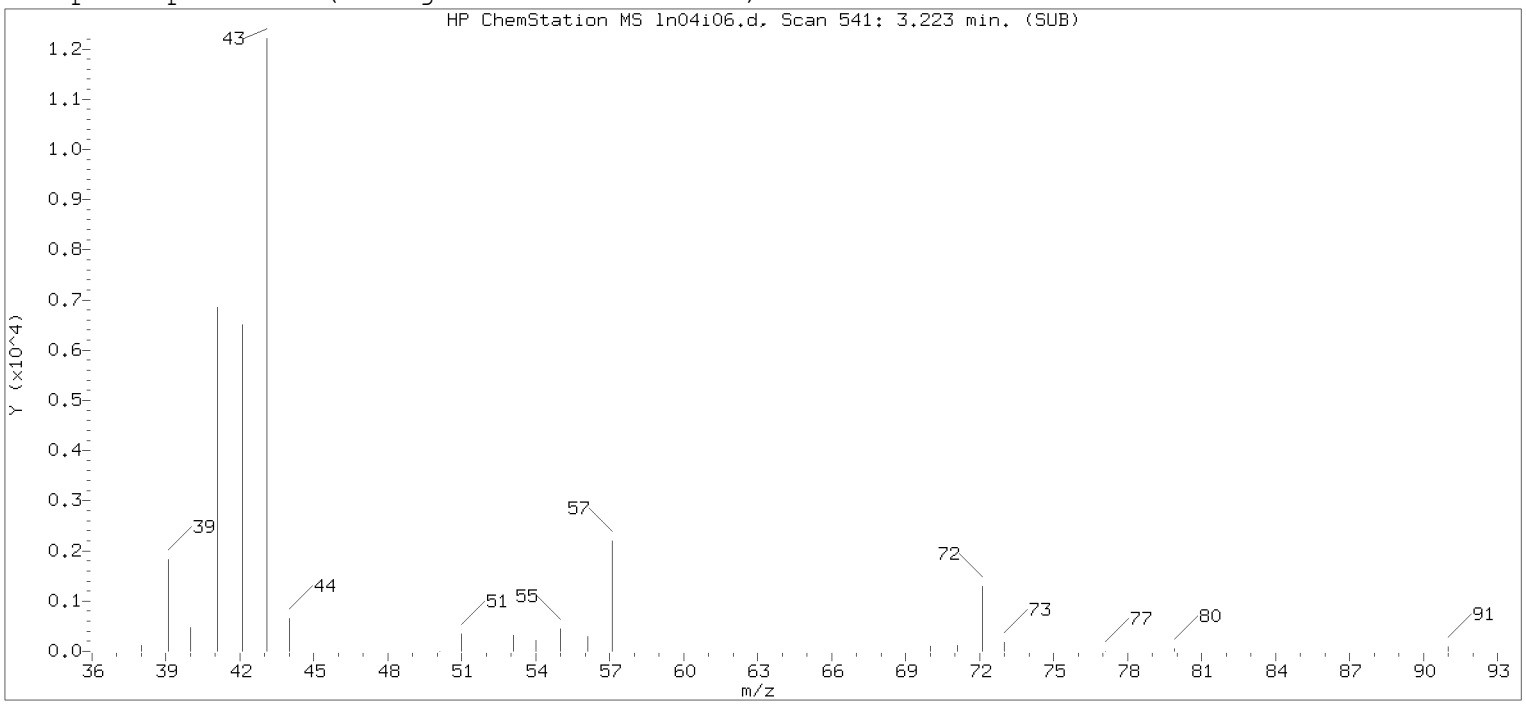
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 541
Retention Time (minutes): 3.223
Quant Ion : 43.00
Area (flag) : 42826M
On-Column Amount (ng) : 4.3694
Integration start scan : 505 Integration stop scan: 573
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

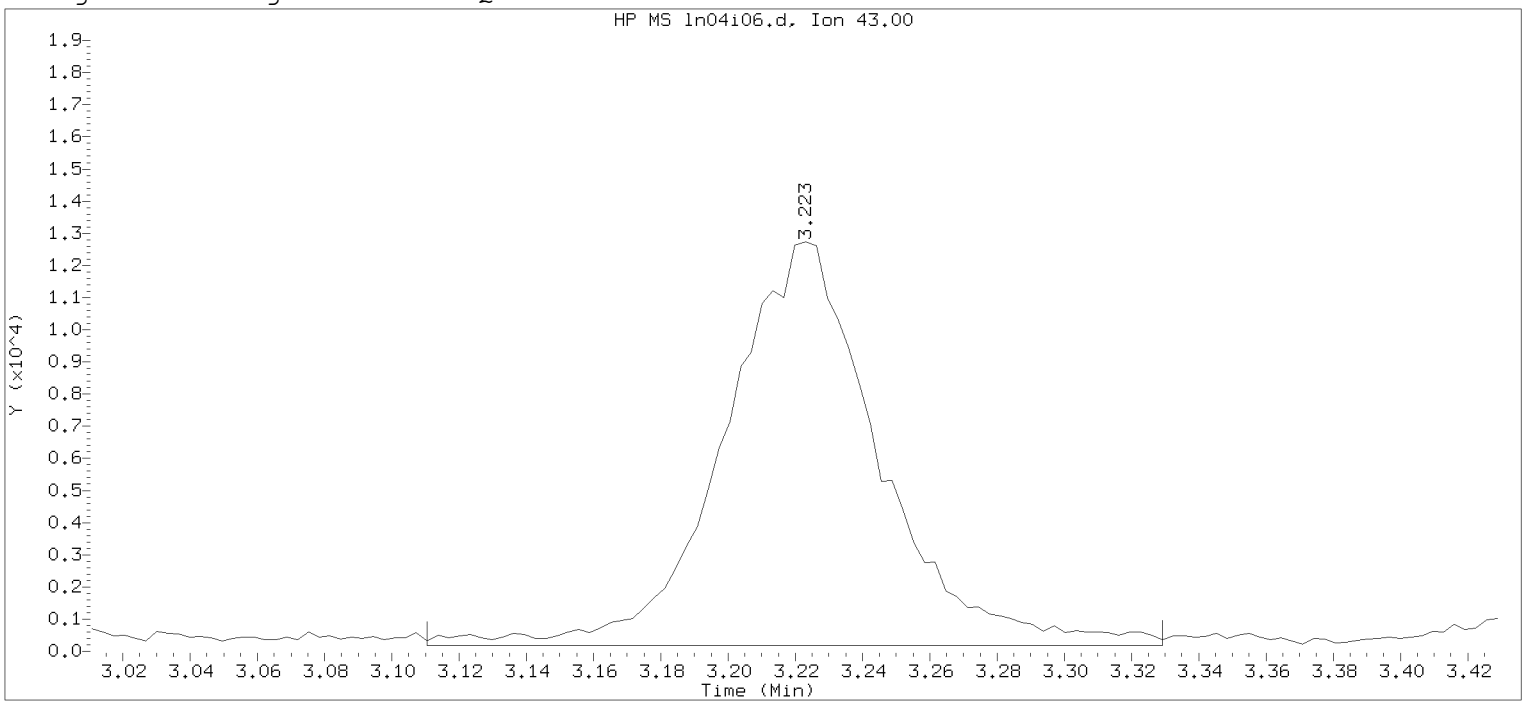
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

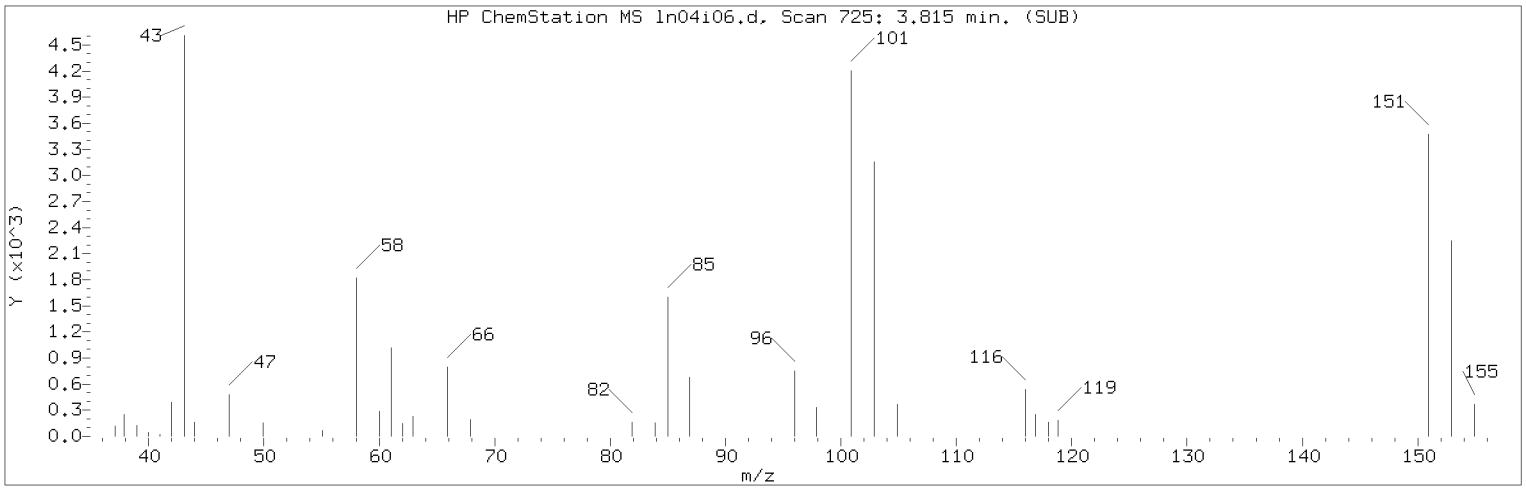
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

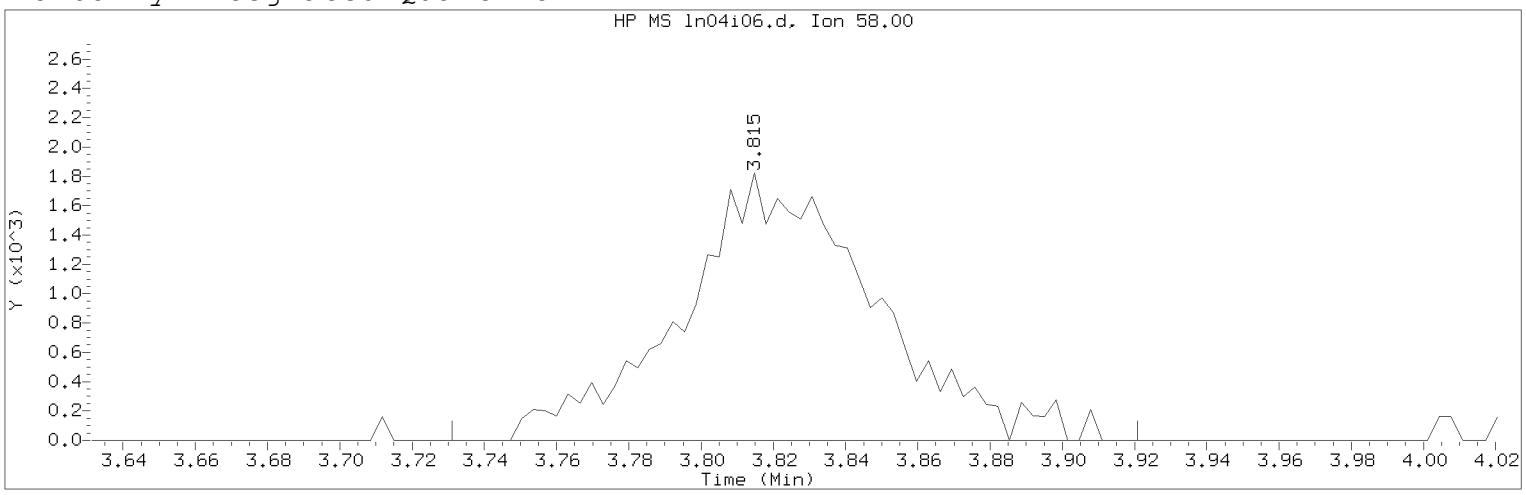
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 541
Retention Time (minutes): 3.223
Quant Ion : 43.00
Area : 40359
On-column Amount (ng) : 4.1550
Integration start scan : 505 Integration stop scan: 573
Y at integration start : 183 Y at integration end: 183

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

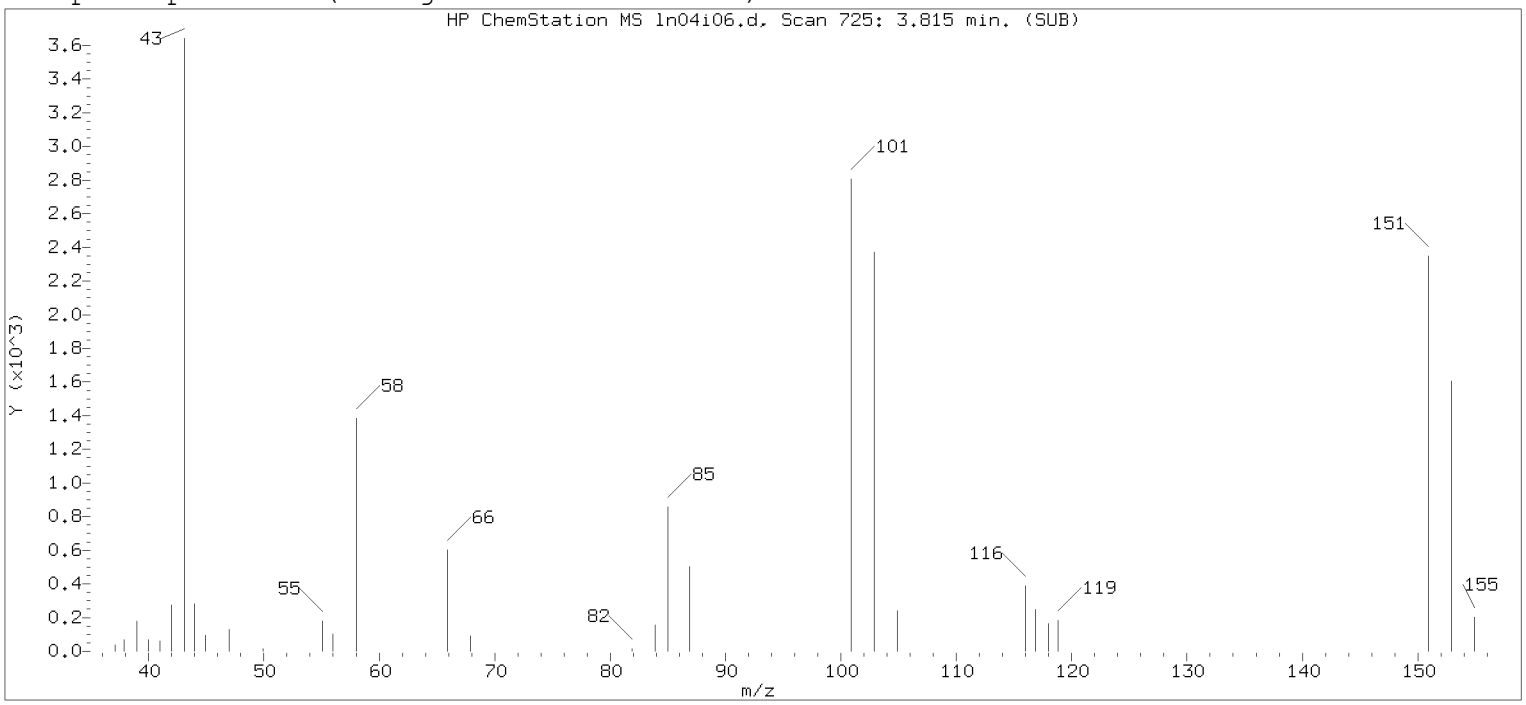
Compound Number : 18
Compound Name : Acetone
Scan Number : 725
Retention Time (minutes): 3.815
Quant Ion : 58.00
Area (flag) : 6763M
On-Column Amount (ng) : 7.6731
Integration start scan : 698 Integration stop scan: 757
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

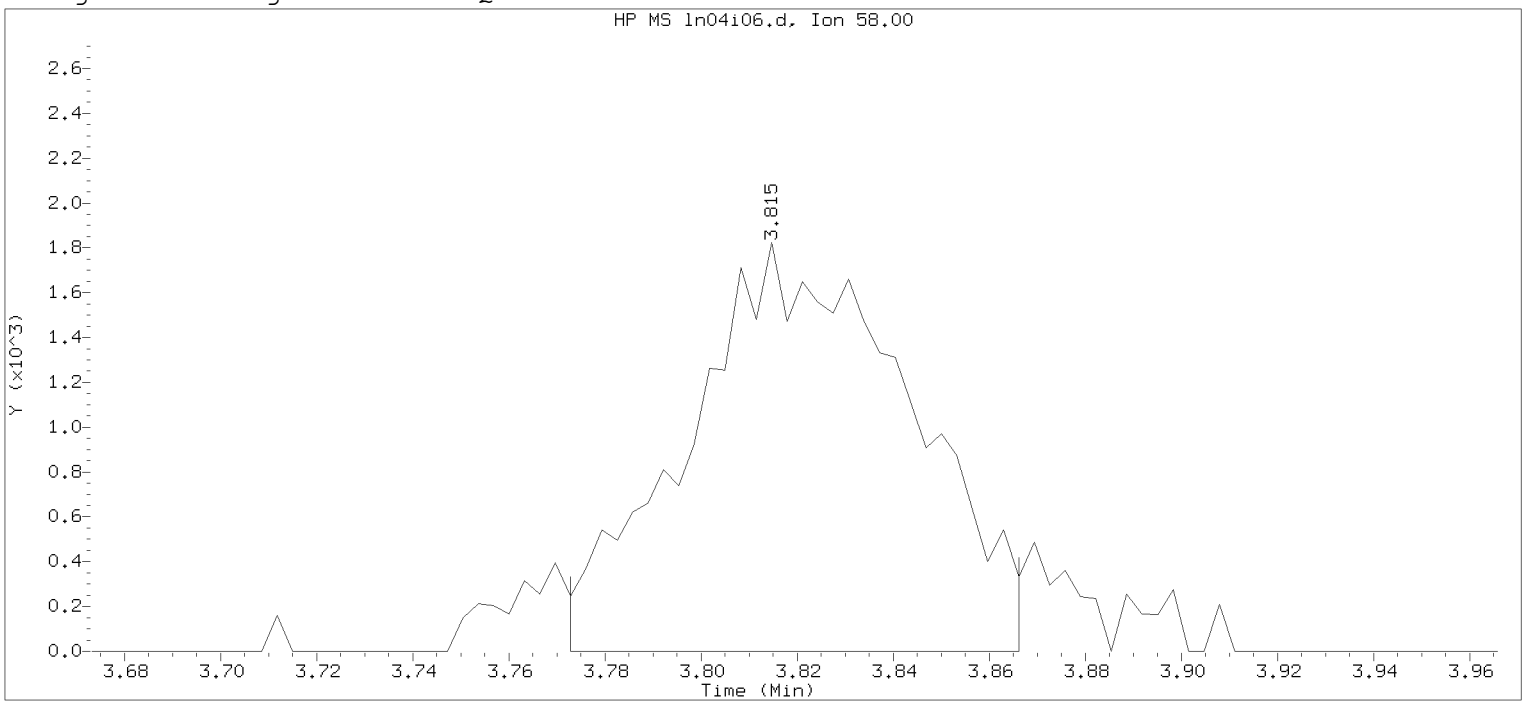
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

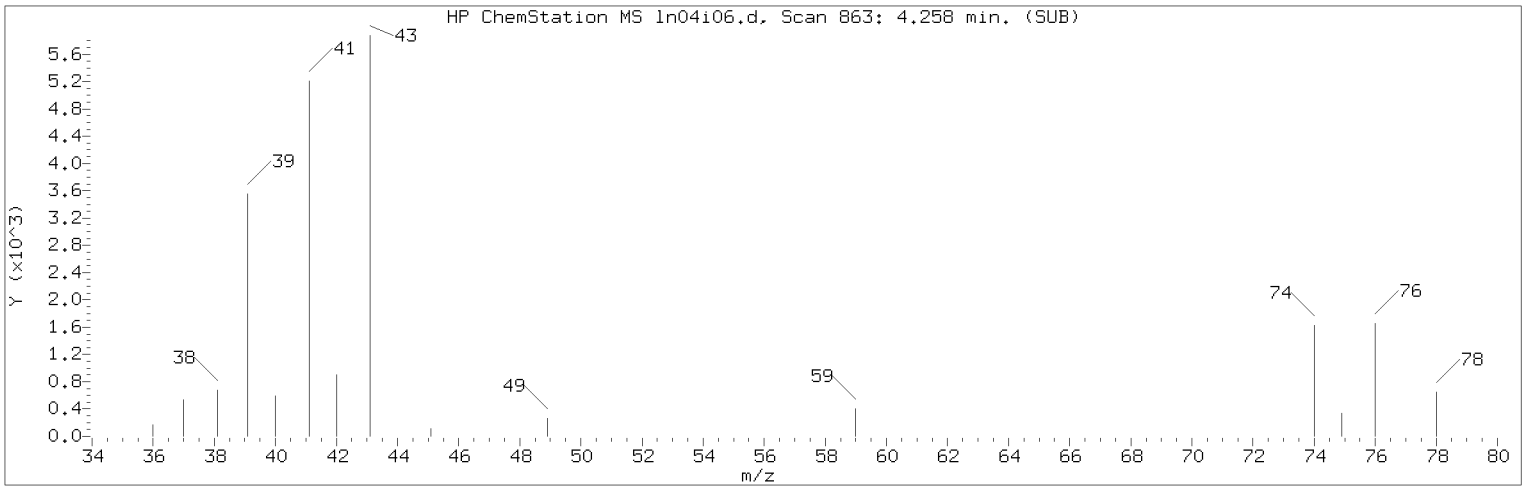
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

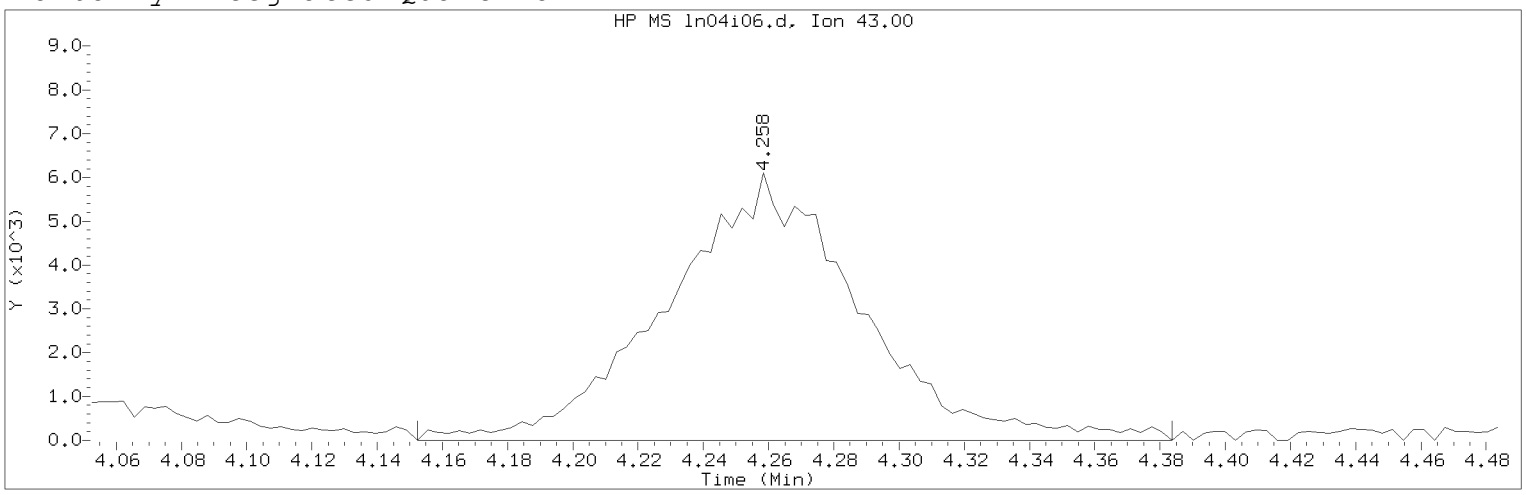
Compound Number	: 18		
Compound Name	: Acetone		
Scan Number	: 725		
Retention Time (minutes)	: 3.815		
Quant Ion	: 58.00		
Area	: 5862		
On-column Amount (ng)	: 7.7134		
Integration start scan	: 711	Integration stop scan:	740
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

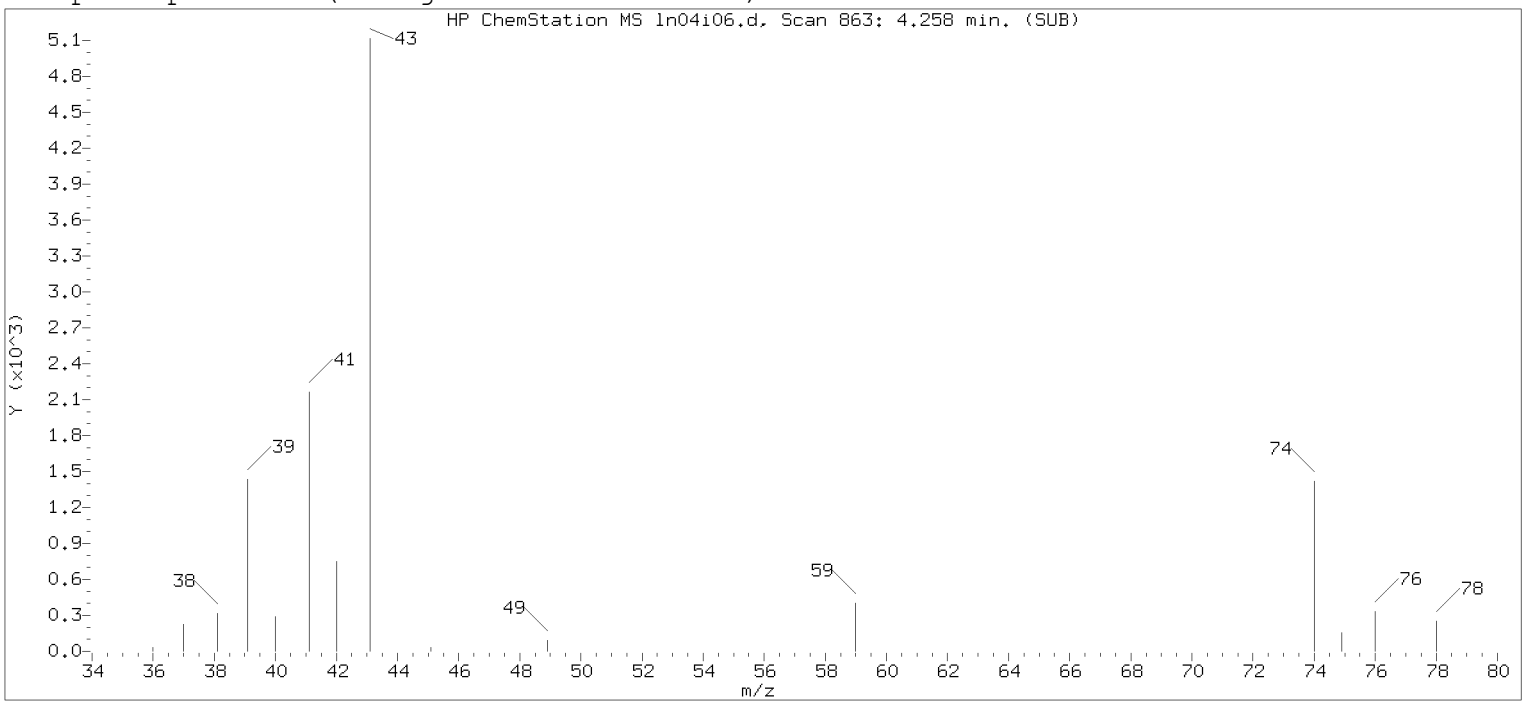
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 863
Retention Time (minutes): 4.258
Quant Ion : 43.00
Area (flag) : 24928M
On-Column Amount (ng) : 3.9757
Integration start scan : 829 Integration stop scan: 901
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

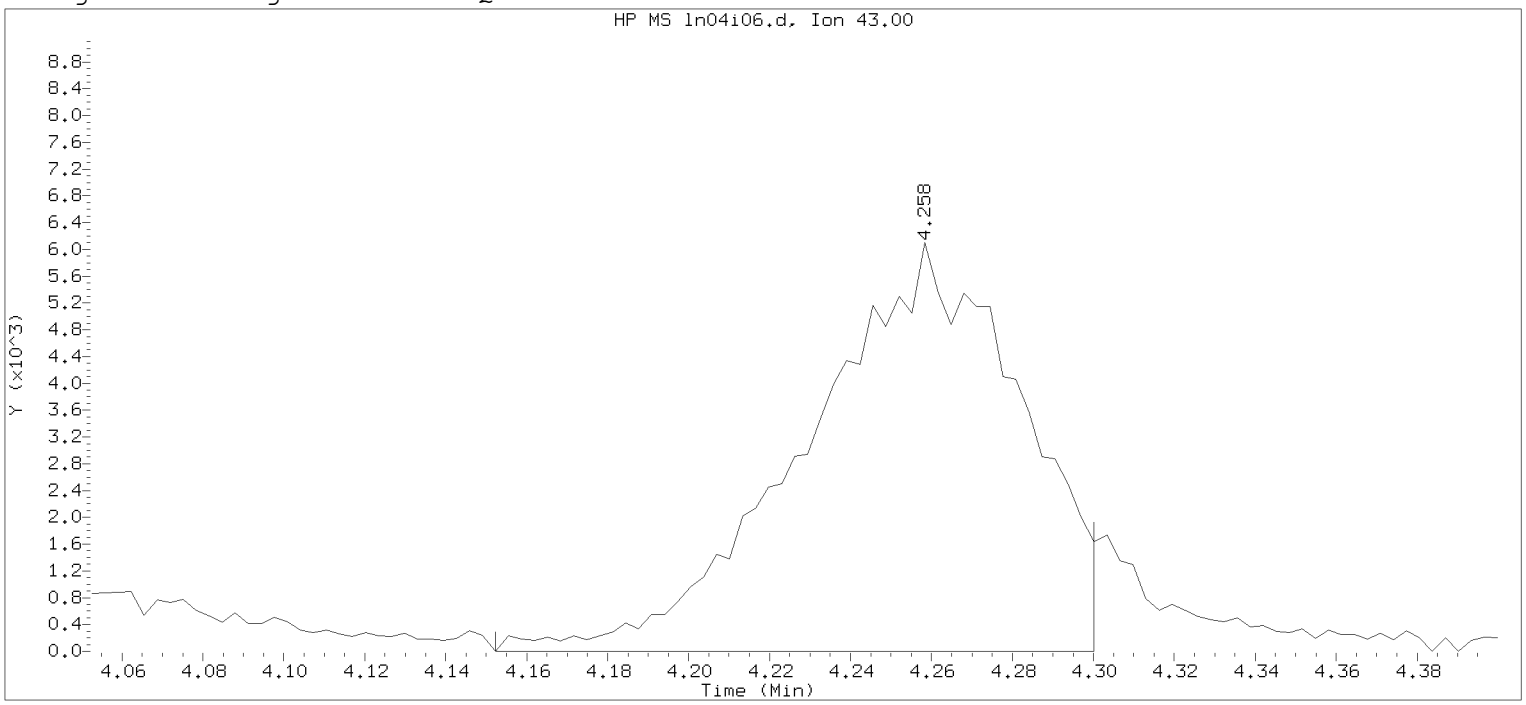
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

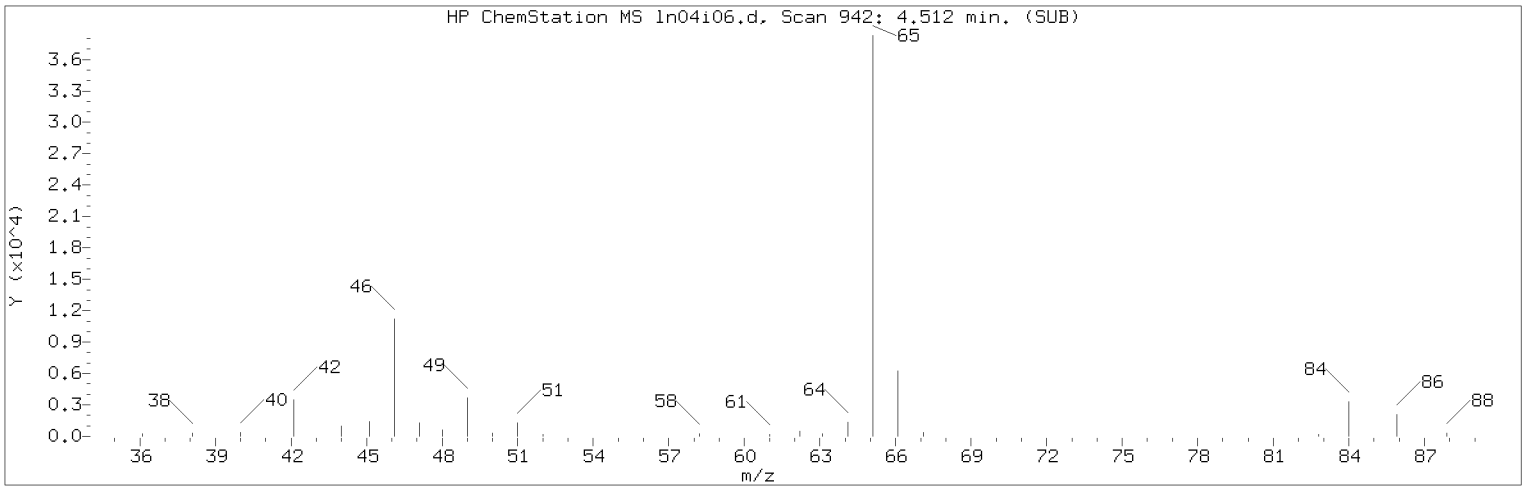
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

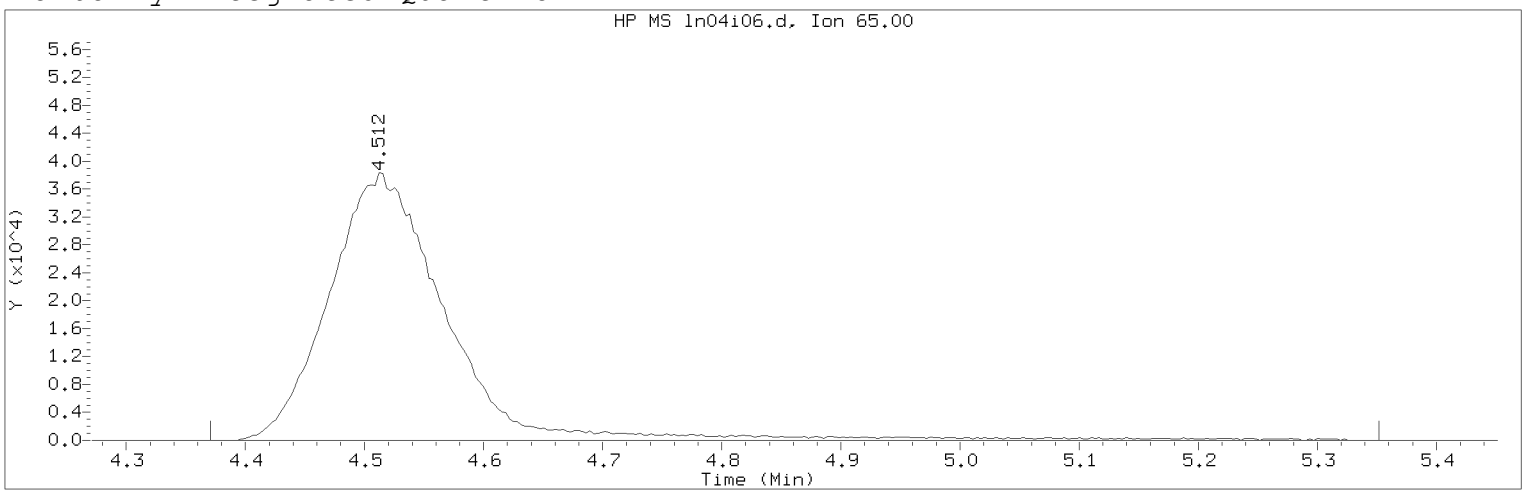
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 863
Retention Time (minutes): 4.258
Quant Ion : 43.00
Area : 22302
On-column Amount (ng) : 3.7243
Integration start scan : 829 Integration stop scan: 875
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

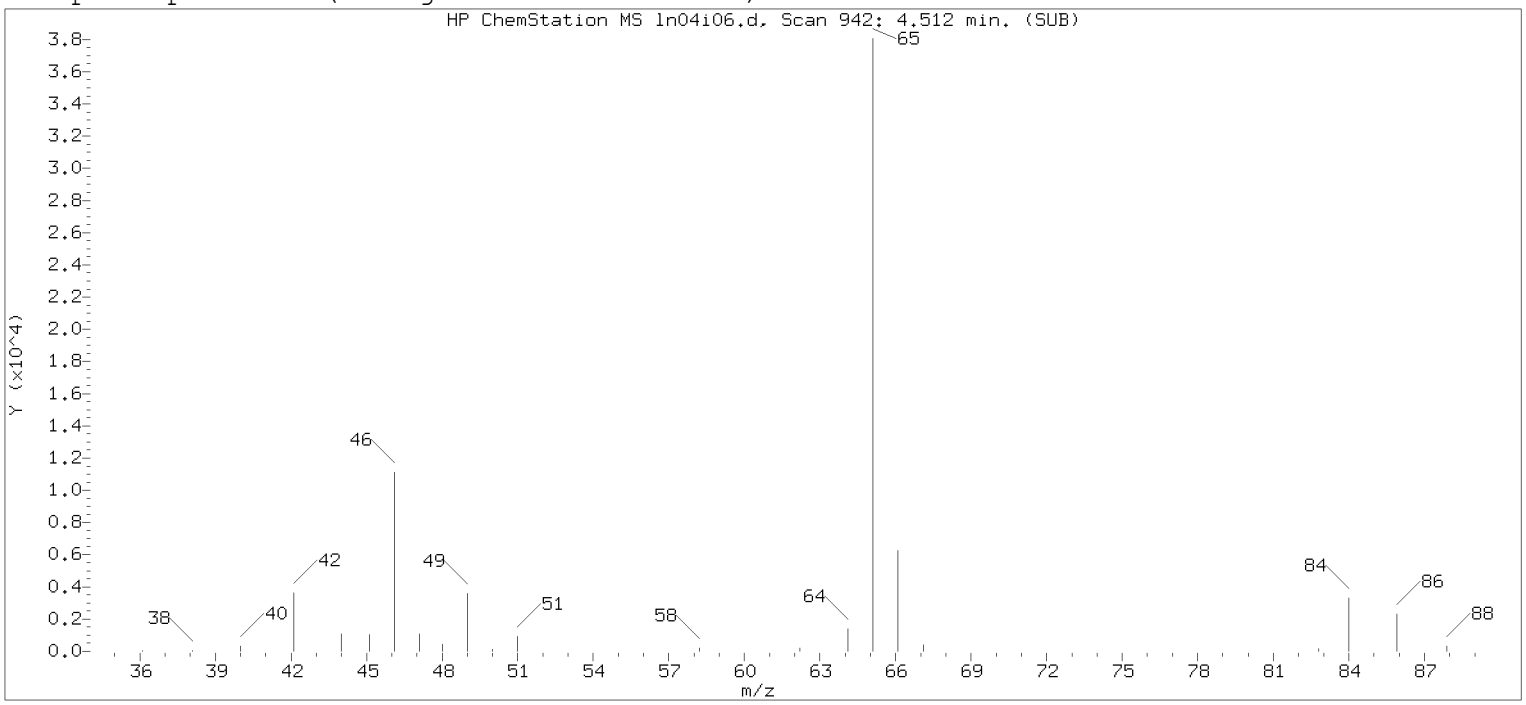
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area (flag) : 262044M
On-Column Amount (ng) : 250.0000
Integration start scan : 897 Integration stop scan: 1202
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

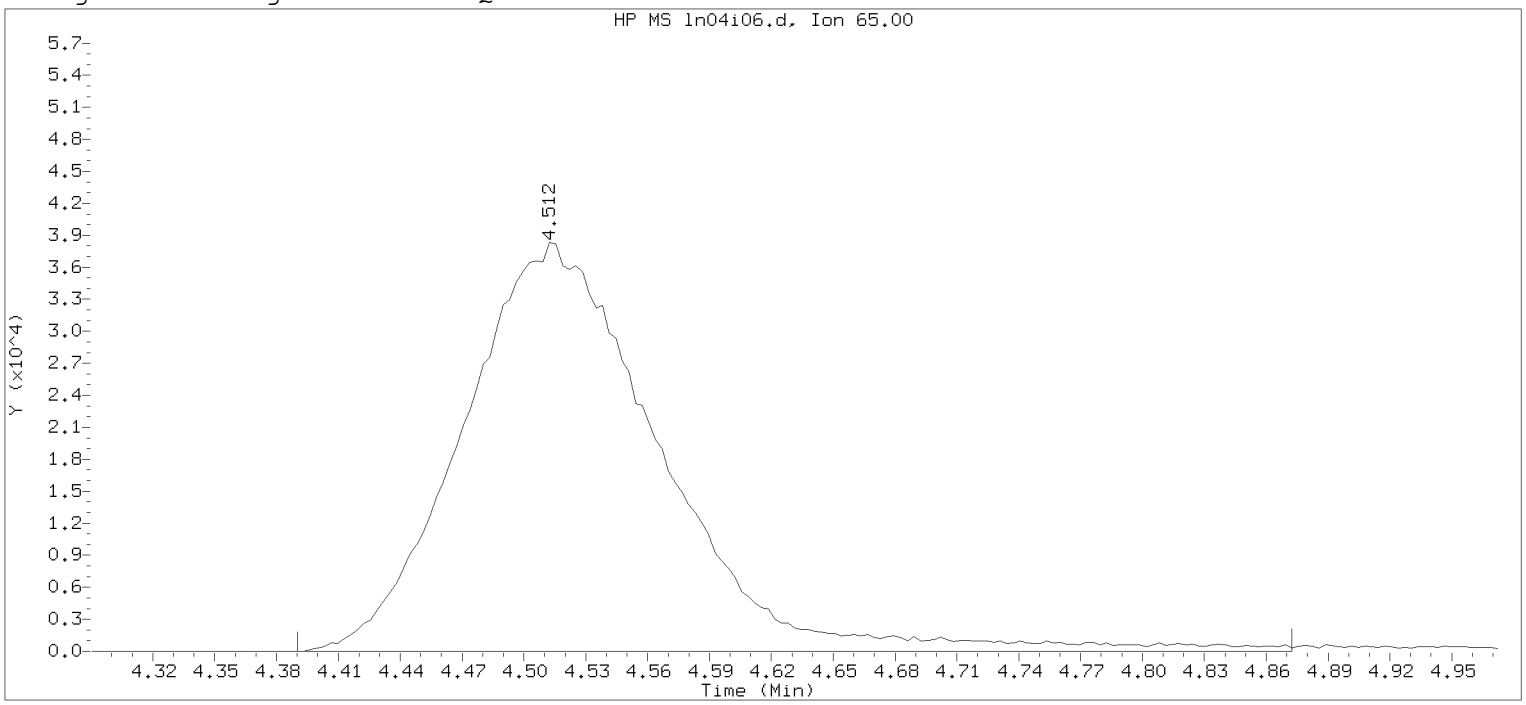
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

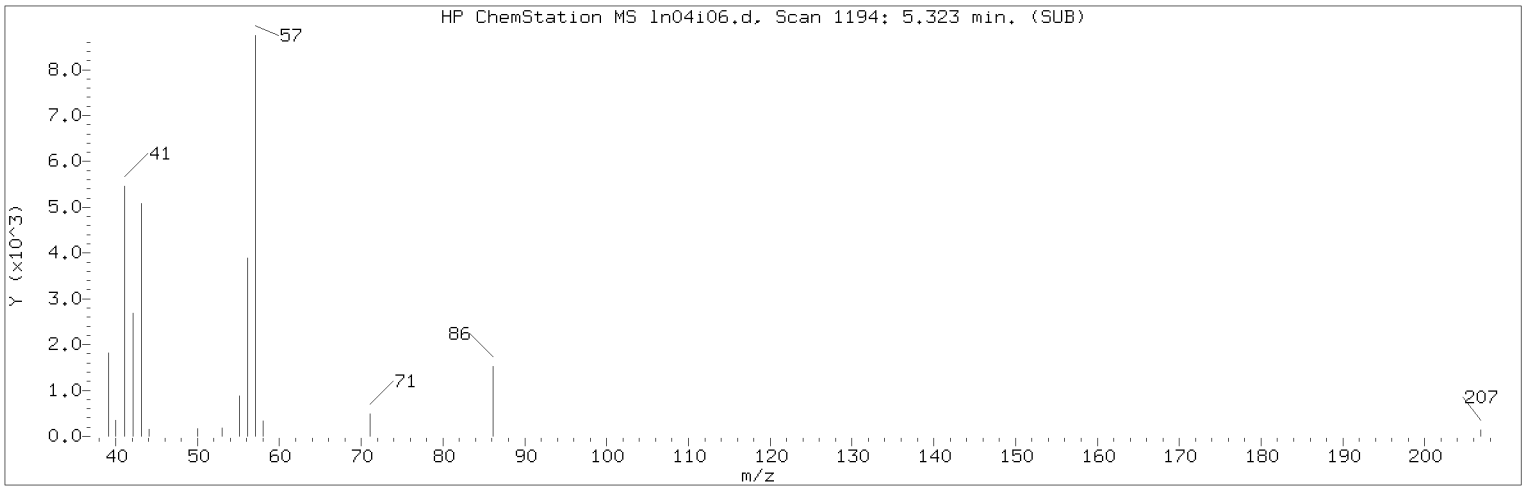
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

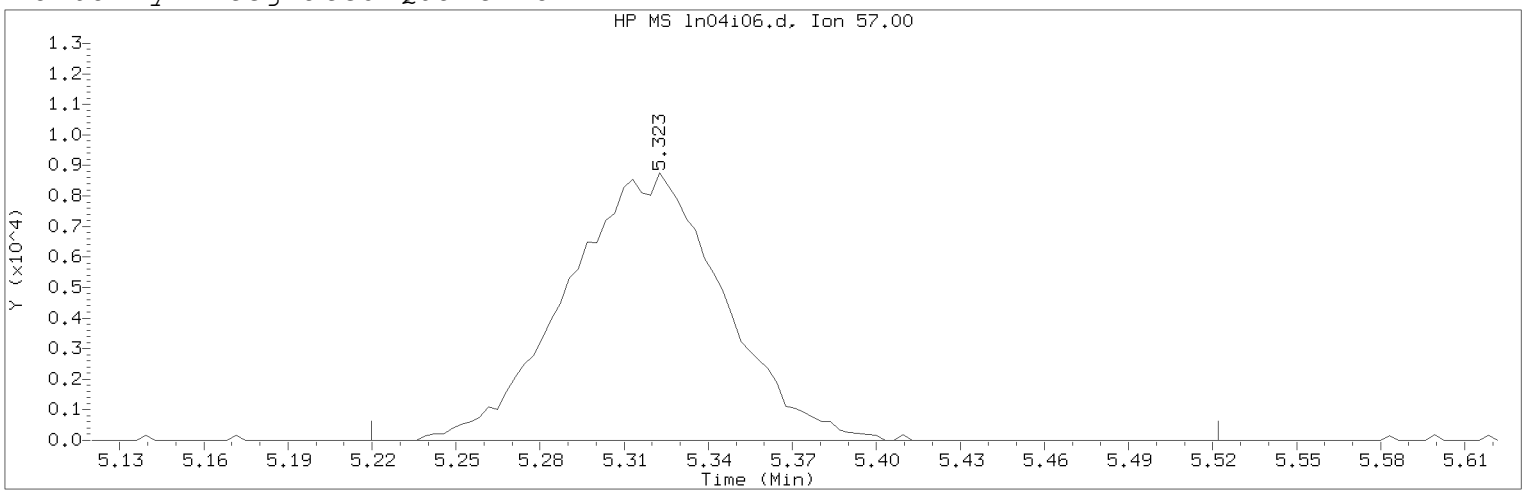
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area : 254362
On-column Amount (ng) : 250.0000
Integration start scan : 903 Integration stop scan: 1053
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

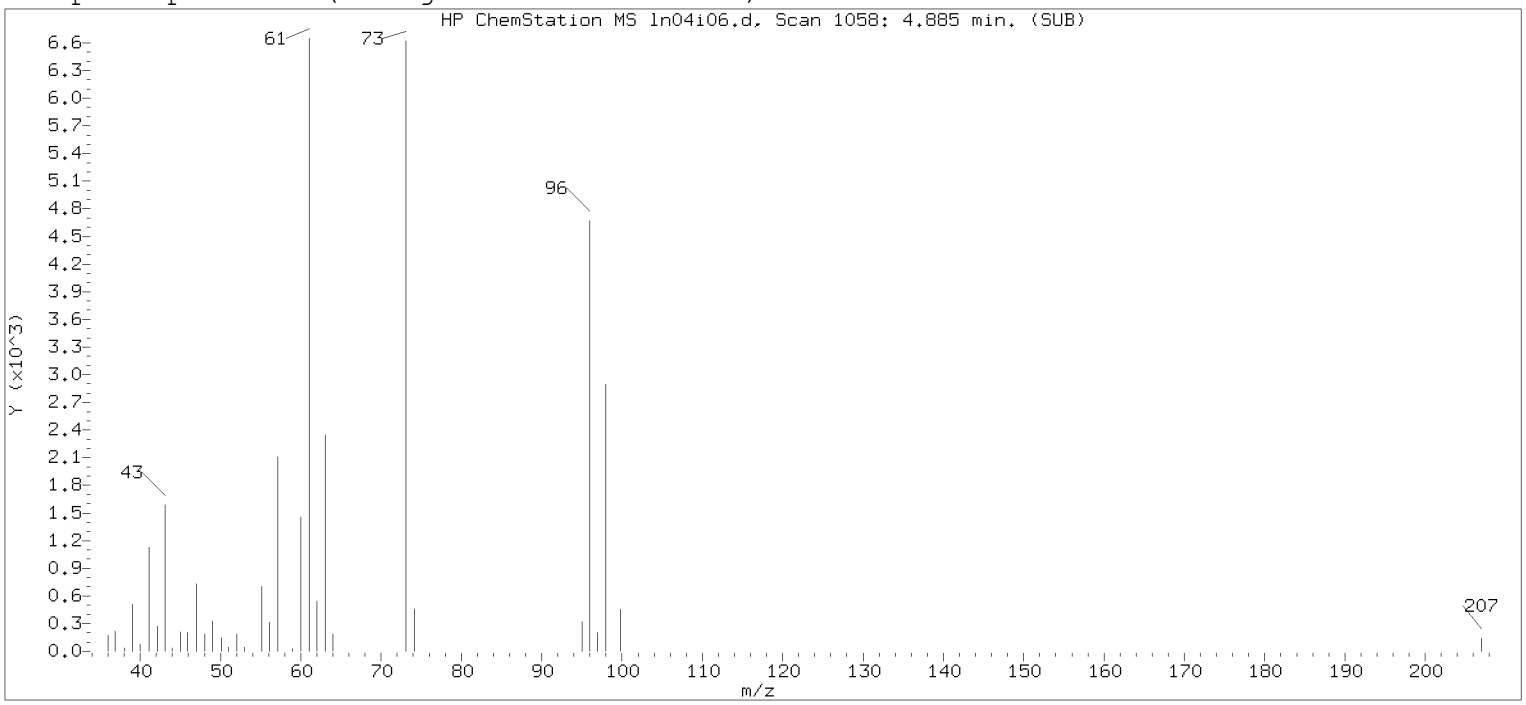
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1194
Retention Time (minutes): 5.323
Quant Ion : 57.00
Area (flag) : 33969M
On-Column Amount (ng) : 3.8769
Integration start scan : 1161 Integration stop scan: 1255
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

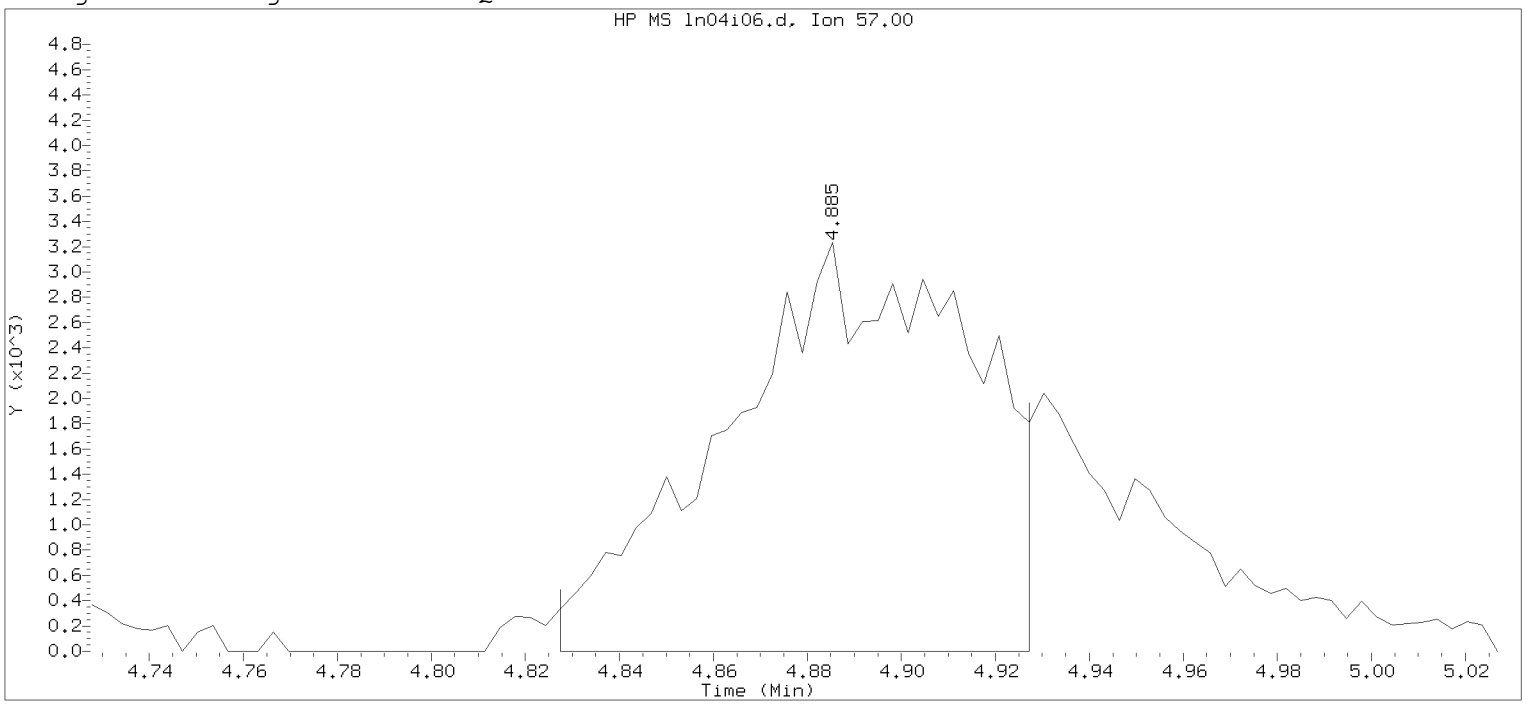
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

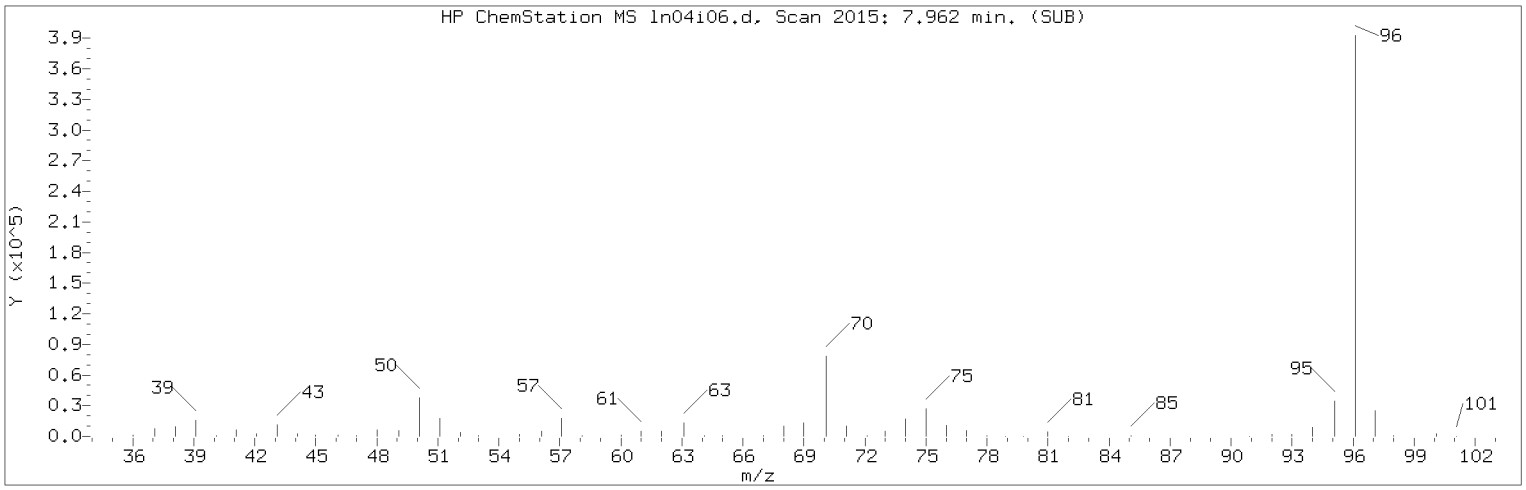
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

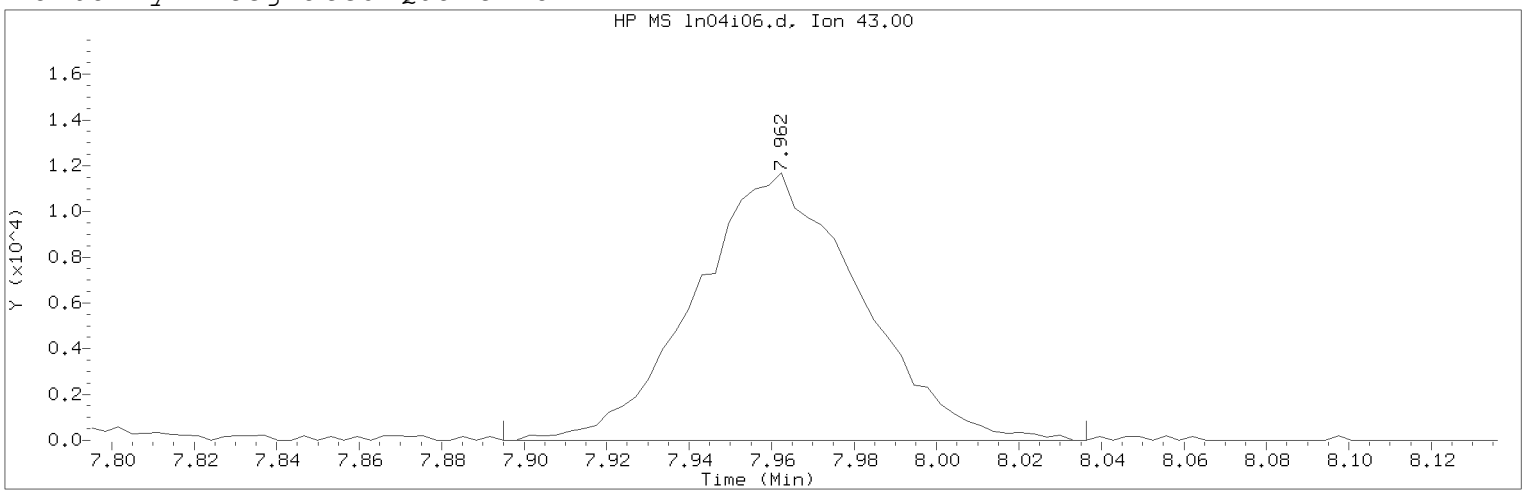
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1058
Retention Time (minutes): 4.885
Quant Ion : 57.00
Area : 11708
On-column Amount (ng) : 3.2297
Integration start scan : 1039 Integration stop scan: 1070
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

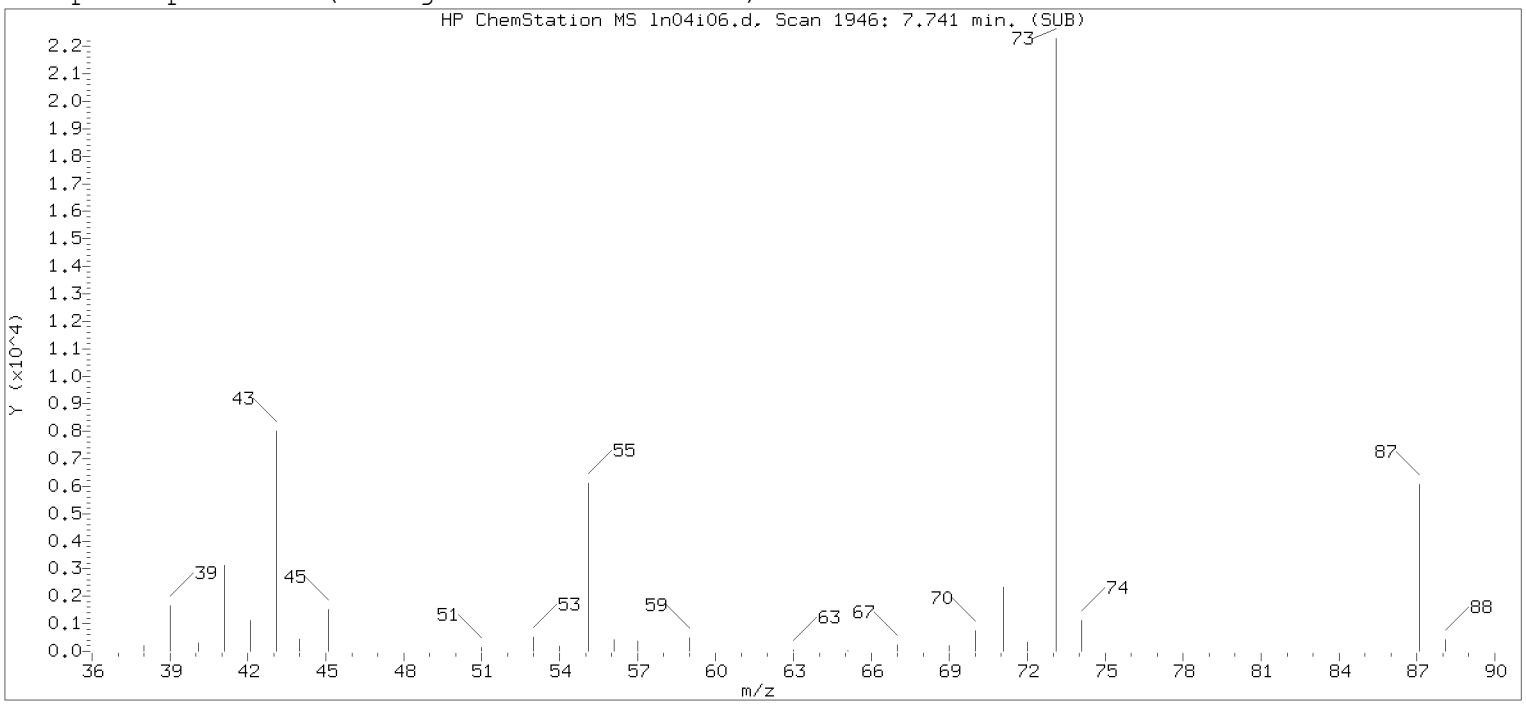
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2015
Retention Time (minutes): 7.962
Quant Ion : 43.00
Area (flag) : 32502MA
On-Column Amount (ng) : 3.9708
Integration start scan : 1993 Integration stop scan: 2037
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

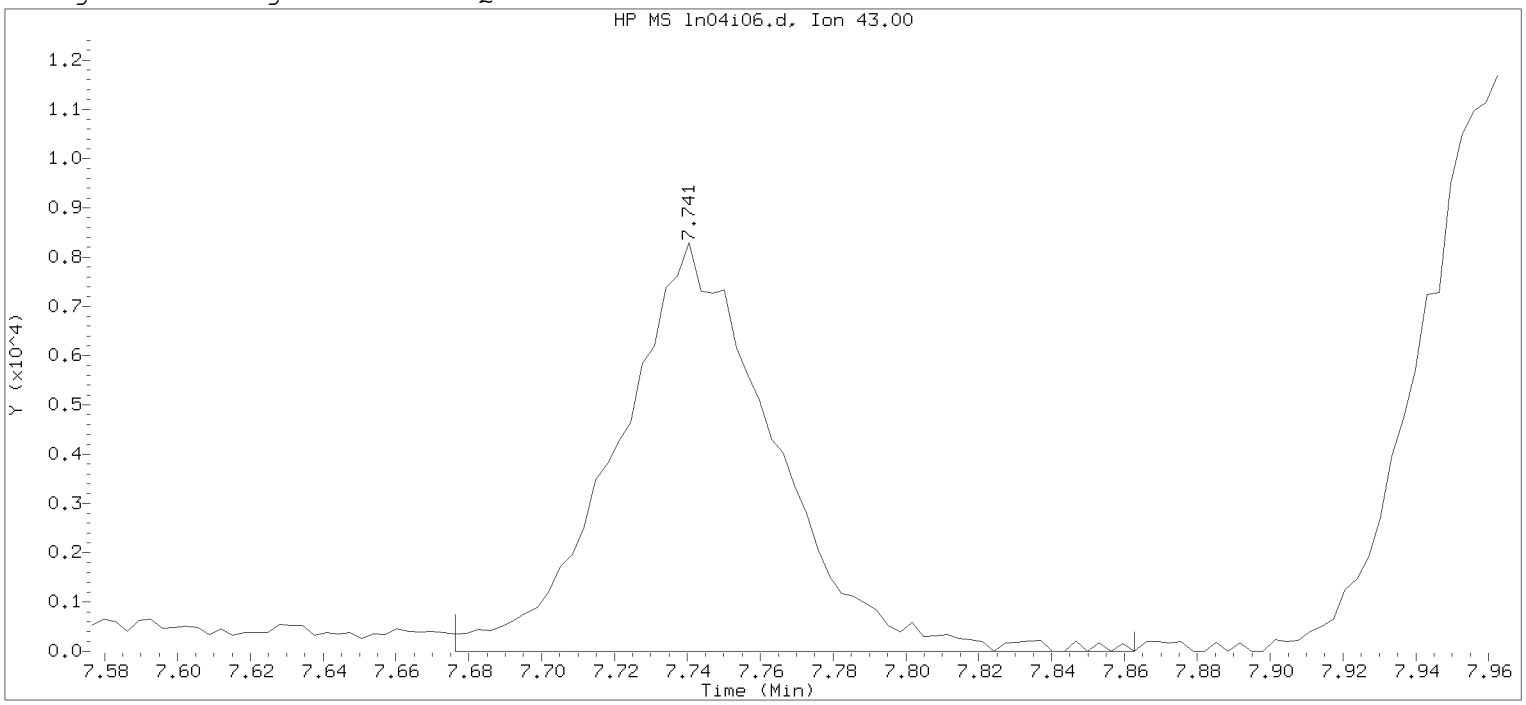
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

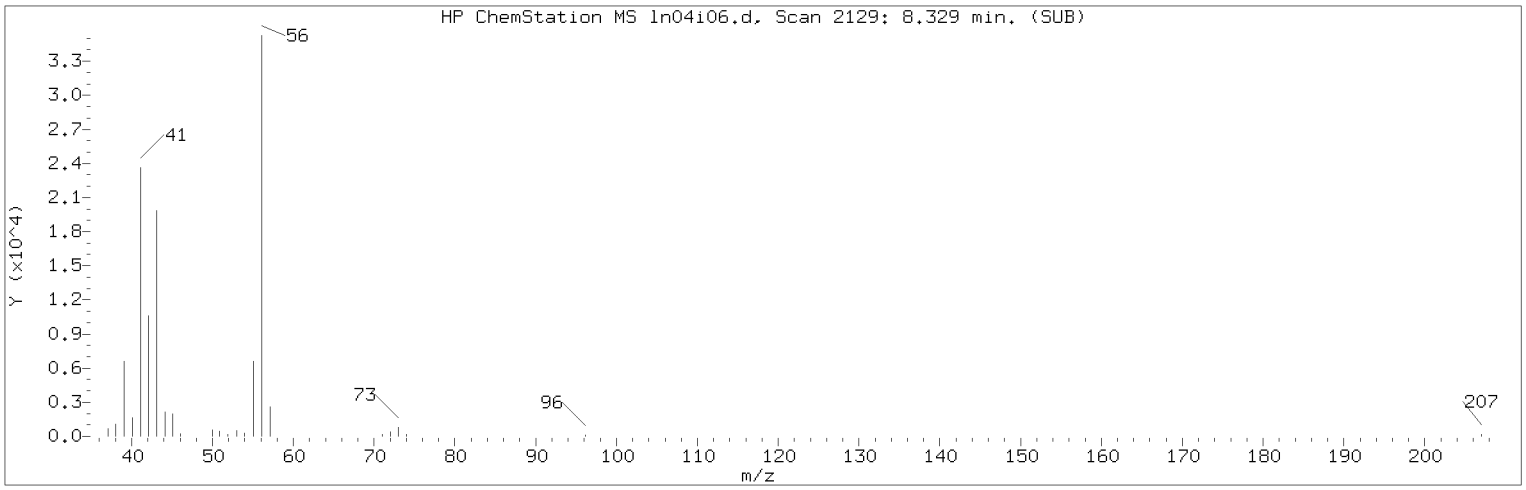
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

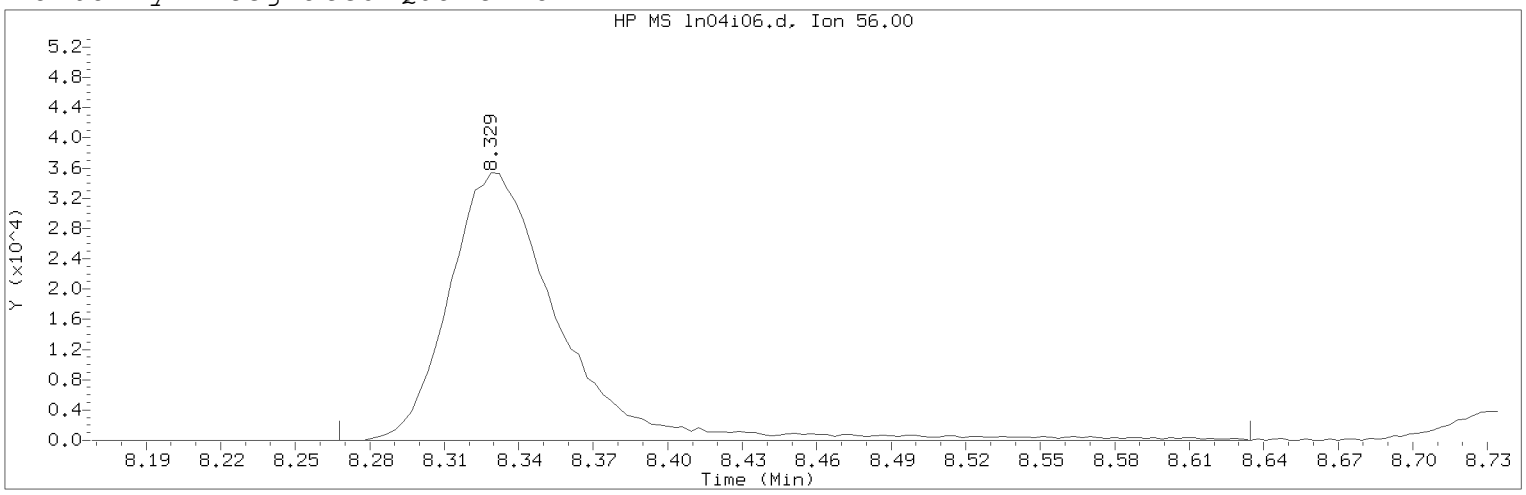
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.741
Quant Ion : 43.00
Area : 24793
On-column Amount (ng) : 4.0913
Integration start scan : 1925 Integration stop scan: 1983
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

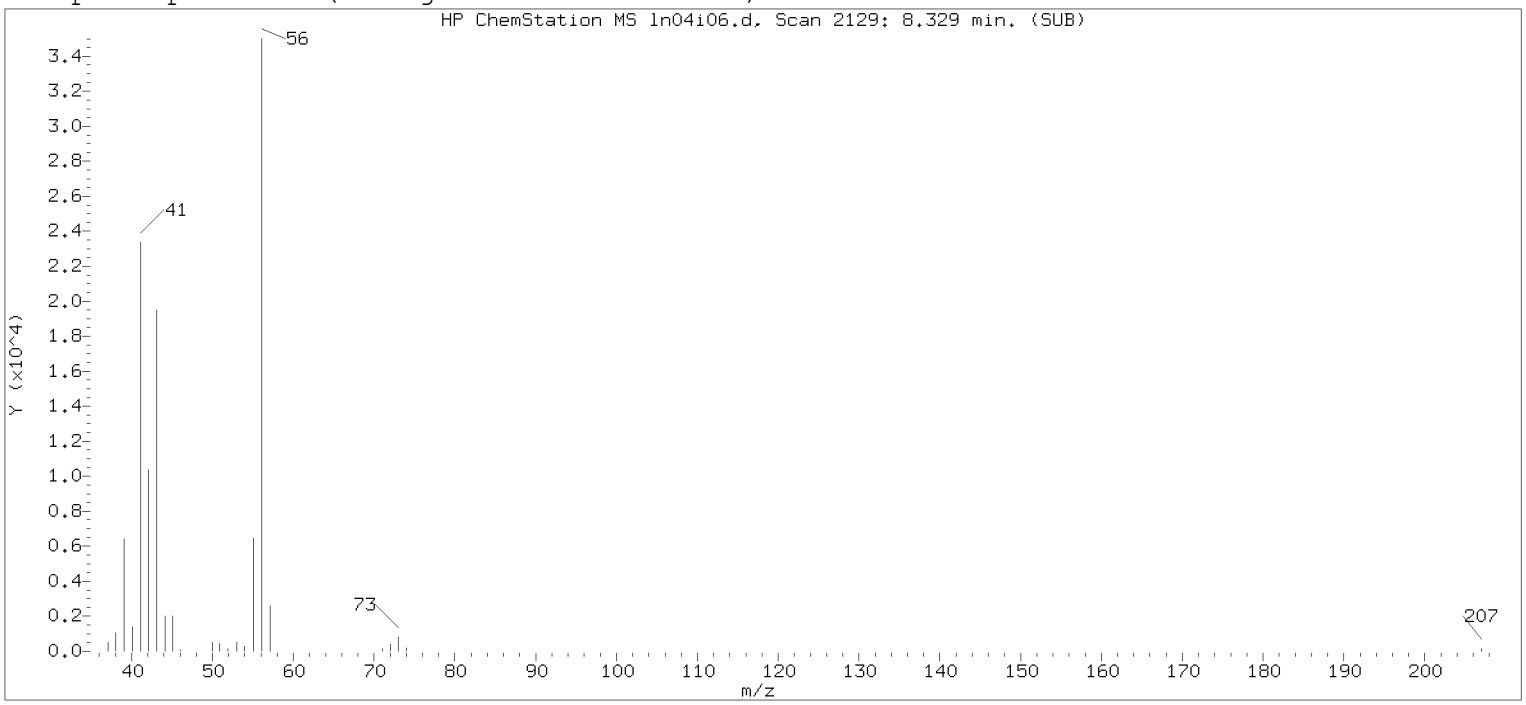
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area (flag) : 110027M
On-Column Amount (ng) : 344.3298
Integration start scan : 2109 Integration stop scan: 2223
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

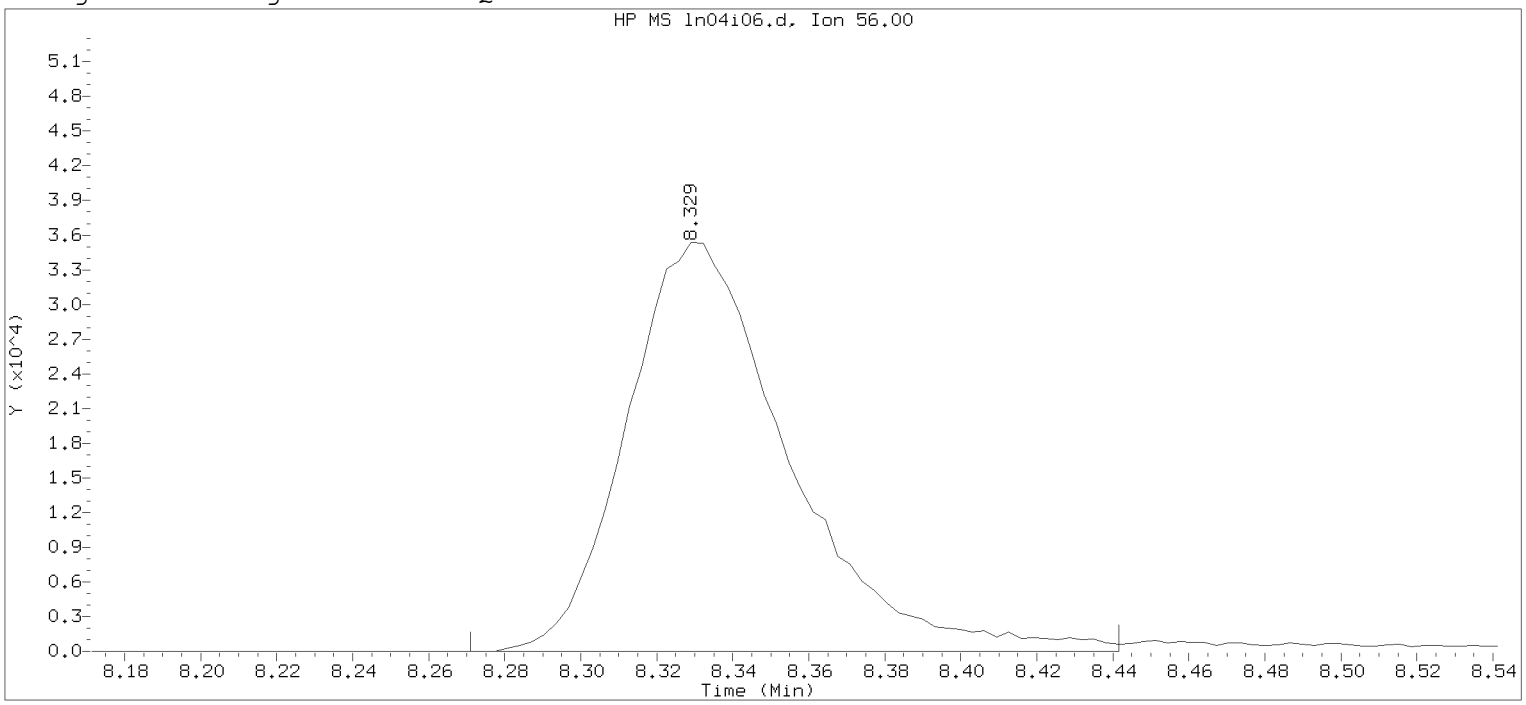
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

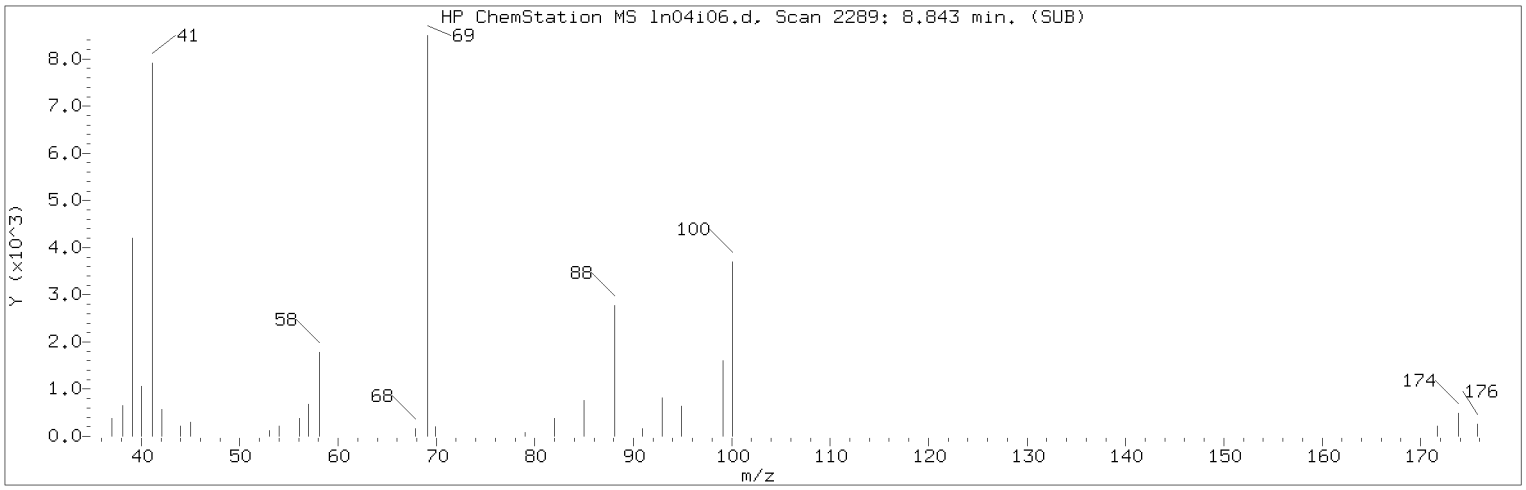
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

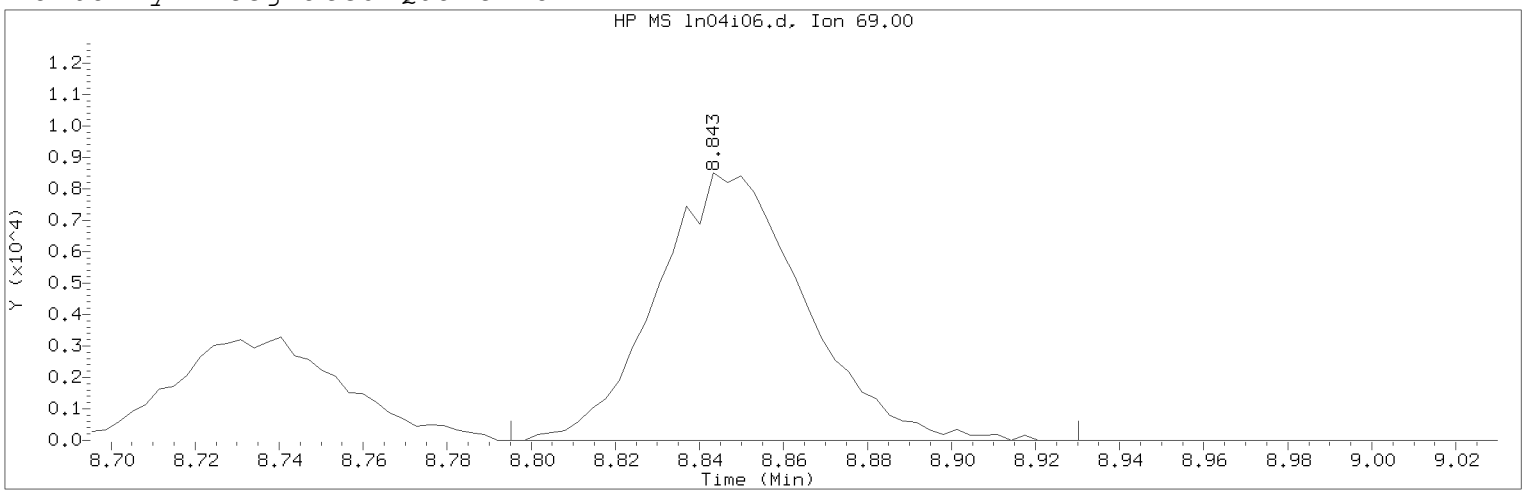
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area : 104688
On-column Amount (ng) : 337.8676
Integration start scan : 2110 Integration stop scan: 2163
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

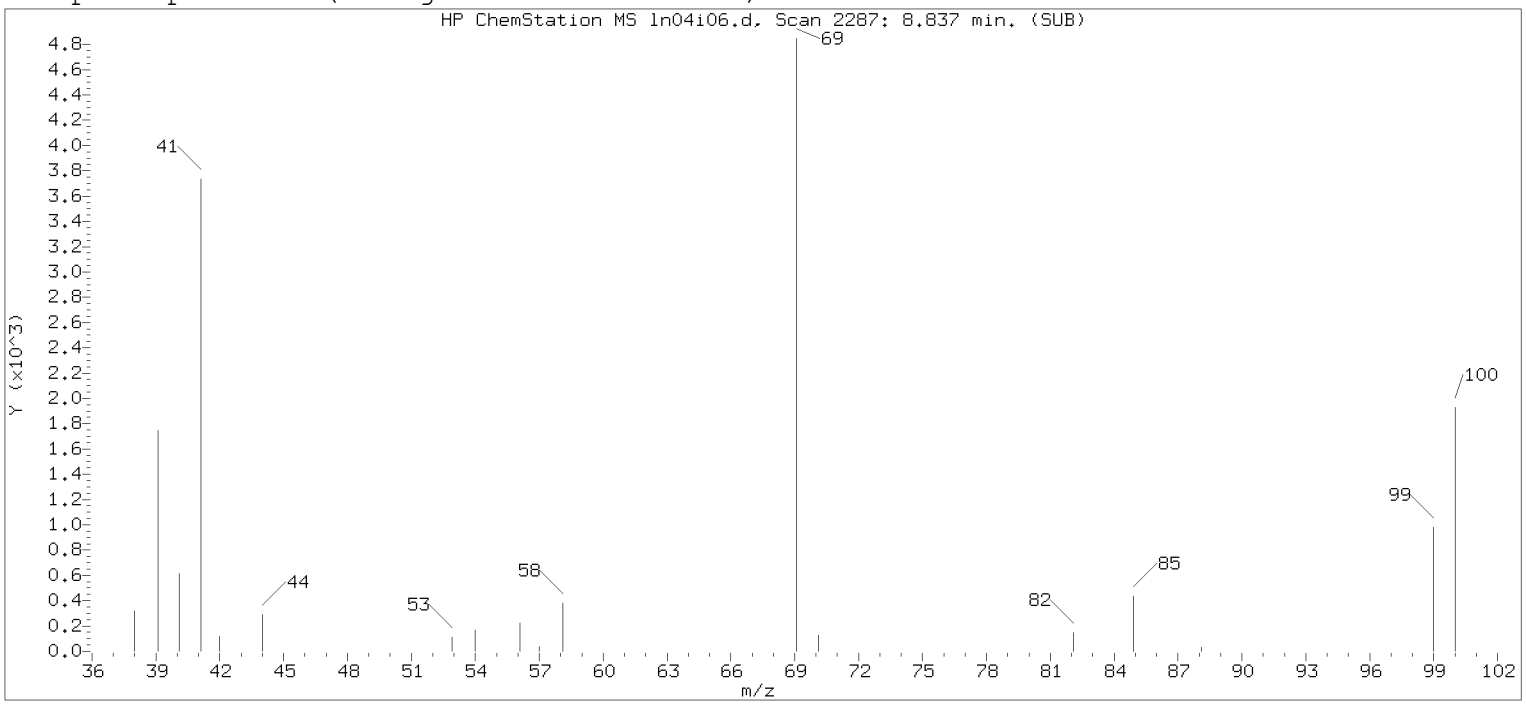
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2289
Retention Time (minutes): 8.843
Quant Ion : 69.00
Area (flag) : 20713M
On-Column Amount (ng) : 3.6110
Integration start scan : 2273 Integration stop scan: 2315
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

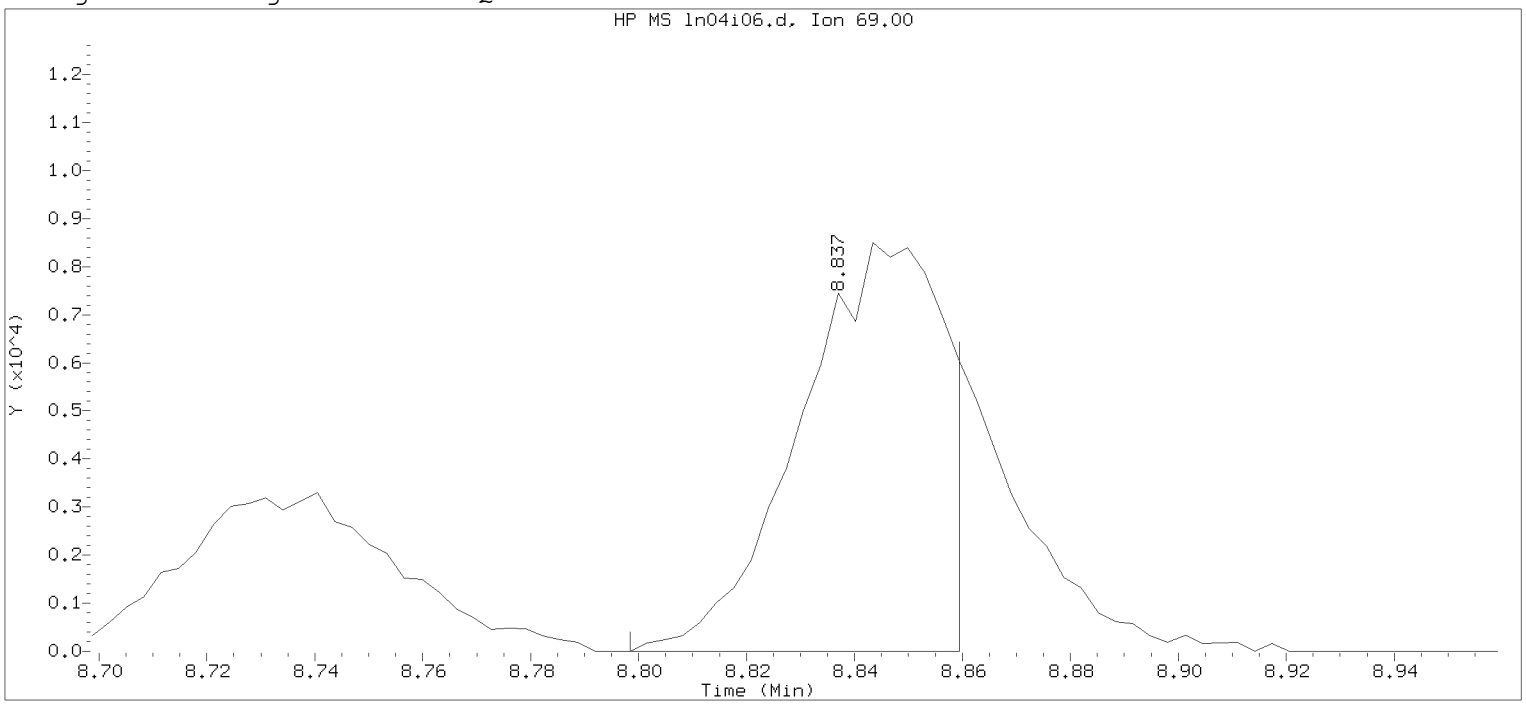
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

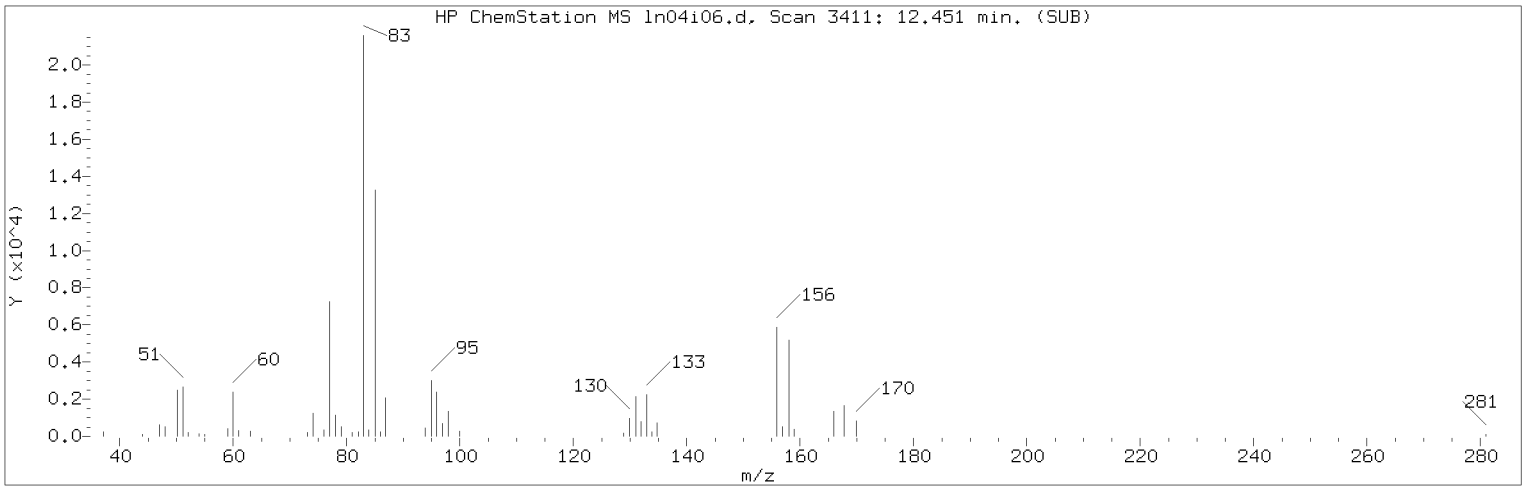
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

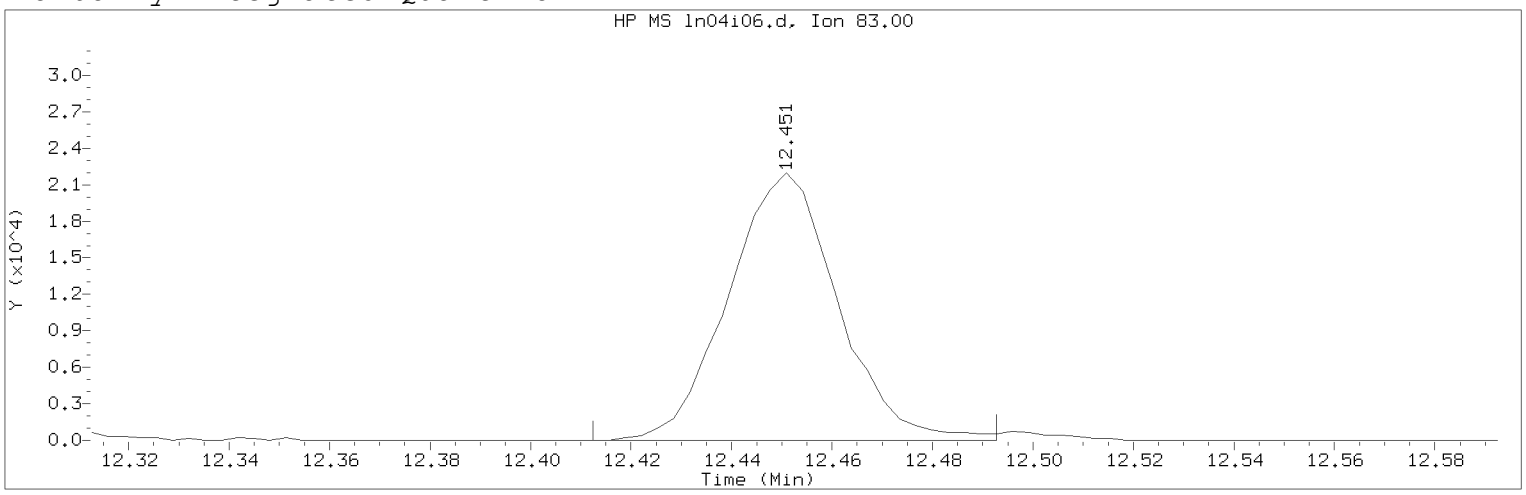
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2287
Retention Time (minutes): 8.837
Quant Ion : 69.00
Area : 15546
On-column Amount (ng) : 2.8548
Integration start scan : 2274 Integration stop scan: 2293
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

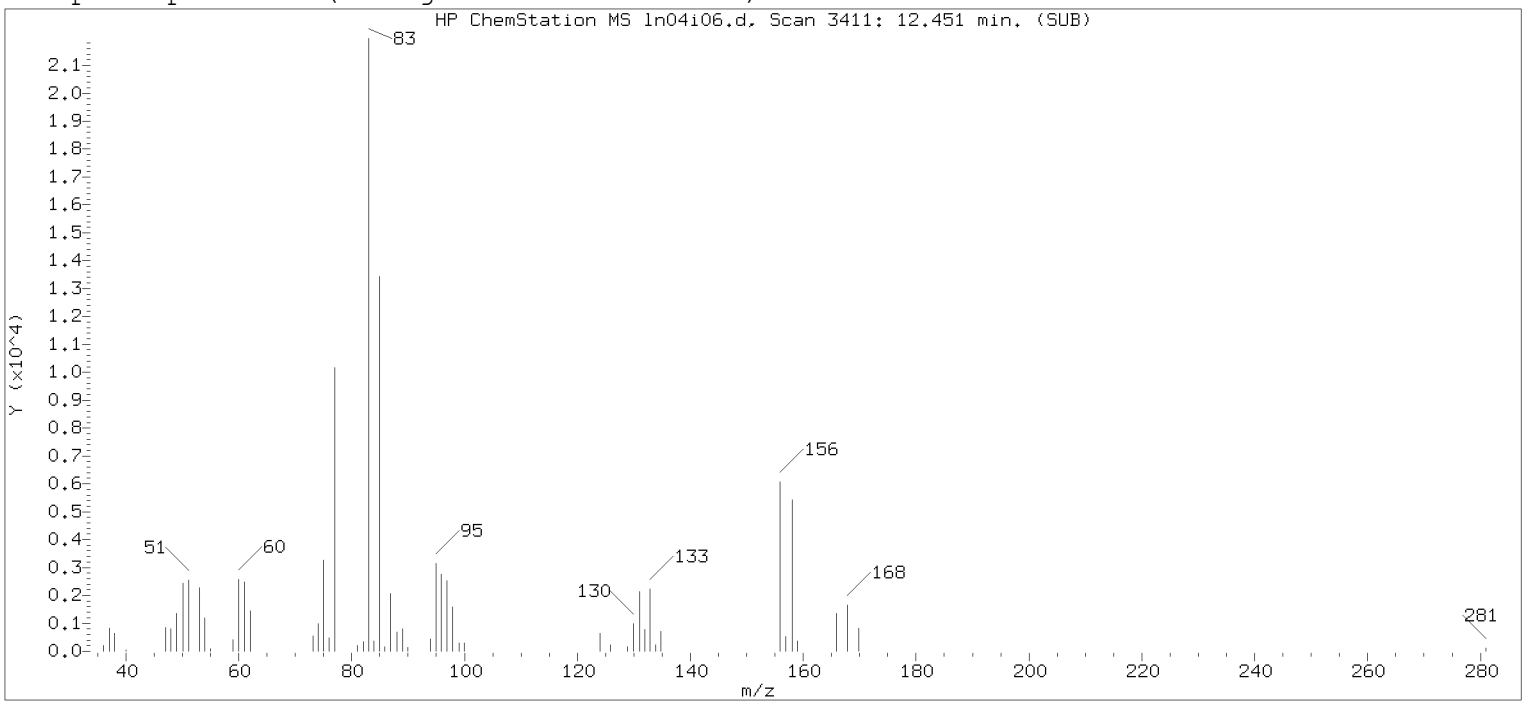
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 33170M
On-Column Amount (ng) : 3.6577
Integration start scan : 3398 Integration stop scan: 3423
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

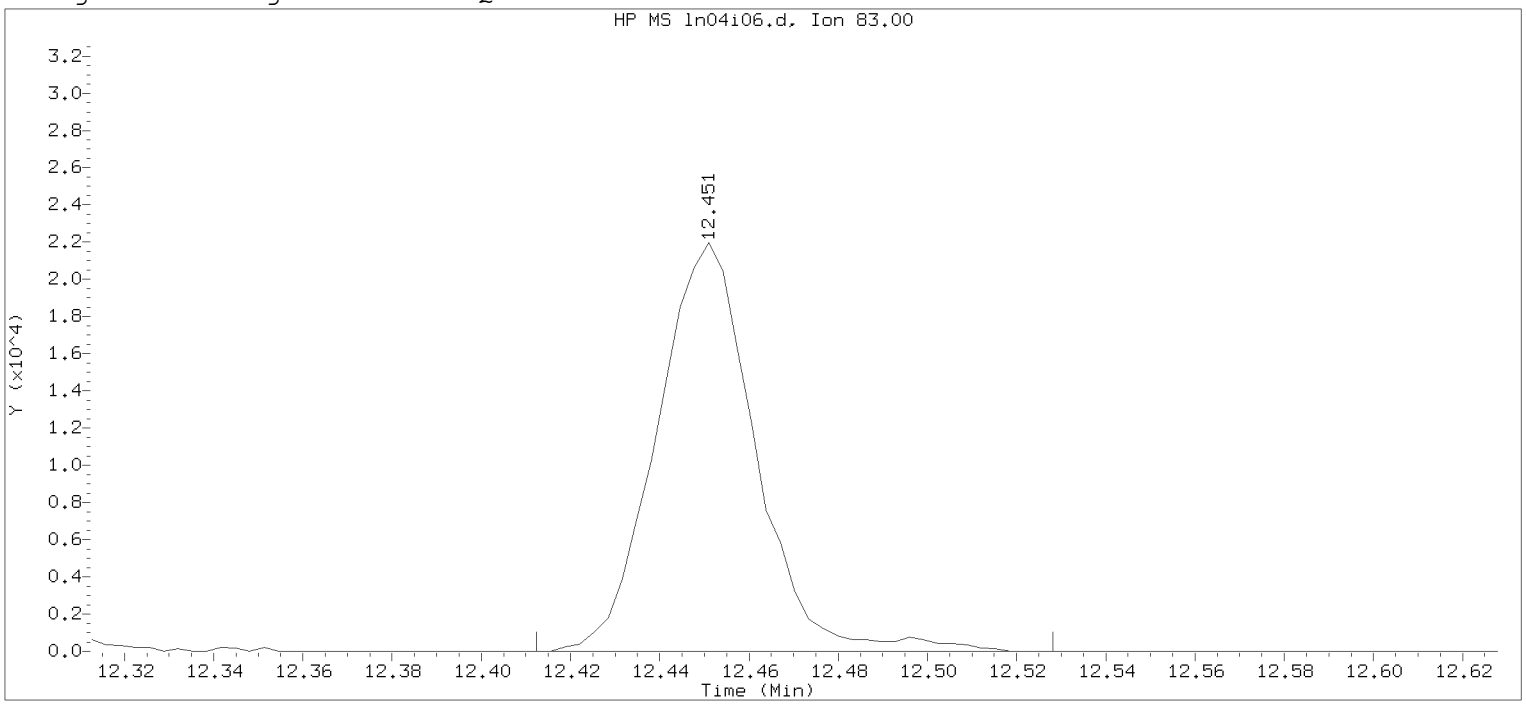
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

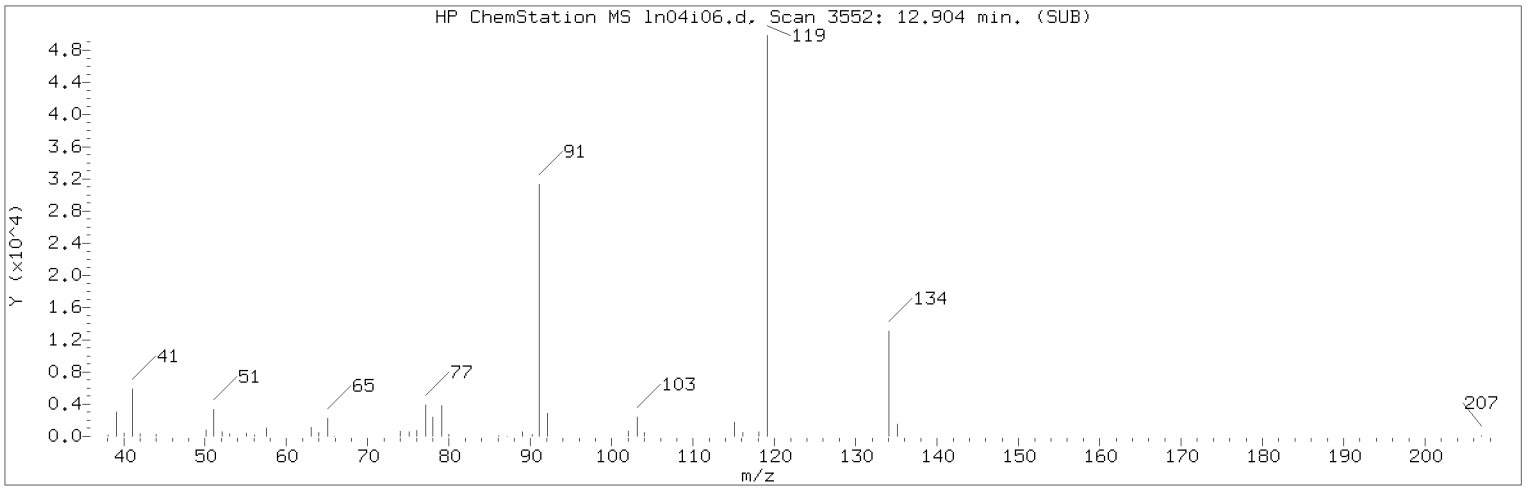
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

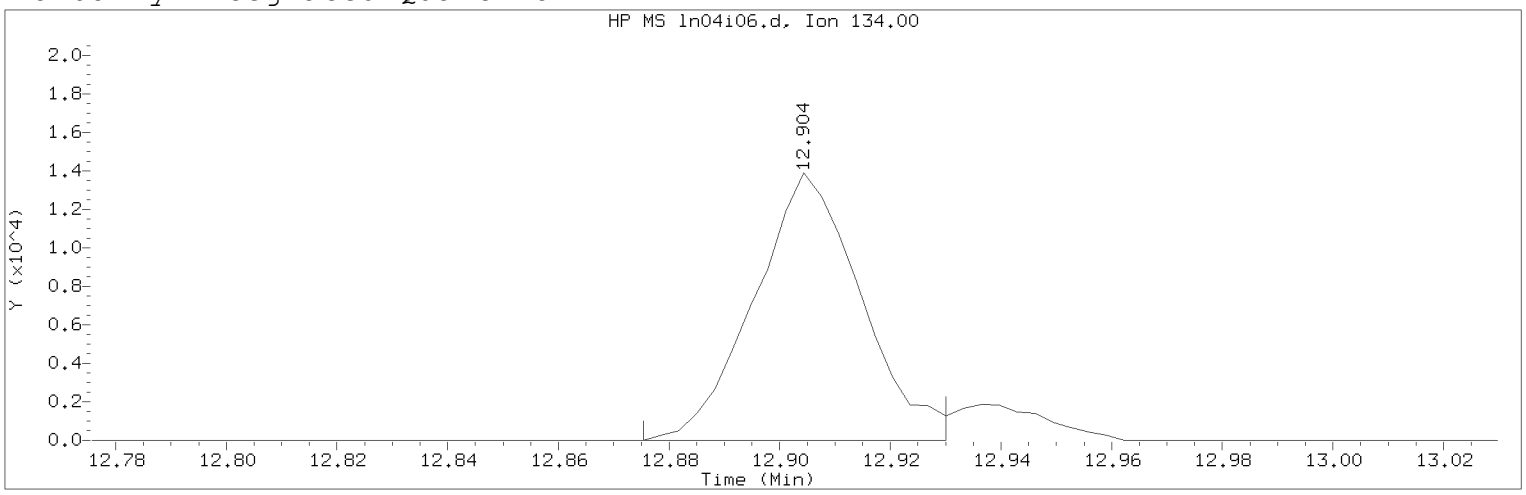
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 33718
On-column Amount (ng) : 3.6520
Integration start scan : 3398 Integration stop scan: 3434
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

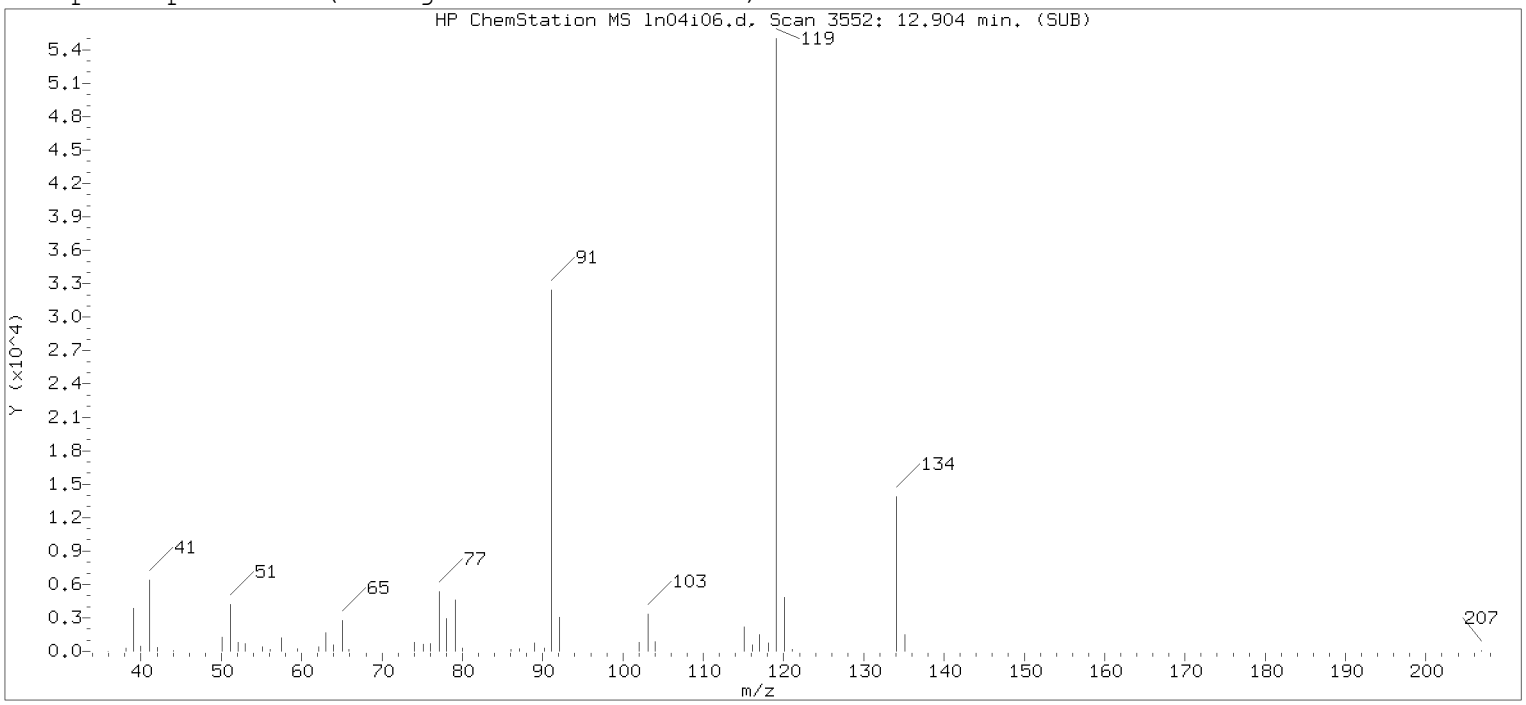
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 18608M
On-Column Amount (ng) : 3.9276
Integration start scan : 3542 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

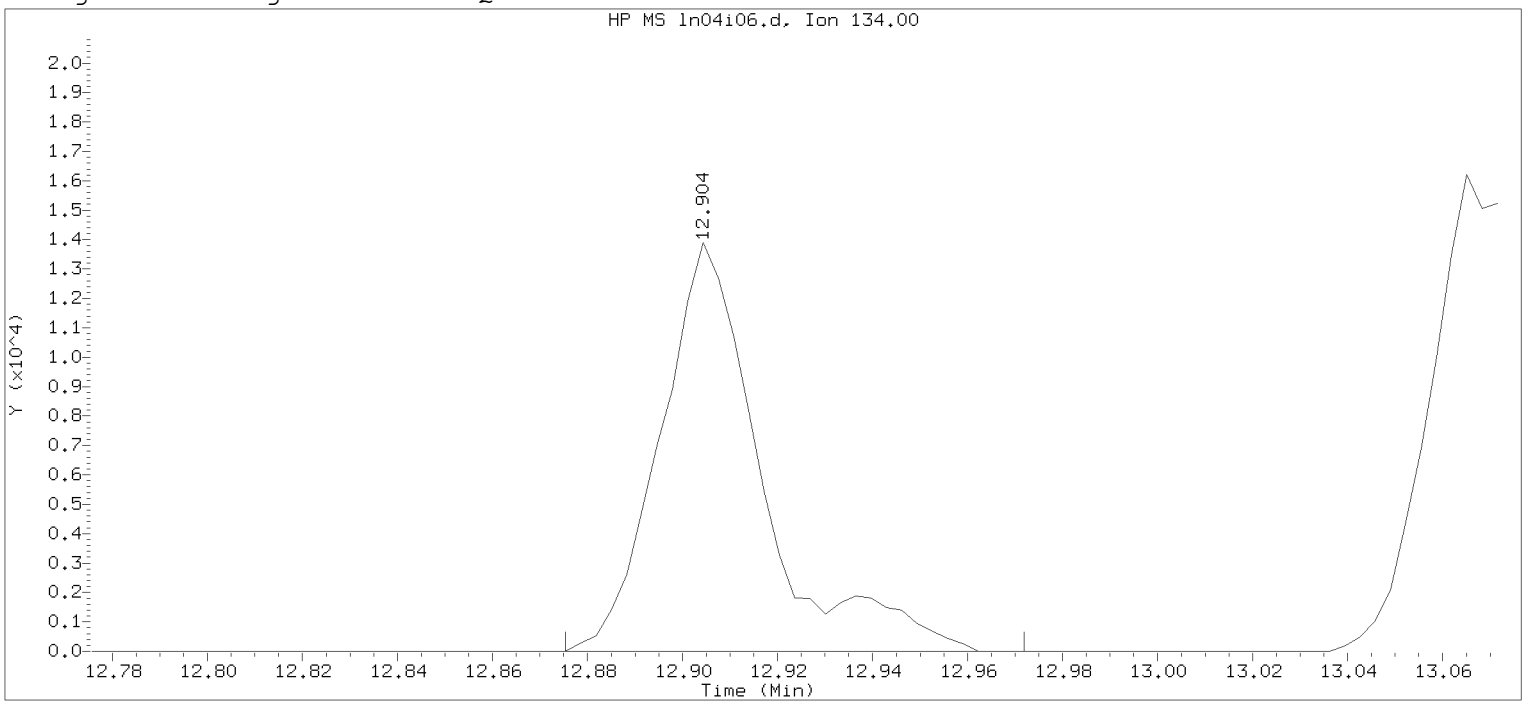
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



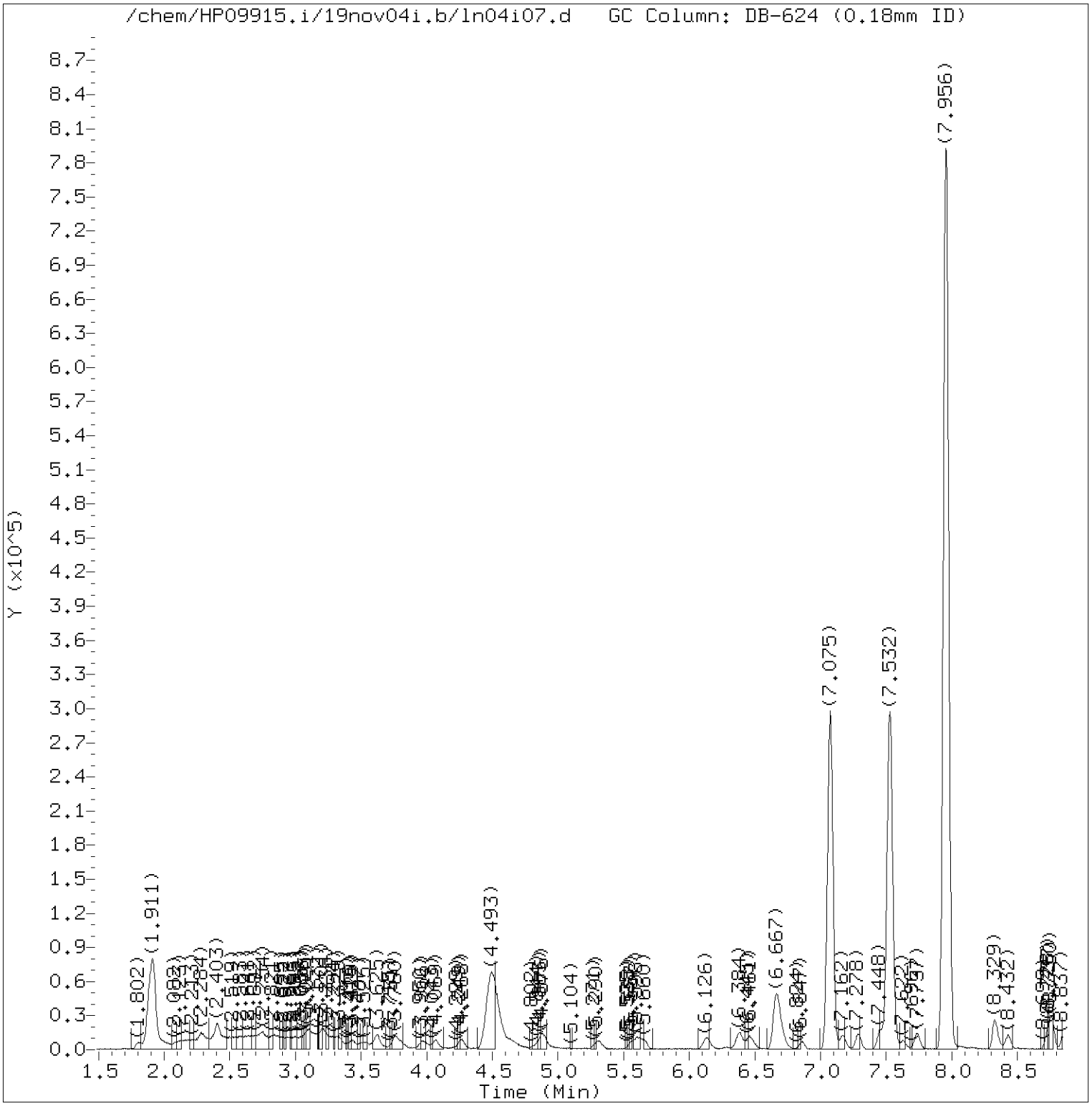
Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 20636
On-column Amount (ng) : 4.1808
Integration start scan : 3542 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

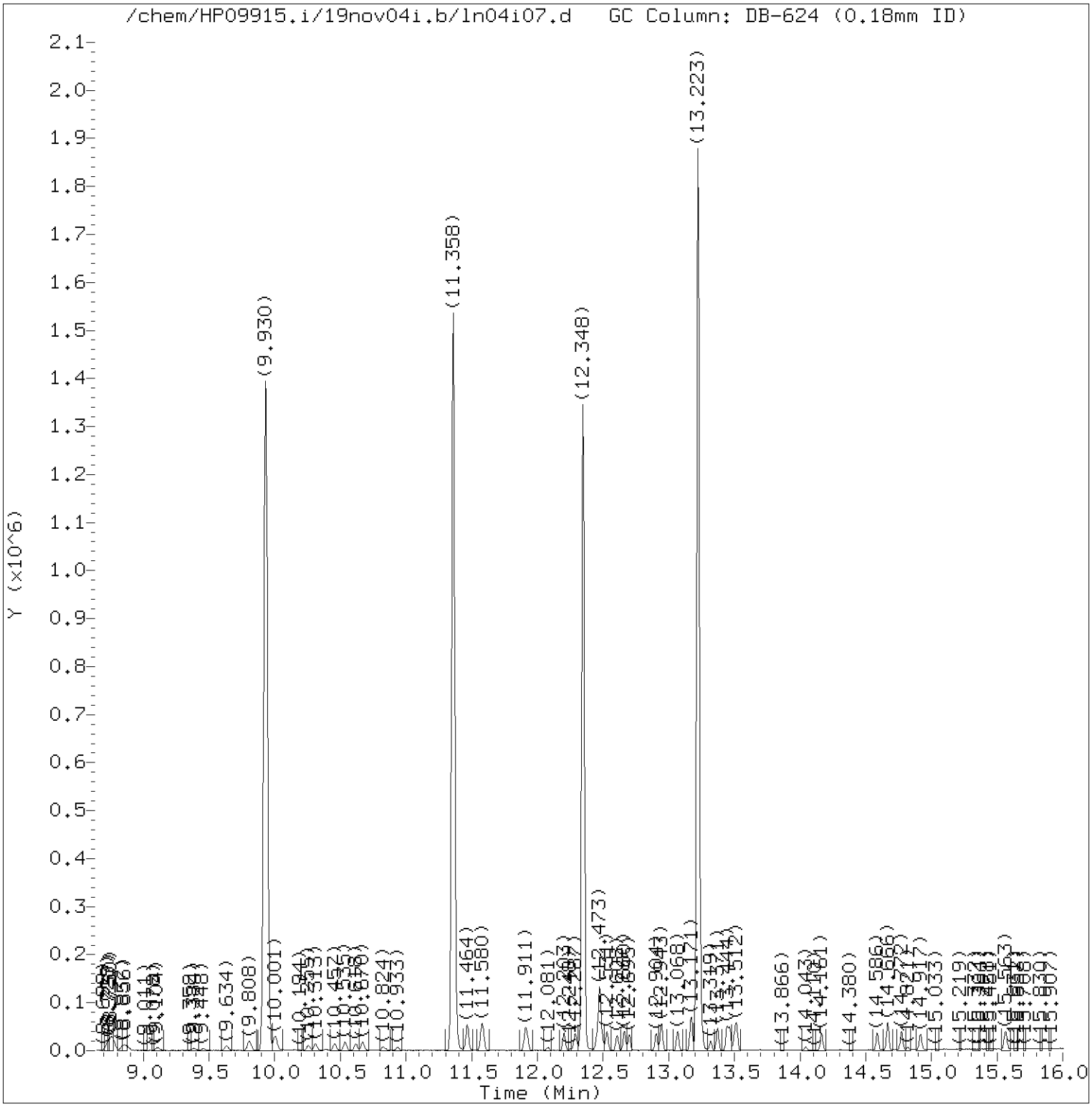
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.078	85	6299	0.794
4) Chloromethane	(2)	2.284	50	6896	0.902
5) 1,3-Butadiene	(2)	2.403	39	7255M	1.143
6) Vinyl Chloride	(2)	2.410	62	7160	0.939
8) Bromomethane	(2)	2.744	94	5605	1.025
9) Chloroethane	(2)	2.840	64	4160M	0.992
10) Dichlorofluoromethane	(2)	3.094	67	10094M	1.004
12) Trichlorofluoromethane	(2)	3.146	101	7129	0.868
11) n-Pentane	(2)	3.204	43	10269	1.058
14) Ethyl ether	(2)	3.429	59	4640M	0.874
15) Freon 123a	(2)	3.516	67	6210	0.940
16) Acrolein	(1)	3.622	56	17644	9.654
17) 1,1-Dichloroethene	(2)	3.750	96	4176	0.866
17) 1,1-Dichloroethene	(2)	3.754	63	2326	0.963
19) Freon 113	(2)	3.779	101	4754	0.864
18) Acetone	(1)	3.831	58	1588M	1.938
22) Methyl Iodide	(2)	3.966	142	8860	0.887
21) 2-Propanol	(1)	4.011	45	12063	20.480
23) Carbon Disulfide	(2)	4.075	76	15443	0.850
27) Methyl Acetate	(2)	4.255	43	6274M	1.011
25) Allyl Chloride	(2)	4.271	41	8168	0.945
28) Methylene Chloride	(2)	4.474	84	5404	0.942
29)*t-Butyl alcohol-d10	(1)	4.496	65	243591	250.000
30) t-Butyl alcohol	(1)	4.622	59	19461	18.976
31) Acrylonitrile	(2)	4.856	53	2960	0.886
33) Methyl Tertiary Butyl Ether	(2)	4.879	73	16848	0.920
32) trans-1,2-Dichloroethene	(2)	4.885	96	5035	0.903
34) n-Hexane	(2)	5.316	57	7475M	0.862
36) 1,1-Dichloroethane	(2)	5.548	63	8436	0.867
38) di-Isopropyl ether	(2)	5.606	45	16654	0.888
39) 2-Chloro-1,3-butadiene	(2)	5.663	53	7448	0.853
40) Ethyl t-butyl ether	(2)	6.126	59	16060	0.882
43) 1,2-Dichloroethene (Total)	(2)		96	10762	1.818
44) 2-Butanone	(2)	6.361	43	8098	1.889
42) cis-1,2-Dichloroethene	(2)	6.377	96	5727	0.915
45) 2,2-Dichloropropane	(2)	6.390	77	6419M	0.849
47) Propionitrile	(1)	6.461	54	24221	18.955
48) Methacrylonitrile	(2)	6.670	67	32346	8.977

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	2849	0.858
50) Tetrahydrofuran	(1)	6.728	71	2319	2.009
51) Chloroform	(2)	6.860	83	8108	0.871
52)$Dibromofluoromethane	(2)	7.075	113	273696	49.231
52)$Dibromofluoromethane	(2)	7.075	111	279412	49.293
53) 1,1,1-Trichloroethane	(2)	7.078	97	6588	0.830
54) Cyclohexane	(2)	7.171	56	8997	0.847
54) Cyclohexane	(2)	7.178	84	7859	0.852
54) Cyclohexane	(2)	7.178	69	2772	0.844
56) Carbon Tetrachloride	(2)	7.284	117	5549	0.824
55) 1,1-Dichloropropene	(2)	7.287	75	6611	0.860
58) Isobutyl Alcohol	(1)	7.458	41	16978	49.195
57)$1,2-Dichloroethane-d4	(2)	7.528	102	69641	49.151
57)$1,2-Dichloroethane-d4	(2)	7.528	65	311703	49.366
57)$1,2-Dichloroethane-d4	(2)	7.535	104	44286	48.935
60) Benzene	(2)	7.551	78	20445	0.884
61) 1,2-Dichloroethane	(2)	7.631	62	7810	1.050
61) 1,2-Dichloroethane	(2)	7.631	98	696	0.945
65) t-Amyl methyl ether	(2)	7.741	73	16286	0.891
67) n-Heptane	(2)	7.956	43	7535M	0.930
66)*Fluorobenzene	(2)	7.959	96	1137124	50.000
69) n-Butanol	(1)	8.329	56	24322	81.882
71) Trichloroethene	(2)	8.432	95	5231	0.898
72) Methylcyclohexane	(2)	8.737	83	9247	0.856
72) Methylcyclohexane	(2)	8.731	98	4032	0.825
73) 1,2-Dichloropropane	(2)	8.760	63	5229	0.890
76) Methyl Methacrylate	(2)	8.837	69	4607M	0.811
75) 1,4-Dioxane	(1)	8.856	88	3548M	43.457
74) Dibromomethane	(2)	8.866	93	3298	0.868
78) Bromodichloromethane	(2)	9.107	83	5648	0.828
79) 2-Nitropropane	(2)	9.384	41	3333	1.614
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	2007	0.796
81) cis-1,3-Dichloropropene	(2)	9.638	75	6973	0.770
82) 4-Methyl-2-pentanone	(2)	9.808	43	16006	1.769
83)$Toluene-d8	(3)	9.930	98	1156948	50.253
83)$Toluene-d8	(3)	9.930	100	746174	50.033
88) Toluene	(3)	10.007	92	12902	0.894
90) 1,3-Dichloropropene (total)	(3)		100	13101	1.518

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on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.255	75	6128	0.748
91) Ethyl Methacrylate	(3)	10.313	69	7873	0.791
92) 1,1,2-Trichloroethane	(3)	10.461	97	4897	0.895
93) Tetrachloroethene	(3)	10.538	166	5565	0.910
94) 1,3-Dichloropropane	(3)	10.618	76	8504	0.910
96) 2-Hexanone	(3)	10.670	43	11811	1.777
97) Dibromochloromethane	(3)	10.827	129	4109	0.733
99) 1,2-Dibromoethane	(3)	10.937	107	5163	0.869
100)*Chlorobenzene-d5	(3)	11.358	117	879875	50.000
101) 1-Chlorohexane	(3)	11.361	91	8103	1.045
102) Chlorobenzene	(3)	11.383	112	14367	0.880
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	4138	0.769
104) Ethylbenzene	(3)	11.464	91	24192	0.877
106) m+p-Xylene	(3)	11.583	106	18914	1.743
108) Xylene (Total)	(3)		106	28415	2.629
107) o-Xylene	(3)	11.908	106	9501	0.886
109) Styrene	(3)	11.917	104	14106	0.796
110) Bromoform	(3)	12.081	173	2729	0.652
111) Isopropylbenzene	(3)	12.203	105	22719	0.845
112) Cyclohexanone	(1)	12.287	55	15983	49.985
114)$4-Bromofluorobenzene	(3)	12.348	95	436282	50.046
114)$4-Bromofluorobenzene	(3)	12.348	174	360511	49.883
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	7596	0.849
115) Bromobenzene	(4)	12.461	156	6426	0.903
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	22650	8.211
117) 1,2,3-Trichloropropane	(4)	12.496	110	2425	0.884
119) n-Propylbenzene	(4)	12.528	91	27655	0.890
120) 2-Chlorotoluene	(4)	12.612	126	6138M	0.929
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	18836	0.834
121) 4-Chlorotoluene	(4)	12.702	126	6403M	0.931
124) tert-Butylbenzene	(4)	12.904	134	4060M	0.869
125) Pentachloroethane	(4)	12.940	167	2751	0.684
126) 1,2,4-Trimethylbenzene	(4)	12.943	105	20498	0.861
127) sec-Butylbenzene	(4)	13.065	105	24344	0.873
129) 1,3-Dichlorobenzene	(4)	13.165	146	12468	0.954
130) p-Isopropyltoluene	(4)	13.174	119	21126	0.876
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	473433	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	13174	0.972

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Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	22457	0.890
135) Benzyl Chloride	(4)	13.319	91	11494	0.602
136) 1,3-Diethylbenzene	(4)	13.374	119	13985	0.891
141) Diethylbenzene (total)	(4)		100	41423	2.726
137) 1,4-Diethylbenzene	(4)	13.441	119	15446	0.929
139) n-Butylbenzene	(4)	13.464	92	11964M	0.970
138) 1,2-Dichlorobenzene	(4)	13.502	146	12171	0.943
140) 1,2-Diethylbenzene	(4)	13.515	119	11992	0.906
142) 1,2-Dibromo-3-chloropropane	(4)	14.046	75	1565	0.799
144) 1,3,5-Trichlorobenzene	(4)	14.161	180	10166	1.026
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	10347	1.074
147) Hexachlorobutadiene	(4)	14.666	225	9370	2.059
148) Naphthalene	(4)	14.772	128	28210	0.910
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	10052	1.072
150) 2-Methylnaphthalene	(4)	15.567	142	18783M	0.984

M = Compound was manually integrated.

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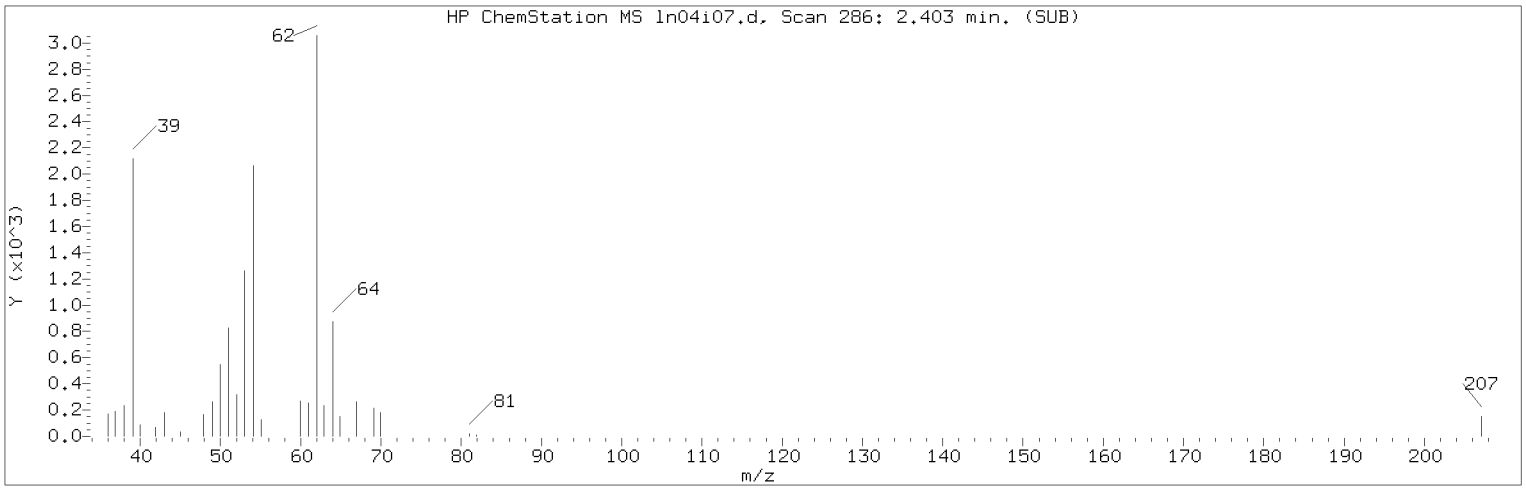
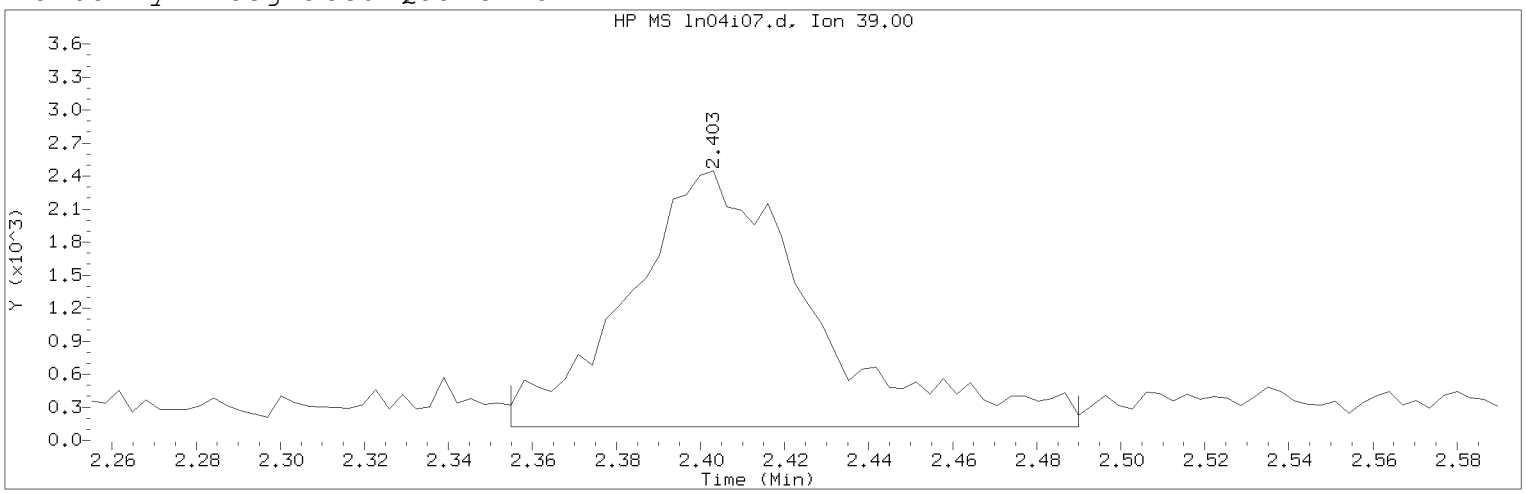
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

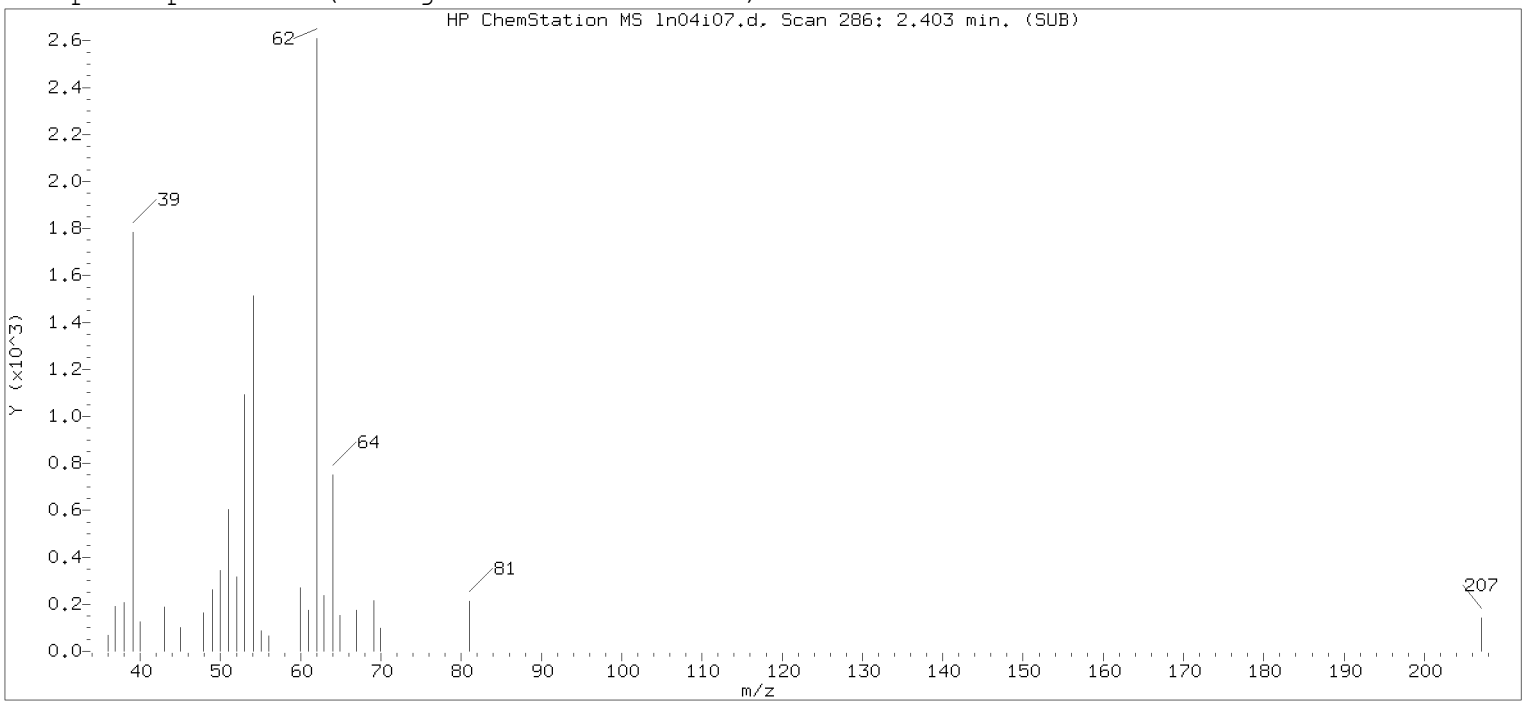
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 286
Retention Time (minutes): 2.403
Quant Ion : 39.00
Area (flag) : 7255M
On-Column Amount (ng) : 1.1432
Integration start scan : 270 Integration stop scan: 312
Y at integration start : 120 Y at integration end: 120

Reason for manual integration: improper integration

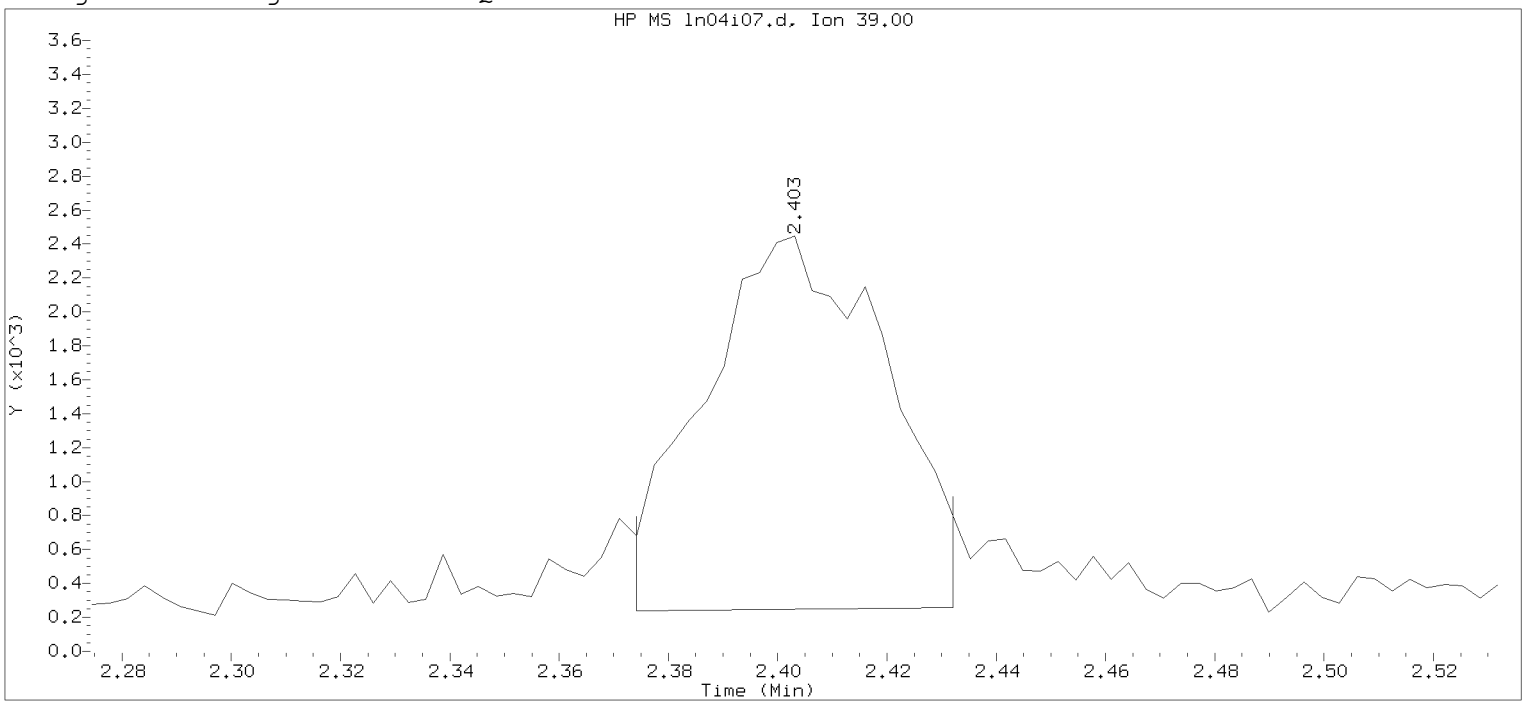
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

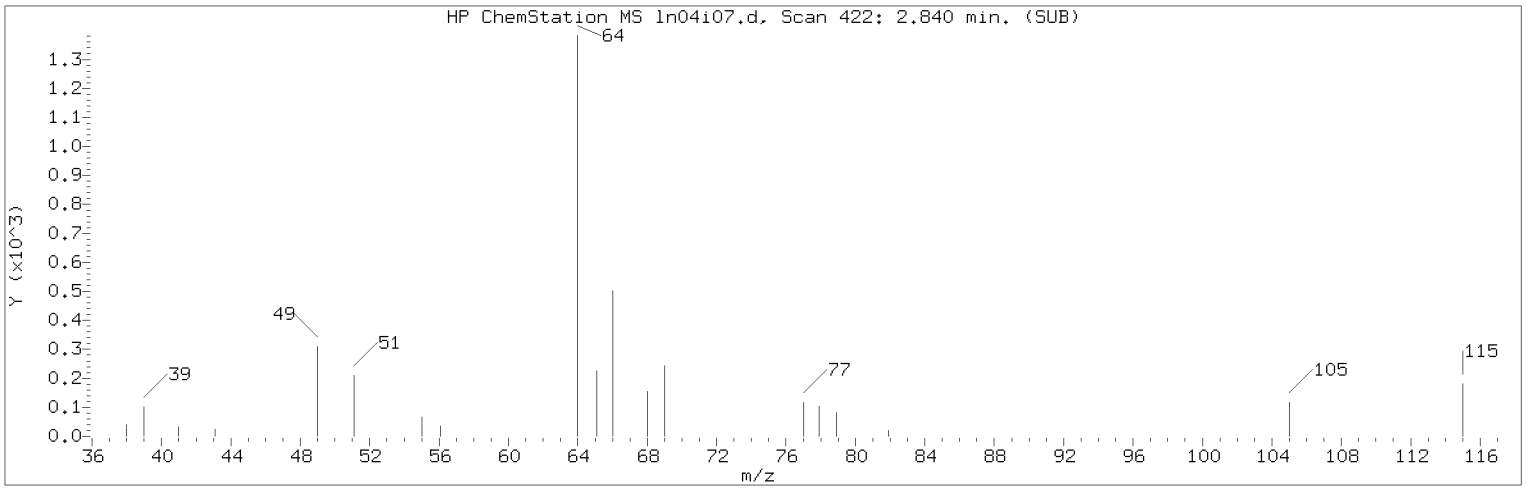
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

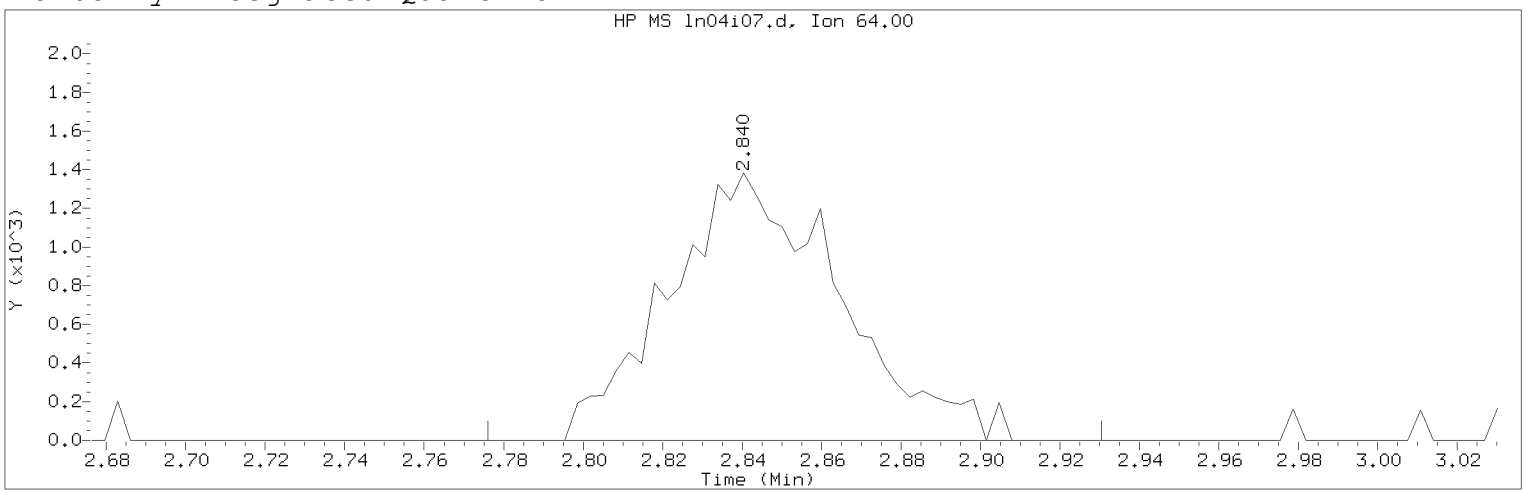
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 286
Retention Time (minutes): 2.403
Quant Ion : 39.00
Area : 5073
On-column Amount (ng) : 0.8493
Integration start scan : 276 Integration stop scan: 294
Y at integration start : 239 Y at integration end: 258

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

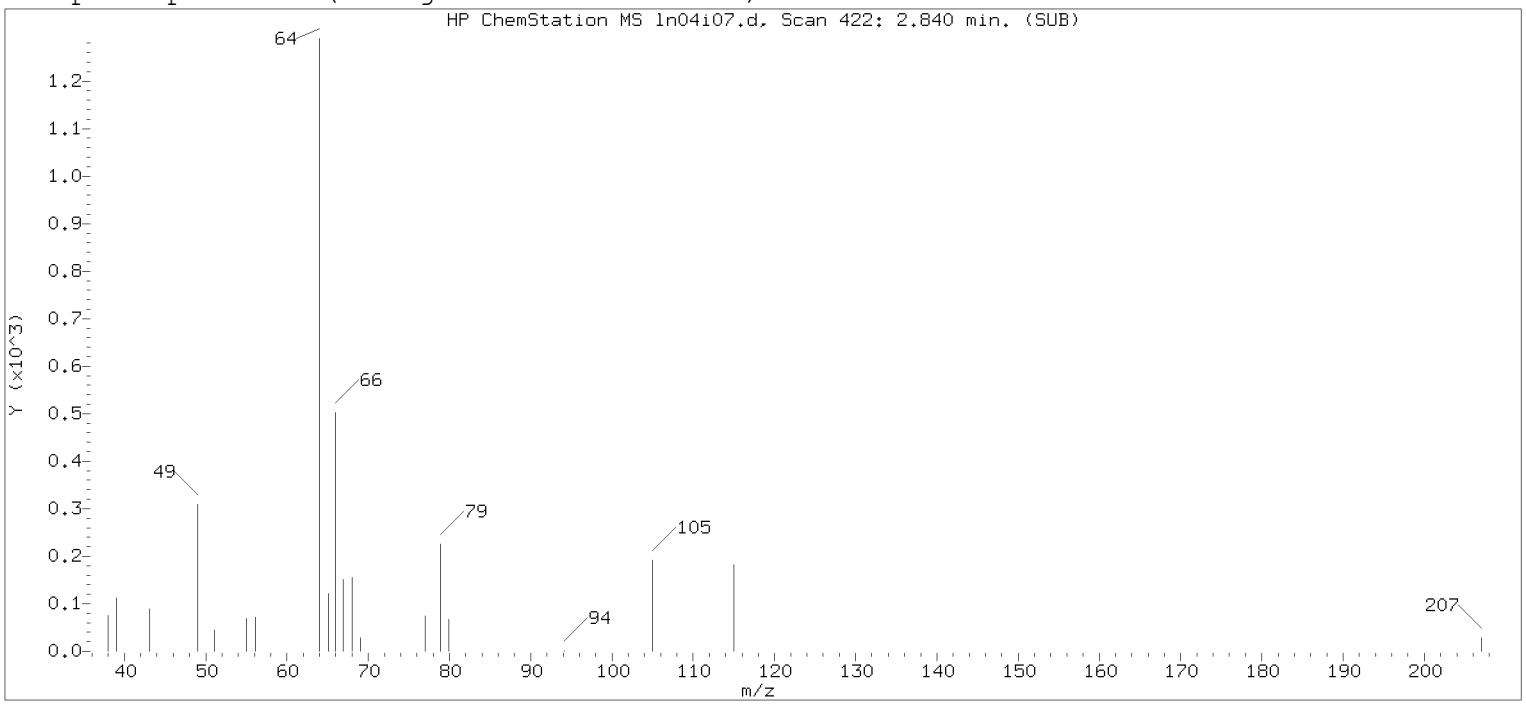
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 422
Retention Time (minutes): 2.840
Quant Ion : 64.00
Area (flag) : 4160M
On-Column Amount (ng) : 0.9924
Integration start scan : 401 Integration stop scan: 449
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

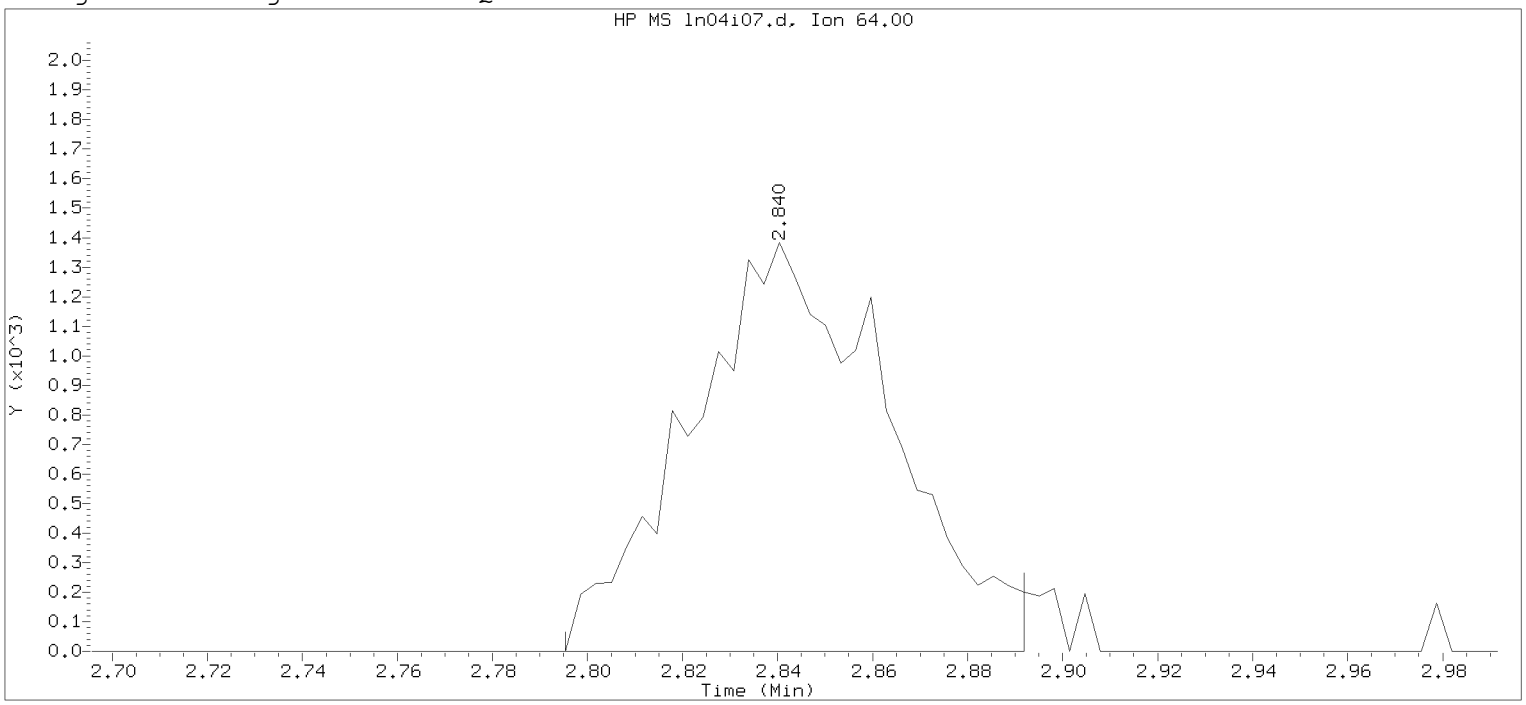
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

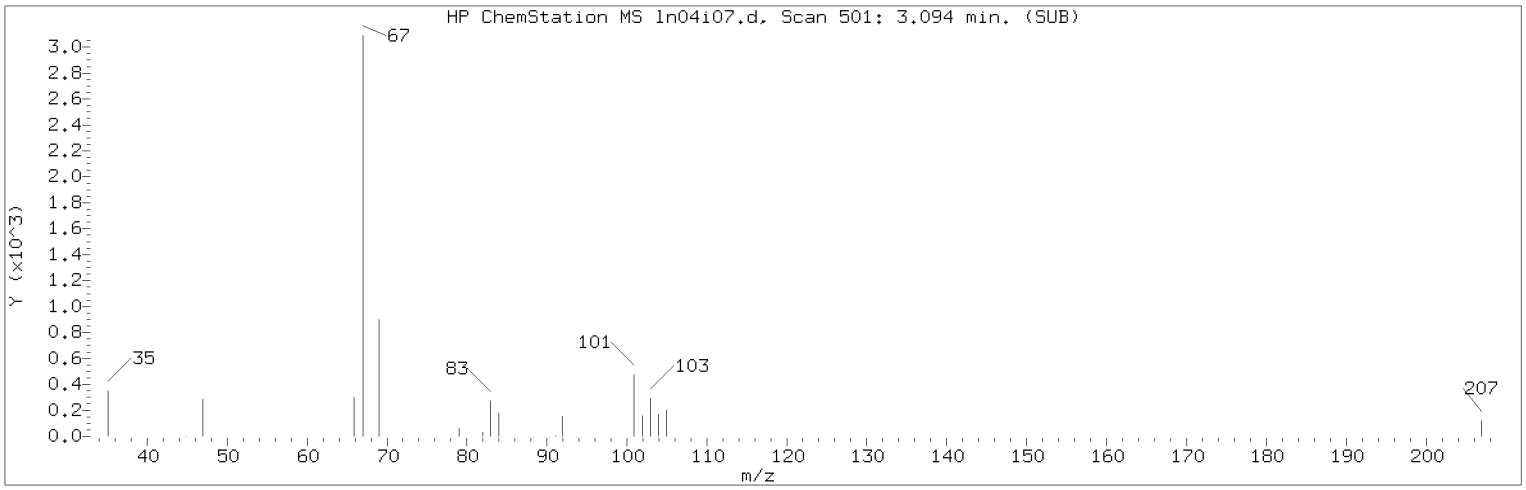
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

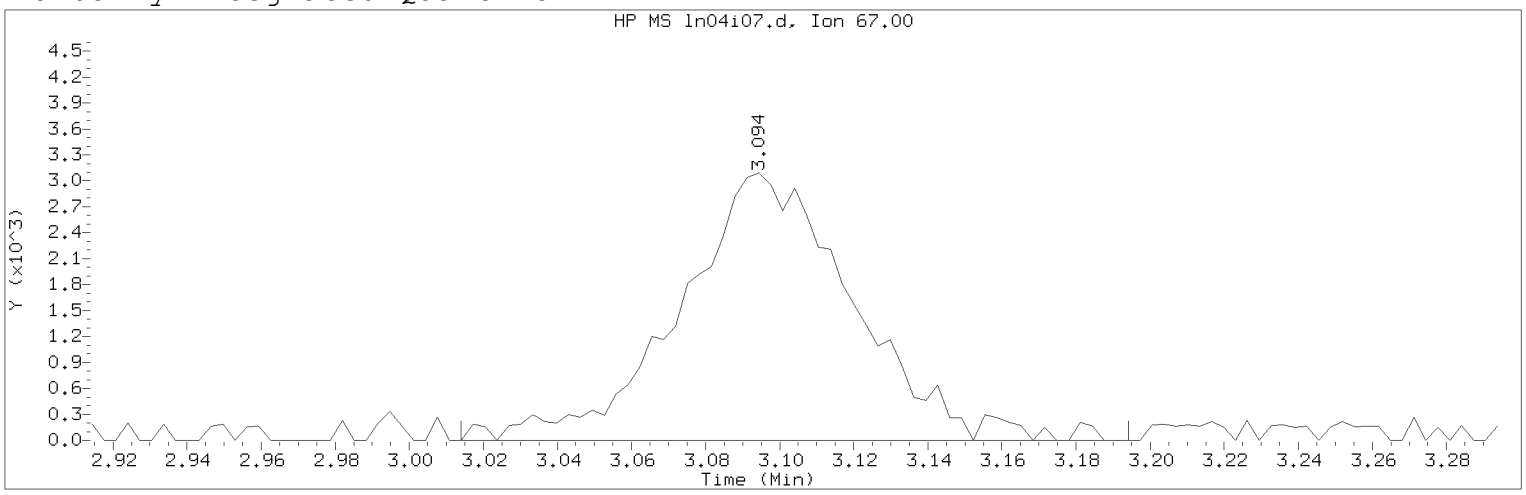
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 422
Retention Time (minutes): 2.840
Quant Ion : 64.00
Area : 4026
On-column Amount (ng) : 0.9650
Integration start scan : 407 Integration stop scan: 437
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

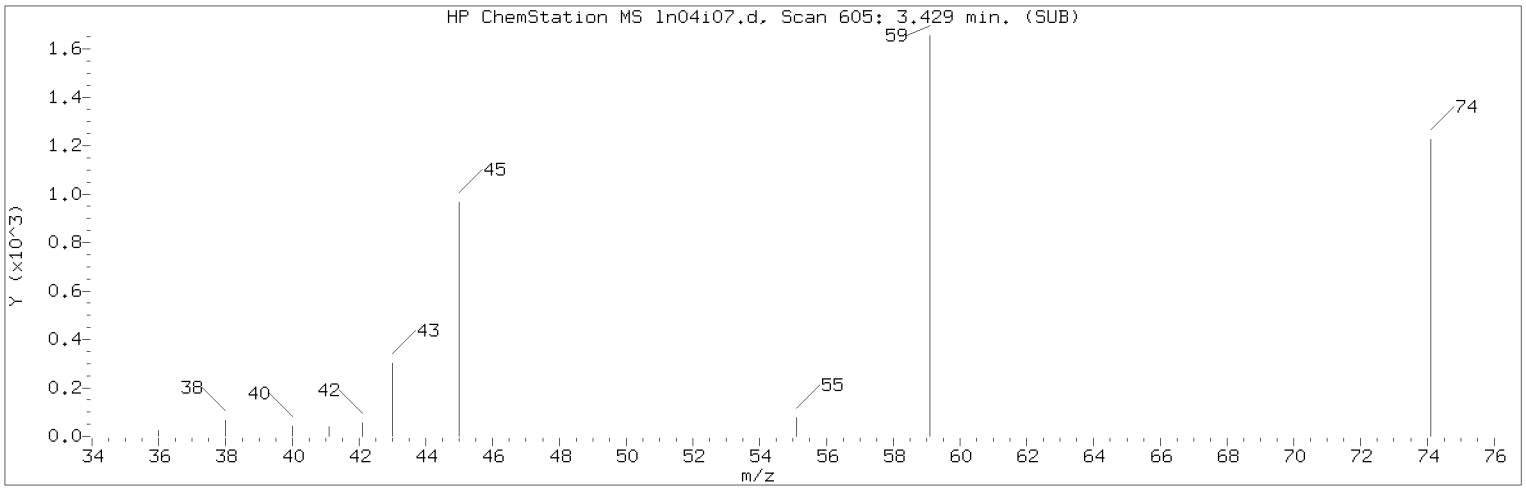
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 501
Retention Time (minutes): 3.094
Quant Ion : 67.00
Area (flag) : 10094M
On-Column Amount (ng) : 1.0040
Integration start scan : 475 Integration stop scan: 531
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

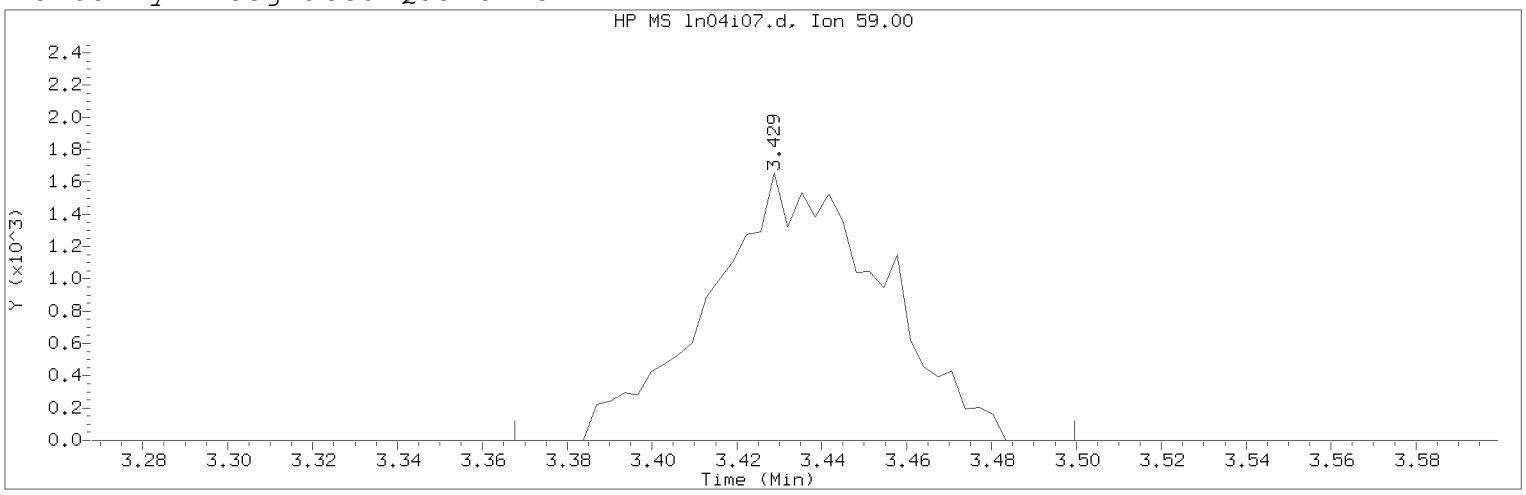
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

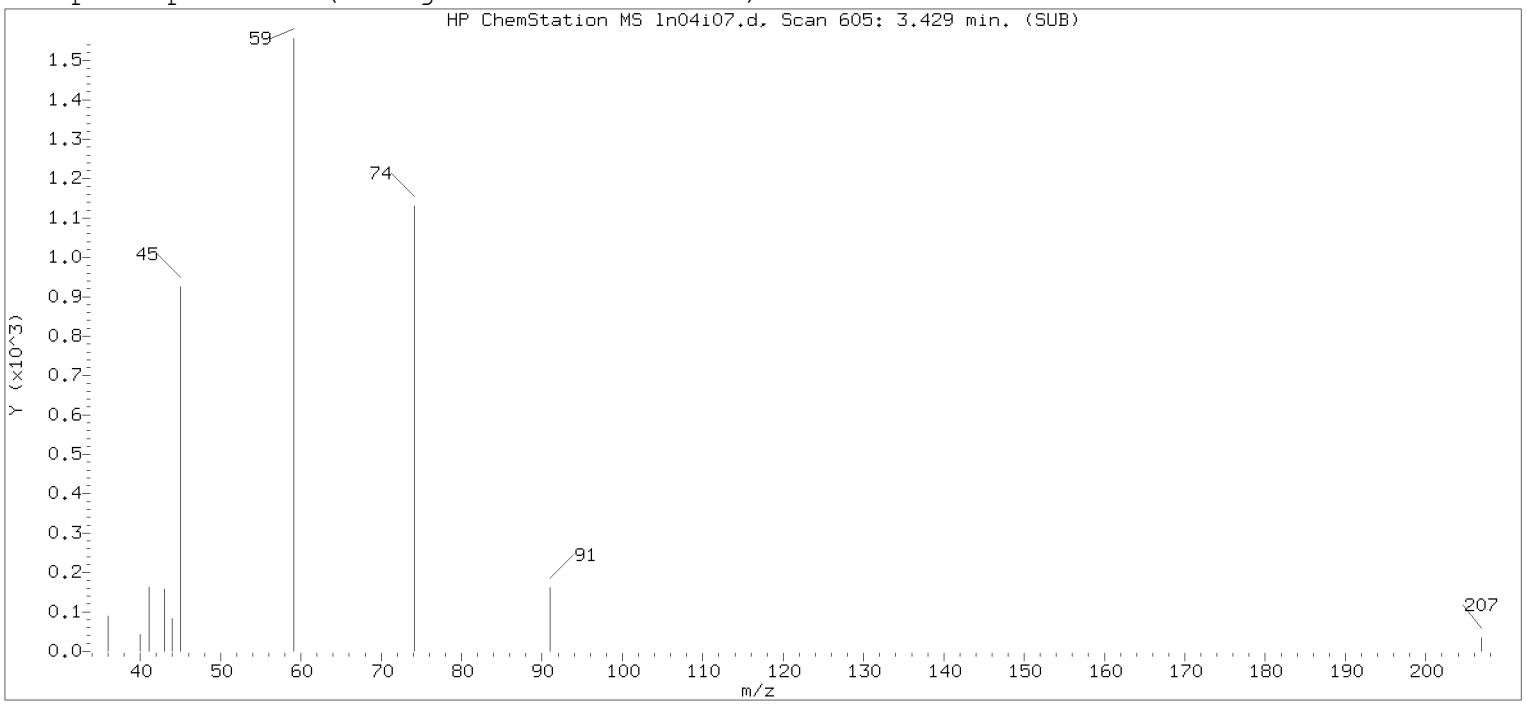
Compound Number : 14
Compound Name : Ethyl ether
Scan Number : 605
Retention Time (minutes): 3.429
Quant Ion : 59.00
Area (flag) : 4640M
On-Column Amount (ng) : 0.8744
Integration start scan : 585 Integration stop scan: 626
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

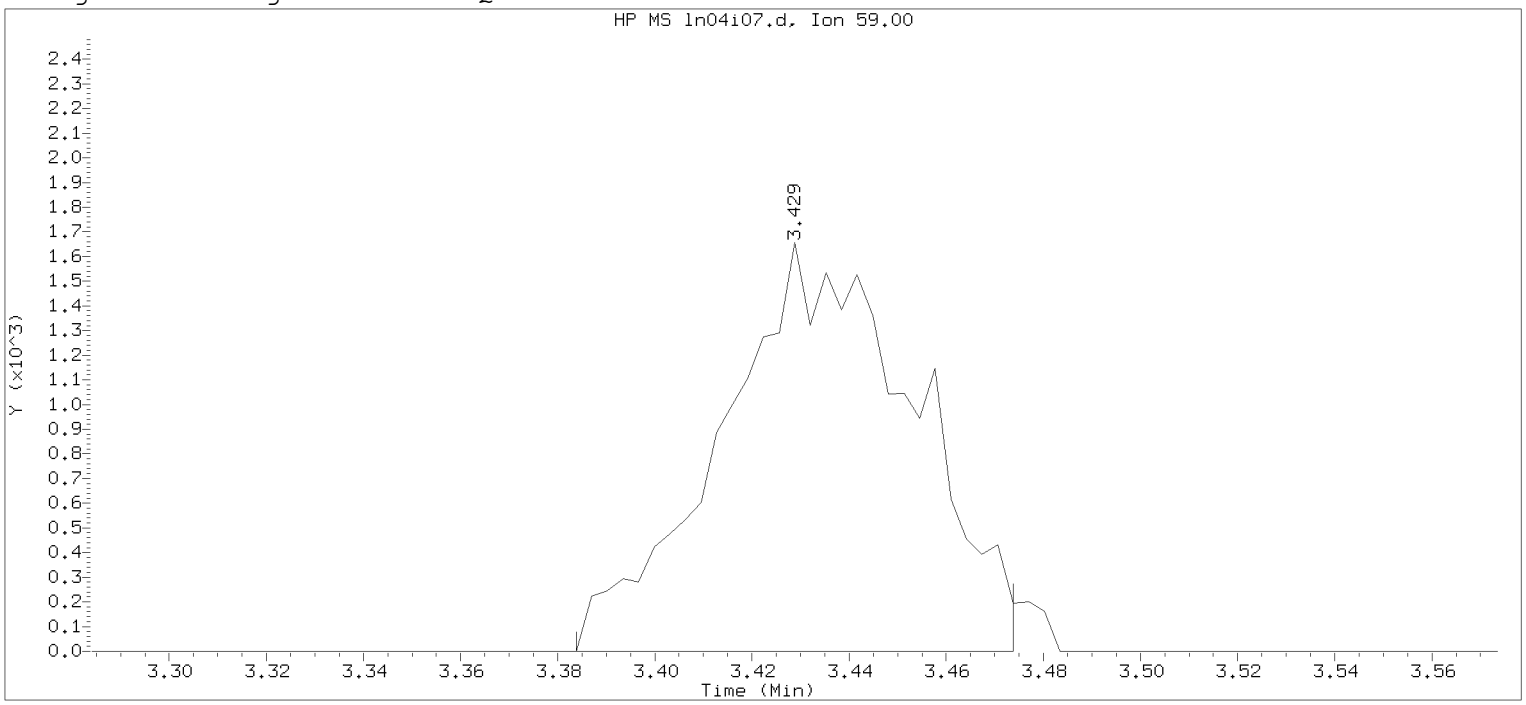
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

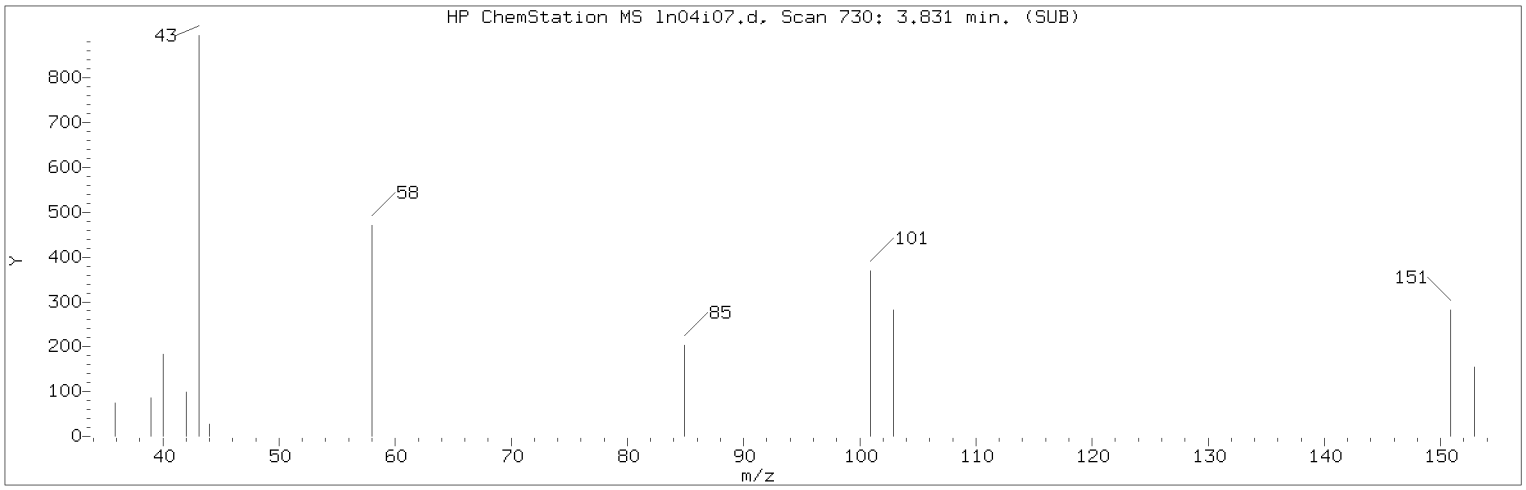
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

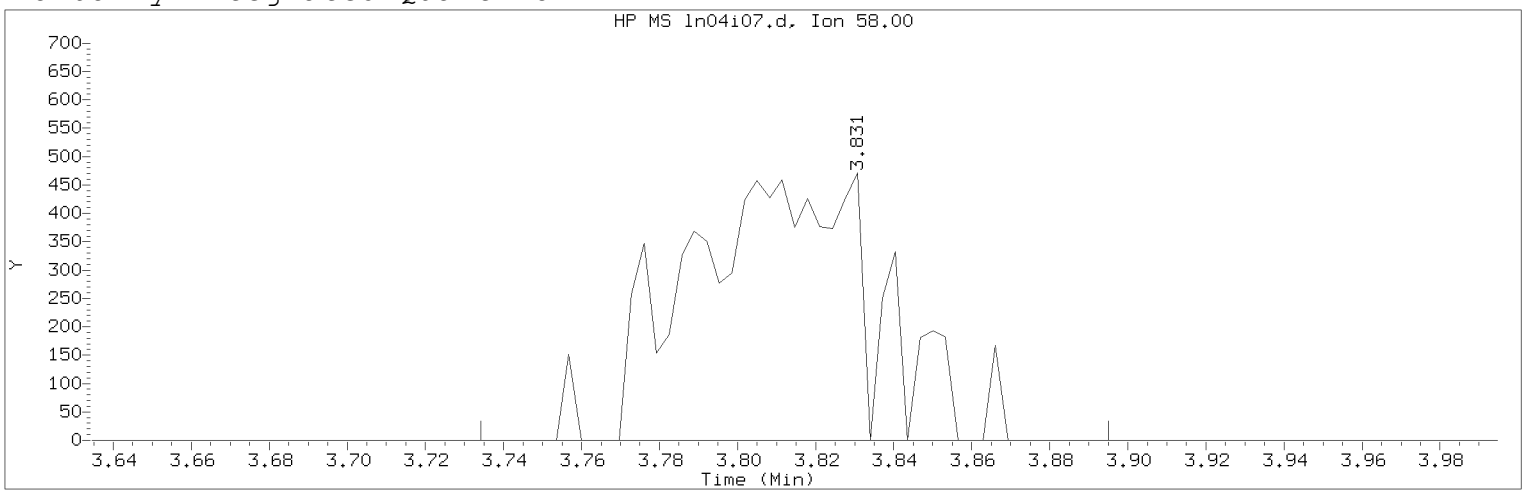
Compound Number : 14
Compound Name : Ethyl ether
Scan Number : 605
Retention Time (minutes): 3.429
Quant Ion : 59.00
Area : 4552
On-column Amount (ng) : 0.8599
Integration start scan : 590 Integration stop scan: 618
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

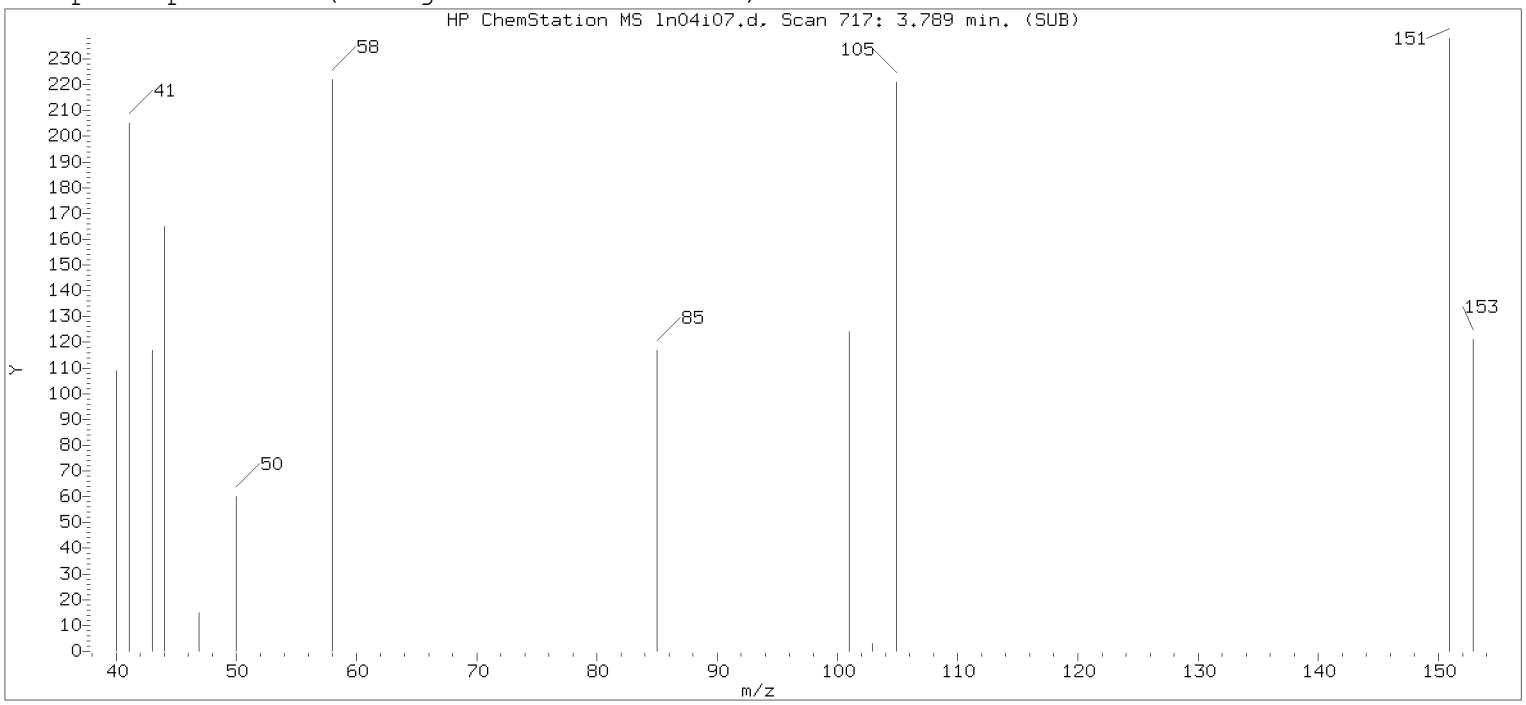
Compound Number : 18
Compound Name : Acetone
Scan Number : 730
Retention Time (minutes): 3.831
Quant Ion : 58.00
Area (flag) : 1588M
On-Column Amount (ng) : 1.9382
Integration start scan : 699 Integration stop scan: 749
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

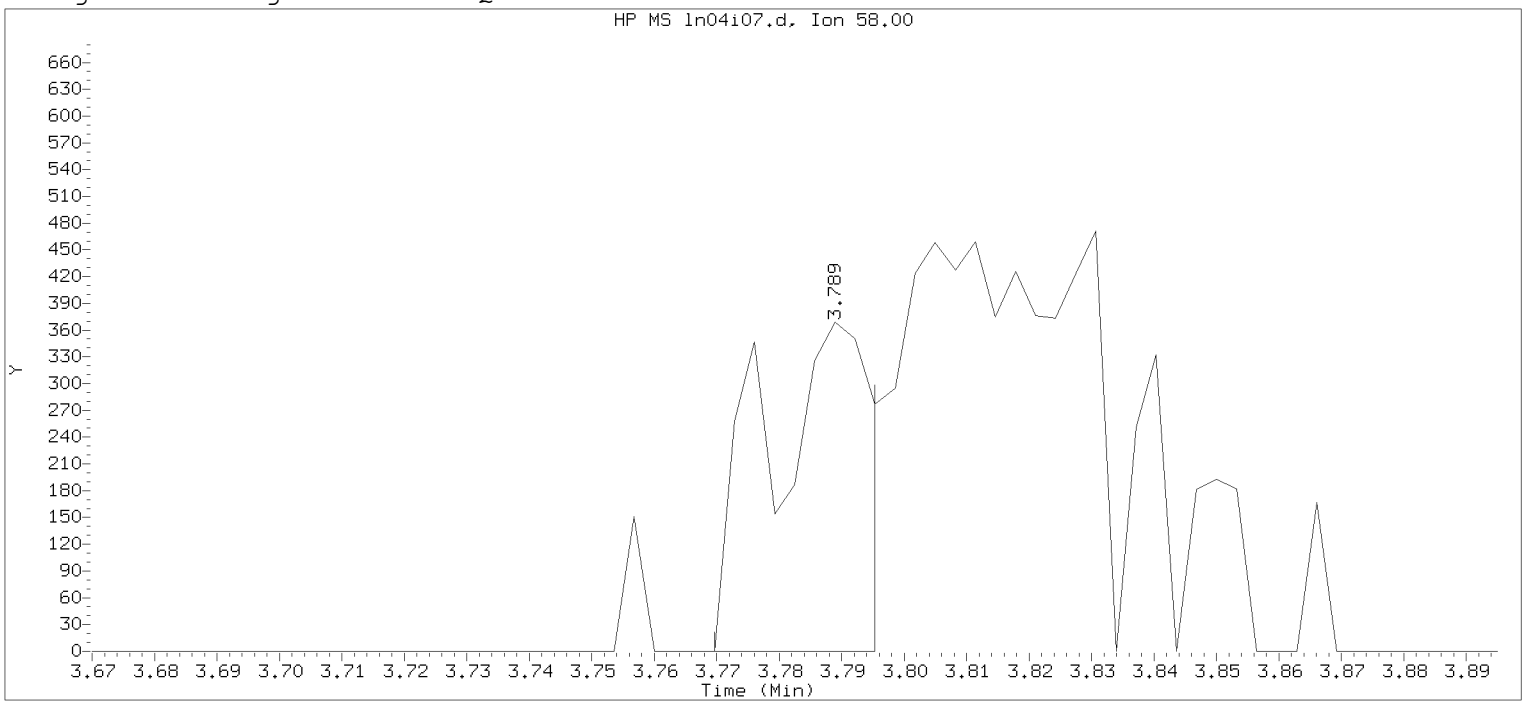
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

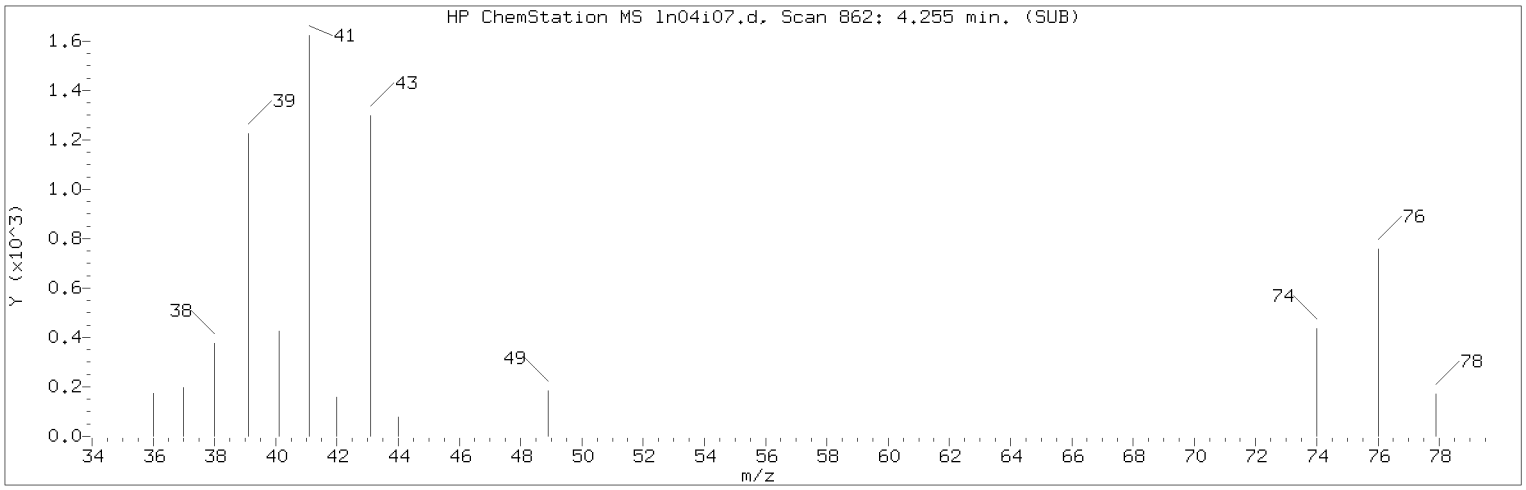
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

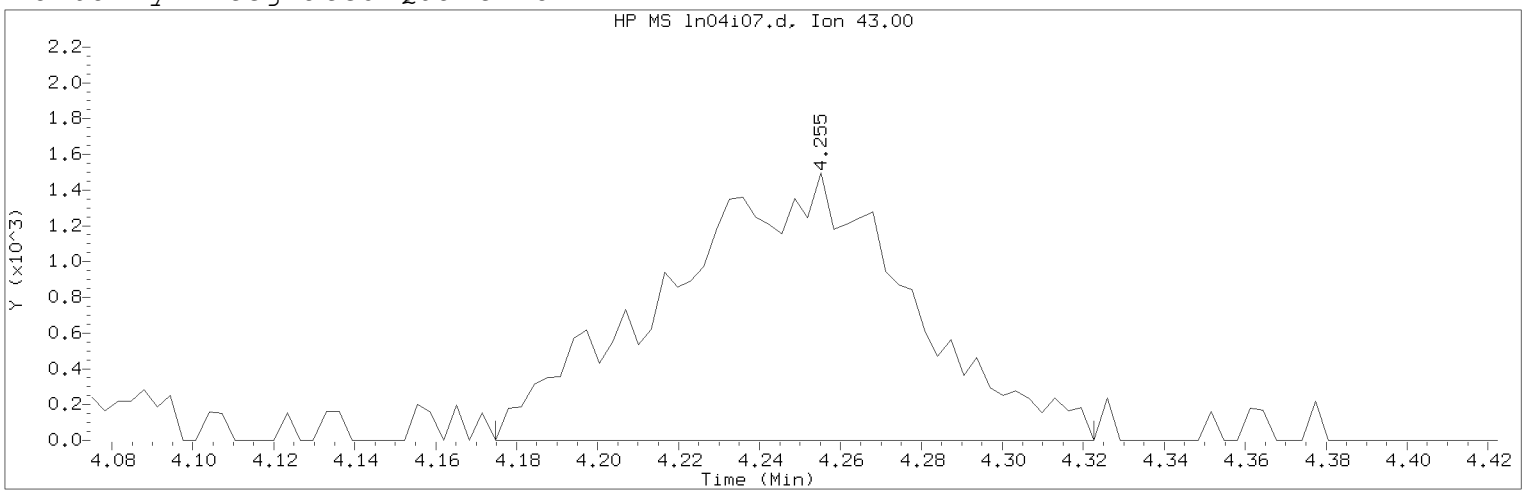
Compound Number : 18
Compound Name : Acetone
Scan Number : 717
Retention Time (minutes): 3.789
Quant Ion : 58.00
Area : 410
On-column Amount (ng) : 0.5644
Integration start scan : 710 Integration stop scan: 718
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

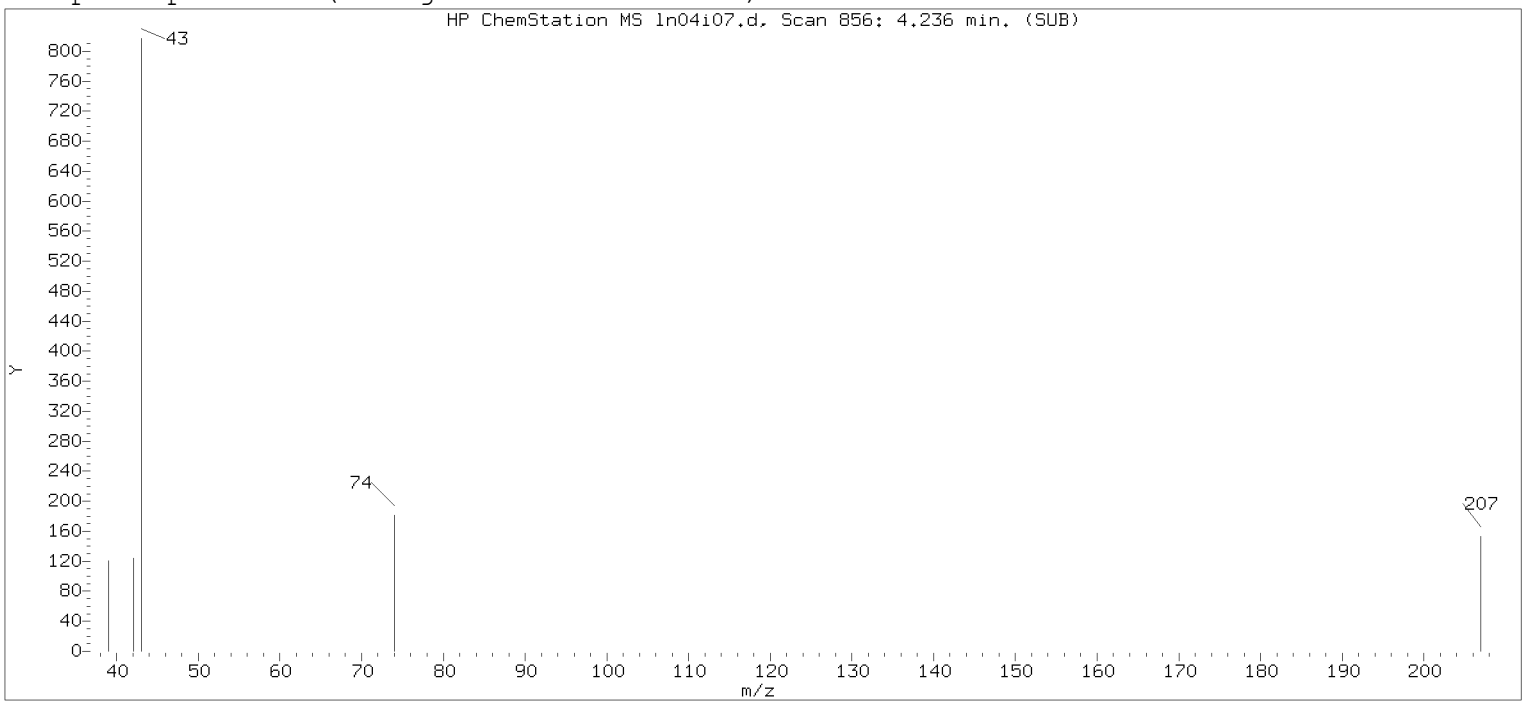
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 862
Retention Time (minutes): 4.255
Quant Ion : 43.00
Area (flag) : 6274M
On-Column Amount (ng) : 1.0106
Integration start scan : 836 Integration stop scan: 882
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

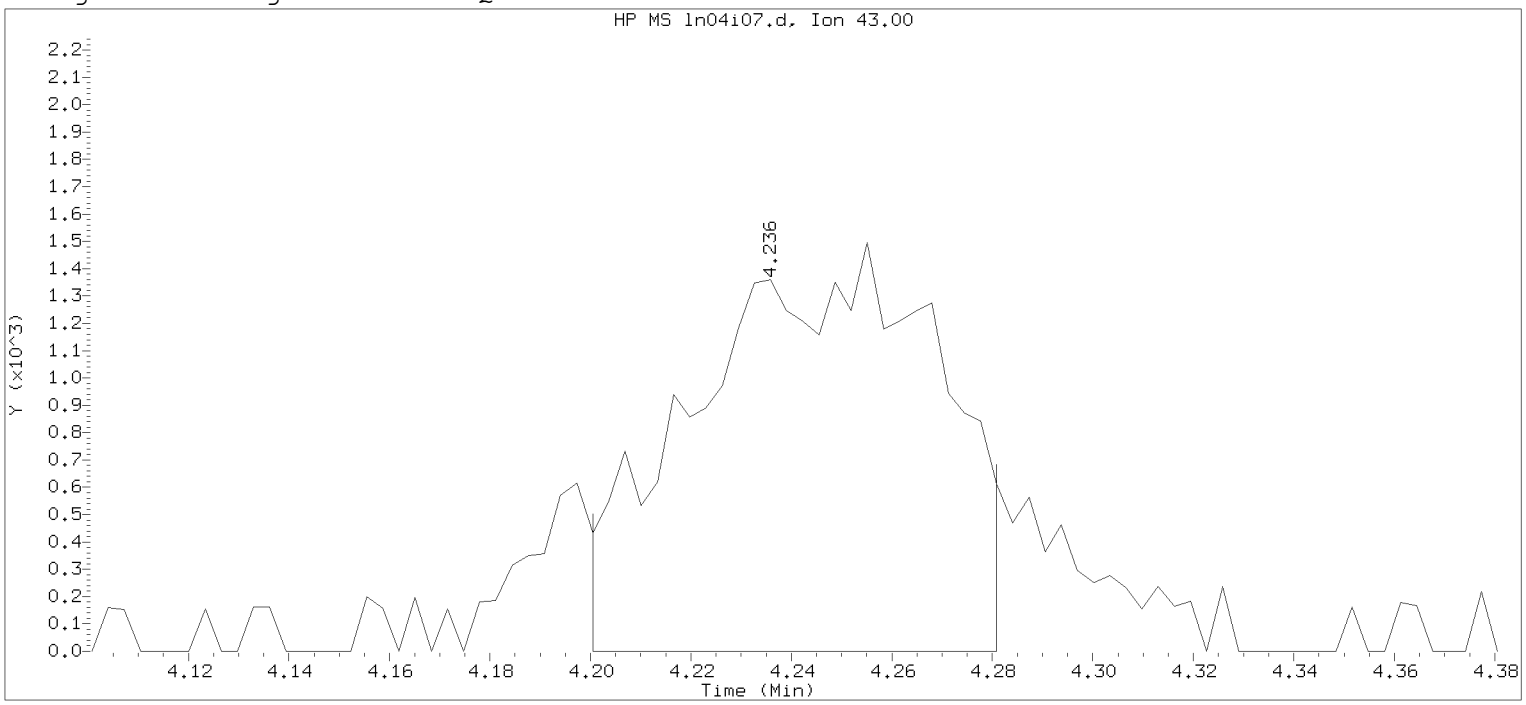
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

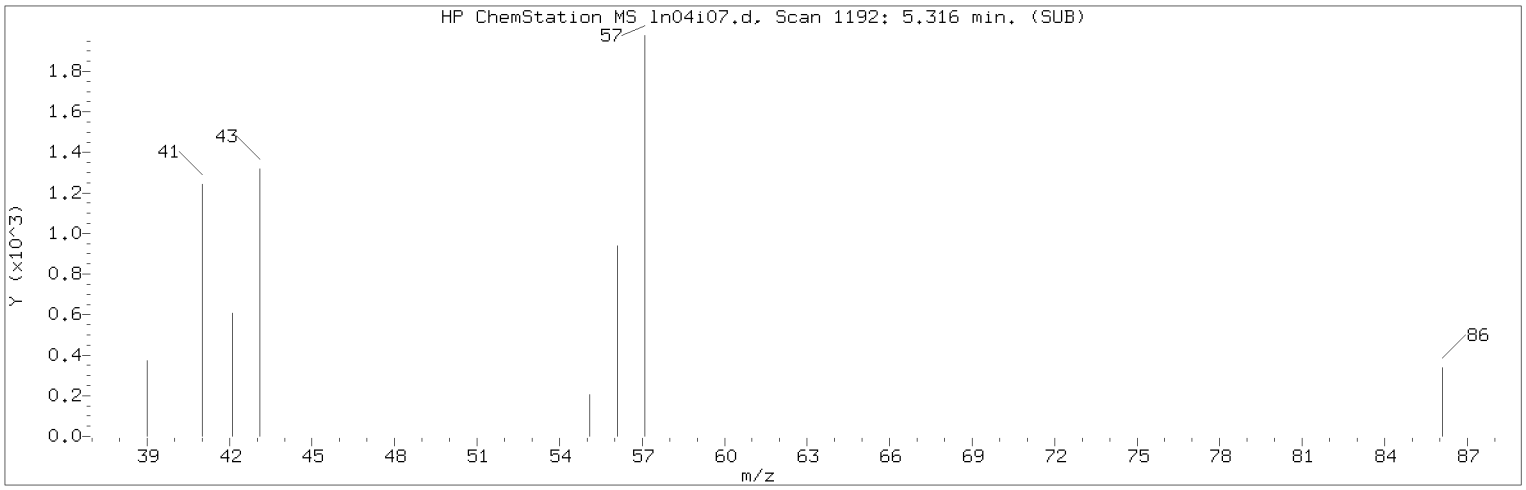
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

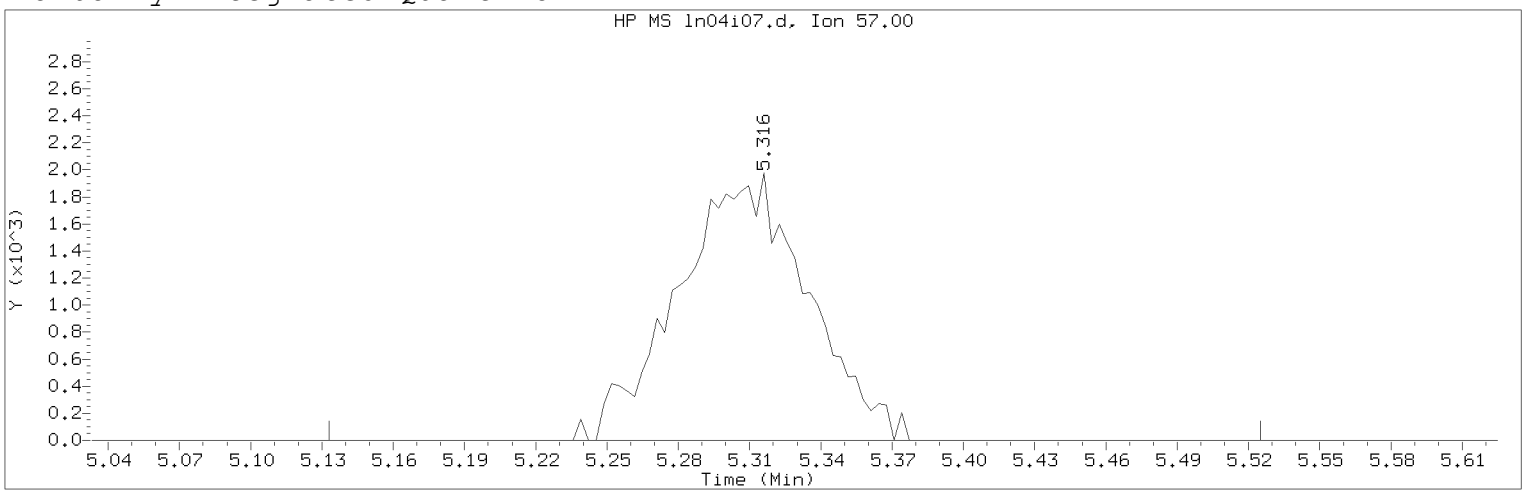
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 856
Retention Time (minutes): 4.236
Quant Ion : 43.00
Area : 4972
On-column Amount (ng) : 0.8386
Integration start scan : 844 Integration stop scan: 869
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

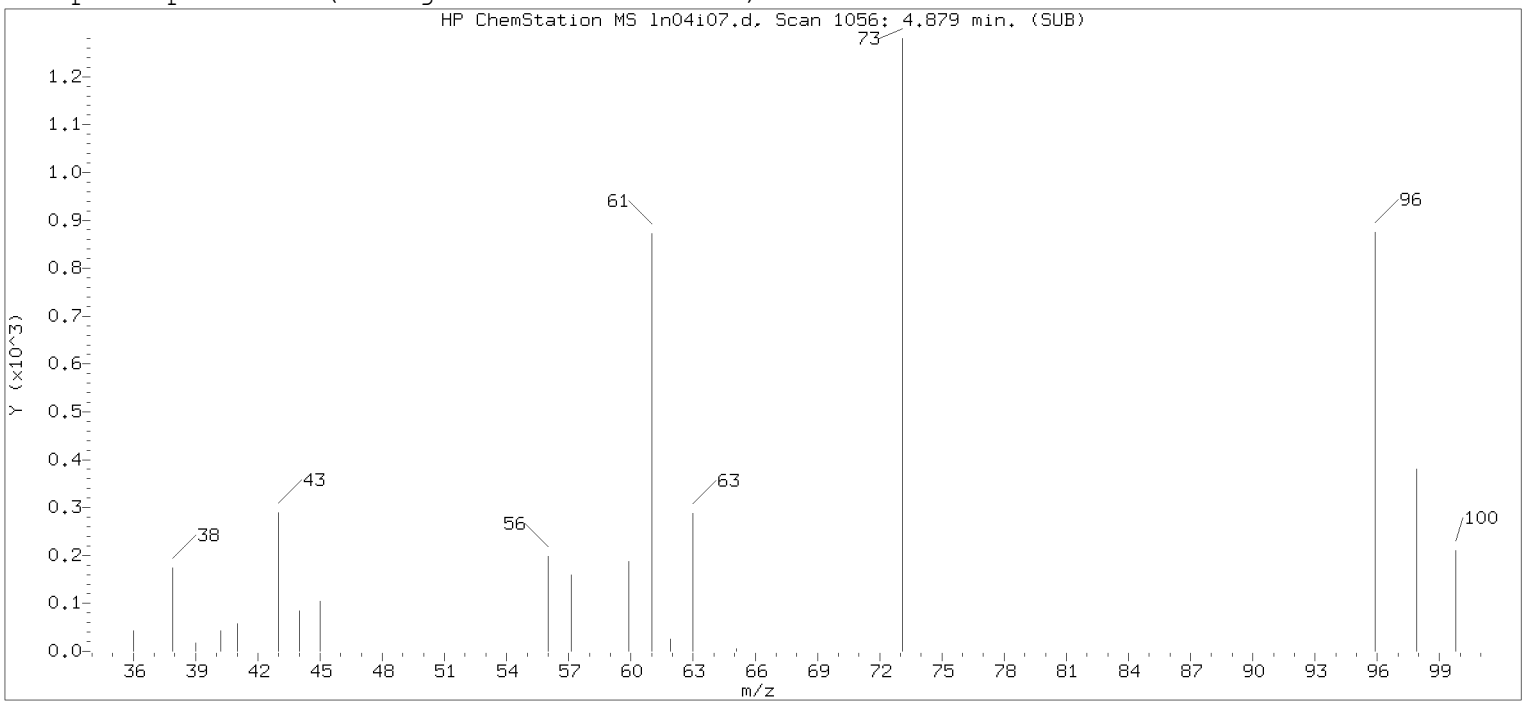
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1192
Retention Time (minutes): 5.316
Quant Ion : 57.00
Area (flag) : 7475M
On-Column Amount (ng) : 0.8616
Integration start scan : 1134 Integration stop scan: 1256
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

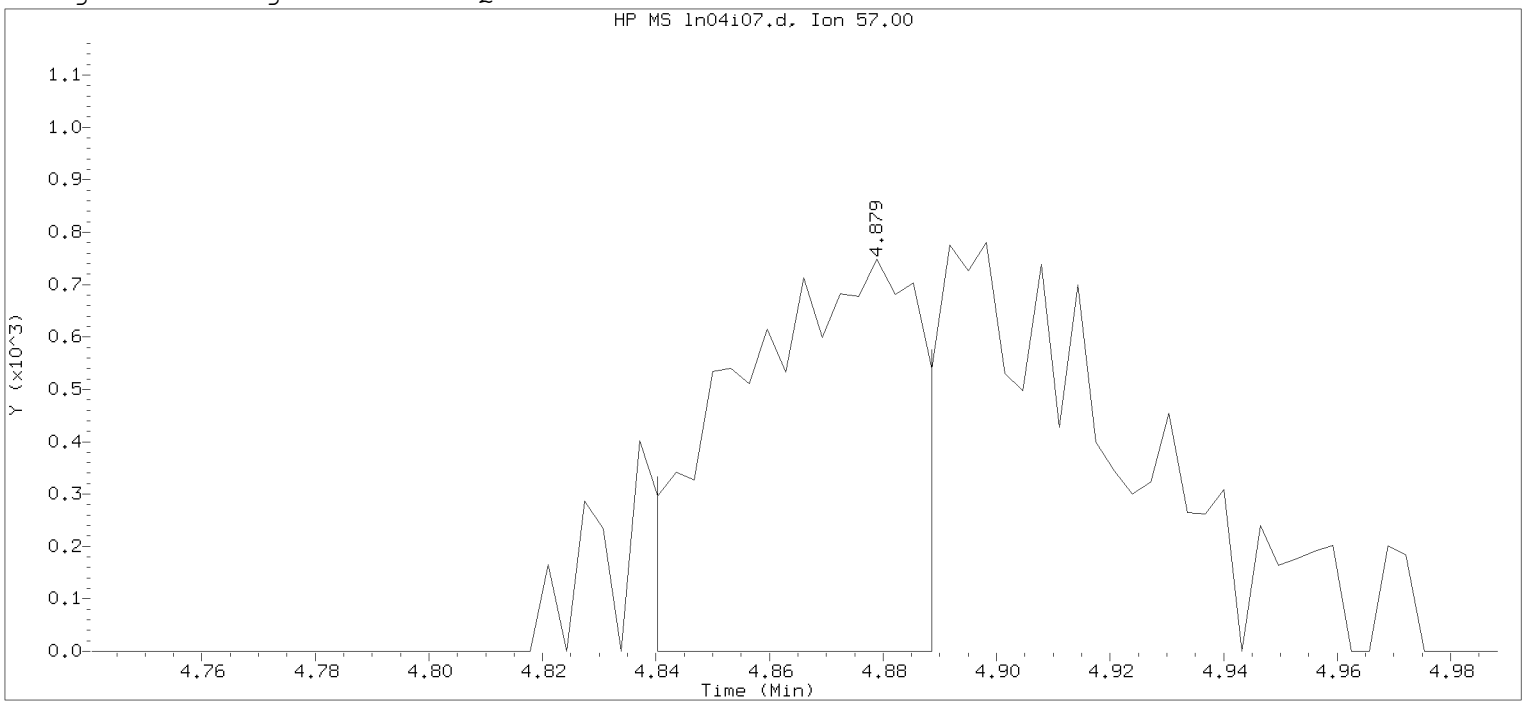
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

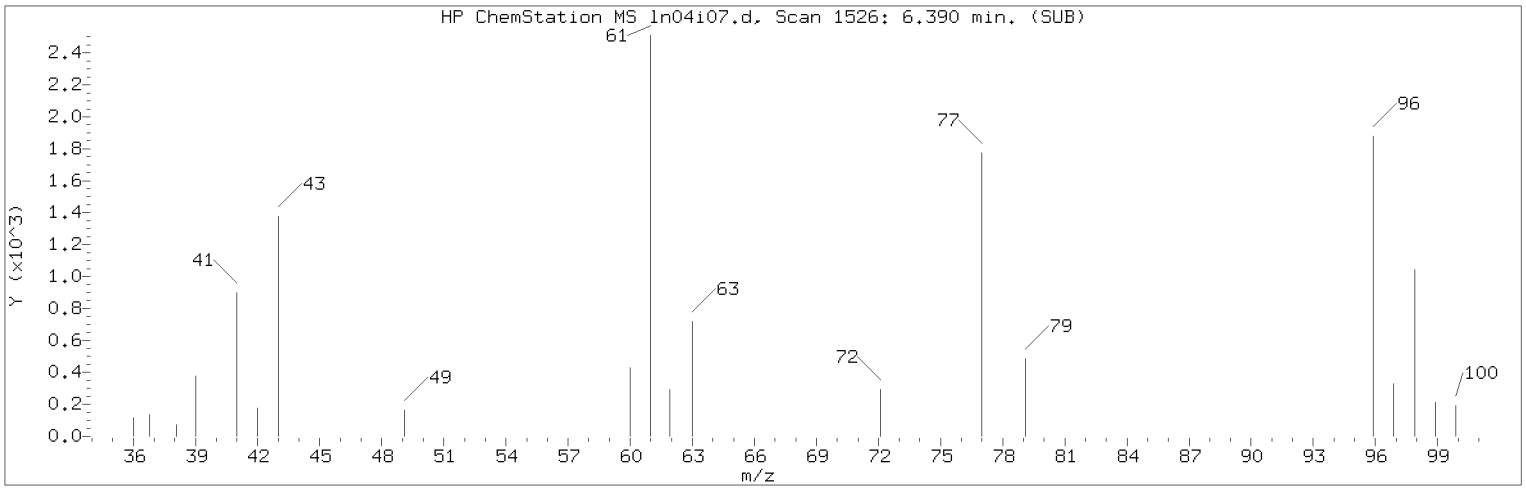
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

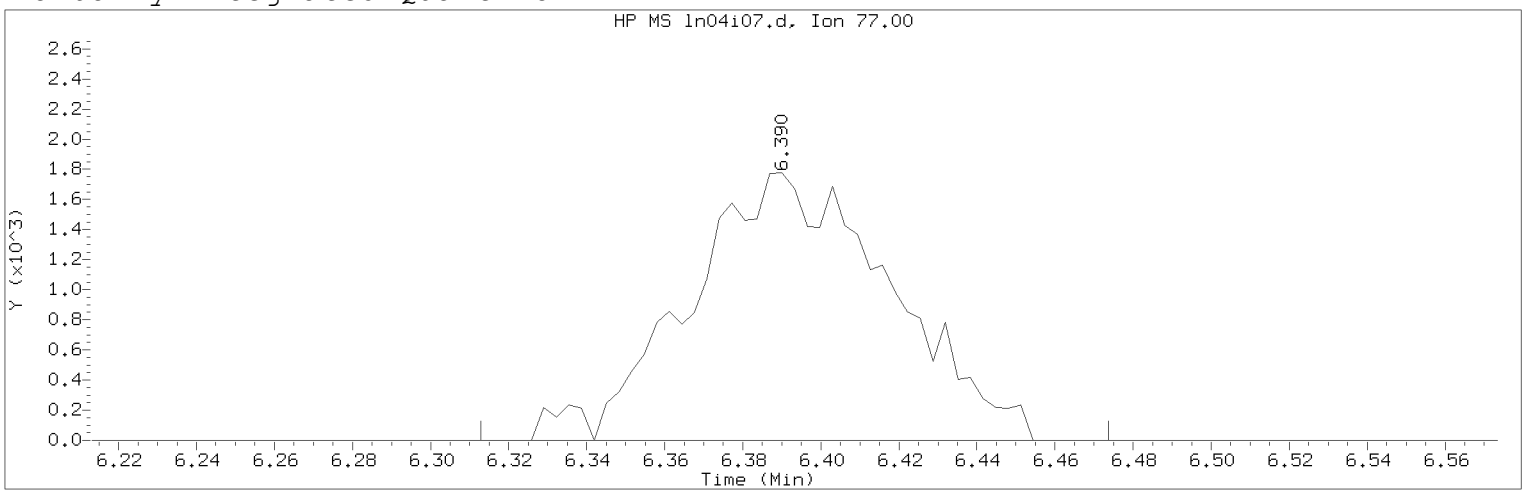
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1056
Retention Time (minutes): 4.879
Quant Ion : 57.00
Area : 1663
On-column Amount (ng) : 0.4635
Integration start scan : 1043 Integration stop scan: 1058
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

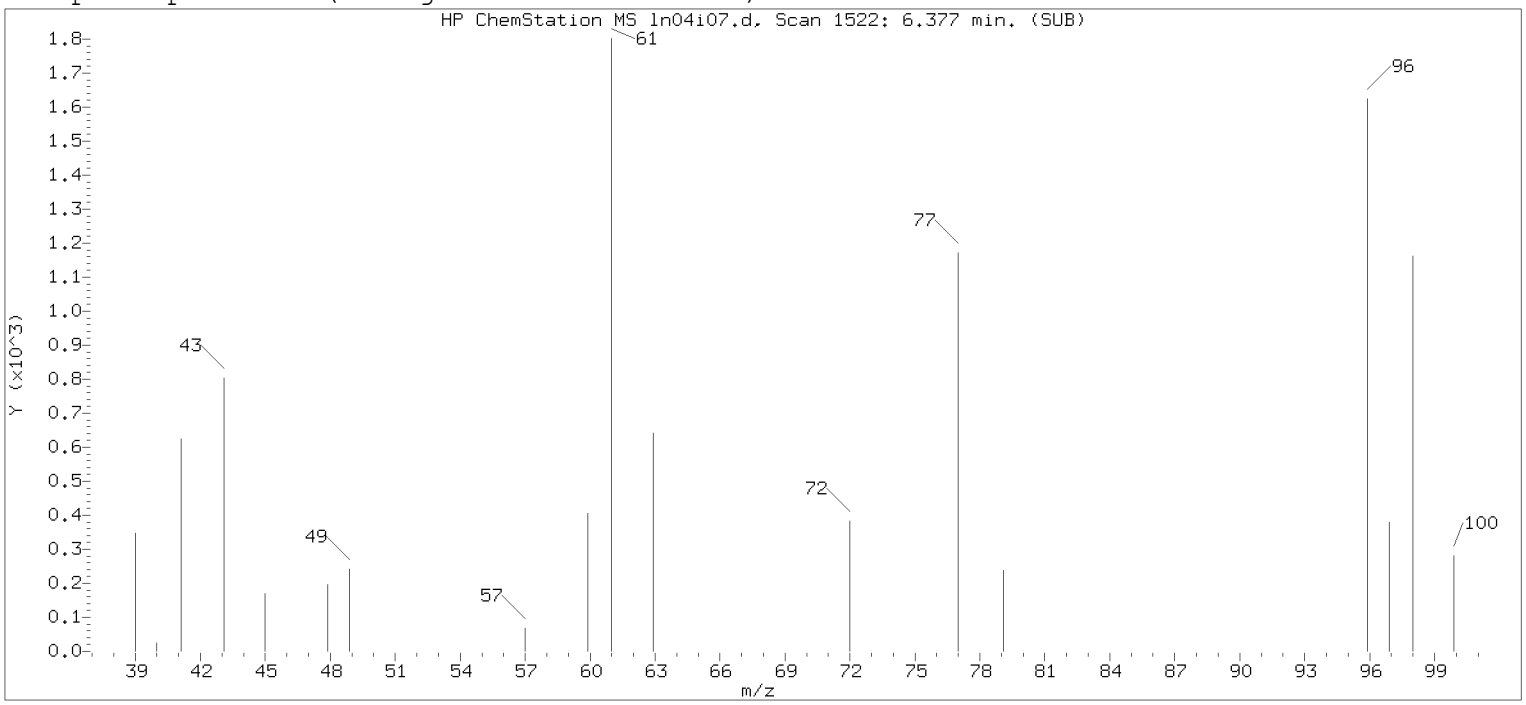
Compound Number : 45
Compound Name : 2,2-Dichloropropane
Scan Number : 1526
Retention Time (minutes): 6.390
Quant Ion : 77.00
Area (flag) : 6419M
On-Column Amount (ng) : 0.8488
Integration start scan : 1501 Integration stop scan: 1551
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

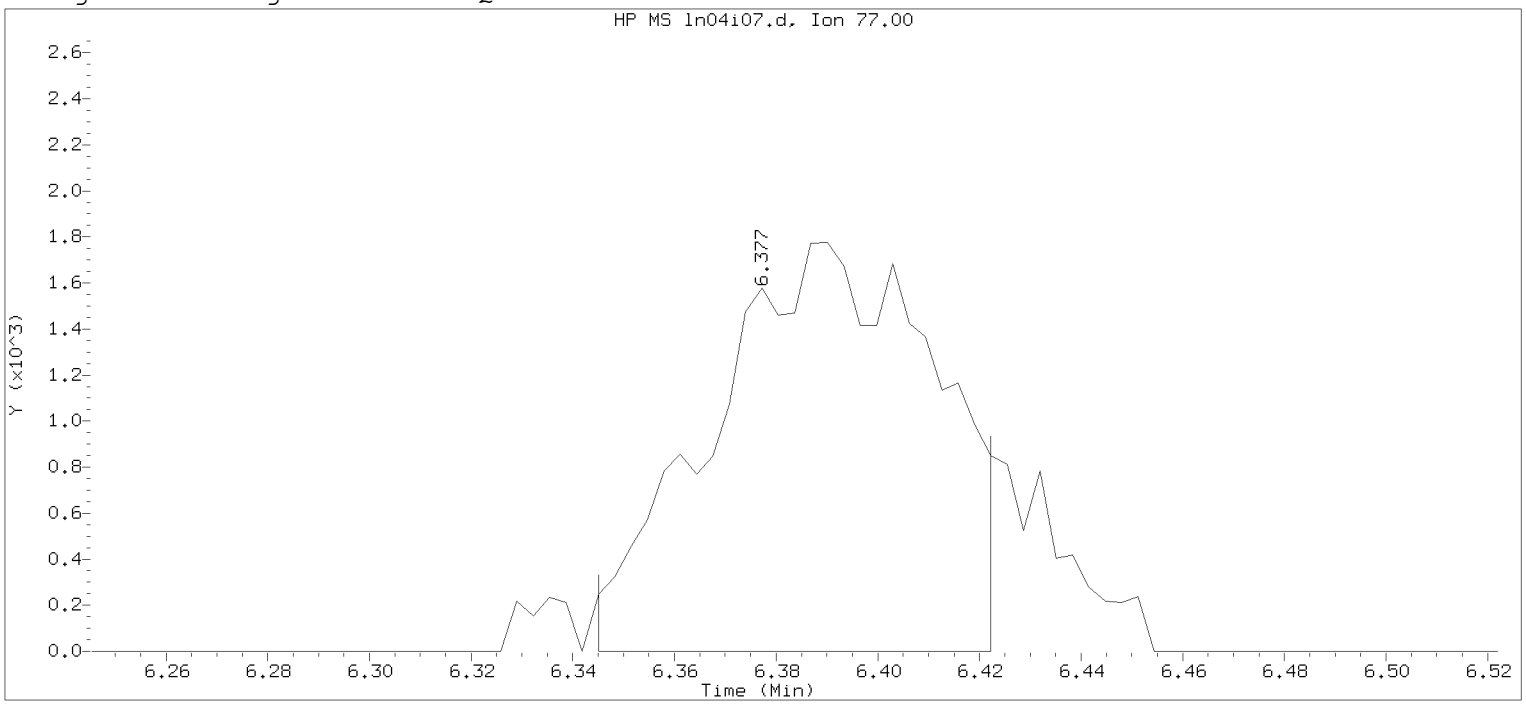
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

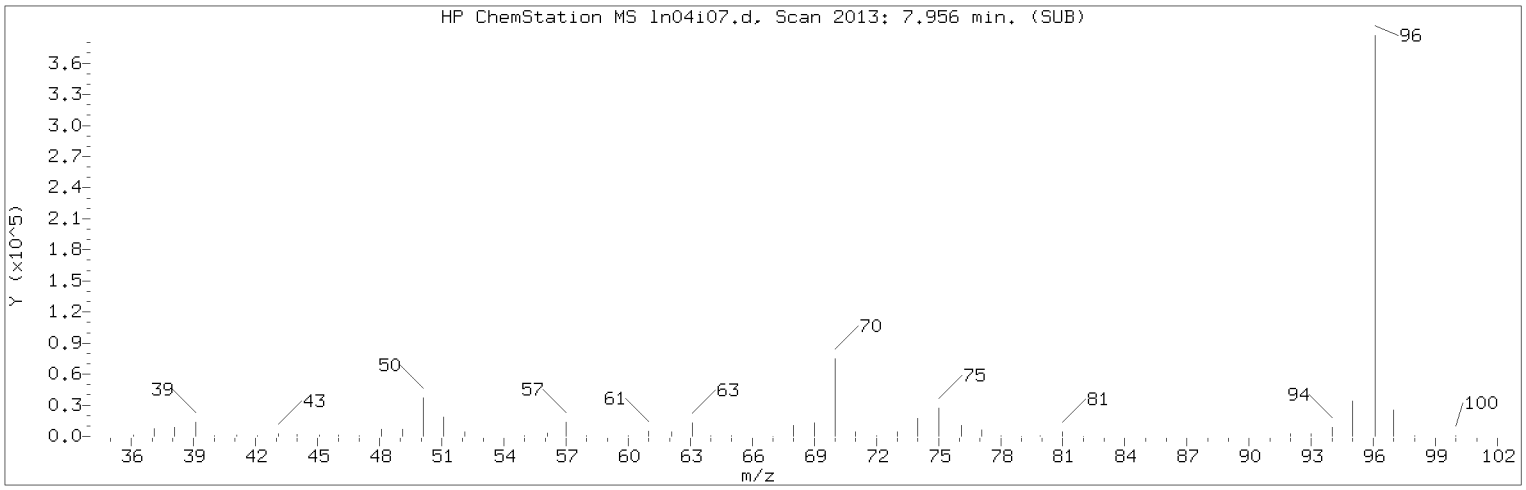
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

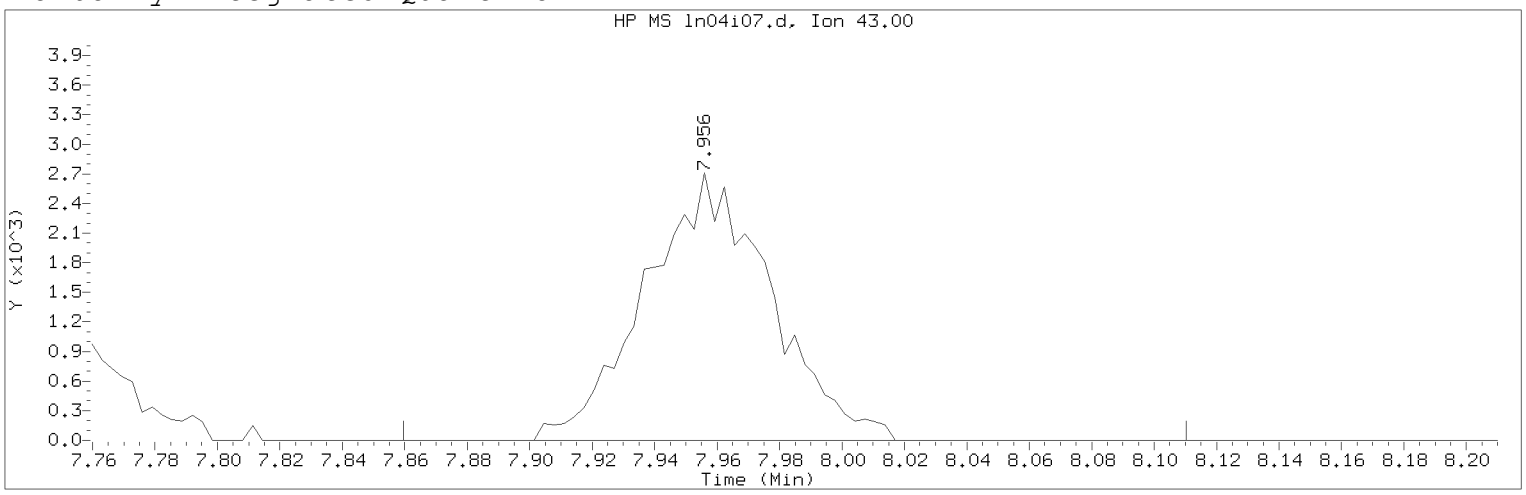
Compound Number : 45
Compound Name : 2,2-Dichloropropane
Scan Number : 1522
Retention Time (minutes): 6.377
Quant Ion : 77.00
Area : 5406
On-column Amount (ng) : 0.7289
Integration start scan : 1511 Integration stop scan: 1535
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

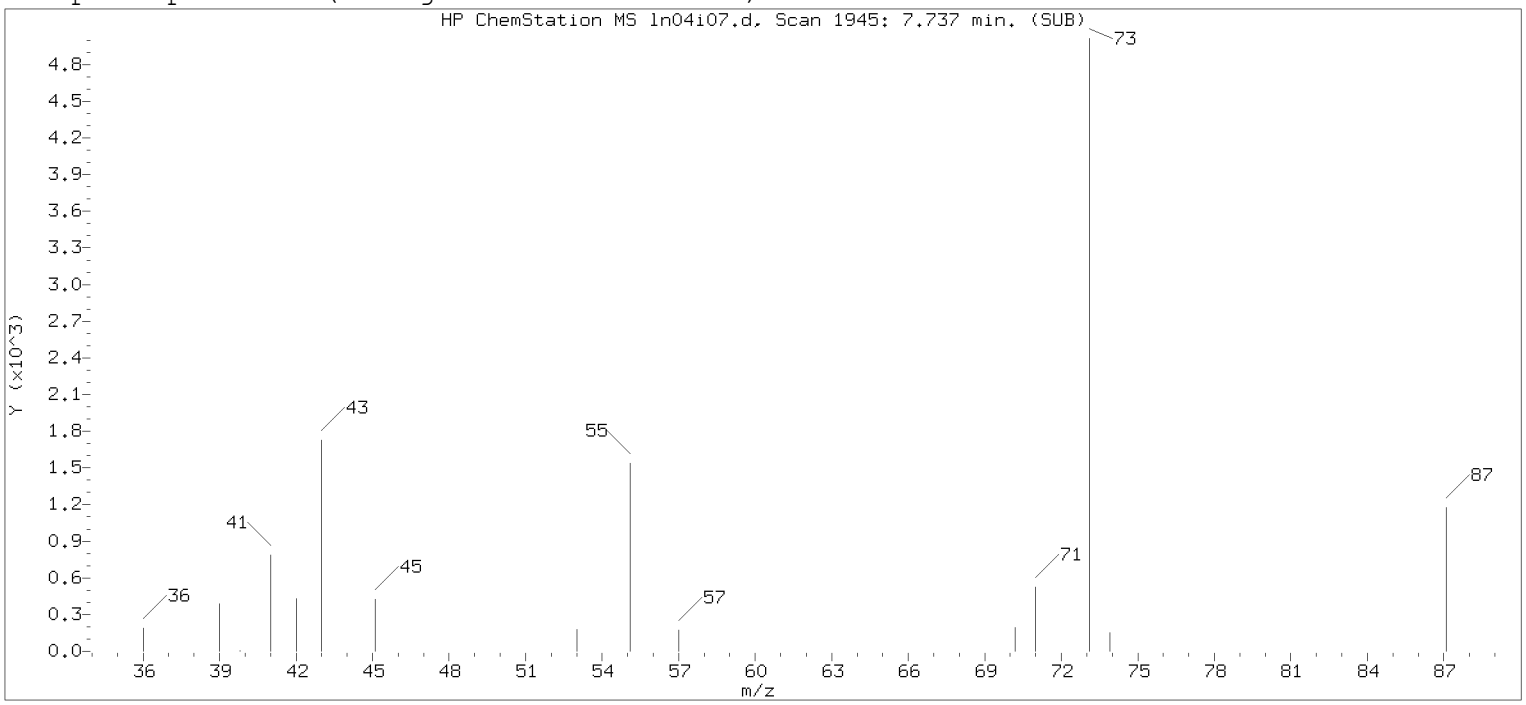
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2013
Retention Time (minutes): 7.956
Quant Ion : 43.00
Area (flag) : 7535M
On-Column Amount (ng) : 0.9297
Integration start scan : 1982 Integration stop scan: 2060
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

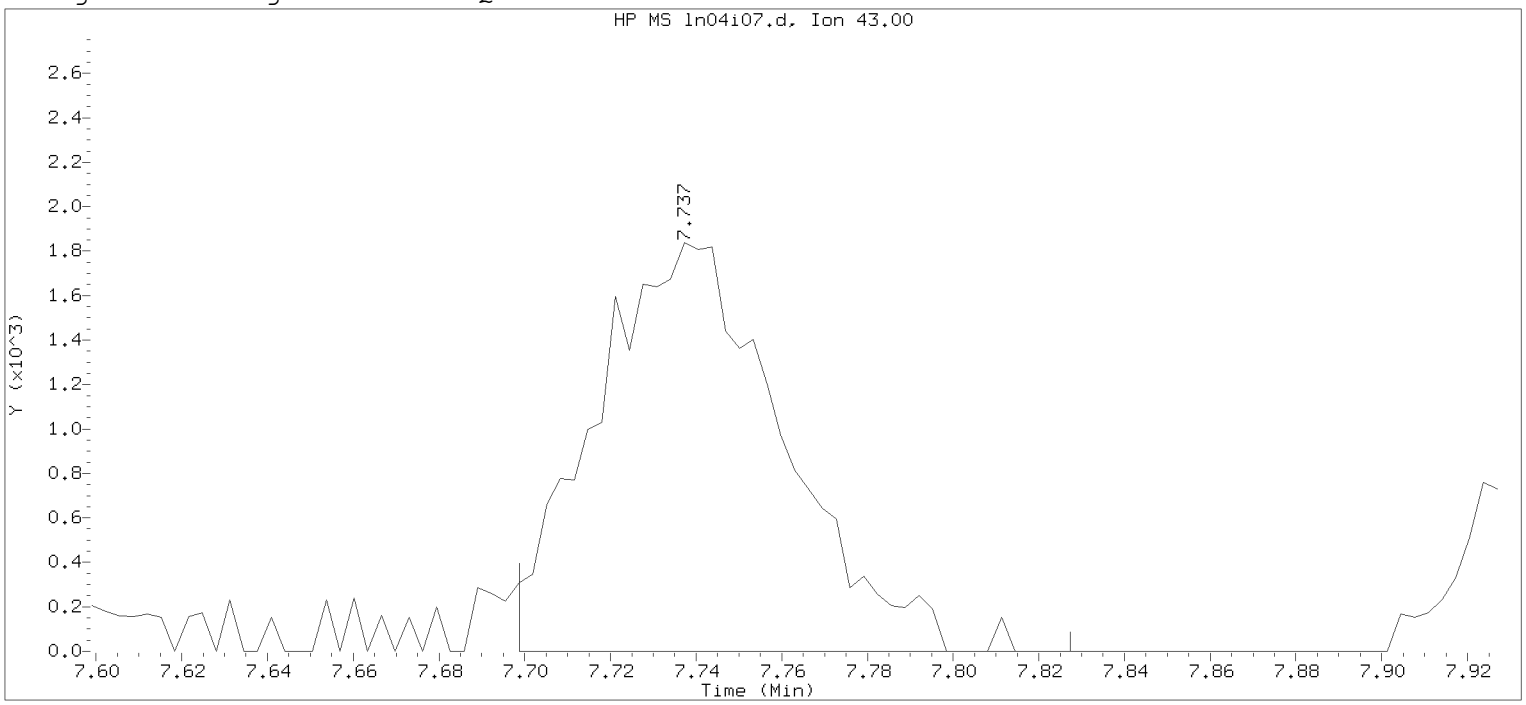
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

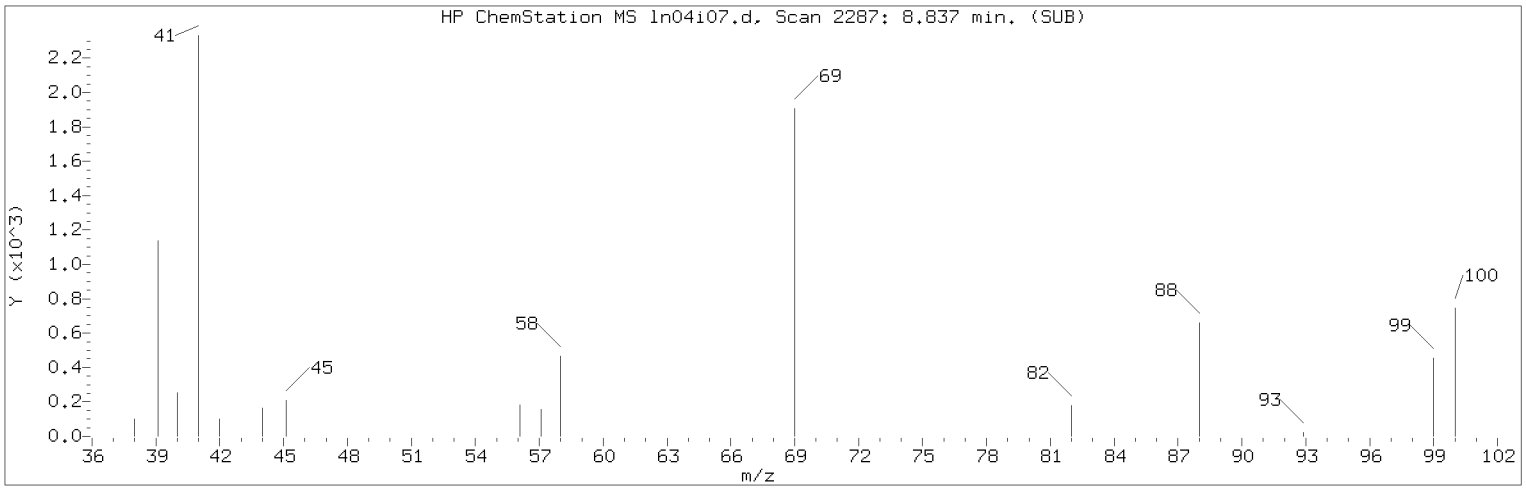
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

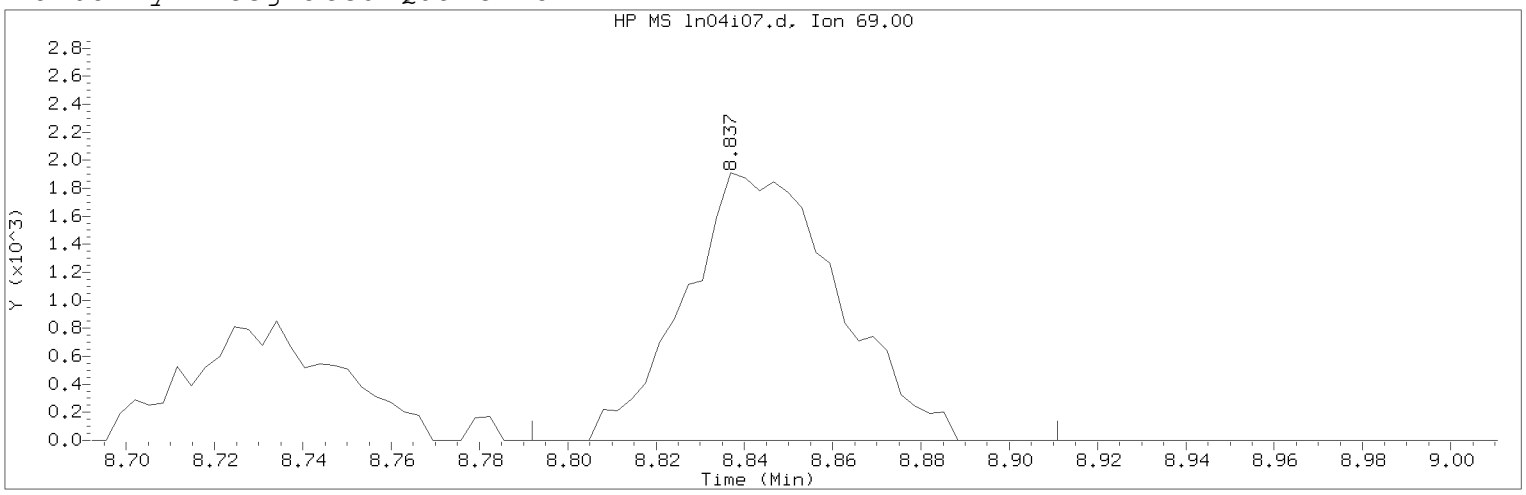
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1945
Retention Time (minutes): 7.737
Quant Ion : 43.00
Area : 5623
On-column Amount (ng) : 0.9372
Integration start scan : 1932 Integration stop scan: 1972
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

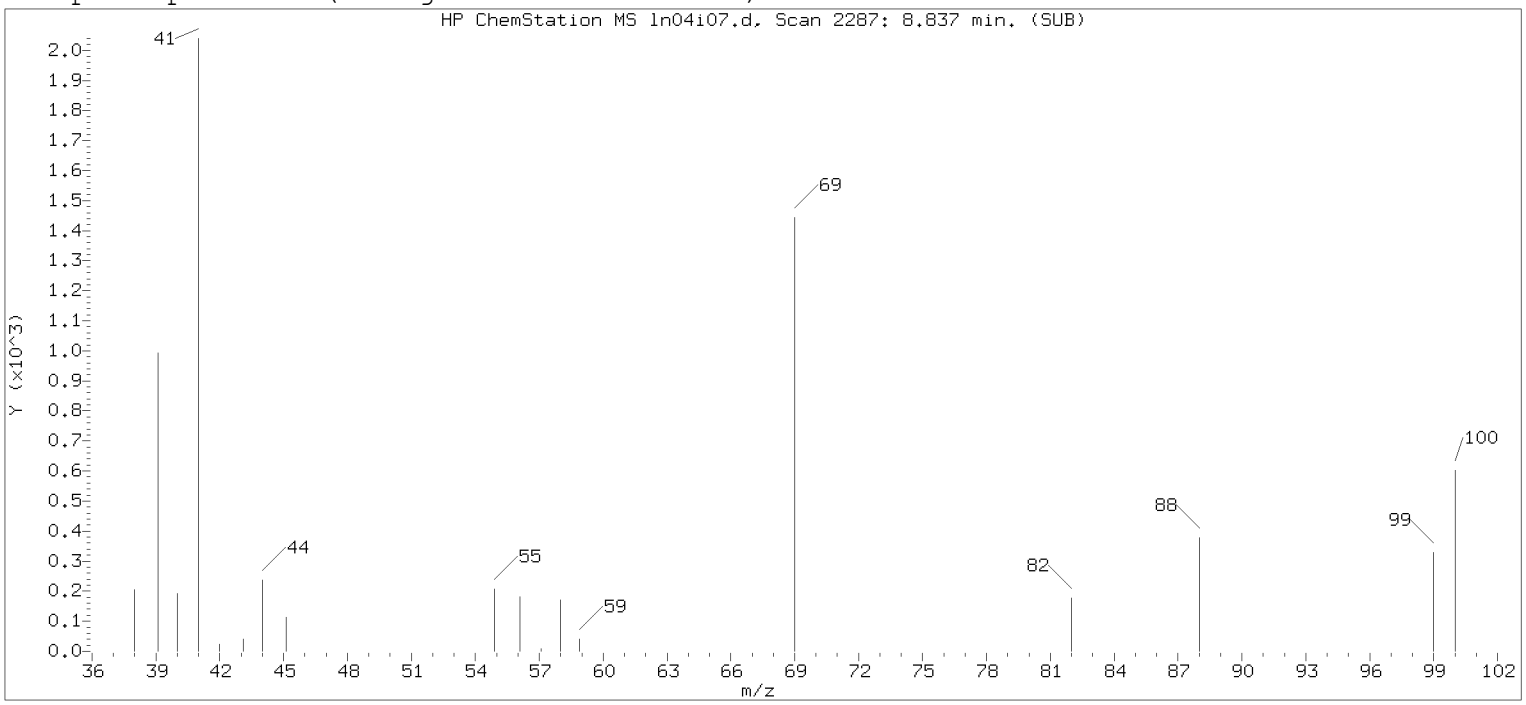
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2287
Retention Time (minutes): 8.837
Quant Ion : 69.00
Area (flag) : 4607M
On-Column Amount (ng) : 0.8112
Integration start scan : 2272 Integration stop scan: 2309
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

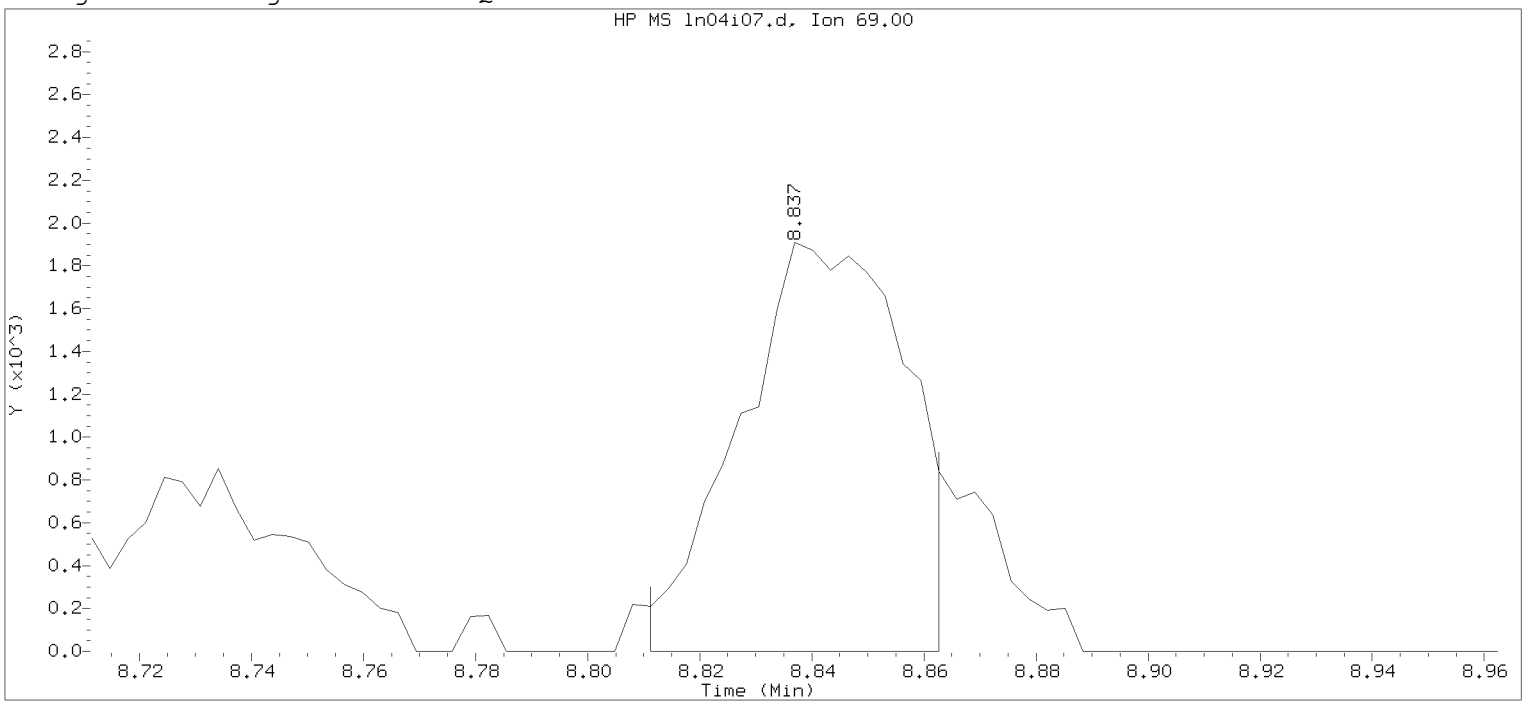
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

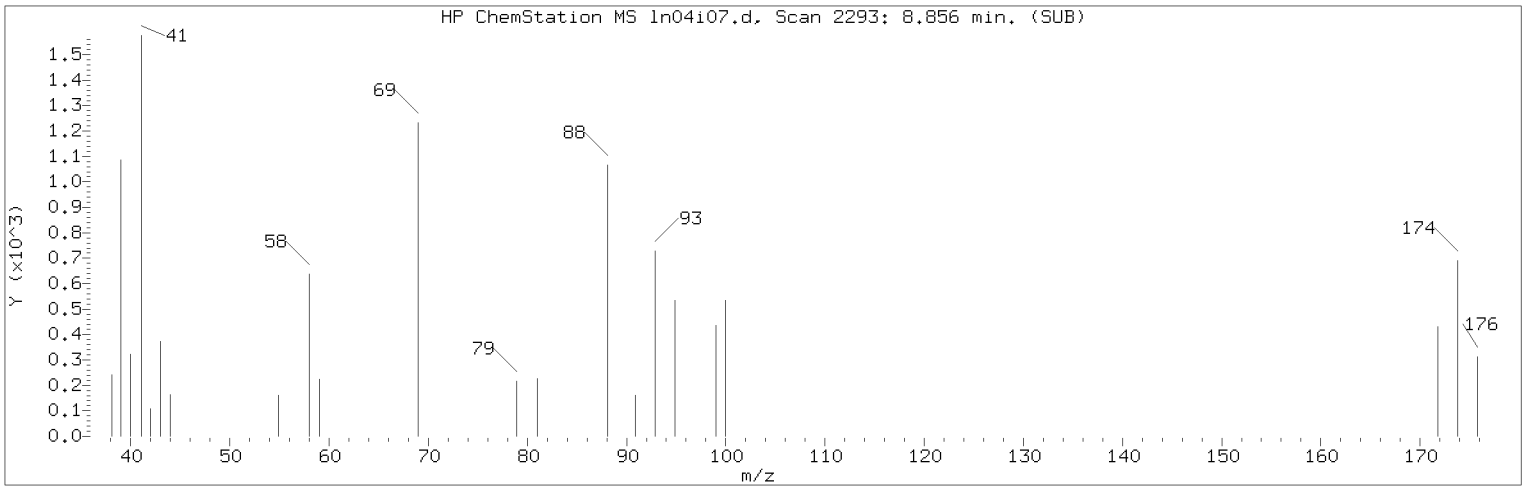
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

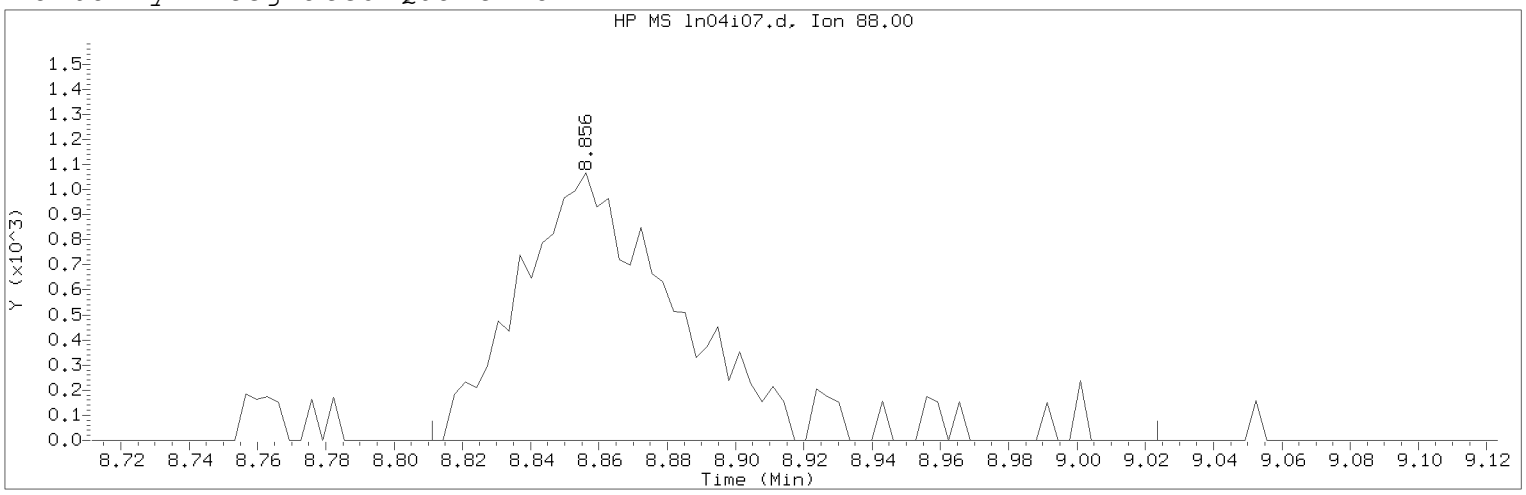
Compound Number	: 76		
Compound Name	: Methyl Methacrylate		
Scan Number	: 2287		
Retention Time (minutes)	: 8.837		
Quant Ion	: 69.00		
Area	: 3874		
On-column Amount (ng)	: 0.7186		
Integration start scan	: 2278	Integration stop scan:	2294
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

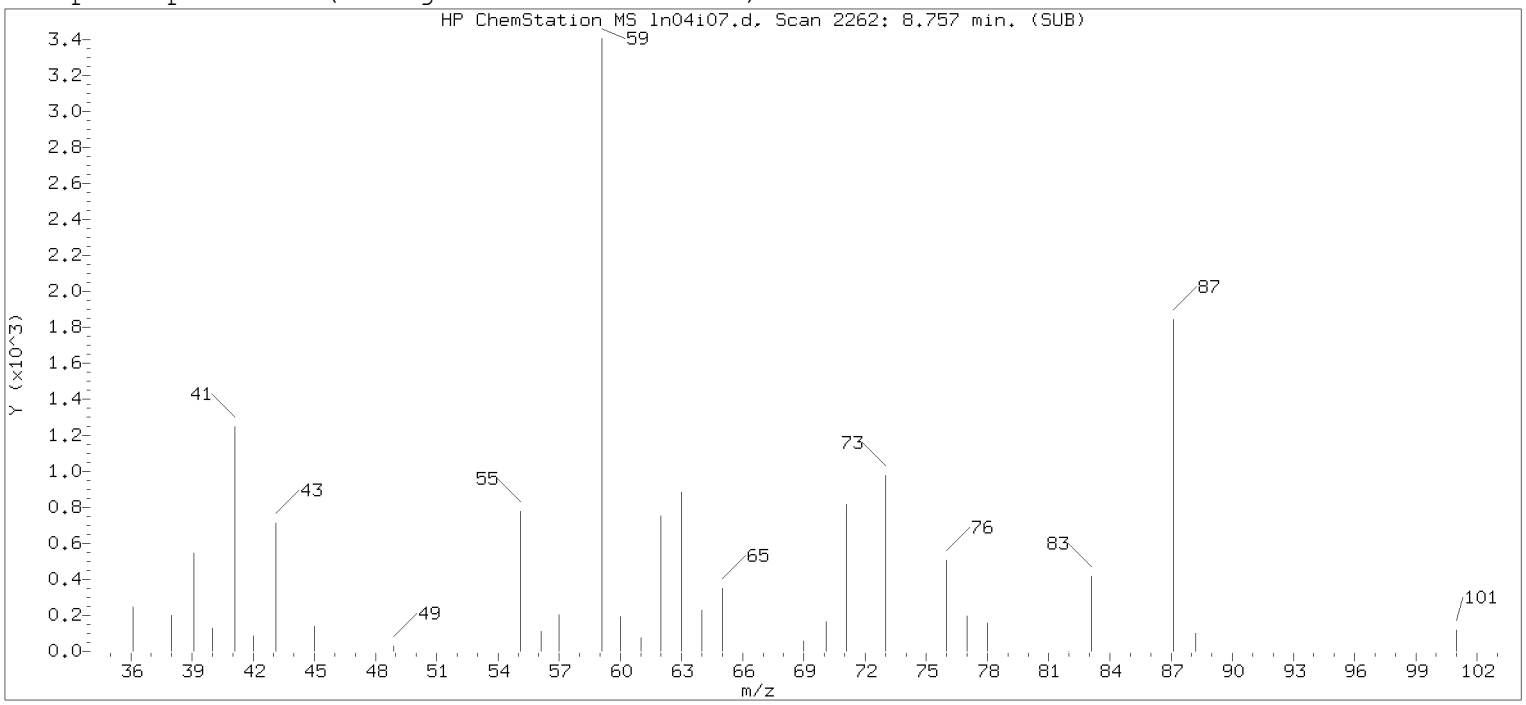
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 3548M
On-Column Amount (ng) : 43.4574
Integration start scan : 2278 Integration stop scan: 2344
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

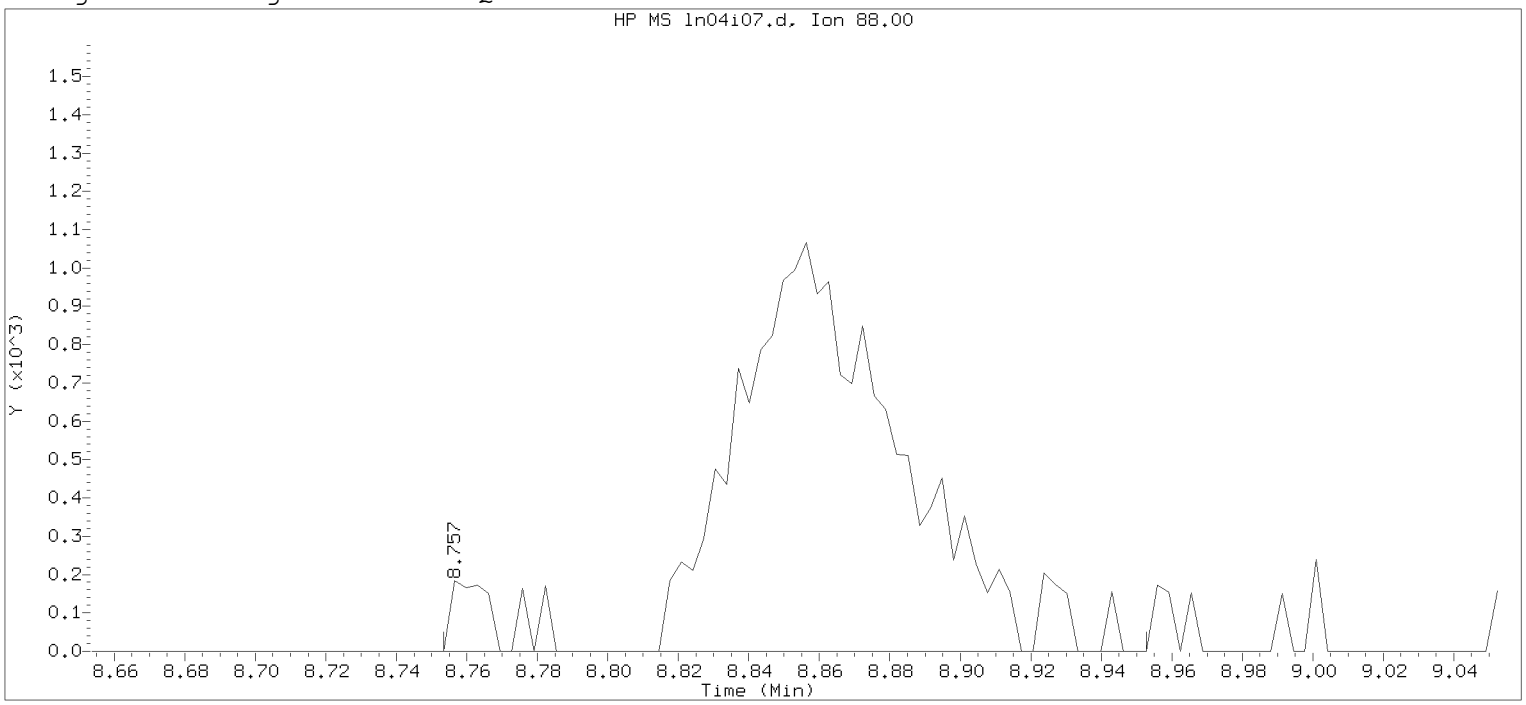
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

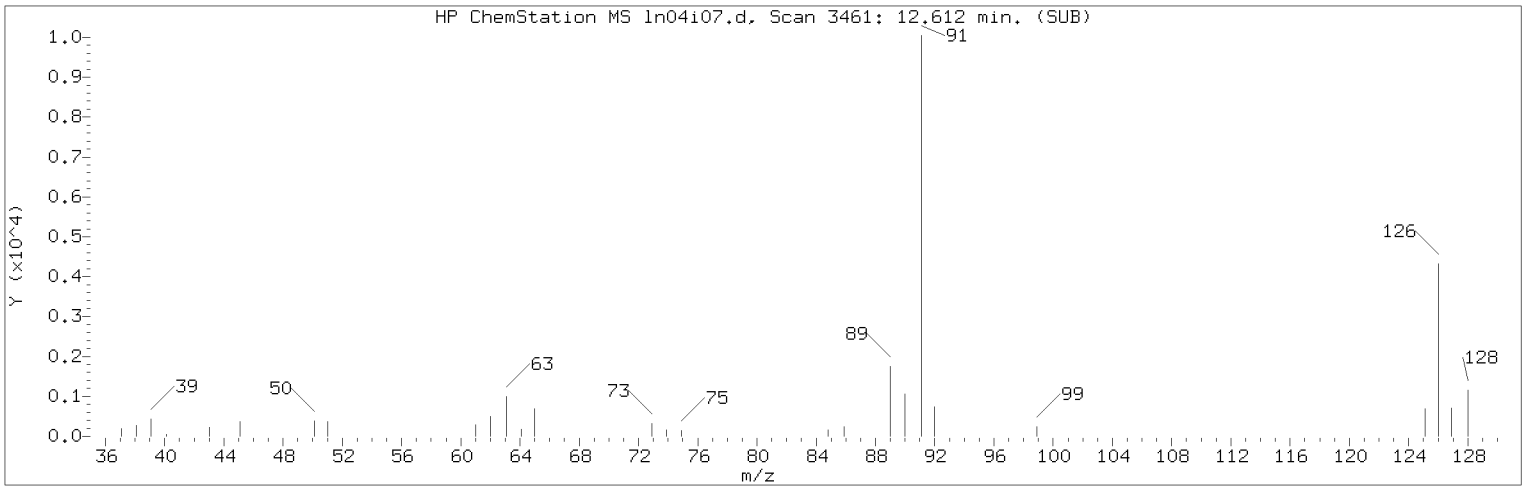
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

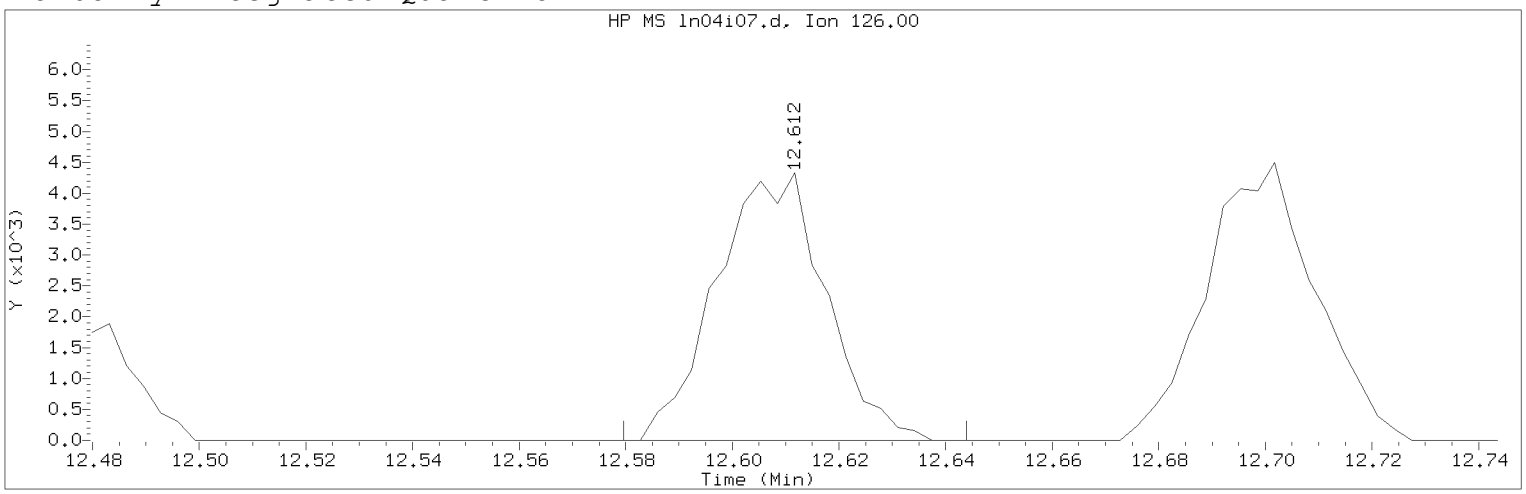
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2262		
Retention Time (minutes)	: 8.757		
Quant Ion	: 88.00		
Area	: 3575		
On-column Amount (ng)	: 43.6406		
Integration start scan	: 2260	Integration stop scan:	2322
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

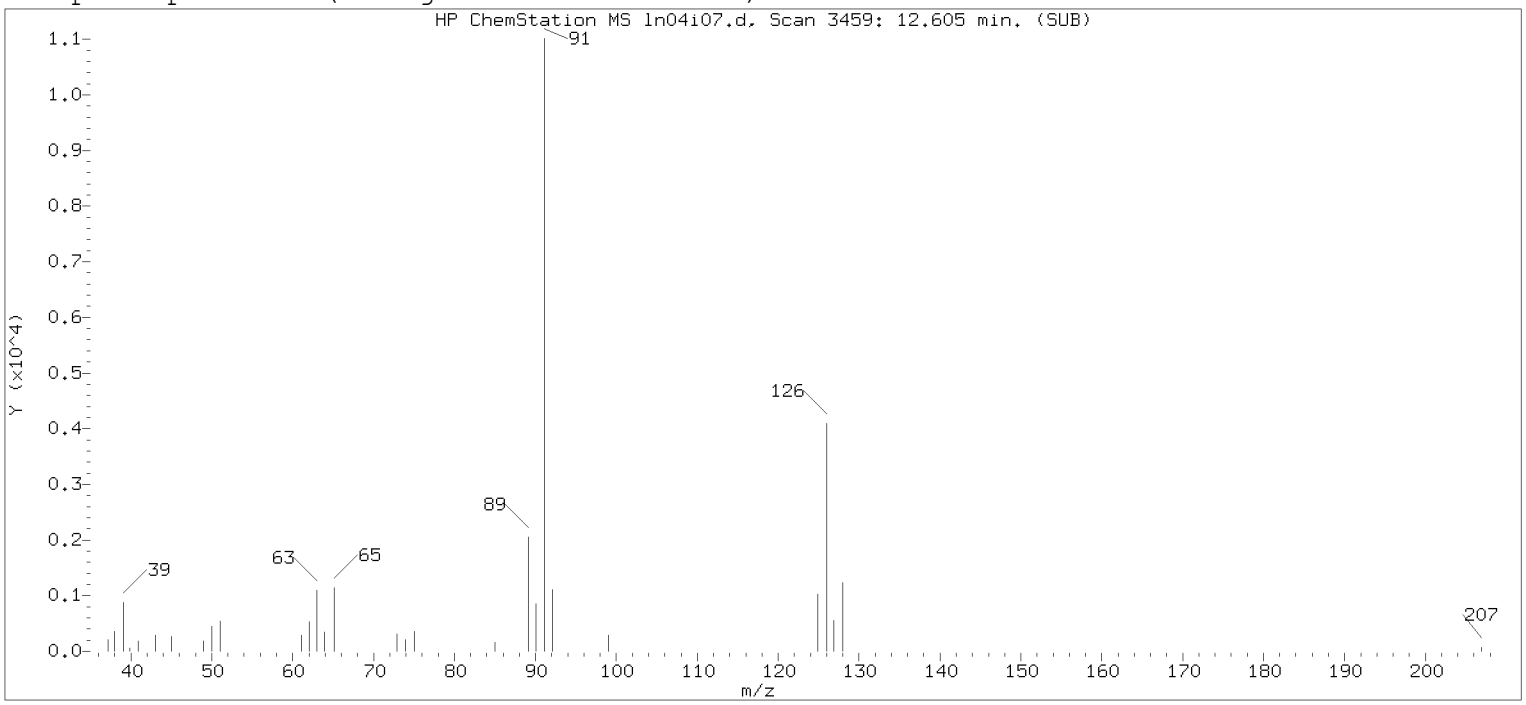
Compound Number : 120
Compound Name : 2-Chlorotoluene
Scan Number : 3461
Retention Time (minutes): 12.612
Quant Ion : 126.00
Area (flag) : 6138M
On-Column Amount (ng) : 0.9294
Integration start scan : 3450 Integration stop scan: 3470
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

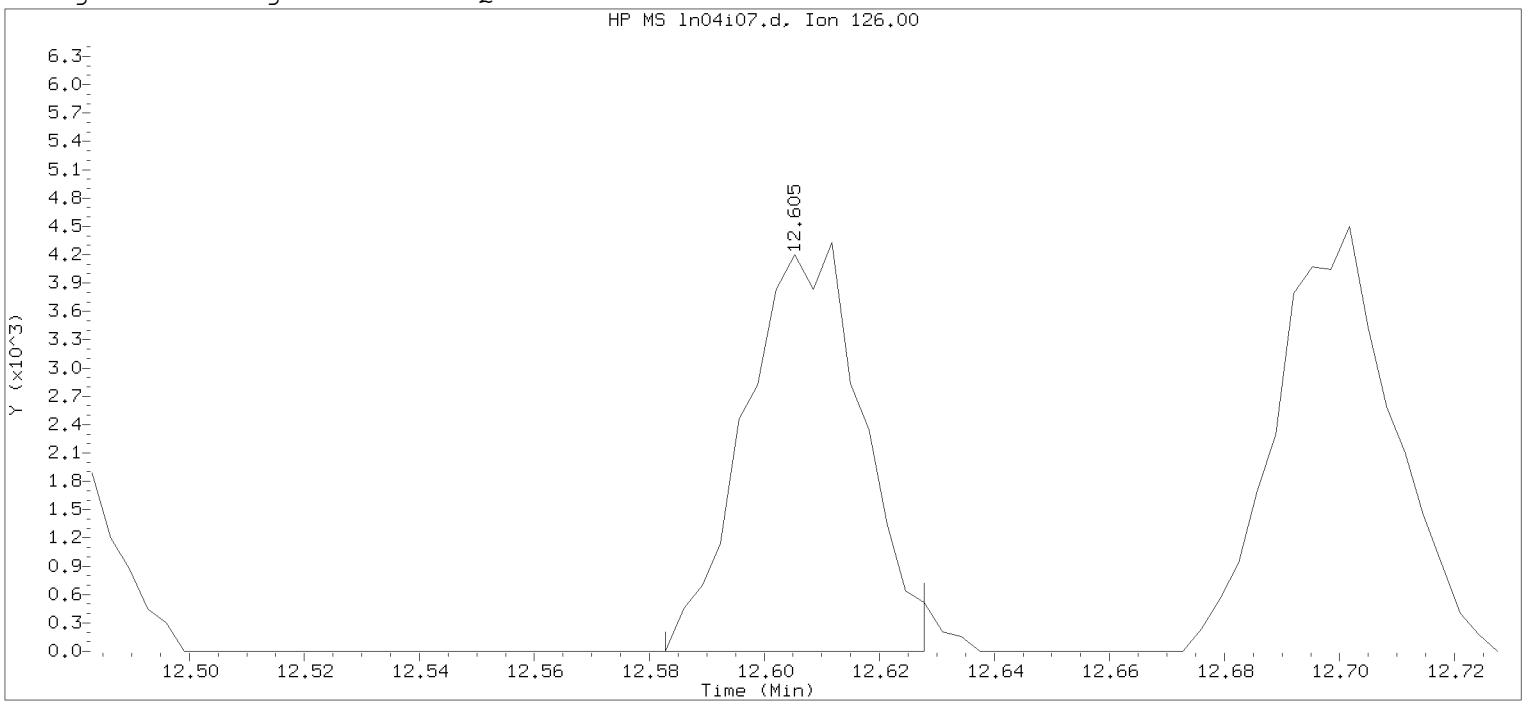
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

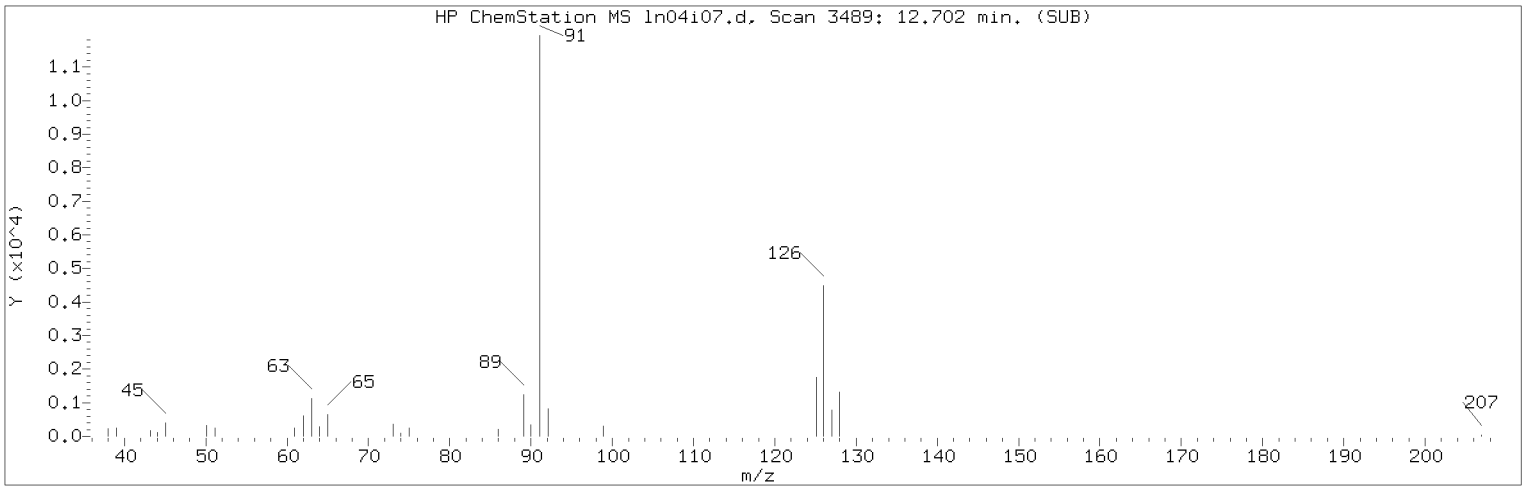
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

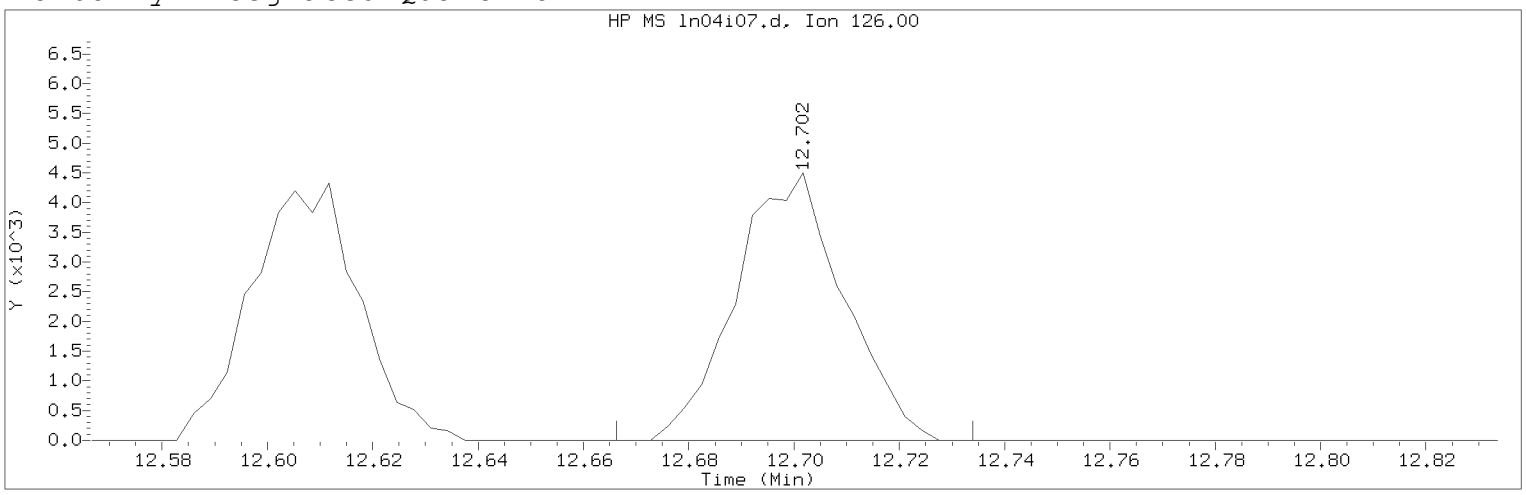
Compound Number : 120
Compound Name : 2-Chlorotoluene
Scan Number : 3459
Retention Time (minutes): 12.605
Quant Ion : 126.00
Area : 6018
On-column Amount (ng) : 0.9136
Integration start scan : 3451 Integration stop scan: 3465
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

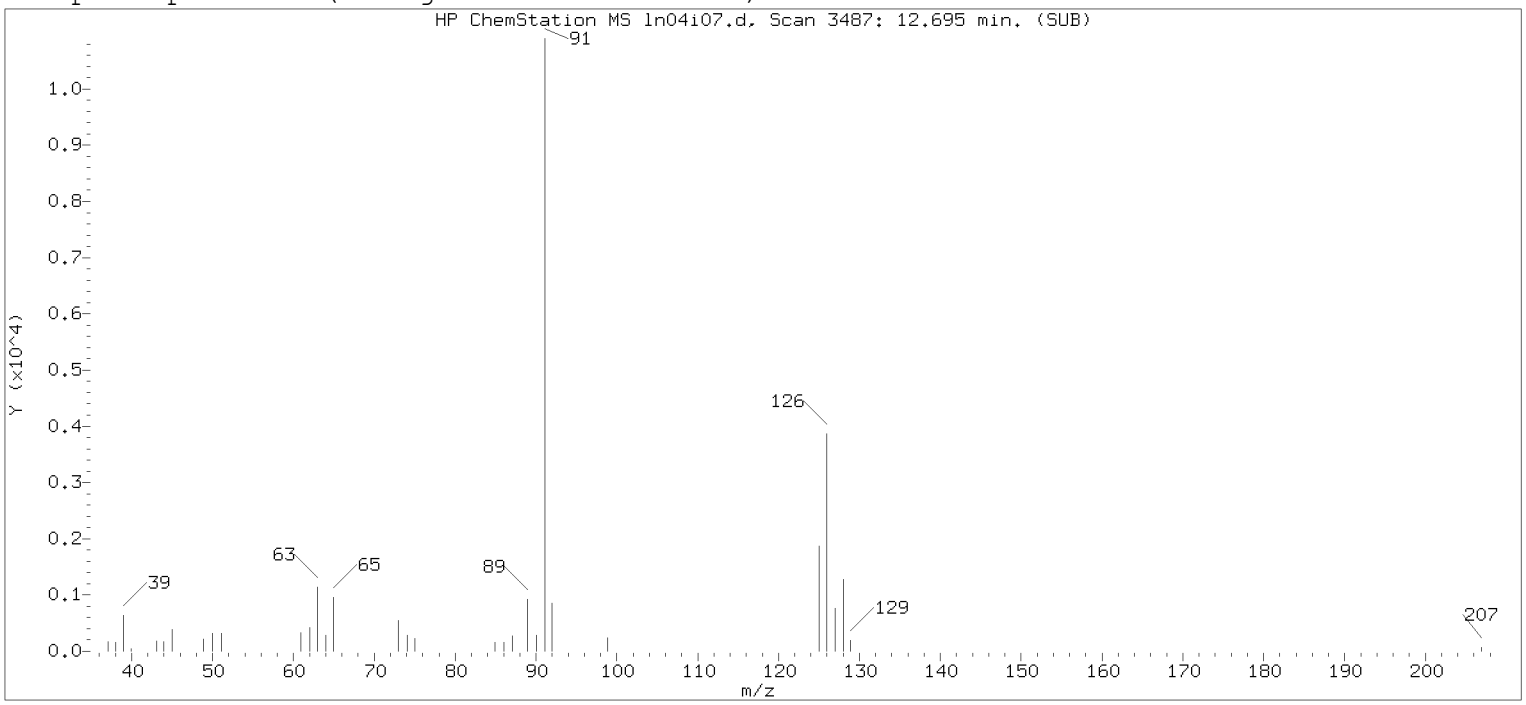
Compound Number : 121
Compound Name : 4-Chlorotoluene
Scan Number : 3489
Retention Time (minutes): 12.702
Quant Ion : 126.00
Area (flag) : 6403M
On-Column Amount (ng) : 0.9314
Integration start scan : 3477 Integration stop scan: 3498
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

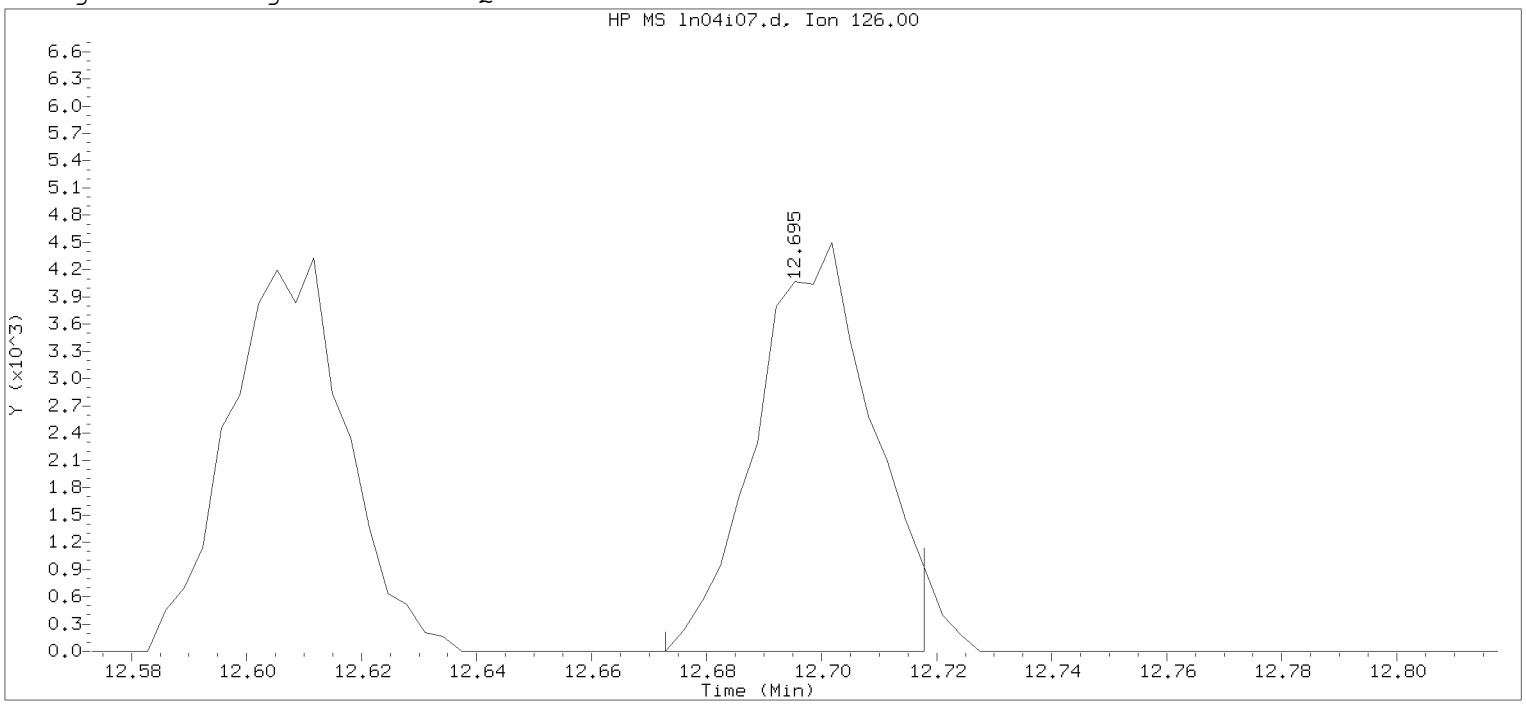
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

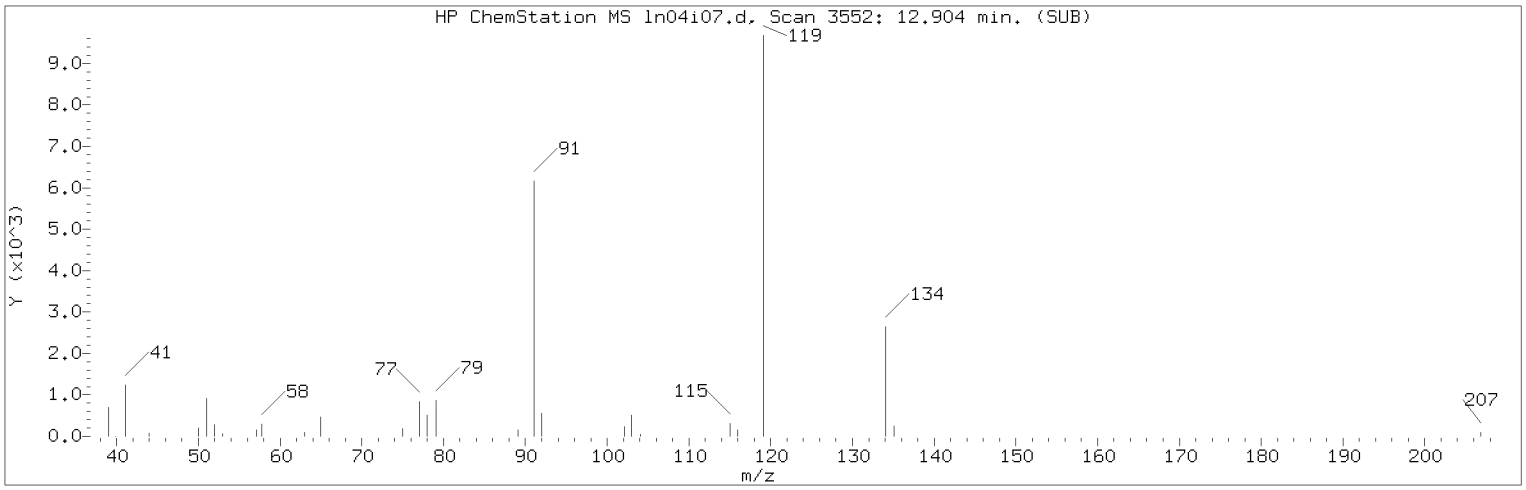
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

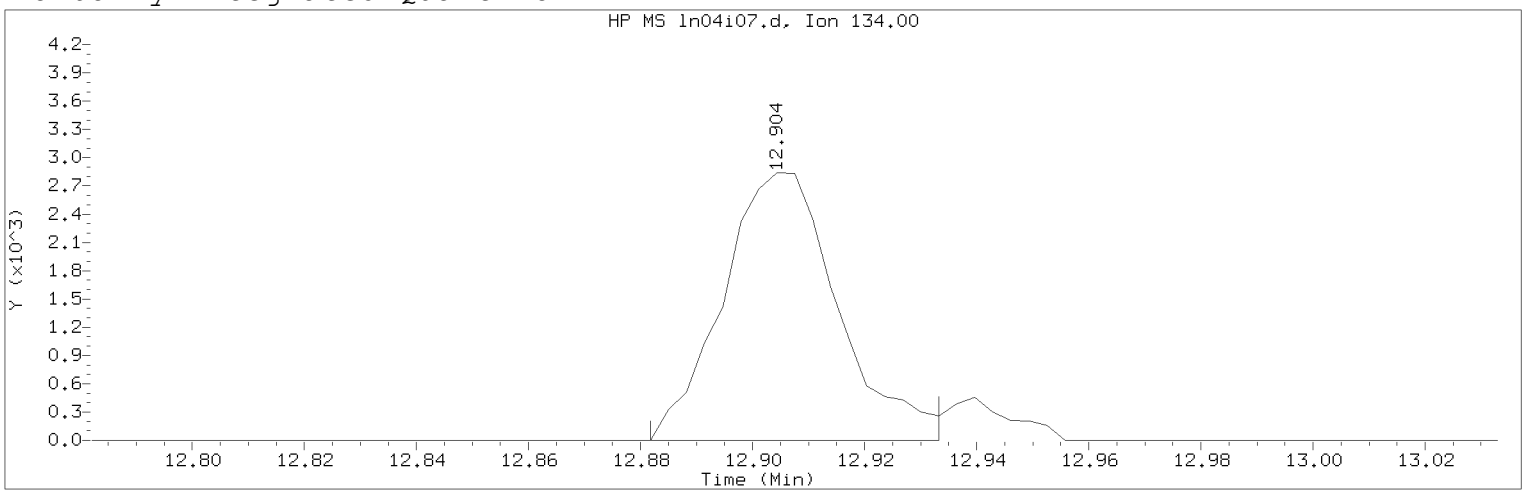
Compound Number : 121
Compound Name : 4-Chlorotoluene
Scan Number : 3487
Retention Time (minutes): 12.695
Quant Ion : 126.00
Area : 6203
On-column Amount (ng) : 0.9062
Integration start scan : 3479 Integration stop scan: 3493
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

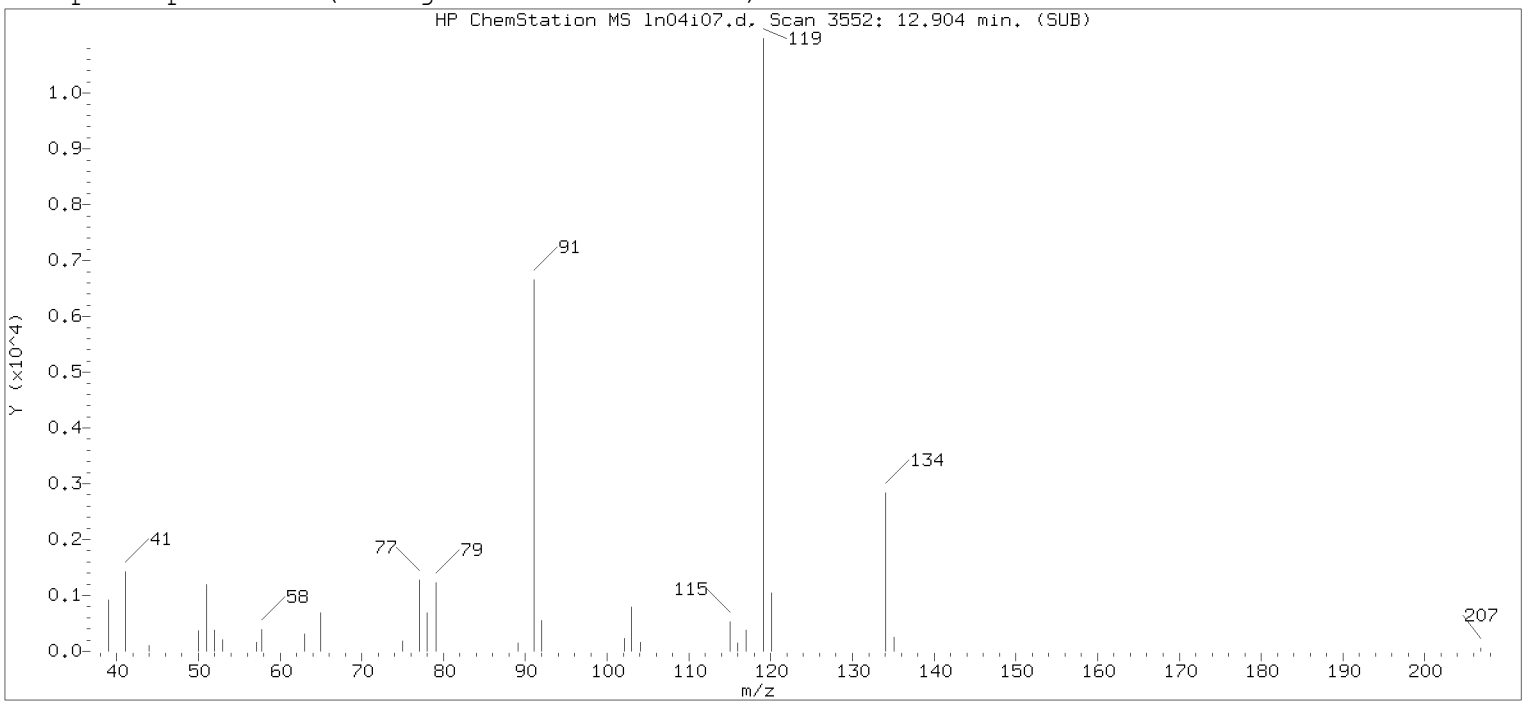
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 4060M
On-Column Amount (ng) : 0.8690
Integration start scan : 3544 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

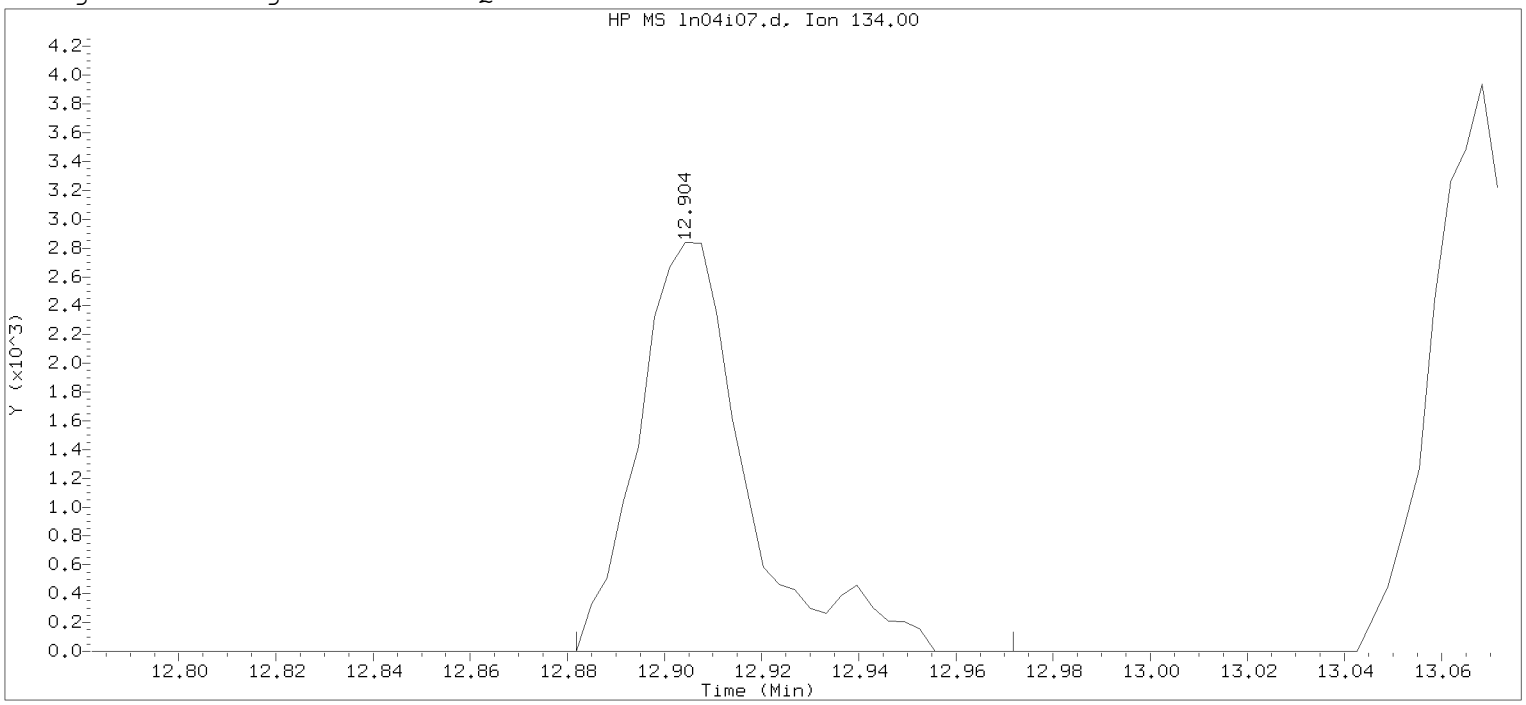
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

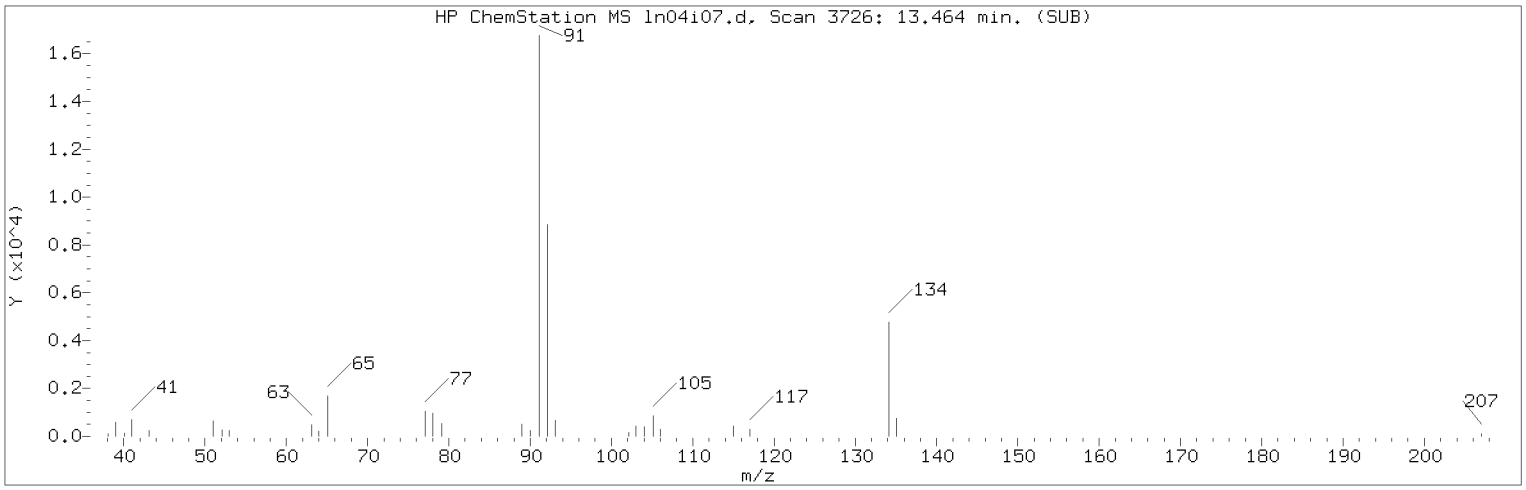
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

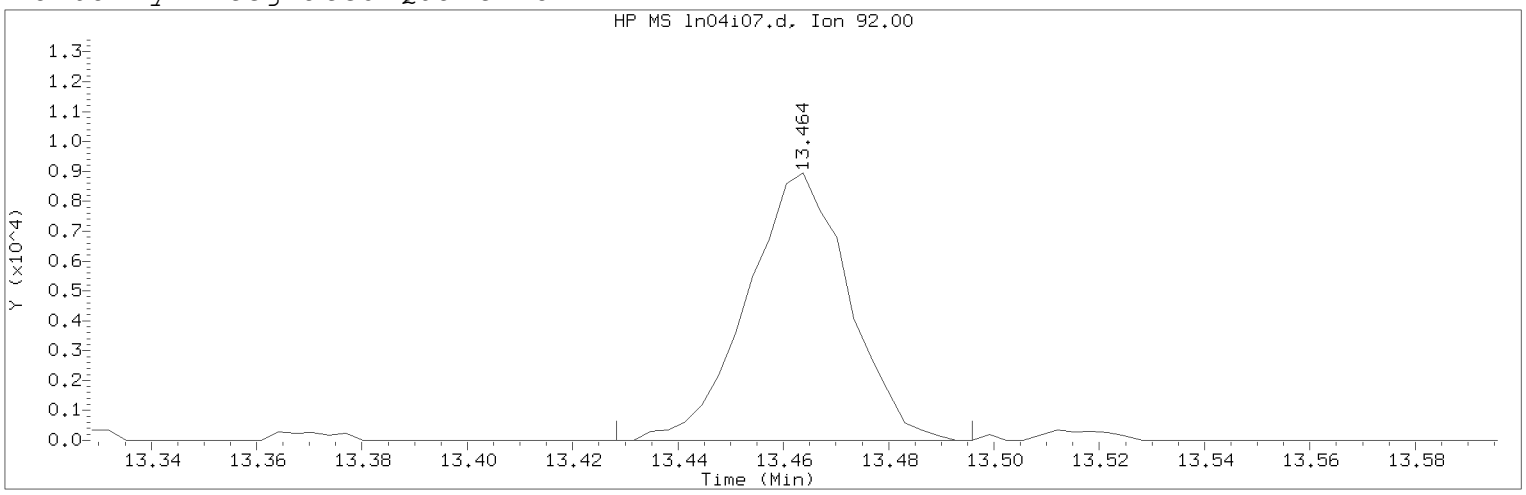
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 4392
On-column Amount (ng) : 0.9024
Integration start scan : 3544 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

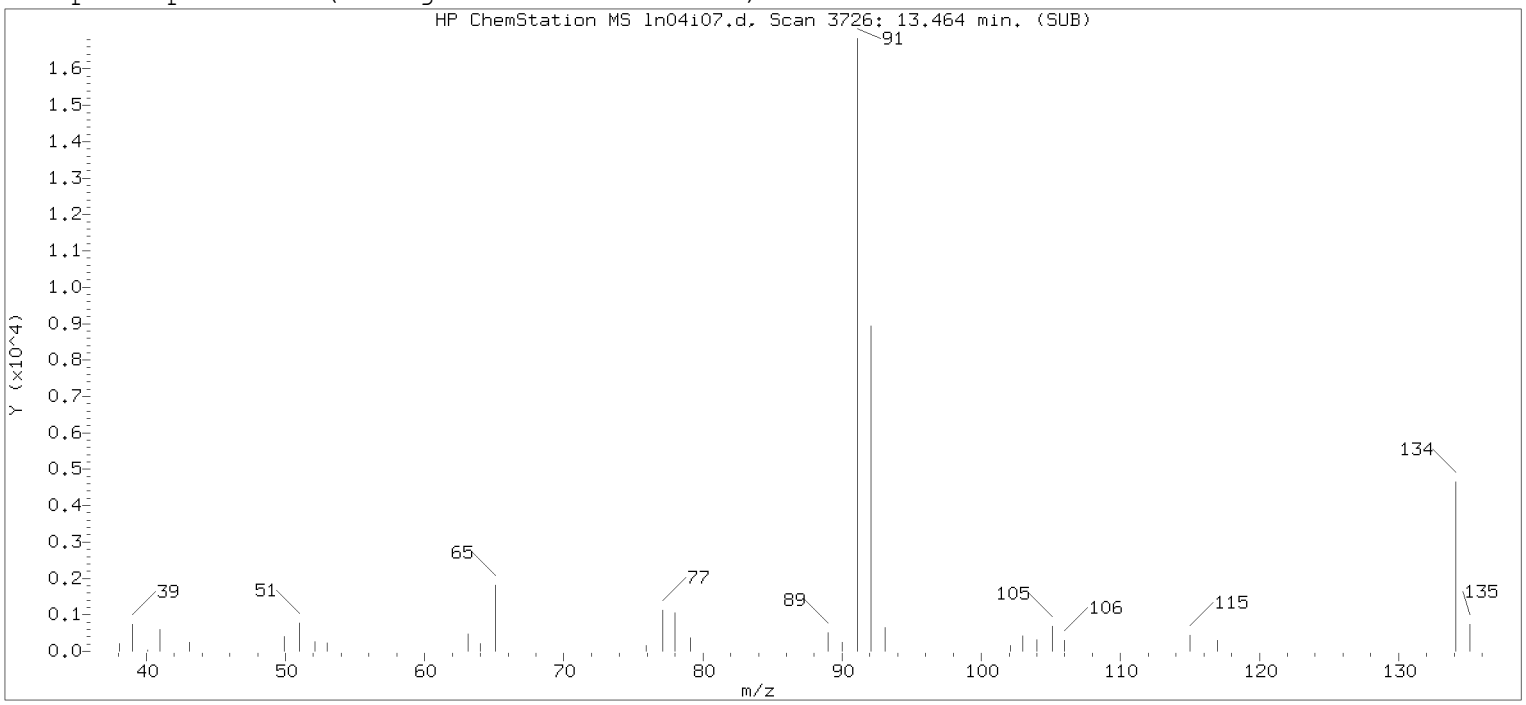
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 3726
Retention Time (minutes): 13.464
Quant Ion : 92.00
Area (flag) : 11964M
On-Column Amount (ng) : 0.9701
Integration start scan : 3714 Integration stop scan: 3735
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

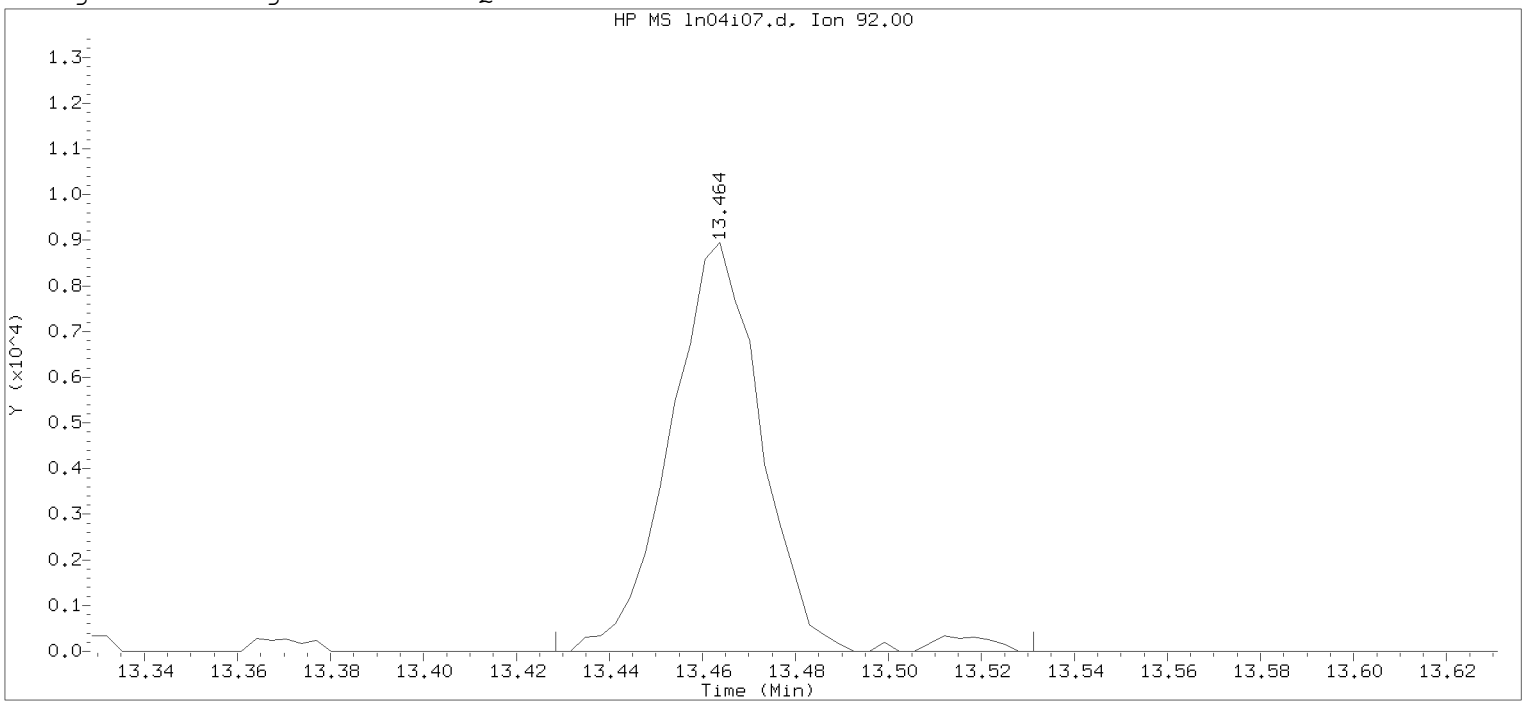
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

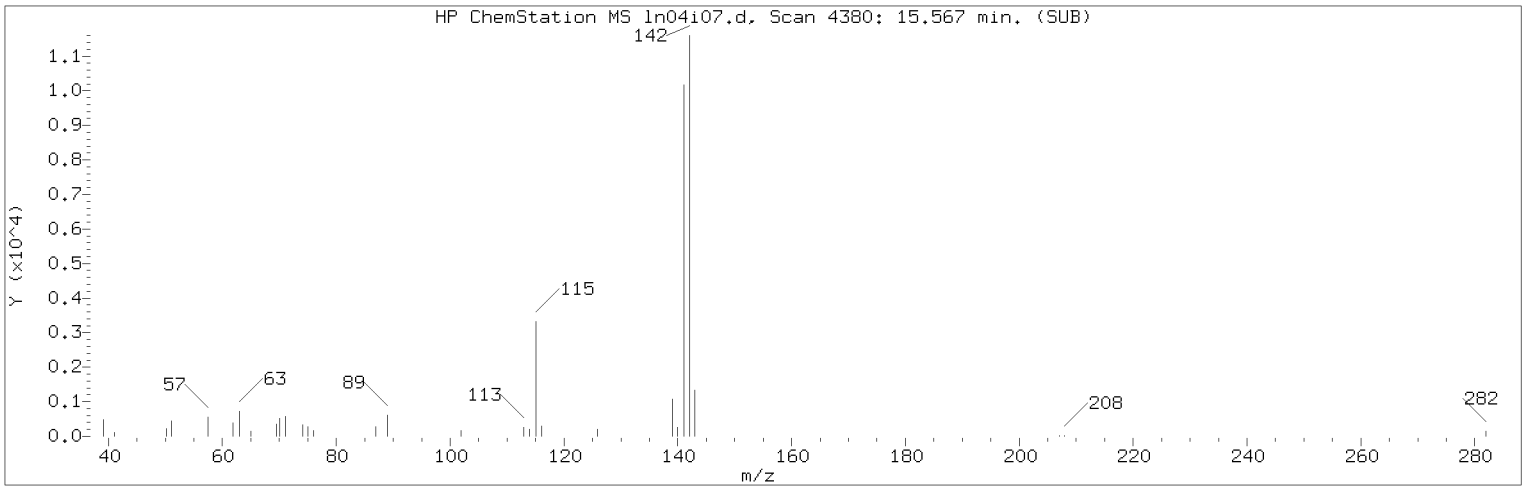
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

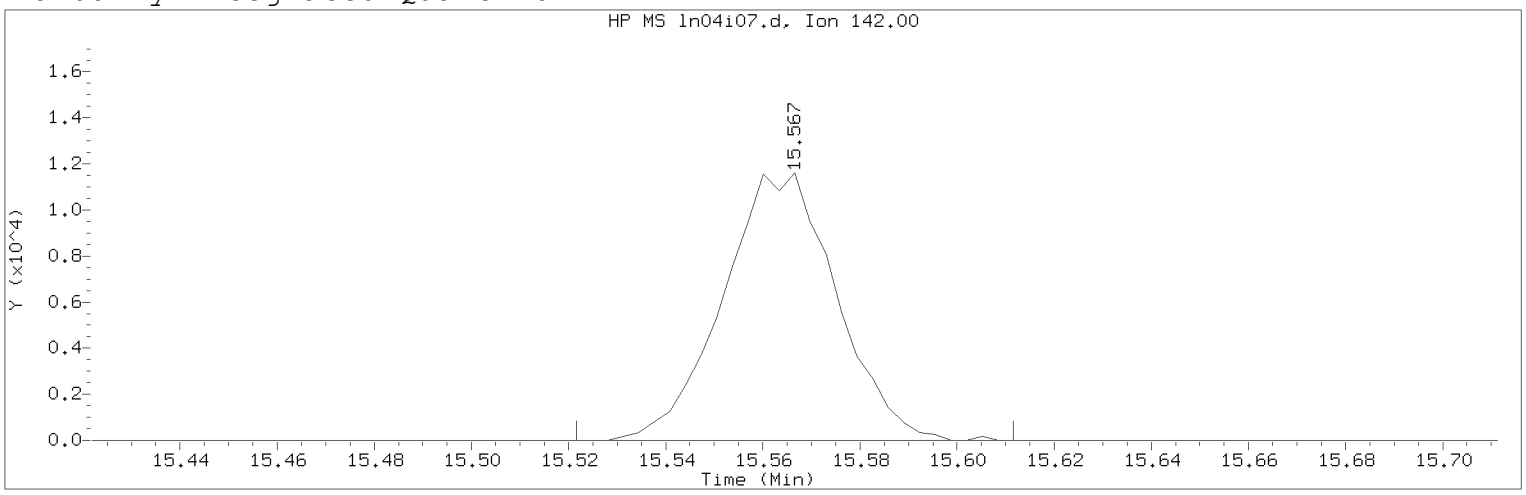
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 3726
Retention Time (minutes): 13.464
Quant Ion : 92.00
Area : 12291
On-column Amount (ng) : 0.9929
Integration start scan : 3714 Integration stop scan: 3746
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

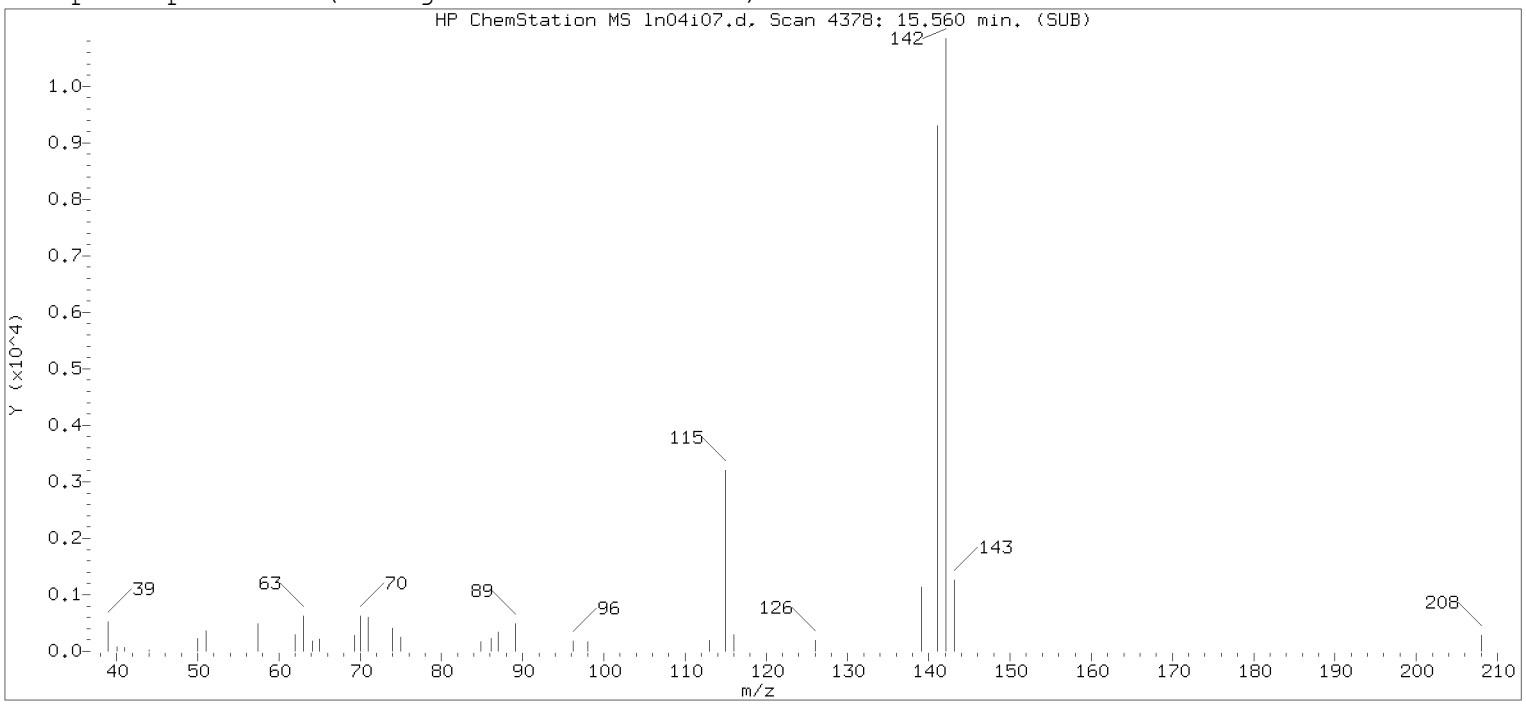
Compound Number : 150
Compound Name : 2-Methylnaphthalene
Scan Number : 4380
Retention Time (minutes): 15.567
Quant Ion : 142.00
Area (flag) : 18783M
On-Column Amount (ng) : 0.9844
Integration start scan : 4365 Integration stop scan: 4393
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

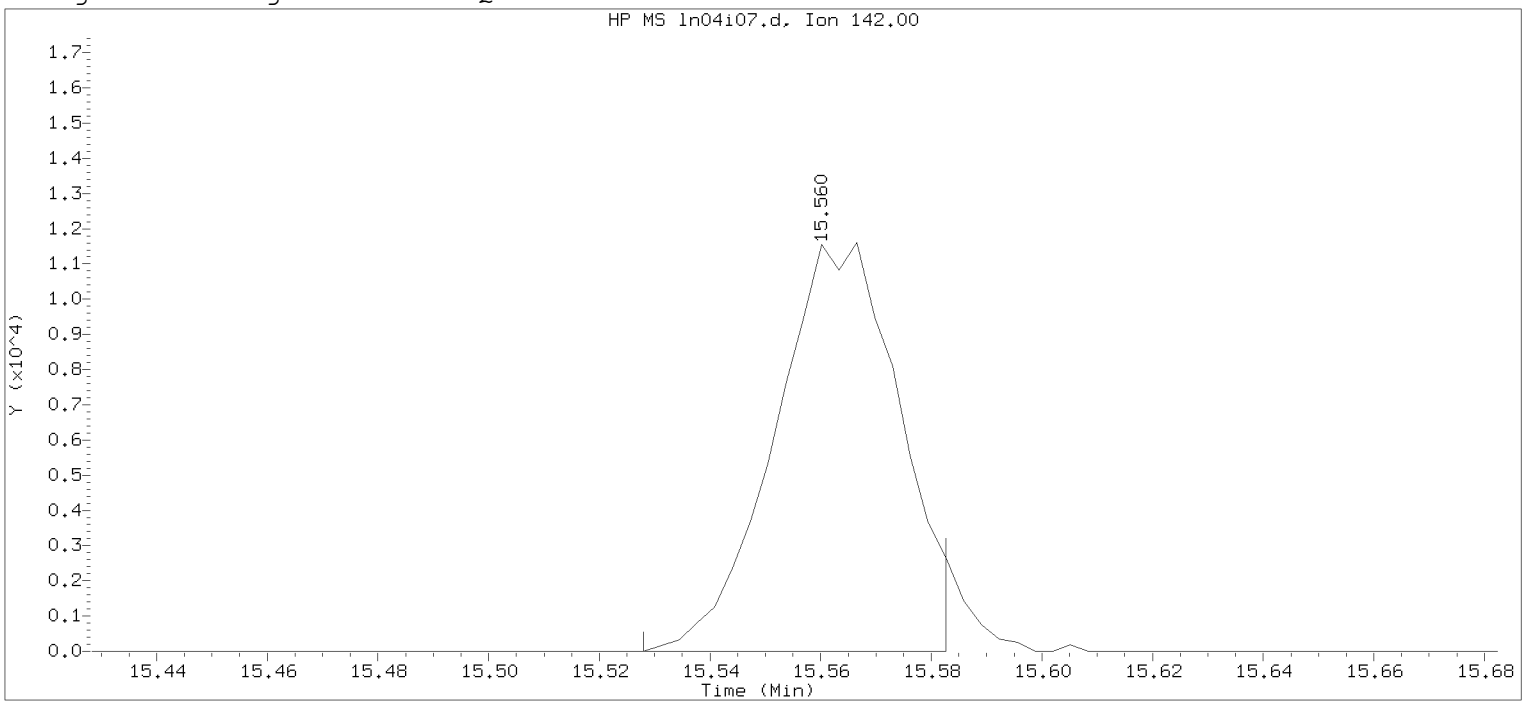
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



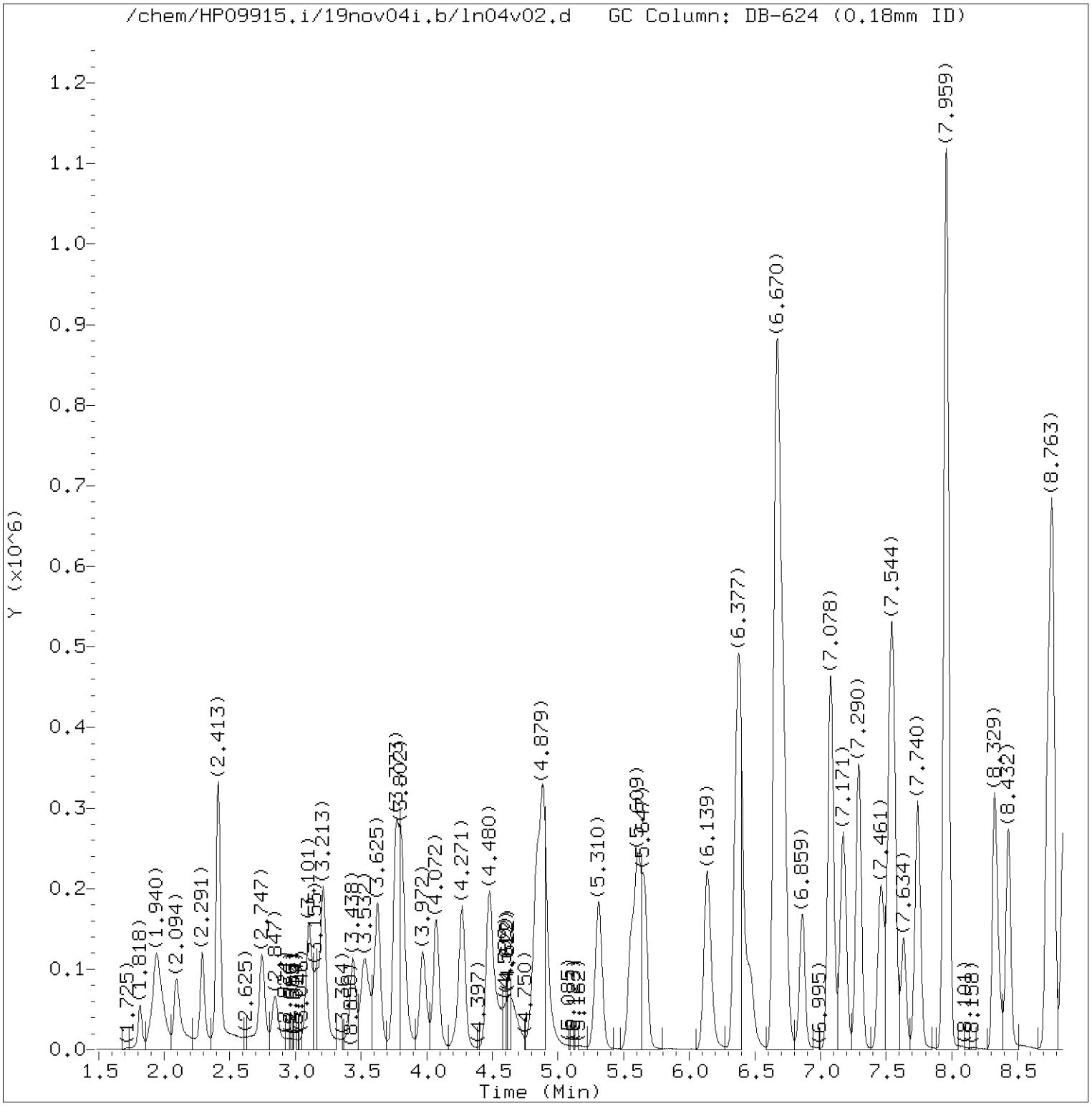
Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 150
Compound Name : 2-Methylnaphthalene
Scan Number : 4378
Retention Time (minutes): 15.560
Quant Ion : 142.00
Area : 17962
On-column Amount (ng) : 0.9472
Integration start scan : 4367 Integration stop scan: 4384
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

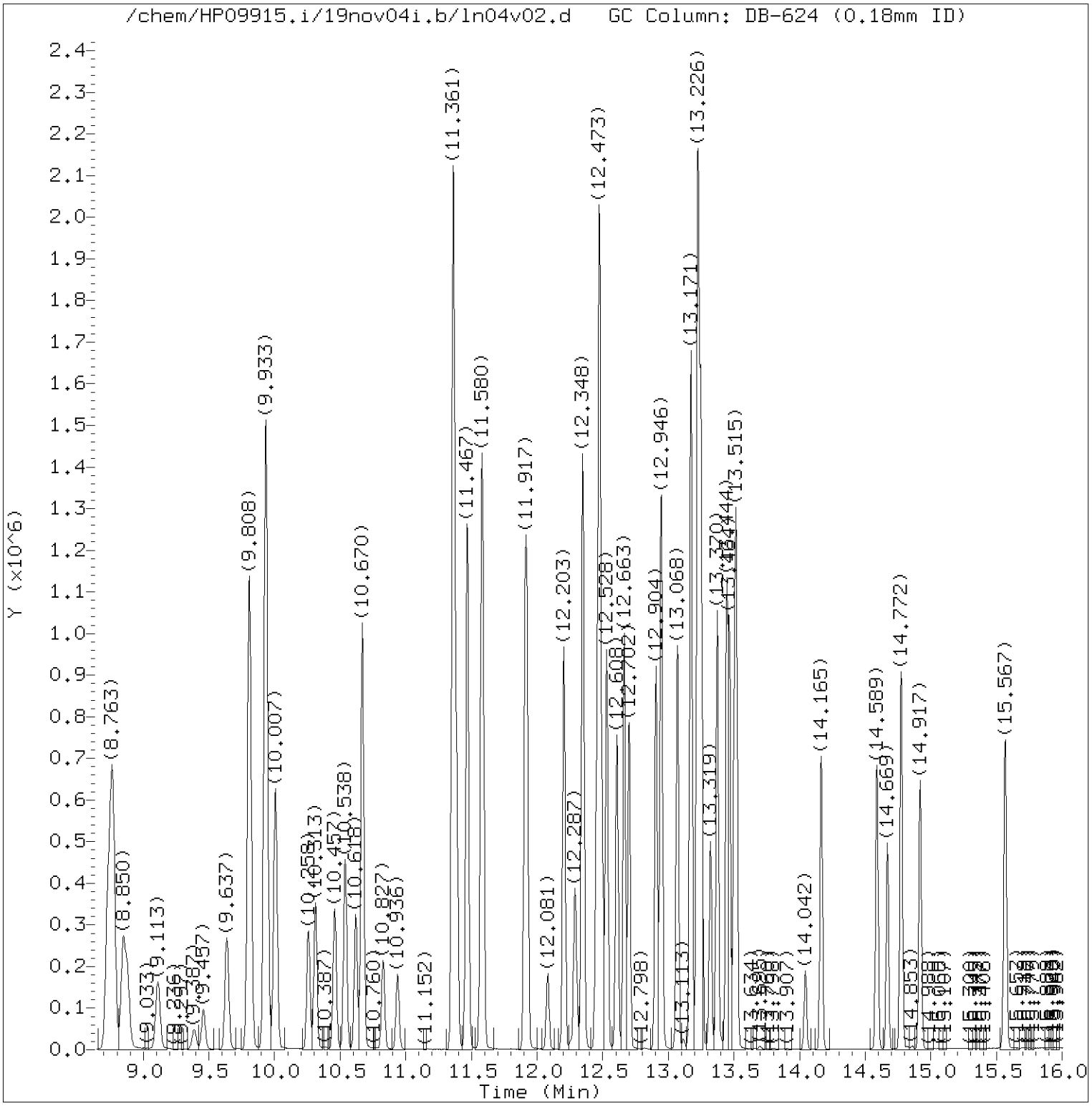
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.094	85	158021M	18.732
4) Chloromethane	(2)	2.291	50	153886	18.927
5) 1,3-Butadiene	(2)	2.413	39	132622M	19.645
6) Vinyl Chloride	(2)	2.413	62	157013	19.349
8) Bromomethane	(2)	2.747	94	104324	17.935
9) Chloroethane	(2)	2.847	64	82467	18.493
10) Dichlorofluoromethane	(2)	3.101	67	174118M	16.224
12) Trichlorofluoromethane	(2)	3.159	101	181238	20.746
11) n-Pentane	(2)	3.213	43	196297	19.014
14) Ethyl ether	(2)	3.438	59	93832	16.622
15) Freon 123a	(2)	3.528	67	136689	19.450
16) Acrolein	(1)	3.625	56	286690	135.125
17) 1,1-Dichloroethene	(2)	3.766	96	107244	20.914
19) Freon 113	(2)	3.795	101	115842	19.801
18) Acetone	(1)	3.805	58	130076	136.752
22) Methyl Iodide	(2)	3.969	142	197263	18.564
21) 2-Propanol	(1)	4.008	45	98510	144.063
23) Carbon Disulfide	(2)	4.075	76	360582	18.660
27) Methyl Acetate	(2)	4.249	43	126109	19.095
25) Allyl Chloride	(2)	4.271	41	171048	18.595
28) Methylene Chloride	(2)	4.474	84	124367	20.377
29)*t-Butyl alcohol-d10	(1)	4.503	65	282794M	250.000
30) t-Butyl alcohol	(1)	4.641	59	227283	190.899
31) Acrylonitrile	(2)	4.834	53	337483	94.980
32) trans-1,2-Dichloroethene	(2)	4.888	96	118658	20.003
33) Methyl Tertiary Butyl Ether	(2)	4.892	73	367523	18.875
34) n-Hexane	(2)	5.310	57	185206M	20.067
36) 1,1-Dichloroethane	(2)	5.554	63	201428	19.465
38) di-Isopropyl ether	(2)	5.609	45	380712	19.075
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	177031	19.067
40) Ethyl t-butyl ether	(2)	6.139	59	369375	19.070
43) 1,2-Dichloroethene (Total)	(2)		96	258427	40.995
44) 2-Butanone	(2)	6.361	43	651073	142.743
42) cis-1,2-Dichloroethene	(2)	6.384	96	139769	20.992
45) 2,2-Dichloropropane	(2)	6.396	77	163413	20.314
47) Propionitrile	(1)	6.461	54	209265	141.065
48) Methacrylonitrile	(2)	6.670	67	556962	145.312
49) Bromochloromethane	(2)	6.712	128	66215	18.755

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.721	71	123960	92.508
51) Chloroform	(2)	6.866	83	199497	20.156
52)$Dibromofluoromethane	(2)	7.075	113	293558	49.637
53) 1,1,1-Trichloroethane	(2)	7.081	97	172182	20.382
54) Cyclohexane	(2)	7.171	56	214913	19.025
56) Carbon Tetrachloride	(2)	7.287	117	143405	20.016
55) 1,1-Dichloropropene	(2)	7.294	75	164177	20.065
58) Isobutyl Alcohol	(1)	7.461	41	180862	451.413
57)$1,2-Dichloroethane-d4	(2)	7.531	102	74610	49.500
60) Benzene	(2)	7.560	78	492012	19.996
61) 1,2-Dichloroethane	(2)	7.638	62	163231	20.625
65) t-Amyl methyl ether	(2)	7.740	73	369180	18.989
67) n-Heptane	(2)	7.956	43	163362M	18.948
66)*Fluorobenzene	(2)	7.959	96	1209671	50.000
69) n-Butanol	(1)	8.326	56	314470M	911.924
71) Trichloroethene	(2)	8.429	95	124893	20.159
72) Methylcyclohexane	(2)	8.731	83	222042	19.318
73) 1,2-Dichloropropane	(2)	8.769	63	127774	20.450
76) Methyl Methacrylate	(2)	8.847	69	115569	19.128
75) 1,4-Dioxane	(1)	8.853	88	47747M	503.753
74) Dibromomethane	(2)	8.879	93	80909	20.014
78) Bromodichloromethane	(2)	9.113	83	144408	19.907
79) 2-Nitropropane	(2)	9.383	41	35869	16.324
80) 2-Chloroethyl Vinyl Ether	(2)	9.457	63	51088	19.038
81) cis-1,3-Dichloropropene	(2)	9.637	75	191486	19.874
82) 4-Methyl-2-pentanone	(2)	9.808	43	893533	92.810
83)$Toluene-d8	(3)	9.933	98	1243931	50.214
88) Toluene	(3)	10.007	92	314091	20.224
90) 1,3-Dichloropropene (total)	(3)		100	360855	39.085
89) trans-1,3-Dichloropropene	(3)	10.258	75	169369	19.211
91) Ethyl Methacrylate	(3)	10.313	69	194593	18.162
92) 1,1,2-Trichloroethane	(3)	10.457	97	120085	20.394
93) Tetrachloroethene	(3)	10.538	166	145489	22.119
94) 1,3-Dichloropropane	(3)	10.618	76	197817	19.676
96) 2-Hexanone	(3)	10.670	43	659041	92.150
97) Dibromochloromethane	(3)	10.827	129	119169	19.757
99) 1,2-Dibromoethane	(3)	10.936	107	127100	19.878
100)*Chlorobenzene-d5	(3)	11.361	117	946755	50.000

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on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) 1-Chlorohexane	(3)	11.364	91	162531	19.480
102) Chlorobenzene	(3)	11.387	112	355167	20.223
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	114709	19.823
104) Ethylbenzene	(3)	11.470	91	602093	20.283
106) m+p-Xylene	(3)	11.583	106	478306	40.959
108) Xylene (Total)	(3)		106	712690	61.279
107) o-Xylene	(3)	11.908	106	234384	20.320
109) Styrene	(3)	11.924	104	391950	20.563
110) Bromoform	(3)	12.081	173	80910	17.952
111) Isopropylbenzene	(3)	12.203	105	603598	20.864
112) Cyclohexanone	(1)	12.287	55	166810	449.364
114)$4-Bromofluorobenzene	(3)	12.348	95	469009	49.999
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	188446M	19.576
115) Bromobenzene	(4)	12.467	156	151805	19.821
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	290498	97.834
117) 1,2,3-Trichloropropane	(4)	12.496	110	58902M	19.940
119) n-Propylbenzene	(4)	12.531	91	694916	20.768
120) 2-Chlorotoluene	(4)	12.608	126	143440	20.178
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	499772	20.552
121) 4-Chlorotoluene	(4)	12.702	126	148830	20.114
124) tert-Butylbenzene	(4)	12.907	134	103762M	20.632
125) Pentachloroethane	(4)	12.943	167	74538	17.213
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	511834	19.971
127) sec-Butylbenzene	(4)	13.068	105	616554	20.545
129) 1,3-Dichlorobenzene	(4)	13.168	146	282424	20.067
130) p-Isopropyltoluene	(4)	13.174	119	533278	20.541
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	509597	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	298831	20.482
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	539562	19.874
135) Benzyl Chloride	(4)	13.319	91	329267	16.019
136) 1,3-Diethylbenzene	(4)	13.374	119	322622	19.095
141) Diethylbenzene (total)	(4)		100	935720	57.258
137) 1,4-Diethylbenzene	(4)	13.444	119	340230	19.006
139) n-Butylbenzene	(4)	13.464	92	258920	19.505
138) 1,2-Dichlorobenzene	(4)	13.502	146	282807	20.364
140) 1,2-Diethylbenzene	(4)	13.518	119	272868	19.158
142) 1,2-Dibromo-3-chloropropane	(4)	14.042	75	40654	19.292
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	203102	19.035

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on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146)	1,2,4-Trichlorobenzene	(4)	14.589	180	199046	19.186
147)	Hexachlorobutadiene	(4)	14.666	225	82991	16.942
148)	Naphthalene	(4)	14.772	128	666056	19.970
149)	1,2,3-Trichlorobenzene	(4)	14.917	180	192487	19.067
150)	2-Methylnaphthalene	(4)	15.567	142	374385	18.228

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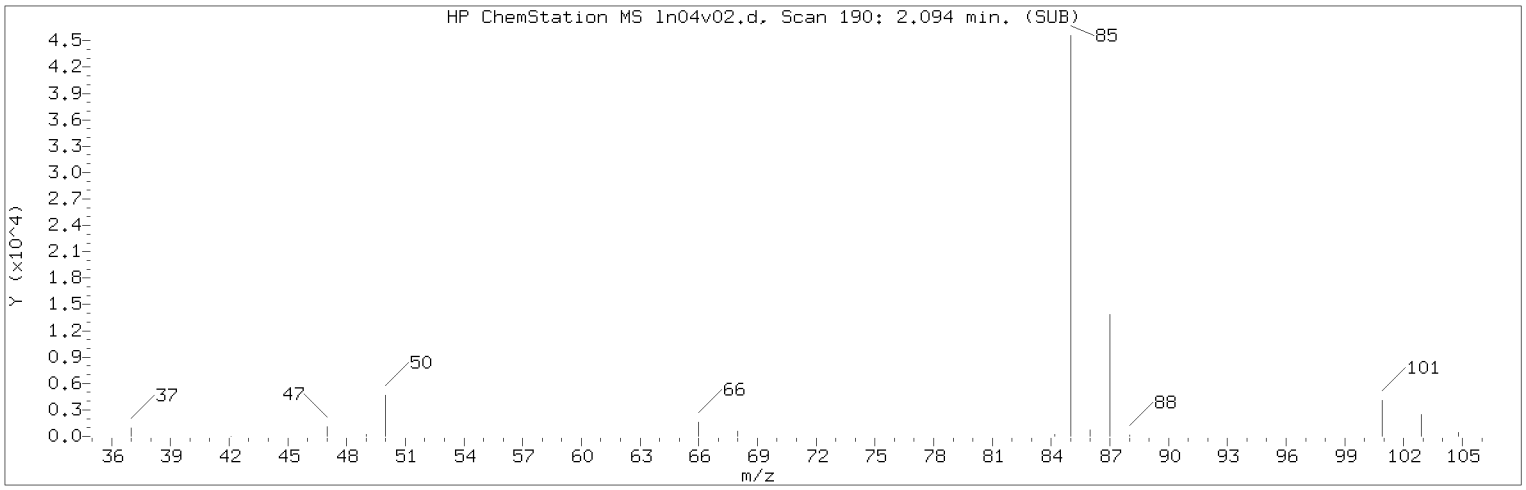
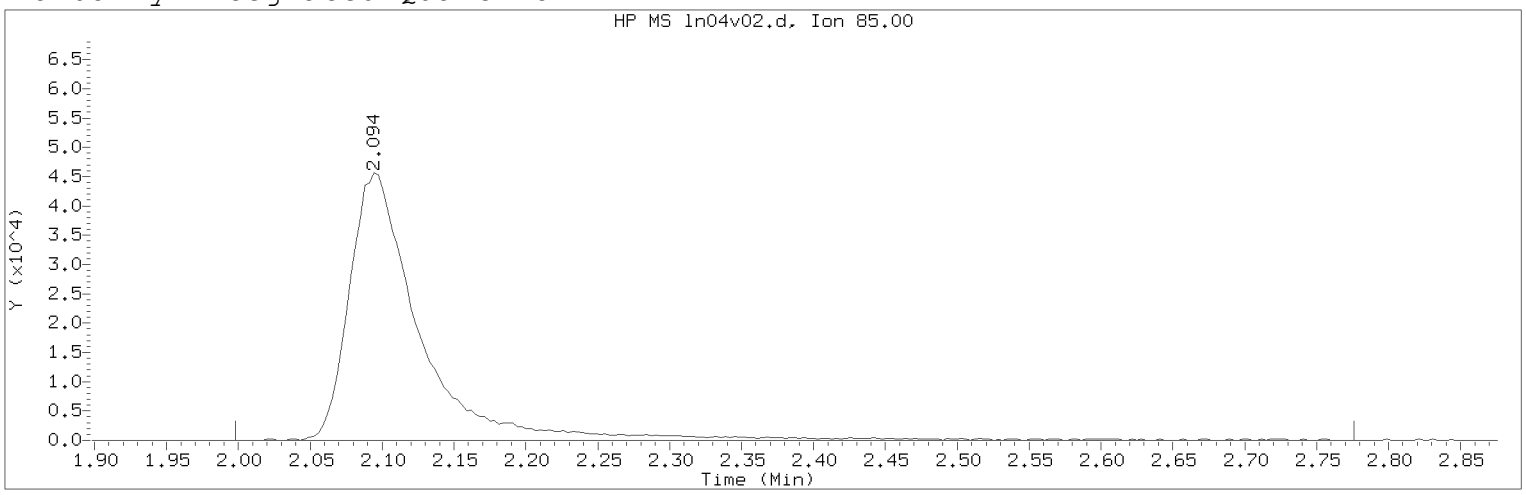
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

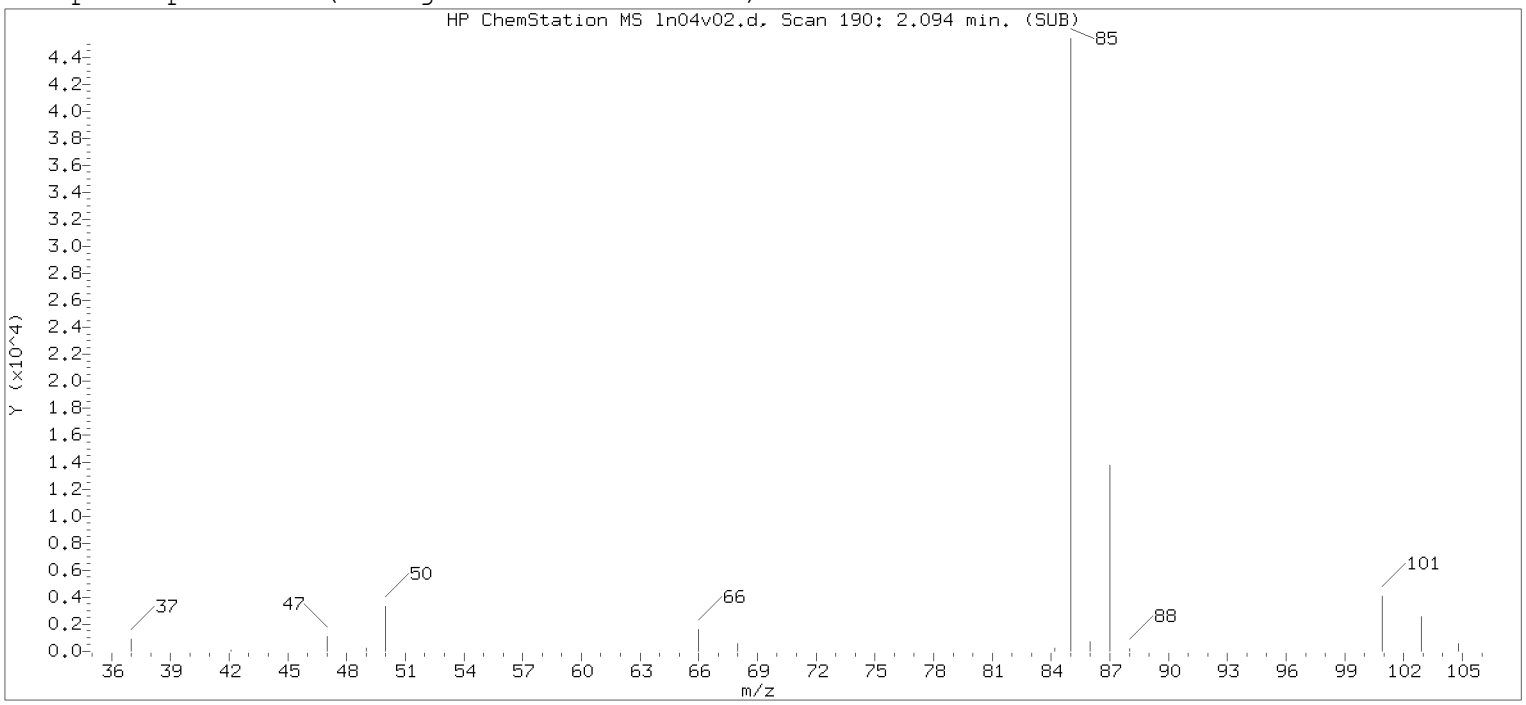
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area (flag) : 158021M
On-Column Amount (ng) : 18.7320
Integration start scan : 159 Integration stop scan: 401
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

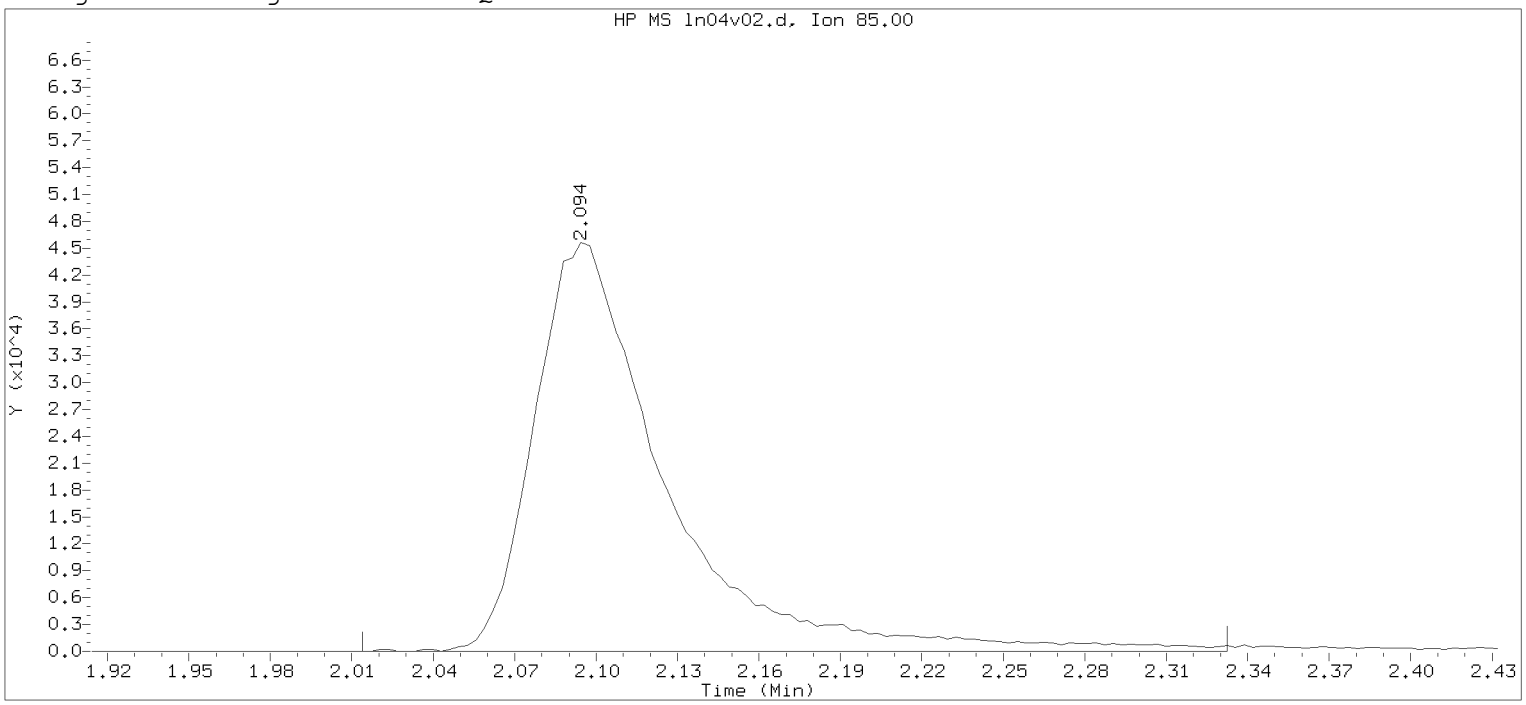
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area : 152845
On-column Amount (ng) : 18.1184
Integration start scan : 164 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

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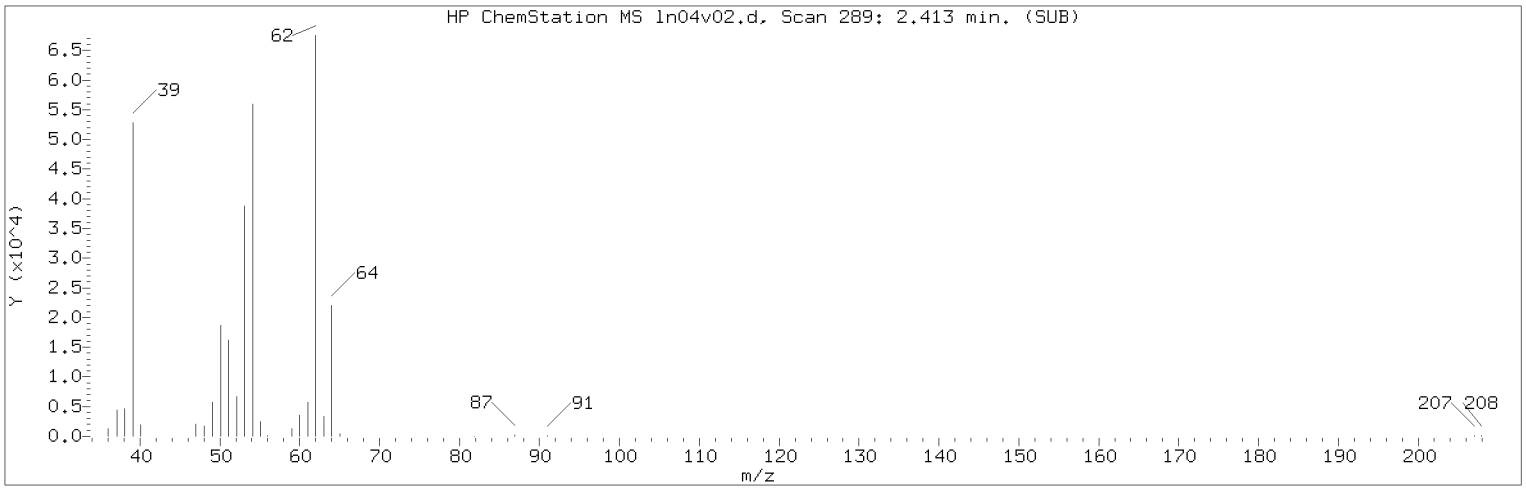
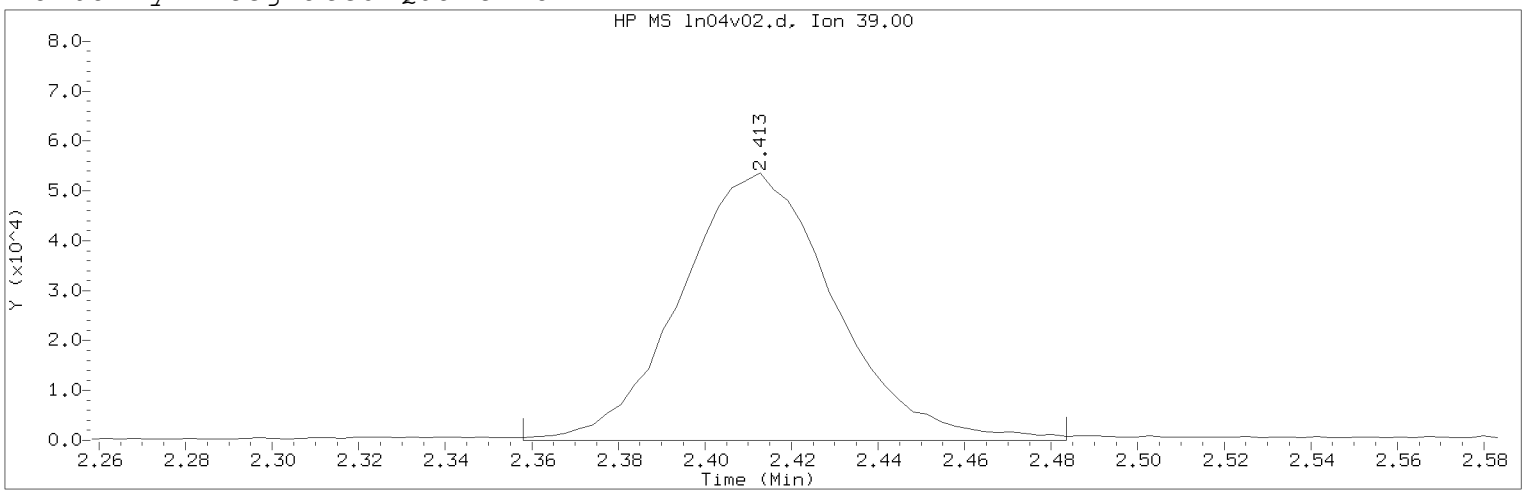
Target 3.5 esignature user: KASposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

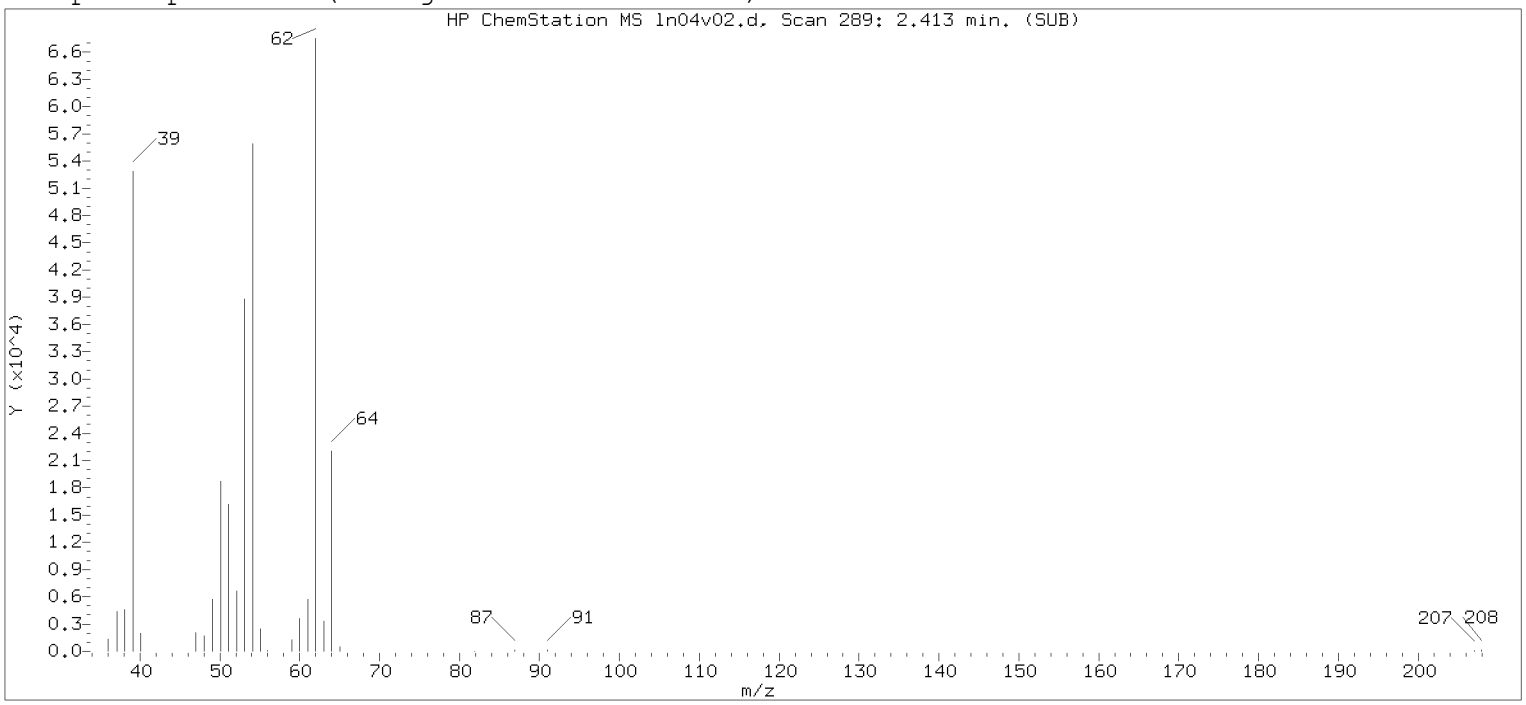
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area (flag) : 132622M
On-Column Amount (ng) : 19.6453
Integration start scan : 271 Integration stop scan: 310
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

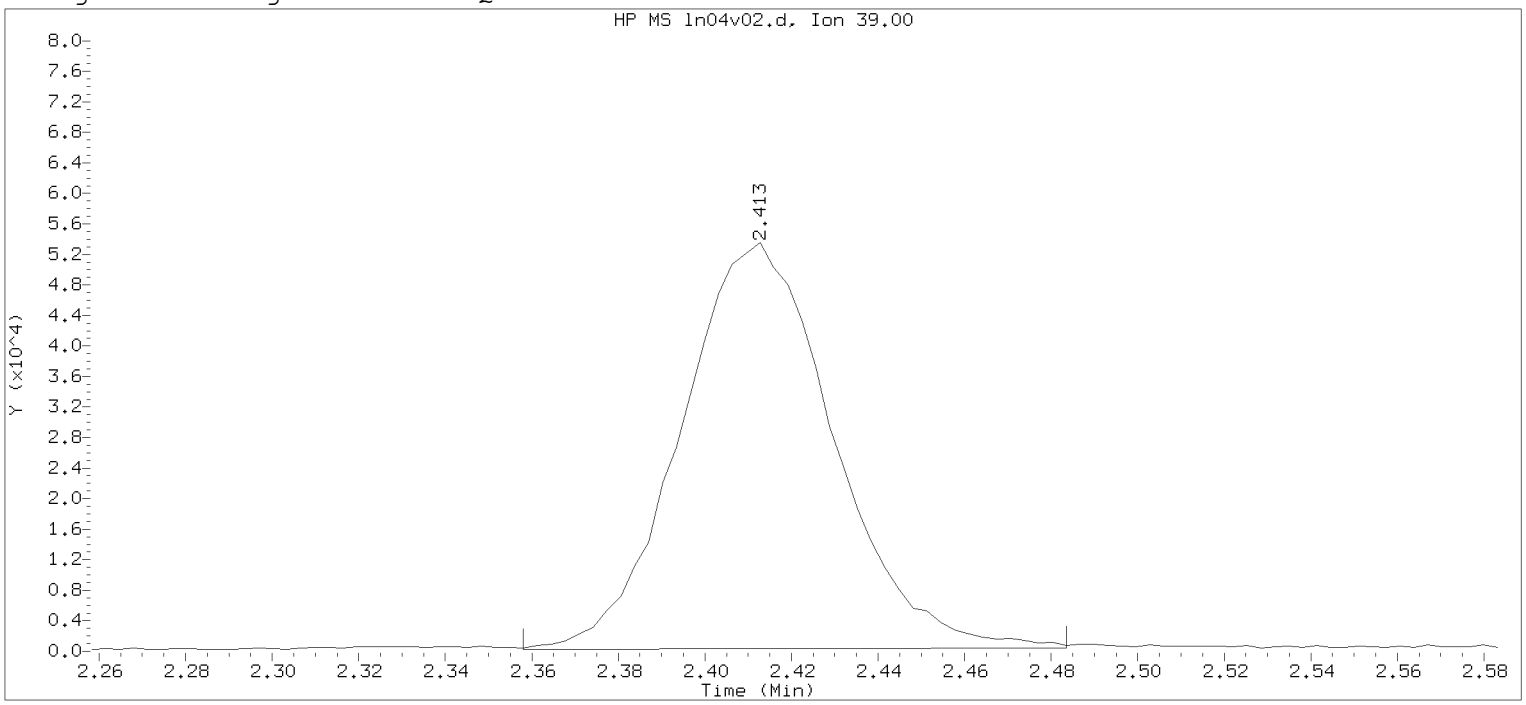
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area : 129885
On-column Amount (ng) : 19.2400
Integration start scan : 271 Integration stop scan: 310
Y at integration start : 283 Y at integration end: 414

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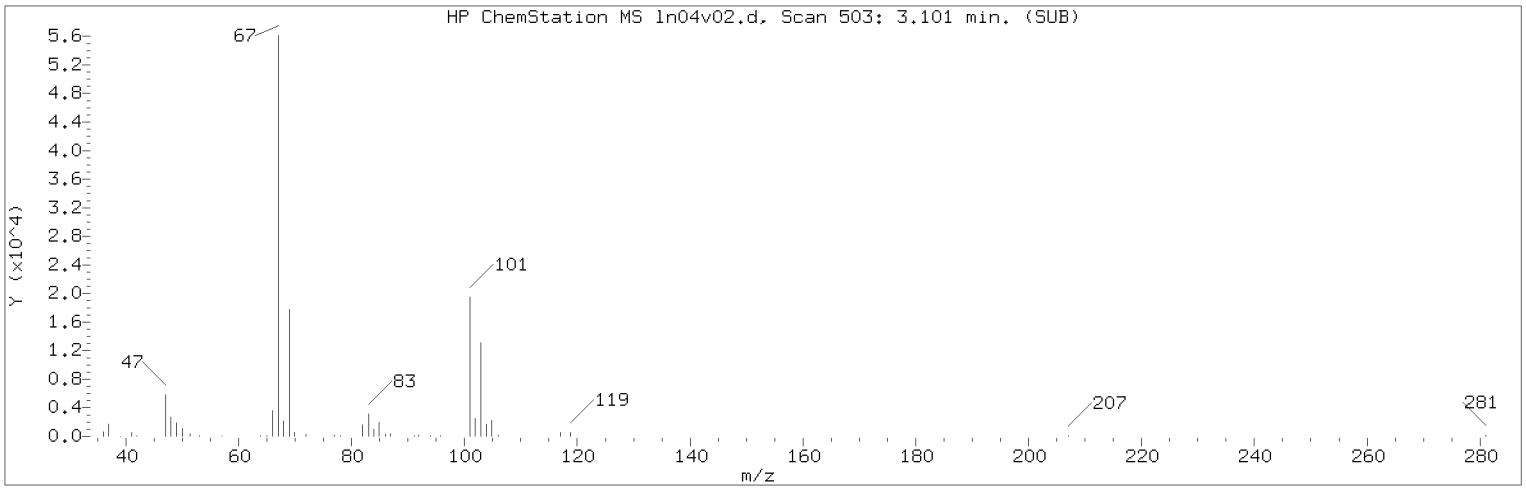
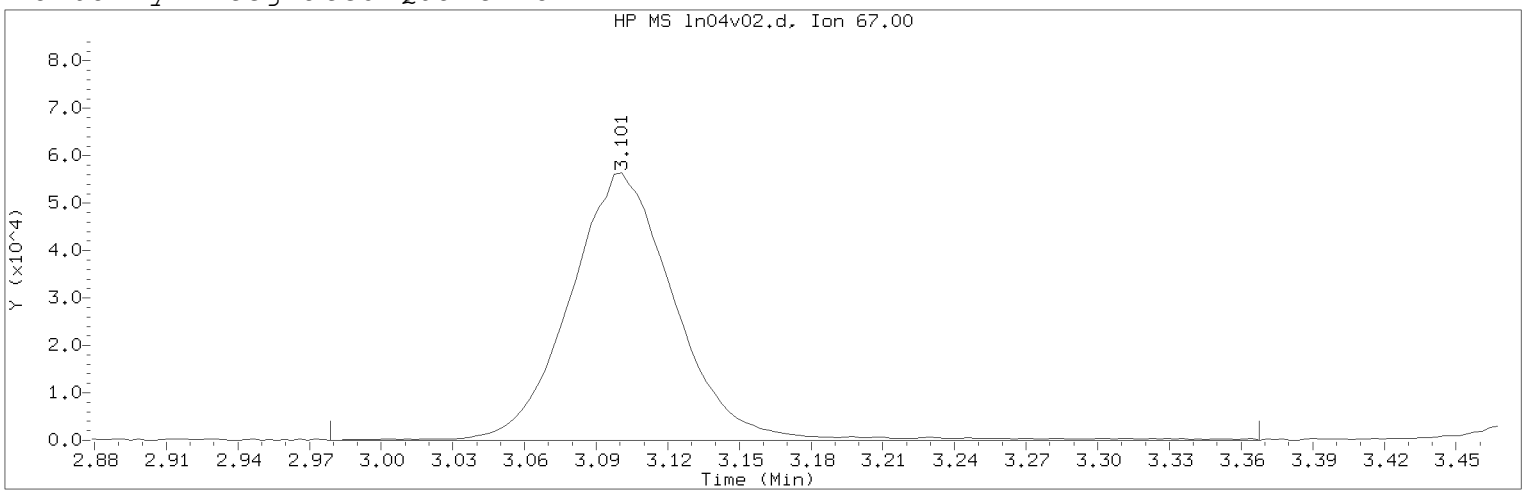
Target 3.5 esignature user ID: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

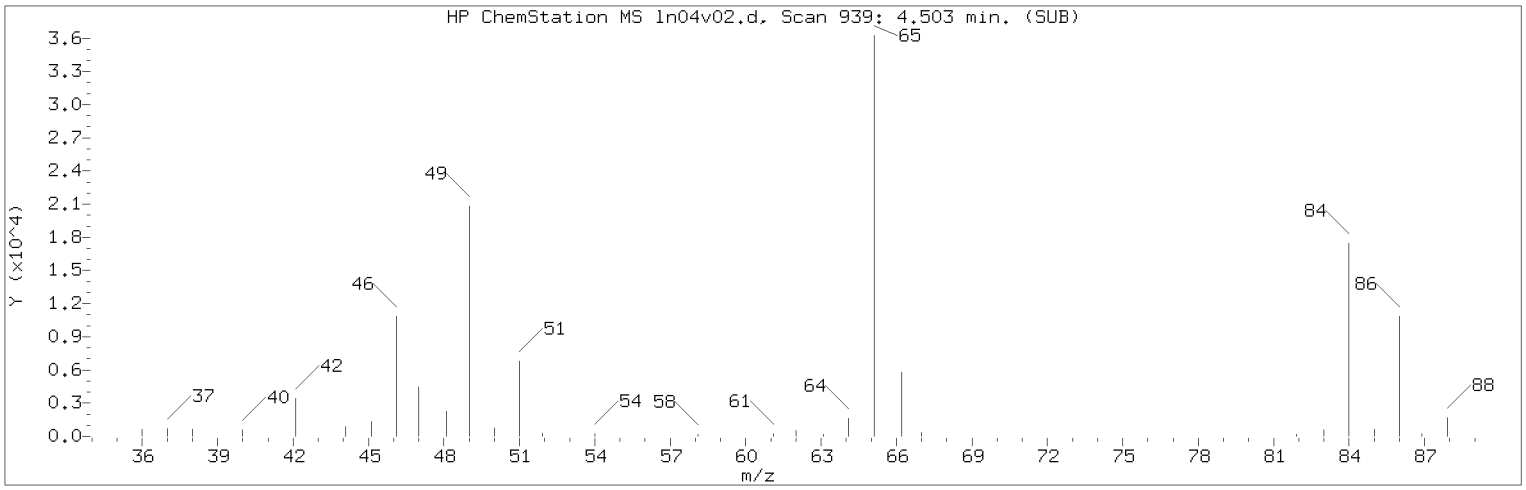
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 503
Retention Time (minutes): 3.101
Quant Ion : 67.00
Area (flag) : 174118M
On-Column Amount (ng) : 16.2240
Integration start scan : 464 Integration stop scan: 585
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

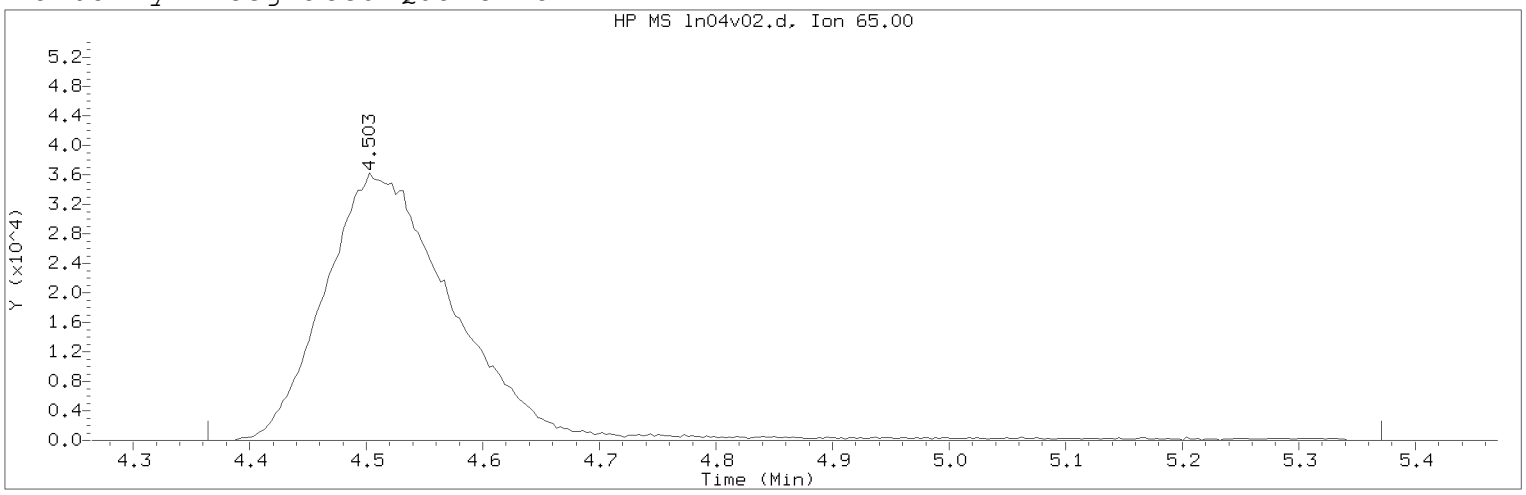
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

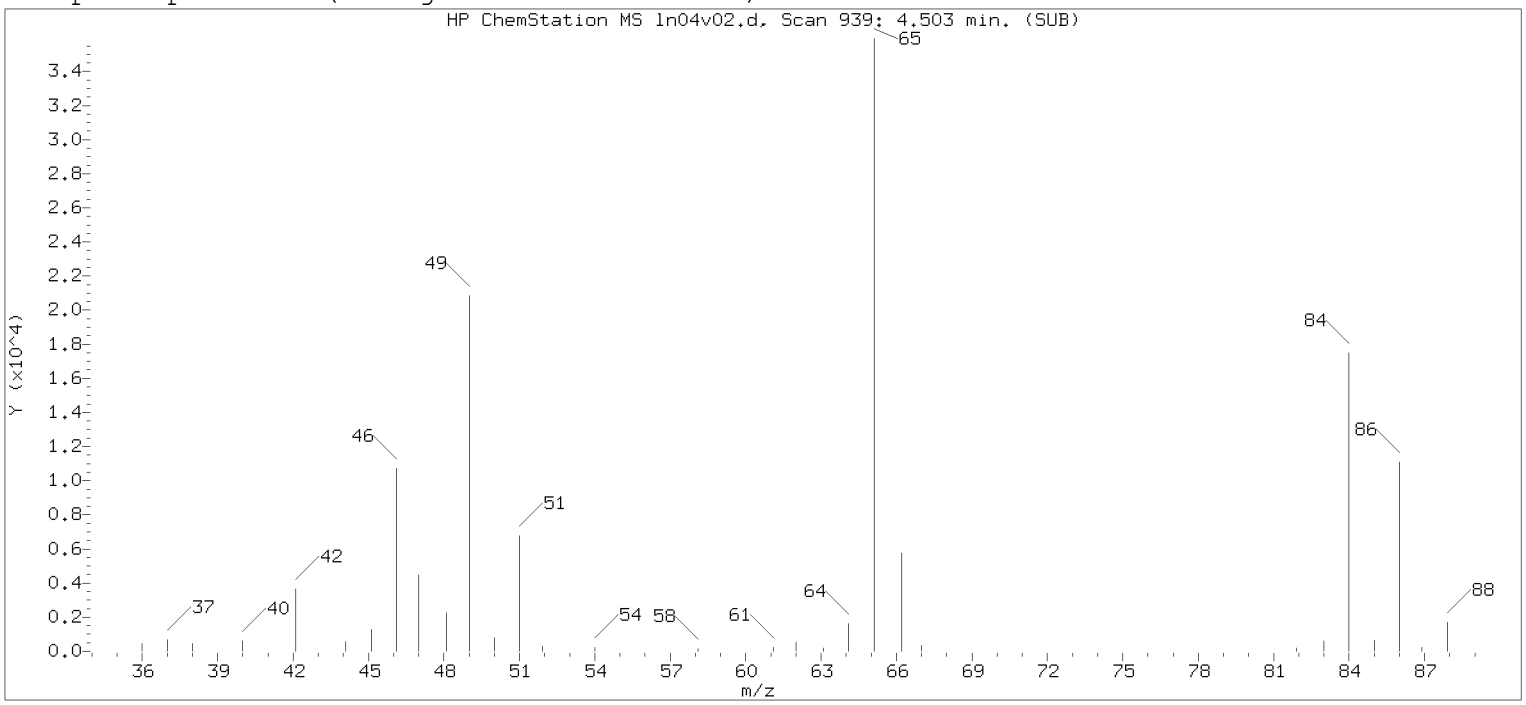
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area (flag) : 282794M
On-Column Amount (ng) : 250.0000
Integration start scan : 895 Integration stop scan: 1208
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

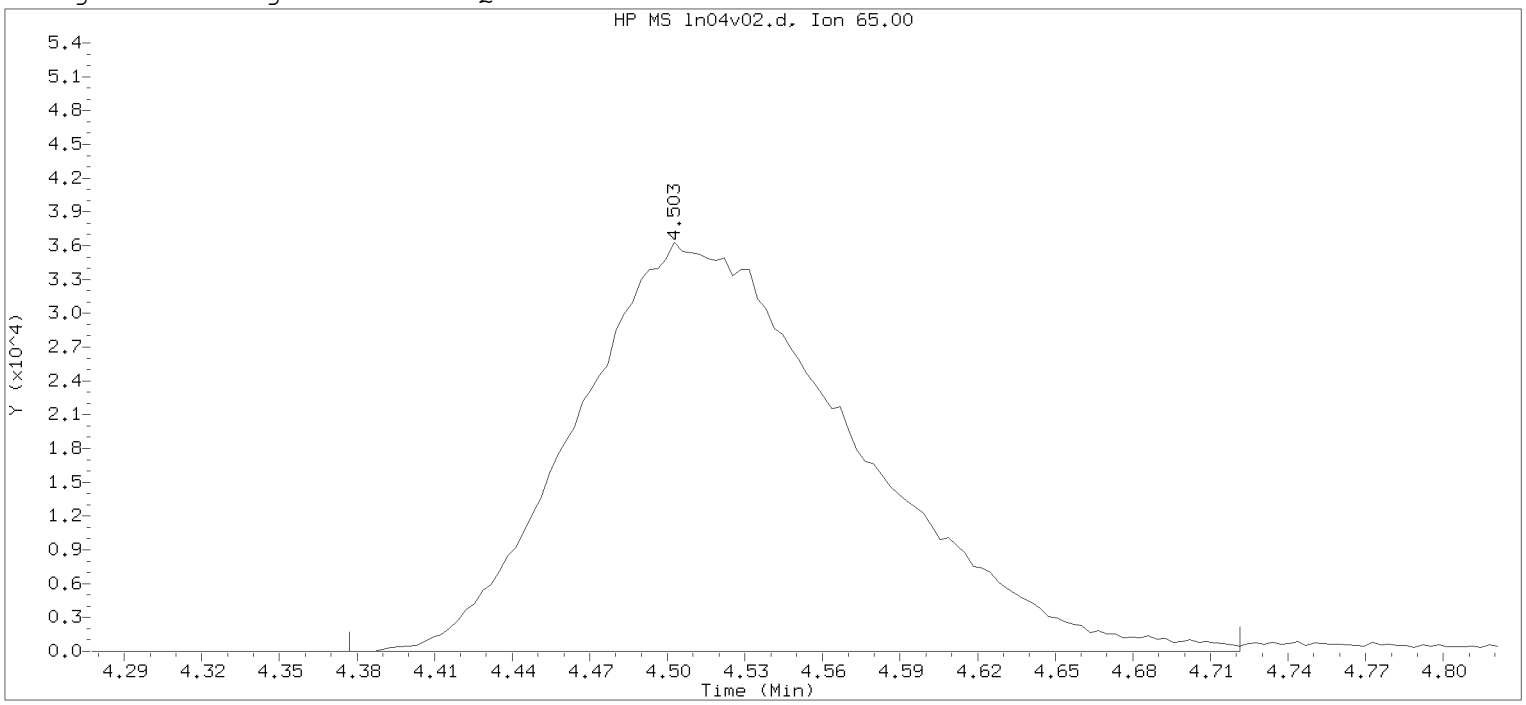
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

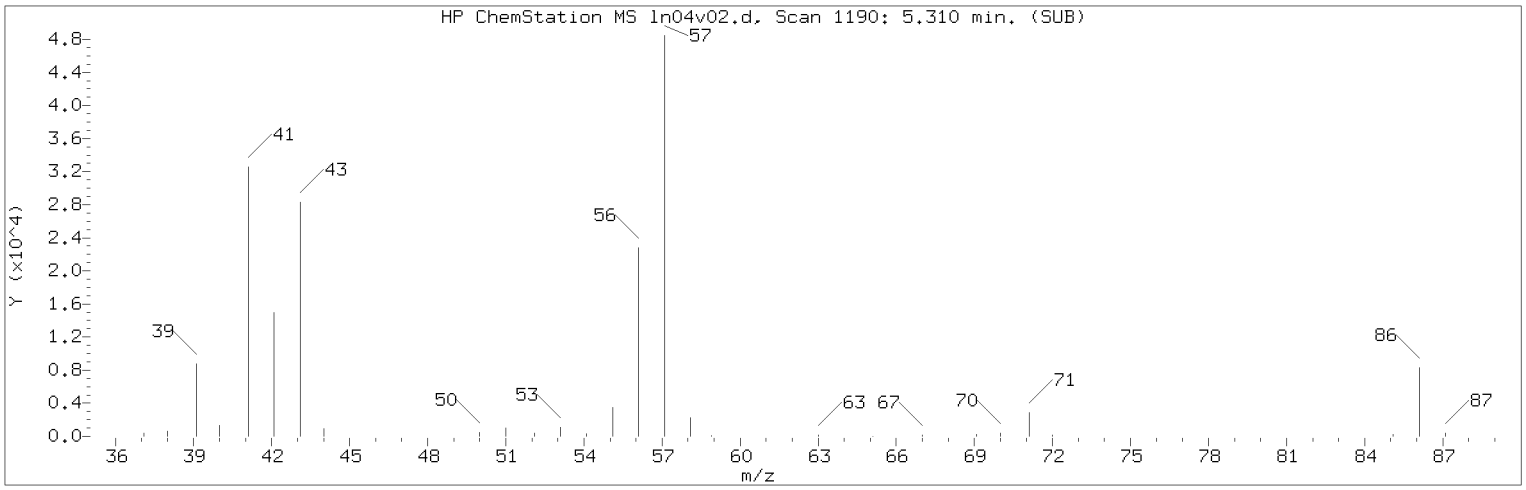
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

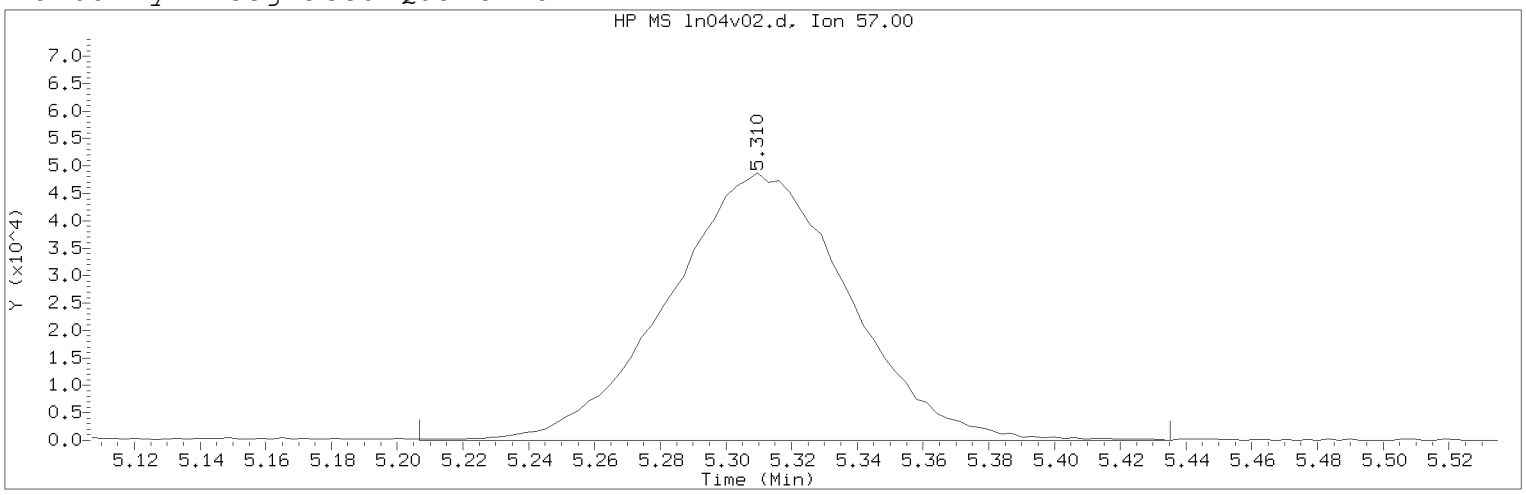
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area : 270950
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1006
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

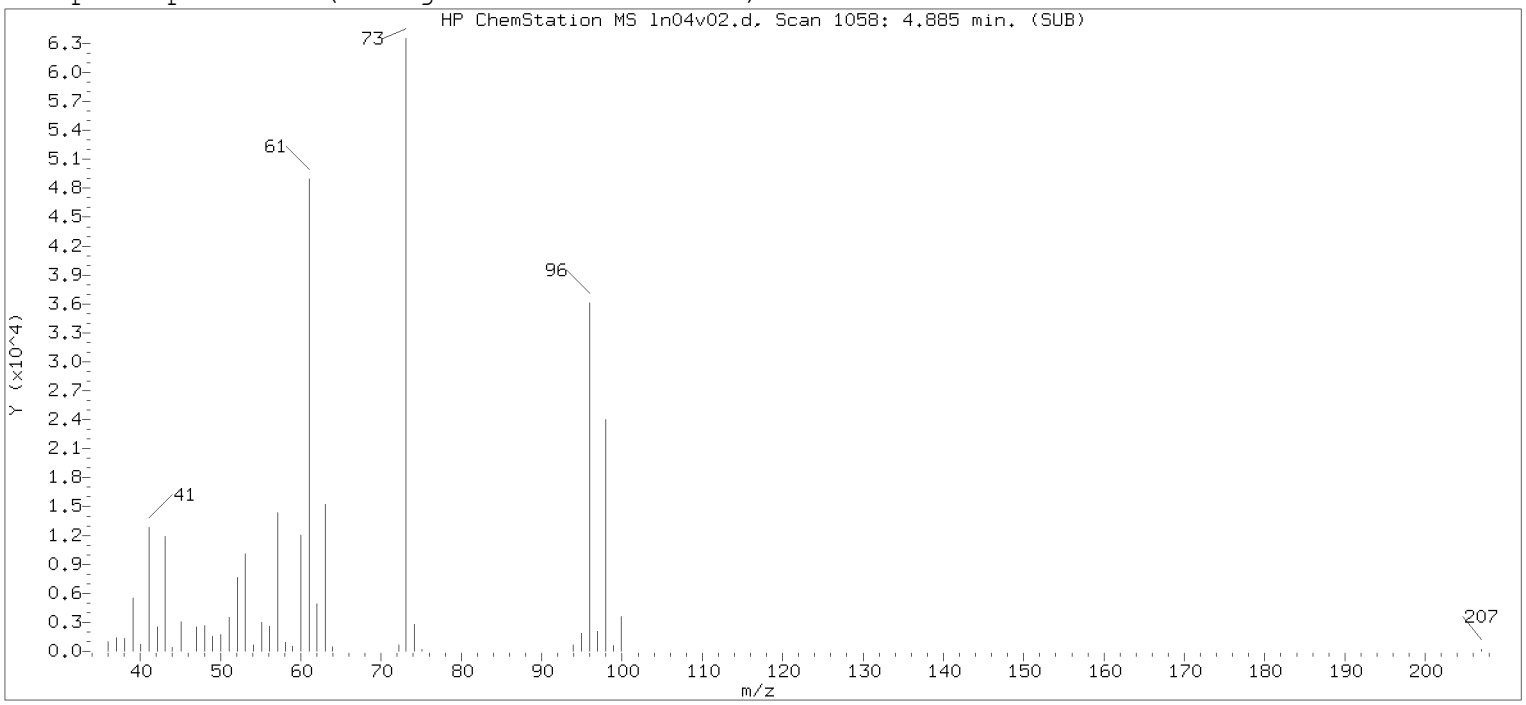
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1190
Retention Time (minutes): 5.310
Quant Ion : 57.00
Area (flag) : 185206M
On-Column Amount (ng) : 20.0675
Integration start scan : 1157 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

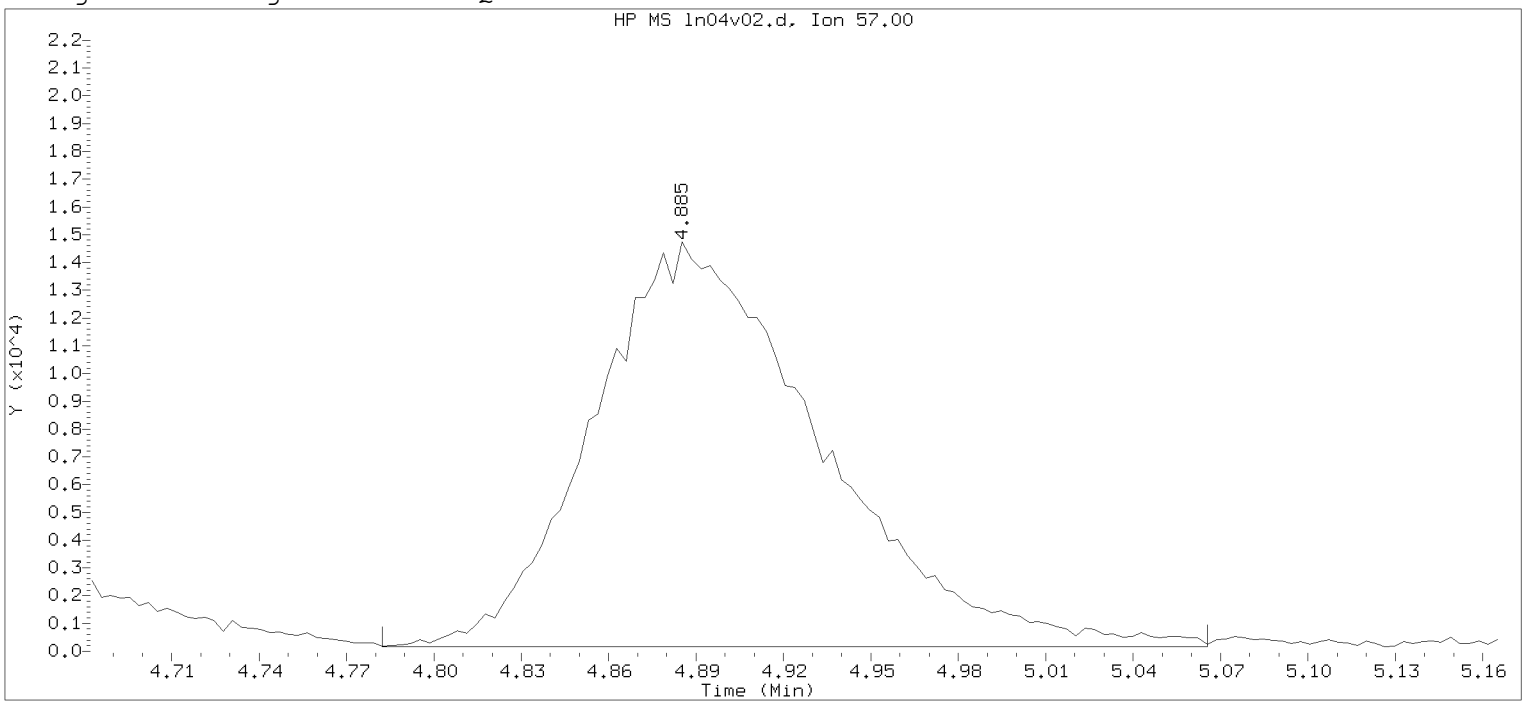
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

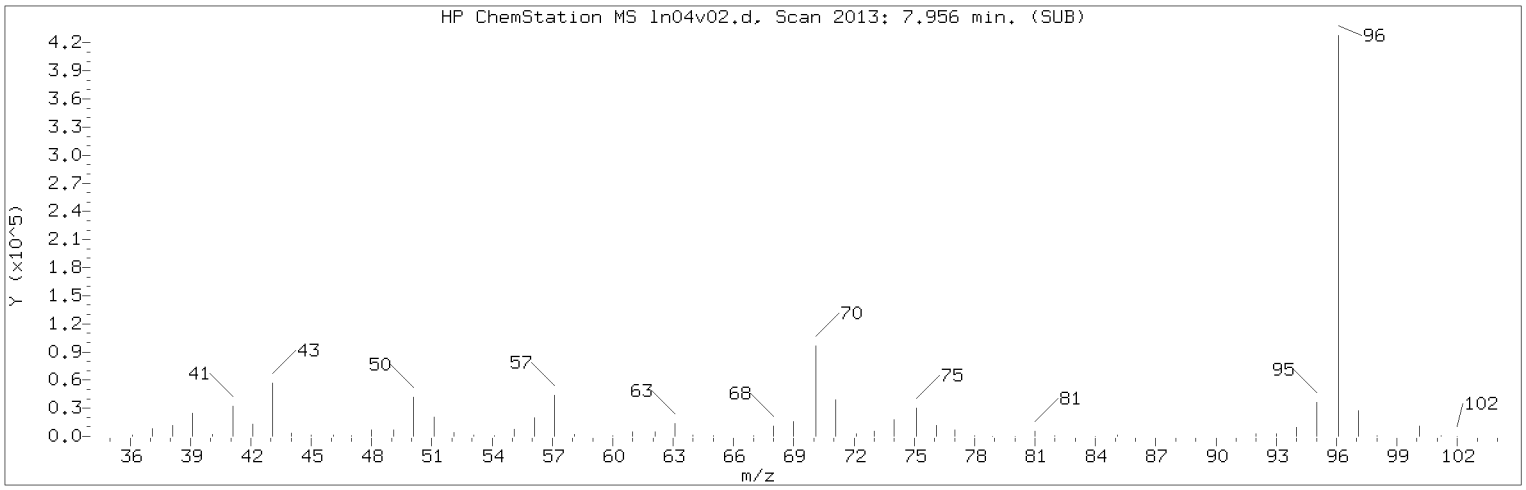
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

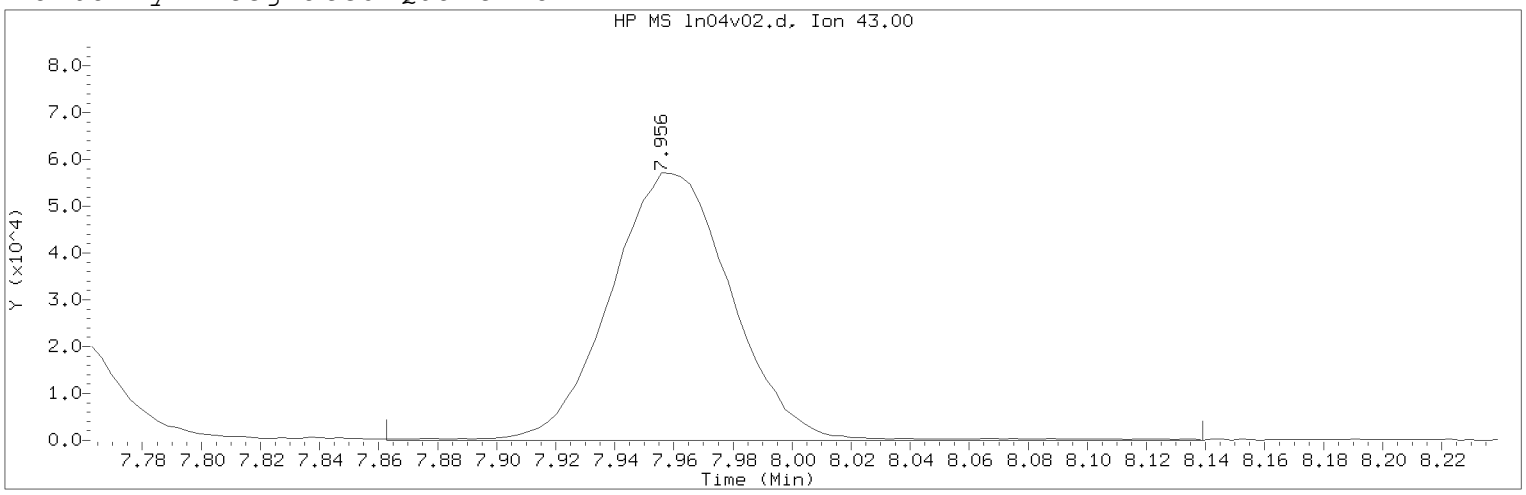
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1058		
Retention Time (minutes)	: 4.885		
Quant Ion	: 57.00		
Area	: 79381		
On-column Amount (ng)	: 18.4374		
Integration start scan	: 1025	Integration stop scan:	1113
Y at integration start	: 160	Y at integration end:	160

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

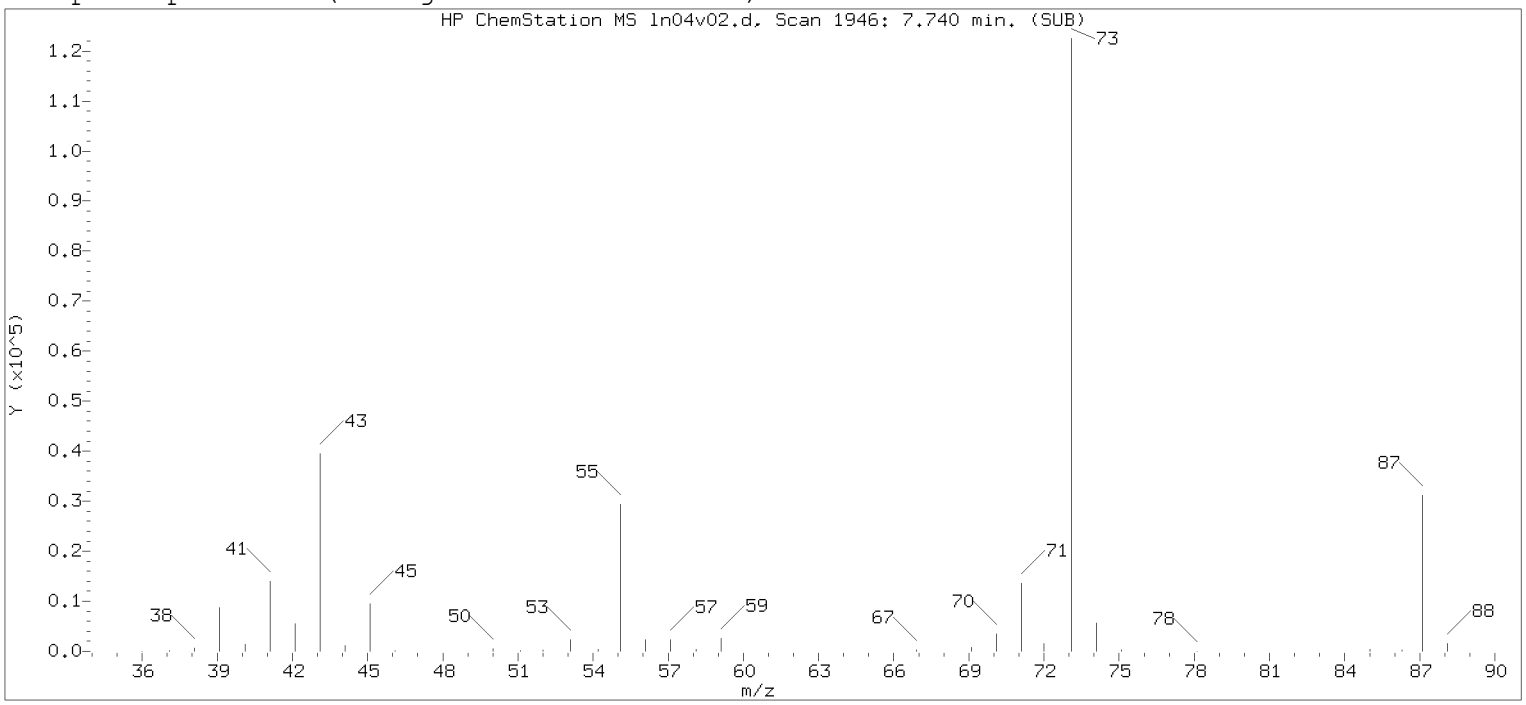
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2013
Retention Time (minutes): 7.956
Quant Ion : 43.00
Area (flag) : 163362M
On-Column Amount (ng) : 18.9476
Integration start scan : 1983 Integration stop scan: 2069
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

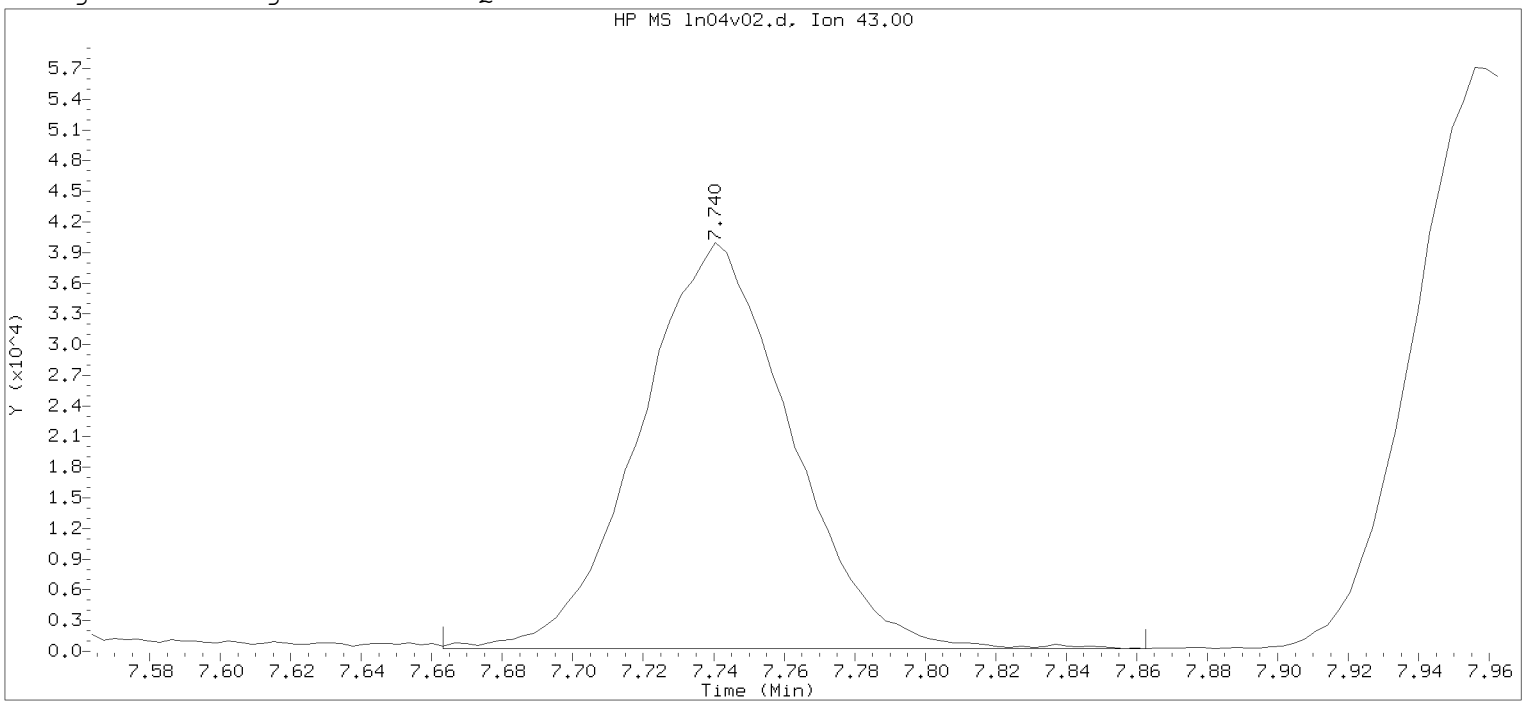
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

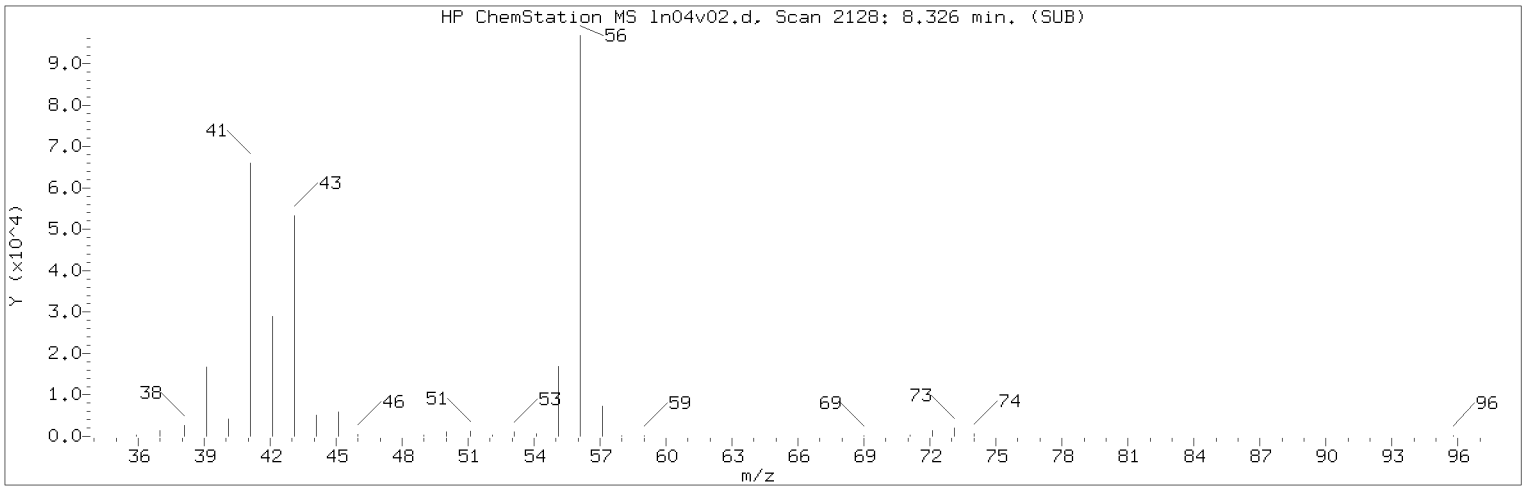
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

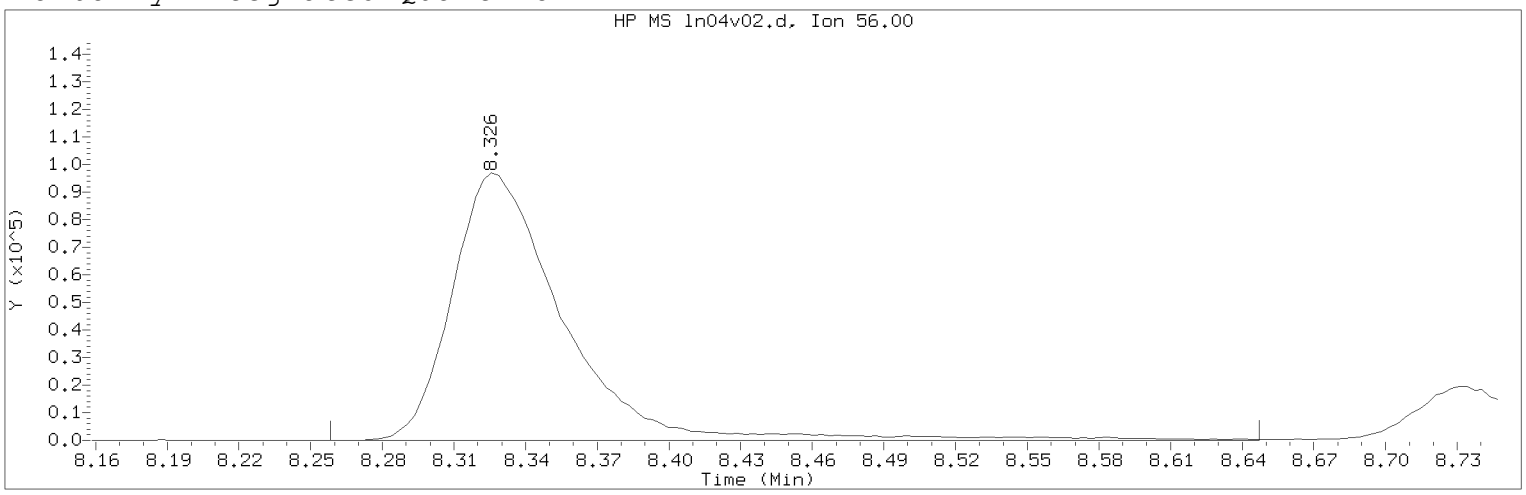
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.740
Quant Ion : 43.00
Area : 118529
On-column Amount (ng) : 18.5036
Integration start scan : 1921 Integration stop scan: 1983
Y at integration start : 255 Y at integration end: 255

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

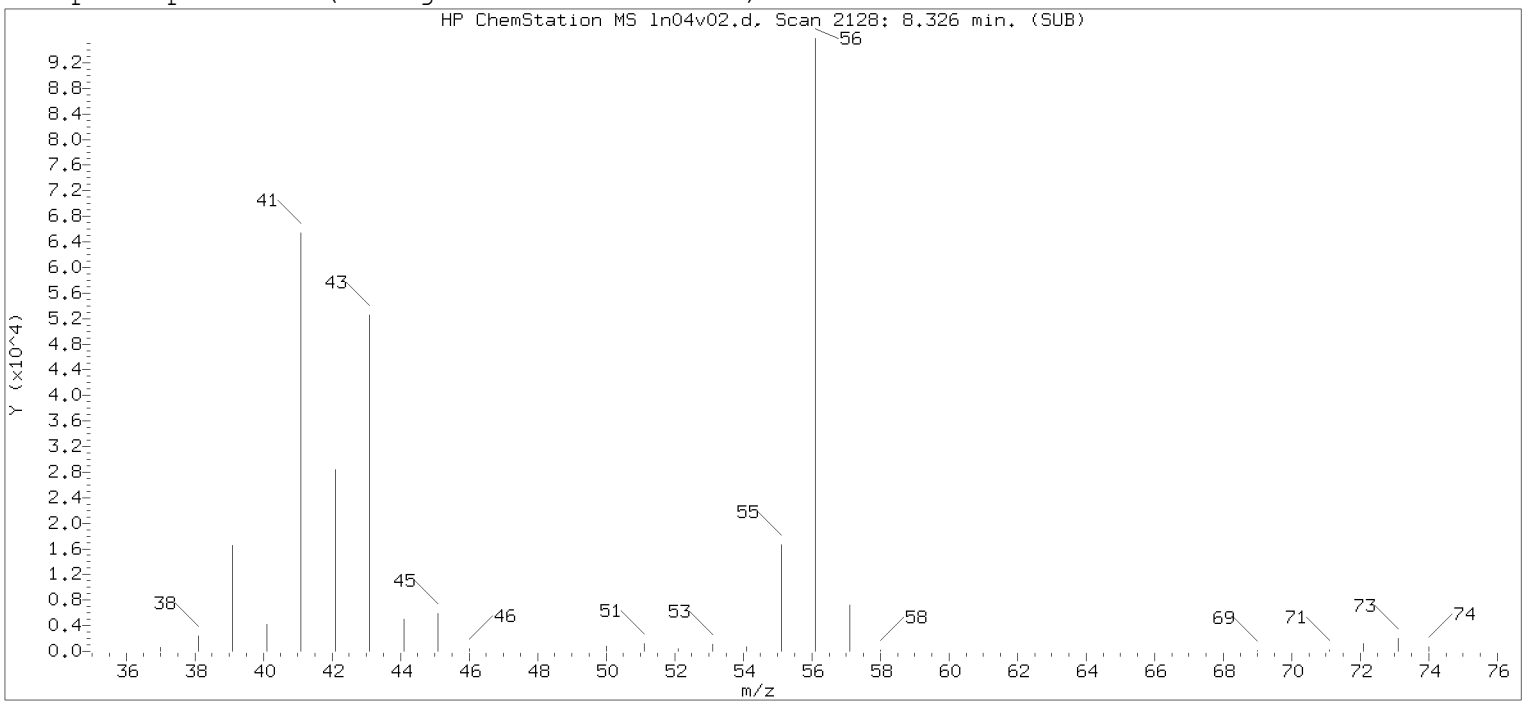
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area (flag) : 314470M
On-Column Amount (ng) : 911.9238
Integration start scan : 2106 Integration stop scan: 2227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

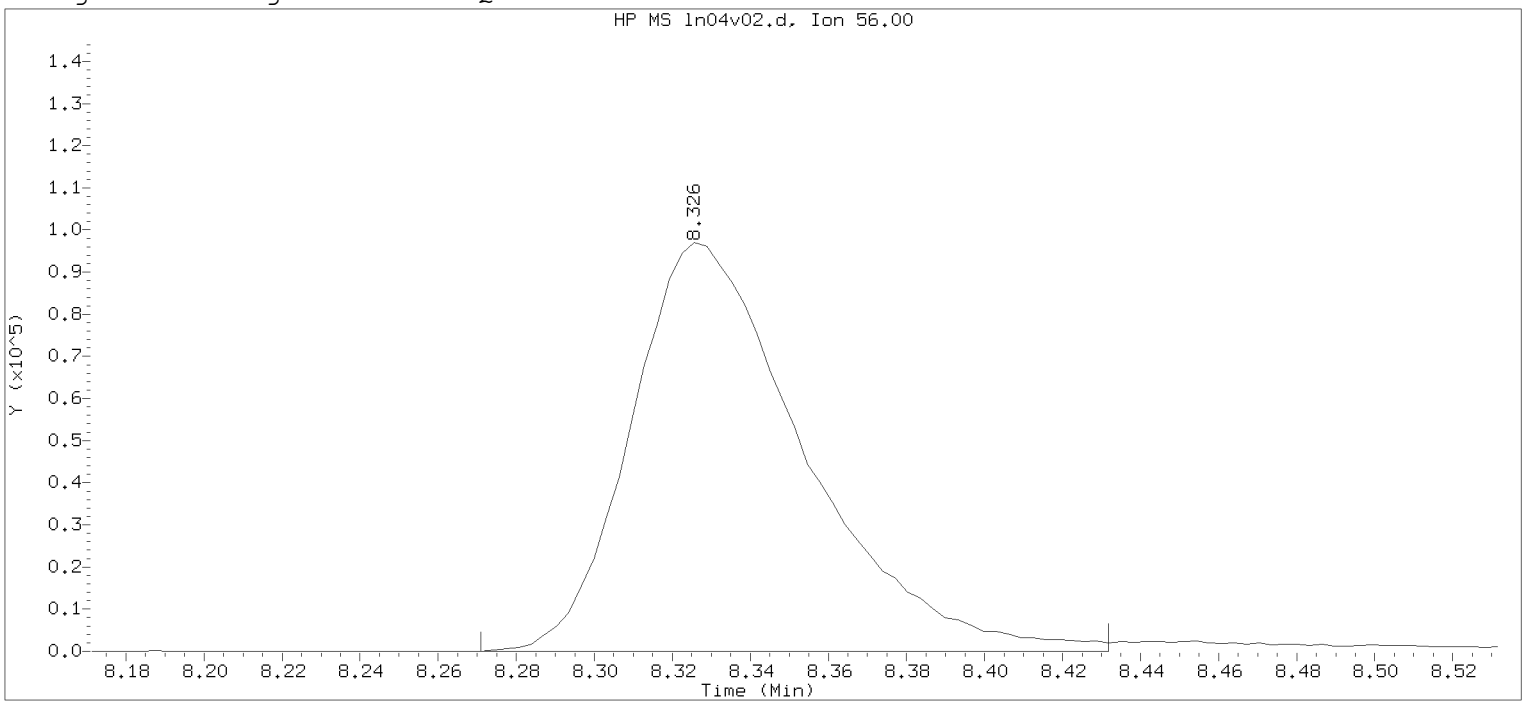
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

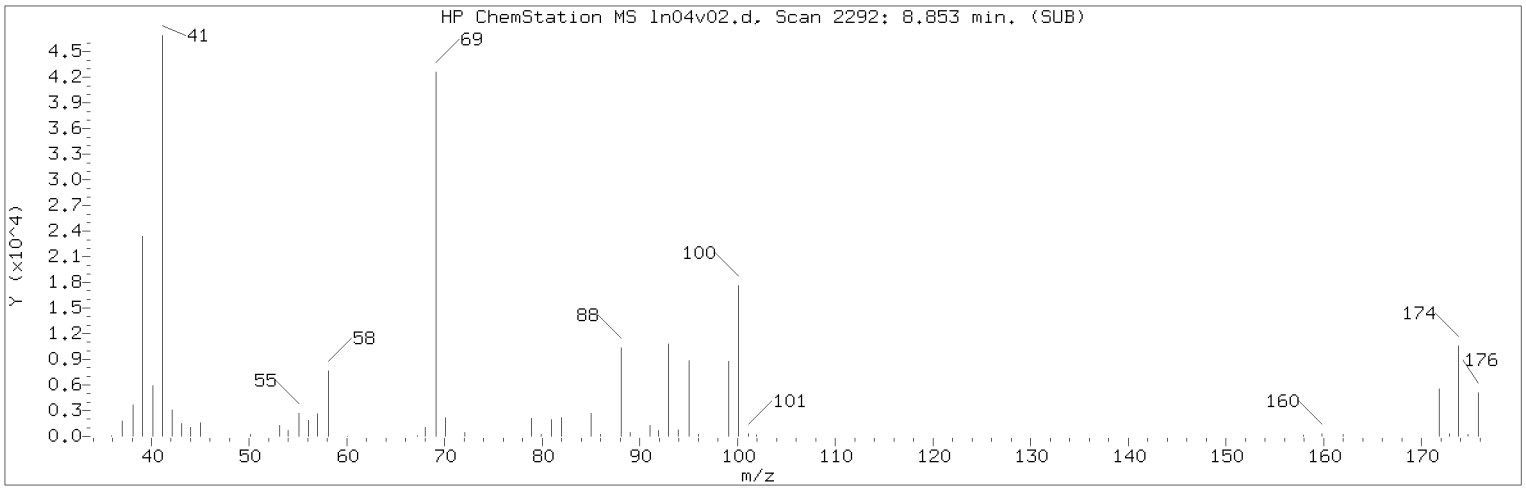
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

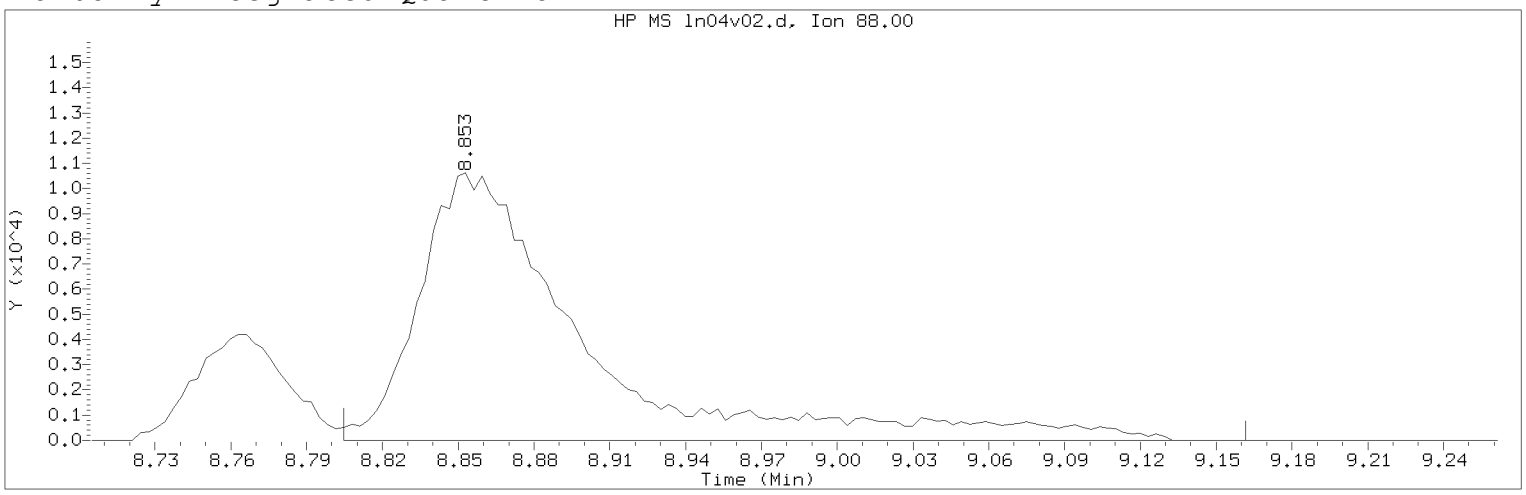
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area : 299611
On-column Amount (ng) : 906.8122
Integration start scan : 2110 Integration stop scan: 2160
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

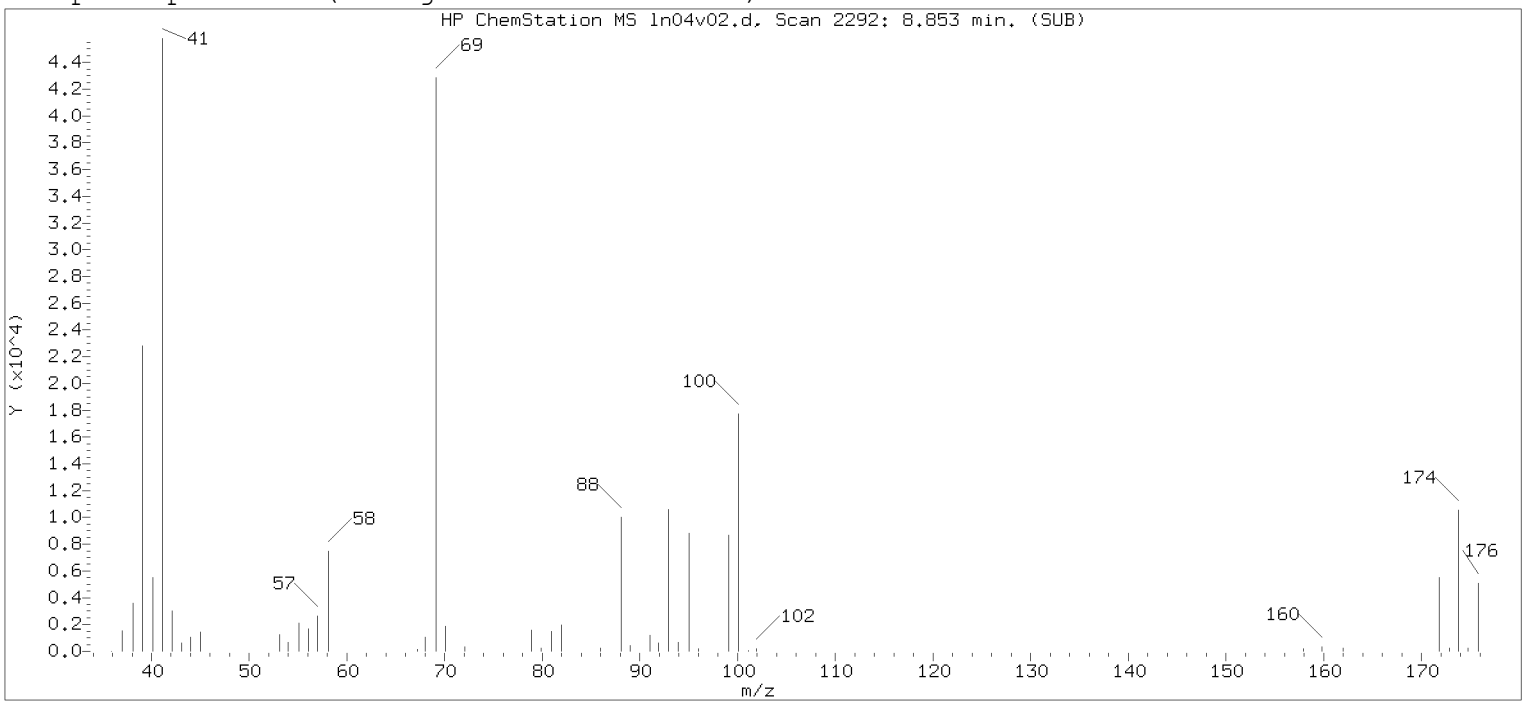
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area (flag) : 47747M
On-Column Amount (ng) : 503.7529
Integration start scan : 2276 Integration stop scan: 2387
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

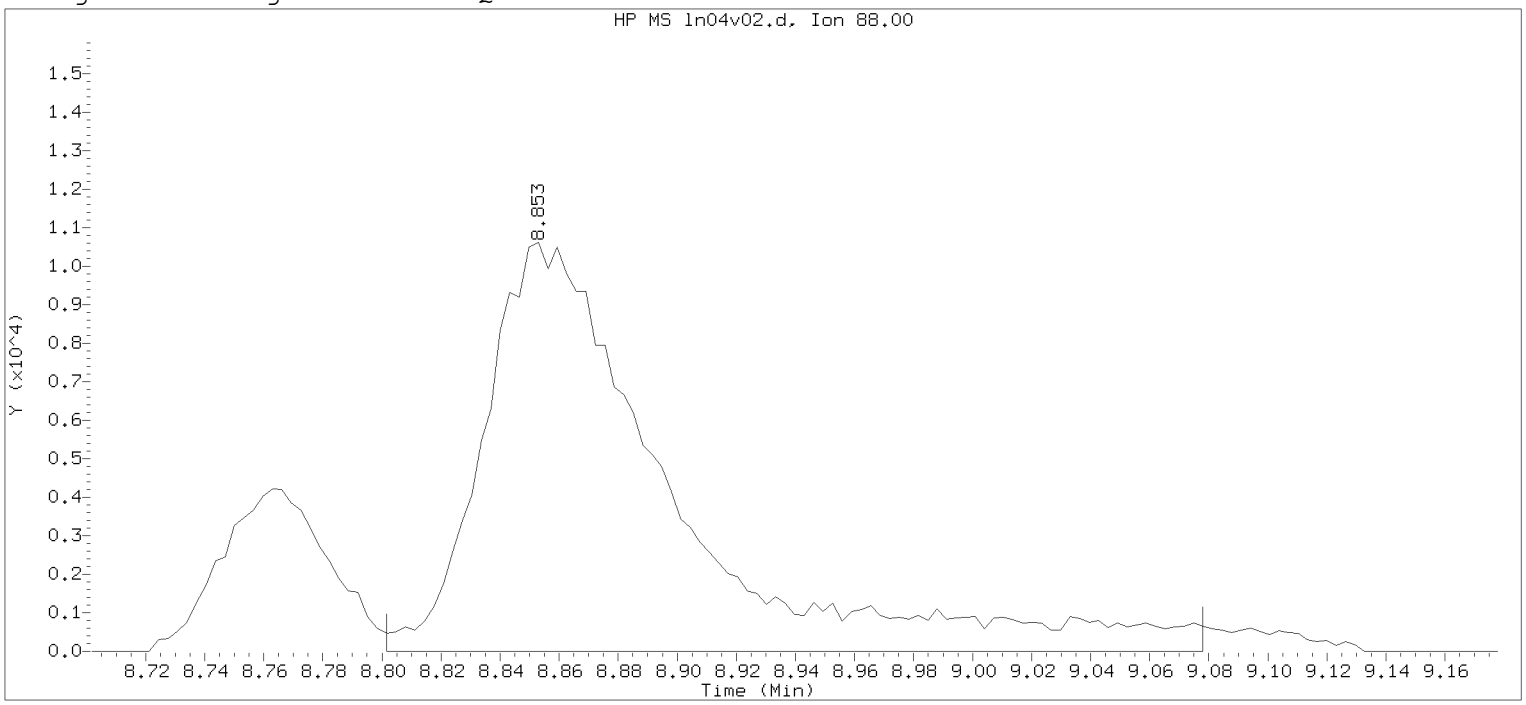
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

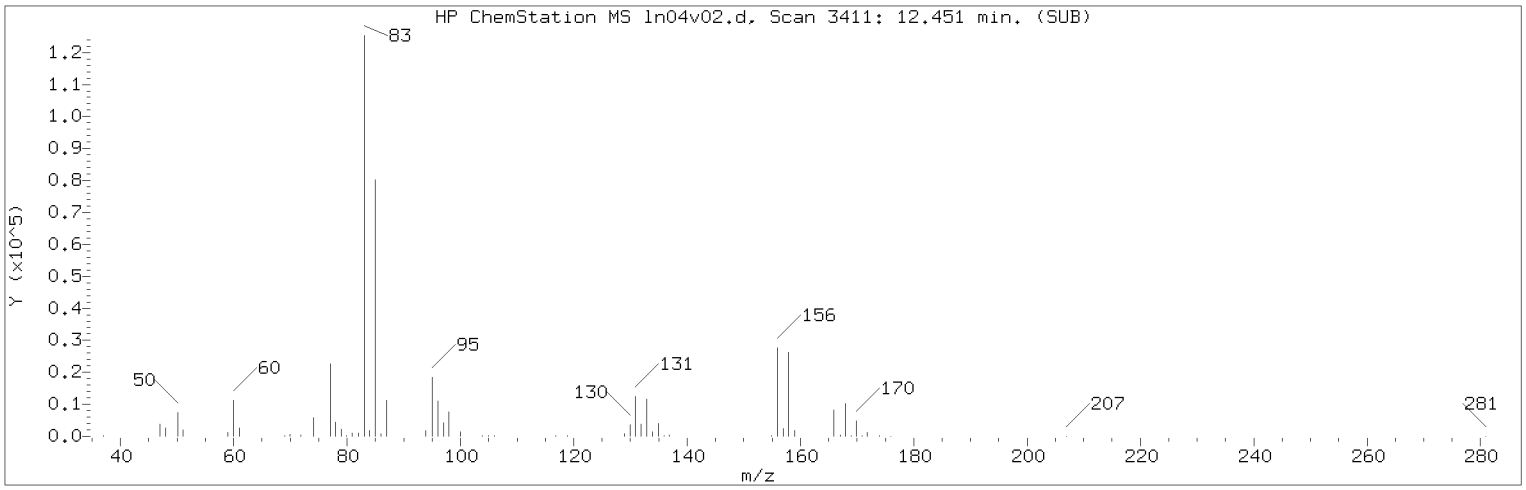
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

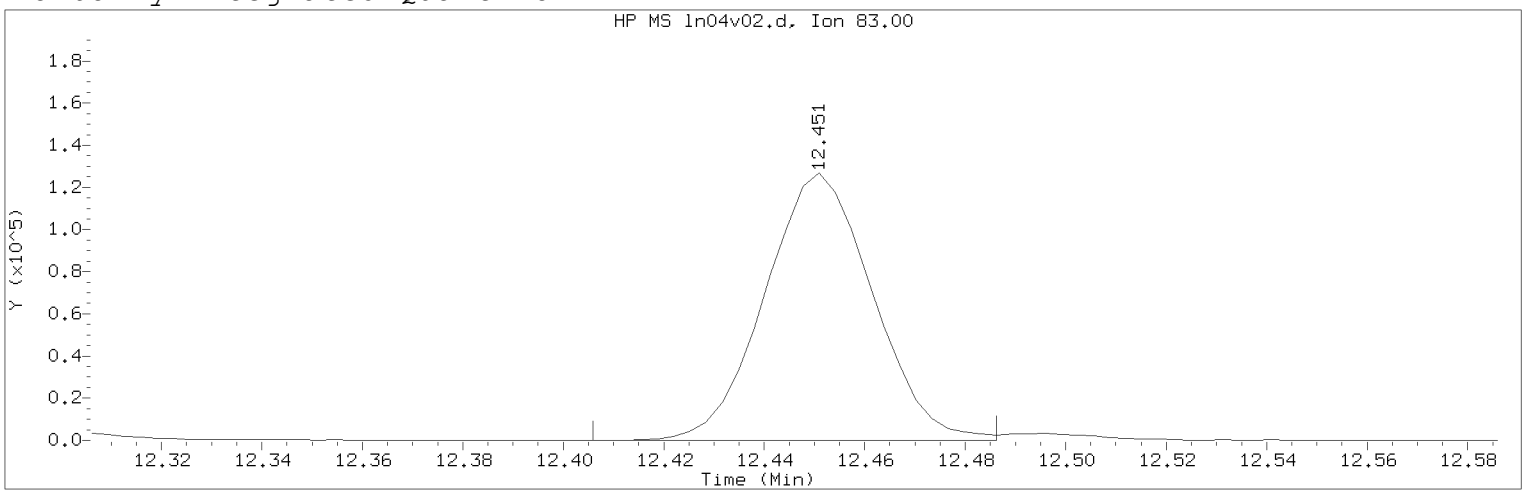
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2292		
Retention Time (minutes)	: 8.853		
Quant Ion	: 88.00		
Area	: 46453		
On-column Amount (ng)	: 511.5262		
Integration start scan	: 2275	Integration stop scan:	2361
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

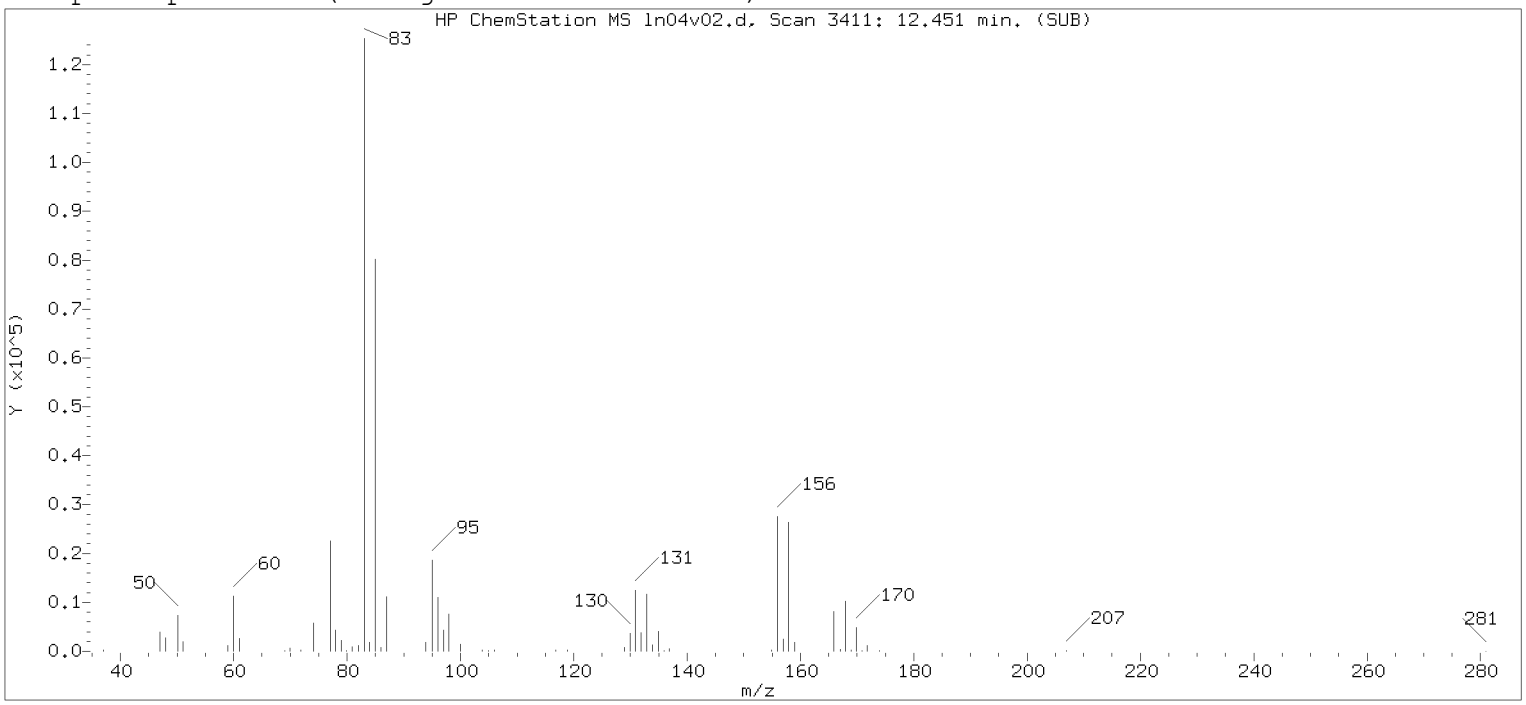
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 188446M
On-Column Amount (ng) : 19.5761
Integration start scan : 3396 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

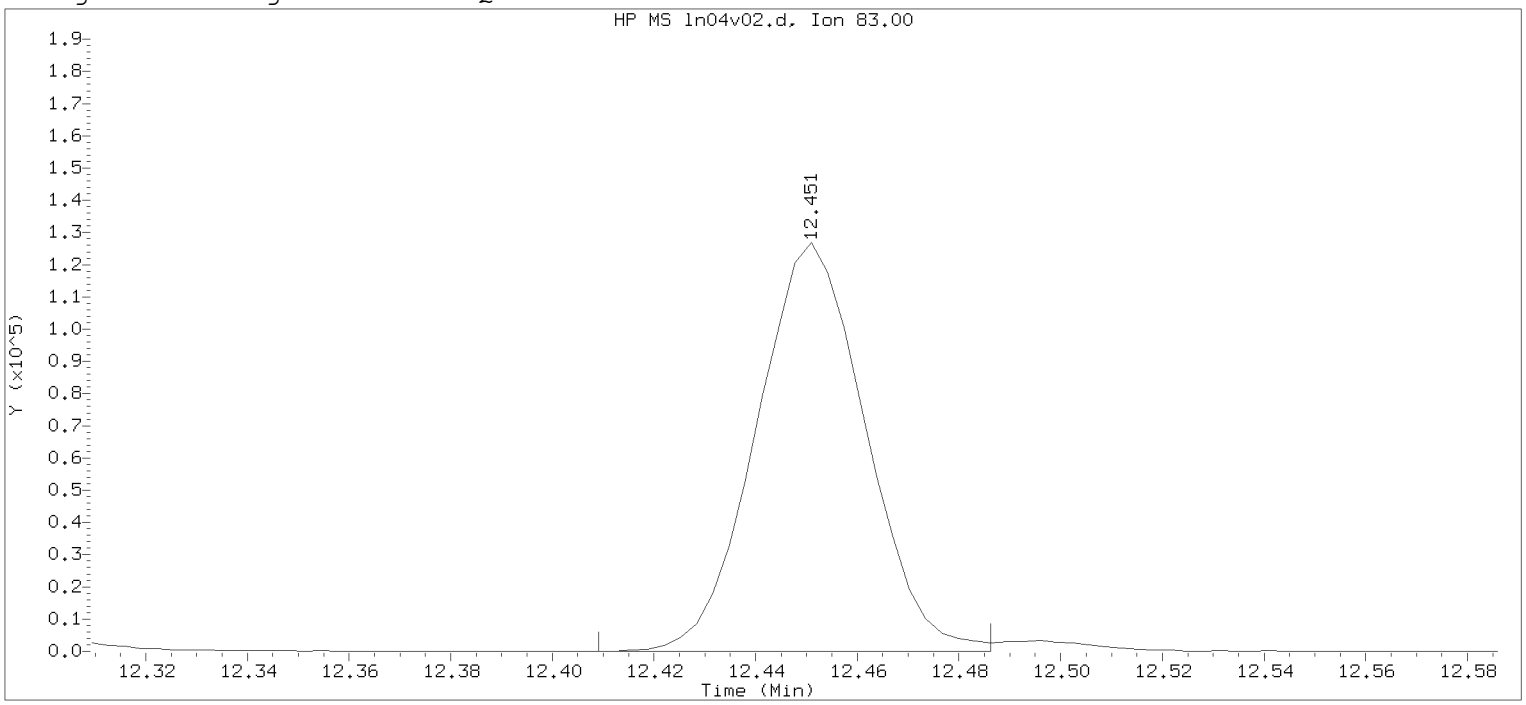
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

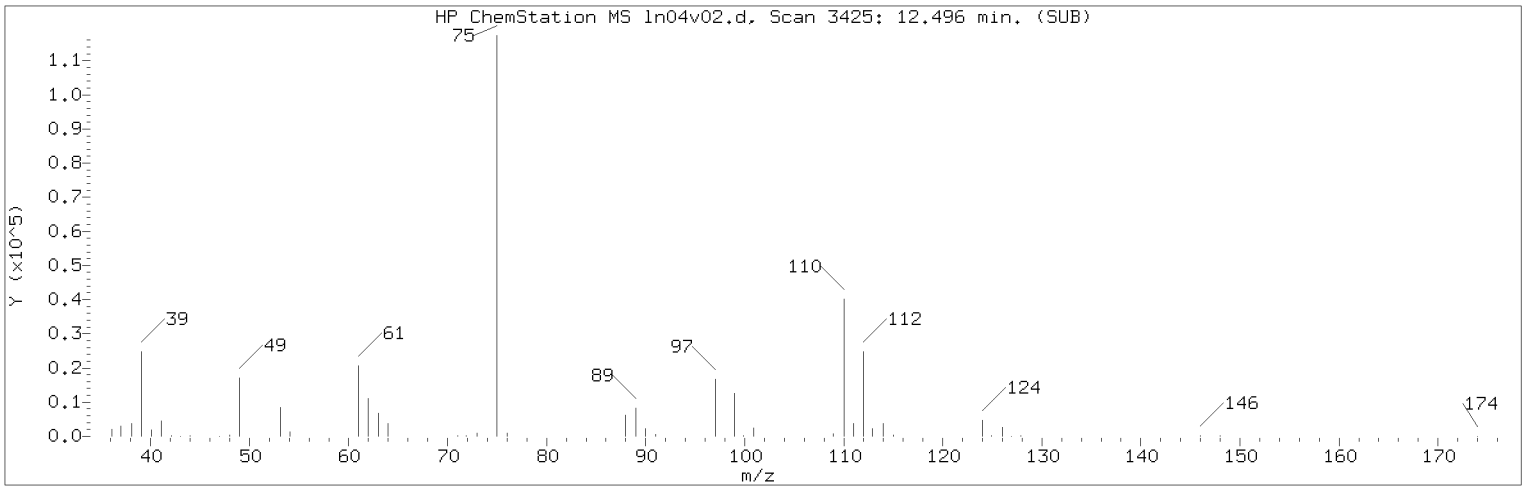
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

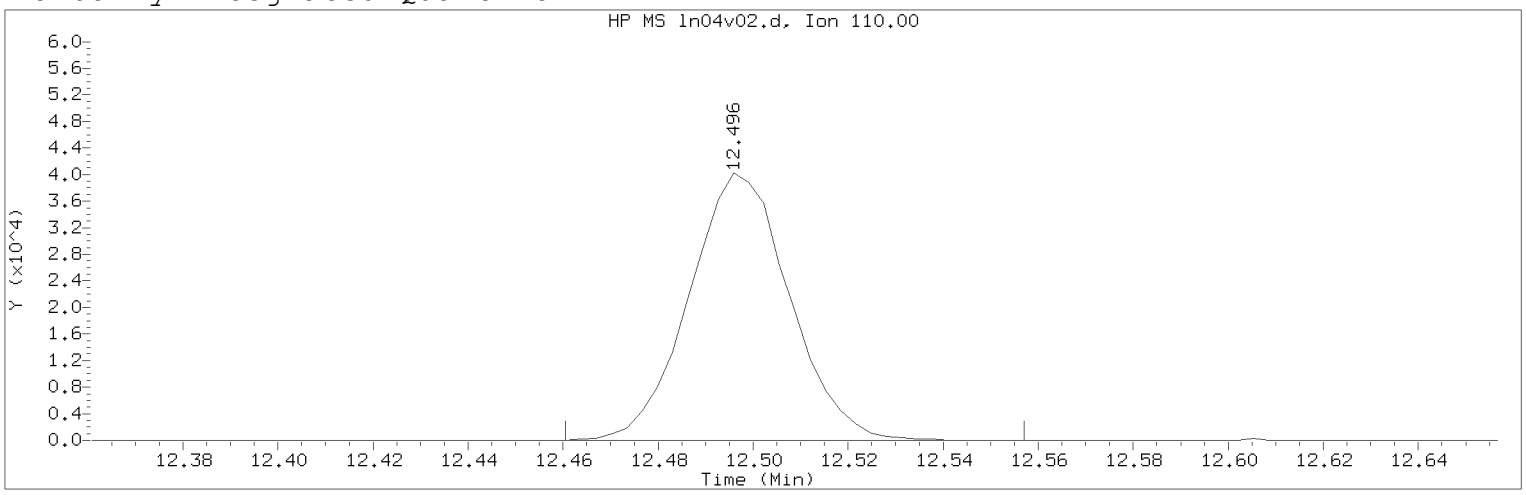
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 188196
On-column Amount (ng) : 19.2022
Integration start scan : 3397 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

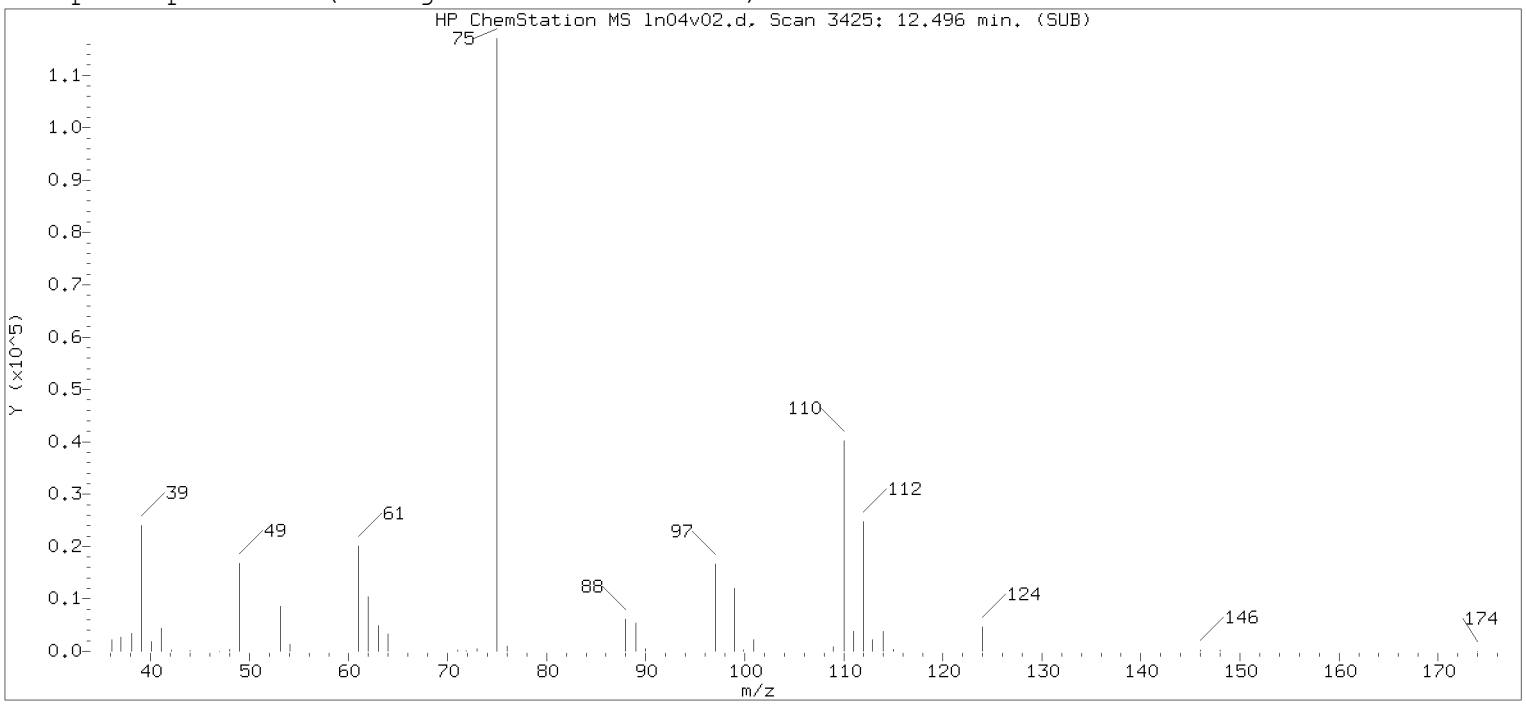
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 3425
Retention Time (minutes): 12.496
Quant Ion : 110.00
Area (flag) : 58902M
On-Column Amount (ng) : 19.9401
Integration start scan : 3413 Integration stop scan: 3443
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

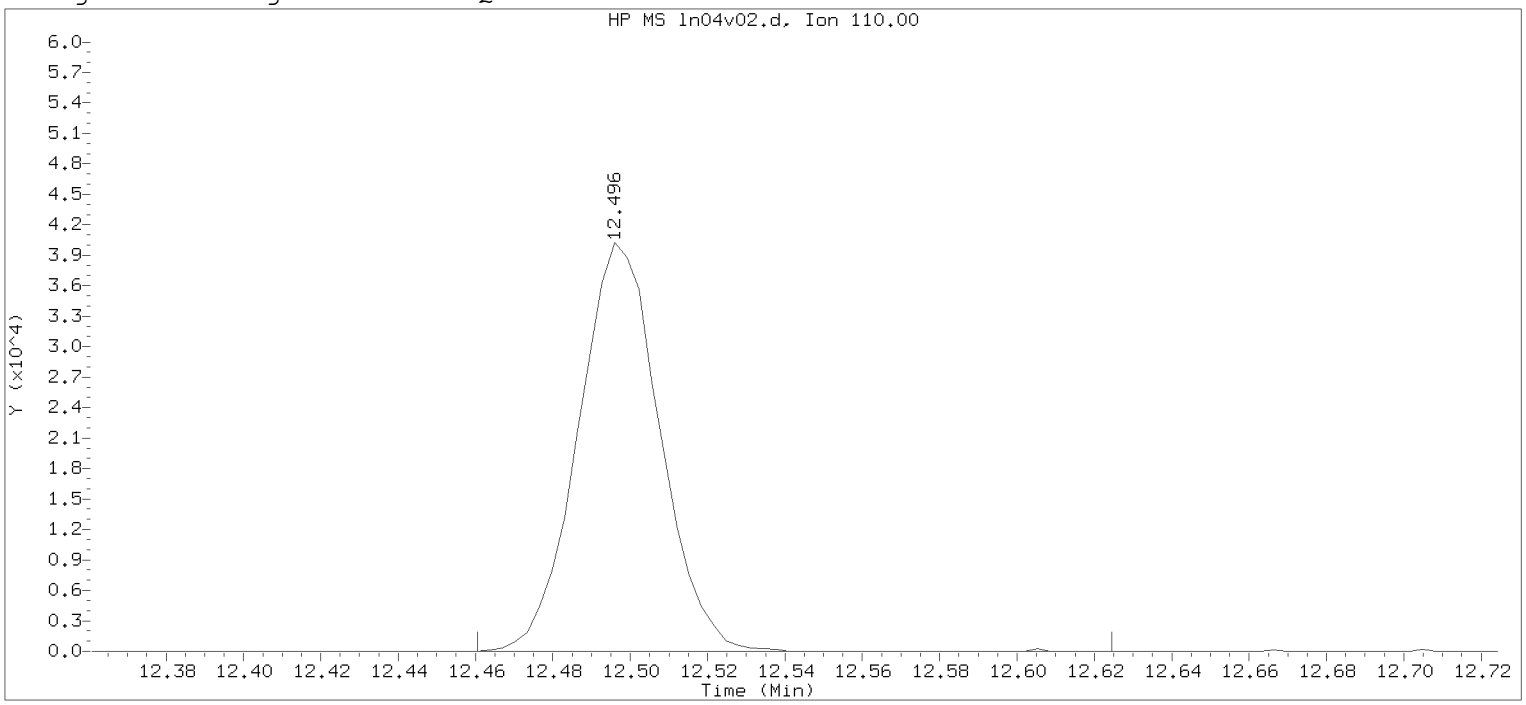
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

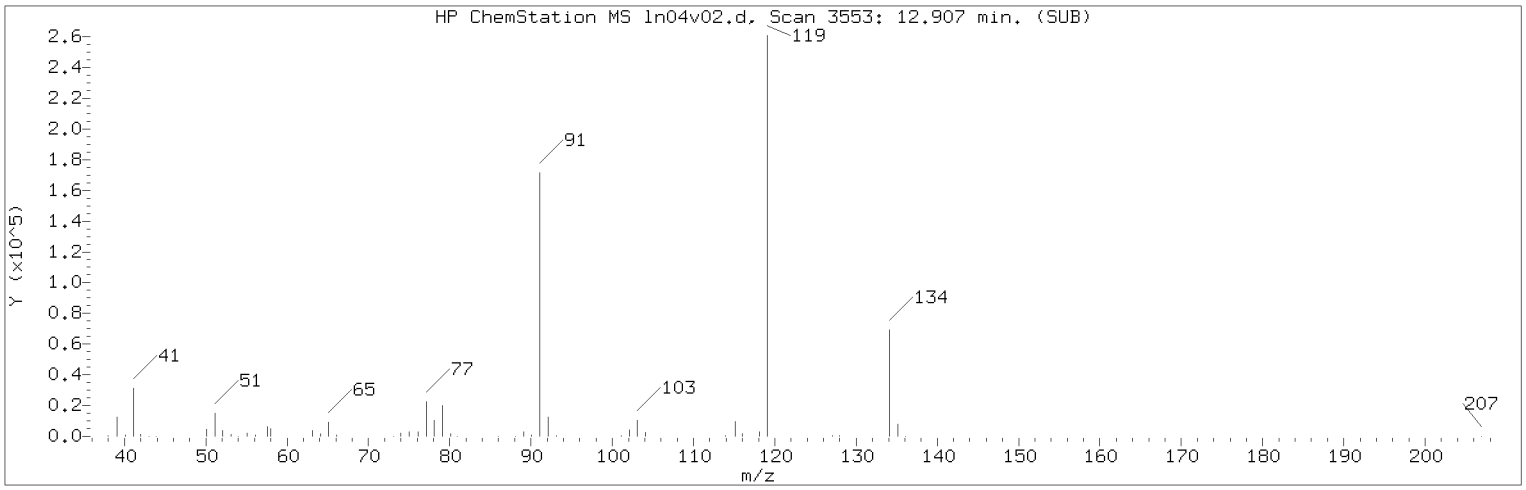
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

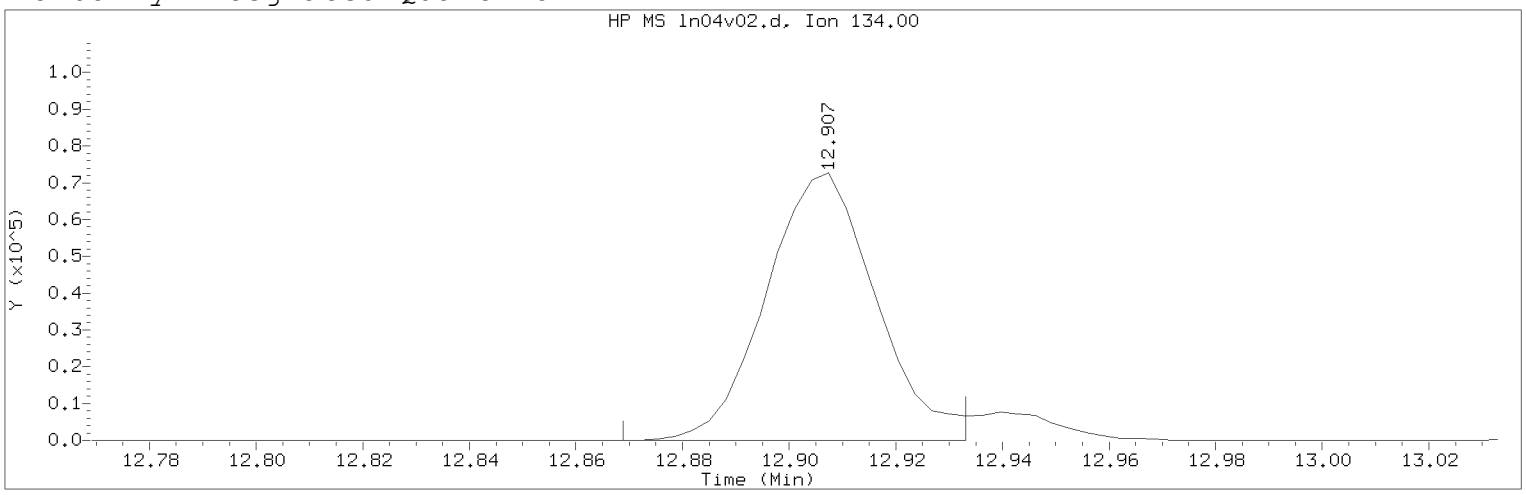
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 3425
Retention Time (minutes): 12.496
Quant Ion : 110.00
Area : 58948
On-column Amount (ng) : 19.9559
Integration start scan : 3413 Integration stop scan: 3464
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

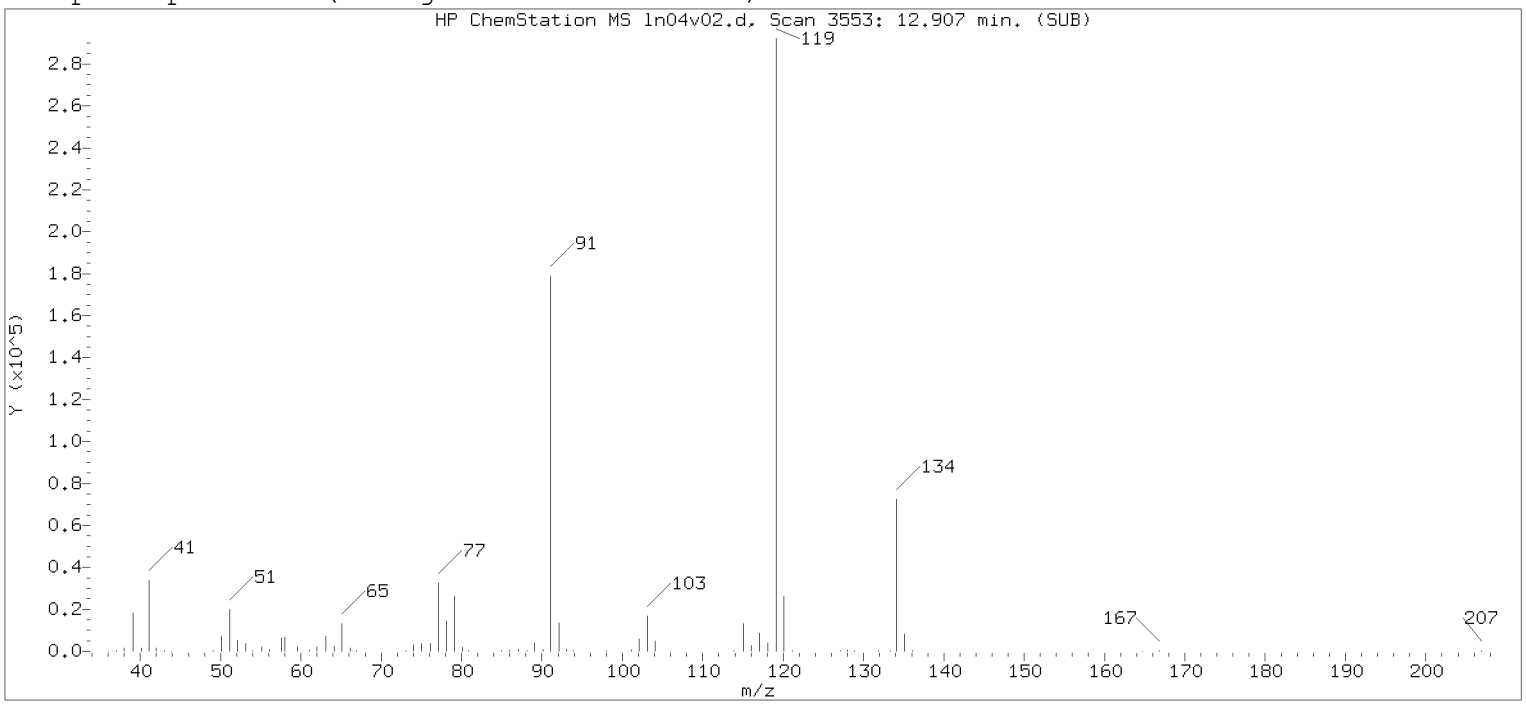
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area (flag) : 103762M
On-Column Amount (ng) : 20.6322
Integration start scan : 3540 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

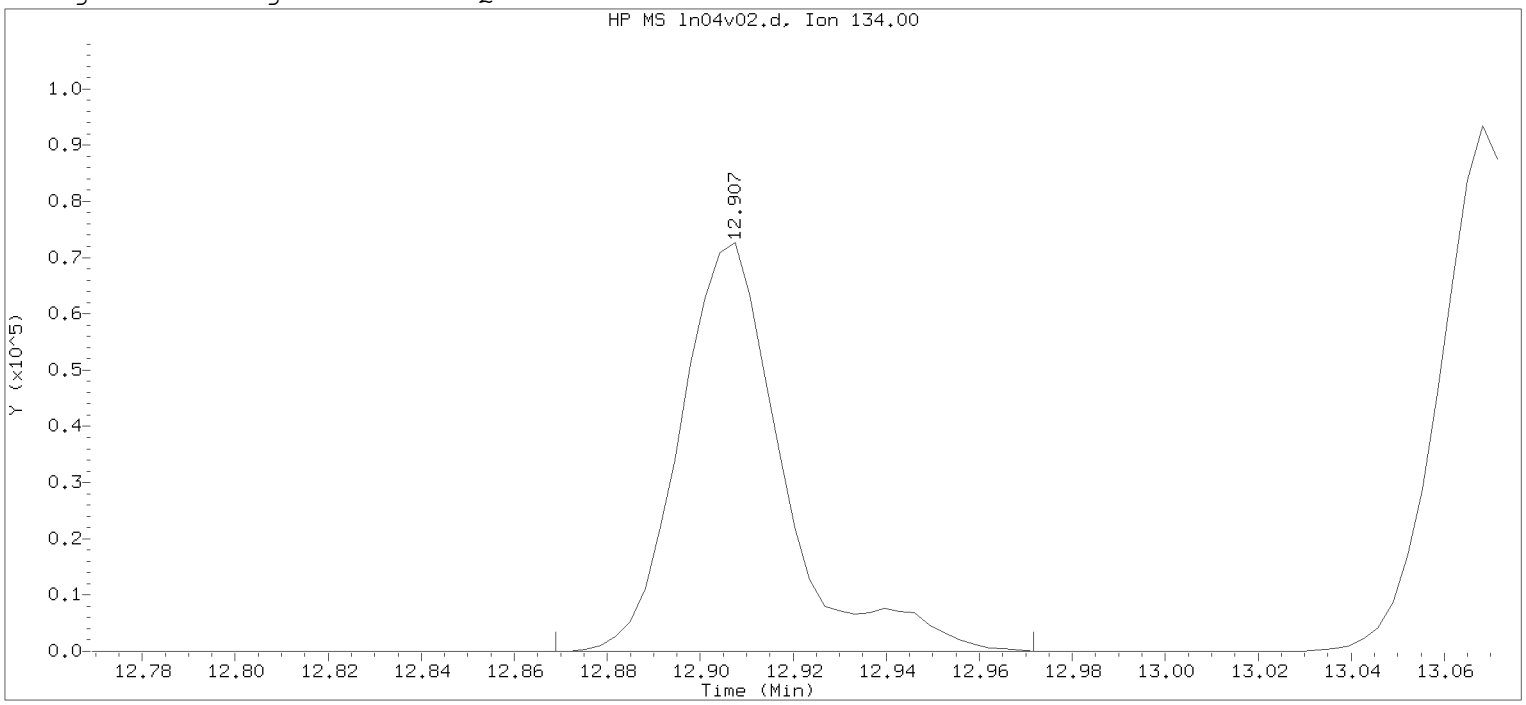
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area : 111654
On-column Amount (ng) : 22.2016
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASPOSITO

Data File: /chem/HP09915.i/19nov23a.b/ln23t02.d

Date : 23-NOV-2019 07:57

Client ID: aug-02-19

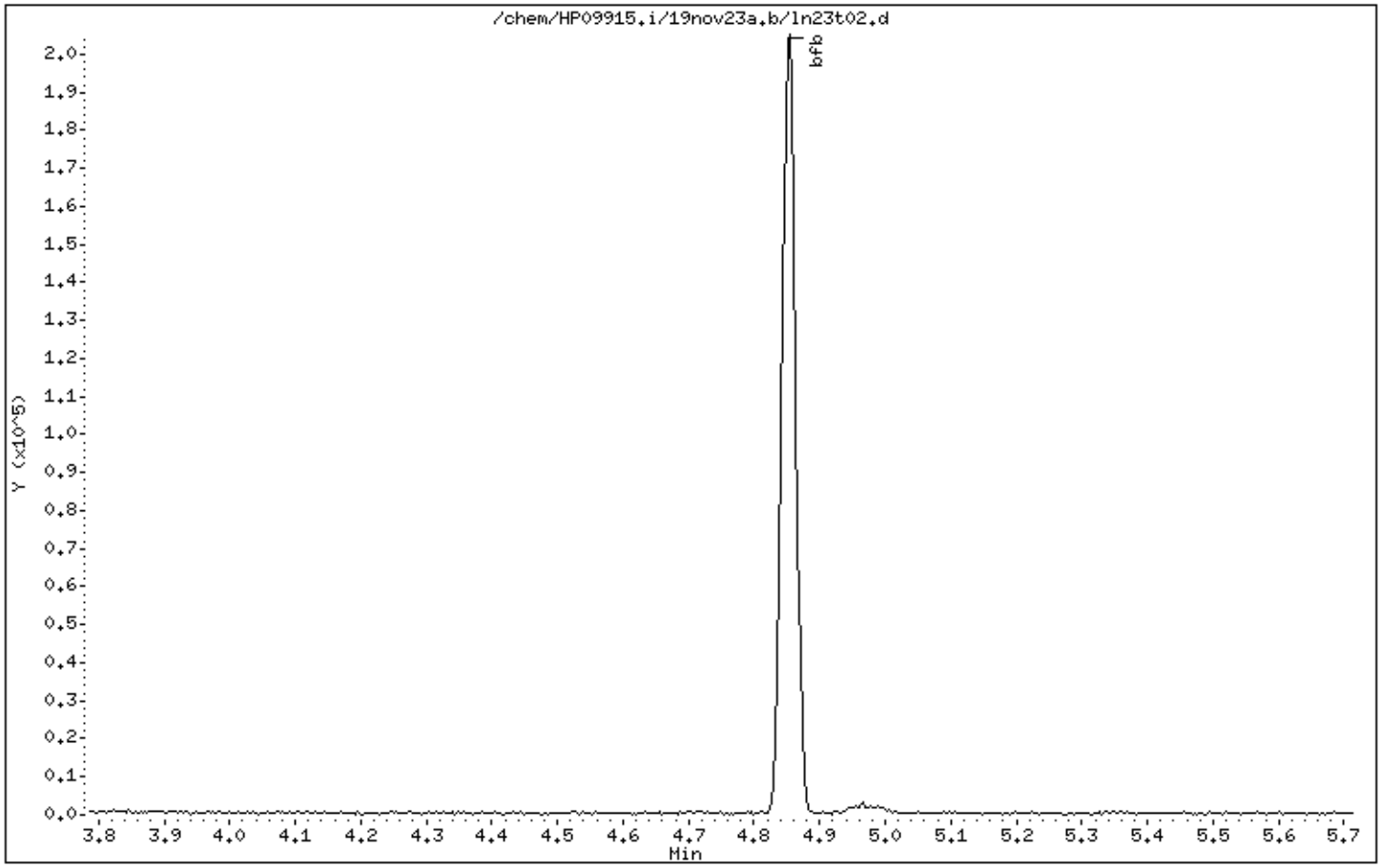
Instrument: HP09915.i

Sample Info: aug-02-19;50NGBFB;1;3;;;;;;

Operator: CLM27445

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem/HP09915.i/19nov23a.b/ln23t02.d

Date : 23-NOV-2019 07:57

Client ID: aug-02-19

Instrument: HP09915.i

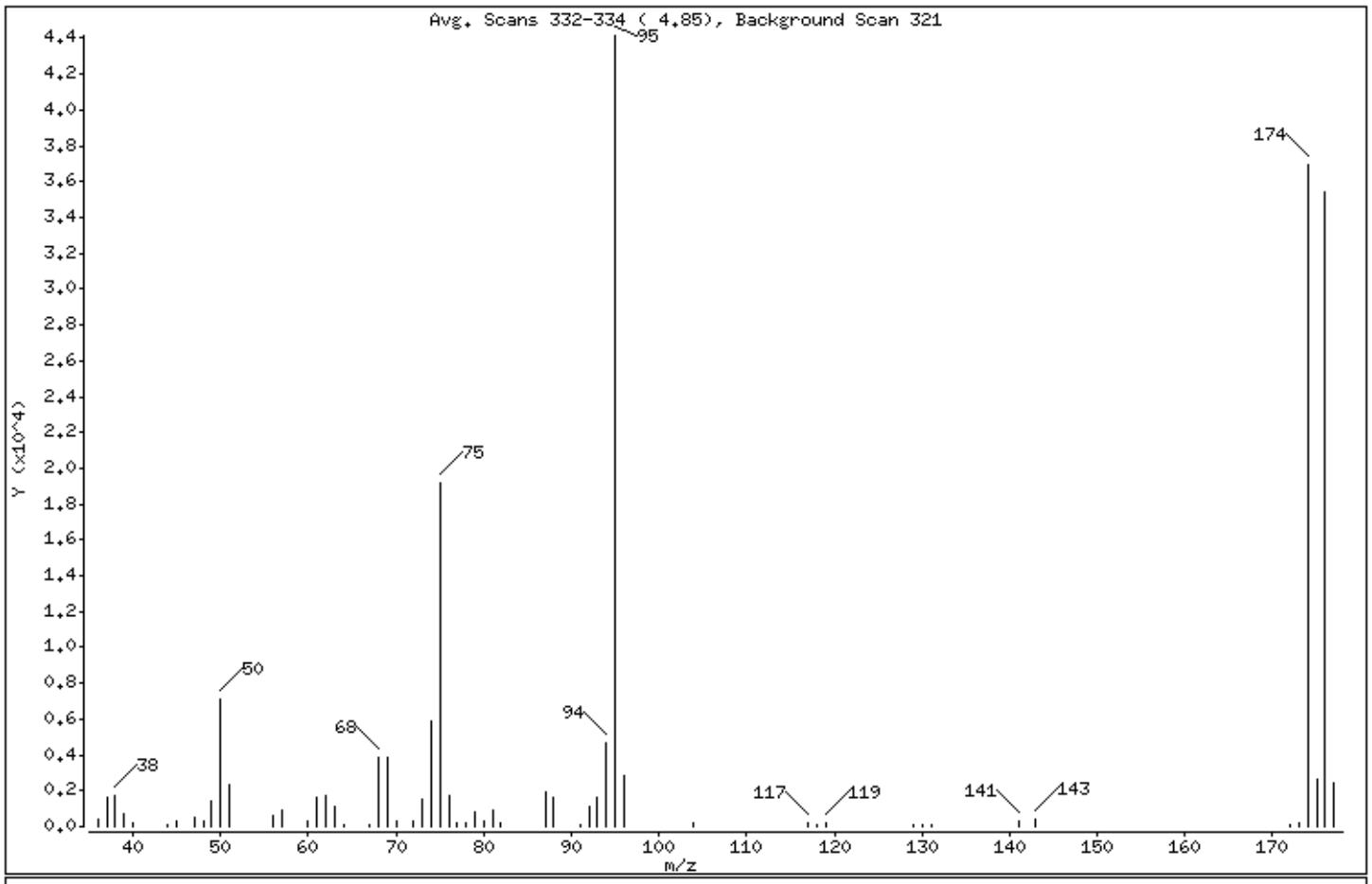
Sample Info: aug-02-19;50NGBFB;1;3;;;;;;

Operator: CLM27445

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.16
75	30.00 - 60.00% of mass 95	43.53
96	5.00 - 9.00% of mass 95	6.39
173	Less than 2.00% of mass 174	0.55 (0.66)
174	50.00 - 100.00% of mass 95	83.68
175	5.00 - 9.00% of mass 174	6.06 (7.25)
176	95.00 - 101.00% of mass 174	80.15 (95.78)
177	5.00 - 9.00% of mass 176	5.44 (6.78)

Date : 23-NOV-2019 07:57

Client ID: aug-02-19 Instrument: HP09915.i

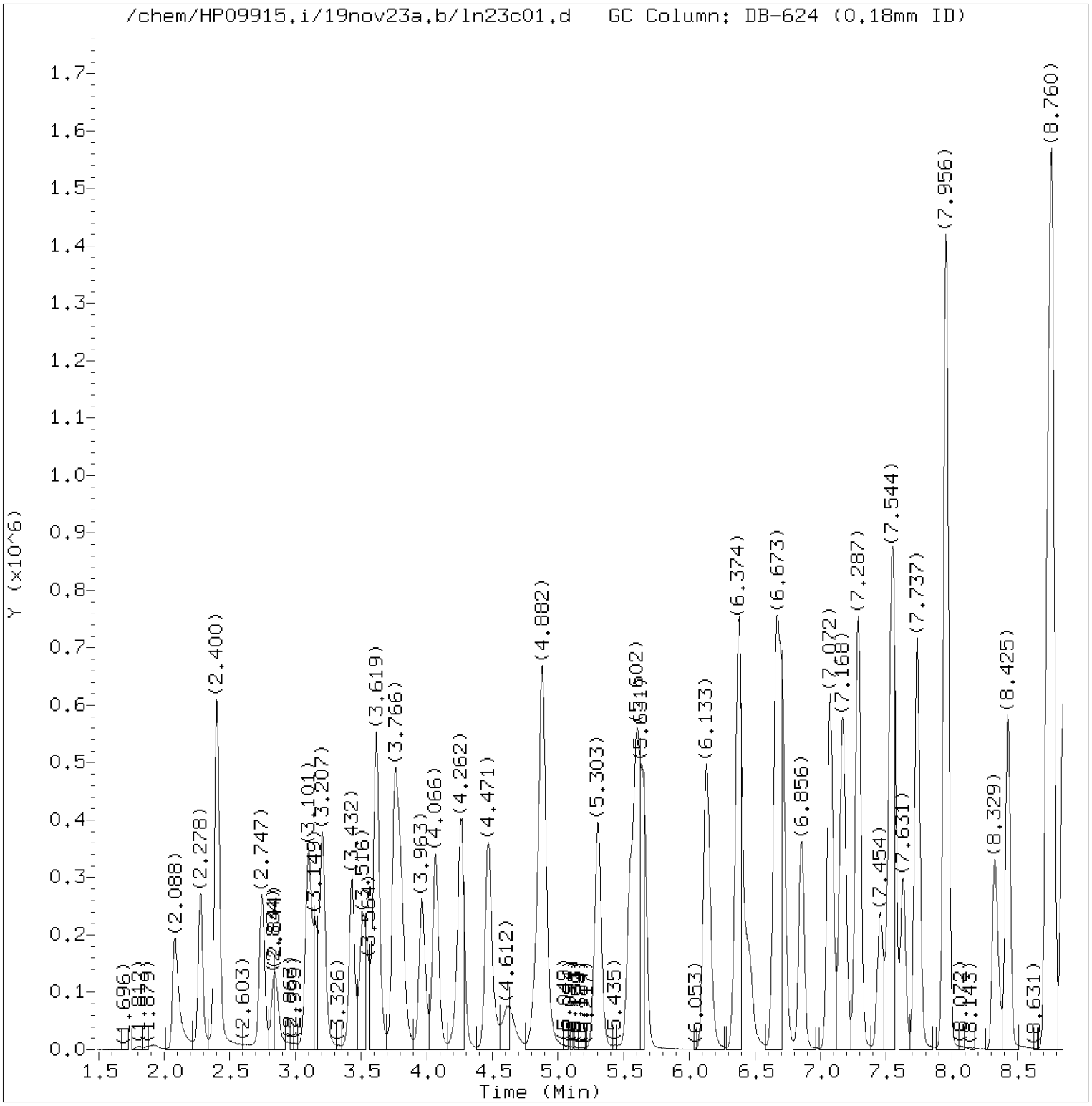
Sample Info: aug-02-19;50NGBFB;1;3;;;;;;

Operator: CLM27445

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: ln23t02.d
Spectrum: Avg. Scans 332-334 (4.85), Background Scan 321
Location of Maximum: 95.00
Number of points: 57

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	371	61.00	1626	79.00	835	119.00	198
37.00	1659	62.00	1729	80.00	340	129.00	55
38.00	1713	63.00	1142	81.00	937	130.00	83
39.00	697	64.00	132	82.00	206	131.00	58
40.00	168	67.00	144	87.00	1893	141.00	254
44.00	143	68.00	3907	88.00	1611	143.00	370
45.00	324	69.00	3810	91.00	54	172.00	143
47.00	460	70.00	306	92.00	1144	173.00	244
48.00	285	72.00	257	93.00	1645	174.00	36944
49.00	1402	73.00	1566	94.00	4717	175.00	2677
50.00	7136	74.00	5916	95.00	44152	176.00	35384
51.00	2379	75.00	19216	96.00	2820	177.00	2400
56.00	617	76.00	1741	104.00	191		
57.00	926	77.00	239	117.00	245		
60.00	342	78.00	218	118.00	59		



Total Ion Chromatogram (TIC)

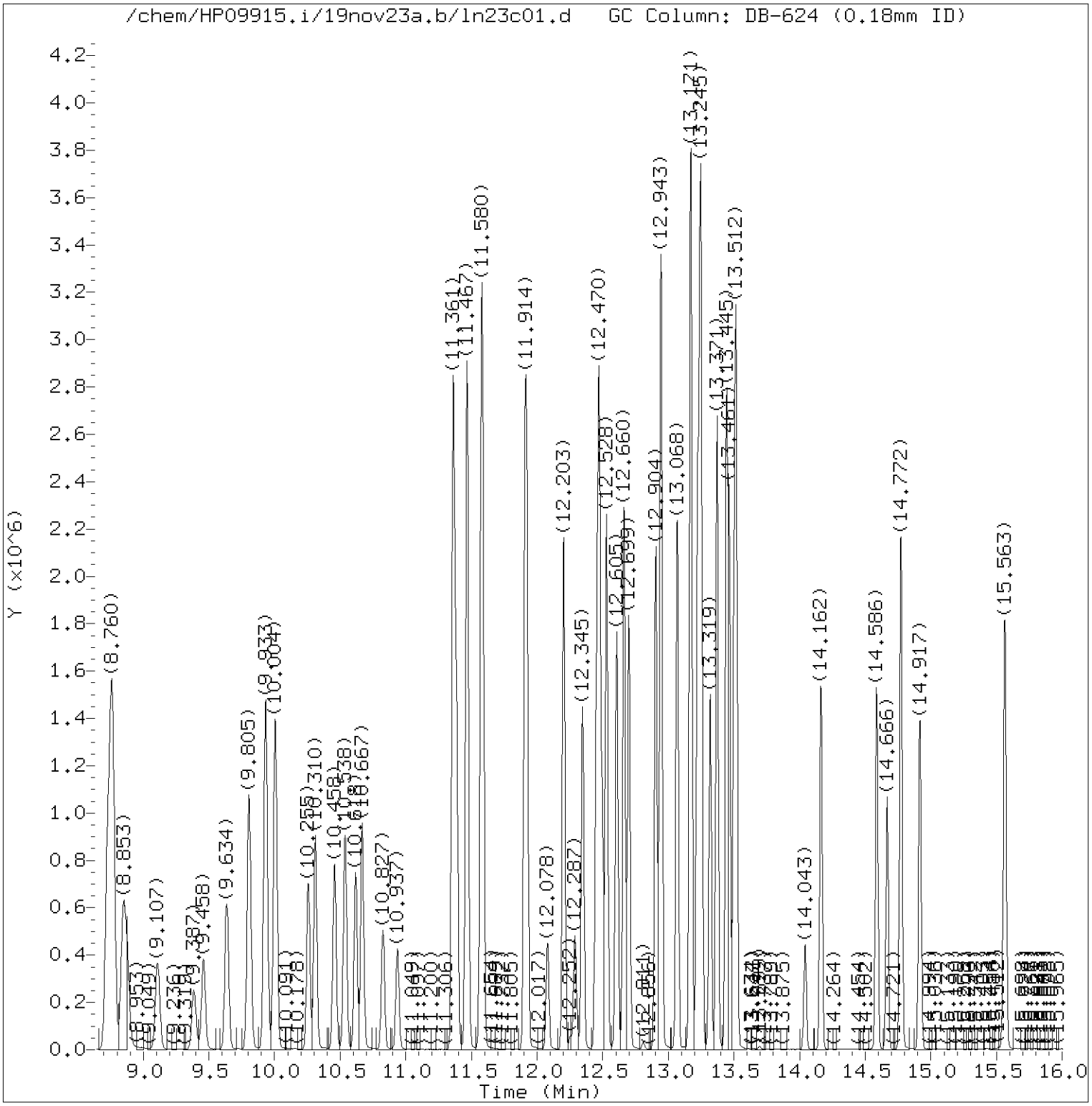
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.085	85	426647	54.170
4) Chloromethane	(2)	2.278	50	395979	52.166
6) Vinyl Chloride	(2)	2.400	62	390013	51.480
5) 1,3-Butadiene	(2)	2.406	39	259783	41.217
8) Bromomethane	(2)	2.741	94	276278	50.873
9) Chloroethane	(2)	2.844	64	209700	50.367
10) Dichlorofluoromethane	(2)	3.098	67	399390	39.860
12) Trichlorofluoromethane	(2)	3.149	101	448631	55.004
11) n-Pentane	(2)	3.204	43	360401	37.390
14) Ethyl ether	(2)	3.429	59	273084	51.813
15) Freon 123a	(2)	3.522	67	301358	45.931
16) Acrolein	(1)	3.615	56	841370	512.444
17) 1,1-Dichloroethene	(2)	3.754	96	215176	44.946
17) 1,1-Dichloroethene	(2)	3.754	63	105439	43.930
18) Acetone	(1)	3.795	58	77055	104.683
19) Freon 113	(2)	3.799	101	249953	45.761
22) Methyl Iodide	(2)	3.963	142	454457	45.809
21) 2-Propanol	(1)	3.985	45	132231	249.887
23) Carbon Disulfide	(2)	4.066	76	799496	44.315
27) Methyl Acetate	(2)	4.236	43	283759	46.019
25) Allyl Chloride	(2)	4.268	41	380893	44.350
28) Methylene Chloride	(2)	4.467	84	268162	47.062
29)*t-Butyl alcohol-d10	(1)	4.490	65	218843	250.000
30) t-Butyl alcohol	(1)	4.622	59	222936	241.966
31) Acrylonitrile	(2)	4.831	53	152489	45.967
33) Methyl Tertiary Butyl Ether	(2)	4.876	73	763776	42.014
32) trans-1,2-Dichloroethene	(2)	4.882	96	256465	46.307
34) n-Hexane	(2)	5.303	57	379461	44.038
36) 1,1-Dichloroethane	(2)	5.545	63	445094	46.069
38) di-Isopropyl ether	(2)	5.602	45	840159	45.088
39) 2-Chloro-1,3-butadiene	(2)	5.654	53	394866	45.553
40) Ethyl t-butyl ether	(2)	6.136	59	784651	43.390
43) 1,2-Dichloroethene (Total)	(2)		96	549419	93.434
44) 2-Butanone	(2)	6.361	43	374479	87.938
42) cis-1,2-Dichloroethene	(2)	6.377	96	292954	47.126
45) 2,2-Dichloropropane	(2)	6.390	77	342986	45.667
47) Propionitrile	(1)	6.451	54	325864	283.854
48) Methacrylonitrile	(2)	6.663	67	435635	121.737

* = Compound is an internal standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.702	128	166357	50.469
50) Tetrahydrofuran	(1)	6.718	71	109845	105.929
51) Chloroform	(2)	6.856	83	445256	48.184
52)$Dibromofluoromethane	(2)	7.072	113	275545	49.903
52)$Dibromofluoromethane	(2)	7.072	111	279116	49.578
53) 1,1,1-Trichloroethane	(2)	7.081	97	368717	46.750
54) Cyclohexane	(2)	7.168	56	471025	44.660
54) Cyclohexane	(2)	7.168	84	417552	45.576
54) Cyclohexane	(2)	7.175	69	147071	45.084
56) Carbon Tetrachloride	(2)	7.281	117	311124	46.511
55) 1,1-Dichloropropene	(2)	7.290	75	354863	46.453
58) Isobutyl Alcohol	(1)	7.454	41	199717	644.138
57)$1,2-Dichloroethane-d4	(2)	7.528	102	71008	50.460
57)$1,2-Dichloroethane-d4	(2)	7.528	65	321059	51.196
57)$1,2-Dichloroethane-d4	(2)	7.528	104	45768	50.919
60) Benzene	(2)	7.557	78	1092018	47.536
61) 1,2-Dichloroethane	(2)	7.631	62	354351	47.957
61) 1,2-Dichloroethane	(2)	7.628	98	35318	48.300
65) t-Amyl methyl ether	(2)	7.737	73	829046	45.675
66)*Fluorobenzene	(2)	7.956	96	1129387	50.000
67) n-Heptane	(2)	7.959	43	367404	45.643
69) n-Butanol	(1)	8.332	56	340740	1276.850
71) Trichloroethene	(2)	8.425	95	278257	48.106
72) Methylcyclohexane	(2)	8.728	83	505175	47.076
72) Methylcyclohexane	(2)	8.728	98	229307	47.222
73) 1,2-Dichloropropane	(2)	8.766	63	280113	48.019
76) Methyl Methacrylate	(2)	8.843	69	280393	49.707
75) 1,4-Dioxane	(1)	8.853	88	65102M	887.571
74) Dibromomethane	(2)	8.876	93	186925	49.526
78) Bromodichloromethane	(2)	9.107	83	331866	48.999
79) 2-Nitropropane	(2)	9.384	41	195731	95.412
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	213296	85.137
81) cis-1,3-Dichloropropene	(2)	9.634	75	449906	50.015
82) 4-Methyl-2-pentanone	(2)	9.805	43	820810	91.317
83)$Toluene-d8	(3)	9.933	98	1206568	48.944
83)$Toluene-d8	(3)	9.933	100	772586	48.381
88) Toluene	(3)	10.007	92	717271	46.410
90) 1,3-Dichloropropene (total)	(3)		100	872271	98.158

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.255	75	422365	48.142
91) Ethyl Methacrylate	(3)	10.310	69	501676	47.052
92) 1,1,2-Trichloroethane	(3)	10.458	97	279687	47.732
93) Tetrachloroethene	(3)	10.535	166	299047	45.688
94) 1,3-Dichloropropane	(3)	10.618	76	472234	47.202
96) 2-Hexanone	(3)	10.667	43	608236	85.463
97) Dibromochloromethane	(3)	10.827	129	287076	47.827
99) 1,2-Dibromoethane	(3)	10.937	107	305899	48.076
100)*Chlorobenzene-d5	(3)	11.358	117	942140	50.000
101) 1-Chlorohexane	(3)	11.364	91	357494	43.058
102) Chlorobenzene	(3)	11.387	112	823619	47.126
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	270952	47.053
104) Ethylbenzene	(3)	11.467	91	1388430	47.002
106) m+p-Xylene	(3)	11.580	106	1100827	94.730
108) Xylene (Total)	(3)		106	1640642	141.759
107) o-Xylene	(3)	11.908	106	539815	47.029
109) Styrene	(3)	11.920	104	921222	48.568
110) Bromoform	(3)	12.081	173	201677	44.966
111) Isopropylbenzene	(3)	12.203	105	1358883	47.200
112) Cyclohexanone	(1)	12.287	55	195406	680.224
114)$4-Bromofluorobenzene	(3)	12.345	95	475891	50.982
114)$4-Bromofluorobenzene	(3)	12.348	174	390248	50.429
116) 1,1,2,2-Tetrachloroethane	(4)	12.448	83	453102	45.942
115) Bromobenzene	(4)	12.464	156	353786	45.087
118) trans-1,4-Dichloro-2-butene	(4)	12.474	53	332260	109.220
117) 1,2,3-Trichloropropane	(4)	12.496	110	138812	45.867
119) n-Propylbenzene	(4)	12.528	91	1592058	46.440
120) 2-Chlorotoluene	(4)	12.609	126	331322	45.493
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	1173871	47.117
121) 4-Chlorotoluene	(4)	12.699	126	345450	45.569
124) tert-Butylbenzene	(4)	12.904	134	230705M	44.776
125) Pentachloroethane	(4)	12.937	167	213232	48.061
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	1234172	47.002
127) sec-Butylbenzene	(4)	13.068	105	1409138	45.832
129) 1,3-Dichlorobenzene	(4)	13.168	146	656157	45.506
130) p-Isopropyltoluene	(4)	13.171	119	1218604	45.814
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	522095	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	675899	45.217

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

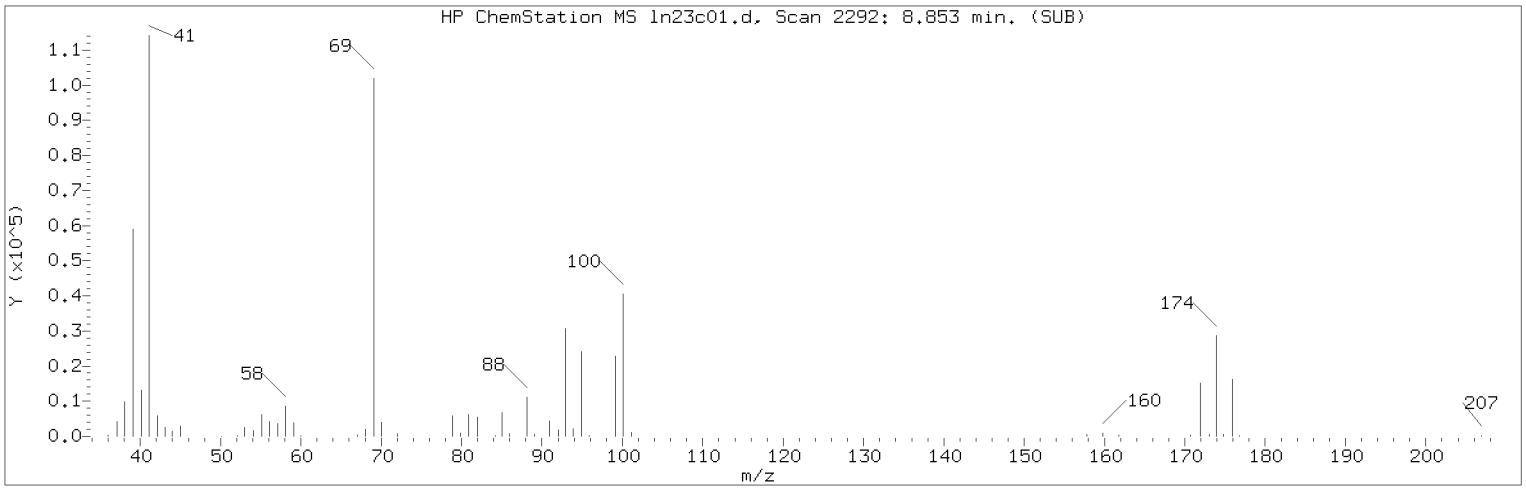
Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

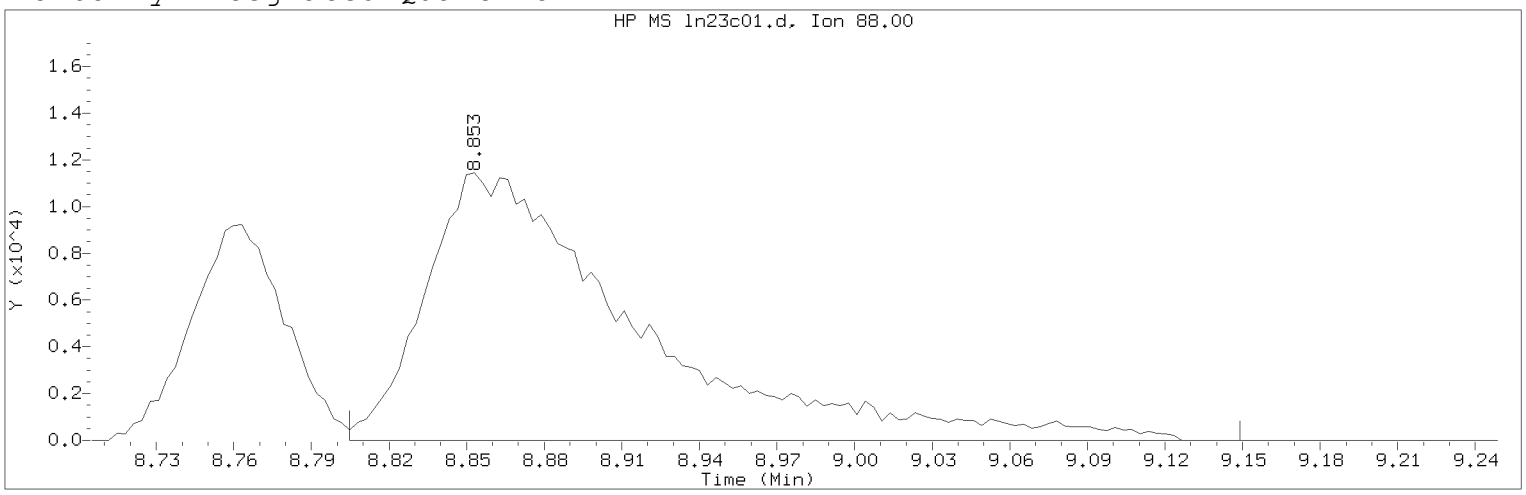
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	1347453	48.445
135) Benzyl Chloride	(4)	13.319	91	969998	46.061
136) 1,3-Diethylbenzene	(4)	13.371	119	799617	46.193
141) Diethylbenzene (total)	(4)		100	2318753	138.613
137) 1,4-Diethylbenzene	(4)	13.441	119	834323	45.492
139) n-Butylbenzene	(4)	13.464	92	599219	44.060
138) 1,2-Dichlorobenzene	(4)	13.502	146	651315	45.776
140) 1,2-Diethylbenzene	(4)	13.515	119	684813	46.929
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	99289	45.989
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	452085	41.356
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	430638	40.515
147) Hexachlorobutadiene	(4)	14.666	225	175764	35.022
148) Naphthalene	(4)	14.772	128	1577744	46.172
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	424272	41.022
150) 2-Methylnaphthalene	(4)	15.563	142	908098	43.156

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

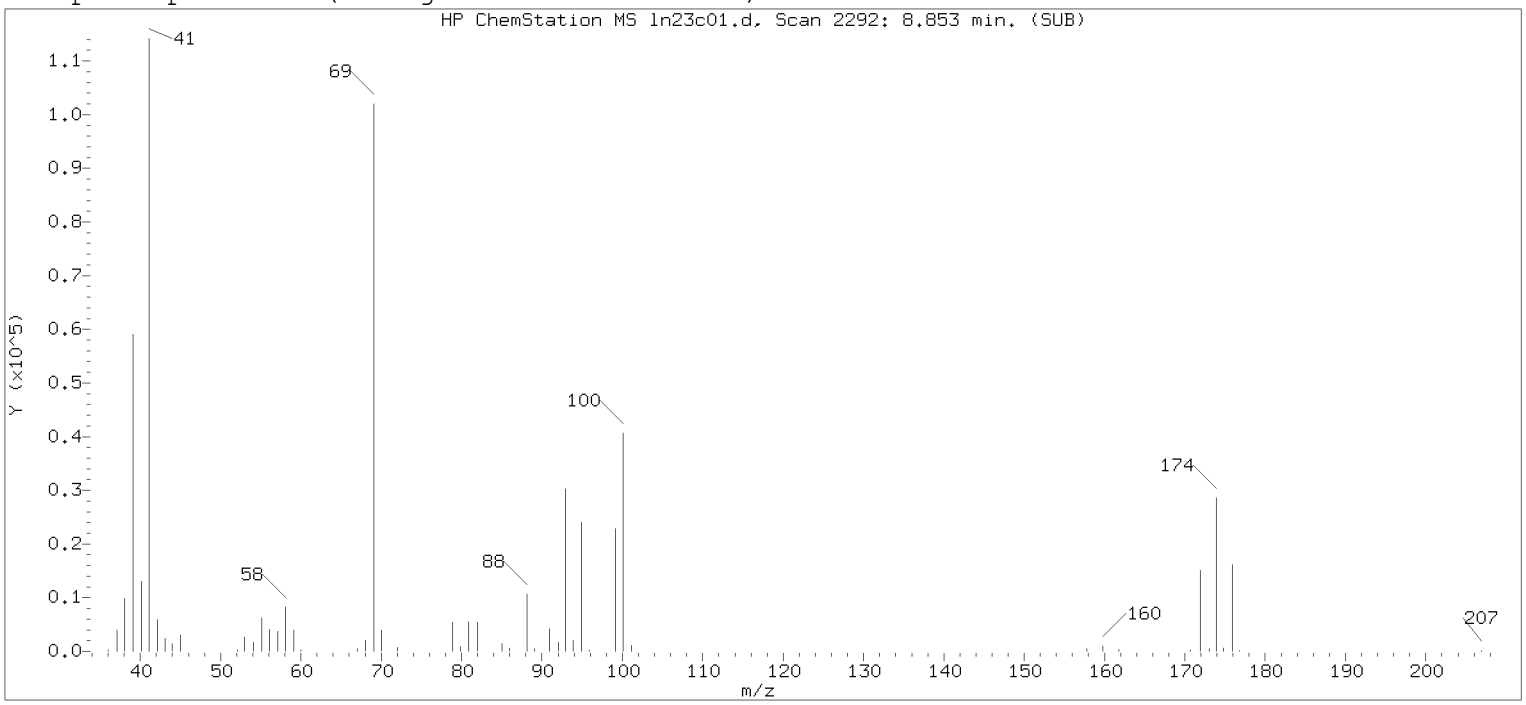
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area (flag) : 65102M
On-Column Amount (ng) : 887.5715
Integration start scan : 2276 Integration stop scan: 2383
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

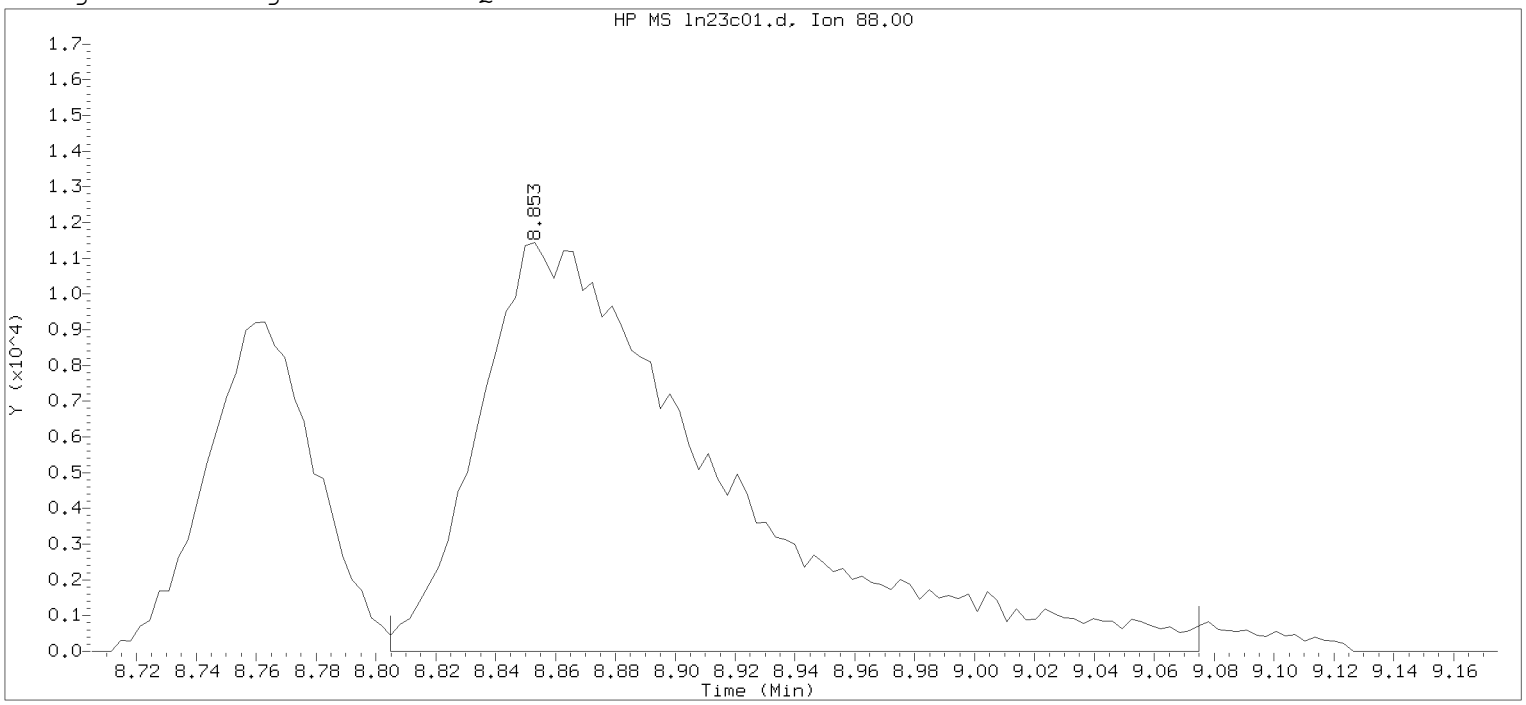
Analyst responsible for change: Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:45.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

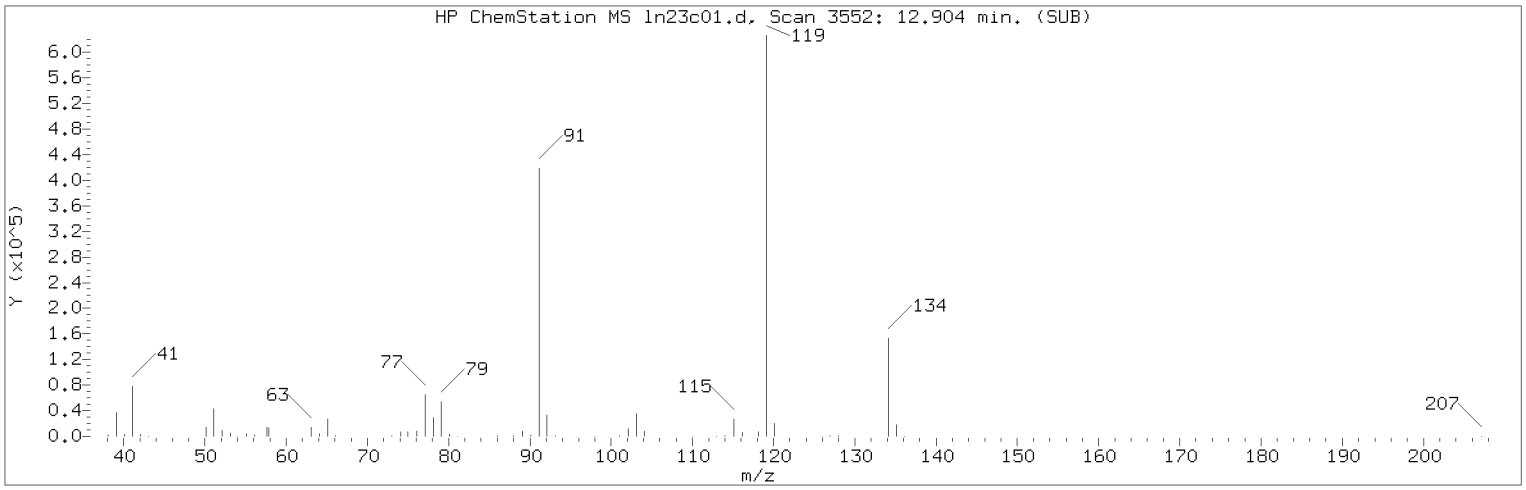
Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 08:59
Date, time and analyst ID of latest file update: 23-Nov-2019 08:59 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

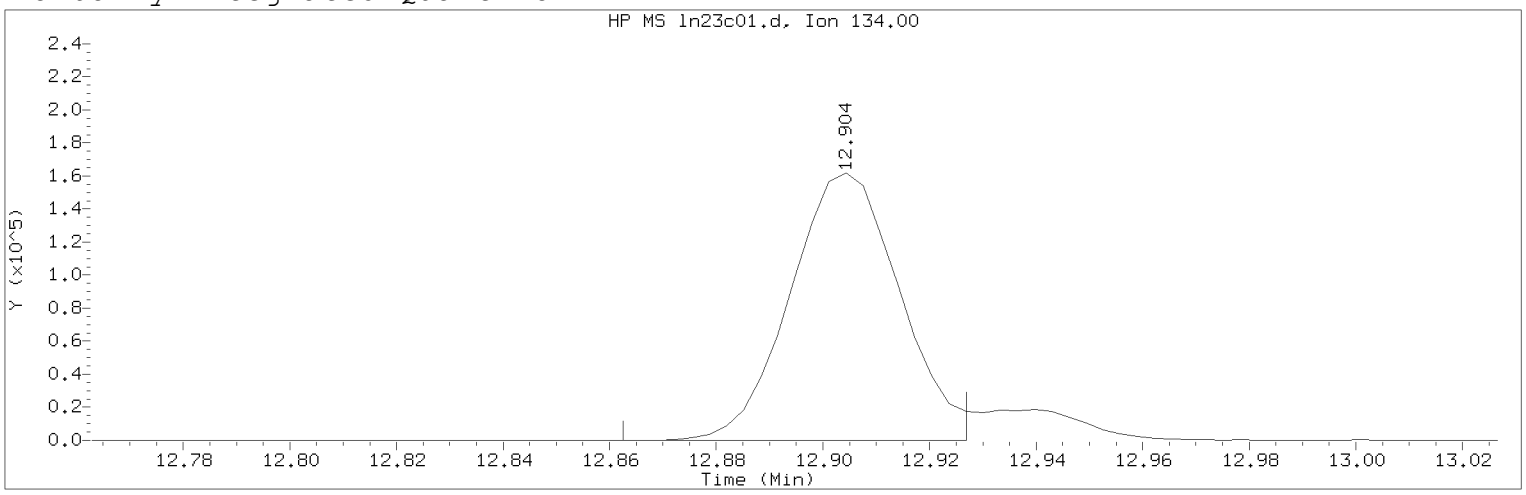
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area : 63644
On-column Amount (ng) : 867.7000
Integration start scan : 2276 Integration stop scan: 2360
Y at integration start : 0 Y at integration end: 0

Digitally signed by Corie L. Mellinger on 11/23/2019 at 09:09.
Target 3.5 esignature user: CLM27445

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

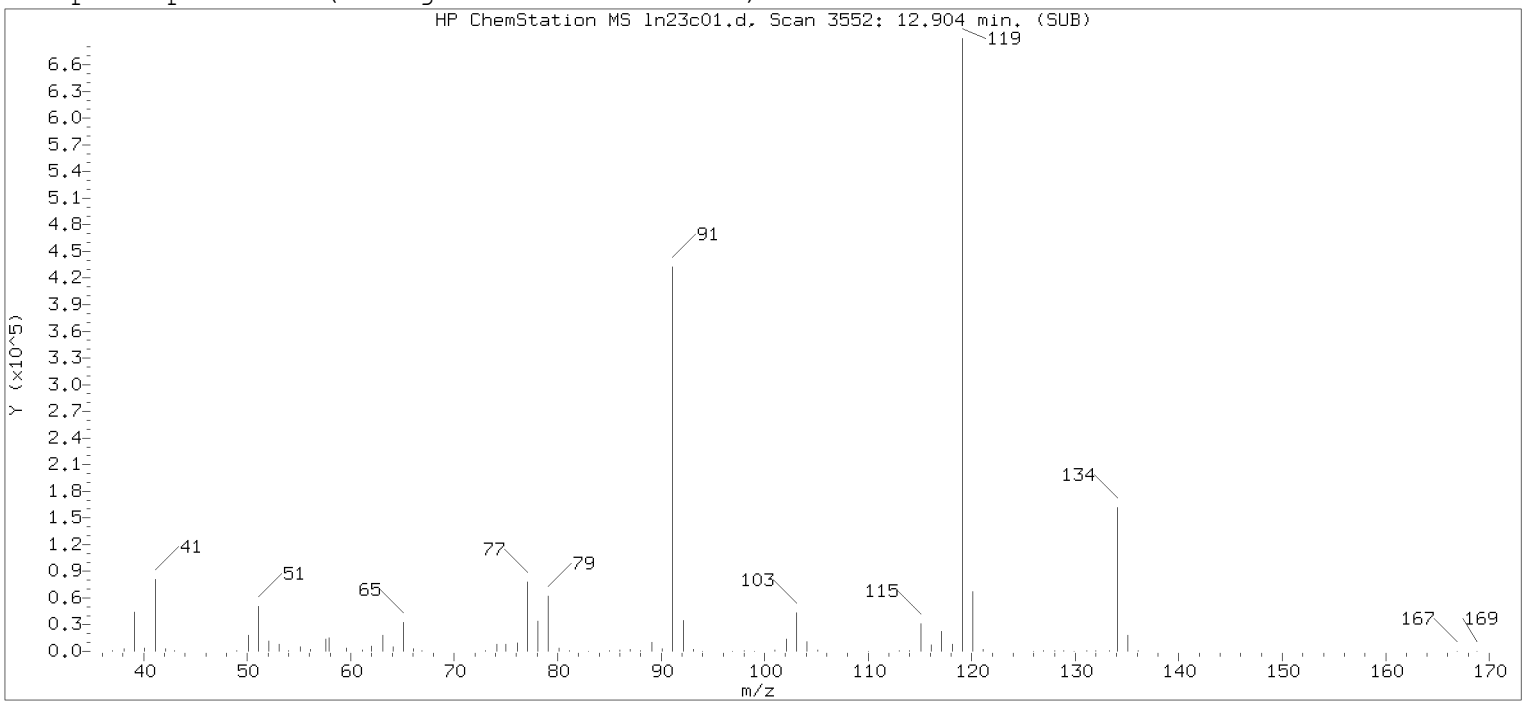
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 230705M
On-Column Amount (ng) : 44.7756
Integration start scan : 3538 Integration stop scan: 3558
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

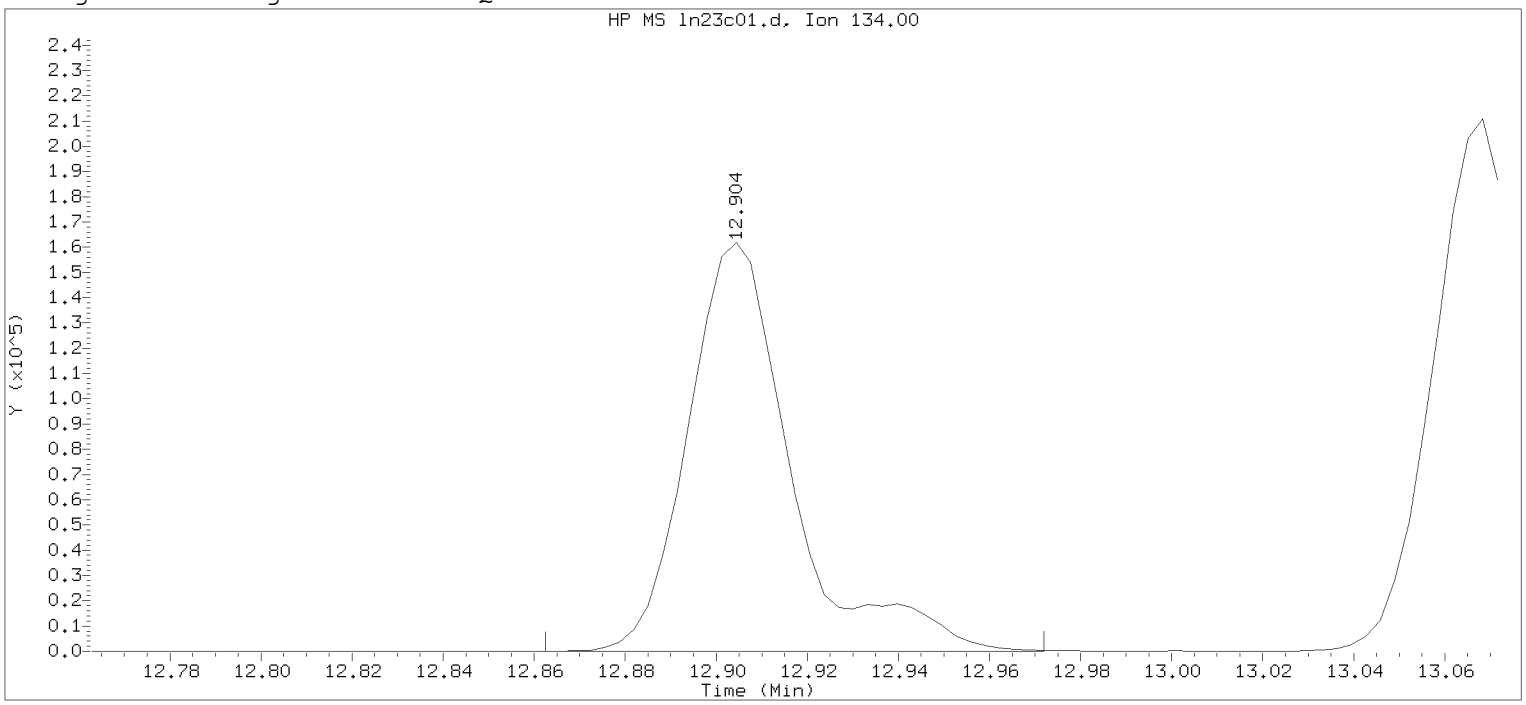
Analyst responsible for change: Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:45.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 08:59
Date, time and analyst ID of latest file update: 23-Nov-2019 08:59 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 255483
On-column Amount (ng) : 49.5846
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Corie L. Mellinger on 11/23/2019 at 09:09.
Target 3.5 esignature user: CLM27445

Raw QC Data

Volatiles by GC/MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKL87

Data file: /chem/HP09915.i/19nov23a.b/ln23b01.d
Injection date and time: **23-NOV-2019 09:48**
Data file Sample Info. Line: VBLKL87;VBLKL87;1;3;;;;;;
Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493	(-0.003)	936	65	224793	(3)	250.00	
66) Fluorobenzene	7.953	(0.003)	2012	96	1154568	(2)	50.00	
100) Chlorobenzene-d5	11.358	(0.000)	3071	117	947038	(1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.220	(0.003)	3650	152	506608	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(-0.001)	113	273712	48.490	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	73640	51.189	102%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	1203589	48.571	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	460603	49.089	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)				Not Detected					0.2	1
4) Chloromethane	(2)				Not Detected					0.2	1
5) 1,3-Butadiene	(2)				Not Detected					1	3
6) Vinyl Chloride	(2)				Not Detected					0.2	1
8) Bromomethane	(2)				Not Detected					0.3	1
9) Chloroethane	(2)				Not Detected					0.2	1
11) n-Pentane	(2)				Not Detected					0.4	10
12) Trichlorofluoromethane	(2)				Not Detected					0.2	1
14) Ethyl ether	(2)				Not Detected					0.2	5
15) Freon 123a	(2)				Not Detected					0.4	5
16) Acrolein	(1)				Not Detected					2	100
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
21) 2-Propanol	(1)				Not Detected					18	100
22) Methyl Iodide	(2)				Not Detected					0.2	1
23) Carbon Disulfide	(2)				Not Detected					0.2	5
25) Allyl Chloride	(2)				Not Detected					0.3	5
27) Methyl Acetate	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
30) t-Butyl alcohol	(1)				Not Detected					12	50
31) Acrylonitrile	(2)				Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.2	1
34) n-Hexane	(2)				Not Detected					2	5
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
38) di-Isopropyl ether	(2)				Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)				Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)				Not Detected					0.4	2

Digitally signed by Linda C. Pape on 11/25/2019 at 13:55. Target 3.5 esignature user ID: lcp00895

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23b01.d Injection date and time: **23-NOV-2019 09:48**
Data file Sample Info. Line: VBLKL87;VBLKL87;1;3;;;;;; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)				Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					1	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
72) Methylcyclohexane	(2)				Not Detected					0.5	5
73) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
74) Dibromomethane	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
76) Methyl Methacrylate	(2)				Not Detected					0.2	5
78) Bromodichloromethane	(2)				Not Detected					0.2	1
79) 2-Nitropropane	(2)				Not Detected					0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
81) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
82) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
88) Toluene	(3)				Not Detected					0.2	1
89) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
90) 1,3-Dichloropropene (total)	(3)				Not Detected					0.4	2
91) Ethyl Methacrylate	(3)				Not Detected					0.2	5
92) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
94) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
96) 2-Hexanone	(3)				Not Detected					0.3	10
97) Dibromochloromethane	(3)				Not Detected					0.2	1
99) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
101) 1-Chlorohexane	(3)				Not Detected					0.3	5
102) Chlorobenzene	(3)				Not Detected					0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
109) Styrene	(3)				Not Detected					0.2	5
110) Bromoform	(3)				Not Detected					1	4
111) Isopropylbenzene	(3)				Not Detected					0.2	5
112) Cyclohexanone	(1)				Not Detected					25	100
115) Bromobenzene	(4)				Not Detected					0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
117) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
118) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50
119) n-Propylbenzene	(4)				Not Detected					0.2	5

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23b01.d Injection date and time: **23-NOV-2019 09:48**
Data file Sample Info. Line: VBLKL87;VBLKL87;1;3;;;;;; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

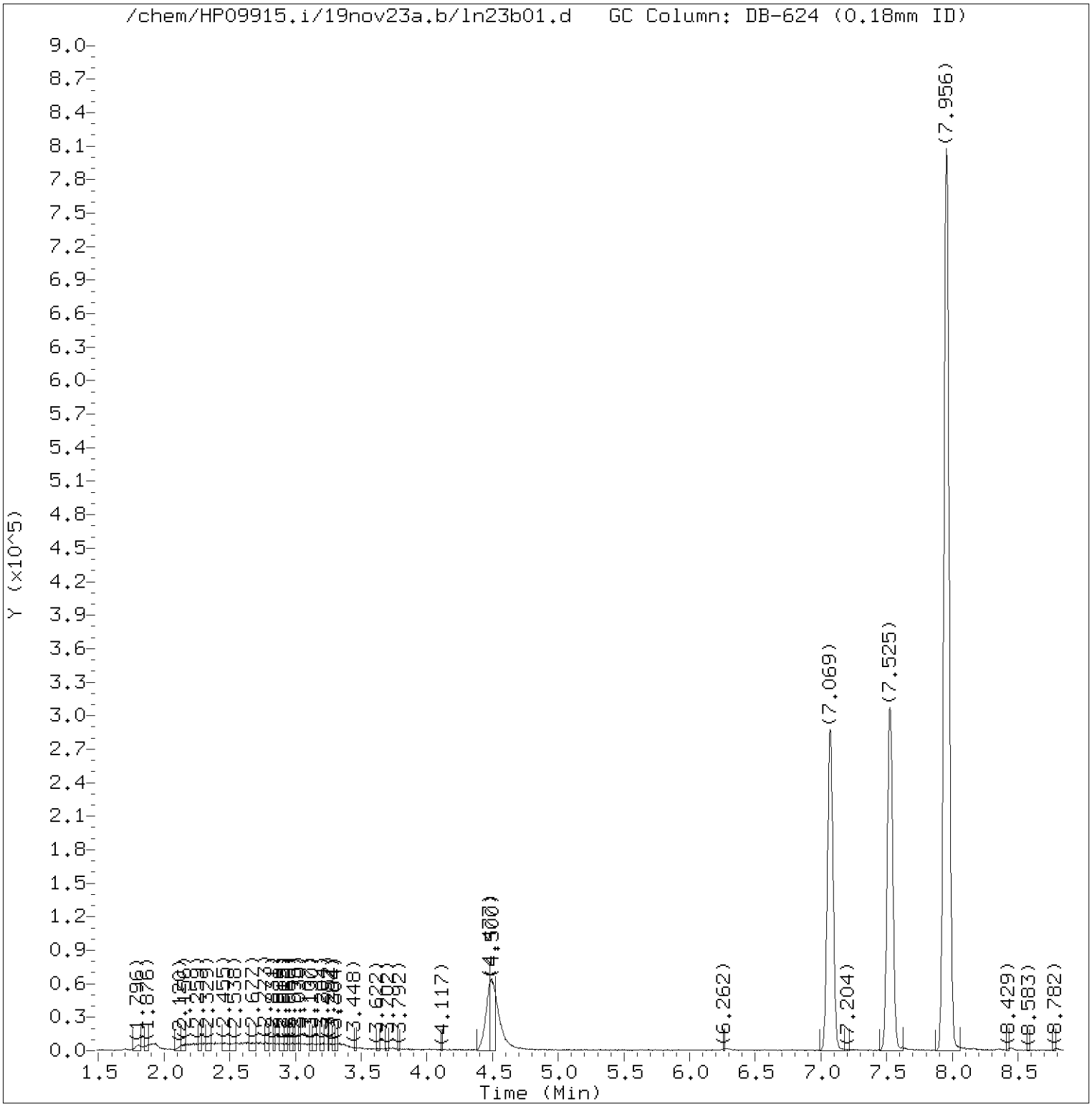
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)			Not Detected					0.2	5
121) 4-Chlorotoluene	(4)			Not Detected					0.2	5
122) 1,3,5-Trimethylbenzene	(4)			Not Detected					0.3	5
124) tert-Butylbenzene	(4)			Not Detected					0.3	5
125) Pentachloroethane	(4)			Not Detected					0.2	5
126) 1,2,4-Trimethylbenzene	(4)			Not Detected					1	5
127) sec-Butylbenzene	(4)			Not Detected					0.2	5
129) 1,3-Dichlorobenzene	(4)			Not Detected					0.2	5
130) p-Isopropyltoluene	(4)			Not Detected					0.2	5
133) 1,4-Dichlorobenzene	(4)			Not Detected					0.2	5
134) 1,2,3-Trimethylbenzene	(4)			Not Detected					0.3	5
135) Benzyl Chloride	(4)			Not Detected					1	5
136) 1,3-Diethylbenzene	(4)			Not Detected					0.2	5
137) 1,4-Diethylbenzene	(4)	13.441(-0.000)	119	3836	0.216	0.22		J	0.2	5
138) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
139) n-Butylbenzene	(4)	13.461(-0.000)	92	4540	0.344	0.34		J	0.2	5
140) 1,2-Diethylbenzene	(4)			Not Detected					0.2	5
141) Diethylbenzene (total)	(4)			Not Detected					0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)			Not Detected					0.3	5
144) 1,3,5-Trichlorobenzene	(4)	14.165(-0.000)	180	5851	0.552	0.55		J	0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.586(-0.000)	180	5468	0.530	0.53		J	0.3	5
147) Hexachlorobutadiene	(4)			Not Detected					2	5
148) Naphthalene	(4)			Not Detected					1	5
149) 1,2,3-Trichlorobenzene	(4)	14.914(-0.000)	180	5973	0.595	0.60		J	0.4	5
150) 2-Methylnaphthalene	(4)			Not Detected					2	4

Total number of targets = 110

Digitally signed by Linda C. Pape on 11/25/2019 at 13:55. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:45. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

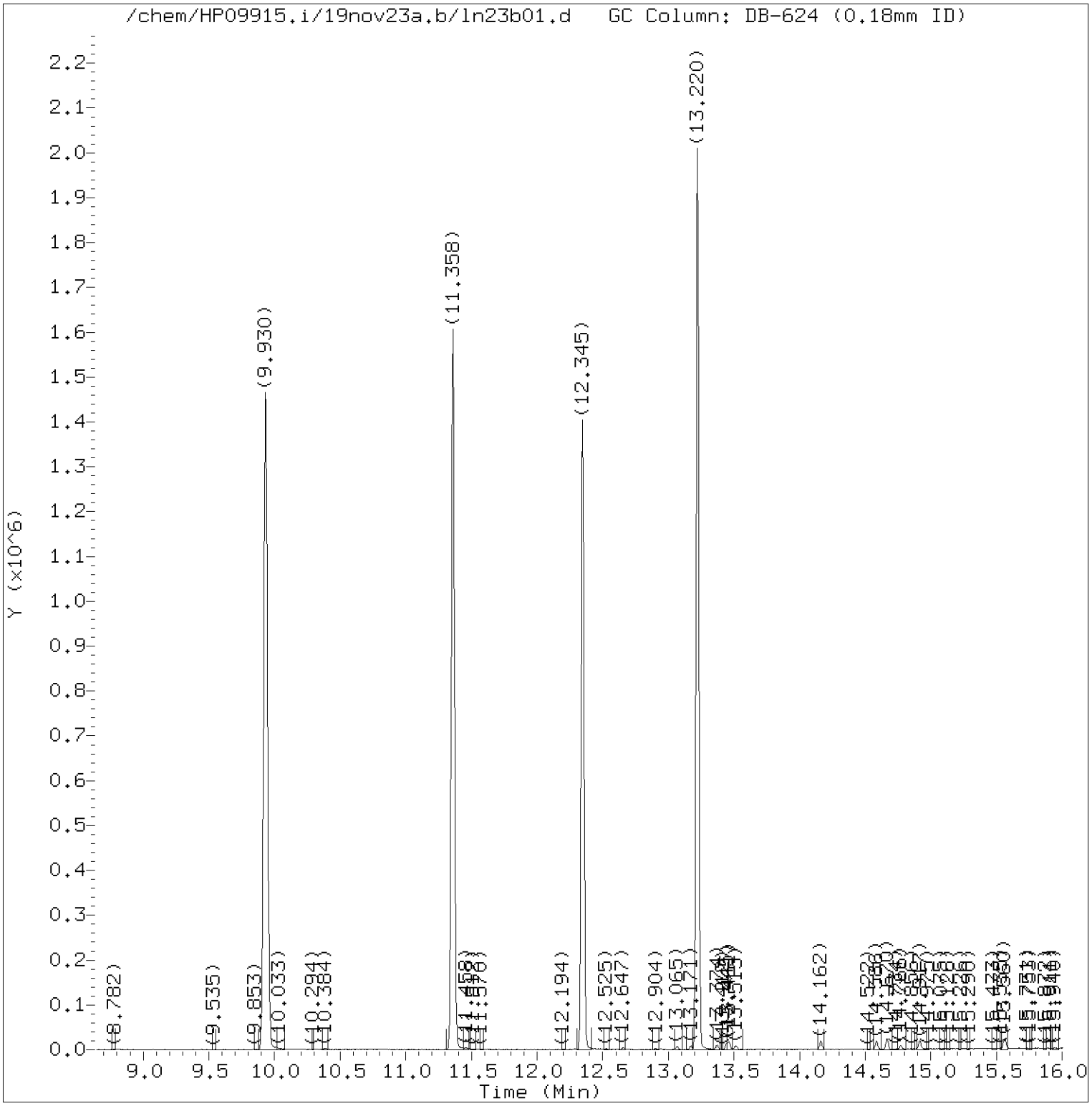
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:55.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:55.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.493	65	224793	250.000
52)$Dibromofluoromethane	(2)	7.075	113	273712	48.490
57)$1,2-Dichloroethane-d4	(2)	7.525	102	73640	51.189
66)*Fluorobenzene	(2)	7.953	96	1154568	50.000
83)$Toluene-d8	(3)	9.930	98	1203589	48.571
100)*Chlorobenzene-d5	(3)	11.358	117	947038	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	460603	49.089
131)*1,4-Dichlorobenzene-d4	(4)	13.220	152	506608	50.000
137) 1,4-Diethylbenzene	(4)	13.441	119	3836	0.216
139) n-Butylbenzene	(4)	13.461	92	4540	0.344
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	5851	0.552
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	5468	0.530
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	5973	0.595

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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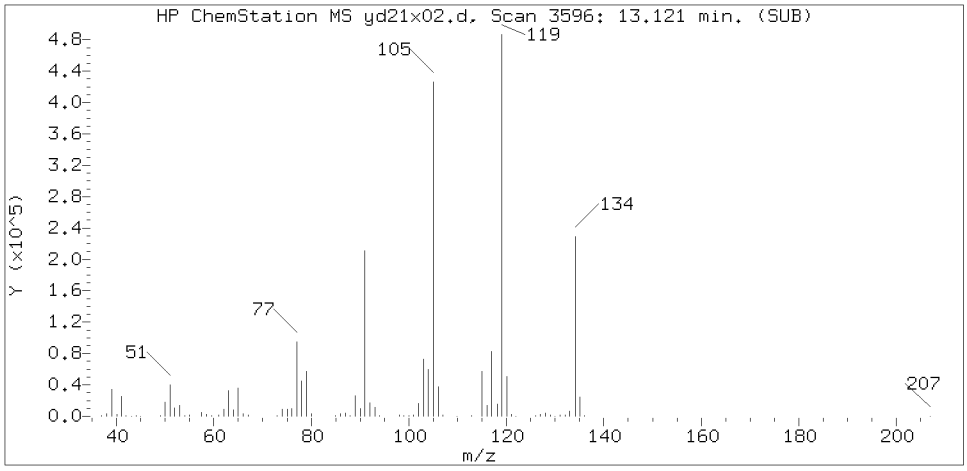
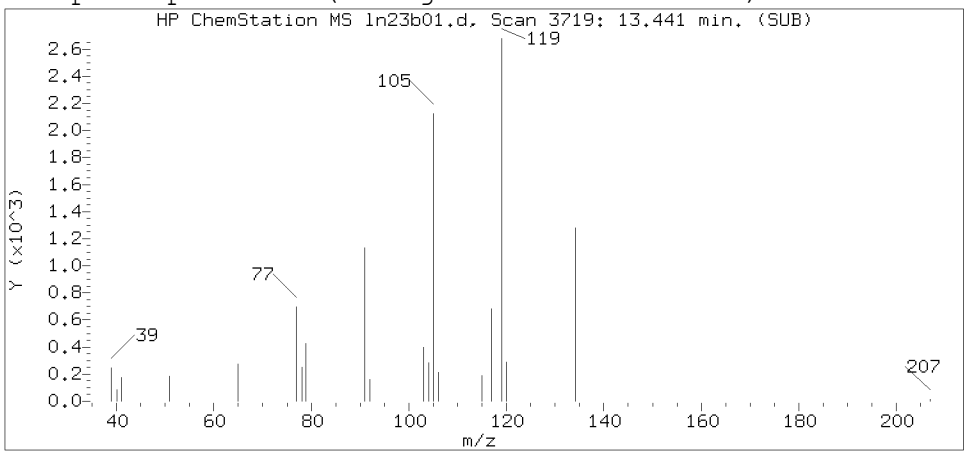
on 11/25/2019 at 13:55.
Target 3.5 esignature user ID: lcp00895

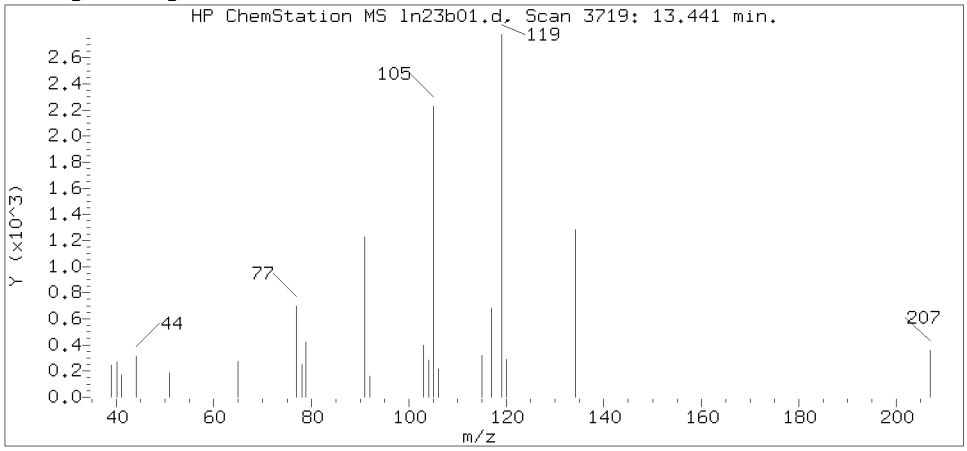
Reference Standard Spectrum for 1,4-Diethylbenzene

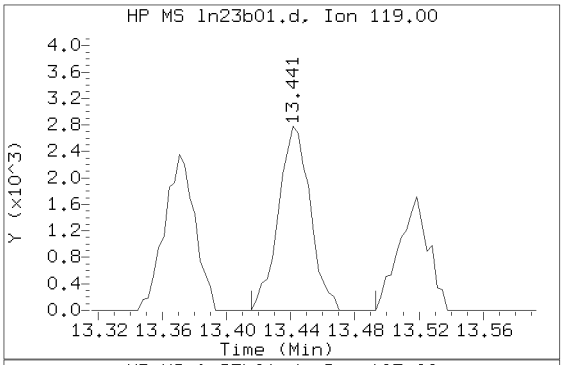


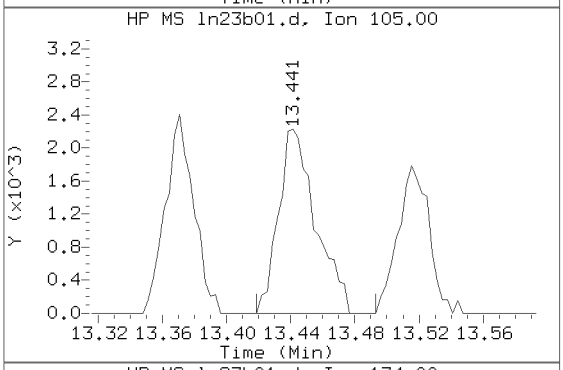
Sample Spectrum (Background Subtracted)

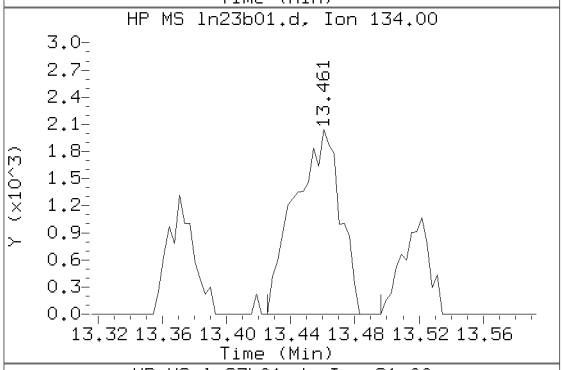


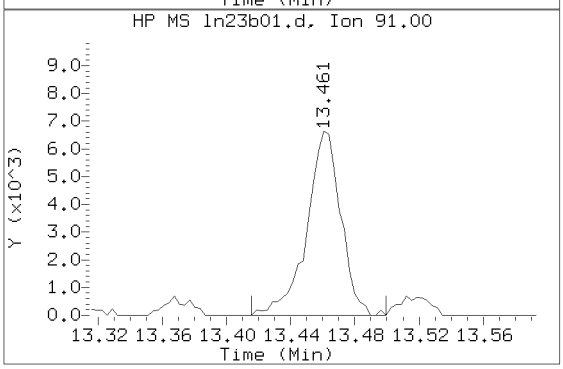
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compound Number : 137
Compound Name : 1,4-Diethylbenzene
Scan Number : 3719
Retention Time (minutes): 13.441
Relative Retention Time :-0.00025
Quant Ion : 119.00
Area (flag) : 3836
On-Column Amount (ng) : 0.2156

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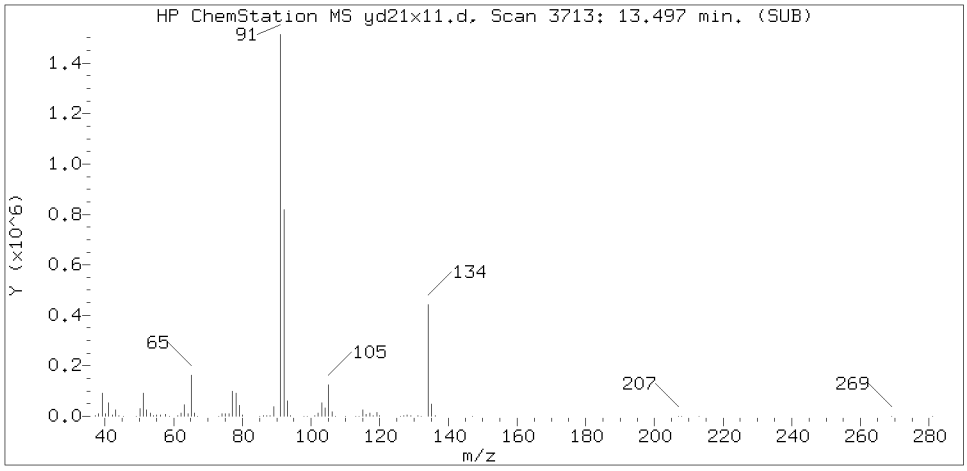
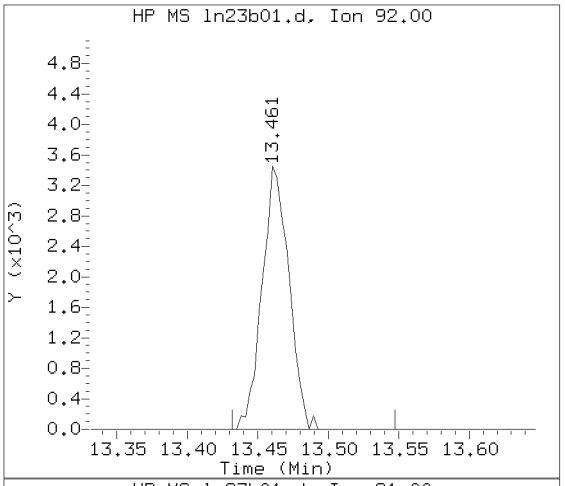
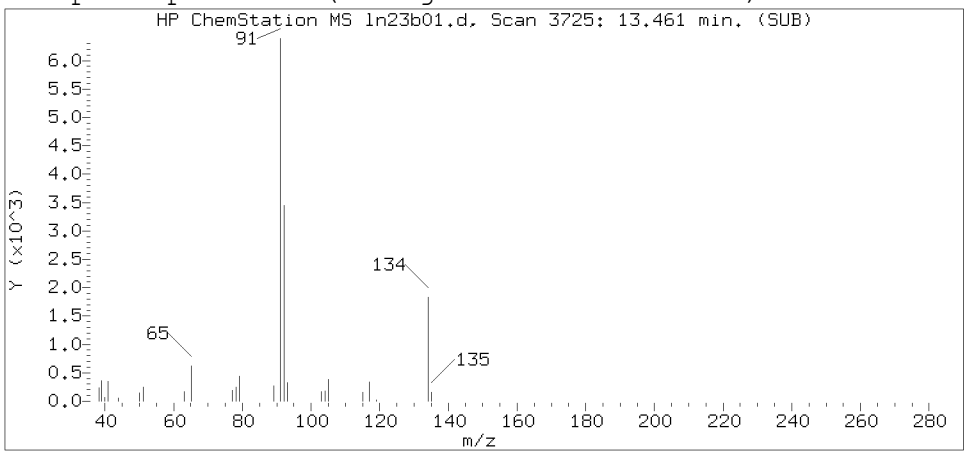
Target 3.5 esignature user ID: lcp00895

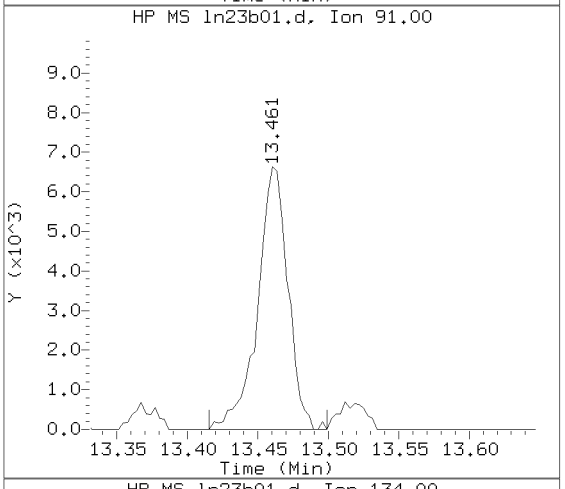
Reference Standard Spectrum for n-Butylbenzene



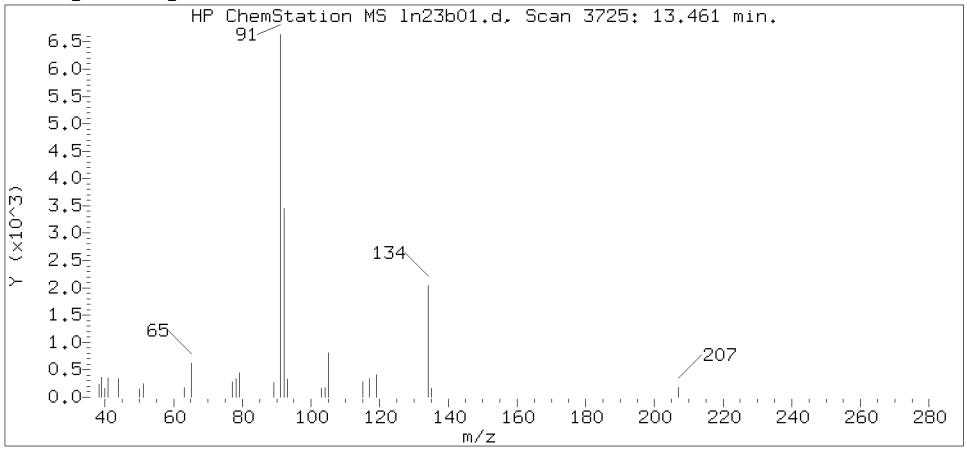


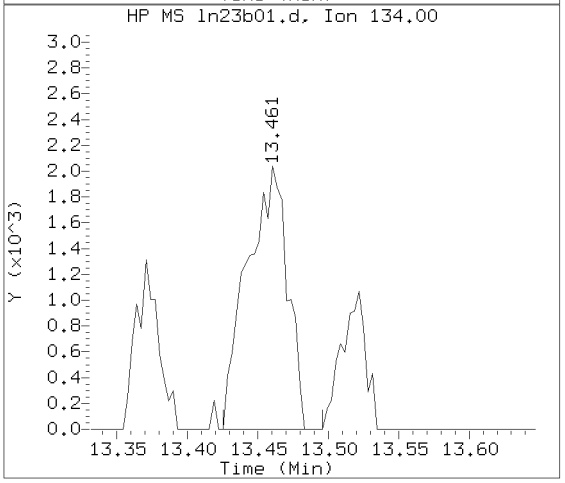
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 3725
Retention Time (minutes): 13.461
Relative Retention Time :-0.00000
Quant Ion : 92.00
Area (flag) : 4540
On-Column Amount (ng) : 0.3440

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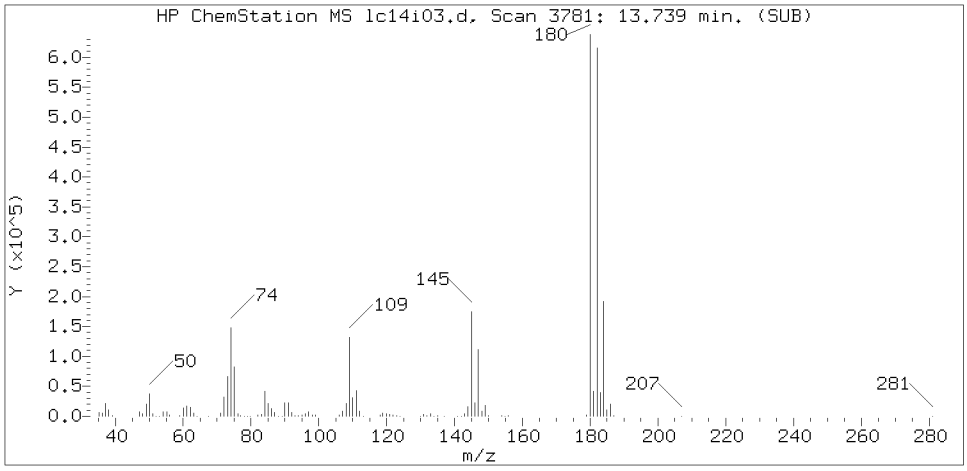
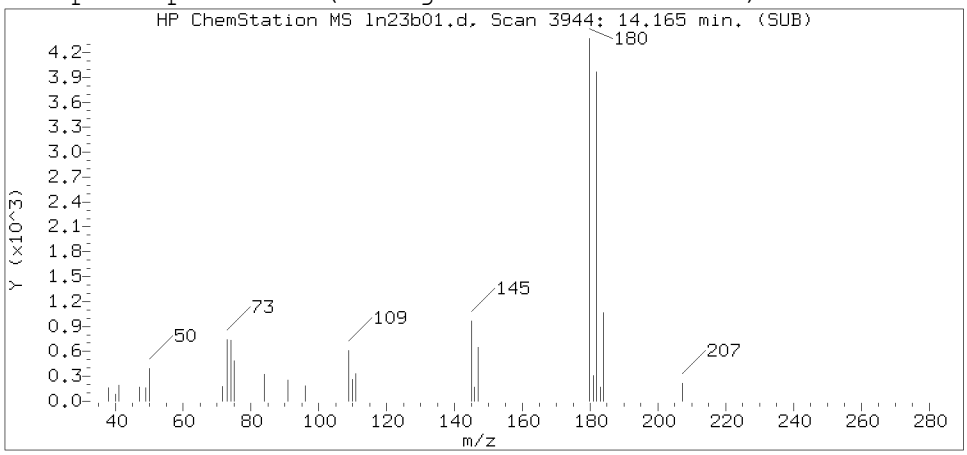
Target 3.5 esignature user ID: lcp00805

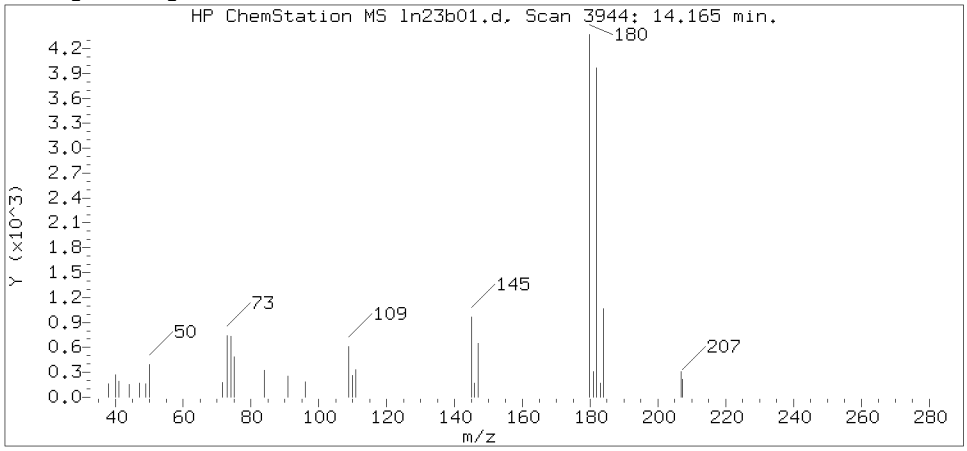
Reference Standard Spectrum for 1,3,5-Trichlorobenzene

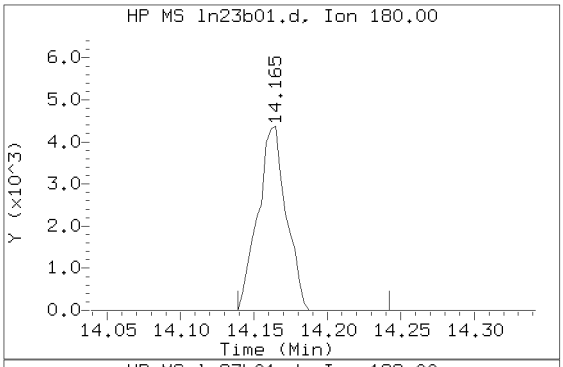


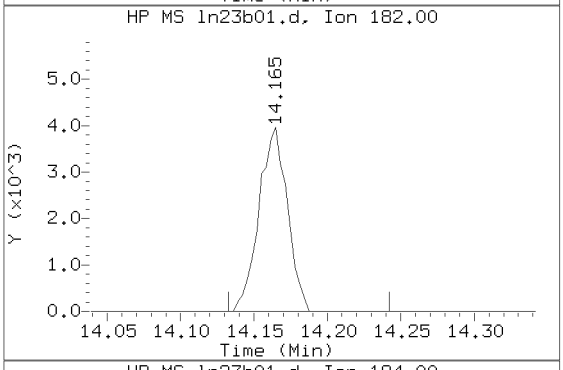
Sample Spectrum (Background Subtracted)

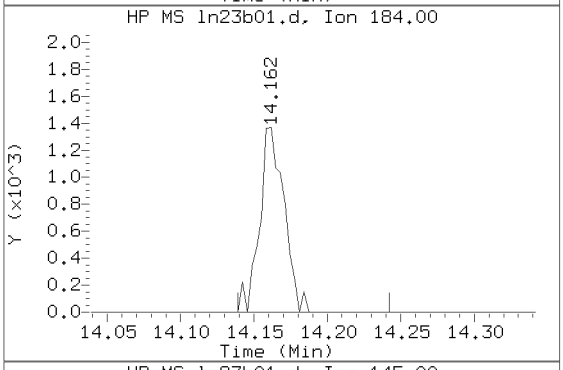


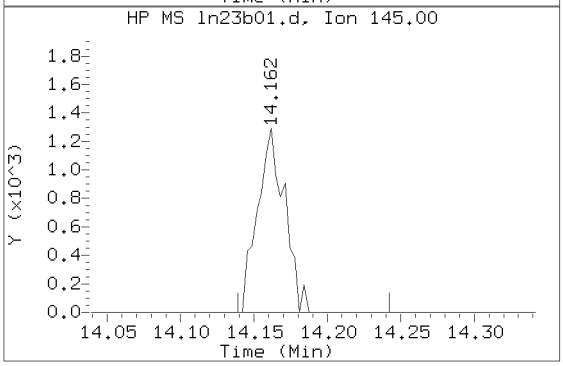
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compound Number : 144
Compound Name : 1,3,5-Trichlorobenzene
Scan Number : 3944
Retention Time (minutes): 14.165
Relative Retention Time :-0.00026
Quant Ion : 180.00
Area (flag) : 5851
On-Column Amount (ng) : 0.5516

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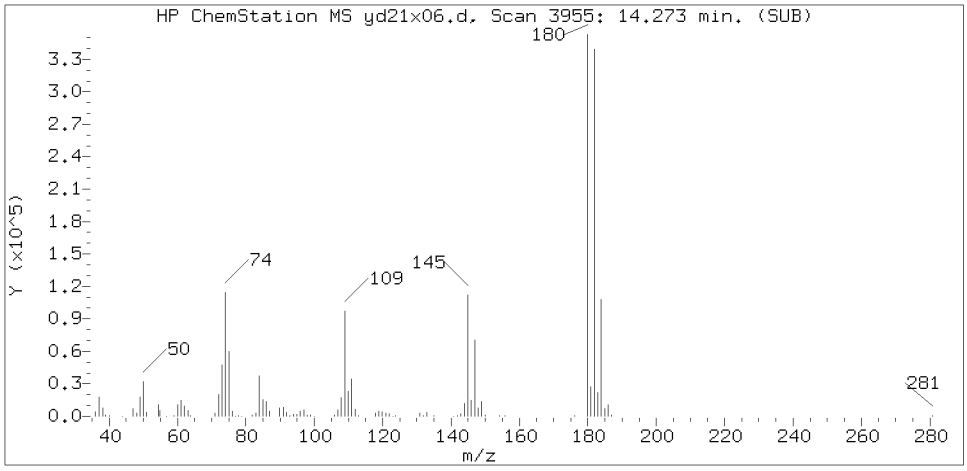
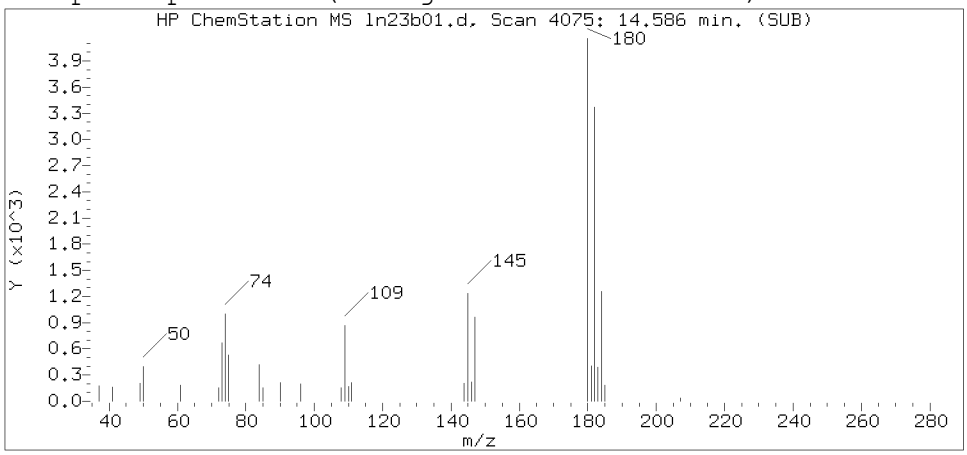
Target 3.5 esignature user ID: lcp00895

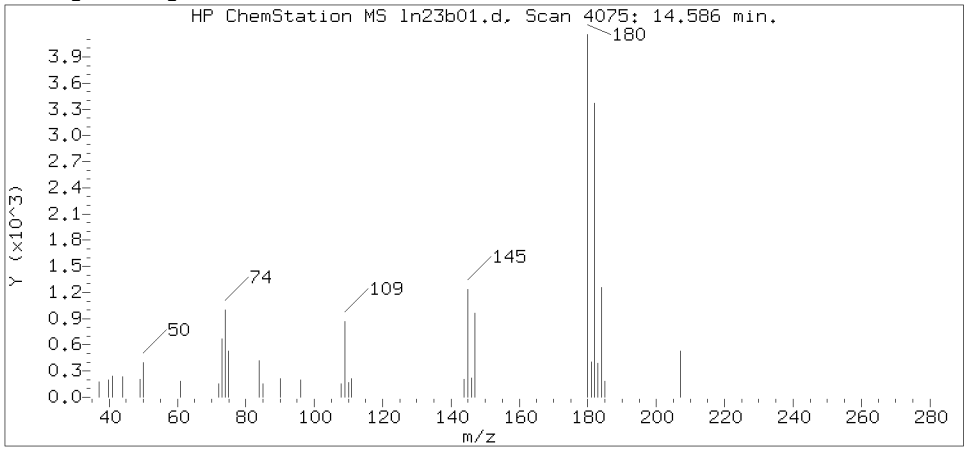
Reference Standard Spectrum for 1,2,4-Trichlorobenzene

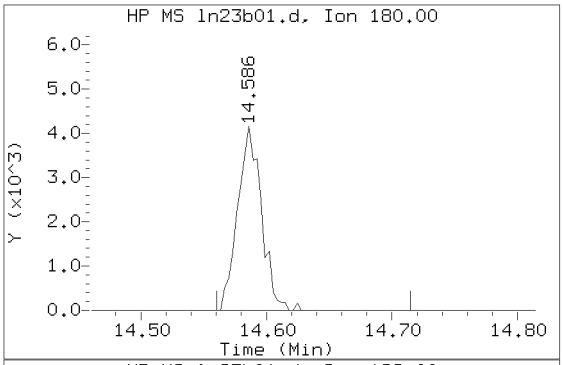


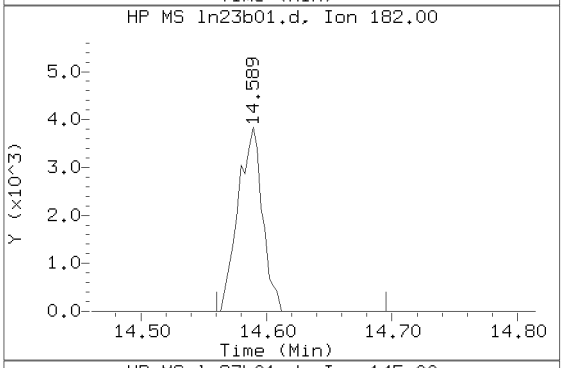
Sample Spectrum (Background Subtracted)

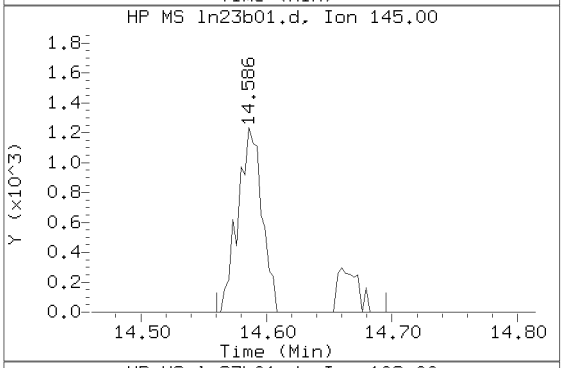


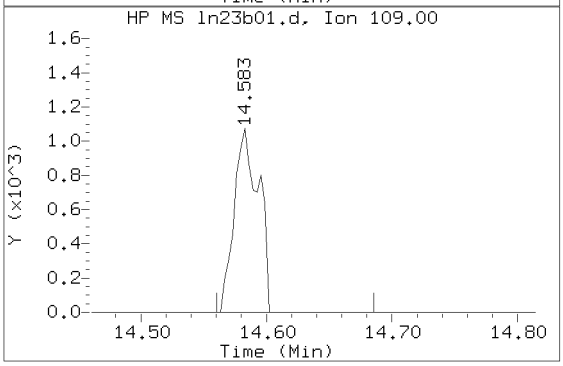
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compound Number : 146
Compound Name : 1,2,4-Trichlorobenzene
Scan Number : 4075
Retention Time (minutes): 14.586
Relative Retention Time :-0.00027
Quant Ion : 180.00
Area (flag) : 5468
On-Column Amount (ng) : 0.5302

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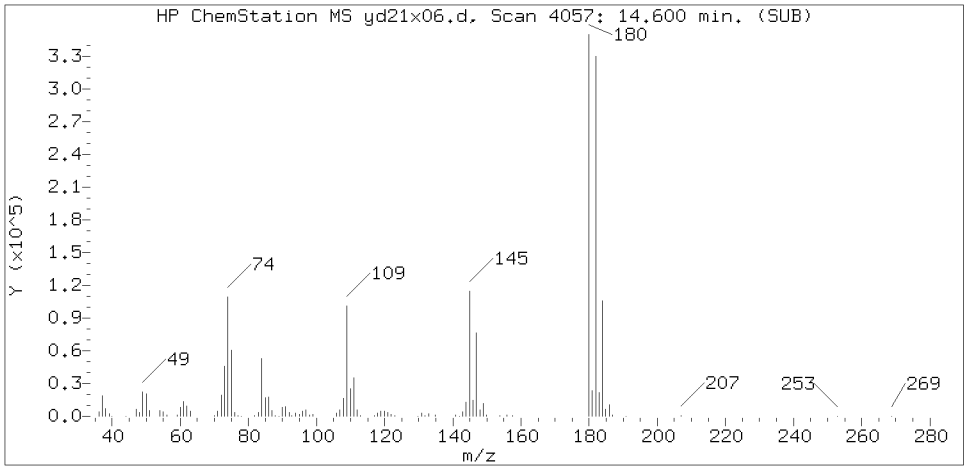
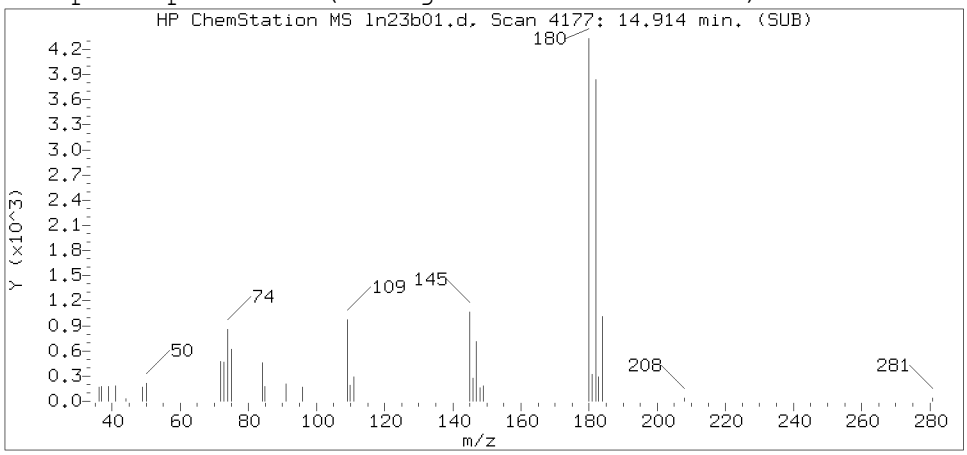
Target 3.5 esignature user ID: lcp00895

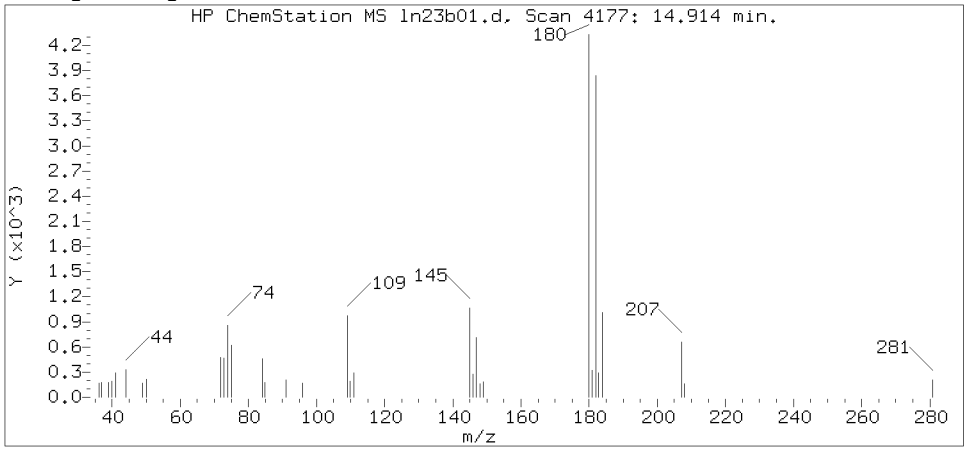
Reference Standard Spectrum for 1,2,3-Trichlorobenzene

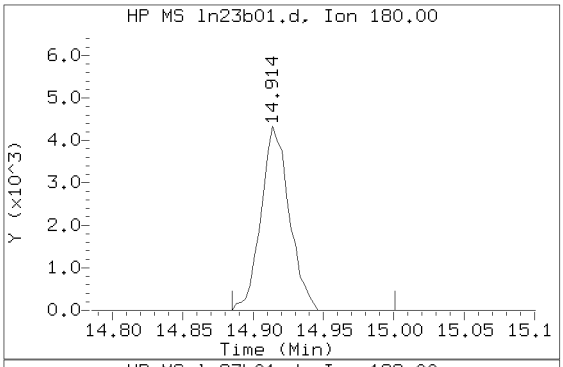


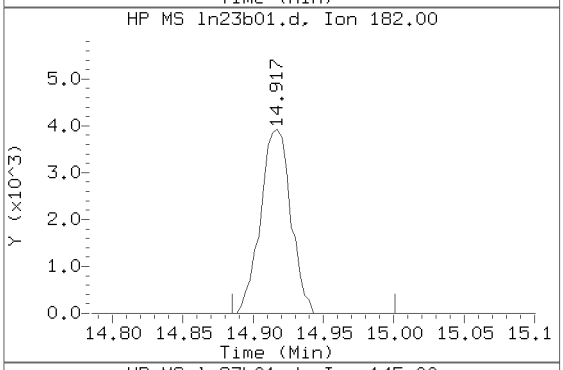
Sample Spectrum (Background Subtracted)

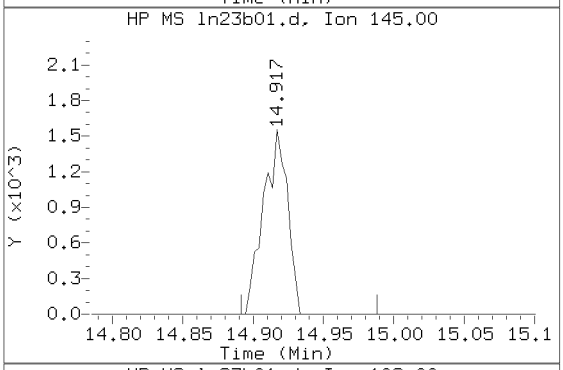


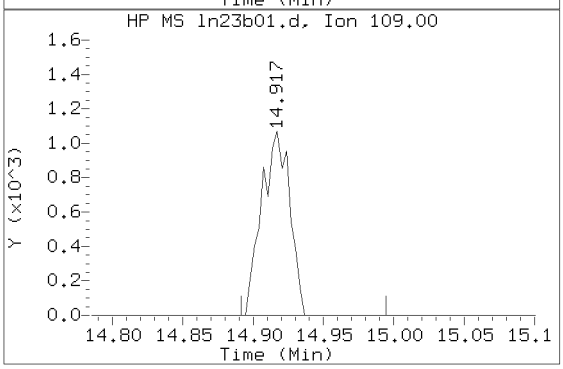
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compound Number : 149
Compound Name : 1,2,3-Trichlorobenzene
Scan Number : 4177
Retention Time (minutes): 14.914
Relative Retention Time :-0.00003
Quant Ion : 180.00
Area (flag) : 5973
On-Column Amount (ng) : 0.5952

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Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL87

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL87

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	17	
74-87-3	Chloromethane	18	
106-99-0	1,3-Butadiene	20	
75-01-4	Vinyl Chloride	18	
74-83-9	Bromomethane	18	
75-00-3	Chloroethane	18	
109-66-0	n-Pentane	15	
75-69-4	Trichlorofluoromethane	20	
60-29-7	Ethyl ether	20	
354-23-4	Freon 123a	20	
107-02-8	Acrolein	150	
75-35-4	1,1-Dichloroethene	20	
67-64-1	Acetone	170	
76-13-1	Freon 113	18	
67-63-0	2-Propanol	150	
74-88-4	Methyl Iodide	18	
75-15-0	Carbon Disulfide	17	
107-05-1	Allyl Chloride	18	
79-20-9	Methyl Acetate	19	
75-09-2	Methylene Chloride	21	
75-65-0	t-Butyl alcohol	200	
107-13-1	Acrylonitrile	94	
156-60-5	trans-1,2-Dichloroethene	20	
1634-04-4	Methyl Tertiary Butyl Ether	17	
110-54-3	n-Hexane	18	
75-34-3	1,1-Dichloroethane	20	
108-20-3	di-Isopropyl ether	18	
126-99-8	2-Chloro-1,3-butadiene	18	
637-92-3	Ethyl t-butyl ether	17	
156-59-2	cis-1,2-Dichloroethene	21	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL87

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL87

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	41	
78-93-3	2-Butanone	140	
594-20-7	2,2-Dichloropropane	19	
107-12-0	Propionitrile	170	
126-98-7	Methacrylonitrile	150	
74-97-5	Bromochloromethane	20	
109-99-9	Tetrahydrofuran	110	
67-66-3	Chloroform	21	
71-55-6	1,1,1-Trichloroethane	20	
110-82-7	Cyclohexane	17	
563-58-6	1,1-Dichloropropene	20	
56-23-5	Carbon Tetrachloride	19	
78-83-1	Isobutyl Alcohol	520	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	21	
994-05-8	t-Amyl methyl ether	18	
142-82-5	n-Heptane	17	
71-36-3	n-Butanol	960	
79-01-6	Trichloroethene	21	
108-87-2	Methylcyclohexane	19	
78-87-5	1,2-Dichloropropane	21	
74-95-3	Dibromomethane	21	
123-91-1	1,4-Dioxane	540	
80-62-6	Methyl Methacrylate	19	
75-27-4	Bromodichloromethane	20	
79-46-9	2-Nitropropane	15	
110-75-8	2-Chloroethyl Vinyl Ether	31	
10061-01-5	cis-1,3-Dichloropropene	20	
108-10-1	4-Methyl-2-pentanone	91	
108-88-3	Toluene	20	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL87

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL87

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	19	
542-75-6	1,3-Dichloropropene (total)	39	
97-63-2	Ethyl Methacrylate	17	
79-00-5	1,1,2-Trichloroethane	21	
127-18-4	Tetrachloroethene	20	
142-28-9	1,3-Dichloropropane	20	
591-78-6	2-Hexanone	87	
124-48-1	Dibromochloromethane	19	
106-93-4	1,2-Dibromoethane	20	
544-10-5	1-Chlorohexane	18	
108-90-7	Chlorobenzene	20	
630-20-6	1,1,1,2-Tetrachloroethane	19	
100-41-4	Ethylbenzene	20	
179601-23-1	m+p-Xylene	41	
95-47-6	o-Xylene	20	
1330-20-7	Xylene (Total)	61	
100-42-5	Styrene	20	
75-25-2	Bromoform	17	
98-82-8	Isopropylbenzene	20	
108-94-1	Cyclohexanone	480	
108-86-1	Bromobenzene	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	
96-18-4	1,2,3-Trichloropropane	20	
110-57-6	trans-1,4-Dichloro-2-butene	86	
103-65-1	n-Propylbenzene	20	
95-49-8	2-Chlorotoluene	20	
106-43-4	4-Chlorotoluene	20	
108-67-8	1,3,5-Trimethylbenzene	20	
98-06-6	tert-Butylbenzene	19	
76-01-7	Pentachloroethane	18	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL87

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL87

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
95-63-6	1,2,4-Trimethylbenzene	20	
135-98-8	sec-Butylbenzene	20	
541-73-1	1,3-Dichlorobenzene	20	
99-87-6	p-Isopropyltoluene	20	
106-46-7	1,4-Dichlorobenzene	20	
526-73-8	1,2,3-Trimethylbenzene	19	
100-44-7	Benzyl Chloride	16	
141-93-5	1,3-Diethylbenzene	18	
105-05-5	1,4-Diethylbenzene	18	B
95-50-1	1,2-Dichlorobenzene	20	
104-51-8	n-Butylbenzene	19	B
135-01-3	1,2-Diethylbenzene	18	
25340-17-4	Diethylbenzene (total)	54	
96-12-8	1,2-Dibromo-3-chloropropane	18	
108-70-3	1,3,5-Trichlorobenzene	18	B
120-82-1	1,2,4-Trichlorobenzene	17	B
87-68-3	Hexachlorobutadiene	15	
91-20-3	Naphthalene	18	
87-61-6	1,2,3-Trichlorobenzene	17	B
91-57-6	2-Methylnaphthalene	14	

FORM I VOA

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Data file: /chem/HP09915.i/19nov23a.b/ln23s01.d Injection date and time: **23-NOV-2019 09:26**
Data file Sample Info. Line: LCSL87;LCSL87;1;3;LCS;;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493	(-0.003)	936	65	219124	(0)	250.00	
66) Fluorobenzene	7.956	(0.000)	2013	96	1149568	(2)	50.00	
100) Chlorobenzene-d5	11.358	(0.000)	3071	117	954034	(1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.219	(0.003)	3650	152	518331	(-1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.065	(0.001)	113	279543	49.739	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	73161	51.077	102%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	1224920	49.069	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	482775	51.074	102%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	2.082	(0.000)	85	136297	17.002	17.00			0.2	1
4) Chloromethane	(2)	2.278	(0.000)	50	138166	17.882	17.88			0.2	1
5) 1,3-Butadiene	(2)	2.406	(0.000)	39	130178	20.291	20.29			1	3
6) Vinyl Chloride	(2)	2.397	(0.000)	62	137718	17.859	17.86			0.2	1
8) Bromomethane	(2)	2.741	(0.000)	94	97922	17.715	17.71			0.3	1
9) Chloroethane	(2)	2.837	(0.000)	64	75570	17.832	17.83			0.2	1
11) n-Pentane	(2)	3.200	(0.000)	43	151384	15.430	15.43			0.4	10
12) Trichlorofluoromethane	(2)	3.149	(0.000)	101	168712	20.322	20.32			0.2	1
14) Ethyl ether	(2)	3.432	(-0.000)	59	105121	19.595	19.59			0.2	5
15) Freon 123a	(2)	3.519	(0.000)	67	132374	19.821	19.82			0.4	5
16) Acrolein	(1)	3.612	(0.001)	56	249441	151.730	151.73			2	100
17) 1,1-Dichloroethene	(2)	3.750	(0.000)	96	98797	20.274	20.27			0.2	1
18) Acetone	(1)	3.798	(-0.000)	58	122187	165.784	165.78			0.7	20
19) Freon 113	(2)	3.795	(0.000)	101	101611	18.276	18.28			0.2	10
21) 2-Propanol	(1)	3.985	(0.000)	45	78385	147.940	147.94			18	100
22) Methyl Iodide	(2)	3.962	(0.000)	142	179282	17.754	17.75			0.2	1
23) Carbon Disulfide	(2)	4.065	(0.000)	76	308657	16.808	16.81			0.2	5
25) Allyl Chloride	(2)	4.265	(0.000)	41	157036	17.964	17.96			0.3	5
27) Methyl Acetate	(2)	4.242	(-0.000)	43	118037	18.807	18.81			0.2	5
28) Methylene Chloride	(2)	4.464	(0.000)	84	120393	20.758	20.76			0.3	1
30) t-Butyl alcohol	(1)	4.622	(0.000)	59	183342	198.737	198.74			12	50
31) Acrylonitrile	(2)	4.831	(0.000)	53	316407	93.704	93.70			0.3	20
32) trans-1,2-Dichloroethene	(2)	4.882	(0.000)	96	113295	20.097	20.10			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	4.872	(0.000)	73	315427	17.046	17.05			0.2	1
34) n-Hexane	(2)	5.306	(-0.000)	57	153781	17.534	17.53			2	5
36) 1,1-Dichloroethane	(2)	5.544	(0.000)	63	195838	19.914	19.91			0.2	1
38) di-Isopropyl ether	(2)	5.599	(0.000)	45	343897	18.131	18.13			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	5.657	(-0.000)	53	159972	18.131	18.13			0.2	5
40) Ethyl t-butyl ether	(2)	6.133	(0.000)	59	320696	17.423	17.42			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.374	(0.000)	96	134446	21.248	21.25			0.2	1
43) 1,2-Dichloroethene (Total)	(2)			96	247741	41.345	41.35			0.4	2

Digitally signed by Corie L. Mellinger on 11/23/2019 at 10:16. Target 3.5 esignature user ID: clm27445

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23s01.d Injection date and time: **23-NOV-2019 09:26**
Data file Sample Info. Line: LCSL87;LCSL87;1;3;LCS;;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	6.358(0.000)	43	596366	137.585	137.59			0.3	10
45) 2,2-Dichloropropane	(2)	6.387(0.000)	77	147462	19.289	19.29			0.3	1
47) Propionitrile	(1)	6.458(-0.000)	54	195546	170.118	170.12			14	100
48) Methacrylonitrile	(2)	6.666(-0.000)	67	536833	147.383	147.38			6	50
49) Bromochloromethane	(2)	6.708(-0.000)	128	65482	19.517	19.52			0.2	5
50) Tetrahydrofuran	(1)	6.718(0.001)	71	116538	112.239	112.24			0.7	10
51) Chloroform	(2)	6.856(0.000)	83	194950	20.726	20.73			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.078(0.000)	97	159852	19.912	19.91			0.3	1
54) Cyclohexane	(2)	7.165(0.000)	56	186666	17.388	17.39			1	5
55) 1,1-Dichloropropene	(2)	7.290(0.000)	75	153454	19.735	19.74			0.2	5
56) Carbon Tetrachloride	(2)	7.277(0.000)	117	131745	19.349	19.35			0.2	1
58) Isobutyl Alcohol	(1)	7.454(0.001)	41	160914	518.323	518.32			36	250
60) Benzene	(2)	7.551(0.000)	78	482008	20.614	20.61			0.2	1
61) 1,2-Dichloroethane	(2)	7.625(0.000)	62	157726	20.971	20.97			0.3	1
65) t-Amyl methyl ether	(2)	7.734(0.000)	73	332235	17.983	17.98			0.8	5
67) n-Heptane	(2)	7.959(0.000)	43	138196	16.867	16.87			2	5
69) n-Butanol	(1)	8.329(0.002)	56	256065	958.318	958.32			61	250
71) Trichloroethene	(2)	8.428(-0.000)	95	121790	20.686	20.69			0.2	1
72) Methylcyclohexane	(2)	8.728(-0.000)	83	204135	18.689	18.69			0.5	5
73) 1,2-Dichloropropane	(2)	8.763(0.000)	63	123397	20.782	20.78			0.2	1
74) Dibromomethane	(2)	8.875(0.000)	93	79710	20.748	20.75			0.2	1
75) 1,4-Dioxane	(1)	8.856(0.000)	88	39582M	538.951	538.95			29	250
76) Methyl Methacrylate	(2)	8.846(-0.000)	69	111030	19.337	19.34			0.2	5
78) Bromodichloromethane	(2)	9.110(-0.000)	83	140364	20.361	20.36			0.2	1
79) 2-Nitropropane	(2)	9.390(-0.000)	41	31840	15.248	15.25			0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)	9.461(-0.000)	63	78938	30.955	30.95			0.2	10
81) cis-1,3-Dichloropropene	(2)	9.634(-0.000)	75	185790	20.291	20.29			0.2	1
82) 4-Methyl-2-pentanone	(2)	9.805(-0.000)	43	832198	90.959	90.96			0.5	10
88) Toluene	(3)	10.007(0.000)	92	313711	20.045	20.05			0.2	1
89) trans-1,3-Dichloropropene	(3)	10.258(-0.000)	75	165350	18.612	18.61			0.2	1
90) 1,3-Dichloropropene (total)	(3)		100	351140	38.903	38.90			0.4	2
91) Ethyl Methacrylate	(3)	10.310(-0.000)	69	185379	17.170	17.17			0.2	5
92) 1,1,2-Trichloroethane	(3)	10.457(-0.000)	97	123325	20.784	20.78			0.2	1
93) Tetrachloroethene	(3)	10.538(-0.000)	166	129265	19.503	19.50			0.2	1
94) 1,3-Dichloropropane	(3)	10.618(-0.000)	76	201364	19.876	19.88			0.2	1
96) 2-Hexanone	(3)	10.666(-0.000)	43	627871	87.122	87.12			0.3	10
97) Dibromochloromethane	(3)	10.824(0.000)	129	115965	19.079	19.08			0.2	1
99) 1,2-Dibromoethane	(3)	10.933(0.000)	107	129008	20.022	20.02			0.2	1
101) 1-Chlorohexane	(3)	11.361(0.000)	91	154355	18.359	18.36			0.3	5
102) Chlorobenzene	(3)	11.383(0.000)	112	359998	20.341	20.34			0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)	11.464(-0.000)	131	112152	19.233	19.23			0.2	1
104) Ethylbenzene	(3)	11.467(-0.000)	91	597136	19.963	19.96			0.4	1
106) m+p-Xylene	(3)	11.580(-0.000)	106	479979	40.789	40.79			1	5
107) o-Xylene	(3)	11.908(-0.000)	106	229466	19.742	19.74			0.4	1
108) Xylene (Total)	(3)		106	709445	60.531	60.53			1	6
109) Styrene	(3)	11.920(-0.000)	104	386872	20.142	20.14			0.2	5
110) Bromoform	(3)	12.078(0.000)	173	75317	16.583	16.58			1	4
111) Isopropylbenzene	(3)	12.203(-0.000)	105	586751	20.127	20.13			0.2	5
112) Cyclohexanone	(1)	12.287(0.001)	55	136932	476.060	476.06			25	100
115) Bromobenzene	(4)	12.464(-0.000)	156	152936	19.632	19.63			0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	12.448(-0.000)	83	197038	20.124	20.12			0.2	1
117) 1,2,3-Trichloropropane	(4)	12.496(-0.000)	110	59005	19.638	19.64			0.2	5
118) trans-1,4-Dichloro-2-butene	(4)	12.473(-0.000)	53	259700	85.988	85.99			6	50
119) n-Propylbenzene	(4)	12.528(-0.000)	91	696154	20.454	20.45			0.2	5

M = Compound was manually integrated.

Digitally signed by Corie L. Mellinger on 11/23/2019 at 10:16. Target 3.5 esignature user ID: clm27445

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23s01.d Injection date and time: **23-NOV-2019 09:26**
Data file Sample Info. Line: LCSL87;LCSL87;1;3;LCS;;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

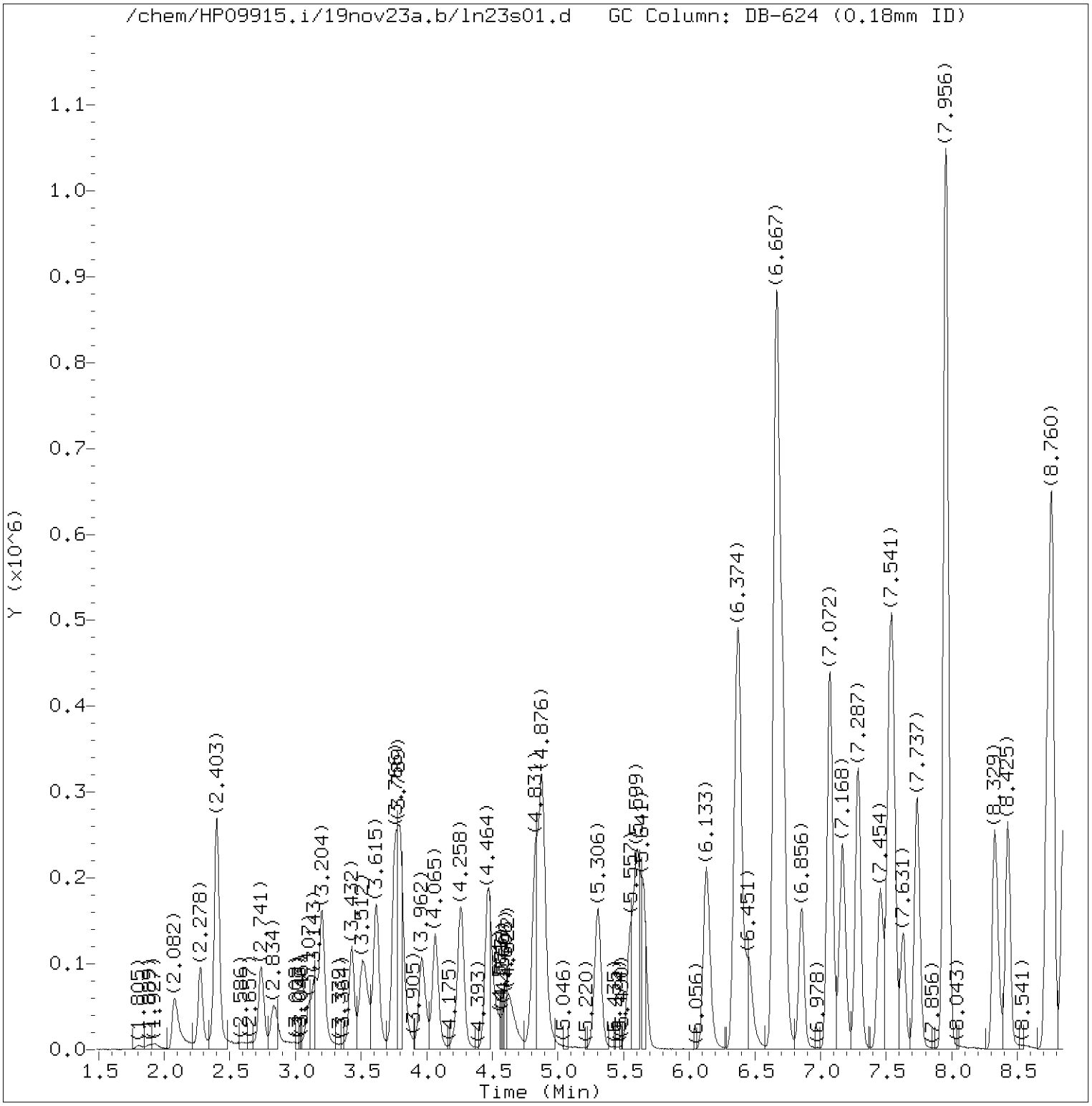
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)	12.605(0.000)	126	141098	19.514	19.51			0.2	5
121) 4-Chlorotoluene	(4)	12.698(-0.000)	126	147115	19.547	19.55			0.2	5
122) 1,3,5-Trimethylbenzene	(4)	12.660(0.000)	105	498236	20.144	20.14			0.3	5
124) tert-Butylbenzene	(4)	12.904(-0.000)	134	97397	19.040	19.04			0.3	5
125) Pentachloroethane	(4)	12.936(-0.000)	167	80055	18.175	18.18			0.2	5
126) 1,2,4-Trimethylbenzene	(4)	12.946(-0.000)	105	516617	19.818	19.82			1	5
127) sec-Butylbenzene	(4)	13.065(0.000)	105	596790	19.552	19.55			0.2	5
129) 1,3-Dichlorobenzene	(4)	13.168(-0.000)	146	284643	19.884	19.88			0.2	5
130) p-Isopropyltoluene	(4)	13.171(-0.000)	119	516072	19.543	19.54			0.2	5
133) 1,4-Dichlorobenzene	(4)	13.239(-0.000)	146	297218	20.028	20.03			0.2	5
134) 1,2,3-Trimethylbenzene	(4)	13.248(-0.000)	105	535390	19.388	19.39			0.3	5
135) Benzyl Chloride	(4)	13.319(-0.000)	91	324287	15.511	15.51			1	5
136) 1,3-Diethylbenzene	(4)	13.370(-0.000)	119	312049	18.158	18.16			0.2	5
137) 1,4-Diethylbenzene	(4)	13.441(-0.000)	119	327147	17.967	17.97	0.216	B	0.2	5
138) 1,2-Dichlorobenzene	(4)	13.499(-0.000)	146	283246	20.052	20.05			0.2	5
139) n-Butylbenzene	(4)	13.464(-0.000)	92	251889	18.656	18.66	0.344	B	0.2	5
140) 1,2-Diethylbenzene	(4)	13.515(-0.000)	119	265561	18.330	18.33			0.2	5
141) Diethylbenzene (total)	(4)		100	904757	54.455	54.46			0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)	14.039(-0.000)	75	39020	18.205	18.20			0.3	5
144) 1,3,5-Trichlorobenzene	(4)	14.161(-0.000)	180	191170	17.615	17.61	0.552	B	0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.586(-0.000)	180	179583	17.018	17.02	0.530	B	0.3	5
147) Hexachlorobutadiene	(4)	14.666(-0.000)	225	75520	15.157	15.16			2	5
148) Naphthalene	(4)	14.772(-0.000)	128	623142	18.368	18.37			1	5
149) 1,2,3-Trichlorobenzene	(4)	14.914(-0.000)	180	174866	17.030	17.03	0.595	B	0.4	5
150) 2-Methylnaphthalene	(4)	15.563(-0.000)	142	295754	14.157	14.16			2	4

B = Compound detected in referenced method blank.

Total number of targets = 110

Digitally signed by Corie L. Mellinger on 11/23/2019 at 10:16. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:45. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

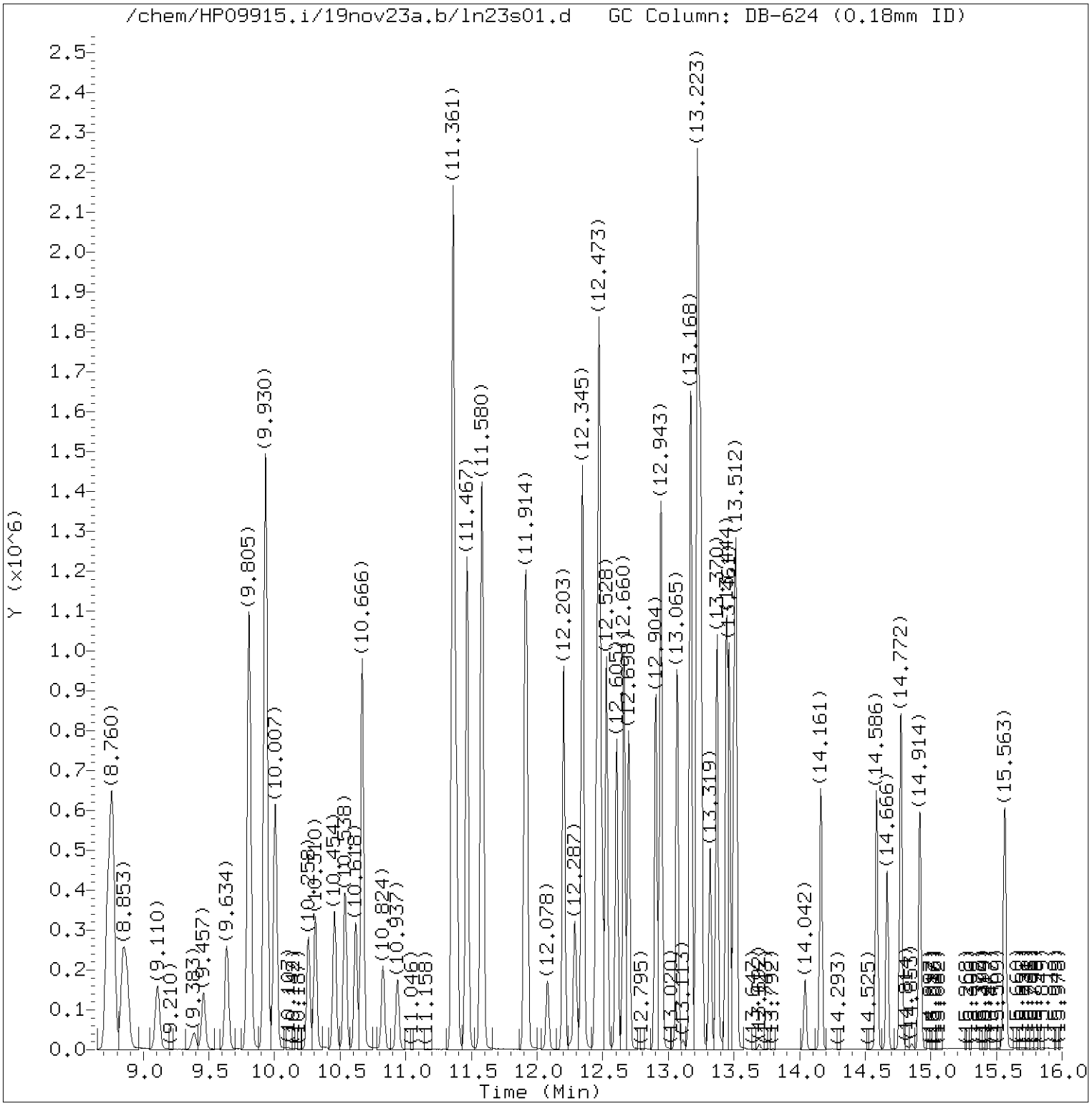
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

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on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.082	85	136297	17.002
4) Chloromethane	(2)	2.278	50	138166	17.882
6) Vinyl Chloride	(2)	2.397	62	137718	17.859
5) 1,3-Butadiene	(2)	2.406	39	130178	20.291
8) Bromomethane	(2)	2.741	94	97922	17.715
9) Chloroethane	(2)	2.837	64	75570	17.832
12) Trichlorofluoromethane	(2)	3.149	101	168712	20.322
11) n-Pentane	(2)	3.200	43	151384	15.430
14) Ethyl ether	(2)	3.432	59	105121	19.595
15) Freon 123a	(2)	3.519	67	132374	19.821
16) Acrolein	(1)	3.612	56	249441	151.730
17) 1,1-Dichloroethene	(2)	3.750	96	98797	20.274
19) Freon 113	(2)	3.795	101	101611	18.276
18) Acetone	(1)	3.799	58	122187	165.784
22) Methyl Iodide	(2)	3.962	142	179282	17.754
21) 2-Propanol	(1)	3.985	45	78385	147.940
23) Carbon Disulfide	(2)	4.065	76	308657	16.808
27) Methyl Acetate	(2)	4.242	43	118037	18.807
25) Allyl Chloride	(2)	4.265	41	157036	17.964
28) Methylene Chloride	(2)	4.464	84	120393	20.758
29)*t-Butyl alcohol-d10	(1)	4.493	65	219124	250.000
30) t-Butyl alcohol	(1)	4.622	59	183342	198.737
31) Acrylonitrile	(2)	4.831	53	316407	93.704
33) Methyl Tertiary Butyl Ether	(2)	4.872	73	315427	17.046
32) trans-1,2-Dichloroethene	(2)	4.882	96	113295	20.097
34) n-Hexane	(2)	5.306	57	153781	17.534
36) 1,1-Dichloroethane	(2)	5.544	63	195838	19.914
38) di-Isopropyl ether	(2)	5.599	45	343897	18.131
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	159972	18.131
40) Ethyl t-butyl ether	(2)	6.133	59	320696	17.423
43) 1,2-Dichloroethene (Total)	(2)		96	247741	41.345
44) 2-Butanone	(2)	6.358	43	596366	137.585
42) cis-1,2-Dichloroethene	(2)	6.374	96	134446	21.248
45) 2,2-Dichloropropane	(2)	6.387	77	147462	19.289
47) Propionitrile	(1)	6.458	54	195546	170.118
48) Methacrylonitrile	(2)	6.667	67	536833	147.383
49) Bromochloromethane	(2)	6.708	128	65482	19.517
50) Tetrahydrofuran	(1)	6.718	71	116538	112.239

* = Compound is an internal standard.

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on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	6.856	83	194950	20.726
52)$Dibromofluoromethane	(2)	7.065	113	279543	49.739
53) 1,1,1-Trichloroethane	(2)	7.078	97	159852	19.912
54) Cyclohexane	(2)	7.165	56	186666	17.388
56) Carbon Tetrachloride	(2)	7.277	117	131745	19.349
55) 1,1-Dichloropropene	(2)	7.290	75	153454	19.735
58) Isobutyl Alcohol	(1)	7.454	41	160914	518.323
57)$1,2-Dichloroethane-d4	(2)	7.525	102	73161	51.077
60) Benzene	(2)	7.551	78	482008	20.614
61) 1,2-Dichloroethane	(2)	7.625	62	157726	20.971
65) t-Amyl methyl ether	(2)	7.734	73	332235	17.983
66)*Fluorobenzene	(2)	7.956	96	1149568	50.000
67) n-Heptane	(2)	7.959	43	138196	16.867
69) n-Butanol	(1)	8.329	56	256065	958.318
71) Trichloroethene	(2)	8.429	95	121790	20.686
72) Methylcyclohexane	(2)	8.728	83	204135	18.689
73) 1,2-Dichloropropane	(2)	8.763	63	123397	20.782
76) Methyl Methacrylate	(2)	8.847	69	111030	19.337
75) 1,4-Dioxane	(1)	8.856	88	39582M	538.951
74) Dibromomethane	(2)	8.875	93	79710	20.748
78) Bromodichloromethane	(2)	9.110	83	140364	20.361
79) 2-Nitropropane	(2)	9.390	41	31840	15.248
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	78938	30.955
81) cis-1,3-Dichloropropene	(2)	9.634	75	185790	20.291
82) 4-Methyl-2-pentanone	(2)	9.805	43	832198	90.959
83)$Toluene-d8	(3)	9.930	98	1224920	49.069
88) Toluene	(3)	10.007	92	313711	20.045
90) 1,3-Dichloropropene (total)	(3)		100	351140	38.903
89) trans-1,3-Dichloropropene	(3)	10.258	75	165350	18.612
91) Ethyl Methacrylate	(3)	10.310	69	185379	17.170
92) 1,1,2-Trichloroethane	(3)	10.457	97	123325	20.784
93) Tetrachloroethene	(3)	10.538	166	129265	19.503
94) 1,3-Dichloropropane	(3)	10.618	76	201364	19.876
96) 2-Hexanone	(3)	10.666	43	627871	87.122
97) Dibromochloromethane	(3)	10.824	129	115965	19.079
99) 1,2-Dibromoethane	(3)	10.933	107	129008	20.022
100)*Chlorobenzene-d5	(3)	11.358	117	954034	50.000
101) 1-Chlorohexane	(3)	11.361	91	154355	18.359

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
102) Chlorobenzene	(3)	11.383	112	359998	20.341
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	112152	19.233
104) Ethylbenzene	(3)	11.467	91	597136	19.963
106) m+p-Xylene	(3)	11.580	106	479979	40.789
108) Xylene (Total)	(3)		106	709445	60.531
107) o-Xylene	(3)	11.908	106	229466	19.742
109) Styrene	(3)	11.920	104	386872	20.142
110) Bromoform	(3)	12.078	173	75317	16.583
111) Isopropylbenzene	(3)	12.203	105	586751	20.127
112) Cyclohexanone	(1)	12.287	55	136932	476.060
114)$4-Bromofluorobenzene	(3)	12.345	95	482775	51.074
116) 1,1,2,2-Tetrachloroethane	(4)	12.448	83	197038	20.124
115) Bromobenzene	(4)	12.464	156	152936	19.632
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	259700	85.988
117) 1,2,3-Trichloropropane	(4)	12.496	110	59005	19.638
119) n-Propylbenzene	(4)	12.528	91	696154	20.454
120) 2-Chlorotoluene	(4)	12.605	126	141098	19.514
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	498236	20.144
121) 4-Chlorotoluene	(4)	12.698	126	147115	19.547
124) tert-Butylbenzene	(4)	12.904	134	97397	19.040
125) Pentachloroethane	(4)	12.936	167	80055	18.175
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	516617	19.818
127) sec-Butylbenzene	(4)	13.065	105	596790	19.552
129) 1,3-Dichlorobenzene	(4)	13.168	146	284643	19.884
130) p-Isopropyltoluene	(4)	13.171	119	516072	19.543
131)*1,4-Dichlorobenzene-d4	(4)	13.219	152	518331	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	297218	20.028
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	535390	19.388
135) Benzyl Chloride	(4)	13.319	91	324287	15.511
136) 1,3-Diethylbenzene	(4)	13.370	119	312049	18.158
141) Diethylbenzene (total)	(4)		100	904757	54.455
137) 1,4-Diethylbenzene	(4)	13.441	119	327147	17.967
139) n-Butylbenzene	(4)	13.464	92	251889	18.656
138) 1,2-Dichlorobenzene	(4)	13.499	146	283246	20.052
140) 1,2-Diethylbenzene	(4)	13.515	119	265561	18.330
142) 1,2-Dibromo-3-chloropropane	(4)	14.039	75	39020	18.205
144) 1,3,5-Trichlorobenzene	(4)	14.161	180	191170	17.615
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	179583	17.018

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

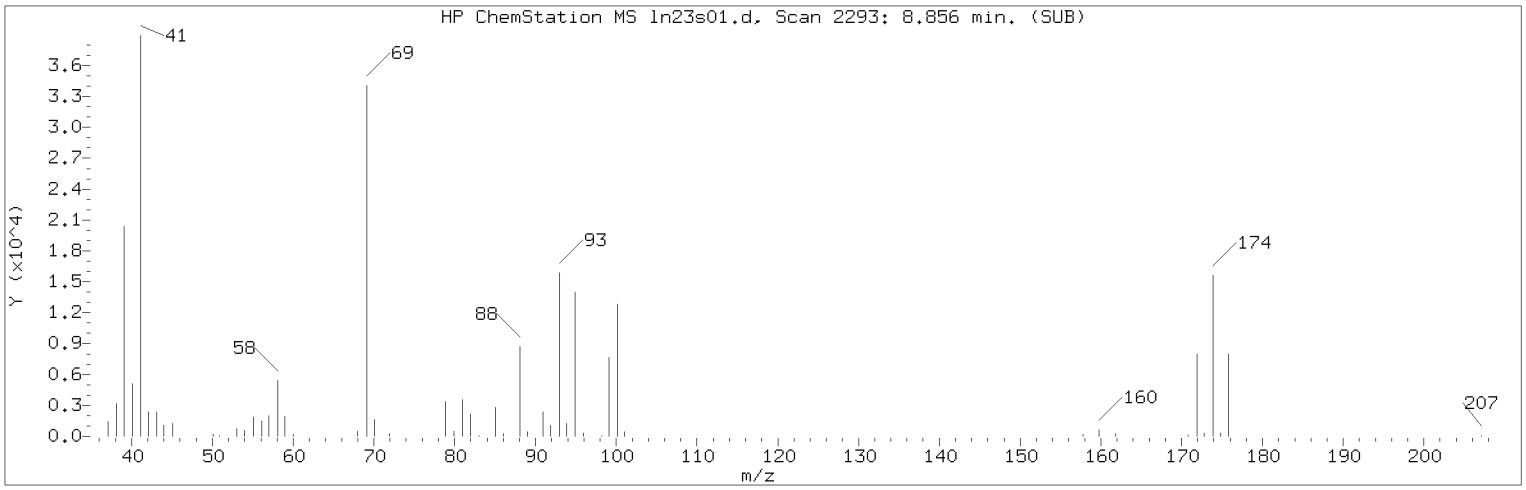
Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

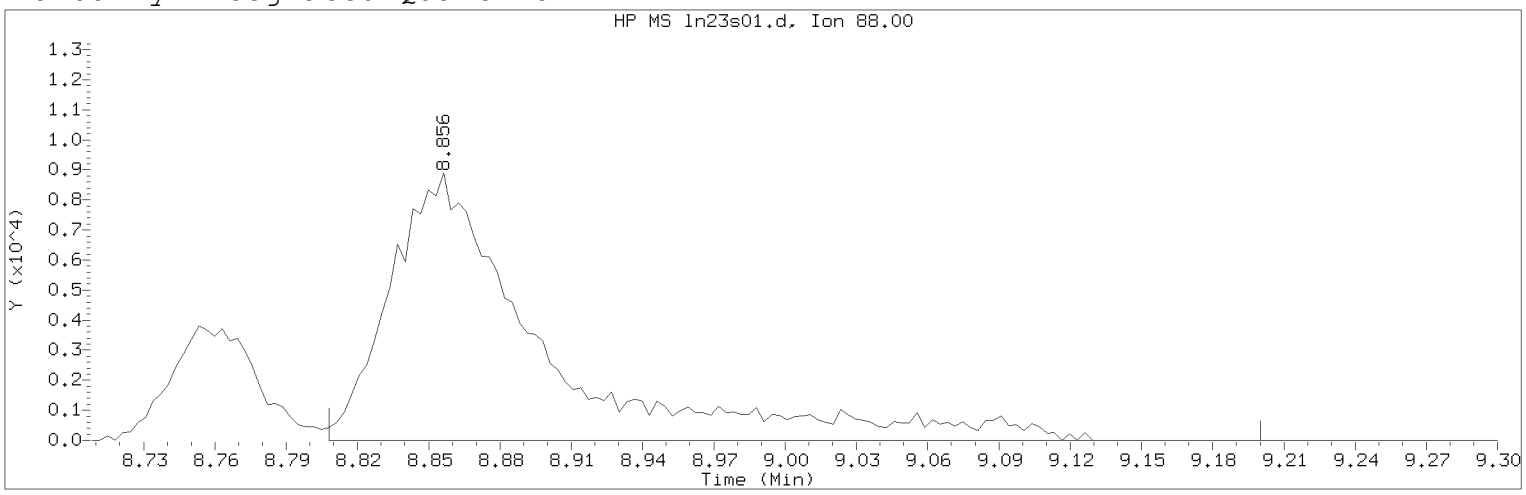
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Hexachlorobutadiene	(4)	14.666	225	75520	15.157
148) Naphthalene	(4)	14.772	128	623142	18.368
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	174866	17.030
150) 2-Methylnaphthalene	(4)	15.563	142	295754	14.157

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

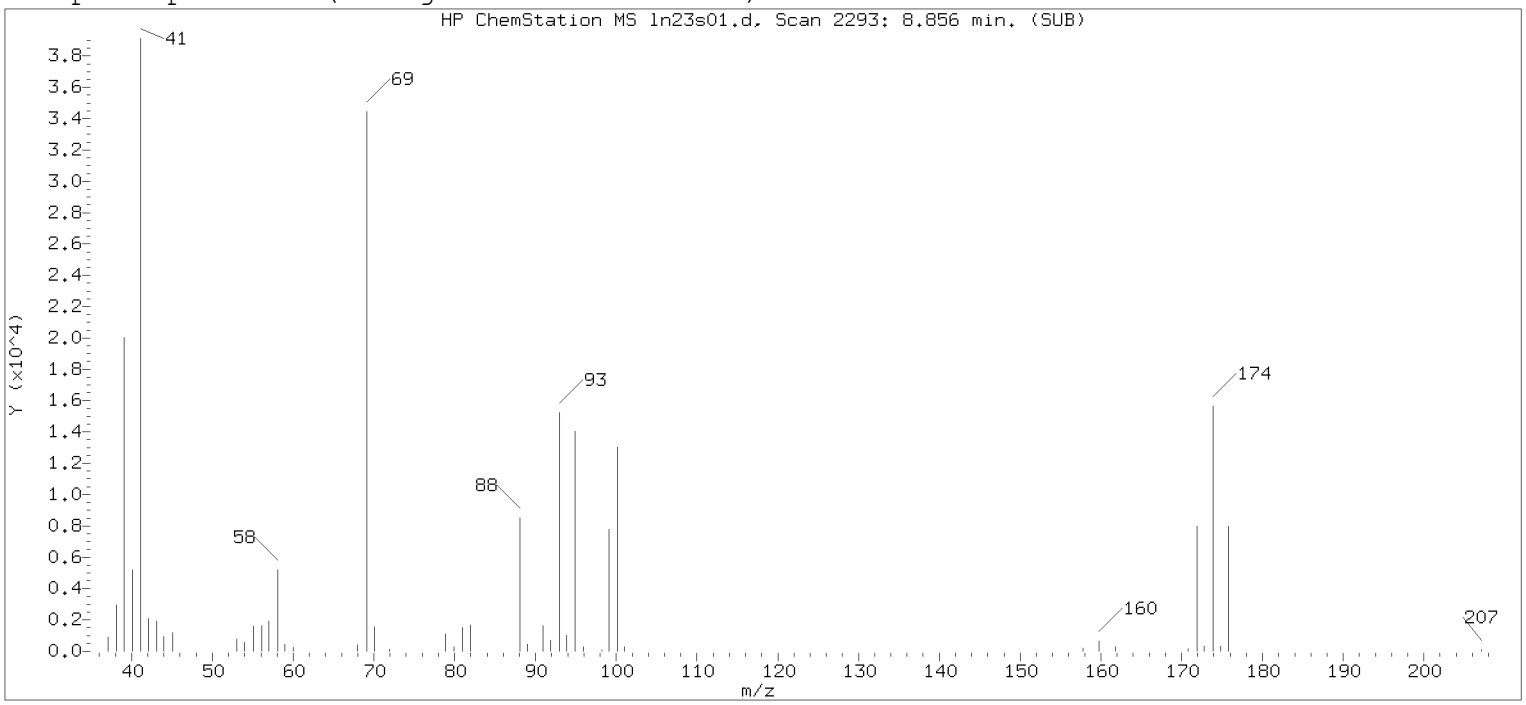
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 39582M
On-Column Amount (ng) : 538.9512
Integration start scan : 2277 Integration stop scan: 2399
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

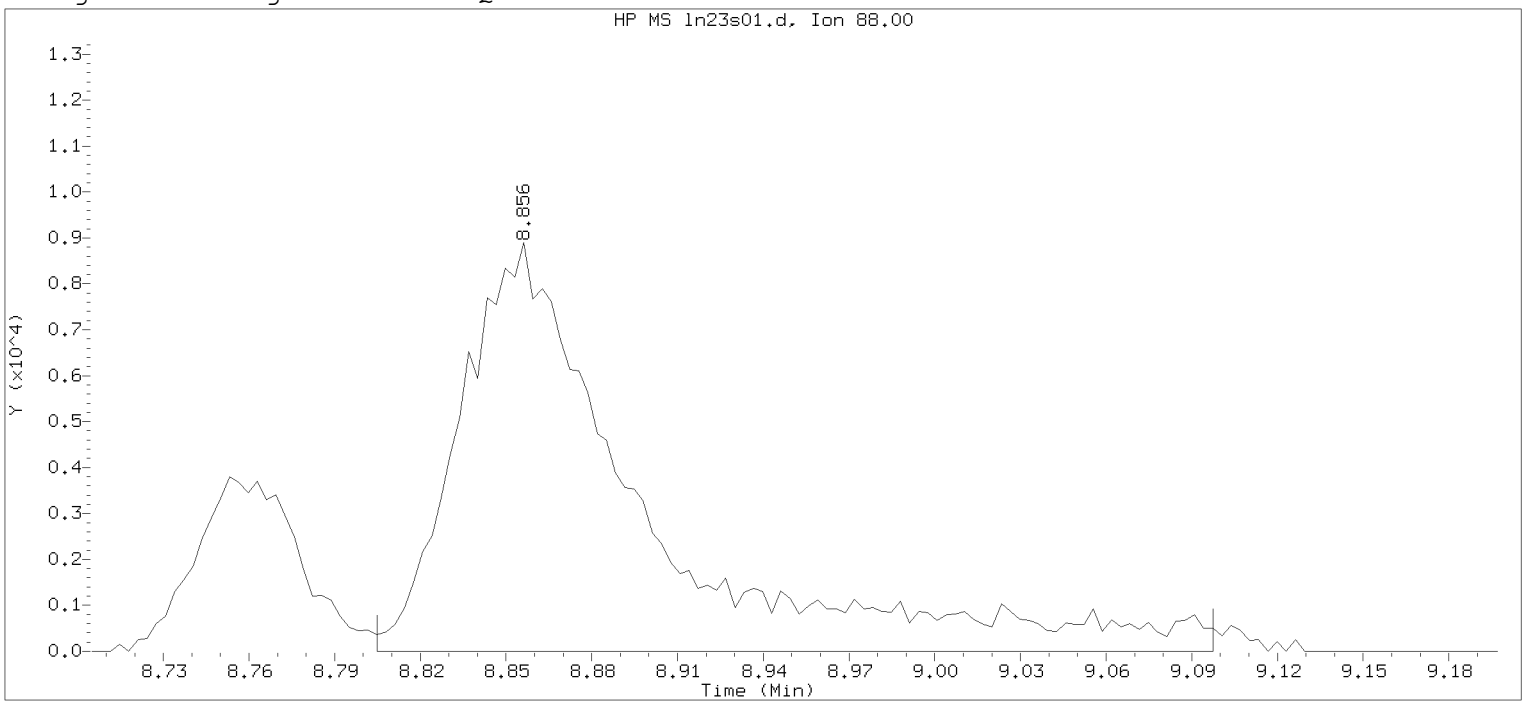
Analyst responsible for change: Digitally signed by Corie L. Mellinger on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:45.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:43 Automation

Sample Name: LCSL87 Lab Sample ID: LCSL87

Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2293		
Retention Time (minutes)	: 8.856		
Quant Ion	: 88.00		
Area	: 39126		
On-column Amount (ng)	: 532.7524		
Integration start scan	: 2276	Integration stop scan:	2367
Y at integration start	: 0	Y at integration end:	0

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Target 3.5 esignature user: CLM27445

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NYSDEC ASP Category B Data Package

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Project: AD-New Windsor, NY
Groundwater and Water Samples
Collected on 11/14/19-11/15/19

SDG# JCW24

GROUP	SAMPLE NUMBERS
2075497	1205918-1205927

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-18-27
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman **Date:** **12/17/2019**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Katherine Klinefelter at (717) 556-7256.

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Sample Reference List for SDG Number JCW24
with a Data Package Type of NYSDEC B

06556 - The Johnson Company, Inc.

Project: AD-New Windsor, NY

Lab Sample Number	Client Sample ID	Collection Date	Date Received	Lab Sample Code
1205918	J13-BR01	11/14/2019 09:15	11/19/2019 10:38	JCW20
1205919	J13-UC02	11/14/2019 10:14	11/19/2019 10:38	JCW21
1205920	J13-UC03	11/14/2019 11:33	11/19/2019 10:38	JCW22
1205921	J13-BR02	11/14/2019 12:54	11/19/2019 10:38	JCW23
1205922	J12-BR01	11/14/2019 14:46	11/19/2019 10:38	JCW24
1205923	J12-BR02	11/14/2019 16:06	11/19/2019 10:38	JCW25
1205924	J05-BR02	11/15/2019 09:34	11/19/2019 10:38	JCW26
1205925	DUP-01	11/15/2019 10:00	11/19/2019 10:38	JCW27
1205926	J05-BR01	11/15/2019 11:05	11/19/2019 10:38	JCW28
1205927	EB-111519-NLS	11/15/2019 11:09	11/19/2019 10:38	JCW29

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Sample pH Log

SDG: JCW24

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
1205918	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/25/2019 1:54:44PM	895
1205919	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/23/2019 11:13:08AM	27445
1205920	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/23/2019 11:13:08AM	27445
1205921	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/23/2019 11:13:08AM	27445
1205922	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/23/2019 11:13:08AM	27445
1205923	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/23/2019 11:13:08AM	27445
1205924	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/23/2019 11:13:08AM	27445
1205925	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/23/2019 11:13:08AM	27445
1205926	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/23/2019 11:13:08AM	27445
1205927	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/23/2019 11:13:08AM	27445

*pH Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

**Chlorine Present Code Key
NA = Chlorine Not Checked
Y = Chlorine Present
N = Chlorine Not Present

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11997 VOCs- 5ml Water by 8260C/D

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Report Date: November 27, 2019 22:11

Project: AD-New Windsor, NY

Account #: 06556
Group Number: 2075497
SDG: JCW24
PO Number: 1-0145-05
Release Number: 58300.00
State of Sample Origin: NY

Electronic Copy To	The Johnson Company, Inc.	Attn: Tristan Hardy
Electronic Copy To	The Johnson Company, Inc.	Attn: George Lester
Electronic Copy To	VHB	Attn: Quinn Ledak

Respectfully Submitted,

Katherine A. Klinefelter

Katherine A. Klinefelter
Principal Specialist

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
J13-BR01 Grab Groundwater	11/14/2019 09:15	1205918
J13-UC02 Grab Groundwater	11/14/2019 10:14	1205919
J13-UC03 Grab Groundwater	11/14/2019 11:33	1205920
J13-BR02 Grab Groundwater	11/14/2019 12:54	1205921
J12-BR01 Grab Groundwater	11/14/2019 14:46	1205922
J12-BR02 Grab Groundwater	11/14/2019 16:06	1205923
J05-BR02 Grab Groundwater	11/15/2019 09:34	1205924
DUP-01 Grab Groundwater	11/15/2019 10:00	1205925
J05-BR01 Grab Groundwater	11/15/2019 11:05	1205926
EB-111519-NLS Grab Water	11/15/2019 11:09	1205927

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **J13-BR01 Grab Groundwater**
AD-New Windsor

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/14/2019 09:15
SDG#: JCW24-01

The Johnson Company, Inc.
ELLE Sample #: GW 1205918
ELLE Group #: 2075497
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	3	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	1	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	1	0.3	1	1
11997	Trichloroethene	79-01-6	5	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193271AA	11/23/2019 15:53	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193271AA	11/23/2019 15:52	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

Sample Description: **J13-UC02 Grab Groundwater AD-New Windsor**

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/14/2019 10:14
SDG#: JCW24-02

The Johnson Company, Inc.
ELLE Sample #: GW 1205919
ELLE Group #: 2075497
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	1	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	1 J	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	1	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	2	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	10	0.3	1	1
11997	Trichloroethene	79-01-6	100	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193262AA	11/22/2019 15:16	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193262AA	11/22/2019 15:15	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **J13-UC03 Grab Groundwater AD-New Windsor**

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/14/2019 11:33
SDG#: JCW24-03

The Johnson Company, Inc.
ELLE Sample #: GW 1205920
ELLE Group #: 2075497
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	3	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	0.7 J	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	7	0.3	1	1
11997	Trichloroethene	79-01-6	2	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193262AA	11/22/2019 15:38	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193262AA	11/22/2019 15:37	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **J13-BR02 Grab Groundwater**
AD-New Windsor

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/14/2019 12:54
SDG#: JCW24-04

The Johnson Company, Inc.
ELLE Sample #: GW 1205921
ELLE Group #: 2075497
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193262AA	11/22/2019 16:00	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193262AA	11/22/2019 15:59	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **J12-BR01 Grab Groundwater**
AD-New Windsor

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/14/2019 14:46
SDG#: JCW24-05

The Johnson Company, Inc.
ELLE Sample #: GW 1205922
ELLE Group #: 2075497
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193262AA	11/22/2019 16:22	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193262AA	11/22/2019 16:21	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **J12-BR02 Grab Groundwater**
AD-New Windsor

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/14/2019 16:06
SDG#: JCW24-06

The Johnson Company, Inc.
ELLE Sample #: GW 1205923
ELLE Group #: 2075497
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193262AA	11/22/2019 16:44	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193262AA	11/22/2019 16:43	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **J05-BR02 Grab Groundwater**
AD-New Windsor

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/15/2019 09:34
SDG#: JCW24-07

The Johnson Company, Inc.
ELLE Sample #: GW 1205924
ELLE Group #: 2075497
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	1	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	0.2 J	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	1	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	0.6 J	0.3	1	1
11997	Trichloroethene	79-01-6	7	0.2	1	1
11997	Vinyl Chloride	75-01-4	0.4 J	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193262AA	11/22/2019 17:06	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193262AA	11/22/2019 17:05	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-01 Grab Groundwater**
AD-New Windsor

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/15/2019 10:00
SDG#: JCW24-08

The Johnson Company, Inc.
ELLE Sample #: GW 1205925
ELLE Group #: 2075497
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	1	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	0.3 J	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	1	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	0.6 J	0.3	1	1
11997	Trichloroethene	79-01-6	7	0.2	1	1
11997	Vinyl Chloride	75-01-4	0.4 J	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193262AA	11/22/2019 17:28	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193262AA	11/22/2019 17:27	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **J05-BR01 Grab Groundwater**
AD-New Windsor

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/15/2019 11:05
SDG#: JCW24-09

The Johnson Company, Inc.
ELLE Sample #: GW 1205926
ELLE Group #: 2075497
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	1	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	0.4 J	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193262AA	11/22/2019 17:50	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193262AA	11/22/2019 17:49	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **EB-111519-NLS Grab Water**
AD-New Windsor

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/15/2019 11:09
SDG#: JCW24-10EB

The Johnson Company, Inc.
ELLE Sample #: GW 1205927
ELLE Group #: 2075497
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193262AA	11/22/2019 11:57	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193262AA	11/22/2019 11:56	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2075497
Reported: 11/27/2019 22:11

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: L193262AA	Sample number(s): 1205919-1205927		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	6
Batch number: L193271AA	Sample number(s): 1205918		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2075497
Reported: 11/27/2019 22:11

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	6

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: L193262AA	Sample number(s): 1205919-1205927								
Acetone	150	154.37	150	152.78	103	102	54-157	1	30
Benzene	20	21.01	20	21.29	105	106	80-120	1	30
2-Butanone	150	143.28	150	142.02	96	95	59-135	1	30
Carbon Disulfide	20	17.27	20	17.52	86	88	65-128	1	30
Chloroform	20	20.84	20	20.79	104	104	80-120	0	30
1,2-Dichlorobenzene	20	21.1	20	20.8	105	104	80-120	1	30
1,1-Dichloroethane	20	20.32	20	20.42	102	102	80-120	0	30
1,2-Dichloroethane	20	20.71	20	20.63	104	103	73-124	0	30
1,1-Dichloroethene	20	20.77	20	21.17	104	106	80-131	2	30
cis-1,2-Dichloroethene	20	21.7	20	21.72	108	109	80-125	0	30
trans-1,2-Dichloroethene	20	20.35	20	20.3	102	102	80-126	0	30
1,4-Dioxane	500	641.66	500	646.1	128	129	63-146	1	30
Ethylbenzene	20	20.94	20	20.95	105	105	80-120	0	30
Freon 113	20	18.67	20	19.05	93	95	73-139	2	30
Methylene Chloride	20	21.25	20	20.95	106	105	80-120	1	30
Naphthalene	20	20.46	20	20.46	102	102	53-124	0	30
Tetrachloroethene	20	20.24	20	20.48	101	102	80-120	1	30
Toluene	20	20.95	20	21.23	105	106	80-120	1	30
1,1,1-Trichloroethane	20	19.84	20	20.02	99	100	67-126	1	30
Trichloroethene	20	20.7	20	21.11	104	106	80-120	2	30
Vinyl Chloride	20	18.12	20	18.42	91	92	56-120	2	30
Xylene (Total)	60	63.16	60	63.66	105	106	80-120	1	30
Batch number: L193271AA	Sample number(s): 1205918								
Acetone	150	165.78			111		54-157		
Benzene	20	20.61			103		80-120		
2-Butanone	150	137.59			92		59-135		
Carbon Disulfide	20	16.81			84		65-128		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2075497
Reported: 11/27/2019 22:11

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Chloroform	20	20.73			104		80-120		
1,2-Dichlorobenzene	20	20.05			100		80-120		
1,1-Dichloroethane	20	19.91			100		80-120		
1,2-Dichloroethane	20	20.97			105		73-124		
1,1-Dichloroethene	20	20.27			101		80-131		
cis-1,2-Dichloroethene	20	21.25			106		80-125		
trans-1,2-Dichloroethene	20	20.1			100		80-126		
1,4-Dioxane	500	538.96			108		63-146		
Ethylbenzene	20	19.96			100		80-120		
Freon 113	20	18.28			91		73-139		
Methylene Chloride	20	20.76			104		80-120		
Naphthalene	20	18.37			92		53-124		
Tetrachloroethene	20	19.5			98		80-120		
Toluene	20	20.05			100		80-120		
1,1,1-Trichloroethane	20	19.91			100		67-126		
Trichloroethene	20	20.69			103		80-120		
Vinyl Chloride	20	17.86			89		56-120		
Xylene (Total)	60	60.53			101		80-120		

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: L193262AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1205919	96	101	98	99
1205920	97	102	97	98
1205921	97	100	97	98
1205922	98	102	97	98
1205923	97	100	98	98
1205924	98	102	97	98
1205925	98	101	97	97
1205926	97	103	97	97
1205927	97	103	98	99
Blank	95	101	98	99
LCS	95	99	100	101
LCSD	95	101	99	101
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2075497
Reported: 11/27/2019 22:11

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: L193271AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1205918	99	102	97	98
Blank	97	102	97	98
LCS	99	102	98	102
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 16556 Group # 2075497 Sample # 1205918-27

COC # 596349

Client Information

Client: VHB/The Johnson Company	Acct. #: 06556
Project Name/#: AD-New Windsor	PWSID #:
Project Manager: George Lester	P.O. #:
Sampler: Nicole Saitta	Quote #:
State where samples were collected: NY	For Compliance: Yes ☐ No ☒

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☒ NPDES ☐ Surface ☐ | Other: DI

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	H	8260C - VOCs
J13-BR01	11/14/19	915	X		3		X
J13-UC02	11/14/19	1014	X		3		X
J13-UC03	11/14/19	1133	X		3		X
J13-BR02	11/14/19	1254	X		3		X
J12-BR01	11/14/19	1446	X		3		X
J12-BR02	11/14/19	1606	X		3		X
J05-BR02	11/15/19	934	X		3		X
DUP-01	11/15/19	1000	X		3		X
J05-BR01	11/15/19	1105	X		3		X
EB-111519-NLS	11/15/19	1109	X		3		X

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days:

E-mail address: glester@vhb.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	11/18/19	1600			
			[signature]	11/19/19	1038

EDD Required? Yes No

If yes, format: Excel

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx Y Other ____

Temperature upon receipt 2.0 °C

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Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 266924

Group Number(s): 2075497

Client: VHB/ THE JOHNSON COMPANY

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	11/19/2019
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	New York		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Julissa Rivera-Santa

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192050133	2.0	IR	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17601-5994
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCW24

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
1205918	J13-BR01	X		1	
1205919	J13-UC02	X		1	
1205920	J13-UC03	X		1	
1205921	J13-BR02	X		1	
1205922	J12-BR01	X		1	
1205923	J12-BR02	X		1	
1205924	J05-BR02	X		1	
1205925	DUP-01	X		1	Field Duplicate Sample
1205926	J05-BR01	X		1	
1205927	EB-111519-NLS	X		1	Equipment Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCW24

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

1. Relative Response Factor (RRF)

$$RRF = \frac{AX}{Ais} \times \frac{Cis}{Cx}$$

Where:

Ax = Area of the characteristic ion for the compound to be measured
Ais = Area of the characteristic ion for the specific internal standard to be measured
Cis = Concentration of the internal standard
Cx = Concentration of the compound to be measured

2. % Relative Standard Deviation (%RSD)

$$\%RSD = \frac{standard\ deviation}{Mean} \times 100$$

3. % Difference

$$\%D = \frac{RRFc - RRFi}{RRFi} \times 100$$

Where:

RRFc = Relative response factor from the continuing calibration standard
RRFi = Mean relative response factor from the initial calibration

4. Concentration

$$Concentration\ (\mu g / L) = \frac{(Ax)(Is)(Df)}{(Ais)(RRF)}$$

Where:

Ax, Ais, and RRF are as given in 1. above
Is = Amount of internal standard added in parts per billion (µg/L)
Df = Dilution factor

5. % Recovery (% Rec)

$$\%Rec = \frac{SSR - SR}{SA} \times 100$$

Where:

SSR = Spiked sample result
SR = Sample result
SA = Spike added

6. Relative Percent Difference (RPD)

$$RPD = \frac{(MSR - MSRD)}{(1/2)(MSR + MSRD)} \times 100$$

Where:

MSR = Matrix spike recovery
MSRD = Matrix spike recovery duplicate

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

eurofins | Lancaster Laboratories Environmental

Quality Control Reference List
GC/MS Volatiles

CLIENT: The Johnson Company, Inc.
SDG: JCW24

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
VOCs- 5ml Water by 8260C/D	L193262AA	VBLKL86	11/22/2019 10:07
		LCDL86	11/22/2019 09:00
		LCSL86	11/22/2019 09:22
		1205919	11/22/2019 15:16
		1205920	11/22/2019 15:38
		1205921	11/22/2019 16:00
		1205922	11/22/2019 16:22
		1205923	11/22/2019 16:44
		1205924	11/22/2019 17:06
		1205925	11/22/2019 17:28
		1205926	11/22/2019 17:50
		1205927	11/22/2019 11:57
VOCs- 5ml Water by 8260C/D	L193271AA	VBLKL87	11/23/2019 09:48
		LCSL87	11/23/2019 09:26
		1205918	11/23/2019 15:53

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: JCW24
Matrix: LIQUID

Fraction: Volatiles by GC/MS

L193262AA / VBLKL86 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	11/22/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	11/22/19	N.D.	ug/l	0.2	1
Acetone	11/22/19	N.D.	ug/l	0.7	20
Freon 113	11/22/19	N.D.	ug/l	0.2	10
Carbon Disulfide	11/22/19	N.D.	ug/l	0.2	5
Methylene Chloride	11/22/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	11/22/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	11/22/19	N.D.	ug/l	0.2	1
2-Butanone	11/22/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	11/22/19	N.D.	ug/l	0.2	1
Chloroform	11/22/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	11/22/19	N.D.	ug/l	0.3	1
Benzene	11/22/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	11/22/19	N.D.	ug/l	0.3	1
Trichloroethene	11/22/19	N.D.	ug/l	0.2	1
1,4-Dioxane	11/22/19	N.D.	ug/l	29	250
Toluene	11/22/19	N.D.	ug/l	0.2	1
Tetrachloroethene	11/22/19	N.D.	ug/l	0.2	1
Ethylbenzene	11/22/19	N.D.	ug/l	0.4	1
Xylene (Total)	11/22/19	N.D.	ug/l	1	6
1,2-Dichlorobenzene	11/22/19	N.D.	ug/l	0.2	5
Naphthalene	11/22/19	N.D.	ug/l	1	5

L193271AA / VBLKL87 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	11/23/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	11/23/19	N.D.	ug/l	0.2	1
Acetone	11/23/19	N.D.	ug/l	0.7	20
Freon 113	11/23/19	N.D.	ug/l	0.2	10
Carbon Disulfide	11/23/19	N.D.	ug/l	0.2	5
Methylene Chloride	11/23/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	11/23/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	11/23/19	N.D.	ug/l	0.2	1
2-Butanone	11/23/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	11/23/19	N.D.	ug/l	0.2	1
Chloroform	11/23/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	11/23/19	N.D.	ug/l	0.3	1
Benzene	11/23/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	11/23/19	N.D.	ug/l	0.3	1
Trichloroethene	11/23/19	N.D.	ug/l	0.2	1
1,4-Dioxane	11/23/19	N.D.	ug/l	29	250
Toluene	11/23/19	N.D.	ug/l	0.2	1
Tetrachloroethene	11/23/19	N.D.	ug/l	0.2	1
Ethylbenzene	11/23/19	N.D.	ug/l	0.4	1
Xylene (Total)	11/23/19	N.D.	ug/l	1	6

Fraction: Volatiles by GC/MS

L193271AA / VBLKL87 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
1,2-Dichlorobenzene	11/23/19	N.D.	ug/l	0.2	5
Naphthalene	11/23/19	N.D.	ug/l	1	5

Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: JCW24
Matrix: LIQUID

Fraction: Volatiles by GC/MS

L193262AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKL86	101	80 - 120	99	80 - 120	95	80 - 120	98	80 - 120
LCDL86	101	80 - 120	101	80 - 120	95	80 - 120	99	80 - 120
LCSL86	99	80 - 120	101	80 - 120	95	80 - 120	100	80 - 120
1205919	101	80 - 120	99	80 - 120	96	80 - 120	98	80 - 120
1205920	102	80 - 120	98	80 - 120	97	80 - 120	97	80 - 120
1205921	100	80 - 120	98	80 - 120	97	80 - 120	97	80 - 120
1205922	102	80 - 120	98	80 - 120	98	80 - 120	97	80 - 120
1205923	100	80 - 120	98	80 - 120	97	80 - 120	98	80 - 120
1205924	102	80 - 120	98	80 - 120	98	80 - 120	97	80 - 120
1205925	101	80 - 120	97	80 - 120	98	80 - 120	97	80 - 120
1205926	103	80 - 120	97	80 - 120	97	80 - 120	97	80 - 120
1205927	103	80 - 120	99	80 - 120	97	80 - 120	98	80 - 120

L193271AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKL87	102	80 - 120	98	80 - 120	97	80 - 120	97	80 - 120
LCSL87	102	80 - 120	102	80 - 120	99	80 - 120	98	80 - 120
1205918	102	80 - 120	98	80 - 120	99	80 - 120	97	80 - 120

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSL86 LCSD: LCDL86	Batch: **L193262AA** (Sample number(s): 1205919-1205927)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	18.12	18.42	91	92	56-120	2	30
1,1-Dichloroethene	20	20.77	21.17	104	106	80-131	2	30
Acetone	150	154.37	152.78	103	102	54-157	1	30
Freon 113	20	18.67	19.05	93	95	73-139	2	30
Carbon Disulfide	20	17.27	17.52	86	88	65-128	1	30
Methylene Chloride	20	21.25	20.95	106	105	80-120	1	30
trans-1,2-Dichloroethene	20	20.35	20.3	102	102	80-126	0	30
1,1-Dichloroethane	20	20.32	20.42	102	102	80-120	0	30
2-Butanone	150	143.28	142.02	96	95	59-135	1	30
cis-1,2-Dichloroethene	20	21.7	21.72	108	109	80-125	0	30
1,1,1-Trichloroethane	20	19.84	20.02	99	100	67-126	1	30
Chloroform	20	20.84	20.79	104	104	80-120	0	30
1,2-Dichloroethane	20	20.71	20.63	104	103	73-124	0	30
Benzene	20	21.01	21.29	105	106	80-120	1	30
Trichloroethene	20	20.7	21.11	104	106	80-120	2	30
1,4-Dioxane	500	641.66	646.1	128	129	63-146	1	30
Toluene	20	20.95	21.23	105	106	80-120	1	30
Tetrachloroethene	20	20.24	20.48	101	102	80-120	1	30
Ethylbenzene	20	20.94	20.95	105	105	80-120	0	30
Xylene (Total)	60	63.16	63.66	105	106	80-120	1	30
1,2-Dichlorobenzene	20	21.1	20.8	105	104	80-120	1	30
Naphthalene	20	20.46	20.46	102	102	53-124	0	30

LCS: LCSL87	Batch: **L193271AA** (Sample number(s): 1205918)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	17.86	NA	89	NA	56-120	NA	NA
1,1-Dichloroethene	20	20.27	NA	101	NA	80-131	NA	NA
Acetone	150	165.78	NA	111	NA	54-157	NA	NA
Freon 113	20	18.28	NA	91	NA	73-139	NA	NA
Carbon Disulfide	20	16.81	NA	84	NA	65-128	NA	NA
Methylene Chloride	20	20.76	NA	104	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	20.1	NA	100	NA	80-126	NA	NA
1,1-Dichloroethane	20	19.91	NA	100	NA	80-120	NA	NA
2-Butanone	150	137.59	NA	92	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	21.25	NA	106	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	19.91	NA	100	NA	67-126	NA	NA
Chloroform	20	20.73	NA	104	NA	80-120	NA	NA
1,2-Dichloroethane	20	20.97	NA	105	NA	73-124	NA	NA
Benzene	20	20.61	NA	103	NA	80-120	NA	NA
Trichloroethene	20	20.69	NA	103	NA	80-120	NA	NA

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSL87	Batch: **L193271AA** (Sample number(s): 1205918)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
1,4-Dioxane	500	538.96	NA	108	NA	63-146	NA	NA
Toluene	20	20.05	NA	100	NA	80-120	NA	NA
Tetrachloroethene	20	19.5	NA	98	NA	80-120	NA	NA
Ethylbenzene	20	19.96	NA	100	NA	80-120	NA	NA
Xylene (Total)	60	60.53	NA	101	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	20.05	NA	100	NA	80-120	NA	NA
Naphthalene	20	18.37	NA	92	NA	53-124	NA	NA

Fraction: Volatiles by GC/MS

11997: VOCs- 5ml Water by 8260C/D Analyte Name	Default MDL	Default LOQ	Units
Vinyl Chloride	0.2	1	ug/l
1,1-Dichloroethene	0.2	1	ug/l
Acetone	0.7	20	ug/l
Freon 113	0.2	10	ug/l
Carbon Disulfide	0.2	5	ug/l
Methylene Chloride	0.3	1	ug/l
trans-1,2-Dichloroethene	0.2	1	ug/l
1,1-Dichloroethane	0.2	1	ug/l
2-Butanone	0.3	10	ug/l
cis-1,2-Dichloroethene	0.2	1	ug/l
Chloroform	0.2	1	ug/l
1,1,1-Trichloroethane	0.3	1	ug/l
Benzene	0.2	1	ug/l
1,2-Dichloroethane	0.3	1	ug/l
Trichloroethene	0.2	1	ug/l
1,4-Dioxane	29	250	ug/l
Toluene	0.2	1	ug/l
Tetrachloroethene	0.2	1	ug/l
Ethylbenzene	0.4	1	ug/l
Xylene (Total)	1	6	ug/l
1,2-Dichlorobenzene	0.2	5	ug/l
Naphthalene	1	5	ug/l

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln04t06.d BFB Injection Date: 11/04/19

Instrument ID: HP09915 BFB Injection Time: 14:18

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.48
75	30.0 - 60.0% of mass 95	44.65
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.22
173	Less than 2.0% of mass 174	0.51 (0.61)1
174	Greater than 50.0% of mass 95	83.73
175	5.0 - 9.0% of mass 174	5.92 (7.07)1
176	Greater than 95.0%, but less than 101.0% of mass 174	82.66 (98.72)1
177	5.0 - 9.0% of mass 176	5.37 (6.49)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	ln04i01.d	11/04/19	14:51
02	VSTD100	ln04i02.d	11/04/19	15:13
03	VSTD50	ln04i03.d	11/04/19	15:35
04	VSTD20	ln04i04.d	11/04/19	15:57
05	VSTD10	ln04i05.d	11/04/19	16:19
06	VSTD4	ln04i06.d	11/04/19	16:41
07	VSTD1	ln04i07.d	11/04/19	17:03
08	ICVLLG	ln04v02.d	11/04/19	18:42

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln22t01.d BFB Injection Date: 11/22/19

Instrument ID: HP09915 BFB Injection Time: 07:53

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.57
75	30.0 - 60.0% of mass 95	43.97
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.56
173	Less than 2.0% of mass 174	0.57 (0.70)1
174	Greater than 50.0% of mass 95	81.03
175	5.0 - 9.0% of mass 174	5.38 (6.64)1
176	Greater than 95.0%, but less than 101.0% of mass 174	78.59 (96.99)1
177	5.0 - 9.0% of mass 176	5.36 (6.82)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	ln22c01.d	11/22/19	08:38
02	LCDL85	ln22s02.d	11/22/19	09:00
03	LCDL86	ln22s32.d	11/22/19	09:00
04	LCSL85	ln22s01.d	11/22/19	09:22
05	LCSL86	ln22s31.d	11/22/19	09:22
06	VBLKL85	ln22b01.d	11/22/19	10:07
07	VBLKL86	ln22b05.d	11/22/19	10:07
08	1202250	ln22s03.d	11/22/19	10:29
09	1202251	ln22s04.d	11/22/19	10:51
10	1202252	ln22s05.d	11/22/19	11:13
11	1202253	ln22s06.d	11/22/19	11:35
12	1205927	ln22s33.d	11/22/19	11:57
13	1205893	ln22s34.d	11/22/19	12:19
14	1205894MS	ln22s35.d	11/22/19	12:42
15	1205895MSD	ln22s36.d	11/22/19	13:04
16	1205892	ln22s37.d	11/22/19	13:26
17	1205896	ln22s38.d	11/22/19	13:48
18	1205897	ln22s39.d	11/22/19	14:10
19	1205898	ln22s40.d	11/22/19	14:32
20	1205899	ln22s41.d	11/22/19	14:54
21	1205919	ln22s42.d	11/22/19	15:16
22	1205920	ln22s43.d	11/22/19	15:38

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln22t01.d BFB Injection Date: 11/22/19

Instrument ID: HP09915 BFB Injection Time: 07:53

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.57
75	30.0 - 60.0% of mass 95	43.97
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.56
173	Less than 2.0% of mass 174	0.57 (0.70)1
174	Greater than 50.0% of mass 95	81.03
175	5.0 - 9.0% of mass 174	5.38 (6.64)1
176	Greater than 95.0%, but less than 101.0% of mass 174	78.59 (96.99)1
177	5.0 - 9.0% of mass 176	5.36 (6.82)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1205921	ln22s44.d	11/22/19	16:00
24	1205922	ln22s45.d	11/22/19	16:22
25	1205923	ln22s46.d	11/22/19	16:44
26	1205924	ln22s47.d	11/22/19	17:06
27	1205925	ln22s48.d	11/22/19	17:28
28	1205926	ln22s49.d	11/22/19	17:50

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln23t02.d BFB Injection Date: 11/23/19

Instrument ID: HP09915 BFB Injection Time: 07:57

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.16
75	30.0 - 60.0% of mass 95	43.53
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.39
173	Less than 2.0% of mass 174	0.55 (0.66)1
174	Greater than 50.0% of mass 95	83.68
175	5.0 - 9.0% of mass 174	6.06 (7.25)1
176	Greater than 95.0%, but less than 101.0% of mass 174	80.15 (95.78)1
177	5.0 - 9.0% of mass 176	5.44 (6.78)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	ln23c01.d	11/23/19	08:42
02	LCSL87	ln23s01.d	11/23/19	09:26
03	VBLKL87	ln23b01.d	11/23/19	09:48
04	1205905	ln23s02.d	11/23/19	10:44
05	1205900	ln23s03.d	11/23/19	11:06
06	1205901MS	ln23s04.d	11/23/19	11:28
07	1205902MSD	ln23s05.d	11/23/19	11:50
08	1205903	ln23s06.d	11/23/19	12:12
09	1205904	ln23s07.d	11/23/19	12:34
10	1205910	ln23s08.d	11/23/19	12:56
11	1205911	ln23s09.d	11/23/19	13:18
12	1205912	ln23s10.d	11/23/19	13:40
13	1205913	ln23s11.d	11/23/19	14:02
14	1205914	ln23s12.d	11/23/19	14:24
15	1205915	ln23s13.d	11/23/19	14:46
16	1205916	ln23s14.d	11/23/19	15:08
17	1205917	ln23s15.d	11/23/19	15:31
18	1205918	ln23s16.d	11/23/19	15:53
19	1205928	ln23s17.d	11/23/19	16:15
20	1205929	ln23s18.d	11/23/19	16:37
21	1206738	ln23s19.d	11/23/19	16:59
22	1206739	ln23s20.d	11/23/19	17:21

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln23t02.d BFB Injection Date: 11/23/19

Instrument ID: HP09915 BFB Injection Time: 07:57

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.16
75	30.0 - 60.0% of mass 95	43.53
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.39
173	Less than 2.0% of mass 174	0.55 (0.66)1
174	Greater than 50.0% of mass 95	83.68
175	5.0 - 9.0% of mass 174	6.06 (7.25)1
176	Greater than 95.0%, but less than 101.0% of mass 174	80.15 (95.78)1
177	5.0 - 9.0% of mass 176	5.44 (6.78)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1206740	ln23s21.d	11/23/19	17:43

FORM V VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 11/04/19 11/04/19

Heated Purge: (Y/N) Y Calibration Times: 14:51 17:03

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ln04i07.d RRF 4 = ln04i06.d RRF 10= ln04i05.d
RRF 20= ln04i04.d RRF 50= ln04i03.d RRF100= ln04i02.d RRF300= ln04i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
Dichlorodifluoromethane	#0.2770	0.3398	0.3322	0.3567	0.3683	0.3624	0.4044	0.3487	11	AVG	#
Chloromethane	#0.3032	0.3486	0.3309	0.3441	0.3366	0.3315	0.3574	0.3361	5	AVG	#
1,3-Butadiene	0.3190	0.2966	0.2596	0.2831	0.2680	0.2614	0.2655	0.2790	8	AVG	
Vinyl Chloride	#0.3148	0.3359	0.3281	0.3461	0.3340	0.3300	0.3588	0.3354	4	AVG	#
Bromomethane	#0.2465	0.2525	0.2338	0.2435	0.2351	0.2280	0.2436	0.2404	4	AVG	#
Chloroethane	#0.1829	0.1883	0.1826	0.1903	0.1829	0.1768	0.1864	0.1843	2	AVG	#
Dichlorofluoromethane	0.4438	0.4434	0.4617	0.4547	0.4393	0.4194	0.4429	0.4436	3	AVG	
n-Pentane	0.4515	0.4661	0.3729	0.4321	0.4220	0.4236	0.4188	0.4267	7	AVG	
Trichlorofluoromethane	#0.3135	0.3650	0.3480	0.3680	0.3738	0.3637	0.3957	0.3611	7	AVG	#
Ethyl ether	0.2040	0.2292	0.2248	0.2407	0.2462	0.2325	0.2560	0.2333	7	AVG	
Freon 123a	0.2731	0.2973	0.2841	0.3052	0.2905	0.2871	0.2961	0.2905	4	AVG	
Acrolein	1.8108	1.7178	1.8759	1.9357	1.9501	1.9507	1.8885	1.8756	5	AVG	
1,1-Dichloroethene	#0.1836	0.2109	0.2092	0.2256	0.2170	0.2158	0.2215	0.2120	6	AVG	#
1,1-Dichloroethene(2)	#0.1023	0.1059	0.1045	0.1117	0.1063	0.1059	0.1072	0.1063	3	AVG	#
Acetone	#0.8149	0.8065	0.8248	0.8719	0.8448	0.8521	0.8711	0.8409	3	AVG	#
Freon 113	#0.2090	0.2460	0.2241	0.2555	0.2493	0.2512	0.2576	0.2418	8	AVG	#
2-Propanol	0.6190	0.5470	0.6059	0.5854	0.6149	0.6455	0.6138	0.6045	5	AVG	
Methyl Iodide	0.3896	0.4318	0.4390	0.4699	0.4471	0.4440	0.4531	0.4392	6	AVG	
Carbon Disulfide	#0.6790	0.7802	0.7759	0.8606	0.8244	0.8268	0.8441	0.7987	8	AVG	#
Allyl Chloride	0.3592	0.3785	0.3741	0.3853	0.3781	0.3777	0.4087	0.3802	4	AVG	
Methyl Acetate	#0.2759	0.2713	0.2678	0.2699	0.2708	0.2665	0.2887	0.2730	3	AVG	#
Methylene Chloride	#0.2376	0.2470	0.2510	0.2643	0.2542	0.2521	0.2596	0.2523	3	AVG	#
t-Butyl alcohol	0.9987	0.9567	1.0535	1.0361	1.0823	1.1654	1.0751	1.0525	6	AVG	
Acrylonitrile	0.1302	0.1382	0.1473	0.1543	0.1516	0.1518	0.1546	0.1469	6	AVG	
trans-1,2-Dichloroethene	#0.2214	0.2420	0.2423	0.2603	0.2478	0.2478	0.2548	0.2452	5	AVG	#
Methyl Tertiary Butyl Ether	#0.7408	0.7784	0.8166	0.8514	0.8245	0.8033	0.8186	0.8048	4	AVG	#
n-Hexane	0.3287	0.3697	0.3246	0.4104	0.3995	0.4116	0.4257	0.3815	11	AVG	
1,1-Dichloroethane	#0.3709	0.4279	0.4277	0.4500	0.4356	0.4348	0.4472	0.4277	6	AVG	#
di-Isopropyl ether	0.7323	0.7905	0.8261	0.8844	0.8488	0.8391	0.8535	0.8250	6	AVG	
2-Chloro-1,3-butadiene	0.3275	0.3721	0.3665	0.4087	0.3982	0.4003	0.4129	0.3838	8	AVG	
Ethyl t-butyl ether	0.7062	0.7711	0.8131	0.8688	0.8314	0.8069	0.8067	0.8006	6	AVG	
cis-1,2-Dichloroethene	#0.2518	0.2724	0.2701	0.2905	0.2780	0.2764	0.2874	0.2752	5	AVG	#
2-Butanone	#0.1780	0.1771	0.1844	0.1937	0.1954	0.1945	0.1965	0.1885	4	AVG	#
2,2-Dichloropropane	0.2822	0.3252	0.3231	0.3546	0.3451	0.3438	0.3535	0.3325	8	AVG	
Propionitrile	1.2429	1.2037	1.2978	1.3520	1.3266	1.3641	1.3930	1.3114	5	AVG	
Methacrylonitrile	0.1422	0.1460	0.1564	0.1674	0.1637	0.1633	0.1700	0.1584	7	AVG	
Bromochloromethane	0.1253	0.1402	0.1475	0.1518	0.1494	0.1475	0.1599	0.1459	7	AVG	
Tetrahydrofuran	1.1900	1.0886	1.1667	1.2087	1.1678	1.2286	1.2418	1.1846	4	AVG	
Chloroform	#0.3565	0.3938	0.4037	0.4404	0.4177	0.4181	0.4336	0.4091	7	AVG	#
1,1,1-Trichloroethane	#0.2897	0.3392	0.3356	0.3727	0.3627	0.3635	0.3807	0.3492	9	AVG	#
Cyclohexane	#0.3956	0.4609	0.4169	0.5022	0.4885	0.4944	0.5099	0.4669	10	AVG	#
Cyclohexane(2)	#0.3456	0.3987	0.3627	0.4329	0.4236	0.4319	0.4438	0.4056	9	AVG	#
Cyclohexane(3)	#0.1219	0.1428	0.1291	0.1542	0.1510	0.1531	0.1588	0.1444	10	AVG	#
1,1-Dichloropropene	0.2907	0.3348	0.3278	0.3579	0.3462	0.3479	0.3620	0.3382	7	AVG	
Carbon Tetrachloride	#0.2440	0.2777	0.2747	0.3128	0.3114	0.3175	0.3350	0.2961	11	AVG	#
Isobutyl Alcohol	0.3485	0.3107	0.3595	0.3421	0.3590	0.3974	0.3623	0.3542	7	AVG	
Benzene	#0.8990	1.0067	1.0148	1.0842	1.0359	1.0238	1.0549	1.0170	6	AVG	#
1,2-Dichloroethane	#0.3434	0.3191	0.3218	0.3337	0.3212	0.3202	0.3304	0.3271	3	AVG	#
1,2-Dichloroethane(2)	#0.0306	0.0316	0.0313	0.0343	0.0326	0.0322	0.0340	0.0324	4	AVG	#<-
t-Amyl methyl ether	0.7161	0.7648	0.8115	0.8675	0.8369	0.8221	0.8061	0.8036	6	AVG	
n-Heptane	0.3313	0.3538	0.2821	0.3843	0.3724	0.3852	0.3855	0.3564	11	AVG	
n-Butanol	0.2496	0.2624	0.3164	0.3024	0.3250	0.3551	0.3230	0.3049	12	AVG	

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 11/04/19 11/04/19

Heated Purge: (Y/N) Y Calibration Times: 14:51 17:03

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ln04i07.d RRF 4 = ln04i06.d RRF 10= ln04i05.d
RRF 20= ln04i04.d RRF 50= ln04i03.d RRF100= ln04i02.d RRF300= ln04i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Trichloroethene	#0.2300	0.2478	0.2477	0.2710	0.2607	0.2615	0.2739	0.2561	6	AVG #
Methylcyclohexane	#0.4066	0.4619	0.4494	0.4907	0.4946	0.4918	0.5306	0.4751	8	AVG #
Methylcyclohexane(2)	#0.1773	0.2158	0.2019	0.2198	0.2245	0.2228	0.2428	0.2150	10	AVG #
1,2-Dichloropropane	#0.2299	0.2478	0.2567	0.2731	0.2644	0.2644	0.2715	0.2582	6	AVG #
Dibromomethane	0.1450	0.1593	0.1638	0.1764	0.1719	0.1732	0.1801	0.1671	7	AVG
1,4-Dioxane	0.0728	0.0772	0.0845	0.0860	0.0888	0.0886	0.0887	0.0838	8	AVG
Methyl Methacrylate	0.2026	0.2254	0.2423	0.2604	0.2637	0.2705	0.2832	0.2497	11	AVG
Bromodichloromethane	#0.2483	0.2630	0.2867	0.3150	0.3161	0.3256	0.3442	0.2998	12	AVG #
2-Nitropropane	0.0733	0.0770	0.0825	0.0914	0.1013	0.1033	0.1070	0.0908	15	AVG
2-Chloroethyl Vinyl Ether	0.0882	0.0977	0.1040	0.1130	0.1155	0.1203	0.1378	0.1109	15	AVG
cis-1,3-Dichloropropene	#0.3066	0.3495	0.3874	0.4270	0.4265	0.4334	0.4572	0.3982	13	AVG #
4-Methyl-2-pentanone	#0.3519	0.3696	0.3930	0.4183	0.4328	0.4167	0.4032	0.3979	7	AVG #
Toluene	#0.7332	0.7931	0.8181	0.8731	0.8456	0.8312	0.8473	0.8202	6	AVG #
trans-1,3-Dichloropropene	#0.3482	0.3965	0.4507	0.4938	0.5103	0.5177	0.5421	0.4656	15	AVG #
Ethyl Methacrylate	0.4474	0.4901	0.5672	0.5969	0.6125	0.6196	0.6273	0.5659	12	AVG
1,1,2-Trichloroethane	#0.2783	0.2901	0.3087	0.3230	0.3222	0.3239	0.3306	0.3110	6	AVG #
Tetrachloroethene	#0.3162	0.3426	0.3214	0.3690	0.3559	0.3544	0.3721	0.3474	6	AVG #
1,3-Dichloropropane	0.4832	0.4915	0.5312	0.5551	0.5463	0.5472	0.5620	0.5309	6	AVG
2-Hexanone	#0.3356	0.3575	0.3750	0.3917	0.4210	0.3894	0.3737	0.3777	7	AVG #
Dibromochloromethane	#0.2335	0.2673	0.3027	0.3338	0.3491	0.3626	0.3808	0.3185	17	AVG #
1,2-Dibromoethane	#0.2934	0.3052	0.3308	0.3537	0.3534	0.3557	0.3715	0.3377	9	AVG #
1-Chlorohexane	0.4605	0.4391	0.3819	0.4601	0.4417	0.4418	0.4594	0.4406	6	AVG
Chlorobenzene	#0.8164	0.9033	0.9335	0.9825	0.9556	0.9405	0.9609	0.9275	6	AVG #
1,1,1,2-Tetrachloroethane	0.2351	0.2774	0.2999	0.3286	0.3310	0.3327	0.3346	0.3056	12	AVG
Ethylbenzene	#1.3747	1.5457	1.5220	1.6801	1.6314	1.6113	1.6087	1.5677	6	AVG #
m+p-Xylene	#0.5374	0.6016	0.5976	0.6715	0.6453	0.6383	0.6253	0.6167	7	AVG #
o-Xylene	#0.5399	0.5806	0.5978	0.6590	0.6427	0.6294	0.6148	0.6092	7	AVG #
Styrene	#0.8016	0.9301	1.0102	1.0972	1.0847	1.0669	1.0557	1.0066	11	AVG #
Bromoform	#	0.1724	0.2151	0.2312	0.2542	0.2685	0.2868	0.2380	17	AVG #
Isopropylbenzene	#1.2910	1.5137	1.4363	1.6684	1.6105	1.5929	1.5825	1.5279	8	AVG #
Cyclohexanone	0.3281	0.3024	0.3195	0.3248	0.3437	0.3247	0.3541	0.3282	5	AVG
Bromobenzene	0.6787	0.7176	0.7360	0.7885	0.7819	0.7772	0.7803	0.7515	6	AVG
1,1,2,2-Tetrachloroethane	#0.8022	0.8637	0.9996	0.9771	0.9960	0.9947	0.9782	0.9445	8	AVG #
1,2,3-Trichloropropane	0.2561	0.2658	0.3031	0.2987	0.2999	0.3027	0.3026	0.2898	7	AVG
trans-1,4-Dichloro-2-butene	0.2392	0.2651	0.2913	0.3105	0.3171	0.3156	0.3005	0.2913	10	AVG
n-Propylbenzene	2.9207	3.2949	2.9806	3.5724	3.4357	3.4054	3.3722	3.2831	7	AVG
2-Chlorotoluene	0.6482	0.6609	0.6535	0.7438	0.7252	0.7177	0.7330	0.6975	6	AVG
4-Chlorotoluene	0.6762	0.7074	0.6870	0.7741	0.7474	0.7369	0.7530	0.7260	5	AVG
1,3,5-Trimethylbenzene	1.9893	2.3249	2.1852	2.6169	2.5322	2.5250	2.5281	2.3860	10	AVG
tert-Butylbenzene	0.4288	0.4845	0.4243	0.5332	0.5247	0.5261	0.5325	0.4934	10	AVG
Pentachloroethane	0.2905	0.3724	0.4105	0.4466	0.4692	0.4744	0.5106	0.4249	18	AVG
1,2,4-Trimethylbenzene	2.1648	2.4282	2.3275	2.7429	2.6696	2.6607	2.6088	2.5147	8	AVG
sec-Butylbenzene	2.5710	2.9123	2.5624	3.2580	3.1256	3.1495	3.0325	2.9444	9	AVG
1,3-Dichlorobenzene	#1.3168	1.3435	1.3443	1.4749	1.4337	1.4053	1.3479	1.3809	4	AVG #
p-Isopropyltoluene	2.2311	2.5145	2.2448	2.8322	2.7191	2.7434	2.5461	2.5473	9	AVG
1,4-Dichlorobenzene	#1.3913	1.3992	1.3855	1.5164	1.4765	1.4501	1.4018	1.4315	4	AVG #
1,2,3-Trimethylbenzene	2.3717	2.5881	2.6584	2.7814	2.7739	2.7079	2.7646	2.6637	6	AVG
Benzyl Chloride		1.4905	1.9042	2.0277	2.1892	2.2241	2.2651	2.0168	14	AVG
1,3-Diethylbenzene	1.4770	1.6040	1.6373	1.7518	1.7206	1.7031	1.7107	1.6578	6	AVG
1,4-Diethylbenzene	1.6313	1.7295	1.7208	1.8600	1.8134	1.7888	1.7510	1.7564	4	AVG
1,2-Dichlorobenzene	#1.2854	1.3272	1.3476	1.4407	1.4096	1.3800	1.3479	1.3626	4	AVG #
n-Butylbenzene	1.2635	1.3335	1.1354	1.4216	1.3485	1.3543	1.2604	1.3024	7	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 11/04/19 11/04/19

Heated Purge: (Y/N) Y Calibration Times: 14:51 17:03

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ln04i07.d RRF 4 = ln04i06.d RRF 10= ln04i05.d
RRF 20= ln04i04.d RRF 50= ln04i03.d RRF100= ln04i02.d RRF300= ln04i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
1,2-Diethylbenzene	1.2665	1.3513	1.3737	1.4741	1.4581	1.4365	1.4223	1.3975	5	AVG
1,2-Dibromo-3-chloropropane#	0.1653	0.1703	0.2163	0.2130	0.2240	0.2247	0.2337	0.2068	13	AVG #
1,3,5-Trichlorobenzene	1.0736	1.0363	0.9506	1.1293	1.0680	1.0728	0.9975	1.0469	6	AVG
1,2,4-Trichlorobenzene	#1.0928	0.9898	0.9467	1.0851	1.0411	1.0335	0.9366	1.0179	6	AVG #
Hexachlorobutadiene		0.6224	0.4463	0.5319	0.4489	0.4300	0.4042	0.4806	17	AVG
Naphthalene	2.9793	3.0036	3.3068	3.4936	3.4918	3.4237	3.2086	3.2725	7	AVG
1,2,3-Trichlorobenzene	1.0616	0.9674	0.9274	1.0684	1.0300	1.0095	0.8692	0.9905	7	AVG
2-Methylnaphthalene	1.9837	1.8879	2.0390	2.2209	2.2298	2.1150	1.6300	2.0152	10	AVG
Dibromofluoromethane	0.2407	0.2444	0.2426	0.2463	0.2437	0.2470	0.2465	0.2445	1	AVG
Dibromofluoromethane(2)	0.2457	0.2504	0.2472	0.2513	0.2494	0.2516	0.2491	0.2492	1	AVG
1,2-Dichloroethane-d4	0.0612	0.0629	0.0625	0.0629	0.0628	0.0627	0.0611	0.0623	1	AVG
1,2-Dichloroethane-d4(2)	0.2741	0.2818	0.2744	0.2819	0.2771	0.2799	0.2742	0.2776	1	AVG
1,2-Dichloroethane-d4(3)	0.0389	0.0398	0.0398	0.0408	0.0397	0.0402	0.0393	0.0398	2	AVG
Toluene-d8	1.3149	1.3039	1.3148	1.3125	1.3146	1.3005	1.2968	1.3083	1	AVG
Toluene-d8(2)	0.8480	0.8436	0.8547	0.8509	0.8480	0.8442	0.8428	0.8475	1	AVG
4-Bromofluorobenzene	0.4958	0.4982	0.5005	0.4967	0.4932	0.4898	0.4935	0.4954	1	AVG
4-Bromofluorobenzene(2)	0.4097	0.4154	0.4152	0.4118	0.4097	0.4065	0.4066	0.4107	1	AVG

Average %RSD 7

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP09915.i/19nov04i.b/ln04i01.d	VSTD300
/chem/HP09915.i/19nov04i.b/ln04i02.d	VSTD100
/chem/HP09915.i/19nov04i.b/ln04i03.d	VSTD050
/chem/HP09915.i/19nov04i.b/ln04i04.d	VSTD020
/chem/HP09915.i/19nov04i.b/ln04i05.d	VSTD010
/chem/HP09915.i/19nov04i.b/ln04i06.d	VSTD004
/chem/HP09915.i/19nov04i.b/ln04i07.d	VSTD001

Area Summary

File ID:

Internal Standard Name	ln04i01.d	ln04i02.d	ln04i03.d	ln04i04.d	ln04i05.d	ln04i06.d	ln04i07.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	254406	265971	269779	258058	263427	262044	243591	259611	3	Yes
Fluorobenzene	1120873	1183605	1160755	1128743	1158257	1148427	1137124	1148255	2	Yes
Chlorobenzene-d5	891668	935628	904578	883281	897139	884065	879875	896605	2	Yes
1,4-Dichlorobenzene-d4	477171	500629	483927	476218	496298	480071	473433	483964	2	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	ln04i01.d	ln04i02.d	ln04i03.d	ln04i04.d	ln04i05.d	ln04i06.d	ln04i07.d	Avg. RT
t-Butyl alcohol-d10	4.503	4.509	4.509	4.512	4.509	4.512	4.496	4.507
Fluorobenzene	7.959	7.962	7.959	7.962	7.956	7.959	7.959	7.960
Chlorobenzene-d5	11.361	11.361	11.361	11.361	11.358	11.358	11.358	11.360
1,4-Dichlorobenzene-d4	13.223	13.223	13.223	13.223	13.223	13.223	13.223	13.223

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 11/05/2019 at 16:07.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 11/04/19 Time: 18:42

Lab File ID: ln04v02.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3487	0.3266	18.73	20	-6	#
# Chloromethane	0.3361	0.3180	18.93	20	-5	#
1,3-Butadiene	0.2790	0.2741	19.65	20	-2	
# Vinyl Chloride	0.3354	0.3245	19.35	20	-3	#
# Bromomethane	0.2404	0.2156	17.93	20	-10	#
# Chloroethane	0.1843	0.1704	18.49	20	-8	#
Dichlorofluoromethane	0.4436	0.3598	16.22	20	-19	
n-Pentane	0.4267	0.4057	19.01	20	-5	
# Trichlorofluoromethane	0.3611	0.3746	20.75	20	4	#
Ethyl ether	0.2333	0.1939	16.62	20	-17	
Freon 123a	0.2905	0.2825	19.45	20	-3	
Acrolein	1.8756	1.6896	135.12	150	-10	
# 1,1-Dichloroethene	0.2120	0.2216	20.91	20	5	#
# Acetone	0.8409	0.7666	136.75	150	-9	#
# Freon 113	0.2418	0.2394	19.80	20	-1	#
2-Propanol	0.6045	0.5806	144.06	150	-4	
Methyl Iodide	0.4392	0.4077	18.56	20	-7	
# Carbon Disulfide	0.7987	0.7452	18.66	20	-7	#
Allyl Chloride	0.3802	0.3535	18.59	20	-7	
# Methyl Acetate	0.2730	0.2606	19.09	20	-5	#
# Methylene Chloride	0.2523	0.2570	20.38	20	2	#
t-Butyl alcohol	1.0525	1.0046	190.90	200	-5	
Acrylonitrile	0.1469	0.1395	94.98	100	-5	
# trans-1,2-Dichloroethene	0.2452	0.2452	20.00	20	0	#
# Methyl Tertiary Butyl Ether	0.8048	0.7596	18.87	20	-6	#
n-Hexane	0.3815	0.3828	20.07	20	0	
# 1,1-Dichloroethane	0.4277	0.4163	19.46	20	-3	#
di-Isopropyl ether	0.8250	0.7868	19.08	20	-5	
2-Chloro-1,3-butadiene	0.3838	0.3659	19.07	20	-5	
Ethyl t-butyl ether	0.8006	0.7634	19.07	20	-5	
# cis-1,2-Dichloroethene	0.2752	0.2889	20.99	20	5	#
# 2-Butanone	0.1885	0.1794	142.74	150	-5	#
2,2-Dichloropropane	0.3325	0.3377	20.31	20	2	
Propionitrile	1.3114	1.2333	141.06	150	-6	
Methacrylonitrile	0.1584	0.1535	145.31	150	-3	
Bromochloromethane	0.1459	0.1368	18.75	20	-6	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 11/04/19 Time: 18:42

Lab File ID: ln04v02.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Tetrahydrofuran	1.1846	1.0959	92.51	100	-7	
#	Chloroform	0.4091	0.4123	20.16	20	1	#
#	1,1,1-Trichloroethane	0.3492	0.3558	20.38	20	2	#
#	Cyclohexane	0.4669	0.4442	19.02	20	-5	#
	1,1-Dichloropropene	0.3382	0.3393	20.07	20	0	
#	Carbon Tetrachloride	0.2961	0.2964	20.02	20	0	#
	Isobutyl Alcohol	0.3542	0.3198	451.41	500	-10	
#	Benzene	1.0170	1.0168	20.00	20	0	#
#	1,2-Dichloroethane	0.3271	0.3373	20.62	20	3	#
	t-Amyl methyl ether	0.8036	0.7630	18.99	20	-5	
	n-Heptane	0.3564	0.3376	18.95	20	-5	
	n-Butanol	0.3049	0.2780	911.92	1000	-9	
#	Trichloroethene	0.2561	0.2581	20.16	20	1	#
#	Methylcyclohexane	0.4751	0.4589	19.32	20	-3	#
#	1,2-Dichloropropane	0.2582	0.2641	20.45	20	2	#
	Dibromomethane	0.1671	0.1672	20.01	20	0	
	1,4-Dioxane	0.0838	0.0844	503.75	500	1	
	Methyl Methacrylate	0.2497	0.2388	19.13	20	-4	
#	Bromodichloromethane	0.2998	0.2984	19.91	20	0	#
	2-Nitropropane	0.0908	0.0741	16.32	20	-18	
	2-Chloroethyl Vinyl Ether	0.1109	0.1056	19.04	20	-5	
#	cis-1,3-Dichloropropene	0.3982	0.3957	19.87	20	-1	#
#	4-Methyl-2-pentanone	0.3979	0.3693	92.81	100	-7	#
#	Toluene	0.8202	0.8294	20.22	20	1	#
#	trans-1,3-Dichloropropene	0.4656	0.4472	19.21	20	-4	#
	Ethyl Methacrylate	0.5659	0.5138	18.16	20	-9	
#	1,1,2-Trichloroethane	0.3110	0.3171	20.39	20	2	#
#	Tetrachloroethene	0.3474	0.3842	22.12	20	11	#
	1,3-Dichloropropane	0.5309	0.5224	19.68	20	-2	
#	2-Hexanone	0.3777	0.3481	92.15	100	-8	#
#	Dibromochloromethane	0.3185	0.3147	19.76	20	-1	#
#	1,2-Dibromoethane	0.3377	0.3356	19.88	20	-1	#
	1-Chlorohexane	0.4406	0.4292	19.48	20	-3	
#	Chlorobenzene	0.9275	0.9379	20.22	20	1	#
	1,1,1,2-Tetrachloroethane	0.3056	0.3029	19.82	20	-1	
#	Ethylbenzene	1.5677	1.5899	20.28	20	1	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 11/04/19 Time: 18:42

Lab File ID: ln04v02.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# m+p-Xylene	0.6167	0.6315	40.96	40	2	#
# o-Xylene	0.6092	0.6189	20.32	20	2	#
# Styrene	1.0066	1.0350	20.56	20	3	#
# Bromoform	0.2380	0.2137	17.95	20	-10	#
# Isopropylbenzene	1.5279	1.5939	20.86	20	4	#
Cyclohexanone	0.3282	0.2949	449.36	500	-10	
Bromobenzene	0.7515	0.7447	19.82	20	-1	
# 1,1,2,2-Tetrachloroethane	0.9445	0.9245	19.58	20	-2	#
1,2,3-Trichloropropane	0.2898	0.2890	19.94	20	0	
trans-1,4-Dichloro-2-butene	0.2913	0.2850	97.83	100	-2	
n-Propylbenzene	3.2831	3.4091	20.77	20	4	
2-Chlorotoluene	0.6975	0.7037	20.18	20	1	
4-Chlorotoluene	0.7260	0.7301	20.11	20	1	
1,3,5-Trimethylbenzene	2.3860	2.4518	20.55	20	3	
tert-Butylbenzene	0.4934	0.5090	20.63	20	3	
Pentachloroethane	0.4249	0.3657	17.21	20	-14	
1,2,4-Trimethylbenzene	2.5147	2.5110	19.97	20	0	
sec-Butylbenzene	2.9444	3.0247	20.55	20	3	
# 1,3-Dichlorobenzene	1.3809	1.3855	20.07	20	0	#
p-Isopropyltoluene	2.5473	2.6162	20.54	20	3	
# 1,4-Dichlorobenzene	1.4315	1.4660	20.48	20	2	#
1,2,3-Trimethylbenzene	2.6637	2.6470	19.87	20	-1	
Benzyl Chloride	2.0168	1.6153	16.02	20	-20	
1,3-Diethylbenzene	1.6578	1.5827	19.09	20	-5	
1,4-Diethylbenzene	1.7564	1.6691	19.01	20	-5	
# 1,2-Dichlorobenzene	1.3626	1.3874	20.36	20	2	#
n-Butylbenzene	1.3024	1.2702	19.50	20	-2	
1,2-Diethylbenzene	1.3975	1.3386	19.16	20	-4	
# 1,2-Dibromo-3-chloropropane	0.2068	0.1994	19.29	20	-4	#
1,3,5-Trichlorobenzene	1.0469	0.9964	19.04	20	-5	
# 1,2,4-Trichlorobenzene	1.0179	0.9765	19.19	20	-4	#
Hexachlorobutadiene	0.4806	0.4071	16.94	20	-15	
Naphthalene	3.2725	3.2676	19.97	20	0	
1,2,3-Trichlorobenzene	0.9905	0.9443	19.07	20	-5	
2-Methylnaphthalene	2.0152	1.8367	18.23	20	-9	

Average %Drift 5

Compounds with required minimum RRF.
Maximum % Drift = 30 %

^

Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem/HP09915.i/19nov04i.b/ln04i07.d
/chem/HP09915.i/19nov04i.b/ln04i06.d
/chem/HP09915.i/19nov04i.b/ln04i05.d
/chem/HP09915.i/19nov04i.b/ln04i04.d
/chem/HP09915.i/19nov04i.b/ln04i03.d
/chem/HP09915.i/19nov04i.b/ln04i02.d
/chem/HP09915.i/19nov04i.b/ln04i01.d

File /chem/HP09915.i/19nov04i.b/ln04i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem/HP09915.i/19nov22a.b/ln22c01.d

RT Summary

Internal Standard Name	File ID: ln22c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	4.496	4.509	Yes
Fluorobenzene	7.959	7.959	Yes
Chlorobenzene-d5	11.361	11.361	Yes
1,4-Dichlorobenzene-d4	13.220	13.223	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: ln22c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	262815	269779	134890	539558	Yes
Fluorobenzene	1333599	1160755	580378	2321510	Yes
Chlorobenzene-d5	1075782	904578	452289	1809156	Yes
1,4-Dichlorobenzene-d4	573585	483927	241964	967854	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 11/22/2019 at 09:51

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/22/19 Time: 08:38

Lab File ID: ln22c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3487	0.3600	51.62	50	3	#
# Chloromethane	0.3361	0.3503	52.11	50	4	#
1,3-Butadiene	0.2790	0.3464	62.08	50	24	<-
# Vinyl Chloride	0.3354	0.3455	51.50	50	3	#
# Bromomethane	0.2404	0.2367	49.22	50	-2	#
# Chloroethane	0.1843	0.1846	50.07	50	0	#
n-Pentane	0.4267	0.3707	43.44	50	-13	
# Trichlorofluoromethane	0.3611	0.3652	50.57	50	1	#
Ethyl ether	0.2333	0.2417	51.79	50	4	
Freon 123a	0.2905	0.2698	46.44	50	-7	
Acrolein	1.8756	1.8332	488.68	500	-2	
# 1,1-Dichloroethene	0.2120	0.1984	46.79	50	-6	#
# 1,1-Dichloroethene(2)	0.1063	0.0958	45.09	50	-10	#<-
# Acetone	0.8409	0.8245	98.06	100	-2	#
# Freon 113	0.2418	0.2244	46.40	50	-7	#
2-Propanol	0.6045	0.5828	241.04	250	-4	
Methyl Iodide	0.4392	0.4025	45.82	50	-8	
# Carbon Disulfide	0.7987	0.7536	47.17	50	-6	#
Allyl Chloride	0.3802	0.3218	42.31	50	-15	
# Methyl Acetate	0.2730	0.2381	43.61	50	-13	#
# Methylene Chloride	0.2523	0.2380	47.18	50	-6	#
t-Butyl alcohol	1.0525	0.9808	232.96	250	-7	
Acrylonitrile	0.1469	0.1324	45.07	50	-10	
# trans-1,2-Dichloroethene	0.2452	0.2266	46.20	50	-8	#
# Methyl Tertiary Butyl Ether	0.8048	0.6960	43.24	50	-14	#
n-Hexane	0.3815	0.3683	48.28	50	-3	
# 1,1-Dichloroethane	0.4277	0.3952	46.20	50	-8	#
di-Isopropyl ether	0.8250	0.7567	45.87	50	-8	
2-Chloro-1,3-butadiene	0.3838	0.3491	45.49	50	-9	
Ethyl t-butyl ether	0.8006	0.7152	44.66	50	-11	
# cis-1,2-Dichloroethene	0.2752	0.2526	45.90	50	-8	#
# 2-Butanone	0.1885	0.1610	85.41	100	-15	#
2,2-Dichloropropane	0.3325	0.2920	43.90	50	-12	
Propionitrile	1.3114	1.4043	267.69	250	7	
Methacrylonitrile	0.1584	0.1511	119.19	125	-5	
Bromochloromethane	0.1459	0.1315	45.06	50	-10	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/22/19 Time: 08:38

Lab File ID: ln22c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
Tetrahydrofuran	1.1846	1.1869	100.19	100	0	
# Chloroform	0.4091	0.3760	45.95	50	-8	#
# 1,1,1-Trichloroethane	0.3492	0.3102	44.41	50	-11	#
# Cyclohexane	0.4669	0.4389	47.00	50	-6	#
# Cyclohexane(2)	0.4056	0.3847	47.43	50	-5	#
# Cyclohexane(3)	0.1444	0.1362	47.17	50	-6	#
1,1-Dichloropropene	0.3382	0.3081	45.55	50	-9	
# Carbon Tetrachloride	0.2961	0.2604	43.96	50	-12	#
Isobutyl Alcohol	0.3542	0.3399	599.76	625	-4	
# Benzene	1.0170	0.9578	47.09	50	-6	#
# 1,2-Dichloroethane	0.3271	0.2944	44.99	50	-10	#
# 1,2-Dichloroethane(2)	0.0324	0.0307	47.38	50	-5	#<-
t-Amyl methyl ether	0.8036	0.7270	45.24	50	-10	
n-Heptane	0.3564	0.3424	48.04	50	-4	
n-Butanol	0.3049	0.3008	1233.22	1250	-1	
# Trichloroethene	0.2561	0.2368	46.25	50	-8	#
# Methylcyclohexane	0.4751	0.4337	45.64	50	-9	#
# Methylcyclohexane(2)	0.2150	0.1931	44.92	50	-10	#
# 1,2-Dichloropropane	0.2582	0.2445	47.34	50	-5	#
Dibromomethane	0.1671	0.1578	47.22	50	-6	
1,4-Dioxane	0.0838	0.1083	807.63	625	29	<-
Methyl Methacrylate	0.2497	0.2445	48.95	50	-2	
# Bromodichloromethane	0.2998	0.2770	46.19	50	-8	#
2-Nitropropane	0.0908	0.0776	85.42	100	-15	
2-Chloroethyl Vinyl Ether	0.1109	0.1759	79.27	50	59	<-
# cis-1,3-Dichloropropene	0.3982	0.3785	47.52	50	-5	#
# 4-Methyl-2-pentanone	0.3979	0.3521	88.47	100	-12	#
# Toluene	0.8202	0.7611	46.40	50	-7	#
# trans-1,3-Dichloropropene	0.4656	0.4297	46.14	50	-8	#
Ethyl Methacrylate	0.5659	0.5416	47.86	50	-4	
# 1,1,2-Trichloroethane	0.3110	0.2918	46.92	50	-6	#
# Tetrachloroethene	0.3474	0.3041	43.78	50	-12	#
1,3-Dichloropropane	0.5309	0.4992	47.01	50	-6	
# 2-Hexanone	0.3777	0.3192	84.50	100	-15	#
# Dibromochloromethane	0.3185	0.2839	44.56	50	-11	#
# 1,2-Dibromoethane	0.3377	0.3188	47.21	50	-6	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/22/19 Time: 08:38

Lab File ID: ln22c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
1-Chlorohexane	0.4406	0.3926	44.55	50	-11	
# Chlorobenzene	0.9275	0.8507	45.86	50	-8	#
1,1,1,2-Tetrachloroethane	0.3056	0.2761	45.18	50	-10	
# Ethylbenzene	1.5677	1.4458	46.11	50	-8	#
# m+p-Xylene	0.6167	0.5729	92.90	100	-7	#
# o-Xylene	0.6092	0.5574	45.75	50	-8	#
# Styrene	1.0066	0.9560	47.48	50	-5	#
# Bromoform	0.2380	0.1889	39.69	50	-21	#<-
# Isopropylbenzene	1.5279	1.4091	46.11	50	-8	#
Cyclohexanone	0.3282	0.3075	585.66	625	-6	
Bromobenzene	0.7515	0.6763	45.00	50	-10	
# 1,1,2,2-Tetrachloroethane	0.9445	0.8947	47.37	50	-5	#
1,2,3-Trichloropropane	0.2898	0.2618	45.16	50	-10	
trans-1,4-Dichloro-2-butene	0.2913	0.1736	74.48	125	-40	<-
n-Propylbenzene	3.2831	3.0898	47.06	50	-6	
2-Chlorotoluene	0.6975	0.6351	45.53	50	-9	
4-Chlorotoluene	0.7260	0.6598	45.44	50	-9	
1,3,5-Trimethylbenzene	2.3860	2.2563	47.28	50	-5	
tert-Butylbenzene	0.4934	0.4486	45.45	50	-9	
Pentachloroethane	0.4249	0.3799	44.71	50	-11	
1,2,4-Trimethylbenzene	2.5147	2.3768	47.26	50	-5	
sec-Butylbenzene	2.9444	2.7412	46.55	50	-7	
# 1,3-Dichlorobenzene	1.3809	1.2481	45.19	50	-10	#
p-Isopropyltoluene	2.5473	2.3435	46.00	50	-8	
# 1,4-Dichlorobenzene	1.4315	1.2811	44.74	50	-11	#
1,2,3-Trimethylbenzene	2.6637	2.4210	45.44	50	-9	
Benzyl Chloride	2.0168	1.8351	45.49	50	-9	
1,3-Diethylbenzene	1.6578	1.4385	43.39	50	-13	
1,4-Diethylbenzene	1.7564	1.4939	42.53	50	-15	
# 1,2-Dichlorobenzene	1.3626	1.2278	45.05	50	-10	#
n-Butylbenzene	1.3024	1.1607	44.56	50	-11	
1,2-Diethylbenzene	1.3975	1.2168	43.53	50	-13	
# 1,2-Dibromo-3-chloropropane	0.2068	0.1803	43.61	50	-13	#
1,3,5-Trichlorobenzene	1.0469	0.8517	40.68	50	-19	
# 1,2,4-Trichlorobenzene	1.0179	0.8167	40.12	50	-20	#
Hexachlorobutadiene	0.4806	0.3271	34.03	50	-32	<-

Compounds with required minimum RRF.

All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/22/19 Time: 08:38

Lab File ID: ln22c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Naphthalene	3.2725	2.9668	45.33	50	-9
1,2,3-Trichlorobenzene	0.9905	0.7967	40.22	50	-20
2-Methylnaphthalene	2.0152	1.6360	40.59	50	-19
Dibromofluoromethane	0.2445	0.2361	48.29	50	-3
Dibromofluoromethane(2)	0.2492	0.2415	48.45	50	-3
1,2-Dichloroethane-d4	0.0623	0.0625	50.15	50	0
1,2-Dichloroethane-d4(2)	0.2776	0.2704	48.70	50	-3
1,2-Dichloroethane-d4(3)	0.0398	0.0398	49.97	50	0
Toluene-d8	1.3083	1.3013	49.73	50	-1
Toluene-d8(2)	0.8475	0.8419	49.67	50	-1
4-Bromofluorobenzene	0.4954	0.4998	50.44	50	1
4-Bromofluorobenzene(2)	0.4107	0.4025	49.00	50	-2

Average %Drift 9

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem/HP09915.i/19nov04i.b/ln04i07.d
/chem/HP09915.i/19nov04i.b/ln04i06.d
/chem/HP09915.i/19nov04i.b/ln04i05.d
/chem/HP09915.i/19nov04i.b/ln04i04.d
/chem/HP09915.i/19nov04i.b/ln04i03.d
/chem/HP09915.i/19nov04i.b/ln04i02.d
/chem/HP09915.i/19nov04i.b/ln04i01.d

File /chem/HP09915.i/19nov04i.b/ln04i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem/HP09915.i/19nov23a.b/ln23c01.d

RT Summary

Internal Standard Name	File ID: ln23c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	4.490	4.509	Yes
Fluorobenzene	7.956	7.959	Yes
Chlorobenzene-d5	11.358	11.361	Yes
1,4-Dichlorobenzene-d4	13.223	13.223	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: ln23c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	218843	269779	134890	539558	Yes
Fluorobenzene	1129387	1160755	580378	2321510	Yes
Chlorobenzene-d5	942140	904578	452289	1809156	Yes
1,4-Dichlorobenzene-d4	522095	483927	241964	967854	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments:_____

report generated on 11/23/2019 at 09:09

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/23/19 Time: 08:42

Lab File ID: ln23c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3487	0.3778	54.17	50	8	#
# Chloromethane	0.3361	0.3506	52.17	50	4	#
1,3-Butadiene	0.2790	0.2300	41.22	50	-18	
# Vinyl Chloride	0.3354	0.3453	51.48	50	3	#
# Bromomethane	0.2404	0.2446	50.87	50	2	#
# Chloroethane	0.1843	0.1857	50.37	50	1	#
Dichlorofluoromethane	0.4436	0.3536	39.86	50	-20	
n-Pentane	0.4267	0.3191	37.39	50	-25	<-
# Trichlorofluoromethane	0.3611	0.3972	55.00	50	10	#
Ethyl ether	0.2333	0.2418	51.81	50	4	
Freon 123a	0.2905	0.2668	45.93	50	-8	
Acrolein	1.8756	1.9223	512.44	500	2	
# 1,1-Dichloroethene	0.2120	0.1905	44.95	50	-10	#
# 1,1-Dichloroethene(2)	0.1063	0.0934	43.93	50	-12	#<-
# Acetone	0.8409	0.8803	104.68	100	5	#
# Freon 113	0.2418	0.2213	45.76	50	-8	#
2-Propanol	0.6045	0.6042	249.89	250	0	
Methyl Iodide	0.4392	0.4024	45.81	50	-8	
# Carbon Disulfide	0.7987	0.7079	44.31	50	-11	#
Allyl Chloride	0.3802	0.3373	44.35	50	-11	
# Methyl Acetate	0.2730	0.2512	46.02	50	-8	#
# Methylene Chloride	0.2523	0.2374	47.06	50	-6	#
t-Butyl alcohol	1.0525	1.0187	241.97	250	-3	
Acrylonitrile	0.1469	0.1350	45.97	50	-8	
# trans-1,2-Dichloroethene	0.2452	0.2271	46.31	50	-7	#
# Methyl Tertiary Butyl Ether	0.8048	0.6763	42.01	50	-16	#
n-Hexane	0.3815	0.3360	44.04	50	-12	
# 1,1-Dichloroethane	0.4277	0.3941	46.07	50	-8	#
di-Isopropyl ether	0.8250	0.7439	45.09	50	-10	
2-Chloro-1,3-butadiene	0.3838	0.3496	45.55	50	-9	
Ethyl t-butyl ether	0.8006	0.6948	43.39	50	-13	
# cis-1,2-Dichloroethene	0.2752	0.2594	47.13	50	-6	#
# 2-Butanone	0.1885	0.1658	87.94	100	-12	#
2,2-Dichloropropane	0.3325	0.3037	45.67	50	-9	
Propionitrile	1.3114	1.4890	283.85	250	14	
Methacrylonitrile	0.1584	0.1543	121.74	125	-3	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/23/19 Time: 08:42

Lab File ID: ln23c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
Bromochloromethane	0.1459	0.1473	50.47	50	1	
Tetrahydrofuran	1.1846	1.2548	105.93	100	6	
# Chloroform	0.4091	0.3942	48.18	50	-4	#
# 1,1,1-Trichloroethane	0.3492	0.3265	46.75	50	-6	#
# Cyclohexane	0.4669	0.4171	44.66	50	-11	#
# Cyclohexane(2)	0.4056	0.3697	45.58	50	-9	#
# Cyclohexane(3)	0.1444	0.1302	45.08	50	-10	#
1,1-Dichloropropene	0.3382	0.3142	46.45	50	-7	
# Carbon Tetrachloride	0.2961	0.2755	46.51	50	-7	#
Isobutyl Alcohol	0.3542	0.3650	644.14	625	3	
# Benzene	1.0170	0.9669	47.54	50	-5	#
# 1,2-Dichloroethane	0.3271	0.3138	47.96	50	-4	#
# 1,2-Dichloroethane(2)	0.0324	0.0313	48.30	50	-3	#<-
t-Amyl methyl ether	0.8036	0.7341	45.67	50	-9	
n-Heptane	0.3564	0.3253	45.64	50	-9	
n-Butanol	0.3049	0.3114	1276.85	1250	2	
# Trichloroethene	0.2561	0.2464	48.11	50	-4	#
# Methylcyclohexane	0.4751	0.4473	47.08	50	-6	#
# Methylcyclohexane(2)	0.2150	0.2030	47.22	50	-6	#
# 1,2-Dichloropropane	0.2582	0.2480	48.02	50	-4	#
Dibromomethane	0.1671	0.1655	49.53	50	-1	
1,4-Dioxane	0.0838	0.1190	887.57	625	42	<-
Methyl Methacrylate	0.2497	0.2483	49.71	50	-1	
# Bromodichloromethane	0.2998	0.2938	49.00	50	-2	#
2-Nitropropane	0.0908	0.0867	95.41	100	-5	
2-Chloroethyl Vinyl Ether	0.1109	0.1889	85.14	50	70	<-
# cis-1,3-Dichloropropene	0.3982	0.3984	50.02	50	0	#
# 4-Methyl-2-pentanone	0.3979	0.3634	91.32	100	-9	#
# Toluene	0.8202	0.7613	46.41	50	-7	#
# trans-1,3-Dichloropropene	0.4656	0.4483	48.14	50	-4	#
Ethyl Methacrylate	0.5659	0.5325	47.05	50	-6	
# 1,1,2-Trichloroethane	0.3110	0.2969	47.73	50	-5	#
# Tetrachloroethene	0.3474	0.3174	45.69	50	-9	#
1,3-Dichloropropane	0.5309	0.5012	47.20	50	-6	
# 2-Hexanone	0.3777	0.3228	85.46	100	-15	#
# Dibromochloromethane	0.3185	0.3047	47.83	50	-4	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/23/19 Time: 08:42

Lab File ID: ln23c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	1,2-Dibromoethane	0.3377	0.3247	48.08	50	-4	#
	1-Chlorohexane	0.4406	0.3794	43.06	50	-14	
#	Chlorobenzene	0.9275	0.8742	47.13	50	-6	#
	1,1,1,2-Tetrachloroethane	0.3056	0.2876	47.05	50	-6	
#	Ethylbenzene	1.5677	1.4737	47.00	50	-6	#
#	m+p-Xylene	0.6167	0.5842	94.73	100	-5	#
#	o-Xylene	0.6092	0.5730	47.03	50	-6	#
#	Styrene	1.0066	0.9778	48.57	50	-3	#
#	Bromoform	0.2380	0.2141	44.97	50	-10	#
#	Isopropylbenzene	1.5279	1.4423	47.20	50	-6	#
	Cyclohexanone	0.3282	0.3572	680.22	625	9	
	Bromobenzene	0.7515	0.6776	45.09	50	-10	
#	1,1,2,2-Tetrachloroethane	0.9445	0.8679	45.94	50	-8	#
	1,2,3-Trichloropropane	0.2898	0.2659	45.87	50	-8	
	trans-1,4-Dichloro-2-butene	0.2913	0.2546	109.22	125	-13	
	n-Propylbenzene	3.2831	3.0494	46.44	50	-7	
	2-Chlorotoluene	0.6975	0.6346	45.49	50	-9	
	4-Chlorotoluene	0.7260	0.6617	45.57	50	-9	
	1,3,5-Trimethylbenzene	2.3860	2.2484	47.12	50	-6	
	tert-Butylbenzene	0.4934	0.4419	44.78	50	-10	
	Pentachloroethane	0.4249	0.4084	48.06	50	-4	
	1,2,4-Trimethylbenzene	2.5147	2.3639	47.00	50	-6	
	sec-Butylbenzene	2.9444	2.6990	45.83	50	-8	
#	1,3-Dichlorobenzene	1.3809	1.2568	45.51	50	-9	#
	p-Isopropyltoluene	2.5473	2.3341	45.81	50	-8	
#	1,4-Dichlorobenzene	1.4315	1.2946	45.22	50	-10	#
	1,2,3-Trimethylbenzene	2.6637	2.5809	48.44	50	-3	
	Benzyl Chloride	2.0168	1.8579	46.06	50	-8	
	1,3-Diethylbenzene	1.6578	1.5316	46.19	50	-8	
	1,4-Diethylbenzene	1.7564	1.5980	45.49	50	-9	
#	1,2-Dichlorobenzene	1.3626	1.2475	45.78	50	-8	#
	n-Butylbenzene	1.3024	1.1477	44.06	50	-12	
	1,2-Diethylbenzene	1.3975	1.3117	46.93	50	-6	
#	1,2-Dibromo-3-chloropropane	0.2068	0.1902	45.99	50	-8	#
	1,3,5-Trichlorobenzene	1.0469	0.8659	41.36	50	-17	
#	1,2,4-Trichlorobenzene	1.0179	0.8248	40.51	50	-19	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/23/19 Time: 08:42

Lab File ID: ln23c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
Hexachlorobutadiene	0.4806	0.3367	35.02	50	-30	<-
Naphthalene	3.2725	3.0219	46.17	50	-8	
1,2,3-Trichlorobenzene	0.9905	0.8126	41.02	50	-18	
2-Methylnaphthalene	2.0152	1.7393	43.16	50	-14	
Dibromofluoromethane	0.2445	0.2440	49.90	50	0	
Dibromofluoromethane(2)	0.2492	0.2471	49.58	50	-1	
1,2-Dichloroethane-d4	0.0623	0.0629	50.46	50	1	
1,2-Dichloroethane-d4(2)	0.2776	0.2843	51.20	50	2	
1,2-Dichloroethane-d4(3)	0.0398	0.0405	50.92	50	2	
Toluene-d8	1.3083	1.2807	48.94	50	-2	
Toluene-d8(2)	0.8475	0.8200	48.38	50	-3	
4-Bromofluorobenzene	0.4954	0.5051	50.98	50	2	
4-Bromofluorobenzene(2)	0.4107	0.4142	50.43	50	1	

Average %Drift 8

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ln22c01.d Date Analyzed: 11/22/19

Instrument ID: HP09915 Time Analyzed: 08:38

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	262815	4.496	1333599	7.959	1075782	11.361	573585	13.220
UPPER LIMIT	525630	4.996	2667198	8.459	2151564	11.861	1147170	13.720
LOWER LIMIT	131408	3.996	666800	7.459	537891	10.861	286792	12.720
LAB SAMPLE ID								
01 LCDL85	281432	4.496	1358142	7.956	1094093	11.358	582660	13.223
02 LCDL86	281432	4.496	1358142	7.956	1094093	11.358	582660	13.223
03 LCSL85	276041	4.499	1351151	7.956	1085726	11.358	574419	13.222
04 LCSL86	276041	4.499	1351151	7.956	1085726	11.358	574419	13.222
05 VBLKL85	256566	4.503	1310742	7.959	1059508	11.361	558840	13.219
06 VBLKL86	256566	4.503	1310742	7.959	1059508	11.361	558840	13.219
07 1202250	256006	4.503	1332832	7.959	1070085	11.361	573880	13.223
08 1202251	258157	4.506	1308965	7.959	1050899	11.358	556538	13.219
09 1202252	249298	4.493	1275839	7.959	1036825	11.358	548600	13.220
10 1202253	247395	4.487	1265289	7.956	1023473	11.358	548114	13.223
11 1205927	239601	4.493	1278548	7.959	1037547	11.361	555387	13.223
12 1205893	223451	4.503	1222267	7.959	995575	11.361	536618	13.223
13 1205894MS	245468	4.509	1259980	7.962	1026081	11.358	552658	13.223
14 1205895MSD	266719	4.506	1340904	7.959	1091224	11.358	586501	13.219
15 1205892	239630	4.493	1265572	7.959	1030528	11.358	544015	13.223
16 1205896	235546	4.509	1249813	7.959	1016147	11.361	538193	13.219
17 1205897	234861	4.490	1238869	7.959	998318	11.358	527441	13.223
18 1205898	226944	4.512	1214920	7.959	991383	11.358	530268	13.223
19 1205899	217495	4.493	1185061	7.956	962498	11.358	511399	13.223
20 1205919	221072	4.496	1184916	7.953	966692	11.358	521743	13.223
21 1205920	213399	4.499	1168199	7.956	952579	11.358	511464	13.219
22 1205921	212522	4.499	1177689	7.959	971431	11.358	518839	13.219

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ln22c01.d Date Analyzed: 11/22/19

Instrument ID: HP09915 Time Analyzed: 08:38

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA) AREA #	RT #	IS2(FBZ) AREA #	RT #	IS3(CBZ) AREA #	RT #	IS4(DCB) AREA #	RT #
12 HOUR STD	262815	4.496	1333599	7.959	1075782	11.361	573585	13.220
UPPER LIMIT	525630	4.996	2667198	8.459	2151564	11.861	1147170	13.720
LOWER LIMIT	131408	3.996	666800	7.459	537891	10.861	286792	12.720
LAB SAMPLE ID								
23 1205922	213211	4.509	1167766	7.959	964104	11.358	519696	13.222
24 1205923	211192	4.490	1151218	7.956	938235	11.358	504861	13.222
25 1205924	212897	4.493	1152100	7.956	949027	11.358	511495	13.219
26 1205925	201724	4.509	1126493	7.962	926858	11.358	495701	13.222
27 1205926	204897	4.487	1116734	7.956	917879	11.358	496362	13.223

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

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8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ln23c01.d Date Analyzed: 11/23/19

Instrument ID: HP09915 Time Analyzed: 08:42

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	218843	4.490	1129387	7.956	942140	11.358	522095	13.223
UPPER LIMIT	437686	4.990	2258774	8.456	1884280	11.858	1044190	13.723
LOWER LIMIT	109422	3.990	564694	7.456	471070	10.858	261048	12.723
LAB SAMPLE ID								
01 LCSL87	219124	4.493	1149568	7.956	954034	11.358	518331	13.219
02 VBLKL87	224793	4.493	1154568	7.953	947038	11.358	506608	13.220
03 1205905	243725	4.496	1211224	7.956	996466	11.358	533216	13.223
04 1205900	220082	4.503	1136731	7.959	925300	11.361	497134	13.223
05 1205901MS	215519	4.493	1138753	7.956	930333	11.358	508418	13.220
06 1205902MSD	233889	4.493	1180531	7.956	965531	11.358	526780	13.219
07 1205903	229063	4.500	1158906	7.956	945973	11.361	499869	13.223
08 1205904	224307	4.499	1139589	7.959	935660	11.361	499734	13.219
09 1205910	220711	4.503	1143515	7.956	932224	11.358	501787	13.223
10 1205911	215340	4.490	1115518	7.953	916138	11.361	490394	13.222
11 1205912	211986	4.512	1107133	7.962	918426	11.361	498430	13.222
12 1205913	203330	4.503	1115082	7.959	907956	11.358	482597	13.223
13 1205914	203647	4.503	1085952	7.959	899726	11.358	482459	13.223
14 1205915	210558	4.493	1104338	7.956	909387	11.358	493457	13.223
15 1205916	205783	4.493	1080825	7.956	894854	11.358	483096	13.219
16 1205917	200795	4.493	1098052	7.956	912322	11.358	495866	13.220
17 1205918	195105	4.493	1064106	7.956	883986	11.358	478718	13.223
18 1205928	196703	4.496	1065783	7.962	880752	11.361	479141	13.223
19 1205929	194903	4.493	1055579	7.959	877530	11.358	479286	13.222
20 1206738	196772	4.509	1059926	7.962	880492	11.361	482281	13.223
21 1206739	194579	4.506	1027064	7.962	860023	11.361	466803	13.222
22 1206740	209748	4.506	1073027	7.959	886519	11.361	491209	13.223

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

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Sample Data

Volatiles by GC/MS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JCW20

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205918

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s16.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	3	
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	5	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1205918

Data file: /chem/HP09915.i/19nov23a.b/ln23s16.d Injection date and time: **23-NOV-2019 15:53**
Data file Sample Info. Line: JCW20;1205918;1;0;;JCW24;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 16:10 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493	(-0.003)	936	65	195105	(-11)	250.00	
66) Fluorobenzene	7.956	(0.000)	2013	96	1064106	(-6)	50.00	
100) Chlorobenzene-d5	11.358	(0.000)	3071	117	883986	(-6)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	478718	(-8)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(0.000)	113	257527	49.502	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	67924	51.230	102%		80 - 120
83) Toluene-d8	(3)	9.934	(0.000)	98	1122086	48.512	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	427690	48.832	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	3.754	(-0.000)	96	4780	1.060	1.06			0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.548	(-0.000)	63	29425	3.232	3.23			0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	7.078	(0.000)	97	10610	1.428	1.43			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.429	(-0.000)	95	25233	4.630	4.63			0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Linda C. Pape on 11/25/2019 at 13:33. Target 3.5 esignature user ID: lcp00895

Data file: /chem/HP09915.i/19nov23a.b/ln23s16.d Injection date and time: **23-NOV-2019 15:53**
Data file Sample Info. Line: JCW20;1205918;1;0;;JCW24;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 16:10 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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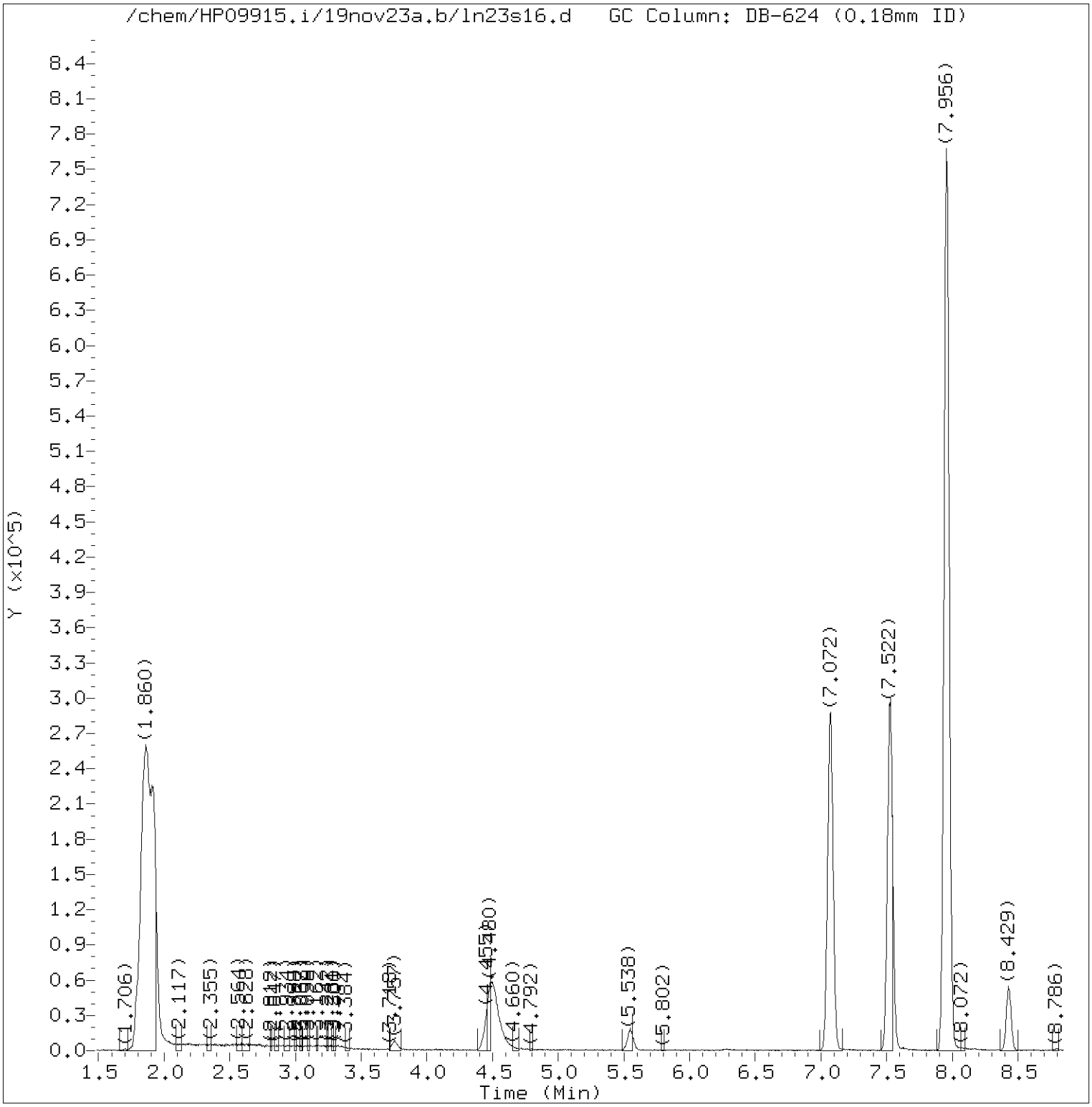
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Linda C. Pape on 11/25/2019 at 13:33. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

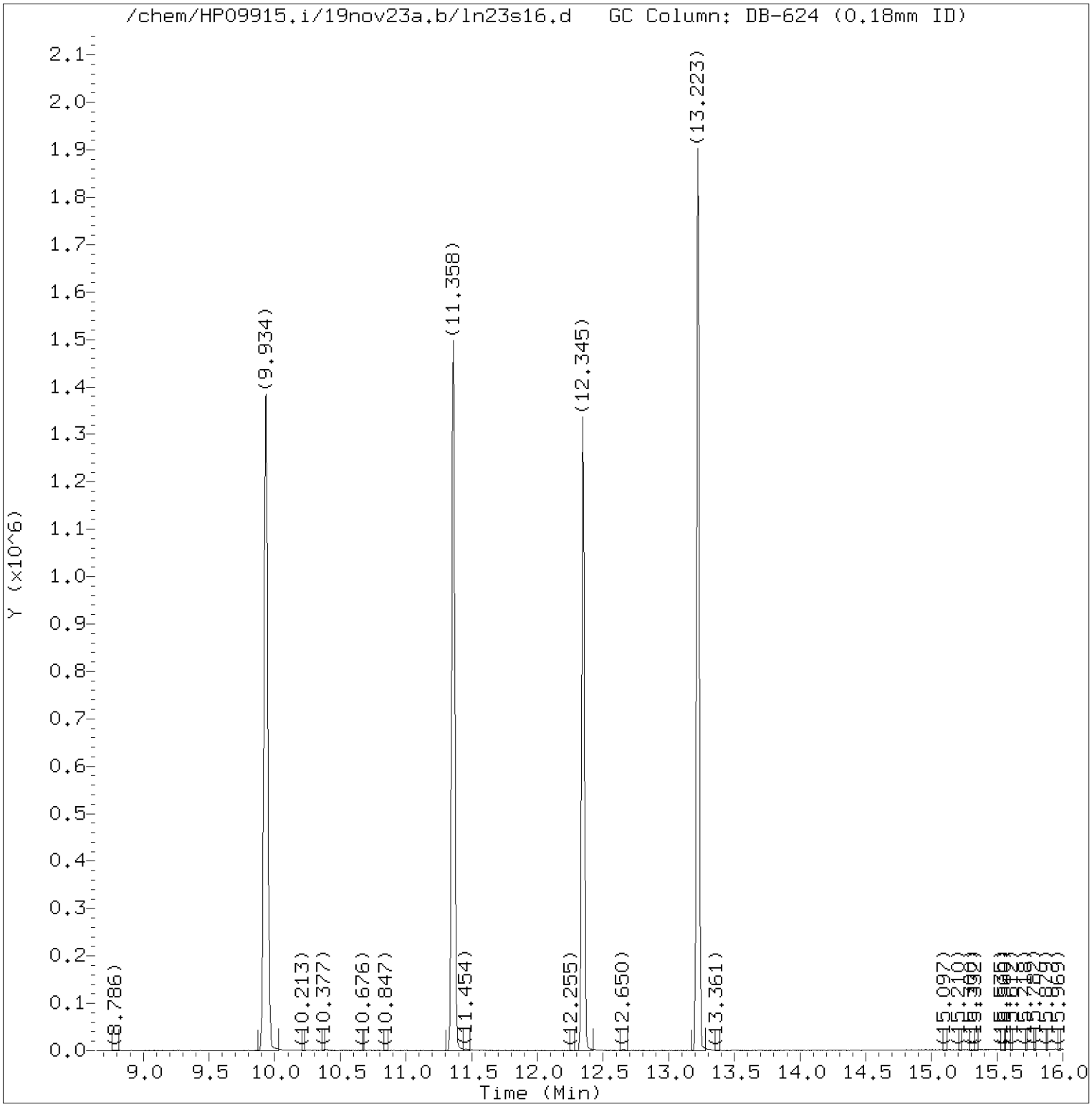
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s16.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 15:53 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 16:10 Automation

Sample Name: JCW20 Lab Sample ID: 1205918

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:33.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s16.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 15:53 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 16:10 Automation

Sample Name: JCW20 Lab Sample ID: 1205918

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:33.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s16.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 15:53 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 16:10 Automation

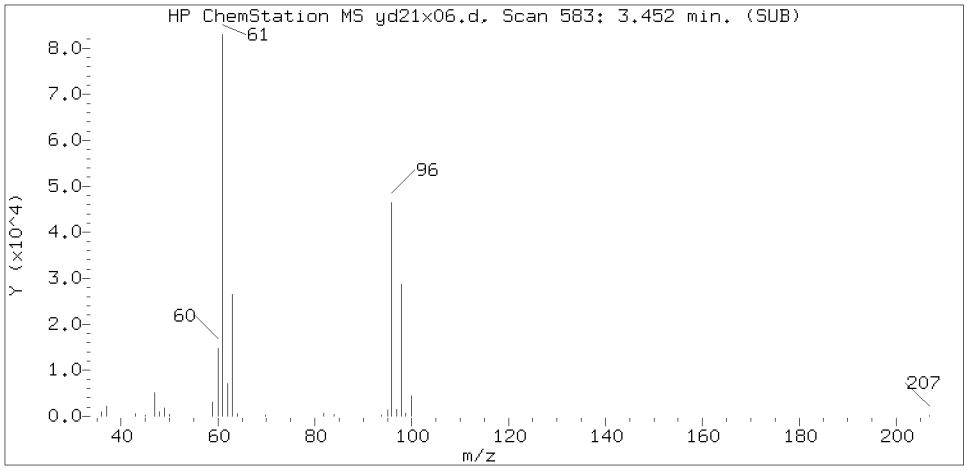
Sample Name: JCW20 Lab Sample ID: 1205918

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	3.754	96	4780	1.060
29)*t-Butyl alcohol-d10	(1)	4.493	65	195105	250.000
36) 1,1-Dichloroethane	(2)	5.548	63	29425	3.232
52)$Dibromofluoromethane	(2)	7.075	113	257527	49.502
53) 1,1,1-Trichloroethane	(2)	7.078	97	10610	1.428
57)$1,2-Dichloroethane-d4	(2)	7.525	102	67924	51.230
66)*Fluorobenzene	(2)	7.956	96	1064106	50.000
71) Trichloroethene	(2)	8.429	95	25233	4.630
83)$Toluene-d8	(3)	9.934	98	1122086	48.512
100)*Chlorobenzene-d5	(3)	11.358	117	883986	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	427690	48.832
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	478718	50.000

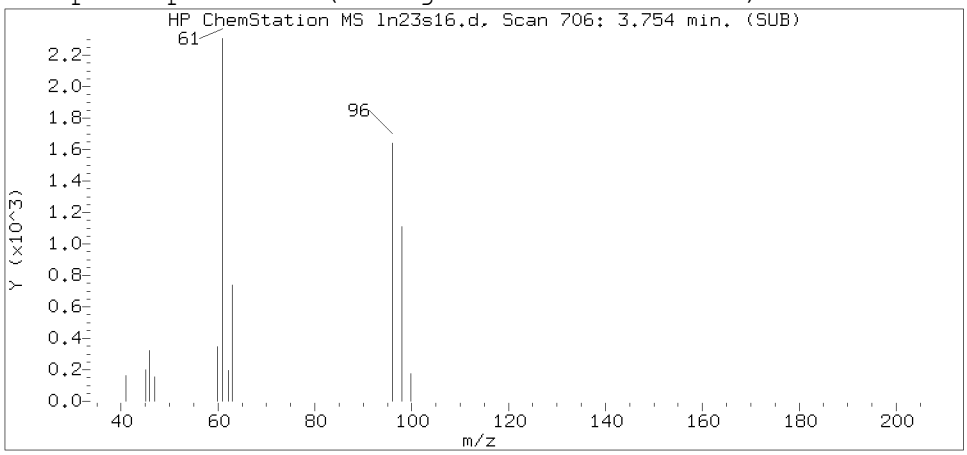
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:33.
Target 3.5 esignature user ID: lcp00895

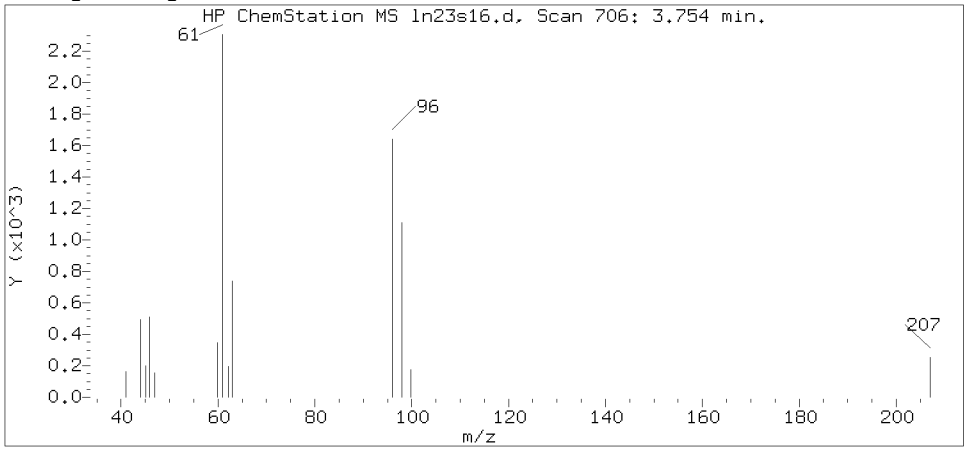
Reference Standard Spectrum for 1,1-Dichloroethene

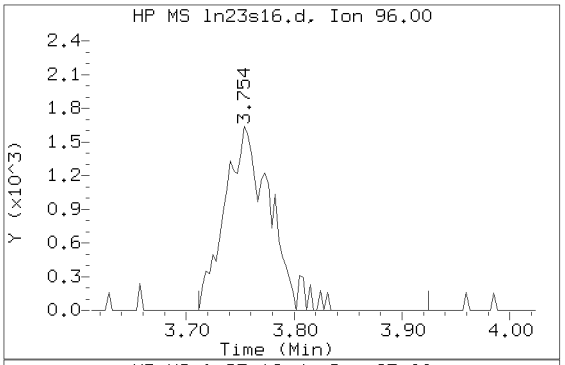


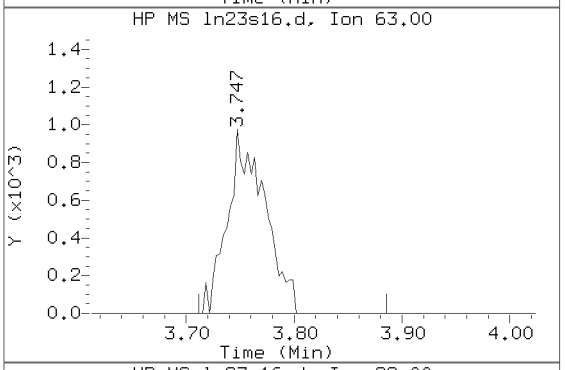
Sample Spectrum (Background Subtracted)

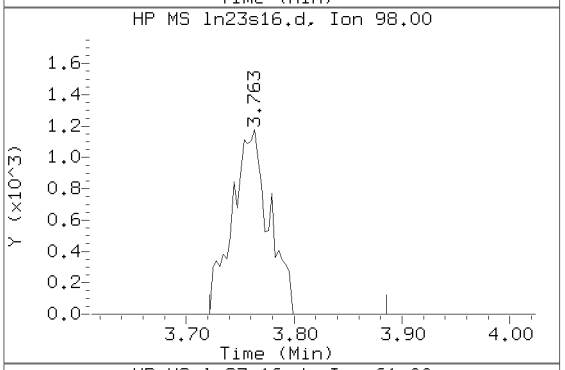


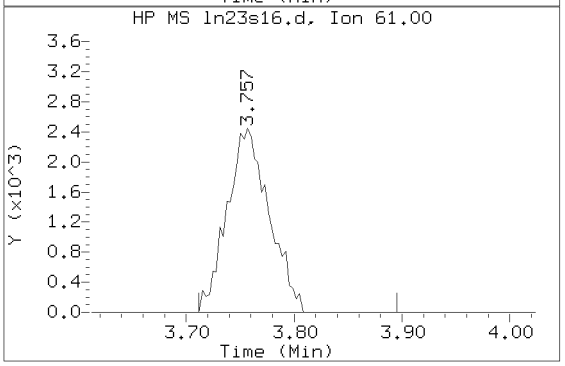
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23s16.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 15:53 Analyst ID: CLM27445

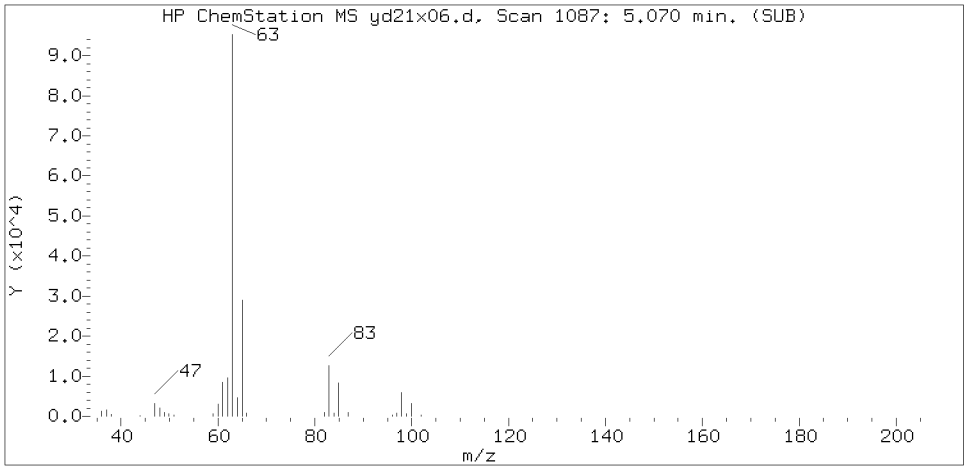
Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 16:10 Automation

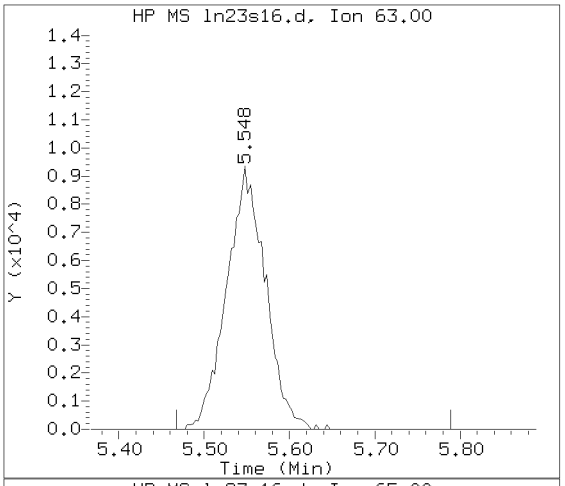
Sample Name: JCW20 Lab Sample ID: 1205918

Compound Number	: 17
Compound Name	: 1,1-Dichloroethene
Scan Number	: 706
Retention Time (minutes)	: 3.754
Relative Retention Time	:-0.00000
Quant Ion	: 96.00
Area (flag)	: 4780
On-Column Amount (ng)	: 1.0598

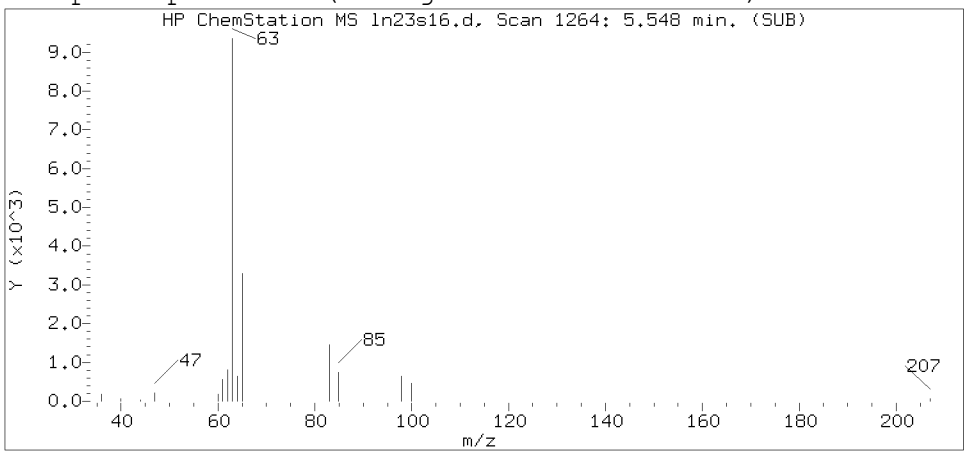
Digitally signed by Linda C. Pape on 11/25/2019 at 13:33.
Target 3.5 esignature user ID: lcp00895

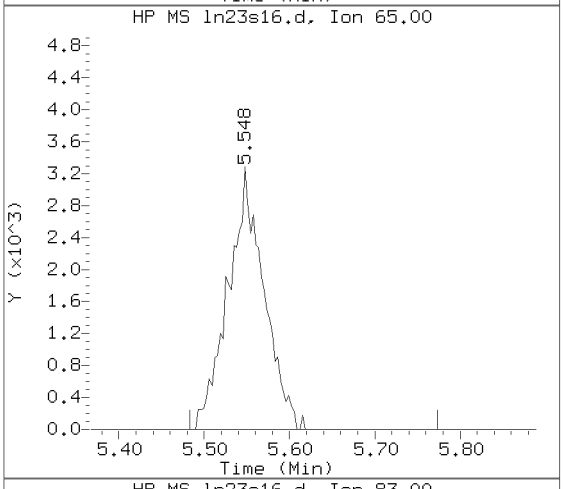
Reference Standard Spectrum for 1,1-Dichloroethane



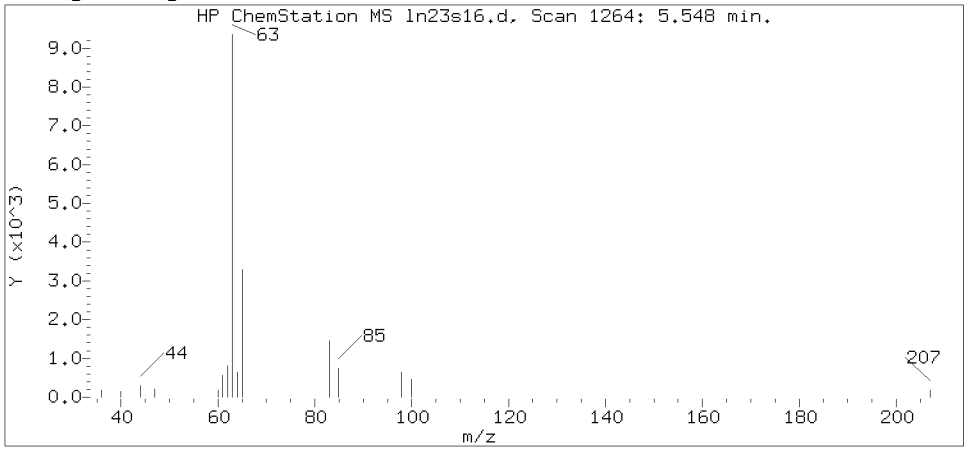


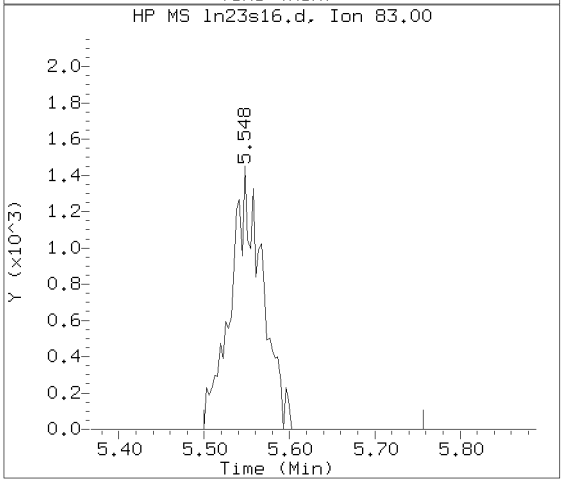
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov23a.b/ln23s16.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 15:53 Analyst ID: CLM27445

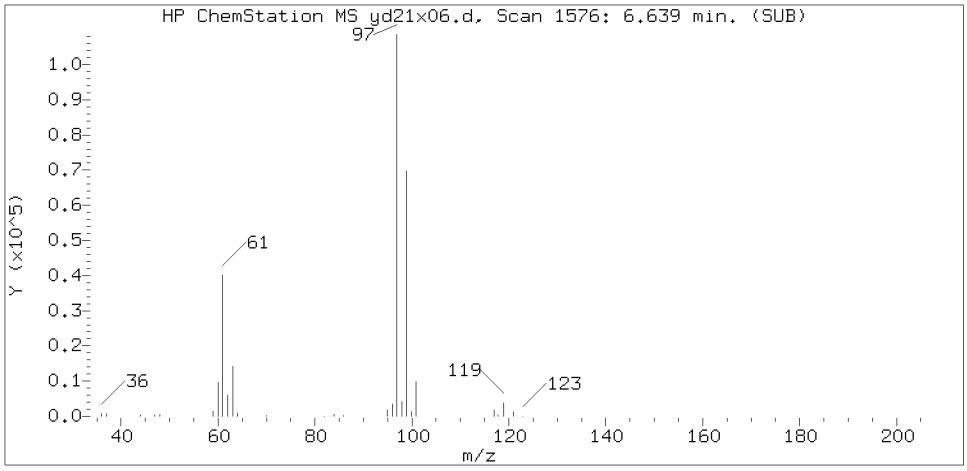
Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 16:10 Automation

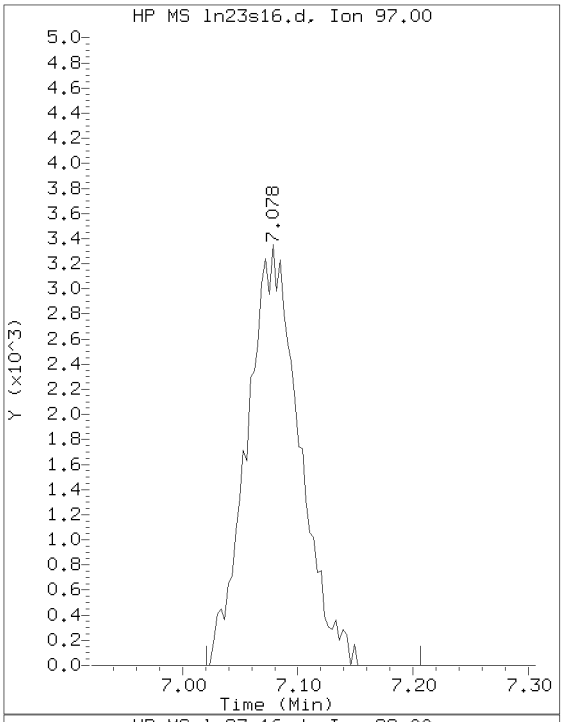
Sample Name: JCW20 Lab Sample ID: 1205918

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 1264
Retention Time (minutes): 5.548
Relative Retention Time :-0.00041
Quant Ion : 63.00
Area (flag) : 29425
On-Column Amount (ng) : 3.2325

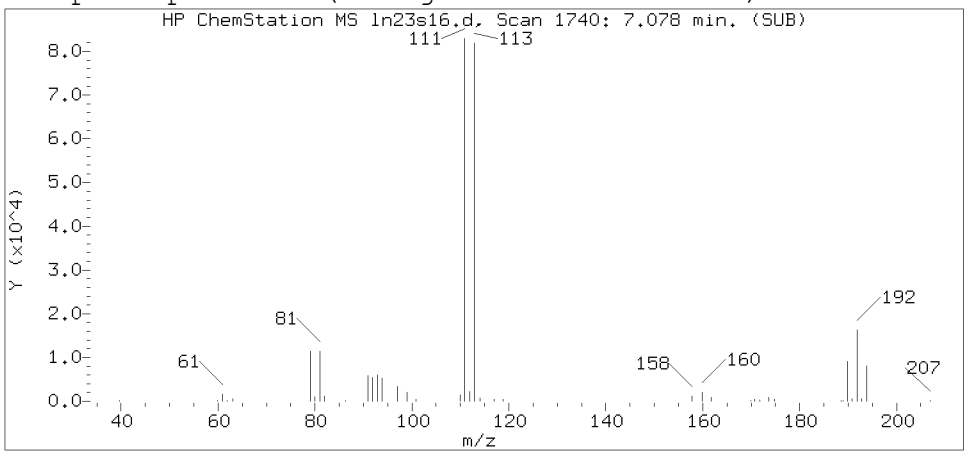
Digitally signed by Linda C. Pape on 11/25/2019 at 13:33.
Target 3.5 esignature user ID: lcp00895

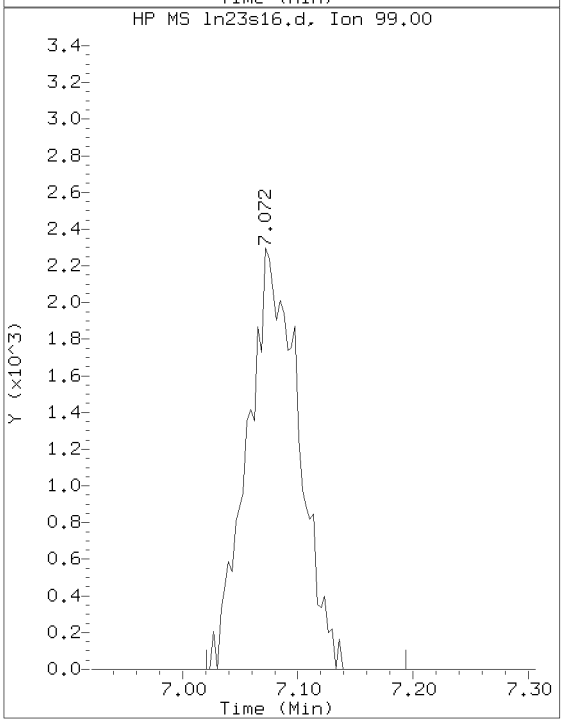
Reference Standard Spectrum for 1,1,1-Trichloroethane



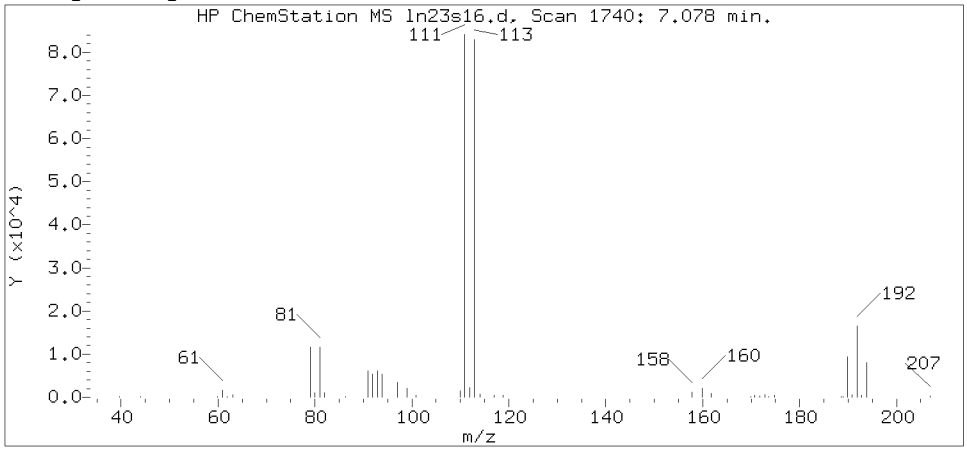


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov23a.b/ln23s16.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 15:53 Analyst ID: CLM27445

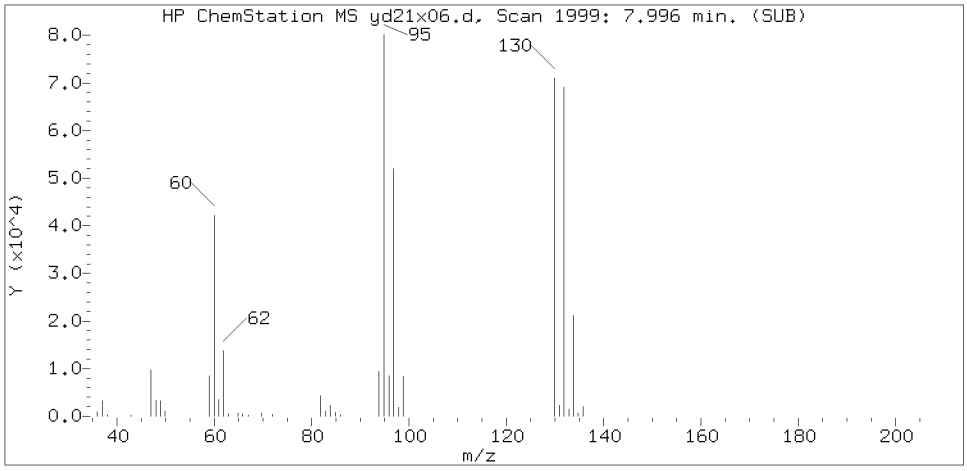
Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 16:10 Automation

Sample Name: JCW20 Lab Sample ID: 1205918

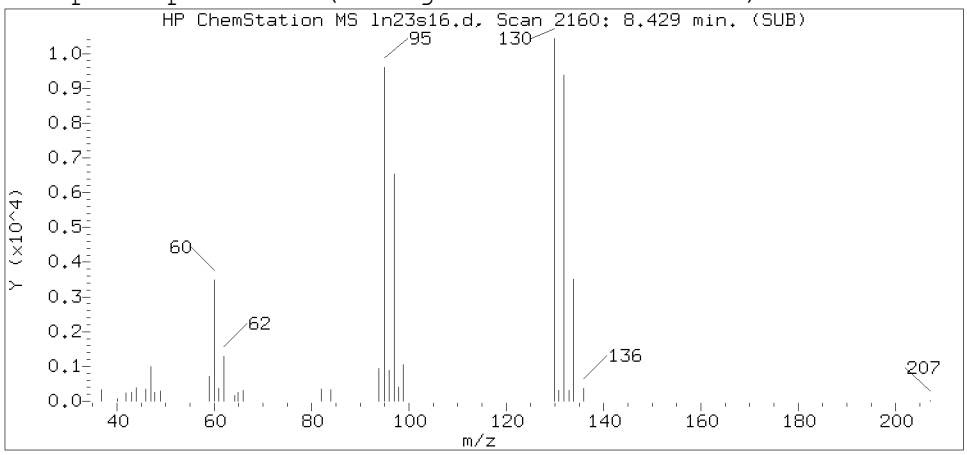
Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1740
Retention Time (minutes)	: 7.078
Relative Retention Time	: 0.00040
Quant Ion	: 97.00
Area (flag)	: 10610
On-Column Amount (ng)	: 1.4278

Digitally signed by Linda C. Pape on 11/25/2019 at 13:33.
Target 3.5 esignature user ID: lcp00895

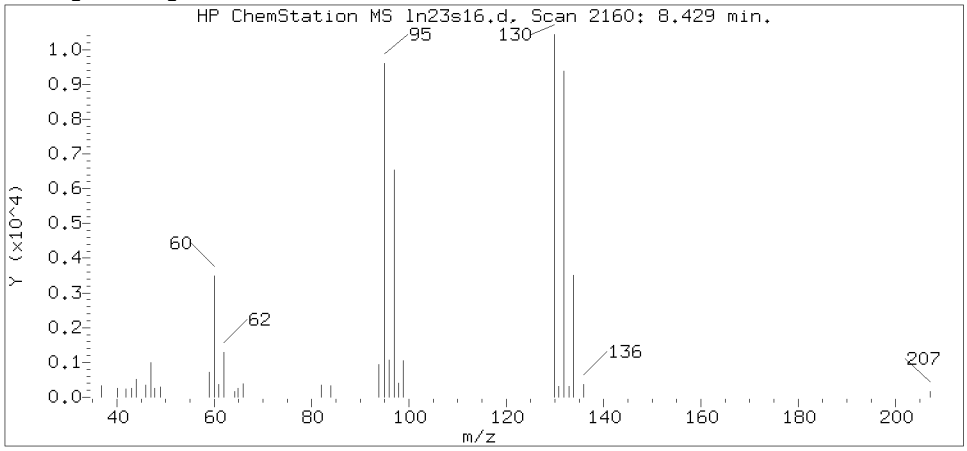
Reference Standard Spectrum for Trichloroethene

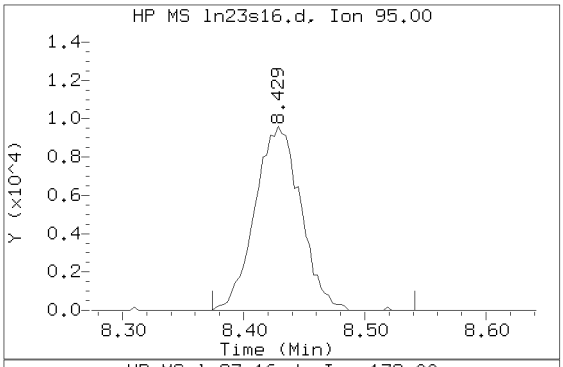


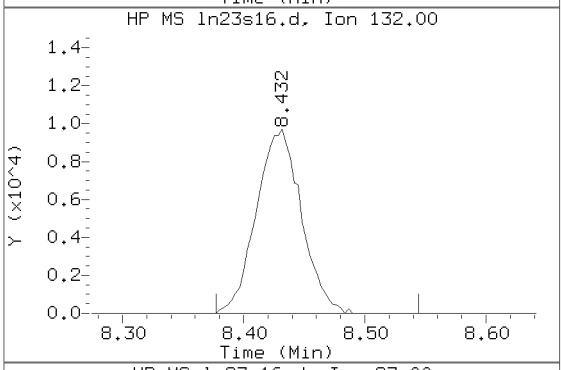
Sample Spectrum (Background Subtracted)

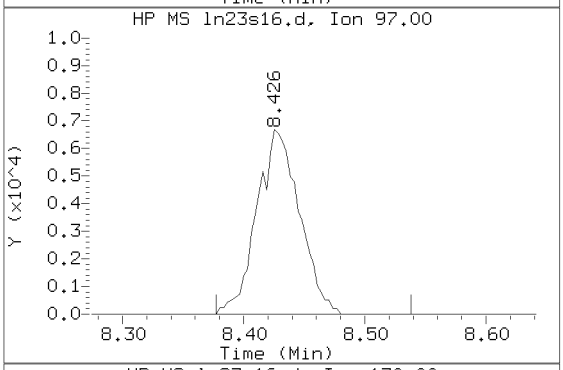


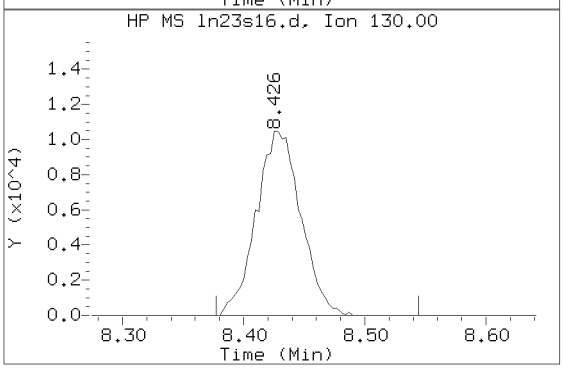
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23s16.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 15:53 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 16:10 Automation

Sample Name: JCW20 Lab Sample ID: 1205918

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 2160
Retention Time (minutes): 8.429
Relative Retention Time :-0.00040
Quant Ion : 95.00
Area (flag) : 25233
On-Column Amount (ng) : 4.6300

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Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JCW21

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205919

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s42.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	J
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	
156-59-2	cis-1,2-Dichloroethene	1	
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	10	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	100	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	2	
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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JCW21 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1205919

Data file: /chem/HP09915.i/19nov22a.b/ln22s42.d Injection date and time: **22-NOV-2019 15:16**
Data file Sample Info. Line: JCW21;1205919;1;0;;JCW24;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 15:33 Automation

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.496	(0.000)	937	65	221072	(-16)	250.00	
66) Fluorobenzene	7.953	(0.007)	2012	96	1184916	(-11)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	966692	(-10)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(-0.003)	3651	152	521743	(-9)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.069	(-0.001)	113	277410	47.887	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(-0.001)	102	74501	50.461	101%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	1242441	49.120	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	473202	49.406	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	3.744	(0.001)	96	4846	0.965	0.96		J	0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.554	(-0.000)	63	11464	1.131	1.13			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.377	(0.000)	96	8737	1.340	1.34			0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	7.075	(0.000)	97	80476	9.726	9.73			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.429	(-0.000)	95	628937	103.637	103.64			0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)	10.538	(-0.000)	166	16206	2.413	2.41			0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:05. Target 3.5 esignature user ID: clm27445

Data file: /chem/HP09915.i/19nov22a.b/ln22s42.d Injection date and time: **22-NOV-2019 15:16**
Data file Sample Info. Line: JCW21;1205919;1;0;;JCW24;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 15:33 Automation

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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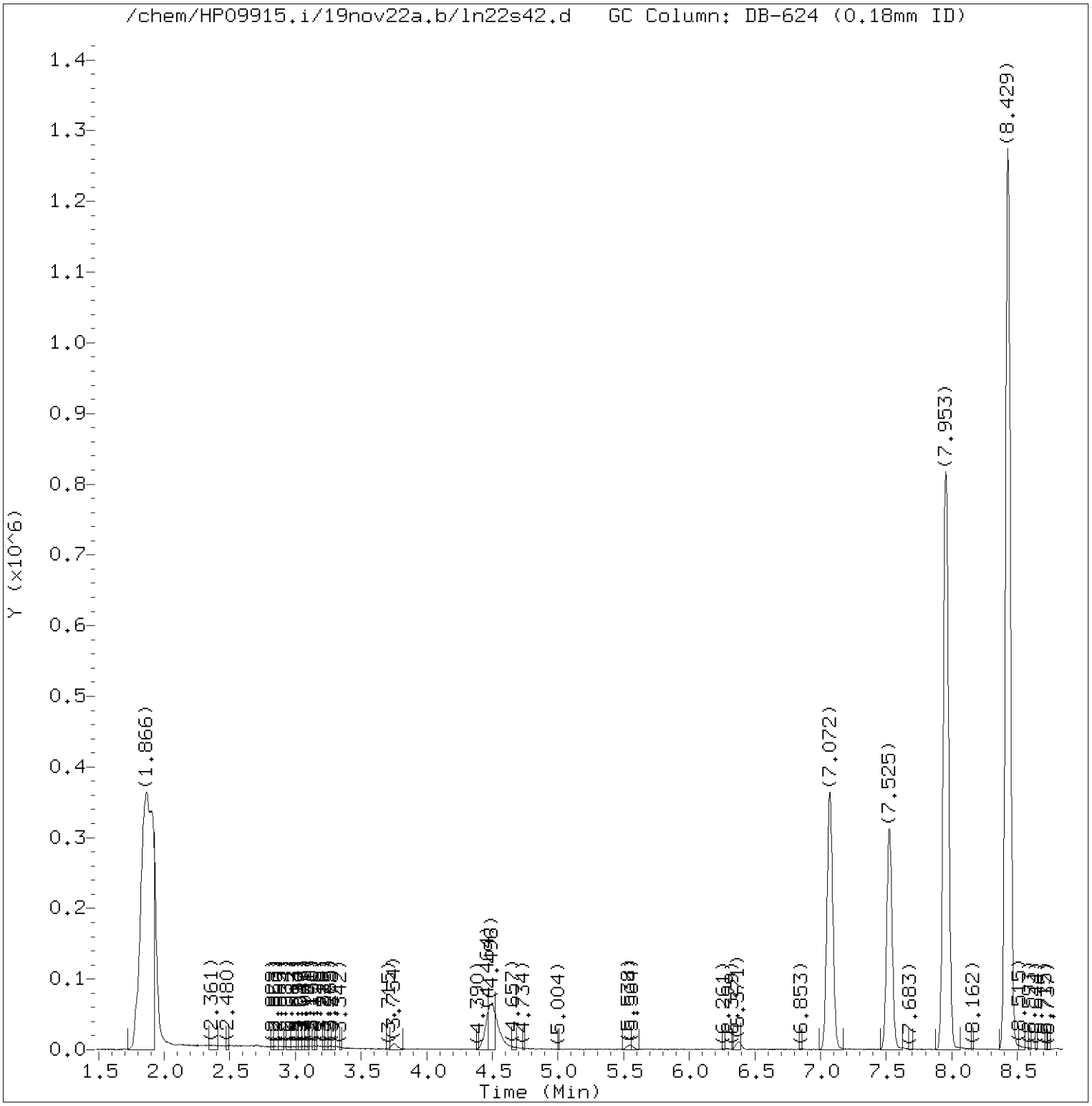
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:05. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:06. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

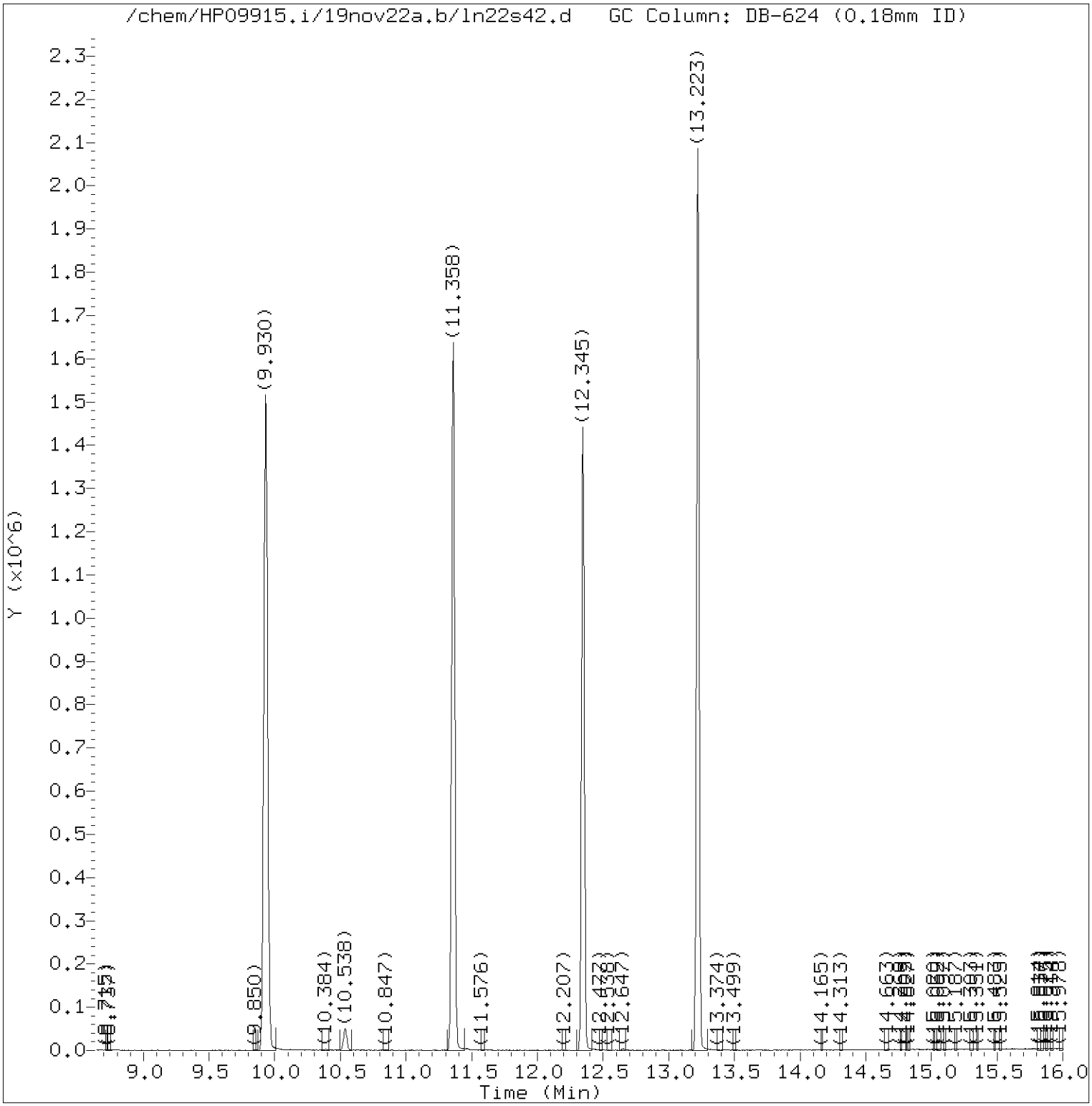
Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s42.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 15:16 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 15:33 Automation

Sample Name: JCW21 Lab Sample ID: 1205919

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:05.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s42.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 15:16 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 15:33 Automation

Sample Name: JCW21 Lab Sample ID: 1205919

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:05.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s42.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 15:16 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 15:33 Automation

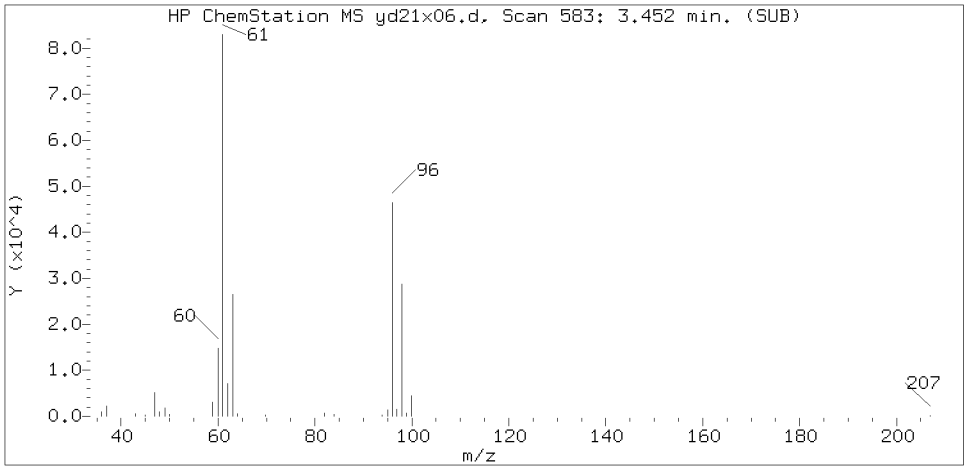
Sample Name: JCW21 Lab Sample ID: 1205919

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	3.744	96	4846	0.965
29)*t-Butyl alcohol-d10	(1)	4.496	65	221072	250.000
36) 1,1-Dichloroethane	(2)	5.554	63	11464	1.131
42) cis-1,2-Dichloroethene	(2)	6.377	96	8737	1.340
52)$Dibromofluoromethane	(2)	7.069	113	277410	47.887
53) 1,1,1-Trichloroethane	(2)	7.075	97	80476	9.726
57)$1,2-Dichloroethane-d4	(2)	7.525	102	74501	50.461
66)*Fluorobenzene	(2)	7.953	96	1184916	50.000
71) Trichloroethene	(2)	8.429	95	628937	103.637
83)$Toluene-d8	(3)	9.930	98	1242441	49.120
93) Tetrachloroethene	(3)	10.538	166	16206	2.413
100)*Chlorobenzene-d5	(3)	11.358	117	966692	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	473202	49.406
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	521743	50.000

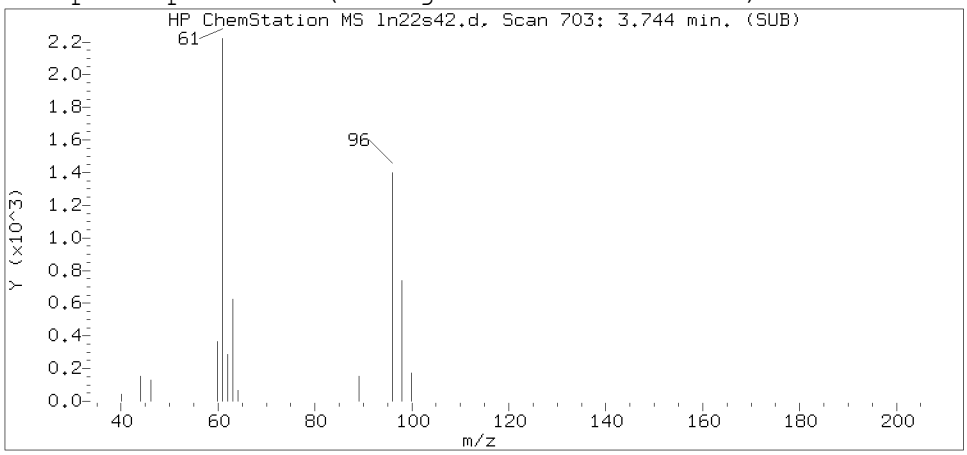
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:05.
Target 3.5 esignature user ID: clm27445

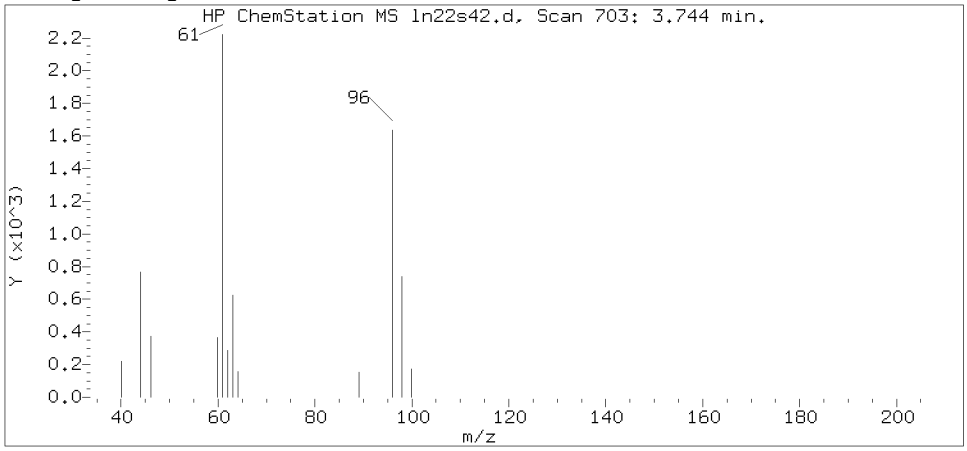
Reference Standard Spectrum for 1,1-Dichloroethene

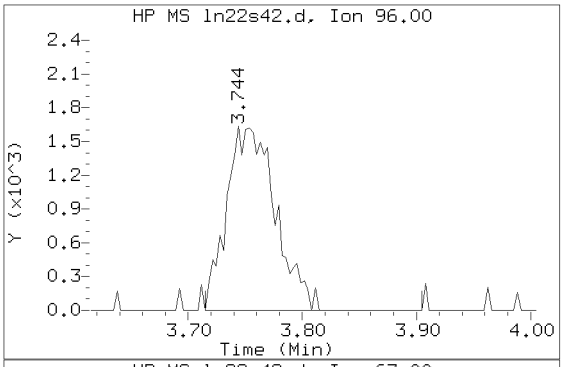


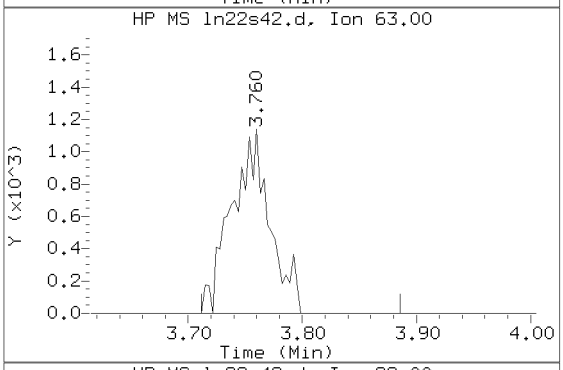
Sample Spectrum (Background Subtracted)

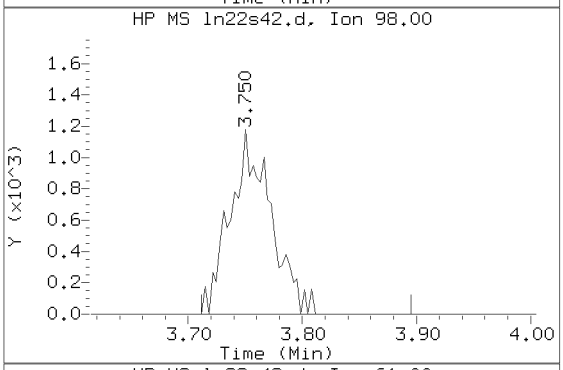


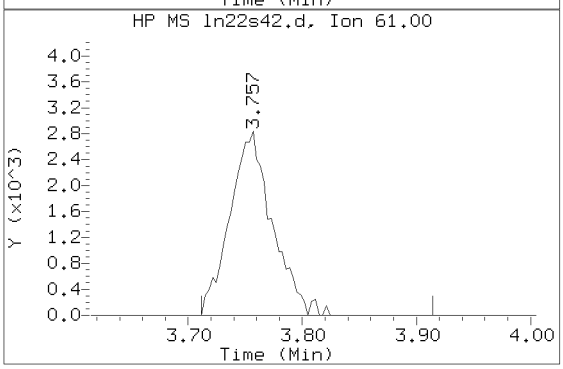
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov22a.b/ln22s42.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 15:16 Analyst ID: lcp00895

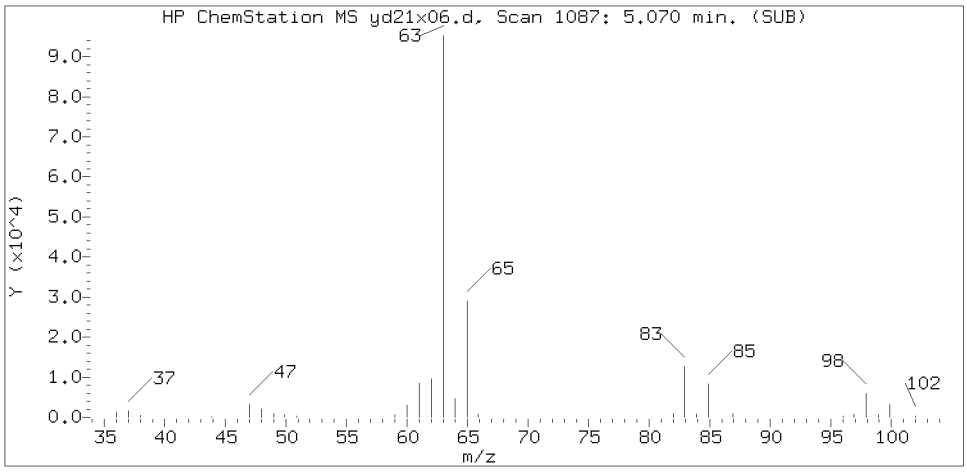
Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 15:33 Automation

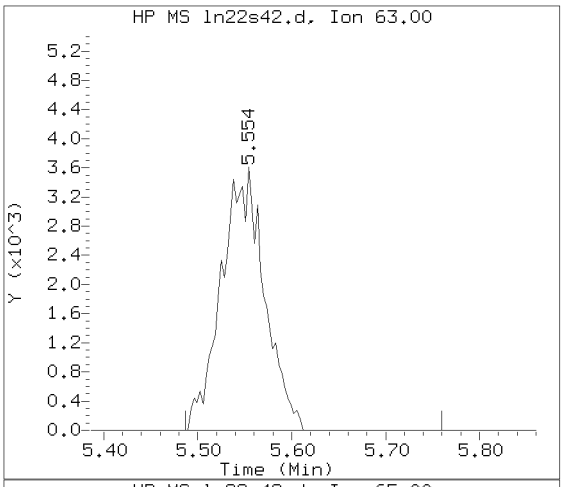
Sample Name: JCW21 Lab Sample ID: 1205919

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 703
Retention Time (minutes): 3.744
Relative Retention Time : 0.00125
Quant Ion : 96.00
Area (flag) : 4846
On-Column Amount (ng) : 0.9649

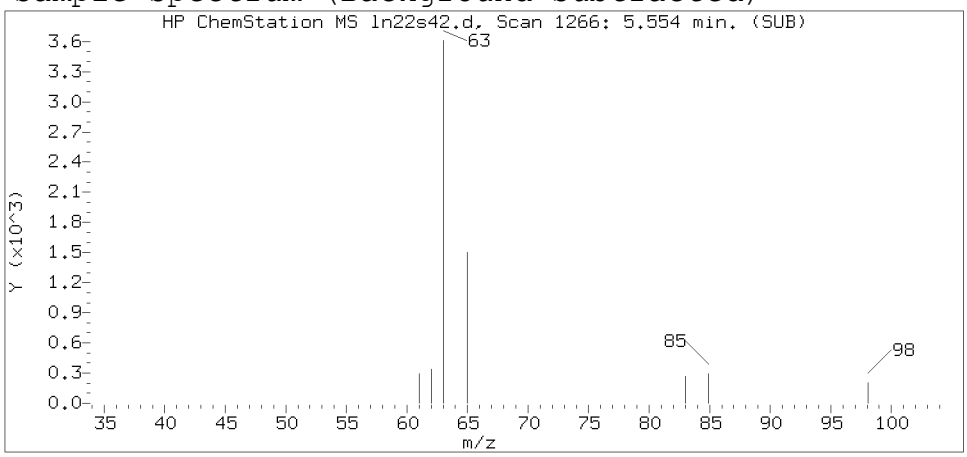
Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:05.
Target 3.5 esignature user ID: clm27445

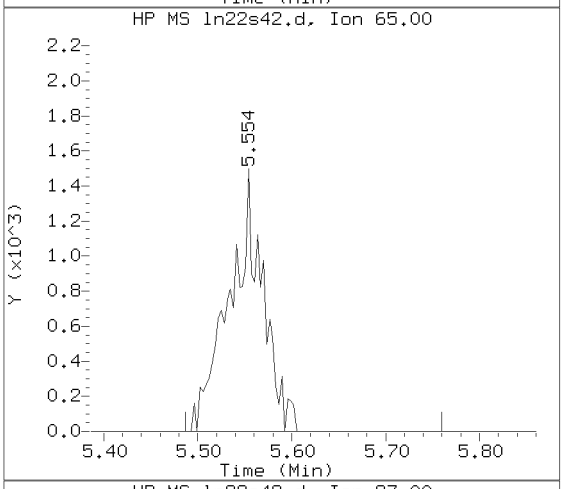
Reference Standard Spectrum for 1,1-Dichloroethane



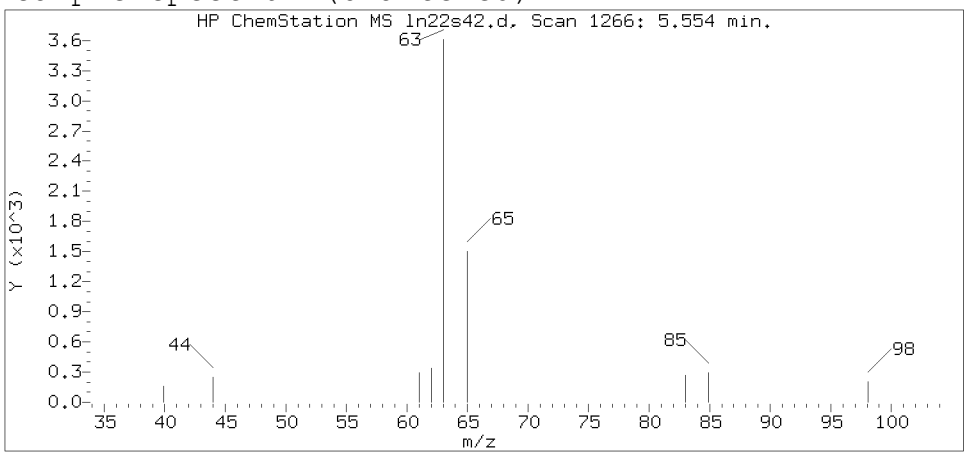


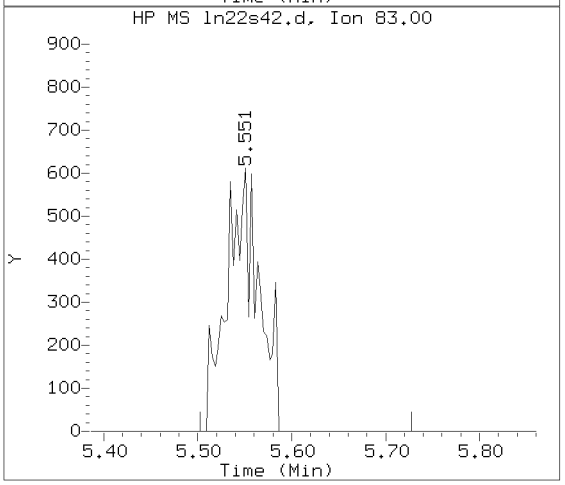
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov22a.b/ln22s42.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 15:16 Analyst ID: lcp00895

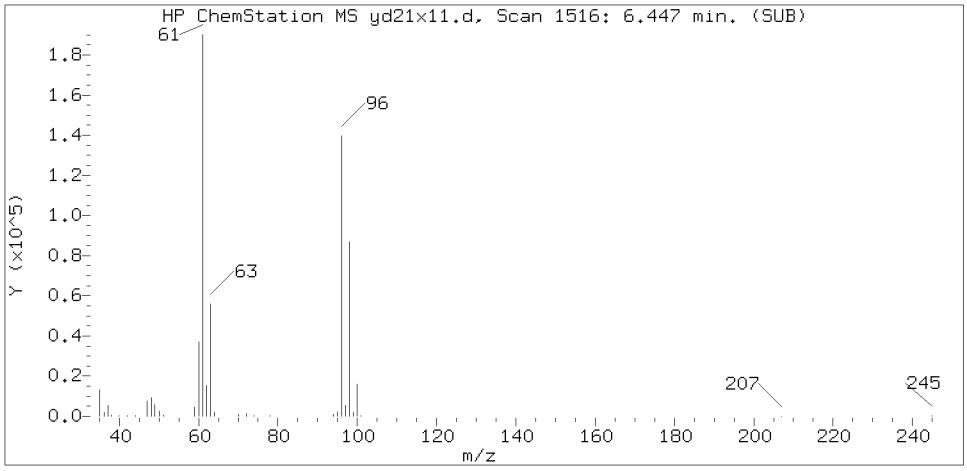
Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 15:33 Automation

Sample Name: JCW21 Lab Sample ID: 1205919

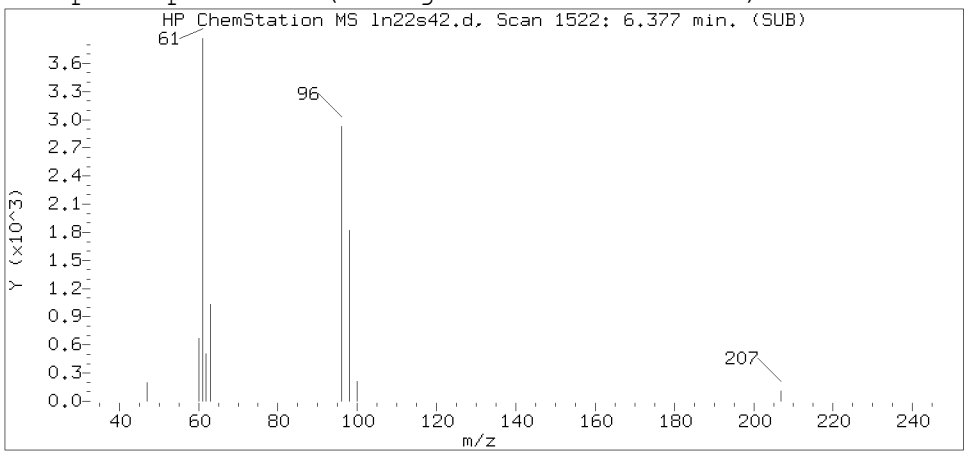
Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 1266
Retention Time (minutes): 5.554
Relative Retention Time :-0.00096
Quant Ion : 63.00
Area (flag) : 11464
On-Column Amount (ng) : 1.1310

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:05.
Target 3.5 esignature user ID: clm27445

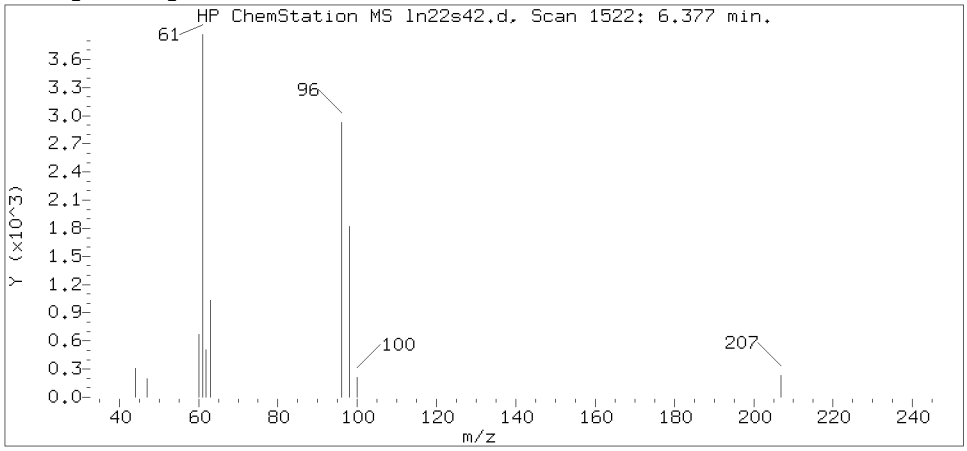
Reference Standard Spectrum for cis-1,2-Dichloroethene

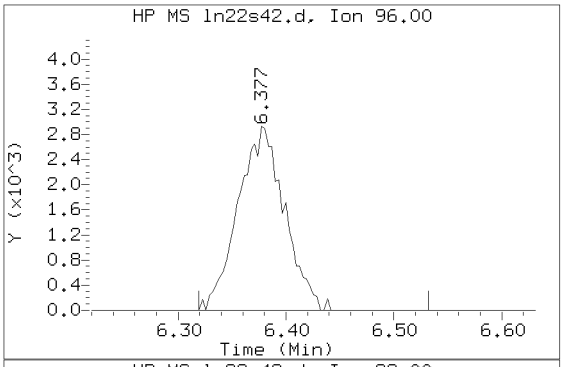


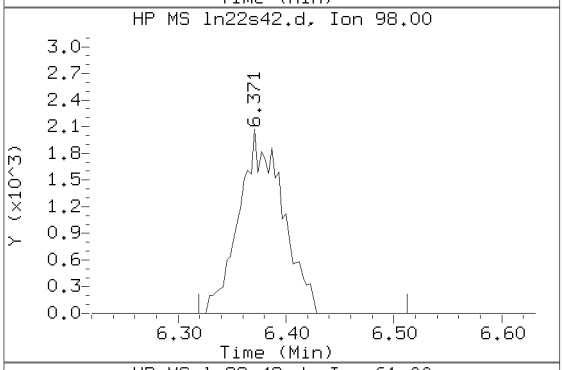
Sample Spectrum (Background Subtracted)

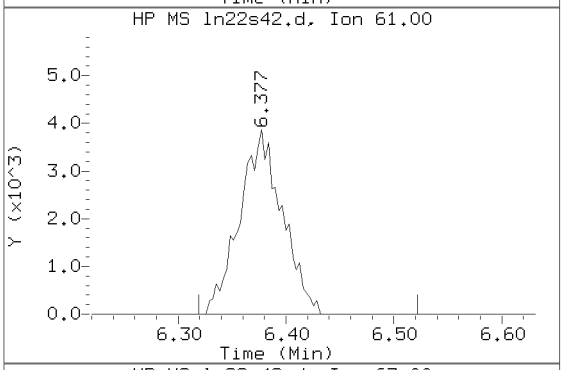


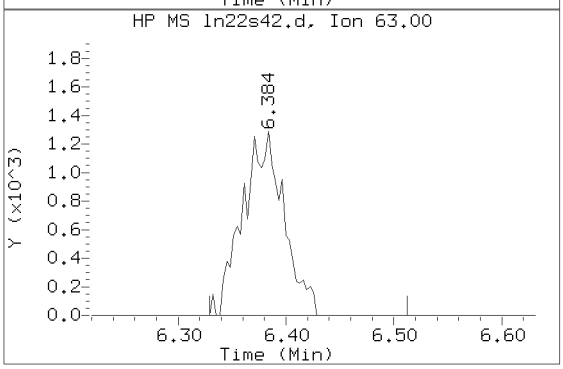
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov22a.b/ln22s42.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 15:16 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 15:33 Automation

Sample Name: JCW21 Lab Sample ID: 1205919

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 1522
Retention Time (minutes): 6.377
Relative Retention Time : 0.00016
Quant Ion : 96.00
Area (flag) : 8737
On-Column Amount (ng) : 1.3397

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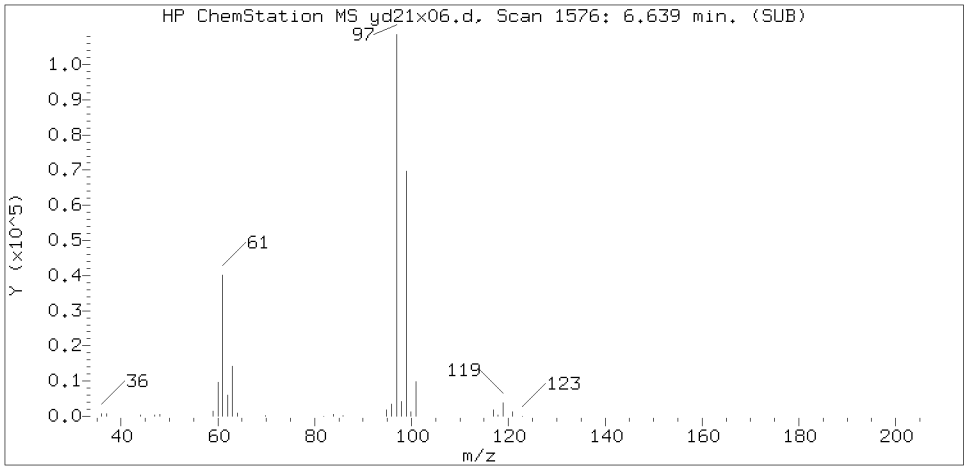
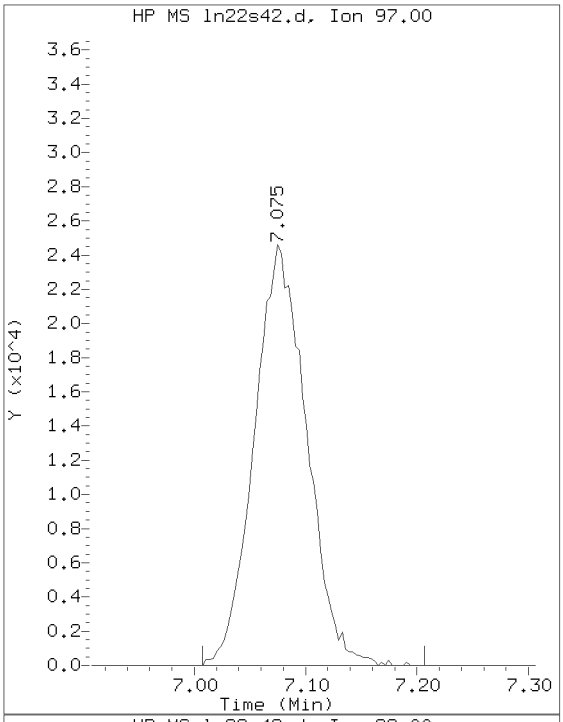
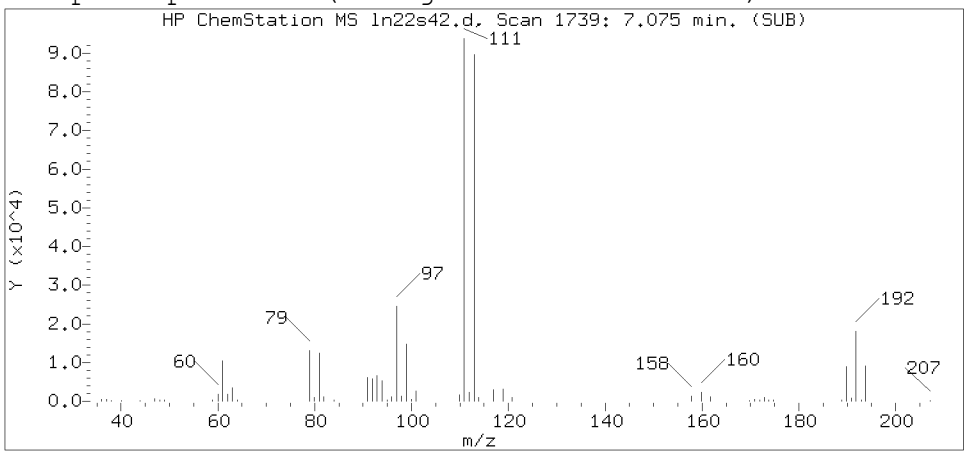
Target 3.5 esignature user ID: clm27445

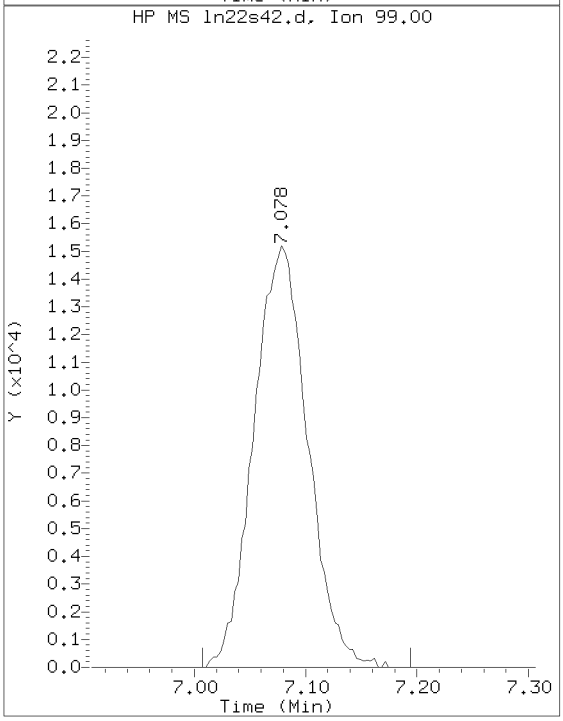
Reference Standard Spectrum for 1,1,1-Trichloroethane



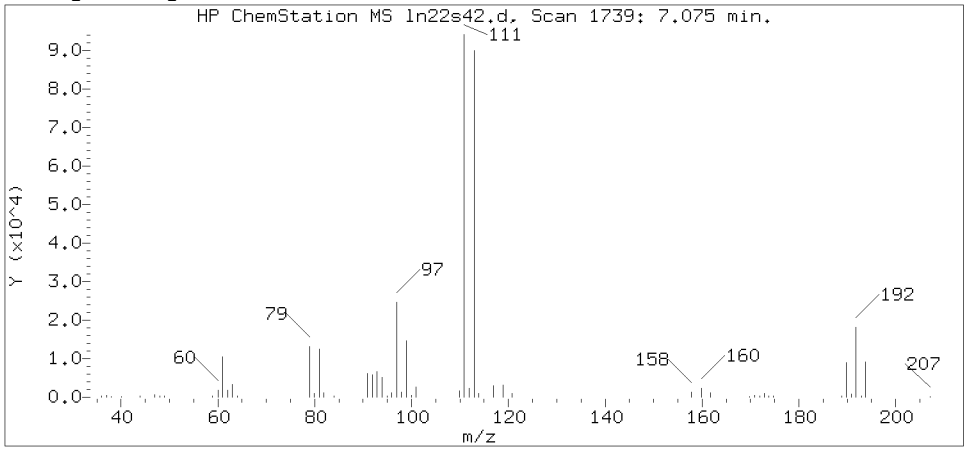


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov22a.b/ln22s42.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 15:16 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 15:33 Automation

Sample Name: JCW21 Lab Sample ID: 1205919

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1739
Retention Time (minutes)	: 7.075
Relative Retention Time	: 0.00009
Quant Ion	: 97.00
Area (flag)	: 80476
On-Column Amount (ng)	: 9.7256

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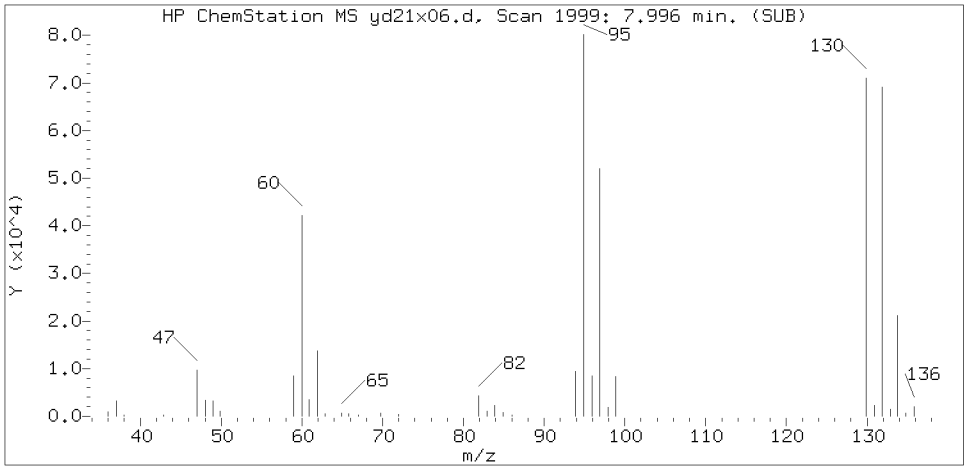
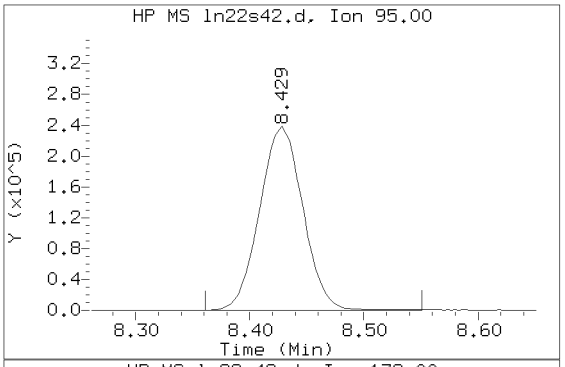
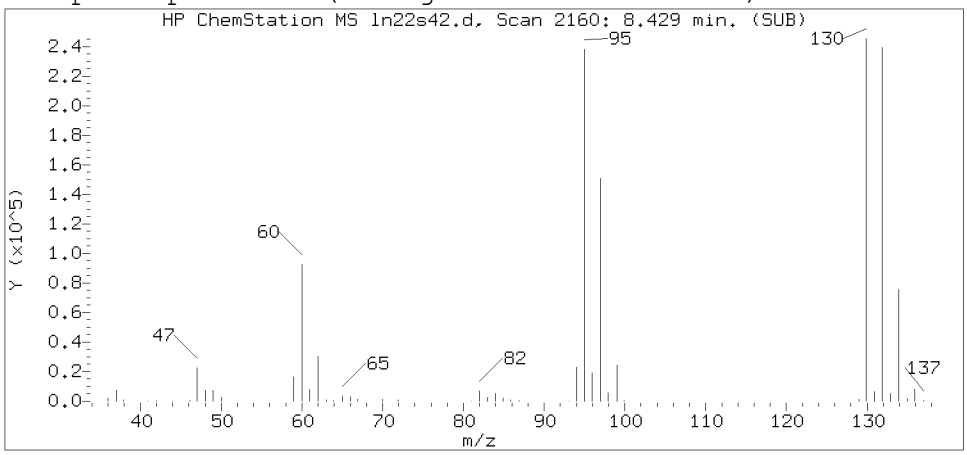
Target 3.5 esignature user ID: clm27445

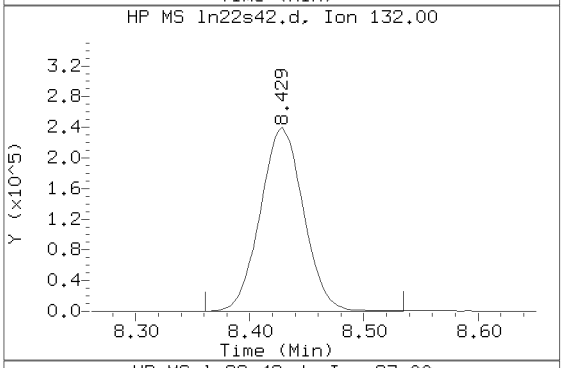
Reference Standard Spectrum for Trichloroethene

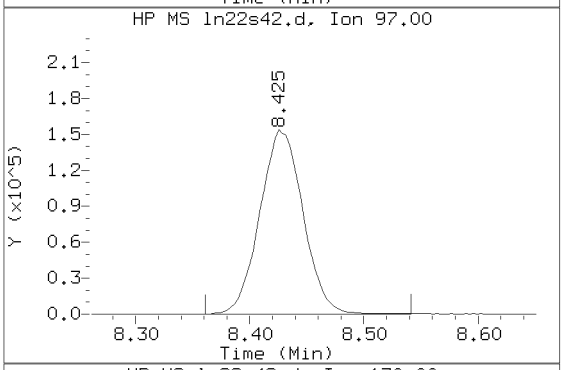




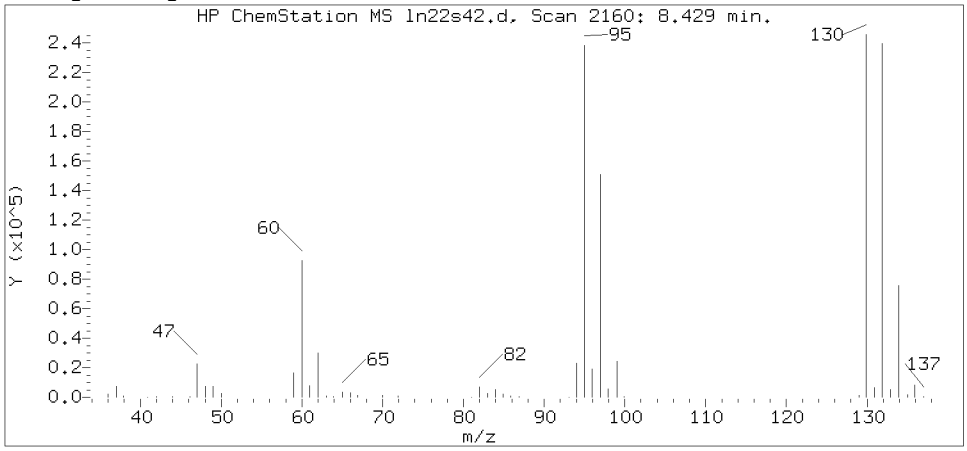
Sample Spectrum (Background Subtracted)

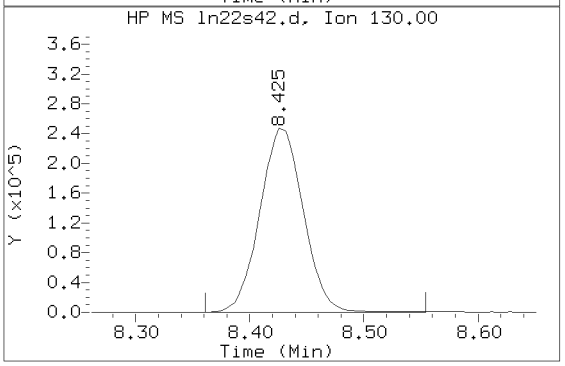






Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov22a.b/ln22s42.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 15:16 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 15:33 Automation

Sample Name: JCW21 Lab Sample ID: 1205919

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 2160
Retention Time (minutes): 8.429
Relative Retention Time :-0.00086
Quant Ion : 95.00
Area (flag) : 628937
On-Column Amount (ng) : 103.6371

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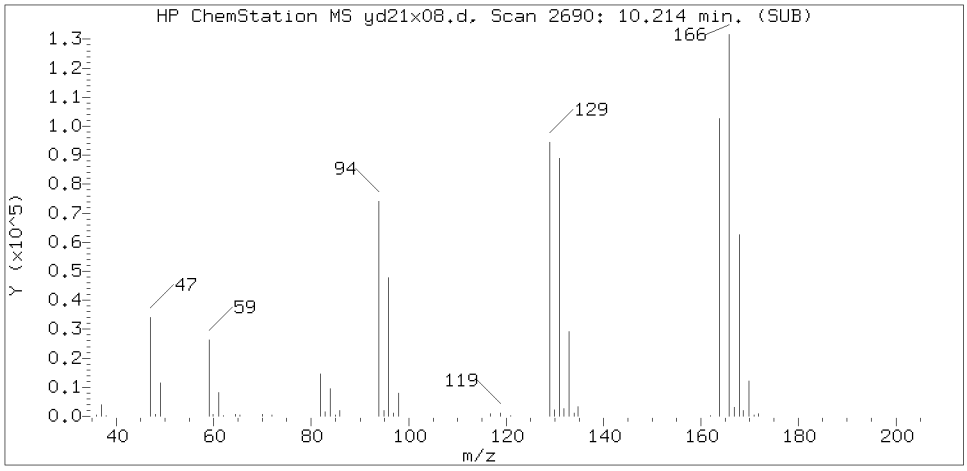
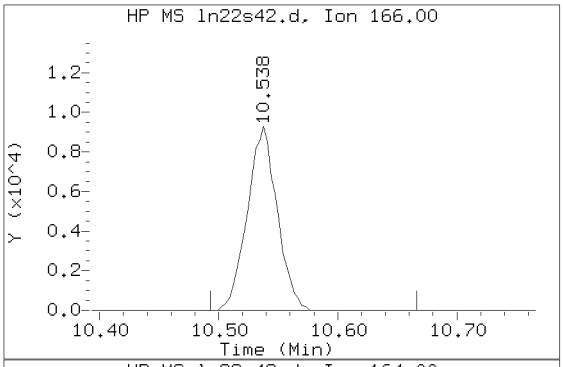
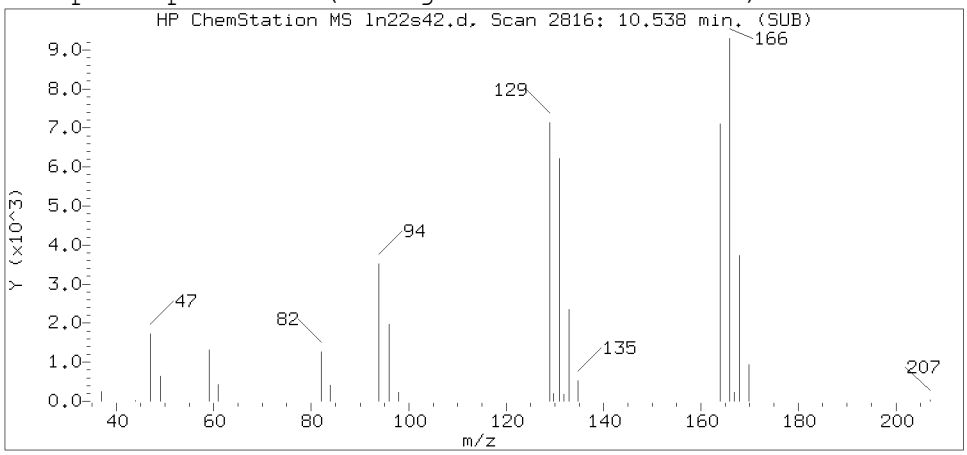
Target 3.5 esignature user ID: clm27445

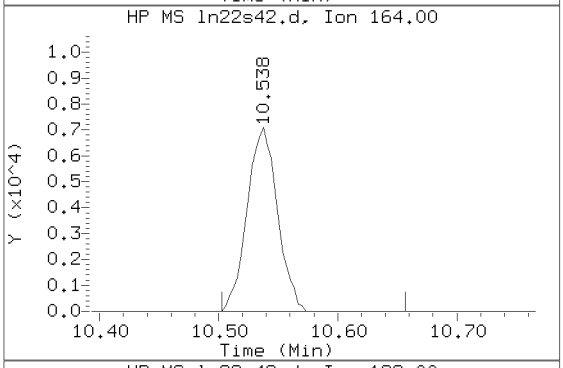
Reference Standard Spectrum for Tetrachloroethene

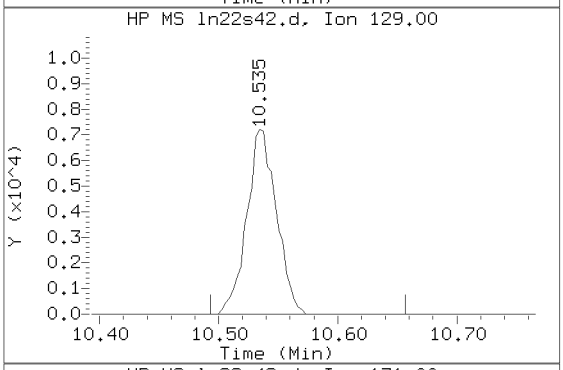




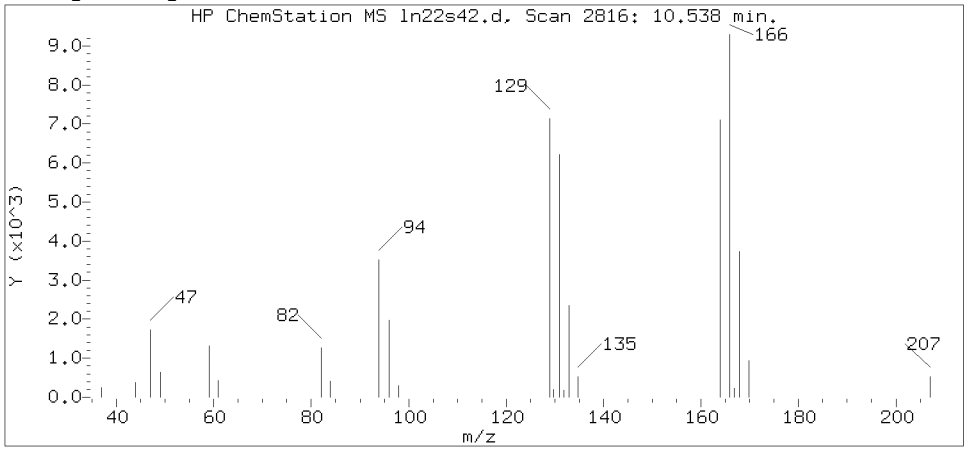
Sample Spectrum (Background Subtracted)

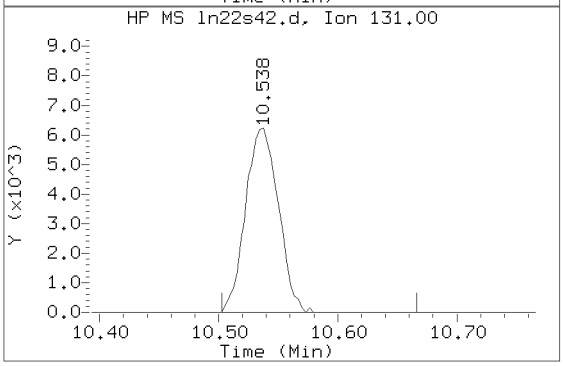






Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov22a.b/ln22s42.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 15:16 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 15:33 Automation

Sample Name: JCW21 Lab Sample ID: 1205919

Compound Number : 93
Compound Name : Tetrachloroethene
Scan Number : 2816
Retention Time (minutes): 10.538
Relative Retention Time :-0.00026
Quant Ion : 166.00
Area (flag) : 16206
On-Column Amount (ng) : 2.4131

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Target 3.5 esignature user ID: clm27445

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JCW22

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205920

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s43.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	0.7	J
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	3	
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	7	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	2	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1205920

Data file: /chem/HP09915.i/19nov22a.b/ln22s43.d Injection date and time: **22-NOV-2019 15:38**
Data file Sample Info. Line: JCW22;1205920;1;0;;JCW24;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 15:55 Automation

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.499	(-0.003)	938	65	213399	(-19)	250.00	
66) Fluorobenzene	7.956	(0.003)	2013	96	1168199	(-12)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	952579	(-11)	50.00	
131) 1,4-Dichlorobenzene-d4	13.219	(0.000)	3650	152	511464	(-11)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.068	(0.000)	113	278060	48.686	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	74165	50.952	102%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	1213000	48.666	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	463710	49.132	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	3.770	(-0.001)	96	3590	0.725	0.73		J	0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.551	(-0.000)	63	31549	3.157	3.16			0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	7.075	(0.000)	97	53790	6.594	6.59			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.432	(-0.000)	95	10551	1.764	1.76			0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:06. Target 3.5 esignature user ID: clm27445

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov22a.b/ln22s43.d Injection date and time: **22-NOV-2019 15:38**
Data file Sample Info. Line: JCW22;1205920;1;0;;JCW24;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 15:55 Automation

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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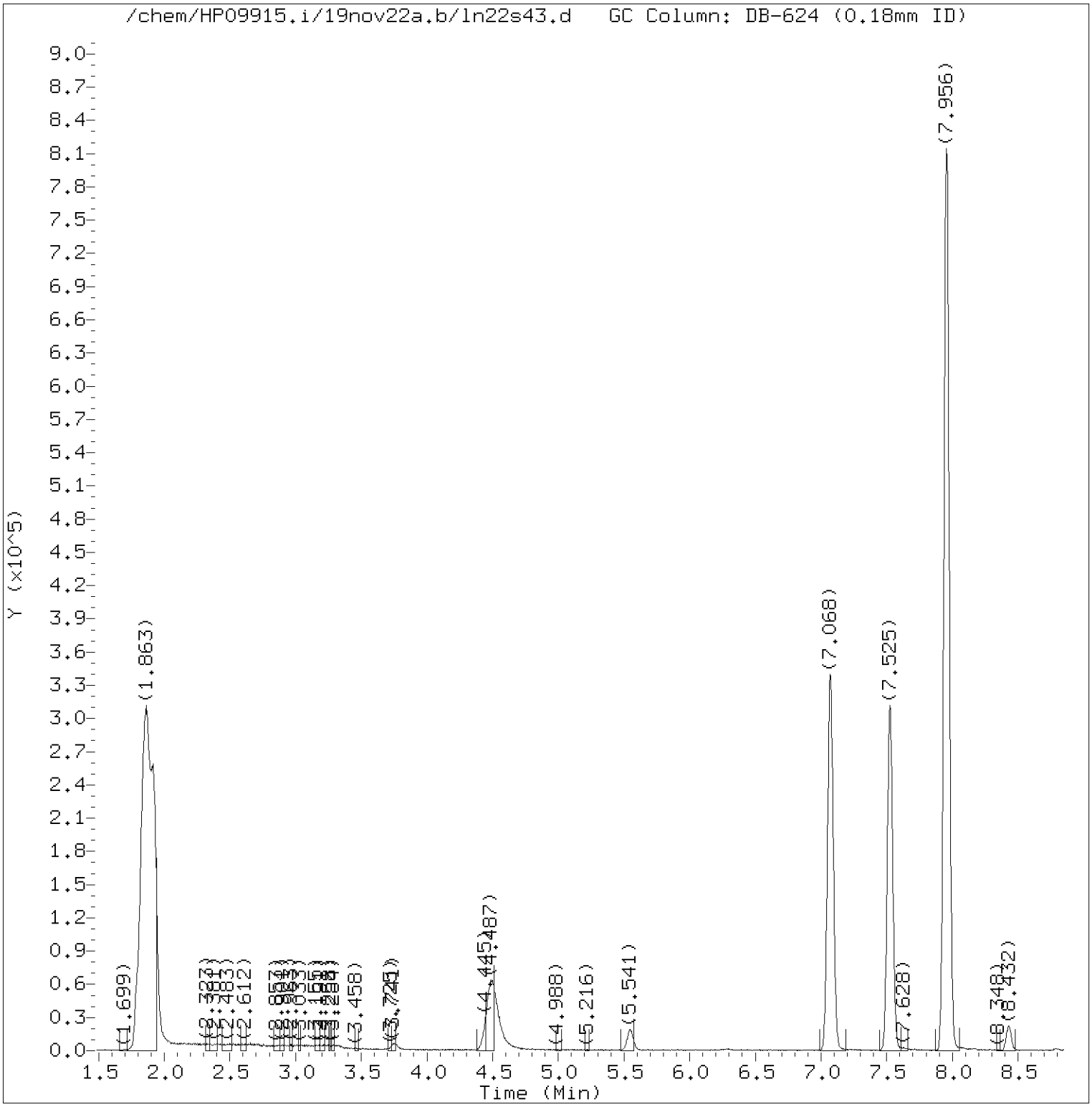
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:06. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:06. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

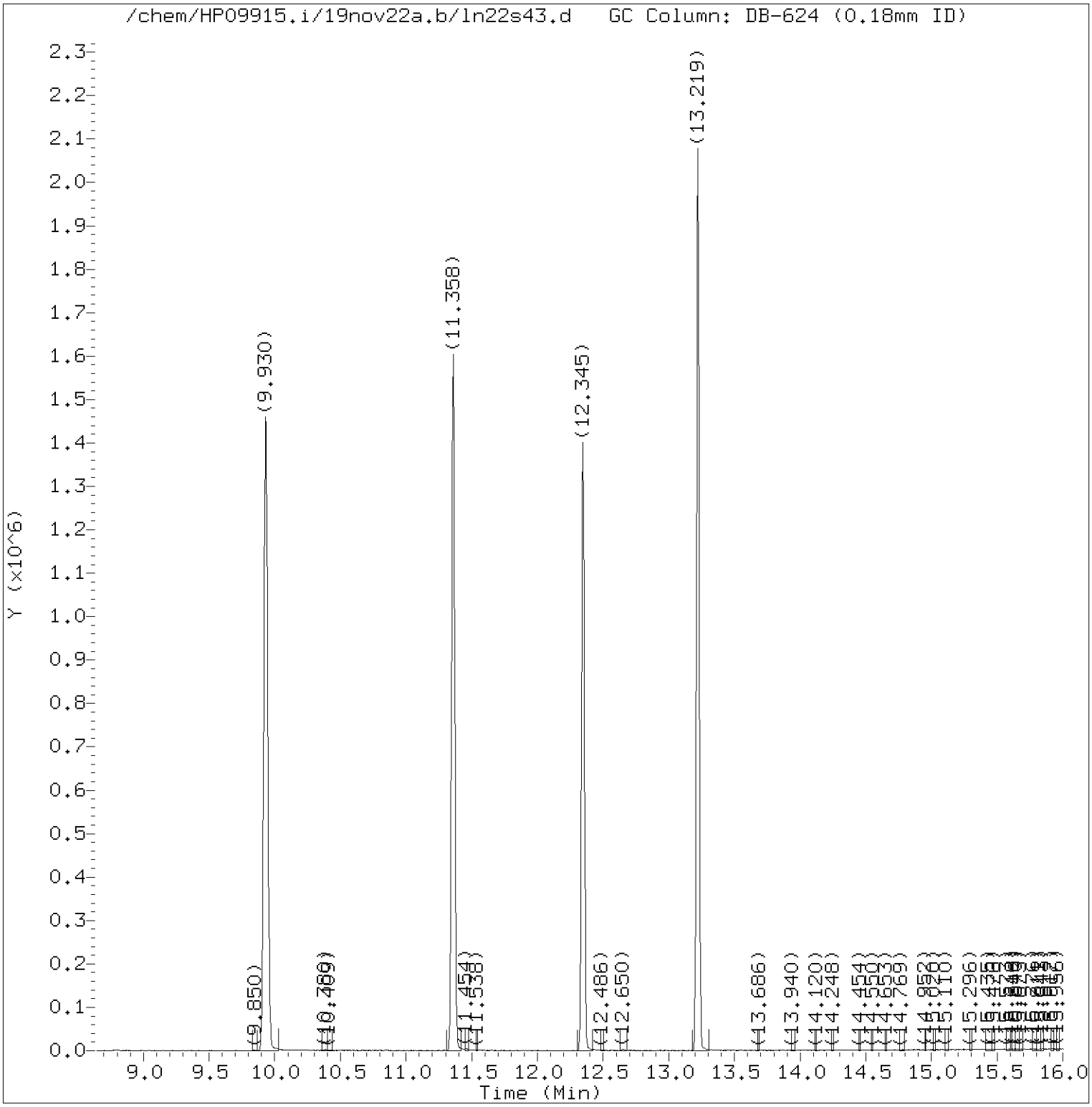
Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s43.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 15:38 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 15:55 Automation

Sample Name: JCW22 Lab Sample ID: 1205920

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:06.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s43.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 15:38 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 15:55 Automation

Sample Name: JCW22 Lab Sample ID: 1205920

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:06.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s43.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 15:38 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 15:55 Automation

Sample Name: JCW22 Lab Sample ID: 1205920

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	3.770	96	3590	0.725
29)*t-Butyl alcohol-d10	(1)	4.499	65	213399	250.000
36) 1,1-Dichloroethane	(2)	5.551	63	31549	3.157
52)$Dibromofluoromethane	(2)	7.068	113	278060	48.686
53) 1,1,1-Trichloroethane	(2)	7.075	97	53790	6.594
57)$1,2-Dichloroethane-d4	(2)	7.525	102	74165	50.952
66)*Fluorobenzene	(2)	7.956	96	1168199	50.000
71) Trichloroethene	(2)	8.432	95	10551	1.764
83)$Toluene-d8	(3)	9.930	98	1213000	48.666
100)*Chlorobenzene-d5	(3)	11.358	117	952579	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	463710	49.132
131)*1,4-Dichlorobenzene-d4	(4)	13.219	152	511464	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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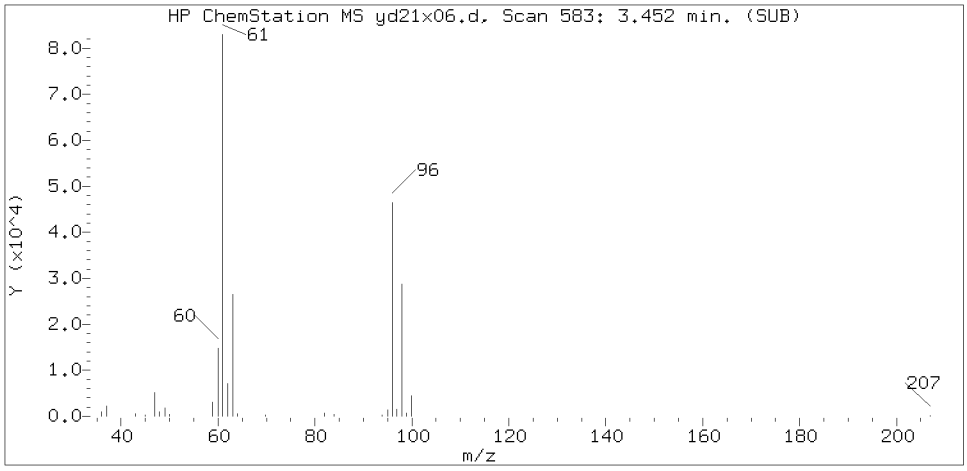
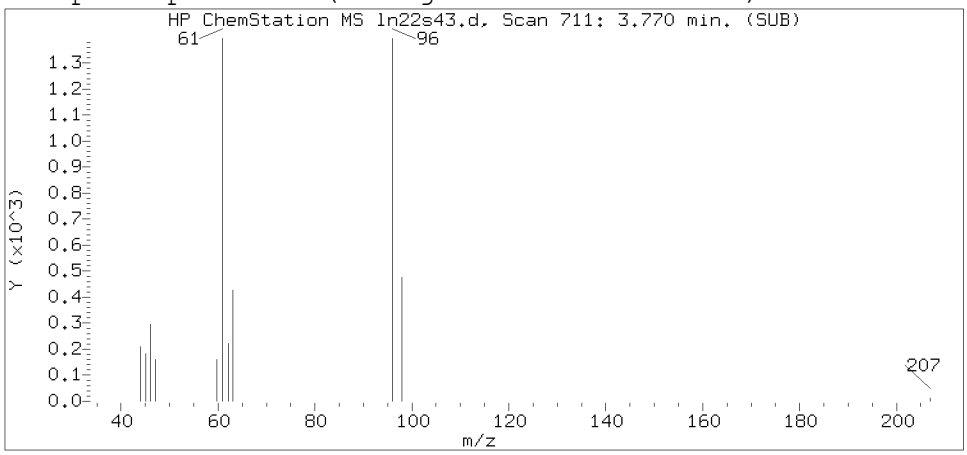
on 11/23/2019 at 11:06.
Target 3.5 esignature user ID: clm27445

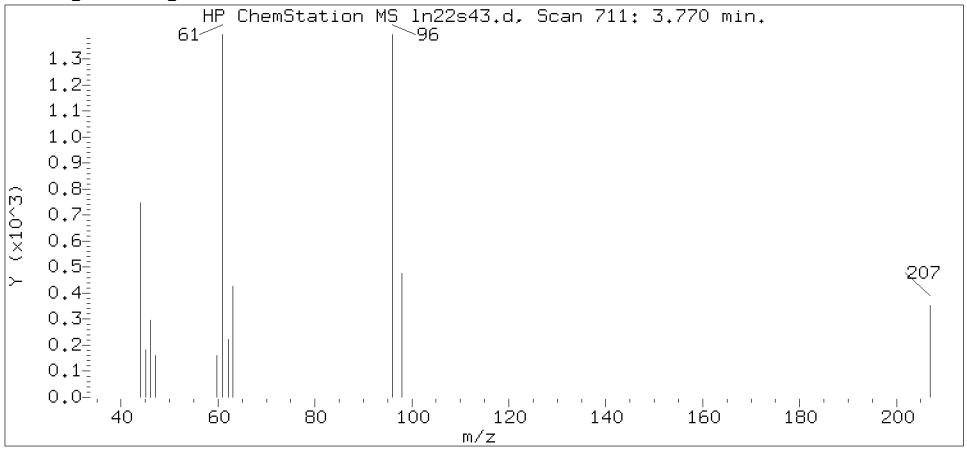
Reference Standard Spectrum for 1,1-Dichloroethene

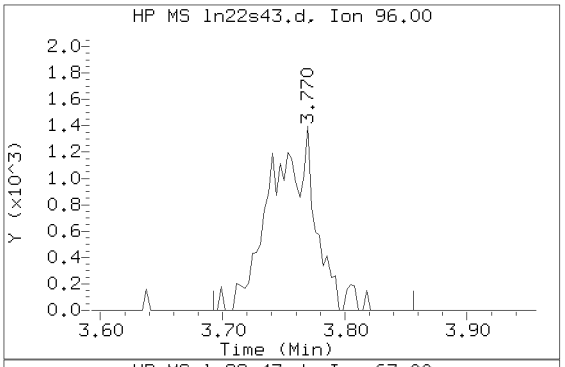


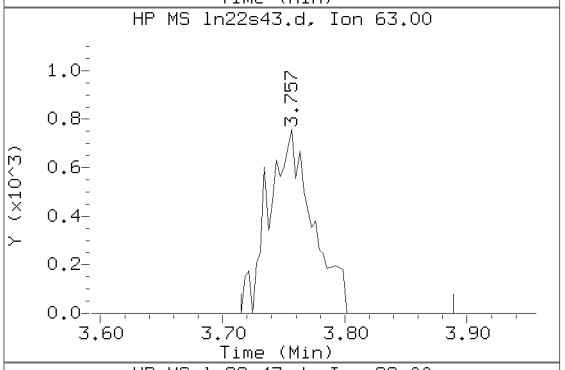
Sample Spectrum (Background Subtracted)

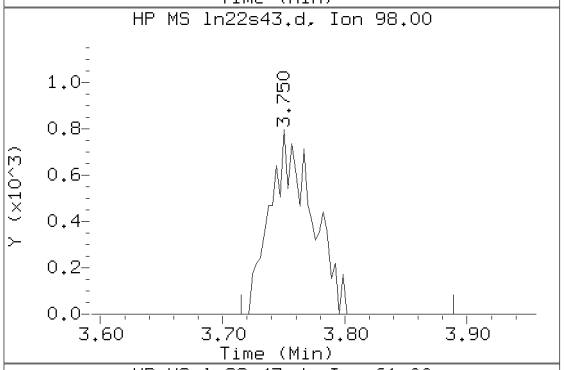


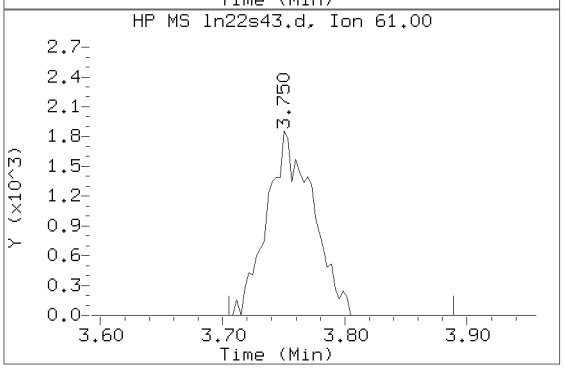
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov22a.b/ln22s43.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 15:38 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 15:55 Automation

Sample Name: JCW22 Lab Sample ID: 1205920

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 711
Retention Time (minutes): 3.770
Relative Retention Time :-0.00179
Quant Ion : 96.00
Area (flag) : 3590
On-Column Amount (ng) : 0.7251

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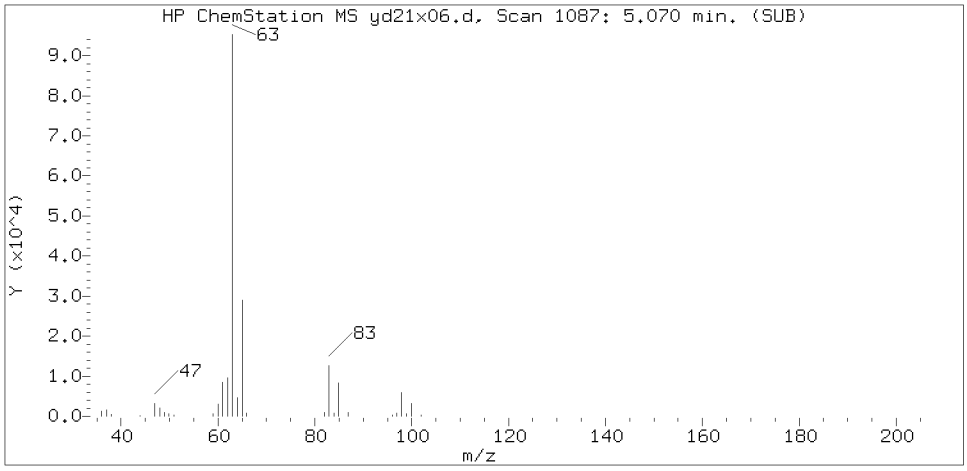
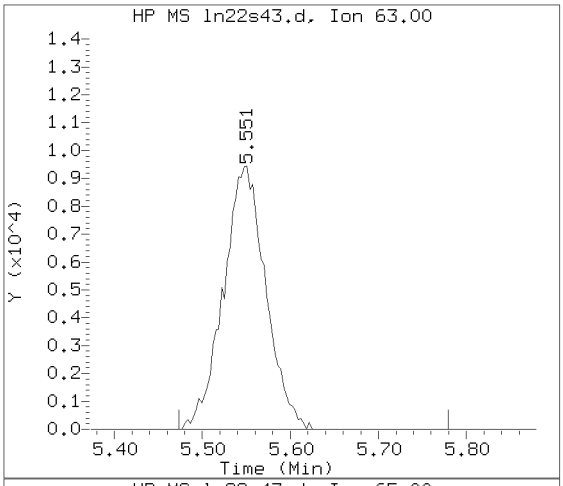
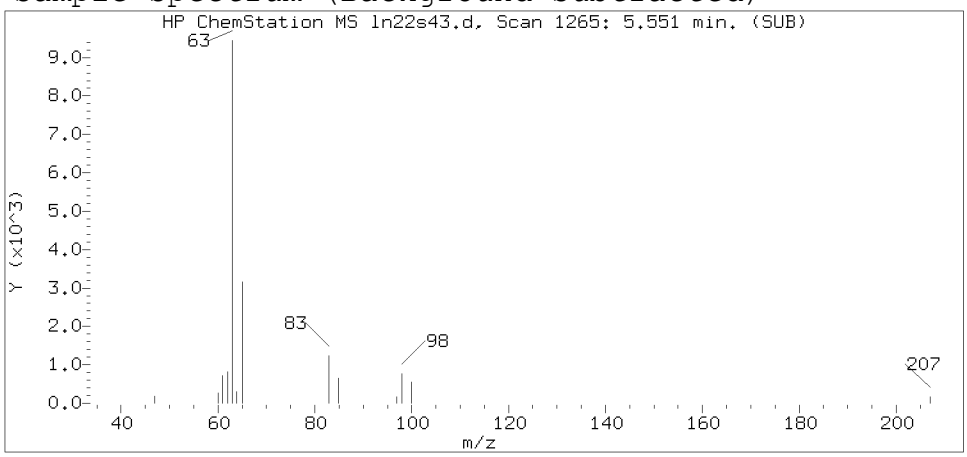
Target 3.5 esignature user ID: clm27445

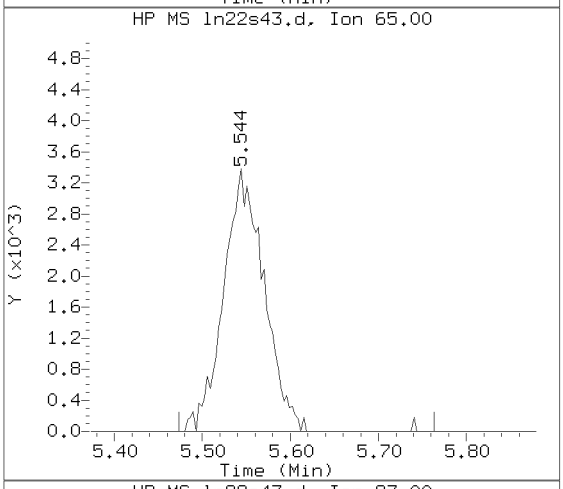
Reference Standard Spectrum for 1,1-Dichloroethane



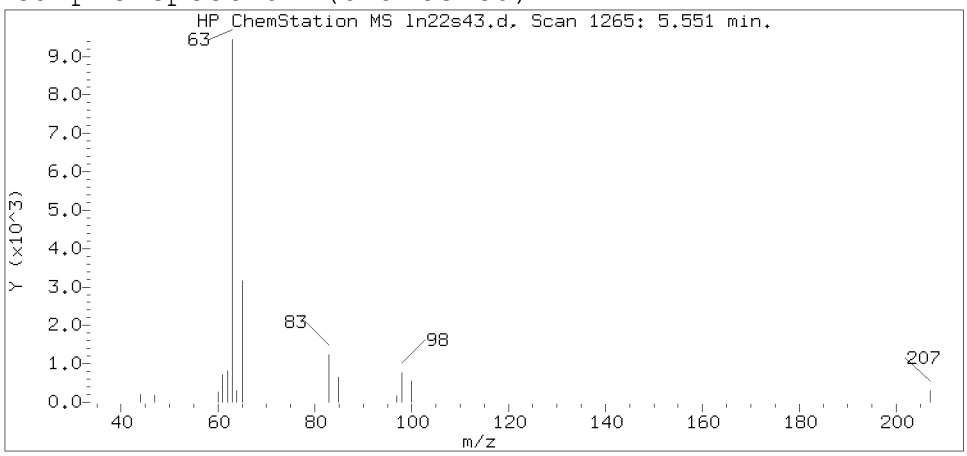


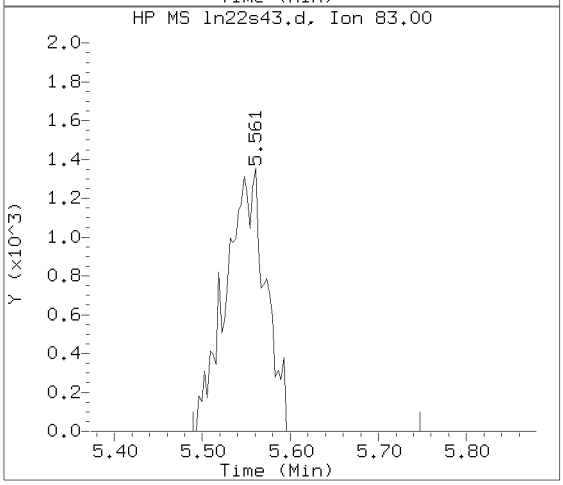
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov22a.b/ln22s43.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 15:38 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 15:55 Automation

Sample Name: JCW22 Lab Sample ID: 1205920

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 1265
Retention Time (minutes): 5.551
Relative Retention Time :-0.00027
Quant Ion : 63.00
Area (flag) : 31549
On-Column Amount (ng) : 3.1570

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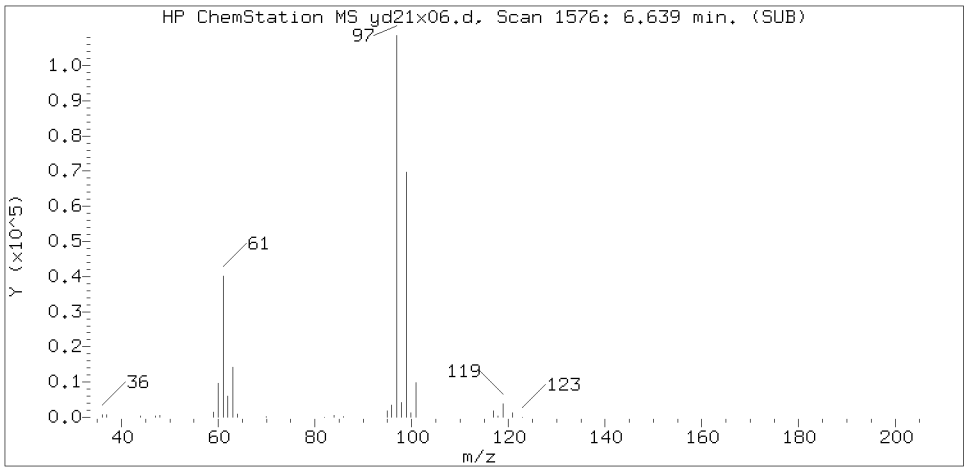
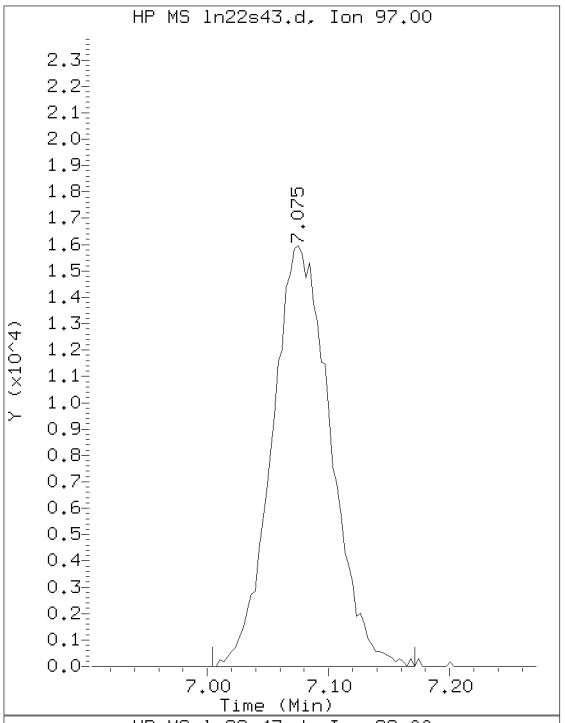
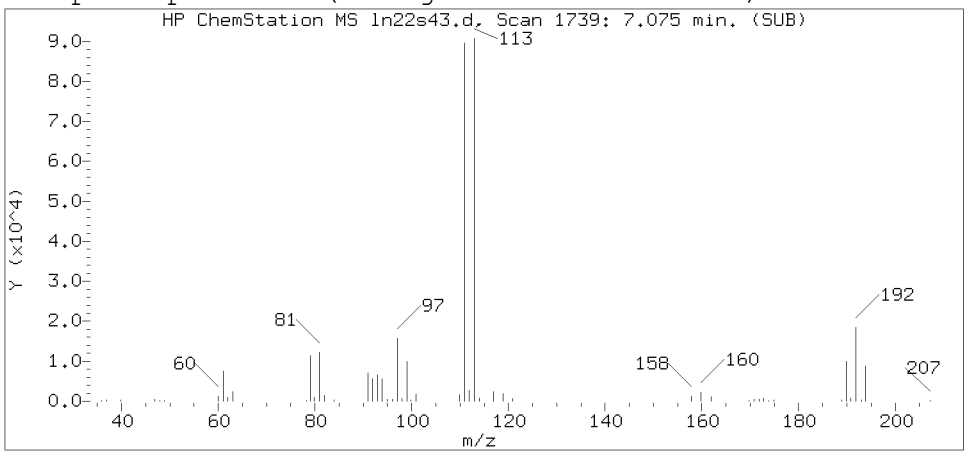
Target 3.5 esignature user ID: clm27445

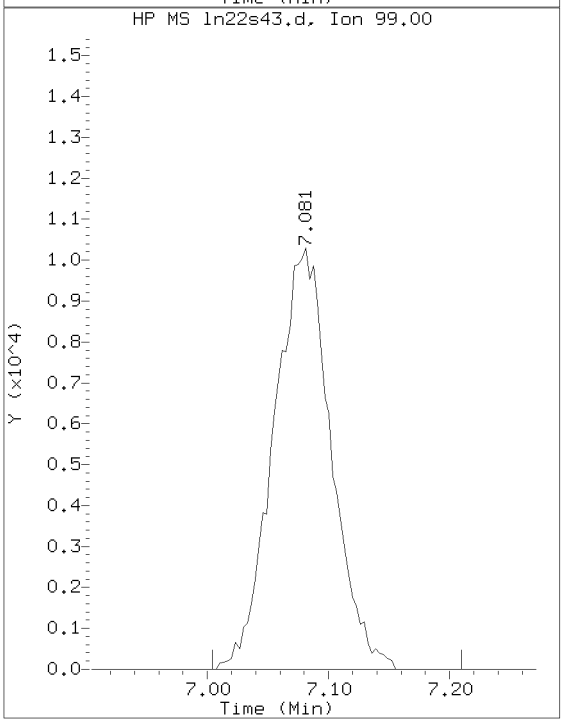
Reference Standard Spectrum for 1,1,1-Trichloroethane



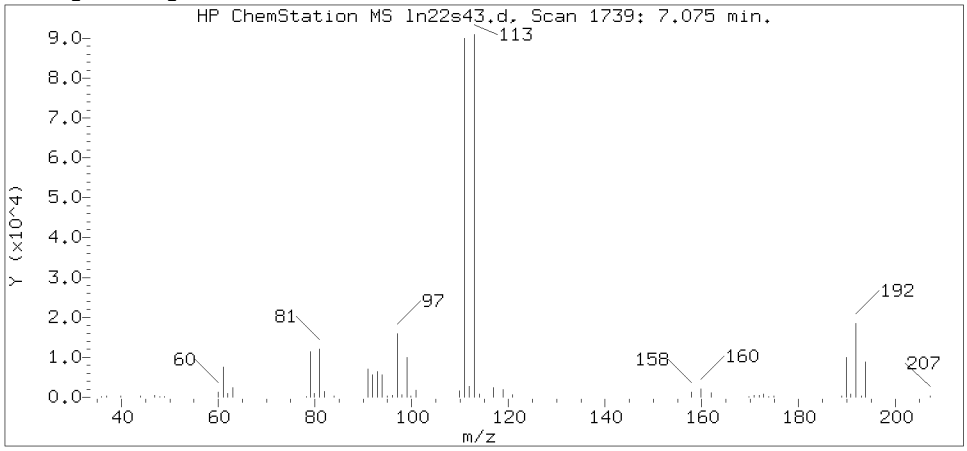


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov22a.b/ln22s43.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 15:38 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 15:55 Automation

Sample Name: JCW22 Lab Sample ID: 1205920

Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 1739
Retention Time (minutes): 7.075
Relative Retention Time : 0.00045
Quant Ion : 97.00
Area (flag) : 53790
On-Column Amount (ng) : 6.5935

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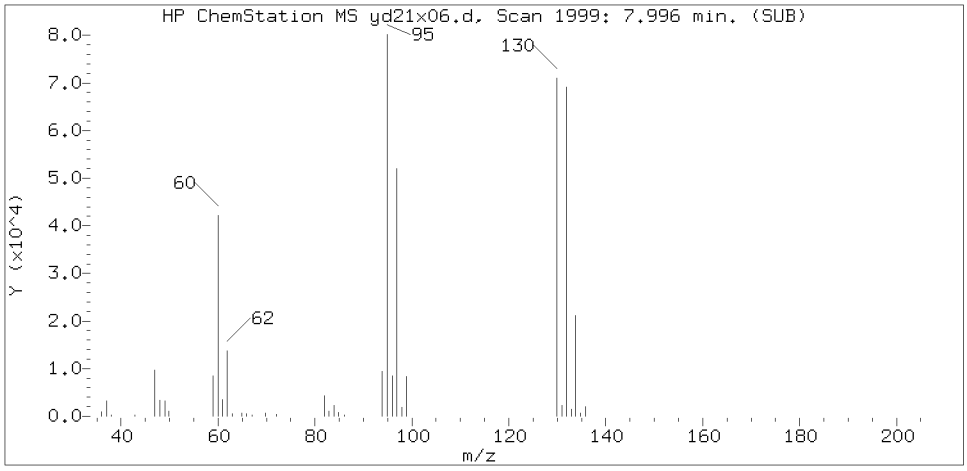
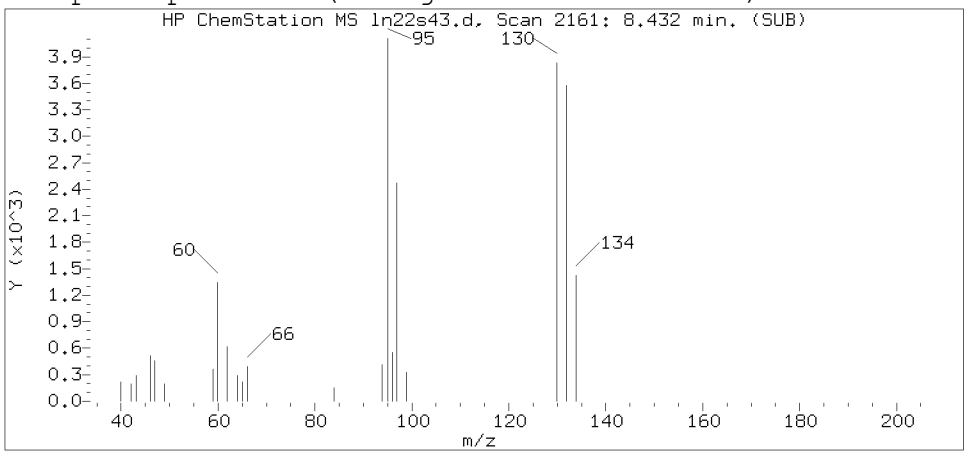
Target 3.5 esignature user ID: clm27445

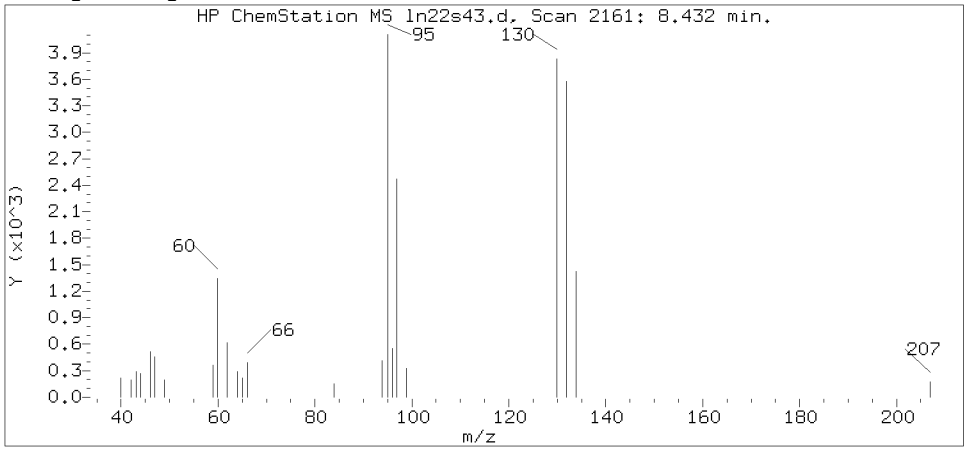
Reference Standard Spectrum for Trichloroethene

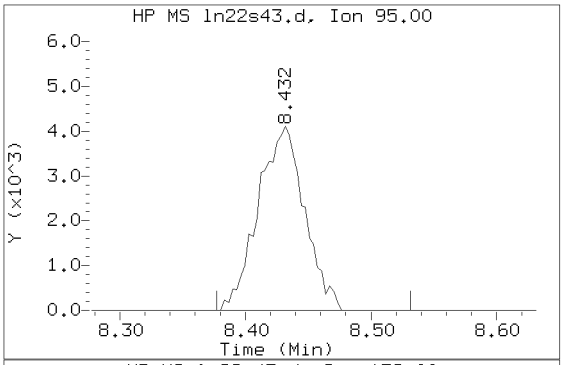


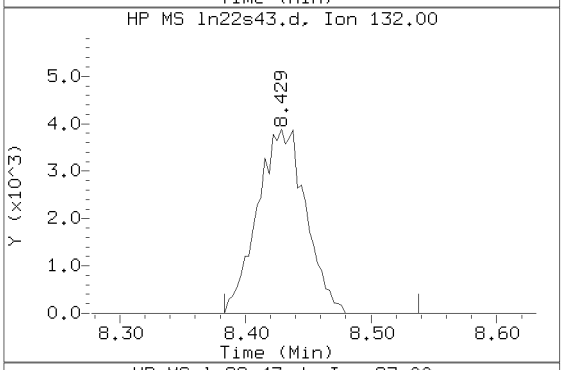
Sample Spectrum (Background Subtracted)

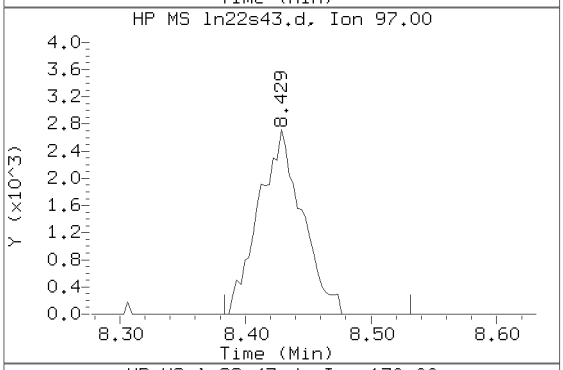


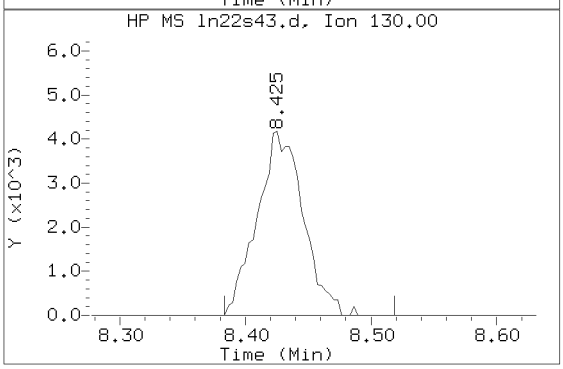
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov22a.b/ln22s43.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 15:38 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 15:55 Automation

Sample Name: JCW22 Lab Sample ID: 1205920

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 2161
Retention Time (minutes): 8.432
Relative Retention Time :-0.00083
Quant Ion : 95.00
Area (flag) : 10551
On-Column Amount (ng) : 1.7635

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Target 3.5 esignature user ID: clm27445

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
JCW23

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205921

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s44.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1205921

Data file: /chem/HP09915.i/19nov22a.b/ln22s44.d Injection date and time: **22-NOV-2019 16:00**
Data file Sample Info. Line: JCW23;1205921;1;0;;JCW24;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 16:17 Automation

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.499	(-0.003)	938	65	212522	(-19)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	1177689	(-12)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	971431	(-10)	50.00	
131) 1,4-Dichlorobenzene-d4	13.219	(0.000)	3650	152	518839	(-10)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072	(0.000)	113	279305	48.510	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.532	(-0.001)	102	73690	50.218	100%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	1226771	48.263	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	470009	48.833	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:06. Target 3.5 esignature user ID: clm27445

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov22a.b/ln22s44.d Injection date and time: **22-NOV-2019 16:00**
Data file Sample Info. Line: JCW23;1205921;1;0;;JCW24;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 16:17 Automation

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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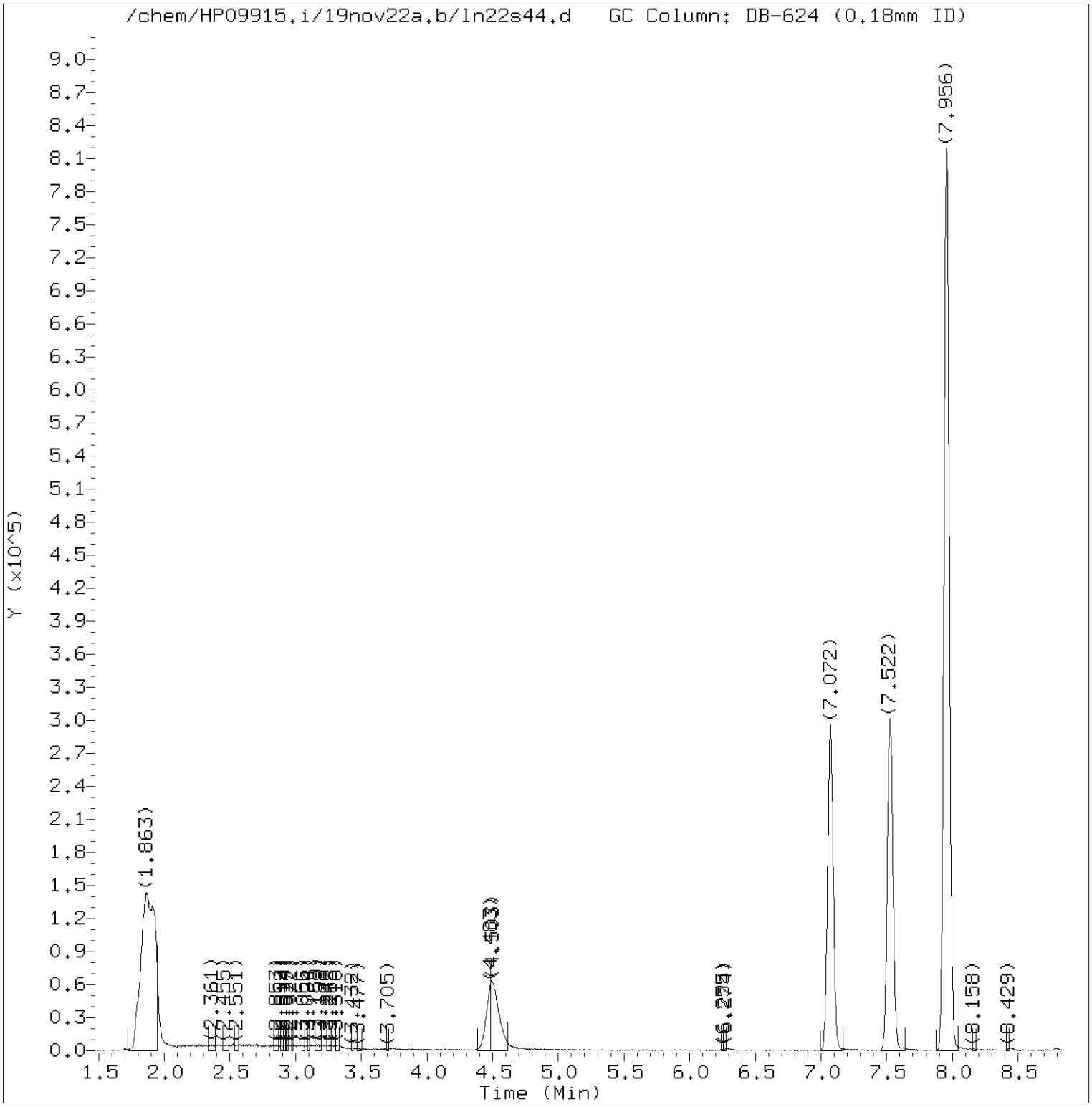
Total number of targets = 24

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:06. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:06. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

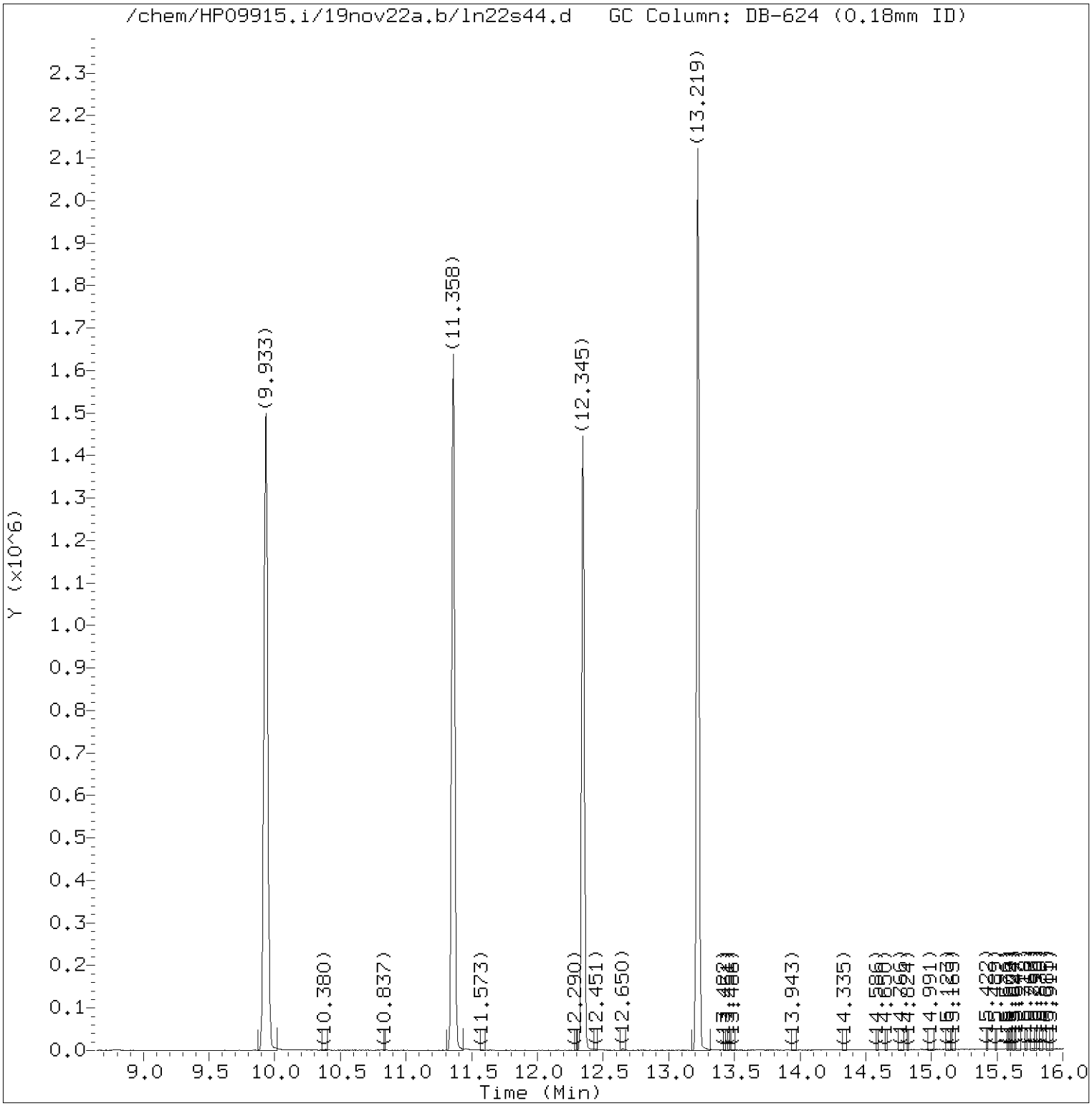
Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s44.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 16:00 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 16:17 Automation

Sample Name: JCW23 Lab Sample ID: 1205921

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:06.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s44.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 16:00 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 16:17 Automation

Sample Name: JCW23 Lab Sample ID: 1205921

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:06.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s44.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 16:00 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 16:17 Automation

Sample Name: JCW23 Lab Sample ID: 1205921

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.499	65	212522	250.000
52)$Dibromofluoromethane	(2)	7.072	113	279305	48.510
57)$1,2-Dichloroethane-d4	(2)	7.532	102	73690	50.218
66)*Fluorobenzene	(2)	7.959	96	1177689	50.000
83)$Toluene-d8	(3)	9.933	98	1226771	48.263
100)*Chlorobenzene-d5	(3)	11.358	117	971431	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	470009	48.833
131)*1,4-Dichlorobenzene-d4	(4)	13.219	152	518839	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/23/2019 at 11:06.
Target 3.5 esignature user ID: clm27445

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
JCW24

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205922

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s45.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1205922

Data file: /chem/HP09915.i/19nov22a.b/ln22s45.d Injection date and time: **22-NOV-2019 16:22**
Data file Sample Info. Line: JCW24;1205922;1;0;;JCW24;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 16:39 Automation

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.509	(-0.013)	941	65	213211	(-19)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	1167766	(-12)	50.00	
100) Chlorobenzene-d5	11.358	(0.004)	3071	117	964104	(-10)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(-0.003)	3651	152	519696	(-9)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.078	(-0.001)	113	278401	48.764	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.531	(-0.001)	102	74172	50.976	102%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	1219631	48.347	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	467527	48.945	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:06. Target 3.5 esignature user ID: clm27445

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov22a.b/ln22s45.d Injection date and time: **22-NOV-2019 16:22**
Data file Sample Info. Line: JCW24;1205922;1;0;;JCW24;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 16:39 Automation

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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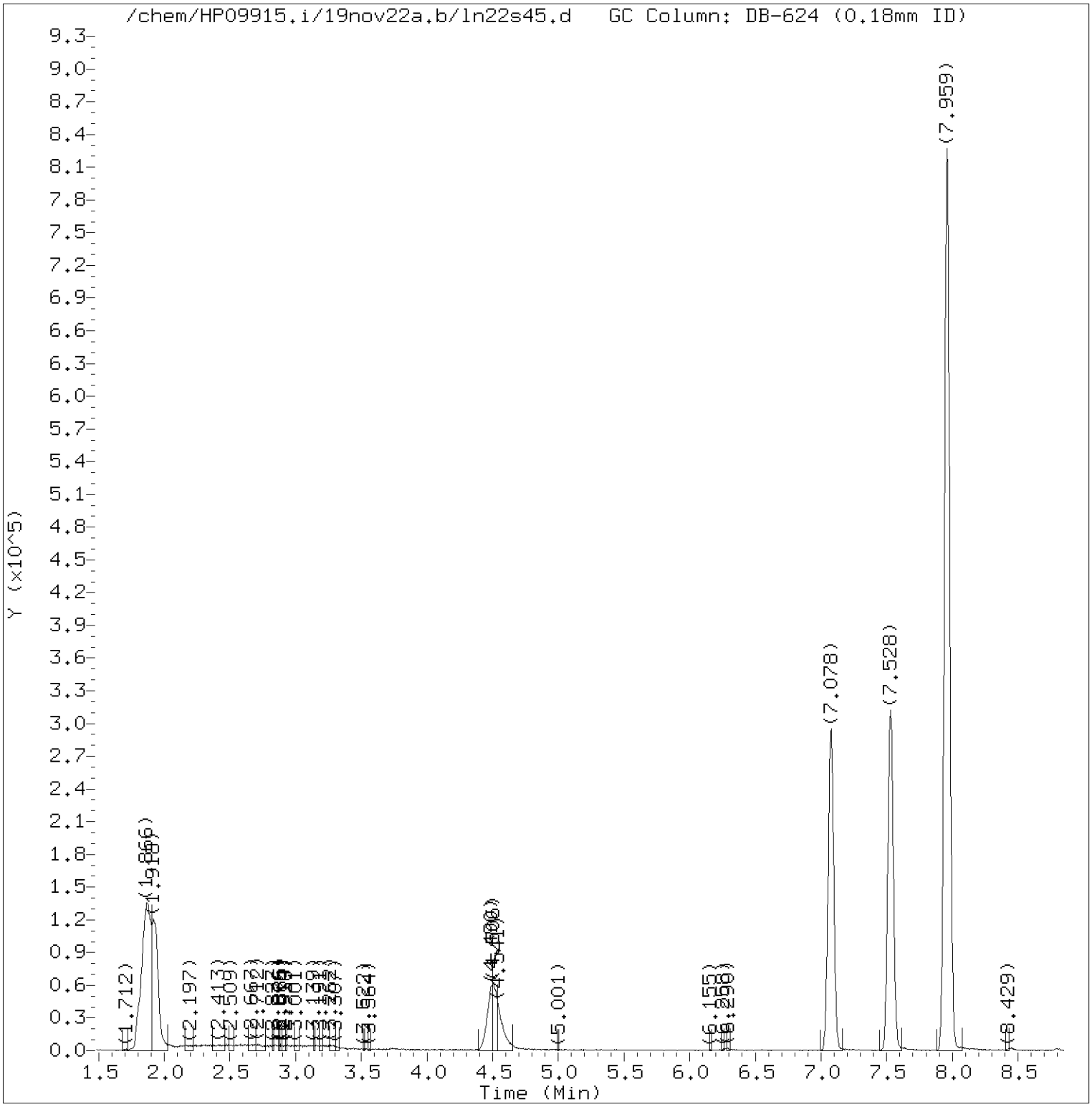
Total number of targets = 24

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:06. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:06. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

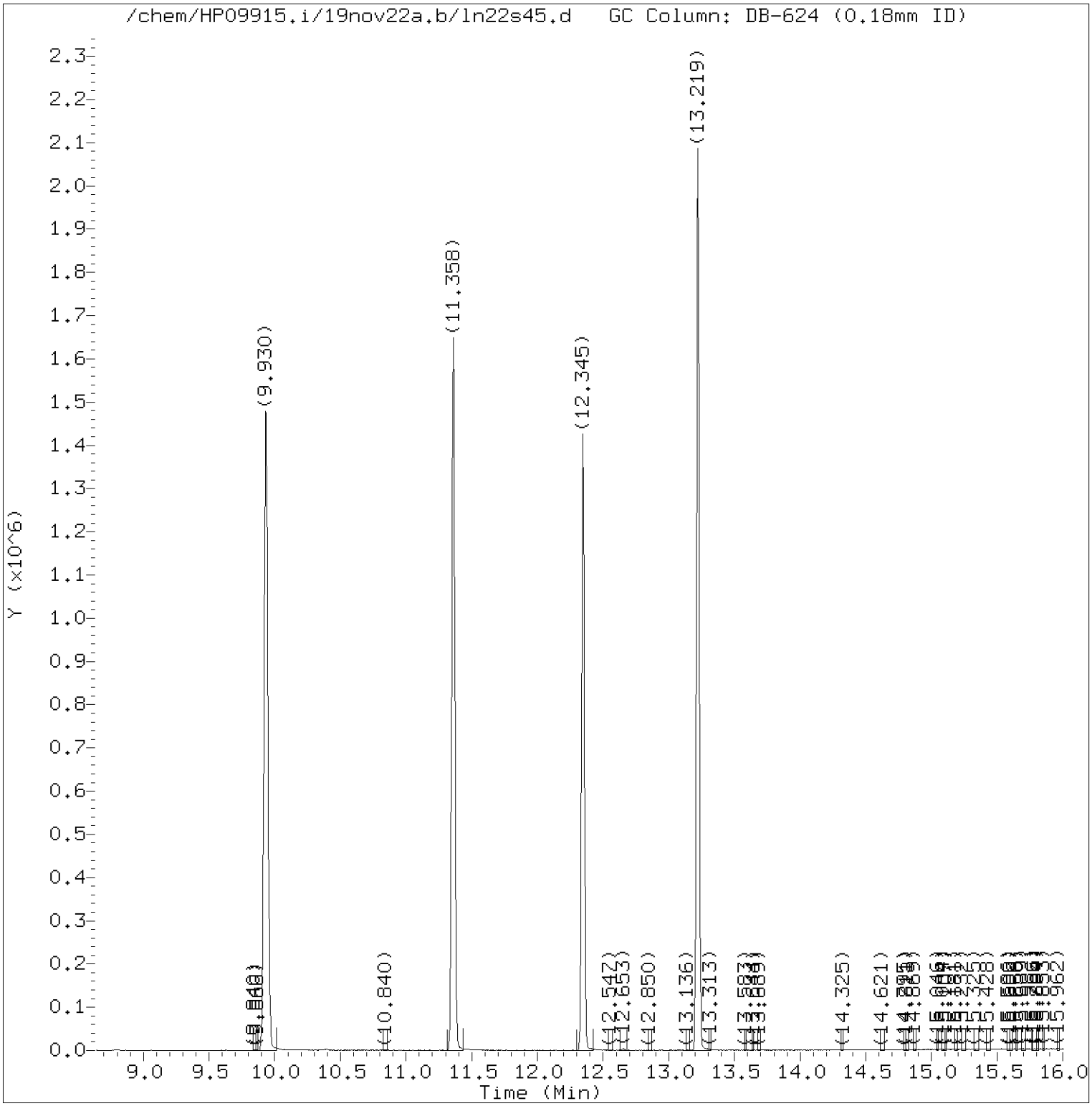
Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s45.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 16:22 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 16:39 Automation

Sample Name: JCW24 Lab Sample ID: 1205922

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:06.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s45.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 16:22 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 16:39 Automation

Sample Name: JCW24 Lab Sample ID: 1205922

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:06.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s45.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 16:22 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 16:39 Automation

Sample Name: JCW24 Lab Sample ID: 1205922

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.509	65	213211	250.000
52)$Dibromofluoromethane	(2)	7.078	113	278401	48.764
57)$1,2-Dichloroethane-d4	(2)	7.531	102	74172	50.976
66)*Fluorobenzene	(2)	7.959	96	1167766	50.000
83)$Toluene-d8	(3)	9.930	98	1219631	48.347
100)*Chlorobenzene-d5	(3)	11.358	117	964104	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	467527	48.945
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	519696	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:06.
Target 3.5 esignature user ID: clm27445

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JCW25

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205923

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s46.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1205923

Data file: /chem/HP09915.i/19nov22a.b/ln22s46.d Injection date and time: **22-NOV-2019 16:44**
Data file Sample Info. Line: JCW25;1205923;1;0;;JCW24;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 17:01 Automation

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.490	(0.007)	935	65	211192	(-20)	250.00	
66) Fluorobenzene	7.956	(0.003)	2013	96	1151218	(-14)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	938235	(-13)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(-0.003)	3651	152	504861	(-12)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.068	(0.000)	113	271767	48.286	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(-0.001)	102	72026	50.213	100%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	1198252	48.809	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	456860	49.147	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:07. Target 3.5 esignature user ID: clm27445

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov22a.b/ln22s46.d Injection date and time: **22-NOV-2019 16:44**
Data file Sample Info. Line: JCW25;1205923;1;0;;JCW24;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 17:01 Automation

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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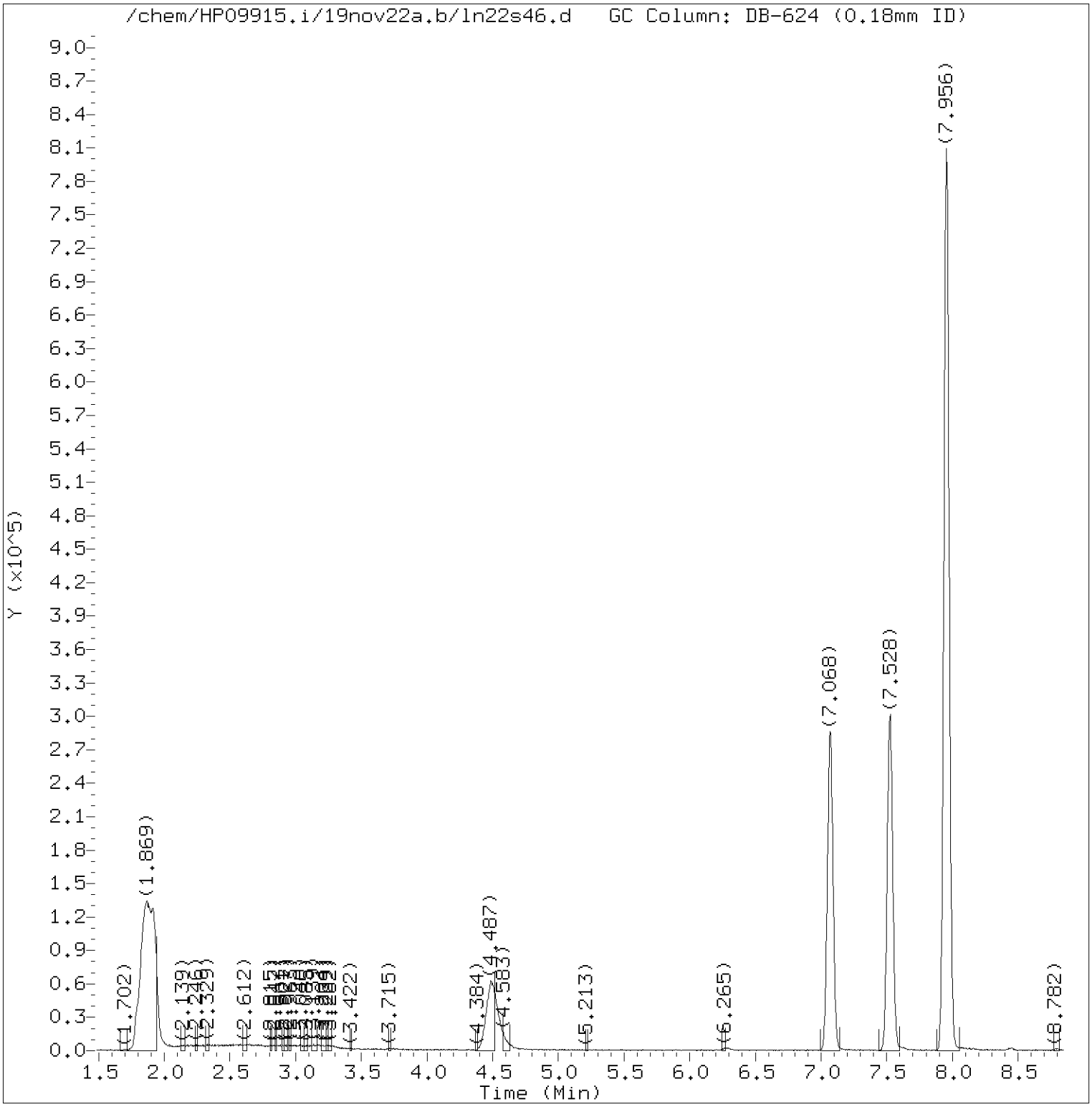
Total number of targets = 24

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:07. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:06. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

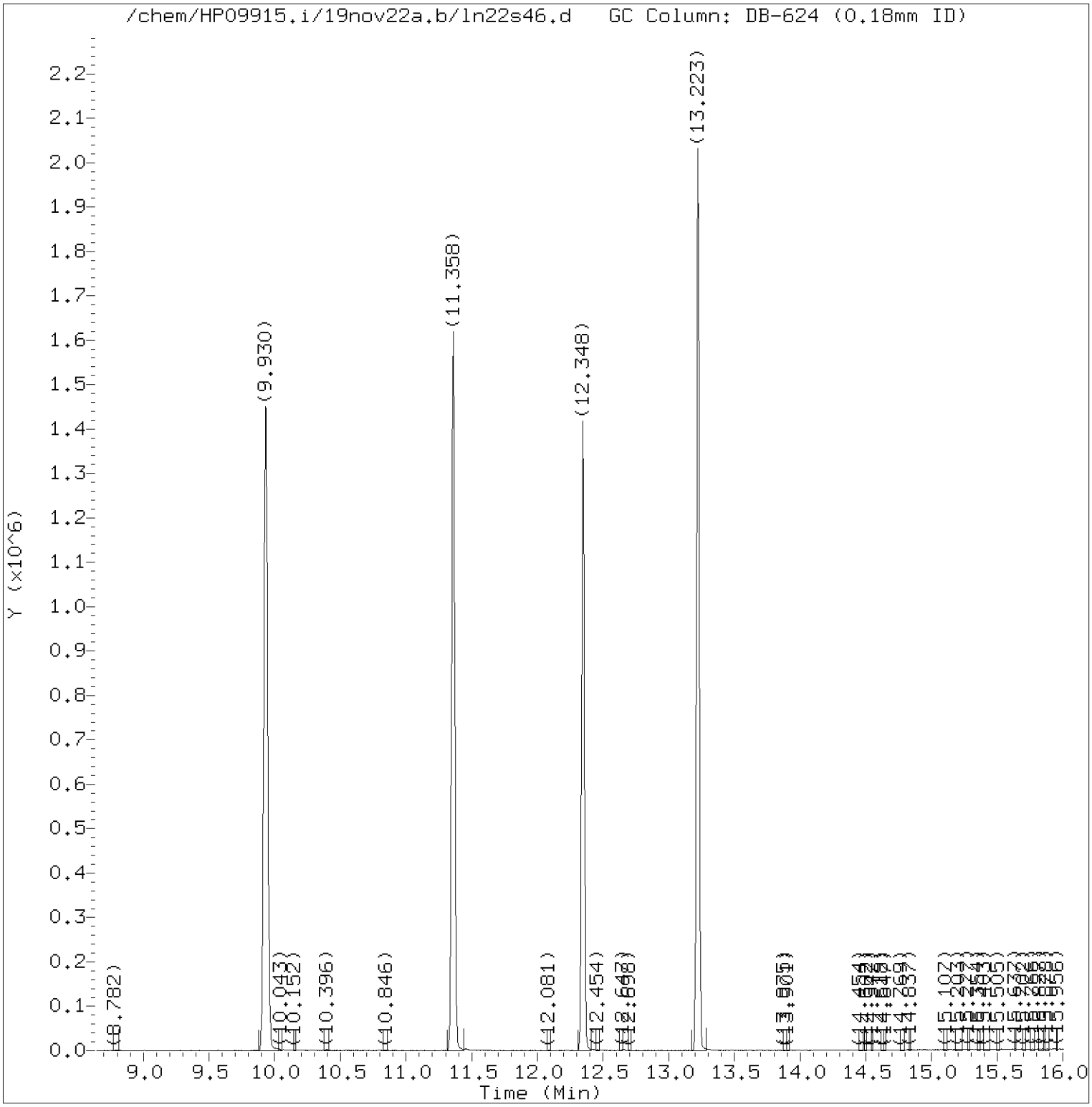
Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s46.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 16:44 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 17:01 Automation

Sample Name: JCW25 Lab Sample ID: 1205923

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:07.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s46.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 16:44 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 17:01 Automation

Sample Name: JCW25 Lab Sample ID: 1205923

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:07.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s46.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 16:44 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 17:01 Automation

Sample Name: JCW25 Lab Sample ID: 1205923

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.490	65	211192	250.000
52)$Dibromofluoromethane	(2)	7.068	113	271767	48.286
57)$1,2-Dichloroethane-d4	(2)	7.528	102	72026	50.213
66)*Fluorobenzene	(2)	7.956	96	1151218	50.000
83)$Toluene-d8	(3)	9.933	98	1198252	48.809
100)*Chlorobenzene-d5	(3)	11.358	117	938235	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	456860	49.147
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	504861	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/23/2019 at 11:07.
Target 3.5 esignature user ID: clm27445

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
JCW26

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205924

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s47.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	0.4	J
75-35-4	1,1-Dichloroethene	0.2	J
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	
156-59-2	cis-1,2-Dichloroethene	1	
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	0.6	J
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	7	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1205924

Data file: /chem/HP09915.i/19nov22a.b/ln22s47.d Injection date and time: **22-NOV-2019 17:06**
Data file Sample Info. Line: JCW26;1205924;1;0;;JCW24;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 11:07 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493	(0.003)	936	65	212897	(-19)	250.00	
66) Fluorobenzene	7.956	(0.003)	2013	96	1152100	(-14)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	949027	(-12)	50.00	
131) 1,4-Dichlorobenzene-d4	13.220	(0.000)	3650	152	511495	(-11)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072	(-0.001)	113	277008	49.179	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(-0.001)	102	73317	51.073	102%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	1206282	48.578	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	460056	48.928	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)	2.397	(0.000)	62	3200	0.414	0.41		J	0.2	1
17) 1,1-Dichloroethene	(2)	3.763	(-0.000)	96	1188	0.243	0.24		J	0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.554	(-0.000)	63	11736	1.191	1.19			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.377	(0.000)	96	8286	1.307	1.31			0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	7.075	(0.000)	97	4503M	0.560	0.56		J	0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.425	(-0.000)	95	42868	7.265	7.27			0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

M = Compound was manually integrated.

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:08. Target 3.5 esignature user ID: clm27445

Data file: /chem/HP09915.i/19nov22a.b/ln22s47.d Injection date and time: **22-NOV-2019 17:06**
Data file Sample Info. Line: JCW26;1205924;1;0;;JCW24;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 11:07 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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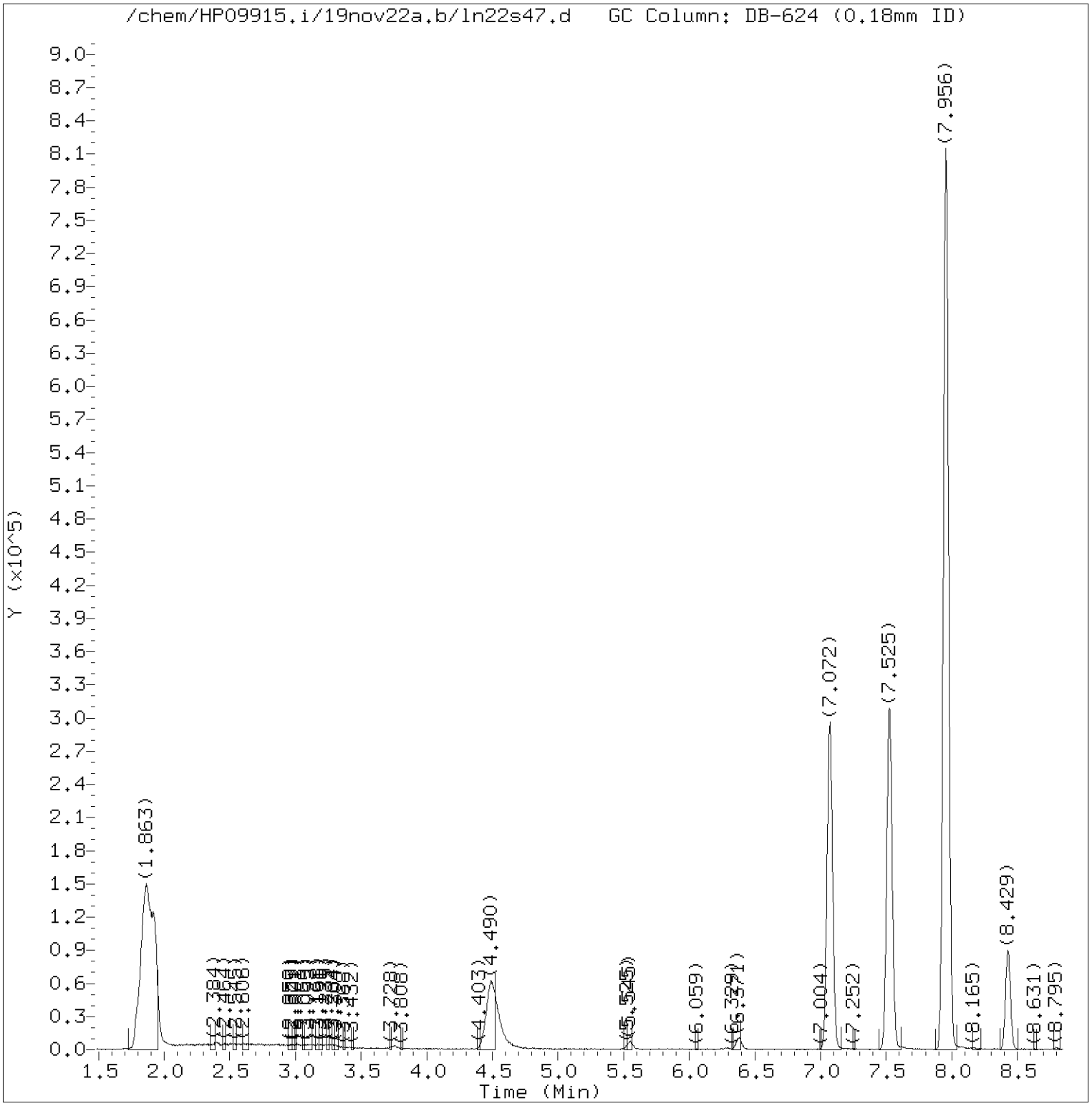
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:08. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:06. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

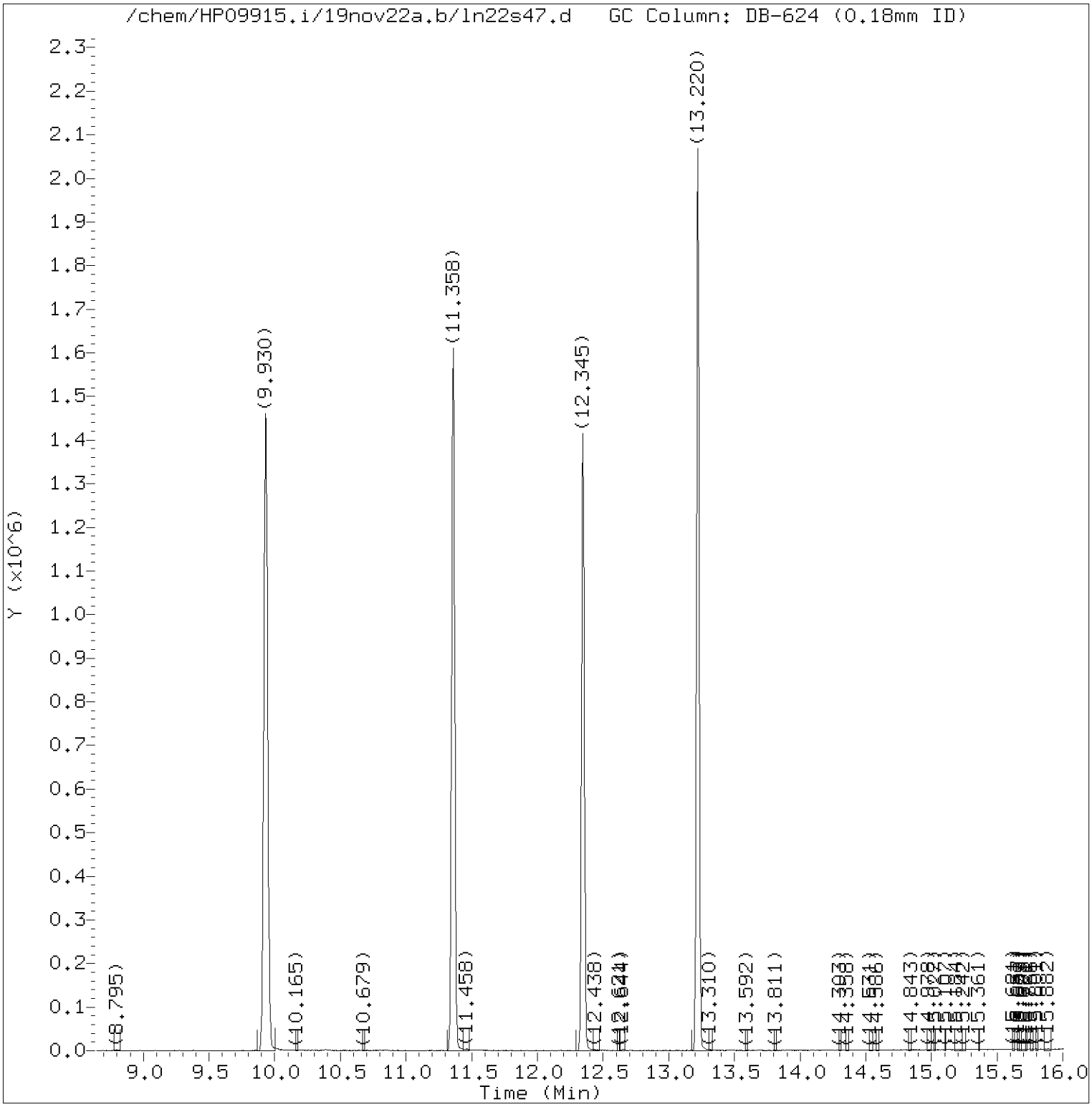
Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s47.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 17:06 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 23-Nov-2019 11:07 clm27445

Sample Name: JCW26 Lab Sample ID: 1205924

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:08.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s47.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 17:06 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 23-Nov-2019 11:07 clm27445

Sample Name: JCW26 Lab Sample ID: 1205924

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:08.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s47.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 17:06 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 23-Nov-2019 11:07 clm27445

Sample Name: JCW26 Lab Sample ID: 1205924

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	2.397	62	3200	0.414
17) 1,1-Dichloroethene	(2)	3.763	96	1188	0.243
29)*t-Butyl alcohol-d10	(1)	4.493	65	212897	250.000
36) 1,1-Dichloroethane	(2)	5.554	63	11736	1.191
42) cis-1,2-Dichloroethene	(2)	6.377	96	8286	1.307
52)$Dibromofluoromethane	(2)	7.072	113	277008	49.179
53) 1,1,1-Trichloroethane	(2)	7.075	97	4503M	0.560
57)$1,2-Dichloroethane-d4	(2)	7.528	102	73317	51.073
66)*Fluorobenzene	(2)	7.956	96	1152100	50.000
71) Trichloroethene	(2)	8.425	95	42868	7.265
83)$Toluene-d8	(3)	9.930	98	1206282	48.578
100)*Chlorobenzene-d5	(3)	11.358	117	949027	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	460056	48.928
131)*1,4-Dichlorobenzene-d4	(4)	13.220	152	511495	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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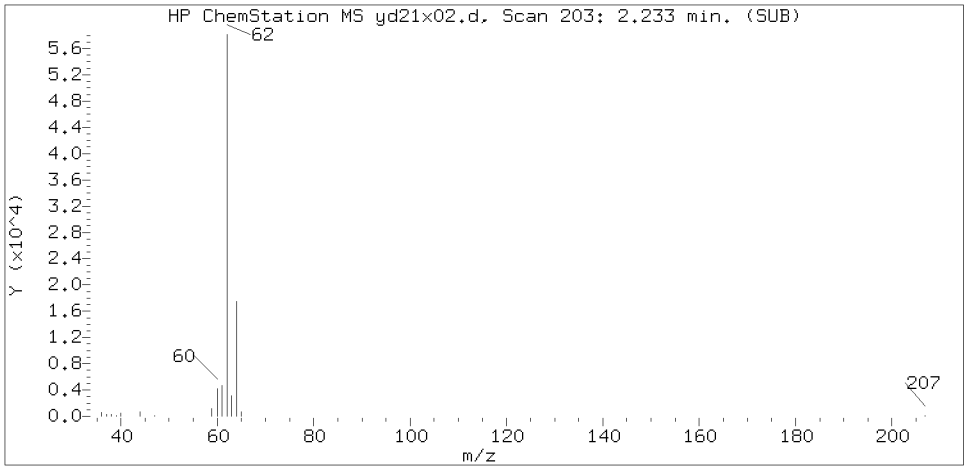
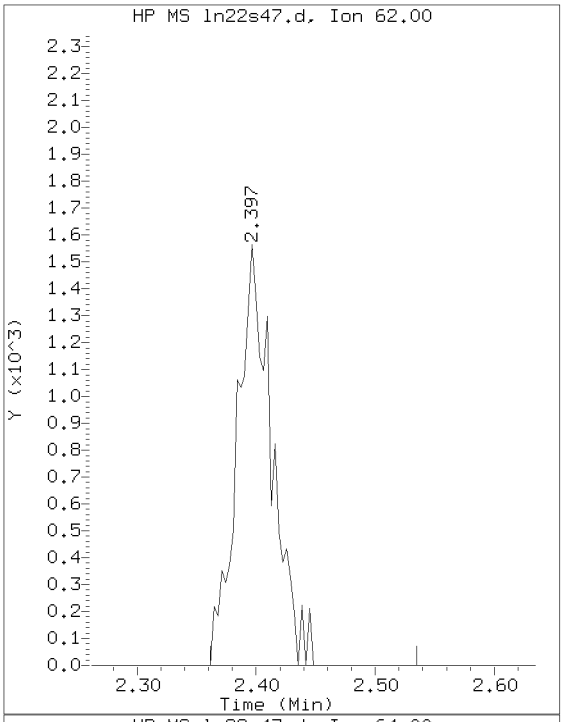
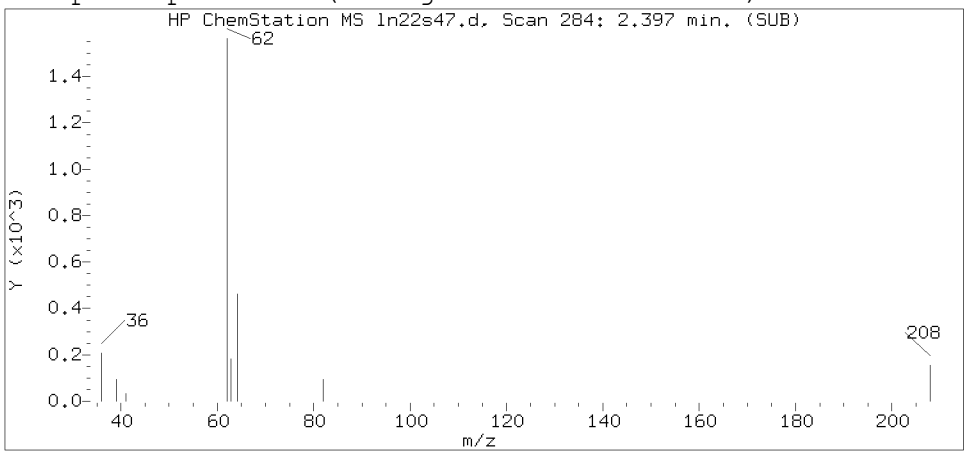
on 11/23/2019 at 11:08.
Target 3.5 esignature user ID: clm27445

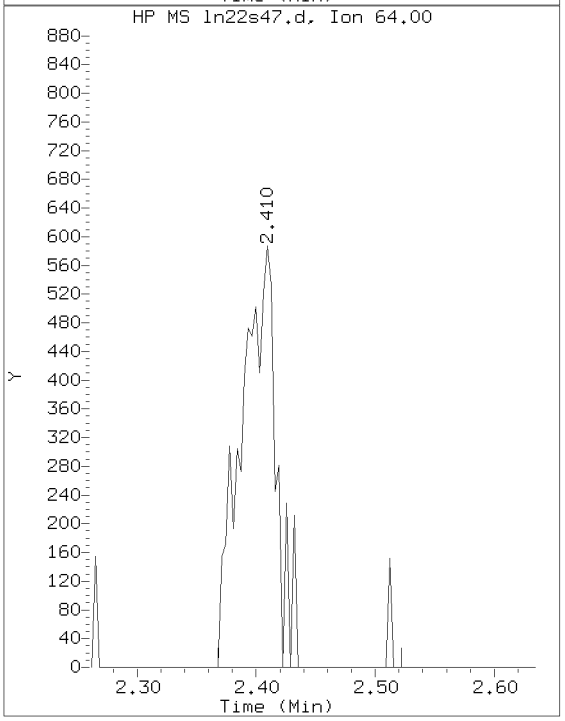
Reference Standard Spectrum for Vinyl Chloride



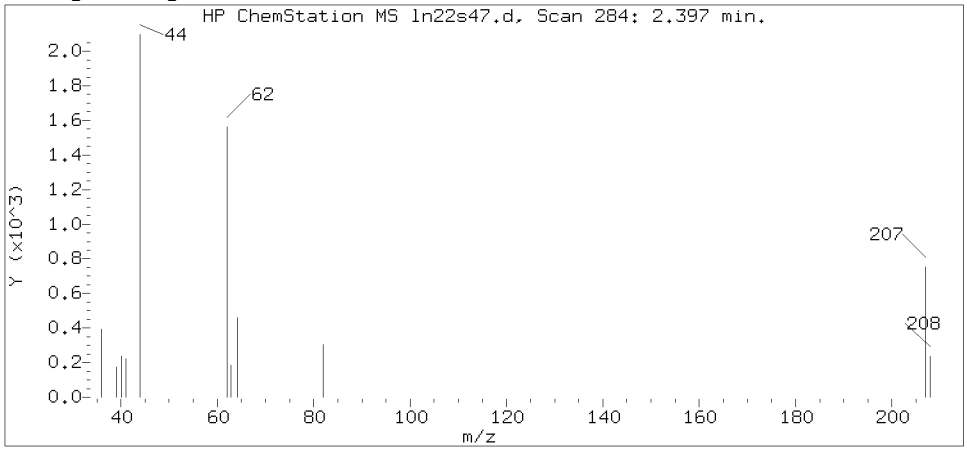


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov22a.b/ln22s47.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 17:06 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 23-Nov-2019 11:07 clm27445

Sample Name: JCW26 Lab Sample ID: 1205924

Compound Number	: 6
Compound Name	: Vinyl Chloride
Scan Number	: 284
Retention Time (minutes)	: 2.397
Relative Retention Time	: 0.00069
Quant Ion	: 62.00
Area (flag)	: 3200
On-Column Amount (ng)	: 0.4141

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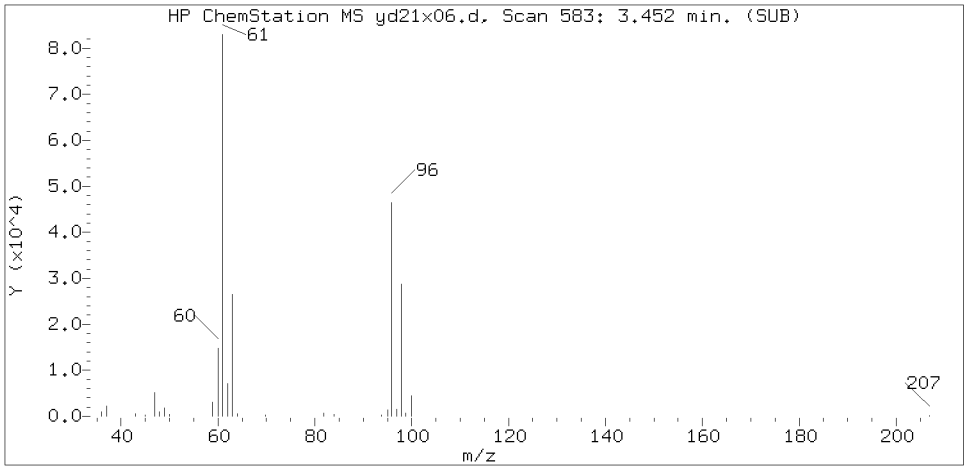
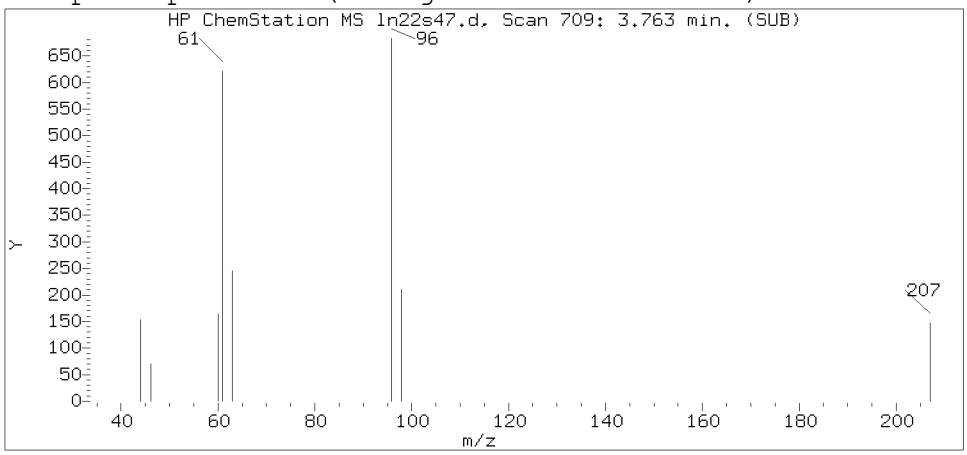
Target 3.5 esignature user ID: clm27445

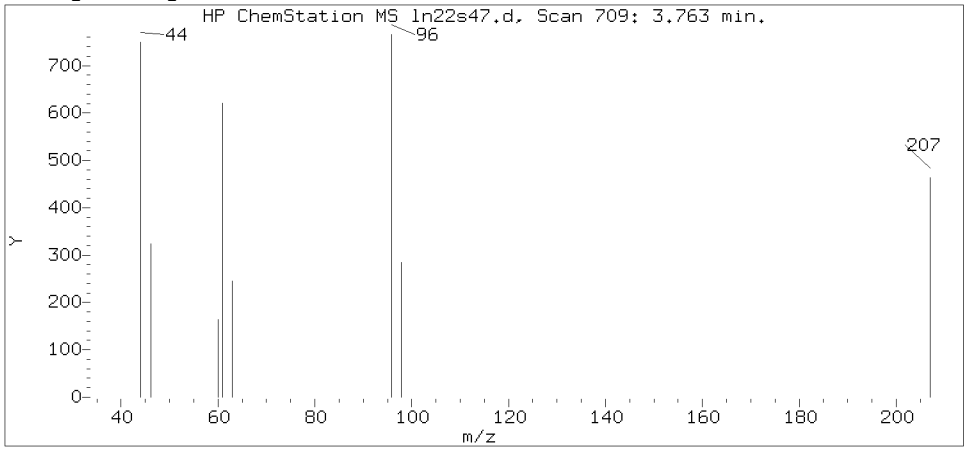
Reference Standard Spectrum for 1,1-Dichloroethene

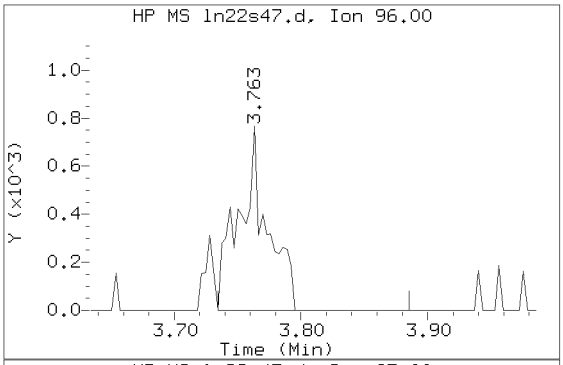


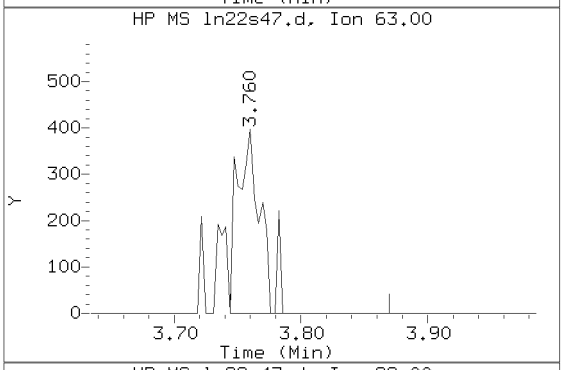
Sample Spectrum (Background Subtracted)

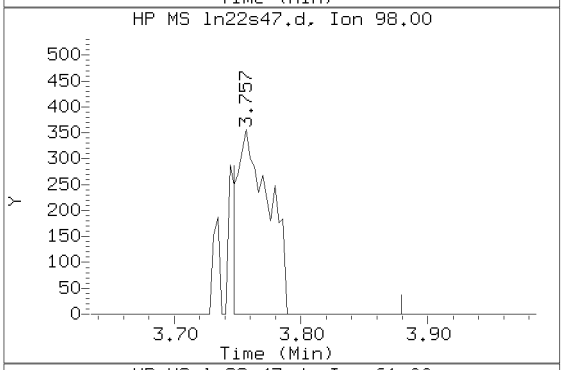


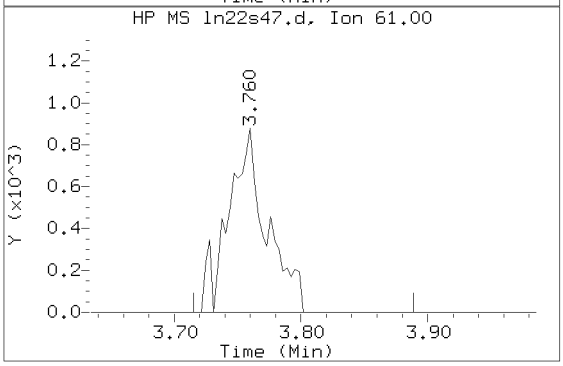
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov22a.b/ln22s47.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 17:06 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 23-Nov-2019 11:07 clm27445

Sample Name: JCW26 Lab Sample ID: 1205924

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 709
Retention Time (minutes): 3.763
Relative Retention Time :-0.00099
Quant Ion : 96.00
Area (flag) : 1188
On-Column Amount (ng) : 0.2433

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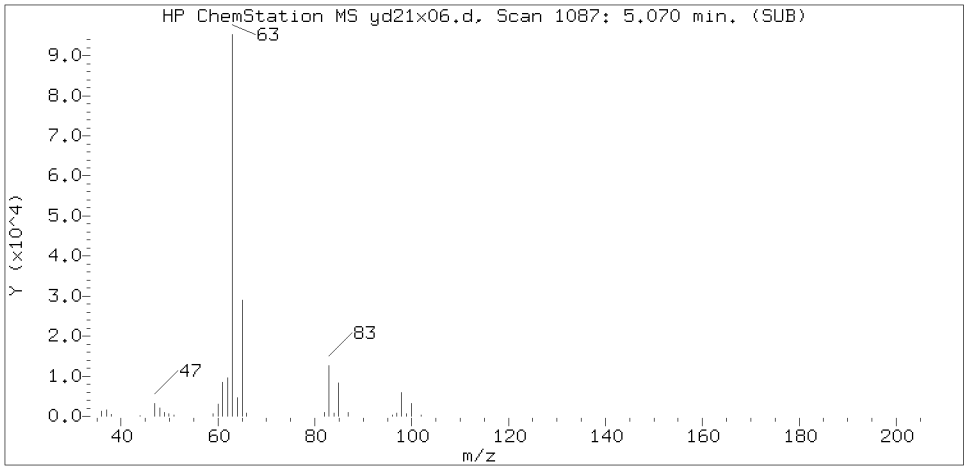
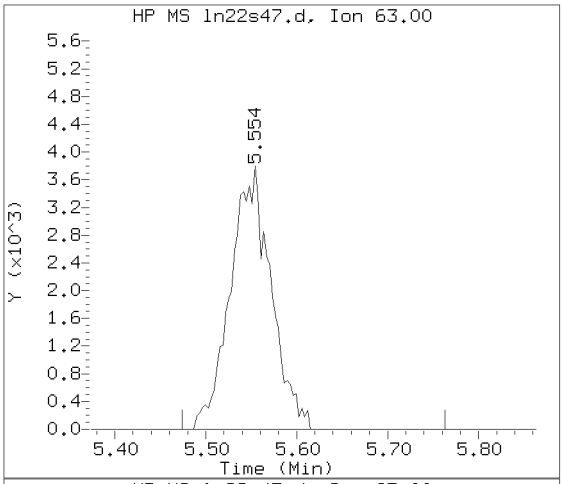
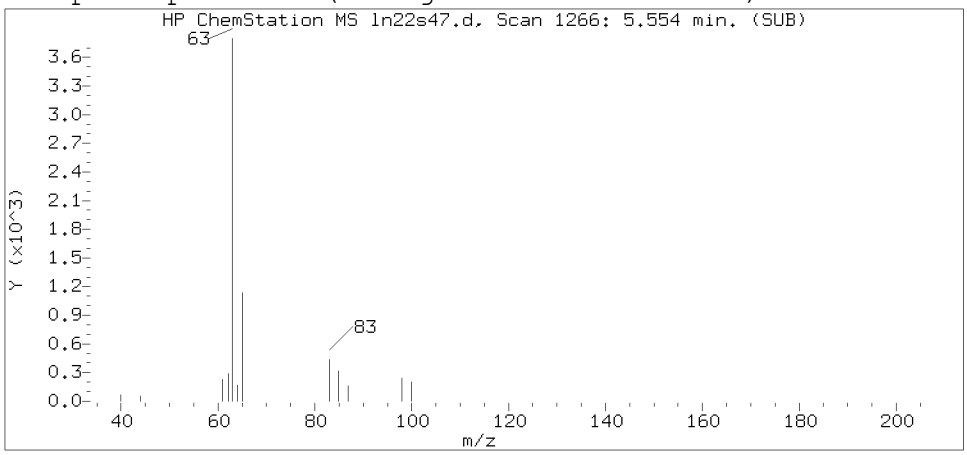
Target 3.5 esignature user ID: clm27445

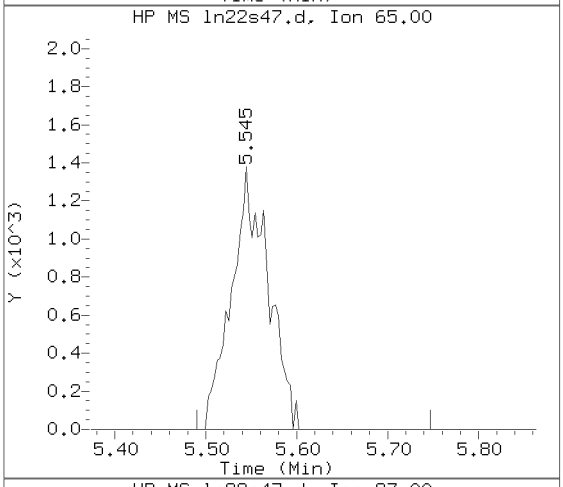
Reference Standard Spectrum for 1,1-Dichloroethane



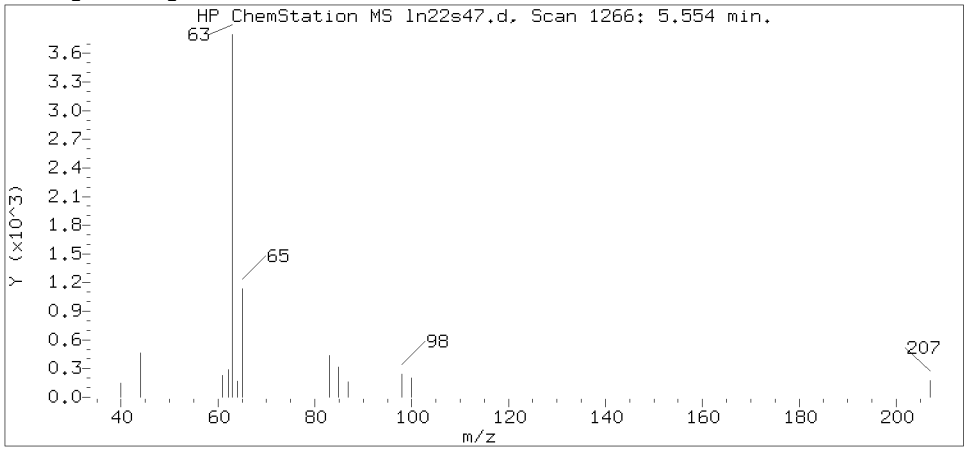


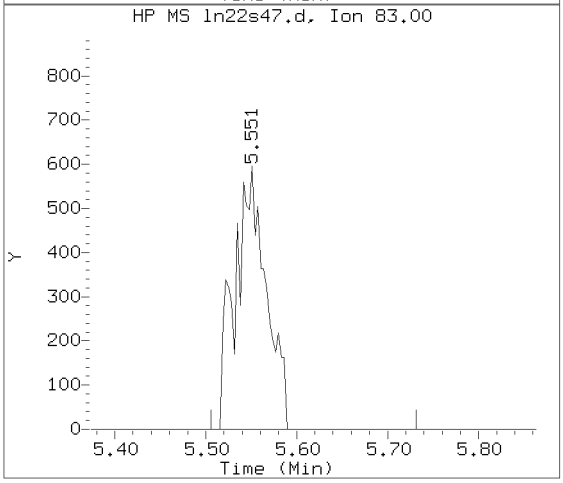
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov22a.b/ln22s47.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 17:06 Analyst ID: lcp00895

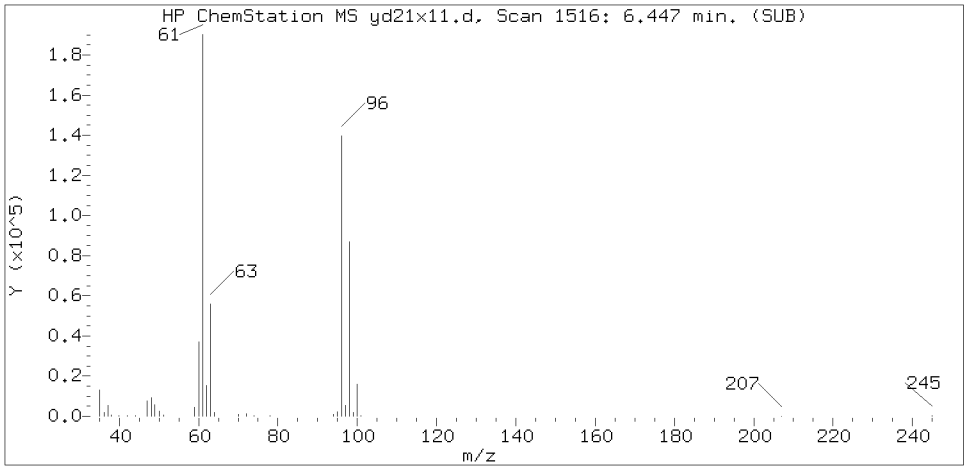
Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 23-Nov-2019 11:07 clm27445

Sample Name: JCW26 Lab Sample ID: 1205924

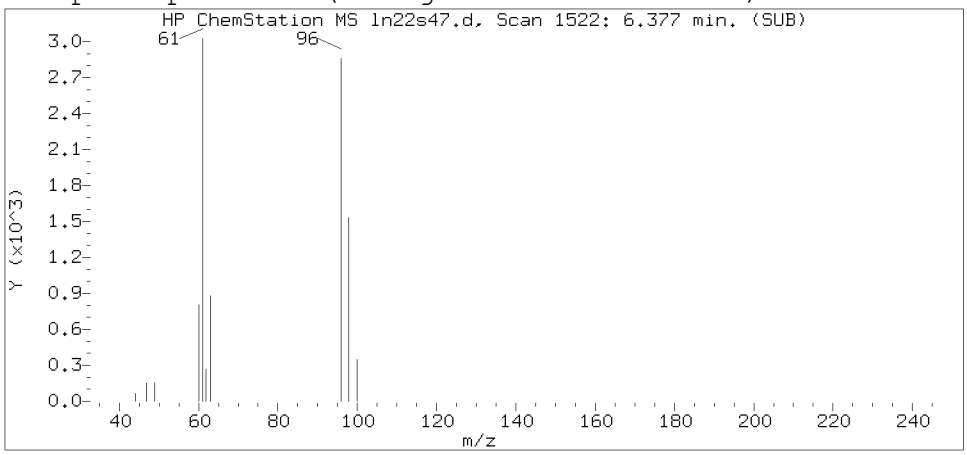
Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 1266
Retention Time (minutes): 5.554
Relative Retention Time :-0.00068
Quant Ion : 63.00
Area (flag) : 11736
On-Column Amount (ng) : 1.1908

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:08.
Target 3.5 esignature user ID: clm27445

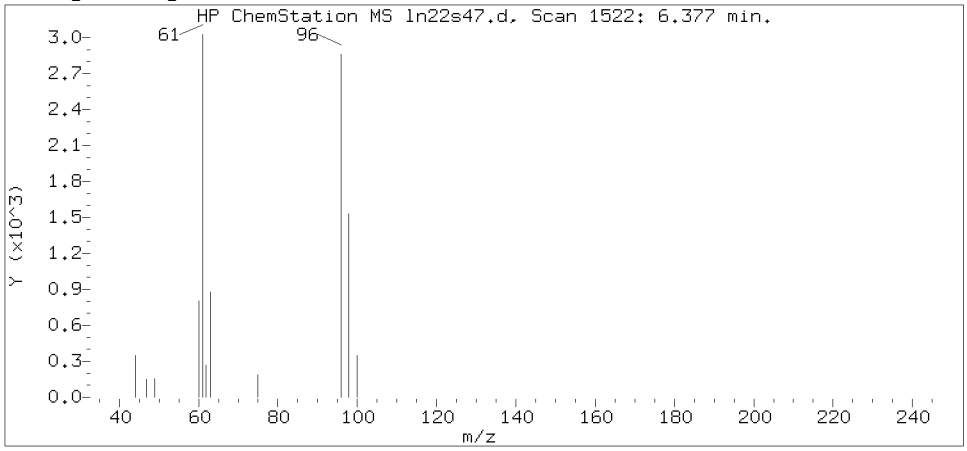
Reference Standard Spectrum for cis-1,2-Dichloroethene

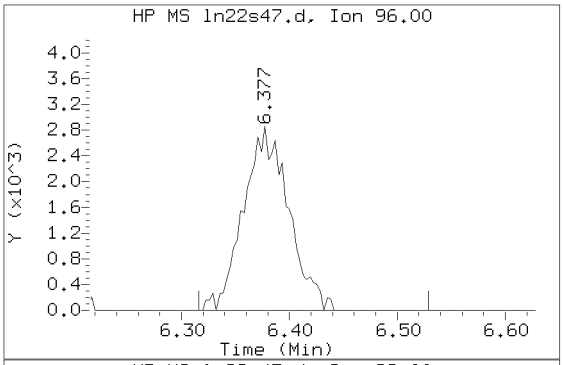


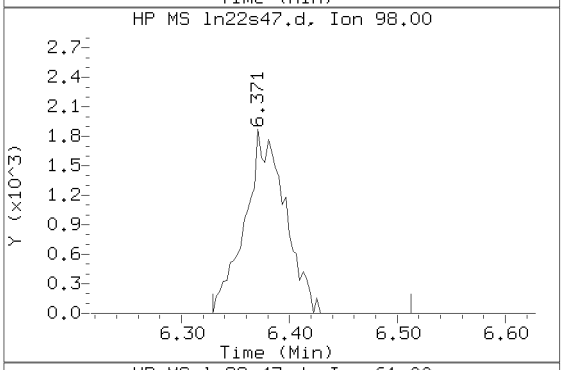
Sample Spectrum (Background Subtracted)

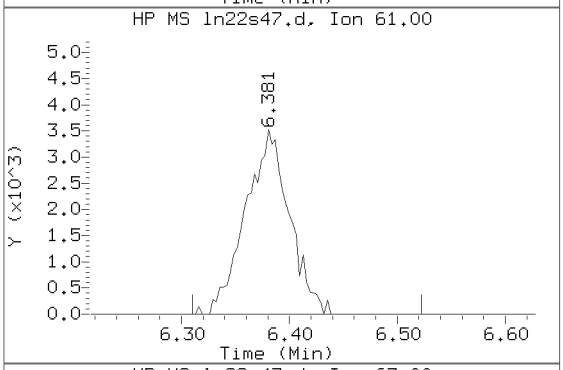


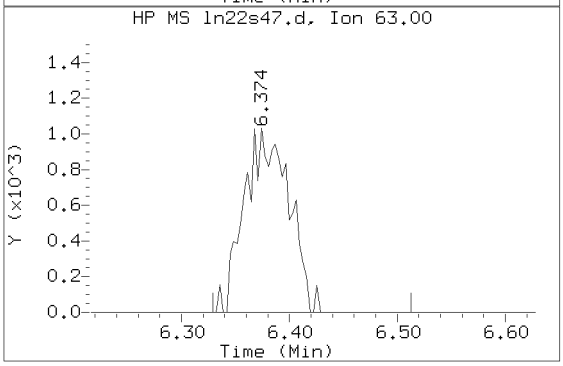
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov22a.b/ln22s47.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 17:06 Analyst ID: lcp00895

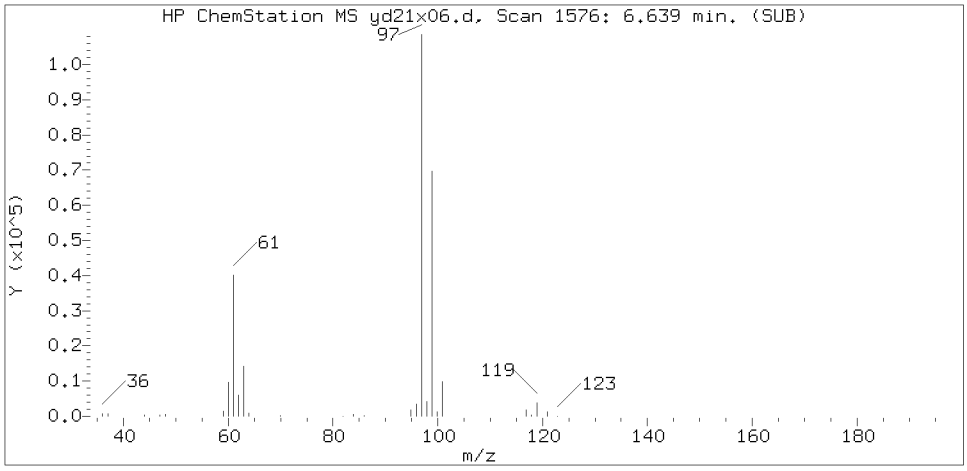
Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 23-Nov-2019 11:07 clm27445

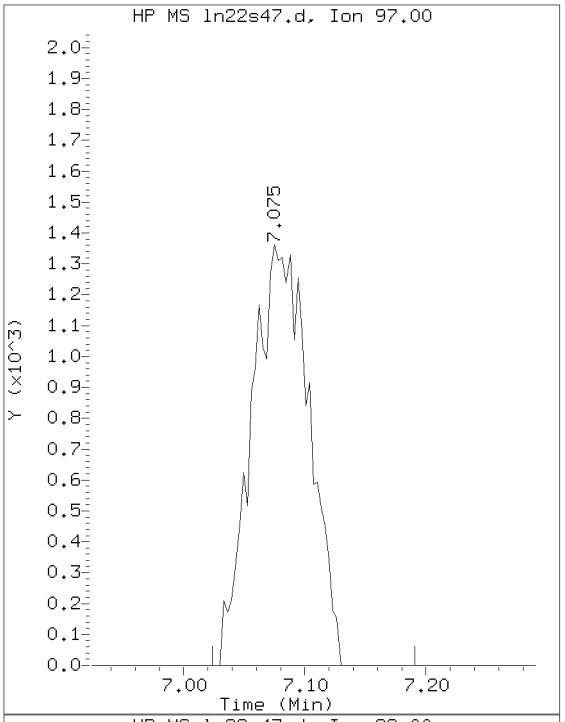
Sample Name: JCW26 Lab Sample ID: 1205924

Compound Number	: 42
Compound Name	: cis-1,2-Dichloroethene
Scan Number	: 1522
Retention Time (minutes)	: 6.377
Relative Retention Time	: 0.00049
Quant Ion	: 96.00
Area (flag)	: 8286
On-Column Amount (ng)	: 1.3067

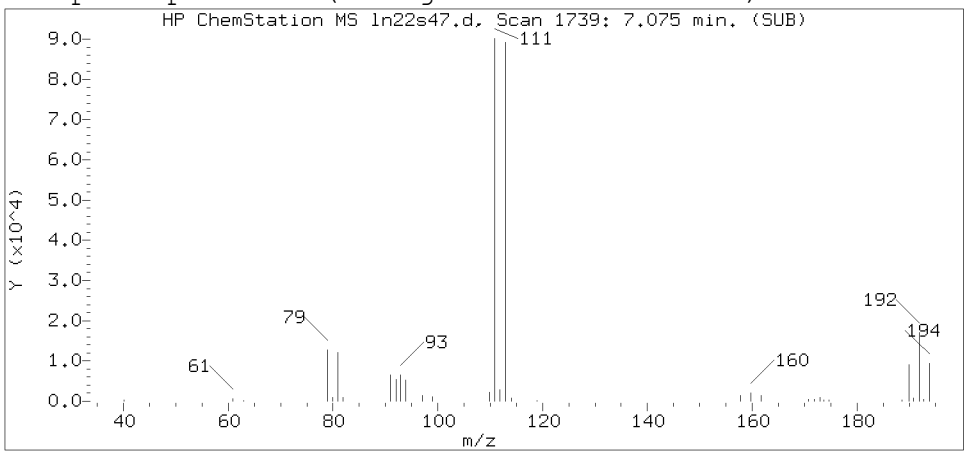
Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:08.
Target 3.5 esignature user ID: clm27445

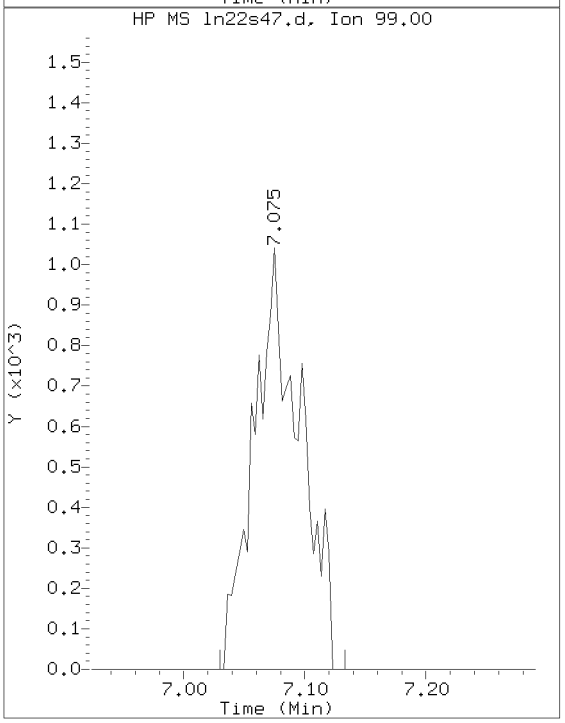
Reference Standard Spectrum for 1,1,1-Trichloroethane



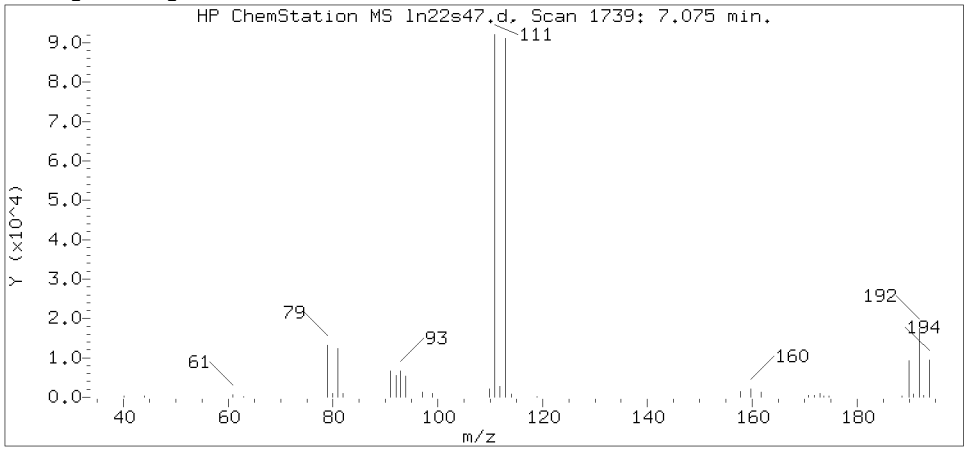


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov22a.b/ln22s47.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 17:06 Analyst ID: lcp00895

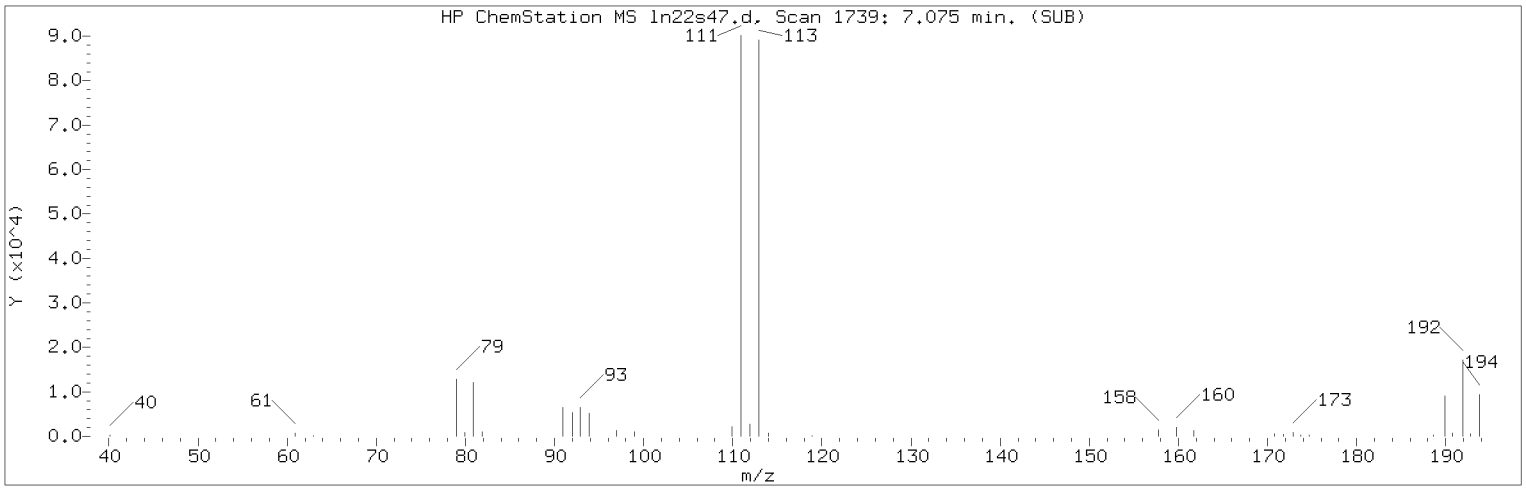
Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 23-Nov-2019 11:07 clm27445

Sample Name: JCW26 Lab Sample ID: 1205924

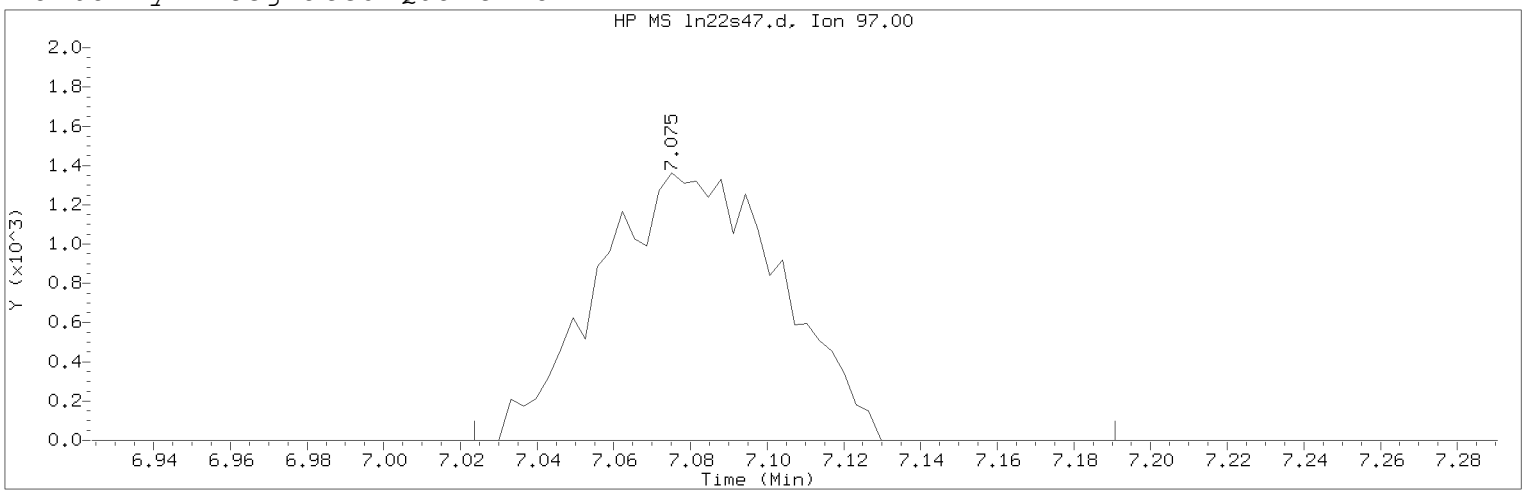
Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1739
Retention Time (minutes)	: 7.075
Relative Retention Time	: 0.00045
Quant Ion	: 97.00
Area (flag)	: 4503M
On-Column Amount (ng)	: 0.5597

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:08.
Target 3.5 esignature user ID: clm27445

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov22a.b/ln22s47.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 17:06 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 23-Nov-2019 11:07 clm27445

Sample Name: JCW26 Lab Sample ID: 1205924

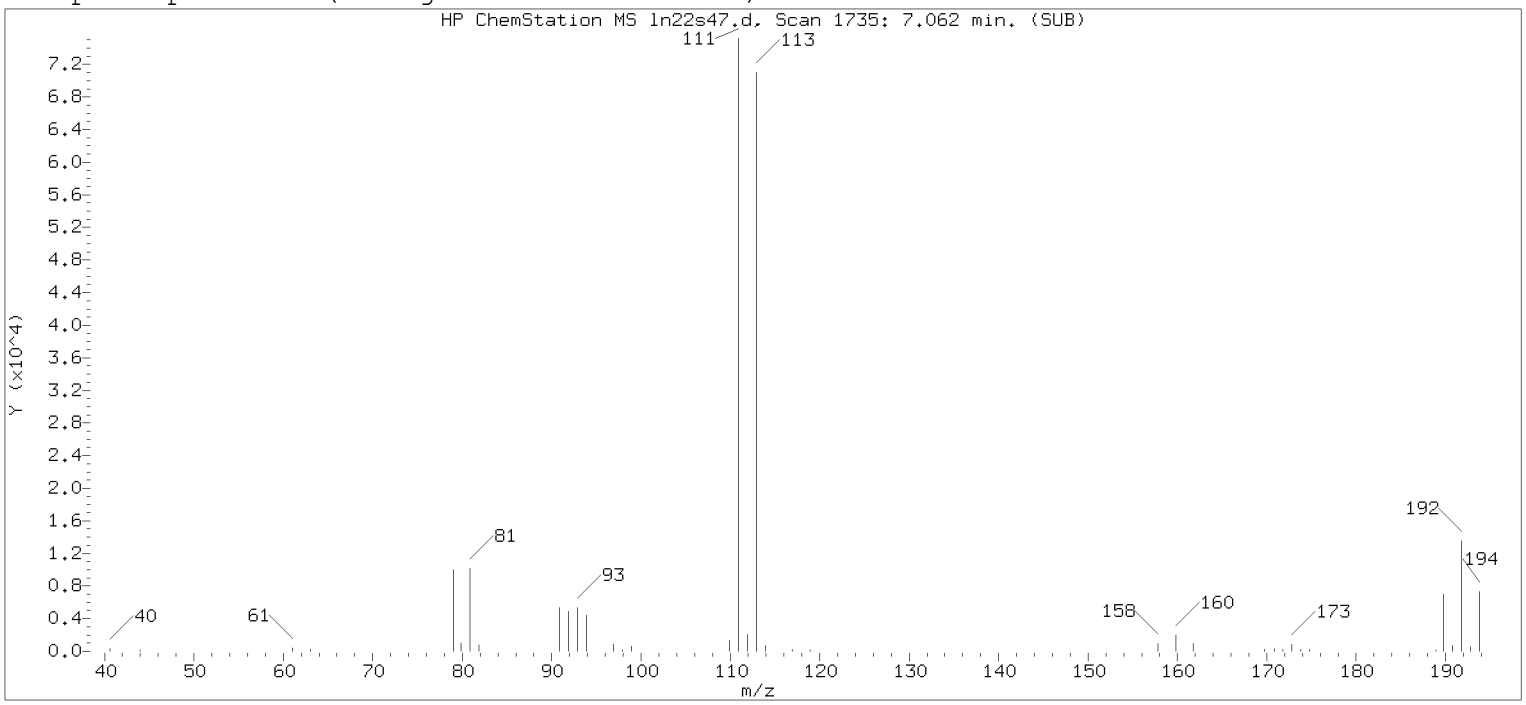
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 1739
Retention Time (minutes): 7.075
Quant Ion : 97.00
Area (flag) : 4503M
On-Column Amount (ng) : 0.5597
Integration start scan : 1722 Integration stop scan: 1774
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

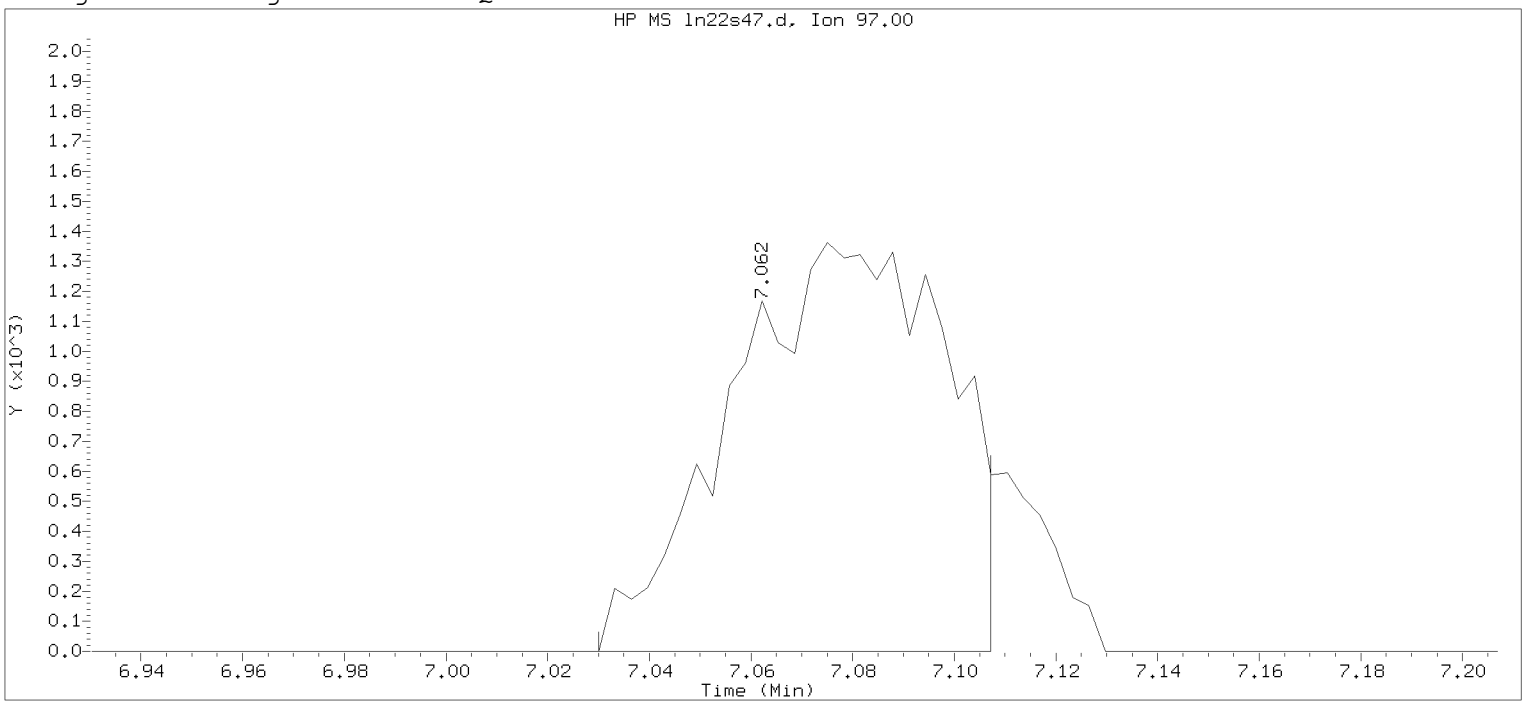
Analyst responsible for change: Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:08.
Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:06.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov22a.b/ln22s47.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 17:06 Analyst ID: lcp00895

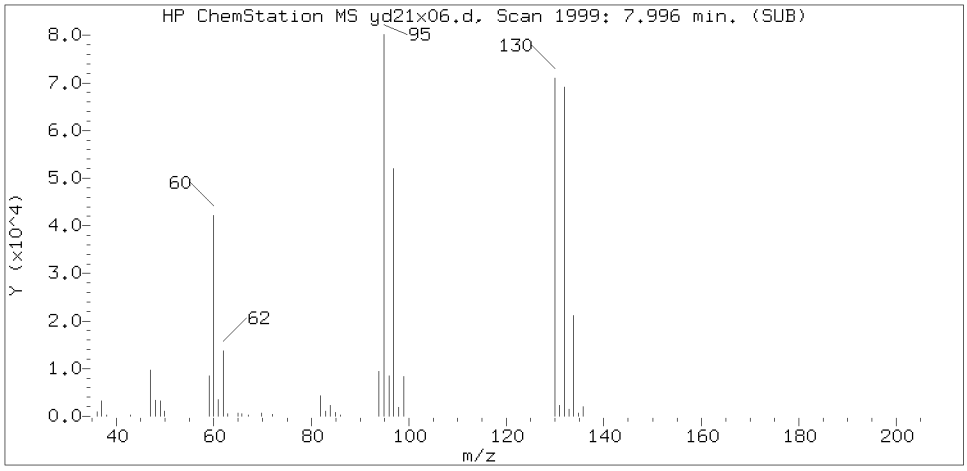
Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 17:24 Automation

Sample Name: JCW26 Lab Sample ID: 1205924

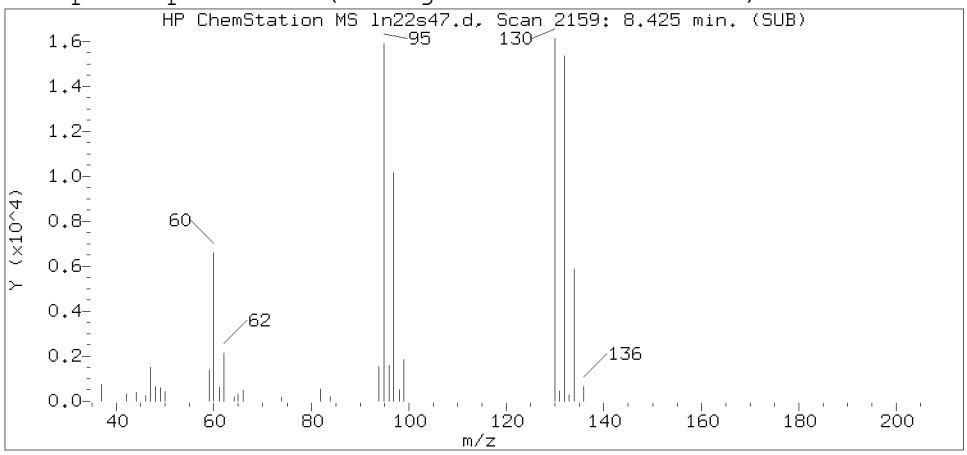
Compound Number	: 53		
Compound Name	: 1,1,1-Trichloroethane		
Scan Number	: 1735		
Retention Time (minutes)	: 7.062		
Quant Ion	: 97.00		
Area	: 4016		
On-column Amount (ng)	: 0.4992		
Integration start scan	: 1724	Integration stop scan:	1748
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:08.
Target 3.5 esignature user: CLMellinger

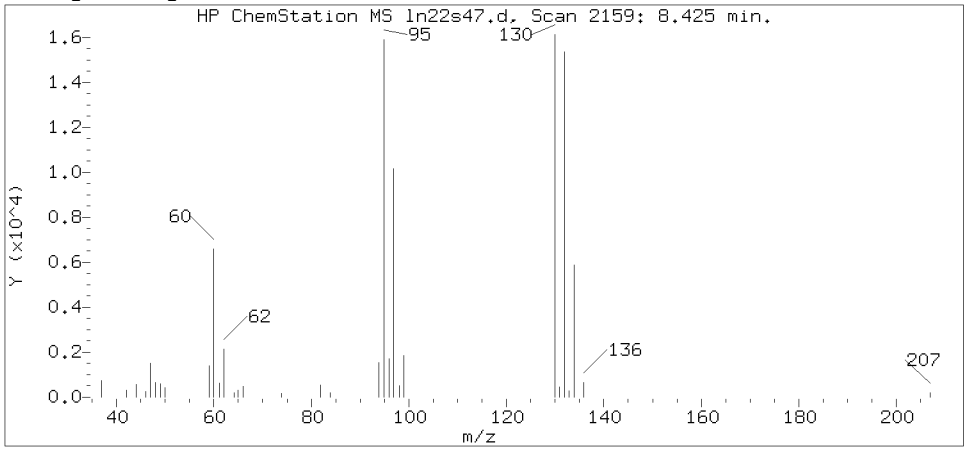
Reference Standard Spectrum for Trichloroethene

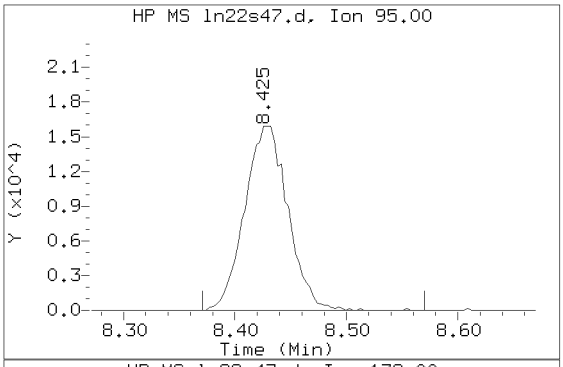


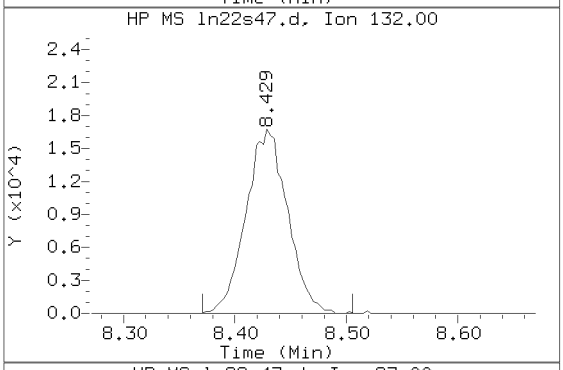
Sample Spectrum (Background Subtracted)

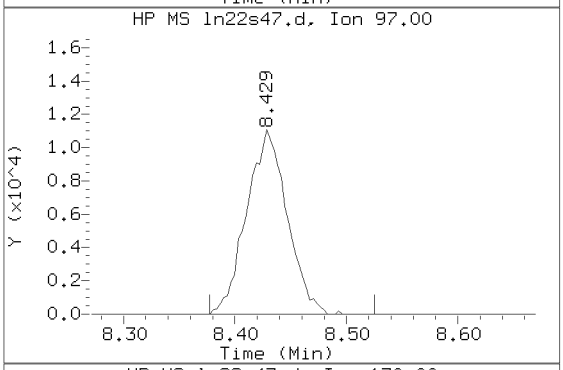


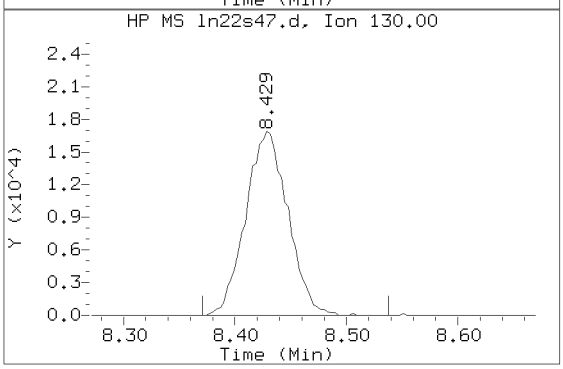
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov22a.b/ln22s47.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 17:06 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 23-Nov-2019 11:07 clm27445

Sample Name: JCW26 Lab Sample ID: 1205924

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 2159
Retention Time (minutes): 8.425
Relative Retention Time :-0.00002
Quant Ion : 95.00
Area (flag) : 42868
On-Column Amount (ng) : 7.2650

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:08.
Target 3.5 esignature user ID: clm27445

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
JCW27

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205925

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s48.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	0.4	J
75-35-4	1,1-Dichloroethene	0.3	J
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	
156-59-2	cis-1,2-Dichloroethene	1	
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	0.6	J
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	7	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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JCW27 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1205925

Data file: /chem/HP09915.i/19nov22a.b/ln22s48.d Injection date and time: **22-NOV-2019 17:28**
Data file Sample Info. Line: JCW27;1205925;1;0;;JCW24;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 17:45 Automation

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.509	(-0.013)	941	65	201724	(-23)	250.00	
66) Fluorobenzene	7.962	(-0.003)	2015	96	1126493	(-16)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	926858	(-14)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(-0.003)	3651	152	495701	(-14)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.078	(-0.001)	113	268883	48.822	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(0.000)	102	71128	50.675	101%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	1180231	48.665	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	447439	48.724	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)	2.410	(-0.000)	62	2992	0.396	0.40		J	0.2	1
17) 1,1-Dichloroethene	(2)	3.766	(-0.001)	96	1451	0.304	0.30		J	0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.557	(-0.000)	63	11628	1.207	1.21			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.380	(0.000)	96	7906	1.275	1.28			0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	7.078	(0.000)	97	4422	0.562	0.56		J	0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.432	(0.000)	95	41416	7.179	7.18			0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:08. Target 3.5 esignature user ID: clm27445

JCW27 Lancaster Laboratories 1205925
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov22a.b/ln22s48.d Injection date and time: **22-NOV-2019 17:28**
Data file Sample Info. Line: JCW27;1205925;1;0;;JCW24;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 17:45 Automation

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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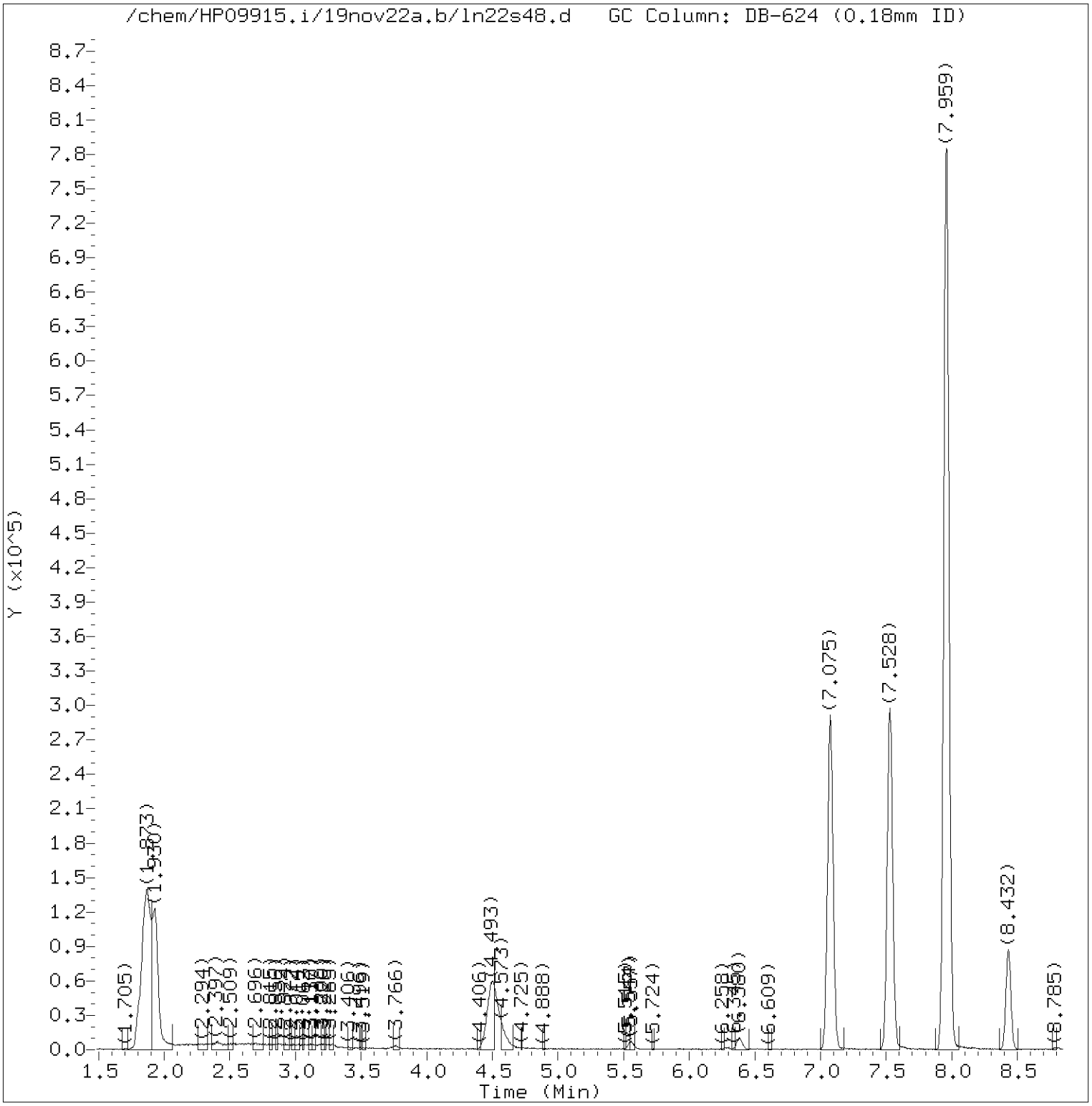
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:08. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:06. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s48.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 17:28 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 17:45 Automation

Sample Name: JCW27 Lab Sample ID: 1205925

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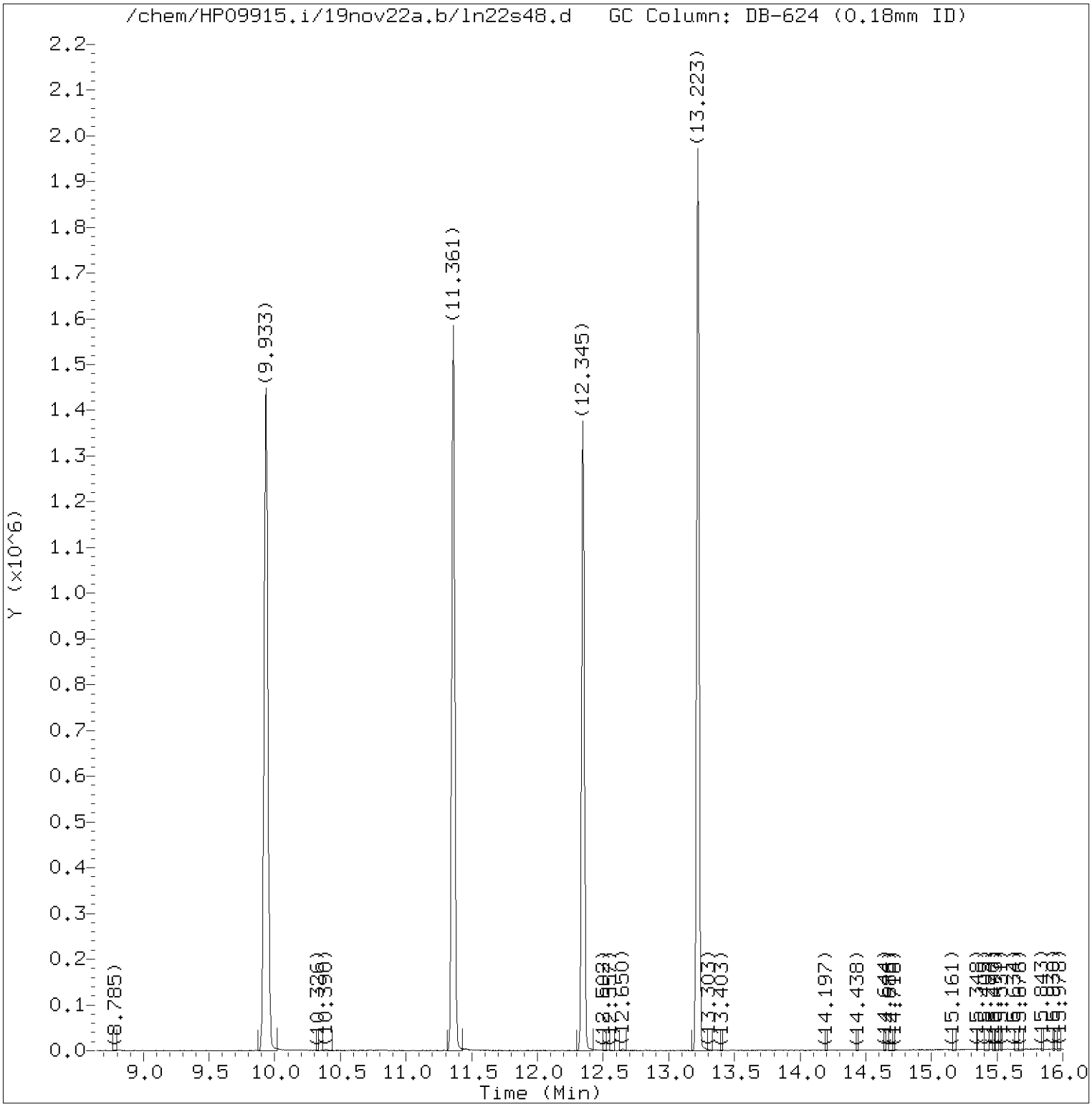
on 11/23/2019 at 11:08.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s48.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 17:28 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 17:45 Automation

Sample Name: JCW27 Lab Sample ID: 1205925

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Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s48.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 17:28 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 17:45 Automation

Sample Name: JCW27 Lab Sample ID: 1205925

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	2.410	62	2992	0.396
17) 1,1-Dichloroethene	(2)	3.766	96	1451	0.304
29)*t-Butyl alcohol-d10	(1)	4.509	65	201724	250.000
36) 1,1-Dichloroethane	(2)	5.557	63	11628	1.207
42) cis-1,2-Dichloroethene	(2)	6.380	96	7906	1.275
53) 1,1,1-Trichloroethane	(2)	7.078	97	4422	0.562
52)$Dibromofluoromethane	(2)	7.078	113	268883	48.822
57)$1,2-Dichloroethane-d4	(2)	7.528	102	71128	50.675
66)*Fluorobenzene	(2)	7.962	96	1126493	50.000
71) Trichloroethene	(2)	8.432	95	41416	7.179
83)$Toluene-d8	(3)	9.933	98	1180231	48.665
100)*Chlorobenzene-d5	(3)	11.358	117	926858	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	447439	48.724
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	495701	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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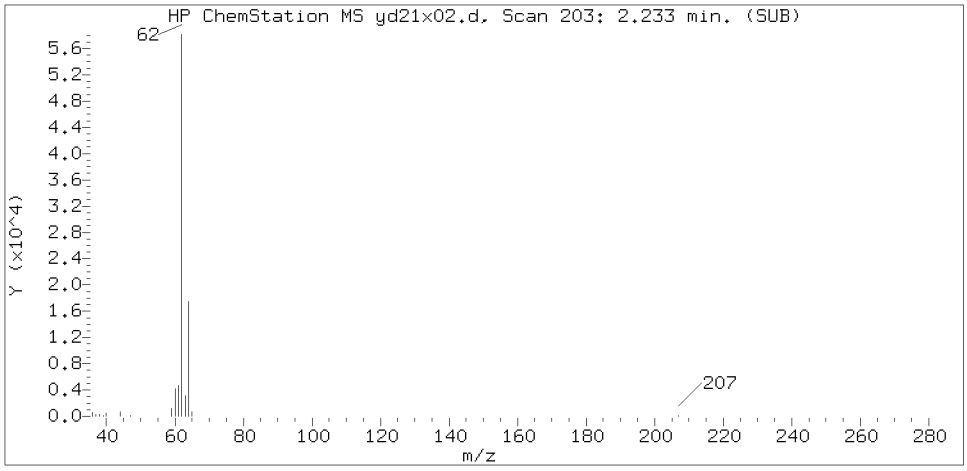
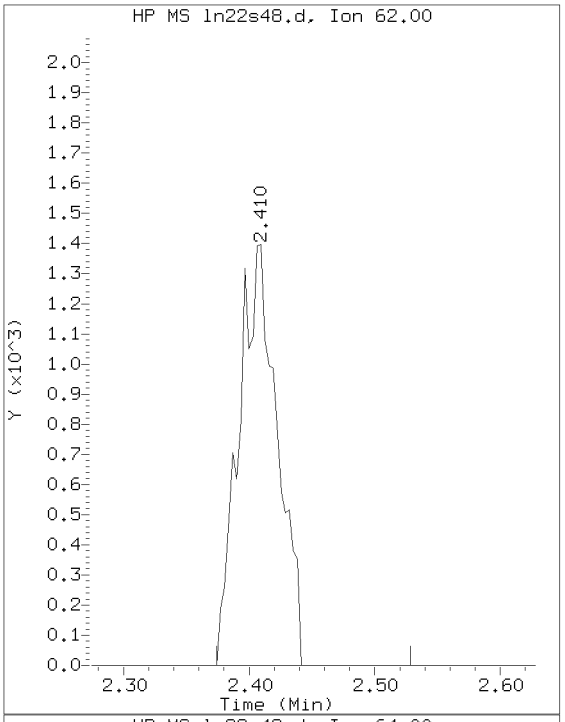
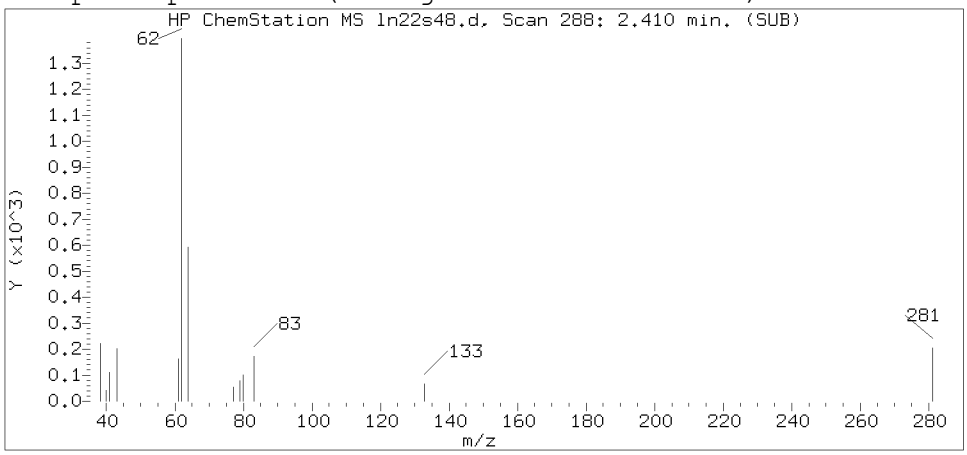
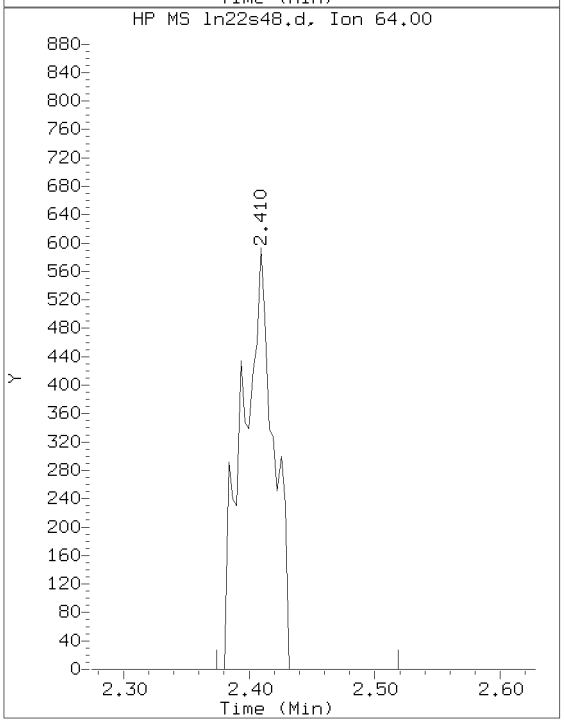
Reference Standard Spectrum for Vinyl Chloride



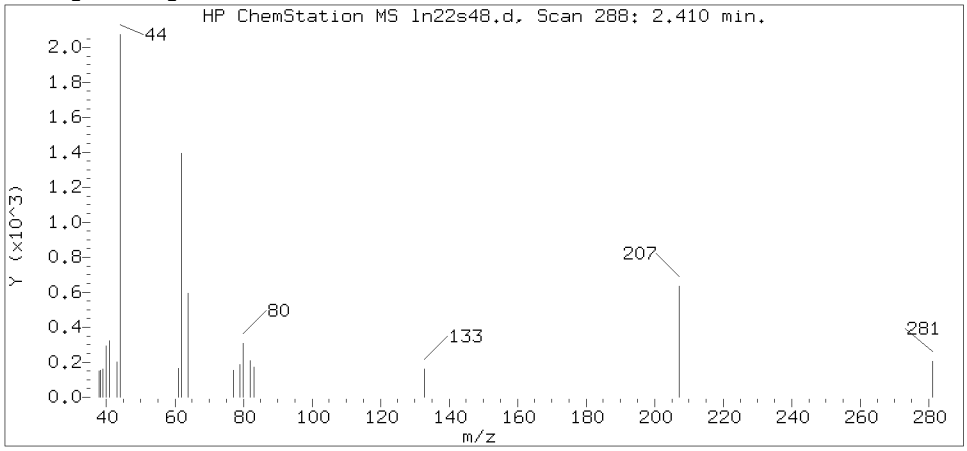


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov22a.b/ln22s48.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 17:28 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 17:45 Automation

Sample Name: JCW27 Lab Sample ID: 1205925

Compound Number : 6
Compound Name : Vinyl Chloride
Scan Number : 288
Retention Time (minutes): 2.410
Relative Retention Time :-0.00067
Quant Ion : 62.00
Area (flag) : 2992
On-Column Amount (ng) : 0.3960

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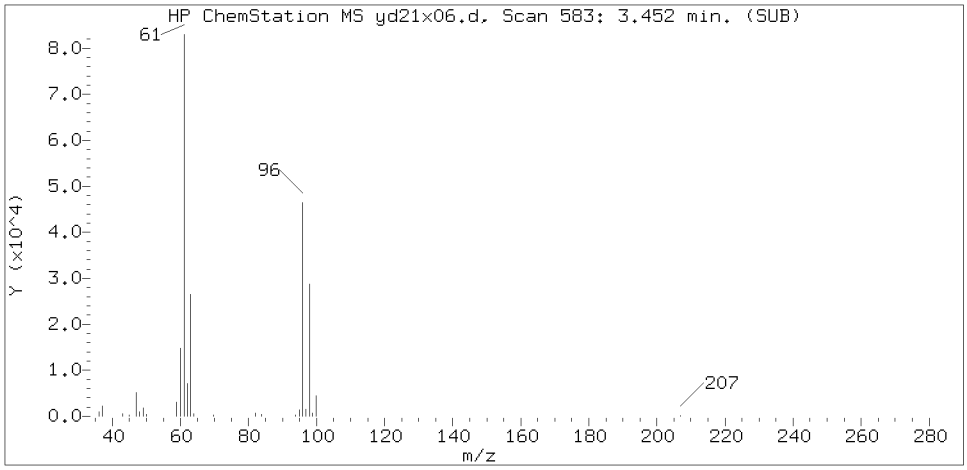
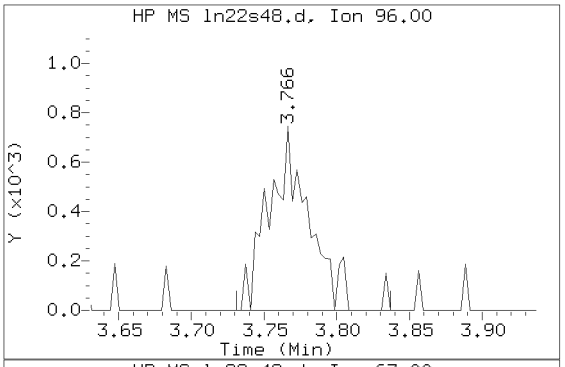
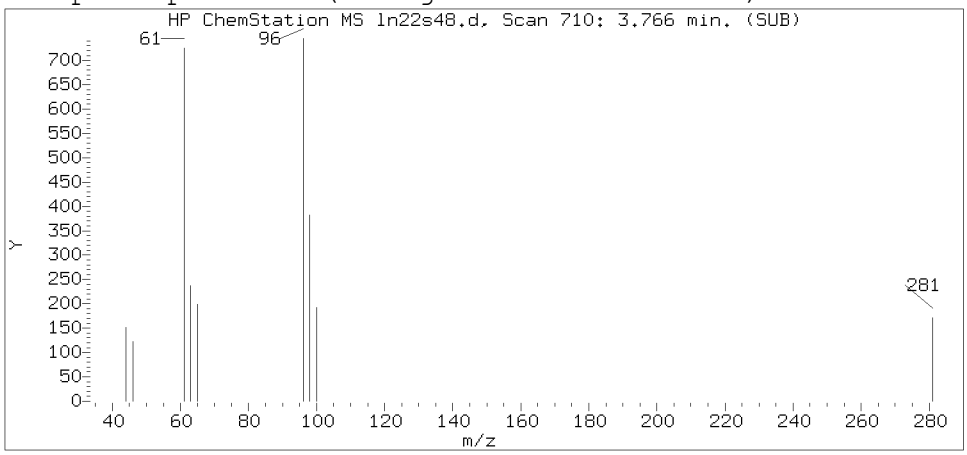
Target 3.5 esignature user ID: clm27445

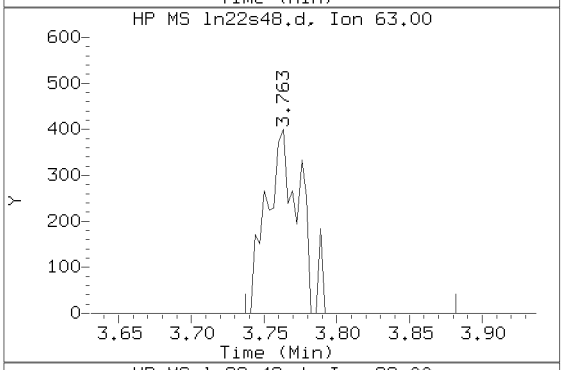
Reference Standard Spectrum for 1,1-Dichloroethene

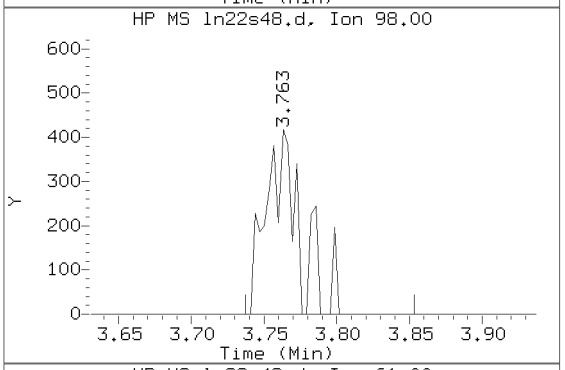




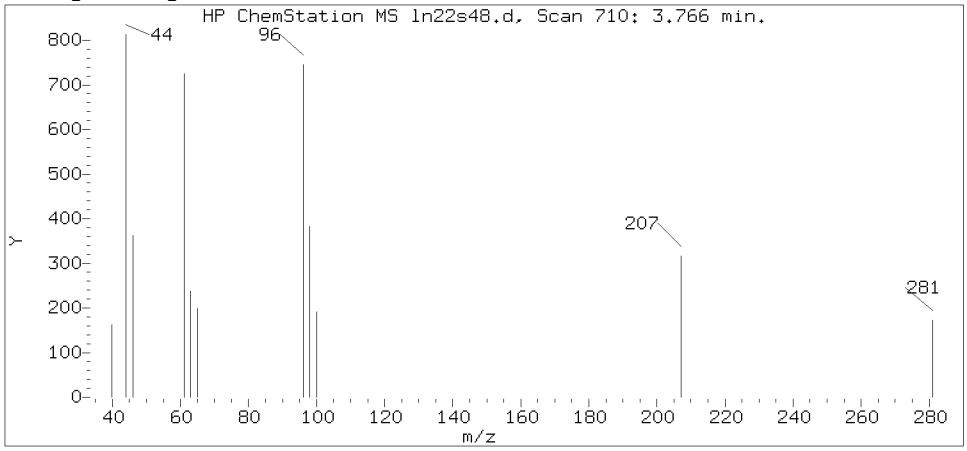
Sample Spectrum (Background Subtracted)

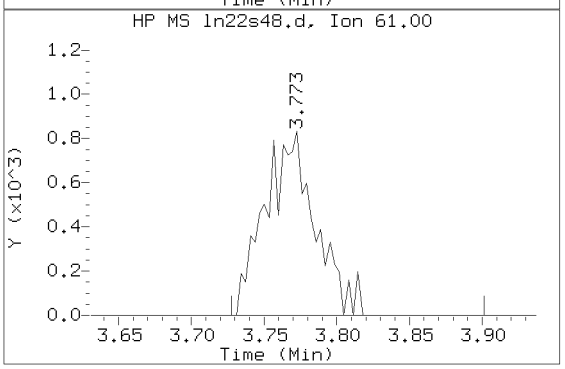






Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov22a.b/ln22s48.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 17:28 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 17:45 Automation

Sample Name: JCW27 Lab Sample ID: 1205925

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 710
Retention Time (minutes): 3.766
Relative Retention Time :-0.00100
Quant Ion : 96.00
Area (flag) : 1451
On-Column Amount (ng) : 0.3040

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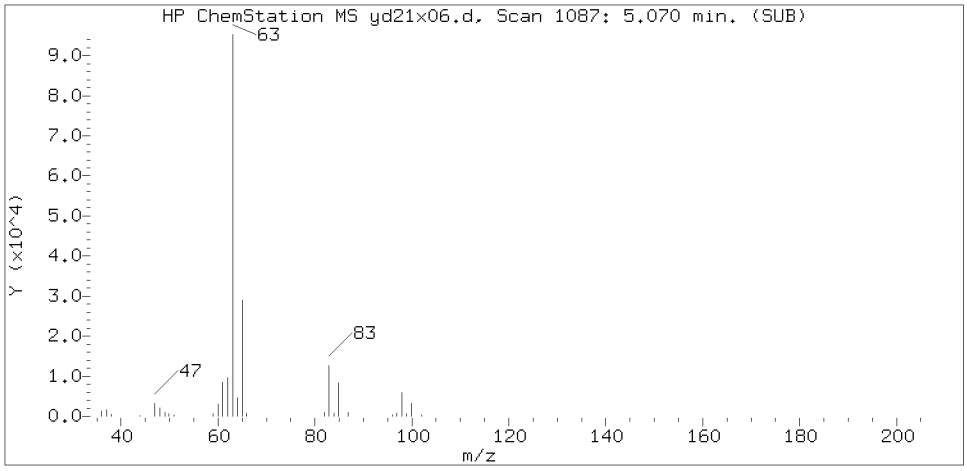
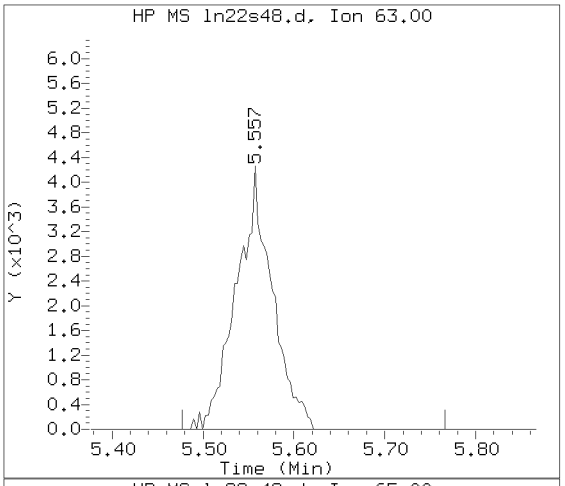
Target 3.5 esignature user ID: clm27445

Reference Standard Spectrum for 1,1-Dichloroethane





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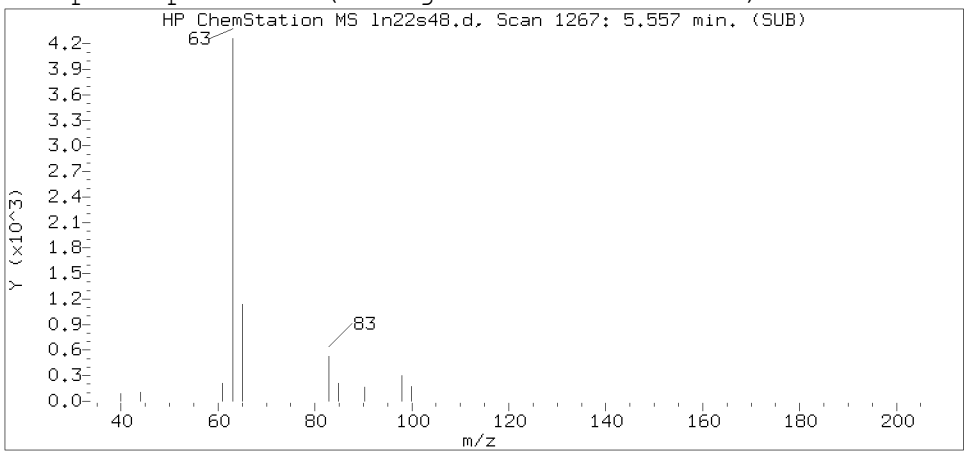
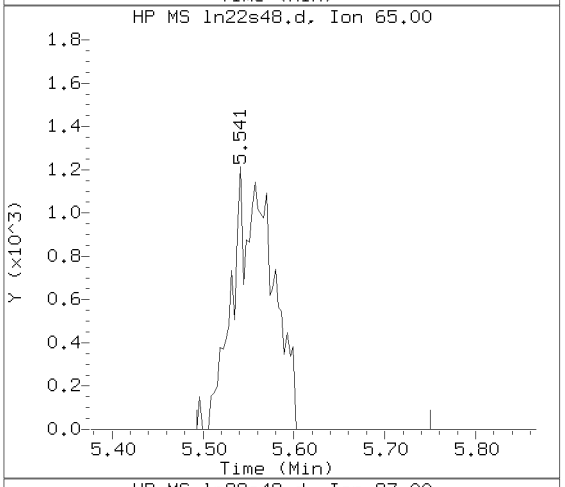
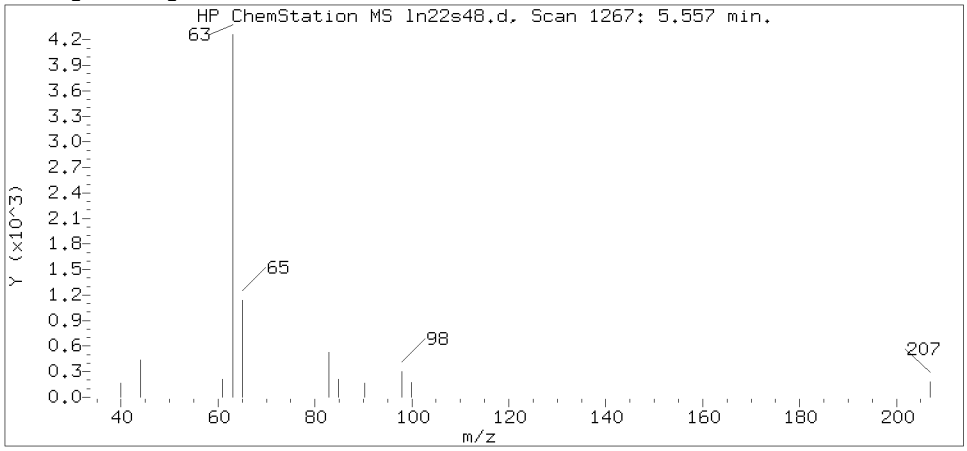
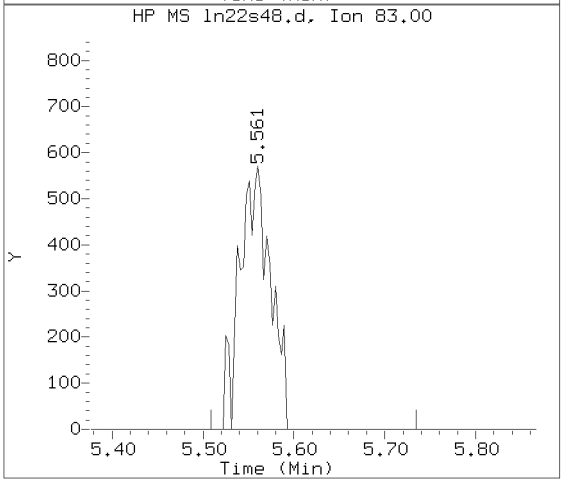




Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov22a.b/ln22s48.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 17:28 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 17:45 Automation

Sample Name: JCW27 Lab Sample ID: 1205925

Compound Number	: 36
Compound Name	: 1,1-Dichloroethane
Scan Number	: 1267
Retention Time (minutes)	: 5.557
Relative Retention Time	:-0.00052
Quant Ion	: 63.00
Area (flag)	: 11628
On-Column Amount (ng)	: 1.2066

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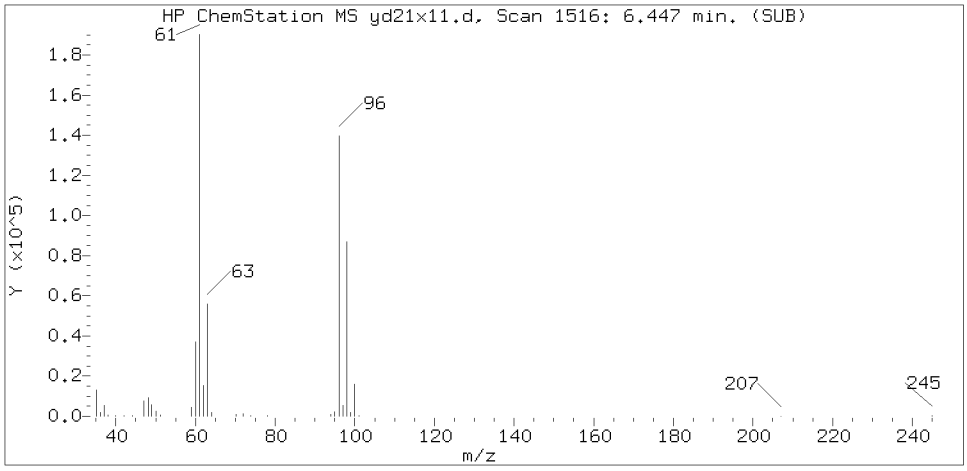
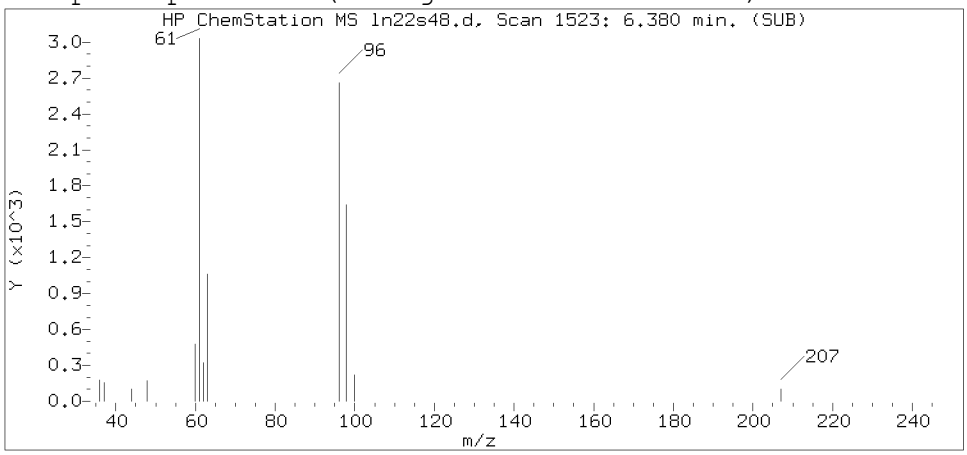
Target 3.5 esignature user ID: clm27445

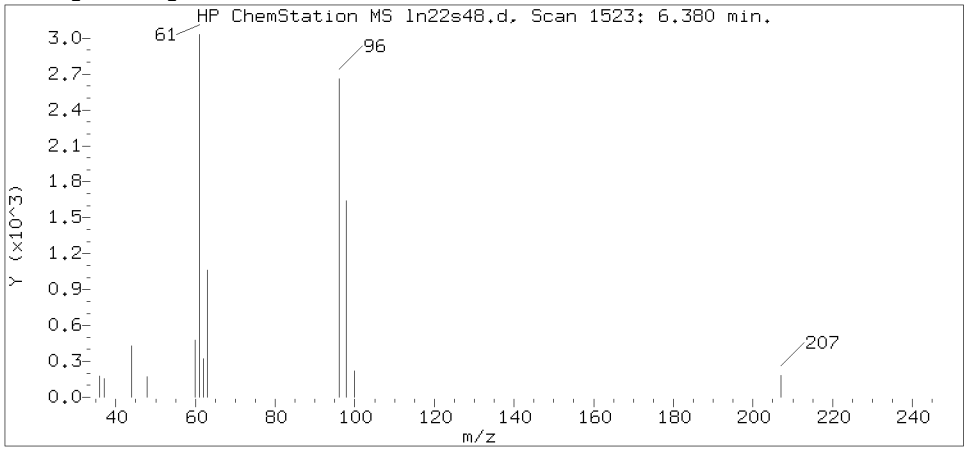
Reference Standard Spectrum for cis-1,2-Dichloroethene

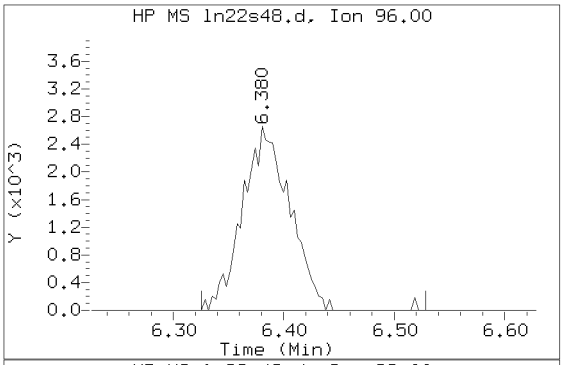


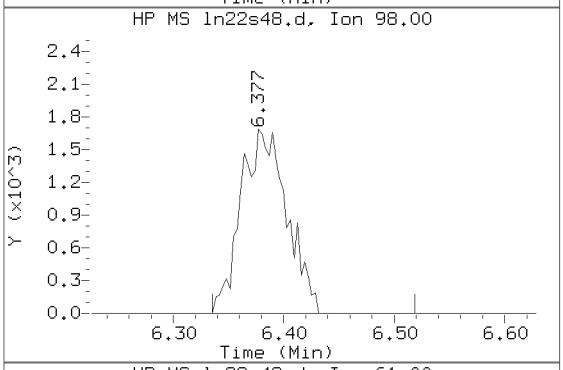
Sample Spectrum (Background Subtracted)

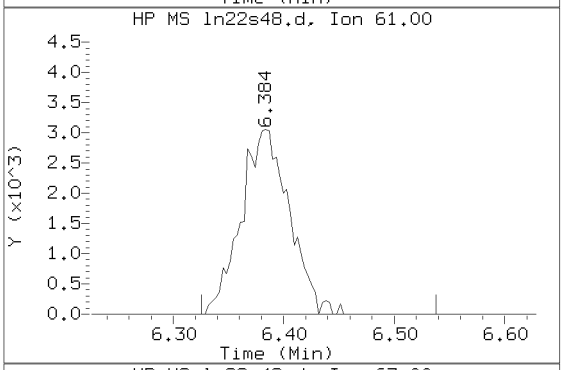


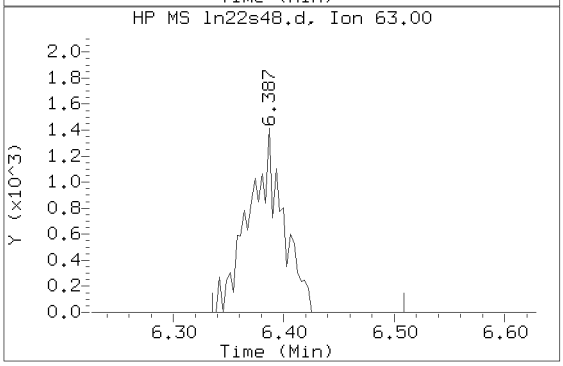
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov22a.b/ln22s48.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 17:28 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 17:45 Automation

Sample Name: JCW27 Lab Sample ID: 1205925

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 1523
Retention Time (minutes): 6.380
Relative Retention Time : 0.00073
Quant Ion : 96.00
Area (flag) : 7906
On-Column Amount (ng) : 1.2751

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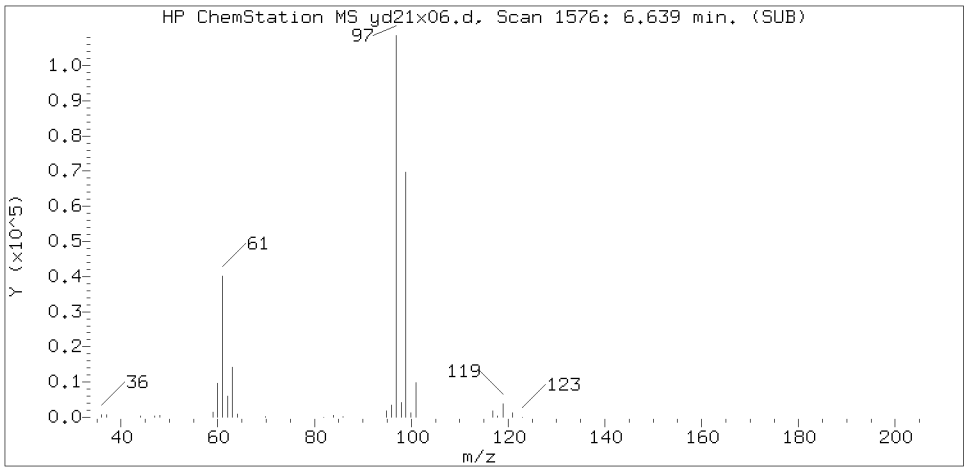
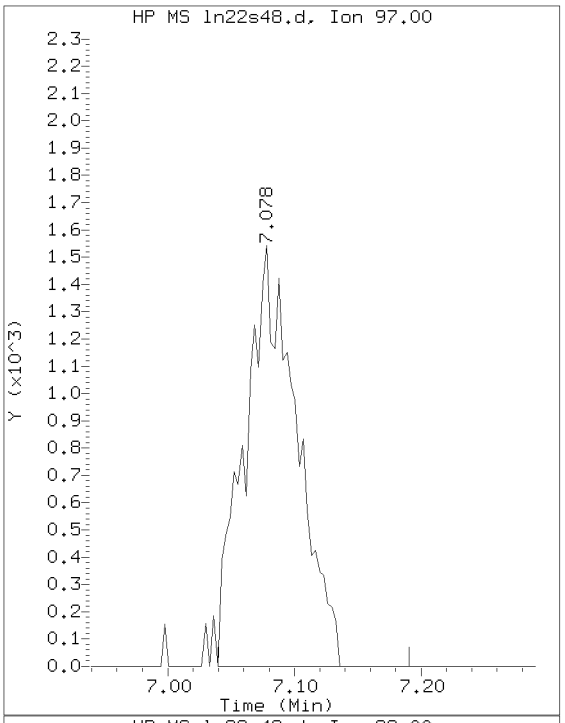
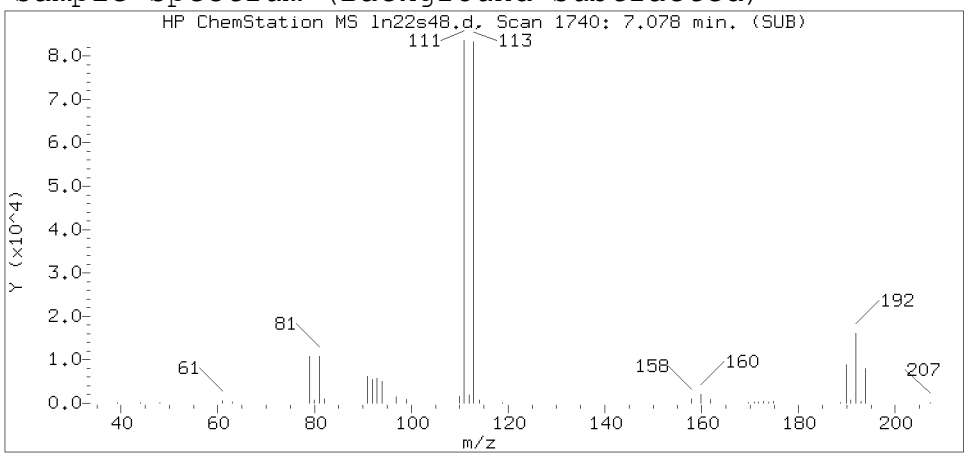
Target 3.5 esignature user ID: clm27445

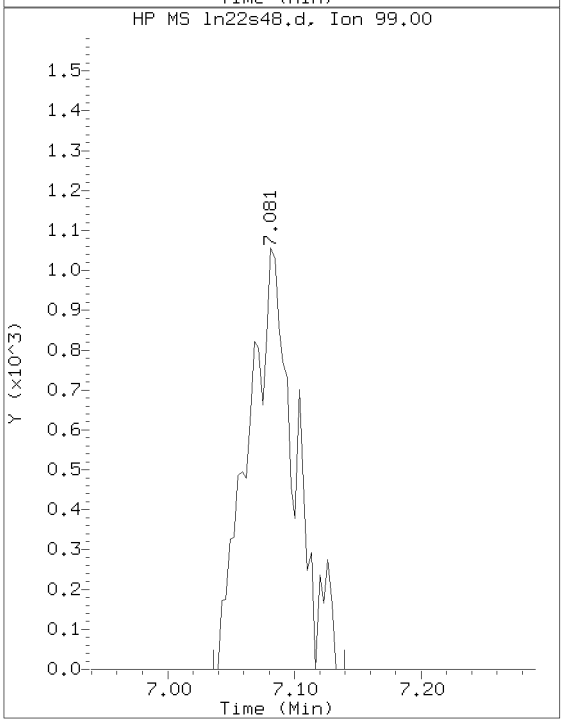
Reference Standard Spectrum for 1,1,1-Trichloroethane



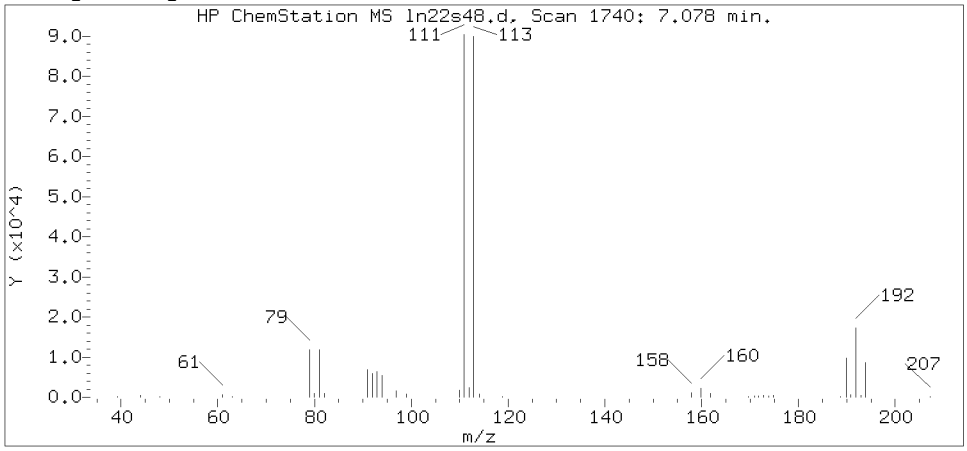


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP09915.i/19nov22a.b/ln22s48.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 17:28 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 17:45 Automation

Sample Name: JCW27 Lab Sample ID: 1205925

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 1740
Retention Time (minutes)	: 7.078
Relative Retention Time	: 0.00077
Quant Ion	: 97.00
Area (flag)	: 4422
On-Column Amount (ng)	: 0.5622

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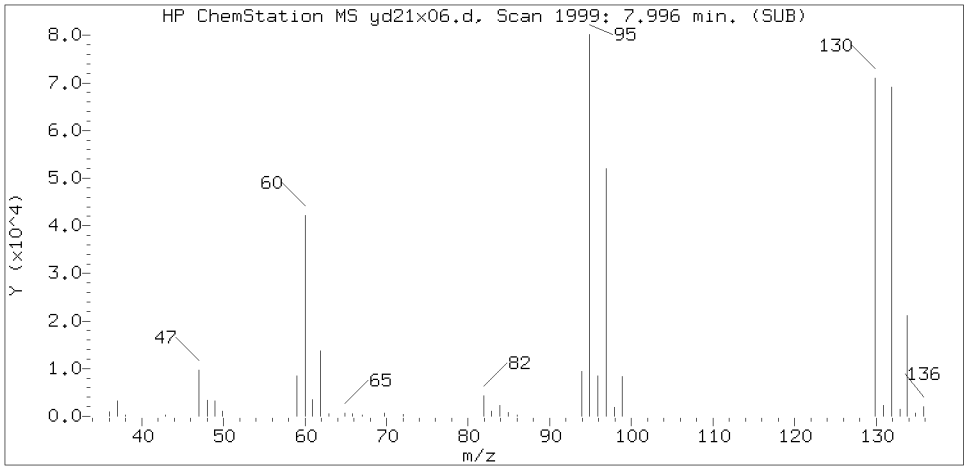
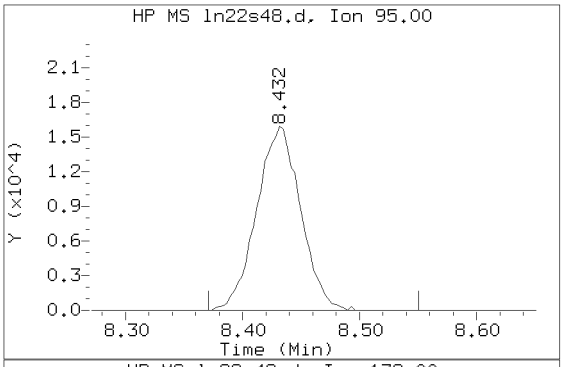
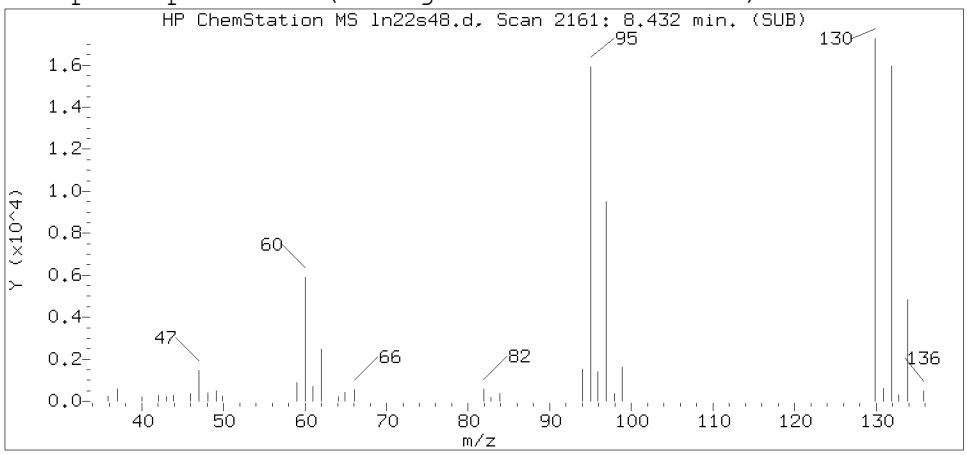
Target 3.5 esignature user ID: clm27445

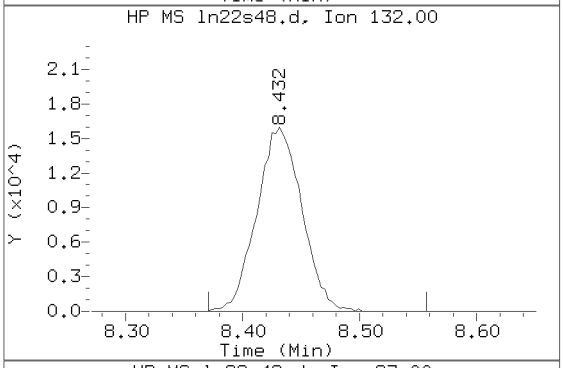
Reference Standard Spectrum for Trichloroethene

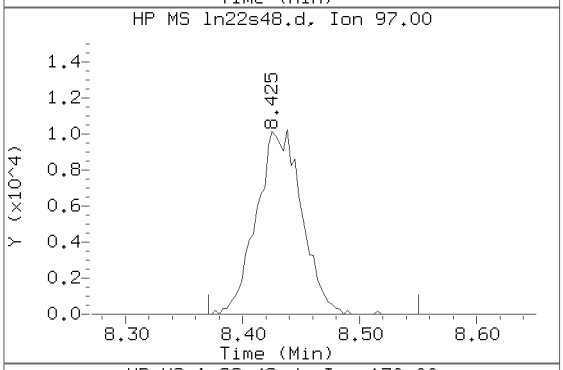




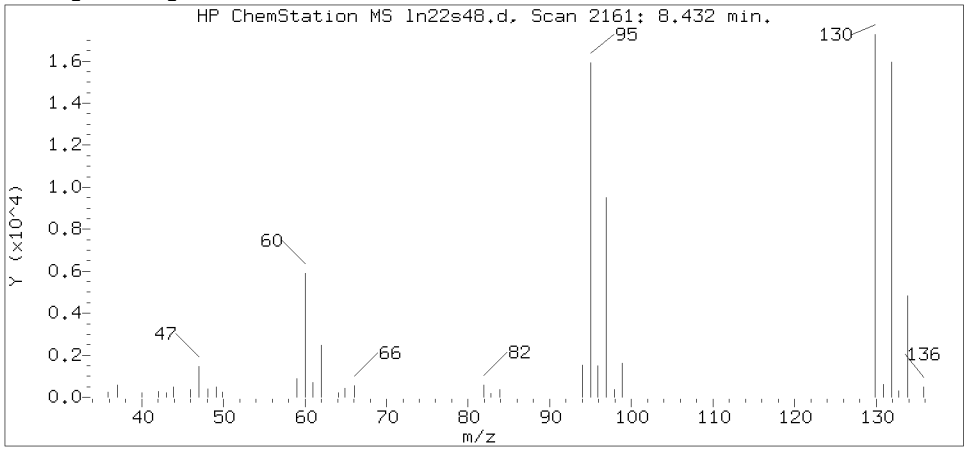
Sample Spectrum (Background Subtracted)

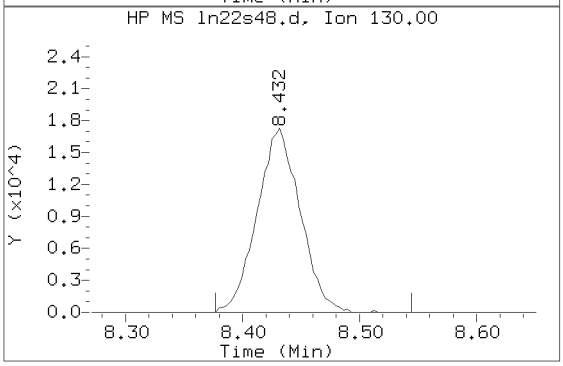






Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov22a.b/ln22s48.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 17:28 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 17:45 Automation

Sample Name: JCW27 Lab Sample ID: 1205925

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 2161
Retention Time (minutes)	: 8.432
Relative Retention Time	: 0.00002
Quant Ion	: 95.00
Area (flag)	: 41416
On-Column Amount (ng)	: 7.1787

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Target 3.5 esignature user ID: clm27445

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
JCW28

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205926

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s49.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	0.4	J
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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JCW28 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1205926

Data file: /chem/HP09915.i/19nov22a.b/ln22s49.d Injection date and time: **22-NOV-2019 17:50**
Data file Sample Info. Line: JCW28;1205926;1;0;;JCW24;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 18:07 Automation

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.487	(0.010)	934	65	204897	(-22)	250.00	
66) Fluorobenzene	7.956	(0.003)	2013	96	1116734	(-16)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	917879	(-15)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(-0.003)	3651	152	496362	(-13)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.065	(0.000)	113	265731	48.671	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(-0.001)	102	71951	51.709	103%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	1162062	48.385	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.348	(-0.001)	95	442609	48.669	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.548	(0.000)	63	13234	1.385	1.39			0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.429	(-0.000)	95	2459	0.430	0.43		J	0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:09. Target 3.5 esignature user ID: clm27445

Data file: /chem/HP09915.i/19nov22a.b/ln22s49.d Injection date and time: **22-NOV-2019 17:50**
Data file Sample Info. Line: JCW28;1205926;1;0;;JCW24;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 18:07 Automation

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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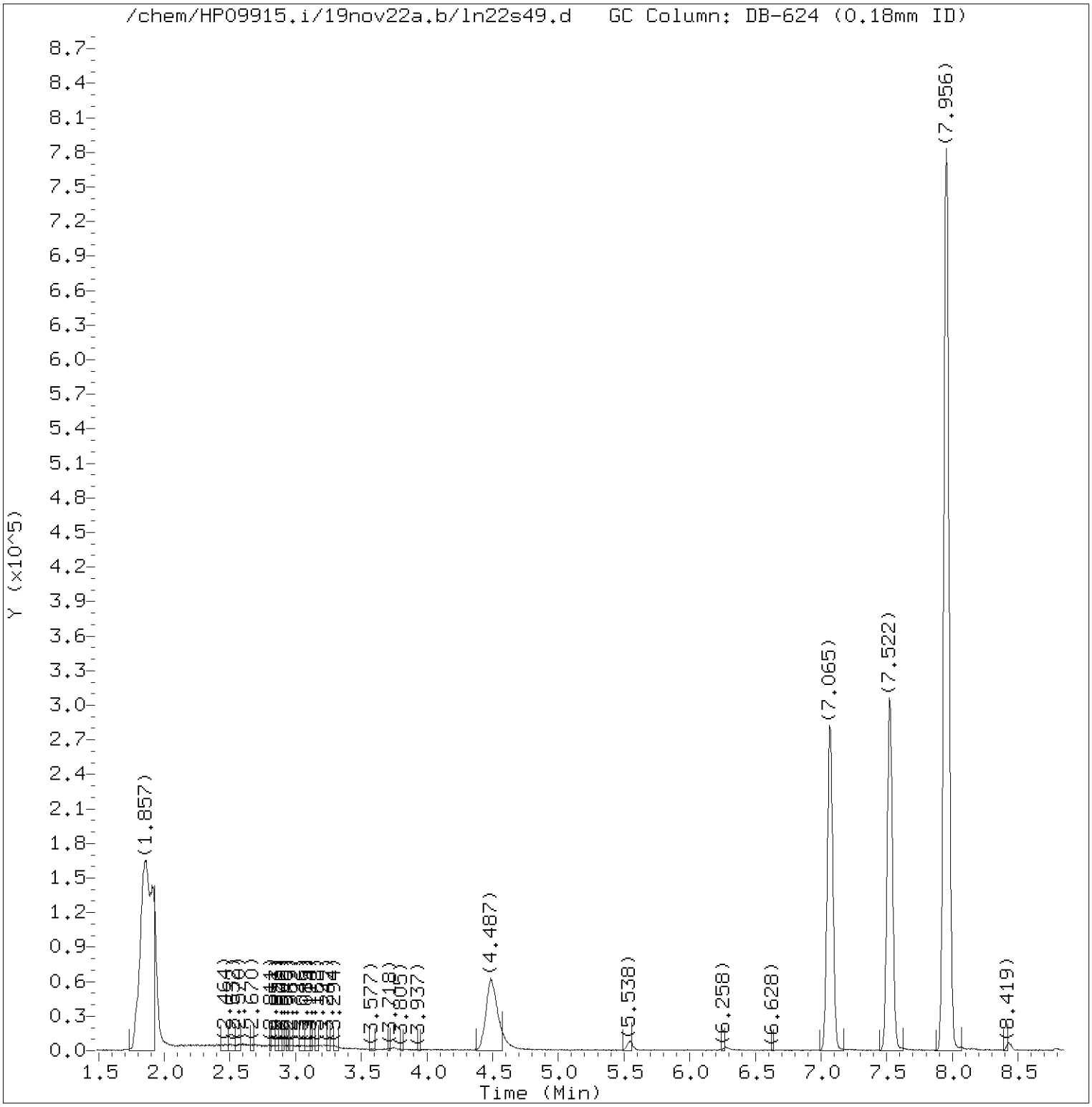
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:09. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:06. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

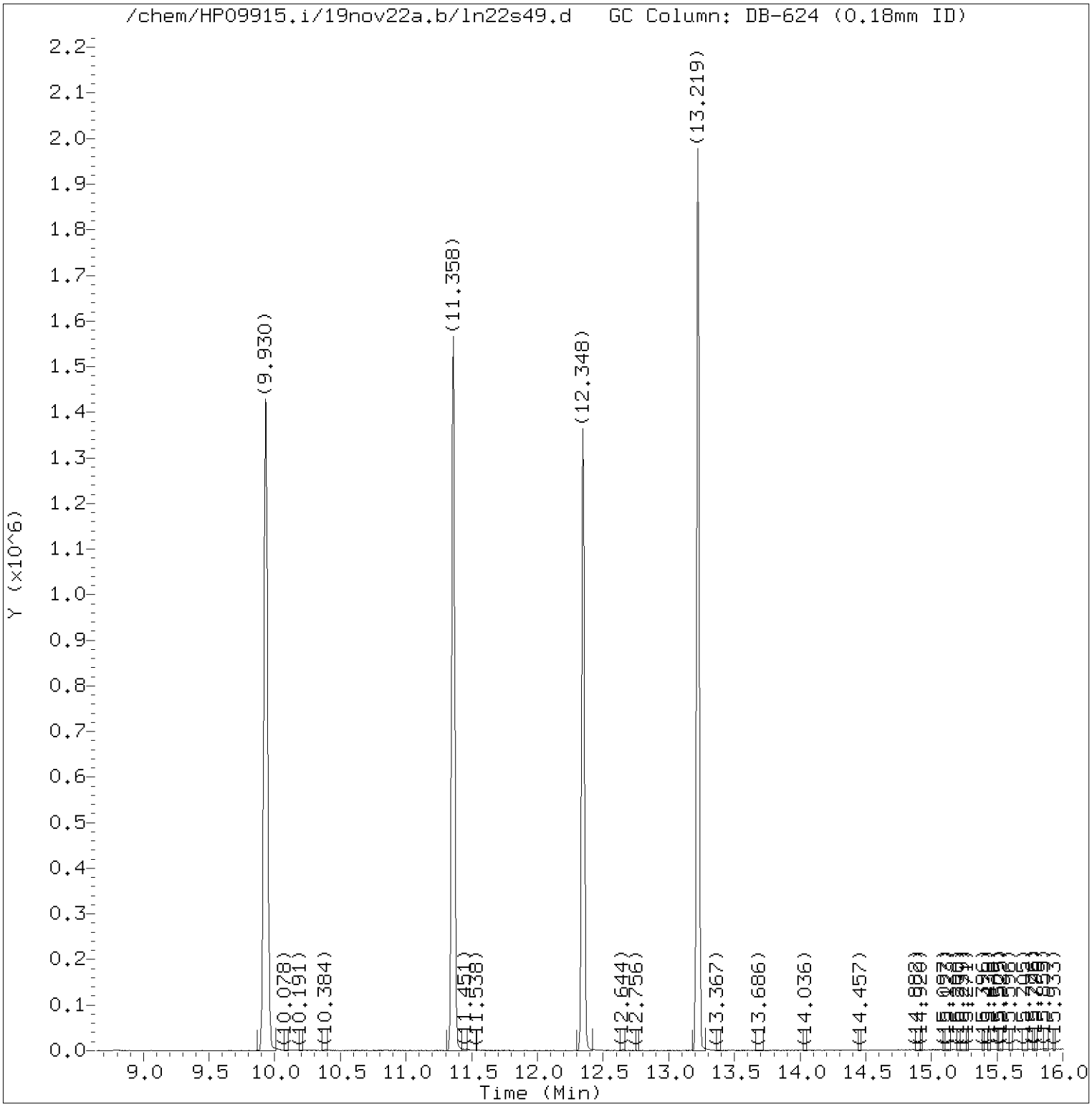
Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s49.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 17:50 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 18:07 Automation

Sample Name: JCW28 Lab Sample ID: 1205926

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:09.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s49.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 17:50 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 18:07 Automation

Sample Name: JCW28 Lab Sample ID: 1205926

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:09.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s49.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 17:50 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 18:07 Automation

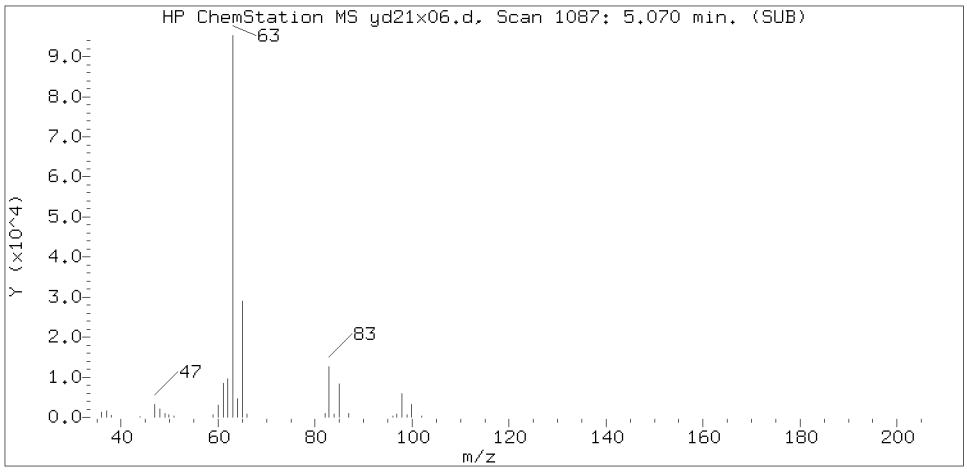
Sample Name: JCW28 Lab Sample ID: 1205926

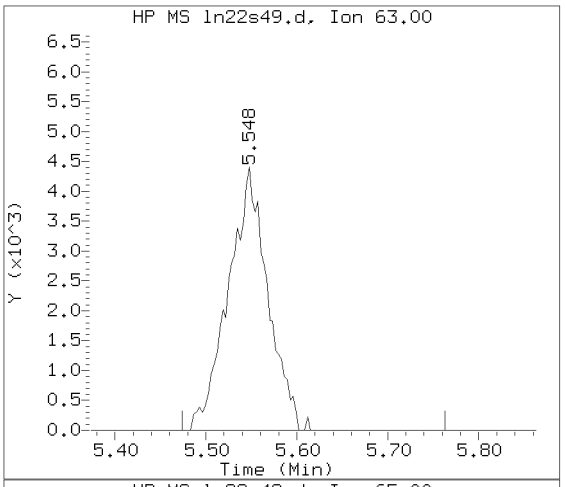
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.487	65	204897	250.000
36) 1,1-Dichloroethane	(2)	5.548	63	13234	1.385
52)$Dibromofluoromethane	(2)	7.065	113	265731	48.671
57)$1,2-Dichloroethane-d4	(2)	7.528	102	71951	51.709
66)*Fluorobenzene	(2)	7.956	96	1116734	50.000
71) Trichloroethene	(2)	8.429	95	2459	0.430
83)$Toluene-d8	(3)	9.930	98	1162062	48.385
100)*Chlorobenzene-d5	(3)	11.358	117	917879	50.000
114)$4-Bromofluorobenzene	(3)	12.348	95	442609	48.669
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	496362	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

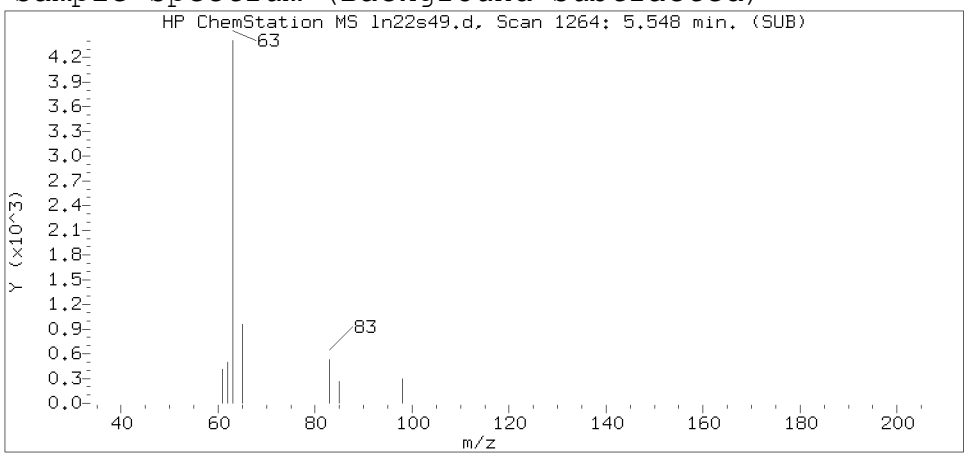
Digitally signed by Corie L. Mellinger
on 11/23/2019 at 11:09.
Target 3.5 esignature user ID: clm27445

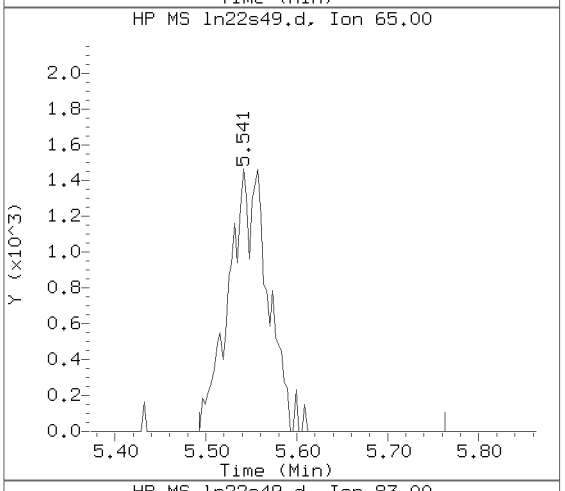
Reference Standard Spectrum for 1,1-Dichloroethane



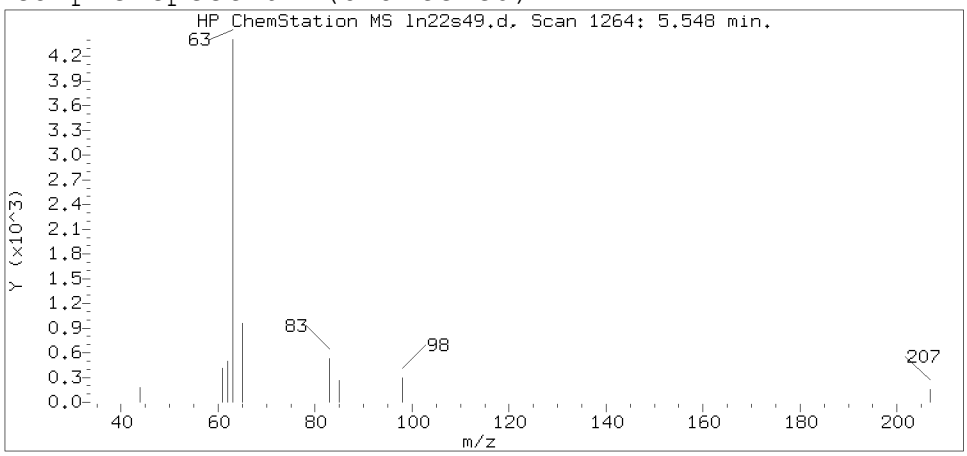


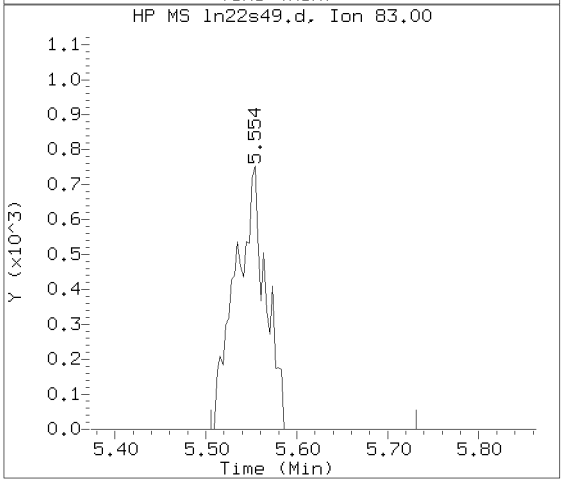
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov22a.b/ln22s49.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 17:50 Analyst ID: lcp00895

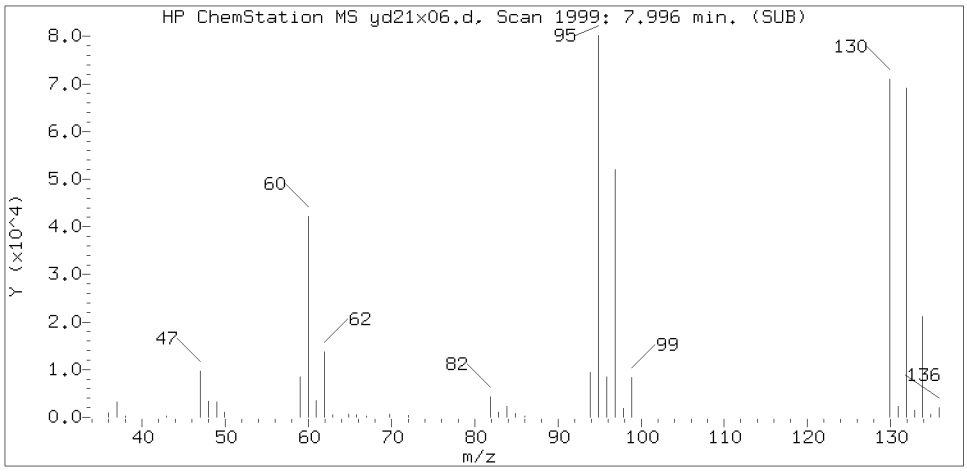
Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 18:07 Automation

Sample Name: JCW28 Lab Sample ID: 1205926

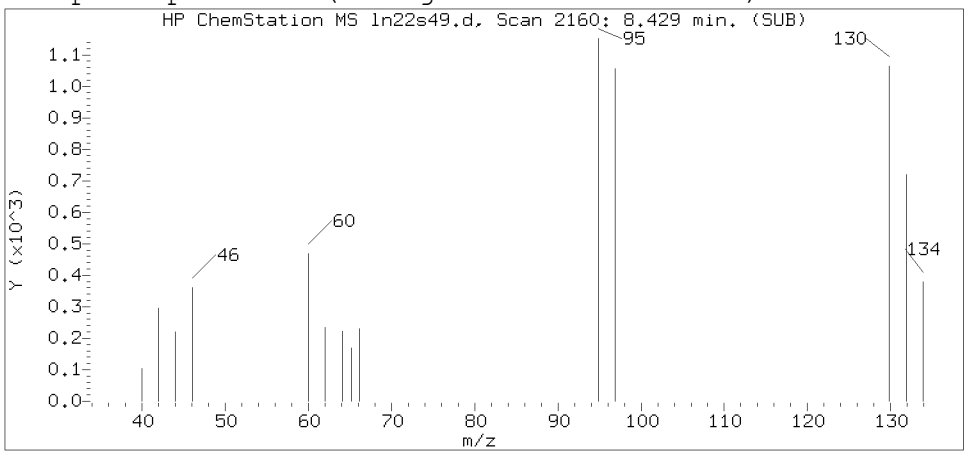
Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 1264
Retention Time (minutes): 5.548
Relative Retention Time : 0.00013
Quant Ion : 63.00
Area (flag) : 13234
On-Column Amount (ng) : 1.3853

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:09.
Target 3.5 esignature user ID: clm27445

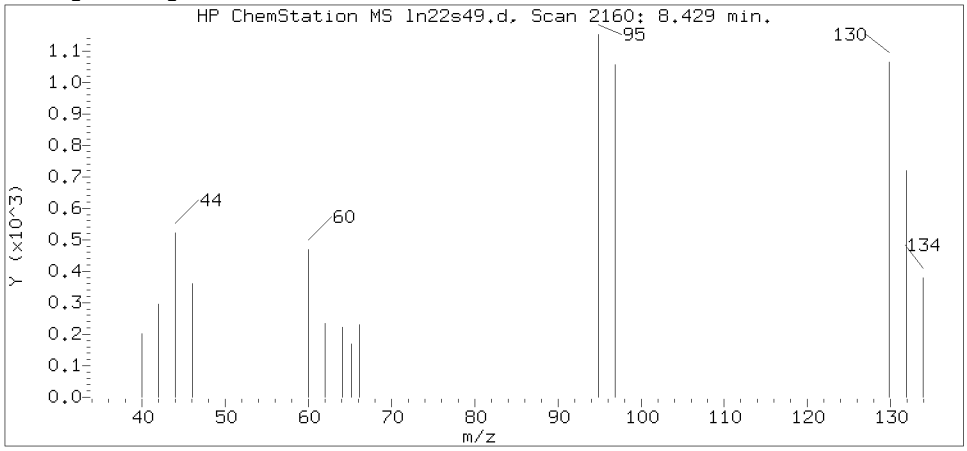
Reference Standard Spectrum for Trichloroethene

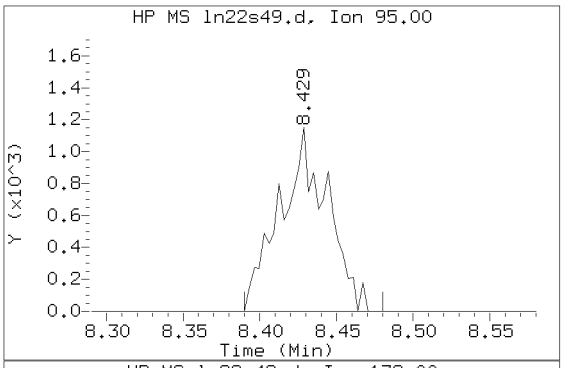


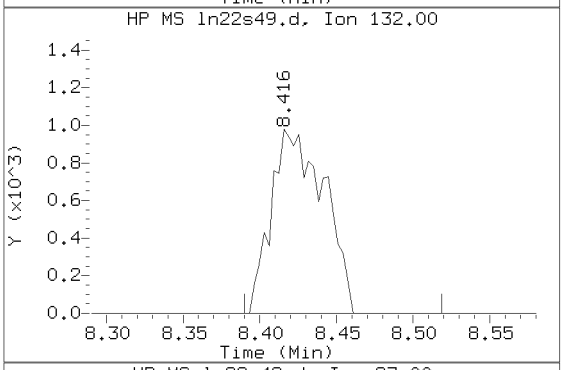
Sample Spectrum (Background Subtracted)

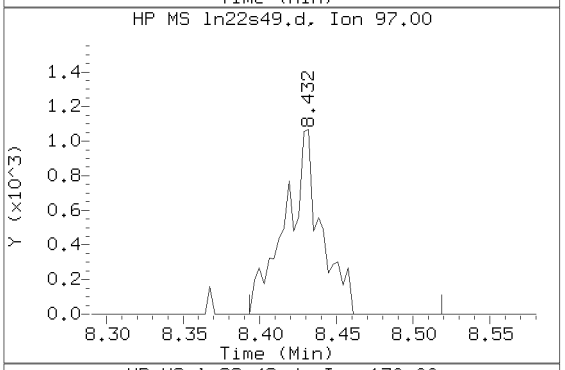


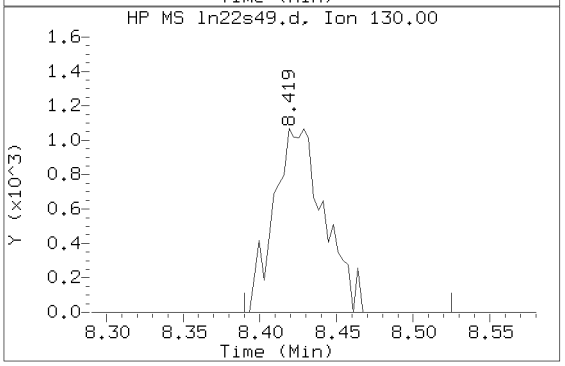
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov22a.b/ln22s49.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 17:50 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 18:07 Automation

Sample Name: JCW28 Lab Sample ID: 1205926

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 2160
Retention Time (minutes): 8.429
Relative Retention Time :-0.00043
Quant Ion : 95.00
Area (flag) : 2459
On-Column Amount (ng) : 0.4301

Digitally signed by Corie L. Mellinger on 11/23/2019 at 11:09.
Target 3.5 esignature user ID: clm27445

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
JCW29

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205927

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s33.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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JCW29

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1205927

Data file: /chem/HP09915.i/19nov22a.b/ln22s33.d
Data file Sample Info. Line: JCW29;1205927;1;0;;JCW24;;;ln22b05;
Date, time and analyst ID of latest file update: 22-Nov-2019 12:15 Automation

Injection date and time: **22-NOV-2019 11:57**
Instrument ID: **HP09915.i** Batch: **L193262AA**

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493	(0.003)	936	65	239601	(-9)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	1278548	(-4)	50.00	
100) Chlorobenzene-d5	11.361	(0.000)	3072	117	1037547	(-4)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(-0.003)	3651	152	555387	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.078	(-0.001)	113	302913	48.460	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.532	(-0.001)	102	81825	51.363	103%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	1332387	49.078	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.348	(0.000)	95	509958	49.608	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Corie L. Mellinger on 11/23/2019 at 10:52. Target 3.5 esignature user ID: clm27445

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov22a.b/ln22s33.d Injection date and time: **22-NOV-2019 11:57**
Data file Sample Info. Line: JCW29;1205927;1;0;;JCW24;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 12:15 Automation

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

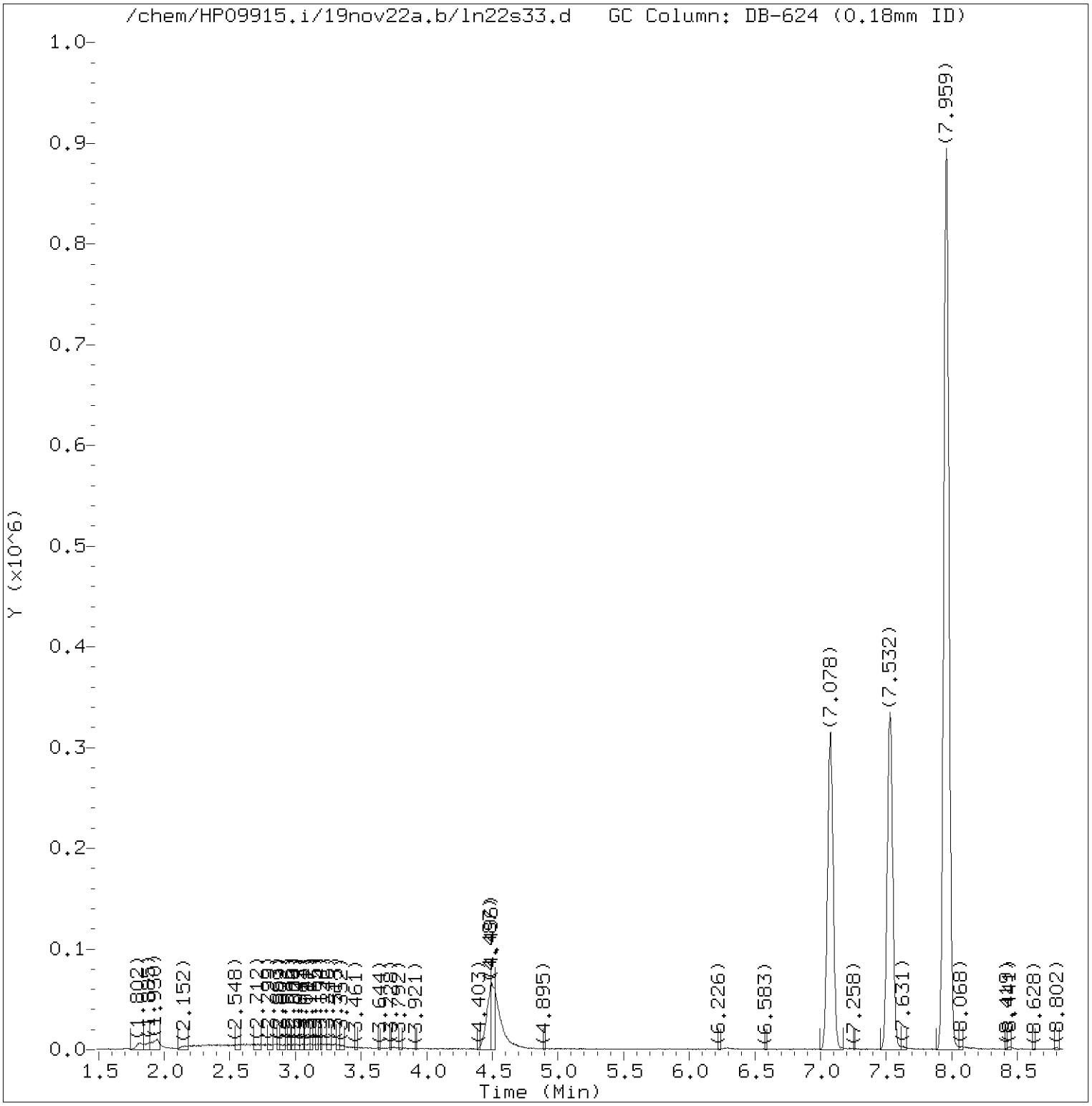
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Corie L. Mellinger on 11/23/2019 at 10:52. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:02. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

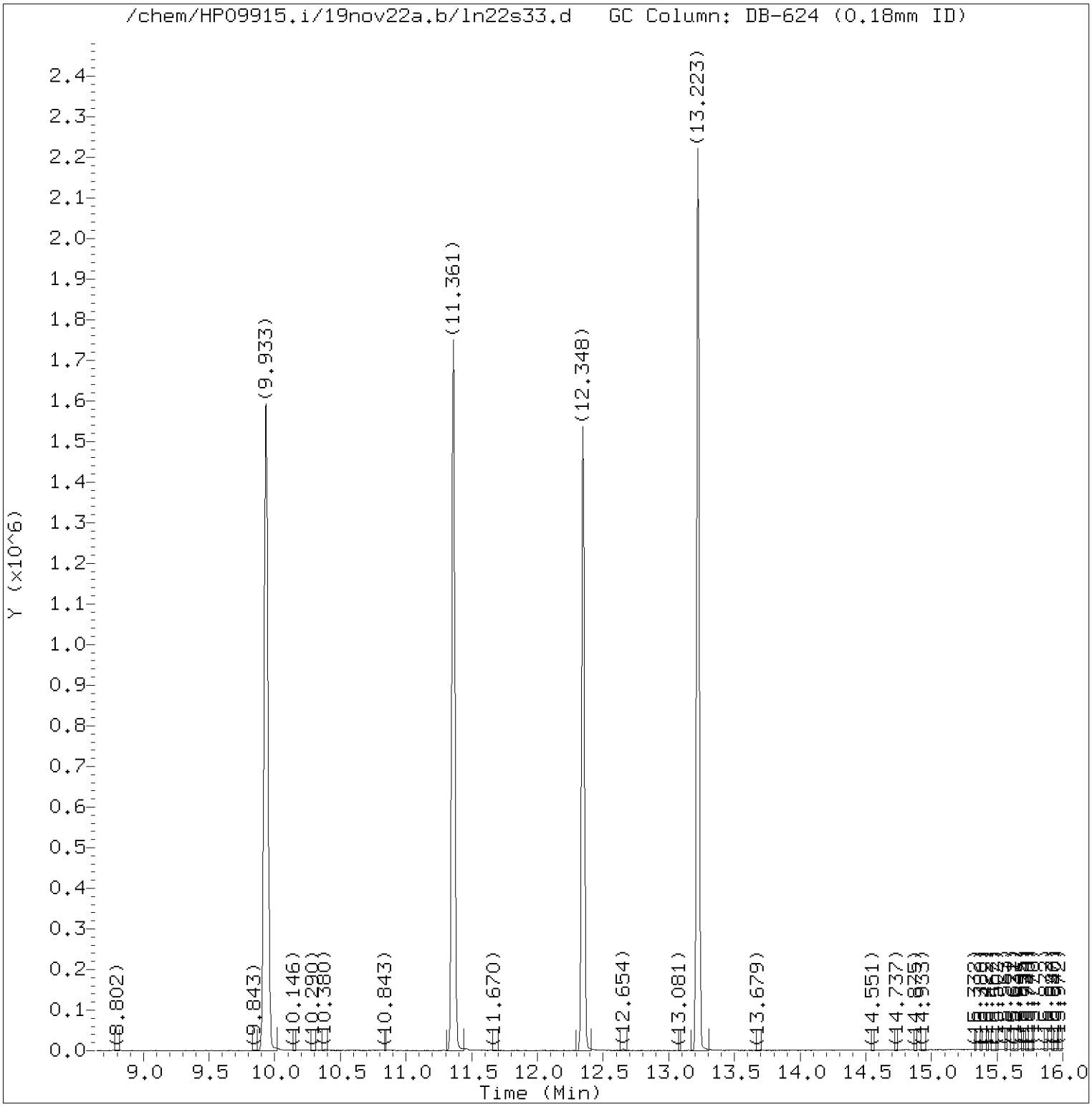
Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s33.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 11:57 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 12:15 Automation

Sample Name: JCW29 Lab Sample ID: 1205927

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 10:52.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s33.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 11:57 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 12:15 Automation

Sample Name: JCW29 Lab Sample ID: 1205927

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 10:52.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s33.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 11:57 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 12:15 Automation

Sample Name: JCW29 Lab Sample ID: 1205927

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.493	65	239601	250.000
52)$Dibromofluoromethane	(2)	7.078	113	302913	48.460
57)$1,2-Dichloroethane-d4	(2)	7.532	102	81825	51.363
66)*Fluorobenzene	(2)	7.959	96	1278548	50.000
83)$Toluene-d8	(3)	9.933	98	1332387	49.078
100)*Chlorobenzene-d5	(3)	11.361	117	1037547	50.000
114)$4-Bromofluorobenzene	(3)	12.348	95	509958	49.608
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	555387	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 10:52.
Target 3.5 esignature user ID: clm27445

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\19nov04i\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
KAS02648	LN04T01.D	50NGBFB	11/04/2019	12:52	L191821AA	
KAS02648	LN04T02.D	50NGBFB	11/04/2019	13:05	L191821AA	
KAS02648	LN04T03.D	50NGBFB	11/04/2019	13:27	L191821AA	
KAS02648	LN04T04.D	50NGBFB	11/04/2019	13:45	L191821AA	
KAS02648	LN04T05.D	50NGBFB	11/04/2019	14:07	L191821AA	
KAS02648	LN04T06.D	50NGBFB	11/04/2019	14:18	L191821AA	
KAS02648	LN04X01.D	CLNBLK	11/04/2019	14:29		
KAS02648	LN04I01.D	VSTD300	11/04/2019	14:51		
KAS02648	LN04I02.D	VSTD100	11/04/2019	15:13		
KAS02648	LN04I03.D	VSTD050	11/04/2019	15:35		
KAS02648	LN04I04.D	VSTD020	11/04/2019	15:57		
KAS02648	LN04I05.D	VSTD010	11/04/2019	16:19		
KAS02648	LN04I06.D	VSTD004	11/04/2019	16:41		
KAS02648	LN04I07.D	VSTD001	11/04/2019	17:03		
KAS02648	LN04V01.D	ICVLLG	11/04/2019	17:25		
KAS02648	LN04V02.D	ICVLLG	11/04/2019	18:42		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\19NOV22a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
lcp00895	LN22T01.D	50NGBFB	11/22/2019	07:53	L191821AA	
lcp00895	LN22X01.D	CBLK	11/22/2019	08:16	L193261AA	
lcp00895	LN22C01.D	VSTD050	11/22/2019	08:38	L193261AA	
lcp00895	LN22S02.D	LCDL85	11/22/2019	09:00	L193261AA	
lcp00895	LN22S01.D	LCSL85	11/22/2019	09:22	L193261AA	
lcp00895	LN22R01.D	RLVL85	11/22/2019	09:45	L193261AA	
lcp00895	LN22B01.D	VBLKL85	11/22/2019	10:07	L193261AA	
lcp00895	LN22S03.D	1202250	11/22/2019	10:29	L193261AA	
lcp00895	LN22S04.D	1202251	11/22/2019	10:51	L193261AA	
lcp00895	LN22S05.D	1202252	11/22/2019	11:13	L193261AA	
lcp00895	LN22S06.D	1202253	11/22/2019	11:35	L193261AA	
lcp00895	LN22S33.D	1205927	11/22/2019	11:57	L193262AA	
lcp00895	LN22S34.D	1205893	11/22/2019	12:19	L193262AA	
lcp00895	LN22S35.D	1205894MS	11/22/2019	12:42	L193262AA	
lcp00895	LN22S36.D	1205895MSD	11/22/2019	13:04	L193262AA	
lcp00895	LN22S37.D	1205892	11/22/2019	13:26	L193262AA	
lcp00895	LN22S38.D	1205896	11/22/2019	13:48	L193262AA	
lcp00895	LN22S39.D	1205897	11/22/2019	14:10	L193262AA	
lcp00895	LN22S40.D	1205898	11/22/2019	14:32	L193262AA	
lcp00895	LN22S41.D	1205899	11/22/2019	14:54	L193262AA	
lcp00895	LN22S42.D	1205919	11/22/2019	15:16	L193262AA	
lcp00895	LN22S43.D	1205920	11/22/2019	15:38	L193262AA	
lcp00895	LN22S44.D	1205921	11/22/2019	16:00	L193262AA	
lcp00895	LN22S45.D	1205922	11/22/2019	16:22	L193262AA	
lcp00895	LN22S46.D	1205923	11/22/2019	16:44	L193262AA	
lcp00895	LN22S47.D	1205924	11/22/2019	17:06	L193262AA	
lcp00895	LN22S48.D	1205925	11/22/2019	17:28	L193262AA	
lcp00895	LN22S49.D	1205926	11/22/2019	17:50	L193262AA	

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\19nov23a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
CLM27445	LN23X55.D	VBLKL85	11/23/2019	06:24	L193261AA	
CLM27445	LN23T01.D	50NGBFB	11/23/2019	07:45	L193271AA	
CLM27445	LN23T02.D	50NGBFB	11/23/2019	07:57	L193271AA	
CLM27445	LN23X00.D	VBLKL87	11/23/2019	08:20	L193271AA	
CLM27445	LN23C01.D	VSTD050	11/23/2019	08:42	L193271AA	
CLM27445	LN23X60.D	VBLKL87	11/23/2019	09:04	L193271AA	
CLM27445	LN23S01.D	LCSL87	11/23/2019	09:26	L193271AA	
CLM27445	LN23B01.D	VBLKL87	11/23/2019	09:48	L193271AA	
CLM27445	LN23S02.D	1205905	11/23/2019	10:44	L193271AA	
CLM27445	LN23S03.D	1205900	11/23/2019	11:06	L193271AA	
CLM27445	LN23S04.D	1205901MS	11/23/2019	11:28	L193271AA	
CLM27445	LN23S05.D	1205902MSD	11/23/2019	11:50	L193271AA	
CLM27445	LN23S06.D	1205903	11/23/2019	12:12	L193271AA	
CLM27445	LN23S07.D	1205904	11/23/2019	12:34	L193271AA	
CLM27445	LN23S08.D	1205910	11/23/2019	12:56	L193271AA	
CLM27445	LN23S09.D	1205911	11/23/2019	13:18	L193271AA	
CLM27445	LN23S10.D	1205912	11/23/2019	13:40	L193271AA	
CLM27445	LN23S11.D	1205913	11/23/2019	14:02	L193271AA	
CLM27445	LN23S12.D	1205914	11/23/2019	14:24	L193271AA	
CLM27445	LN23S13.D	1205915	11/23/2019	14:46	L193271AA	
CLM27445	LN23S14.D	1205916	11/23/2019	15:08	L193271AA	
CLM27445	LN23S15.D	1205917	11/23/2019	15:31	L193271AA	
CLM27445	LN23S16.D	1205918	11/23/2019	15:53	L193271AA	
CLM27445	LN23S17.D	1205928	11/23/2019	16:15	L193271AA	
CLM27445	LN23S18.D	1205929	11/23/2019	16:37	L193271AA	
CLM27445	LN23S19.D	1206738	11/23/2019	16:59	L193271AA	
CLM27445	LN23S20.D	1206739	11/23/2019	17:21	L193271AA	
CLM27445	LN23S21.D	1206740	11/23/2019	17:43	L193271AA	

Data File: /chem/HP09915.i/19nov04i.b/ln04t06.d

Date : 04-NOV-2019 14:18

Client ID: AUG02-19

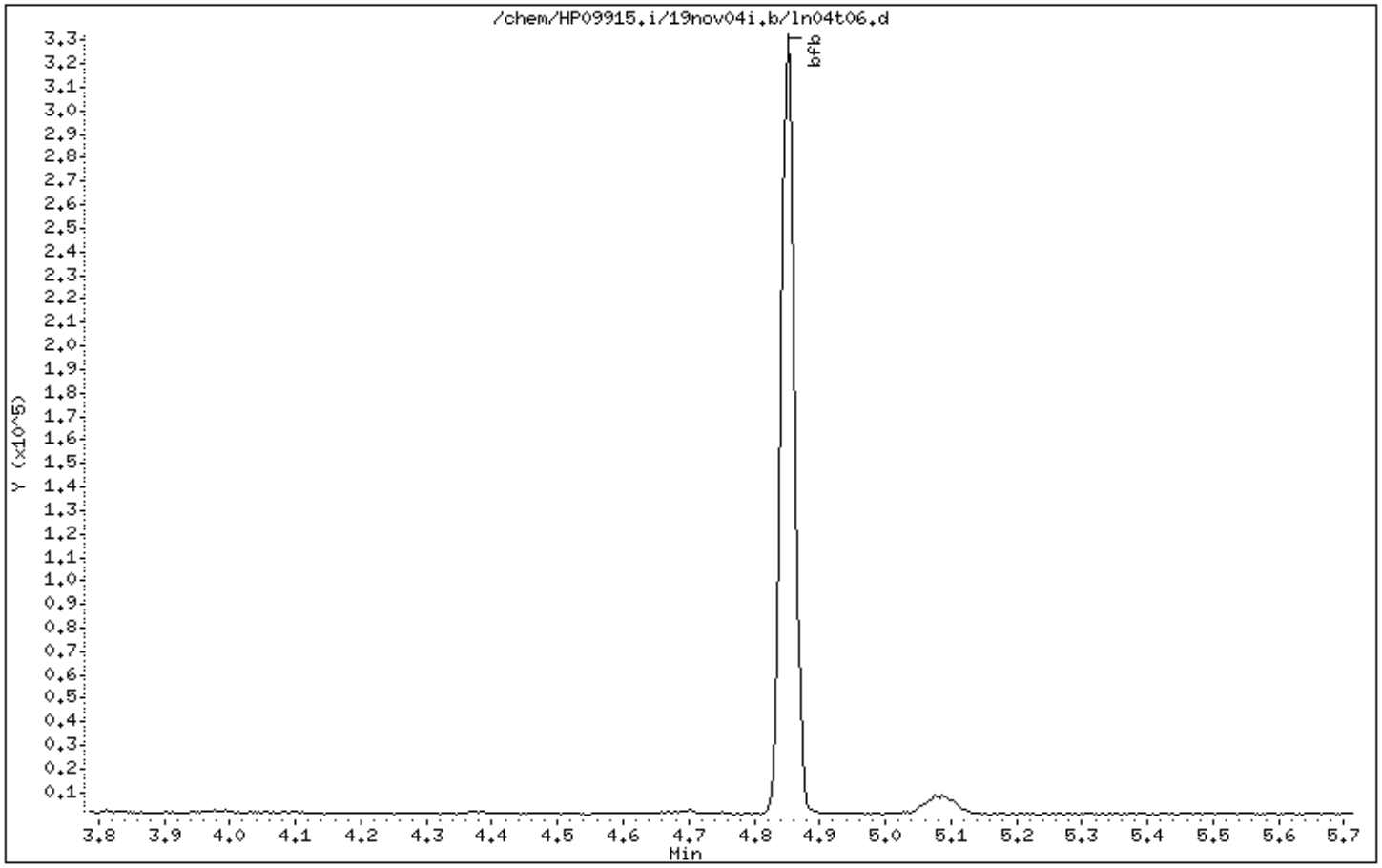
Instrument: HP09915.i

Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem/HP09915.i/19nov04i.b/ln04t06.d

Date : 04-NOV-2019 14:18

Client ID: AUG02-19

Instrument: HP09915.i

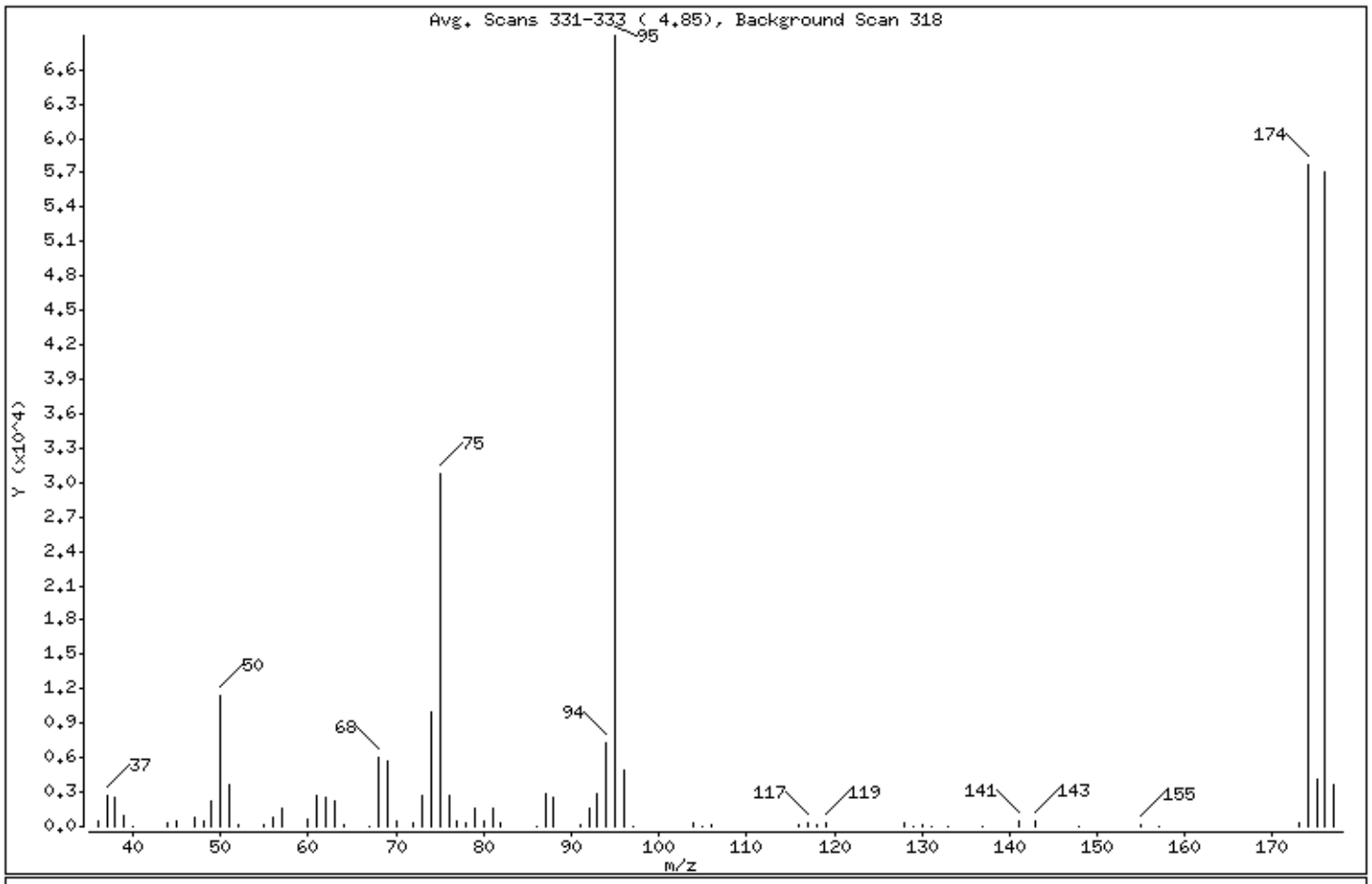
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.48
75	30.00 - 60.00% of mass 95	44.65
96	5.00 - 9.00% of mass 95	7.22
173	Less than 2.00% of mass 174	0.51 (0.61)
174	50.00 - 100.00% of mass 95	83.73
175	5.00 - 9.00% of mass 174	5.92 (7.07)
176	95.00 - 101.00% of mass 174	82.66 (98.72)
177	5.00 - 9.00% of mass 176	5.37 (6.49)

Date : 04-NOV-2019 14:18

Client ID: AUG02-19 Instrument: HP09915.i

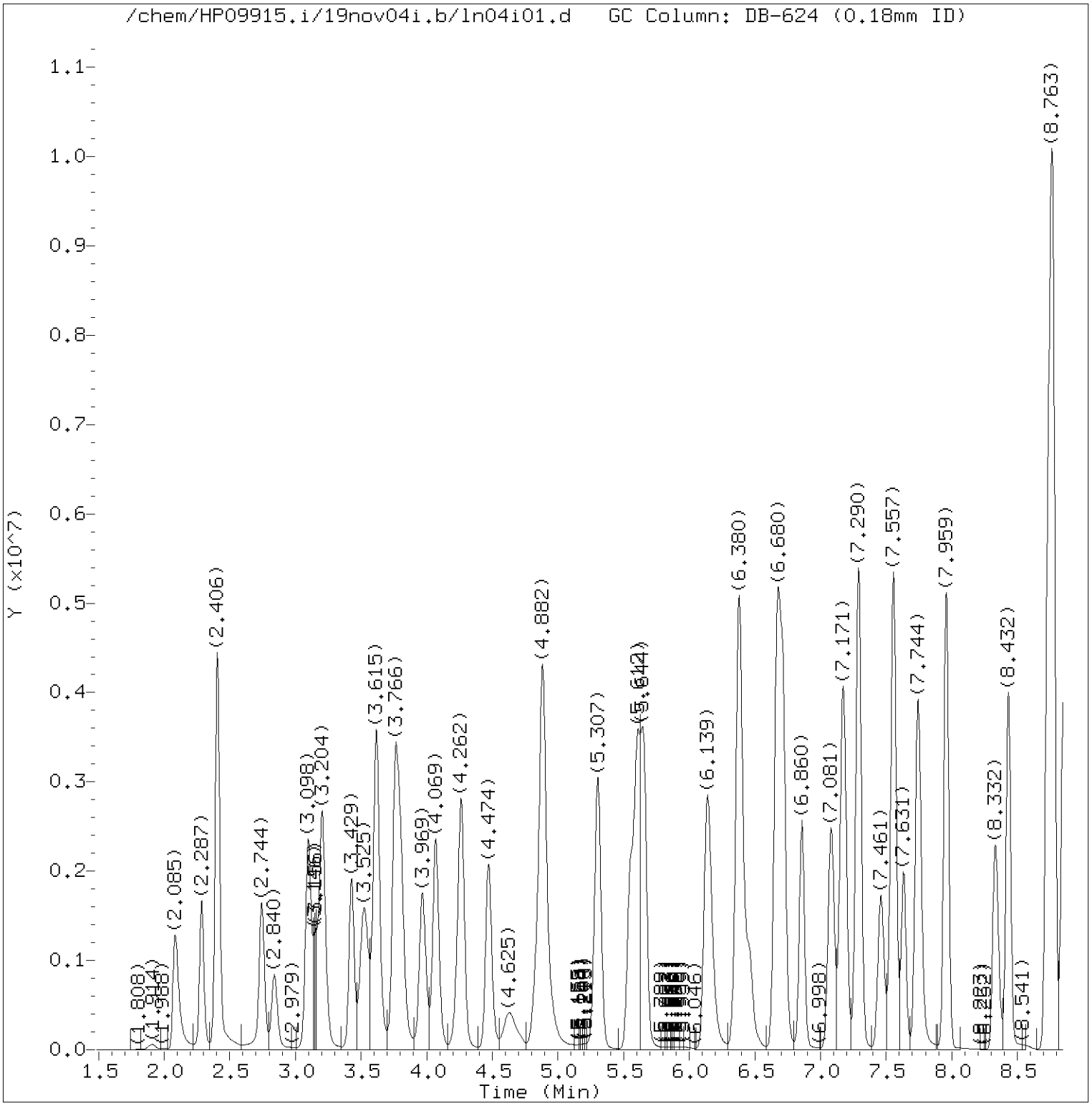
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: ln04t06.d
Spectrum: Avg. Scans 331-333 (4.85), Background Scan 318
Location of Maximum: 95.00
Number of points: 69

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	529	62.00	2498	86.00	55	129.00	53
37.00	2736	63.00	2218	87.00	2840	130.00	112
38.00	2557	64.00	150	88.00	2593	131.00	53
39.00	971	67.00	71	91.00	144	133.00	52
40.00	22	68.00	6076	92.00	1588	137.00	53
44.00	270	69.00	5647	93.00	2845	141.00	538
45.00	457	70.00	476	94.00	7275	143.00	484
47.00	784	72.00	322	95.00	68968	148.00	77
48.00	424	73.00	2656	96.00	4977	155.00	162
49.00	2292	74.00	10024	97.00	62	157.00	63
50.00	11364	75.00	30792	104.00	284	173.00	350
51.00	3586	76.00	2712	105.00	50	174.00	57744
52.00	134	77.00	405	106.00	233	175.00	4082
55.00	217	78.00	267	116.00	189	176.00	57008
56.00	871	79.00	1601	117.00	348	177.00	3701
57.00	1629	80.00	440	118.00	231		
60.00	555	81.00	1543	119.00	348		
61.00	2700	82.00	307	128.00	239		



Total Ion Chromatogram (TIC)

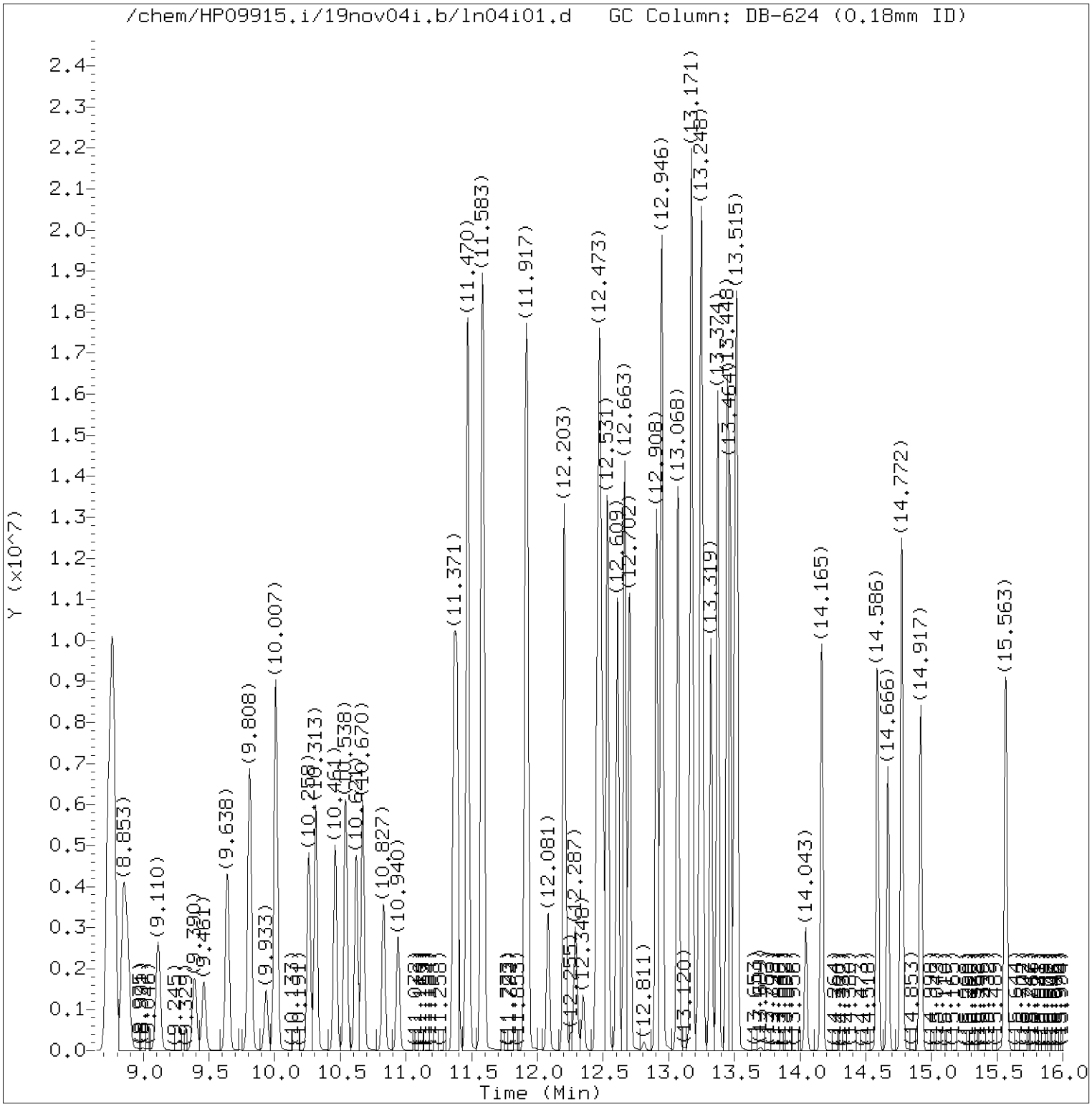
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.085	85	2719746M	347.943
4) Chloromethane	(2)	2.287	50	2403581	319.051
5) 1,3-Butadiene	(2)	2.406	39	1785787M	285.486
6) Vinyl Chloride	(2)	2.406	62	2412855	320.904
8) Bromomethane	(2)	2.744	94	1638575	304.015
9) Chloroethane	(2)	2.837	64	1253478	303.356
12) Trichlorofluoromethane	(2)	3.152	101	2661050	328.734
11) n-Pentane	(2)	3.204	43	2816823	294.455
14) Ethyl ether	(2)	3.429	59	1721693	329.146
15) Freon 123a	(2)	3.525	67	1991616	305.852
16) Acrolein	(1)	3.615	56	5765354	3020.583
17) 1,1-Dichloroethene	(2)	3.760	96	1489890	313.570
17) 1,1-Dichloroethene	(2)	3.757	63	721205	302.767
19) Freon 113	(2)	3.792	101	1732433	319.583
18) Acetone	(1)	3.802	58	531845	621.534
22) Methyl Iodide	(2)	3.966	142	3047145	309.483
21) 2-Propanol	(1)	3.995	45	936919	1523.065
23) Carbon Disulfide	(2)	4.069	76	5676465	317.027
27) Methyl Acetate	(2)	4.239	43	1941315	317.230
25) Allyl Chloride	(2)	4.265	41	2748698	322.482
28) Methylene Chloride	(2)	4.474	84	1745840	308.716
29)*t-Butyl alcohol-d10	(1)	4.503	65	254406M	250.000
30) t-Butyl alcohol	(1)	4.638	59	1641037	1532.140
31) Acrylonitrile	(2)	4.827	53	1039800	315.820
32) trans-1,2-Dichloroethene	(2)	4.885	96	1713357	311.714
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	5505439	305.143
34) n-Hexane	(2)	5.307	57	2863189M	334.811
36) 1,1-Dichloroethane	(2)	5.548	63	3007196	313.618
38) di-Isopropyl ether	(2)	5.609	45	5739955	310.377
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	2776921	322.788
40) Ethyl t-butyl ether	(2)	6.139	59	5425034	302.275
43) 1,2-Dichloroethene (Total)	(2)		96	3646040	624.977
44) 2-Butanone	(2)	6.364	43	2642793	625.317
42) cis-1,2-Dichloroethene	(2)	6.380	96	1932683	313.263
45) 2,2-Dichloropropane	(2)	6.397	77	2377411	318.945
47) Propionitrile	(1)	6.458	54	2126389	1593.336
48) Methacrylonitrile	(2)	6.670	67	2858148	804.768
49) Bromochloromethane	(2)	6.708	128	1075154	328.655

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.718	71	758236	628.991
51) Chloroform	(2)	6.860	83	2916299	317.988
52)$Dibromofluoromethane	(2)	7.075	113	276322	50.424
52)$Dibromofluoromethane	(2)	7.075	111	279197	49.969
53) 1,1,1-Trichloroethane	(2)	7.081	97	2560601	327.130
54) Cyclohexane	(2)	7.171	56	3429211	327.611
54) Cyclohexane	(2)	7.171	84	2984908	328.282
54) Cyclohexane	(2)	7.171	69	1068201	329.937
56) Carbon Tetrachloride	(2)	7.287	117	2252864	339.350
55) 1,1-Dichloropropene	(2)	7.294	75	2434619	321.125
58) Isobutyl Alcohol	(1)	7.461	41	1382486	3835.573
57)$1,2-Dichloroethane-d4	(2)	7.528	102	68480	49.033
57)$1,2-Dichloroethane-d4	(2)	7.532	65	307306	49.375
57)$1,2-Dichloroethane-d4	(2)	7.528	104	44002	49.326
60) Benzene	(2)	7.557	78	7094466	311.169
61) 1,2-Dichloroethane	(2)	7.634	62	2222342	303.049
61) 1,2-Dichloroethane	(2)	7.634	98	228988	315.535
65) t-Amyl methyl ether	(2)	7.744	73	5421278	300.945
67) n-Heptane	(2)	7.959	43	2592531MA	324.518
66)*Fluorobenzene	(2)	7.959	96	1120873	50.000
69) n-Butanol	(1)	8.332	56	2465385M	7947.068
71) Trichloroethene	(2)	8.432	95	1841720	320.821
72) Methylcyclohexane	(2)	8.734	83	3568410	335.054
72) Methylcyclohexane	(2)	8.734	98	1632993	338.844
73) 1,2-Dichloropropane	(2)	8.769	63	1825943	315.397
76) Methyl Methacrylate	(2)	8.850	69	1904896A	340.256
75) 1,4-Dioxane	(1)	8.856	88	338379M	3968.421
74) Dibromomethane	(2)	8.879	93	1210939	323.274
78) Bromodichloromethane	(2)	9.113	83	2314651	344.351
79) 2-Nitropropane	(2)	9.390	41	1438925	706.755
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	926413	372.584
81) cis-1,3-Dichloropropene	(2)	9.638	75	3074664	344.402
82) 4-Methyl-2-pentanone	(2)	9.808	43	5422938	607.899
83)$Toluene-d8	(3)	9.933	98	1156351	49.563
83)$Toluene-d8	(3)	9.933	100	751534	49.726
88) Toluene	(3)	10.007	92	4532879	309.894
90) 1,3-Dichloropropene (total)	(3)		100	5974636	693.659
89) trans-1,3-Dichloropropene	(3)	10.258	75	2899972	349.257

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	10.313	69	3356305	332.603
92) 1,1,2-Trichloroethane	(3)	10.461	97	1768710	318.935
93) Tetrachloroethene	(3)	10.541	166	1990565	321.327
94) 1,3-Dichloropropane	(3)	10.621	76	3006585	317.532
96) 2-Hexanone	(3)	10.670	43	3998423	593.616
97) Dibromochloromethane	(3)	10.827	129	2037523	358.670
99) 1,2-Dibromoethane	(3)	10.940	107	1987783	330.088
100)*Chlorobenzene-d5	(3)	11.361	117	891668	50.000
101) 1-Chlorohexane	(3)	11.364	91	2458057	312.814
102) Chlorobenzene	(3)	11.387	112	5140609	310.783
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	1789998	328.446
104) Ethylbenzene	(3)	11.470	91	8606821	307.854
106) m+p-Xylene	(3)	11.583	106	6690837	608.359
108) Xylene (Total)	(3)		106	9979970	911.130
107) o-Xylene	(3)	11.908	106	3289133	302.771
109) Styrene	(3)	11.924	104	5647939	314.619
110) Bromoform	(3)	12.081	173	1534520	361.500
111) Isopropylbenzene	(3)	12.203	105	8466138	310.714
112) Cyclohexanone	(1)	12.287	55	1351186	4046.080
114)$4-Bromofluorobenzene	(3)	12.348	95	440049	49.810
114)$4-Bromofluorobenzene	(3)	12.348	174	362553	49.502
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	2800639M	310.705
115) Bromobenzene	(4)	12.467	156	2234066	311.517
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	2150976	773.637
117) 1,2,3-Trichloropropane	(4)	12.499	110	866230	313.172
119) n-Propylbenzene	(4)	12.531	91	9654812	308.142
120) 2-Chlorotoluene	(4)	12.609	126	2098494	315.266
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	7238022	317.873
121) 4-Chlorotoluene	(4)	12.702	126	2155793	311.148
124) tert-Butylbenzene	(4)	12.908	134	1524421M	323.717
125) Pentachloroethane	(4)	12.940	167	1461833	360.511
126) 1,2,4-Trimethylbenzene	(4)	12.949	105	7469187	311.236
127) sec-Butylbenzene	(4)	13.068	105	8682126	308.971
129) 1,3-Dichlorobenzene	(4)	13.168	146	3858953	292.822
130) p-Isopropyltoluene	(4)	13.174	119	7289488	299.854
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	477171	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	4013510	293.777
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	7915203	311.364

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.319	91	6484944	336.931
136) 1,3-Diethylbenzene	(4)	13.374	119	4897725	309.573
141) Diethylbenzene (total)	(4)		100	13982971	913.975
137) 1,4-Diethylbenzene	(4)	13.444	119	5013123	299.077
139) n-Butylbenzene	(4)	13.467	92	3608595	290.316
138) 1,2-Dichlorobenzene	(4)	13.502	146	3859125	296.761
140) 1,2-Diethylbenzene	(4)	13.518	119	4072123	305.325
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	669008	339.050
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	2855960	285.855
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	2681523	276.030
147) Hexachlorobutadiene	(4)	14.670	225	1157297	252.311
148) Naphthalene	(4)	14.772	128	9186333	294.145
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	2488608	263.270
150) 2-Methylnaphthalene	(4)	15.563	142	4666682	242.655

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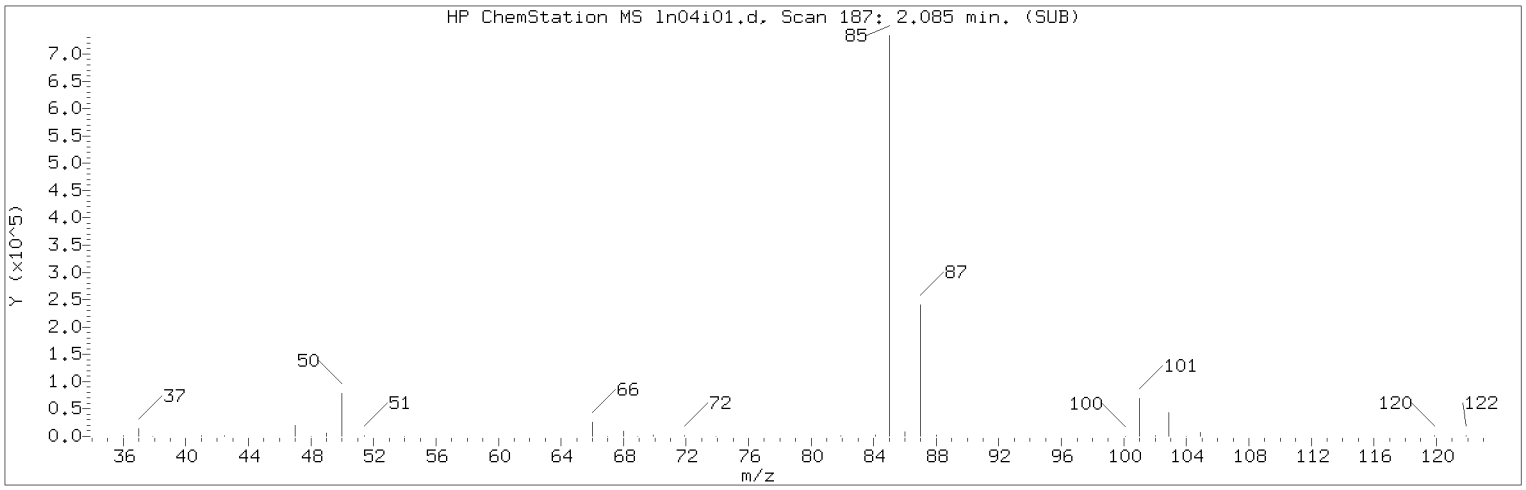
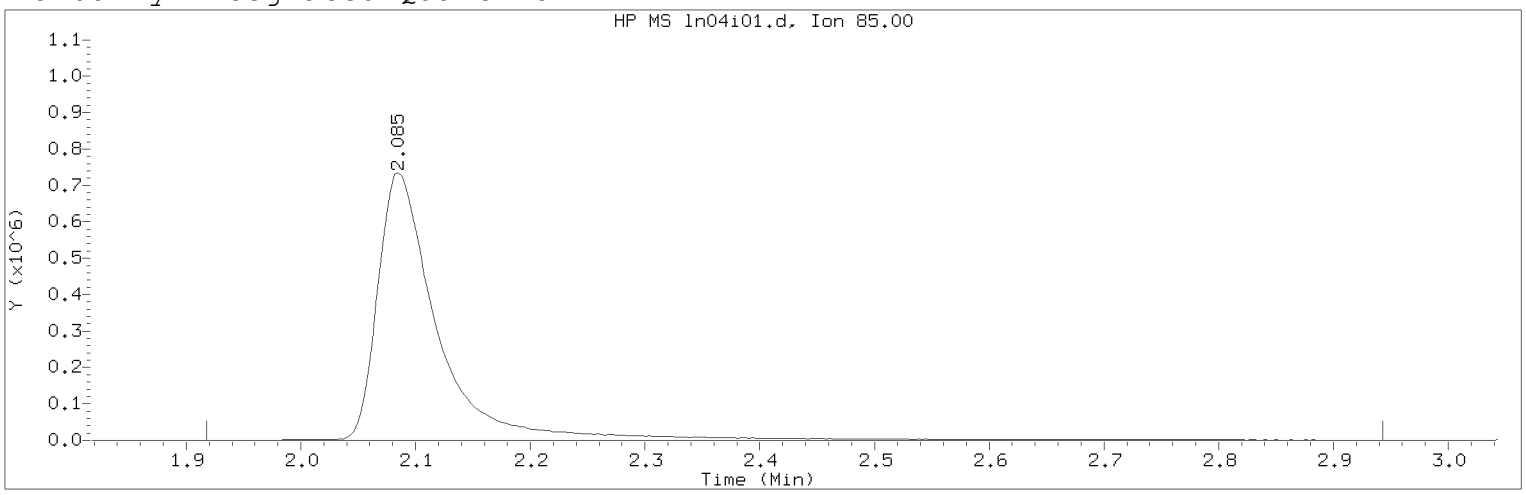
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

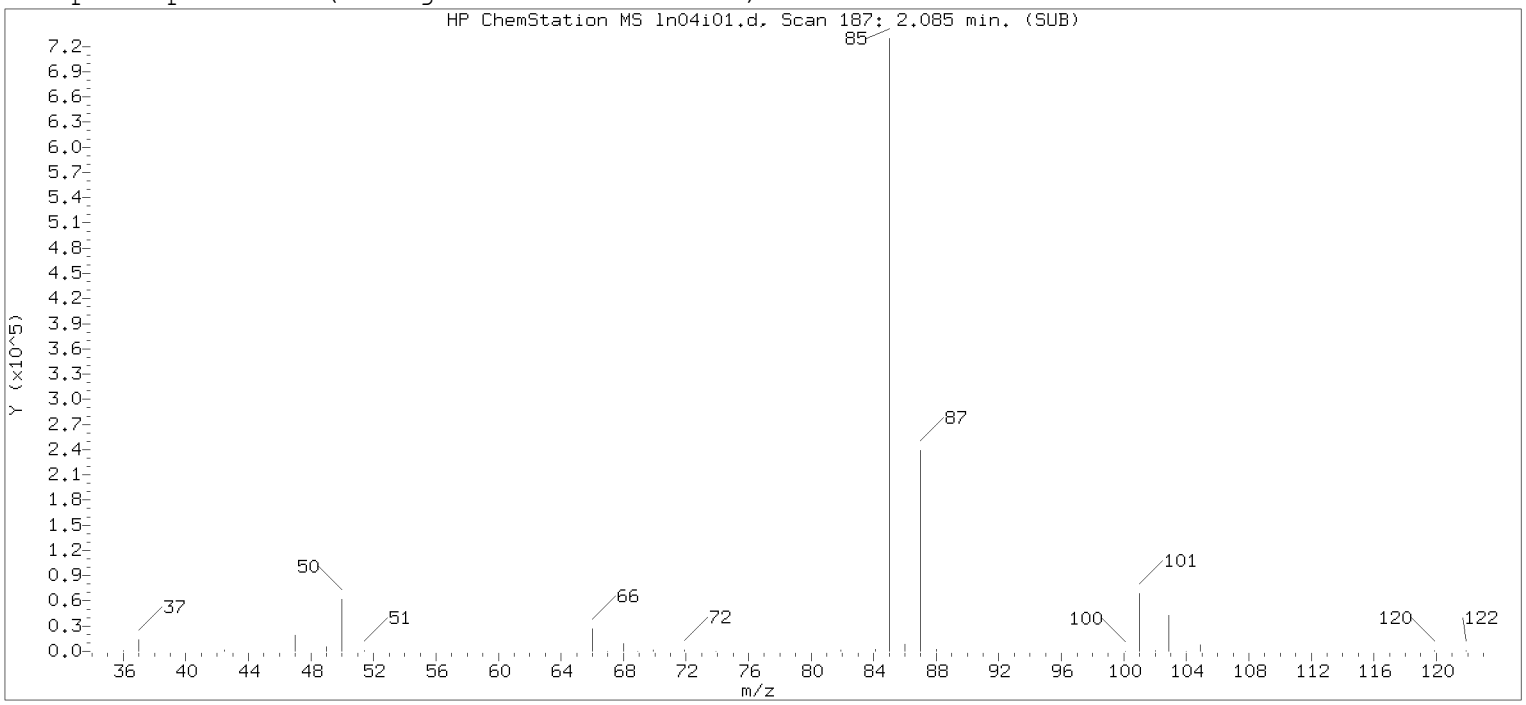
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area (flag) : 2719746M
On-Column Amount (ng) : 347.9426
Integration start scan : 134 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

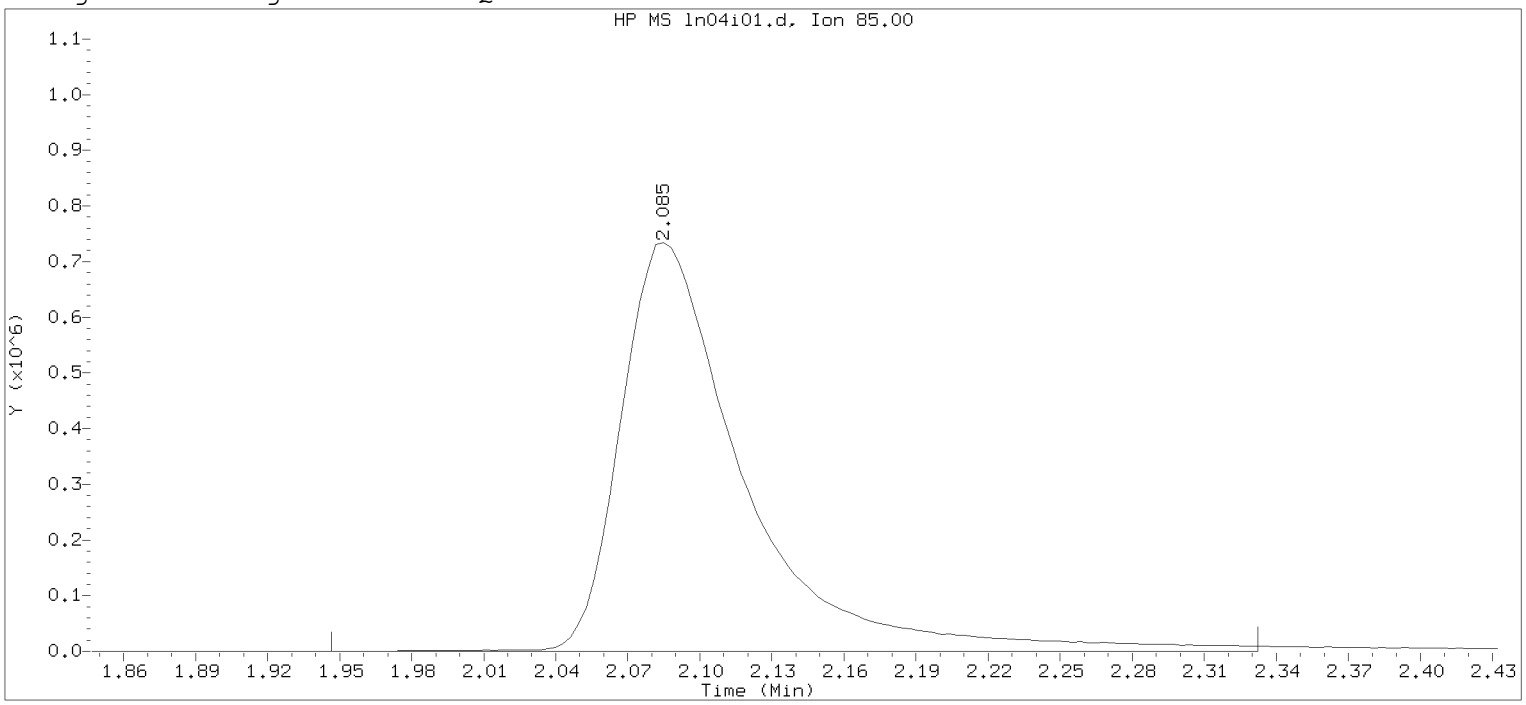
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

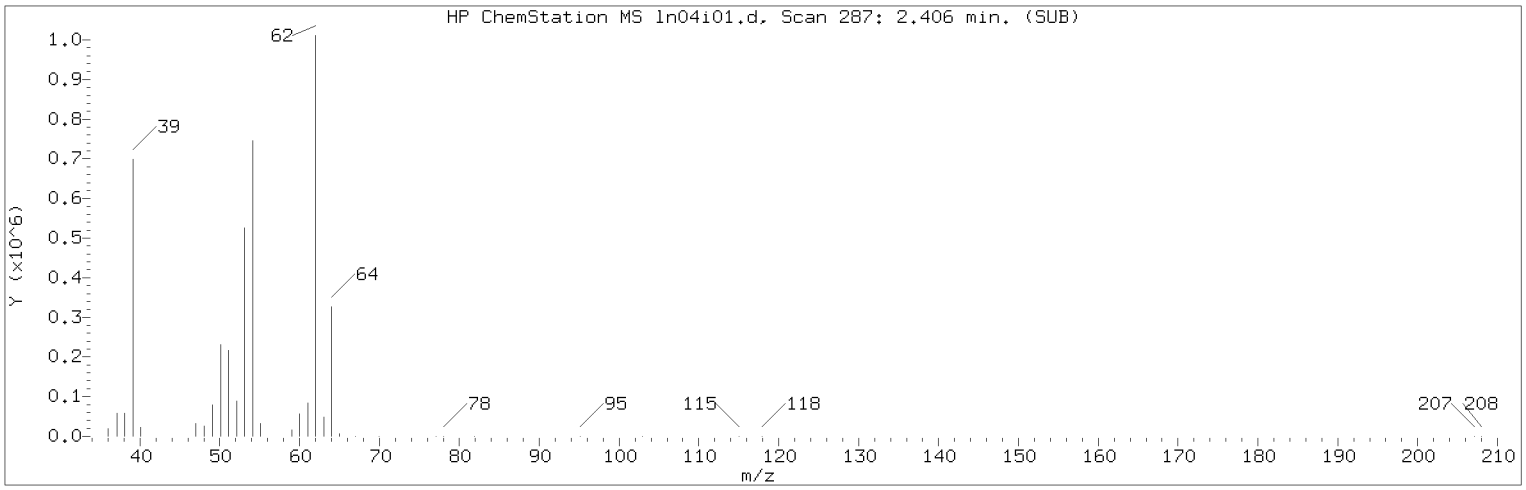
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

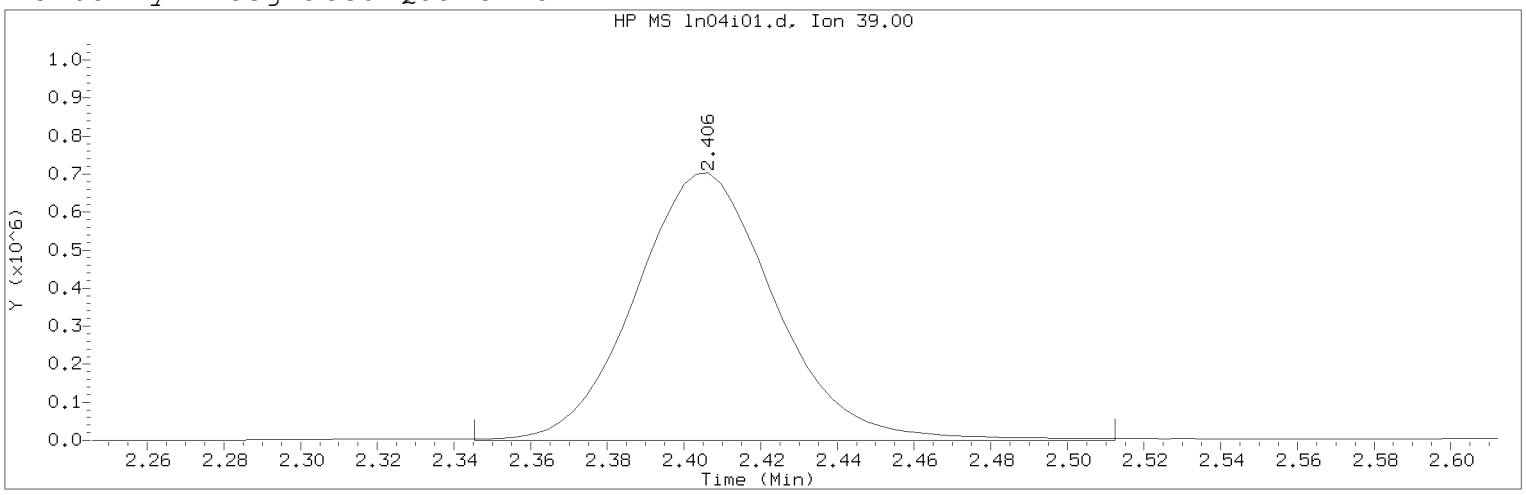
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area : 2624212
On-column Amount (ng) : 308.6520
Integration start scan : 143 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09012

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

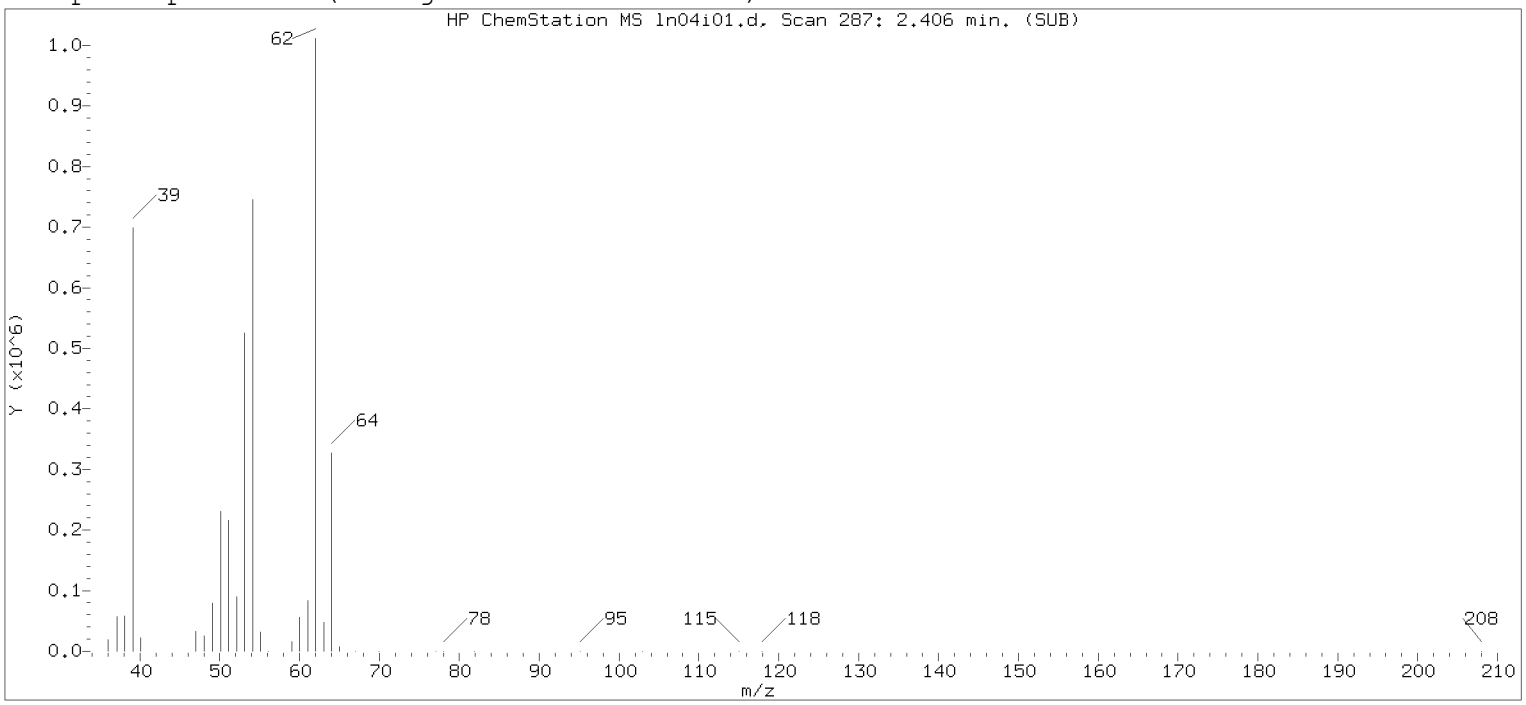
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 1785787M
On-Column Amount (ng) : 285.4858
Integration start scan : 267 Integration stop scan: 319
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

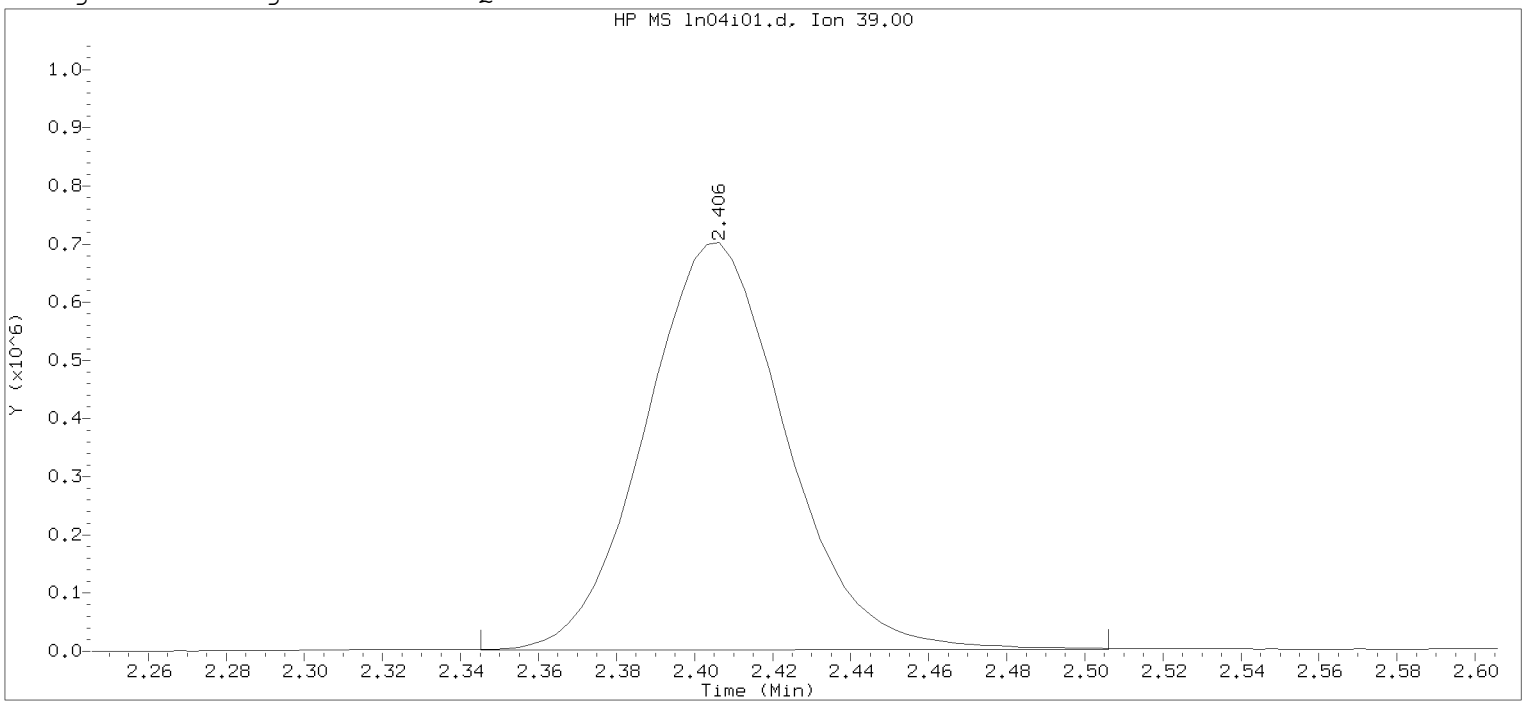
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

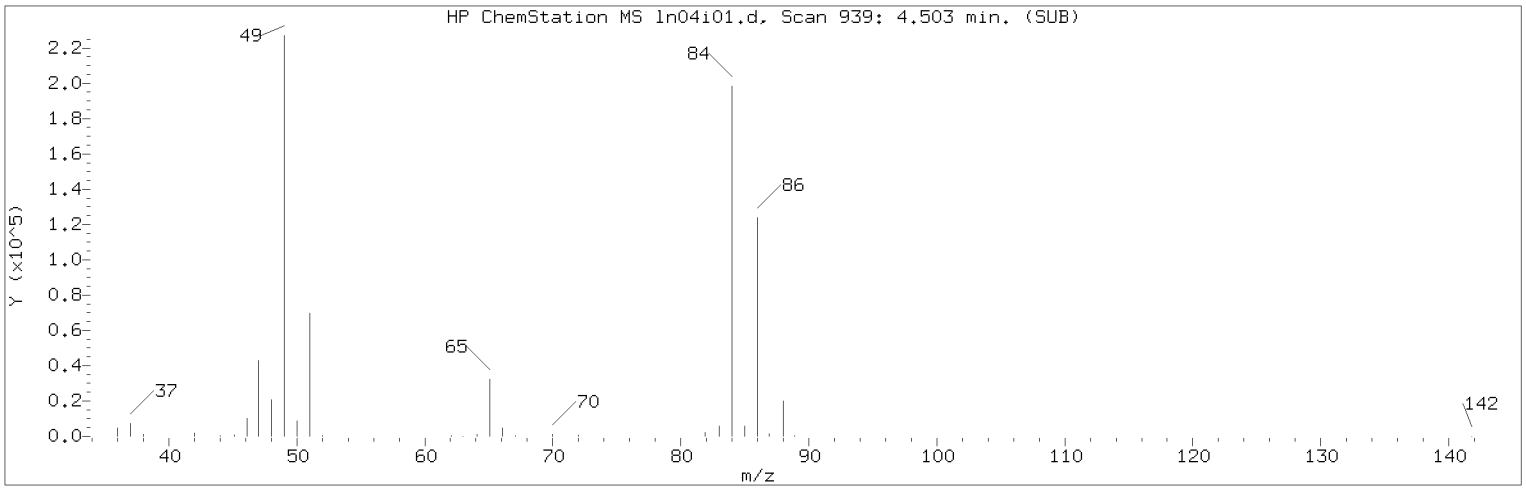
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

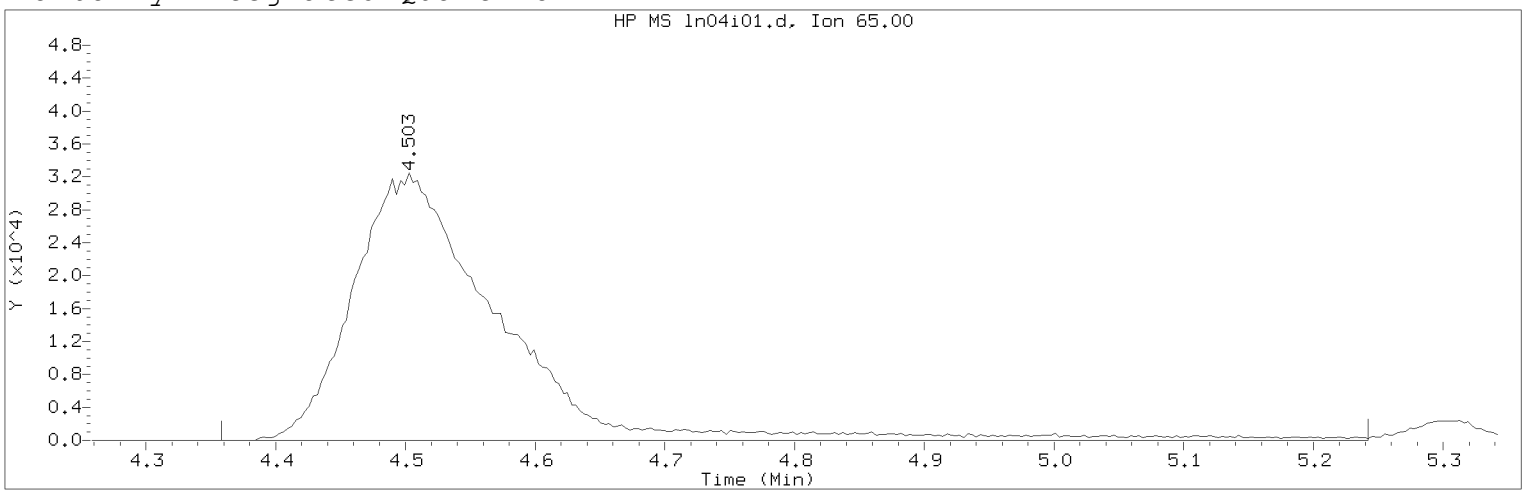
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 1755596
On-column Amount (ng) : 295.0708
Integration start scan : 267 Integration stop scan: 317
Y at integration start : 2196 Y at integration end: 3553

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh00172

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

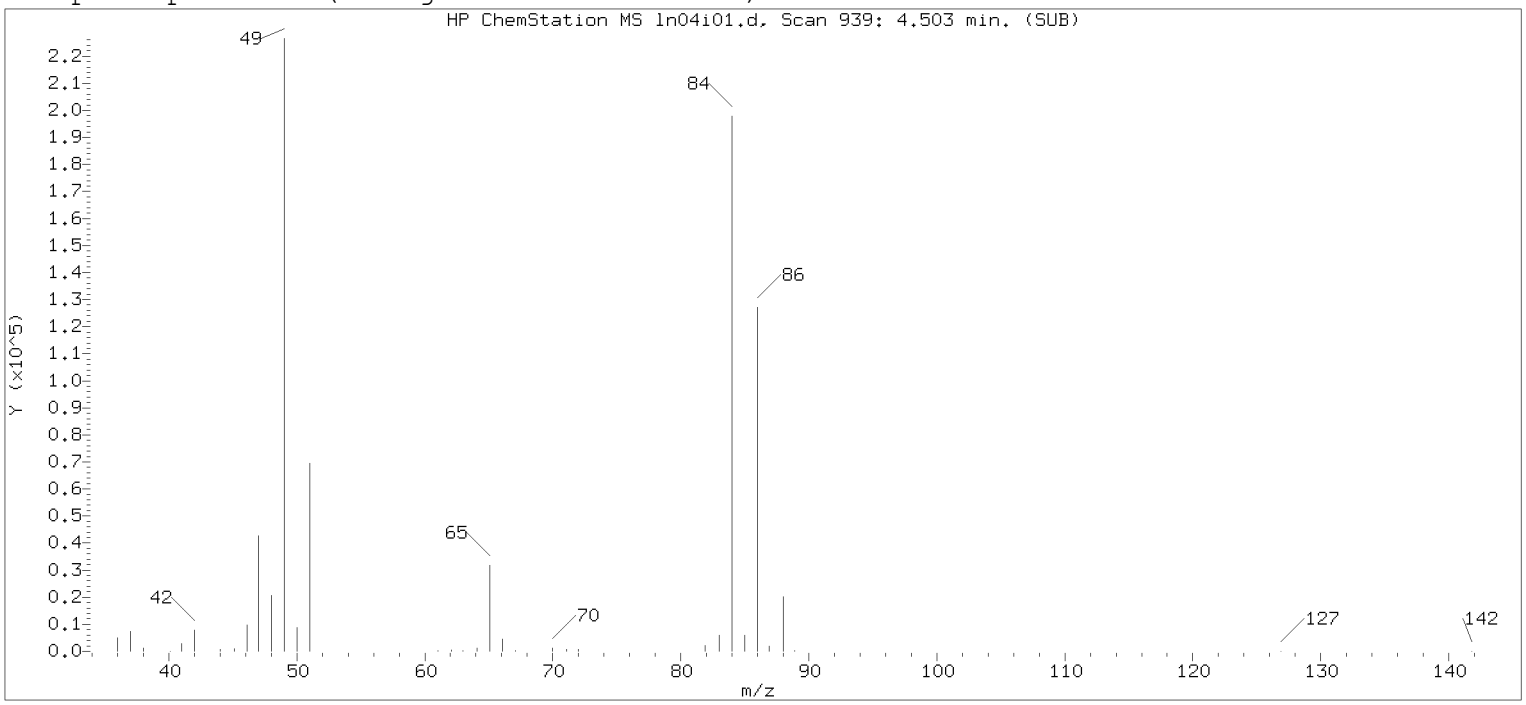
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area (flag) : 254406M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1168
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

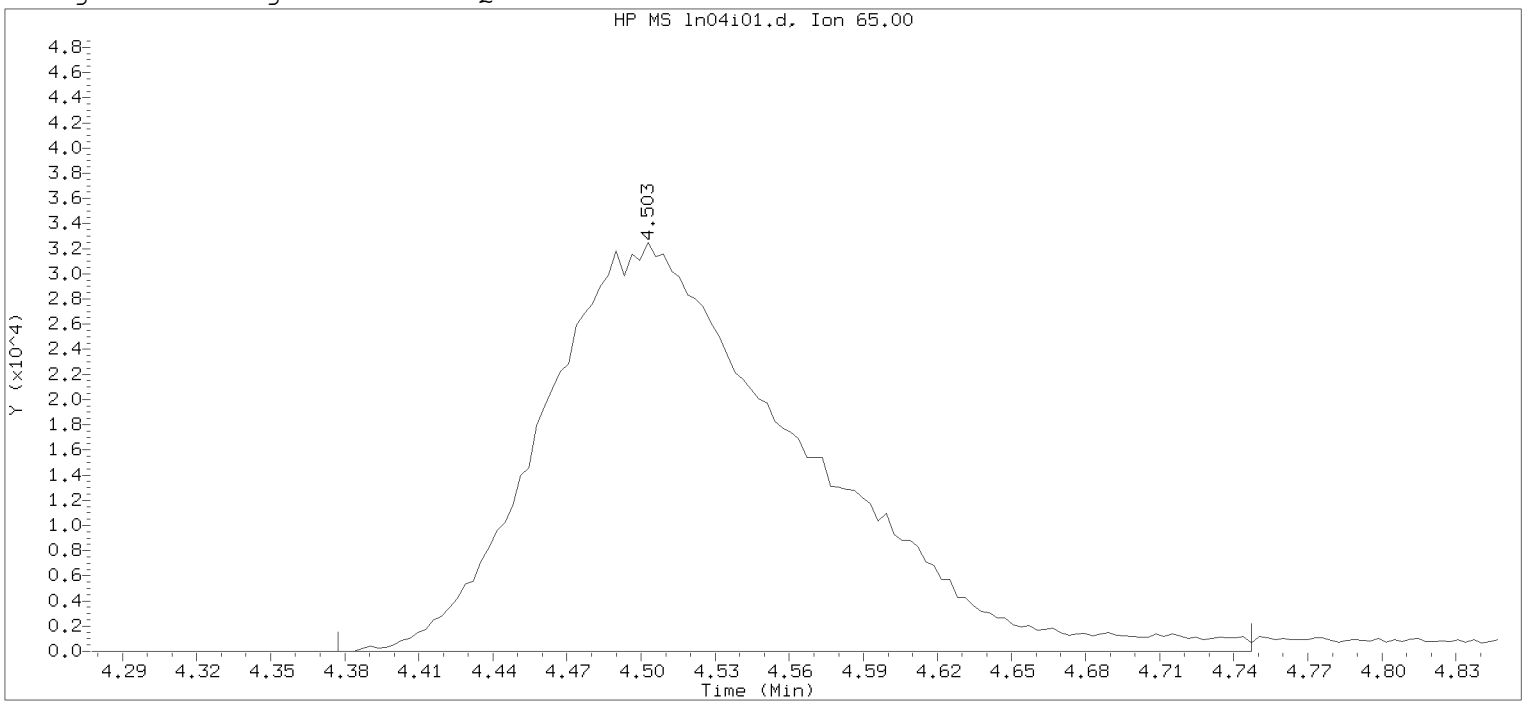
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

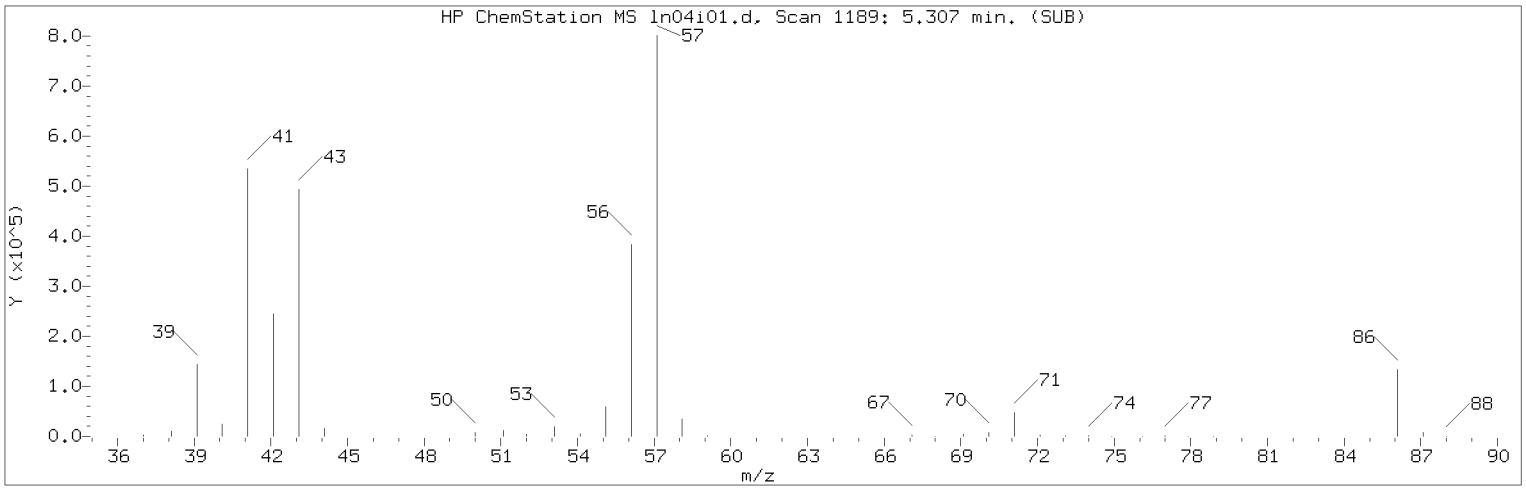
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

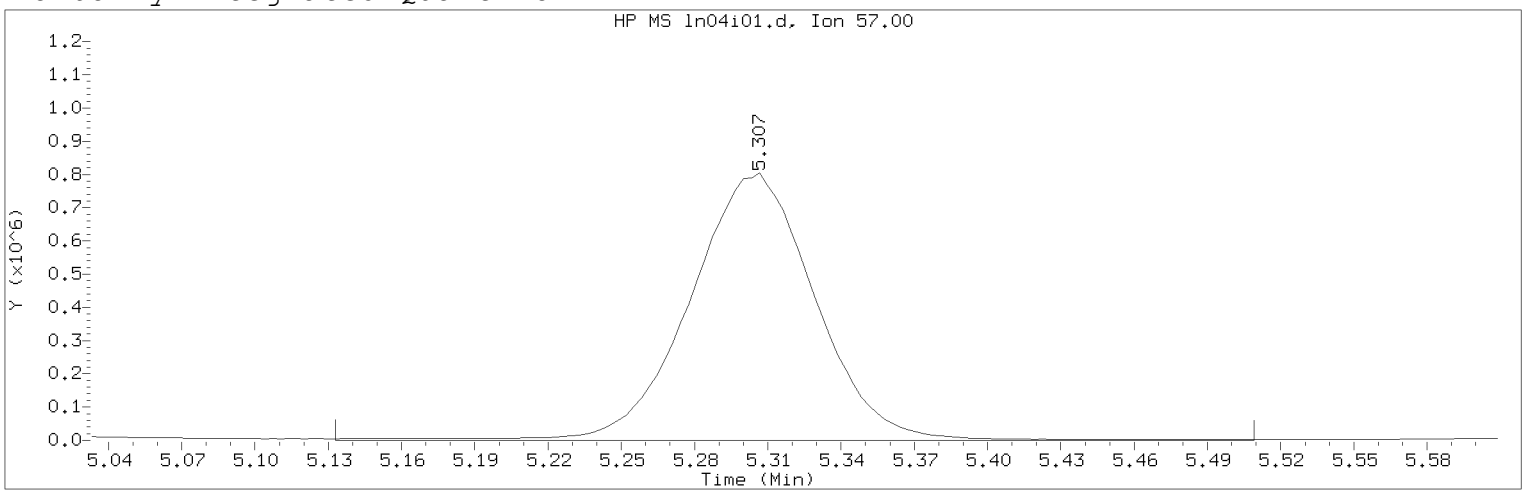
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area : 237264
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jhowe177

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

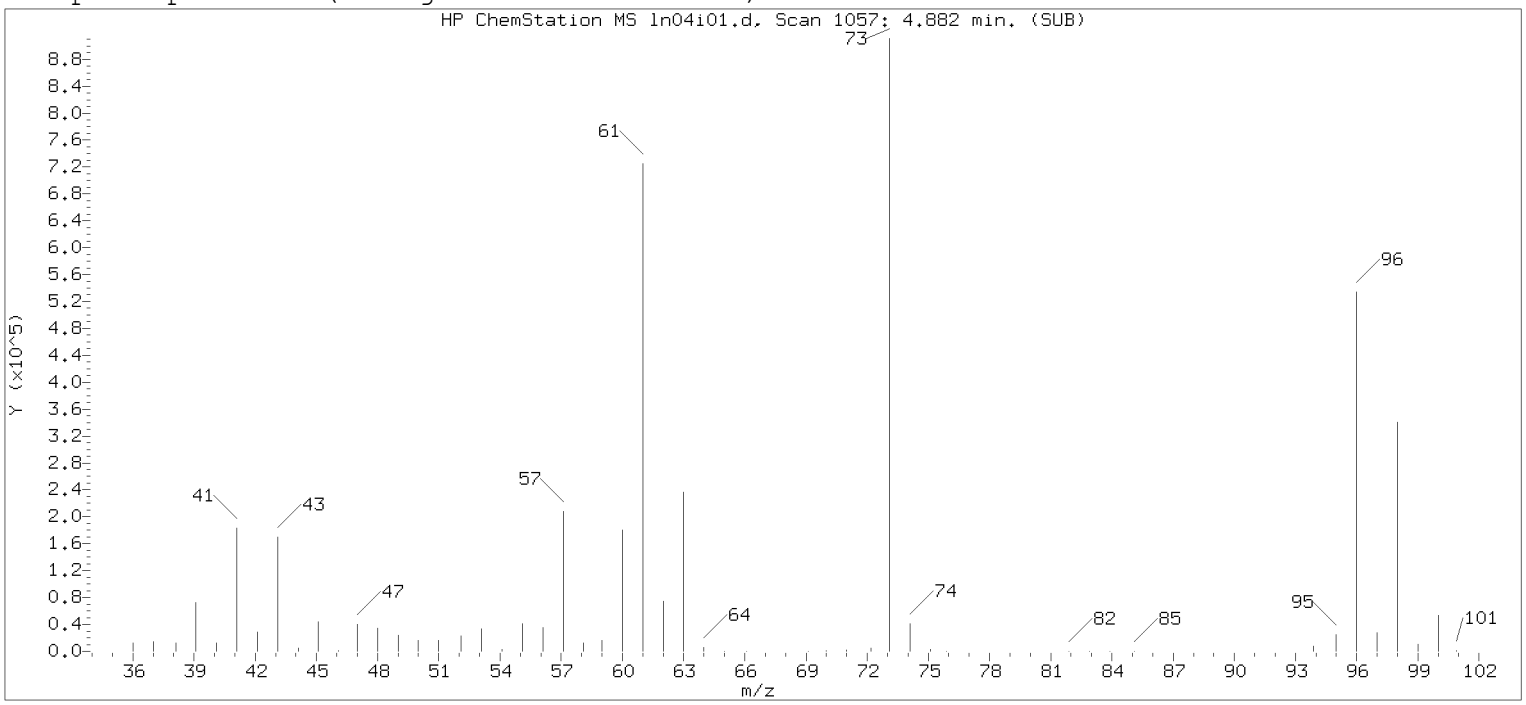
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1189
Retention Time (minutes): 5.307
Quant Ion : 57.00
Area (flag) : 2863189M
On-Column Amount (ng) : 334.8105
Integration start scan : 1134 Integration stop scan: 1251
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

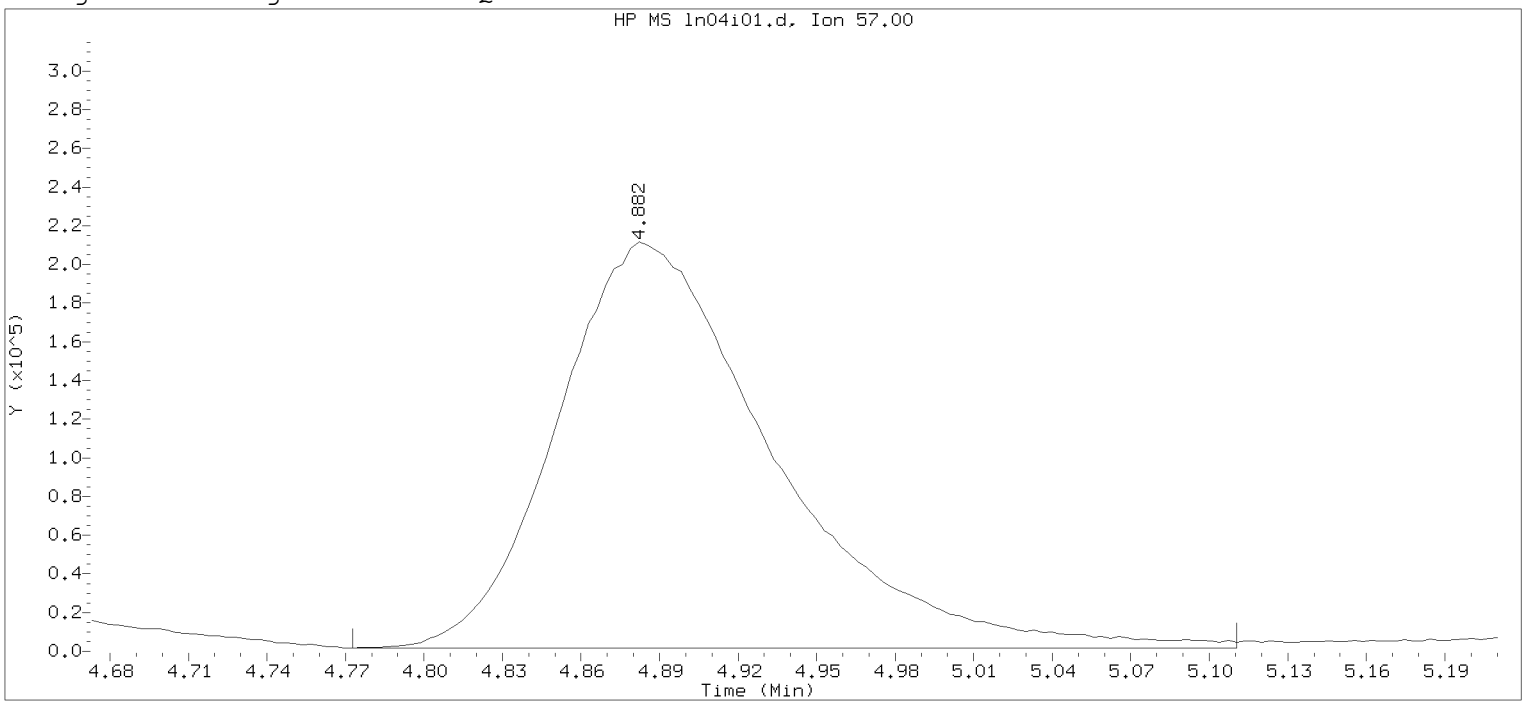
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

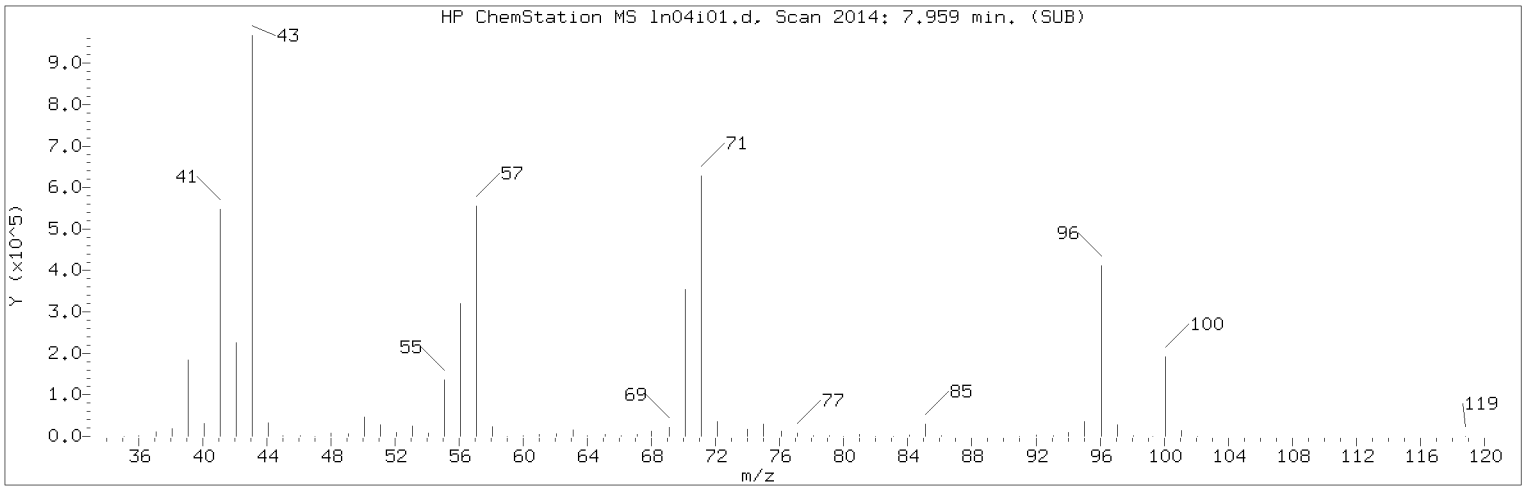
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

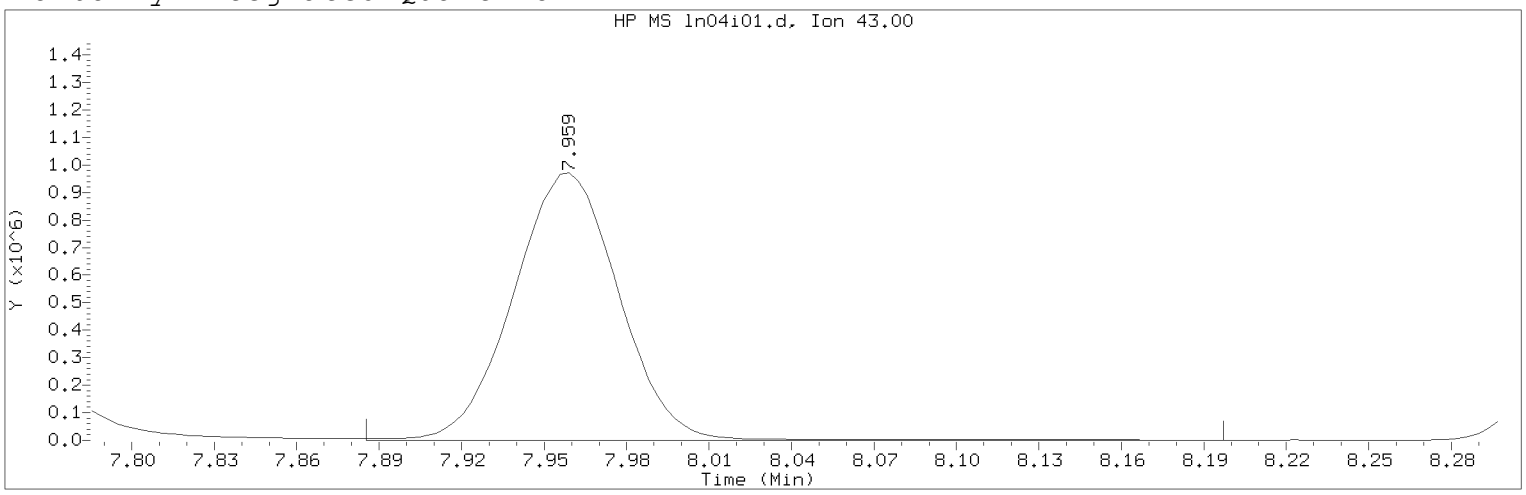
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1057
Retention Time (minutes): 4.882
Quant Ion : 57.00
Area : 1202378
On-column Amount (ng) : 301.4561
Integration start scan : 1022 Integration stop scan: 1127
Y at integration start : 1806 Y at integration end: 1806

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user id: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

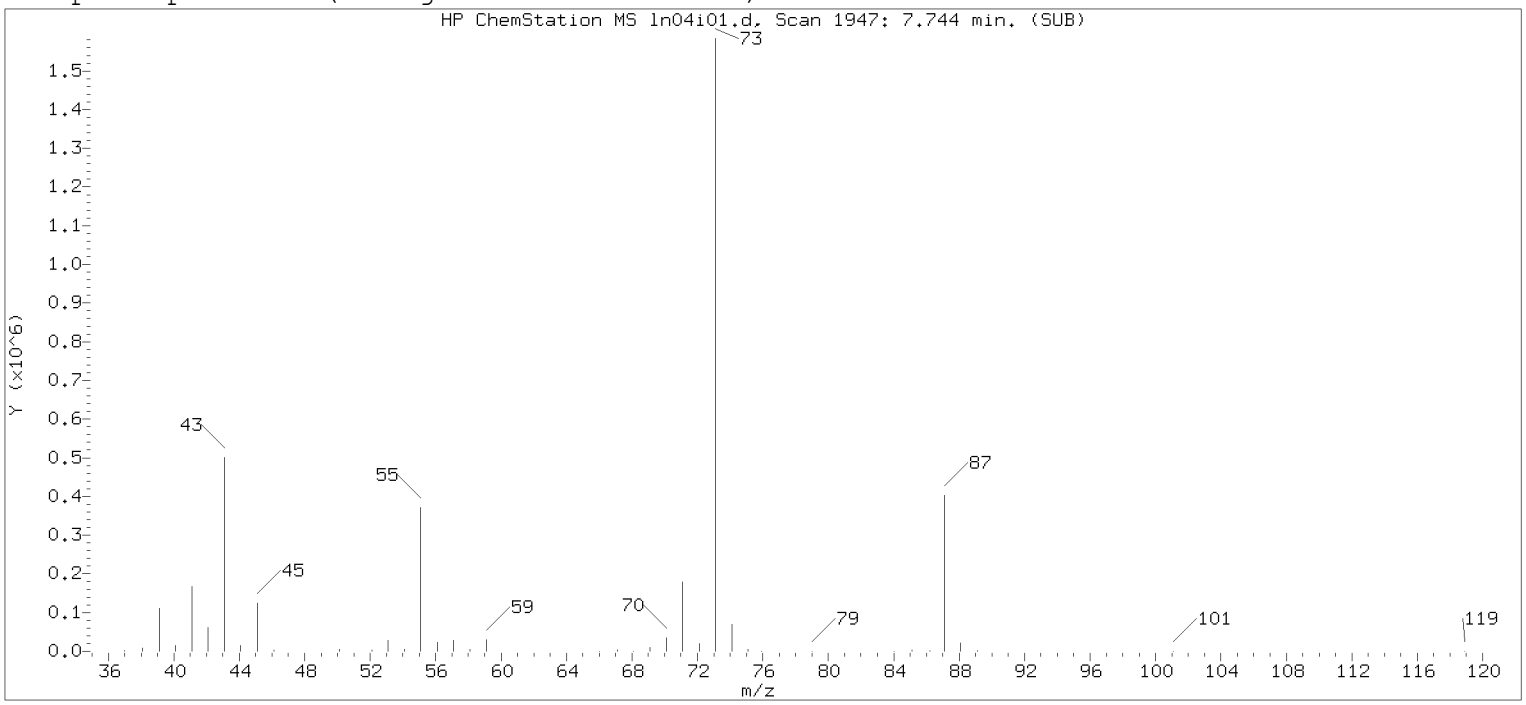
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2014
Retention Time (minutes): 7.959
Quant Ion : 43.00
Area (flag) : 2592531MA
On-Column Amount (ng) : 324.5176
Integration start scan : 1990 Integration stop scan: 2087
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

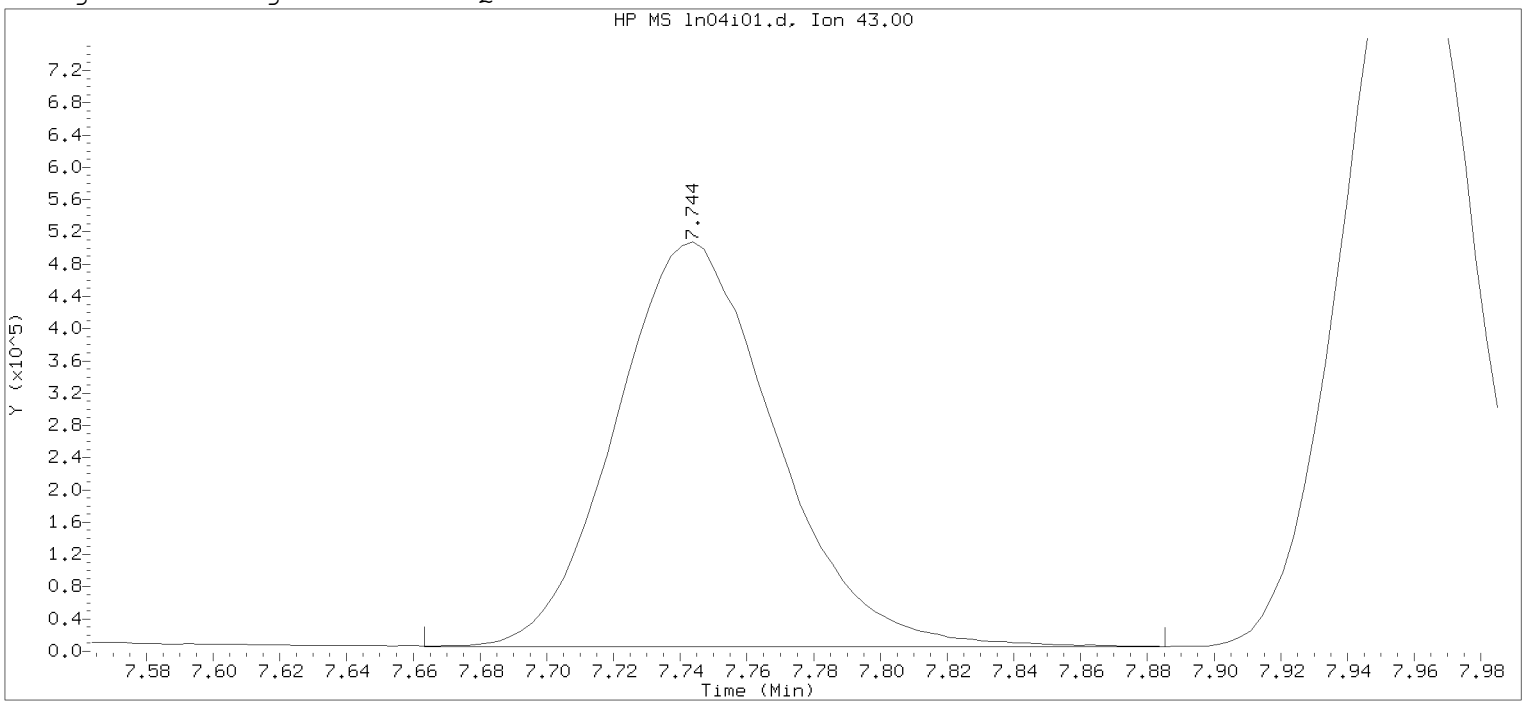
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

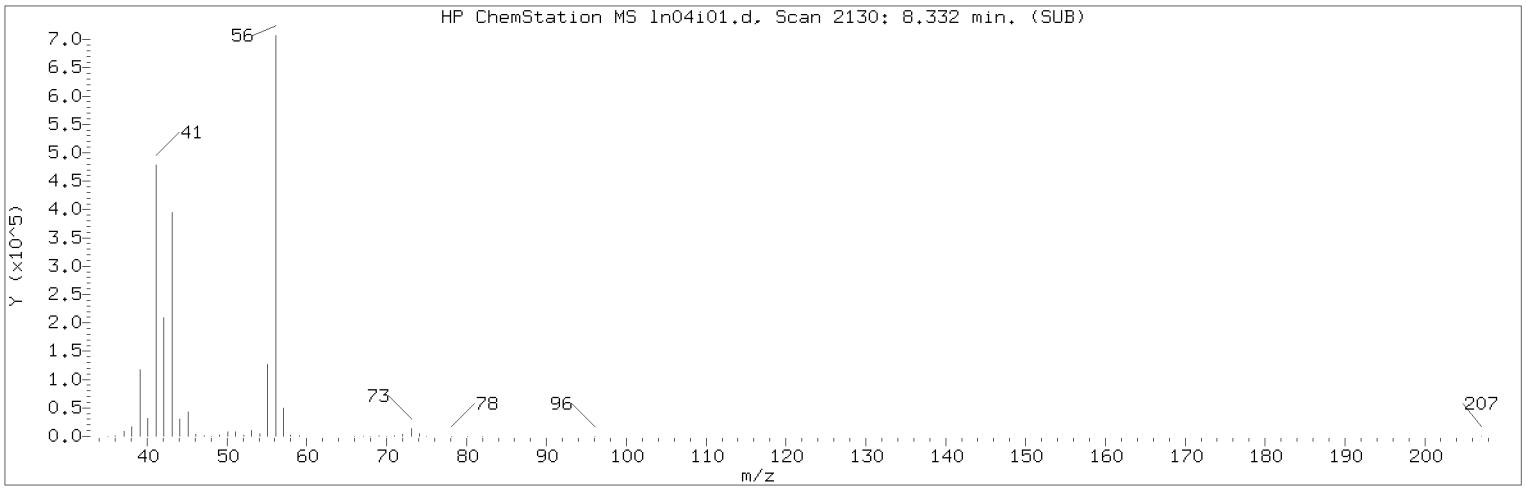
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

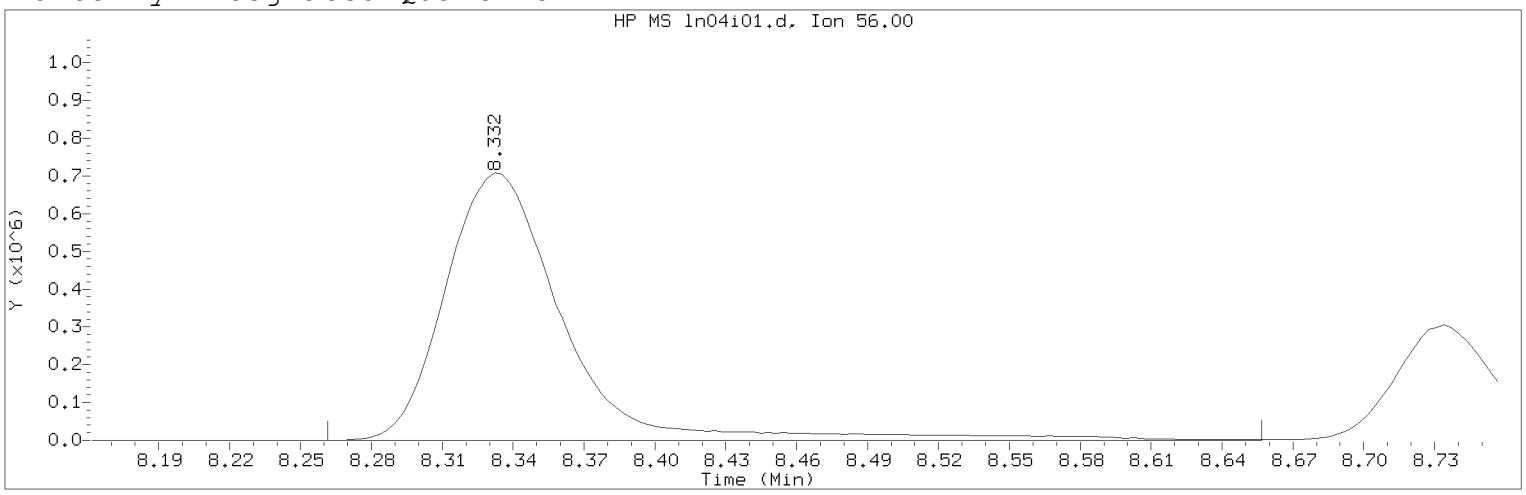
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1947
Retention Time (minutes): 7.744
Quant Ion : 43.00
Area : 1668813
On-column Amount (ng) : 288.4319
Integration start scan : 1921 Integration stop scan: 1990
Y at integration start : 5866 Y at integration end: 5866

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user id: jkhowe01

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

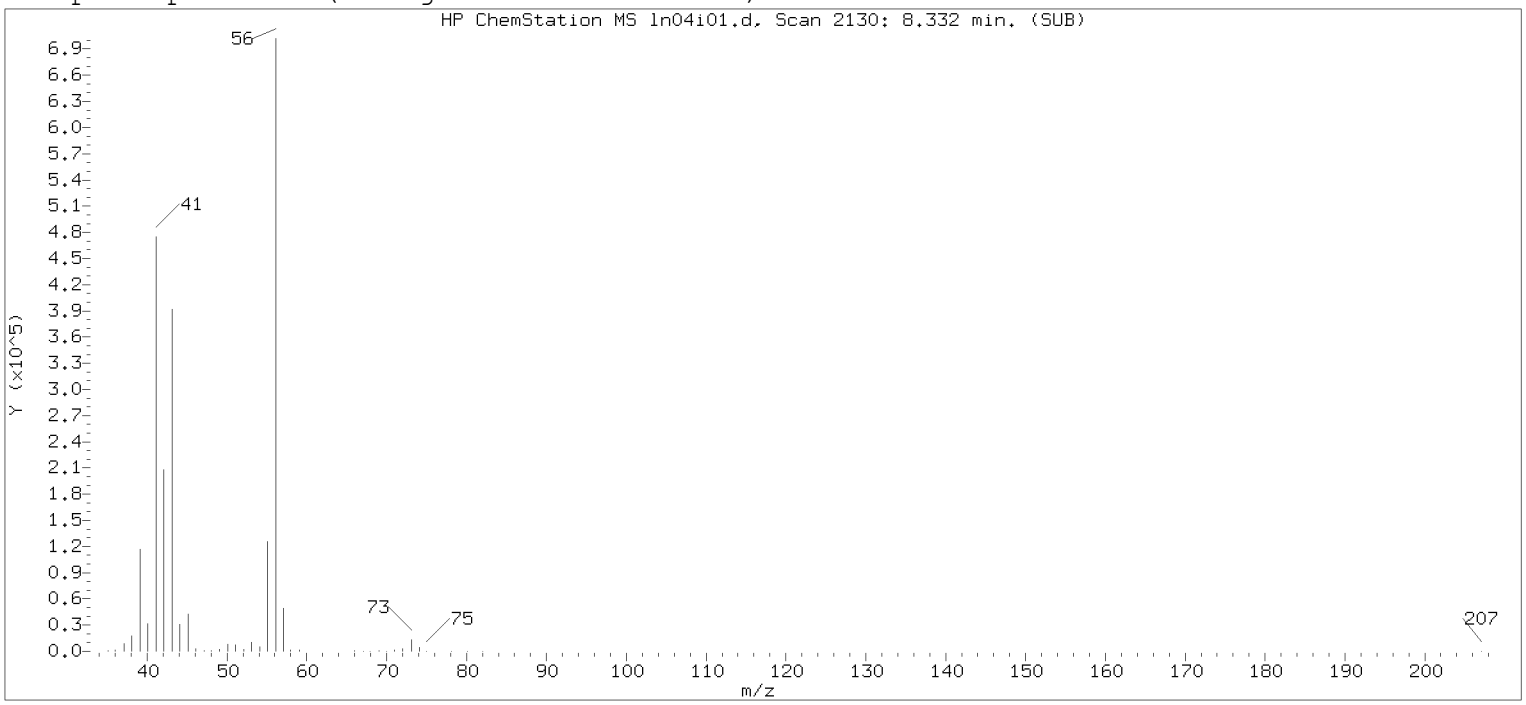
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area (flag) : 2465385M
On-Column Amount (ng) : 7947.0678
Integration start scan : 2107 Integration stop scan: 2230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

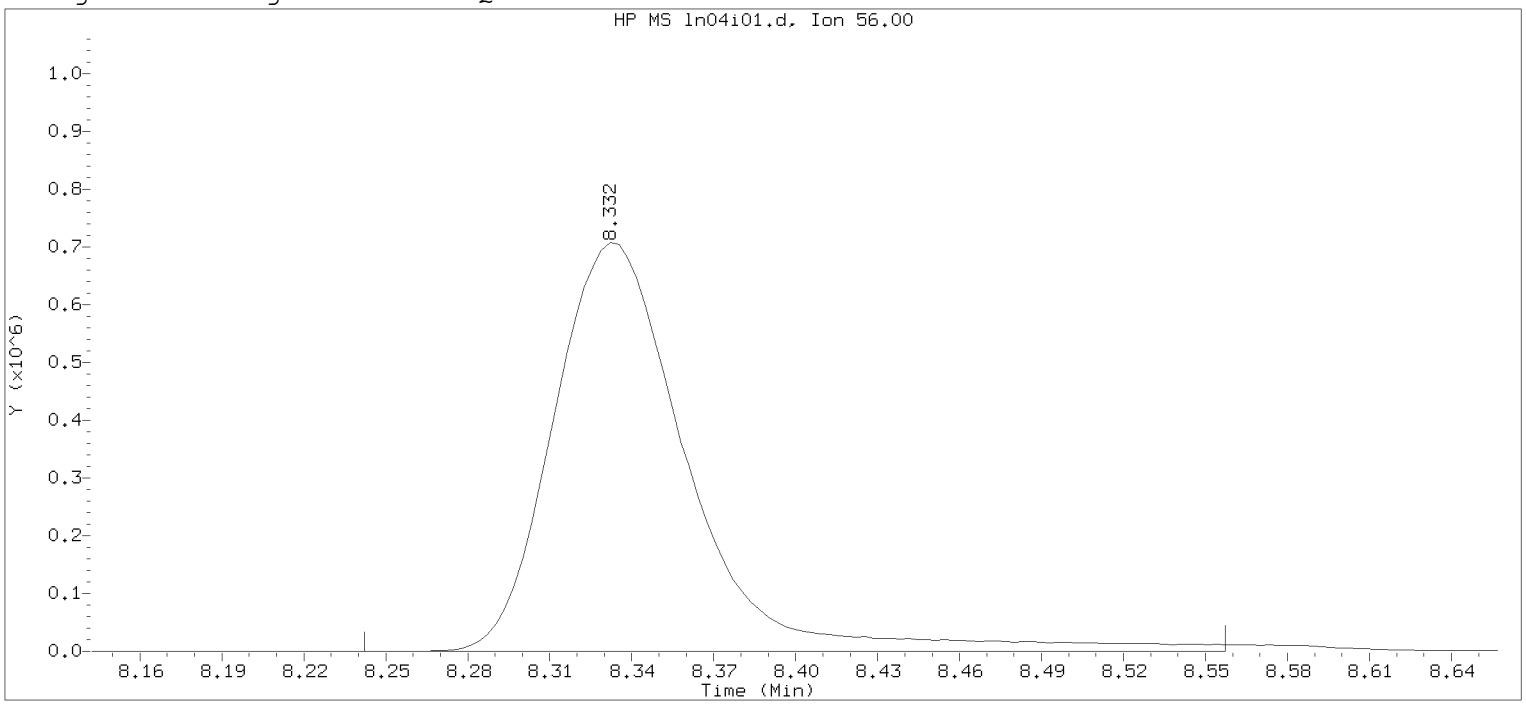
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

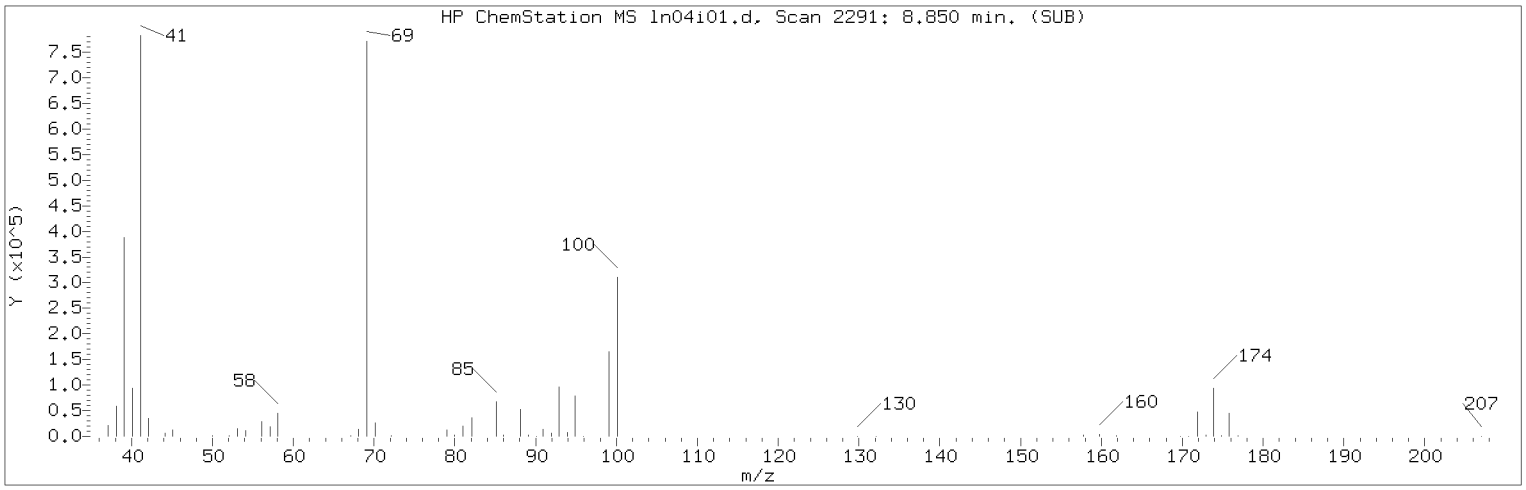
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

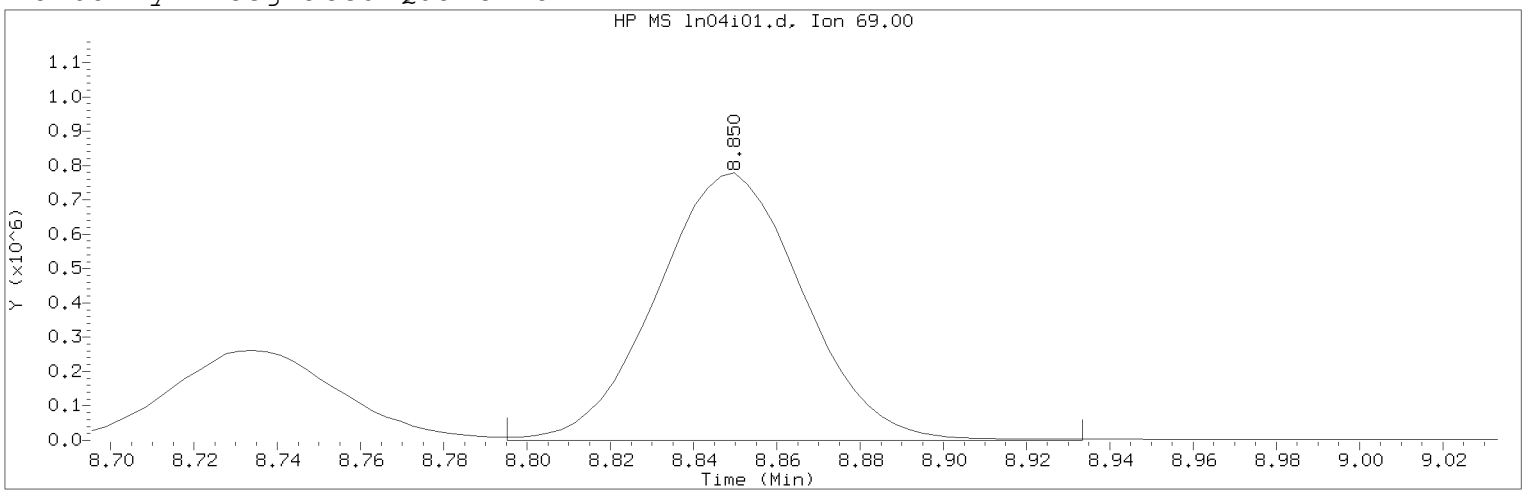
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area : 2429255
On-column Amount (ng) : 7682.9381
Integration start scan : 2101 Integration stop scan: 2199
Y at integration start : 176 Y at integration end: 176

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

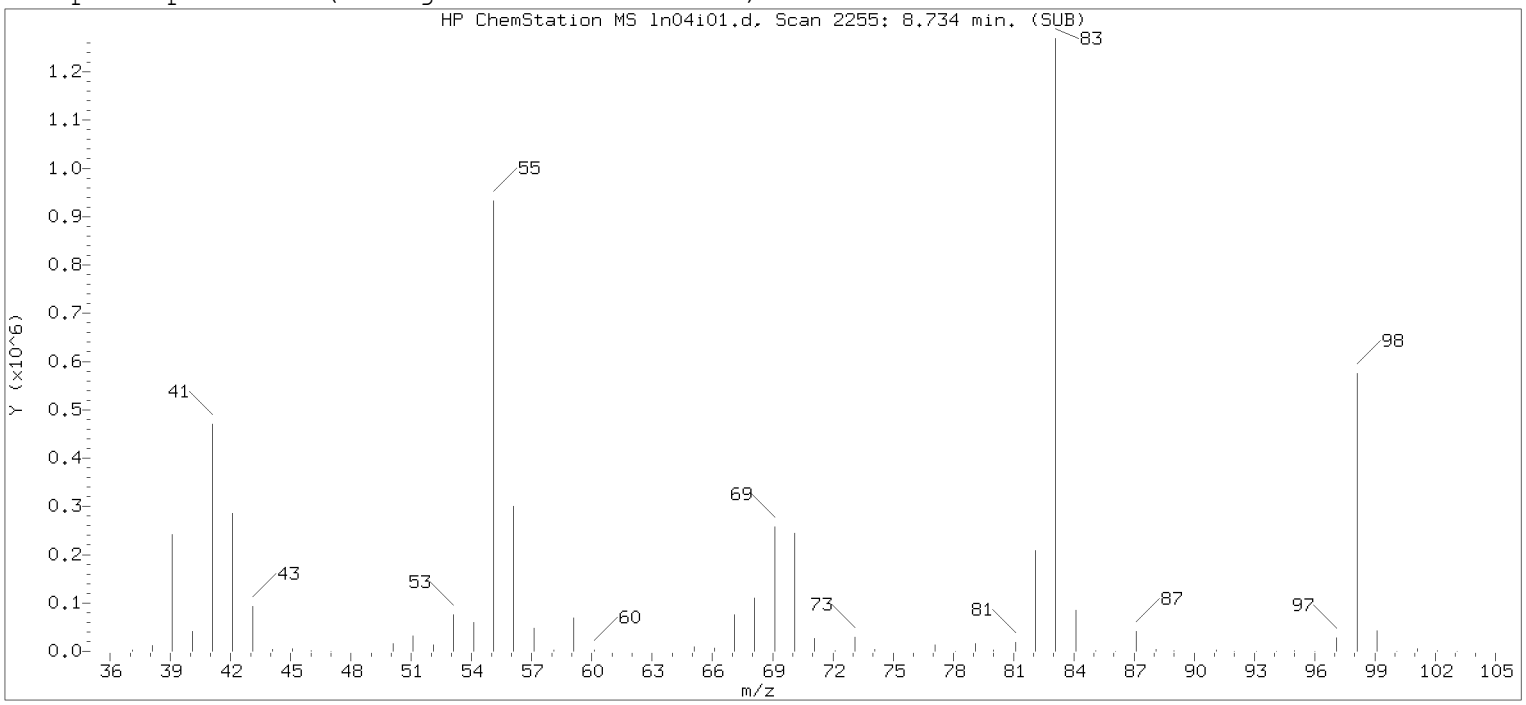
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2291
Retention Time (minutes): 8.850
Quant Ion : 69.00
Area (flag) : 1904896A
On-Column Amount (ng) : 340.2564
Integration start scan : 2273 Integration stop scan: 2316
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

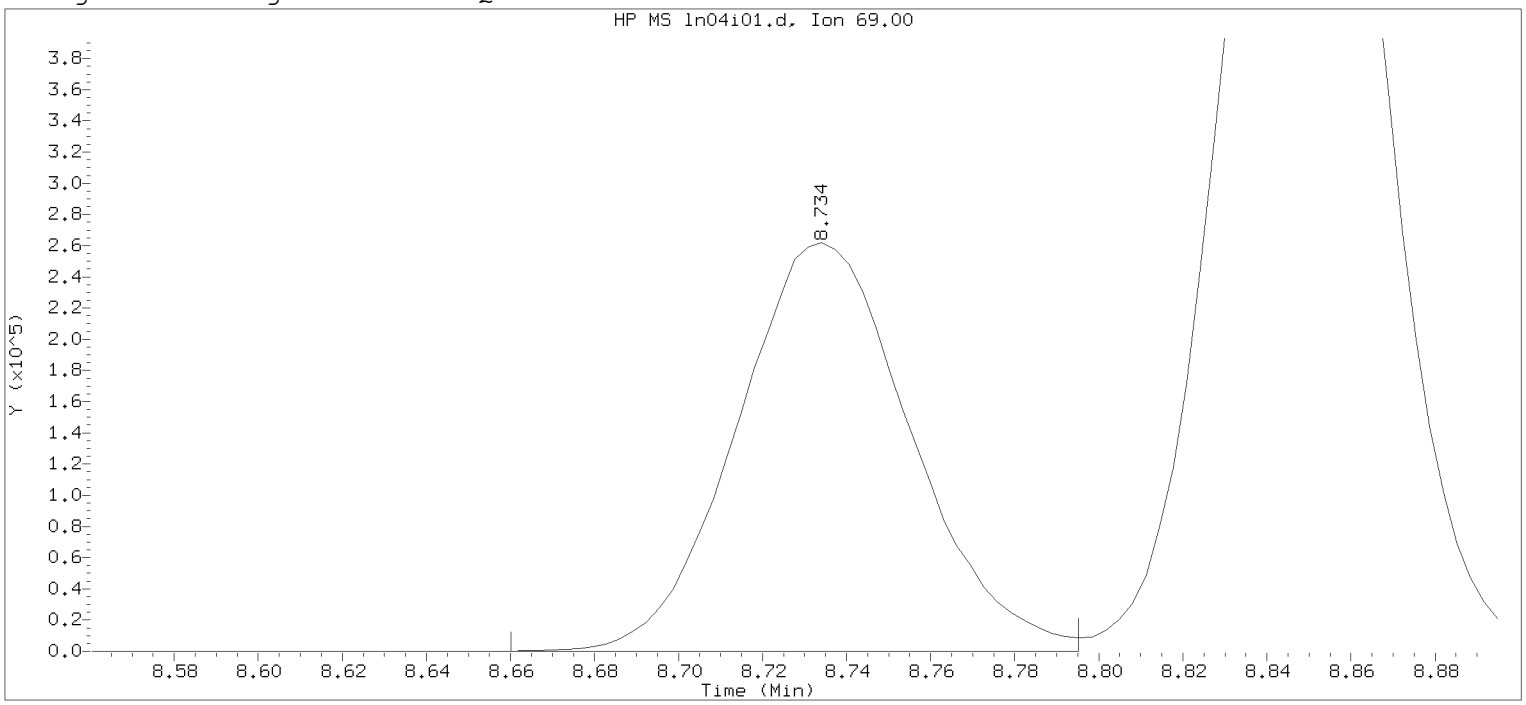
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

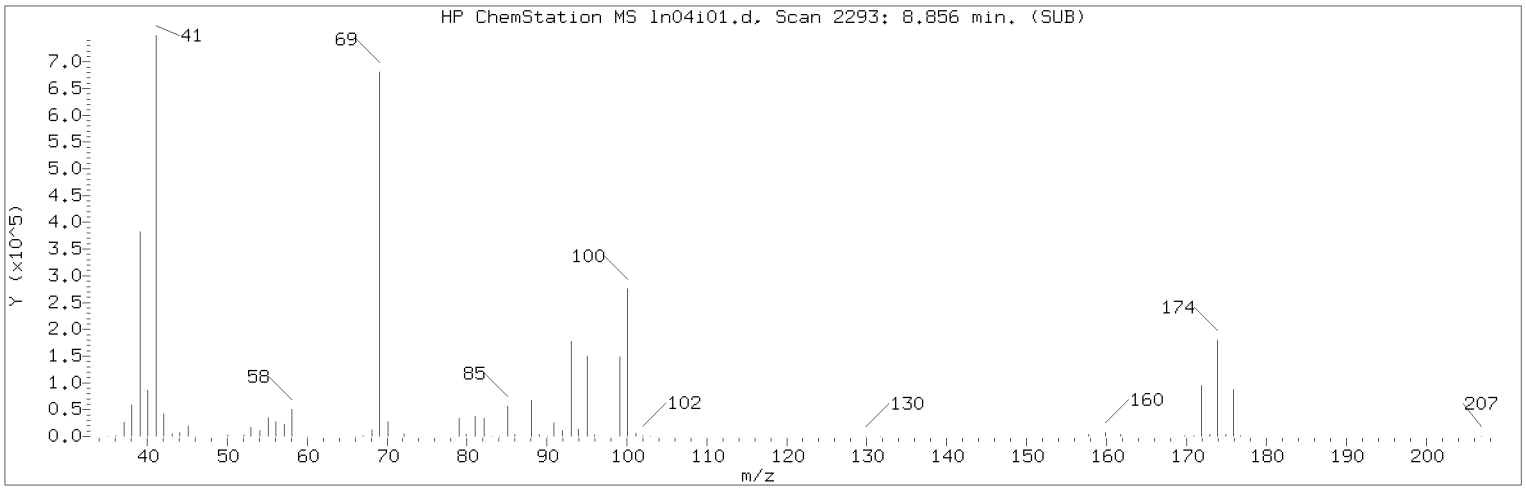
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

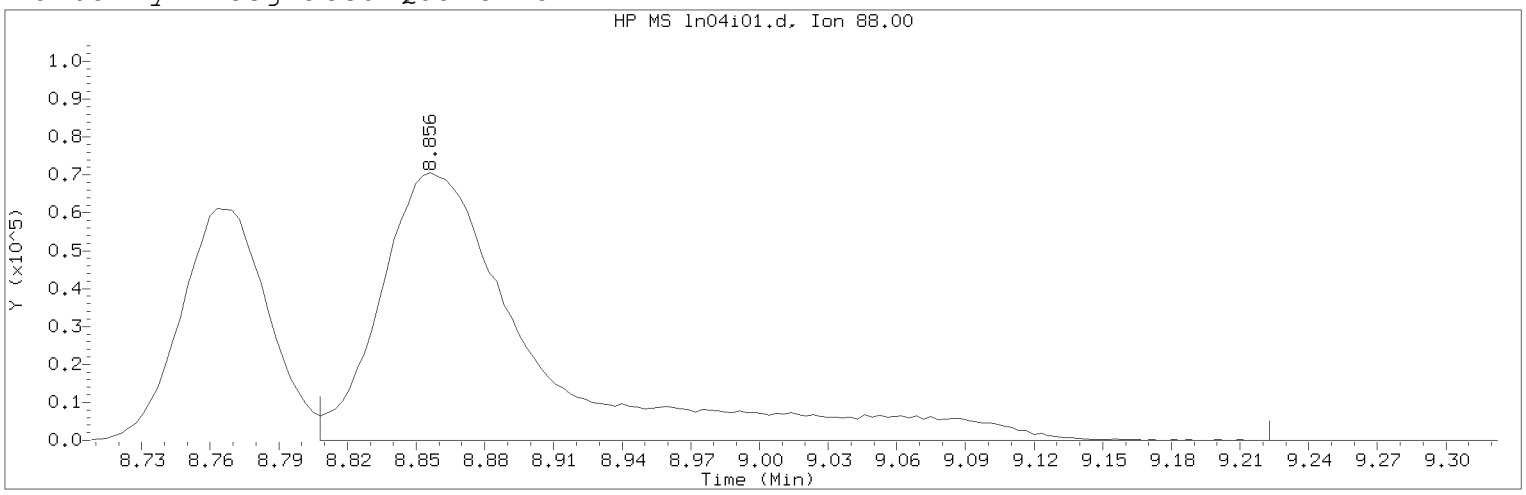
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 752058
On-column Amount (ng) : 311.1363
Integration start scan : 2231 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

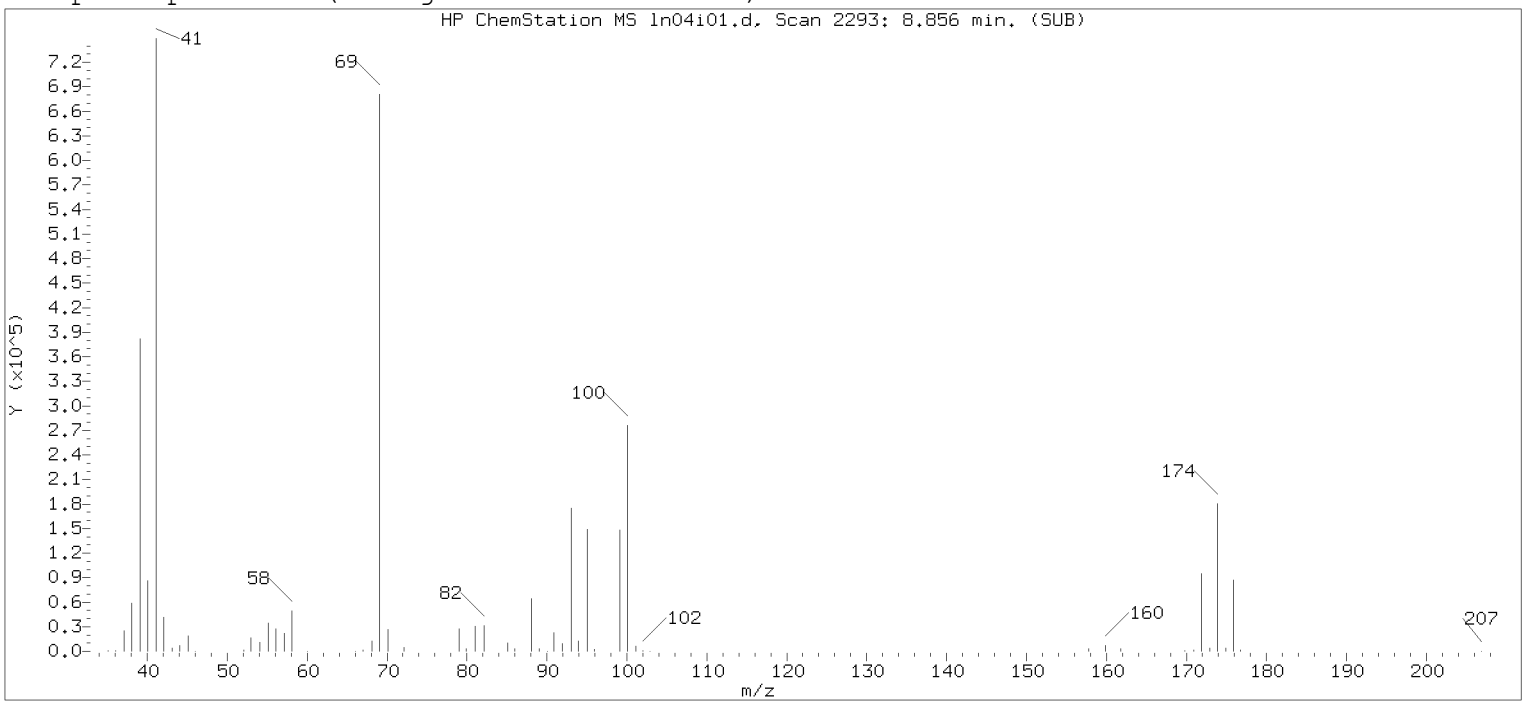
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 338379M
On-Column Amount (ng) : 3968.4208
Integration start scan : 2277 Integration stop scan: 2406
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

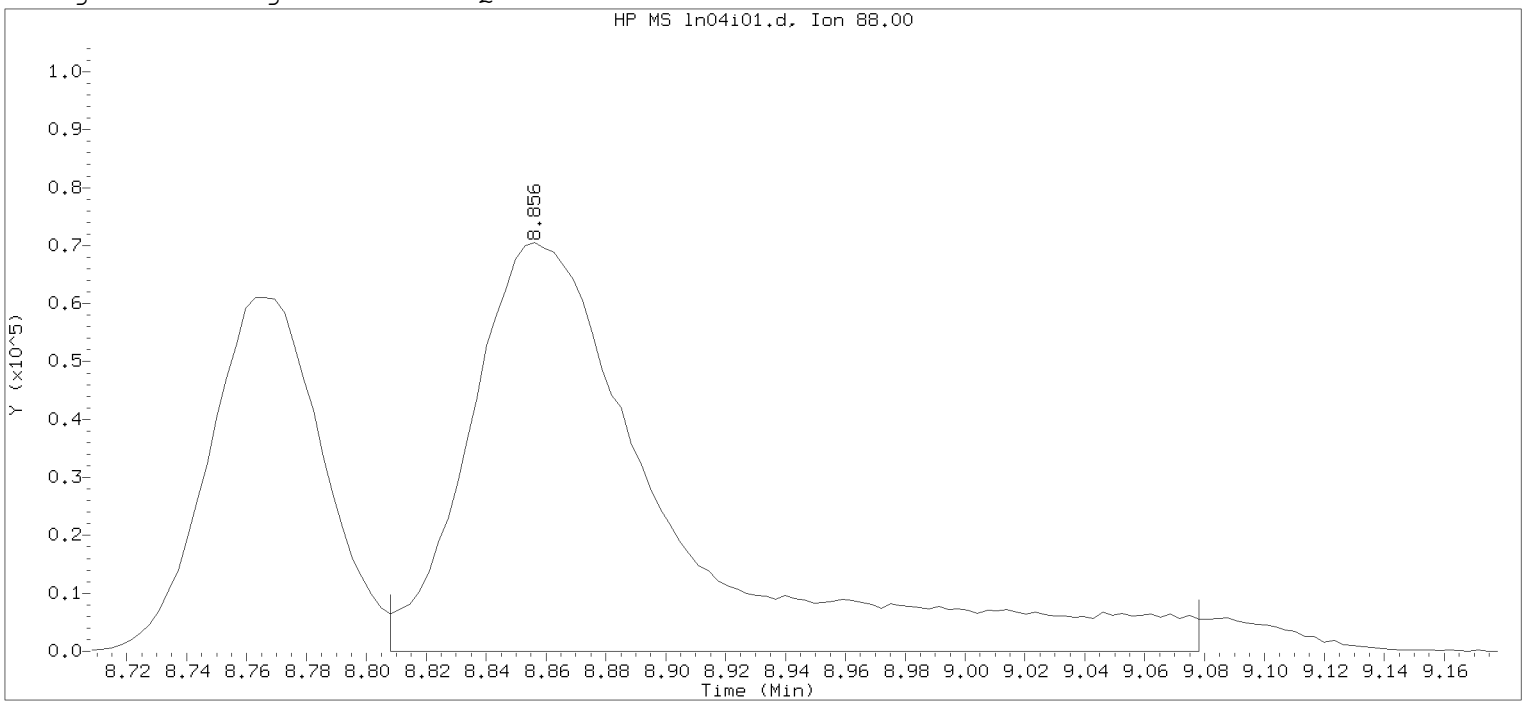
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

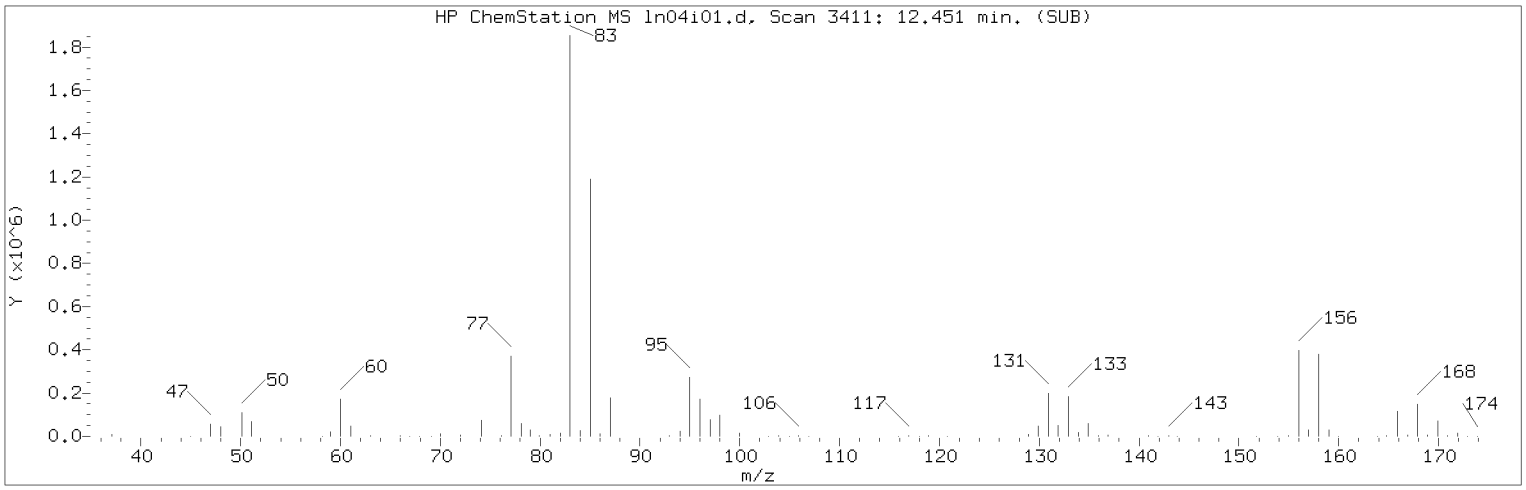
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

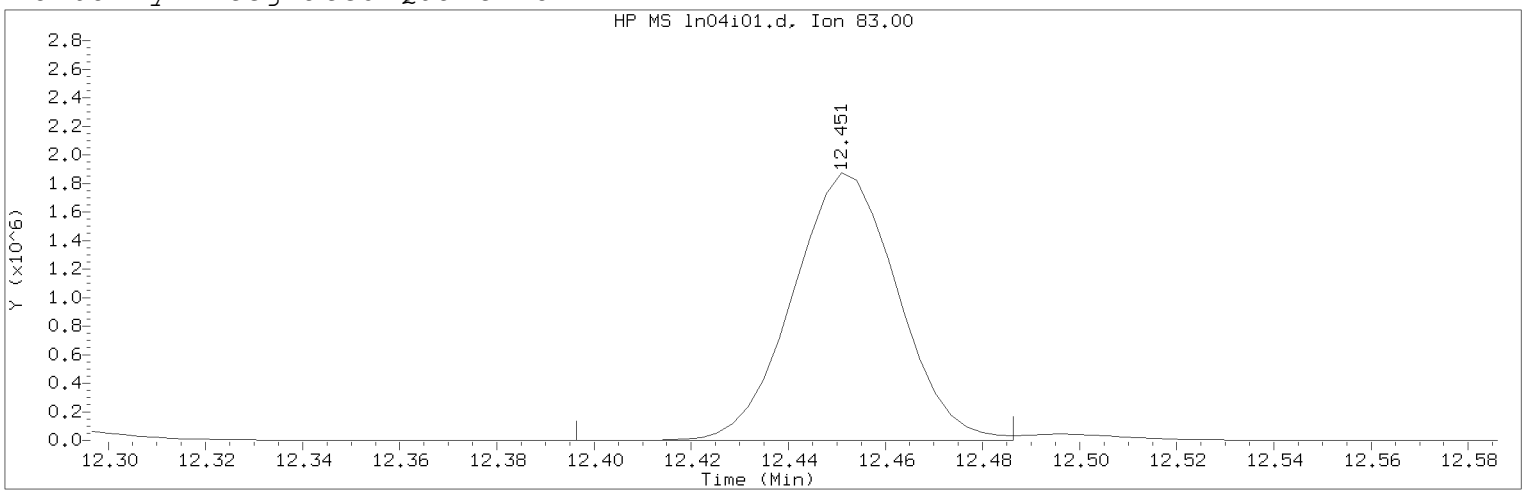
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area : 325164
On-column Amount (ng) : 3803.8575
Integration start scan : 2277 Integration stop scan: 2361
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh00057

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

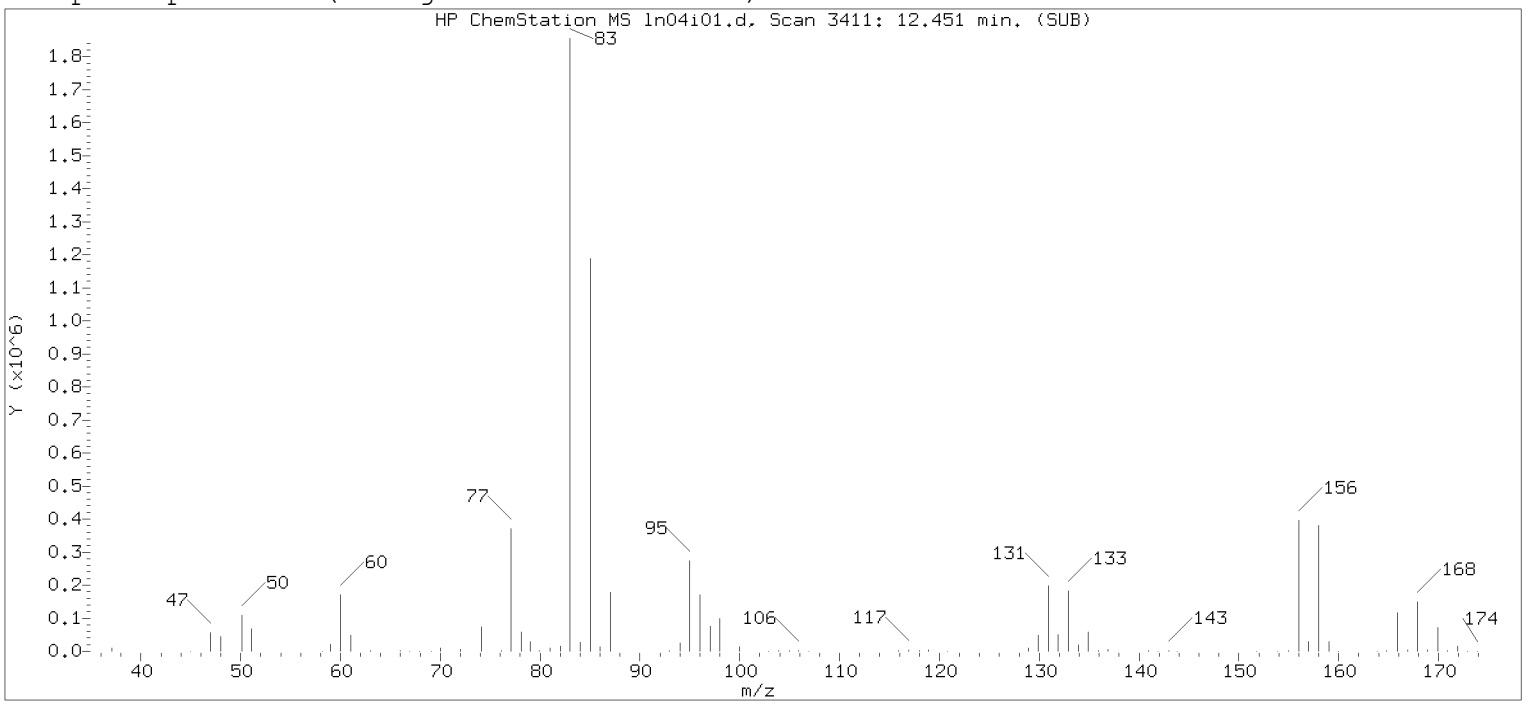
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 2800639M
On-Column Amount (ng) : 310.7054
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

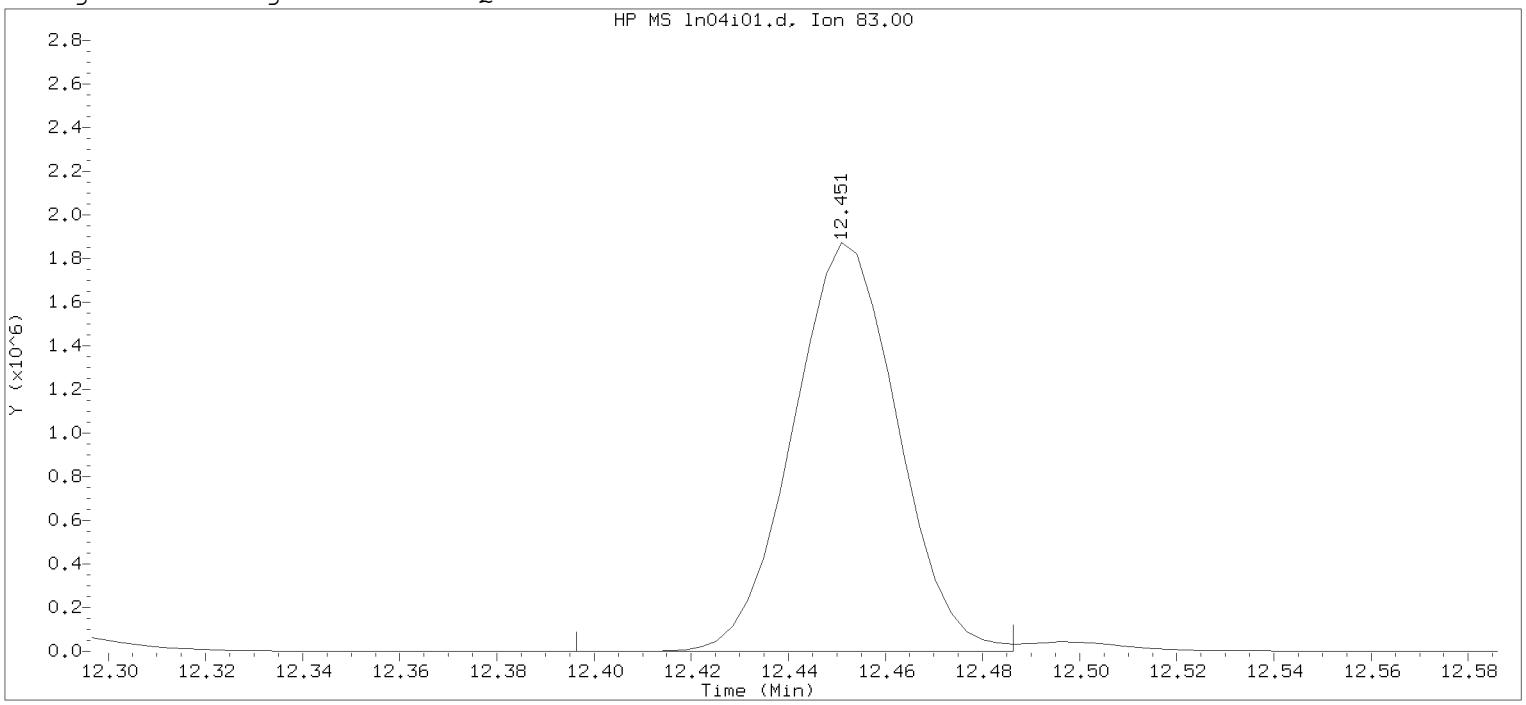
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

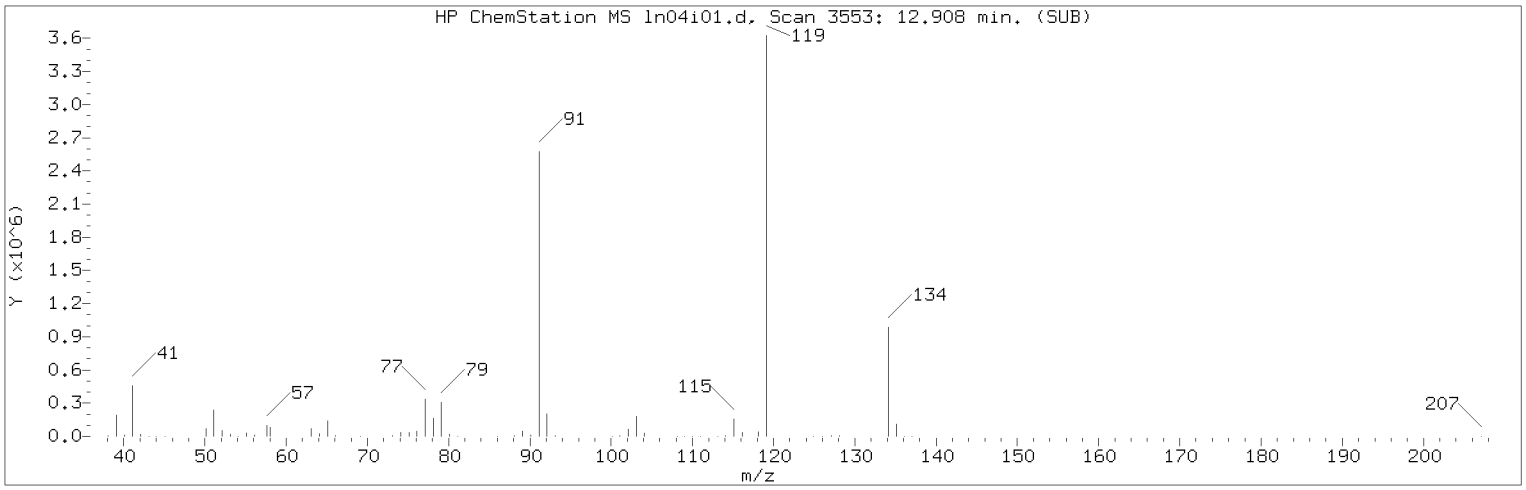
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

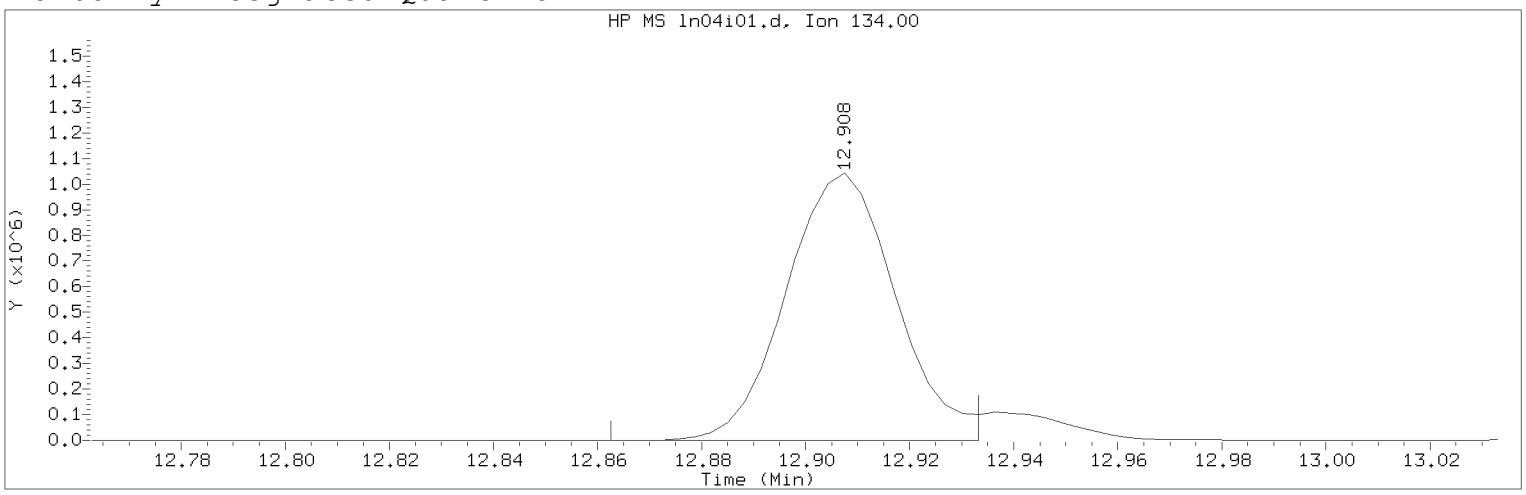
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 2797364
On-column Amount (ng) : 294.0638
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user id: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

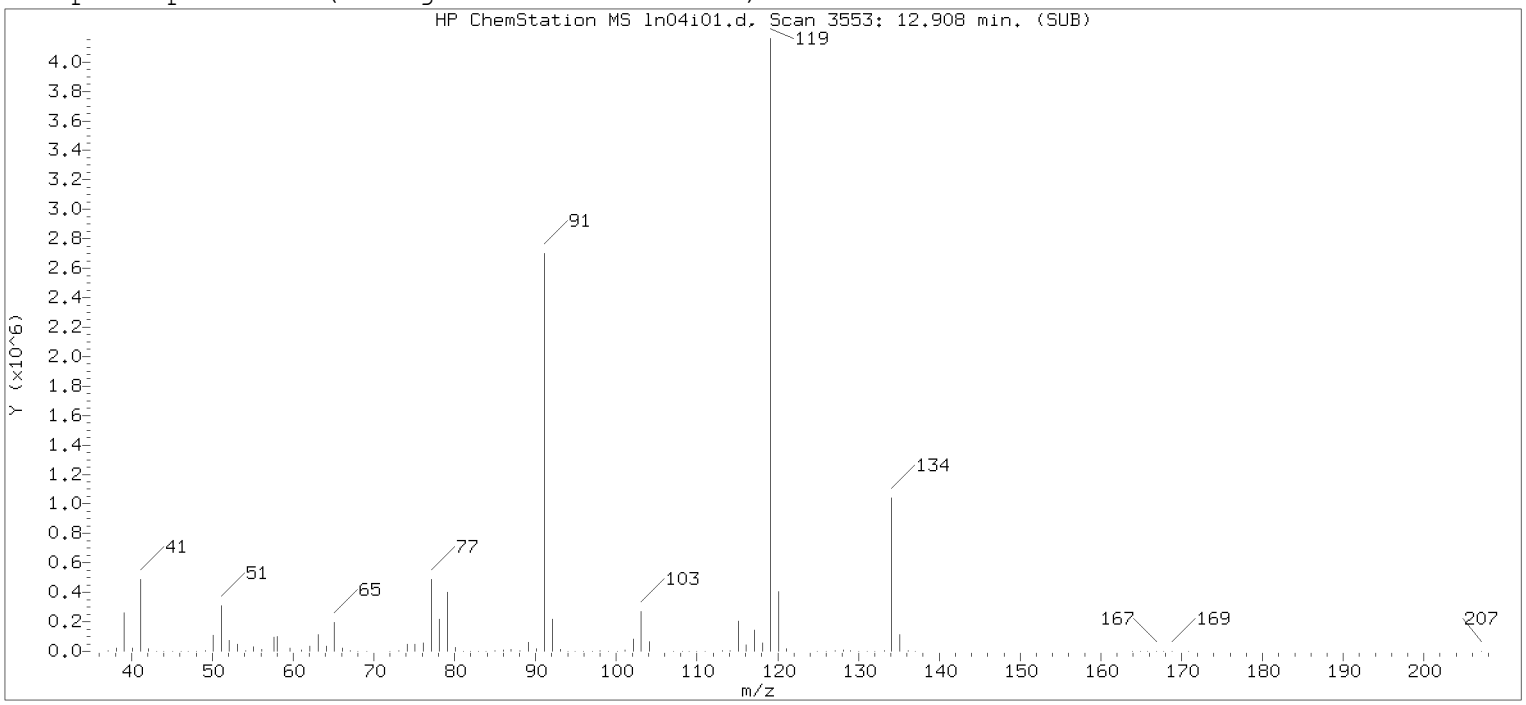
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area (flag) : 1524421M
On-Column Amount (ng) : 323.7167
Integration start scan : 3538 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

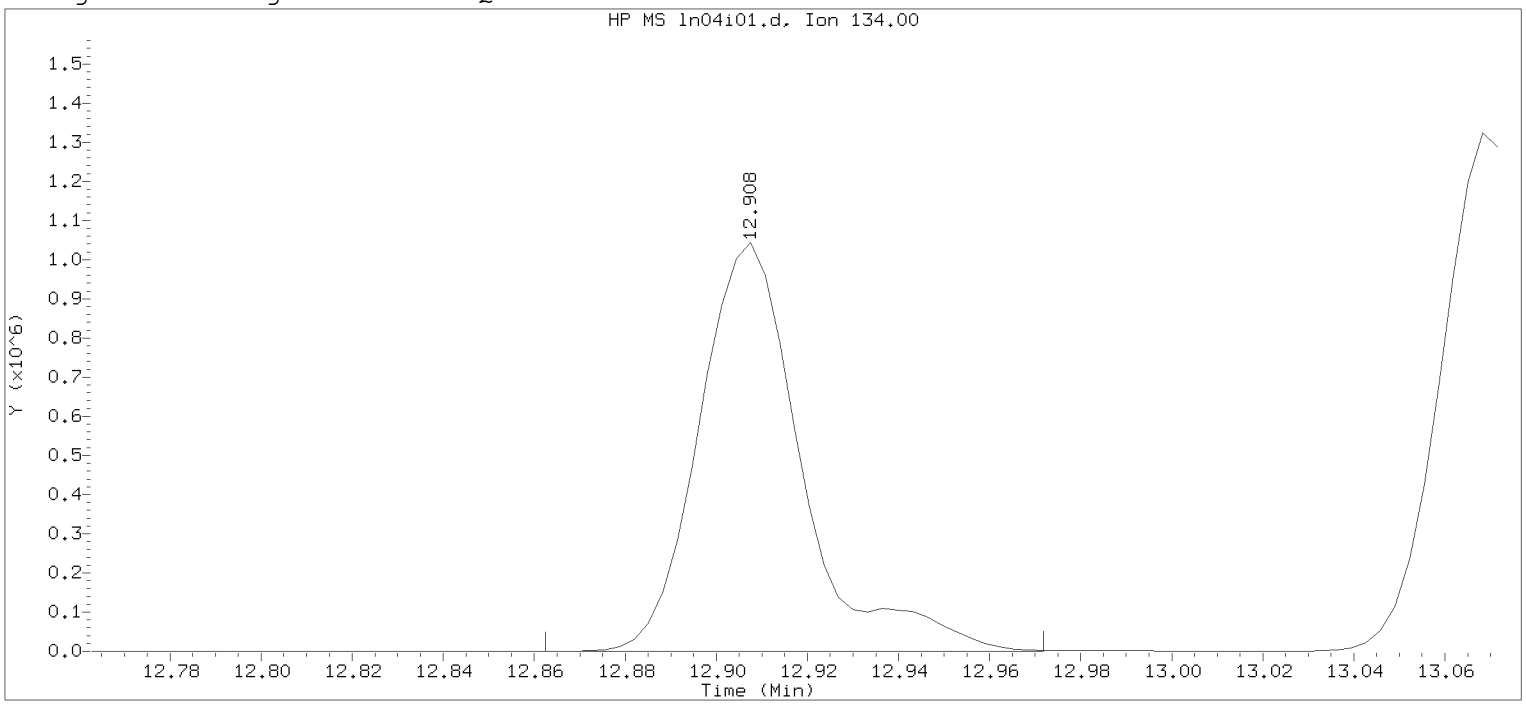
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



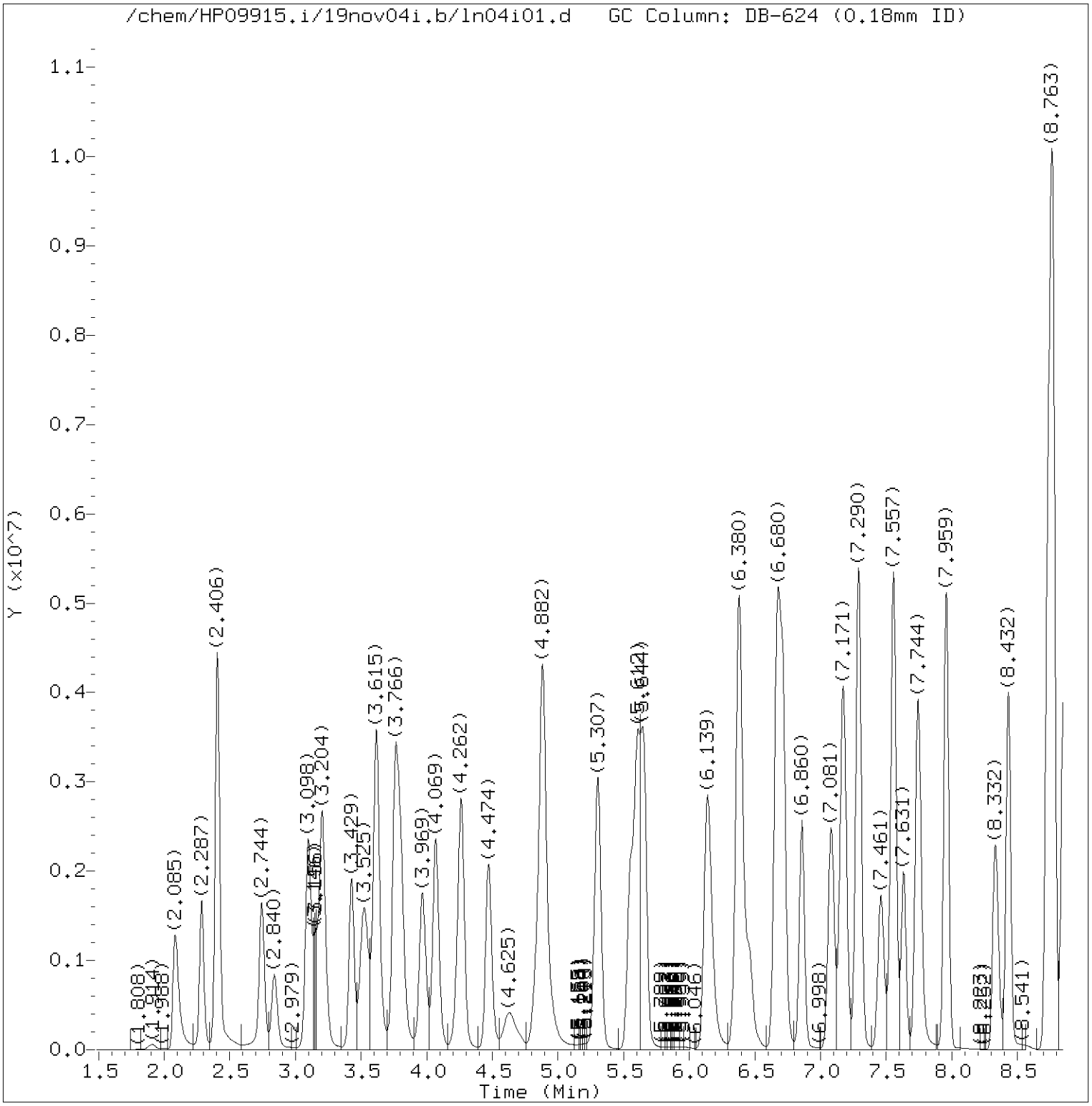
Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area : 1639624
On-column Amount (ng) : 313.1253
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkhowe01



Total Ion Chromatogram (TIC)

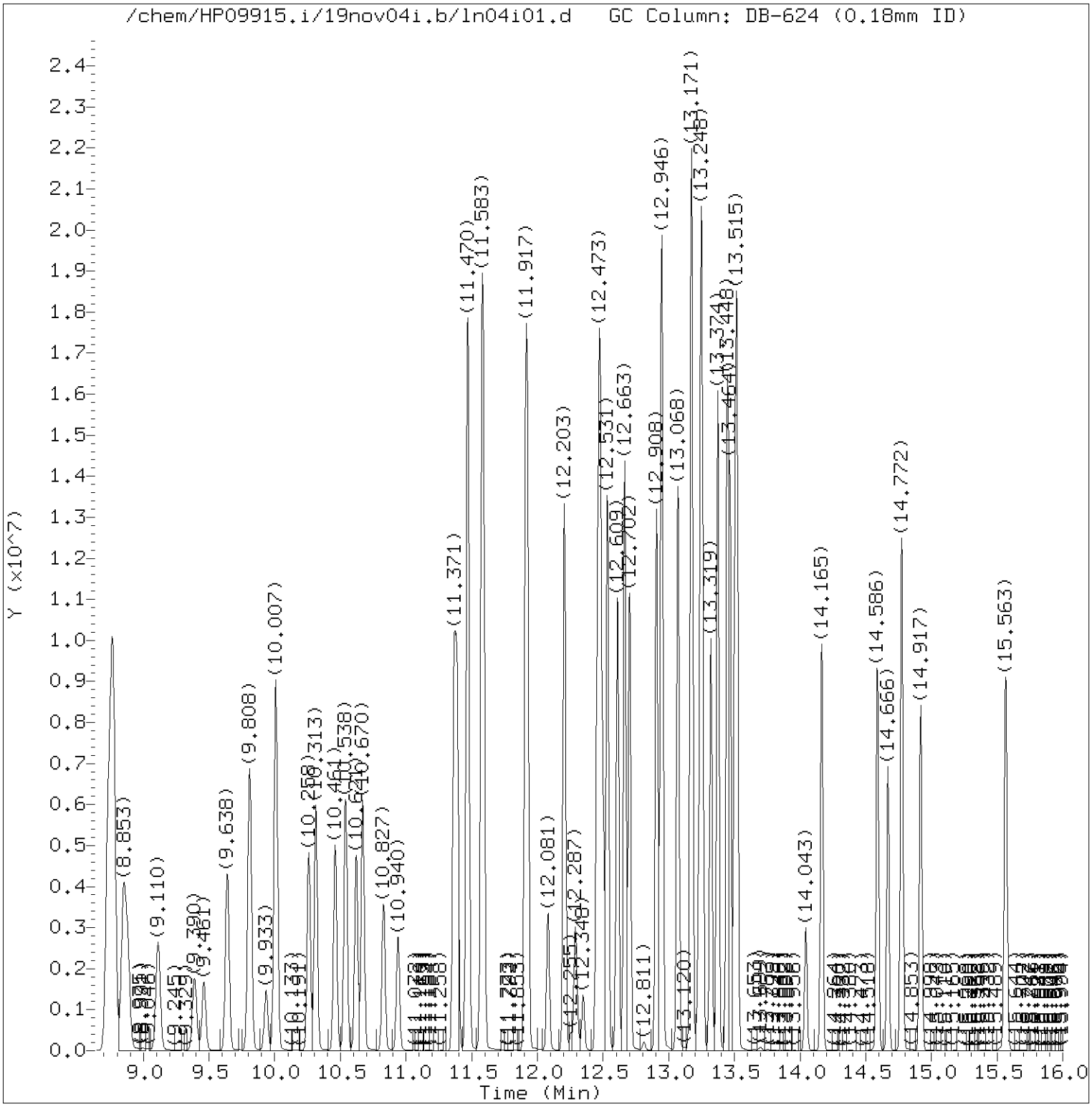
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.085	85	2719746M	347.943
4) Chloromethane	(2)	2.287	50	2403581	319.051
5) 1,3-Butadiene	(2)	2.406	39	1785787M	285.486
6) Vinyl Chloride	(2)	2.406	62	2412855	320.904
8) Bromomethane	(2)	2.744	94	1638575	304.015
9) Chloroethane	(2)	2.837	64	1253478	303.356
10) Dichlorofluoromethane	(2)	3.098	67	2978303M	300.258
12) Trichlorofluoromethane	(2)	3.152	101	2661050	328.734
11) n-Pentane	(2)	3.204	43	2816823	294.455
14) Ethyl ether	(2)	3.429	59	1721693	329.146
15) Freon 123a	(2)	3.525	67	1991616	305.852
16) Acrolein	(1)	3.615	56	5765354	3020.583
17) 1,1-Dichloroethene	(2)	3.760	96	1489890	313.570
17) 1,1-Dichloroethene	(2)	3.757	63	721205	302.767
19) Freon 113	(2)	3.792	101	1732433	319.583
18) Acetone	(1)	3.802	58	531845	621.534
22) Methyl Iodide	(2)	3.966	142	3047145	309.483
21) 2-Propanol	(1)	3.995	45	936919	1523.065
23) Carbon Disulfide	(2)	4.069	76	5676465	317.027
27) Methyl Acetate	(2)	4.239	43	1941315	317.230
25) Allyl Chloride	(2)	4.265	41	2748698	322.482
28) Methylene Chloride	(2)	4.474	84	1745840	308.716
29)*t-Butyl alcohol-d10	(1)	4.503	65	254406M	250.000
30) t-Butyl alcohol	(1)	4.638	59	1641037	1532.140
31) Acrylonitrile	(2)	4.827	53	1039800	315.820
32) trans-1,2-Dichloroethene	(2)	4.885	96	1713357	311.714
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	5505439	305.143
34) n-Hexane	(2)	5.307	57	2863189M	334.811
36) 1,1-Dichloroethane	(2)	5.548	63	3007196	313.618
38) di-Isopropyl ether	(2)	5.609	45	5739955	310.377
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	2776921	322.788
40) Ethyl t-butyl ether	(2)	6.139	59	5425034	302.275
43) 1,2-Dichloroethene (Total)	(2)		96	3646040	624.977
44) 2-Butanone	(2)	6.364	43	2642793	625.317
42) cis-1,2-Dichloroethene	(2)	6.380	96	1932683	313.263
45) 2,2-Dichloropropane	(2)	6.397	77	2377411	318.945
47) Propionitrile	(1)	6.458	54	2126389	1593.336
48) Methacrylonitrile	(2)	6.670	67	2858148	804.768

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.708	128	1075154	328.655
50) Tetrahydrofuran	(1)	6.718	71	758236	628.991
51) Chloroform	(2)	6.860	83	2916299	317.988
52)$Dibromofluoromethane	(2)	7.075	113	276322	50.424
52)$Dibromofluoromethane	(2)	7.075	111	279197	49.969
53) 1,1,1-Trichloroethane	(2)	7.081	97	2560601	327.130
54) Cyclohexane	(2)	7.171	56	3429211	327.611
54) Cyclohexane	(2)	7.171	84	2984908	328.282
54) Cyclohexane	(2)	7.171	69	1068201	329.937
56) Carbon Tetrachloride	(2)	7.287	117	2252864	339.350
55) 1,1-Dichloropropene	(2)	7.294	75	2434619	321.125
58) Isobutyl Alcohol	(1)	7.461	41	1382486	3835.573
57)$1,2-Dichloroethane-d4	(2)	7.528	102	68480	49.033
57)$1,2-Dichloroethane-d4	(2)	7.532	65	307306	49.375
57)$1,2-Dichloroethane-d4	(2)	7.528	104	44002	49.326
60) Benzene	(2)	7.557	78	7094466	311.169
61) 1,2-Dichloroethane	(2)	7.634	62	2222342	303.049
61) 1,2-Dichloroethane	(2)	7.634	98	228988	315.535
65) t-Amyl methyl ether	(2)	7.744	73	5421278	300.945
67) n-Heptane	(2)	7.959	43	2592531MA	324.518
66)*Fluorobenzene	(2)	7.959	96	1120873	50.000
69) n-Butanol	(1)	8.332	56	2465385M	7947.068
71) Trichloroethene	(2)	8.432	95	1841720	320.821
72) Methylcyclohexane	(2)	8.734	83	3568410	335.054
72) Methylcyclohexane	(2)	8.734	98	1632993	338.844
73) 1,2-Dichloropropane	(2)	8.769	63	1825943	315.397
76) Methyl Methacrylate	(2)	8.850	69	1904896A	340.256
75) 1,4-Dioxane	(1)	8.856	88	338379M	3968.421
74) Dibromomethane	(2)	8.879	93	1210939	323.274
78) Bromodichloromethane	(2)	9.113	83	2314651	344.351
79) 2-Nitropropane	(2)	9.390	41	1438925	706.755
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	926413	372.584
81) cis-1,3-Dichloropropene	(2)	9.638	75	3074664	344.402
82) 4-Methyl-2-pentanone	(2)	9.808	43	5422938	607.899
83)$Toluene-d8	(3)	9.933	98	1156351	49.563
83)$Toluene-d8	(3)	9.933	100	751534	49.726
88) Toluene	(3)	10.007	92	4532879	309.894
90) 1,3-Dichloropropene (total)	(3)		100	5974636	693.659

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	2899972	349.257
91) Ethyl Methacrylate	(3)	10.313	69	3356305	332.603
92) 1,1,2-Trichloroethane	(3)	10.461	97	1768710	318.935
93) Tetrachloroethene	(3)	10.541	166	1990565	321.327
94) 1,3-Dichloropropane	(3)	10.621	76	3006585	317.532
96) 2-Hexanone	(3)	10.670	43	3998423	593.616
97) Dibromochloromethane	(3)	10.827	129	2037523	358.670
99) 1,2-Dibromoethane	(3)	10.940	107	1987783	330.088
100)*Chlorobenzene-d5	(3)	11.361	117	891668	50.000
101) 1-Chlorohexane	(3)	11.364	91	2458057	312.814
102) Chlorobenzene	(3)	11.387	112	5140609	310.783
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	1789998	328.446
104) Ethylbenzene	(3)	11.470	91	8606821	307.854
106) m+p-Xylene	(3)	11.583	106	6690837	608.359
108) Xylene (Total)	(3)		106	9979970	911.130
107) o-Xylene	(3)	11.908	106	3289133	302.771
109) Styrene	(3)	11.924	104	5647939	314.619
110) Bromoform	(3)	12.081	173	1534520	361.500
111) Isopropylbenzene	(3)	12.203	105	8466138	310.714
112) Cyclohexanone	(1)	12.287	55	1351186	4046.080
114)$4-Bromofluorobenzene	(3)	12.348	95	440049	49.810
114)$4-Bromofluorobenzene	(3)	12.348	174	362553	49.502
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	2800639M	310.705
115) Bromobenzene	(4)	12.467	156	2234066	311.517
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	2150976	773.637
117) 1,2,3-Trichloropropane	(4)	12.499	110	866230	313.172
119) n-Propylbenzene	(4)	12.531	91	9654812	308.142
120) 2-Chlorotoluene	(4)	12.609	126	2098494	315.266
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	7238022	317.873
121) 4-Chlorotoluene	(4)	12.702	126	2155793	311.148
124) tert-Butylbenzene	(4)	12.908	134	1524421M	323.717
125) Pentachloroethane	(4)	12.940	167	1461833	360.511
126) 1,2,4-Trimethylbenzene	(4)	12.949	105	7469187	311.236
127) sec-Butylbenzene	(4)	13.068	105	8682126	308.971
129) 1,3-Dichlorobenzene	(4)	13.168	146	3858953	292.822
130) p-Isopropyltoluene	(4)	13.174	119	7289488	299.854
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	477171	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	4013510	293.777

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

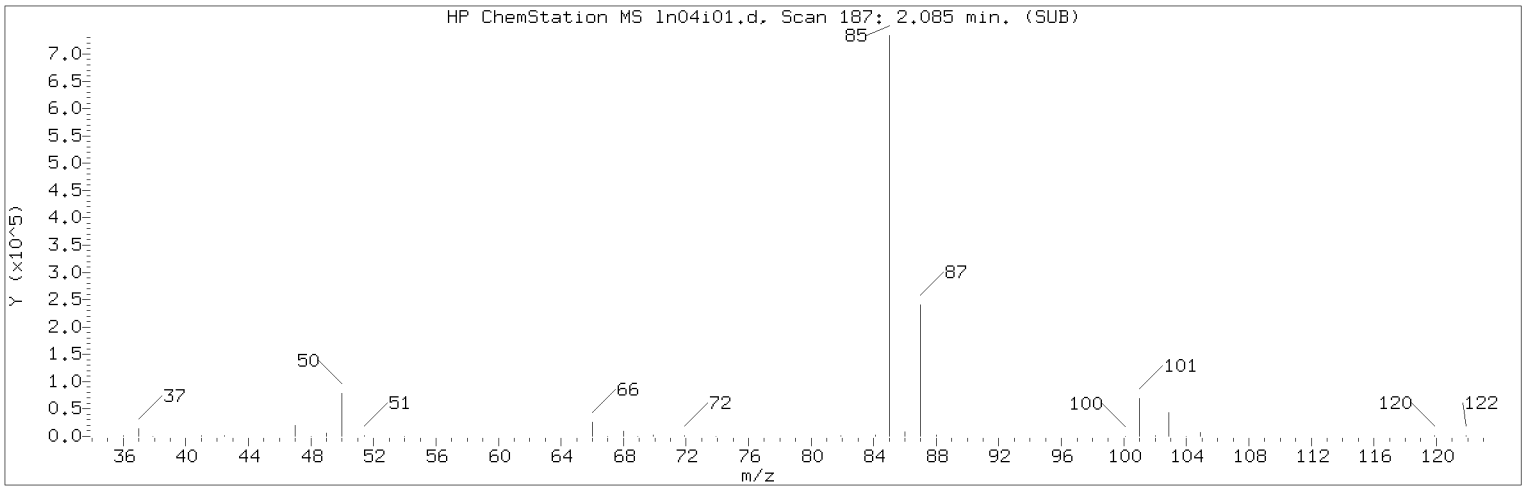
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

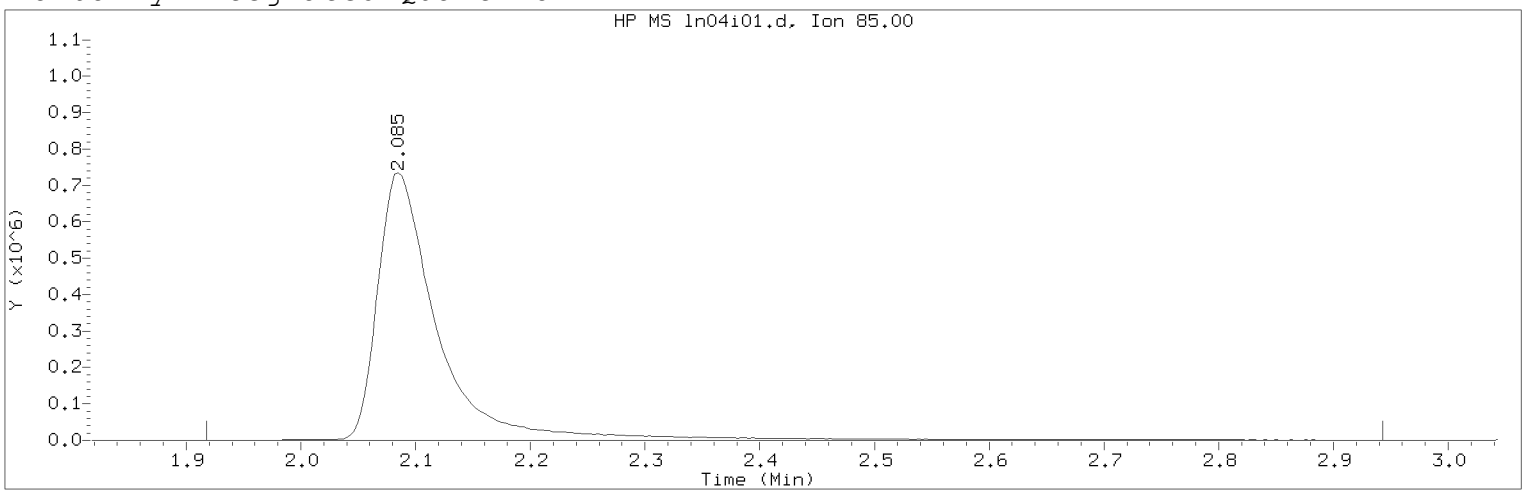
	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134)	1,2,3-Trimethylbenzene	(4)	13.252	105	7915203	311.364
135)	Benzyl Chloride	(4)	13.319	91	6484944	336.931
136)	1,3-Diethylbenzene	(4)	13.374	119	4897725	309.573
141)	Diethylbenzene (total)	(4)		100	13982971	913.975
137)	1,4-Diethylbenzene	(4)	13.444	119	5013123	299.077
139)	n-Butylbenzene	(4)	13.467	92	3608595	290.316
138)	1,2-Dichlorobenzene	(4)	13.502	146	3859125	296.761
140)	1,2-Diethylbenzene	(4)	13.518	119	4072123	305.325
142)	1,2-Dibromo-3-chloropropane	(4)	14.043	75	669008	339.050
144)	1,3,5-Trichlorobenzene	(4)	14.165	180	2855960	285.855
146)	1,2,4-Trichlorobenzene	(4)	14.589	180	2681523	276.030
147)	Hexachlorobutadiene	(4)	14.670	225	1157297	252.311
148)	Naphthalene	(4)	14.772	128	9186333	294.145
149)	1,2,3-Trichlorobenzene	(4)	14.917	180	2488608	263.270
150)	2-Methylnaphthalene	(4)	15.563	142	4666682	242.655

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

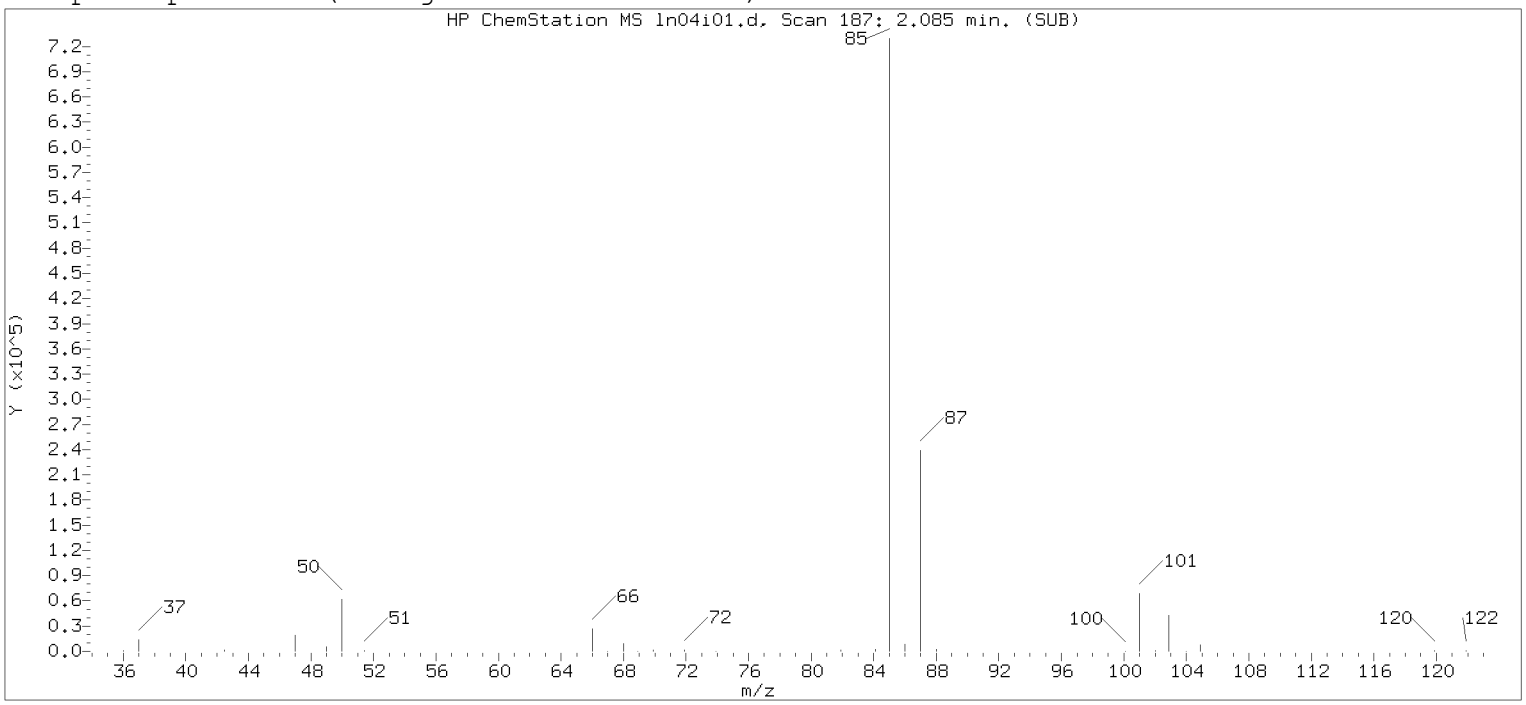
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area (flag) : 2719746M
On-Column Amount (ng) : 347.9426
Integration start scan : 134 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

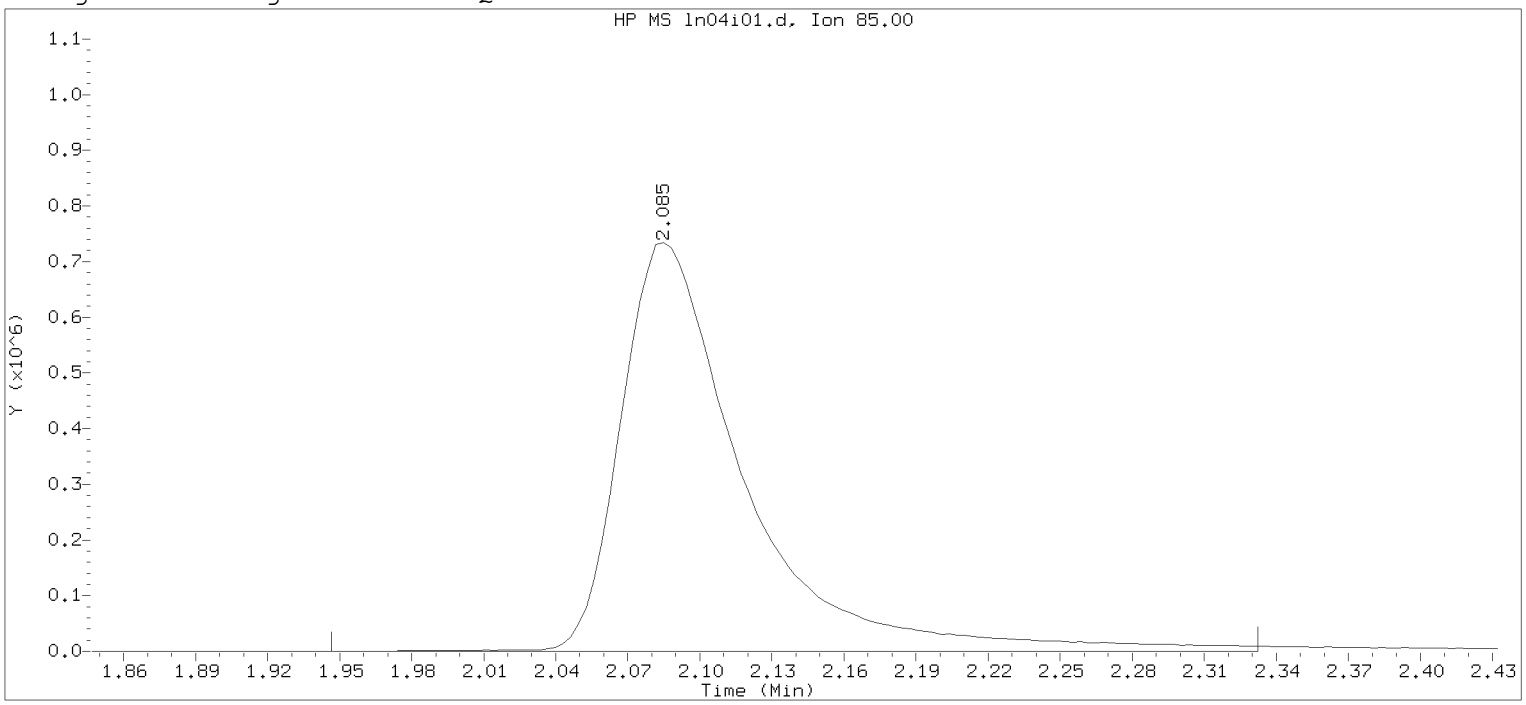
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

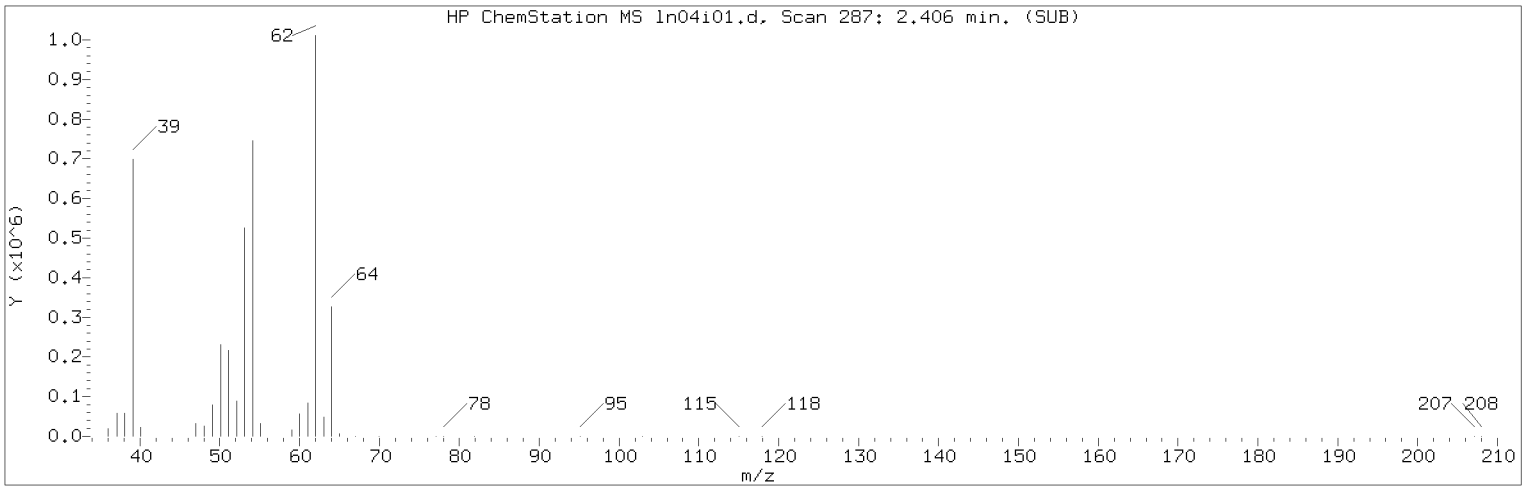
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

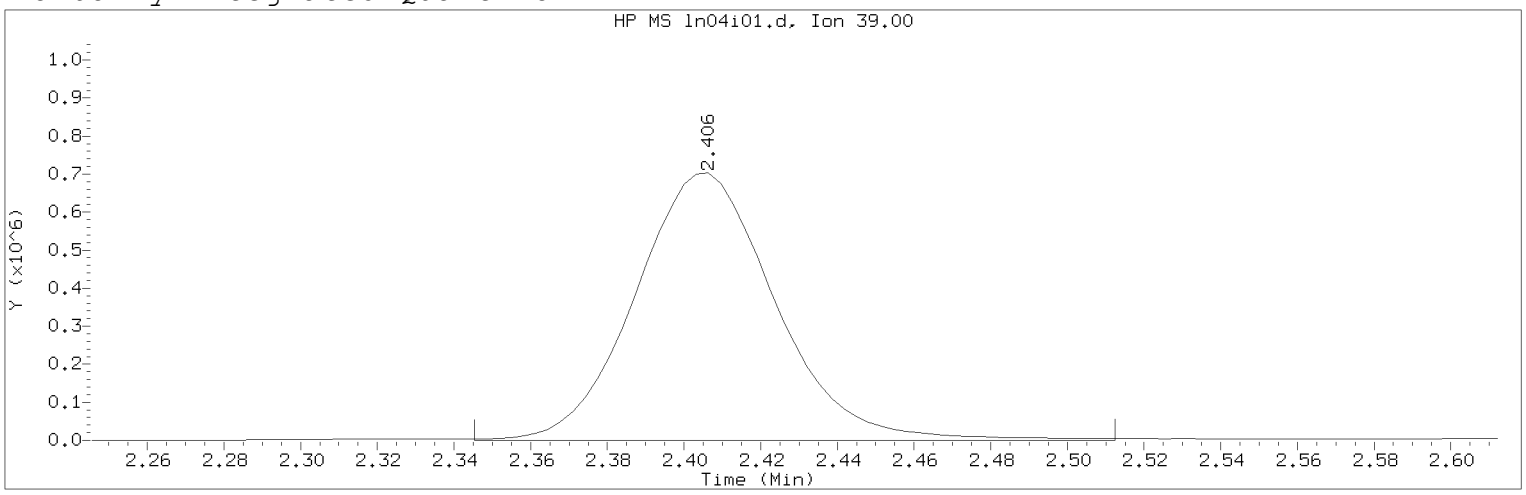
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area : 2624212
On-column Amount (ng) : 308.6520
Integration start scan : 143 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

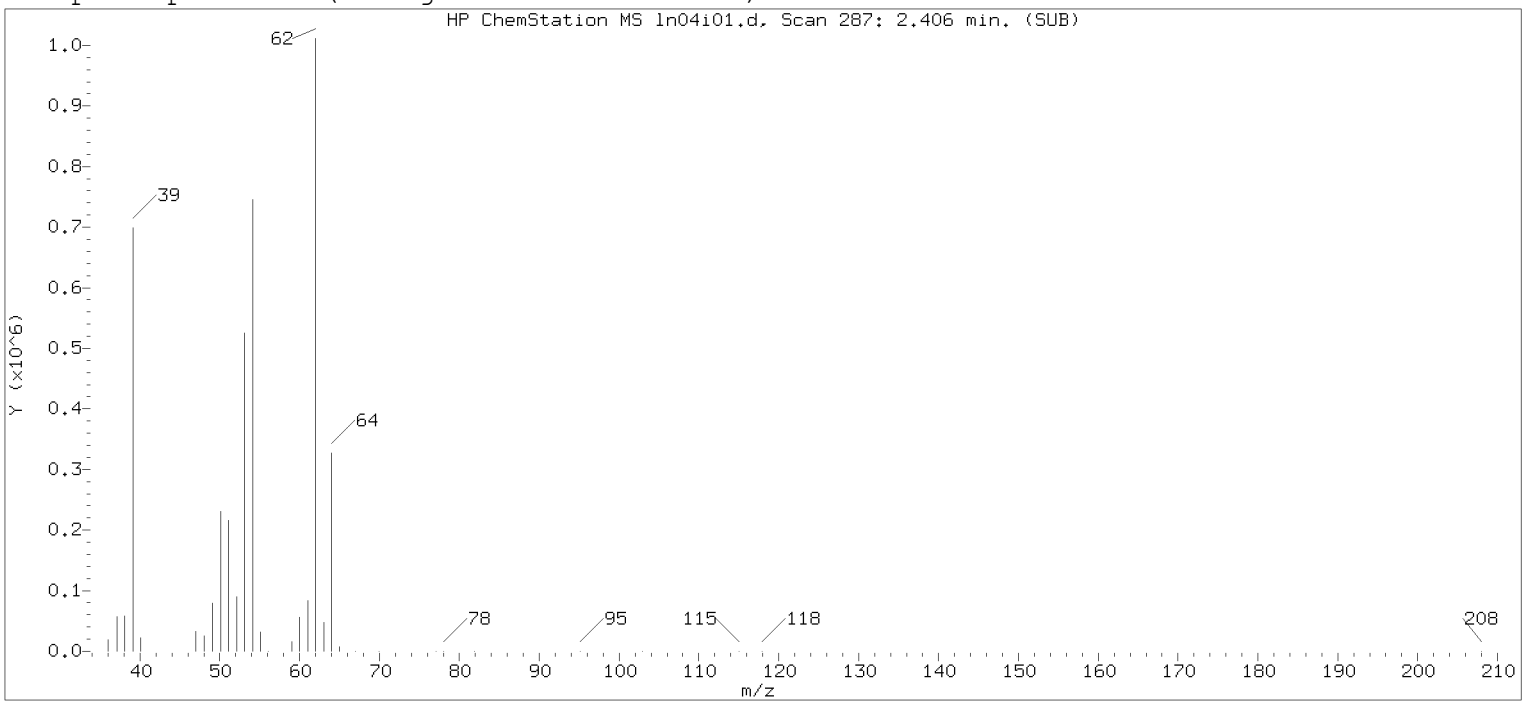
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 1785787M
On-Column Amount (ng) : 285.4858
Integration start scan : 267 Integration stop scan: 319
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

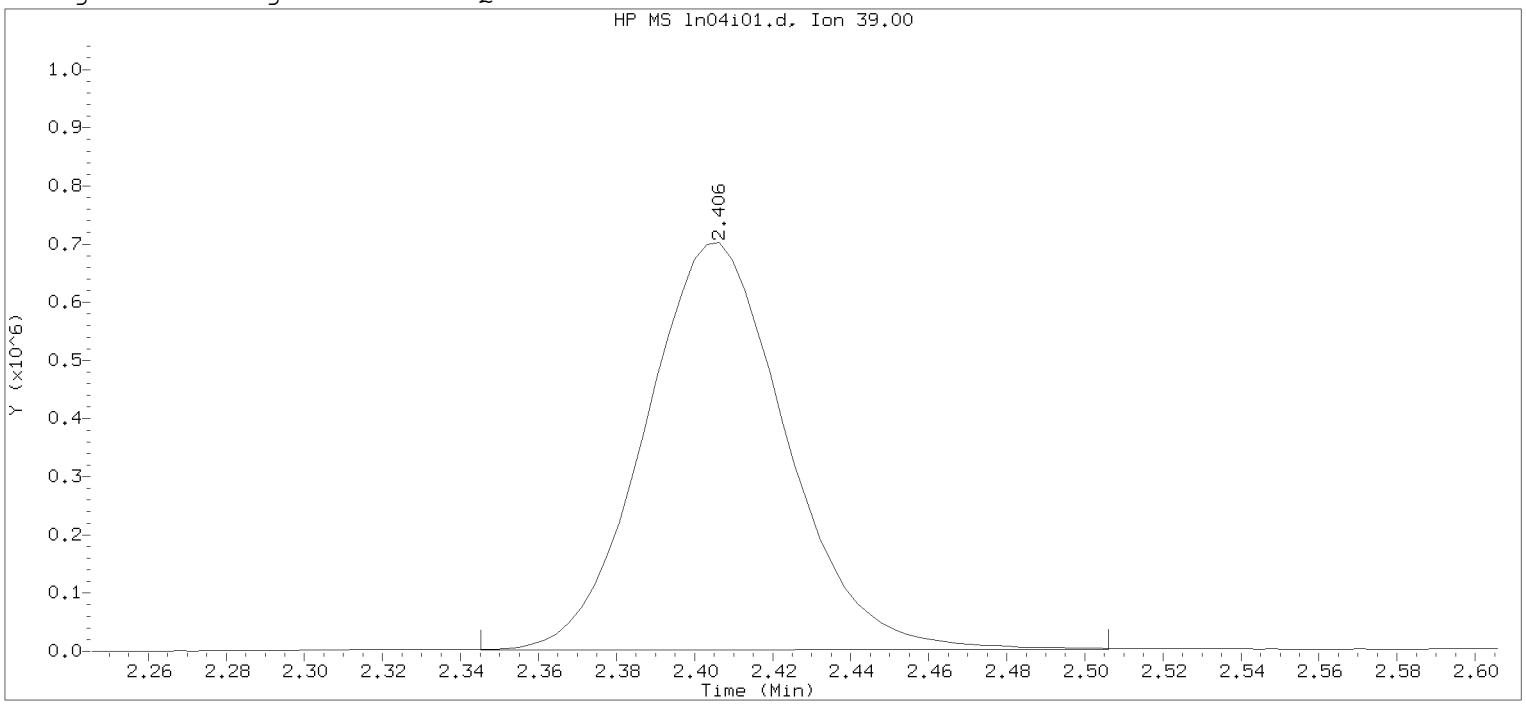
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

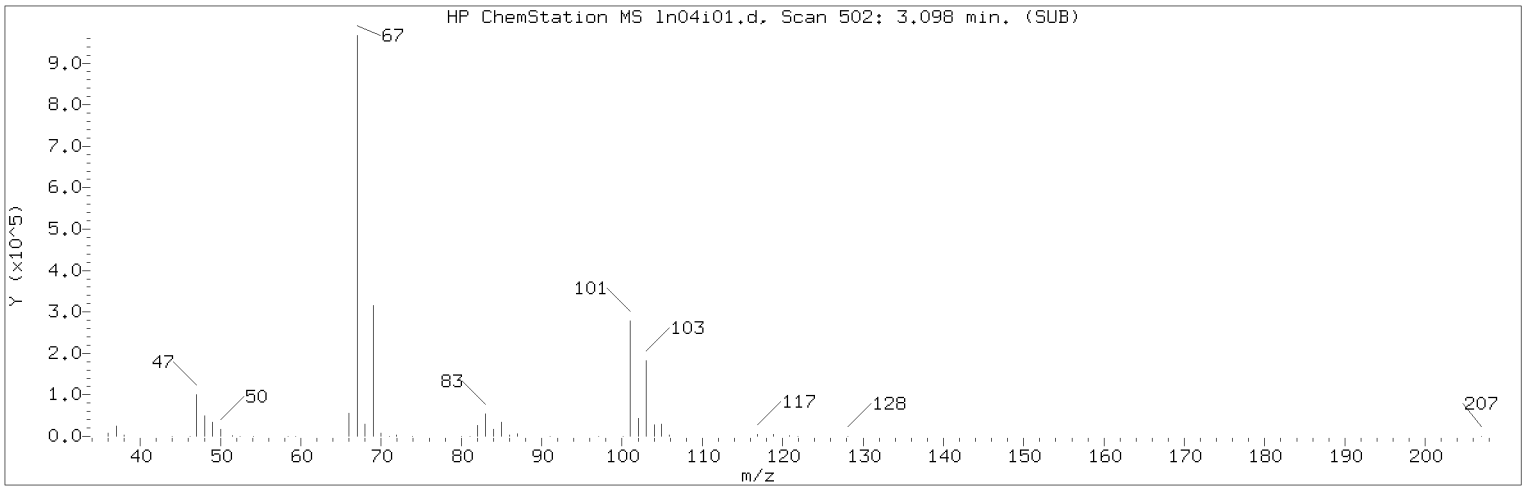
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

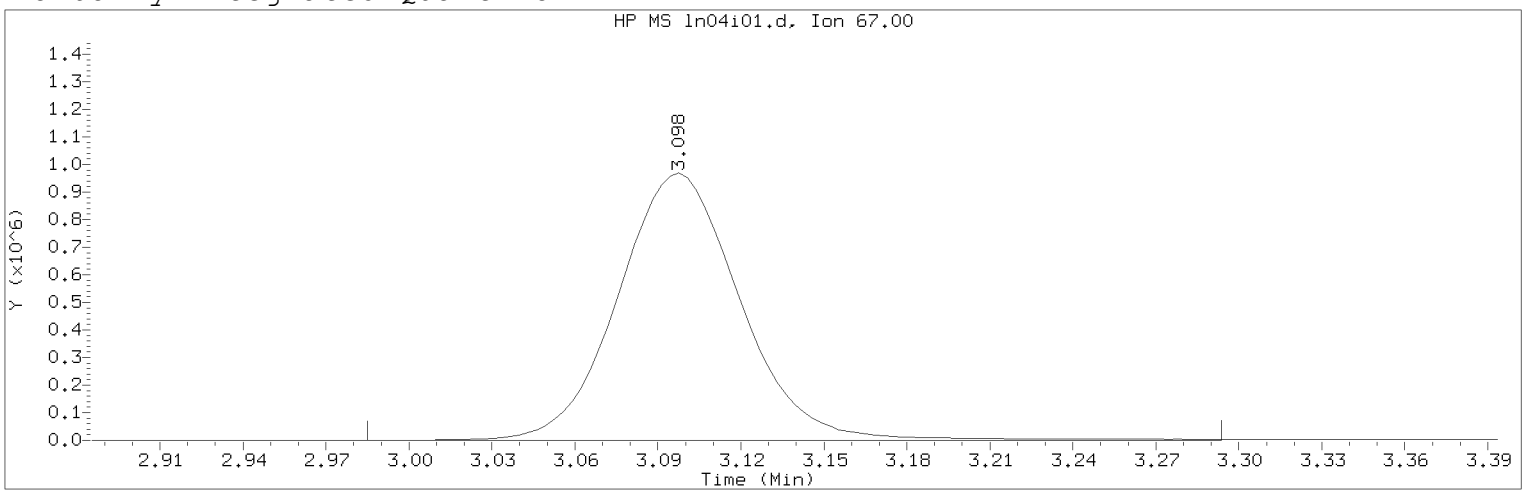
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 1755596
On-column Amount (ng) : 295.0708
Integration start scan : 267 Integration stop scan: 317
Y at integration start : 2196 Y at integration end: 3553

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

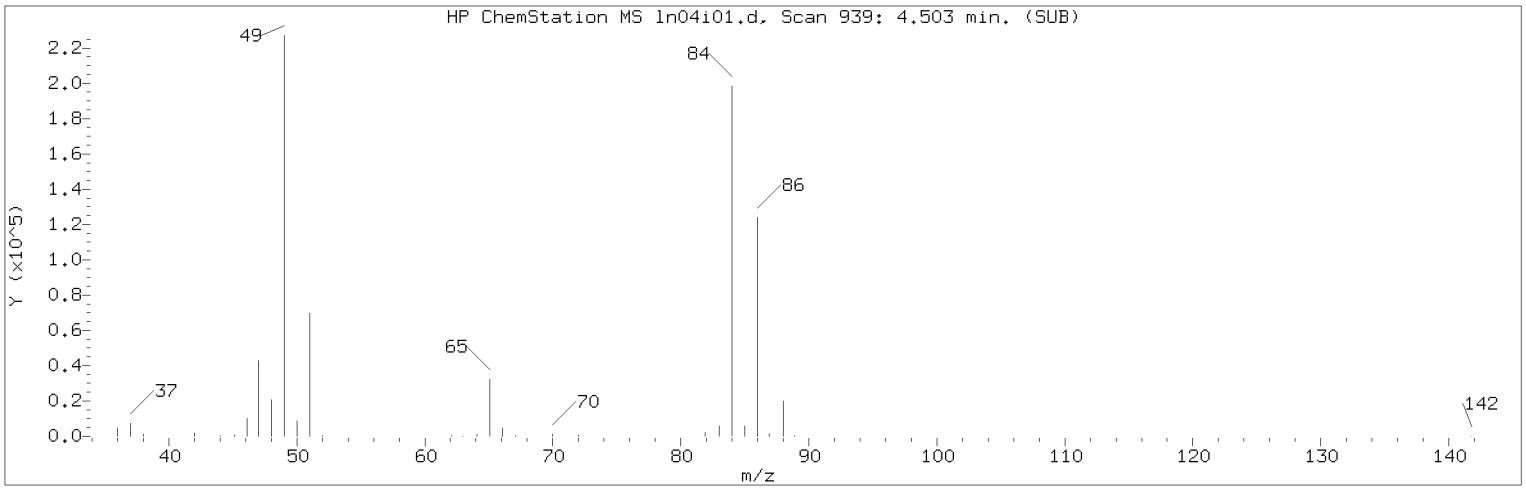
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 502
Retention Time (minutes): 3.098
Quant Ion : 67.00
Area (flag) : 2978303M
On-Column Amount (ng) : 300.2583
Integration start scan : 466 Integration stop scan: 562
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

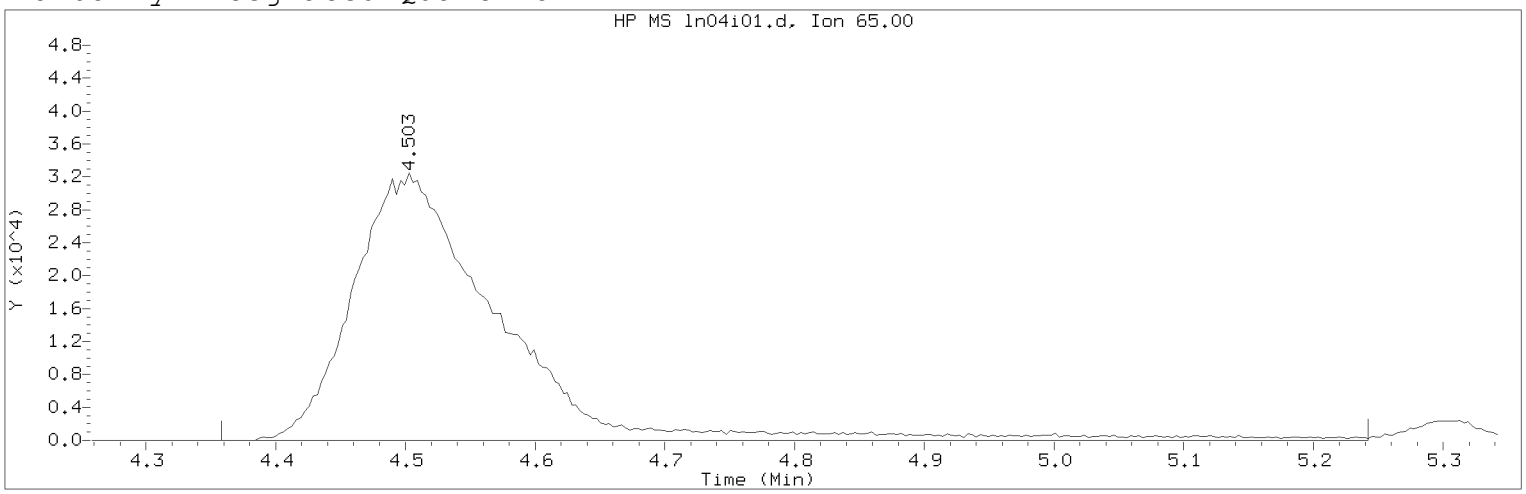
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

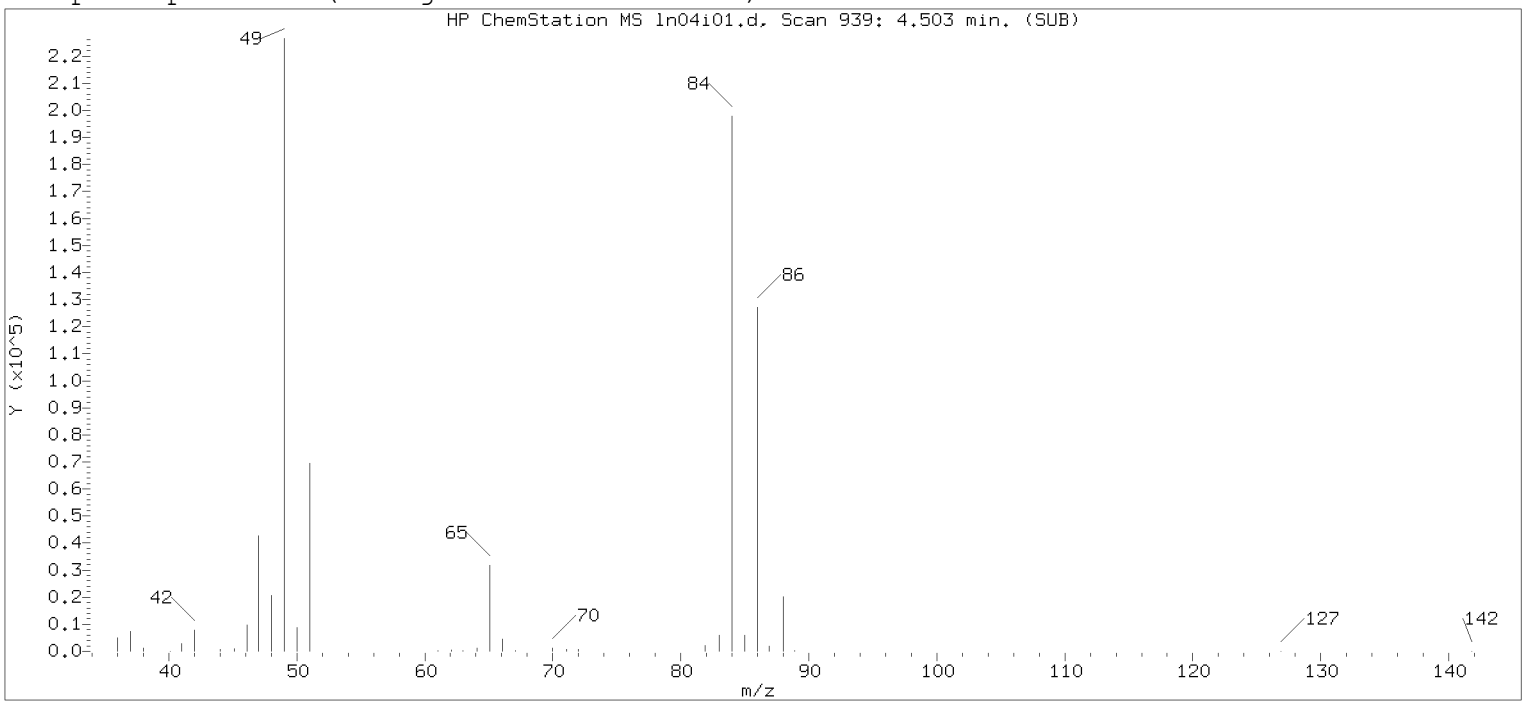
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area (flag) : 254406M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1168
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

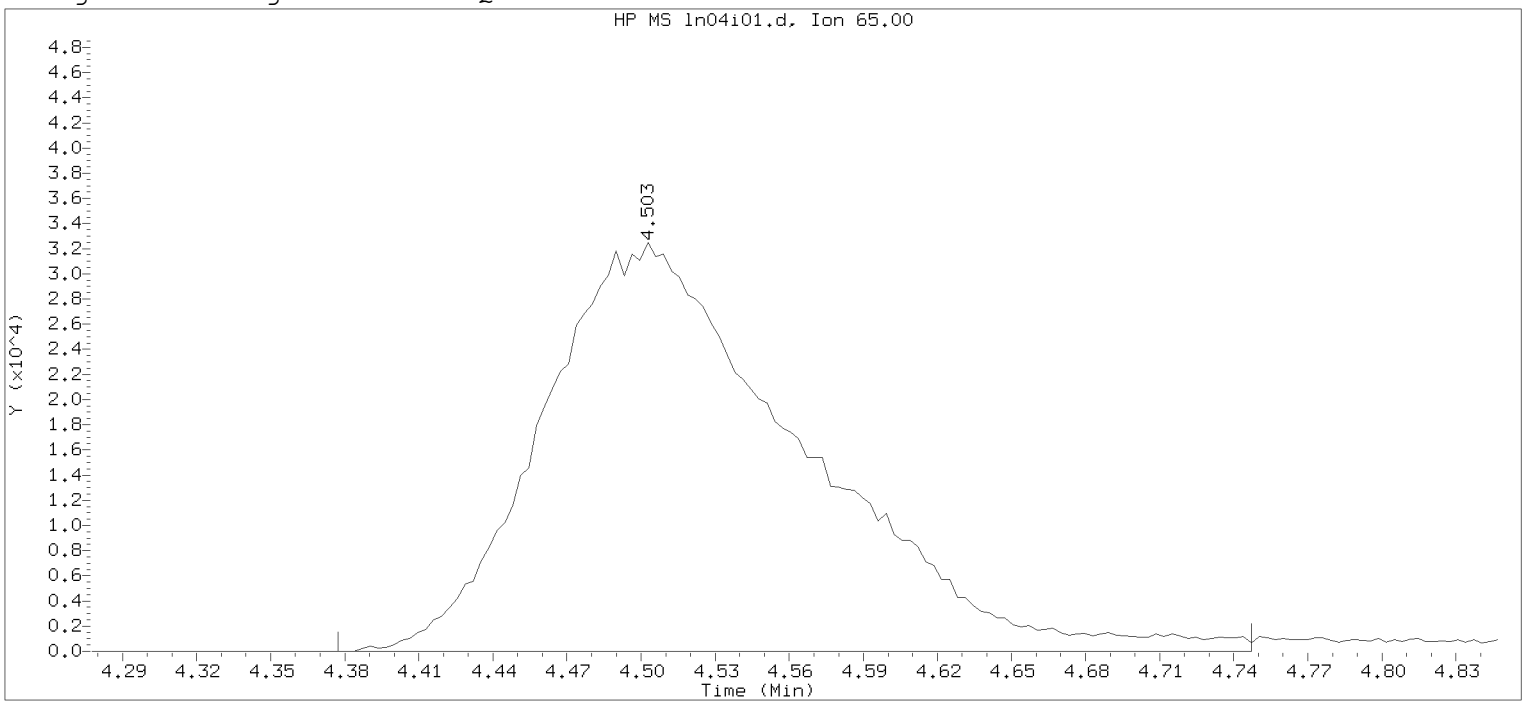
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

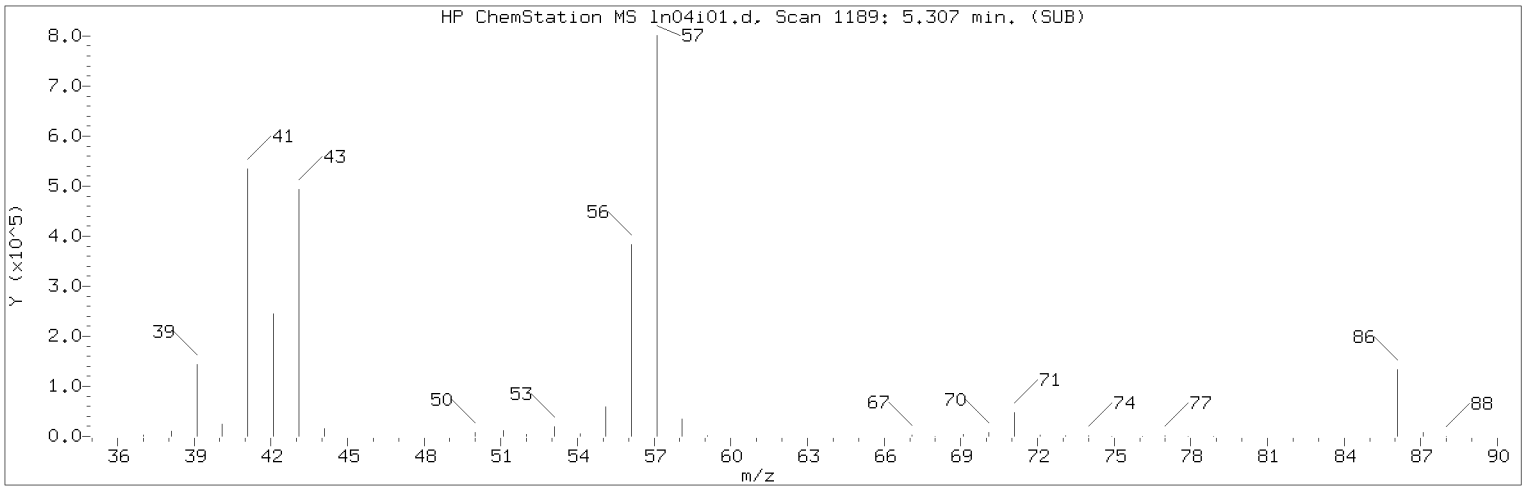
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

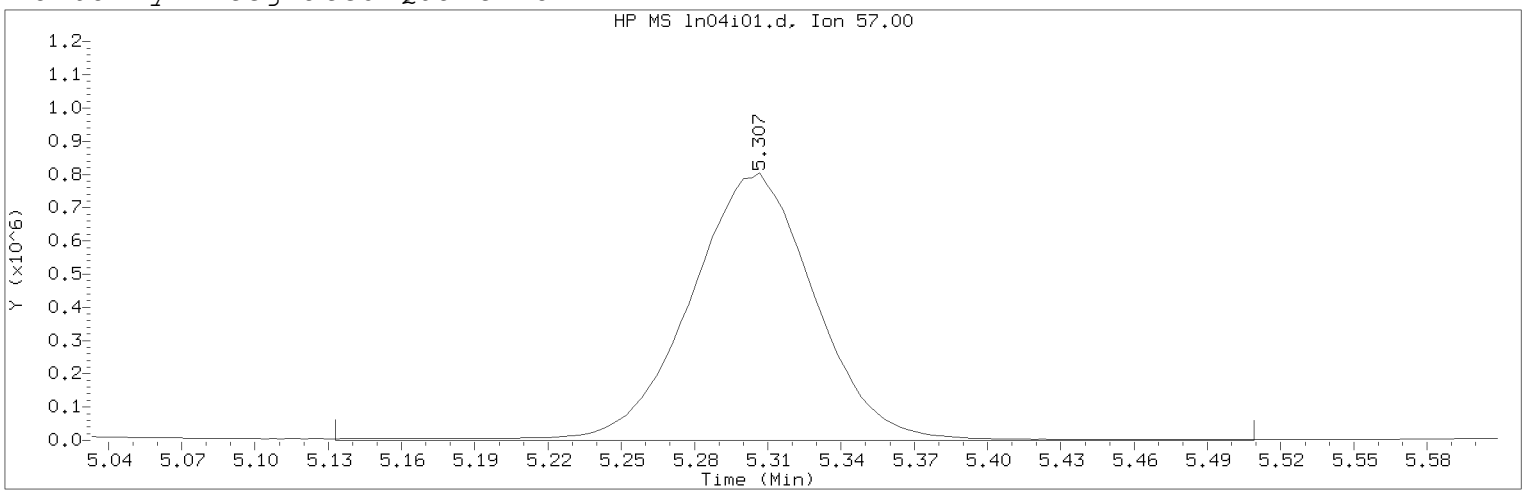
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area : 237264
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

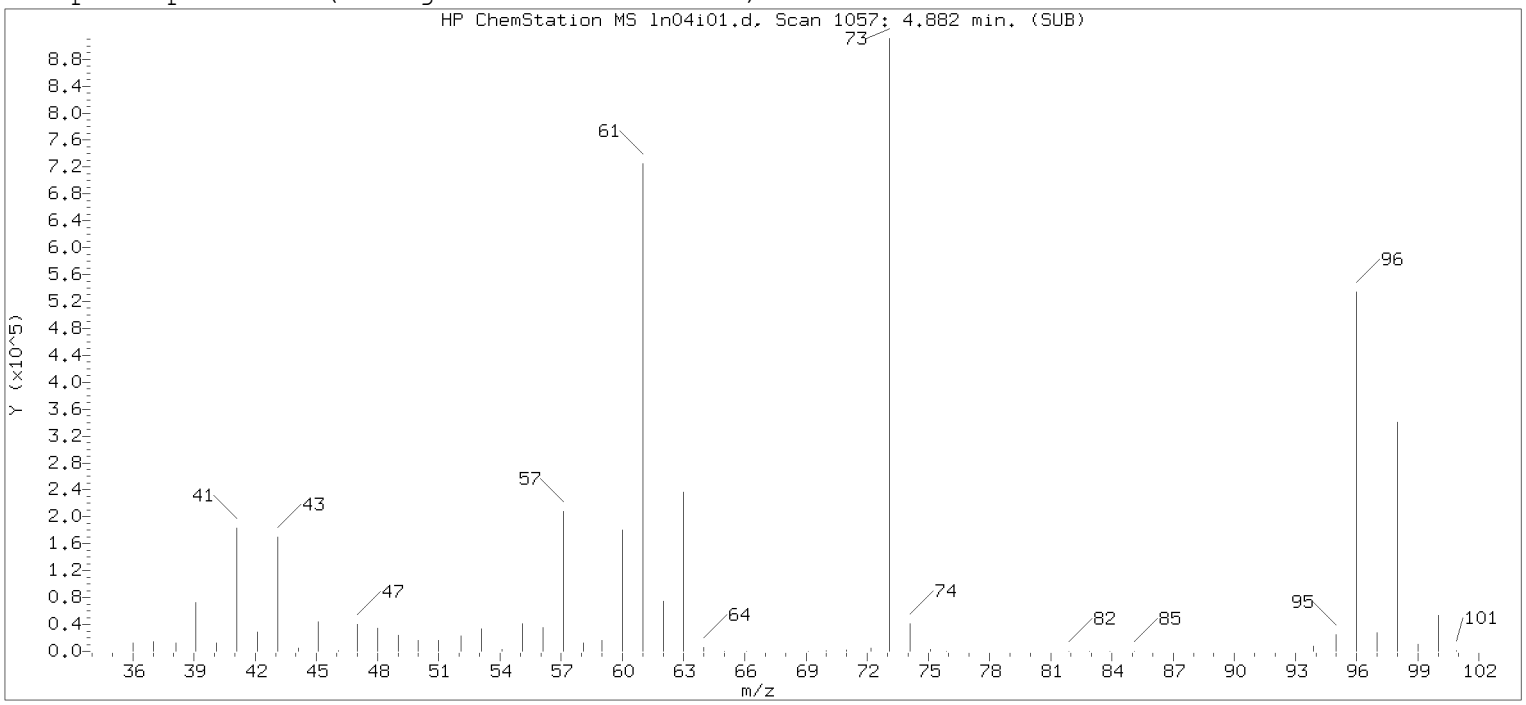
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1189
Retention Time (minutes): 5.307
Quant Ion : 57.00
Area (flag) : 2863189M
On-Column Amount (ng) : 334.8105
Integration start scan : 1134 Integration stop scan: 1251
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

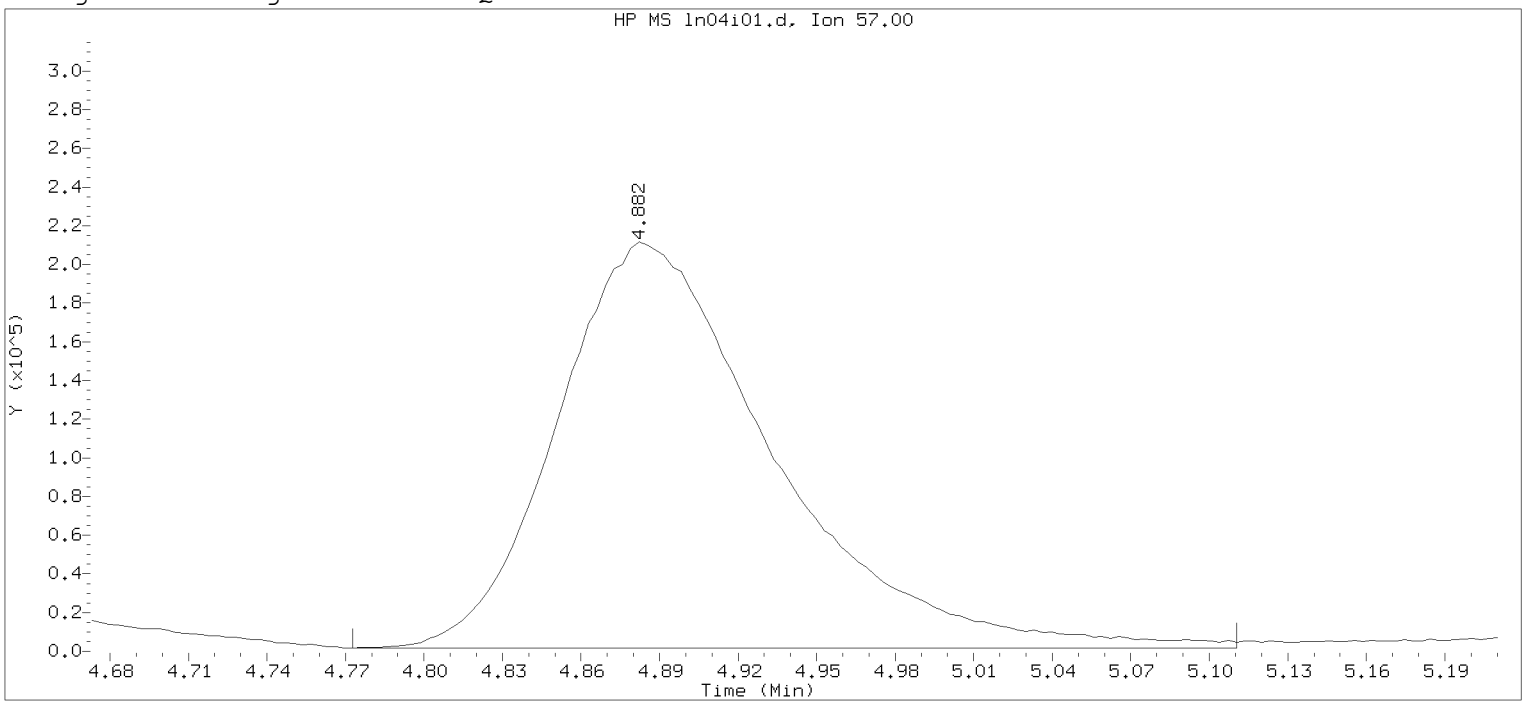
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

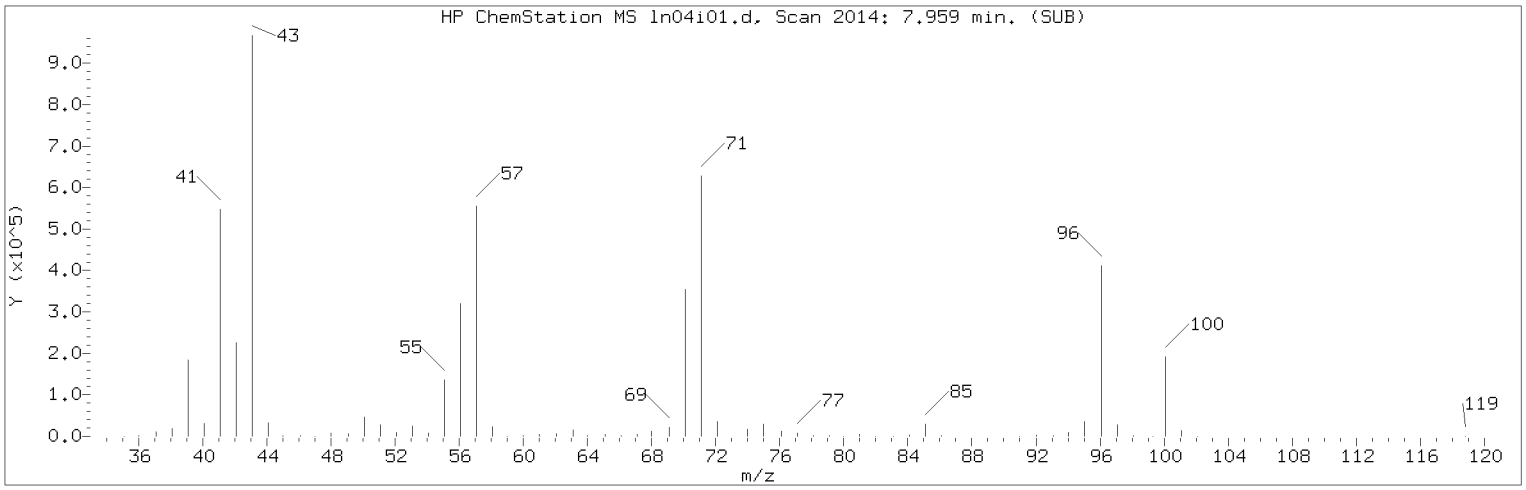
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

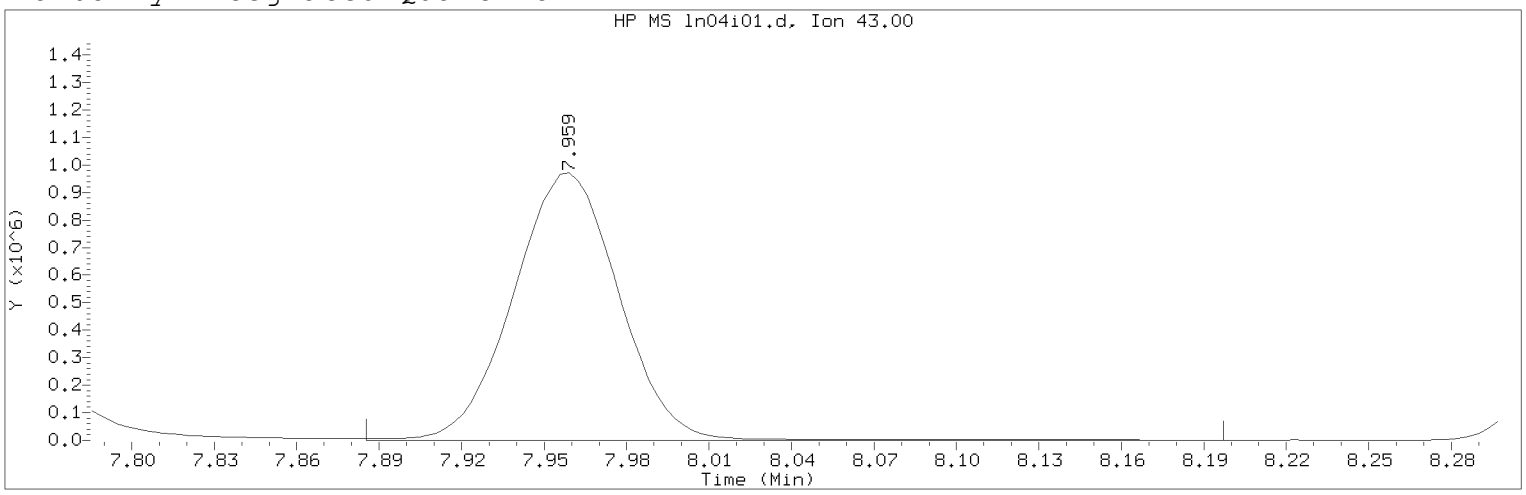
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1057		
Retention Time (minutes)	: 4.882		
Quant Ion	: 57.00		
Area	: 1202378		
On-column Amount (ng)	: 301.4561		
Integration start scan	: 1022	Integration stop scan	: 1127
Y at integration start	: 1806	Y at integration end	: 1806

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

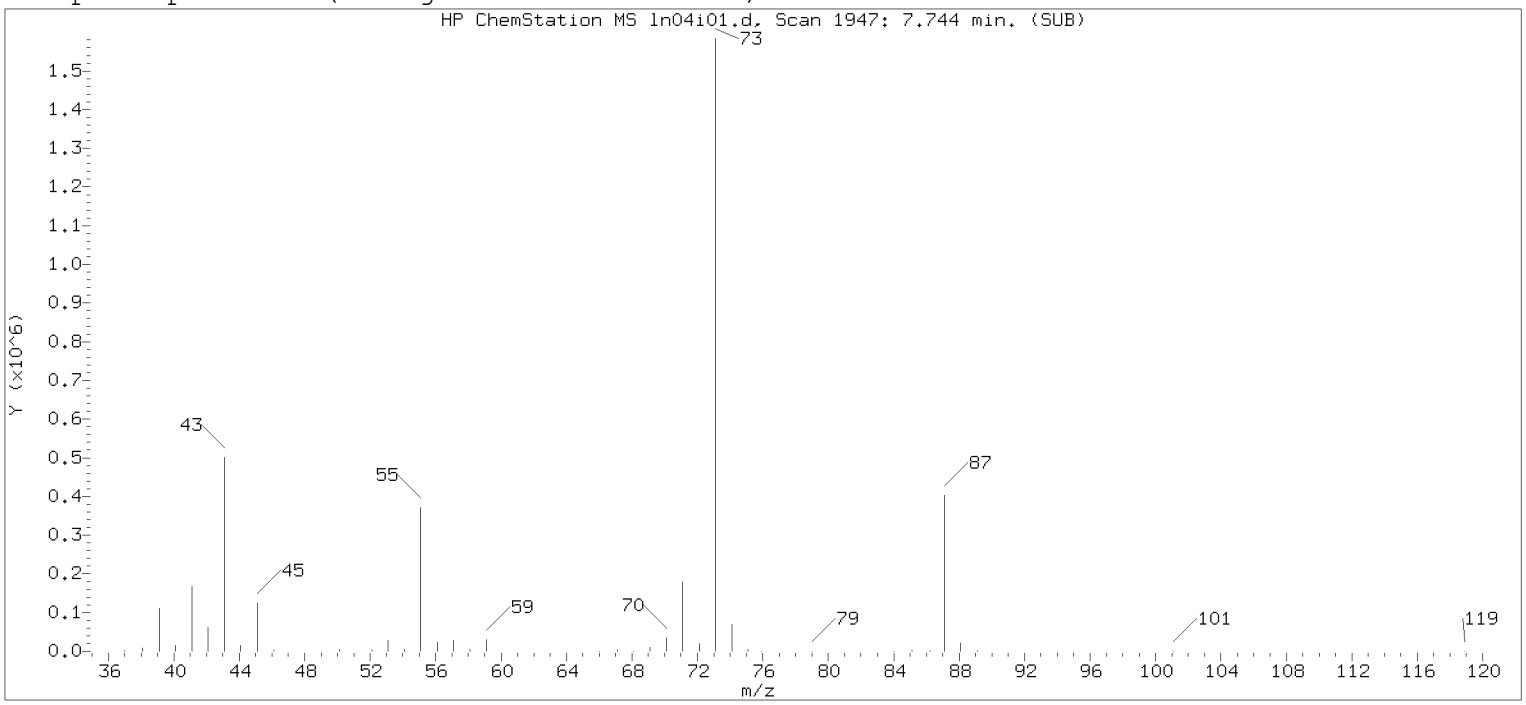
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2014
Retention Time (minutes): 7.959
Quant Ion : 43.00
Area (flag) : 2592531MA
On-Column Amount (ng) : 324.5176
Integration start scan : 1990 Integration stop scan: 2087
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

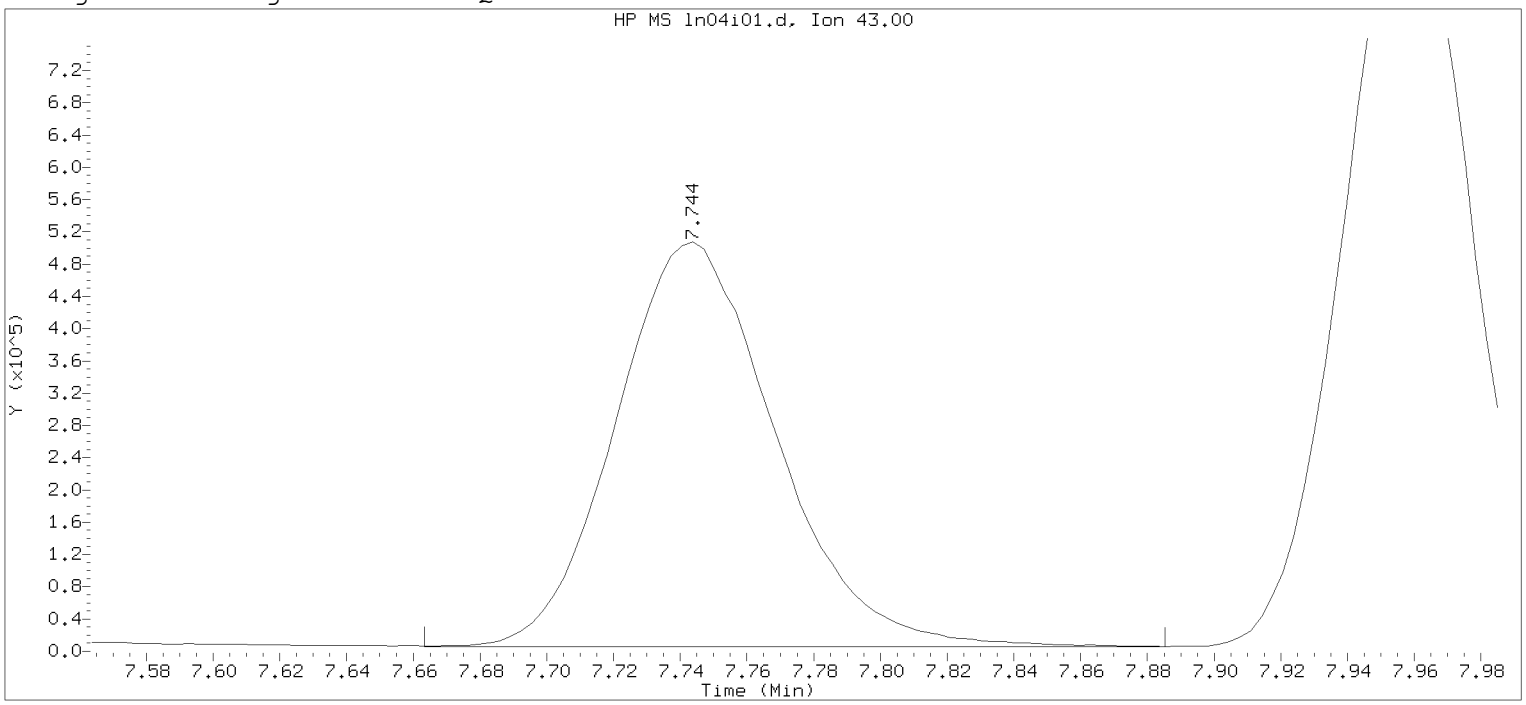
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

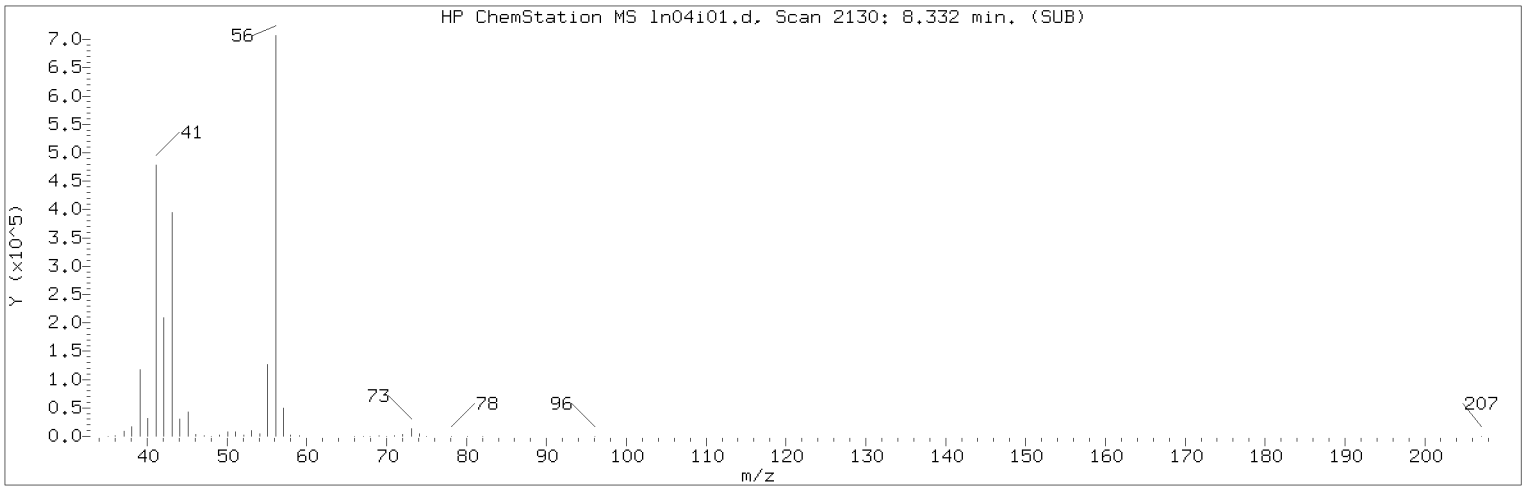
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

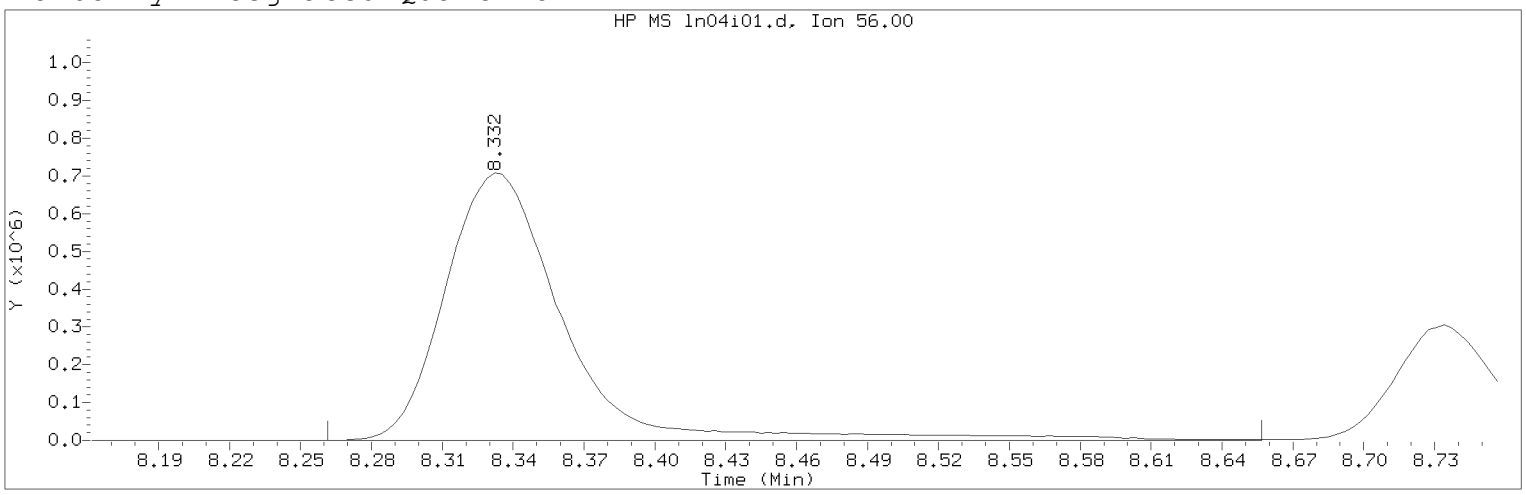
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1947
Retention Time (minutes): 7.744
Quant Ion : 43.00
Area : 1668813
On-column Amount (ng) : 288.4319
Integration start scan : 1921 Integration stop scan: 1990
Y at integration start : 5866 Y at integration end: 5866

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

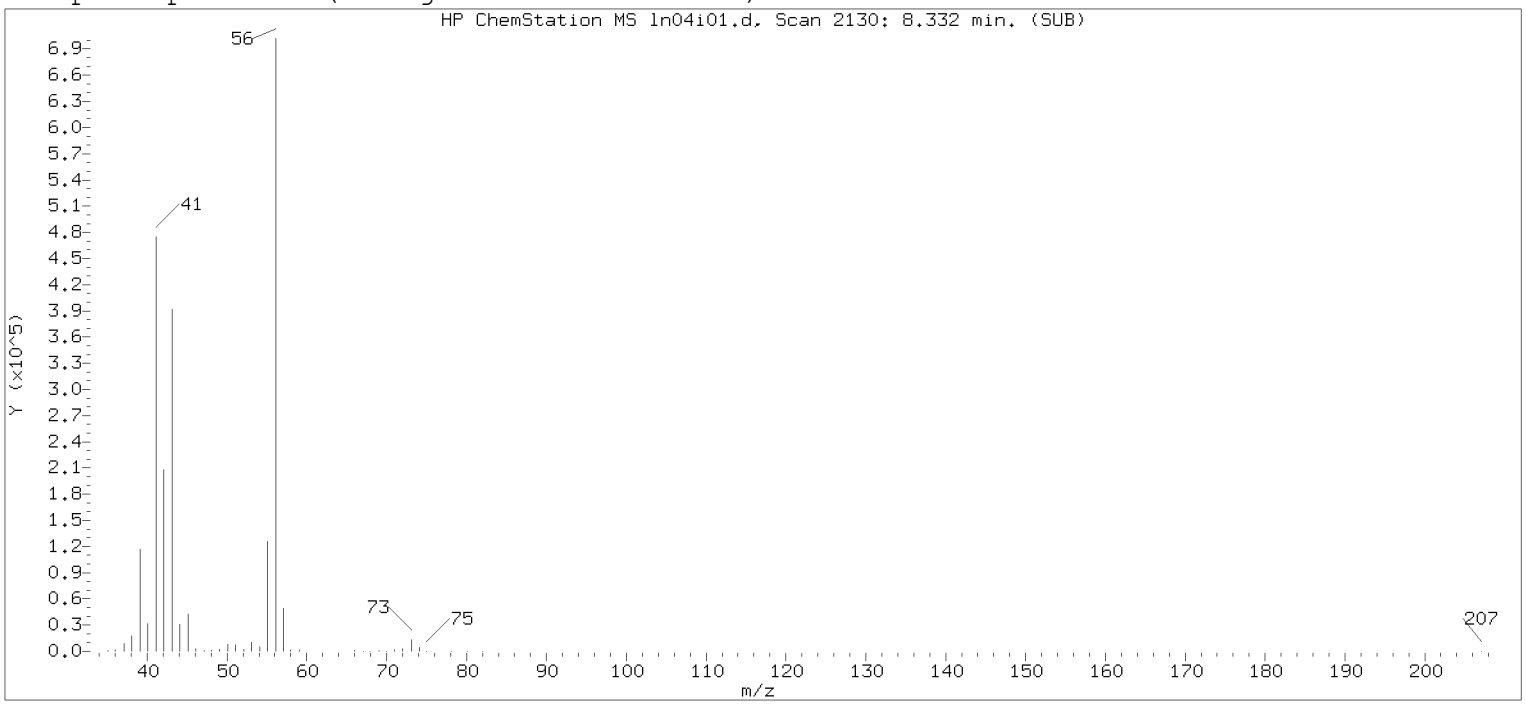
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area (flag) : 2465385M
On-Column Amount (ng) : 7947.0678
Integration start scan : 2107 Integration stop scan: 2230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

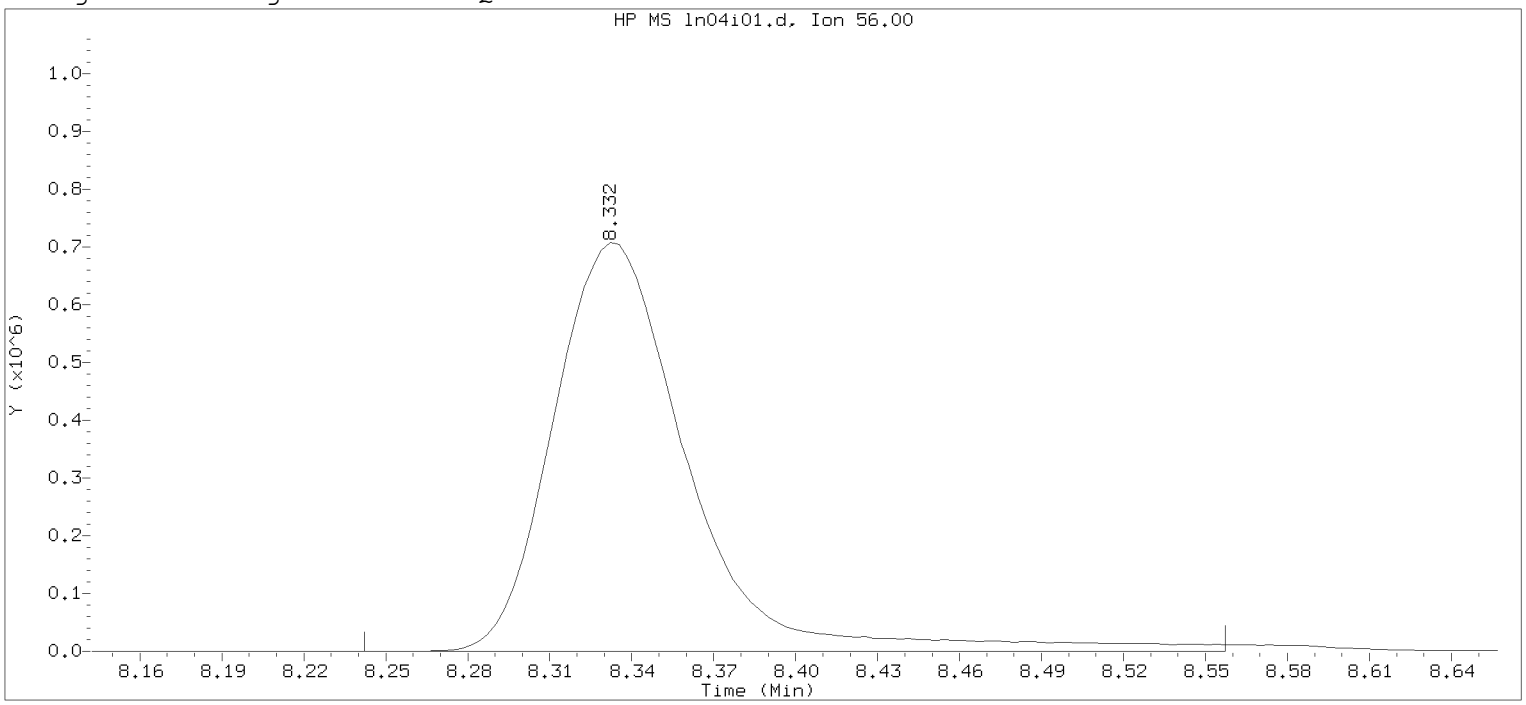
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

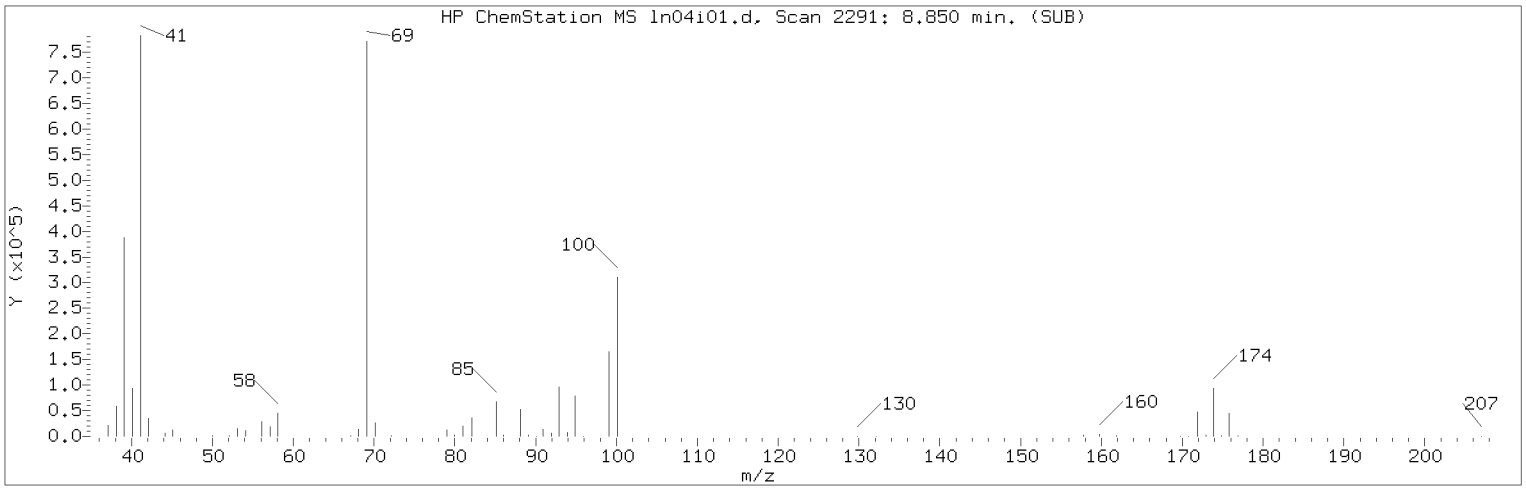
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

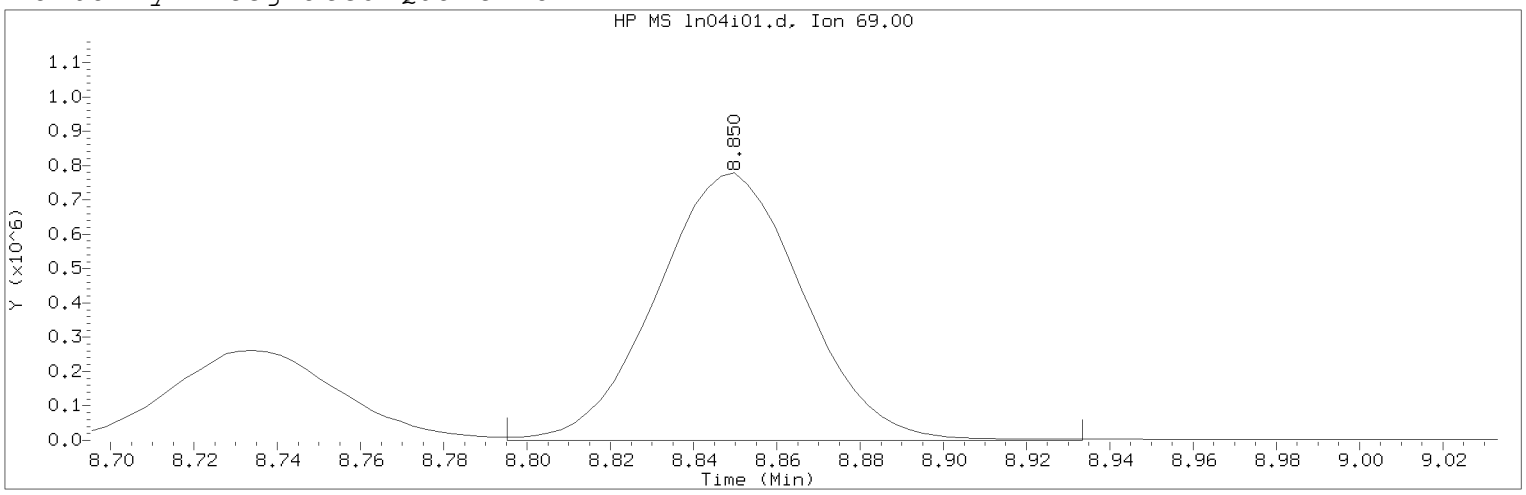
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area : 2429255
On-column Amount (ng) : 7682.9381
Integration start scan : 2101 Integration stop scan: 2199
Y at integration start : 176 Y at integration end: 176

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

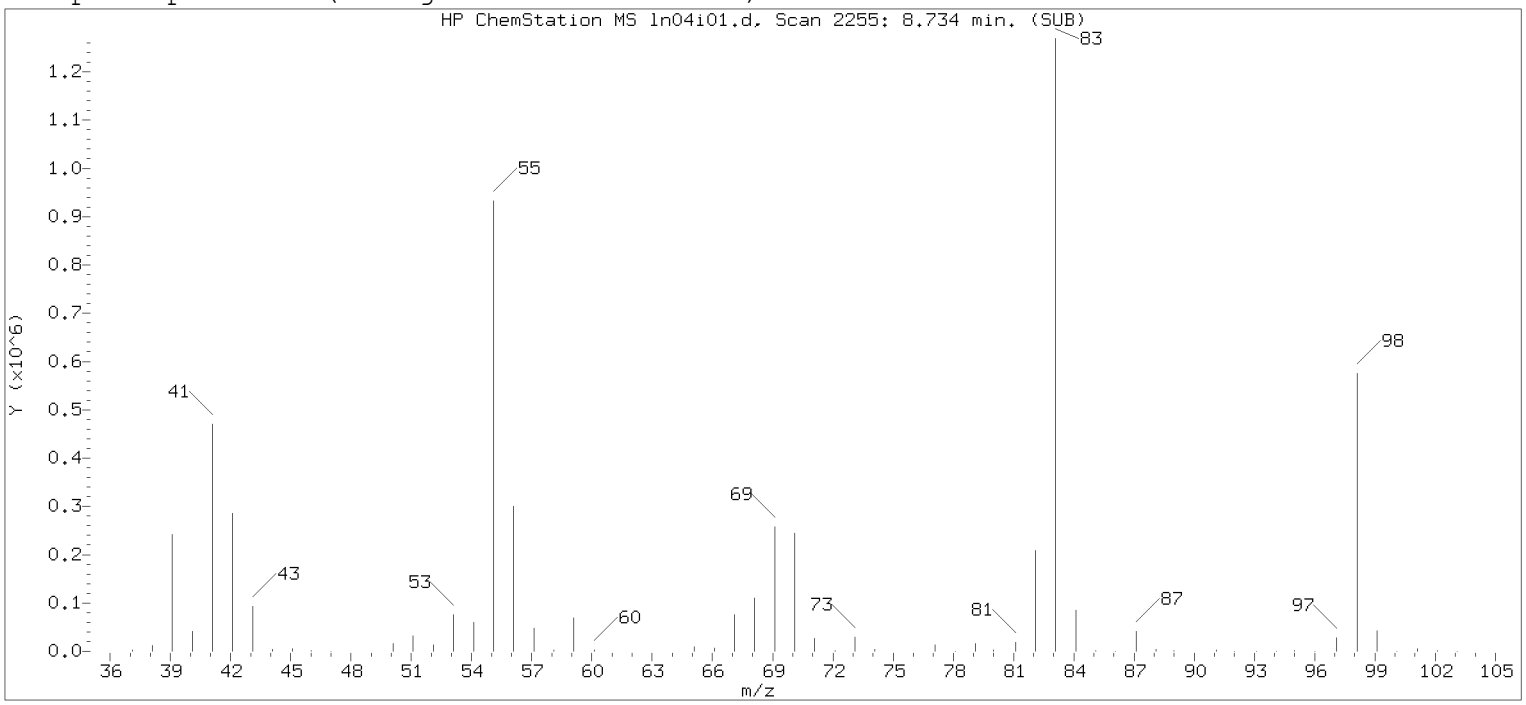
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2291
Retention Time (minutes): 8.850
Quant Ion : 69.00
Area (flag) : 1904896A
On-Column Amount (ng) : 340.2564
Integration start scan : 2273 Integration stop scan: 2316
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

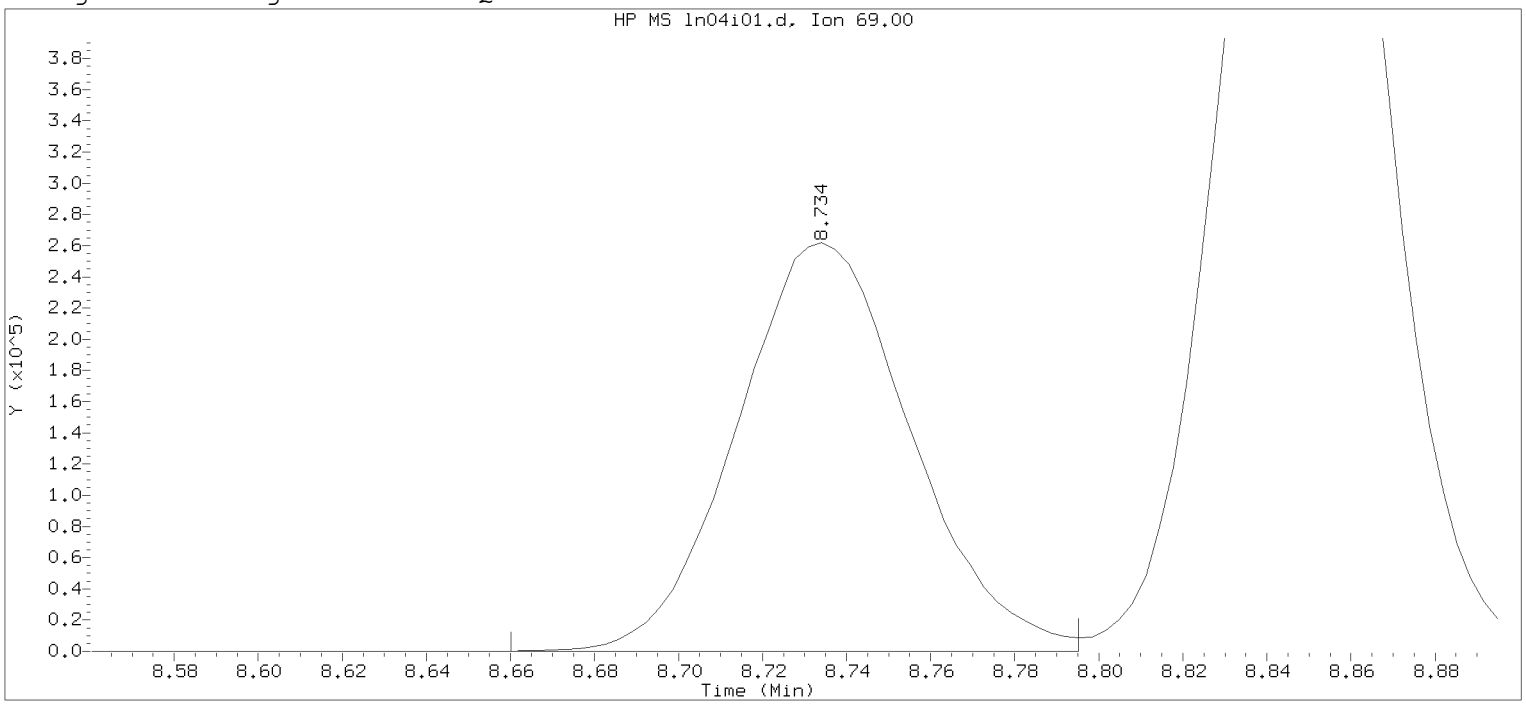
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

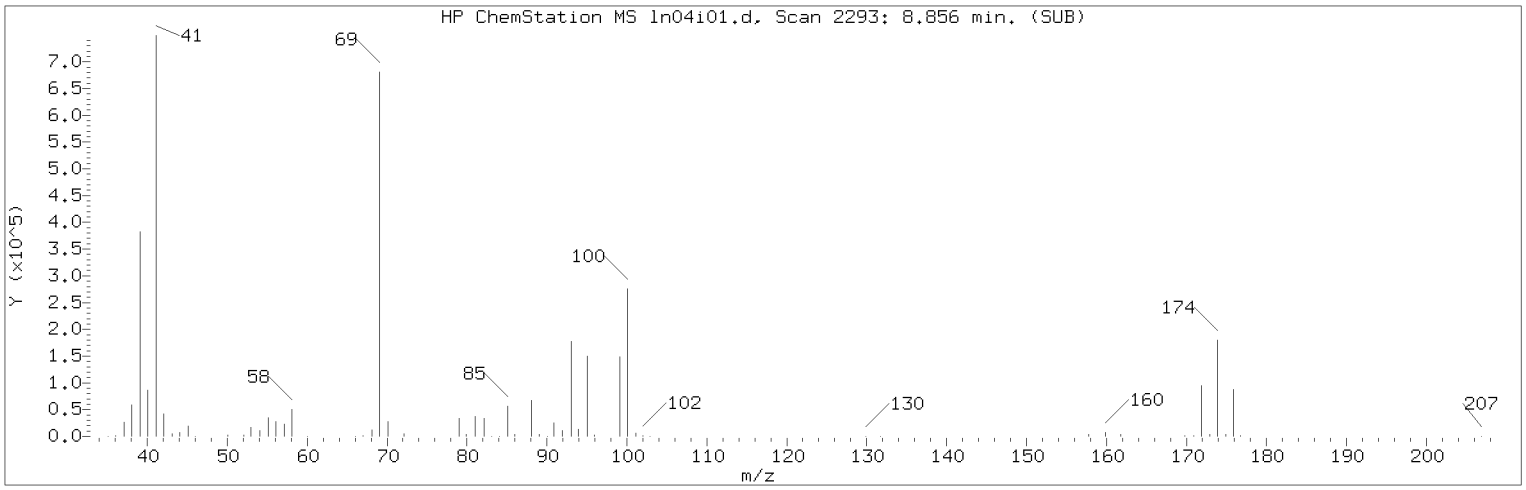
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

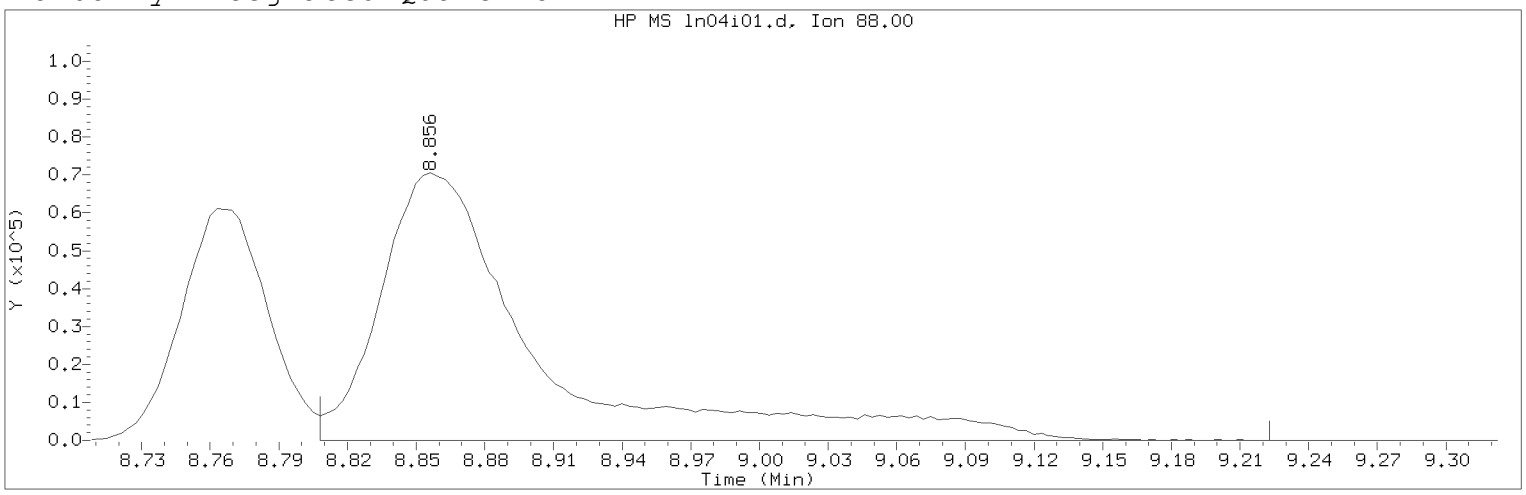
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 752058
On-column Amount (ng) : 311.1363
Integration start scan : 2231 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

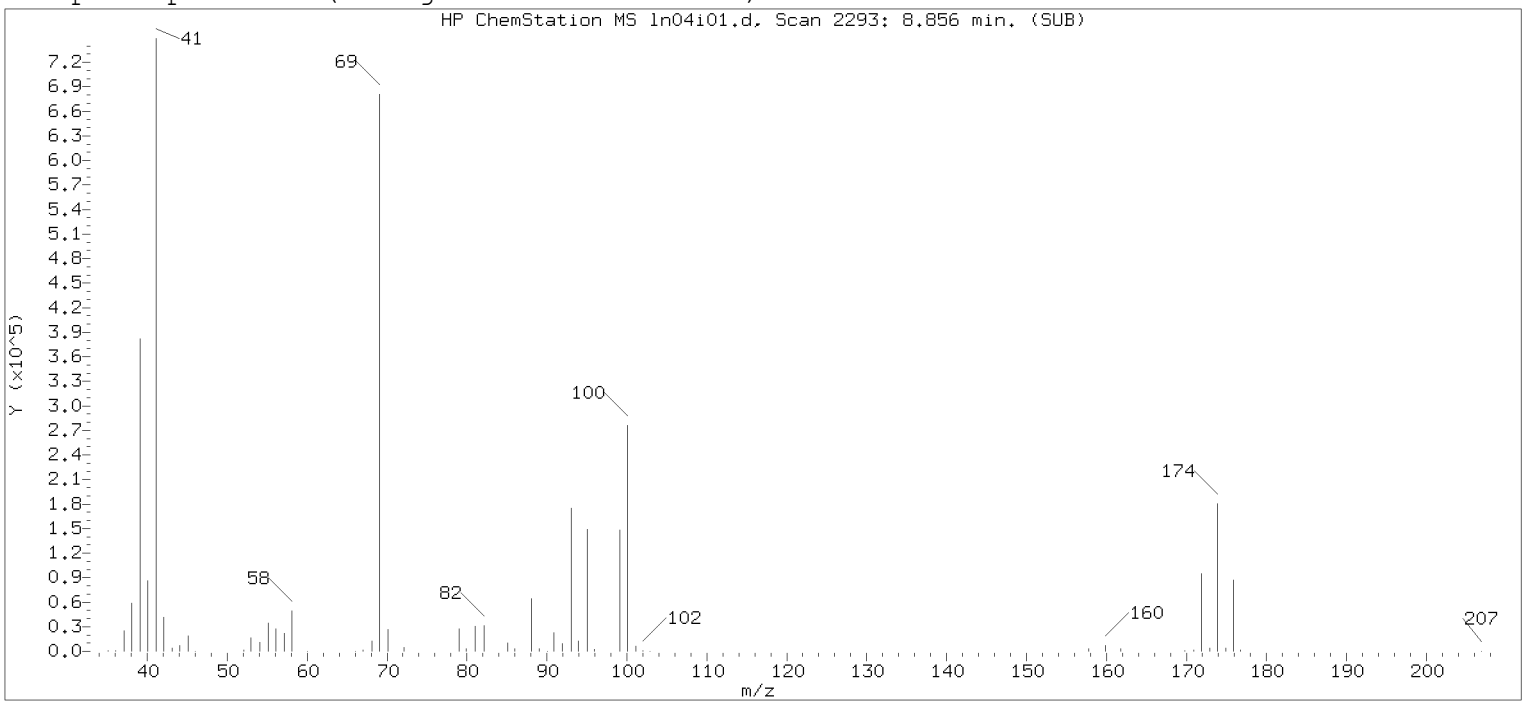
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 338379M
On-Column Amount (ng) : 3968.4208
Integration start scan : 2277 Integration stop scan: 2406
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

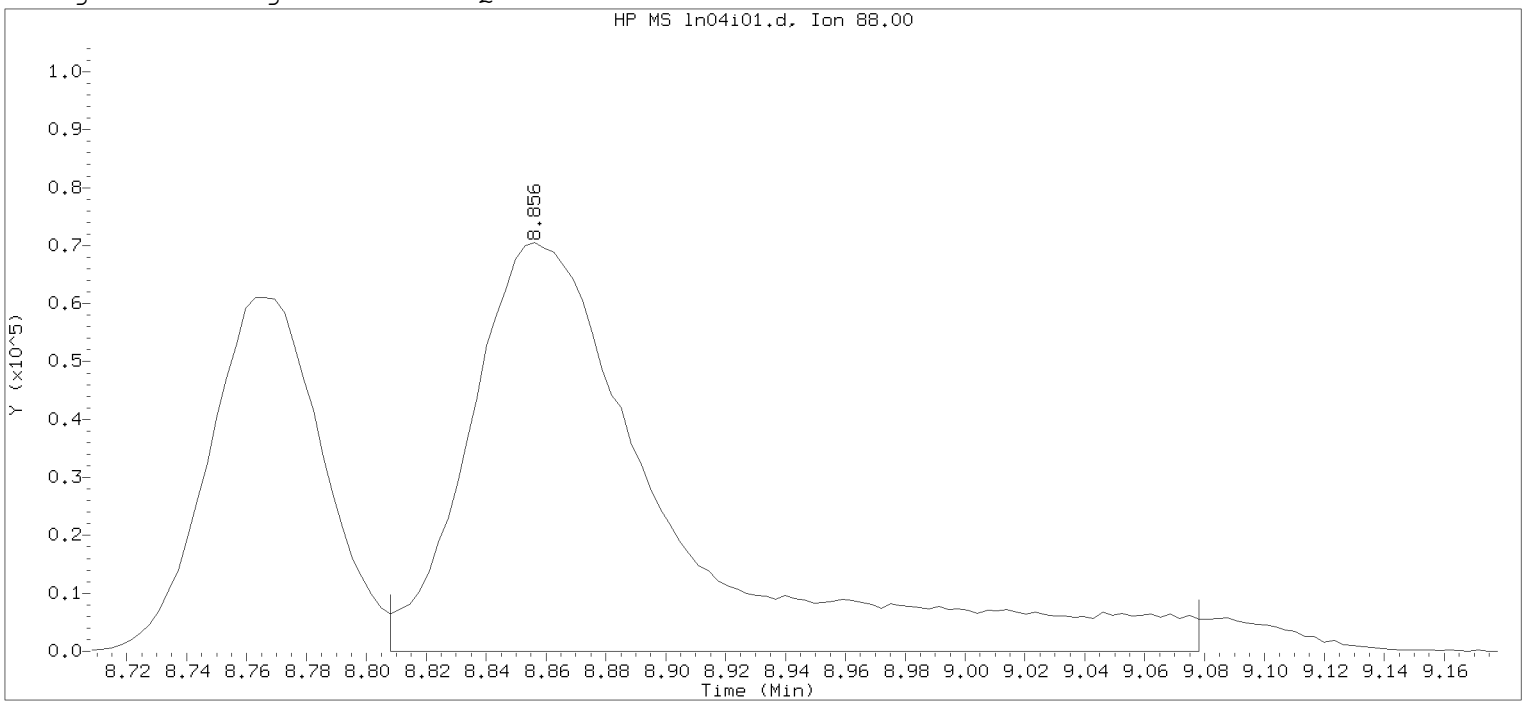
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

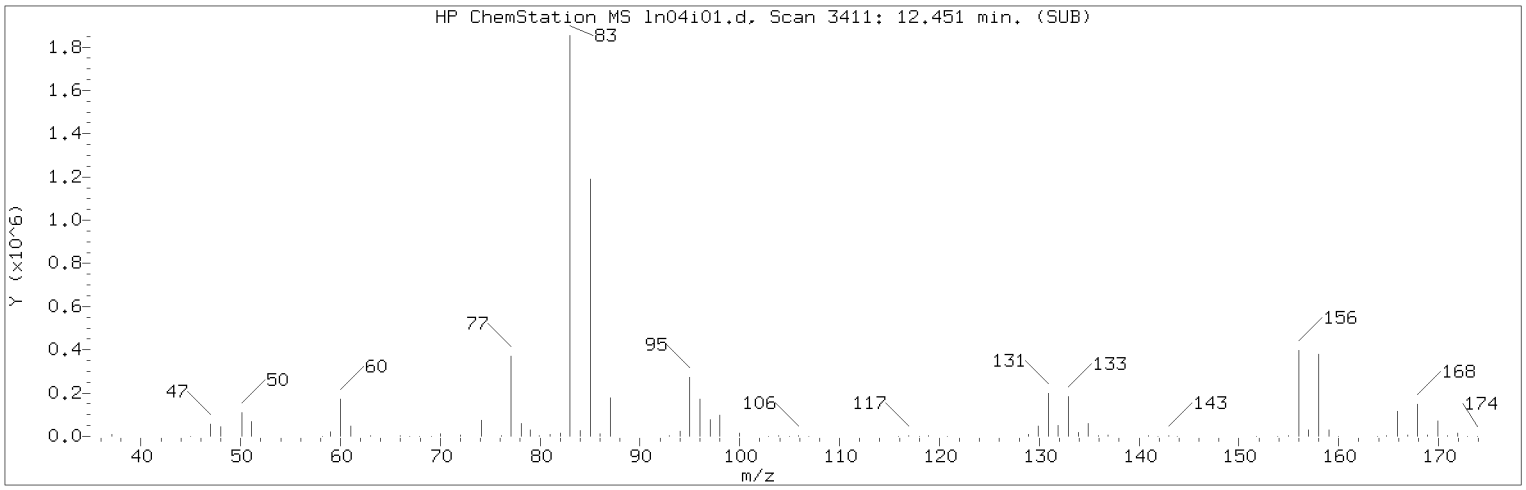
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

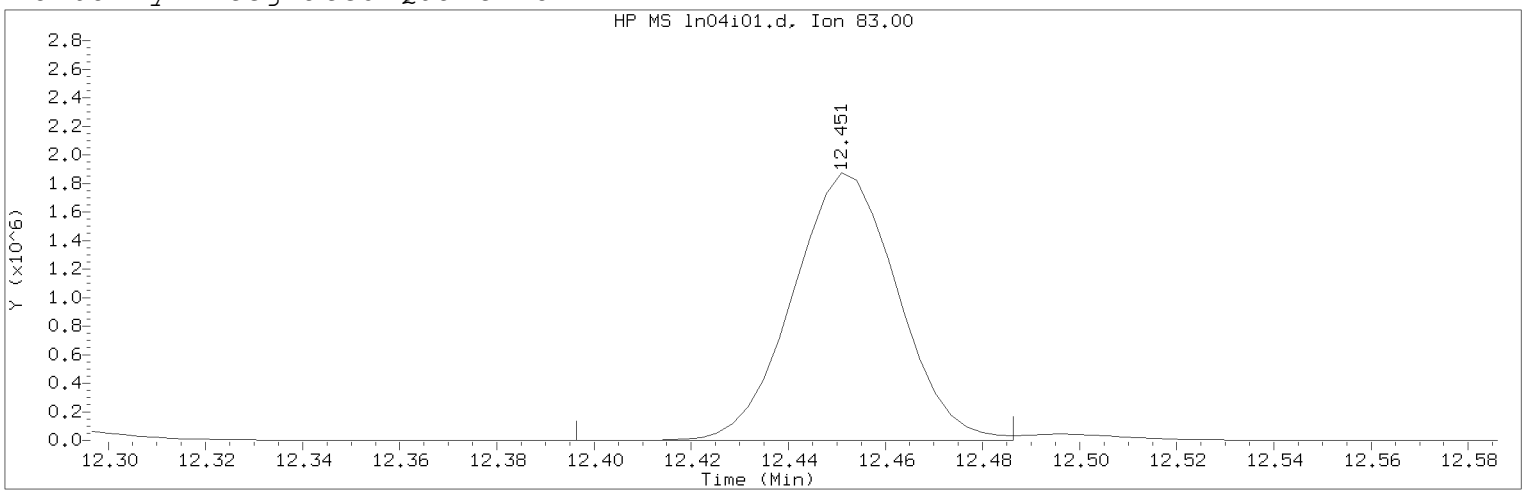
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2293		
Retention Time (minutes)	: 8.856		
Quant Ion	: 88.00		
Area	: 325164		
On-column Amount (ng)	: 3803.8575		
Integration start scan	: 2277	Integration stop scan:	2361
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

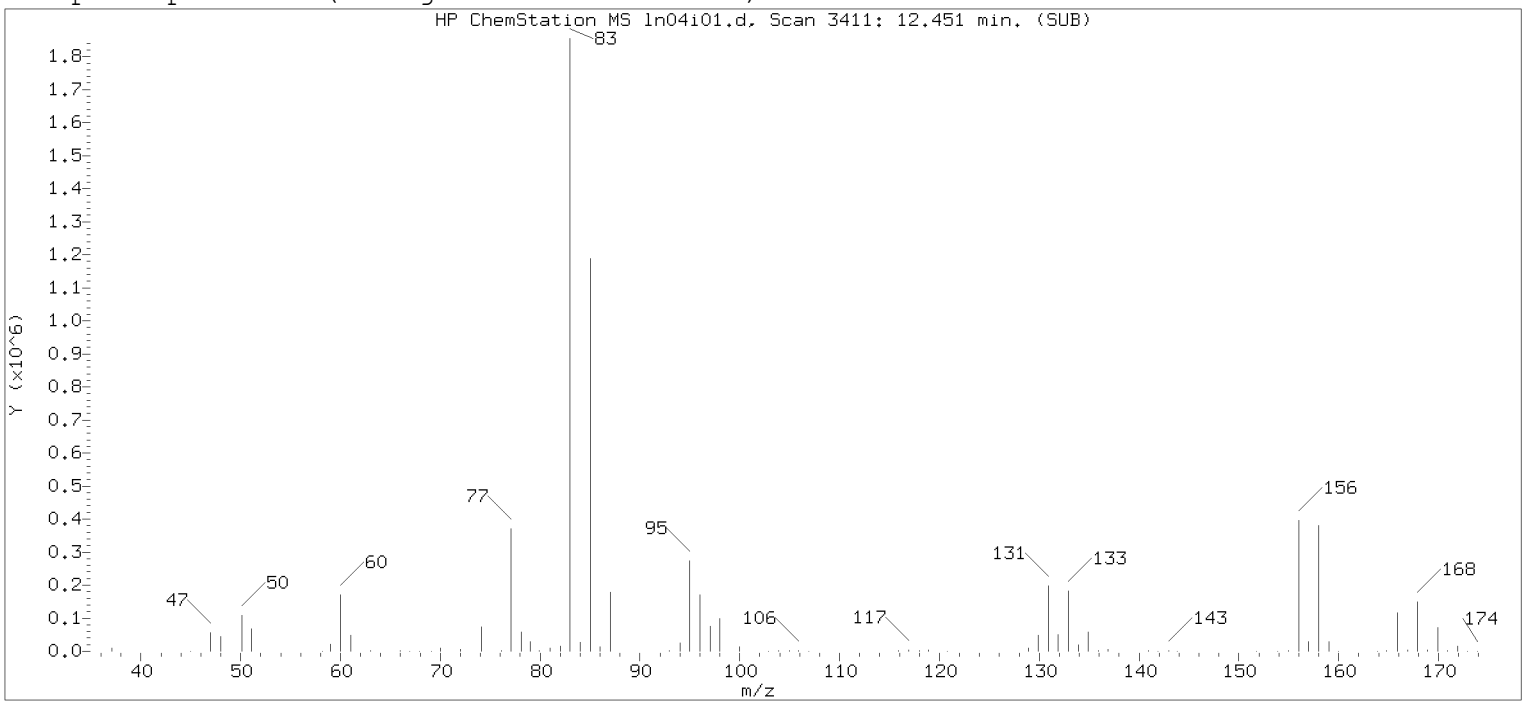
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 2800639M
On-Column Amount (ng) : 310.7054
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

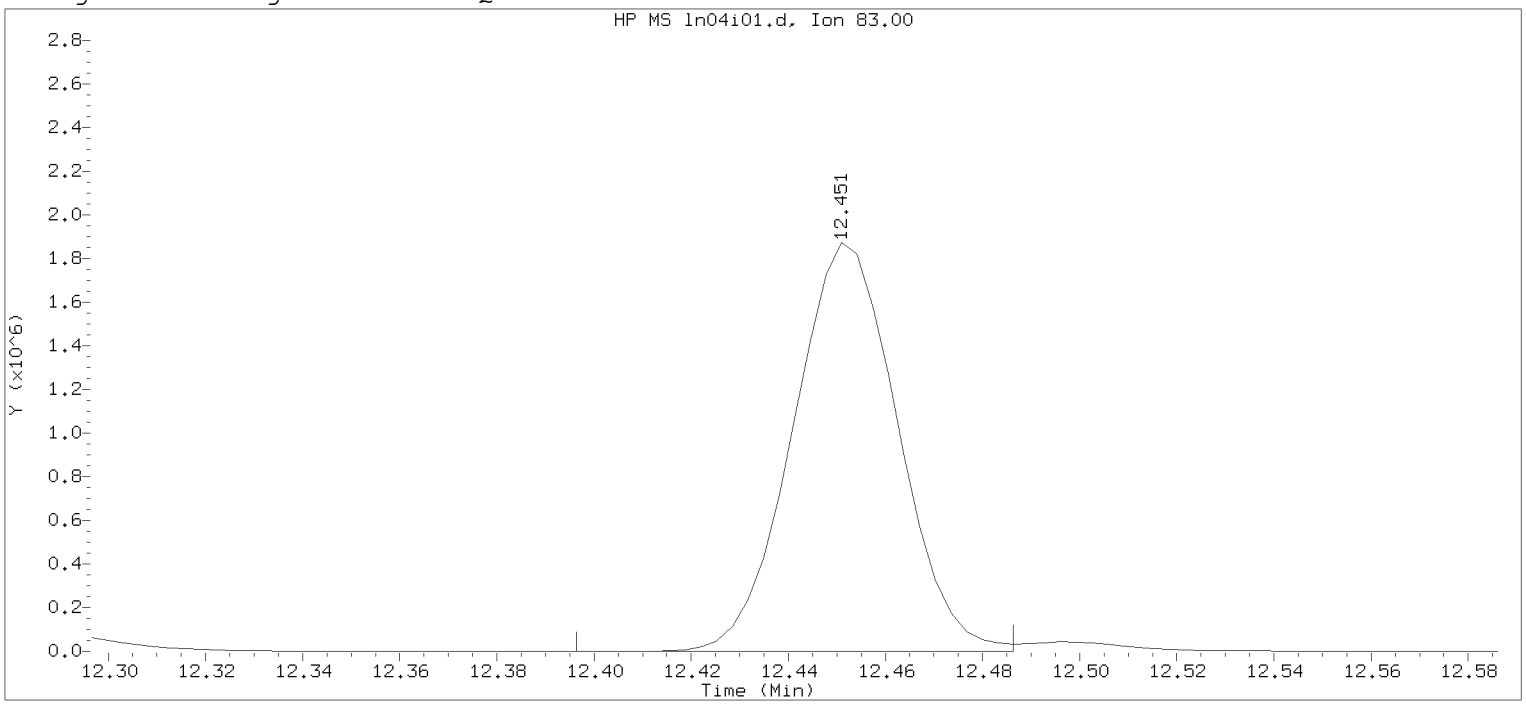
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

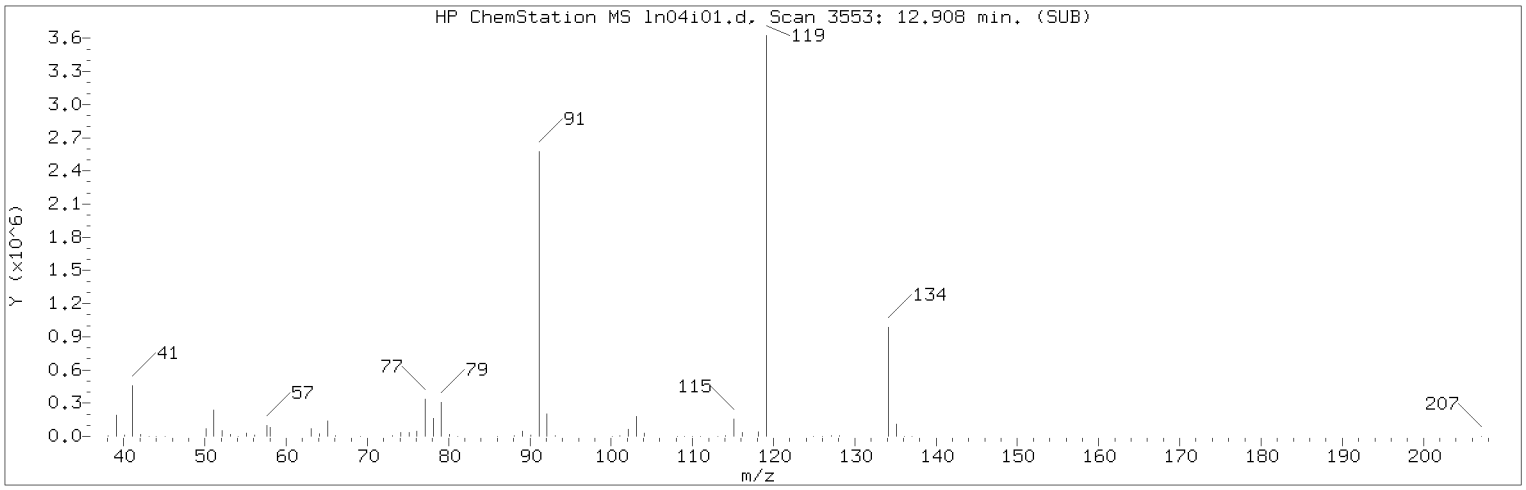
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

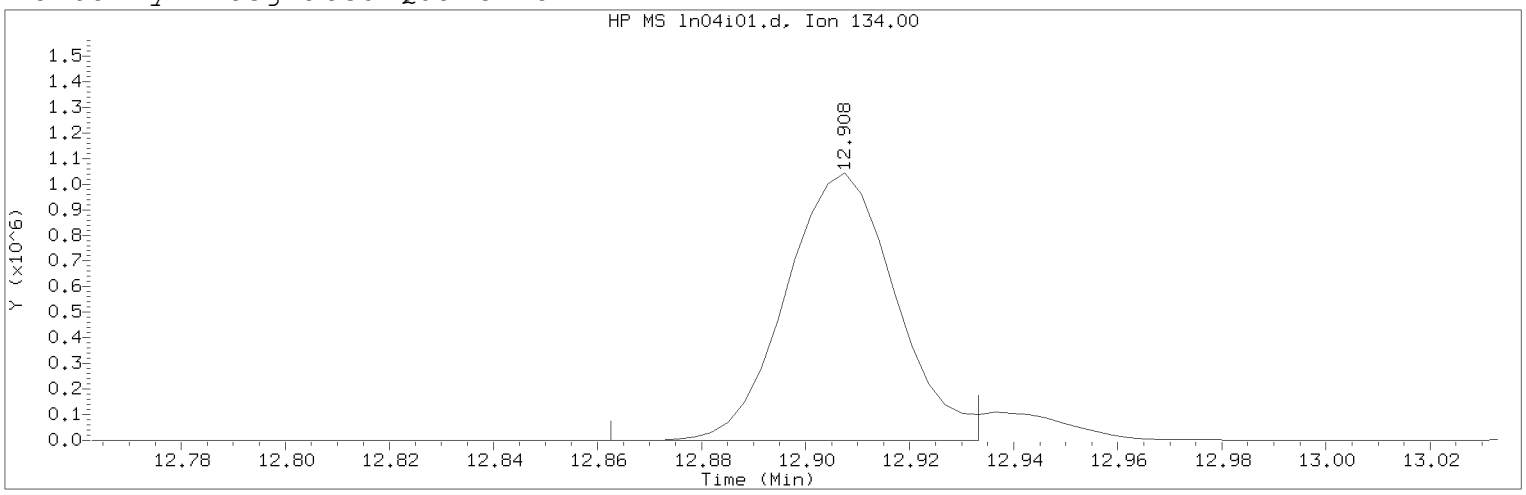
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 2797364
On-column Amount (ng) : 294.0638
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

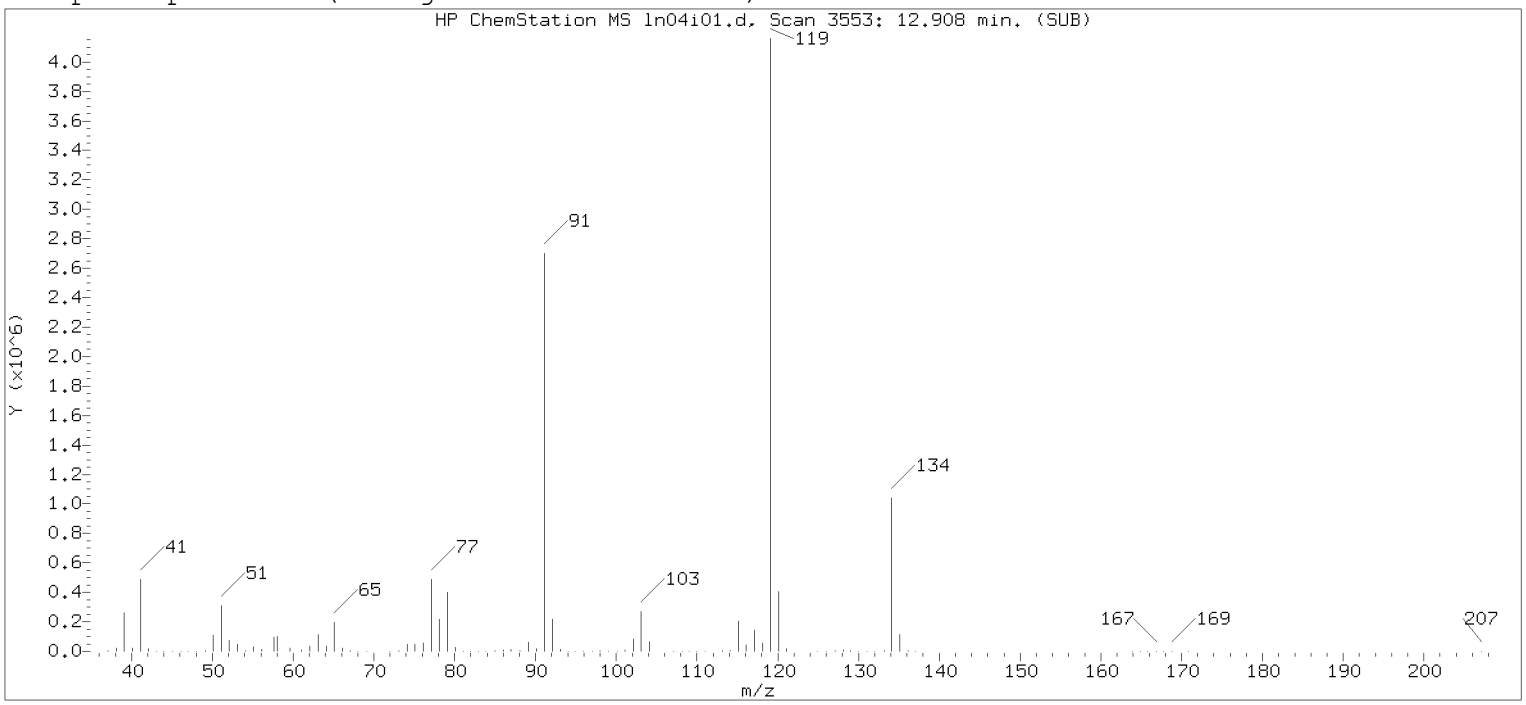
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area (flag) : 1524421M
On-Column Amount (ng) : 323.7167
Integration start scan : 3538 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

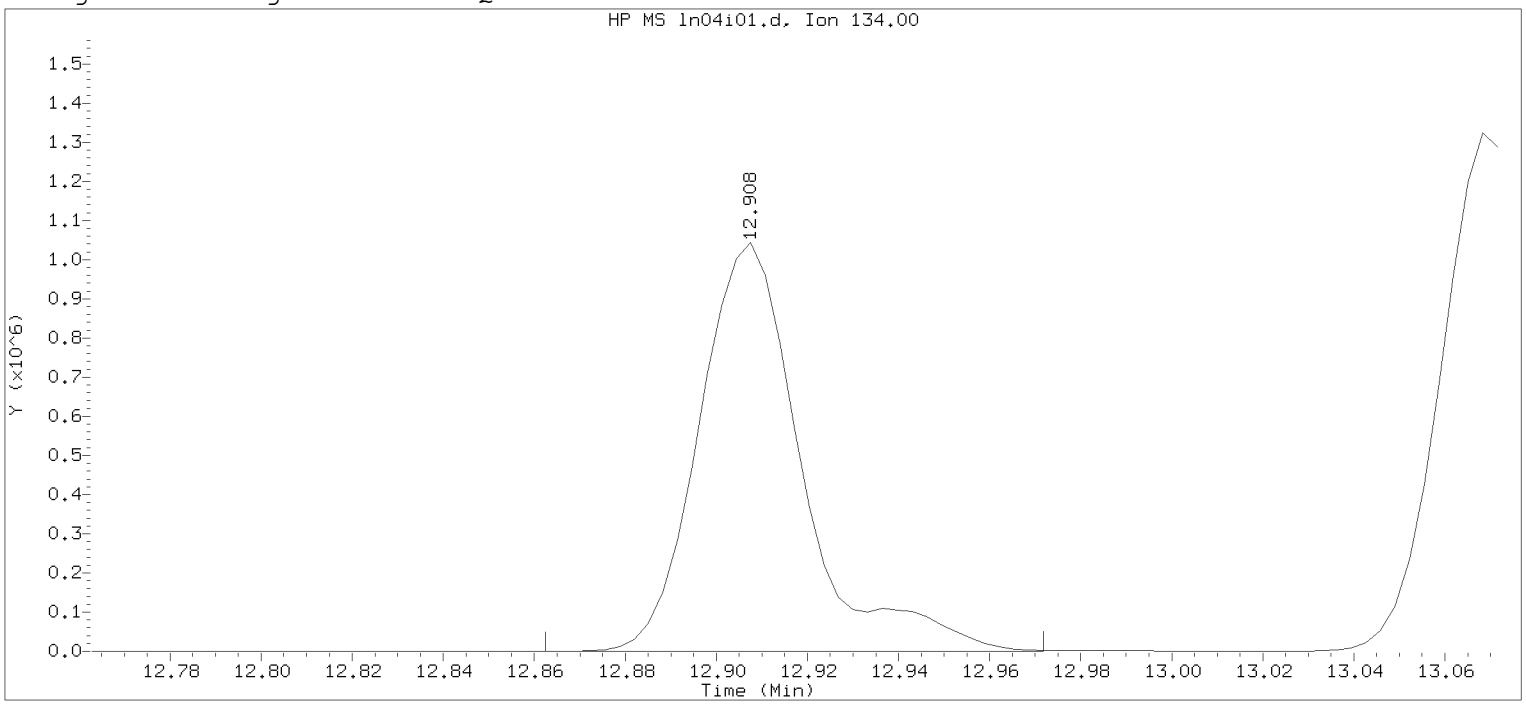
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



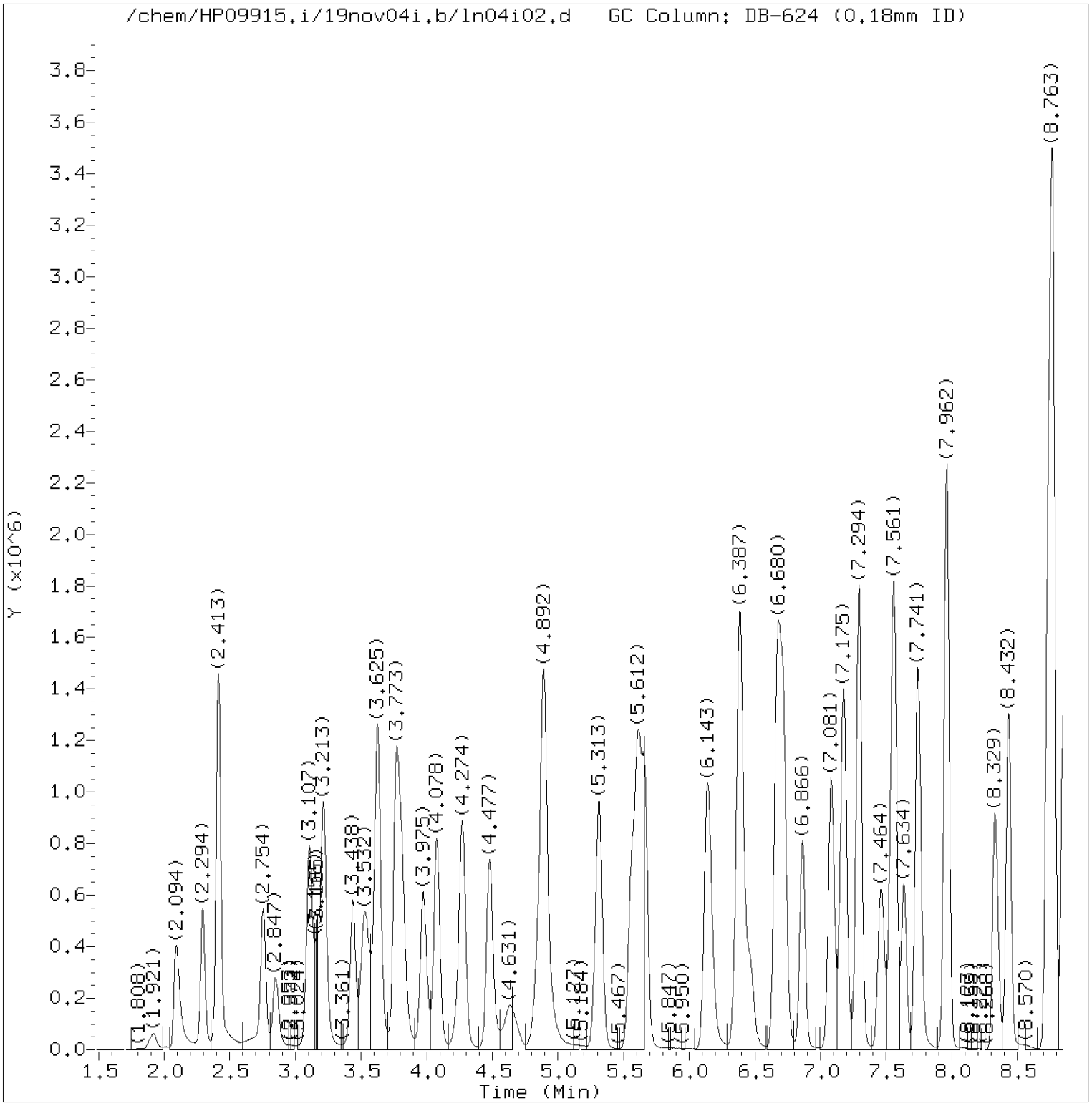
Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area : 1639624
On-column Amount (ng) : 313.1253
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

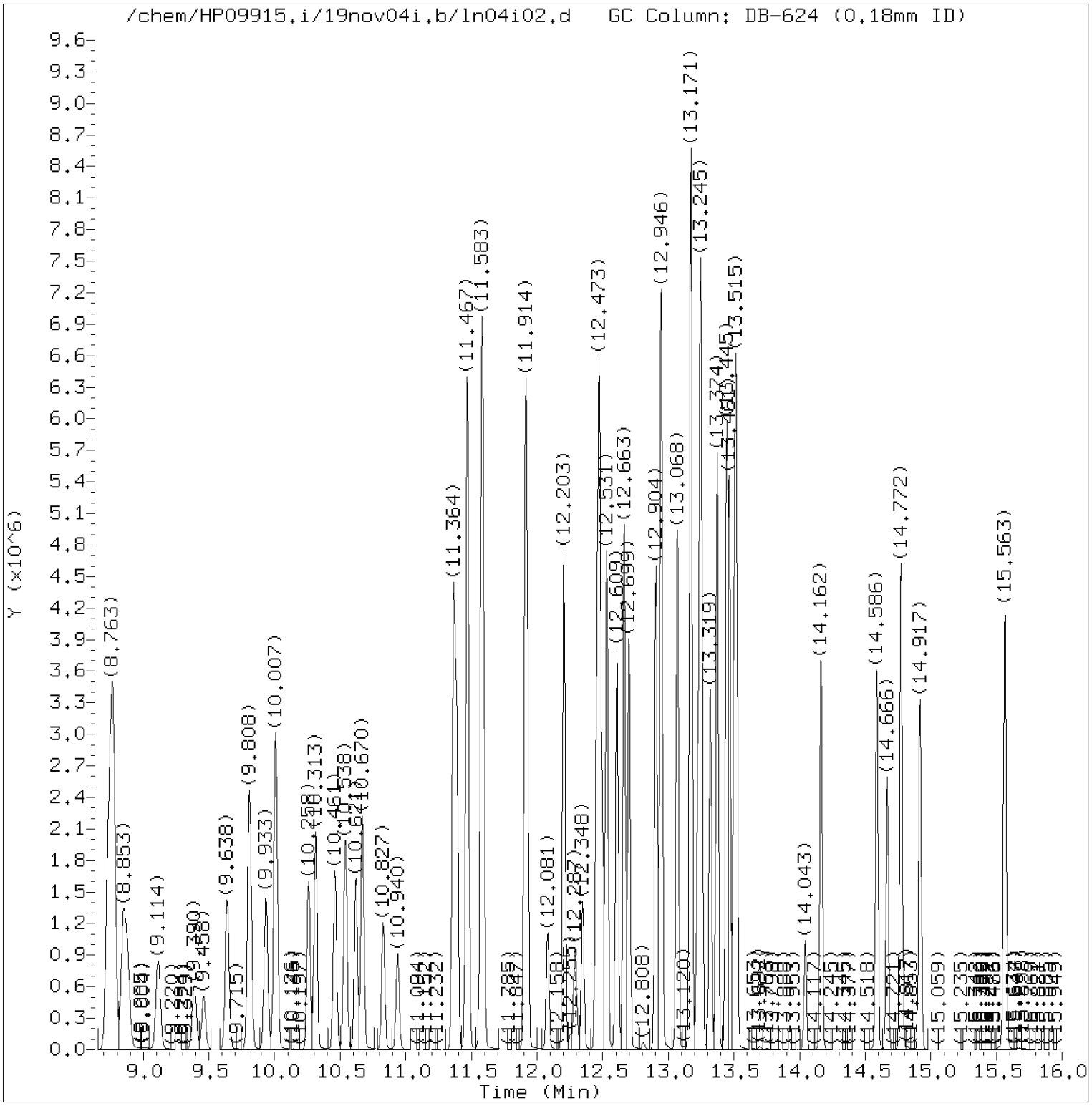
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.094	85	857961M	103.943
4) Chloromethane	(2)	2.294	50	784780	98.650
5) 1,3-Butadiene	(2)	2.413	39	618713M	93.669
6) Vinyl Chloride	(2)	2.416	62	781267	98.400
8) Bromomethane	(2)	2.754	94	539686	94.824
9) Chloroethane	(2)	2.847	64	418524	95.919
10) Dichlorofluoromethane	(2)	3.104	67	992796M	94.678
12) Trichlorofluoromethane	(2)	3.162	101	860893	100.714
11) n-Pentane	(2)	3.217	43	1002713	99.263
14) Ethyl ether	(2)	3.435	59	550266	99.622
15) Freon 123a	(2)	3.532	67	679642	98.841
16) Acrolein	(1)	3.625	56	2075331	1040.029
17) 1,1-Dichloroethene	(2)	3.763	96	510815	101.811
17) 1,1-Dichloroethene	(2)	3.766	63	250669	99.655
19) Freon 113	(2)	3.799	101	594686	103.888
18) Acetone	(1)	3.805	58	181313	202.676
22) Methyl Iodide	(2)	3.972	142	1051103	101.097
21) 2-Propanol	(1)	4.001	45	343390	533.946
23) Carbon Disulfide	(2)	4.078	76	1957296	103.520
27) Methyl Acetate	(2)	4.252	43	630892	97.630
25) Allyl Chloride	(2)	4.274	41	894091	99.337
28) Methylene Chloride	(2)	4.477	84	596882	99.952
29)*t-Butyl alcohol-d10	(1)	4.509	65	265971M	250.000
30) t-Butyl alcohol	(1)	4.631	59	619917	553.614
31) Acrylonitrile	(2)	4.837	53	359403	103.376
33) Methyl Tertiary Butyl Ether	(2)	4.889	73	1901626	99.813
32) trans-1,2-Dichloroethene	(2)	4.892	96	586662	101.076
34) n-Hexane	(2)	5.313	57	974442M	107.908
36) 1,1-Dichloroethane	(2)	5.557	63	1029230	101.649
38) di-Isopropyl ether	(2)	5.609	45	1986383	101.717
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	947614	104.312
40) Ethyl t-butyl ether	(2)	6.143	59	1910218	100.794
43) 1,2-Dichloroethene (Total)	(2)		96	1240957	201.508
44) 2-Butanone	(2)	6.364	43	920731	206.310
42) cis-1,2-Dichloroethene	(2)	6.384	96	654295	100.432
45) 2,2-Dichloropropane	(2)	6.400	77	813782	103.388
47) Propionitrile	(1)	6.464	54	725632	520.085
48) Methacrylonitrile	(2)	6.676	67	966183	257.629

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	349204	101.088
50) Tetrahydrofuran	(1)	6.721	71	261419	207.429
51) Chloroform	(2)	6.866	83	989698	102.195
52)$Dibromofluoromethane	(2)	7.078	113	292391	50.529
52)$Dibromofluoromethane	(2)	7.078	111	297764	50.467
53) 1,1,1-Trichloroethane	(2)	7.088	97	860519	104.109
54) Cyclohexane	(2)	7.175	56	1170449	105.893
54) Cyclohexane	(2)	7.181	84	1022362	106.481
54) Cyclohexane	(2)	7.175	69	362451	106.017
56) Carbon Tetrachloride	(2)	7.290	117	751477	107.196
55) 1,1-Dichloropropene	(2)	7.297	75	823627	102.878
58) Isobutyl Alcohol	(1)	7.461	41	528441	1402.358
57)$1,2-Dichloroethane-d4	(2)	7.535	102	74158	50.284
57)$1,2-Dichloroethane-d4	(2)	7.535	65	331294	50.408
57)$1,2-Dichloroethane-d4	(2)	7.535	104	47551	50.479
60) Benzene	(2)	7.561	78	2423634	100.668
61) 1,2-Dichloroethane	(2)	7.638	62	757974	97.883
61) 1,2-Dichloroethane	(2)	7.641	98	76152	99.373
65) t-Amyl methyl ether	(2)	7.741	73	1946110	102.306
67) n-Heptane	(2)	7.962	43	911962MA	108.104
66)*Fluorobenzene	(2)	7.962	96	1183605	50.000
69) n-Butanol	(1)	8.329	56	944383M	2911.812
71) Trichloroethene	(2)	8.432	95	618983	102.110
72) Methylcyclohexane	(2)	8.734	83	1164174	103.516
72) Methylcyclohexane	(2)	8.734	98	527428	103.640
73) 1,2-Dichloropropane	(2)	8.773	63	625914	102.385
76) Methyl Methacrylate	(2)	8.847	69	640445A	108.334
75) 1,4-Dioxane	(1)	8.856	88	117817M	1321.647
74) Dibromomethane	(2)	8.882	93	410059	103.668
78) Bromodichloromethane	(2)	9.114	83	770805	108.595
79) 2-Nitropropane	(2)	9.390	41	488862	227.388
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	284759	108.454
81) cis-1,3-Dichloropropene	(2)	9.638	75	1026055	108.840
82) 4-Methyl-2-pentanone	(2)	9.808	43	1972651	209.410
83)$Toluene-d8	(3)	9.933	98	1216793	49.703
83)$Toluene-d8	(3)	9.933	100	789846	49.806
88) Toluene	(3)	10.007	92	1555339	101.336
90) 1,3-Dichloropropene (total)	(3)		100	1994775	220.026

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	968720	111.186
91) Ethyl Methacrylate	(3)	10.313	69	1159403	109.496
92) 1,1,2-Trichloroethane	(3)	10.461	97	606132	104.163
93) Tetrachloroethene	(3)	10.541	166	663260	102.036
94) 1,3-Dichloropropane	(3)	10.621	76	1023947	103.060
96) 2-Hexanone	(3)	10.670	43	1457165	206.170
97) Dibromochloromethane	(3)	10.827	129	678552	113.835
99) 1,2-Dibromoethane	(3)	10.940	107	665574	105.331
100)*Chlorobenzene-d5	(3)	11.361	117	935628	50.000
101) 1-Chlorohexane	(3)	11.364	91	826713	100.265
102) Chlorobenzene	(3)	11.387	112	1760002	101.404
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	622547	108.864
104) Ethylbenzene	(3)	11.470	91	3015086	102.779
106) m+p-Xylene	(3)	11.583	106	2388845	206.999
108) Xylene (Total)	(3)		106	3566525	310.313
107) o-Xylene	(3)	11.908	106	1177680	103.314
109) Styrene	(3)	11.924	104	1996461	105.988
110) Bromoform	(3)	12.081	173	502388	112.791
111) Isopropylbenzene	(3)	12.203	105	2980812	104.258
112) Cyclohexanone	(1)	12.287	55	431750	1236.644
114)$4-Bromofluorobenzene	(3)	12.348	95	458263	49.435
114)$4-Bromofluorobenzene	(3)	12.348	174	380301	49.485
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	995972M	105.317
115) Bromobenzene	(4)	12.464	156	778170	103.423
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	790040	270.837
117) 1,2,3-Trichloropropane	(4)	12.496	110	303037	104.425
119) n-Propylbenzene	(4)	12.531	91	3409679	103.724
120) 2-Chlorotoluene	(4)	12.609	126	718635	102.905
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	2528195	105.828
121) 4-Chlorotoluene	(4)	12.699	126	737830	101.502
124) tert-Butylbenzene	(4)	12.904	134	526781M	106.622
125) Pentachloroethane	(4)	12.940	167	474988	111.651
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	2664001	105.806
127) sec-Butylbenzene	(4)	13.068	105	3153429	106.963
129) 1,3-Dichlorobenzene	(4)	13.168	146	1407080	101.768
130) p-Isopropyltoluene	(4)	13.171	119	2746850	107.698
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	500629	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	1451933	101.297

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

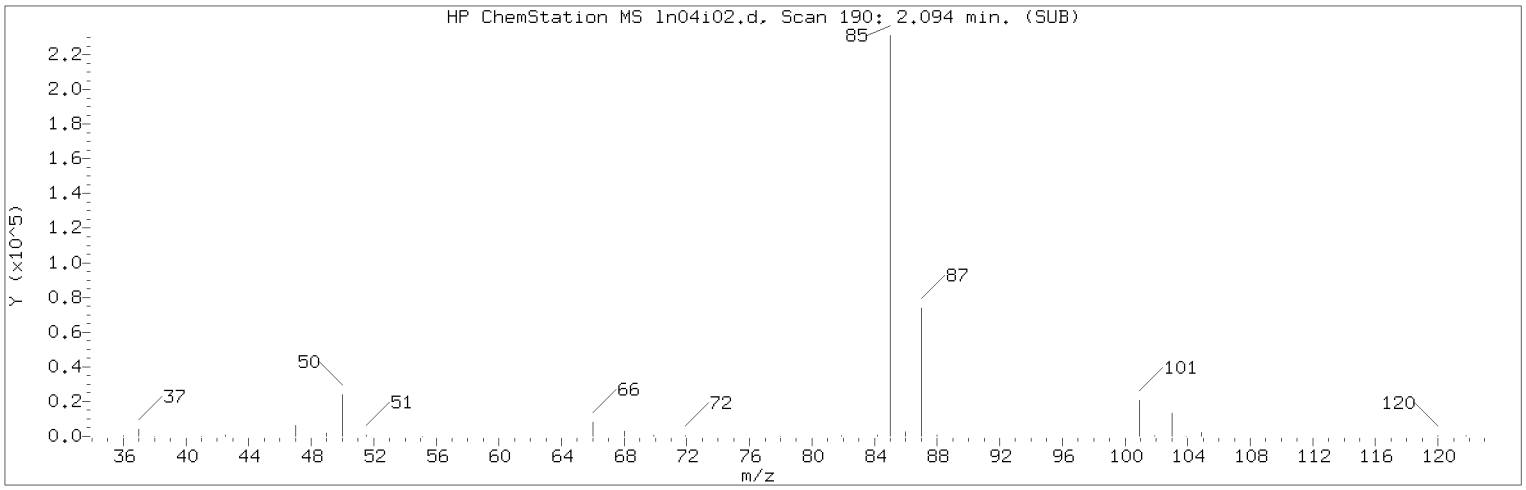
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

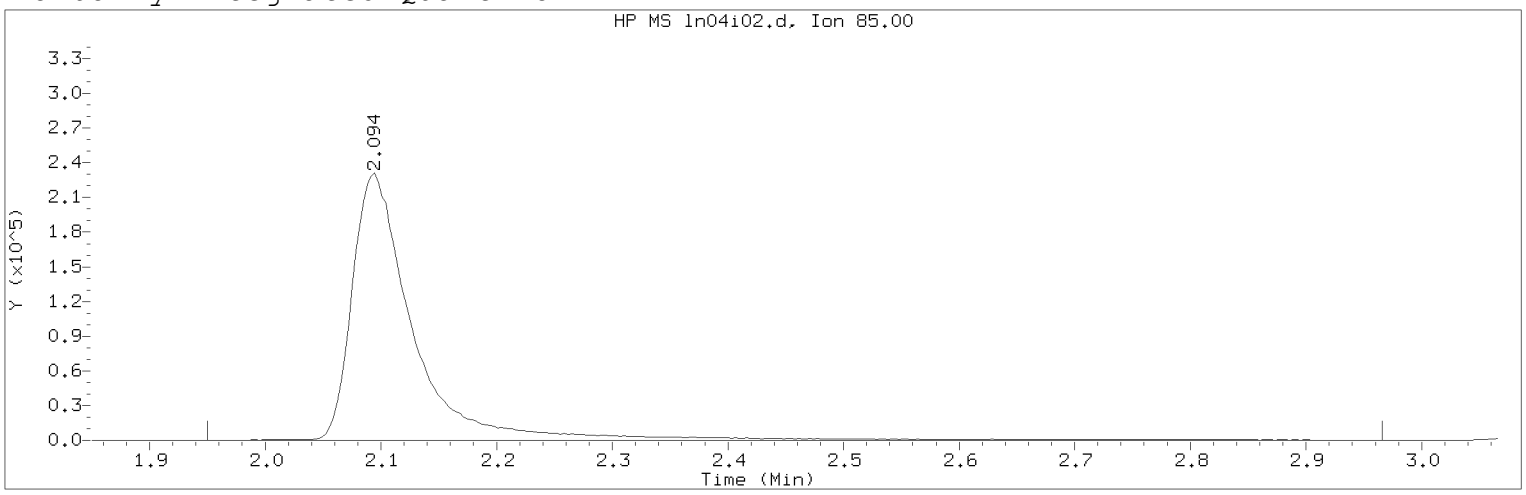
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	2711349	101.660
135) Benzyl Chloride	(4)	13.319	91	2226905	110.280
136) 1,3-Diethylbenzene	(4)	13.374	119	1705244	102.734
141) Diethylbenzene (total)	(4)		100	4934627	307.371
137) 1,4-Diethylbenzene	(4)	13.445	119	1791059	101.846
139) n-Butylbenzene	(4)	13.464	92	1355994	103.980
138) 1,2-Dichlorobenzene	(4)	13.502	146	1381717	101.273
140) 1,2-Diethylbenzene	(4)	13.518	119	1438324	102.791
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	224965	108.669
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	1074198	102.479
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	1034842	101.533
147) Hexachlorobutadiene	(4)	14.666	225	430531	89.465
148) Naphthalene	(4)	14.772	128	3428000	104.621
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	1010801	101.922
150) 2-Methylnaphthalene	(4)	15.563	142	2117626	104.952

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

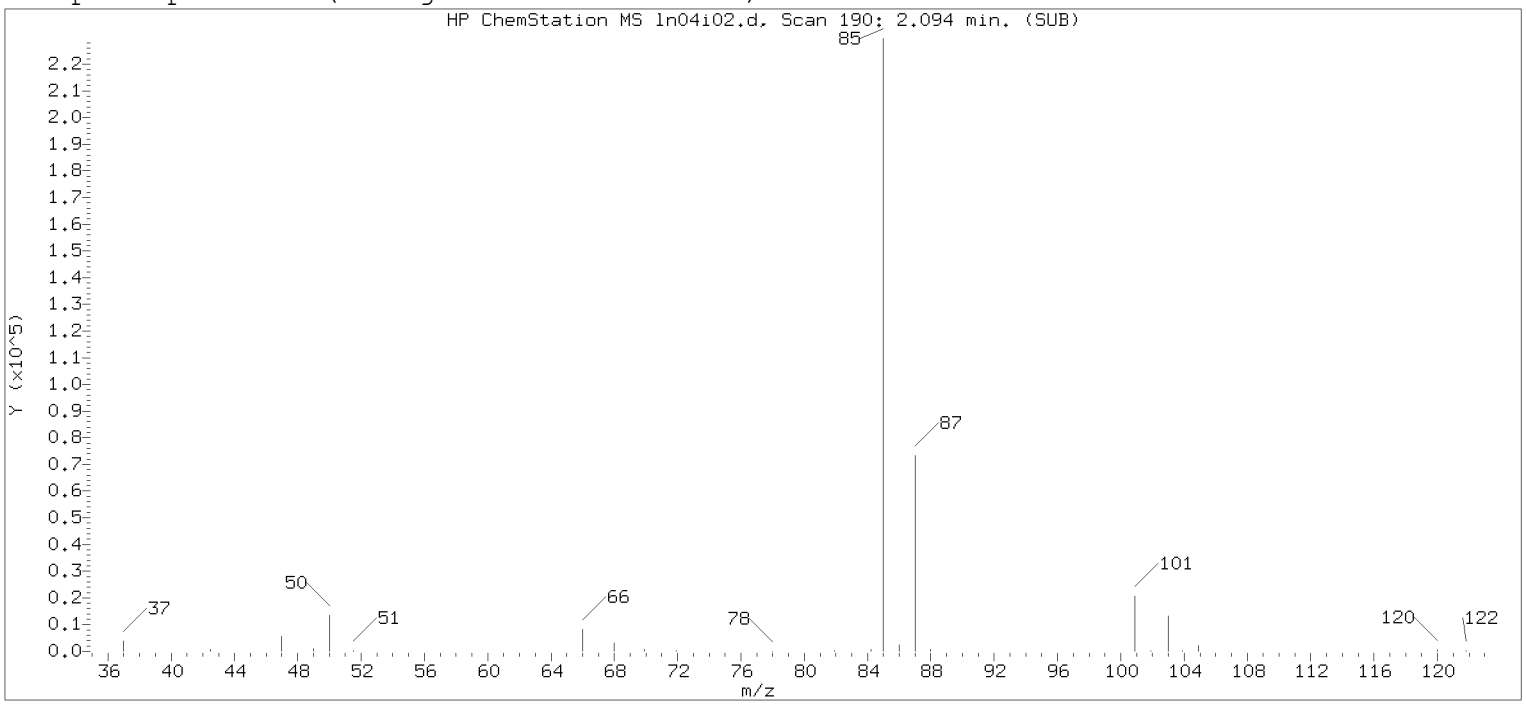
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area (flag) : 857961M
On-Column Amount (ng) : 103.9433
Integration start scan : 144 Integration stop scan: 460
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

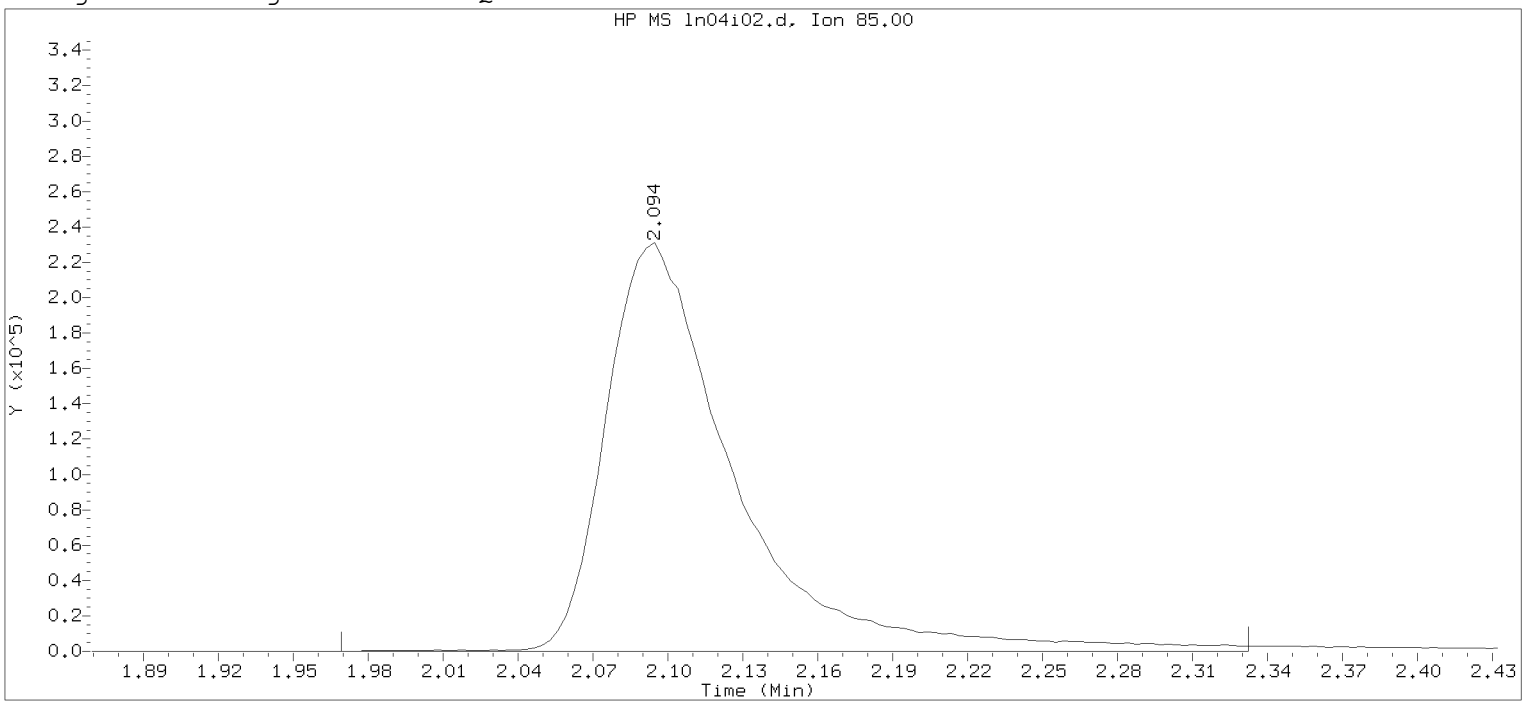
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

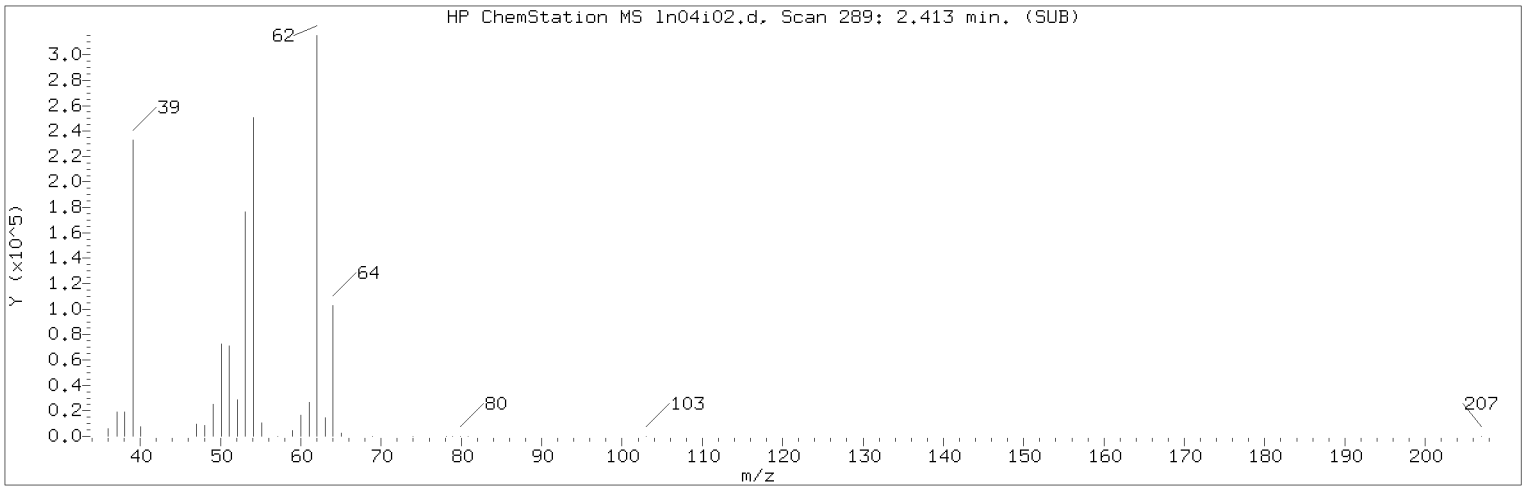
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

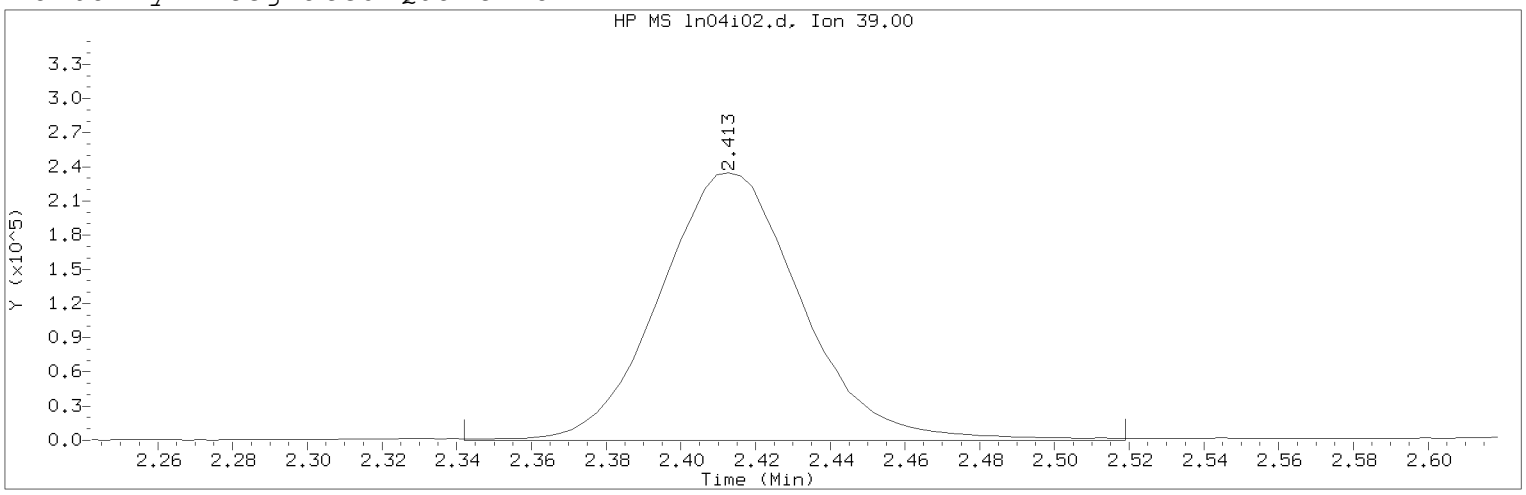
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area : 824639
On-column Amount (ng) : 94.4157
Integration start scan : 150 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

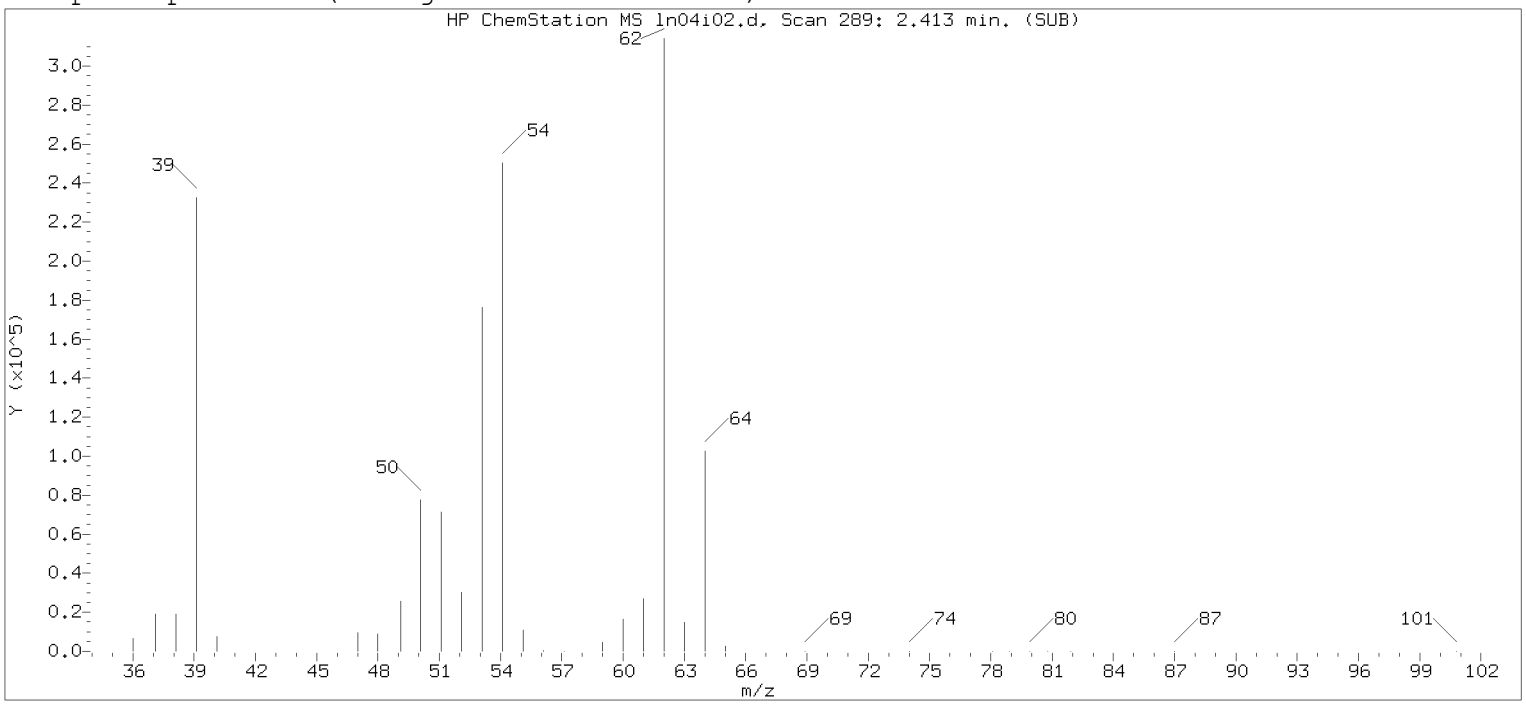
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area (flag) : 618713M
On-Column Amount (ng) : 93.6685
Integration start scan : 266 Integration stop scan: 321
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

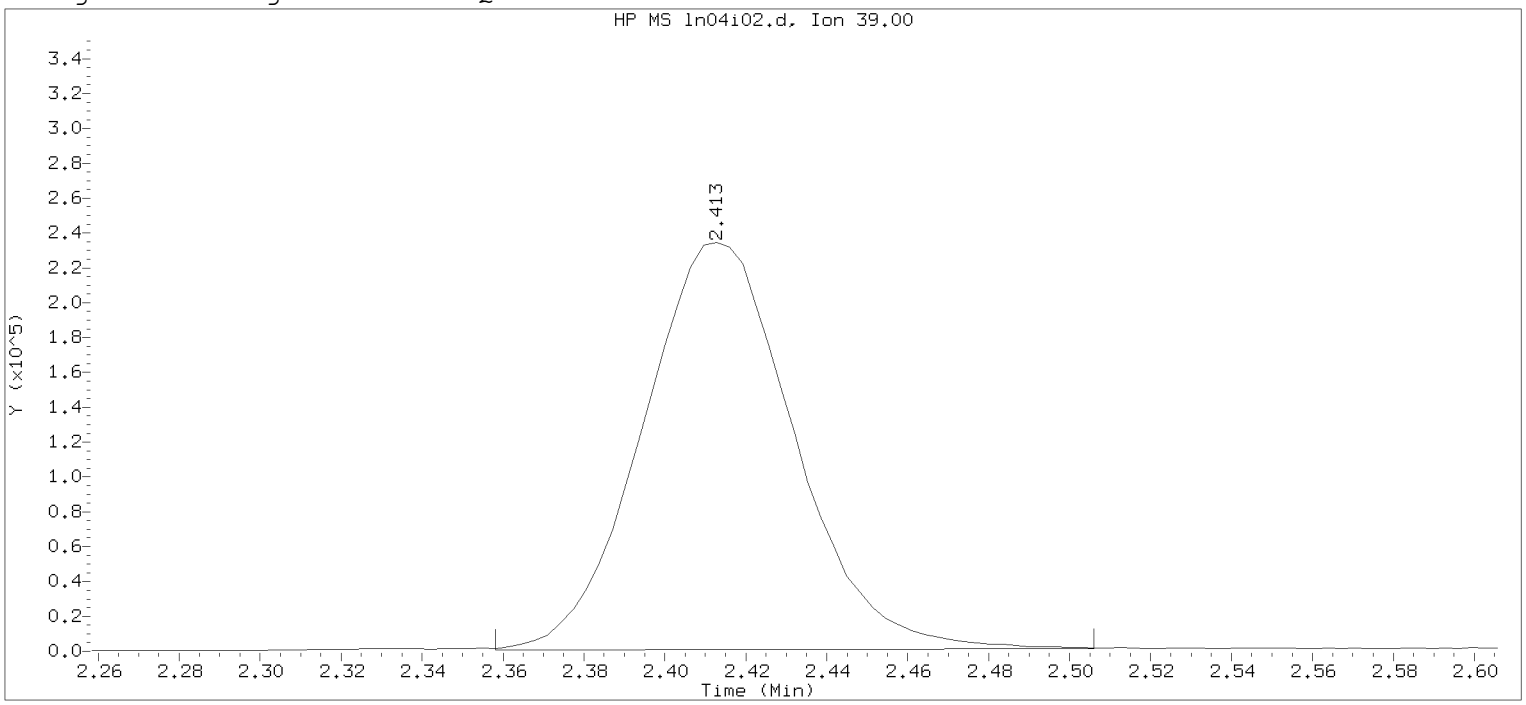
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

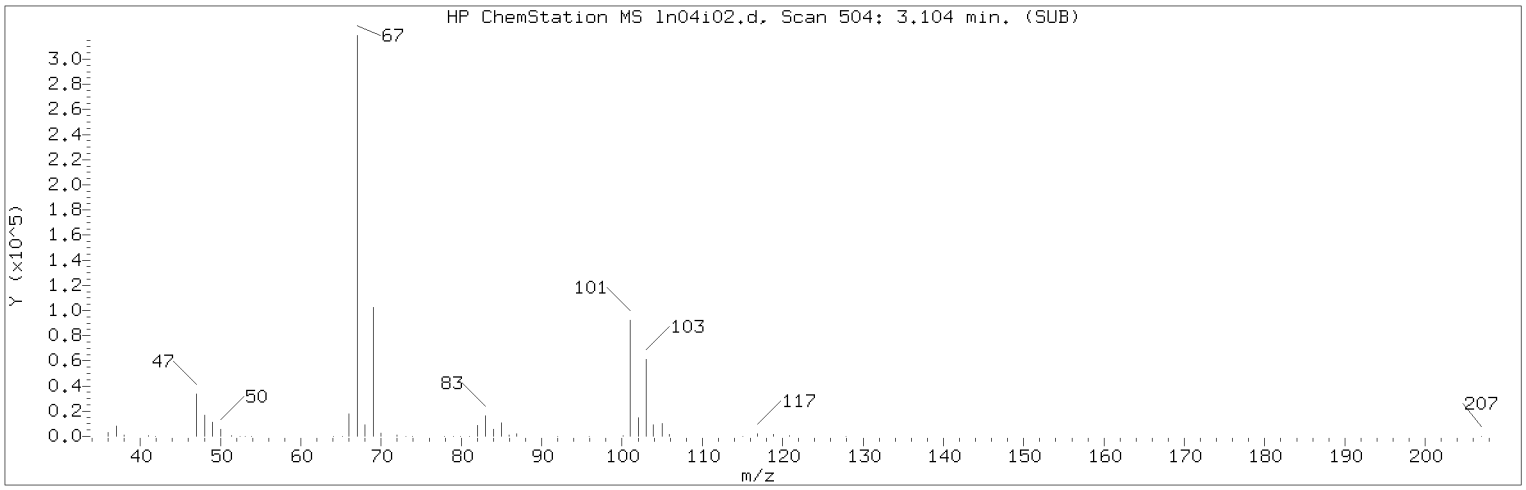
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

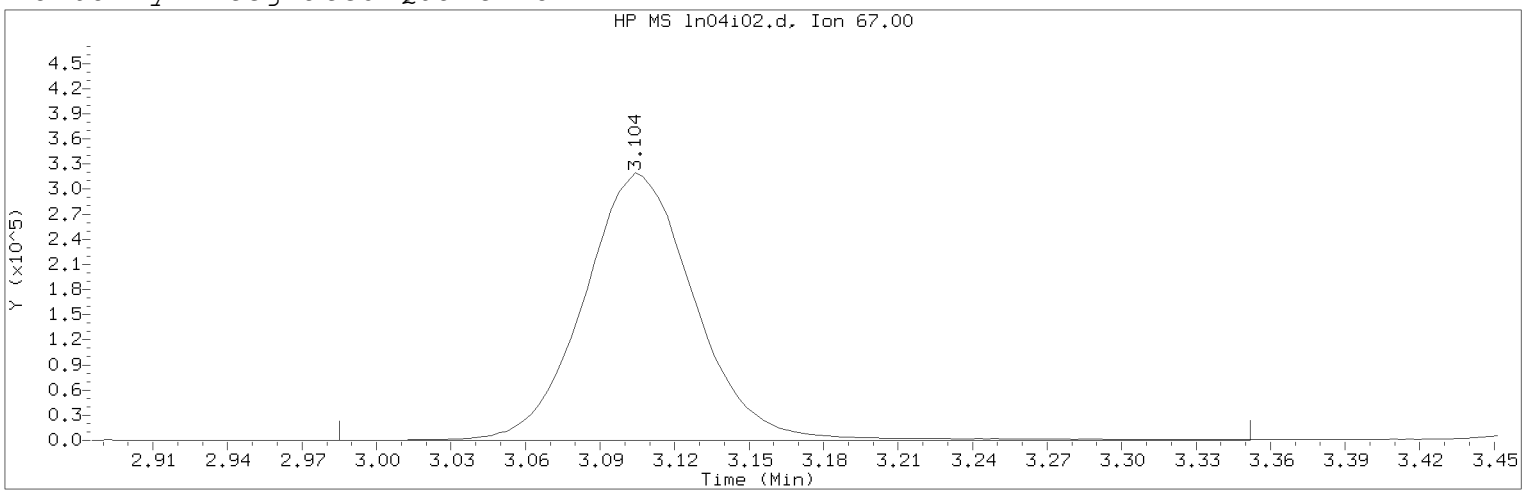
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area : 605602
On-column Amount (ng) : 97.5651
Integration start scan : 271 Integration stop scan: 317
Y at integration start : 806 Y at integration end: 1441

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

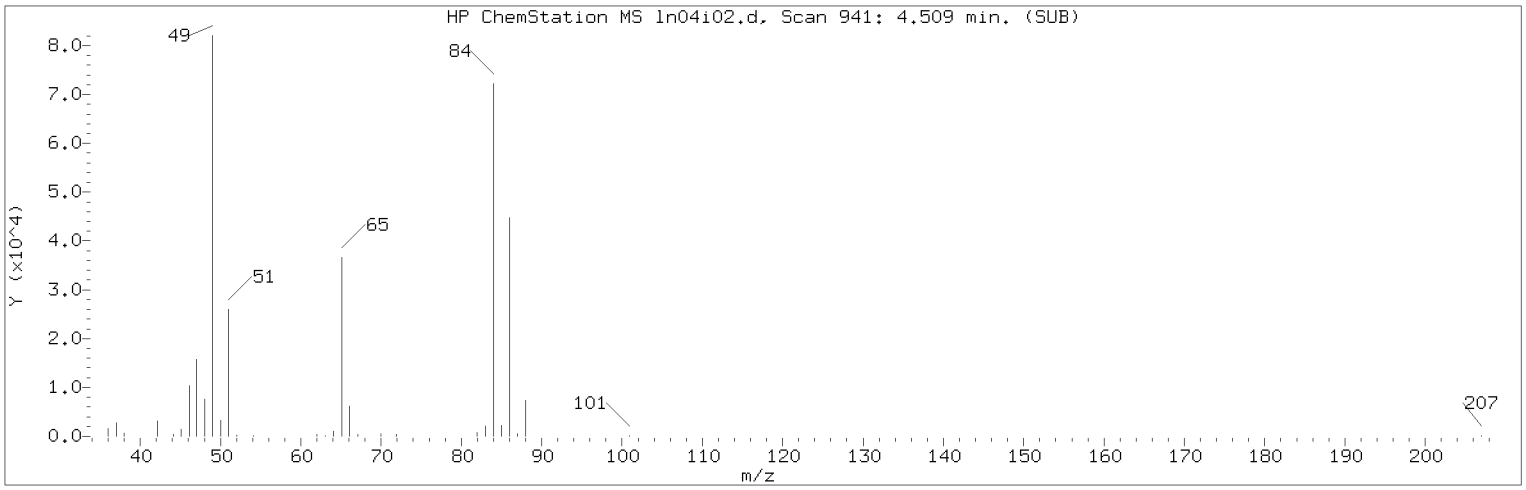
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 504
Retention Time (minutes): 3.104
Quant Ion : 67.00
Area (flag) : 992796M
On-Column Amount (ng) : 94.6777
Integration start scan : 466 Integration stop scan: 580
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

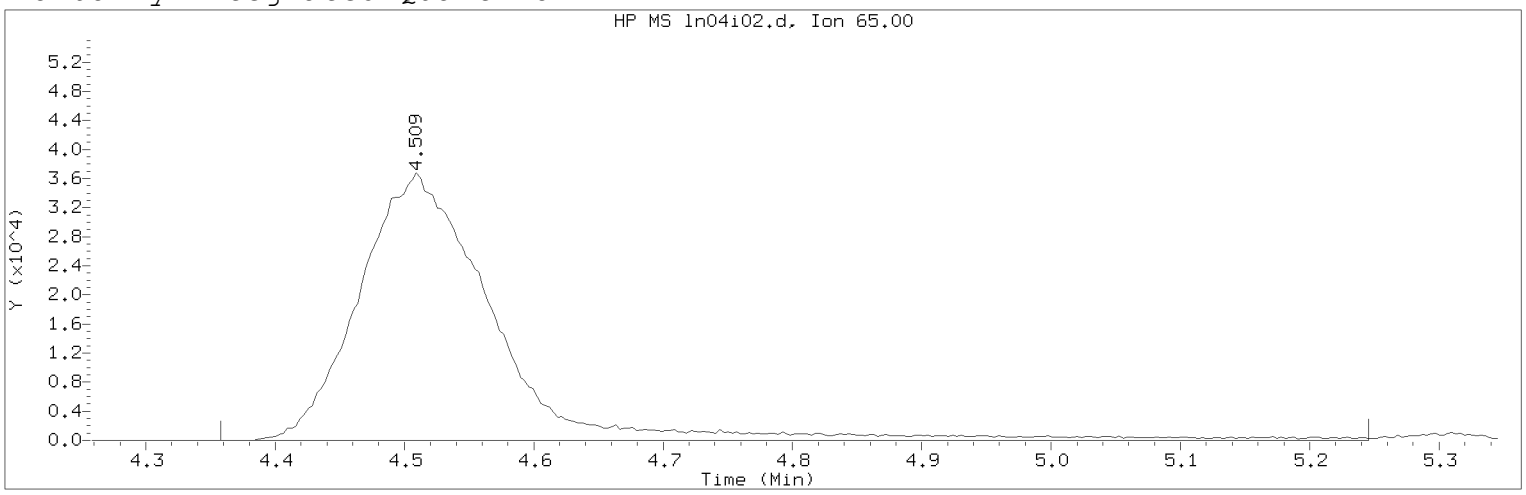
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

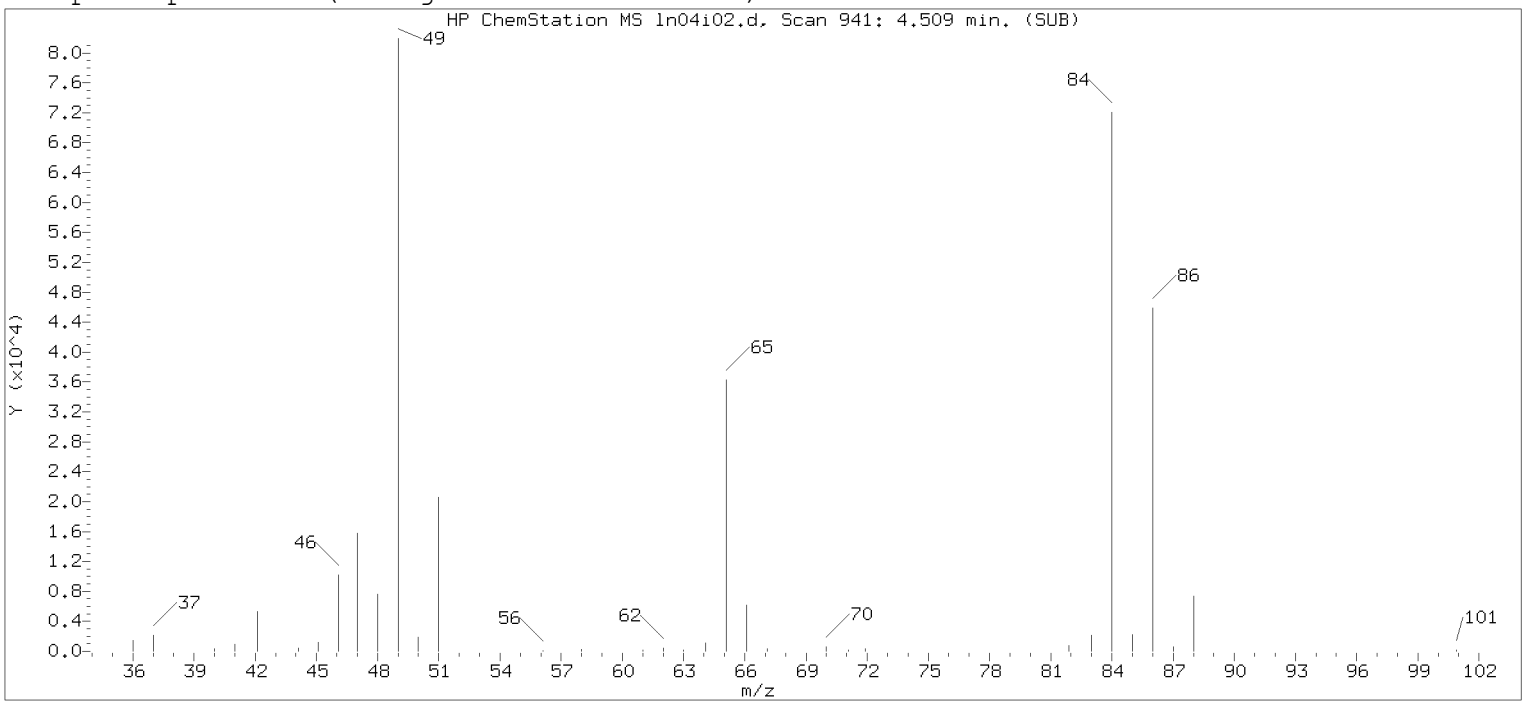
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 265971M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1169
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

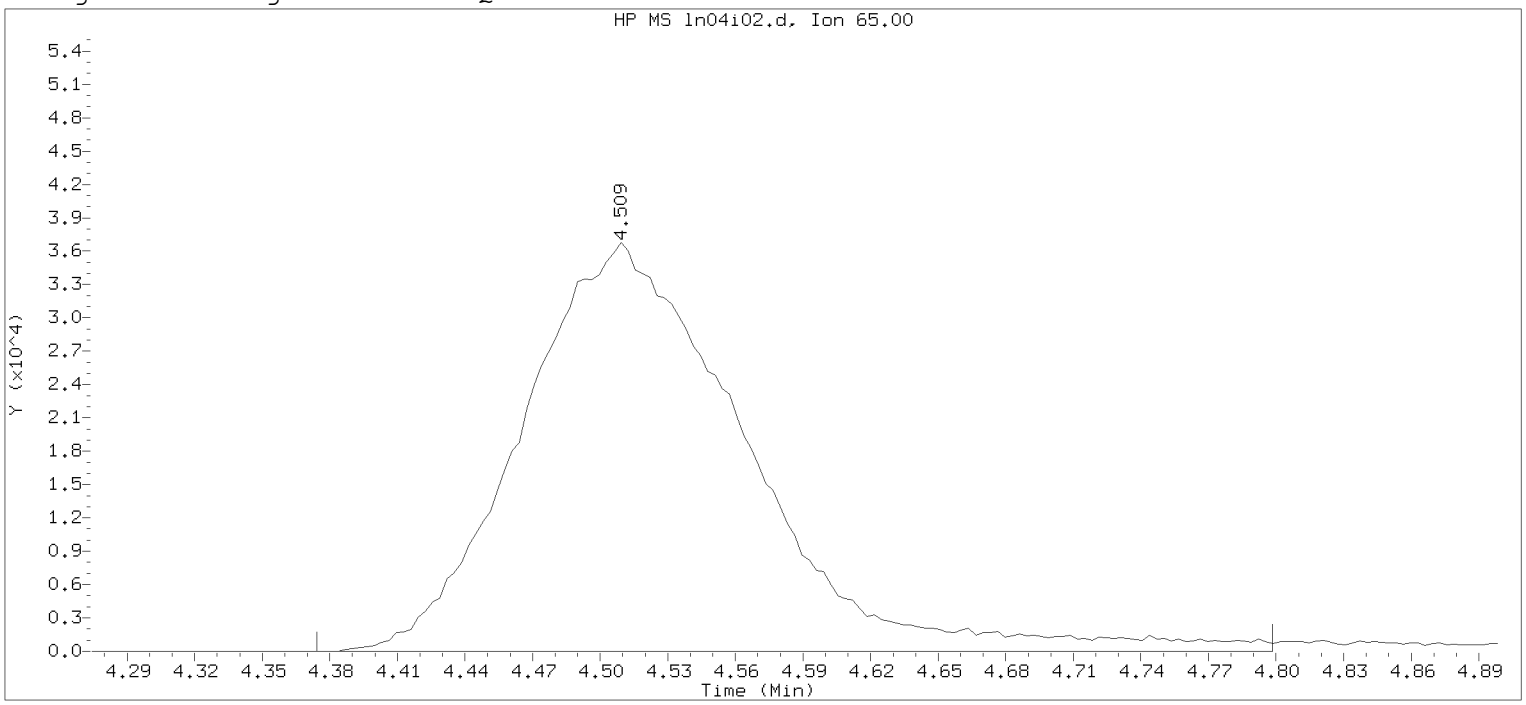
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

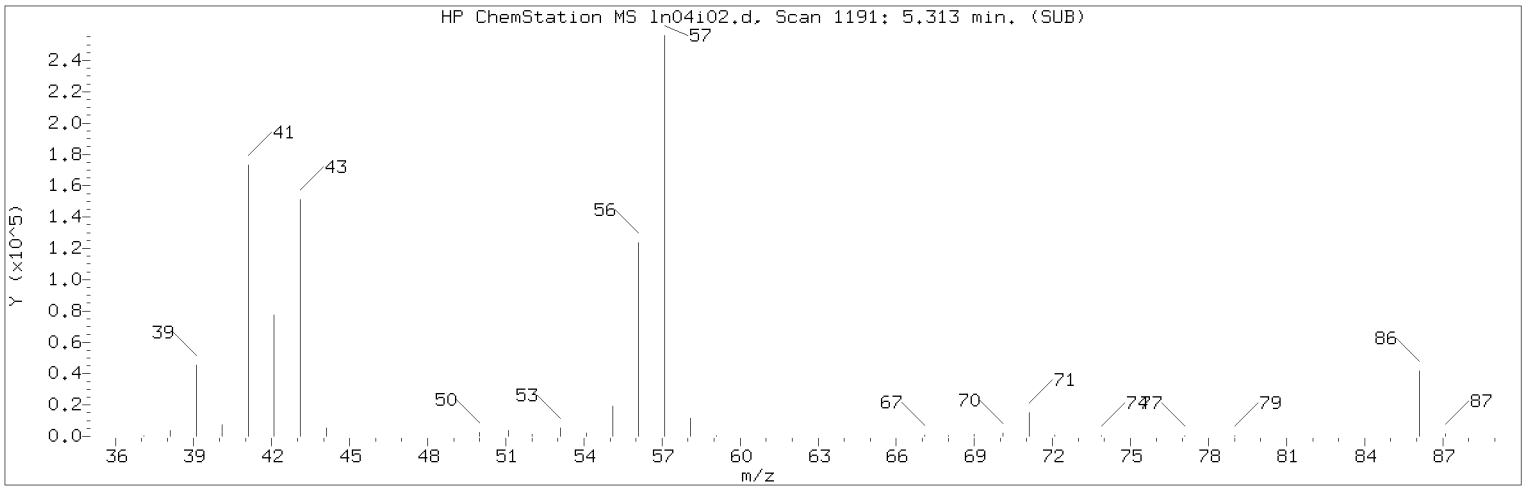
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

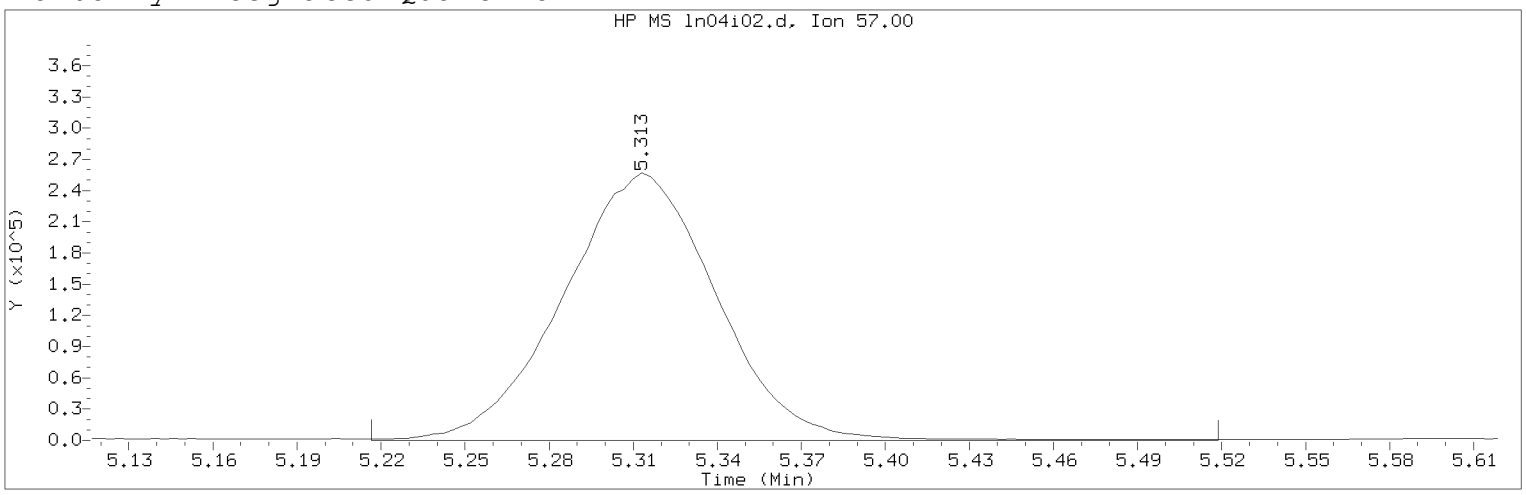
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 252632
On-column Amount (ng) : 250.0000
Integration start scan : 898 Integration stop scan: 1030
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

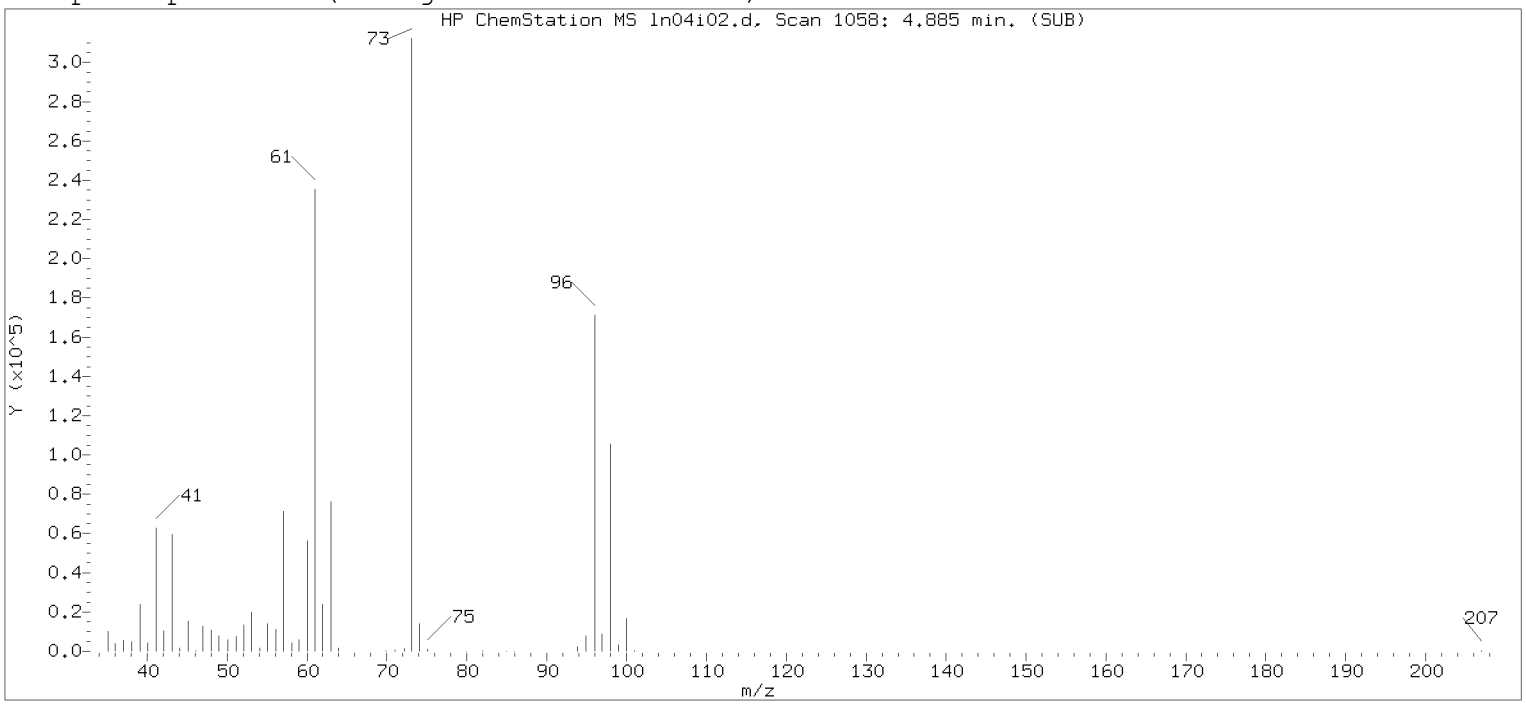
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1191
Retention Time (minutes): 5.313
Quant Ion : 57.00
Area (flag) : 974442M
On-Column Amount (ng) : 107.9083
Integration start scan : 1160 Integration stop scan: 1254
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

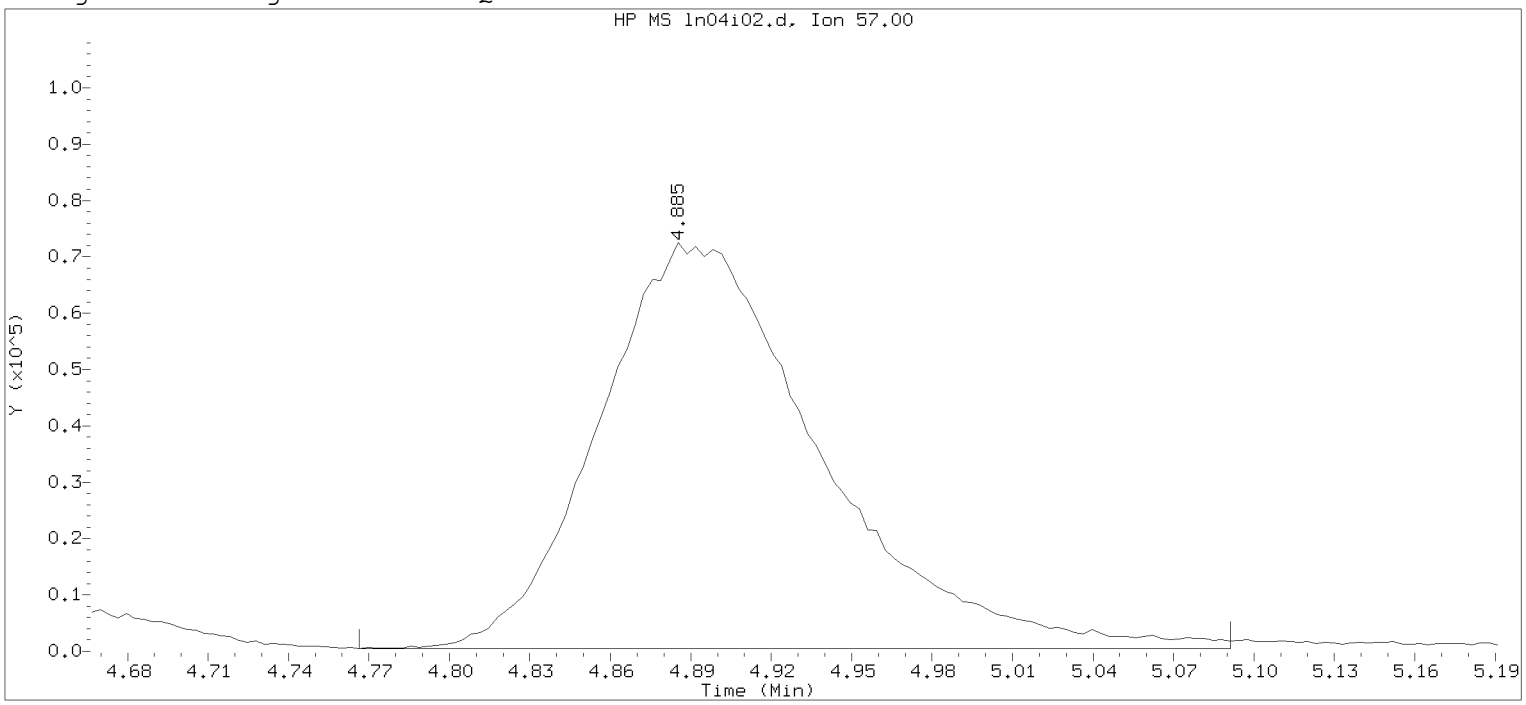
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

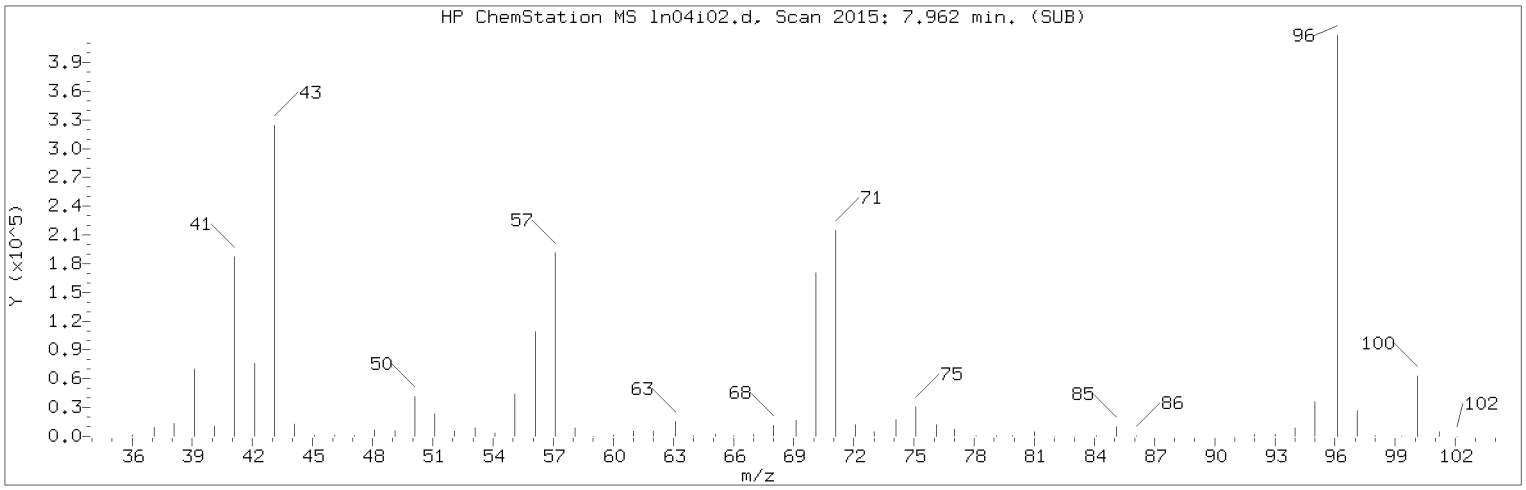
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

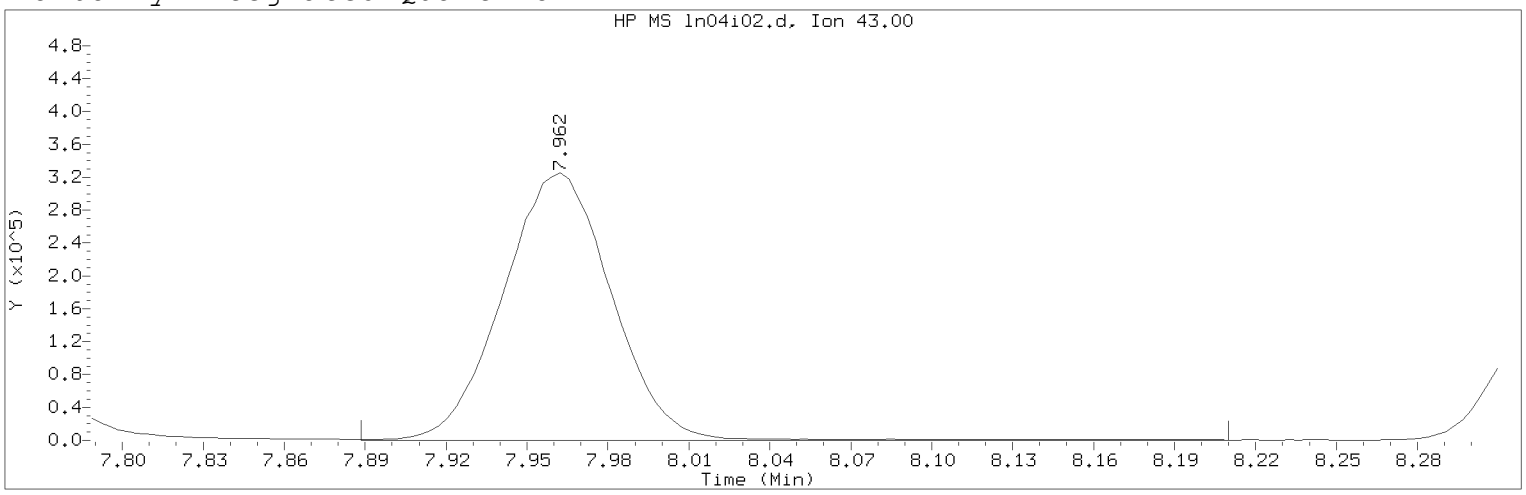
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1058
Retention Time (minutes): 4.885
Quant Ion : 57.00
Area : 414312
On-column Amount (ng) : 98.9070
Integration start scan : 1020 Integration stop scan: 1121
Y at integration start : 485 Y at integration end: 485

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

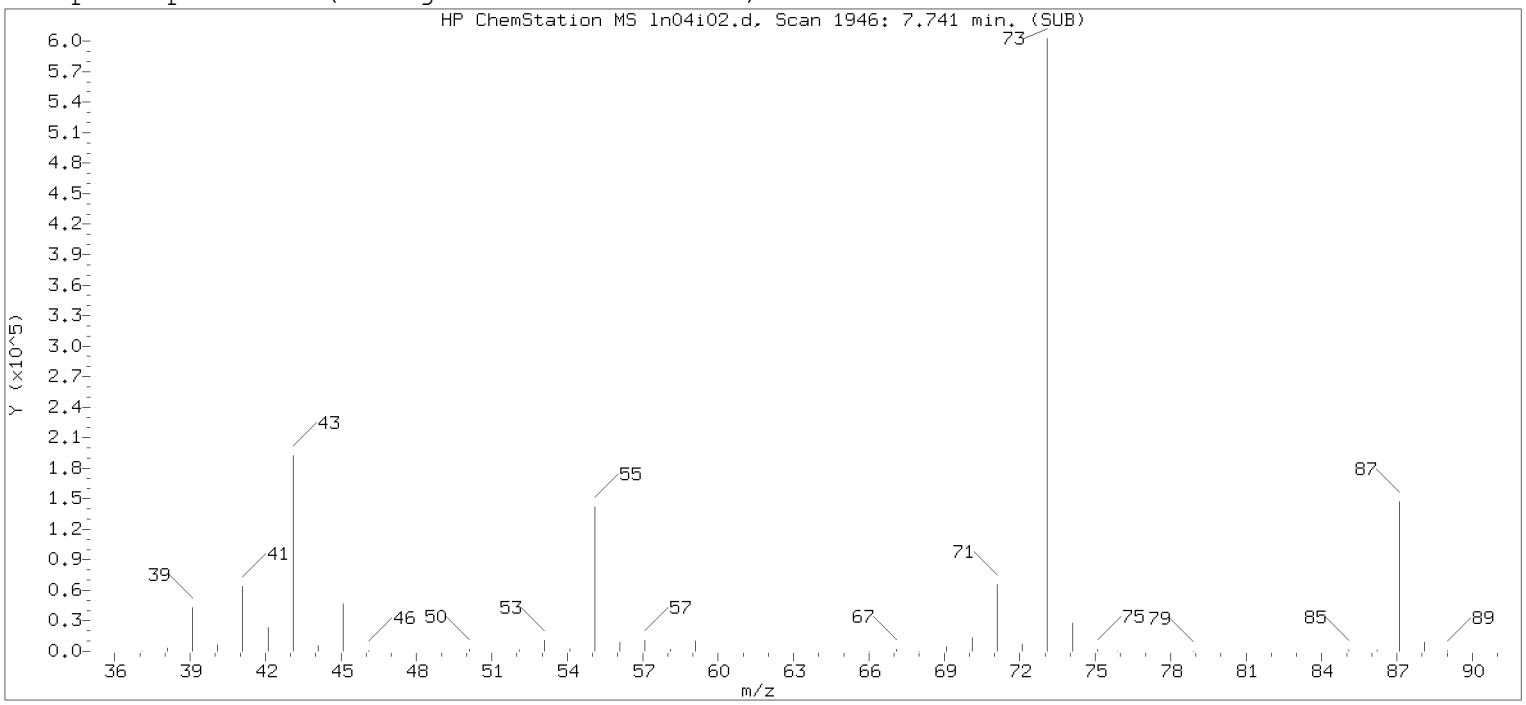
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2015
Retention Time (minutes): 7.962
Quant Ion : 43.00
Area (flag) : 911962MA
On-Column Amount (ng) : 108.1037
Integration start scan : 1991 Integration stop scan: 2091
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

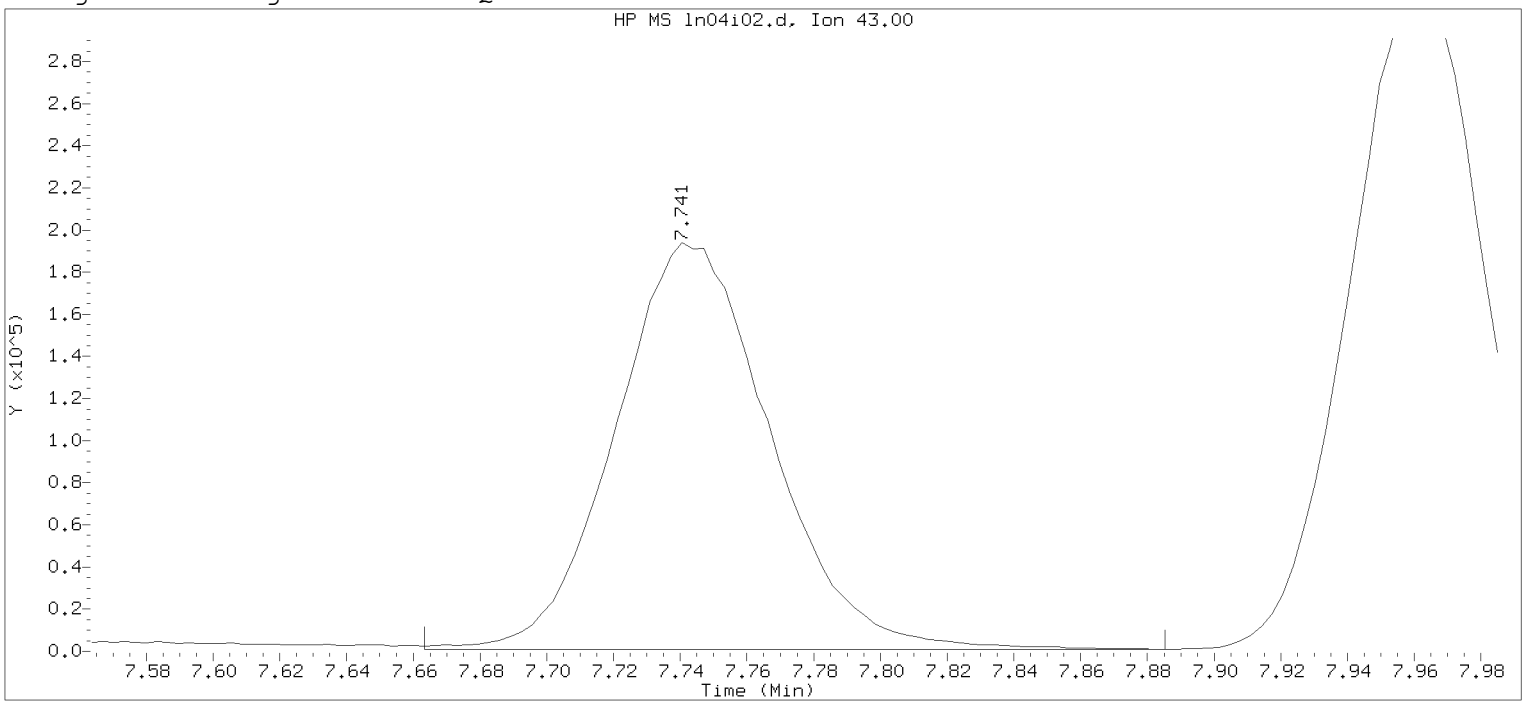
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

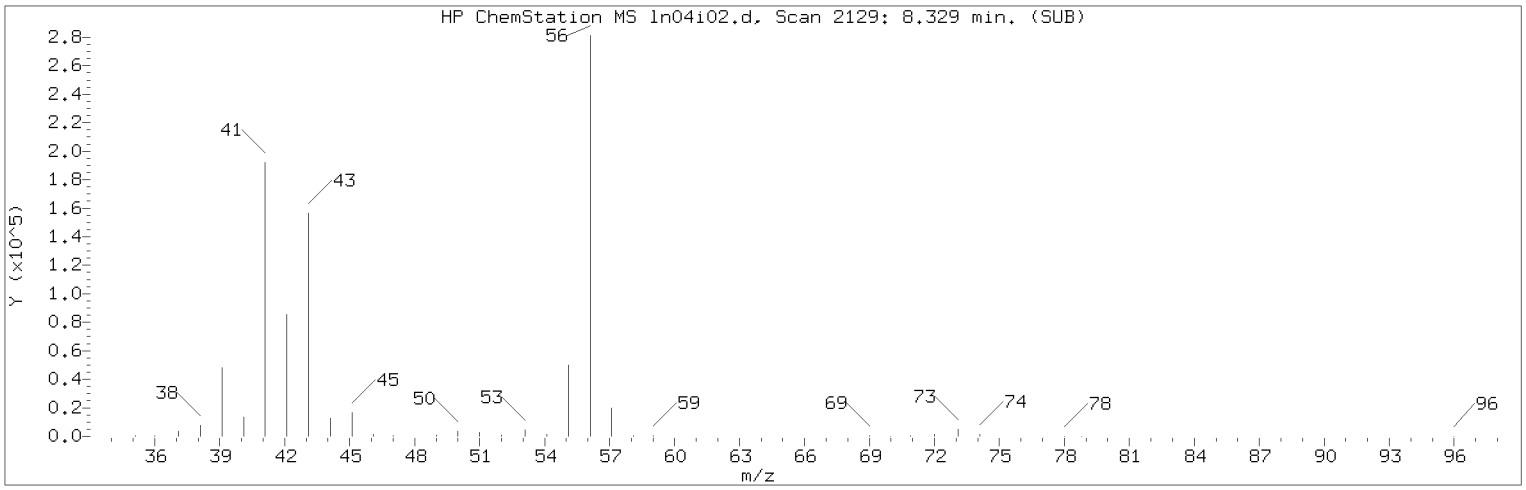
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

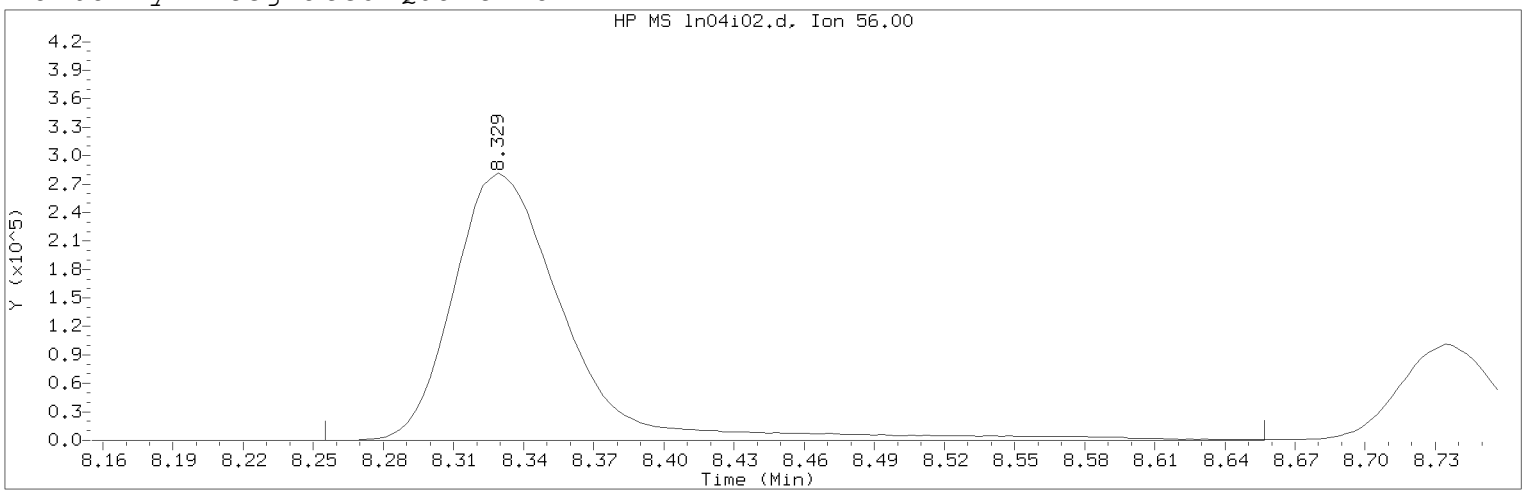
Compound Number	: 67		
Compound Name	: n-Heptane		
Scan Number	: 1946		
Retention Time (minutes)	: 7.741		
Quant Ion	: 43.00		
Area	: 623358		
On-column Amount (ng)	: 101.3435		
Integration start scan	: 1921	Integration stop scan:	1990
Y at integration start	: 845	Y at integration end:	845

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

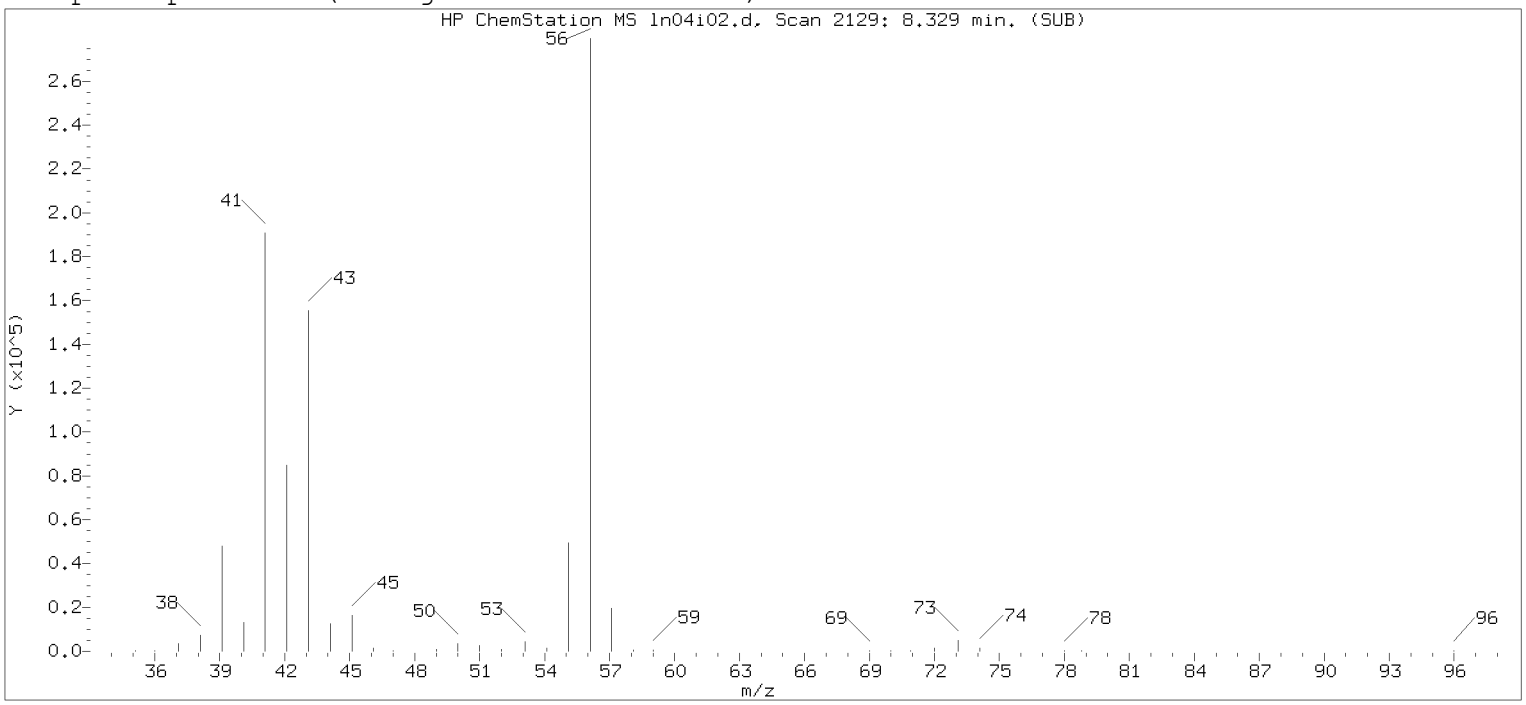
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area (flag) : 944383M
On-Column Amount (ng) : 2911.8124
Integration start scan : 2105 Integration stop scan: 2230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

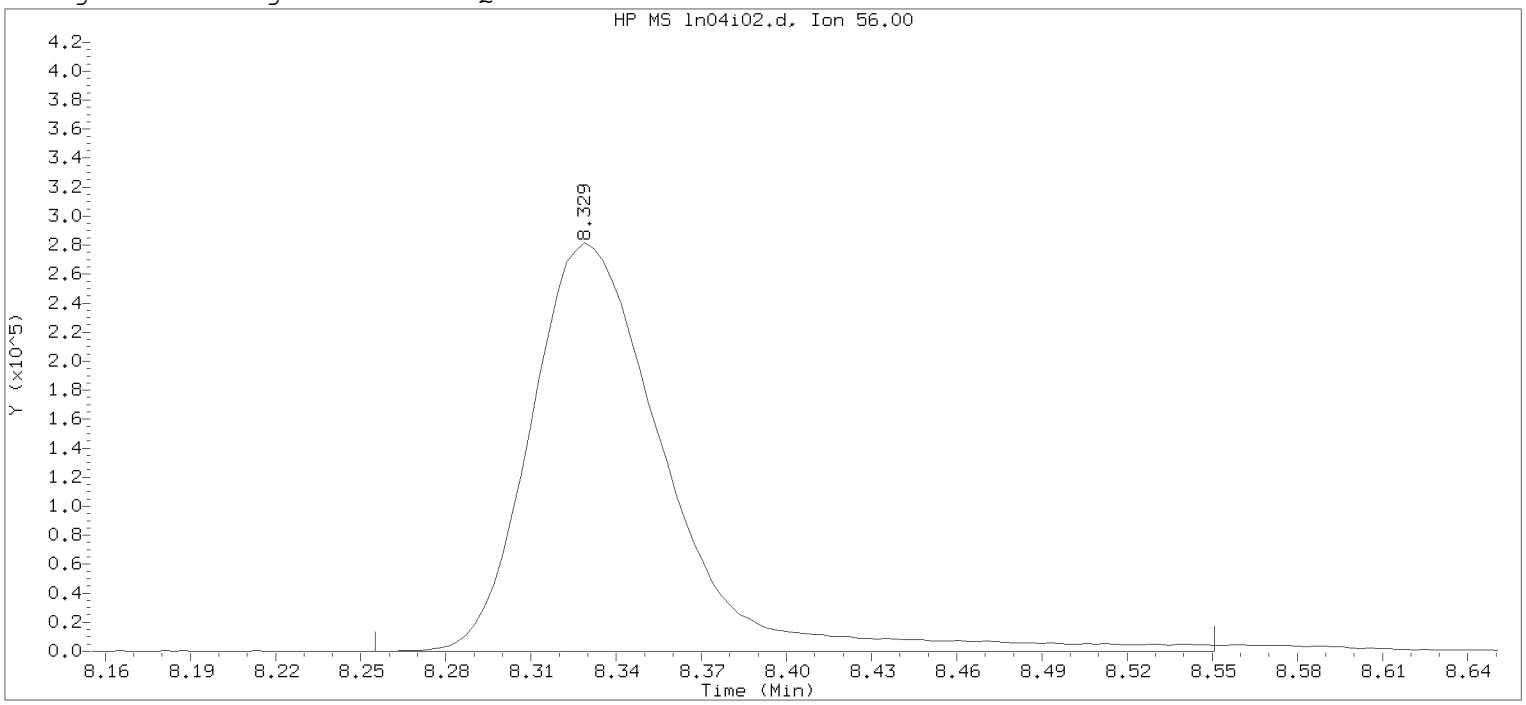
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

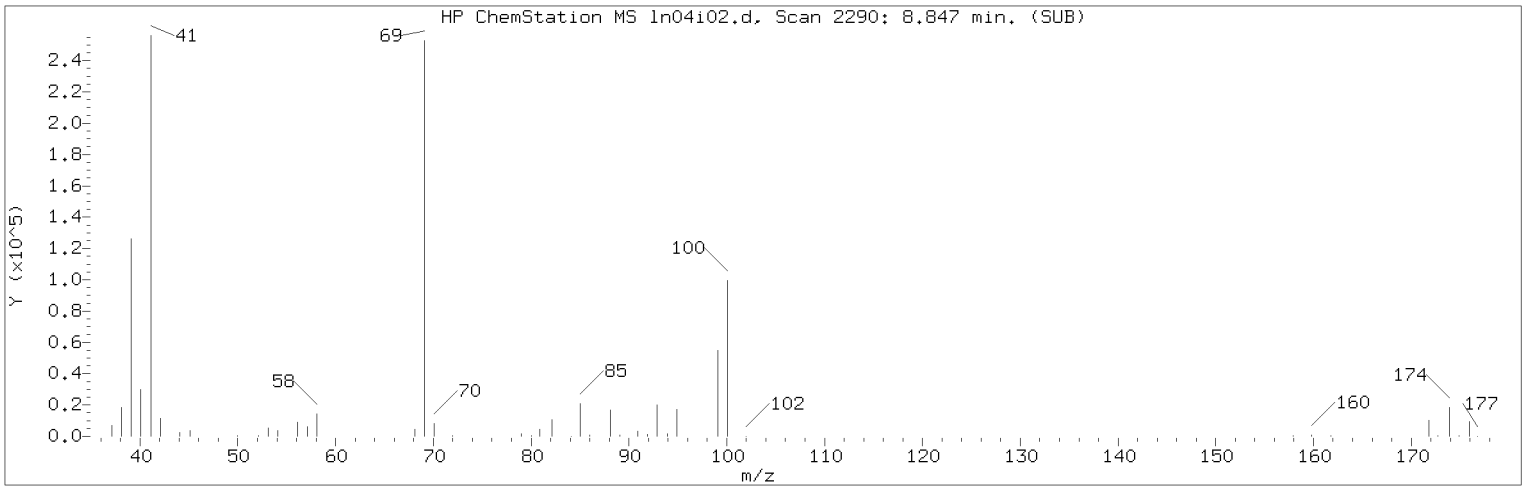
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

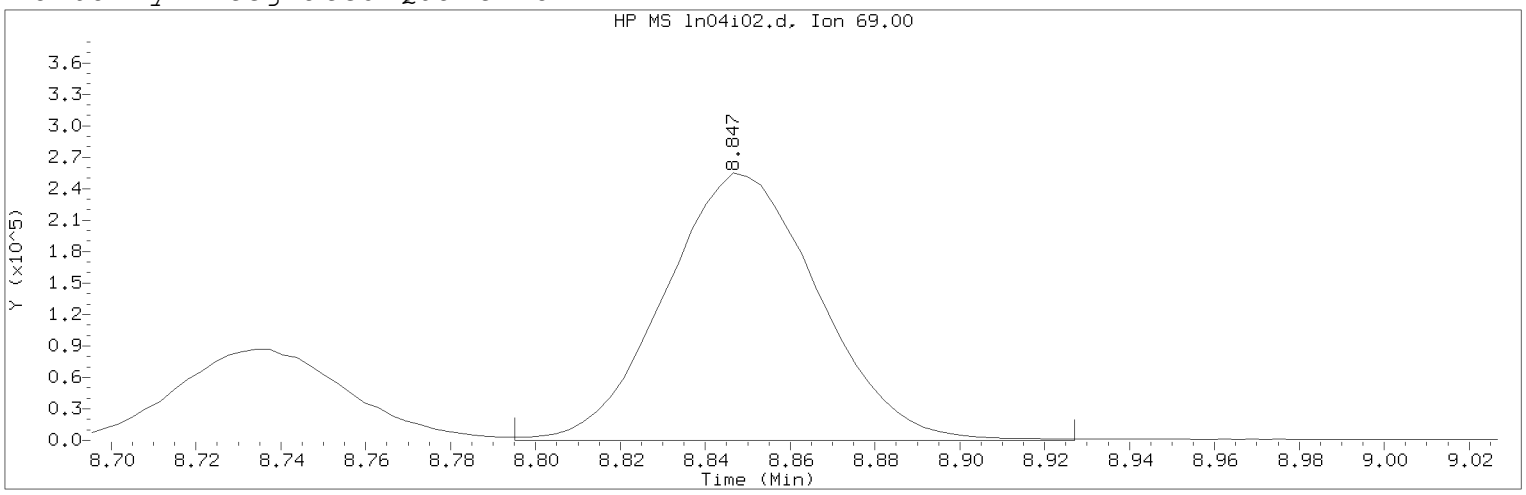
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area : 929615
On-column Amount (ng) : 2668.2803
Integration start scan : 2105 Integration stop scan: 2197
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

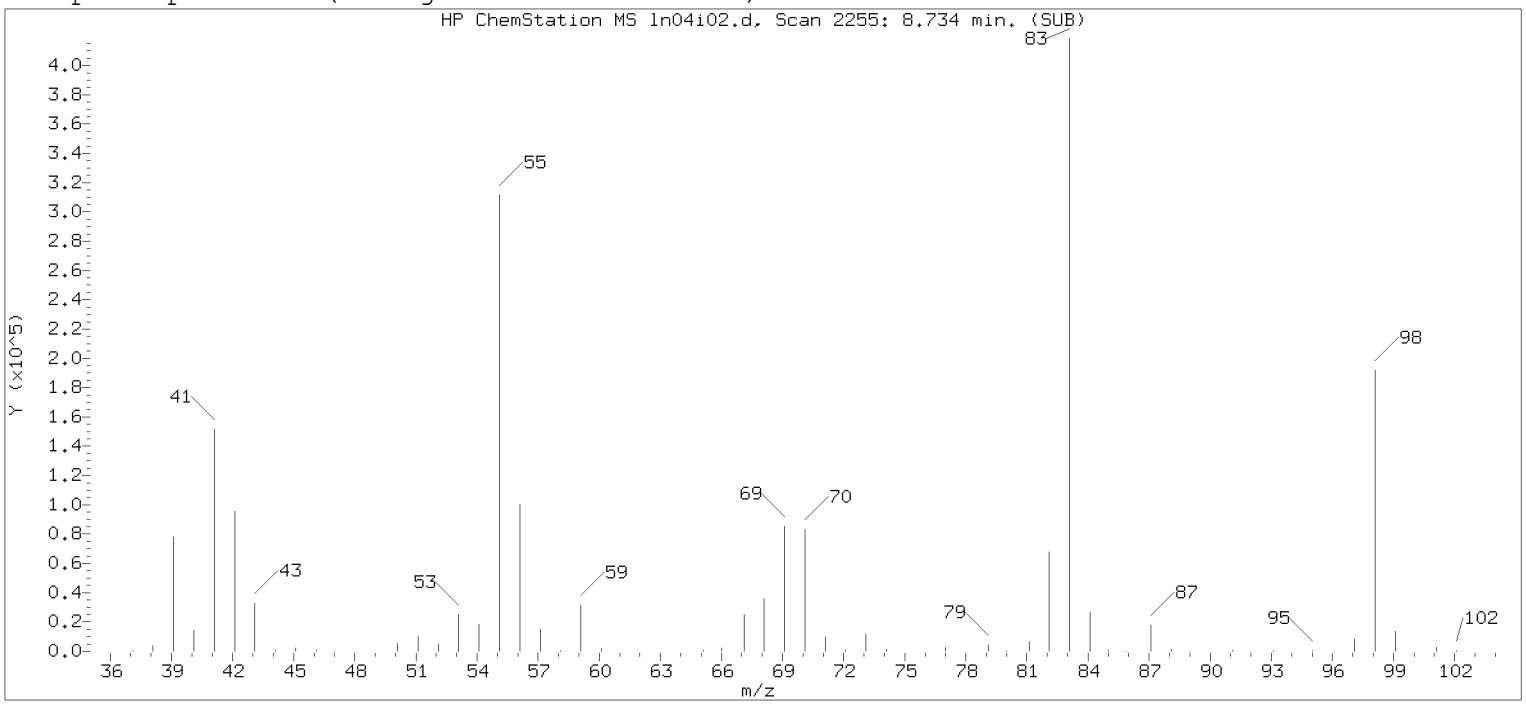
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2290
Retention Time (minutes): 8.847
Quant Ion : 69.00
Area (flag) : 640445A
On-Column Amount (ng) : 108.3344
Integration start scan : 2273 Integration stop scan: 2314
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

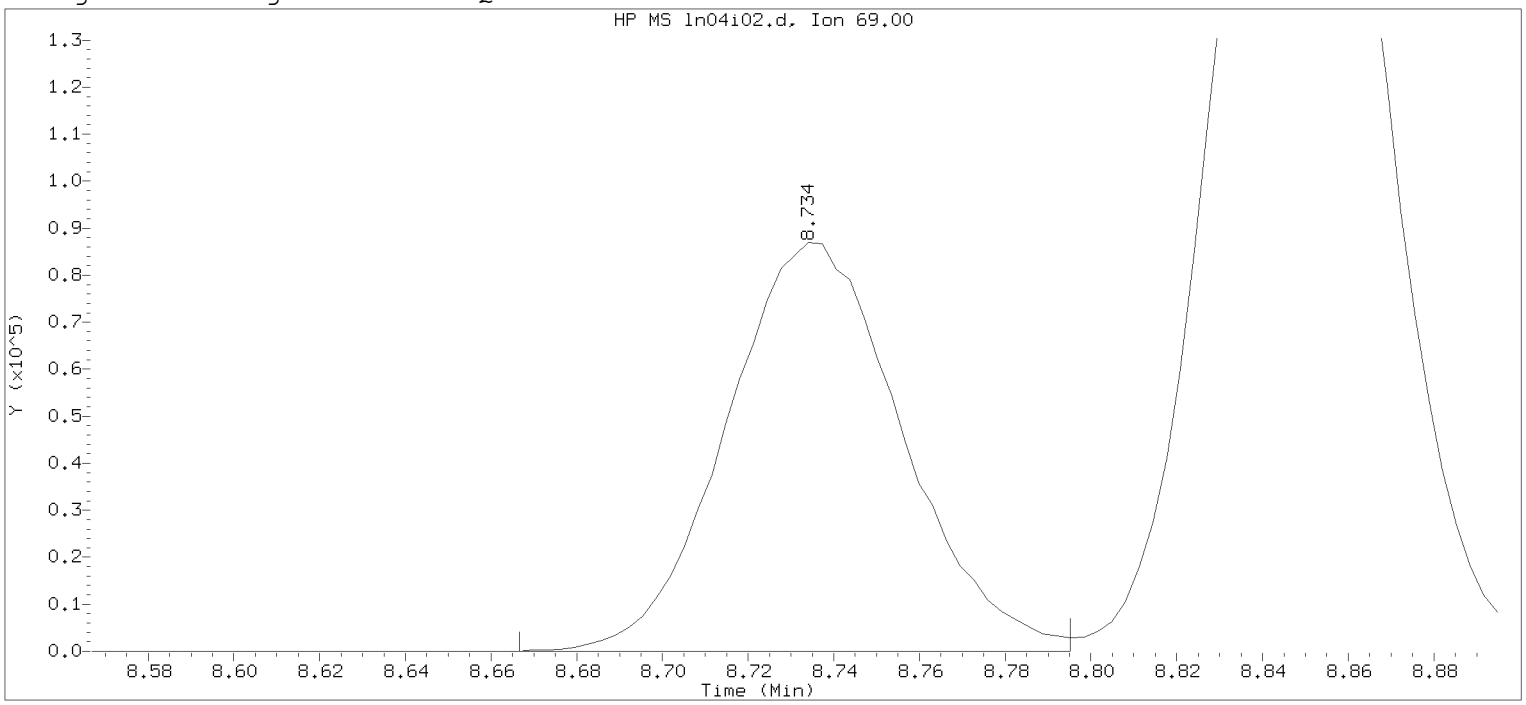
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

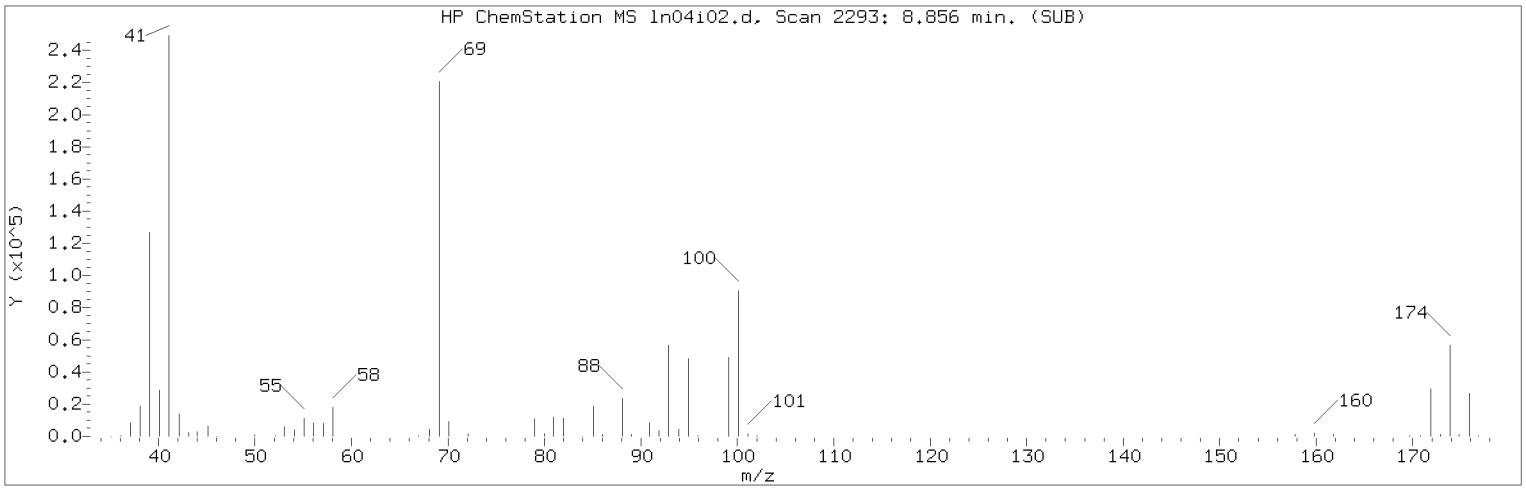
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

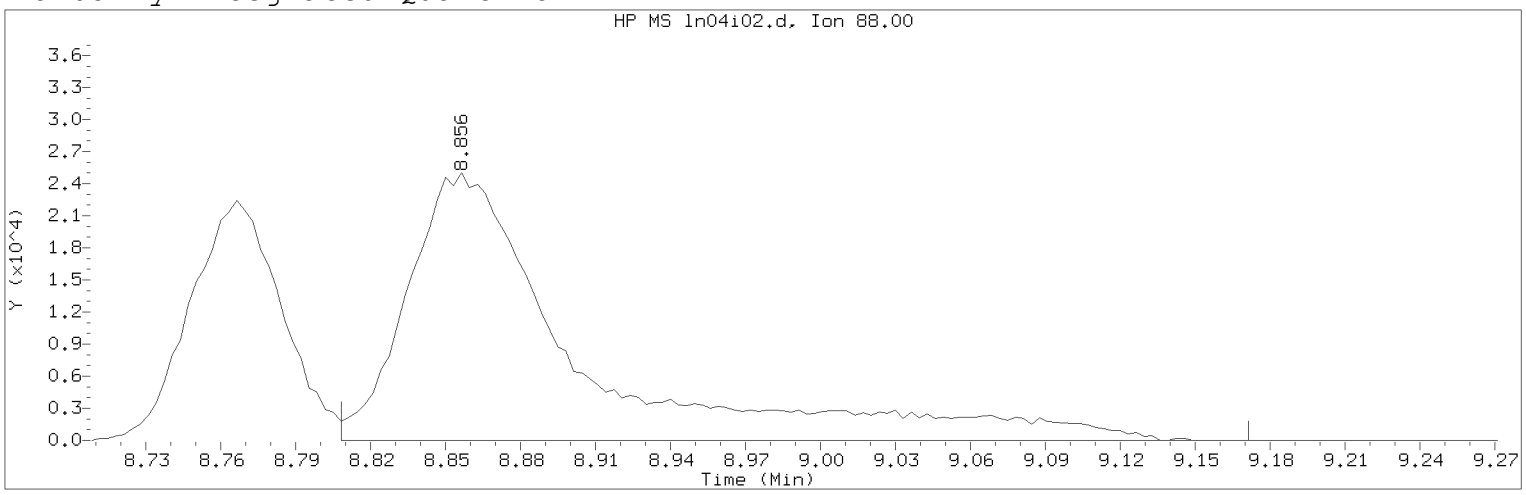
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 247190
On-column Amount (ng) : 97.8749
Integration start scan : 2233 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

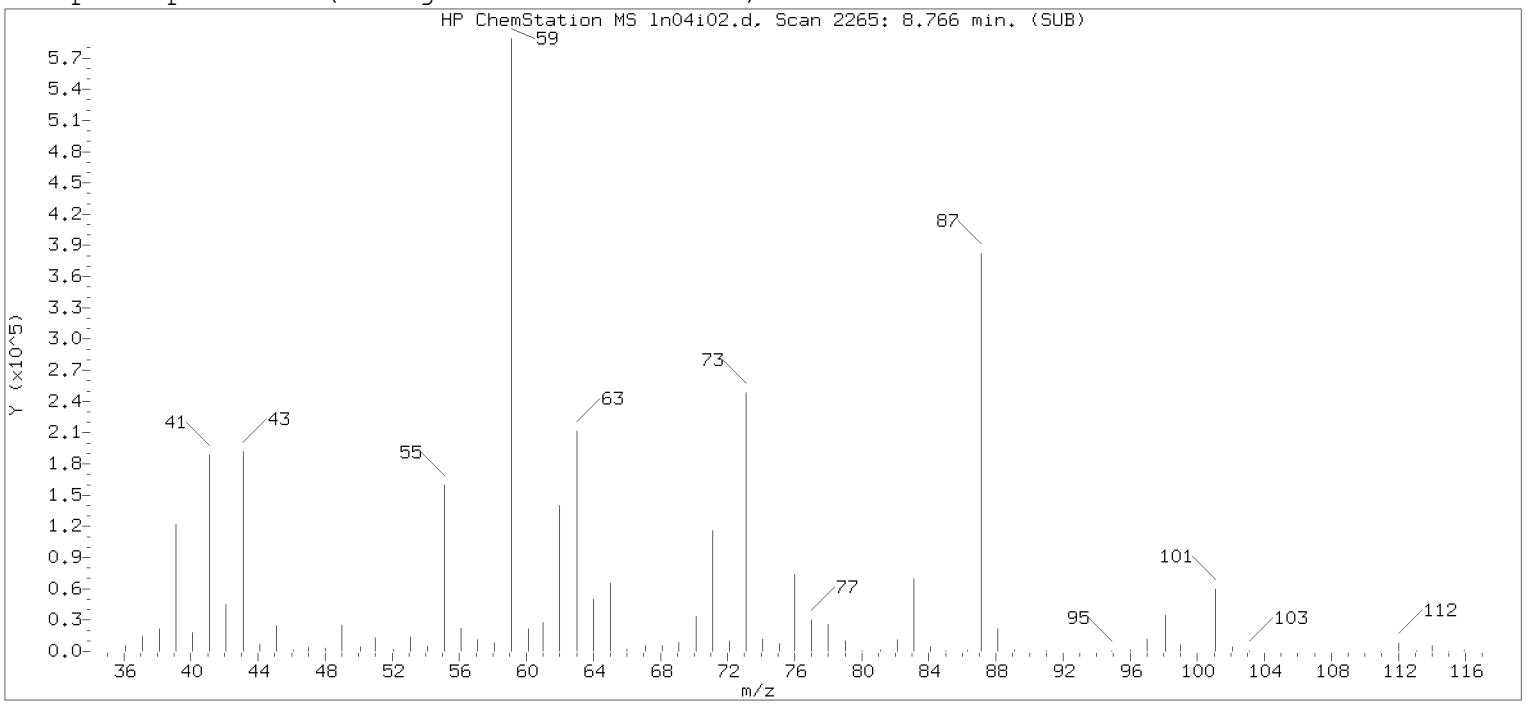
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 117817M
On-Column Amount (ng) : 1321.6466
Integration start scan : 2277 Integration stop scan: 2390
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

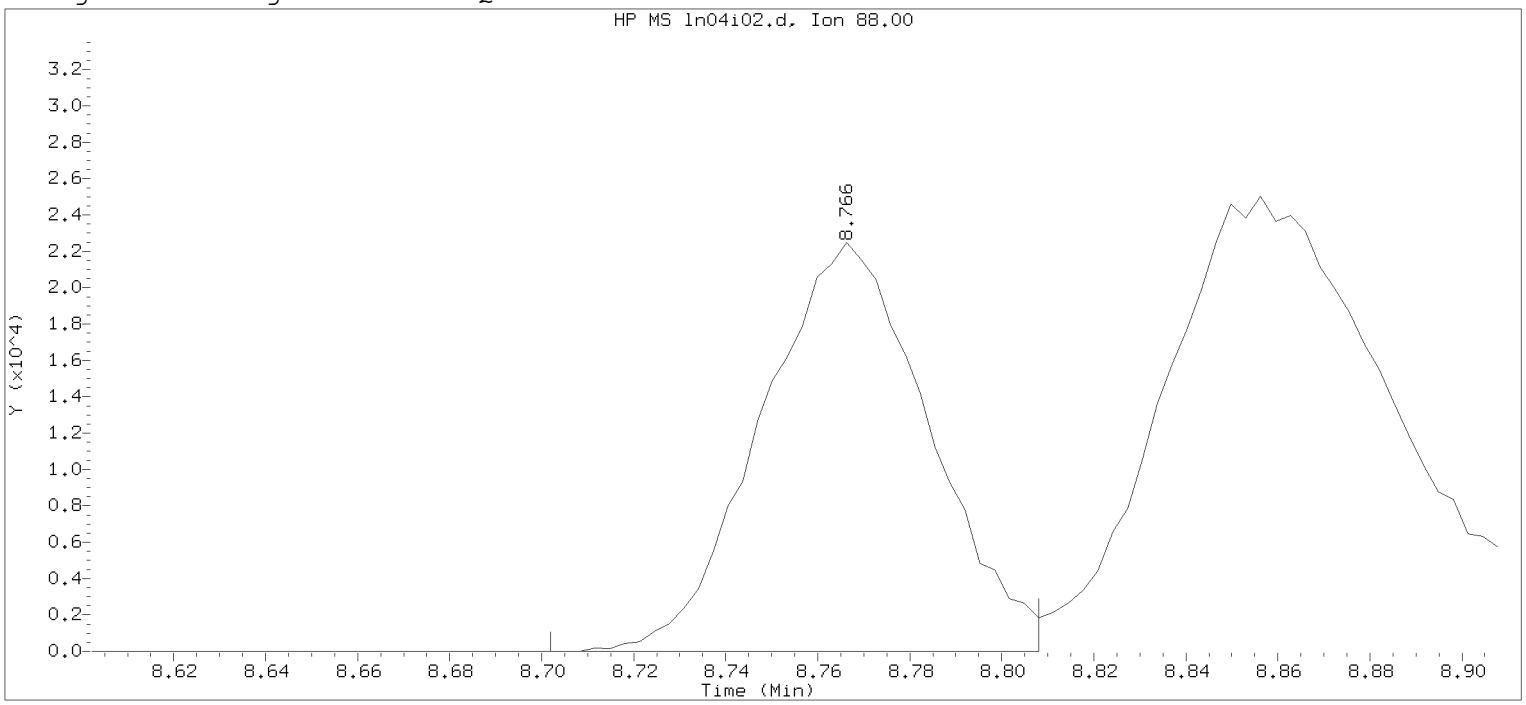
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

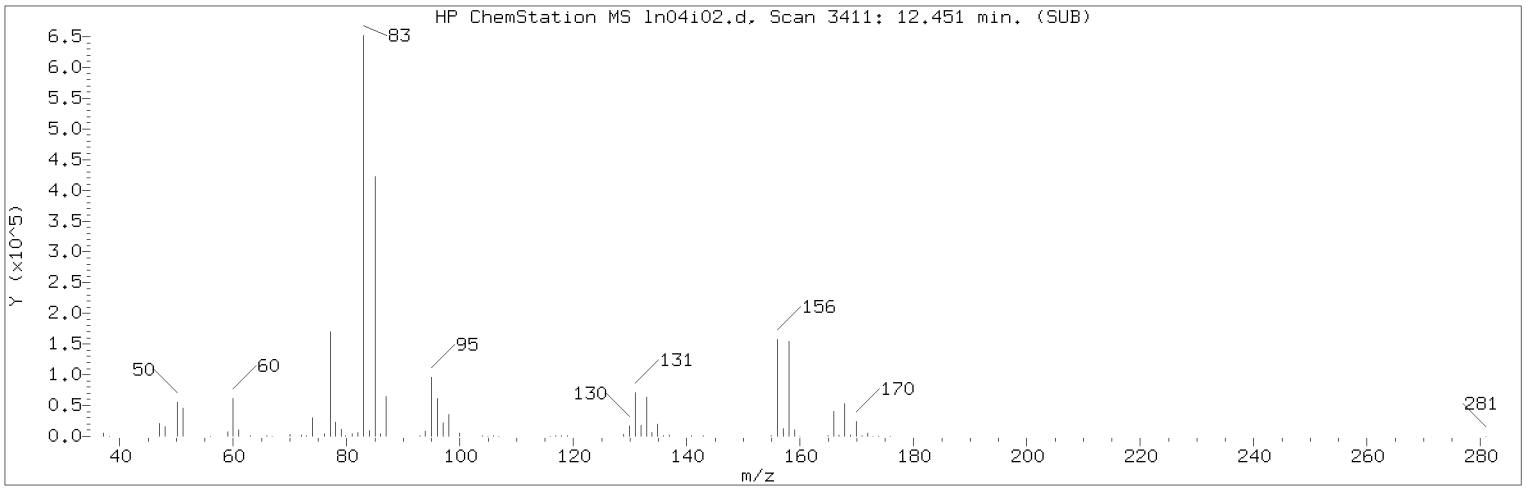
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

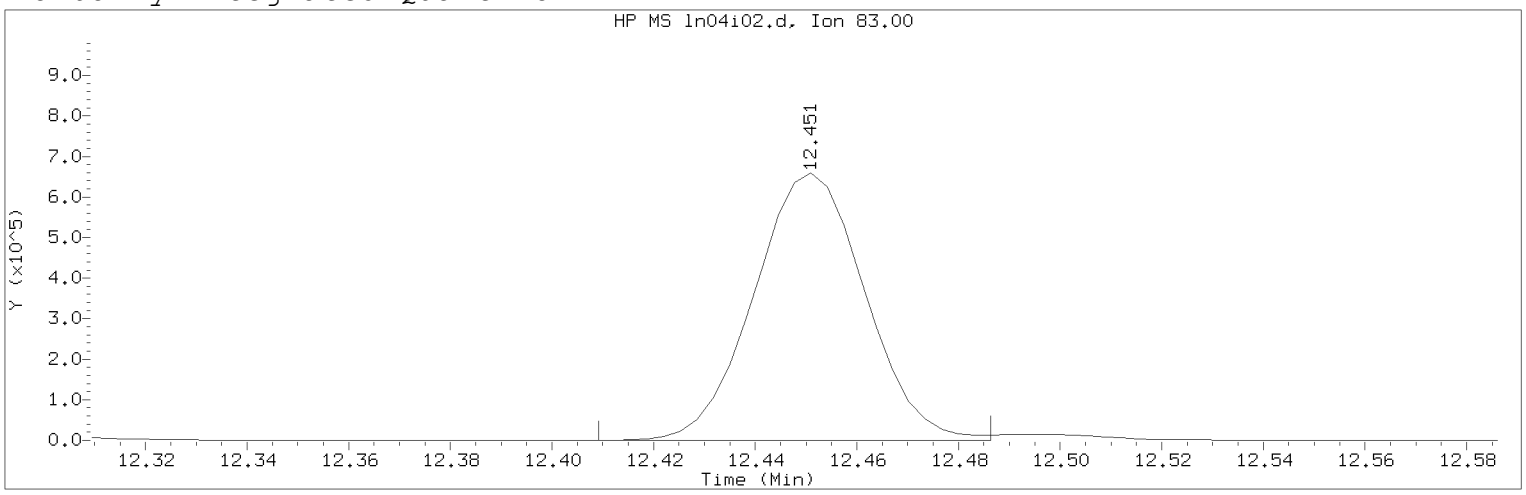
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2265
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area : 56534
On-column Amount (ng) : 746.2694
Integration start scan : 2244 Integration stop scan: 2277
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

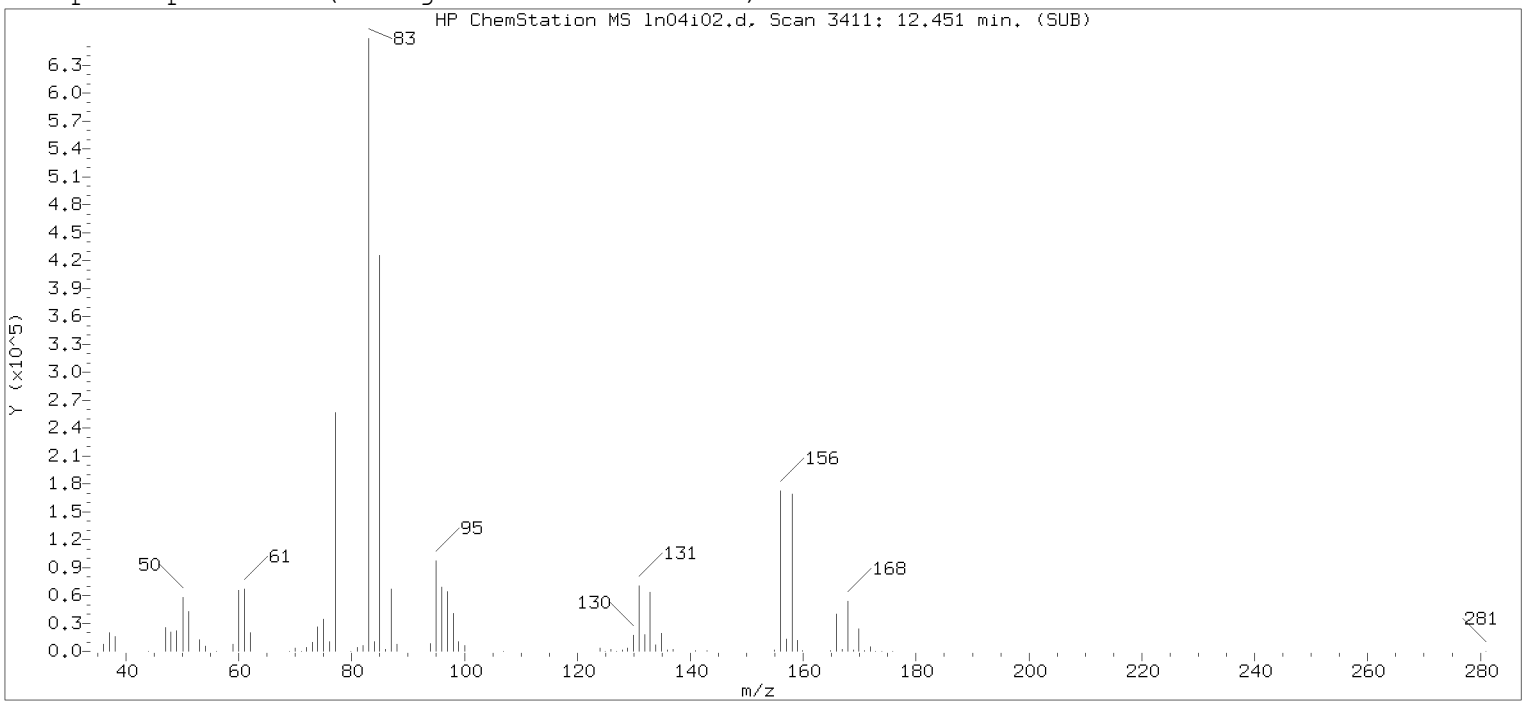
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 995972M
On-Column Amount (ng) : 105.3166
Integration start scan : 3397 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

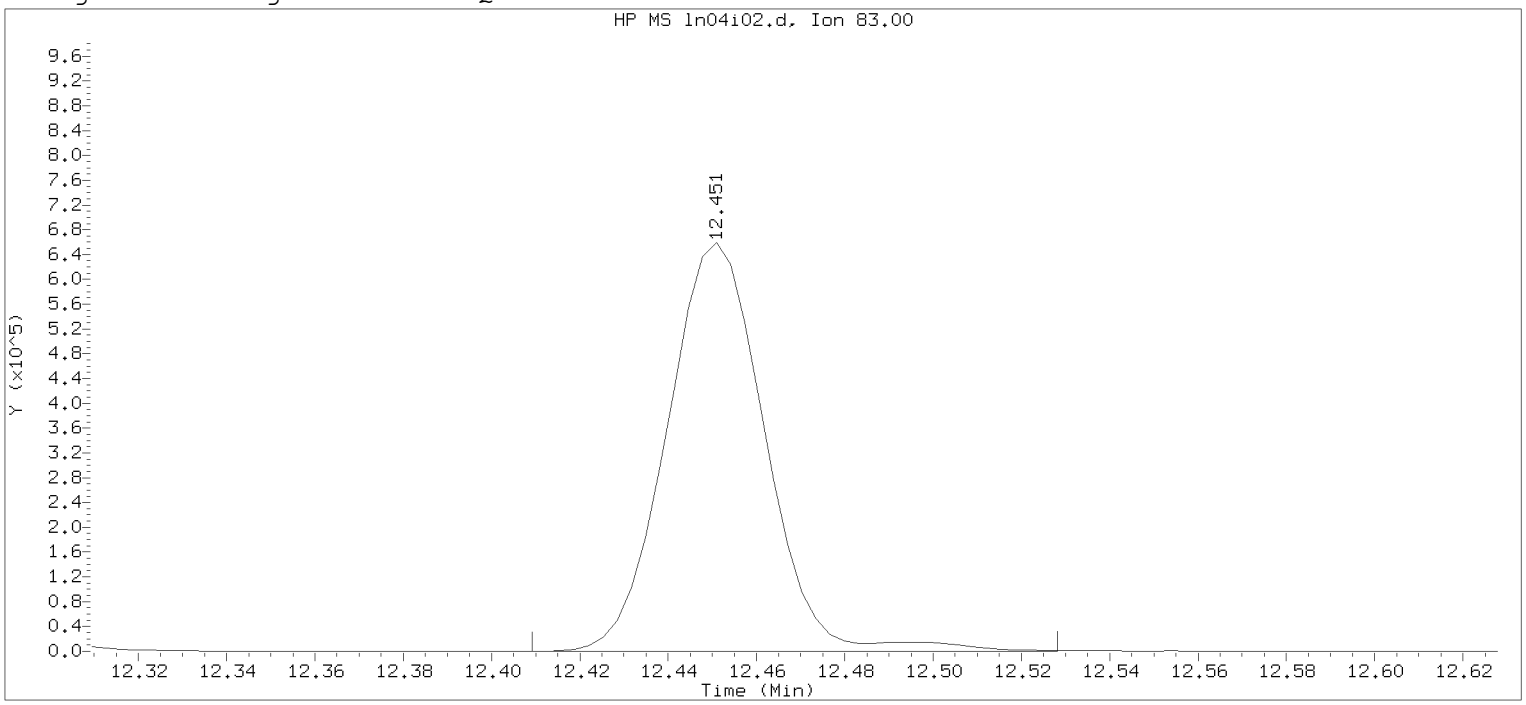
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

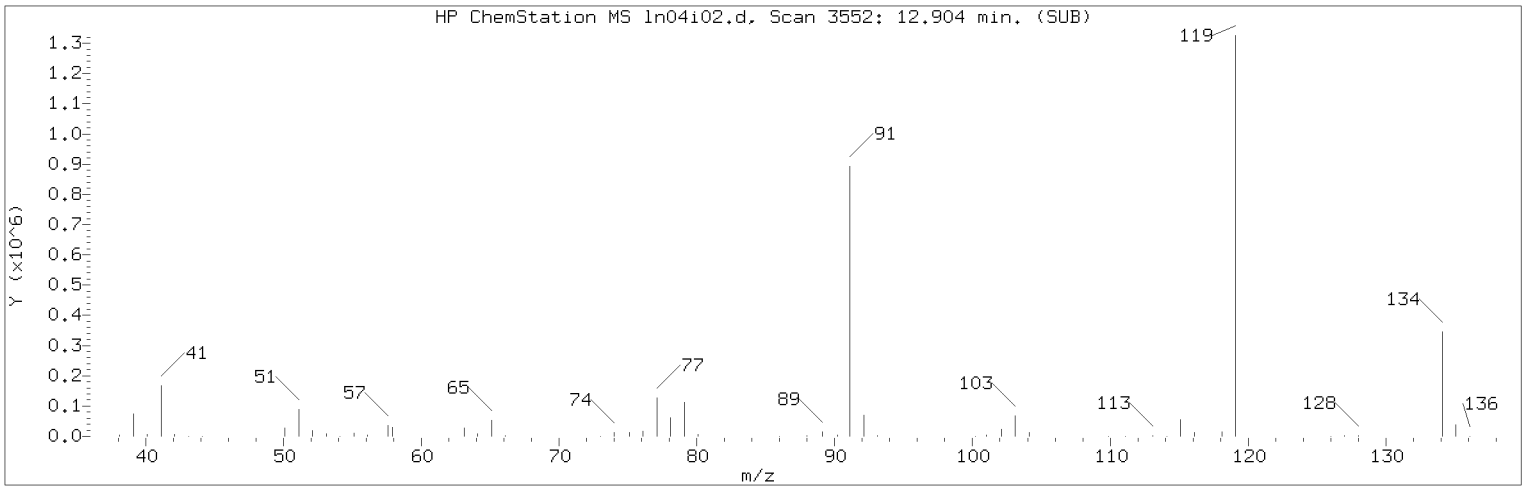
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

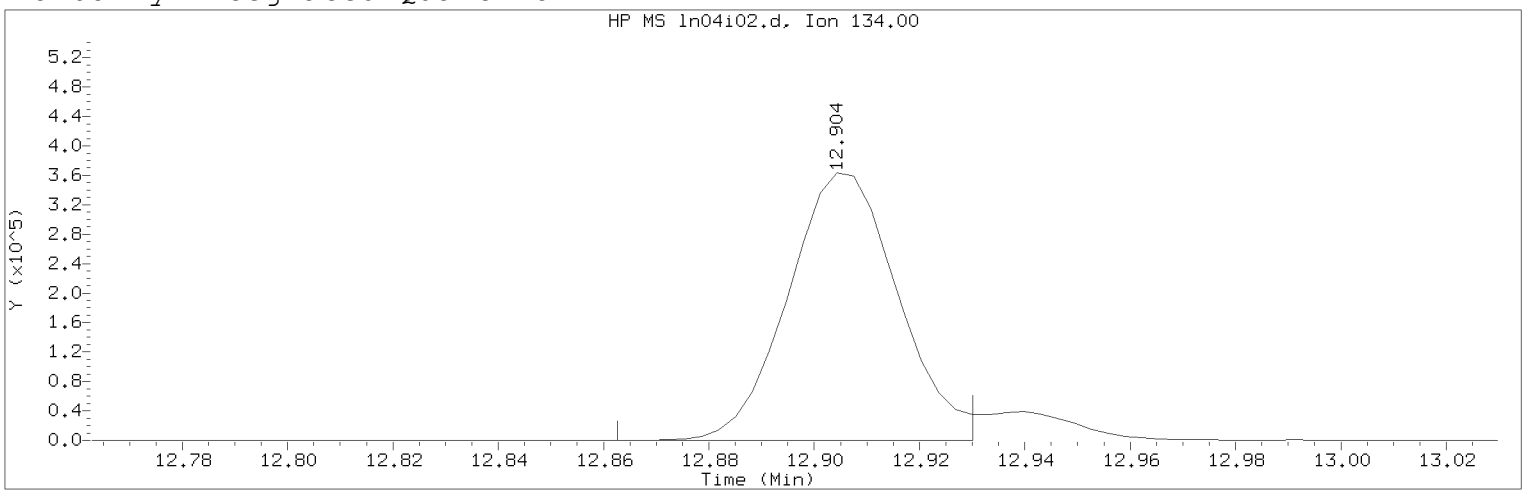
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 1015846
On-column Amount (ng) : 101.1821
Integration start scan : 3397 Integration stop scan: 3434
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

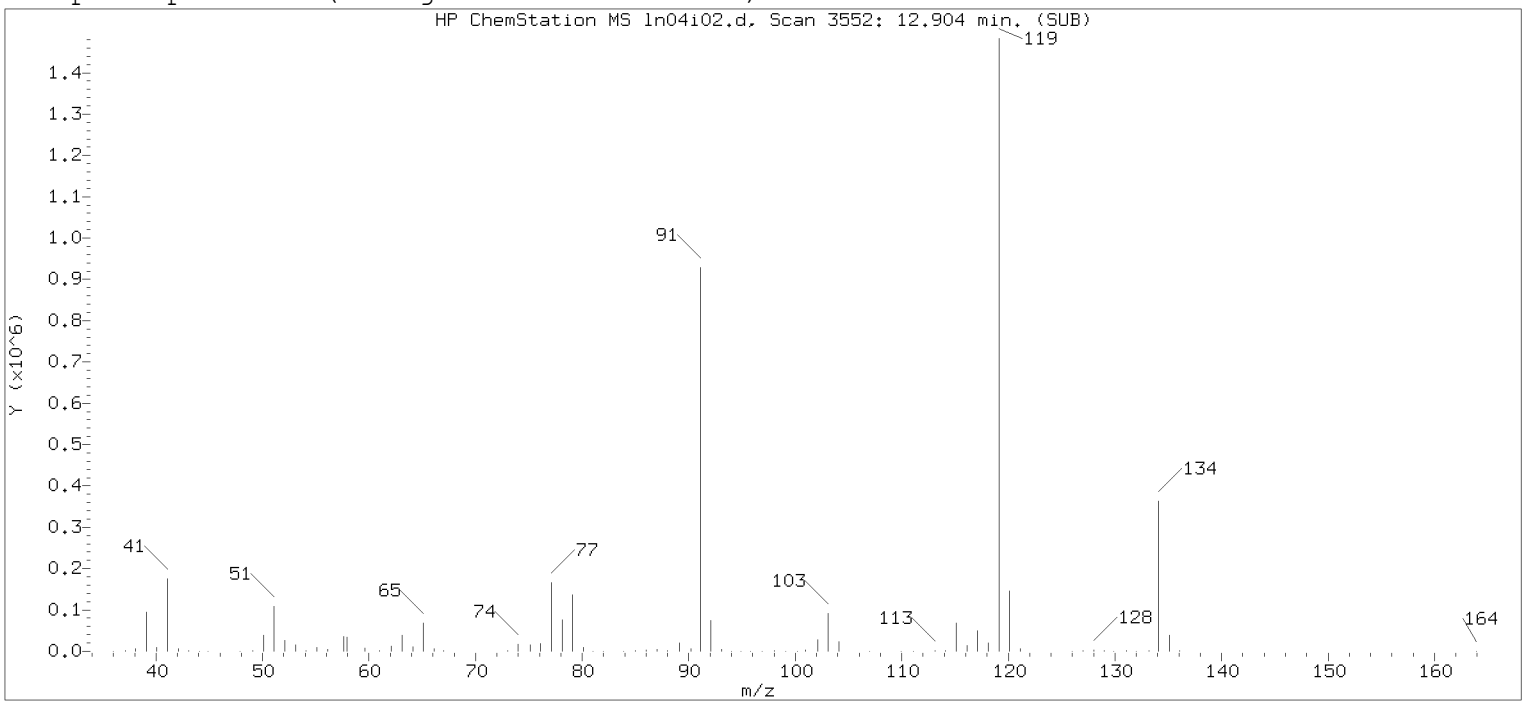
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 526781M
On-Column Amount (ng) : 106.6224
Integration start scan : 3538 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

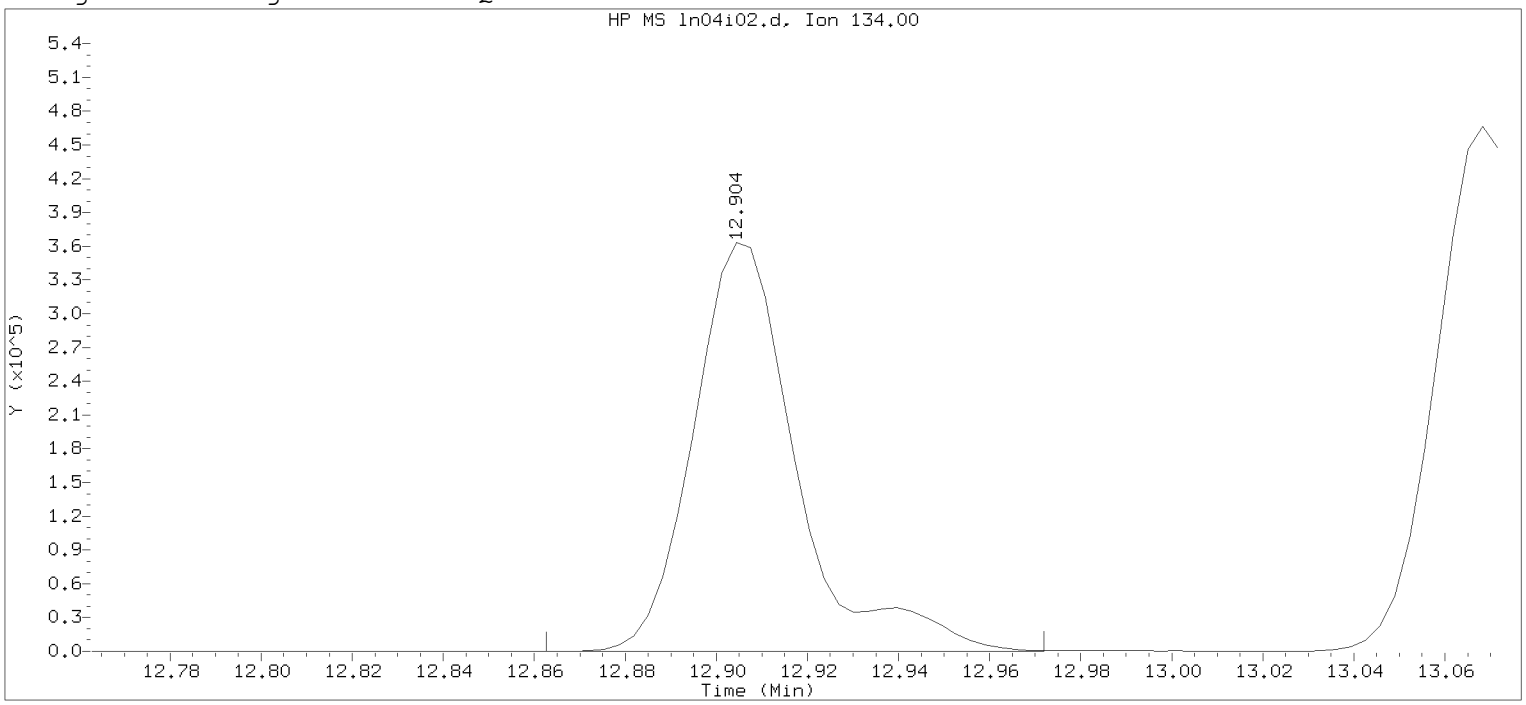
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



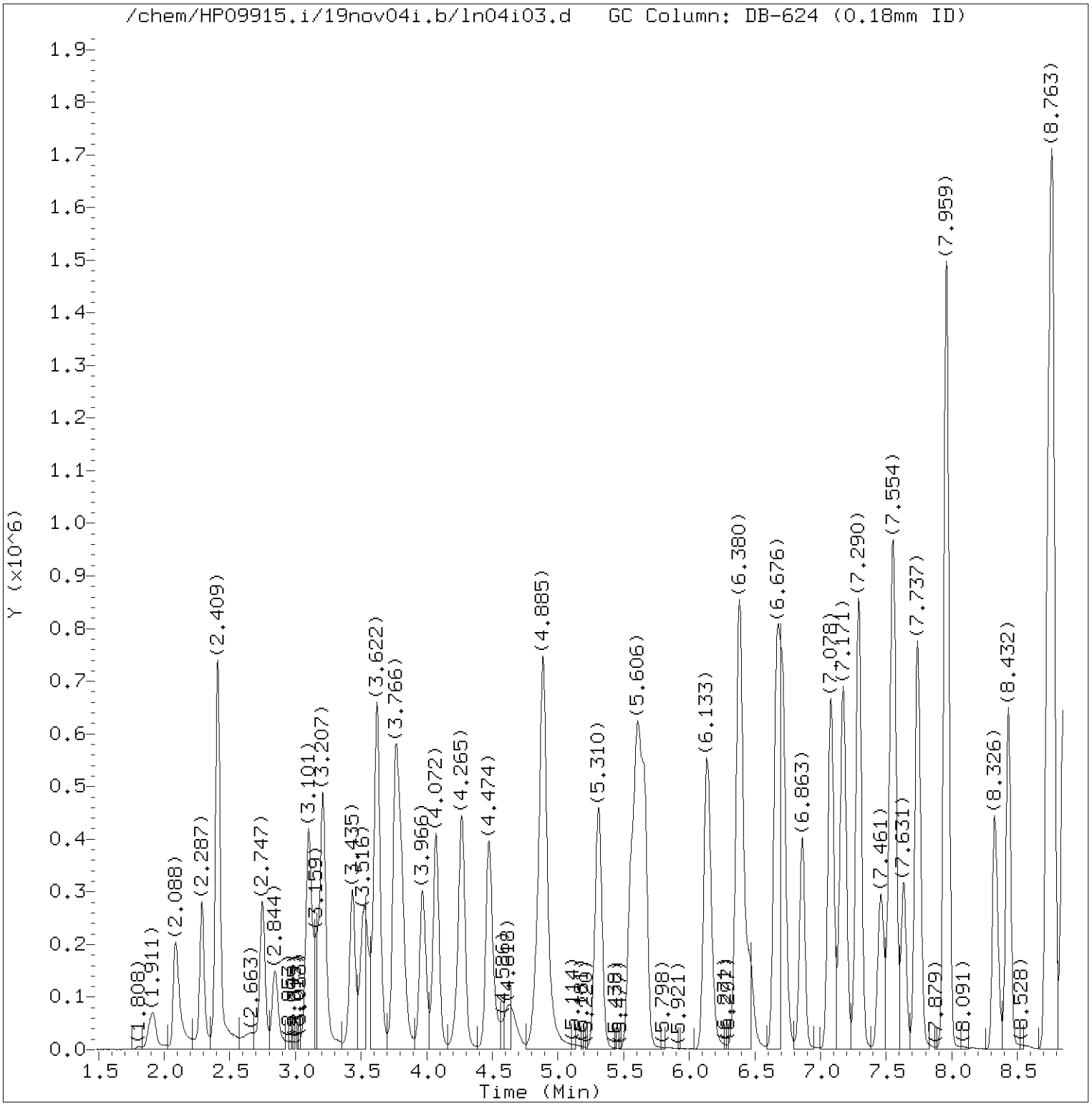
Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 572341
On-column Amount (ng) : 102.7487
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

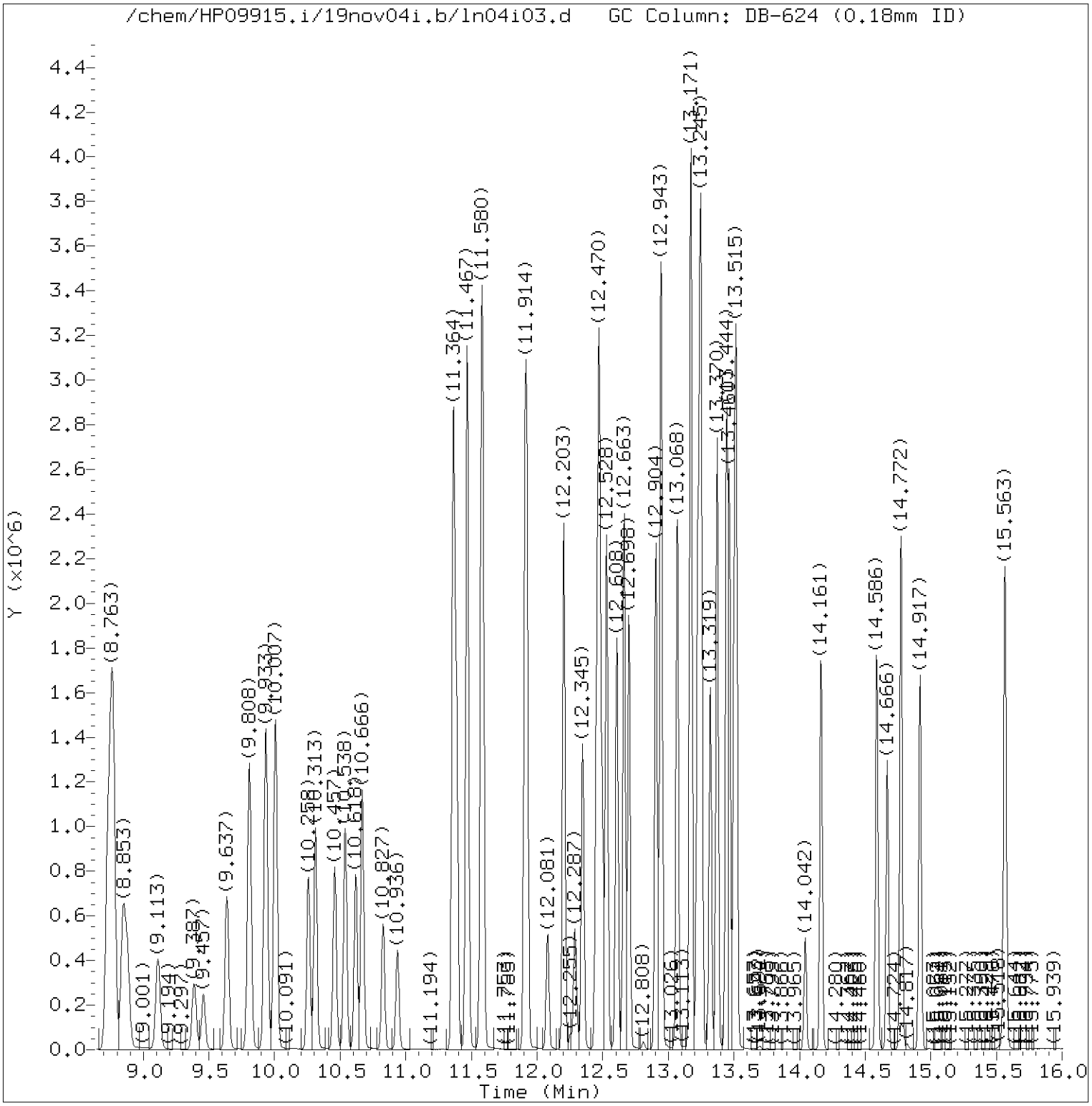
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.088	85	427538M	52.817
4) Chloromethane	(2)	2.287	50	390734	50.084
5) 1,3-Butadiene	(2)	2.406	39	311095M	48.025
6) Vinyl Chloride	(2)	2.409	62	387720	49.794
8) Bromomethane	(2)	2.747	94	272873	48.888
9) Chloroethane	(2)	2.844	64	212325	49.620
10) Dichlorofluoromethane	(2)	3.098	67	509913MA	49.515
12) Trichlorofluoromethane	(2)	3.152	101	433881	51.758
11) n-Pentane	(2)	3.207	43	489872	49.449
14) Ethyl ether	(2)	3.432	59	285731	52.748
15) Freon 123a	(2)	3.525	67	337192	50.003
16) Acrolein	(1)	3.622	56	1052176	519.843
17) 1,1-Dichloroethene	(2)	3.760	96	251911	51.197
17) 1,1-Dichloroethene	(2)	3.760	63	123343	50.001
19) Freon 113	(2)	3.795	101	289343	51.541
18) Acetone	(1)	3.802	58	91161	100.464
22) Methyl Iodide	(2)	3.966	142	518954	50.897
21) 2-Propanol	(1)	3.998	45	165875M	254.283
23) Carbon Disulfide	(2)	4.072	76	956902	51.606
27) Methyl Acetate	(2)	4.245	43	314348	49.603
25) Allyl Chloride	(2)	4.271	41	438915	49.725
28) Methylene Chloride	(2)	4.474	84	295055	50.382
29)*t-Butyl alcohol-d10	(1)	4.509	65	269779M	250.000
30) t-Butyl alcohol	(1)	4.625	59	291988	257.078
31) Acrylonitrile	(2)	4.834	53	175969	51.611
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	957096	51.225
32) trans-1,2-Dichloroethene	(2)	4.888	96	287617	50.529
34) n-Hexane	(2)	5.313	57	463732M	52.364
36) 1,1-Dichloroethane	(2)	5.551	63	505667	50.924
38) di-Isopropyl ether	(2)	5.609	45	985238	51.444
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	462216	51.882
40) Ethyl t-butyl ether	(2)	6.133	59	965104	51.927
43) 1,2-Dichloroethene (Total)	(2)		96	610267	101.029
44) 2-Butanone	(2)	6.361	43	453665	103.655
42) cis-1,2-Dichloroethene	(2)	6.380	96	322650	50.501
45) 2,2-Dichloropropane	(2)	6.400	77	400546	51.890
47) Propionitrile	(1)	6.464	54	357876	252.881
48) Methacrylonitrile	(2)	6.670	67	475036	129.160

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	173386	51.180
50) Tetrahydrofuran	(1)	6.721	71	126019	98.581
51) Chloroform	(2)	6.859	83	484828	51.048
52)$Dibromofluoromethane	(2)	7.075	113	282824	49.838
52)$Dibromofluoromethane	(2)	7.075	111	289462	50.026
53) 1,1,1-Trichloroethane	(2)	7.085	97	420986	51.935
54) Cyclohexane	(2)	7.171	56	567043	52.311
54) Cyclohexane	(2)	7.175	84	491699	52.219
54) Cyclohexane	(2)	7.175	69	175289	52.282
56) Carbon Tetrachloride	(2)	7.284	117	361443	52.574
55) 1,1-Dichloropropene	(2)	7.294	75	401799	51.176
58) Isobutyl Alcohol	(1)	7.461	41	242114	633.444
57)$1,2-Dichloroethane-d4	(2)	7.528	102	72846	50.367
57)$1,2-Dichloroethane-d4	(2)	7.531	65	321603	49.897
57)$1,2-Dichloroethane-d4	(2)	7.531	104	46134	49.939
60) Benzene	(2)	7.557	78	1202424	50.927
61) 1,2-Dichloroethane	(2)	7.638	62	372805	49.091
61) 1,2-Dichloroethane	(2)	7.634	98	37850	50.364
65) t-Amyl methyl ether	(2)	7.737	73	971399	52.071
67) n-Heptane	(2)	7.956	43	432248MA	52.247
66)*Fluorobenzene	(2)	7.959	96	1160755	50.000
69) n-Butanol	(1)	8.326	56	438437M	1332.750
71) Trichloroethene	(2)	8.432	95	302634	50.906
72) Methylcyclohexane	(2)	8.734	83	574135	52.056
72) Methylcyclohexane	(2)	8.731	98	260583	52.213
73) 1,2-Dichloropropane	(2)	8.773	63	306937	51.196
76) Methyl Methacrylate	(2)	8.847	69	306086A	52.795
75) 1,4-Dioxane	(1)	8.853	88	59876M	662.196
74) Dibromomethane	(2)	8.879	93	199498	51.428
78) Bromodichloromethane	(2)	9.113	83	366892	52.707
79) 2-Nitropropane	(2)	9.390	41	235097	111.505
80) 2-Chloroethyl Vinyl Ether	(2)	9.457	63	134015	52.046
81) cis-1,3-Dichloropropene	(2)	9.637	75	495055	53.547
82) 4-Methyl-2-pentanone	(2)	9.808	43	1004831	108.769
83)$Toluene-d8	(3)	9.933	98	1189125	50.240
83)$Toluene-d8	(3)	9.933	100	767119	50.033
88) Toluene	(3)	10.007	92	764927	51.549
90) 1,3-Dichloropropene (total)	(3)		100	956669	108.348

M = Compound was manually integrated.
A = User selected an alternate hit.
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$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	461614	54.801
91) Ethyl Methacrylate	(3)	10.313	69	554039	54.121
92) 1,1,2-Trichloroethane	(3)	10.461	97	291480	51.810
93) Tetrachloroethene	(3)	10.538	166	321895	51.220
94) 1,3-Dichloropropane	(3)	10.618	76	494204	51.449
96) 2-Hexanone	(3)	10.670	43	761734	111.475
97) Dibromochloromethane	(3)	10.827	129	315765	54.792
99) 1,2-Dibromoethane	(3)	10.936	107	319699	52.331
100)*Chlorobenzene-d5	(3)	11.361	117	904578	50.000
101) 1-Chlorohexane	(3)	11.364	91	399510	50.116
102) Chlorobenzene	(3)	11.387	112	864419	51.514
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	299375	54.148
104) Ethylbenzene	(3)	11.467	91	1475718	52.031
106) m+p-Xylene	(3)	11.580	106	1167470	104.636
108) Xylene (Total)	(3)		106	1748839	157.389
107) o-Xylene	(3)	11.907	106	581369	52.752
109) Styrene	(3)	11.924	104	981189	53.877
110) Bromoform	(3)	12.081	173	229903	53.387
111) Isopropylbenzene	(3)	12.203	105	1456789	52.702
112) Cyclohexanone	(1)	12.287	55	231776	654.496
114)$4-Bromofluorobenzene	(3)	12.345	95	446156	49.781
114)$4-Bromofluorobenzene	(3)	12.348	174	370576	49.875
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	482004M	52.727
115) Bromobenzene	(4)	12.464	156	378400	52.027
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	383692	136.075
117) 1,2,3-Trichloropropane	(4)	12.496	110	145151	51.744
119) n-Propylbenzene	(4)	12.528	91	1662625	52.323
120) 2-Chlorotoluene	(4)	12.608	126	350943	51.988
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	1225419	53.065
121) 4-Chlorotoluene	(4)	12.698	126	361669	51.471
124) tert-Butylbenzene	(4)	12.904	134	253906M	53.165
125) Pentachloroethane	(4)	12.940	167	227064	55.216
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	1291883	53.080
127) sec-Butylbenzene	(4)	13.068	105	1512547	53.076
129) 1,3-Dichlorobenzene	(4)	13.168	146	693790	51.911
130) p-Isopropyltoluene	(4)	13.174	119	1315828	53.371
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	483927	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	714495	51.569

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on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

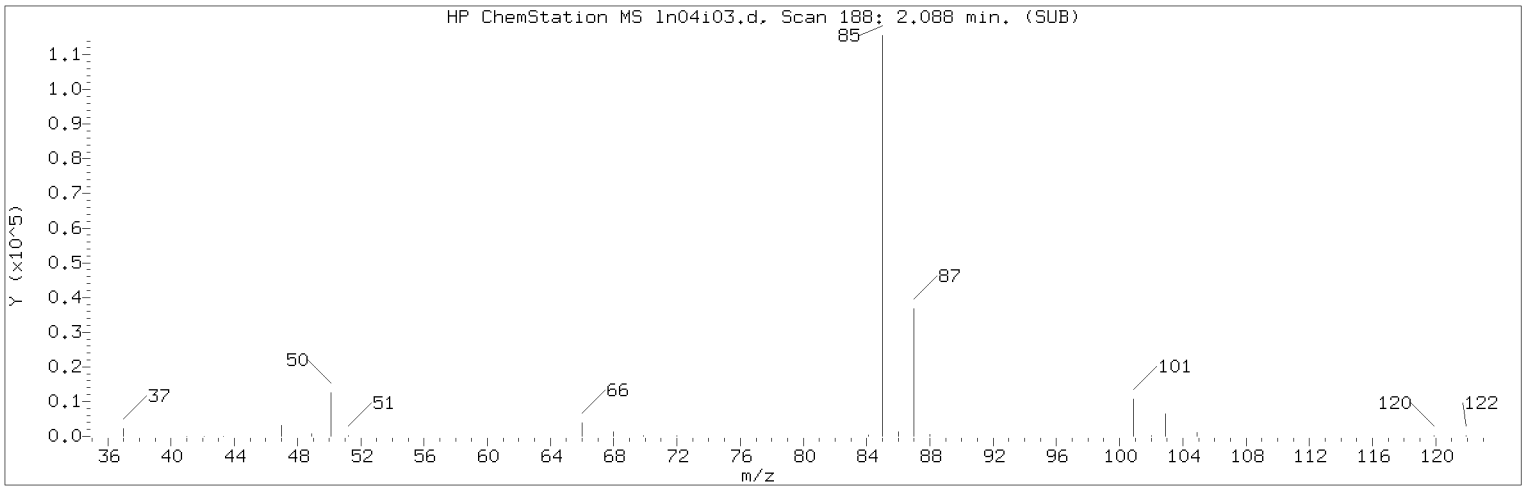
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

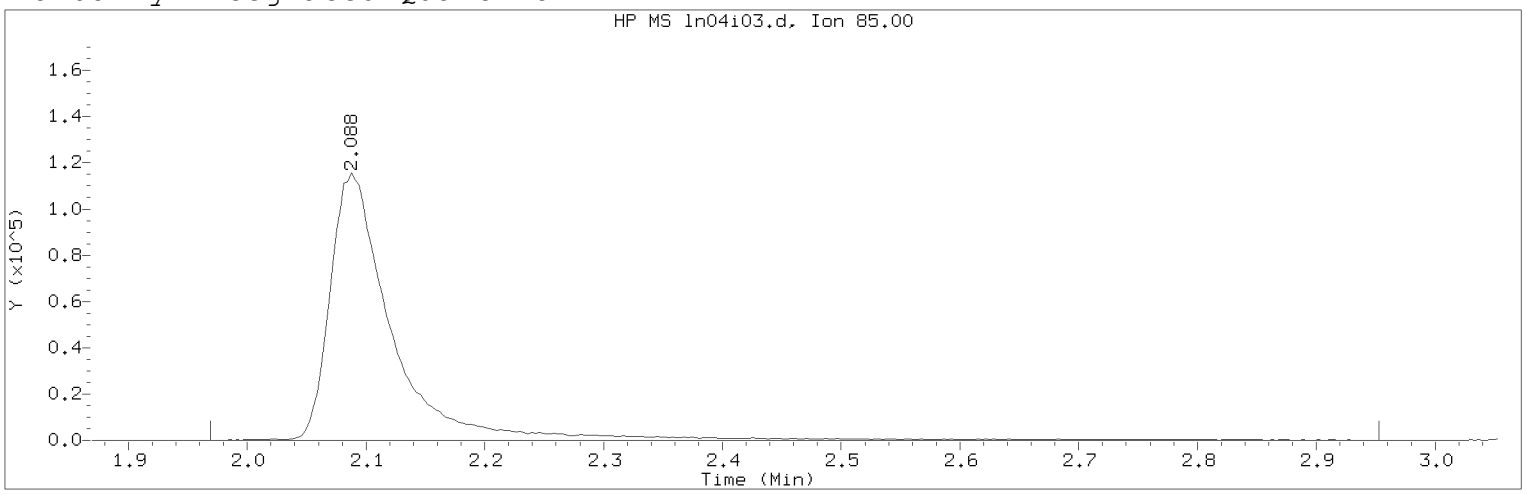
	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134)	1,2,3-Trimethylbenzene	(4)	13.251	105	1342367	52.068
135)	Benzyl Chloride	(4)	13.319	91	1059398	54.274
136)	1,3-Diethylbenzene	(4)	13.370	119	832647	51.895
141)	Diethylbenzene (total)	(4)		100	2415817	155.686
137)	1,4-Diethylbenzene	(4)	13.441	119	877553	51.623
139)	n-Butylbenzene	(4)	13.464	92	652599	51.769
138)	1,2-Dichlorobenzene	(4)	13.502	146	682120	51.722
140)	1,2-Diethylbenzene	(4)	13.518	119	705617	52.168
142)	1,2-Dibromo-3-chloropropane	(4)	14.042	75	108388	54.164
144)	1,3,5-Trichlorobenzene	(4)	14.165	180	516839	51.009
146)	1,2,4-Trichlorobenzene	(4)	14.586	180	503797	51.136
147)	Hexachlorobutadiene	(4)	14.666	225	217236	46.700
148)	Naphthalene	(4)	14.772	128	1689758	53.350
149)	1,2,3-Trichlorobenzene	(4)	14.917	180	498430	51.993
150)	2-Methylnaphthalene	(4)	15.563	142	1079055	55.325

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

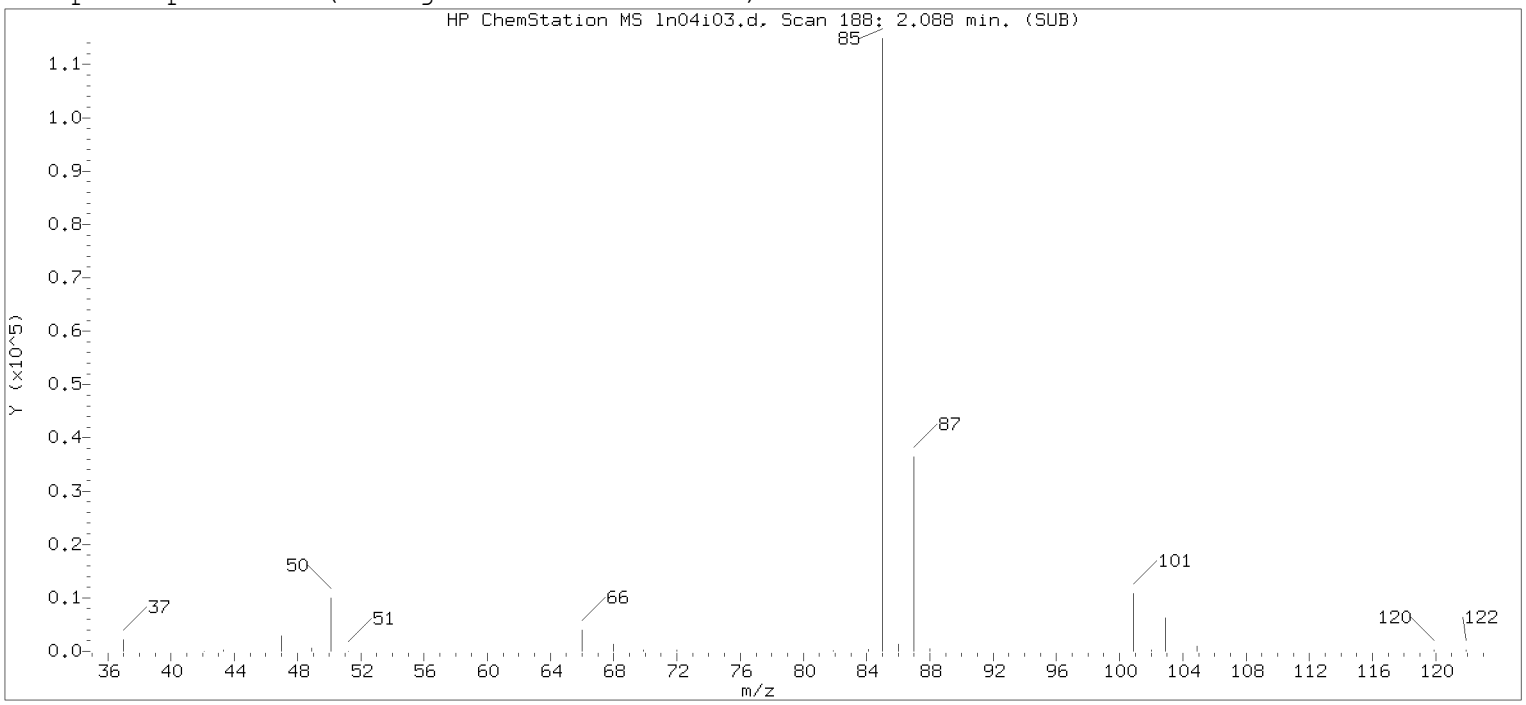
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 188
Retention Time (minutes): 2.088
Quant Ion : 85.00
Area (flag) : 427538M
On-Column Amount (ng) : 52.8165
Integration start scan : 150 Integration stop scan: 456
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

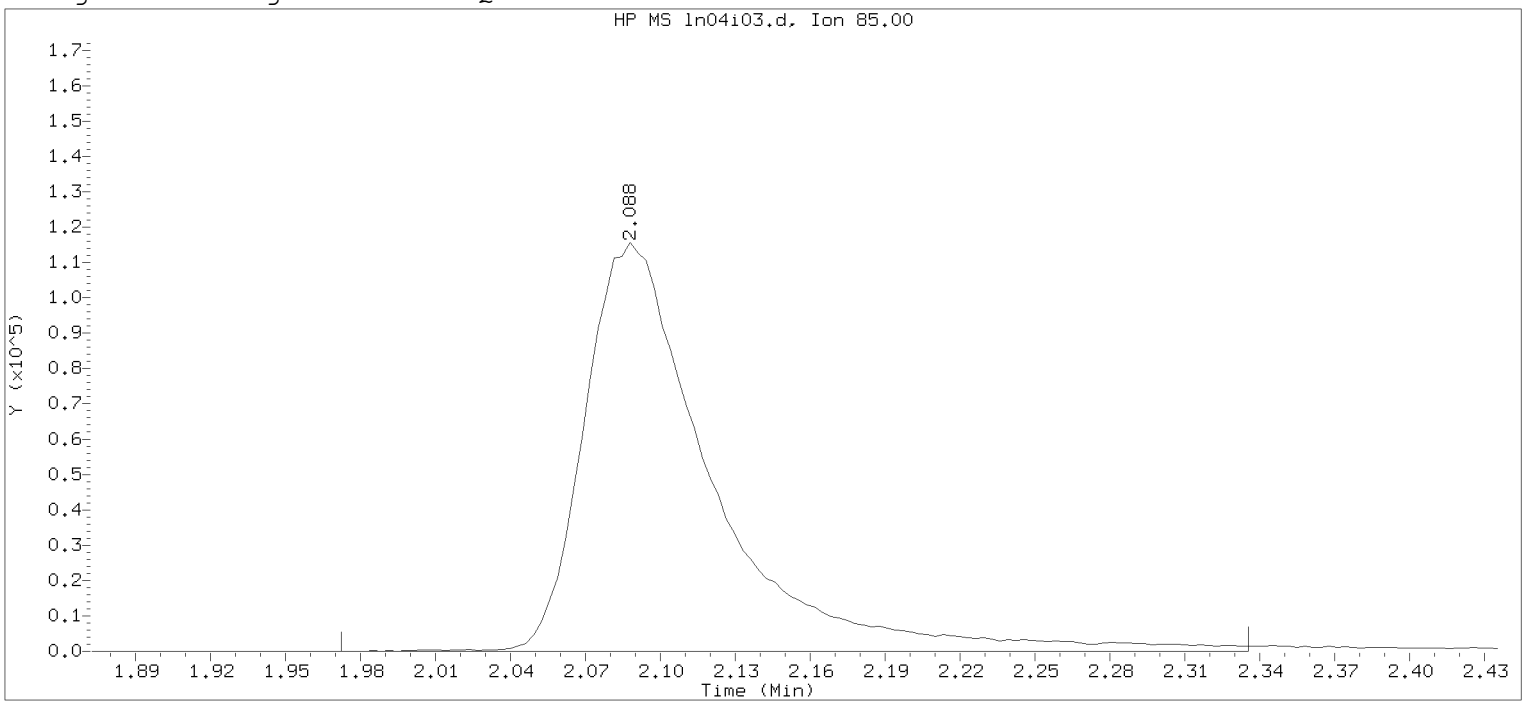
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

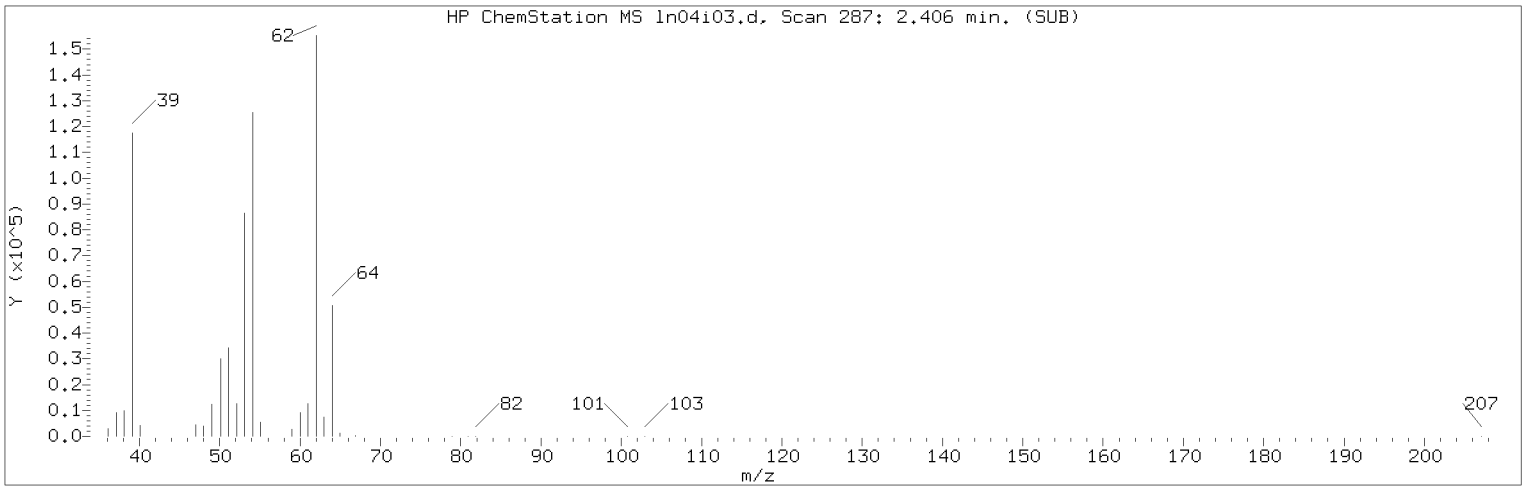
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

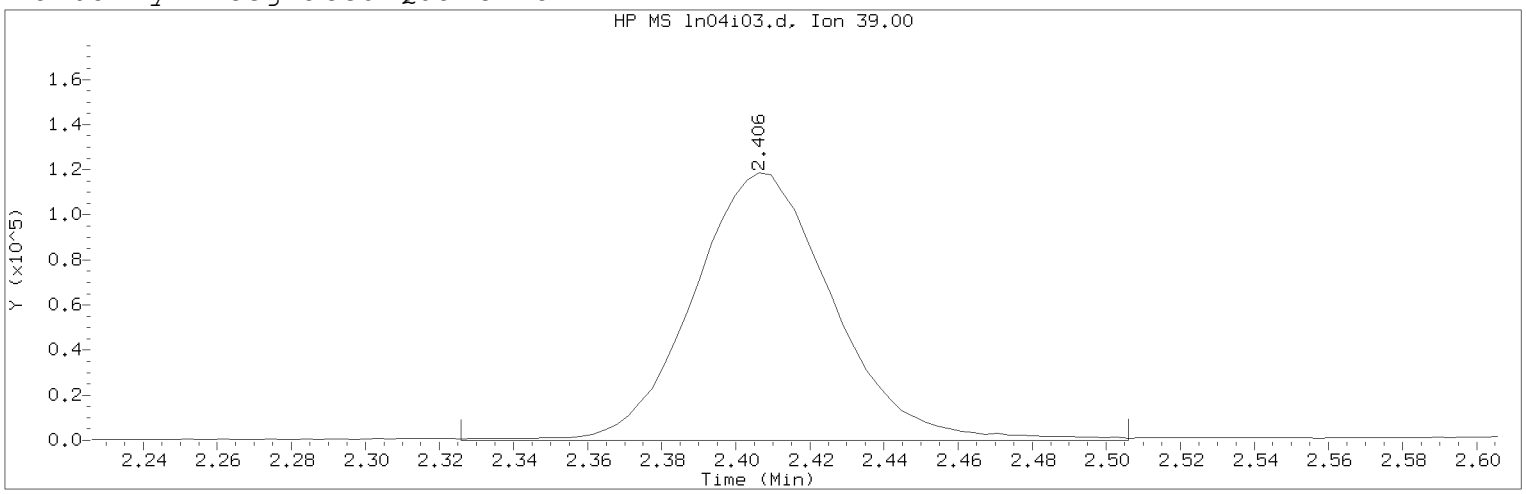
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 188
Retention Time (minutes): 2.088
Quant Ion : 85.00
Area : 411065
On-column Amount (ng) : 48.5918
Integration start scan : 151 Integration stop scan: 264
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: me20254

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

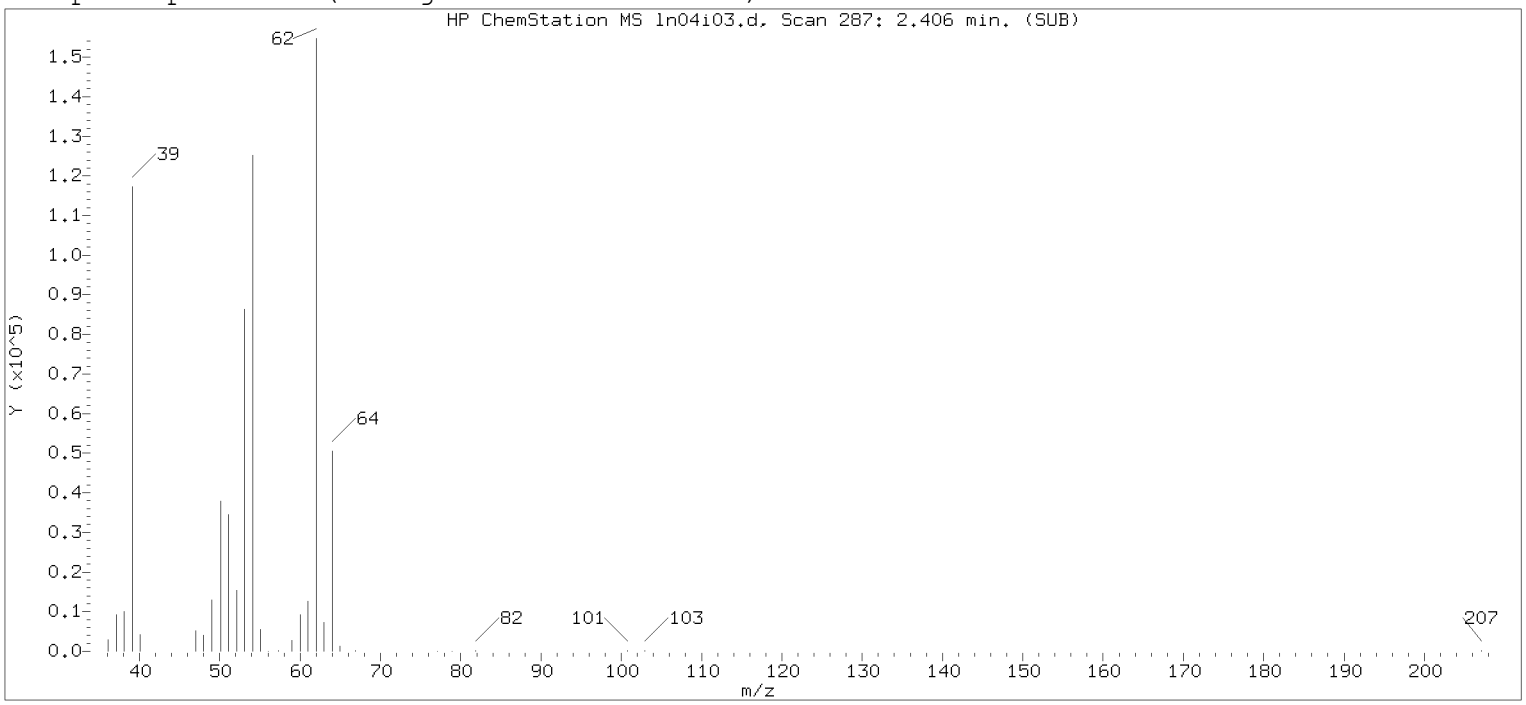
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 311095M
On-Column Amount (ng) : 48.0246
Integration start scan : 261 Integration stop scan: 317
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

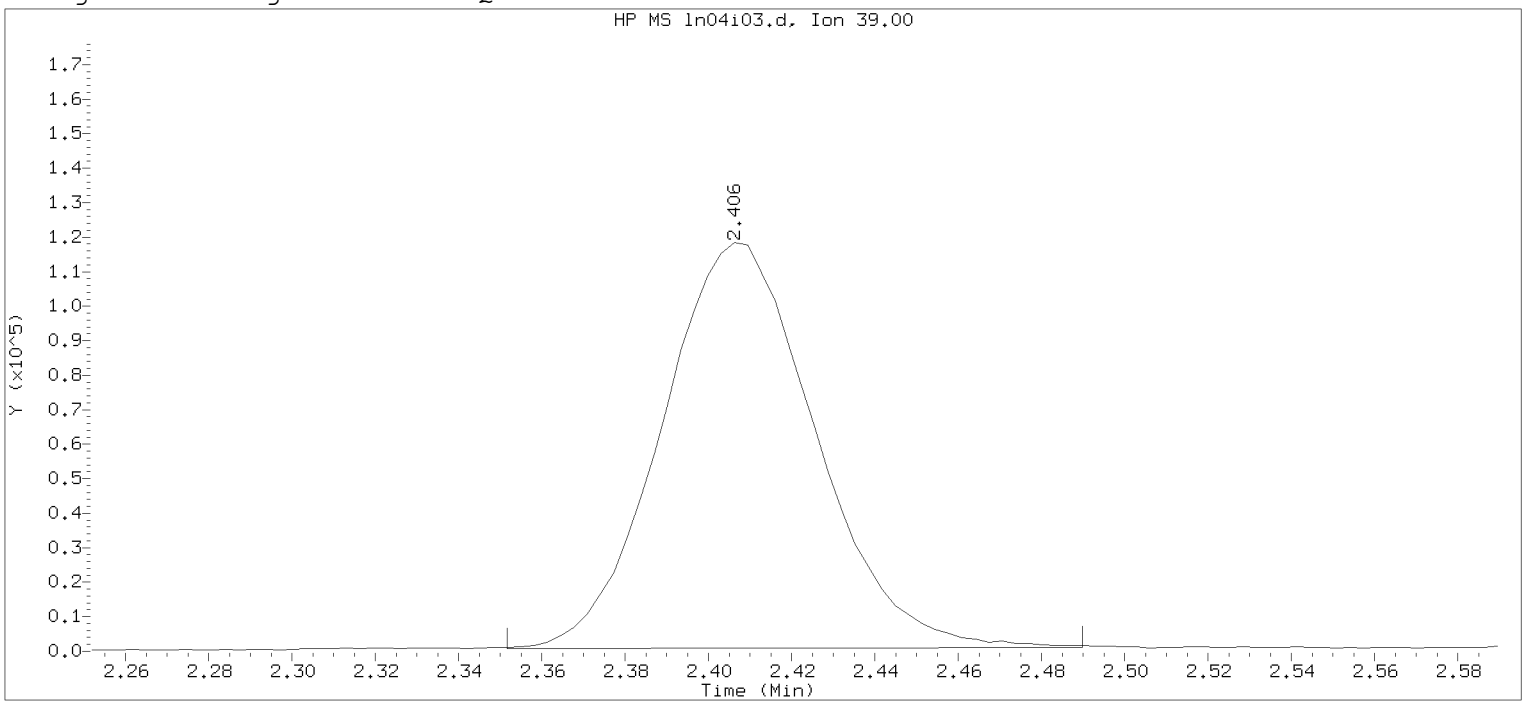
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 300667
On-column Amount (ng) : 50.0756
Integration start scan : 269 Integration stop scan: 312
Y at integration start : 752 Y at integration end: 1063

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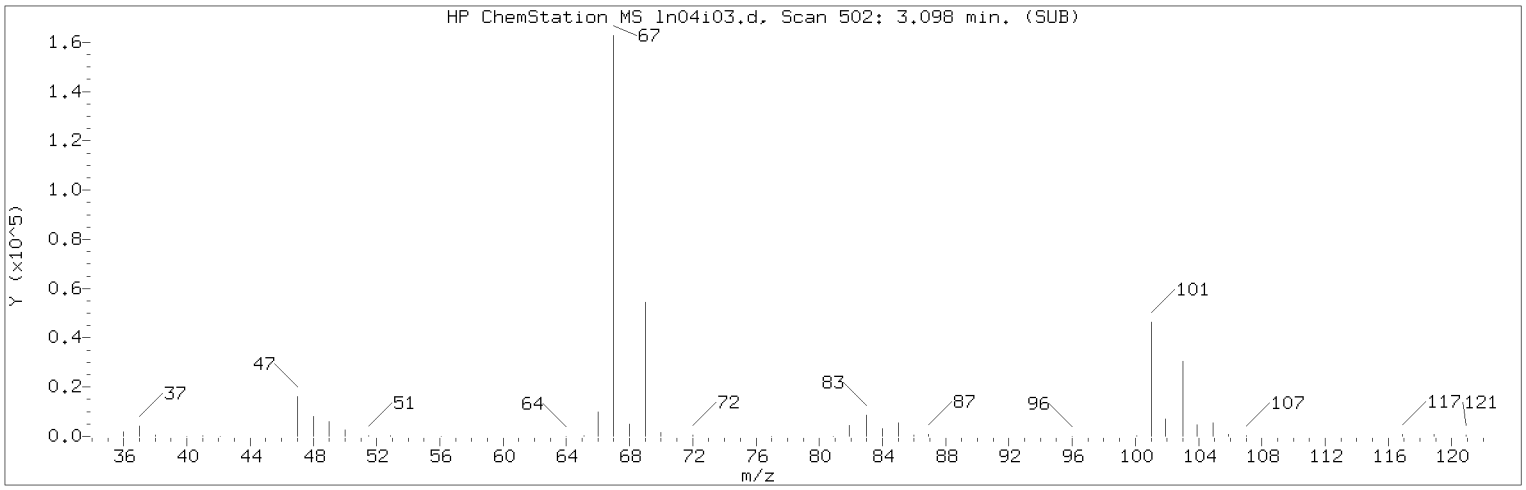
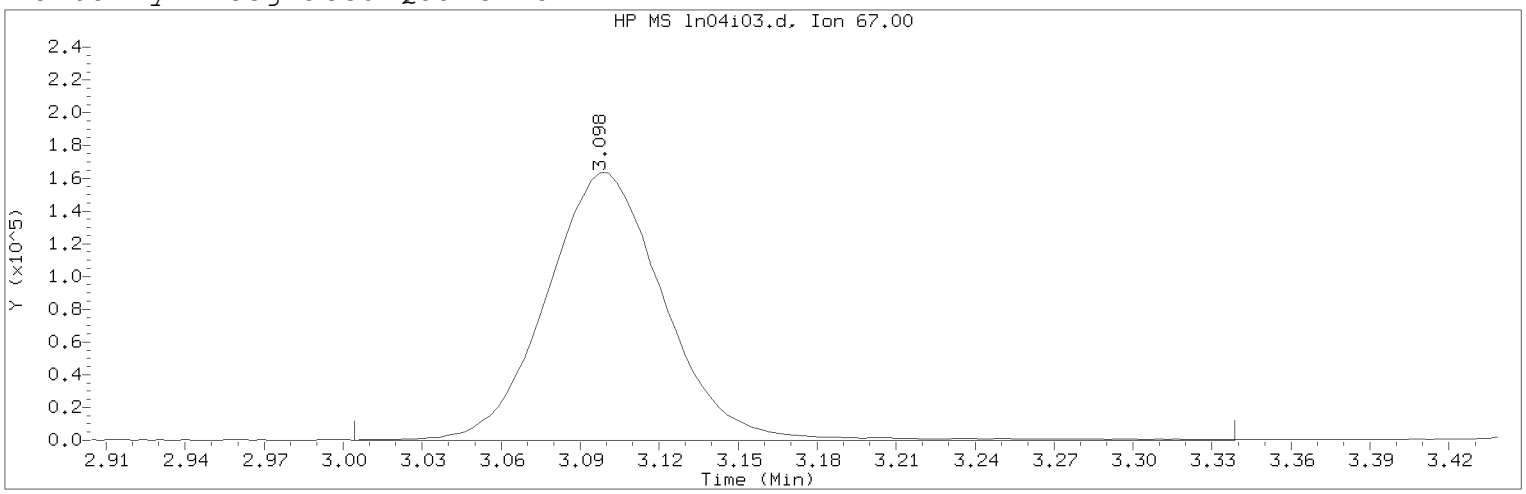
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

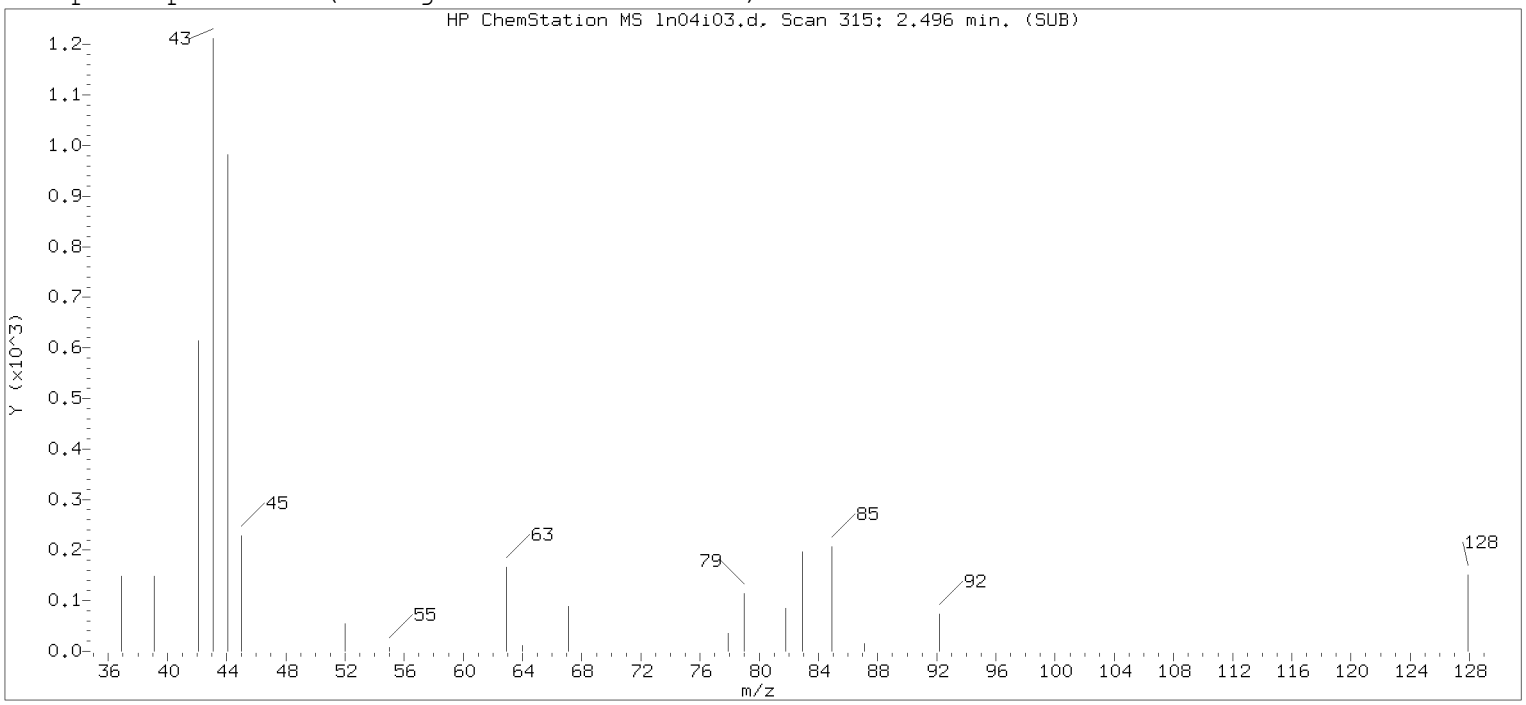
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 502
Retention Time (minutes): 3.098
Quant Ion : 67.00
Area (flag) : 509913MA
On-Column Amount (ng) : 49.5150
Integration start scan : 472 Integration stop scan: 576
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

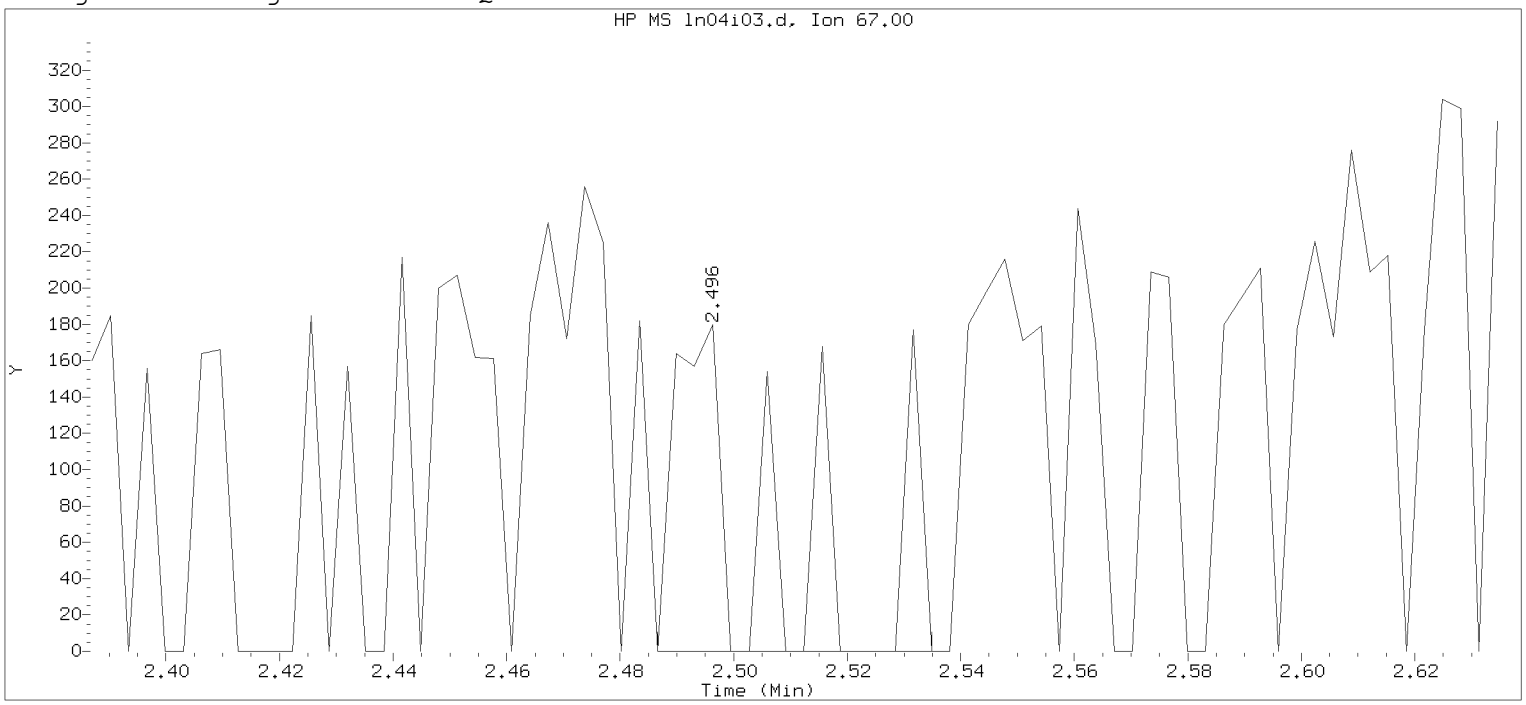
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

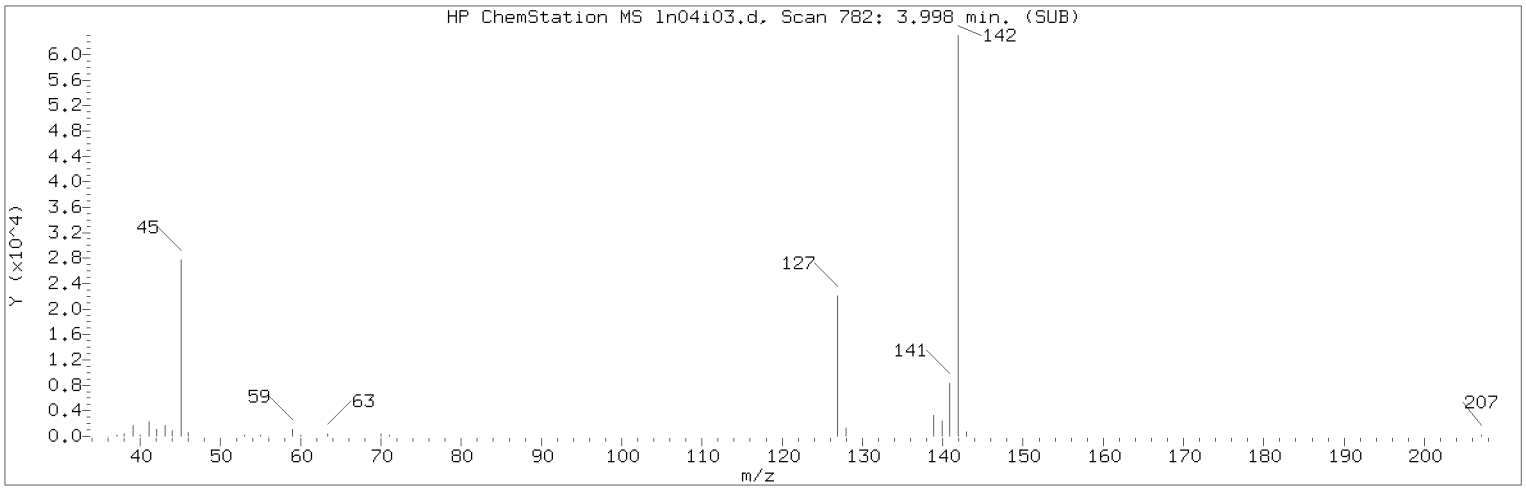
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

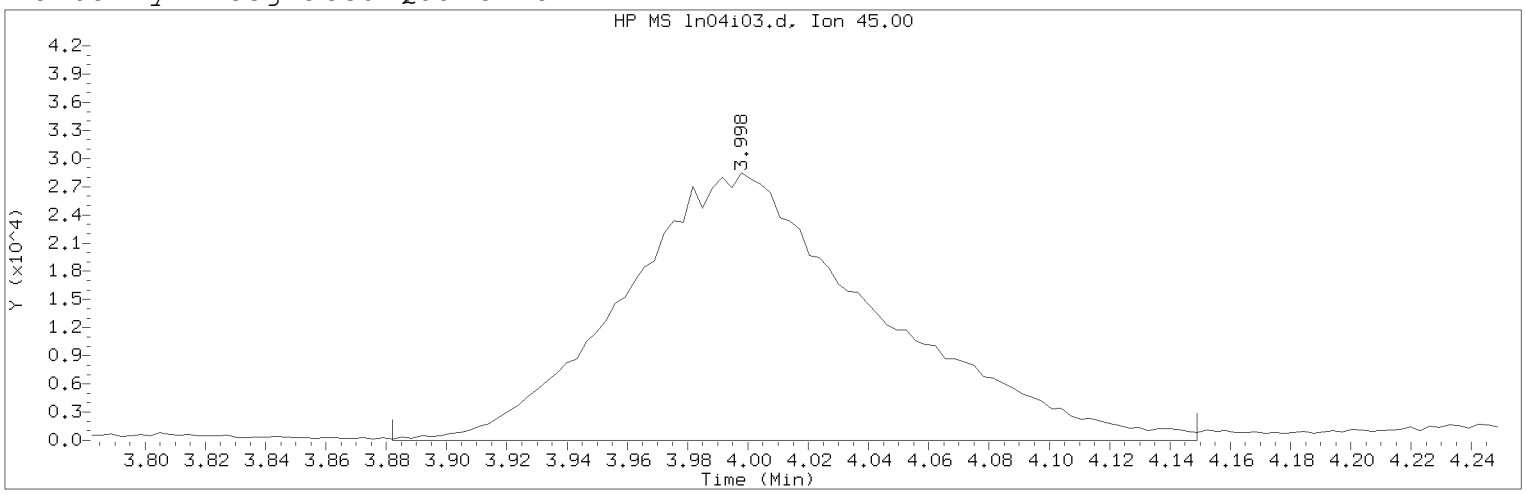
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 315
Retention Time (minutes): 2.496
Quant Ion : 67.00
Area : 192
On-column Amount (ng) : 0.0562
Integration start scan : 311 Integration stop scan: 326
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

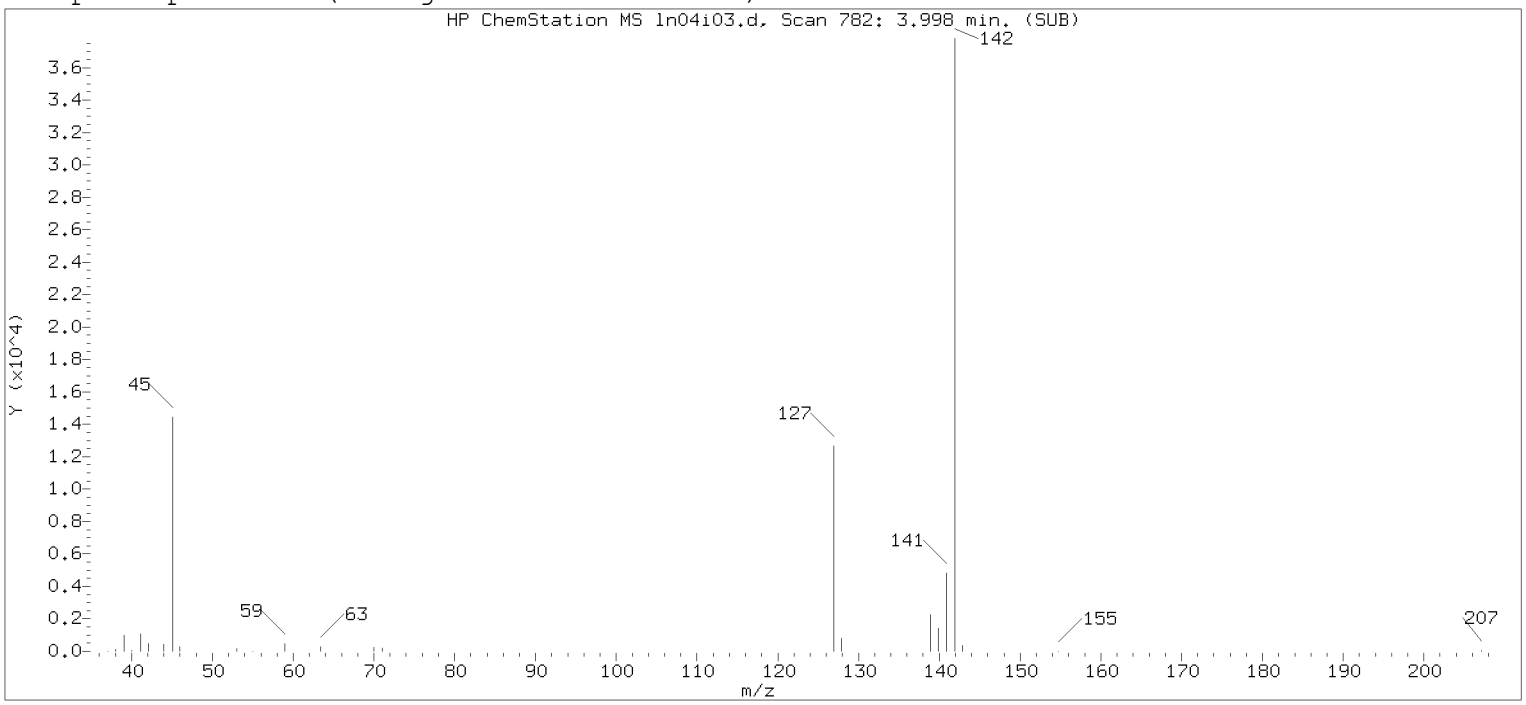
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 782
Retention Time (minutes): 3.998
Quant Ion : 45.00
Area (flag) : 165875M
On-Column Amount (ng) : 254.2825
Integration start scan : 745 Integration stop scan: 828
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

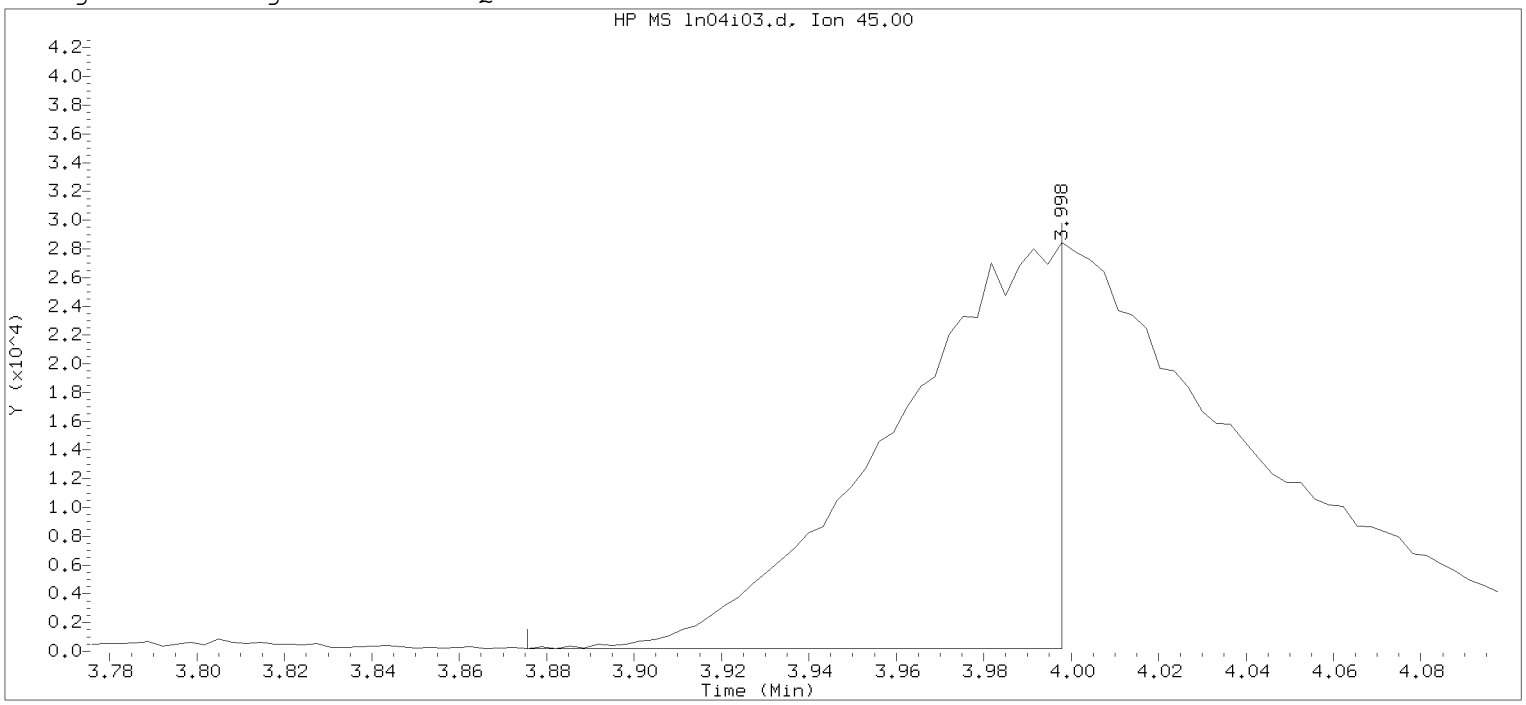
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

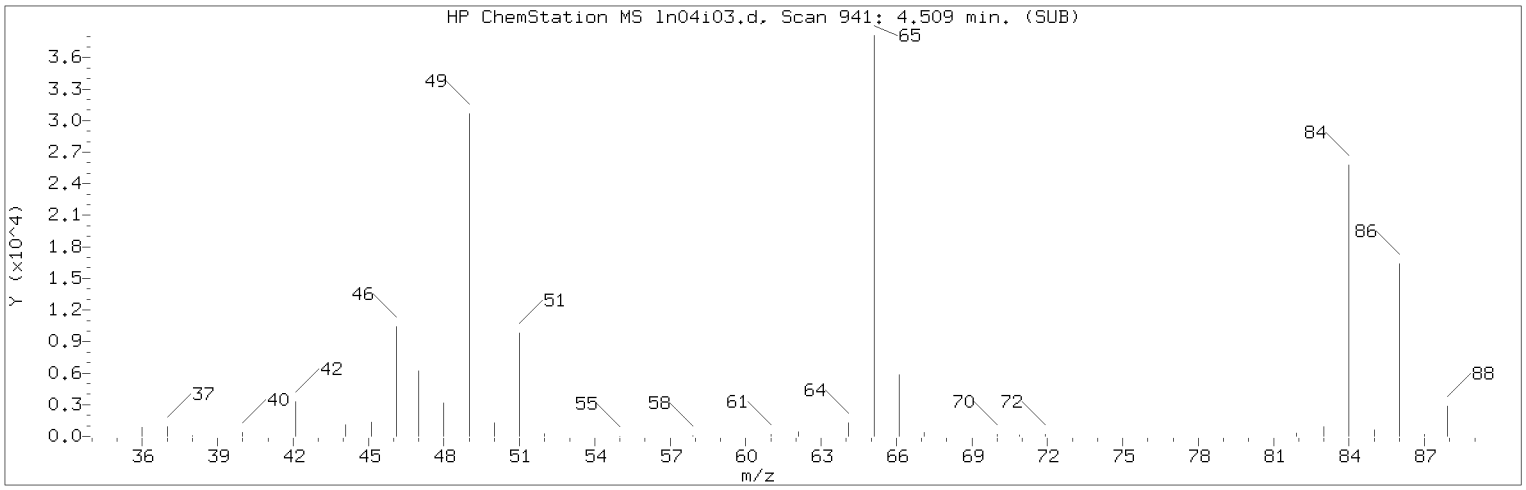
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

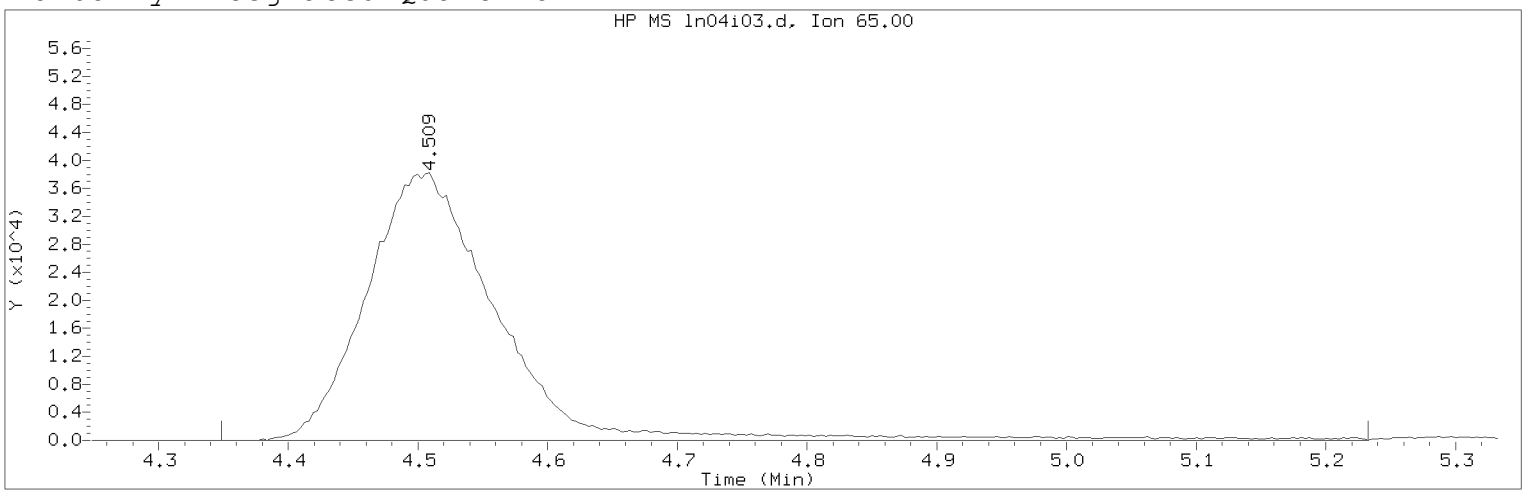
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 782
Retention Time (minutes): 3.998
Quant Ion : 45.00
Area : 74713
On-column Amount (ng) : 135.4026
Integration start scan : 743 Integration stop scan: 781
Y at integration start : 167 Y at integration end: 167

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

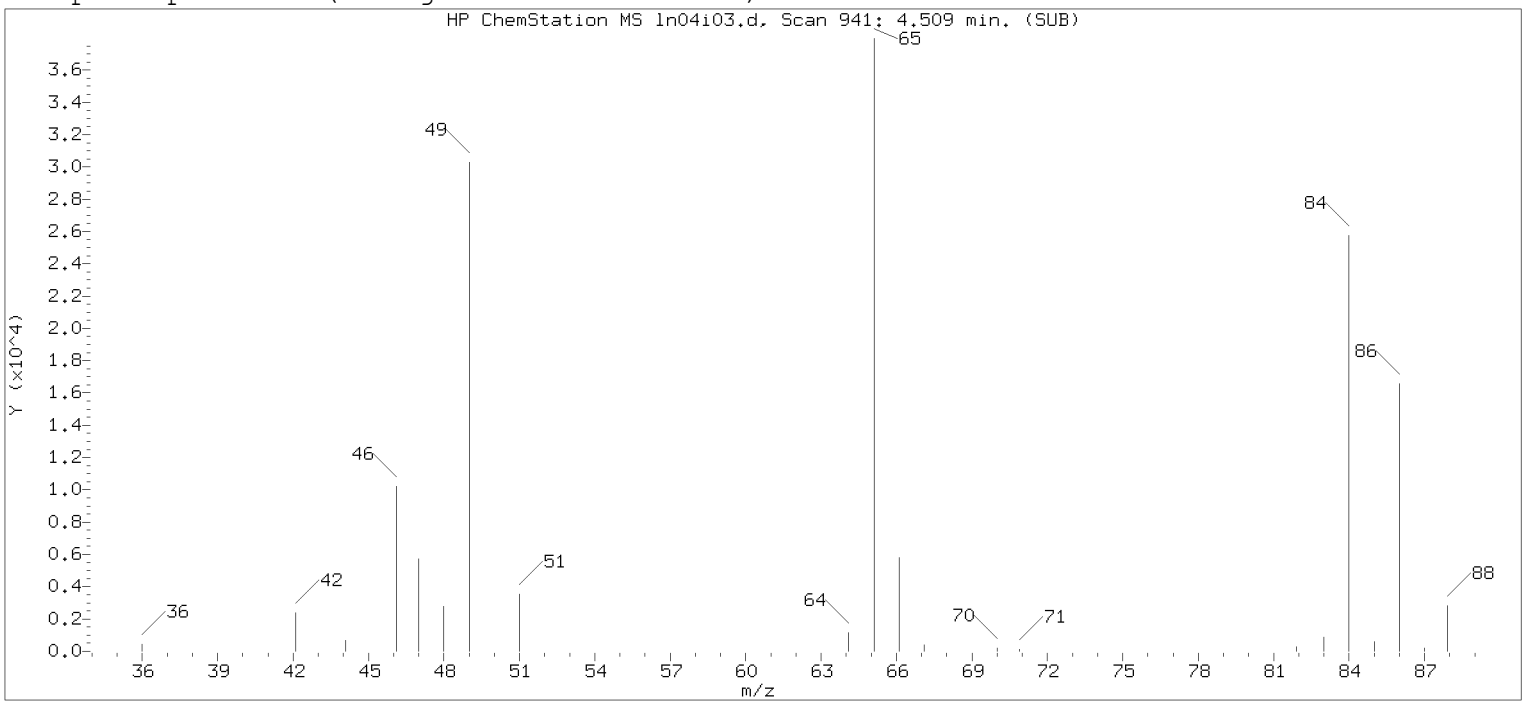
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 269779M
On-Column Amount (ng) : 250.0000
Integration start scan : 890 Integration stop scan: 1165
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

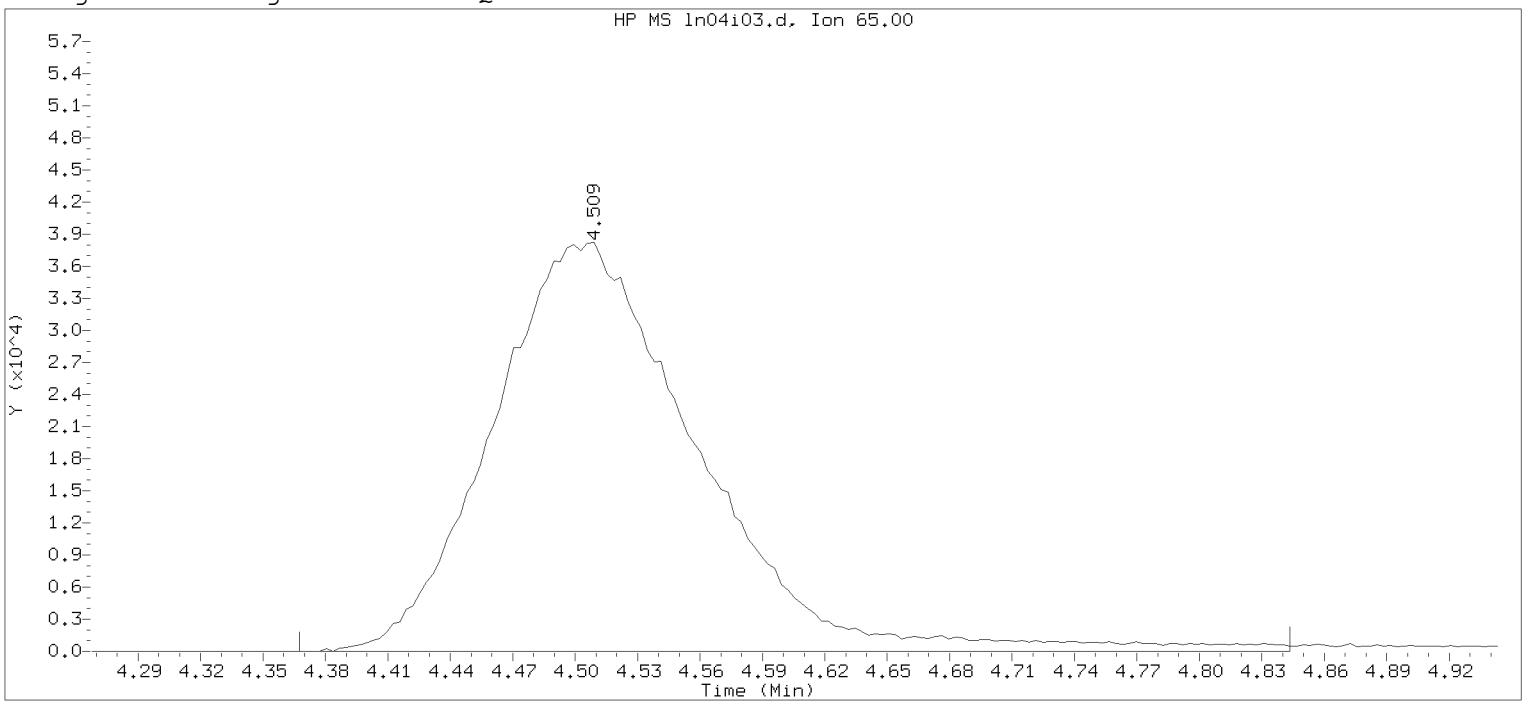
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

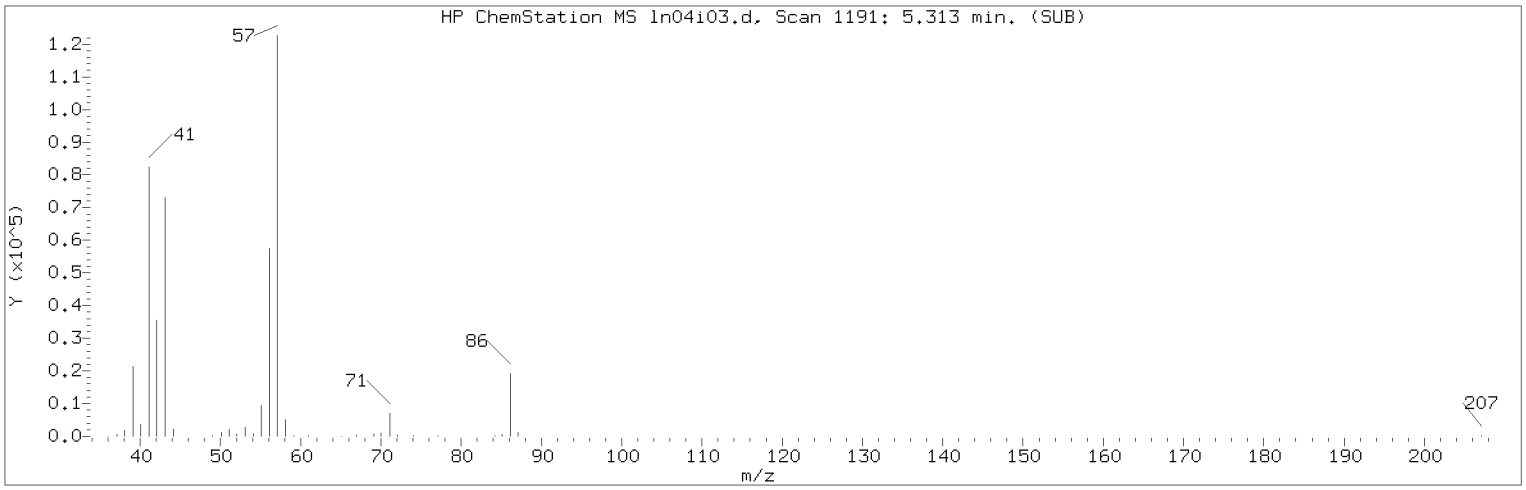
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

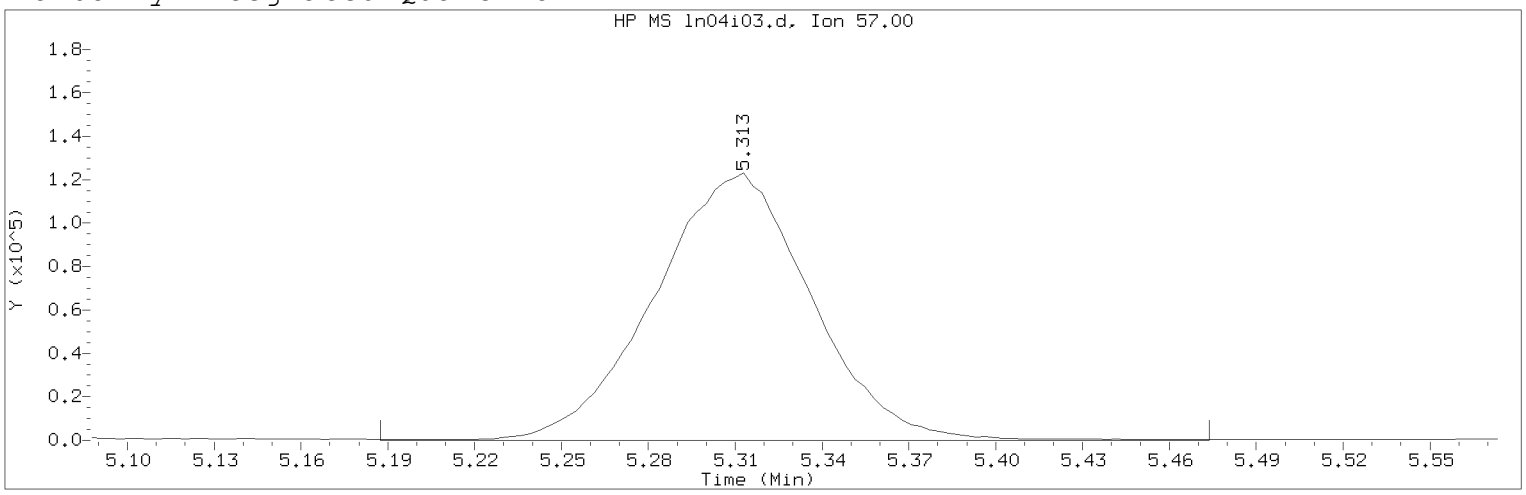
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 261144
On-column Amount (ng) : 250.0000
Integration start scan : 896 Integration stop scan: 1044
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

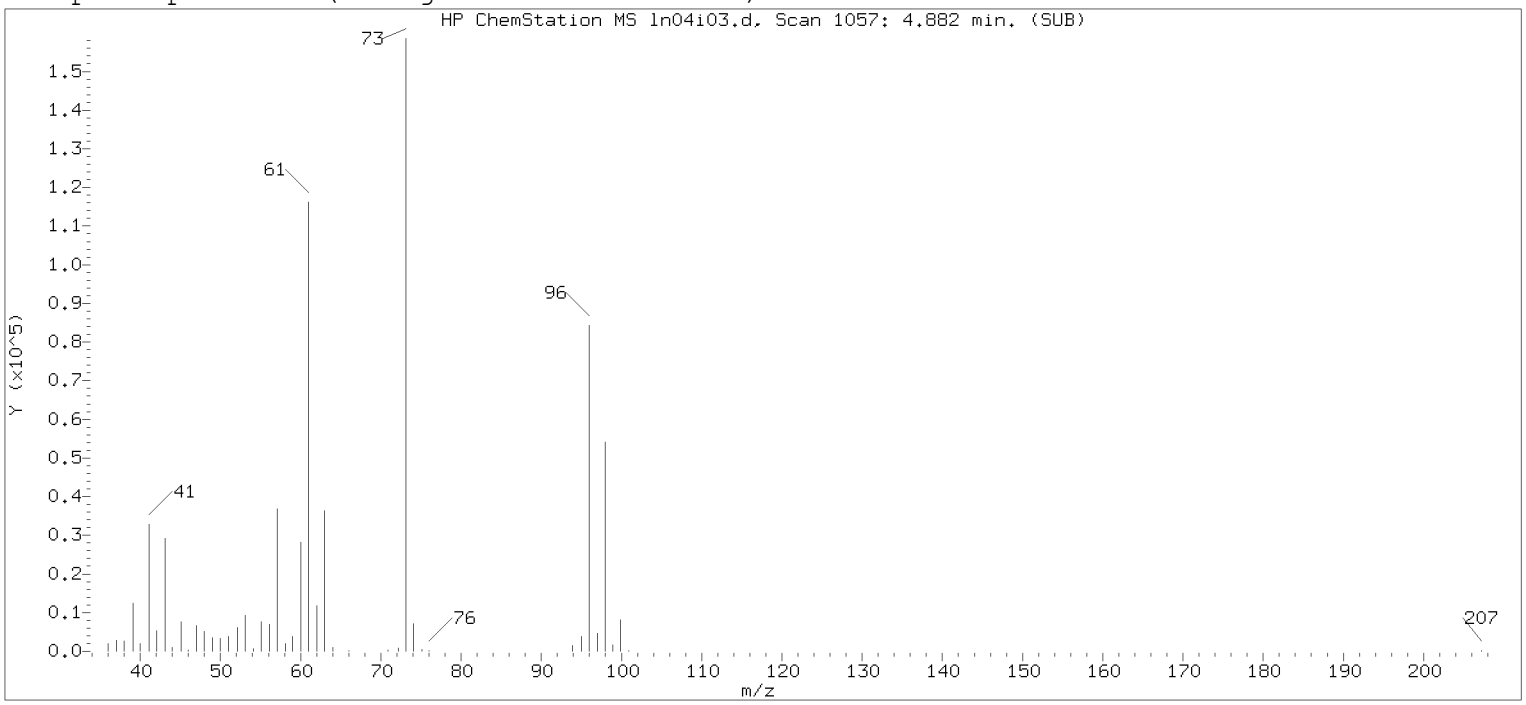
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1191
Retention Time (minutes): 5.313
Quant Ion : 57.00
Area (flag) : 463732M
On-Column Amount (ng) : 52.3639
Integration start scan : 1151 Integration stop scan: 1240
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

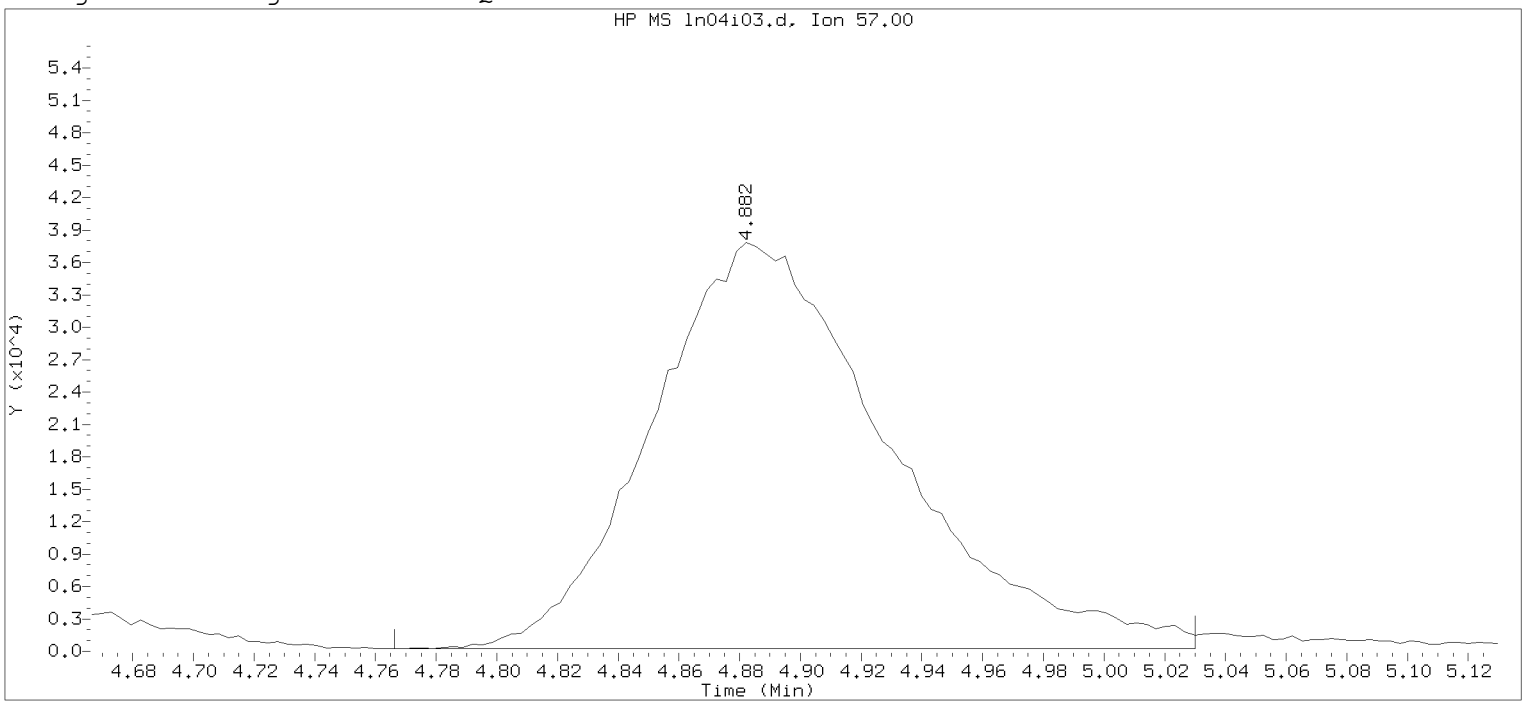
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

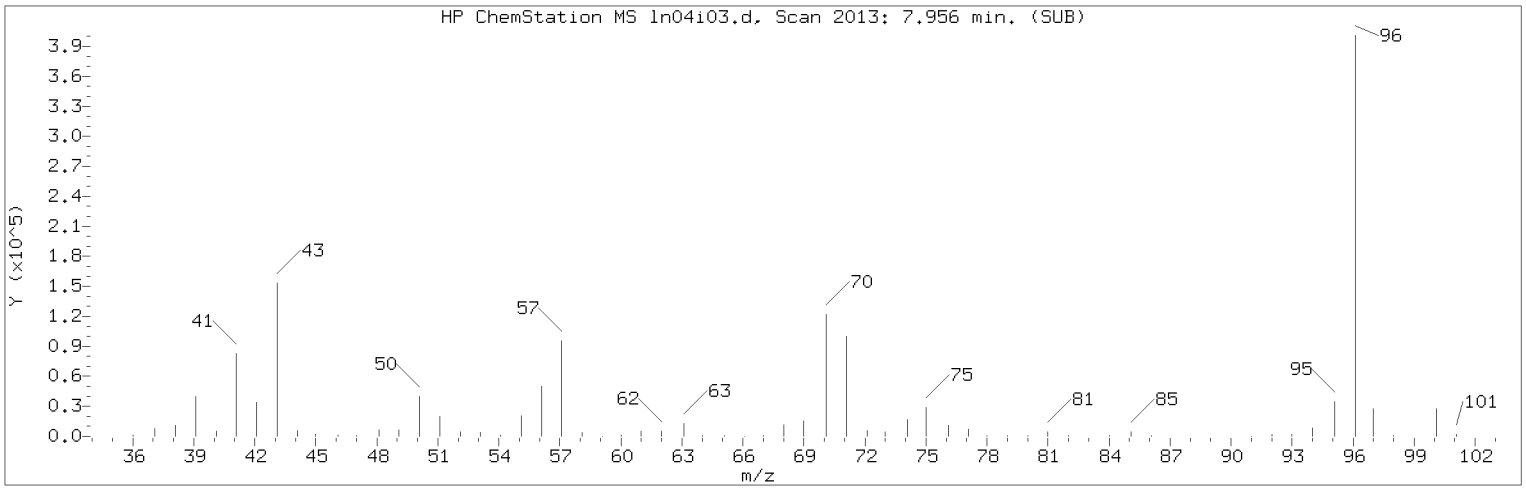
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

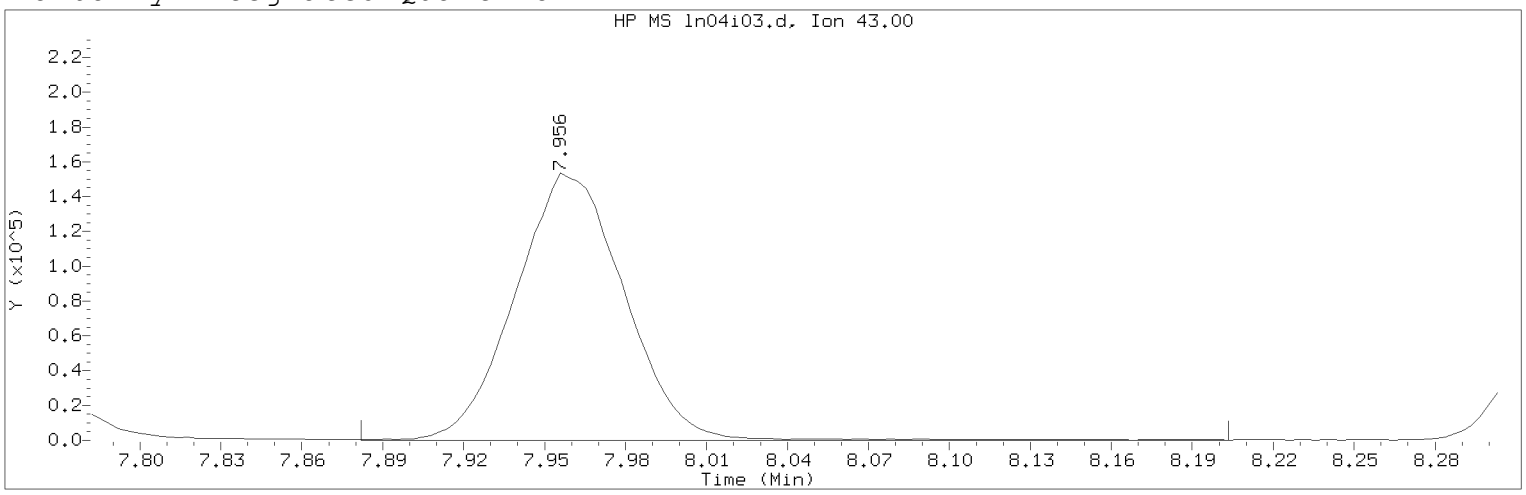
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1057
Retention Time (minutes): 4.882
Quant Ion : 57.00
Area : 205522
On-column Amount (ng) : 50.0557
Integration start scan : 1020 Integration stop scan: 1102
Y at integration start : 228 Y at integration end: 228

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

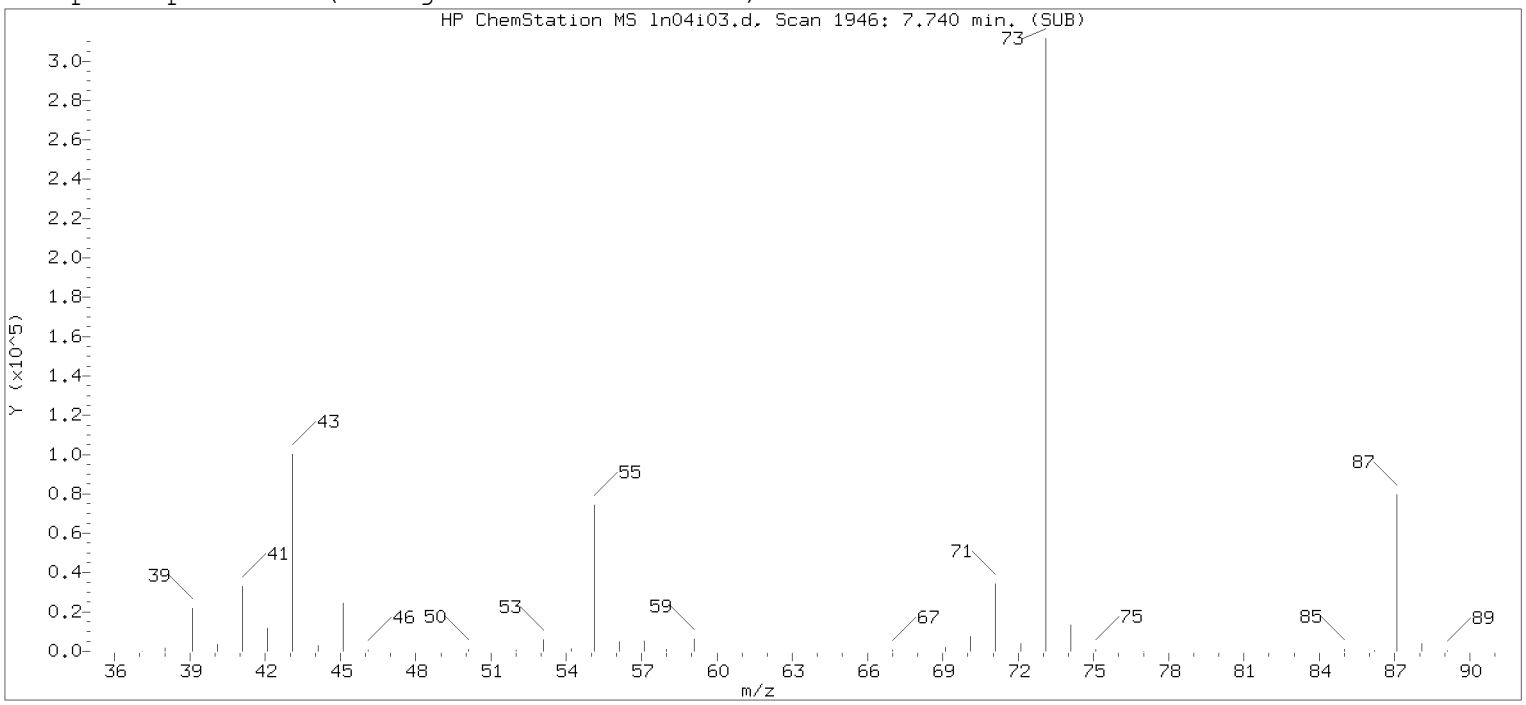
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2013
Retention Time (minutes): 7.956
Quant Ion : 43.00
Area (flag) : 432248MA
On-Column Amount (ng) : 52.2472
Integration start scan : 1989 Integration stop scan: 2089
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

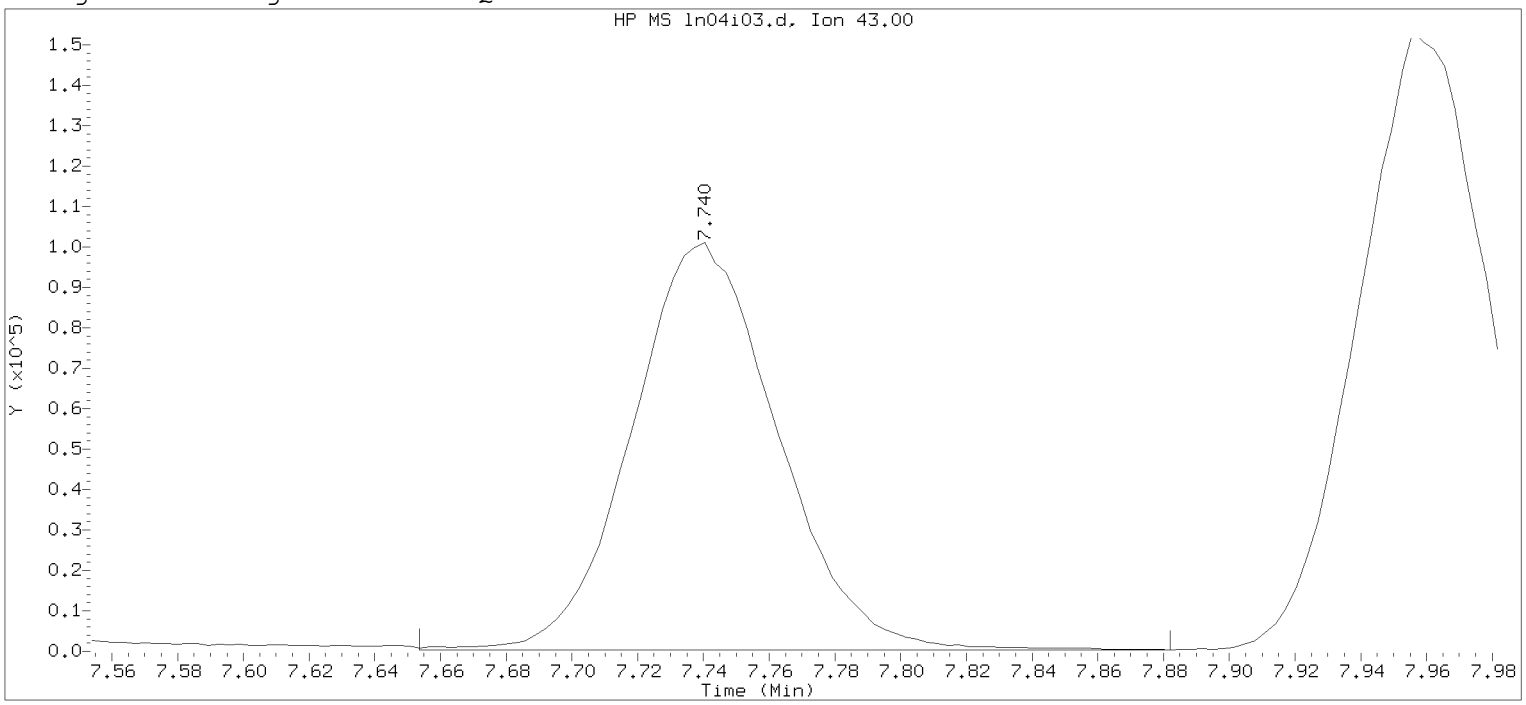
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

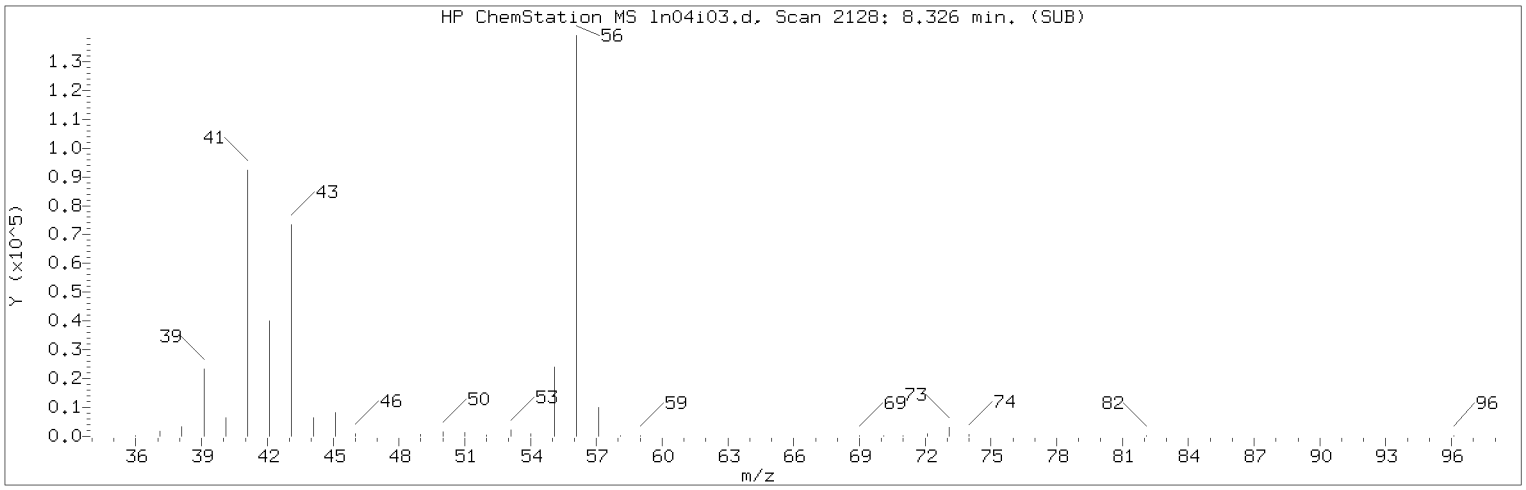
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

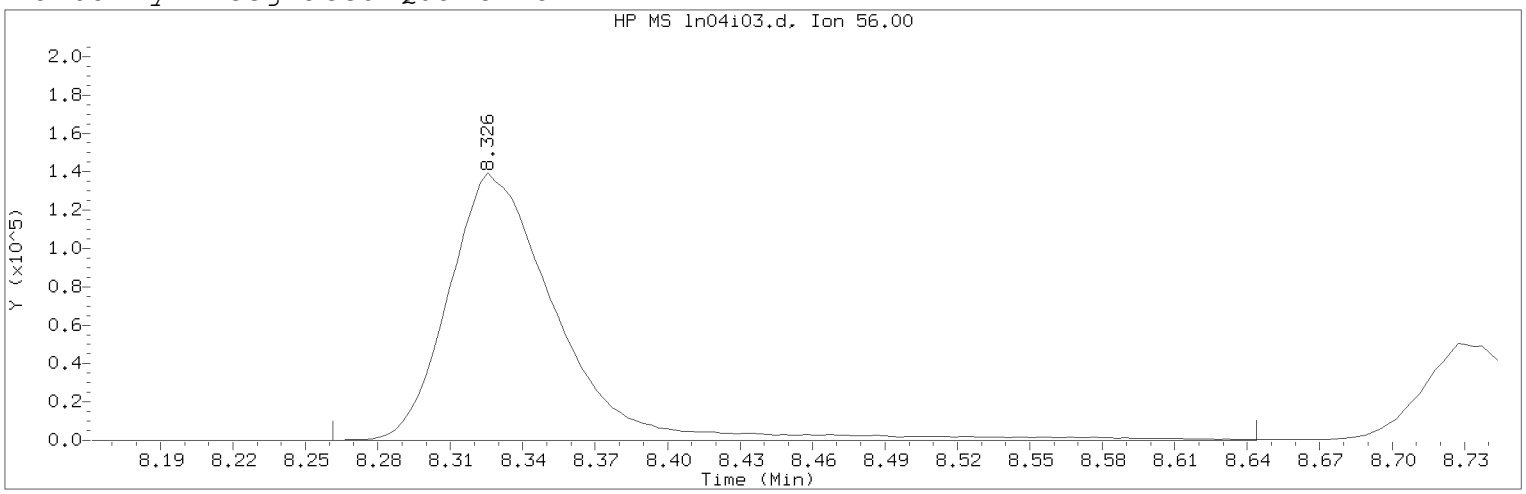
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.740
Quant Ion : 43.00
Area : 311136
On-column Amount (ng) : 51.5793
Integration start scan : 1918 Integration stop scan: 1989
Y at integration start : 288 Y at integration end: 288

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

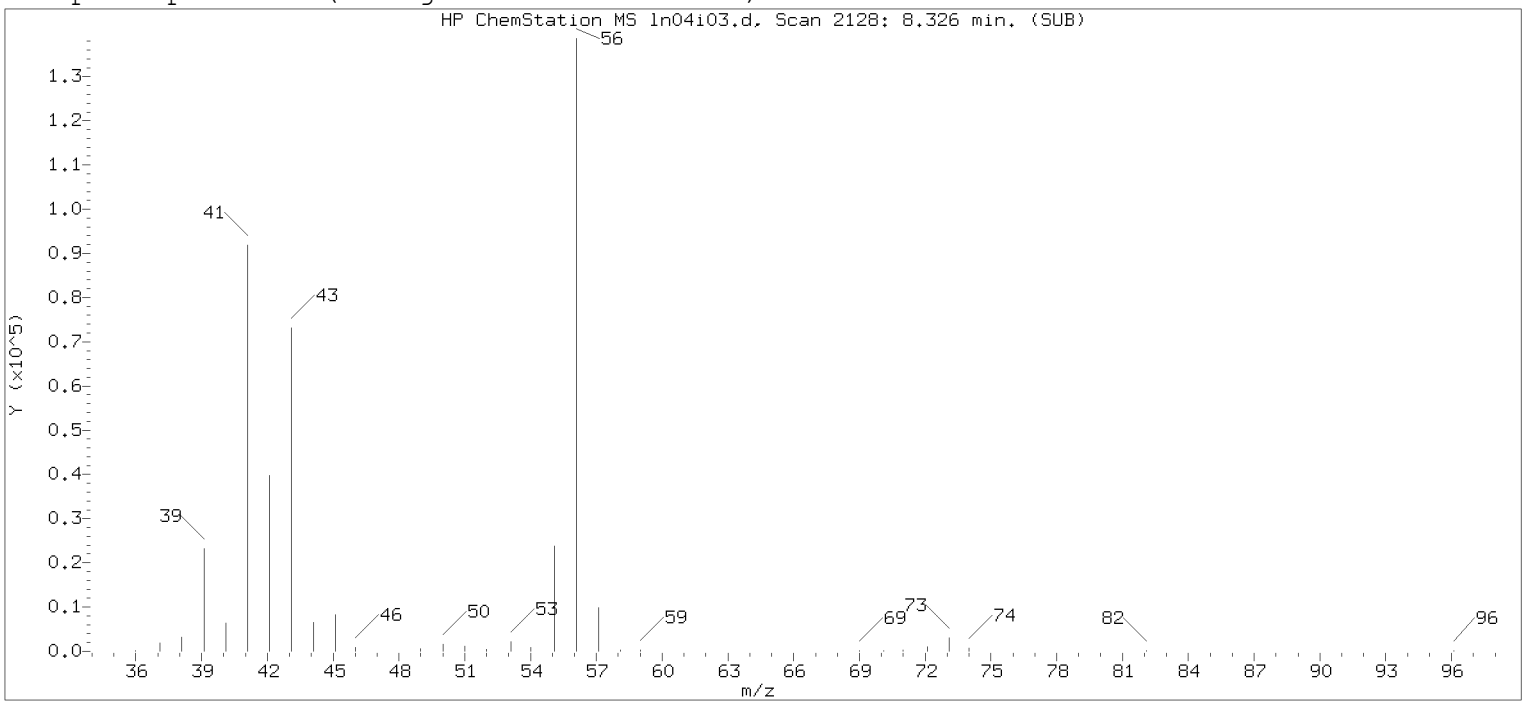
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area (flag) : 438437M
On-Column Amount (ng) : 1332.7496
Integration start scan : 2107 Integration stop scan: 2226
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

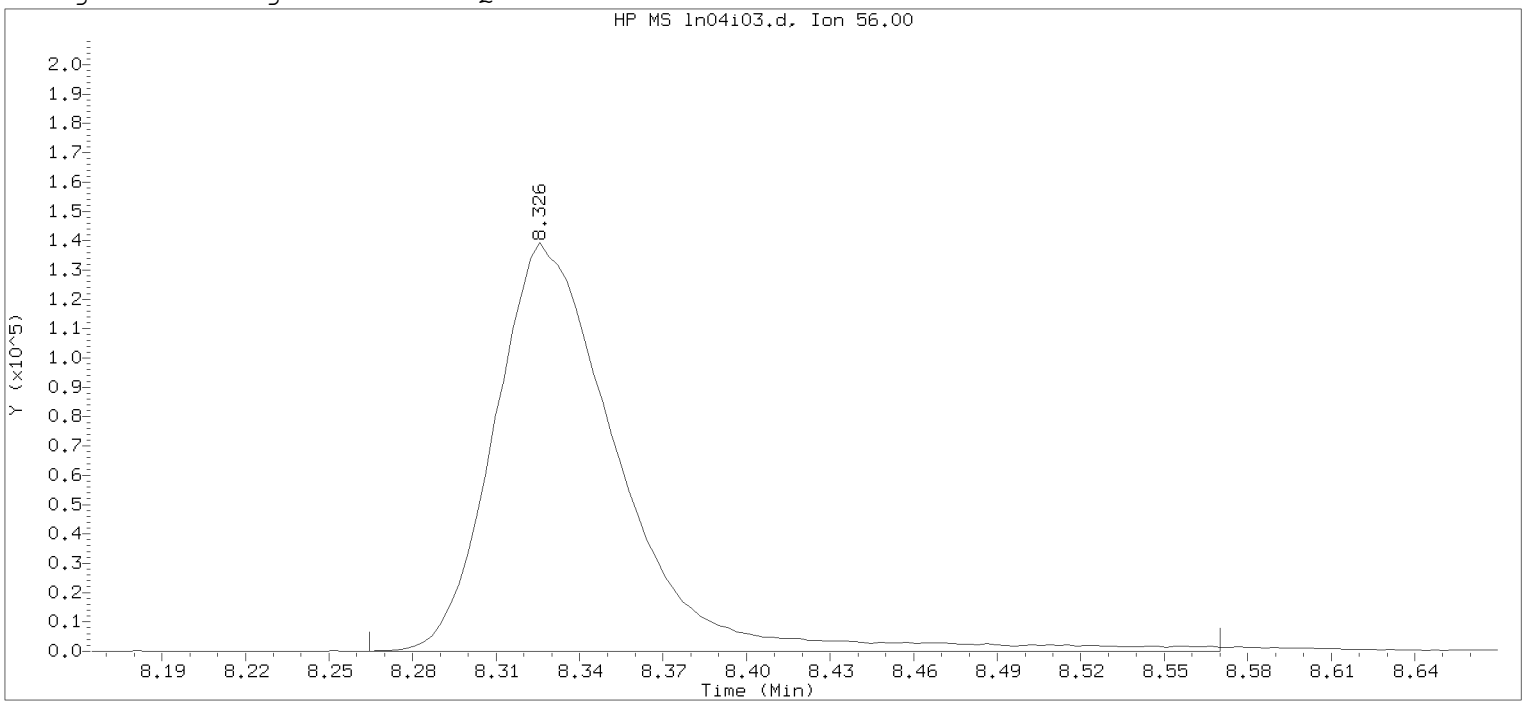
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

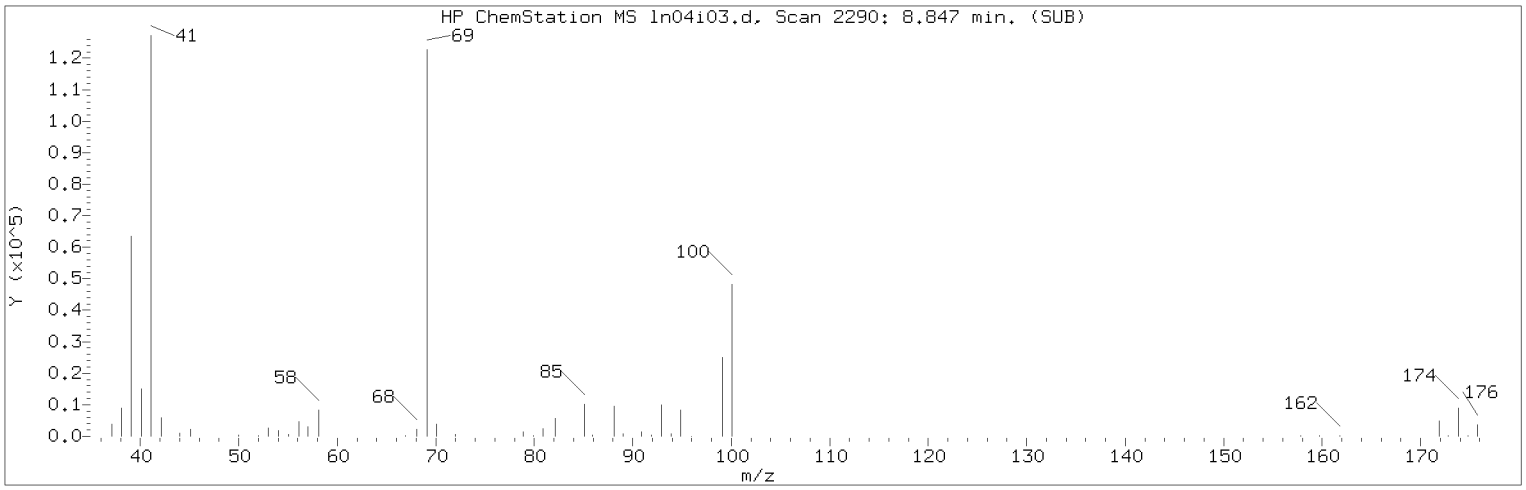
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

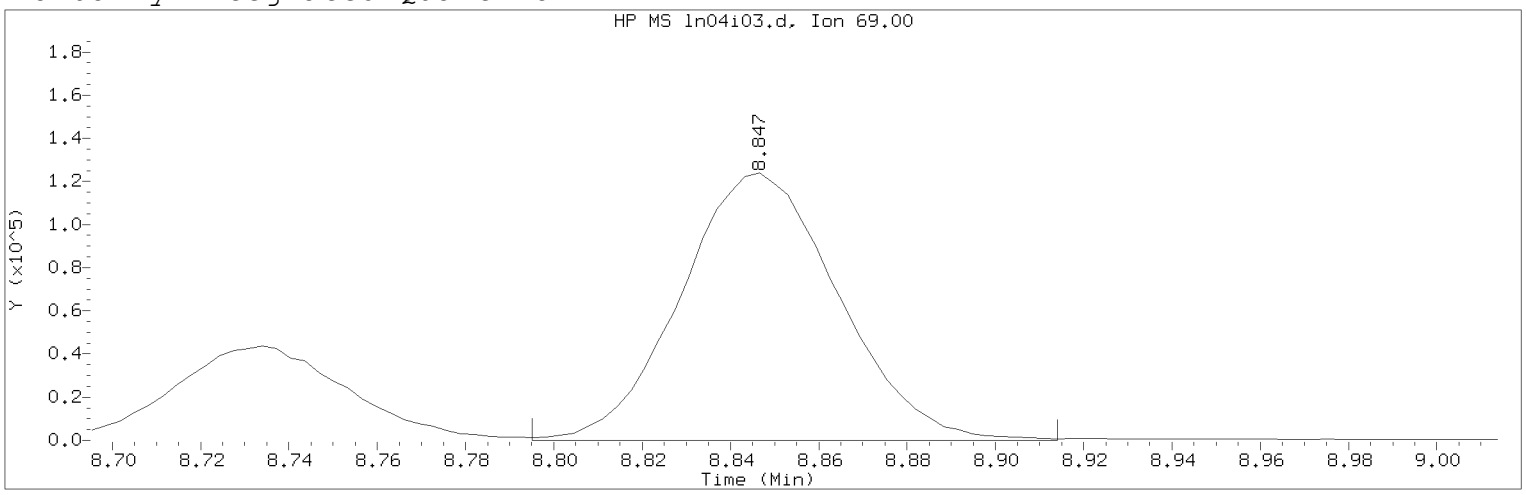
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area : 434385
On-column Amount (ng) : 1223.8707
Integration start scan : 2108 Integration stop scan: 2203
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

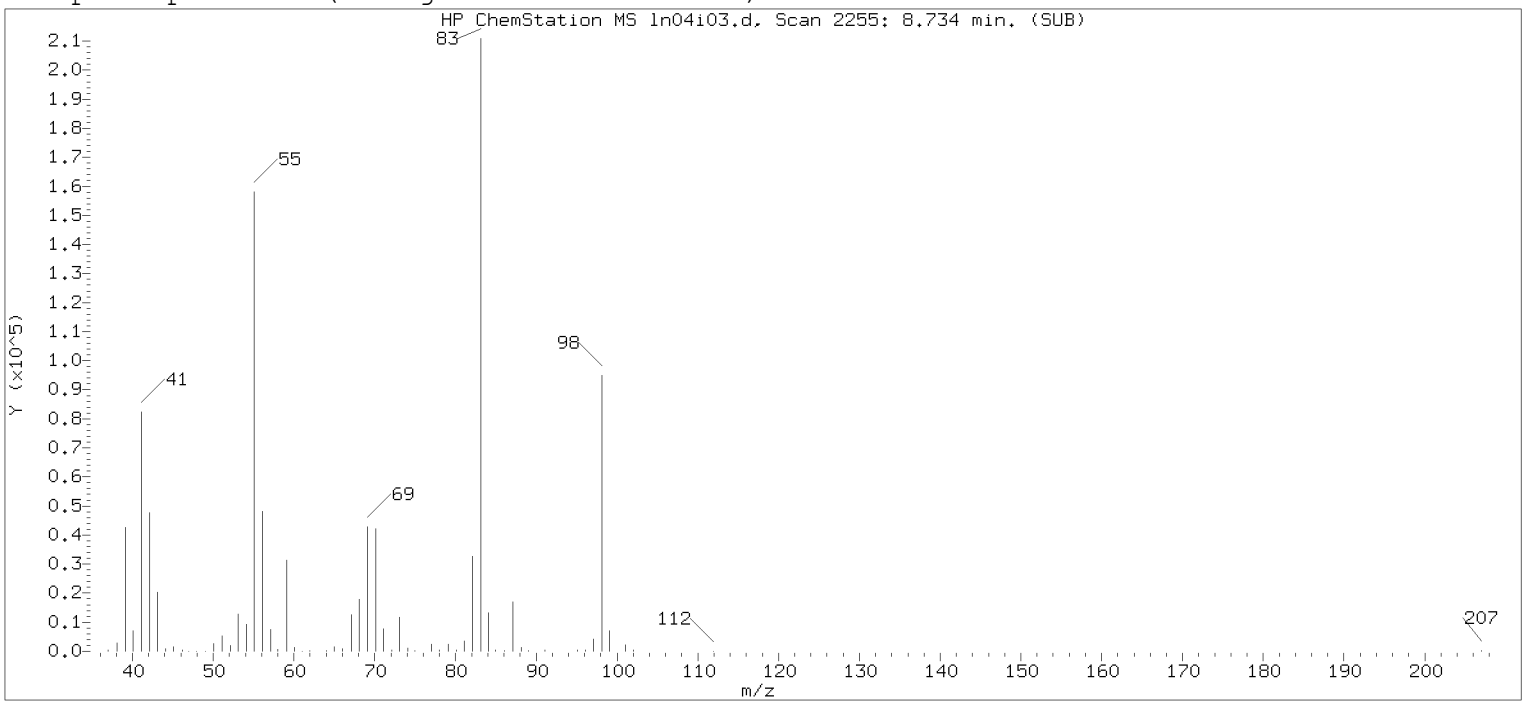
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2290
Retention Time (minutes): 8.847
Quant Ion : 69.00
Area (flag) : 306086A
On-Column Amount (ng) : 52.7952
Integration start scan : 2273 Integration stop scan: 2310
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

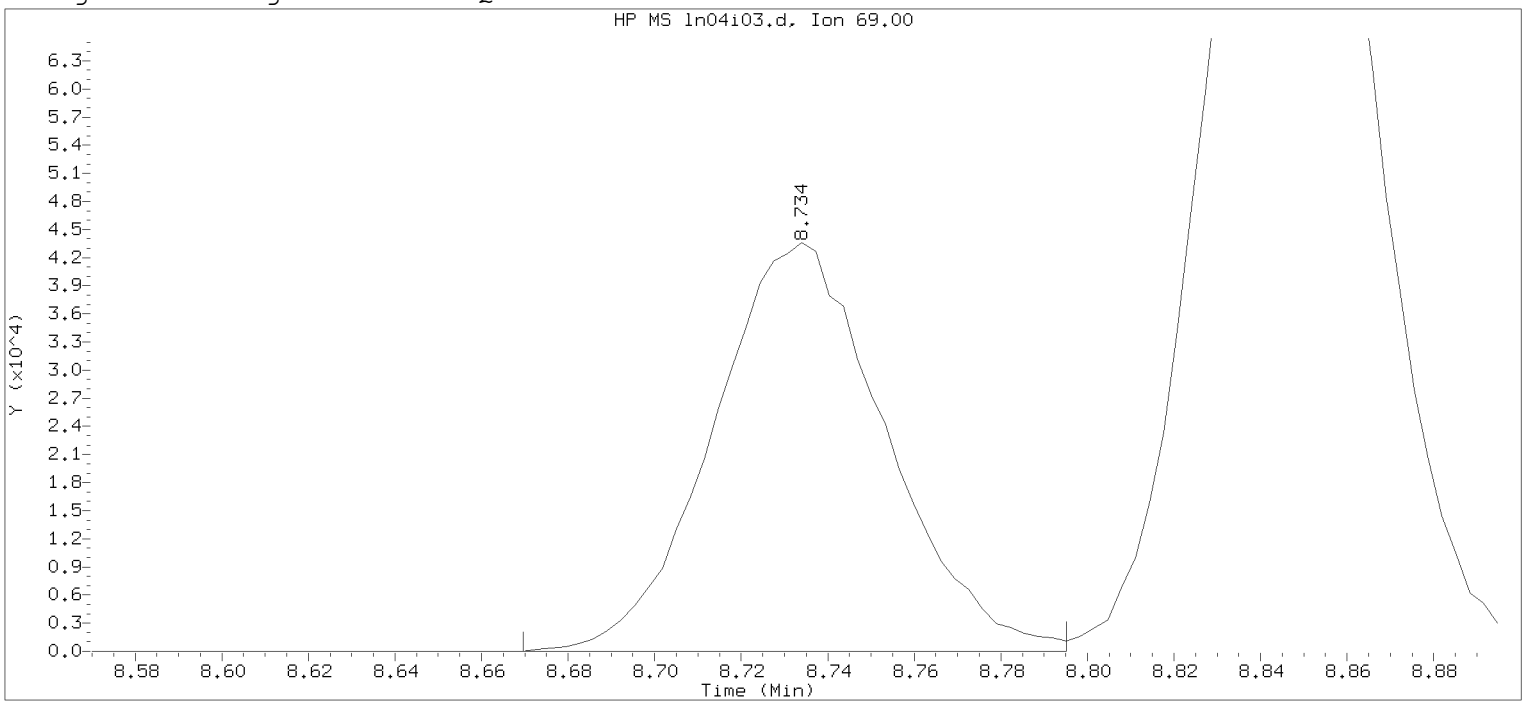
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

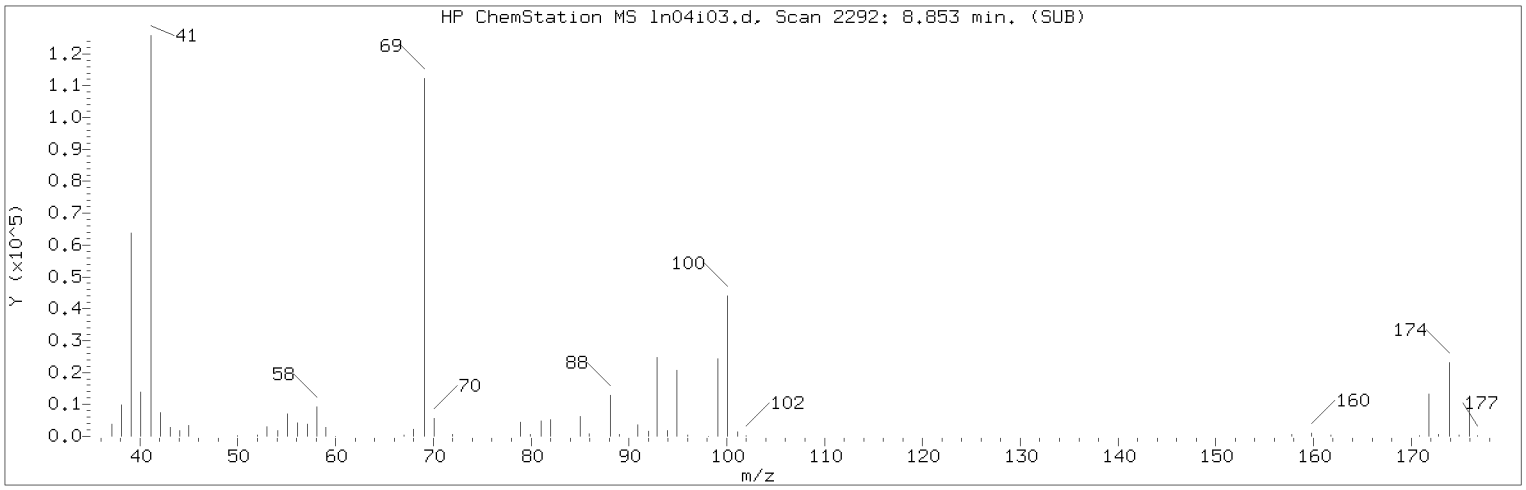
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

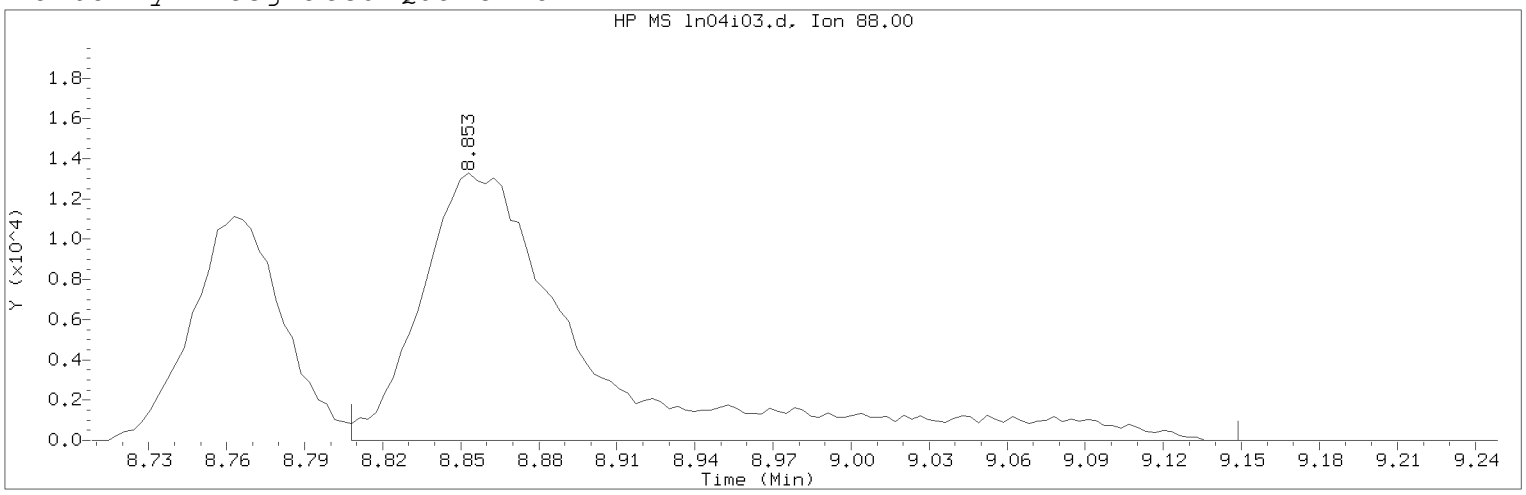
Compound Number	: 76		
Compound Name	: Methyl Methacrylate		
Scan Number	: 2255		
Retention Time (minutes)	: 8.734		
Quant Ion	: 69.00		
Area	: 120511		
On-column Amount (ng)	: 48.6556		
Integration start scan	: 2234	Integration stop scan:	2273
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

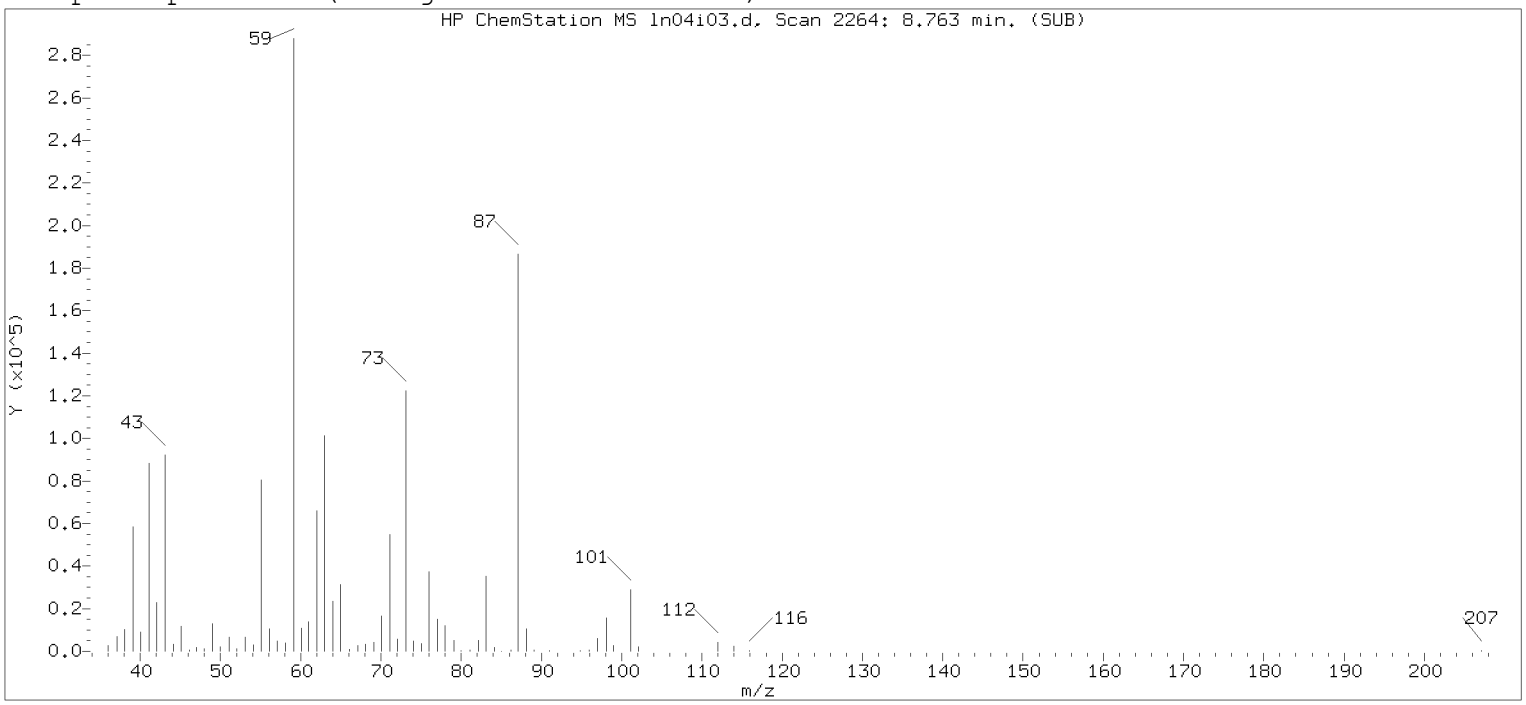
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area (flag) : 59876M
On-Column Amount (ng) : 662.1956
Integration start scan : 2277 Integration stop scan: 2383
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

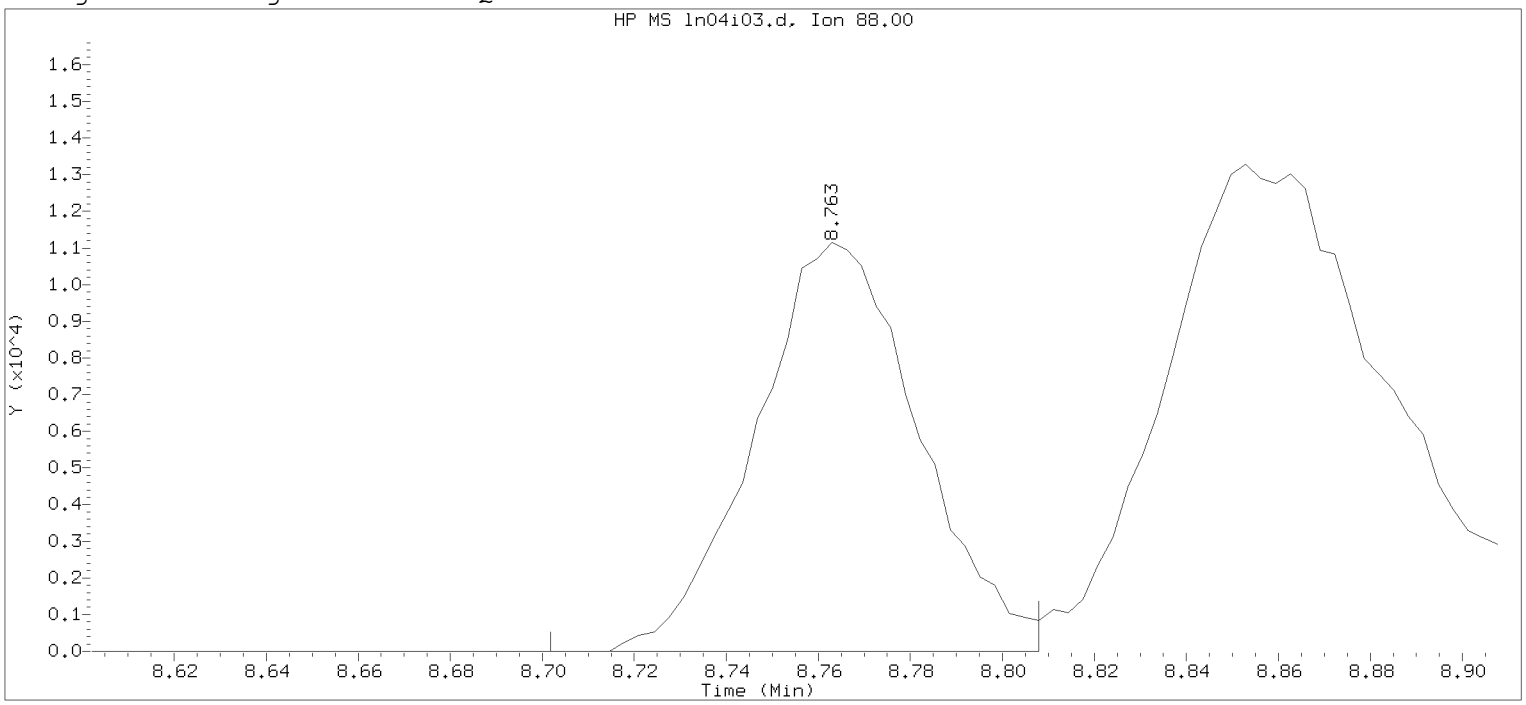
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

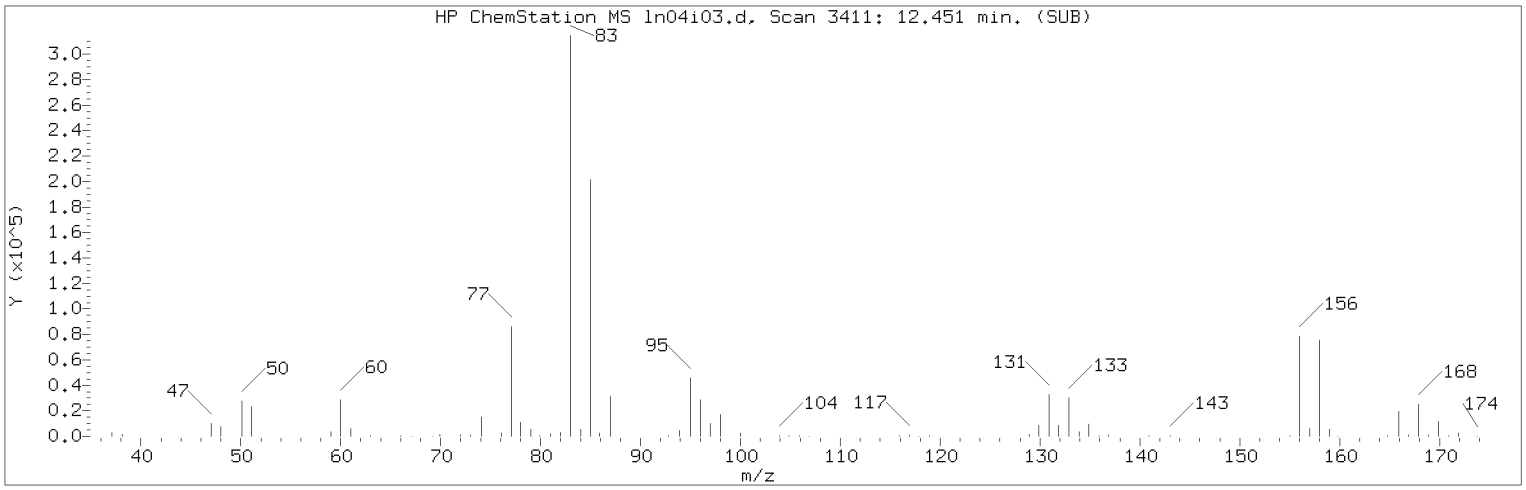
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

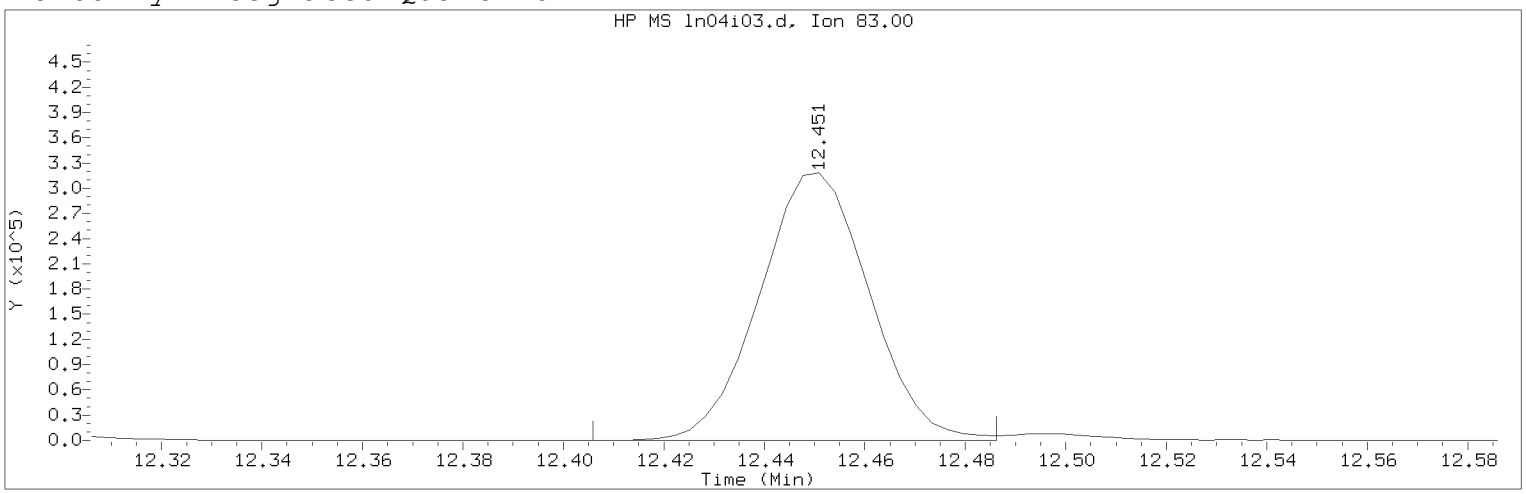
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2264		
Retention Time (minutes)	: 8.763		
Quant Ion	: 88.00		
Area	: 27334		
On-column Amount (ng)	: 447.5530		
Integration start scan	: 2244	Integration stop scan:	2277
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: MCampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

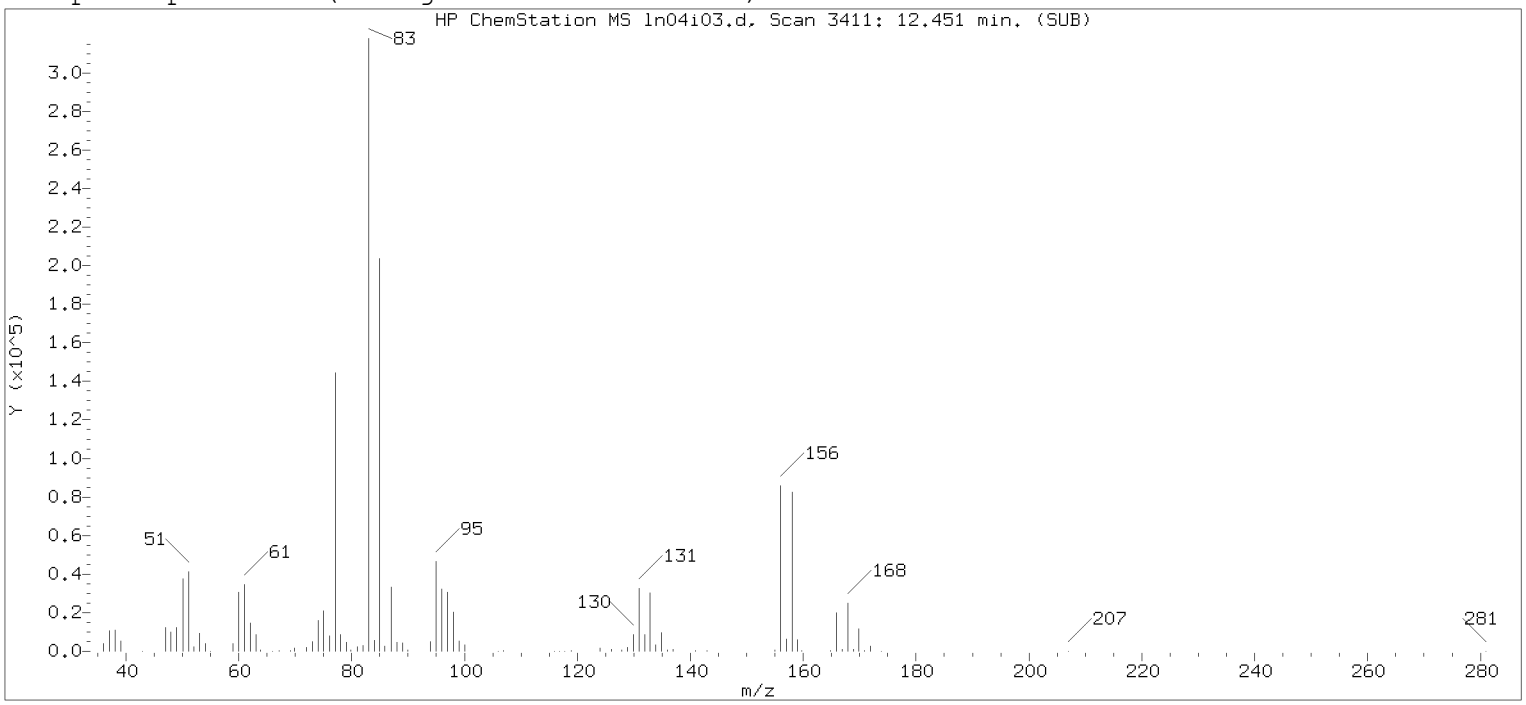
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 482004M
On-Column Amount (ng) : 52.7274
Integration start scan : 3396 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

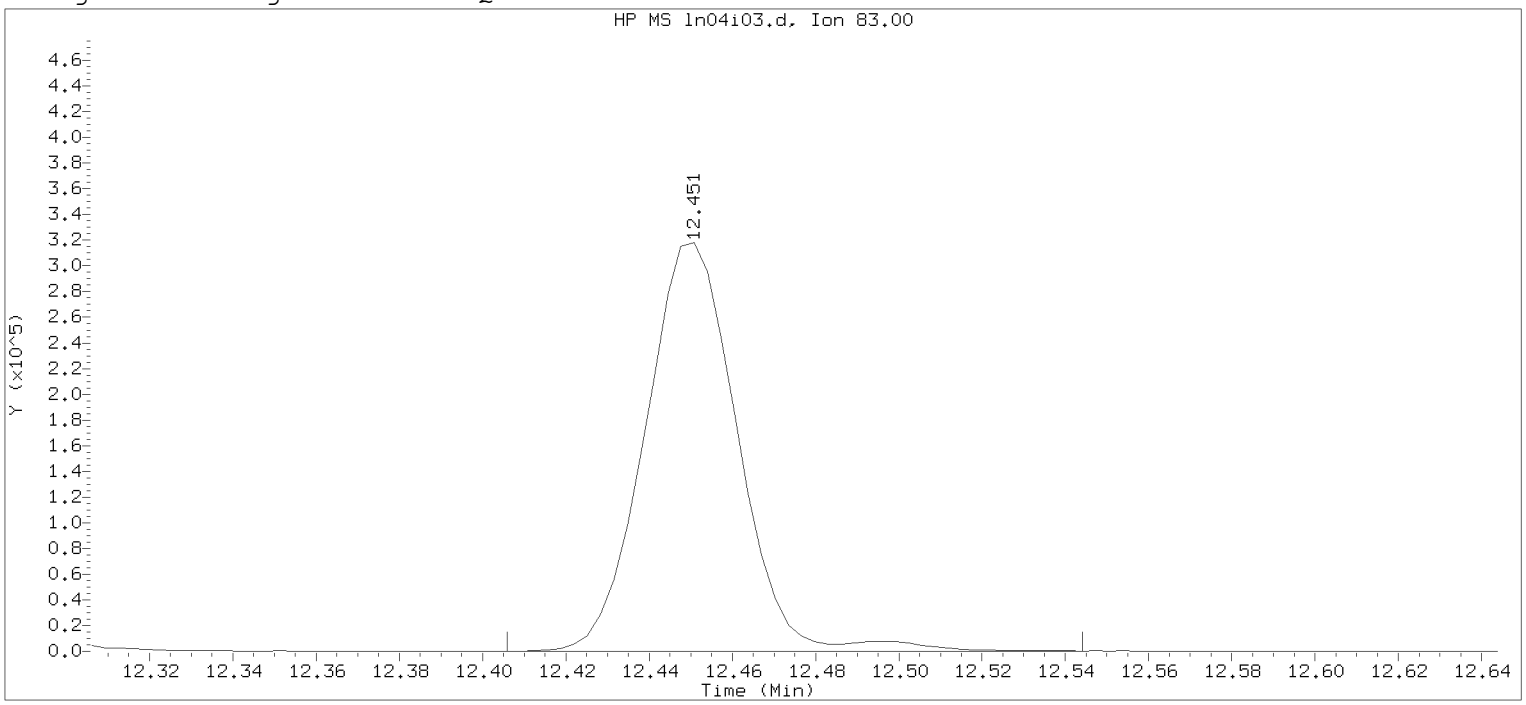
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

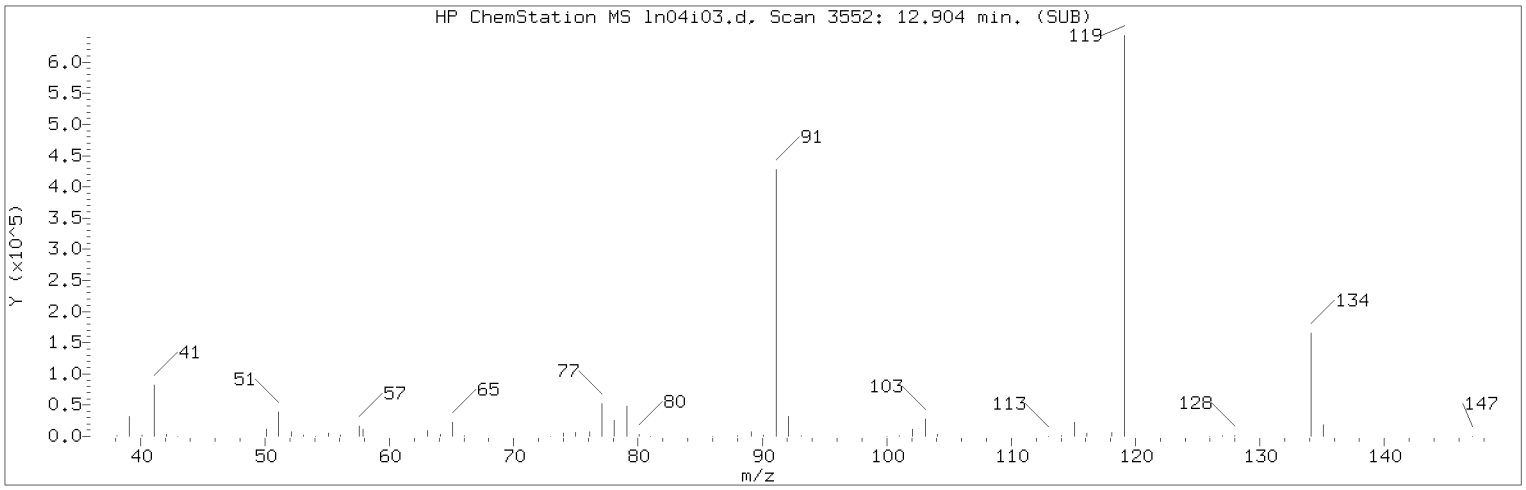
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

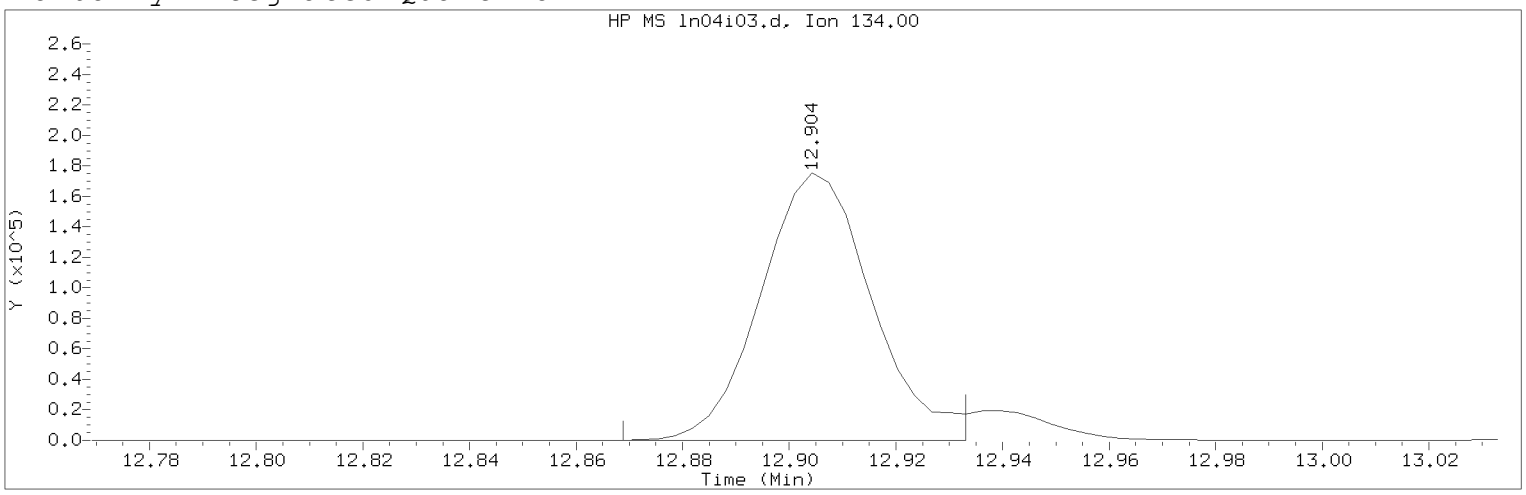
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 491918
On-column Amount (ng) : 50.7154
Integration start scan : 3396 Integration stop scan: 3439
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

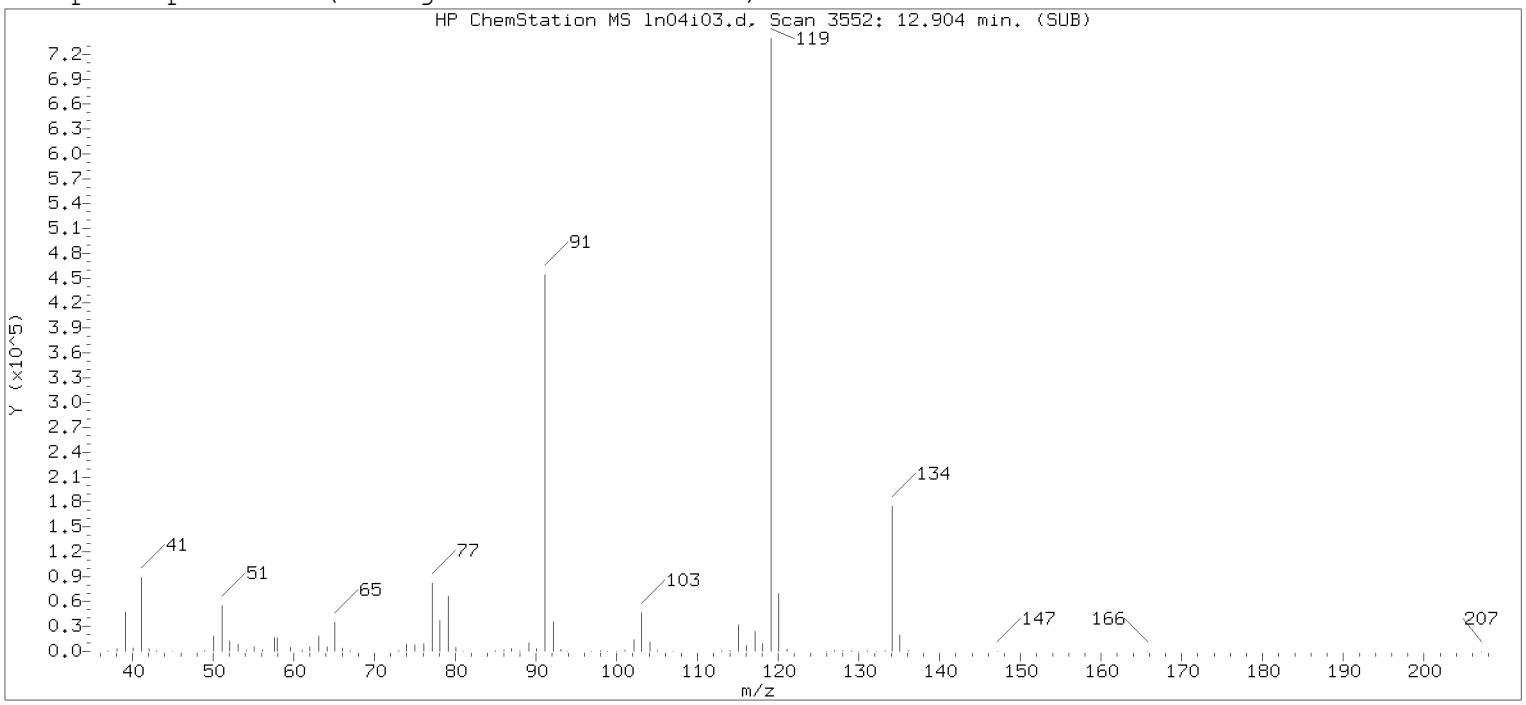
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 253906M
On-Column Amount (ng) : 53.1652
Integration start scan : 3540 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

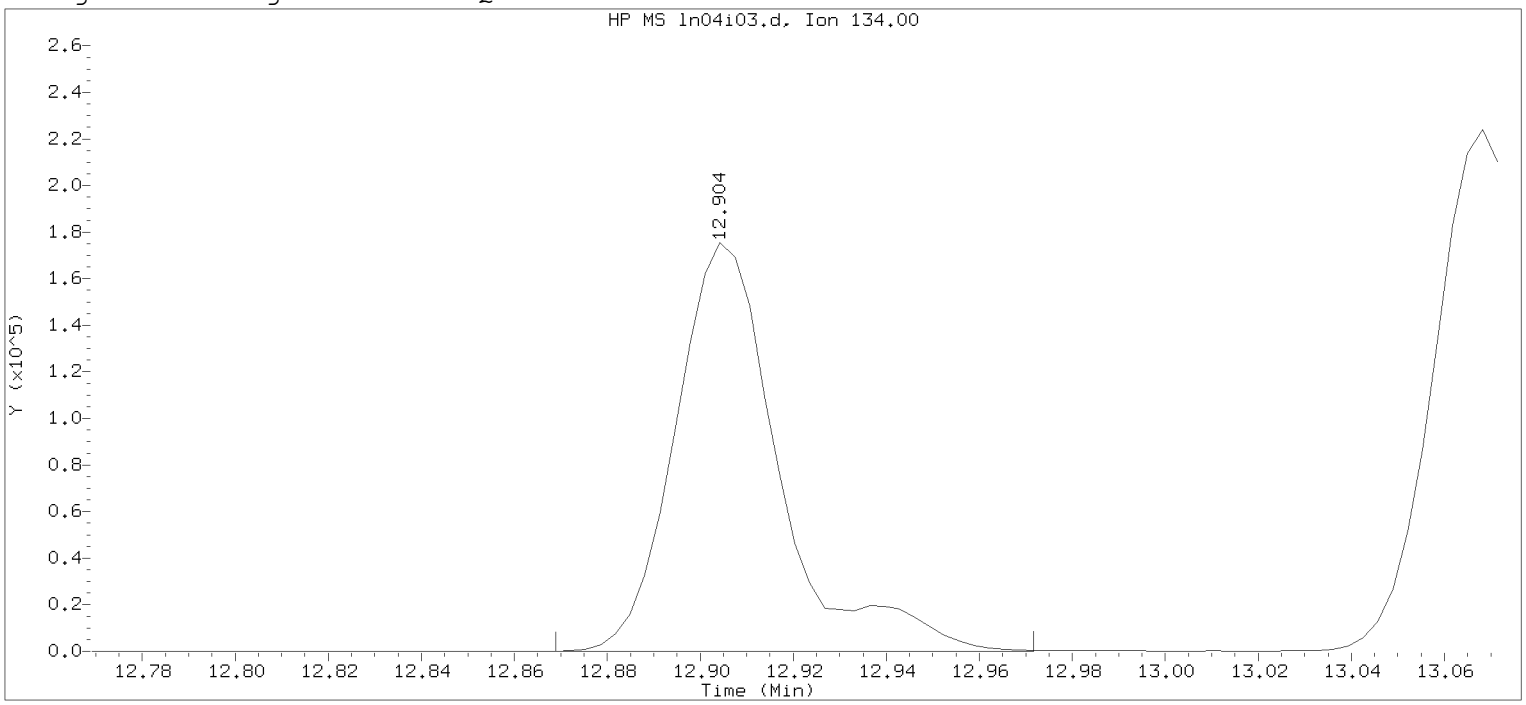
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



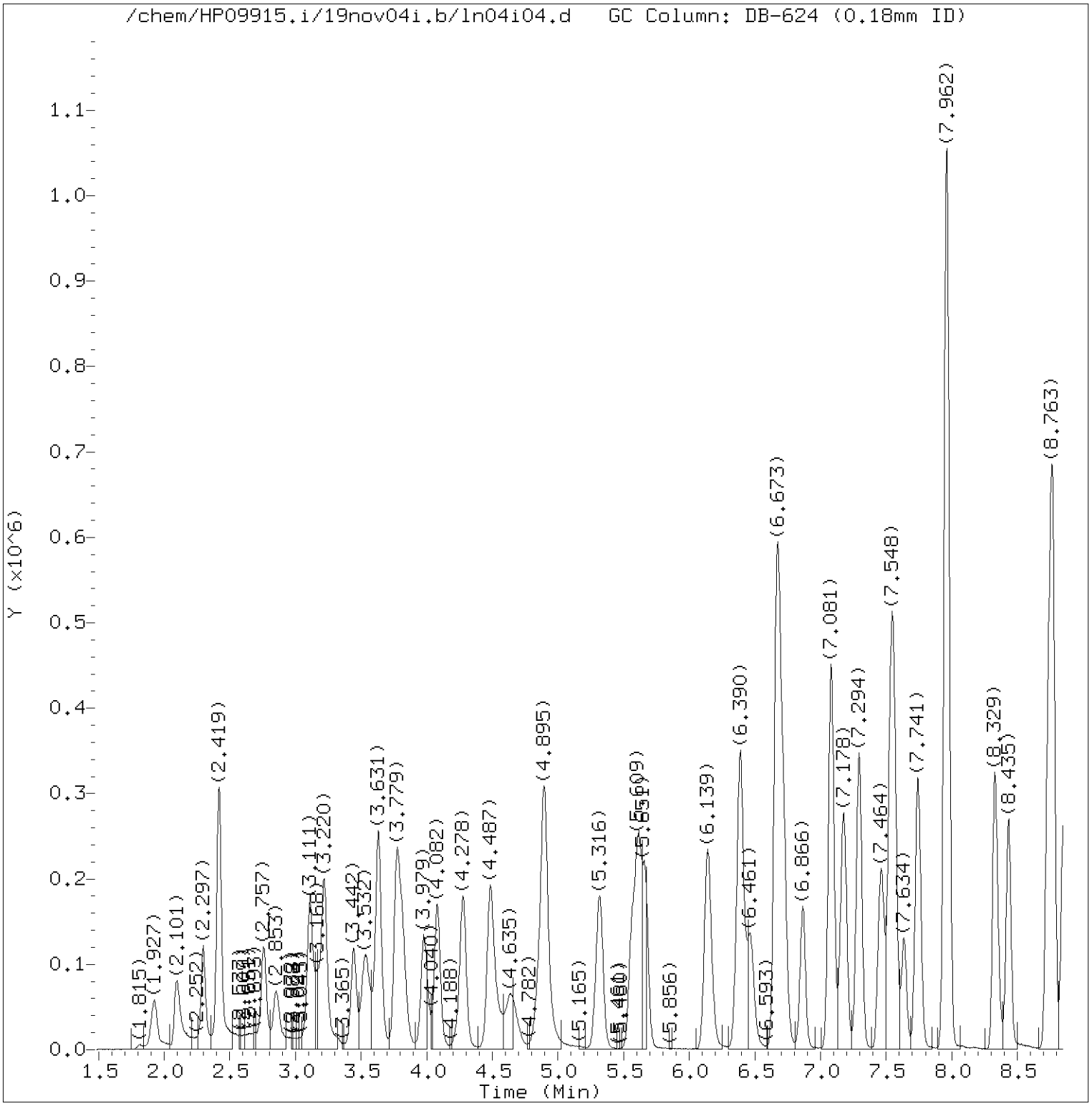
Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 273047
On-column Amount (ng) : 50.7591
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mecm2285



Total Ion Chromatogram (TIC)

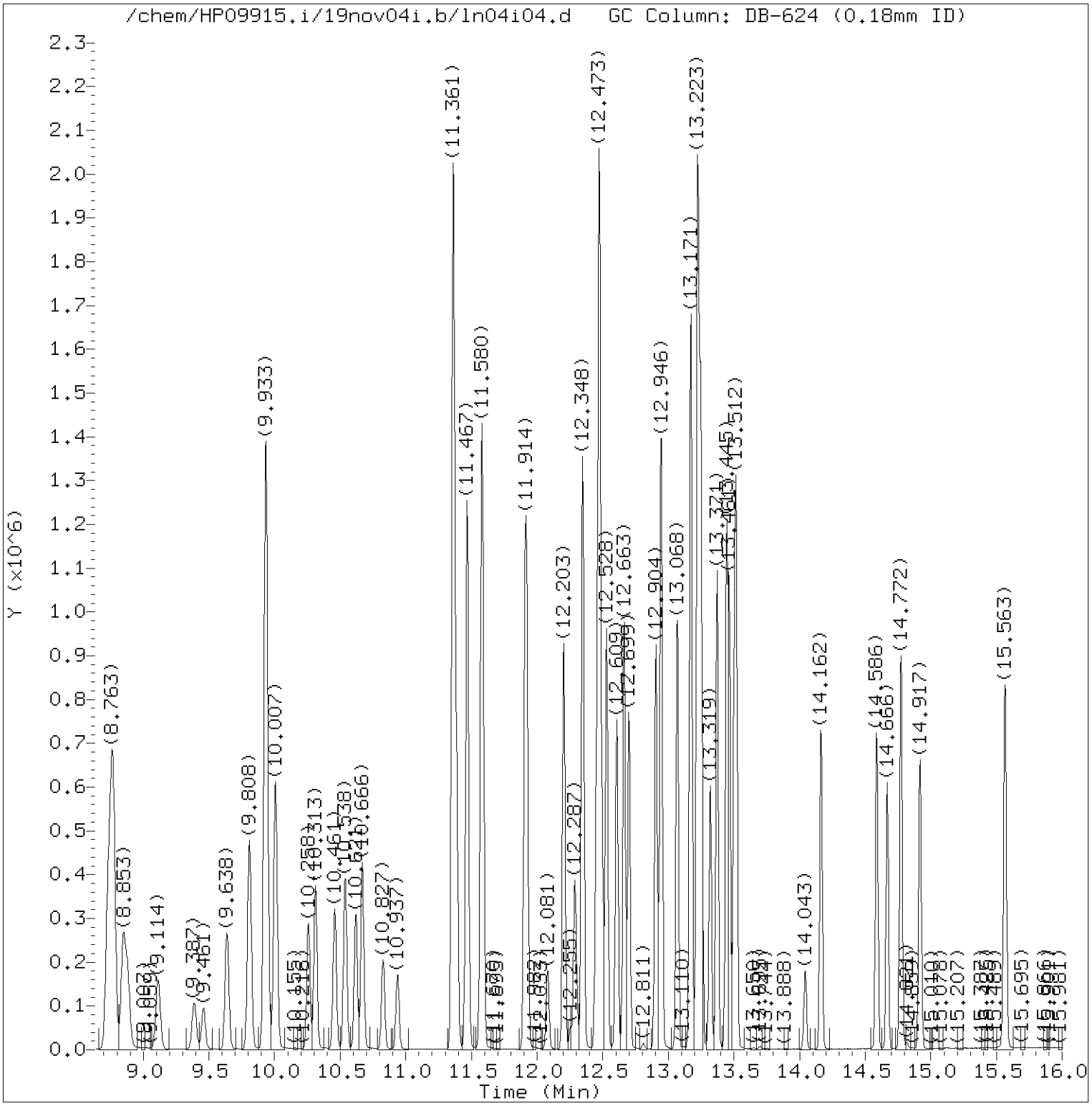
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.095	85	161054M	20.460
4) Chloromethane	(2)	2.297	50	155347	20.477
5) 1,3-Butadiene	(2)	2.416	39	127826M	20.292
6) Vinyl Chloride	(2)	2.419	62	156255	20.637
8) Bromomethane	(2)	2.757	94	109945	20.257
9) Chloroethane	(2)	2.853	64	85938	20.653
10) Dichlorofluoromethane	(2)	3.111	67	205276M	20.838
12) Trichlorofluoromethane	(2)	3.168	101	166167	20.384
11) n-Pentane	(2)	3.220	43	195074	20.250
14) Ethyl ether	(2)	3.442	59	108665	20.629
15) Freon 123a	(2)	3.532	67	137784	21.012
16) Acrolein	(1)	3.631	56	399615	206.403
17) 1,1-Dichloroethene	(2)	3.773	96	101858	21.288
17) 1,1-Dichloroethene	(2)	3.773	63	50444	21.029
19) Freon 113	(2)	3.805	101	115335	21.128
18) Acetone	(1)	3.815	58	36001	41.477
22) Methyl Iodide	(2)	3.979	142	212163	21.398
21) 2-Propanol	(1)	4.004	45	120851	193.676
23) Carbon Disulfide	(2)	4.082	76	388574	21.550
27) Methyl Acetate	(2)	4.255	43	121876	19.777
25) Allyl Chloride	(2)	4.281	41	173950	20.266
28) Methylene Chloride	(2)	4.483	84	119344	20.956
29)*t-Butyl alcohol-d10	(1)	4.512	65	258058M	250.000
30) t-Butyl alcohol	(1)	4.644	59	213903	196.882
31) Acrylonitrile	(2)	4.844	53	69677	21.016
32) trans-1,2-Dichloroethene	(2)	4.898	96	117516	21.231
33) Methyl Tertiary Butyl Ether	(2)	4.898	73	384426	21.159
34) n-Hexane	(2)	5.323	57	185314M	21.519
36) 1,1-Dichloroethane	(2)	5.561	63	203176	21.041
38) di-Isopropyl ether	(2)	5.615	45	399314	21.442
39) 2-Chloro-1,3-butadiene	(2)	5.670	53	184546	21.302
40) Ethyl t-butyl ether	(2)	6.146	59	392243	21.703
43) 1,2-Dichloroethene (Total)	(2)		96	248665	42.340
44) 2-Butanone	(2)	6.371	43	174937	41.104
42) cis-1,2-Dichloroethene	(2)	6.390	96	131149	21.109
45) 2,2-Dichloropropane	(2)	6.397	77	160123	21.332
47) Propionitrile	(1)	6.471	54	279106	206.179
48) Methacrylonitrile	(2)	6.673	67	377980	105.686

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	68547	20.807
50) Tetrahydrofuran	(1)	6.728	71	49905	40.813
51) Chloroform	(2)	6.863	83	198842	21.530
52)$Dibromofluoromethane	(2)	7.078	113	277983	50.374
52)$Dibromofluoromethane	(2)	7.081	111	283696	50.420
53) 1,1,1-Trichloroethane	(2)	7.081	97	168285	21.349
54) Cyclohexane	(2)	7.178	56	226762	21.513
54) Cyclohexane	(2)	7.178	84	195470	21.348
54) Cyclohexane	(2)	7.171	69	69608	21.350
56) Carbon Tetrachloride	(2)	7.290	117	141234	21.126
55) 1,1-Dichloropropene	(2)	7.297	75	161608	21.167
58) Isobutyl Alcohol	(1)	7.464	41	176564	482.927
57)$1,2-Dichloroethane-d4	(2)	7.535	102	71029	50.503
57)$1,2-Dichloroethane-d4	(2)	7.532	65	318244	50.776
57)$1,2-Dichloroethane-d4	(2)	7.535	104	46070	51.284
60) Benzene	(2)	7.561	78	489494	21.320
61) 1,2-Dichloroethane	(2)	7.634	62	150643	20.399
61) 1,2-Dichloroethane	(2)	7.634	98	15487	21.192
65) t-Amyl methyl ether	(2)	7.744	73	391674	21.591
67) n-Heptane	(2)	7.962	43	173500MA	21.566
66)*Fluorobenzene	(2)	7.962	96	1128743	50.000
69) n-Butanol	(1)	8.329	56	312189M	992.087
71) Trichloroethene	(2)	8.435	95	122357	21.166
72) Methylcyclohexane	(2)	8.737	83	221554	20.658
72) Methylcyclohexane	(2)	8.737	98	99234	20.447
73) 1,2-Dichloropropane	(2)	8.769	63	123290	21.148
76) Methyl Methacrylate	(2)	8.850	69	117550A	20.851
75) 1,4-Dioxane	(1)	8.856	88	44376M	513.065
74) Dibromomethane	(2)	8.879	93	79643	21.113
78) Bromodichloromethane	(2)	9.114	83	142226	21.011
79) 2-Nitropropane	(2)	9.390	41	82517M	40.247
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	51005	20.370
81) cis-1,3-Dichloropropene	(2)	9.634	75	192808	21.446
82) 4-Methyl-2-pentanone	(2)	9.808	43	377728	42.047
83)$Toluene-d8	(3)	9.933	98	1159273	50.160
83)$Toluene-d8	(3)	9.933	100	751601	50.203
88) Toluene	(3)	10.007	92	308466	21.289
90) 1,3-Dichloropropene (total)	(3)		100	367273	42.658

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	174465	21.211
91) Ethyl Methacrylate	(3)	10.313	69	210882	21.096
92) 1,1,2-Trichloroethane	(3)	10.461	97	114106	20.771
93) Tetrachloroethene	(3)	10.538	166	130358	21.243
94) 1,3-Dichloropropane	(3)	10.618	76	196136	20.911
96) 2-Hexanone	(3)	10.666	43	276801	41.485
97) Dibromochloromethane	(3)	10.827	129	117920	20.955
99) 1,2-Dibromoethane	(3)	10.940	107	124981	20.951
100)*Chlorobenzene-d5	(3)	11.361	117	883281	50.000
101) 1-Chlorohexane	(3)	11.364	91	162552	20.883
102) Chlorobenzene	(3)	11.387	112	347116	21.185
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	116096	21.505
104) Ethylbenzene	(3)	11.467	91	593614	21.434
106) m+p-Xylene	(3)	11.580	106	474524	43.555
108) Xylene (Total)	(3)		106	707354	65.191
107) o-Xylene	(3)	11.908	106	232830	21.636
109) Styrene	(3)	11.924	104	387652	21.799
110) Bromoform	(3)	12.081	173	81670	19.422
111) Isopropylbenzene	(3)	12.203	105	589458	21.839
112) Cyclohexanone	(1)	12.287	55	167626	494.847
114)$4-Bromofluorobenzene	(3)	12.348	95	438766	50.137
114)$4-Bromofluorobenzene	(3)	12.348	174	363757	50.138
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	186119M	20.690
115) Bromobenzene	(4)	12.464	156	150208	20.987
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	295707	106.569
117) 1,2,3-Trichloropropane	(4)	12.499	110	56899	20.612
119) n-Propylbenzene	(4)	12.528	91	680502	21.762
120) 2-Chlorotoluene	(4)	12.609	126	141675	21.327
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	498486	21.936
121) 4-Chlorotoluene	(4)	12.699	126	147463	21.326
124) tert-Butylbenzene	(4)	12.904	134	101571M	21.612
125) Pentachloroethane	(4)	12.940	167	85065	21.020
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	522495	21.816
127) sec-Butylbenzene	(4)	13.068	105	620603	22.130
129) 1,3-Dichlorobenzene	(4)	13.168	146	280954	21.362
130) p-Isopropyltoluene	(4)	13.171	119	539497	22.237
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	476218	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	288857	21.186

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	529814	20.883
135) Benzyl Chloride	(4)	13.319	91	386244	20.108
136) 1,3-Diethylbenzene	(4)	13.371	119	333696	21.134
141) Diethylbenzene (total)	(4)		100	968804	63.411
137) 1,4-Diethylbenzene	(4)	13.445	119	354305	21.180
139) n-Butylbenzene	(4)	13.464	92	270790	21.829
138) 1,2-Dichlorobenzene	(4)	13.502	146	274435	21.146
140) 1,2-Diethylbenzene	(4)	13.518	119	280803	21.097
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	40583	20.608
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	215108	21.573
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	206700	21.320
147) Hexachlorobutadiene	(4)	14.666	225	101324	22.135
148) Naphthalene	(4)	14.772	128	665482	21.351
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	203518	21.573
150) 2-Methylnaphthalene	(4)	15.563	142	423056	22.042

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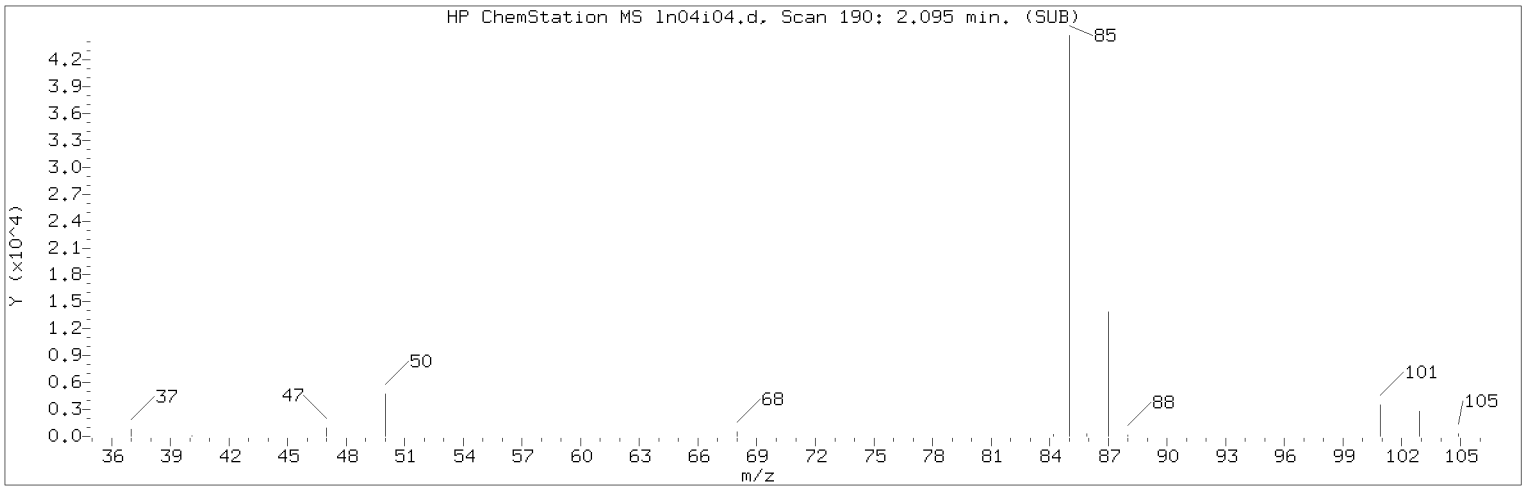
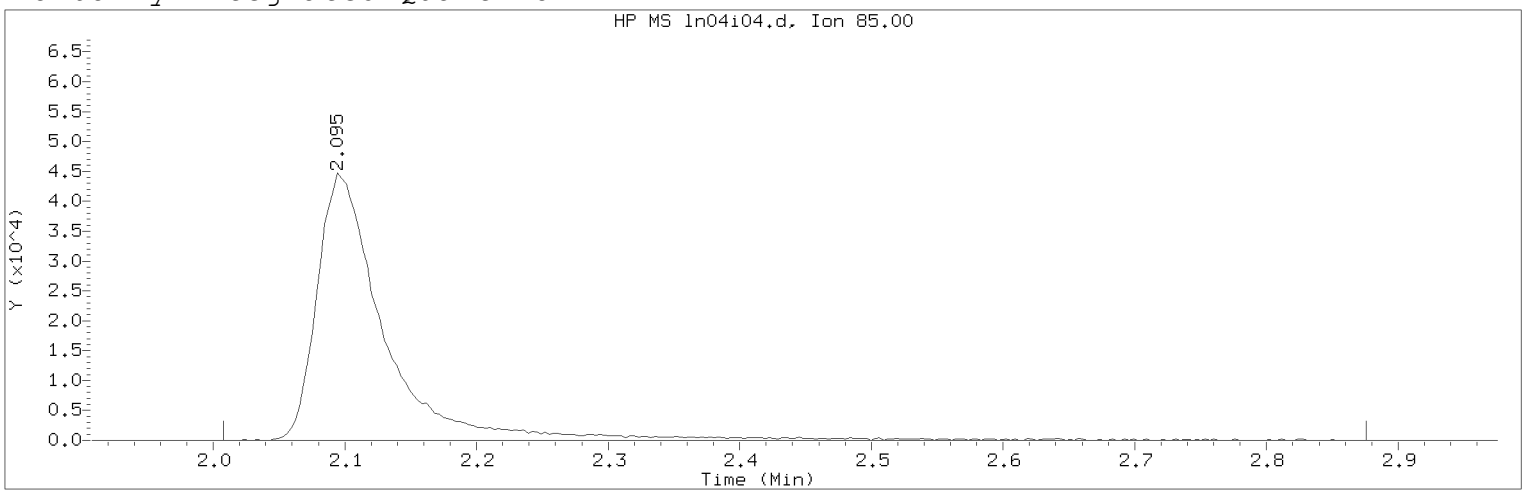
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

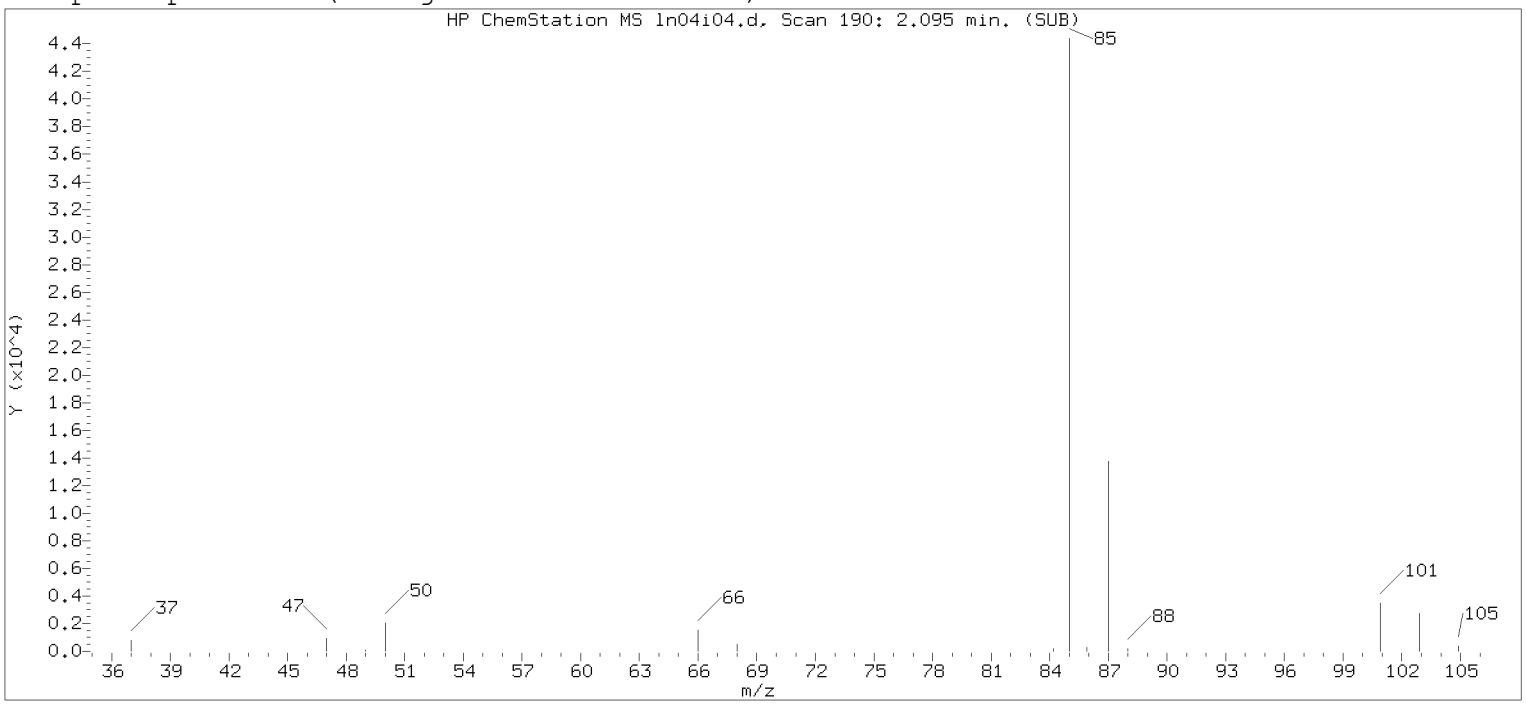
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.095
Quant Ion : 85.00
Area (flag) : 161054M
On-Column Amount (ng) : 20.4603
Integration start scan : 162 Integration stop scan: 432
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

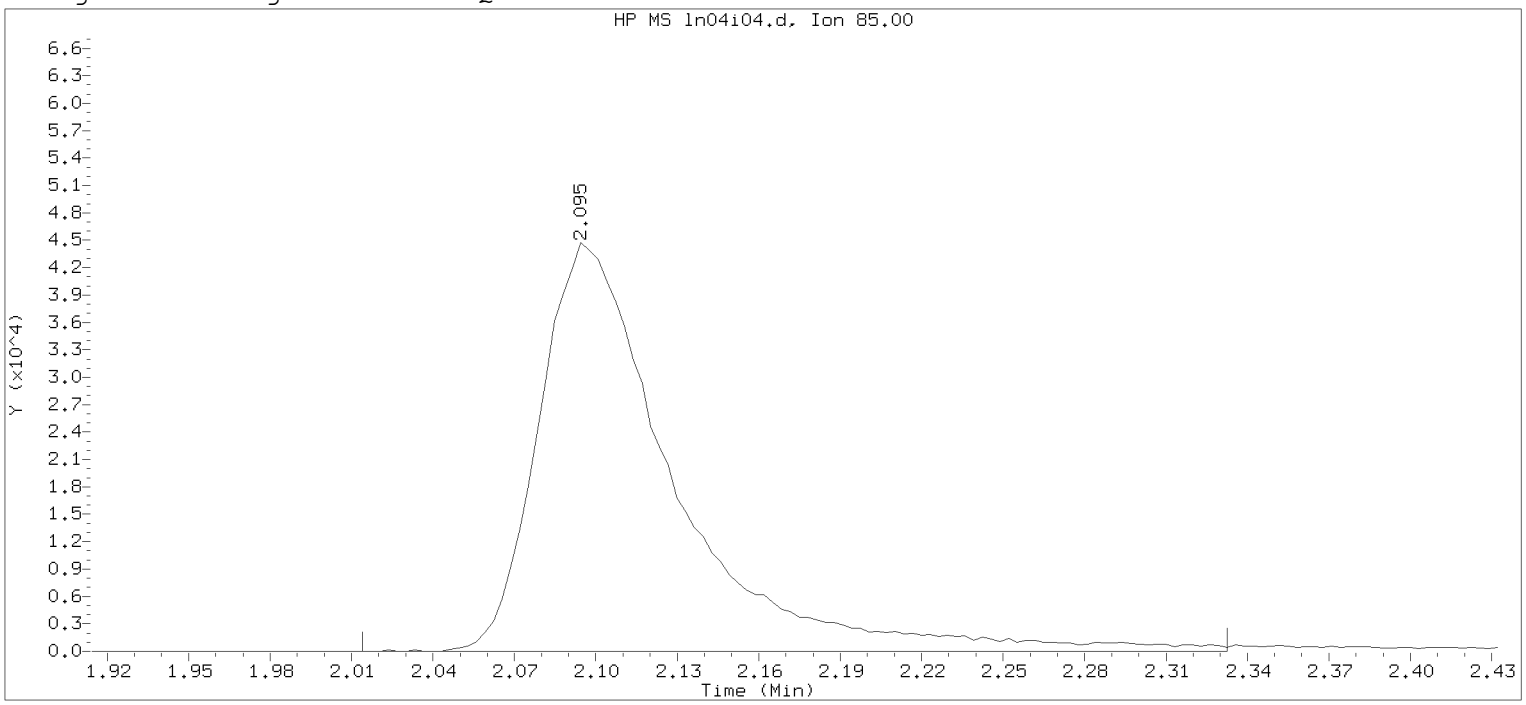
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

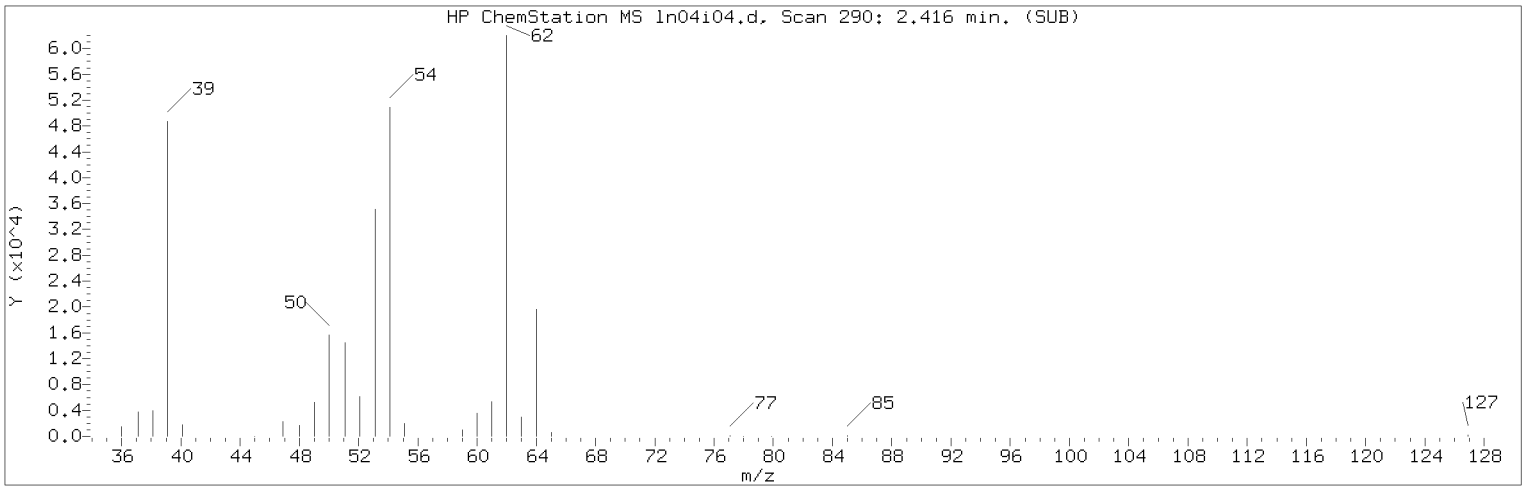
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

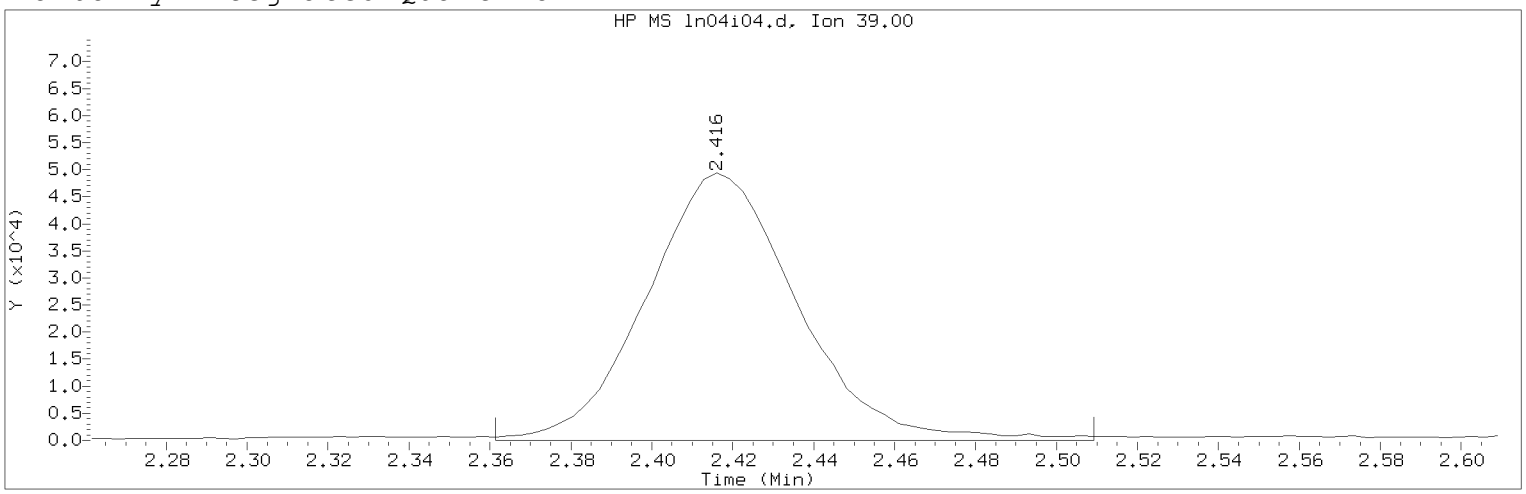
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.095
Quant Ion : 85.00
Area : 154796
On-column Amount (ng) : 18.9193
Integration start scan : 164 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user: CW mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

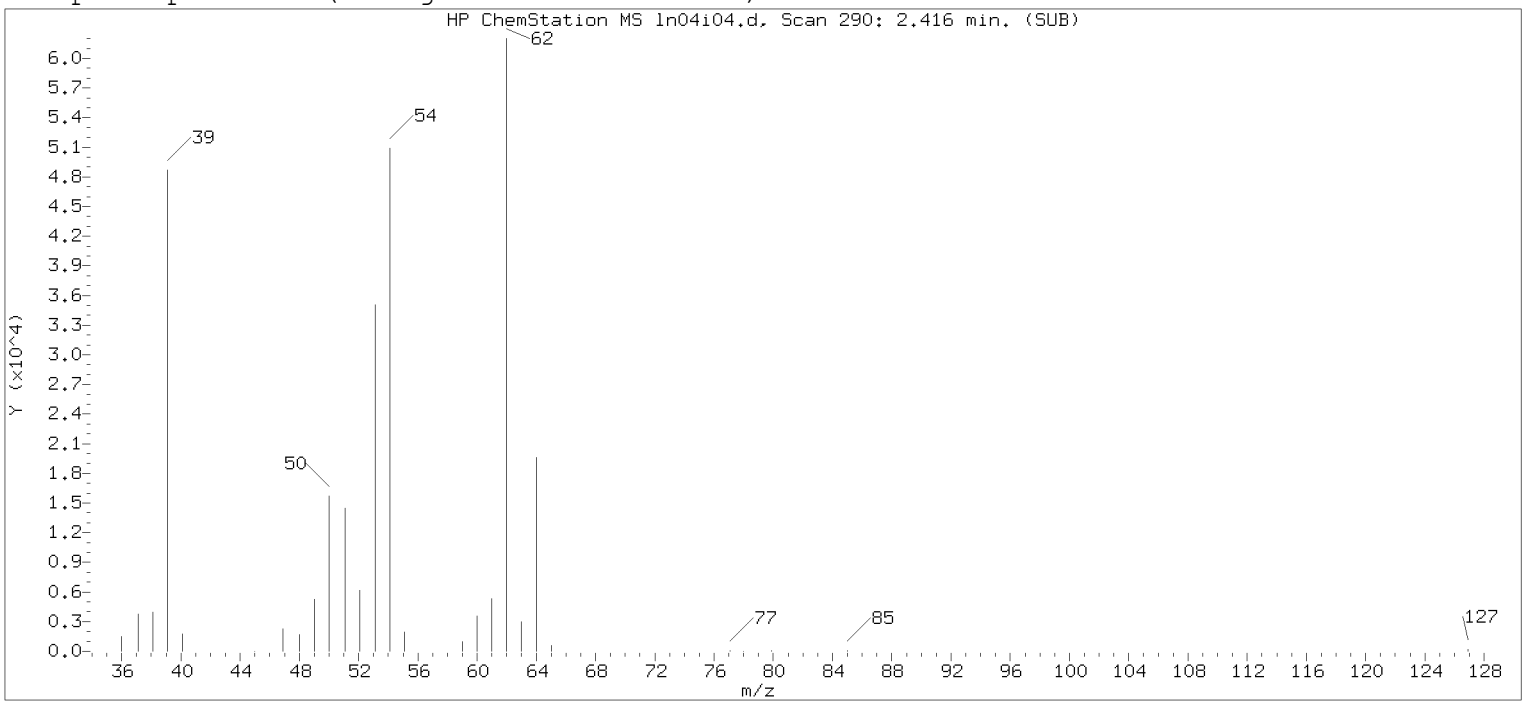
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 290
Retention Time (minutes): 2.416
Quant Ion : 39.00
Area (flag) : 127826M
On-Column Amount (ng) : 20.2925
Integration start scan : 272 Integration stop scan: 318
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

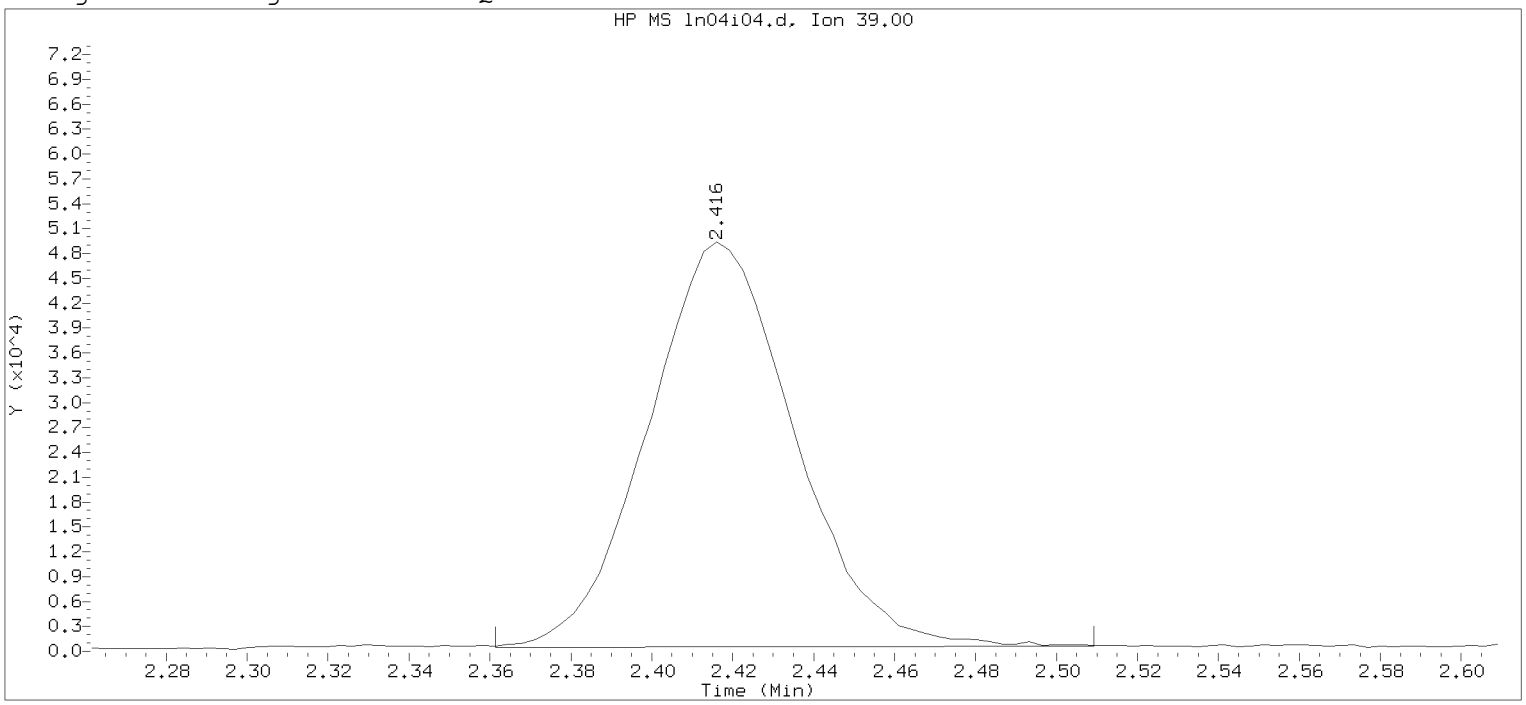
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

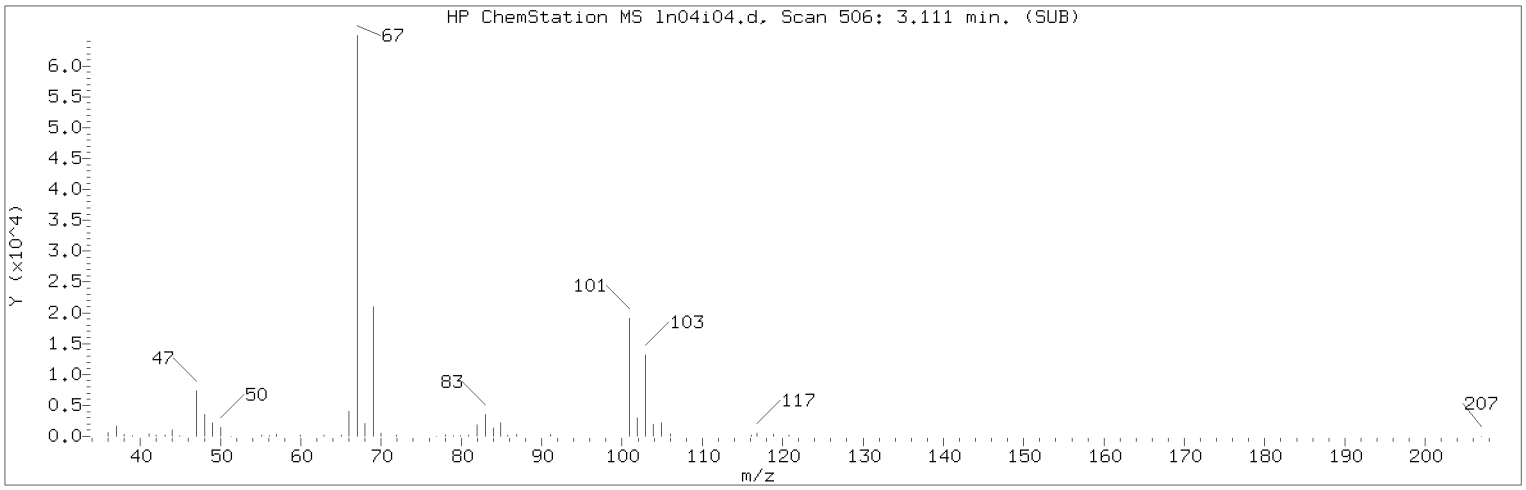
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

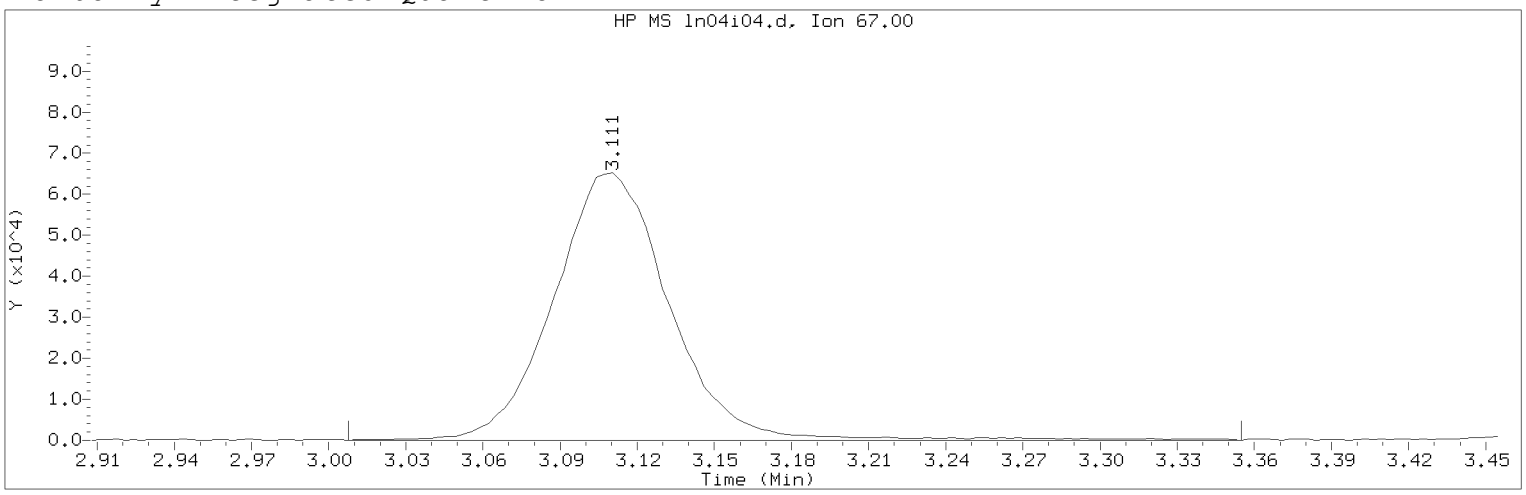
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 290
Retention Time (minutes): 2.416
Quant Ion : 39.00
Area : 122801
On-column Amount (ng) : 20.5539
Integration start scan : 272 Integration stop scan: 318
Y at integration start : 477 Y at integration end: 628

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

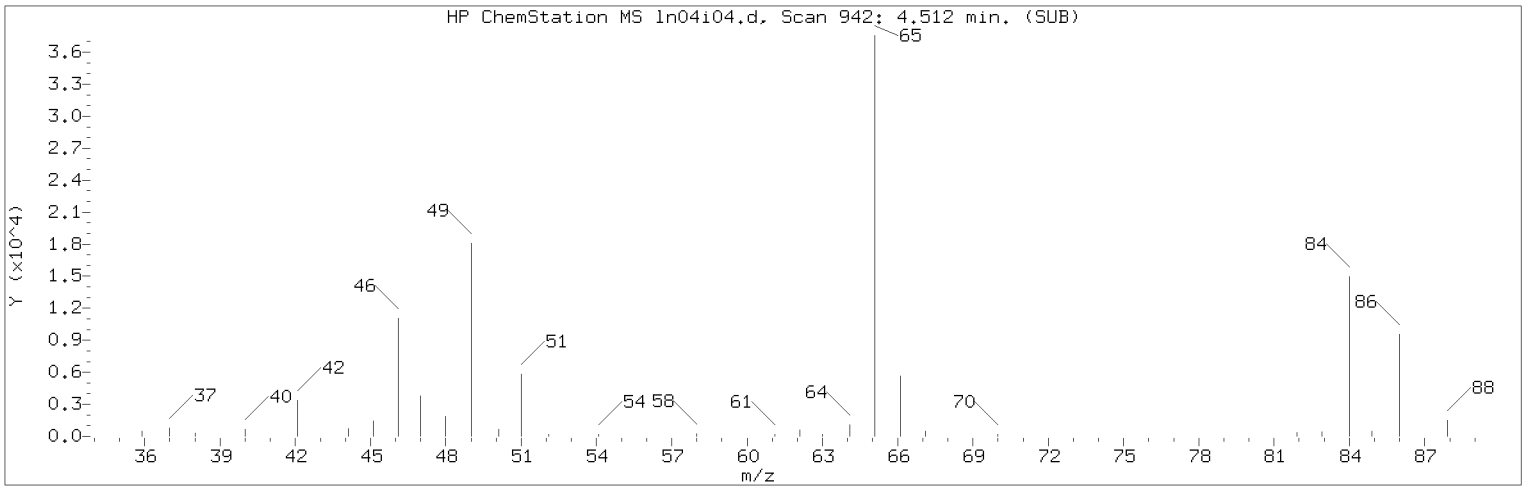
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 506
Retention Time (minutes): 3.111
Quant Ion : 67.00
Area (flag) : 205276M
On-Column Amount (ng) : 20.8381
Integration start scan : 473 Integration stop scan: 581
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

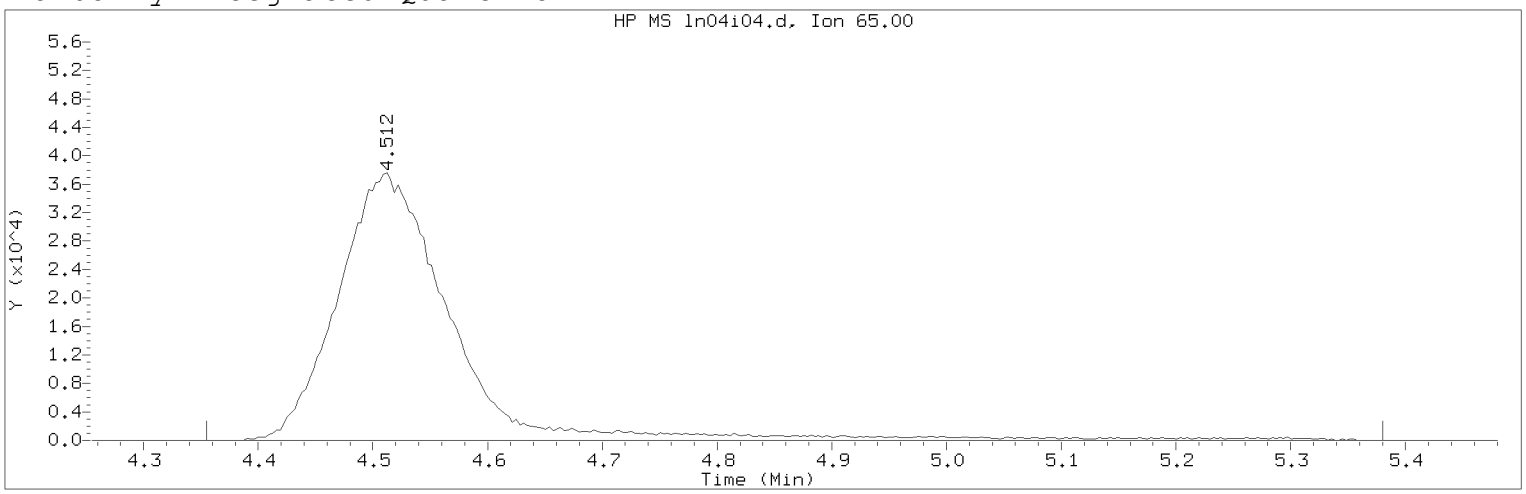
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

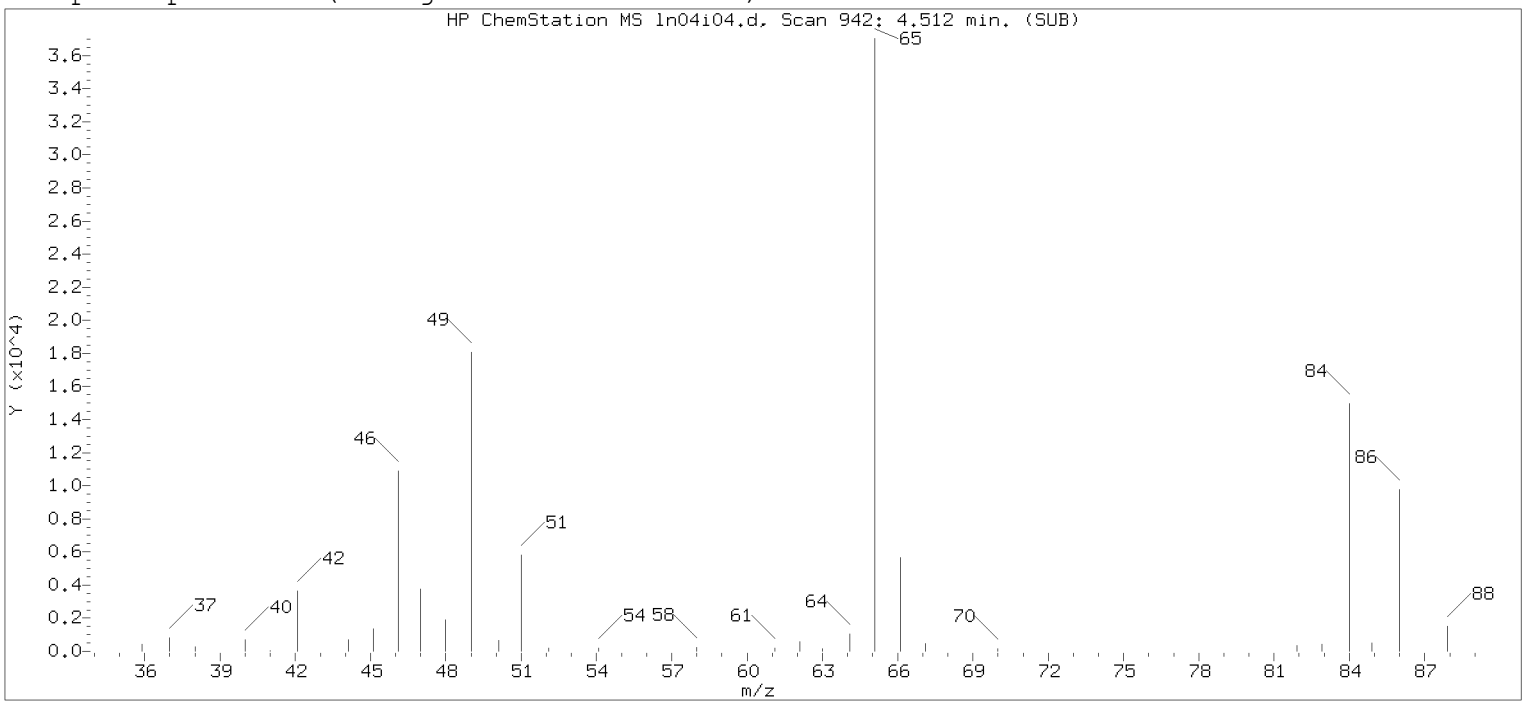
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area (flag) : 258058M
On-Column Amount (ng) : 250.0000
Integration start scan : 892 Integration stop scan: 1211
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

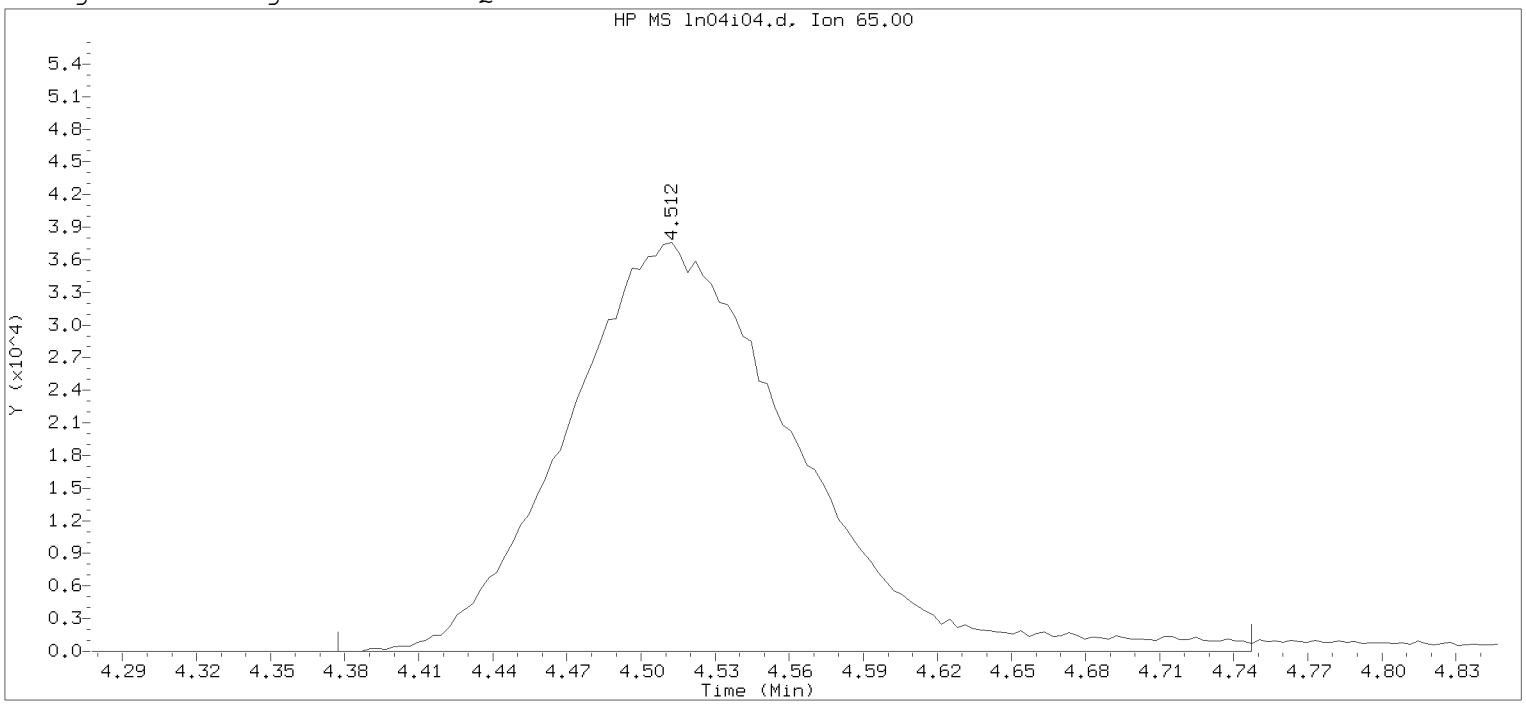
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

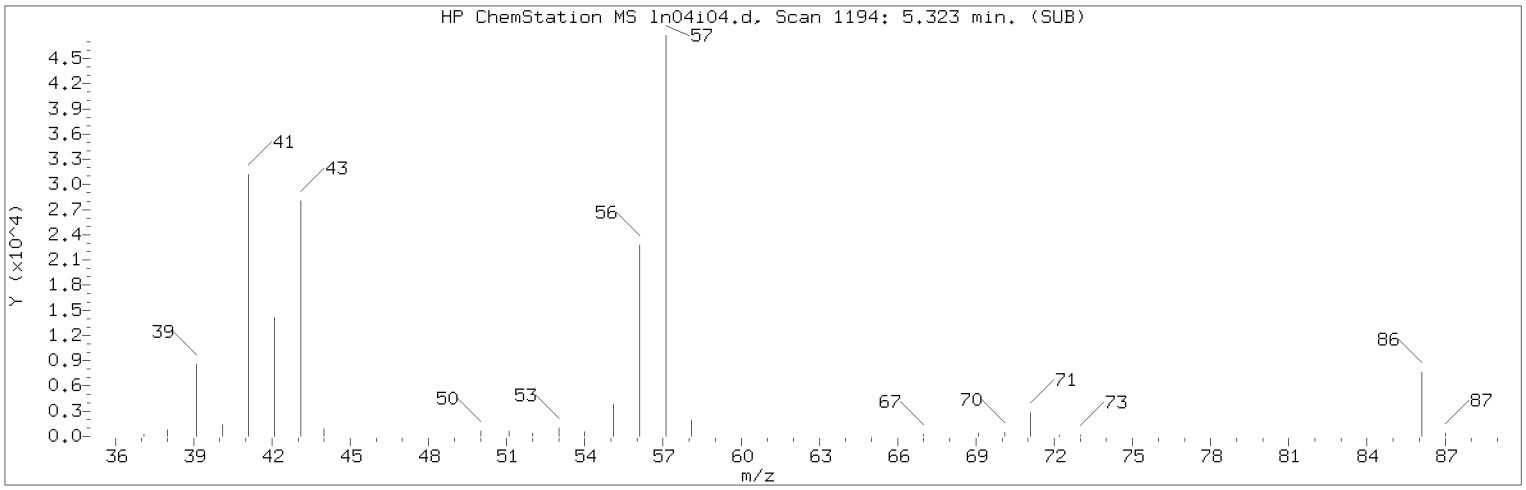
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

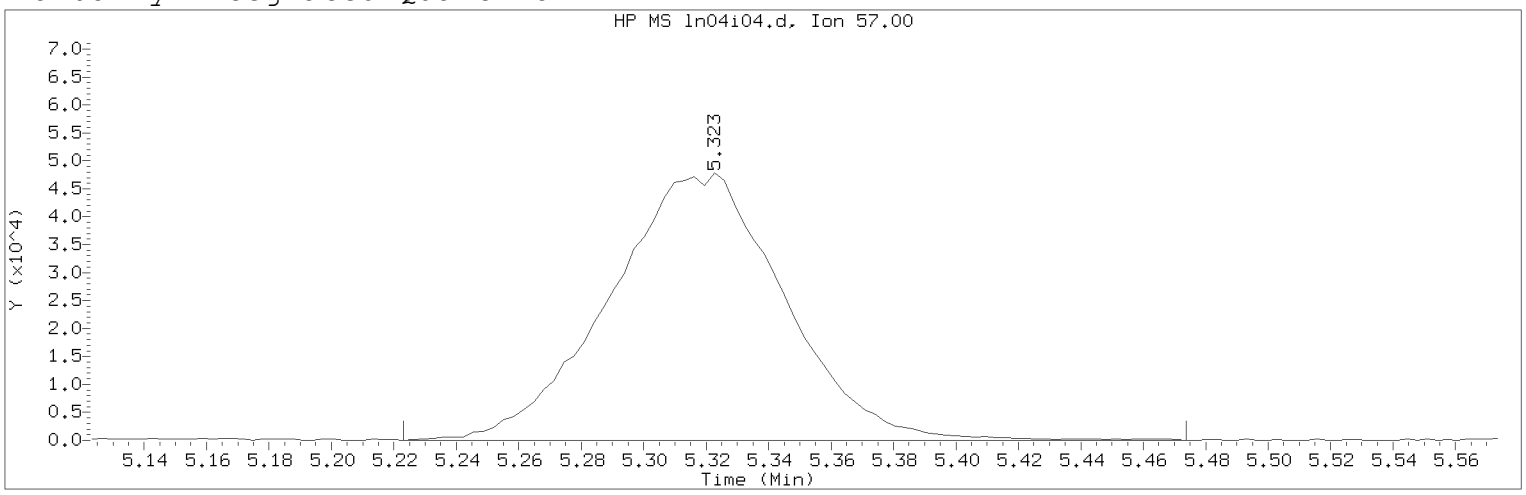
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area : 242565
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

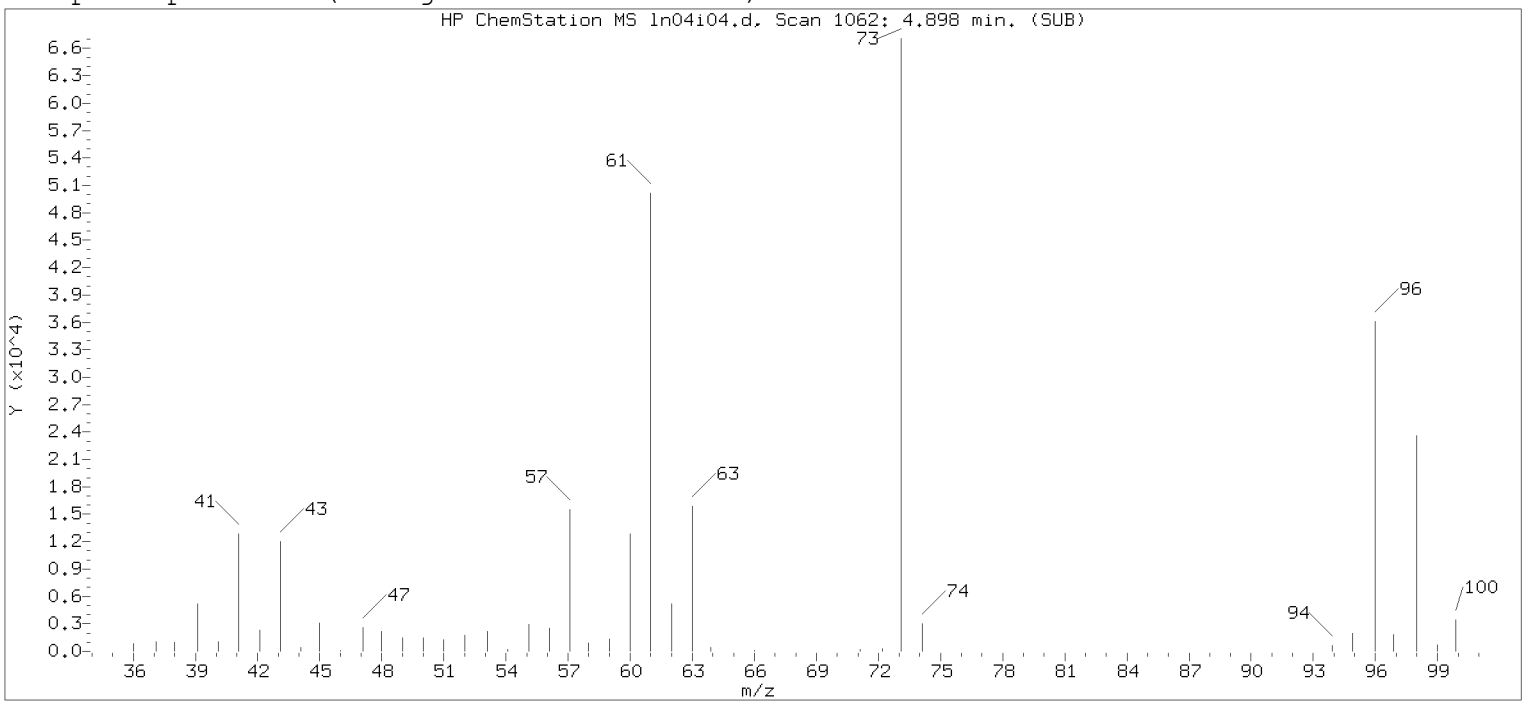
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1194
Retention Time (minutes): 5.323
Quant Ion : 57.00
Area (flag) : 185314M
On-Column Amount (ng) : 21.5188
Integration start scan : 1162 Integration stop scan: 1240
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

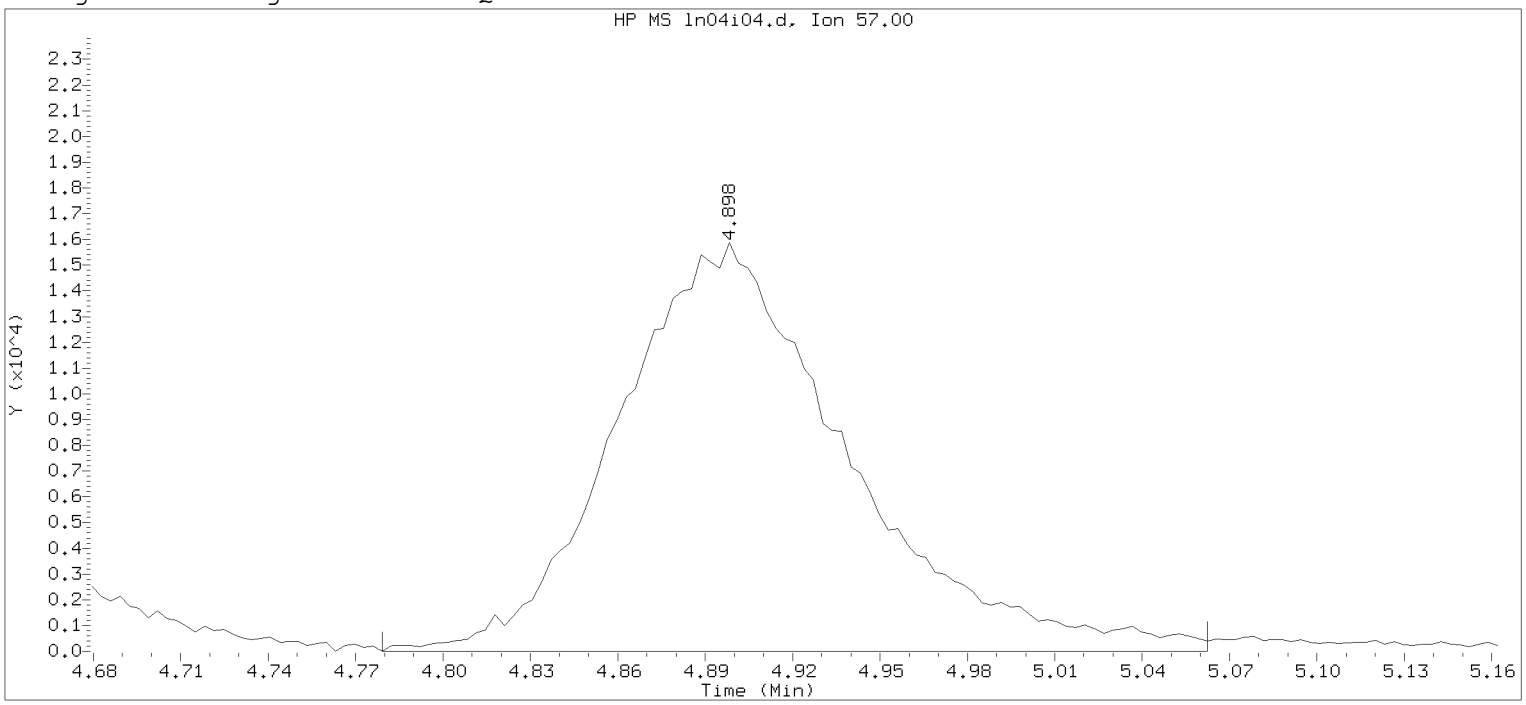
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

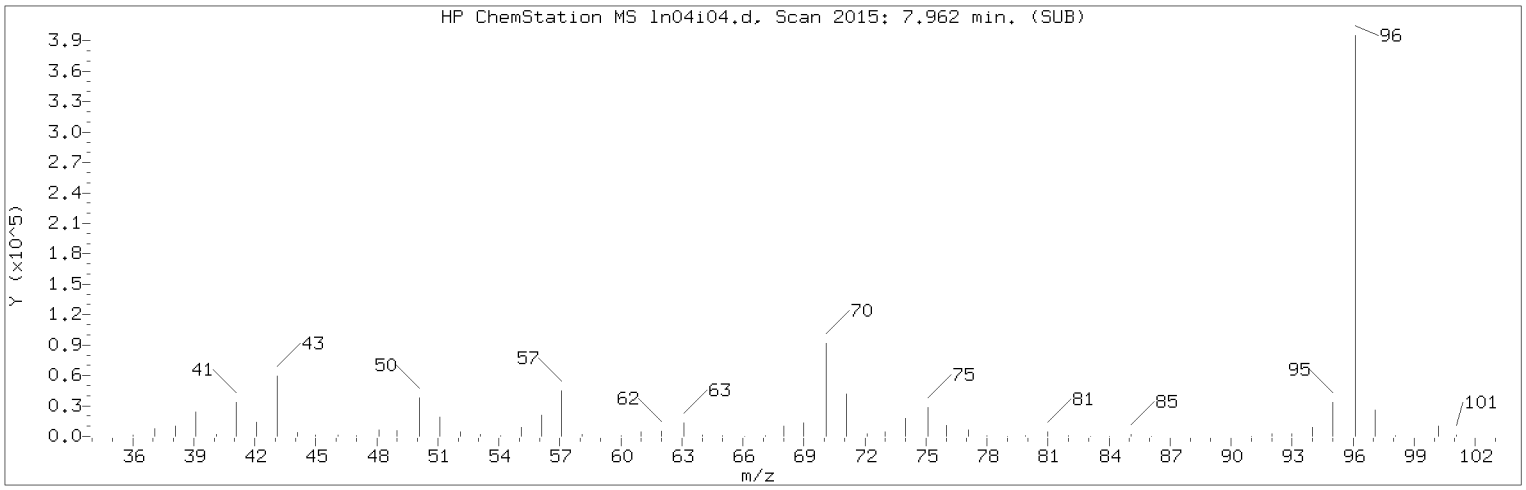
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

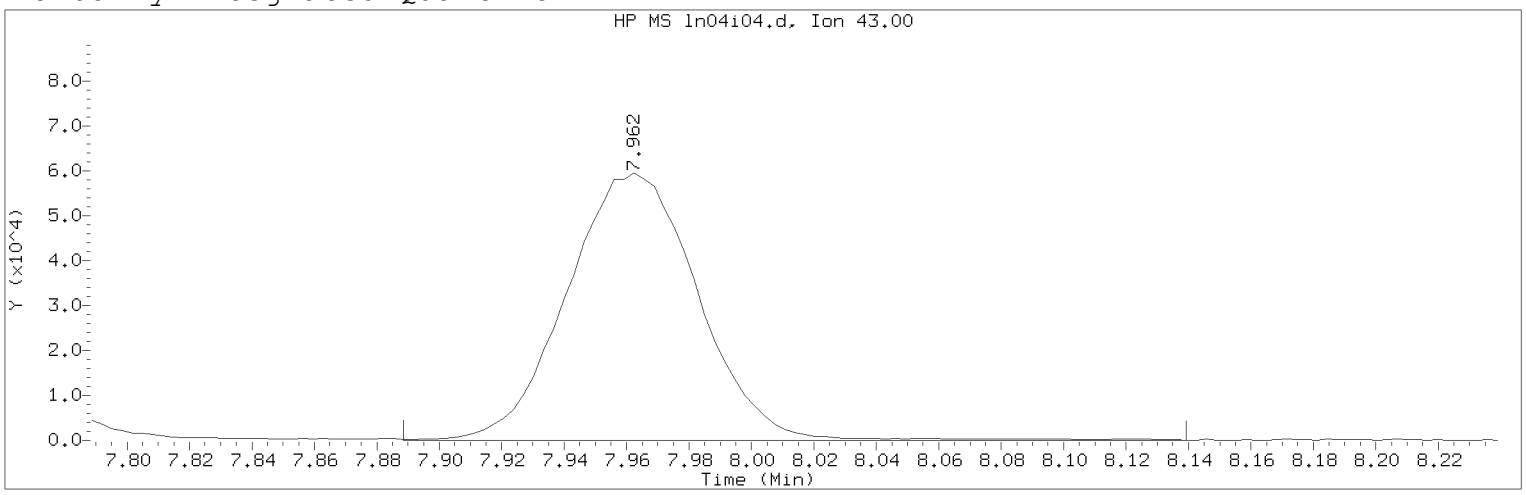
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1062
Retention Time (minutes): 4.898
Quant Ion : 57.00
Area : 86496
On-column Amount (ng) : 21.2144
Integration start scan : 1024 Integration stop scan: 1112
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

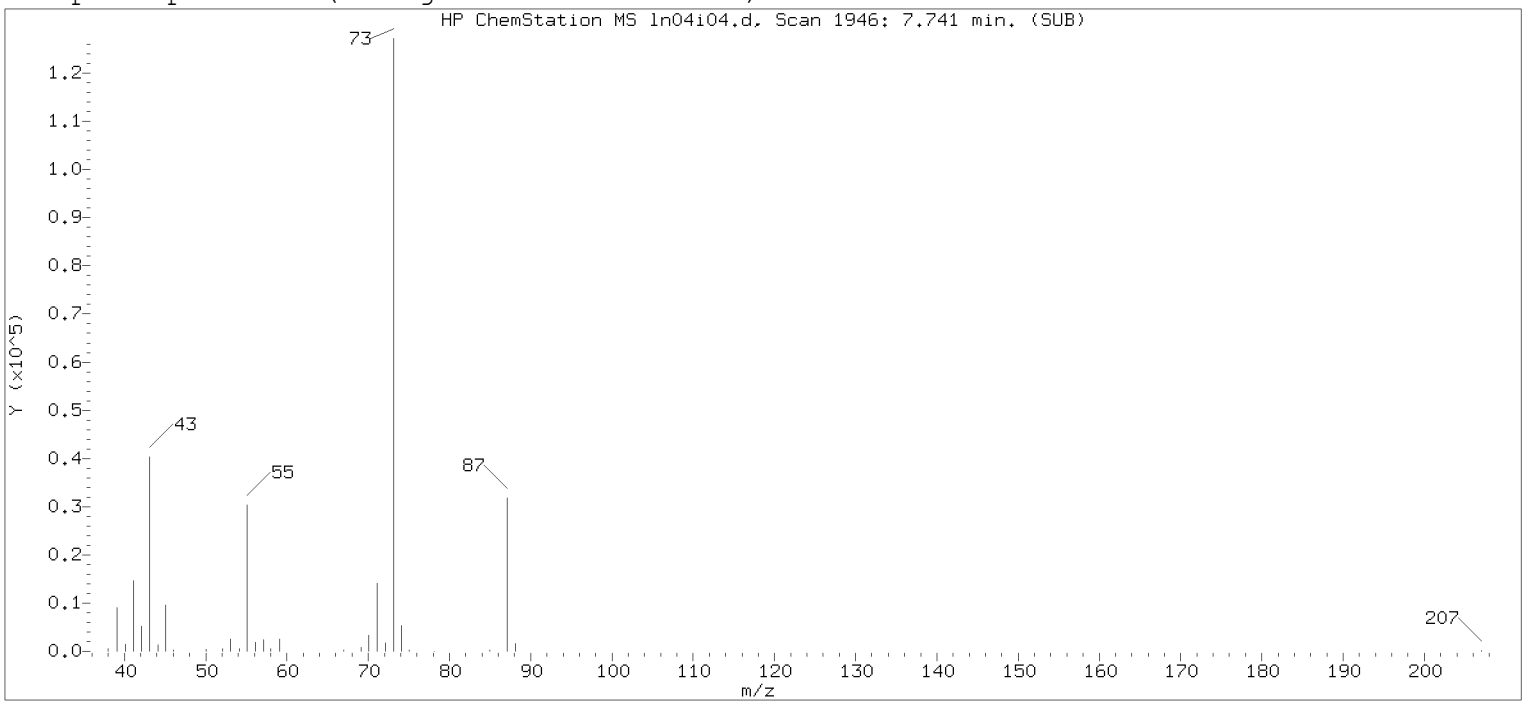
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2015
Retention Time (minutes): 7.962
Quant Ion : 43.00
Area (flag) : 173500MA
On-Column Amount (ng) : 21.5663
Integration start scan : 1991 Integration stop scan: 2069
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

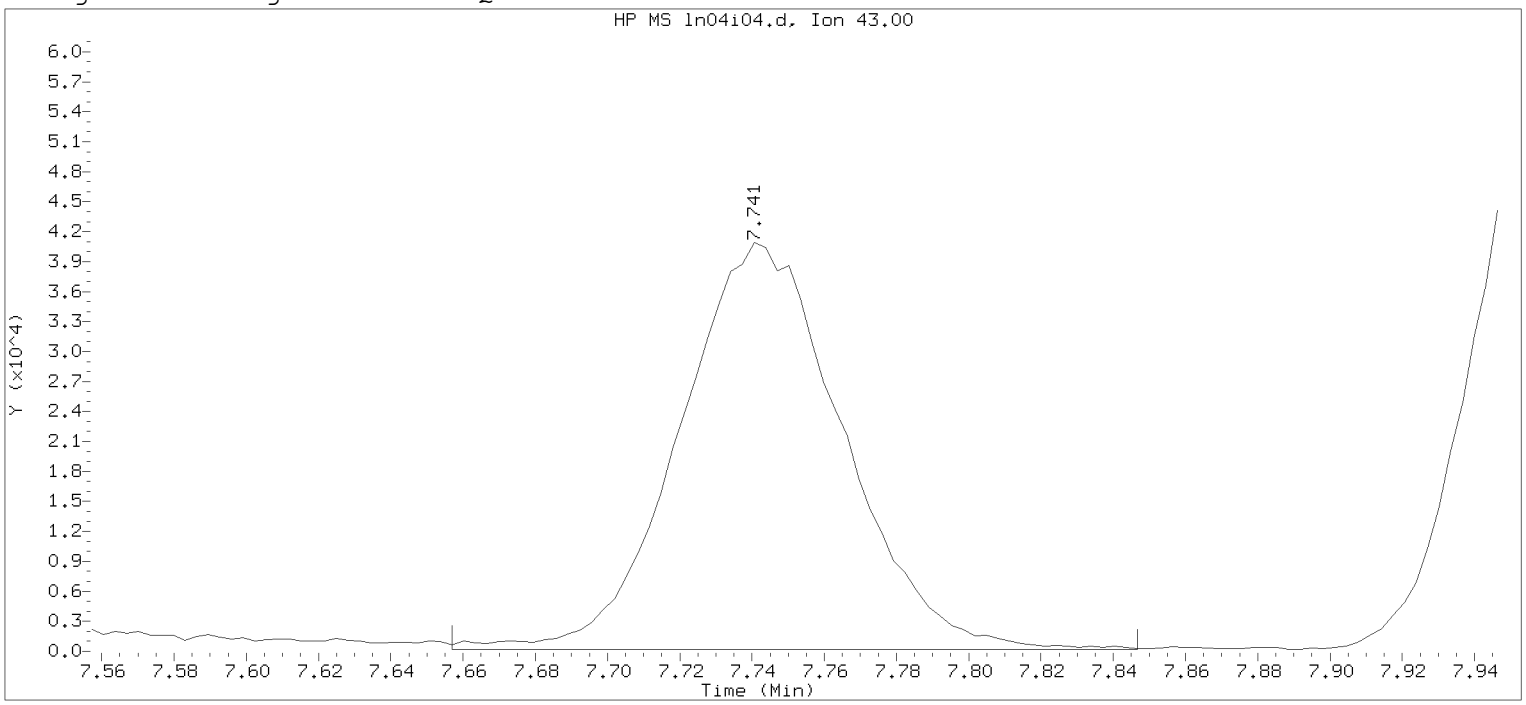
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

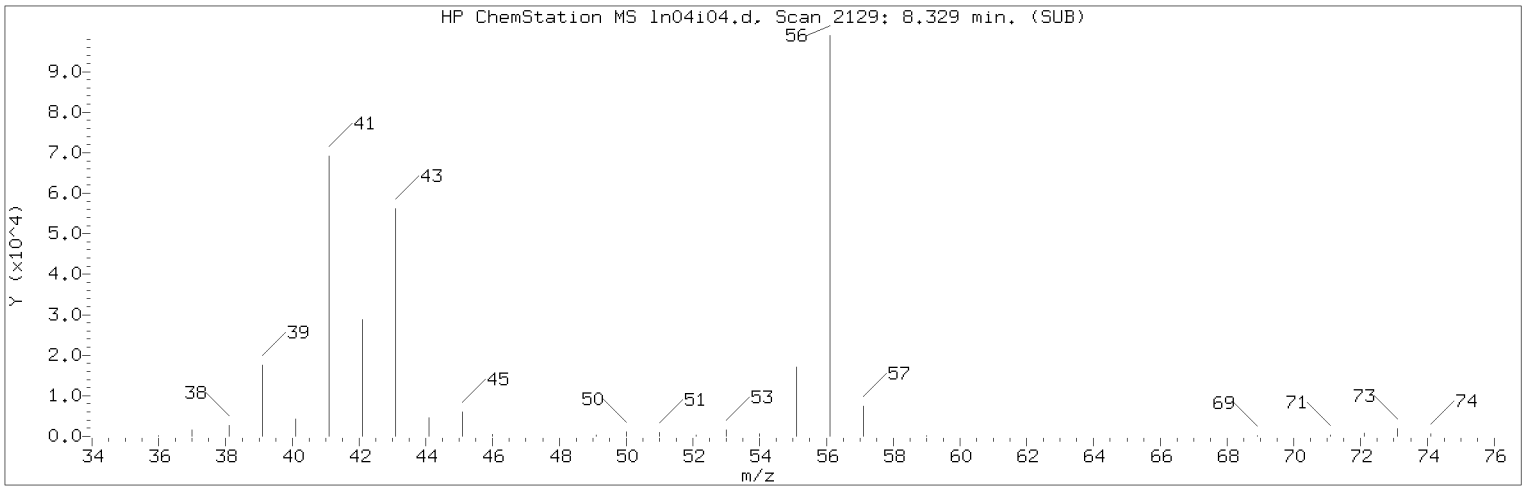
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

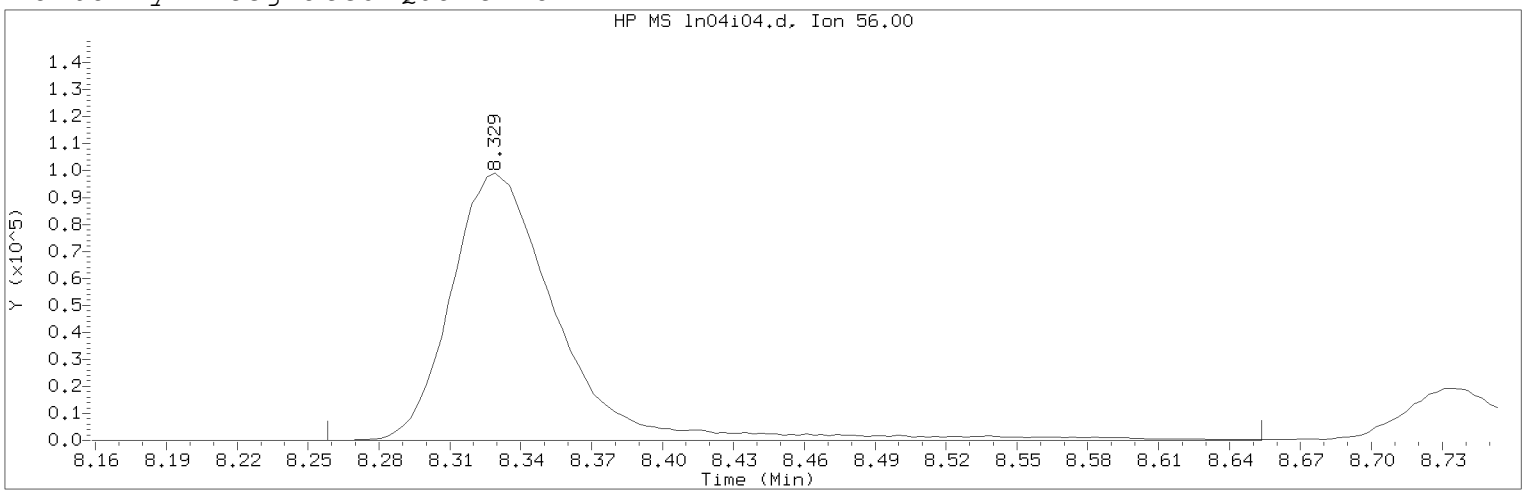
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.741
Quant Ion : 43.00
Area : 127386
On-column Amount (ng) : 21.2604
Integration start scan : 1919 Integration stop scan: 1978
Y at integration start : 203 Y at integration end: 203

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

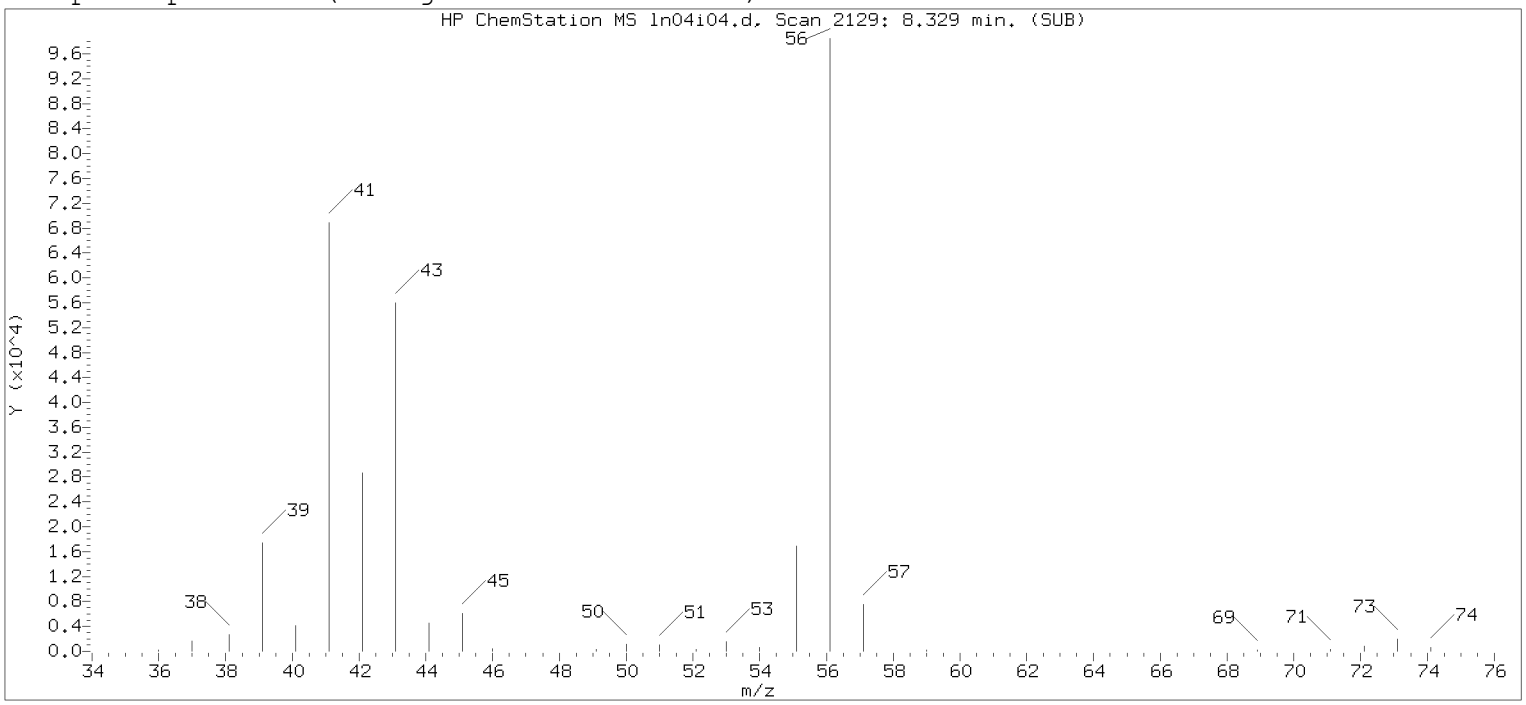
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area (flag) : 312189M
On-Column Amount (ng) : 992.0871
Integration start scan : 2106 Integration stop scan: 2229
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

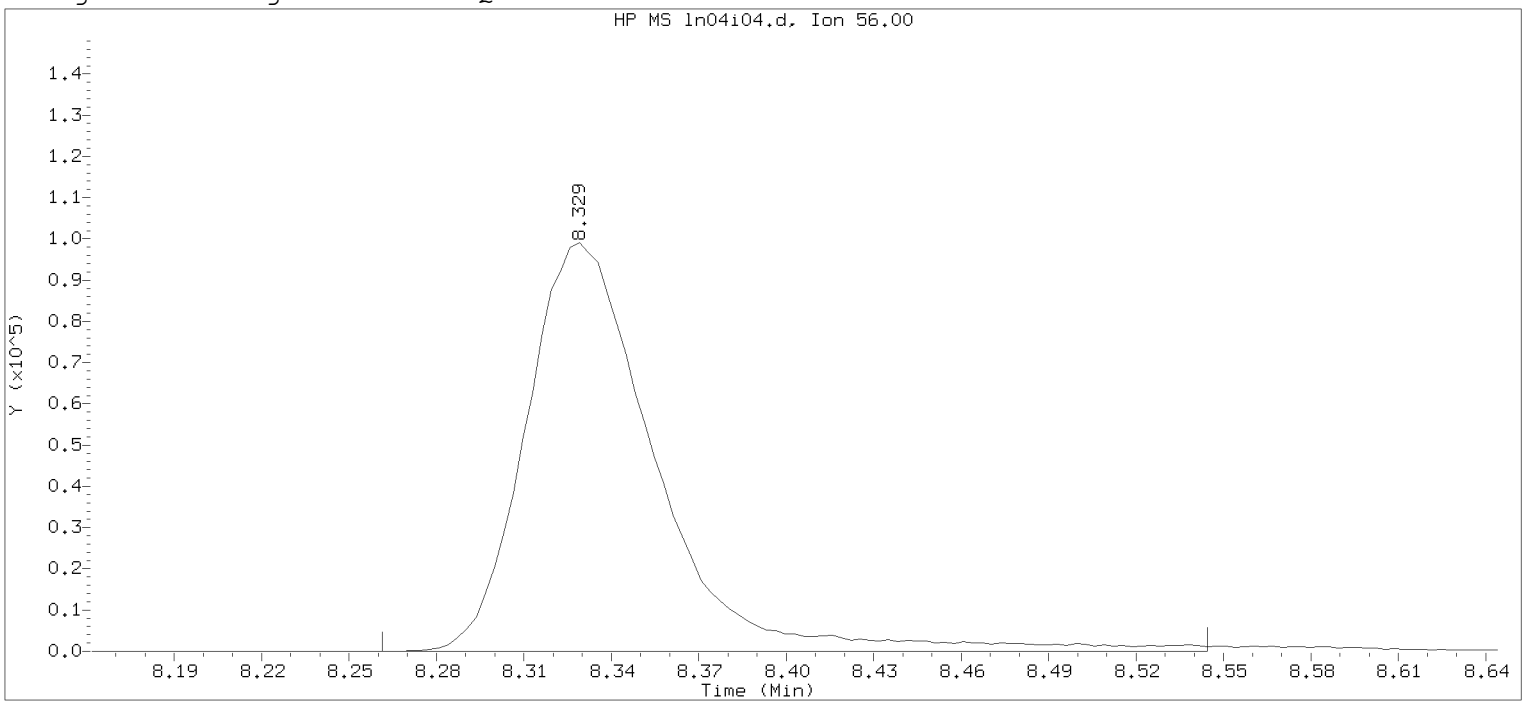
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

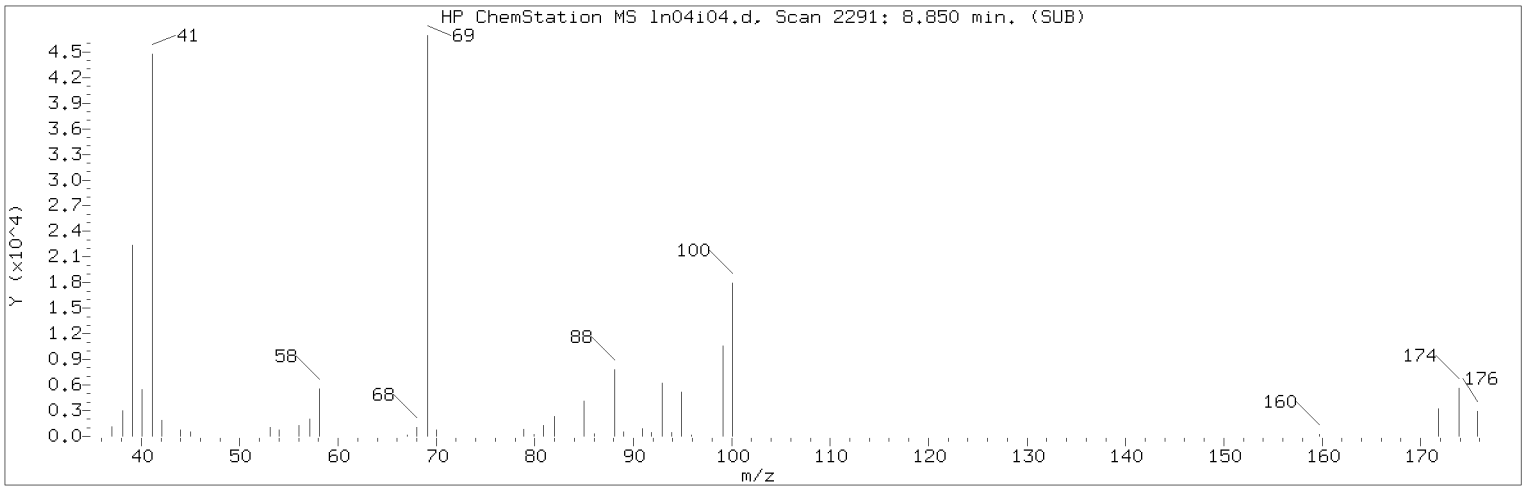
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

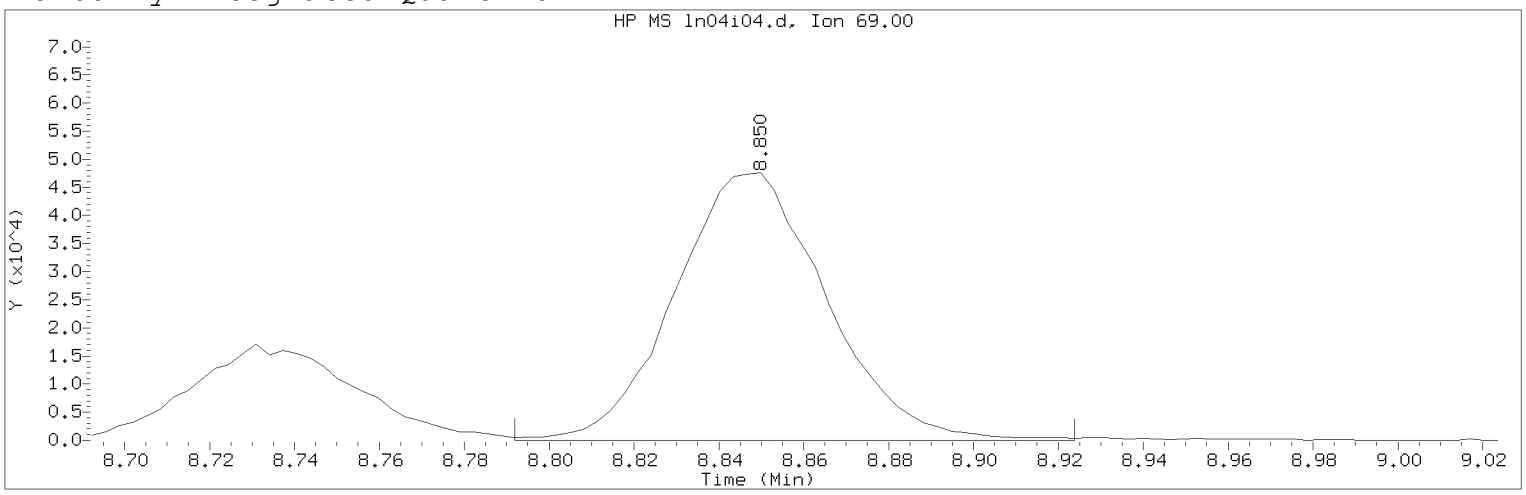
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area : 307443
On-column Amount (ng) : 938.0571
Integration start scan : 2107 Integration stop scan: 2195
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

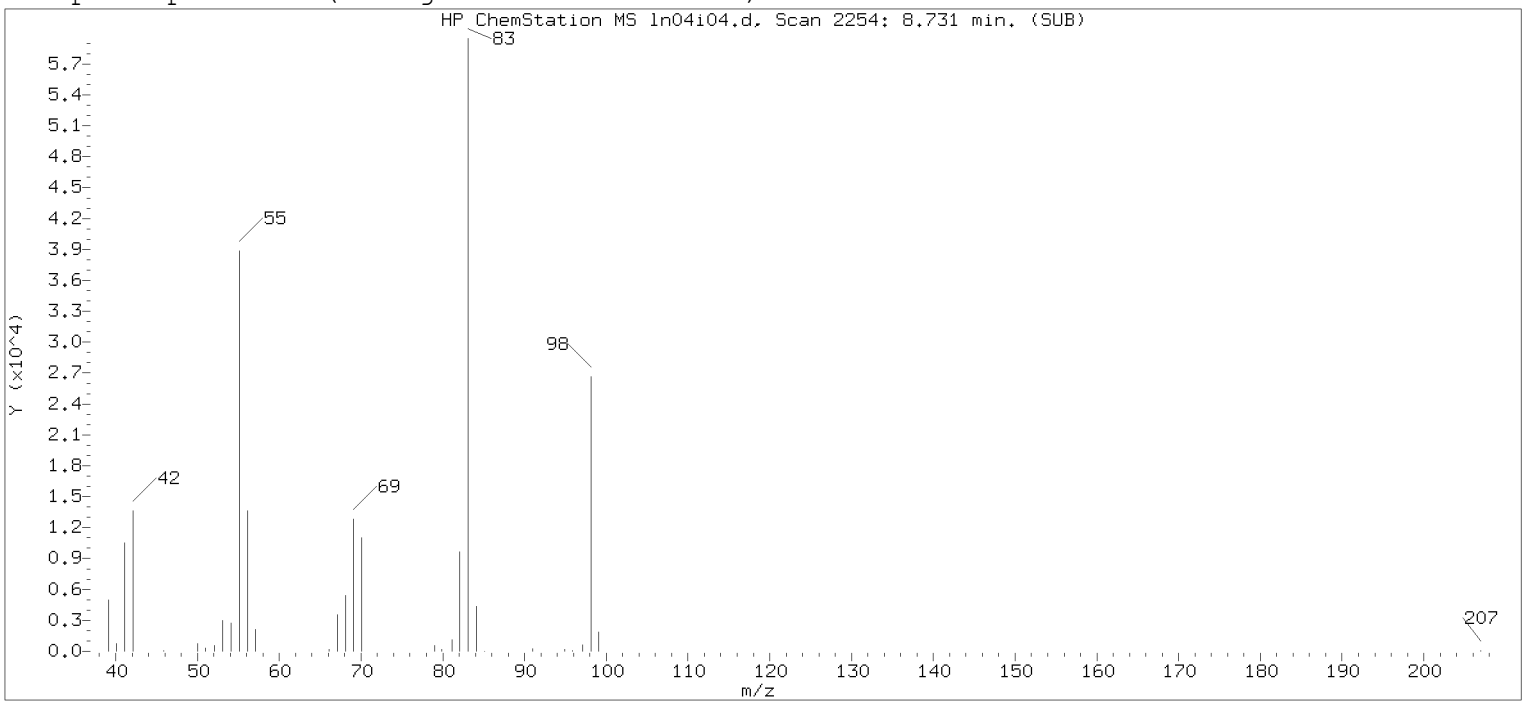
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2291
Retention Time (minutes): 8.850
Quant Ion : 69.00
Area (flag) : 117550A
On-Column Amount (ng) : 20.8506
Integration start scan : 2272 Integration stop scan: 2313
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

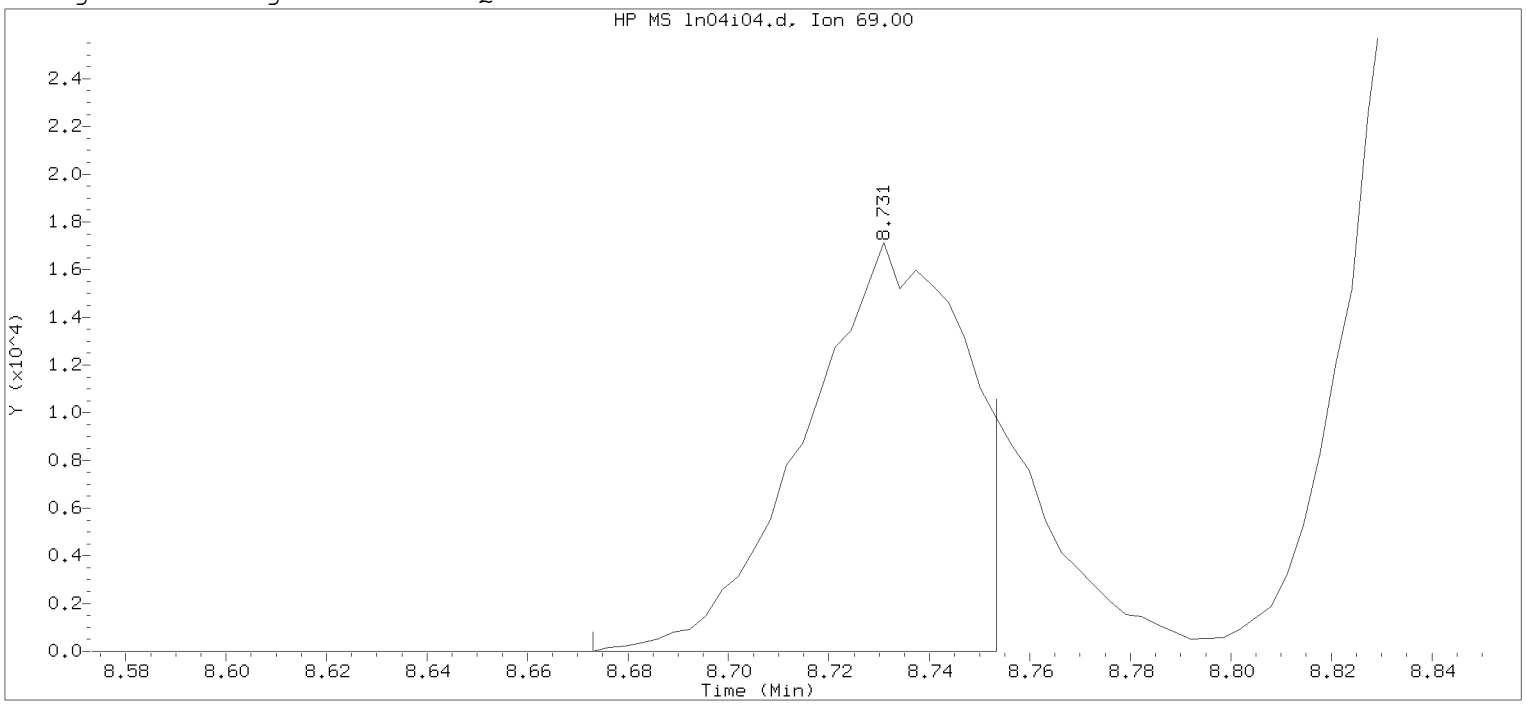
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

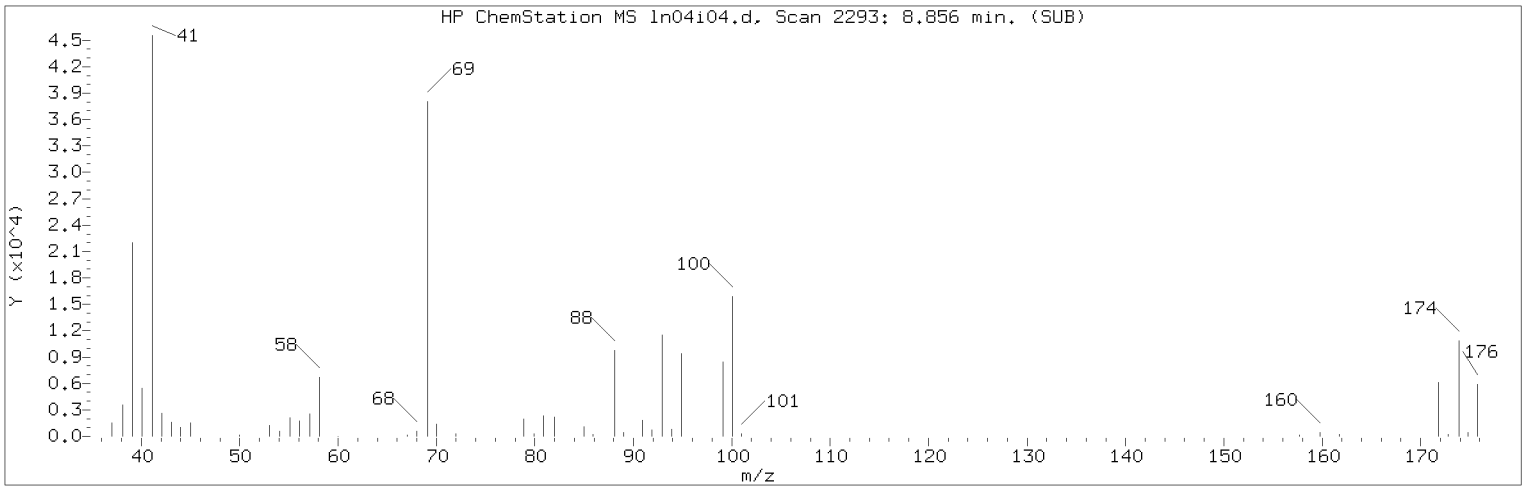
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

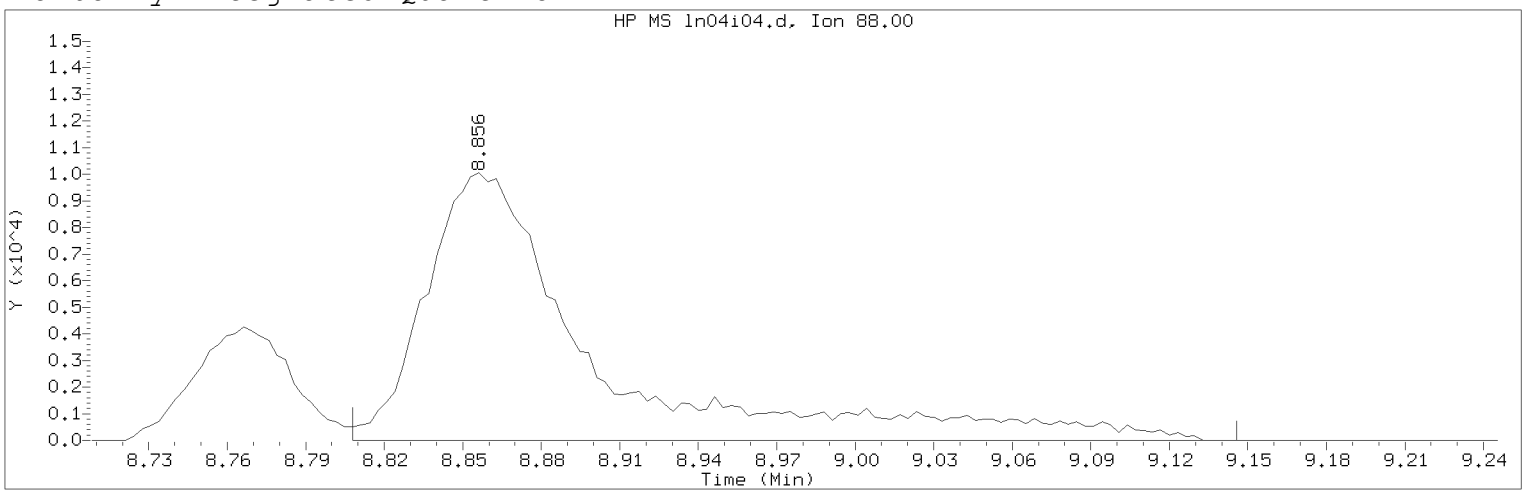
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2254
Retention Time (minutes): 8.731
Quant Ion : 69.00
Area : 37815
On-column Amount (ng) : 16.5923
Integration start scan : 2235 Integration stop scan: 2260
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

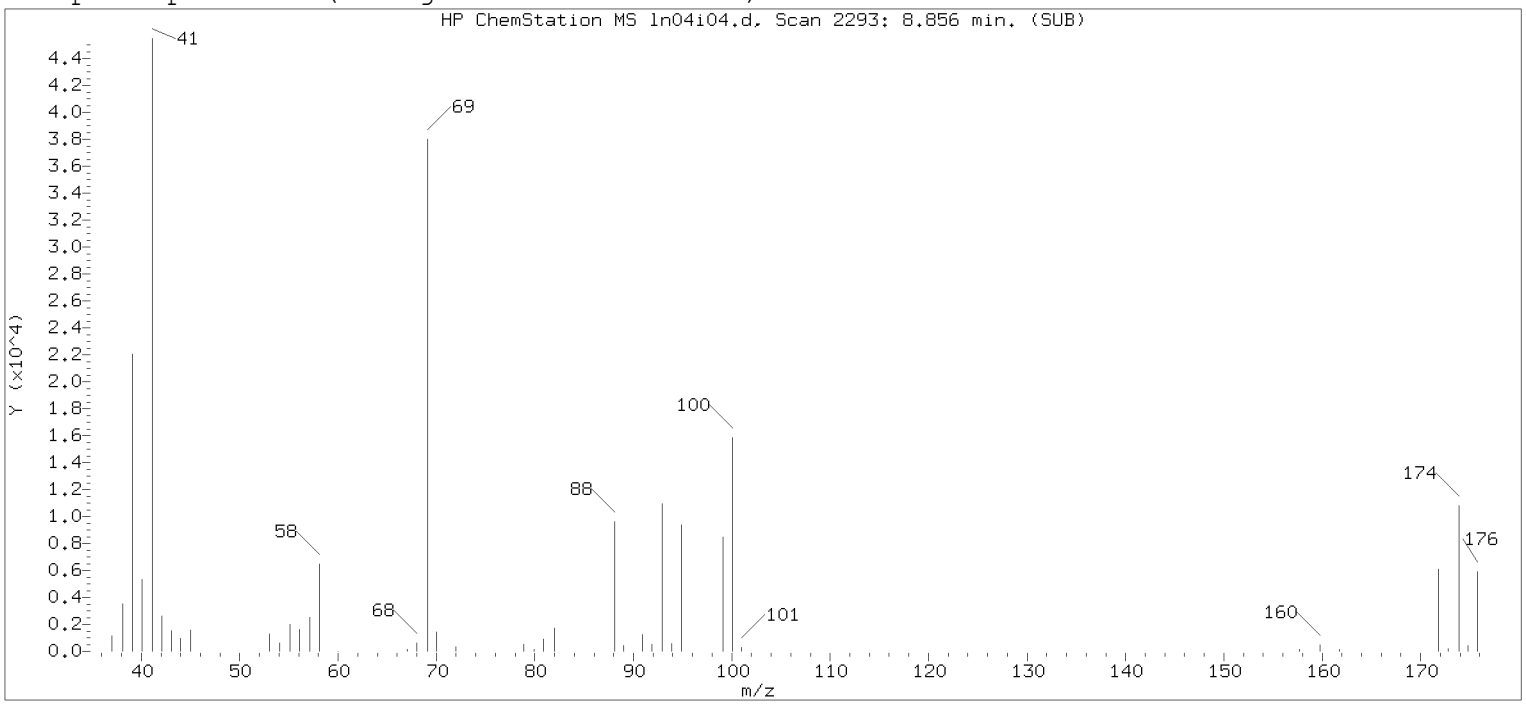
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 44376M
On-Column Amount (ng) : 513.0651
Integration start scan : 2277 Integration stop scan: 2382
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

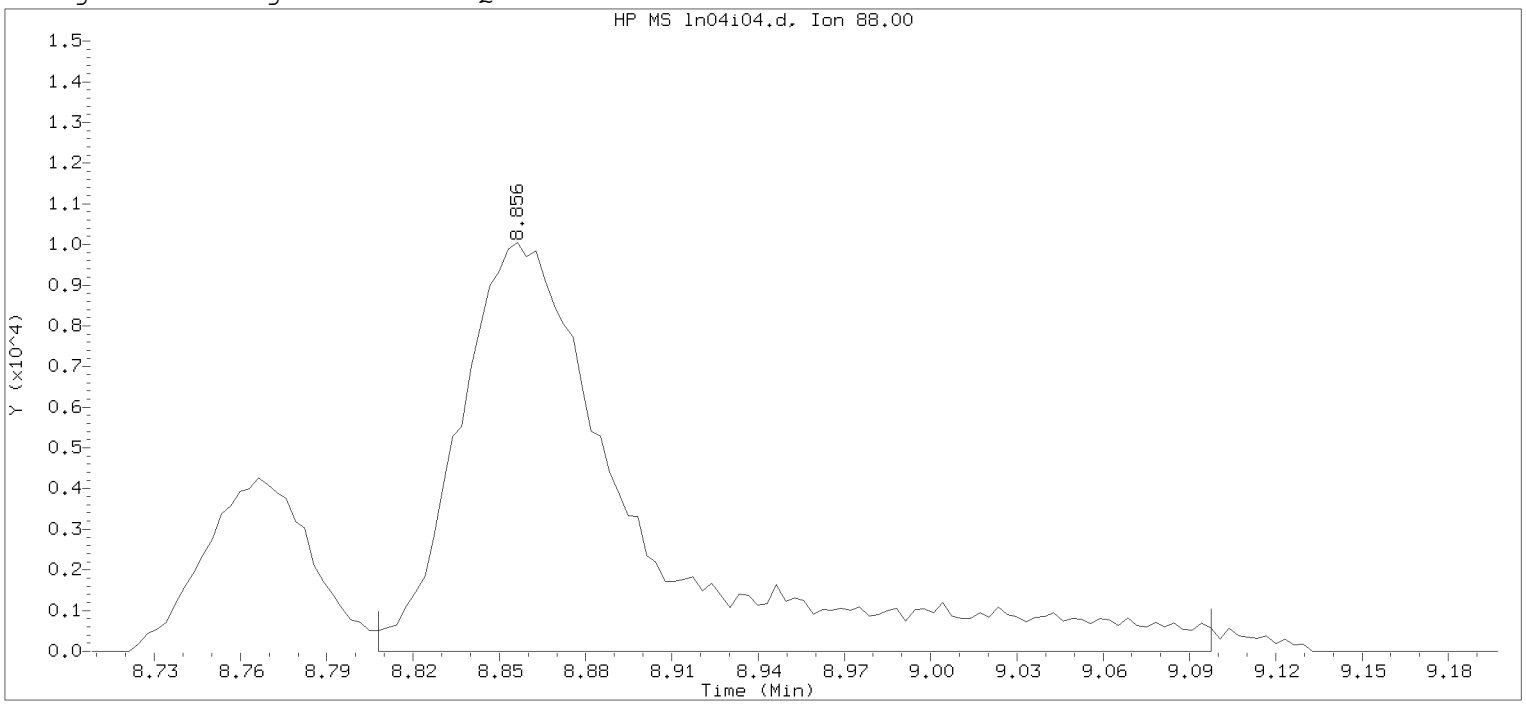
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

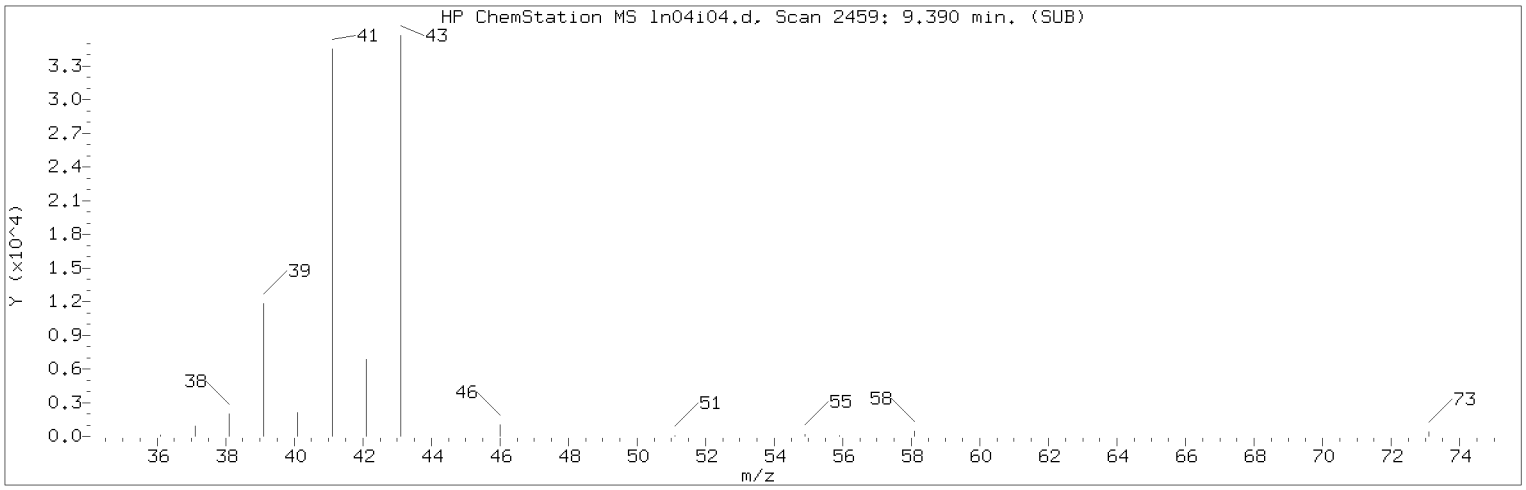
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

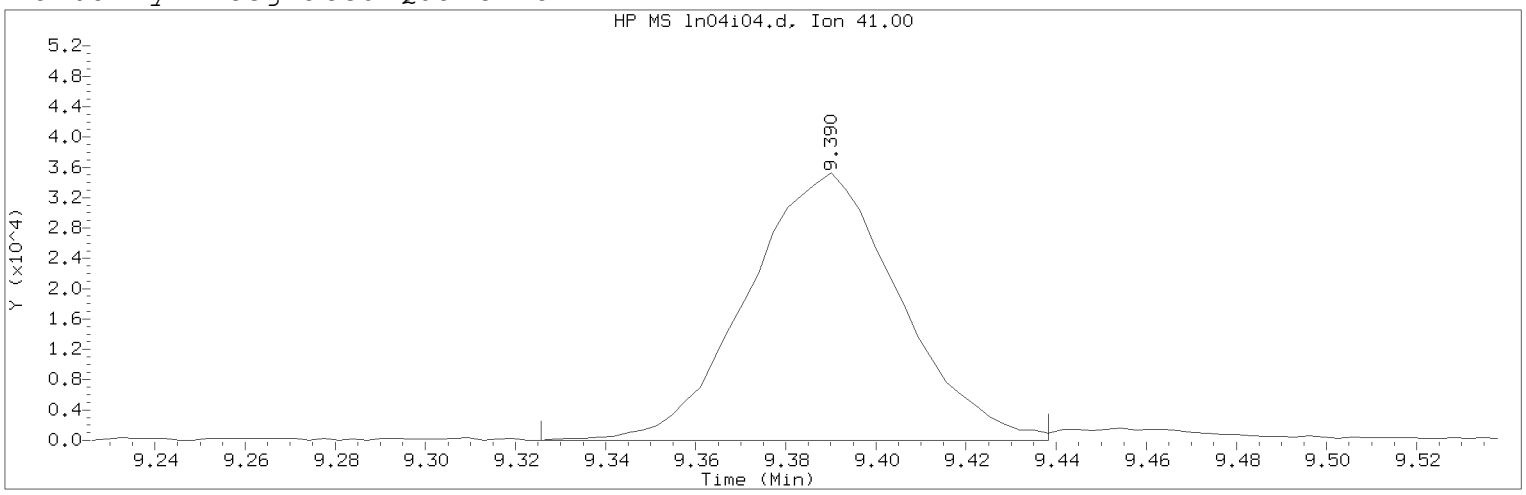
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area : 43671
On-column Amount (ng) : 571.7062
Integration start scan : 2277 Integration stop scan: 2367
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

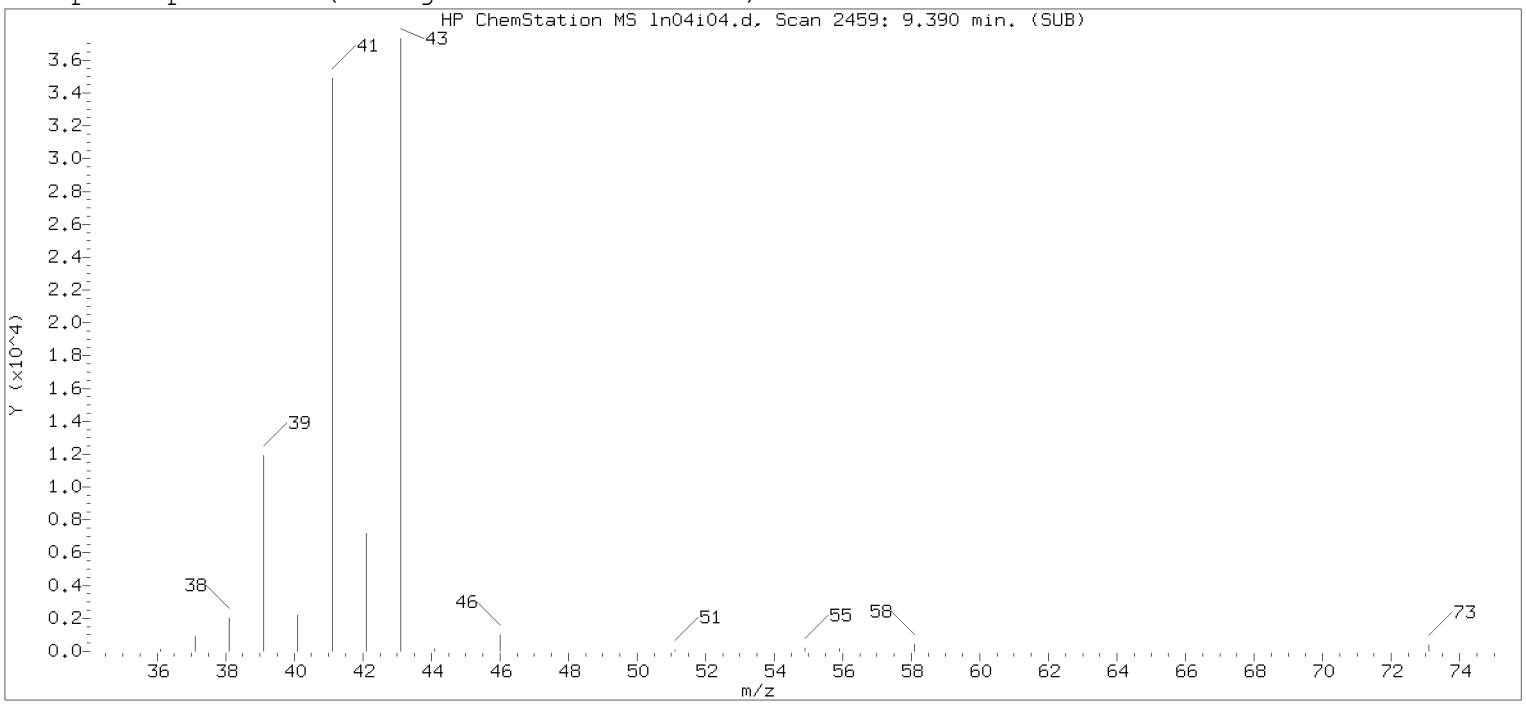
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2459
Retention Time (minutes): 9.390
Quant Ion : 41.00
Area (flag) : 82517M
On-Column Amount (ng) : 40.2472
Integration start scan : 2438 Integration stop scan: 2473
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

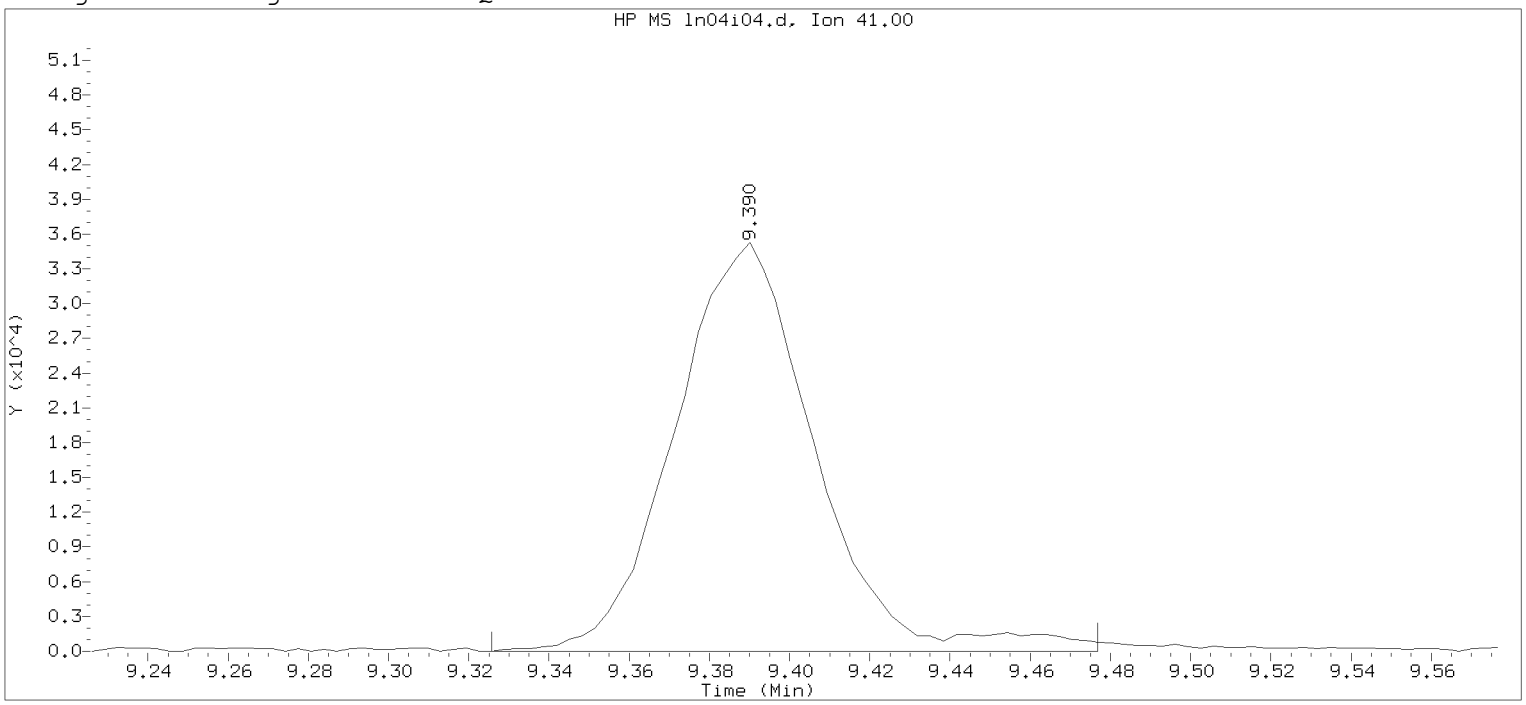
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

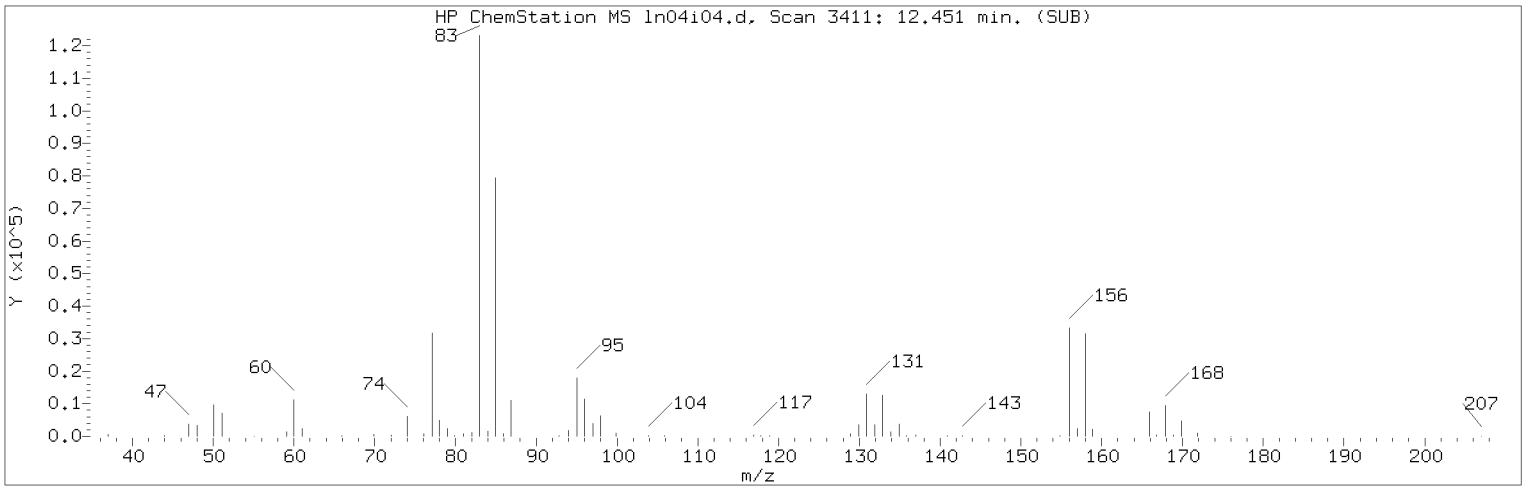
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

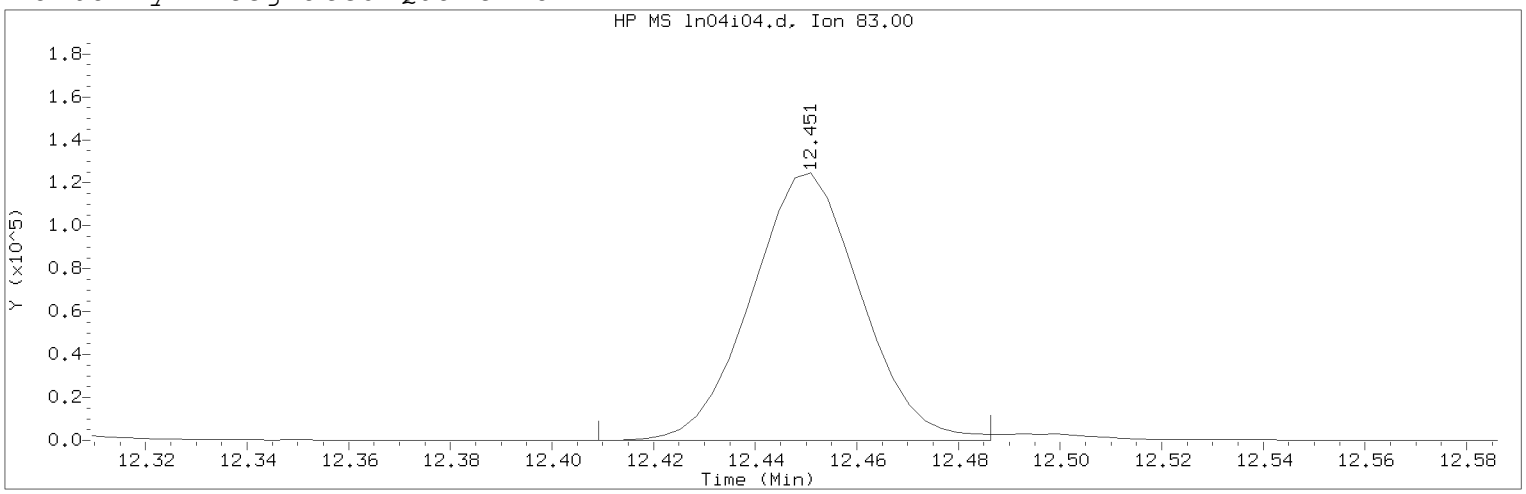
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2459
Retention Time (minutes): 9.390
Quant Ion : 41.00
Area : 85427
On-column Amount (ng) : 37.2727
Integration start scan : 2438 Integration stop scan: 2485
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

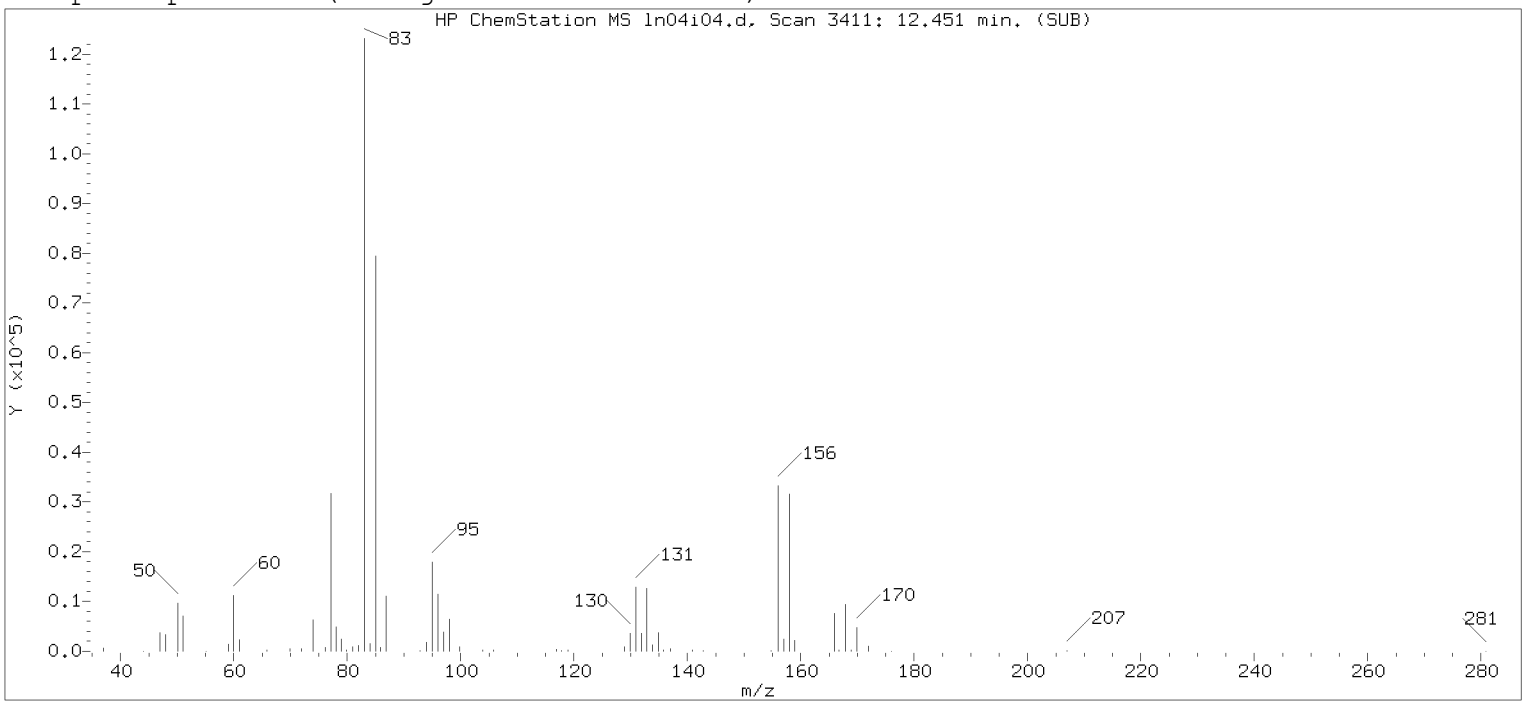
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 186119M
On-Column Amount (ng) : 20.6895
Integration start scan : 3397 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

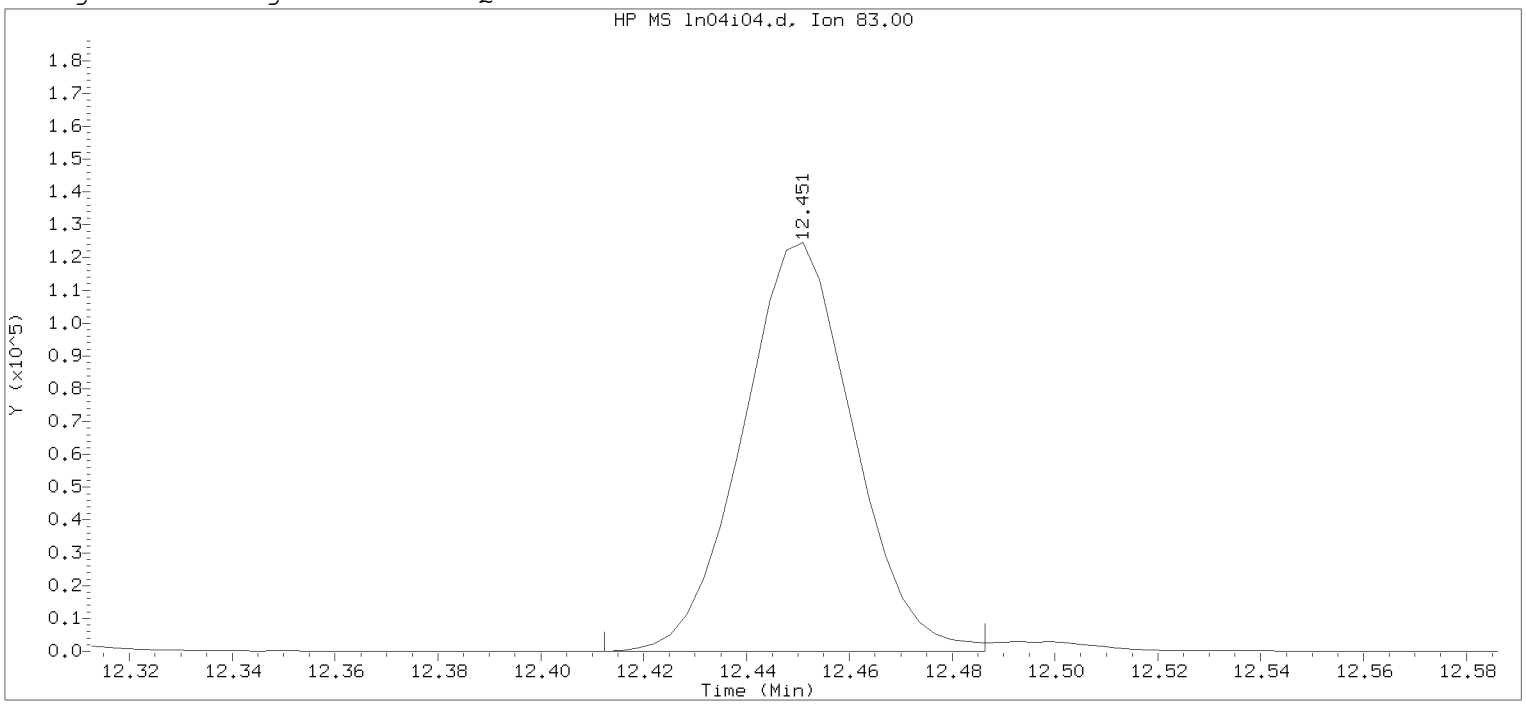
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

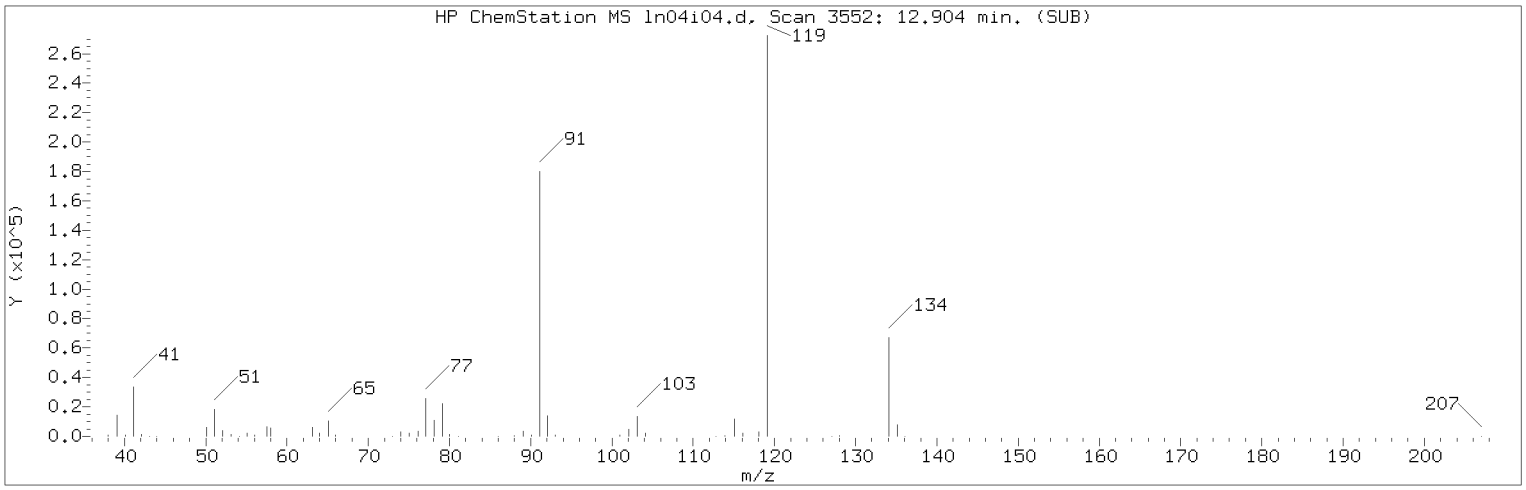
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

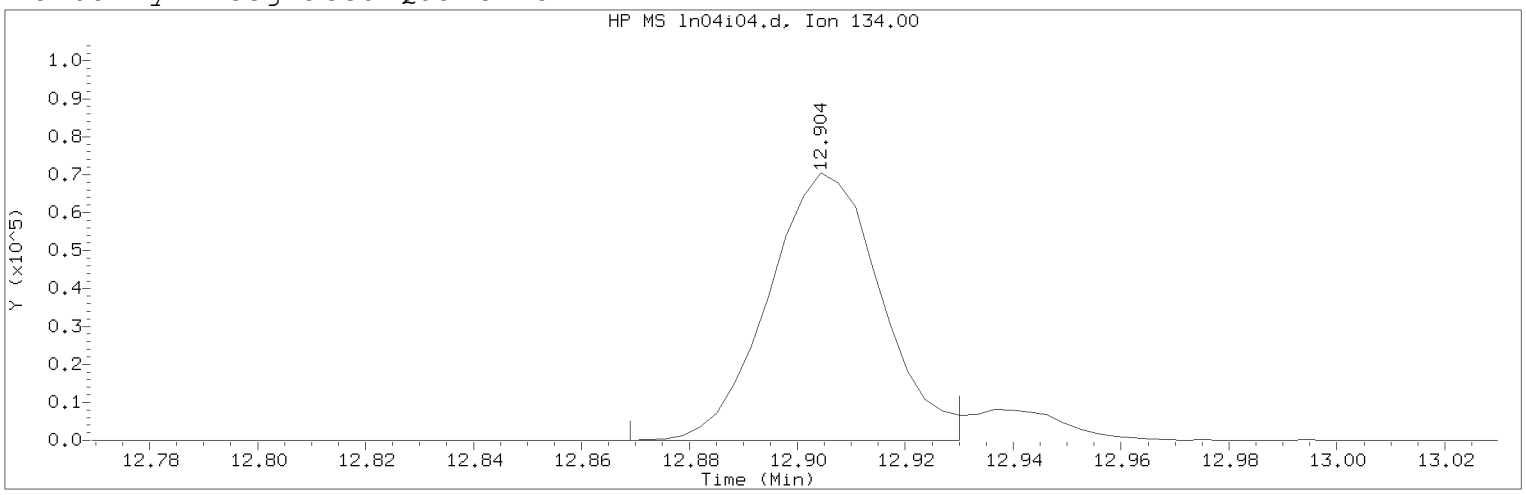
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 185866
On-column Amount (ng) : 19.5938
Integration start scan : 3398 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

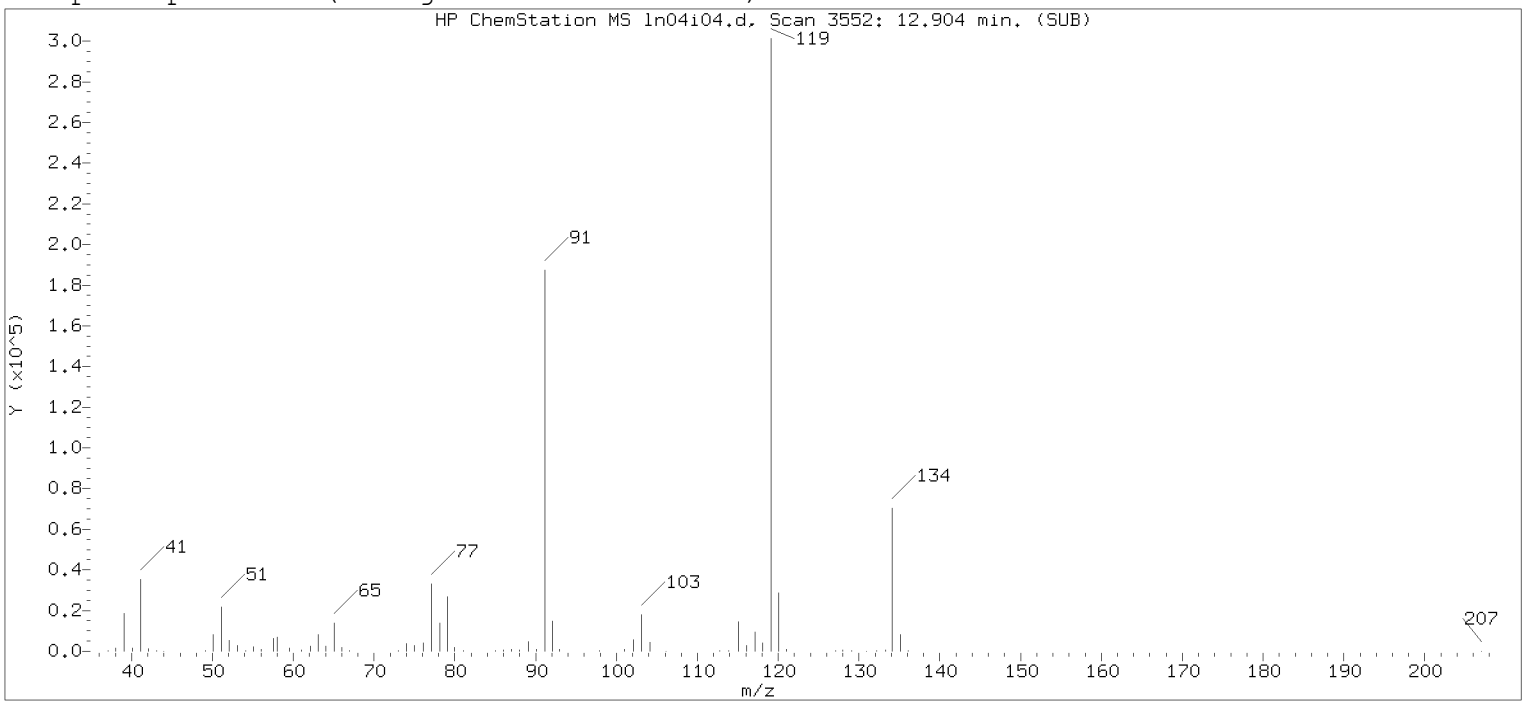
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 101571M
On-Column Amount (ng) : 21.6122
Integration start scan : 3540 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

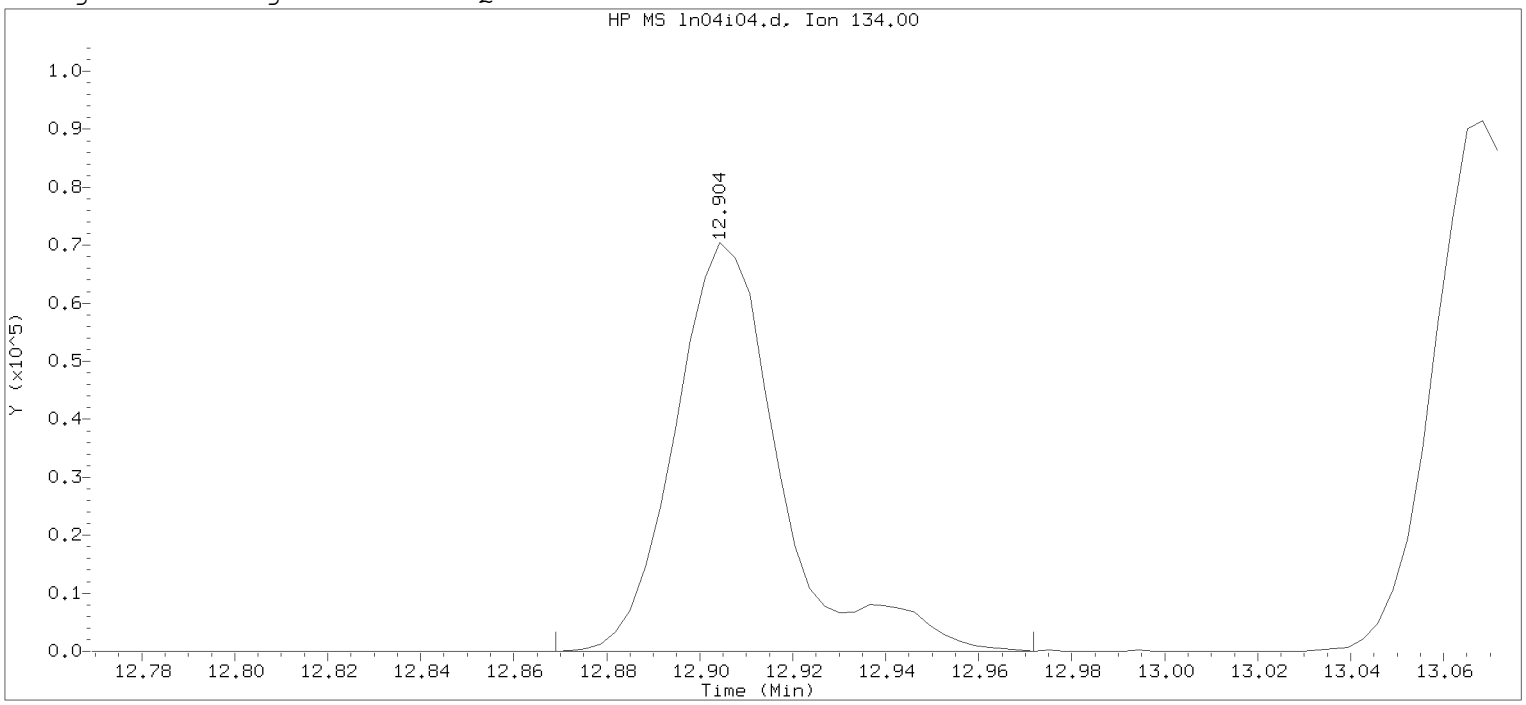
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



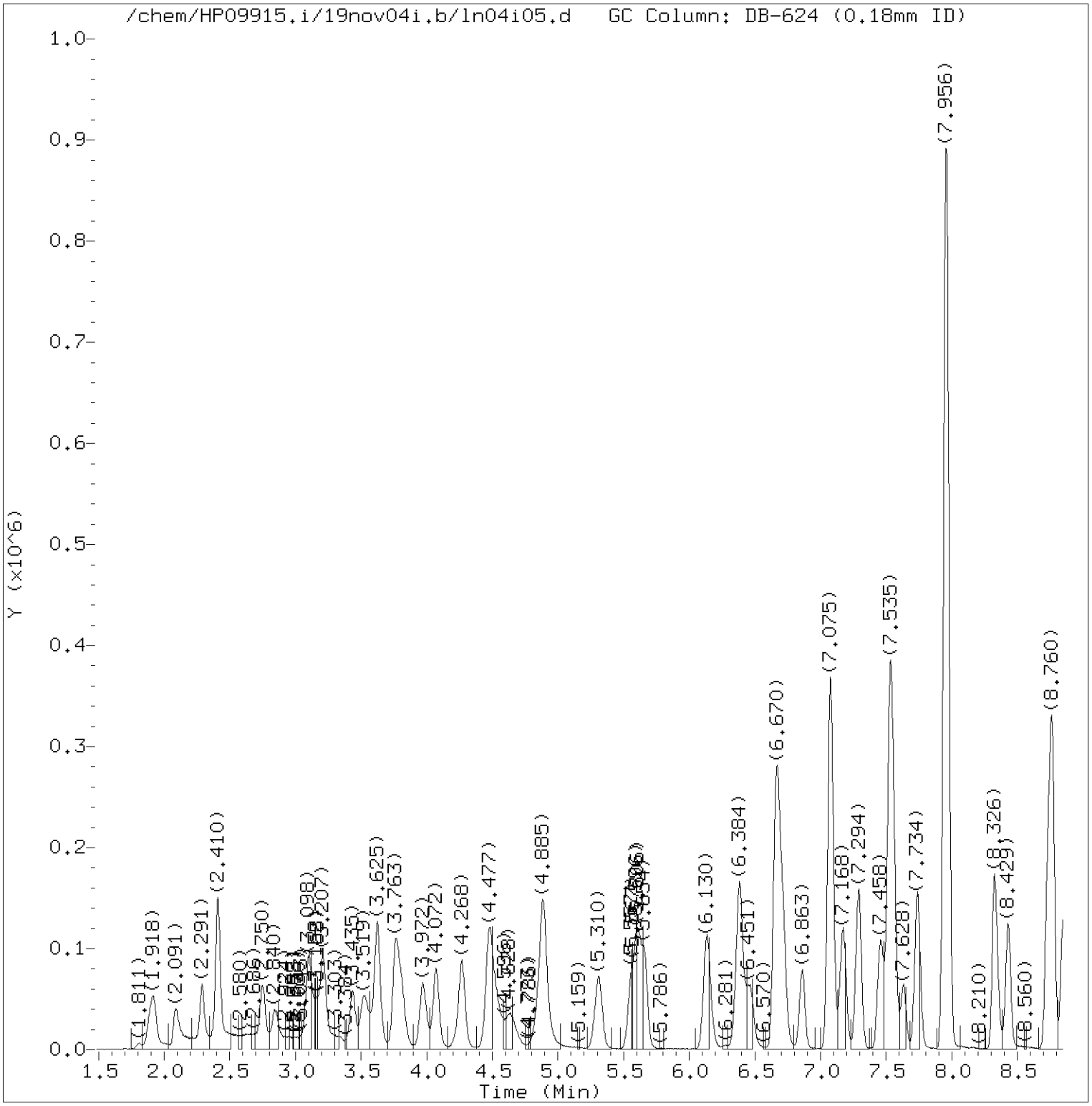
Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 110902
On-column Amount (ng) : 20.6897
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

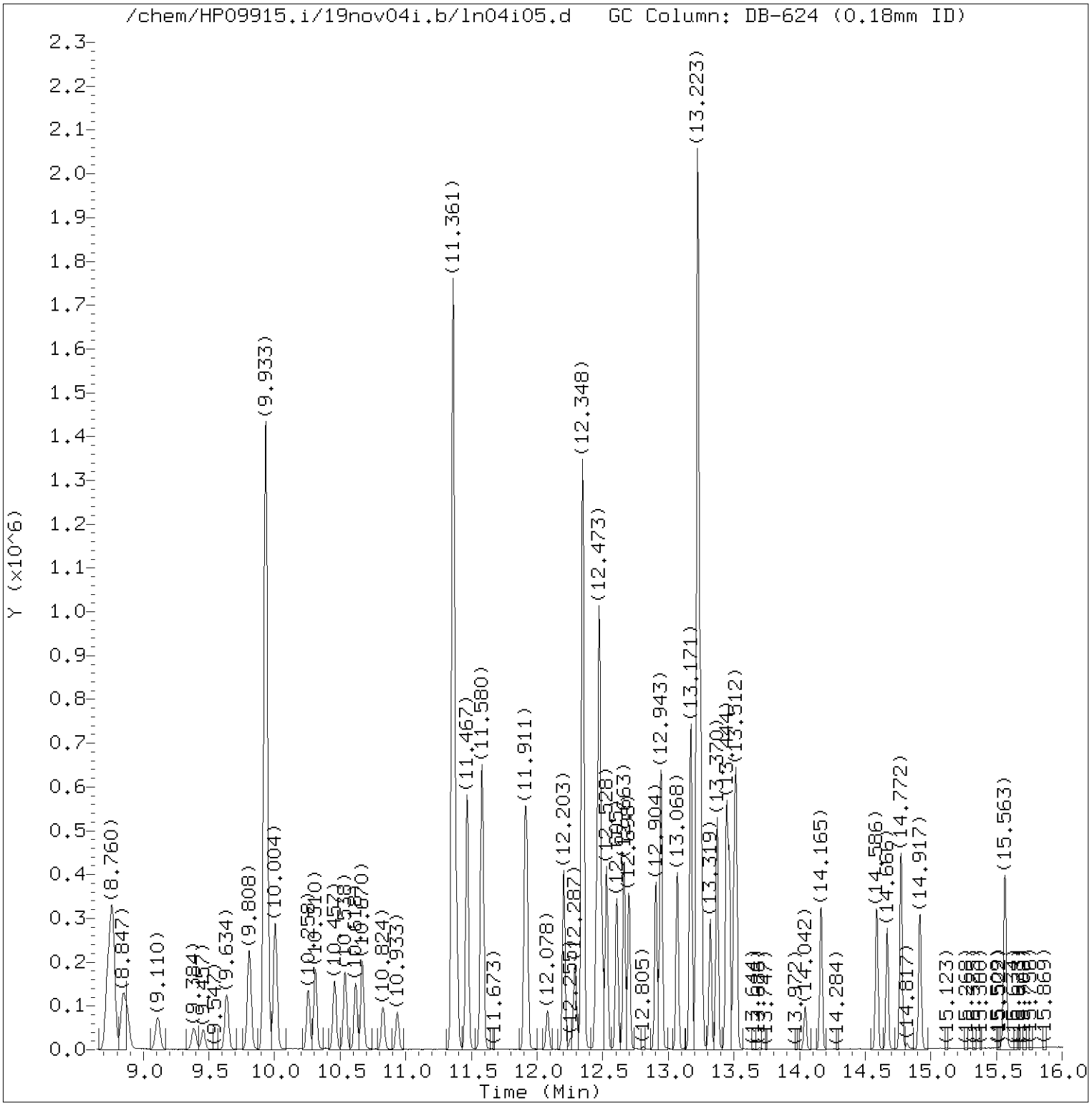
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.091	85	76947M	9.526
4) Chloromethane	(2)	2.291	50	76659	9.847
5) 1,3-Butadiene	(2)	2.406	39	60141M	9.304
6) Vinyl Chloride	(2)	2.413	62	76016	9.784
8) Bromomethane	(2)	2.750	94	54155	9.723
9) Chloroethane	(2)	2.853	64	42303	9.907
10) Dichlorofluoromethane	(2)	3.104	67	106956M	10.459
12) Trichlorofluoromethane	(2)	3.152	101	80624	9.638
11) n-Pentane	(2)	3.213	43	86389	8.739
14) Ethyl ether	(2)	3.438	59	52079	9.635
15) Freon 123a	(2)	3.519	67	65806	9.780
16) Acrolein	(1)	3.625	56	197662	100.013
17) 1,1-Dichloroethene	(2)	3.763	96	48467	9.871
17) 1,1-Dichloroethene	(2)	3.763	63	24200	9.831
19) Freon 113	(2)	3.792	101	51923	9.269
18) Acetone	(1)	3.805	58	17383	19.619
22) Methyl Iodide	(2)	3.969	142	101688	9.995
21) 2-Propanol	(1)	4.001	45	63841	100.227
23) Carbon Disulfide	(2)	4.075	76	179738	9.714
27) Methyl Acetate	(2)	4.245	43	62026	9.809
25) Allyl Chloride	(2)	4.268	41	86653	9.838
28) Methylene Chloride	(2)	4.474	84	58140	9.949
29)*t-Butyl alcohol-d10	(1)	4.509	65	263427M	250.000
30) t-Butyl alcohol	(1)	4.644	59	111005	100.090
31) Acrylonitrile	(2)	4.840	53	34130	10.032
33) Methyl Tertiary Butyl Ether	(2)	4.882	73	189173	10.147
32) trans-1,2-Dichloroethene	(2)	4.889	96	56133	9.883
34) n-Hexane	(2)	5.306	57	75187M	8.508
36) 1,1-Dichloroethane	(2)	5.557	63	99074	9.999
38) di-Isopropyl ether	(2)	5.606	45	191363	10.014
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	84906	9.551
40) Ethyl t-butyl ether	(2)	6.136	59	188350	10.156
43) 1,2-Dichloroethene (Total)	(2)		96	118698	19.696
44) 2-Butanone	(2)	6.364	43	85445	19.565
42) cis-1,2-Dichloroethene	(2)	6.387	96	62565	9.814
45) 2,2-Dichloropropane	(2)	6.396	77	74849	9.717
47) Propionitrile	(1)	6.464	54	136751	98.961
48) Methacrylonitrile	(2)	6.663	67	181171	49.366

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	34163	10.106
50) Tetrahydrofuran	(1)	6.724	71	24588	19.698
51) Chloroform	(2)	6.863	83	93507	9.867
52)$Dibromofluoromethane	(2)	7.072	113	280960	49.616
52)$Dibromofluoromethane	(2)	7.075	111	286315	49.589
53) 1,1,1-Trichloroethane	(2)	7.078	97	77742	9.611
54) Cyclohexane	(2)	7.175	56	96567	8.928
54) Cyclohexane	(2)	7.175	84	84021	8.942
54) Cyclohexane	(2)	7.175	69	29917	8.942
56) Carbon Tetrachloride	(2)	7.287	117	63638	9.276
55) 1,1-Dichloropropene	(2)	7.294	75	75943	9.694
58) Isobutyl Alcohol	(1)	7.458	41	94699	253.736
57)$1,2-Dichloroethane-d4	(2)	7.532	102	72410	50.173
57)$1,2-Dichloroethane-d4	(2)	7.528	65	317862	49.423
57)$1,2-Dichloroethane-d4	(2)	7.528	104	46131	50.043
60) Benzene	(2)	7.557	78	235083	9.978
61) 1,2-Dichloroethane	(2)	7.634	62	74555	9.839
61) 1,2-Dichloroethane	(2)	7.634	98	7256	9.676
65) t-Amyl methyl ether	(2)	7.740	73	187995	10.099
66)*Fluorobenzene	(2)	7.956	96	1158257	50.000
67) n-Heptane	(2)	7.959	43	65347MA	7.916
69) n-Butanol	(1)	8.326	56	166674M	518.868
71) Trichloroethene	(2)	8.425	95	57378	9.672
72) Methylcyclohexane	(2)	8.731	83	104101	9.459
72) Methylcyclohexane	(2)	8.731	98	46774	9.392
73) 1,2-Dichloropropane	(2)	8.766	63	59459	9.939
76) Methyl Methacrylate	(2)	8.843	69	56123	9.701
75) 1,4-Dioxane	(1)	8.859	88	22251M	252.018
74) Dibromomethane	(2)	8.875	93	37949	9.804
78) Bromodichloromethane	(2)	9.110	83	66403	9.560
79) 2-Nitropropane	(2)	9.387	41	38245M	18.178
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	24083	9.373
81) cis-1,3-Dichloropropene	(2)	9.638	75	89740	9.728
82) 4-Methyl-2-pentanone	(2)	9.808	43	182101	19.754
83)$Toluene-d8	(3)	9.933	98	1179588	50.250
83)$Toluene-d8	(3)	9.933	100	766795	50.427
88) Toluene	(3)	10.004	92	146792	9.974
90) 1,3-Dichloropropene (total)	(3)		100	170602	19.407

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.255	75	80862	9.679
91) Ethyl Methacrylate	(3)	10.310	69	101774	10.024
92) 1,1,2-Trichloroethane	(3)	10.457	97	55397	9.928
93) Tetrachloroethene	(3)	10.538	166	57668	9.252
94) 1,3-Dichloropropane	(3)	10.615	76	95319	10.005
96) 2-Hexanone	(3)	10.670	43	134577	19.858
97) Dibromochloromethane	(3)	10.824	129	54317	9.503
99) 1,2-Dibromoethane	(3)	10.937	107	59349	9.795
100)*Chlorobenzene-d5	(3)	11.358	117	897139	50.000
101) 1-Chlorohexane	(3)	11.364	91	68517	8.666
102) Chlorobenzene	(3)	11.383	112	167497	10.065
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	53804	9.812
104) Ethylbenzene	(3)	11.467	91	273085	9.708
106) m+p-Xylene	(3)	11.583	106	214450	19.380
108) Xylene (Total)	(3)		106	321712	29.193
107) o-Xylene	(3)	11.908	106	107262	9.813
109) Styrene	(3)	11.924	104	181265	10.036
110) Bromoform	(3)	12.078	173	38599	9.038
111) Isopropylbenzene	(3)	12.203	105	257704	9.400
112) Cyclohexanone	(1)	12.290	55	84173	243.422
114)$4-Bromofluorobenzene	(3)	12.348	95	448980	50.511
114)$4-Bromofluorobenzene	(3)	12.348	174	372460	50.544
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	99221M	10.583
115) Bromobenzene	(4)	12.464	156	73059	9.795
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	144573	49.994
117) 1,2,3-Trichloropropane	(4)	12.496	110	30082	10.457
119) n-Propylbenzene	(4)	12.528	91	295857	9.079
120) 2-Chlorotoluene	(4)	12.608	126	64871	9.370
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	216905	9.159
121) 4-Chlorotoluene	(4)	12.698	126	68187	9.462
124) tert-Butylbenzene	(4)	12.907	134	42119M	8.599
125) Pentachloroethane	(4)	12.936	167	40747	9.662
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	231031	9.256
127) sec-Butylbenzene	(4)	13.068	105	254340	8.702
129) 1,3-Dichlorobenzene	(4)	13.168	146	133435	9.735
130) p-Isopropyltoluene	(4)	13.171	119	222820	8.812
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	496298	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	137520	9.678

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Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

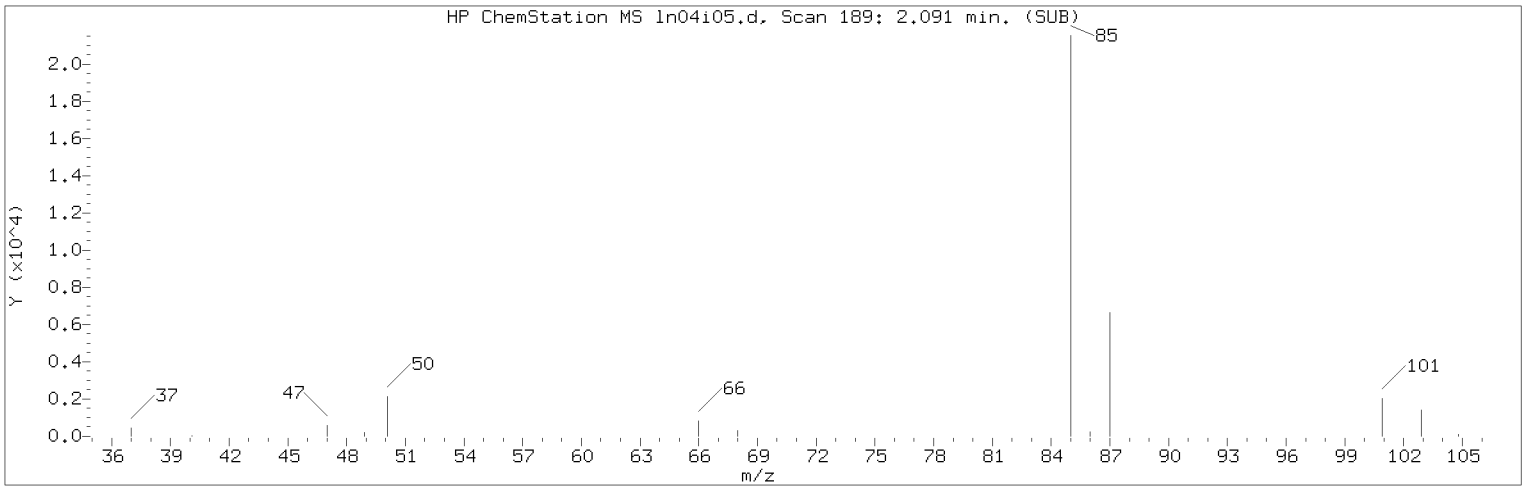
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

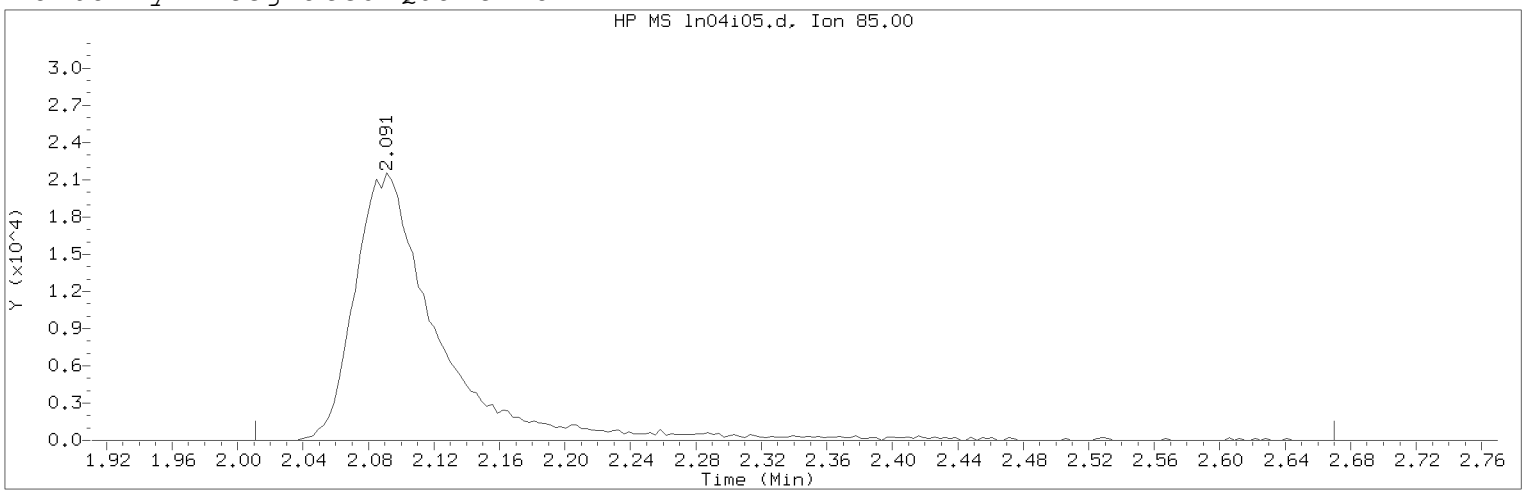
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	263873	9.980
135) Benzyl Chloride	(4)	13.319	91	189013	9.442
136) 1,3-Diethylbenzene	(4)	13.370	119	162518	9.876
141) Diethylbenzene (total)	(4)		100	469676	29.503
137) 1,4-Diethylbenzene	(4)	13.444	119	170802	9.797
139) n-Butylbenzene	(4)	13.464	92	112696	8.717
138) 1,2-Dichlorobenzene	(4)	13.502	146	133767	9.890
140) 1,2-Diethylbenzene	(4)	13.518	119	136356	9.830
142) 1,2-Dibromo-3-chloropropane	(4)	14.042	75	21471	10.462
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	94358	9.080
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	93971	9.300
147) Hexachlorobutadiene	(4)	14.666	225	44299	9.286
148) Naphthalene	(4)	14.772	128	328233	10.105
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	92049	9.363
150) 2-Methylnaphthalene	(4)	15.563	142	202392	10.118

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

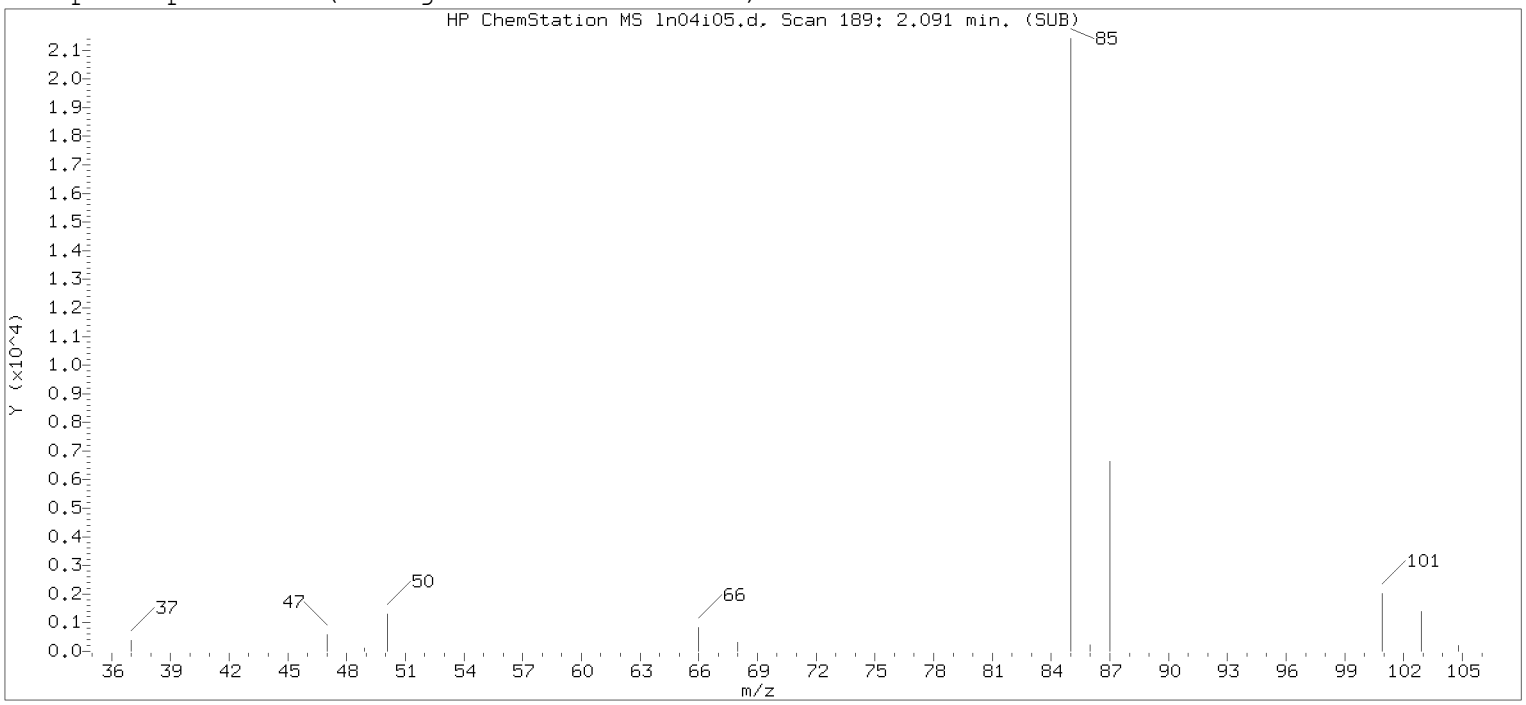
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 189
Retention Time (minutes): 2.091
Quant Ion : 85.00
Area (flag) : 76947M
On-Column Amount (ng) : 9.5263
Integration start scan : 163 Integration stop scan: 368
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

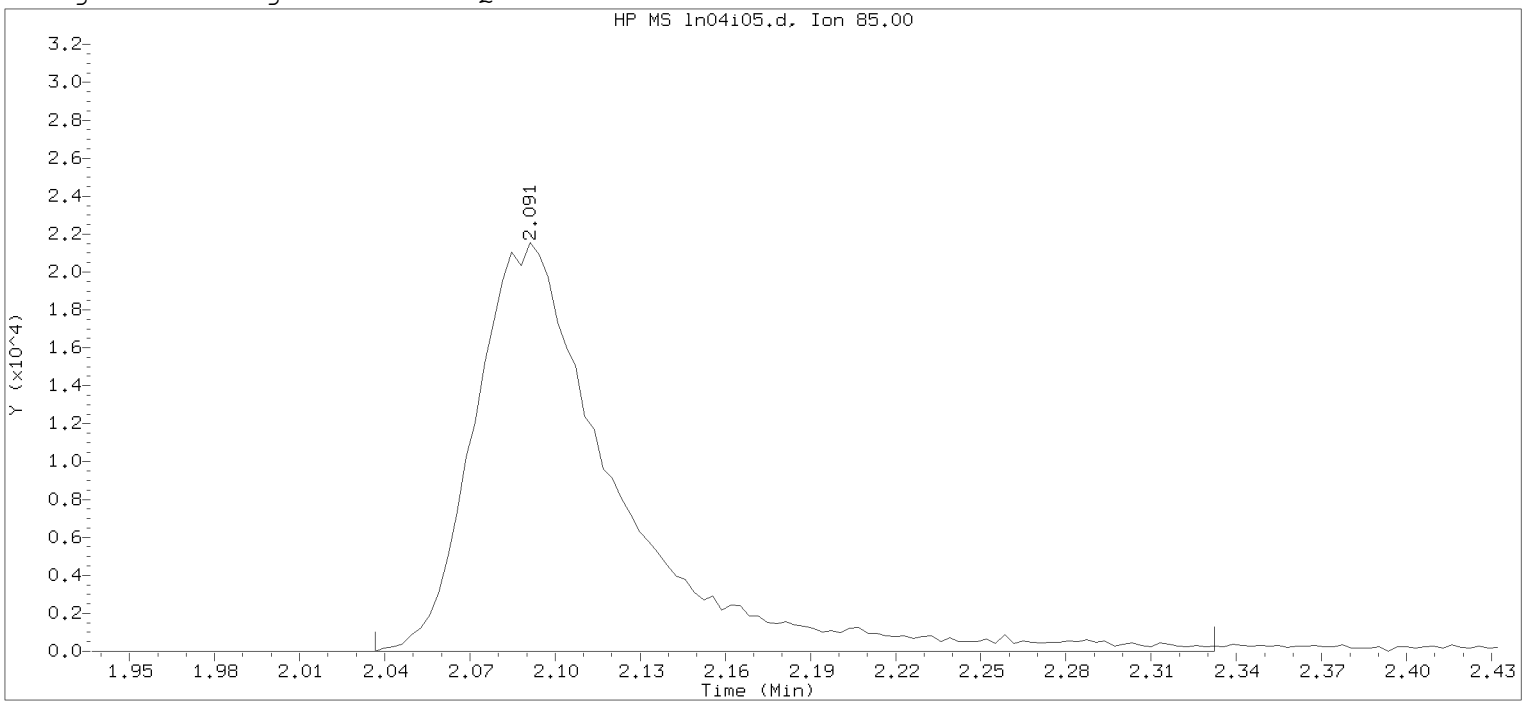
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

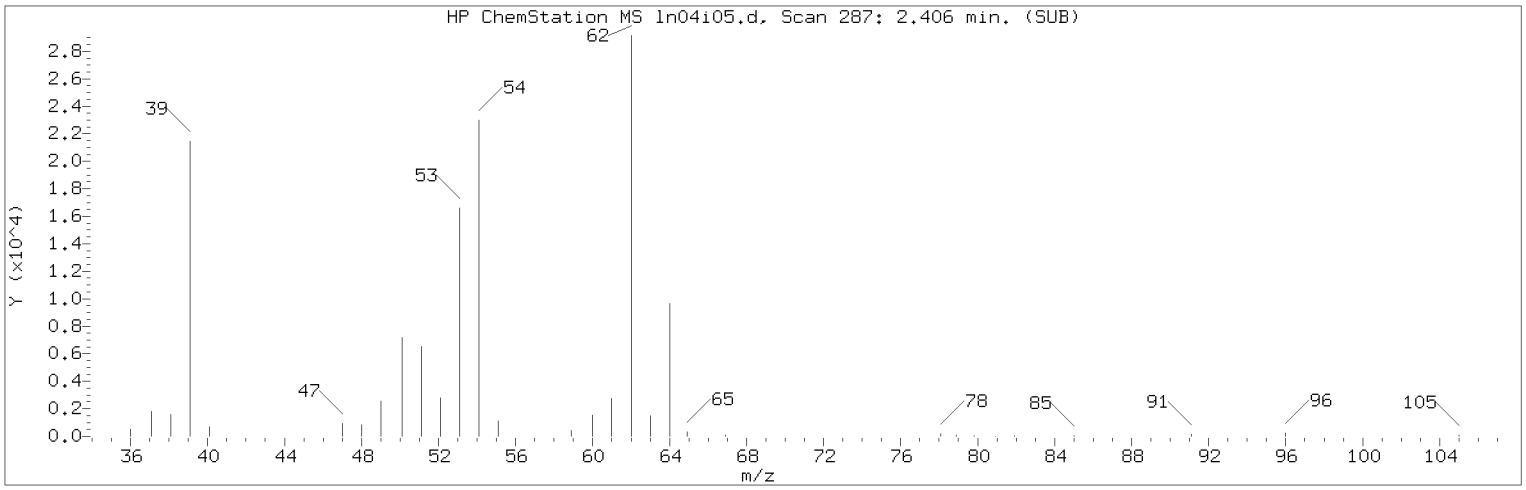
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

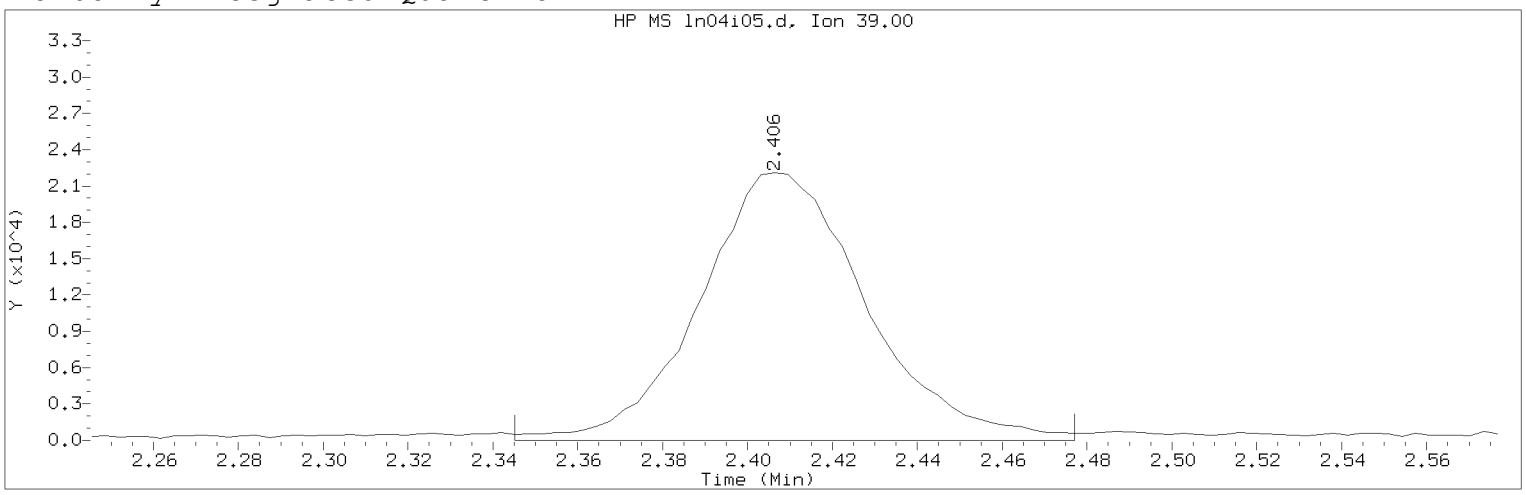
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 189
Retention Time (minutes): 2.091
Quant Ion : 85.00
Area : 74877
On-column Amount (ng) : 9.3136
Integration start scan : 171 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

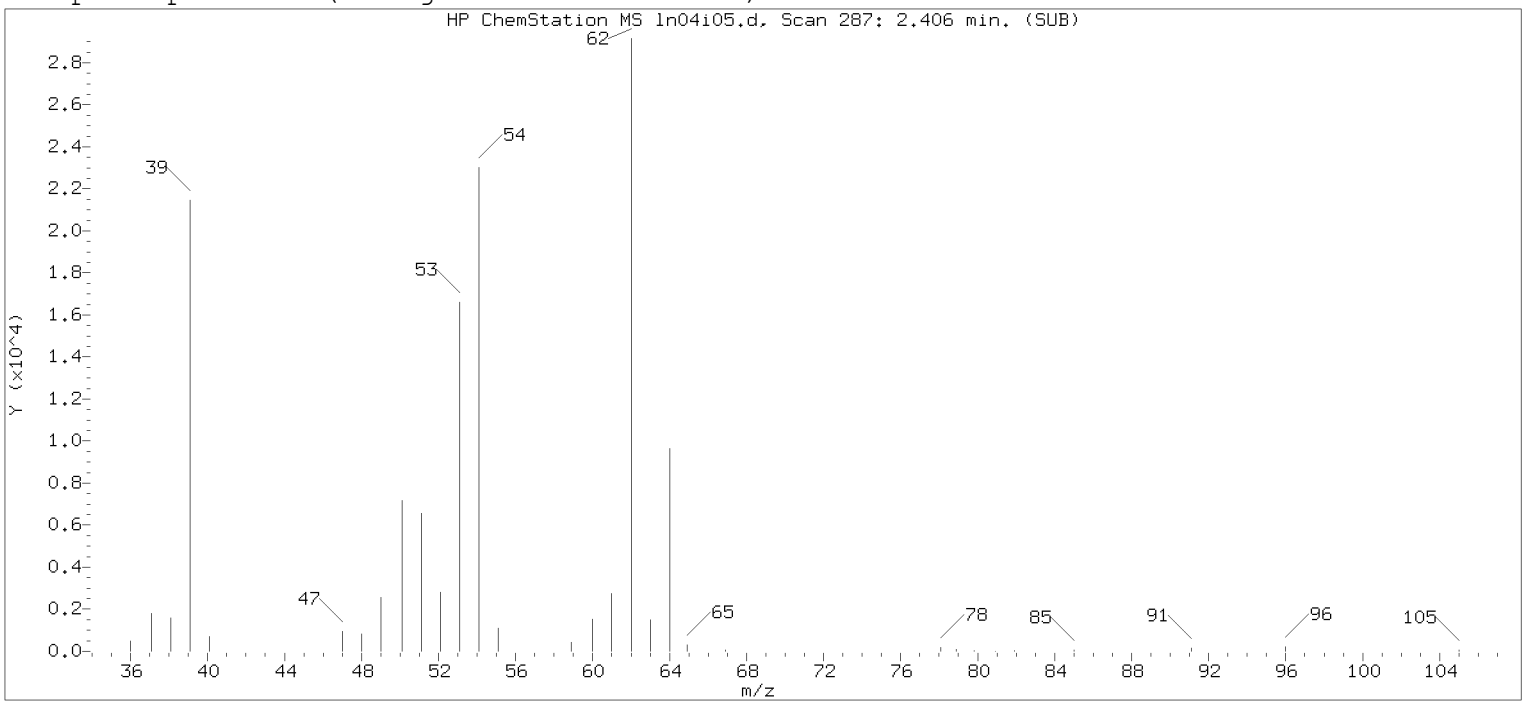
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 60141M
On-Column Amount (ng) : 9.3042
Integration start scan : 267 Integration stop scan: 308
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

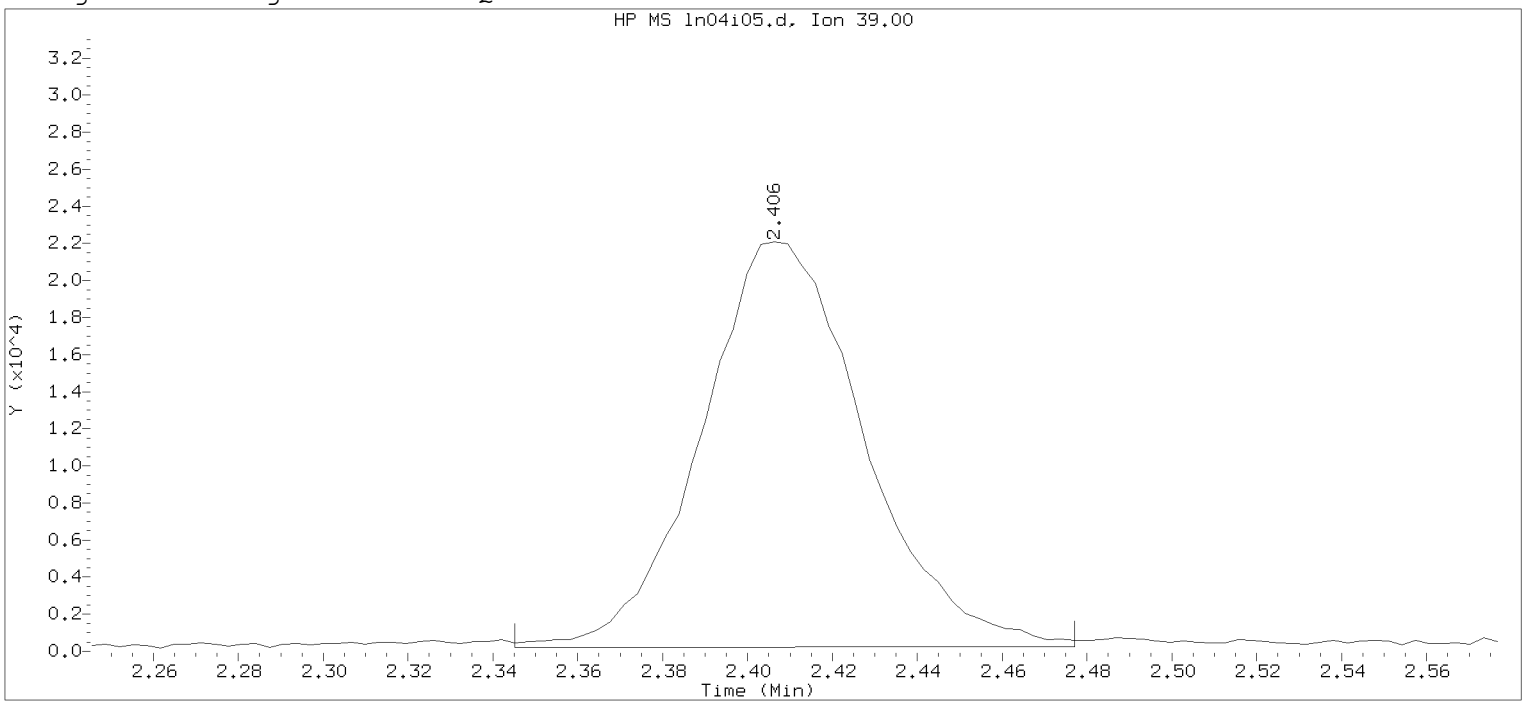
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

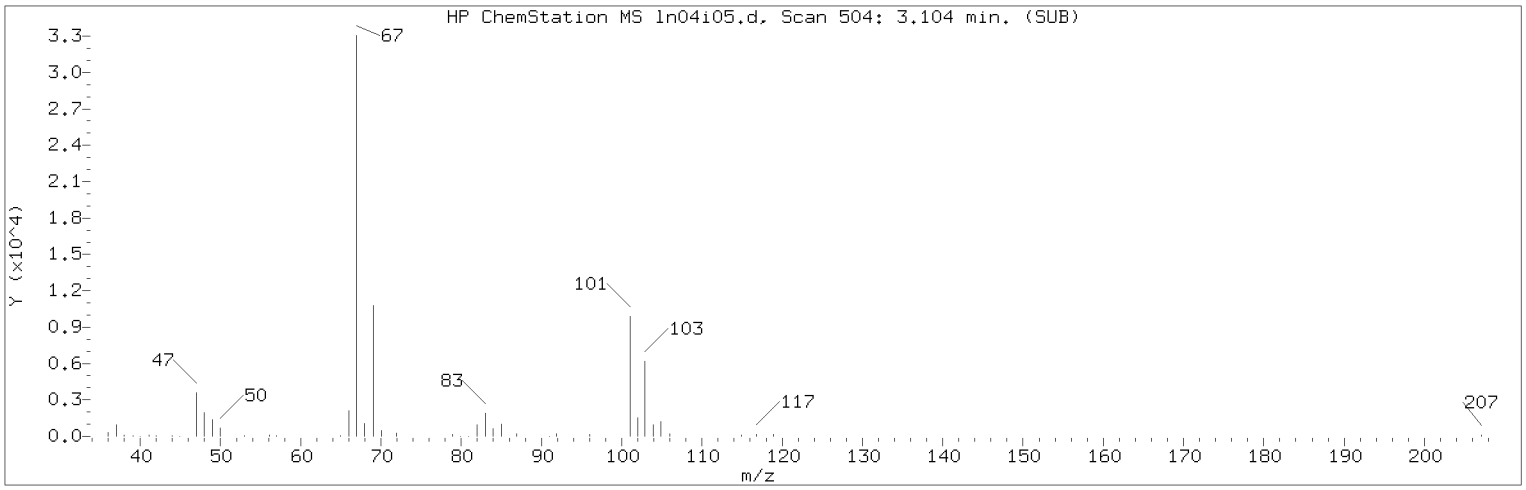
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

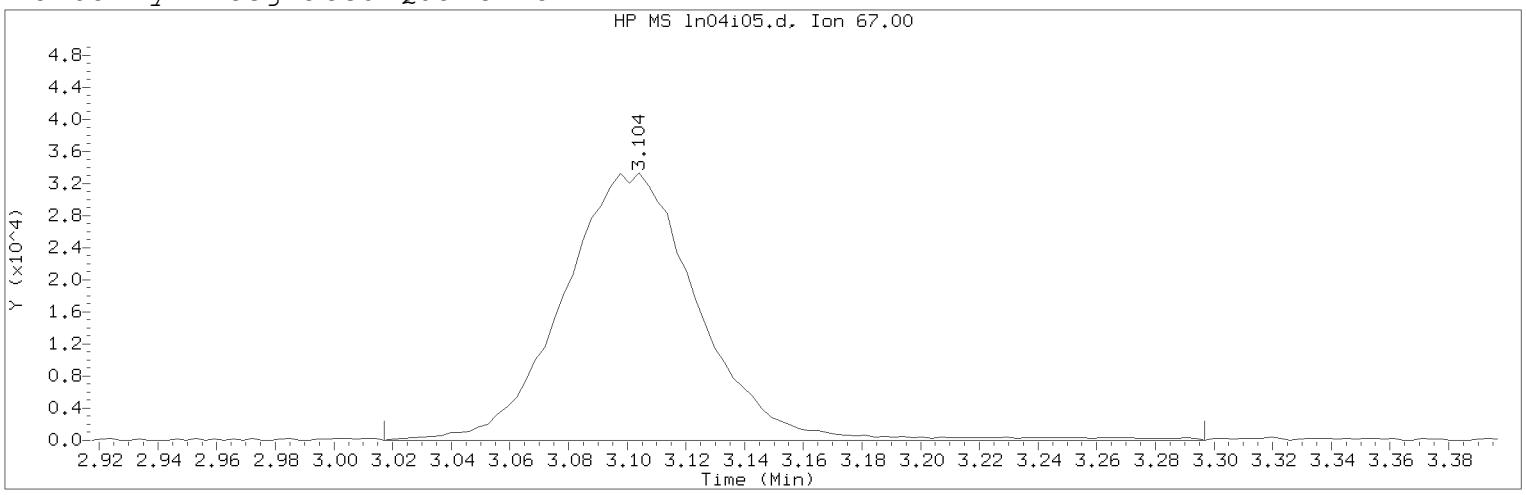
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 58240
On-column Amount (ng) : 9.5707
Integration start scan : 267 Integration stop scan: 308
Y at integration start : 206 Y at integration end: 250

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

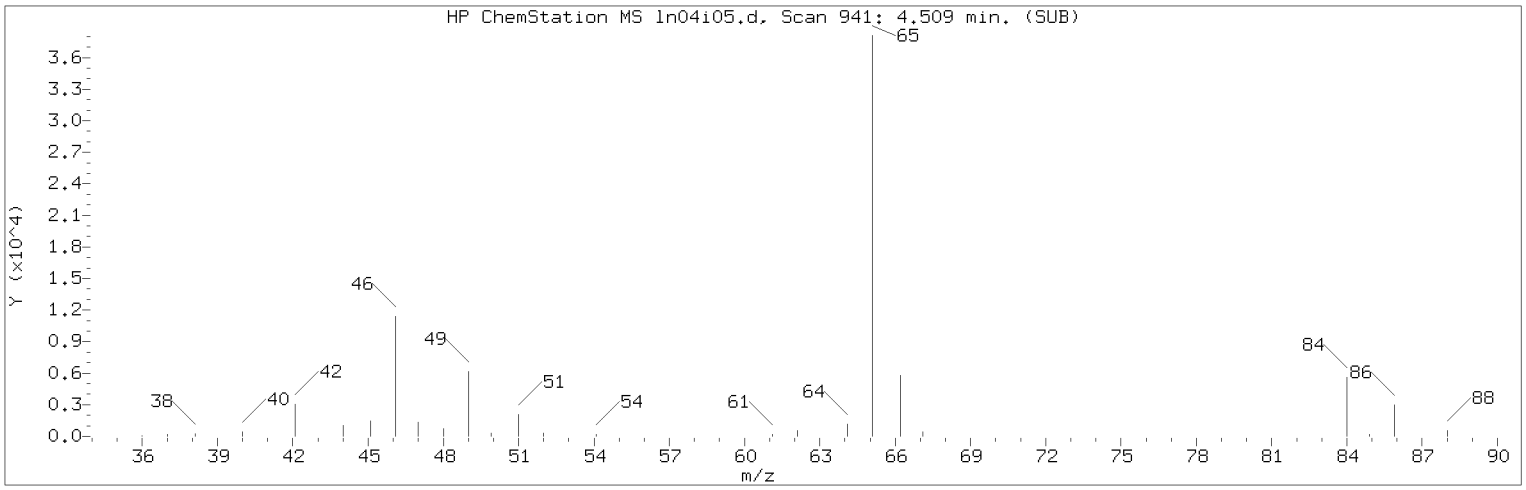
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 504
Retention Time (minutes): 3.104
Quant Ion : 67.00
Area (flag) : 106956M
On-Column Amount (ng) : 10.4593
Integration start scan : 476 Integration stop scan: 563
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

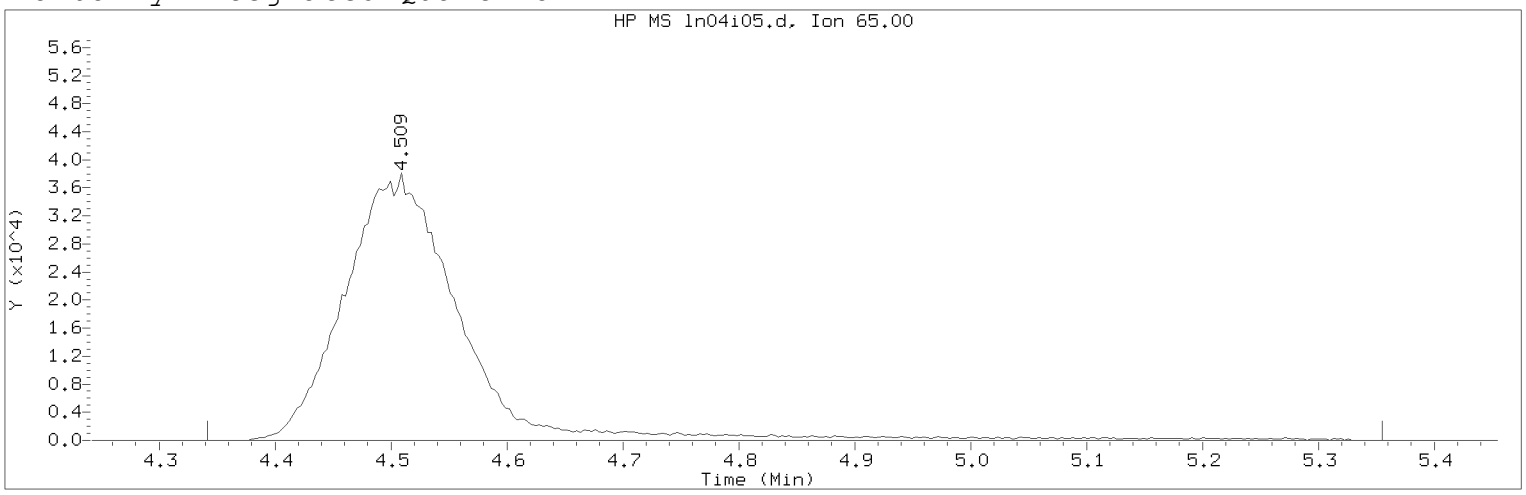
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

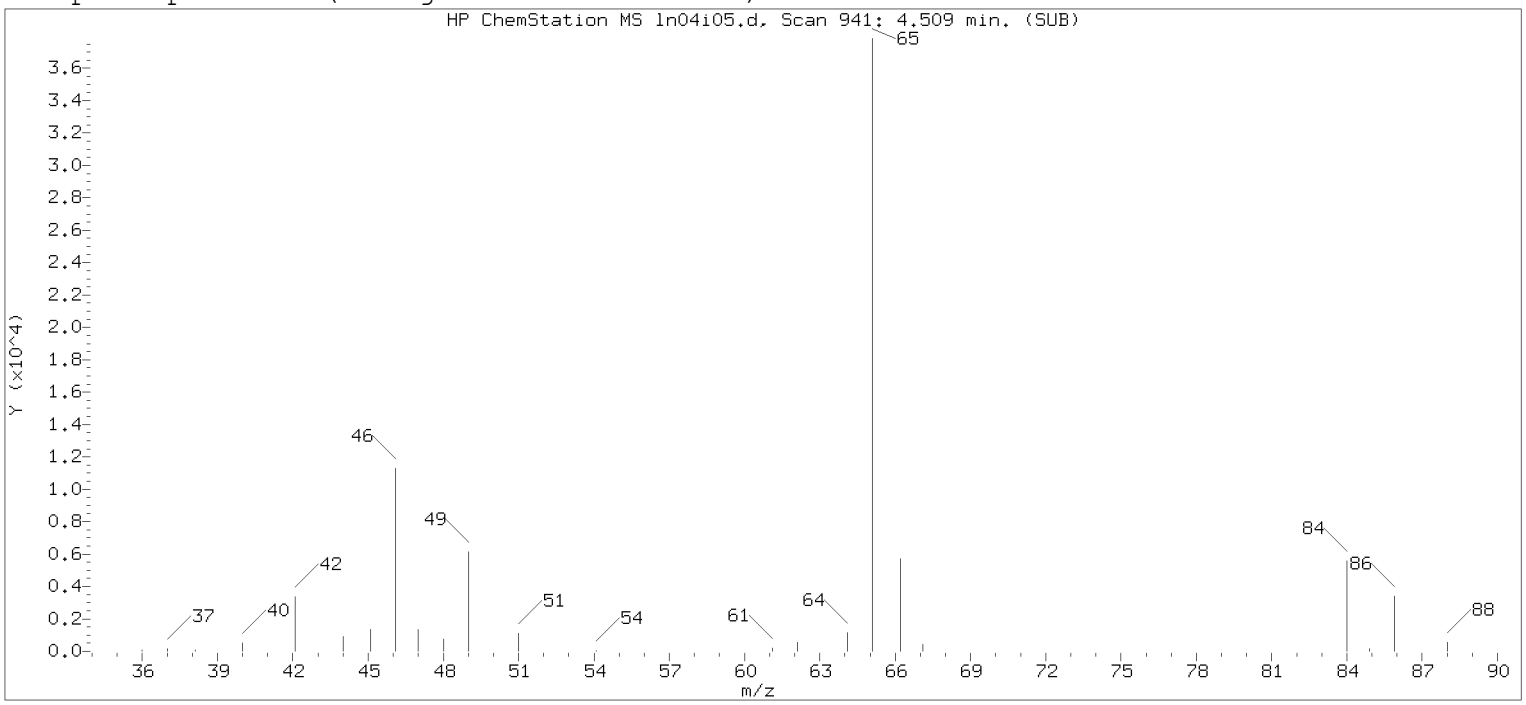
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 263427M
On-Column Amount (ng) : 250.0000
Integration start scan : 888 Integration stop scan: 1203
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

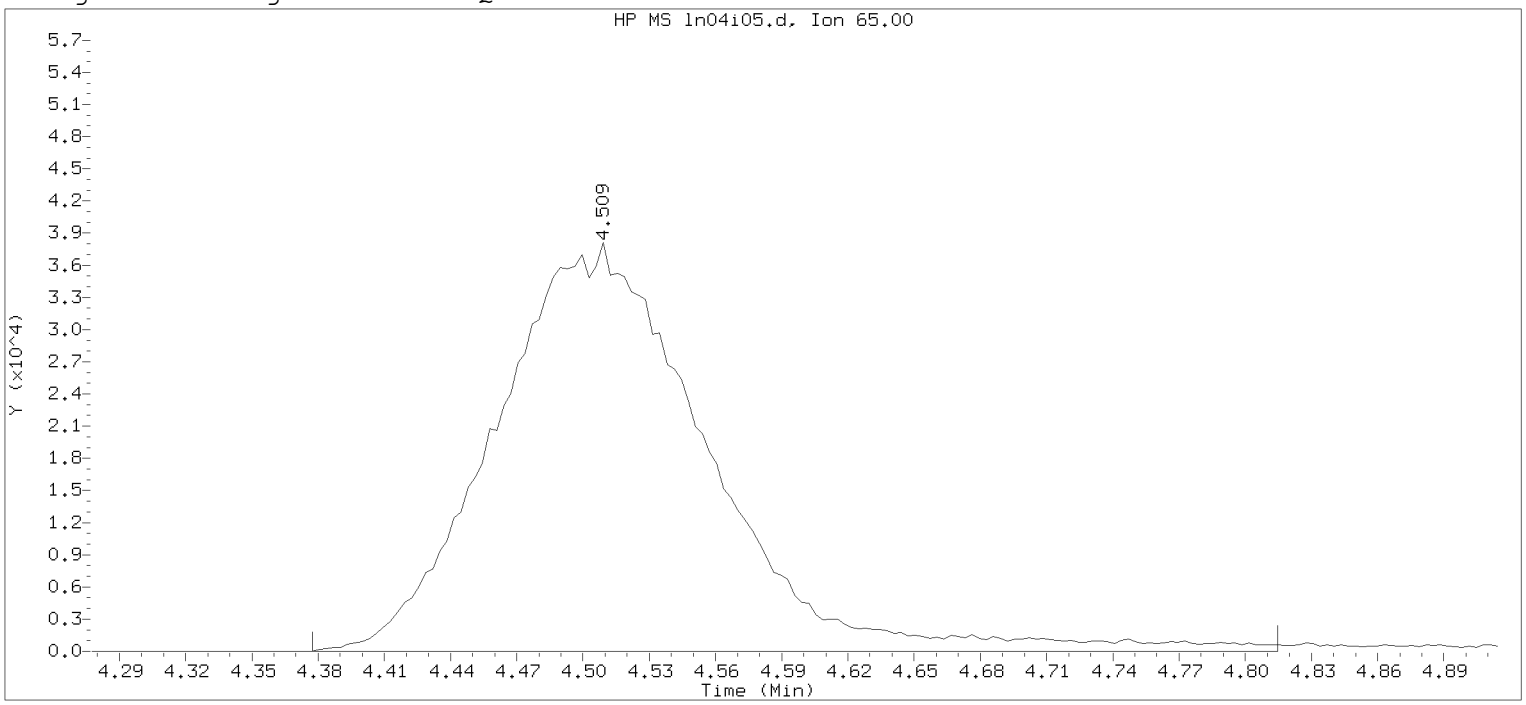
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

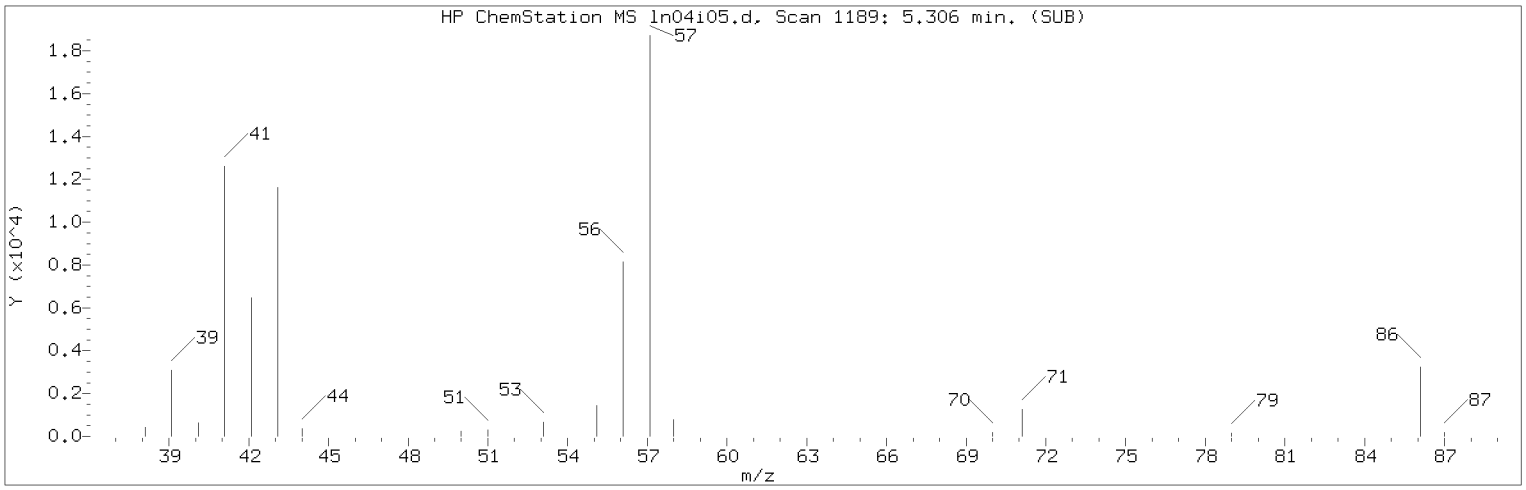
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

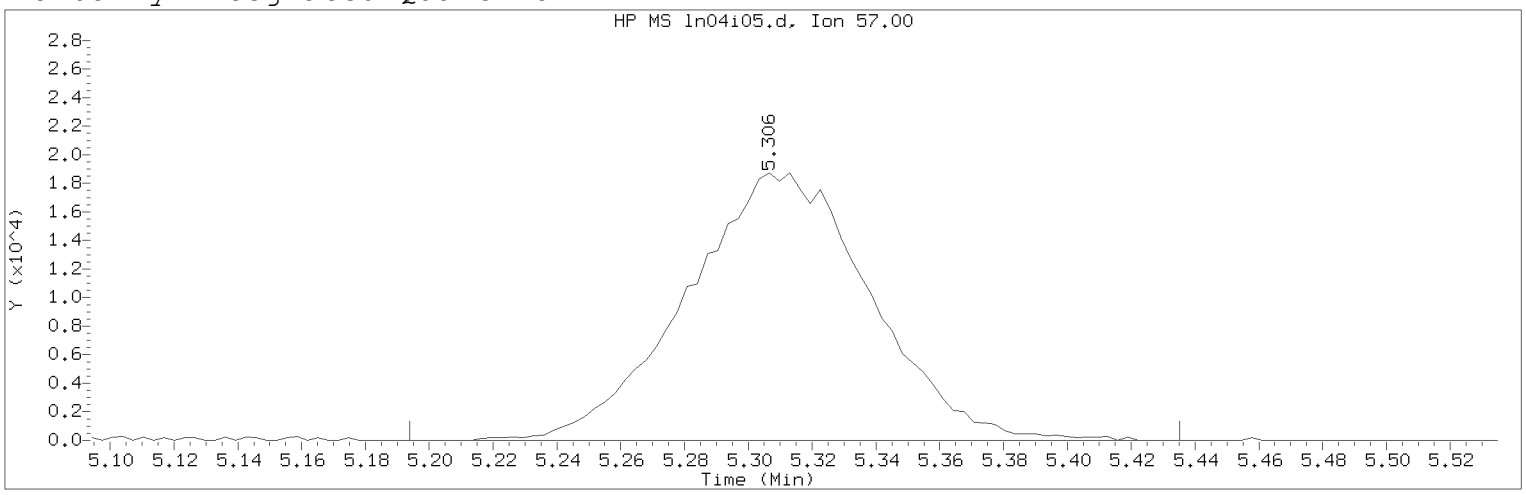
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 253092
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1035
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

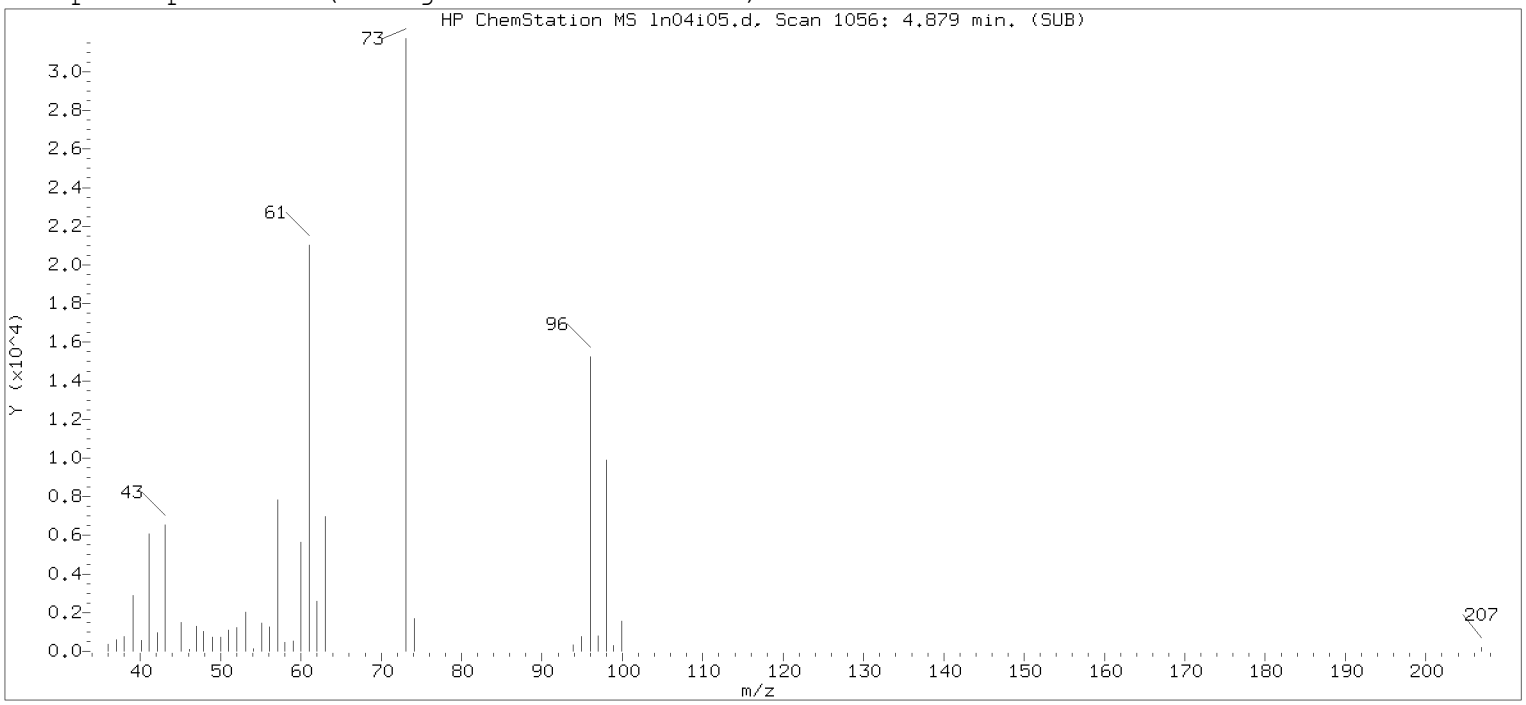
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1189
Retention Time (minutes): 5.306
Quant Ion : 57.00
Area (flag) : 75187M
On-Column Amount (ng) : 8.5083
Integration start scan : 1153 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

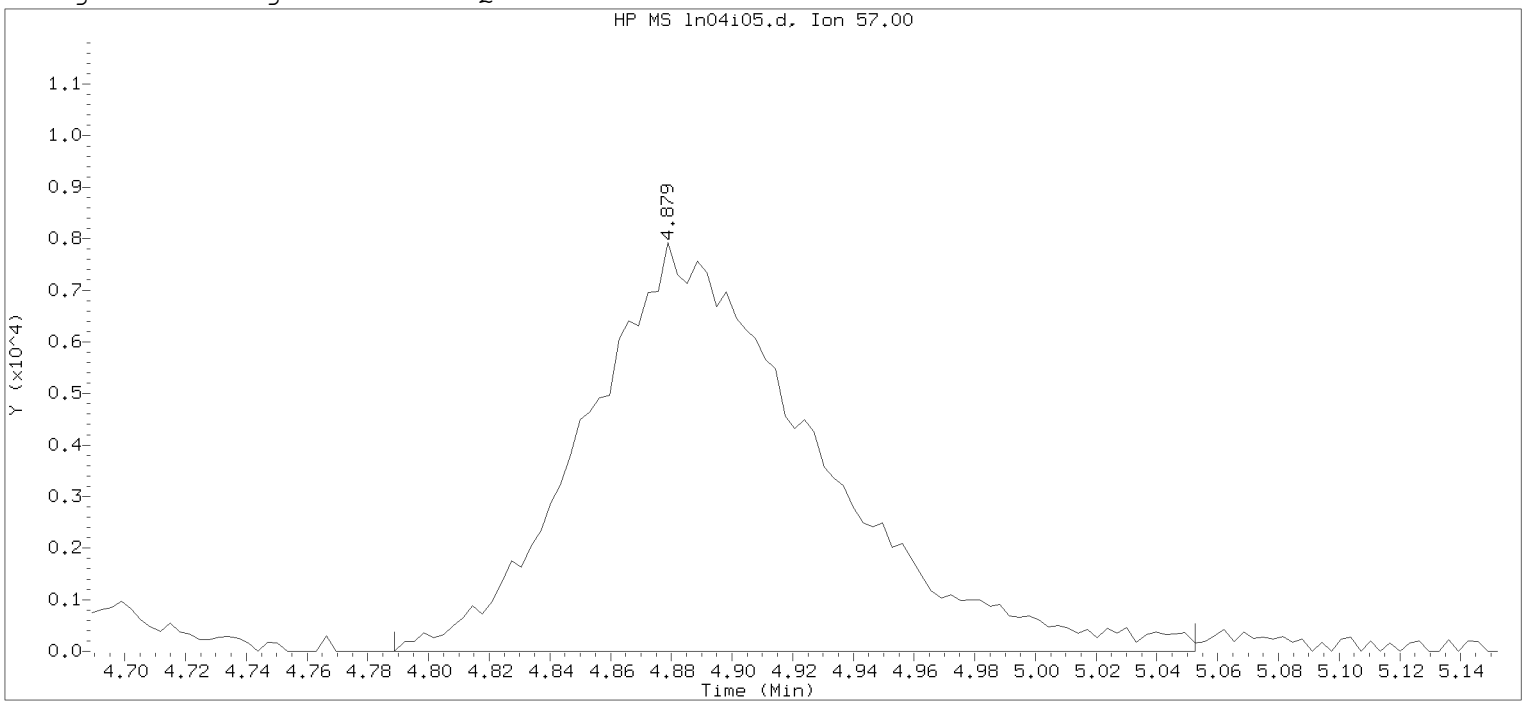
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

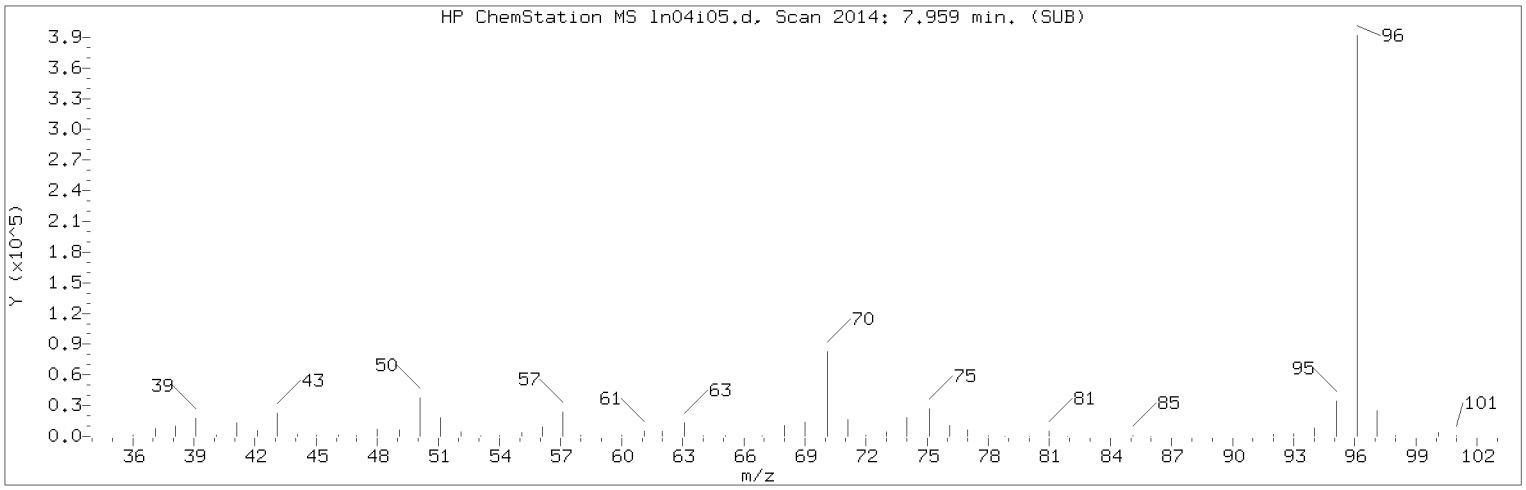
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

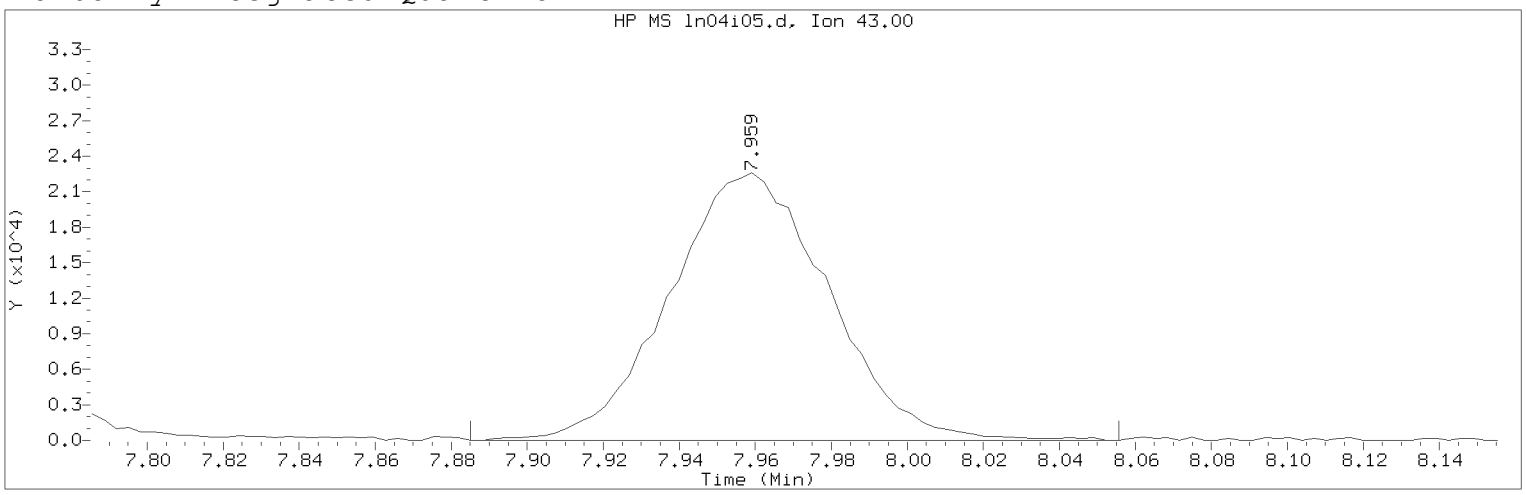
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1056		
Retention Time (minutes)	: 4.879		
Quant Ion	: 57.00		
Area	: 42116		
On-column Amount (ng)	: 11.5193		
Integration start scan	: 1027	Integration stop scan:	1109
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

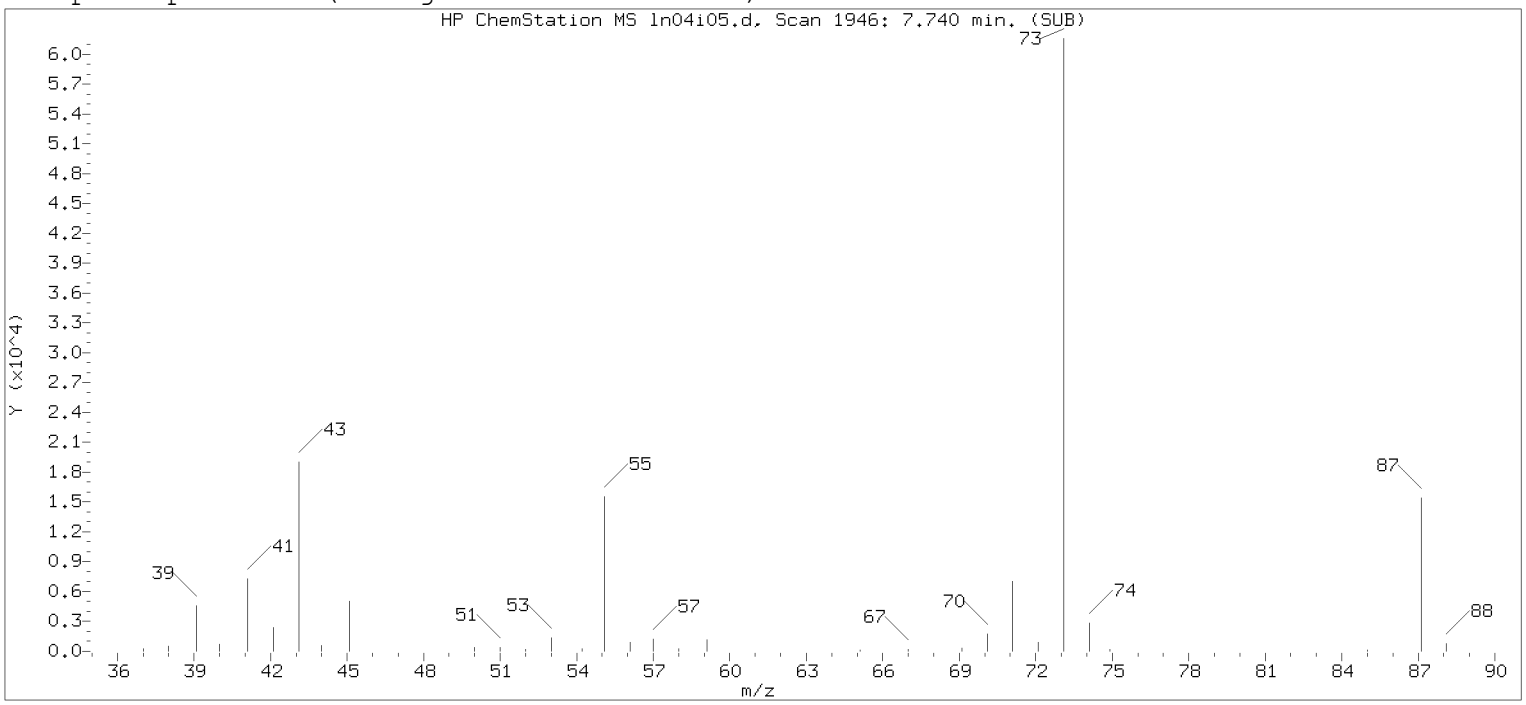
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2014
Retention Time (minutes): 7.959
Quant Ion : 43.00
Area (flag) : 65347MA
On-Column Amount (ng) : 7.9157
Integration start scan : 1990 Integration stop scan: 2043
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

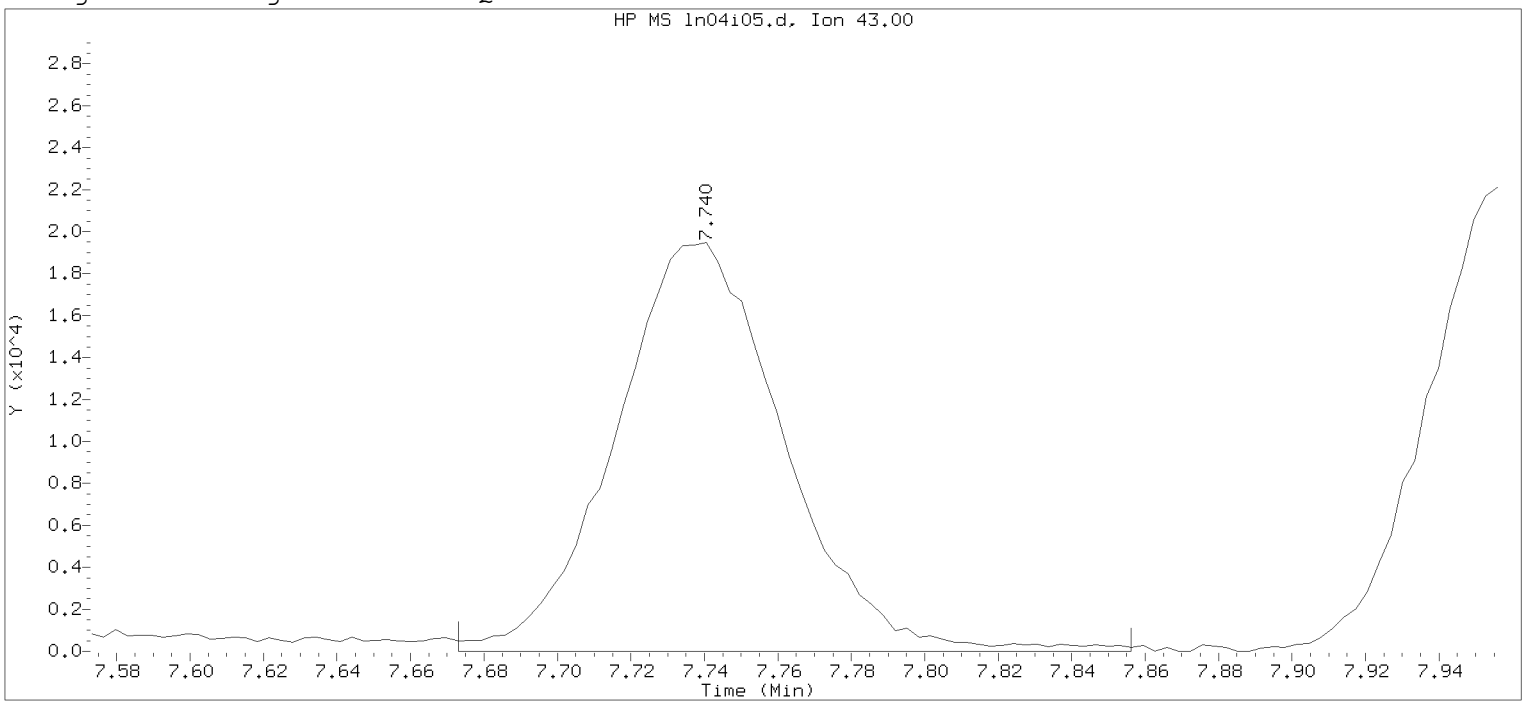
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

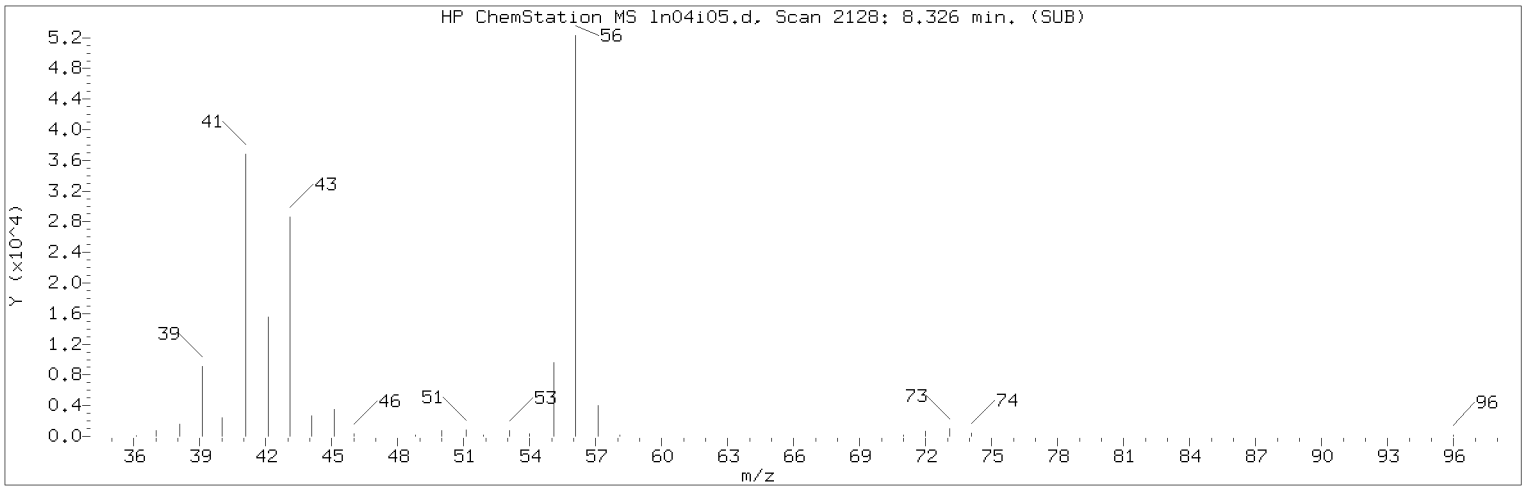
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

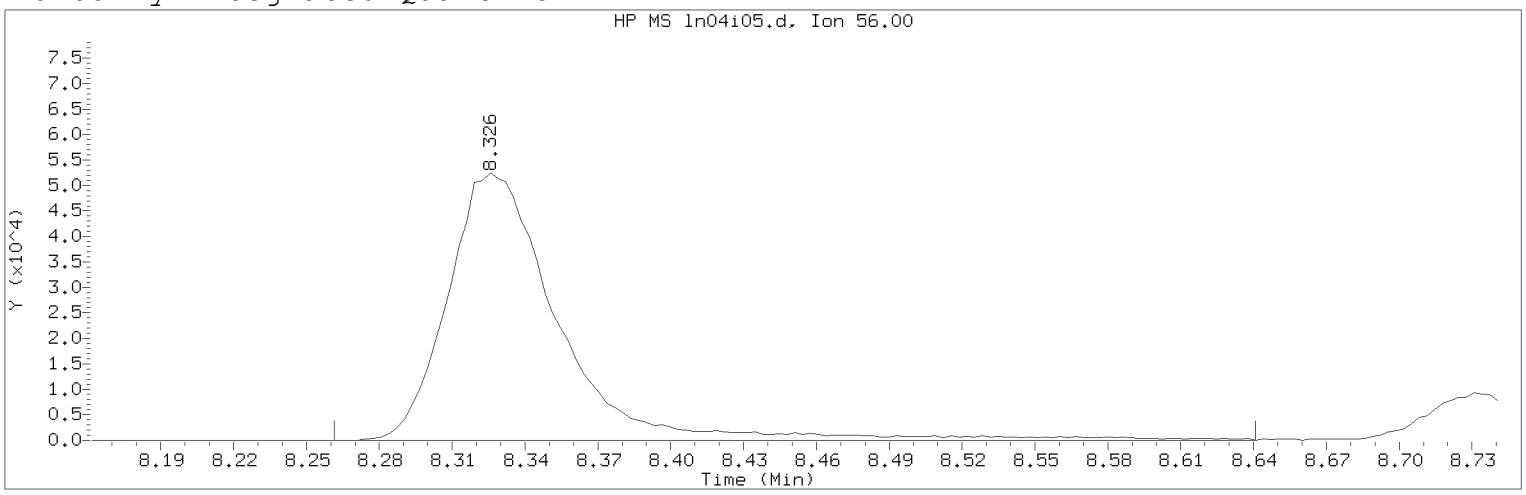
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.740
Quant Ion : 43.00
Area : 62104
On-column Amount (ng) : 10.1613
Integration start scan : 1924 Integration stop scan: 1981
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user[illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

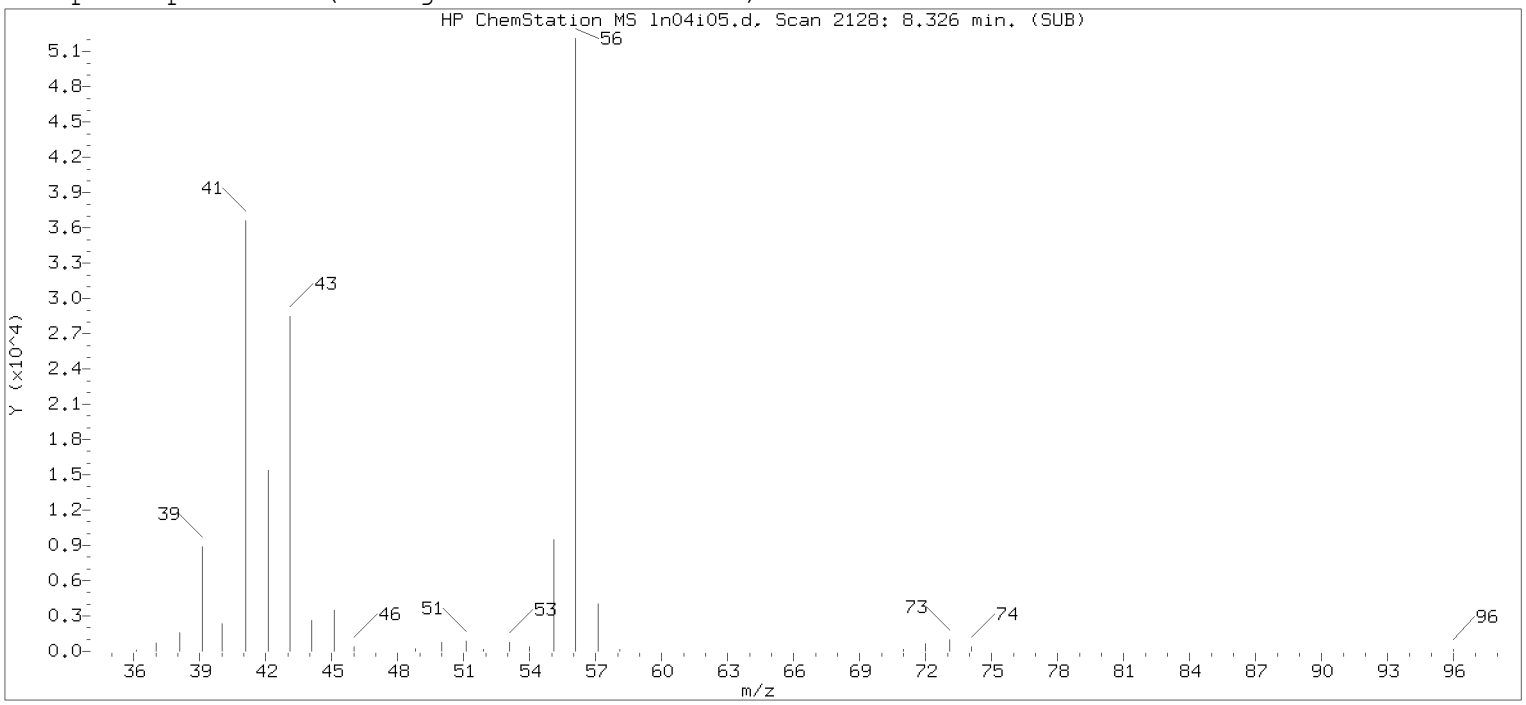
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area (flag) : 166674M
On-Column Amount (ng) : 518.8682
Integration start scan : 2107 Integration stop scan: 2225
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

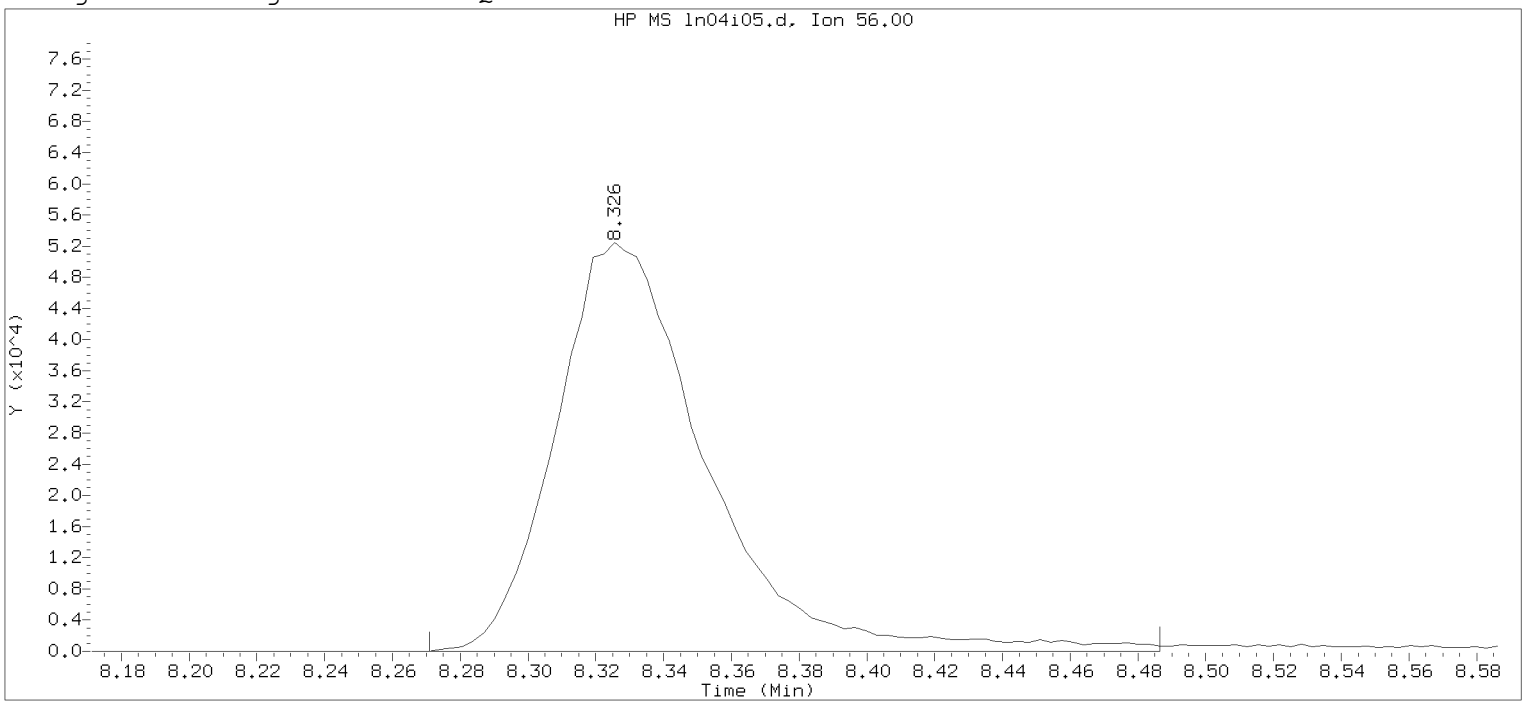
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

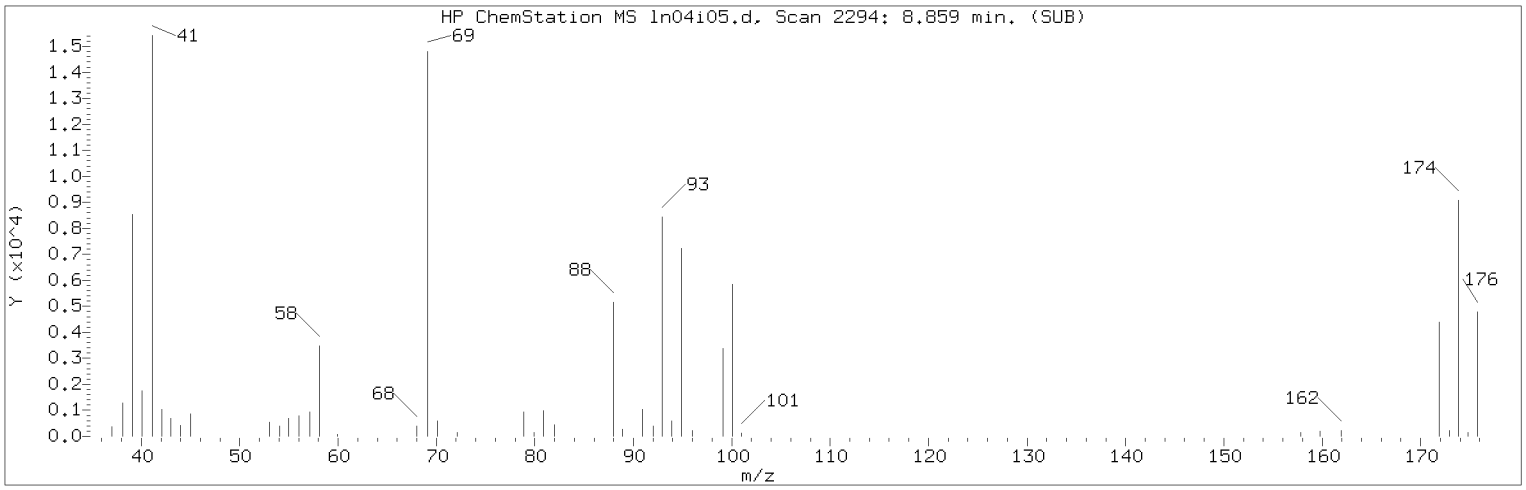
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

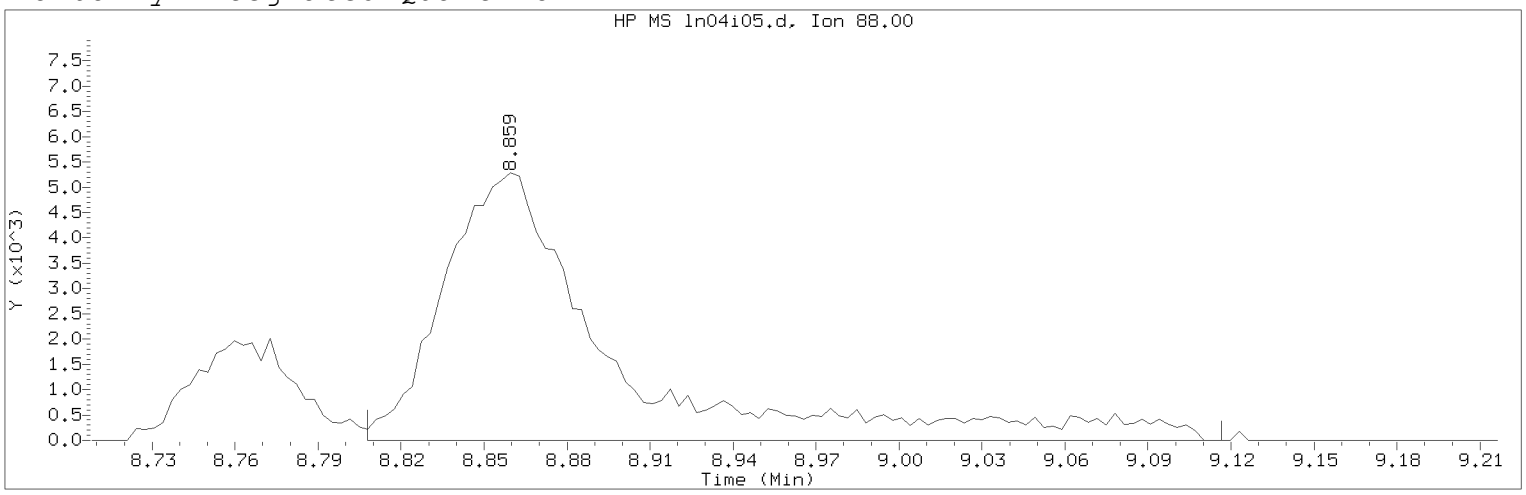
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area : 161642
On-column Amount (ng) : 524.2963
Integration start scan : 2110 Integration stop scan: 2177
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

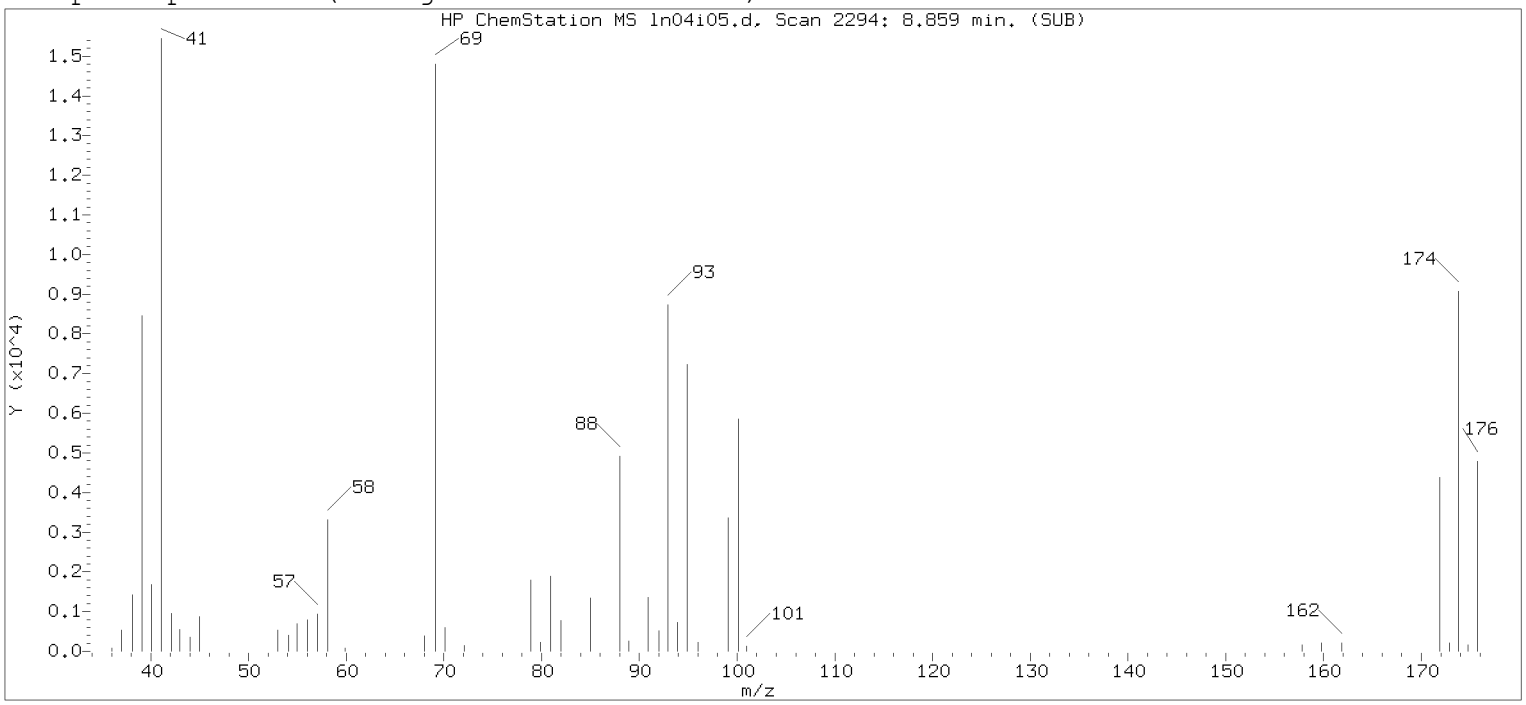
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2294
Retention Time (minutes): 8.859
Quant Ion : 88.00
Area (flag) : 22251M
On-Column Amount (ng) : 252.0176
Integration start scan : 2277 Integration stop scan: 2373
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

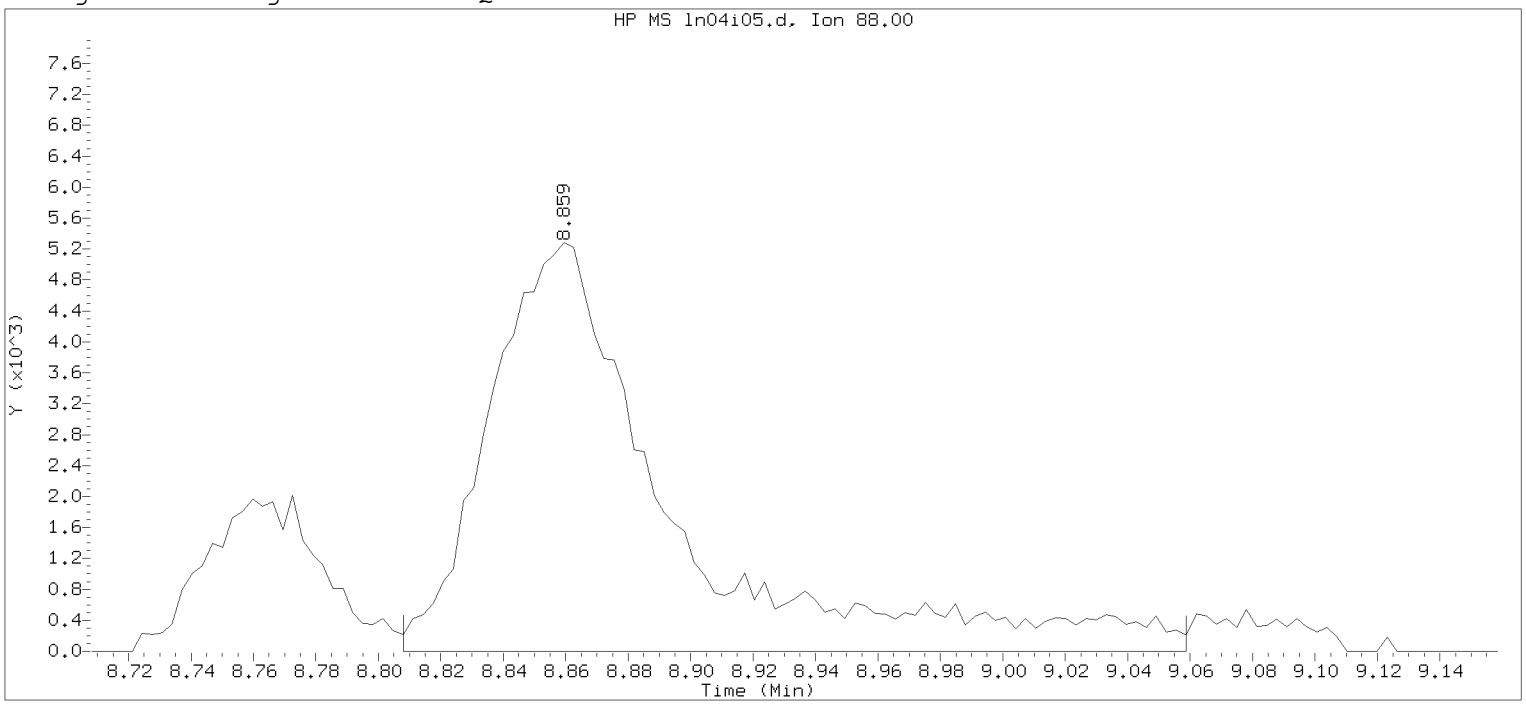
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

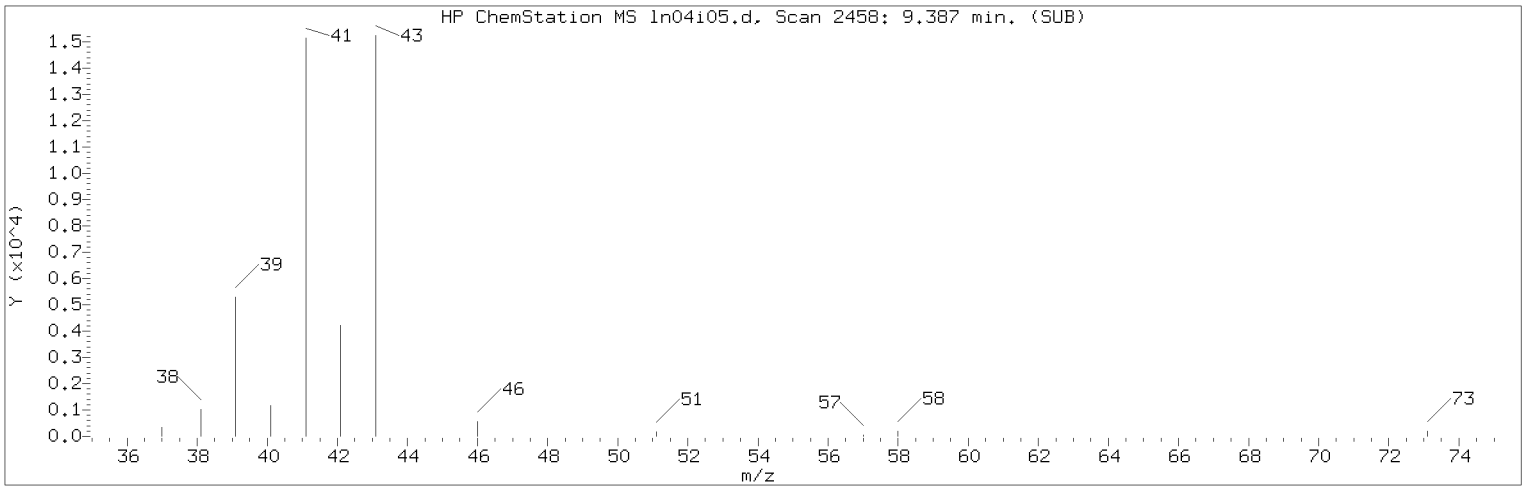
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

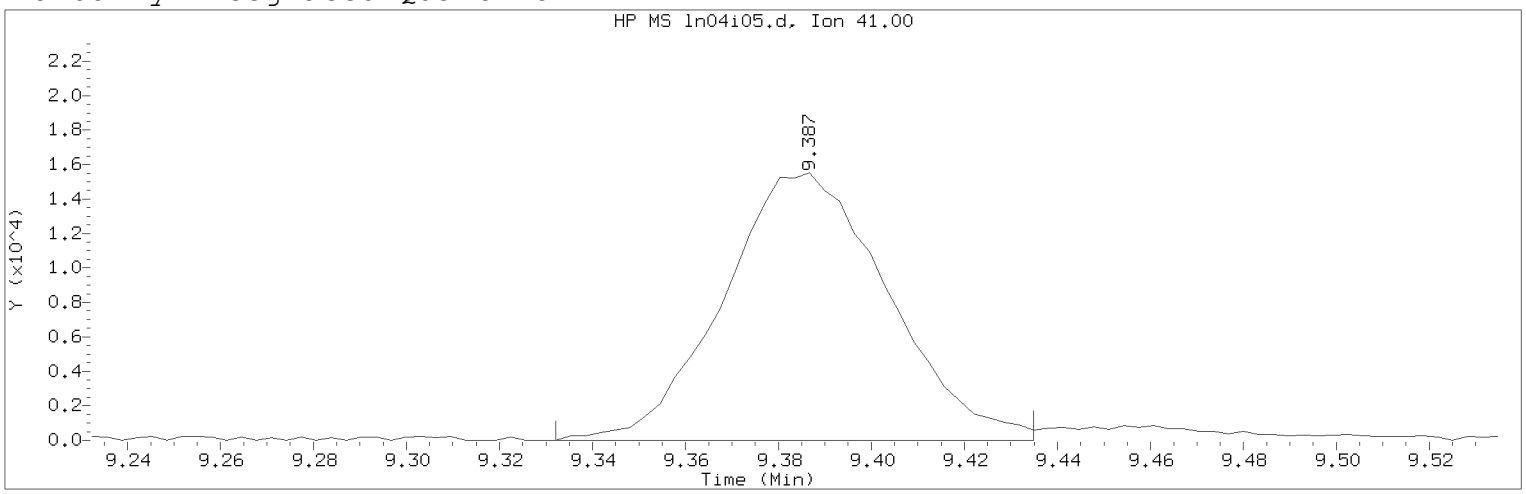
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2294
Retention Time (minutes): 8.859
Quant Ion : 88.00
Area : 21165
On-column Amount (ng) : 248.6410
Integration start scan : 2277 Integration stop scan: 2355
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

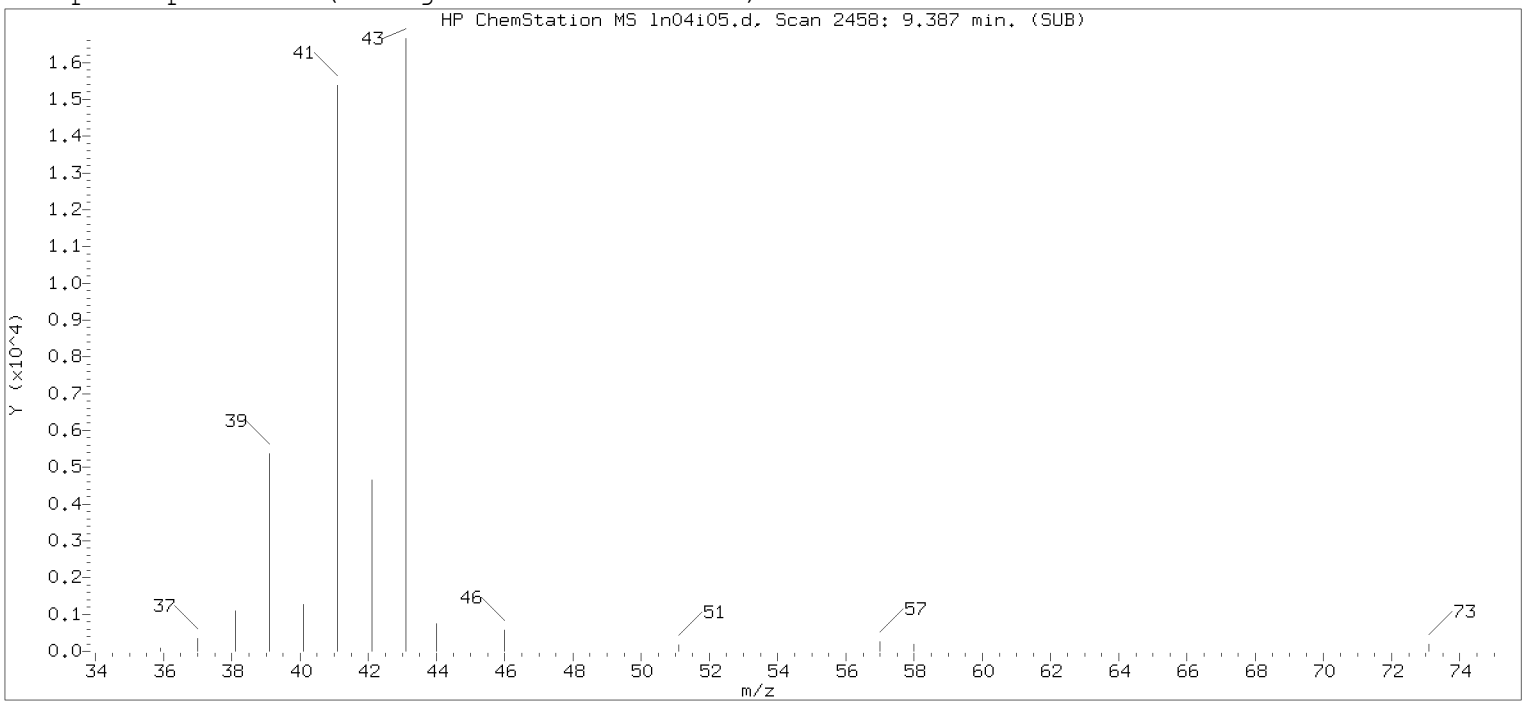
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2458
Retention Time (minutes): 9.387
Quant Ion : 41.00
Area (flag) : 38245M
On-Column Amount (ng) : 18.1785
Integration start scan : 2440 Integration stop scan: 2472
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

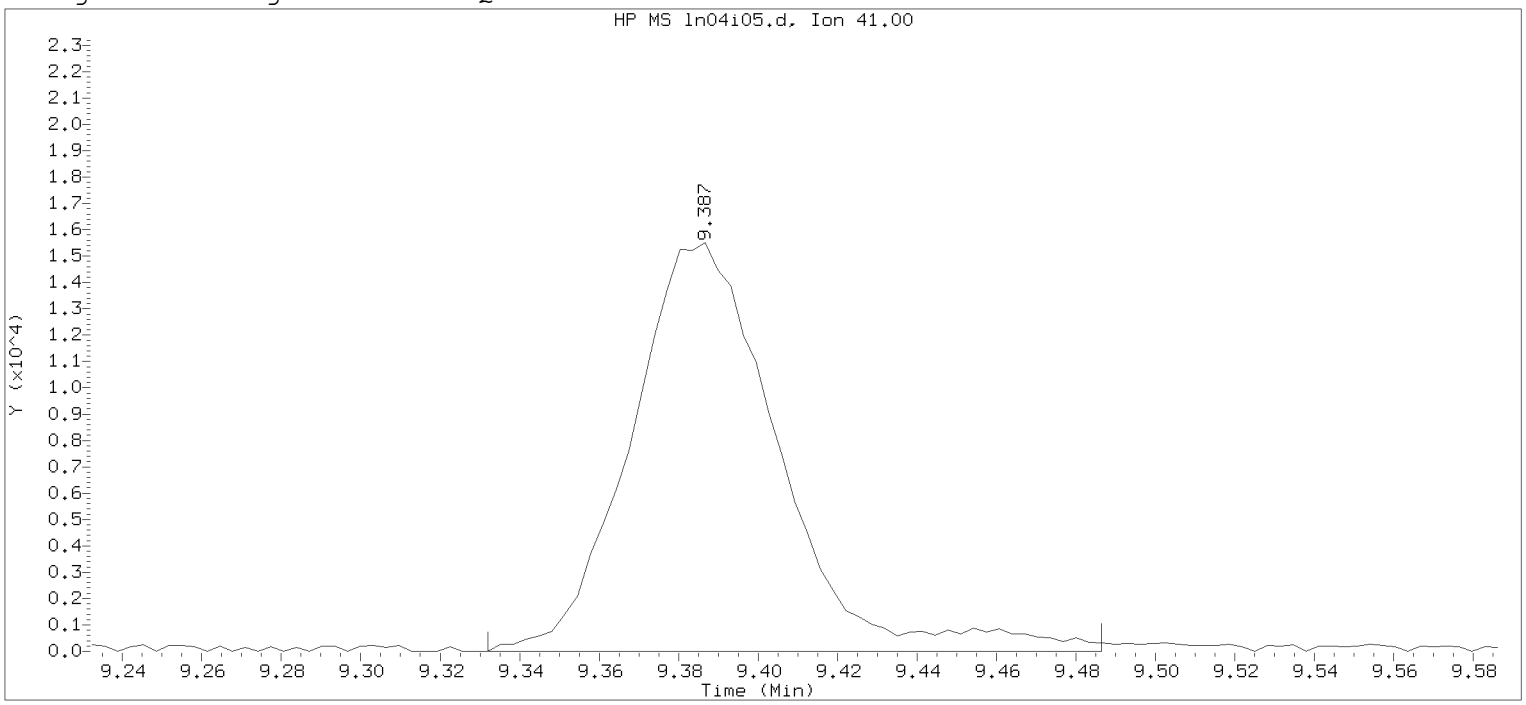
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

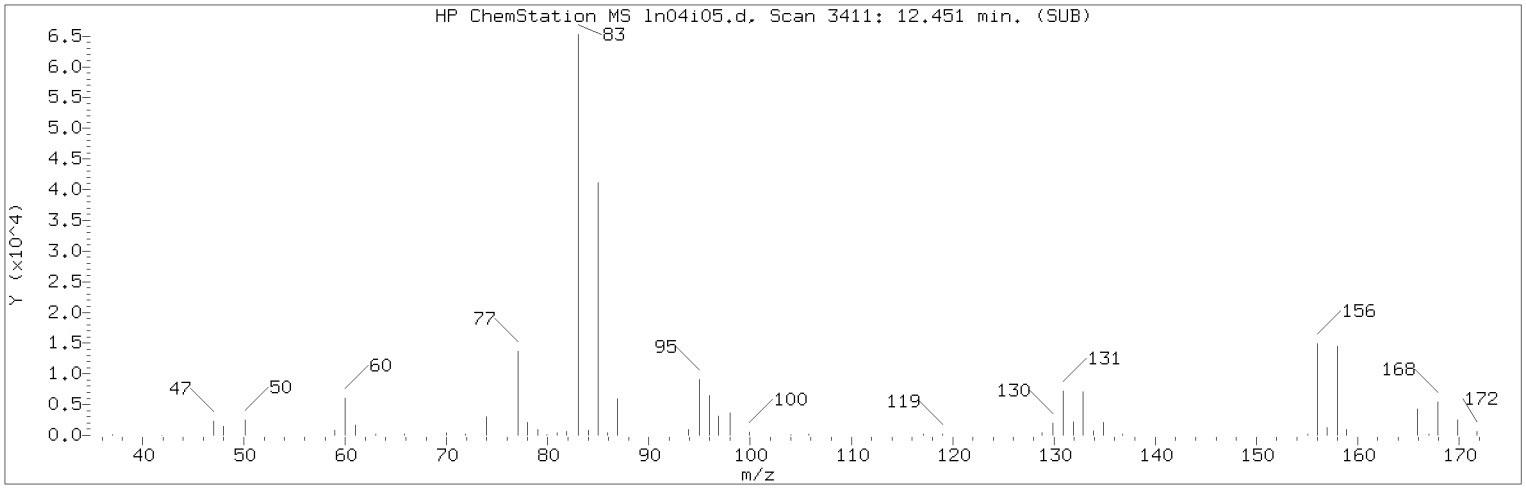
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

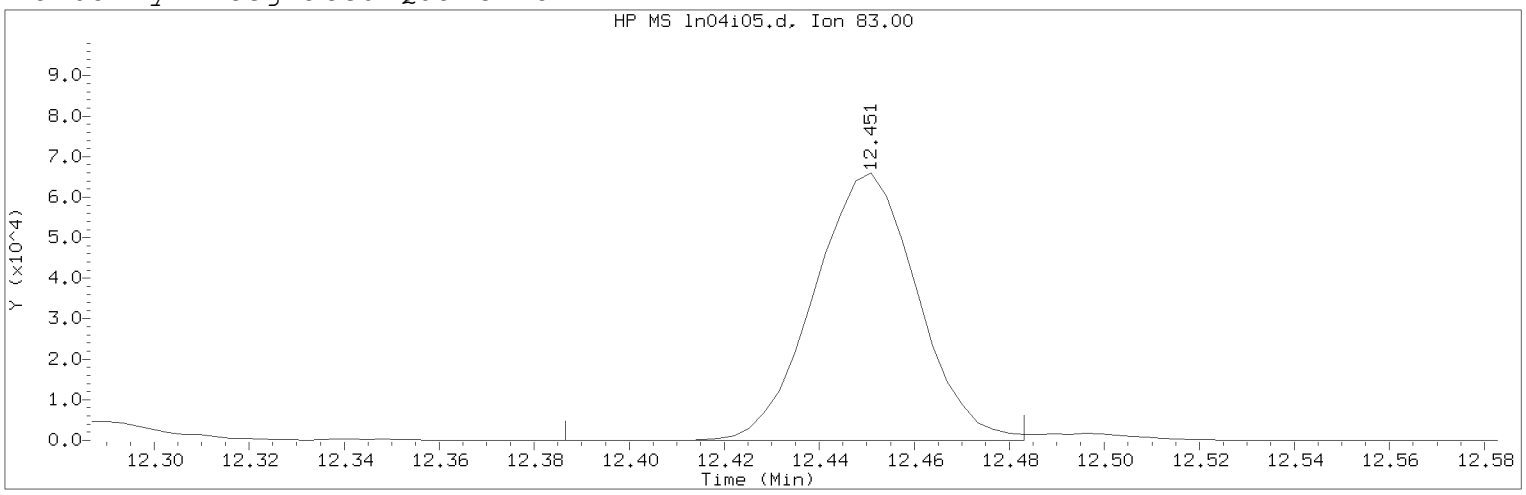
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2458
Retention Time (minutes): 9.387
Quant Ion : 41.00
Area : 40127
On-column Amount (ng) : 18.9522
Integration start scan : 2440 Integration stop scan: 2488
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

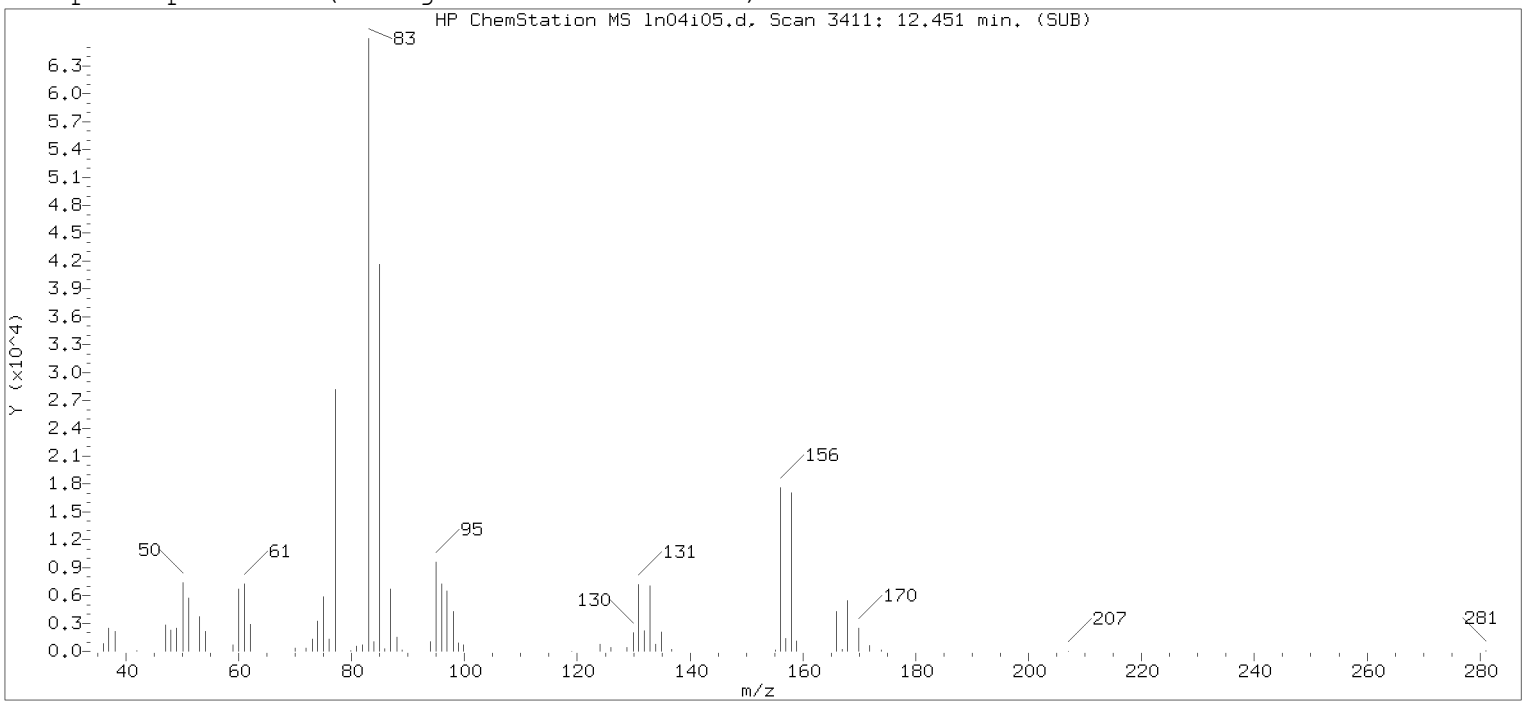
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 99221M
On-Column Amount (ng) : 10.5834
Integration start scan : 3390 Integration stop scan: 3420
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

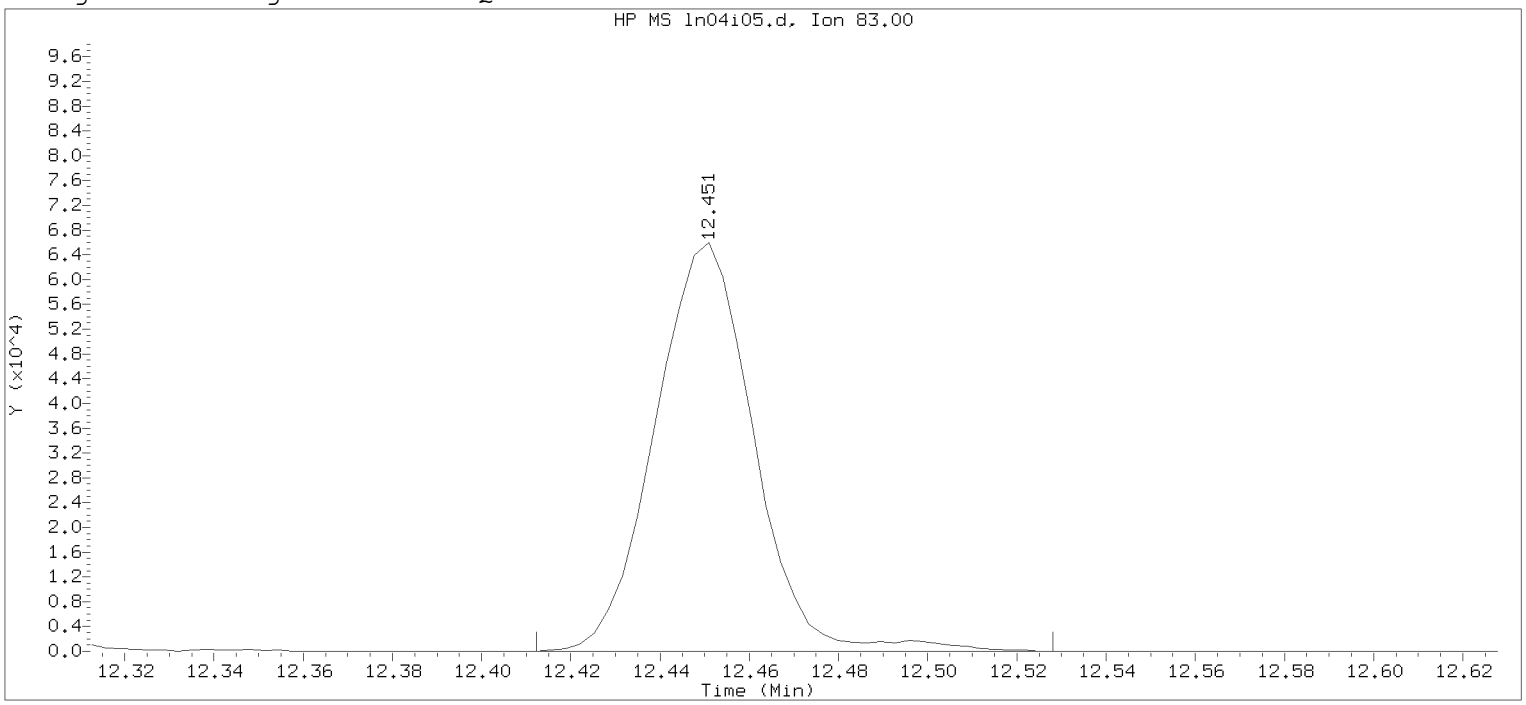
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

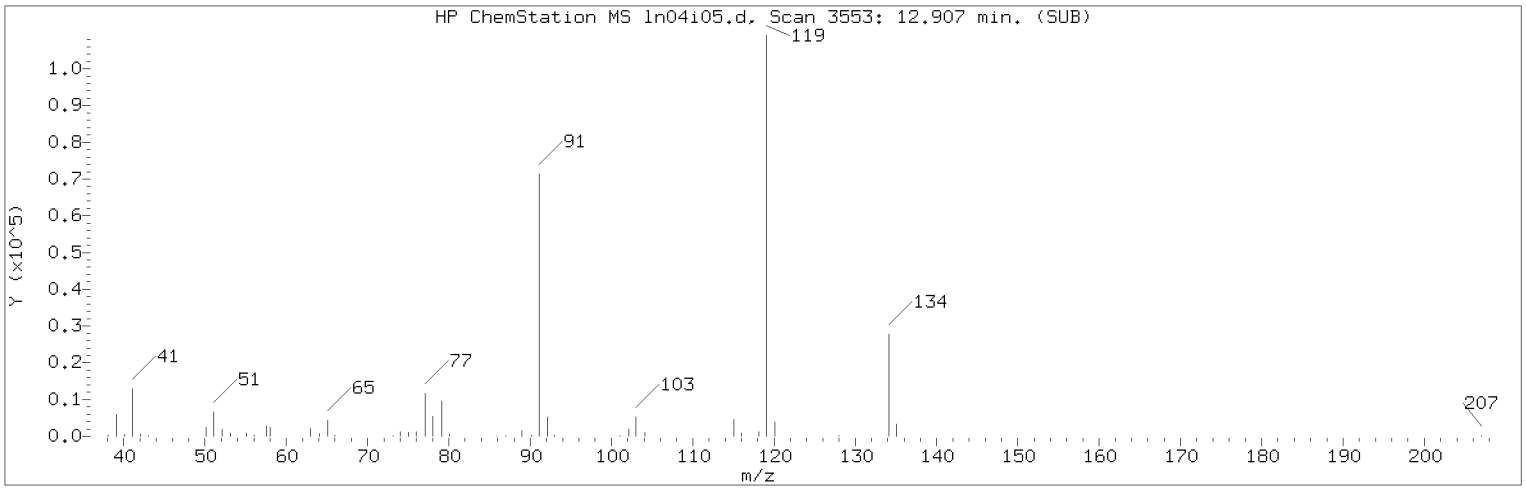
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

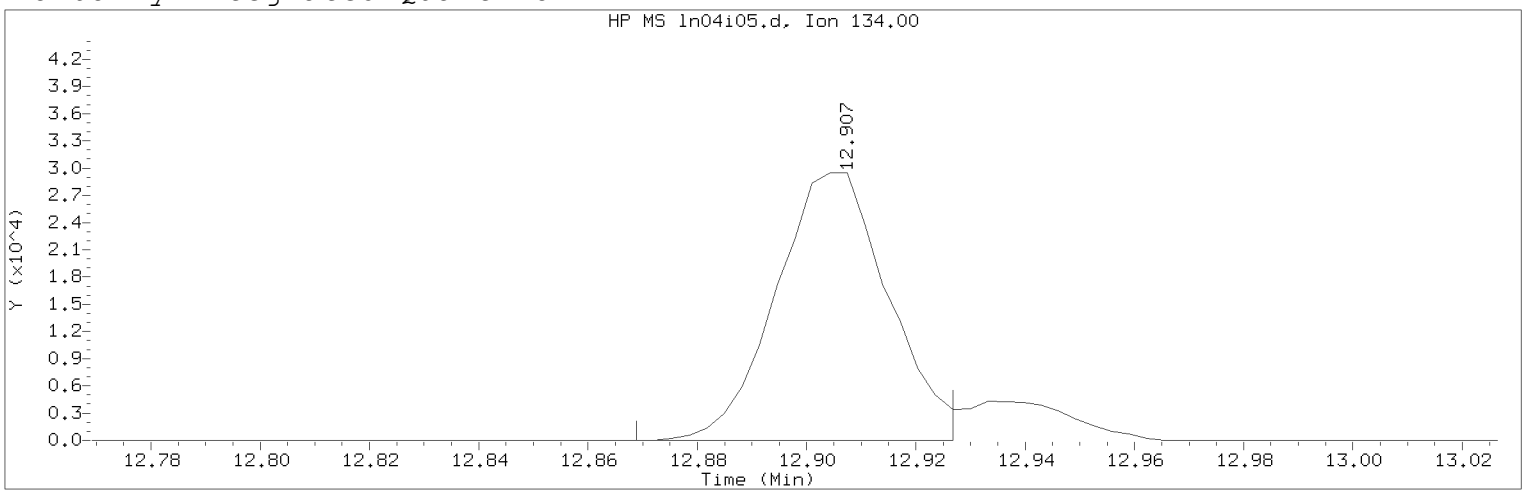
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 101487
On-column Amount (ng) : 10.6325
Integration start scan : 3398 Integration stop scan: 3434
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

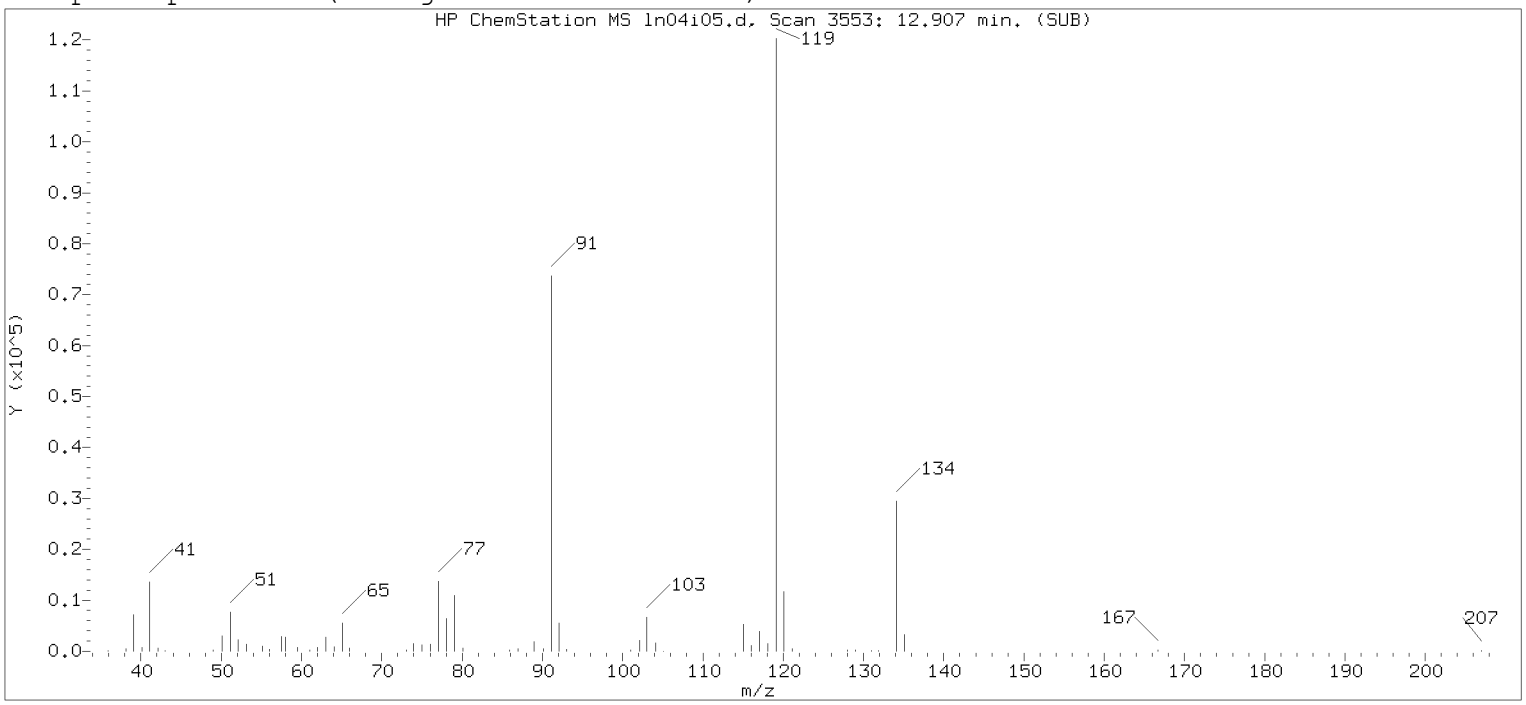
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area (flag) : 42119M
On-Column Amount (ng) : 8.5994
Integration start scan : 3540 Integration stop scan: 3558
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

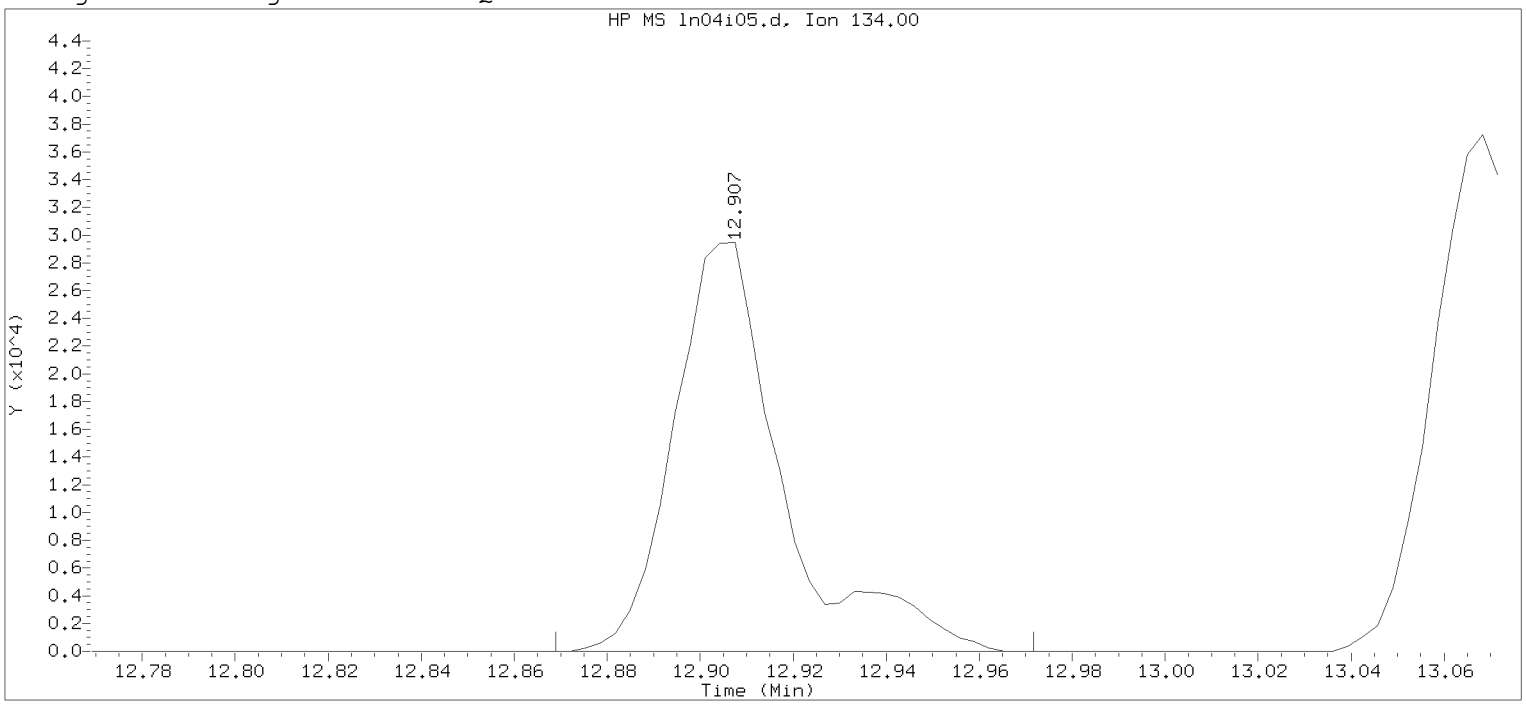
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



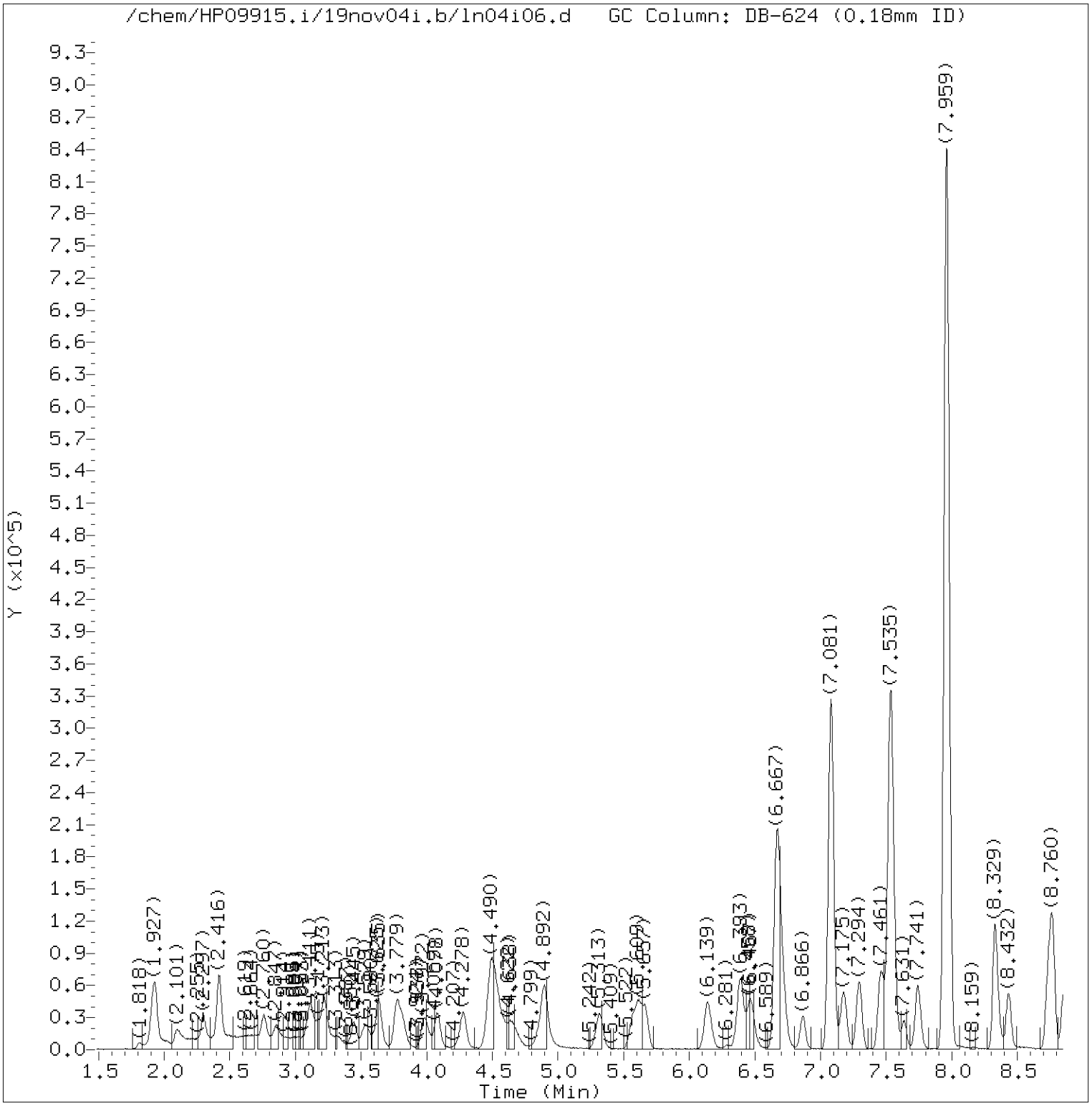
Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area : 47747
On-column Amount (ng) : 9.3569
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

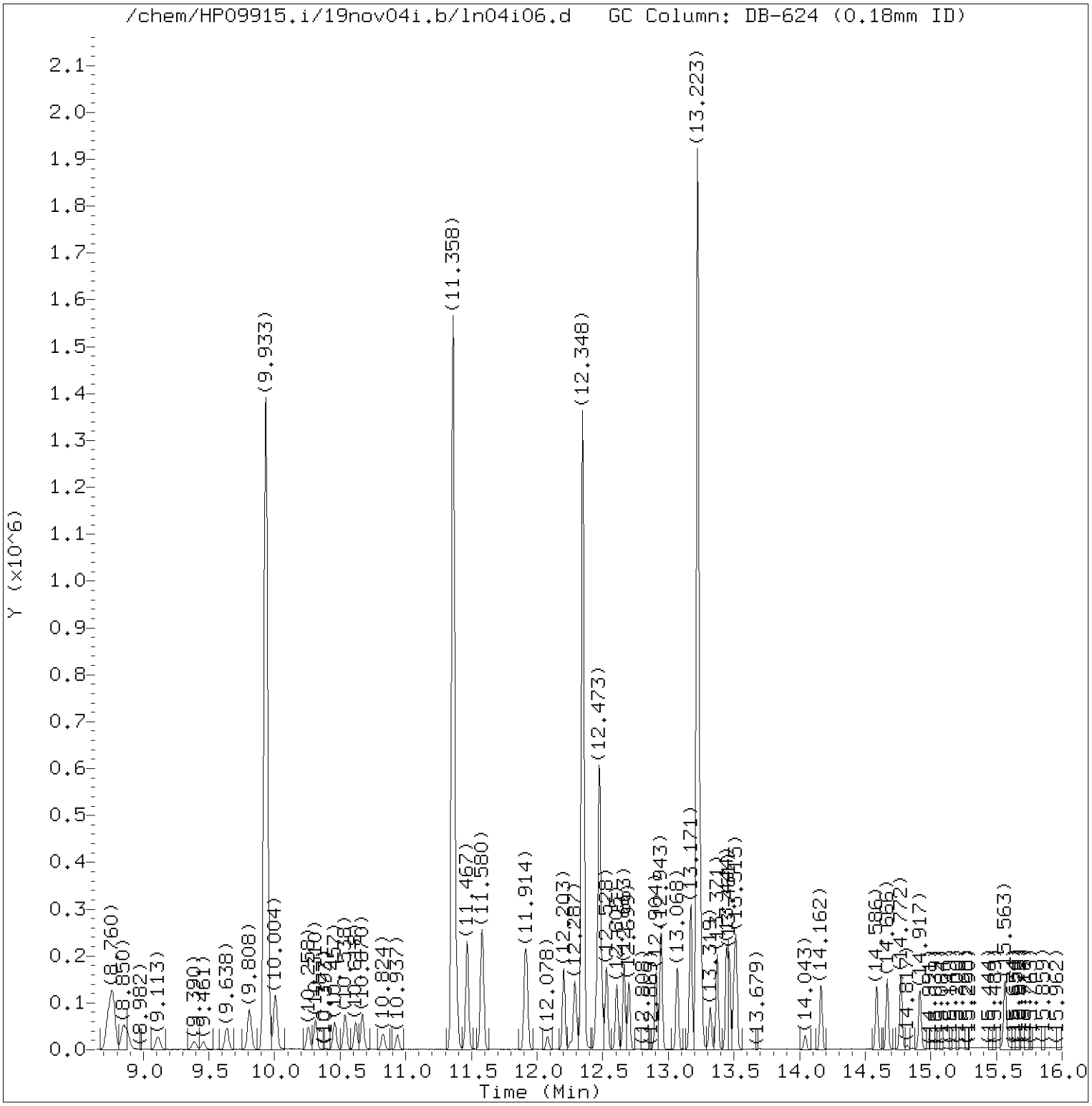
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.098	85	31217M	3.898
4) Chloromethane	(2)	2.297	50	32031	4.150
6) Vinyl Chloride	(2)	2.416	62	30864	4.006
5) 1,3-Butadiene	(2)	2.419	39	27249M	4.252
8) Bromomethane	(2)	2.760	94	23202	4.202
9) Chloroethane	(2)	2.860	64	17298	4.086
10) Dichlorofluoromethane	(2)	3.107	67	40740M	4.015
12) Trichlorofluoromethane	(2)	3.168	101	33532	4.043
11) n-Pentane	(2)	3.223	43	42826M	4.369
14) Ethyl ether	(2)	3.445	59	21059	3.929
15) Freon 123a	(2)	3.538	67	27312	4.094
16) Acrolein	(1)	3.635	56	72021	36.633
17) 1,1-Dichloroethene	(2)	3.773	96	19372	3.979
17) 1,1-Dichloroethene	(2)	3.773	63	9734	3.988
19) Freon 113	(2)	3.805	101	22601	4.069
18) Acetone	(1)	3.815	58	6763M	7.673
22) Methyl Iodide	(2)	3.972	142	39671	3.933
21) 2-Propanol	(1)	4.004	45	45871	72.395
23) Carbon Disulfide	(2)	4.082	76	71681	3.907
27) Methyl Acetate	(2)	4.258	43	24928M	3.976
25) Allyl Chloride	(2)	4.281	41	34775	3.982
28) Methylene Chloride	(2)	4.477	84	22693	3.917
29)*t-Butyl alcohol-d10	(1)	4.512	65	262044M	250.000
30) t-Butyl alcohol	(1)	4.638	59	80219	72.713
31) Acrylonitrile	(2)	4.840	53	12699	3.765
32) trans-1,2-Dichloroethene	(2)	4.901	96	22231	3.947
33) Methyl Tertiary Butyl Ether	(2)	4.901	73	71515	3.869
34) n-Hexane	(2)	5.323	57	33969M	3.877
36) 1,1-Dichloroethane	(2)	5.564	63	39317	4.002
38) di-Isopropyl ether	(2)	5.615	45	72628	3.833
39) 2-Chloro-1,3-butadiene	(2)	5.663	53	34190	3.879
40) Ethyl t-butyl ether	(2)	6.139	59	70845	3.853
43) 1,2-Dichloroethene (Total)	(2)		96	47253	7.906
44) 2-Butanone	(2)	6.371	43	32547	7.516
42) cis-1,2-Dichloroethene	(2)	6.390	96	25022	3.958
45) 2,2-Dichloropropane	(2)	6.400	77	29877	3.912
47) Propionitrile	(1)	6.467	54	100934	73.427
48) Methacrylonitrile	(2)	6.670	67	134092	36.850

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.718	128	12879	3.842
50) Tetrahydrofuran	(1)	6.734	71	9128	7.351
51) Chloroform	(2)	6.869	83	36176	3.850
52)$Dibromofluoromethane	(2)	7.081	113	280667	49.988
52)$Dibromofluoromethane	(2)	7.078	111	287593	50.237
53) 1,1,1-Trichloroethane	(2)	7.091	97	31167	3.886
54) Cyclohexane	(2)	7.178	56	42347	3.949
54) Cyclohexane	(2)	7.175	84	36627	3.932
54) Cyclohexane	(2)	7.181	69	13119	3.955
56) Carbon Tetrachloride	(2)	7.287	117	25509	3.750
55) 1,1-Dichloropropene	(2)	7.297	75	30762	3.960
58) Isobutyl Alcohol	(1)	7.464	41	65125	175.416
57)$1,2-Dichloroethane-d4	(2)	7.532	102	72246	50.488
57)$1,2-Dichloroethane-d4	(2)	7.535	65	323654	50.754
57)$1,2-Dichloroethane-d4	(2)	7.538	104	45694	49.994
60) Benzene	(2)	7.564	78	92488	3.959
61) 1,2-Dichloroethane	(2)	7.638	62	29321	3.902
61) 1,2-Dichloroethane	(2)	7.628	98	2899	3.899
65) t-Amyl methyl ether	(2)	7.744	73	70267	3.807
66)*Fluorobenzene	(2)	7.959	96	1148427	50.000
67) n-Heptane	(2)	7.962	43	32502MA	3.971
69) n-Butanol	(1)	8.329	56	110027M	344.330
71) Trichloroethene	(2)	8.435	95	22766	3.871
72) Methylcyclohexane	(2)	8.737	83	42437	3.889
72) Methylcyclohexane	(2)	8.731	98	19822	4.014
73) 1,2-Dichloropropane	(2)	8.773	63	22762	3.837
76) Methyl Methacrylate	(2)	8.843	69	20713M	3.611
75) 1,4-Dioxane	(1)	8.850	88	16188	184.315
74) Dibromomethane	(2)	8.879	93	14634	3.813
78) Bromodichloromethane	(2)	9.110	83	24167	3.509
79) 2-Nitropropane	(2)	9.387	41	14154	6.785
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	8979	3.525
81) cis-1,3-Dichloropropene	(2)	9.638	75	32112	3.511
82) 4-Methyl-2-pentanone	(2)	9.808	43	67922	7.431
83)$Toluene-d8	(3)	9.933	98	1152733	49.832
83)$Toluene-d8	(3)	9.933	100	745821	49.773
88) Toluene	(3)	10.004	92	56092	3.868
90) 1,3-Dichloropropene (total)	(3)		100	60153	6.917

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	28041	3.406
91) Ethyl Methacrylate	(3)	10.310	69	34660	3.464
92) 1,1,2-Trichloroethane	(3)	10.457	97	20516	3.731
93) Tetrachloroethene	(3)	10.538	166	24234	3.946
94) 1,3-Dichloropropane	(3)	10.618	76	34762	3.703
96) 2-Hexanone	(3)	10.670	43	50570	7.572
97) Dibromochloromethane	(3)	10.824	129	18906	3.357
99) 1,2-Dibromoethane	(3)	10.937	107	21586	3.615
100)*Chlorobenzene-d5	(3)	11.358	117	884065	50.000
101) 1-Chlorohexane	(3)	11.364	91	31055	3.986
102) Chlorobenzene	(3)	11.387	112	63883	3.895
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	19618	3.631
104) Ethylbenzene	(3)	11.467	91	109318	3.944
106) m+p-Xylene	(3)	11.580	106	85093	7.804
108) Xylene (Total)	(3)		106	126157	11.616
107) o-Xylene	(3)	11.908	106	41064	3.813
109) Styrene	(3)	11.924	104	65784	3.696
110) Bromoform	(3)	12.078	173	12196	2.898
111) Isopropylbenzene	(3)	12.203	105	107056	3.963
112) Cyclohexanone	(1)	12.287	55	63391	184.289
114)$4-Bromofluorobenzene	(3)	12.348	95	440415	50.280
114)$4-Bromofluorobenzene	(3)	12.348	174	367241	50.573
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	33170M	3.658
115) Bromobenzene	(4)	12.467	156	27559	3.820
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	101806	36.395
117) 1,2,3-Trichloropropane	(4)	12.496	110	10208	3.668
119) n-Propylbenzene	(4)	12.528	91	126543	4.014
120) 2-Chlorotoluene	(4)	12.609	126	25381	3.790
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	89290	3.898
121) 4-Chlorotoluene	(4)	12.699	126	27169	3.898
124) tert-Butylbenzene	(4)	12.904	134	18608M	3.928
125) Pentachloroethane	(4)	12.940	167	14303	3.506
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	93258	3.863
127) sec-Butylbenzene	(4)	13.068	105	111847	3.956
129) 1,3-Dichlorobenzene	(4)	13.168	146	51597	3.892
130) p-Isopropyltoluene	(4)	13.174	119	96571	3.948
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	480071	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	53736	3.910

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	99398	3.886
135) Benzyl Chloride	(4)	13.319	91	57244	2.956
136) 1,3-Diethylbenzene	(4)	13.371	119	61603	3.870
141) Diethylbenzene (total)	(4)		100	179922	11.677
137) 1,4-Diethylbenzene	(4)	13.444	119	66423	3.939
139) n-Butylbenzene	(4)	13.464	92	51213	4.095
138) 1,2-Dichlorobenzene	(4)	13.502	146	50972	3.896
140) 1,2-Diethylbenzene	(4)	13.518	119	51896	3.868
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	6542	3.295
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	39801	3.960
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	38013	3.889
147) Hexachlorobutadiene	(4)	14.670	225	23904	5.180
148) Naphthalene	(4)	14.772	128	115354	3.671
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	37152	3.907
150) 2-Methylnaphthalene	(4)	15.563	142	72506	3.747

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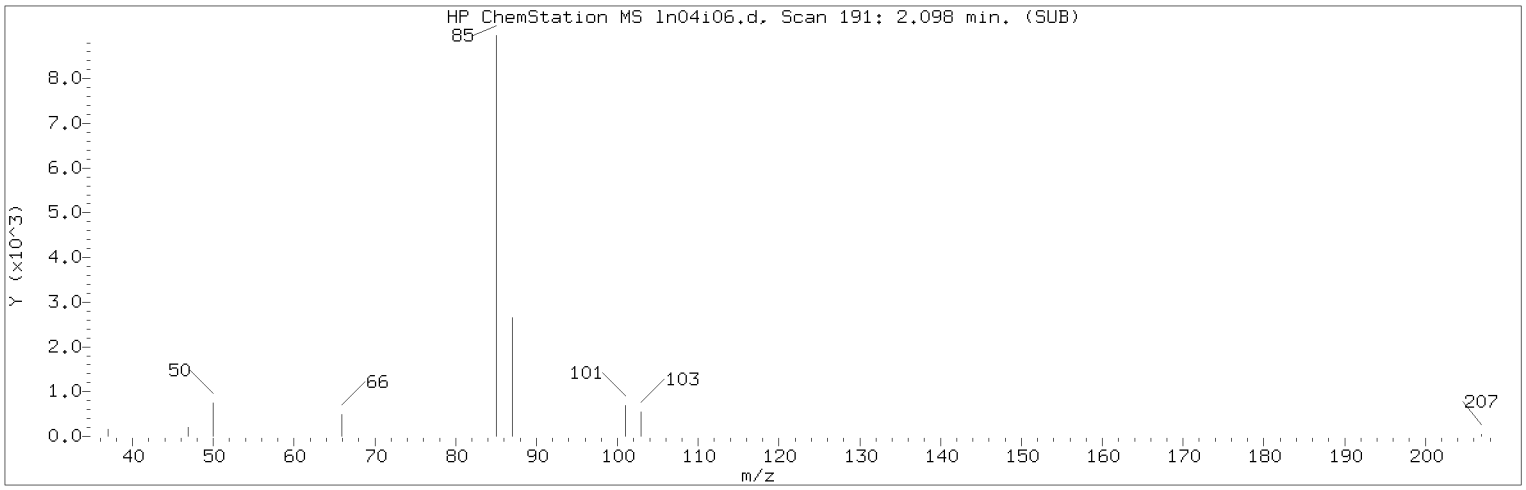
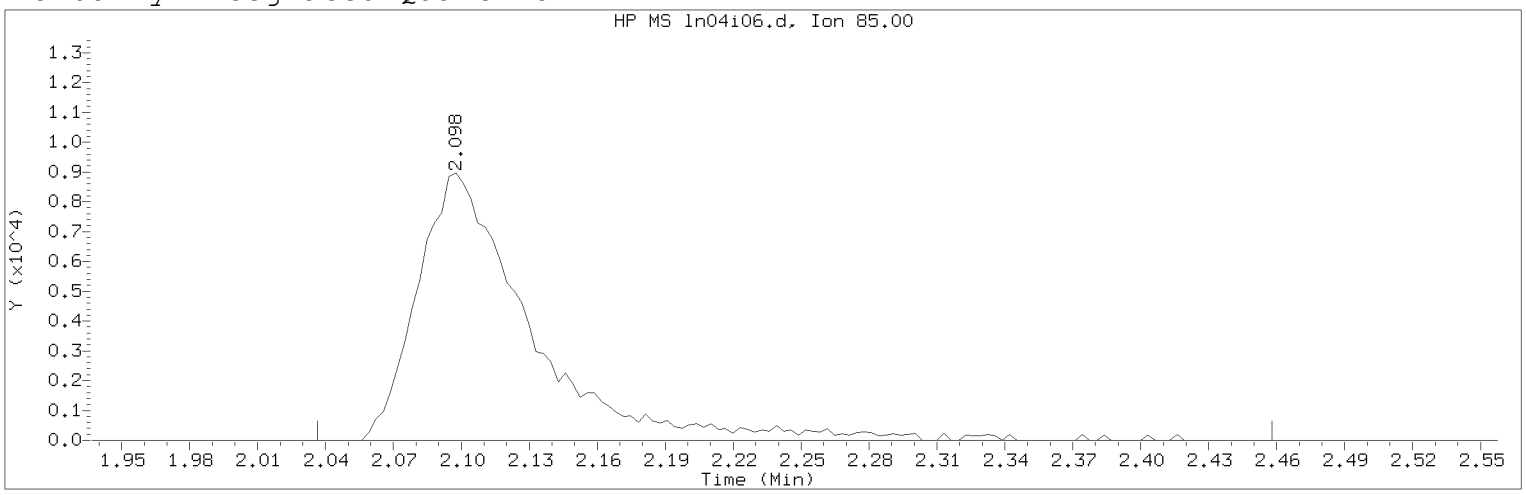
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

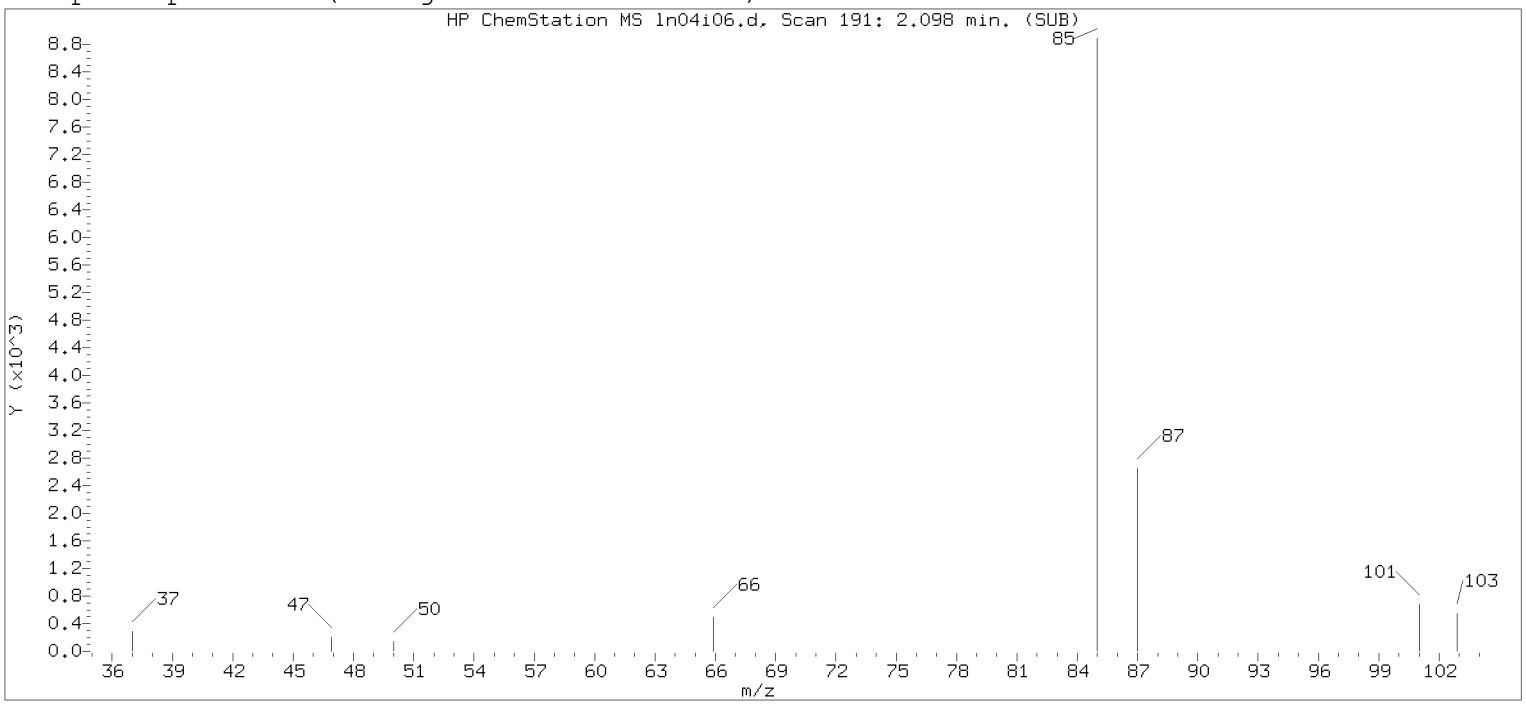
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 191
Retention Time (minutes): 2.098
Quant Ion : 85.00
Area (flag) : 31217M
On-Column Amount (ng) : 3.8978
Integration start scan : 171 Integration stop scan: 302
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

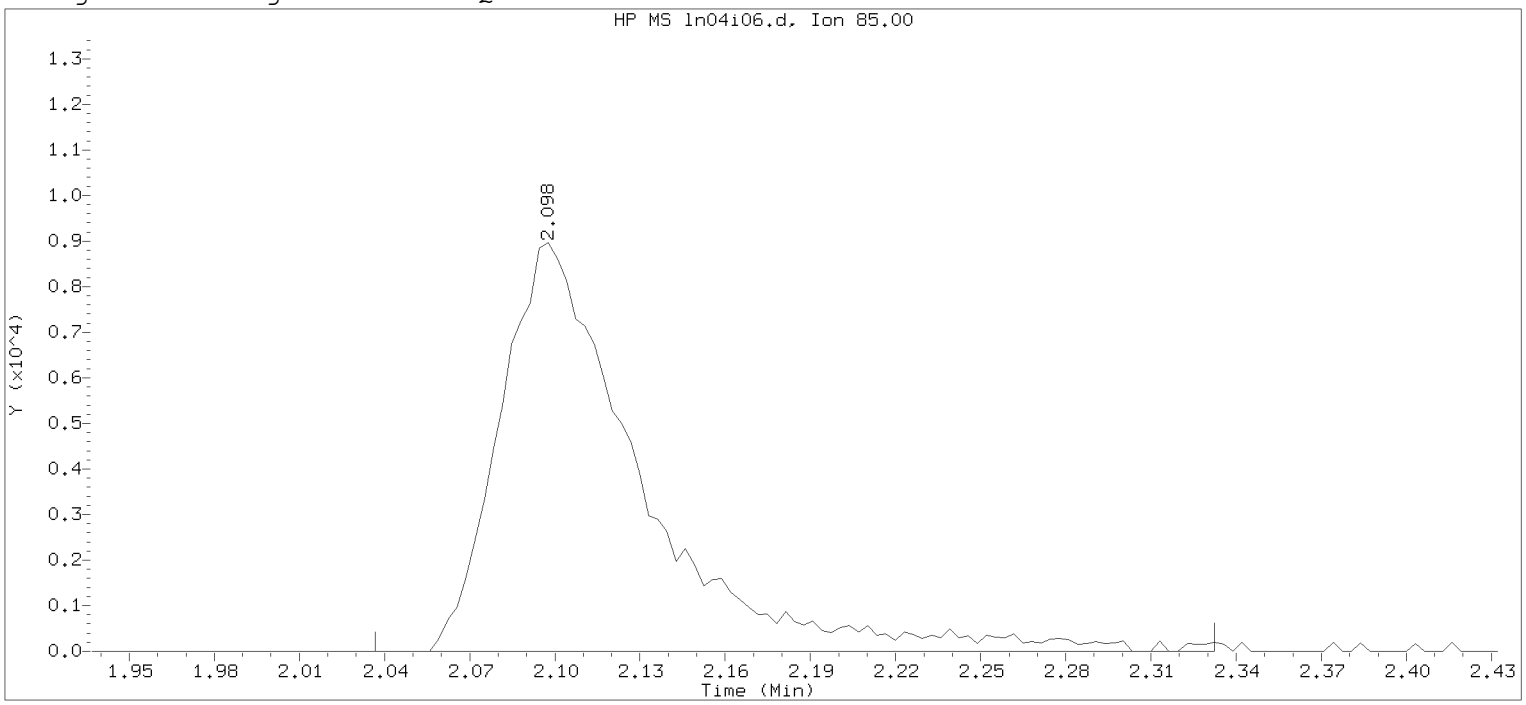
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

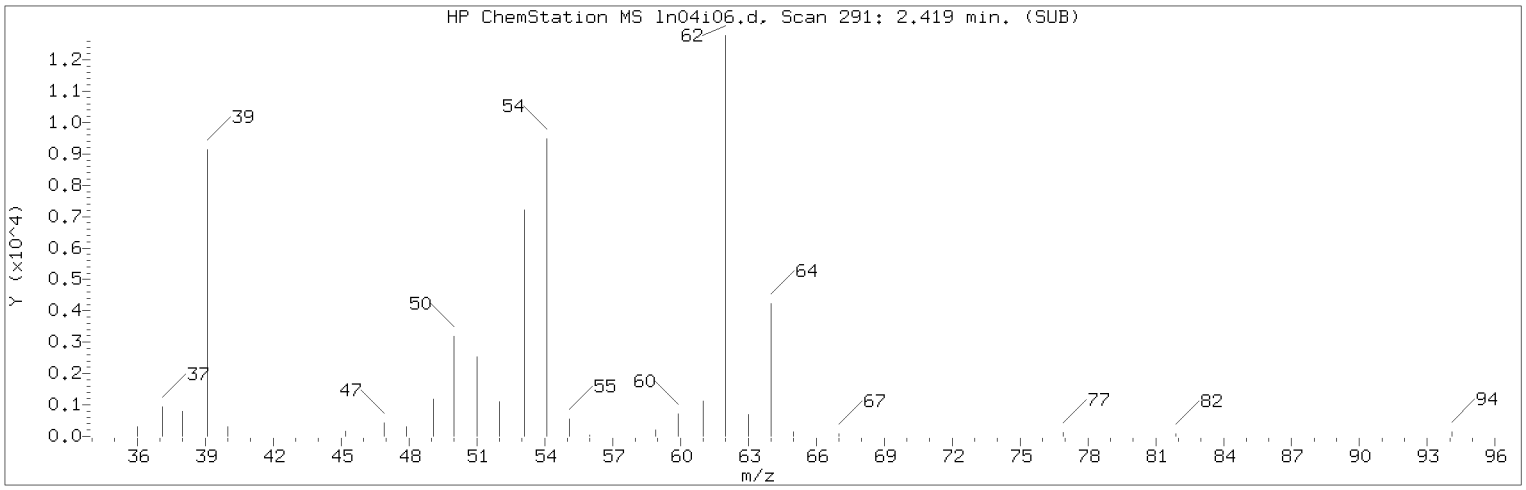
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

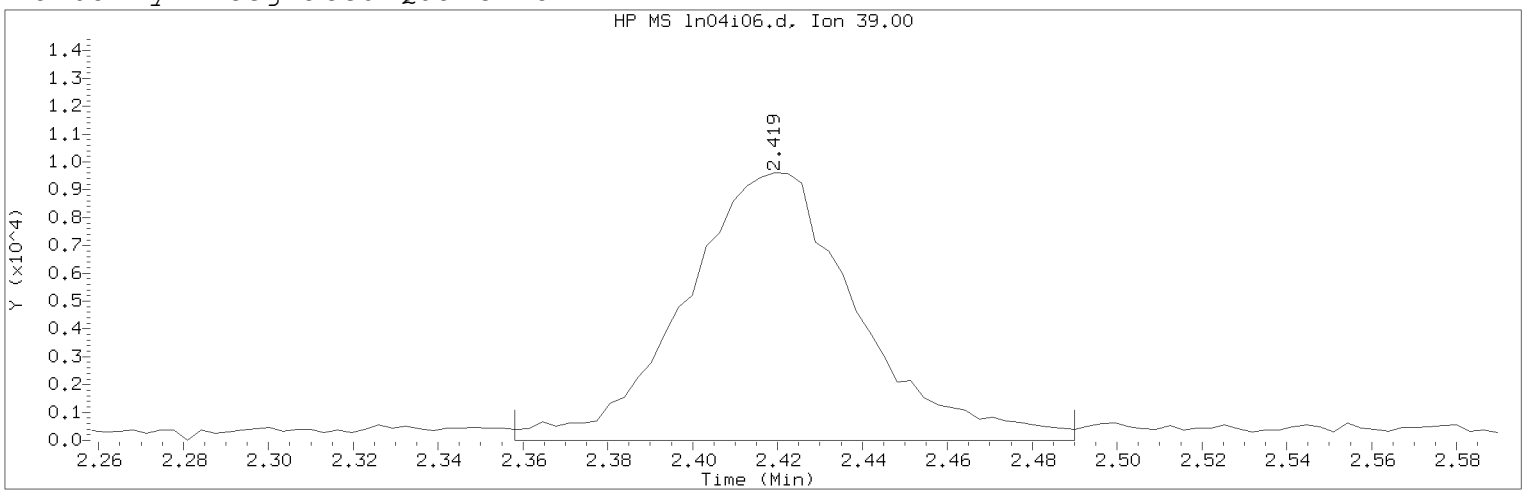
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 191
Retention Time (minutes): 2.098
Quant Ion : 85.00
Area : 30987
On-column Amount (ng) : 3.8874
Integration start scan : 171 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

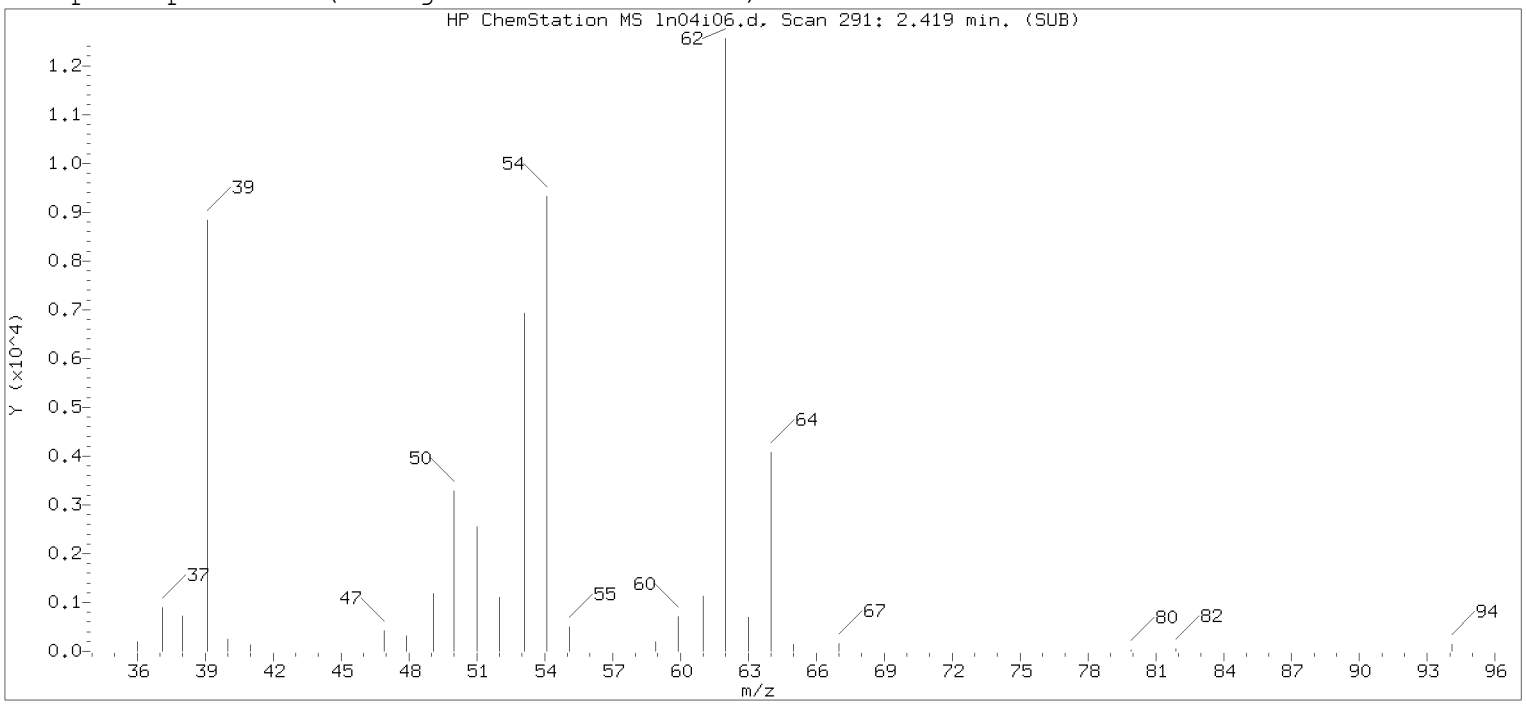
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 291
Retention Time (minutes): 2.419
Quant Ion : 39.00
Area (flag) : 27249M
On-Column Amount (ng) : 4.2517
Integration start scan : 271 Integration stop scan: 312
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

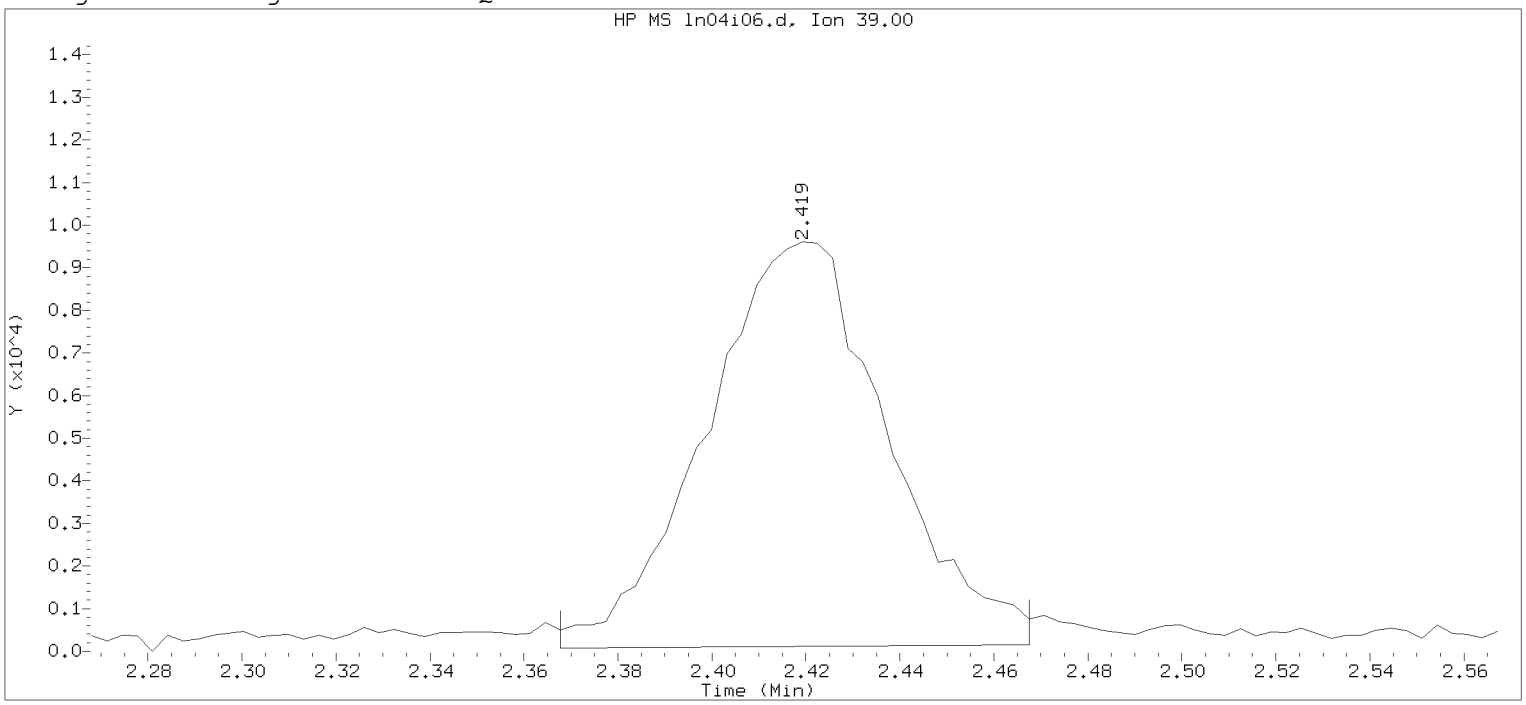
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 291
Retention Time (minutes): 2.419
Quant Ion : 39.00
Area : 25391
On-column Amount (ng) : 4.2082
Integration start scan : 274 Integration stop scan: 305
Y at integration start : 76 Y at integration end: 147

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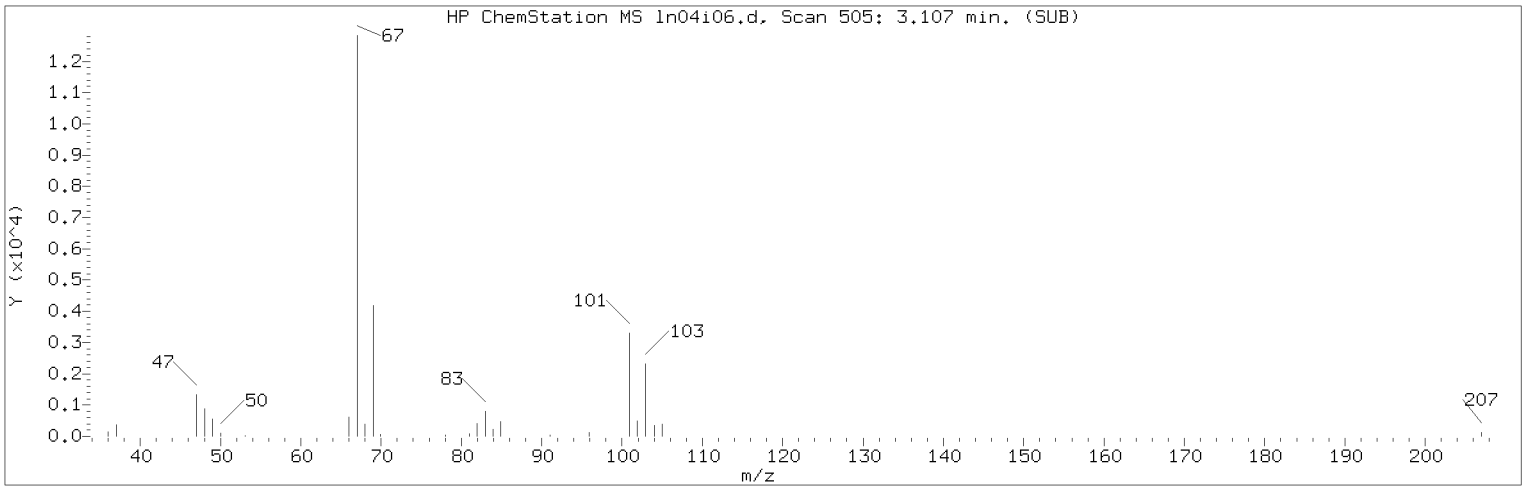
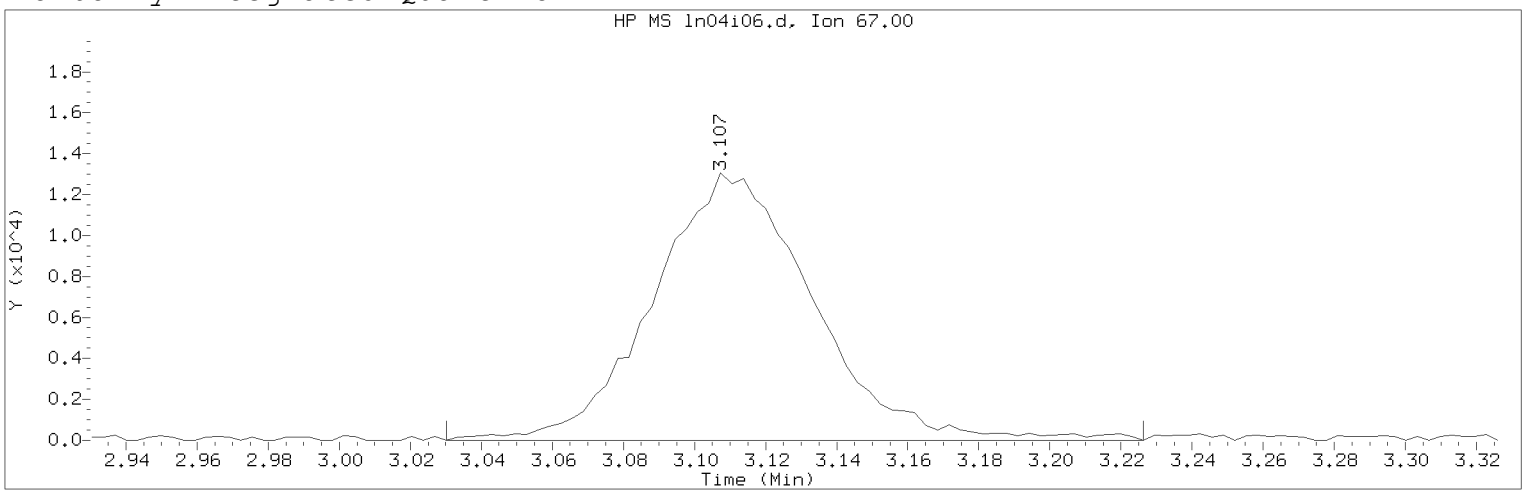
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

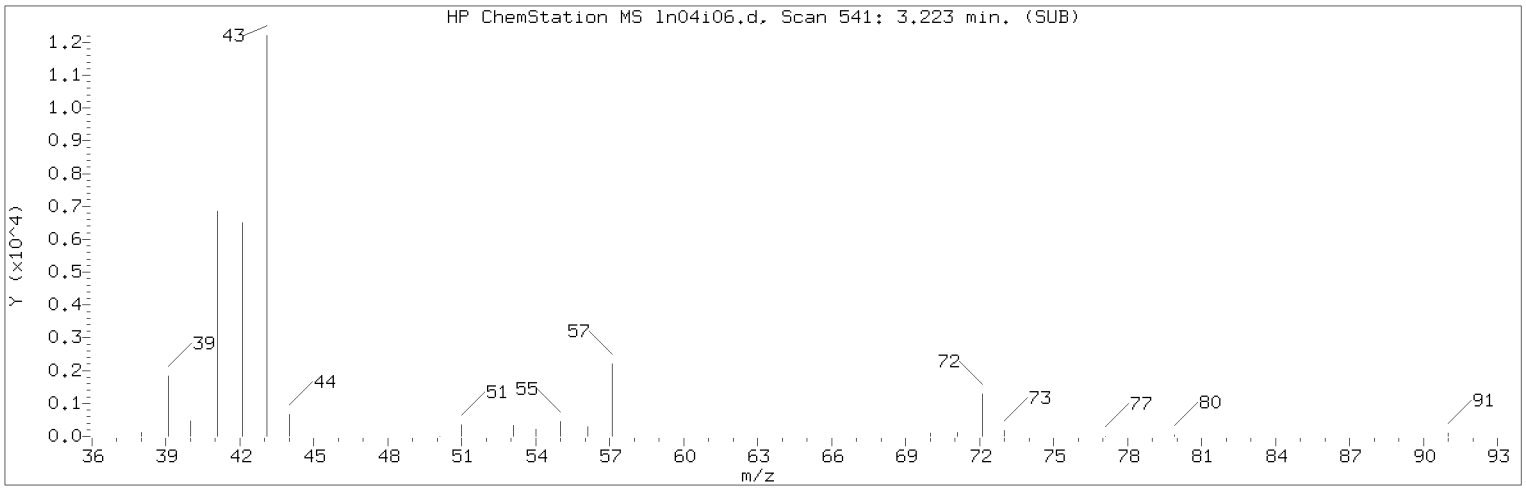
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 505
Retention Time (minutes): 3.107
Quant Ion : 67.00
Area (flag) : 40740M
On-Column Amount (ng) : 4.0151
Integration start scan : 480 Integration stop scan: 541
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

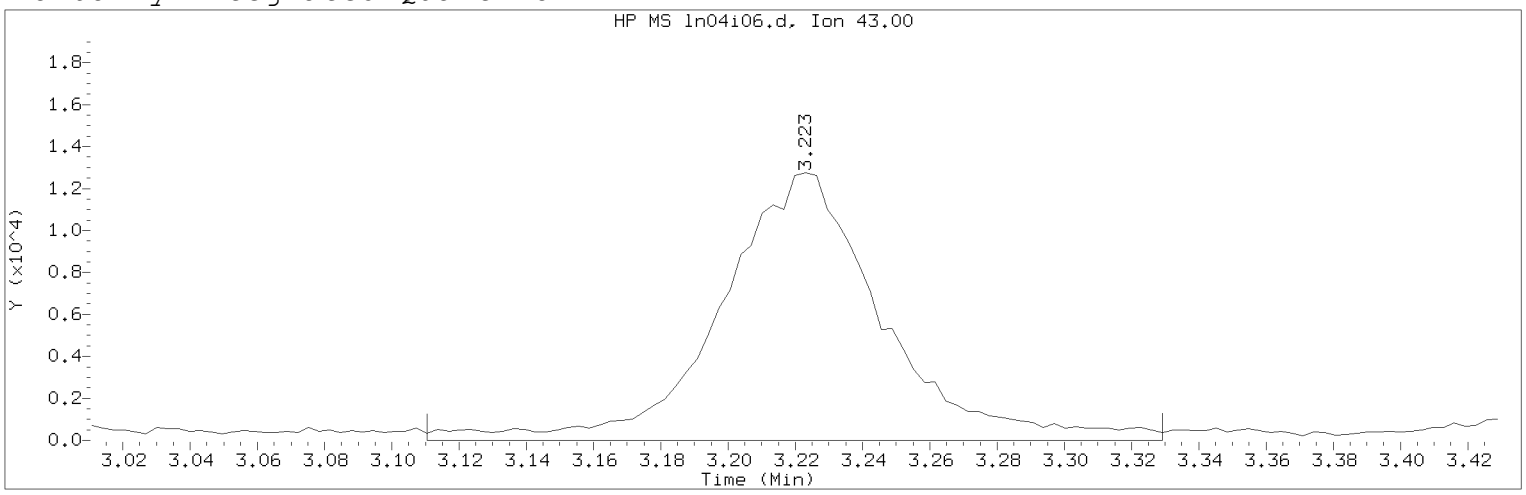
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

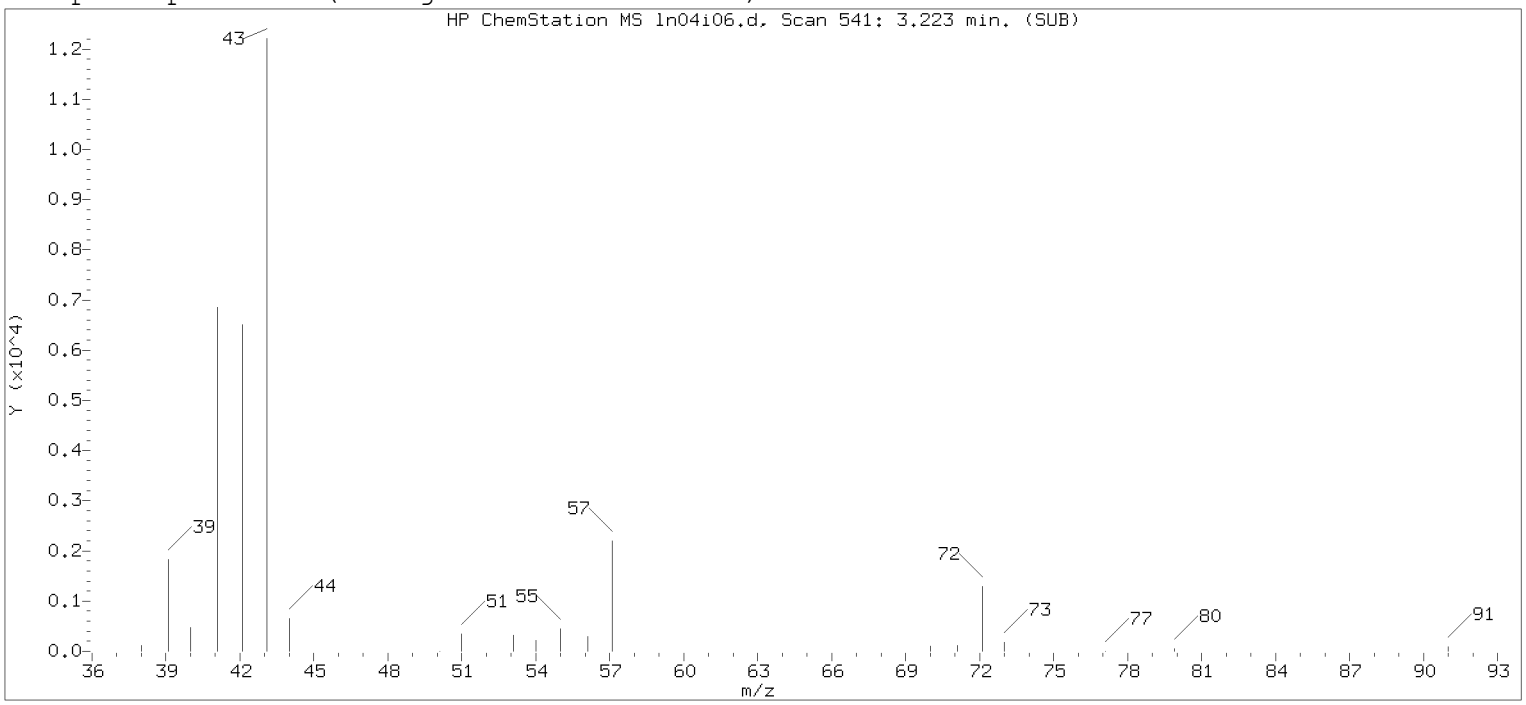
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 541
Retention Time (minutes): 3.223
Quant Ion : 43.00
Area (flag) : 42826M
On-Column Amount (ng) : 4.3694
Integration start scan : 505 Integration stop scan: 573
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

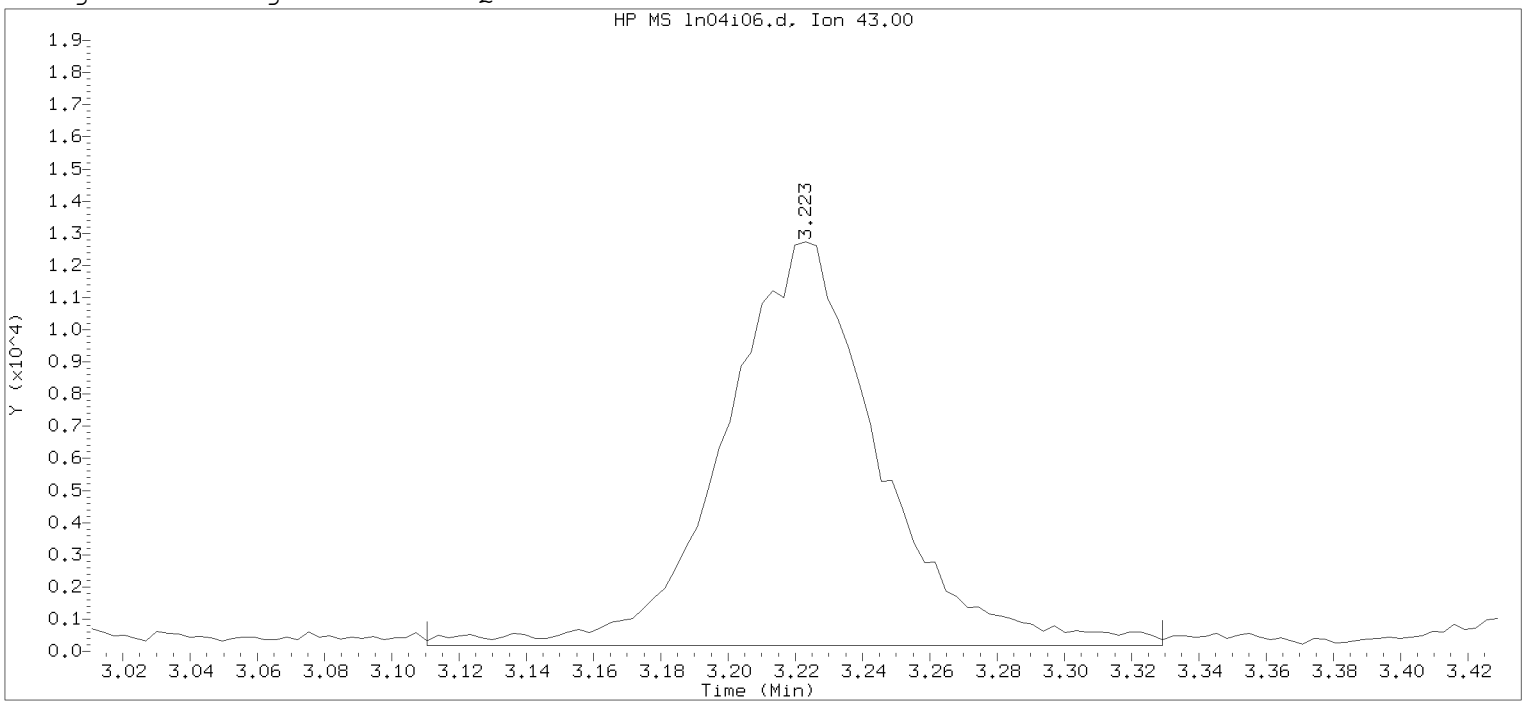
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

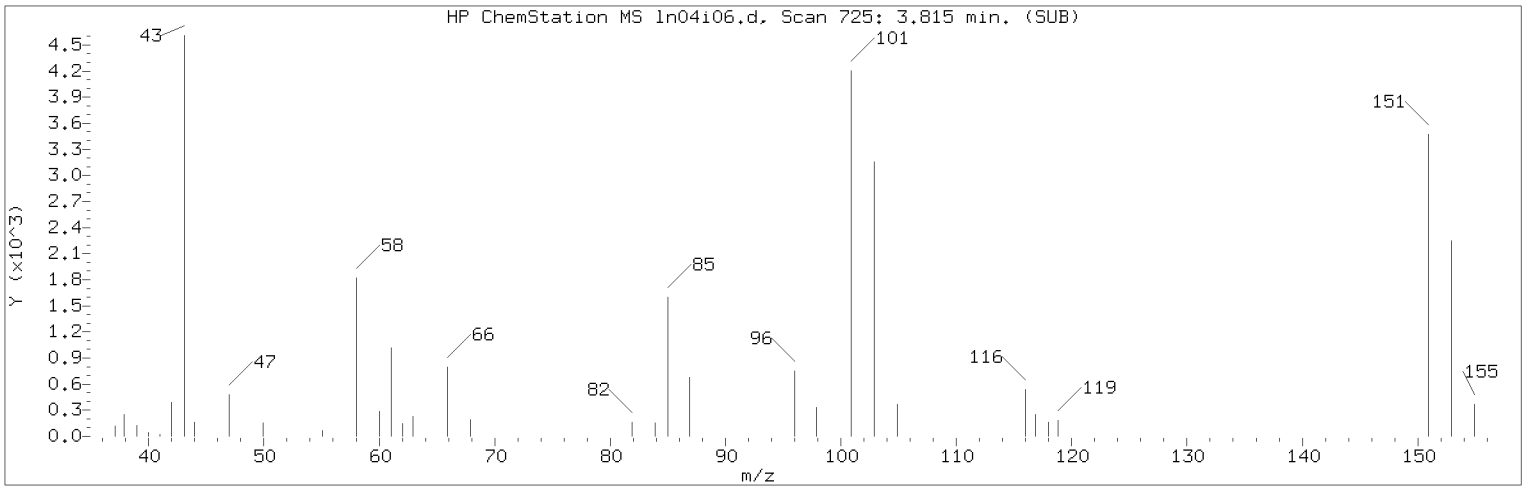
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

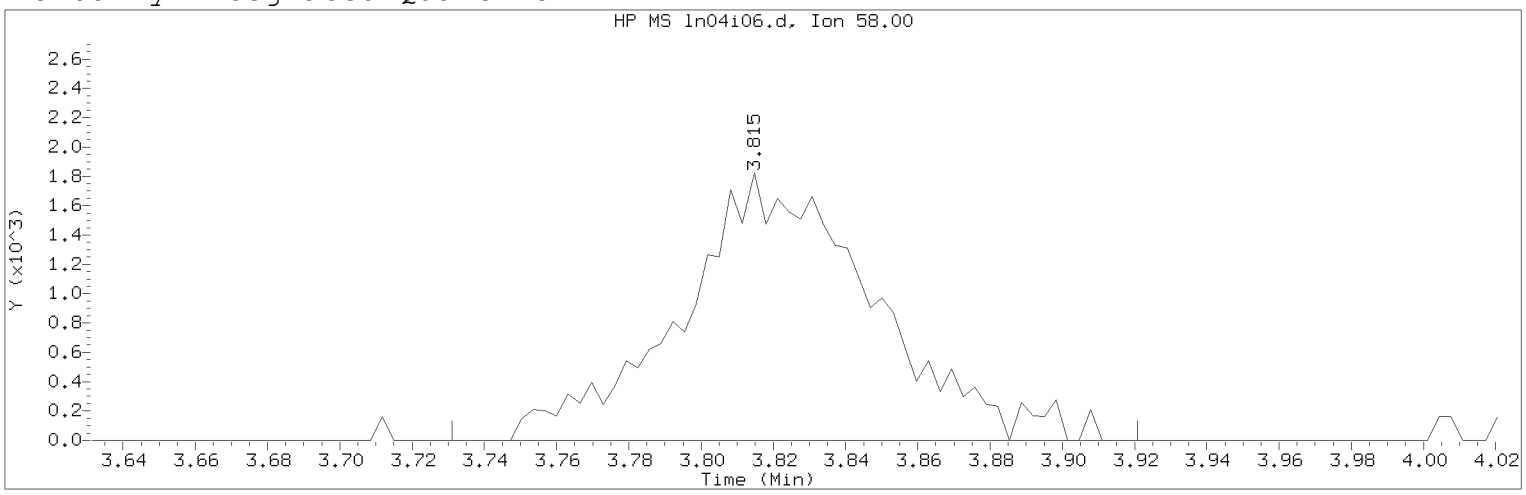
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 541
Retention Time (minutes): 3.223
Quant Ion : 43.00
Area : 40359
On-column Amount (ng) : 4.1550
Integration start scan : 505 Integration stop scan: 573
Y at integration start : 183 Y at integration end: 183

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

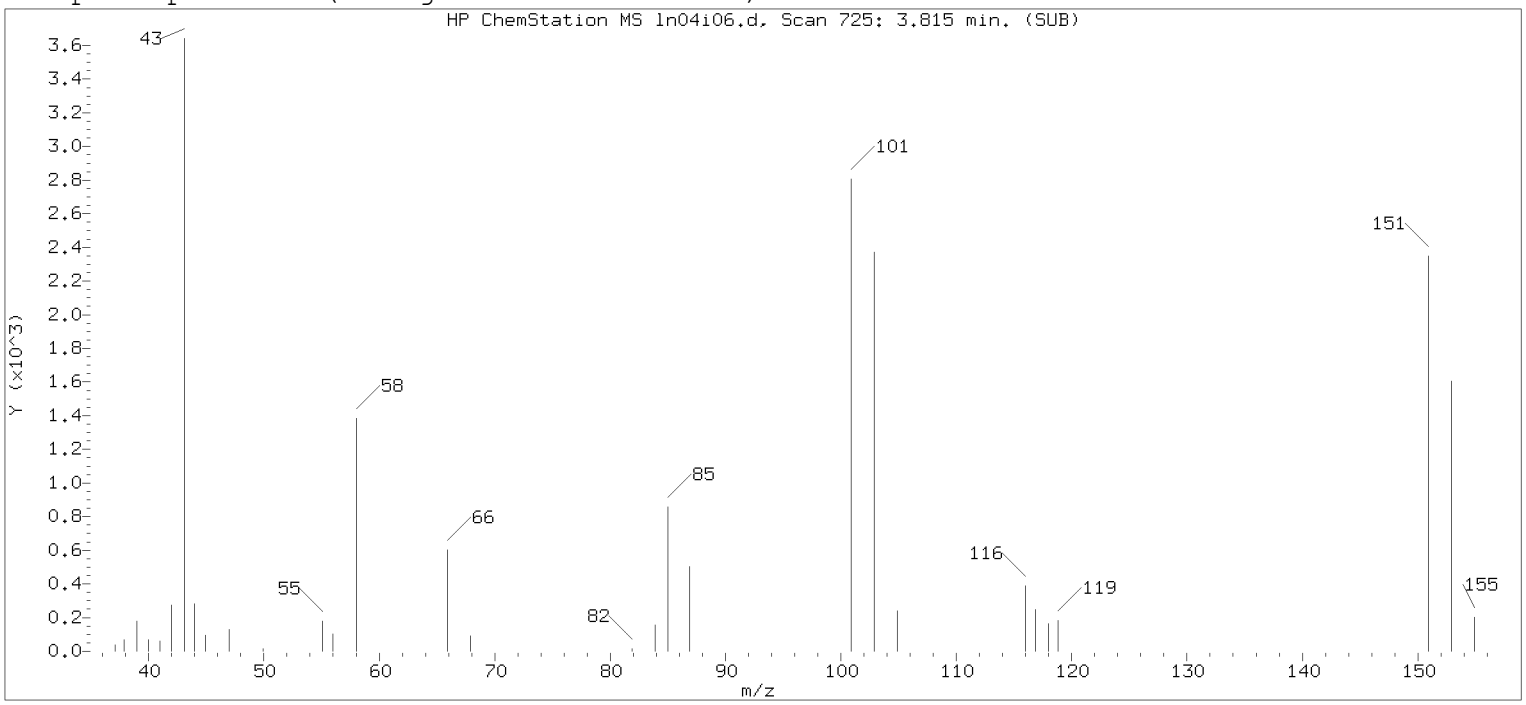
Compound Number : 18
Compound Name : Acetone
Scan Number : 725
Retention Time (minutes): 3.815
Quant Ion : 58.00
Area (flag) : 6763M
On-Column Amount (ng) : 7.6731
Integration start scan : 698 Integration stop scan: 757
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

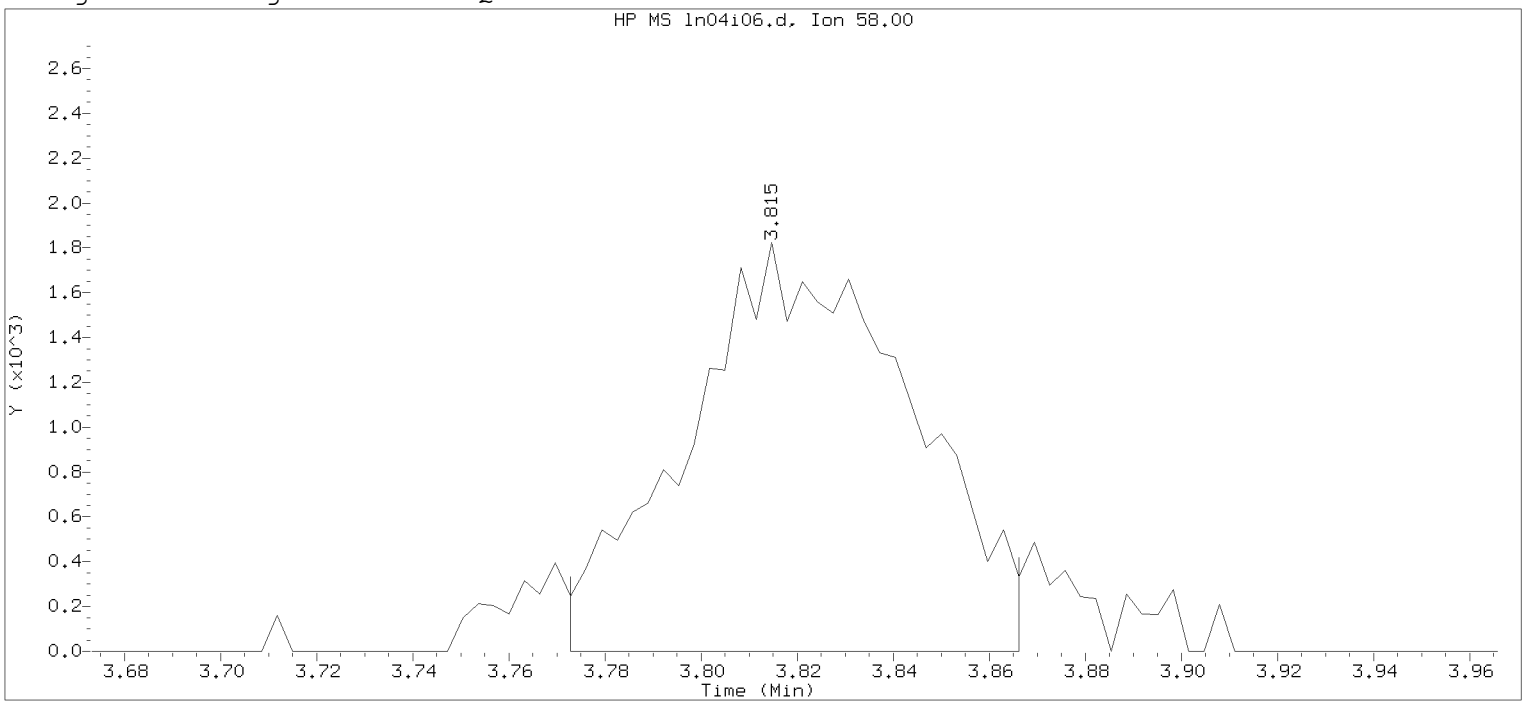
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

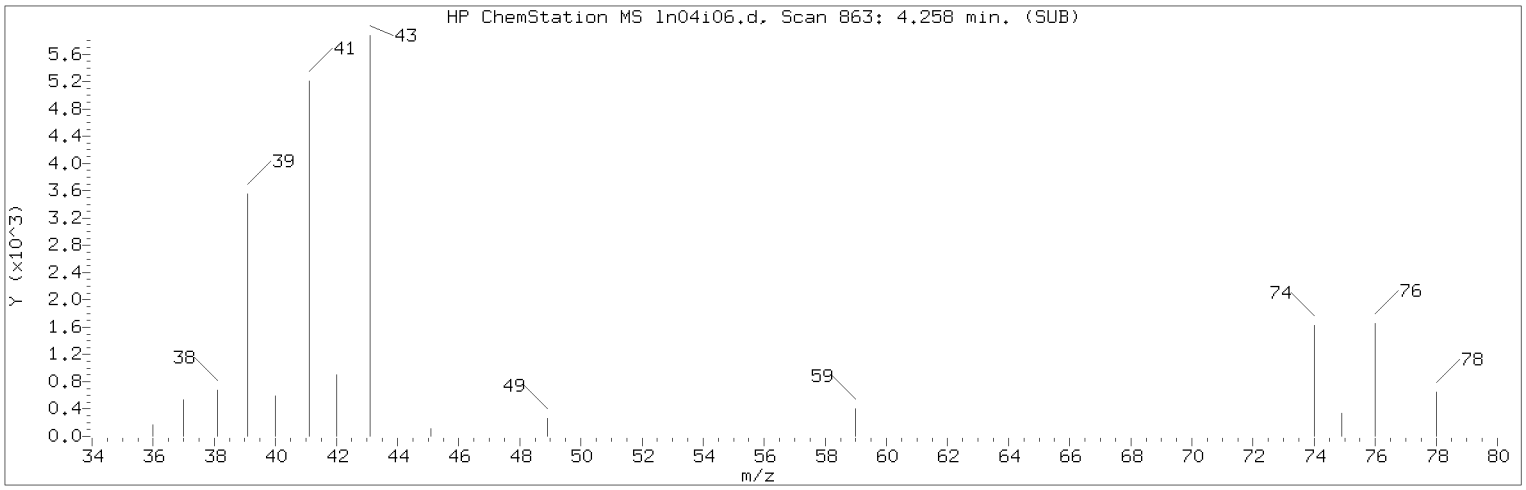
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

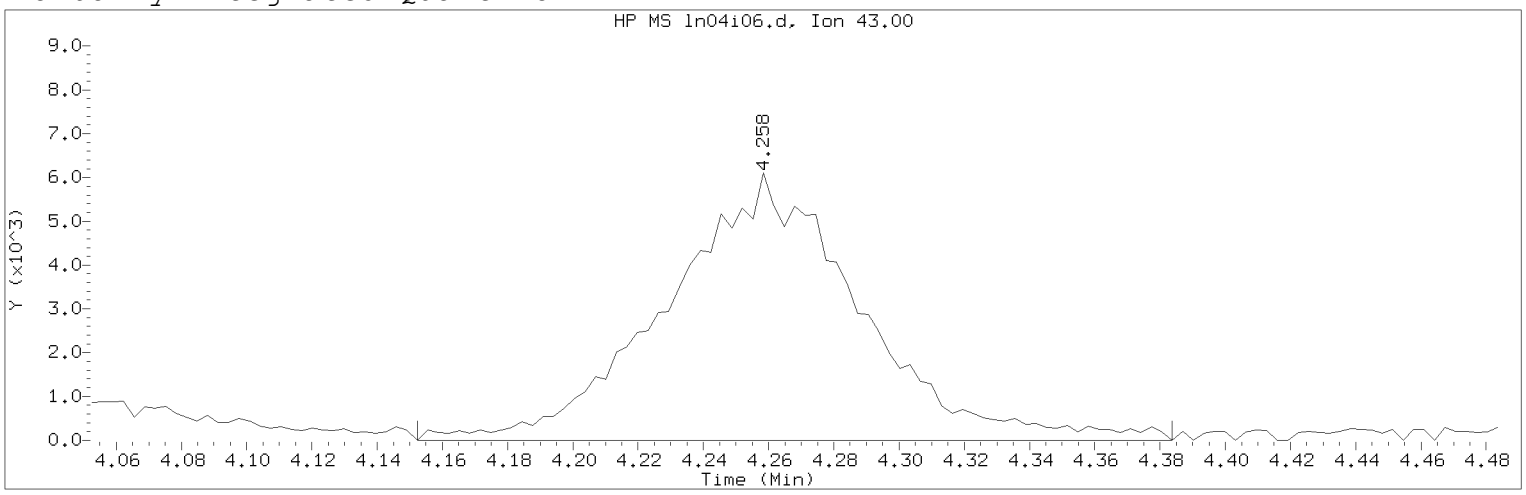
Compound Number : 18
Compound Name : Acetone
Scan Number : 725
Retention Time (minutes): 3.815
Quant Ion : 58.00
Area : 5862
On-column Amount (ng) : 7.7134
Integration start scan : 711 Integration stop scan: 740
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

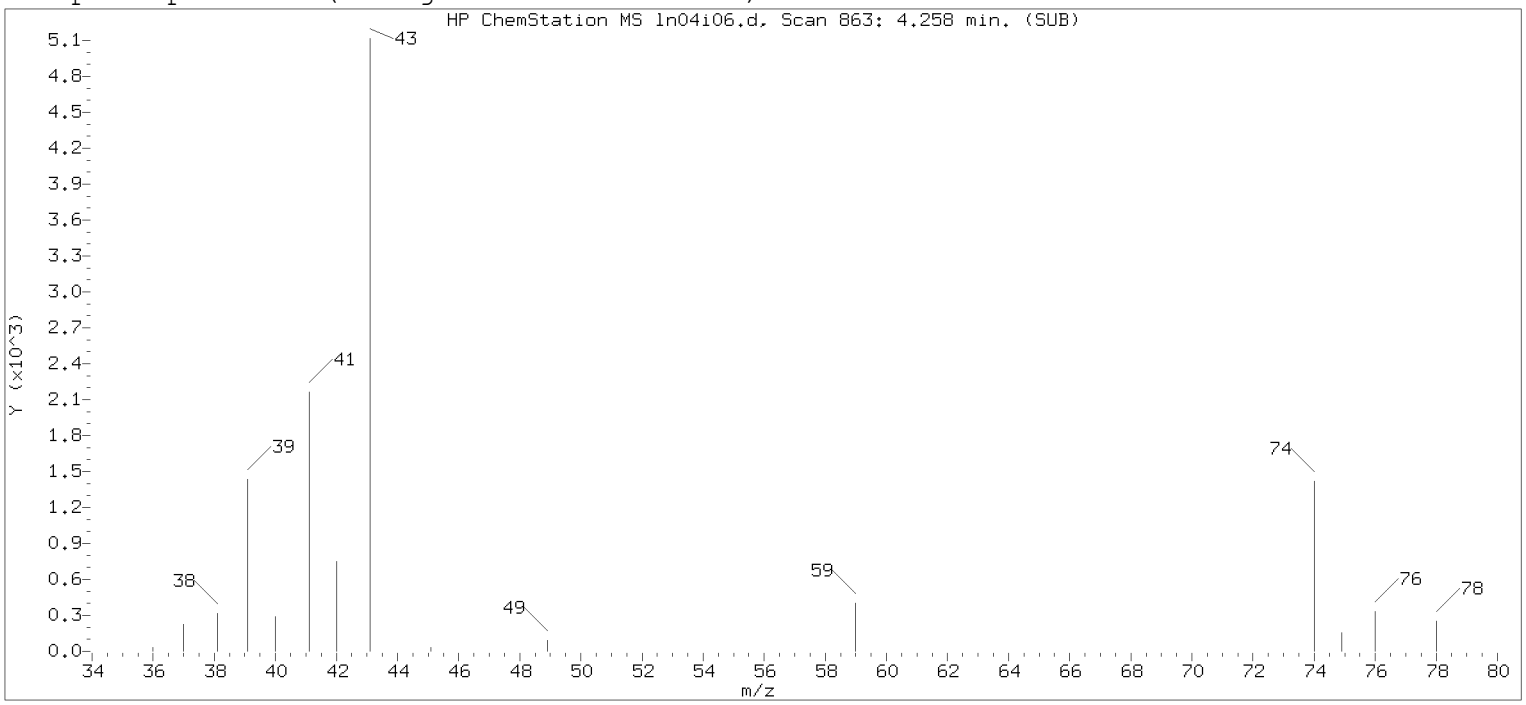
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 863
Retention Time (minutes): 4.258
Quant Ion : 43.00
Area (flag) : 24928M
On-Column Amount (ng) : 3.9757
Integration start scan : 829 Integration stop scan: 901
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

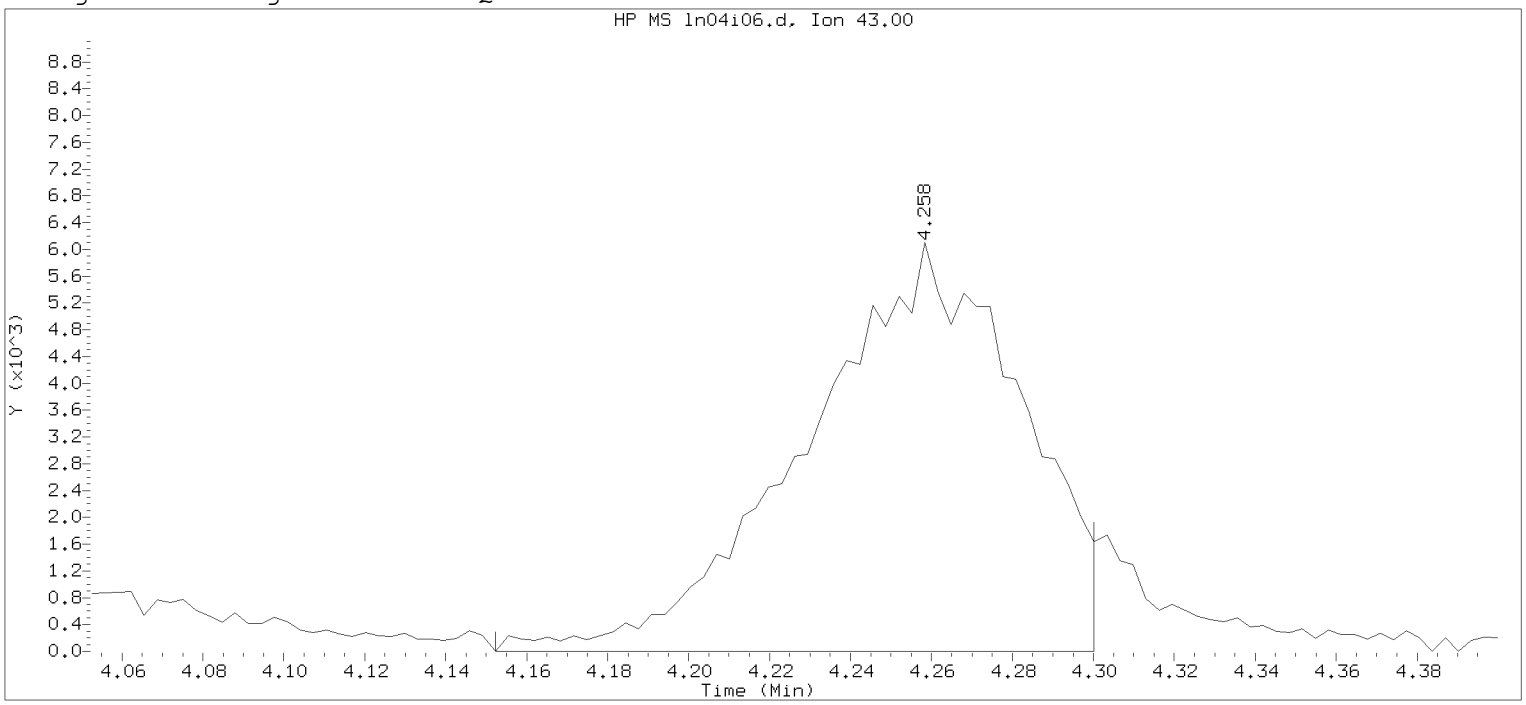
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

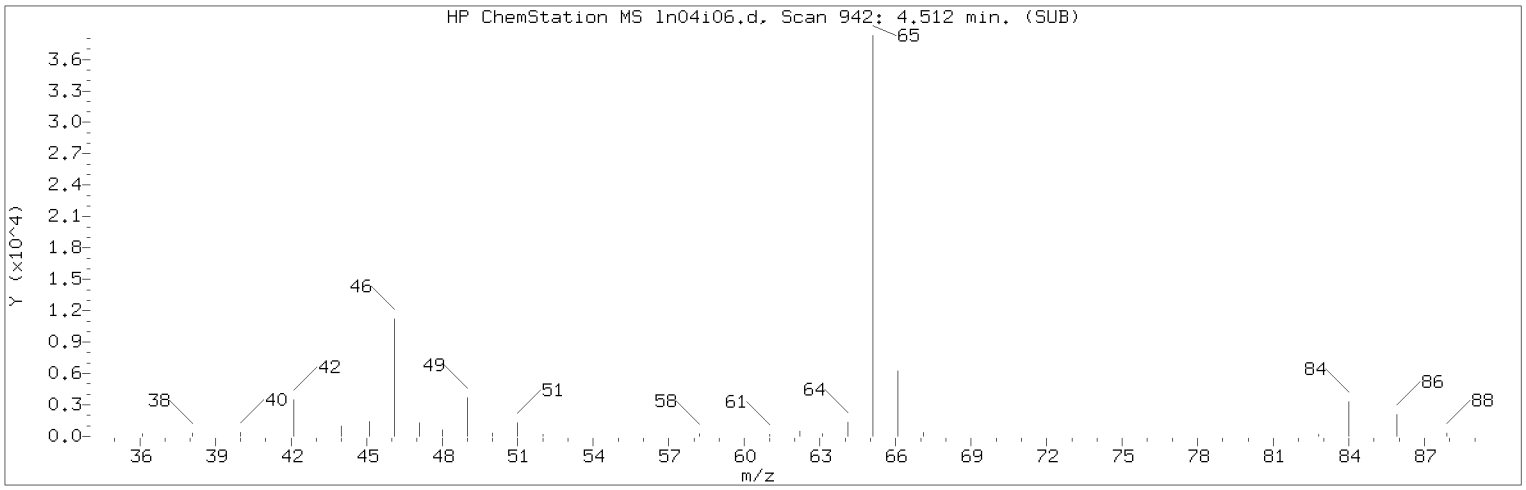
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

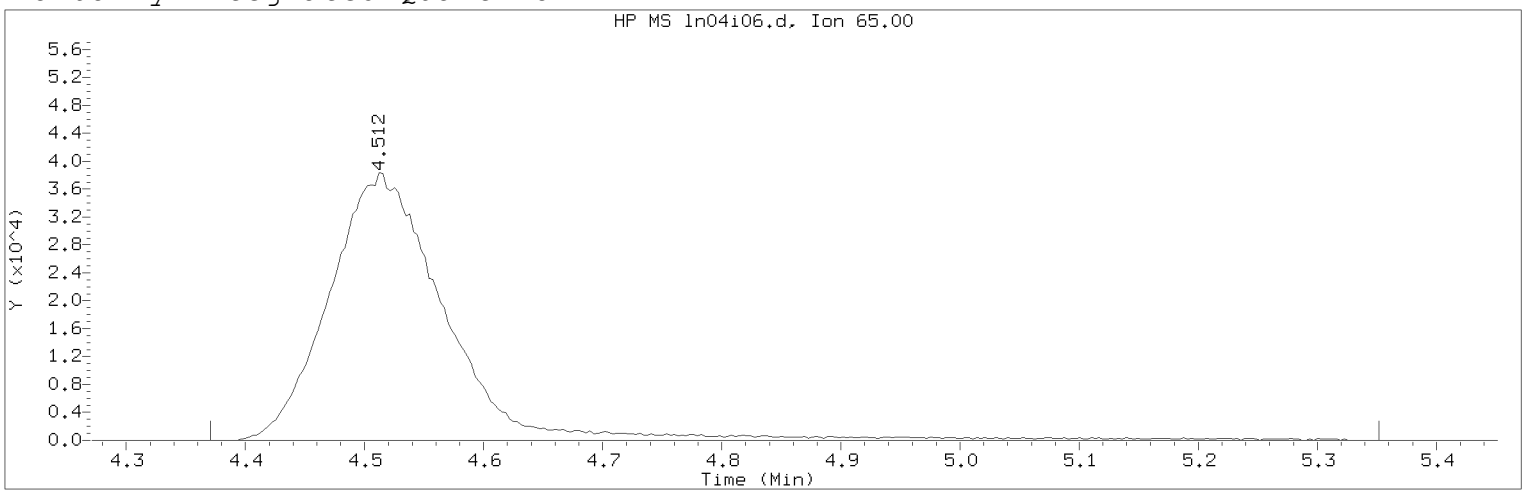
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 863
Retention Time (minutes): 4.258
Quant Ion : 43.00
Area : 22302
On-column Amount (ng) : 3.7243
Integration start scan : 829 Integration stop scan: 875
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

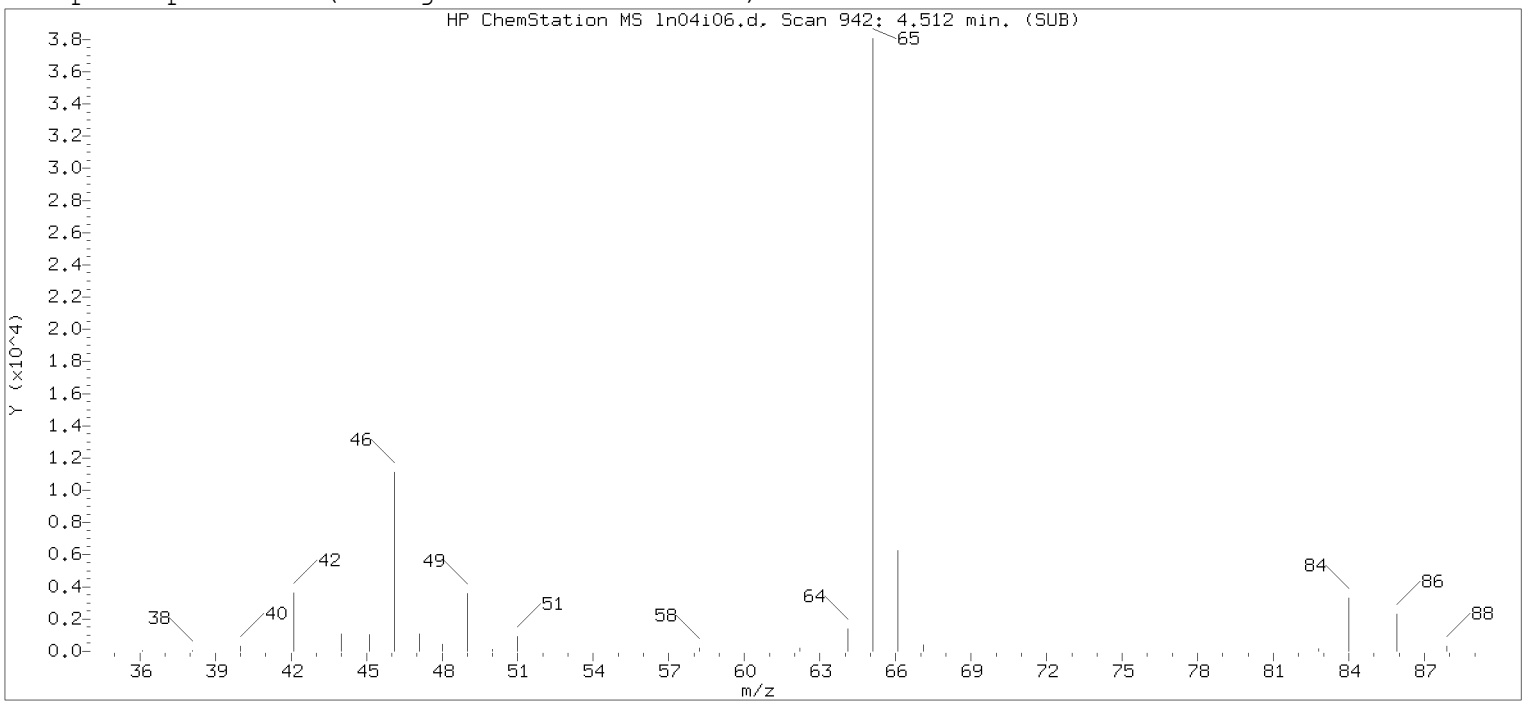
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area (flag) : 262044M
On-Column Amount (ng) : 250.0000
Integration start scan : 897 Integration stop scan: 1202
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

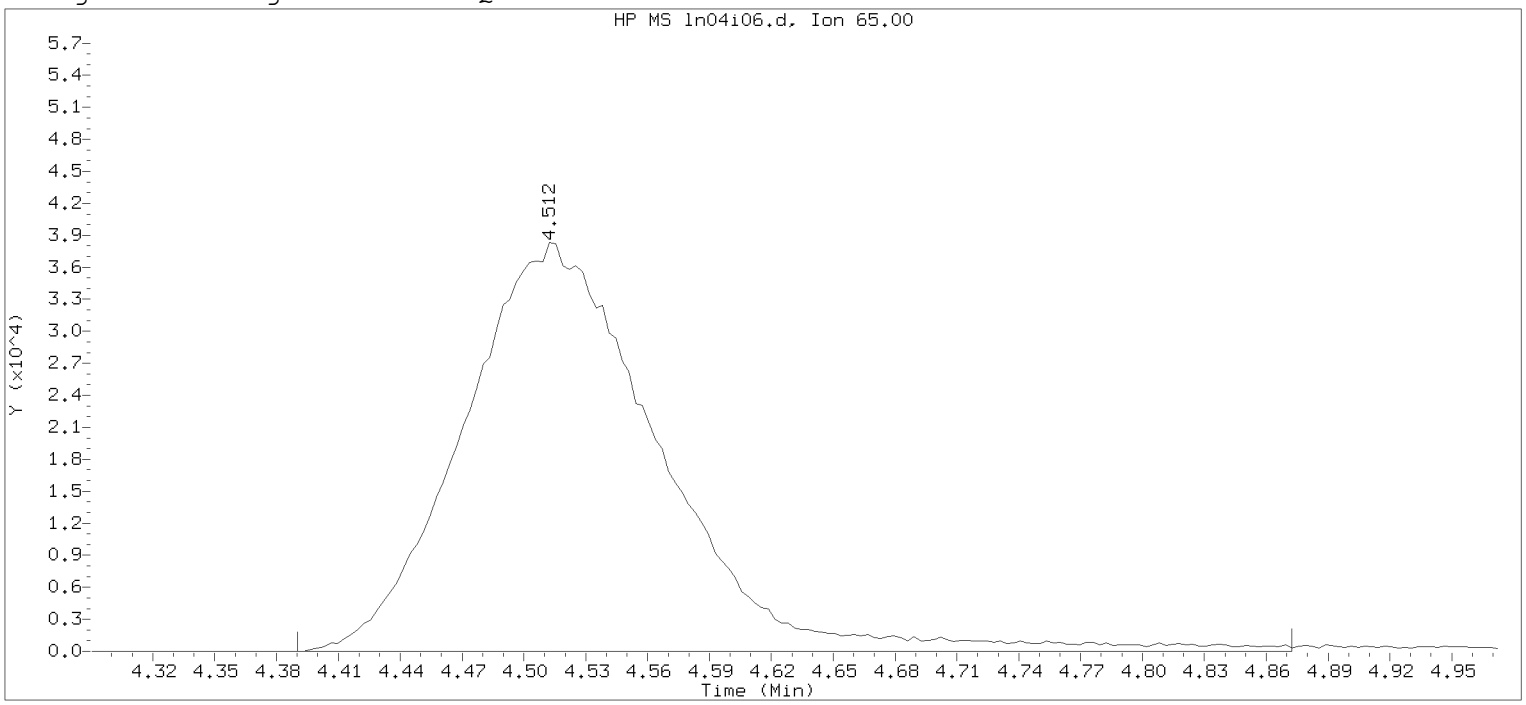
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

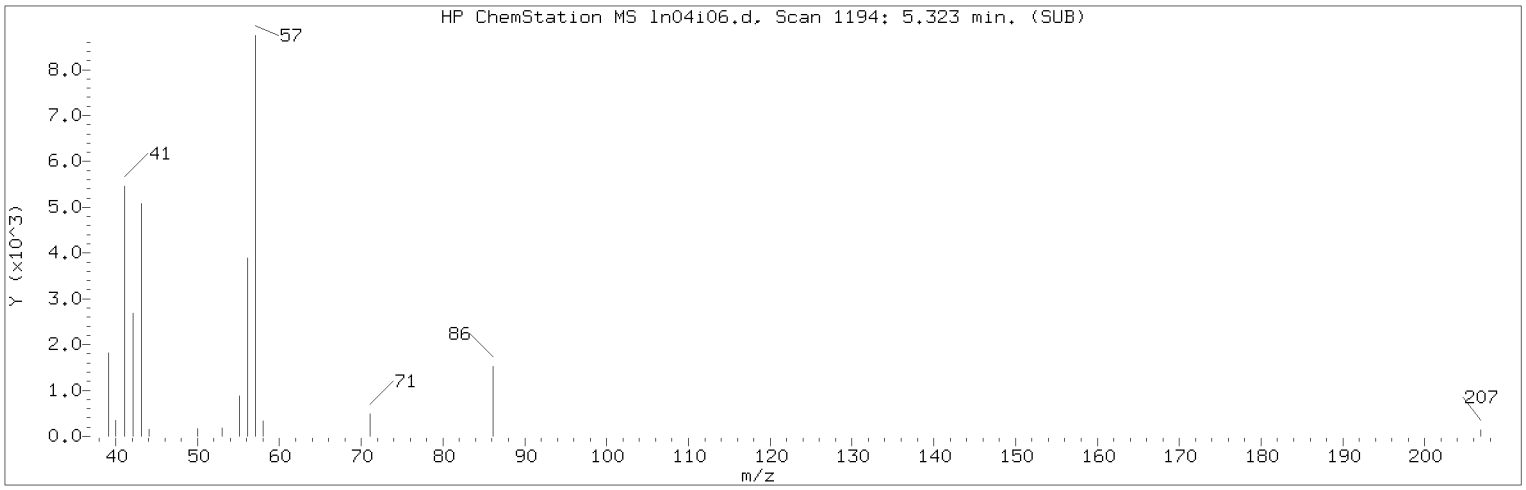
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

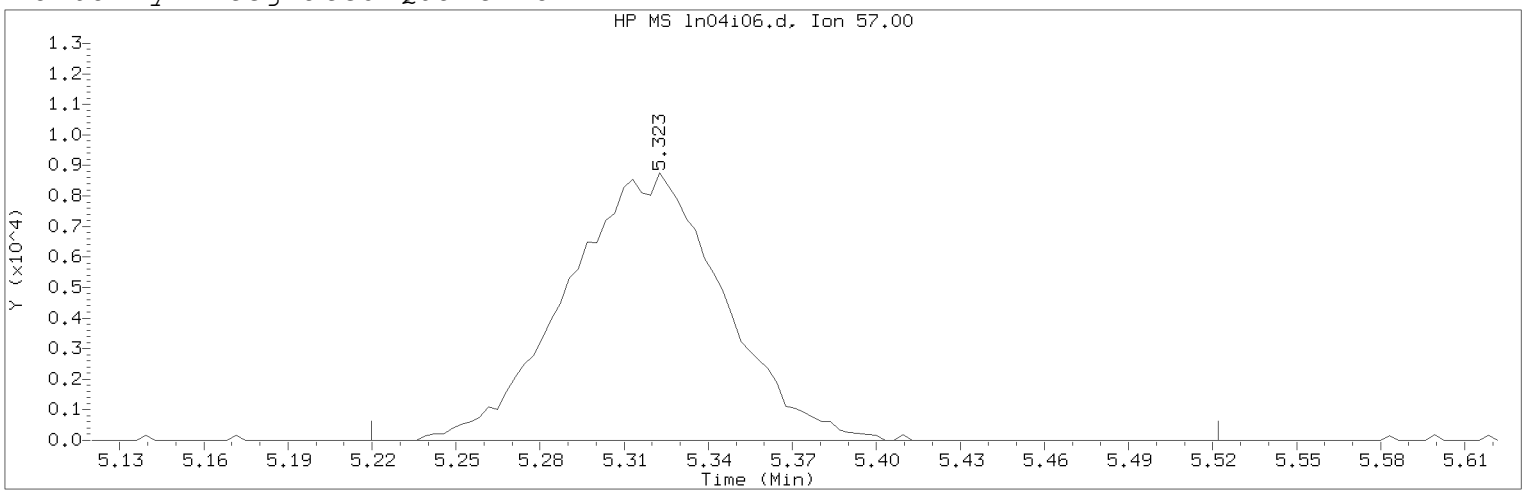
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area : 254362
On-column Amount (ng) : 250.0000
Integration start scan : 903 Integration stop scan: 1053
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

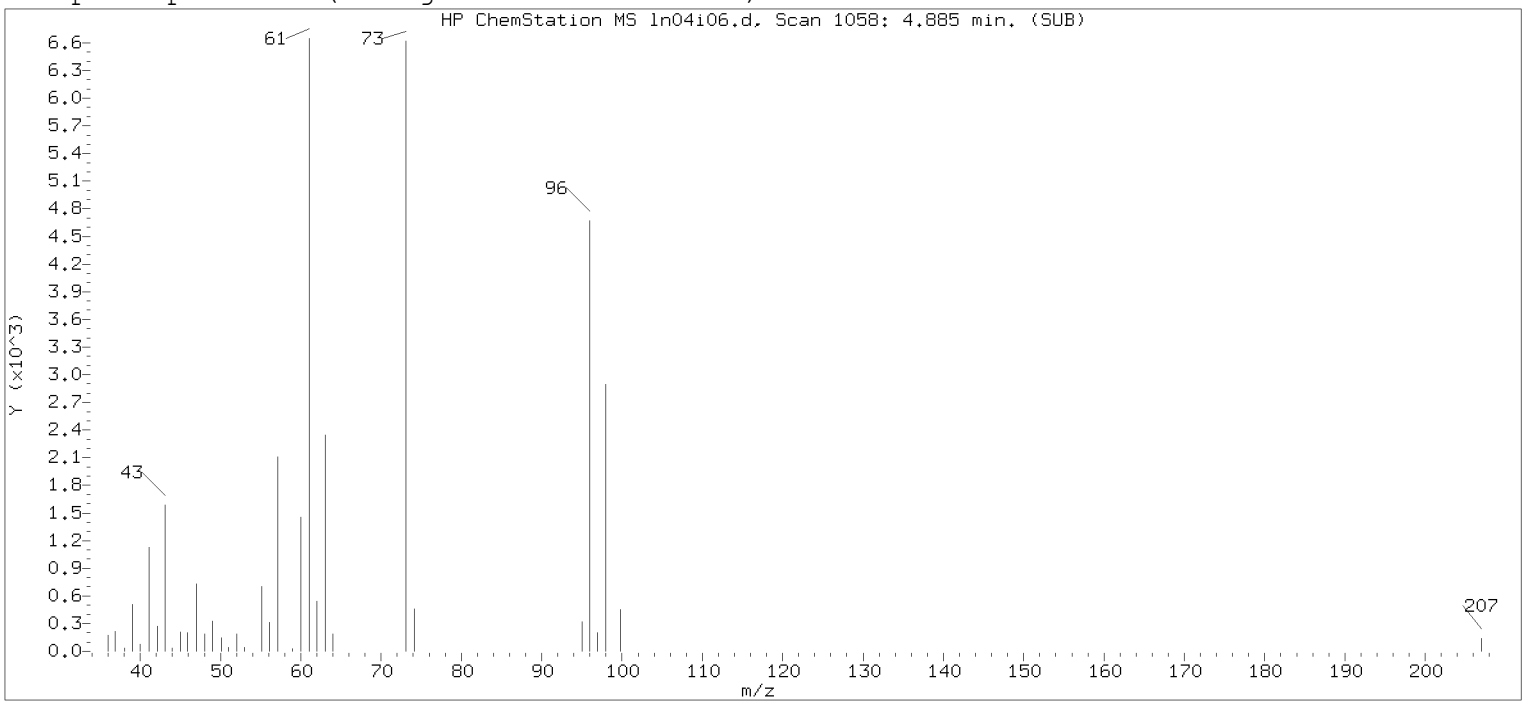
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1194
Retention Time (minutes): 5.323
Quant Ion : 57.00
Area (flag) : 33969M
On-Column Amount (ng) : 3.8769
Integration start scan : 1161 Integration stop scan: 1255
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

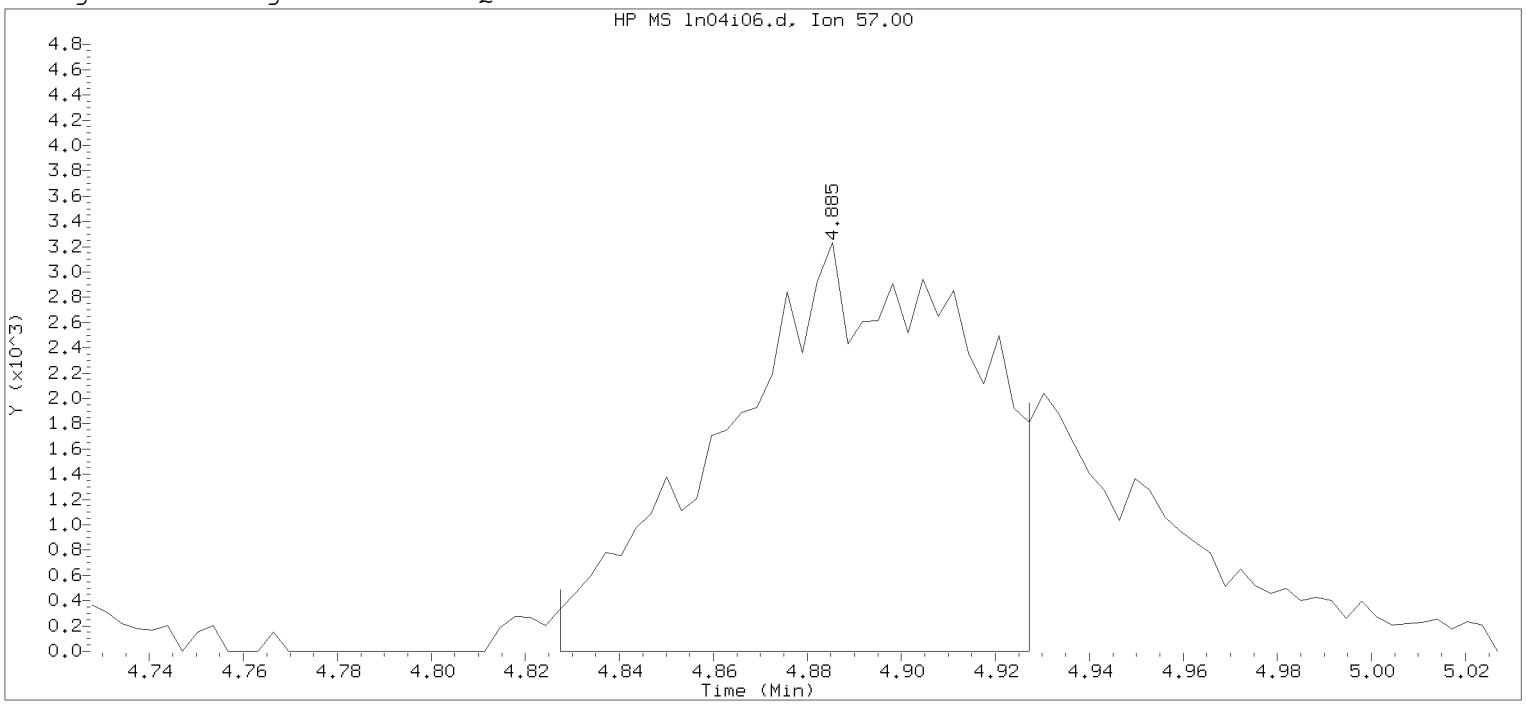
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

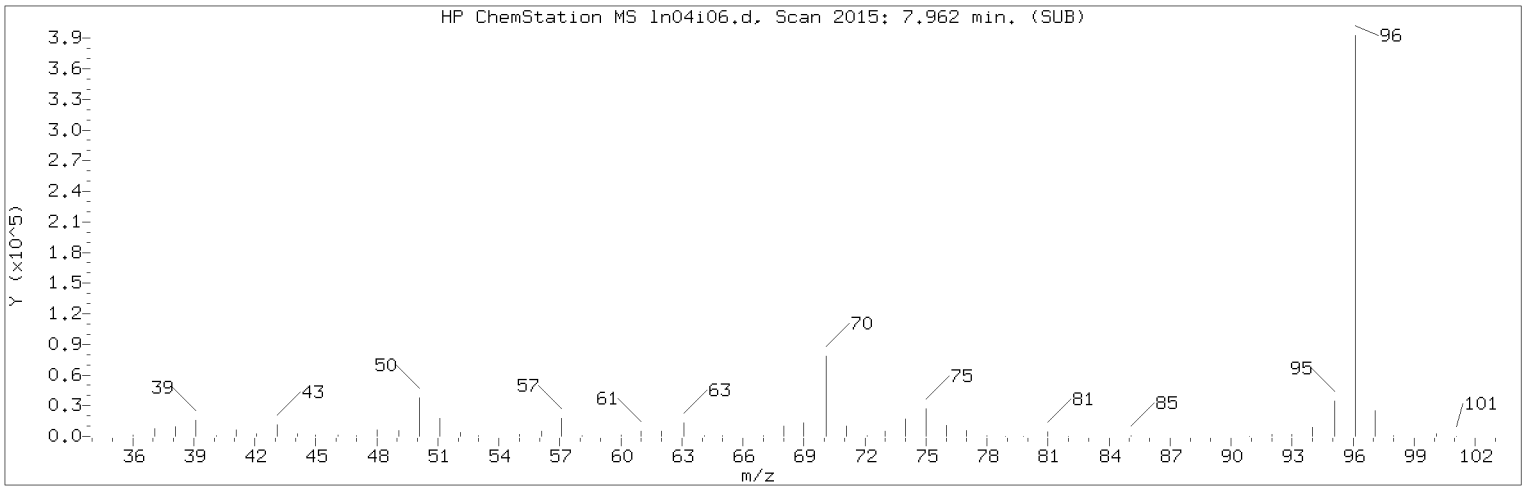
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

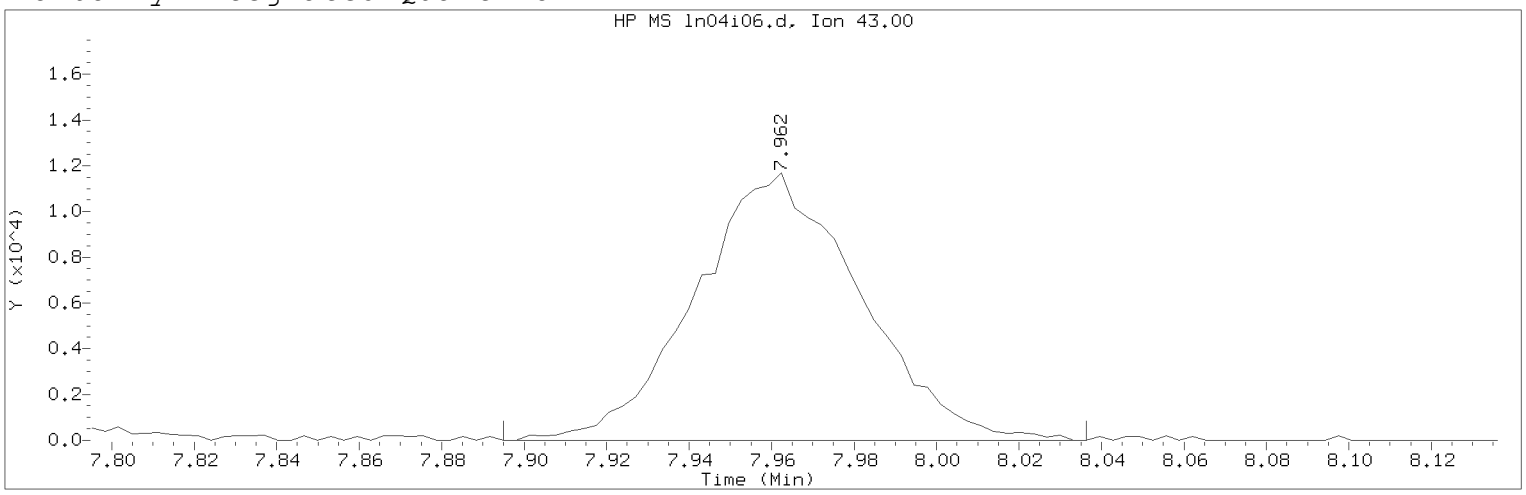
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1058		
Retention Time (minutes)	: 4.885		
Quant Ion	: 57.00		
Area	: 11708		
On-column Amount (ng)	: 3.2297		
Integration start scan	: 1039	Integration stop scan:	1070
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

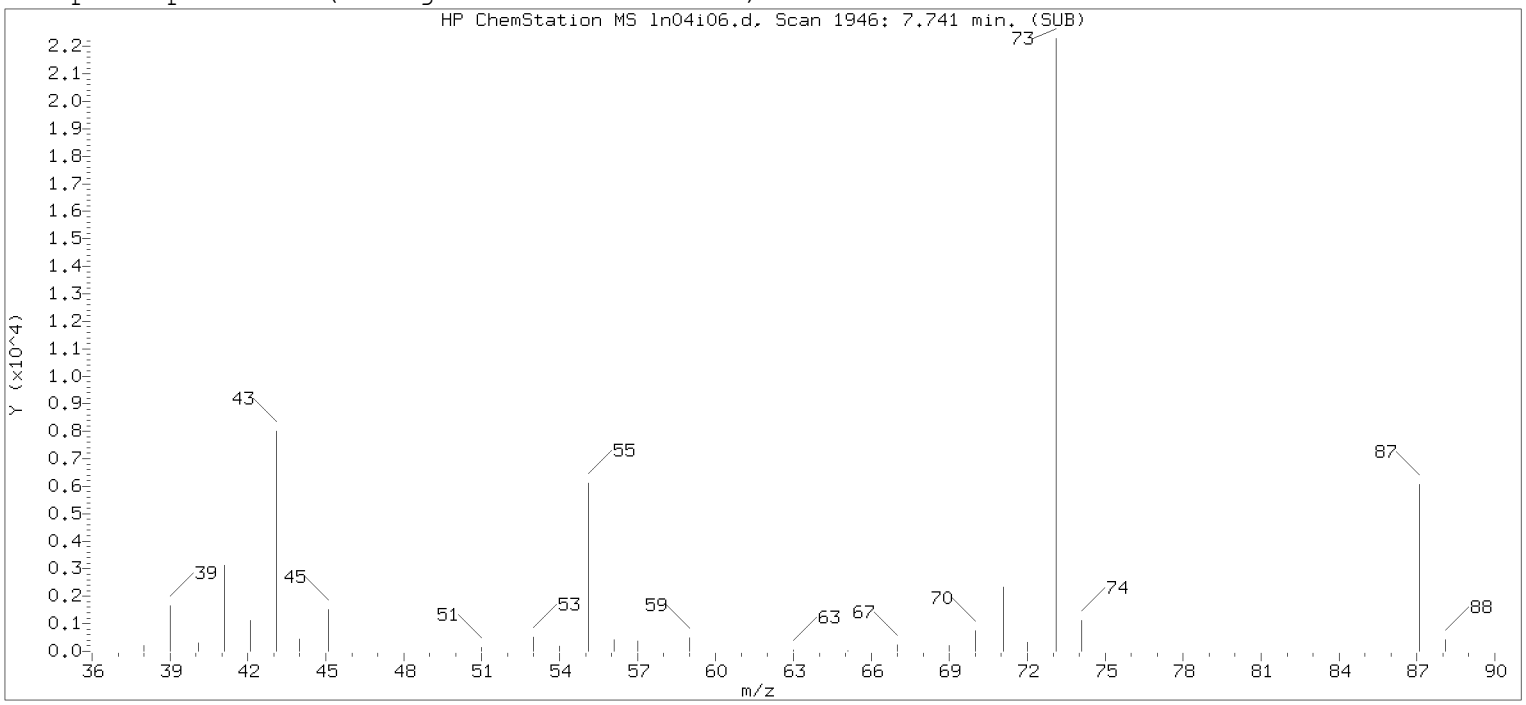
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2015
Retention Time (minutes): 7.962
Quant Ion : 43.00
Area (flag) : 32502MA
On-Column Amount (ng) : 3.9708
Integration start scan : 1993 Integration stop scan: 2037
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

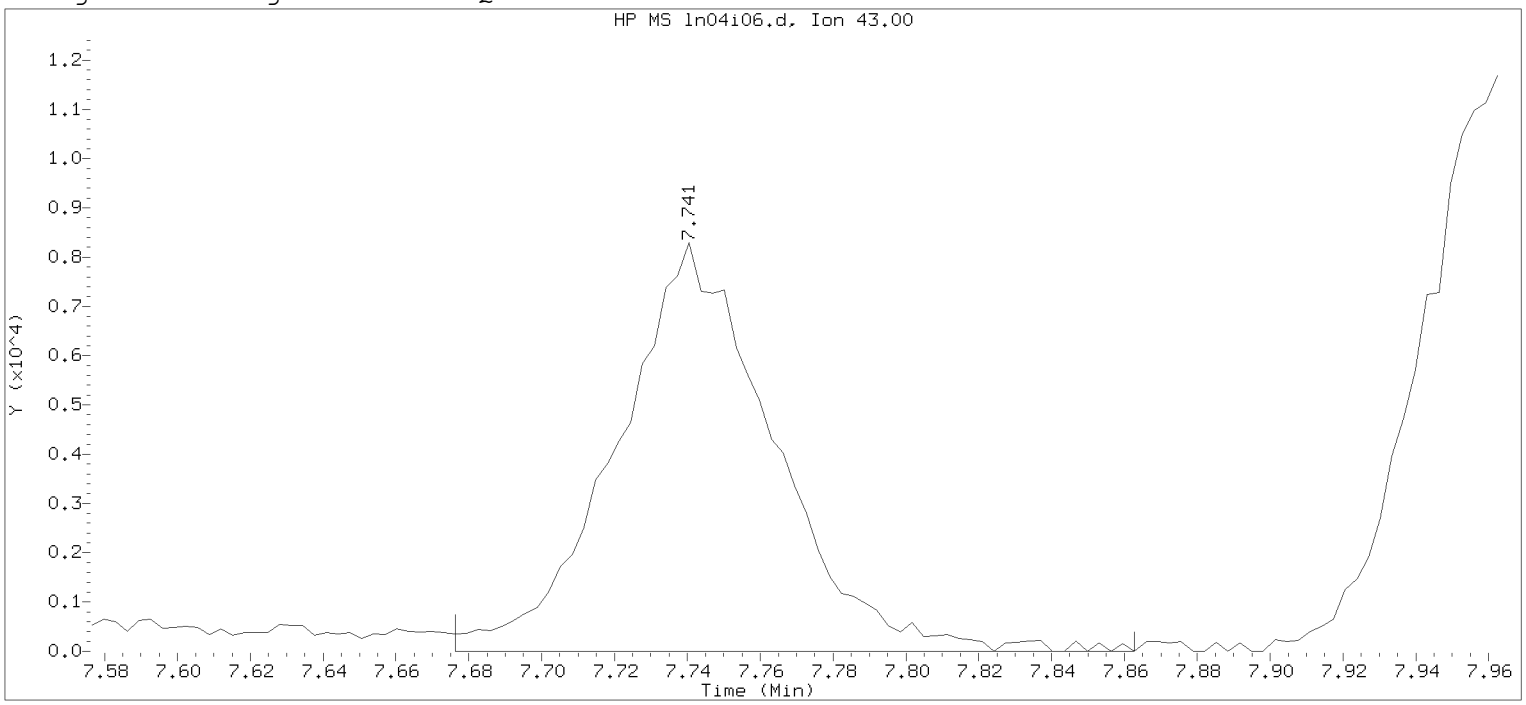
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

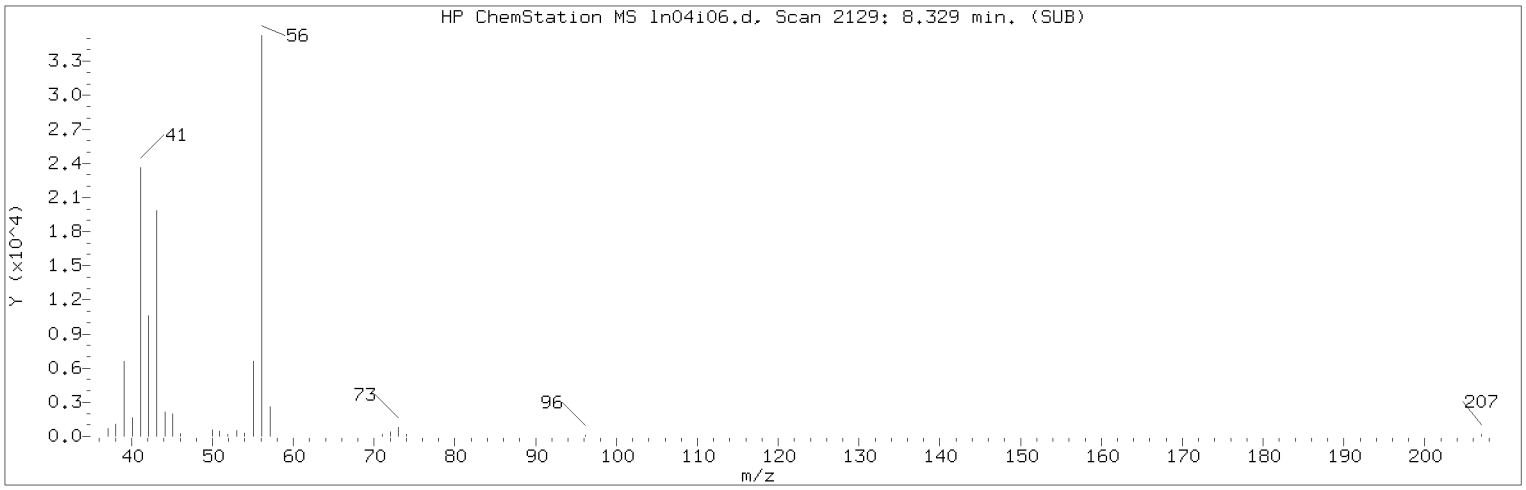
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

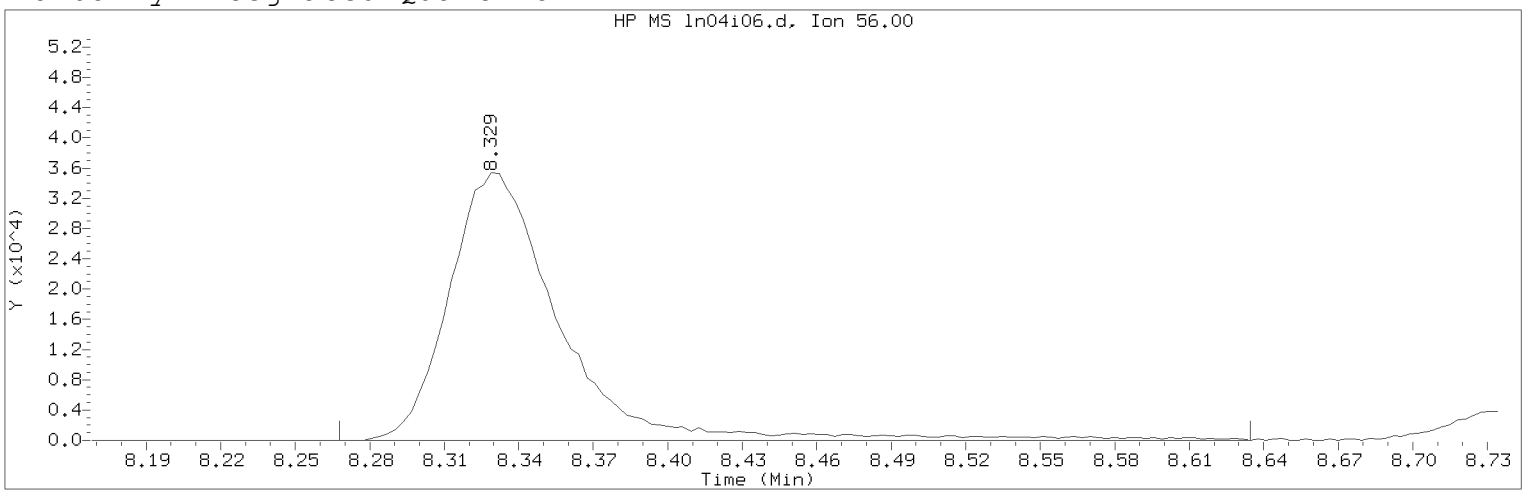
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.741
Quant Ion : 43.00
Area : 24793
On-column Amount (ng) : 4.0913
Integration start scan : 1925 Integration stop scan: 1983
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

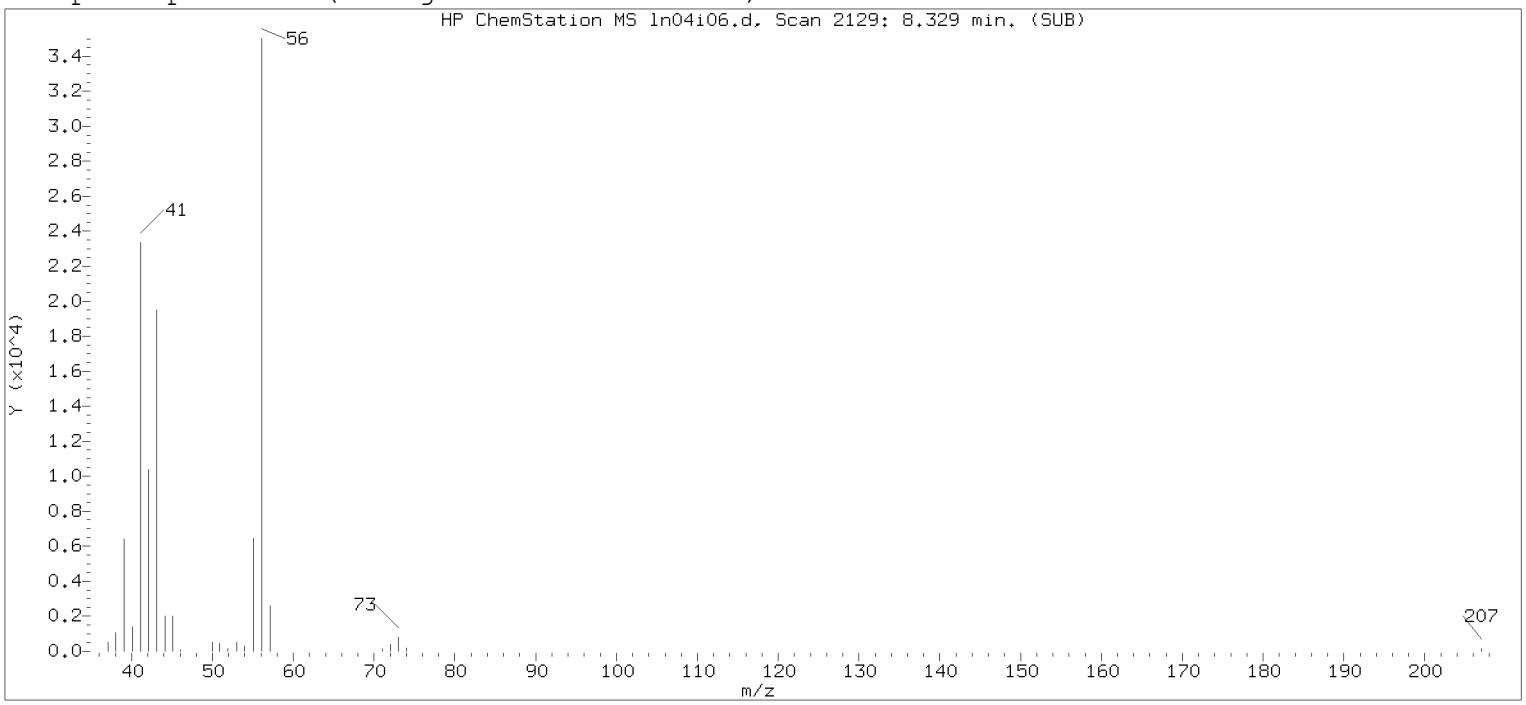
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area (flag) : 110027M
On-Column Amount (ng) : 344.3298
Integration start scan : 2109 Integration stop scan: 2223
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

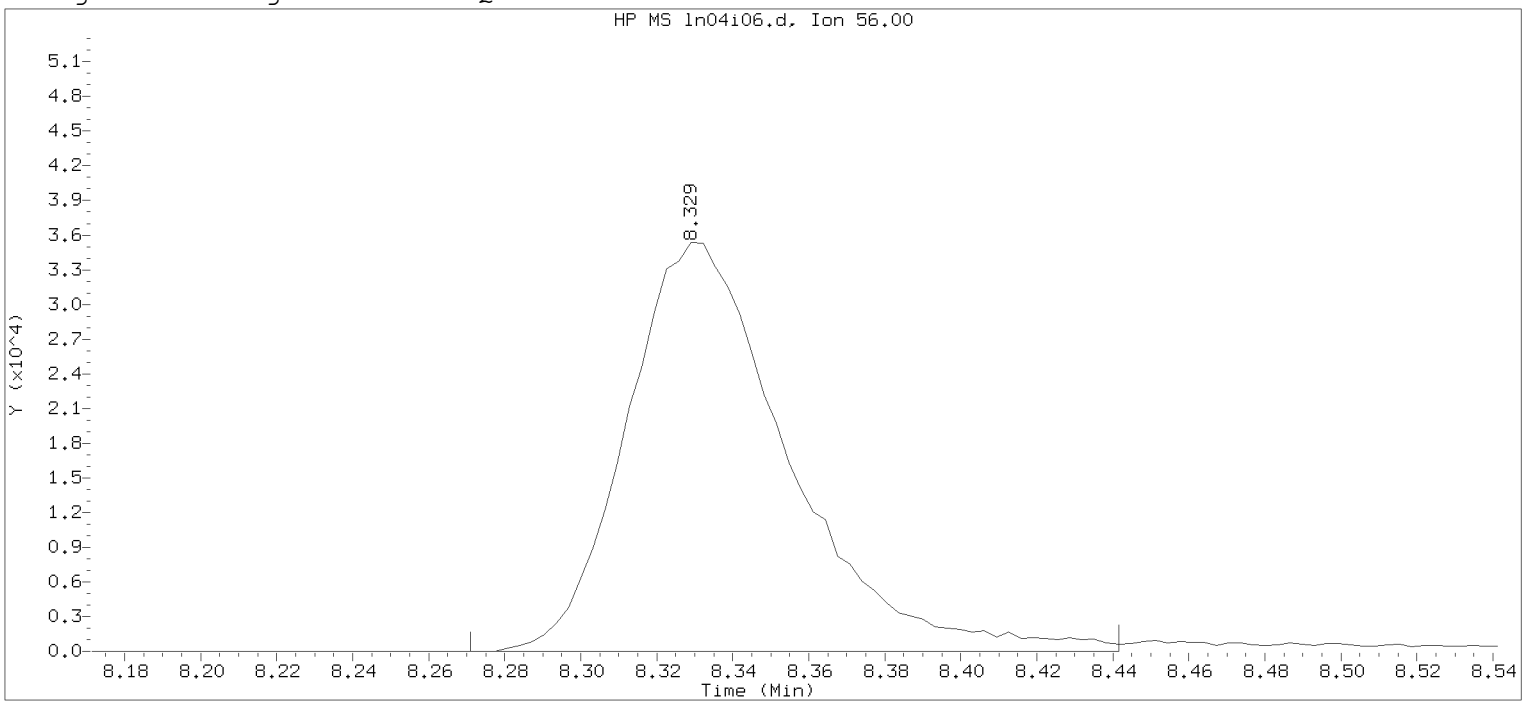
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

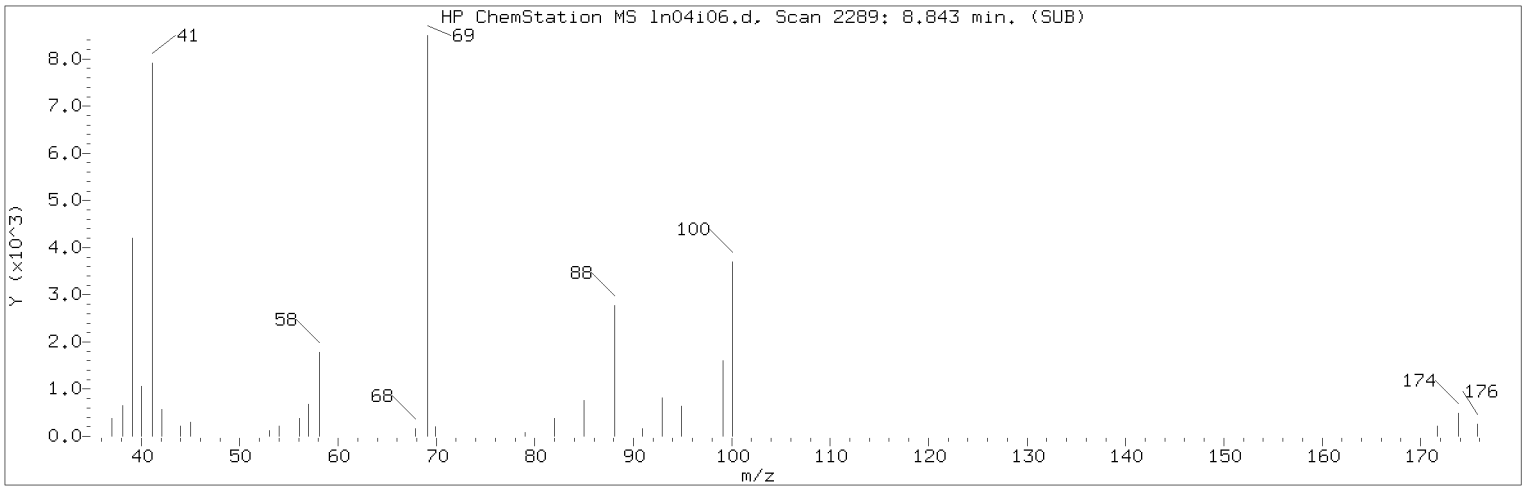
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

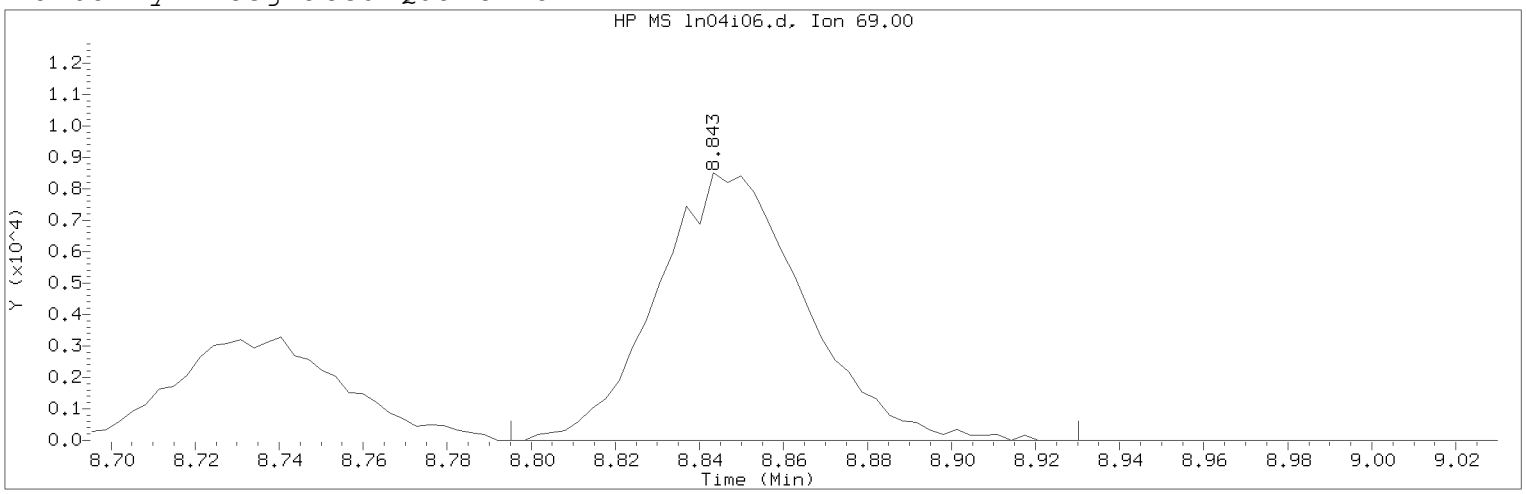
Compound Number	: 69		
Compound Name	: n-Butanol		
Scan Number	: 2129		
Retention Time (minutes)	: 8.329		
Quant Ion	: 56.00		
Area	: 104688		
On-column Amount (ng)	: 337.8676		
Integration start scan	: 2110	Integration stop scan:	2163
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

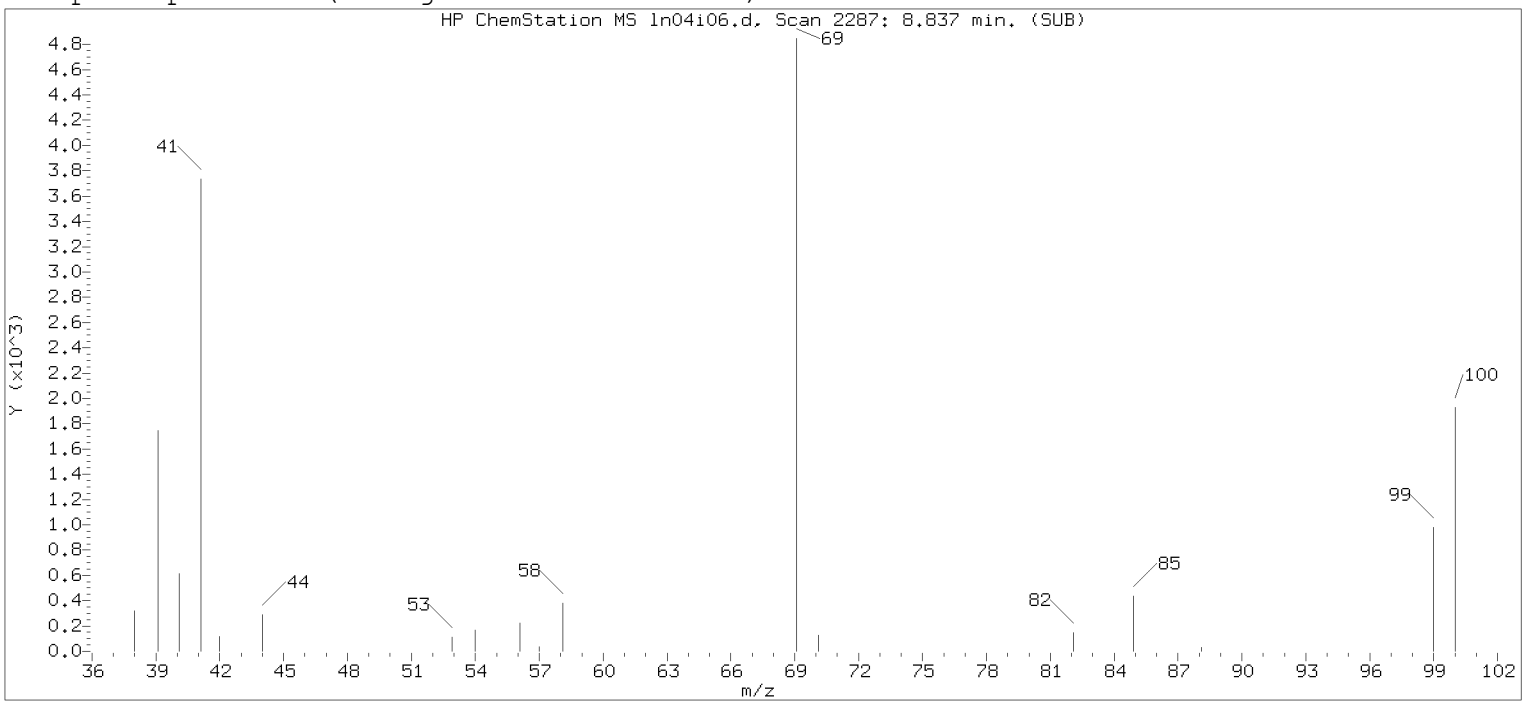
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2289
Retention Time (minutes): 8.843
Quant Ion : 69.00
Area (flag) : 20713M
On-Column Amount (ng) : 3.6110
Integration start scan : 2273 Integration stop scan: 2315
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

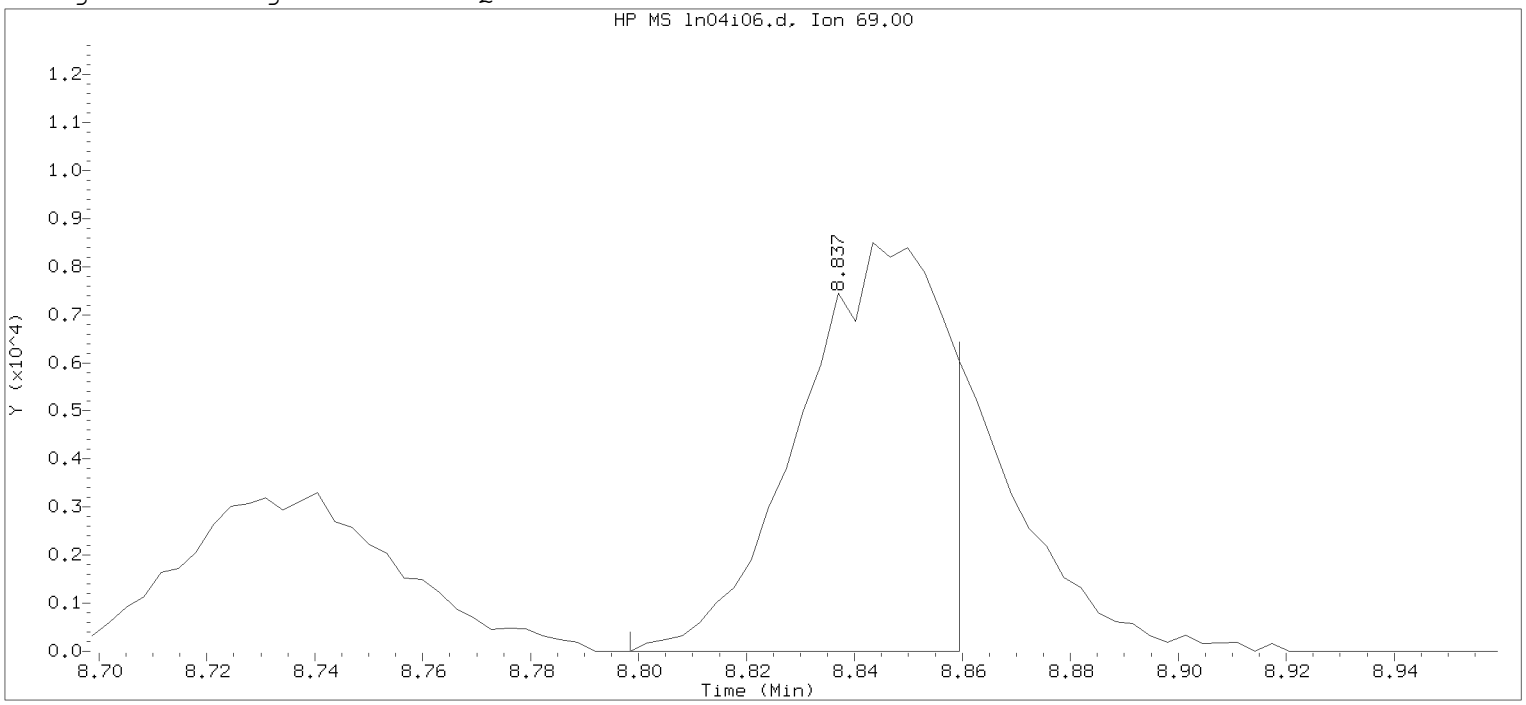
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

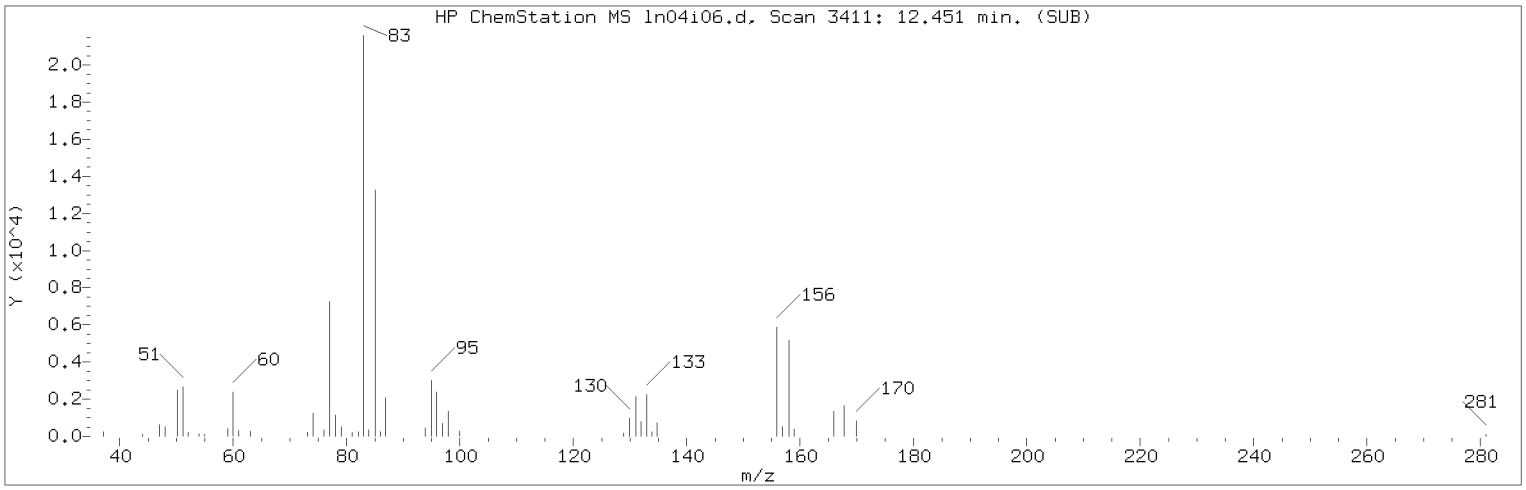
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

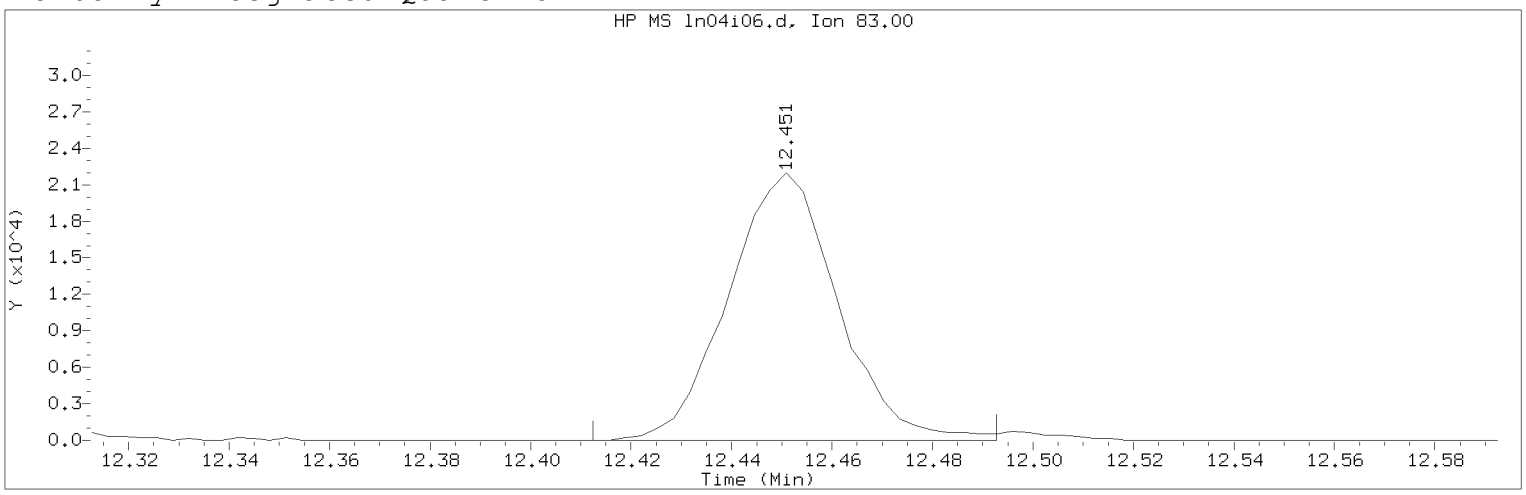
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2287
Retention Time (minutes): 8.837
Quant Ion : 69.00
Area : 15546
On-column Amount (ng) : 2.8548
Integration start scan : 2274 Integration stop scan: 2293
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

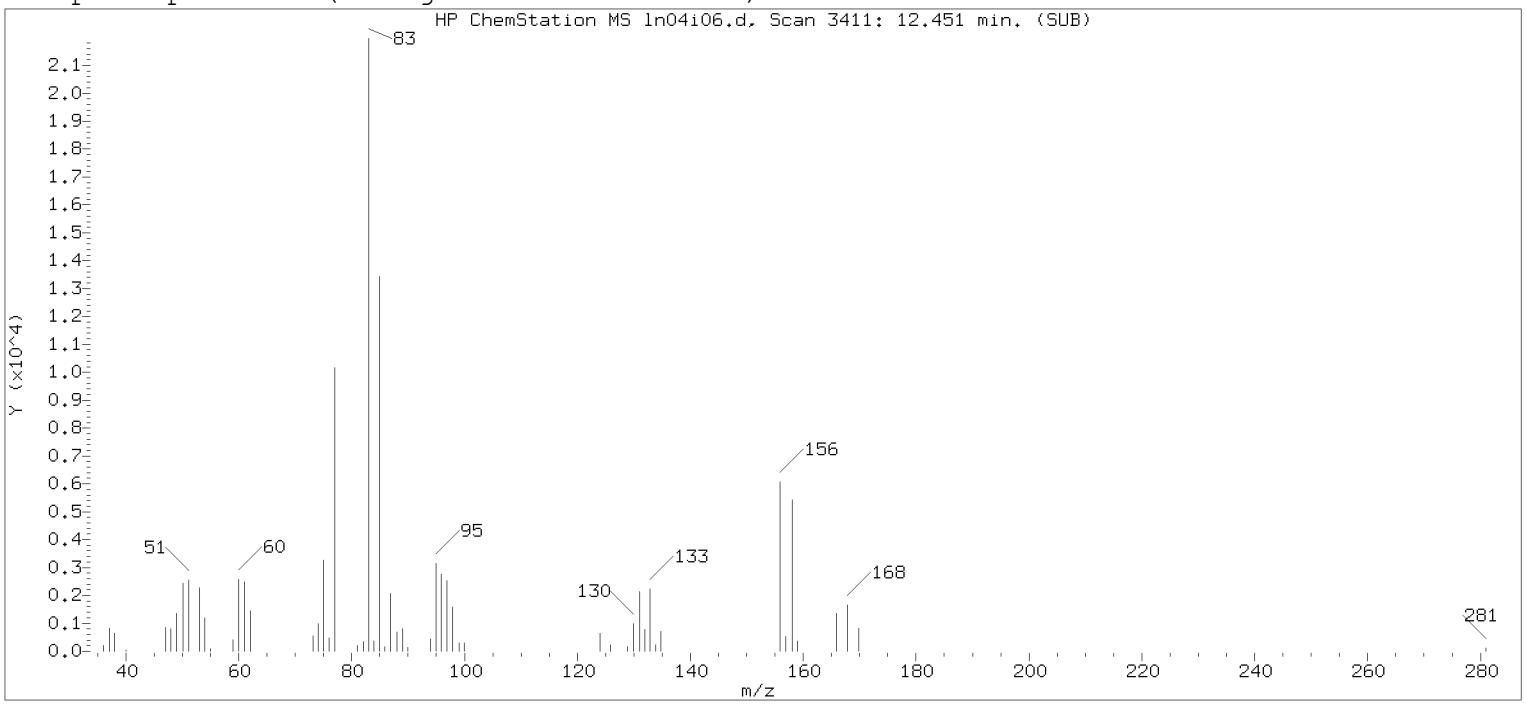
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 33170M
On-Column Amount (ng) : 3.6577
Integration start scan : 3398 Integration stop scan: 3423
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

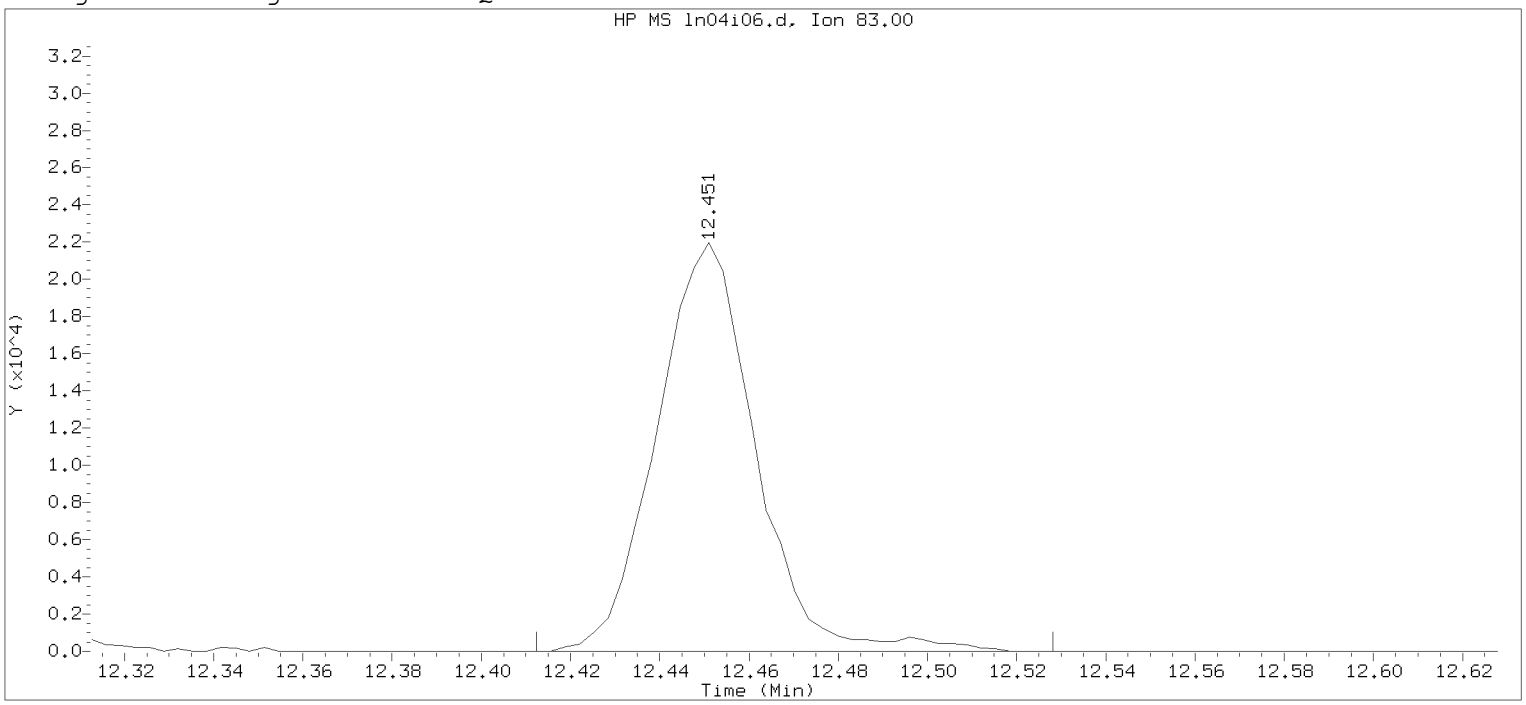
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

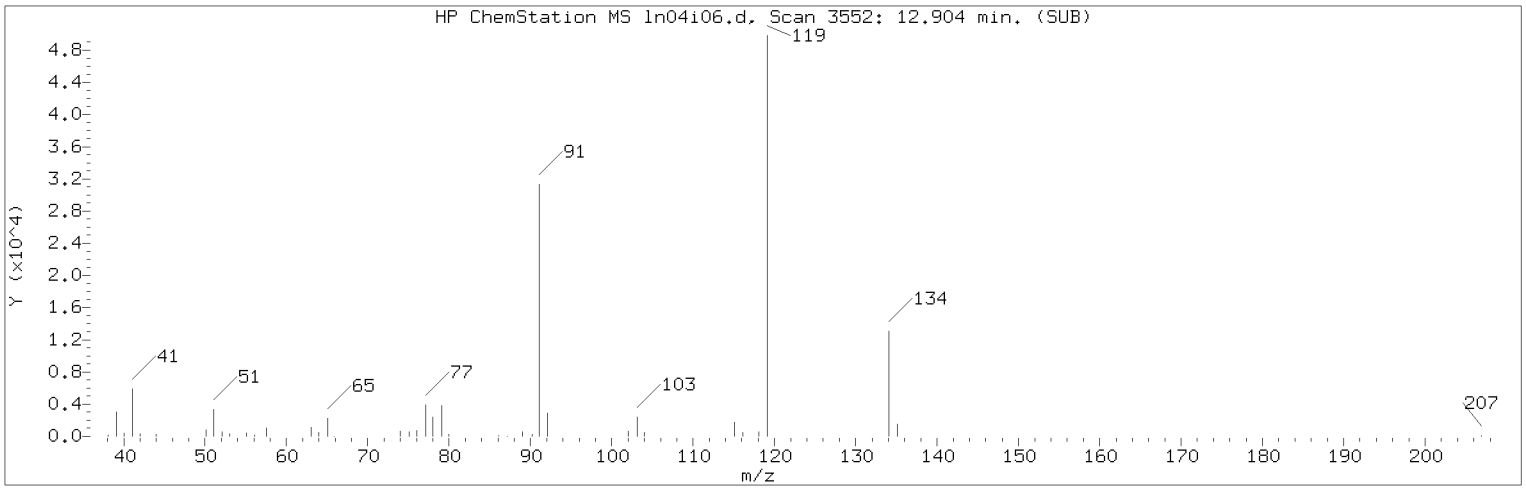
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

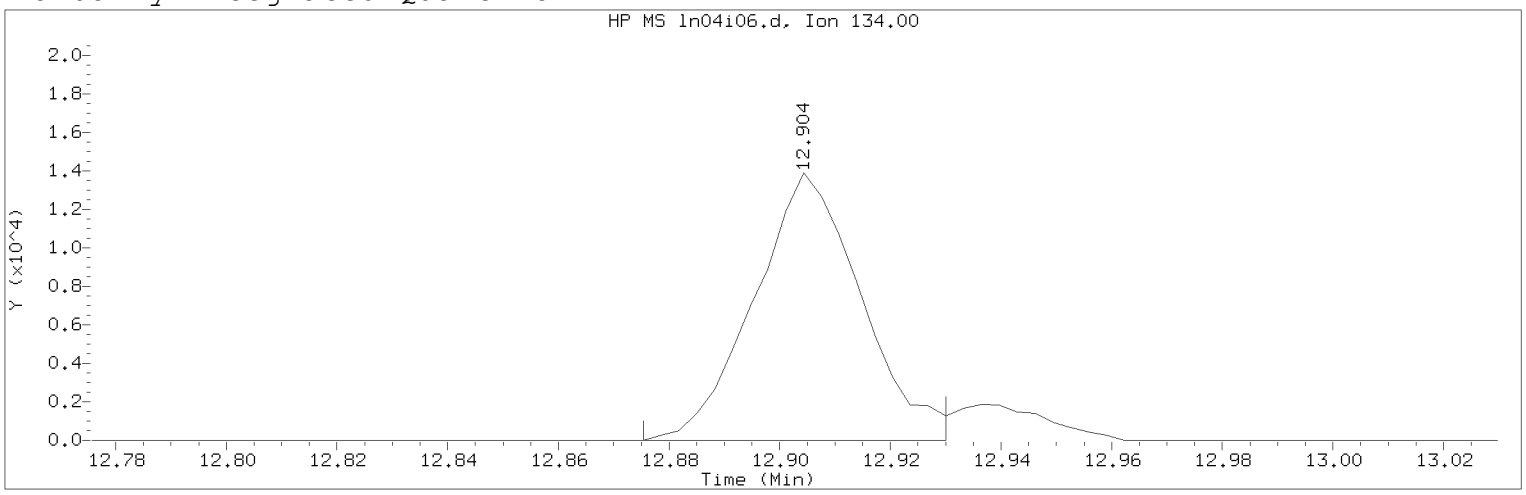
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 33718
On-column Amount (ng) : 3.6520
Integration start scan : 3398 Integration stop scan: 3434
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

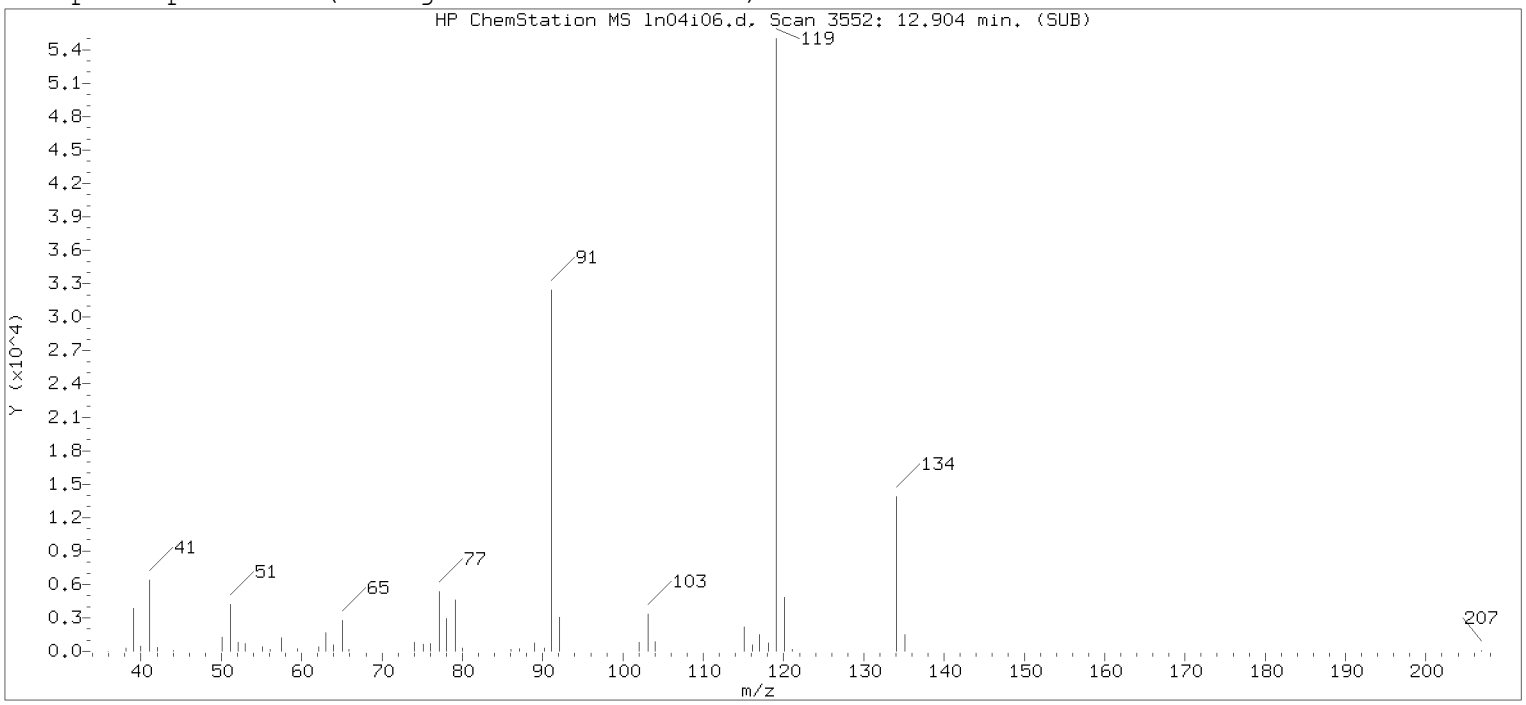
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 18608M
On-Column Amount (ng) : 3.9276
Integration start scan : 3542 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

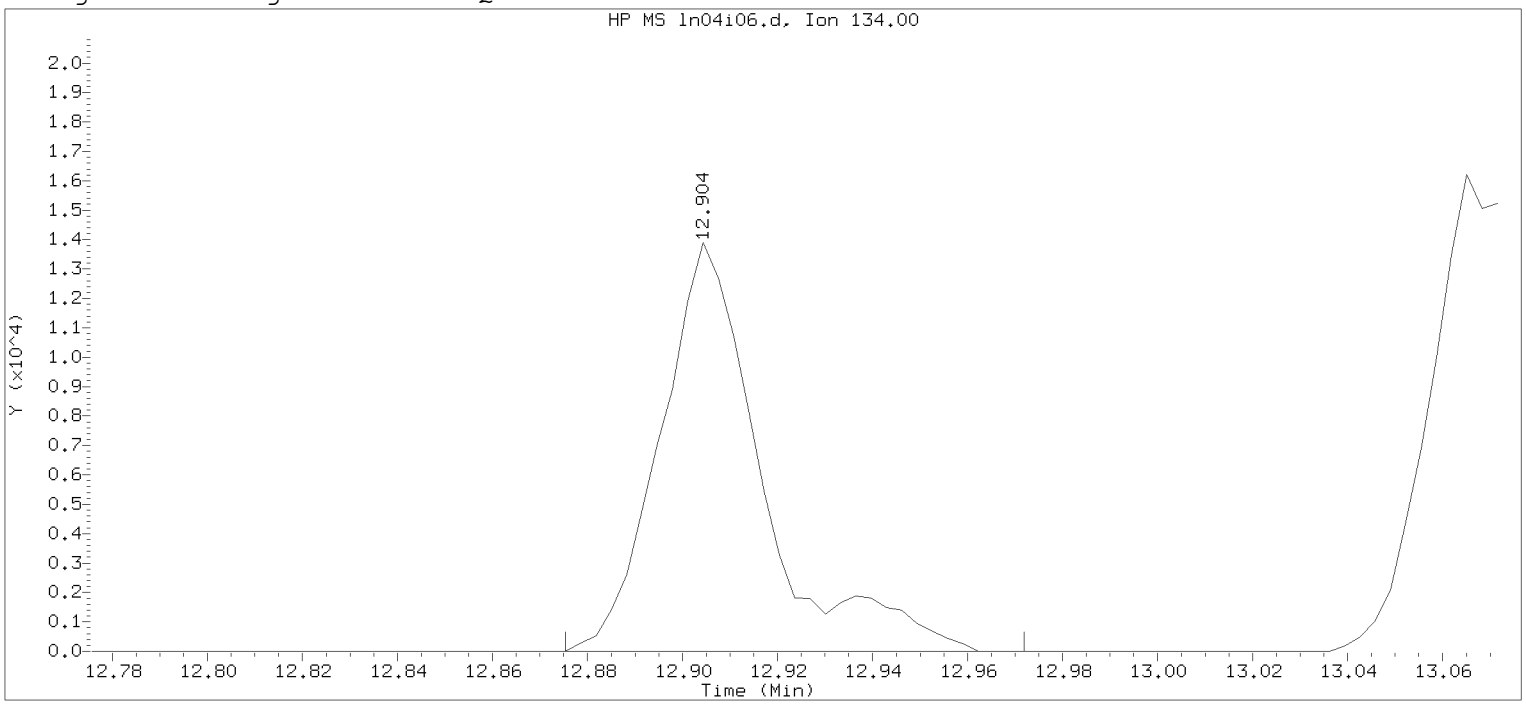
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



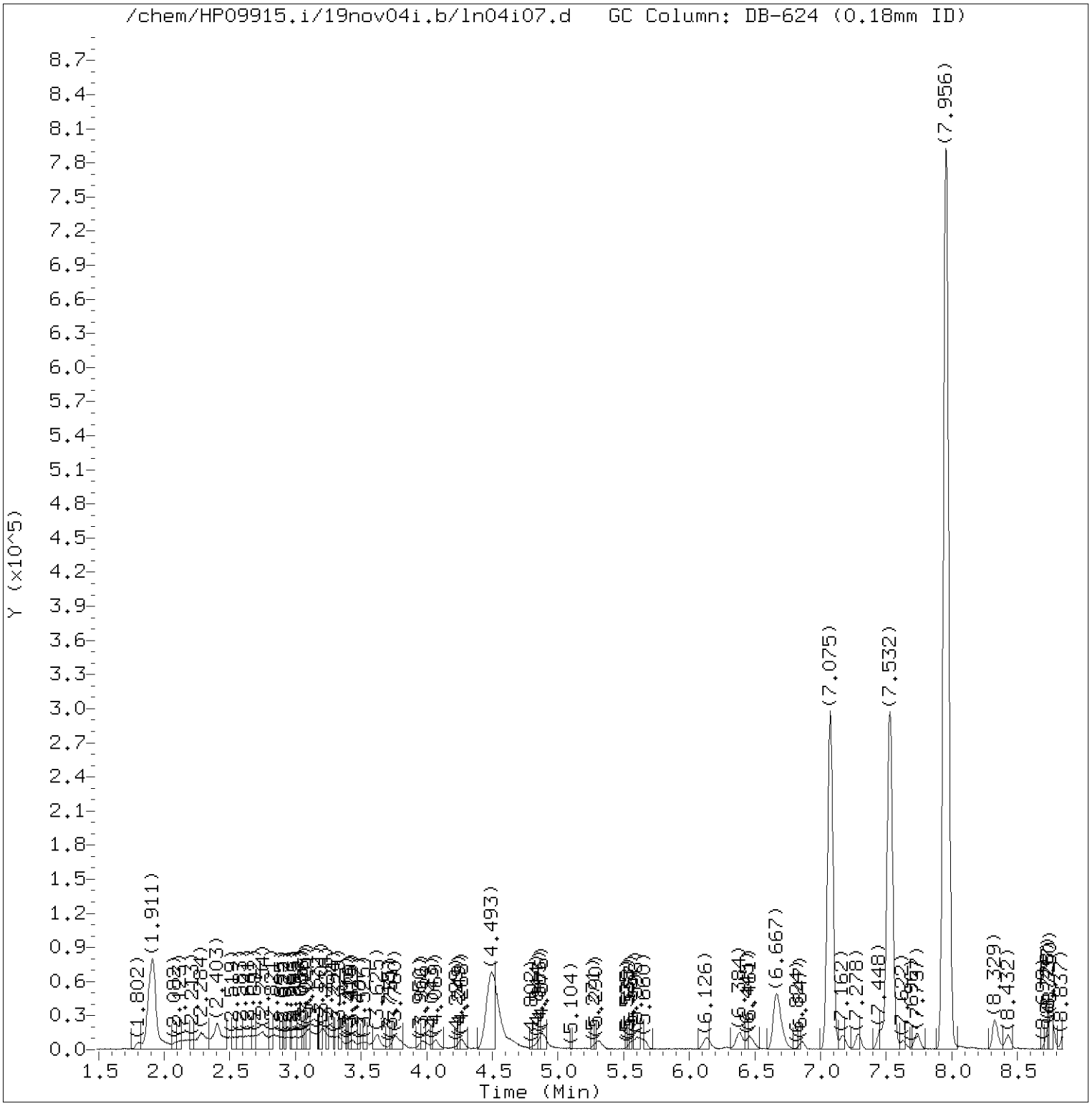
Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 20636
On-column Amount (ng) : 4.1808
Integration start scan : 3542 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

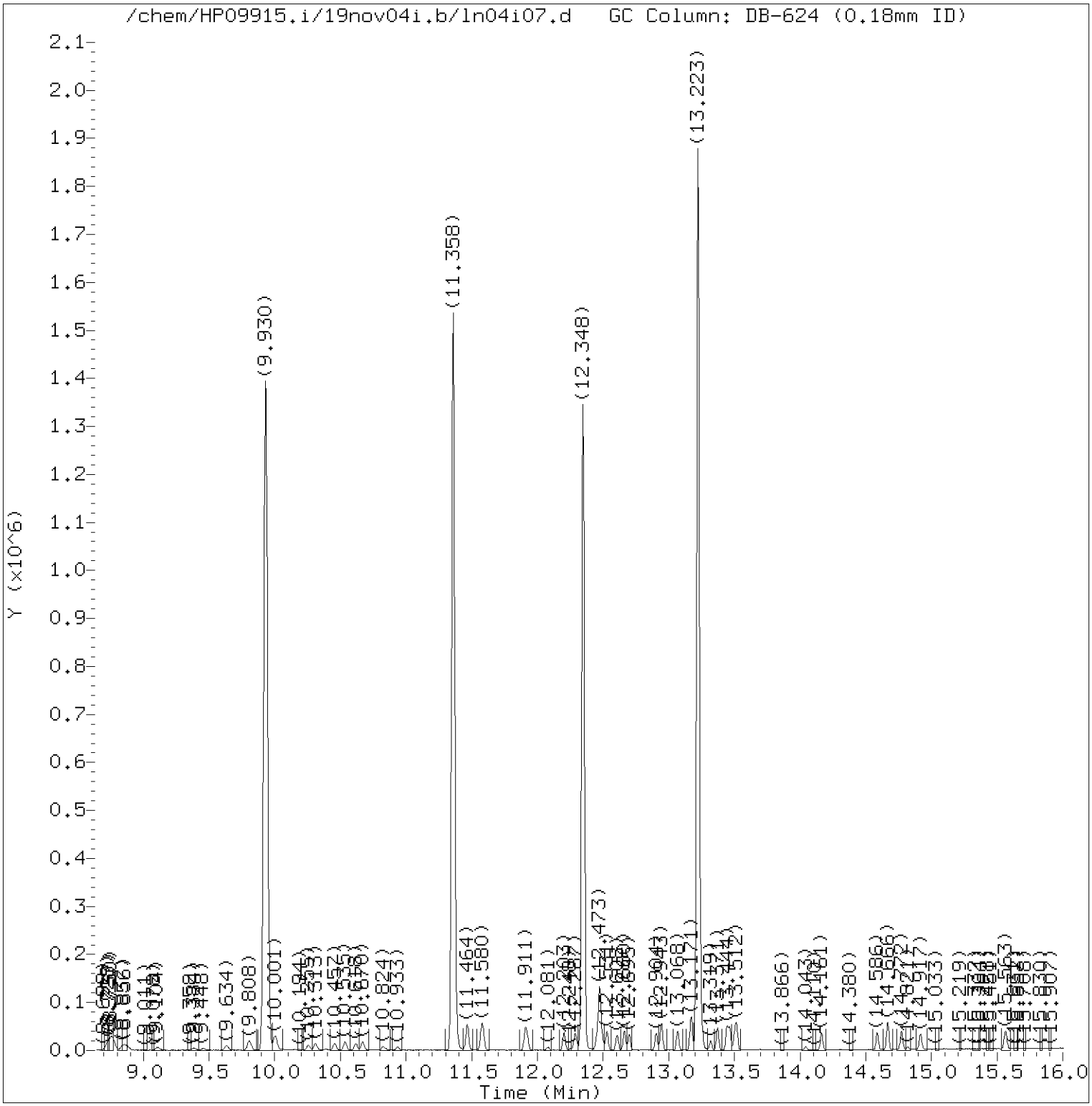
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.078	85	6299	0.794
4) Chloromethane	(2)	2.284	50	6896	0.902
5) 1,3-Butadiene	(2)	2.403	39	7255M	1.143
6) Vinyl Chloride	(2)	2.410	62	7160	0.939
8) Bromomethane	(2)	2.744	94	5605	1.025
9) Chloroethane	(2)	2.840	64	4160M	0.992
10) Dichlorofluoromethane	(2)	3.094	67	10094M	1.004
12) Trichlorofluoromethane	(2)	3.146	101	7129	0.868
11) n-Pentane	(2)	3.204	43	10269	1.058
14) Ethyl ether	(2)	3.429	59	4640M	0.874
15) Freon 123a	(2)	3.516	67	6210	0.940
16) Acrolein	(1)	3.622	56	17644	9.654
17) 1,1-Dichloroethene	(2)	3.750	96	4176	0.866
17) 1,1-Dichloroethene	(2)	3.754	63	2326	0.963
19) Freon 113	(2)	3.779	101	4754	0.864
18) Acetone	(1)	3.831	58	1588M	1.938
22) Methyl Iodide	(2)	3.966	142	8860	0.887
21) 2-Propanol	(1)	4.011	45	12063	20.480
23) Carbon Disulfide	(2)	4.075	76	15443	0.850
27) Methyl Acetate	(2)	4.255	43	6274M	1.011
25) Allyl Chloride	(2)	4.271	41	8168	0.945
28) Methylene Chloride	(2)	4.474	84	5404	0.942
29)*t-Butyl alcohol-d10	(1)	4.496	65	243591	250.000
30) t-Butyl alcohol	(1)	4.622	59	19461	18.976
31) Acrylonitrile	(2)	4.856	53	2960	0.886
33) Methyl Tertiary Butyl Ether	(2)	4.879	73	16848	0.920
32) trans-1,2-Dichloroethene	(2)	4.885	96	5035	0.903
34) n-Hexane	(2)	5.316	57	7475M	0.862
36) 1,1-Dichloroethane	(2)	5.548	63	8436	0.867
38) di-Isopropyl ether	(2)	5.606	45	16654	0.888
39) 2-Chloro-1,3-butadiene	(2)	5.663	53	7448	0.853
40) Ethyl t-butyl ether	(2)	6.126	59	16060	0.882
43) 1,2-Dichloroethene (Total)	(2)		96	10762	1.818
44) 2-Butanone	(2)	6.361	43	8098	1.889
42) cis-1,2-Dichloroethene	(2)	6.377	96	5727	0.915
45) 2,2-Dichloropropane	(2)	6.390	77	6419M	0.849
47) Propionitrile	(1)	6.461	54	24221	18.955
48) Methacrylonitrile	(2)	6.670	67	32346	8.977

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	2849	0.858
50) Tetrahydrofuran	(1)	6.728	71	2319	2.009
51) Chloroform	(2)	6.860	83	8108	0.871
52)$Dibromofluoromethane	(2)	7.075	113	273696	49.231
52)$Dibromofluoromethane	(2)	7.075	111	279412	49.293
53) 1,1,1-Trichloroethane	(2)	7.078	97	6588	0.830
54) Cyclohexane	(2)	7.171	56	8997	0.847
54) Cyclohexane	(2)	7.178	84	7859	0.852
54) Cyclohexane	(2)	7.178	69	2772	0.844
56) Carbon Tetrachloride	(2)	7.284	117	5549	0.824
55) 1,1-Dichloropropene	(2)	7.287	75	6611	0.860
58) Isobutyl Alcohol	(1)	7.458	41	16978	49.195
57)$1,2-Dichloroethane-d4	(2)	7.528	102	69641	49.151
57)$1,2-Dichloroethane-d4	(2)	7.528	65	311703	49.366
57)$1,2-Dichloroethane-d4	(2)	7.535	104	44286	48.935
60) Benzene	(2)	7.551	78	20445	0.884
61) 1,2-Dichloroethane	(2)	7.631	62	7810	1.050
61) 1,2-Dichloroethane	(2)	7.631	98	696	0.945
65) t-Amyl methyl ether	(2)	7.741	73	16286	0.891
67) n-Heptane	(2)	7.956	43	7535M	0.930
66)*Fluorobenzene	(2)	7.959	96	1137124	50.000
69) n-Butanol	(1)	8.329	56	24322	81.882
71) Trichloroethene	(2)	8.432	95	5231	0.898
72) Methylcyclohexane	(2)	8.737	83	9247	0.856
72) Methylcyclohexane	(2)	8.731	98	4032	0.825
73) 1,2-Dichloropropane	(2)	8.760	63	5229	0.890
76) Methyl Methacrylate	(2)	8.837	69	4607M	0.811
75) 1,4-Dioxane	(1)	8.856	88	3548M	43.457
74) Dibromomethane	(2)	8.866	93	3298	0.868
78) Bromodichloromethane	(2)	9.107	83	5648	0.828
79) 2-Nitropropane	(2)	9.384	41	3333	1.614
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	2007	0.796
81) cis-1,3-Dichloropropene	(2)	9.638	75	6973	0.770
82) 4-Methyl-2-pentanone	(2)	9.808	43	16006	1.769
83)$Toluene-d8	(3)	9.930	98	1156948	50.253
83)$Toluene-d8	(3)	9.930	100	746174	50.033
88) Toluene	(3)	10.007	92	12902	0.894
90) 1,3-Dichloropropene (total)	(3)		100	13101	1.518

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.255	75	6128	0.748
91) Ethyl Methacrylate	(3)	10.313	69	7873	0.791
92) 1,1,2-Trichloroethane	(3)	10.461	97	4897	0.895
93) Tetrachloroethene	(3)	10.538	166	5565	0.910
94) 1,3-Dichloropropane	(3)	10.618	76	8504	0.910
96) 2-Hexanone	(3)	10.670	43	11811	1.777
97) Dibromochloromethane	(3)	10.827	129	4109	0.733
99) 1,2-Dibromoethane	(3)	10.937	107	5163	0.869
100)*Chlorobenzene-d5	(3)	11.358	117	879875	50.000
101) 1-Chlorohexane	(3)	11.361	91	8103	1.045
102) Chlorobenzene	(3)	11.383	112	14367	0.880
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	4138	0.769
104) Ethylbenzene	(3)	11.464	91	24192	0.877
106) m+p-Xylene	(3)	11.583	106	18914	1.743
108) Xylene (Total)	(3)		106	28415	2.629
107) o-Xylene	(3)	11.908	106	9501	0.886
109) Styrene	(3)	11.917	104	14106	0.796
110) Bromoform	(3)	12.081	173	2729	0.652
111) Isopropylbenzene	(3)	12.203	105	22719	0.845
112) Cyclohexanone	(1)	12.287	55	15983	49.985
114)$4-Bromofluorobenzene	(3)	12.348	95	436282	50.046
114)$4-Bromofluorobenzene	(3)	12.348	174	360511	49.883
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	7596	0.849
115) Bromobenzene	(4)	12.461	156	6426	0.903
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	22650	8.211
117) 1,2,3-Trichloropropane	(4)	12.496	110	2425	0.884
119) n-Propylbenzene	(4)	12.528	91	27655	0.890
120) 2-Chlorotoluene	(4)	12.612	126	6138M	0.929
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	18836	0.834
121) 4-Chlorotoluene	(4)	12.702	126	6403M	0.931
124) tert-Butylbenzene	(4)	12.904	134	4060M	0.869
125) Pentachloroethane	(4)	12.940	167	2751	0.684
126) 1,2,4-Trimethylbenzene	(4)	12.943	105	20498	0.861
127) sec-Butylbenzene	(4)	13.065	105	24344	0.873
129) 1,3-Dichlorobenzene	(4)	13.165	146	12468	0.954
130) p-Isopropyltoluene	(4)	13.174	119	21126	0.876
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	473433	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	13174	0.972

M = Compound was manually integrated.
* = Compound is an internal standard.
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Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

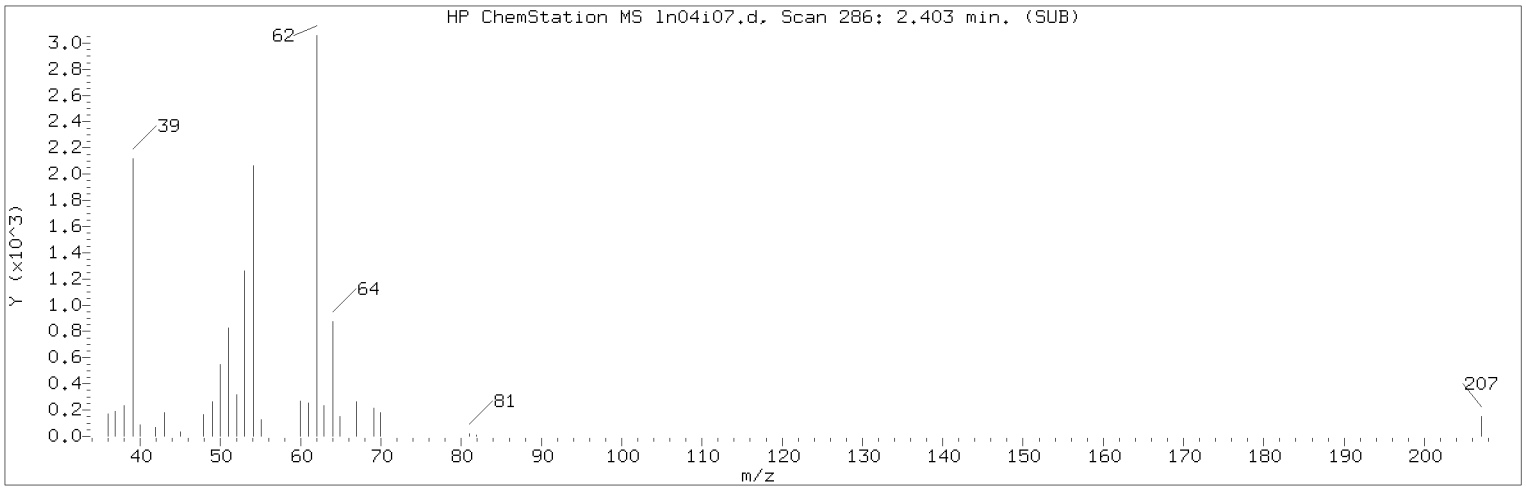
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	22457	0.890
135) Benzyl Chloride	(4)	13.319	91	11494	0.602
136) 1,3-Diethylbenzene	(4)	13.374	119	13985	0.891
141) Diethylbenzene (total)	(4)		100	41423	2.726
137) 1,4-Diethylbenzene	(4)	13.441	119	15446	0.929
139) n-Butylbenzene	(4)	13.464	92	11964M	0.970
138) 1,2-Dichlorobenzene	(4)	13.502	146	12171	0.943
140) 1,2-Diethylbenzene	(4)	13.515	119	11992	0.906
142) 1,2-Dibromo-3-chloropropane	(4)	14.046	75	1565	0.799
144) 1,3,5-Trichlorobenzene	(4)	14.161	180	10166	1.026
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	10347	1.074
147) Hexachlorobutadiene	(4)	14.666	225	9370	2.059
148) Naphthalene	(4)	14.772	128	28210	0.910
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	10052	1.072
150) 2-Methylnaphthalene	(4)	15.567	142	18783M	0.984

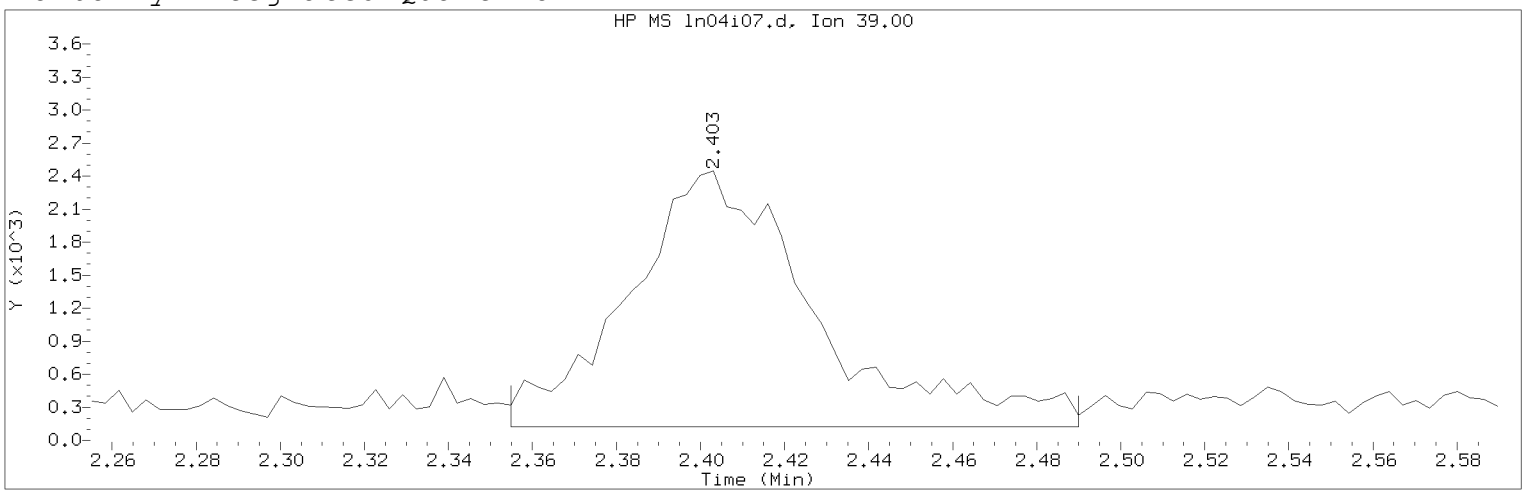
M = Compound was manually integrated.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

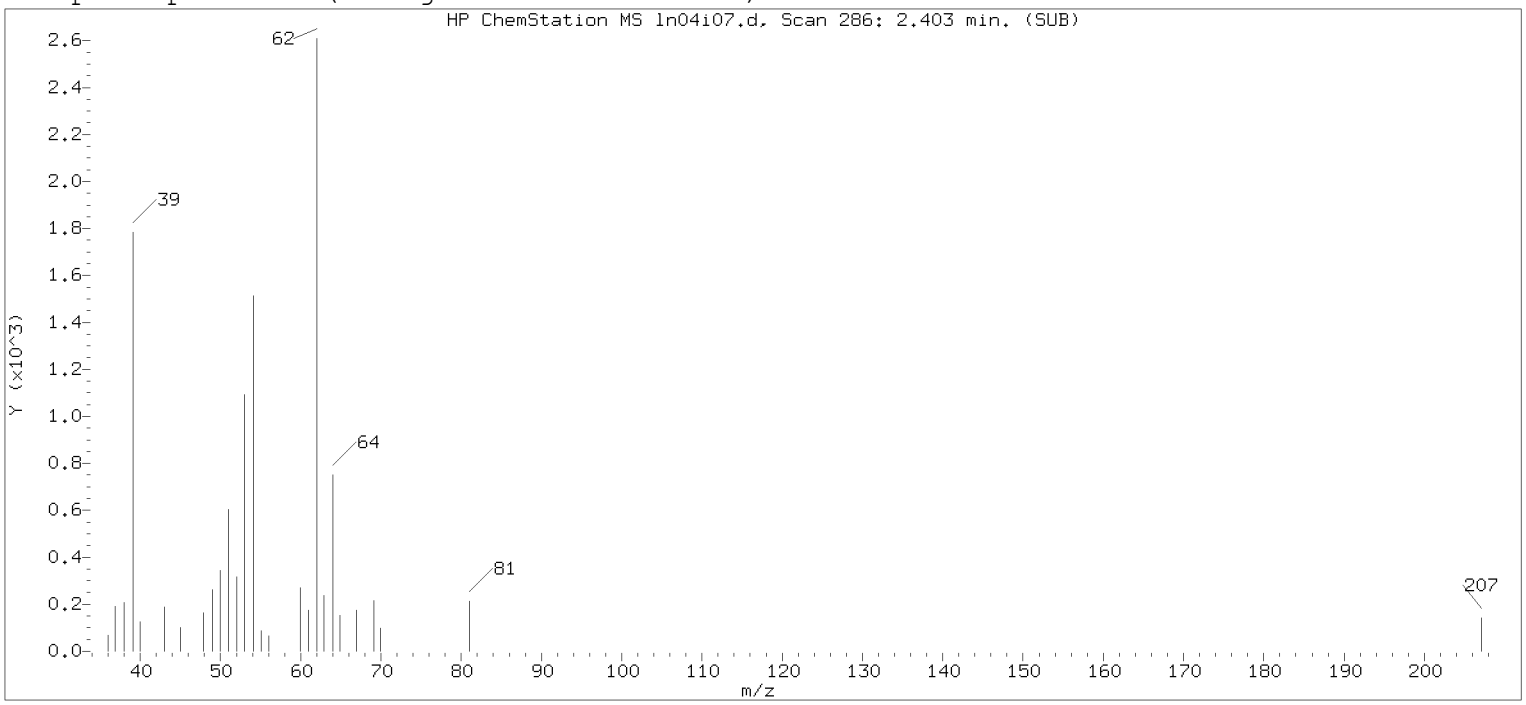
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 286
Retention Time (minutes): 2.403
Quant Ion : 39.00
Area (flag) : 7255M
On-Column Amount (ng) : 1.1432
Integration start scan : 270 Integration stop scan: 312
Y at integration start : 120 Y at integration end: 120

Reason for manual integration: improper integration

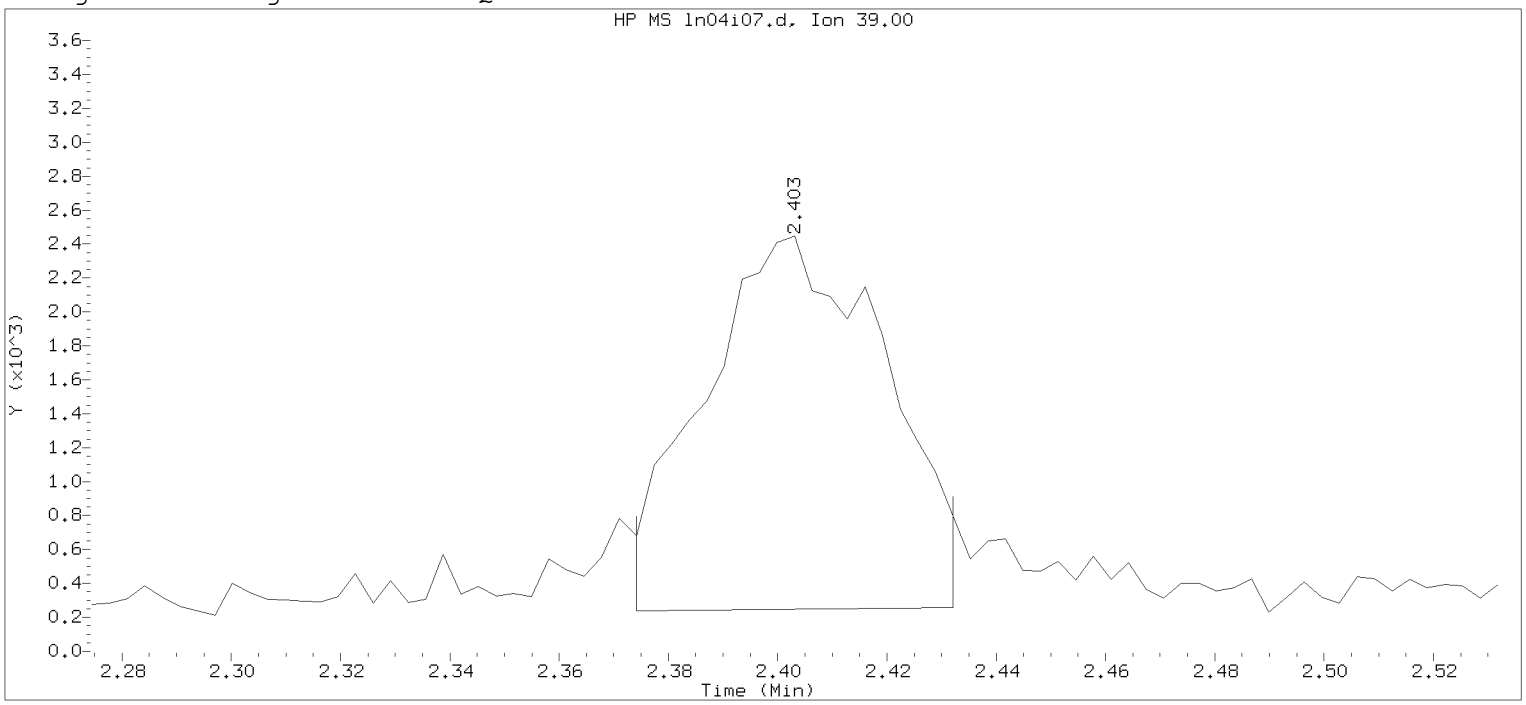
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

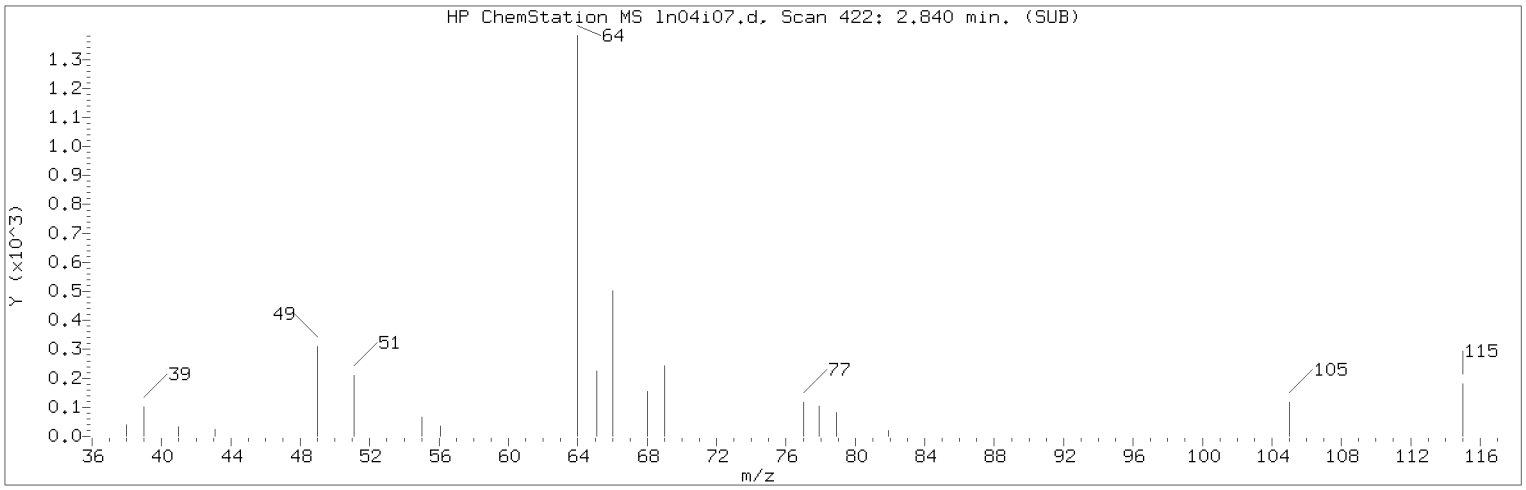
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

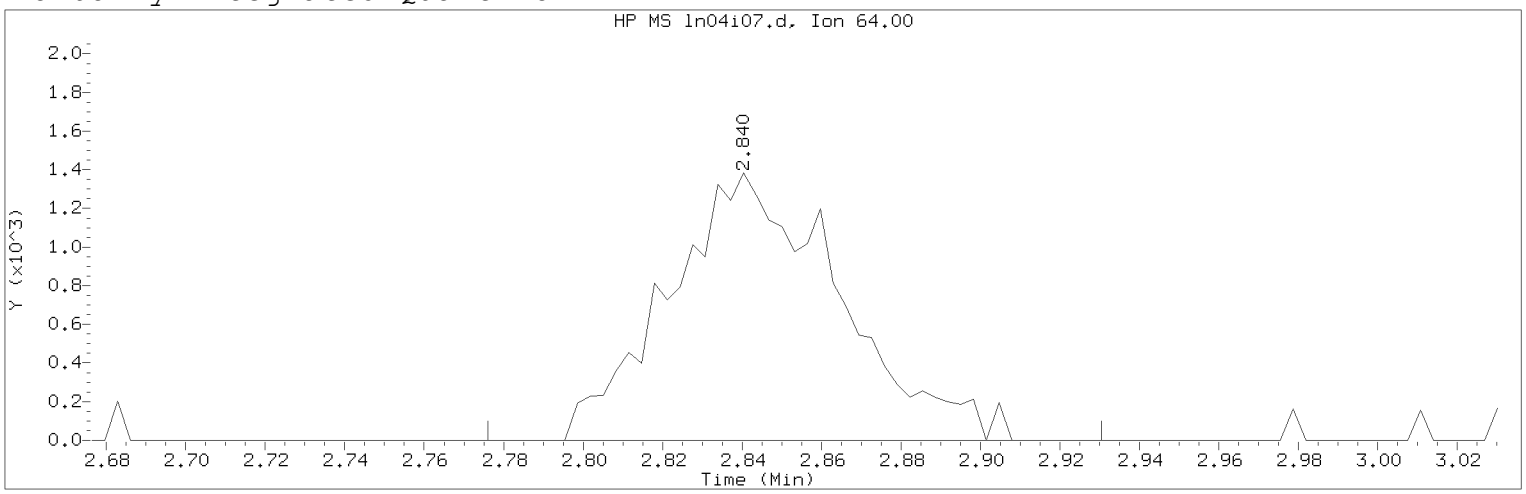
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 286
Retention Time (minutes): 2.403
Quant Ion : 39.00
Area : 5073
On-column Amount (ng) : 0.8493
Integration start scan : 276 Integration stop scan: 294
Y at integration start : 239 Y at integration end: 258

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

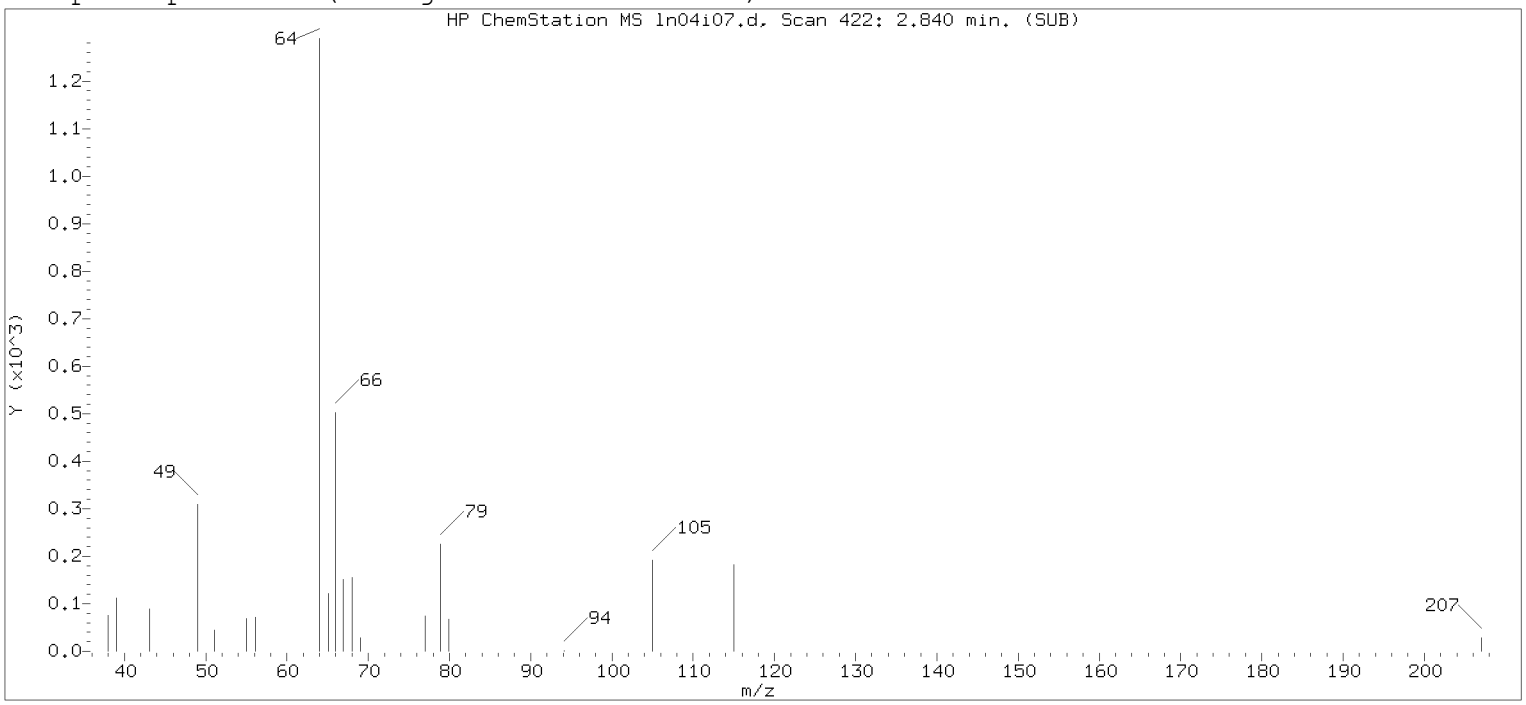
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 422
Retention Time (minutes): 2.840
Quant Ion : 64.00
Area (flag) : 4160M
On-Column Amount (ng) : 0.9924
Integration start scan : 401 Integration stop scan: 449
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

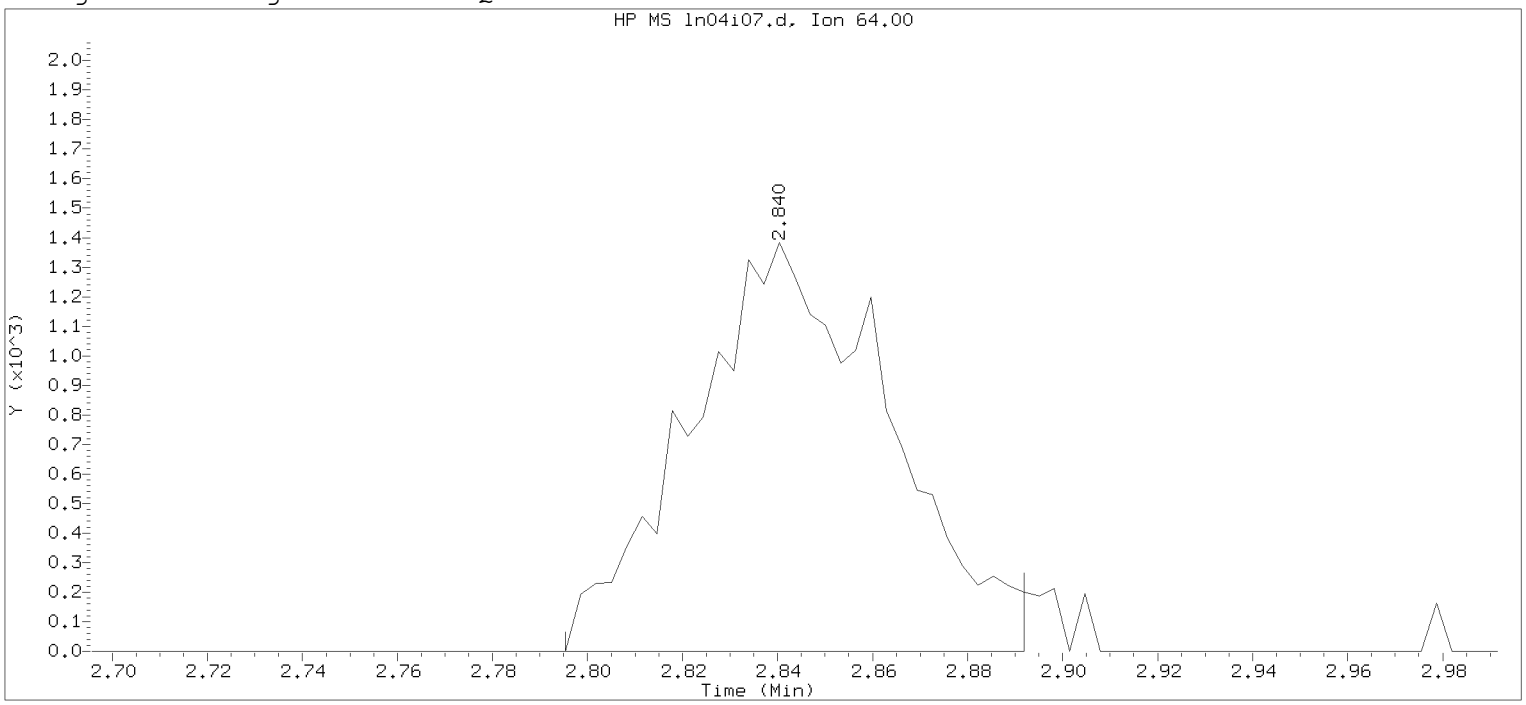
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

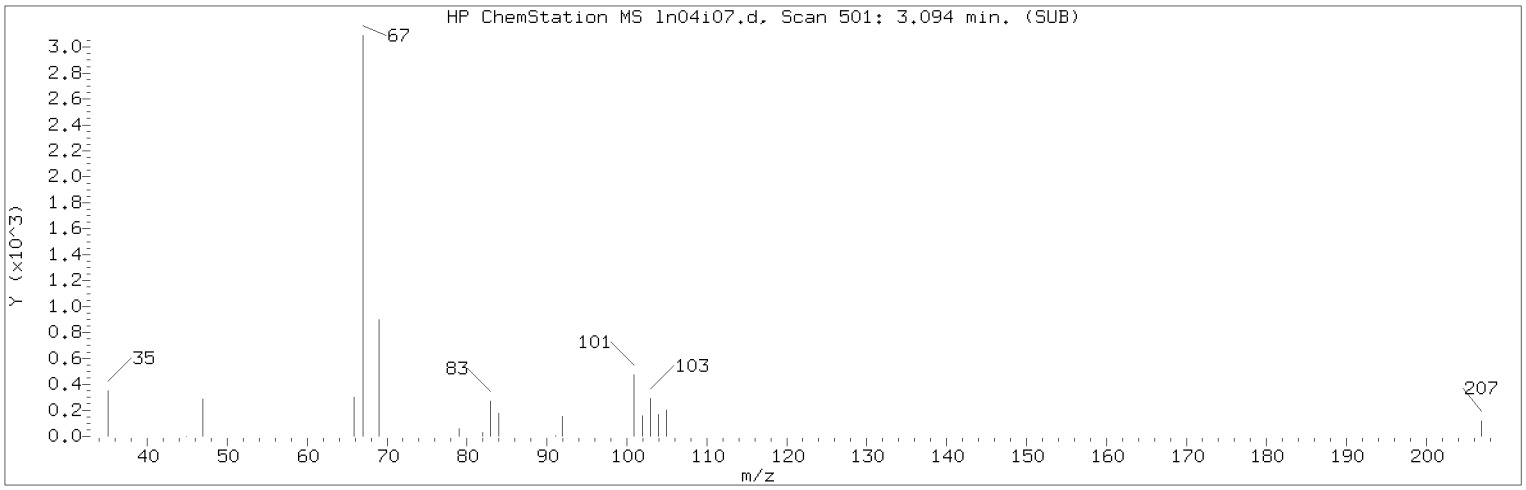
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

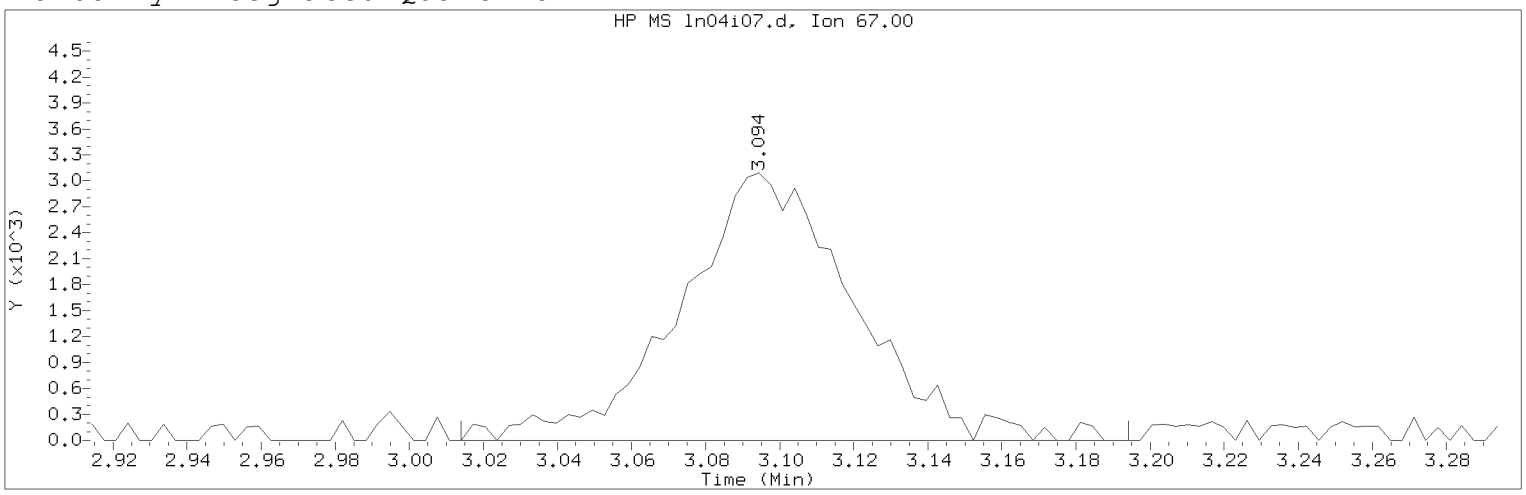
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 422
Retention Time (minutes): 2.840
Quant Ion : 64.00
Area : 4026
On-column Amount (ng) : 0.9650
Integration start scan : 407 Integration stop scan: 437
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

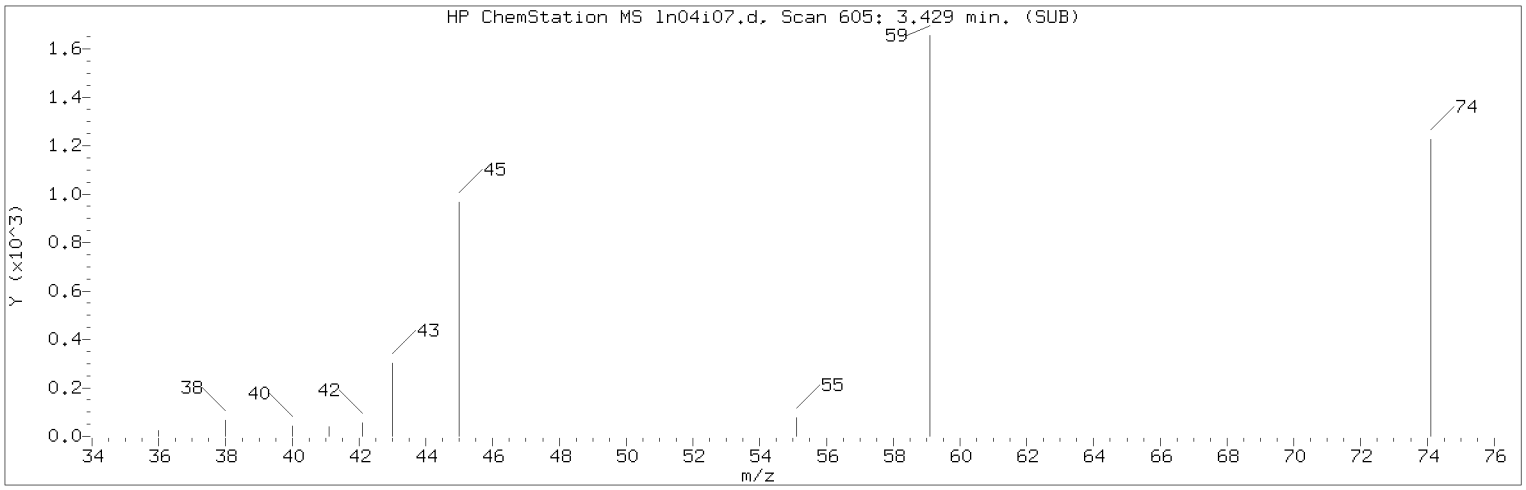
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 501
Retention Time (minutes): 3.094
Quant Ion : 67.00
Area (flag) : 10094M
On-Column Amount (ng) : 1.0040
Integration start scan : 475 Integration stop scan: 531
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

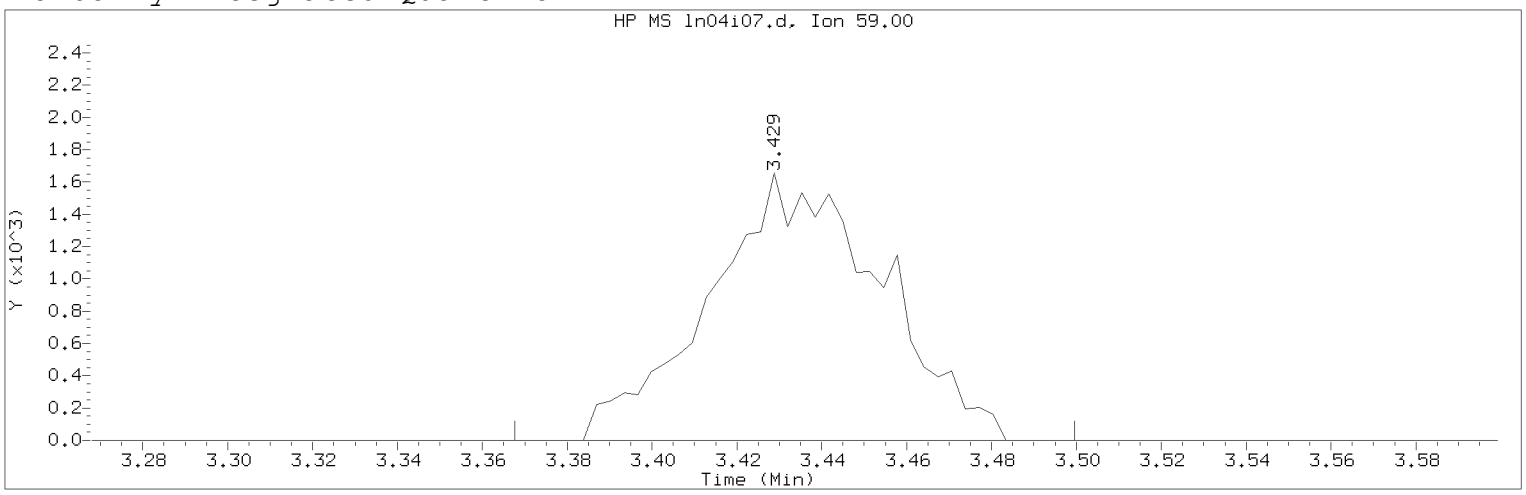
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

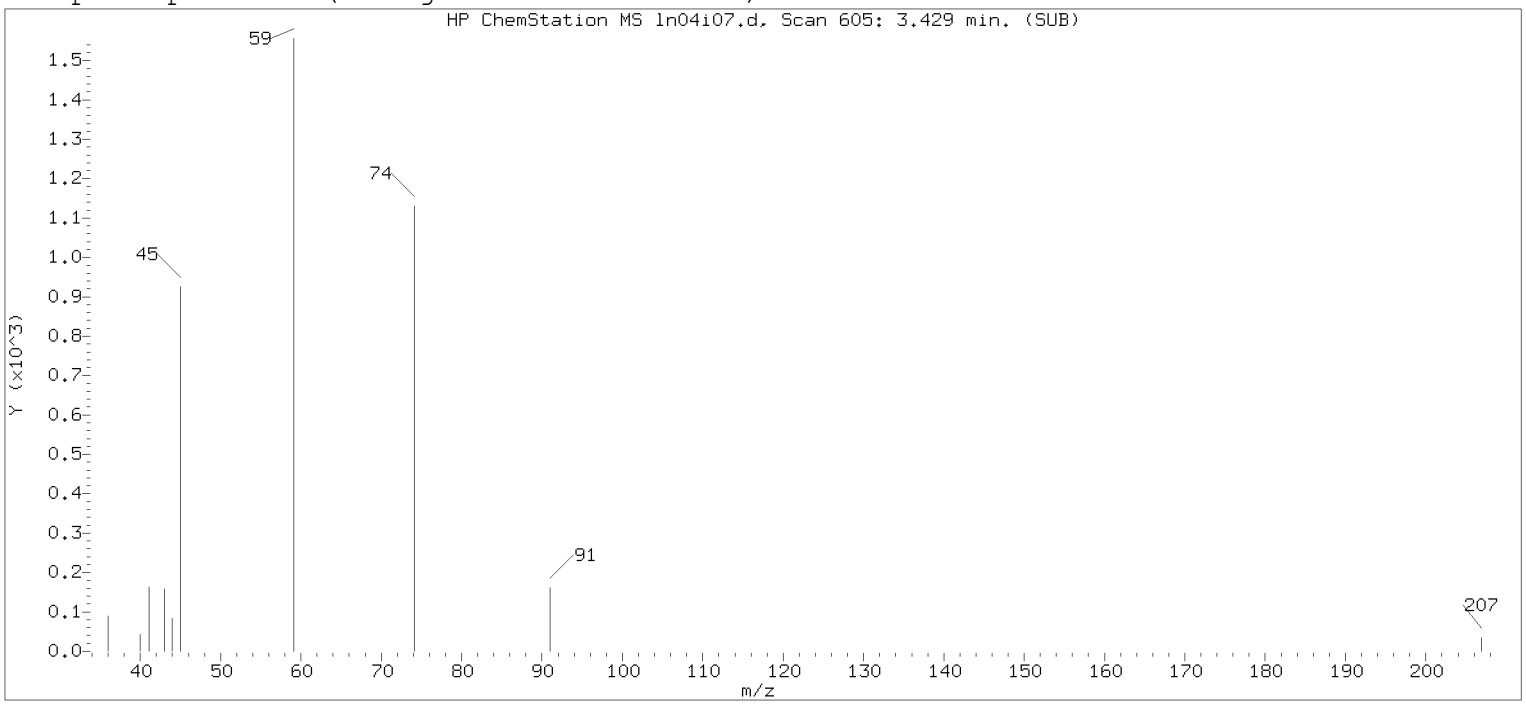
Compound Number : 14
Compound Name : Ethyl ether
Scan Number : 605
Retention Time (minutes): 3.429
Quant Ion : 59.00
Area (flag) : 4640M
On-Column Amount (ng) : 0.8744
Integration start scan : 585 Integration stop scan: 626
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

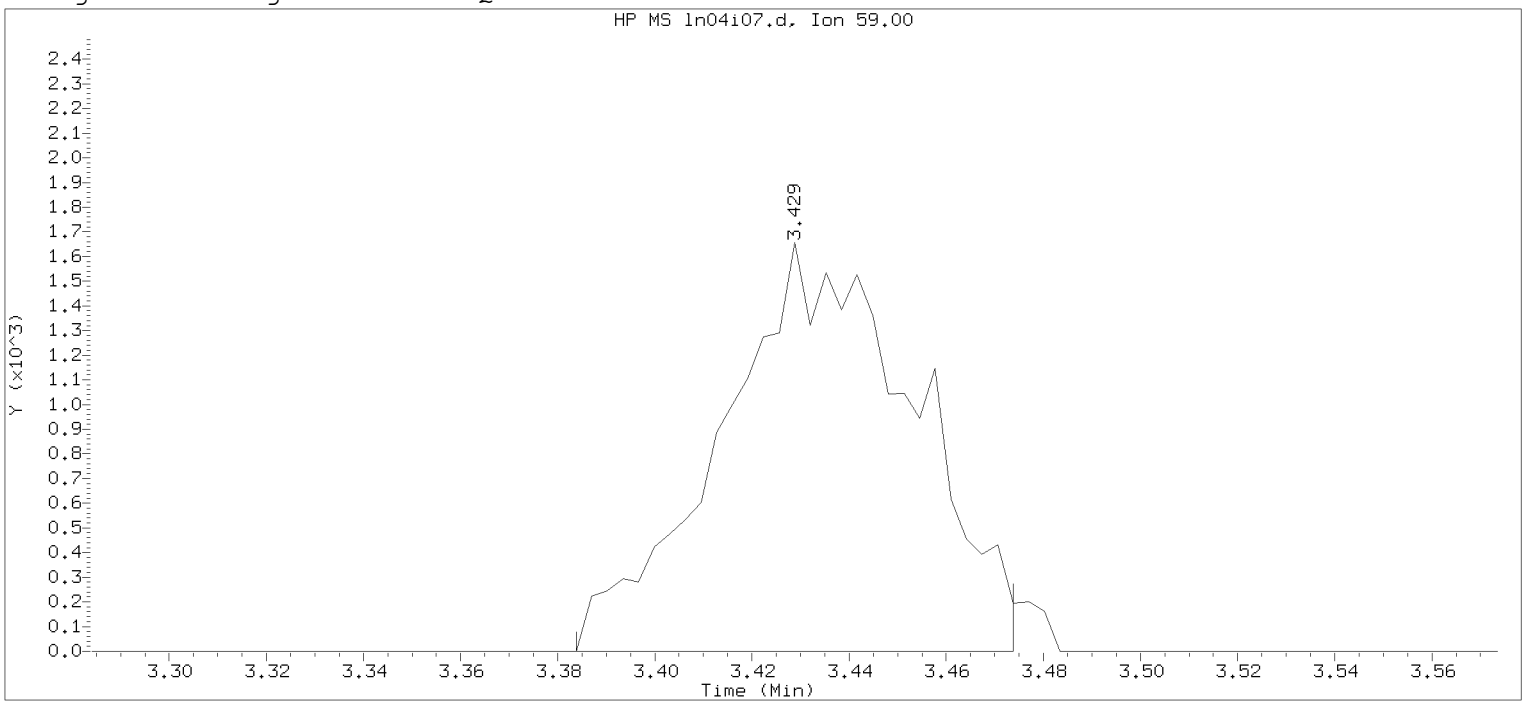
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

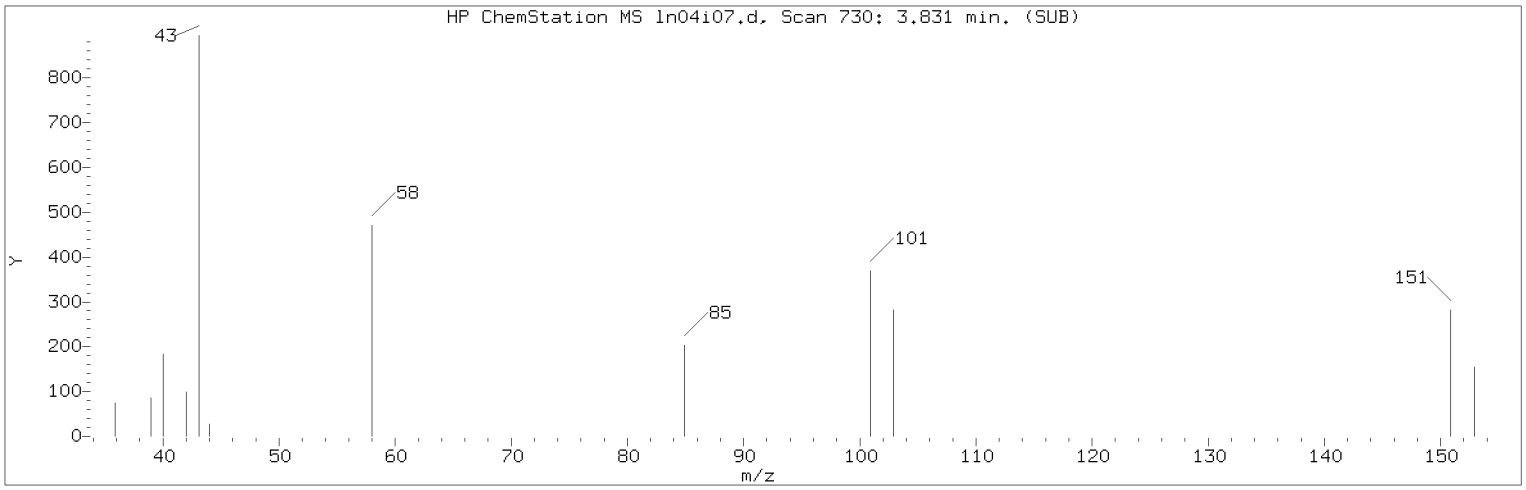
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

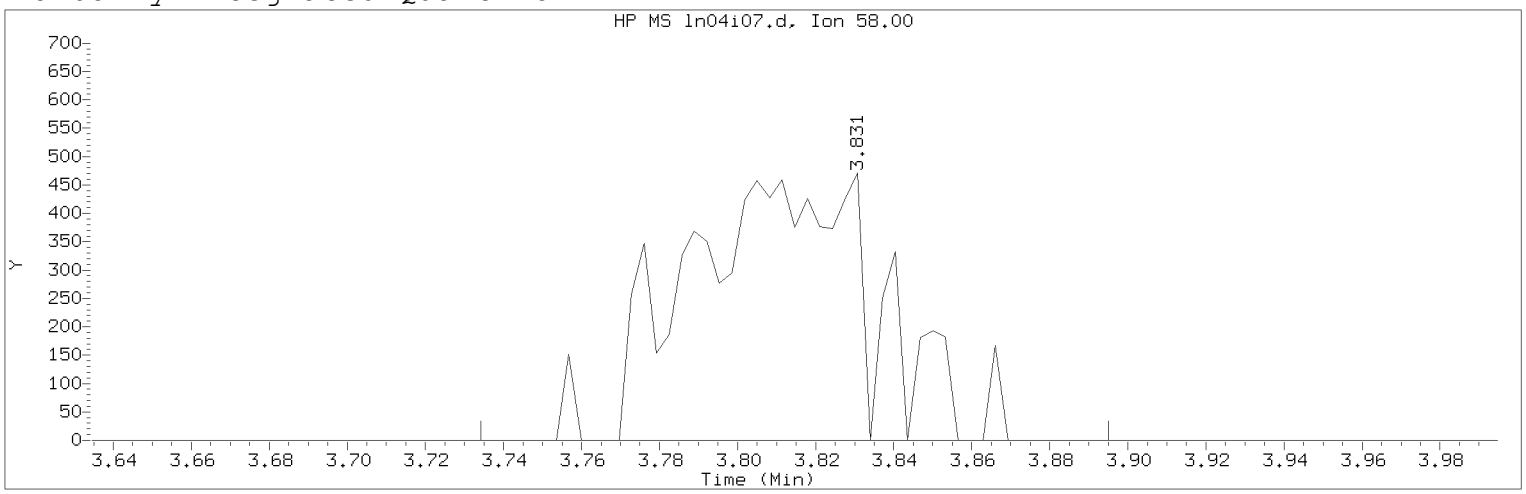
Compound Number : 14
Compound Name : Ethyl ether
Scan Number : 605
Retention Time (minutes): 3.429
Quant Ion : 59.00
Area : 4552
On-column Amount (ng) : 0.8599
Integration start scan : 590 Integration stop scan: 618
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

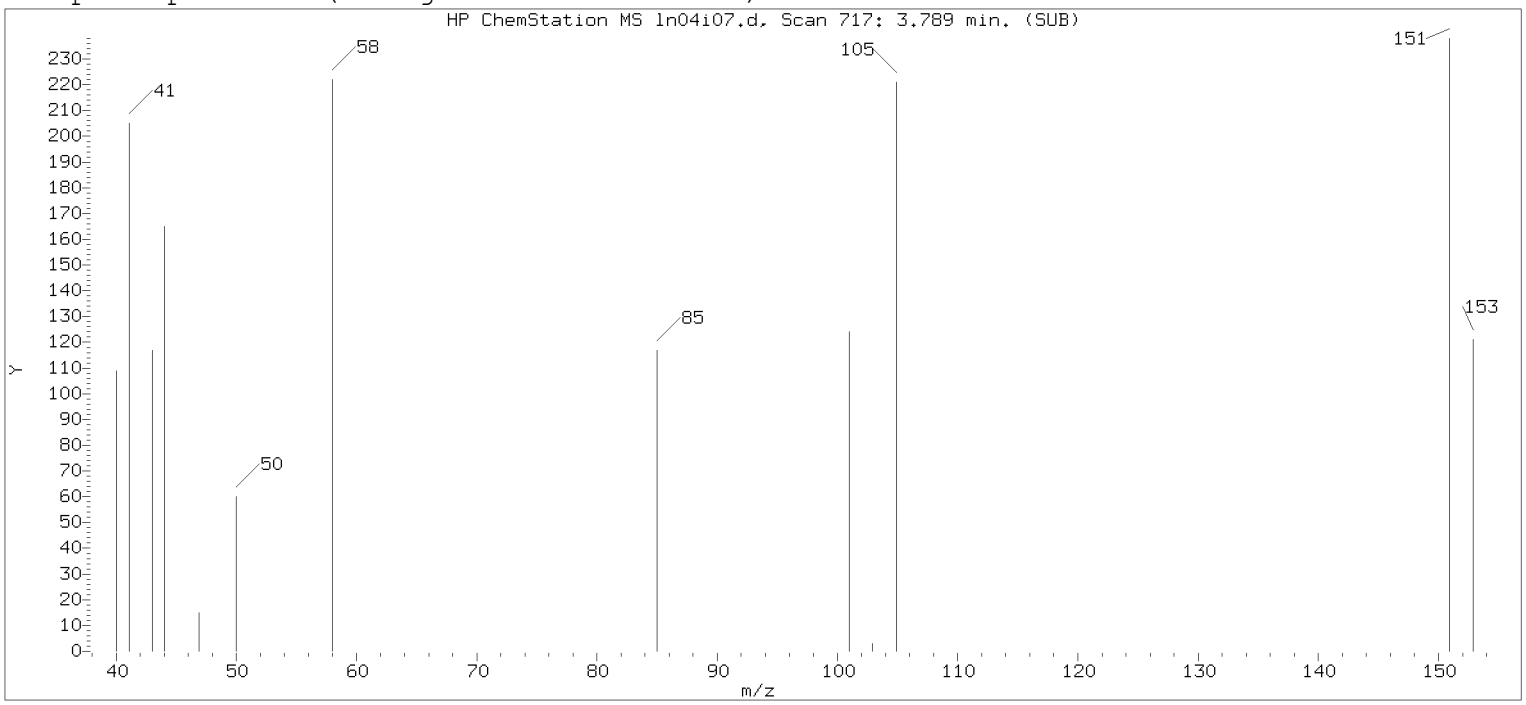
Compound Number : 18
Compound Name : Acetone
Scan Number : 730
Retention Time (minutes): 3.831
Quant Ion : 58.00
Area (flag) : 1588M
On-Column Amount (ng) : 1.9382
Integration start scan : 699 Integration stop scan: 749
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

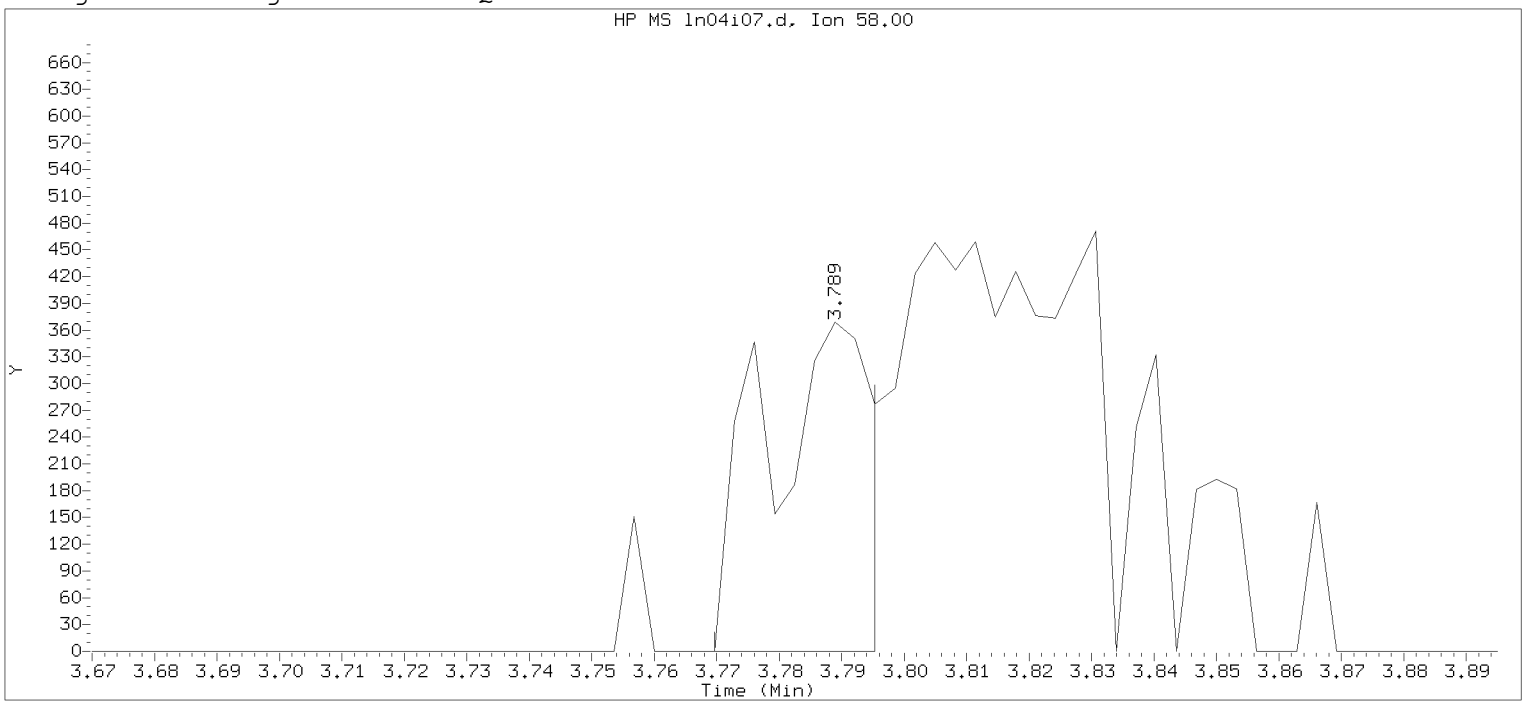
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

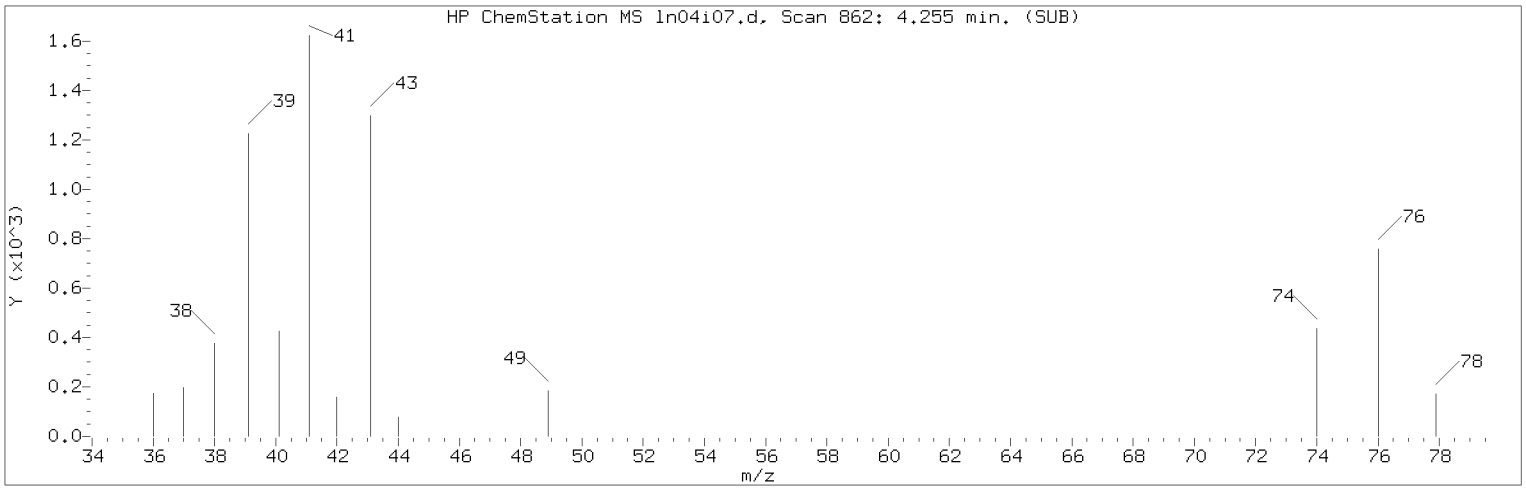
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

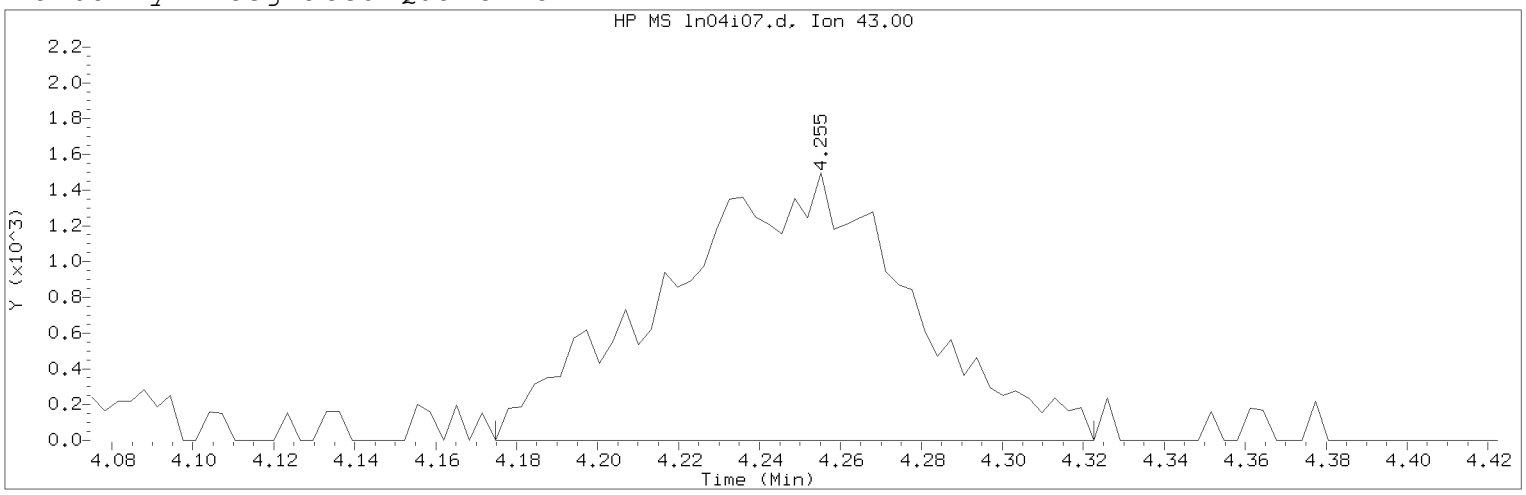
Compound Number : 18
Compound Name : Acetone
Scan Number : 717
Retention Time (minutes): 3.789
Quant Ion : 58.00
Area : 410
On-column Amount (ng) : 0.5644
Integration start scan : 710 Integration stop scan: 718
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

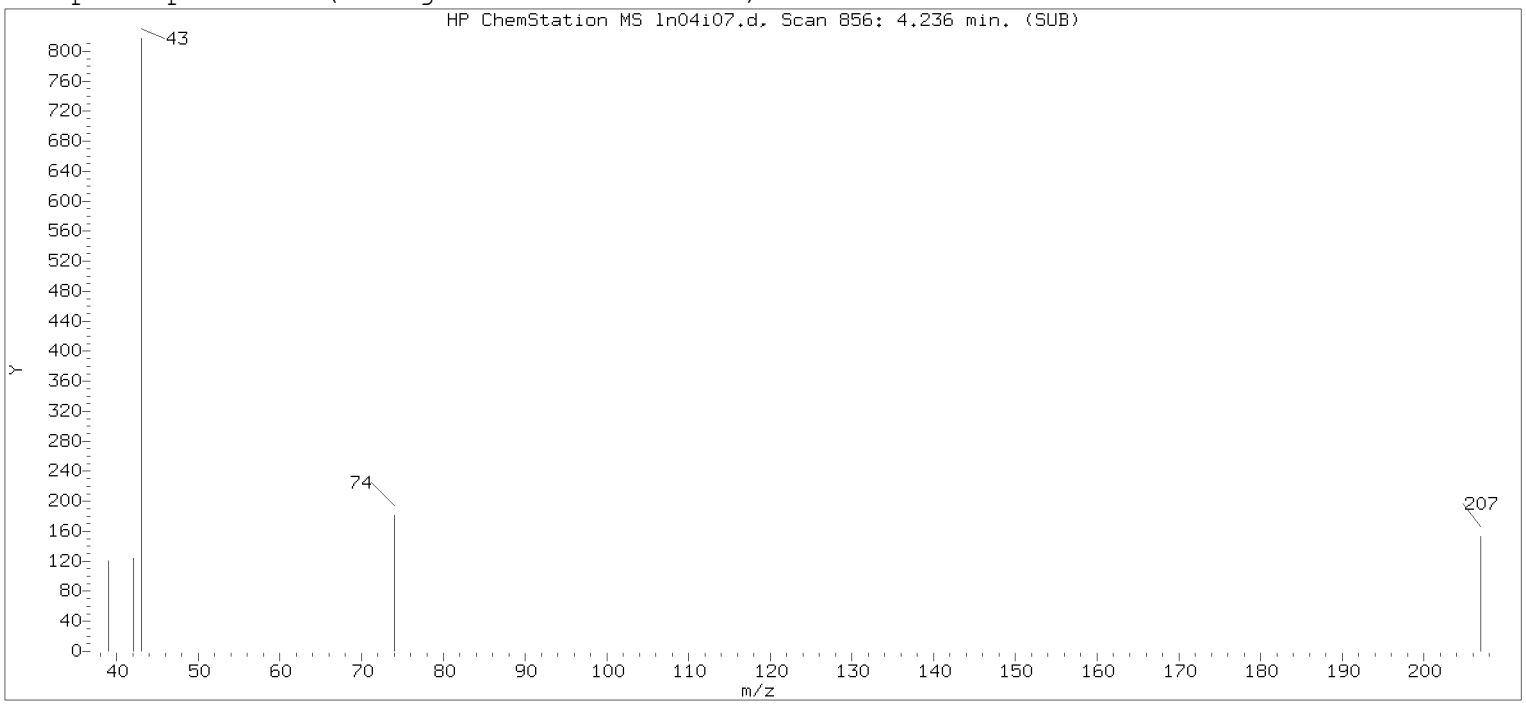
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 862
Retention Time (minutes): 4.255
Quant Ion : 43.00
Area (flag) : 6274M
On-Column Amount (ng) : 1.0106
Integration start scan : 836 Integration stop scan: 882
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

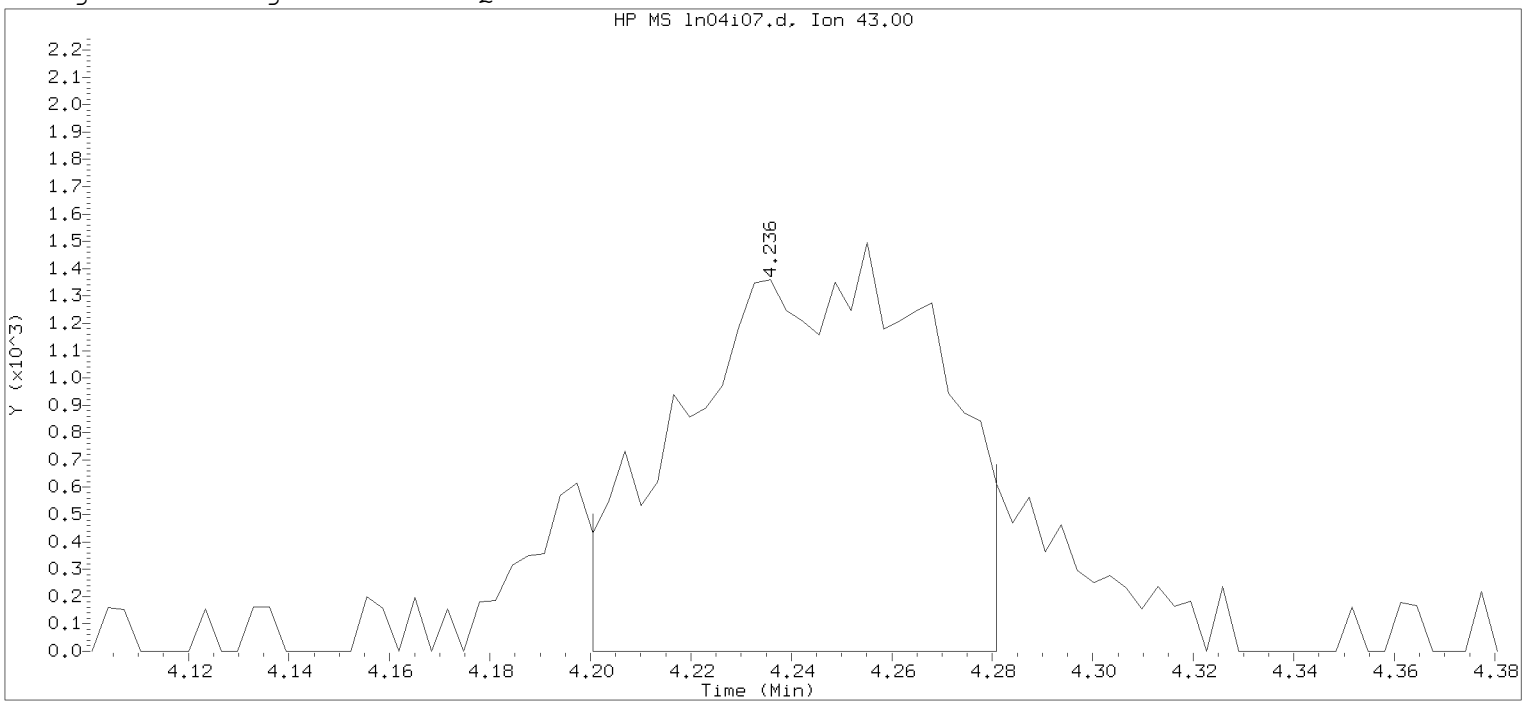
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

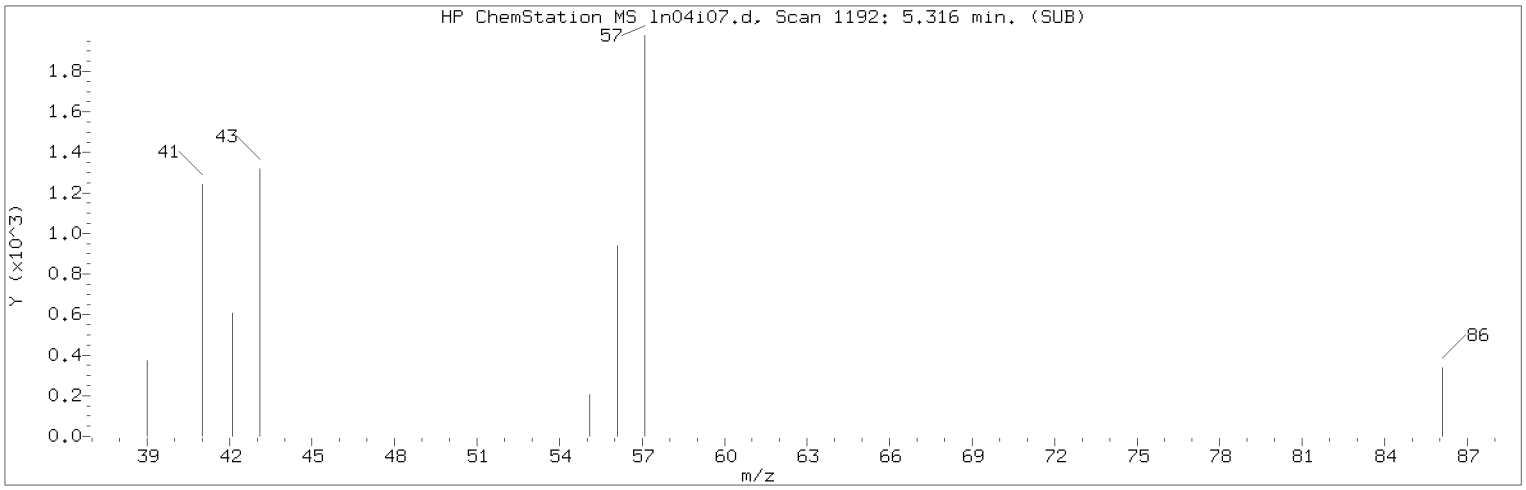
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

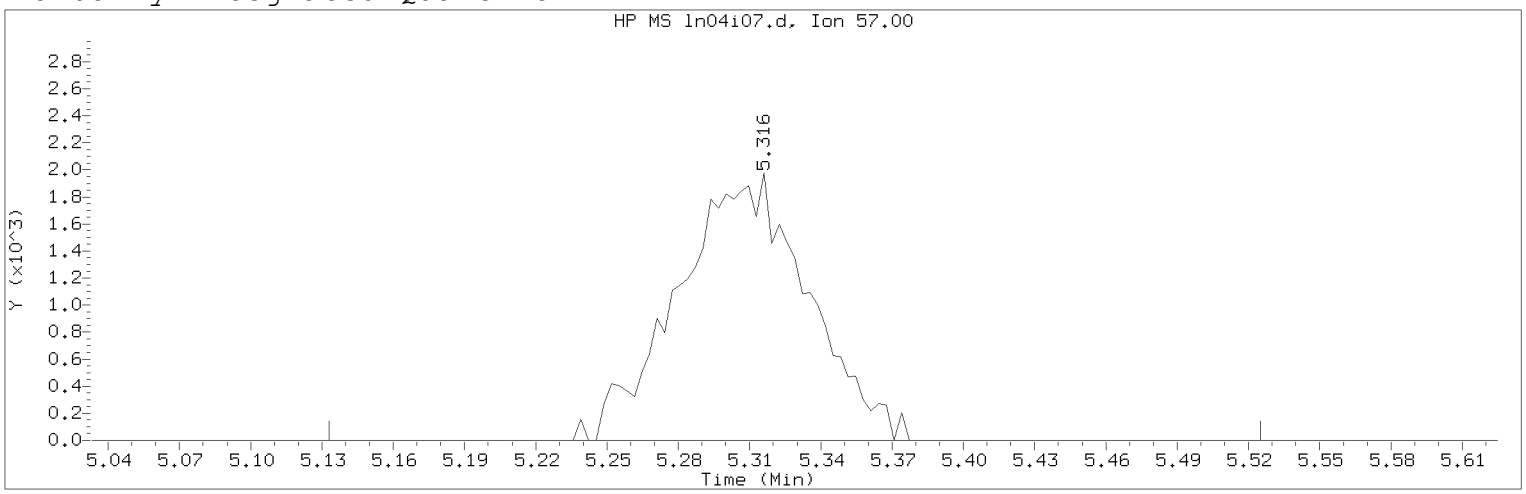
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 856
Retention Time (minutes): 4.236
Quant Ion : 43.00
Area : 4972
On-column Amount (ng) : 0.8386
Integration start scan : 844 Integration stop scan: 869
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

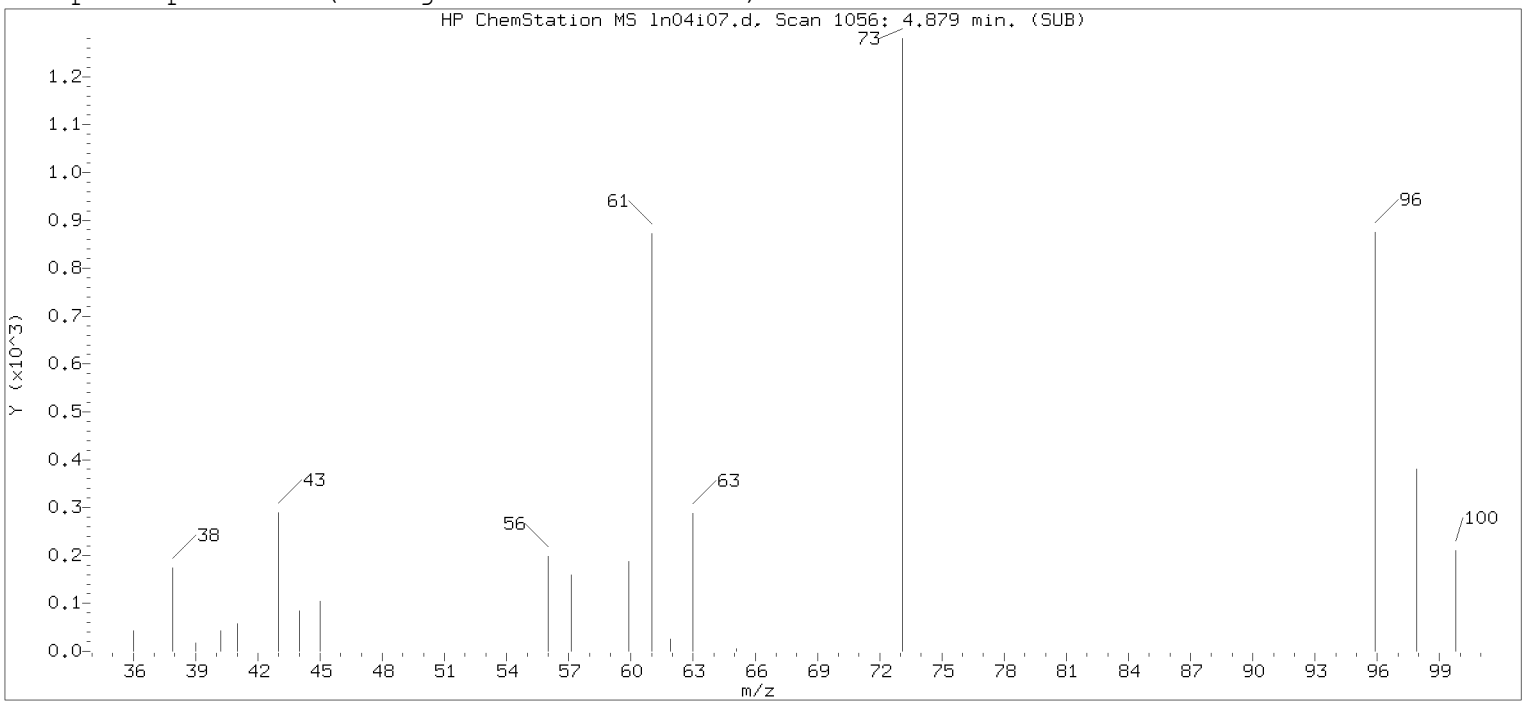
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1192
Retention Time (minutes): 5.316
Quant Ion : 57.00
Area (flag) : 7475M
On-Column Amount (ng) : 0.8616
Integration start scan : 1134 Integration stop scan: 1256
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

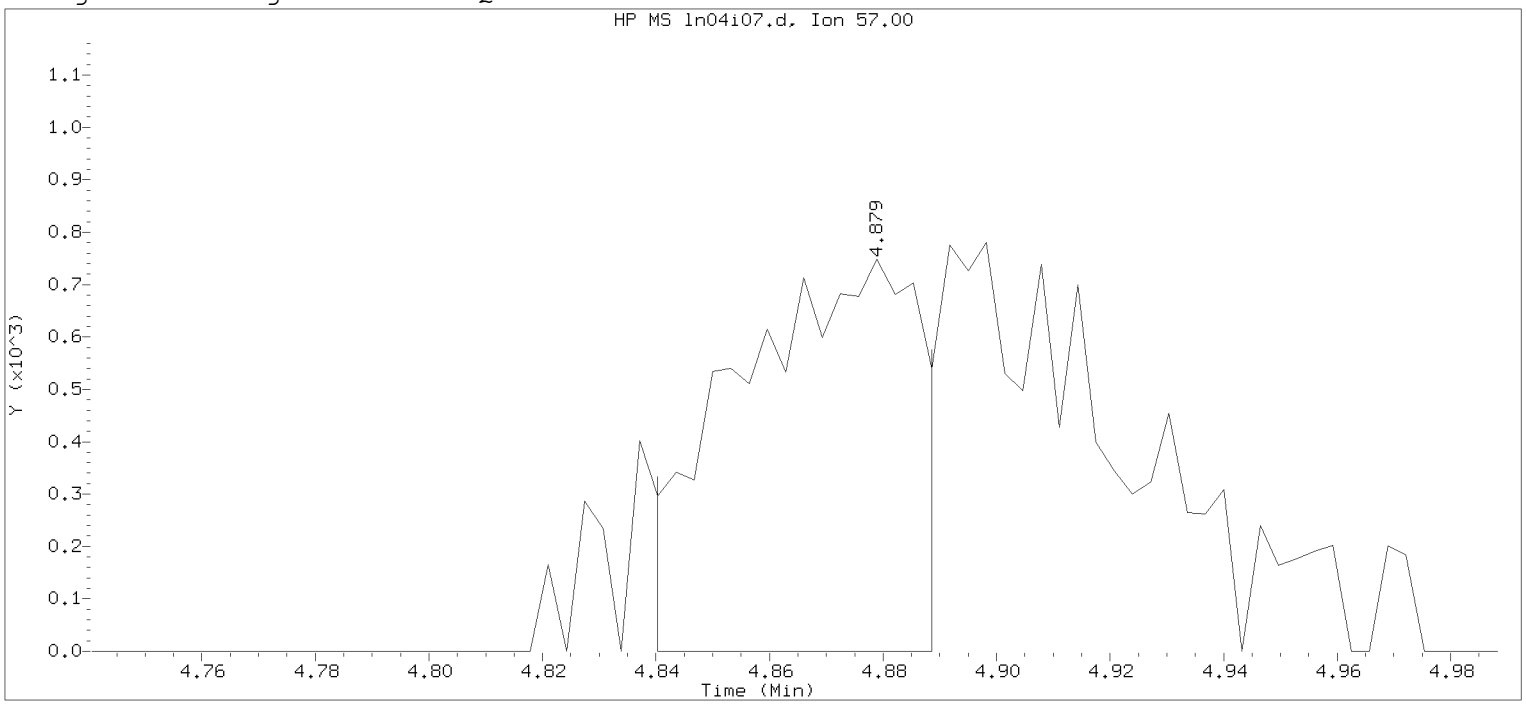
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

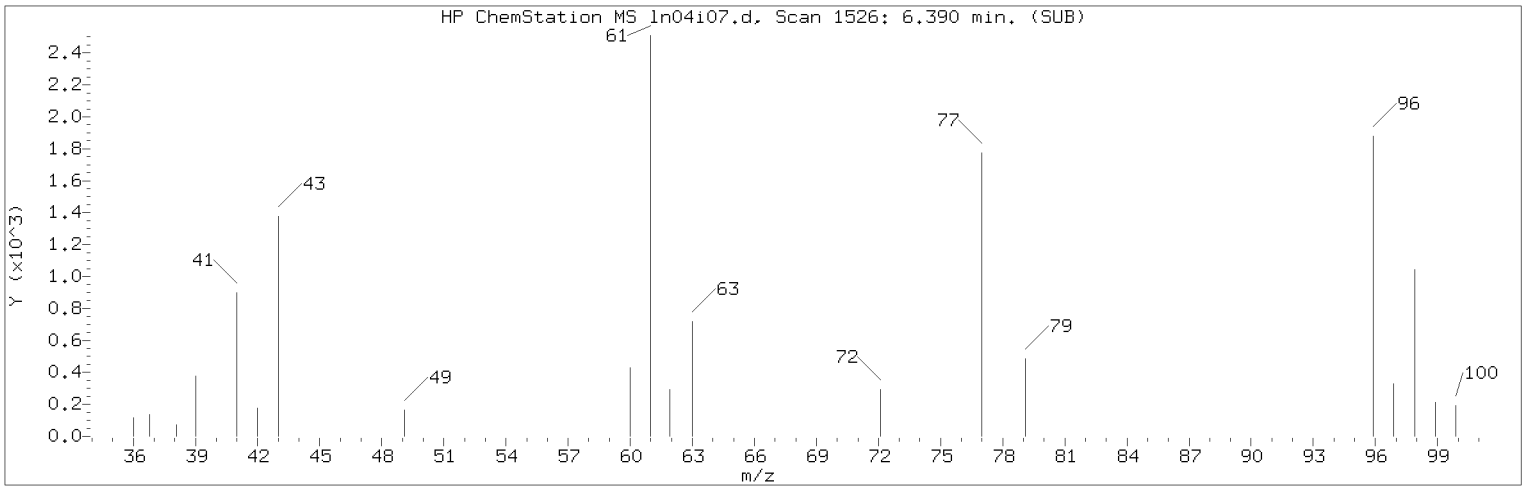
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

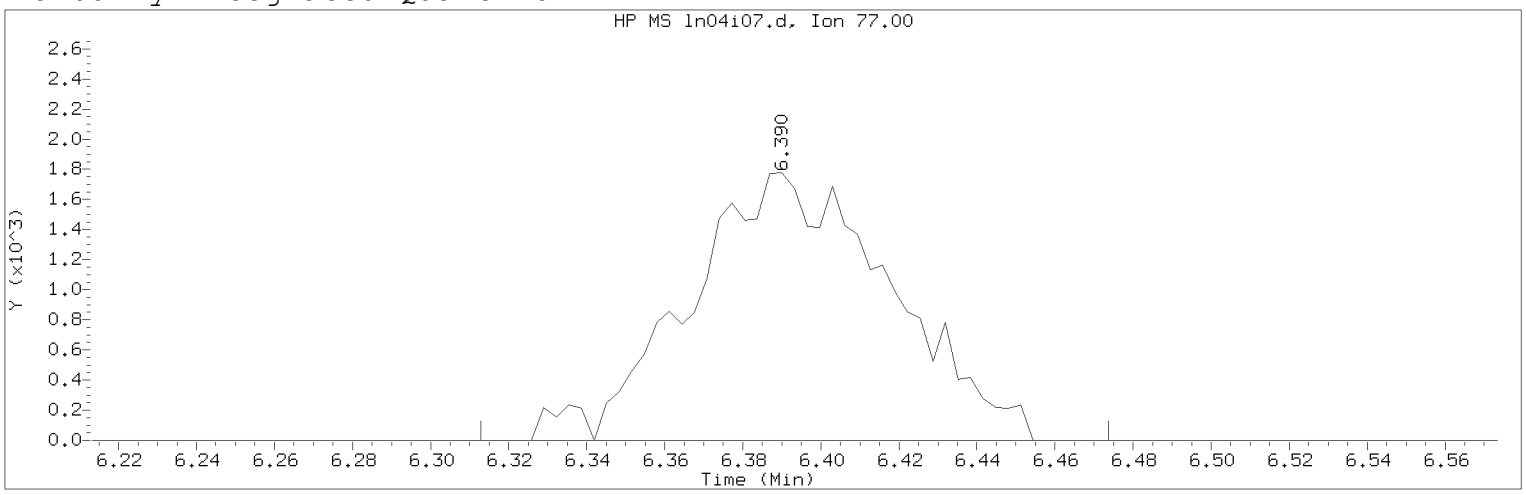
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1056
Retention Time (minutes): 4.879
Quant Ion : 57.00
Area : 1663
On-column Amount (ng) : 0.4635
Integration start scan : 1043 Integration stop scan: 1058
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

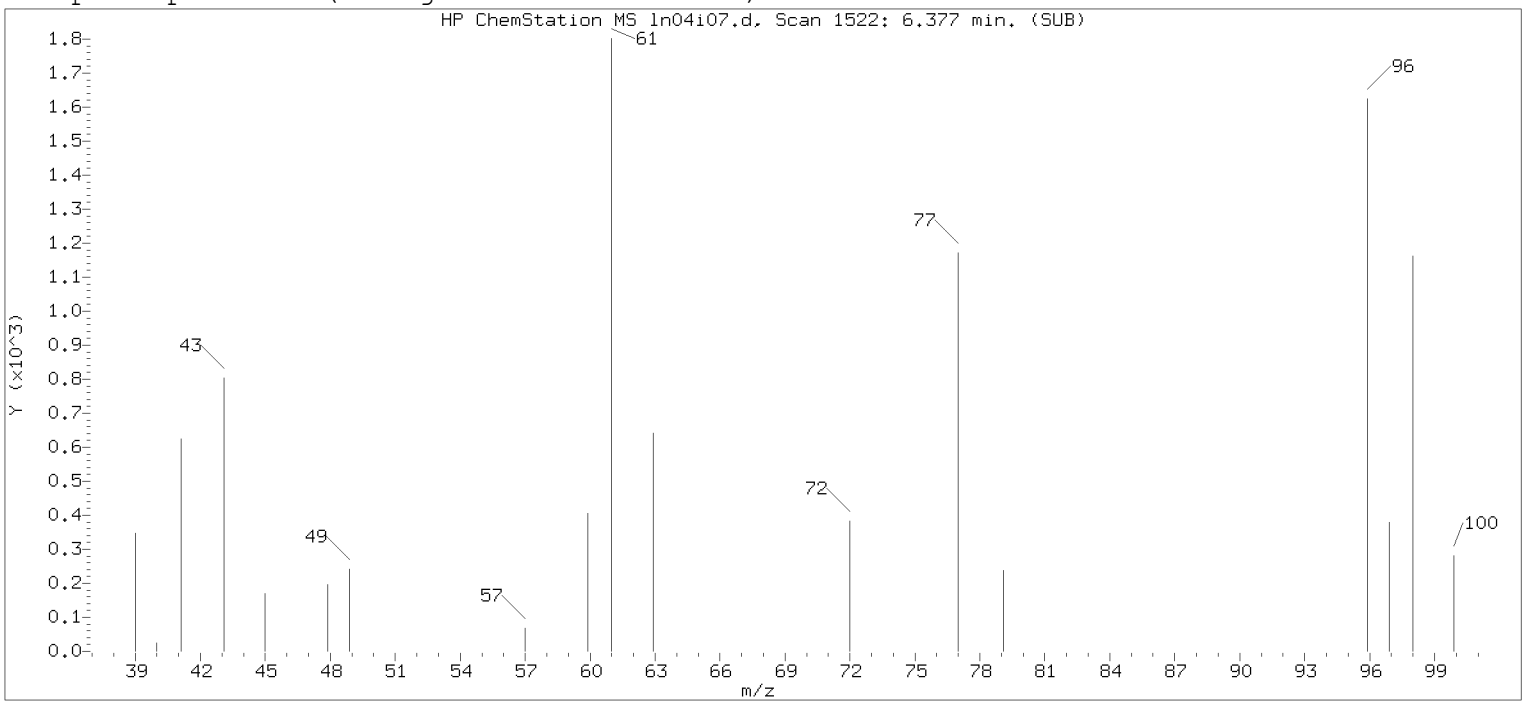
Compound Number : 45
Compound Name : 2,2-Dichloropropane
Scan Number : 1526
Retention Time (minutes): 6.390
Quant Ion : 77.00
Area (flag) : 6419M
On-Column Amount (ng) : 0.8488
Integration start scan : 1501 Integration stop scan: 1551
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

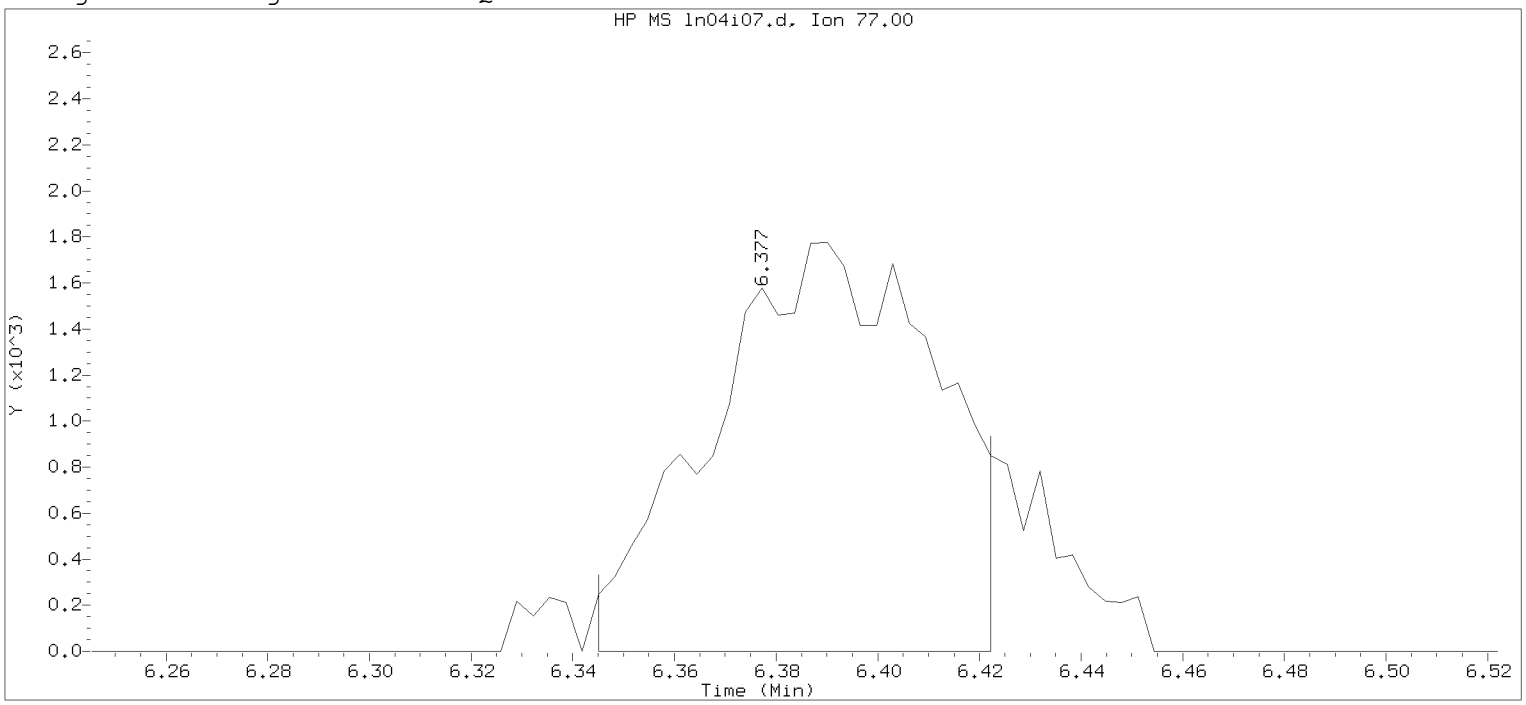
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

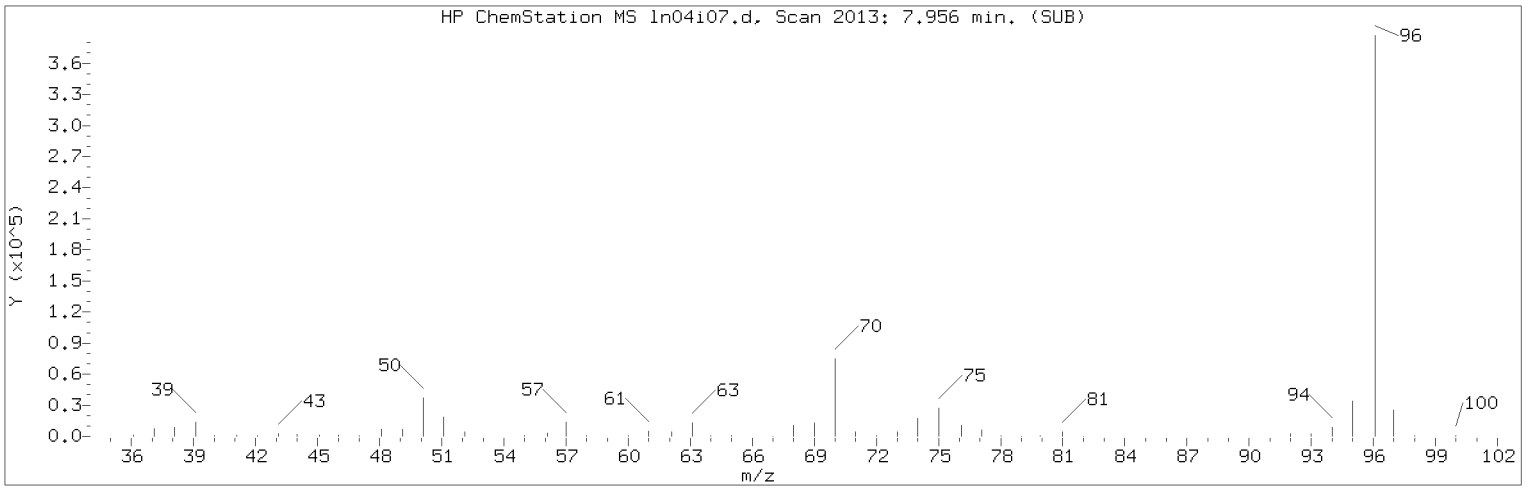
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

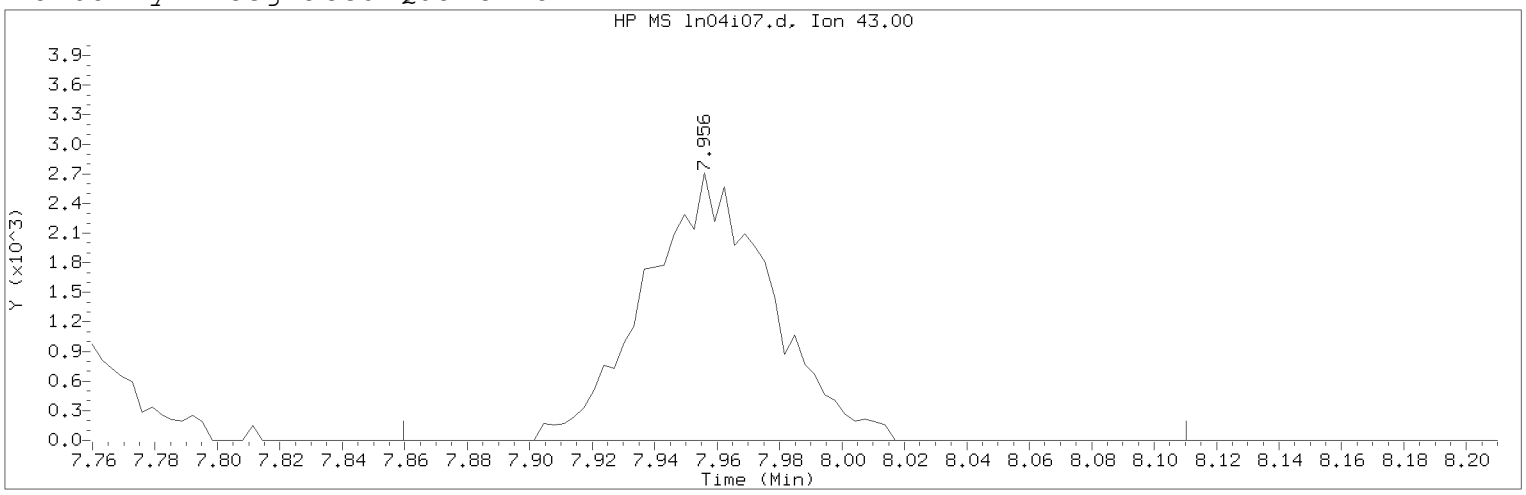
Compound Number	: 45		
Compound Name	: 2,2-Dichloropropane		
Scan Number	: 1522		
Retention Time (minutes)	: 6.377		
Quant Ion	: 77.00		
Area	: 5406		
On-column Amount (ng)	: 0.7289		
Integration start scan	: 1511	Integration stop scan:	1535
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

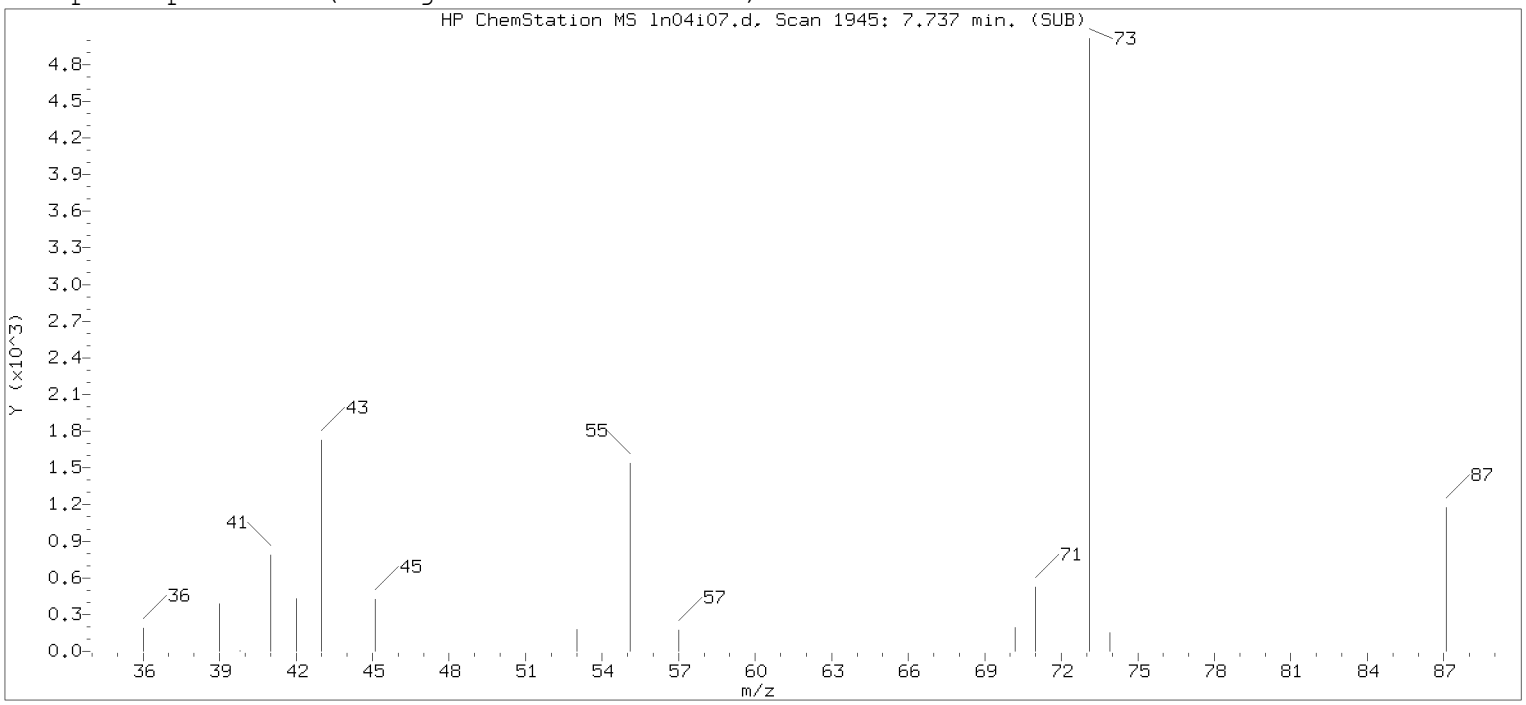
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2013
Retention Time (minutes): 7.956
Quant Ion : 43.00
Area (flag) : 7535M
On-Column Amount (ng) : 0.9297
Integration start scan : 1982 Integration stop scan: 2060
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

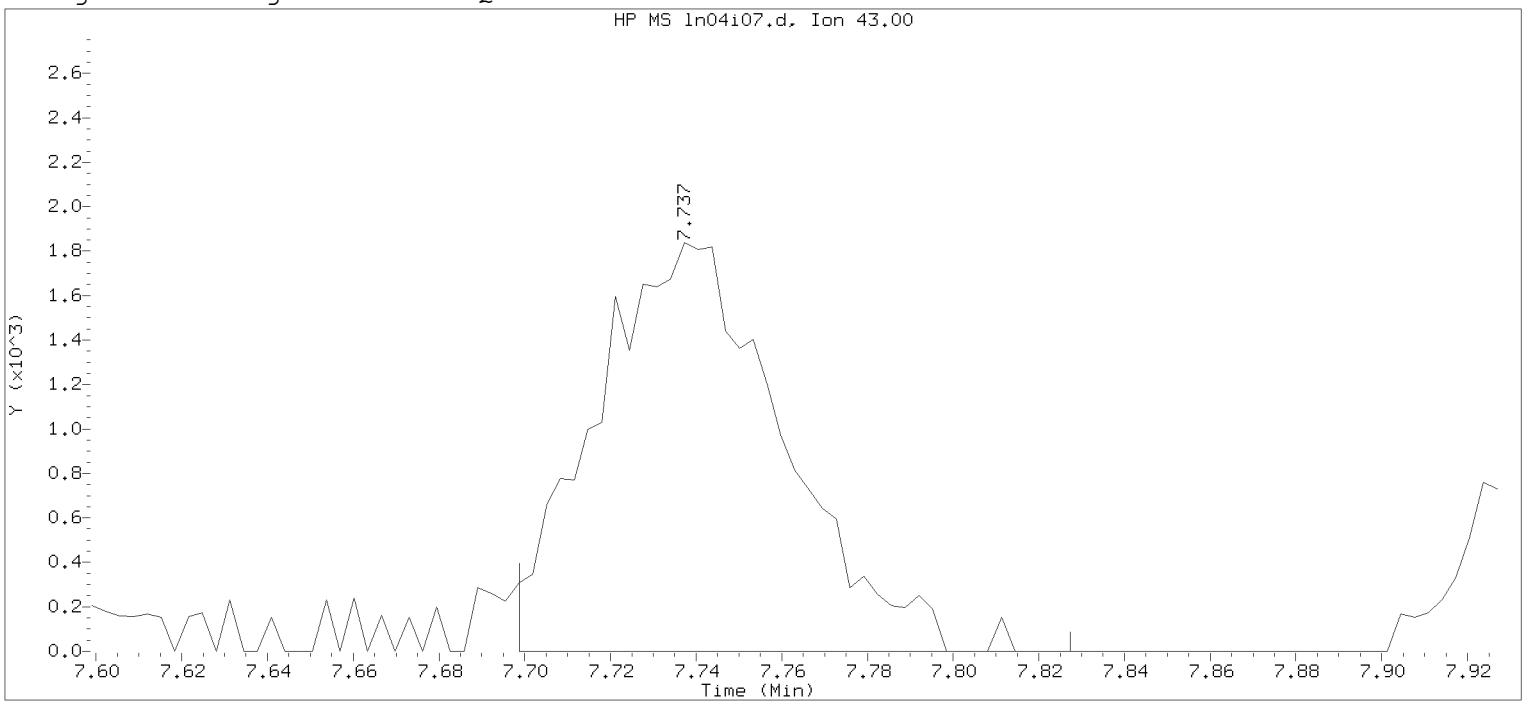
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

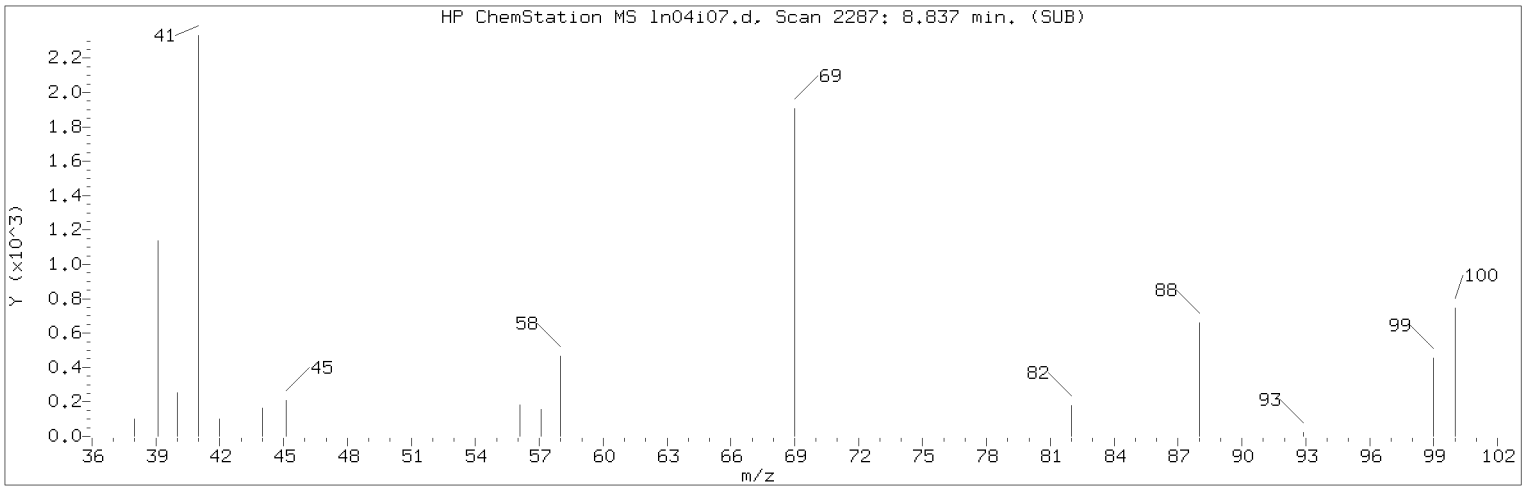
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

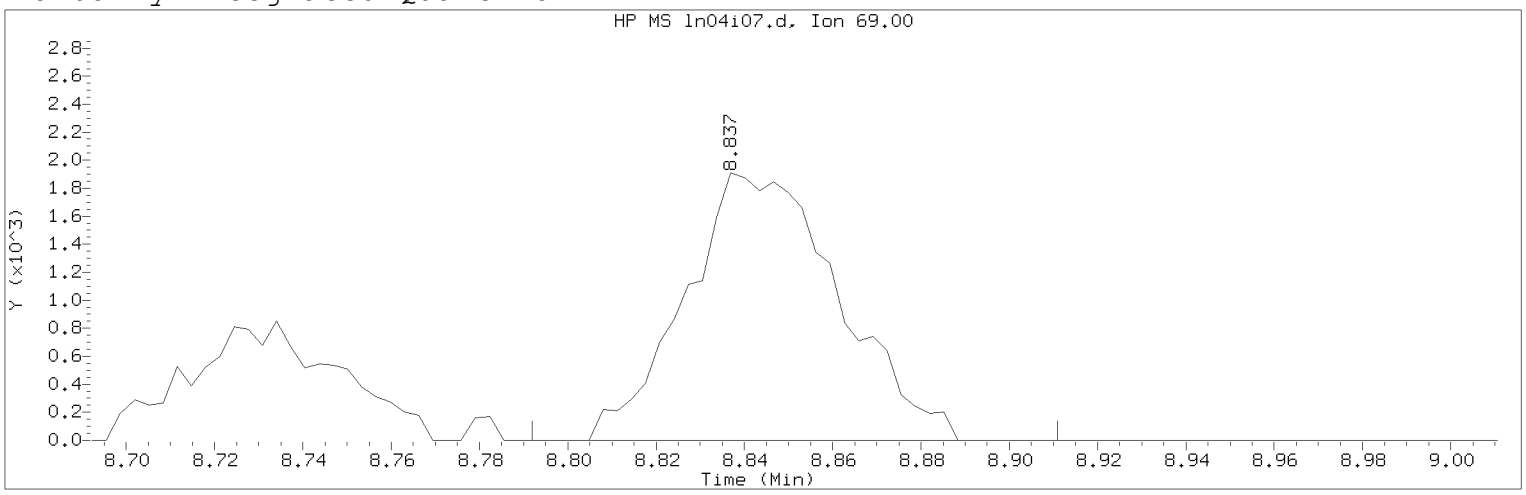
Compound Number	: 67		
Compound Name	: n-Heptane		
Scan Number	: 1945		
Retention Time (minutes)	: 7.737		
Quant Ion	: 43.00		
Area	: 5623		
On-column Amount (ng)	: 0.9372		
Integration start scan	: 1932	Integration stop scan:	1972
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

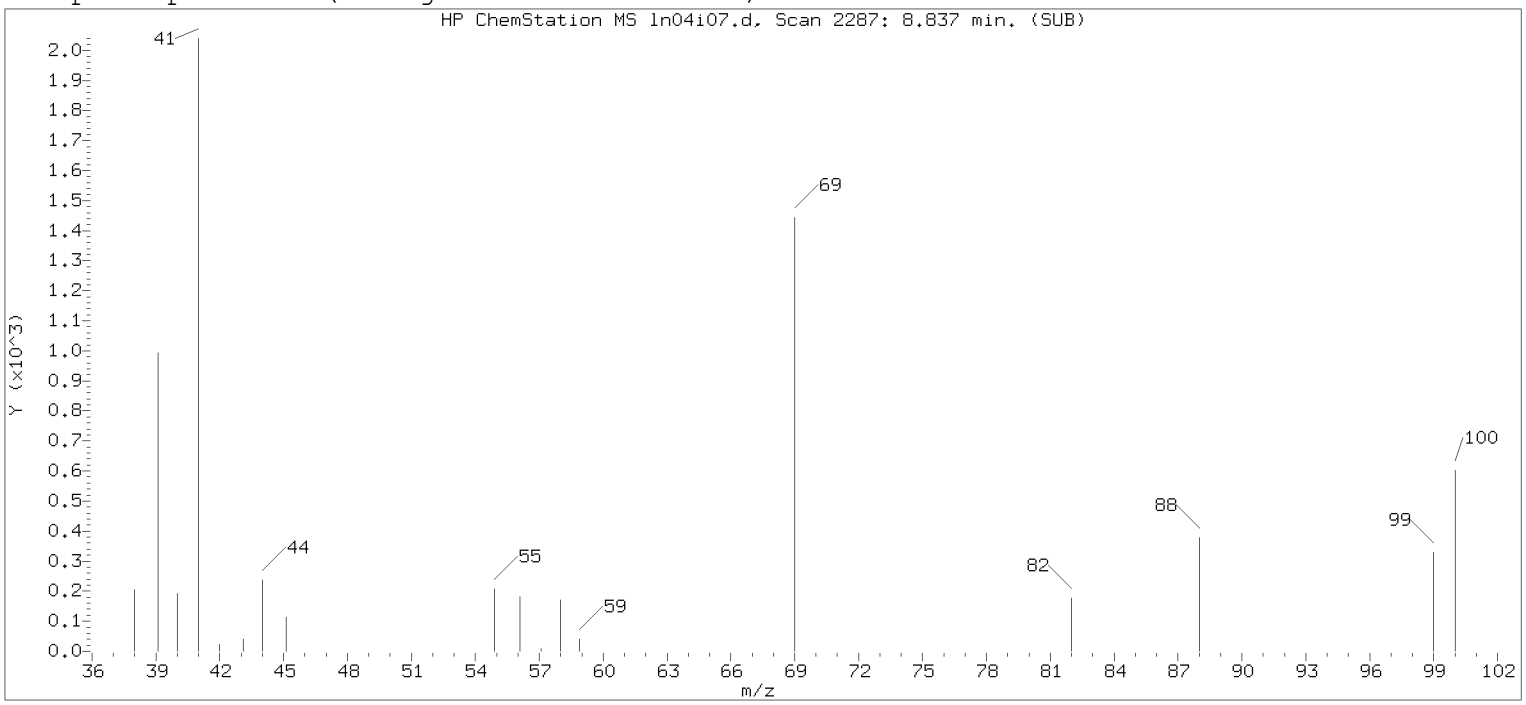
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2287
Retention Time (minutes): 8.837
Quant Ion : 69.00
Area (flag) : 4607M
On-Column Amount (ng) : 0.8112
Integration start scan : 2272 Integration stop scan: 2309
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

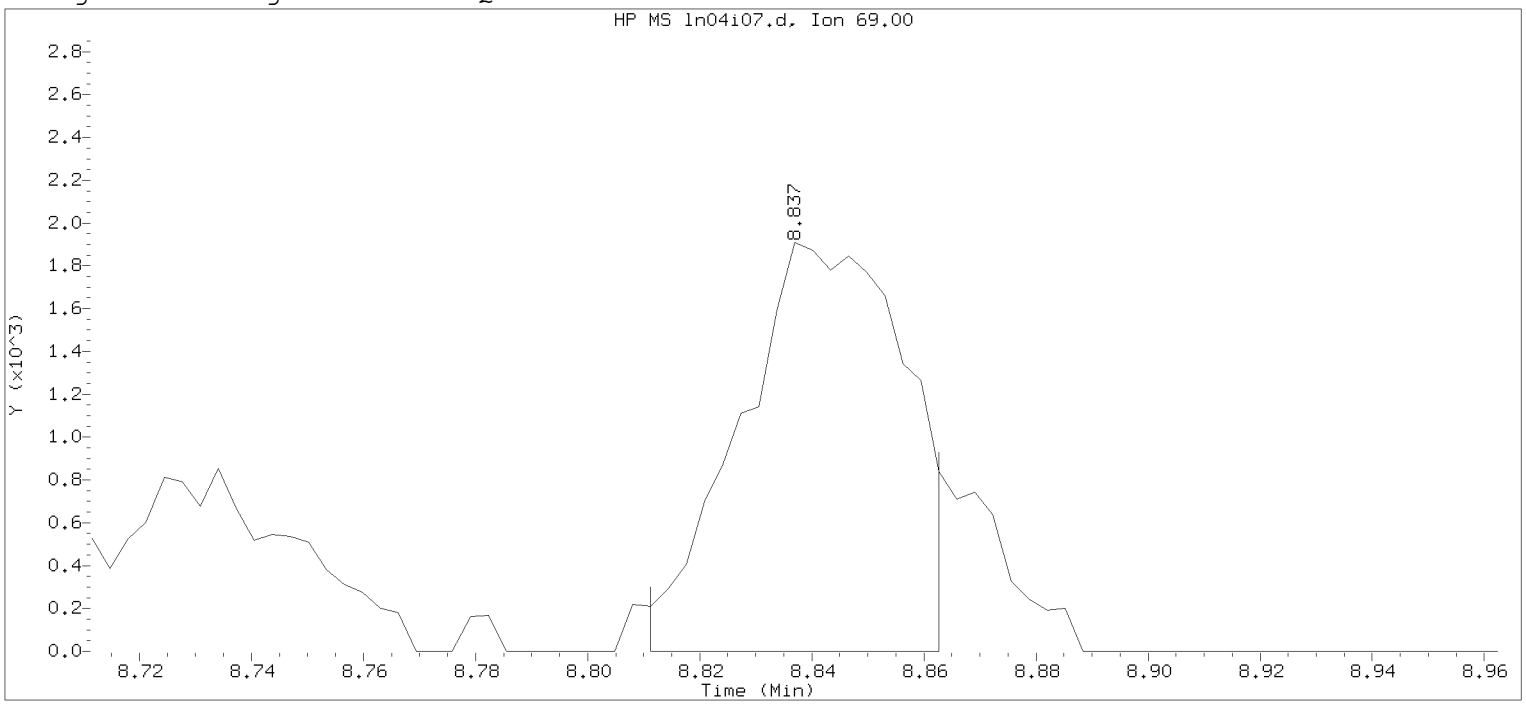
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

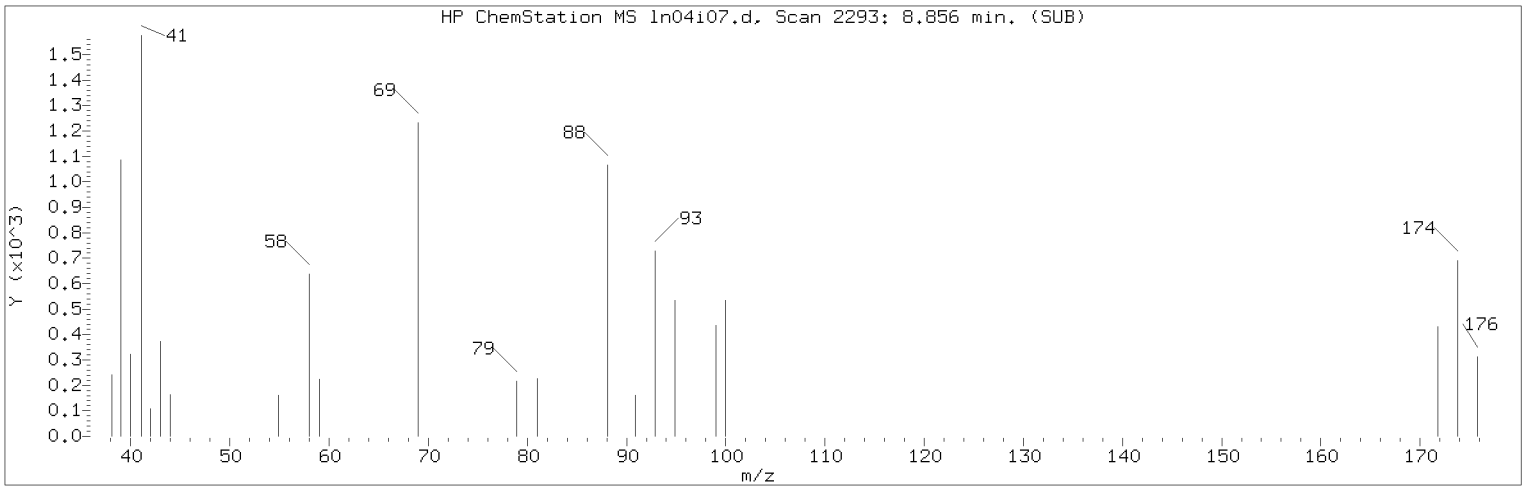
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

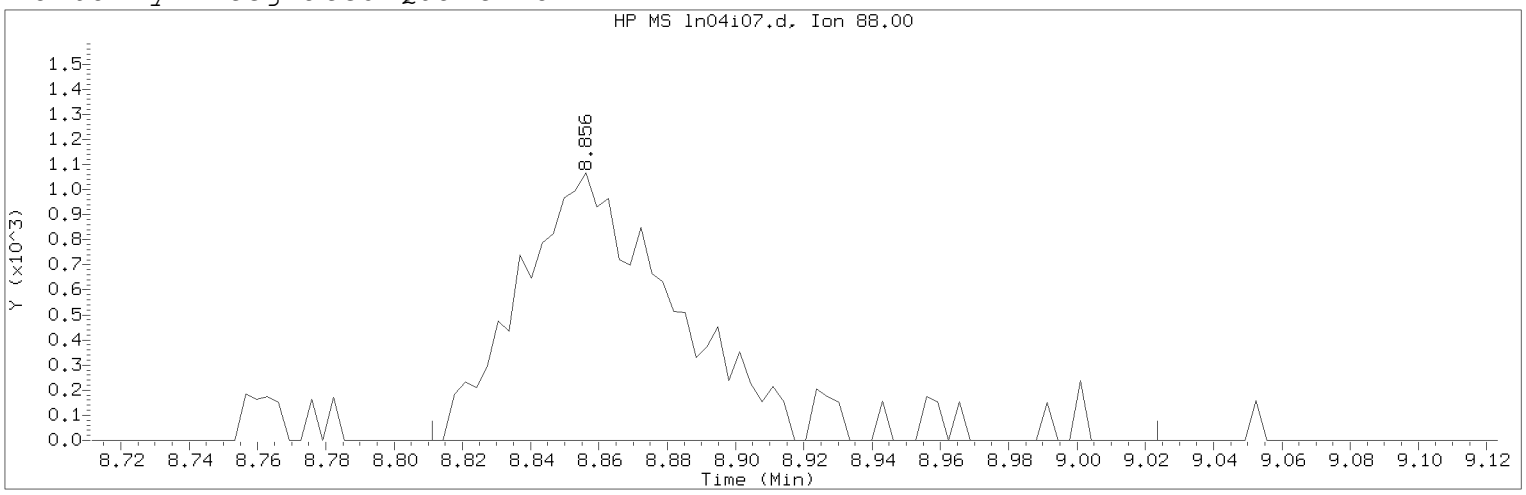
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2287
Retention Time (minutes): 8.837
Quant Ion : 69.00
Area : 3874
On-column Amount (ng) : 0.7186
Integration start scan : 2278 Integration stop scan: 2294
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

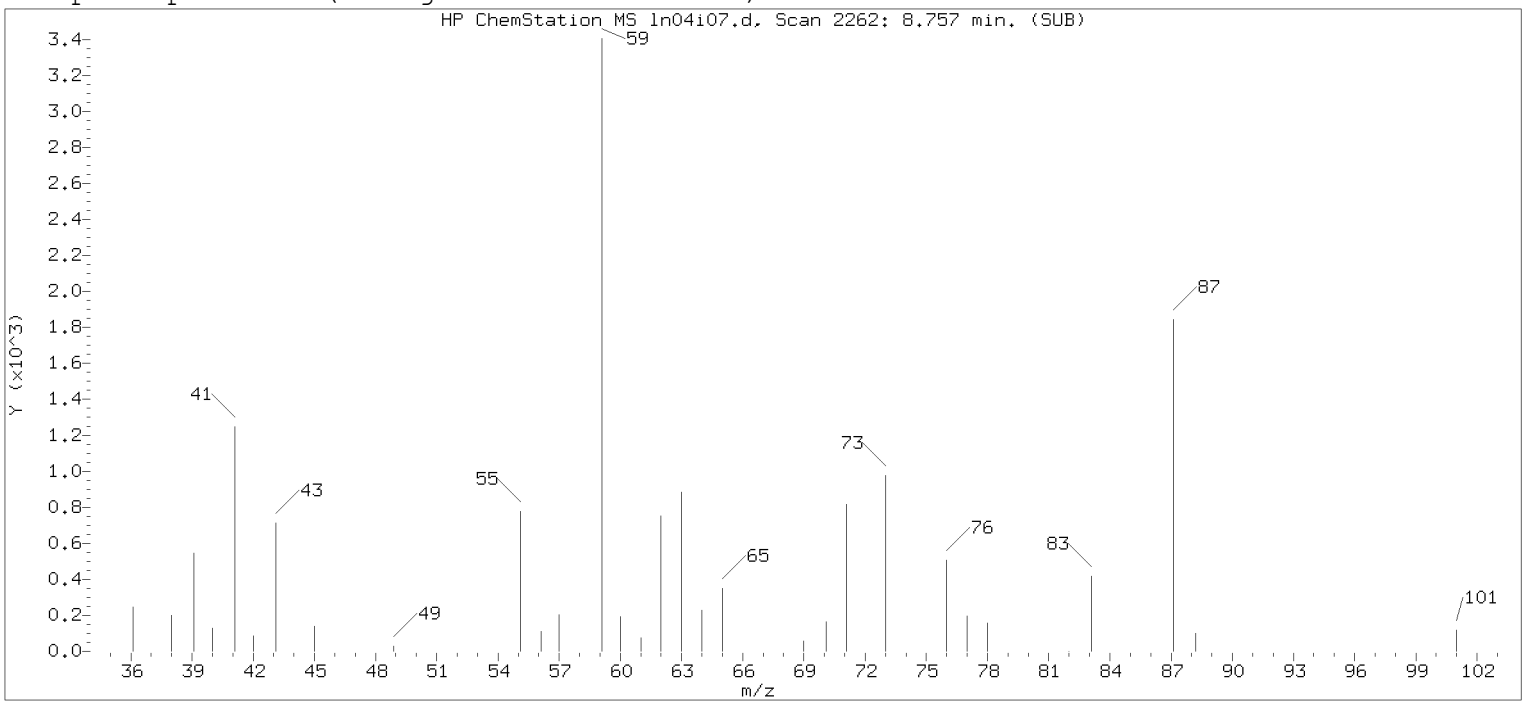
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 3548M
On-Column Amount (ng) : 43.4574
Integration start scan : 2278 Integration stop scan: 2344
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

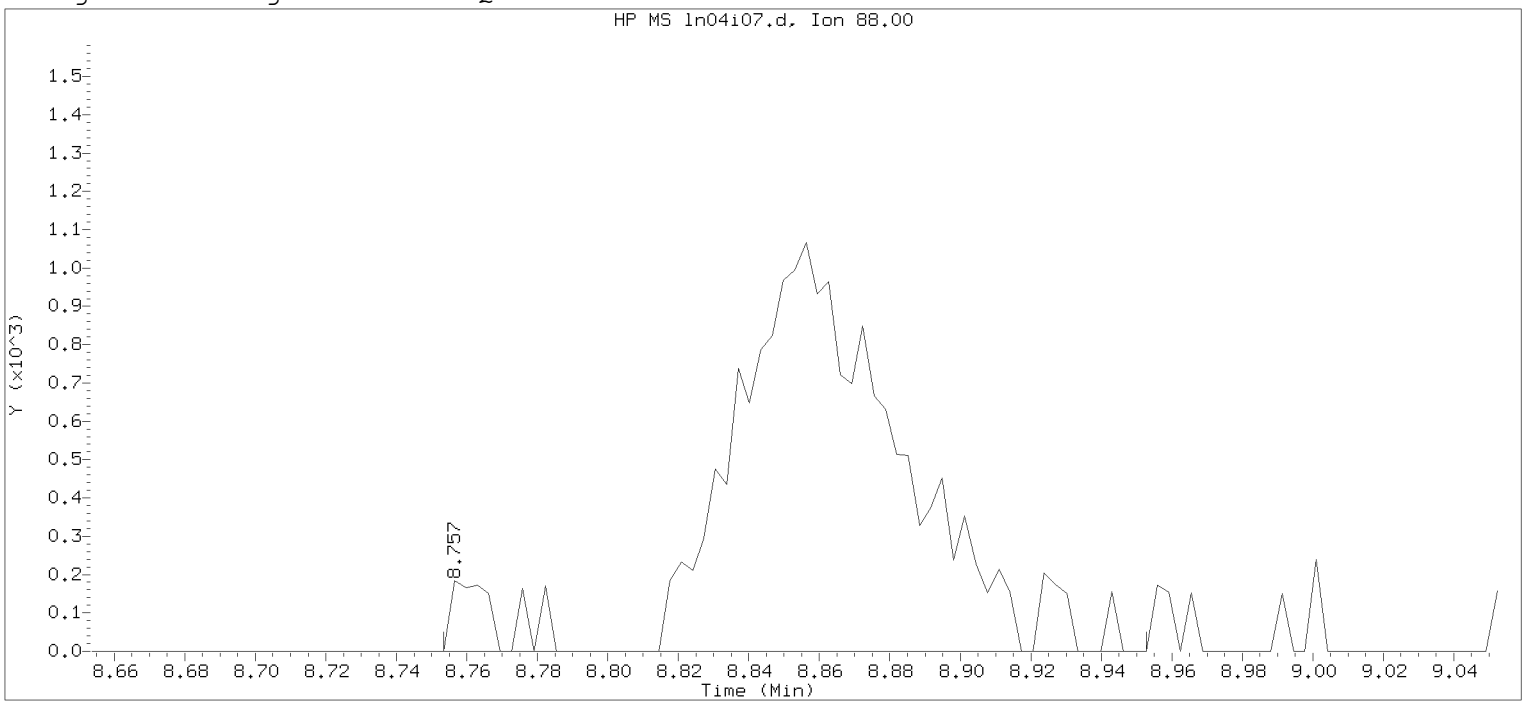
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

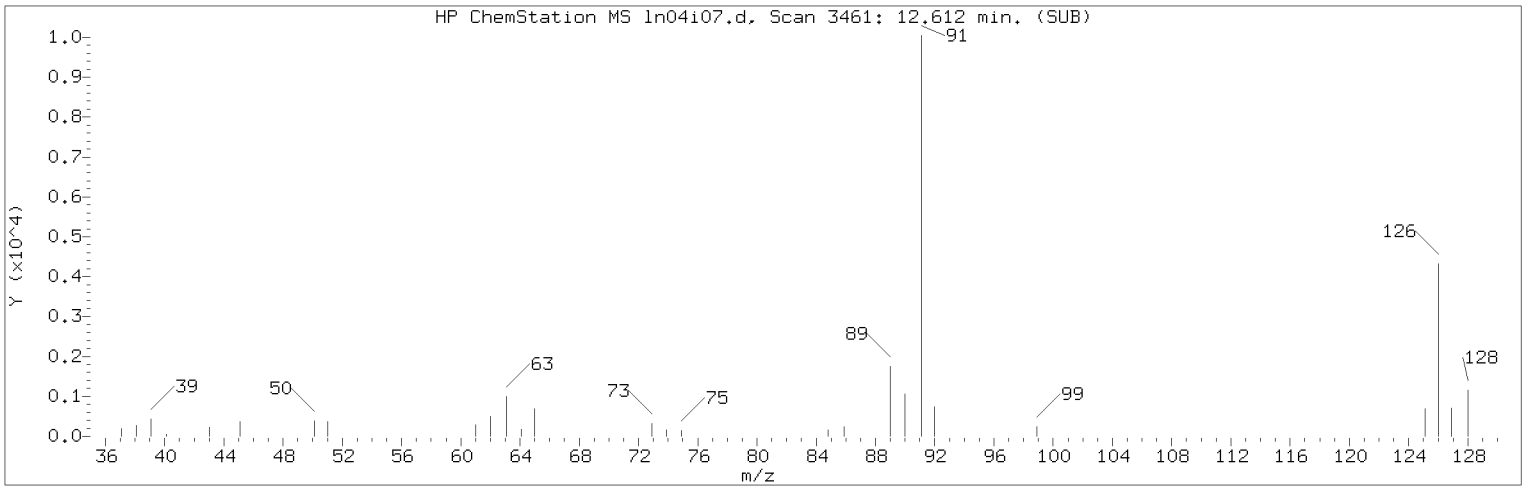
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

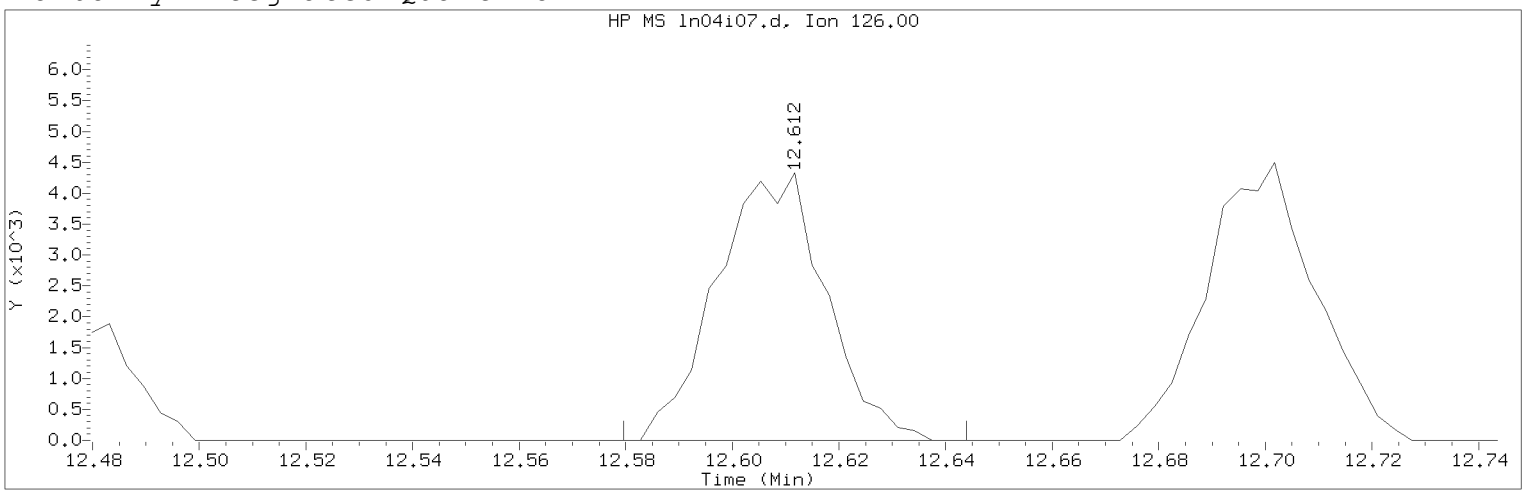
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2262		
Retention Time (minutes)	: 8.757		
Quant Ion	: 88.00		
Area	: 3575		
On-column Amount (ng)	: 43.6406		
Integration start scan	: 2260	Integration stop scan:	2322
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

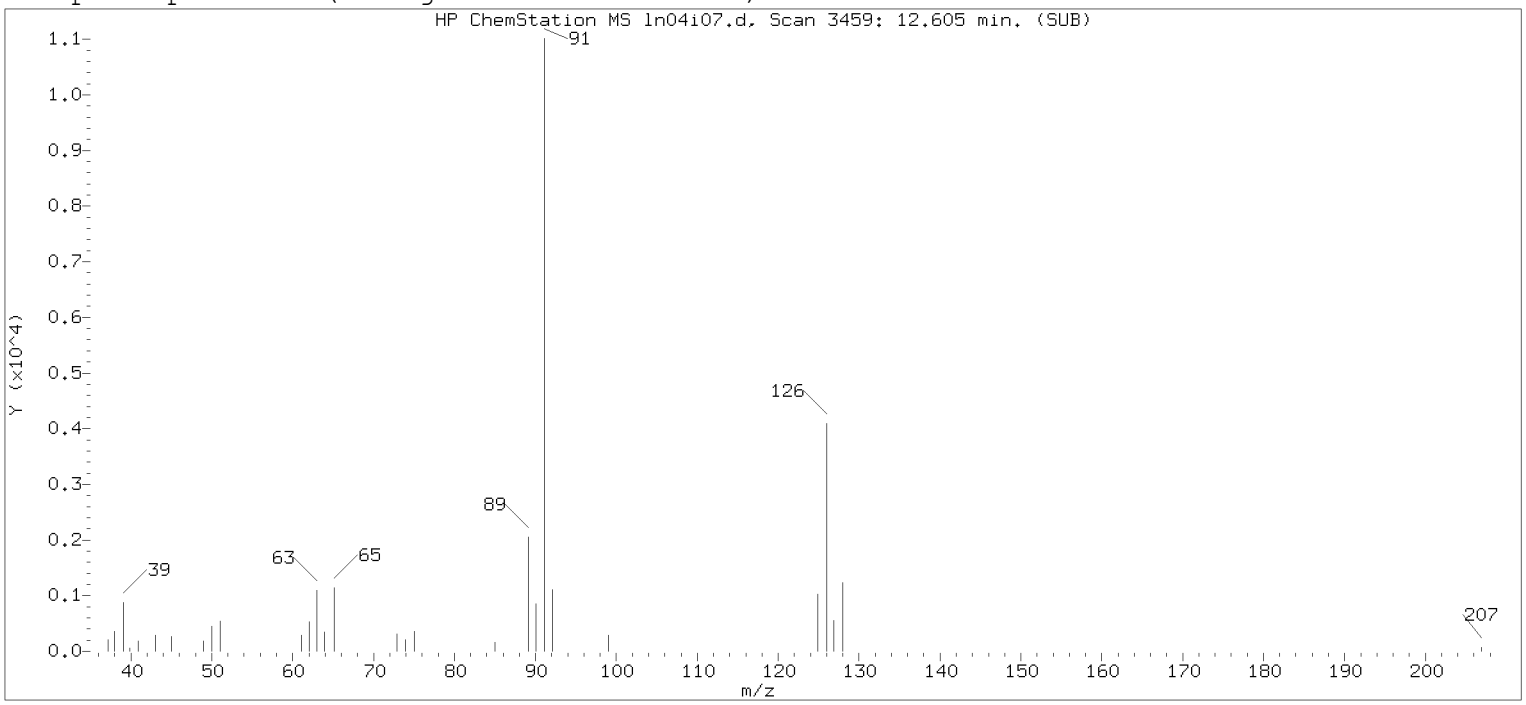
Compound Number : 120
Compound Name : 2-Chlorotoluene
Scan Number : 3461
Retention Time (minutes): 12.612
Quant Ion : 126.00
Area (flag) : 6138M
On-Column Amount (ng) : 0.9294
Integration start scan : 3450 Integration stop scan: 3470
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

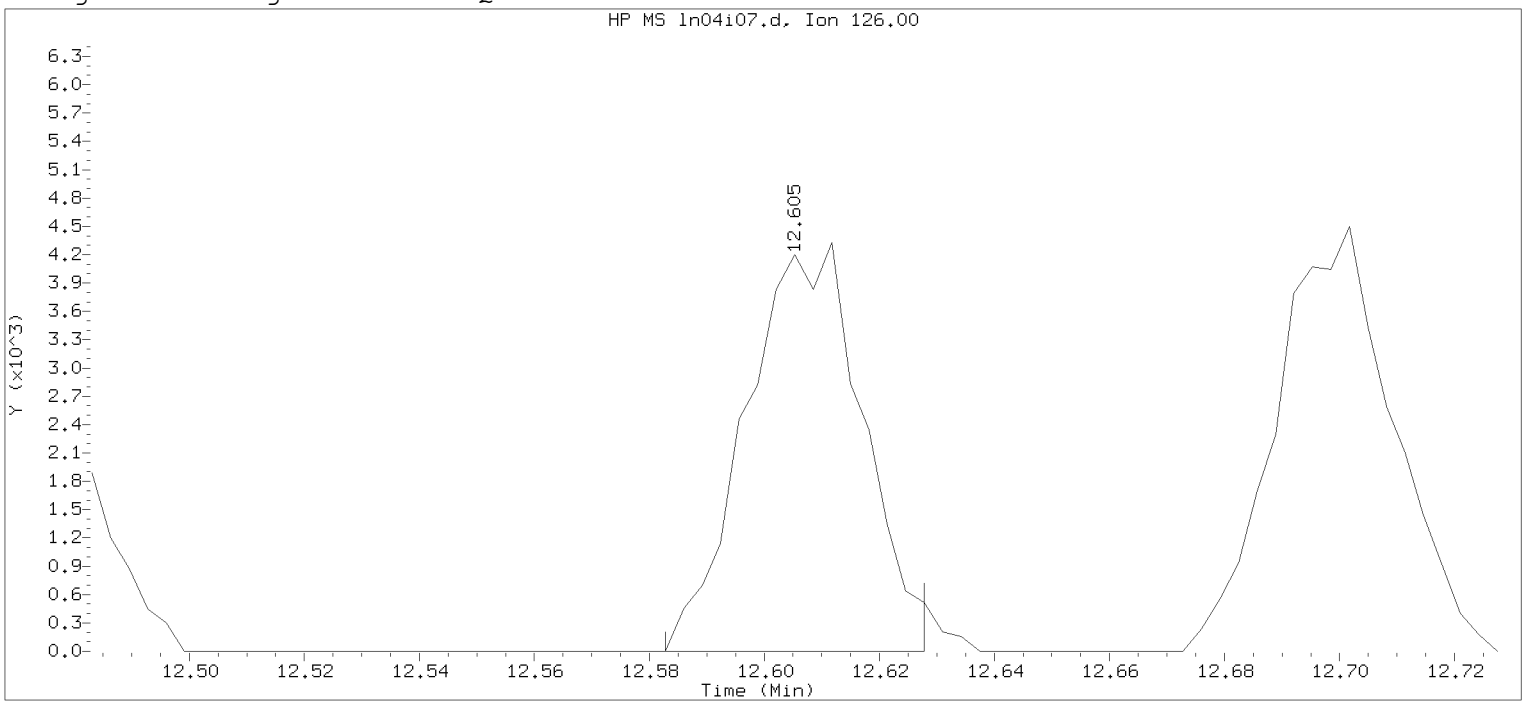
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

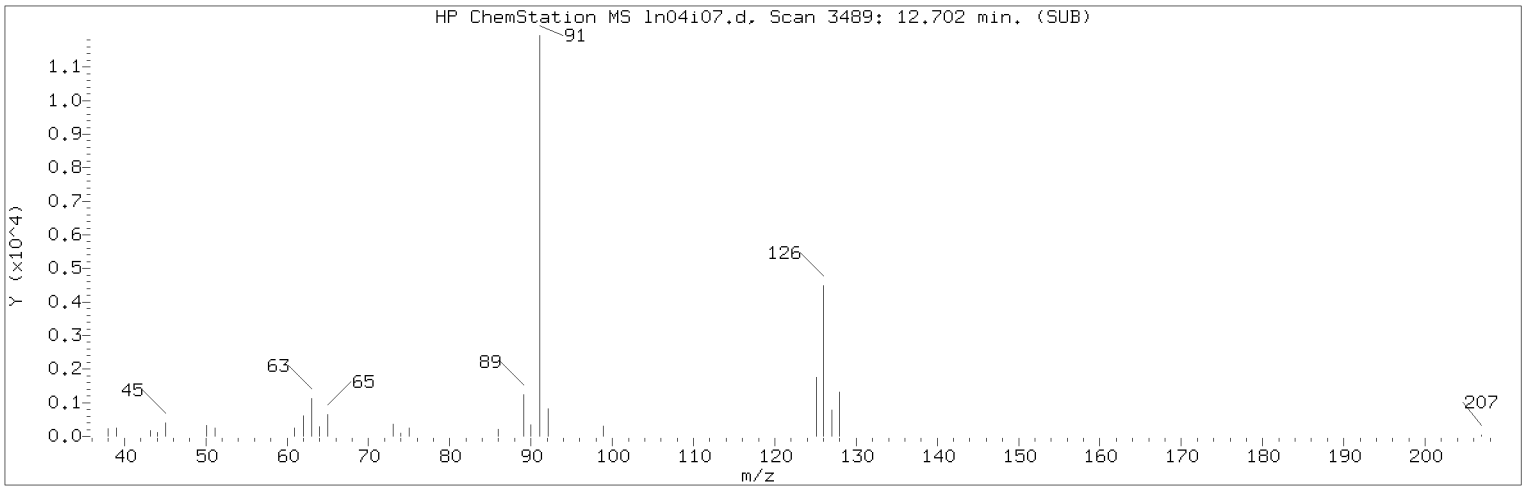
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

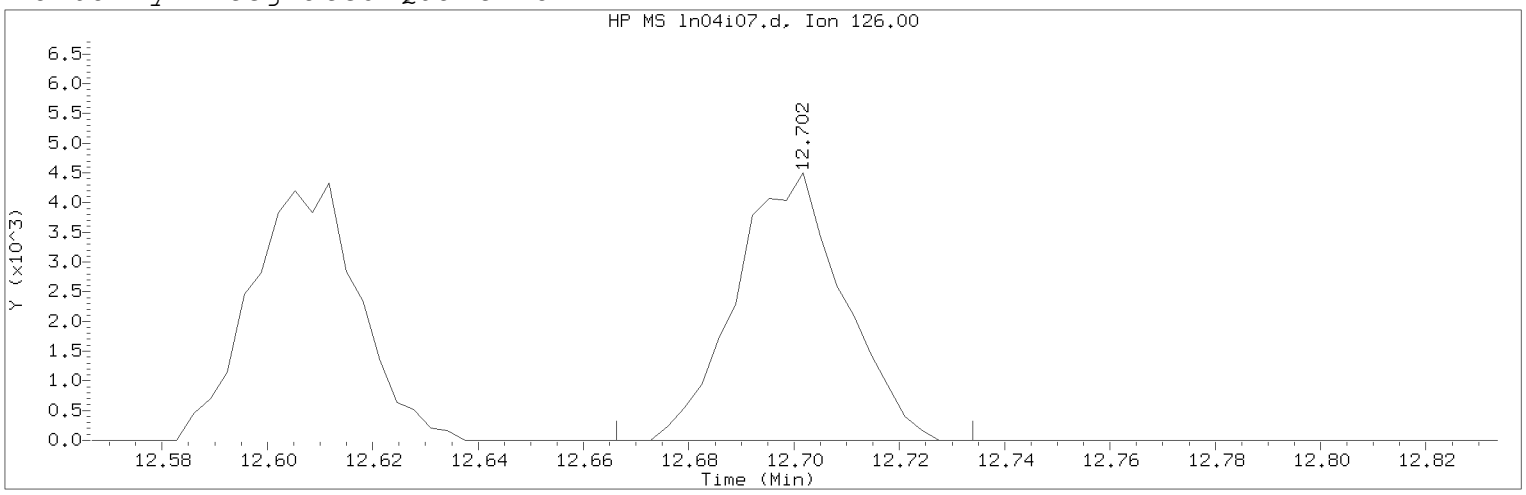
Compound Number : 120
Compound Name : 2-Chlorotoluene
Scan Number : 3459
Retention Time (minutes): 12.605
Quant Ion : 126.00
Area : 6018
On-column Amount (ng) : 0.9136
Integration start scan : 3451 Integration stop scan: 3465
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

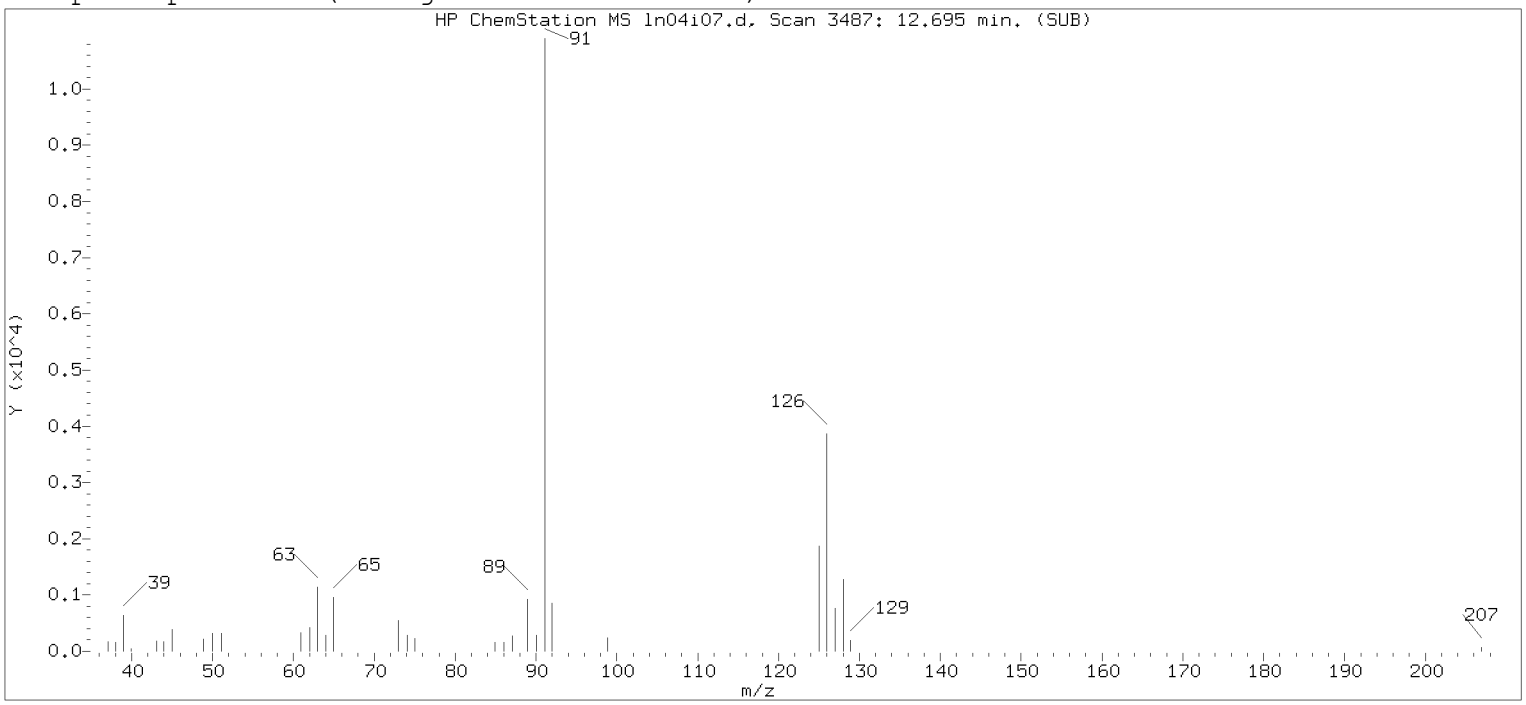
Compound Number : 121
Compound Name : 4-Chlorotoluene
Scan Number : 3489
Retention Time (minutes): 12.702
Quant Ion : 126.00
Area (flag) : 6403M
On-Column Amount (ng) : 0.9314
Integration start scan : 3477 Integration stop scan: 3498
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

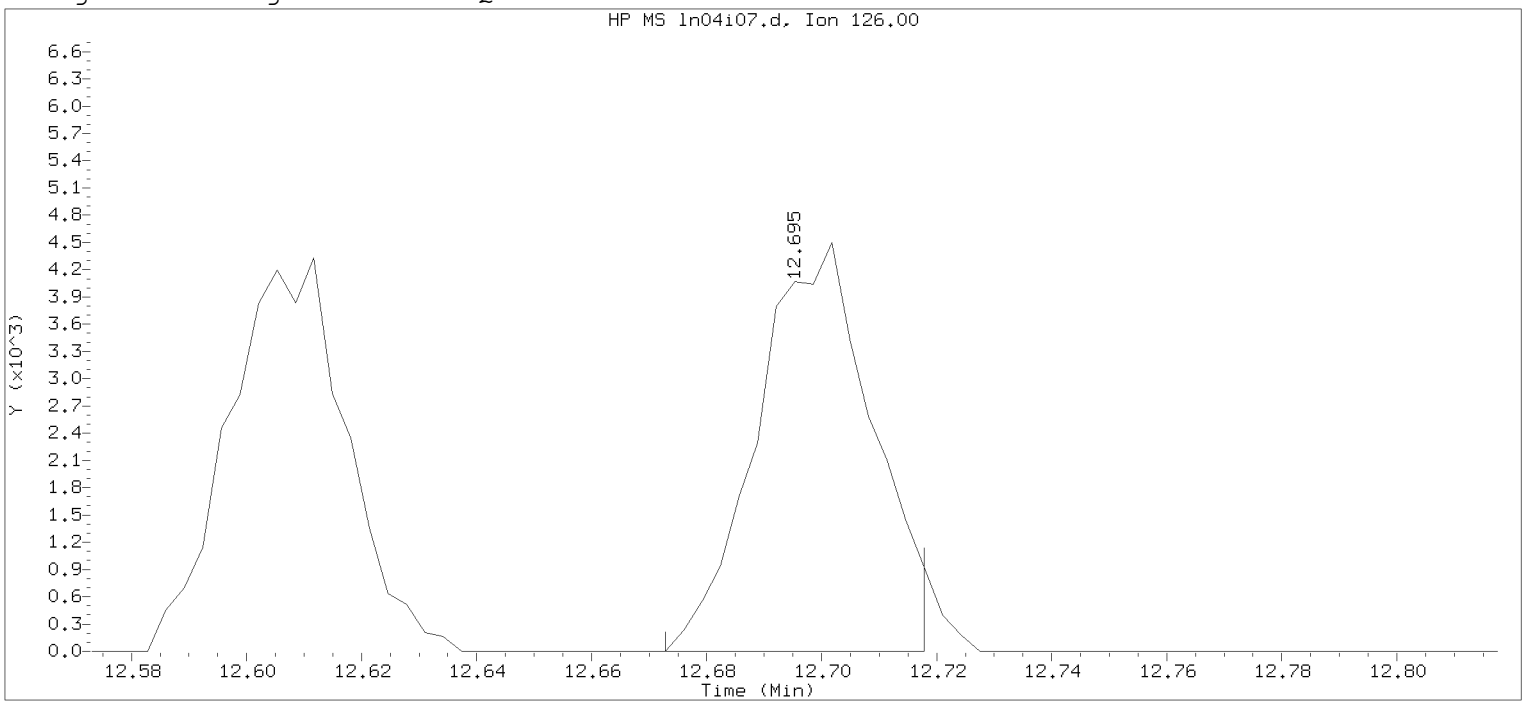
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

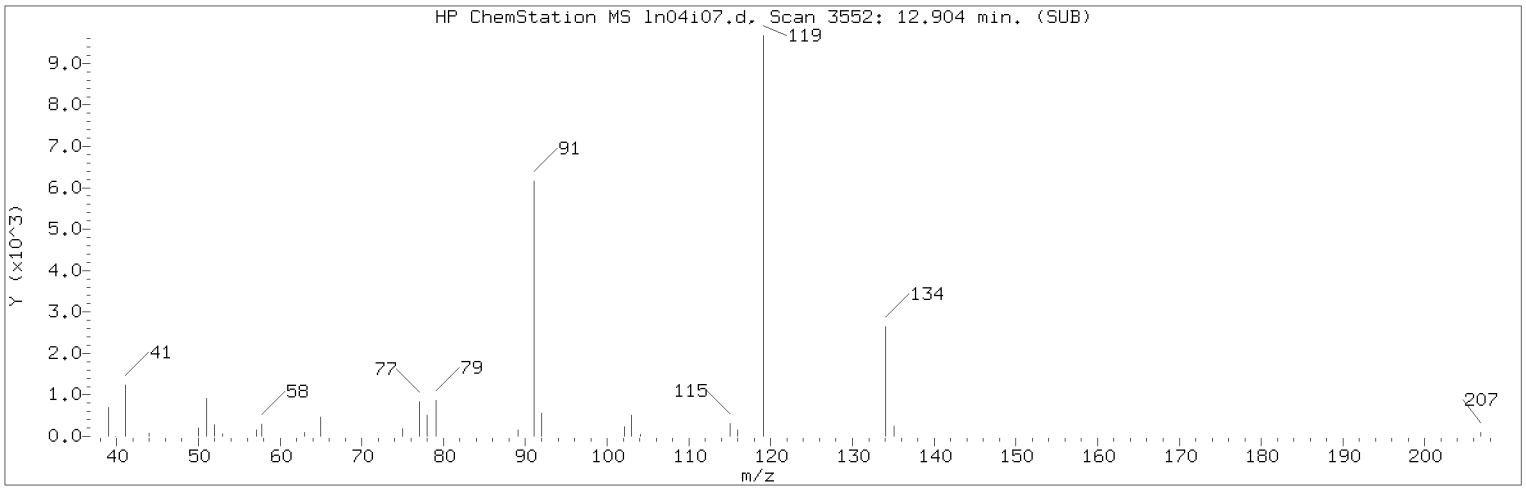
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

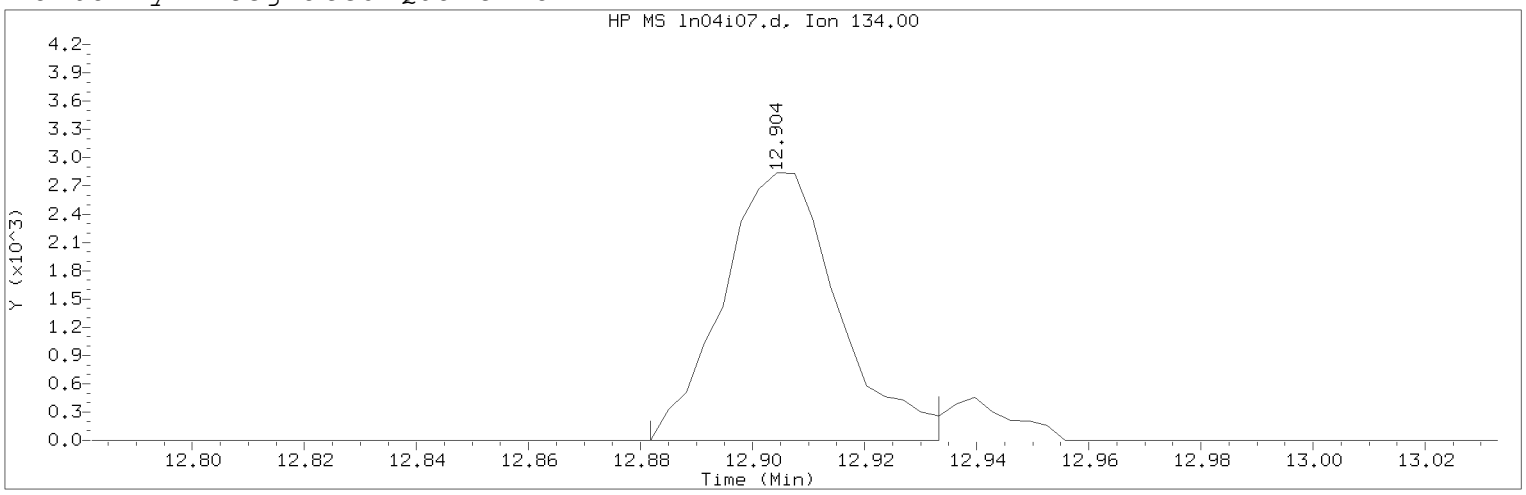
Compound Number : 121
Compound Name : 4-Chlorotoluene
Scan Number : 3487
Retention Time (minutes): 12.695
Quant Ion : 126.00
Area : 6203
On-column Amount (ng) : 0.9062
Integration start scan : 3479 Integration stop scan: 3493
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

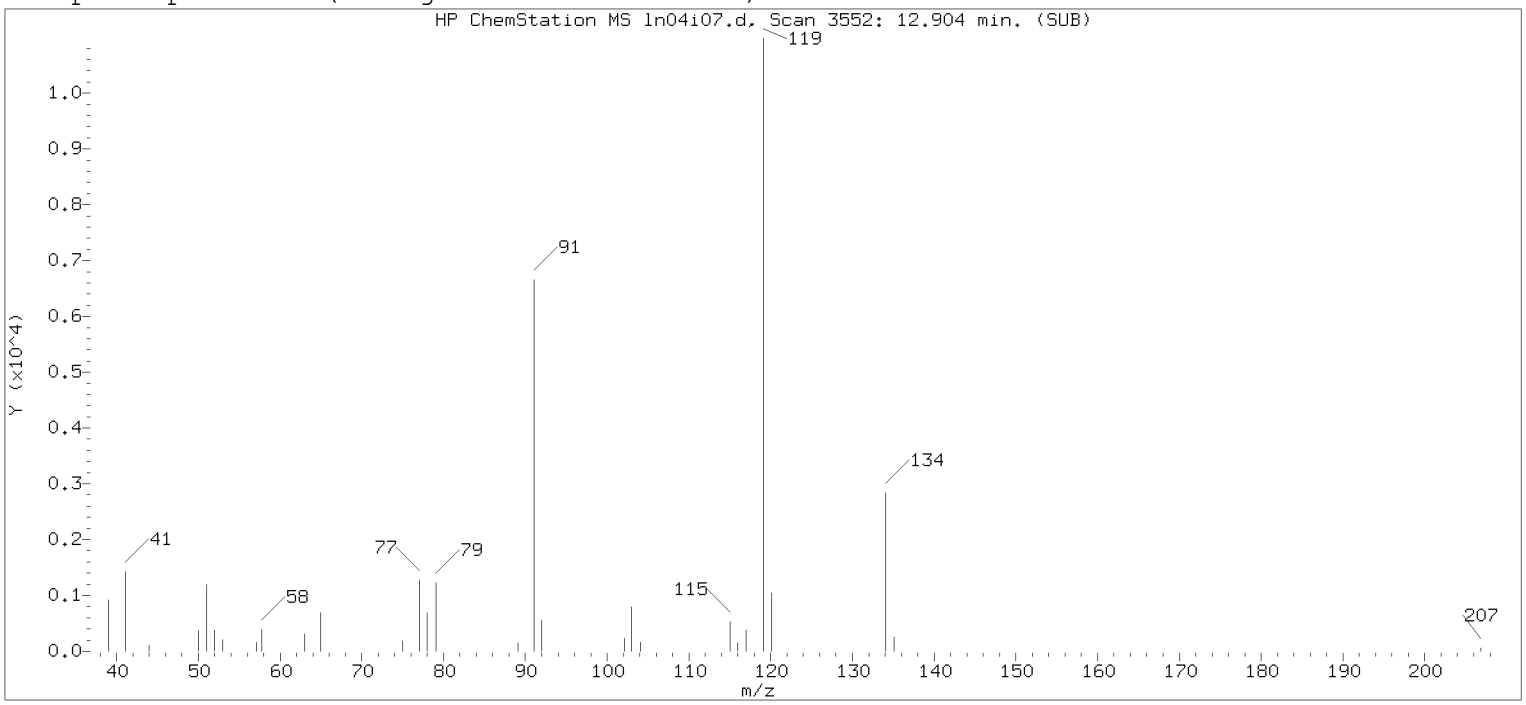
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 4060M
On-Column Amount (ng) : 0.8690
Integration start scan : 3544 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

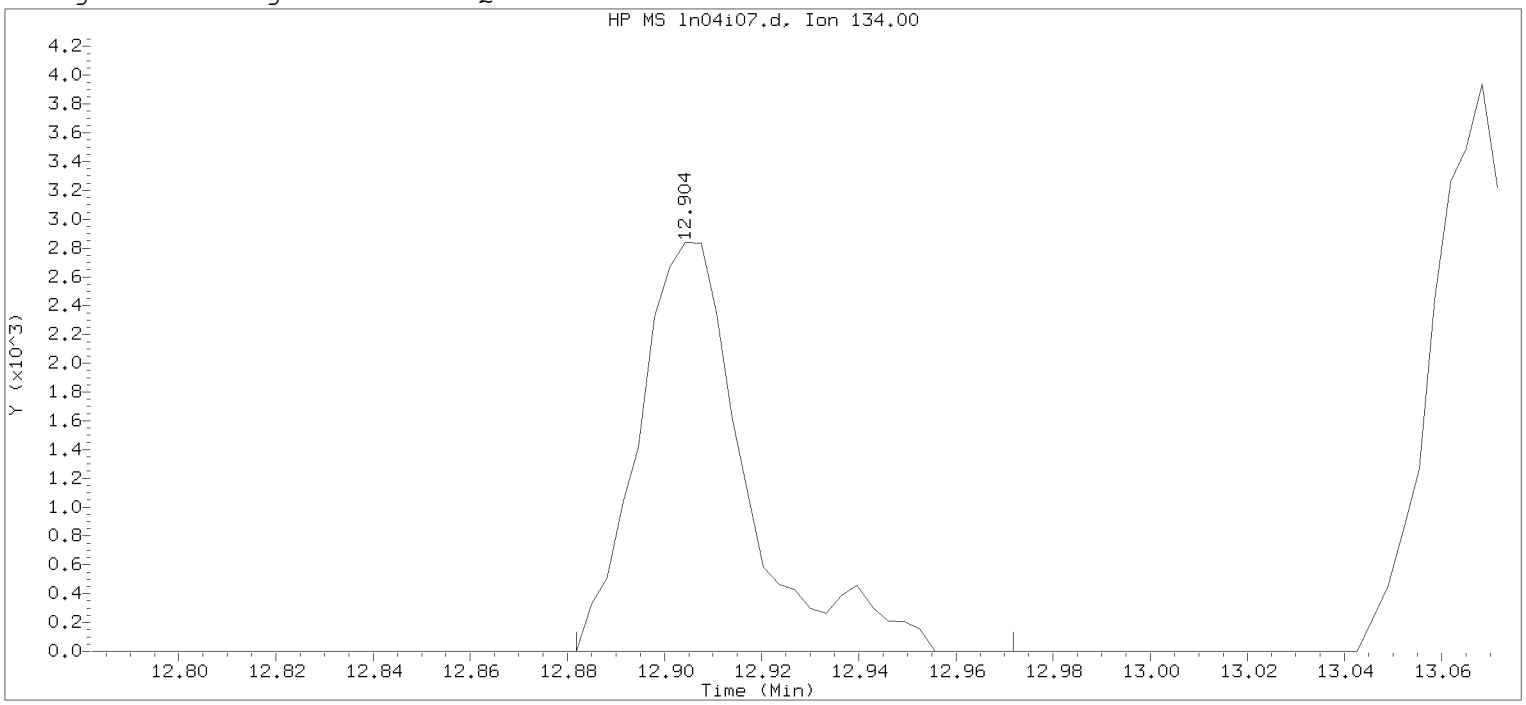
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

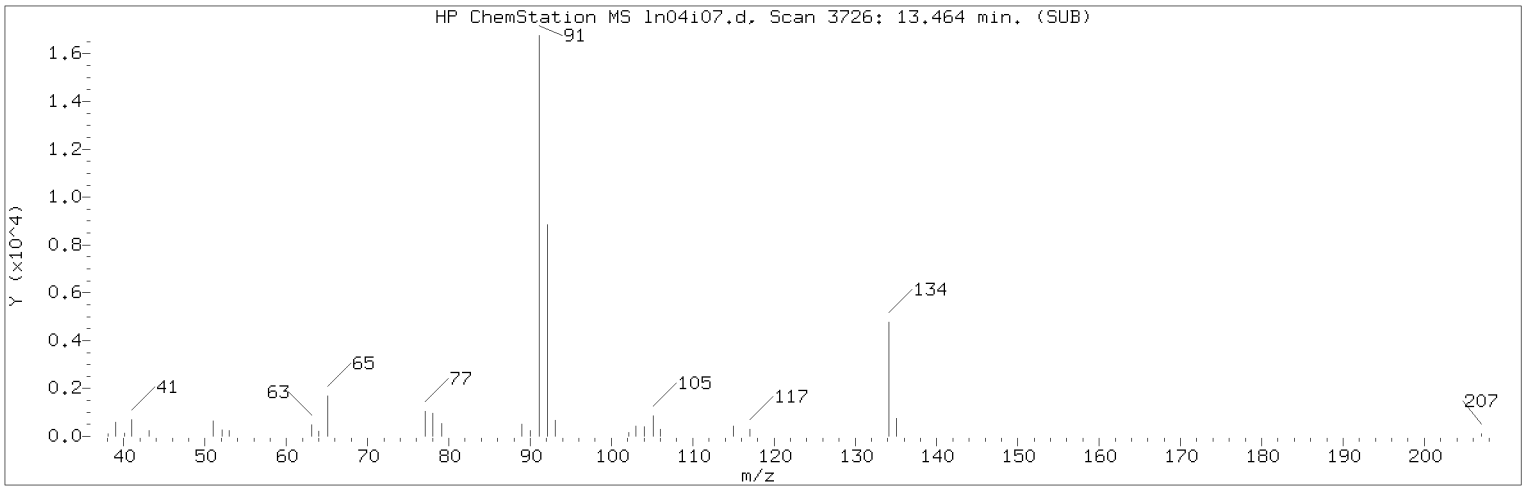
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

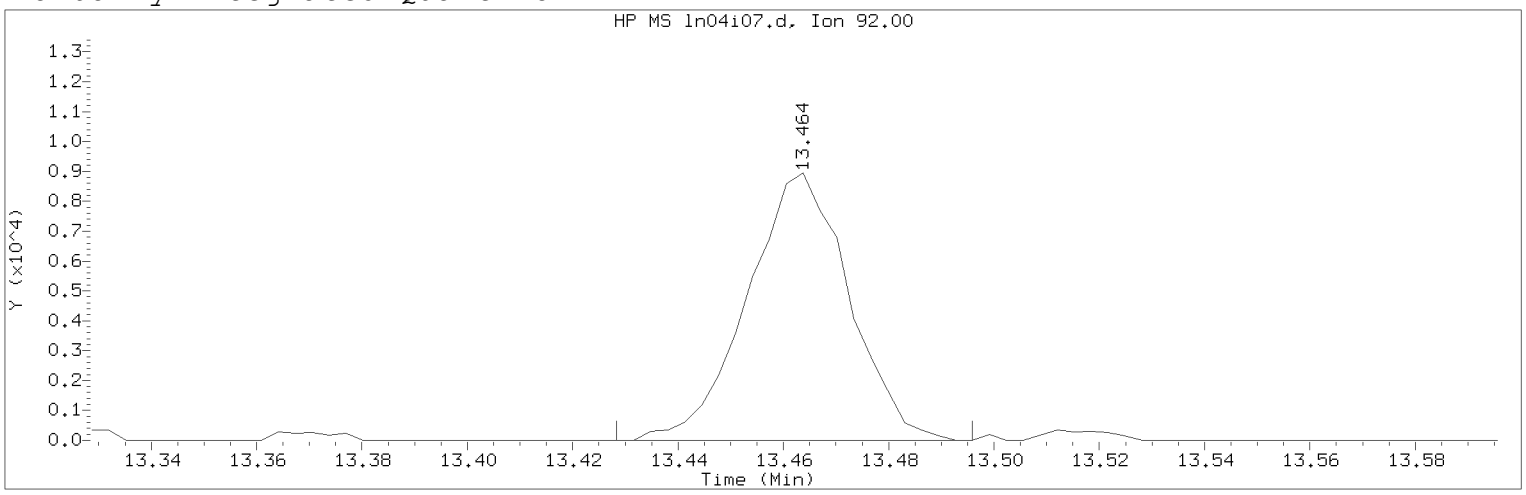
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 4392
On-column Amount (ng) : 0.9024
Integration start scan : 3544 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

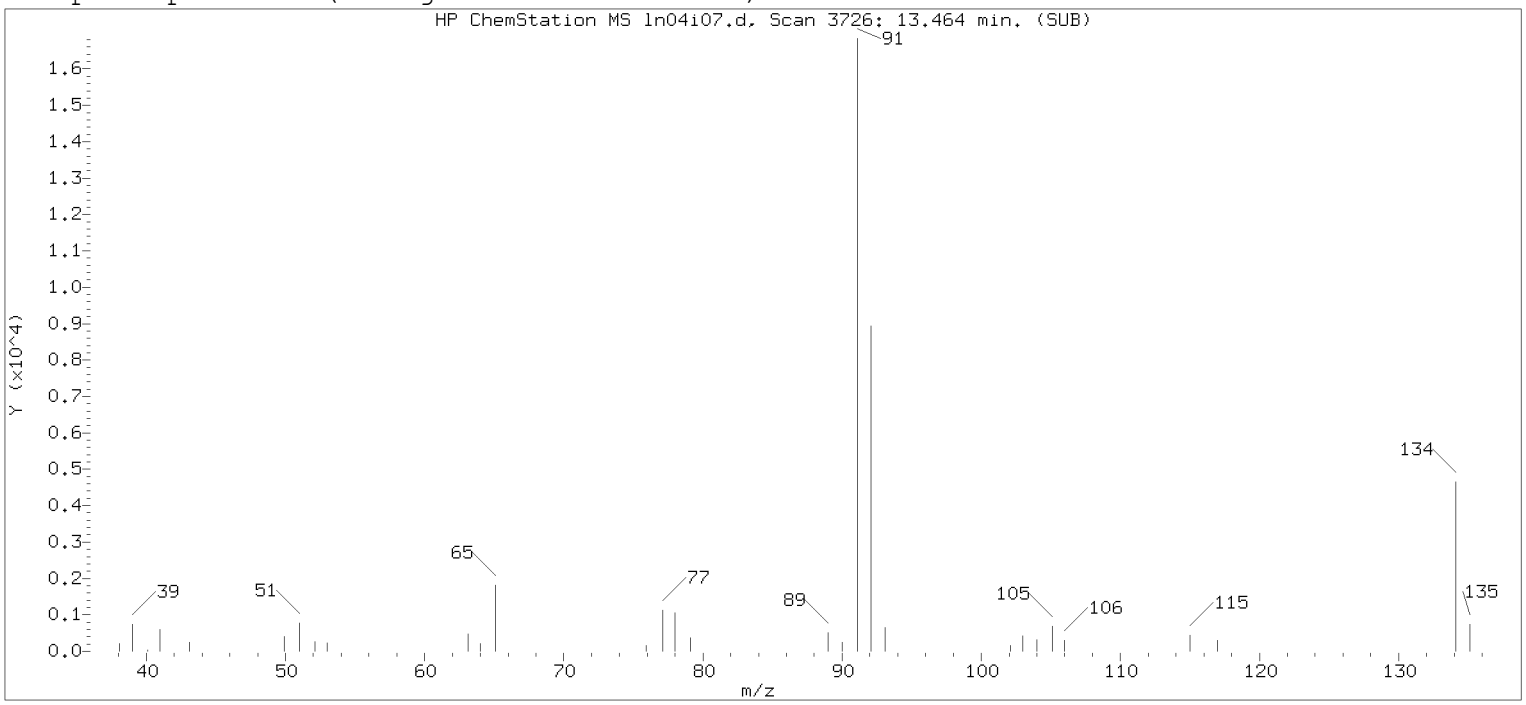
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 3726
Retention Time (minutes): 13.464
Quant Ion : 92.00
Area (flag) : 11964M
On-Column Amount (ng) : 0.9701
Integration start scan : 3714 Integration stop scan: 3735
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

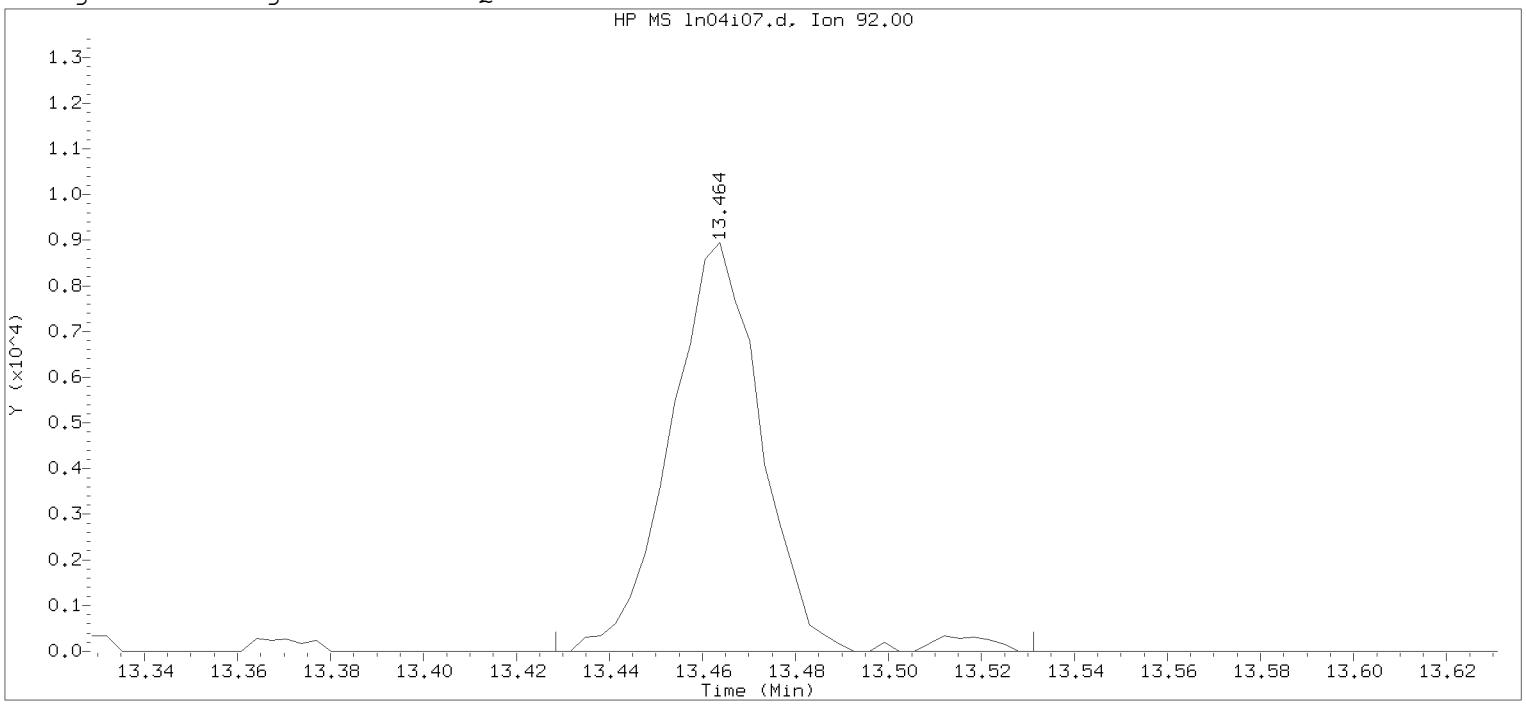
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

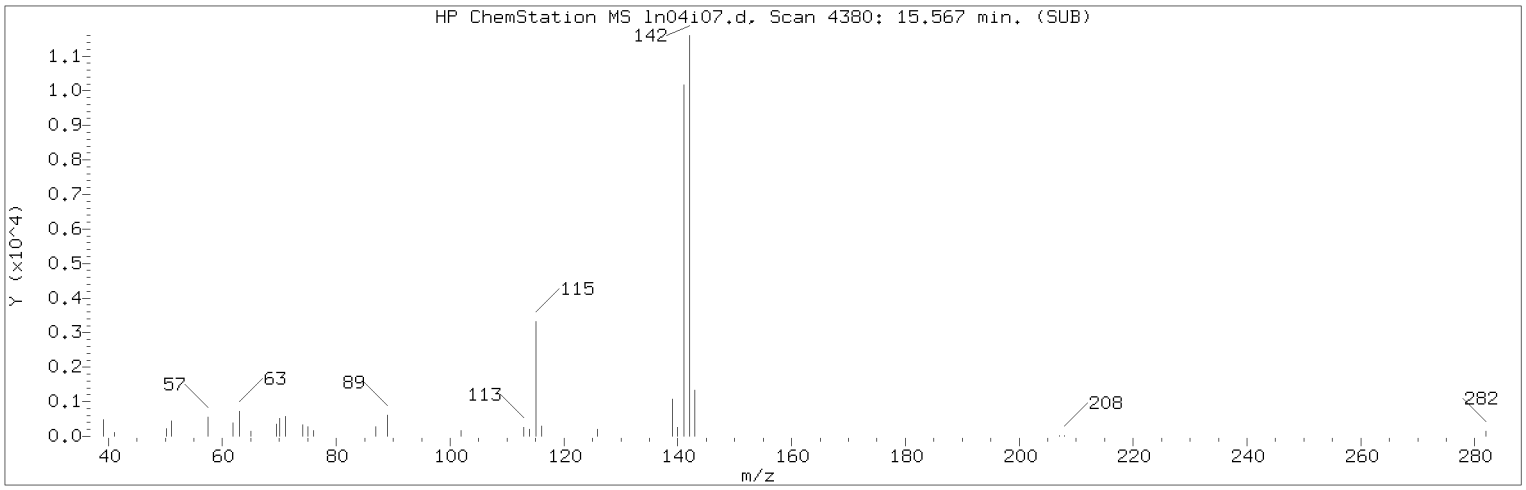
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

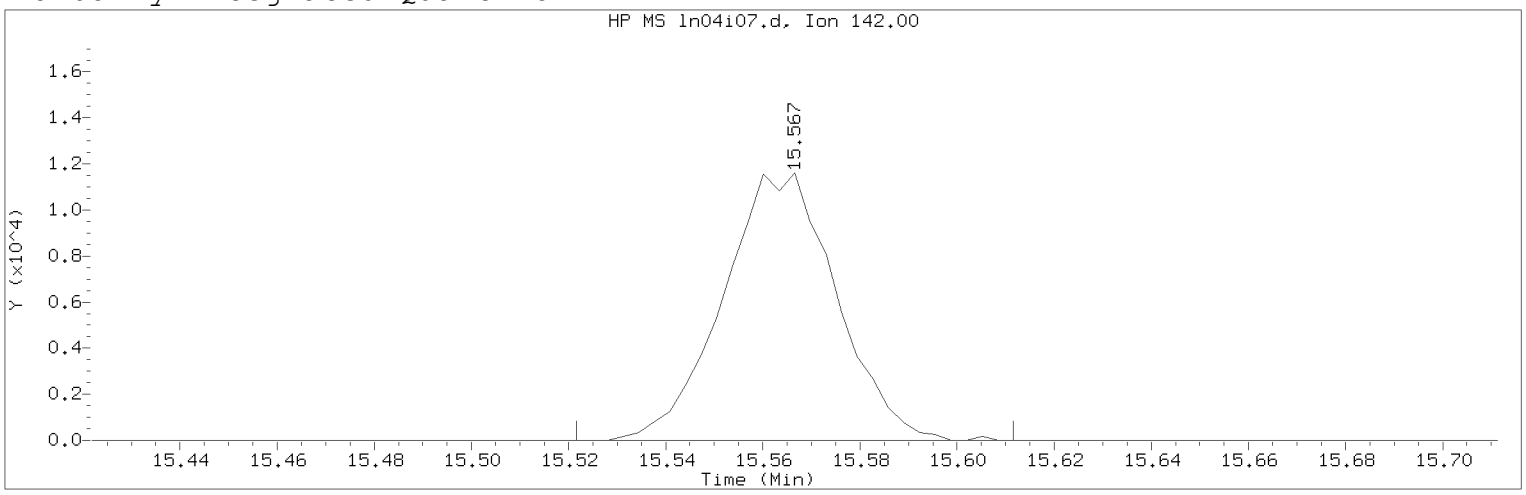
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 3726
Retention Time (minutes): 13.464
Quant Ion : 92.00
Area : 12291
On-column Amount (ng) : 0.9929
Integration start scan : 3714 Integration stop scan: 3746
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

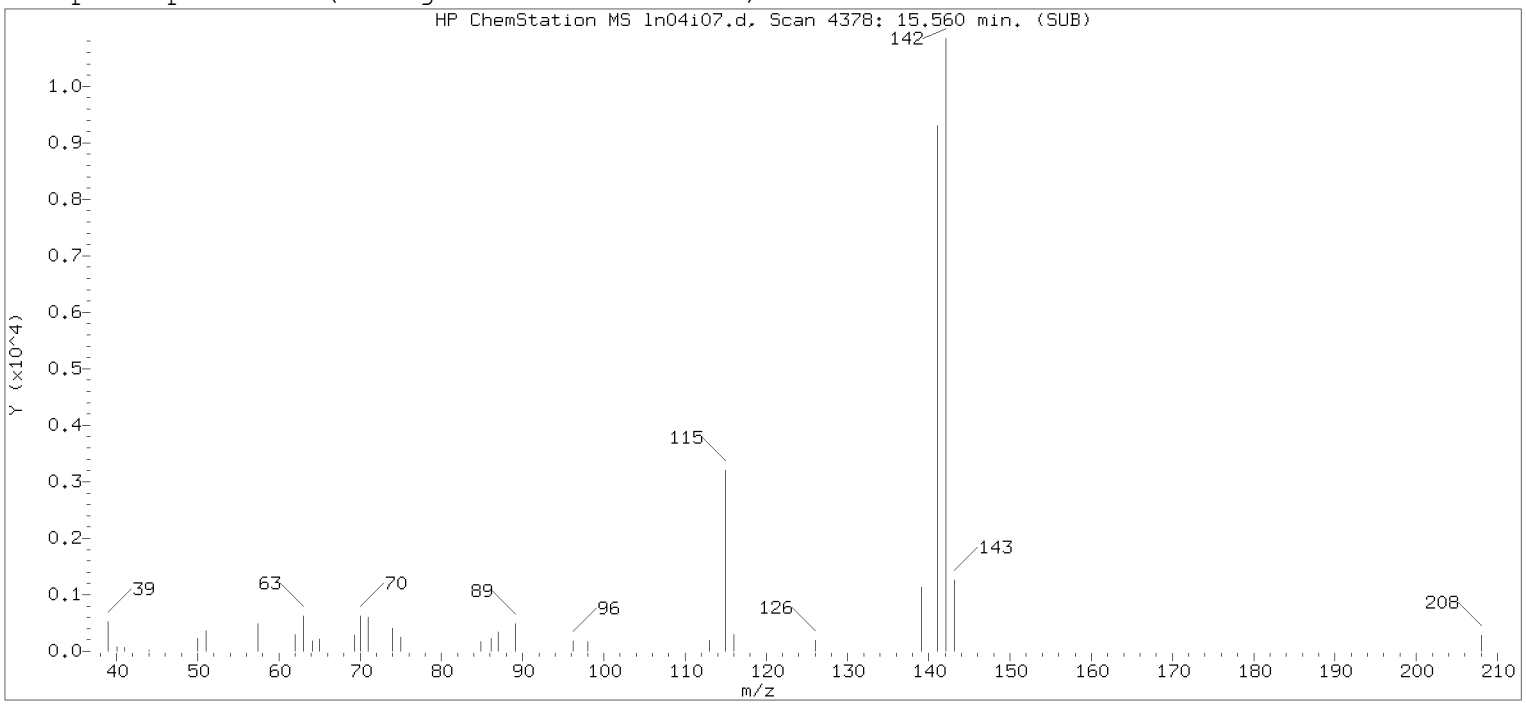
Compound Number : 150
Compound Name : 2-Methylnaphthalene
Scan Number : 4380
Retention Time (minutes): 15.567
Quant Ion : 142.00
Area (flag) : 18783M
On-Column Amount (ng) : 0.9844
Integration start scan : 4365 Integration stop scan: 4393
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

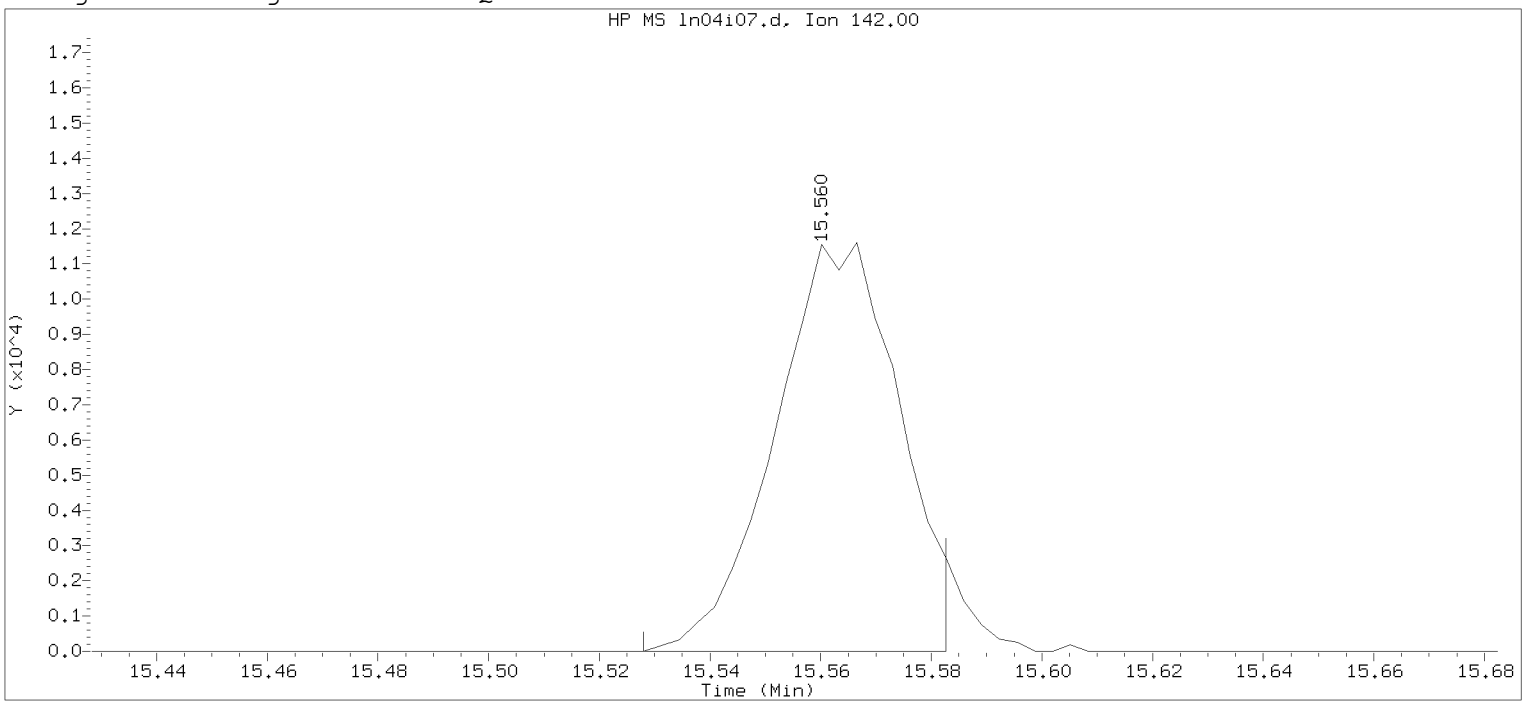
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



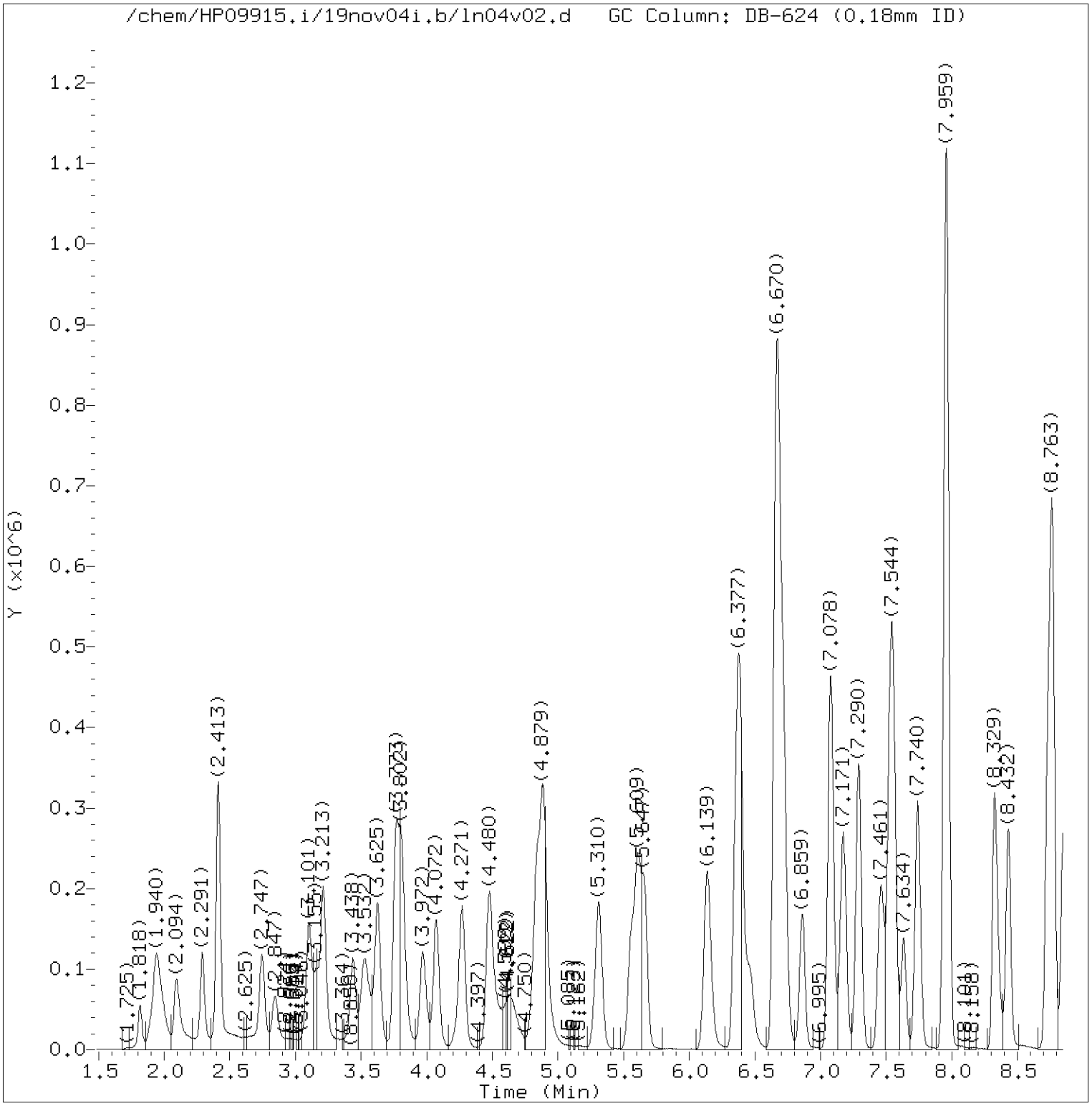
Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 150
Compound Name : 2-Methylnaphthalene
Scan Number : 4378
Retention Time (minutes): 15.560
Quant Ion : 142.00
Area : 17962
On-column Amount (ng) : 0.9472
Integration start scan : 4367 Integration stop scan: 4384
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

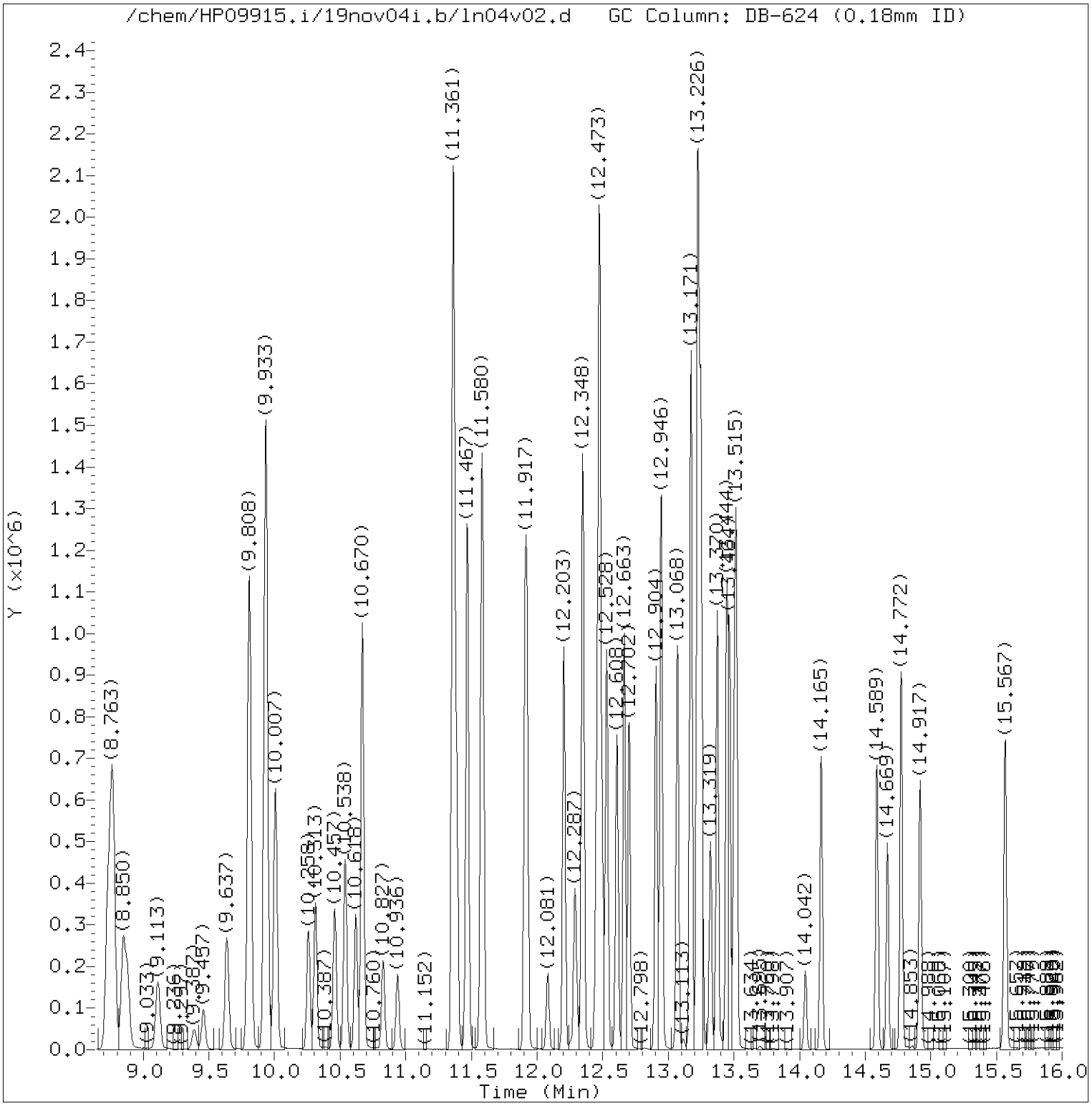
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.094	85	158021M	18.732
4) Chloromethane	(2)	2.291	50	153886	18.927
5) 1,3-Butadiene	(2)	2.413	39	132622M	19.645
6) Vinyl Chloride	(2)	2.413	62	157013	19.349
8) Bromomethane	(2)	2.747	94	104324	17.935
9) Chloroethane	(2)	2.847	64	82467	18.493
10) Dichlorofluoromethane	(2)	3.101	67	174118M	16.224
12) Trichlorofluoromethane	(2)	3.159	101	181238	20.746
11) n-Pentane	(2)	3.213	43	196297	19.014
14) Ethyl ether	(2)	3.438	59	93832	16.622
15) Freon 123a	(2)	3.528	67	136689	19.450
16) Acrolein	(1)	3.625	56	286690	135.125
17) 1,1-Dichloroethene	(2)	3.766	96	107244	20.914
19) Freon 113	(2)	3.795	101	115842	19.801
18) Acetone	(1)	3.805	58	130076	136.752
22) Methyl Iodide	(2)	3.969	142	197263	18.564
21) 2-Propanol	(1)	4.008	45	98510	144.063
23) Carbon Disulfide	(2)	4.075	76	360582	18.660
27) Methyl Acetate	(2)	4.249	43	126109	19.095
25) Allyl Chloride	(2)	4.271	41	171048	18.595
28) Methylene Chloride	(2)	4.474	84	124367	20.377
29)*t-Butyl alcohol-d10	(1)	4.503	65	282794M	250.000
30) t-Butyl alcohol	(1)	4.641	59	227283	190.899
31) Acrylonitrile	(2)	4.834	53	337483	94.980
32) trans-1,2-Dichloroethene	(2)	4.888	96	118658	20.003
33) Methyl Tertiary Butyl Ether	(2)	4.892	73	367523	18.875
34) n-Hexane	(2)	5.310	57	185206M	20.067
36) 1,1-Dichloroethane	(2)	5.554	63	201428	19.465
38) di-Isopropyl ether	(2)	5.609	45	380712	19.075
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	177031	19.067
40) Ethyl t-butyl ether	(2)	6.139	59	369375	19.070
43) 1,2-Dichloroethene (Total)	(2)		96	258427	40.995
44) 2-Butanone	(2)	6.361	43	651073	142.743
42) cis-1,2-Dichloroethene	(2)	6.384	96	139769	20.992
45) 2,2-Dichloropropane	(2)	6.396	77	163413	20.314
47) Propionitrile	(1)	6.461	54	209265	141.065
48) Methacrylonitrile	(2)	6.670	67	556962	145.312
49) Bromochloromethane	(2)	6.712	128	66215	18.755

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.721	71	123960	92.508
51) Chloroform	(2)	6.866	83	199497	20.156
52)$Dibromofluoromethane	(2)	7.075	113	293558	49.637
53) 1,1,1-Trichloroethane	(2)	7.081	97	172182	20.382
54) Cyclohexane	(2)	7.171	56	214913	19.025
56) Carbon Tetrachloride	(2)	7.287	117	143405	20.016
55) 1,1-Dichloropropene	(2)	7.294	75	164177	20.065
58) Isobutyl Alcohol	(1)	7.461	41	180862	451.413
57)$1,2-Dichloroethane-d4	(2)	7.531	102	74610	49.500
60) Benzene	(2)	7.560	78	492012	19.996
61) 1,2-Dichloroethane	(2)	7.638	62	163231	20.625
65) t-Amyl methyl ether	(2)	7.740	73	369180	18.989
67) n-Heptane	(2)	7.956	43	163362M	18.948
66)*Fluorobenzene	(2)	7.959	96	1209671	50.000
69) n-Butanol	(1)	8.326	56	314470M	911.924
71) Trichloroethene	(2)	8.429	95	124893	20.159
72) Methylcyclohexane	(2)	8.731	83	222042	19.318
73) 1,2-Dichloropropane	(2)	8.769	63	127774	20.450
76) Methyl Methacrylate	(2)	8.847	69	115569	19.128
75) 1,4-Dioxane	(1)	8.853	88	47747M	503.753
74) Dibromomethane	(2)	8.879	93	80909	20.014
78) Bromodichloromethane	(2)	9.113	83	144408	19.907
79) 2-Nitropropane	(2)	9.383	41	35869	16.324
80) 2-Chloroethyl Vinyl Ether	(2)	9.457	63	51088	19.038
81) cis-1,3-Dichloropropene	(2)	9.637	75	191486	19.874
82) 4-Methyl-2-pentanone	(2)	9.808	43	893533	92.810
83)$Toluene-d8	(3)	9.933	98	1243931	50.214
88) Toluene	(3)	10.007	92	314091	20.224
90) 1,3-Dichloropropene (total)	(3)		100	360855	39.085
89) trans-1,3-Dichloropropene	(3)	10.258	75	169369	19.211
91) Ethyl Methacrylate	(3)	10.313	69	194593	18.162
92) 1,1,2-Trichloroethane	(3)	10.457	97	120085	20.394
93) Tetrachloroethene	(3)	10.538	166	145489	22.119
94) 1,3-Dichloropropane	(3)	10.618	76	197817	19.676
96) 2-Hexanone	(3)	10.670	43	659041	92.150
97) Dibromochloromethane	(3)	10.827	129	119169	19.757
99) 1,2-Dibromoethane	(3)	10.936	107	127100	19.878
100)*Chlorobenzene-d5	(3)	11.361	117	946755	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) 1-Chlorohexane	(3)	11.364	91	162531	19.480
102) Chlorobenzene	(3)	11.387	112	355167	20.223
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	114709	19.823
104) Ethylbenzene	(3)	11.470	91	602093	20.283
106) m+p-Xylene	(3)	11.583	106	478306	40.959
108) Xylene (Total)	(3)		106	712690	61.279
107) o-Xylene	(3)	11.908	106	234384	20.320
109) Styrene	(3)	11.924	104	391950	20.563
110) Bromoform	(3)	12.081	173	80910	17.952
111) Isopropylbenzene	(3)	12.203	105	603598	20.864
112) Cyclohexanone	(1)	12.287	55	166810	449.364
114)$4-Bromofluorobenzene	(3)	12.348	95	469009	49.999
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	188446M	19.576
115) Bromobenzene	(4)	12.467	156	151805	19.821
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	290498	97.834
117) 1,2,3-Trichloropropane	(4)	12.496	110	58902M	19.940
119) n-Propylbenzene	(4)	12.531	91	694916	20.768
120) 2-Chlorotoluene	(4)	12.608	126	143440	20.178
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	499772	20.552
121) 4-Chlorotoluene	(4)	12.702	126	148830	20.114
124) tert-Butylbenzene	(4)	12.907	134	103762M	20.632
125) Pentachloroethane	(4)	12.943	167	74538	17.213
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	511834	19.971
127) sec-Butylbenzene	(4)	13.068	105	616554	20.545
129) 1,3-Dichlorobenzene	(4)	13.168	146	282424	20.067
130) p-Isopropyltoluene	(4)	13.174	119	533278	20.541
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	509597	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	298831	20.482
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	539562	19.874
135) Benzyl Chloride	(4)	13.319	91	329267	16.019
136) 1,3-Diethylbenzene	(4)	13.374	119	322622	19.095
141) Diethylbenzene (total)	(4)		100	935720	57.258
137) 1,4-Diethylbenzene	(4)	13.444	119	340230	19.006
139) n-Butylbenzene	(4)	13.464	92	258920	19.505
138) 1,2-Dichlorobenzene	(4)	13.502	146	282807	20.364
140) 1,2-Diethylbenzene	(4)	13.518	119	272868	19.158
142) 1,2-Dibromo-3-chloropropane	(4)	14.042	75	40654	19.292
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	203102	19.035

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

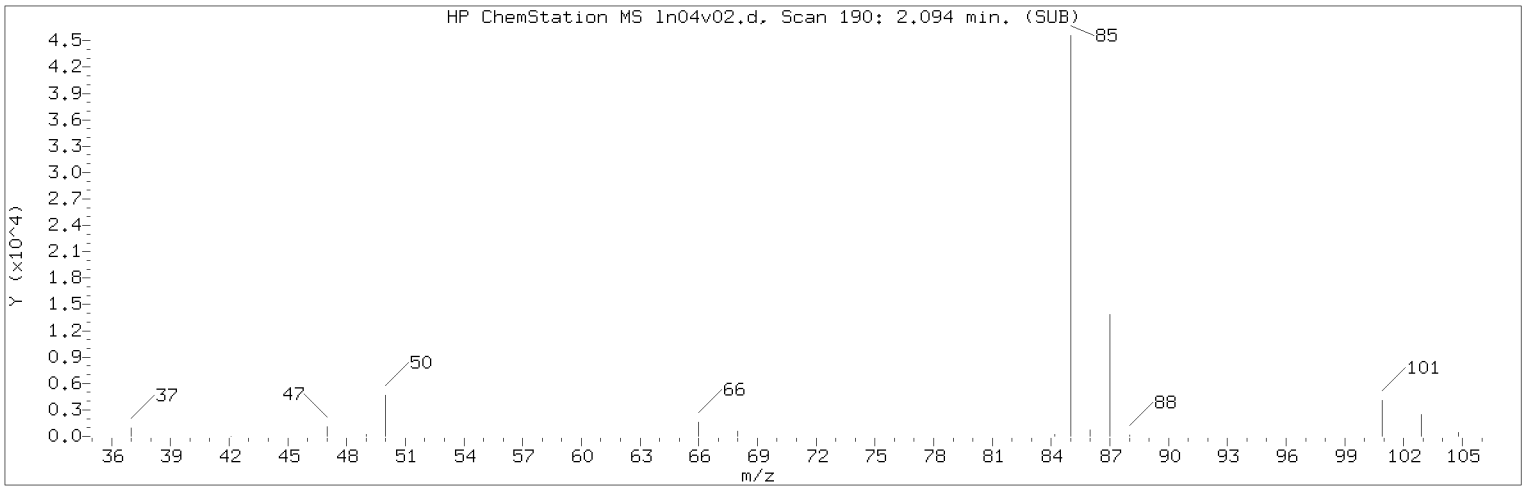
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

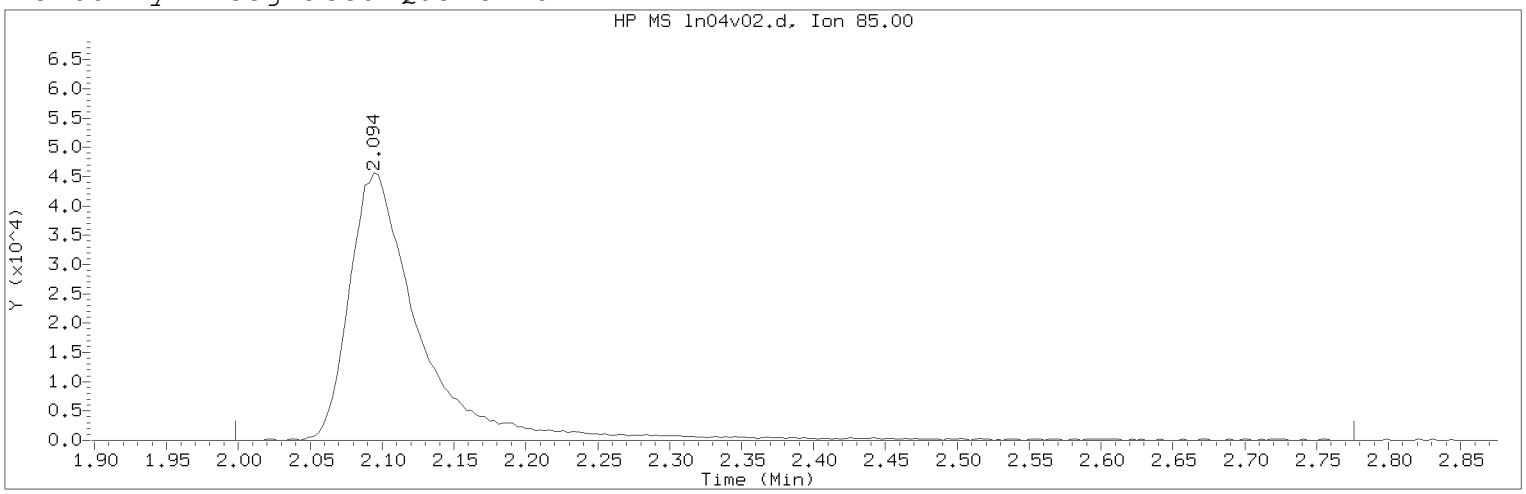
	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146)	1,2,4-Trichlorobenzene	(4)	14.589	180	199046	19.186
147)	Hexachlorobutadiene	(4)	14.666	225	82991	16.942
148)	Naphthalene	(4)	14.772	128	666056	19.970
149)	1,2,3-Trichlorobenzene	(4)	14.917	180	192487	19.067
150)	2-Methylnaphthalene	(4)	15.567	142	374385	18.228

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

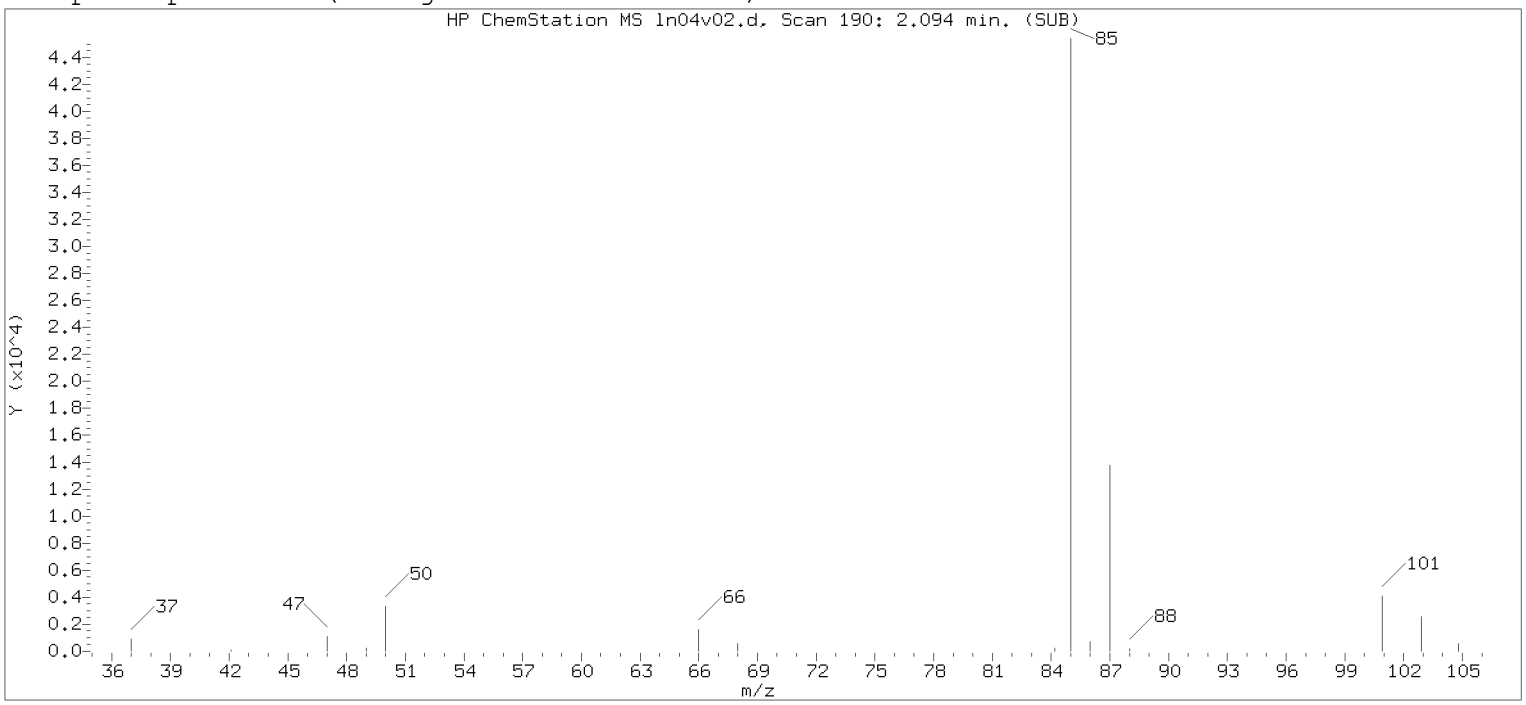
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area (flag) : 158021M
On-Column Amount (ng) : 18.7320
Integration start scan : 159 Integration stop scan: 401
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

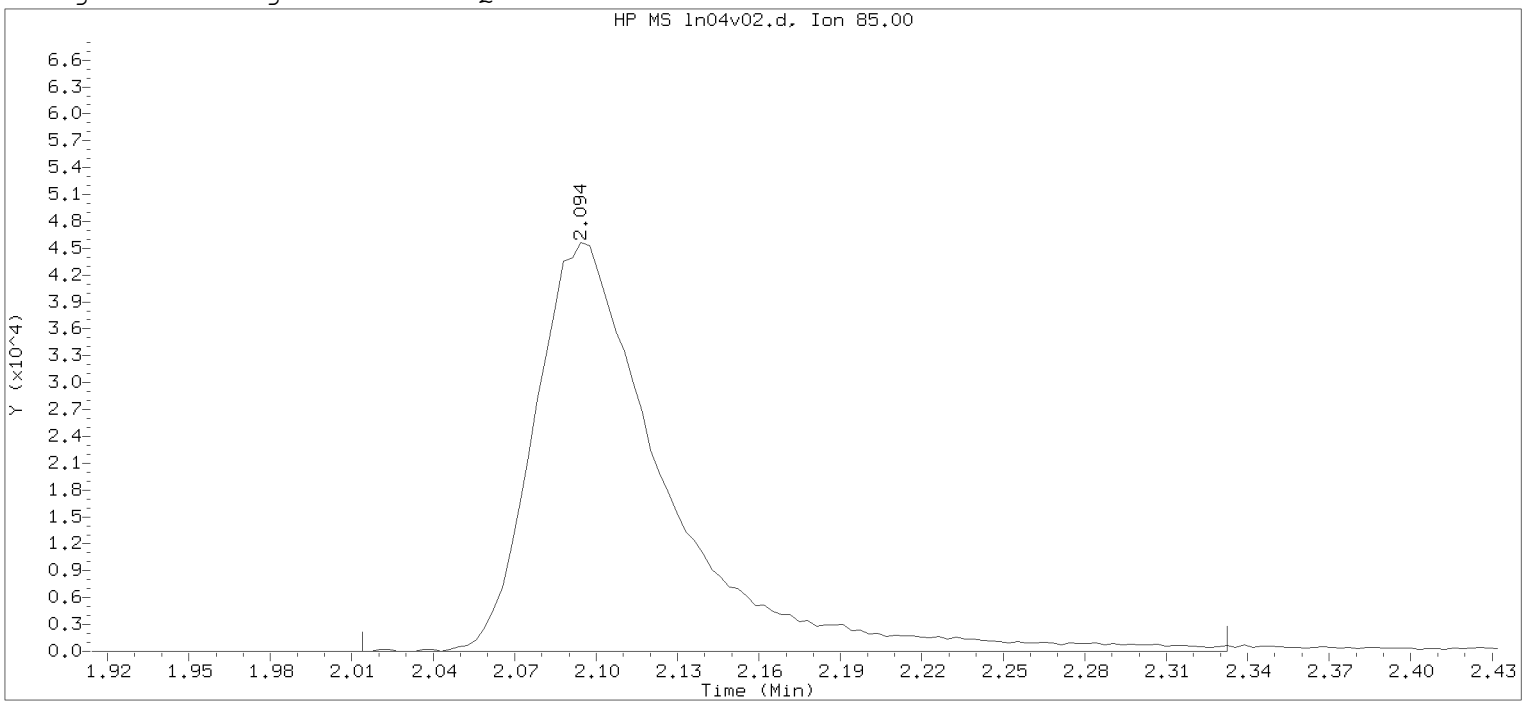
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

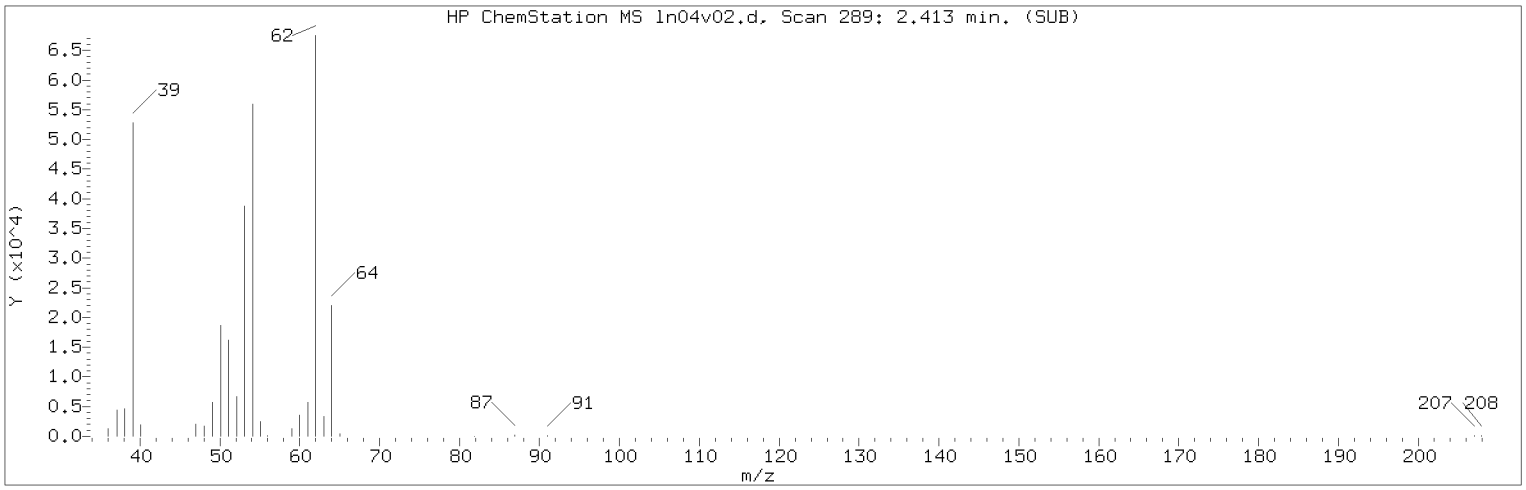
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

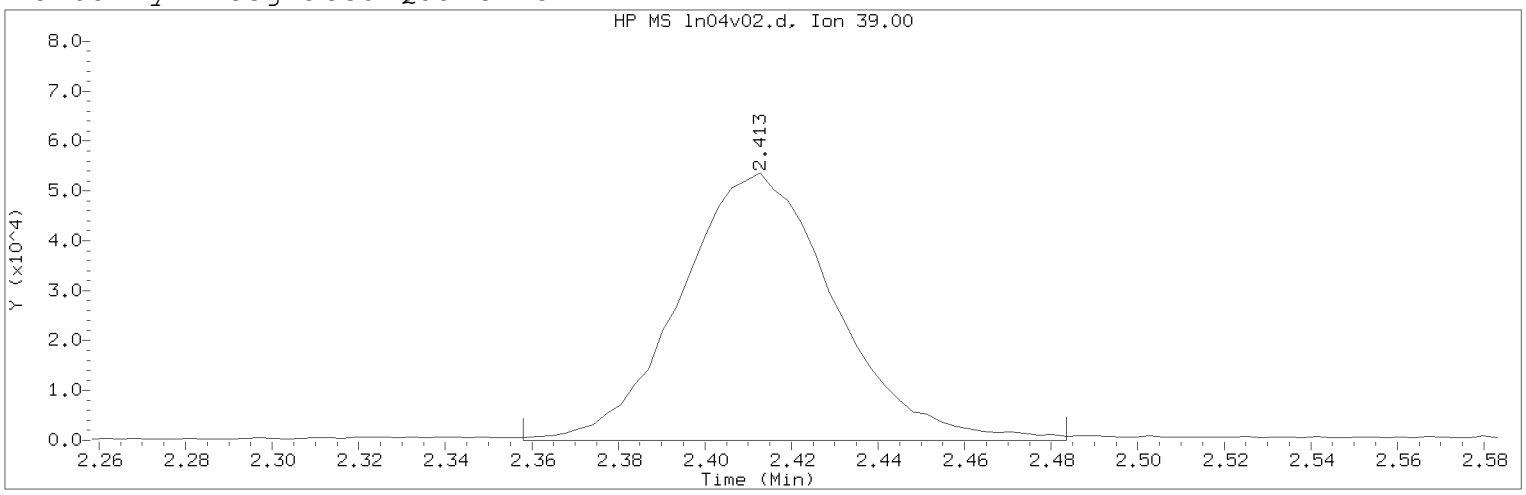
Compound Number	: 3		
Compound Name	: Dichlorodifluoromethane		
Scan Number	: 190		
Retention Time (minutes)	: 2.094		
Quant Ion	: 85.00		
Area	: 152845		
On-column Amount (ng)	: 18.1184		
Integration start scan	: 164	Integration stop scan:	263
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

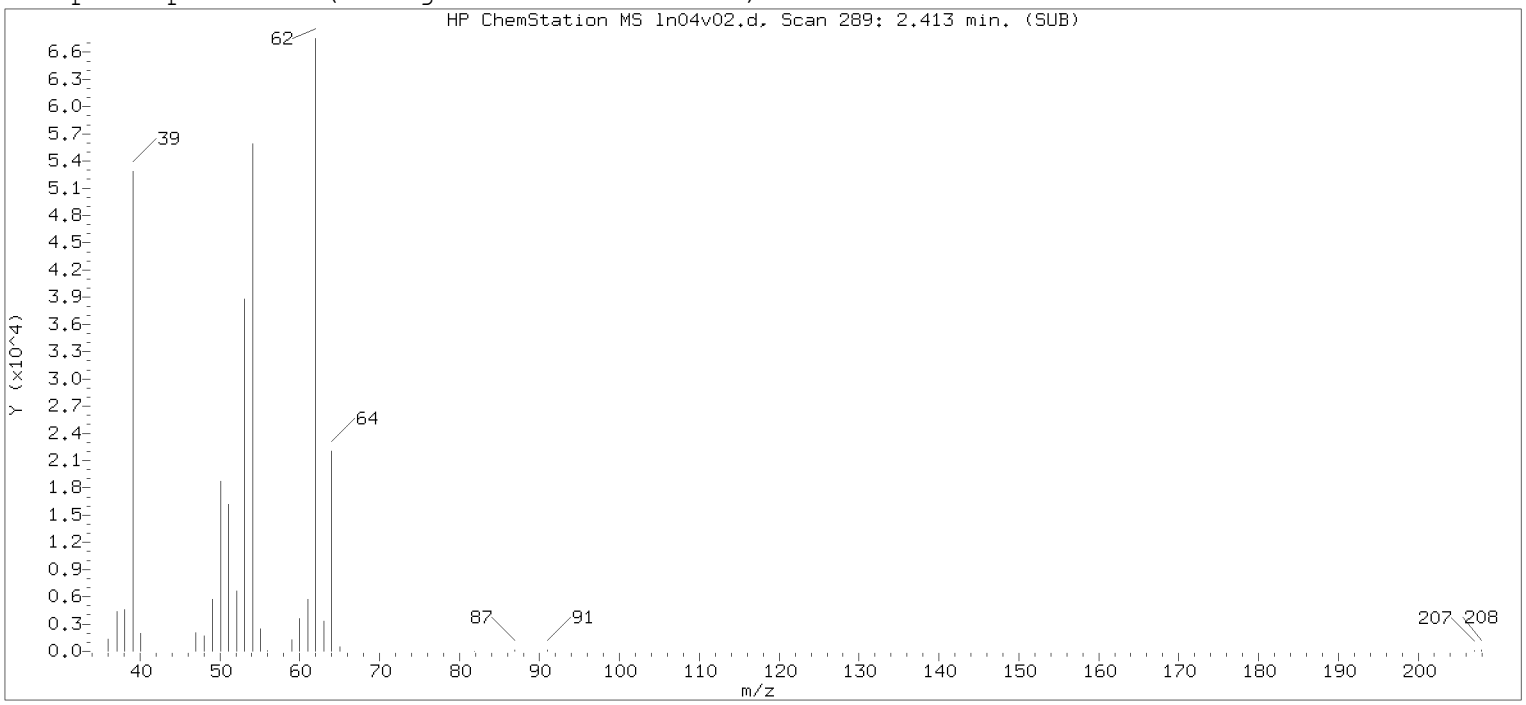
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area (flag) : 132622M
On-Column Amount (ng) : 19.6453
Integration start scan : 271 Integration stop scan: 310
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

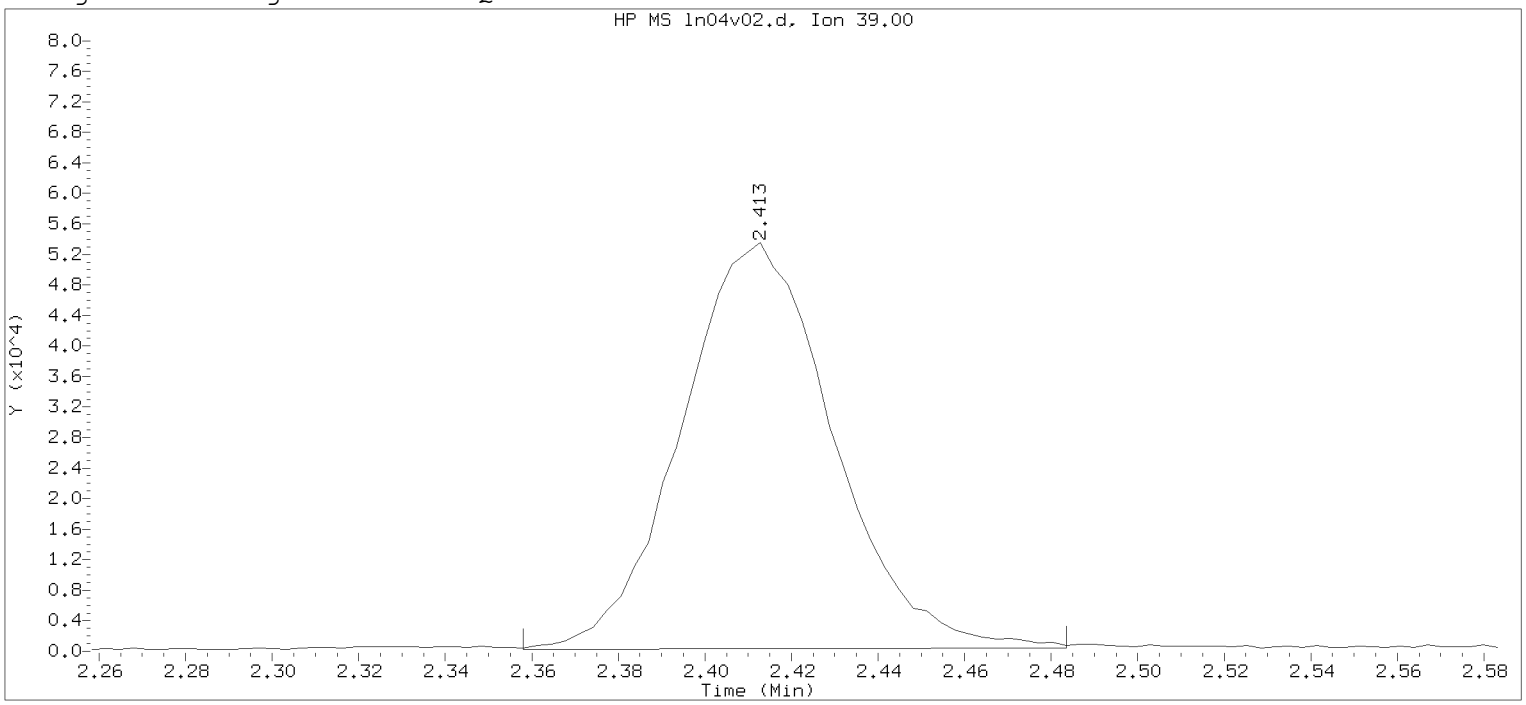
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

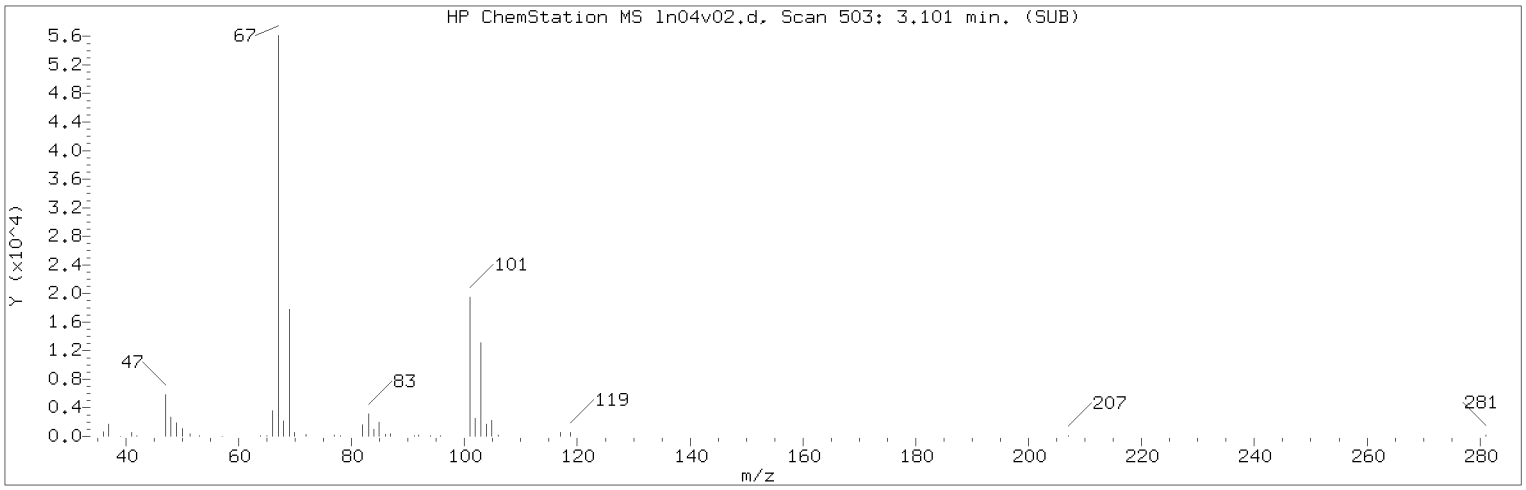
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

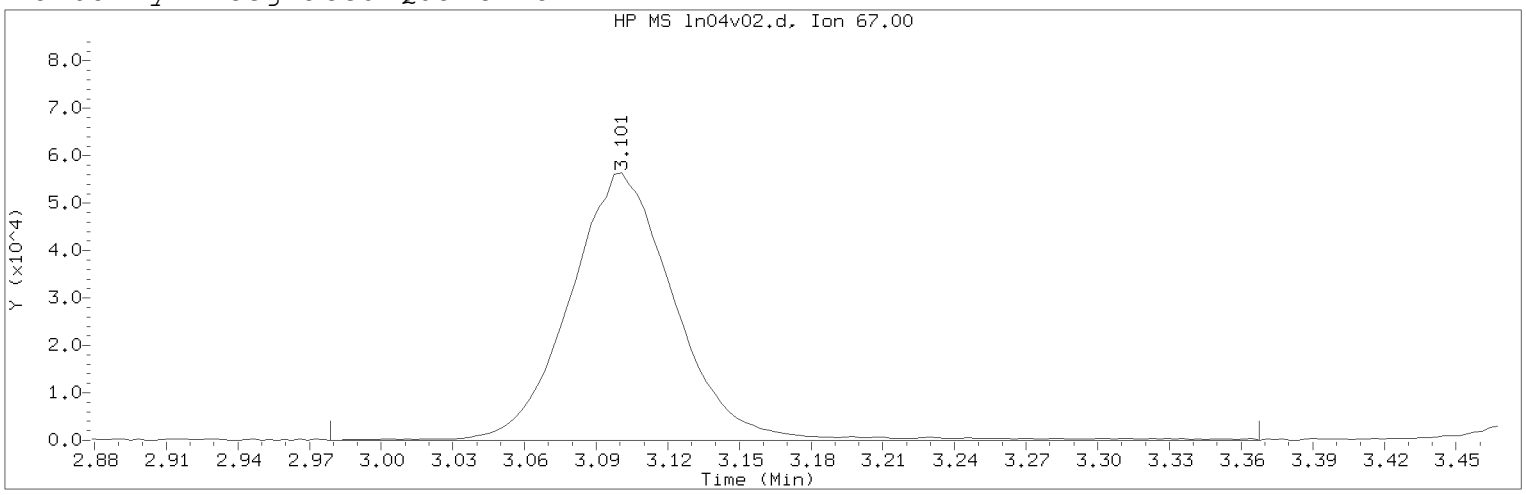
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area : 129885
On-column Amount (ng) : 19.2400
Integration start scan : 271 Integration stop scan: 310
Y at integration start : 283 Y at integration end: 414

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

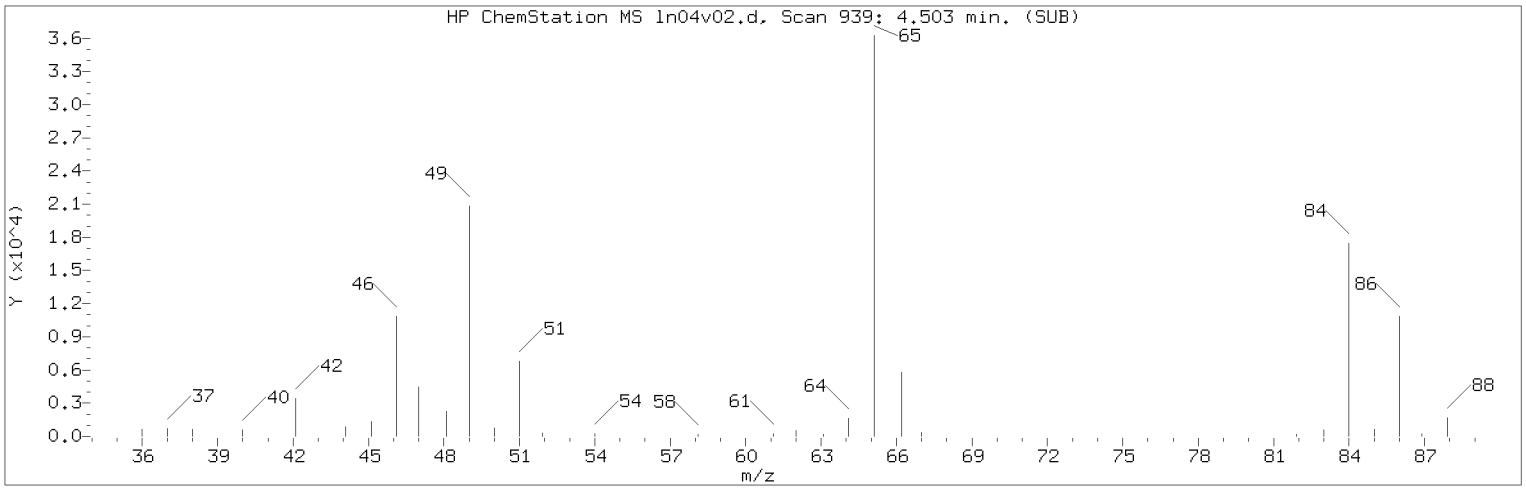
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 503
Retention Time (minutes): 3.101
Quant Ion : 67.00
Area (flag) : 174118M
On-Column Amount (ng) : 16.2240
Integration start scan : 464 Integration stop scan: 585
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

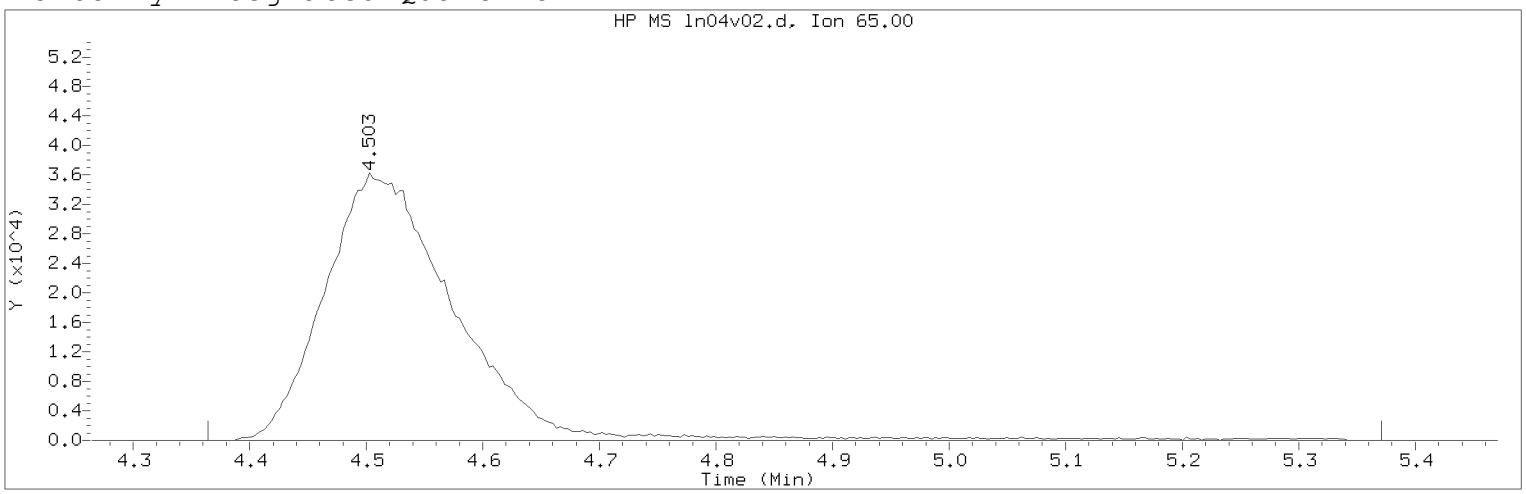
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

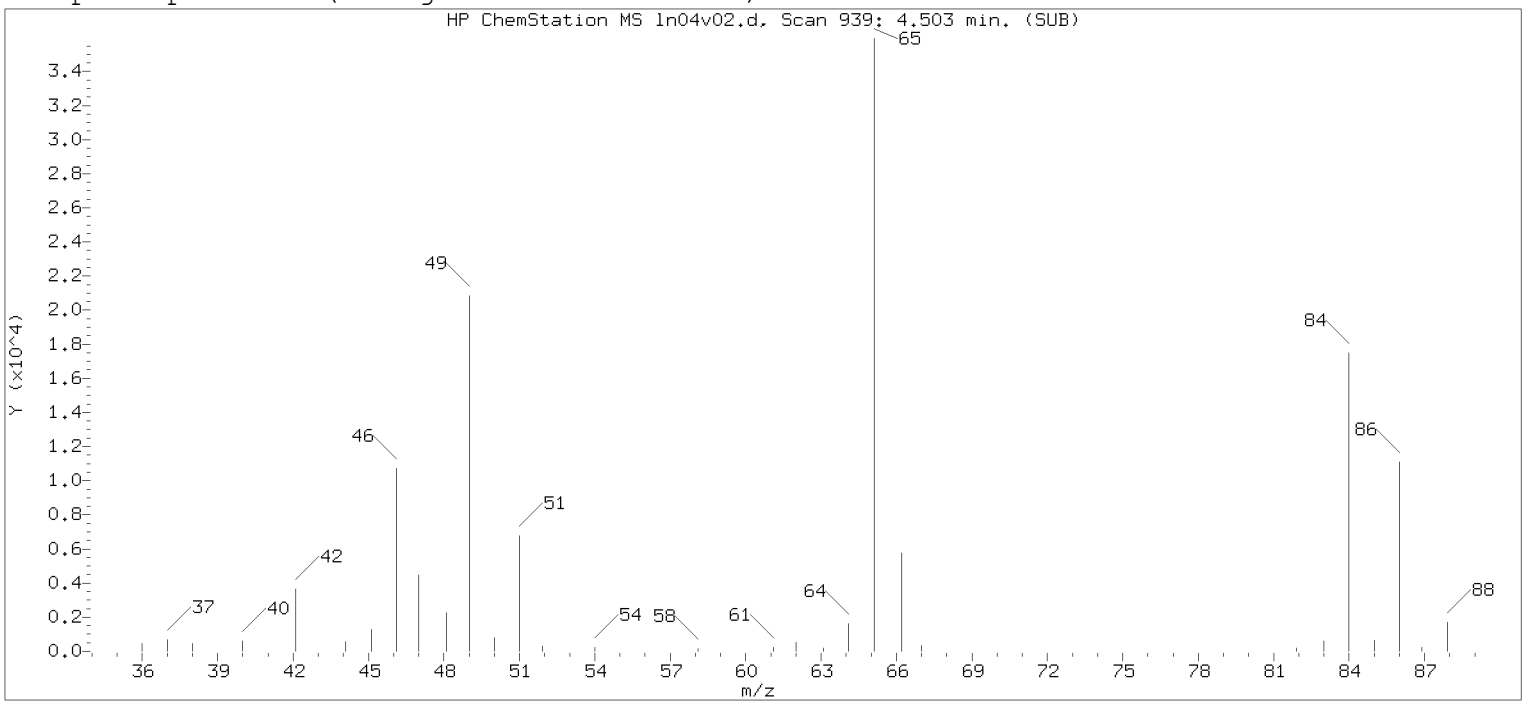
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area (flag) : 282794M
On-Column Amount (ng) : 250.0000
Integration start scan : 895 Integration stop scan: 1208
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

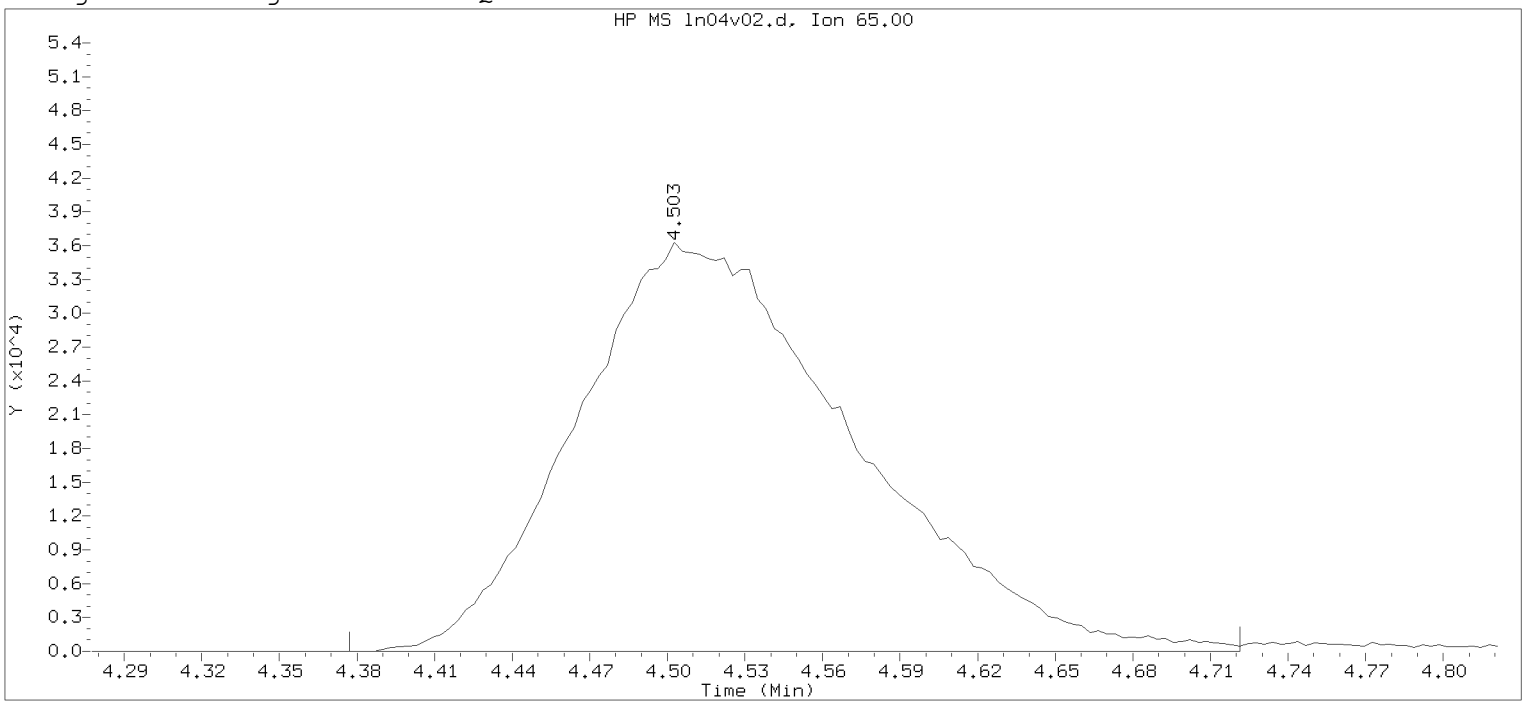
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

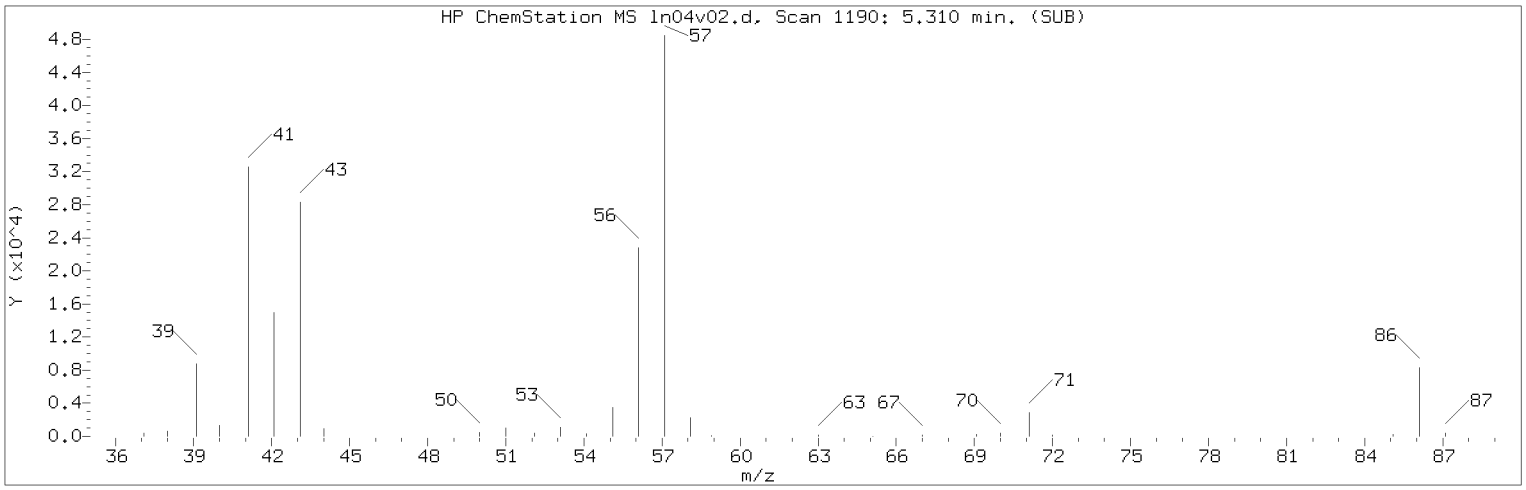
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

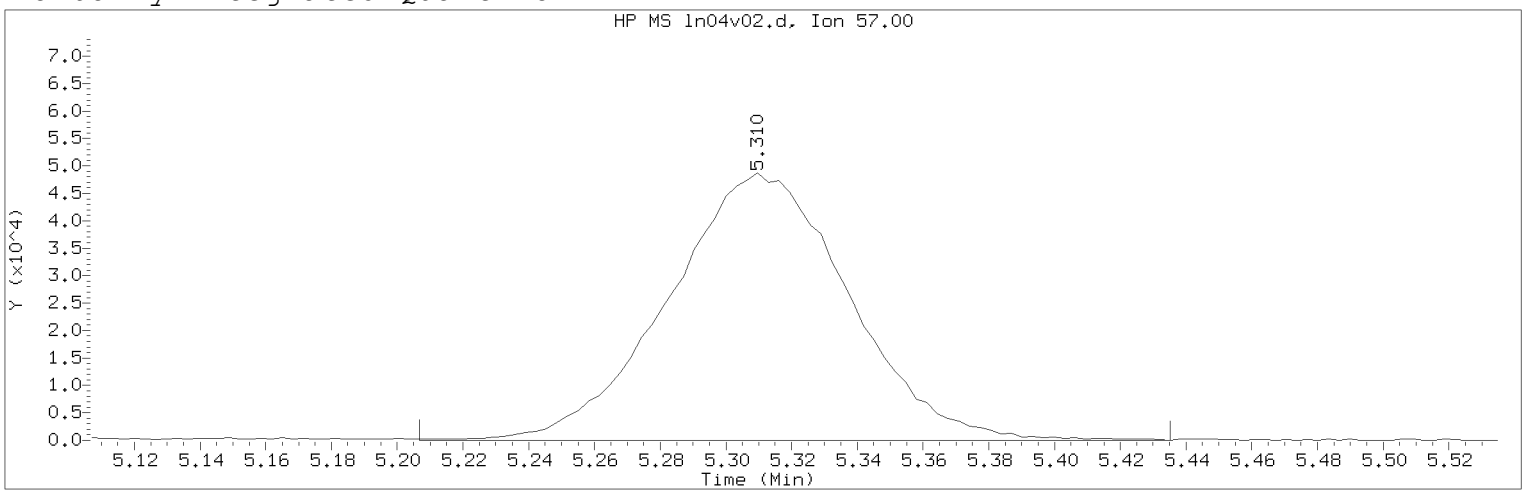
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area : 270950
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1006
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

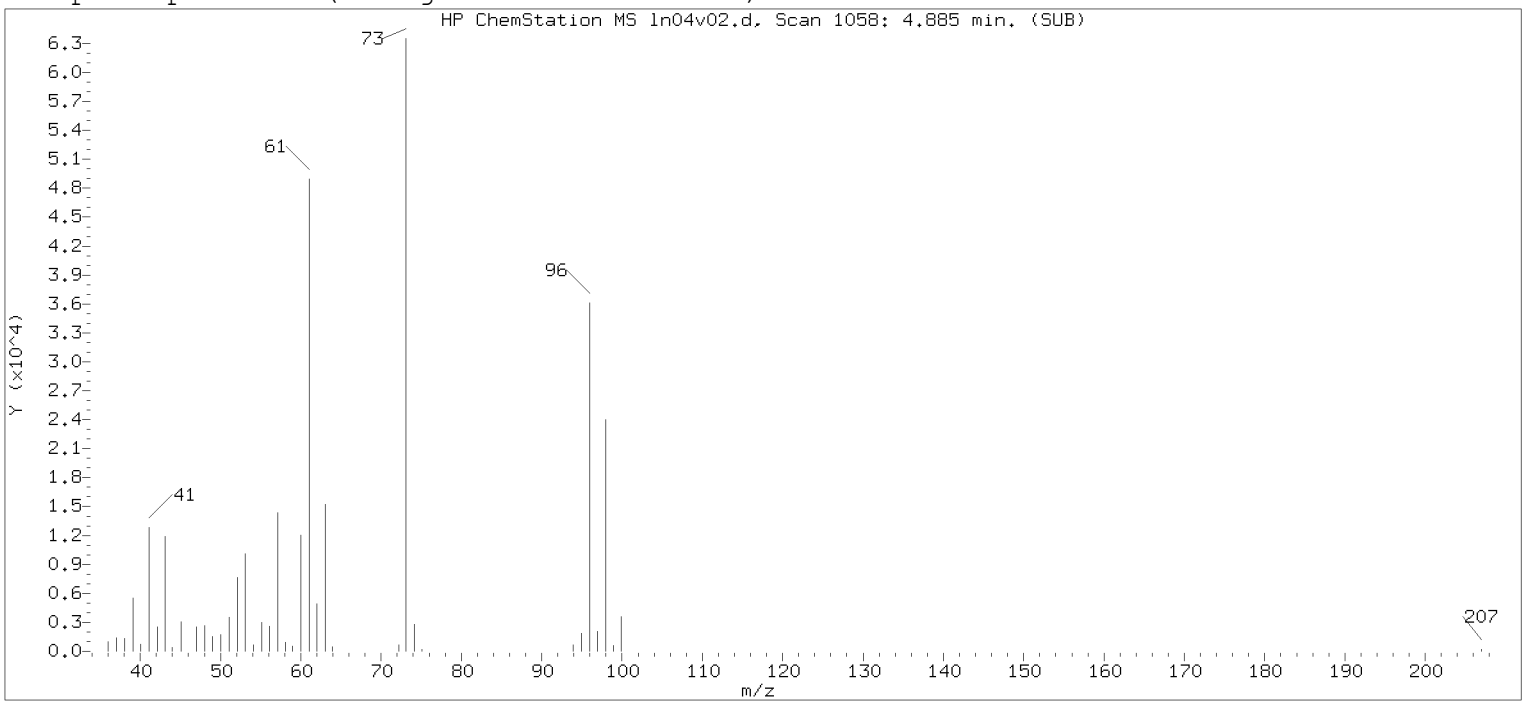
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1190
Retention Time (minutes): 5.310
Quant Ion : 57.00
Area (flag) : 185206M
On-Column Amount (ng) : 20.0675
Integration start scan : 1157 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

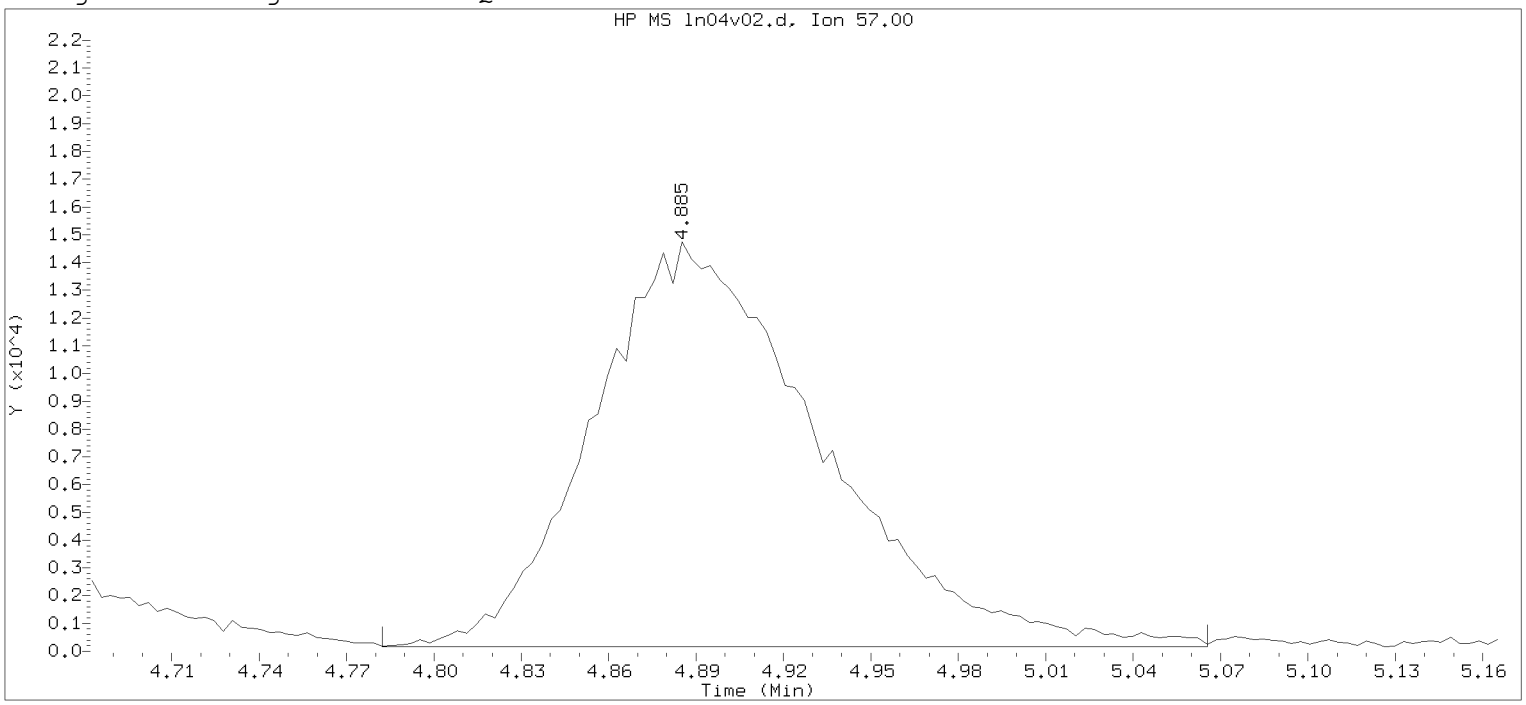
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

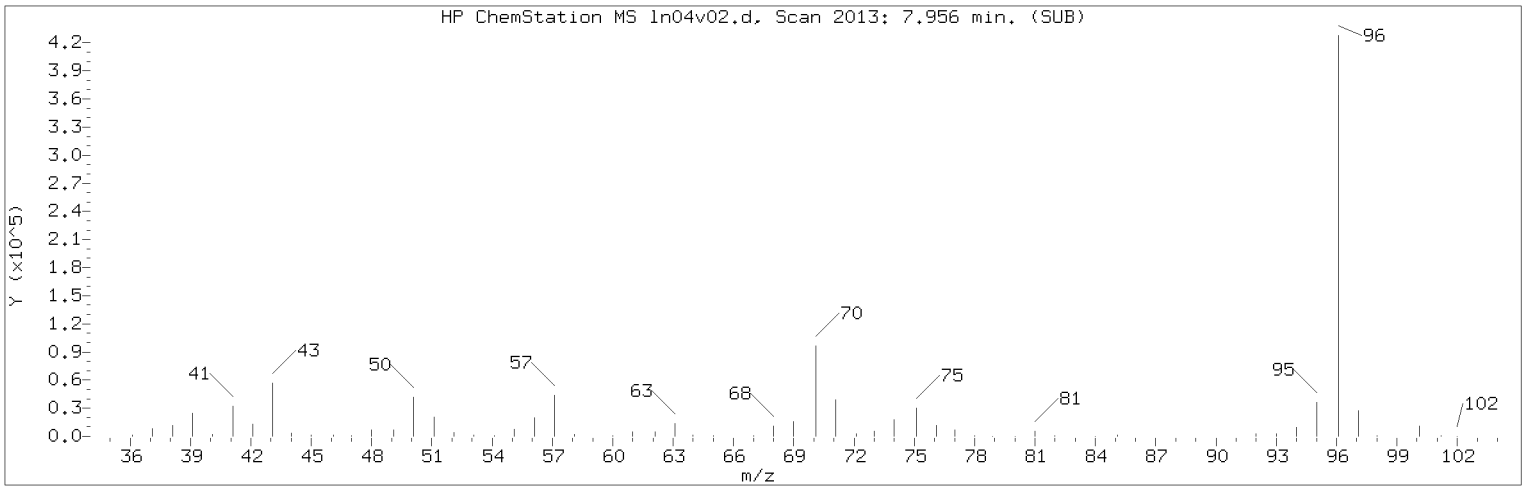
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

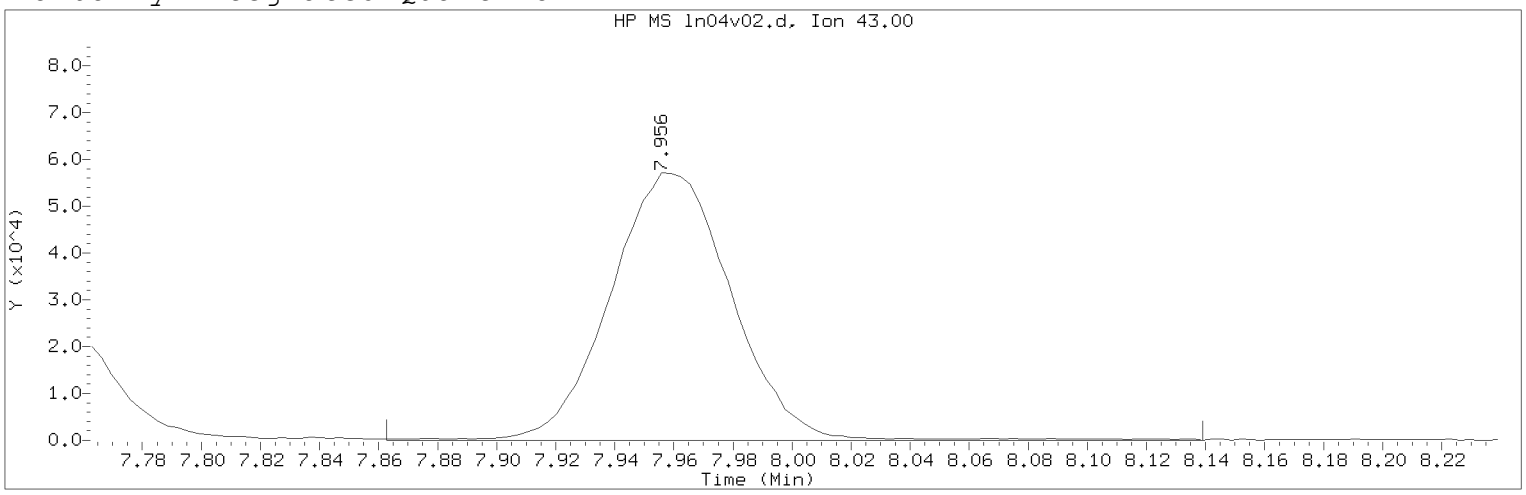
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1058		
Retention Time (minutes)	: 4.885		
Quant Ion	: 57.00		
Area	: 79381		
On-column Amount (ng)	: 18.4374		
Integration start scan	: 1025	Integration stop scan:	1113
Y at integration start	: 160	Y at integration end:	160

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

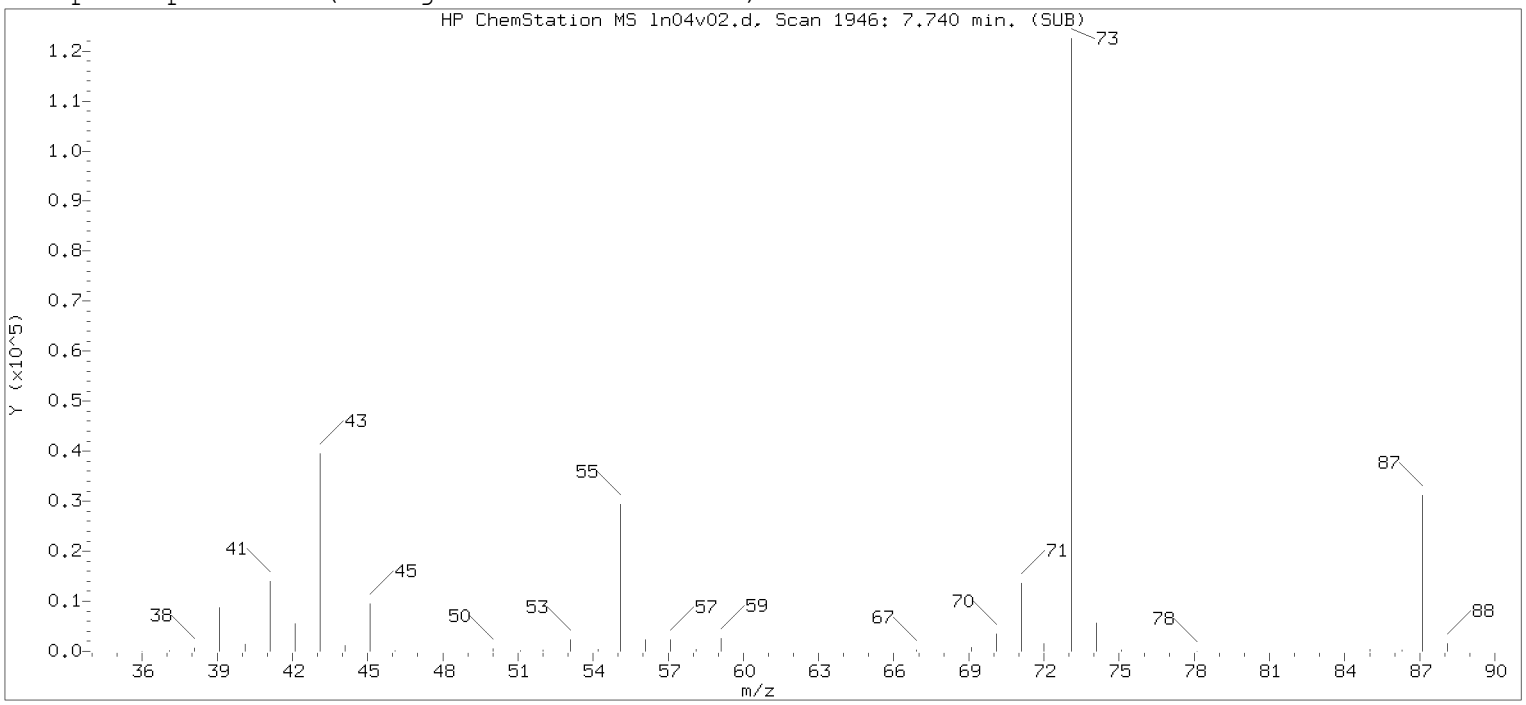
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2013
Retention Time (minutes): 7.956
Quant Ion : 43.00
Area (flag) : 163362M
On-Column Amount (ng) : 18.9476
Integration start scan : 1983 Integration stop scan: 2069
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

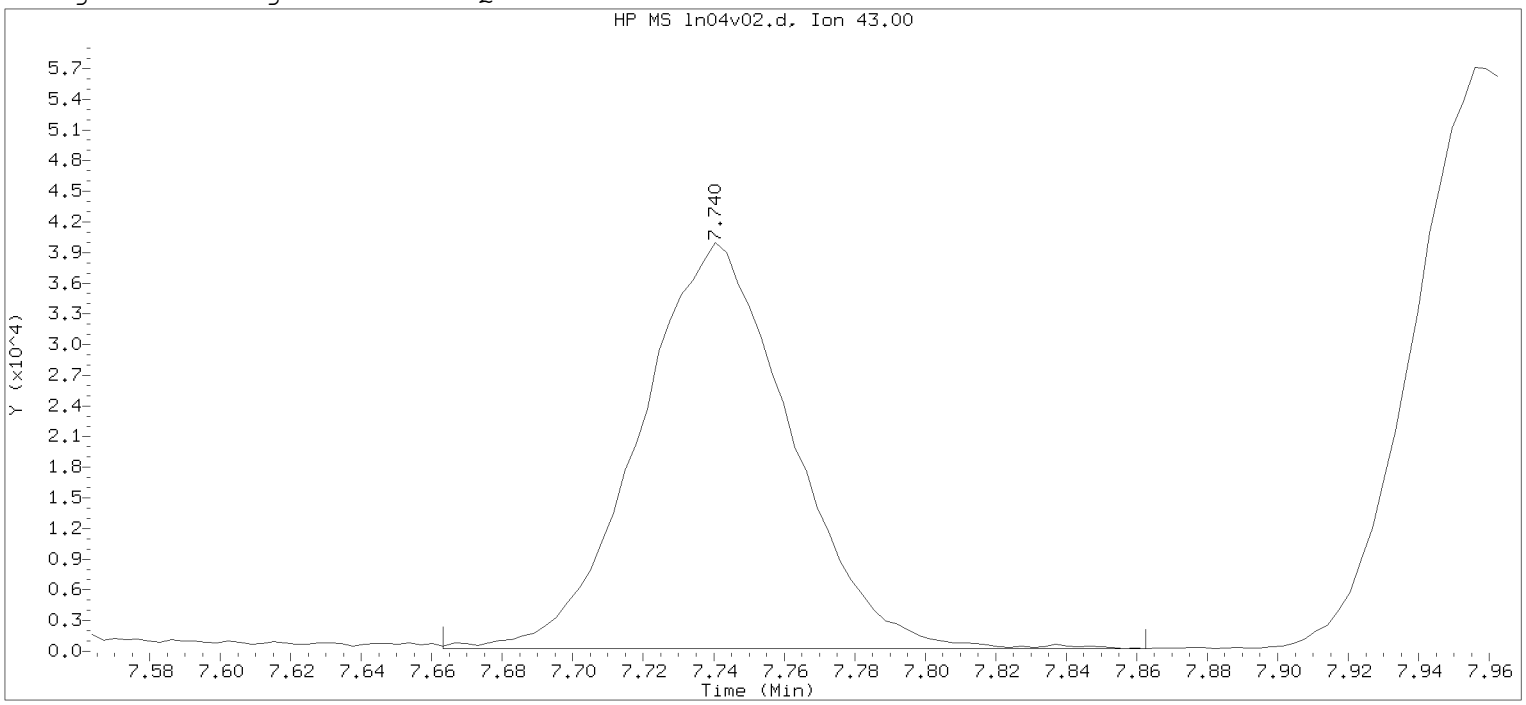
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

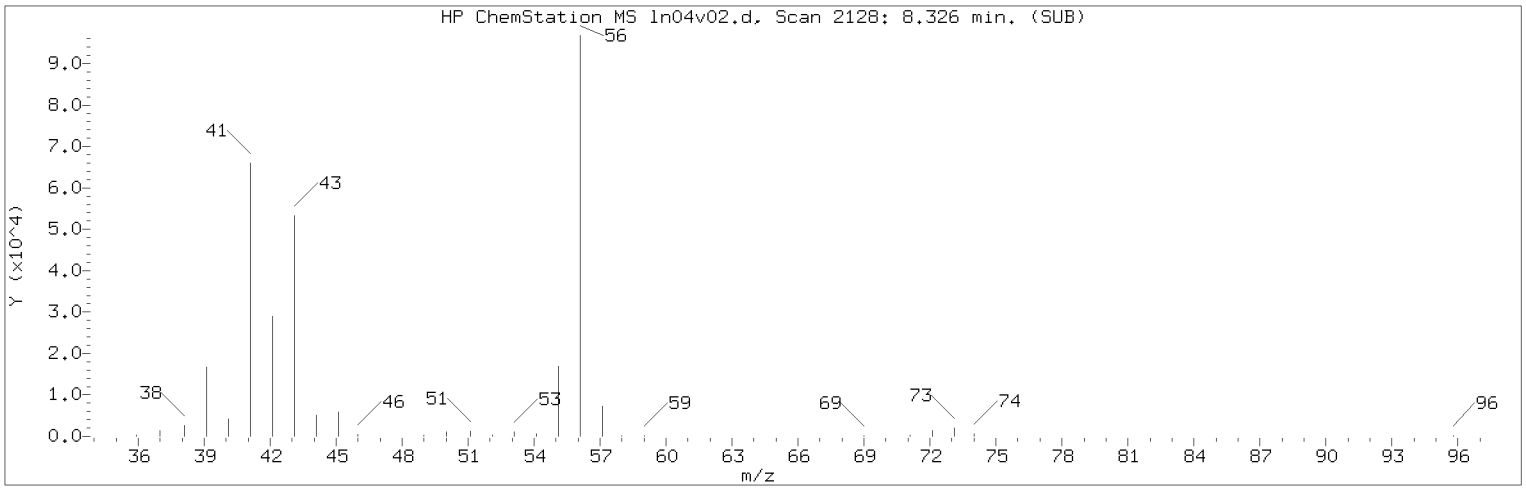
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

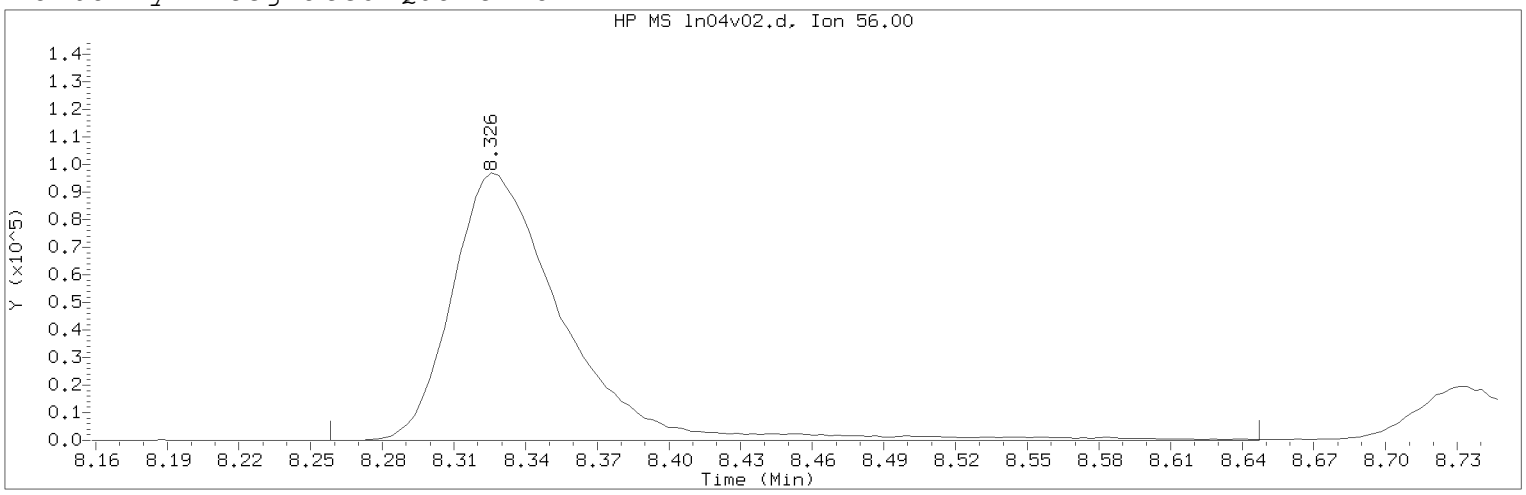
Compound Number	: 67		
Compound Name	: n-Heptane		
Scan Number	: 1946		
Retention Time (minutes)	: 7.740		
Quant Ion	: 43.00		
Area	: 118529		
On-column Amount (ng)	: 18.5036		
Integration start scan	: 1921	Integration stop scan:	1983
Y at integration start	: 255	Y at integration end:	255

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

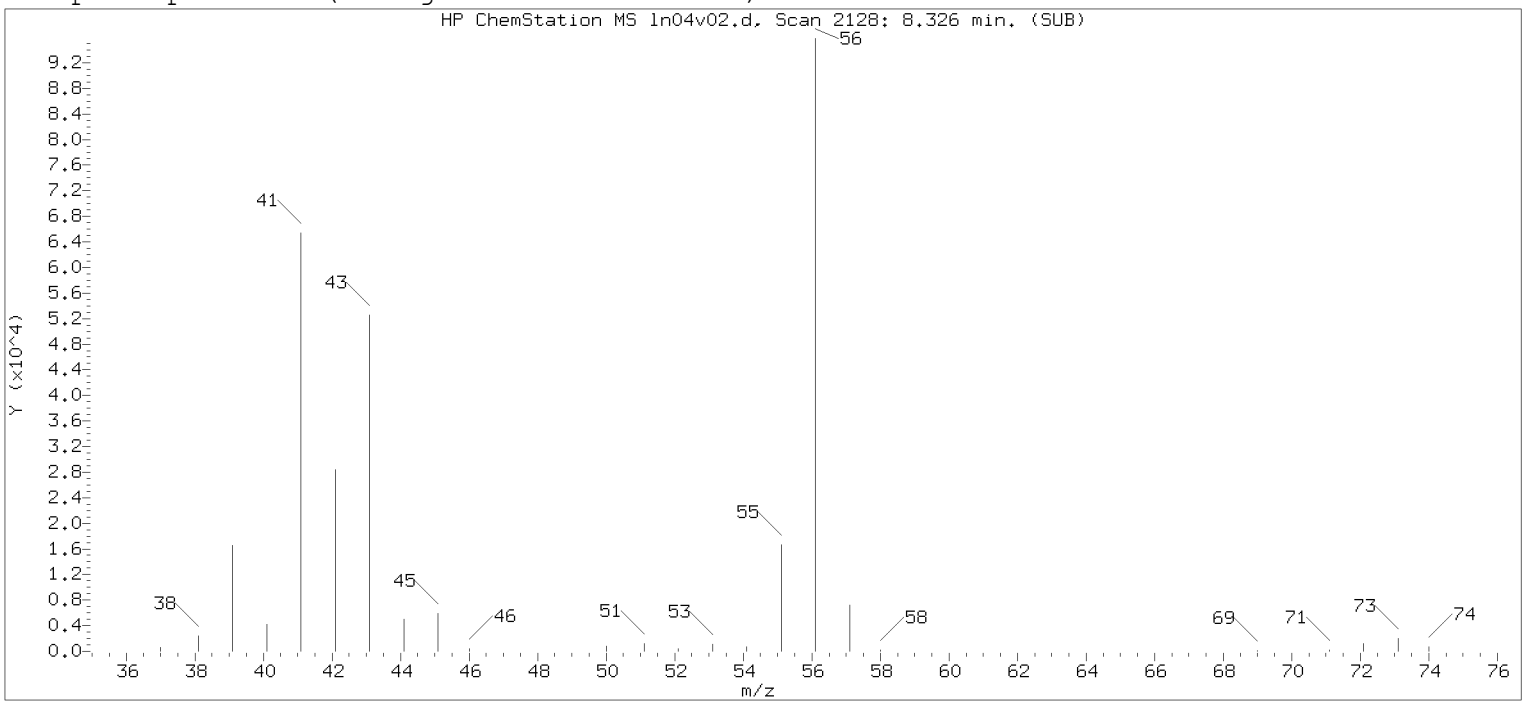
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area (flag) : 314470M
On-Column Amount (ng) : 911.9238
Integration start scan : 2106 Integration stop scan: 2227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

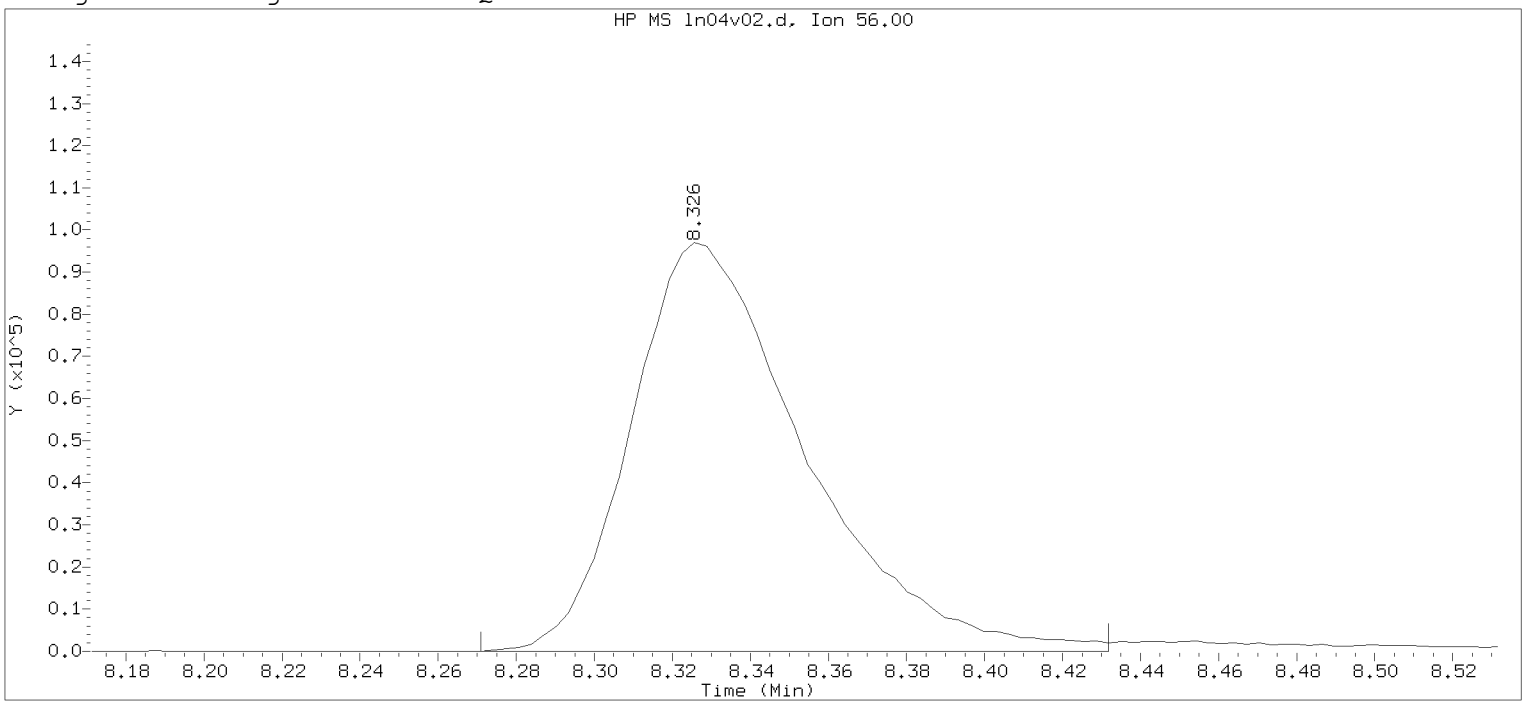
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

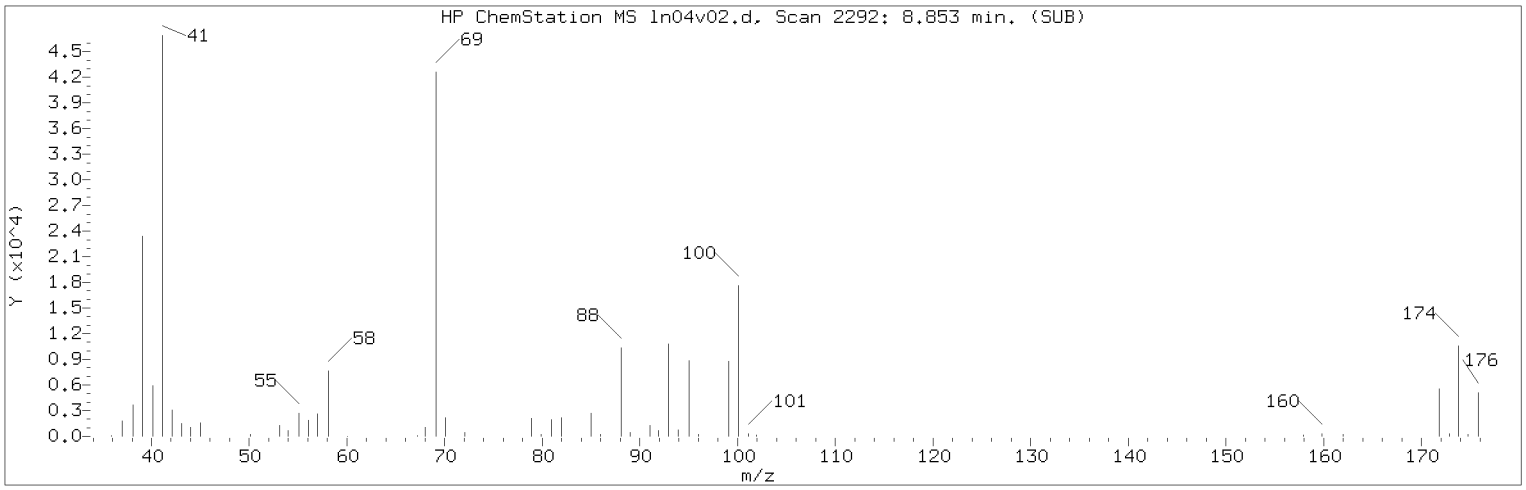
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

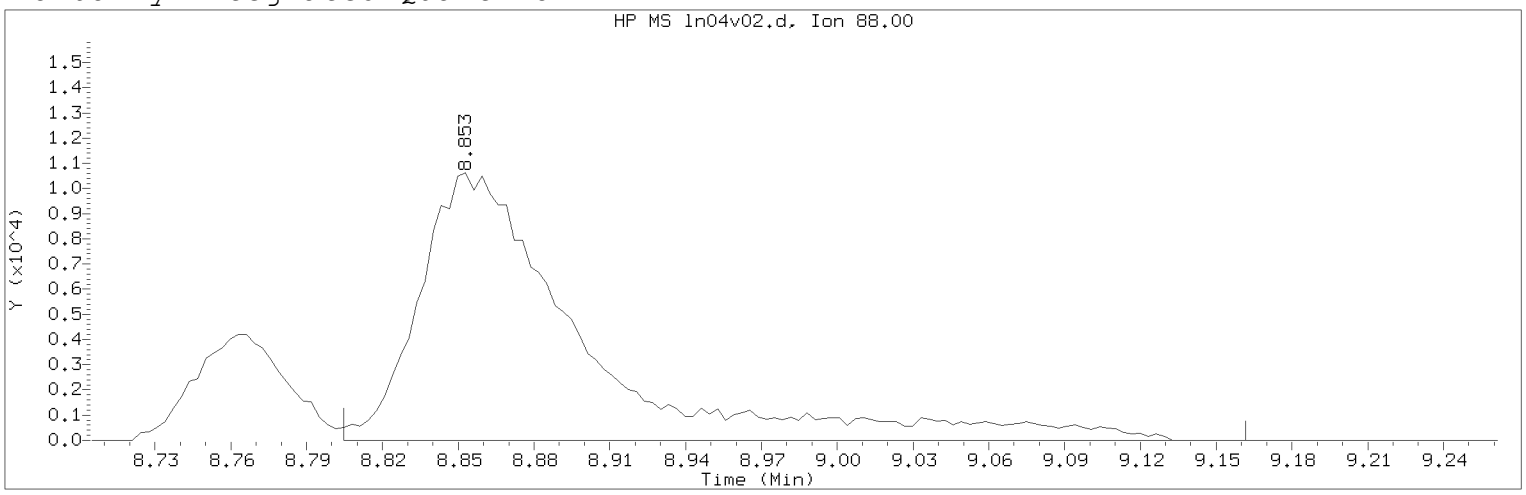
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area : 299611
On-column Amount (ng) : 906.8122
Integration start scan : 2110 Integration stop scan: 2160
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

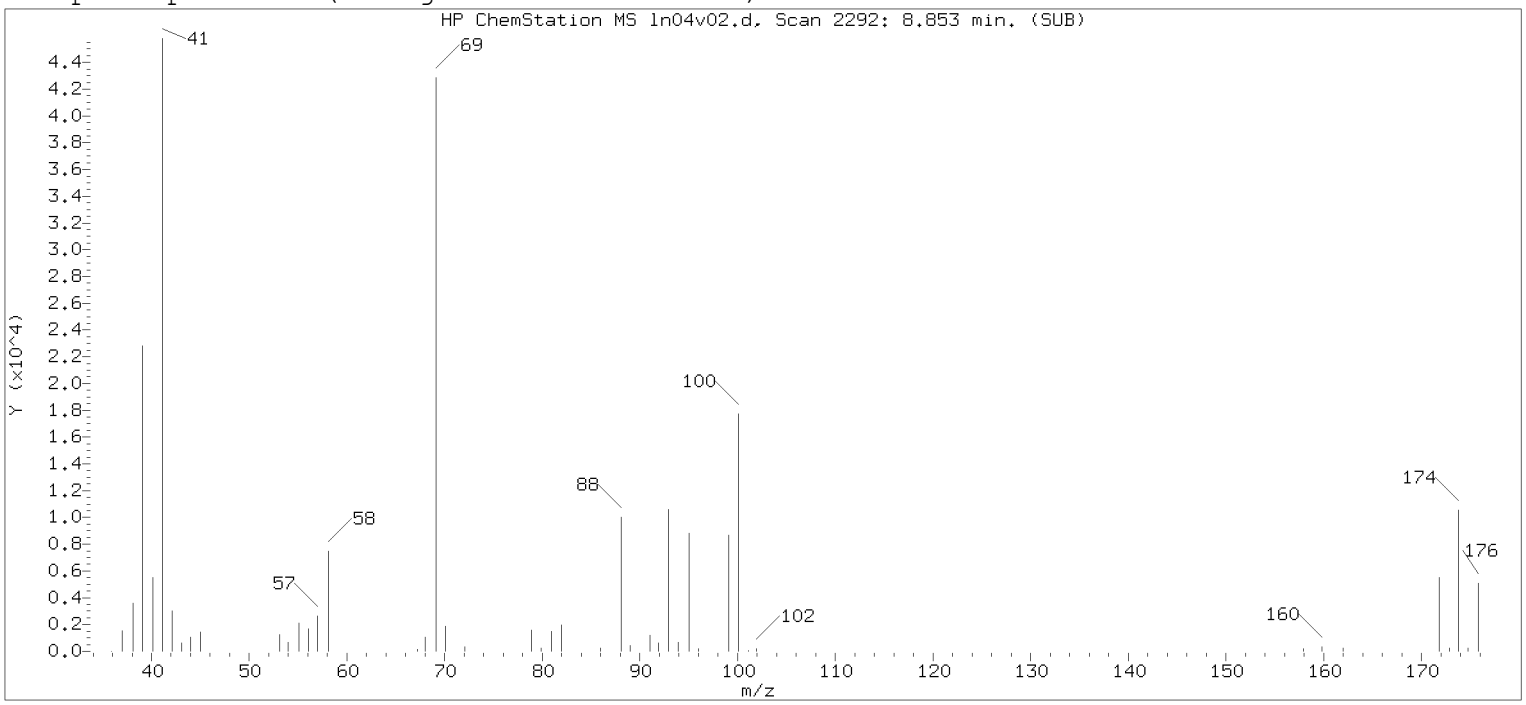
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area (flag) : 47747M
On-Column Amount (ng) : 503.7529
Integration start scan : 2276 Integration stop scan: 2387
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

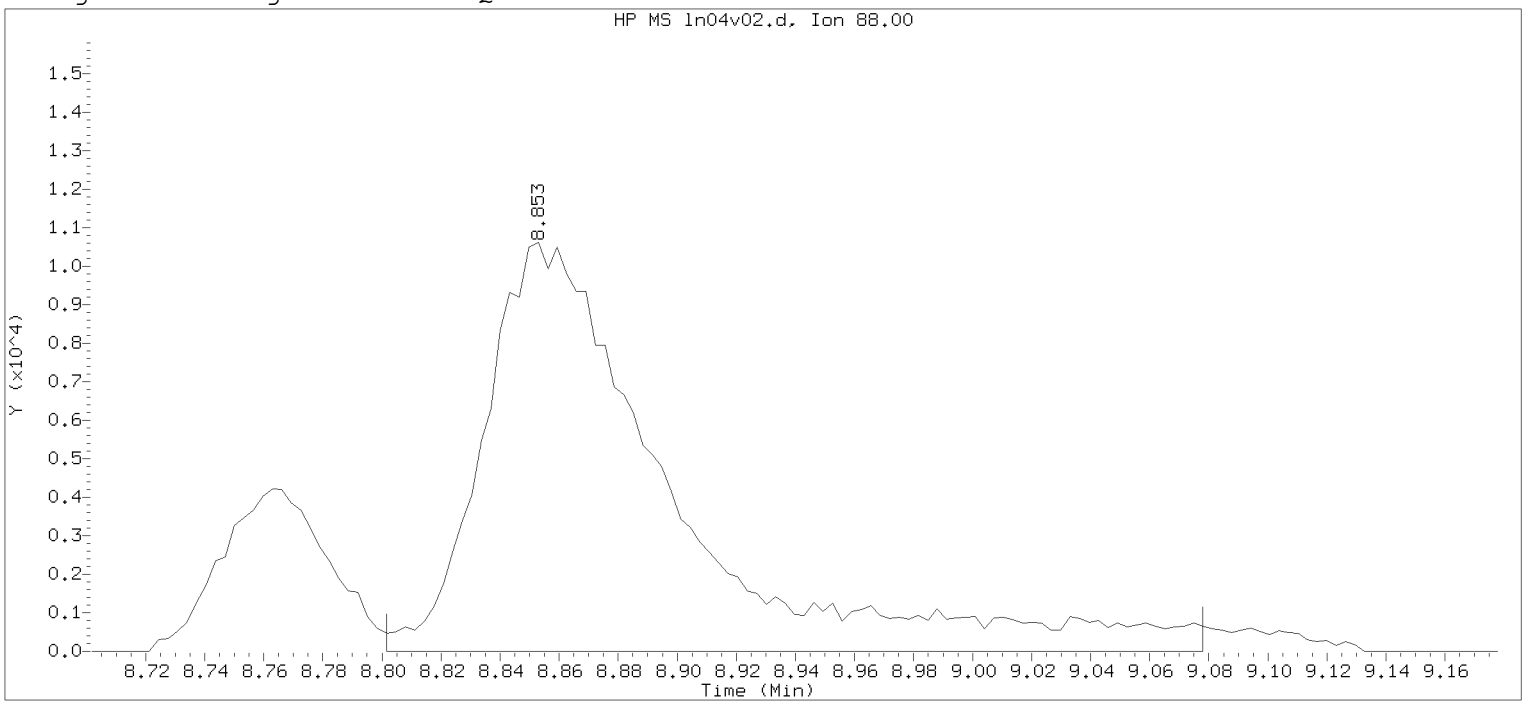
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

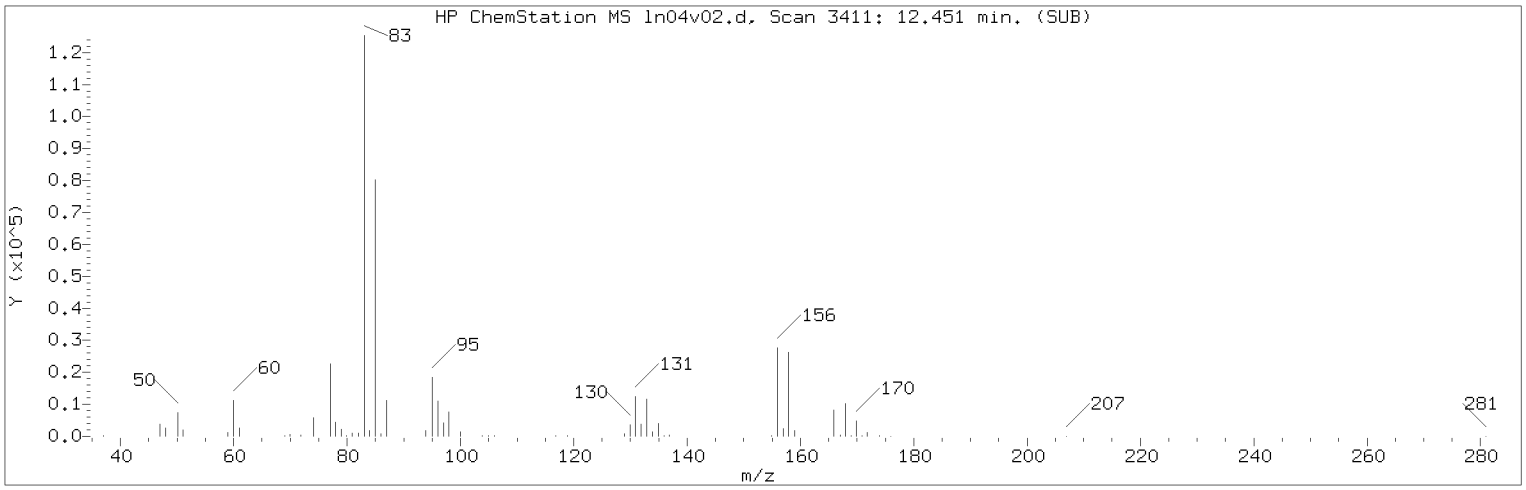
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

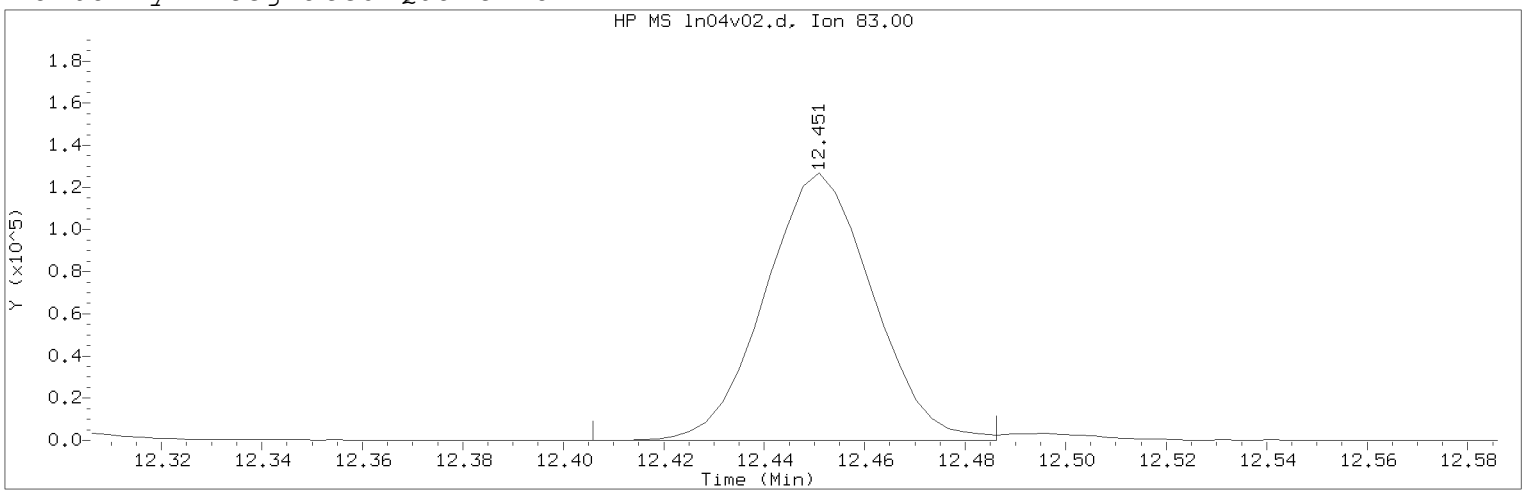
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2292		
Retention Time (minutes)	: 8.853		
Quant Ion	: 88.00		
Area	: 46453		
On-column Amount (ng)	: 511.5262		
Integration start scan	: 2275	Integration stop scan:	2361
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

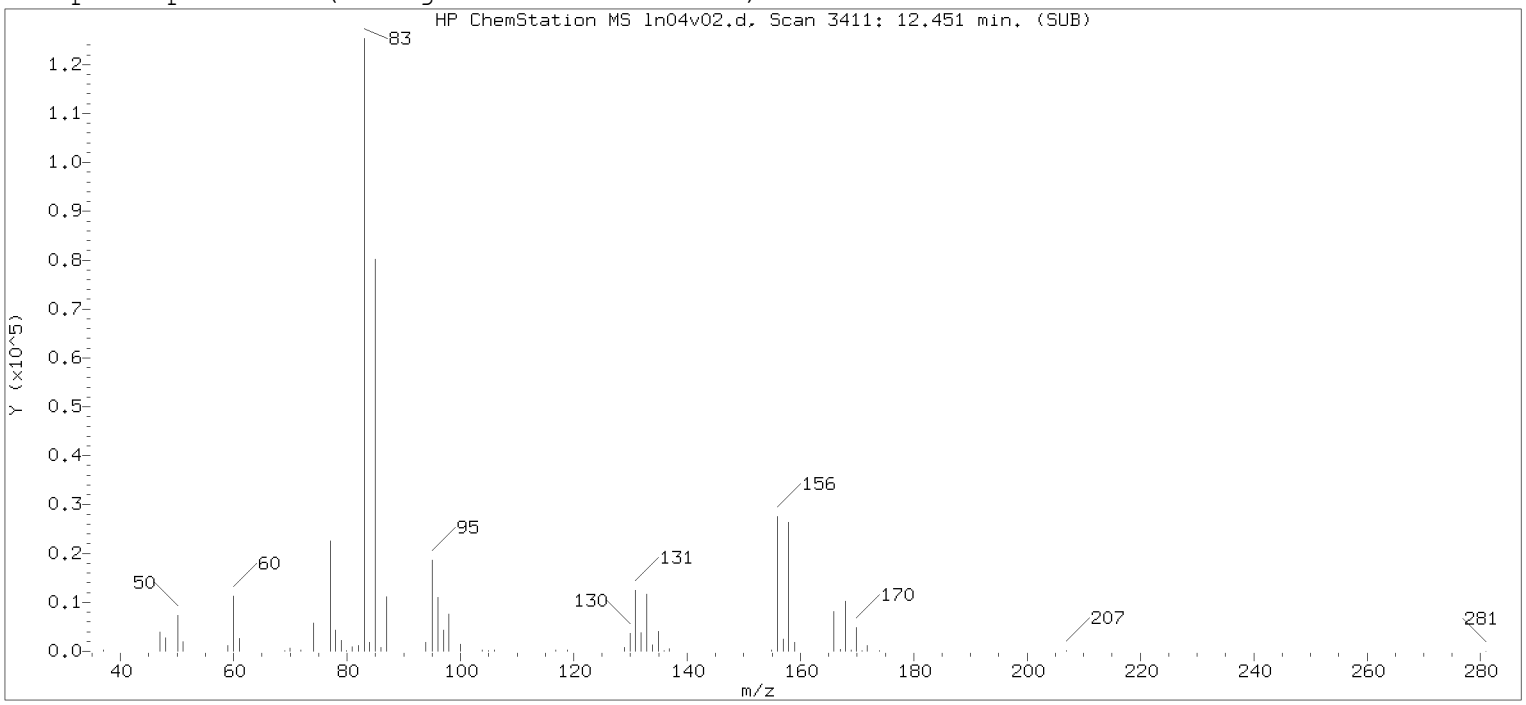
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 188446M
On-Column Amount (ng) : 19.5761
Integration start scan : 3396 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

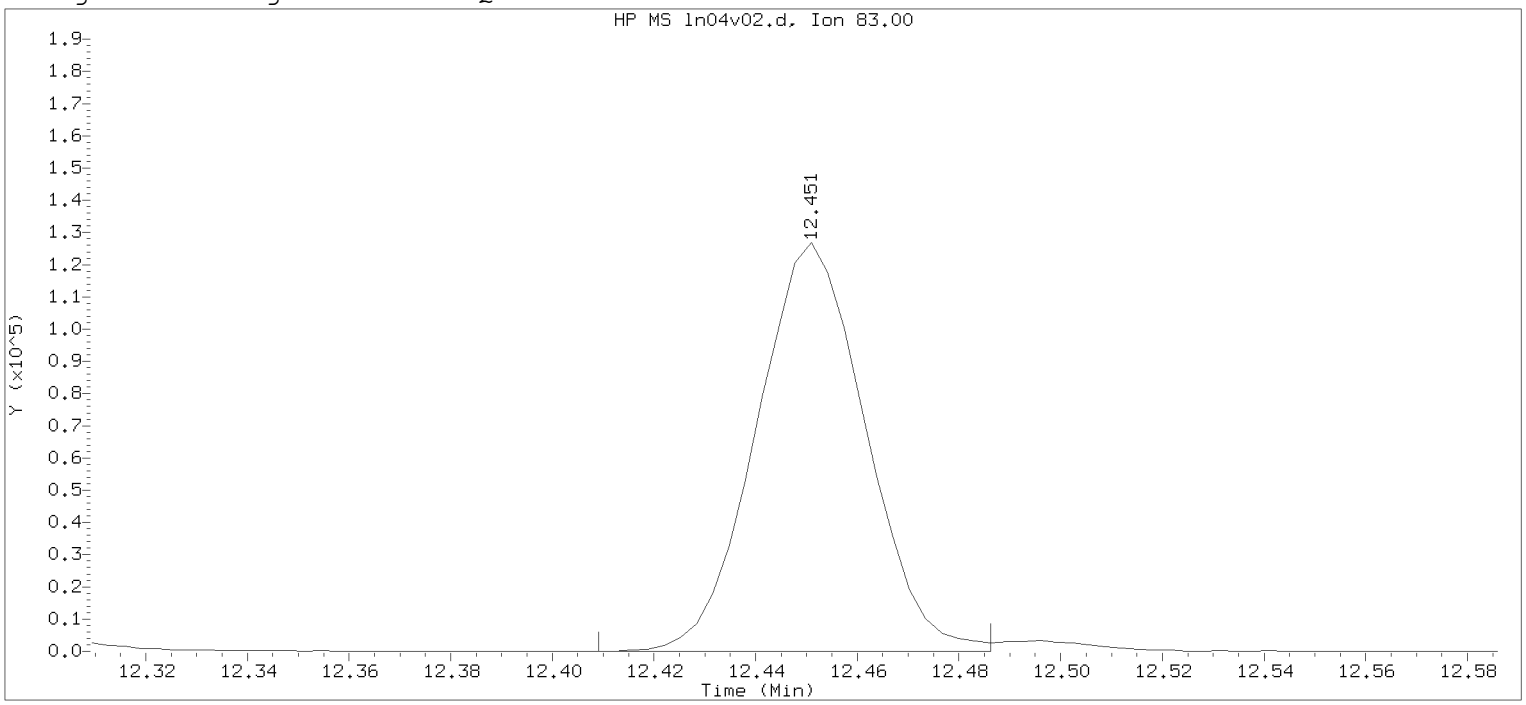
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

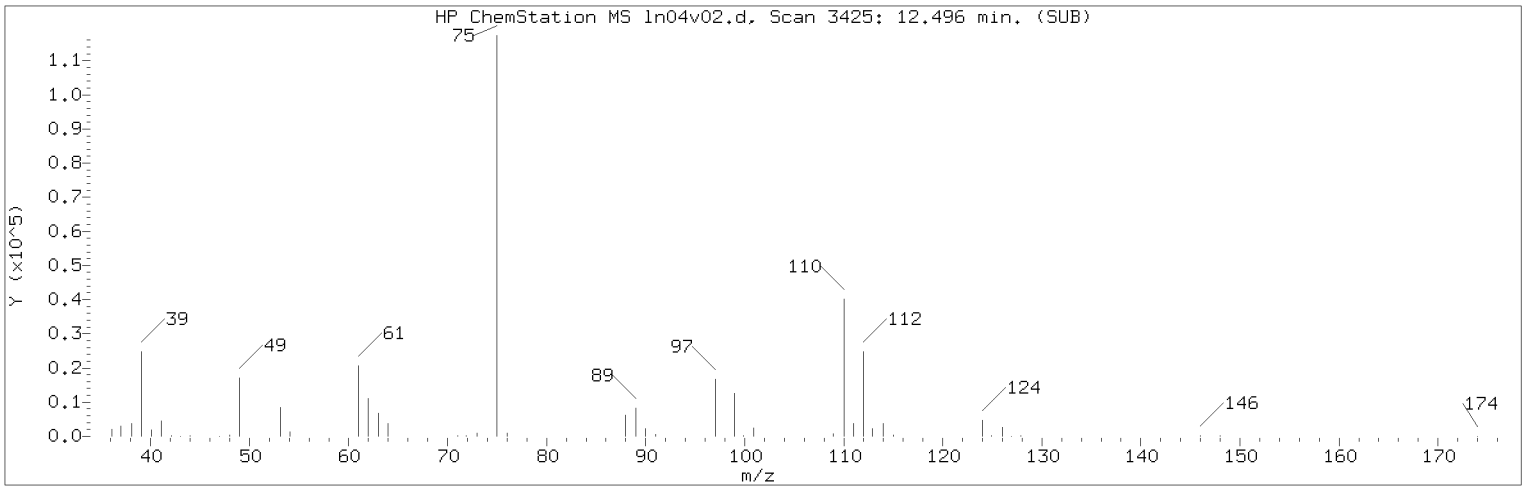
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

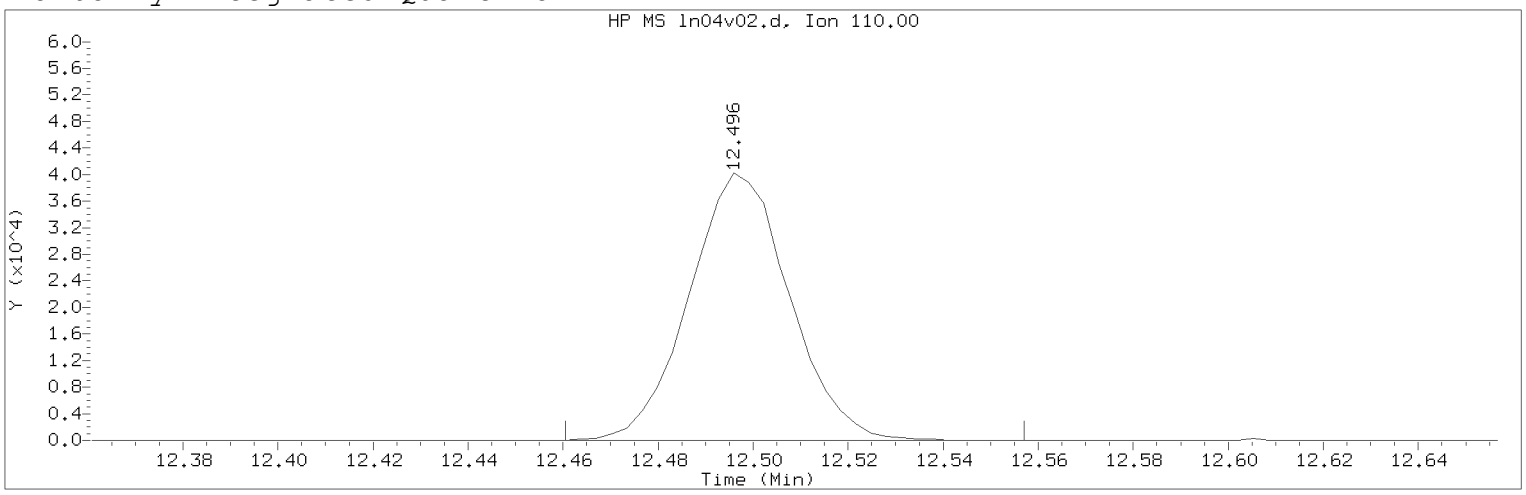
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 188196
On-column Amount (ng) : 19.2022
Integration start scan : 3397 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

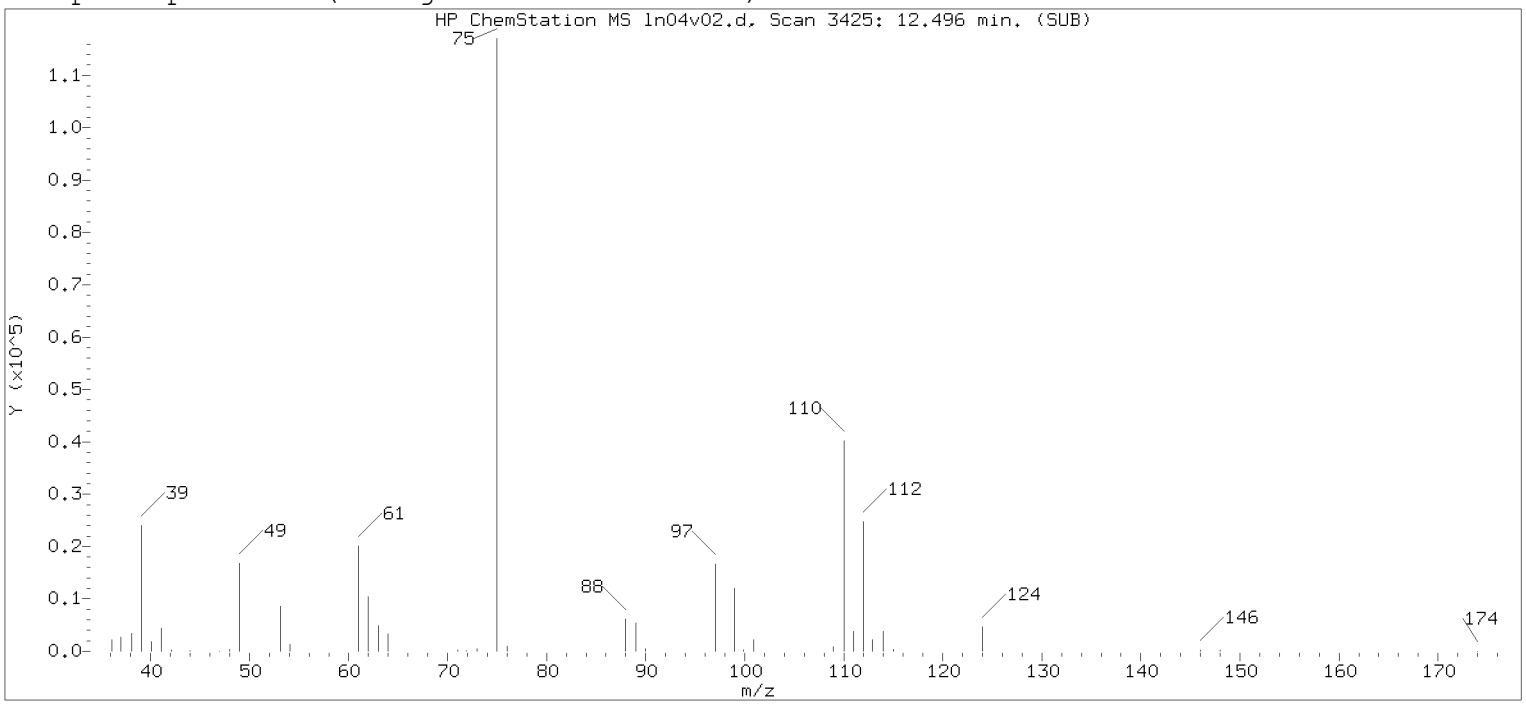
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 3425
Retention Time (minutes): 12.496
Quant Ion : 110.00
Area (flag) : 58902M
On-Column Amount (ng) : 19.9401
Integration start scan : 3413 Integration stop scan: 3443
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

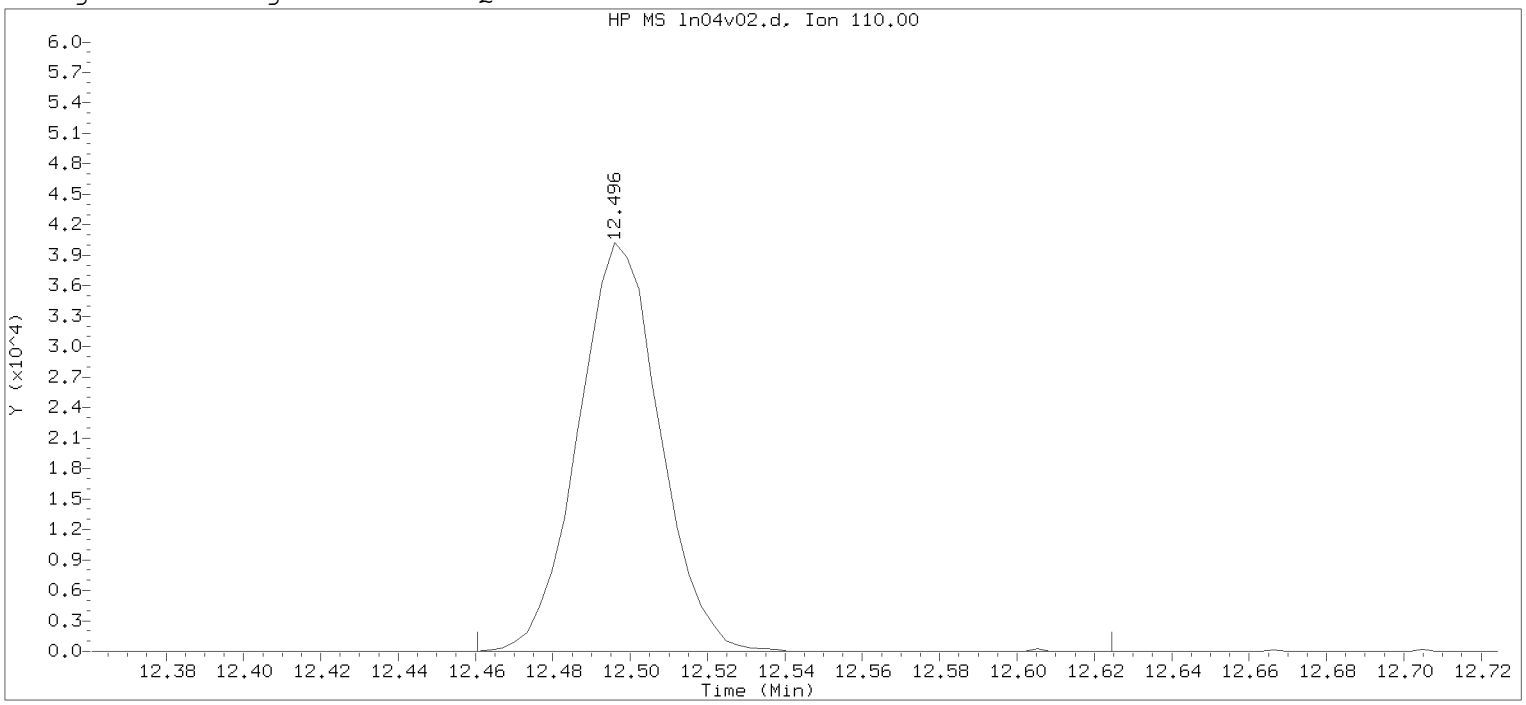
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

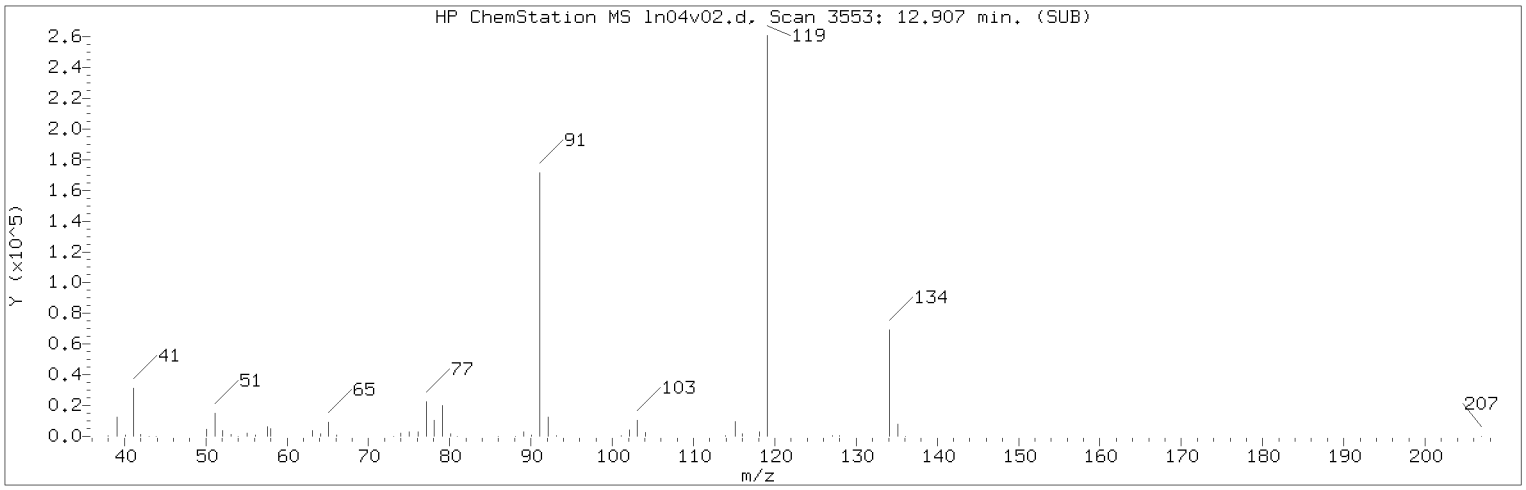
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

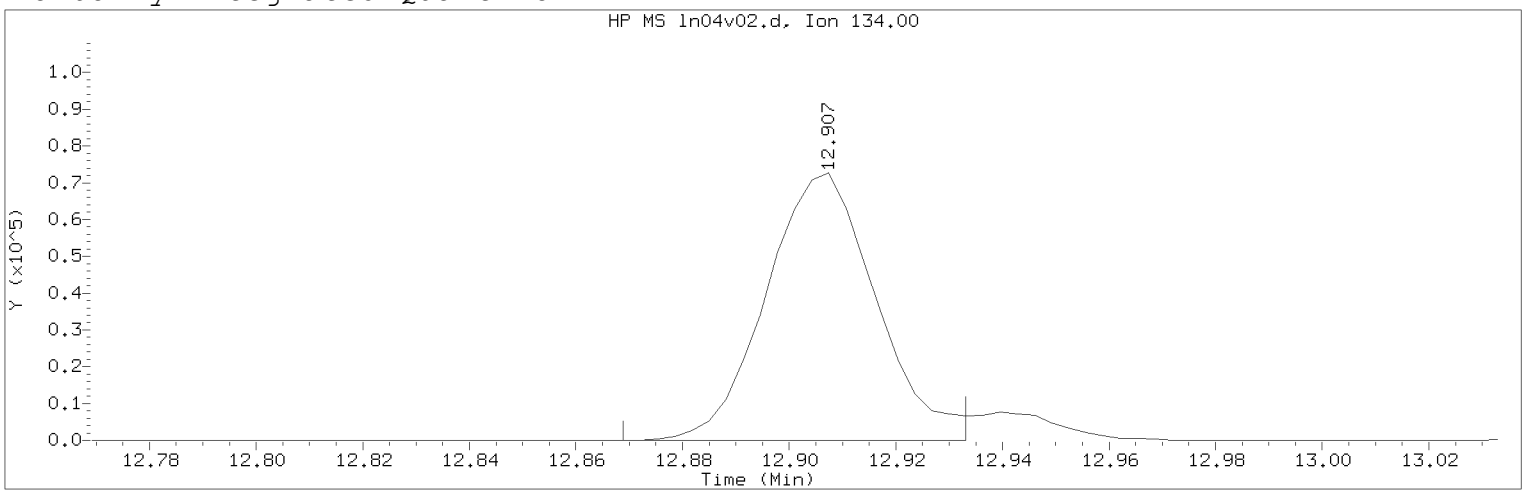
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 3425
Retention Time (minutes): 12.496
Quant Ion : 110.00
Area : 58948
On-column Amount (ng) : 19.9559
Integration start scan : 3413 Integration stop scan: 3464
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

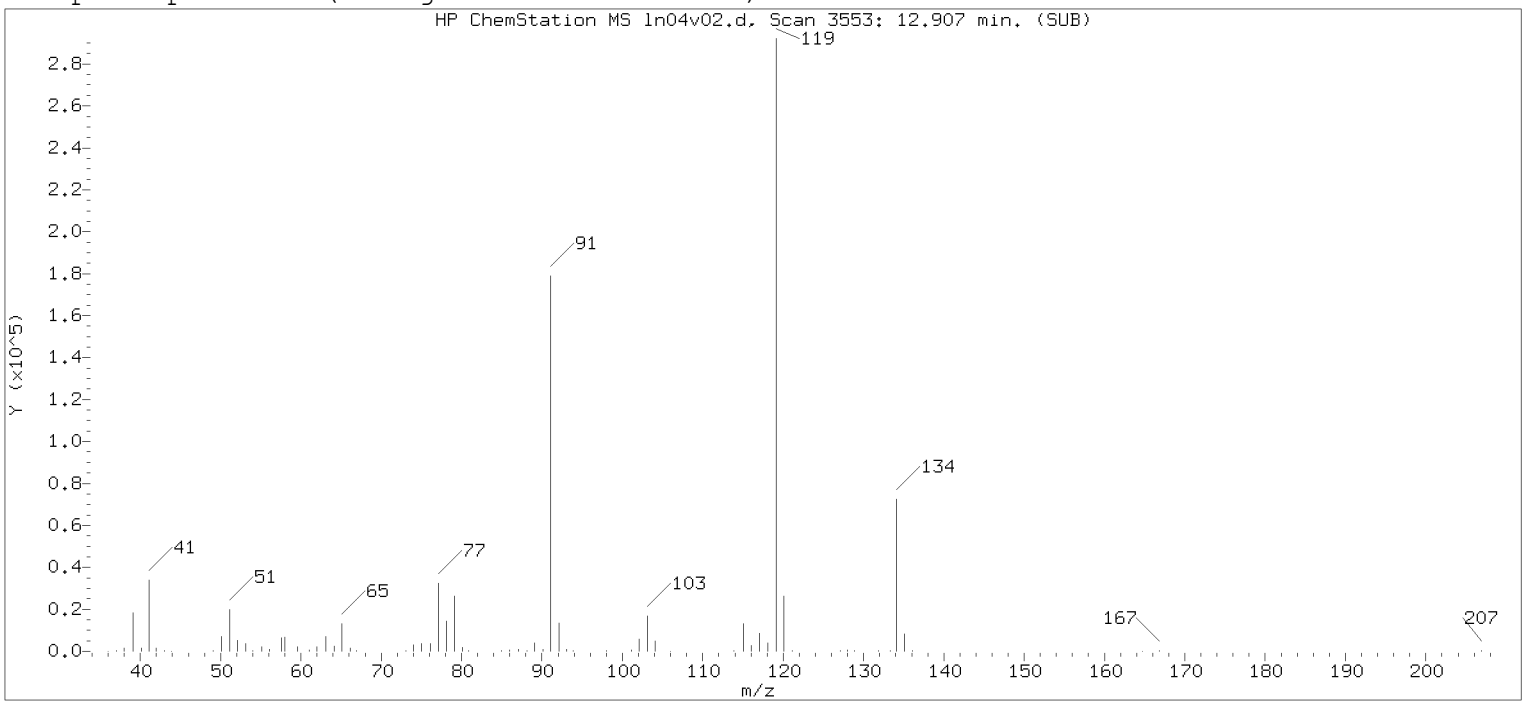
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area (flag) : 103762M
On-Column Amount (ng) : 20.6322
Integration start scan : 3540 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

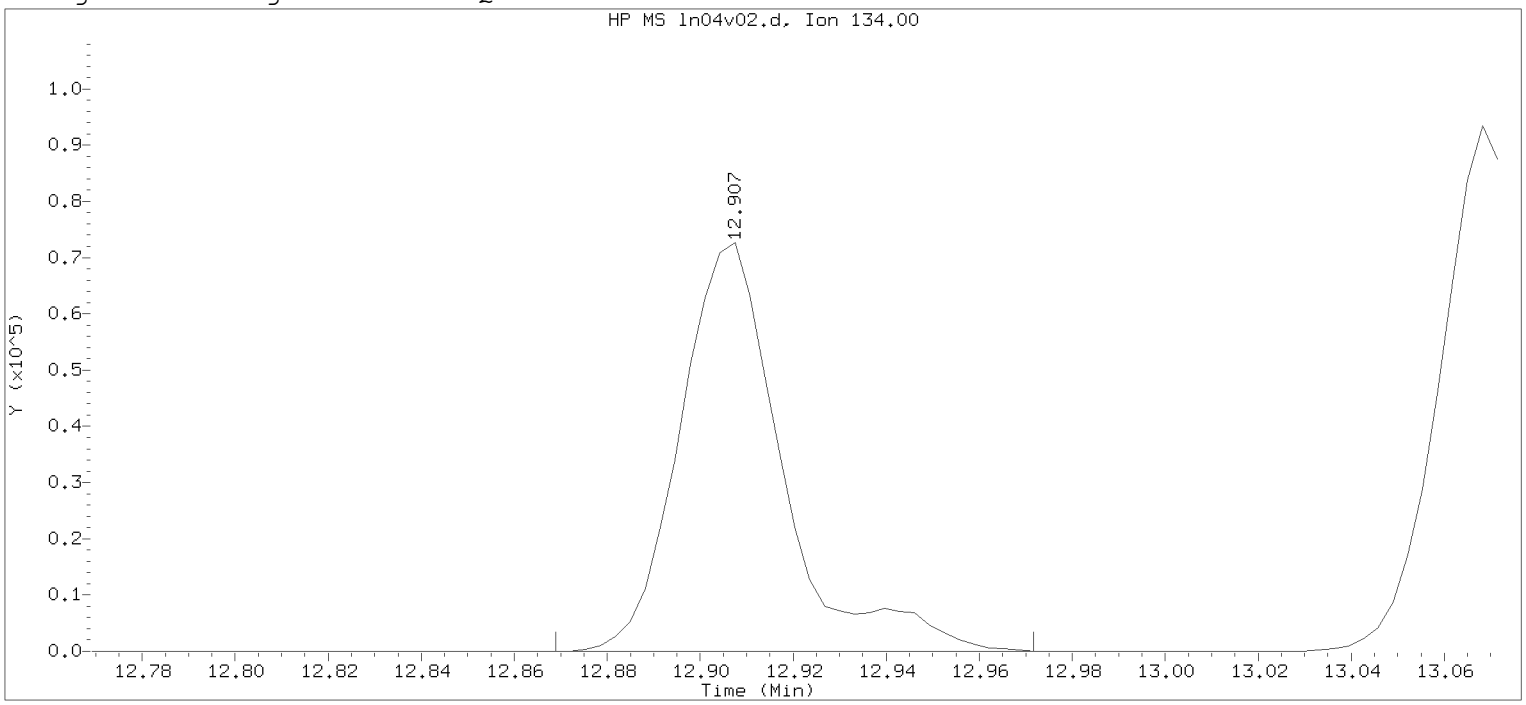
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area : 111654
On-column Amount (ng) : 22.2016
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASPOSITO

Data File: /chem/HP09915.i/19nov22a.b/ln22t01.d

Date : 22-NOV-2019 07:53

Client ID: AUG02-19

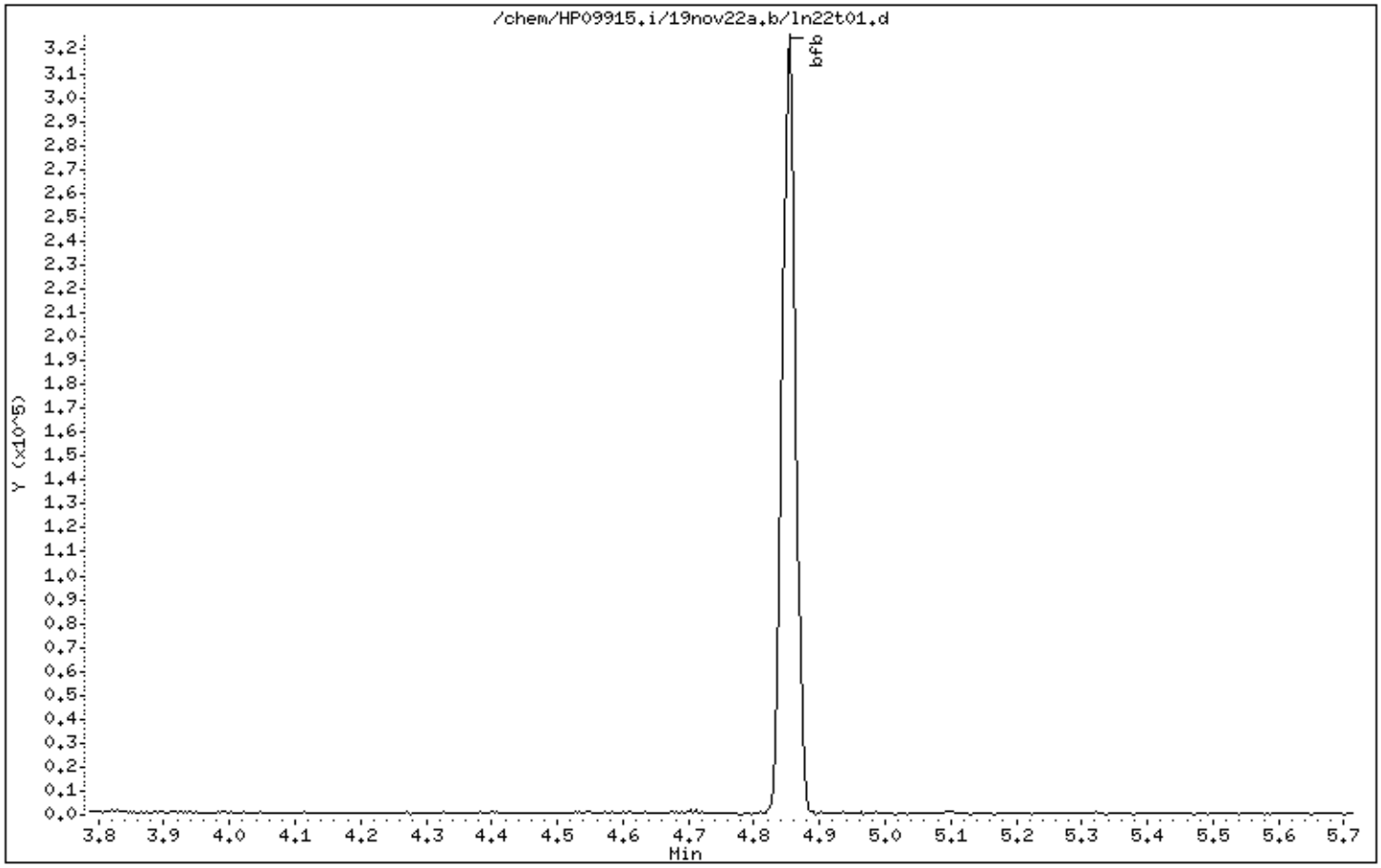
Instrument: HP09915.i

Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: lcp00895

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem/HP09915.i/19nov22a.b/ln22t01.d

Date : 22-NOV-2019 07:53

Client ID: AUG02-19

Instrument: HP09915.i

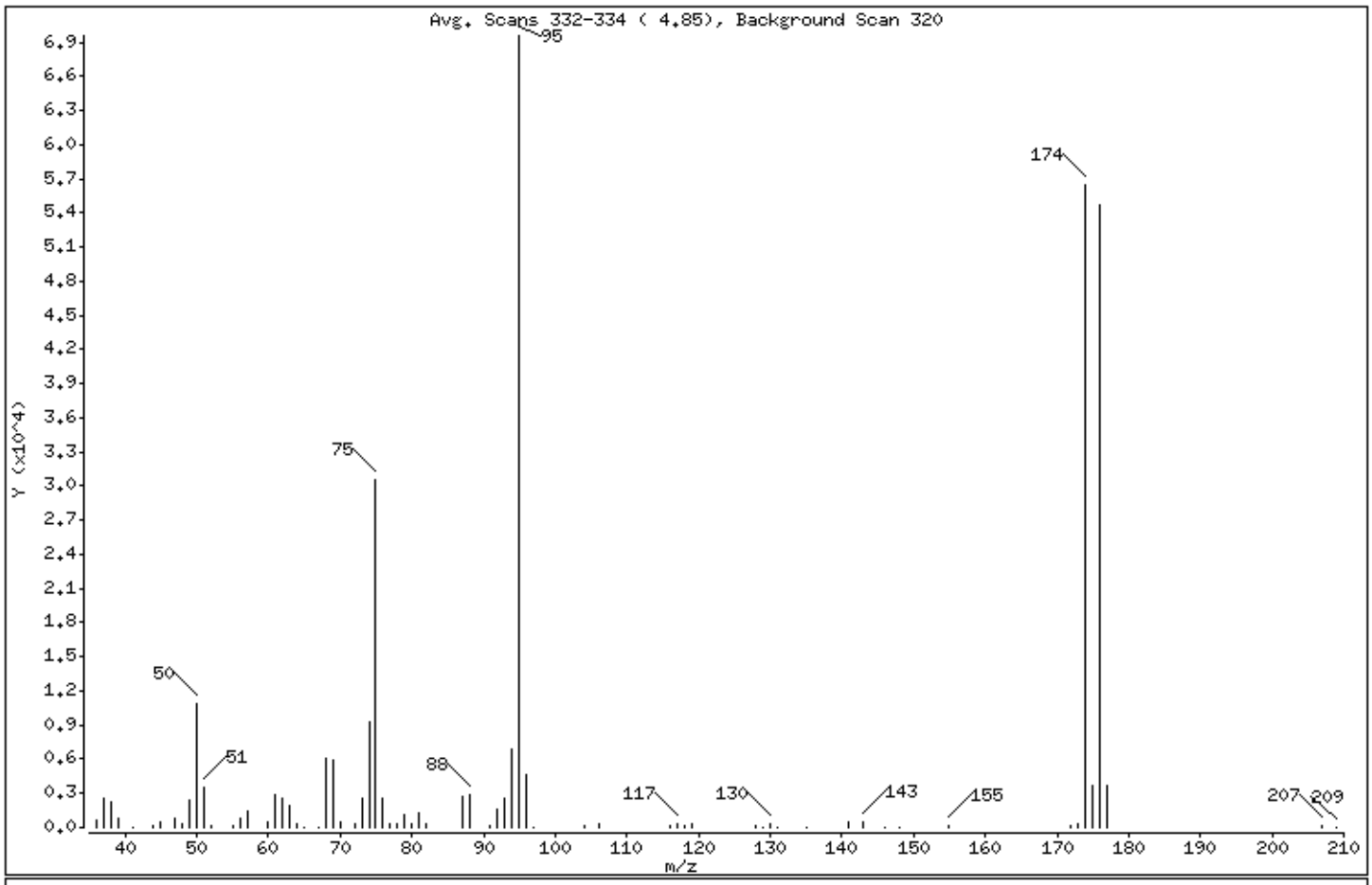
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: lcp00895

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.57
75	30.00 - 60.00% of mass 95	43.97
96	5.00 - 9.00% of mass 95	6.56
173	Less than 2.00% of mass 174	0.57 (0.70)
174	50.00 - 100.00% of mass 95	81.03
175	5.00 - 9.00% of mass 174	5.38 (6.64)
176	95.00 - 101.00% of mass 174	78.59 (96.99)
177	5.00 - 9.00% of mass 176	5.36 (6.82)

Date : 22-NOV-2019 07:53

Client ID: AUG02-19 Instrument: HP09915.i

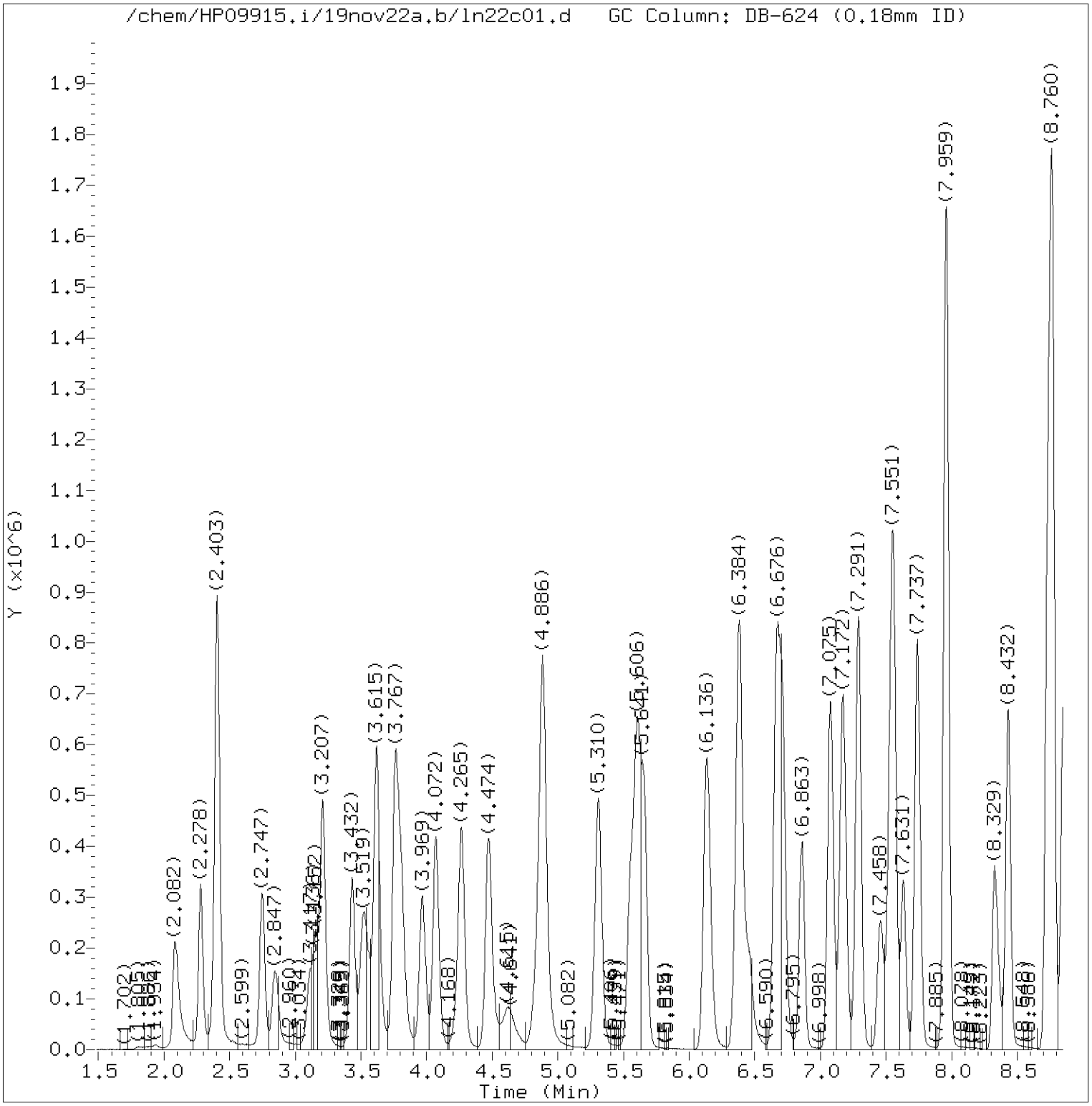
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: lcp00895

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: ln22t01.d
Spectrum: Avg. Scans 332-334 (4.85), Background Scan 320
Location of Maximum: 95.00
Number of points: 70

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	588	62.00	2503	82.00	289	130.00	254
37.00	2531	63.00	1872	87.00	2738	131.00	54
38.00	2252	64.00	251	88.00	2925	135.00	69
39.00	789	65.00	69	91.00	219	141.00	451
41.00	54	67.00	60	92.00	1554	143.00	530
44.00	192	68.00	6078	93.00	2614	146.00	50
45.00	524	69.00	5883	94.00	6831	148.00	65
47.00	732	70.00	543	95.00	69568	155.00	120
48.00	364	72.00	398	96.00	4567	172.00	97
49.00	2353	73.00	2541	97.00	72	173.00	394
50.00	10831	74.00	9215	104.00	192	174.00	56376
51.00	3530	75.00	30584	106.00	278	175.00	3741
52.00	149	76.00	2524	116.00	134	176.00	54680
55.00	205	77.00	391	117.00	315	177.00	3729
56.00	828	78.00	283	118.00	133	207.00	139
57.00	1498	79.00	1176	119.00	309	209.00	52
60.00	484	80.00	361	128.00	239		
61.00	2832	81.00	1203	129.00	61		



Total Ion Chromatogram (TIC)

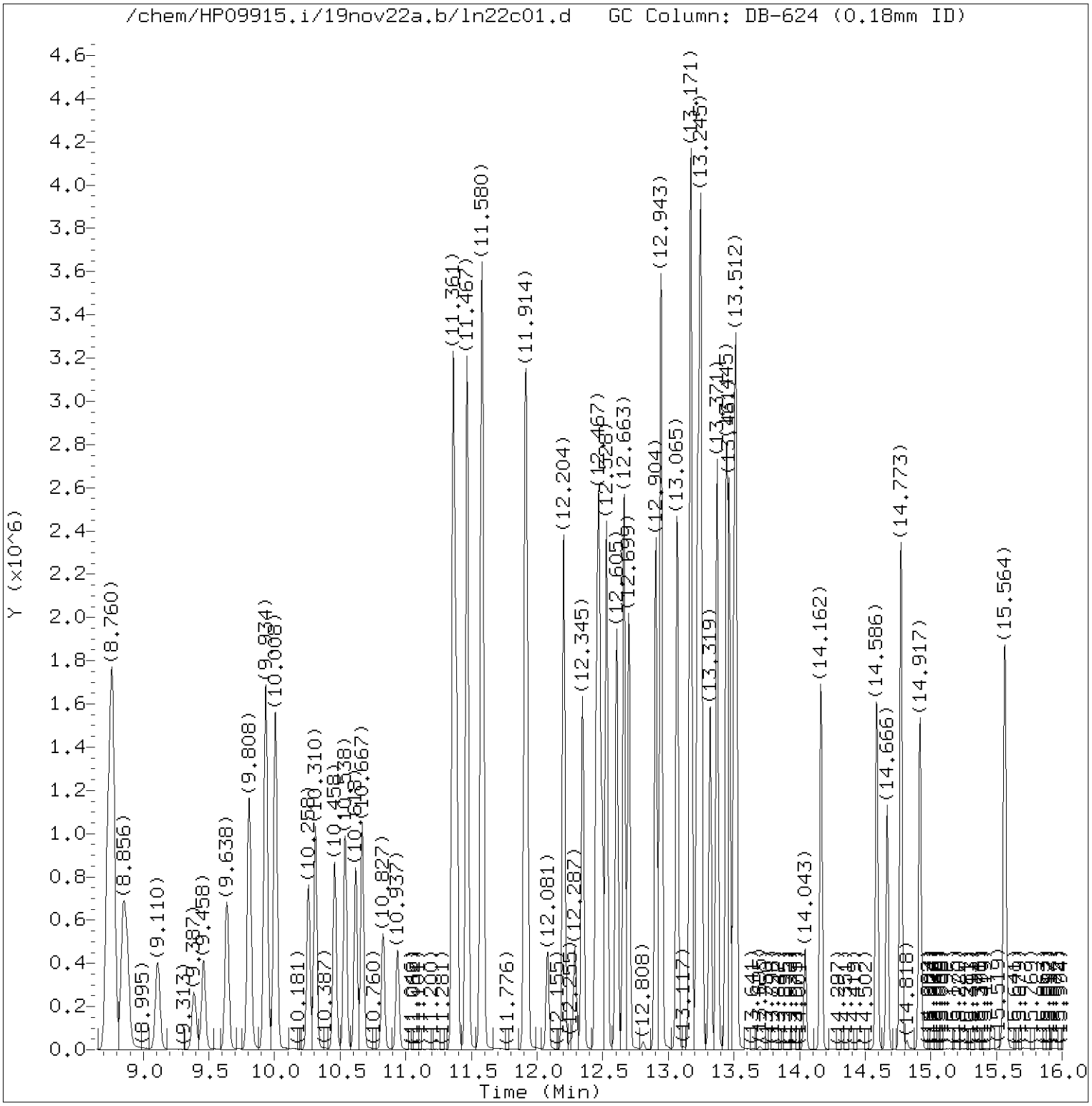
Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22c01.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 08:38 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-NOV-2019 08:56
Date, time and analyst ID of latest file update: 22-Nov-2019 09:50 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Linda C. Pape
on 11/22/2019 at 09:50.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22c01.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 08:38 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-NOV-2019 08:56
Date, time and analyst ID of latest file update: 22-Nov-2019 09:50 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Linda C. Pape
on 11/22/2019 at 09:50.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22c01.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 08:38 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-NOV-2019 08:56
Date, time and analyst ID of latest file update: 22-Nov-2019 09:50 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.085	85	480107	51.624
4) Chloromethane	(2)	2.278	50	467113	52.114
5) 1,3-Butadiene	(2)	2.403	39	462024M	62.080
6) Vinyl Chloride	(2)	2.403	62	460736	51.502
8) Bromomethane	(2)	2.751	94	315610	49.216
9) Chloroethane	(2)	2.844	64	246155	50.070
12) Trichlorofluoromethane	(2)	3.149	101	487002	50.565
11) n-Pentane	(2)	3.210	43	494430	43.441
14) Ethyl ether	(2)	3.432	59	322330	51.792
15) Freon 123a	(2)	3.522	67	359769	46.437
16) Acrolein	(1)	3.622	56	963559	488.675
17) 1,1-Dichloroethene	(2)	3.757	96	264521	46.792
17) 1,1-Dichloroethene	(2)	3.757	63	127800	45.093
19) Freon 113	(2)	3.796	101	299236	46.395
18) Acetone	(1)	3.802	58	86679	98.055
22) Methyl Iodide	(2)	3.966	142	536783	45.822
21) 2-Propanol	(1)	3.988	45	153178	241.040
23) Carbon Disulfide	(2)	4.069	76	1004958	47.173
27) Methyl Acetate	(2)	4.242	43	317491	43.605
25) Allyl Chloride	(2)	4.268	41	429111	42.314
28) Methylene Chloride	(2)	4.474	84	317453	47.181
29)*t-Butyl alcohol-d10	(1)	4.496	65	262815	250.000
30) t-Butyl alcohol	(1)	4.635	59	257760	232.955
31) Acrylonitrile	(2)	4.831	53	176552	45.071
32) trans-1,2-Dichloroethene	(2)	4.882	96	302128	46.199
33) Methyl Tertiary Butyl Ether	(2)	4.886	73	928155	43.238
34) n-Hexane	(2)	5.307	57	491211	48.278
36) 1,1-Dichloroethane	(2)	5.551	63	527039	46.197
38) di-Isopropyl ether	(2)	5.603	45	1009197	45.866
39) 2-Chloro-1,3-butadiene	(2)	5.654	53	465589	45.487
40) Ethyl t-butyl ether	(2)	6.130	59	953734	44.664
43) 1,2-Dichloroethene (Total)	(2)		96	639058	92.100
44) 2-Butanone	(2)	6.365	43	429492	85.413
42) cis-1,2-Dichloroethene	(2)	6.384	96	336930	45.901
45) 2,2-Dichloropropane	(2)	6.394	77	389356	43.903
47) Propionitrile	(1)	6.461	54	369058	267.693
48) Methacrylonitrile	(2)	6.664	67	503657	119.193
49) Bromochloromethane	(2)	6.709	128	175368	45.056

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Linda C. Pape
on 11/22/2019 at 09:50.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22c01.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 08:38 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-NOV-2019 08:56
Date, time and analyst ID of latest file update: 22-Nov-2019 09:50 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.718	71	124775	100.195
51) Chloroform	(2)	6.860	83	501440	45.955
52)$Dibromofluoromethane	(2)	7.069	113	314848	48.290
52)$Dibromofluoromethane	(2)	7.069	111	322112	48.454
53) 1,1,1-Trichloroethane	(2)	7.082	97	413632	44.414
54) Cyclohexane	(2)	7.175	56	585361	47.002
54) Cyclohexane	(2)	7.168	84	513063	47.426
54) Cyclohexane	(2)	7.172	69	181699	47.170
56) Carbon Tetrachloride	(2)	7.287	117	347264	43.965
55) 1,1-Dichloropropene	(2)	7.294	75	410868	45.549
58) Isobutyl Alcohol	(1)	7.455	41	223320	599.756
57)$1,2-Dichloroethane-d4	(2)	7.525	102	83330	50.148
57)$1,2-Dichloroethane-d4	(2)	7.525	65	360595	48.696
57)$1,2-Dichloroethane-d4	(2)	7.529	104	53039	49.972
60) Benzene	(2)	7.557	78	1277337	47.088
61) 1,2-Dichloroethane	(2)	7.635	62	392568	44.993
61) 1,2-Dichloroethane	(2)	7.625	98	40908	47.378
65) t-Amyl methyl ether	(2)	7.737	73	969568	45.237
67) n-Heptane	(2)	7.959	43	456641	48.042
66)*Fluorobenzene	(2)	7.959	96	1333599	50.000
69) n-Butanol	(1)	8.326	56	395221	1233.217
71) Trichloroethene	(2)	8.429	95	315861	46.245
72) Methylcyclohexane	(2)	8.731	83	578323	45.640
72) Methylcyclohexane	(2)	8.731	98	257555	44.918
73) 1,2-Dichloropropane	(2)	8.766	63	326056	47.336
76) Methyl Methacrylate	(2)	8.847	69	326052	48.950
75) 1,4-Dioxane	(1)	8.856	88	71141	807.628
74) Dibromomethane	(2)	8.876	93	210438	47.218
78) Bromodichloromethane	(2)	9.110	83	369412	46.191
79) 2-Nitropropane	(2)	9.387	41	206906	85.415
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	234520	79.274
81) cis-1,3-Dichloropropene	(2)	9.638	75	504747	47.520
82) 4-Methyl-2-pentanone	(2)	9.805	43	938996	88.469
83)$Toluene-d8	(3)	9.934	98	1399870	49.731
83)$Toluene-d8	(3)	9.934	100	905719	49.672
88) Toluene	(3)	10.008	92	818756	46.395
90) 1,3-Dichloropropene (total)	(3)		100	966997	93.663
89) trans-1,3-Dichloropropene	(3)	10.258	75	462250	46.143

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/22/2019 at 09:50.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22c01.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 08:38 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-NOV-2019 08:56
Date, time and analyst ID of latest file update: 22-Nov-2019 09:50 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	10.313	69	582663	47.859
92) 1,1,2-Trichloroethane	(3)	10.458	97	313908	46.917
93) Tetrachloroethene	(3)	10.538	166	327187	43.777
94) 1,3-Dichloropropane	(3)	10.618	76	537074	47.014
96) 2-Hexanone	(3)	10.670	43	686707	84.502
97) Dibromochloromethane	(3)	10.827	129	305385	44.557
99) 1,2-Dibromoethane	(3)	10.937	107	342972	47.206
100)*Chlorobenzene-d5	(3)	11.361	117	1075782	50.000
101) 1-Chlorohexane	(3)	11.364	91	422321	44.547
102) Chlorobenzene	(3)	11.387	112	915188	45.860
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	297047	45.177
104) Ethylbenzene	(3)	11.467	91	1555418	46.114
106) m+p-Xylene	(3)	11.580	106	1232704	92.900
108) Xylene (Total)	(3)		106	1832376	138.654
107) o-Xylene	(3)	11.908	106	599672	45.754
109) Styrene	(3)	11.921	104	1028422	47.484
110) Bromoform	(3)	12.081	173	203248	39.686
111) Isopropylbenzene	(3)	12.204	105	1515930	46.114
112) Cyclohexanone	(1)	12.287	55	202045	585.659
114)$4-Bromofluorobenzene	(3)	12.345	95	537673	50.445
114)$4-Bromofluorobenzene	(3)	12.348	174	432986	49.001
116) 1,1,2,2-Tetrachloroethane	(4)	12.448	83	513210	47.366
115) Bromobenzene	(4)	12.464	156	387943	45.002
118) trans-1,4-Dichloro-2-butene	(4)	12.474	53	248921	74.480
117) 1,2,3-Trichloropropane	(4)	12.496	110	150142	45.157
119) n-Propylbenzene	(4)	12.528	91	1772277	47.056
120) 2-Chlorotoluene	(4)	12.605	126	364305	45.531
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	1294166	47.282
121) 4-Chlorotoluene	(4)	12.699	126	378434	45.439
124) tert-Butylbenzene	(4)	12.904	134	257299	45.454
125) Pentachloroethane	(4)	12.940	167	217930	44.711
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	1363269	47.258
127) sec-Butylbenzene	(4)	13.065	105	1572289	46.548
129) 1,3-Dichlorobenzene	(4)	13.165	146	715864	45.190
130) p-Isopropyltoluene	(4)	13.171	119	1344190	45.999
131)*1,4-Dichlorobenzene-d4	(4)	13.220	152	573585	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	734802	44.744
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	1388657	45.444

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/22/2019 at 09:50.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22c01.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 08:38 Analyst ID: lcp00895

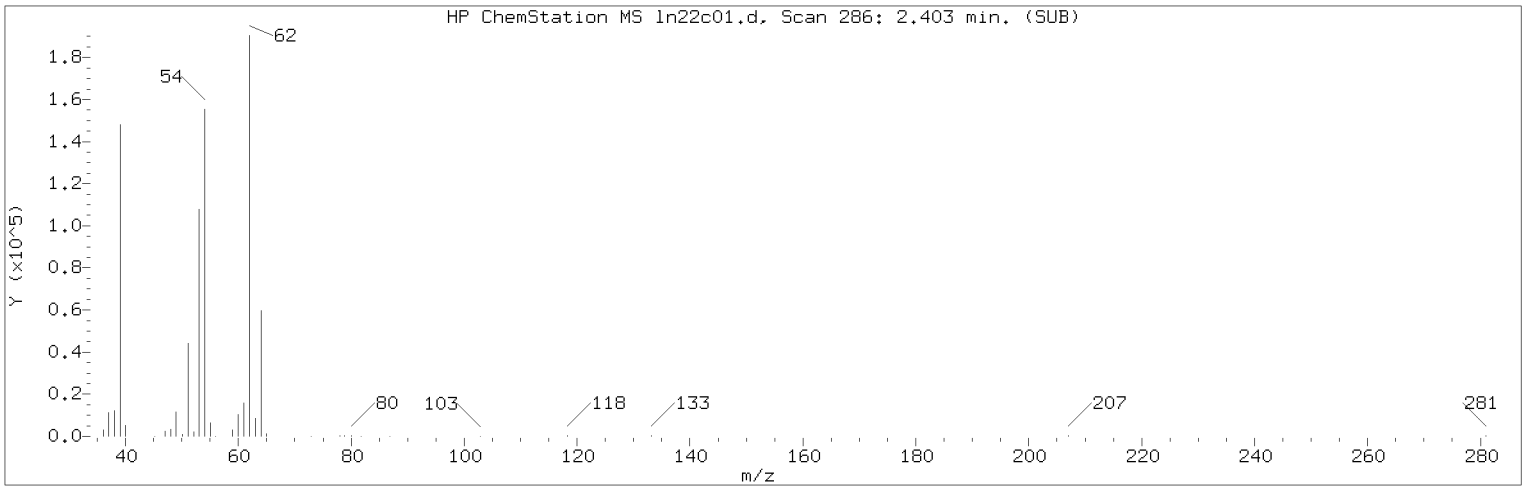
Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-NOV-2019 08:56
Date, time and analyst ID of latest file update: 22-Nov-2019 09:50 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

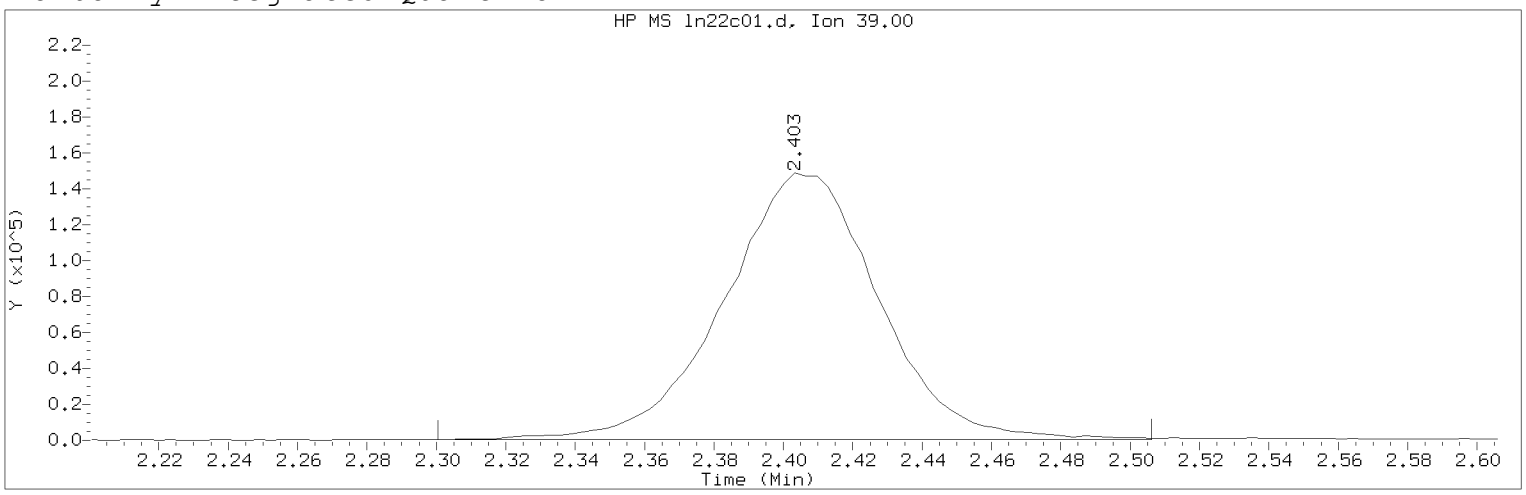
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.319	91	1052560	45.494
136) 1,3-Diethylbenzene	(4)	13.371	119	825108	43.387
141) Diethylbenzene (total)	(4)		100	2379922	129.449
137) 1,4-Diethylbenzene	(4)	13.441	119	856877	42.527
139) n-Butylbenzene	(4)	13.464	92	665758	44.558
138) 1,2-Dichlorobenzene	(4)	13.503	146	704250	45.053
140) 1,2-Diethylbenzene	(4)	13.515	119	697937	43.535
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	103445	43.613
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	488508	40.676
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	468472	40.118
147) Hexachlorobutadiene	(4)	14.666	225	187600	34.025
148) Naphthalene	(4)	14.773	128	1701690	45.329
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	457001	40.220
150) 2-Methylnaphthalene	(4)	15.564	142	938358	40.591

Digitally signed by Linda C. Pape
on 11/22/2019 at 09:50.
Target 3.5 esignature user ID: lcp00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov22a.b/ln22c01.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 08:38 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-NOV-2019 08:56
Date, time and analyst ID of latest file update: 22-Nov-2019 09:50 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

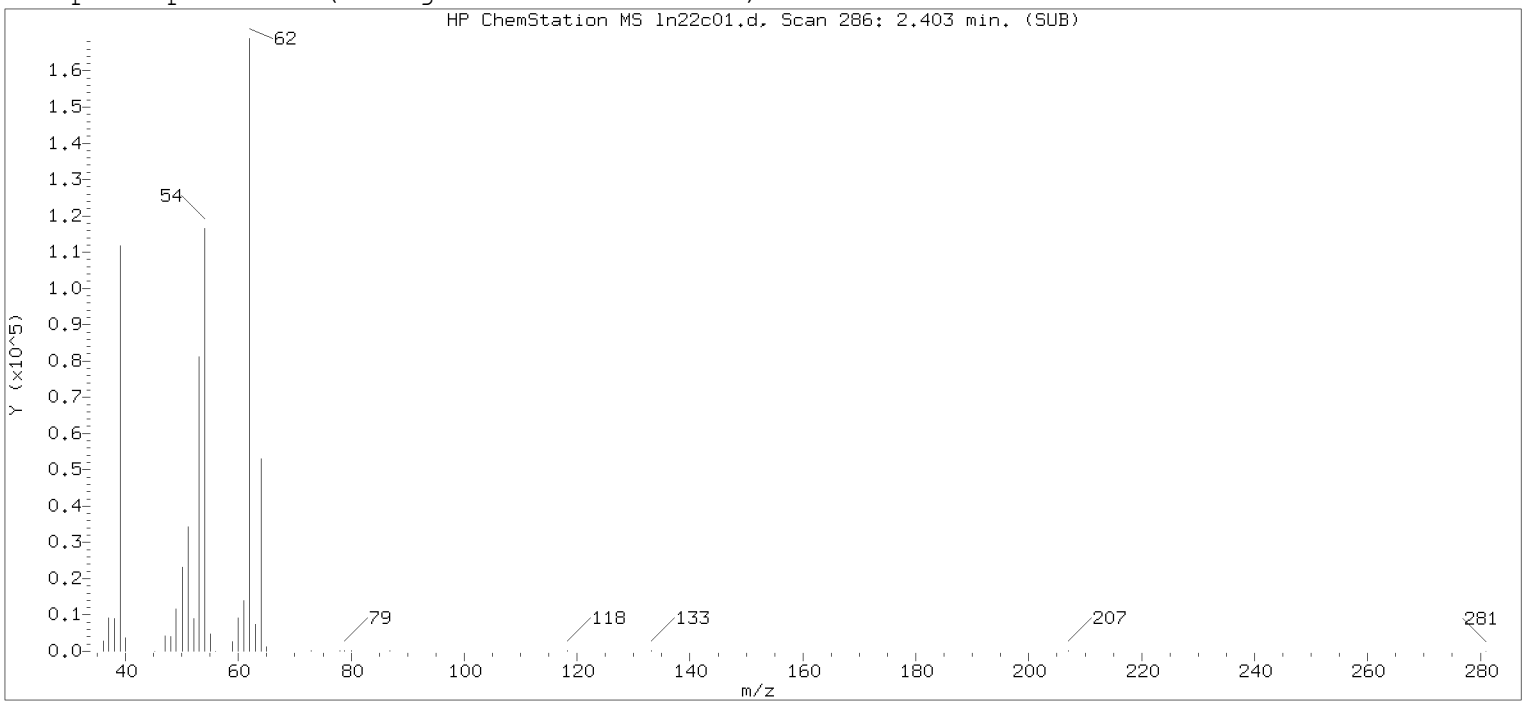
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 286
Retention Time (minutes): 2.403
Quant Ion : 39.00
Area (flag) : 462024M
On-Column Amount (ng) : 62.0799
Integration start scan : 253 Integration stop scan: 317
Y at integration start : 212 Y at integration end: 212

Reason for manual integration: improper integration

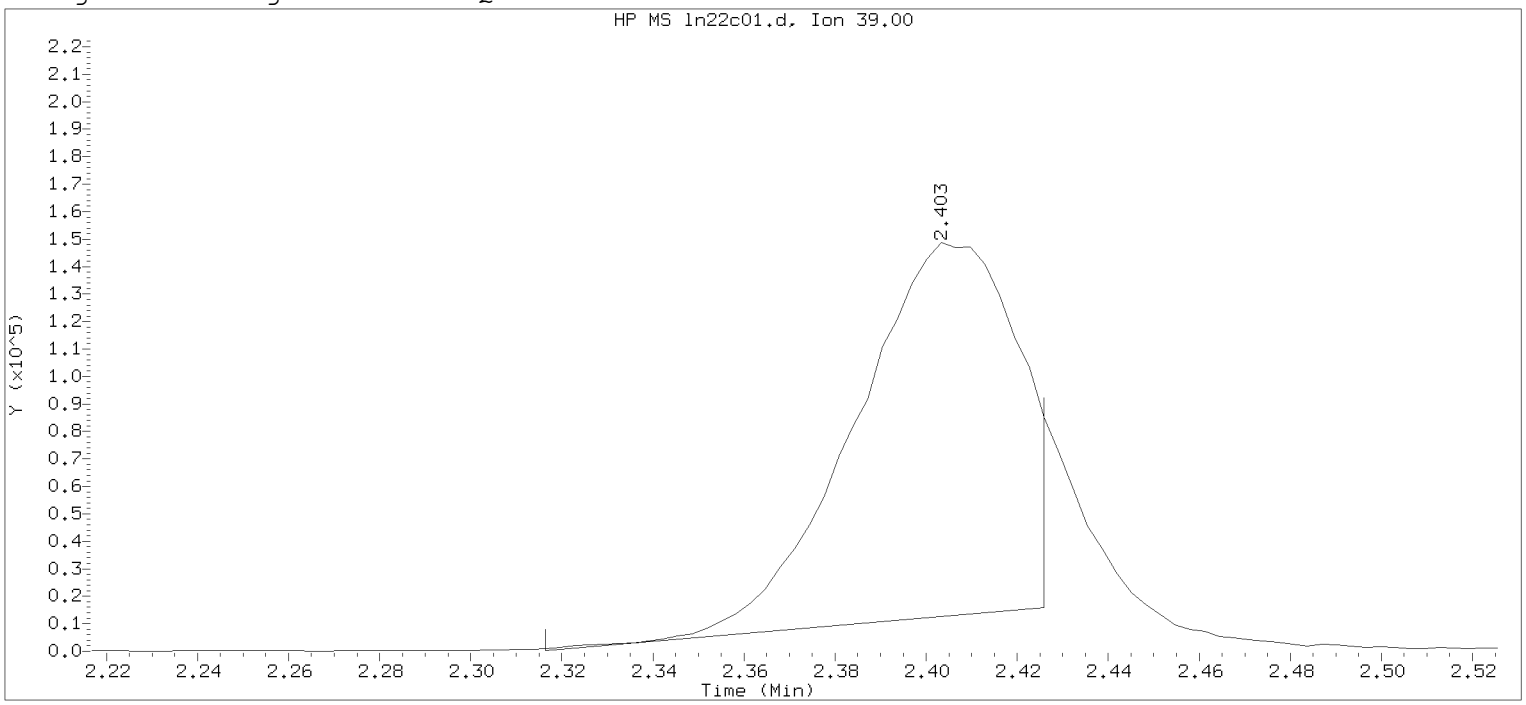
Analyst responsible for change: Digitally signed by Linda C. Pape
on 11/22/2019 at 09:50.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/24/2019 at 11:08.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov22a.b/ln22c01.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 08:38 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-NOV-2019 08:56
Date, time and analyst ID of latest file update: 22-Nov-2019 08:56 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 286
Retention Time (minutes): 2.403
Quant Ion : 39.00
Area : 334278
On-column Amount (ng) : 44.9153
Integration start scan : 258 Integration stop scan: 292
Y at integration start : 224 Y at integration end: 15792

Digitally signed by Linda C. Pape on 11/22/2019 at 09:50.
Target 3.5 esignature user: Linda C. Pape

Data File: /chem/HP09915.i/19nov23a.b/ln23t02.d

Page 1

Date : 23-NOV-2019 07:57

Client ID: aug-02-19

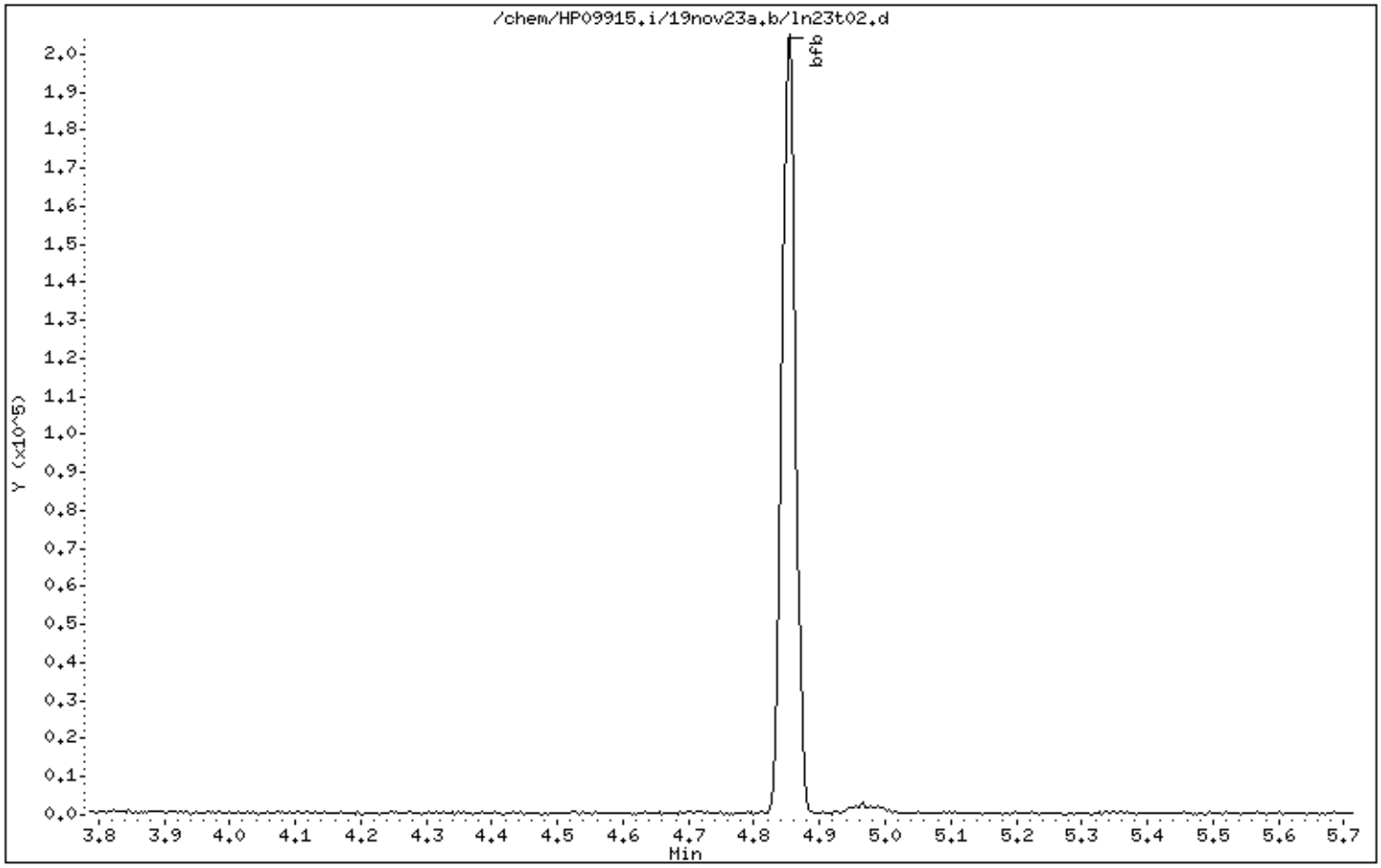
Instrument: HP09915.i

Sample Info: aug-02-19;50NGBFB;1;3;;;;;;

Operator: CLM27445

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem/HP09915.i/19nov23a.b/ln23t02.d

Date : 23-NOV-2019 07:57

Client ID: aug-02-19

Instrument: HP09915.i

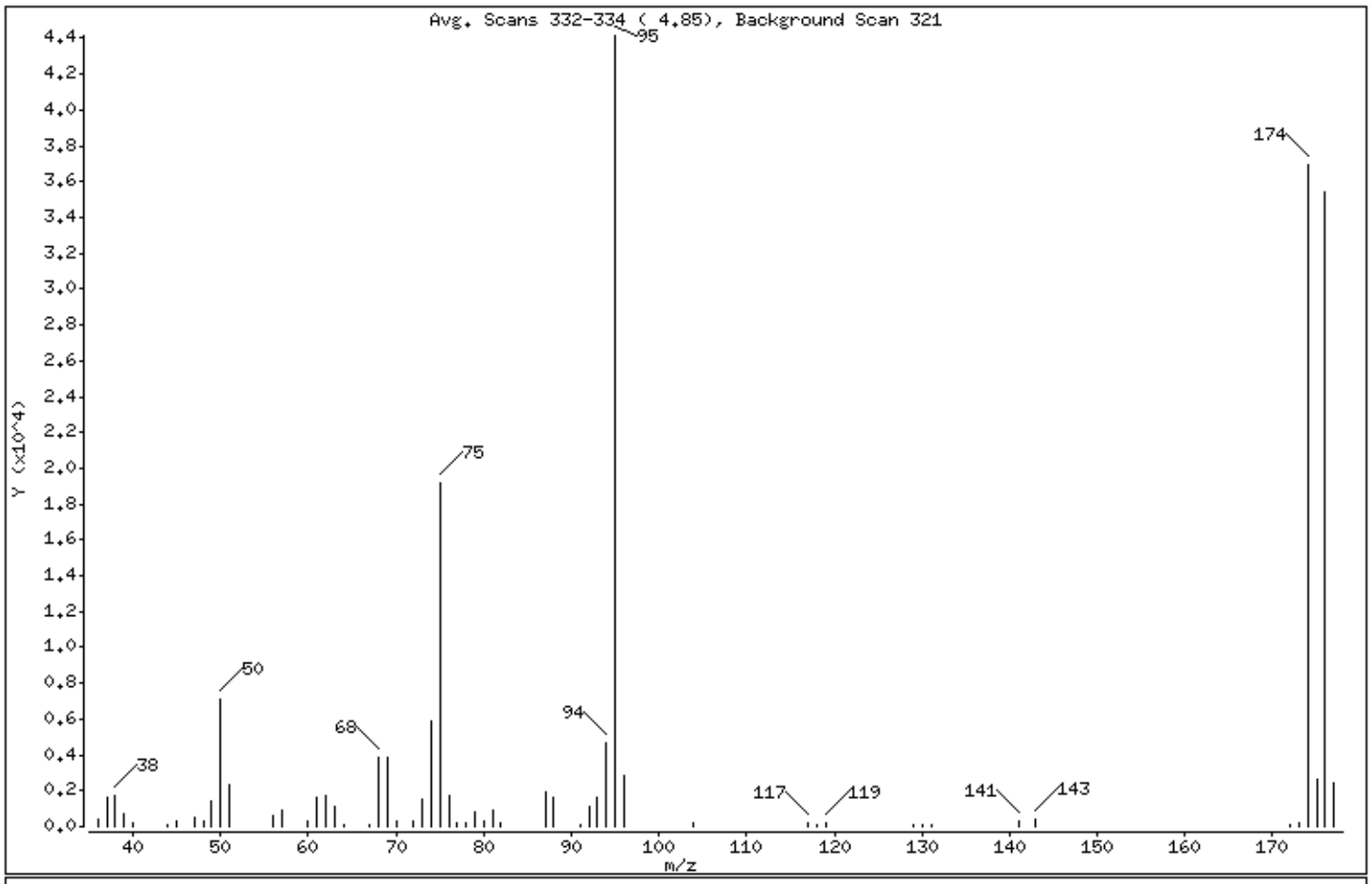
Sample Info: aug-02-19;50NGBFB;1;3;;;;;;

Operator: CLM27445

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.16
75	30.00 - 60.00% of mass 95	43.53
96	5.00 - 9.00% of mass 95	6.39
173	Less than 2.00% of mass 174	0.55 (0.66)
174	50.00 - 100.00% of mass 95	83.68
175	5.00 - 9.00% of mass 174	6.06 (7.25)
176	95.00 - 101.00% of mass 174	80.15 (95.78)
177	5.00 - 9.00% of mass 176	5.44 (6.78)

Date : 23-NOV-2019 07:57

Client ID: aug-02-19 Instrument: HP09915.i

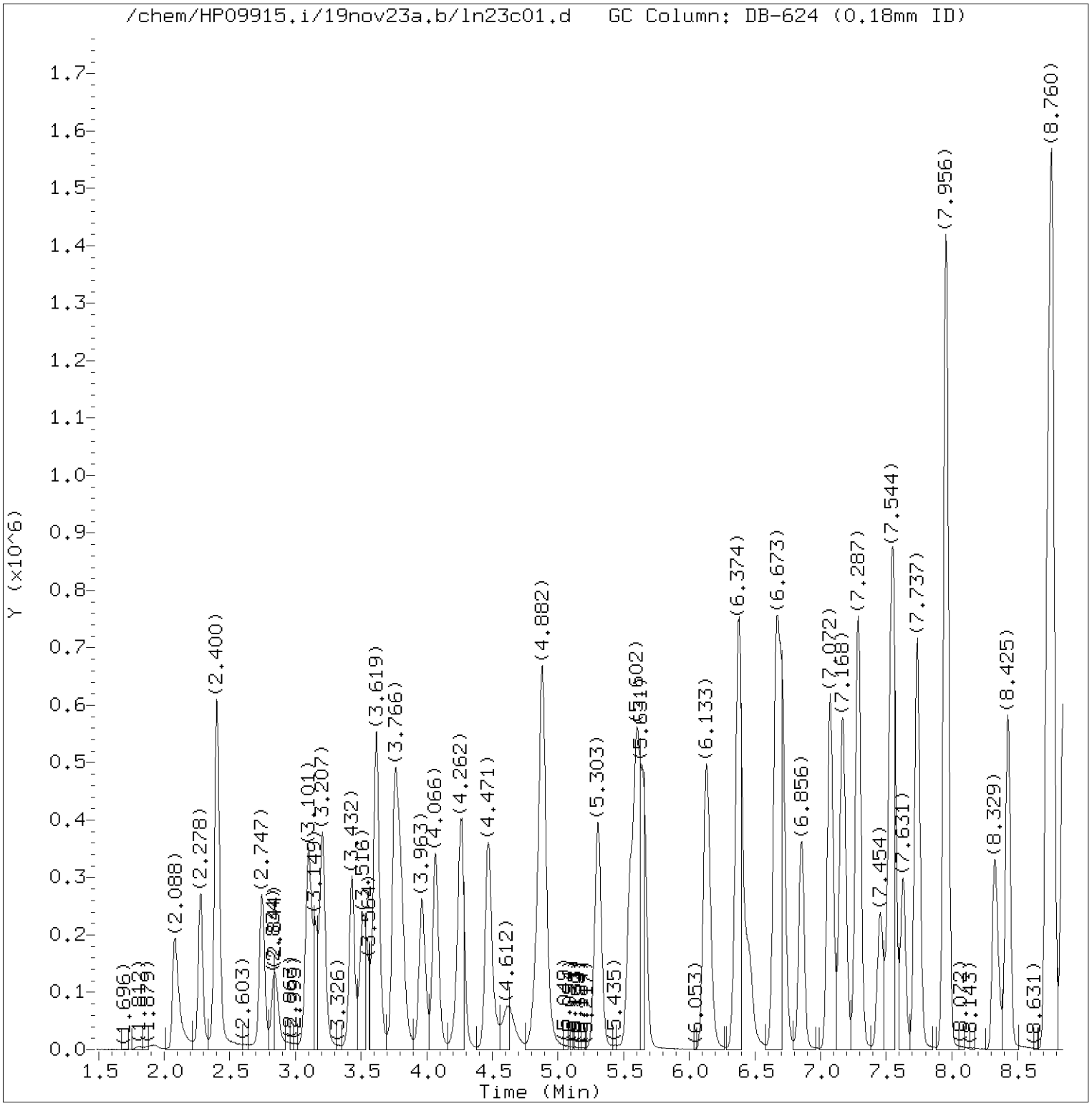
Sample Info: aug-02-19;50NGBFB;1;3;;;;;;

Operator: CLM27445

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: ln23t02.d
Spectrum: Avg. Scans 332-334 (4.85), Background Scan 321
Location of Maximum: 95.00
Number of points: 57

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	371	61.00	1626	79.00	835	119.00	198
37.00	1659	62.00	1729	80.00	340	129.00	55
38.00	1713	63.00	1142	81.00	937	130.00	83
39.00	697	64.00	132	82.00	206	131.00	58
40.00	168	67.00	144	87.00	1893	141.00	254
44.00	143	68.00	3907	88.00	1611	143.00	370
45.00	324	69.00	3810	91.00	54	172.00	143
47.00	460	70.00	306	92.00	1144	173.00	244
48.00	285	72.00	257	93.00	1645	174.00	36944
49.00	1402	73.00	1566	94.00	4717	175.00	2677
50.00	7136	74.00	5916	95.00	44152	176.00	35384
51.00	2379	75.00	19216	96.00	2820	177.00	2400
56.00	617	76.00	1741	104.00	191		
57.00	926	77.00	239	117.00	245		
60.00	342	78.00	218	118.00	59		



Total Ion Chromatogram (TIC)

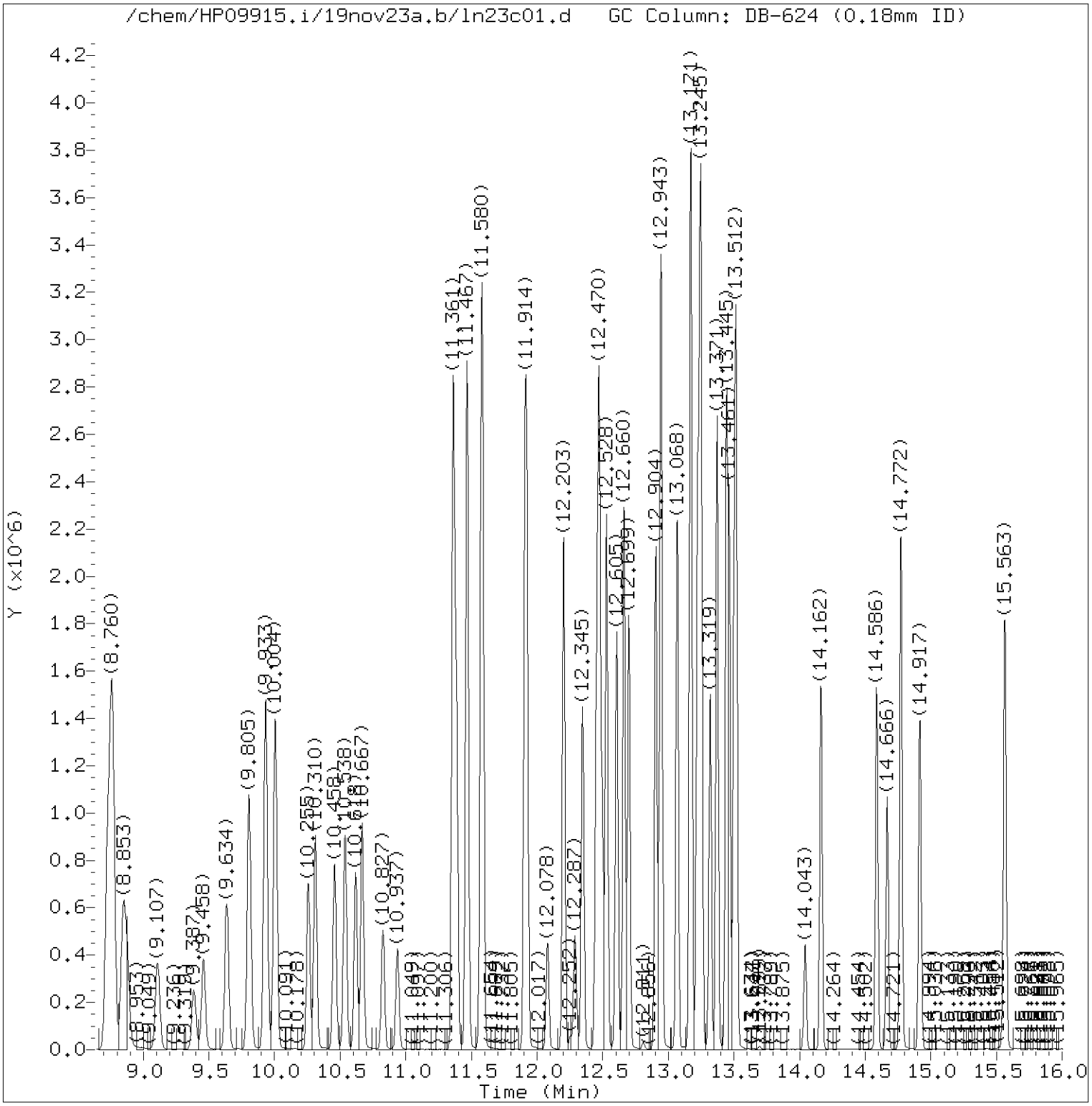
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.085	85	426647	54.170
4) Chloromethane	(2)	2.278	50	395979	52.166
6) Vinyl Chloride	(2)	2.400	62	390013	51.480
5) 1,3-Butadiene	(2)	2.406	39	259783	41.217
8) Bromomethane	(2)	2.741	94	276278	50.873
9) Chloroethane	(2)	2.844	64	209700	50.367
10) Dichlorofluoromethane	(2)	3.098	67	399390	39.860
12) Trichlorofluoromethane	(2)	3.149	101	448631	55.004
11) n-Pentane	(2)	3.204	43	360401	37.390
14) Ethyl ether	(2)	3.429	59	273084	51.813
15) Freon 123a	(2)	3.522	67	301358	45.931
16) Acrolein	(1)	3.615	56	841370	512.444
17) 1,1-Dichloroethene	(2)	3.754	96	215176	44.946
17) 1,1-Dichloroethene	(2)	3.754	63	105439	43.930
18) Acetone	(1)	3.795	58	77055	104.683
19) Freon 113	(2)	3.799	101	249953	45.761
22) Methyl Iodide	(2)	3.963	142	454457	45.809
21) 2-Propanol	(1)	3.985	45	132231	249.887
23) Carbon Disulfide	(2)	4.066	76	799496	44.315
27) Methyl Acetate	(2)	4.236	43	283759	46.019
25) Allyl Chloride	(2)	4.268	41	380893	44.350
28) Methylene Chloride	(2)	4.467	84	268162	47.062
29)*t-Butyl alcohol-d10	(1)	4.490	65	218843	250.000
30) t-Butyl alcohol	(1)	4.622	59	222936	241.966
31) Acrylonitrile	(2)	4.831	53	152489	45.967
33) Methyl Tertiary Butyl Ether	(2)	4.876	73	763776	42.014
32) trans-1,2-Dichloroethene	(2)	4.882	96	256465	46.307
34) n-Hexane	(2)	5.303	57	379461	44.038
36) 1,1-Dichloroethane	(2)	5.545	63	445094	46.069
38) di-Isopropyl ether	(2)	5.602	45	840159	45.088
39) 2-Chloro-1,3-butadiene	(2)	5.654	53	394866	45.553
40) Ethyl t-butyl ether	(2)	6.136	59	784651	43.390
43) 1,2-Dichloroethene (Total)	(2)		96	549419	93.434
44) 2-Butanone	(2)	6.361	43	374479	87.938
42) cis-1,2-Dichloroethene	(2)	6.377	96	292954	47.126
45) 2,2-Dichloropropane	(2)	6.390	77	342986	45.667
47) Propionitrile	(1)	6.451	54	325864	283.854
48) Methacrylonitrile	(2)	6.663	67	435635	121.737

* = Compound is an internal standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.702	128	166357	50.469
50) Tetrahydrofuran	(1)	6.718	71	109845	105.929
51) Chloroform	(2)	6.856	83	445256	48.184
52)$Dibromofluoromethane	(2)	7.072	113	275545	49.903
52)$Dibromofluoromethane	(2)	7.072	111	279116	49.578
53) 1,1,1-Trichloroethane	(2)	7.081	97	368717	46.750
54) Cyclohexane	(2)	7.168	56	471025	44.660
54) Cyclohexane	(2)	7.168	84	417552	45.576
54) Cyclohexane	(2)	7.175	69	147071	45.084
56) Carbon Tetrachloride	(2)	7.281	117	311124	46.511
55) 1,1-Dichloropropene	(2)	7.290	75	354863	46.453
58) Isobutyl Alcohol	(1)	7.454	41	199717	644.138
57)$1,2-Dichloroethane-d4	(2)	7.528	102	71008	50.460
57)$1,2-Dichloroethane-d4	(2)	7.528	65	321059	51.196
57)$1,2-Dichloroethane-d4	(2)	7.528	104	45768	50.919
60) Benzene	(2)	7.557	78	1092018	47.536
61) 1,2-Dichloroethane	(2)	7.631	62	354351	47.957
61) 1,2-Dichloroethane	(2)	7.628	98	35318	48.300
65) t-Amyl methyl ether	(2)	7.737	73	829046	45.675
66)*Fluorobenzene	(2)	7.956	96	1129387	50.000
67) n-Heptane	(2)	7.959	43	367404	45.643
69) n-Butanol	(1)	8.332	56	340740	1276.850
71) Trichloroethene	(2)	8.425	95	278257	48.106
72) Methylcyclohexane	(2)	8.728	83	505175	47.076
72) Methylcyclohexane	(2)	8.728	98	229307	47.222
73) 1,2-Dichloropropane	(2)	8.766	63	280113	48.019
76) Methyl Methacrylate	(2)	8.843	69	280393	49.707
75) 1,4-Dioxane	(1)	8.853	88	65102M	887.571
74) Dibromomethane	(2)	8.876	93	186925	49.526
78) Bromodichloromethane	(2)	9.107	83	331866	48.999
79) 2-Nitropropane	(2)	9.384	41	195731	95.412
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	213296	85.137
81) cis-1,3-Dichloropropene	(2)	9.634	75	449906	50.015
82) 4-Methyl-2-pentanone	(2)	9.805	43	820810	91.317
83)$Toluene-d8	(3)	9.933	98	1206568	48.944
83)$Toluene-d8	(3)	9.933	100	772586	48.381
88) Toluene	(3)	10.007	92	717271	46.410
90) 1,3-Dichloropropene (total)	(3)		100	872271	98.158

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.255	75	422365	48.142
91) Ethyl Methacrylate	(3)	10.310	69	501676	47.052
92) 1,1,2-Trichloroethane	(3)	10.458	97	279687	47.732
93) Tetrachloroethene	(3)	10.535	166	299047	45.688
94) 1,3-Dichloropropane	(3)	10.618	76	472234	47.202
96) 2-Hexanone	(3)	10.667	43	608236	85.463
97) Dibromochloromethane	(3)	10.827	129	287076	47.827
99) 1,2-Dibromoethane	(3)	10.937	107	305899	48.076
100)*Chlorobenzene-d5	(3)	11.358	117	942140	50.000
101) 1-Chlorohexane	(3)	11.364	91	357494	43.058
102) Chlorobenzene	(3)	11.387	112	823619	47.126
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	270952	47.053
104) Ethylbenzene	(3)	11.467	91	1388430	47.002
106) m+p-Xylene	(3)	11.580	106	1100827	94.730
108) Xylene (Total)	(3)		106	1640642	141.759
107) o-Xylene	(3)	11.908	106	539815	47.029
109) Styrene	(3)	11.920	104	921222	48.568
110) Bromoform	(3)	12.081	173	201677	44.966
111) Isopropylbenzene	(3)	12.203	105	1358883	47.200
112) Cyclohexanone	(1)	12.287	55	195406	680.224
114)$4-Bromofluorobenzene	(3)	12.345	95	475891	50.982
114)$4-Bromofluorobenzene	(3)	12.348	174	390248	50.429
116) 1,1,2,2-Tetrachloroethane	(4)	12.448	83	453102	45.942
115) Bromobenzene	(4)	12.464	156	353786	45.087
118) trans-1,4-Dichloro-2-butene	(4)	12.474	53	332260	109.220
117) 1,2,3-Trichloropropane	(4)	12.496	110	138812	45.867
119) n-Propylbenzene	(4)	12.528	91	1592058	46.440
120) 2-Chlorotoluene	(4)	12.609	126	331322	45.493
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	1173871	47.117
121) 4-Chlorotoluene	(4)	12.699	126	345450	45.569
124) tert-Butylbenzene	(4)	12.904	134	230705M	44.776
125) Pentachloroethane	(4)	12.937	167	213232	48.061
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	1234172	47.002
127) sec-Butylbenzene	(4)	13.068	105	1409138	45.832
129) 1,3-Dichlorobenzene	(4)	13.168	146	656157	45.506
130) p-Isopropyltoluene	(4)	13.171	119	1218604	45.814
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	522095	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	675899	45.217

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

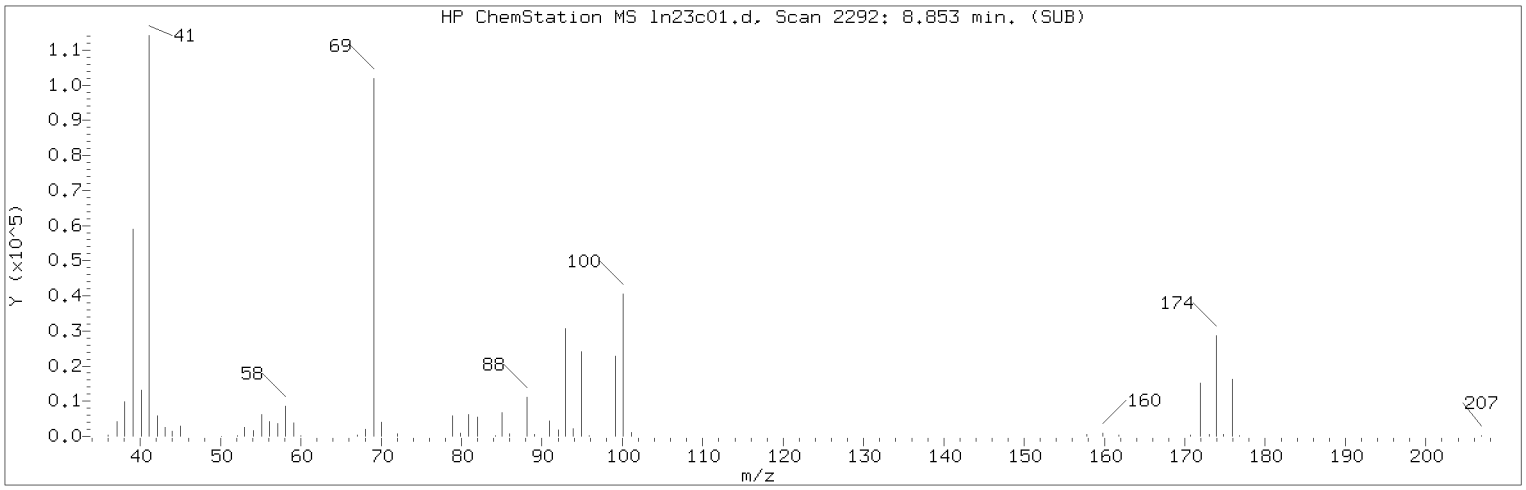
Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

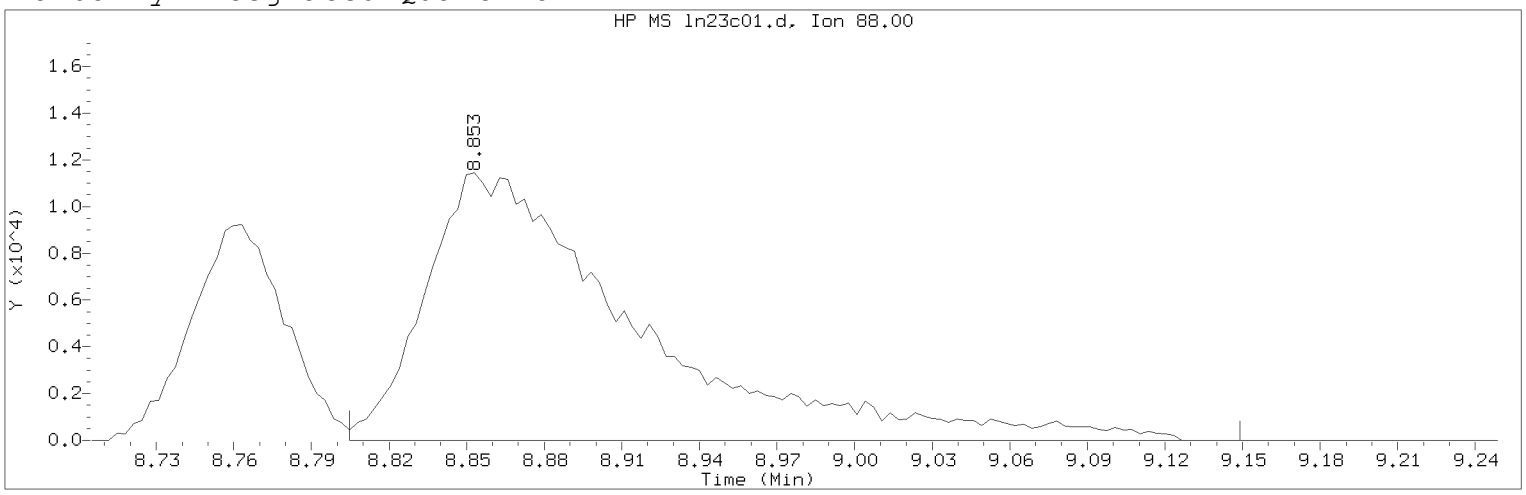
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	1347453	48.445
135) Benzyl Chloride	(4)	13.319	91	969998	46.061
136) 1,3-Diethylbenzene	(4)	13.371	119	799617	46.193
141) Diethylbenzene (total)	(4)		100	2318753	138.613
137) 1,4-Diethylbenzene	(4)	13.441	119	834323	45.492
139) n-Butylbenzene	(4)	13.464	92	599219	44.060
138) 1,2-Dichlorobenzene	(4)	13.502	146	651315	45.776
140) 1,2-Diethylbenzene	(4)	13.515	119	684813	46.929
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	99289	45.989
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	452085	41.356
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	430638	40.515
147) Hexachlorobutadiene	(4)	14.666	225	175764	35.022
148) Naphthalene	(4)	14.772	128	1577744	46.172
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	424272	41.022
150) 2-Methylnaphthalene	(4)	15.563	142	908098	43.156

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

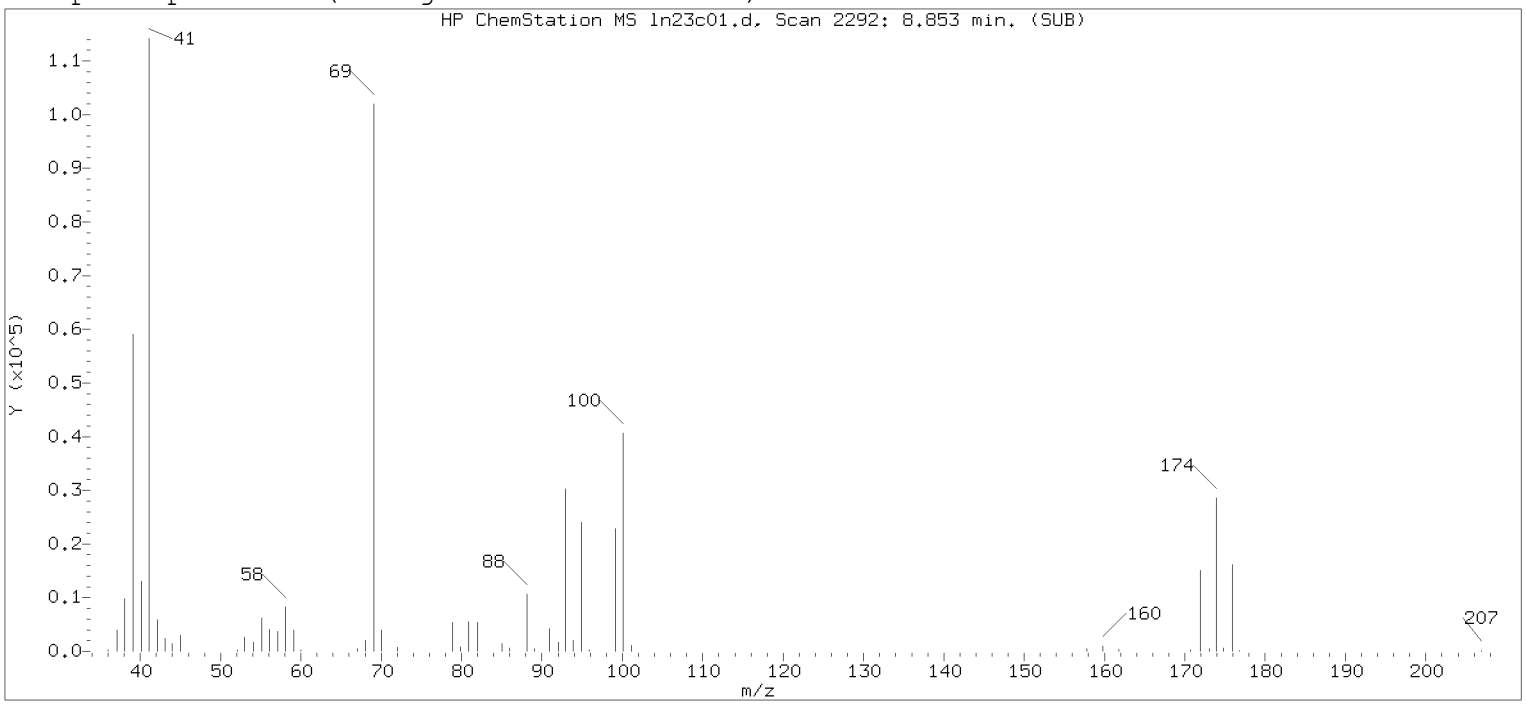
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area (flag) : 65102M
On-Column Amount (ng) : 887.5715
Integration start scan : 2276 Integration stop scan: 2383
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

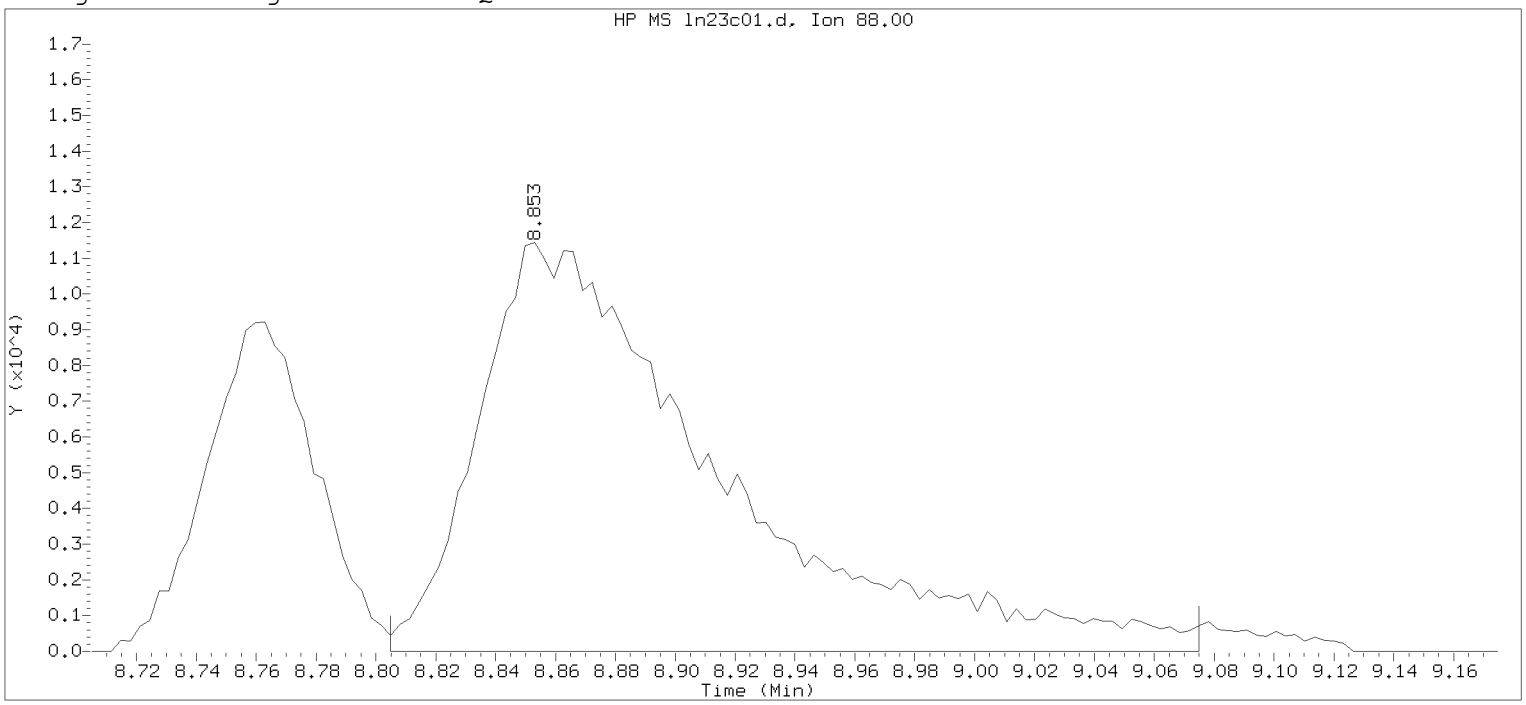
Analyst responsible for change: Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:45.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

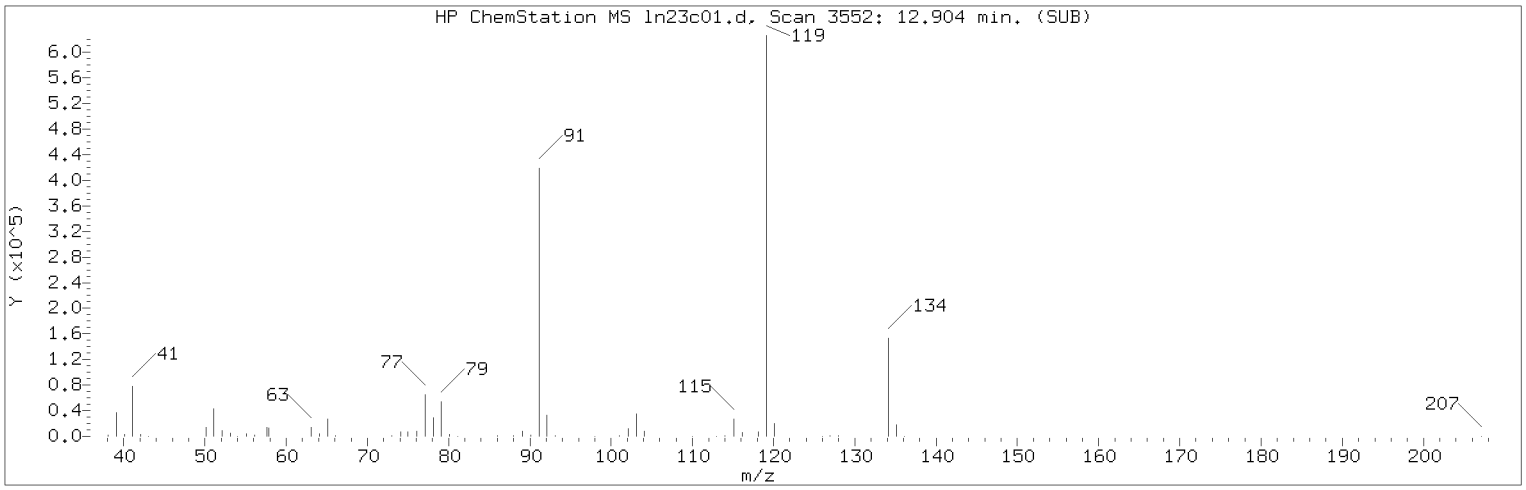
Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 08:59
Date, time and analyst ID of latest file update: 23-Nov-2019 08:59 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

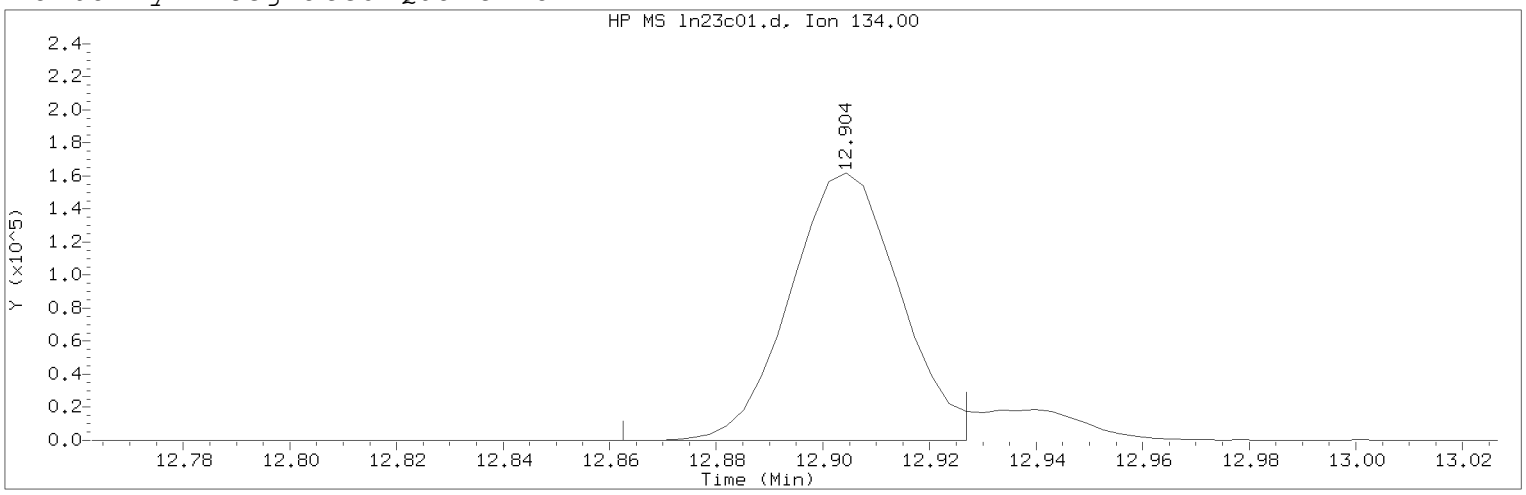
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2292		
Retention Time (minutes)	: 8.853		
Quant Ion	: 88.00		
Area	: 63644		
On-column Amount (ng)	: 867.7000		
Integration start scan	: 2276	Integration stop scan:	2360
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Corie L. Mellinger on 11/23/2019 at 09:09.
Target 3.5 esignature user: CLM27445

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

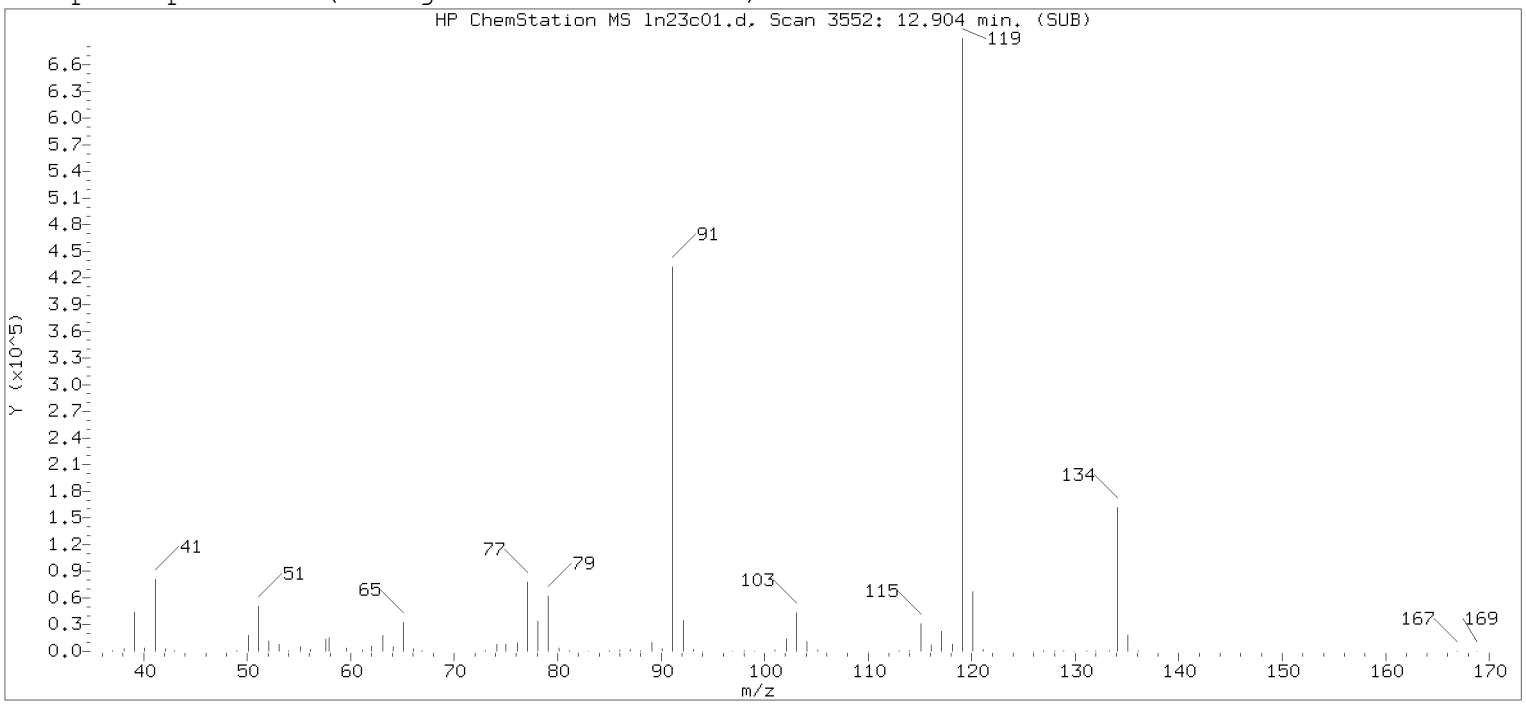
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 230705M
On-Column Amount (ng) : 44.7756
Integration start scan : 3538 Integration stop scan: 3558
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

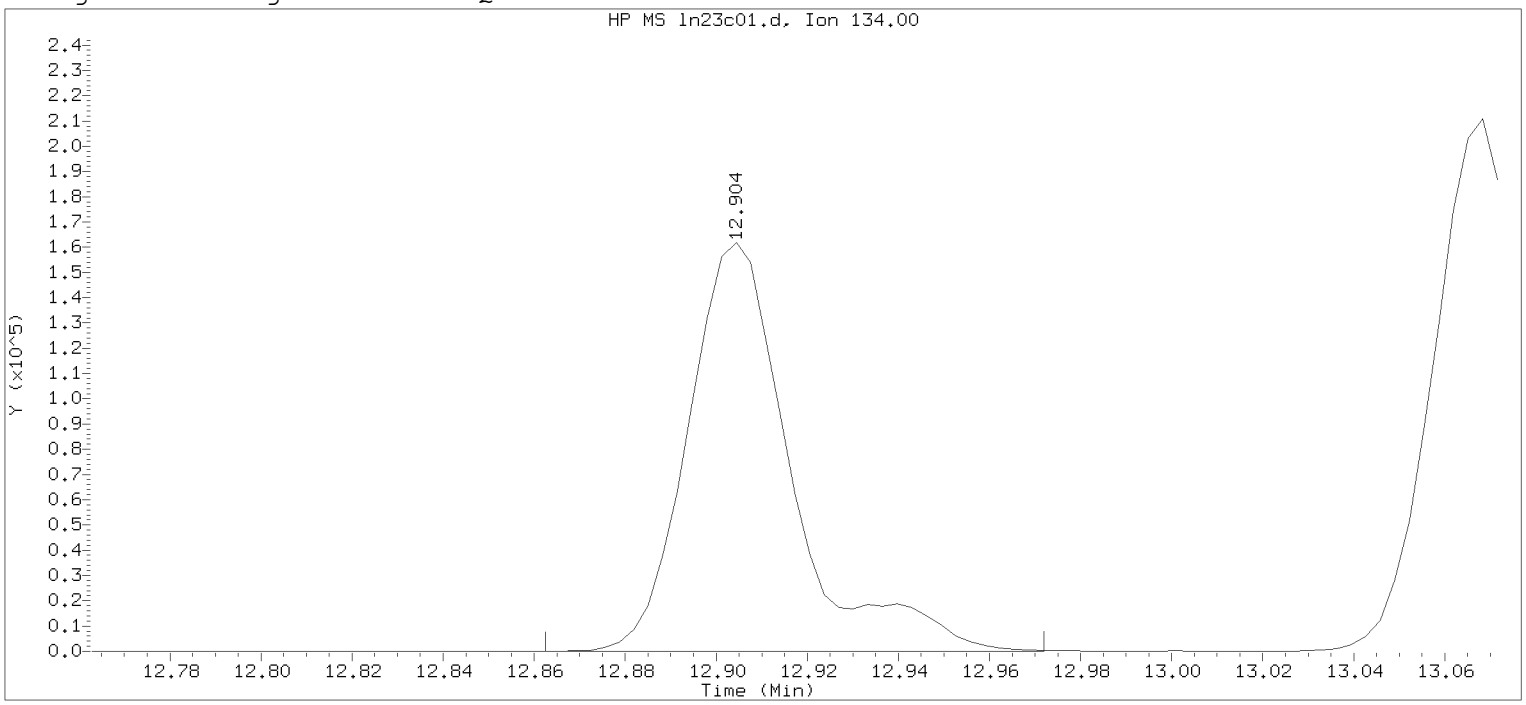
Analyst responsible for change: Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:45.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 08:59
Date, time and analyst ID of latest file update: 23-Nov-2019 08:59 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 255483
On-column Amount (ng) : 49.5846
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Corie L. Mellinger on 11/23/2019 at 09:09.
Target 3.5 esignature user: CLM27445

Raw QC Data

Volatiles by GC/MS

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov22a.b/ln22b05.d
Injection date and time: **22-NOV-2019 10:07**
Data file Sample Info. Line: VBLKL86;VBLKL86;1;3;;;;;;
Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 11:17 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.503	(-0.006)	939	65	256566	(-2)	250.00	
66) Fluorobenzene	7.959	(0.000)	2014	96	1310742	(-2)	50.00	
100) Chlorobenzene-d5	11.361	(0.000)	3072	117	1059508	(-2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.219	(0.000)	3650	152	558840	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(-0.001)	113	303488	47.359	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.532	(-0.001)	102	82856	50.733	101%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	1357743	48.976	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.348	(0.000)	95	519370	49.476	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)				Not Detected					0.2	1
4) Chloromethane	(2)				Not Detected					0.2	1
5) 1,3-Butadiene	(2)				Not Detected					1	3
6) Vinyl Chloride	(2)				Not Detected					0.2	1
8) Bromomethane	(2)				Not Detected					0.3	1
9) Chloroethane	(2)				Not Detected					0.2	1
11) n-Pentane	(2)				Not Detected					0.4	10
12) Trichlorofluoromethane	(2)				Not Detected					0.2	1
14) Ethyl ether	(2)				Not Detected					0.2	5
15) Freon 123a	(2)				Not Detected					0.4	5
16) Acrolein	(1)				Not Detected					2	100
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
21) 2-Propanol	(1)				Not Detected					18	100
22) Methyl Iodide	(2)				Not Detected					0.2	1
23) Carbon Disulfide	(2)				Not Detected					0.2	5
25) Allyl Chloride	(2)				Not Detected					0.3	5
27) Methyl Acetate	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
30) t-Butyl alcohol	(1)				Not Detected					12	50
31) Acrylonitrile	(2)				Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.2	1
34) n-Hexane	(2)				Not Detected					2	5
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
38) di-Isopropyl ether	(2)				Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)				Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)				Not Detected					0.4	2

Digitally signed by Linda C. Pape on 11/22/2019 at 11:18. Target 3.5 esignature user ID: lcp00895

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov22a.b/ln22b05.d Injection date and time: **22-NOV-2019 10:07**
Data file Sample Info. Line: VBLKL86;VBLKL86;1;3;;;;;; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 11:17 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)				Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					1	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
72) Methylcyclohexane	(2)				Not Detected					0.5	5
73) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
74) Dibromomethane	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
76) Methyl Methacrylate	(2)				Not Detected					0.2	5
78) Bromodichloromethane	(2)				Not Detected					0.2	1
79) 2-Nitropropane	(2)				Not Detected					0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
81) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
82) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
88) Toluene	(3)				Not Detected					0.2	1
89) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
90) 1,3-Dichloropropene (total)	(3)				Not Detected					0.4	2
91) Ethyl Methacrylate	(3)				Not Detected					0.2	5
92) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
94) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
96) 2-Hexanone	(3)				Not Detected					0.3	10
97) Dibromochloromethane	(3)				Not Detected					0.2	1
99) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
101) 1-Chlorohexane	(3)				Not Detected					0.3	5
102) Chlorobenzene	(3)				Not Detected					0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
109) Styrene	(3)				Not Detected					0.2	5
110) Bromoform	(3)				Not Detected					1	4
111) Isopropylbenzene	(3)				Not Detected					0.2	5
112) Cyclohexanone	(1)				Not Detected					25	100
115) Bromobenzene	(4)				Not Detected					0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
117) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
118) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50
119) n-Propylbenzene	(4)				Not Detected					0.2	5

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov22a.b/ln22b05.d Injection date and time: **22-NOV-2019 10:07**
Data file Sample Info. Line: VBLKL86;VBLKL86;1;3;;;;;; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 11:17 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

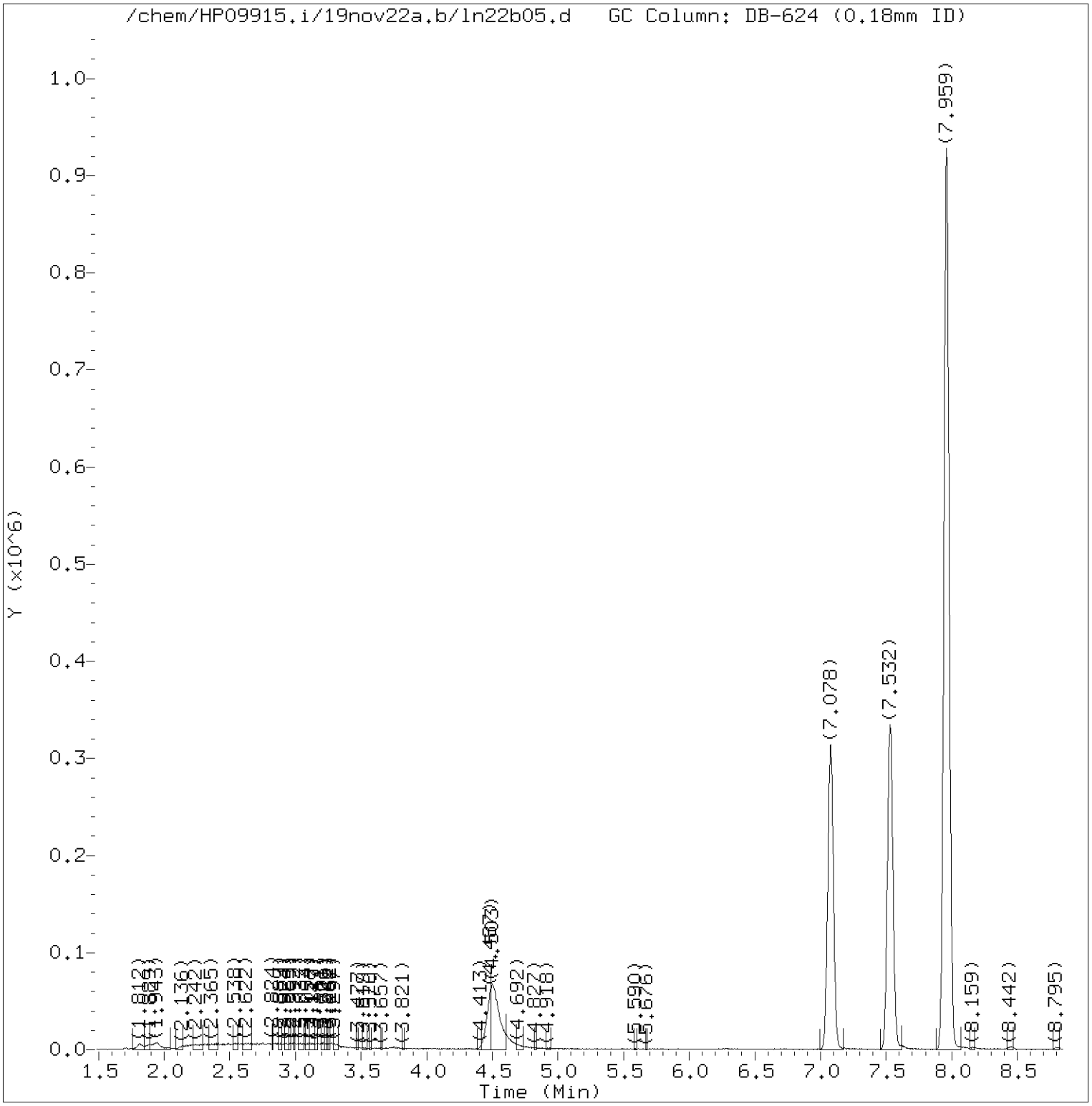
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)				Not Detected					0.2	5
121) 4-Chlorotoluene	(4)				Not Detected					0.2	5
122) 1,3,5-Trimethylbenzene	(4)				Not Detected					0.3	5
124) tert-Butylbenzene	(4)				Not Detected					0.3	5
125) Pentachloroethane	(4)				Not Detected					0.2	5
126) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5
127) sec-Butylbenzene	(4)				Not Detected					0.2	5
129) 1,3-Dichlorobenzene	(4)				Not Detected					0.2	5
130) p-Isopropyltoluene	(4)				Not Detected					0.2	5
133) 1,4-Dichlorobenzene	(4)				Not Detected					0.2	5
134) 1,2,3-Trimethylbenzene	(4)				Not Detected					0.3	5
135) Benzyl Chloride	(4)				Not Detected					1	5
136) 1,3-Diethylbenzene	(4)				Not Detected					0.2	5
137) 1,4-Diethylbenzene	(4)				Not Detected					0.2	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
139) n-Butylbenzene	(4)				Not Detected					0.2	5
140) 1,2-Diethylbenzene	(4)				Not Detected					0.2	5
141) Diethylbenzene (total)	(4)				Not Detected					0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.3	5
144) 1,3,5-Trichlorobenzene	(4)				Not Detected					0.2	5
146) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	5
147) Hexachlorobutadiene	(4)				Not Detected					2	5
148) Naphthalene	(4)				Not Detected					1	5
149) 1,2,3-Trichlorobenzene	(4)				Not Detected					0.4	5
150) 2-Methylnaphthalene	(4)				Not Detected					2	4

Total number of targets = 110

Digitally signed by Linda C. Pape on 11/22/2019 at 11:18. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:02. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

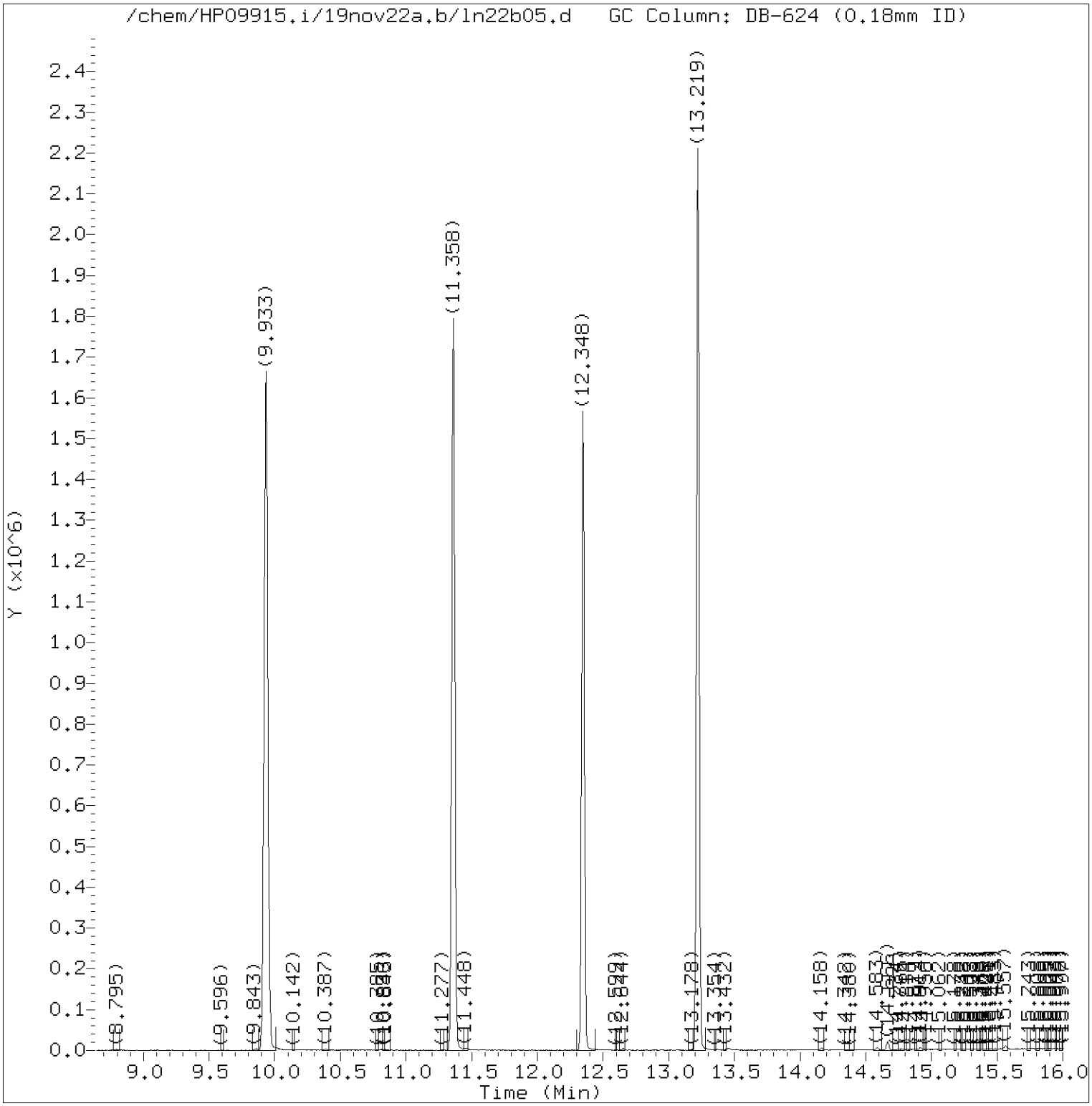
Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22b05.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 10:07 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:17 lcp00895

Sample Name: VBLKL86 Lab Sample ID: VBLKL86

Digitally signed by Linda C. Pape
on 11/22/2019 at 11:18.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22b05.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 10:07 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:17 lcp00895

Sample Name: VBLKL86 Lab Sample ID: VBLKL86

Digitally signed by Linda C. Pape
on 11/22/2019 at 11:18.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22b05.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 10:07 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:17 lcp00895

Sample Name: VBLKL86 Lab Sample ID: VBLKL86

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.503	65	256566	250.000
52)$Dibromofluoromethane	(2)	7.075	113	303488	47.359
57)$1,2-Dichloroethane-d4	(2)	7.532	102	82856	50.733
66)*Fluorobenzene	(2)	7.959	96	1310742	50.000
83)$Toluene-d8	(3)	9.933	98	1357743	48.976
100)*Chlorobenzene-d5	(3)	11.361	117	1059508	50.000
114)$4-Bromofluorobenzene	(3)	12.348	95	519370	49.476
131)*1,4-Dichlorobenzene-d4	(4)	13.219	152	558840	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/22/2019 at 11:18.
Target 3.5 esignature user ID: lcp00895

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23b01.d
Data file Sample Info. Line: VBLKL87;VBLKL87;1;3;;;;;;
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Injection date and time: **23-NOV-2019 09:48**
Instrument ID: **HP09915.i** Batch: **L193271AA**

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493	(-0.003)	936	65	224793	(3)	250.00	
66) Fluorobenzene	7.953	(0.003)	2012	96	1154568	(2)	50.00	
100) Chlorobenzene-d5	11.358	(0.000)	3071	117	947038	(1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.220	(0.003)	3650	152	506608	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(-0.001)	113	273712	48.490	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	73640	51.189	102%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	1203589	48.571	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	460603	49.089	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)				Not Detected					0.2	1
4) Chloromethane	(2)				Not Detected					0.2	1
5) 1,3-Butadiene	(2)				Not Detected					1	3
6) Vinyl Chloride	(2)				Not Detected					0.2	1
8) Bromomethane	(2)				Not Detected					0.3	1
9) Chloroethane	(2)				Not Detected					0.2	1
11) n-Pentane	(2)				Not Detected					0.4	10
12) Trichlorofluoromethane	(2)				Not Detected					0.2	1
14) Ethyl ether	(2)				Not Detected					0.2	5
15) Freon 123a	(2)				Not Detected					0.4	5
16) Acrolein	(1)				Not Detected					2	100
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
21) 2-Propanol	(1)				Not Detected					18	100
22) Methyl Iodide	(2)				Not Detected					0.2	1
23) Carbon Disulfide	(2)				Not Detected					0.2	5
25) Allyl Chloride	(2)				Not Detected					0.3	5
27) Methyl Acetate	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
30) t-Butyl alcohol	(1)				Not Detected					12	50
31) Acrylonitrile	(2)				Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.2	1
34) n-Hexane	(2)				Not Detected					2	5
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
38) di-Isopropyl ether	(2)				Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)				Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)				Not Detected					0.4	2

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKL87

Data file: /chem/HP09915.i/19nov23a.b/ln23b01.d Injection date and time: **23-NOV-2019 09:48**
Data file Sample Info. Line: VBLKL87;VBLKL87;1;3;;;;;; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)				Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					1	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
72) Methylcyclohexane	(2)				Not Detected					0.5	5
73) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
74) Dibromomethane	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
76) Methyl Methacrylate	(2)				Not Detected					0.2	5
78) Bromodichloromethane	(2)				Not Detected					0.2	1
79) 2-Nitropropane	(2)				Not Detected					0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
81) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
82) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
88) Toluene	(3)				Not Detected					0.2	1
89) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
90) 1,3-Dichloropropene (total)	(3)				Not Detected					0.4	2
91) Ethyl Methacrylate	(3)				Not Detected					0.2	5
92) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
94) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
96) 2-Hexanone	(3)				Not Detected					0.3	10
97) Dibromochloromethane	(3)				Not Detected					0.2	1
99) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
101) 1-Chlorohexane	(3)				Not Detected					0.3	5
102) Chlorobenzene	(3)				Not Detected					0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
109) Styrene	(3)				Not Detected					0.2	5
110) Bromoform	(3)				Not Detected					1	4
111) Isopropylbenzene	(3)				Not Detected					0.2	5
112) Cyclohexanone	(1)				Not Detected					25	100
115) Bromobenzene	(4)				Not Detected					0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
117) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
118) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50
119) n-Propylbenzene	(4)				Not Detected					0.2	5

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23b01.d Injection date and time: **23-NOV-2019 09:48**
Data file Sample Info. Line: VBLKL87;VBLKL87;1;3;;;;;; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

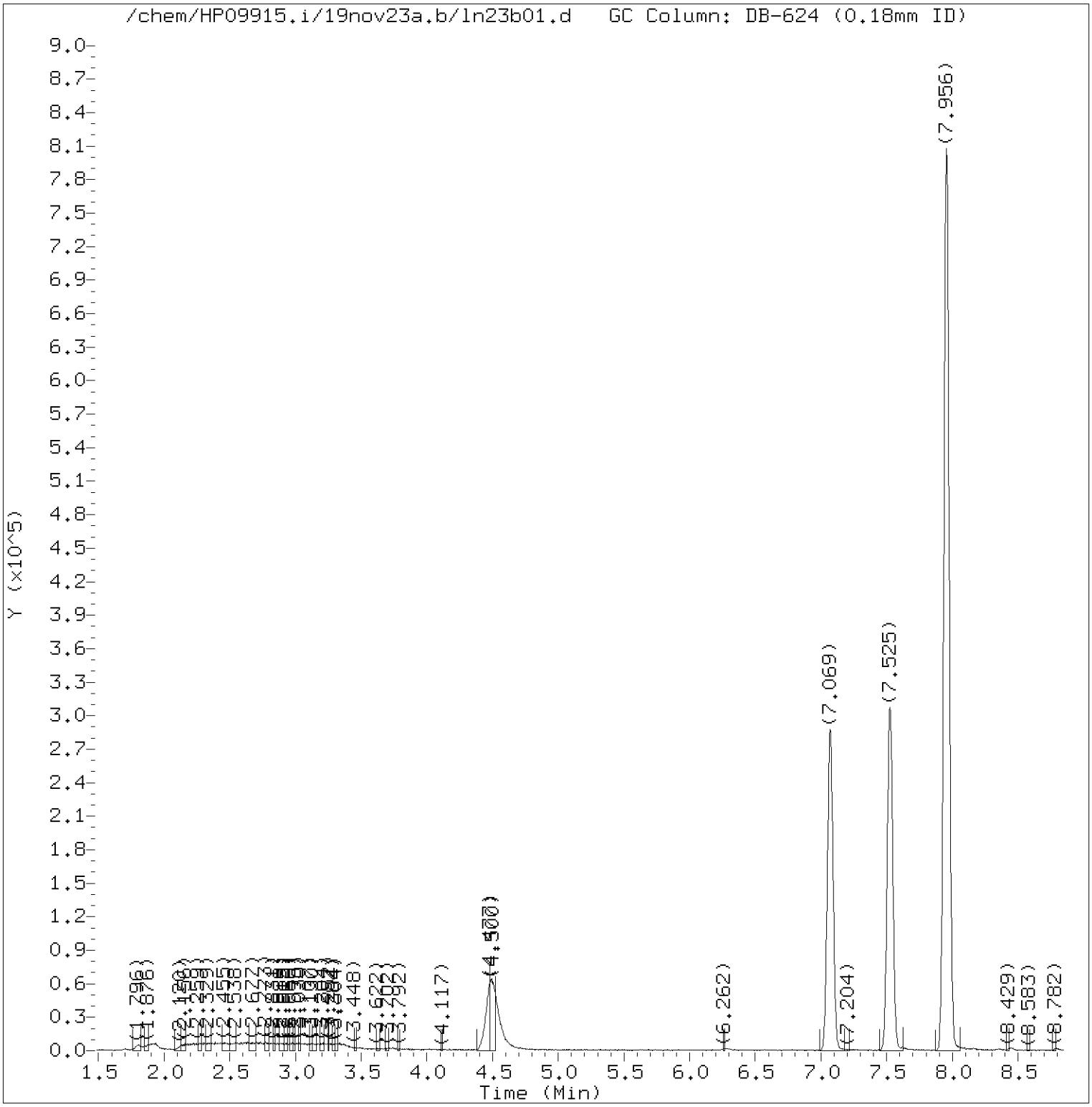
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)			Not Detected					0.2	5
121) 4-Chlorotoluene	(4)			Not Detected					0.2	5
122) 1,3,5-Trimethylbenzene	(4)			Not Detected					0.3	5
124) tert-Butylbenzene	(4)			Not Detected					0.3	5
125) Pentachloroethane	(4)			Not Detected					0.2	5
126) 1,2,4-Trimethylbenzene	(4)			Not Detected					1	5
127) sec-Butylbenzene	(4)			Not Detected					0.2	5
129) 1,3-Dichlorobenzene	(4)			Not Detected					0.2	5
130) p-Isopropyltoluene	(4)			Not Detected					0.2	5
133) 1,4-Dichlorobenzene	(4)			Not Detected					0.2	5
134) 1,2,3-Trimethylbenzene	(4)			Not Detected					0.3	5
135) Benzyl Chloride	(4)			Not Detected					1	5
136) 1,3-Diethylbenzene	(4)			Not Detected					0.2	5
137) 1,4-Diethylbenzene	(4)	13.441(-0.000)	119	3836	0.216	0.22		J	0.2	5
138) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
139) n-Butylbenzene	(4)	13.461(-0.000)	92	4540	0.344	0.34		J	0.2	5
140) 1,2-Diethylbenzene	(4)			Not Detected					0.2	5
141) Diethylbenzene (total)	(4)			Not Detected					0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)			Not Detected					0.3	5
144) 1,3,5-Trichlorobenzene	(4)	14.165(-0.000)	180	5851	0.552	0.55		J	0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.586(-0.000)	180	5468	0.530	0.53		J	0.3	5
147) Hexachlorobutadiene	(4)			Not Detected					2	5
148) Naphthalene	(4)			Not Detected					1	5
149) 1,2,3-Trichlorobenzene	(4)	14.914(-0.000)	180	5973	0.595	0.60		J	0.4	5
150) 2-Methylnaphthalene	(4)			Not Detected					2	4

Total number of targets = 110

Digitally signed by Linda C. Pape on 11/25/2019 at 13:55. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:45. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

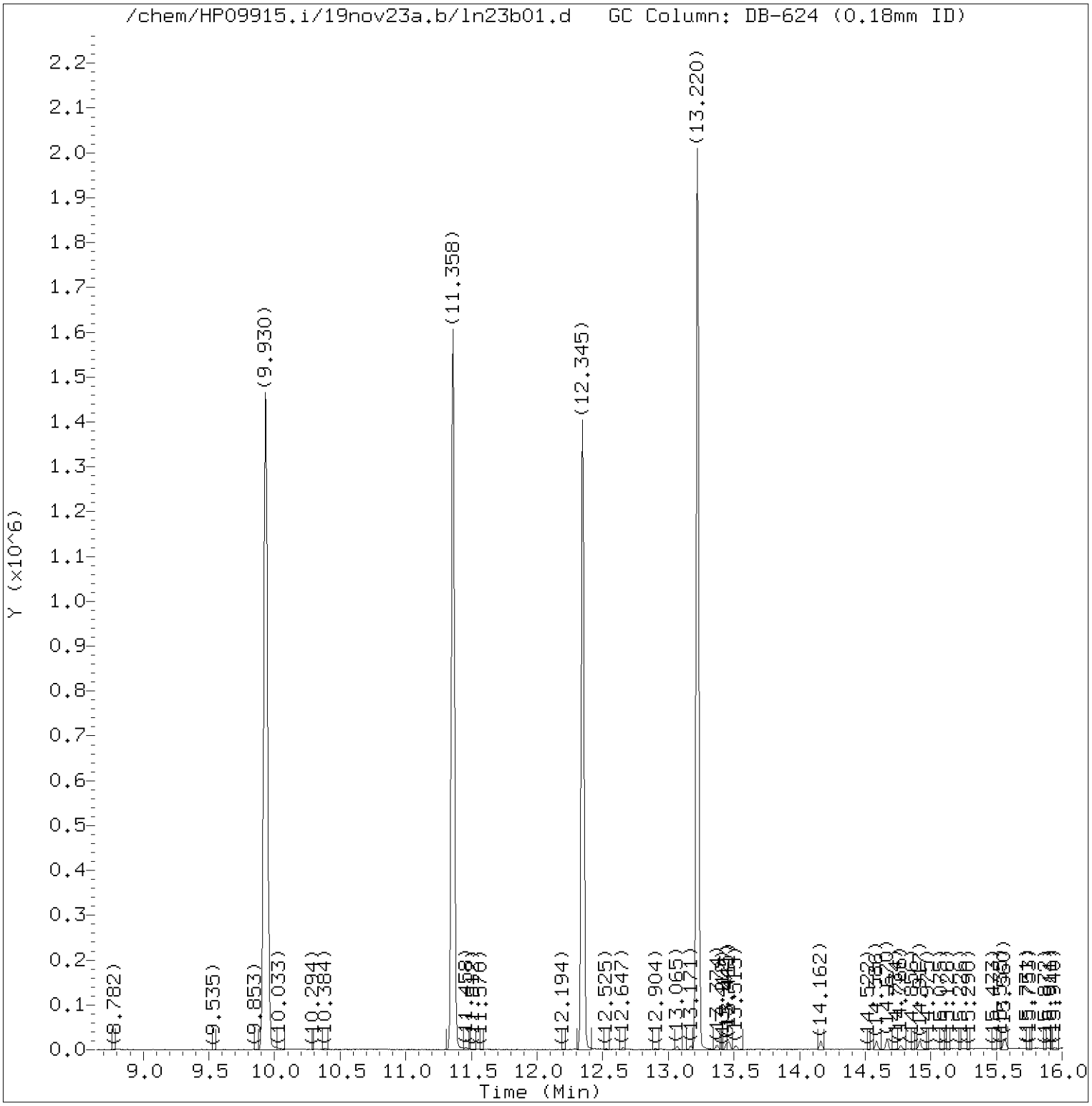
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:55.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:55.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

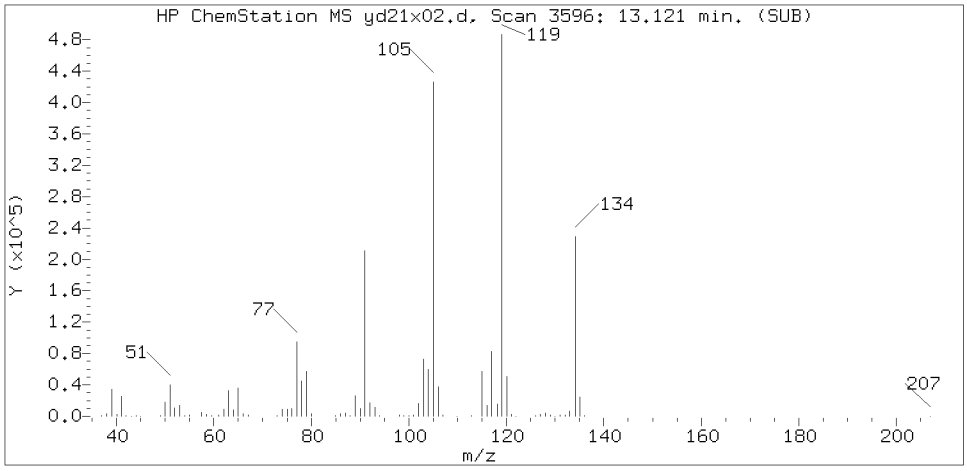
Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.493	65	224793	250.000
52)$Dibromofluoromethane	(2)	7.075	113	273712	48.490
57)$1,2-Dichloroethane-d4	(2)	7.525	102	73640	51.189
66)*Fluorobenzene	(2)	7.953	96	1154568	50.000
83)$Toluene-d8	(3)	9.930	98	1203589	48.571
100)*Chlorobenzene-d5	(3)	11.358	117	947038	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	460603	49.089
131)*1,4-Dichlorobenzene-d4	(4)	13.220	152	506608	50.000
137) 1,4-Diethylbenzene	(4)	13.441	119	3836	0.216
139) n-Butylbenzene	(4)	13.461	92	4540	0.344
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	5851	0.552
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	5468	0.530
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	5973	0.595

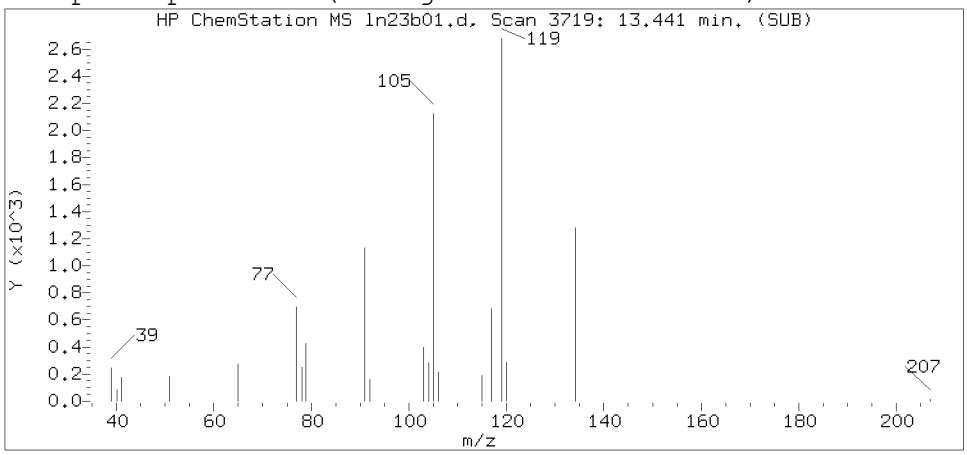
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:55.
Target 3.5 esignature user ID: lcp00895

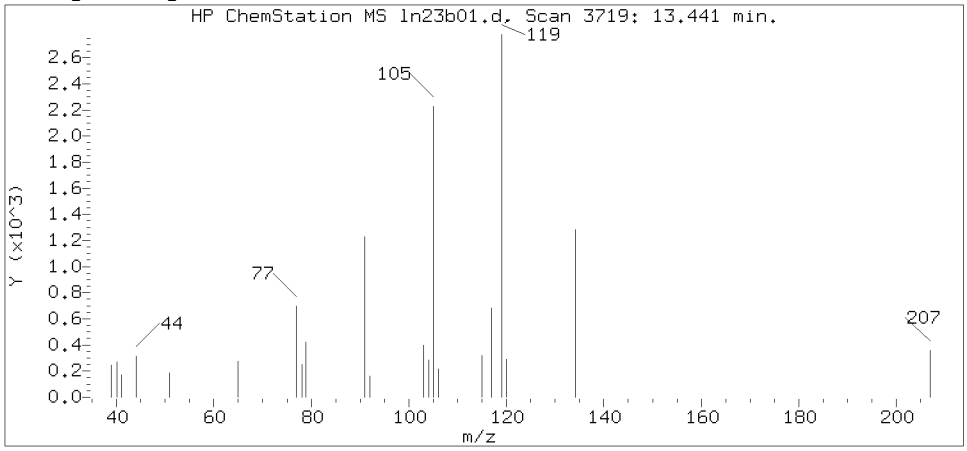
Reference Standard Spectrum for 1,4-Diethylbenzene

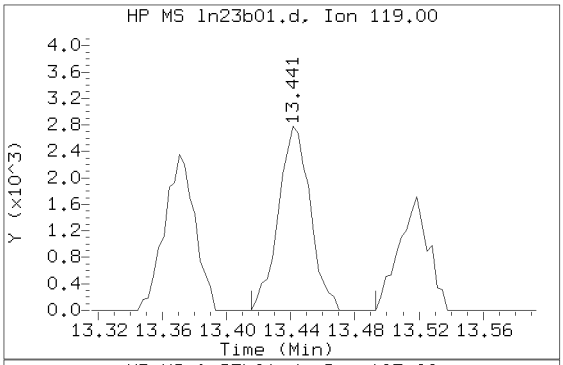


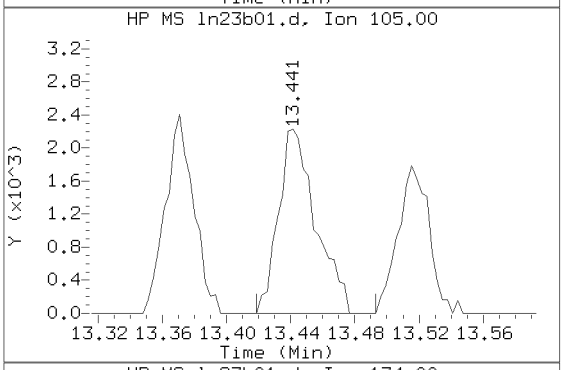
Sample Spectrum (Background Subtracted)

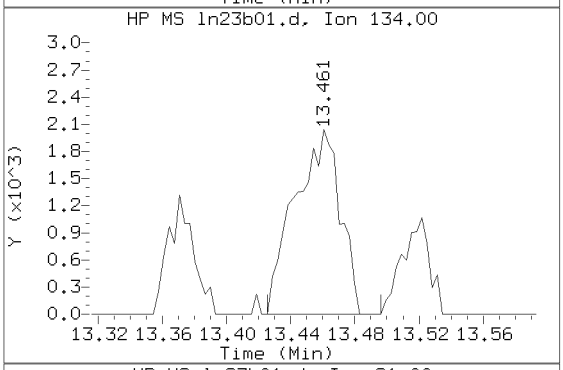


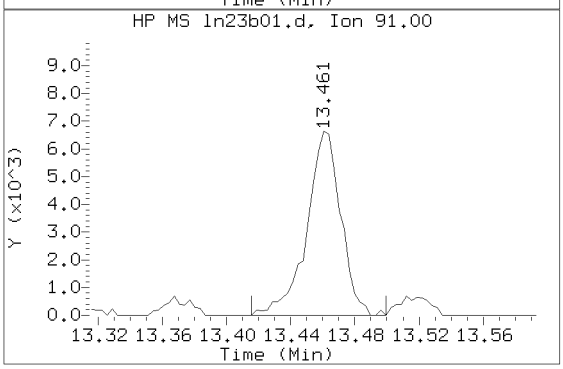
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

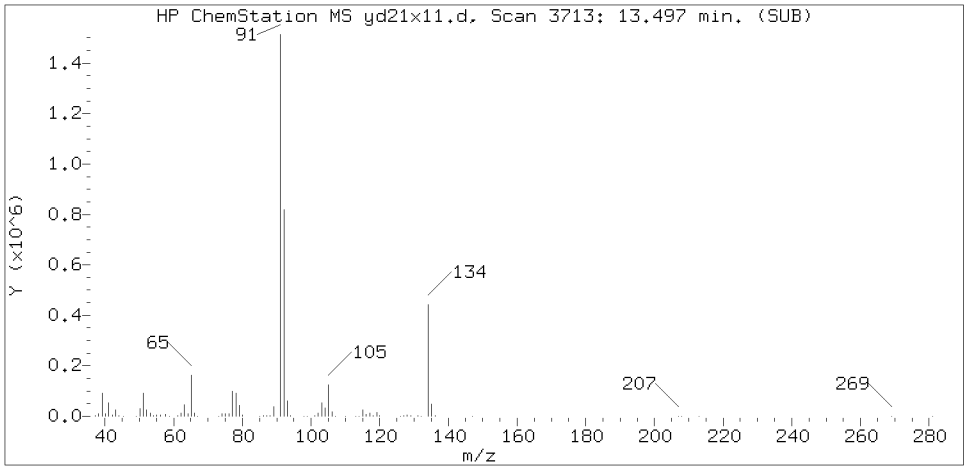
Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

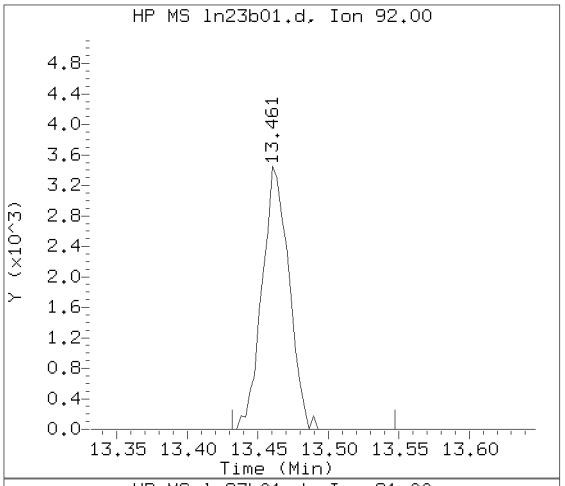
Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compound Number : 137
Compound Name : 1,4-Diethylbenzene
Scan Number : 3719
Retention Time (minutes): 13.441
Relative Retention Time :-0.00025
Quant Ion : 119.00
Area (flag) : 3836
On-Column Amount (ng) : 0.2156

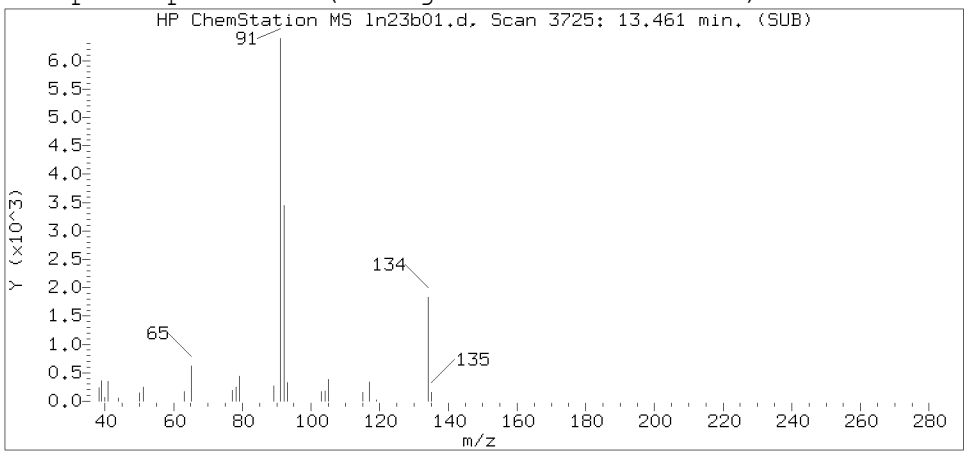
Digitally signed by Linda C. Pape on 11/25/2019 at 13:55.
Target 3.5 esignature user ID: lcp00895

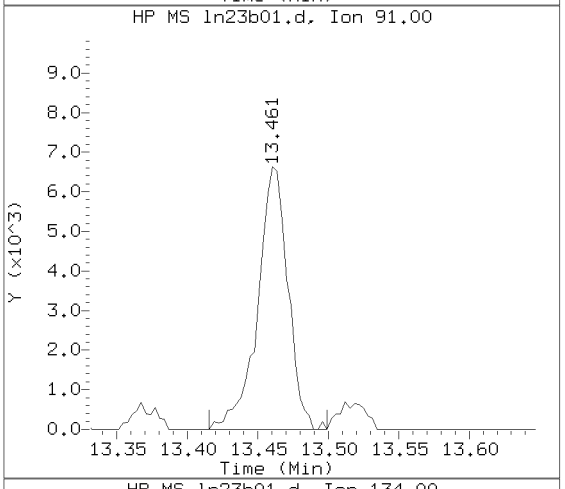
Reference Standard Spectrum for n-Butylbenzene



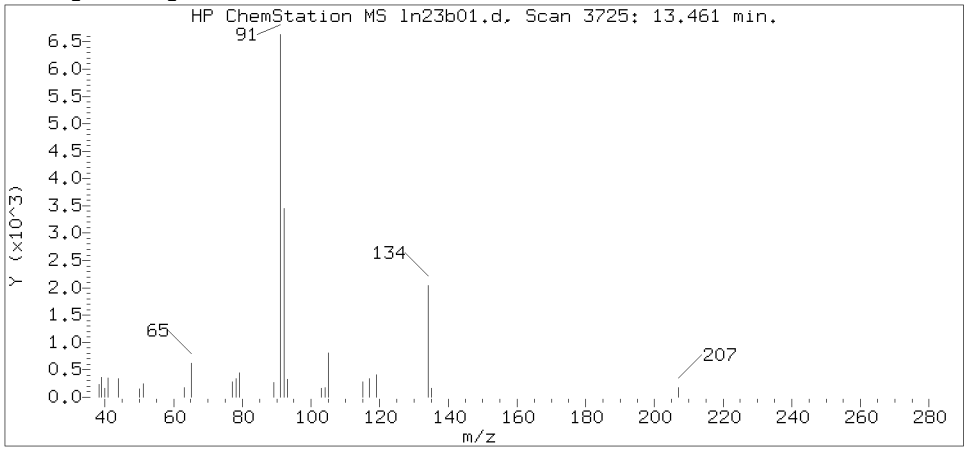


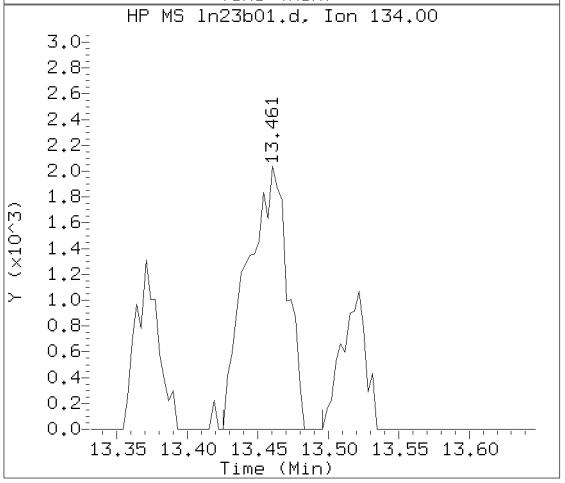
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 3725
Retention Time (minutes): 13.461
Relative Retention Time :-0.00000
Quant Ion : 92.00
Area (flag) : 4540
On-Column Amount (ng) : 0.3440

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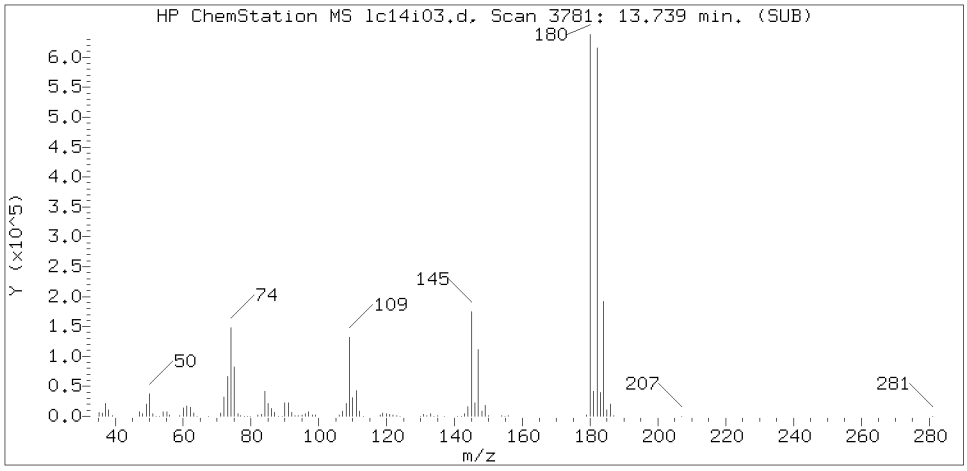
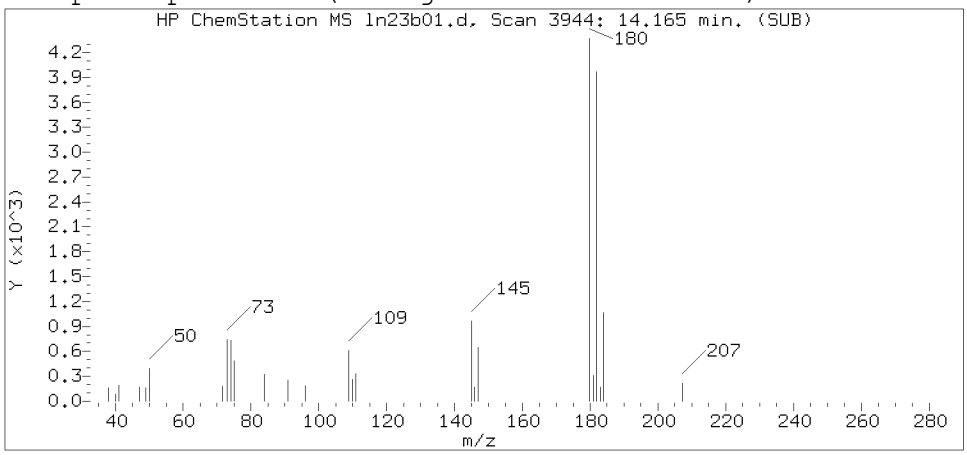
Target 3.5 esignature user ID: lcp00895

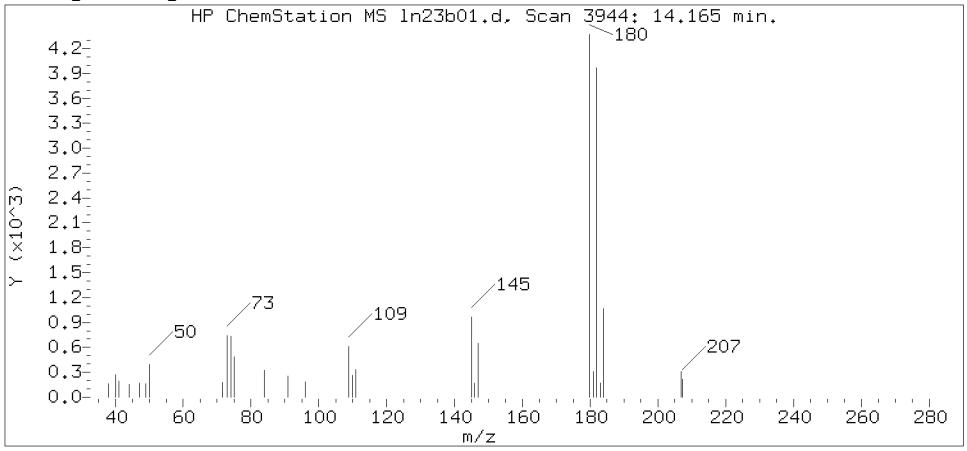
Reference Standard Spectrum for 1,3,5-Trichlorobenzene

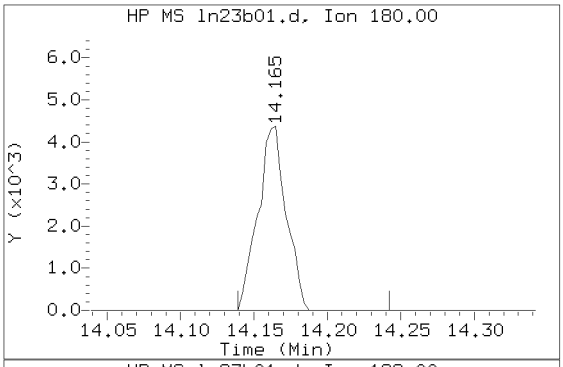


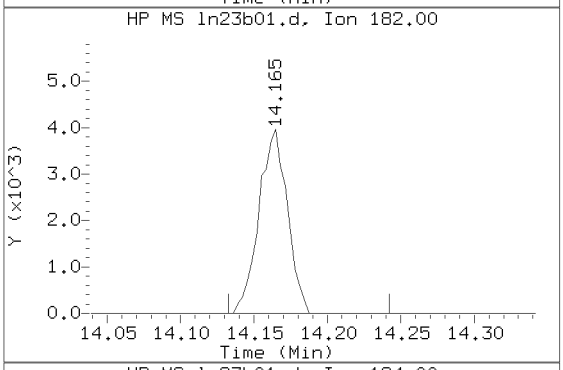
Sample Spectrum (Background Subtracted)

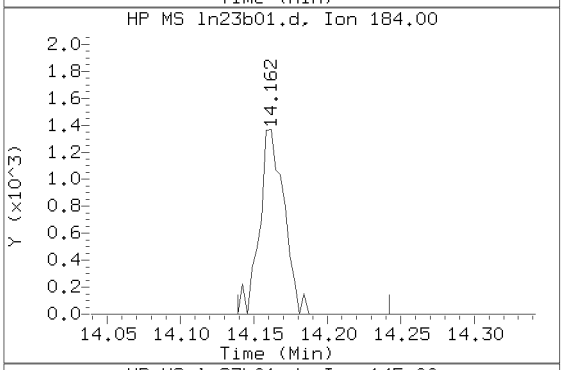


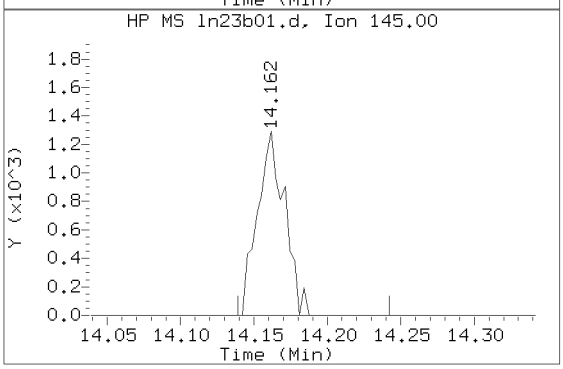
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compound Number : 144
Compound Name : 1,3,5-Trichlorobenzene
Scan Number : 3944
Retention Time (minutes): 14.165
Relative Retention Time :-0.00026
Quant Ion : 180.00
Area (flag) : 5851
On-Column Amount (ng) : 0.5516

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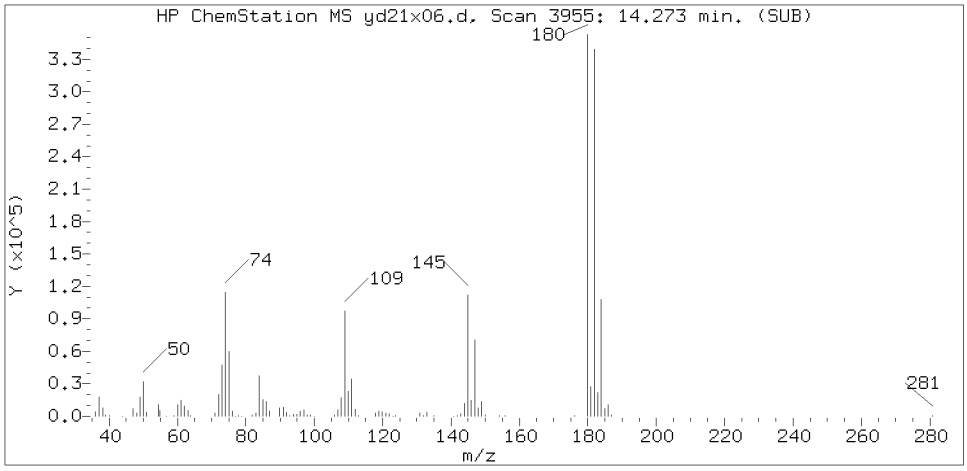
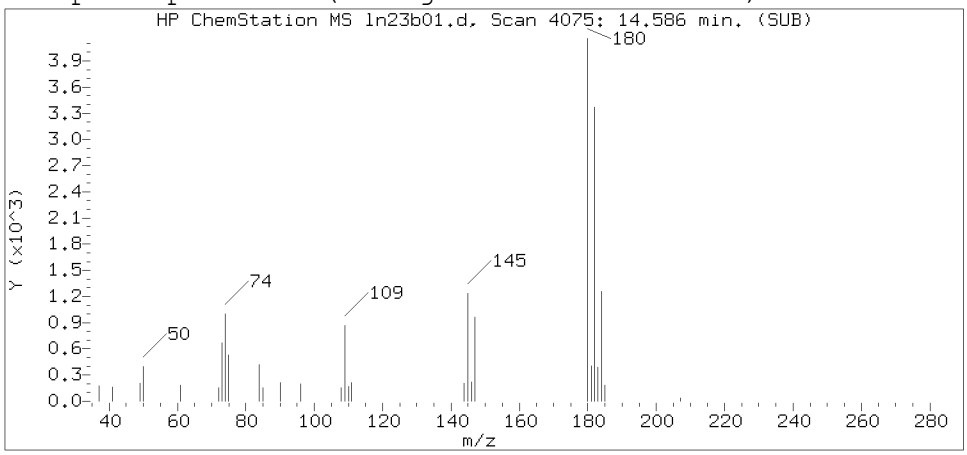
Target 3.5 esignature user ID: lcp00895

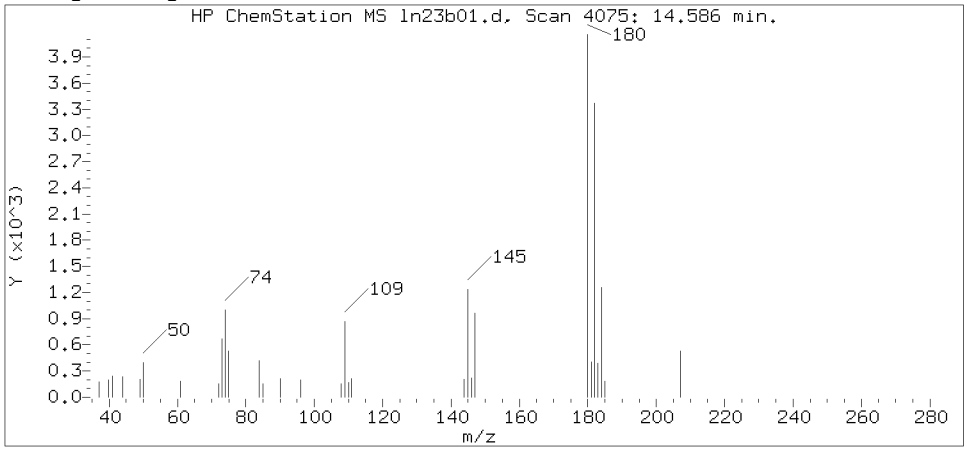
Reference Standard Spectrum for 1,2,4-Trichlorobenzene

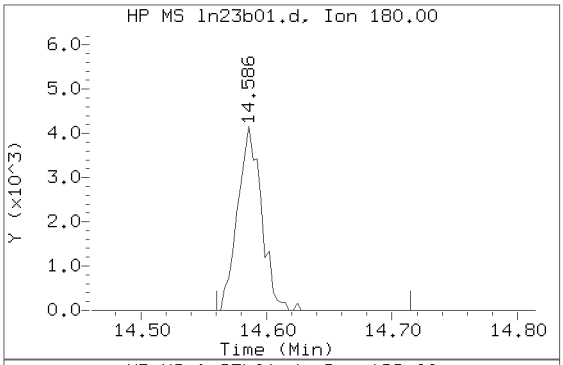


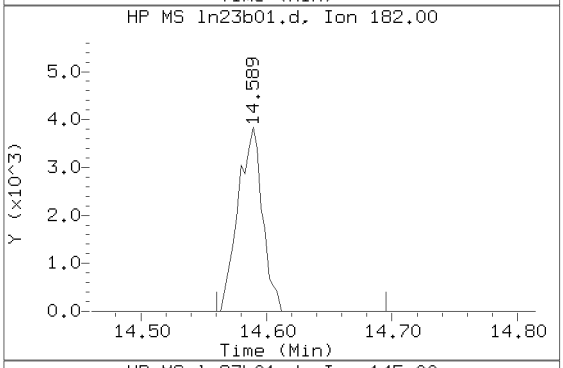
Sample Spectrum (Background Subtracted)

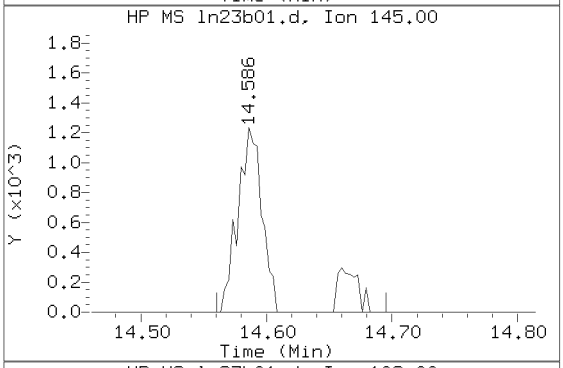


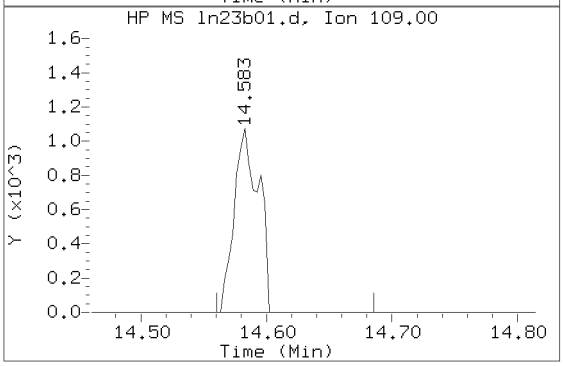
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compound Number : 146
Compound Name : 1,2,4-Trichlorobenzene
Scan Number : 4075
Retention Time (minutes): 14.586
Relative Retention Time :-0.00027
Quant Ion : 180.00
Area (flag) : 5468
On-Column Amount (ng) : 0.5302

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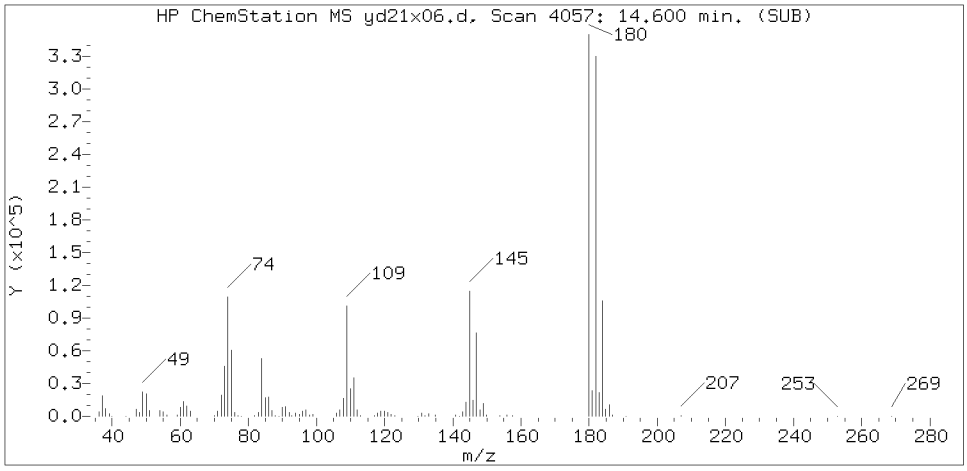
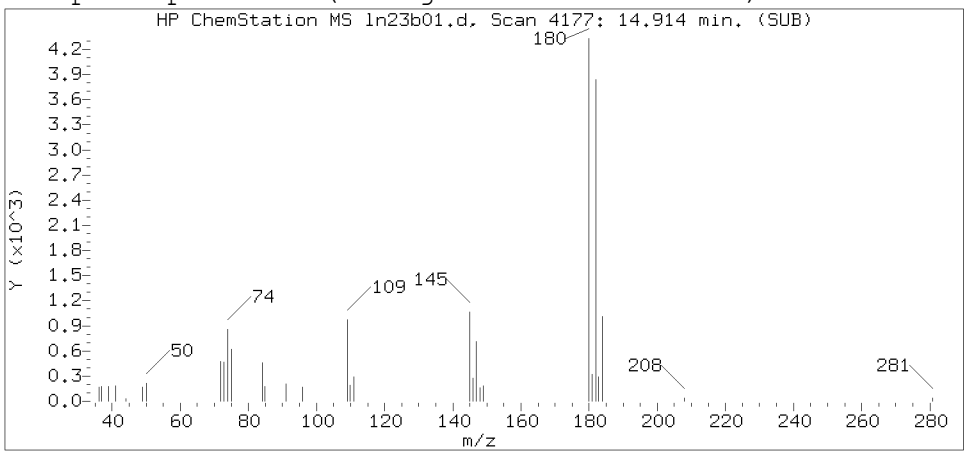
Target 3.5 esignature user ID: lcp00895

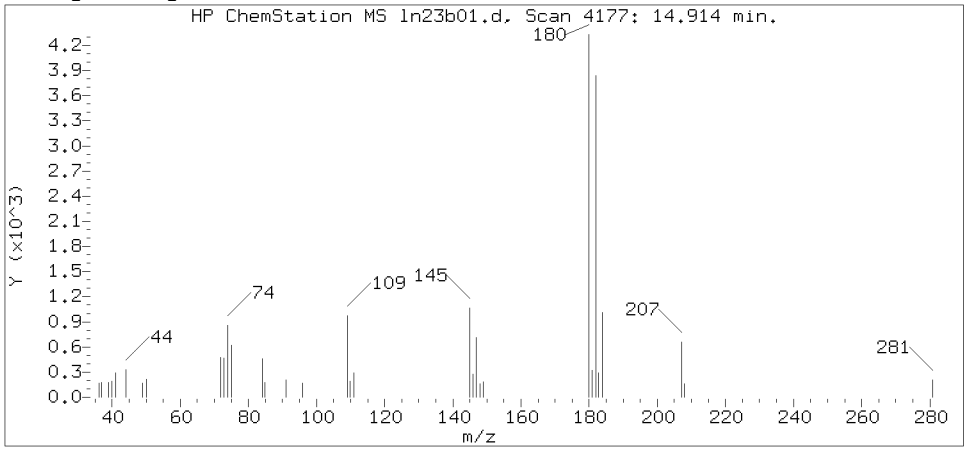
Reference Standard Spectrum for 1,2,3-Trichlorobenzene

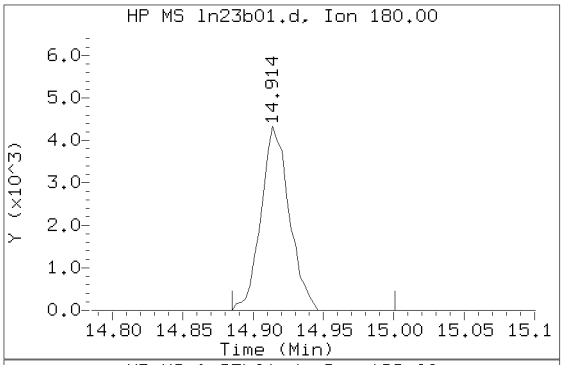


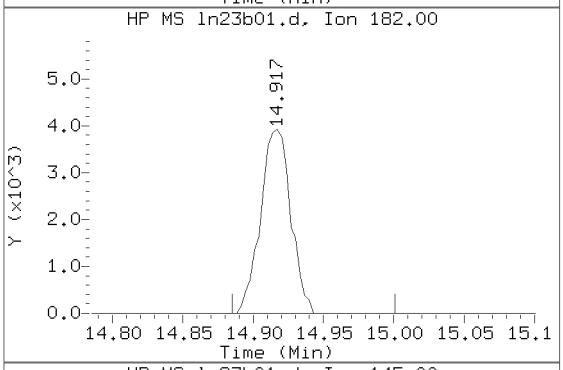
Sample Spectrum (Background Subtracted)

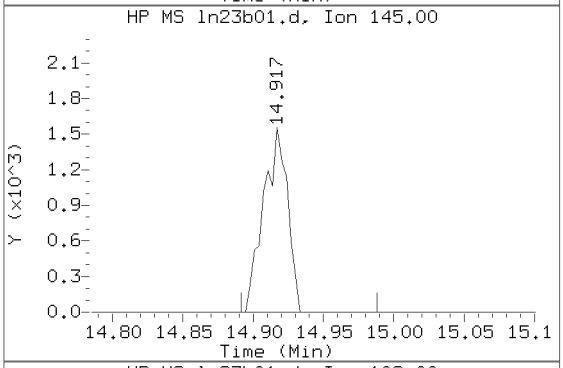


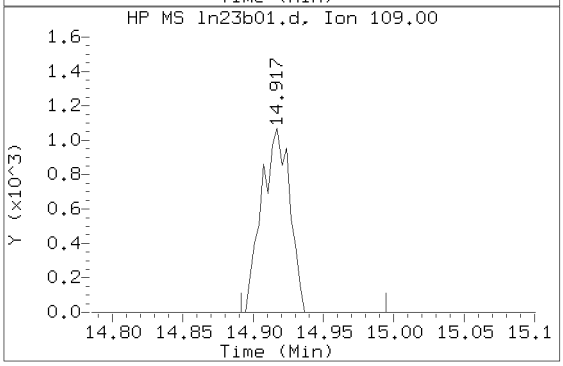
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compound Number : 149
Compound Name : 1,2,3-Trichlorobenzene
Scan Number : 4177
Retention Time (minutes): 14.914
Relative Retention Time :-0.00003
Quant Ion : 180.00
Area (flag) : 5973
On-Column Amount (ng) : 0.5952

Digitally signed by Linda C. Pape on 11/25/2019 at 13:55.
Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL86

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL86

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s31.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	16	
74-87-3	Chloromethane	19	
106-99-0	1,3-Butadiene	24	
75-01-4	Vinyl Chloride	18	
74-83-9	Bromomethane	15	
75-00-3	Chloroethane	16	
109-66-0	n-Pentane	16	
75-69-4	Trichlorofluoromethane	18	
60-29-7	Ethyl ether	21	
354-23-4	Freon 123a	20	
107-02-8	Acrolein	150	
75-35-4	1,1-Dichloroethene	21	
67-64-1	Acetone	150	
76-13-1	Freon 113	19	
67-63-0	2-Propanol	150	
74-88-4	Methyl Iodide	18	
75-15-0	Carbon Disulfide	17	
107-05-1	Allyl Chloride	19	
79-20-9	Methyl Acetate	19	
75-09-2	Methylene Chloride	21	
75-65-0	t-Butyl alcohol	200	
107-13-1	Acrylonitrile	98	
156-60-5	trans-1,2-Dichloroethene	20	
1634-04-4	Methyl Tertiary Butyl Ether	19	
110-54-3	n-Hexane	19	
75-34-3	1,1-Dichloroethane	20	
108-20-3	di-Isopropyl ether	19	
126-99-8	2-Chloro-1,3-butadiene	19	
637-92-3	Ethyl t-butyl ether	19	
156-59-2	cis-1,2-Dichloroethene	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL86

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL86

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s31.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	42	
78-93-3	2-Butanone	140	
594-20-7	2,2-Dichloropropane	20	
107-12-0	Propionitrile	170	
126-98-7	Methacrylonitrile	150	
74-97-5	Bromochloromethane	19	
109-99-9	Tetrahydrofuran	110	
67-66-3	Chloroform	21	
71-55-6	1,1,1-Trichloroethane	20	
110-82-7	Cyclohexane	19	
563-58-6	1,1-Dichloropropene	20	
56-23-5	Carbon Tetrachloride	19	
78-83-1	Isobutyl Alcohol	510	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	21	
994-05-8	t-Amyl methyl ether	19	
142-82-5	n-Heptane	18	
71-36-3	n-Butanol	1000	
79-01-6	Trichloroethene	21	
108-87-2	Methylcyclohexane	19	
78-87-5	1,2-Dichloropropane	22	
74-95-3	Dibromomethane	21	
123-91-1	1,4-Dioxane	640	
80-62-6	Methyl Methacrylate	20	
75-27-4	Bromodichloromethane	20	
79-46-9	2-Nitropropane	15	
110-75-8	2-Chloroethyl Vinyl Ether	34	
10061-01-5	cis-1,3-Dichloropropene	20	
108-10-1	4-Methyl-2-pentanone	95	
108-88-3	Toluene	21	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL86

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL86

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s31.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	19	
542-75-6	1,3-Dichloropropene (total)	40	
97-63-2	Ethyl Methacrylate	19	
79-00-5	1,1,2-Trichloroethane	22	
127-18-4	Tetrachloroethene	20	
142-28-9	1,3-Dichloropropane	21	
591-78-6	2-Hexanone	93	
124-48-1	Dibromochloromethane	19	
106-93-4	1,2-Dibromoethane	21	
544-10-5	1-Chlorohexane	20	
108-90-7	Chlorobenzene	21	
630-20-6	1,1,1,2-Tetrachloroethane	20	
100-41-4	Ethylbenzene	21	
179601-23-1	m+p-Xylene	42	
95-47-6	o-Xylene	21	
1330-20-7	Xylene (Total)	63	
100-42-5	Styrene	21	
75-25-2	Bromoform	16	
98-82-8	Isopropylbenzene	21	
108-94-1	Cyclohexanone	540	
108-86-1	Bromobenzene	21	
79-34-5	1,1,2,2-Tetrachloroethane	21	
96-18-4	1,2,3-Trichloropropane	21	
110-57-6	trans-1,4-Dichloro-2-butene	62	
103-65-1	n-Propylbenzene	22	
95-49-8	2-Chlorotoluene	21	
106-43-4	4-Chlorotoluene	21	
108-67-8	1,3,5-Trimethylbenzene	21	
98-06-6	tert-Butylbenzene	21	
76-01-7	Pentachloroethane	19	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL86

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL86

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s31.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
95-63-6	1,2,4-Trimethylbenzene	21	
135-98-8	sec-Butylbenzene	21	
541-73-1	1,3-Dichlorobenzene	21	
99-87-6	p-Isopropyltoluene	21	
106-46-7	1,4-Dichlorobenzene	21	
526-73-8	1,2,3-Trimethylbenzene	21	
100-44-7	Benzyl Chloride	17	
141-93-5	1,3-Diethylbenzene	19	
105-05-5	1,4-Diethylbenzene	19	
95-50-1	1,2-Dichlorobenzene	21	
104-51-8	n-Butylbenzene	21	
135-01-3	1,2-Diethylbenzene	20	
25340-17-4	Diethylbenzene (total)	59	
96-12-8	1,2-Dibromo-3-chloropropane	19	
108-70-3	1,3,5-Trichlorobenzene	19	
120-82-1	1,2,4-Trichlorobenzene	19	
87-68-3	Hexachlorobutadiene	17	
91-20-3	Naphthalene	20	
87-61-6	1,2,3-Trichlorobenzene	19	
91-57-6	2-Methylnaphthalene	18	

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov22a.b/ln22s31.d Injection date and time: **22-NOV-2019 09:22**
Data file Sample Info. Line: LCSL86;LCSL86;1;3;LCS;;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.499	(-0.003)	938	65	276041	(5)	250.00	
66) Fluorobenzene	7.956	(0.003)	2013	96	1351151	(1)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	1085726	(1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(-0.003)	3651	152	574419	(0)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.068	(0.000)	113	314109	47.551	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(-0.001)	102	83540	49.622	99%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	1421656	50.043	100%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	545321	50.694	101%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
3) Dichlorodifluoromethane	(2)	2.088	(-0.000)	85	146439	15.541	15.54			0.2	1
4) Chloromethane	(2)	2.278	(-0.000)	50	168430	18.547	18.55			0.2	1
5) 1,3-Butadiene	(2)	2.400	(0.000)	39	178682	23.697	23.70			1	3
6) Vinyl Chloride	(2)	2.400	(0.000)	62	164260	18.123	18.12			0.2	1
8) Bromomethane	(2)	2.741	(0.001)	94	99770	15.356	15.36			0.3	1
9) Chloroethane	(2)	2.840	(0.000)	64	80610	16.184	16.18			0.2	1
11) n-Pentane	(2)	3.200	(0.001)	43	187289	16.241	16.24			0.4	10
12) Trichlorofluoromethane	(2)	3.149	(-0.000)	101	177789	18.220	18.22			0.2	1
14) Ethyl ether	(2)	3.432	(-0.000)	59	129822	20.589	20.59			0.2	5
15) Freon 123a	(2)	3.512	(0.001)	67	157834	20.108	20.11			0.4	5
16) Acrolein	(1)	3.615	(0.002)	56	300884	145.284	145.28			2	100
17) 1,1-Dichloroethene	(2)	3.753	(0.000)	96	118960	20.770	20.77			0.2	1
18) Acetone	(1)	3.805	(-0.000)	58	143327	154.370	154.37			0.7	20
19) Freon 113	(2)	3.795	(-0.000)	101	121983	18.667	18.67			0.2	10
21) 2-Propanol	(1)	3.988	(0.000)	45	97709	146.388	146.39			18	100
22) Methyl Iodide	(2)	3.959	(0.000)	142	209322	17.636	17.64			0.2	1
23) Carbon Disulfide	(2)	4.065	(0.000)	76	372728	17.269	17.27			0.2	5
25) Allyl Chloride	(2)	4.262	(0.000)	41	192420	18.728	18.73			0.3	5
27) Methyl Acetate	(2)	4.236	(0.000)	43	141243	19.147	19.15			0.2	5
28) Methylene Chloride	(2)	4.467	(0.000)	84	144865	21.251	21.25			0.3	1
30) t-Butyl alcohol	(1)	4.625	(0.002)	59	230834	198.625	198.62			12	50
31) Acrylonitrile	(2)	4.827	(0.000)	53	387984	97.759	97.76			0.3	20
32) trans-1,2-Dichloroethene	(2)	4.882	(-0.000)	96	134818	20.347	20.35			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	4.876	(0.000)	73	402470	18.505	18.51			0.2	1
34) n-Hexane	(2)	5.313	(-0.001)	57	198447	19.251	19.25			2	5
36) 1,1-Dichloroethane	(2)	5.548	(0.000)	63	234881	20.321	20.32			0.2	1
38) di-Isopropyl ether	(2)	5.602	(-0.000)	45	434007	19.468	19.47			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	5.657	(-0.000)	53	194244	18.731	18.73			0.2	5
40) Ethyl t-butyl ether	(2)	6.136	(-0.001)	59	411175	19.005	19.01			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.380	(0.000)	96	161379	21.699	21.70			0.2	1
43) 1,2-Dichloroethene (Total)	(2)			96	296197	42.047	42.05			0.4	2

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov22a.b/ln22s31.d Injection date and time: **22-NOV-2019 09:22**
Data file Sample Info. Line: LCSL86;LCSL86;1;3;LCS;;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	6.358(0.000)	43	729939	143.277	143.28			0.3	10
45) 2,2-Dichloropropane	(2)	6.390(0.000)	77	178131	19.825	19.82			0.3	1
47) Propionitrile	(1)	6.454(0.002)	54	240646	166.187	166.19			14	100
48) Methacrylonitrile	(2)	6.663(-0.000)	67	653880	152.734	152.73			6	50
49) Bromochloromethane	(2)	6.705(0.000)	128	75696	19.195	19.20			0.2	5
50) Tetrahydrofuran	(1)	6.715(0.001)	71	141054	107.840	107.84			0.7	10
51) Chloroform	(2)	6.856(0.000)	83	230393	20.840	20.84			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.081(-0.000)	97	187230	19.843	19.84			0.3	1
54) Cyclohexane	(2)	7.171(0.000)	56	237690	18.838	18.84			1	5
55) 1,1-Dichloropropene	(2)	7.290(0.000)	75	187307	20.495	20.50			0.2	5
56) Carbon Tetrachloride	(2)	7.281(0.000)	117	152272	19.028	19.03			0.2	1
58) Isobutyl Alcohol	(1)	7.451(0.001)	41	199143	509.200	509.20			36	250
60) Benzene	(2)	7.554(0.000)	78	577494	21.012	21.01			0.2	1
61) 1,2-Dichloroethane	(2)	7.631(0.000)	62	183049	20.707	20.71			0.3	1
65) t-Amyl methyl ether	(2)	7.737(-0.000)	73	417025	19.204	19.20			0.8	5
67) n-Heptane	(2)	7.956(0.000)	43	177798	18.463	18.46			2	5
69) n-Butanol	(1)	8.329(0.000)	56	345915	1027.650	1027.65			61	250
71) Trichloroethene	(2)	8.425(-0.000)	95	143279	20.705	20.70			0.2	1
72) Methylcyclohexane	(2)	8.731(-0.000)	83	250326	19.498	19.50			0.5	5
73) 1,2-Dichloropropane	(2)	8.763(-0.000)	63	151775	21.748	21.75			0.2	1
74) Dibromomethane	(2)	8.875(-0.000)	93	94760	20.986	20.99			0.2	1
75) 1,4-Dioxane	(1)	8.853(0.002)	88	59366	641.661	641.66			29	250
76) Methyl Methacrylate	(2)	8.843(-0.000)	69	135867	20.133	20.13			0.2	5
78) Bromodichloromethane	(2)	9.110(-0.000)	83	163717	20.205	20.21			0.2	1
79) 2-Nitropropane	(2)	9.383(-0.000)	41	37702	15.362	15.36			0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)	9.461(-0.000)	63	101485	33.859	33.86			0.2	10
81) cis-1,3-Dichloropropene	(2)	9.638(-0.000)	75	218744	20.326	20.33			0.2	1
82) 4-Methyl-2-pentanone	(2)	9.805(-0.000)	43	1023165	95.147	95.15			0.5	10
88) Toluene	(3)	10.007(-0.000)	92	373186	20.953	20.95			0.2	1
89) trans-1,3-Dichloropropene	(3)	10.255(0.000)	75	193929	19.181	19.18			0.2	1
90) 1,3-Dichloropropene (total)	(3)		100	412673	39.507	39.51			0.4	2
91) Ethyl Methacrylate	(3)	10.313(-0.000)	69	232684	18.937	18.94			0.2	5
92) 1,1,2-Trichloroethane	(3)	10.457(-0.000)	97	146523	21.699	21.70			0.2	1
93) Tetrachloroethene	(3)	10.538(-0.000)	166	152684	20.242	20.24			0.2	1
94) 1,3-Dichloropropane	(3)	10.615(0.000)	76	242124	21.001	21.00			0.2	1
96) 2-Hexanone	(3)	10.670(-0.000)	43	764524	93.216	93.22			0.3	10
97) Dibromochloromethane	(3)	10.824(0.000)	129	131597	19.025	19.02			0.2	1
99) 1,2-Dibromoethane	(3)	10.936(-0.000)	107	152685	20.823	20.82			0.2	1
101) 1-Chlorohexane	(3)	11.364(-0.000)	91	190403	19.900	19.90			0.3	5
102) Chlorobenzene	(3)	11.387(-0.000)	112	422592	20.982	20.98			0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)	11.464(-0.000)	131	130507	19.667	19.67			0.2	1
104) Ethylbenzene	(3)	11.467(-0.000)	91	712911	20.942	20.94			0.4	1
106) m+p-Xylene	(3)	11.580(-0.000)	106	567789	42.398	42.40			1	5
107) o-Xylene	(3)	11.908(-0.000)	106	274633	20.762	20.76			0.4	1
108) Xylene (Total)	(3)		106	842422	63.160	63.16			1	6
109) Styrene	(3)	11.920(-0.000)	104	463800	21.218	21.22			0.2	5
110) Bromoform	(3)	12.081(-0.000)	173	81624	15.792	15.79			1	4
111) Isopropylbenzene	(3)	12.203(-0.000)	105	702182	21.164	21.16			0.2	5
112) Cyclohexanone	(1)	12.287(0.001)	55	194471	536.696	536.70			25	100
115) Bromobenzene	(4)	12.467(-0.000)	156	177923	20.609	20.61			0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	12.448(0.000)	83	229750	21.173	21.17			0.2	1
117) 1,2,3-Trichloropropane	(4)	12.496(0.000)	110	68439	20.554	20.55			0.2	5
118) trans-1,4-Dichloro-2-butene	(4)	12.473(0.000)	53	206621	61.734	61.73			6	50
119) n-Propylbenzene	(4)	12.528(0.000)	91	825345	21.882	21.88			0.2	5

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Data file: /chem/HP09915.i/19nov22a.b/ln22s31.d Injection date and time: **22-NOV-2019 09:22**
Data file Sample Info. Line: LCSL86;LCSL86;1;3;LCS;;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)	12.605(0.000)	126	164379	20.514	20.51			0.2	5
121) 4-Chlorotoluene	(4)	12.698(0.000)	126	173549	20.808	20.81			0.2	5
122) 1,3,5-Trimethylbenzene	(4)	12.663(0.000)	105	587226	21.423	21.42			0.3	5
124) tert-Butylbenzene	(4)	12.904(0.000)	134	118320M	20.872	20.87			0.3	5
125) Pentachloroethane	(4)	12.936(0.000)	167	92382	18.926	18.93			0.2	5
126) 1,2,4-Trimethylbenzene	(4)	12.946(0.000)	105	612068	21.187	21.19			1	5
127) sec-Butylbenzene	(4)	13.065(0.000)	105	722217	21.350	21.35			0.2	5
129) 1,3-Dichlorobenzene	(4)	13.165(0.000)	146	328392	20.700	20.70			0.2	5
130) p-Isopropyltoluene	(4)	13.171(0.000)	119	616210	21.057	21.06			0.2	5
133) 1,4-Dichlorobenzene	(4)	13.239(0.000)	146	342298	20.813	20.81			0.2	5
134) 1,2,3-Trimethylbenzene	(4)	13.248(0.000)	105	634740	20.742	20.74			0.3	5
135) Benzyl Chloride	(4)	13.319(0.000)	91	388635	16.773	16.77			1	5
136) 1,3-Diethylbenzene	(4)	13.370(0.000)	119	371063	19.483	19.48			0.2	5
137) 1,4-Diethylbenzene	(4)	13.441(0.000)	119	392281	19.441	19.44			0.2	5
138) 1,2-Dichlorobenzene	(4)	13.499(0.000)	146	330293	21.099	21.10			0.2	5
139) n-Butylbenzene	(4)	13.464(0.000)	92	307732	20.566	20.57			0.2	5
140) 1,2-Diethylbenzene	(4)	13.515(0.000)	119	316183	19.694	19.69			0.2	5
141) Diethylbenzene (total)	(4)		100	1079527	58.618	58.62			0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)	14.042(0.000)	75	45003	18.946	18.95			0.3	5
144) 1,3,5-Trichlorobenzene	(4)	14.161(0.000)	180	231556	19.253	19.25			0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.586(0.000)	180	224584	19.204	19.20			0.3	5
147) Hexachlorobutadiene	(4)	14.666(0.000)	225	93404	16.916	16.92			2	5
148) Naphthalene	(4)	14.772(0.000)	128	769169	20.459	20.46			1	5
149) 1,2,3-Trichlorobenzene	(4)	14.914(0.000)	180	221335	19.451	19.45			0.4	5
150) 2-Methylnaphthalene	(4)	15.563(0.000)	142	413397	17.856	17.86			2	4

M = Compound was manually integrated.

Total number of targets = 110

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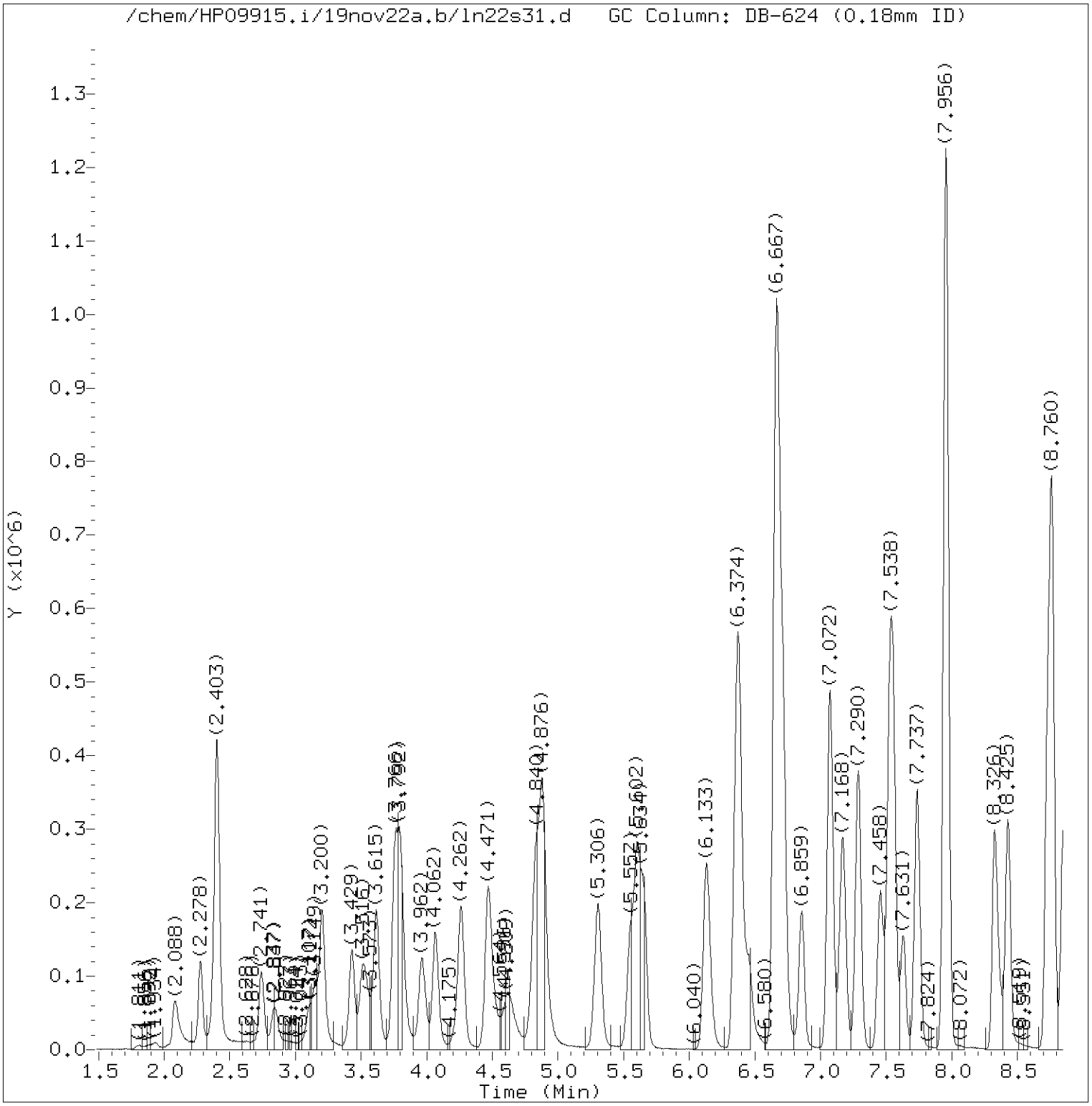
Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:02. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s31.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:22 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCSL86 Lab Sample ID: LCSL86

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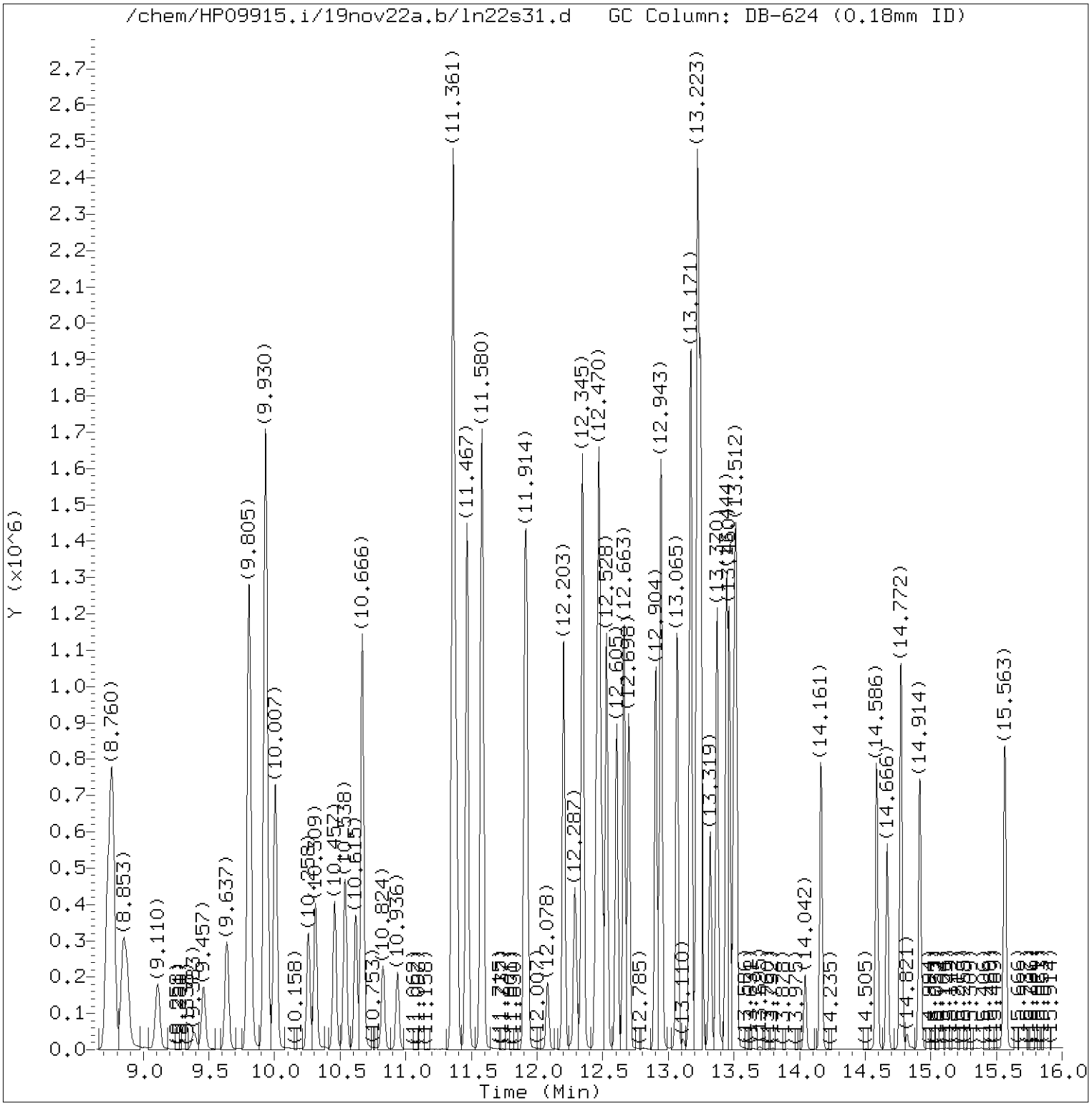
on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s31.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:22 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCSL86 Lab Sample ID: LCSL86

Digitally signed by Linda C. Pape
on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s31.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:22 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCSL86 Lab Sample ID: LCSL86

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.088	85	146439	15.541
4) Chloromethane	(2)	2.278	50	168430	18.547
5) 1,3-Butadiene	(2)	2.400	39	178682	23.697
6) Vinyl Chloride	(2)	2.400	62	164260	18.123
8) Bromomethane	(2)	2.741	94	99770	15.356
9) Chloroethane	(2)	2.840	64	80610	16.184
12) Trichlorofluoromethane	(2)	3.149	101	177789	18.220
11) n-Pentane	(2)	3.200	43	187289	16.241
14) Ethyl ether	(2)	3.432	59	129822	20.589
15) Freon 123a	(2)	3.512	67	157834	20.108
16) Acrolein	(1)	3.615	56	300884	145.284
17) 1,1-Dichloroethene	(2)	3.753	96	118960	20.770
19) Freon 113	(2)	3.795	101	121983	18.667
18) Acetone	(1)	3.805	58	143327	154.370
22) Methyl Iodide	(2)	3.959	142	209322	17.636
21) 2-Propanol	(1)	3.988	45	97709	146.388
23) Carbon Disulfide	(2)	4.065	76	372728	17.269
27) Methyl Acetate	(2)	4.236	43	141243	19.147
25) Allyl Chloride	(2)	4.262	41	192420	18.728
28) Methylene Chloride	(2)	4.467	84	144865	21.251
29)*t-Butyl alcohol-d10	(1)	4.499	65	276041	250.000
30) t-Butyl alcohol	(1)	4.625	59	230834	198.625
31) Acrylonitrile	(2)	4.827	53	387984	97.759
33) Methyl Tertiary Butyl Ether	(2)	4.876	73	402470	18.505
32) trans-1,2-Dichloroethene	(2)	4.882	96	134818	20.347
34) n-Hexane	(2)	5.313	57	198447	19.251
36) 1,1-Dichloroethane	(2)	5.548	63	234881	20.321
38) di-Isopropyl ether	(2)	5.602	45	434007	19.468
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	194244	18.731
40) Ethyl t-butyl ether	(2)	6.136	59	411175	19.005
43) 1,2-Dichloroethene (Total)	(2)		96	296197	42.047
44) 2-Butanone	(2)	6.358	43	729939	143.277
42) cis-1,2-Dichloroethene	(2)	6.380	96	161379	21.699
45) 2,2-Dichloropropane	(2)	6.390	77	178131	19.825
47) Propionitrile	(1)	6.454	54	240646	166.187
48) Methacrylonitrile	(2)	6.663	67	653880	152.734
49) Bromochloromethane	(2)	6.705	128	75696	19.195
50) Tetrahydrofuran	(1)	6.715	71	141054	107.840

* = Compound is an internal standard.

Digitally signed by Linda C. Pape
on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s31.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:22 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCSL86 Lab Sample ID: LCSL86

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	6.856	83	230393	20.840
52)$Dibromofluoromethane	(2)	7.068	113	314109	47.551
53) 1,1,1-Trichloroethane	(2)	7.081	97	187230	19.843
54) Cyclohexane	(2)	7.171	56	237690	18.838
56) Carbon Tetrachloride	(2)	7.281	117	152272	19.028
55) 1,1-Dichloropropene	(2)	7.290	75	187307	20.495
58) Isobutyl Alcohol	(1)	7.451	41	199143	509.200
57)$1,2-Dichloroethane-d4	(2)	7.528	102	83540	49.622
60) Benzene	(2)	7.554	78	577494	21.012
61) 1,2-Dichloroethane	(2)	7.631	62	183049	20.707
65) t-Amyl methyl ether	(2)	7.737	73	417025	19.204
67) n-Heptane	(2)	7.956	43	177798	18.463
66)*Fluorobenzene	(2)	7.956	96	1351151	50.000
69) n-Butanol	(1)	8.329	56	345915	1027.650
71) Trichloroethene	(2)	8.425	95	143279	20.705
72) Methylcyclohexane	(2)	8.731	83	250326	19.498
73) 1,2-Dichloropropane	(2)	8.763	63	151775	21.748
76) Methyl Methacrylate	(2)	8.843	69	135867	20.133
75) 1,4-Dioxane	(1)	8.853	88	59366	641.661
74) Dibromomethane	(2)	8.875	93	94760	20.986
78) Bromodichloromethane	(2)	9.110	83	163717	20.205
79) 2-Nitropropane	(2)	9.383	41	37702	15.362
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	101485	33.859
81) cis-1,3-Dichloropropene	(2)	9.637	75	218744	20.326
82) 4-Methyl-2-pentanone	(2)	9.805	43	1023165	95.147
83)$Toluene-d8	(3)	9.930	98	1421656	50.043
88) Toluene	(3)	10.007	92	373186	20.953
90) 1,3-Dichloropropene (total)	(3)		100	412673	39.507
89) trans-1,3-Dichloropropene	(3)	10.255	75	193929	19.181
91) Ethyl Methacrylate	(3)	10.313	69	232684	18.937
92) 1,1,2-Trichloroethane	(3)	10.457	97	146523	21.699
93) Tetrachloroethene	(3)	10.538	166	152684	20.242
94) 1,3-Dichloropropane	(3)	10.615	76	242124	21.001
96) 2-Hexanone	(3)	10.670	43	764524	93.216
97) Dibromochloromethane	(3)	10.824	129	131597	19.025
99) 1,2-Dibromoethane	(3)	10.936	107	152685	20.823
100)*Chlorobenzene-d5	(3)	11.358	117	1085726	50.000
101) 1-Chlorohexane	(3)	11.364	91	190403	19.900

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s31.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:22 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCSL86 Lab Sample ID: LCSL86

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
102) Chlorobenzene	(3)	11.387	112	422592	20.982
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	130507	19.667
104) Ethylbenzene	(3)	11.467	91	712911	20.942
106) m+p-Xylene	(3)	11.580	106	567789	42.398
108) Xylene (Total)	(3)		106	842422	63.160
107) o-Xylene	(3)	11.908	106	274633	20.762
109) Styrene	(3)	11.920	104	463800	21.218
110) Bromoform	(3)	12.081	173	81624	15.792
111) Isopropylbenzene	(3)	12.203	105	702182	21.164
112) Cyclohexanone	(1)	12.287	55	194471	536.696
114)$4-Bromofluorobenzene	(3)	12.345	95	545321	50.694
116) 1,1,2,2-Tetrachloroethane	(4)	12.448	83	229750	21.173
115) Bromobenzene	(4)	12.467	156	177923	20.609
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	206621	61.734
117) 1,2,3-Trichloropropane	(4)	12.496	110	68439	20.554
119) n-Propylbenzene	(4)	12.528	91	825345	21.882
120) 2-Chlorotoluene	(4)	12.605	126	164379	20.514
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	587226	21.423
121) 4-Chlorotoluene	(4)	12.698	126	173549	20.808
124) tert-Butylbenzene	(4)	12.904	134	118320M	20.872
125) Pentachloroethane	(4)	12.936	167	92382	18.926
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	612068	21.187
127) sec-Butylbenzene	(4)	13.065	105	722217	21.350
129) 1,3-Dichlorobenzene	(4)	13.165	146	328392	20.700
130) p-Isopropyltoluene	(4)	13.171	119	616210	21.057
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	574419	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	342298	20.813
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	634740	20.742
135) Benzyl Chloride	(4)	13.319	91	388635	16.773
136) 1,3-Diethylbenzene	(4)	13.370	119	371063	19.483
141) Diethylbenzene (total)	(4)		100	1079527	58.618
137) 1,4-Diethylbenzene	(4)	13.441	119	392281	19.441
139) n-Butylbenzene	(4)	13.464	92	307732	20.566
138) 1,2-Dichlorobenzene	(4)	13.499	146	330293	21.099
140) 1,2-Diethylbenzene	(4)	13.515	119	316183	19.694
142) 1,2-Dibromo-3-chloropropane	(4)	14.042	75	45003	18.946
144) 1,3,5-Trichlorobenzene	(4)	14.161	180	231556	19.253
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	224584	19.204

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s31.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:22 Analyst ID: lcp00895

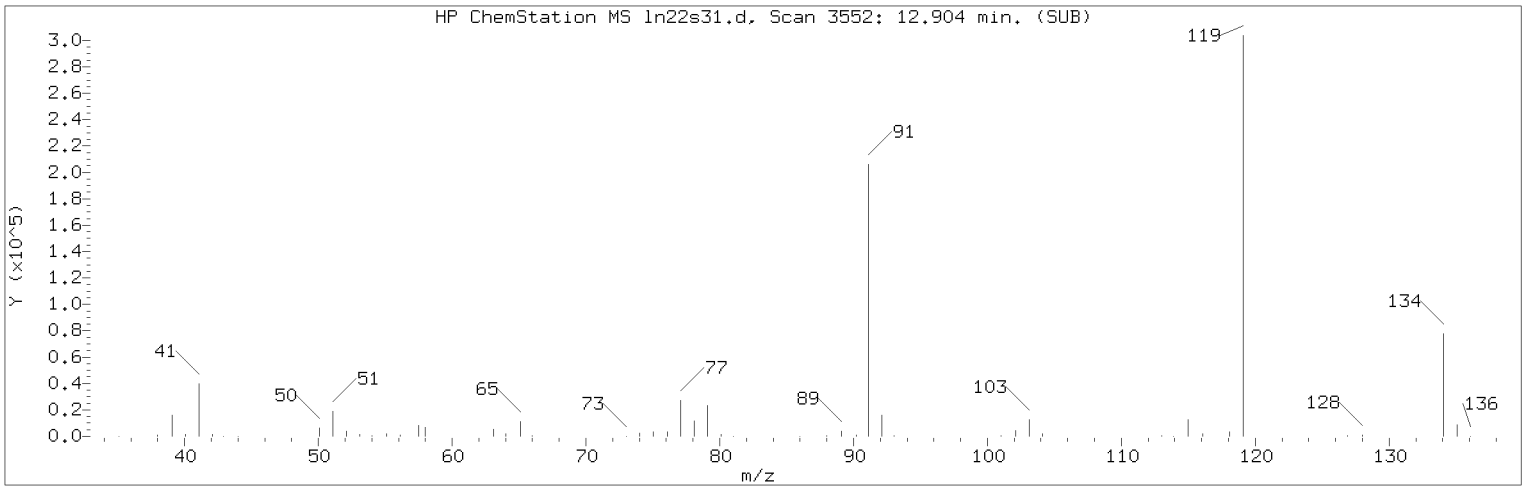
Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCSL86 Lab Sample ID: LCSL86

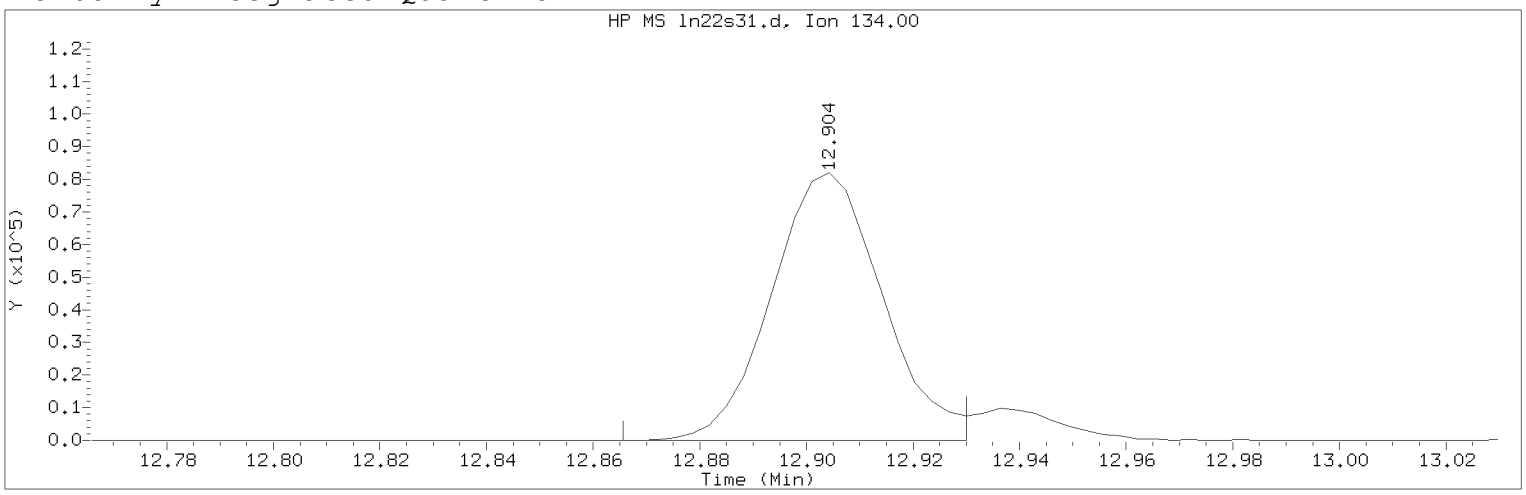
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Hexachlorobutadiene	(4)	14.666	225	93404	16.916
148) Naphthalene	(4)	14.772	128	769169	20.459
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	221335	19.451
150) 2-Methylnaphthalene	(4)	15.563	142	413397	17.856

Digitally signed by Linda C. Pape
on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov22a.b/ln22s31.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:22 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCSL86 Lab Sample ID: LCSL86

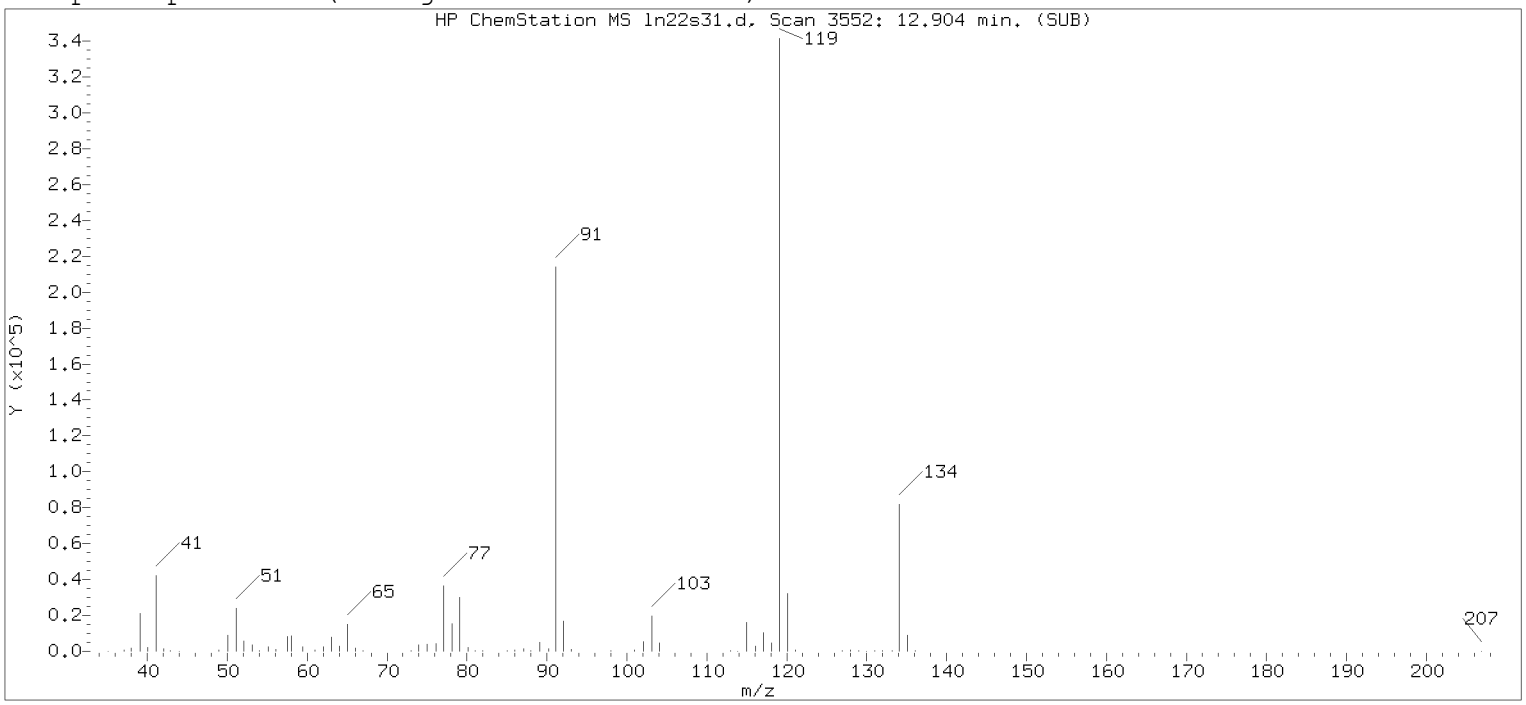
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 118320M
On-Column Amount (ng) : 20.8720
Integration start scan : 3539 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

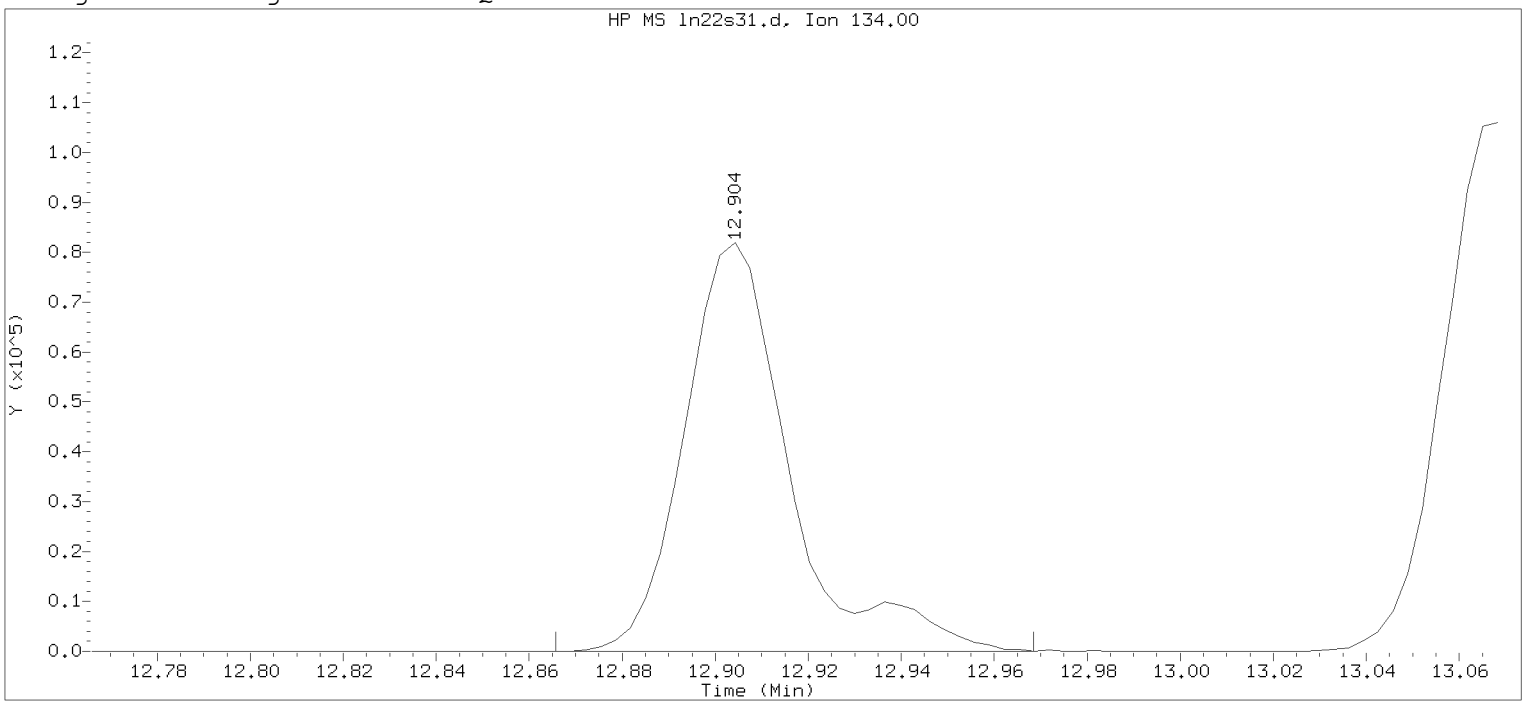
Analyst responsible for change: Digitally signed by Linda C. Pape
on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:02.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov22a.b/ln22s31.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:22 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 10:25 lcp00895

Sample Name: LCSL86 Lab Sample ID: LCSL86

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 128564
On-column Amount (ng) : 22.6791
Integration start scan : 3539 Integration stop scan: 3571
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 11/22/2019 at 11:19.
Target 3.5 esignature user: Linda C. Pape

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCDL86

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDL86

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s32.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	16	
74-87-3	Chloromethane	18	
106-99-0	1,3-Butadiene	21	
75-01-4	Vinyl Chloride	18	
74-83-9	Bromomethane	16	
75-00-3	Chloroethane	17	
109-66-0	n-Pentane	16	
75-69-4	Trichlorofluoromethane	18	
60-29-7	Ethyl ether	21	
354-23-4	Freon 123a	20	
107-02-8	Acrolein	140	
75-35-4	1,1-Dichloroethene	21	
67-64-1	Acetone	150	
76-13-1	Freon 113	19	
67-63-0	2-Propanol	140	
74-88-4	Methyl Iodide	18	
75-15-0	Carbon Disulfide	18	
107-05-1	Allyl Chloride	18	
79-20-9	Methyl Acetate	20	
75-09-2	Methylene Chloride	21	
75-65-0	t-Butyl alcohol	200	
107-13-1	Acrylonitrile	97	
156-60-5	trans-1,2-Dichloroethene	20	
1634-04-4	Methyl Tertiary Butyl Ether	18	
110-54-3	n-Hexane	20	
75-34-3	1,1-Dichloroethane	20	
108-20-3	di-Isopropyl ether	19	
126-99-8	2-Chloro-1,3-butadiene	19	
637-92-3	Ethyl t-butyl ether	19	
156-59-2	cis-1,2-Dichloroethene	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCDL86

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDL86

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s32.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	42	
78-93-3	2-Butanone	140	
594-20-7	2,2-Dichloropropane	20	
107-12-0	Propionitrile	160	
126-98-7	Methacrylonitrile	150	
74-97-5	Bromochloromethane	19	
109-99-9	Tetrahydrofuran	110	
67-66-3	Chloroform	21	
71-55-6	1,1,1-Trichloroethane	20	
110-82-7	Cyclohexane	19	
563-58-6	1,1-Dichloropropene	21	
56-23-5	Carbon Tetrachloride	20	
78-83-1	Isobutyl Alcohol	520	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	21	
994-05-8	t-Amyl methyl ether	19	
142-82-5	n-Heptane	19	
71-36-3	n-Butanol	1000	
79-01-6	Trichloroethene	21	
108-87-2	Methylcyclohexane	20	
78-87-5	1,2-Dichloropropane	22	
74-95-3	Dibromomethane	21	
123-91-1	1,4-Dioxane	650	
80-62-6	Methyl Methacrylate	20	
75-27-4	Bromodichloromethane	20	
79-46-9	2-Nitropropane	16	
110-75-8	2-Chloroethyl Vinyl Ether	34	
10061-01-5	cis-1,3-Dichloropropene	20	
108-10-1	4-Methyl-2-pentanone	95	
108-88-3	Toluene	21	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCDL86

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDL86

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s32.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	19	
542-75-6	1,3-Dichloropropene (total)	40	
97-63-2	Ethyl Methacrylate	19	
79-00-5	1,1,2-Trichloroethane	22	
127-18-4	Tetrachloroethene	20	
142-28-9	1,3-Dichloropropane	21	
591-78-6	2-Hexanone	93	
124-48-1	Dibromochloromethane	19	
106-93-4	1,2-Dibromoethane	21	
544-10-5	1-Chlorohexane	20	
108-90-7	Chlorobenzene	21	
630-20-6	1,1,1,2-Tetrachloroethane	20	
100-41-4	Ethylbenzene	21	
179601-23-1	m+p-Xylene	43	
95-47-6	o-Xylene	21	
1330-20-7	Xylene (Total)	64	
100-42-5	Styrene	21	
75-25-2	Bromoform	16	
98-82-8	Isopropylbenzene	21	
108-94-1	Cyclohexanone	530	
108-86-1	Bromobenzene	21	
79-34-5	1,1,2,2-Tetrachloroethane	21	
96-18-4	1,2,3-Trichloropropane	20	
110-57-6	trans-1,4-Dichloro-2-butene	61	
103-65-1	n-Propylbenzene	22	
95-49-8	2-Chlorotoluene	21	
106-43-4	4-Chlorotoluene	21	
108-67-8	1,3,5-Trimethylbenzene	22	
98-06-6	tert-Butylbenzene	21	
76-01-7	Pentachloroethane	19	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCDL86

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDL86

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov22a.b/ln22s32.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/22/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
95-63-6	1,2,4-Trimethylbenzene	21	
135-98-8	sec-Butylbenzene	21	
541-73-1	1,3-Dichlorobenzene	21	
99-87-6	p-Isopropyltoluene	21	
106-46-7	1,4-Dichlorobenzene	21	
526-73-8	1,2,3-Trimethylbenzene	21	
100-44-7	Benzyl Chloride	17	
141-93-5	1,3-Diethylbenzene	20	
105-05-5	1,4-Diethylbenzene	19	
95-50-1	1,2-Dichlorobenzene	21	
104-51-8	n-Butylbenzene	21	
135-01-3	1,2-Diethylbenzene	20	
25340-17-4	Diethylbenzene (total)	59	
96-12-8	1,2-Dibromo-3-chloropropane	18	
108-70-3	1,3,5-Trichlorobenzene	20	
120-82-1	1,2,4-Trichlorobenzene	20	
87-68-3	Hexachlorobutadiene	17	
91-20-3	Naphthalene	20	
87-61-6	1,2,3-Trichlorobenzene	20	
91-57-6	2-Methylnaphthalene	19	

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov22a.b/ln22s32.d Injection date and time: **22-NOV-2019 09:00**
Data file Sample Info. Line: LCDL86;LCDL86;1;3;LCSD;;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.496	(0.000)	937	65	281432	(7)	250.00	
66) Fluorobenzene	7.956	(0.003)	2013	96	1358142	(2)	50.00	
100) Chlorobenzene-d5	11.358	(0.003)	3071	117	1094093	(2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(-0.003)	3651	152	582660	(2)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072	(-0.001)	113	313787	47.258	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(-0.001)	102	85277	50.393	101%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	1424089	49.745	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	547780	50.533	101%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	2.088	(-0.000)	85	150176	15.856	15.86			0.2	1
4) Chloromethane	(2)	2.281	(-0.000)	50	167814	18.384	18.38			0.2	1
5) 1,3-Butadiene	(2)	2.397	(0.000)	39	157771	20.816	20.82			1	3
6) Vinyl Chloride	(2)	2.400	(0.000)	62	167850	18.424	18.42			0.2	1
8) Bromomethane	(2)	2.741	(0.001)	94	101921	15.606	15.61			0.3	1
9) Chloroethane	(2)	2.840	(0.000)	64	84037	16.785	16.78			0.2	1
11) n-Pentane	(2)	3.204	(0.000)	43	189377	16.338	16.34			0.4	10
12) Trichlorofluoromethane	(2)	3.149	(-0.000)	101	181086	18.462	18.46			0.2	1
14) Ethyl ether	(2)	3.432	(-0.000)	59	130168	20.538	20.54			0.2	5
15) Freon 123a	(2)	3.525	(-0.000)	67	161423	20.459	20.46			0.4	5
16) Acrolein	(1)	3.618	(0.000)	56	305206	144.548	144.55			2	100
17) 1,1-Dichloroethene	(2)	3.757	(-0.000)	96	121866	21.168	21.17			0.2	1
18) Acetone	(1)	3.802	(0.000)	58	144617	152.775	152.78			0.7	20
19) Freon 113	(2)	3.792	(0.000)	101	125120	19.049	19.05			0.2	10
21) 2-Propanol	(1)	3.985	(0.000)	45	93909	137.999	138.00			18	100
22) Methyl Iodide	(2)	3.966	(-0.000)	142	210714	17.662	17.66			0.2	1
23) Carbon Disulfide	(2)	4.069	(-0.000)	76	380115	17.520	17.52			0.2	5
25) Allyl Chloride	(2)	4.268	(-0.000)	41	189084	18.308	18.31			0.3	5
27) Methyl Acetate	(2)	4.239	(0.000)	43	145088	19.567	19.57			0.2	5
28) Methylene Chloride	(2)	4.474	(-0.000)	84	143588	20.955	20.95			0.3	1
30) t-Butyl alcohol	(1)	4.628	(0.001)	59	235398	198.672	198.67			12	50
31) Acrylonitrile	(2)	4.828	(0.000)	53	387159	97.049	97.05			0.3	20
32) trans-1,2-Dichloroethene	(2)	4.885	(-0.000)	96	135213	20.302	20.30			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	4.876	(0.000)	73	399905	18.293	18.29			0.2	1
34) n-Hexane	(2)	5.307	(-0.000)	57	205015	19.785	19.79			2	5
36) 1,1-Dichloroethane	(2)	5.548	(0.000)	63	237258	20.421	20.42			0.2	1
38) di-Isopropyl ether	(2)	5.602	(-0.000)	45	435590	19.439	19.44			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	5.654	(-0.000)	53	196554	18.856	18.86			0.2	5
40) Ethyl t-butyl ether	(2)	6.133	(-0.000)	59	409704	18.840	18.84			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.377	(0.000)	96	162391	21.723	21.72			0.2	1
43) 1,2-Dichloroethene (Total)	(2)			96	297604	42.025	42.03			0.4	2

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Data file: /chem/HP09915.i/19nov22a.b/ln22s32.d Injection date and time: **22-NOV-2019 09:00**
Data file Sample Info. Line: LCDL86;LCDL86;1;3;LCSD;;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	6.361(0.000)	43	727298	142.024	142.02			0.3	10
45) 2,2-Dichloropropane	(2)	6.387(0.000)	77	181003	20.041	20.04			0.3	1
47) Propionitrile	(1)	6.454(0.001)	54	243550	164.971	164.97			14	100
48) Methacrylonitrile	(2)	6.667(-0.000)	67	650118	151.074	151.07			6	50
49) Bromochloromethane	(2)	6.708(-0.000)	128	76164	19.215	19.21			0.2	5
50) Tetrahydrofuran	(1)	6.721(-0.000)	71	142023	106.501	106.50			0.7	10
51) Chloroform	(2)	6.856(0.000)	83	231074	20.794	20.79			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.081(-0.000)	97	189865	20.019	20.02			0.3	1
54) Cyclohexane	(2)	7.175(-0.000)	56	242028	19.083	19.08			1	5
55) 1,1-Dichloropropene	(2)	7.290(0.000)	75	190070	20.690	20.69			0.2	5
56) Carbon Tetrachloride	(2)	7.284(0.000)	117	157805	19.618	19.62			0.2	1
58) Isobutyl Alcohol	(1)	7.458(-0.000)	41	206106	516.909	516.91			36	250
60) Benzene	(2)	7.554(0.000)	78	588185	21.291	21.29			0.2	1
61) 1,2-Dichloroethane	(2)	7.631(0.000)	62	183312	20.630	20.63			0.3	1
65) t-Amyl methyl ether	(2)	7.737(-0.000)	73	416032	19.060	19.06			0.8	5
67) n-Heptane	(2)	7.959(-0.000)	43	181967	18.798	18.80			2	5
69) n-Butanol	(1)	8.326(-0.000)	56	352973	1028.531	1028.53			61	250
71) Trichloroethene	(2)	8.429(-0.000)	95	146857	21.113	21.11			0.2	1
72) Methylcyclohexane	(2)	8.731(-0.000)	83	254892	19.752	19.75			0.5	5
73) 1,2-Dichloropropane	(2)	8.770(-0.000)	63	152148	21.689	21.69			0.2	1
74) Dibromomethane	(2)	8.879(-0.000)	93	94472	20.814	20.81			0.2	1
75) 1,4-Dioxane	(1)	8.856(-0.000)	88	60944	646.099	646.10			29	250
76) Methyl Methacrylate	(2)	8.847(-0.000)	69	136858	20.175	20.18			0.2	5
78) Bromodichloromethane	(2)	9.110(-0.000)	83	166163	20.401	20.40			0.2	1
79) 2-Nitropropane	(2)	9.384(-0.000)	41	38377	15.557	15.56			0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)	9.461(-0.000)	63	101757	33.775	33.78			0.2	10
81) cis-1,3-Dichloropropene	(2)	9.634(-0.000)	75	221734	20.498	20.50			0.2	1
82) 4-Methyl-2-pentanone	(2)	9.805(-0.000)	43	1028880	95.186	95.19			0.5	10
88) Toluene	(3)	10.004(0.000)	92	381006	21.229	21.23			0.2	1
89) trans-1,3-Dichloropropene	(3)	10.255(0.000)	75	193643	19.007	19.01			0.2	1
90) 1,3-Dichloropropene (total)	(3)		100	415377	39.505	39.50			0.4	2
91) Ethyl Methacrylate	(3)	10.313(-0.000)	69	232222	18.755	18.75			0.2	5
92) 1,1,2-Trichloroethane	(3)	10.458(-0.000)	97	149205	21.927	21.93			0.2	1
93) Tetrachloroethene	(3)	10.538(-0.000)	166	155709	20.485	20.48			0.2	1
94) 1,3-Dichloropropane	(3)	10.618(-0.000)	76	241857	20.817	20.82			0.2	1
96) 2-Hexanone	(3)	10.666(0.000)	43	766740	92.771	92.77			0.3	10
97) Dibromochloromethane	(3)	10.827(-0.000)	129	132677	19.034	19.03			0.2	1
99) 1,2-Dibromoethane	(3)	10.937(-0.000)	107	153468	20.770	20.77			0.2	1
101) 1-Chlorohexane	(3)	11.361(-0.000)	91	193321	20.050	20.05			0.3	5
102) Chlorobenzene	(3)	11.387(-0.000)	112	423885	20.885	20.89			0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)	11.464(-0.000)	131	131978	19.736	19.74			0.2	1
104) Ethylbenzene	(3)	11.467(-0.000)	91	718835	20.955	20.95			0.4	1
106) m+p-Xylene	(3)	11.580(-0.000)	106	577348	42.782	42.78			1	5
107) o-Xylene	(3)	11.904(-0.000)	106	278239	20.874	20.87			0.4	1
108) Xylene (Total)	(3)		106	855587	63.656	63.66			1	6
109) Styrene	(3)	11.924(-0.000)	104	464467	21.086	21.09			0.2	5
110) Bromoform	(3)	12.081(-0.000)	173	81887	15.722	15.72			1	4
111) Isopropylbenzene	(3)	12.203(-0.000)	105	712799	21.320	21.32			0.2	5
112) Cyclohexanone	(1)	12.287(-0.000)	55	197253	533.945	533.95			25	100
115) Bromobenzene	(4)	12.464(0.000)	156	180276	20.587	20.59			0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	12.448(0.000)	83	230369	20.930	20.93			0.2	1
117) 1,2,3-Trichloropropane	(4)	12.496(0.000)	110	68080	20.157	20.16			0.2	5
118) trans-1,4-Dichloro-2-butene	(4)	12.474(0.000)	53	208707	61.475	61.47			6	50
119) n-Propylbenzene	(4)	12.528(0.000)	91	843191	22.039	22.04			0.2	5

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov22a.b/ln22s32.d Injection date and time: **22-NOV-2019 09:00**
Data file Sample Info. Line: LCDL86;LCDL86;1;3;LCSD;;;;ln22b05; Instrument ID: **HP09915.i** Batch: **L193262AA**
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov22a.b/ln22b05.d**

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 22-NOV-2019 09:51
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov22a.b/ln22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)	12.605(0.000)	126	167926	20.661	20.66			0.2	5
121) 4-Chlorotoluene	(4)	12.699(0.000)	126	174928	20.677	20.68			0.2	5
122) 1,3,5-Trimethylbenzene	(4)	12.660(0.000)	105	598061	21.510	21.51			0.3	5
124) tert-Butylbenzene	(4)	12.904(0.000)	134	118749M	20.651	20.65			0.3	5
125) Pentachloroethane	(4)	12.936(0.000)	167	93474	18.879	18.88			0.2	5
126) 1,2,4-Trimethylbenzene	(4)	12.946(0.000)	105	614335	20.964	20.96			1	5
127) sec-Butylbenzene	(4)	13.065(0.000)	105	736795	21.473	21.47			0.2	5
129) 1,3-Dichlorobenzene	(4)	13.168(-0.000)	146	333024	20.695	20.70			0.2	5
130) p-Isopropyltoluene	(4)	13.171(0.000)	119	628953	21.188	21.19			0.2	5
133) 1,4-Dichlorobenzene	(4)	13.239(0.000)	146	346801	20.789	20.79			0.2	5
134) 1,2,3-Trimethylbenzene	(4)	13.248(0.000)	105	637942	20.552	20.55			0.3	5
135) Benzyl Chloride	(4)	13.316(0.000)	91	389772	16.585	16.58			1	5
136) 1,3-Diethylbenzene	(4)	13.371(0.000)	119	378903	19.614	19.61			0.2	5
137) 1,4-Diethylbenzene	(4)	13.441(0.000)	119	398384	19.464	19.46			0.2	5
138) 1,2-Dichlorobenzene	(4)	13.502(0.000)	146	330244	20.798	20.80			0.2	5
139) n-Butylbenzene	(4)	13.464(0.000)	92	317038	20.888	20.89			0.2	5
140) 1,2-Diethylbenzene	(4)	13.515(0.000)	119	322275	19.789	19.79			0.2	5
141) Diethylbenzene (total)	(4)		100	1099562	58.867	58.87			0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)	14.039(0.000)	75	44163	18.329	18.33			0.3	5
144) 1,3,5-Trichlorobenzene	(4)	14.165(0.000)	180	238510	19.551	19.55			0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.589(0.000)	180	231617	19.526	19.53			0.3	5
147) Hexachlorobutadiene	(4)	14.666(0.000)	225	93571	16.707	16.71			2	5
148) Naphthalene	(4)	14.772(0.000)	128	780279	20.461	20.46			1	5
149) 1,2,3-Trichlorobenzene	(4)	14.914(0.000)	180	226994	19.666	19.67			0.4	5
150) 2-Methylnaphthalene	(4)	15.563(0.000)	142	436409	18.584	18.58			2	4

M = Compound was manually integrated.

Total number of targets = 110

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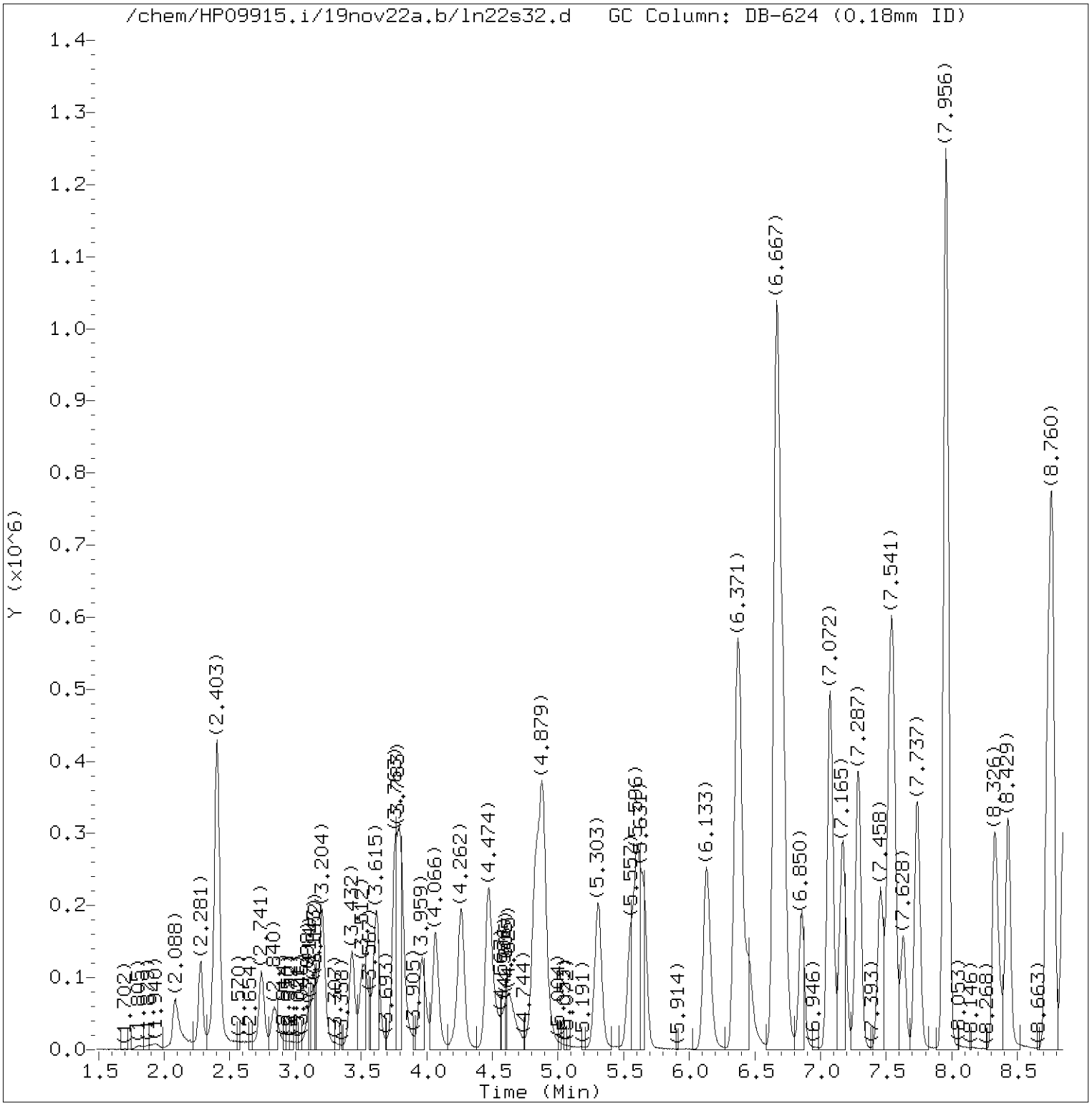
Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:02. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

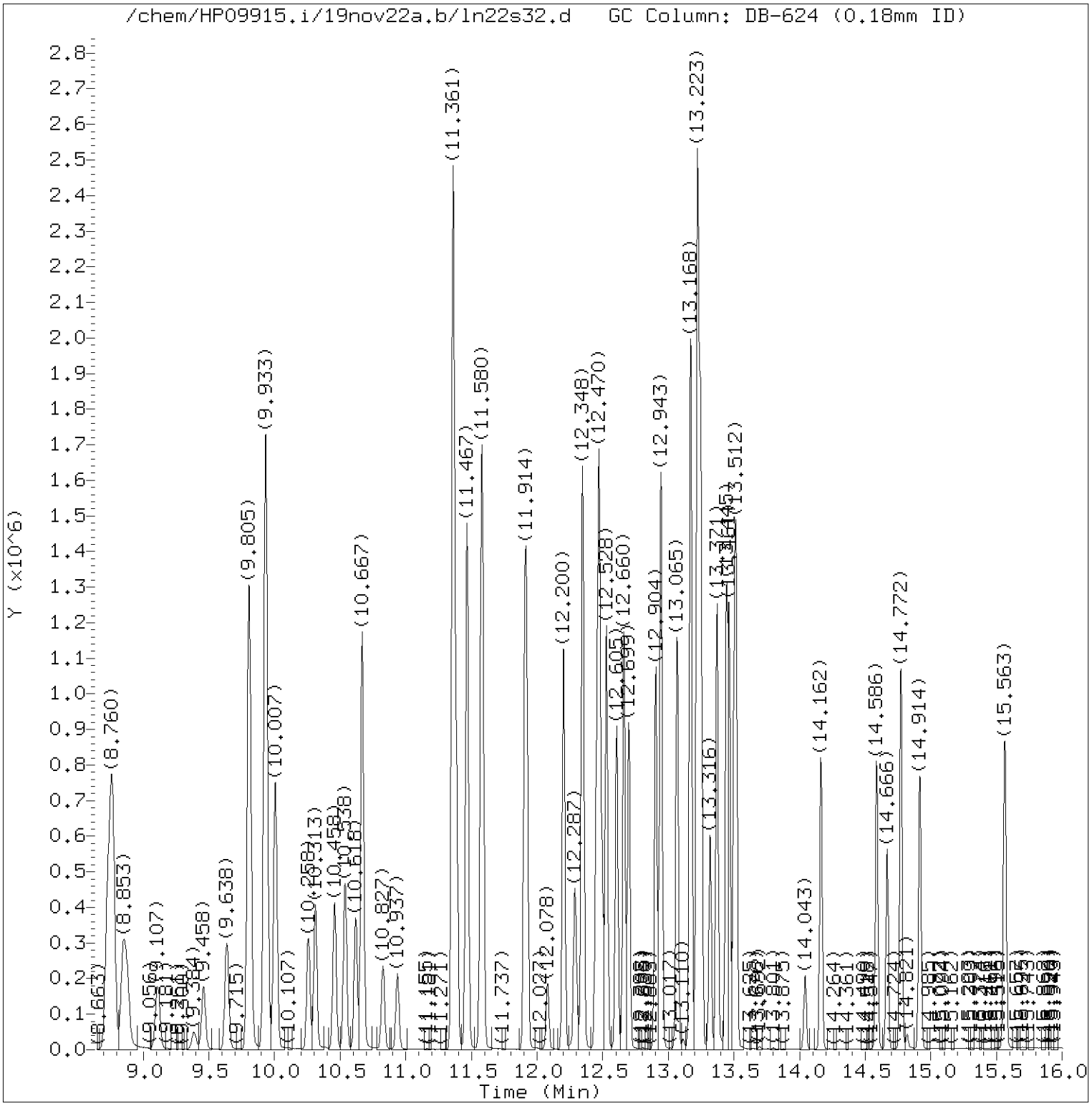
Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s32.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:00 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCDL86 Lab Sample ID: LCDL86

Digitally signed by Linda C. Pape
on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s32.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:00 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCDL86 Lab Sample ID: LCDL86

Digitally signed by Linda C. Pape
on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s32.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:00 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCDL86 Lab Sample ID: LCDL86

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.088	85	150176	15.856
4) Chloromethane	(2)	2.281	50	167814	18.384
5) 1,3-Butadiene	(2)	2.397	39	157771	20.816
6) Vinyl Chloride	(2)	2.400	62	167850	18.424
8) Bromomethane	(2)	2.741	94	101921	15.606
9) Chloroethane	(2)	2.840	64	84037	16.785
12) Trichlorofluoromethane	(2)	3.149	101	181086	18.462
11) n-Pentane	(2)	3.204	43	189377	16.338
14) Ethyl ether	(2)	3.432	59	130168	20.538
15) Freon 123a	(2)	3.525	67	161423	20.459
16) Acrolein	(1)	3.619	56	305206	144.548
17) 1,1-Dichloroethene	(2)	3.757	96	121866	21.168
19) Freon 113	(2)	3.792	101	125120	19.049
18) Acetone	(1)	3.802	58	144617	152.775
22) Methyl Iodide	(2)	3.966	142	210714	17.662
21) 2-Propanol	(1)	3.985	45	93909	137.999
23) Carbon Disulfide	(2)	4.069	76	380115	17.520
27) Methyl Acetate	(2)	4.239	43	145088	19.567
25) Allyl Chloride	(2)	4.268	41	189084	18.308
28) Methylene Chloride	(2)	4.474	84	143588	20.955
29)*t-Butyl alcohol-d10	(1)	4.496	65	281432	250.000
30) t-Butyl alcohol	(1)	4.628	59	235398	198.672
31) Acrylonitrile	(2)	4.828	53	387159	97.049
33) Methyl Tertiary Butyl Ether	(2)	4.876	73	399905	18.293
32) trans-1,2-Dichloroethene	(2)	4.885	96	135213	20.302
34) n-Hexane	(2)	5.307	57	205015	19.785
36) 1,1-Dichloroethane	(2)	5.548	63	237258	20.421
38) di-Isopropyl ether	(2)	5.602	45	435590	19.439
39) 2-Chloro-1,3-butadiene	(2)	5.654	53	196554	18.856
40) Ethyl t-butyl ether	(2)	6.133	59	409704	18.840
43) 1,2-Dichloroethene (Total)	(2)		96	297604	42.025
44) 2-Butanone	(2)	6.361	43	727298	142.024
42) cis-1,2-Dichloroethene	(2)	6.377	96	162391	21.723
45) 2,2-Dichloropropane	(2)	6.387	77	181003	20.041
47) Propionitrile	(1)	6.454	54	243550	164.971
48) Methacrylonitrile	(2)	6.667	67	650118	151.074
49) Bromochloromethane	(2)	6.708	128	76164	19.215
50) Tetrahydrofuran	(1)	6.721	71	142023	106.501

* = Compound is an internal standard.

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on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s32.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:00 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCDL86 Lab Sample ID: LCDL86

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	6.856	83	231074	20.794
52)$Dibromofluoromethane	(2)	7.072	113	313787	47.258
53) 1,1,1-Trichloroethane	(2)	7.081	97	189865	20.019
54) Cyclohexane	(2)	7.175	56	242028	19.083
56) Carbon Tetrachloride	(2)	7.284	117	157805	19.618
55) 1,1-Dichloropropene	(2)	7.290	75	190070	20.690
58) Isobutyl Alcohol	(1)	7.458	41	206106	516.909
57)$1,2-Dichloroethane-d4	(2)	7.528	102	85277	50.393
60) Benzene	(2)	7.554	78	588185	21.291
61) 1,2-Dichloroethane	(2)	7.631	62	183312	20.630
65) t-Amyl methyl ether	(2)	7.737	73	416032	19.060
66)*Fluorobenzene	(2)	7.956	96	1358142	50.000
67) n-Heptane	(2)	7.959	43	181967	18.798
69) n-Butanol	(1)	8.326	56	352973	1028.531
71) Trichloroethene	(2)	8.429	95	146857	21.113
72) Methylcyclohexane	(2)	8.731	83	254892	19.752
73) 1,2-Dichloropropane	(2)	8.770	63	152148	21.689
76) Methyl Methacrylate	(2)	8.847	69	136858	20.175
75) 1,4-Dioxane	(1)	8.856	88	60944	646.099
74) Dibromomethane	(2)	8.879	93	94472	20.814
78) Bromodichloromethane	(2)	9.110	83	166163	20.401
79) 2-Nitropropane	(2)	9.384	41	38377	15.557
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	101757	33.775
81) cis-1,3-Dichloropropene	(2)	9.634	75	221734	20.498
82) 4-Methyl-2-pentanone	(2)	9.805	43	1028880	95.186
83)$Toluene-d8	(3)	9.933	98	1424089	49.745
88) Toluene	(3)	10.004	92	381006	21.229
90) 1,3-Dichloropropene (total)	(3)		100	415377	39.505
89) trans-1,3-Dichloropropene	(3)	10.255	75	193643	19.007
91) Ethyl Methacrylate	(3)	10.313	69	232222	18.755
92) 1,1,2-Trichloroethane	(3)	10.458	97	149205	21.927
93) Tetrachloroethene	(3)	10.538	166	155709	20.485
94) 1,3-Dichloropropane	(3)	10.618	76	241857	20.817
96) 2-Hexanone	(3)	10.667	43	766740	92.771
97) Dibromochloromethane	(3)	10.827	129	132677	19.034
99) 1,2-Dibromoethane	(3)	10.937	107	153468	20.770
100)*Chlorobenzene-d5	(3)	11.358	117	1094093	50.000
101) 1-Chlorohexane	(3)	11.361	91	193321	20.050

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s32.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:00 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCDL86 Lab Sample ID: LCDL86

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
102) Chlorobenzene	(3)	11.387	112	423885	20.885
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	131978	19.736
104) Ethylbenzene	(3)	11.467	91	718835	20.955
106) m+p-Xylene	(3)	11.580	106	577348	42.782
108) Xylene (Total)	(3)		106	855587	63.656
107) o-Xylene	(3)	11.904	106	278239	20.874
109) Styrene	(3)	11.924	104	464467	21.086
110) Bromoform	(3)	12.081	173	81887	15.722
111) Isopropylbenzene	(3)	12.203	105	712799	21.320
112) Cyclohexanone	(1)	12.287	55	197253	533.945
114)$4-Bromofluorobenzene	(3)	12.345	95	547780	50.533
116) 1,1,2,2-Tetrachloroethane	(4)	12.448	83	230369	20.930
115) Bromobenzene	(4)	12.464	156	180276	20.587
118) trans-1,4-Dichloro-2-butene	(4)	12.474	53	208707	61.475
117) 1,2,3-Trichloropropane	(4)	12.496	110	68080	20.157
119) n-Propylbenzene	(4)	12.528	91	843191	22.039
120) 2-Chlorotoluene	(4)	12.605	126	167926	20.661
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	598061	21.510
121) 4-Chlorotoluene	(4)	12.699	126	174928	20.677
124) tert-Butylbenzene	(4)	12.904	134	118749M	20.651
125) Pentachloroethane	(4)	12.937	167	93474	18.879
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	614335	20.964
127) sec-Butylbenzene	(4)	13.065	105	736795	21.473
129) 1,3-Dichlorobenzene	(4)	13.168	146	333024	20.695
130) p-Isopropyltoluene	(4)	13.171	119	628953	21.188
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	582660	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	346801	20.789
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	637942	20.552
135) Benzyl Chloride	(4)	13.316	91	389772	16.585
136) 1,3-Diethylbenzene	(4)	13.371	119	378903	19.614
141) Diethylbenzene (total)	(4)		100	1099562	58.867
137) 1,4-Diethylbenzene	(4)	13.441	119	398384	19.464
139) n-Butylbenzene	(4)	13.464	92	317038	20.888
138) 1,2-Dichlorobenzene	(4)	13.502	146	330244	20.798
140) 1,2-Diethylbenzene	(4)	13.515	119	322275	19.789
142) 1,2-Dibromo-3-chloropropane	(4)	14.039	75	44163	18.329
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	238510	19.551
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	231617	19.526

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov22a.b/ln22s32.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:00 Analyst ID: lcp00895

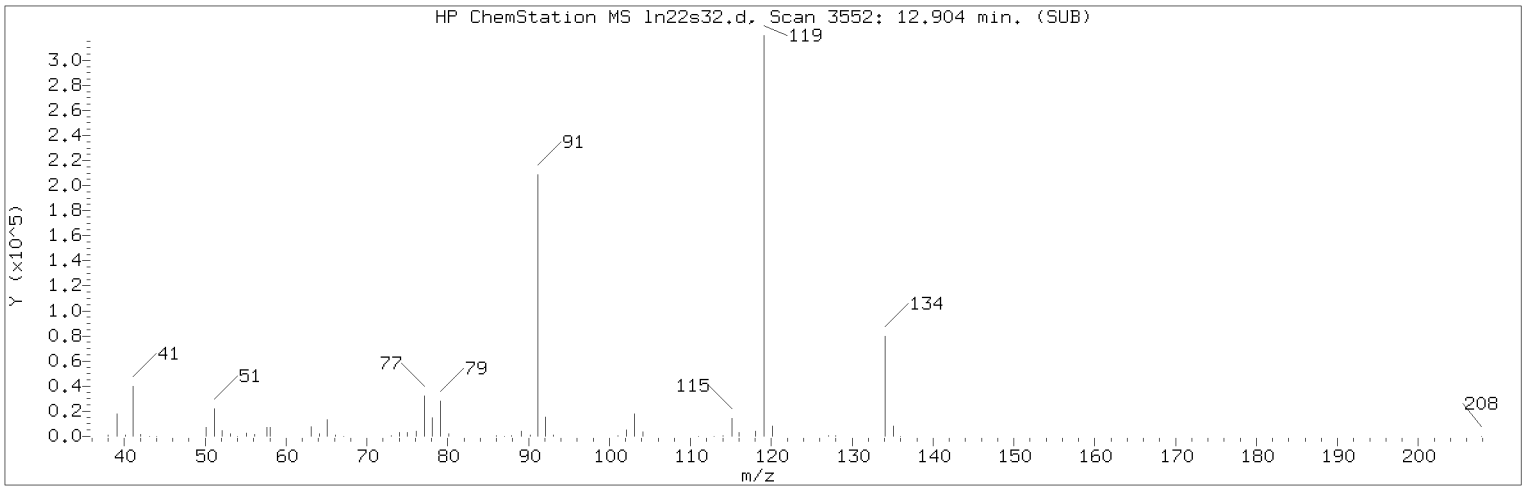
Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCDL86 Lab Sample ID: LCDL86

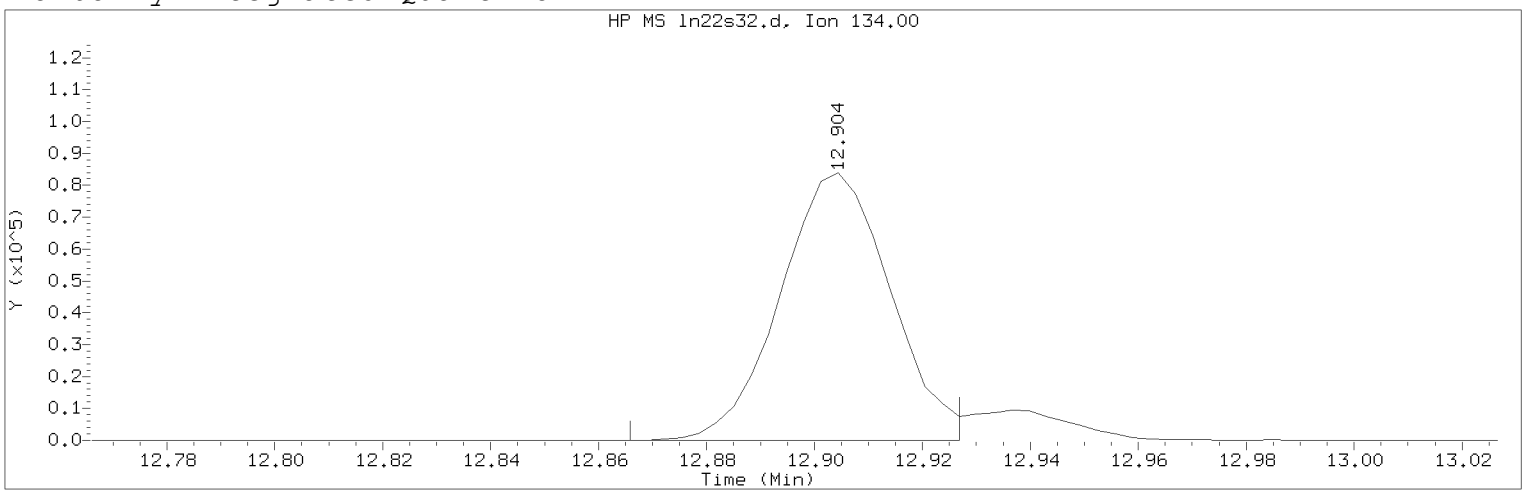
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Hexachlorobutadiene	(4)	14.666	225	93571	16.707
148) Naphthalene	(4)	14.772	128	780279	20.461
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	226994	19.666
150) 2-Methylnaphthalene	(4)	15.563	142	436409	18.584

Digitally signed by Linda C. Pape
on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov22a.b/ln22s32.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:00 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 11:18 lcp00895

Sample Name: LCDL86 Lab Sample ID: LCDL86

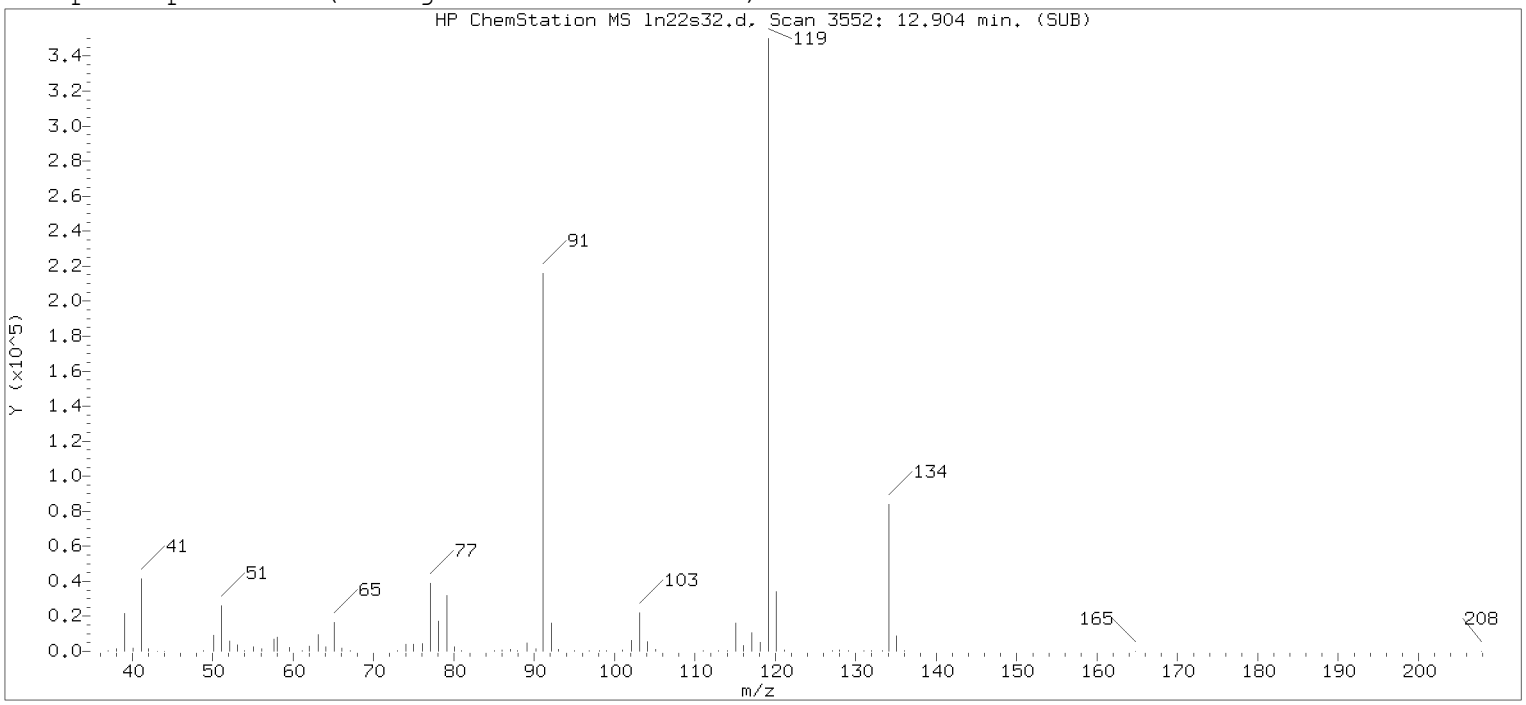
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 118749M
On-Column Amount (ng) : 20.6514
Integration start scan : 3539 Integration stop scan: 3558
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

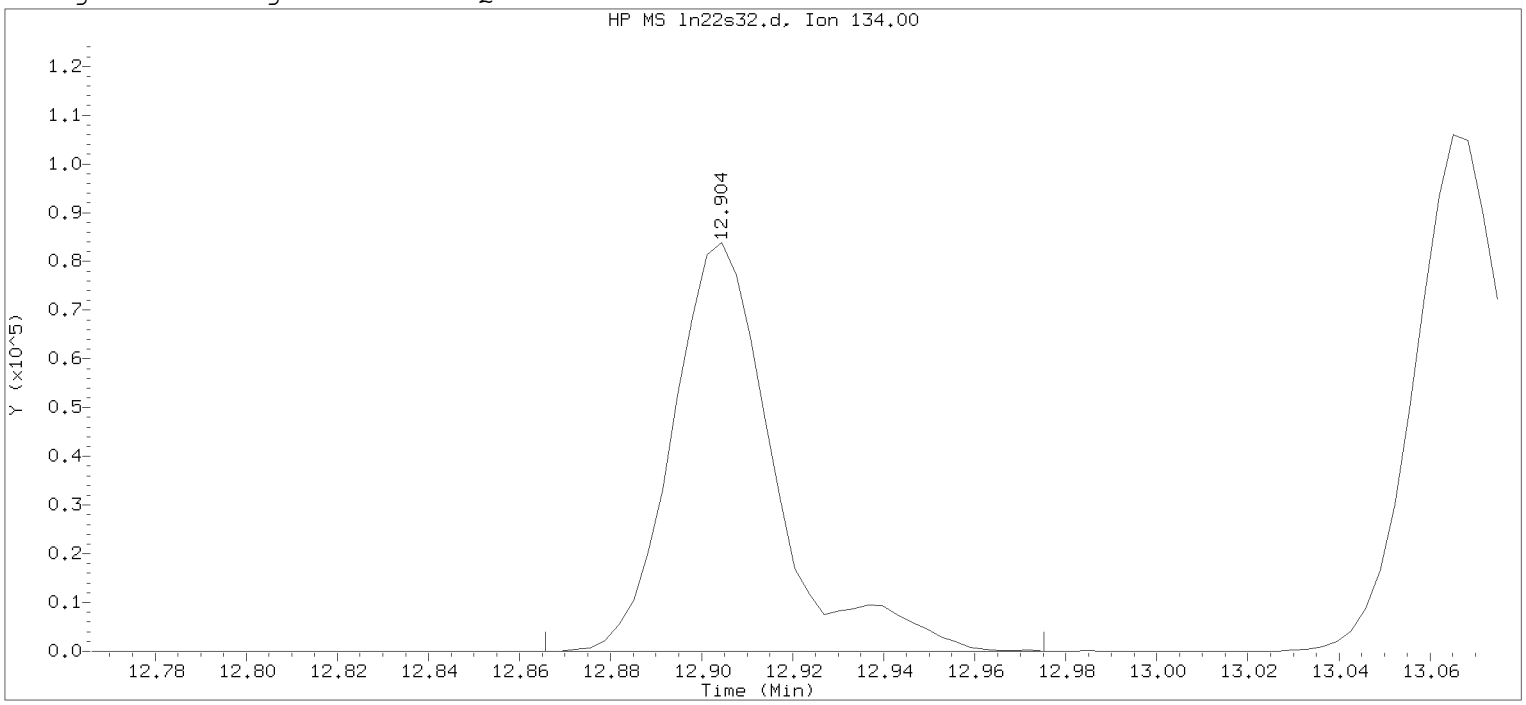
Analyst responsible for change: Digitally signed by Linda C. Pape
on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:02.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov22a.b/ln22s32.d Instrument ID: HP09915.i
Injection date and time: 22-NOV-2019 09:00 Analyst ID: lcp00895

Method used: /chem/HP09915.i/19nov22a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 22-NOV-2019 09:51
Date, time and analyst ID of latest file update: 22-Nov-2019 10:25 lcp00895

Sample Name: LCDL86 Lab Sample ID: LCDL86

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 130430
On-column Amount (ng) : 22.6828
Integration start scan : 3539 Integration stop scan: 3573
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 11/22/2019 at 11:19.
Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL87

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL87

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	17	
74-87-3	Chloromethane	18	
106-99-0	1,3-Butadiene	20	
75-01-4	Vinyl Chloride	18	
74-83-9	Bromomethane	18	
75-00-3	Chloroethane	18	
109-66-0	n-Pentane	15	
75-69-4	Trichlorofluoromethane	20	
60-29-7	Ethyl ether	20	
354-23-4	Freon 123a	20	
107-02-8	Acrolein	150	
75-35-4	1,1-Dichloroethene	20	
67-64-1	Acetone	170	
76-13-1	Freon 113	18	
67-63-0	2-Propanol	150	
74-88-4	Methyl Iodide	18	
75-15-0	Carbon Disulfide	17	
107-05-1	Allyl Chloride	18	
79-20-9	Methyl Acetate	19	
75-09-2	Methylene Chloride	21	
75-65-0	t-Butyl alcohol	200	
107-13-1	Acrylonitrile	94	
156-60-5	trans-1,2-Dichloroethene	20	
1634-04-4	Methyl Tertiary Butyl Ether	17	
110-54-3	n-Hexane	18	
75-34-3	1,1-Dichloroethane	20	
108-20-3	di-Isopropyl ether	18	
126-99-8	2-Chloro-1,3-butadiene	18	
637-92-3	Ethyl t-butyl ether	17	
156-59-2	cis-1,2-Dichloroethene	21	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL87

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL87

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	41	
78-93-3	2-Butanone	140	
594-20-7	2,2-Dichloropropane	19	
107-12-0	Propionitrile	170	
126-98-7	Methacrylonitrile	150	
74-97-5	Bromochloromethane	20	
109-99-9	Tetrahydrofuran	110	
67-66-3	Chloroform	21	
71-55-6	1,1,1-Trichloroethane	20	
110-82-7	Cyclohexane	17	
563-58-6	1,1-Dichloropropene	20	
56-23-5	Carbon Tetrachloride	19	
78-83-1	Isobutyl Alcohol	520	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	21	
994-05-8	t-Amyl methyl ether	18	
142-82-5	n-Heptane	17	
71-36-3	n-Butanol	960	
79-01-6	Trichloroethene	21	
108-87-2	Methylcyclohexane	19	
78-87-5	1,2-Dichloropropane	21	
74-95-3	Dibromomethane	21	
123-91-1	1,4-Dioxane	540	
80-62-6	Methyl Methacrylate	19	
75-27-4	Bromodichloromethane	20	
79-46-9	2-Nitropropane	15	
110-75-8	2-Chloroethyl Vinyl Ether	31	
10061-01-5	cis-1,3-Dichloropropene	20	
108-10-1	4-Methyl-2-pentanone	91	
108-88-3	Toluene	20	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL87

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL87

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	19	
542-75-6	1,3-Dichloropropene (total)	39	
97-63-2	Ethyl Methacrylate	17	
79-00-5	1,1,2-Trichloroethane	21	
127-18-4	Tetrachloroethene	20	
142-28-9	1,3-Dichloropropane	20	
591-78-6	2-Hexanone	87	
124-48-1	Dibromochloromethane	19	
106-93-4	1,2-Dibromoethane	20	
544-10-5	1-Chlorohexane	18	
108-90-7	Chlorobenzene	20	
630-20-6	1,1,1,2-Tetrachloroethane	19	
100-41-4	Ethylbenzene	20	
179601-23-1	m+p-Xylene	41	
95-47-6	o-Xylene	20	
1330-20-7	Xylene (Total)	61	
100-42-5	Styrene	20	
75-25-2	Bromoform	17	
98-82-8	Isopropylbenzene	20	
108-94-1	Cyclohexanone	480	
108-86-1	Bromobenzene	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	
96-18-4	1,2,3-Trichloropropane	20	
110-57-6	trans-1,4-Dichloro-2-butene	86	
103-65-1	n-Propylbenzene	20	
95-49-8	2-Chlorotoluene	20	
106-43-4	4-Chlorotoluene	20	
108-67-8	1,3,5-Trimethylbenzene	20	
98-06-6	tert-Butylbenzene	19	
76-01-7	Pentachloroethane	18	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL87

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL87

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
95-63-6	1,2,4-Trimethylbenzene	20	
135-98-8	sec-Butylbenzene	20	
541-73-1	1,3-Dichlorobenzene	20	
99-87-6	p-Isopropyltoluene	20	
106-46-7	1,4-Dichlorobenzene	20	
526-73-8	1,2,3-Trimethylbenzene	19	
100-44-7	Benzyl Chloride	16	
141-93-5	1,3-Diethylbenzene	18	
105-05-5	1,4-Diethylbenzene	18	B
95-50-1	1,2-Dichlorobenzene	20	
104-51-8	n-Butylbenzene	19	B
135-01-3	1,2-Diethylbenzene	18	
25340-17-4	Diethylbenzene (total)	54	
96-12-8	1,2-Dibromo-3-chloropropane	18	
108-70-3	1,3,5-Trichlorobenzene	18	B
120-82-1	1,2,4-Trichlorobenzene	17	B
87-68-3	Hexachlorobutadiene	15	
91-20-3	Naphthalene	18	
87-61-6	1,2,3-Trichlorobenzene	17	B
91-57-6	2-Methylnaphthalene	14	

Data file: /chem/HP09915.i/19nov23a.b/ln23s01.d Injection date and time: **23-NOV-2019 09:26**
Data file Sample Info. Line: LCSL87;LCSL87;1;3;LCS;;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493	(-0.003)	936	65	219124	(0)	250.00	
66) Fluorobenzene	7.956	(0.000)	2013	96	1149568	(2)	50.00	
100) Chlorobenzene-d5	11.358	(0.000)	3071	117	954034	(1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.219	(0.003)	3650	152	518331	(-1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.065	(0.001)	113	279543	49.739	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	73161	51.077	102%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	1224920	49.069	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	482775	51.074	102%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
3) Dichlorodifluoromethane	(2)	2.082	(0.000)	85	136297	17.002	17.00			0.2	1
4) Chloromethane	(2)	2.278	(0.000)	50	138166	17.882	17.88			0.2	1
5) 1,3-Butadiene	(2)	2.406	(0.000)	39	130178	20.291	20.29			1	3
6) Vinyl Chloride	(2)	2.397	(0.000)	62	137718	17.859	17.86			0.2	1
8) Bromomethane	(2)	2.741	(0.000)	94	97922	17.715	17.71			0.3	1
9) Chloroethane	(2)	2.837	(0.000)	64	75570	17.832	17.83			0.2	1
11) n-Pentane	(2)	3.200	(0.000)	43	151384	15.430	15.43			0.4	10
12) Trichlorofluoromethane	(2)	3.149	(0.000)	101	168712	20.322	20.32			0.2	1
14) Ethyl ether	(2)	3.432	(-0.000)	59	105121	19.595	19.59			0.2	5
15) Freon 123a	(2)	3.519	(0.000)	67	132374	19.821	19.82			0.4	5
16) Acrolein	(1)	3.612	(0.001)	56	249441	151.730	151.73			2	100
17) 1,1-Dichloroethene	(2)	3.750	(0.000)	96	98797	20.274	20.27			0.2	1
18) Acetone	(1)	3.798	(-0.000)	58	122187	165.784	165.78			0.7	20
19) Freon 113	(2)	3.795	(0.000)	101	101611	18.276	18.28			0.2	10
21) 2-Propanol	(1)	3.985	(0.000)	45	78385	147.940	147.94			18	100
22) Methyl Iodide	(2)	3.962	(0.000)	142	179282	17.754	17.75			0.2	1
23) Carbon Disulfide	(2)	4.065	(0.000)	76	308657	16.808	16.81			0.2	5
25) Allyl Chloride	(2)	4.265	(0.000)	41	157036	17.964	17.96			0.3	5
27) Methyl Acetate	(2)	4.242	(-0.000)	43	118037	18.807	18.81			0.2	5
28) Methylene Chloride	(2)	4.464	(0.000)	84	120393	20.758	20.76			0.3	1
30) t-Butyl alcohol	(1)	4.622	(0.000)	59	183342	198.737	198.74			12	50
31) Acrylonitrile	(2)	4.831	(0.000)	53	316407	93.704	93.70			0.3	20
32) trans-1,2-Dichloroethene	(2)	4.882	(0.000)	96	113295	20.097	20.10			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	4.872	(0.000)	73	315427	17.046	17.05			0.2	1
34) n-Hexane	(2)	5.306	(-0.000)	57	153781	17.534	17.53			2	5
36) 1,1-Dichloroethane	(2)	5.544	(0.000)	63	195838	19.914	19.91			0.2	1
38) di-Isopropyl ether	(2)	5.599	(0.000)	45	343897	18.131	18.13			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	5.657	(-0.000)	53	159972	18.131	18.13			0.2	5
40) Ethyl t-butyl ether	(2)	6.133	(0.000)	59	320696	17.423	17.42			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.374	(0.000)	96	134446	21.248	21.25			0.2	1
43) 1,2-Dichloroethene (Total)	(2)			96	247741	41.345	41.35			0.4	2

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23s01.d Injection date and time: **23-NOV-2019 09:26**
Data file Sample Info. Line: LCSL87;LCSL87;1;3;LCS;;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	6.358(0.000)	43	596366	137.585	137.59			0.3	10
45) 2,2-Dichloropropane	(2)	6.387(0.000)	77	147462	19.289	19.29			0.3	1
47) Propionitrile	(1)	6.458(-0.000)	54	195546	170.118	170.12			14	100
48) Methacrylonitrile	(2)	6.666(-0.000)	67	536833	147.383	147.38			6	50
49) Bromochloromethane	(2)	6.708(-0.000)	128	65482	19.517	19.52			0.2	5
50) Tetrahydrofuran	(1)	6.718(0.001)	71	116538	112.239	112.24			0.7	10
51) Chloroform	(2)	6.856(0.000)	83	194950	20.726	20.73			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.078(0.000)	97	159852	19.912	19.91			0.3	1
54) Cyclohexane	(2)	7.165(0.000)	56	186666	17.388	17.39			1	5
55) 1,1-Dichloropropene	(2)	7.290(0.000)	75	153454	19.735	19.74			0.2	5
56) Carbon Tetrachloride	(2)	7.277(0.000)	117	131745	19.349	19.35			0.2	1
58) Isobutyl Alcohol	(1)	7.454(0.001)	41	160914	518.323	518.32			36	250
60) Benzene	(2)	7.551(0.000)	78	482008	20.614	20.61			0.2	1
61) 1,2-Dichloroethane	(2)	7.625(0.000)	62	157726	20.971	20.97			0.3	1
65) t-Amyl methyl ether	(2)	7.734(0.000)	73	332235	17.983	17.98			0.8	5
67) n-Heptane	(2)	7.959(0.000)	43	138196	16.867	16.87			2	5
69) n-Butanol	(1)	8.329(0.002)	56	256065	958.318	958.32			61	250
71) Trichloroethene	(2)	8.428(-0.000)	95	121790	20.686	20.69			0.2	1
72) Methylcyclohexane	(2)	8.728(-0.000)	83	204135	18.689	18.69			0.5	5
73) 1,2-Dichloropropane	(2)	8.763(0.000)	63	123397	20.782	20.78			0.2	1
74) Dibromomethane	(2)	8.875(0.000)	93	79710	20.748	20.75			0.2	1
75) 1,4-Dioxane	(1)	8.856(0.000)	88	39582M	538.951	538.95			29	250
76) Methyl Methacrylate	(2)	8.846(-0.000)	69	111030	19.337	19.34			0.2	5
78) Bromodichloromethane	(2)	9.110(-0.000)	83	140364	20.361	20.36			0.2	1
79) 2-Nitropropane	(2)	9.390(-0.000)	41	31840	15.248	15.25			0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)	9.461(-0.000)	63	78938	30.955	30.95			0.2	10
81) cis-1,3-Dichloropropene	(2)	9.634(-0.000)	75	185790	20.291	20.29			0.2	1
82) 4-Methyl-2-pentanone	(2)	9.805(-0.000)	43	832198	90.959	90.96			0.5	10
88) Toluene	(3)	10.007(0.000)	92	313711	20.045	20.05			0.2	1
89) trans-1,3-Dichloropropene	(3)	10.258(-0.000)	75	165350	18.612	18.61			0.2	1
90) 1,3-Dichloropropene (total)	(3)		100	351140	38.903	38.90			0.4	2
91) Ethyl Methacrylate	(3)	10.310(-0.000)	69	185379	17.170	17.17			0.2	5
92) 1,1,2-Trichloroethane	(3)	10.457(-0.000)	97	123325	20.784	20.78			0.2	1
93) Tetrachloroethene	(3)	10.538(-0.000)	166	129265	19.503	19.50			0.2	1
94) 1,3-Dichloropropane	(3)	10.618(-0.000)	76	201364	19.876	19.88			0.2	1
96) 2-Hexanone	(3)	10.666(-0.000)	43	627871	87.122	87.12			0.3	10
97) Dibromochloromethane	(3)	10.824(0.000)	129	115965	19.079	19.08			0.2	1
99) 1,2-Dibromoethane	(3)	10.933(0.000)	107	129008	20.022	20.02			0.2	1
101) 1-Chlorohexane	(3)	11.361(0.000)	91	154355	18.359	18.36			0.3	5
102) Chlorobenzene	(3)	11.383(0.000)	112	359998	20.341	20.34			0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)	11.464(-0.000)	131	112152	19.233	19.23			0.2	1
104) Ethylbenzene	(3)	11.467(-0.000)	91	597136	19.963	19.96			0.4	1
106) m+p-Xylene	(3)	11.580(-0.000)	106	479979	40.789	40.79			1	5
107) o-Xylene	(3)	11.908(-0.000)	106	229466	19.742	19.74			0.4	1
108) Xylene (Total)	(3)		106	709445	60.531	60.53			1	6
109) Styrene	(3)	11.920(-0.000)	104	386872	20.142	20.14			0.2	5
110) Bromoform	(3)	12.078(0.000)	173	75317	16.583	16.58			1	4
111) Isopropylbenzene	(3)	12.203(-0.000)	105	586751	20.127	20.13			0.2	5
112) Cyclohexanone	(1)	12.287(0.001)	55	136932	476.060	476.06			25	100
115) Bromobenzene	(4)	12.464(-0.000)	156	152936	19.632	19.63			0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	12.448(-0.000)	83	197038	20.124	20.12			0.2	1
117) 1,2,3-Trichloropropane	(4)	12.496(-0.000)	110	59005	19.638	19.64			0.2	5
118) trans-1,4-Dichloro-2-butene	(4)	12.473(-0.000)	53	259700	85.988	85.99			6	50
119) n-Propylbenzene	(4)	12.528(-0.000)	91	696154	20.454	20.45			0.2	5

M = Compound was manually integrated.

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23s01.d Injection date and time: **23-NOV-2019 09:26**
Data file Sample Info. Line: LCSL87;LCSL87;1;3;LCS;;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)	12.605(0.000)	126	141098	19.514	19.51			0.2	5
121) 4-Chlorotoluene	(4)	12.698(-0.000)	126	147115	19.547	19.55			0.2	5
122) 1,3,5-Trimethylbenzene	(4)	12.660(0.000)	105	498236	20.144	20.14			0.3	5
124) tert-Butylbenzene	(4)	12.904(-0.000)	134	97397	19.040	19.04			0.3	5
125) Pentachloroethane	(4)	12.936(-0.000)	167	80055	18.175	18.18			0.2	5
126) 1,2,4-Trimethylbenzene	(4)	12.946(-0.000)	105	516617	19.818	19.82			1	5
127) sec-Butylbenzene	(4)	13.065(0.000)	105	596790	19.552	19.55			0.2	5
129) 1,3-Dichlorobenzene	(4)	13.168(-0.000)	146	284643	19.884	19.88			0.2	5
130) p-Isopropyltoluene	(4)	13.171(-0.000)	119	516072	19.543	19.54			0.2	5
133) 1,4-Dichlorobenzene	(4)	13.239(-0.000)	146	297218	20.028	20.03			0.2	5
134) 1,2,3-Trimethylbenzene	(4)	13.248(-0.000)	105	535390	19.388	19.39			0.3	5
135) Benzyl Chloride	(4)	13.319(-0.000)	91	324287	15.511	15.51			1	5
136) 1,3-Diethylbenzene	(4)	13.370(-0.000)	119	312049	18.158	18.16			0.2	5
137) 1,4-Diethylbenzene	(4)	13.441(-0.000)	119	327147	17.967	17.97	0.216	B	0.2	5
138) 1,2-Dichlorobenzene	(4)	13.499(-0.000)	146	283246	20.052	20.05			0.2	5
139) n-Butylbenzene	(4)	13.464(-0.000)	92	251889	18.656	18.66	0.344	B	0.2	5
140) 1,2-Diethylbenzene	(4)	13.515(-0.000)	119	265561	18.330	18.33			0.2	5
141) Diethylbenzene (total)	(4)		100	904757	54.455	54.46			0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)	14.039(-0.000)	75	39020	18.205	18.20			0.3	5
144) 1,3,5-Trichlorobenzene	(4)	14.161(-0.000)	180	191170	17.615	17.61	0.552	B	0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.586(-0.000)	180	179583	17.018	17.02	0.530	B	0.3	5
147) Hexachlorobutadiene	(4)	14.666(-0.000)	225	75520	15.157	15.16			2	5
148) Naphthalene	(4)	14.772(-0.000)	128	623142	18.368	18.37			1	5
149) 1,2,3-Trichlorobenzene	(4)	14.914(-0.000)	180	174866	17.030	17.03	0.595	B	0.4	5
150) 2-Methylnaphthalene	(4)	15.563(-0.000)	142	295754	14.157	14.16			2	4

B = Compound detected in referenced method blank.

Total number of targets = 110

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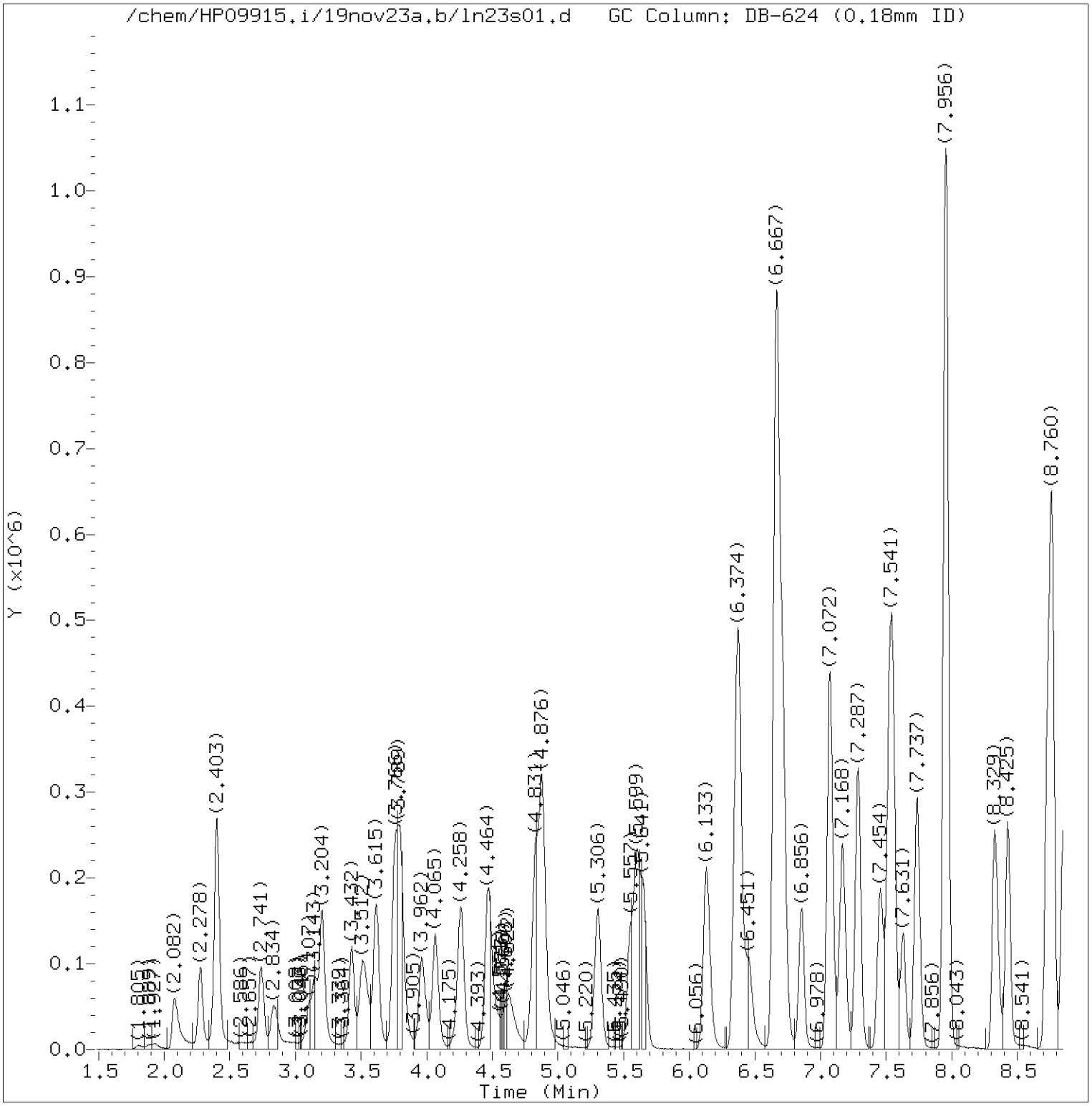
Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:45. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

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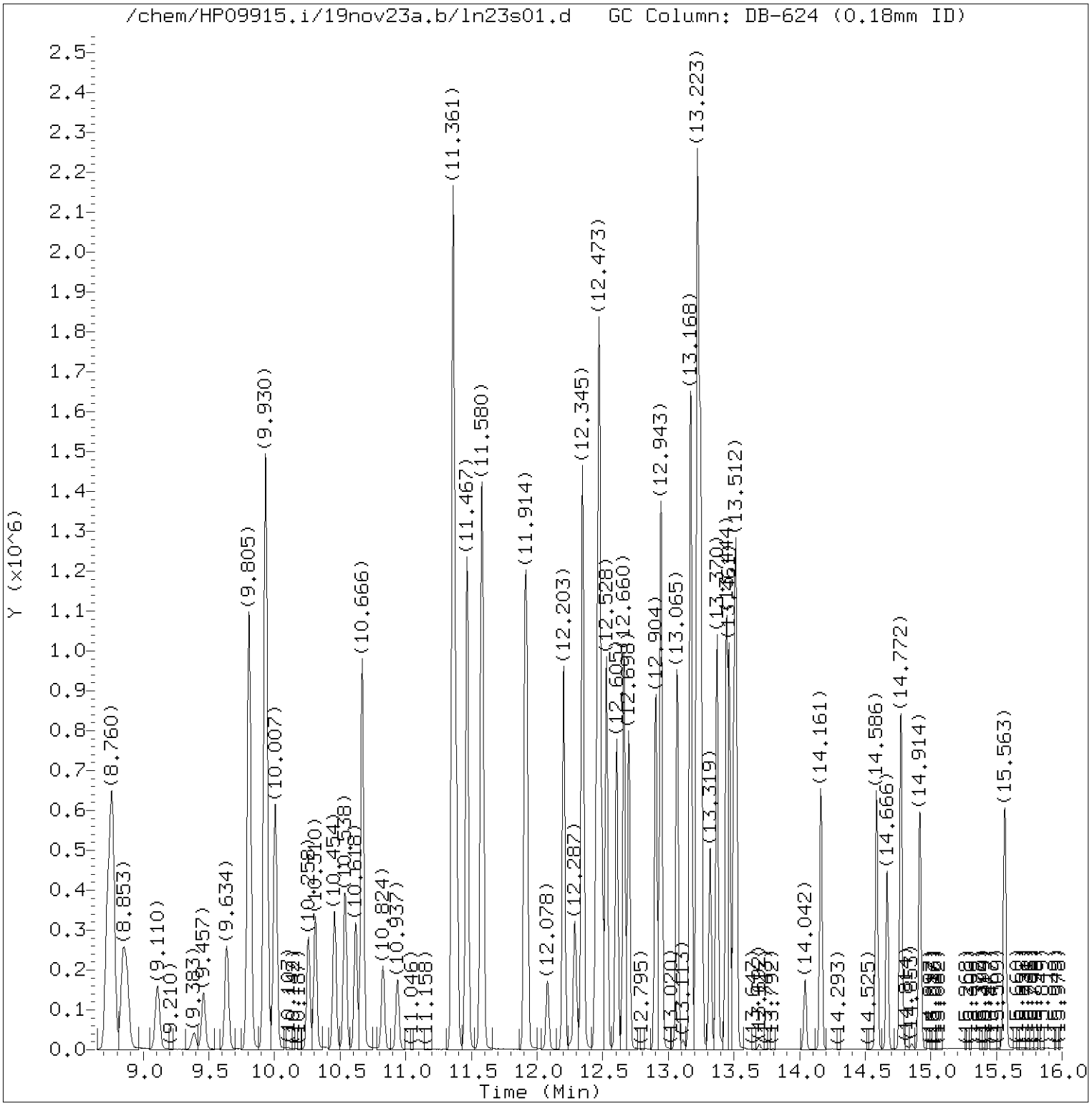
on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.082	85	136297	17.002
4) Chloromethane	(2)	2.278	50	138166	17.882
6) Vinyl Chloride	(2)	2.397	62	137718	17.859
5) 1,3-Butadiene	(2)	2.406	39	130178	20.291
8) Bromomethane	(2)	2.741	94	97922	17.715
9) Chloroethane	(2)	2.837	64	75570	17.832
12) Trichlorofluoromethane	(2)	3.149	101	168712	20.322
11) n-Pentane	(2)	3.200	43	151384	15.430
14) Ethyl ether	(2)	3.432	59	105121	19.595
15) Freon 123a	(2)	3.519	67	132374	19.821
16) Acrolein	(1)	3.612	56	249441	151.730
17) 1,1-Dichloroethene	(2)	3.750	96	98797	20.274
19) Freon 113	(2)	3.795	101	101611	18.276
18) Acetone	(1)	3.799	58	122187	165.784
22) Methyl Iodide	(2)	3.962	142	179282	17.754
21) 2-Propanol	(1)	3.985	45	78385	147.940
23) Carbon Disulfide	(2)	4.065	76	308657	16.808
27) Methyl Acetate	(2)	4.242	43	118037	18.807
25) Allyl Chloride	(2)	4.265	41	157036	17.964
28) Methylene Chloride	(2)	4.464	84	120393	20.758
29)*t-Butyl alcohol-d10	(1)	4.493	65	219124	250.000
30) t-Butyl alcohol	(1)	4.622	59	183342	198.737
31) Acrylonitrile	(2)	4.831	53	316407	93.704
33) Methyl Tertiary Butyl Ether	(2)	4.872	73	315427	17.046
32) trans-1,2-Dichloroethene	(2)	4.882	96	113295	20.097
34) n-Hexane	(2)	5.306	57	153781	17.534
36) 1,1-Dichloroethane	(2)	5.544	63	195838	19.914
38) di-Isopropyl ether	(2)	5.599	45	343897	18.131
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	159972	18.131
40) Ethyl t-butyl ether	(2)	6.133	59	320696	17.423
43) 1,2-Dichloroethene (Total)	(2)		96	247741	41.345
44) 2-Butanone	(2)	6.358	43	596366	137.585
42) cis-1,2-Dichloroethene	(2)	6.374	96	134446	21.248
45) 2,2-Dichloropropane	(2)	6.387	77	147462	19.289
47) Propionitrile	(1)	6.458	54	195546	170.118
48) Methacrylonitrile	(2)	6.667	67	536833	147.383
49) Bromochloromethane	(2)	6.708	128	65482	19.517
50) Tetrahydrofuran	(1)	6.718	71	116538	112.239

* = Compound is an internal standard.

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on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	6.856	83	194950	20.726
52)$Dibromofluoromethane	(2)	7.065	113	279543	49.739
53) 1,1,1-Trichloroethane	(2)	7.078	97	159852	19.912
54) Cyclohexane	(2)	7.165	56	186666	17.388
56) Carbon Tetrachloride	(2)	7.277	117	131745	19.349
55) 1,1-Dichloropropene	(2)	7.290	75	153454	19.735
58) Isobutyl Alcohol	(1)	7.454	41	160914	518.323
57)$1,2-Dichloroethane-d4	(2)	7.525	102	73161	51.077
60) Benzene	(2)	7.551	78	482008	20.614
61) 1,2-Dichloroethane	(2)	7.625	62	157726	20.971
65) t-Amyl methyl ether	(2)	7.734	73	332235	17.983
66)*Fluorobenzene	(2)	7.956	96	1149568	50.000
67) n-Heptane	(2)	7.959	43	138196	16.867
69) n-Butanol	(1)	8.329	56	256065	958.318
71) Trichloroethene	(2)	8.429	95	121790	20.686
72) Methylcyclohexane	(2)	8.728	83	204135	18.689
73) 1,2-Dichloropropane	(2)	8.763	63	123397	20.782
76) Methyl Methacrylate	(2)	8.847	69	111030	19.337
75) 1,4-Dioxane	(1)	8.856	88	39582M	538.951
74) Dibromomethane	(2)	8.875	93	79710	20.748
78) Bromodichloromethane	(2)	9.110	83	140364	20.361
79) 2-Nitropropane	(2)	9.390	41	31840	15.248
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	78938	30.955
81) cis-1,3-Dichloropropene	(2)	9.634	75	185790	20.291
82) 4-Methyl-2-pentanone	(2)	9.805	43	832198	90.959
83)$Toluene-d8	(3)	9.930	98	1224920	49.069
88) Toluene	(3)	10.007	92	313711	20.045
90) 1,3-Dichloropropene (total)	(3)		100	351140	38.903
89) trans-1,3-Dichloropropene	(3)	10.258	75	165350	18.612
91) Ethyl Methacrylate	(3)	10.310	69	185379	17.170
92) 1,1,2-Trichloroethane	(3)	10.457	97	123325	20.784
93) Tetrachloroethene	(3)	10.538	166	129265	19.503
94) 1,3-Dichloropropane	(3)	10.618	76	201364	19.876
96) 2-Hexanone	(3)	10.666	43	627871	87.122
97) Dibromochloromethane	(3)	10.824	129	115965	19.079
99) 1,2-Dibromoethane	(3)	10.933	107	129008	20.022
100)*Chlorobenzene-d5	(3)	11.358	117	954034	50.000
101) 1-Chlorohexane	(3)	11.361	91	154355	18.359

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
102) Chlorobenzene	(3)	11.383	112	359998	20.341
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	112152	19.233
104) Ethylbenzene	(3)	11.467	91	597136	19.963
106) m+p-Xylene	(3)	11.580	106	479979	40.789
108) Xylene (Total)	(3)		106	709445	60.531
107) o-Xylene	(3)	11.908	106	229466	19.742
109) Styrene	(3)	11.920	104	386872	20.142
110) Bromoform	(3)	12.078	173	75317	16.583
111) Isopropylbenzene	(3)	12.203	105	586751	20.127
112) Cyclohexanone	(1)	12.287	55	136932	476.060
114)$4-Bromofluorobenzene	(3)	12.345	95	482775	51.074
116) 1,1,2,2-Tetrachloroethane	(4)	12.448	83	197038	20.124
115) Bromobenzene	(4)	12.464	156	152936	19.632
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	259700	85.988
117) 1,2,3-Trichloropropane	(4)	12.496	110	59005	19.638
119) n-Propylbenzene	(4)	12.528	91	696154	20.454
120) 2-Chlorotoluene	(4)	12.605	126	141098	19.514
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	498236	20.144
121) 4-Chlorotoluene	(4)	12.698	126	147115	19.547
124) tert-Butylbenzene	(4)	12.904	134	97397	19.040
125) Pentachloroethane	(4)	12.936	167	80055	18.175
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	516617	19.818
127) sec-Butylbenzene	(4)	13.065	105	596790	19.552
129) 1,3-Dichlorobenzene	(4)	13.168	146	284643	19.884
130) p-Isopropyltoluene	(4)	13.171	119	516072	19.543
131)*1,4-Dichlorobenzene-d4	(4)	13.219	152	518331	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	297218	20.028
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	535390	19.388
135) Benzyl Chloride	(4)	13.319	91	324287	15.511
136) 1,3-Diethylbenzene	(4)	13.370	119	312049	18.158
141) Diethylbenzene (total)	(4)		100	904757	54.455
137) 1,4-Diethylbenzene	(4)	13.441	119	327147	17.967
139) n-Butylbenzene	(4)	13.464	92	251889	18.656
138) 1,2-Dichlorobenzene	(4)	13.499	146	283246	20.052
140) 1,2-Diethylbenzene	(4)	13.515	119	265561	18.330
142) 1,2-Dibromo-3-chloropropane	(4)	14.039	75	39020	18.205
144) 1,3,5-Trichlorobenzene	(4)	14.161	180	191170	17.615
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	179583	17.018

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

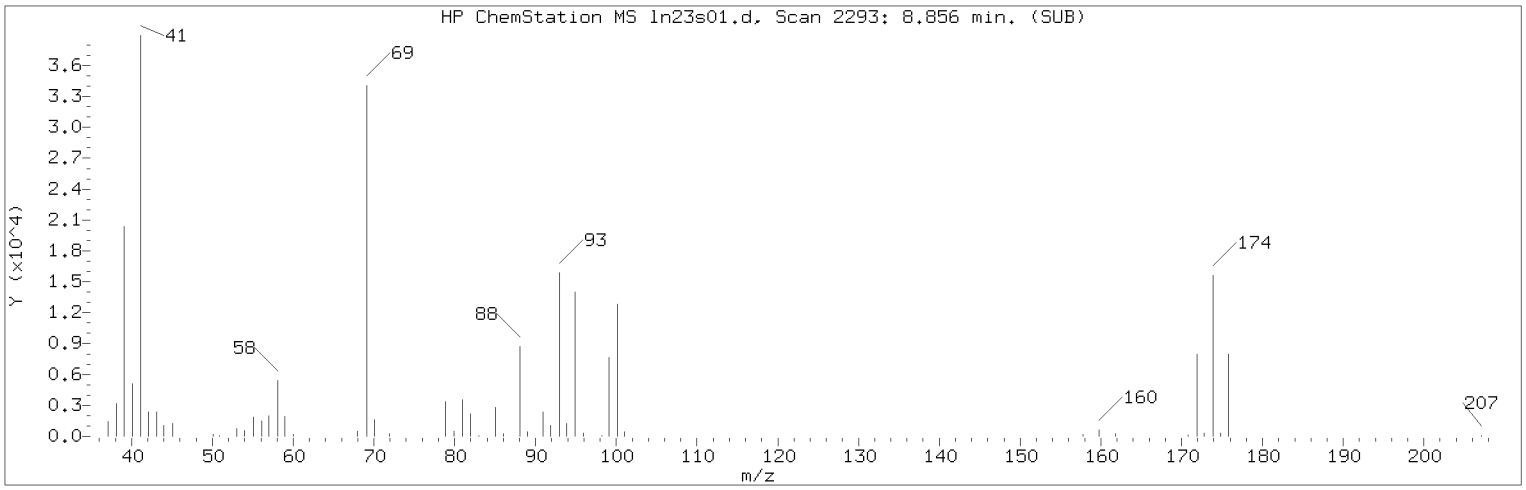
Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

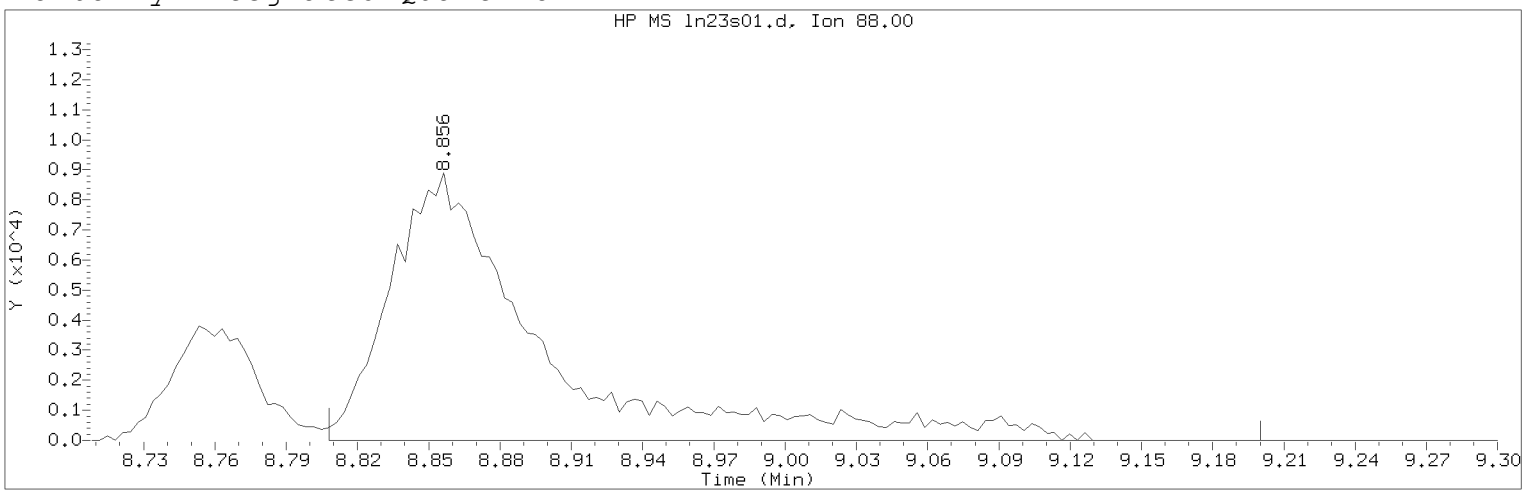
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Hexachlorobutadiene	(4)	14.666	225	75520	15.157
148) Naphthalene	(4)	14.772	128	623142	18.368
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	174866	17.030
150) 2-Methylnaphthalene	(4)	15.563	142	295754	14.157

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

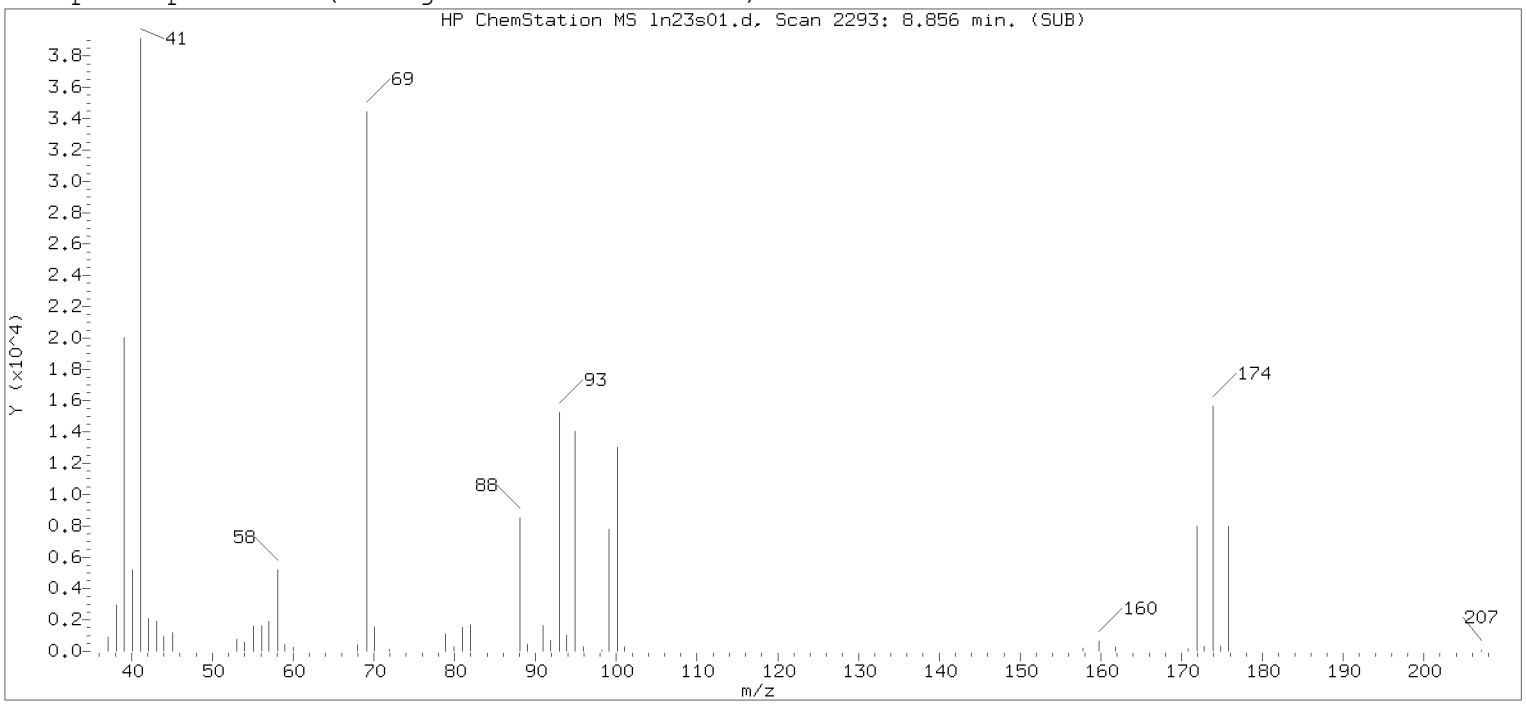
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 39582M
On-Column Amount (ng) : 538.9512
Integration start scan : 2277 Integration stop scan: 2399
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

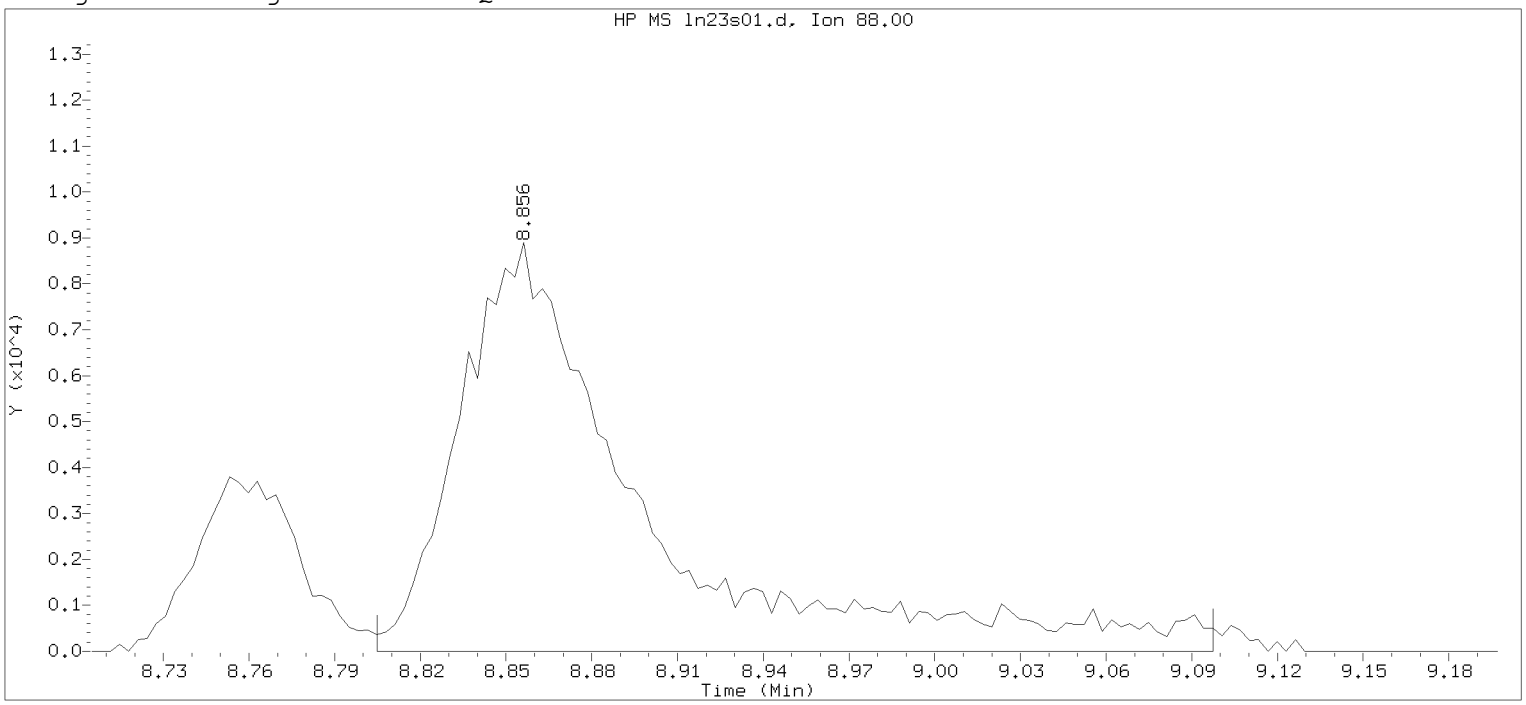
Analyst responsible for change: Digitally signed by Corie L. Mellinger
on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:45.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:43 Automation

Sample Name: LCSL87 Lab Sample ID: LCSL87

Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2293		
Retention Time (minutes)	: 8.856		
Quant Ion	: 88.00		
Area	: 39126		
On-column Amount (ng)	: 532.7524		
Integration start scan	: 2276	Integration stop scan:	2367
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Corie L. Mellinger on 11/23/2019 at 10:16.
Target 3.5 esignature user: CLM27445

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NYSDEC ASP Category B Data Package

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Project: AD-New Windsor, NY
Groundwater Samples
Collected on 11/15/19

SDG# JCW25

GROUP	SAMPLE NUMBERS
2075498	1205928-1205929

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-18-27
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M. Kauffman

Dana M. Kauffman
Manager

Date: **12/17/2019**

Any questions or concerns you might have regarding this data package should be directed to your client representative, Katherine Klinefelter at (717) 556-7256.

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Sample Reference List for SDG Number JCW25
with a Data Package Type of NYSDEC B

06556 - The Johnson Company, Inc.
Project: AD-New Windsor, NY

Lab Sample Number	Client Sample ID	Collection Date	Date Received	Lab Sample Code
1205928	J08-UC01	11/15/2019 12:13	11/19/2019 10:38	JCW30
1205929	J08-UC02	11/15/2019 13:27	11/19/2019 10:38	JCW31

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Sample pH Log

SDG: JCW25

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
1205928	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/25/2019 1:54:45PM	895
1205929	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/25/2019 1:54:45PM	895

*pH Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

**Chlorine Present Code Key
NA = Chlorine Not Checked
Y = Chlorine Present
N = Chlorine Not Present

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11997 VOCs- 5ml Water by 8260C/D

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Report Date: November 27, 2019 22:05

Project: AD-New Windsor, NY

Account #: 06556
Group Number: 2075498
SDG: JCW25
PO Number: 1-0145-05
Release Number: 58300.00
State of Sample Origin: NY

Electronic Copy To	The Johnson Company, Inc.	Attn: Tristan Hardy
Electronic Copy To	The Johnson Company, Inc.	Attn: George Lester
Electronic Copy To	VHB	Attn: Quinn Ledak

Respectfully Submitted,

Katherine A. Klinefelter

Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
J08-UC01 Grab Groundwater	11/15/2019 12:13	1205928
J08-UC02 Grab Groundwater	11/15/2019 13:27	1205929

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **J08-UC01 Grab Groundwater**
AD-New Windsor

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/15/2019 12:13
SDG#: JCW25-01

The Johnson Company, Inc.
ELLE Sample #: GW 1205928
ELLE Group #: 2075498
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	1	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193271AA	11/23/2019 16:15	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193271AA	11/23/2019 16:14	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

Sample Description: **J08-UC02 Grab Groundwater**
AD-New Windsor

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/19/2019 10:38
Collection Date/Time: 11/15/2019 13:27
SDG#: JCW25-02

The Johnson Company, Inc.
ELLE Sample #: GW 1205929
ELLE Group #: 2075498
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	2	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193271AA	11/23/2019 16:37	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193271AA	11/23/2019 16:36	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2075498
Reported: 11/27/2019 22:05

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: L193271AA	Sample number(s): 1205928-1205929		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	6

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: L193271AA	Sample number(s): 1205928-1205929								
Acetone	150	165.78			111		54-157		
Benzene	20	20.61			103		80-120		
2-Butanone	150	137.59			92		59-135		
Carbon Disulfide	20	16.81			84		65-128		
Chloroform	20	20.73			104		80-120		
1,2-Dichlorobenzene	20	20.05			100		80-120		
1,1-Dichloroethane	20	19.91			100		80-120		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2075498
Reported: 11/27/2019 22:05

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,2-Dichloroethane	20	20.97			105		73-124		
1,1-Dichloroethene	20	20.27			101		80-131		
cis-1,2-Dichloroethene	20	21.25			106		80-125		
trans-1,2-Dichloroethene	20	20.1			100		80-126		
1,4-Dioxane	500	538.96			108		63-146		
Ethylbenzene	20	19.96			100		80-120		
Freon 113	20	18.28			91		73-139		
Methylene Chloride	20	20.76			104		80-120		
Naphthalene	20	18.37			92		53-124		
Tetrachloroethene	20	19.5			98		80-120		
Toluene	20	20.05			100		80-120		
1,1,1-Trichloroethane	20	19.91			100		67-126		
Trichloroethene	20	20.69			103		80-120		
Vinyl Chloride	20	17.86			89		56-120		
Xylene (Total)	60	60.53			101		80-120		

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: L193271AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1205928	100	104	97	98
1205929	100	103	97	97
Blank	97	102	97	98
LCS	99	102	98	102
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 6656 Group # 2075498 Sample # 1205928-29

COC # 596350

Client Information

Client: VHB/The Johnson	Acct. #:
Project Name/#: AD-New Windsor	PWSID #:
Project Manager: George Lester	P.O. #:
Sampler: Nicole Saitta	Quote #:
State where samples were collected: NY	For Compliance: Yes ☐ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ Water ☒ Potable ☐ Ground ☐ NPDES ☐ Surface ☐ Other: ____

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	H	8260C - VOCs
J08-UC01	11/15/19	1213	X		3	X	X
J08-UC02	11/15/19	1327	X		3	X	X

For Lab Use Only

FSC: _____

SCR#: _____

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: _____

E-mail address: glester@vhb.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)

Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13

NYSDEC Category A or (B) | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	11/18/19	1600			
			[signature]		
			[signature]	11/19/19	1038

EDD Required? (Yes) No

If yes, format: Excel

Site-Specific QC (MS/MSD/Dup)? (Yes) No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS _____ FedEx Y Other _____

Temperature upon receipt 2.0 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 266924

Group Number(s): 2075498

Client: VHB/ THE JOHNSON COMPANY

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	11/19/2019
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	New York		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Julissa Rivera-Santa

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192050133	2.0	IR	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17601-5994
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCW25

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
1205928	J08-UC01	X		1	
1205929	J08-UC02	X		1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCW25

GC/MS Volatiles

Fraction: Volatiles by GC/MS

MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

1. Relative Response Factor (RRF)

$$RRF = \frac{AX}{Ais} \times \frac{Cis}{Cx}$$

Where:

Ax = Area of the characteristic ion for the compound to be measured
Ais = Area of the characteristic ion for the specific internal standard to be measured
Cis = Concentration of the internal standard
Cx = Concentration of the compound to be measured

2. % Relative Standard Deviation (%RSD)

$$\%RSD = \frac{standard\ deviation}{Mean} \times 100$$

3. % Difference

$$\%D = \frac{RRFc - RRFi}{RRFi} \times 100$$

Where:

RRFc = Relative response factor from the continuing calibration standard
RRFi = Mean relative response factor from the initial calibration

4. Concentration

$$Concentration\ (\mu g/L) = \frac{(Ax)(Is)(Df)}{(Ais)(RRF)}$$

Where:

Ax, Ais, and RRF are as given in 1. above
Is = Amount of internal standard added in parts per billion (µg/L)
Df = Dilution factor

5. % Recovery (% Rec)

$$\%Rec = \frac{SSR - SR}{SA} \times 100$$

Where:

SSR = Spiked sample result
SR = Sample result
SA = Spike added

6. Relative Percent Difference (RPD)

$$RPD = \frac{(MSR - MSRD)}{(1/2)(MSR + MSRD)} \times 100$$

Where:

MSR = Matrix spike recovery
MSRD = Matrix spike recovery duplicate

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: The Johnson Company, Inc.
SDG: JCW25

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
VOCs- 5ml Water by 8260C/D	L193271AA	VBLKL87	11/23/2019 09:48
		LCSL87	11/23/2019 09:26
		1205928	11/23/2019 16:15
		1205929	11/23/2019 16:37

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: JCW25
Matrix: LIQUID

Fraction: Volatiles by GC/MS

L193271AA / VBLKL87 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	11/23/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	11/23/19	N.D.	ug/l	0.2	1
Acetone	11/23/19	N.D.	ug/l	0.7	20
Freon 113	11/23/19	N.D.	ug/l	0.2	10
Carbon Disulfide	11/23/19	N.D.	ug/l	0.2	5
Methylene Chloride	11/23/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	11/23/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	11/23/19	N.D.	ug/l	0.2	1
2-Butanone	11/23/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	11/23/19	N.D.	ug/l	0.2	1
Chloroform	11/23/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	11/23/19	N.D.	ug/l	0.3	1
Benzene	11/23/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	11/23/19	N.D.	ug/l	0.3	1
Trichloroethene	11/23/19	N.D.	ug/l	0.2	1
1,4-Dioxane	11/23/19	N.D.	ug/l	29	250
Toluene	11/23/19	N.D.	ug/l	0.2	1
Tetrachloroethene	11/23/19	N.D.	ug/l	0.2	1
Ethylbenzene	11/23/19	N.D.	ug/l	0.4	1
Xylene (Total)	11/23/19	N.D.	ug/l	1	6
1,2-Dichlorobenzene	11/23/19	N.D.	ug/l	0.2	5
Naphthalene	11/23/19	N.D.	ug/l	1	5

Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: JCW25
Matrix: LIQUID

Fraction: Volatiles by GC/MS

L193271AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKL87	102	80 - 120	98	80 - 120	97	80 - 120	97	80 - 120
LCSL87	102	80 - 120	102	80 - 120	99	80 - 120	98	80 - 120
1205928	104	80 - 120	98	80 - 120	100	80 - 120	97	80 - 120
1205929	103	80 - 120	97	80 - 120	100	80 - 120	97	80 - 120

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: JCW25
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSL87	Batch: **L193271AA** (Sample number(s): 1205928-1205929)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	17.86	NA	89	NA	56-120	NA	NA
1,1-Dichloroethene	20	20.27	NA	101	NA	80-131	NA	NA
Acetone	150	165.78	NA	111	NA	54-157	NA	NA
Freon 113	20	18.28	NA	91	NA	73-139	NA	NA
Carbon Disulfide	20	16.81	NA	84	NA	65-128	NA	NA
Methylene Chloride	20	20.76	NA	104	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	20.1	NA	100	NA	80-126	NA	NA
1,1-Dichloroethane	20	19.91	NA	100	NA	80-120	NA	NA
2-Butanone	150	137.59	NA	92	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	21.25	NA	106	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	19.91	NA	100	NA	67-126	NA	NA
Chloroform	20	20.73	NA	104	NA	80-120	NA	NA
1,2-Dichloroethane	20	20.97	NA	105	NA	73-124	NA	NA
Benzene	20	20.61	NA	103	NA	80-120	NA	NA
Trichloroethene	20	20.69	NA	103	NA	80-120	NA	NA
1,4-Dioxane	500	538.96	NA	108	NA	63-146	NA	NA
Toluene	20	20.05	NA	100	NA	80-120	NA	NA
Tetrachloroethene	20	19.5	NA	98	NA	80-120	NA	NA
Ethylbenzene	20	19.96	NA	100	NA	80-120	NA	NA
Xylene (Total)	60	60.53	NA	101	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	20.05	NA	100	NA	80-120	NA	NA
Naphthalene	20	18.37	NA	92	NA	53-124	NA	NA

Fraction: Volatiles by GC/MS

11997: VOCs- 5ml Water by 8260C/D Analyte Name	Default MDL	Default LOQ	Units
Vinyl Chloride	0.2	1	ug/l
1,1-Dichloroethene	0.2	1	ug/l
Acetone	0.7	20	ug/l
Freon 113	0.2	10	ug/l
Carbon Disulfide	0.2	5	ug/l
Methylene Chloride	0.3	1	ug/l
trans-1,2-Dichloroethene	0.2	1	ug/l
1,1-Dichloroethane	0.2	1	ug/l
2-Butanone	0.3	10	ug/l
cis-1,2-Dichloroethene	0.2	1	ug/l
Chloroform	0.2	1	ug/l
1,1,1-Trichloroethane	0.3	1	ug/l
Benzene	0.2	1	ug/l
1,2-Dichloroethane	0.3	1	ug/l
Trichloroethene	0.2	1	ug/l
1,4-Dioxane	29	250	ug/l
Toluene	0.2	1	ug/l
Tetrachloroethene	0.2	1	ug/l
Ethylbenzene	0.4	1	ug/l
Xylene (Total)	1	6	ug/l
1,2-Dichlorobenzene	0.2	5	ug/l
Naphthalene	1	5	ug/l

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln04t06.d BFB Injection Date: 11/04/19

Instrument ID: HP09915 BFB Injection Time: 14:18

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.48
75	30.0 - 60.0% of mass 95	44.65
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.22
173	Less than 2.0% of mass 174	0.51 (0.61)1
174	Greater than 50.0% of mass 95	83.73
175	5.0 - 9.0% of mass 174	5.92 (7.07)1
176	Greater than 95.0%, but less than 101.0% of mass 174	82.66 (98.72)1
177	5.0 - 9.0% of mass 176	5.37 (6.49)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	ln04i01.d	11/04/19	14:51
02	VSTD100	ln04i02.d	11/04/19	15:13
03	VSTD50	ln04i03.d	11/04/19	15:35
04	VSTD20	ln04i04.d	11/04/19	15:57
05	VSTD10	ln04i05.d	11/04/19	16:19
06	VSTD4	ln04i06.d	11/04/19	16:41
07	VSTD1	ln04i07.d	11/04/19	17:03
08	ICVLLG	ln04v02.d	11/04/19	18:42

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln23t02.d BFB Injection Date: 11/23/19

Instrument ID: HP09915 BFB Injection Time: 07:57

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.16
75	30.0 - 60.0% of mass 95	43.53
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.39
173	Less than 2.0% of mass 174	0.55 (0.66)1
174	Greater than 50.0% of mass 95	83.68
175	5.0 - 9.0% of mass 174	6.06 (7.25)1
176	Greater than 95.0%, but less than 101.0% of mass 174	80.15 (95.78)1
177	5.0 - 9.0% of mass 176	5.44 (6.78)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	ln23c01.d	11/23/19	08:42
02	LCSL87	ln23s01.d	11/23/19	09:26
03	VBLKL87	ln23b01.d	11/23/19	09:48
04	1205905	ln23s02.d	11/23/19	10:44
05	1205900	ln23s03.d	11/23/19	11:06
06	1205901MS	ln23s04.d	11/23/19	11:28
07	1205902MSD	ln23s05.d	11/23/19	11:50
08	1205903	ln23s06.d	11/23/19	12:12
09	1205904	ln23s07.d	11/23/19	12:34
10	1205910	ln23s08.d	11/23/19	12:56
11	1205911	ln23s09.d	11/23/19	13:18
12	1205912	ln23s10.d	11/23/19	13:40
13	1205913	ln23s11.d	11/23/19	14:02
14	1205914	ln23s12.d	11/23/19	14:24
15	1205915	ln23s13.d	11/23/19	14:46
16	1205916	ln23s14.d	11/23/19	15:08
17	1205917	ln23s15.d	11/23/19	15:31
18	1205918	ln23s16.d	11/23/19	15:53
19	1205928	ln23s17.d	11/23/19	16:15
20	1205929	ln23s18.d	11/23/19	16:37
21	1206738	ln23s19.d	11/23/19	16:59
22	1206739	ln23s20.d	11/23/19	17:21

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln23t02.d BFB Injection Date: 11/23/19

Instrument ID: HP09915 BFB Injection Time: 07:57

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.16
75	30.0 - 60.0% of mass 95	43.53
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.39
173	Less than 2.0% of mass 174	0.55 (0.66)1
174	Greater than 50.0% of mass 95	83.68
175	5.0 - 9.0% of mass 174	6.06 (7.25)1
176	Greater than 95.0%, but less than 101.0% of mass 174	80.15 (95.78)1
177	5.0 - 9.0% of mass 176	5.44 (6.78)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1206740	ln23s21.d	11/23/19	17:43

FORM V VOA

^

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 11/04/19 11/04/19

Heated Purge: (Y/N) Y Calibration Times: 14:51 17:03

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ln04i07.d RRF 4 = ln04i06.d RRF 10= ln04i05.d
RRF 20= ln04i04.d RRF 50= ln04i03.d RRF100= ln04i02.d RRF300= ln04i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
Dichlorodifluoromethane	#0.2770	0.3398	0.3322	0.3567	0.3683	0.3624	0.4044	0.3487	11	AVG	#
Chloromethane	#0.3032	0.3486	0.3309	0.3441	0.3366	0.3315	0.3574	0.3361	5	AVG	#
1,3-Butadiene	0.3190	0.2966	0.2596	0.2831	0.2680	0.2614	0.2655	0.2790	8	AVG	
Vinyl Chloride	#0.3148	0.3359	0.3281	0.3461	0.3340	0.3300	0.3588	0.3354	4	AVG	#
Bromomethane	#0.2465	0.2525	0.2338	0.2435	0.2351	0.2280	0.2436	0.2404	4	AVG	#
Chloroethane	#0.1829	0.1883	0.1826	0.1903	0.1829	0.1768	0.1864	0.1843	2	AVG	#
Dichlorofluoromethane	0.4438	0.4434	0.4617	0.4547	0.4393	0.4194	0.4429	0.4436	3	AVG	
n-Pentane	0.4515	0.4661	0.3729	0.4321	0.4220	0.4236	0.4188	0.4267	7	AVG	
Trichlorofluoromethane	#0.3135	0.3650	0.3480	0.3680	0.3738	0.3637	0.3957	0.3611	7	AVG	#
Ethyl ether	0.2040	0.2292	0.2248	0.2407	0.2462	0.2325	0.2560	0.2333	7	AVG	
Freon 123a	0.2731	0.2973	0.2841	0.3052	0.2905	0.2871	0.2961	0.2905	4	AVG	
Acrolein	1.8108	1.7178	1.8759	1.9357	1.9501	1.9507	1.8885	1.8756	5	AVG	
1,1-Dichloroethene	#0.1836	0.2109	0.2092	0.2256	0.2170	0.2158	0.2215	0.2120	6	AVG	#
1,1-Dichloroethene(2)	#0.1023	0.1059	0.1045	0.1117	0.1063	0.1059	0.1072	0.1063	3	AVG	#
Acetone	#0.8149	0.8065	0.8248	0.8719	0.8448	0.8521	0.8711	0.8409	3	AVG	#
Freon 113	#0.2090	0.2460	0.2241	0.2555	0.2493	0.2512	0.2576	0.2418	8	AVG	#
2-Propanol	0.6190	0.5470	0.6059	0.5854	0.6149	0.6455	0.6138	0.6045	5	AVG	
Methyl Iodide	0.3896	0.4318	0.4390	0.4699	0.4471	0.4440	0.4531	0.4392	6	AVG	
Carbon Disulfide	#0.6790	0.7802	0.7759	0.8606	0.8244	0.8268	0.8441	0.7987	8	AVG	#
Allyl Chloride	0.3592	0.3785	0.3741	0.3853	0.3781	0.3777	0.4087	0.3802	4	AVG	
Methyl Acetate	#0.2759	0.2713	0.2678	0.2699	0.2708	0.2665	0.2887	0.2730	3	AVG	#
Methylene Chloride	#0.2376	0.2470	0.2510	0.2643	0.2542	0.2521	0.2596	0.2523	3	AVG	#
t-Butyl alcohol	0.9987	0.9567	1.0535	1.0361	1.0823	1.1654	1.0751	1.0525	6	AVG	
Acrylonitrile	0.1302	0.1382	0.1473	0.1543	0.1516	0.1518	0.1546	0.1469	6	AVG	
trans-1,2-Dichloroethene	#0.2214	0.2420	0.2423	0.2603	0.2478	0.2478	0.2548	0.2452	5	AVG	#
Methyl Tertiary Butyl Ether	#0.7408	0.7784	0.8166	0.8514	0.8245	0.8033	0.8186	0.8048	4	AVG	#
n-Hexane	0.3287	0.3697	0.3246	0.4104	0.3995	0.4116	0.4257	0.3815	11	AVG	
1,1-Dichloroethane	#0.3709	0.4279	0.4277	0.4500	0.4356	0.4348	0.4472	0.4277	6	AVG	#
di-Isopropyl ether	0.7323	0.7905	0.8261	0.8844	0.8488	0.8391	0.8535	0.8250	6	AVG	
2-Chloro-1,3-butadiene	0.3275	0.3721	0.3665	0.4087	0.3982	0.4003	0.4129	0.3838	8	AVG	
Ethyl t-butyl ether	0.7062	0.7711	0.8131	0.8688	0.8314	0.8069	0.8067	0.8006	6	AVG	
cis-1,2-Dichloroethene	#0.2518	0.2724	0.2701	0.2905	0.2780	0.2764	0.2874	0.2752	5	AVG	#
2-Butanone	#0.1780	0.1771	0.1844	0.1937	0.1954	0.1945	0.1965	0.1885	4	AVG	#
2,2-Dichloropropane	0.2822	0.3252	0.3231	0.3546	0.3451	0.3438	0.3535	0.3325	8	AVG	
Propionitrile	1.2429	1.2037	1.2978	1.3520	1.3266	1.3641	1.3930	1.3114	5	AVG	
Methacrylonitrile	0.1422	0.1460	0.1564	0.1674	0.1637	0.1633	0.1700	0.1584	7	AVG	
Bromochloromethane	0.1253	0.1402	0.1475	0.1518	0.1494	0.1475	0.1599	0.1459	7	AVG	
Tetrahydrofuran	1.1900	1.0886	1.1667	1.2087	1.1678	1.2286	1.2418	1.1846	4	AVG	
Chloroform	#0.3565	0.3938	0.4037	0.4404	0.4177	0.4181	0.4336	0.4091	7	AVG	#
1,1,1-Trichloroethane	#0.2897	0.3392	0.3356	0.3727	0.3627	0.3635	0.3807	0.3492	9	AVG	#
Cyclohexane	#0.3956	0.4609	0.4169	0.5022	0.4885	0.4944	0.5099	0.4669	10	AVG	#
Cyclohexane(2)	#0.3456	0.3987	0.3627	0.4329	0.4236	0.4319	0.4438	0.4056	9	AVG	#
Cyclohexane(3)	#0.1219	0.1428	0.1291	0.1542	0.1510	0.1531	0.1588	0.1444	10	AVG	#
1,1-Dichloropropene	0.2907	0.3348	0.3278	0.3579	0.3462	0.3479	0.3620	0.3382	7	AVG	
Carbon Tetrachloride	#0.2440	0.2777	0.2747	0.3128	0.3114	0.3175	0.3350	0.2961	11	AVG	#
Isobutyl Alcohol	0.3485	0.3107	0.3595	0.3421	0.3590	0.3974	0.3623	0.3542	7	AVG	
Benzene	#0.8990	1.0067	1.0148	1.0842	1.0359	1.0238	1.0549	1.0170	6	AVG	#
1,2-Dichloroethane	#0.3434	0.3191	0.3218	0.3337	0.3212	0.3202	0.3304	0.3271	3	AVG	#
1,2-Dichloroethane(2)	#0.0306	0.0316	0.0313	0.0343	0.0326	0.0322	0.0340	0.0324	4	AVG	#<-
t-Amyl methyl ether	0.7161	0.7648	0.8115	0.8675	0.8369	0.8221	0.8061	0.8036	6	AVG	
n-Heptane	0.3313	0.3538	0.2821	0.3843	0.3724	0.3852	0.3855	0.3564	11	AVG	
n-Butanol	0.2496	0.2624	0.3164	0.3024	0.3250	0.3551	0.3230	0.3049	12	AVG	

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 11/04/19 11/04/19

Heated Purge: (Y/N) Y Calibration Times: 14:51 17:03

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ln04i07.d RRF 4 = ln04i06.d RRF 10= ln04i05.d
RRF 20= ln04i04.d RRF 50= ln04i03.d RRF100= ln04i02.d RRF300= ln04i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Trichloroethene	#0.2300	0.2478	0.2477	0.2710	0.2607	0.2615	0.2739	0.2561	6	AVG #
Methylcyclohexane	#0.4066	0.4619	0.4494	0.4907	0.4946	0.4918	0.5306	0.4751	8	AVG #
Methylcyclohexane(2)	#0.1773	0.2158	0.2019	0.2198	0.2245	0.2228	0.2428	0.2150	10	AVG #
1,2-Dichloropropane	#0.2299	0.2478	0.2567	0.2731	0.2644	0.2644	0.2715	0.2582	6	AVG #
Dibromomethane	0.1450	0.1593	0.1638	0.1764	0.1719	0.1732	0.1801	0.1671	7	AVG
1,4-Dioxane	0.0728	0.0772	0.0845	0.0860	0.0888	0.0886	0.0887	0.0838	8	AVG
Methyl Methacrylate	0.2026	0.2254	0.2423	0.2604	0.2637	0.2705	0.2832	0.2497	11	AVG
Bromodichloromethane	#0.2483	0.2630	0.2867	0.3150	0.3161	0.3256	0.3442	0.2998	12	AVG #
2-Nitropropane	0.0733	0.0770	0.0825	0.0914	0.1013	0.1033	0.1070	0.0908	15	AVG
2-Chloroethyl Vinyl Ether	0.0882	0.0977	0.1040	0.1130	0.1155	0.1203	0.1378	0.1109	15	AVG
cis-1,3-Dichloropropene	#0.3066	0.3495	0.3874	0.4270	0.4265	0.4334	0.4572	0.3982	13	AVG #
4-Methyl-2-pentanone	#0.3519	0.3696	0.3930	0.4183	0.4328	0.4167	0.4032	0.3979	7	AVG #
Toluene	#0.7332	0.7931	0.8181	0.8731	0.8456	0.8312	0.8473	0.8202	6	AVG #
trans-1,3-Dichloropropene	#0.3482	0.3965	0.4507	0.4938	0.5103	0.5177	0.5421	0.4656	15	AVG #
Ethyl Methacrylate	0.4474	0.4901	0.5672	0.5969	0.6125	0.6196	0.6273	0.5659	12	AVG
1,1,2-Trichloroethane	#0.2783	0.2901	0.3087	0.3230	0.3222	0.3239	0.3306	0.3110	6	AVG #
Tetrachloroethene	#0.3162	0.3426	0.3214	0.3690	0.3559	0.3544	0.3721	0.3474	6	AVG #
1,3-Dichloropropane	0.4832	0.4915	0.5312	0.5551	0.5463	0.5472	0.5620	0.5309	6	AVG
2-Hexanone	#0.3356	0.3575	0.3750	0.3917	0.4210	0.3894	0.3737	0.3777	7	AVG #
Dibromochloromethane	#0.2335	0.2673	0.3027	0.3338	0.3491	0.3626	0.3808	0.3185	17	AVG #
1,2-Dibromoethane	#0.2934	0.3052	0.3308	0.3537	0.3534	0.3557	0.3715	0.3377	9	AVG #
1-Chlorohexane	0.4605	0.4391	0.3819	0.4601	0.4417	0.4418	0.4594	0.4406	6	AVG
Chlorobenzene	#0.8164	0.9033	0.9335	0.9825	0.9556	0.9405	0.9609	0.9275	6	AVG #
1,1,1,2-Tetrachloroethane	0.2351	0.2774	0.2999	0.3286	0.3310	0.3327	0.3346	0.3056	12	AVG
Ethylbenzene	#1.3747	1.5457	1.5220	1.6801	1.6314	1.6113	1.6087	1.5677	6	AVG #
m+p-Xylene	#0.5374	0.6016	0.5976	0.6715	0.6453	0.6383	0.6253	0.6167	7	AVG #
o-Xylene	#0.5399	0.5806	0.5978	0.6590	0.6427	0.6294	0.6148	0.6092	7	AVG #
Styrene	#0.8016	0.9301	1.0102	1.0972	1.0847	1.0669	1.0557	1.0066	11	AVG #
Bromoform	#	0.1724	0.2151	0.2312	0.2542	0.2685	0.2868	0.2380	17	AVG #
Isopropylbenzene	#1.2910	1.5137	1.4363	1.6684	1.6105	1.5929	1.5825	1.5279	8	AVG #
Cyclohexanone	0.3281	0.3024	0.3195	0.3248	0.3437	0.3247	0.3541	0.3282	5	AVG
Bromobenzene	0.6787	0.7176	0.7360	0.7885	0.7819	0.7772	0.7803	0.7515	6	AVG
1,1,2,2-Tetrachloroethane	#0.8022	0.8637	0.9996	0.9771	0.9960	0.9947	0.9782	0.9445	8	AVG #
1,2,3-Trichloropropane	0.2561	0.2658	0.3031	0.2987	0.2999	0.3027	0.3026	0.2898	7	AVG
trans-1,4-Dichloro-2-butene	0.2392	0.2651	0.2913	0.3105	0.3171	0.3156	0.3005	0.2913	10	AVG
n-Propylbenzene	2.9207	3.2949	2.9806	3.5724	3.4357	3.4054	3.3722	3.2831	7	AVG
2-Chlorotoluene	0.6482	0.6609	0.6535	0.7438	0.7252	0.7177	0.7330	0.6975	6	AVG
4-Chlorotoluene	0.6762	0.7074	0.6870	0.7741	0.7474	0.7369	0.7530	0.7260	5	AVG
1,3,5-Trimethylbenzene	1.9893	2.3249	2.1852	2.6169	2.5322	2.5250	2.5281	2.3860	10	AVG
tert-Butylbenzene	0.4288	0.4845	0.4243	0.5332	0.5247	0.5261	0.5325	0.4934	10	AVG
Pentachloroethane	0.2905	0.3724	0.4105	0.4466	0.4692	0.4744	0.5106	0.4249	18	AVG
1,2,4-Trimethylbenzene	2.1648	2.4282	2.3275	2.7429	2.6696	2.6607	2.6088	2.5147	8	AVG
sec-Butylbenzene	2.5710	2.9123	2.5624	3.2580	3.1256	3.1495	3.0325	2.9444	9	AVG
1,3-Dichlorobenzene	#1.3168	1.3435	1.3443	1.4749	1.4337	1.4053	1.3479	1.3809	4	AVG #
p-Isopropyltoluene	2.2311	2.5145	2.2448	2.8322	2.7191	2.7434	2.5461	2.5473	9	AVG
1,4-Dichlorobenzene	#1.3913	1.3992	1.3855	1.5164	1.4765	1.4501	1.4018	1.4315	4	AVG #
1,2,3-Trimethylbenzene	2.3717	2.5881	2.6584	2.7814	2.7739	2.7079	2.7646	2.6637	6	AVG
Benzyl Chloride		1.4905	1.9042	2.0277	2.1892	2.2241	2.2651	2.0168	14	AVG
1,3-Diethylbenzene	1.4770	1.6040	1.6373	1.7518	1.7206	1.7031	1.7107	1.6578	6	AVG
1,4-Diethylbenzene	1.6313	1.7295	1.7208	1.8600	1.8134	1.7888	1.7510	1.7564	4	AVG
1,2-Dichlorobenzene	#1.2854	1.3272	1.3476	1.4407	1.4096	1.3800	1.3479	1.3626	4	AVG #
n-Butylbenzene	1.2635	1.3335	1.1354	1.4216	1.3485	1.3543	1.2604	1.3024	7	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 11/04/19 11/04/19

Heated Purge: (Y/N) Y Calibration Times: 14:51 17:03

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ln04i07.d RRF 4 = ln04i06.d RRF 10= ln04i05.d
RRF 20= ln04i04.d RRF 50= ln04i03.d RRF100= ln04i02.d RRF300= ln04i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
1,2-Diethylbenzene	1.2665	1.3513	1.3737	1.4741	1.4581	1.4365	1.4223	1.3975	5	AVG
1,2-Dibromo-3-chloropropane#	0.1653	0.1703	0.2163	0.2130	0.2240	0.2247	0.2337	0.2068	13	AVG #
1,3,5-Trichlorobenzene	1.0736	1.0363	0.9506	1.1293	1.0680	1.0728	0.9975	1.0469	6	AVG
1,2,4-Trichlorobenzene	#1.0928	0.9898	0.9467	1.0851	1.0411	1.0335	0.9366	1.0179	6	AVG #
Hexachlorobutadiene		0.6224	0.4463	0.5319	0.4489	0.4300	0.4042	0.4806	17	AVG
Naphthalene	2.9793	3.0036	3.3068	3.4936	3.4918	3.4237	3.2086	3.2725	7	AVG
1,2,3-Trichlorobenzene	1.0616	0.9674	0.9274	1.0684	1.0300	1.0095	0.8692	0.9905	7	AVG
2-Methylnaphthalene	1.9837	1.8879	2.0390	2.2209	2.2298	2.1150	1.6300	2.0152	10	AVG
Dibromofluoromethane	0.2407	0.2444	0.2426	0.2463	0.2437	0.2470	0.2465	0.2445	1	AVG
Dibromofluoromethane(2)	0.2457	0.2504	0.2472	0.2513	0.2494	0.2516	0.2491	0.2492	1	AVG
1,2-Dichloroethane-d4	0.0612	0.0629	0.0625	0.0629	0.0628	0.0627	0.0611	0.0623	1	AVG
1,2-Dichloroethane-d4(2)	0.2741	0.2818	0.2744	0.2819	0.2771	0.2799	0.2742	0.2776	1	AVG
1,2-Dichloroethane-d4(3)	0.0389	0.0398	0.0398	0.0408	0.0397	0.0402	0.0393	0.0398	2	AVG
Toluene-d8	1.3149	1.3039	1.3148	1.3125	1.3146	1.3005	1.2968	1.3083	1	AVG
Toluene-d8(2)	0.8480	0.8436	0.8547	0.8509	0.8480	0.8442	0.8428	0.8475	1	AVG
4-Bromofluorobenzene	0.4958	0.4982	0.5005	0.4967	0.4932	0.4898	0.4935	0.4954	1	AVG
4-Bromofluorobenzene(2)	0.4097	0.4154	0.4152	0.4118	0.4097	0.4065	0.4066	0.4107	1	AVG

Average %RSD 7

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP09915.i/19nov04i.b/ln04i01.d	VSTD300
/chem/HP09915.i/19nov04i.b/ln04i02.d	VSTD100
/chem/HP09915.i/19nov04i.b/ln04i03.d	VSTD050
/chem/HP09915.i/19nov04i.b/ln04i04.d	VSTD020
/chem/HP09915.i/19nov04i.b/ln04i05.d	VSTD010
/chem/HP09915.i/19nov04i.b/ln04i06.d	VSTD004
/chem/HP09915.i/19nov04i.b/ln04i07.d	VSTD001

Area Summary

File ID:

Internal Standard Name	ln04i01.d	ln04i02.d	ln04i03.d	ln04i04.d	ln04i05.d	ln04i06.d	ln04i07.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	254406	265971	269779	258058	263427	262044	243591	259611	3	Yes
Fluorobenzene	1120873	1183605	1160755	1128743	1158257	1148427	1137124	1148255	2	Yes
Chlorobenzene-d5	891668	935628	904578	883281	897139	884065	879875	896605	2	Yes
1,4-Dichlorobenzene-d4	477171	500629	483927	476218	496298	480071	473433	483964	2	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	ln04i01.d	ln04i02.d	ln04i03.d	ln04i04.d	ln04i05.d	ln04i06.d	ln04i07.d	Avg. RT
t-Butyl alcohol-d10	4.503	4.509	4.509	4.512	4.509	4.512	4.496	4.507
Fluorobenzene	7.959	7.962	7.959	7.962	7.956	7.959	7.959	7.960
Chlorobenzene-d5	11.361	11.361	11.361	11.361	11.358	11.358	11.358	11.360
1,4-Dichlorobenzene-d4	13.223	13.223	13.223	13.223	13.223	13.223	13.223	13.223

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 11/05/2019 at 16:07.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 11/04/19 Time: 18:42

Lab File ID: ln04v02.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3487	0.3266	18.73	20	-6	#
# Chloromethane	0.3361	0.3180	18.93	20	-5	#
1,3-Butadiene	0.2790	0.2741	19.65	20	-2	
# Vinyl Chloride	0.3354	0.3245	19.35	20	-3	#
# Bromomethane	0.2404	0.2156	17.93	20	-10	#
# Chloroethane	0.1843	0.1704	18.49	20	-8	#
Dichlorofluoromethane	0.4436	0.3598	16.22	20	-19	
n-Pentane	0.4267	0.4057	19.01	20	-5	
# Trichlorofluoromethane	0.3611	0.3746	20.75	20	4	#
Ethyl ether	0.2333	0.1939	16.62	20	-17	
Freon 123a	0.2905	0.2825	19.45	20	-3	
Acrolein	1.8756	1.6896	135.12	150	-10	
# 1,1-Dichloroethene	0.2120	0.2216	20.91	20	5	#
# Acetone	0.8409	0.7666	136.75	150	-9	#
# Freon 113	0.2418	0.2394	19.80	20	-1	#
2-Propanol	0.6045	0.5806	144.06	150	-4	
Methyl Iodide	0.4392	0.4077	18.56	20	-7	
# Carbon Disulfide	0.7987	0.7452	18.66	20	-7	#
Allyl Chloride	0.3802	0.3535	18.59	20	-7	
# Methyl Acetate	0.2730	0.2606	19.09	20	-5	#
# Methylene Chloride	0.2523	0.2570	20.38	20	2	#
t-Butyl alcohol	1.0525	1.0046	190.90	200	-5	
Acrylonitrile	0.1469	0.1395	94.98	100	-5	
# trans-1,2-Dichloroethene	0.2452	0.2452	20.00	20	0	#
# Methyl Tertiary Butyl Ether	0.8048	0.7596	18.87	20	-6	#
n-Hexane	0.3815	0.3828	20.07	20	0	
# 1,1-Dichloroethane	0.4277	0.4163	19.46	20	-3	#
di-Isopropyl ether	0.8250	0.7868	19.08	20	-5	
2-Chloro-1,3-butadiene	0.3838	0.3659	19.07	20	-5	
Ethyl t-butyl ether	0.8006	0.7634	19.07	20	-5	
# cis-1,2-Dichloroethene	0.2752	0.2889	20.99	20	5	#
# 2-Butanone	0.1885	0.1794	142.74	150	-5	#
2,2-Dichloropropane	0.3325	0.3377	20.31	20	2	
Propionitrile	1.3114	1.2333	141.06	150	-6	
Methacrylonitrile	0.1584	0.1535	145.31	150	-3	
Bromochloromethane	0.1459	0.1368	18.75	20	-6	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 11/04/19 Time: 18:42

Lab File ID: ln04v02.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Tetrahydrofuran	1.1846	1.0959	92.51	100	-7	
#	Chloroform	0.4091	0.4123	20.16	20	1	#
#	1,1,1-Trichloroethane	0.3492	0.3558	20.38	20	2	#
#	Cyclohexane	0.4669	0.4442	19.02	20	-5	#
	1,1-Dichloropropene	0.3382	0.3393	20.07	20	0	
#	Carbon Tetrachloride	0.2961	0.2964	20.02	20	0	#
	Isobutyl Alcohol	0.3542	0.3198	451.41	500	-10	
#	Benzene	1.0170	1.0168	20.00	20	0	#
#	1,2-Dichloroethane	0.3271	0.3373	20.62	20	3	#
	t-Amyl methyl ether	0.8036	0.7630	18.99	20	-5	
	n-Heptane	0.3564	0.3376	18.95	20	-5	
	n-Butanol	0.3049	0.2780	911.92	1000	-9	
#	Trichloroethene	0.2561	0.2581	20.16	20	1	#
#	Methylcyclohexane	0.4751	0.4589	19.32	20	-3	#
#	1,2-Dichloropropane	0.2582	0.2641	20.45	20	2	#
	Dibromomethane	0.1671	0.1672	20.01	20	0	
	1,4-Dioxane	0.0838	0.0844	503.75	500	1	
	Methyl Methacrylate	0.2497	0.2388	19.13	20	-4	
#	Bromodichloromethane	0.2998	0.2984	19.91	20	0	#
	2-Nitropropane	0.0908	0.0741	16.32	20	-18	
	2-Chloroethyl Vinyl Ether	0.1109	0.1056	19.04	20	-5	
#	cis-1,3-Dichloropropene	0.3982	0.3957	19.87	20	-1	#
#	4-Methyl-2-pentanone	0.3979	0.3693	92.81	100	-7	#
#	Toluene	0.8202	0.8294	20.22	20	1	#
#	trans-1,3-Dichloropropene	0.4656	0.4472	19.21	20	-4	#
	Ethyl Methacrylate	0.5659	0.5138	18.16	20	-9	
#	1,1,2-Trichloroethane	0.3110	0.3171	20.39	20	2	#
#	Tetrachloroethene	0.3474	0.3842	22.12	20	11	#
	1,3-Dichloropropane	0.5309	0.5224	19.68	20	-2	
#	2-Hexanone	0.3777	0.3481	92.15	100	-8	#
#	Dibromochloromethane	0.3185	0.3147	19.76	20	-1	#
#	1,2-Dibromoethane	0.3377	0.3356	19.88	20	-1	#
	1-Chlorohexane	0.4406	0.4292	19.48	20	-3	
#	Chlorobenzene	0.9275	0.9379	20.22	20	1	#
	1,1,1,2-Tetrachloroethane	0.3056	0.3029	19.82	20	-1	
#	Ethylbenzene	1.5677	1.5899	20.28	20	1	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 11/04/19 Time: 18:42

Lab File ID: ln04v02.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# m+p-Xylene	0.6167	0.6315	40.96	40	2	#
# o-Xylene	0.6092	0.6189	20.32	20	2	#
# Styrene	1.0066	1.0350	20.56	20	3	#
# Bromoform	0.2380	0.2137	17.95	20	-10	#
# Isopropylbenzene	1.5279	1.5939	20.86	20	4	#
Cyclohexanone	0.3282	0.2949	449.36	500	-10	
Bromobenzene	0.7515	0.7447	19.82	20	-1	
# 1,1,2,2-Tetrachloroethane	0.9445	0.9245	19.58	20	-2	#
1,2,3-Trichloropropane	0.2898	0.2890	19.94	20	0	
trans-1,4-Dichloro-2-butene	0.2913	0.2850	97.83	100	-2	
n-Propylbenzene	3.2831	3.4091	20.77	20	4	
2-Chlorotoluene	0.6975	0.7037	20.18	20	1	
4-Chlorotoluene	0.7260	0.7301	20.11	20	1	
1,3,5-Trimethylbenzene	2.3860	2.4518	20.55	20	3	
tert-Butylbenzene	0.4934	0.5090	20.63	20	3	
Pentachloroethane	0.4249	0.3657	17.21	20	-14	
1,2,4-Trimethylbenzene	2.5147	2.5110	19.97	20	0	
sec-Butylbenzene	2.9444	3.0247	20.55	20	3	
# 1,3-Dichlorobenzene	1.3809	1.3855	20.07	20	0	#
p-Isopropyltoluene	2.5473	2.6162	20.54	20	3	
# 1,4-Dichlorobenzene	1.4315	1.4660	20.48	20	2	#
1,2,3-Trimethylbenzene	2.6637	2.6470	19.87	20	-1	
Benzyl Chloride	2.0168	1.6153	16.02	20	-20	
1,3-Diethylbenzene	1.6578	1.5827	19.09	20	-5	
1,4-Diethylbenzene	1.7564	1.6691	19.01	20	-5	
# 1,2-Dichlorobenzene	1.3626	1.3874	20.36	20	2	#
n-Butylbenzene	1.3024	1.2702	19.50	20	-2	
1,2-Diethylbenzene	1.3975	1.3386	19.16	20	-4	
# 1,2-Dibromo-3-chloropropane	0.2068	0.1994	19.29	20	-4	#
1,3,5-Trichlorobenzene	1.0469	0.9964	19.04	20	-5	
# 1,2,4-Trichlorobenzene	1.0179	0.9765	19.19	20	-4	#
Hexachlorobutadiene	0.4806	0.4071	16.94	20	-15	
Naphthalene	3.2725	3.2676	19.97	20	0	
1,2,3-Trichlorobenzene	0.9905	0.9443	19.07	20	-5	
2-Methylnaphthalene	2.0152	1.8367	18.23	20	-9	

Average %Drift 5

Compounds with required minimum RRF.
Maximum % Drift = 30 %

^

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem/HP09915.i/19nov04i.b/ln04i07.d
/chem/HP09915.i/19nov04i.b/ln04i06.d
/chem/HP09915.i/19nov04i.b/ln04i05.d
/chem/HP09915.i/19nov04i.b/ln04i04.d
/chem/HP09915.i/19nov04i.b/ln04i03.d
/chem/HP09915.i/19nov04i.b/ln04i02.d
/chem/HP09915.i/19nov04i.b/ln04i01.d

File /chem/HP09915.i/19nov04i.b/ln04i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem/HP09915.i/19nov23a.b/ln23c01.d

RT Summary

Internal Standard Name	File ID: ln23c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	4.490	4.509	Yes
Fluorobenzene	7.956	7.959	Yes
Chlorobenzene-d5	11.358	11.361	Yes
1,4-Dichlorobenzene-d4	13.223	13.223	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: ln23c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	218843	269779	134890	539558	Yes
Fluorobenzene	1129387	1160755	580378	2321510	Yes
Chlorobenzene-d5	942140	904578	452289	1809156	Yes
1,4-Dichlorobenzene-d4	522095	483927	241964	967854	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments:_____

report generated on 11/23/2019 at 09:09

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/23/19 Time: 08:42

Lab File ID: ln23c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3487	0.3778	54.17	50	8	#
# Chloromethane	0.3361	0.3506	52.17	50	4	#
1,3-Butadiene	0.2790	0.2300	41.22	50	-18	
# Vinyl Chloride	0.3354	0.3453	51.48	50	3	#
# Bromomethane	0.2404	0.2446	50.87	50	2	#
# Chloroethane	0.1843	0.1857	50.37	50	1	#
Dichlorofluoromethane	0.4436	0.3536	39.86	50	-20	
n-Pentane	0.4267	0.3191	37.39	50	-25	<-
# Trichlorofluoromethane	0.3611	0.3972	55.00	50	10	#
Ethyl ether	0.2333	0.2418	51.81	50	4	
Freon 123a	0.2905	0.2668	45.93	50	-8	
Acrolein	1.8756	1.9223	512.44	500	2	
# 1,1-Dichloroethene	0.2120	0.1905	44.95	50	-10	#
# 1,1-Dichloroethene(2)	0.1063	0.0934	43.93	50	-12	#<-
# Acetone	0.8409	0.8803	104.68	100	5	#
# Freon 113	0.2418	0.2213	45.76	50	-8	#
2-Propanol	0.6045	0.6042	249.89	250	0	
Methyl Iodide	0.4392	0.4024	45.81	50	-8	
# Carbon Disulfide	0.7987	0.7079	44.31	50	-11	#
Allyl Chloride	0.3802	0.3373	44.35	50	-11	
# Methyl Acetate	0.2730	0.2512	46.02	50	-8	#
# Methylene Chloride	0.2523	0.2374	47.06	50	-6	#
t-Butyl alcohol	1.0525	1.0187	241.97	250	-3	
Acrylonitrile	0.1469	0.1350	45.97	50	-8	
# trans-1,2-Dichloroethene	0.2452	0.2271	46.31	50	-7	#
# Methyl Tertiary Butyl Ether	0.8048	0.6763	42.01	50	-16	#
n-Hexane	0.3815	0.3360	44.04	50	-12	
# 1,1-Dichloroethane	0.4277	0.3941	46.07	50	-8	#
di-Isopropyl ether	0.8250	0.7439	45.09	50	-10	
2-Chloro-1,3-butadiene	0.3838	0.3496	45.55	50	-9	
Ethyl t-butyl ether	0.8006	0.6948	43.39	50	-13	
# cis-1,2-Dichloroethene	0.2752	0.2594	47.13	50	-6	#
# 2-Butanone	0.1885	0.1658	87.94	100	-12	#
2,2-Dichloropropane	0.3325	0.3037	45.67	50	-9	
Propionitrile	1.3114	1.4890	283.85	250	14	
Methacrylonitrile	0.1584	0.1543	121.74	125	-3	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/23/19 Time: 08:42

Lab File ID: ln23c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
Bromochloromethane	0.1459	0.1473	50.47	50	1	
Tetrahydrofuran	1.1846	1.2548	105.93	100	6	
# Chloroform	0.4091	0.3942	48.18	50	-4	#
# 1,1,1-Trichloroethane	0.3492	0.3265	46.75	50	-6	#
# Cyclohexane	0.4669	0.4171	44.66	50	-11	#
# Cyclohexane(2)	0.4056	0.3697	45.58	50	-9	#
# Cyclohexane(3)	0.1444	0.1302	45.08	50	-10	#
1,1-Dichloropropene	0.3382	0.3142	46.45	50	-7	
# Carbon Tetrachloride	0.2961	0.2755	46.51	50	-7	#
Isobutyl Alcohol	0.3542	0.3650	644.14	625	3	
# Benzene	1.0170	0.9669	47.54	50	-5	#
# 1,2-Dichloroethane	0.3271	0.3138	47.96	50	-4	#
# 1,2-Dichloroethane(2)	0.0324	0.0313	48.30	50	-3	#<-
t-Amyl methyl ether	0.8036	0.7341	45.67	50	-9	
n-Heptane	0.3564	0.3253	45.64	50	-9	
n-Butanol	0.3049	0.3114	1276.85	1250	2	
# Trichloroethene	0.2561	0.2464	48.11	50	-4	#
# Methylcyclohexane	0.4751	0.4473	47.08	50	-6	#
# Methylcyclohexane(2)	0.2150	0.2030	47.22	50	-6	#
# 1,2-Dichloropropane	0.2582	0.2480	48.02	50	-4	#
Dibromomethane	0.1671	0.1655	49.53	50	-1	
1,4-Dioxane	0.0838	0.1190	887.57	625	42	<-
Methyl Methacrylate	0.2497	0.2483	49.71	50	-1	
# Bromodichloromethane	0.2998	0.2938	49.00	50	-2	#
2-Nitropropane	0.0908	0.0867	95.41	100	-5	
2-Chloroethyl Vinyl Ether	0.1109	0.1889	85.14	50	70	<-
# cis-1,3-Dichloropropene	0.3982	0.3984	50.02	50	0	#
# 4-Methyl-2-pentanone	0.3979	0.3634	91.32	100	-9	#
# Toluene	0.8202	0.7613	46.41	50	-7	#
# trans-1,3-Dichloropropene	0.4656	0.4483	48.14	50	-4	#
Ethyl Methacrylate	0.5659	0.5325	47.05	50	-6	
# 1,1,2-Trichloroethane	0.3110	0.2969	47.73	50	-5	#
# Tetrachloroethene	0.3474	0.3174	45.69	50	-9	#
1,3-Dichloropropane	0.5309	0.5012	47.20	50	-6	
# 2-Hexanone	0.3777	0.3228	85.46	100	-15	#
# Dibromochloromethane	0.3185	0.3047	47.83	50	-4	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/23/19 Time: 08:42

Lab File ID: ln23c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# 1,2-Dibromoethane	0.3377	0.3247	48.08	50	-4	#
1-Chlorohexane	0.4406	0.3794	43.06	50	-14	
# Chlorobenzene	0.9275	0.8742	47.13	50	-6	#
1,1,1,2-Tetrachloroethane	0.3056	0.2876	47.05	50	-6	
# Ethylbenzene	1.5677	1.4737	47.00	50	-6	#
# m+p-Xylene	0.6167	0.5842	94.73	100	-5	#
# o-Xylene	0.6092	0.5730	47.03	50	-6	#
# Styrene	1.0066	0.9778	48.57	50	-3	#
# Bromoform	0.2380	0.2141	44.97	50	-10	#
# Isopropylbenzene	1.5279	1.4423	47.20	50	-6	#
Cyclohexanone	0.3282	0.3572	680.22	625	9	
Bromobenzene	0.7515	0.6776	45.09	50	-10	
# 1,1,2,2-Tetrachloroethane	0.9445	0.8679	45.94	50	-8	#
1,2,3-Trichloropropane	0.2898	0.2659	45.87	50	-8	
trans-1,4-Dichloro-2-butene	0.2913	0.2546	109.22	125	-13	
n-Propylbenzene	3.2831	3.0494	46.44	50	-7	
2-Chlorotoluene	0.6975	0.6346	45.49	50	-9	
4-Chlorotoluene	0.7260	0.6617	45.57	50	-9	
1,3,5-Trimethylbenzene	2.3860	2.2484	47.12	50	-6	
tert-Butylbenzene	0.4934	0.4419	44.78	50	-10	
Pentachloroethane	0.4249	0.4084	48.06	50	-4	
1,2,4-Trimethylbenzene	2.5147	2.3639	47.00	50	-6	
sec-Butylbenzene	2.9444	2.6990	45.83	50	-8	
# 1,3-Dichlorobenzene	1.3809	1.2568	45.51	50	-9	#
p-Isopropyltoluene	2.5473	2.3341	45.81	50	-8	
# 1,4-Dichlorobenzene	1.4315	1.2946	45.22	50	-10	#
1,2,3-Trimethylbenzene	2.6637	2.5809	48.44	50	-3	
Benzyl Chloride	2.0168	1.8579	46.06	50	-8	
1,3-Diethylbenzene	1.6578	1.5316	46.19	50	-8	
1,4-Diethylbenzene	1.7564	1.5980	45.49	50	-9	
# 1,2-Dichlorobenzene	1.3626	1.2475	45.78	50	-8	#
n-Butylbenzene	1.3024	1.1477	44.06	50	-12	
1,2-Diethylbenzene	1.3975	1.3117	46.93	50	-6	
# 1,2-Dibromo-3-chloropropane	0.2068	0.1902	45.99	50	-8	#
1,3,5-Trichlorobenzene	1.0469	0.8659	41.36	50	-17	
# 1,2,4-Trichlorobenzene	1.0179	0.8248	40.51	50	-19	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/23/19 Time: 08:42

Lab File ID: ln23c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
Hexachlorobutadiene	0.4806	0.3367	35.02	50	-30	<-
Naphthalene	3.2725	3.0219	46.17	50	-8	
1,2,3-Trichlorobenzene	0.9905	0.8126	41.02	50	-18	
2-Methylnaphthalene	2.0152	1.7393	43.16	50	-14	
Dibromofluoromethane	0.2445	0.2440	49.90	50	0	
Dibromofluoromethane(2)	0.2492	0.2471	49.58	50	-1	
1,2-Dichloroethane-d4	0.0623	0.0629	50.46	50	1	
1,2-Dichloroethane-d4(2)	0.2776	0.2843	51.20	50	2	
1,2-Dichloroethane-d4(3)	0.0398	0.0405	50.92	50	2	
Toluene-d8	1.3083	1.2807	48.94	50	-2	
Toluene-d8(2)	0.8475	0.8200	48.38	50	-3	
4-Bromofluorobenzene	0.4954	0.5051	50.98	50	2	
4-Bromofluorobenzene(2)	0.4107	0.4142	50.43	50	1	

Average %Drift 8

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ln23c01.d Date Analyzed: 11/23/19

Instrument ID: HP09915 Time Analyzed: 08:42

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	218843	4.490	1129387	7.956	942140	11.358	522095	13.223
UPPER LIMIT	437686	4.990	2258774	8.456	1884280	11.858	1044190	13.723
LOWER LIMIT	109422	3.990	564694	7.456	471070	10.858	261048	12.723
LAB SAMPLE ID								
01 LCSL87	219124	4.493	1149568	7.956	954034	11.358	518331	13.219
02 VBLKL87	224793	4.493	1154568	7.953	947038	11.358	506608	13.220
03 1205905	243725	4.496	1211224	7.956	996466	11.358	533216	13.223
04 1205900	220082	4.503	1136731	7.959	925300	11.361	497134	13.223
05 1205901MS	215519	4.493	1138753	7.956	930333	11.358	508418	13.220
06 1205902MSD	233889	4.493	1180531	7.956	965531	11.358	526780	13.219
07 1205903	229063	4.500	1158906	7.956	945973	11.361	499869	13.223
08 1205904	224307	4.499	1139589	7.959	935660	11.361	499734	13.219
09 1205910	220711	4.503	1143515	7.956	932224	11.358	501787	13.223
10 1205911	215340	4.490	1115518	7.953	916138	11.361	490394	13.222
11 1205912	211986	4.512	1107133	7.962	918426	11.361	498430	13.222
12 1205913	203330	4.503	1115082	7.959	907956	11.358	482597	13.223
13 1205914	203647	4.503	1085952	7.959	899726	11.358	482459	13.223
14 1205915	210558	4.493	1104338	7.956	909387	11.358	493457	13.223
15 1205916	205783	4.493	1080825	7.956	894854	11.358	483096	13.219
16 1205917	200795	4.493	1098052	7.956	912322	11.358	495866	13.220
17 1205918	195105	4.493	1064106	7.956	883986	11.358	478718	13.223
18 1205928	196703	4.496	1065783	7.962	880752	11.361	479141	13.223
19 1205929	194903	4.493	1055579	7.959	877530	11.358	479286	13.222
20 1206738	196772	4.509	1059926	7.962	880492	11.361	482281	13.223
21 1206739	194579	4.506	1027064	7.962	860023	11.361	466803	13.222
22 1206740	209748	4.506	1073027	7.959	886519	11.361	491209	13.223

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

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Sample Data

Volatiles by GC/MS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JCW30

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205928

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s17.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1205928

Data file: /chem/HP09915.i/19nov23a.b/ln23s17.d Injection date and time: **23-NOV-2019 16:15**
Data file Sample Info. Line: JCW30;1205928;1;0;;JCW25;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 16:32 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.496(-0.006)	937	65	196703 (-10)	250.00	
66) Fluorobenzene	7.962(-0.006)	2015	96	1065783 (-6)	50.00	
100) Chlorobenzene-d5	11.361(-0.003)	3072	117	880752 (-7)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223(0.000)	3651	152	479141 (-8)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075(0.000)	113	260507	49.996	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528(0.001)	102	68863	51.856	104%		80 - 120
83) Toluene-d8	(3)	9.933(0.000)	98	1118306	48.526	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345(0.000)	95	426899	48.921	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	8.435(-0.000)	95	5657	1.036	1.04			0.2	1
75) 1,4-Dioxane	(1)			Not Detected					29	250
88) Toluene	(3)			Not Detected					0.2	1
93) Tetrachloroethene	(3)			Not Detected					0.2	1
104) Ethylbenzene	(3)			Not Detected					0.4	1
106) m+p-Xylene	(3)			Not Detected					1	5
107) o-Xylene	(3)			Not Detected					0.4	1
108) Xylene (Total)	(3)			Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
148) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Miranda E. Campbell on 11/27/2019 at 20:02. Target 3.5 esignature user ID: mec29284

Data file: /chem/HP09915.i/19nov23a.b/ln23s17.d Injection date and time: **23-NOV-2019 16:15**
Data file Sample Info. Line: JCW30;1205928;1;0;;JCW25;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 16:32 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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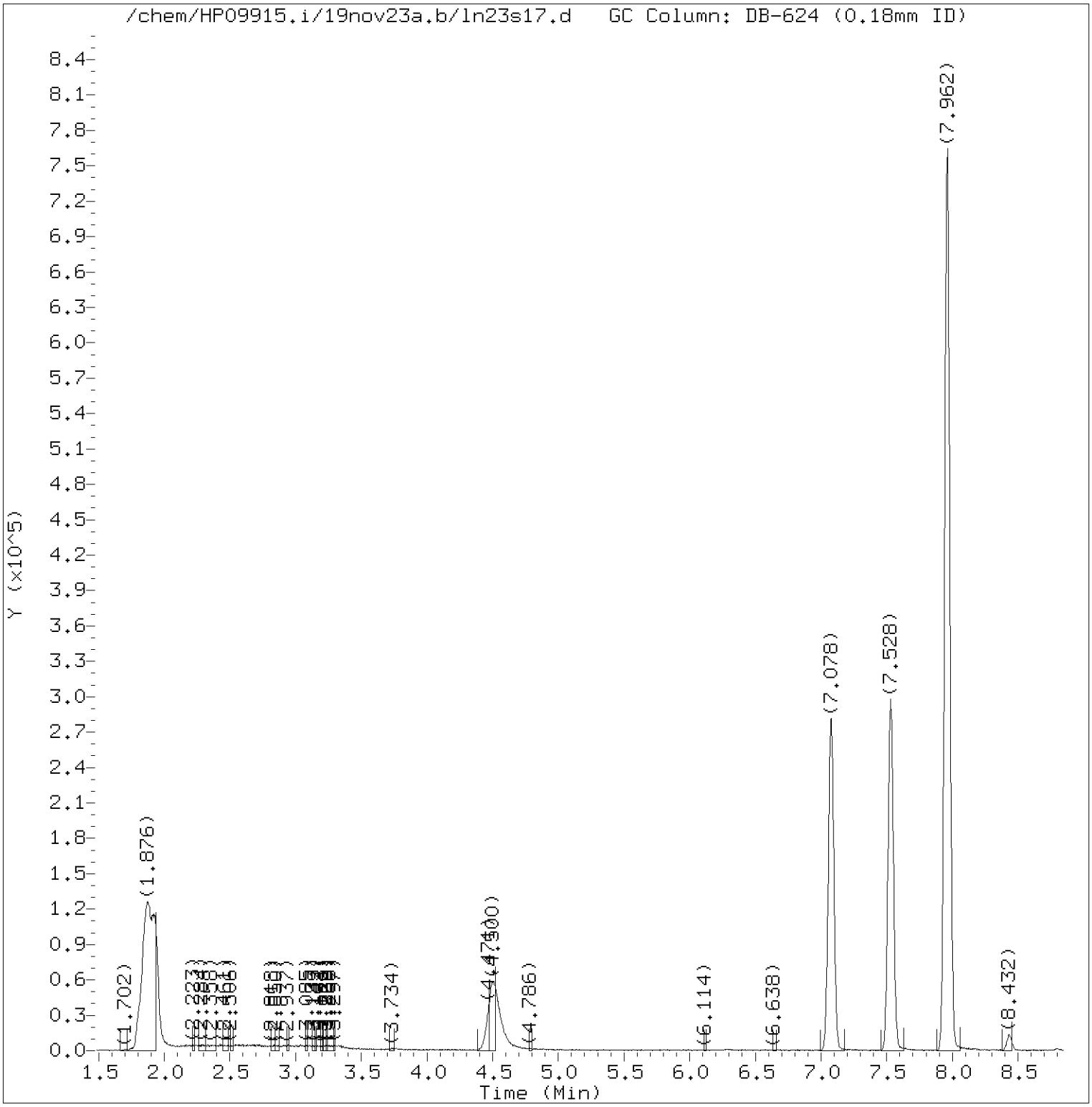
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Miranda E. Campbell on 11/27/2019 at 20:02. Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:03. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

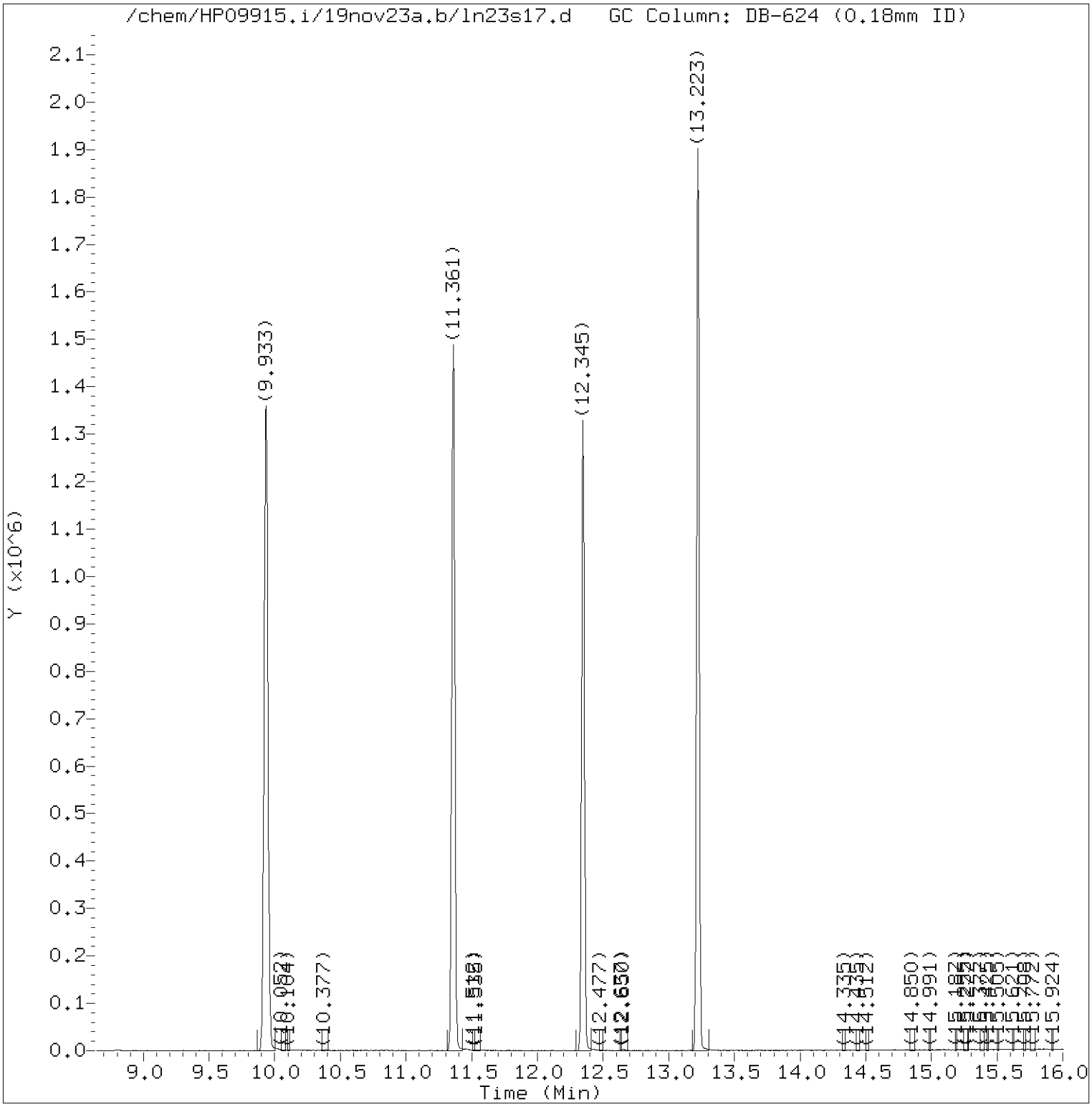
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s17.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 16:15 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 16:32 Automation

Sample Name: JCW30 Lab Sample ID: 1205928

Digitally signed by Miranda E. Campbell
on 11/27/2019 at 20:02.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s17.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 16:15 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 16:32 Automation

Sample Name: JCW30 Lab Sample ID: 1205928

Digitally signed by Miranda E. Campbell
on 11/27/2019 at 20:02.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s17.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 16:15 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 16:32 Automation

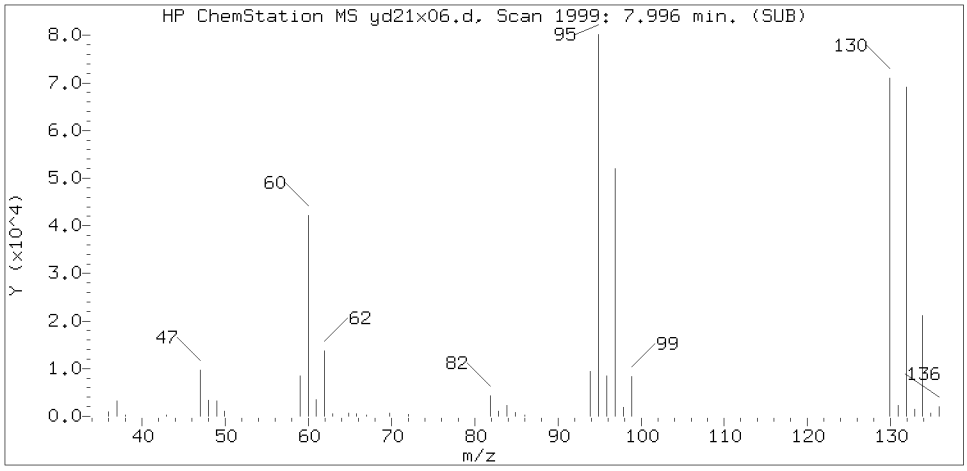
Sample Name: JCW30 Lab Sample ID: 1205928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.496	65	196703	250.000
52)$Dibromofluoromethane	(2)	7.075	113	260507	49.996
57)$1,2-Dichloroethane-d4	(2)	7.528	102	68863	51.856
66)*Fluorobenzene	(2)	7.962	96	1065783	50.000
71) Trichloroethene	(2)	8.435	95	5657	1.036
83)$Toluene-d8	(3)	9.933	98	1118306	48.526
100)*Chlorobenzene-d5	(3)	11.361	117	880752	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	426899	48.921
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	479141	50.000

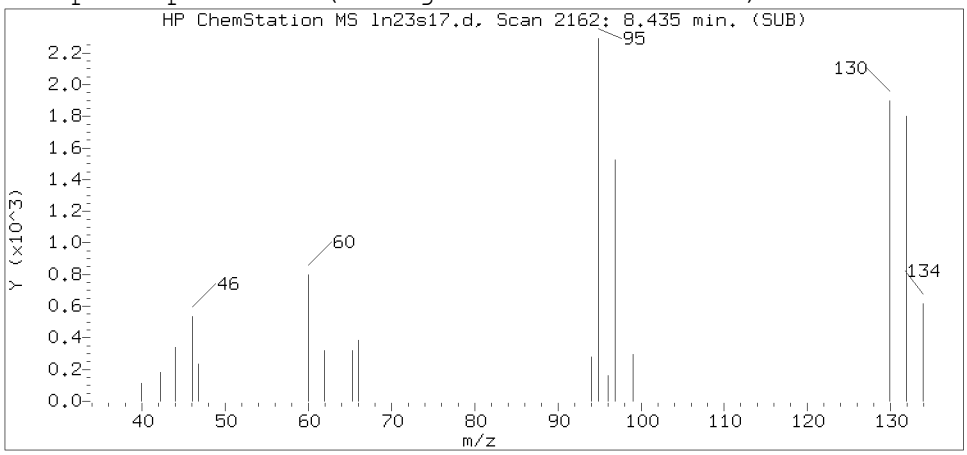
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/27/2019 at 20:02.
Target 3.5 esignature user ID: mec29284

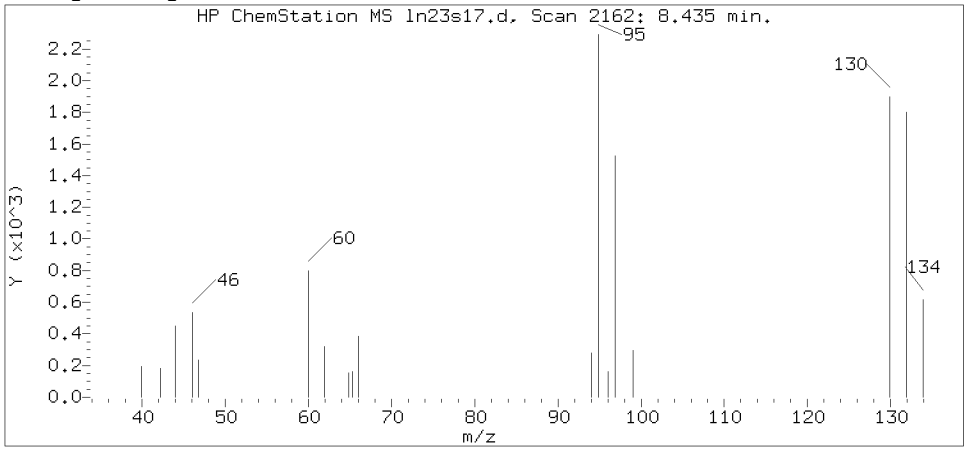
Reference Standard Spectrum for Trichloroethene

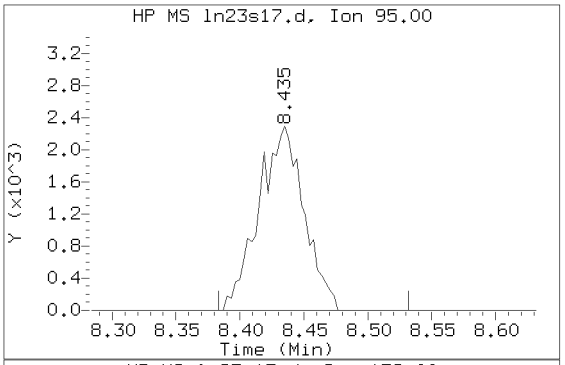


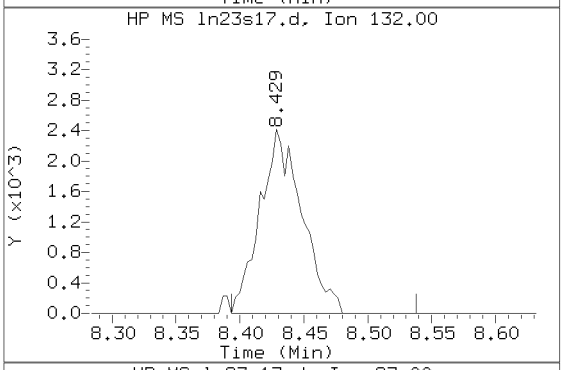
Sample Spectrum (Background Subtracted)

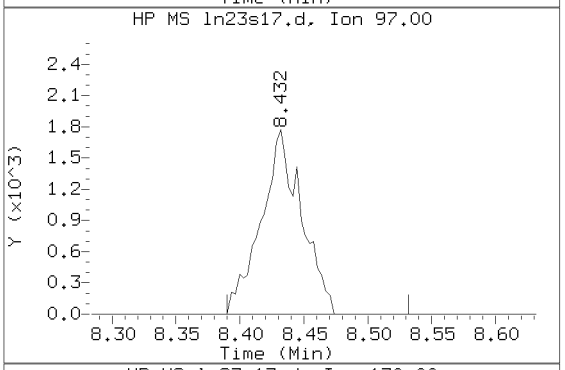


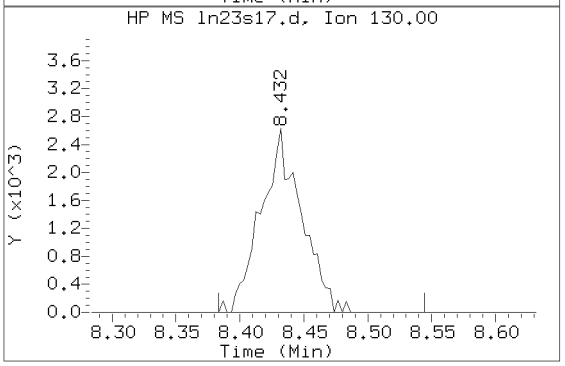
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23s17.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 16:15 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 16:32 Automation

Sample Name: JCW30 Lab Sample ID: 1205928

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 2162
Retention Time (minutes): 8.435
Relative Retention Time :-0.00036
Quant Ion : 95.00
Area (flag) : 5657
On-Column Amount (ng) : 1.0365

Digitally signed by Miranda E. Campbell on 11/27/2019 at 20:02.
Target 3.5 esignature user ID: mec29284

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JCW31

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1205929

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s18.d

Level: (low/med) LOW Date Received: 11/19/19

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	2	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1205929

Data file: /chem/HP09915.i/19nov23a.b/ln23s18.d Injection date and time: **23-NOV-2019 16:37**
Data file Sample Info. Line: JCW31;1205929;1;0;;JCW25;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 16:54 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493(-0.003)	936	65	194903 (-11)	250.00	
66) Fluorobenzene	7.959(-0.003)	2014	96	1055579 (-7)	50.00	
100) Chlorobenzene-d5	11.358(0.000)	3071	117	877530 (-7)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223(0.000)	3651	152	479286 (-8)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072(0.000)	113	257784	49.951	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525(0.001)	102	68021	51.717	103%		80 - 120
83) Toluene-d8	(3)	9.933(0.000)	98	1113297	48.486	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.348(0.000)	95	423162	48.671	97%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	8.432(-0.000)	95	10567	1.955	1.95			0.2	1
75) 1,4-Dioxane	(1)			Not Detected					29	250
88) Toluene	(3)			Not Detected					0.2	1
93) Tetrachloroethene	(3)			Not Detected					0.2	1
104) Ethylbenzene	(3)			Not Detected					0.4	1
106) m+p-Xylene	(3)			Not Detected					1	5
107) o-Xylene	(3)			Not Detected					0.4	1
108) Xylene (Total)	(3)			Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
148) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Miranda E. Campbell on 11/27/2019 at 20:02. Target 3.5 esignature user ID: mec29284

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23s18.d Injection date and time: **23-NOV-2019 16:37**
Data file Sample Info. Line: JCW31;1205929;1;0;;JCW25;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 16:54 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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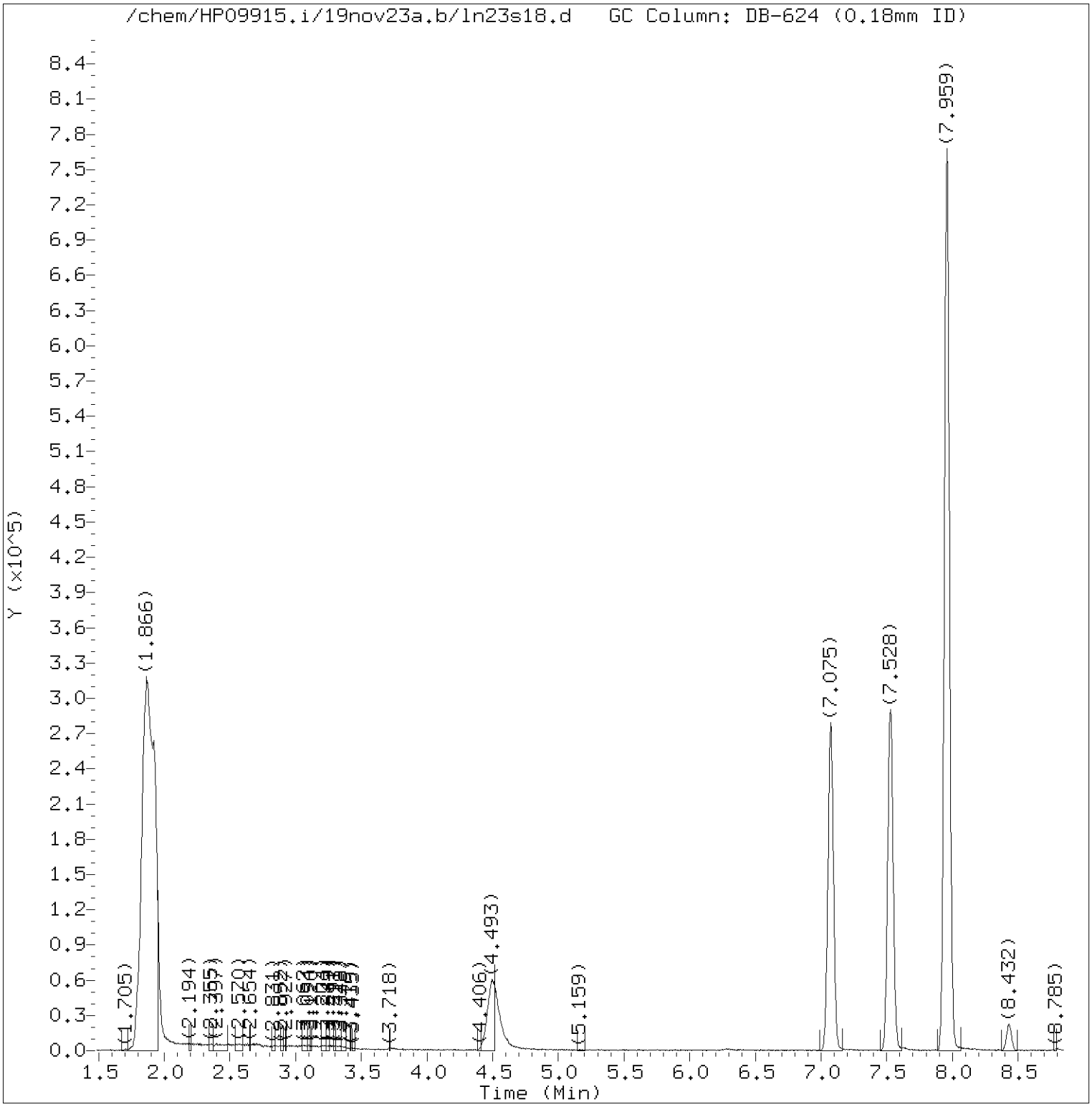
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Miranda E. Campbell on 11/27/2019 at 20:02. Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 20:03. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

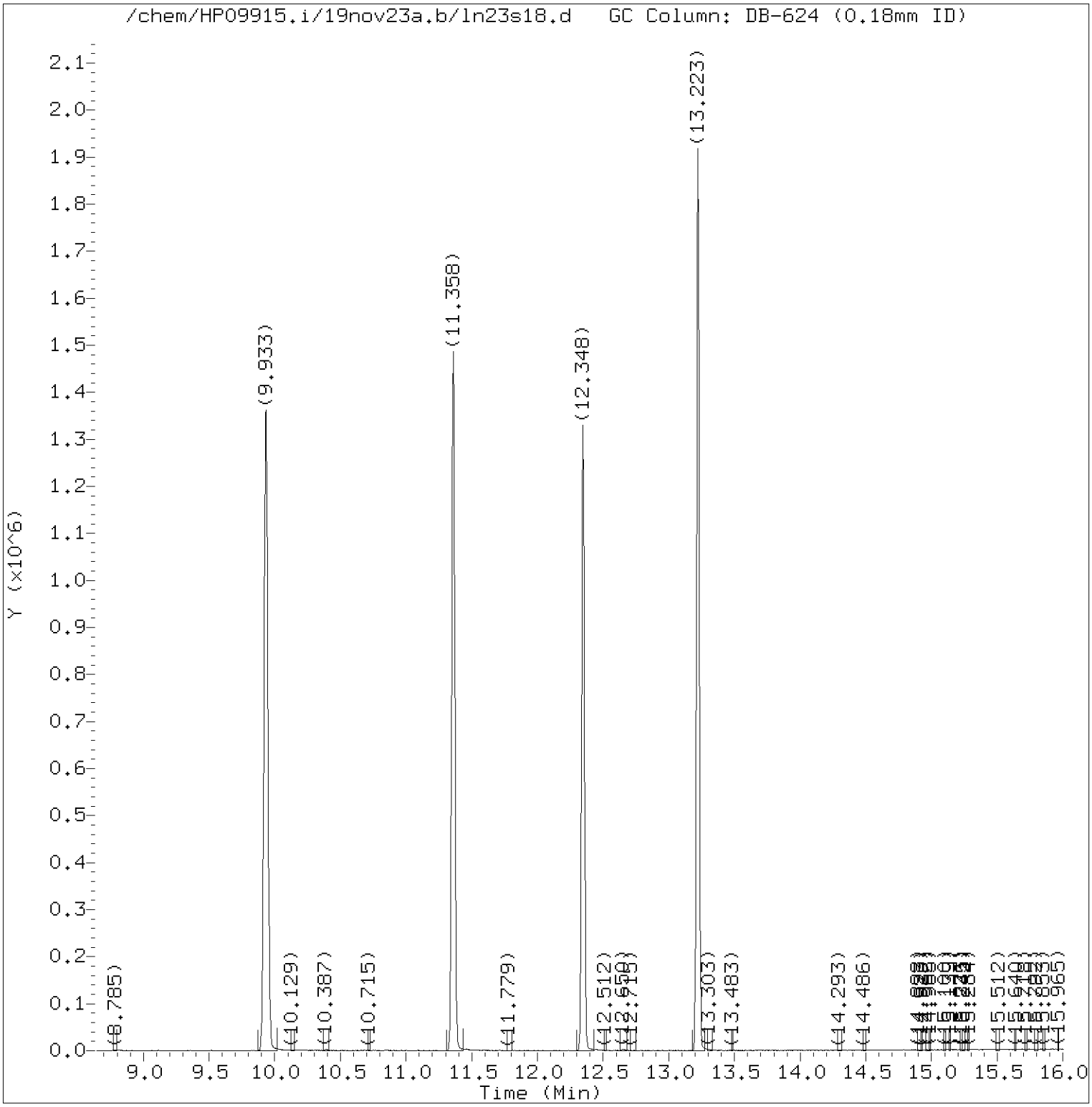
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s18.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 16:37 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 16:54 Automation

Sample Name: JCW31 Lab Sample ID: 1205929

Digitally signed by Miranda E. Campbell
on 11/27/2019 at 20:02.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s18.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 16:37 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 16:54 Automation

Sample Name: JCW31 Lab Sample ID: 1205929

Digitally signed by Miranda E. Campbell
on 11/27/2019 at 20:02.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s18.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 16:37 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 16:54 Automation

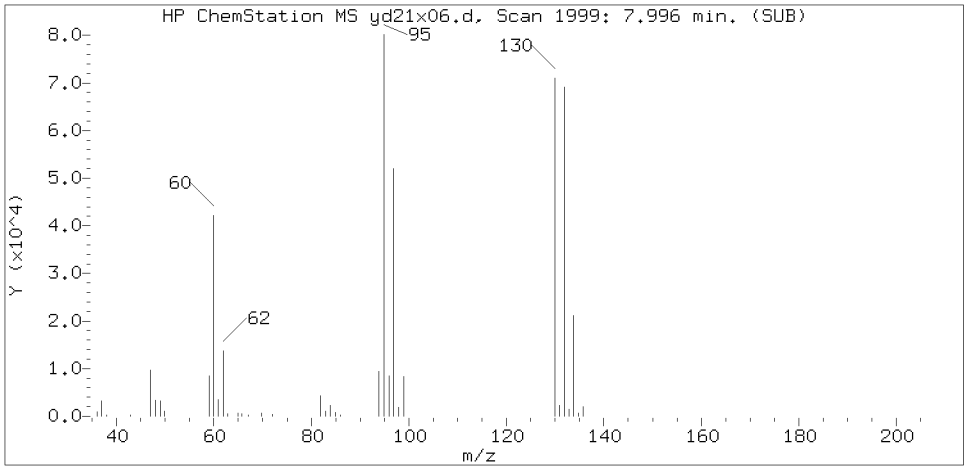
Sample Name: JCW31 Lab Sample ID: 1205929

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.493	65	194903	250.000
52)$Dibromofluoromethane	(2)	7.072	113	257784	49.951
57)$1,2-Dichloroethane-d4	(2)	7.525	102	68021	51.717
66)*Fluorobenzene	(2)	7.959	96	1055579	50.000
71) Trichloroethene	(2)	8.432	95	10567	1.955
83)$Toluene-d8	(3)	9.933	98	1113297	48.486
100)*Chlorobenzene-d5	(3)	11.358	117	877530	50.000
114)$4-Bromofluorobenzene	(3)	12.348	95	423162	48.671
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	479286	50.000

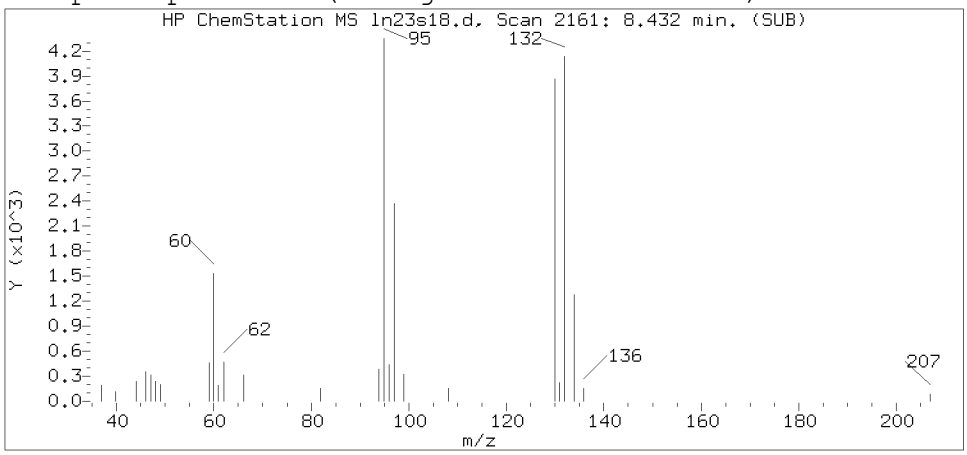
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/27/2019 at 20:02.
Target 3.5 esignature user ID: mec29284

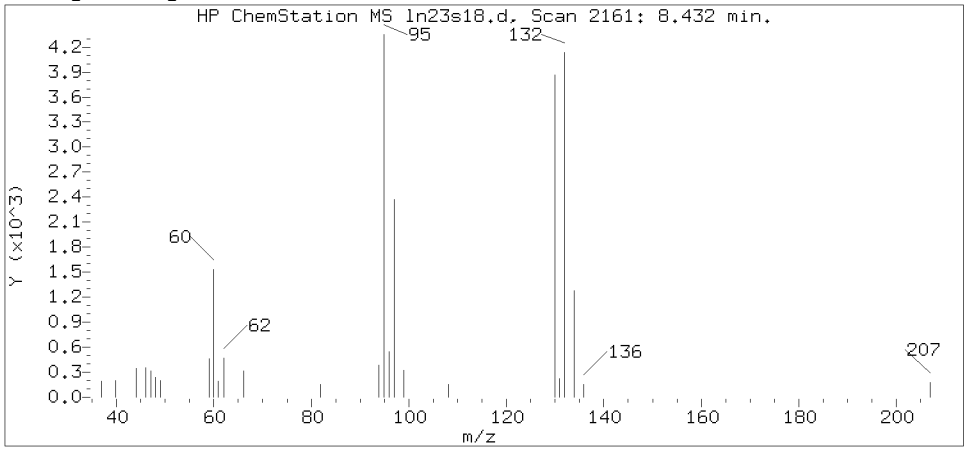
Reference Standard Spectrum for Trichloroethene

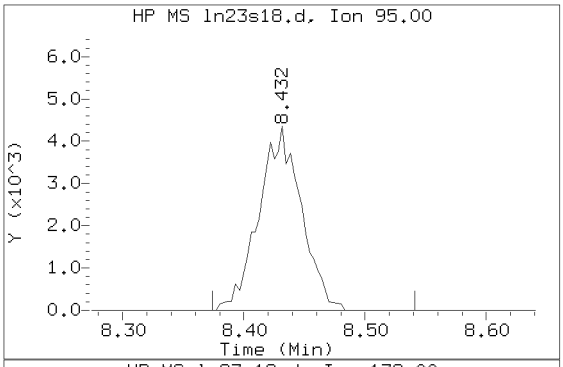


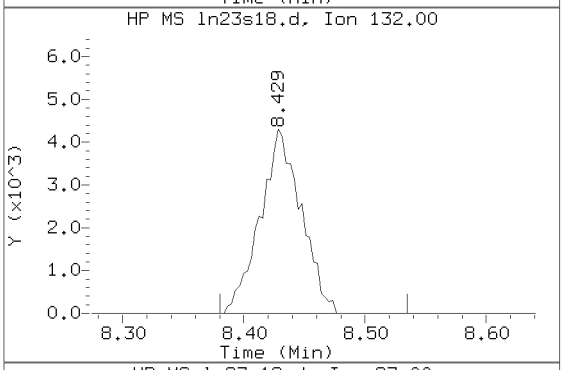
Sample Spectrum (Background Subtracted)

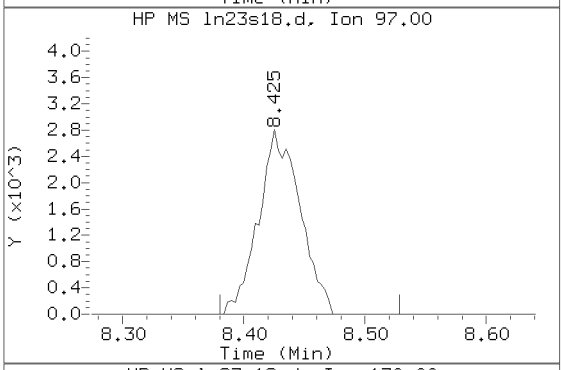


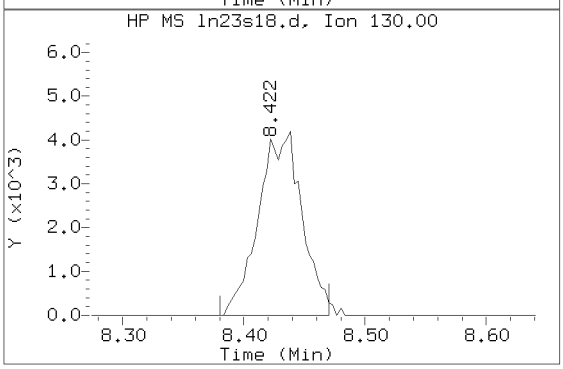
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23s18.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 16:37 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 16:54 Automation

Sample Name: JCW31 Lab Sample ID: 1205929

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 2161
Retention Time (minutes): 8.432
Relative Retention Time :-0.00038
Quant Ion : 95.00
Area (flag) : 10567
On-Column Amount (ng) : 1.9546

Digitally signed by Miranda E. Campbell on 11/27/2019 at 20:02.
Target 3.5 esignature user ID: mec29284

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\19nov04i\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
KAS02648	LN04T01.D	50NGBFB	11/04/2019	12:52	L191821AA	
KAS02648	LN04T02.D	50NGBFB	11/04/2019	13:05	L191821AA	
KAS02648	LN04T03.D	50NGBFB	11/04/2019	13:27	L191821AA	
KAS02648	LN04T04.D	50NGBFB	11/04/2019	13:45	L191821AA	
KAS02648	LN04T05.D	50NGBFB	11/04/2019	14:07	L191821AA	
KAS02648	LN04T06.D	50NGBFB	11/04/2019	14:18	L191821AA	
KAS02648	LN04X01.D	CLNBLK	11/04/2019	14:29		
KAS02648	LN04I01.D	VSTD300	11/04/2019	14:51		
KAS02648	LN04I02.D	VSTD100	11/04/2019	15:13		
KAS02648	LN04I03.D	VSTD050	11/04/2019	15:35		
KAS02648	LN04I04.D	VSTD020	11/04/2019	15:57		
KAS02648	LN04I05.D	VSTD010	11/04/2019	16:19		
KAS02648	LN04I06.D	VSTD004	11/04/2019	16:41		
KAS02648	LN04I07.D	VSTD001	11/04/2019	17:03		
KAS02648	LN04V01.D	ICVLLG	11/04/2019	17:25		
KAS02648	LN04V02.D	ICVLLG	11/04/2019	18:42		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\19nov23a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
CLM27445	LN23X55.D	VBLKL85	11/23/2019	06:24	L193261AA	
CLM27445	LN23T01.D	50NGBFB	11/23/2019	07:45	L193271AA	
CLM27445	LN23T02.D	50NGBFB	11/23/2019	07:57	L193271AA	
CLM27445	LN23X00.D	VBLKL87	11/23/2019	08:20	L193271AA	
CLM27445	LN23C01.D	VSTD050	11/23/2019	08:42	L193271AA	
CLM27445	LN23X60.D	VBLKL87	11/23/2019	09:04	L193271AA	
CLM27445	LN23S01.D	LCSL87	11/23/2019	09:26	L193271AA	
CLM27445	LN23B01.D	VBLKL87	11/23/2019	09:48	L193271AA	
CLM27445	LN23S02.D	1205905	11/23/2019	10:44	L193271AA	
CLM27445	LN23S03.D	1205900	11/23/2019	11:06	L193271AA	
CLM27445	LN23S04.D	1205901MS	11/23/2019	11:28	L193271AA	
CLM27445	LN23S05.D	1205902MSD	11/23/2019	11:50	L193271AA	
CLM27445	LN23S06.D	1205903	11/23/2019	12:12	L193271AA	
CLM27445	LN23S07.D	1205904	11/23/2019	12:34	L193271AA	
CLM27445	LN23S08.D	1205910	11/23/2019	12:56	L193271AA	
CLM27445	LN23S09.D	1205911	11/23/2019	13:18	L193271AA	
CLM27445	LN23S10.D	1205912	11/23/2019	13:40	L193271AA	
CLM27445	LN23S11.D	1205913	11/23/2019	14:02	L193271AA	
CLM27445	LN23S12.D	1205914	11/23/2019	14:24	L193271AA	
CLM27445	LN23S13.D	1205915	11/23/2019	14:46	L193271AA	
CLM27445	LN23S14.D	1205916	11/23/2019	15:08	L193271AA	
CLM27445	LN23S15.D	1205917	11/23/2019	15:31	L193271AA	
CLM27445	LN23S16.D	1205918	11/23/2019	15:53	L193271AA	
CLM27445	LN23S17.D	1205928	11/23/2019	16:15	L193271AA	
CLM27445	LN23S18.D	1205929	11/23/2019	16:37	L193271AA	
CLM27445	LN23S19.D	1206738	11/23/2019	16:59	L193271AA	
CLM27445	LN23S20.D	1206739	11/23/2019	17:21	L193271AA	
CLM27445	LN23S21.D	1206740	11/23/2019	17:43	L193271AA	

Data File: /chem/HP09915.i/19nov04i.b/ln04t06.d

Page 1

Date : 04-NOV-2019 14:18

Client ID: AUG02-19

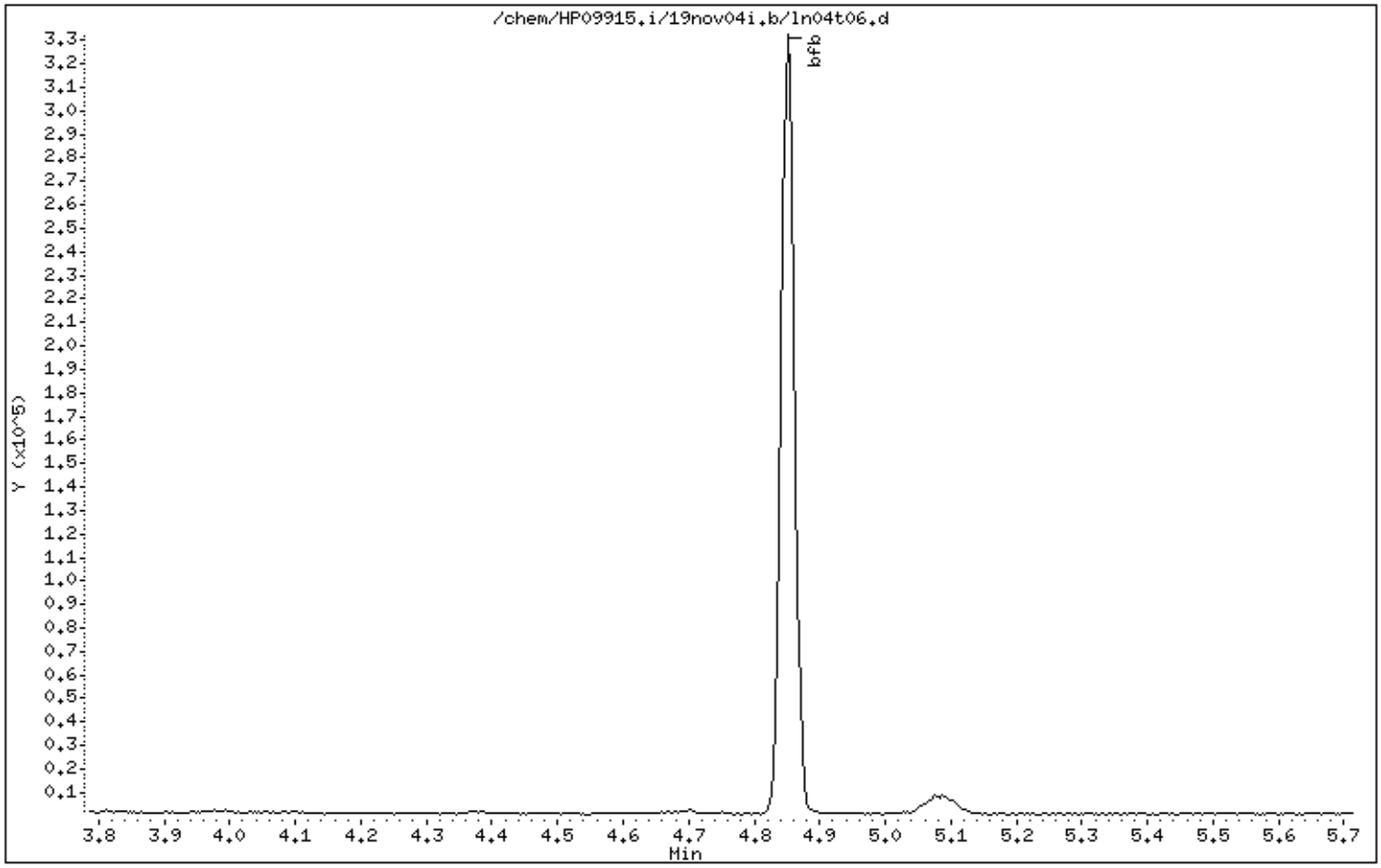
Instrument: HP09915.i

Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem/HP09915.i/19nov04i.b/ln04t06.d

Date : 04-NOV-2019 14:18

Client ID: AUG02-19

Instrument: HP09915.i

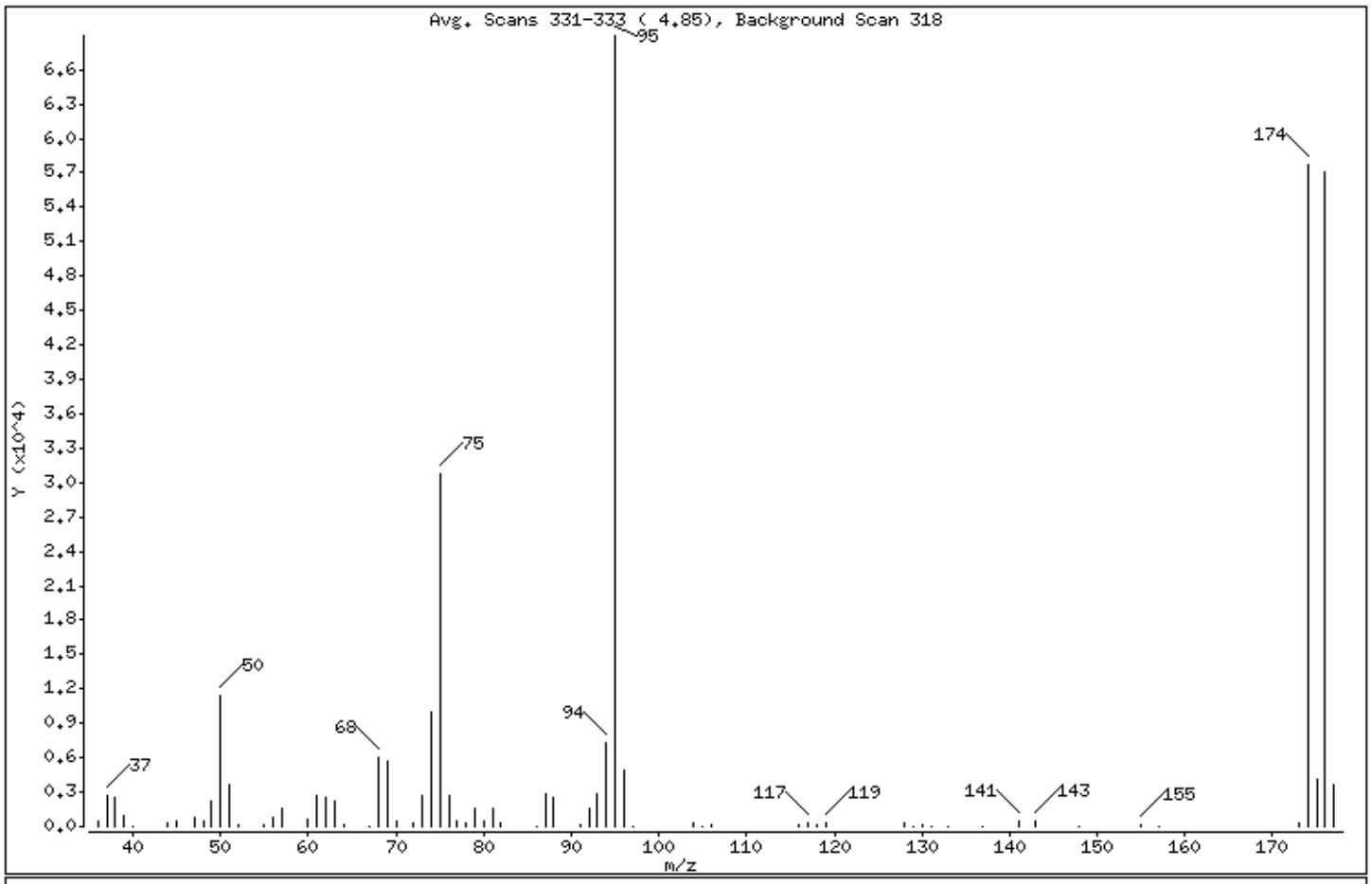
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.48
75	30.00 - 60.00% of mass 95	44.65
96	5.00 - 9.00% of mass 95	7.22
173	Less than 2.00% of mass 174	0.51 (0.61)
174	50.00 - 100.00% of mass 95	83.73
175	5.00 - 9.00% of mass 174	5.92 (7.07)
176	95.00 - 101.00% of mass 174	82.66 (98.72)
177	5.00 - 9.00% of mass 176	5.37 (6.49)

Date : 04-NOV-2019 14:18

Client ID: AUG02-19 Instrument: HP09915.i

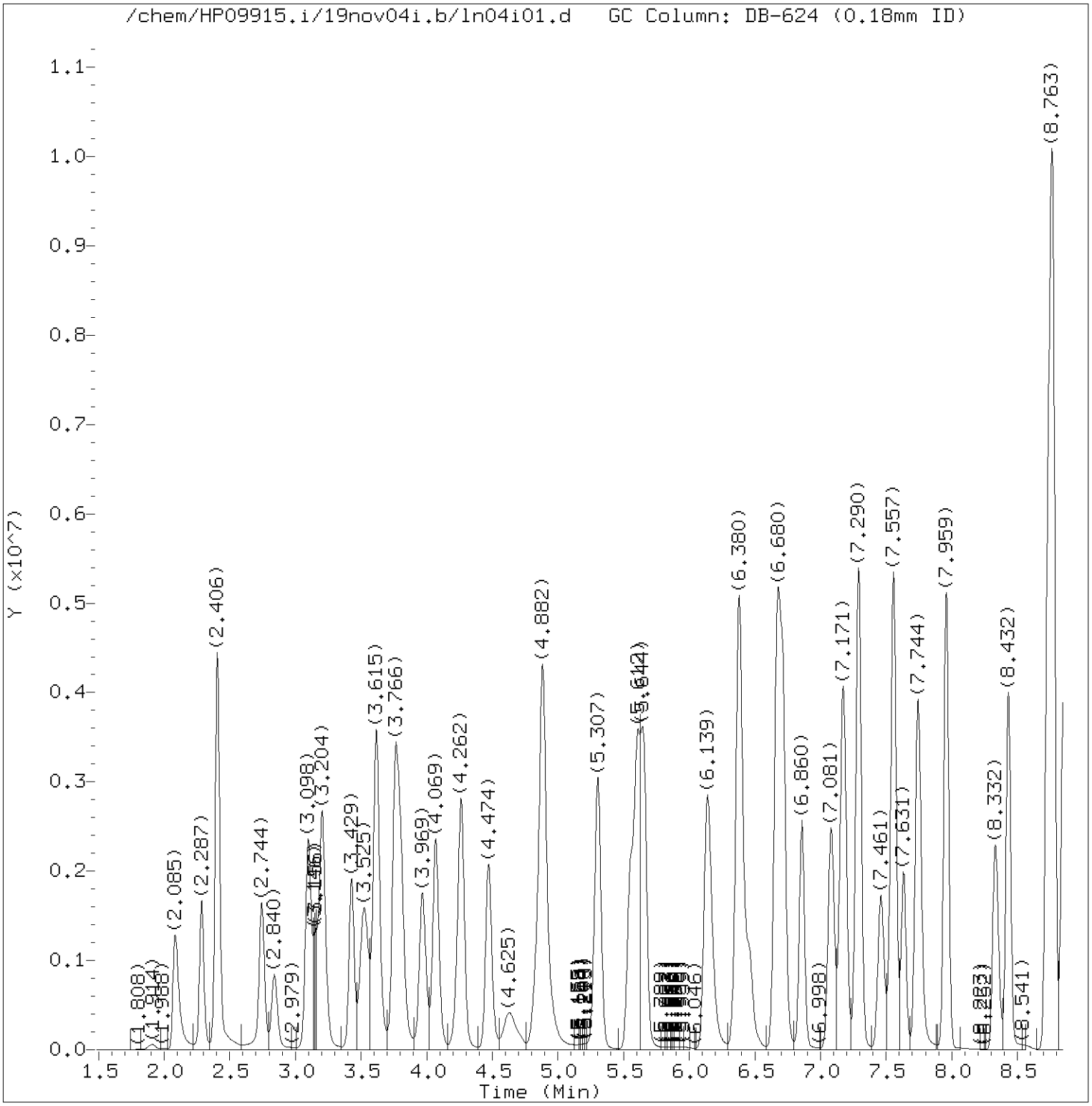
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: ln04t06.d
Spectrum: Avg. Scans 331-333 (4.85), Background Scan 318
Location of Maximum: 95.00
Number of points: 69

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	529	62.00	2498	86.00	55	129.00	53
37.00	2736	63.00	2218	87.00	2840	130.00	112
38.00	2557	64.00	150	88.00	2593	131.00	53
39.00	971	67.00	71	91.00	144	133.00	52
40.00	22	68.00	6076	92.00	1588	137.00	53
44.00	270	69.00	5647	93.00	2845	141.00	538
45.00	457	70.00	476	94.00	7275	143.00	484
47.00	784	72.00	322	95.00	68968	148.00	77
48.00	424	73.00	2656	96.00	4977	155.00	162
49.00	2292	74.00	10024	97.00	62	157.00	63
50.00	11364	75.00	30792	104.00	284	173.00	350
51.00	3586	76.00	2712	105.00	50	174.00	57744
52.00	134	77.00	405	106.00	233	175.00	4082
55.00	217	78.00	267	116.00	189	176.00	57008
56.00	871	79.00	1601	117.00	348	177.00	3701
57.00	1629	80.00	440	118.00	231		
60.00	555	81.00	1543	119.00	348		
61.00	2700	82.00	307	128.00	239		



Total Ion Chromatogram (TIC)

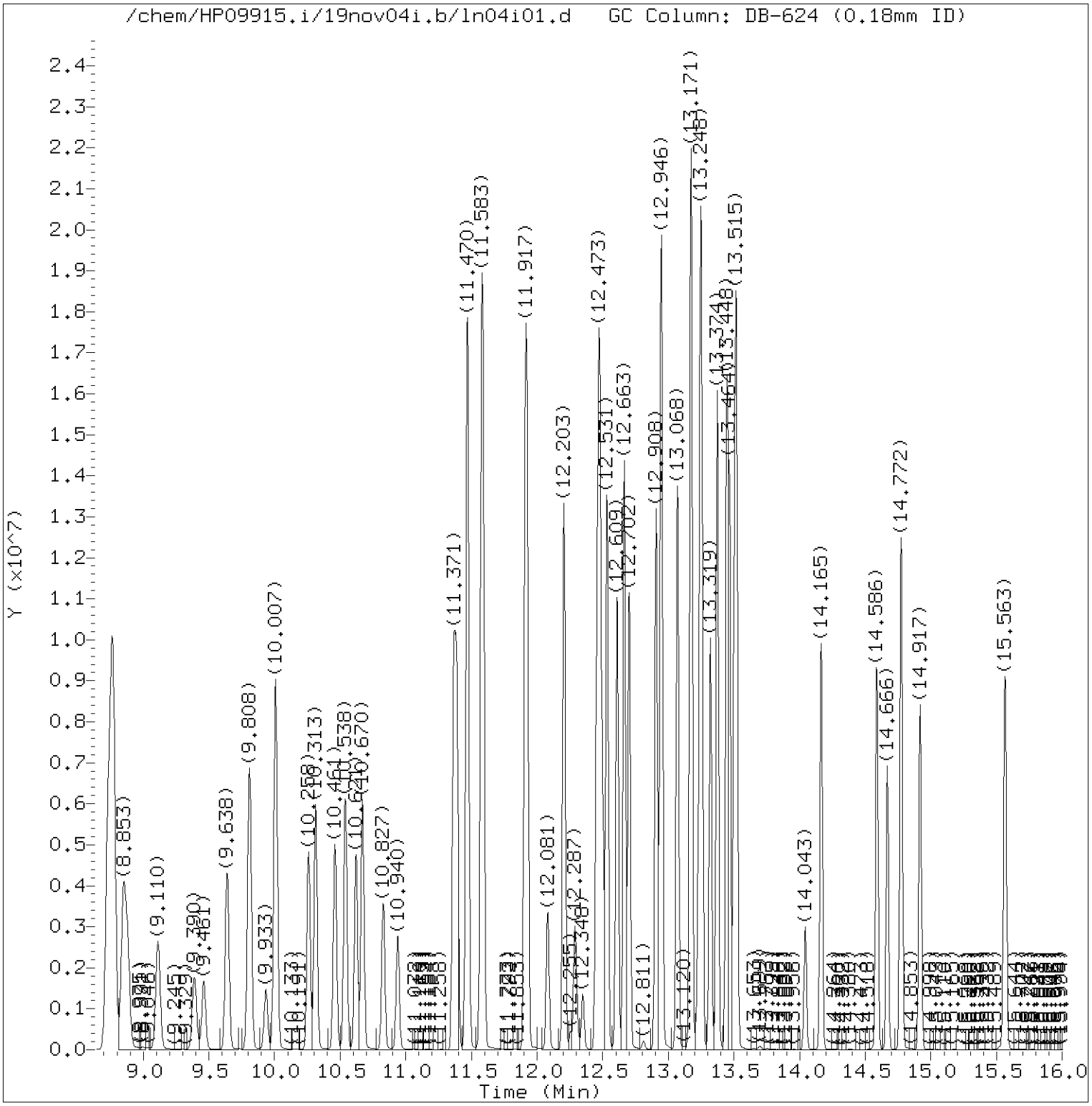
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.085	85	2719746M	347.943
4) Chloromethane	(2)	2.287	50	2403581	319.051
5) 1,3-Butadiene	(2)	2.406	39	1785787M	285.486
6) Vinyl Chloride	(2)	2.406	62	2412855	320.904
8) Bromomethane	(2)	2.744	94	1638575	304.015
9) Chloroethane	(2)	2.837	64	1253478	303.356
12) Trichlorofluoromethane	(2)	3.152	101	2661050	328.734
11) n-Pentane	(2)	3.204	43	2816823	294.455
14) Ethyl ether	(2)	3.429	59	1721693	329.146
15) Freon 123a	(2)	3.525	67	1991616	305.852
16) Acrolein	(1)	3.615	56	5765354	3020.583
17) 1,1-Dichloroethene	(2)	3.760	96	1489890	313.570
17) 1,1-Dichloroethene	(2)	3.757	63	721205	302.767
19) Freon 113	(2)	3.792	101	1732433	319.583
18) Acetone	(1)	3.802	58	531845	621.534
22) Methyl Iodide	(2)	3.966	142	3047145	309.483
21) 2-Propanol	(1)	3.995	45	936919	1523.065
23) Carbon Disulfide	(2)	4.069	76	5676465	317.027
27) Methyl Acetate	(2)	4.239	43	1941315	317.230
25) Allyl Chloride	(2)	4.265	41	2748698	322.482
28) Methylene Chloride	(2)	4.474	84	1745840	308.716
29)*t-Butyl alcohol-d10	(1)	4.503	65	254406M	250.000
30) t-Butyl alcohol	(1)	4.638	59	1641037	1532.140
31) Acrylonitrile	(2)	4.827	53	1039800	315.820
32) trans-1,2-Dichloroethene	(2)	4.885	96	1713357	311.714
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	5505439	305.143
34) n-Hexane	(2)	5.307	57	2863189M	334.811
36) 1,1-Dichloroethane	(2)	5.548	63	3007196	313.618
38) di-Isopropyl ether	(2)	5.609	45	5739955	310.377
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	2776921	322.788
40) Ethyl t-butyl ether	(2)	6.139	59	5425034	302.275
43) 1,2-Dichloroethene (Total)	(2)		96	3646040	624.977
44) 2-Butanone	(2)	6.364	43	2642793	625.317
42) cis-1,2-Dichloroethene	(2)	6.380	96	1932683	313.263
45) 2,2-Dichloropropane	(2)	6.397	77	2377411	318.945
47) Propionitrile	(1)	6.458	54	2126389	1593.336
48) Methacrylonitrile	(2)	6.670	67	2858148	804.768
49) Bromochloromethane	(2)	6.708	128	1075154	328.655

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.718	71	758236	628.991
51) Chloroform	(2)	6.860	83	2916299	317.988
52)$Dibromofluoromethane	(2)	7.075	113	276322	50.424
52)$Dibromofluoromethane	(2)	7.075	111	279197	49.969
53) 1,1,1-Trichloroethane	(2)	7.081	97	2560601	327.130
54) Cyclohexane	(2)	7.171	56	3429211	327.611
54) Cyclohexane	(2)	7.171	84	2984908	328.282
54) Cyclohexane	(2)	7.171	69	1068201	329.937
56) Carbon Tetrachloride	(2)	7.287	117	2252864	339.350
55) 1,1-Dichloropropene	(2)	7.294	75	2434619	321.125
58) Isobutyl Alcohol	(1)	7.461	41	1382486	3835.573
57)$1,2-Dichloroethane-d4	(2)	7.528	102	68480	49.033
57)$1,2-Dichloroethane-d4	(2)	7.532	65	307306	49.375
57)$1,2-Dichloroethane-d4	(2)	7.528	104	44002	49.326
60) Benzene	(2)	7.557	78	7094466	311.169
61) 1,2-Dichloroethane	(2)	7.634	62	2222342	303.049
61) 1,2-Dichloroethane	(2)	7.634	98	228988	315.535
65) t-Amyl methyl ether	(2)	7.744	73	5421278	300.945
67) n-Heptane	(2)	7.959	43	2592531MA	324.518
66)*Fluorobenzene	(2)	7.959	96	1120873	50.000
69) n-Butanol	(1)	8.332	56	2465385M	7947.068
71) Trichloroethene	(2)	8.432	95	1841720	320.821
72) Methylcyclohexane	(2)	8.734	83	3568410	335.054
72) Methylcyclohexane	(2)	8.734	98	1632993	338.844
73) 1,2-Dichloropropane	(2)	8.769	63	1825943	315.397
76) Methyl Methacrylate	(2)	8.850	69	1904896A	340.256
75) 1,4-Dioxane	(1)	8.856	88	338379M	3968.421
74) Dibromomethane	(2)	8.879	93	1210939	323.274
78) Bromodichloromethane	(2)	9.113	83	2314651	344.351
79) 2-Nitropropane	(2)	9.390	41	1438925	706.755
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	926413	372.584
81) cis-1,3-Dichloropropene	(2)	9.638	75	3074664	344.402
82) 4-Methyl-2-pentanone	(2)	9.808	43	5422938	607.899
83)$Toluene-d8	(3)	9.933	98	1156351	49.563
83)$Toluene-d8	(3)	9.933	100	751534	49.726
88) Toluene	(3)	10.007	92	4532879	309.894
90) 1,3-Dichloropropene (total)	(3)		100	5974636	693.659
89) trans-1,3-Dichloropropene	(3)	10.258	75	2899972	349.257

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	10.313	69	3356305	332.603
92) 1,1,2-Trichloroethane	(3)	10.461	97	1768710	318.935
93) Tetrachloroethene	(3)	10.541	166	1990565	321.327
94) 1,3-Dichloropropane	(3)	10.621	76	3006585	317.532
96) 2-Hexanone	(3)	10.670	43	3998423	593.616
97) Dibromochloromethane	(3)	10.827	129	2037523	358.670
99) 1,2-Dibromoethane	(3)	10.940	107	1987783	330.088
100)*Chlorobenzene-d5	(3)	11.361	117	891668	50.000
101) 1-Chlorohexane	(3)	11.364	91	2458057	312.814
102) Chlorobenzene	(3)	11.387	112	5140609	310.783
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	1789998	328.446
104) Ethylbenzene	(3)	11.470	91	8606821	307.854
106) m+p-Xylene	(3)	11.583	106	6690837	608.359
108) Xylene (Total)	(3)		106	9979970	911.130
107) o-Xylene	(3)	11.908	106	3289133	302.771
109) Styrene	(3)	11.924	104	5647939	314.619
110) Bromoform	(3)	12.081	173	1534520	361.500
111) Isopropylbenzene	(3)	12.203	105	8466138	310.714
112) Cyclohexanone	(1)	12.287	55	1351186	4046.080
114)$4-Bromofluorobenzene	(3)	12.348	95	440049	49.810
114)$4-Bromofluorobenzene	(3)	12.348	174	362553	49.502
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	2800639M	310.705
115) Bromobenzene	(4)	12.467	156	2234066	311.517
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	2150976	773.637
117) 1,2,3-Trichloropropane	(4)	12.499	110	866230	313.172
119) n-Propylbenzene	(4)	12.531	91	9654812	308.142
120) 2-Chlorotoluene	(4)	12.609	126	2098494	315.266
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	7238022	317.873
121) 4-Chlorotoluene	(4)	12.702	126	2155793	311.148
124) tert-Butylbenzene	(4)	12.908	134	1524421M	323.717
125) Pentachloroethane	(4)	12.940	167	1461833	360.511
126) 1,2,4-Trimethylbenzene	(4)	12.949	105	7469187	311.236
127) sec-Butylbenzene	(4)	13.068	105	8682126	308.971
129) 1,3-Dichlorobenzene	(4)	13.168	146	3858953	292.822
130) p-Isopropyltoluene	(4)	13.174	119	7289488	299.854
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	477171	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	4013510	293.777
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	7915203	311.364

M = Compound was manually integrated.
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Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

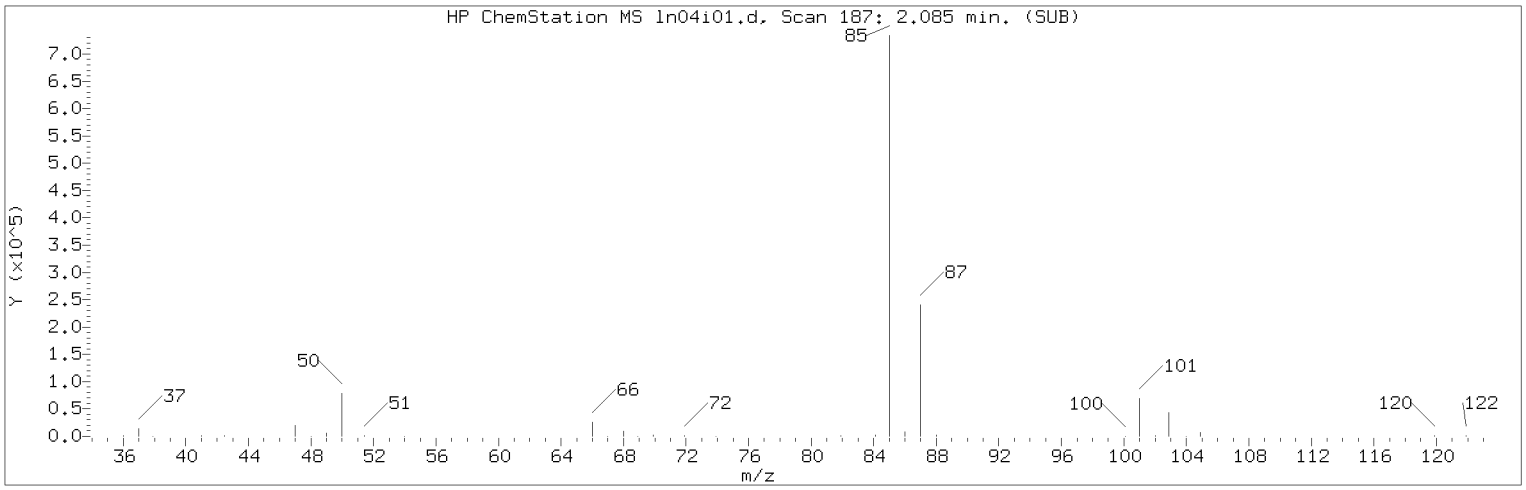
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

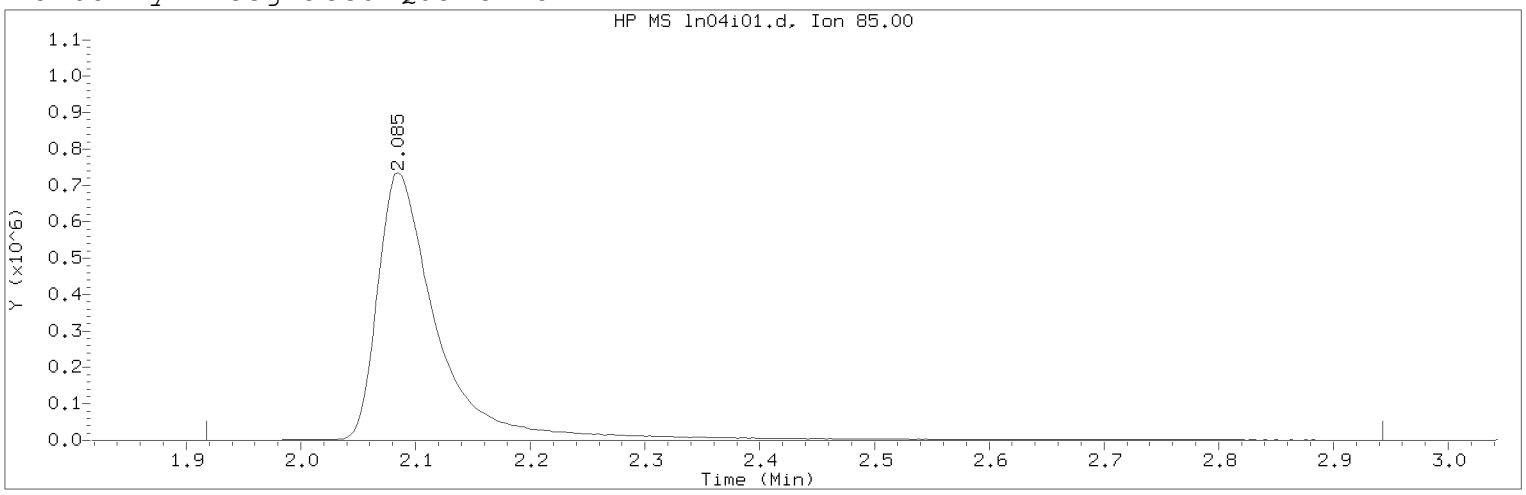
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.319	91	6484944	336.931
136) 1,3-Diethylbenzene	(4)	13.374	119	4897725	309.573
141) Diethylbenzene (total)	(4)		100	13982971	913.975
137) 1,4-Diethylbenzene	(4)	13.444	119	5013123	299.077
139) n-Butylbenzene	(4)	13.467	92	3608595	290.316
138) 1,2-Dichlorobenzene	(4)	13.502	146	3859125	296.761
140) 1,2-Diethylbenzene	(4)	13.518	119	4072123	305.325
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	669008	339.050
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	2855960	285.855
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	2681523	276.030
147) Hexachlorobutadiene	(4)	14.670	225	1157297	252.311
148) Naphthalene	(4)	14.772	128	9186333	294.145
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	2488608	263.270
150) 2-Methylnaphthalene	(4)	15.563	142	4666682	242.655

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

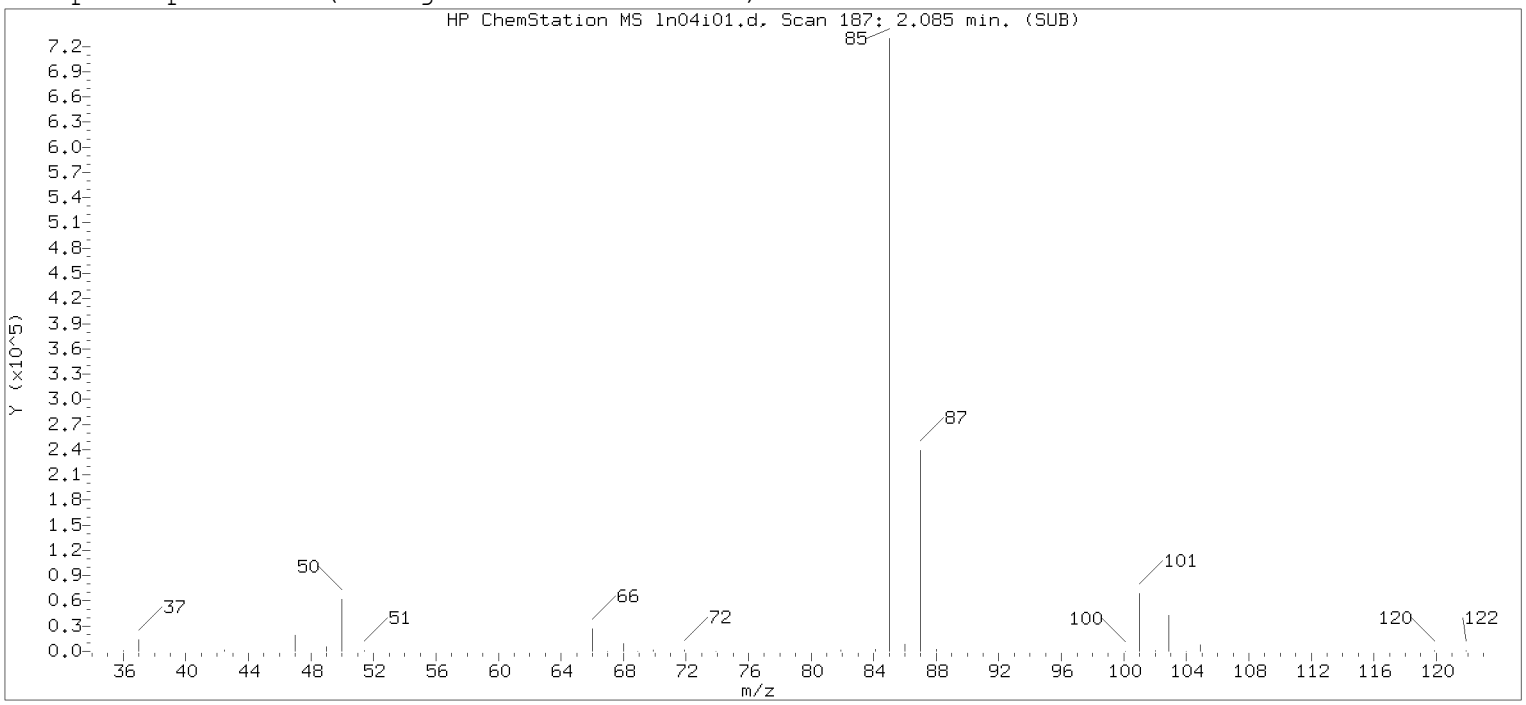
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area (flag) : 2719746M
On-Column Amount (ng) : 347.9426
Integration start scan : 134 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

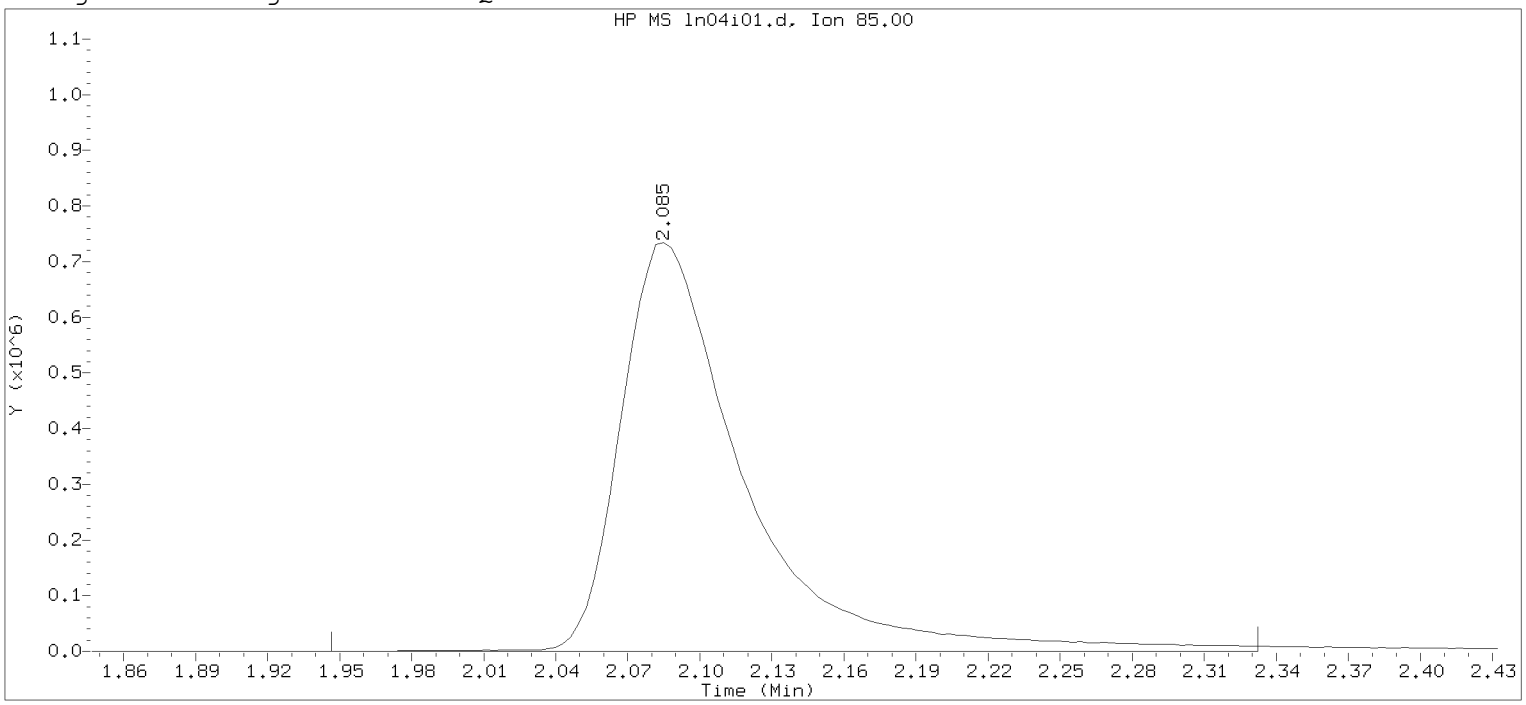
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

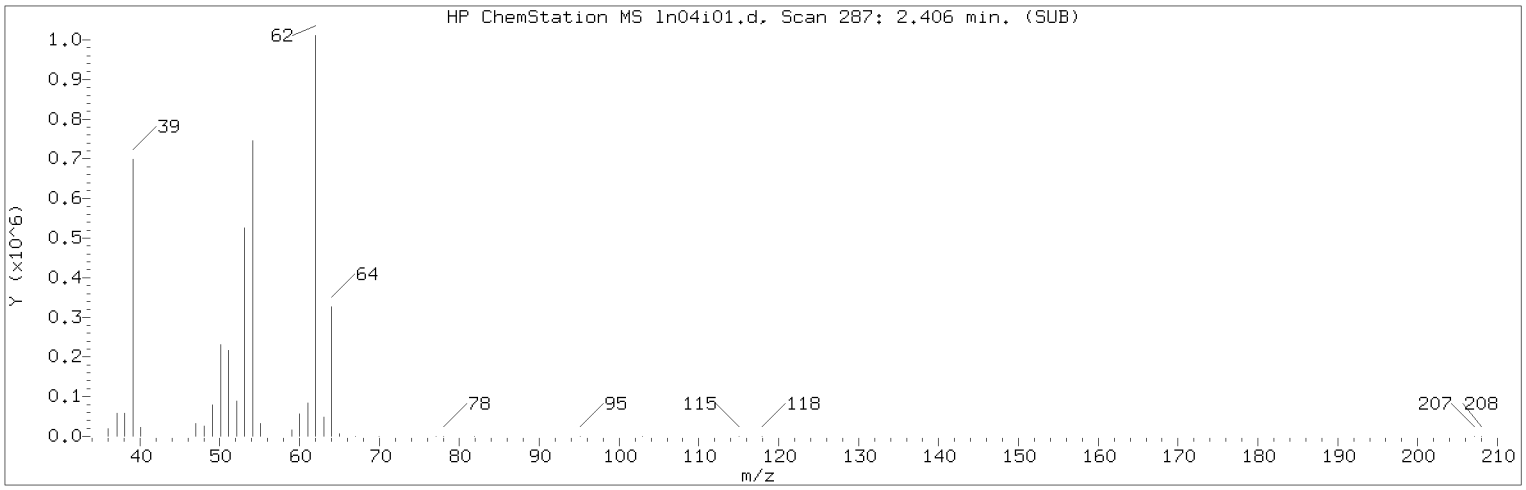
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

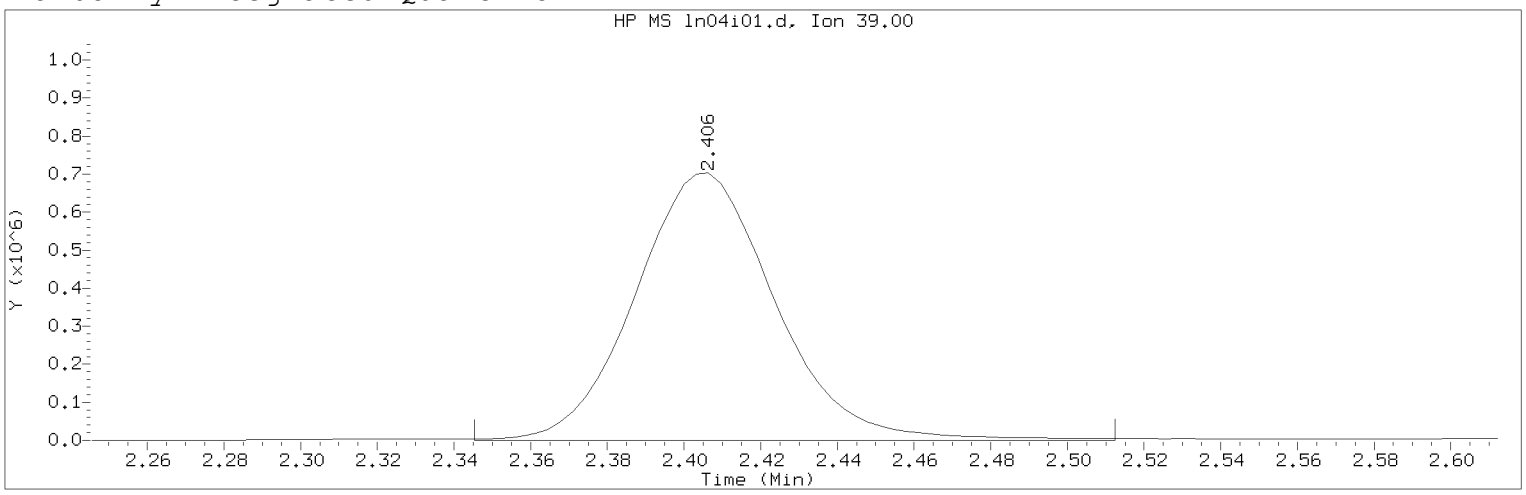
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area : 2624212
On-column Amount (ng) : 308.6520
Integration start scan : 143 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user Jennifer K. Howe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

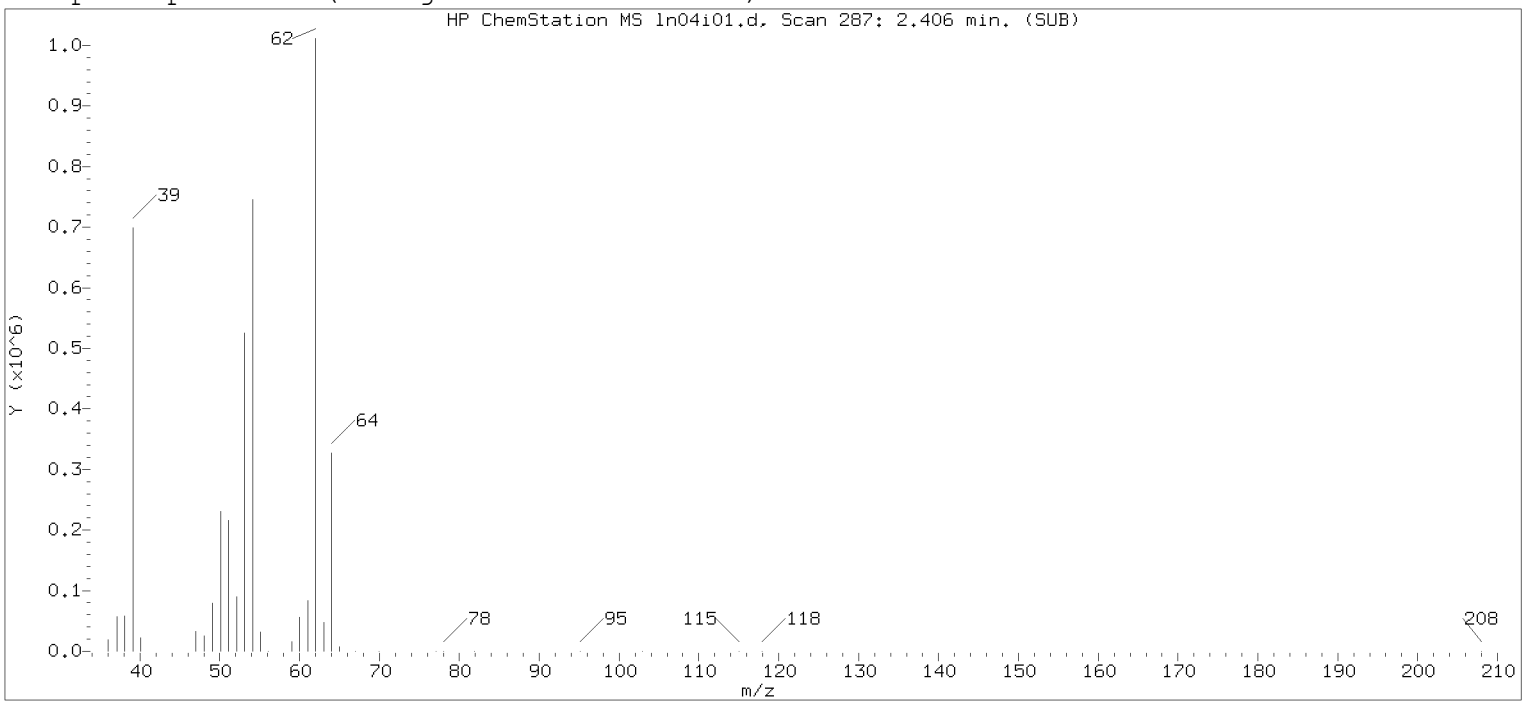
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 1785787M
On-Column Amount (ng) : 285.4858
Integration start scan : 267 Integration stop scan: 319
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

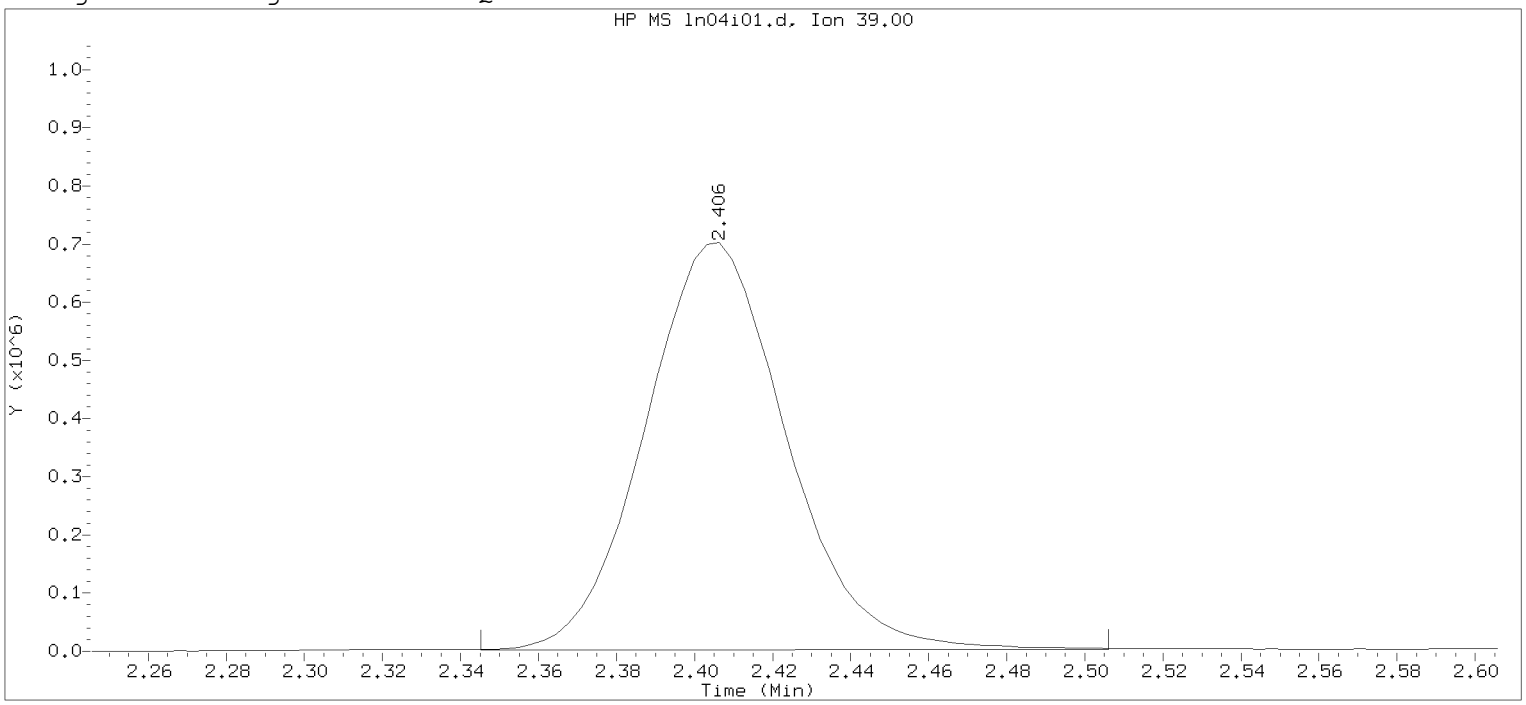
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

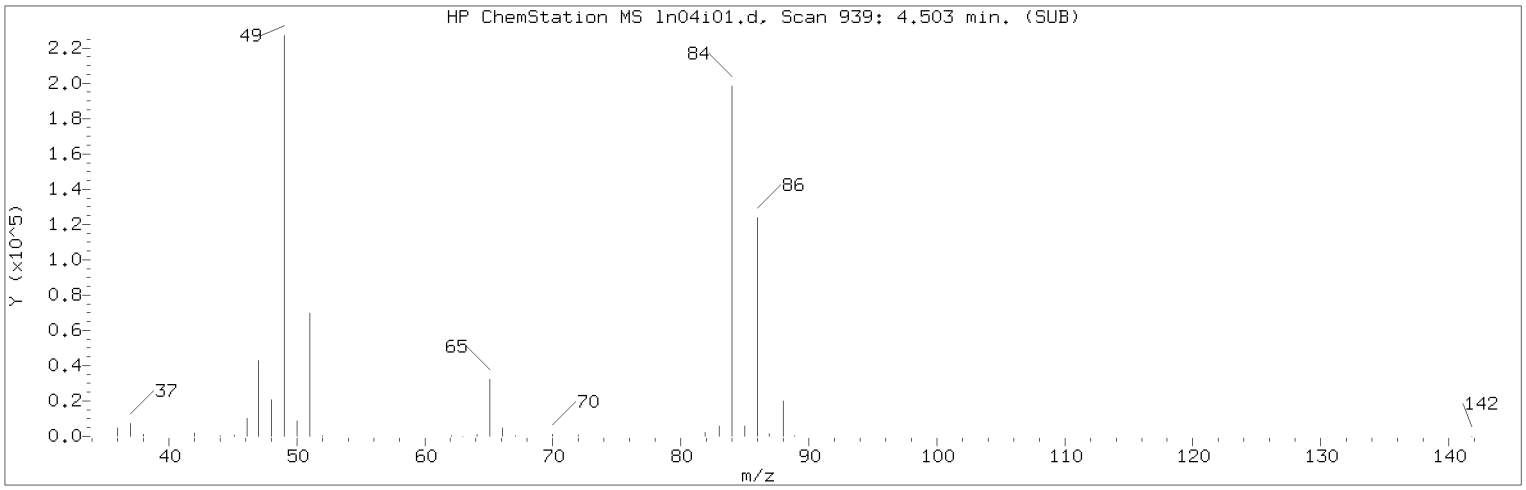
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

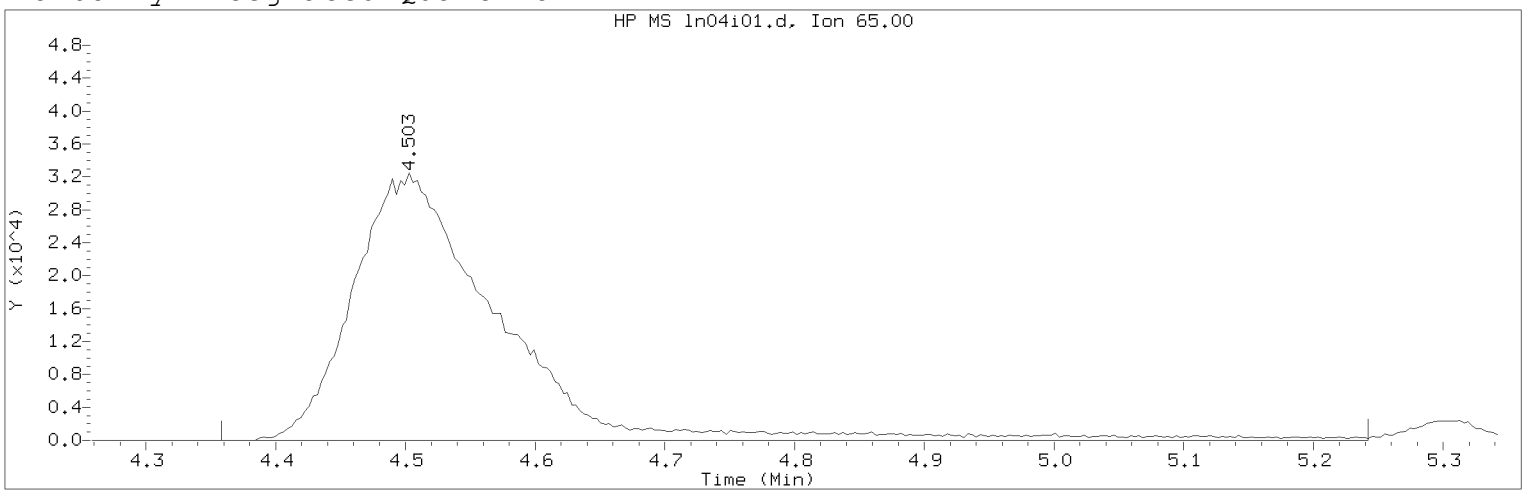
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 1755596
On-column Amount (ng) : 295.0708
Integration start scan : 267 Integration stop scan: 317
Y at integration start : 2196 Y at integration end: 3553

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user Jennifer K. Howe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

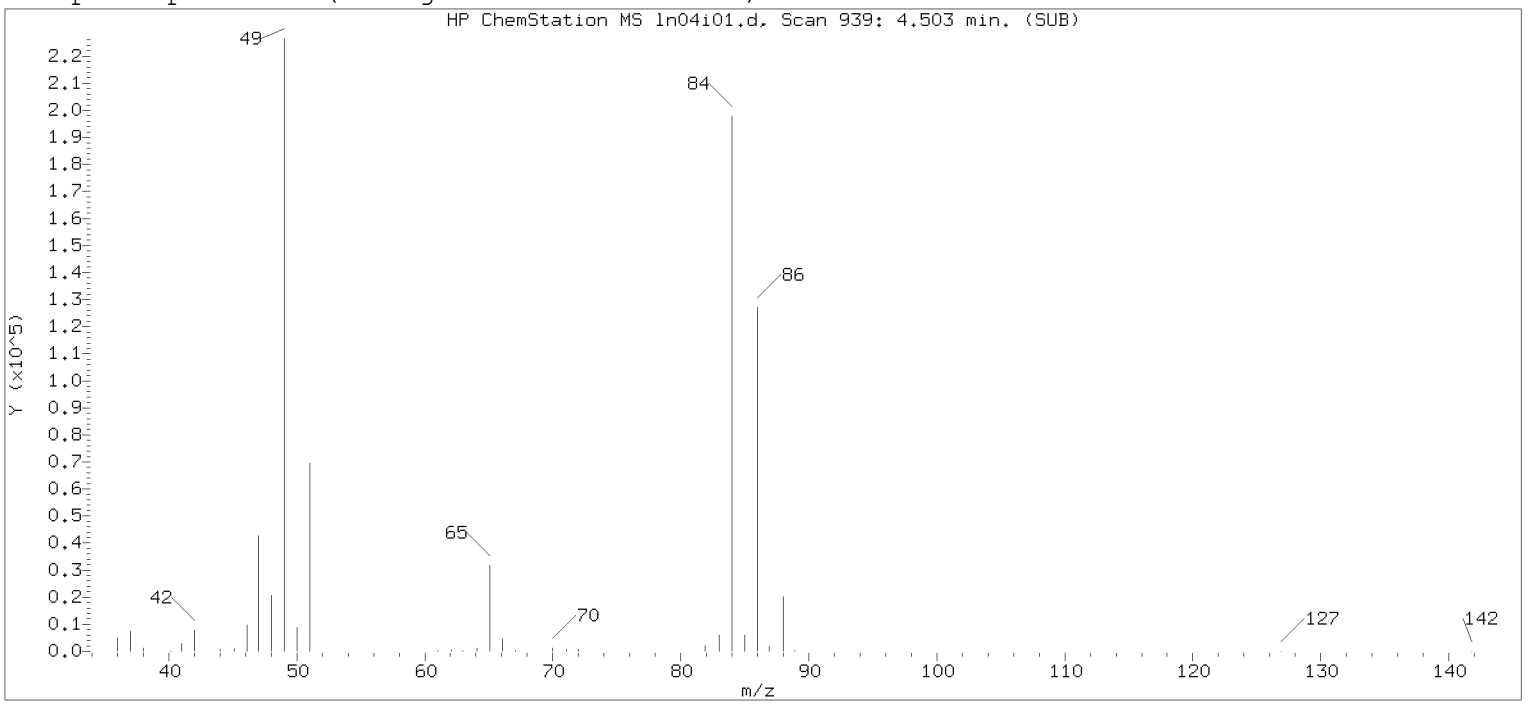
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area (flag) : 254406M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1168
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

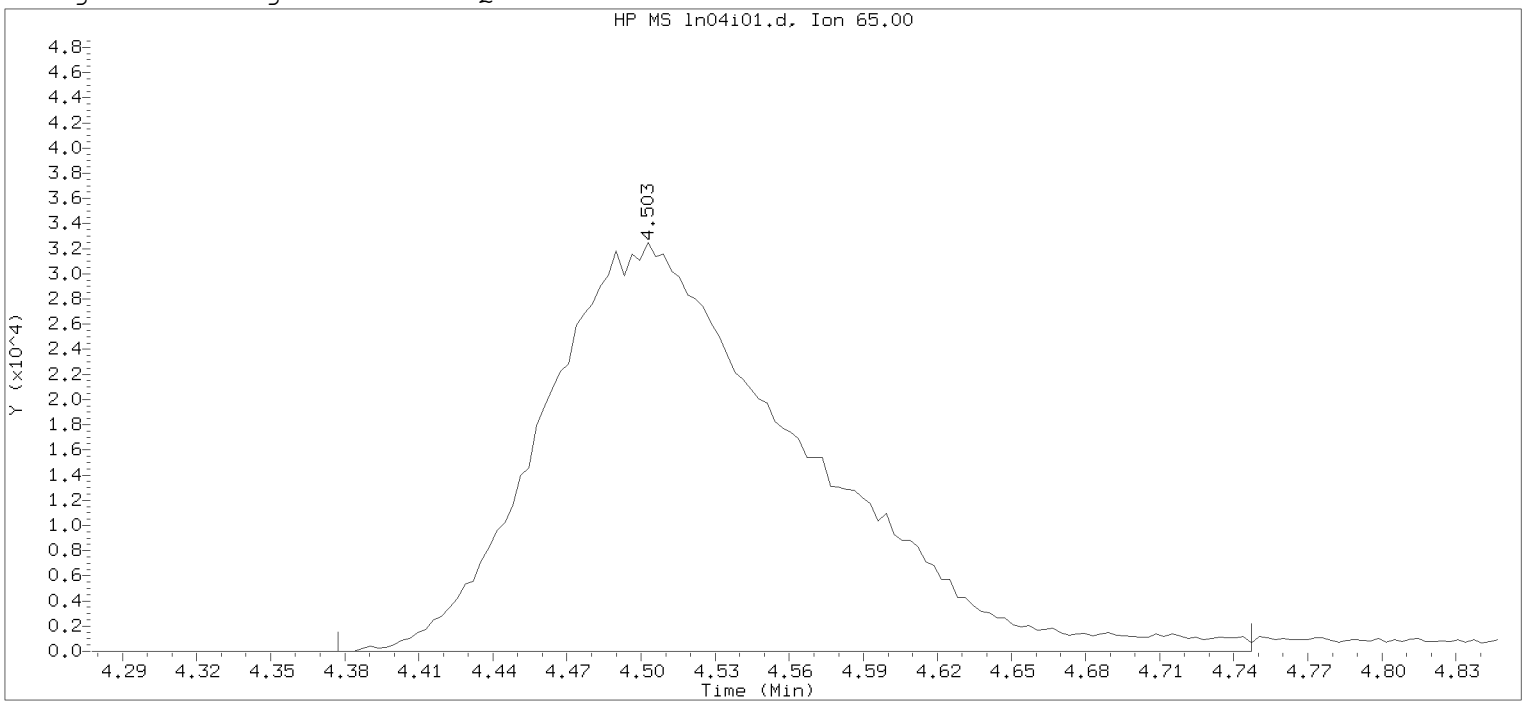
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

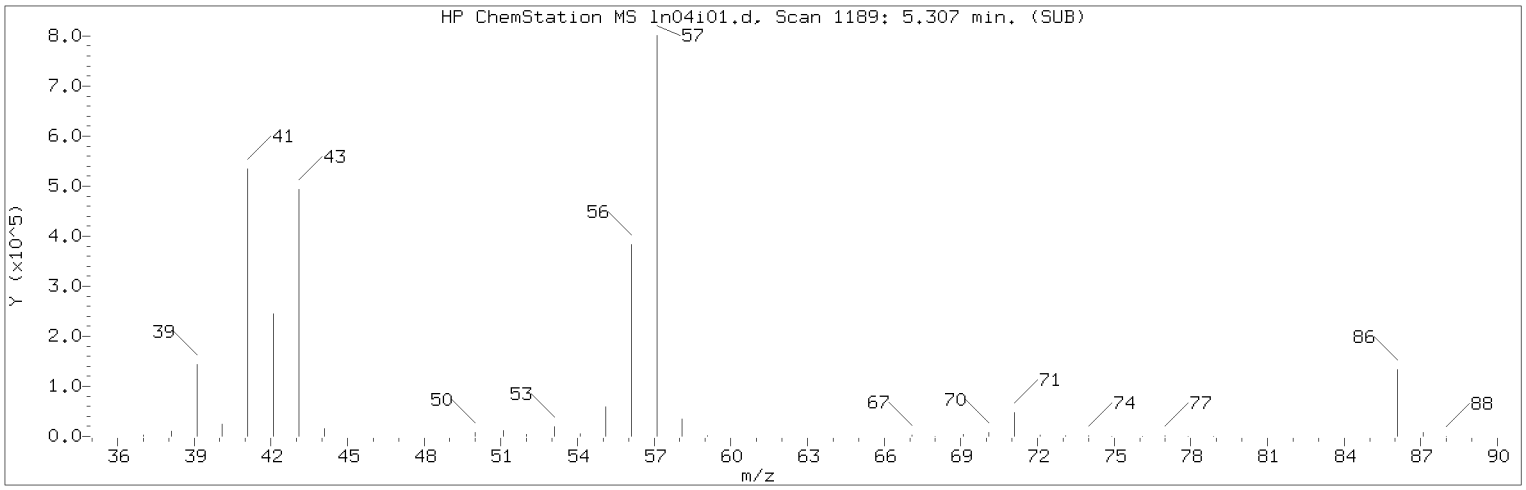
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

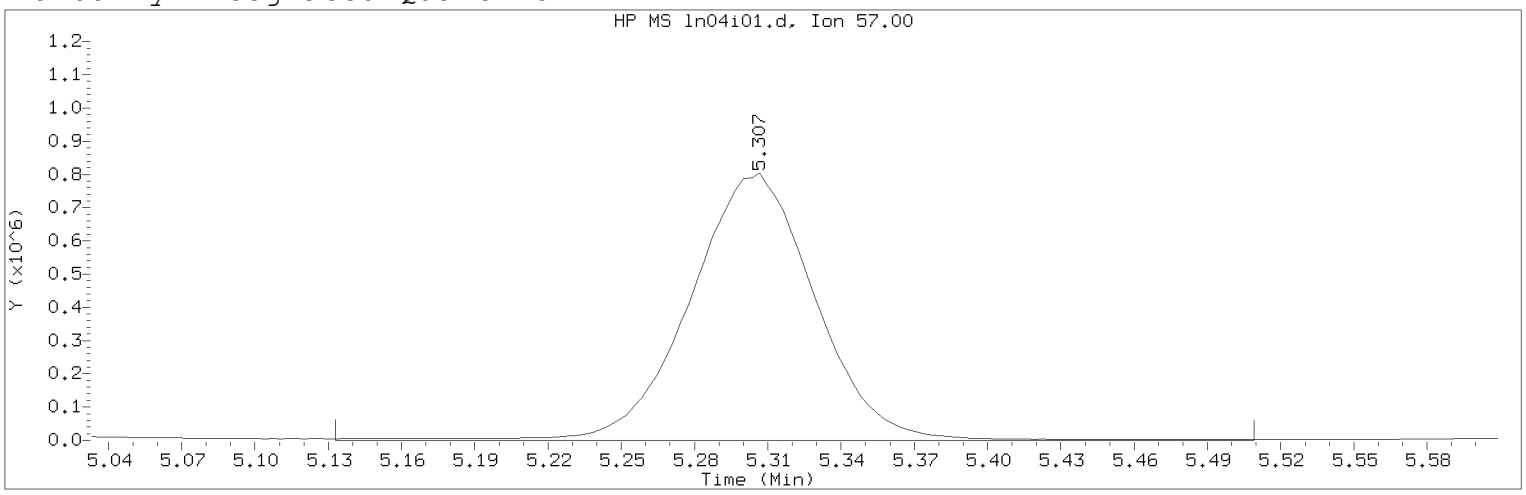
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area : 237264
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user Jennifer K. Howe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

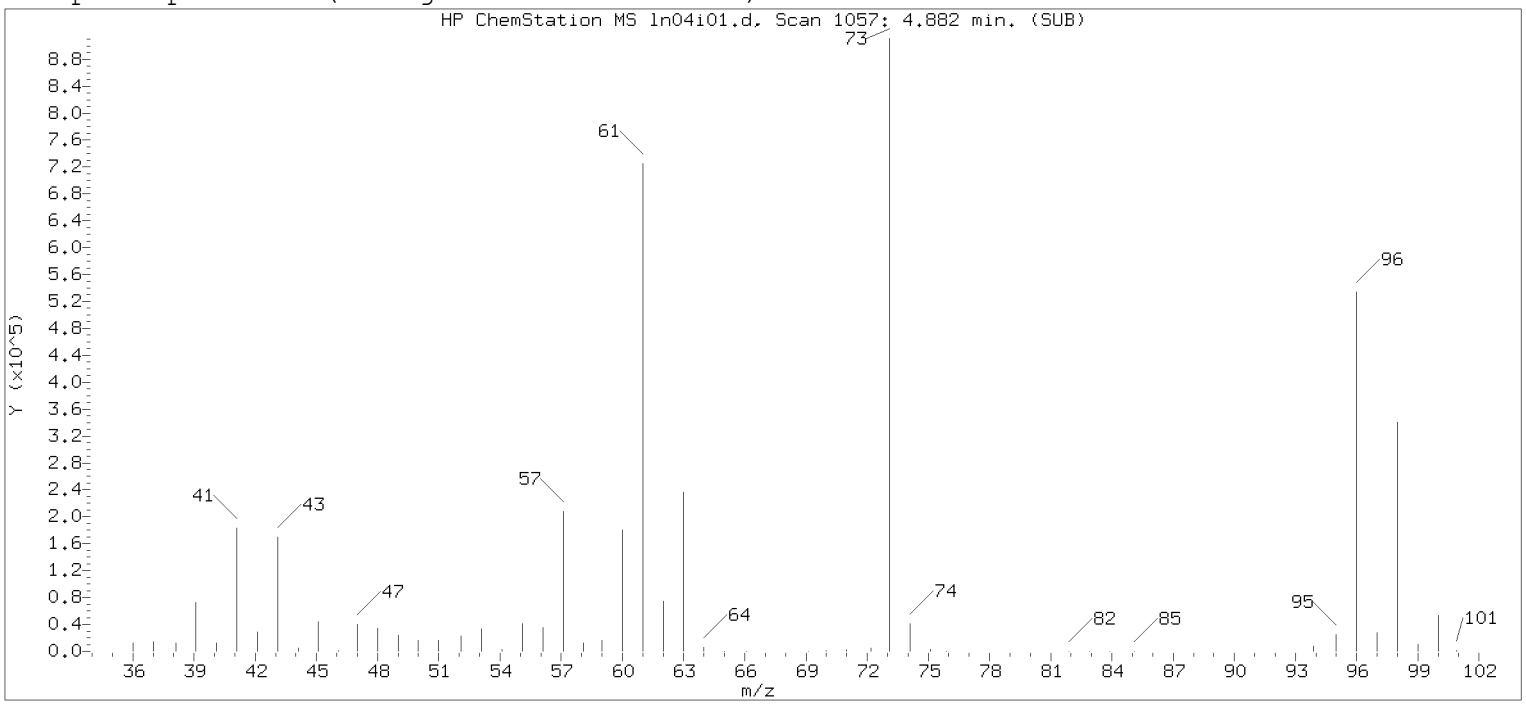
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1189
Retention Time (minutes): 5.307
Quant Ion : 57.00
Area (flag) : 2863189M
On-Column Amount (ng) : 334.8105
Integration start scan : 1134 Integration stop scan: 1251
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

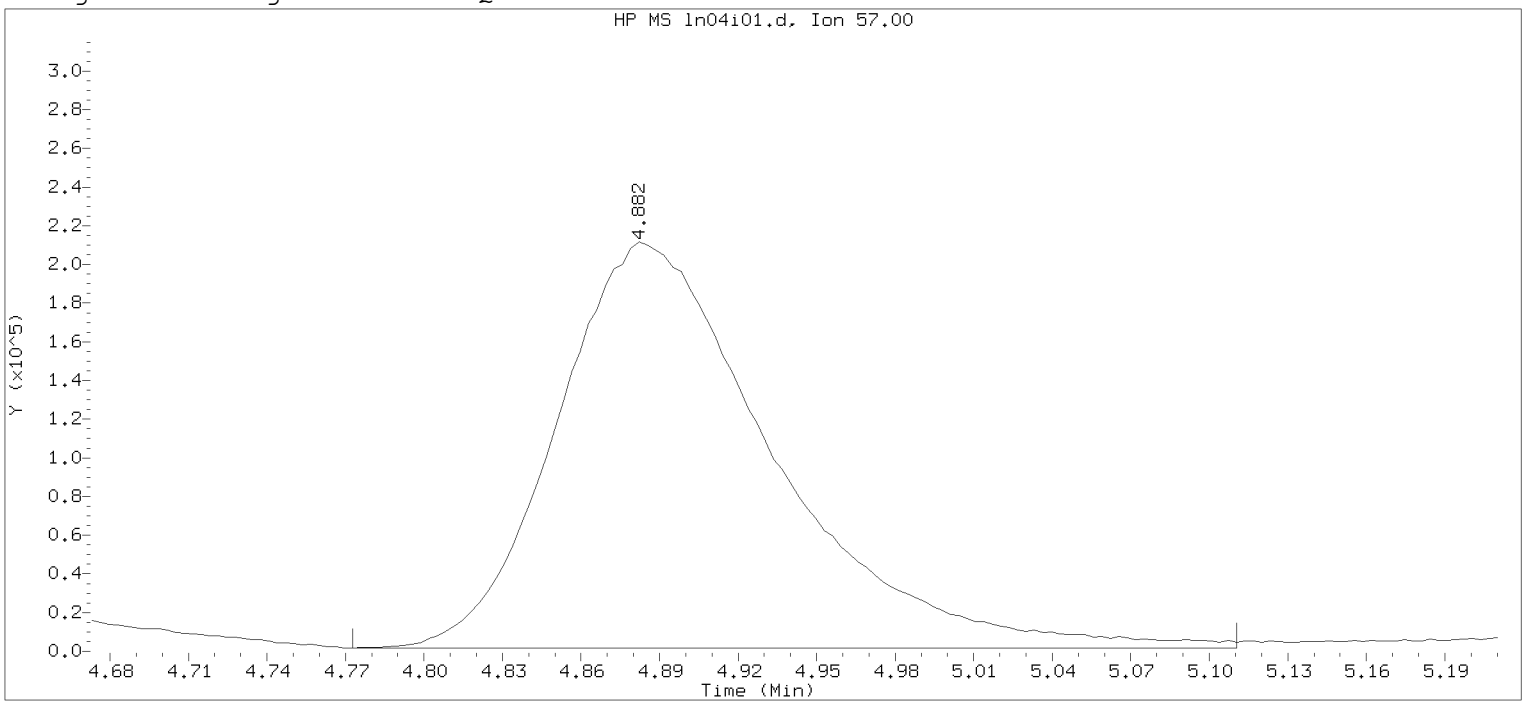
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

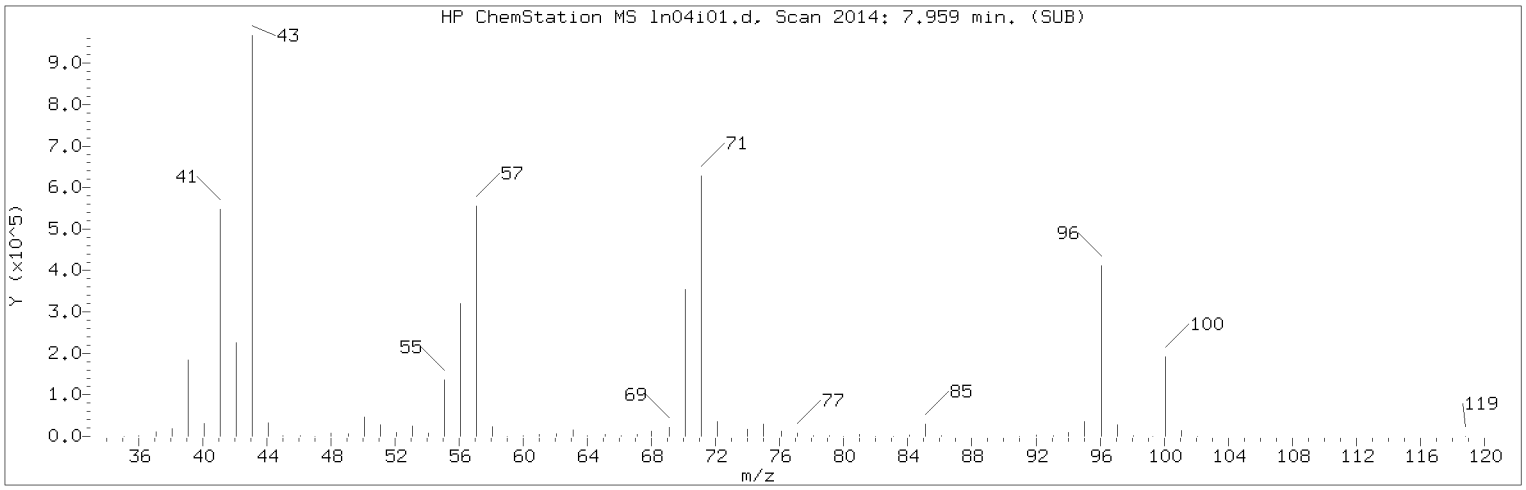
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

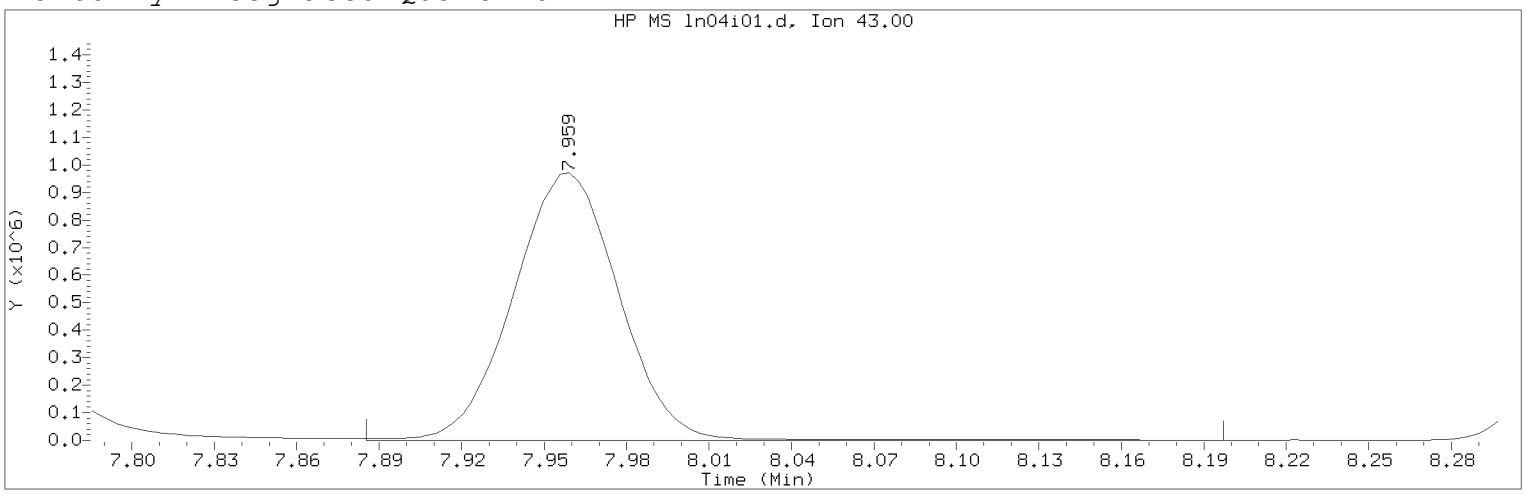
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1057		
Retention Time (minutes)	: 4.882		
Quant Ion	: 57.00		
Area	: 1202378		
On-column Amount (ng)	: 301.4561		
Integration start scan	: 1022	Integration stop scan	: 1127
Y at integration start	: 1806	Y at integration end	: 1806

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user Jennifer K. Howe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

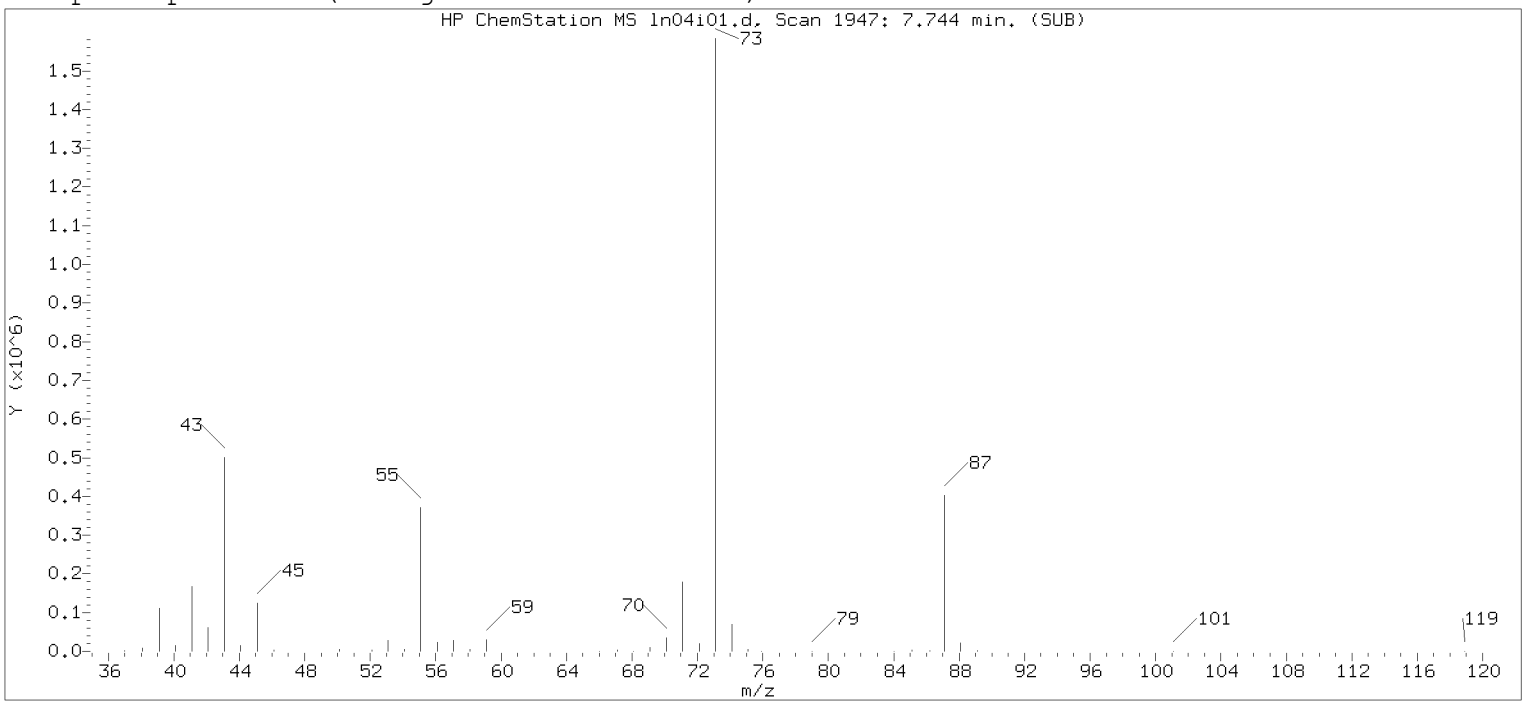
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2014
Retention Time (minutes): 7.959
Quant Ion : 43.00
Area (flag) : 2592531MA
On-Column Amount (ng) : 324.5176
Integration start scan : 1990 Integration stop scan: 2087
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

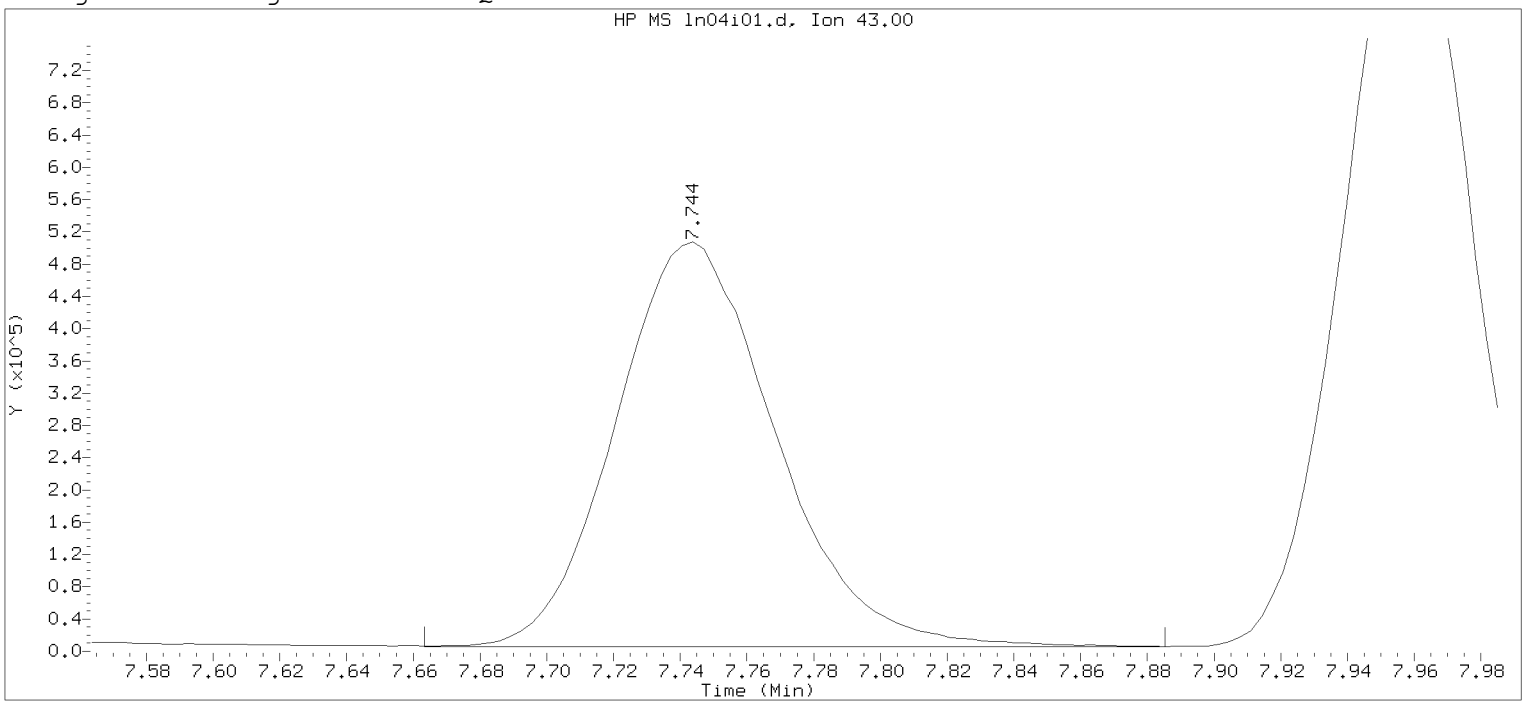
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

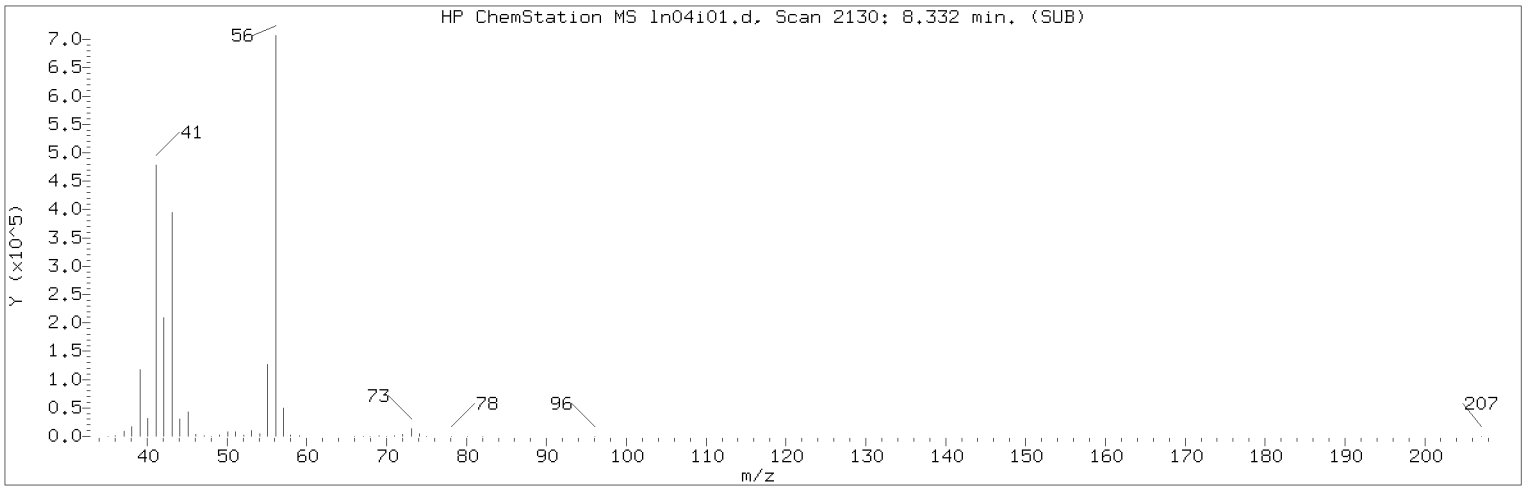
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

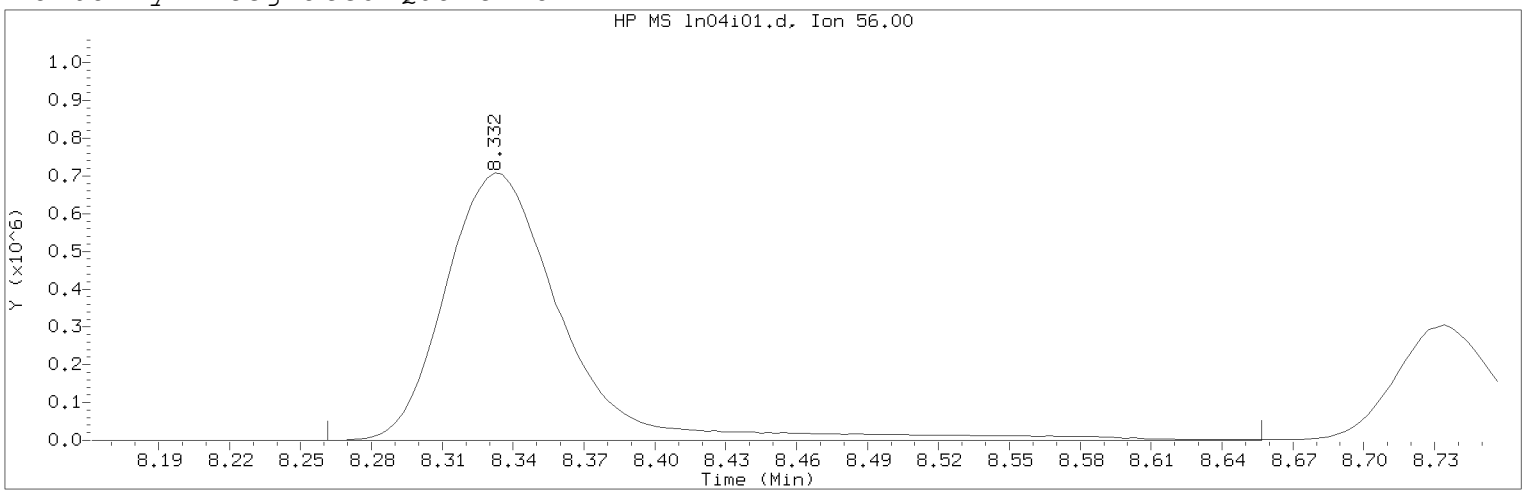
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1947
Retention Time (minutes): 7.744
Quant Ion : 43.00
Area : 1668813
On-column Amount (ng) : 288.4319
Integration start scan : 1921 Integration stop scan: 1990
Y at integration start : 5866 Y at integration end: 5866

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user Jennifer K. Howe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

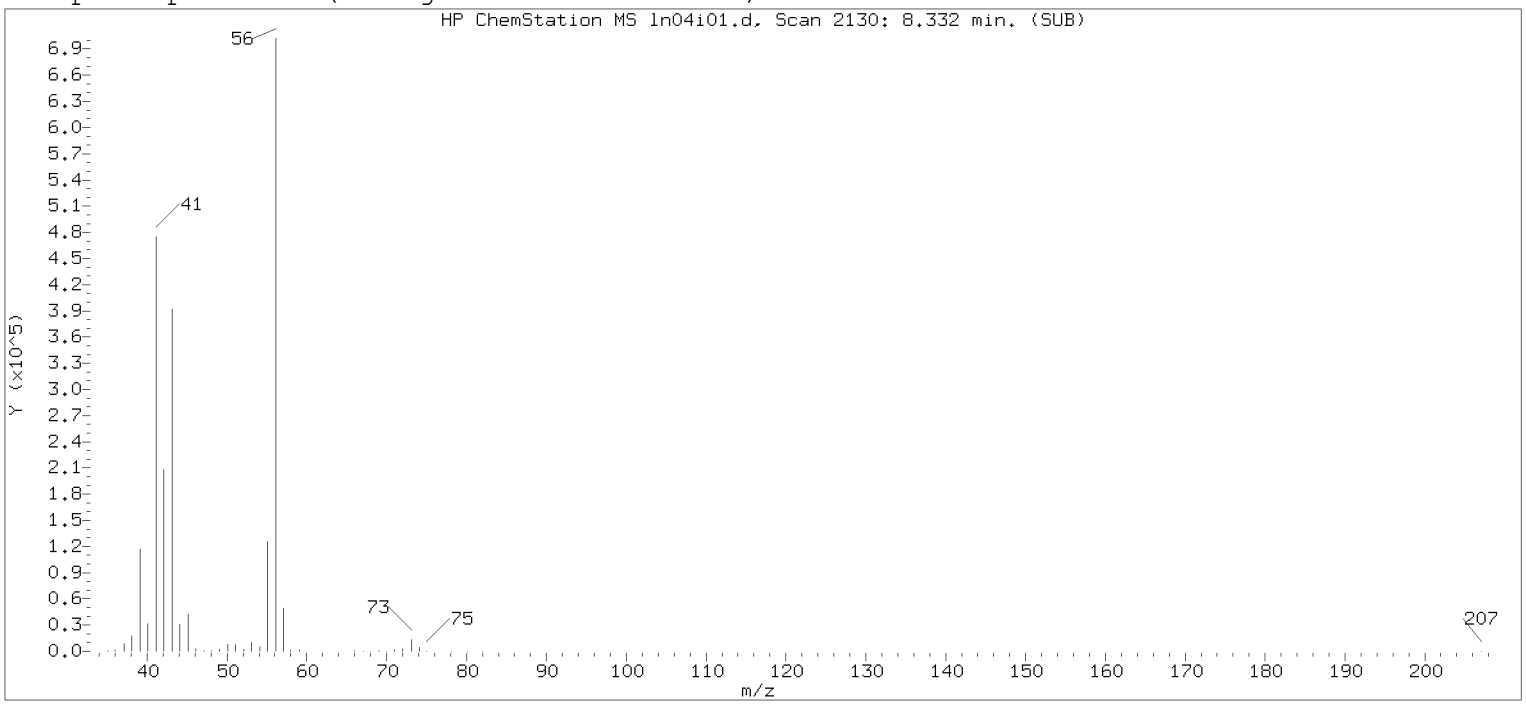
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area (flag) : 2465385M
On-Column Amount (ng) : 7947.0678
Integration start scan : 2107 Integration stop scan: 2230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

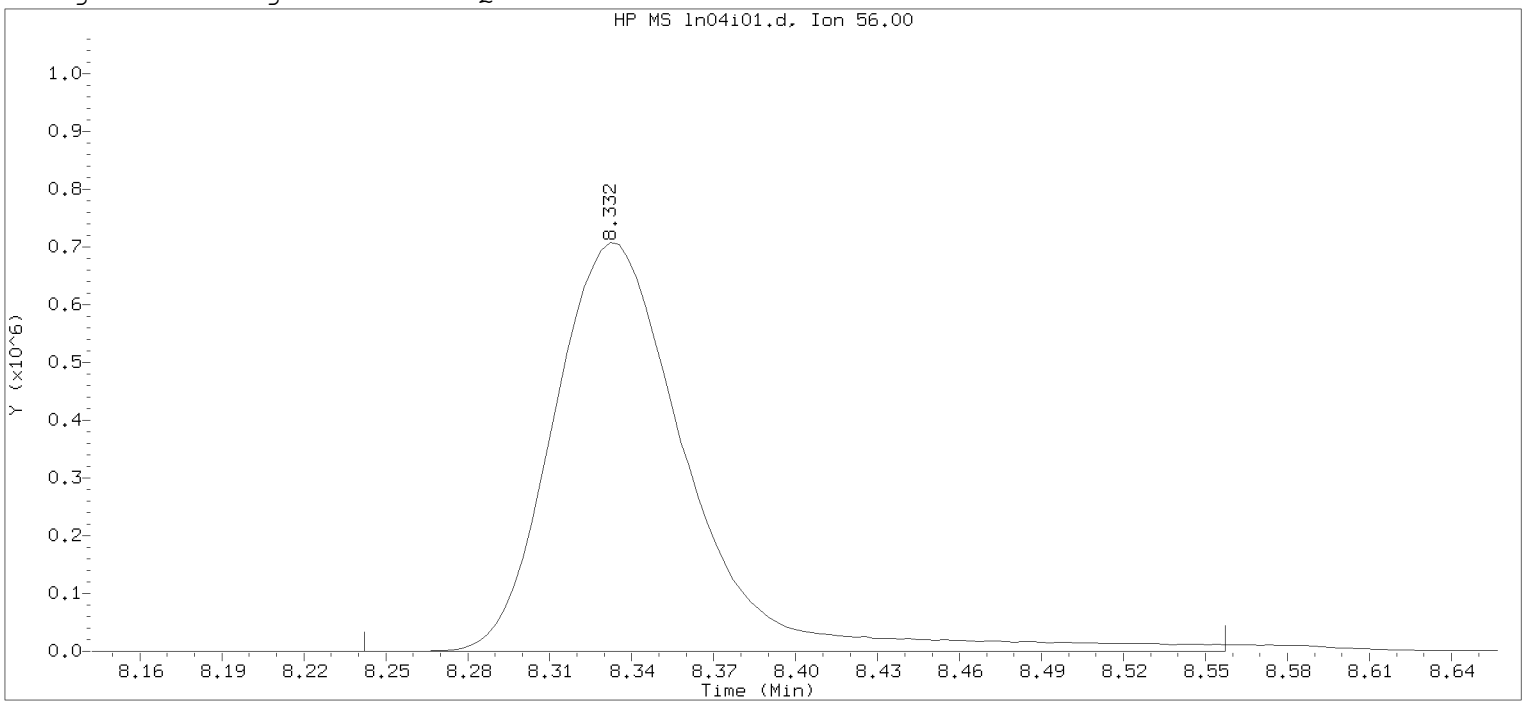
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

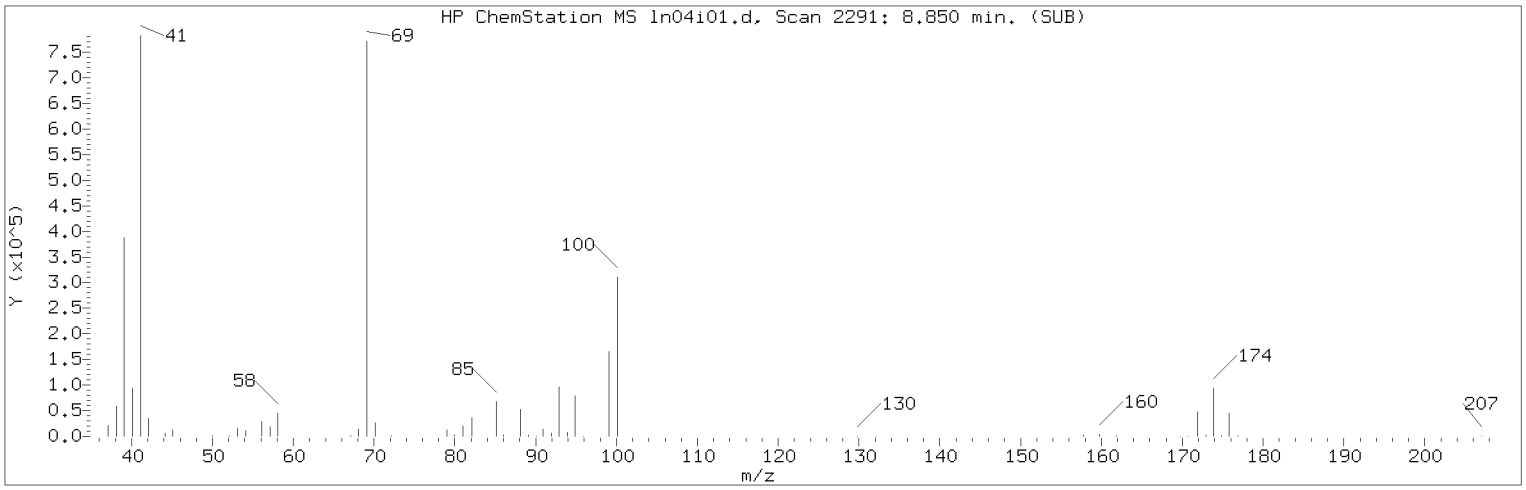
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

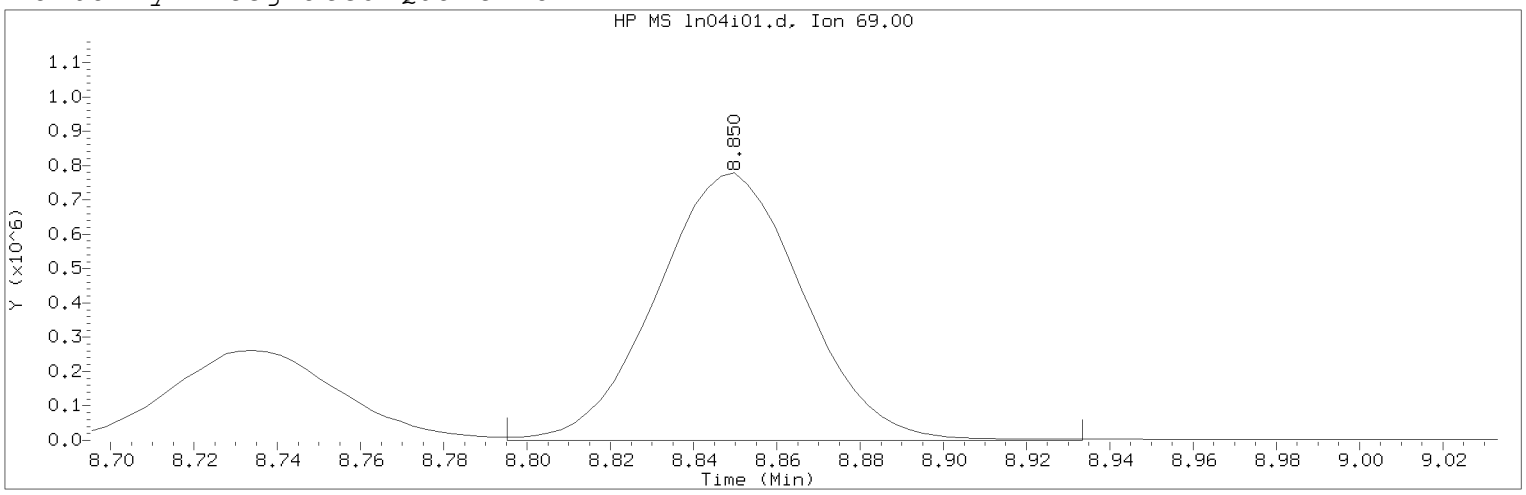
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area : 2429255
On-column Amount (ng) : 7682.9381
Integration start scan : 2101 Integration stop scan: 2199
Y at integration start : 176 Y at integration end: 176

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user Jennifer K. Howe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

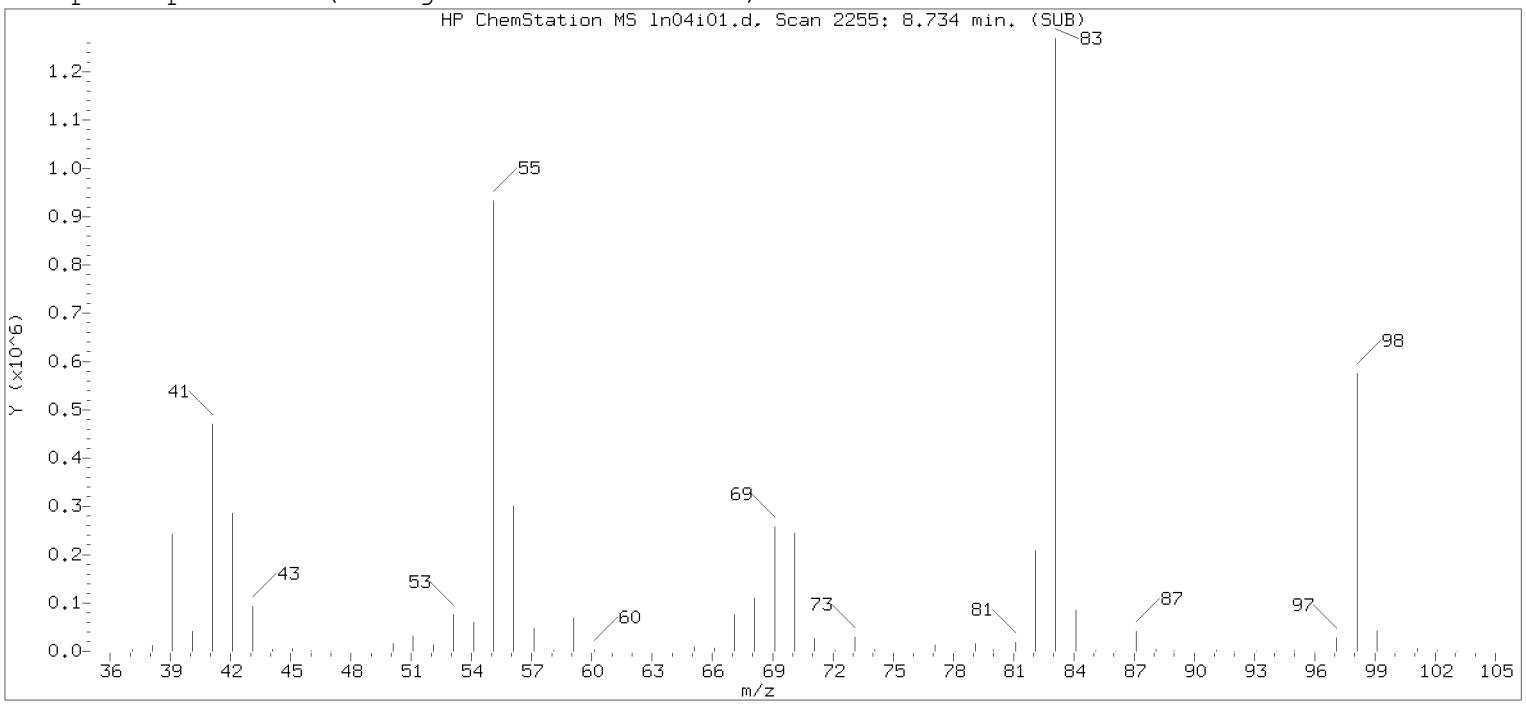
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2291
Retention Time (minutes): 8.850
Quant Ion : 69.00
Area (flag) : 1904896A
On-Column Amount (ng) : 340.2564
Integration start scan : 2273 Integration stop scan: 2316
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

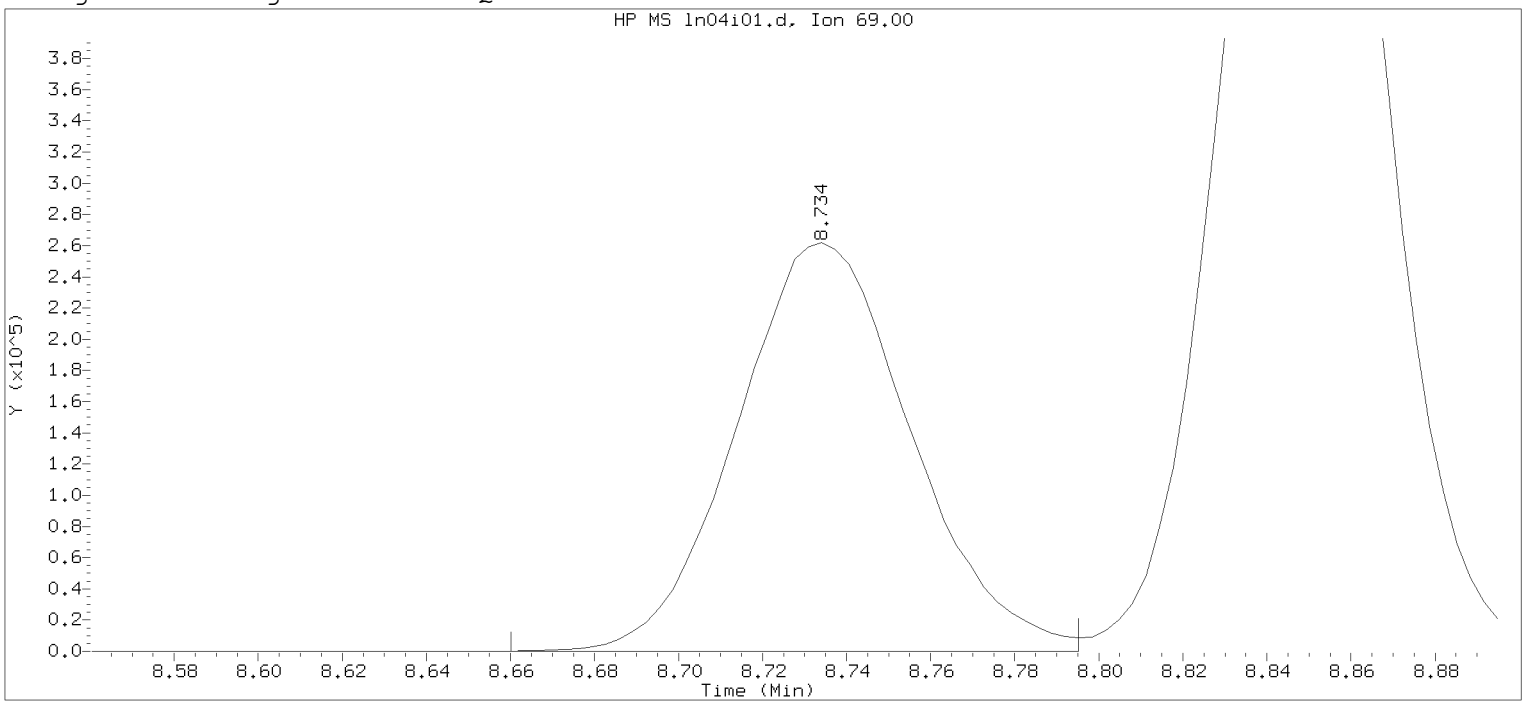
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

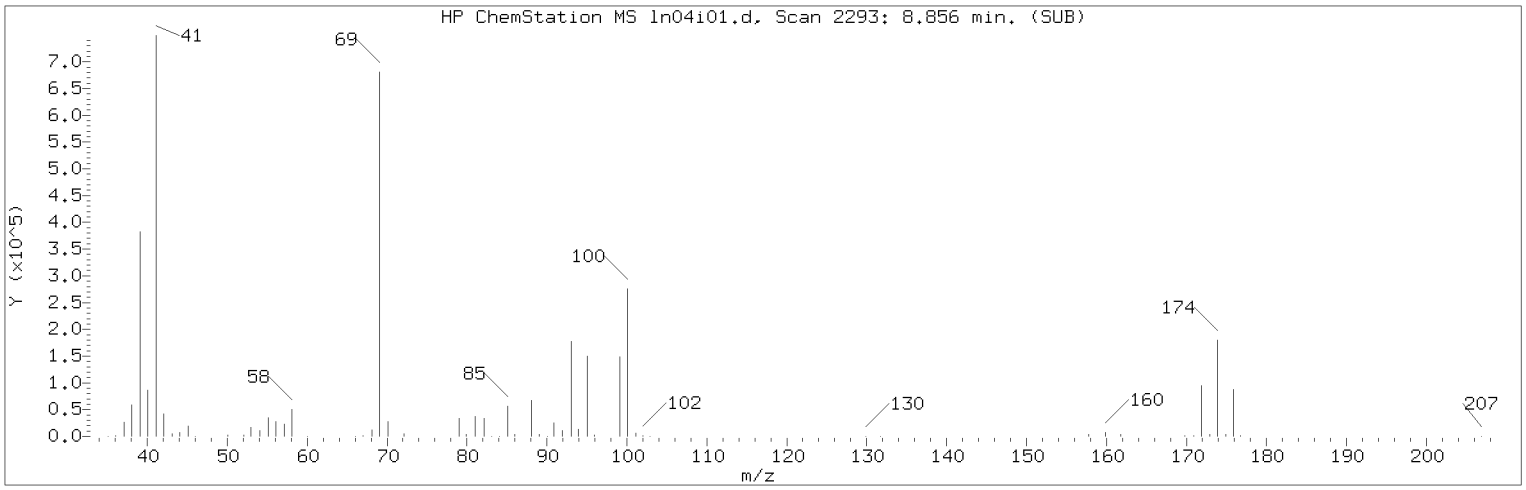
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

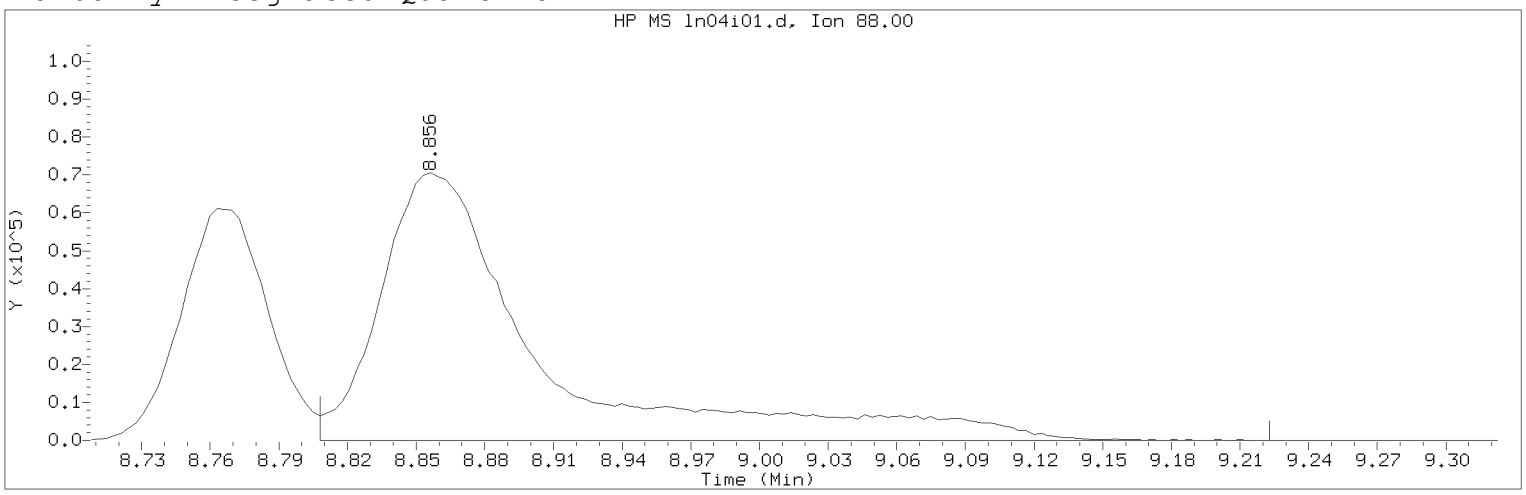
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 752058
On-column Amount (ng) : 311.1363
Integration start scan : 2231 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user Jennifer K. Howe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

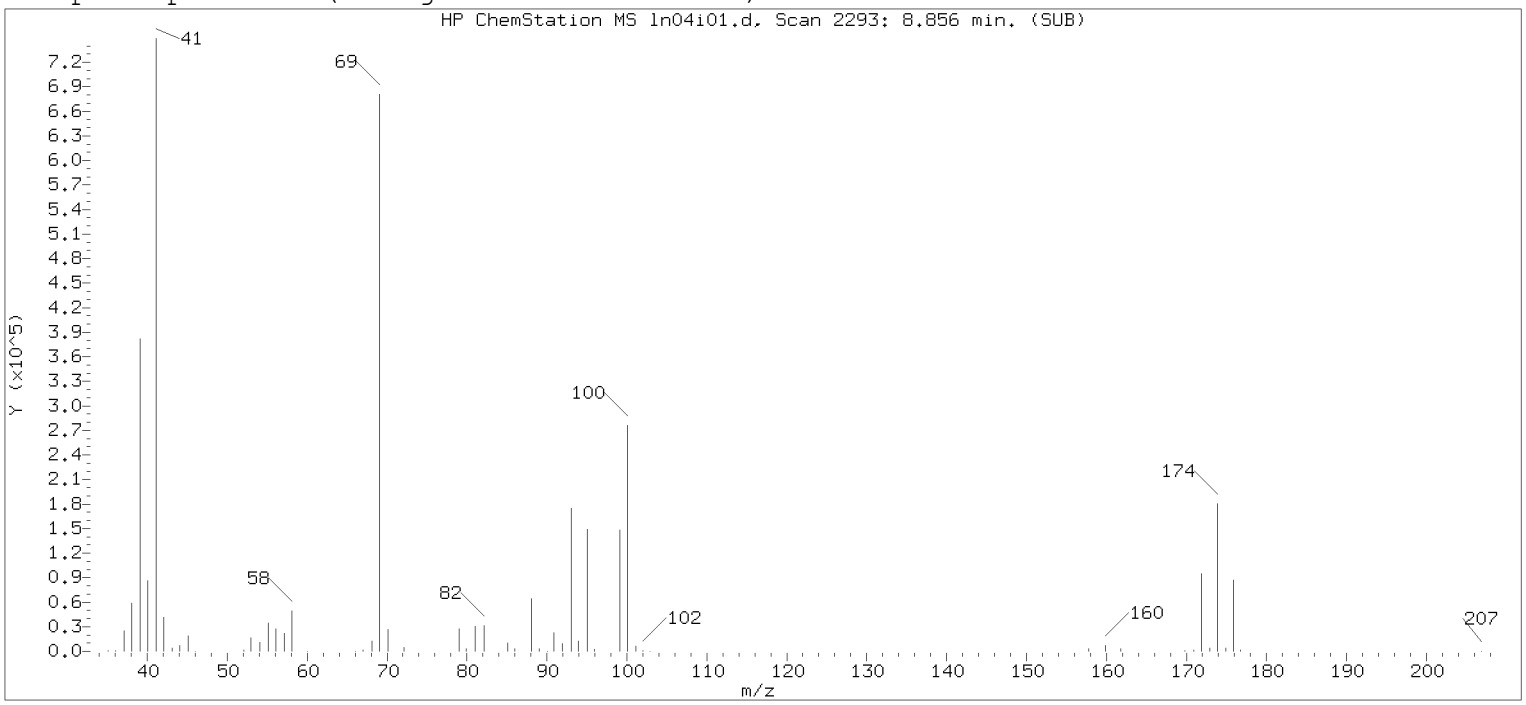
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 338379M
On-Column Amount (ng) : 3968.4208
Integration start scan : 2277 Integration stop scan: 2406
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

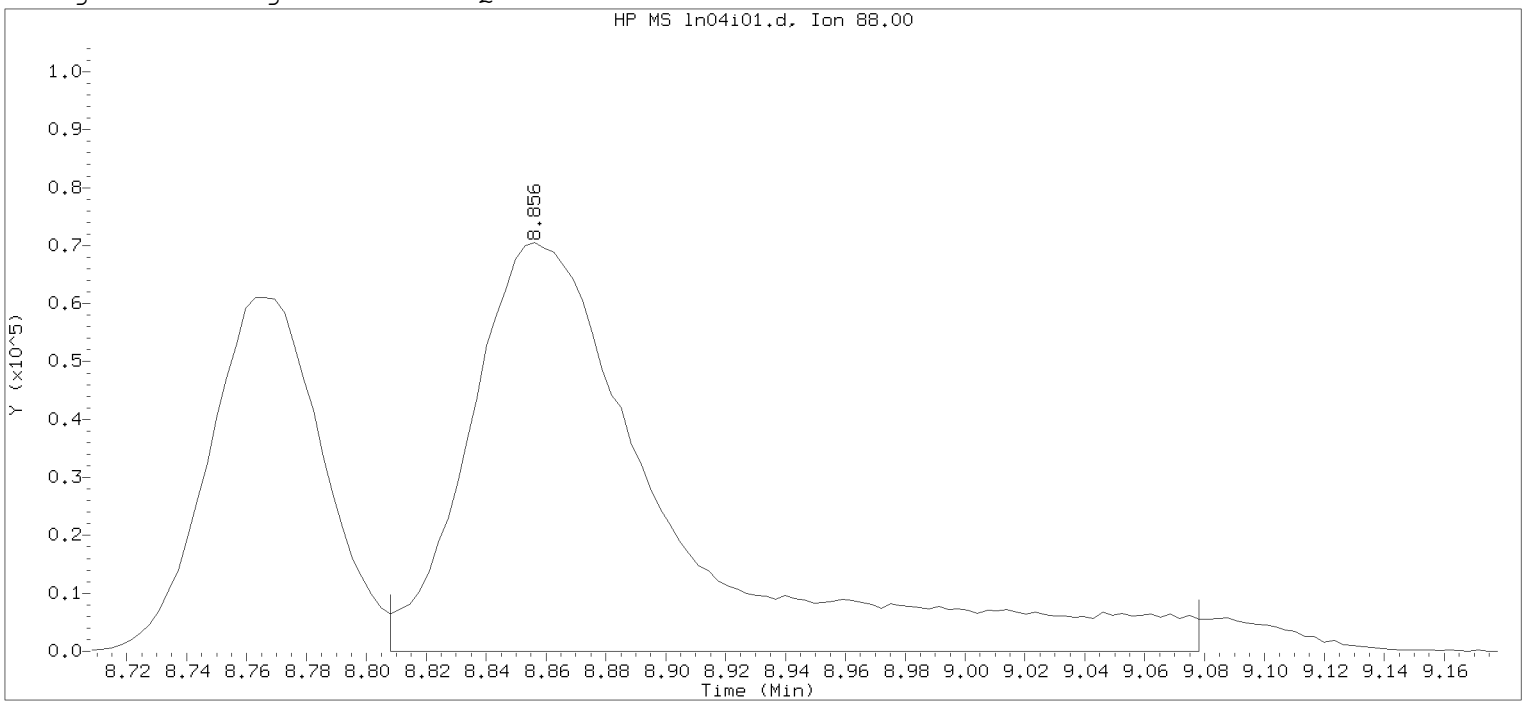
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

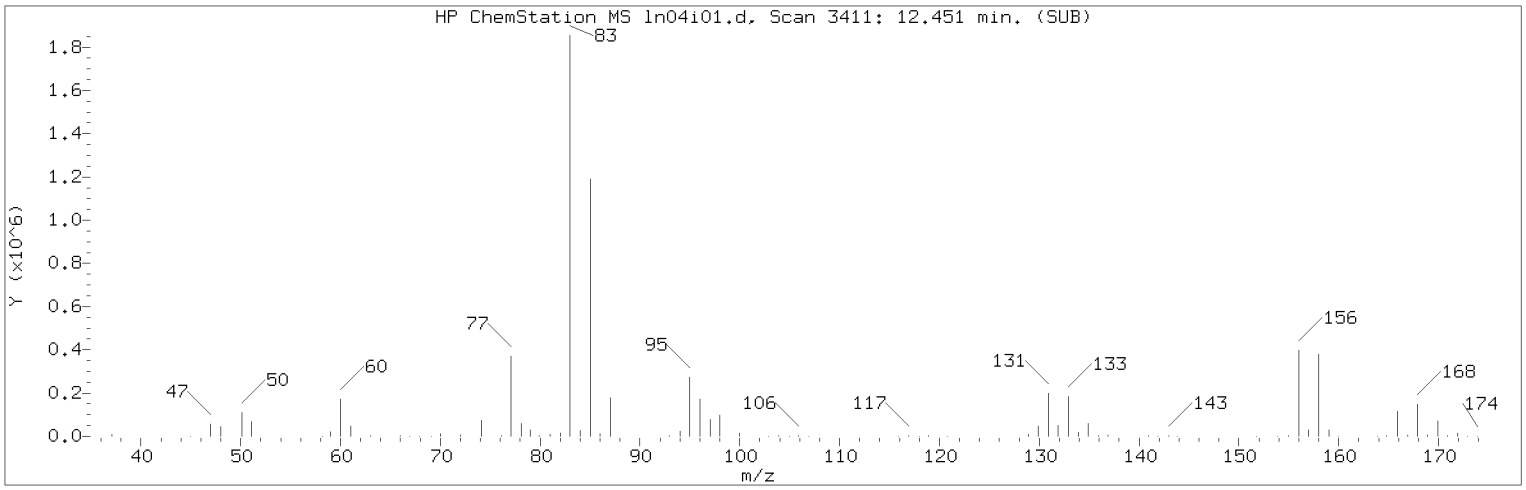
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

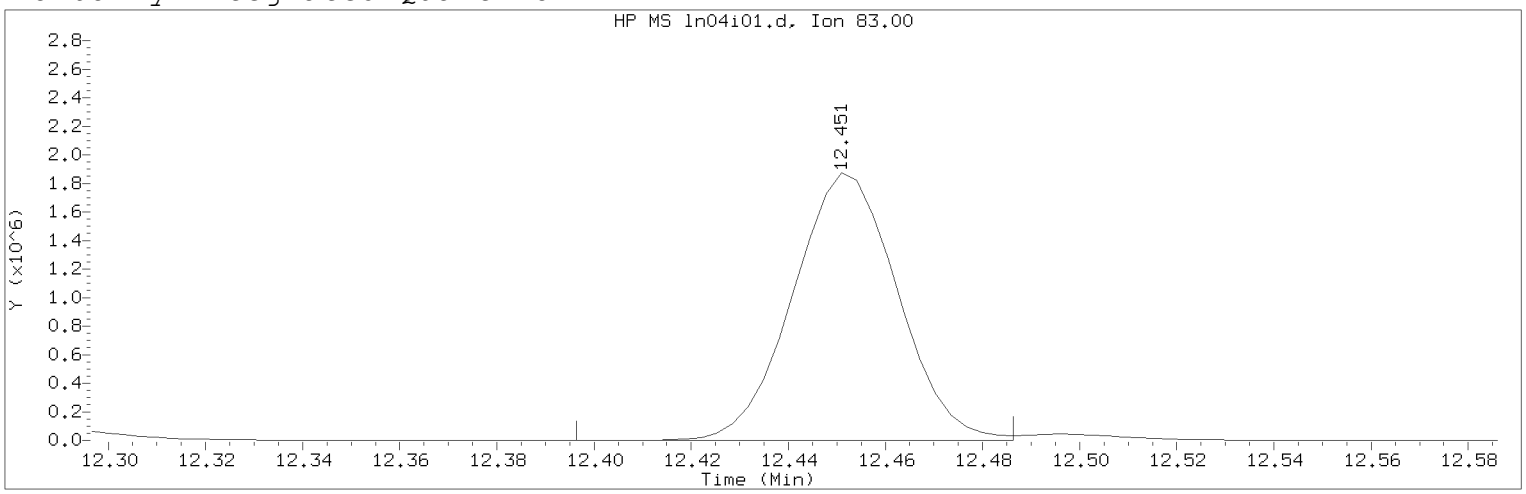
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area : 325164
On-column Amount (ng) : 3803.8575
Integration start scan : 2277 Integration stop scan: 2361
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user Jennifer K. Howe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

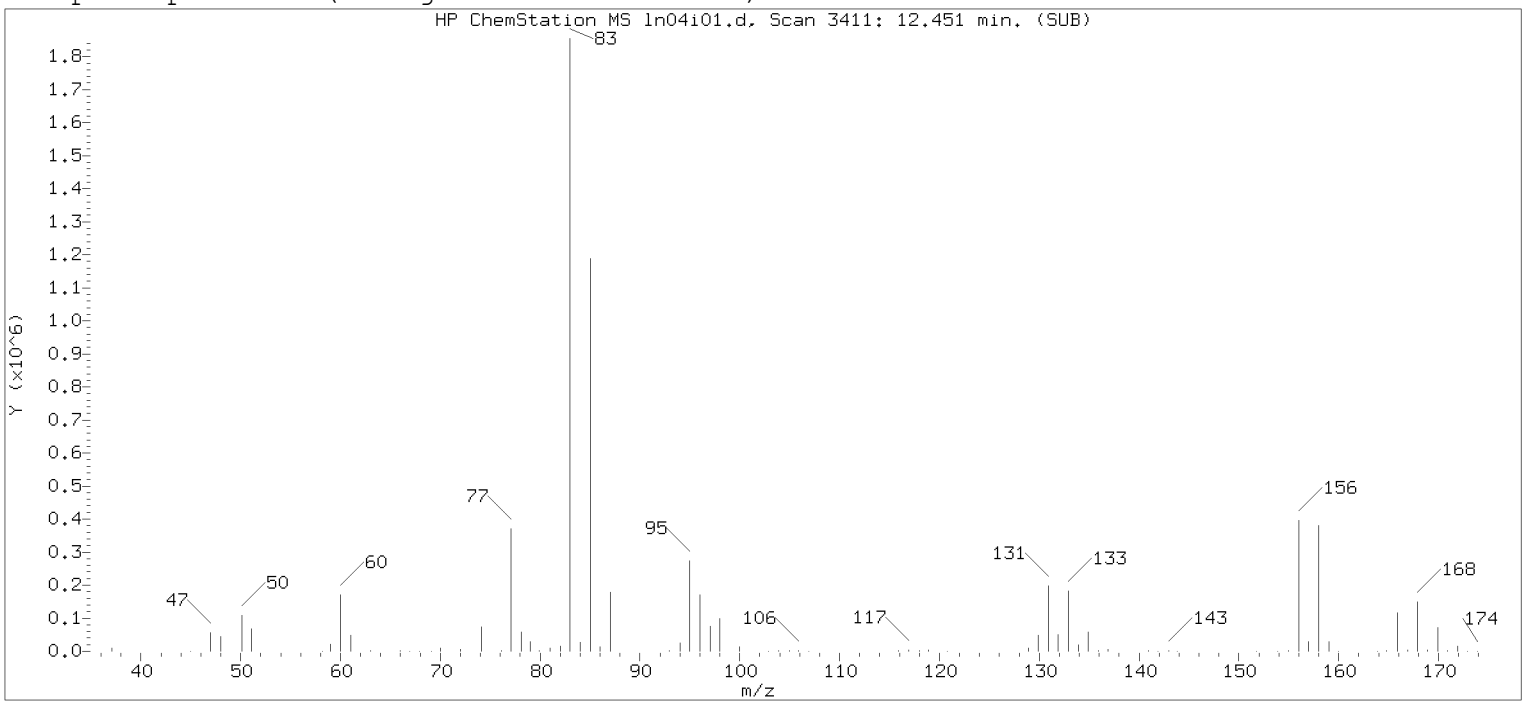
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 2800639M
On-Column Amount (ng) : 310.7054
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

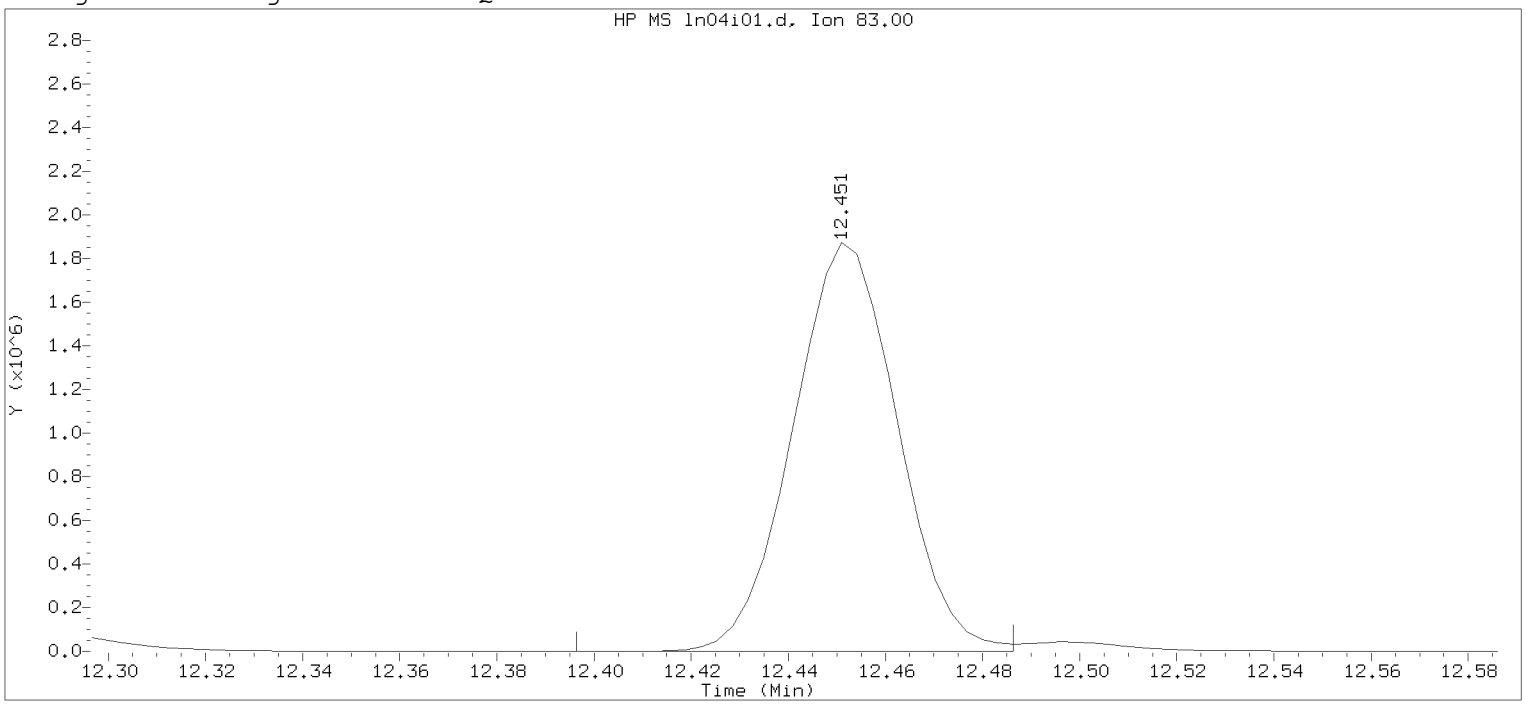
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

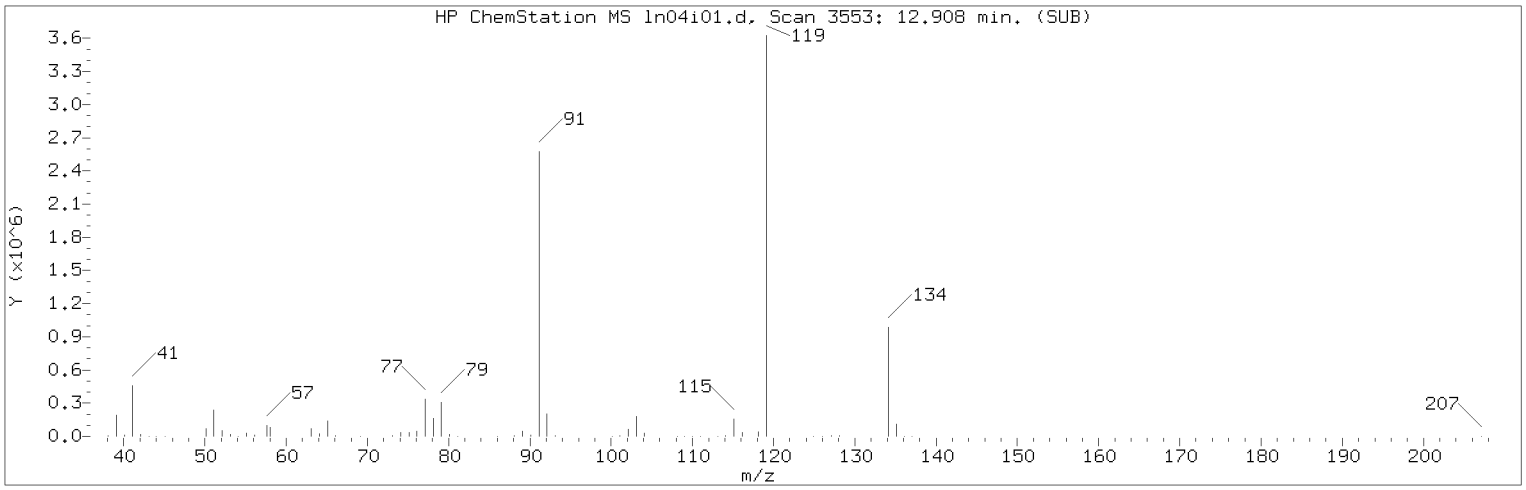
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

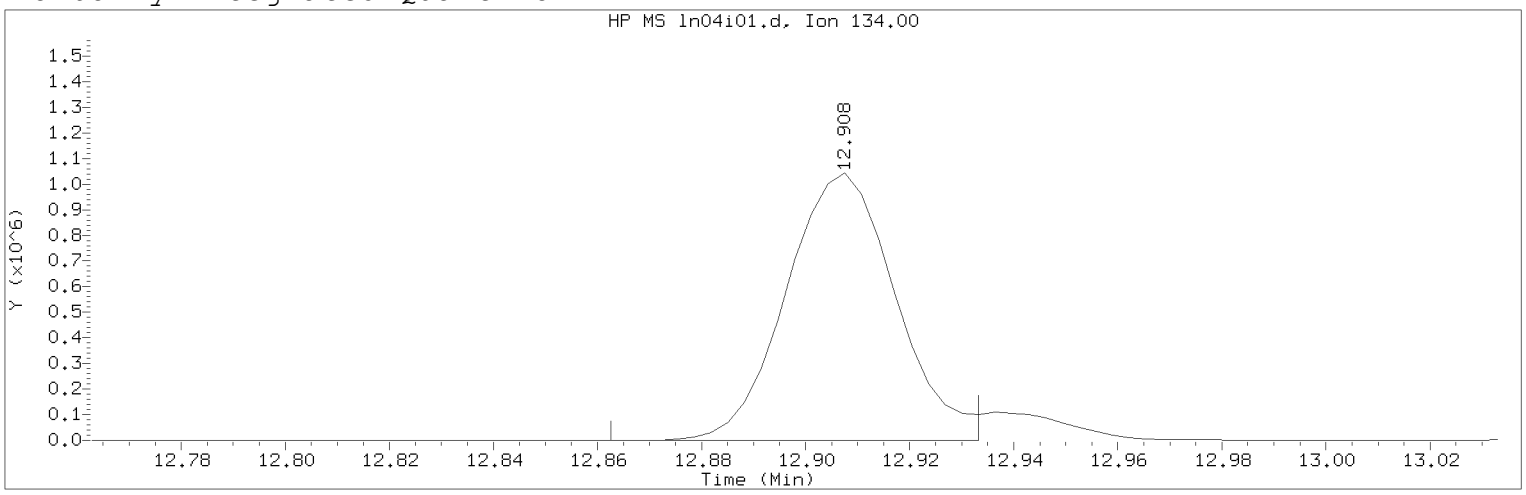
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 2797364
On-column Amount (ng) : 294.0638
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user Jennifer K. Howe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

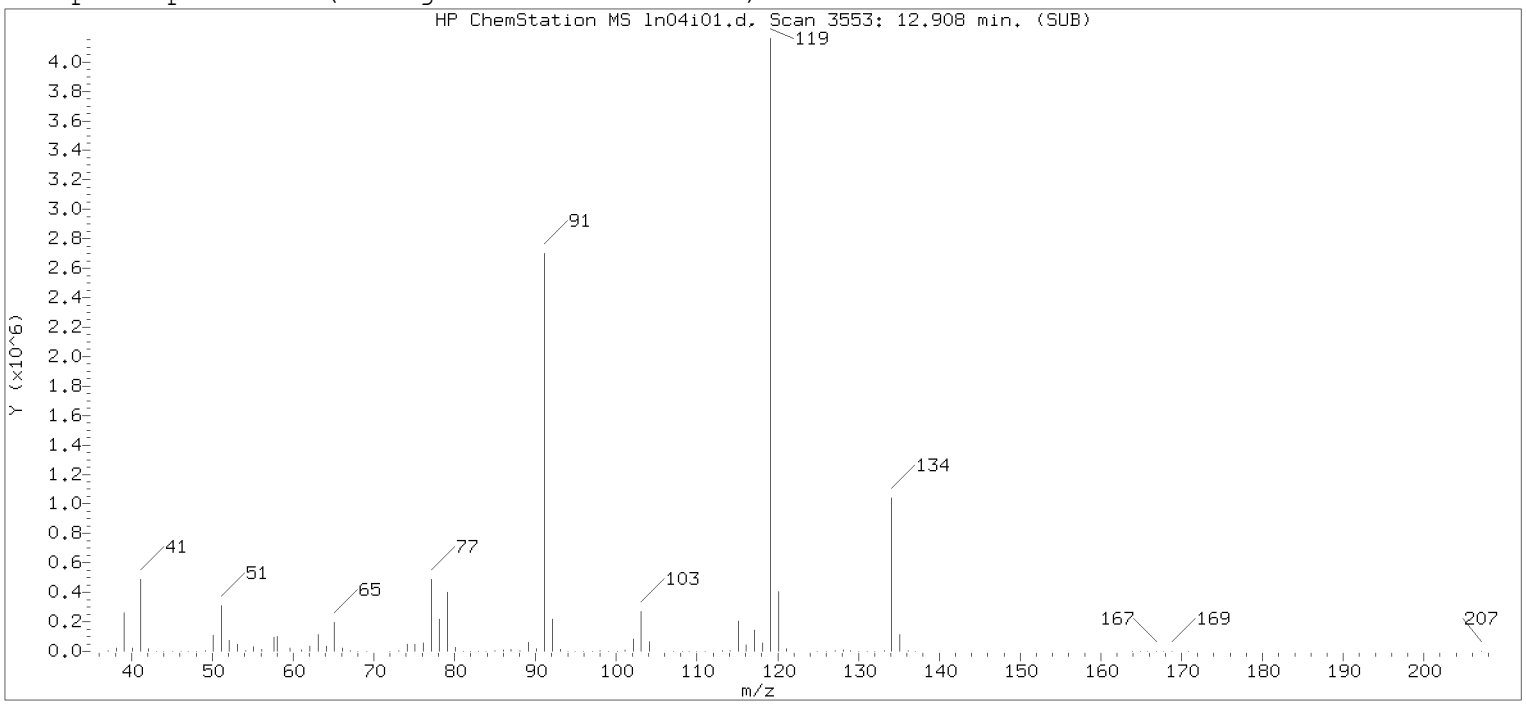
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area (flag) : 1524421M
On-Column Amount (ng) : 323.7167
Integration start scan : 3538 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

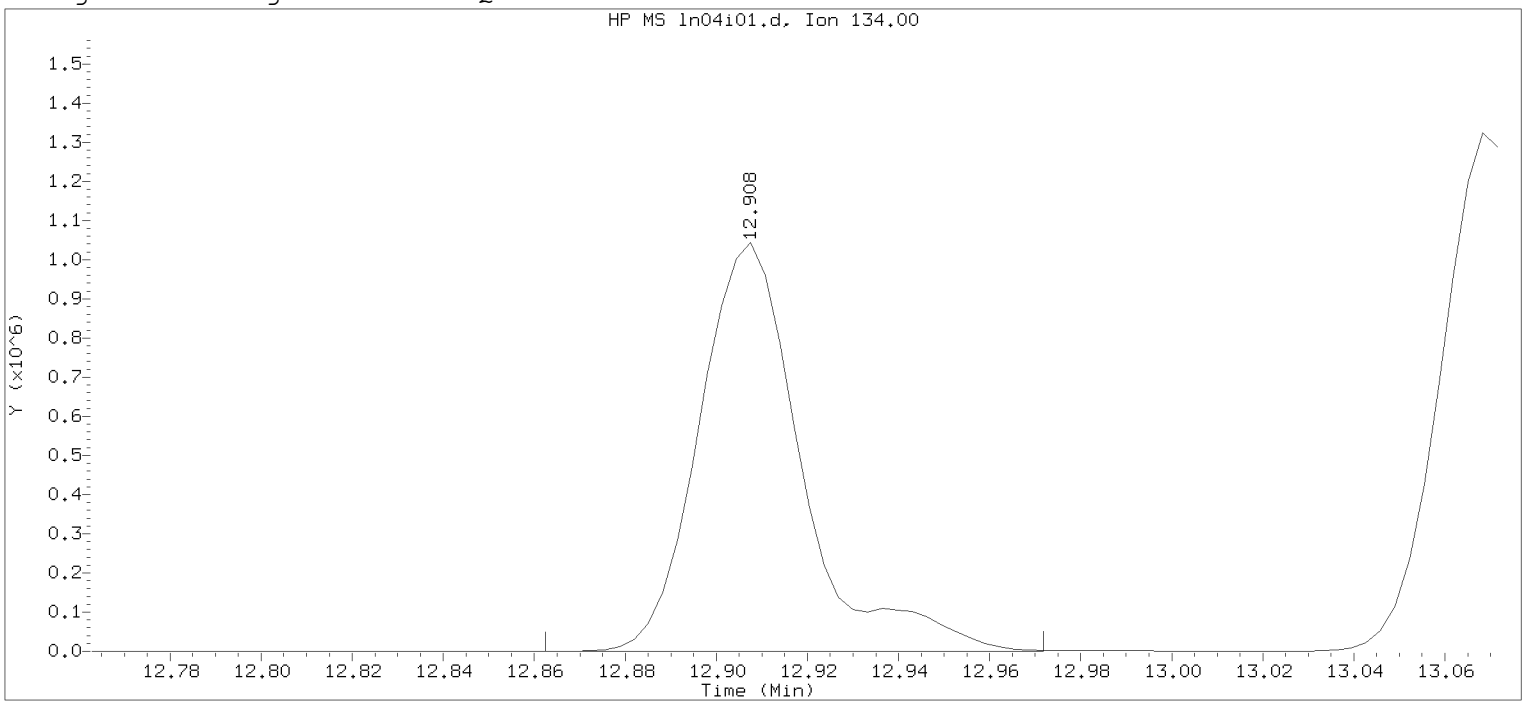
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



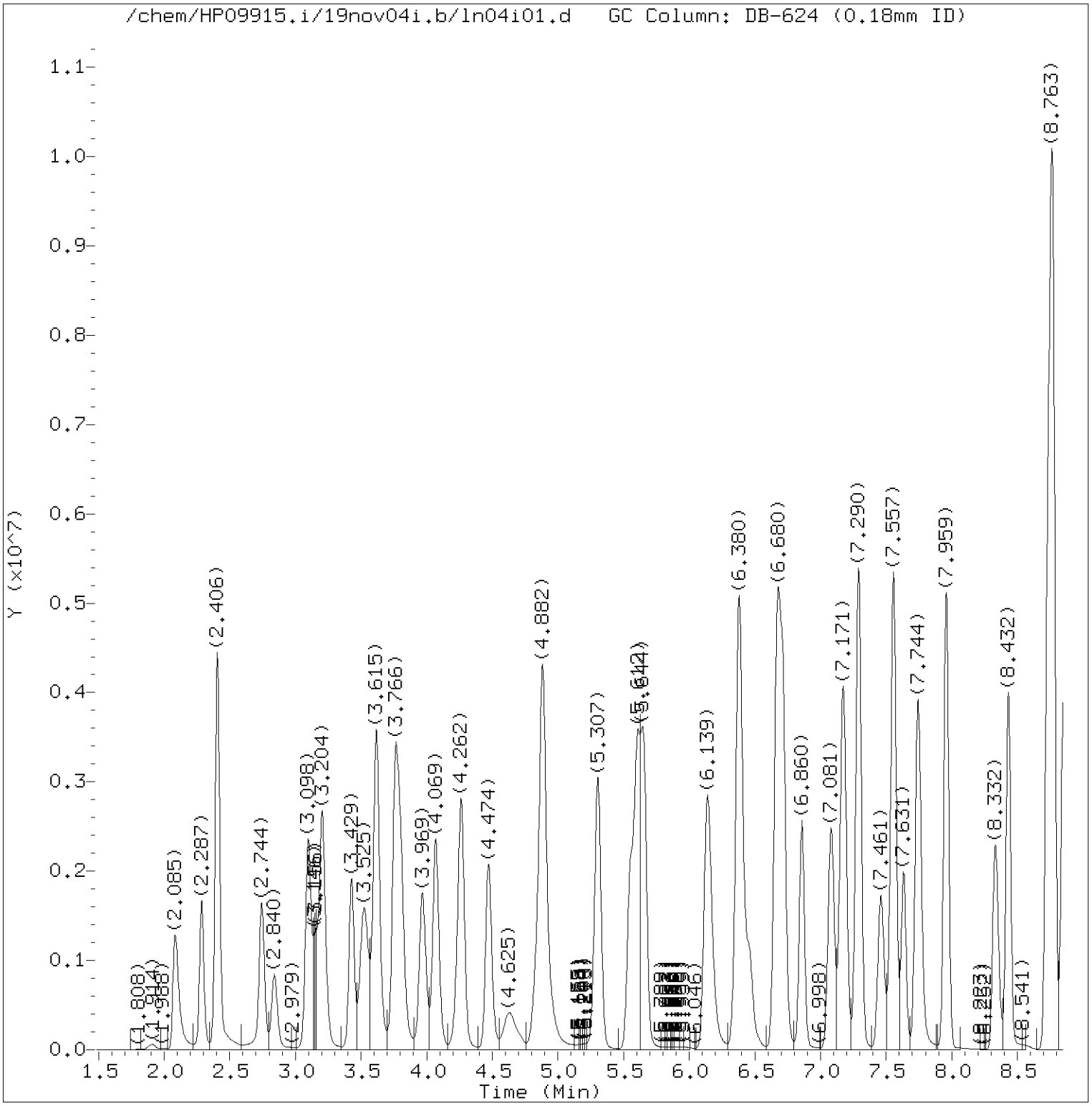
Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area : 1639624
On-column Amount (ng) : 313.1253
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user Jennifer K. Howe



Total Ion Chromatogram (TIC)

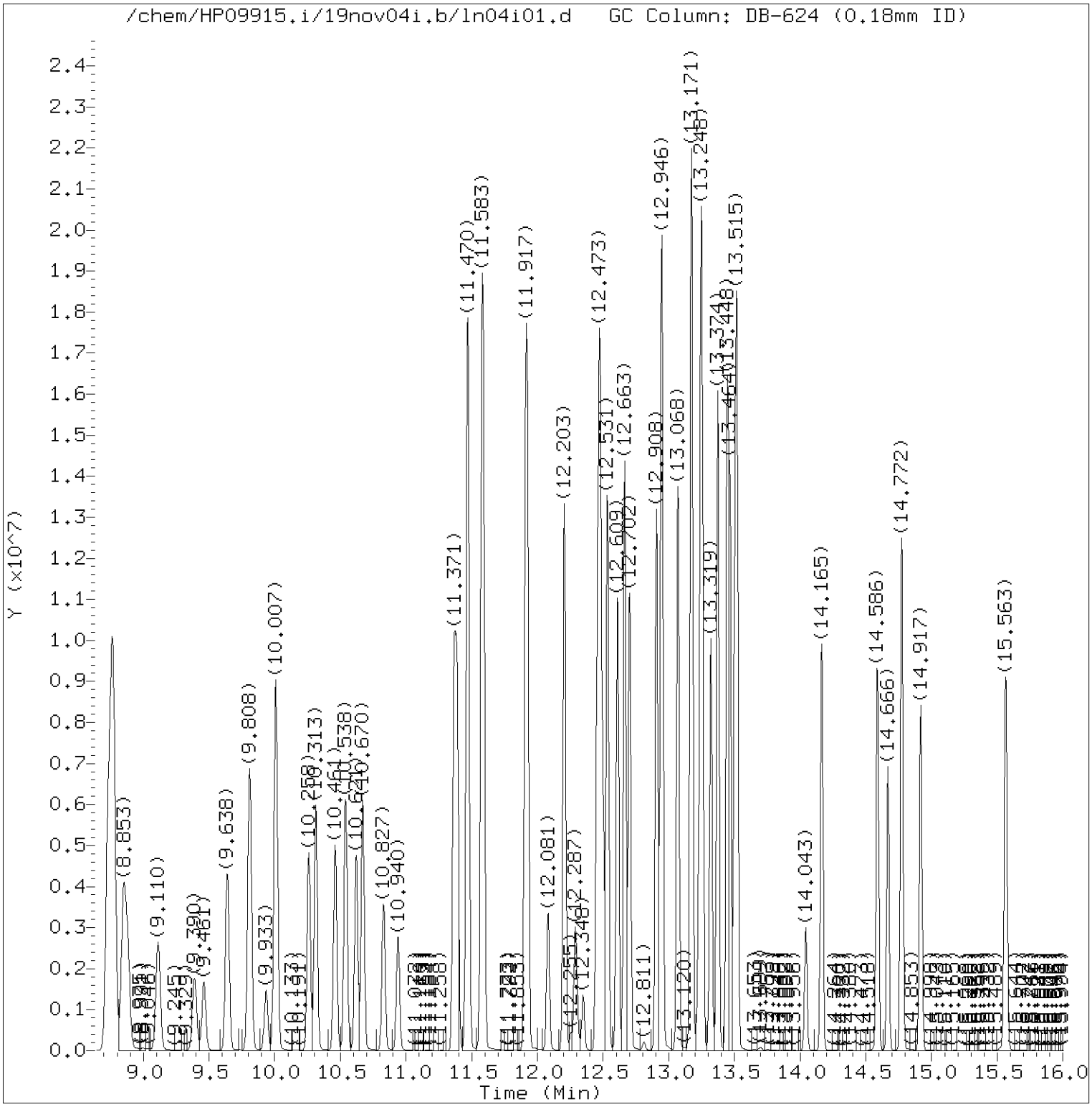
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.085	85	2719746M	347.943
4) Chloromethane	(2)	2.287	50	2403581	319.051
5) 1,3-Butadiene	(2)	2.406	39	1785787M	285.486
6) Vinyl Chloride	(2)	2.406	62	2412855	320.904
8) Bromomethane	(2)	2.744	94	1638575	304.015
9) Chloroethane	(2)	2.837	64	1253478	303.356
10) Dichlorofluoromethane	(2)	3.098	67	2978303M	300.258
12) Trichlorofluoromethane	(2)	3.152	101	2661050	328.734
11) n-Pentane	(2)	3.204	43	2816823	294.455
14) Ethyl ether	(2)	3.429	59	1721693	329.146
15) Freon 123a	(2)	3.525	67	1991616	305.852
16) Acrolein	(1)	3.615	56	5765354	3020.583
17) 1,1-Dichloroethene	(2)	3.760	96	1489890	313.570
17) 1,1-Dichloroethene	(2)	3.757	63	721205	302.767
19) Freon 113	(2)	3.792	101	1732433	319.583
18) Acetone	(1)	3.802	58	531845	621.534
22) Methyl Iodide	(2)	3.966	142	3047145	309.483
21) 2-Propanol	(1)	3.995	45	936919	1523.065
23) Carbon Disulfide	(2)	4.069	76	5676465	317.027
27) Methyl Acetate	(2)	4.239	43	1941315	317.230
25) Allyl Chloride	(2)	4.265	41	2748698	322.482
28) Methylene Chloride	(2)	4.474	84	1745840	308.716
29)*t-Butyl alcohol-d10	(1)	4.503	65	254406M	250.000
30) t-Butyl alcohol	(1)	4.638	59	1641037	1532.140
31) Acrylonitrile	(2)	4.827	53	1039800	315.820
32) trans-1,2-Dichloroethene	(2)	4.885	96	1713357	311.714
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	5505439	305.143
34) n-Hexane	(2)	5.307	57	2863189M	334.811
36) 1,1-Dichloroethane	(2)	5.548	63	3007196	313.618
38) di-Isopropyl ether	(2)	5.609	45	5739955	310.377
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	2776921	322.788
40) Ethyl t-butyl ether	(2)	6.139	59	5425034	302.275
43) 1,2-Dichloroethene (Total)	(2)		96	3646040	624.977
44) 2-Butanone	(2)	6.364	43	2642793	625.317
42) cis-1,2-Dichloroethene	(2)	6.380	96	1932683	313.263
45) 2,2-Dichloropropane	(2)	6.397	77	2377411	318.945
47) Propionitrile	(1)	6.458	54	2126389	1593.336
48) Methacrylonitrile	(2)	6.670	67	2858148	804.768

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.708	128	1075154	328.655
50) Tetrahydrofuran	(1)	6.718	71	758236	628.991
51) Chloroform	(2)	6.860	83	2916299	317.988
52)$Dibromofluoromethane	(2)	7.075	113	276322	50.424
52)$Dibromofluoromethane	(2)	7.075	111	279197	49.969
53) 1,1,1-Trichloroethane	(2)	7.081	97	2560601	327.130
54) Cyclohexane	(2)	7.171	56	3429211	327.611
54) Cyclohexane	(2)	7.171	84	2984908	328.282
54) Cyclohexane	(2)	7.171	69	1068201	329.937
56) Carbon Tetrachloride	(2)	7.287	117	2252864	339.350
55) 1,1-Dichloropropene	(2)	7.294	75	2434619	321.125
58) Isobutyl Alcohol	(1)	7.461	41	1382486	3835.573
57)$1,2-Dichloroethane-d4	(2)	7.528	102	68480	49.033
57)$1,2-Dichloroethane-d4	(2)	7.532	65	307306	49.375
57)$1,2-Dichloroethane-d4	(2)	7.528	104	44002	49.326
60) Benzene	(2)	7.557	78	7094466	311.169
61) 1,2-Dichloroethane	(2)	7.634	62	2222342	303.049
61) 1,2-Dichloroethane	(2)	7.634	98	228988	315.535
65) t-Amyl methyl ether	(2)	7.744	73	5421278	300.945
67) n-Heptane	(2)	7.959	43	2592531MA	324.518
66)*Fluorobenzene	(2)	7.959	96	1120873	50.000
69) n-Butanol	(1)	8.332	56	2465385M	7947.068
71) Trichloroethene	(2)	8.432	95	1841720	320.821
72) Methylcyclohexane	(2)	8.734	83	3568410	335.054
72) Methylcyclohexane	(2)	8.734	98	1632993	338.844
73) 1,2-Dichloropropane	(2)	8.769	63	1825943	315.397
76) Methyl Methacrylate	(2)	8.850	69	1904896A	340.256
75) 1,4-Dioxane	(1)	8.856	88	338379M	3968.421
74) Dibromomethane	(2)	8.879	93	1210939	323.274
78) Bromodichloromethane	(2)	9.113	83	2314651	344.351
79) 2-Nitropropane	(2)	9.390	41	1438925	706.755
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	926413	372.584
81) cis-1,3-Dichloropropene	(2)	9.638	75	3074664	344.402
82) 4-Methyl-2-pentanone	(2)	9.808	43	5422938	607.899
83)$Toluene-d8	(3)	9.933	98	1156351	49.563
83)$Toluene-d8	(3)	9.933	100	751534	49.726
88) Toluene	(3)	10.007	92	4532879	309.894
90) 1,3-Dichloropropene (total)	(3)		100	5974636	693.659

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	2899972	349.257
91) Ethyl Methacrylate	(3)	10.313	69	3356305	332.603
92) 1,1,2-Trichloroethane	(3)	10.461	97	1768710	318.935
93) Tetrachloroethene	(3)	10.541	166	1990565	321.327
94) 1,3-Dichloropropane	(3)	10.621	76	3006585	317.532
96) 2-Hexanone	(3)	10.670	43	3998423	593.616
97) Dibromochloromethane	(3)	10.827	129	2037523	358.670
99) 1,2-Dibromoethane	(3)	10.940	107	1987783	330.088
100)*Chlorobenzene-d5	(3)	11.361	117	891668	50.000
101) 1-Chlorohexane	(3)	11.364	91	2458057	312.814
102) Chlorobenzene	(3)	11.387	112	5140609	310.783
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	1789998	328.446
104) Ethylbenzene	(3)	11.470	91	8606821	307.854
106) m+p-Xylene	(3)	11.583	106	6690837	608.359
108) Xylene (Total)	(3)		106	9979970	911.130
107) o-Xylene	(3)	11.908	106	3289133	302.771
109) Styrene	(3)	11.924	104	5647939	314.619
110) Bromoform	(3)	12.081	173	1534520	361.500
111) Isopropylbenzene	(3)	12.203	105	8466138	310.714
112) Cyclohexanone	(1)	12.287	55	1351186	4046.080
114)$4-Bromofluorobenzene	(3)	12.348	95	440049	49.810
114)$4-Bromofluorobenzene	(3)	12.348	174	362553	49.502
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	2800639M	310.705
115) Bromobenzene	(4)	12.467	156	2234066	311.517
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	2150976	773.637
117) 1,2,3-Trichloropropane	(4)	12.499	110	866230	313.172
119) n-Propylbenzene	(4)	12.531	91	9654812	308.142
120) 2-Chlorotoluene	(4)	12.609	126	2098494	315.266
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	7238022	317.873
121) 4-Chlorotoluene	(4)	12.702	126	2155793	311.148
124) tert-Butylbenzene	(4)	12.908	134	1524421M	323.717
125) Pentachloroethane	(4)	12.940	167	1461833	360.511
126) 1,2,4-Trimethylbenzene	(4)	12.949	105	7469187	311.236
127) sec-Butylbenzene	(4)	13.068	105	8682126	308.971
129) 1,3-Dichlorobenzene	(4)	13.168	146	3858953	292.822
130) p-Isopropyltoluene	(4)	13.174	119	7289488	299.854
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	477171	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	4013510	293.777

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

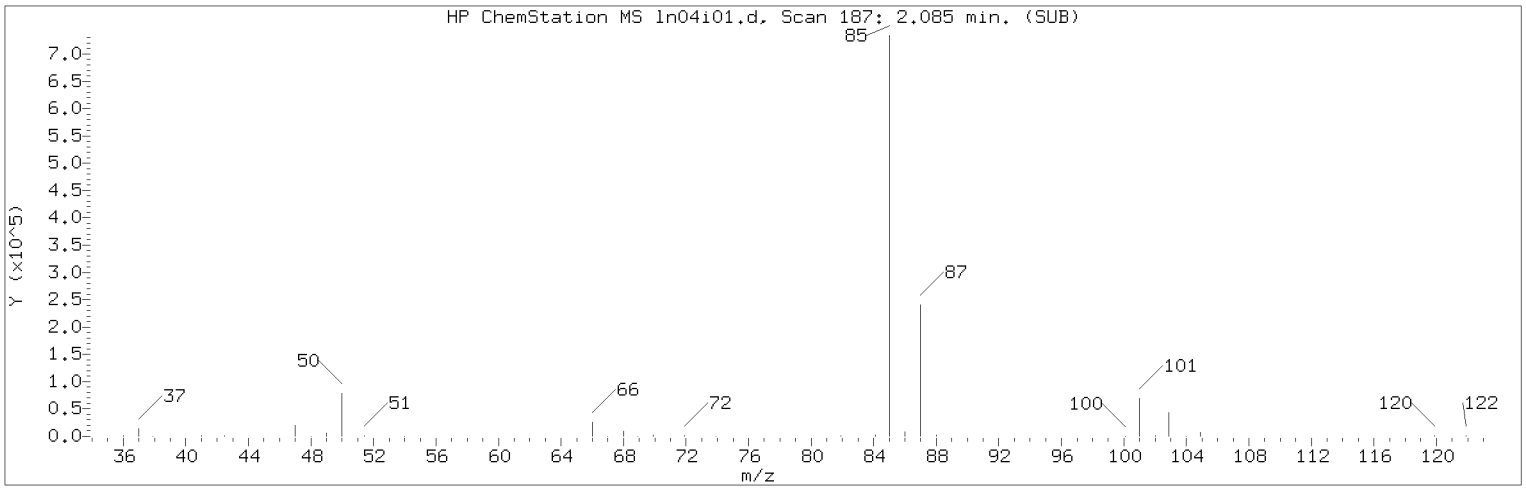
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

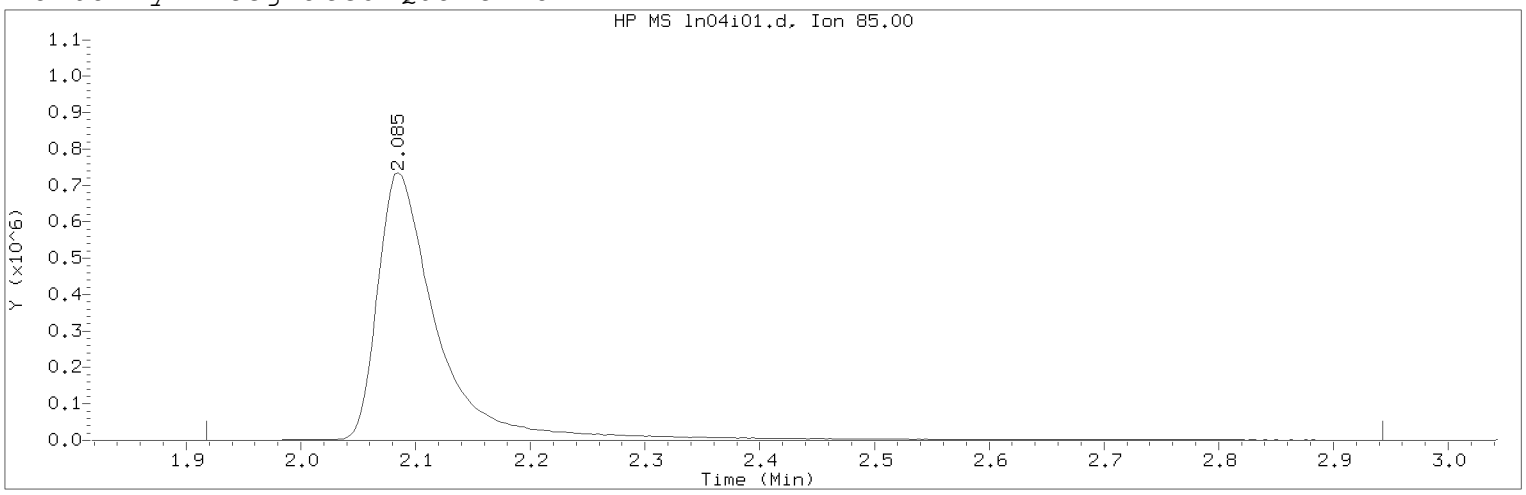
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	7915203	311.364
135) Benzyl Chloride	(4)	13.319	91	6484944	336.931
136) 1,3-Diethylbenzene	(4)	13.374	119	4897725	309.573
141) Diethylbenzene (total)	(4)		100	13982971	913.975
137) 1,4-Diethylbenzene	(4)	13.444	119	5013123	299.077
139) n-Butylbenzene	(4)	13.467	92	3608595	290.316
138) 1,2-Dichlorobenzene	(4)	13.502	146	3859125	296.761
140) 1,2-Diethylbenzene	(4)	13.518	119	4072123	305.325
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	669008	339.050
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	2855960	285.855
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	2681523	276.030
147) Hexachlorobutadiene	(4)	14.670	225	1157297	252.311
148) Naphthalene	(4)	14.772	128	9186333	294.145
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	2488608	263.270
150) 2-Methylnaphthalene	(4)	15.563	142	4666682	242.655

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

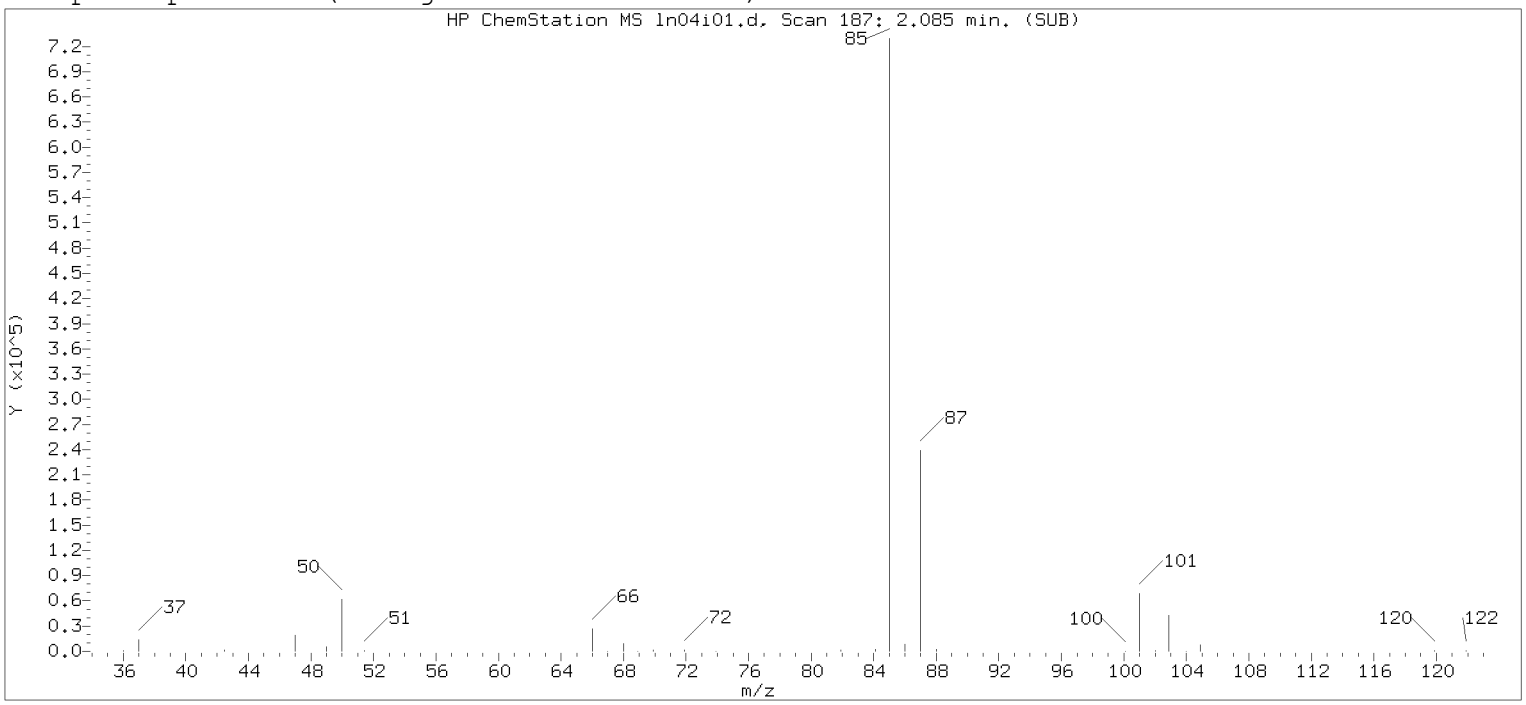
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area (flag) : 2719746M
On-Column Amount (ng) : 347.9426
Integration start scan : 134 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

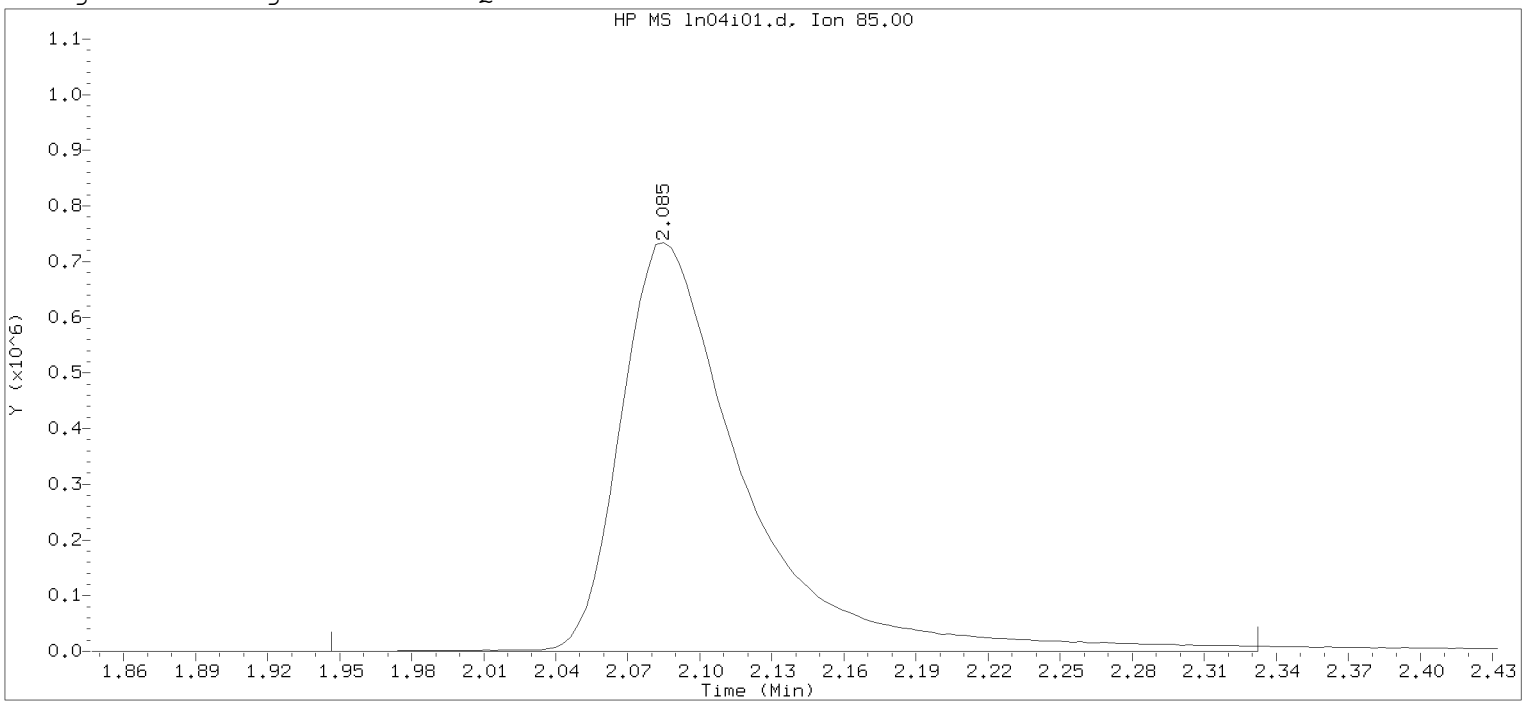
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

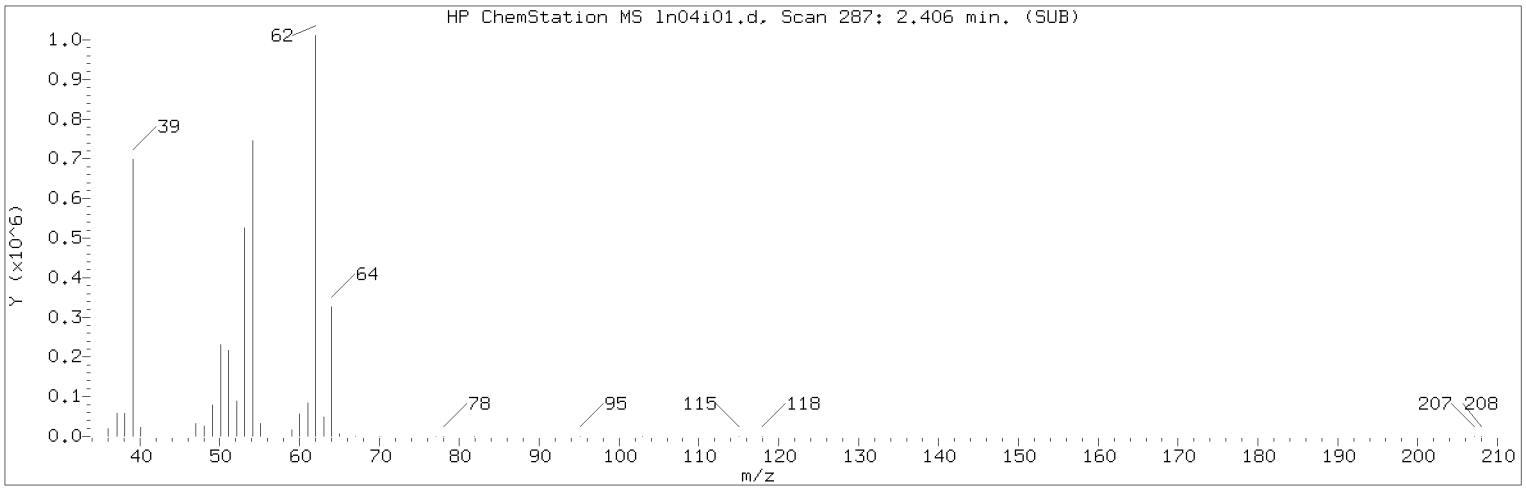
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

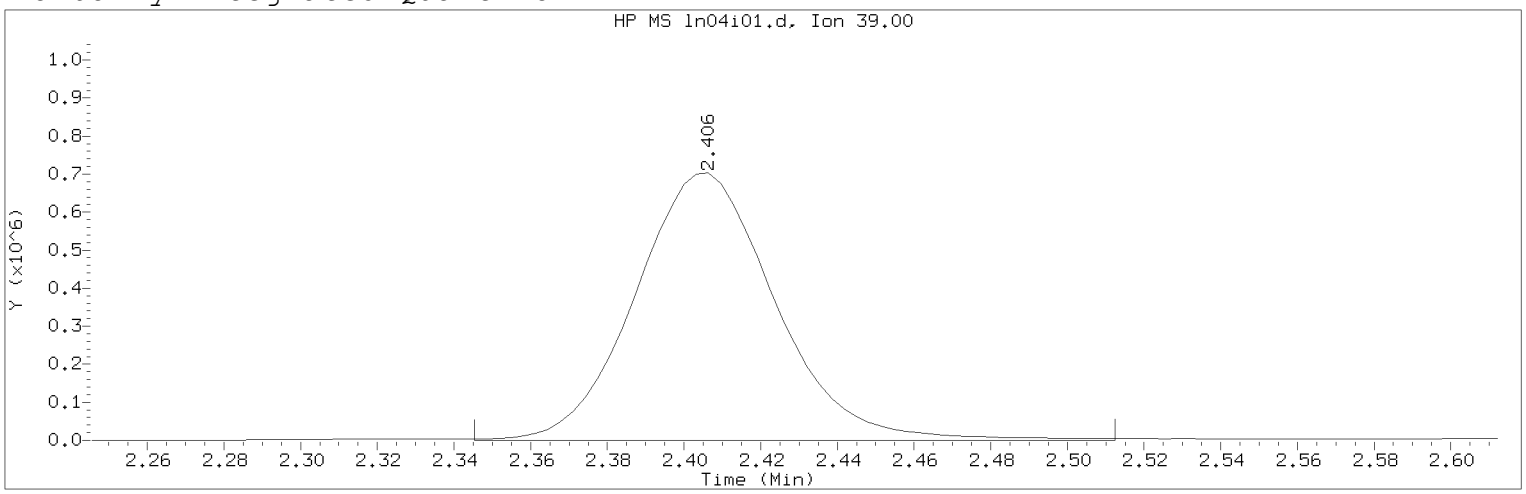
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area : 2624212
On-column Amount (ng) : 308.6520
Integration start scan : 143 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

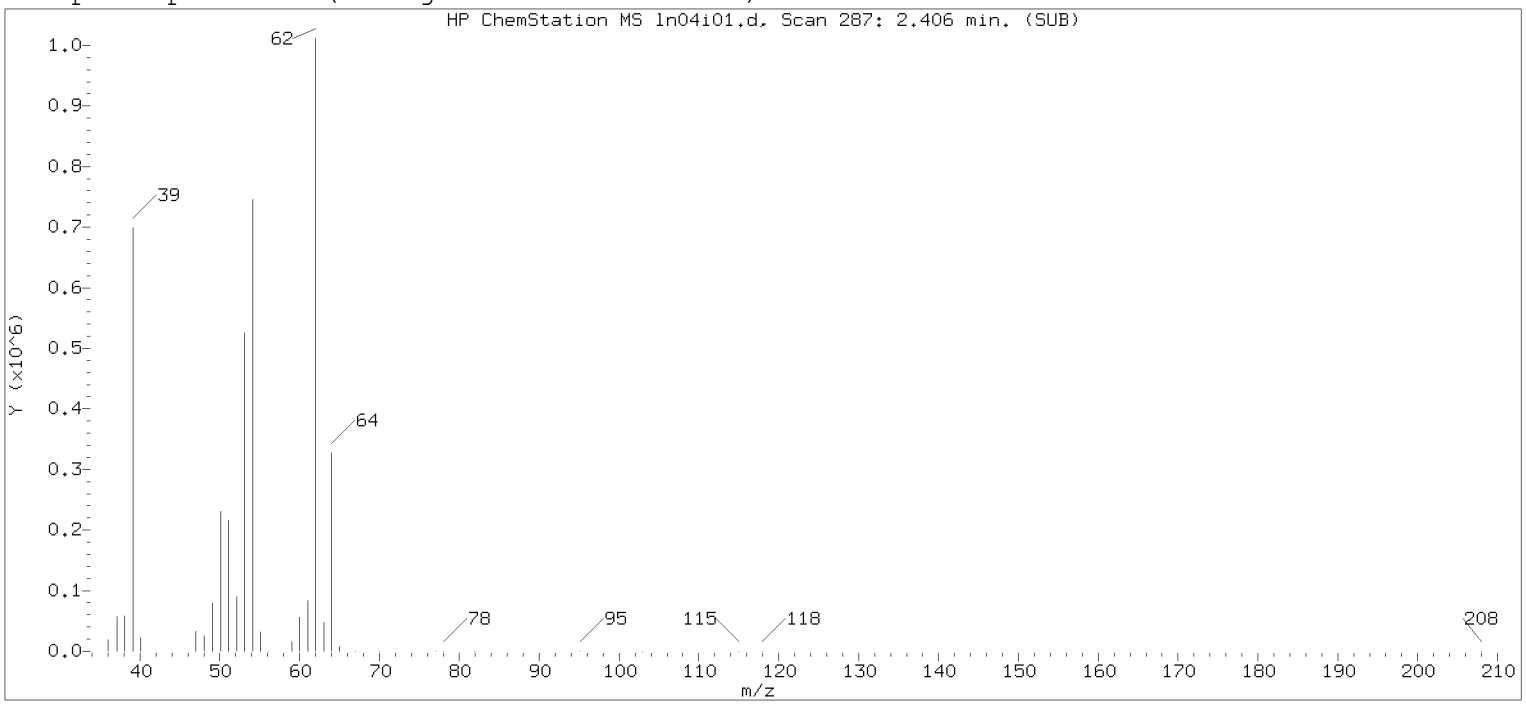
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 1785787M
On-Column Amount (ng) : 285.4858
Integration start scan : 267 Integration stop scan: 319
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

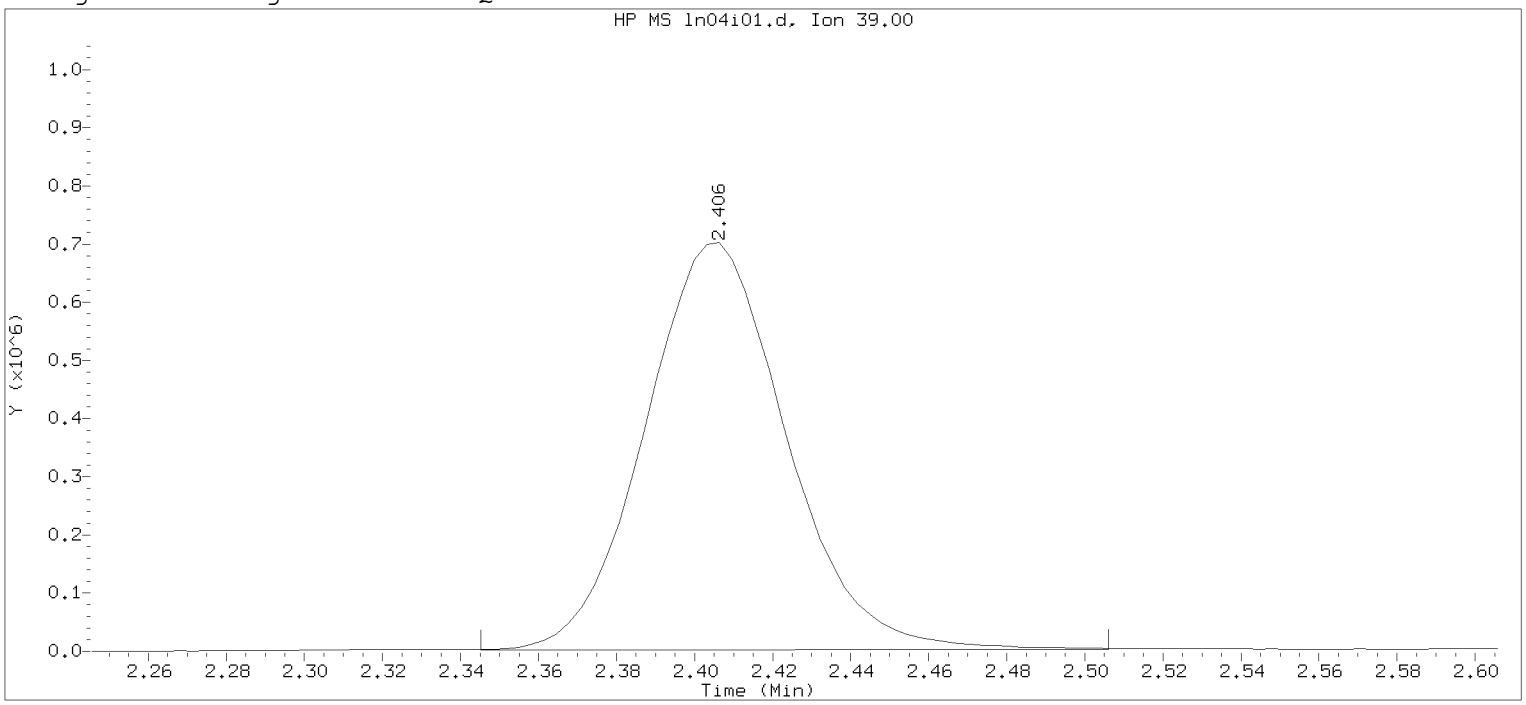
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

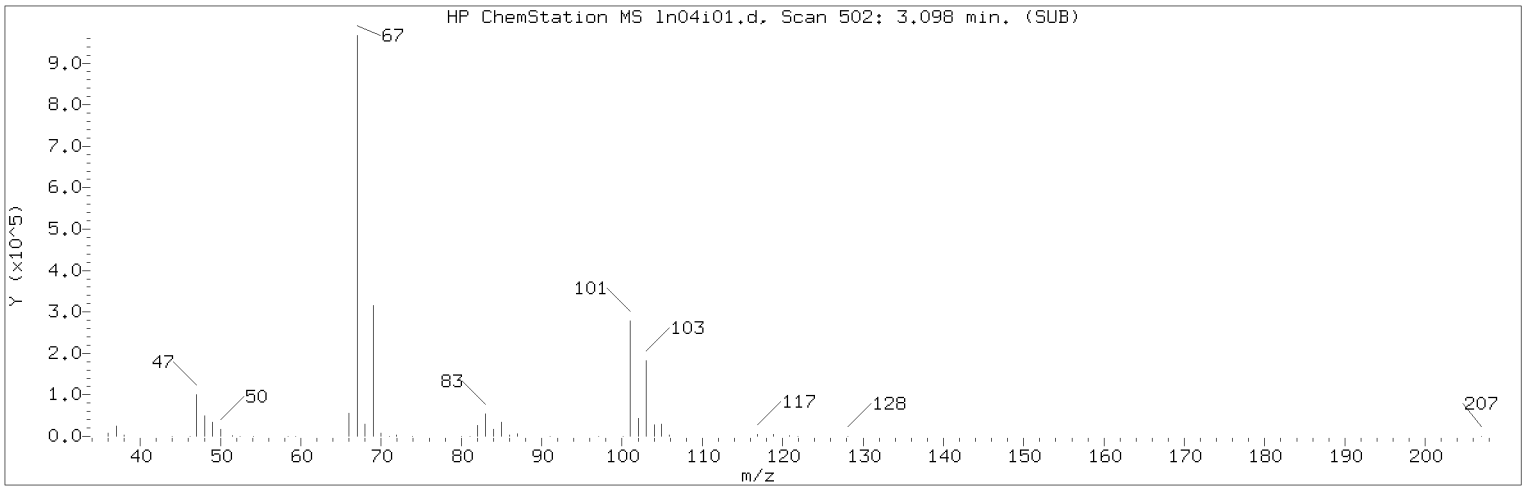
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

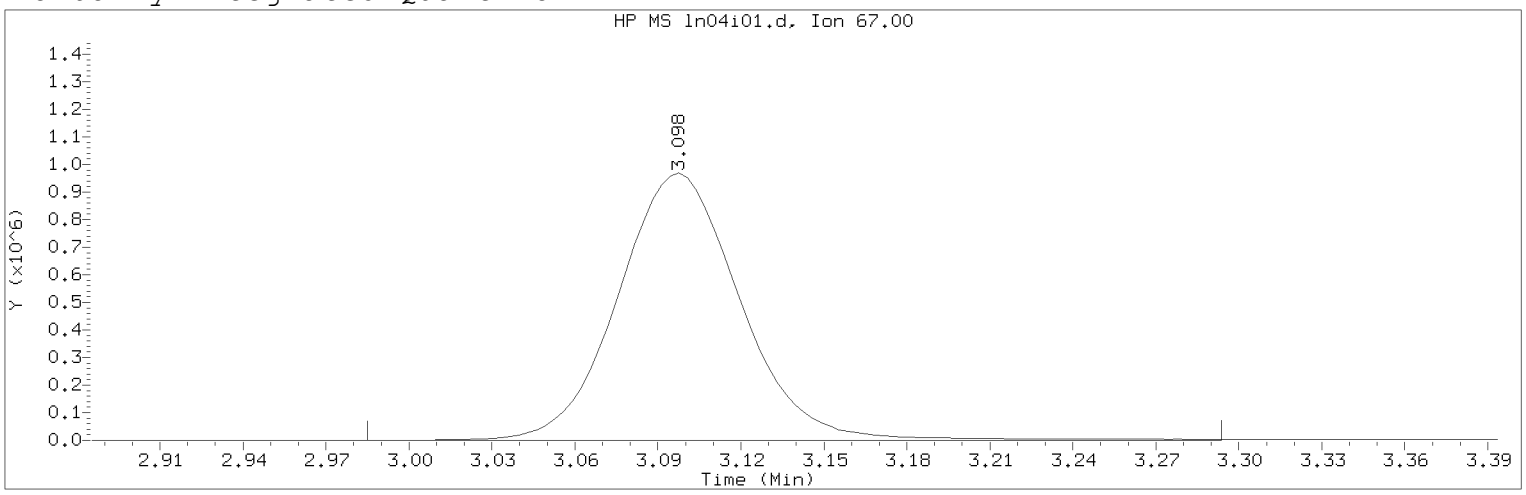
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 1755596
On-column Amount (ng) : 295.0708
Integration start scan : 267 Integration stop scan: 317
Y at integration start : 2196 Y at integration end: 3553

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

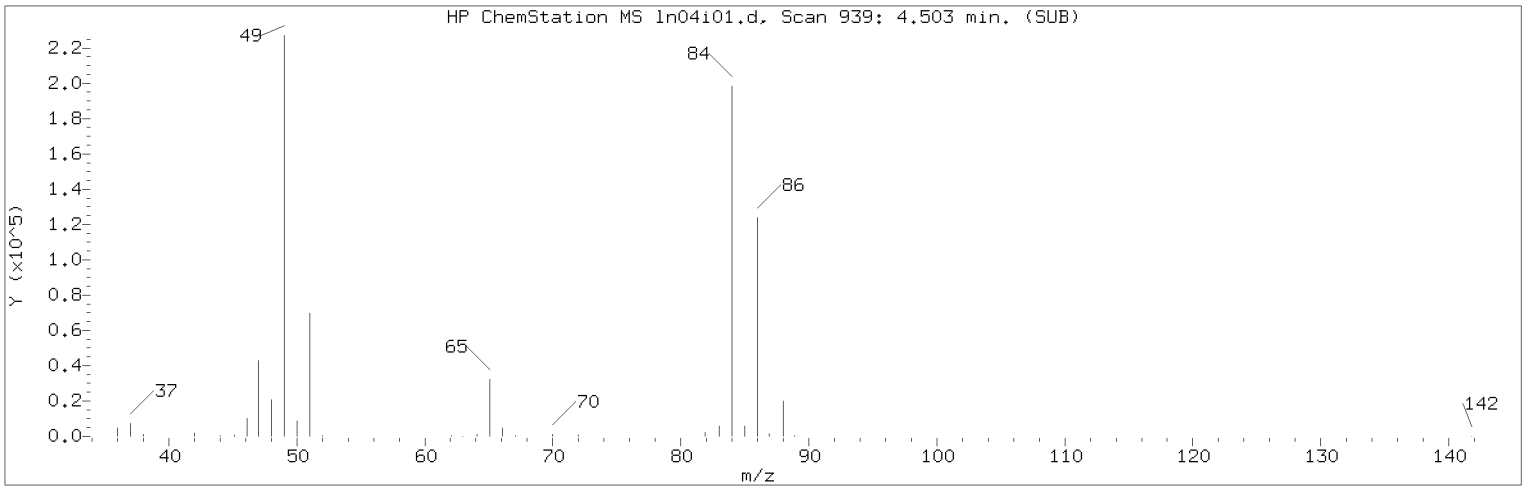
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 502
Retention Time (minutes): 3.098
Quant Ion : 67.00
Area (flag) : 2978303M
On-Column Amount (ng) : 300.2583
Integration start scan : 466 Integration stop scan: 562
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

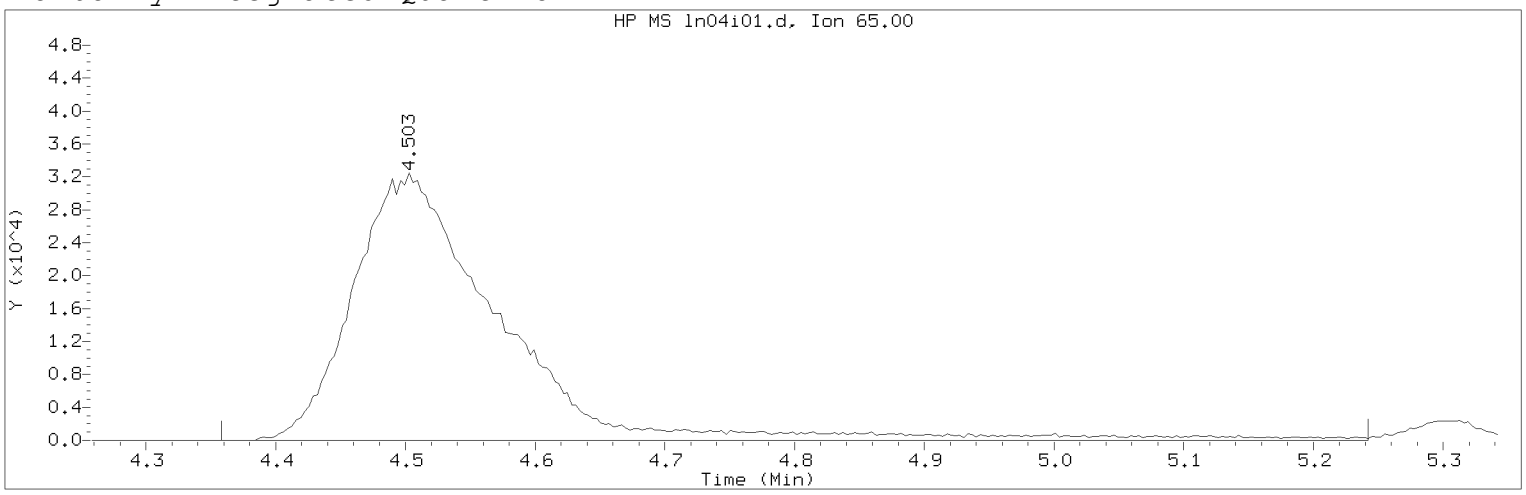
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

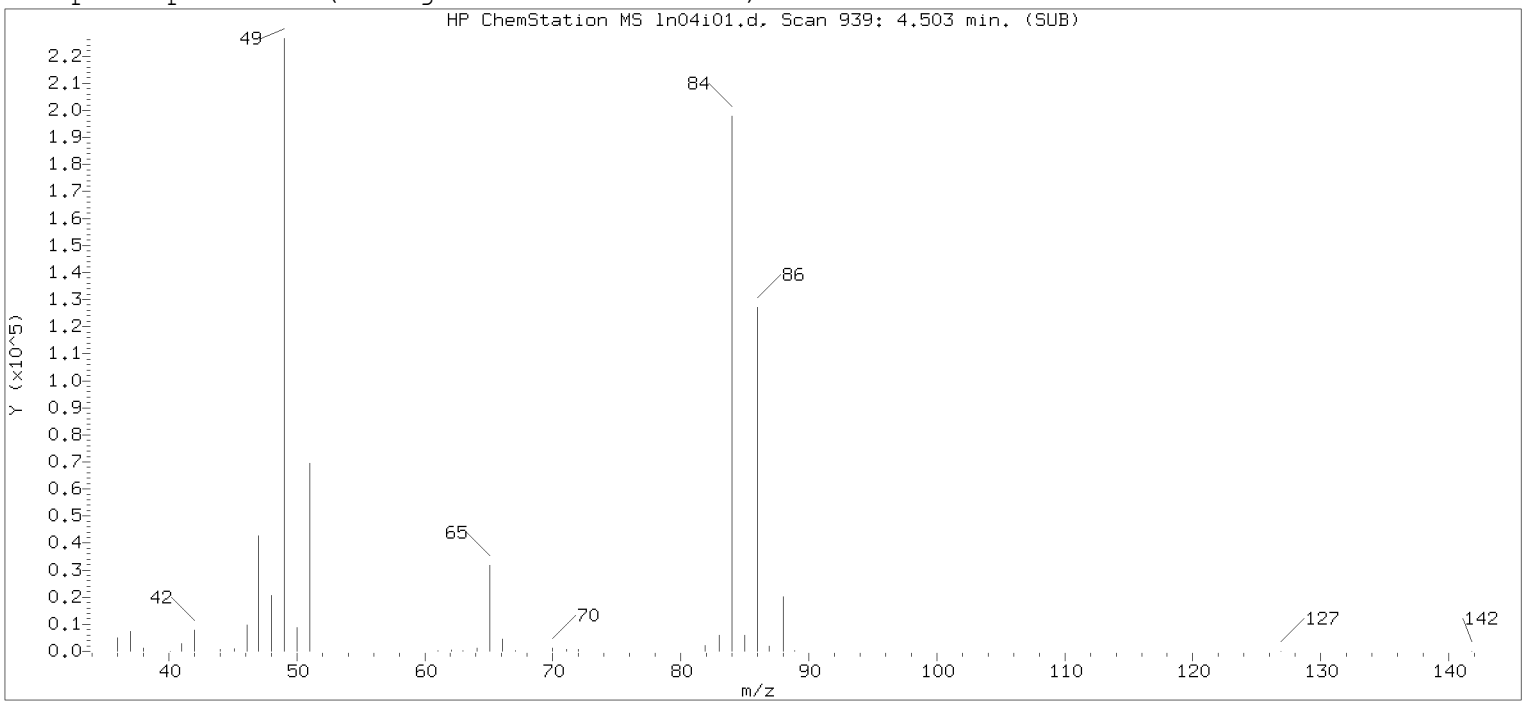
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area (flag) : 254406M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1168
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

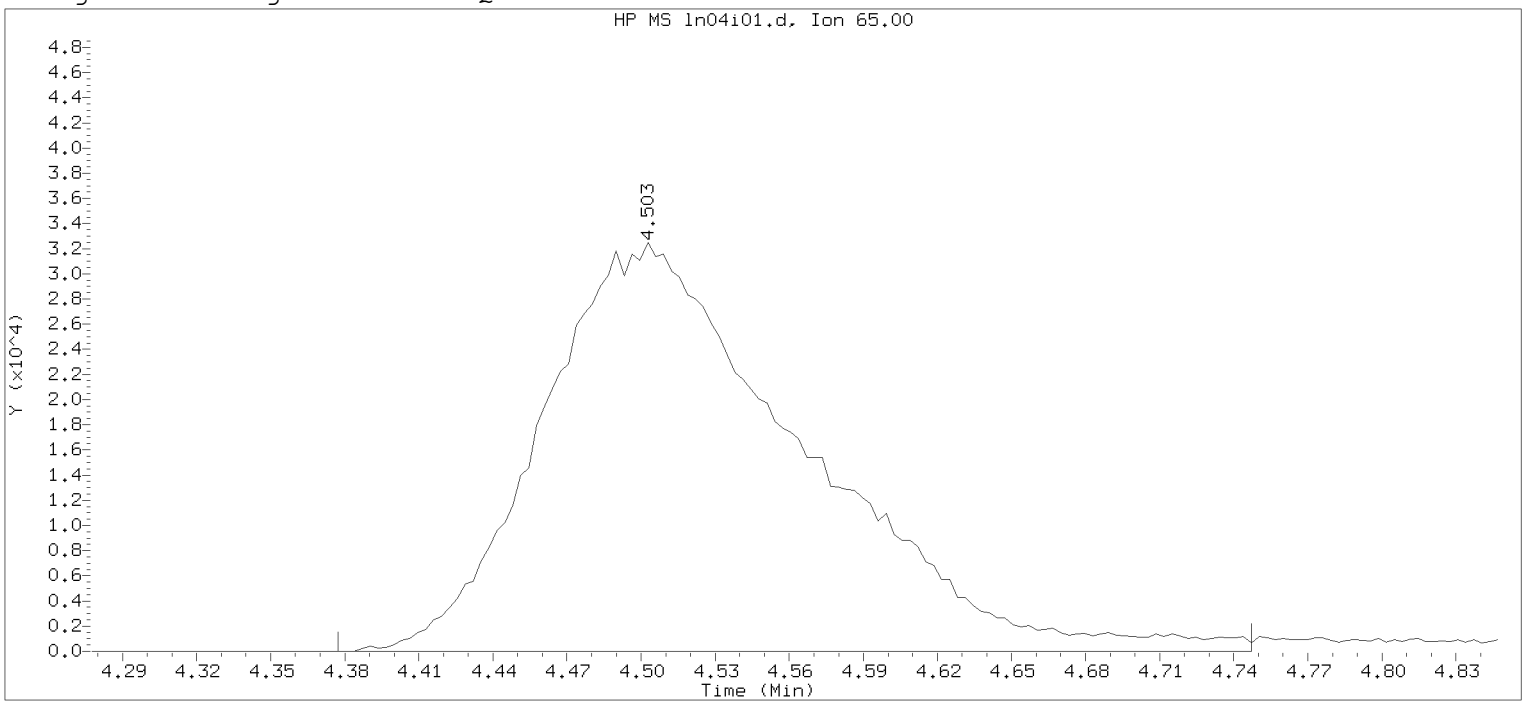
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

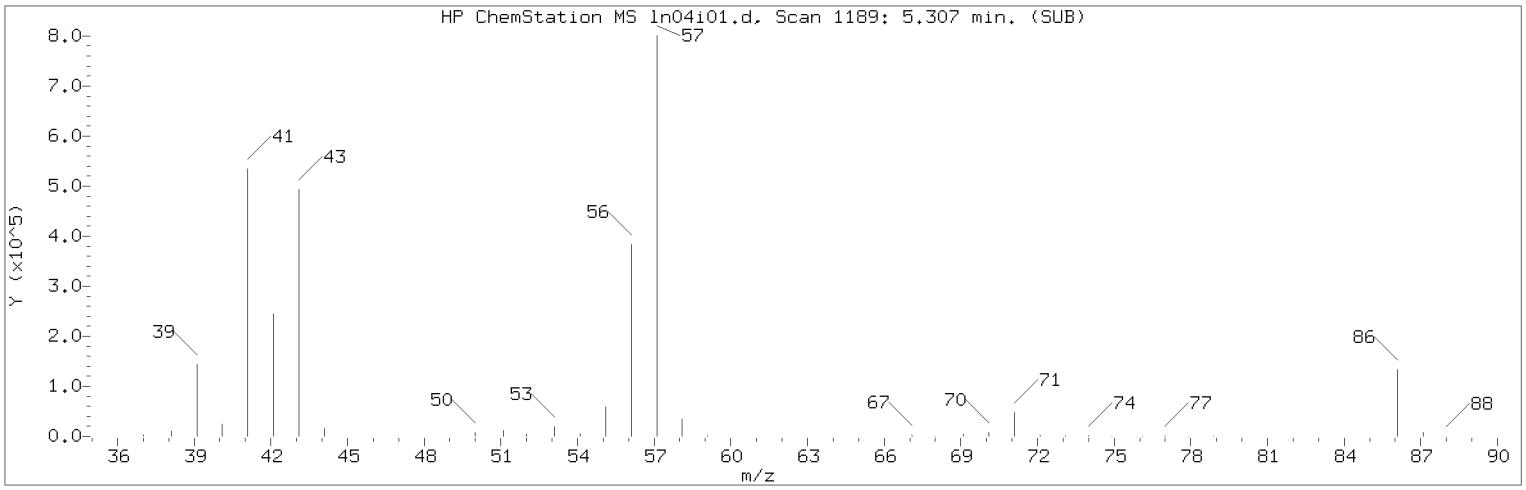
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

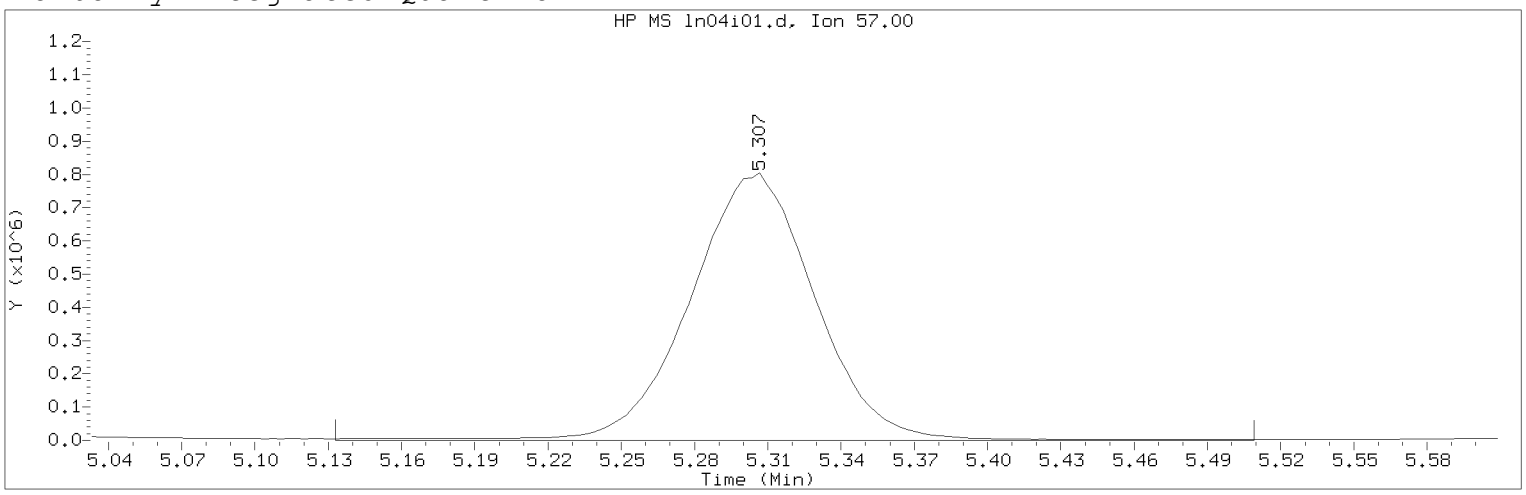
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area : 237264
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

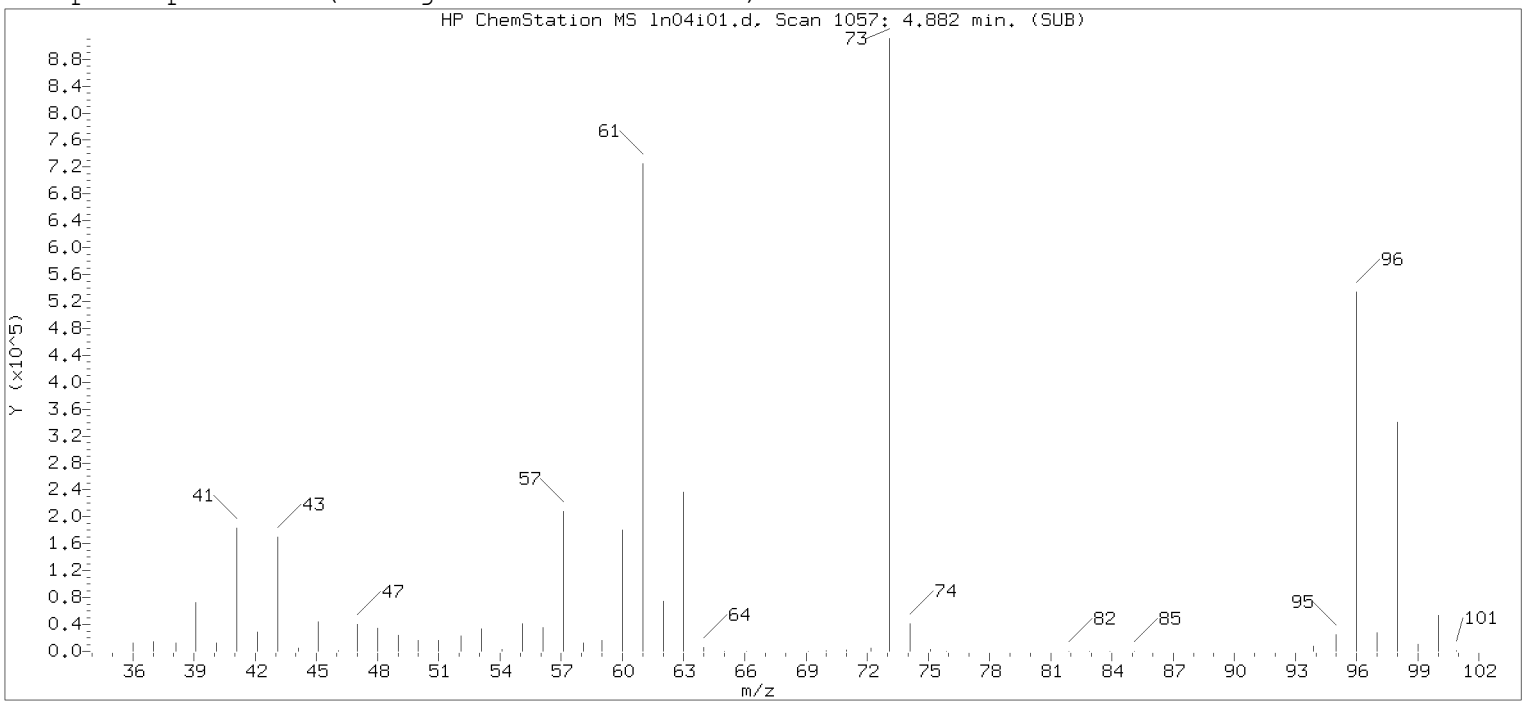
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1189
Retention Time (minutes): 5.307
Quant Ion : 57.00
Area (flag) : 2863189M
On-Column Amount (ng) : 334.8105
Integration start scan : 1134 Integration stop scan: 1251
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

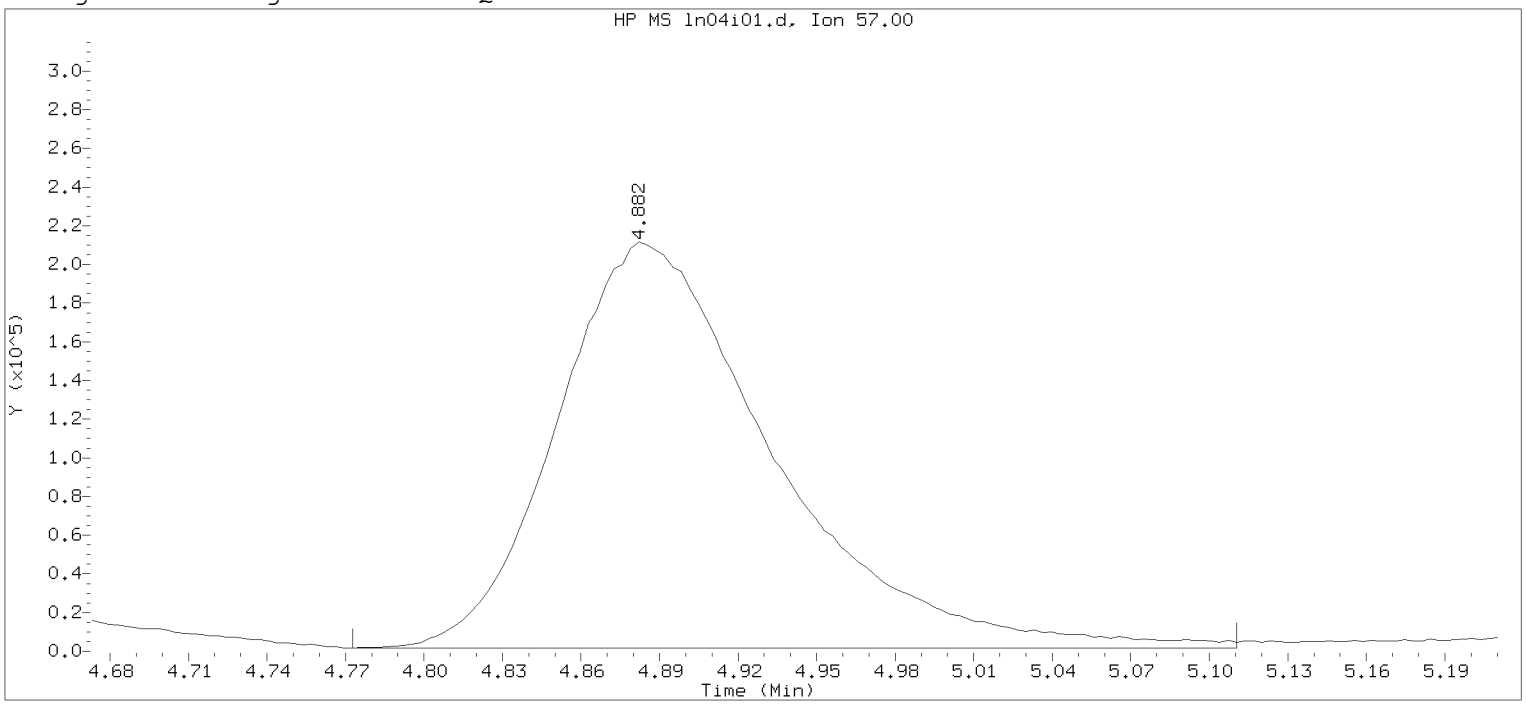
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1057		
Retention Time (minutes)	: 4.882		
Quant Ion	: 57.00		
Area	: 1202378		
On-column Amount (ng)	: 301.4561		
Integration start scan	: 1022	Integration stop scan	: 1127
Y at integration start	: 1806	Y at integration end	: 1806

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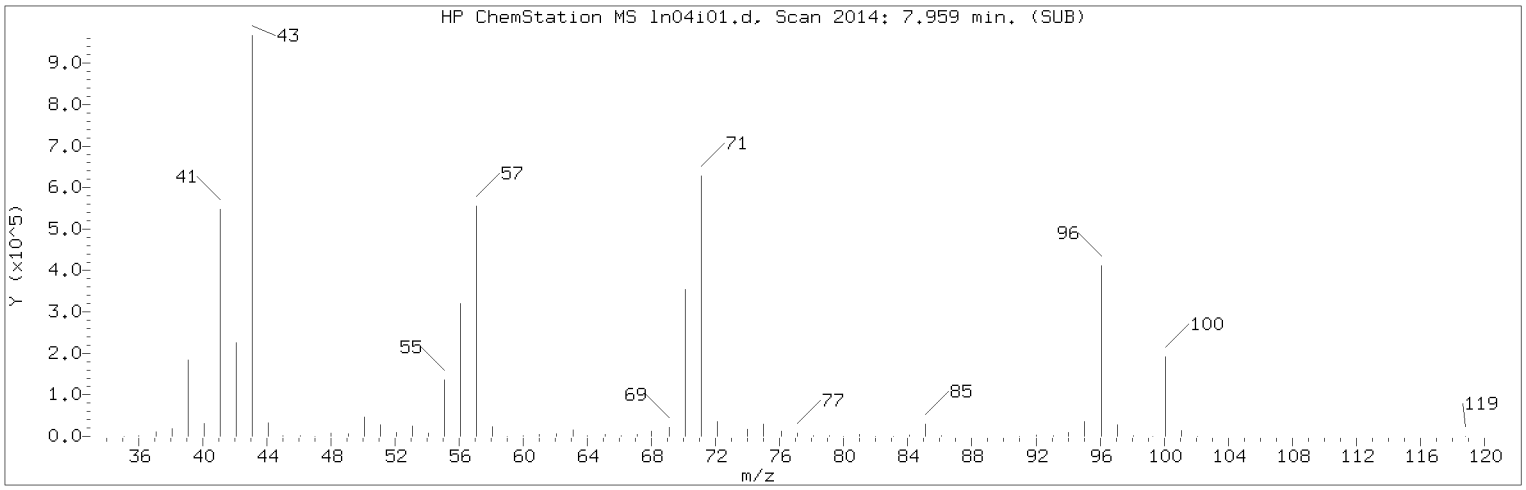
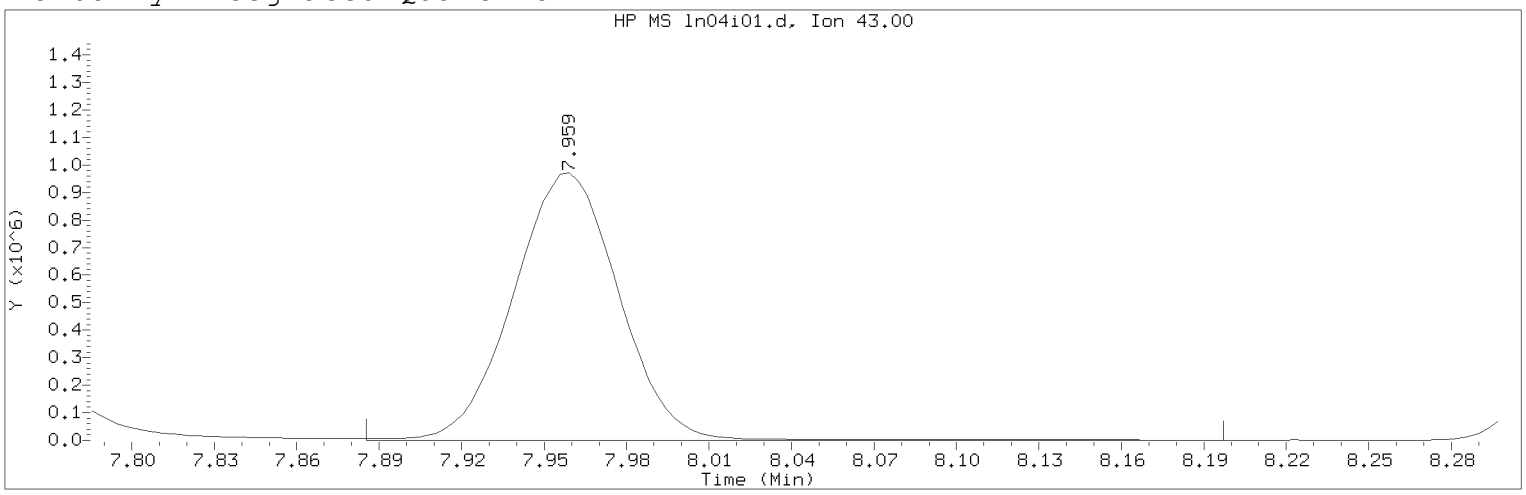
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

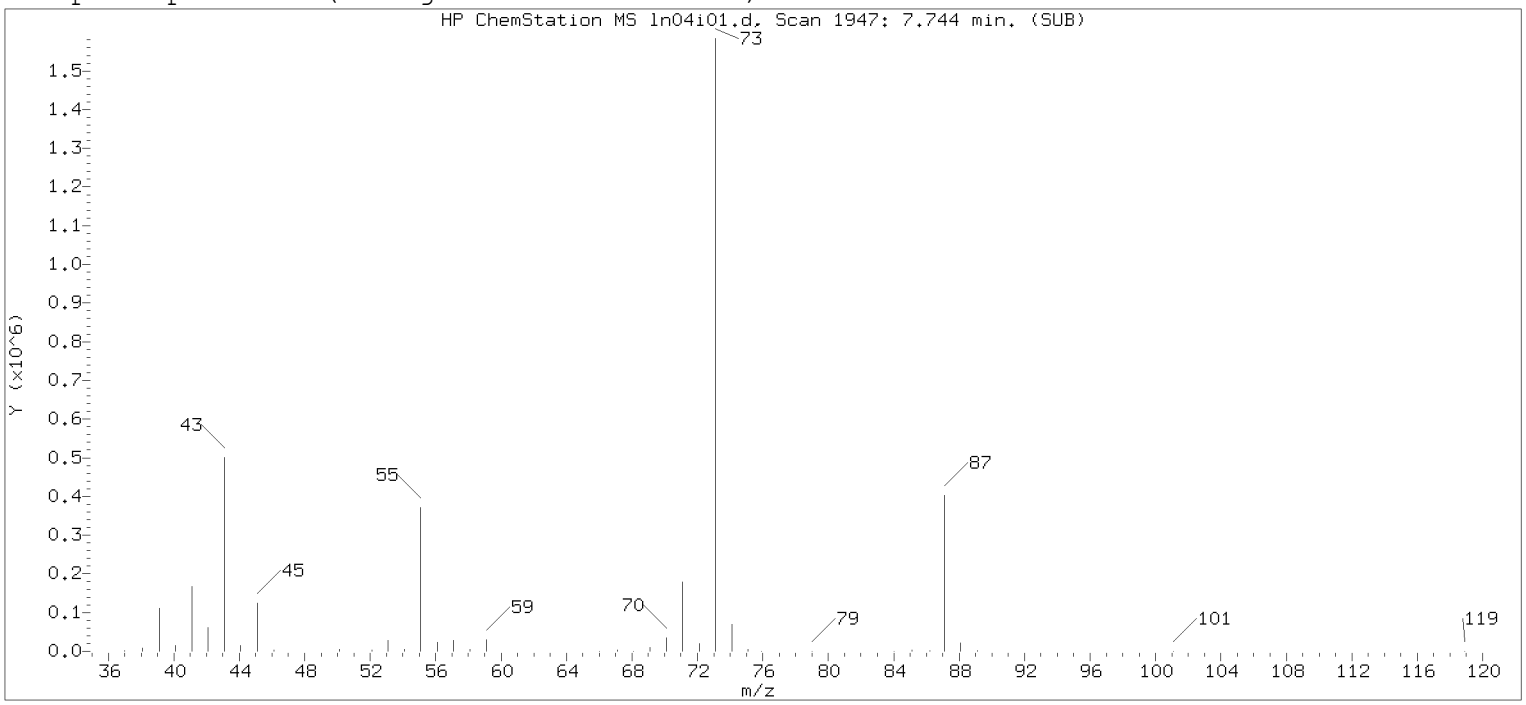
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2014
Retention Time (minutes): 7.959
Quant Ion : 43.00
Area (flag) : 2592531MA
On-Column Amount (ng) : 324.5176
Integration start scan : 1990 Integration stop scan: 2087
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

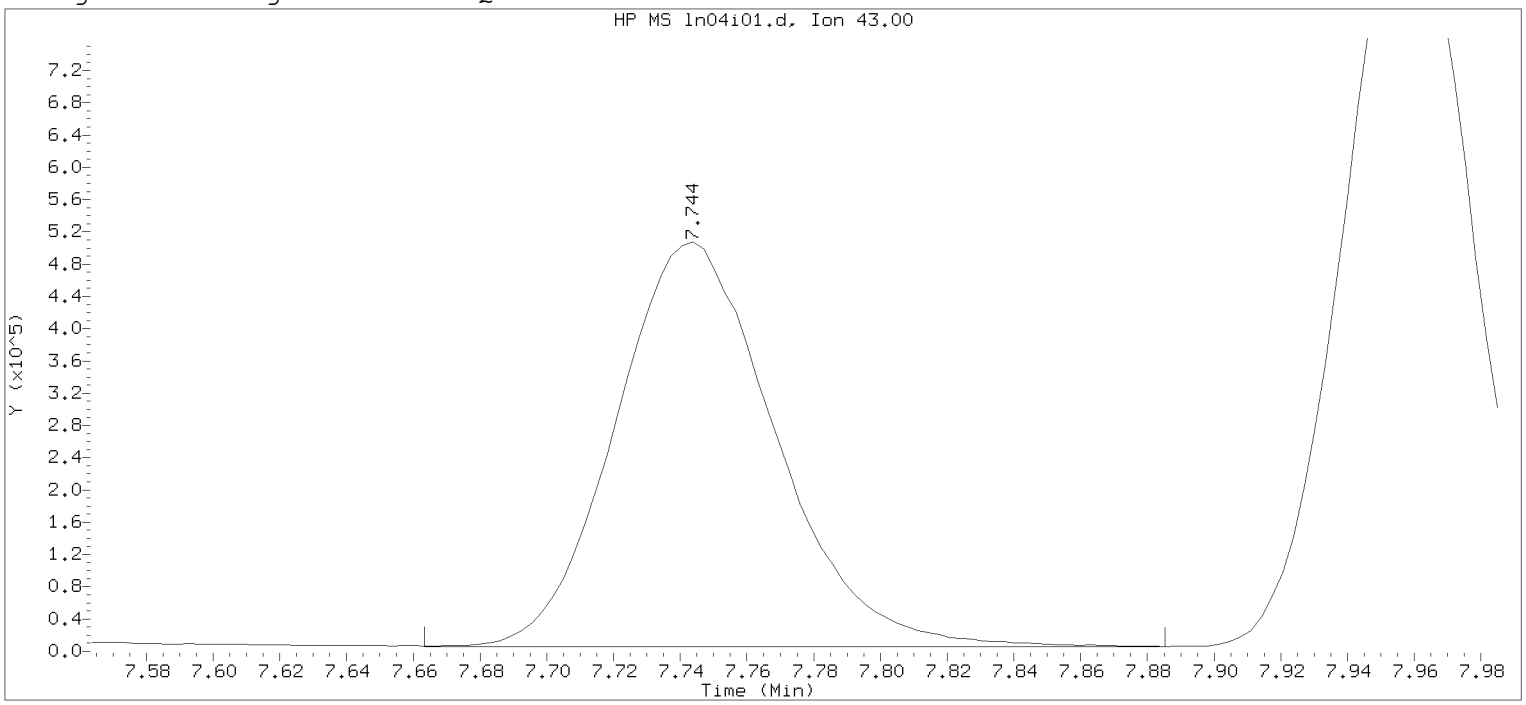
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

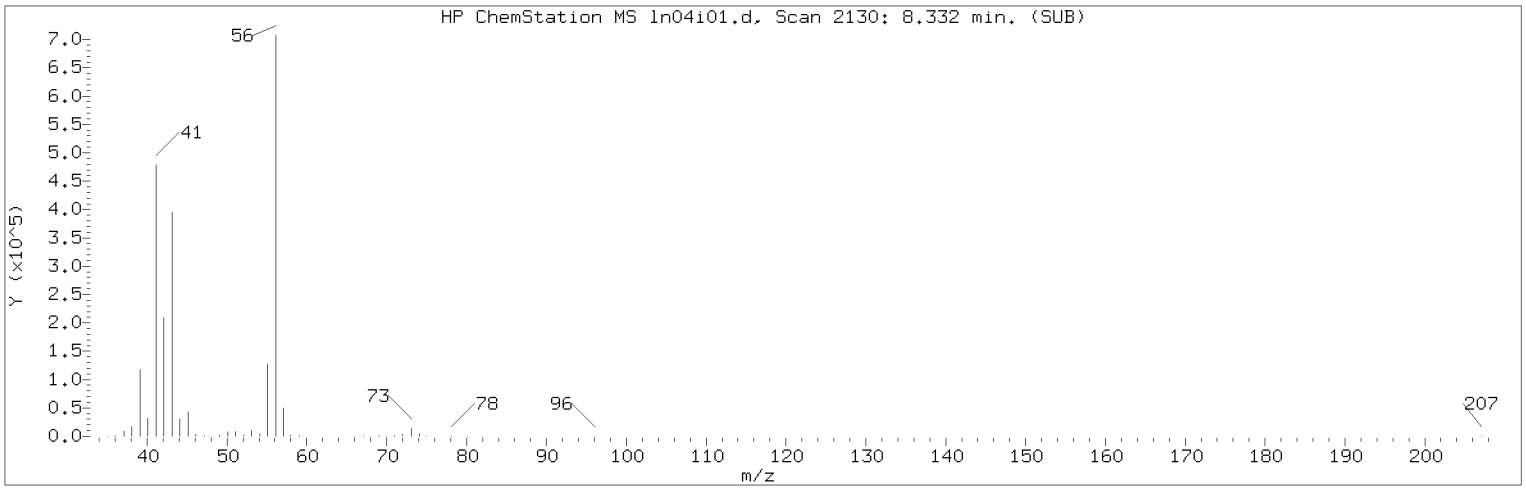
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

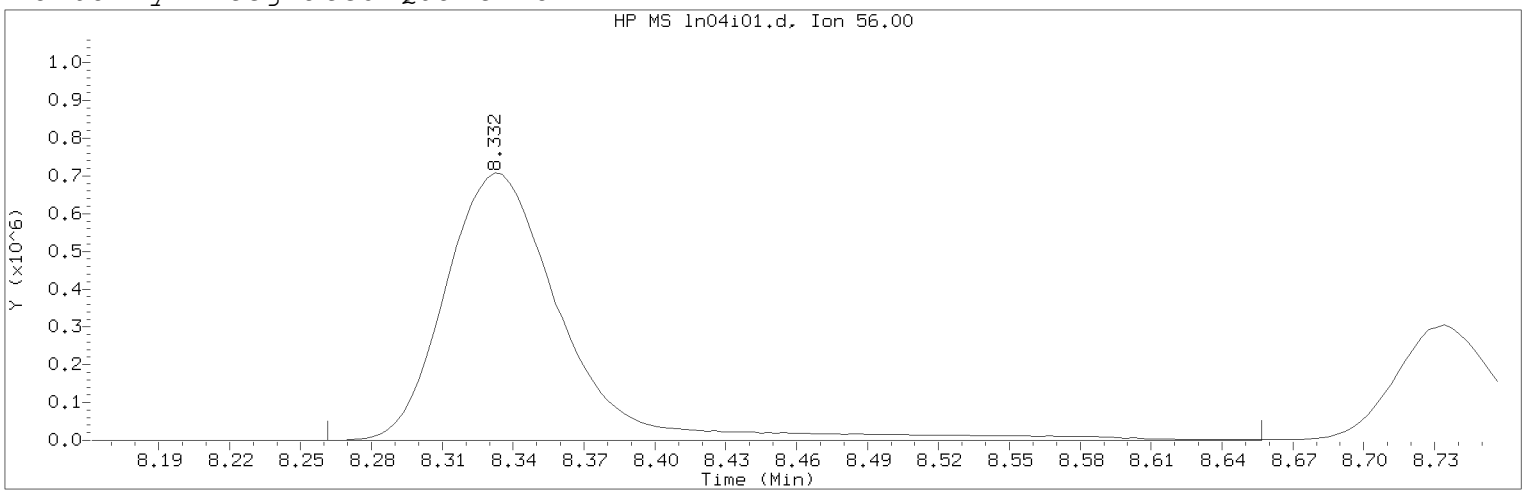
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1947
Retention Time (minutes): 7.744
Quant Ion : 43.00
Area : 1668813
On-column Amount (ng) : 288.4319
Integration start scan : 1921 Integration stop scan: 1990
Y at integration start : 5866 Y at integration end: 5866

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

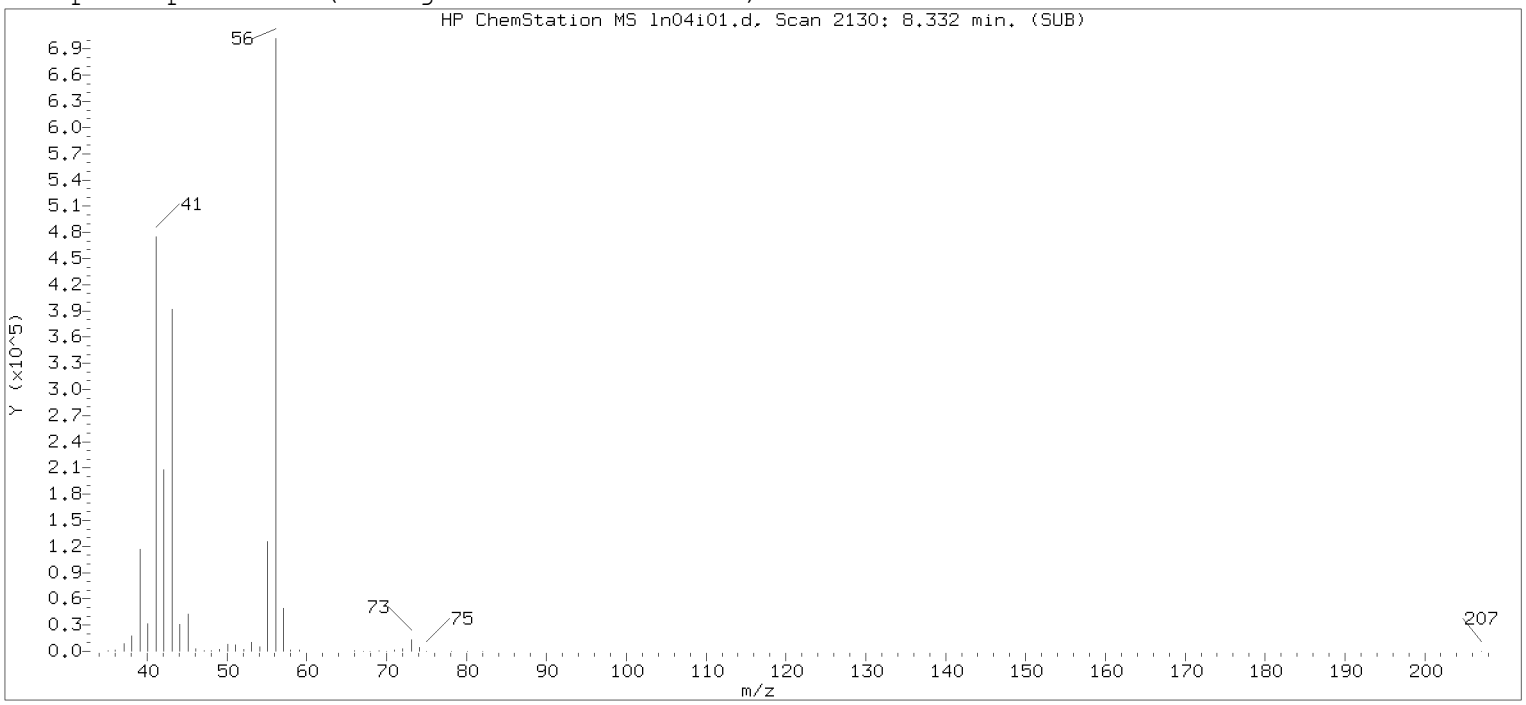
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area (flag) : 2465385M
On-Column Amount (ng) : 7947.0678
Integration start scan : 2107 Integration stop scan: 2230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

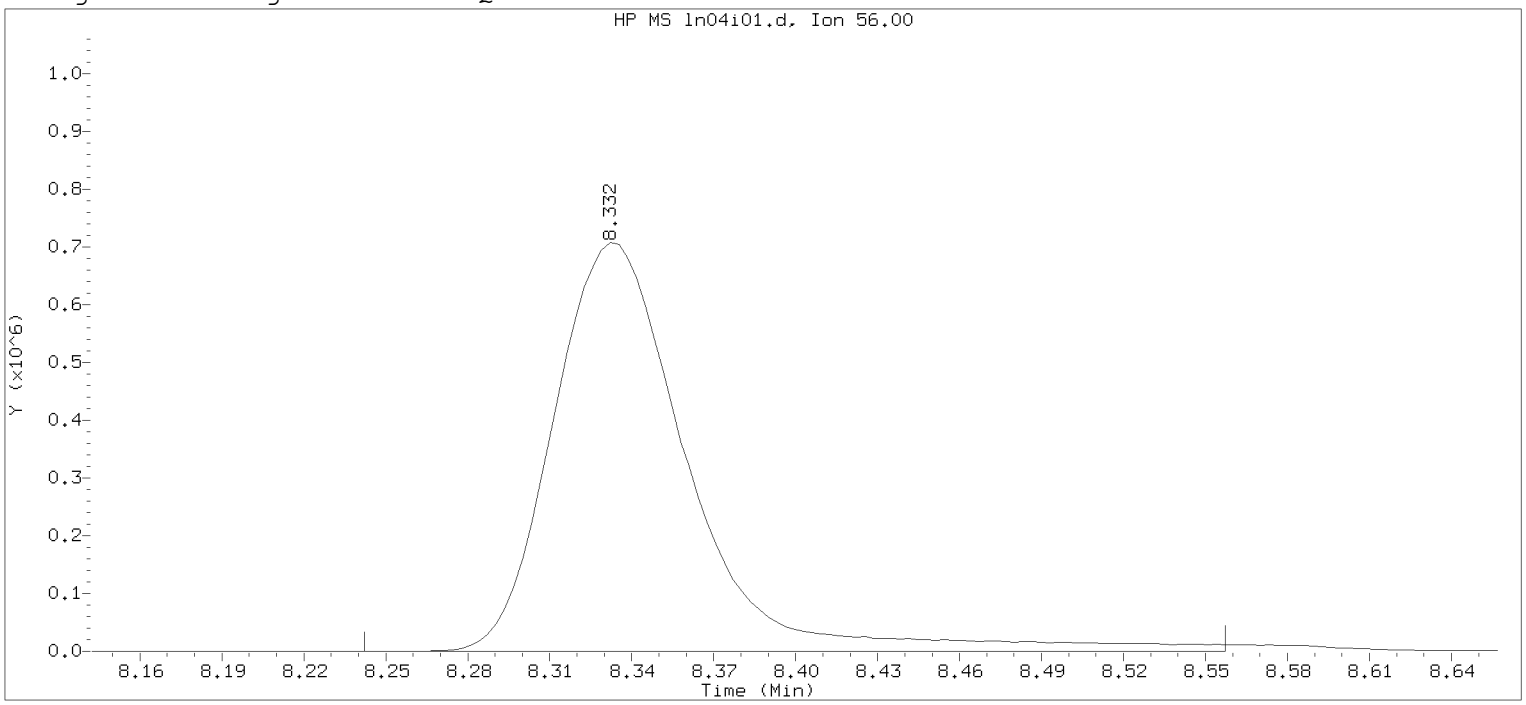
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

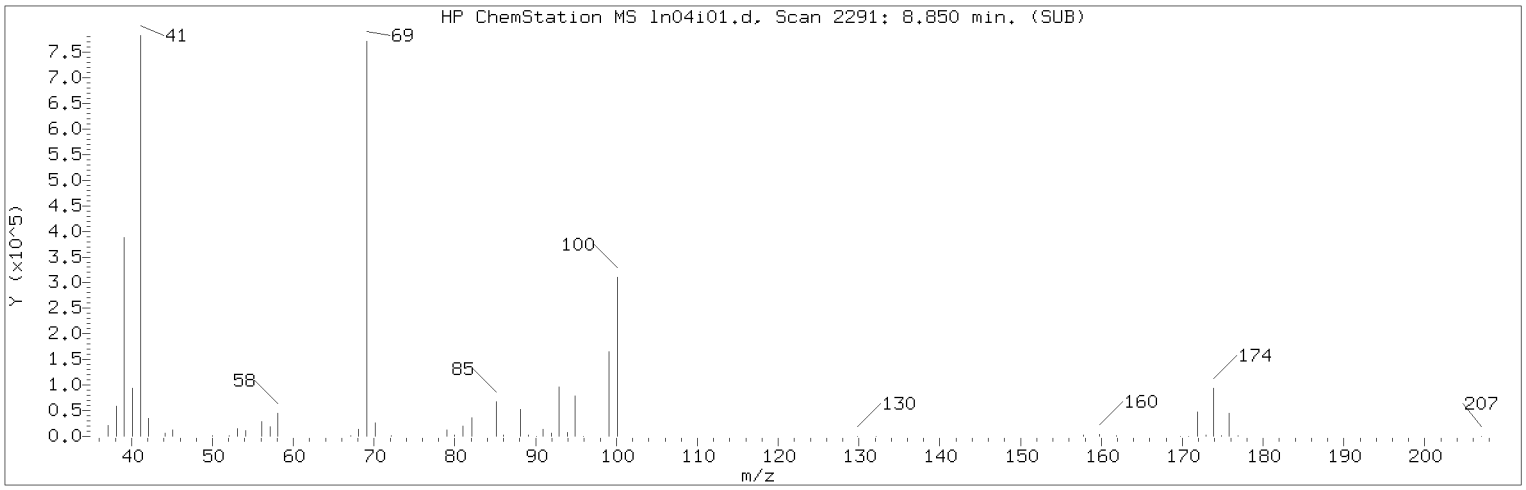
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

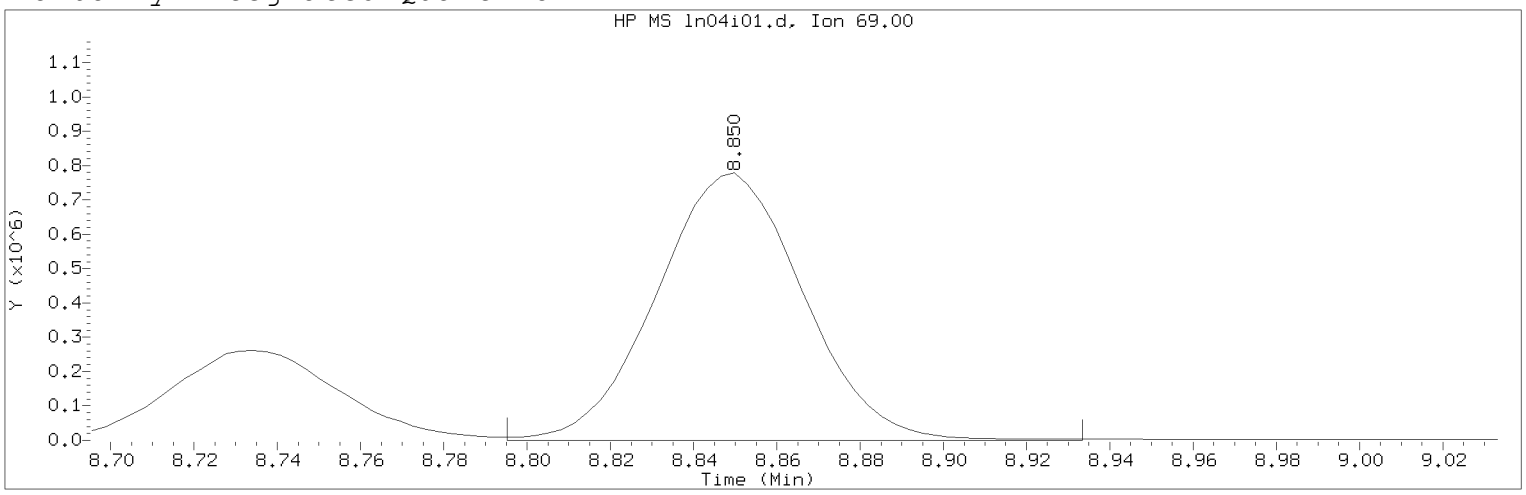
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area : 2429255
On-column Amount (ng) : 7682.9381
Integration start scan : 2101 Integration stop scan: 2199
Y at integration start : 176 Y at integration end: 176

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

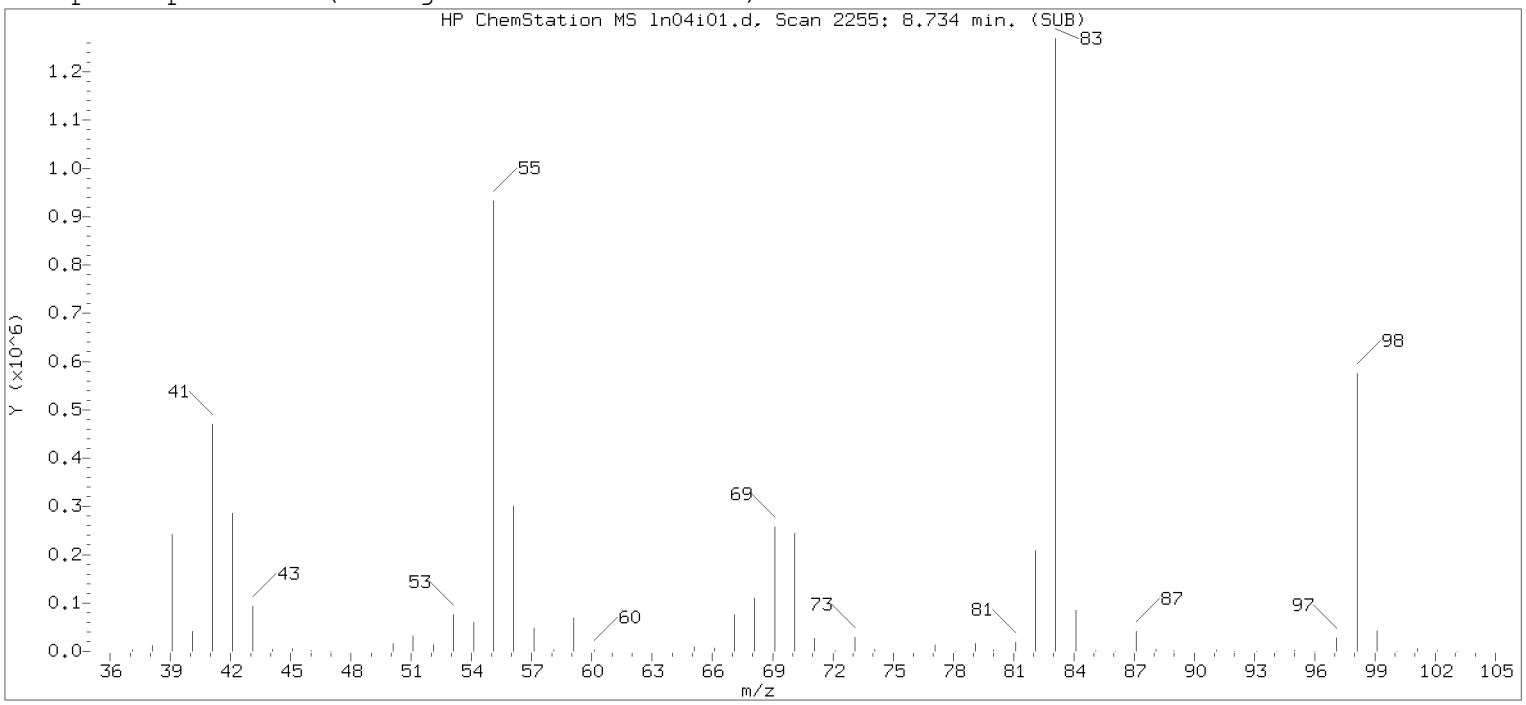
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2291
Retention Time (minutes): 8.850
Quant Ion : 69.00
Area (flag) : 1904896A
On-Column Amount (ng) : 340.2564
Integration start scan : 2273 Integration stop scan: 2316
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

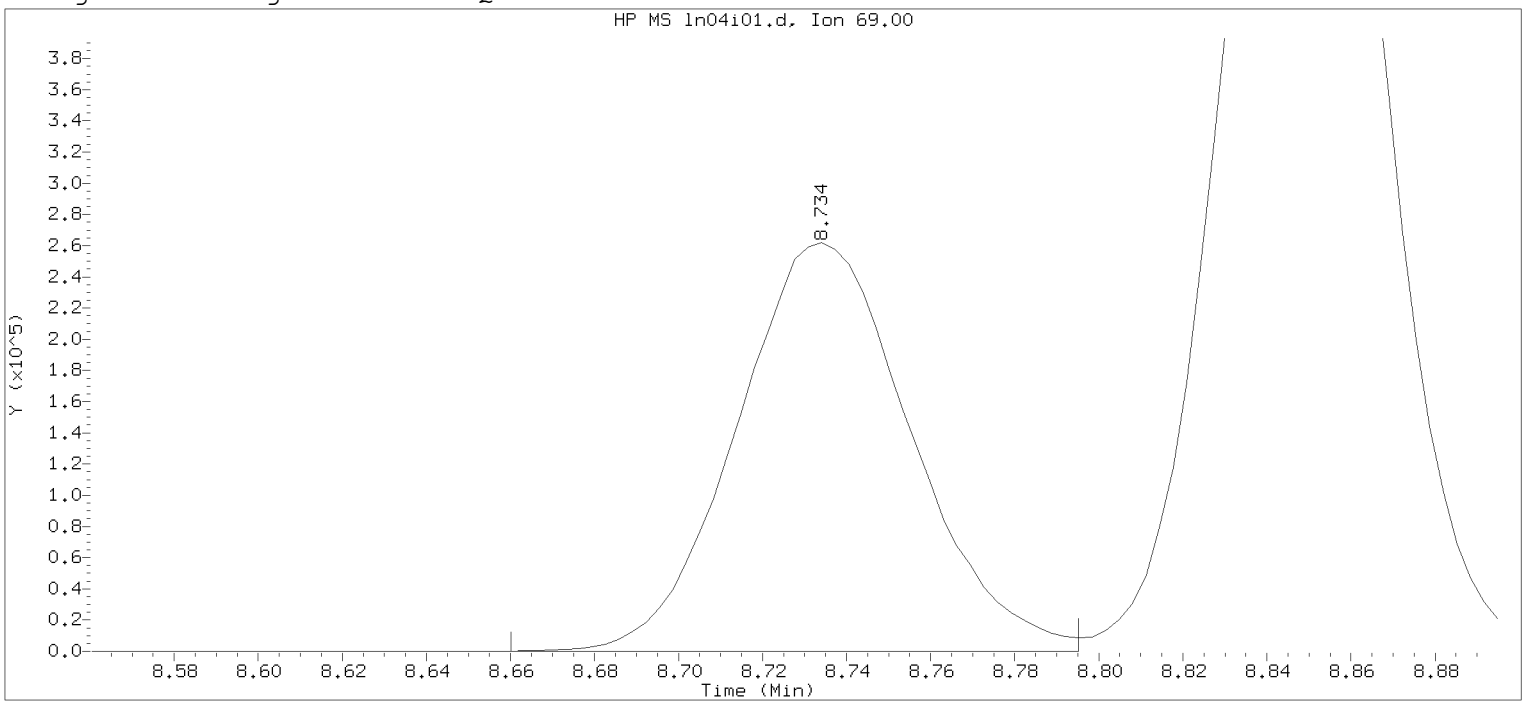
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

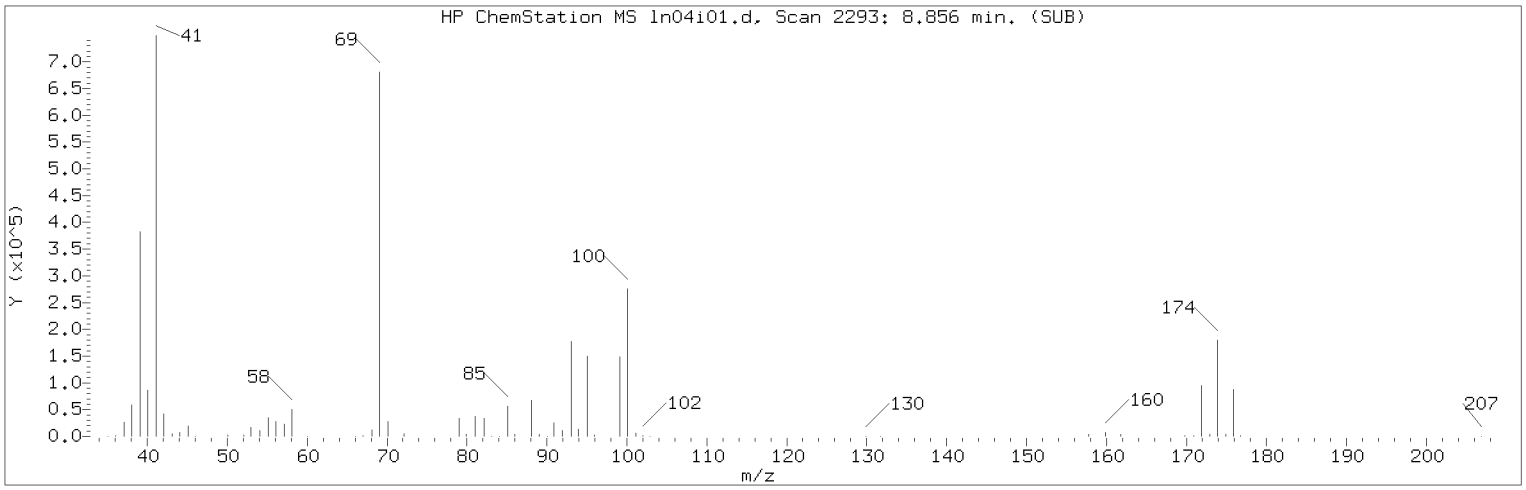
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

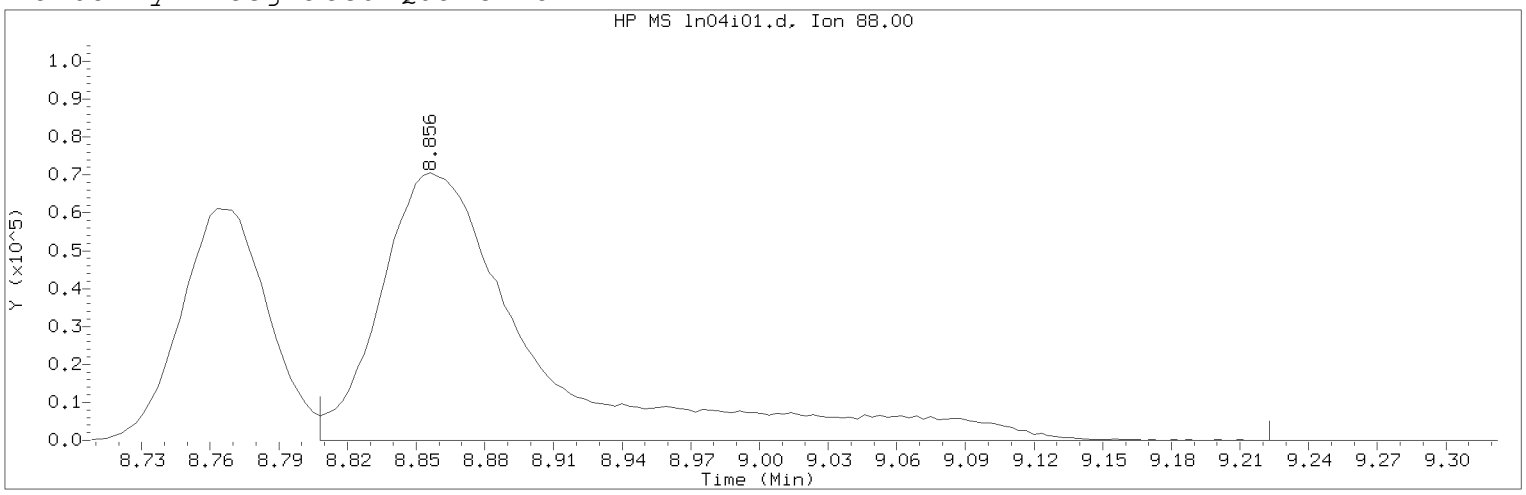
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 752058
On-column Amount (ng) : 311.1363
Integration start scan : 2231 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

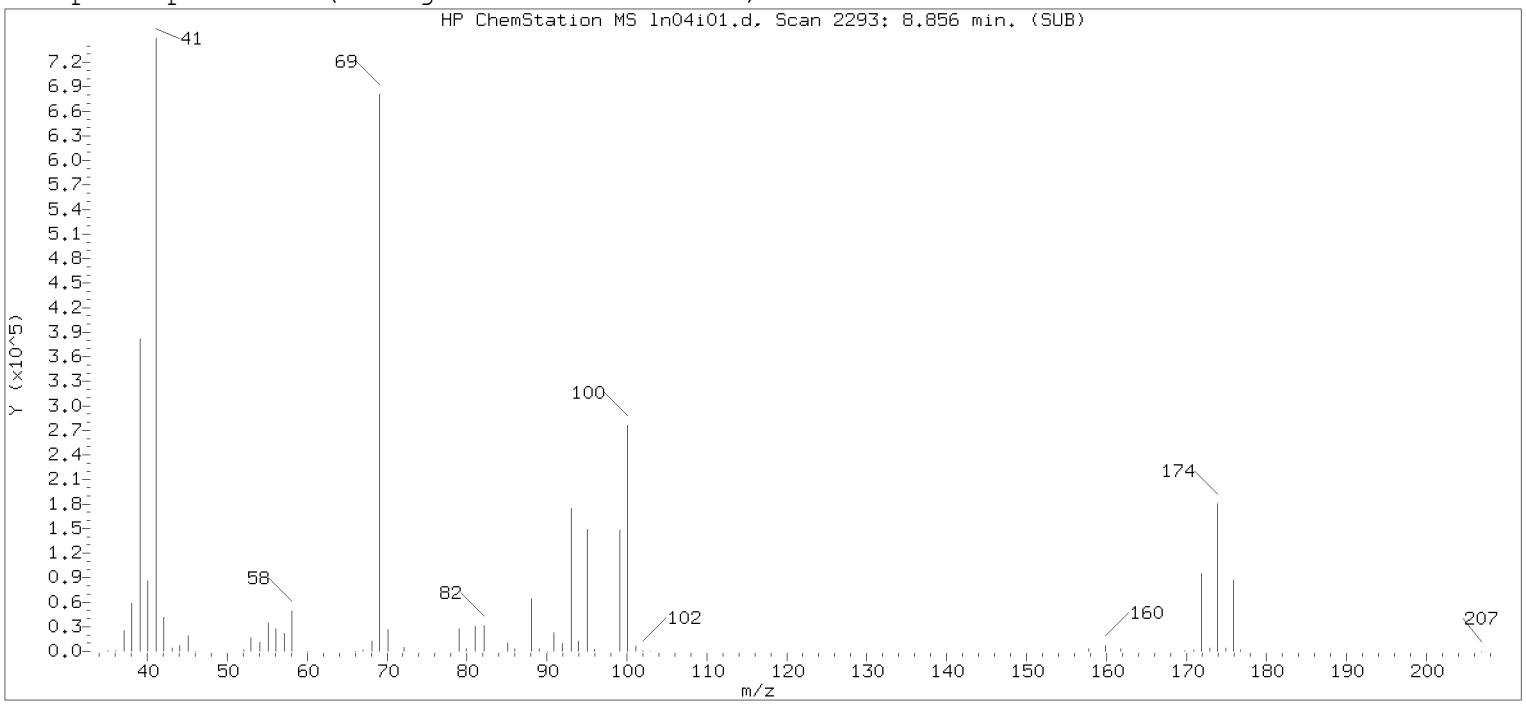
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 338379M
On-Column Amount (ng) : 3968.4208
Integration start scan : 2277 Integration stop scan: 2406
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

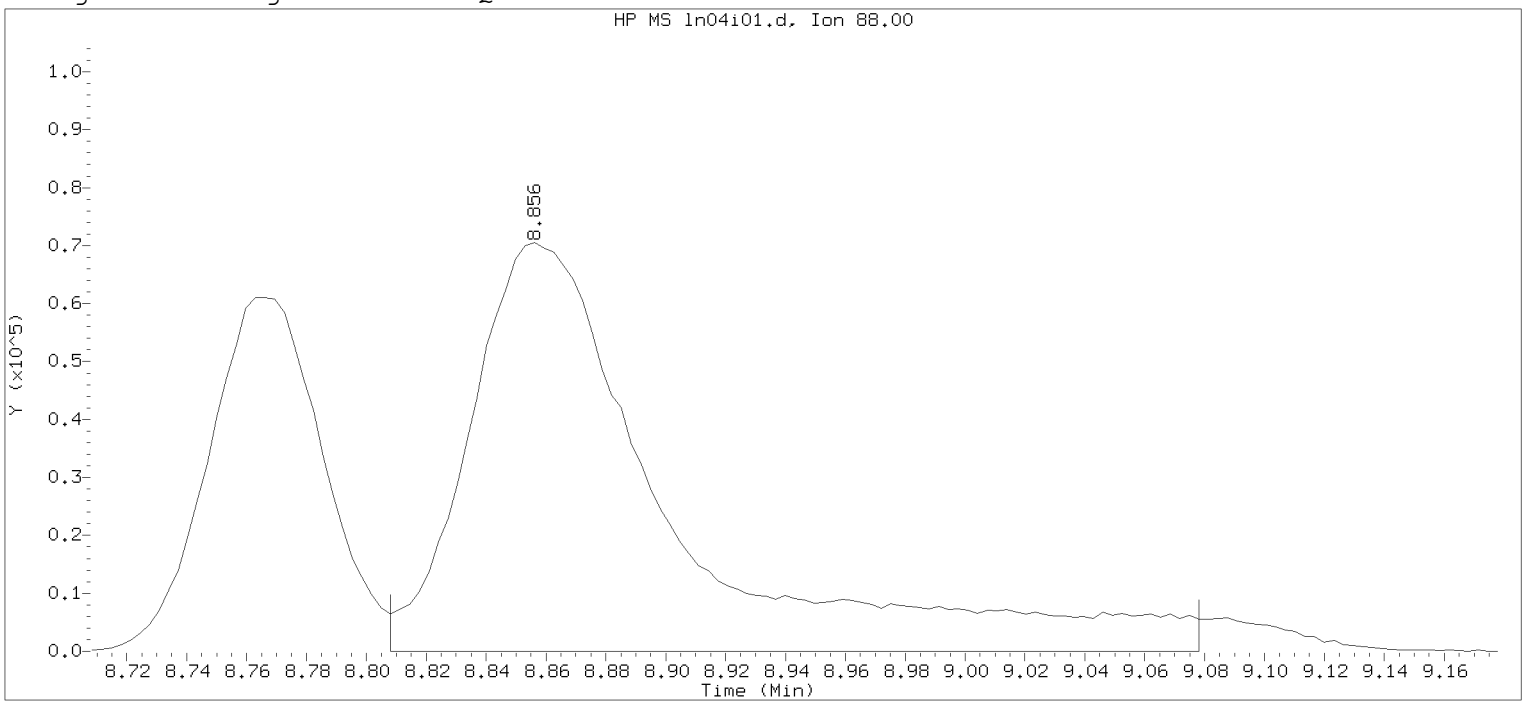
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2293		
Retention Time (minutes)	: 8.856		
Quant Ion	: 88.00		
Area	: 325164		
On-column Amount (ng)	: 3803.8575		
Integration start scan	: 2277	Integration stop scan:	2361
Y at integration start	: 0	Y at integration end:	0

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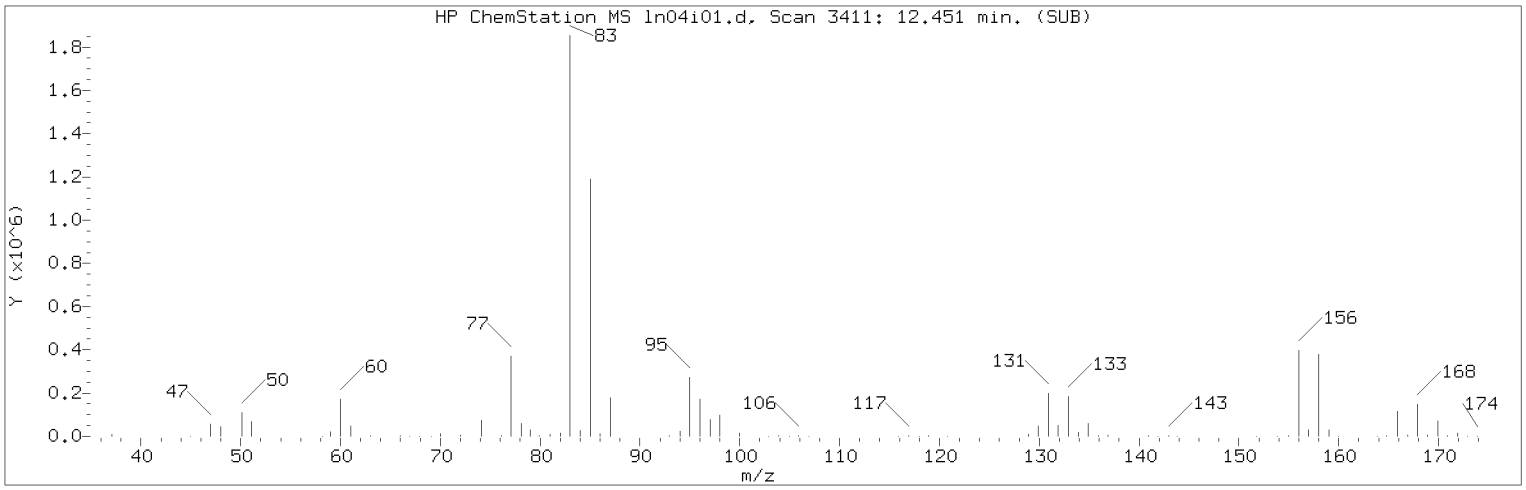
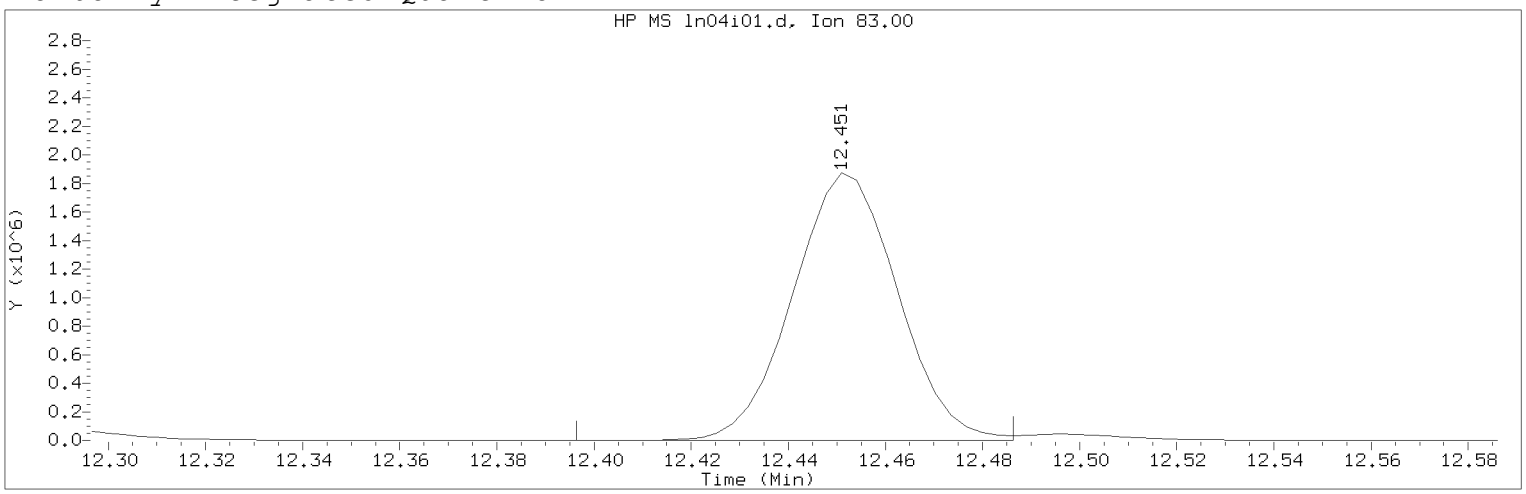
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

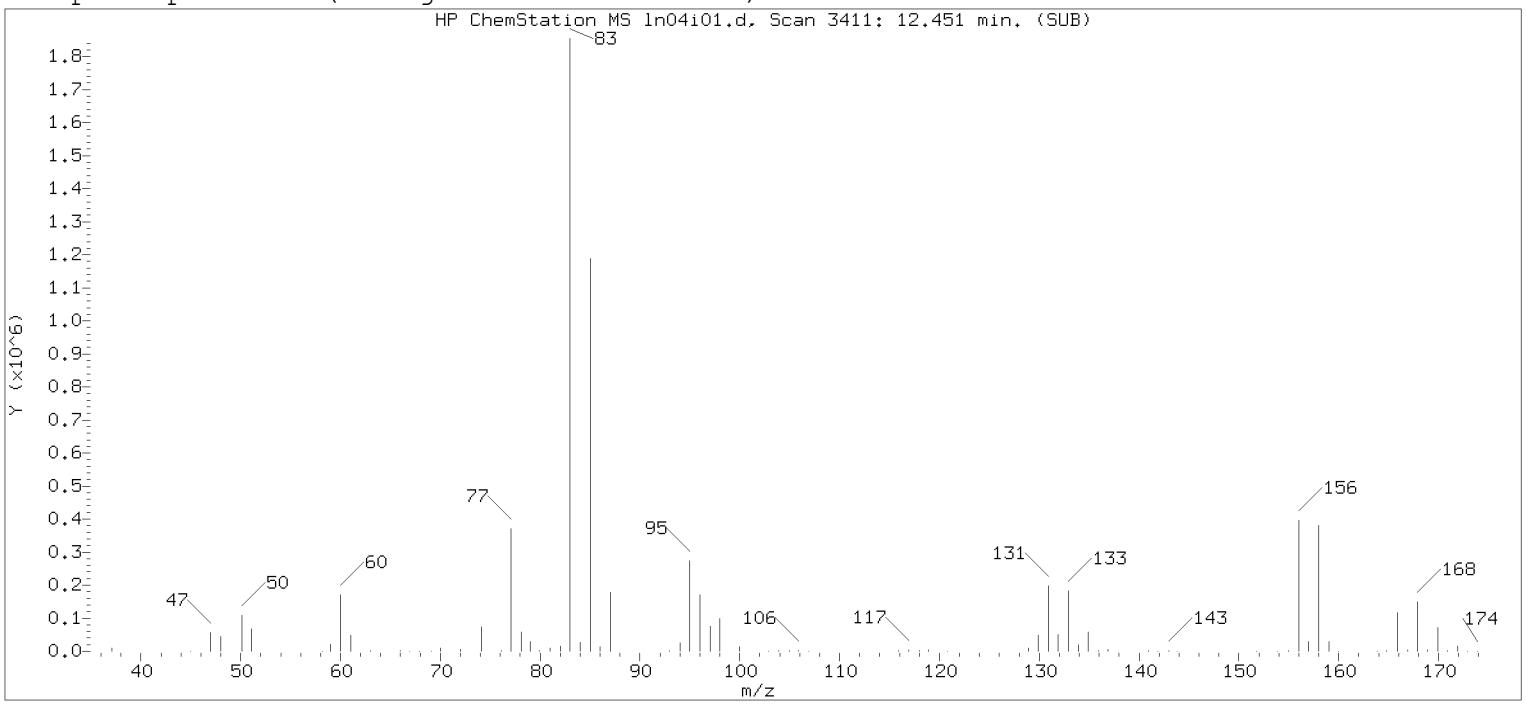
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 2800639M
On-Column Amount (ng) : 310.7054
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

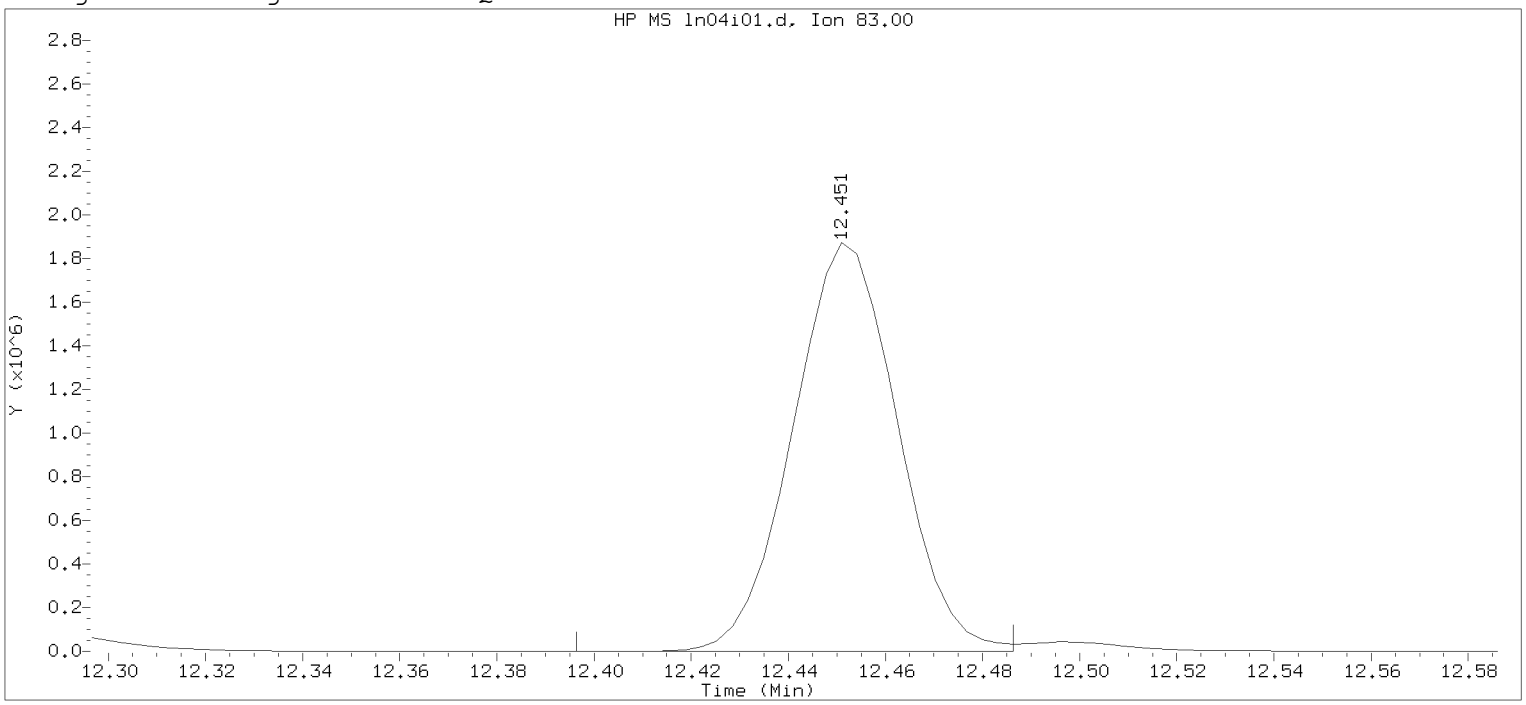
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

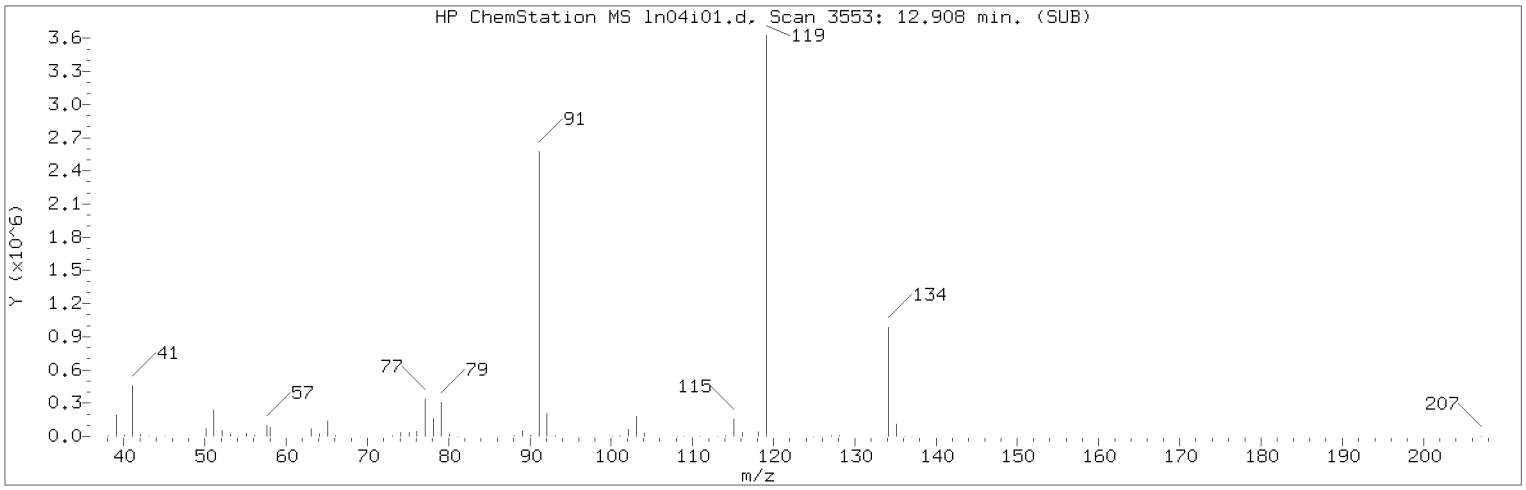
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

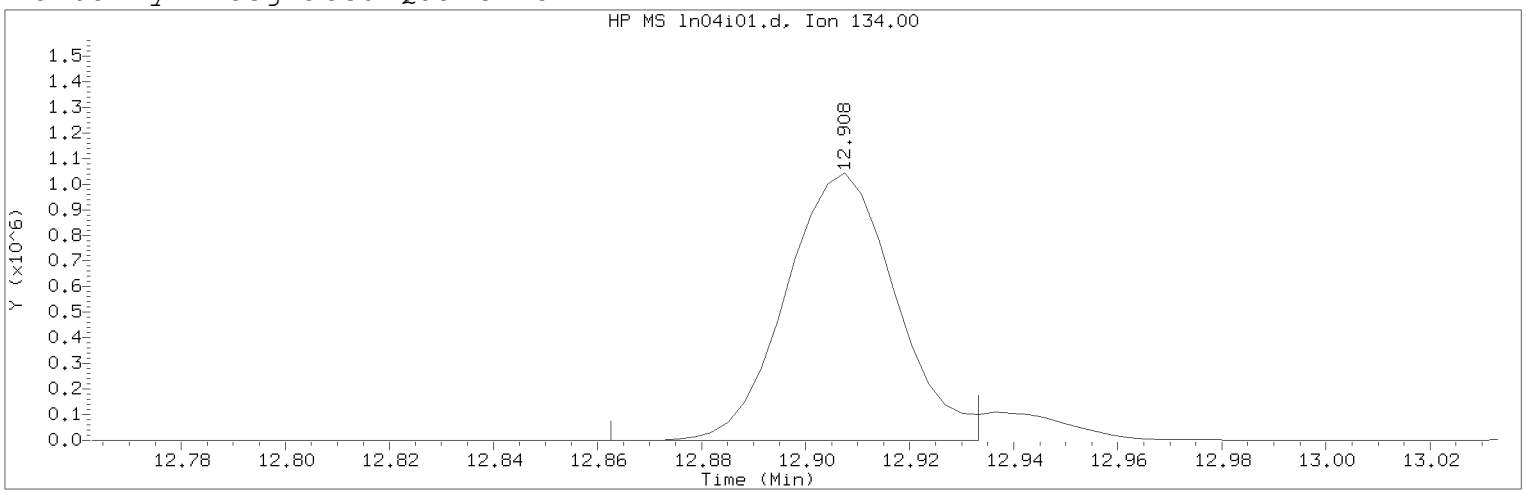
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 2797364
On-column Amount (ng) : 294.0638
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

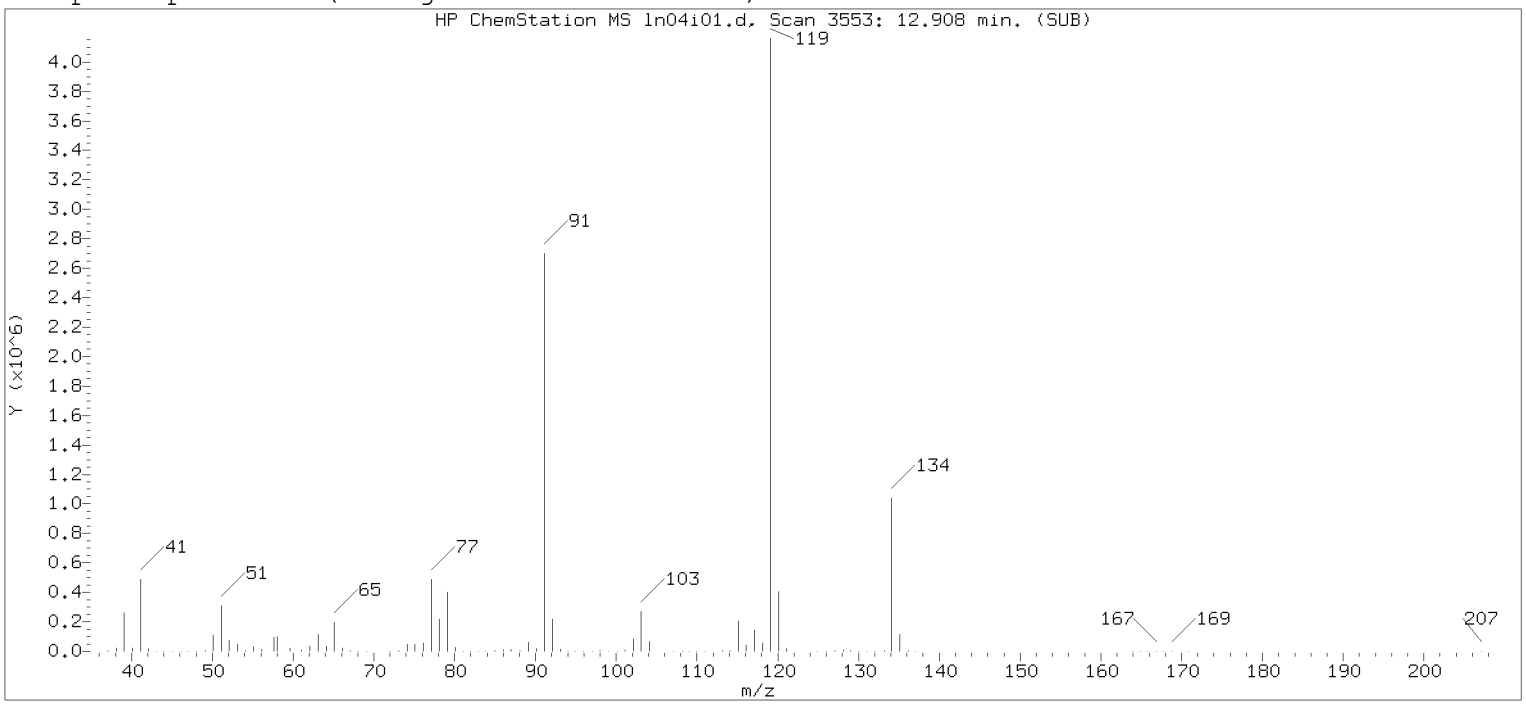
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area (flag) : 1524421M
On-Column Amount (ng) : 323.7167
Integration start scan : 3538 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

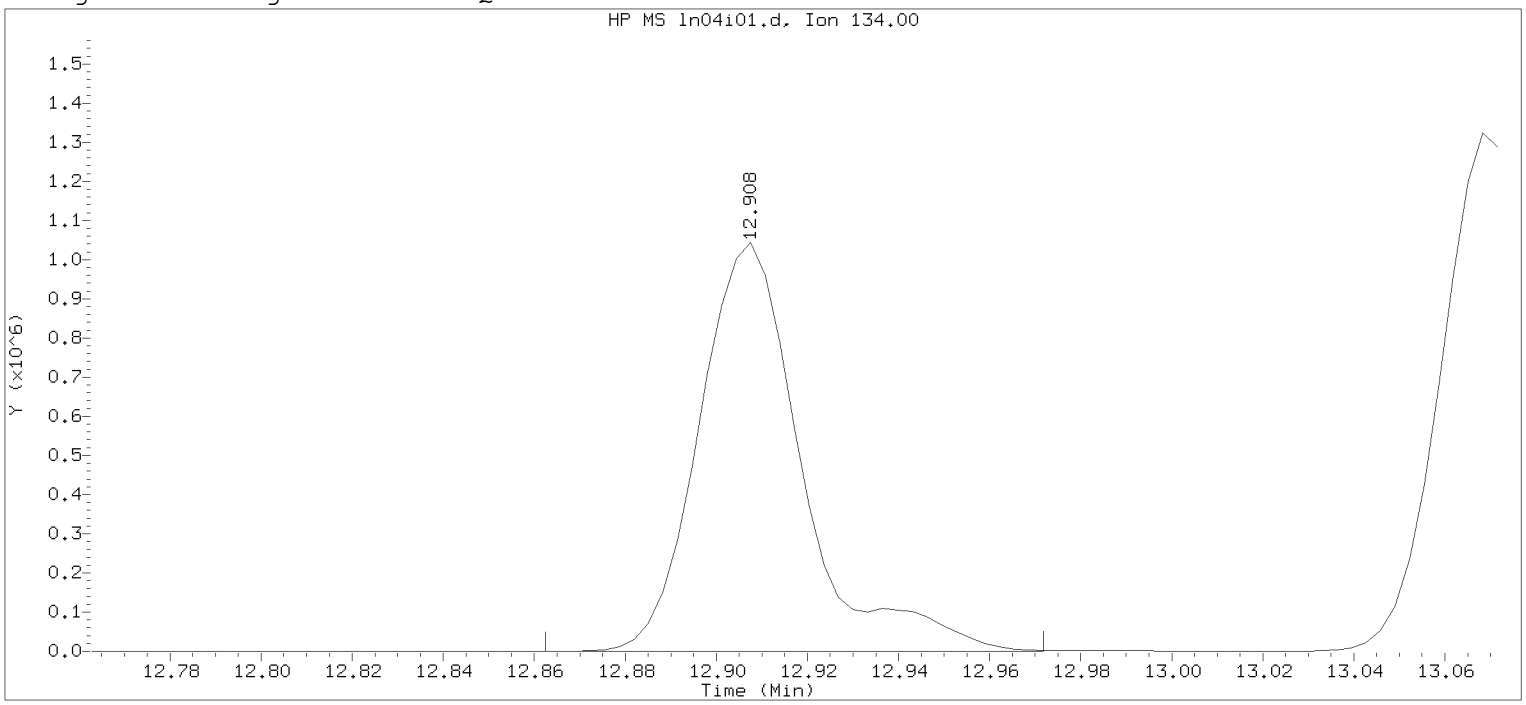
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



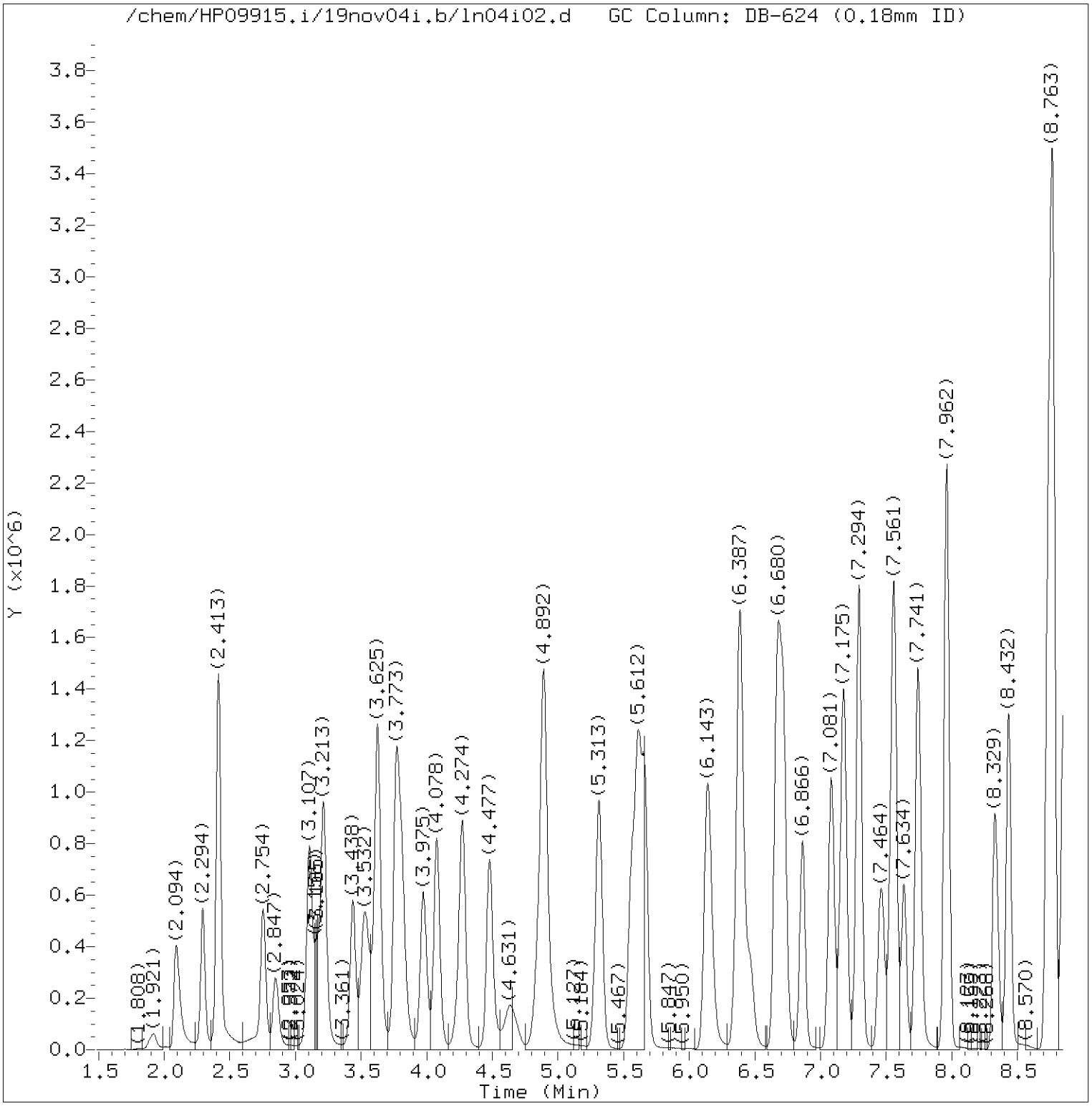
Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area : 1639624
On-column Amount (ng) : 313.1253
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

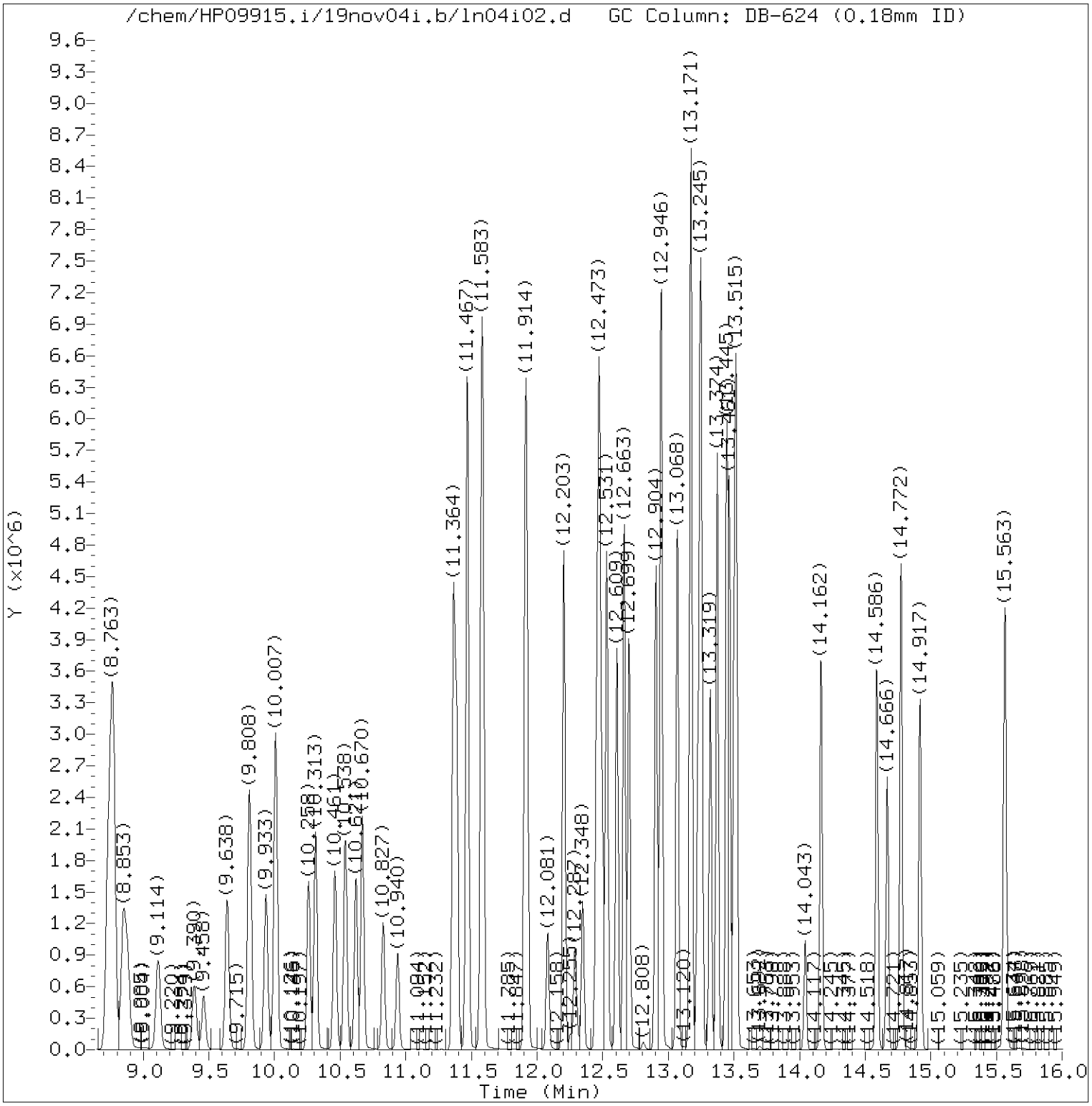
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.094	85	857961M	103.943
4) Chloromethane	(2)	2.294	50	784780	98.650
5) 1,3-Butadiene	(2)	2.413	39	618713M	93.669
6) Vinyl Chloride	(2)	2.416	62	781267	98.400
8) Bromomethane	(2)	2.754	94	539686	94.824
9) Chloroethane	(2)	2.847	64	418524	95.919
10) Dichlorofluoromethane	(2)	3.104	67	992796M	94.678
12) Trichlorofluoromethane	(2)	3.162	101	860893	100.714
11) n-Pentane	(2)	3.217	43	1002713	99.263
14) Ethyl ether	(2)	3.435	59	550266	99.622
15) Freon 123a	(2)	3.532	67	679642	98.841
16) Acrolein	(1)	3.625	56	2075331	1040.029
17) 1,1-Dichloroethene	(2)	3.763	96	510815	101.811
17) 1,1-Dichloroethene	(2)	3.766	63	250669	99.655
19) Freon 113	(2)	3.799	101	594686	103.888
18) Acetone	(1)	3.805	58	181313	202.676
22) Methyl Iodide	(2)	3.972	142	1051103	101.097
21) 2-Propanol	(1)	4.001	45	343390	533.946
23) Carbon Disulfide	(2)	4.078	76	1957296	103.520
27) Methyl Acetate	(2)	4.252	43	630892	97.630
25) Allyl Chloride	(2)	4.274	41	894091	99.337
28) Methylene Chloride	(2)	4.477	84	596882	99.952
29)*t-Butyl alcohol-d10	(1)	4.509	65	265971M	250.000
30) t-Butyl alcohol	(1)	4.631	59	619917	553.614
31) Acrylonitrile	(2)	4.837	53	359403	103.376
33) Methyl Tertiary Butyl Ether	(2)	4.889	73	1901626	99.813
32) trans-1,2-Dichloroethene	(2)	4.892	96	586662	101.076
34) n-Hexane	(2)	5.313	57	974442M	107.908
36) 1,1-Dichloroethane	(2)	5.557	63	1029230	101.649
38) di-Isopropyl ether	(2)	5.609	45	1986383	101.717
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	947614	104.312
40) Ethyl t-butyl ether	(2)	6.143	59	1910218	100.794
43) 1,2-Dichloroethene (Total)	(2)		96	1240957	201.508
44) 2-Butanone	(2)	6.364	43	920731	206.310
42) cis-1,2-Dichloroethene	(2)	6.384	96	654295	100.432
45) 2,2-Dichloropropane	(2)	6.400	77	813782	103.388
47) Propionitrile	(1)	6.464	54	725632	520.085
48) Methacrylonitrile	(2)	6.676	67	966183	257.629

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	349204	101.088
50) Tetrahydrofuran	(1)	6.721	71	261419	207.429
51) Chloroform	(2)	6.866	83	989698	102.195
52)$Dibromofluoromethane	(2)	7.078	113	292391	50.529
52)$Dibromofluoromethane	(2)	7.078	111	297764	50.467
53) 1,1,1-Trichloroethane	(2)	7.088	97	860519	104.109
54) Cyclohexane	(2)	7.175	56	1170449	105.893
54) Cyclohexane	(2)	7.181	84	1022362	106.481
54) Cyclohexane	(2)	7.175	69	362451	106.017
56) Carbon Tetrachloride	(2)	7.290	117	751477	107.196
55) 1,1-Dichloropropene	(2)	7.297	75	823627	102.878
58) Isobutyl Alcohol	(1)	7.461	41	528441	1402.358
57)$1,2-Dichloroethane-d4	(2)	7.535	102	74158	50.284
57)$1,2-Dichloroethane-d4	(2)	7.535	65	331294	50.408
57)$1,2-Dichloroethane-d4	(2)	7.535	104	47551	50.479
60) Benzene	(2)	7.561	78	2423634	100.668
61) 1,2-Dichloroethane	(2)	7.638	62	757974	97.883
61) 1,2-Dichloroethane	(2)	7.641	98	76152	99.373
65) t-Amyl methyl ether	(2)	7.741	73	1946110	102.306
67) n-Heptane	(2)	7.962	43	911962MA	108.104
66)*Fluorobenzene	(2)	7.962	96	1183605	50.000
69) n-Butanol	(1)	8.329	56	944383M	2911.812
71) Trichloroethene	(2)	8.432	95	618983	102.110
72) Methylcyclohexane	(2)	8.734	83	1164174	103.516
72) Methylcyclohexane	(2)	8.734	98	527428	103.640
73) 1,2-Dichloropropane	(2)	8.773	63	625914	102.385
76) Methyl Methacrylate	(2)	8.847	69	640445A	108.334
75) 1,4-Dioxane	(1)	8.856	88	117817M	1321.647
74) Dibromomethane	(2)	8.882	93	410059	103.668
78) Bromodichloromethane	(2)	9.114	83	770805	108.595
79) 2-Nitropropane	(2)	9.390	41	488862	227.388
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	284759	108.454
81) cis-1,3-Dichloropropene	(2)	9.638	75	1026055	108.840
82) 4-Methyl-2-pentanone	(2)	9.808	43	1972651	209.410
83)$Toluene-d8	(3)	9.933	98	1216793	49.703
83)$Toluene-d8	(3)	9.933	100	789846	49.806
88) Toluene	(3)	10.007	92	1555339	101.336
90) 1,3-Dichloropropene (total)	(3)		100	1994775	220.026

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	968720	111.186
91) Ethyl Methacrylate	(3)	10.313	69	1159403	109.496
92) 1,1,2-Trichloroethane	(3)	10.461	97	606132	104.163
93) Tetrachloroethene	(3)	10.541	166	663260	102.036
94) 1,3-Dichloropropane	(3)	10.621	76	1023947	103.060
96) 2-Hexanone	(3)	10.670	43	1457165	206.170
97) Dibromochloromethane	(3)	10.827	129	678552	113.835
99) 1,2-Dibromoethane	(3)	10.940	107	665574	105.331
100)*Chlorobenzene-d5	(3)	11.361	117	935628	50.000
101) 1-Chlorohexane	(3)	11.364	91	826713	100.265
102) Chlorobenzene	(3)	11.387	112	1760002	101.404
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	622547	108.864
104) Ethylbenzene	(3)	11.470	91	3015086	102.779
106) m+p-Xylene	(3)	11.583	106	2388845	206.999
108) Xylene (Total)	(3)		106	3566525	310.313
107) o-Xylene	(3)	11.908	106	1177680	103.314
109) Styrene	(3)	11.924	104	1996461	105.988
110) Bromoform	(3)	12.081	173	502388	112.791
111) Isopropylbenzene	(3)	12.203	105	2980812	104.258
112) Cyclohexanone	(1)	12.287	55	431750	1236.644
114)$4-Bromofluorobenzene	(3)	12.348	95	458263	49.435
114)$4-Bromofluorobenzene	(3)	12.348	174	380301	49.485
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	995972M	105.317
115) Bromobenzene	(4)	12.464	156	778170	103.423
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	790040	270.837
117) 1,2,3-Trichloropropane	(4)	12.496	110	303037	104.425
119) n-Propylbenzene	(4)	12.531	91	3409679	103.724
120) 2-Chlorotoluene	(4)	12.609	126	718635	102.905
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	2528195	105.828
121) 4-Chlorotoluene	(4)	12.699	126	737830	101.502
124) tert-Butylbenzene	(4)	12.904	134	526781M	106.622
125) Pentachloroethane	(4)	12.940	167	474988	111.651
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	2664001	105.806
127) sec-Butylbenzene	(4)	13.068	105	3153429	106.963
129) 1,3-Dichlorobenzene	(4)	13.168	146	1407080	101.768
130) p-Isopropyltoluene	(4)	13.171	119	2746850	107.698
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	500629	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	1451933	101.297

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

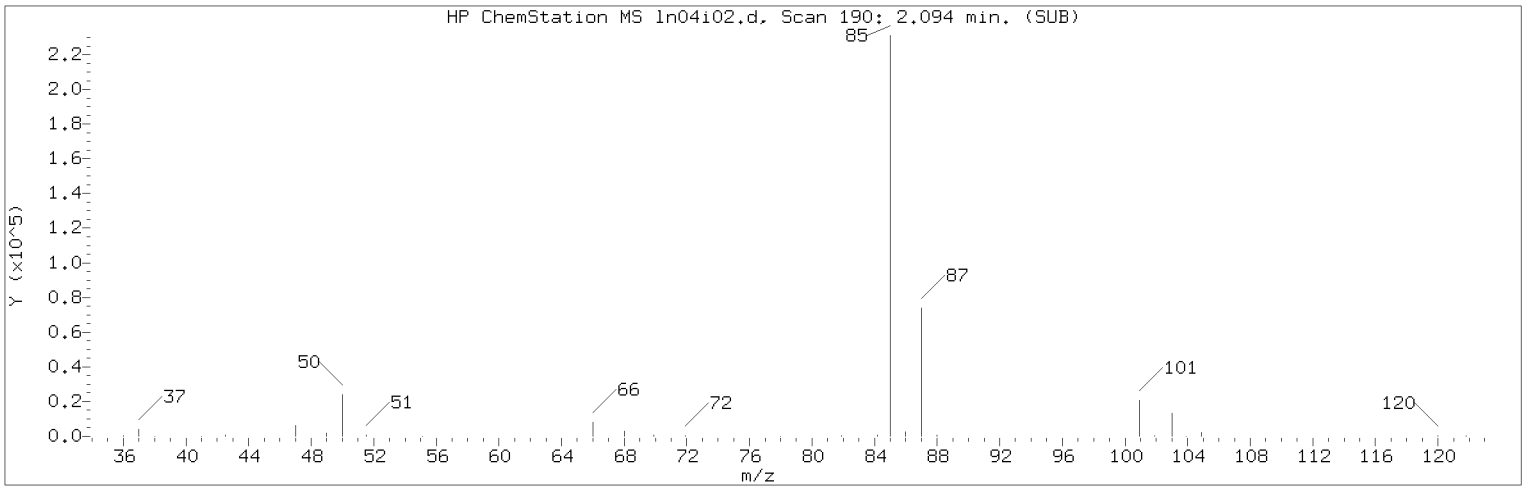
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

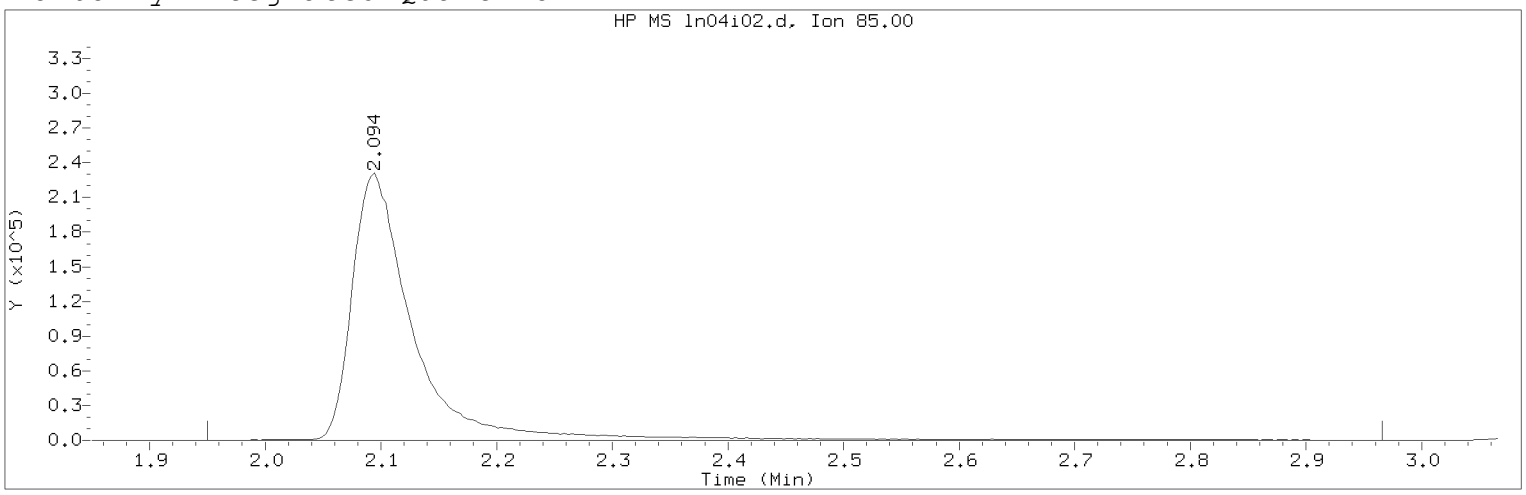
	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134)	1,2,3-Trimethylbenzene	(4)	13.252	105	2711349	101.660
135)	Benzyl Chloride	(4)	13.319	91	2226905	110.280
136)	1,3-Diethylbenzene	(4)	13.374	119	1705244	102.734
141)	Diethylbenzene (total)	(4)		100	4934627	307.371
137)	1,4-Diethylbenzene	(4)	13.445	119	1791059	101.846
139)	n-Butylbenzene	(4)	13.464	92	1355994	103.980
138)	1,2-Dichlorobenzene	(4)	13.502	146	1381717	101.273
140)	1,2-Diethylbenzene	(4)	13.518	119	1438324	102.791
142)	1,2-Dibromo-3-chloropropane	(4)	14.043	75	224965	108.669
144)	1,3,5-Trichlorobenzene	(4)	14.162	180	1074198	102.479
146)	1,2,4-Trichlorobenzene	(4)	14.589	180	1034842	101.533
147)	Hexachlorobutadiene	(4)	14.666	225	430531	89.465
148)	Naphthalene	(4)	14.772	128	3428000	104.621
149)	1,2,3-Trichlorobenzene	(4)	14.917	180	1010801	101.922
150)	2-Methylnaphthalene	(4)	15.563	142	2117626	104.952

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

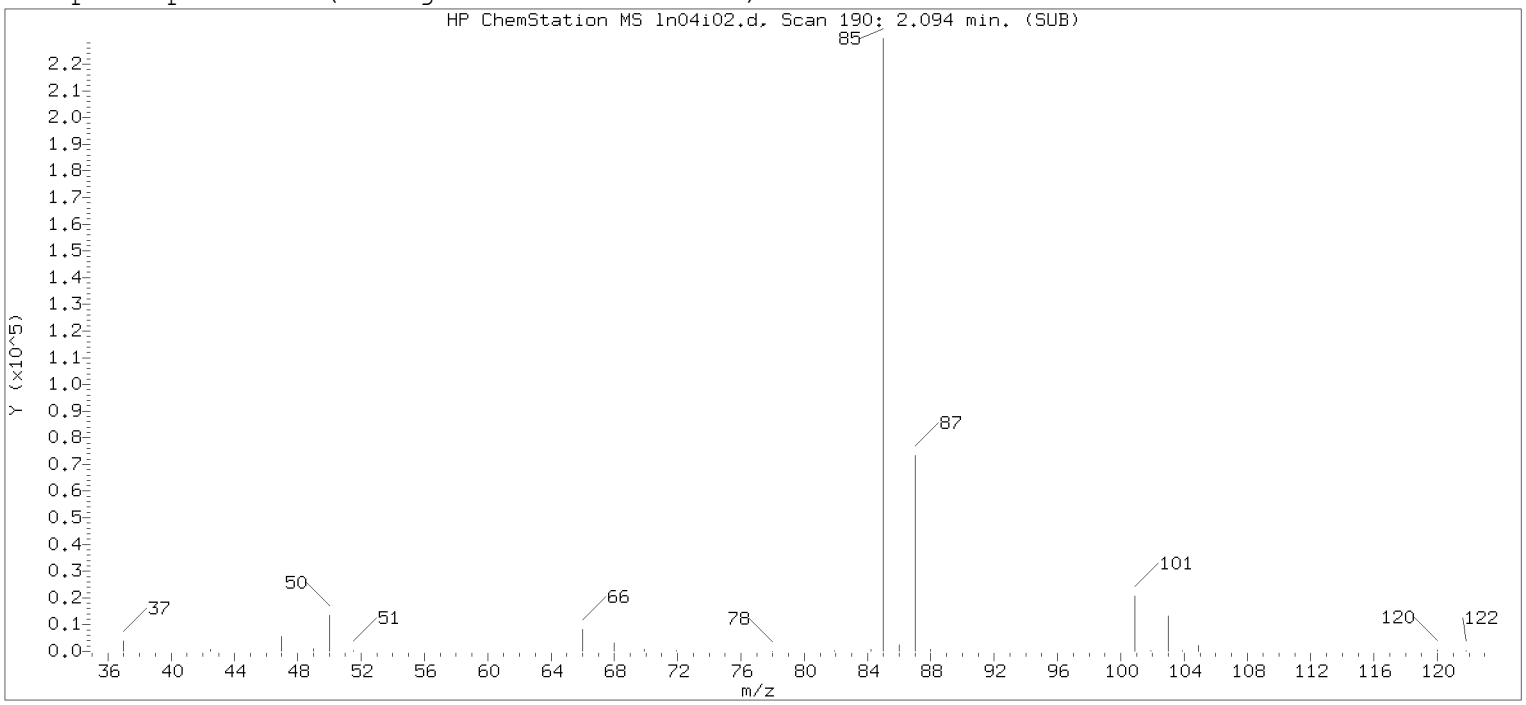
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area (flag) : 857961M
On-Column Amount (ng) : 103.9433
Integration start scan : 144 Integration stop scan: 460
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

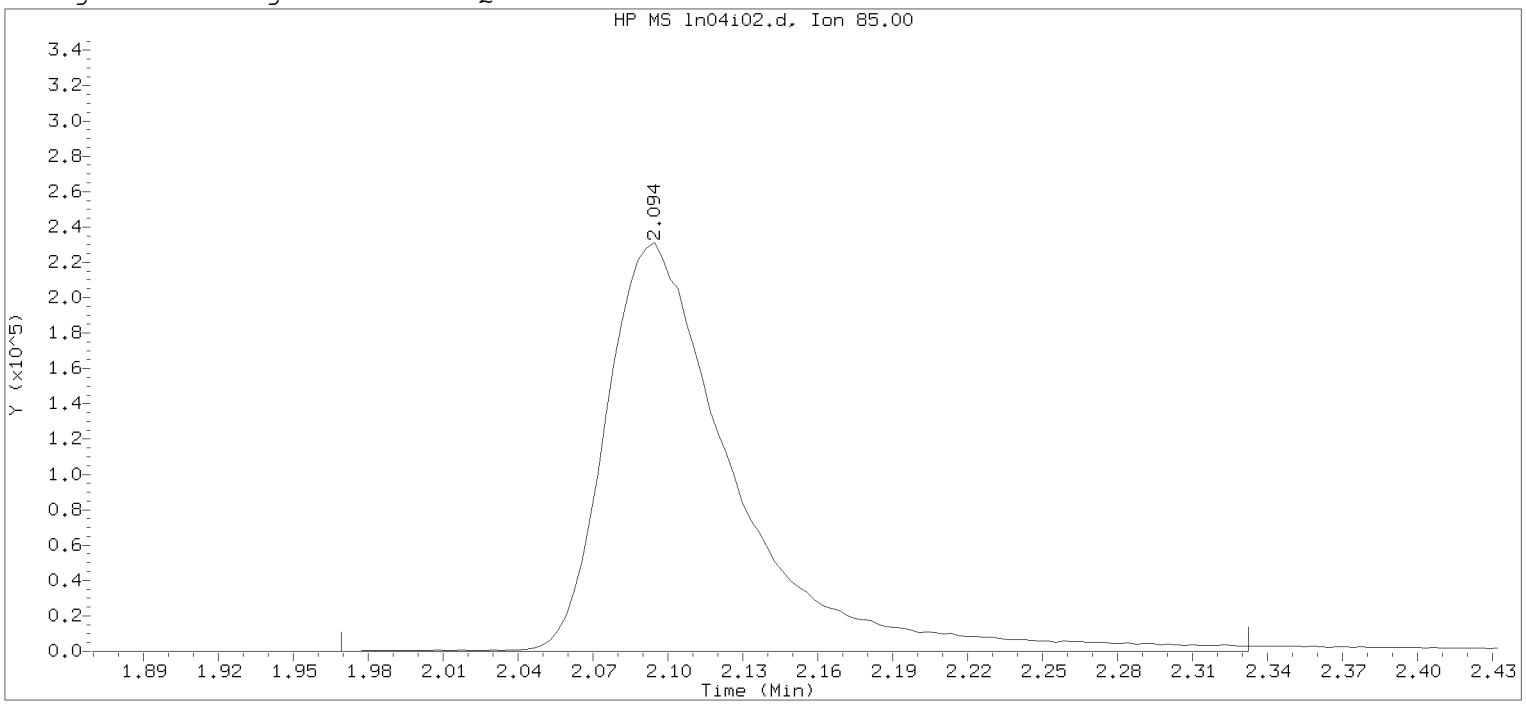
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

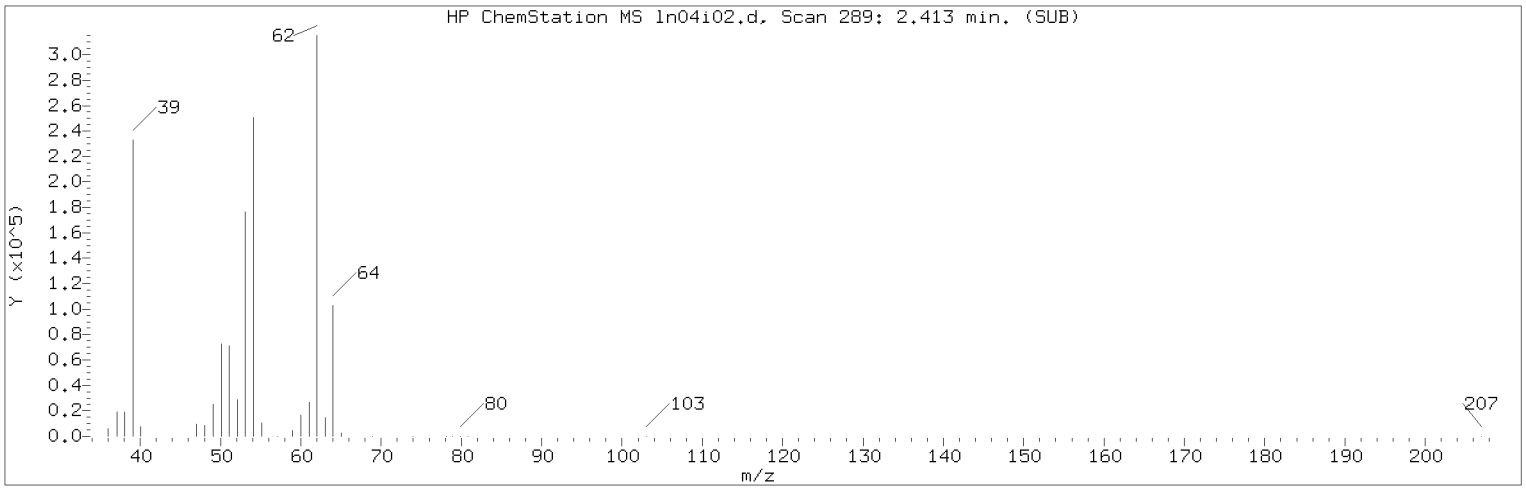
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

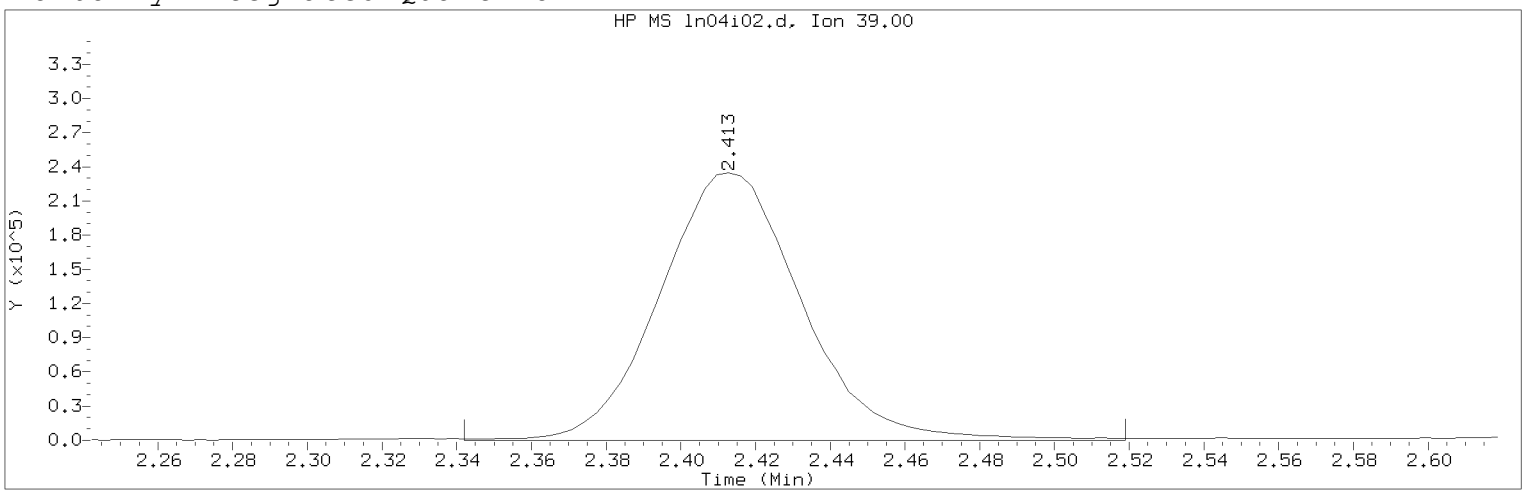
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area : 824639
On-column Amount (ng) : 94.4157
Integration start scan : 150 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

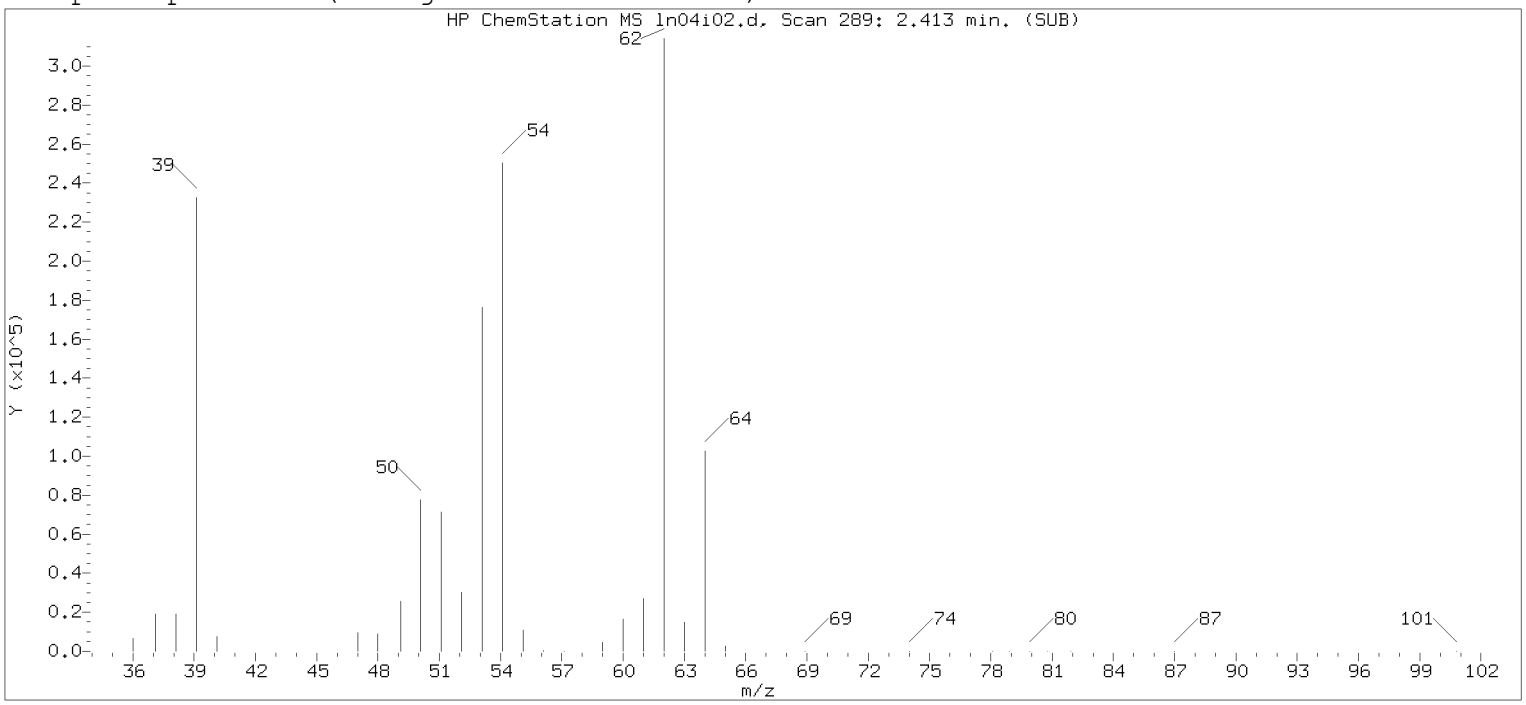
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area (flag) : 618713M
On-Column Amount (ng) : 93.6685
Integration start scan : 266 Integration stop scan: 321
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

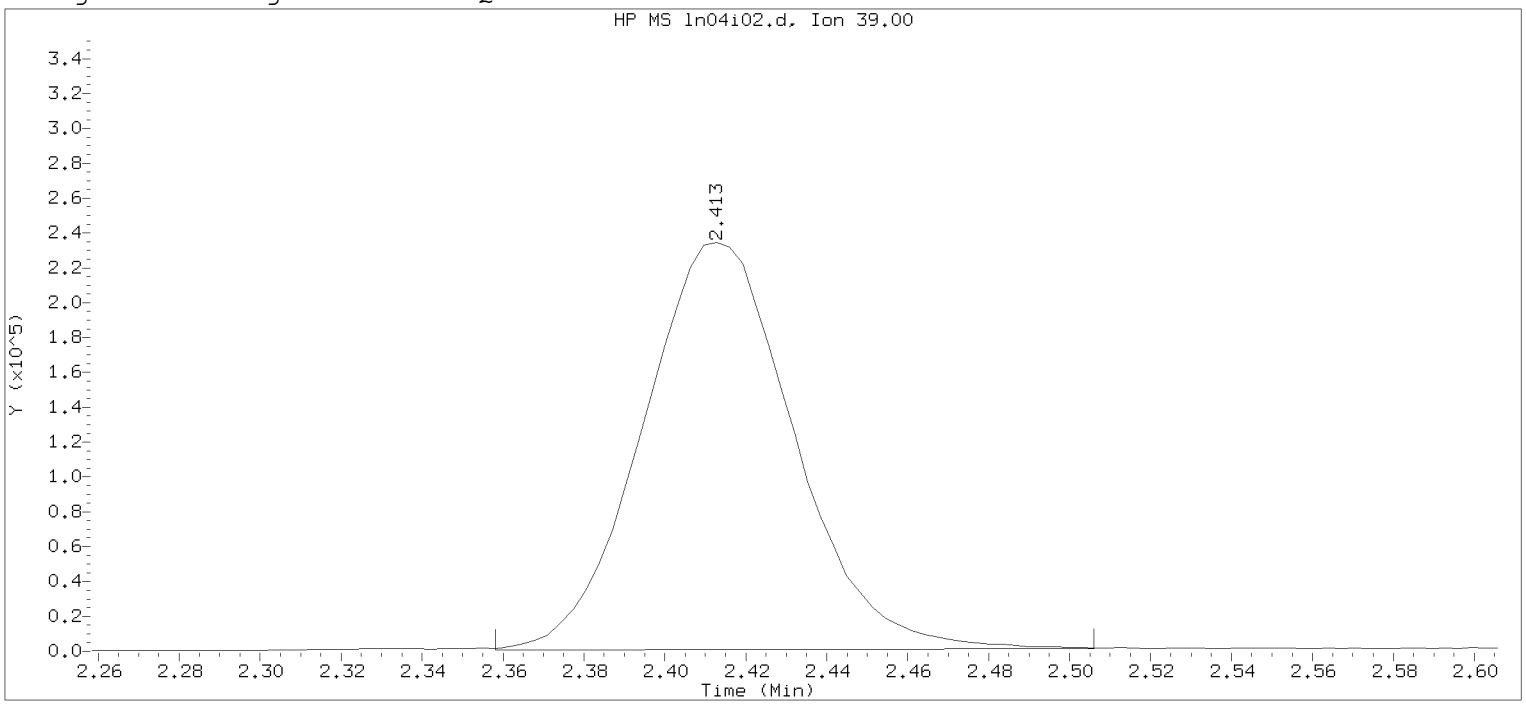
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

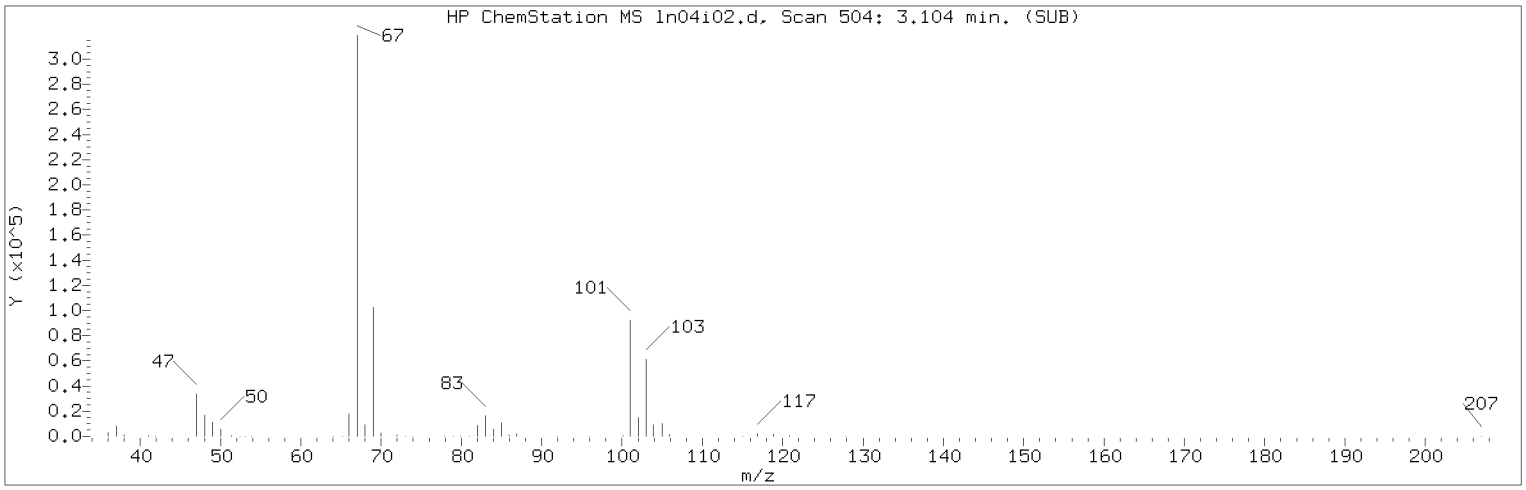
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

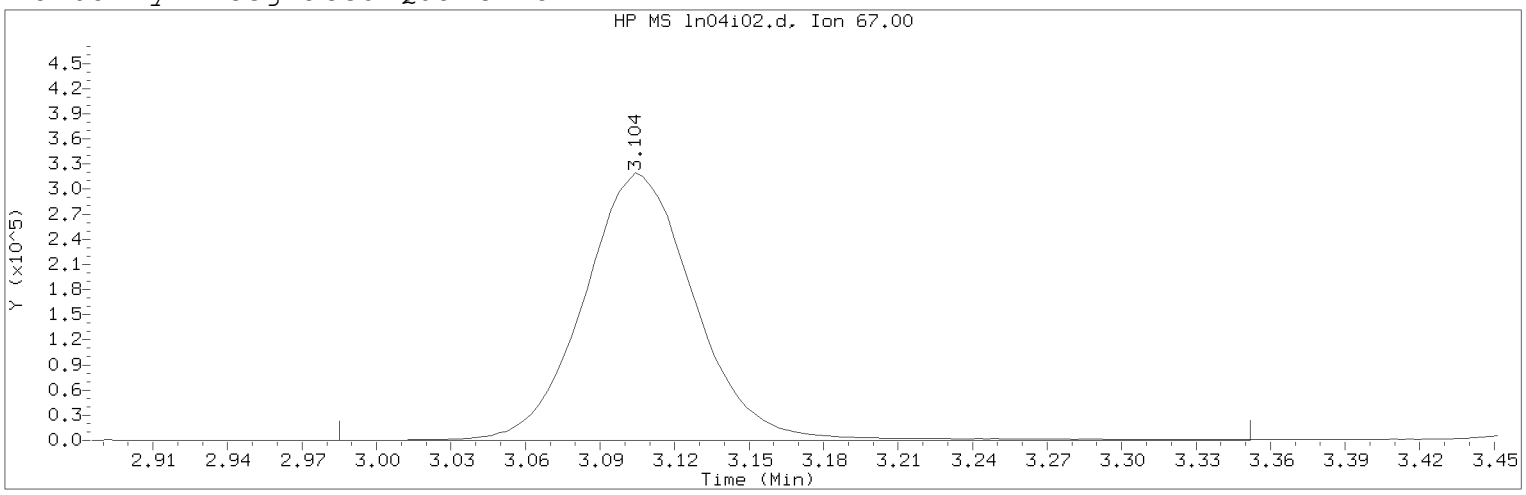
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area : 605602
On-column Amount (ng) : 97.5651
Integration start scan : 271 Integration stop scan: 317
Y at integration start : 806 Y at integration end: 1441

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

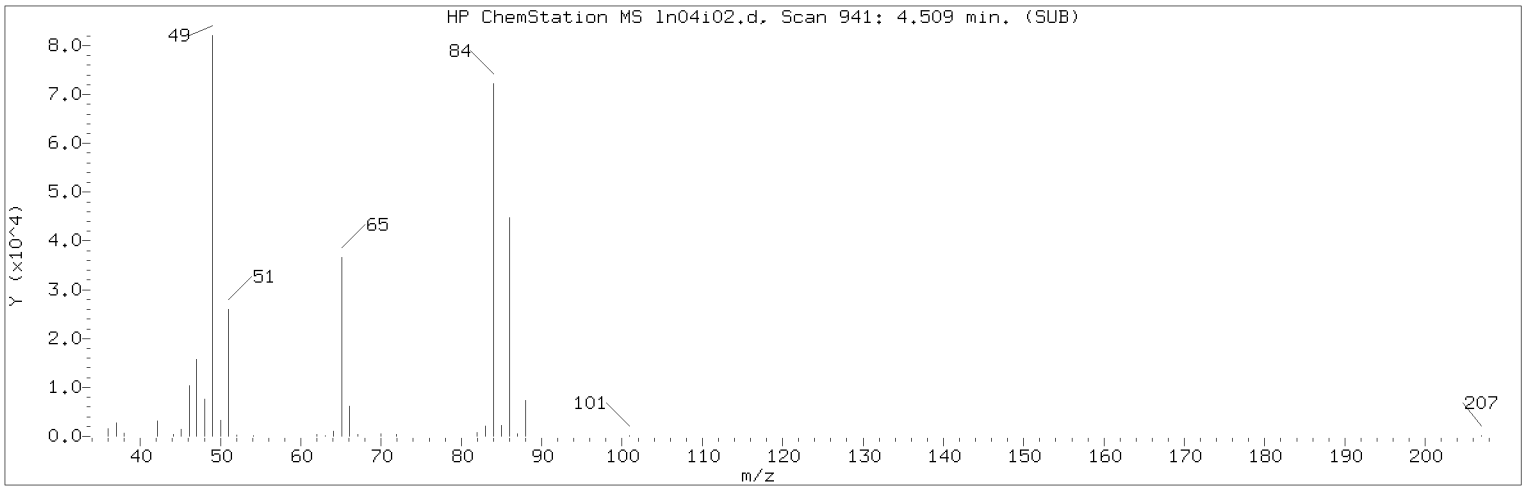
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 504
Retention Time (minutes): 3.104
Quant Ion : 67.00
Area (flag) : 992796M
On-Column Amount (ng) : 94.6777
Integration start scan : 466 Integration stop scan: 580
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

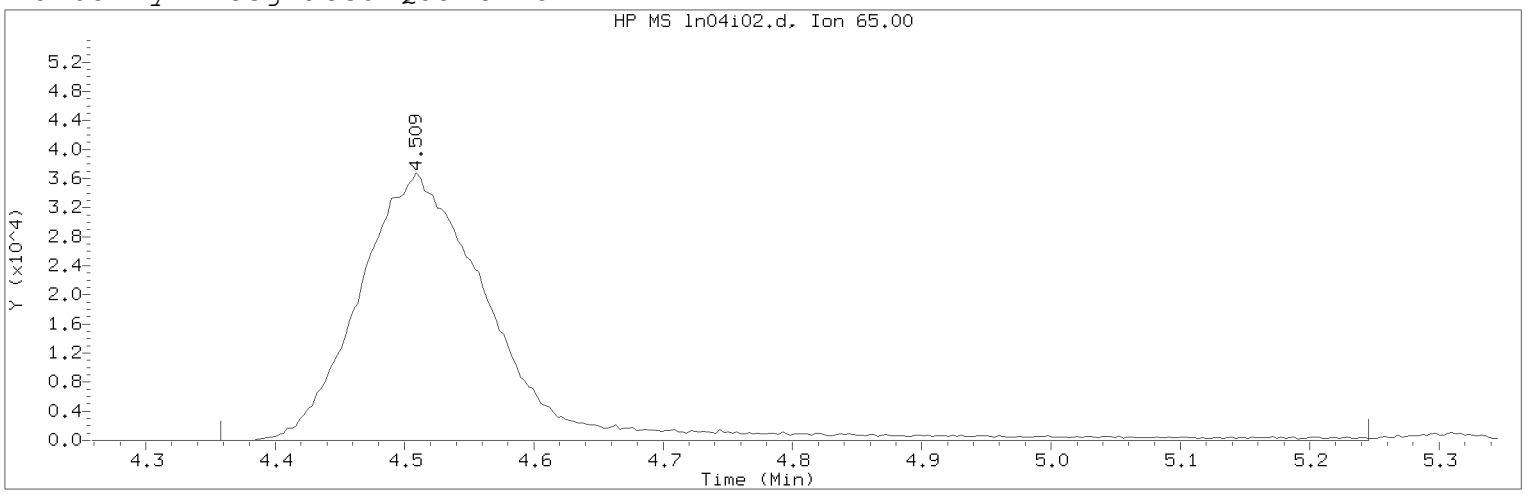
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

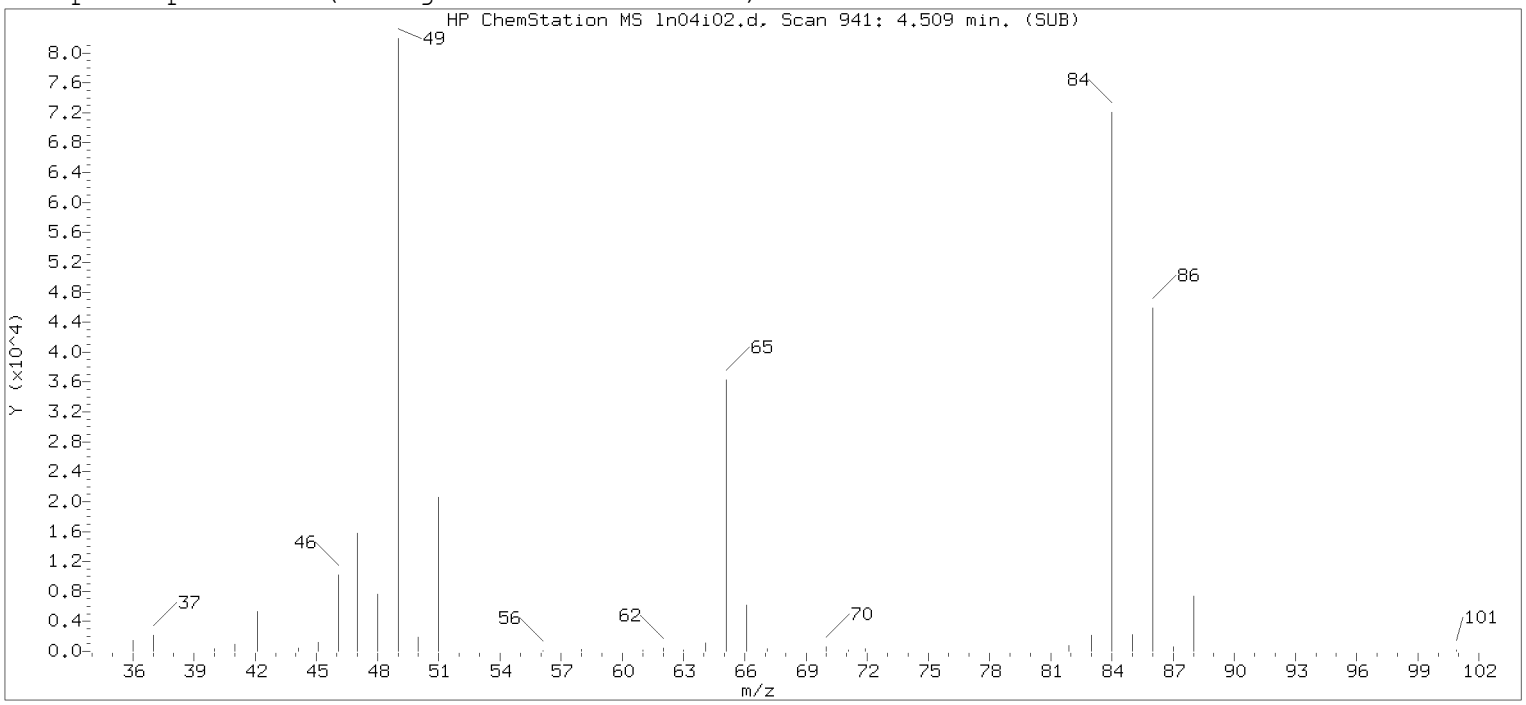
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 265971M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1169
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

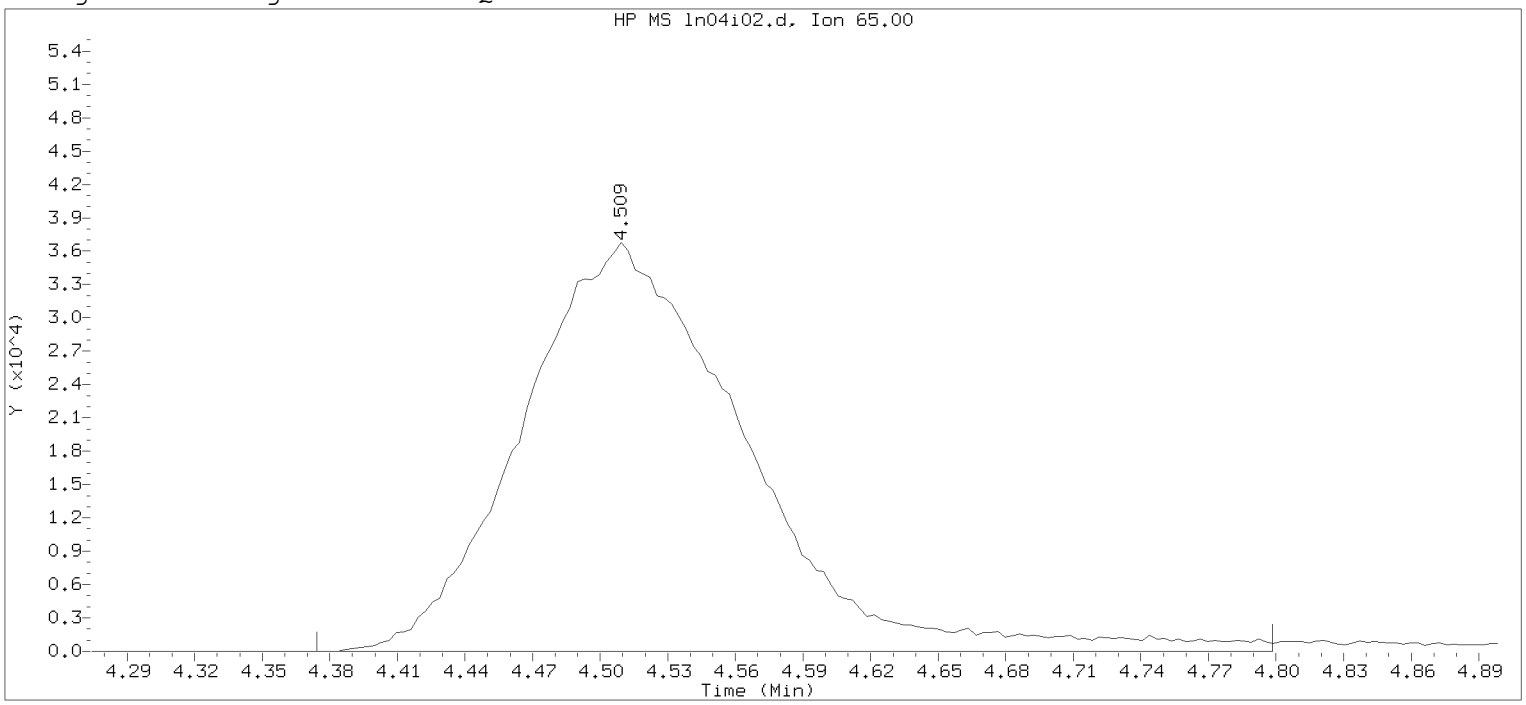
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

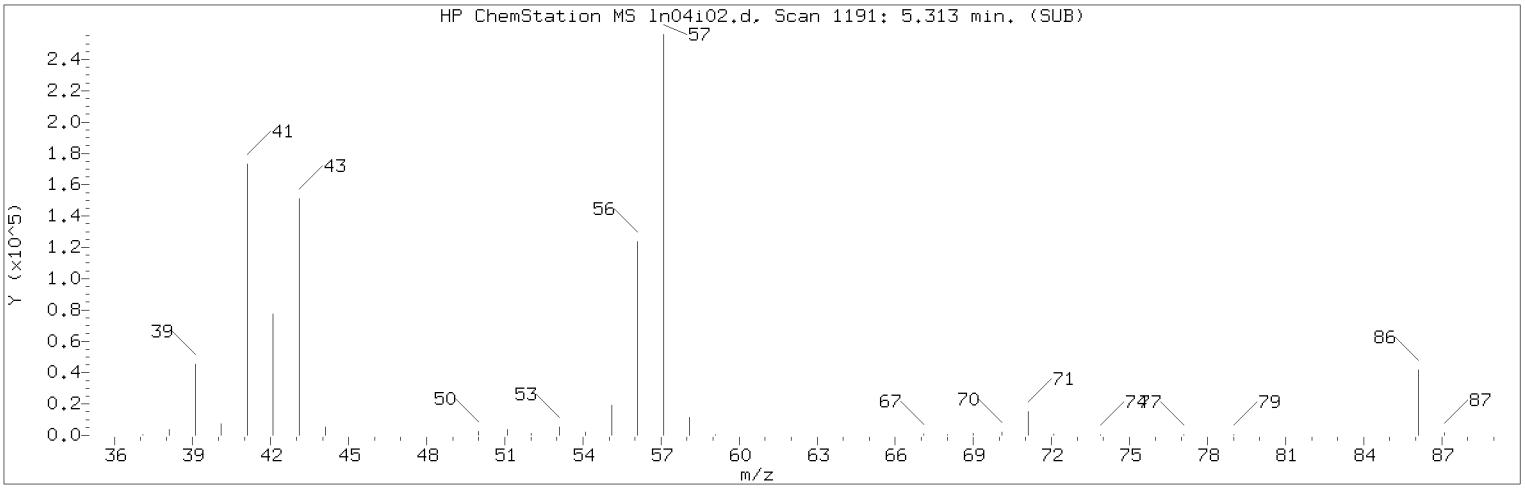
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

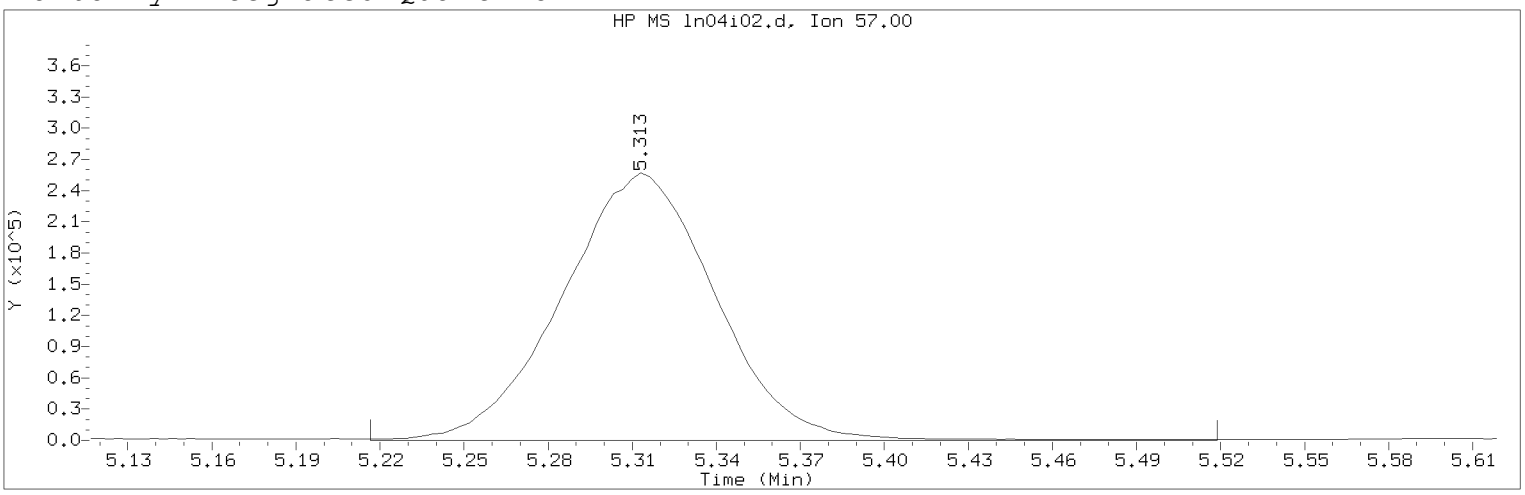
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 252632
On-column Amount (ng) : 250.0000
Integration start scan : 898 Integration stop scan: 1030
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

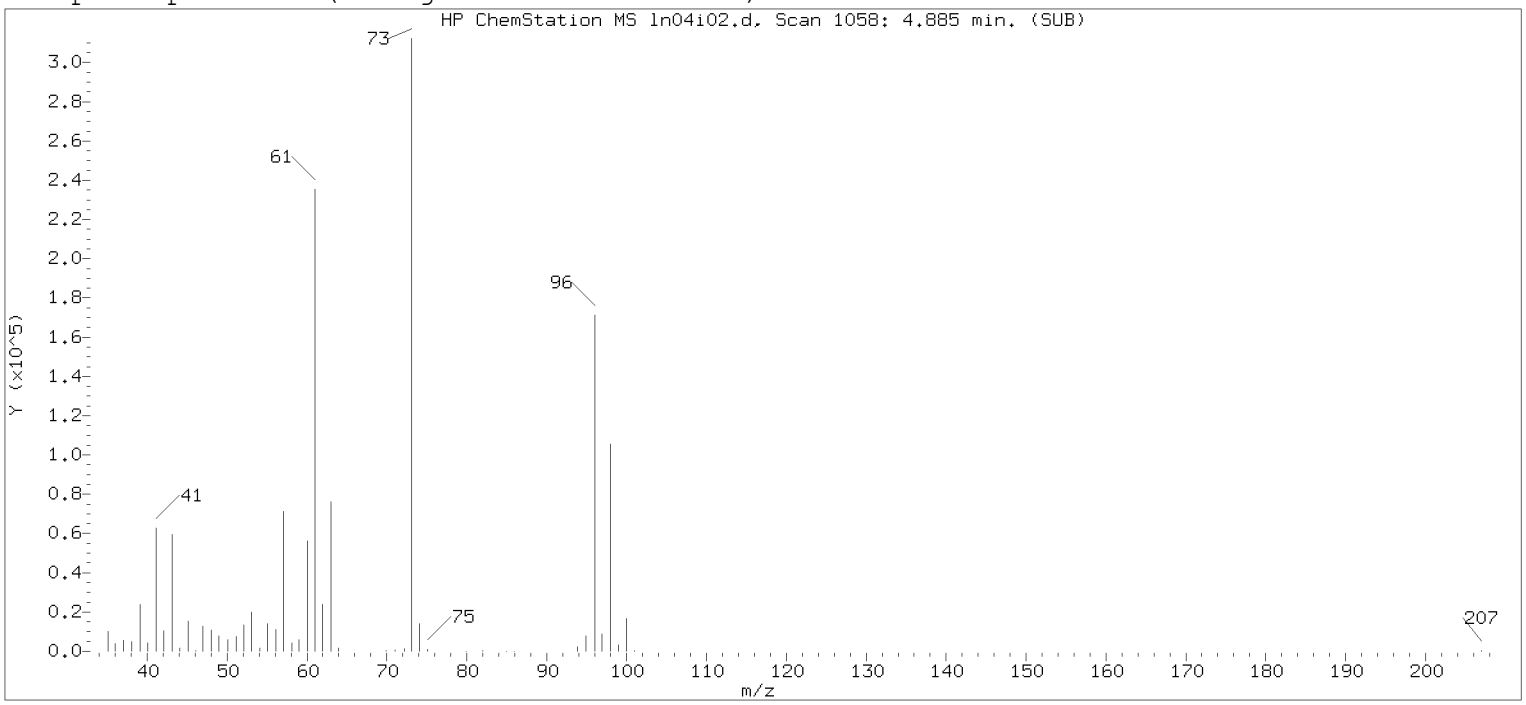
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1191
Retention Time (minutes): 5.313
Quant Ion : 57.00
Area (flag) : 974442M
On-Column Amount (ng) : 107.9083
Integration start scan : 1160 Integration stop scan: 1254
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

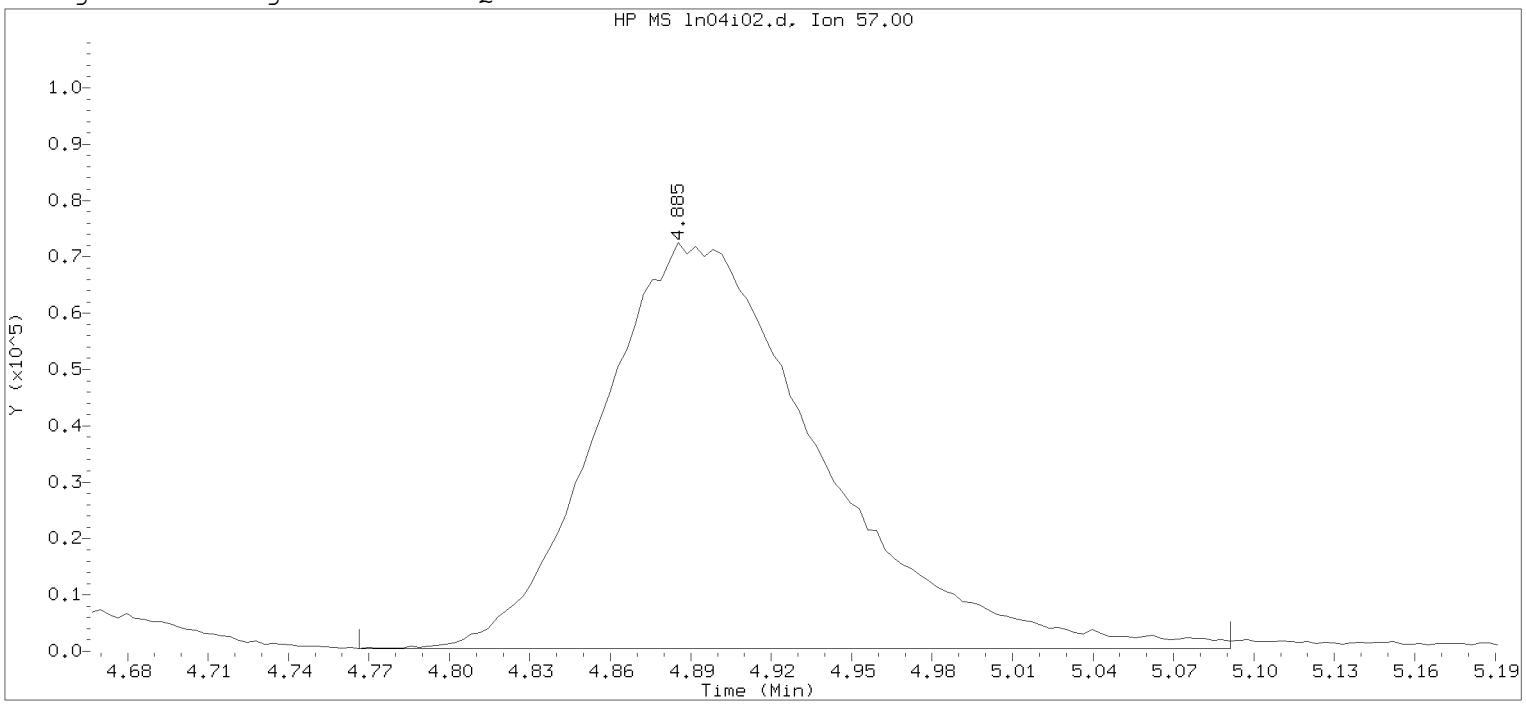
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

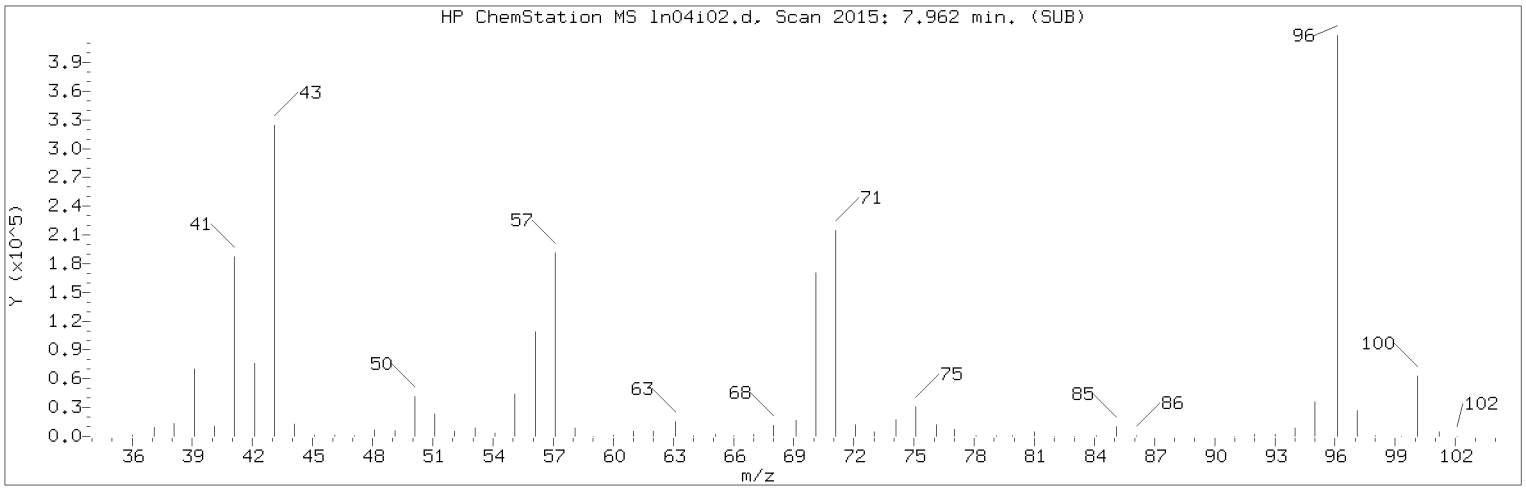
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

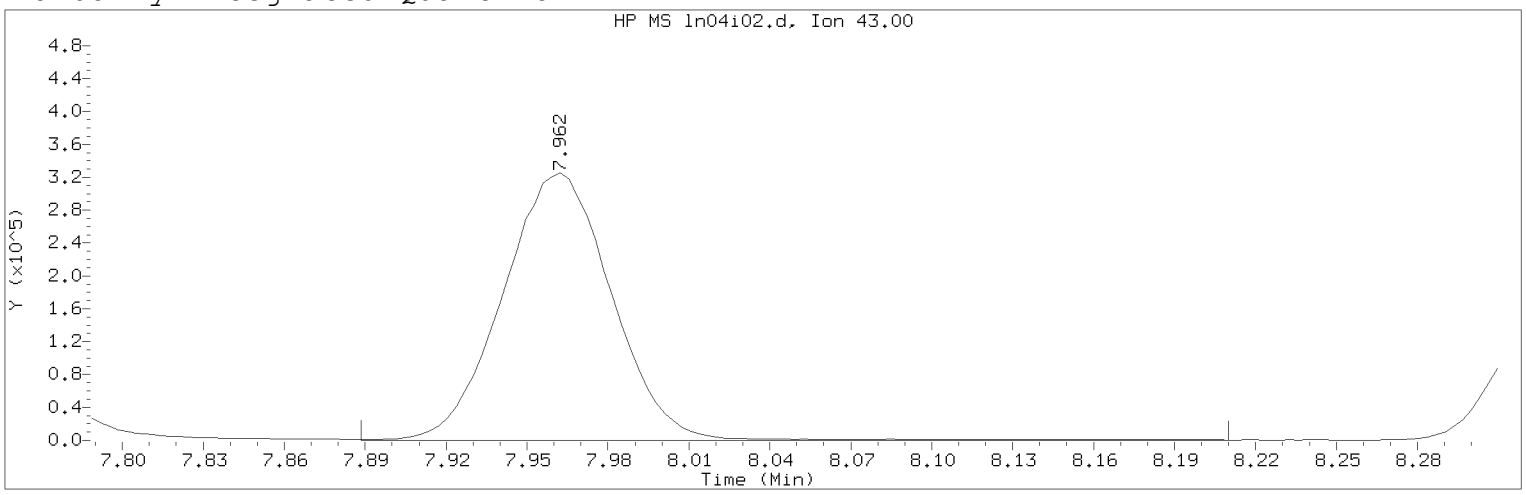
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1058
Retention Time (minutes): 4.885
Quant Ion : 57.00
Area : 414312
On-column Amount (ng) : 98.9070
Integration start scan : 1020 Integration stop scan: 1121
Y at integration start : 485 Y at integration end: 485

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

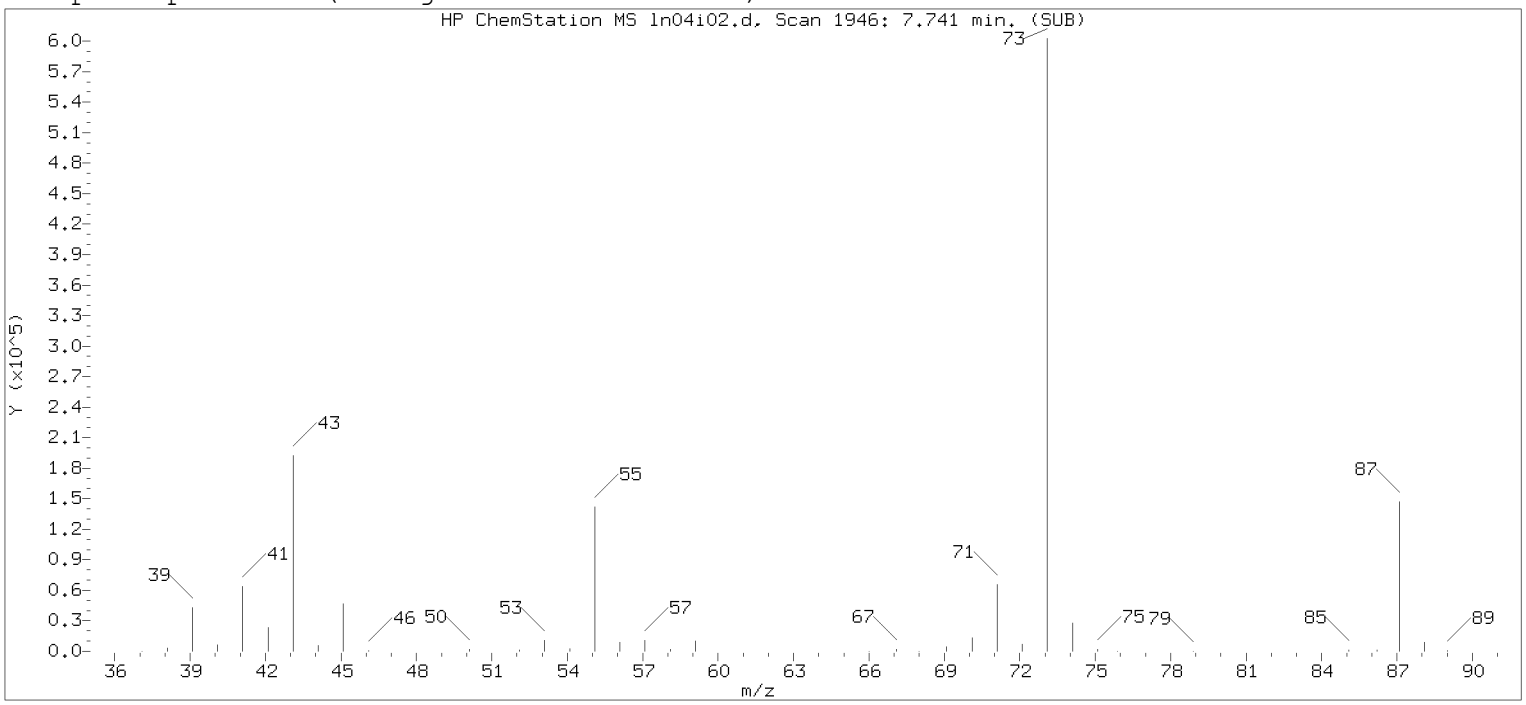
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2015
Retention Time (minutes): 7.962
Quant Ion : 43.00
Area (flag) : 911962MA
On-Column Amount (ng) : 108.1037
Integration start scan : 1991 Integration stop scan: 2091
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

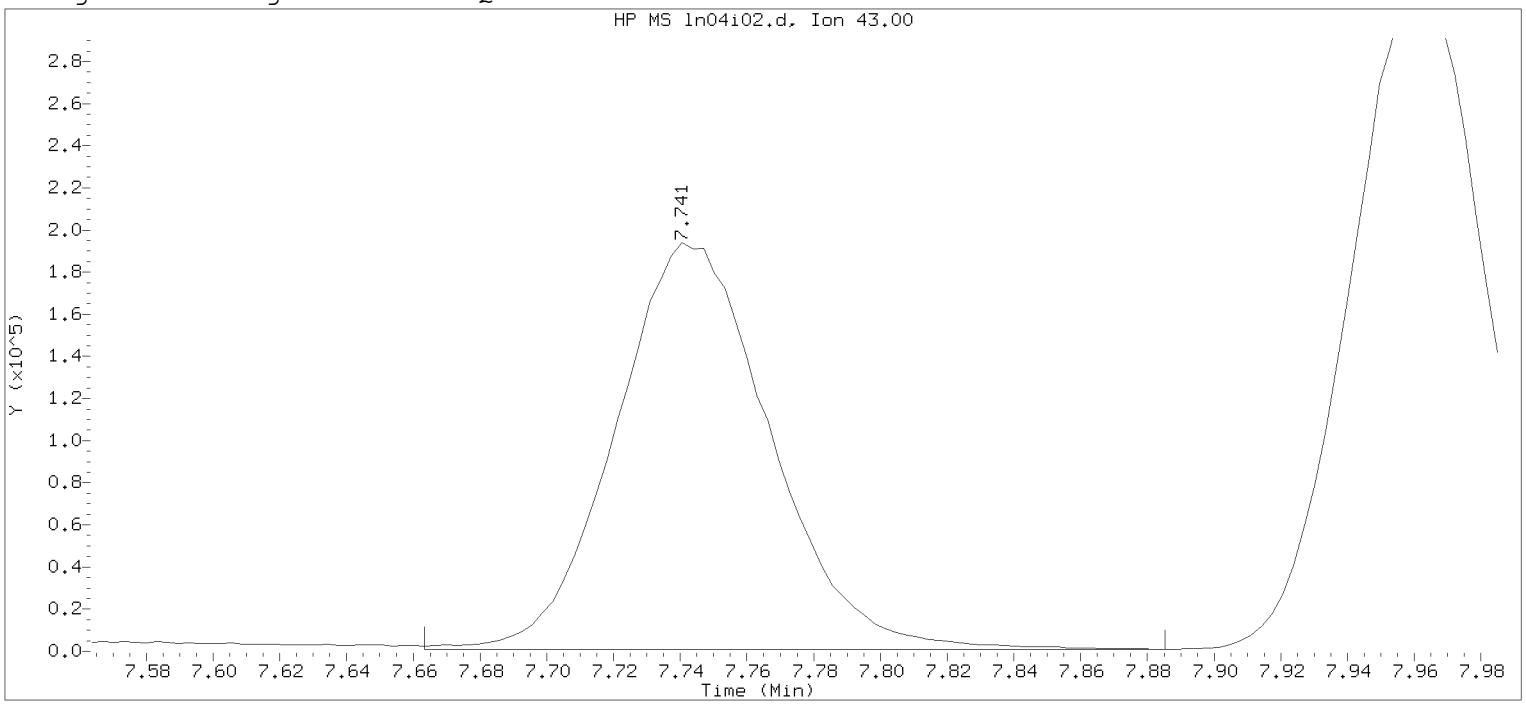
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

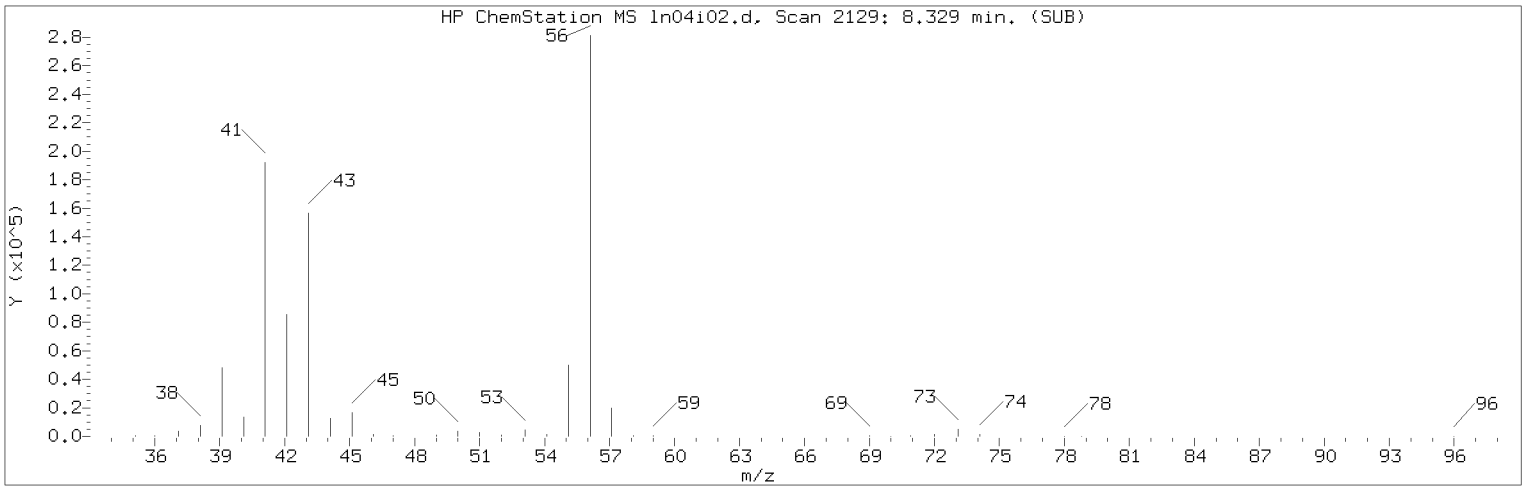
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

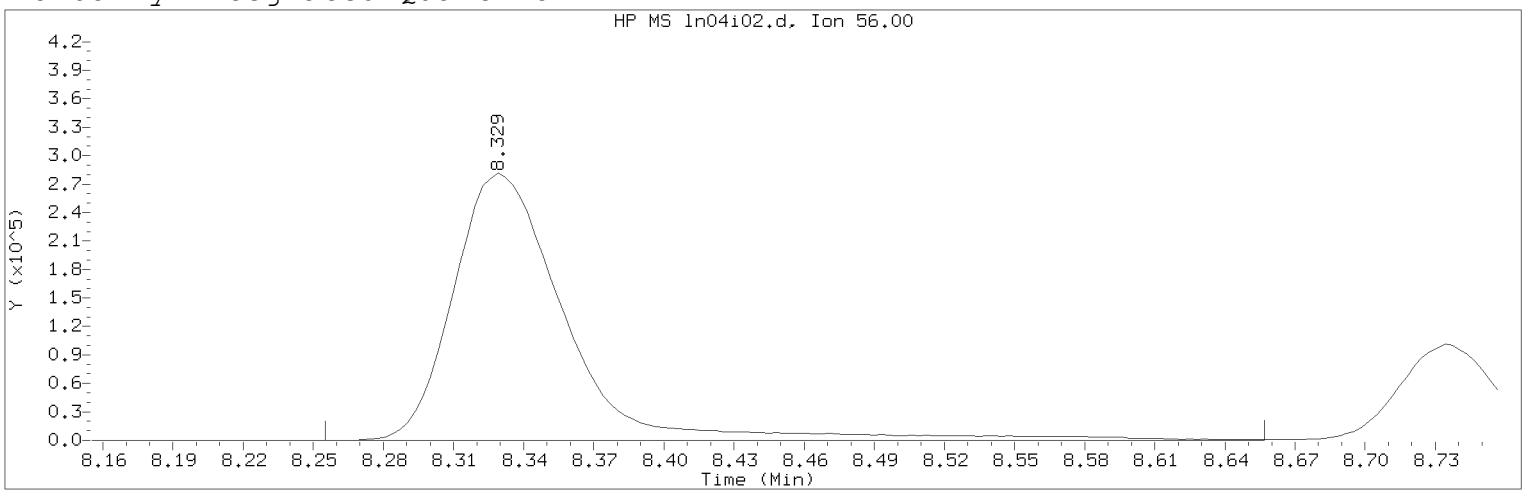
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.741
Quant Ion : 43.00
Area : 623358
On-column Amount (ng) : 101.3435
Integration start scan : 1921 Integration stop scan: 1990
Y at integration start : 845 Y at integration end: 845

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

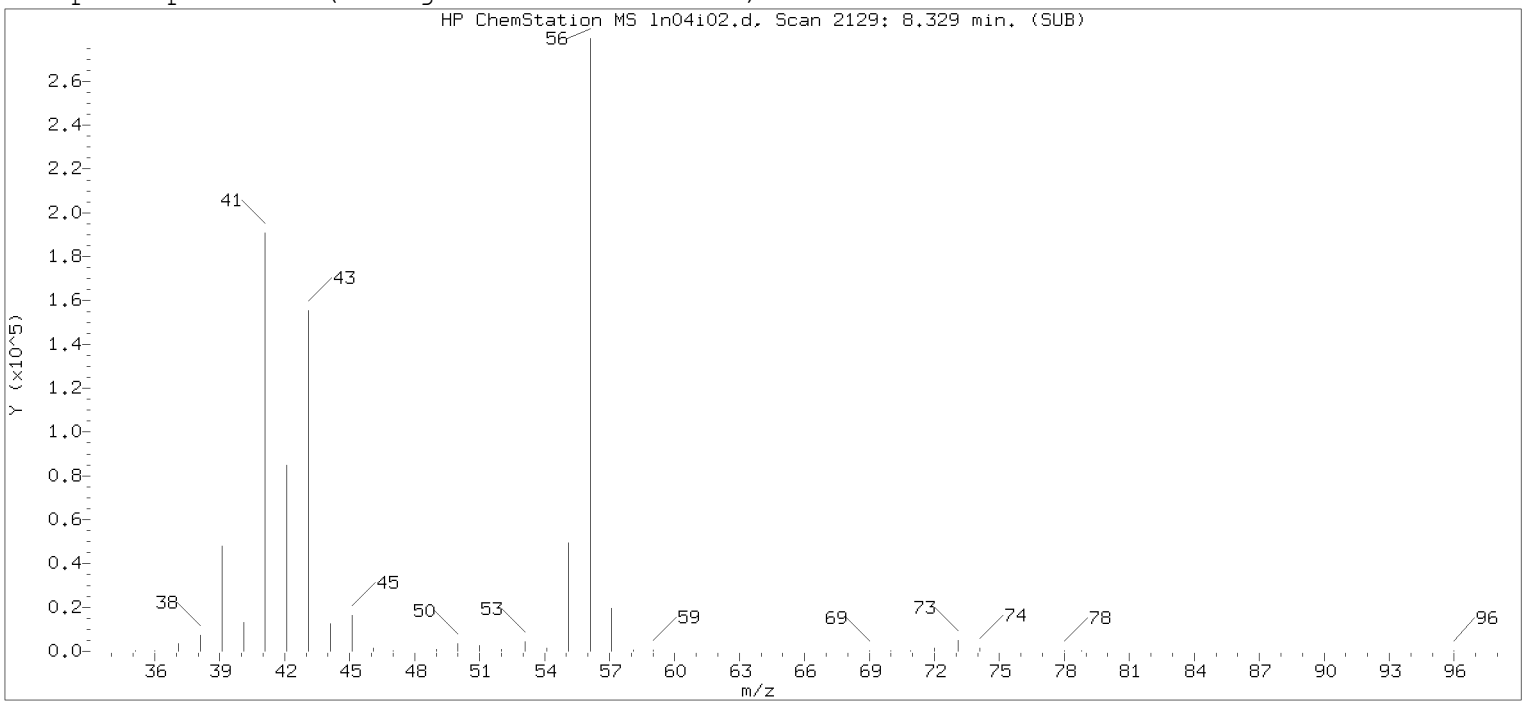
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area (flag) : 944383M
On-Column Amount (ng) : 2911.8124
Integration start scan : 2105 Integration stop scan: 2230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

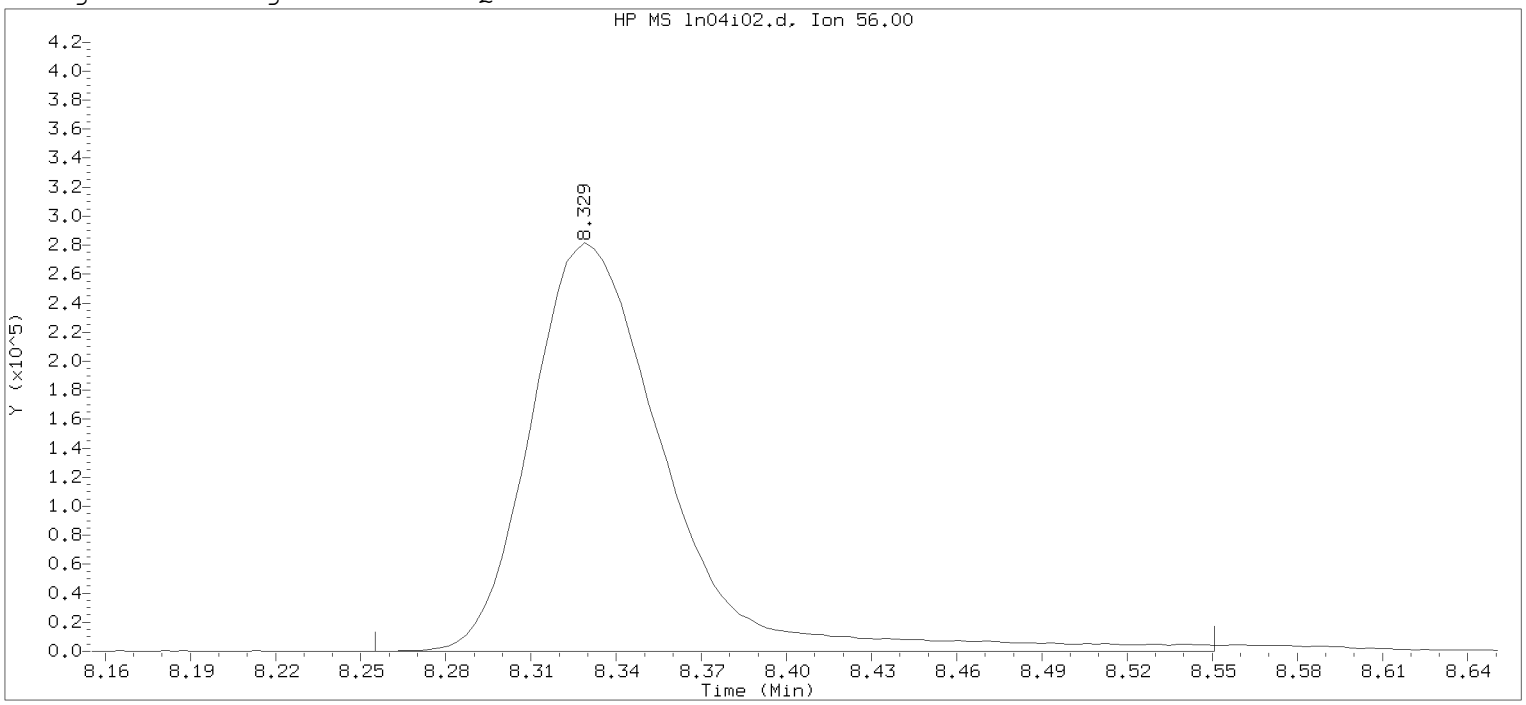
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

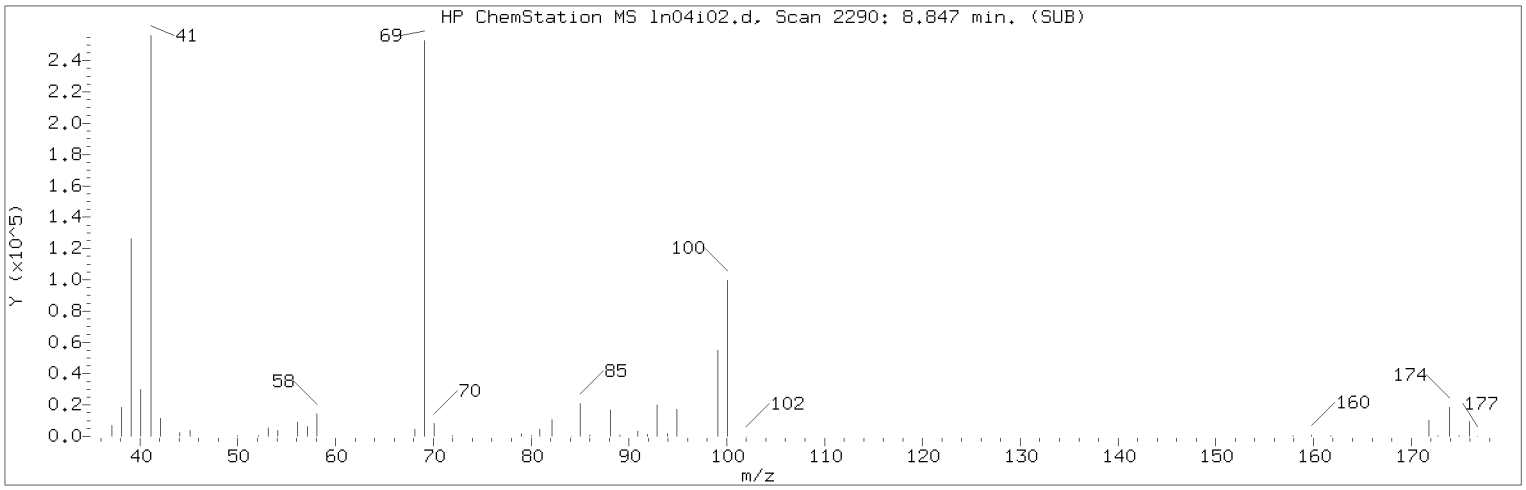
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

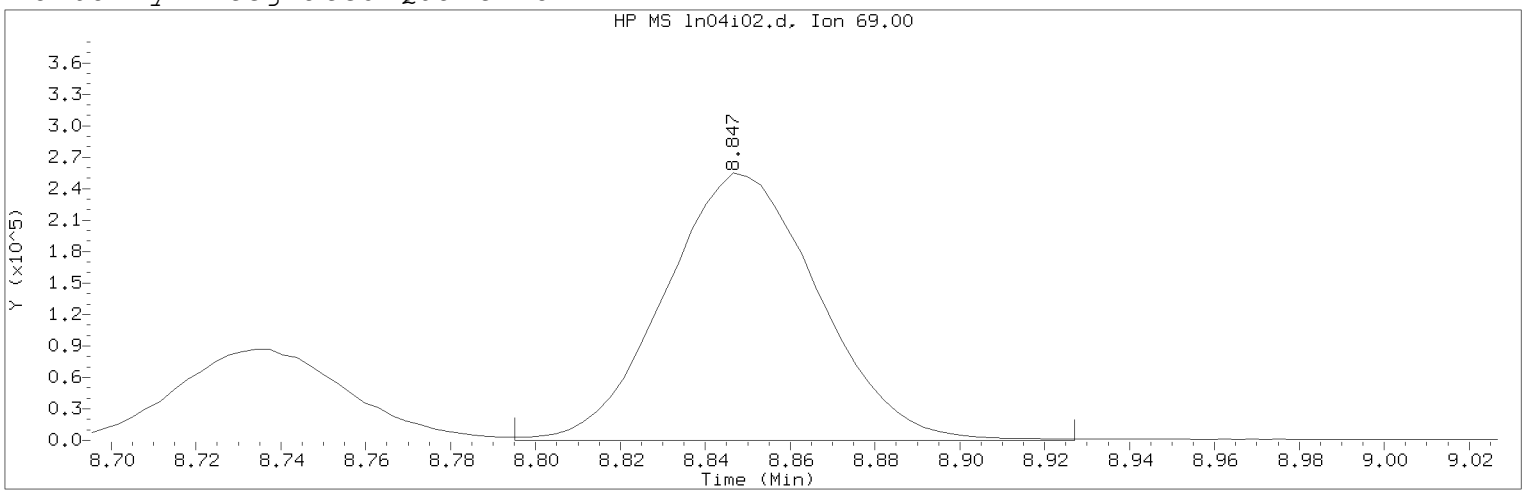
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area : 929615
On-column Amount (ng) : 2668.2803
Integration start scan : 2105 Integration stop scan: 2197
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

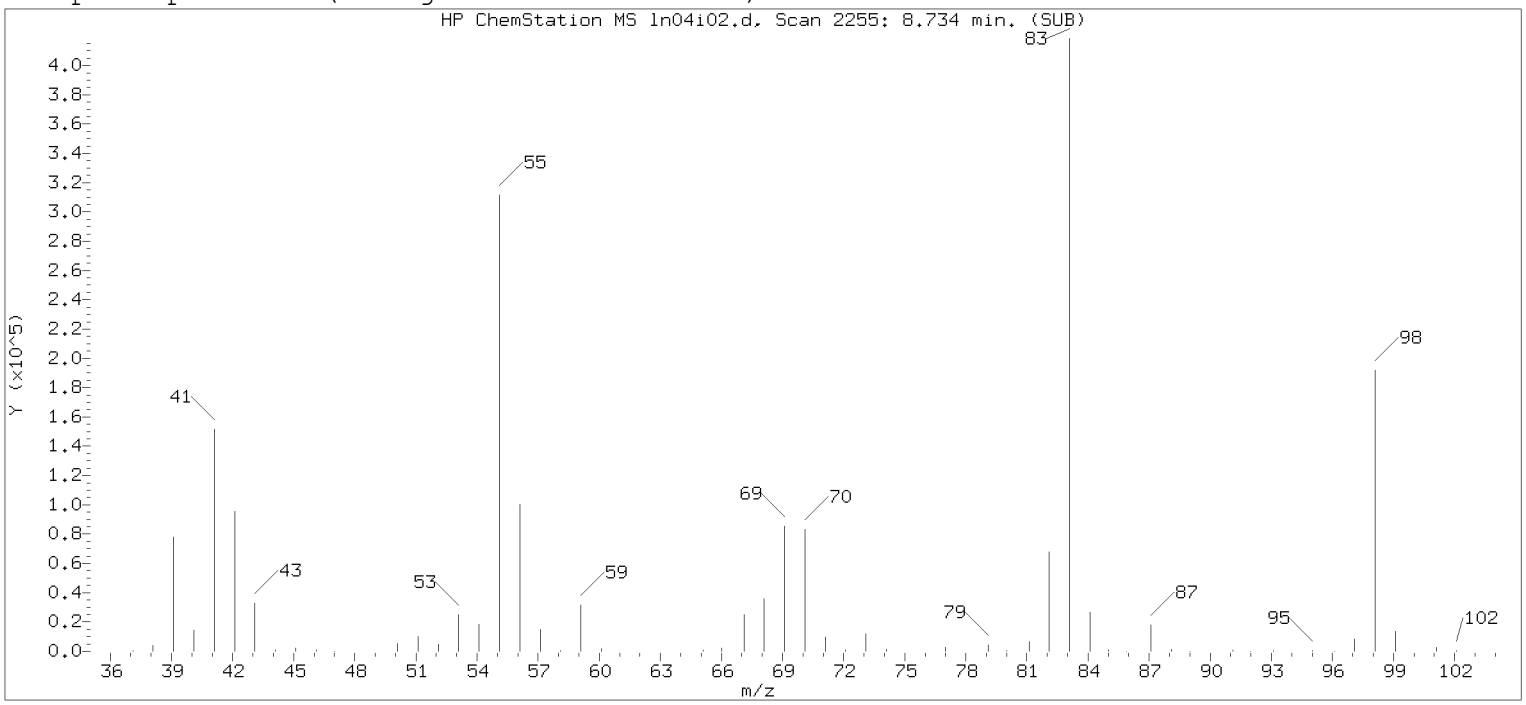
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2290
Retention Time (minutes): 8.847
Quant Ion : 69.00
Area (flag) : 640445A
On-Column Amount (ng) : 108.3344
Integration start scan : 2273 Integration stop scan: 2314
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

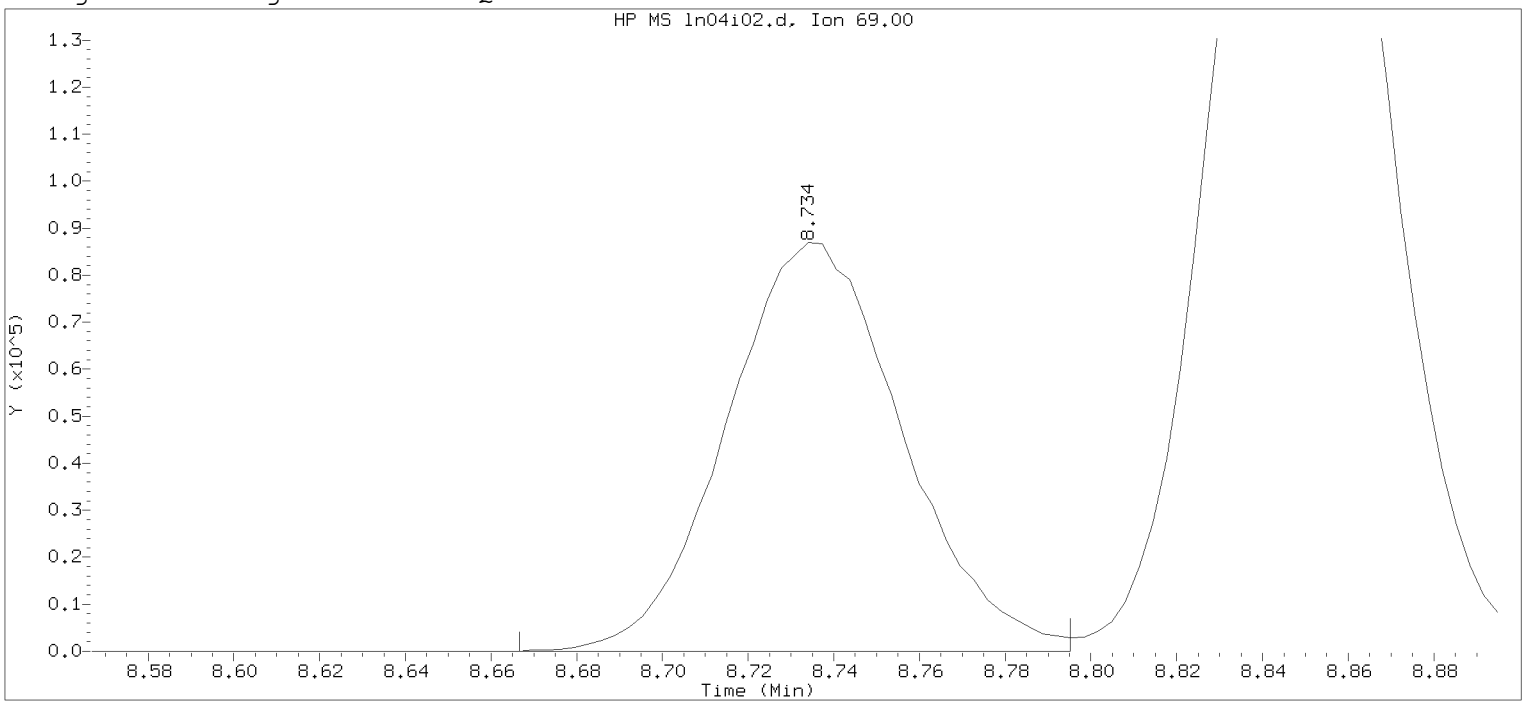
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

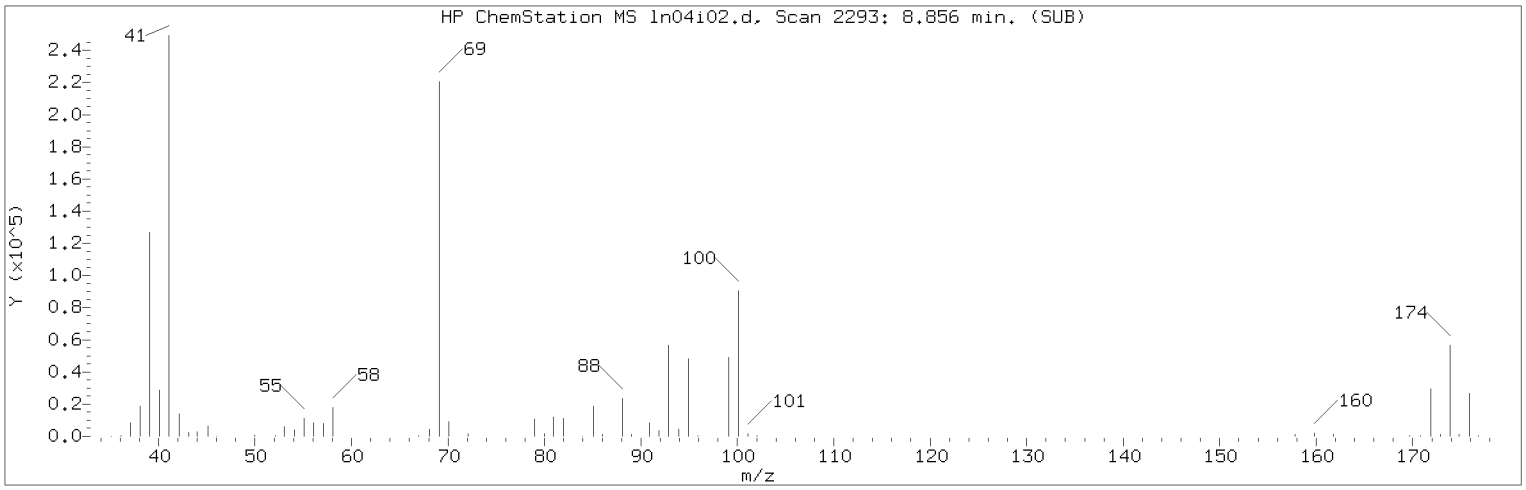
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

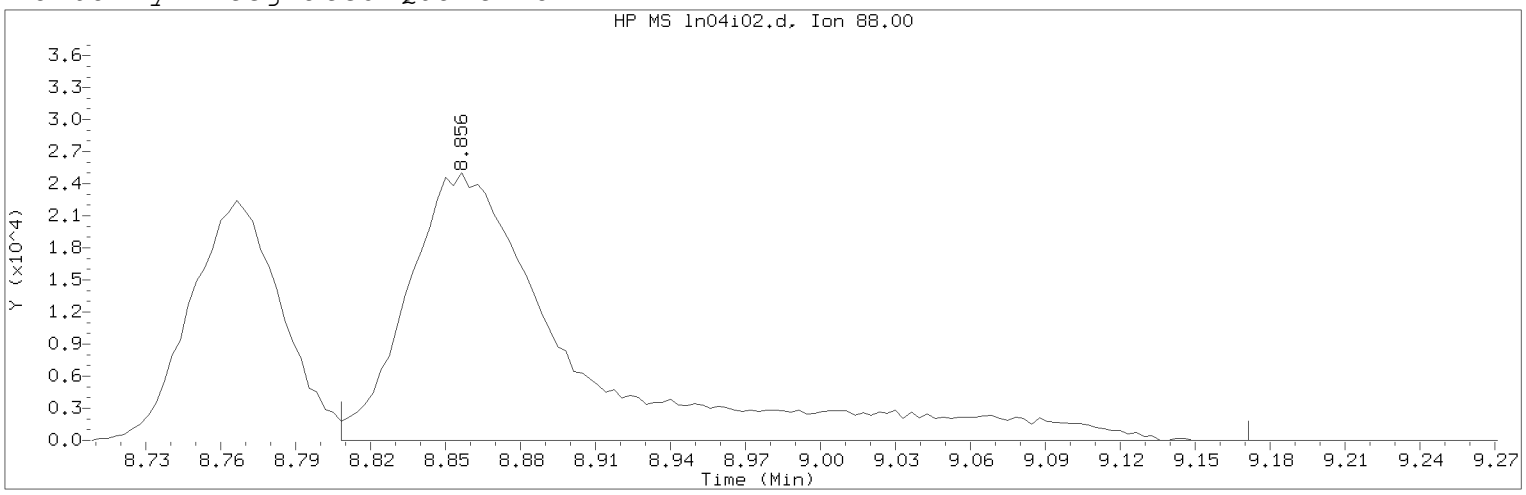
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 247190
On-column Amount (ng) : 97.8749
Integration start scan : 2233 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

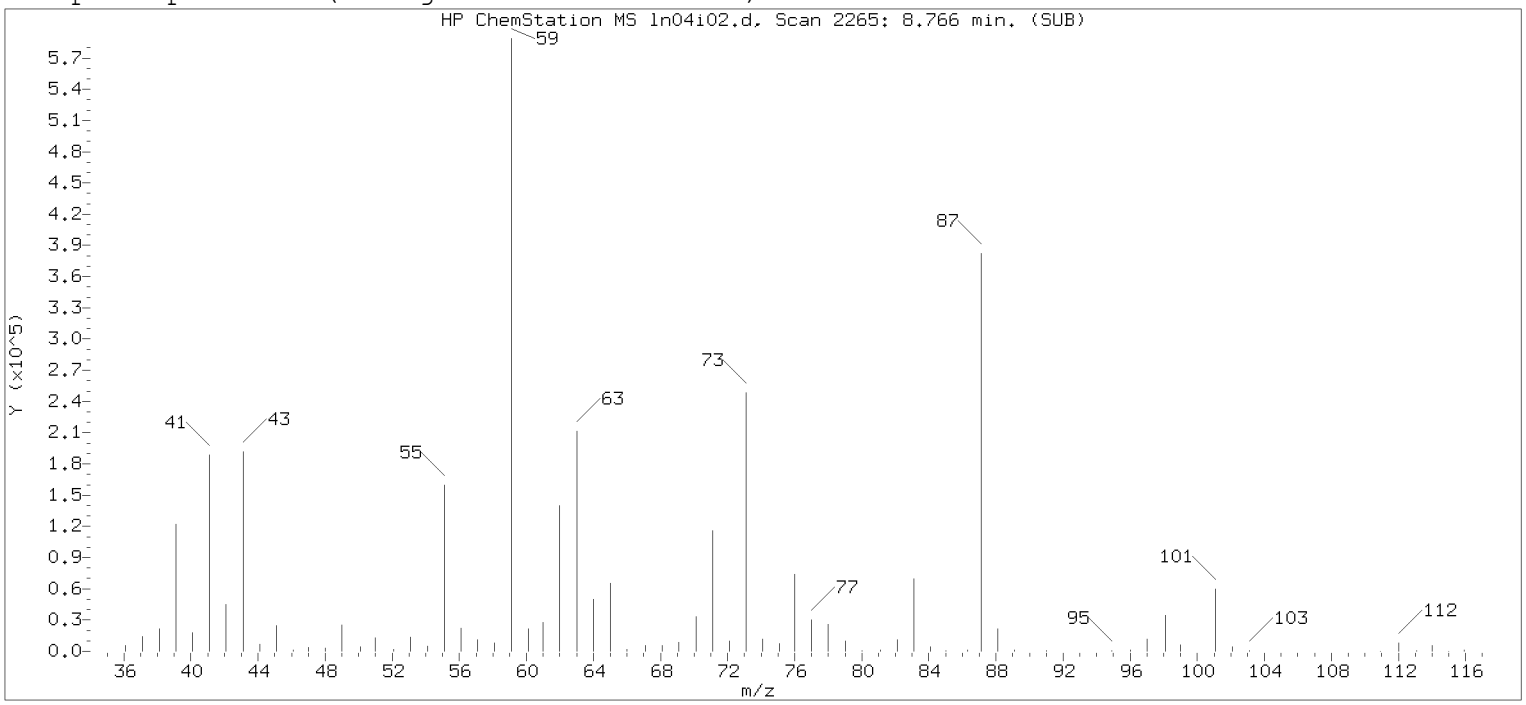
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 117817M
On-Column Amount (ng) : 1321.6466
Integration start scan : 2277 Integration stop scan: 2390
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

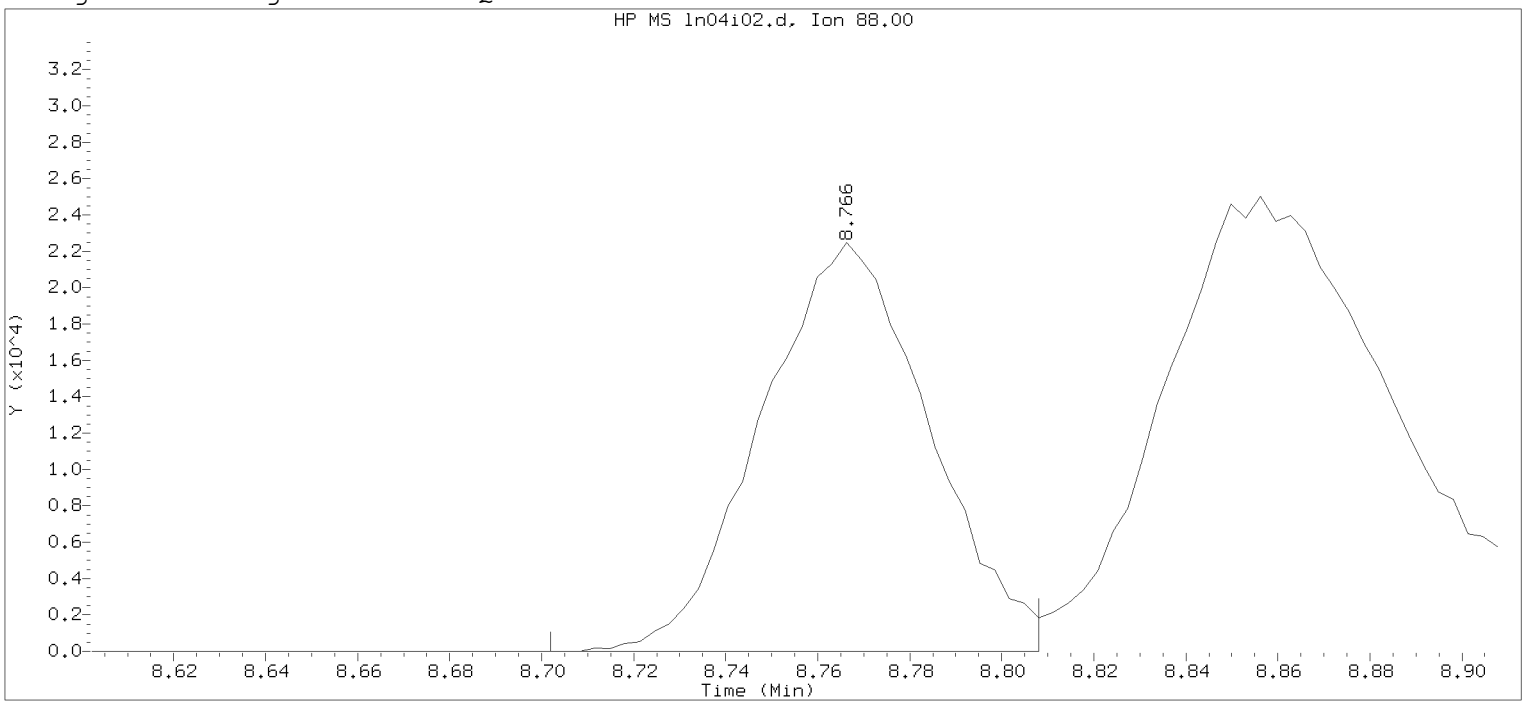
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

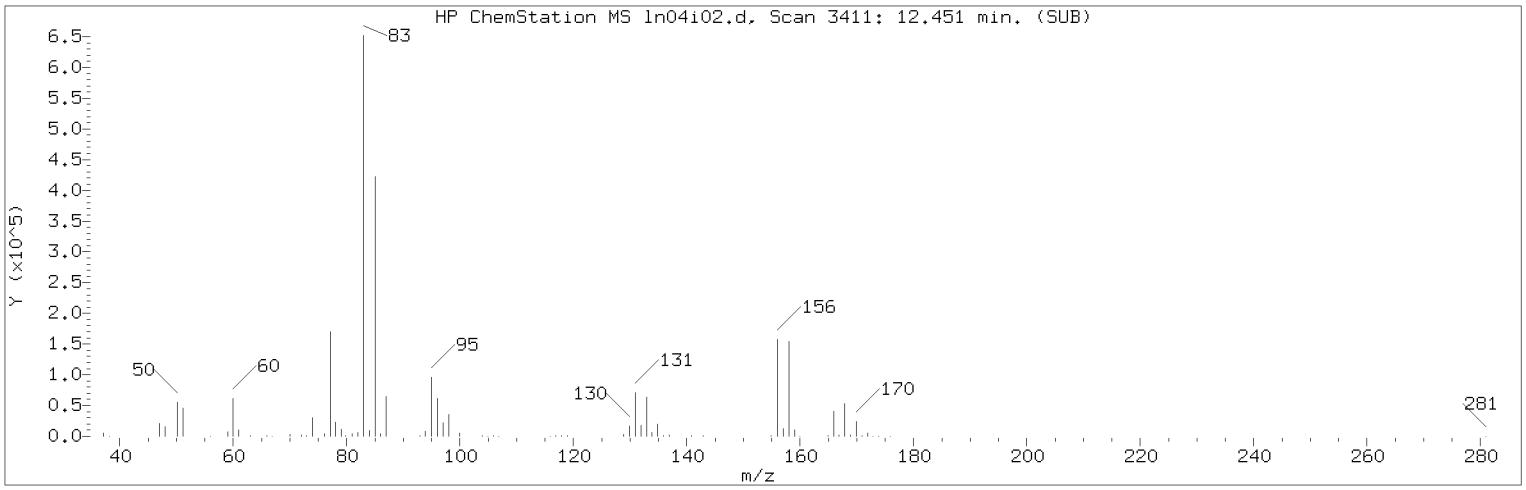
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

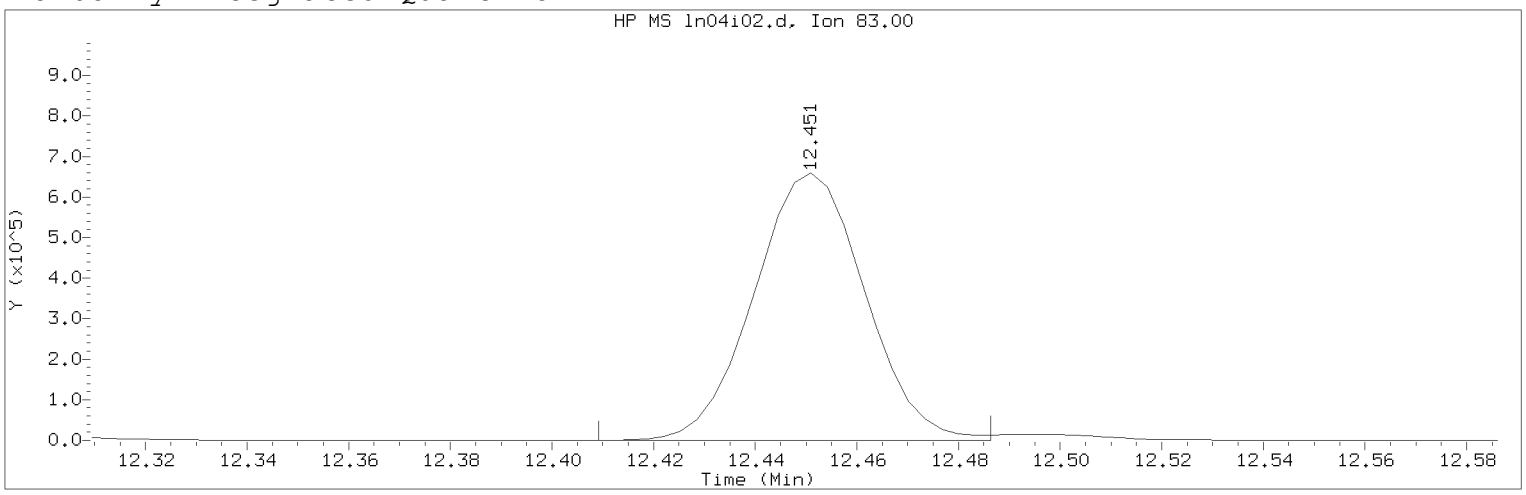
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2265
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area : 56534
On-column Amount (ng) : 746.2694
Integration start scan : 2244 Integration stop scan: 2277
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

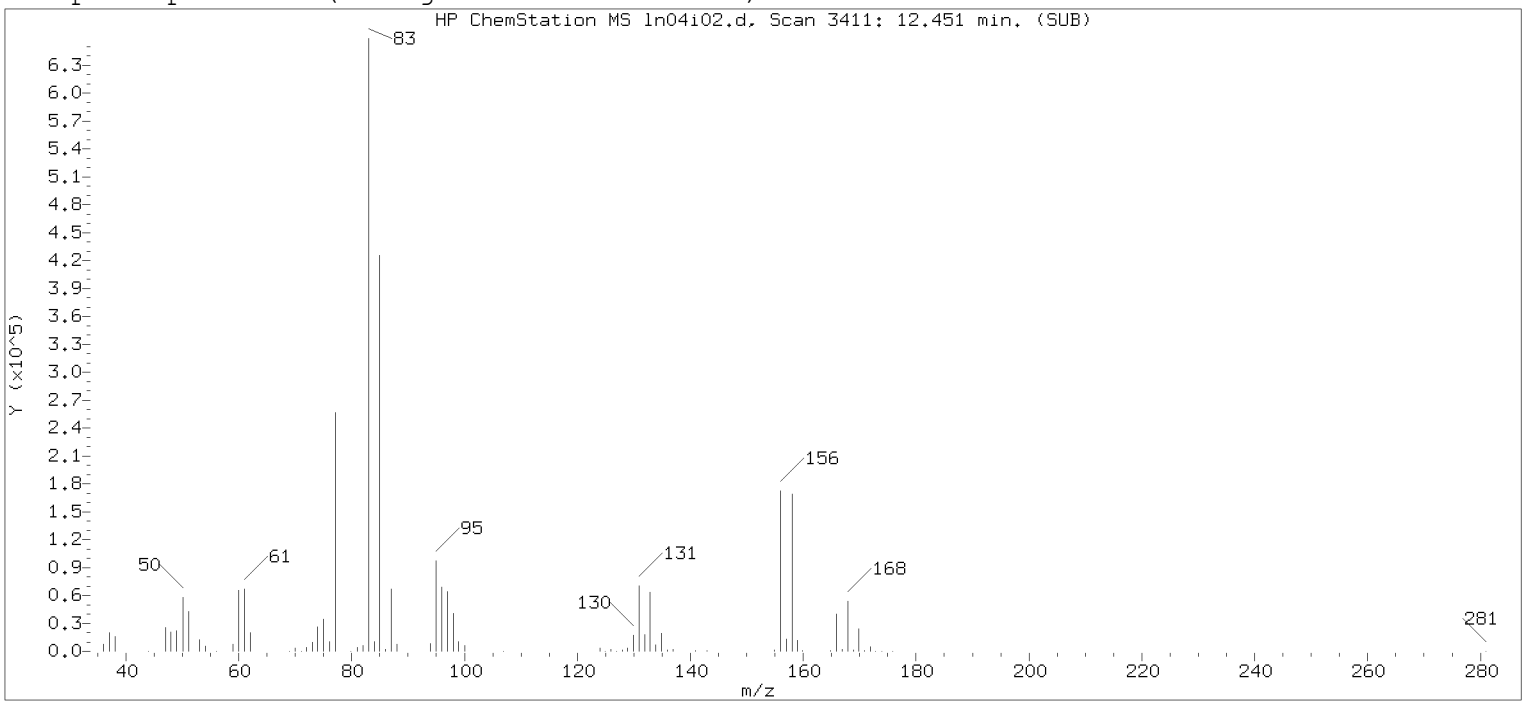
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 995972M
On-Column Amount (ng) : 105.3166
Integration start scan : 3397 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

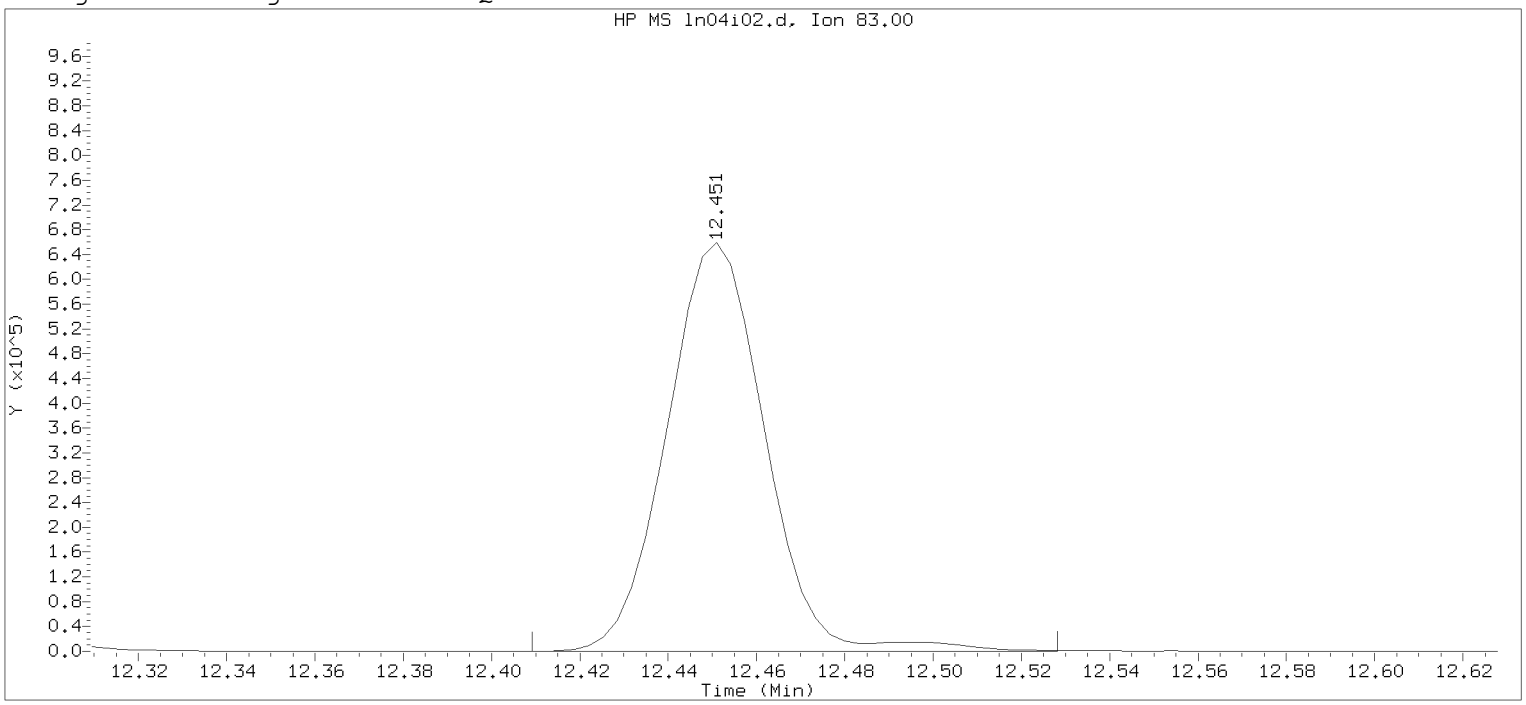
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

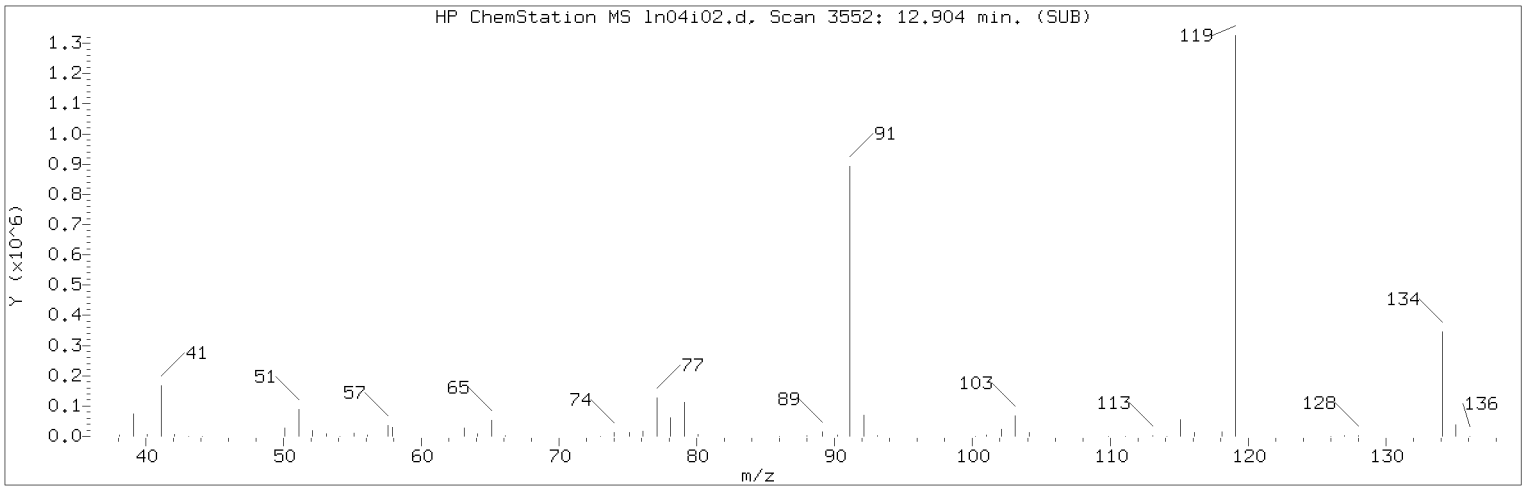
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

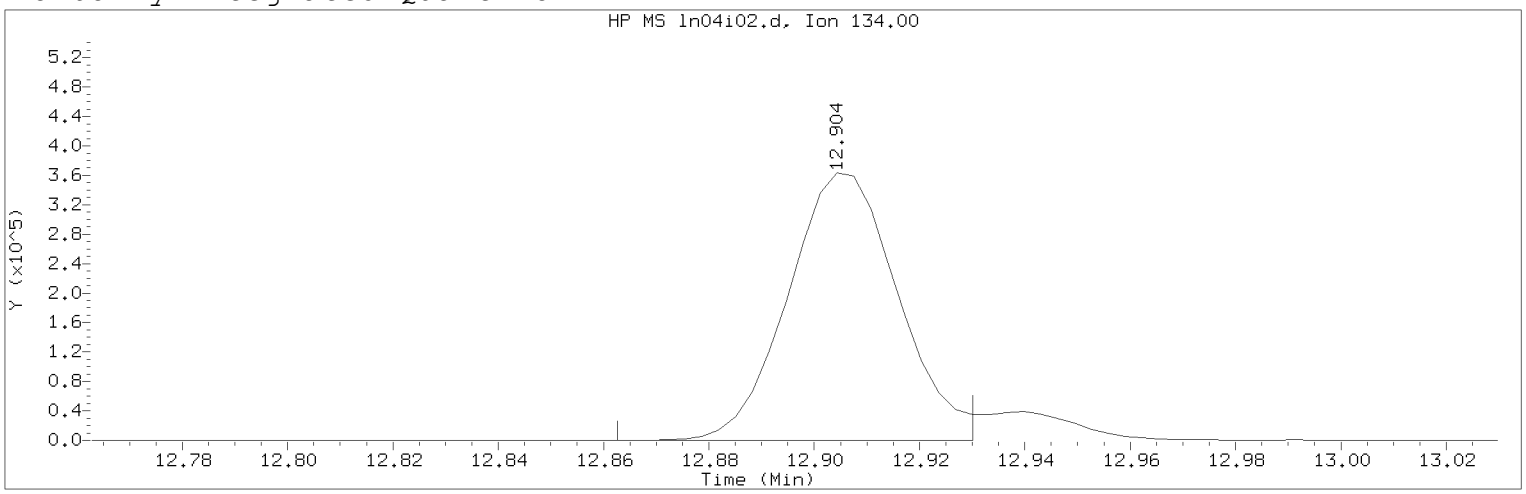
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 1015846
On-column Amount (ng) : 101.1821
Integration start scan : 3397 Integration stop scan: 3434
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

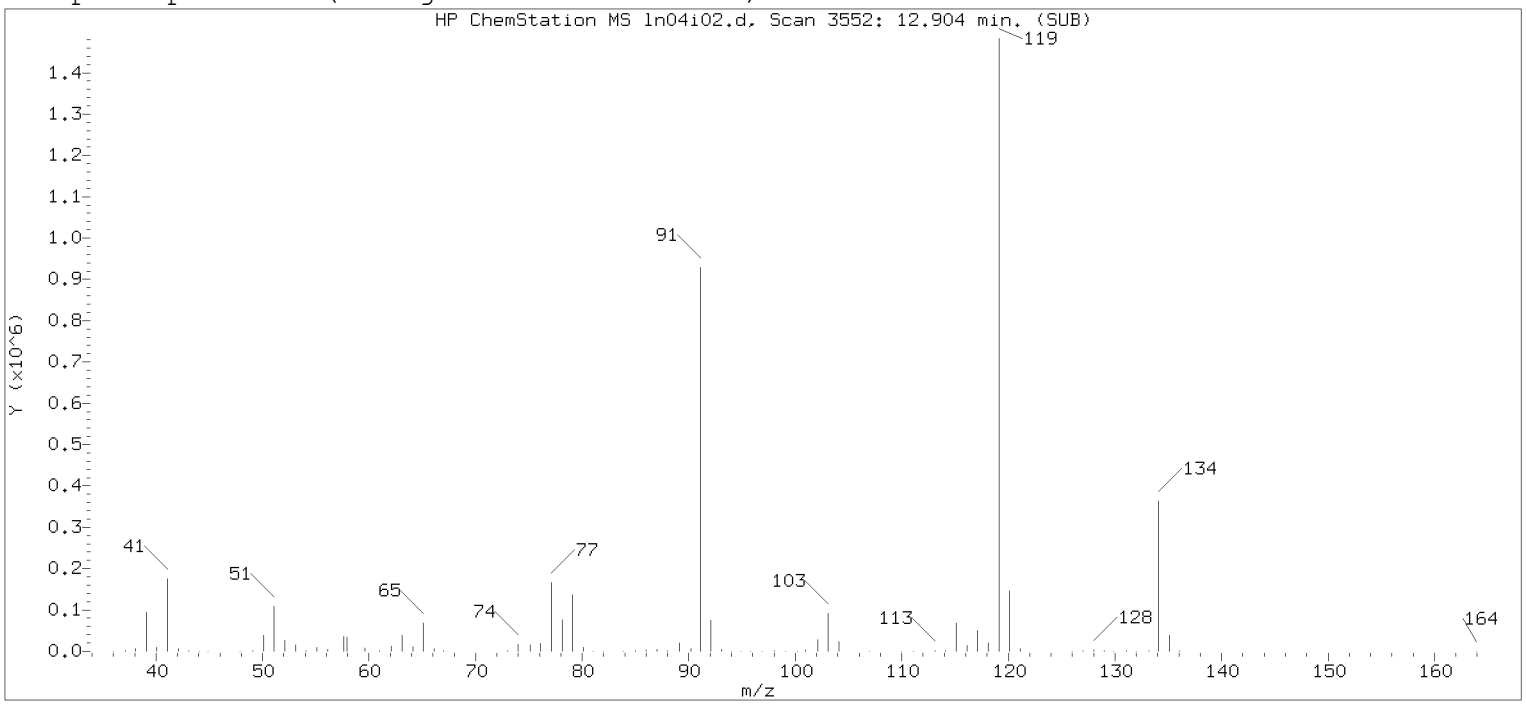
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 526781M
On-Column Amount (ng) : 106.6224
Integration start scan : 3538 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

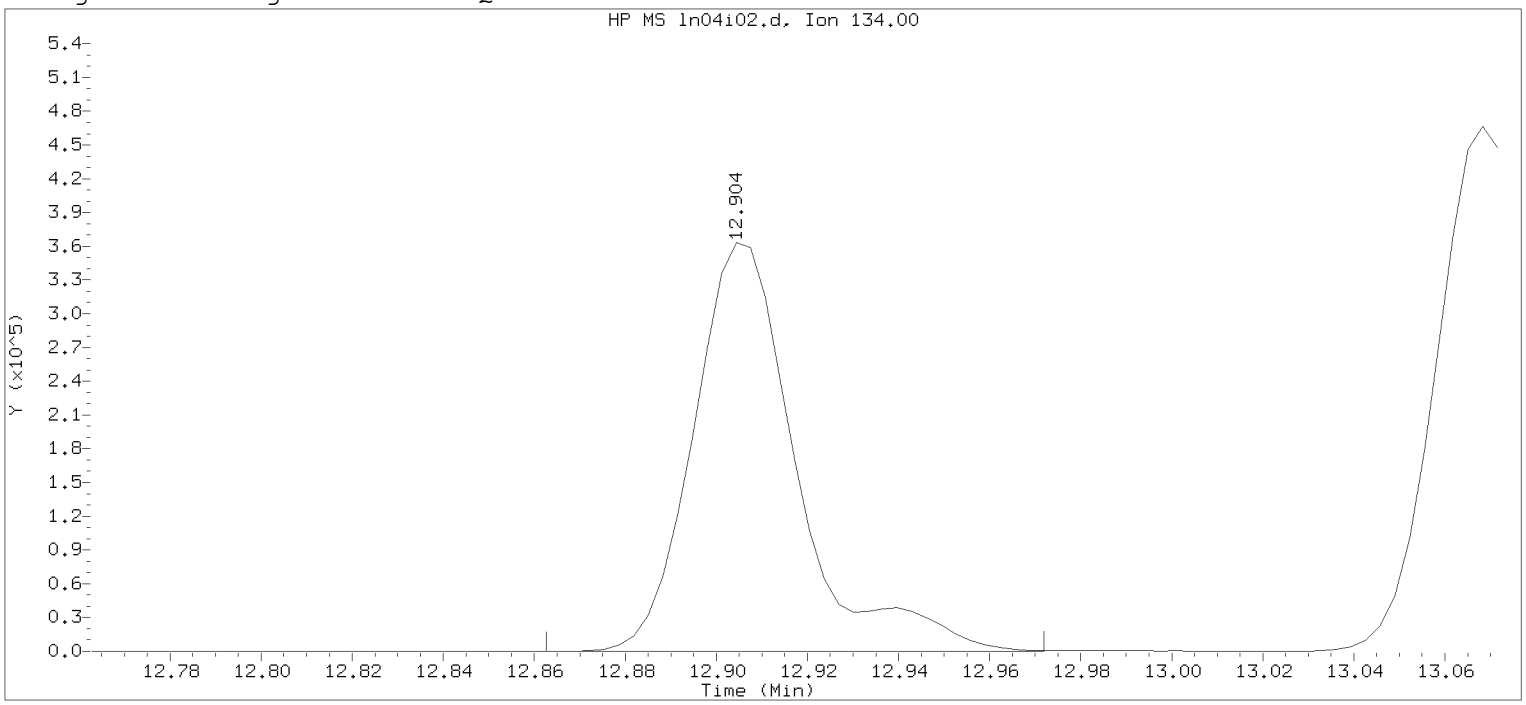
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



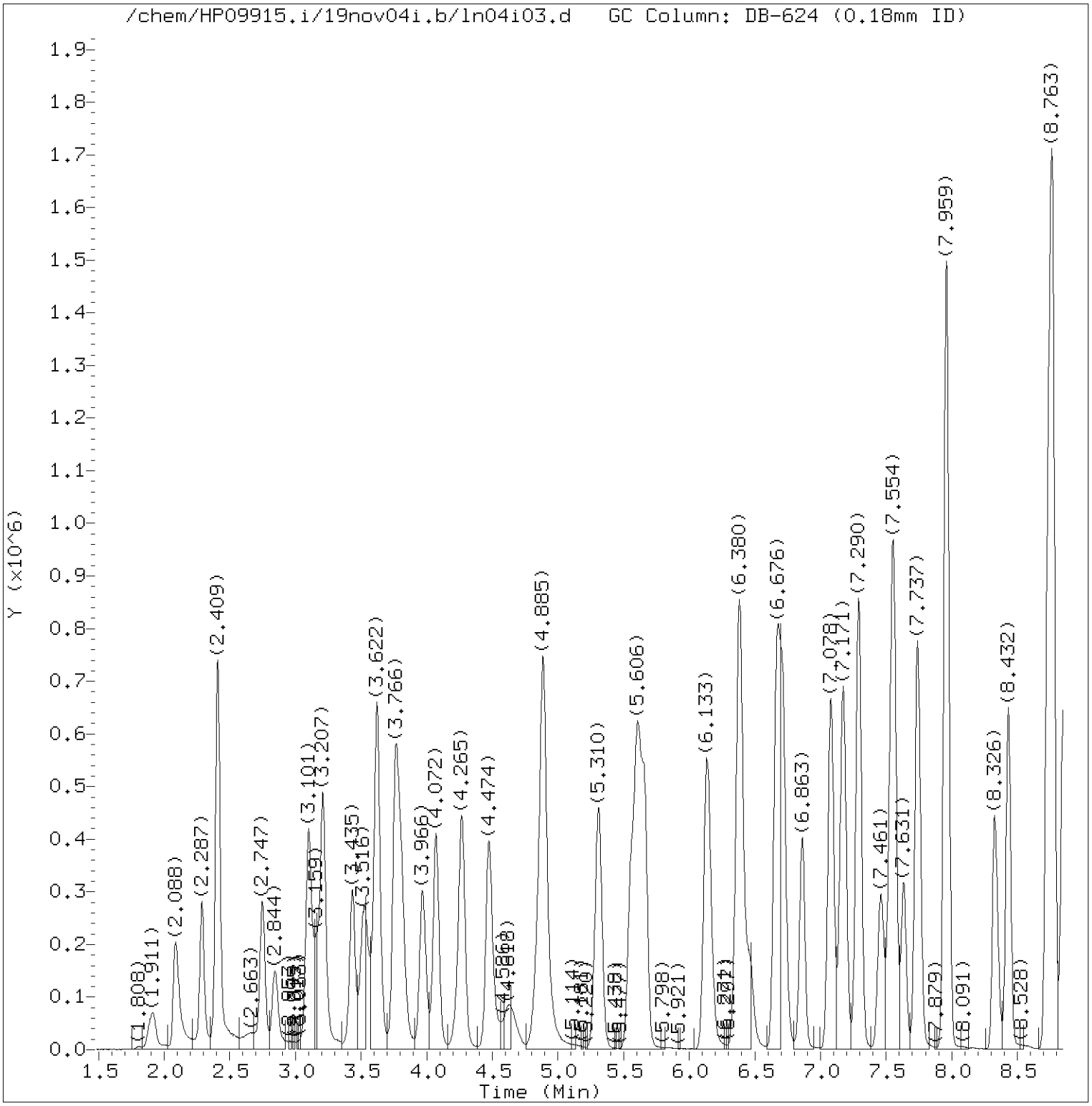
Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 572341
On-column Amount (ng) : 102.7487
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

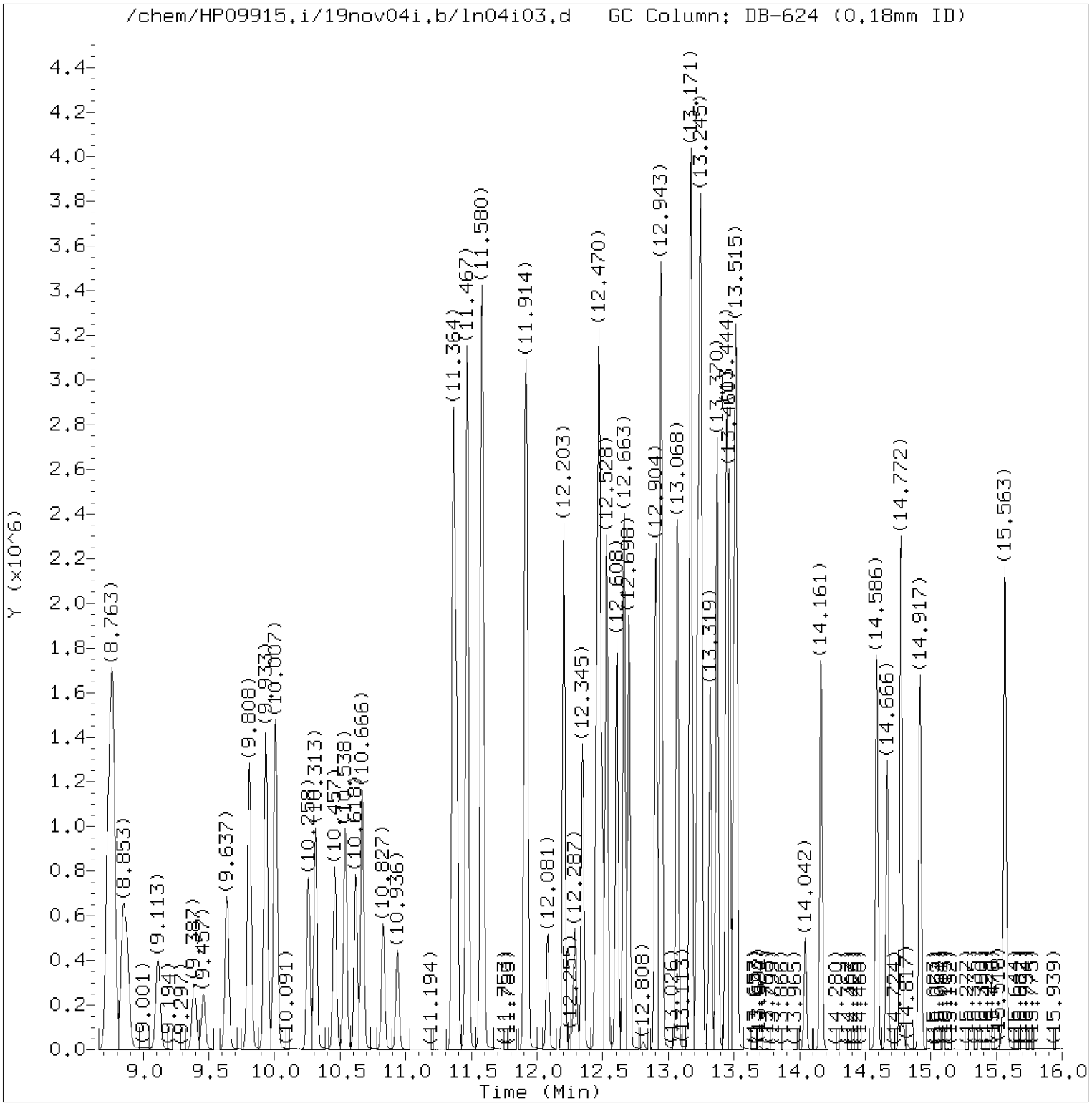
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.088	85	427538M	52.817
4) Chloromethane	(2)	2.287	50	390734	50.084
5) 1,3-Butadiene	(2)	2.406	39	311095M	48.025
6) Vinyl Chloride	(2)	2.409	62	387720	49.794
8) Bromomethane	(2)	2.747	94	272873	48.888
9) Chloroethane	(2)	2.844	64	212325	49.620
10) Dichlorofluoromethane	(2)	3.098	67	509913MA	49.515
12) Trichlorofluoromethane	(2)	3.152	101	433881	51.758
11) n-Pentane	(2)	3.207	43	489872	49.449
14) Ethyl ether	(2)	3.432	59	285731	52.748
15) Freon 123a	(2)	3.525	67	337192	50.003
16) Acrolein	(1)	3.622	56	1052176	519.843
17) 1,1-Dichloroethene	(2)	3.760	96	251911	51.197
17) 1,1-Dichloroethene	(2)	3.760	63	123343	50.001
19) Freon 113	(2)	3.795	101	289343	51.541
18) Acetone	(1)	3.802	58	91161	100.464
22) Methyl Iodide	(2)	3.966	142	518954	50.897
21) 2-Propanol	(1)	3.998	45	165875M	254.283
23) Carbon Disulfide	(2)	4.072	76	956902	51.606
27) Methyl Acetate	(2)	4.245	43	314348	49.603
25) Allyl Chloride	(2)	4.271	41	438915	49.725
28) Methylene Chloride	(2)	4.474	84	295055	50.382
29)*t-Butyl alcohol-d10	(1)	4.509	65	269779M	250.000
30) t-Butyl alcohol	(1)	4.625	59	291988	257.078
31) Acrylonitrile	(2)	4.834	53	175969	51.611
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	957096	51.225
32) trans-1,2-Dichloroethene	(2)	4.888	96	287617	50.529
34) n-Hexane	(2)	5.313	57	463732M	52.364
36) 1,1-Dichloroethane	(2)	5.551	63	505667	50.924
38) di-Isopropyl ether	(2)	5.609	45	985238	51.444
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	462216	51.882
40) Ethyl t-butyl ether	(2)	6.133	59	965104	51.927
43) 1,2-Dichloroethene (Total)	(2)		96	610267	101.029
44) 2-Butanone	(2)	6.361	43	453665	103.655
42) cis-1,2-Dichloroethene	(2)	6.380	96	322650	50.501
45) 2,2-Dichloropropane	(2)	6.400	77	400546	51.890
47) Propionitrile	(1)	6.464	54	357876	252.881
48) Methacrylonitrile	(2)	6.670	67	475036	129.160

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	173386	51.180
50) Tetrahydrofuran	(1)	6.721	71	126019	98.581
51) Chloroform	(2)	6.859	83	484828	51.048
52)$Dibromofluoromethane	(2)	7.075	113	282824	49.838
52)$Dibromofluoromethane	(2)	7.075	111	289462	50.026
53) 1,1,1-Trichloroethane	(2)	7.085	97	420986	51.935
54) Cyclohexane	(2)	7.171	56	567043	52.311
54) Cyclohexane	(2)	7.175	84	491699	52.219
54) Cyclohexane	(2)	7.175	69	175289	52.282
56) Carbon Tetrachloride	(2)	7.284	117	361443	52.574
55) 1,1-Dichloropropene	(2)	7.294	75	401799	51.176
58) Isobutyl Alcohol	(1)	7.461	41	242114	633.444
57)$1,2-Dichloroethane-d4	(2)	7.528	102	72846	50.367
57)$1,2-Dichloroethane-d4	(2)	7.531	65	321603	49.897
57)$1,2-Dichloroethane-d4	(2)	7.531	104	46134	49.939
60) Benzene	(2)	7.557	78	1202424	50.927
61) 1,2-Dichloroethane	(2)	7.638	62	372805	49.091
61) 1,2-Dichloroethane	(2)	7.634	98	37850	50.364
65) t-Amyl methyl ether	(2)	7.737	73	971399	52.071
67) n-Heptane	(2)	7.956	43	432248MA	52.247
66)*Fluorobenzene	(2)	7.959	96	1160755	50.000
69) n-Butanol	(1)	8.326	56	438437M	1332.750
71) Trichloroethene	(2)	8.432	95	302634	50.906
72) Methylcyclohexane	(2)	8.734	83	574135	52.056
72) Methylcyclohexane	(2)	8.731	98	260583	52.213
73) 1,2-Dichloropropane	(2)	8.773	63	306937	51.196
76) Methyl Methacrylate	(2)	8.847	69	306086A	52.795
75) 1,4-Dioxane	(1)	8.853	88	59876M	662.196
74) Dibromomethane	(2)	8.879	93	199498	51.428
78) Bromodichloromethane	(2)	9.113	83	366892	52.707
79) 2-Nitropropane	(2)	9.390	41	235097	111.505
80) 2-Chloroethyl Vinyl Ether	(2)	9.457	63	134015	52.046
81) cis-1,3-Dichloropropene	(2)	9.637	75	495055	53.547
82) 4-Methyl-2-pentanone	(2)	9.808	43	1004831	108.769
83)$Toluene-d8	(3)	9.933	98	1189125	50.240
83)$Toluene-d8	(3)	9.933	100	767119	50.033
88) Toluene	(3)	10.007	92	764927	51.549
90) 1,3-Dichloropropene (total)	(3)		100	956669	108.348

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	461614	54.801
91) Ethyl Methacrylate	(3)	10.313	69	554039	54.121
92) 1,1,2-Trichloroethane	(3)	10.461	97	291480	51.810
93) Tetrachloroethene	(3)	10.538	166	321895	51.220
94) 1,3-Dichloropropane	(3)	10.618	76	494204	51.449
96) 2-Hexanone	(3)	10.670	43	761734	111.475
97) Dibromochloromethane	(3)	10.827	129	315765	54.792
99) 1,2-Dibromoethane	(3)	10.936	107	319699	52.331
100)*Chlorobenzene-d5	(3)	11.361	117	904578	50.000
101) 1-Chlorohexane	(3)	11.364	91	399510	50.116
102) Chlorobenzene	(3)	11.387	112	864419	51.514
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	299375	54.148
104) Ethylbenzene	(3)	11.467	91	1475718	52.031
106) m+p-Xylene	(3)	11.580	106	1167470	104.636
108) Xylene (Total)	(3)		106	1748839	157.389
107) o-Xylene	(3)	11.907	106	581369	52.752
109) Styrene	(3)	11.924	104	981189	53.877
110) Bromoform	(3)	12.081	173	229903	53.387
111) Isopropylbenzene	(3)	12.203	105	1456789	52.702
112) Cyclohexanone	(1)	12.287	55	231776	654.496
114)$4-Bromofluorobenzene	(3)	12.345	95	446156	49.781
114)$4-Bromofluorobenzene	(3)	12.348	174	370576	49.875
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	482004M	52.727
115) Bromobenzene	(4)	12.464	156	378400	52.027
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	383692	136.075
117) 1,2,3-Trichloropropane	(4)	12.496	110	145151	51.744
119) n-Propylbenzene	(4)	12.528	91	1662625	52.323
120) 2-Chlorotoluene	(4)	12.608	126	350943	51.988
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	1225419	53.065
121) 4-Chlorotoluene	(4)	12.698	126	361669	51.471
124) tert-Butylbenzene	(4)	12.904	134	253906M	53.165
125) Pentachloroethane	(4)	12.940	167	227064	55.216
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	1291883	53.080
127) sec-Butylbenzene	(4)	13.068	105	1512547	53.076
129) 1,3-Dichlorobenzene	(4)	13.168	146	693790	51.911
130) p-Isopropyltoluene	(4)	13.174	119	1315828	53.371
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	483927	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	714495	51.569

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

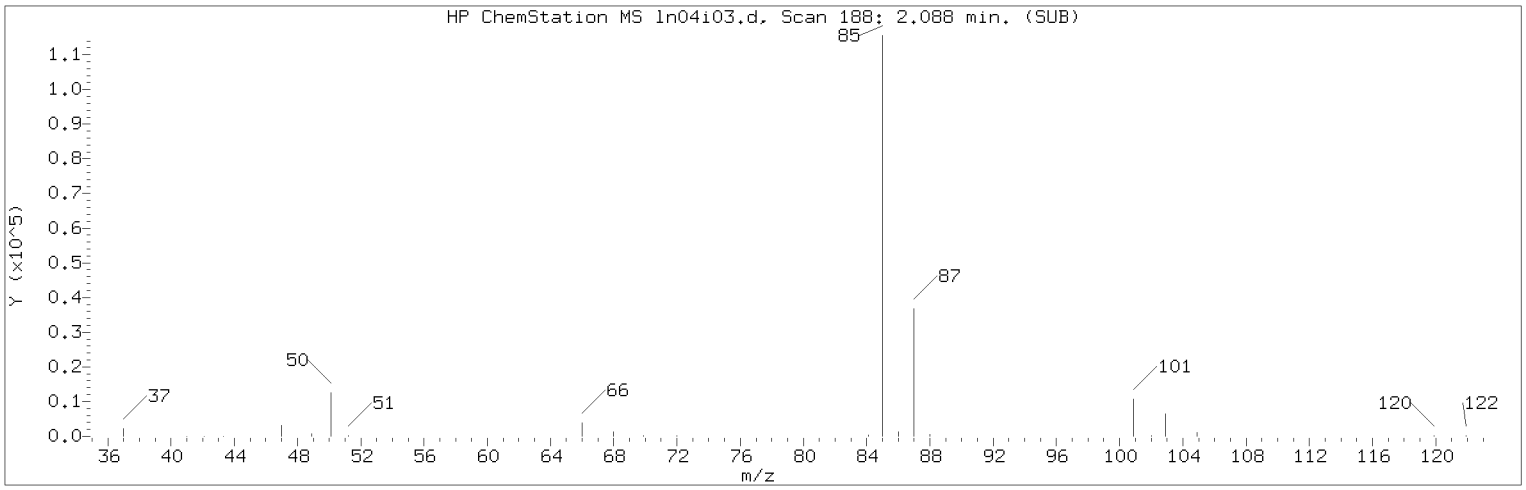
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

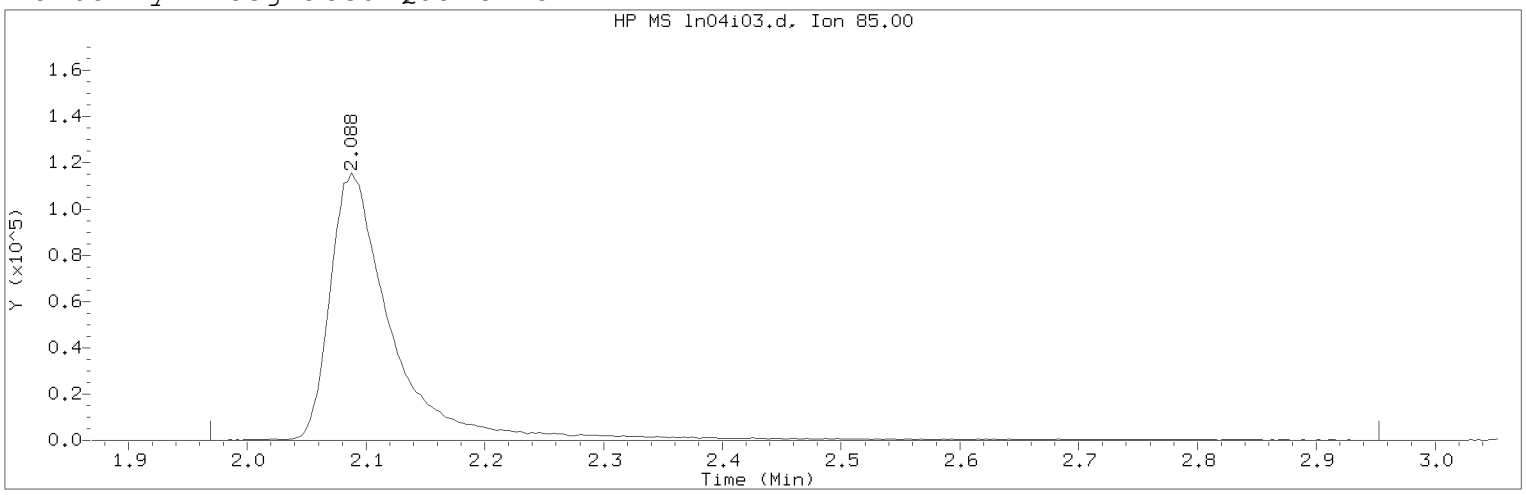
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.251	105	1342367	52.068
135) Benzyl Chloride	(4)	13.319	91	1059398	54.274
136) 1,3-Diethylbenzene	(4)	13.370	119	832647	51.895
141) Diethylbenzene (total)	(4)		100	2415817	155.686
137) 1,4-Diethylbenzene	(4)	13.441	119	877553	51.623
139) n-Butylbenzene	(4)	13.464	92	652599	51.769
138) 1,2-Dichlorobenzene	(4)	13.502	146	682120	51.722
140) 1,2-Diethylbenzene	(4)	13.518	119	705617	52.168
142) 1,2-Dibromo-3-chloropropane	(4)	14.042	75	108388	54.164
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	516839	51.009
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	503797	51.136
147) Hexachlorobutadiene	(4)	14.666	225	217236	46.700
148) Naphthalene	(4)	14.772	128	1689758	53.350
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	498430	51.993
150) 2-Methylnaphthalene	(4)	15.563	142	1079055	55.325

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

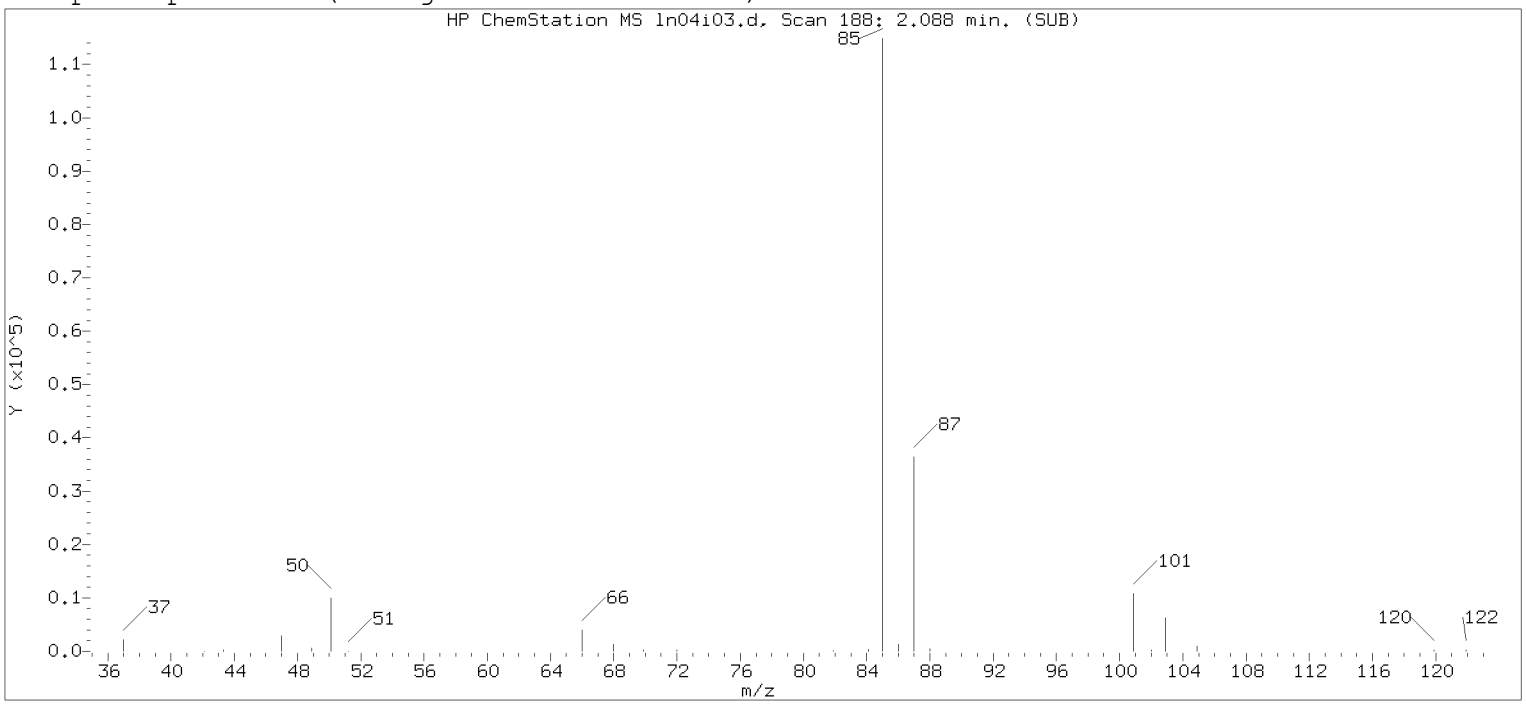
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 188
Retention Time (minutes): 2.088
Quant Ion : 85.00
Area (flag) : 427538M
On-Column Amount (ng) : 52.8165
Integration start scan : 150 Integration stop scan: 456
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

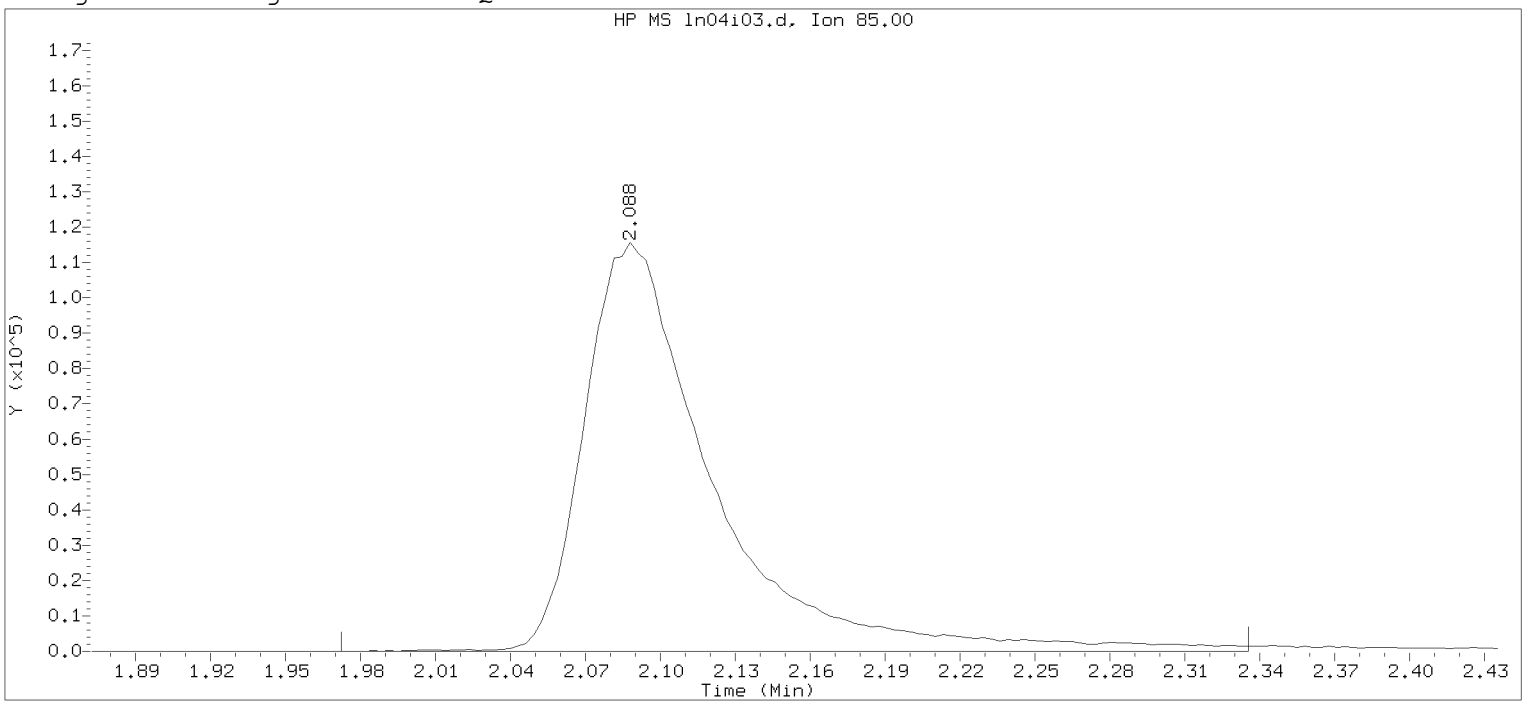
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

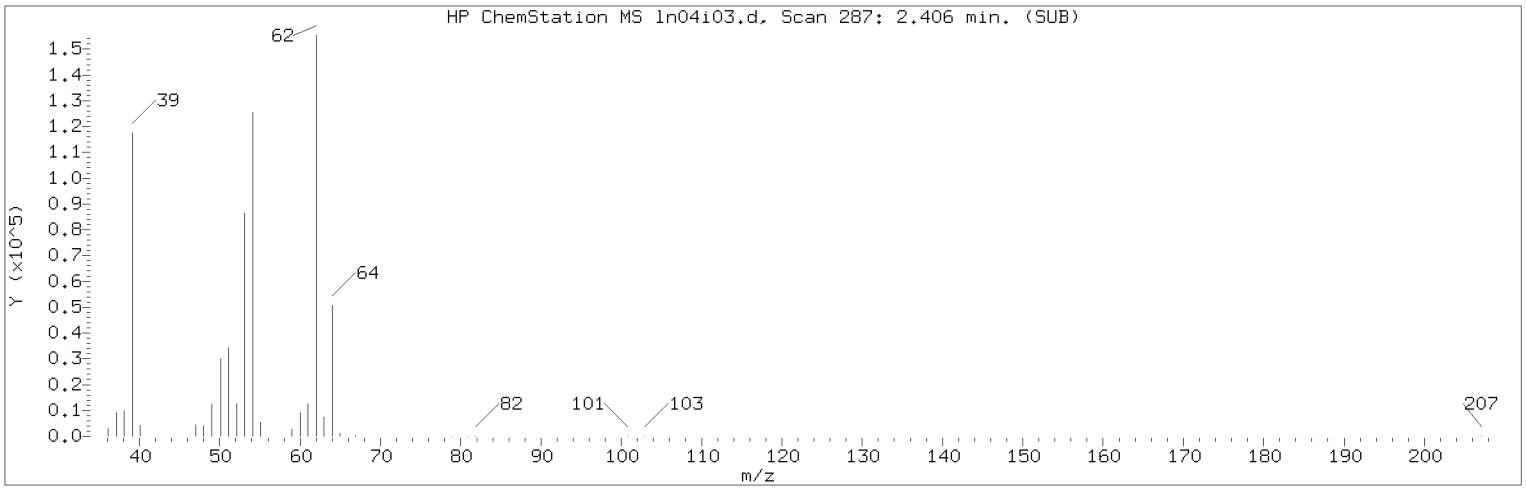
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

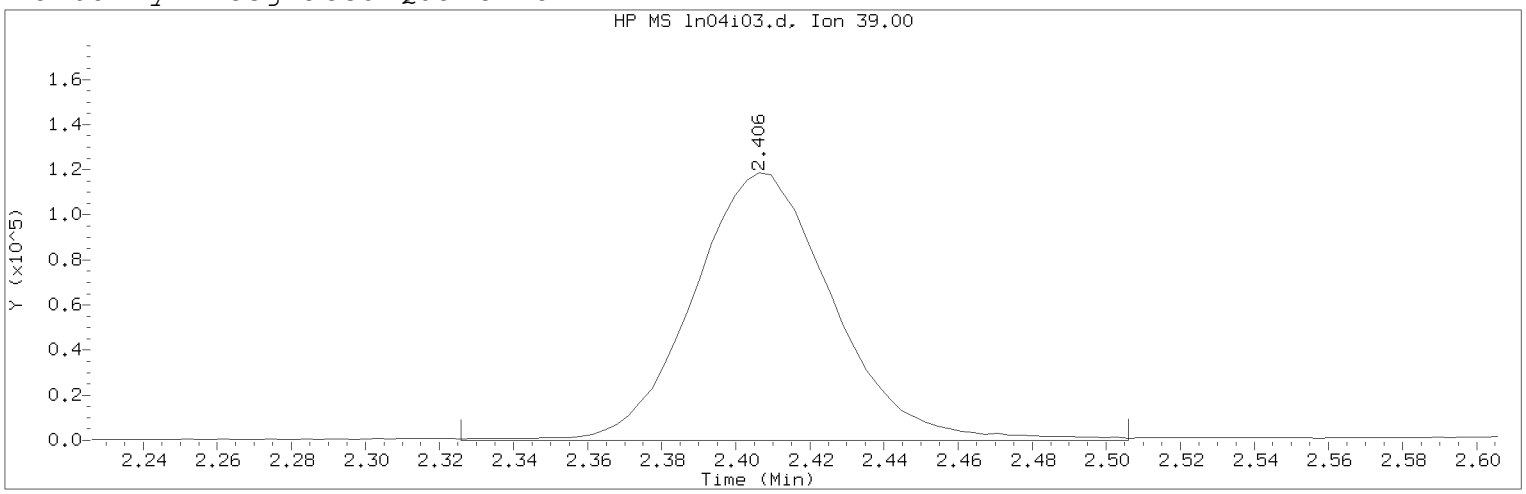
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 188
Retention Time (minutes): 2.088
Quant Ion : 85.00
Area : 411065
On-column Amount (ng) : 48.5918
Integration start scan : 151 Integration stop scan: 264
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

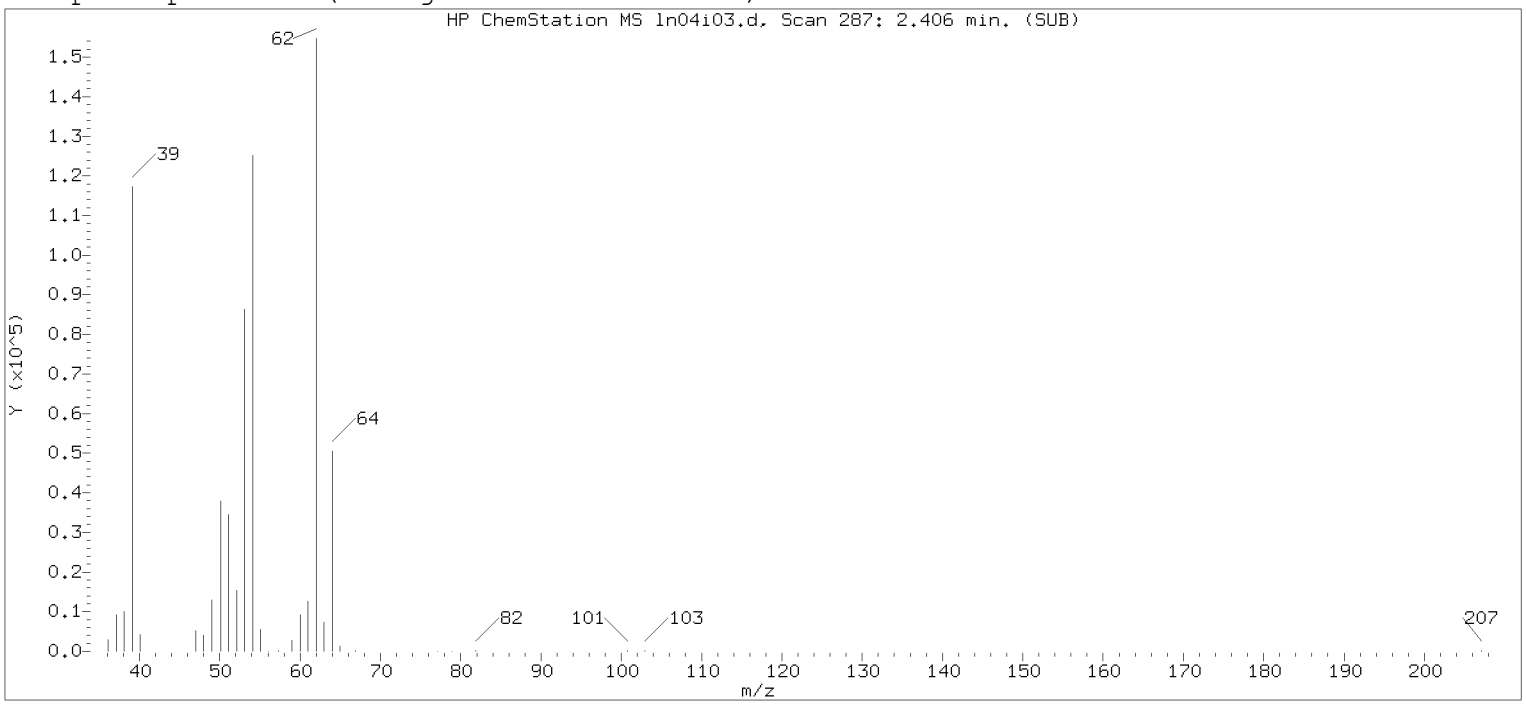
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 311095M
On-Column Amount (ng) : 48.0246
Integration start scan : 261 Integration stop scan: 317
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

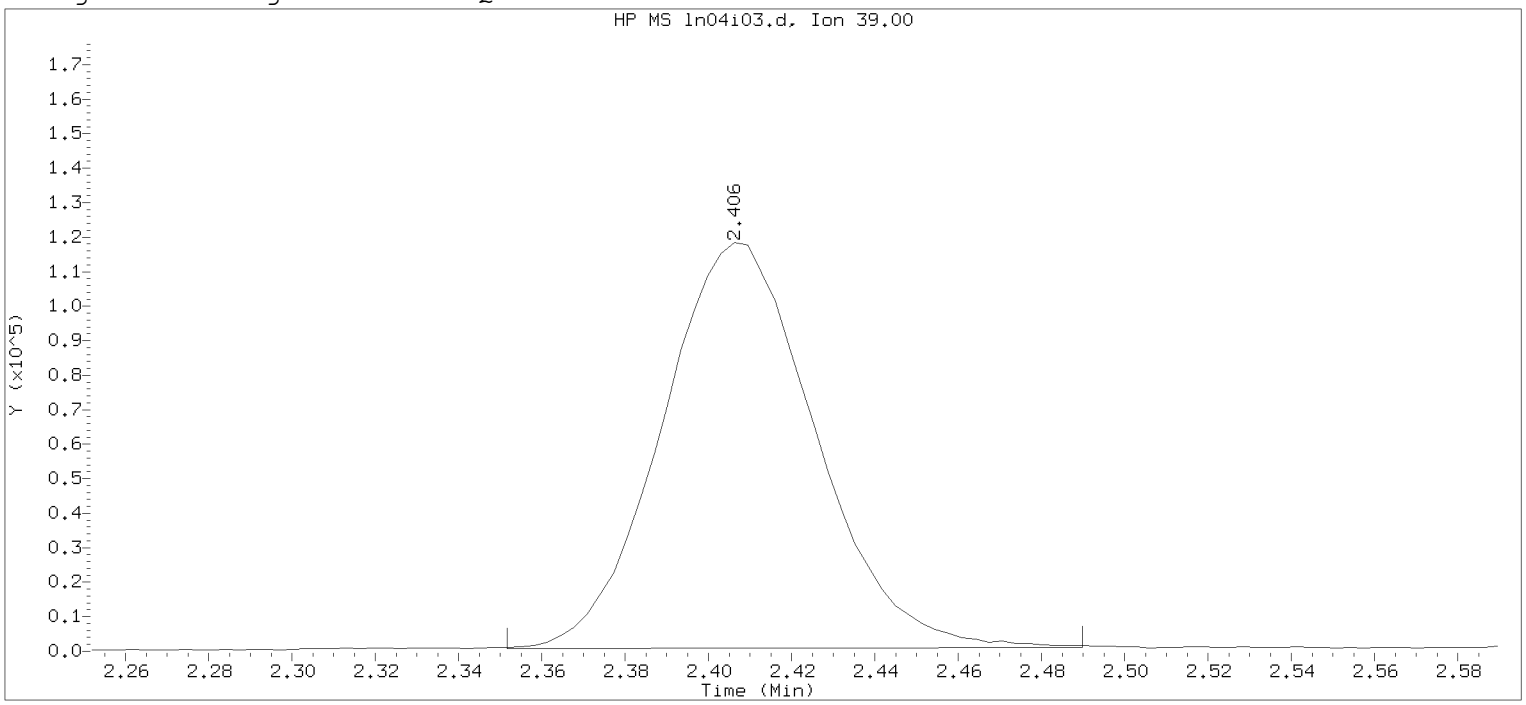
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

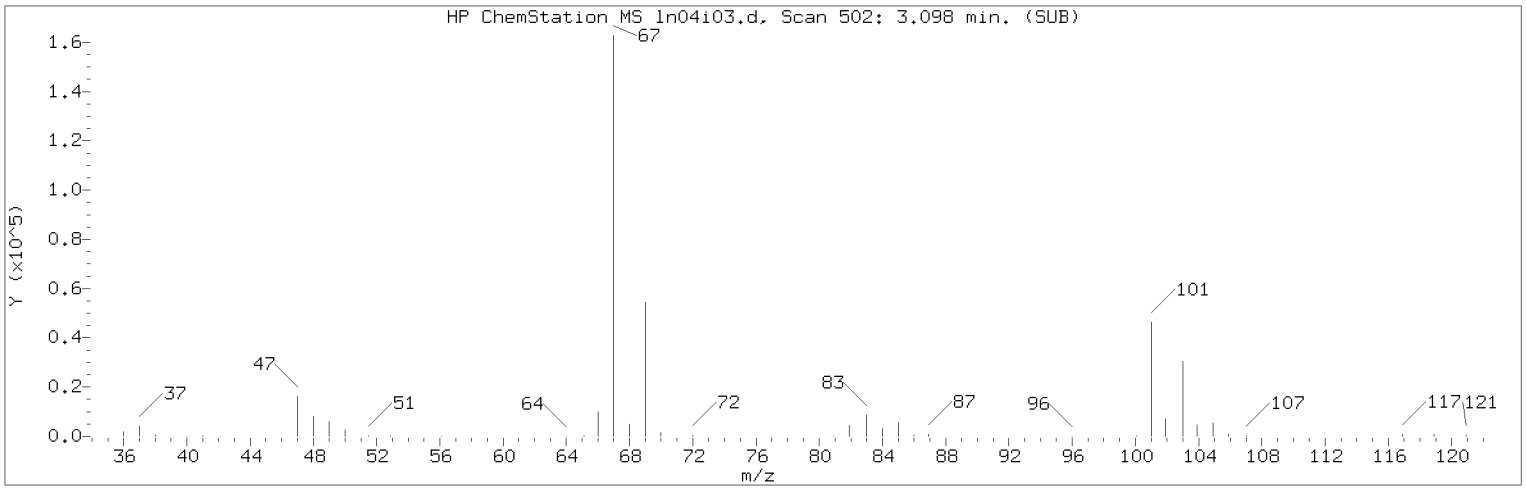
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

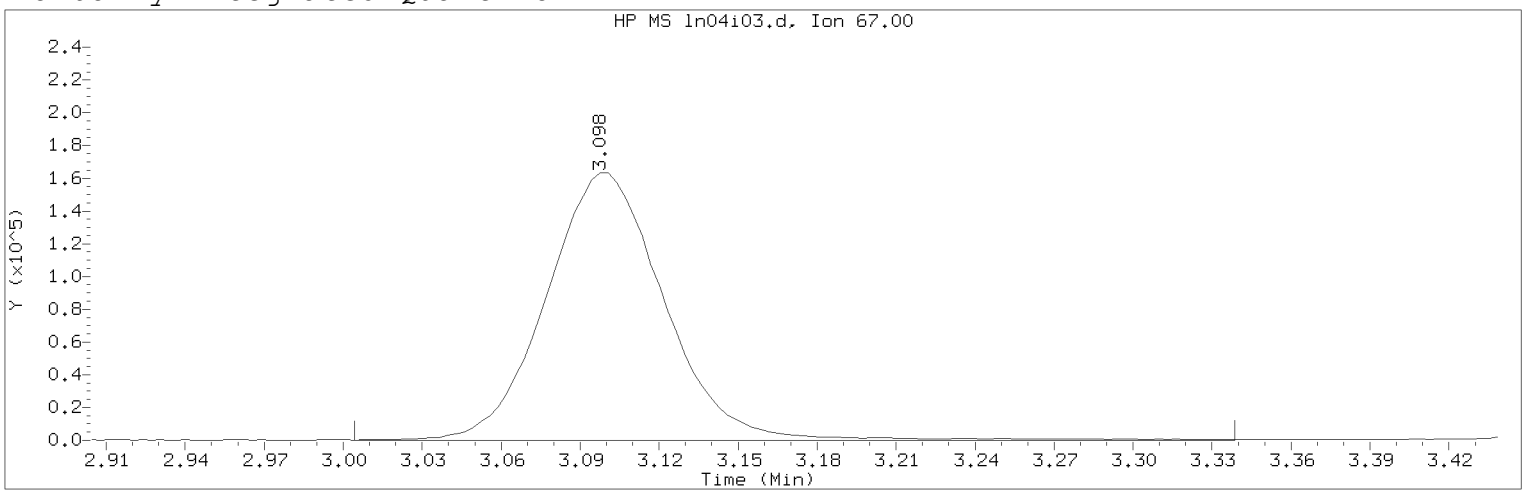
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 300667
On-column Amount (ng) : 50.0756
Integration start scan : 269 Integration stop scan: 312
Y at integration start : 752 Y at integration end: 1063

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

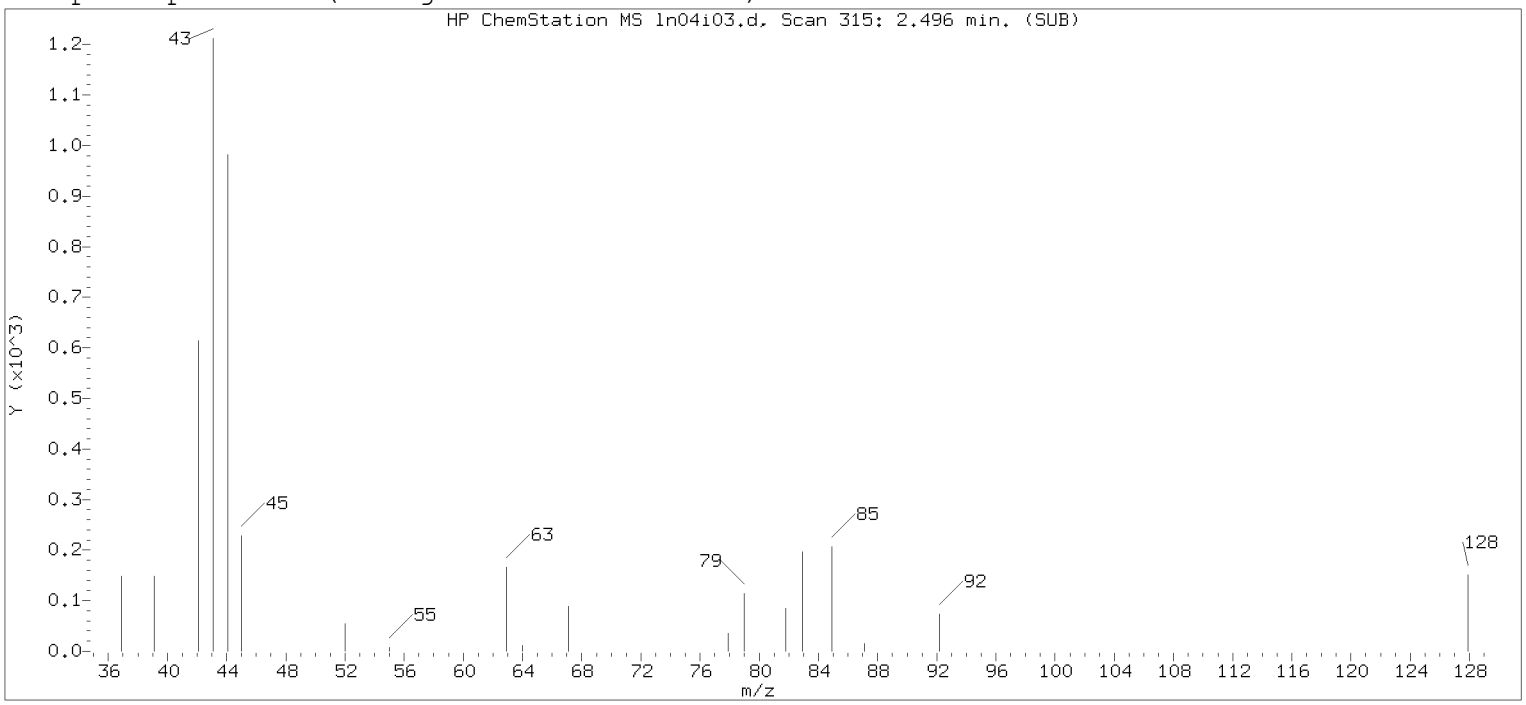
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 502
Retention Time (minutes): 3.098
Quant Ion : 67.00
Area (flag) : 509913MA
On-Column Amount (ng) : 49.5150
Integration start scan : 472 Integration stop scan: 576
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

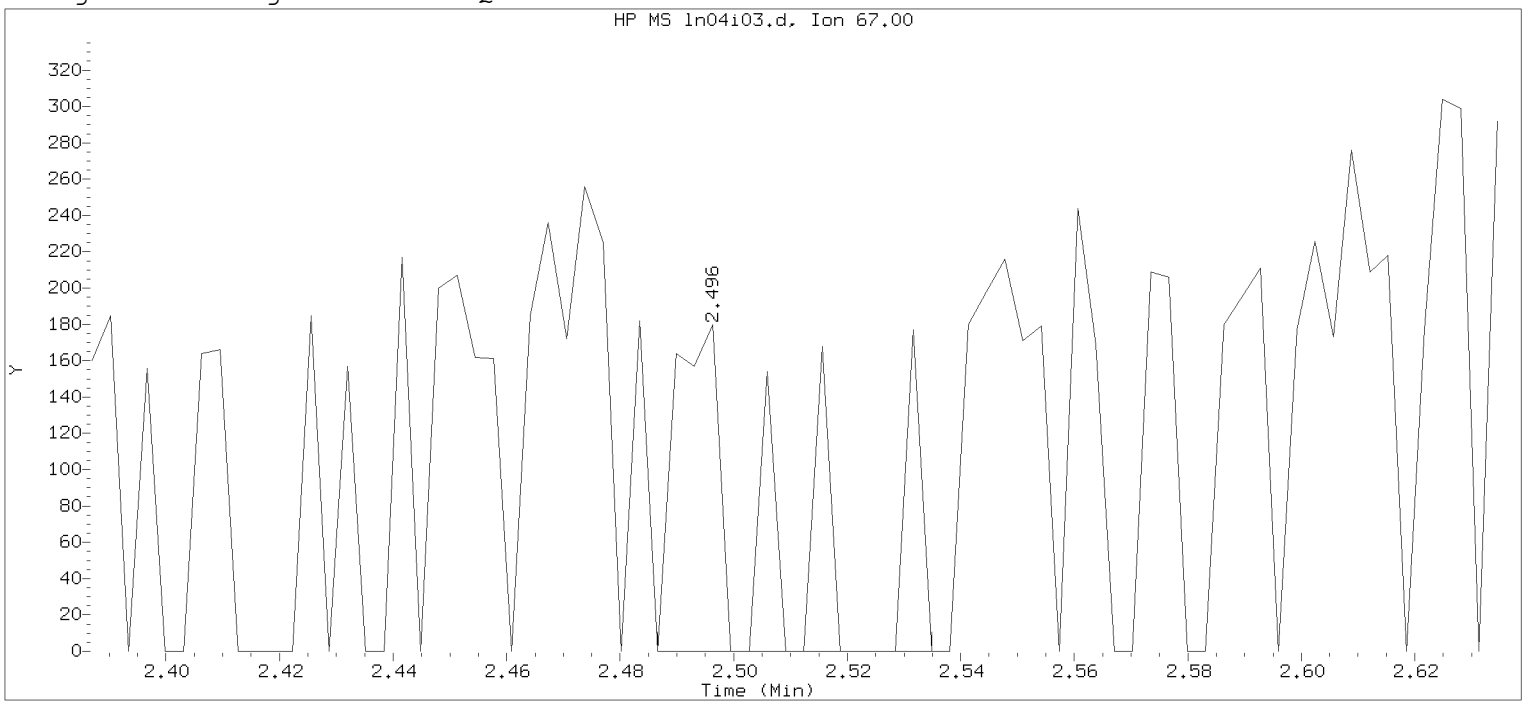
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 315
Retention Time (minutes): 2.496
Quant Ion : 67.00
Area : 192
On-column Amount (ng) : 0.0562
Integration start scan : 311 Integration stop scan: 326
Y at integration start : 0 Y at integration end: 0

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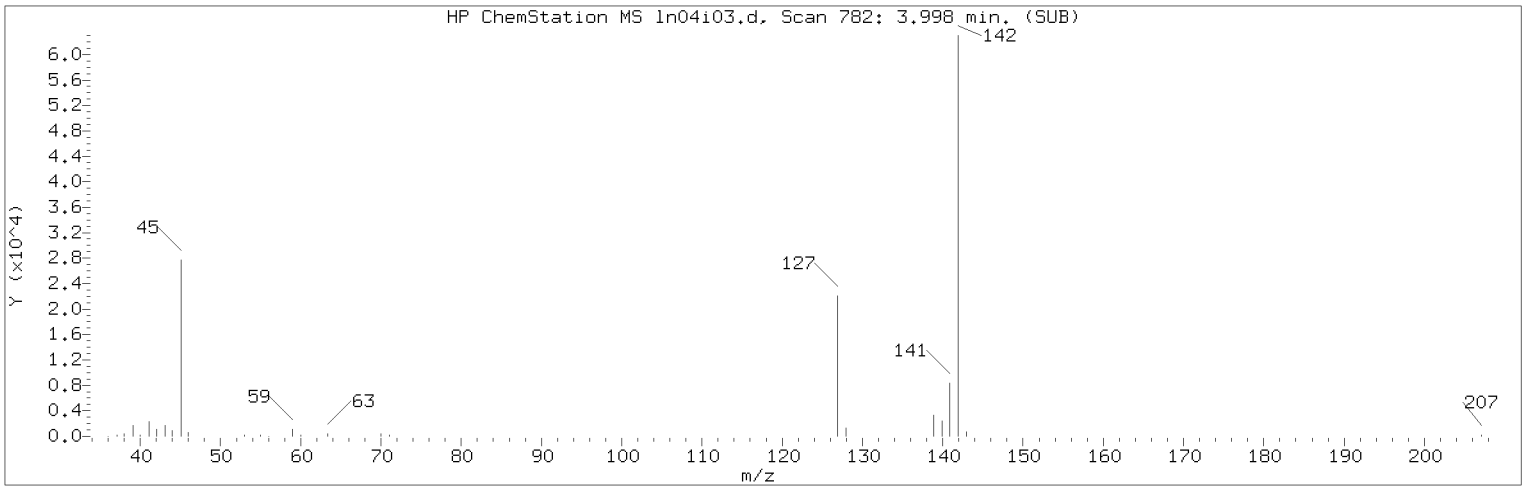
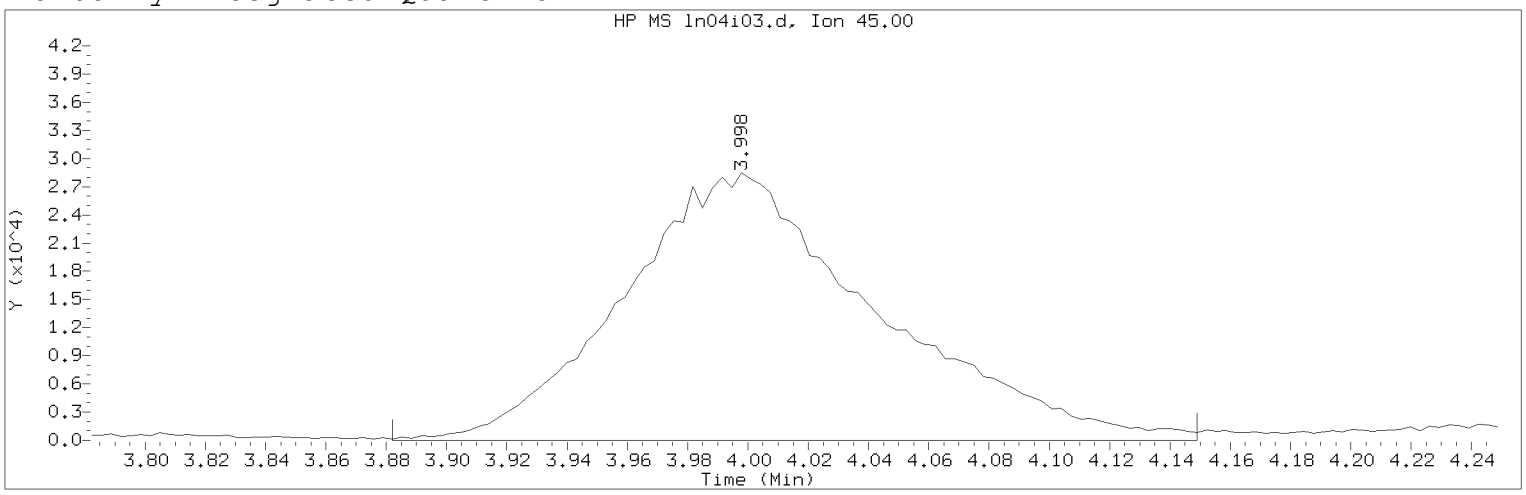
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

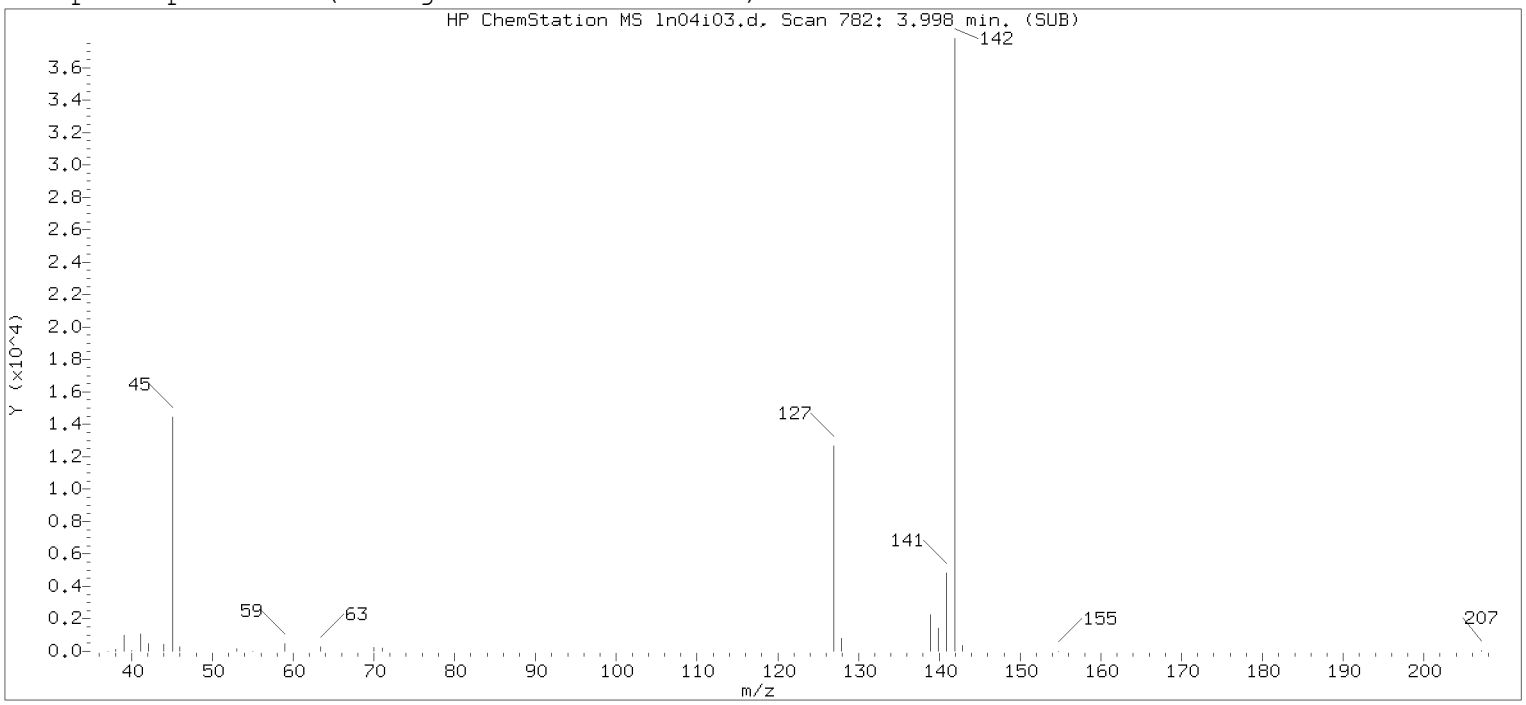
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 782
Retention Time (minutes): 3.998
Quant Ion : 45.00
Area (flag) : 165875M
On-Column Amount (ng) : 254.2825
Integration start scan : 745 Integration stop scan: 828
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

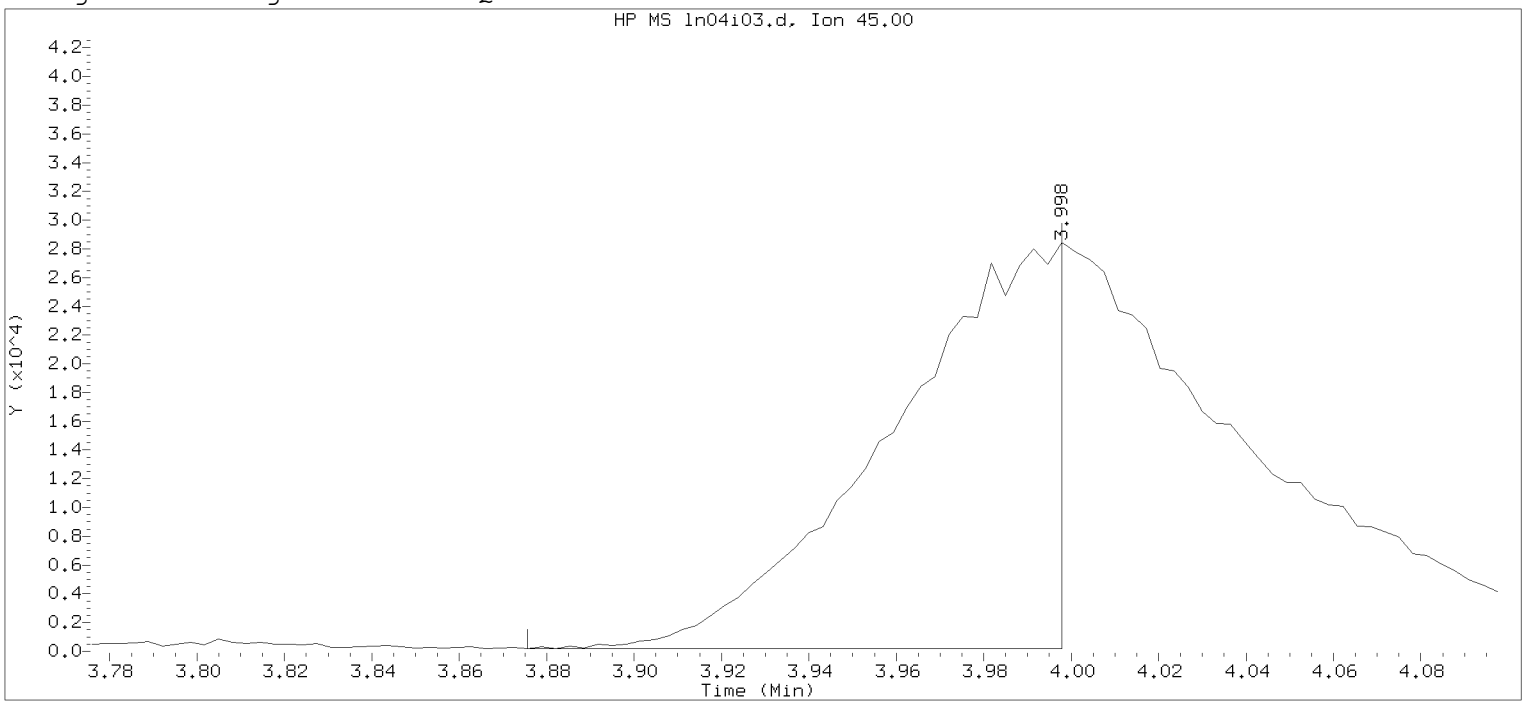
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

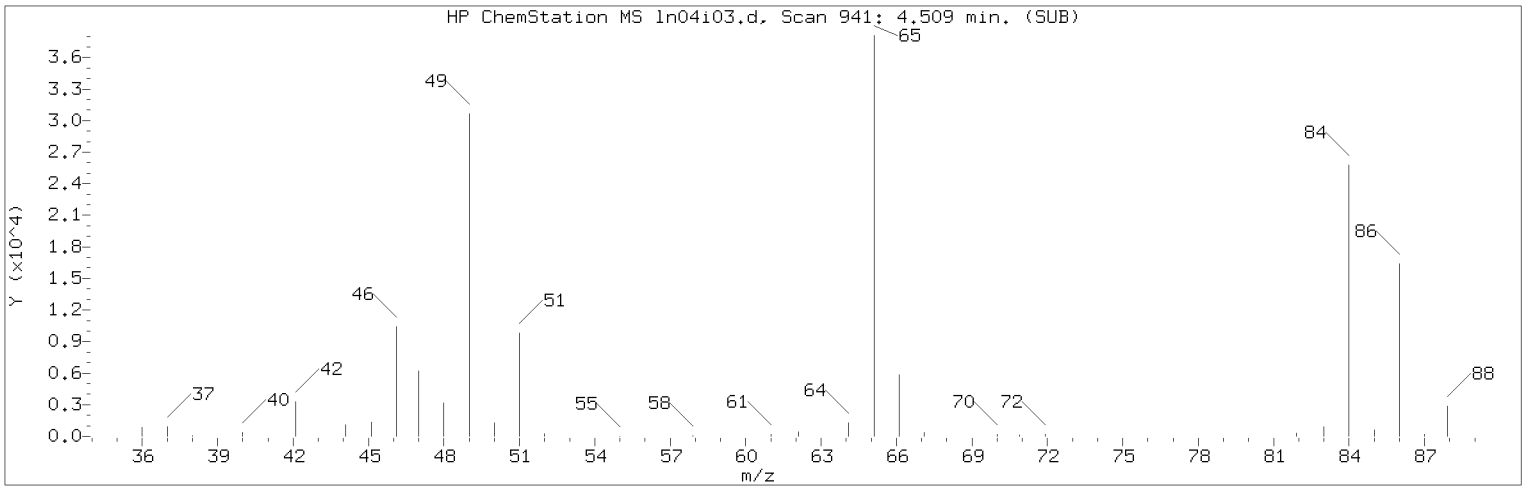
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

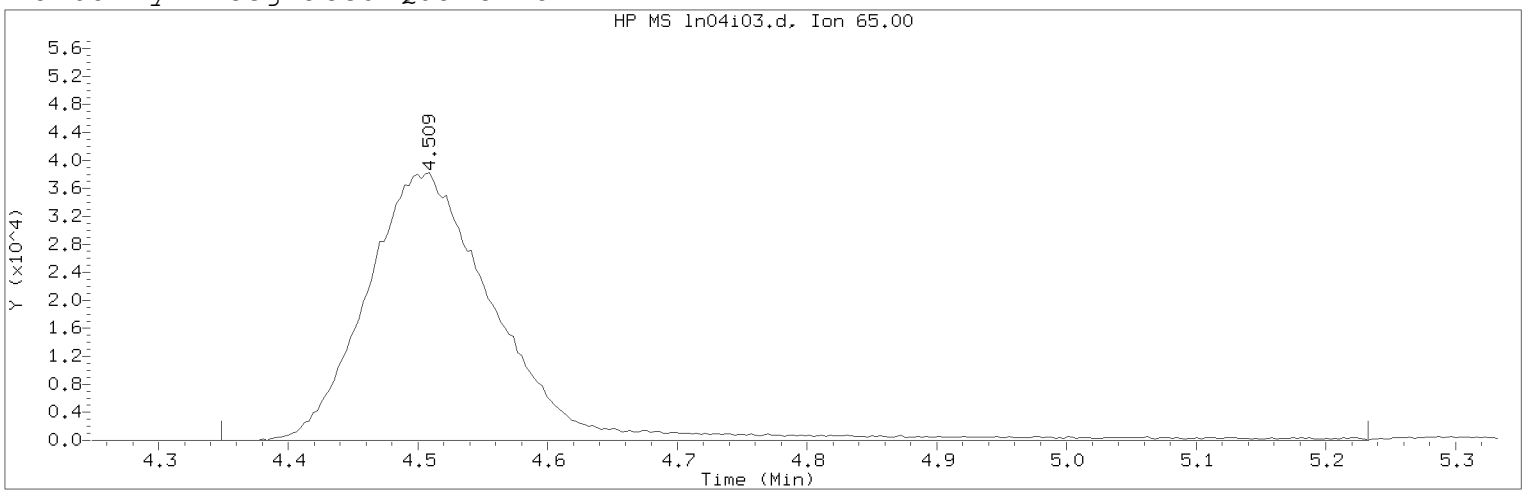
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 782
Retention Time (minutes): 3.998
Quant Ion : 45.00
Area : 74713
On-column Amount (ng) : 135.4026
Integration start scan : 743 Integration stop scan: 781
Y at integration start : 167 Y at integration end: 167

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

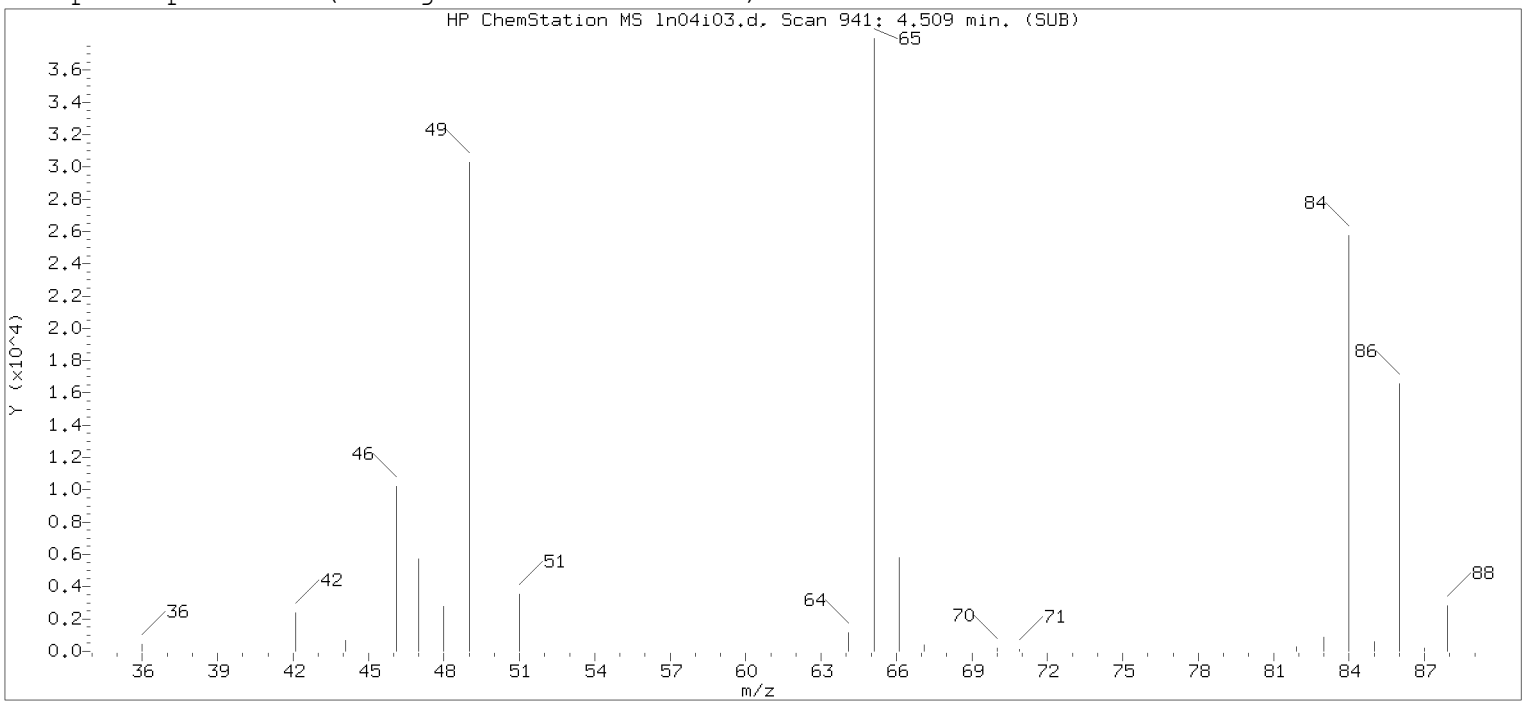
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 269779M
On-Column Amount (ng) : 250.0000
Integration start scan : 890 Integration stop scan: 1165
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

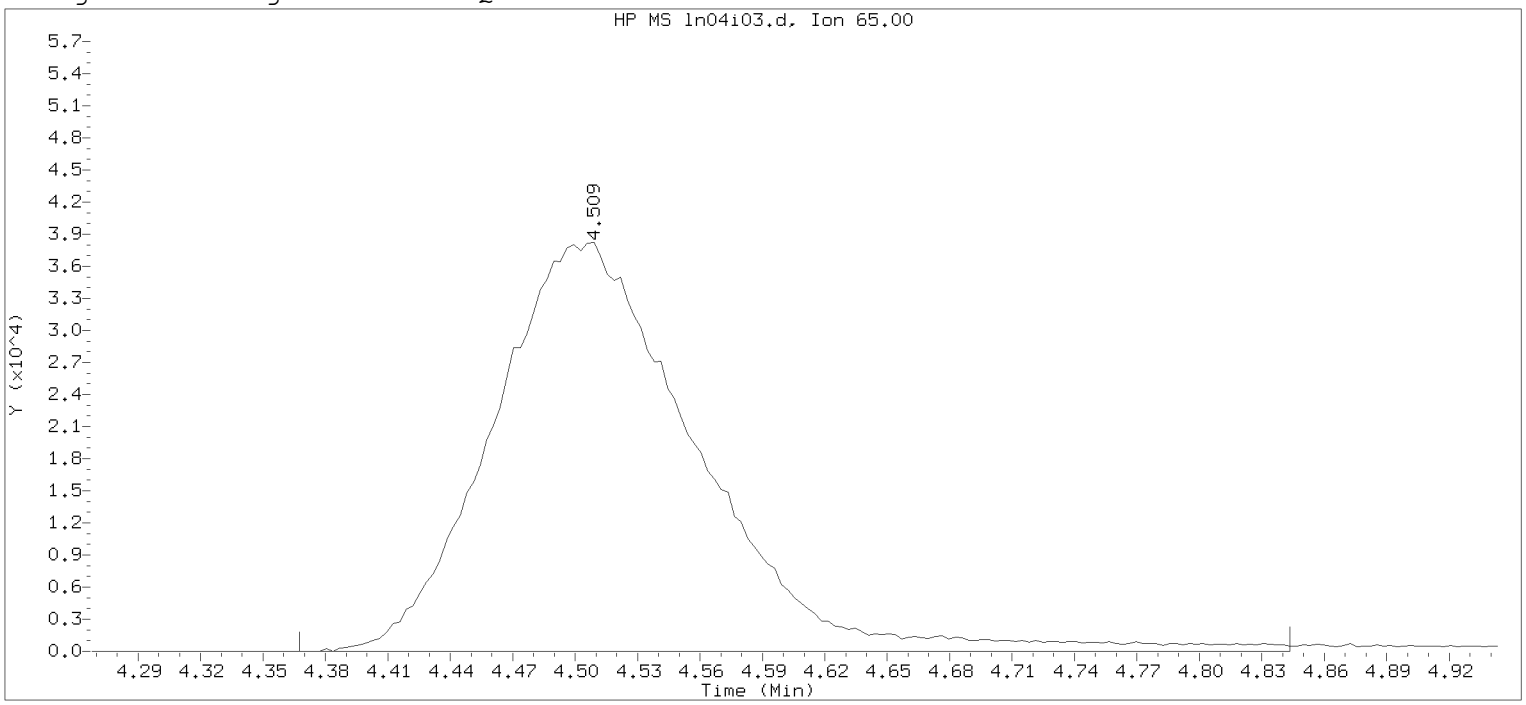
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

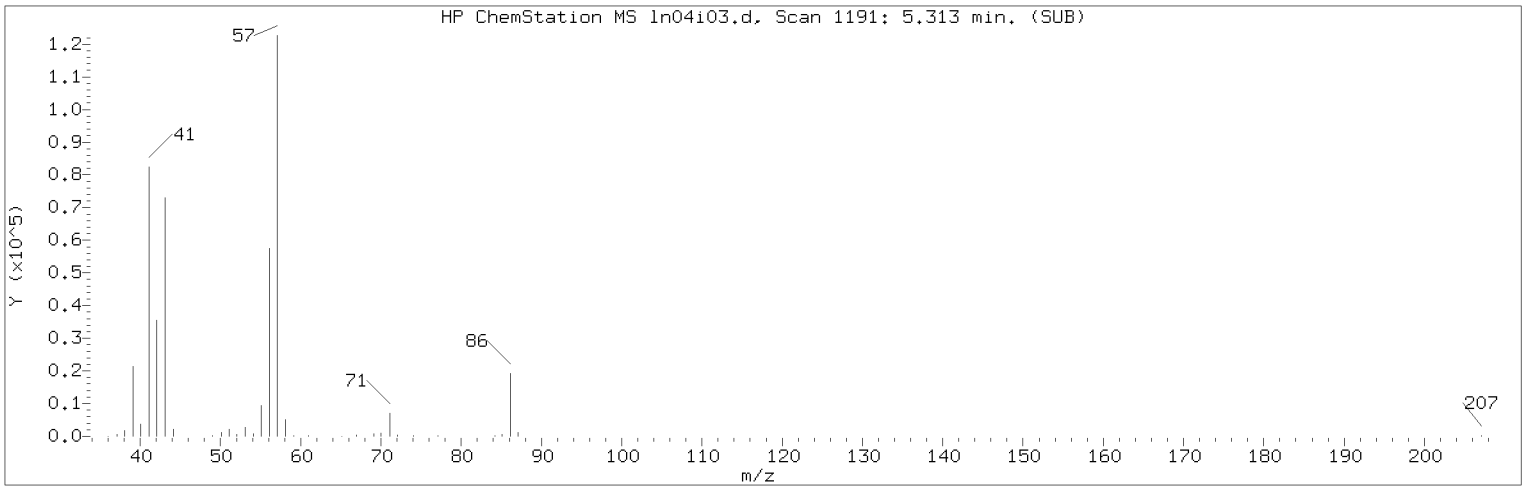
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

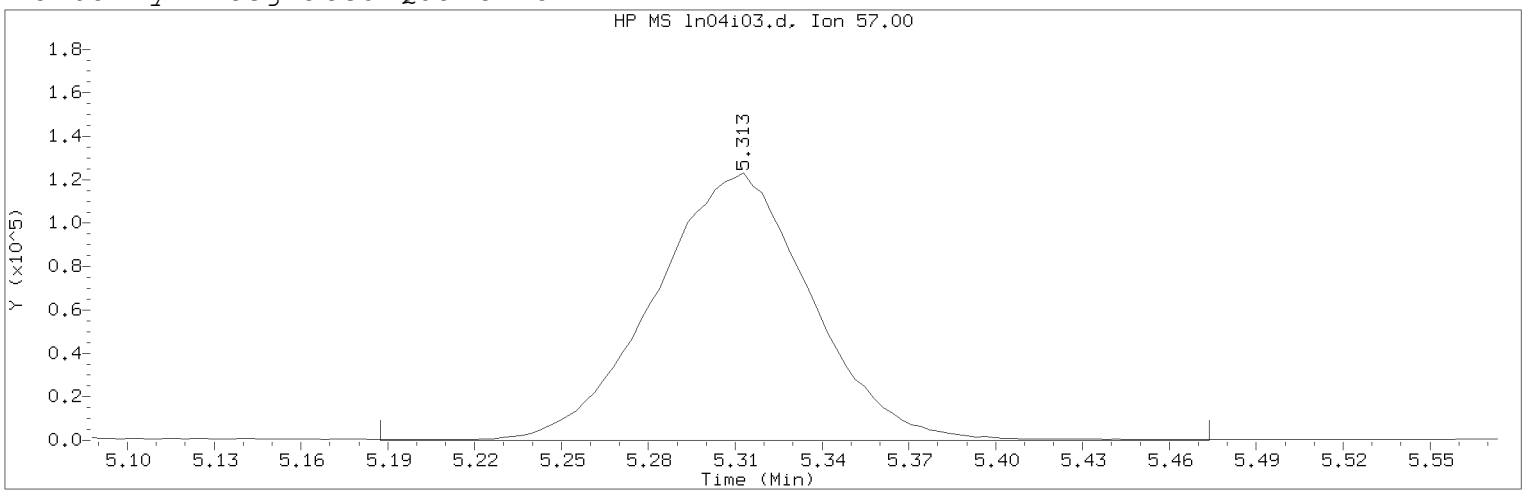
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 261144
On-column Amount (ng) : 250.0000
Integration start scan : 896 Integration stop scan: 1044
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

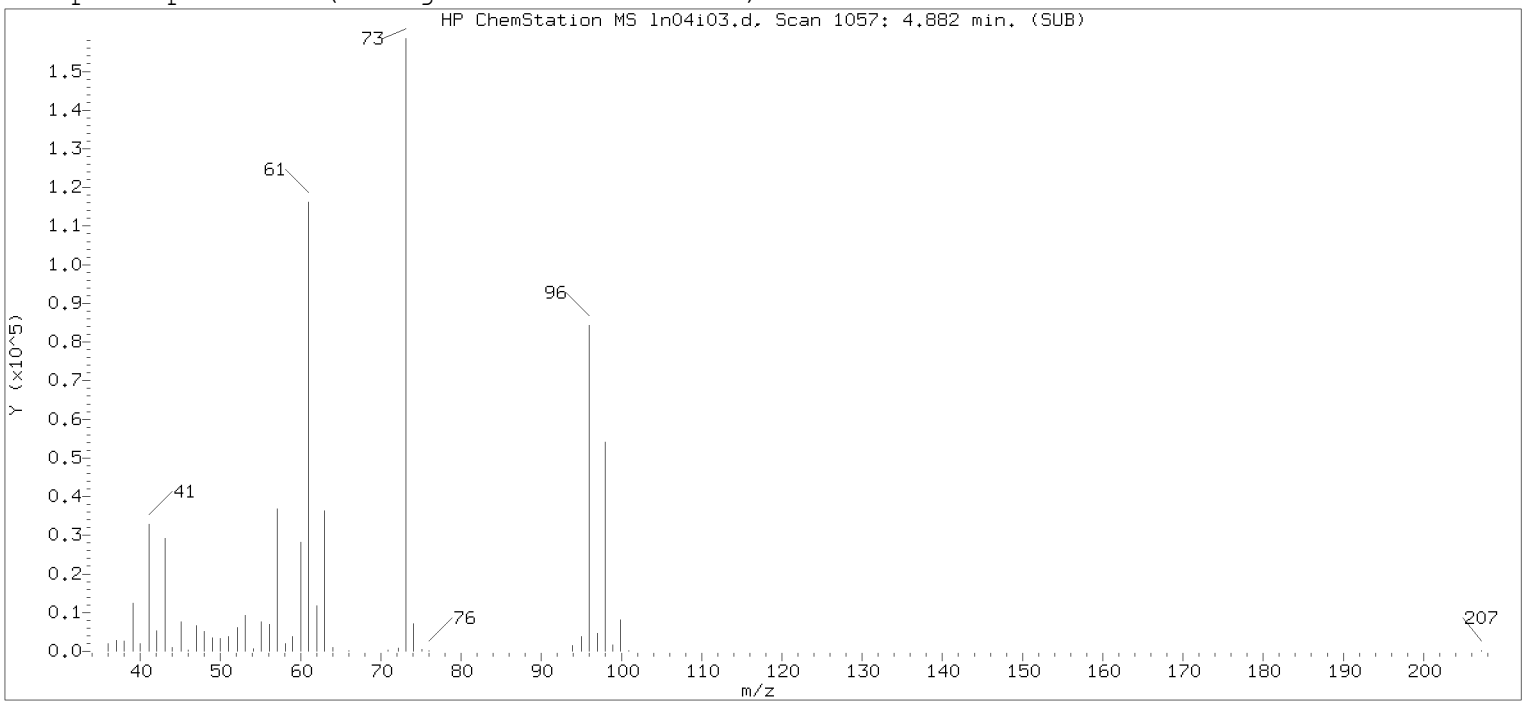
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1191
Retention Time (minutes): 5.313
Quant Ion : 57.00
Area (flag) : 463732M
On-Column Amount (ng) : 52.3639
Integration start scan : 1151 Integration stop scan: 1240
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

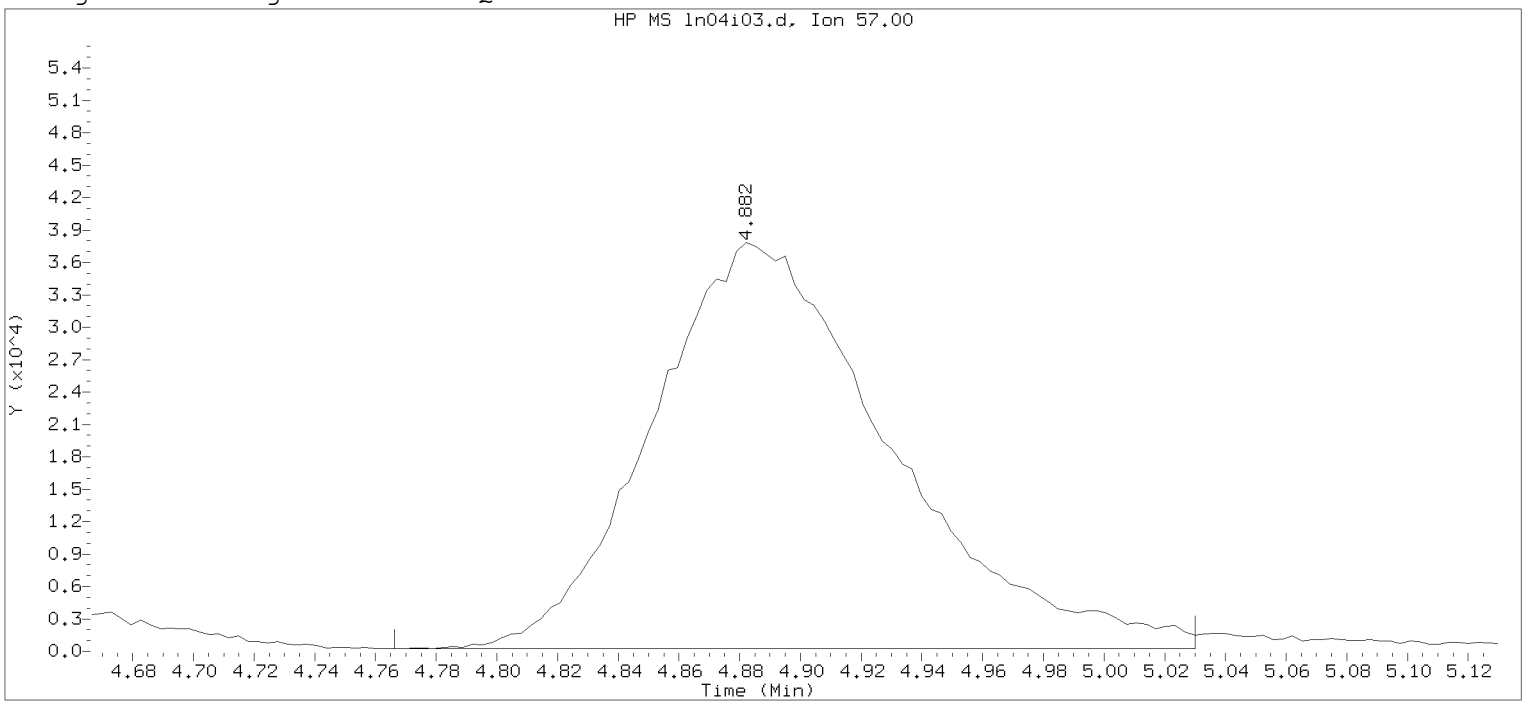
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

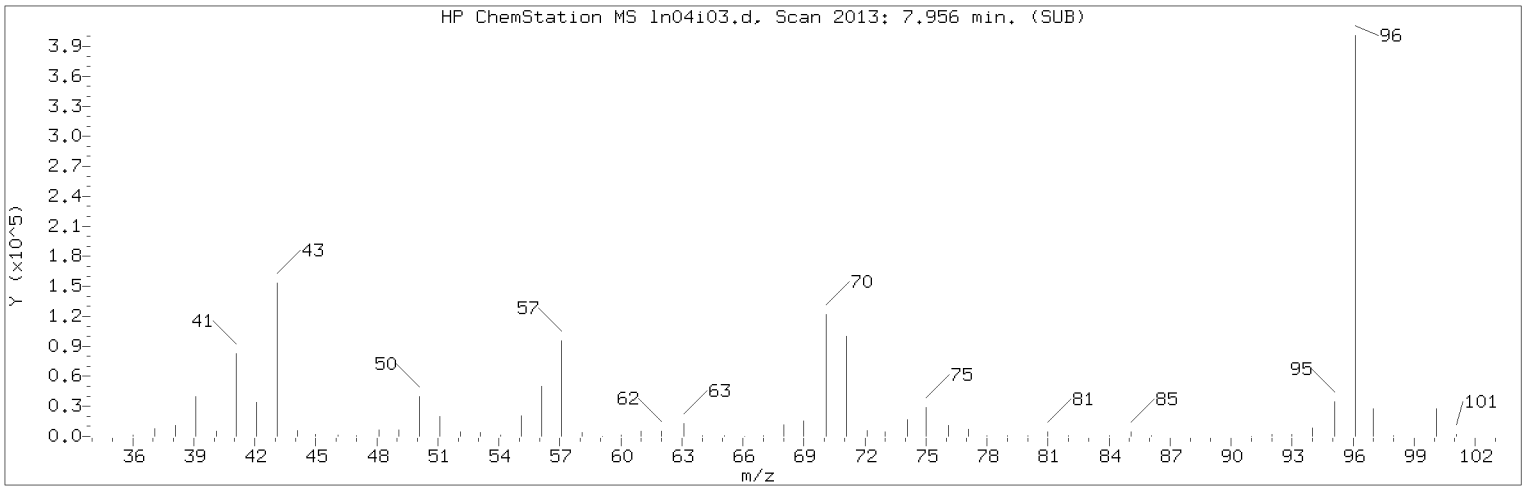
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

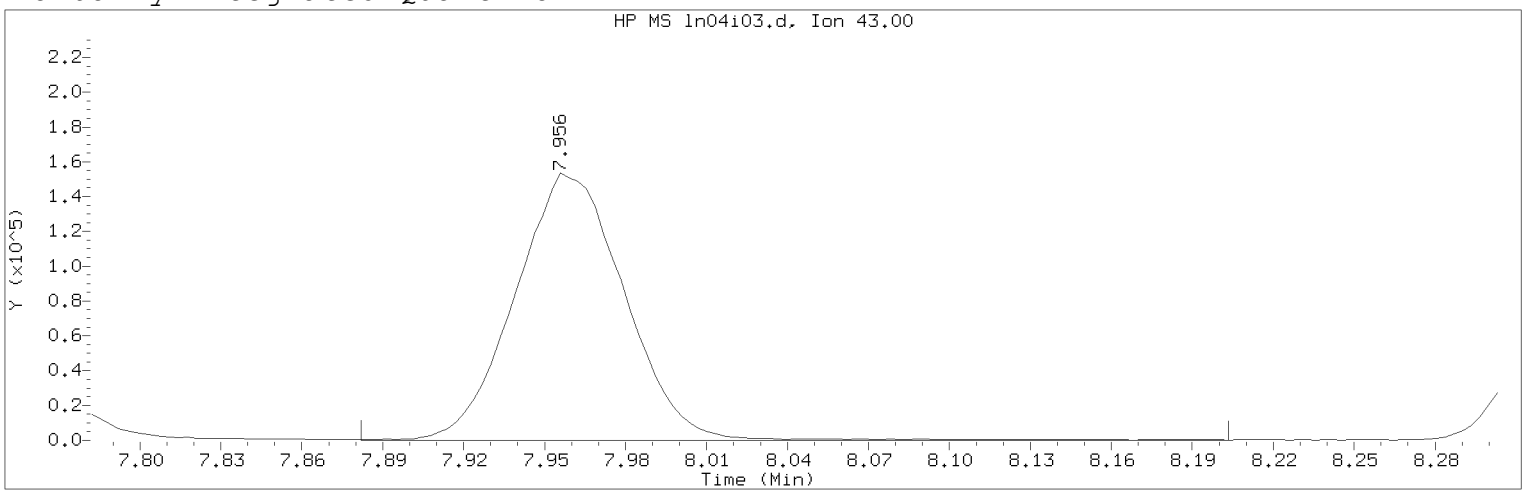
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1057
Retention Time (minutes): 4.882
Quant Ion : 57.00
Area : 205522
On-column Amount (ng) : 50.0557
Integration start scan : 1020 Integration stop scan: 1102
Y at integration start : 228 Y at integration end: 228

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

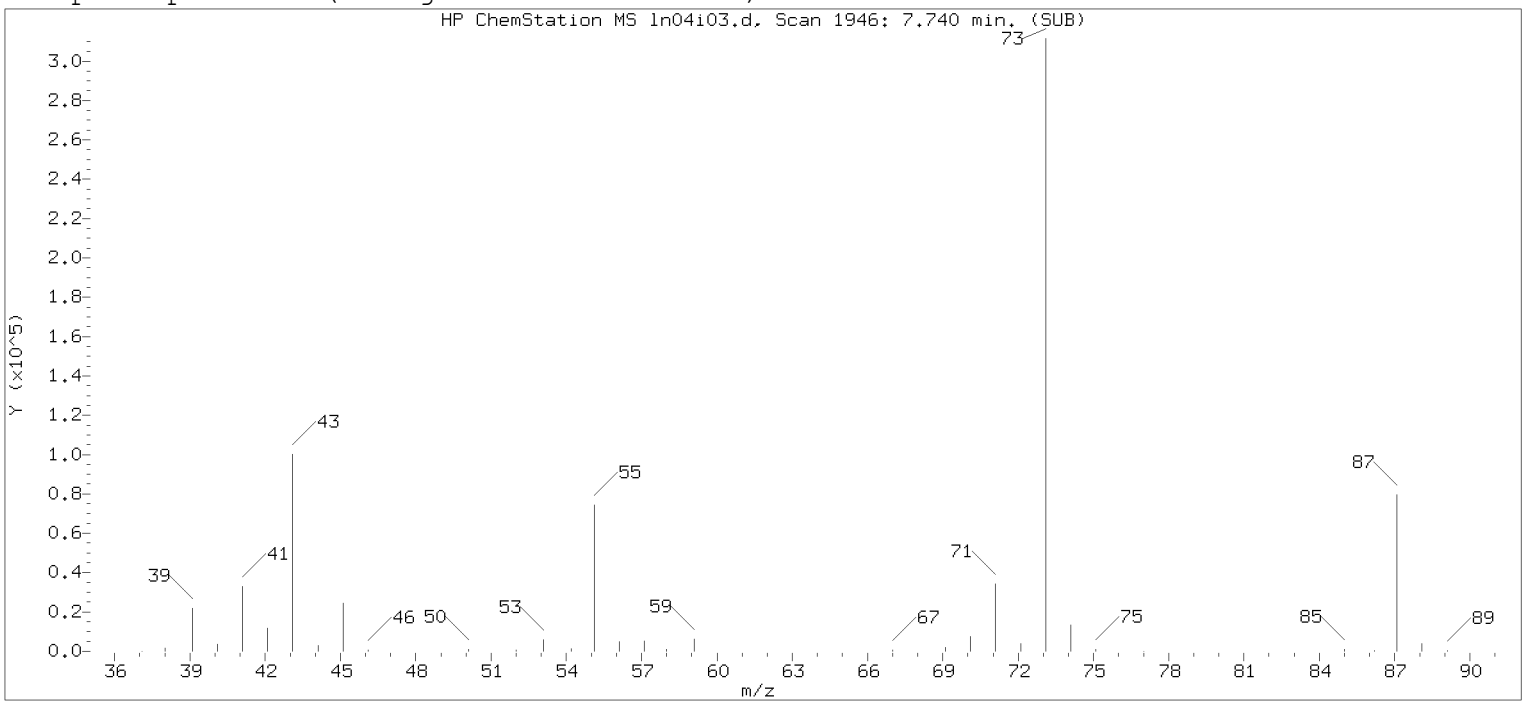
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2013
Retention Time (minutes): 7.956
Quant Ion : 43.00
Area (flag) : 432248MA
On-Column Amount (ng) : 52.2472
Integration start scan : 1989 Integration stop scan: 2089
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

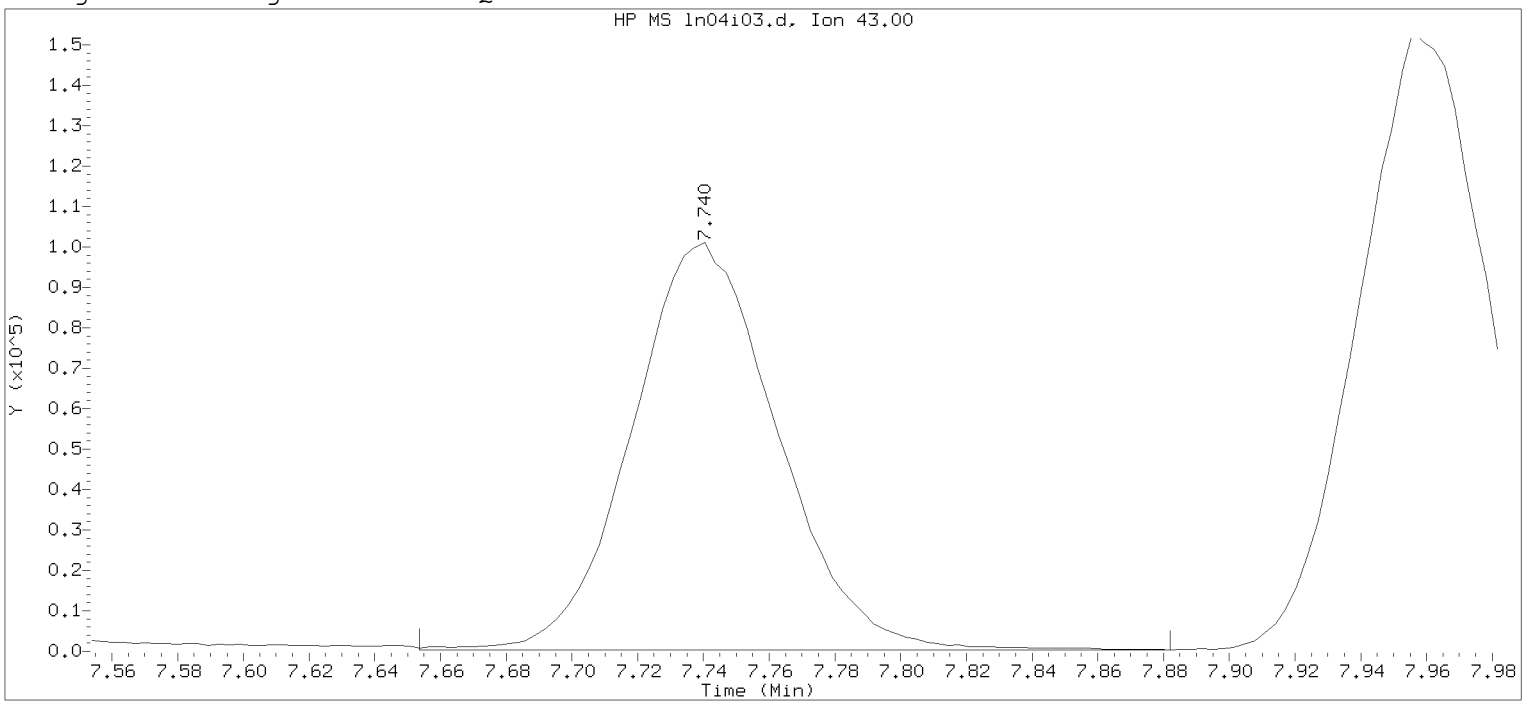
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

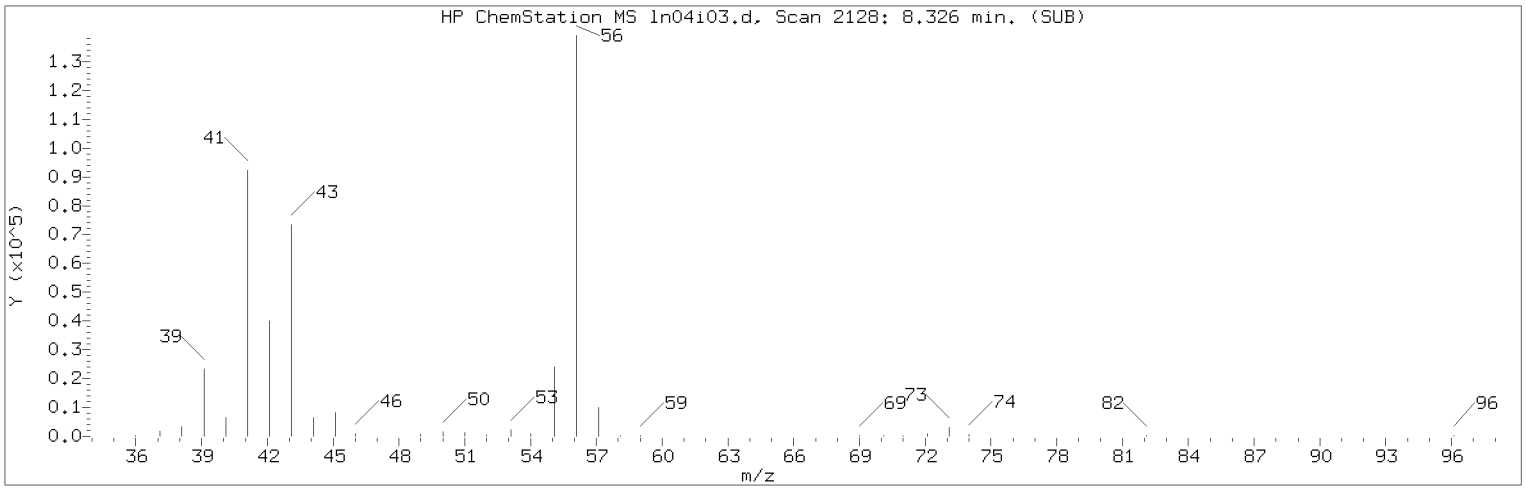
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

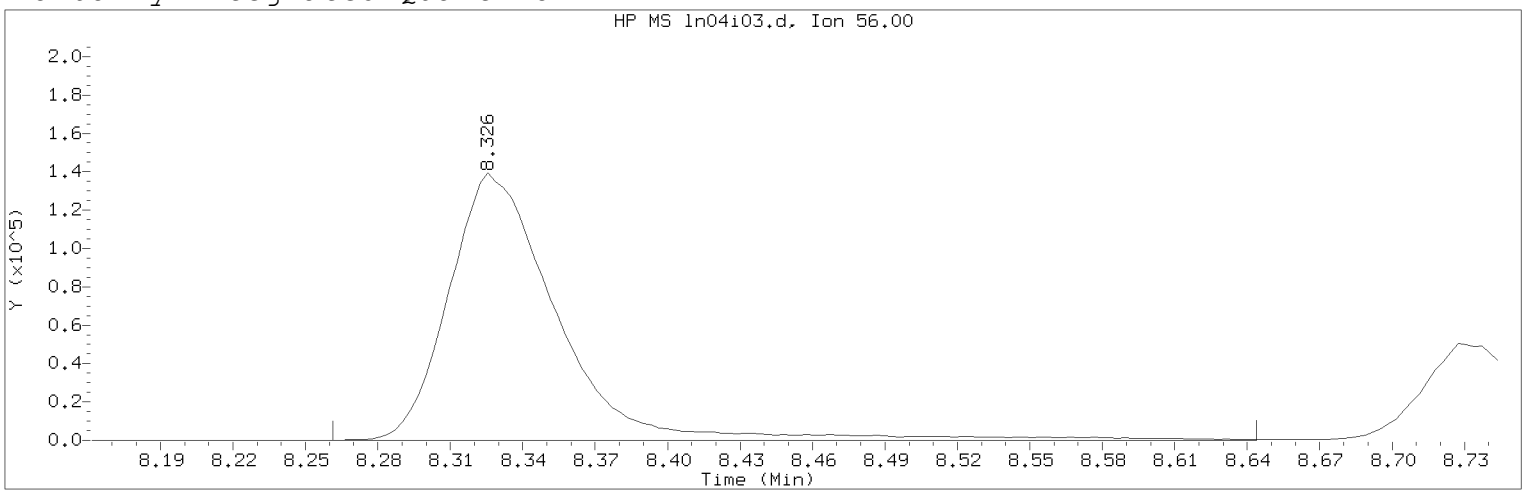
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.740
Quant Ion : 43.00
Area : 311136
On-column Amount (ng) : 51.5793
Integration start scan : 1918 Integration stop scan: 1989
Y at integration start : 288 Y at integration end: 288

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

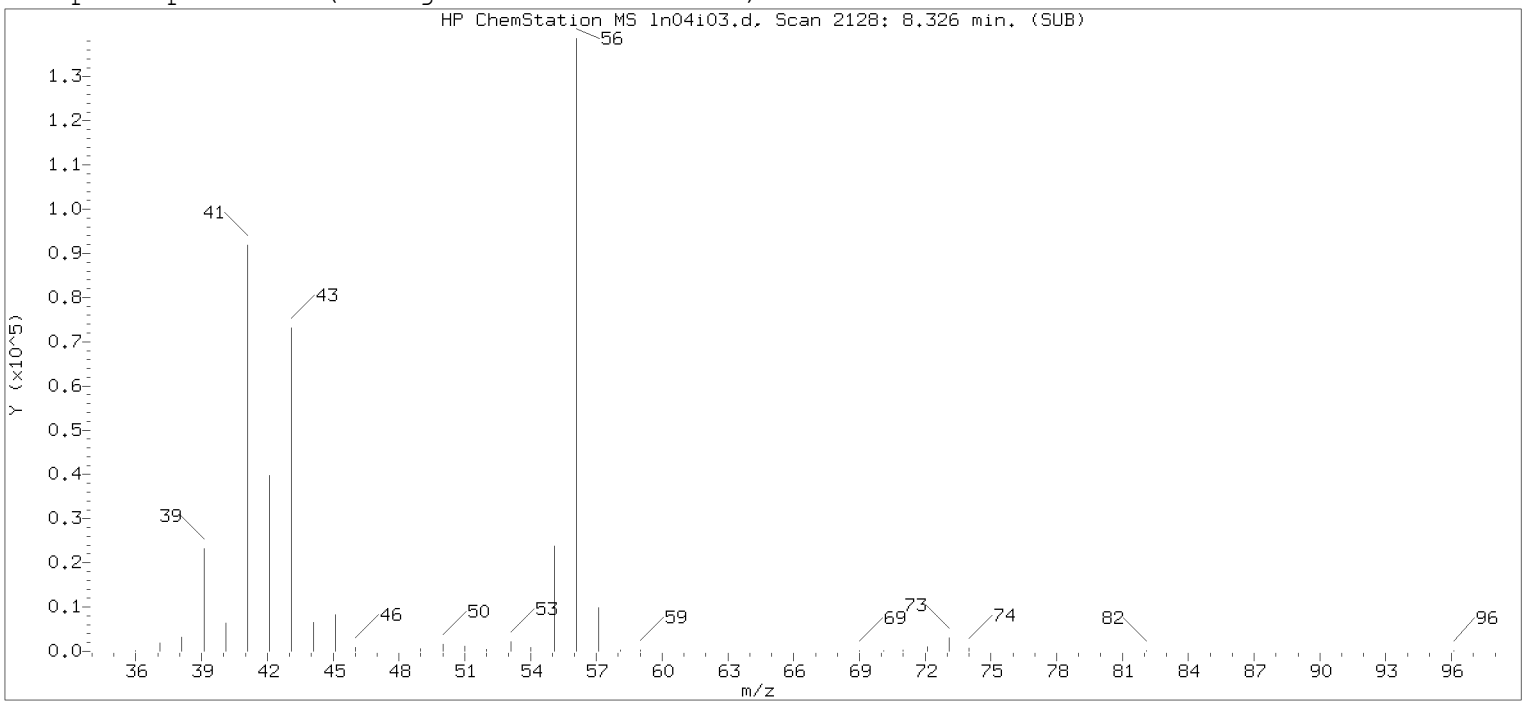
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area (flag) : 438437M
On-Column Amount (ng) : 1332.7496
Integration start scan : 2107 Integration stop scan: 2226
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

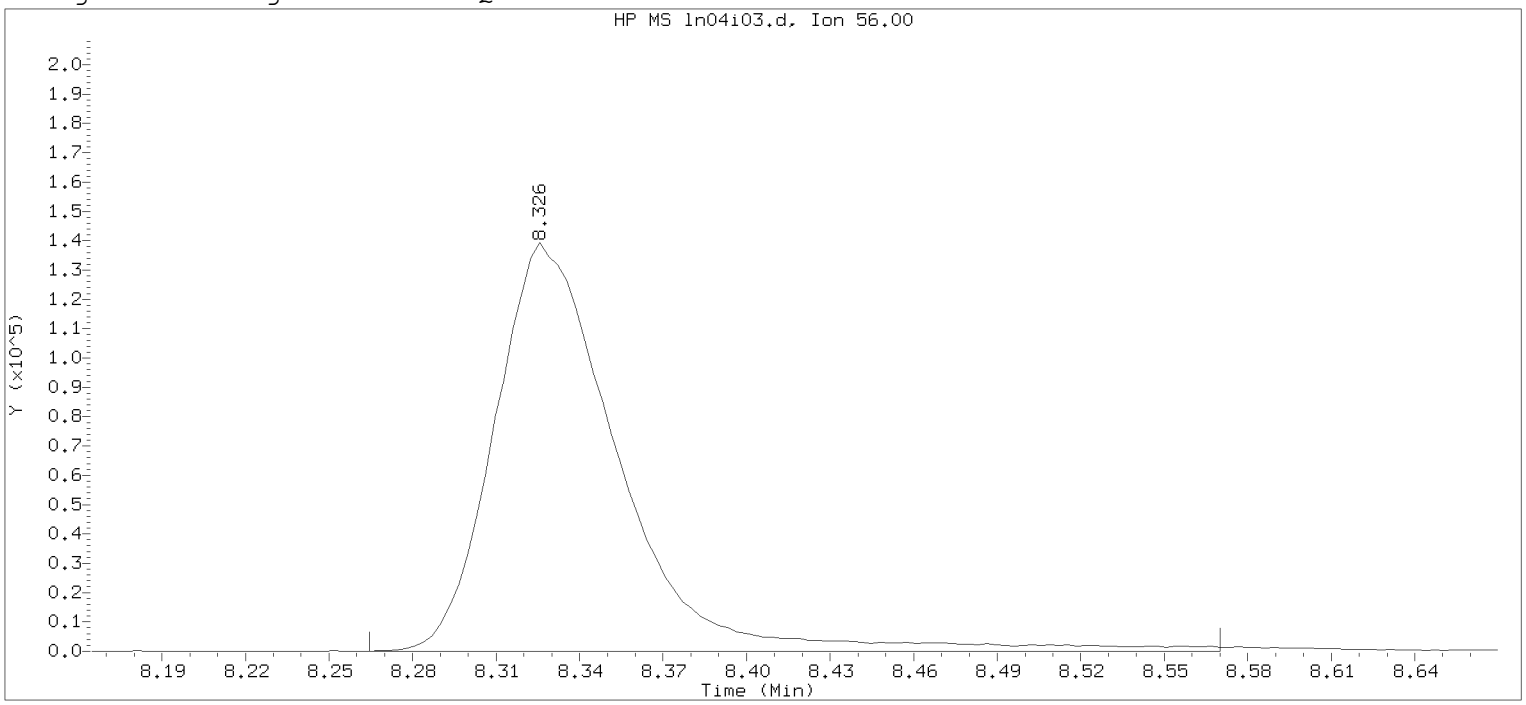
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

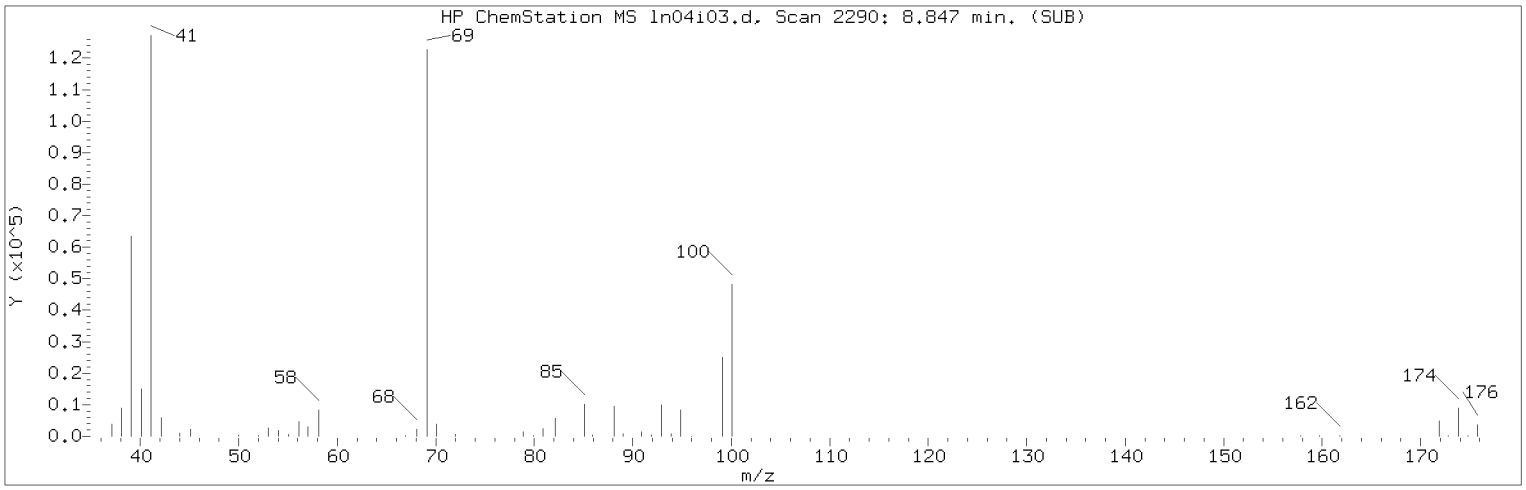
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

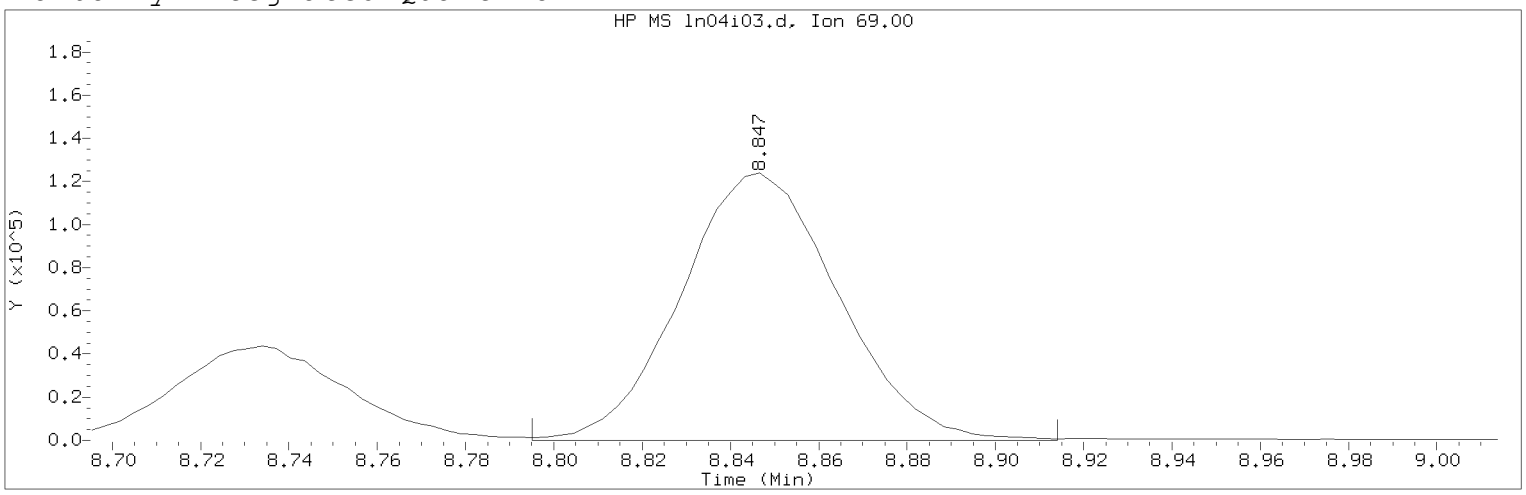
Compound Number	: 69		
Compound Name	: n-Butanol		
Scan Number	: 2128		
Retention Time (minutes)	: 8.326		
Quant Ion	: 56.00		
Area	: 434385		
On-column Amount (ng)	: 1223.8707		
Integration start scan	: 2108	Integration stop scan:	2203
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

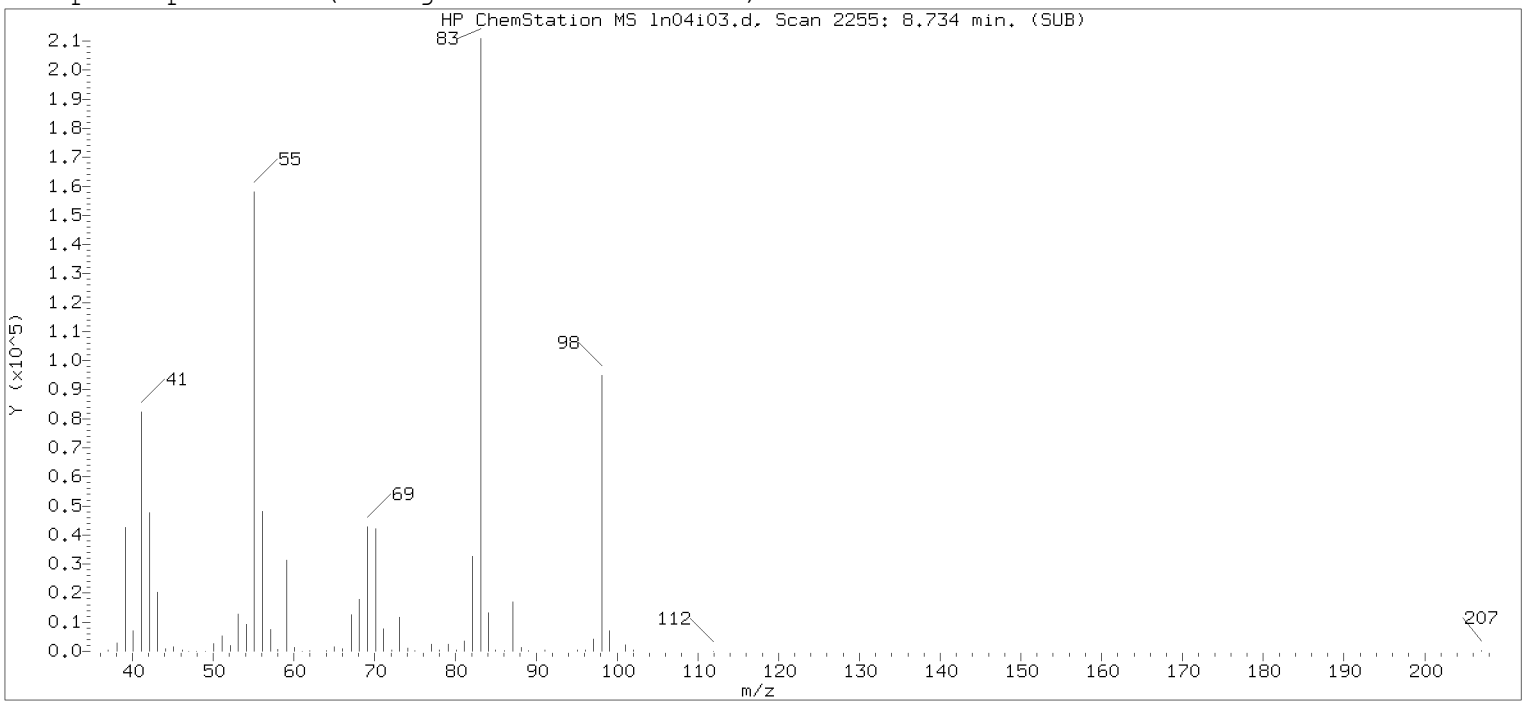
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2290
Retention Time (minutes): 8.847
Quant Ion : 69.00
Area (flag) : 306086A
On-Column Amount (ng) : 52.7952
Integration start scan : 2273 Integration stop scan: 2310
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

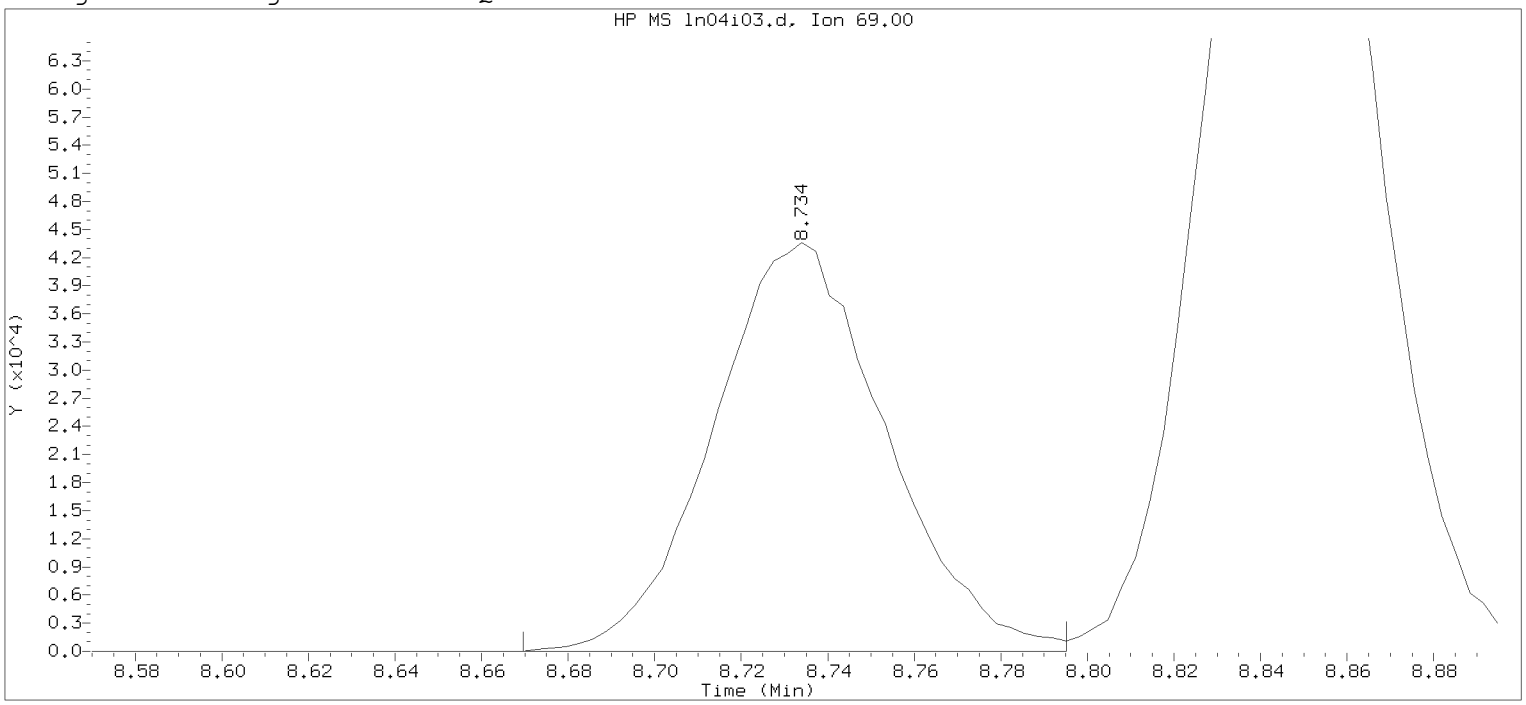
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

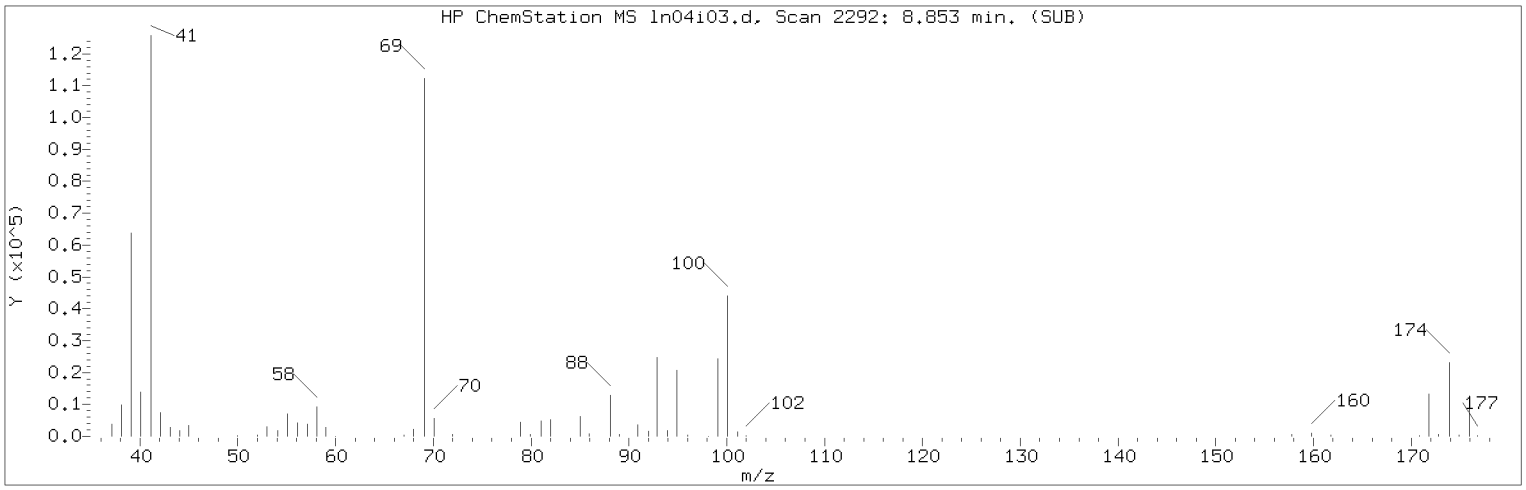
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

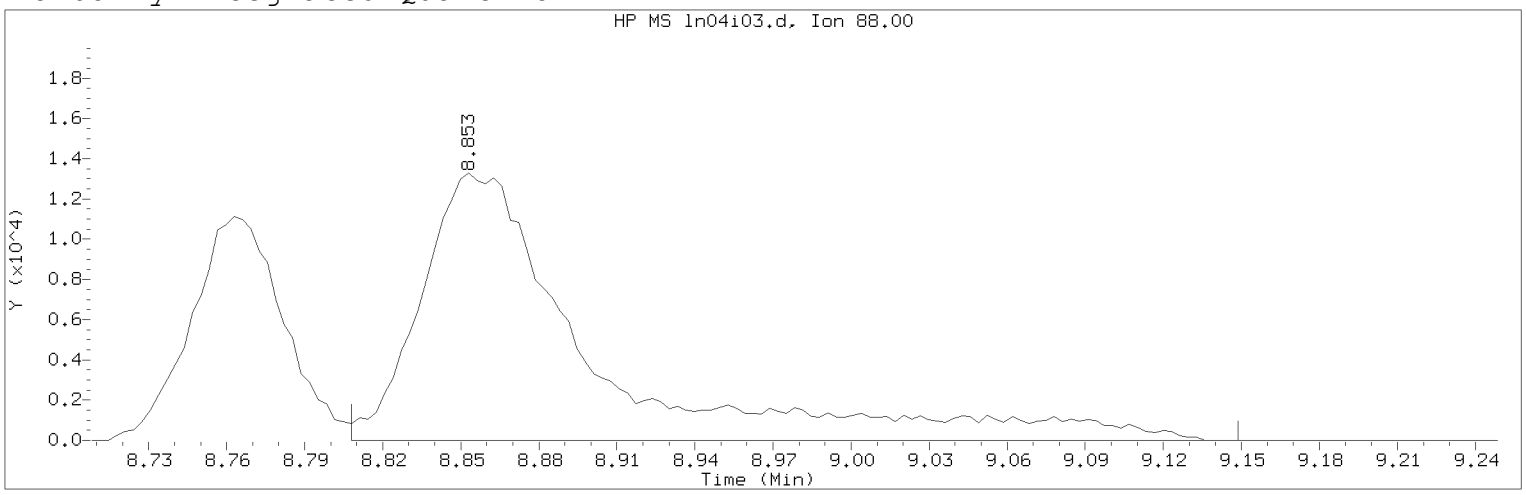
Compound Number	: 76		
Compound Name	: Methyl Methacrylate		
Scan Number	: 2255		
Retention Time (minutes)	: 8.734		
Quant Ion	: 69.00		
Area	: 120511		
On-column Amount (ng)	: 48.6556		
Integration start scan	: 2234	Integration stop scan:	2273
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

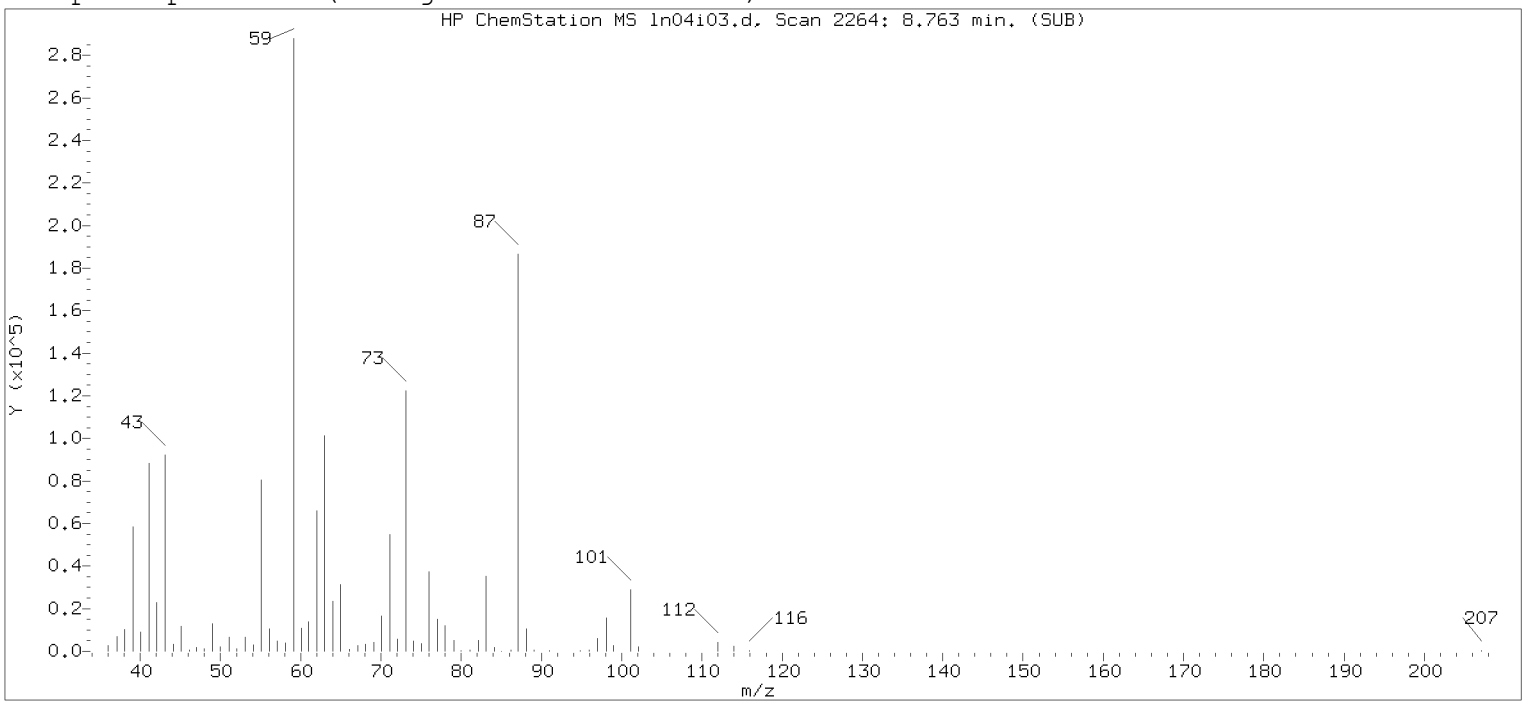
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area (flag) : 59876M
On-Column Amount (ng) : 662.1956
Integration start scan : 2277 Integration stop scan: 2383
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

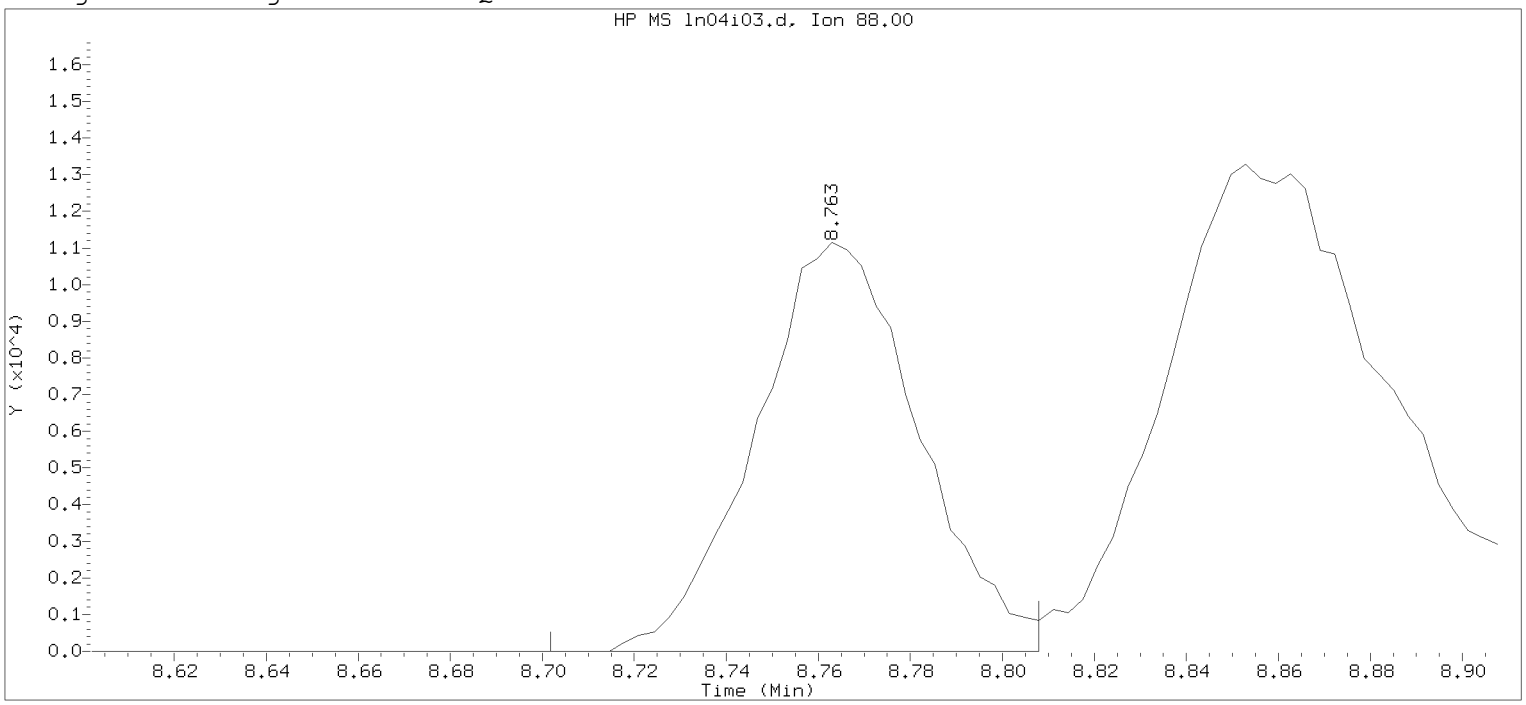
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

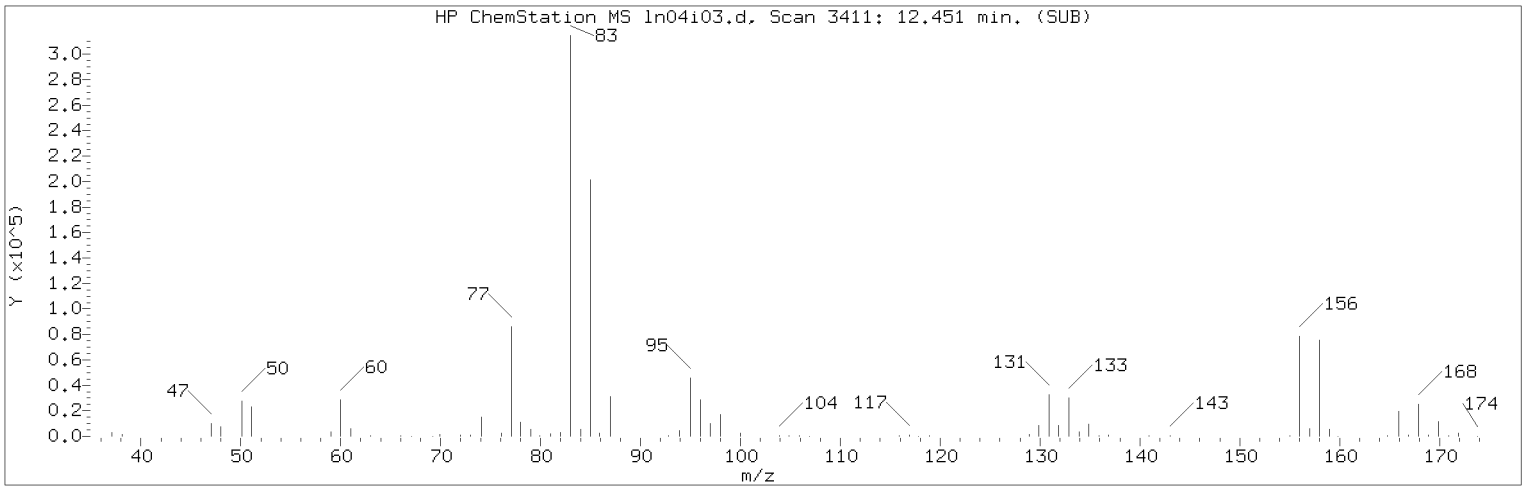
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

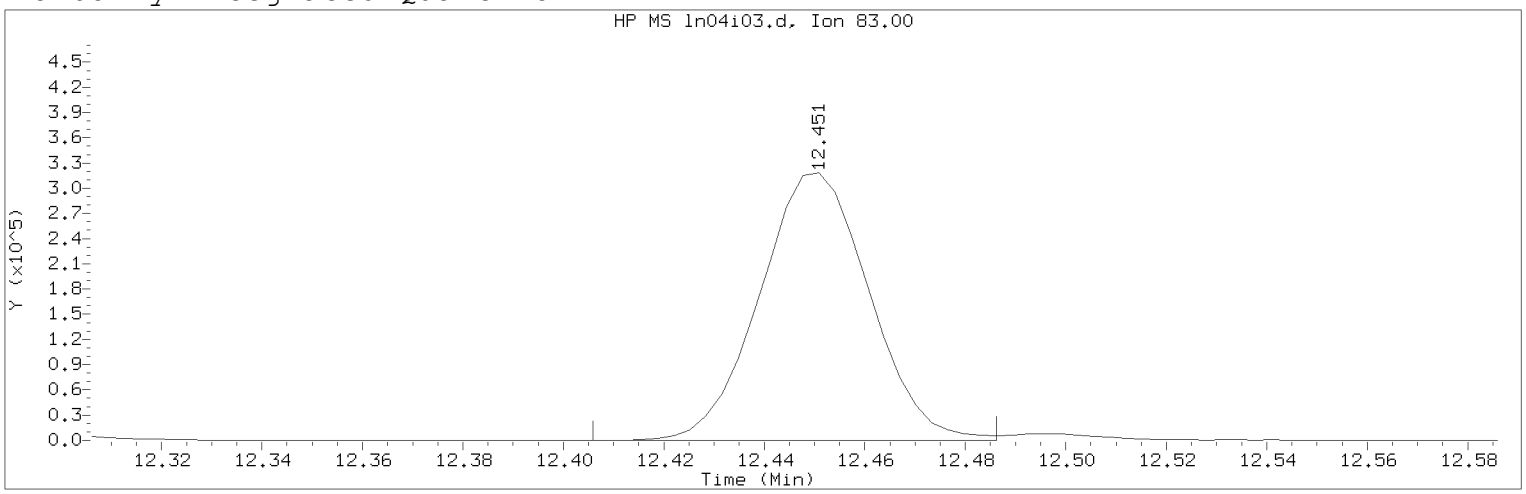
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2264
Retention Time (minutes): 8.763
Quant Ion : 88.00
Area : 27334
On-column Amount (ng) : 447.5530
Integration start scan : 2244 Integration stop scan: 2277
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

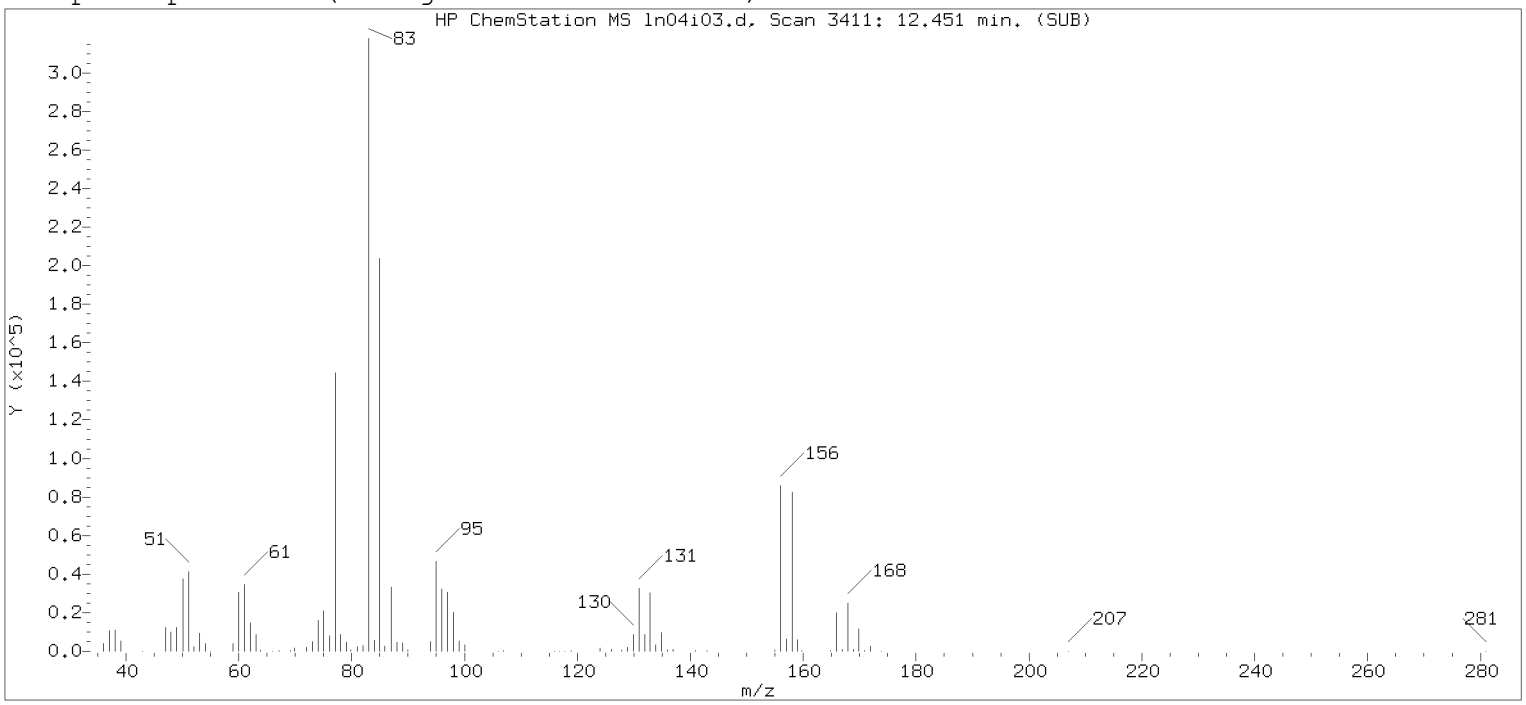
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 482004M
On-Column Amount (ng) : 52.7274
Integration start scan : 3396 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

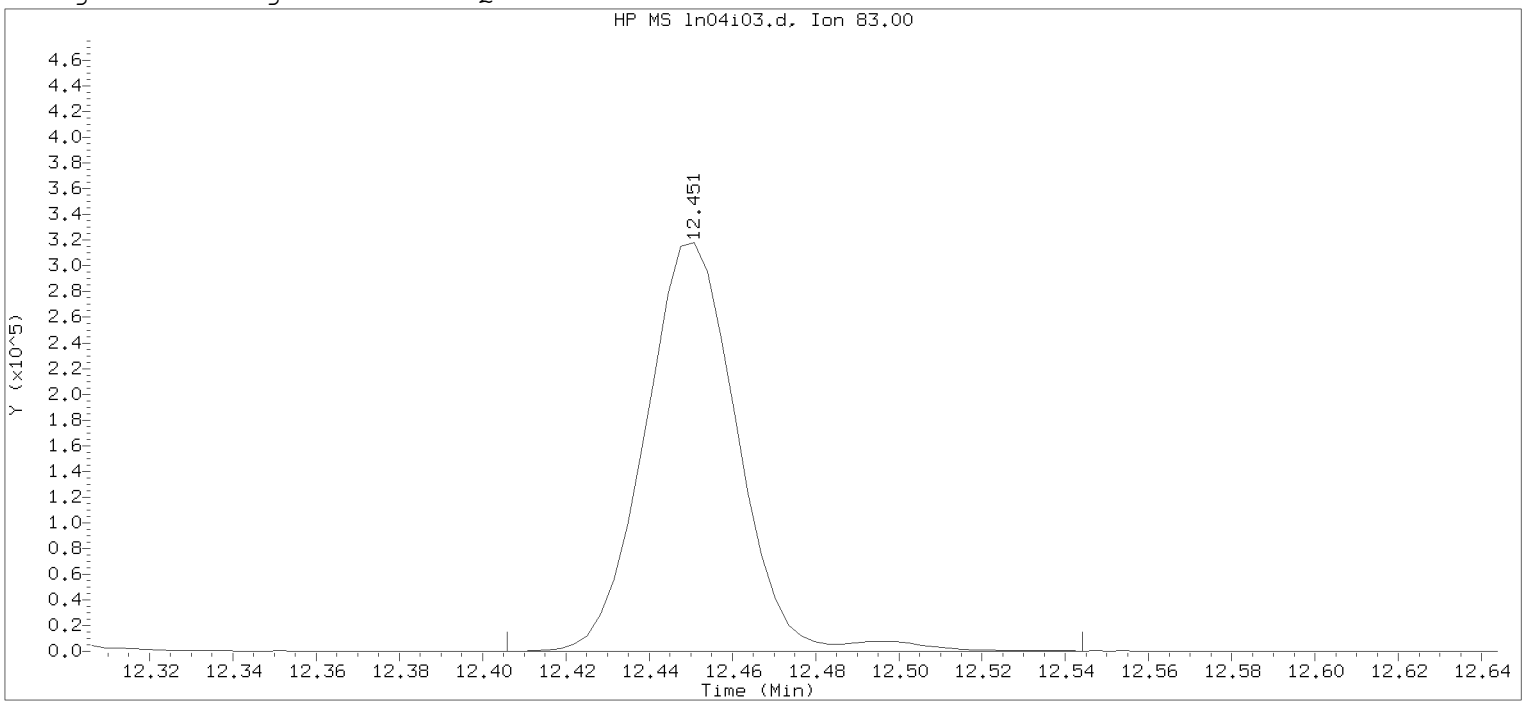
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

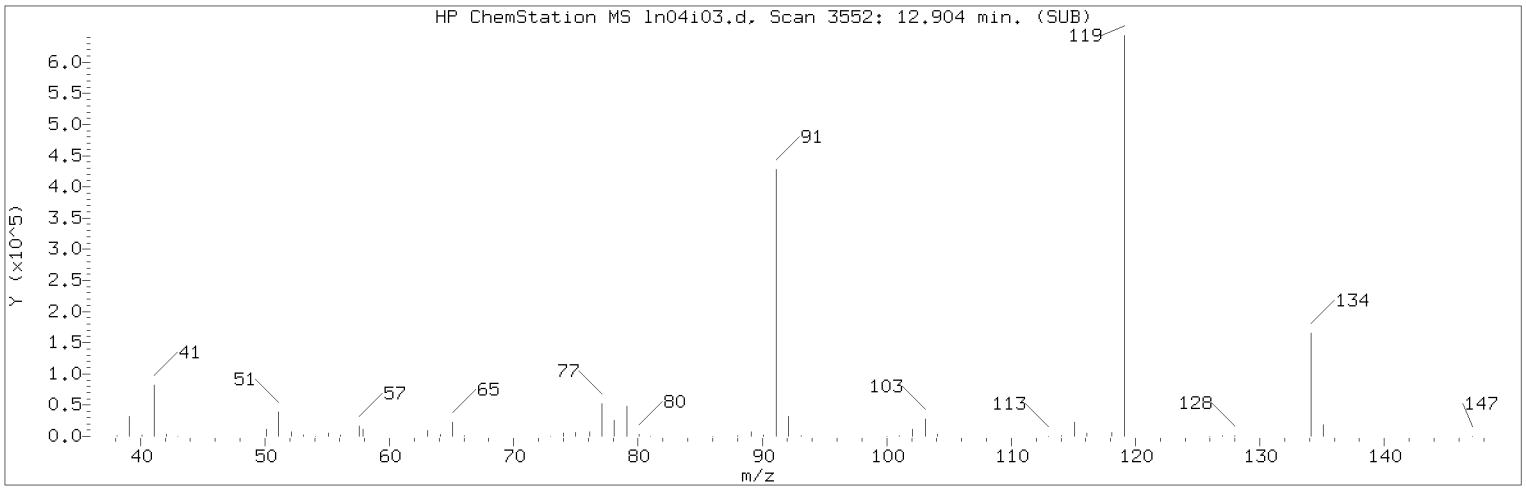
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

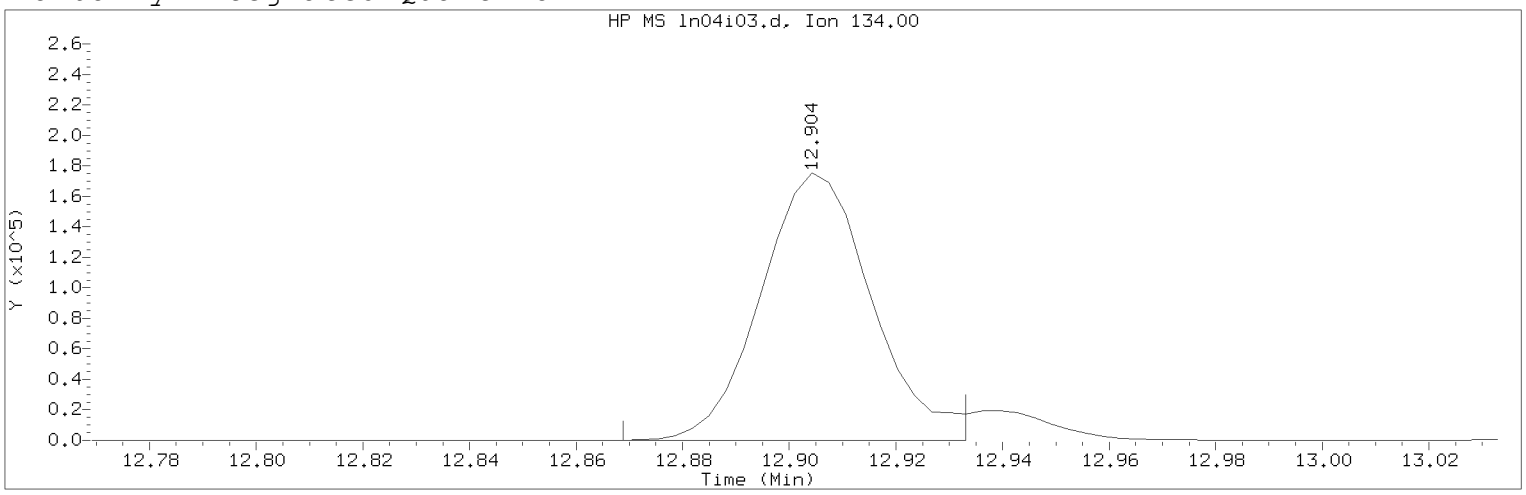
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 491918
On-column Amount (ng) : 50.7154
Integration start scan : 3396 Integration stop scan: 3439
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

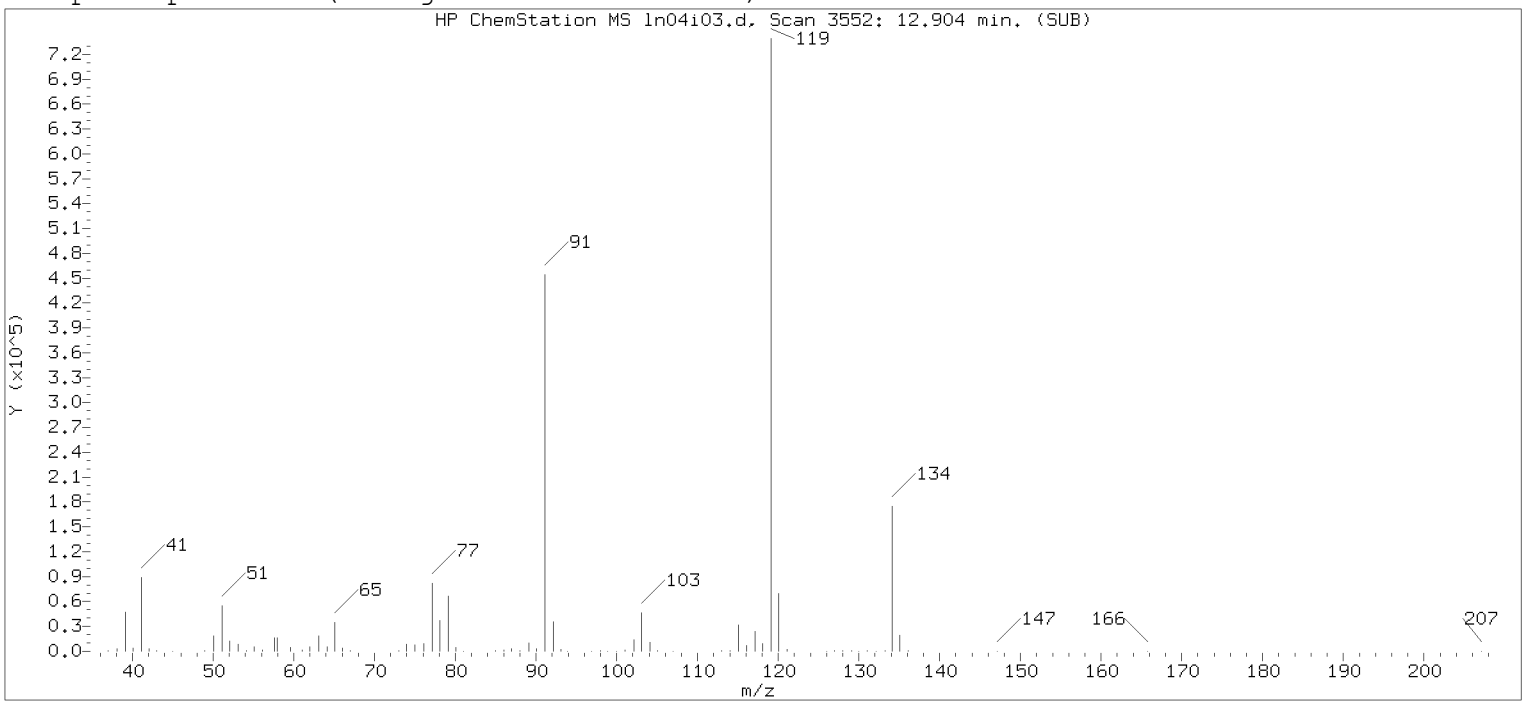
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 253906M
On-Column Amount (ng) : 53.1652
Integration start scan : 3540 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

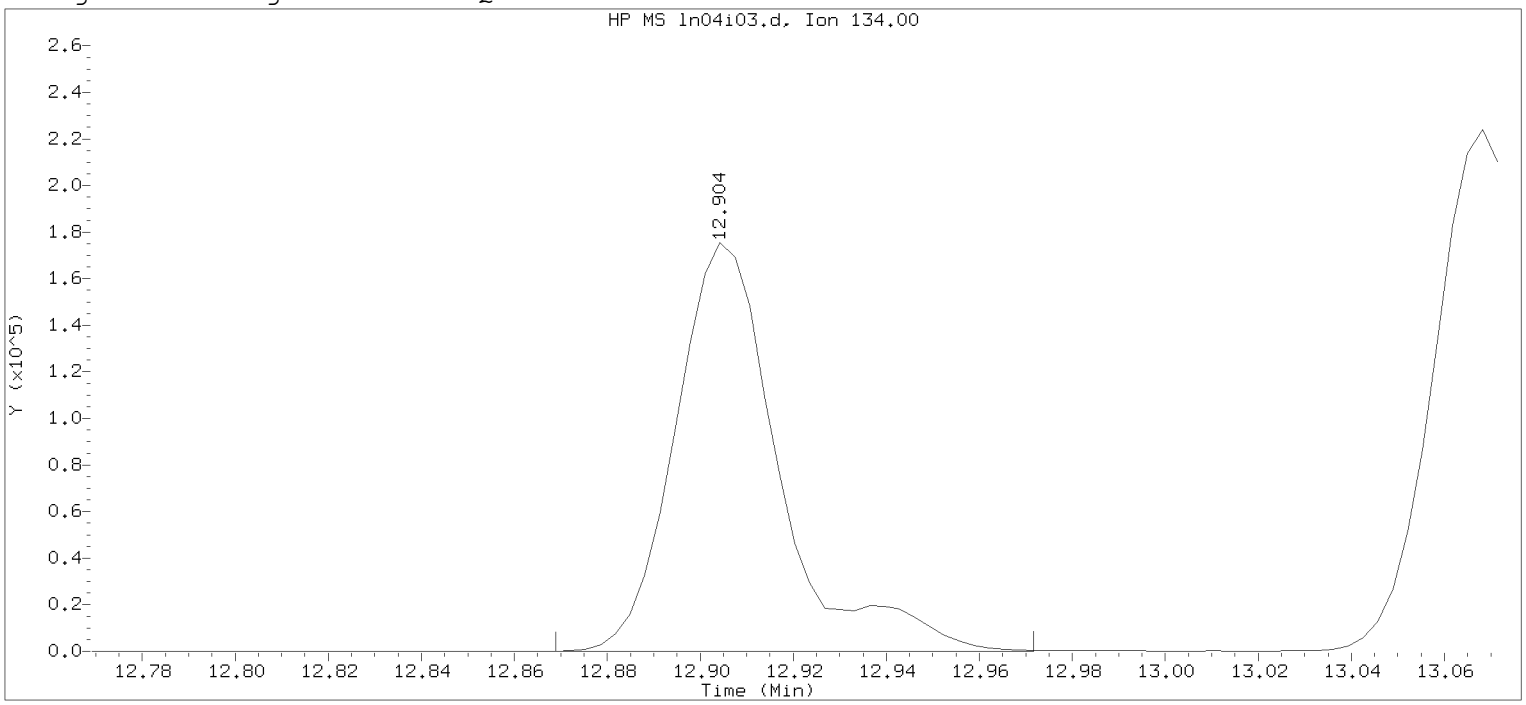
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



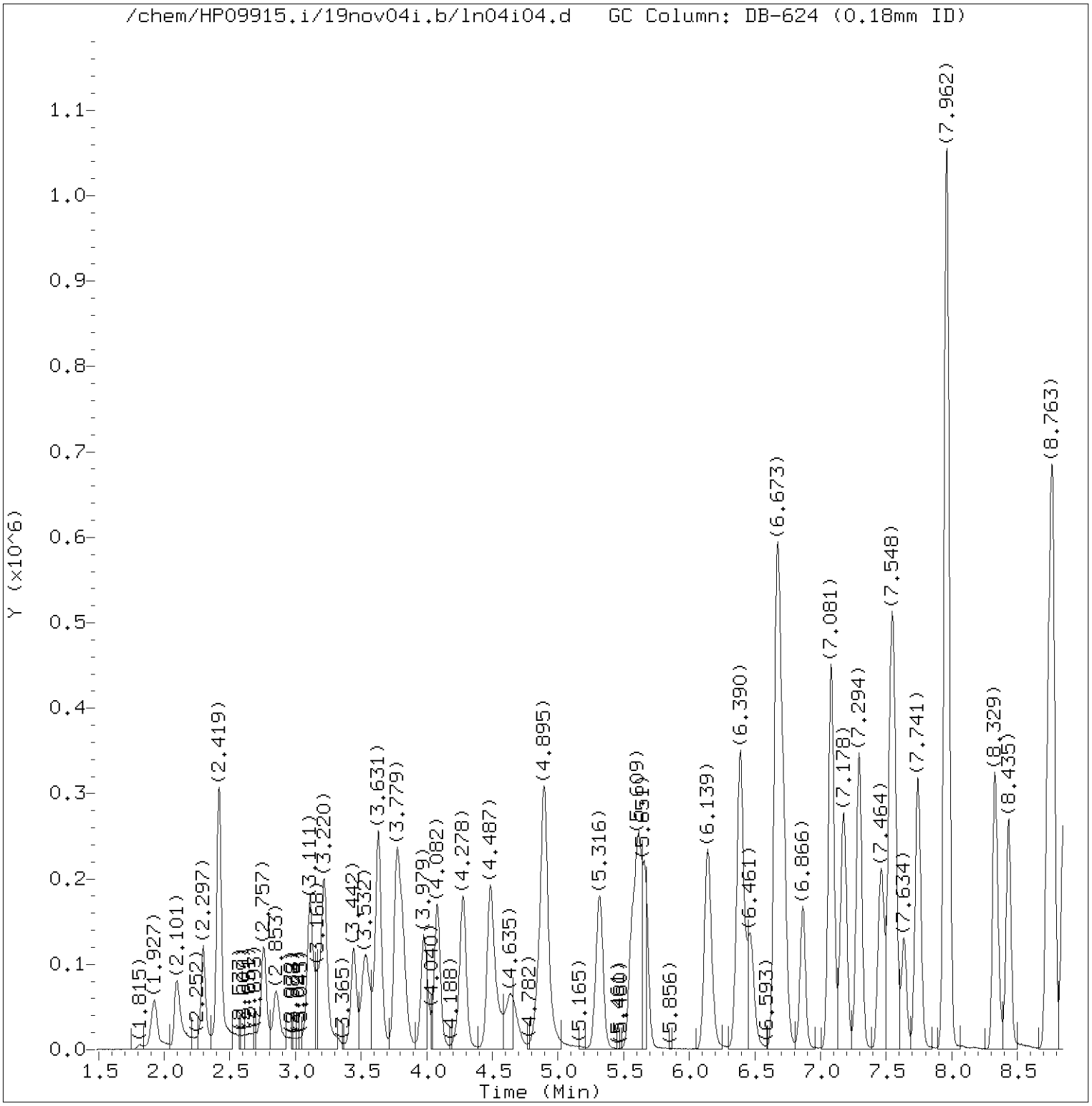
Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 273047
On-column Amount (ng) : 50.7591
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell



Total Ion Chromatogram (TIC)

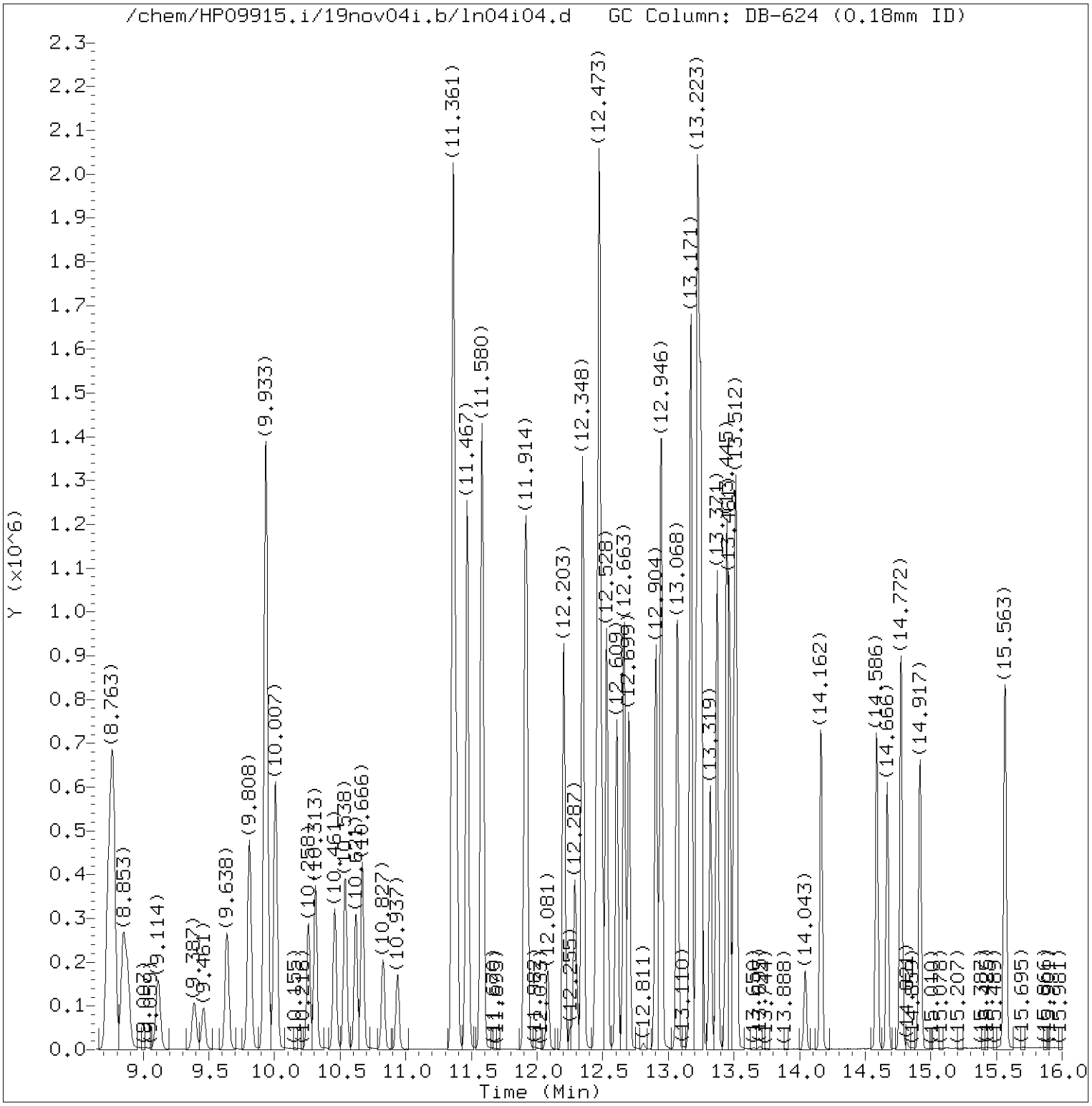
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.095	85	161054M	20.460
4) Chloromethane	(2)	2.297	50	155347	20.477
5) 1,3-Butadiene	(2)	2.416	39	127826M	20.292
6) Vinyl Chloride	(2)	2.419	62	156255	20.637
8) Bromomethane	(2)	2.757	94	109945	20.257
9) Chloroethane	(2)	2.853	64	85938	20.653
10) Dichlorofluoromethane	(2)	3.111	67	205276M	20.838
12) Trichlorofluoromethane	(2)	3.168	101	166167	20.384
11) n-Pentane	(2)	3.220	43	195074	20.250
14) Ethyl ether	(2)	3.442	59	108665	20.629
15) Freon 123a	(2)	3.532	67	137784	21.012
16) Acrolein	(1)	3.631	56	399615	206.403
17) 1,1-Dichloroethene	(2)	3.773	96	101858	21.288
17) 1,1-Dichloroethene	(2)	3.773	63	50444	21.029
19) Freon 113	(2)	3.805	101	115335	21.128
18) Acetone	(1)	3.815	58	36001	41.477
22) Methyl Iodide	(2)	3.979	142	212163	21.398
21) 2-Propanol	(1)	4.004	45	120851	193.676
23) Carbon Disulfide	(2)	4.082	76	388574	21.550
27) Methyl Acetate	(2)	4.255	43	121876	19.777
25) Allyl Chloride	(2)	4.281	41	173950	20.266
28) Methylene Chloride	(2)	4.483	84	119344	20.956
29)*t-Butyl alcohol-d10	(1)	4.512	65	258058M	250.000
30) t-Butyl alcohol	(1)	4.644	59	213903	196.882
31) Acrylonitrile	(2)	4.844	53	69677	21.016
32) trans-1,2-Dichloroethene	(2)	4.898	96	117516	21.231
33) Methyl Tertiary Butyl Ether	(2)	4.898	73	384426	21.159
34) n-Hexane	(2)	5.323	57	185314M	21.519
36) 1,1-Dichloroethane	(2)	5.561	63	203176	21.041
38) di-Isopropyl ether	(2)	5.615	45	399314	21.442
39) 2-Chloro-1,3-butadiene	(2)	5.670	53	184546	21.302
40) Ethyl t-butyl ether	(2)	6.146	59	392243	21.703
43) 1,2-Dichloroethene (Total)	(2)		96	248665	42.340
44) 2-Butanone	(2)	6.371	43	174937	41.104
42) cis-1,2-Dichloroethene	(2)	6.390	96	131149	21.109
45) 2,2-Dichloropropane	(2)	6.397	77	160123	21.332
47) Propionitrile	(1)	6.471	54	279106	206.179
48) Methacrylonitrile	(2)	6.673	67	377980	105.686

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	68547	20.807
50) Tetrahydrofuran	(1)	6.728	71	49905	40.813
51) Chloroform	(2)	6.863	83	198842	21.530
52)$Dibromofluoromethane	(2)	7.078	113	277983	50.374
52)$Dibromofluoromethane	(2)	7.081	111	283696	50.420
53) 1,1,1-Trichloroethane	(2)	7.081	97	168285	21.349
54) Cyclohexane	(2)	7.178	56	226762	21.513
54) Cyclohexane	(2)	7.178	84	195470	21.348
54) Cyclohexane	(2)	7.171	69	69608	21.350
56) Carbon Tetrachloride	(2)	7.290	117	141234	21.126
55) 1,1-Dichloropropene	(2)	7.297	75	161608	21.167
58) Isobutyl Alcohol	(1)	7.464	41	176564	482.927
57)$1,2-Dichloroethane-d4	(2)	7.535	102	71029	50.503
57)$1,2-Dichloroethane-d4	(2)	7.532	65	318244	50.776
57)$1,2-Dichloroethane-d4	(2)	7.535	104	46070	51.284
60) Benzene	(2)	7.561	78	489494	21.320
61) 1,2-Dichloroethane	(2)	7.634	62	150643	20.399
61) 1,2-Dichloroethane	(2)	7.634	98	15487	21.192
65) t-Amyl methyl ether	(2)	7.744	73	391674	21.591
67) n-Heptane	(2)	7.962	43	173500MA	21.566
66)*Fluorobenzene	(2)	7.962	96	1128743	50.000
69) n-Butanol	(1)	8.329	56	312189M	992.087
71) Trichloroethene	(2)	8.435	95	122357	21.166
72) Methylcyclohexane	(2)	8.737	83	221554	20.658
72) Methylcyclohexane	(2)	8.737	98	99234	20.447
73) 1,2-Dichloropropane	(2)	8.769	63	123290	21.148
76) Methyl Methacrylate	(2)	8.850	69	117550A	20.851
75) 1,4-Dioxane	(1)	8.856	88	44376M	513.065
74) Dibromomethane	(2)	8.879	93	79643	21.113
78) Bromodichloromethane	(2)	9.114	83	142226	21.011
79) 2-Nitropropane	(2)	9.390	41	82517M	40.247
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	51005	20.370
81) cis-1,3-Dichloropropene	(2)	9.634	75	192808	21.446
82) 4-Methyl-2-pentanone	(2)	9.808	43	377728	42.047
83)$Toluene-d8	(3)	9.933	98	1159273	50.160
83)$Toluene-d8	(3)	9.933	100	751601	50.203
88) Toluene	(3)	10.007	92	308466	21.289
90) 1,3-Dichloropropene (total)	(3)		100	367273	42.658

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	174465	21.211
91) Ethyl Methacrylate	(3)	10.313	69	210882	21.096
92) 1,1,2-Trichloroethane	(3)	10.461	97	114106	20.771
93) Tetrachloroethene	(3)	10.538	166	130358	21.243
94) 1,3-Dichloropropane	(3)	10.618	76	196136	20.911
96) 2-Hexanone	(3)	10.666	43	276801	41.485
97) Dibromochloromethane	(3)	10.827	129	117920	20.955
99) 1,2-Dibromoethane	(3)	10.940	107	124981	20.951
100)*Chlorobenzene-d5	(3)	11.361	117	883281	50.000
101) 1-Chlorohexane	(3)	11.364	91	162552	20.883
102) Chlorobenzene	(3)	11.387	112	347116	21.185
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	116096	21.505
104) Ethylbenzene	(3)	11.467	91	593614	21.434
106) m+p-Xylene	(3)	11.580	106	474524	43.555
108) Xylene (Total)	(3)		106	707354	65.191
107) o-Xylene	(3)	11.908	106	232830	21.636
109) Styrene	(3)	11.924	104	387652	21.799
110) Bromoform	(3)	12.081	173	81670	19.422
111) Isopropylbenzene	(3)	12.203	105	589458	21.839
112) Cyclohexanone	(1)	12.287	55	167626	494.847
114)$4-Bromofluorobenzene	(3)	12.348	95	438766	50.137
114)$4-Bromofluorobenzene	(3)	12.348	174	363757	50.138
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	186119M	20.690
115) Bromobenzene	(4)	12.464	156	150208	20.987
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	295707	106.569
117) 1,2,3-Trichloropropane	(4)	12.499	110	56899	20.612
119) n-Propylbenzene	(4)	12.528	91	680502	21.762
120) 2-Chlorotoluene	(4)	12.609	126	141675	21.327
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	498486	21.936
121) 4-Chlorotoluene	(4)	12.699	126	147463	21.326
124) tert-Butylbenzene	(4)	12.904	134	101571M	21.612
125) Pentachloroethane	(4)	12.940	167	85065	21.020
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	522495	21.816
127) sec-Butylbenzene	(4)	13.068	105	620603	22.130
129) 1,3-Dichlorobenzene	(4)	13.168	146	280954	21.362
130) p-Isopropyltoluene	(4)	13.171	119	539497	22.237
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	476218	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	288857	21.186

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

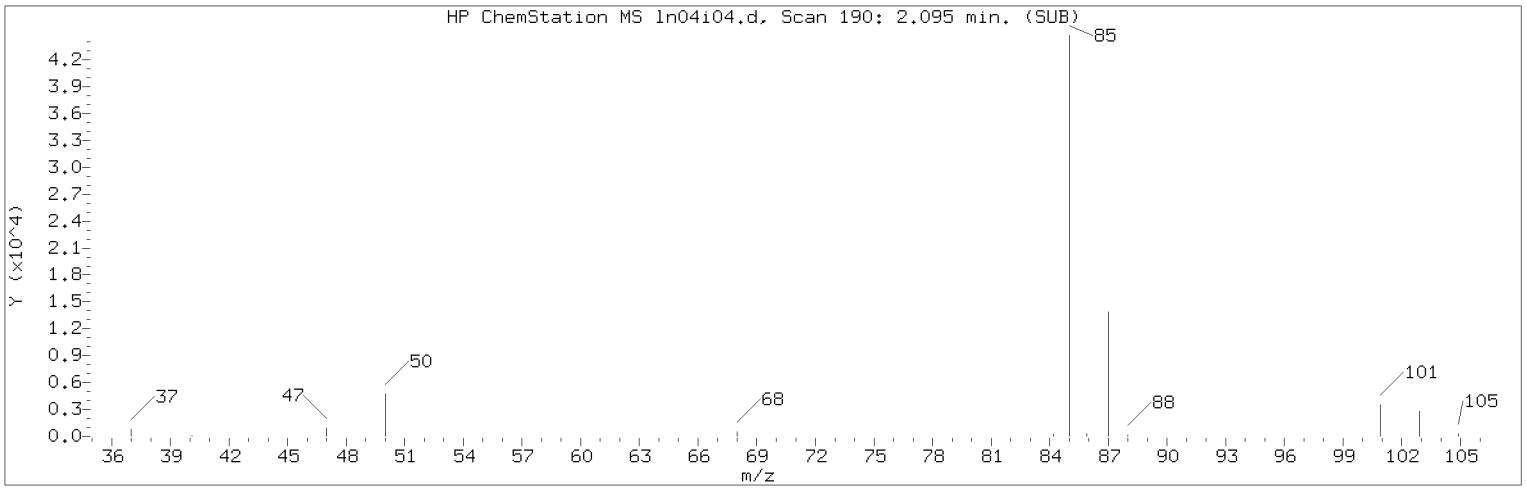
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

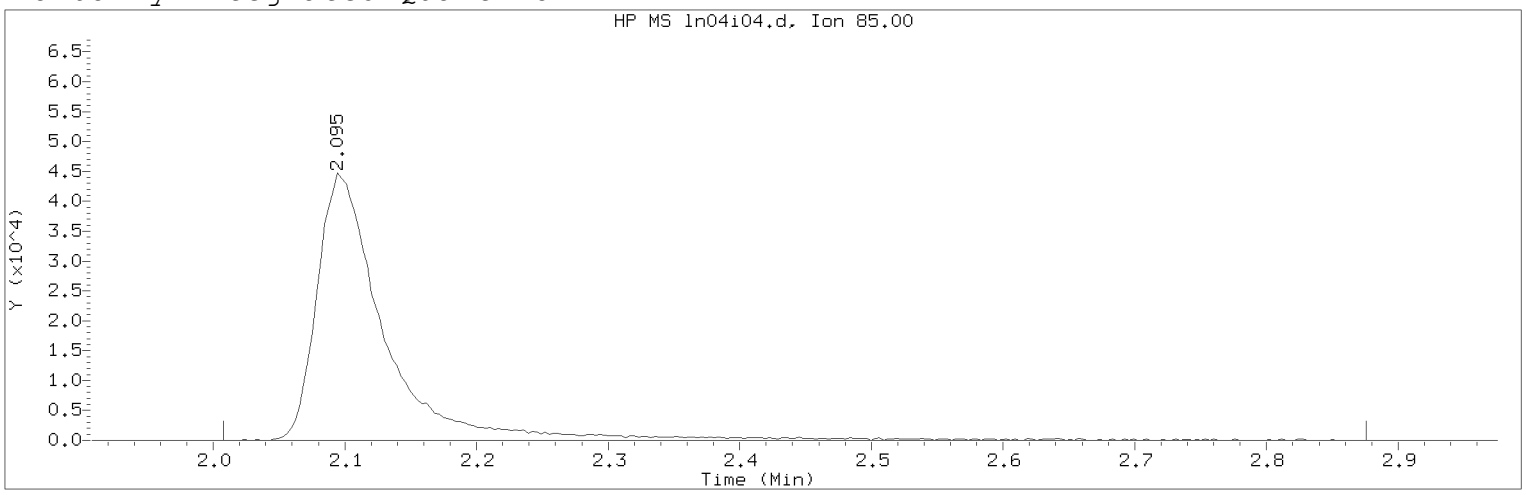
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	529814	20.883
135) Benzyl Chloride	(4)	13.319	91	386244	20.108
136) 1,3-Diethylbenzene	(4)	13.371	119	333696	21.134
141) Diethylbenzene (total)	(4)		100	968804	63.411
137) 1,4-Diethylbenzene	(4)	13.445	119	354305	21.180
139) n-Butylbenzene	(4)	13.464	92	270790	21.829
138) 1,2-Dichlorobenzene	(4)	13.502	146	274435	21.146
140) 1,2-Diethylbenzene	(4)	13.518	119	280803	21.097
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	40583	20.608
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	215108	21.573
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	206700	21.320
147) Hexachlorobutadiene	(4)	14.666	225	101324	22.135
148) Naphthalene	(4)	14.772	128	665482	21.351
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	203518	21.573
150) 2-Methylnaphthalene	(4)	15.563	142	423056	22.042

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

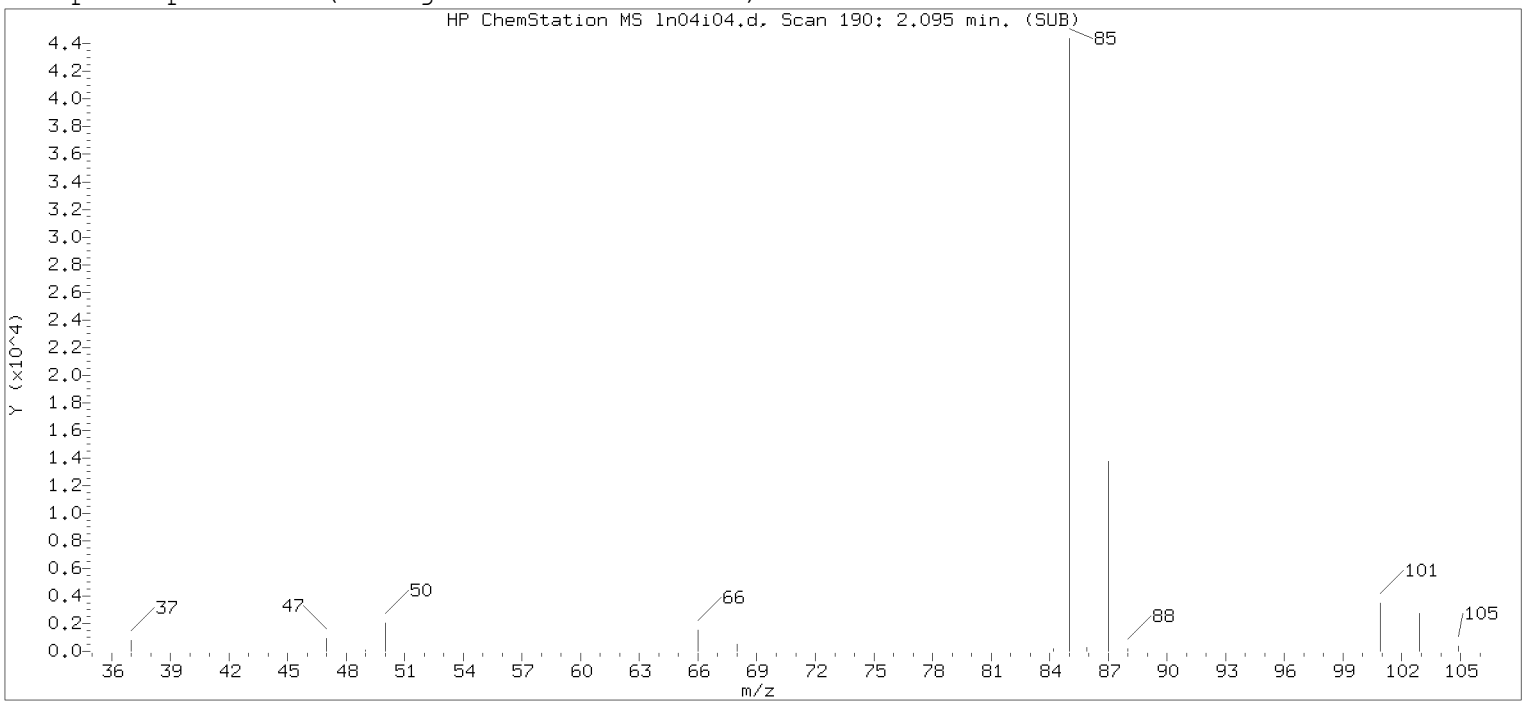
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.095
Quant Ion : 85.00
Area (flag) : 161054M
On-Column Amount (ng) : 20.4603
Integration start scan : 162 Integration stop scan: 432
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

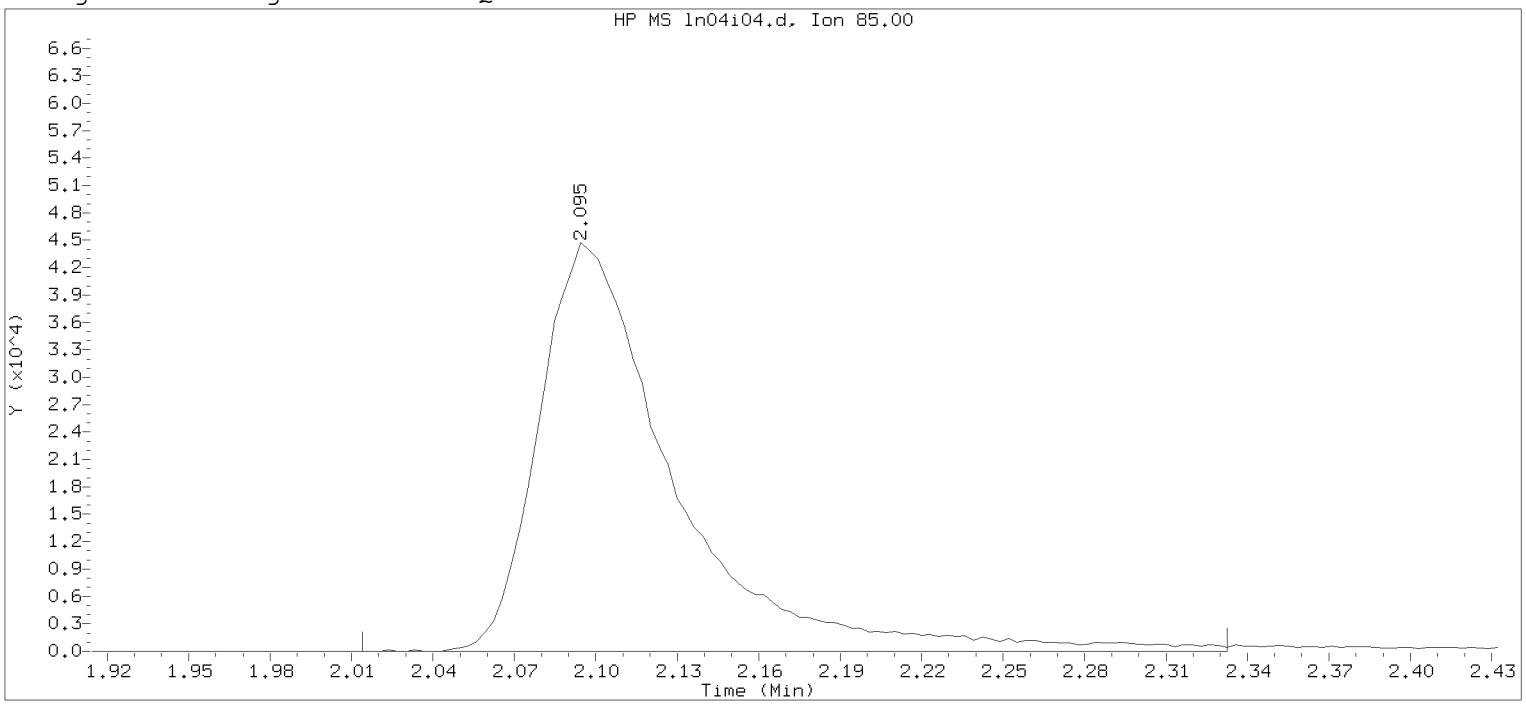
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

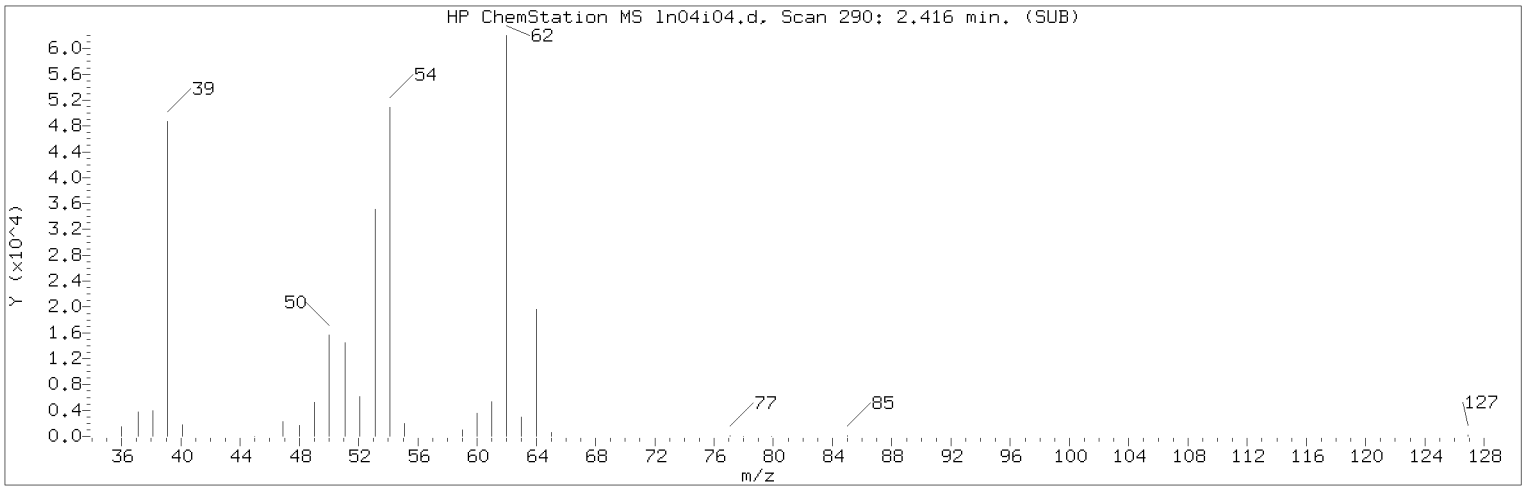
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

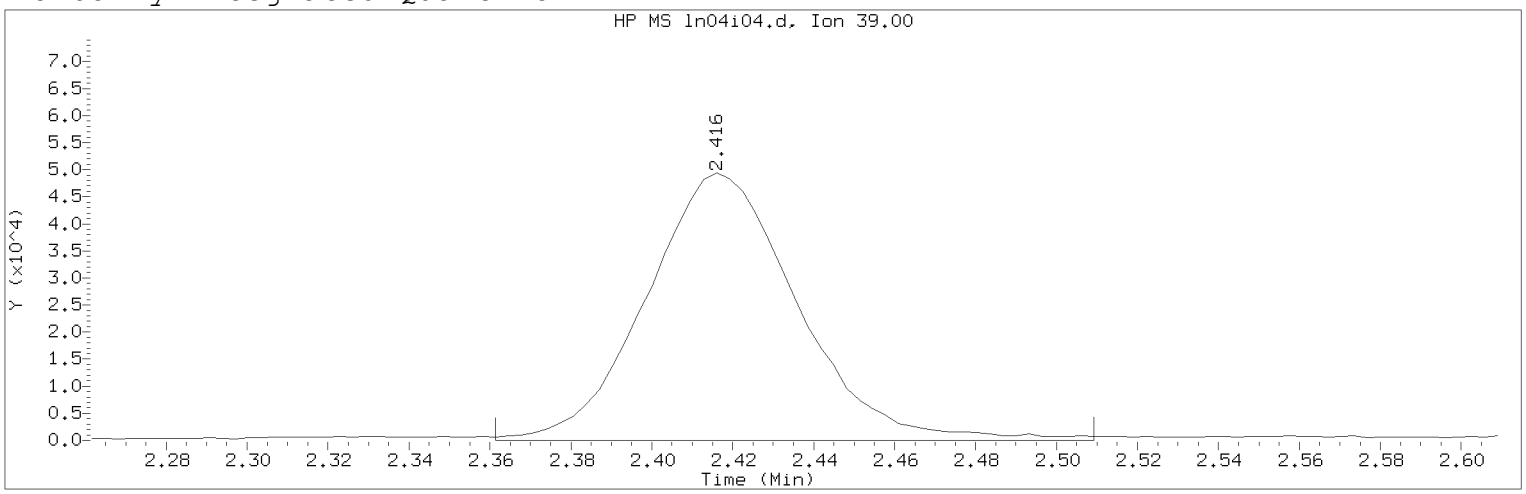
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.095
Quant Ion : 85.00
Area : 154796
On-column Amount (ng) : 18.9193
Integration start scan : 164 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

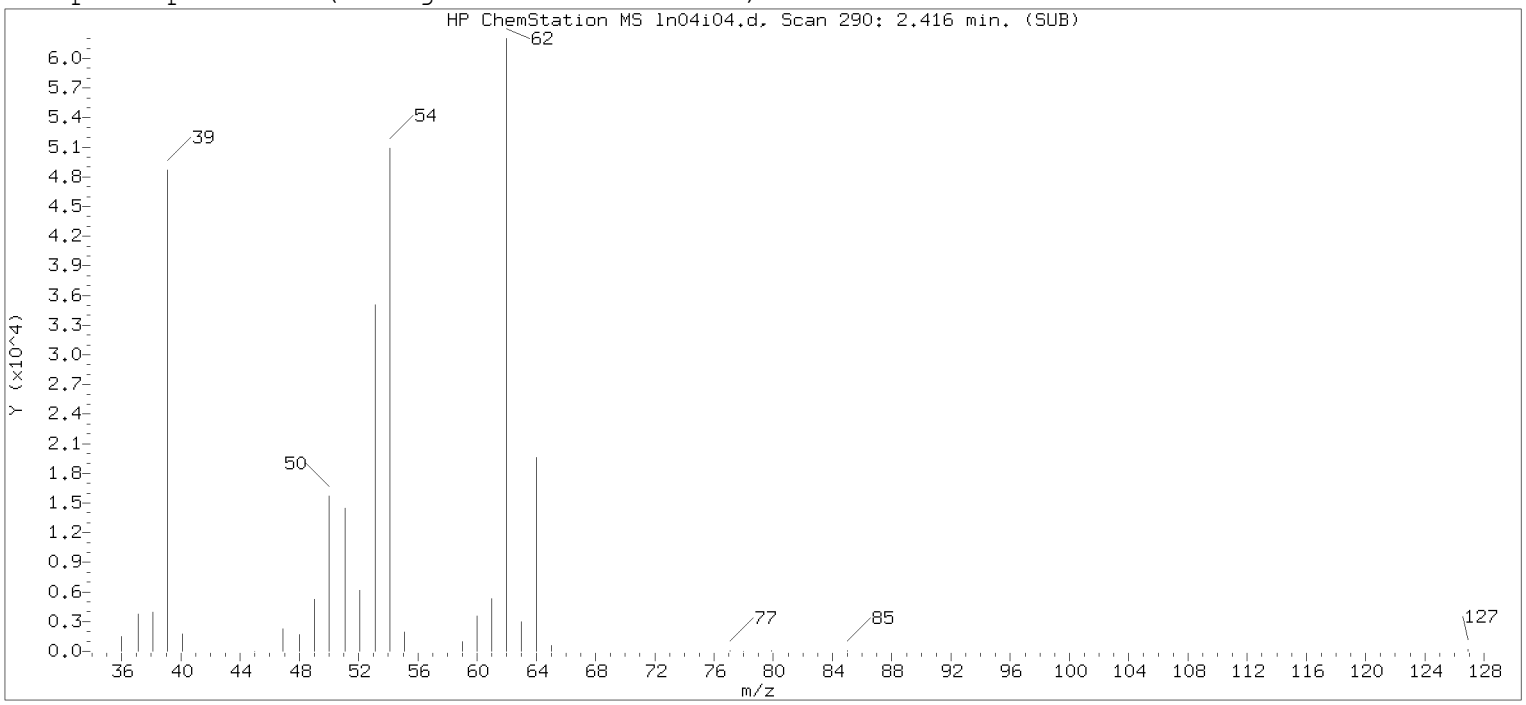
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 290
Retention Time (minutes): 2.416
Quant Ion : 39.00
Area (flag) : 127826M
On-Column Amount (ng) : 20.2925
Integration start scan : 272 Integration stop scan: 318
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

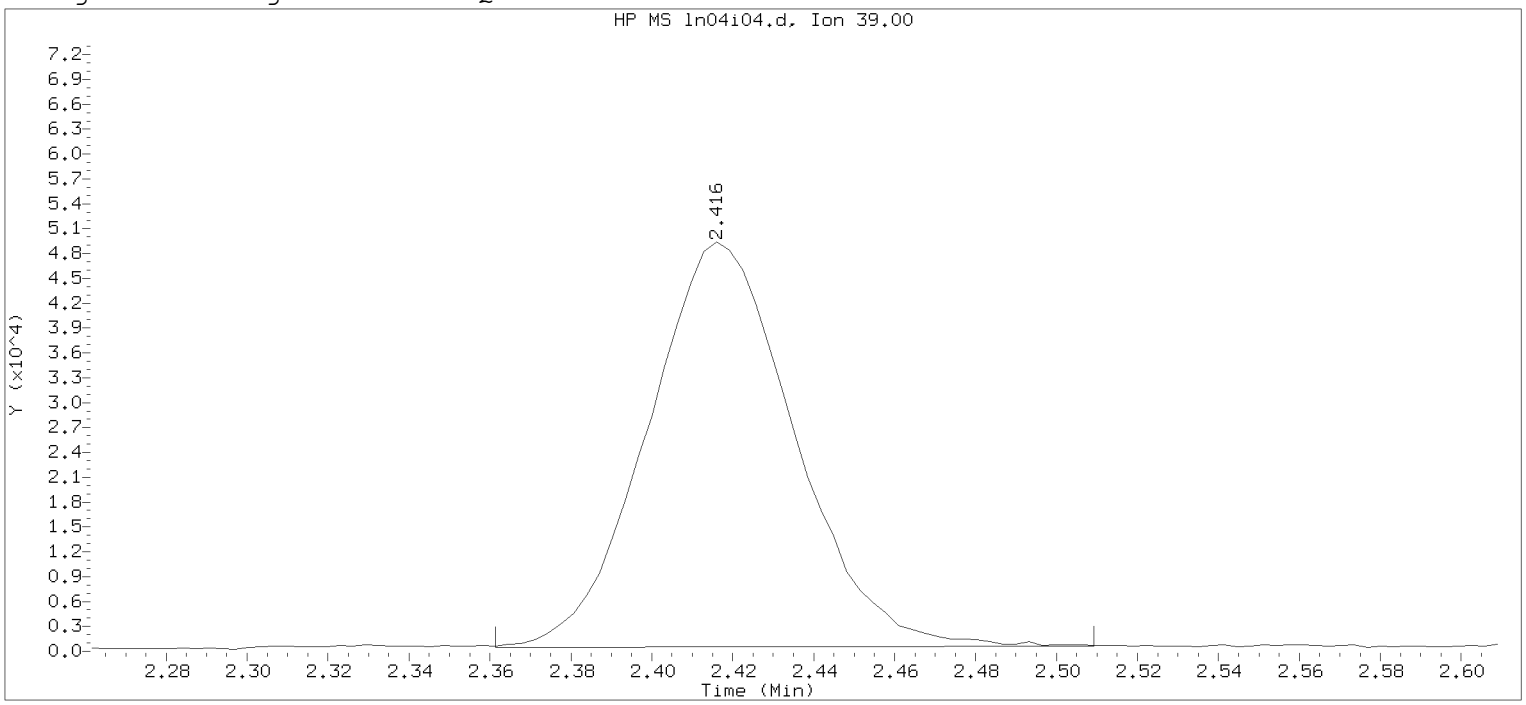
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

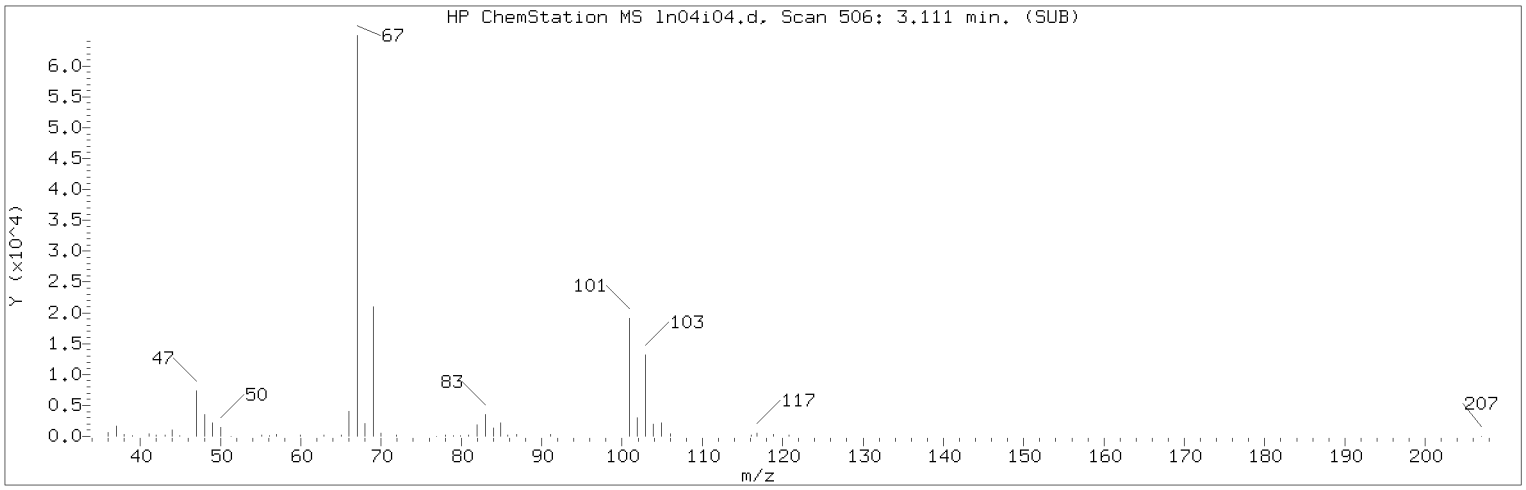
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

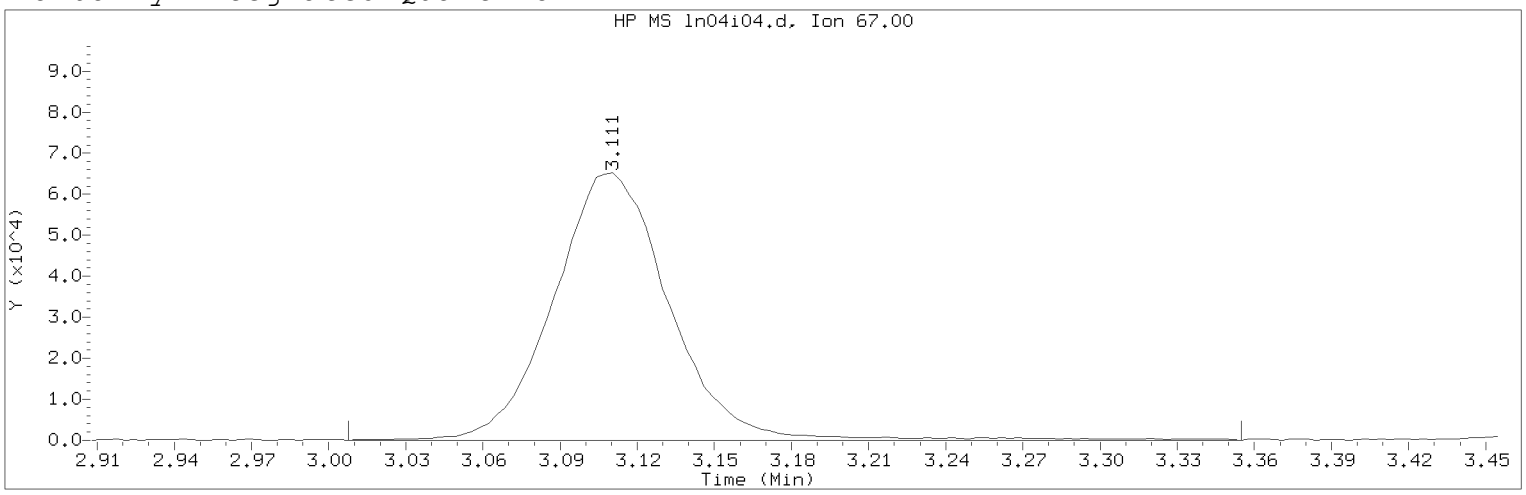
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 290
Retention Time (minutes): 2.416
Quant Ion : 39.00
Area : 122801
On-column Amount (ng) : 20.5539
Integration start scan : 272 Integration stop scan: 318
Y at integration start : 477 Y at integration end: 628

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

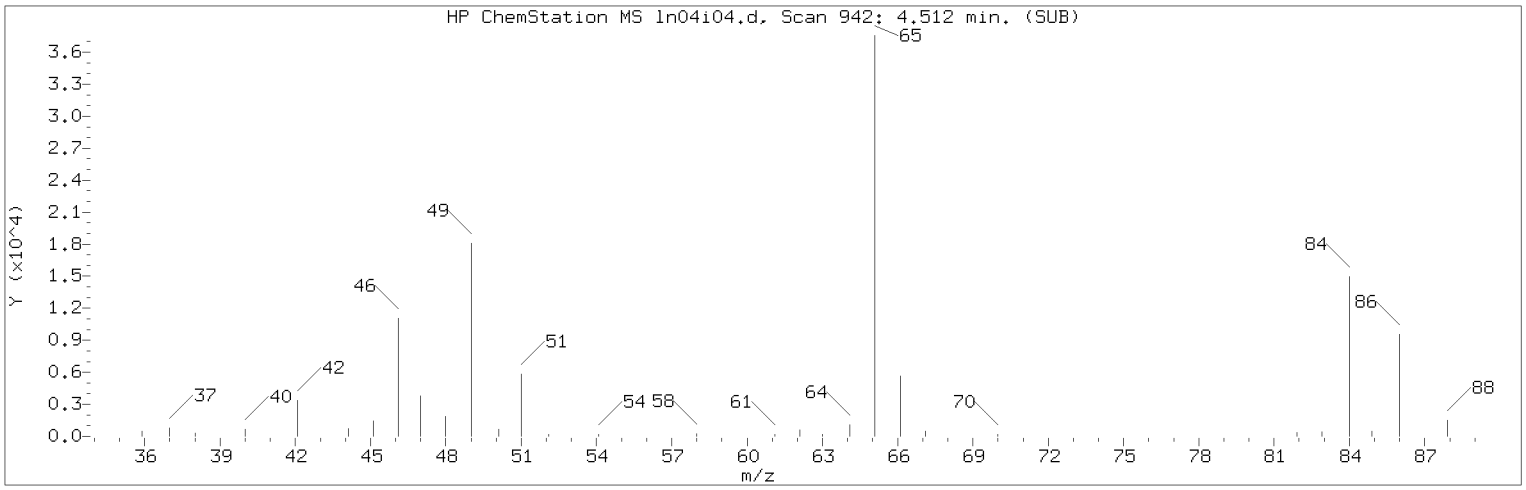
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 506
Retention Time (minutes): 3.111
Quant Ion : 67.00
Area (flag) : 205276M
On-Column Amount (ng) : 20.8381
Integration start scan : 473 Integration stop scan: 581
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

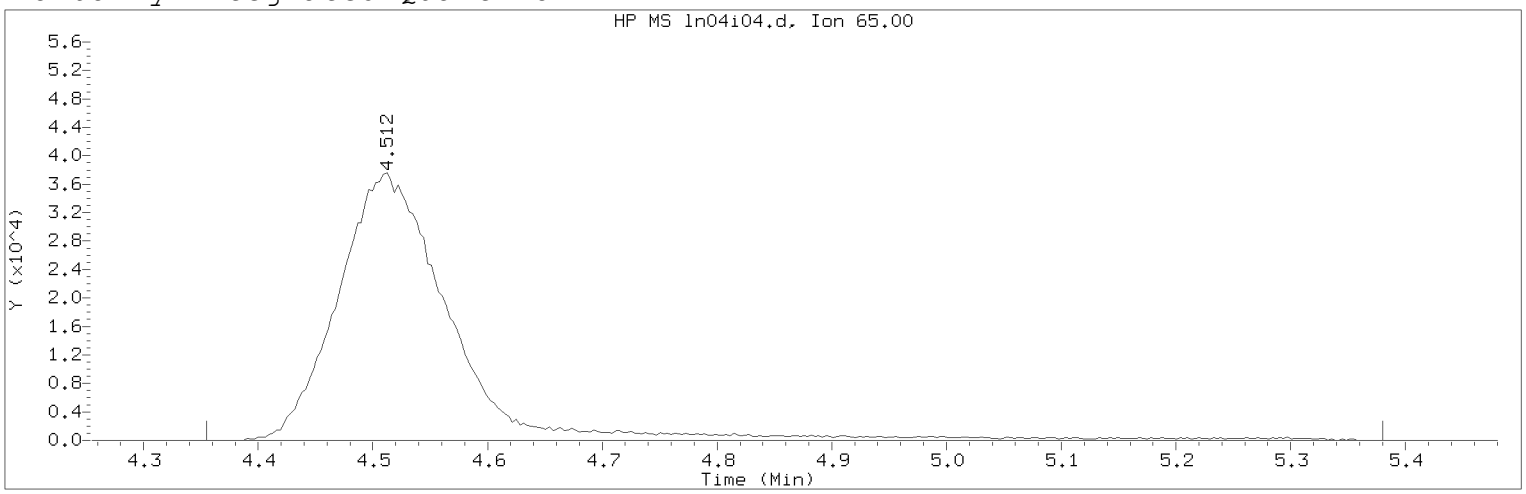
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

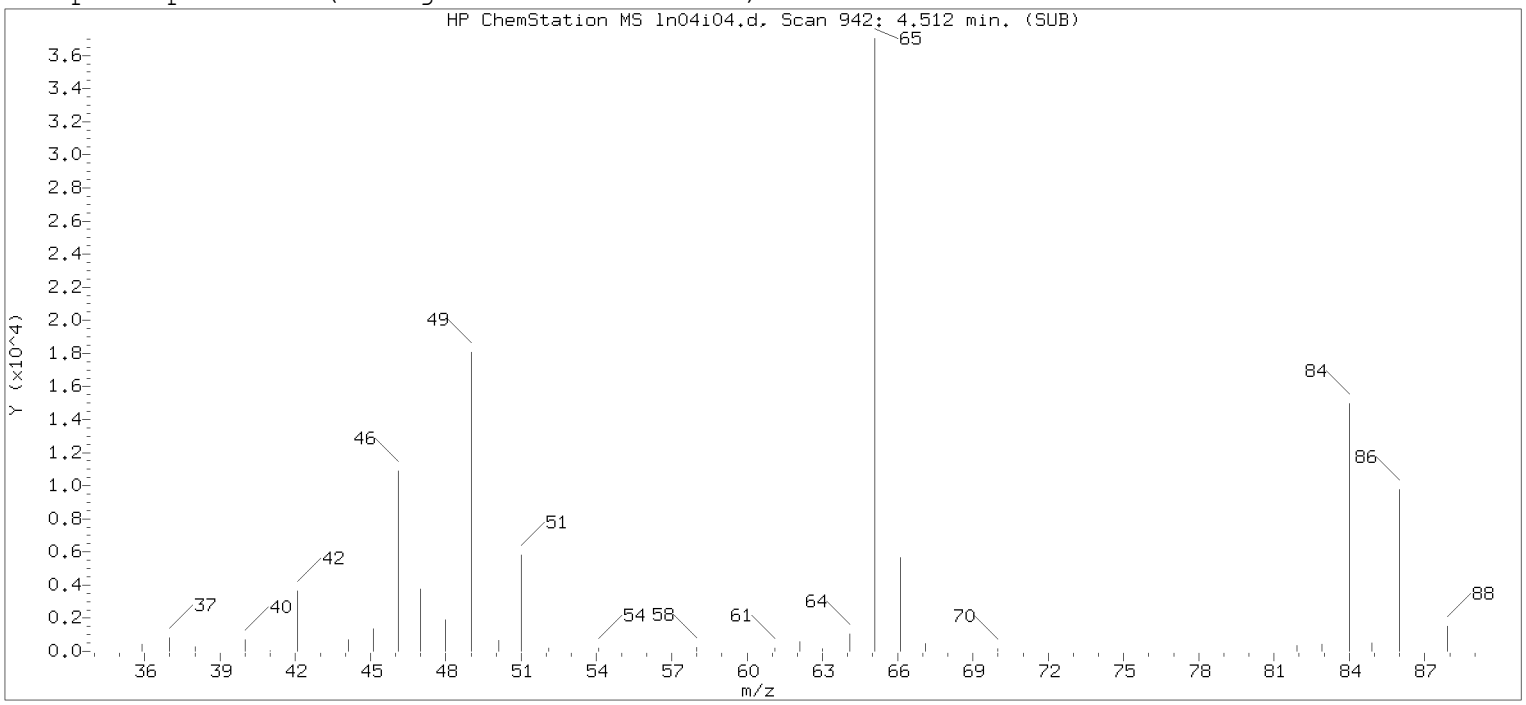
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area (flag) : 258058M
On-Column Amount (ng) : 250.0000
Integration start scan : 892 Integration stop scan: 1211
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

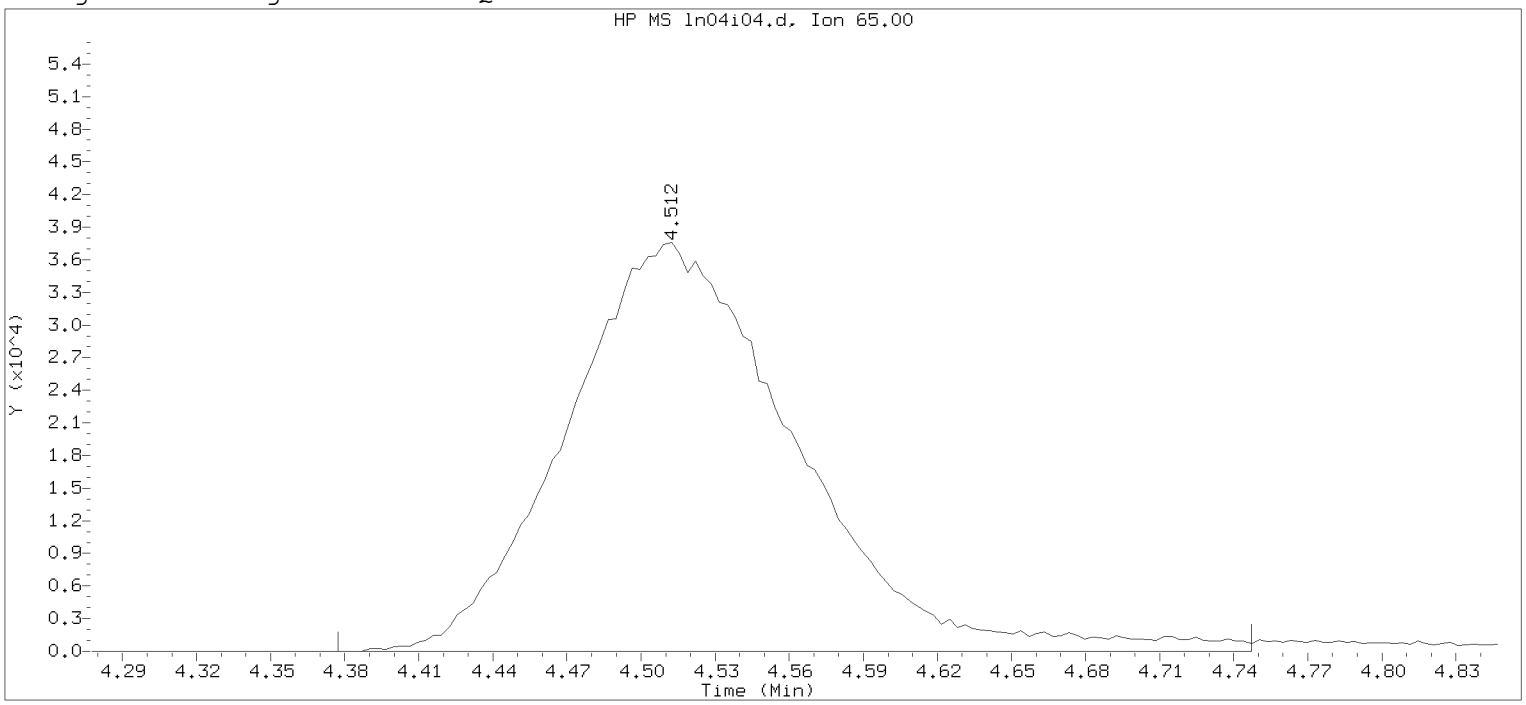
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

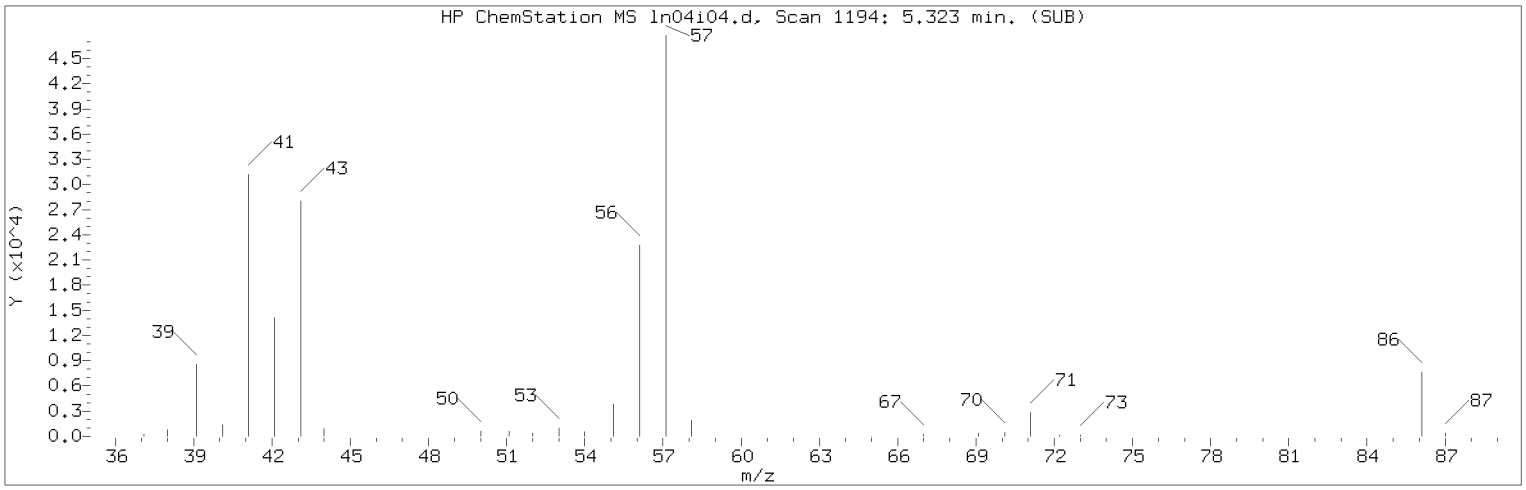
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

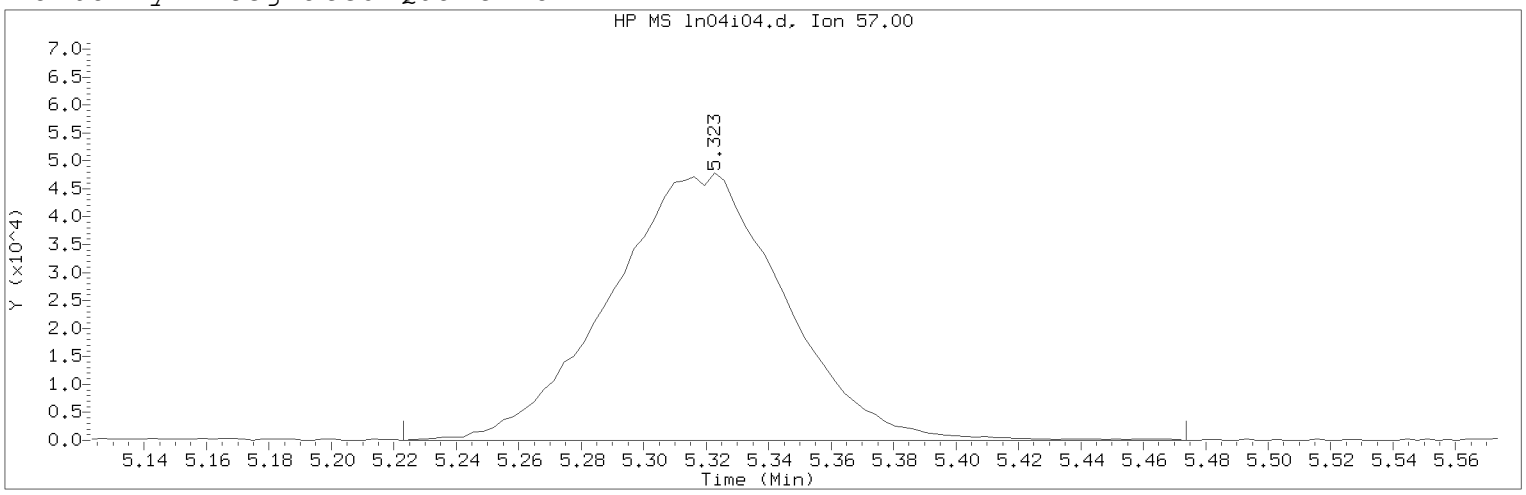
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area : 242565
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

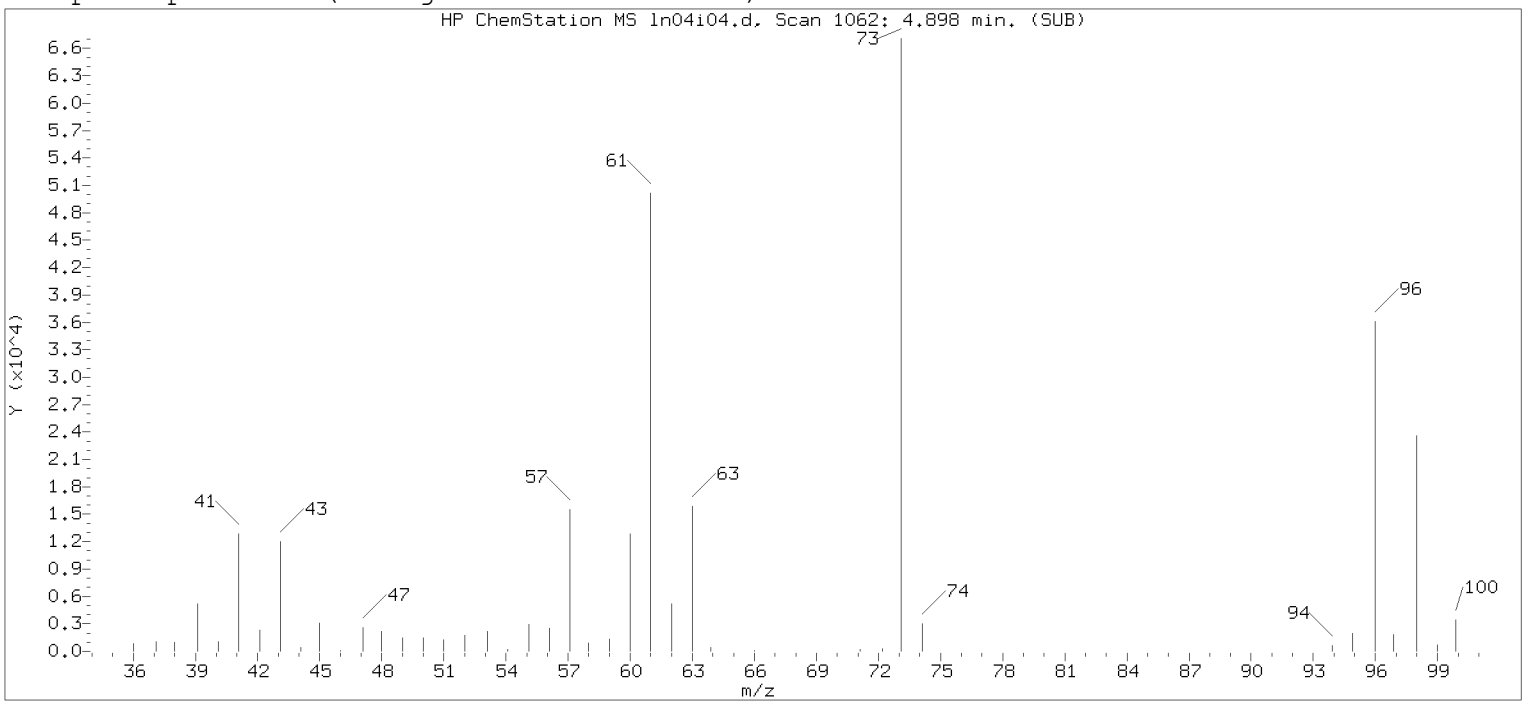
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1194
Retention Time (minutes): 5.323
Quant Ion : 57.00
Area (flag) : 185314M
On-Column Amount (ng) : 21.5188
Integration start scan : 1162 Integration stop scan: 1240
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

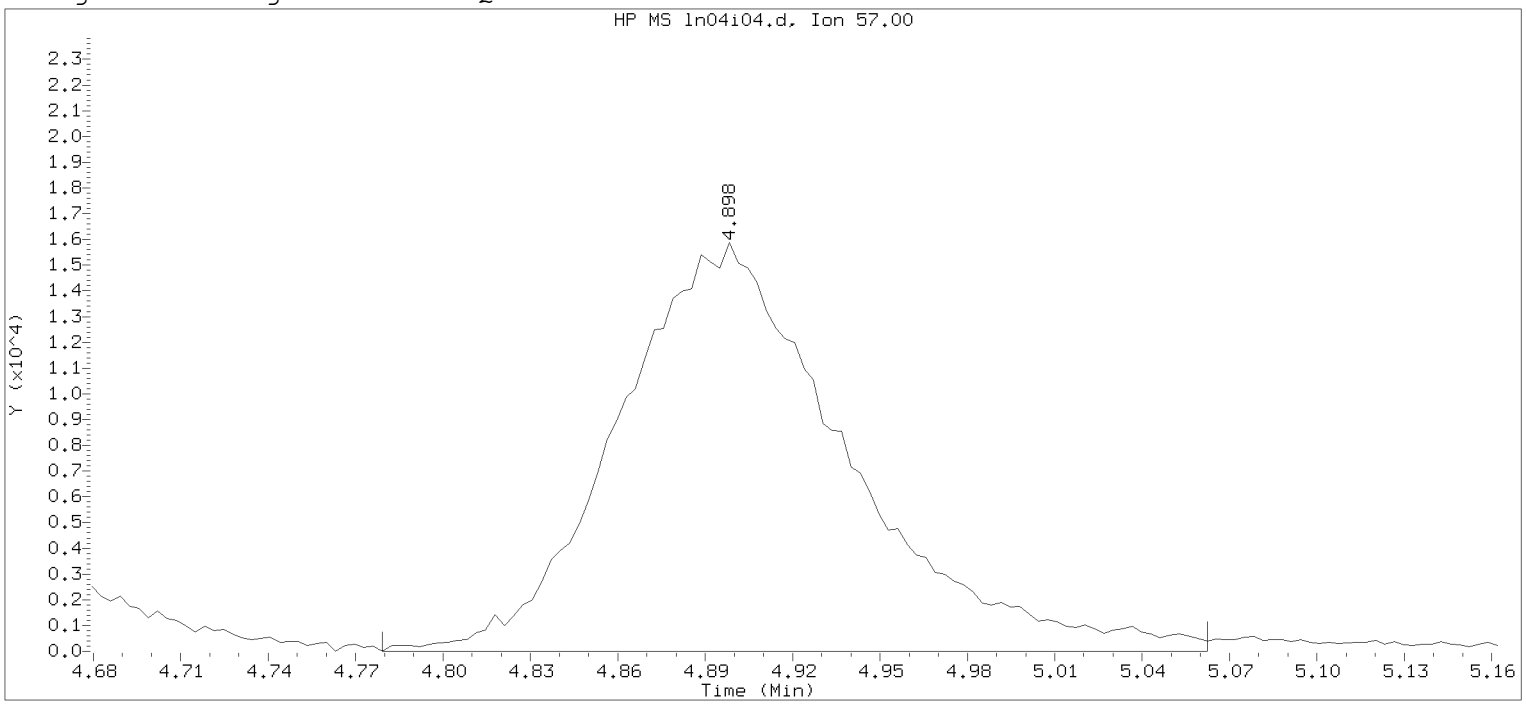
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

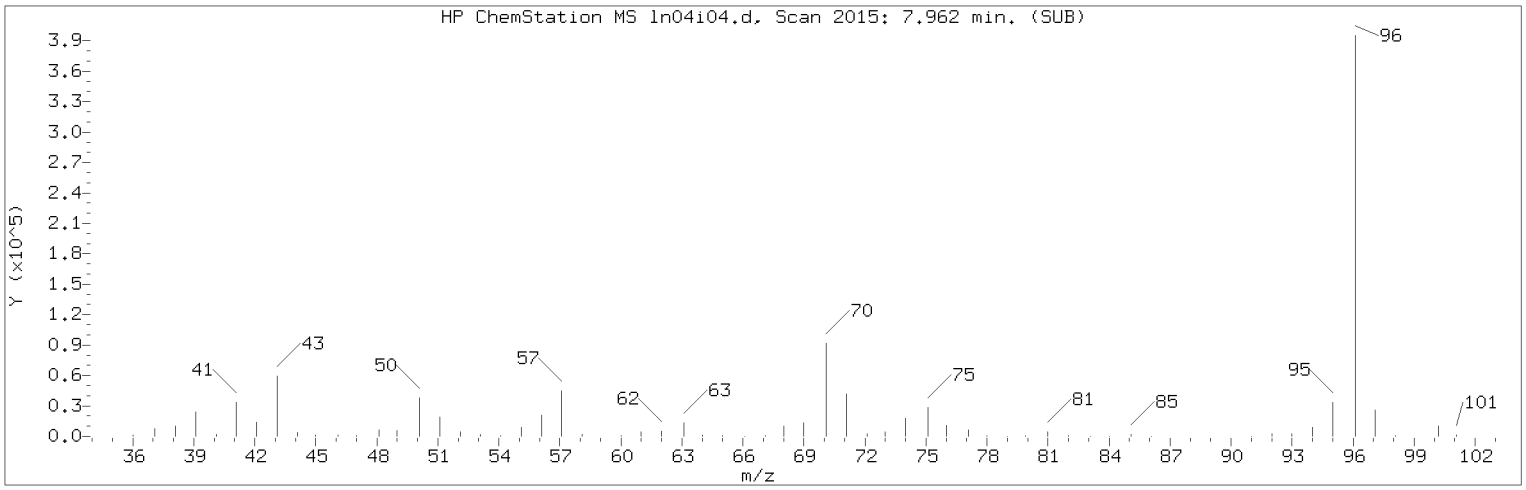
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

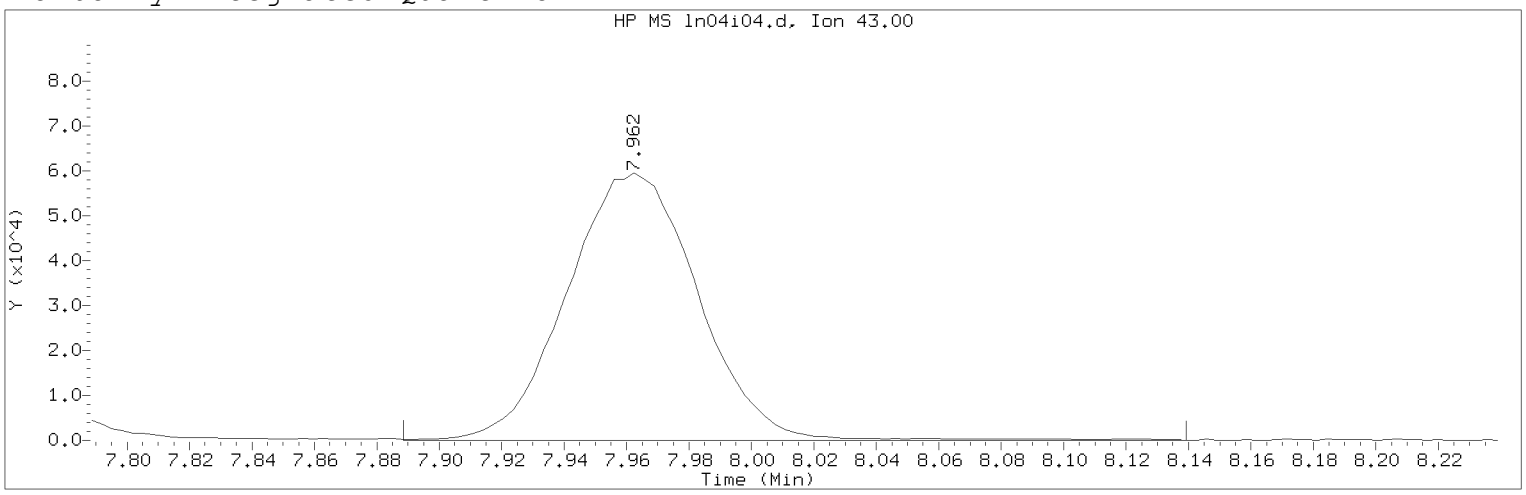
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1062
Retention Time (minutes): 4.898
Quant Ion : 57.00
Area : 86496
On-column Amount (ng) : 21.2144
Integration start scan : 1024 Integration stop scan: 1112
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

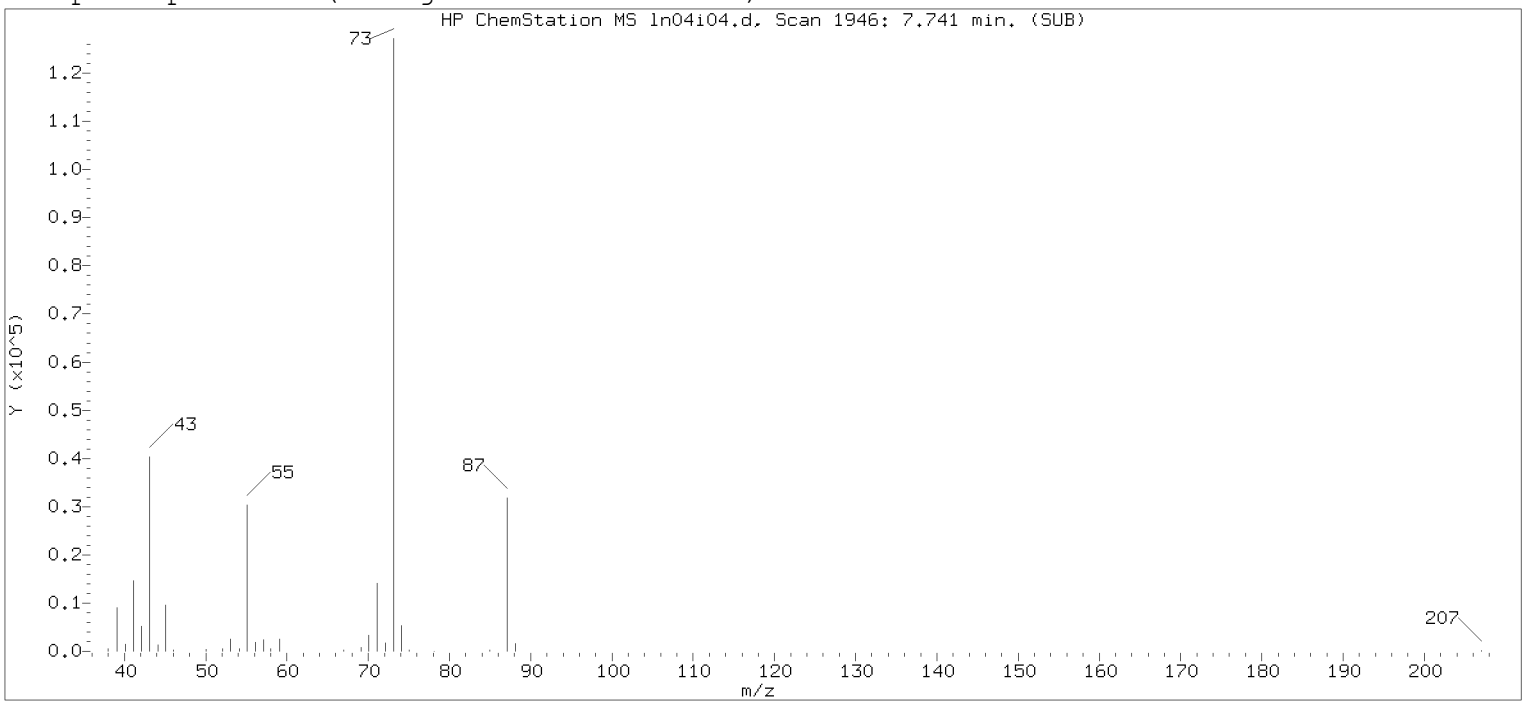
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2015
Retention Time (minutes): 7.962
Quant Ion : 43.00
Area (flag) : 173500MA
On-Column Amount (ng) : 21.5663
Integration start scan : 1991 Integration stop scan: 2069
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

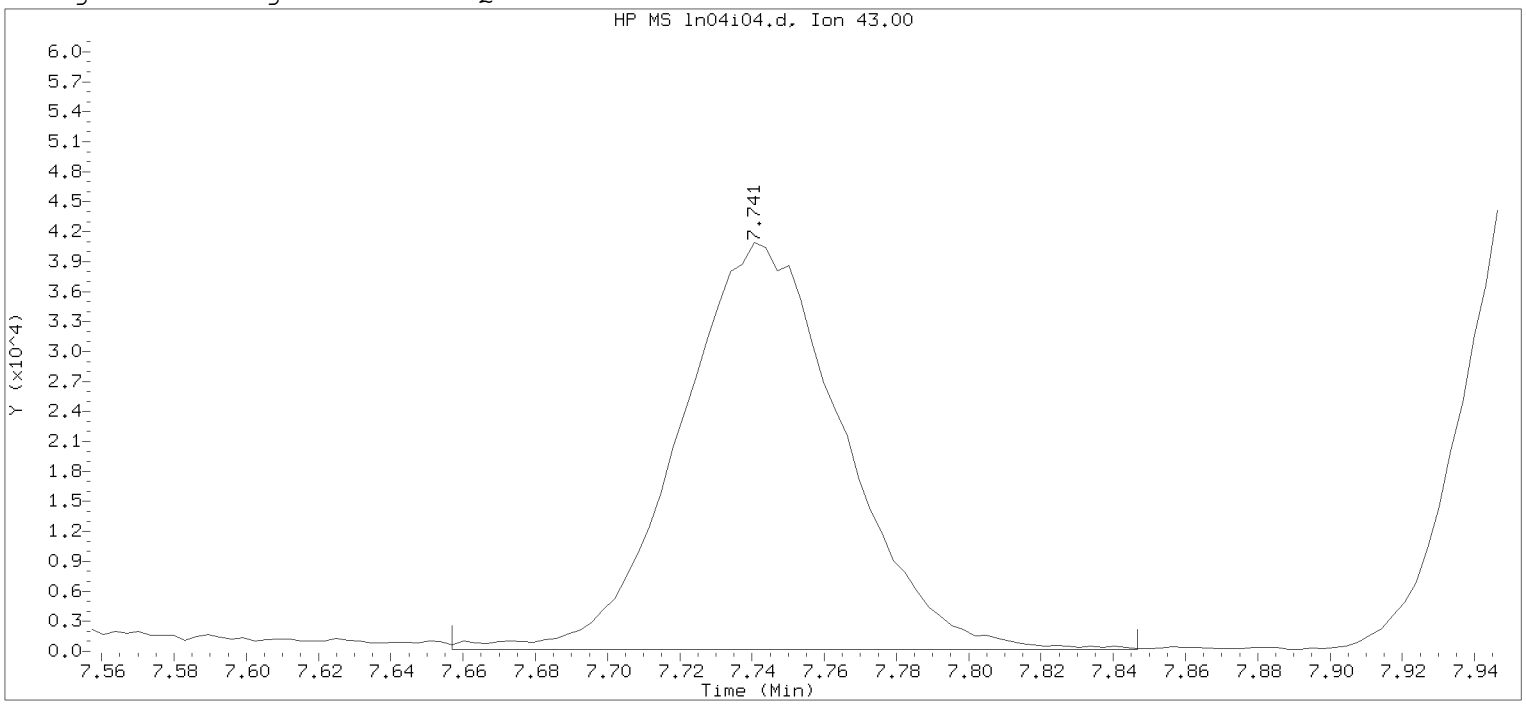
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

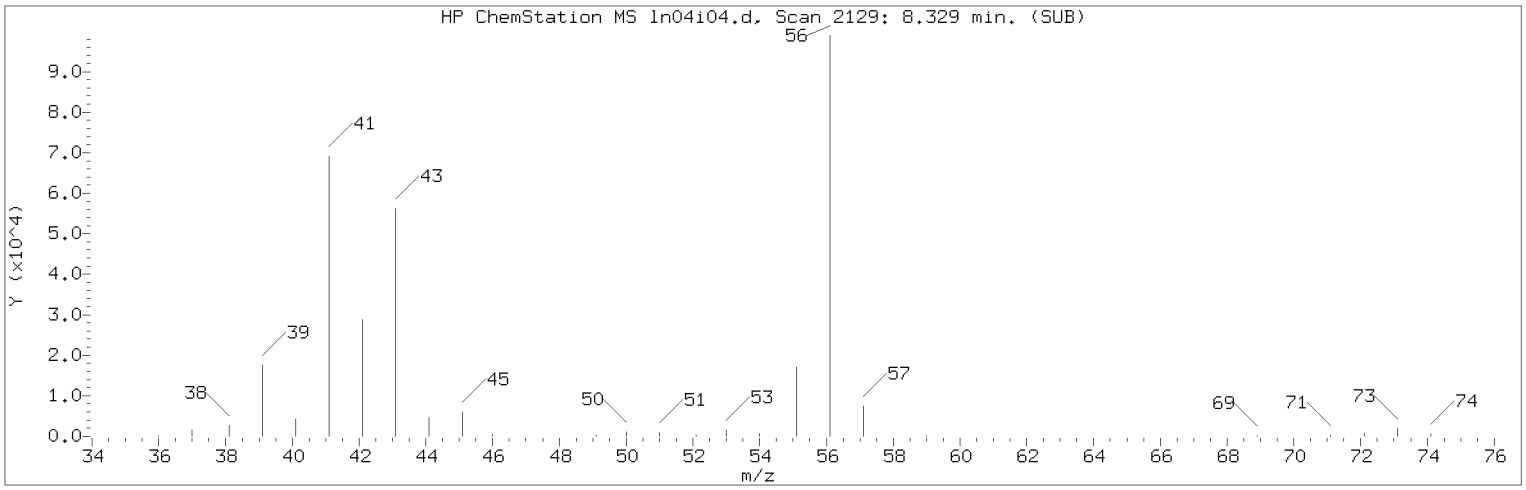
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

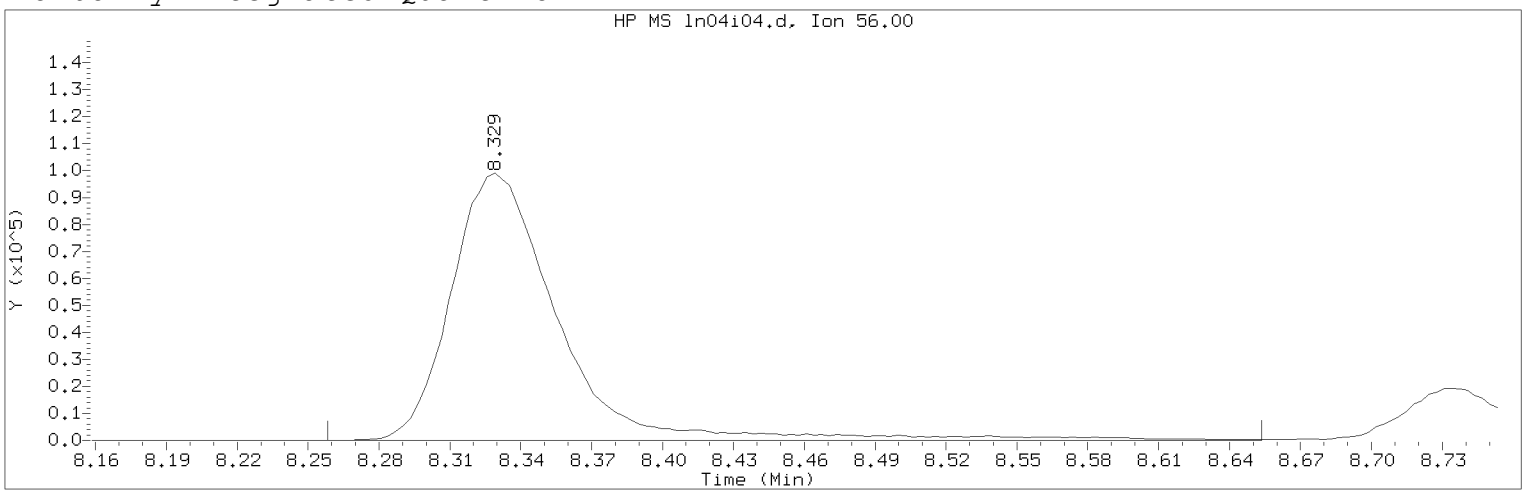
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.741
Quant Ion : 43.00
Area : 127386
On-column Amount (ng) : 21.2604
Integration start scan : 1919 Integration stop scan: 1978
Y at integration start : 203 Y at integration end: 203

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

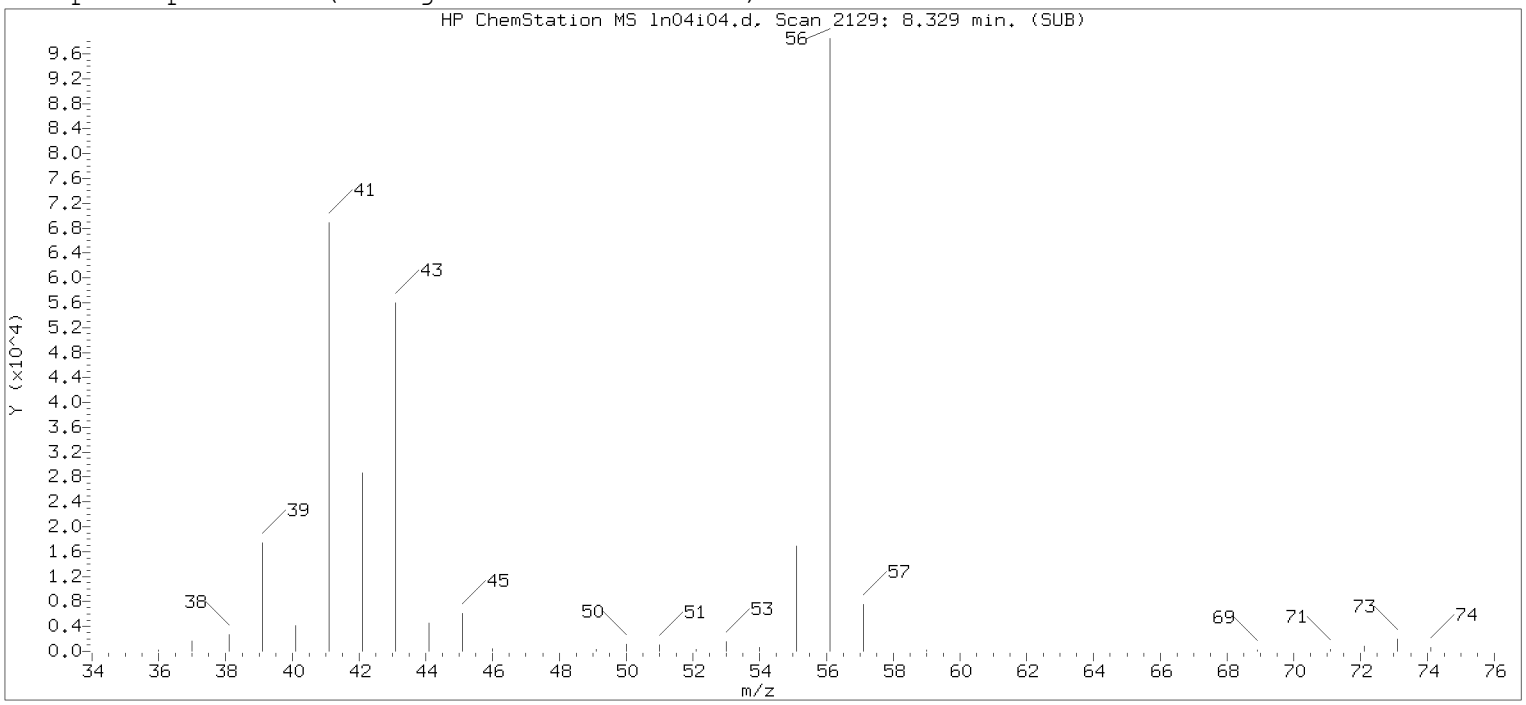
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area (flag) : 312189M
On-Column Amount (ng) : 992.0871
Integration start scan : 2106 Integration stop scan: 2229
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

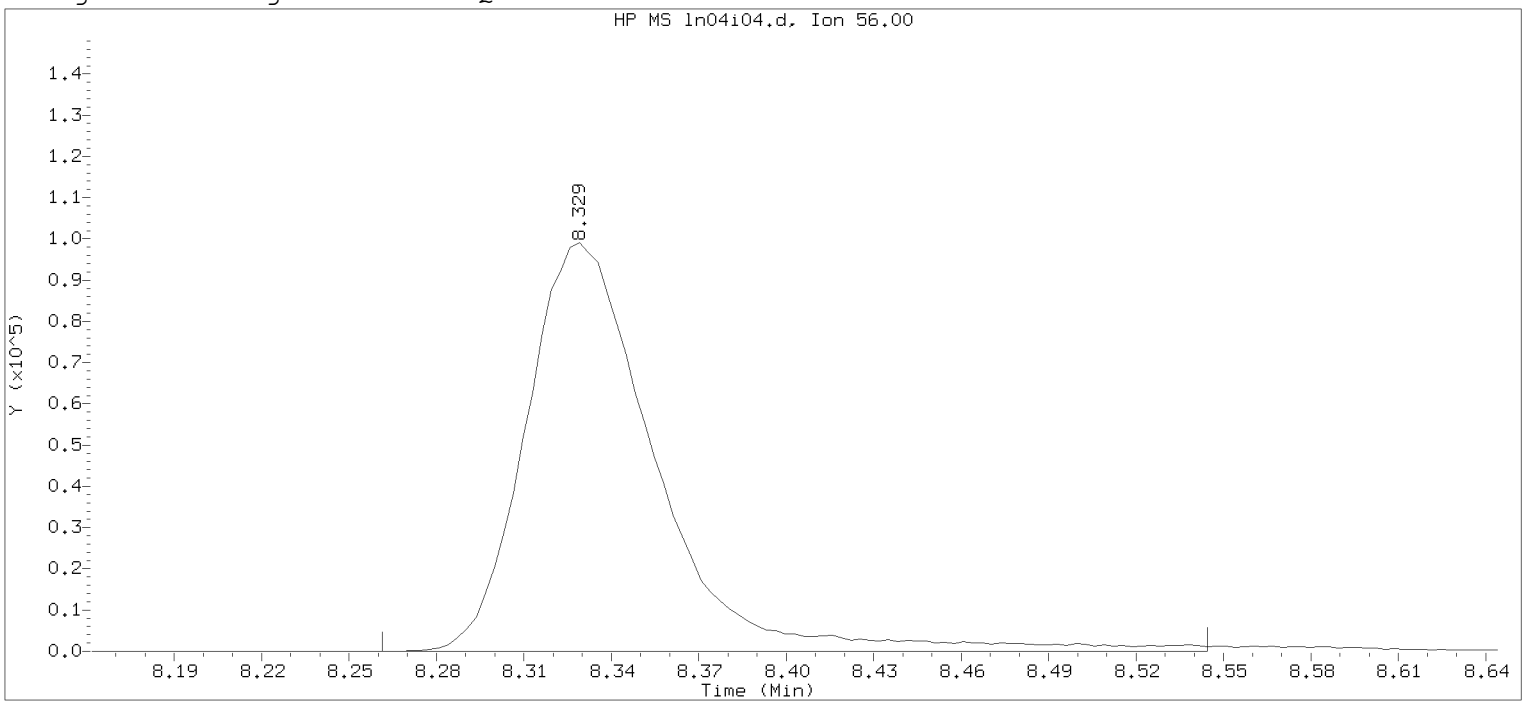
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

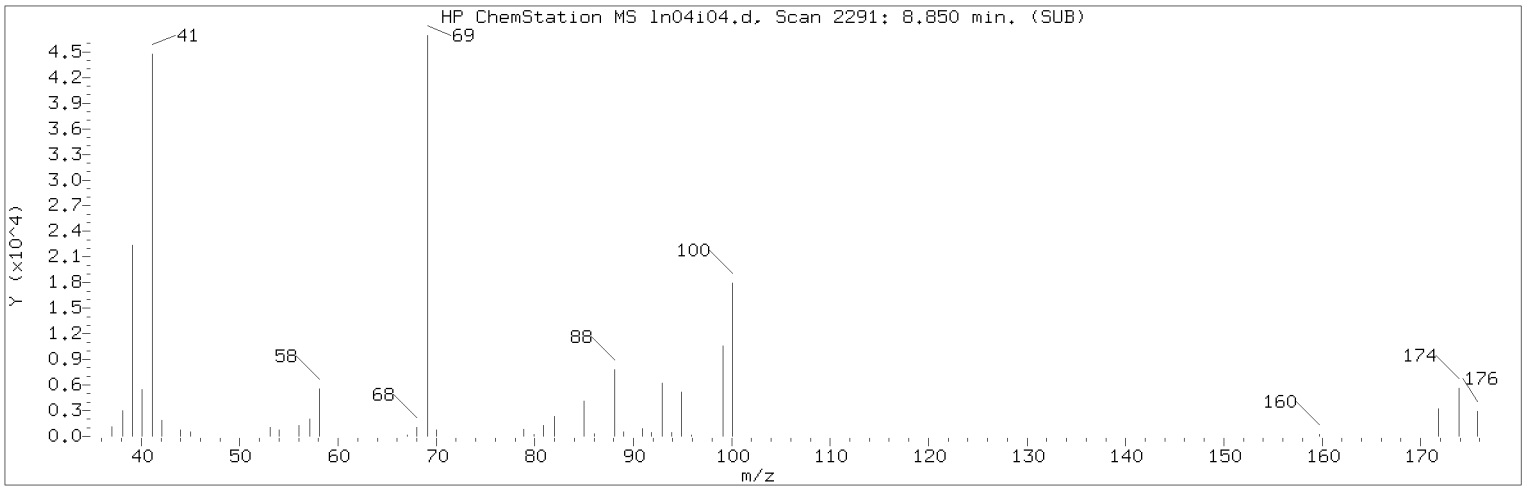
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

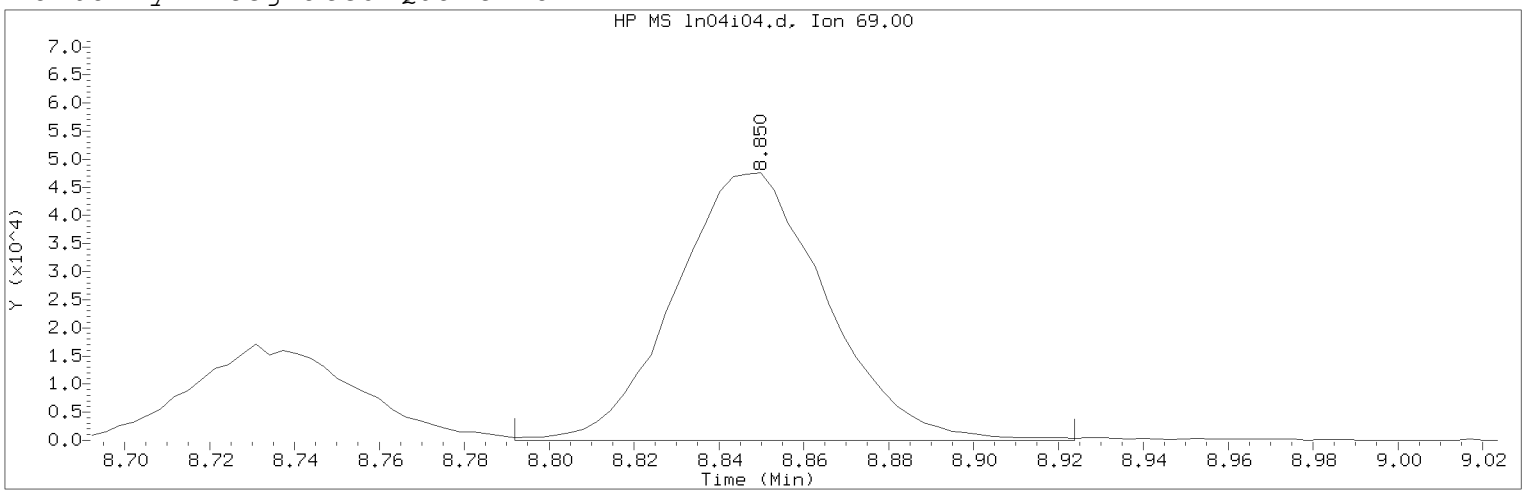
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area : 307443
On-column Amount (ng) : 938.0571
Integration start scan : 2107 Integration stop scan: 2195
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

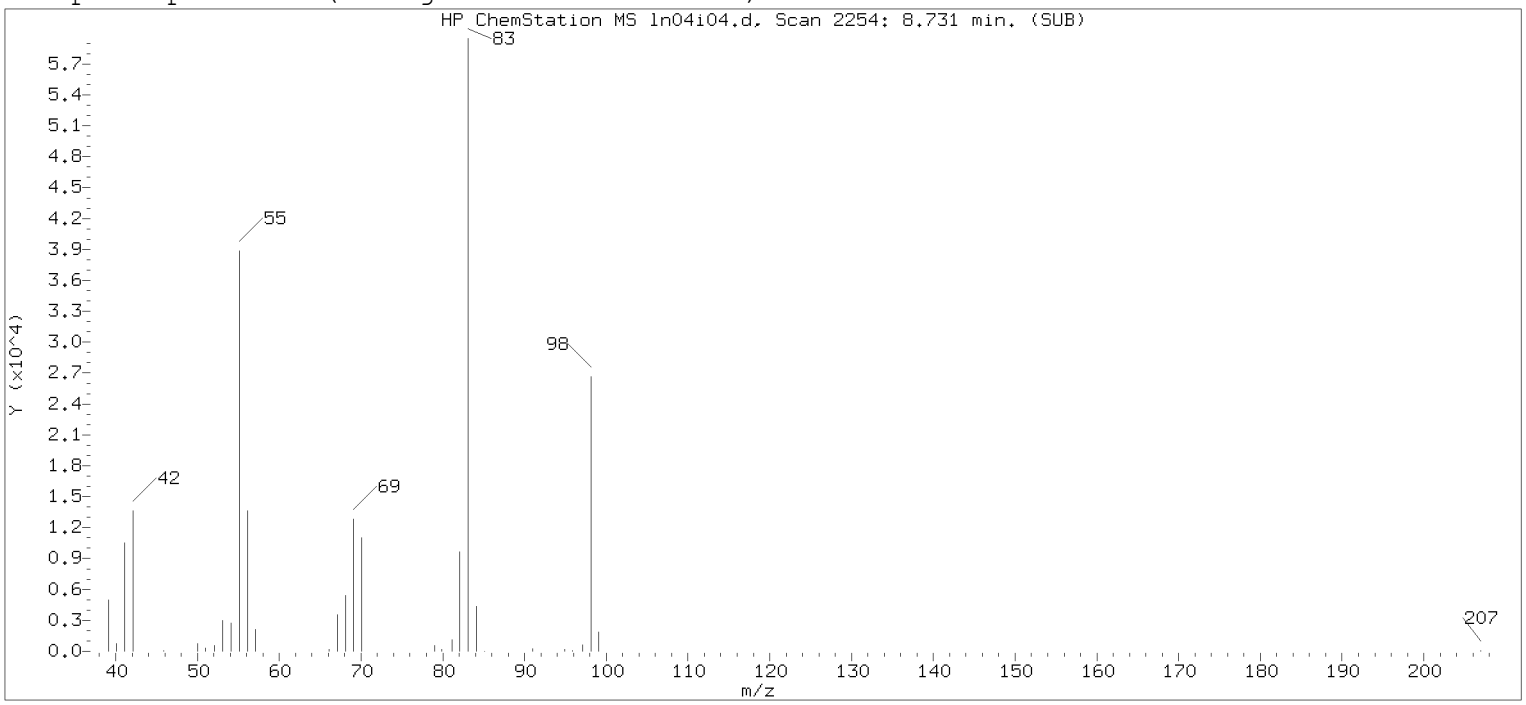
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2291
Retention Time (minutes): 8.850
Quant Ion : 69.00
Area (flag) : 117550A
On-Column Amount (ng) : 20.8506
Integration start scan : 2272 Integration stop scan: 2313
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

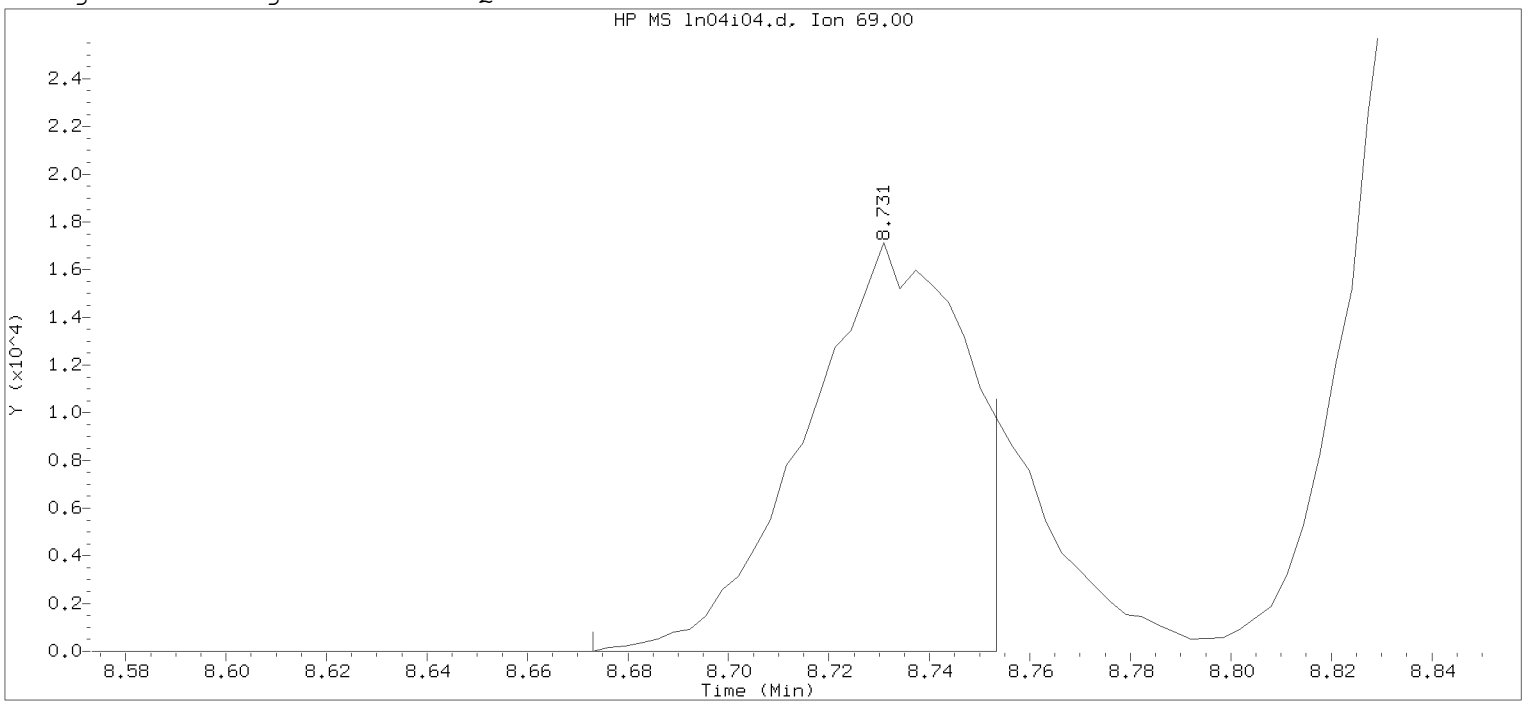
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

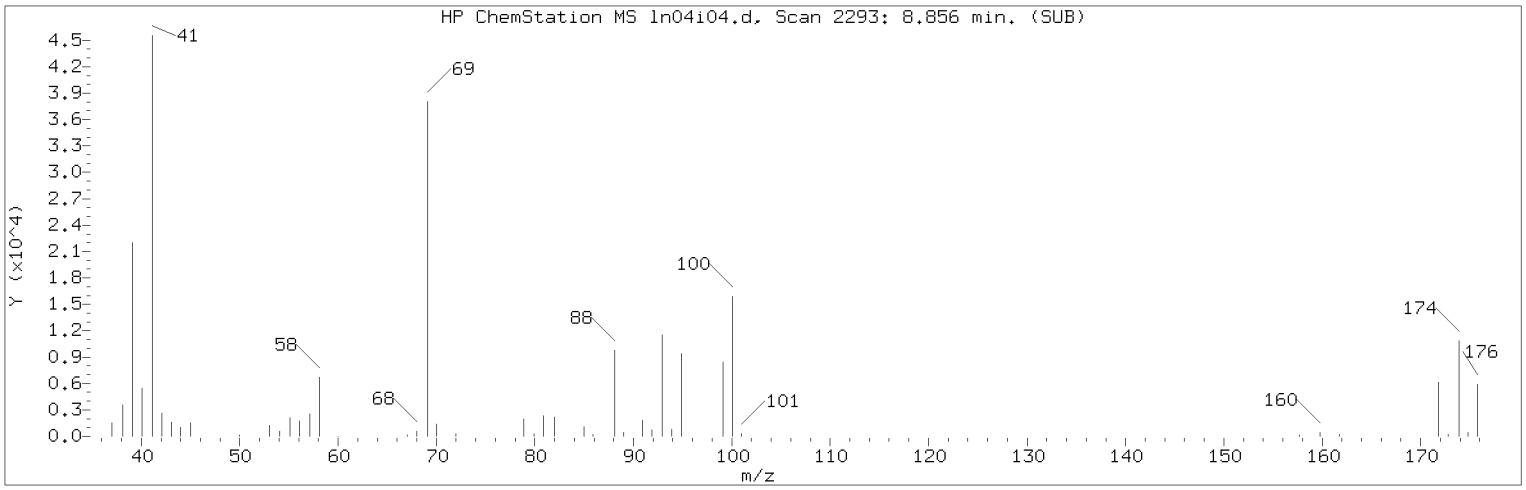
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

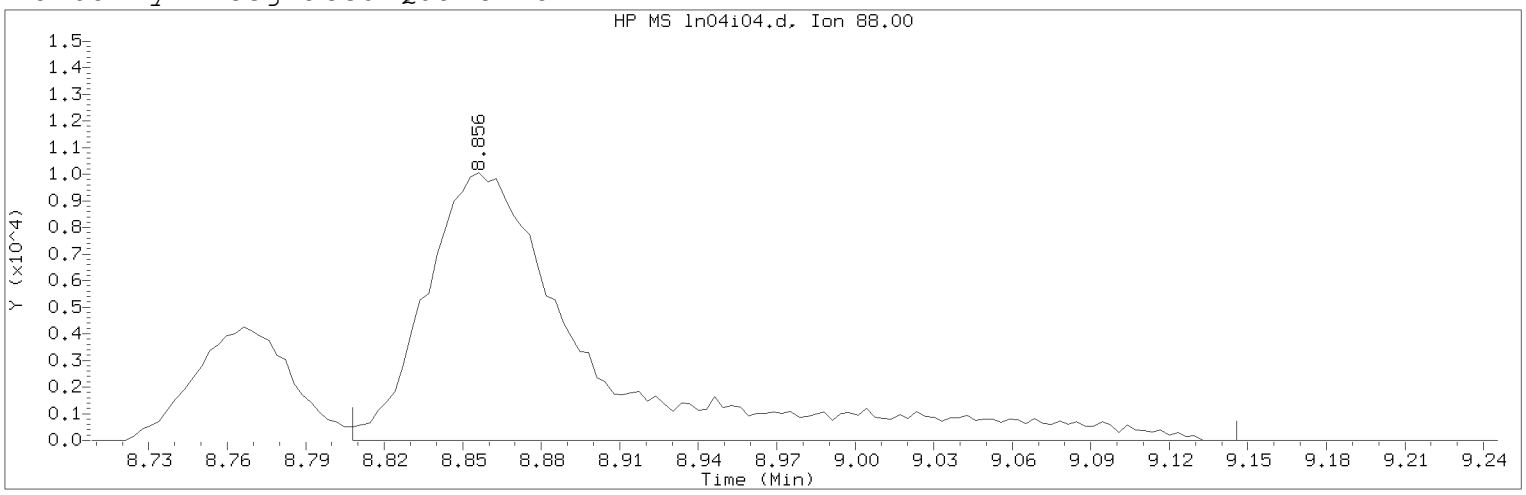
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2254
Retention Time (minutes): 8.731
Quant Ion : 69.00
Area : 37815
On-column Amount (ng) : 16.5923
Integration start scan : 2235 Integration stop scan: 2260
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

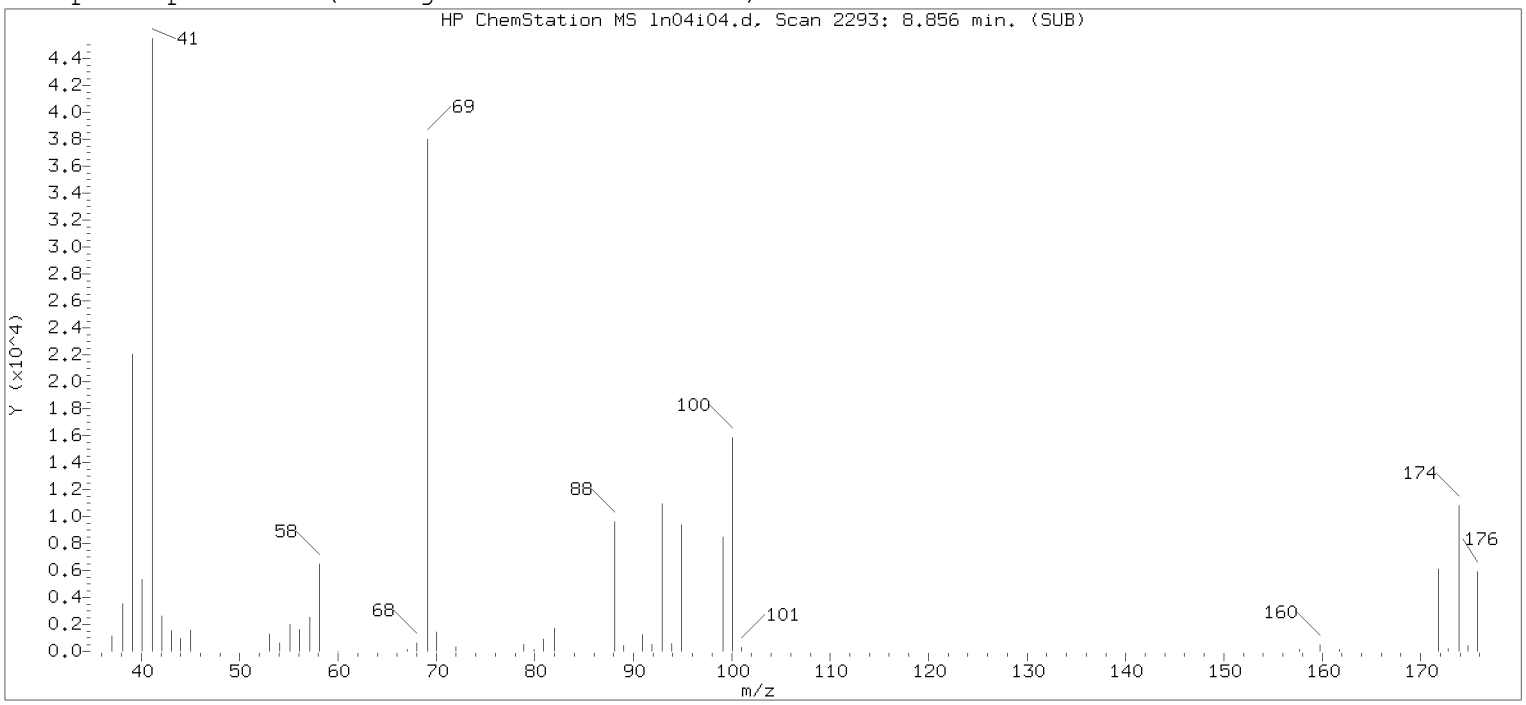
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 44376M
On-Column Amount (ng) : 513.0651
Integration start scan : 2277 Integration stop scan: 2382
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

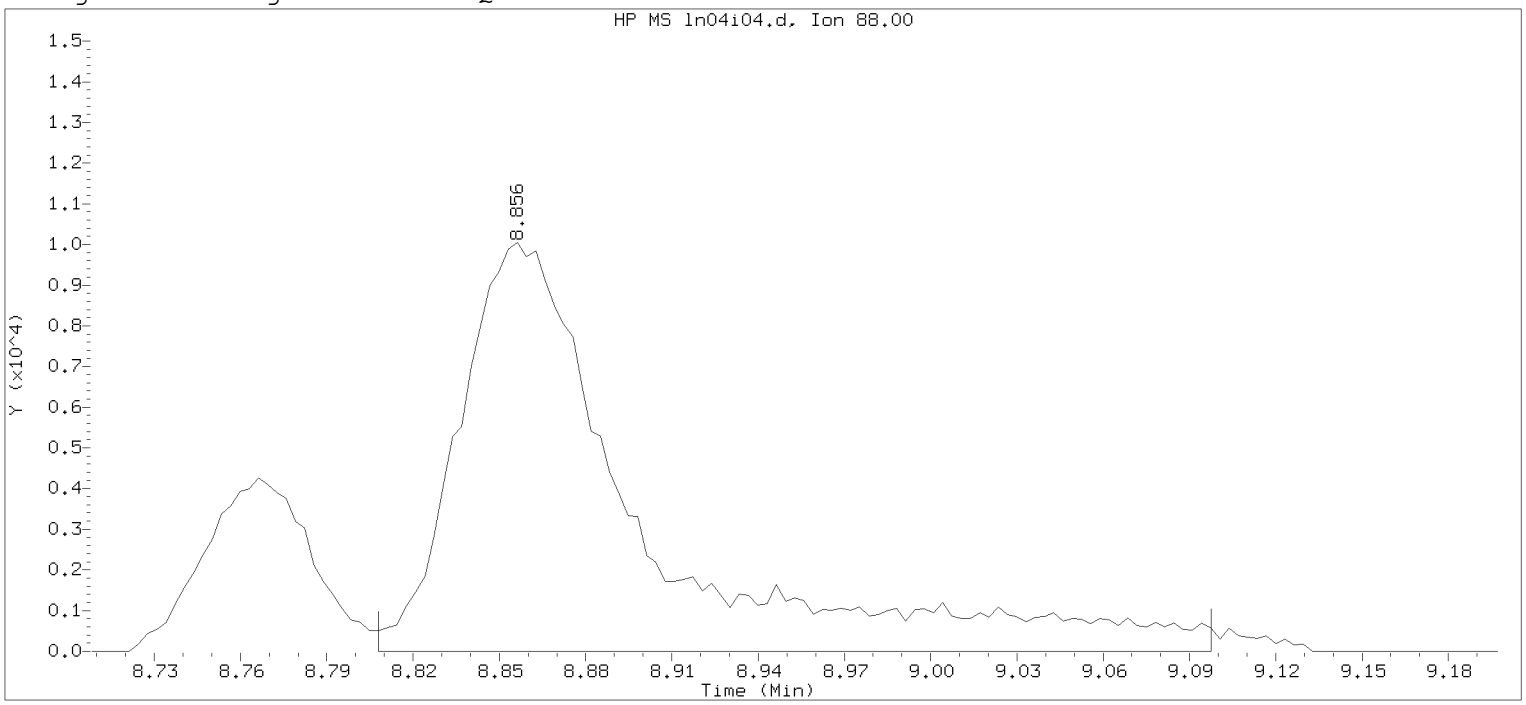
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

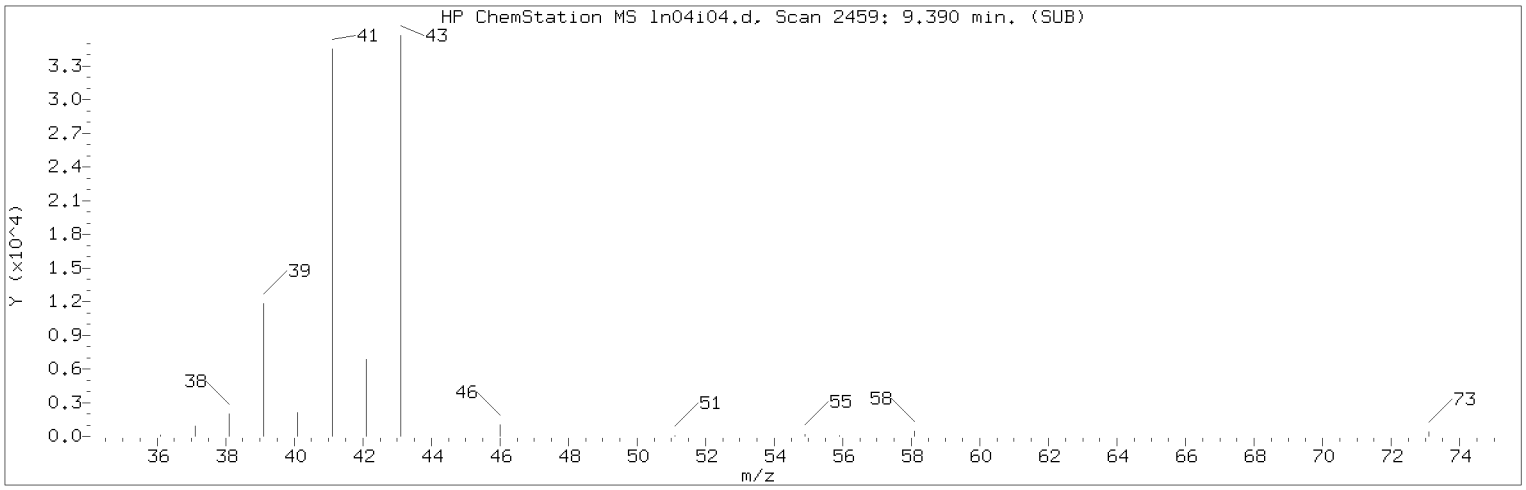
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

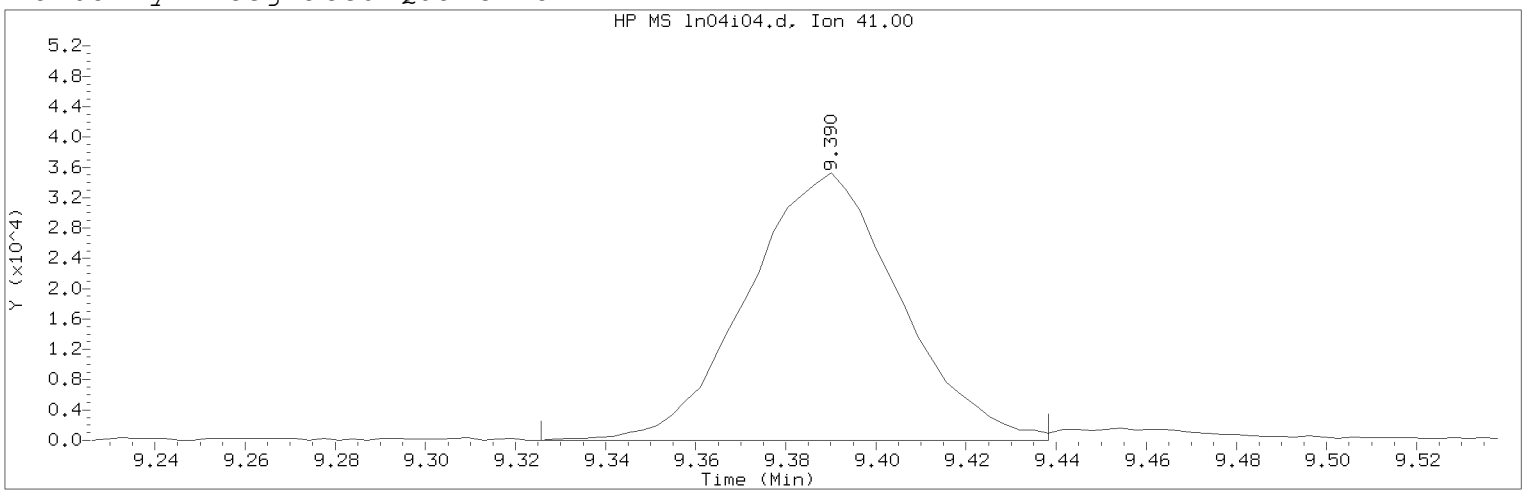
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area : 43671
On-column Amount (ng) : 571.7062
Integration start scan : 2277 Integration stop scan: 2367
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

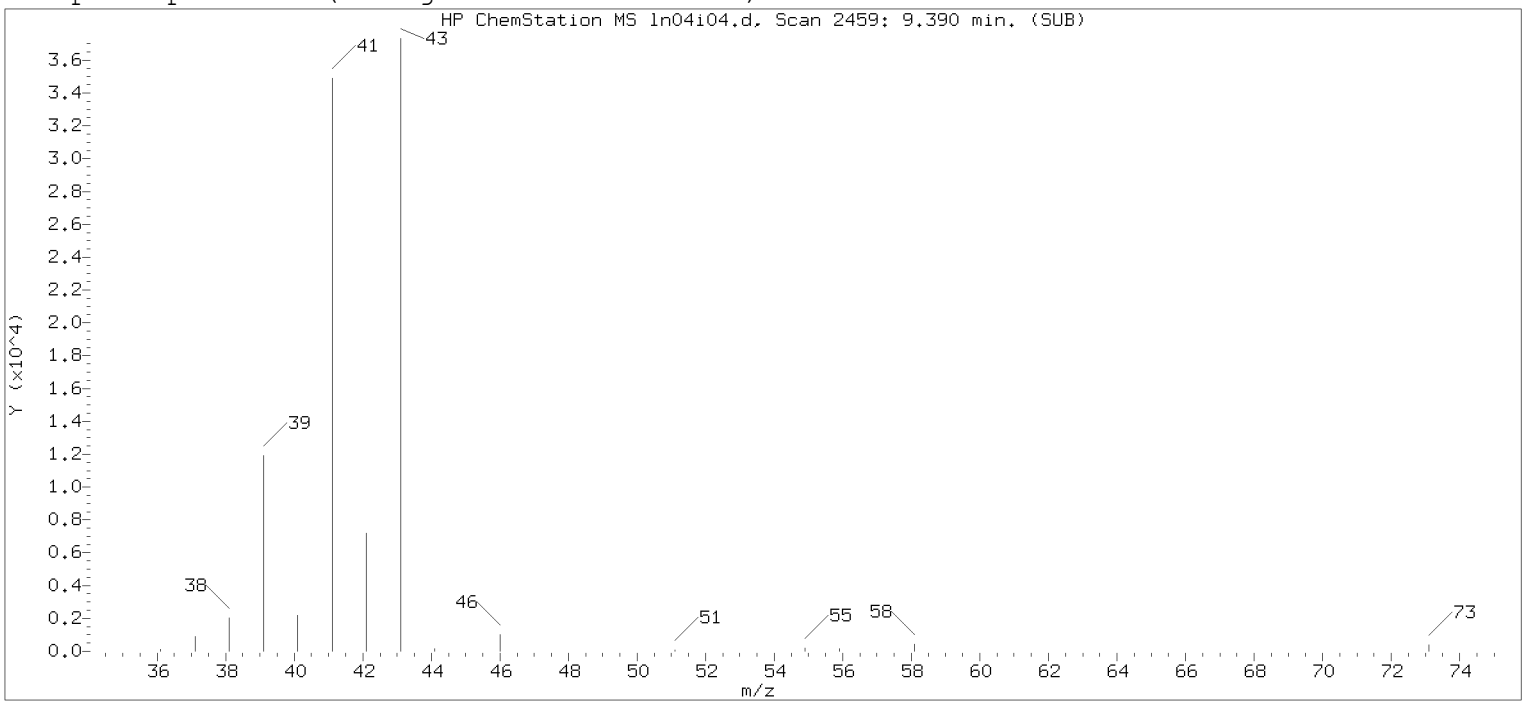
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2459
Retention Time (minutes): 9.390
Quant Ion : 41.00
Area (flag) : 82517M
On-Column Amount (ng) : 40.2472
Integration start scan : 2438 Integration stop scan: 2473
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

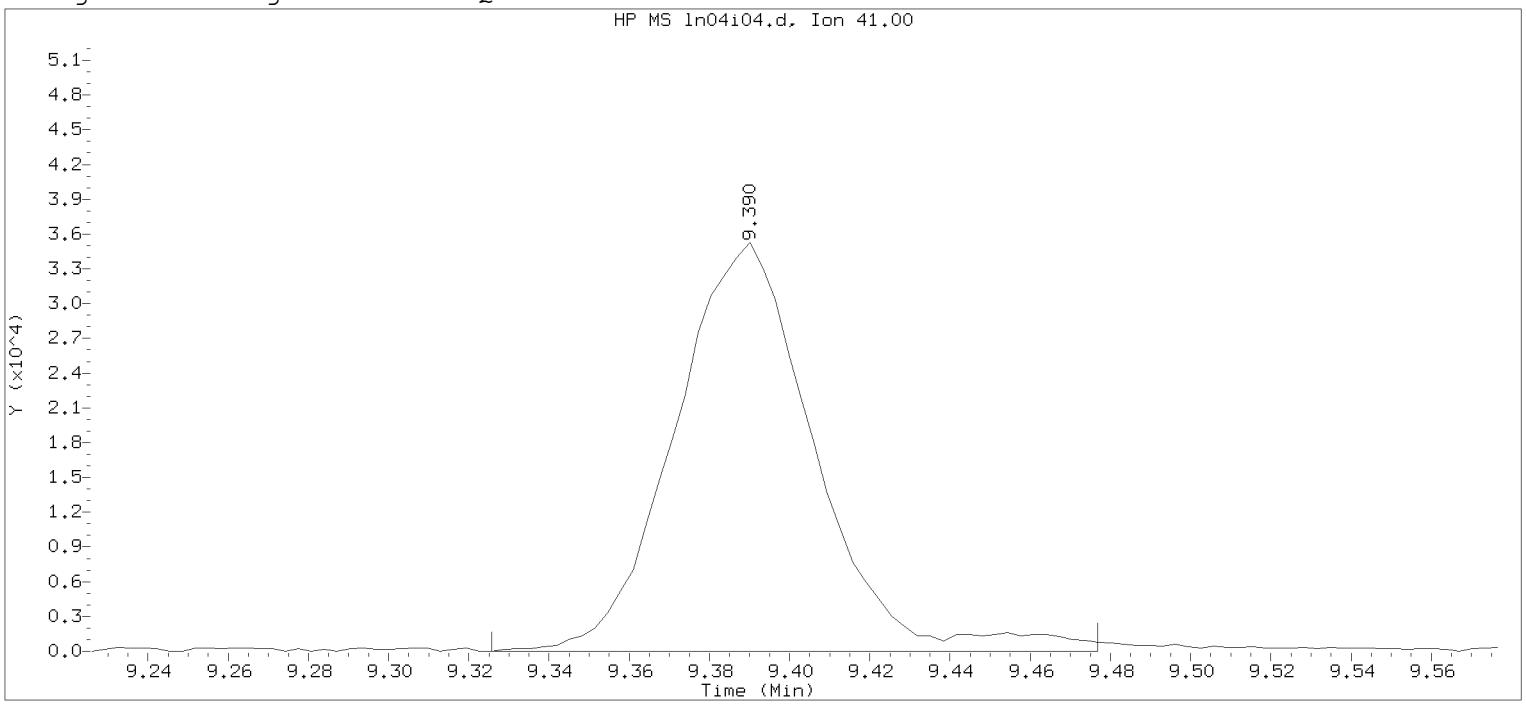
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

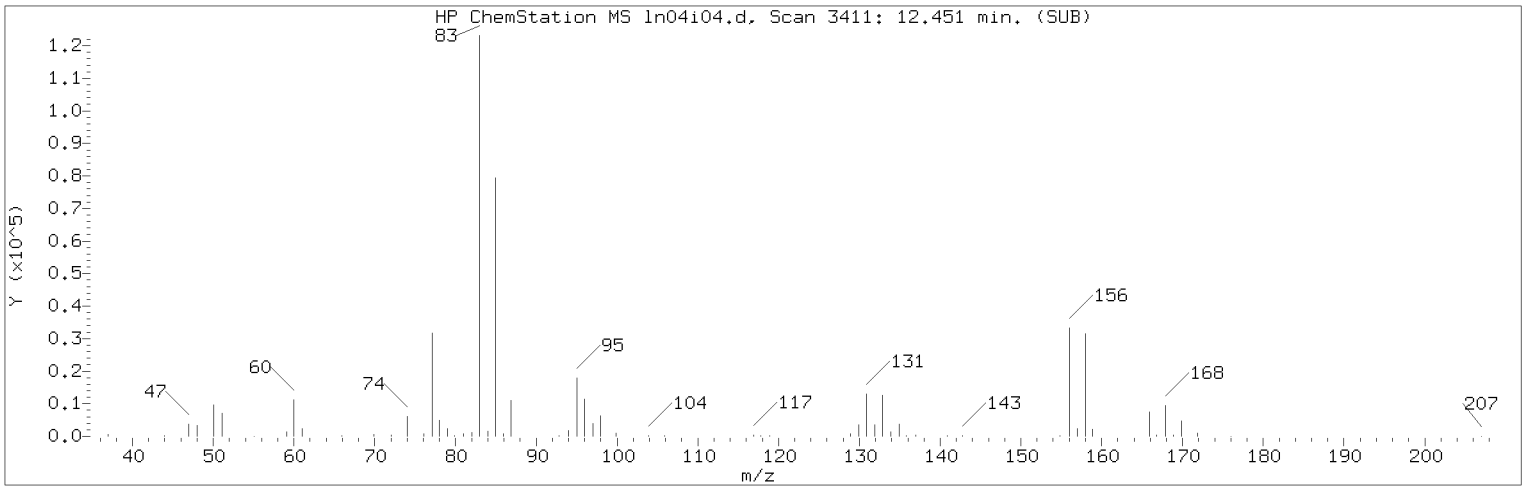
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

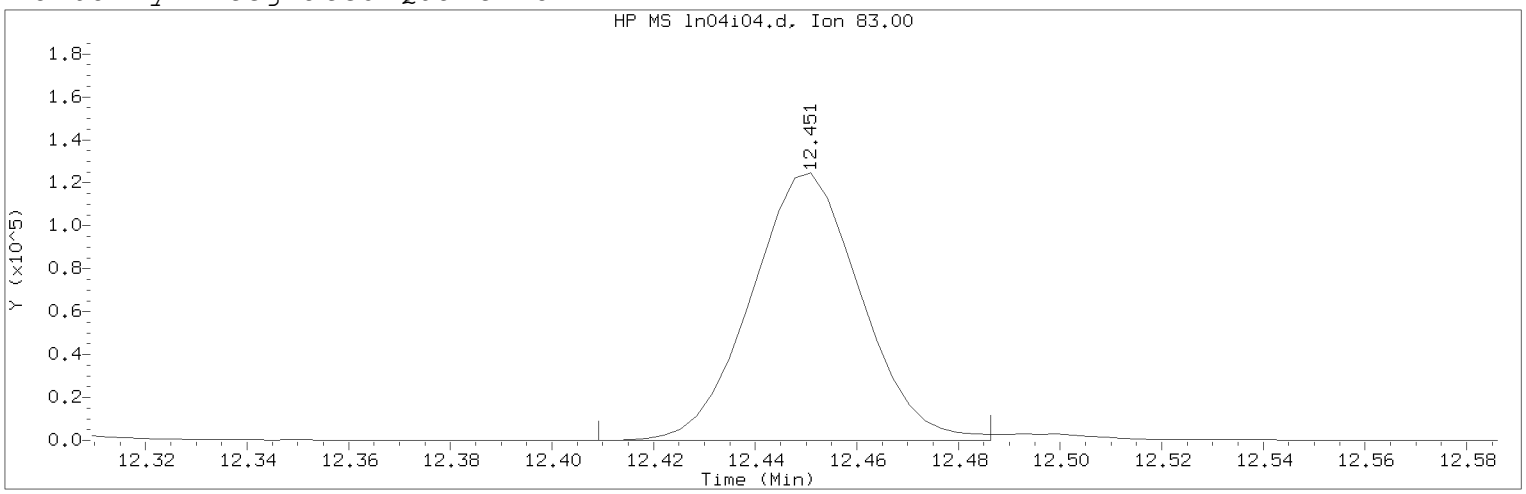
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2459
Retention Time (minutes): 9.390
Quant Ion : 41.00
Area : 85427
On-column Amount (ng) : 37.2727
Integration start scan : 2438 Integration stop scan: 2485
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

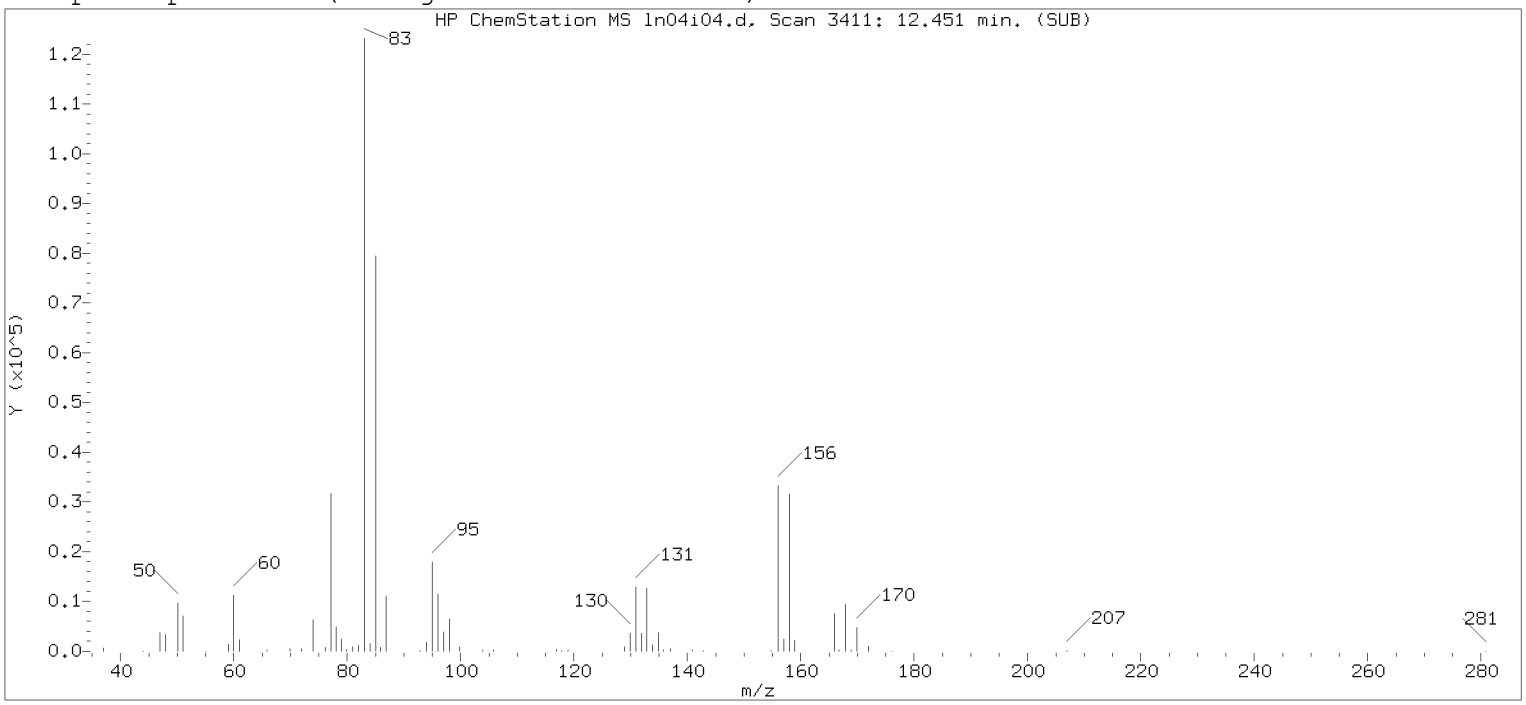
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 186119M
On-Column Amount (ng) : 20.6895
Integration start scan : 3397 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

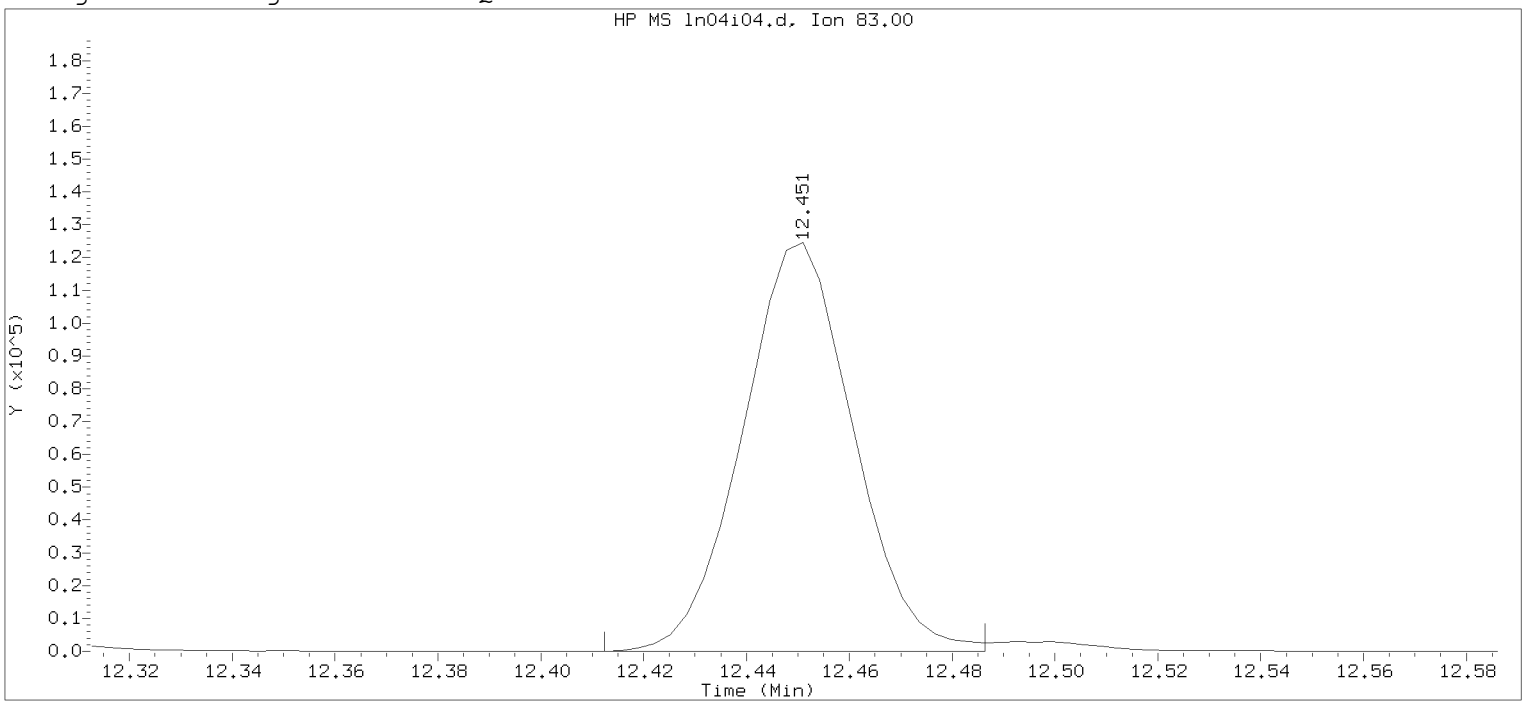
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

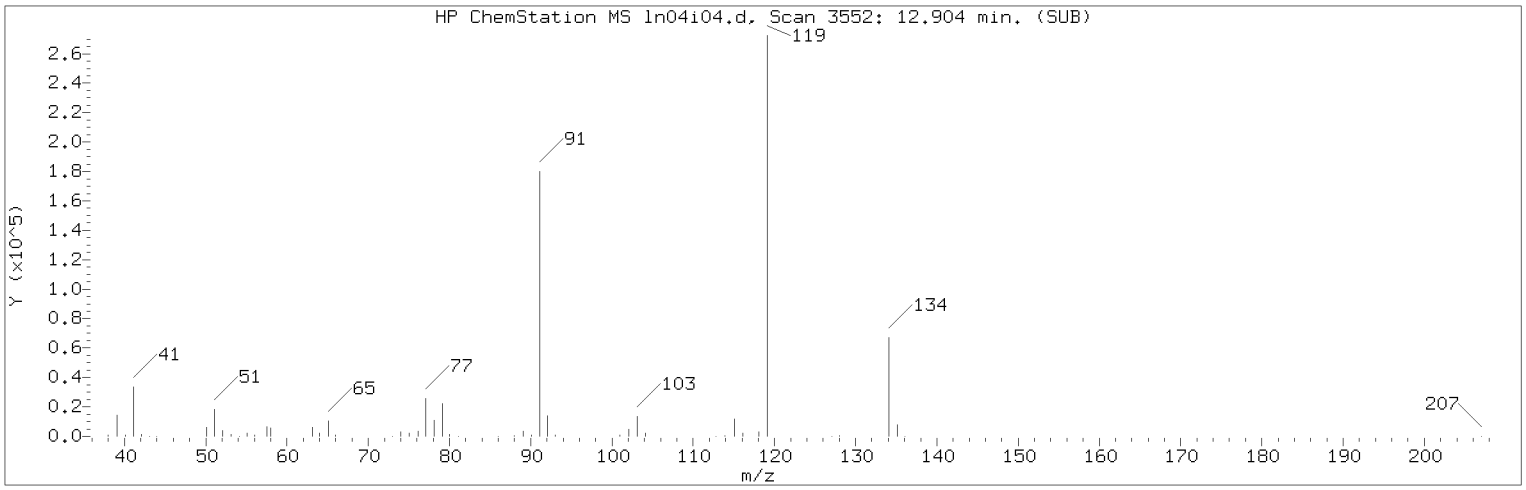
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

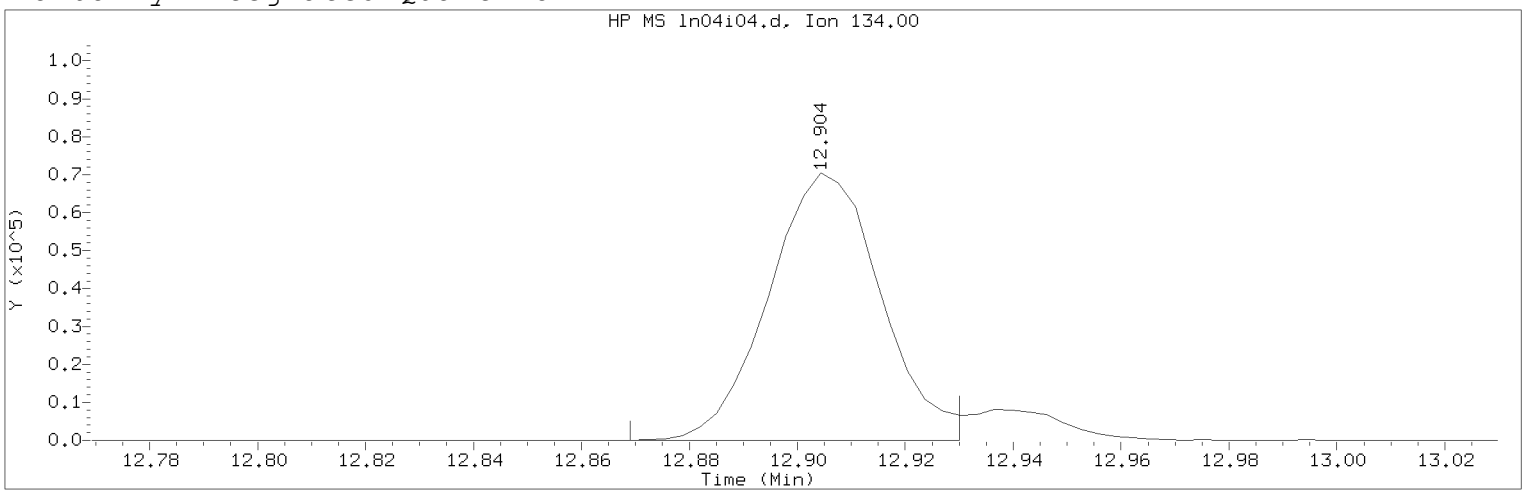
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 185866
On-column Amount (ng) : 19.5938
Integration start scan : 3398 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

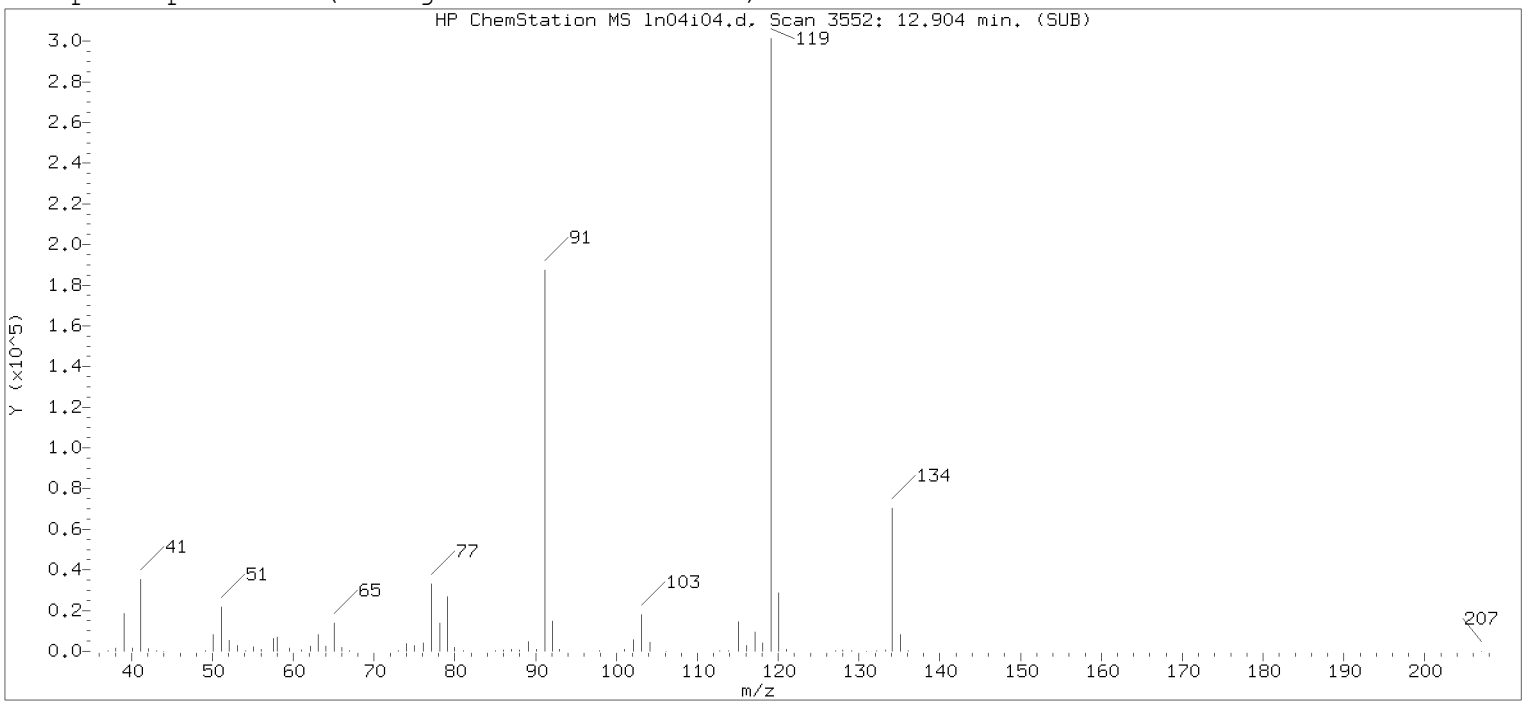
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 101571M
On-Column Amount (ng) : 21.6122
Integration start scan : 3540 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

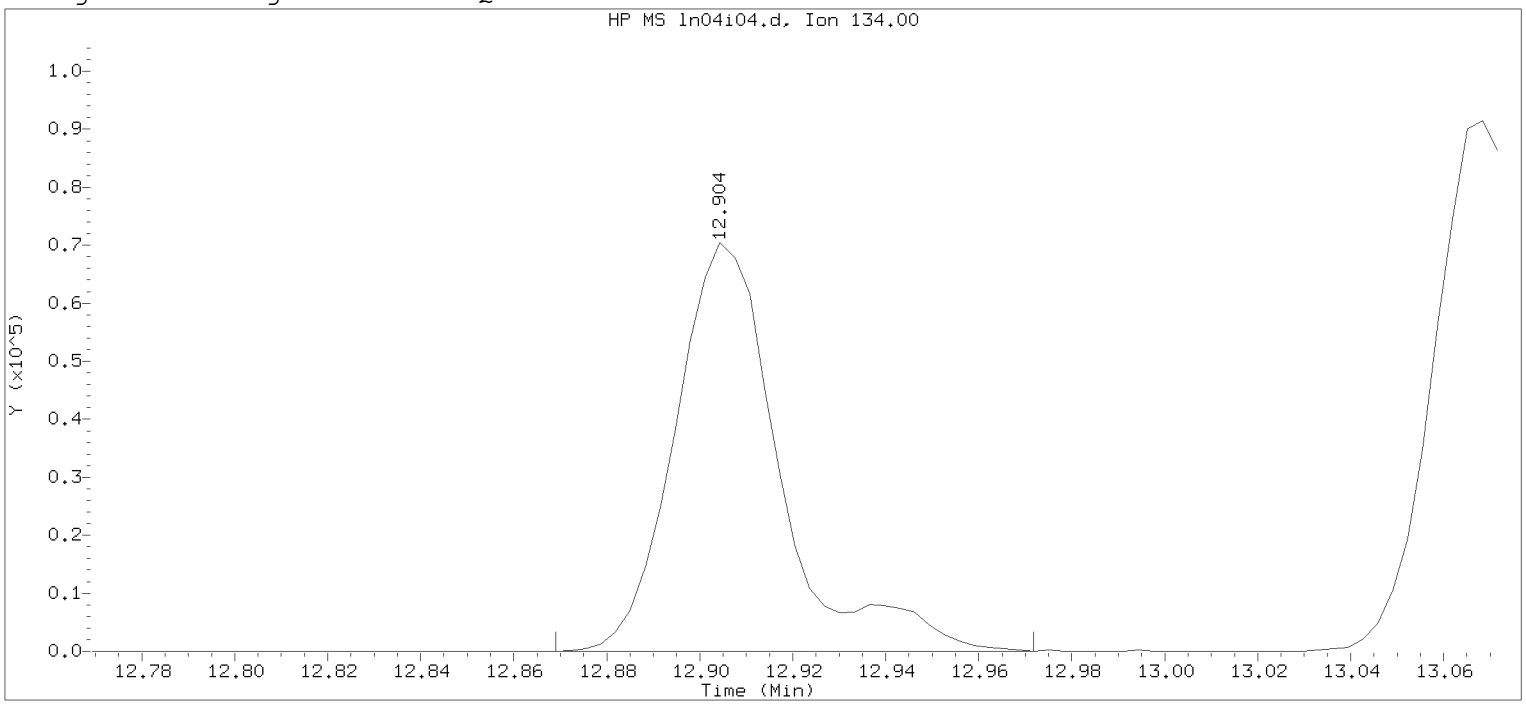
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



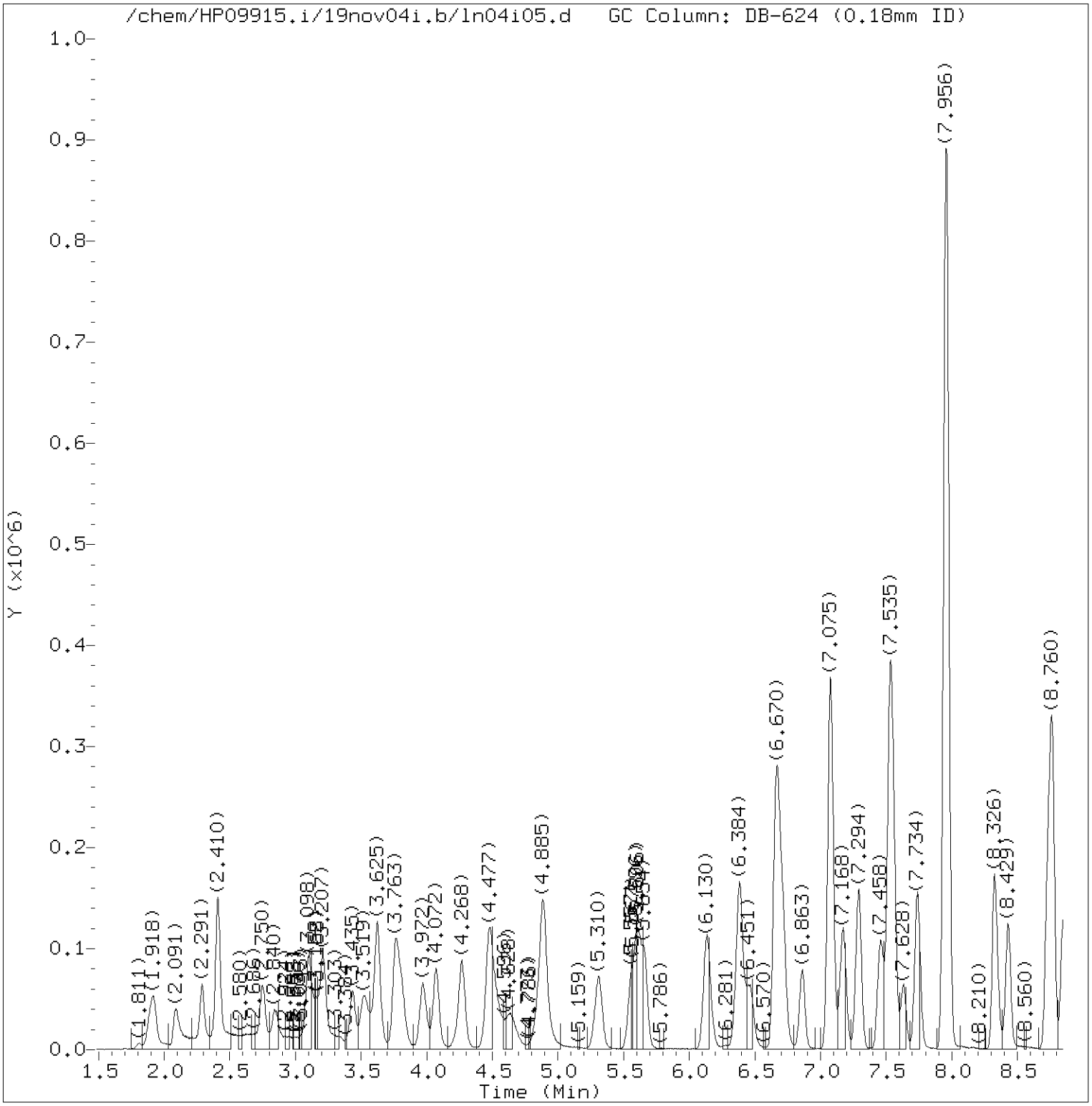
Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 110902
On-column Amount (ng) : 20.6897
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

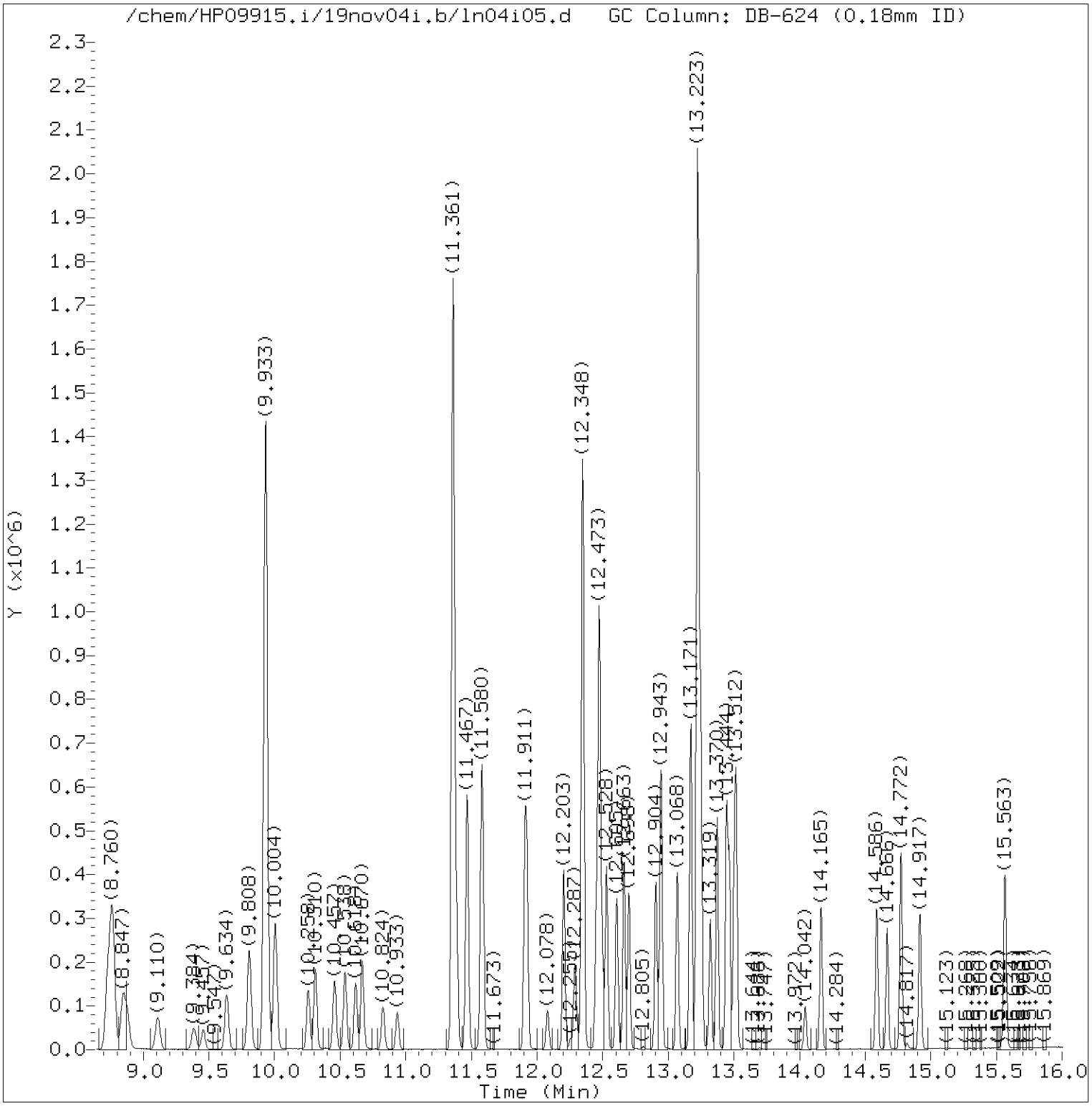
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.091	85	76947M	9.526
4) Chloromethane	(2)	2.291	50	76659	9.847
5) 1,3-Butadiene	(2)	2.406	39	60141M	9.304
6) Vinyl Chloride	(2)	2.413	62	76016	9.784
8) Bromomethane	(2)	2.750	94	54155	9.723
9) Chloroethane	(2)	2.853	64	42303	9.907
10) Dichlorofluoromethane	(2)	3.104	67	106956M	10.459
12) Trichlorofluoromethane	(2)	3.152	101	80624	9.638
11) n-Pentane	(2)	3.213	43	86389	8.739
14) Ethyl ether	(2)	3.438	59	52079	9.635
15) Freon 123a	(2)	3.519	67	65806	9.780
16) Acrolein	(1)	3.625	56	197662	100.013
17) 1,1-Dichloroethene	(2)	3.763	96	48467	9.871
17) 1,1-Dichloroethene	(2)	3.763	63	24200	9.831
19) Freon 113	(2)	3.792	101	51923	9.269
18) Acetone	(1)	3.805	58	17383	19.619
22) Methyl Iodide	(2)	3.969	142	101688	9.995
21) 2-Propanol	(1)	4.001	45	63841	100.227
23) Carbon Disulfide	(2)	4.075	76	179738	9.714
27) Methyl Acetate	(2)	4.245	43	62026	9.809
25) Allyl Chloride	(2)	4.268	41	86653	9.838
28) Methylene Chloride	(2)	4.474	84	58140	9.949
29)*t-Butyl alcohol-d10	(1)	4.509	65	263427M	250.000
30) t-Butyl alcohol	(1)	4.644	59	111005	100.090
31) Acrylonitrile	(2)	4.840	53	34130	10.032
33) Methyl Tertiary Butyl Ether	(2)	4.882	73	189173	10.147
32) trans-1,2-Dichloroethene	(2)	4.889	96	56133	9.883
34) n-Hexane	(2)	5.306	57	75187M	8.508
36) 1,1-Dichloroethane	(2)	5.557	63	99074	9.999
38) di-Isopropyl ether	(2)	5.606	45	191363	10.014
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	84906	9.551
40) Ethyl t-butyl ether	(2)	6.136	59	188350	10.156
43) 1,2-Dichloroethene (Total)	(2)		96	118698	19.696
44) 2-Butanone	(2)	6.364	43	85445	19.565
42) cis-1,2-Dichloroethene	(2)	6.387	96	62565	9.814
45) 2,2-Dichloropropane	(2)	6.396	77	74849	9.717
47) Propionitrile	(1)	6.464	54	136751	98.961
48) Methacrylonitrile	(2)	6.663	67	181171	49.366

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	34163	10.106
50) Tetrahydrofuran	(1)	6.724	71	24588	19.698
51) Chloroform	(2)	6.863	83	93507	9.867
52)$Dibromofluoromethane	(2)	7.072	113	280960	49.616
52)$Dibromofluoromethane	(2)	7.075	111	286315	49.589
53) 1,1,1-Trichloroethane	(2)	7.078	97	77742	9.611
54) Cyclohexane	(2)	7.175	56	96567	8.928
54) Cyclohexane	(2)	7.175	84	84021	8.942
54) Cyclohexane	(2)	7.175	69	29917	8.942
56) Carbon Tetrachloride	(2)	7.287	117	63638	9.276
55) 1,1-Dichloropropene	(2)	7.294	75	75943	9.694
58) Isobutyl Alcohol	(1)	7.458	41	94699	253.736
57)$1,2-Dichloroethane-d4	(2)	7.532	102	72410	50.173
57)$1,2-Dichloroethane-d4	(2)	7.528	65	317862	49.423
57)$1,2-Dichloroethane-d4	(2)	7.528	104	46131	50.043
60) Benzene	(2)	7.557	78	235083	9.978
61) 1,2-Dichloroethane	(2)	7.634	62	74555	9.839
61) 1,2-Dichloroethane	(2)	7.634	98	7256	9.676
65) t-Amyl methyl ether	(2)	7.740	73	187995	10.099
66)*Fluorobenzene	(2)	7.956	96	1158257	50.000
67) n-Heptane	(2)	7.959	43	65347MA	7.916
69) n-Butanol	(1)	8.326	56	166674M	518.868
71) Trichloroethene	(2)	8.425	95	57378	9.672
72) Methylcyclohexane	(2)	8.731	83	104101	9.459
72) Methylcyclohexane	(2)	8.731	98	46774	9.392
73) 1,2-Dichloropropane	(2)	8.766	63	59459	9.939
76) Methyl Methacrylate	(2)	8.843	69	56123	9.701
75) 1,4-Dioxane	(1)	8.859	88	22251M	252.018
74) Dibromomethane	(2)	8.875	93	37949	9.804
78) Bromodichloromethane	(2)	9.110	83	66403	9.560
79) 2-Nitropropane	(2)	9.387	41	38245M	18.178
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	24083	9.373
81) cis-1,3-Dichloropropene	(2)	9.638	75	89740	9.728
82) 4-Methyl-2-pentanone	(2)	9.808	43	182101	19.754
83)$Toluene-d8	(3)	9.933	98	1179588	50.250
83)$Toluene-d8	(3)	9.933	100	766795	50.427
88) Toluene	(3)	10.004	92	146792	9.974
90) 1,3-Dichloropropene (total)	(3)		100	170602	19.407

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.255	75	80862	9.679
91) Ethyl Methacrylate	(3)	10.310	69	101774	10.024
92) 1,1,2-Trichloroethane	(3)	10.457	97	55397	9.928
93) Tetrachloroethene	(3)	10.538	166	57668	9.252
94) 1,3-Dichloropropane	(3)	10.615	76	95319	10.005
96) 2-Hexanone	(3)	10.670	43	134577	19.858
97) Dibromochloromethane	(3)	10.824	129	54317	9.503
99) 1,2-Dibromoethane	(3)	10.937	107	59349	9.795
100)*Chlorobenzene-d5	(3)	11.358	117	897139	50.000
101) 1-Chlorohexane	(3)	11.364	91	68517	8.666
102) Chlorobenzene	(3)	11.383	112	167497	10.065
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	53804	9.812
104) Ethylbenzene	(3)	11.467	91	273085	9.708
106) m+p-Xylene	(3)	11.583	106	214450	19.380
108) Xylene (Total)	(3)		106	321712	29.193
107) o-Xylene	(3)	11.908	106	107262	9.813
109) Styrene	(3)	11.924	104	181265	10.036
110) Bromoform	(3)	12.078	173	38599	9.038
111) Isopropylbenzene	(3)	12.203	105	257704	9.400
112) Cyclohexanone	(1)	12.290	55	84173	243.422
114)$4-Bromofluorobenzene	(3)	12.348	95	448980	50.511
114)$4-Bromofluorobenzene	(3)	12.348	174	372460	50.544
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	99221M	10.583
115) Bromobenzene	(4)	12.464	156	73059	9.795
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	144573	49.994
117) 1,2,3-Trichloropropane	(4)	12.496	110	30082	10.457
119) n-Propylbenzene	(4)	12.528	91	295857	9.079
120) 2-Chlorotoluene	(4)	12.608	126	64871	9.370
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	216905	9.159
121) 4-Chlorotoluene	(4)	12.698	126	68187	9.462
124) tert-Butylbenzene	(4)	12.907	134	42119M	8.599
125) Pentachloroethane	(4)	12.936	167	40747	9.662
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	231031	9.256
127) sec-Butylbenzene	(4)	13.068	105	254340	8.702
129) 1,3-Dichlorobenzene	(4)	13.168	146	133435	9.735
130) p-Isopropyltoluene	(4)	13.171	119	222820	8.812
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	496298	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	137520	9.678

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	263873	9.980
135) Benzyl Chloride	(4)	13.319	91	189013	9.442
136) 1,3-Diethylbenzene	(4)	13.370	119	162518	9.876
141) Diethylbenzene (total)	(4)		100	469676	29.503
137) 1,4-Diethylbenzene	(4)	13.444	119	170802	9.797
139) n-Butylbenzene	(4)	13.464	92	112696	8.717
138) 1,2-Dichlorobenzene	(4)	13.502	146	133767	9.890
140) 1,2-Diethylbenzene	(4)	13.518	119	136356	9.830
142) 1,2-Dibromo-3-chloropropane	(4)	14.042	75	21471	10.462
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	94358	9.080
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	93971	9.300
147) Hexachlorobutadiene	(4)	14.666	225	44299	9.286
148) Naphthalene	(4)	14.772	128	328233	10.105
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	92049	9.363
150) 2-Methylnaphthalene	(4)	15.563	142	202392	10.118

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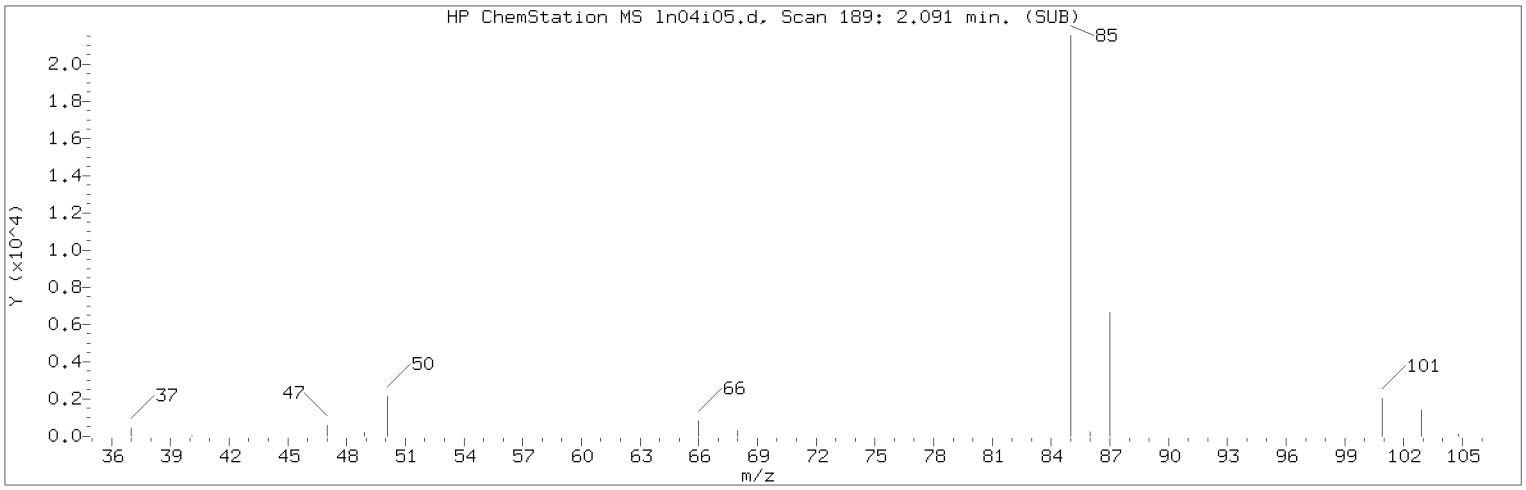
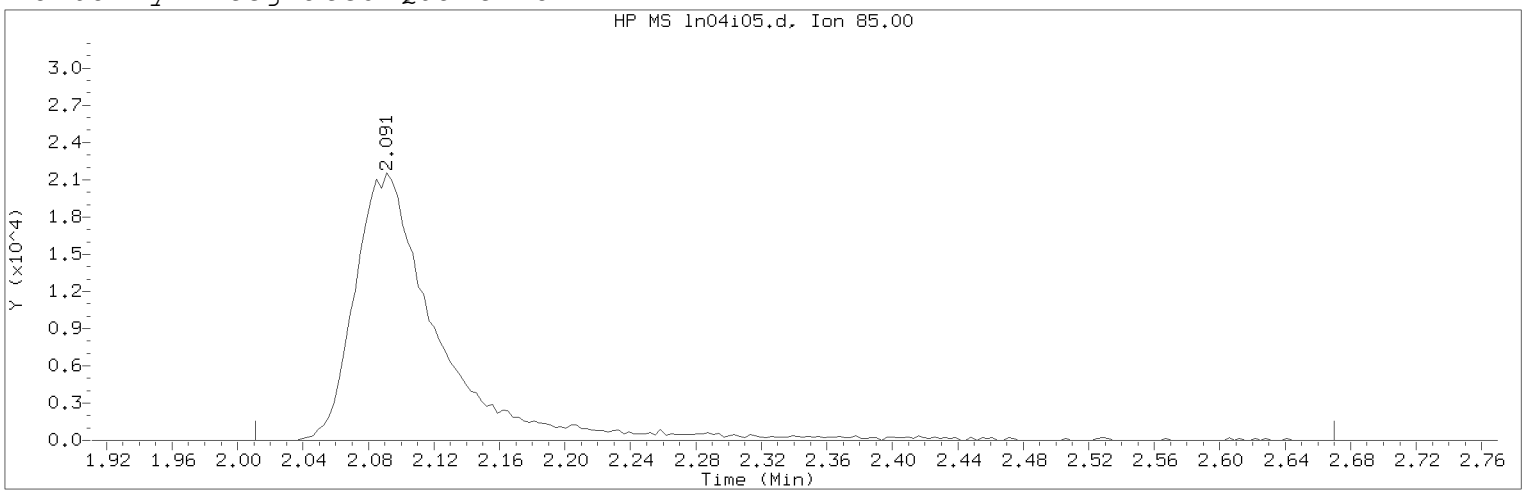
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

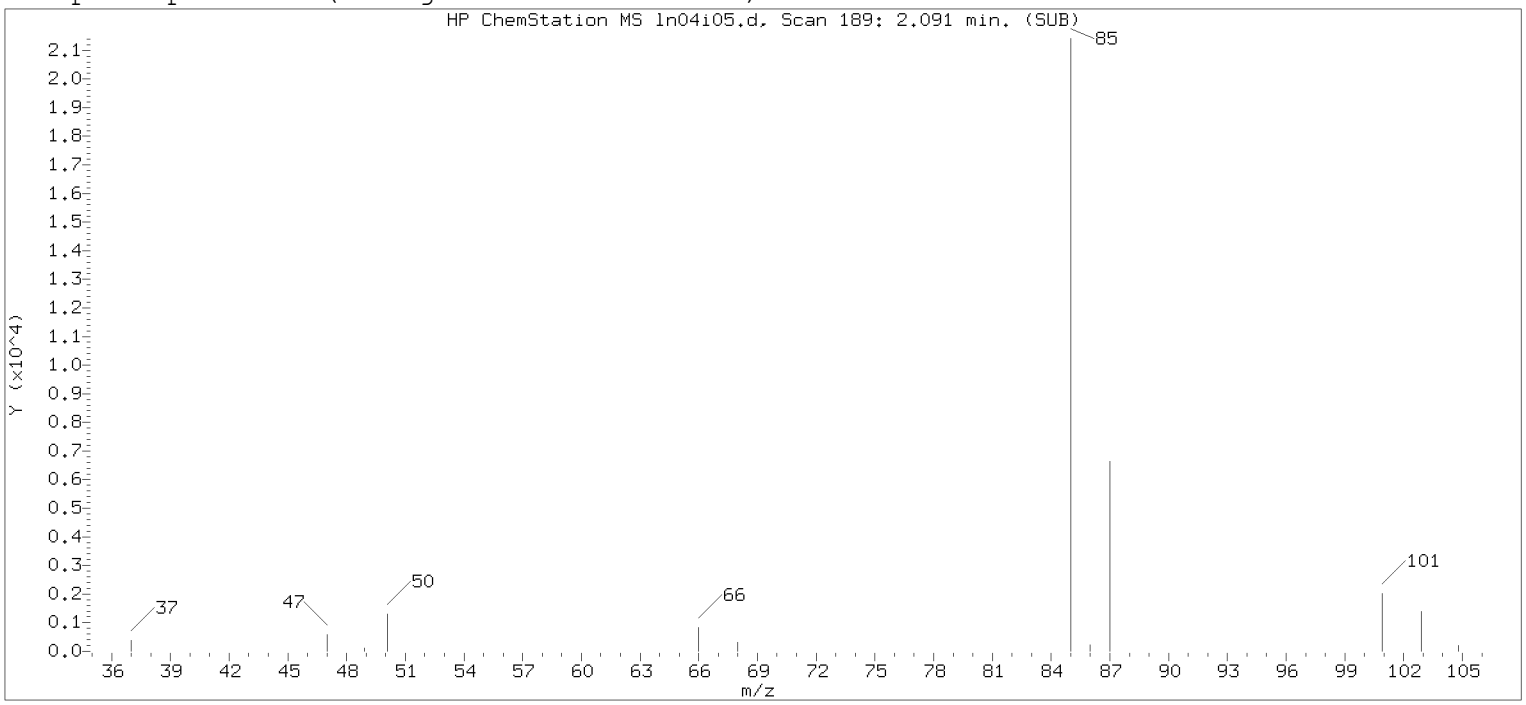
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 189
Retention Time (minutes): 2.091
Quant Ion : 85.00
Area (flag) : 76947M
On-Column Amount (ng) : 9.5263
Integration start scan : 163 Integration stop scan: 368
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

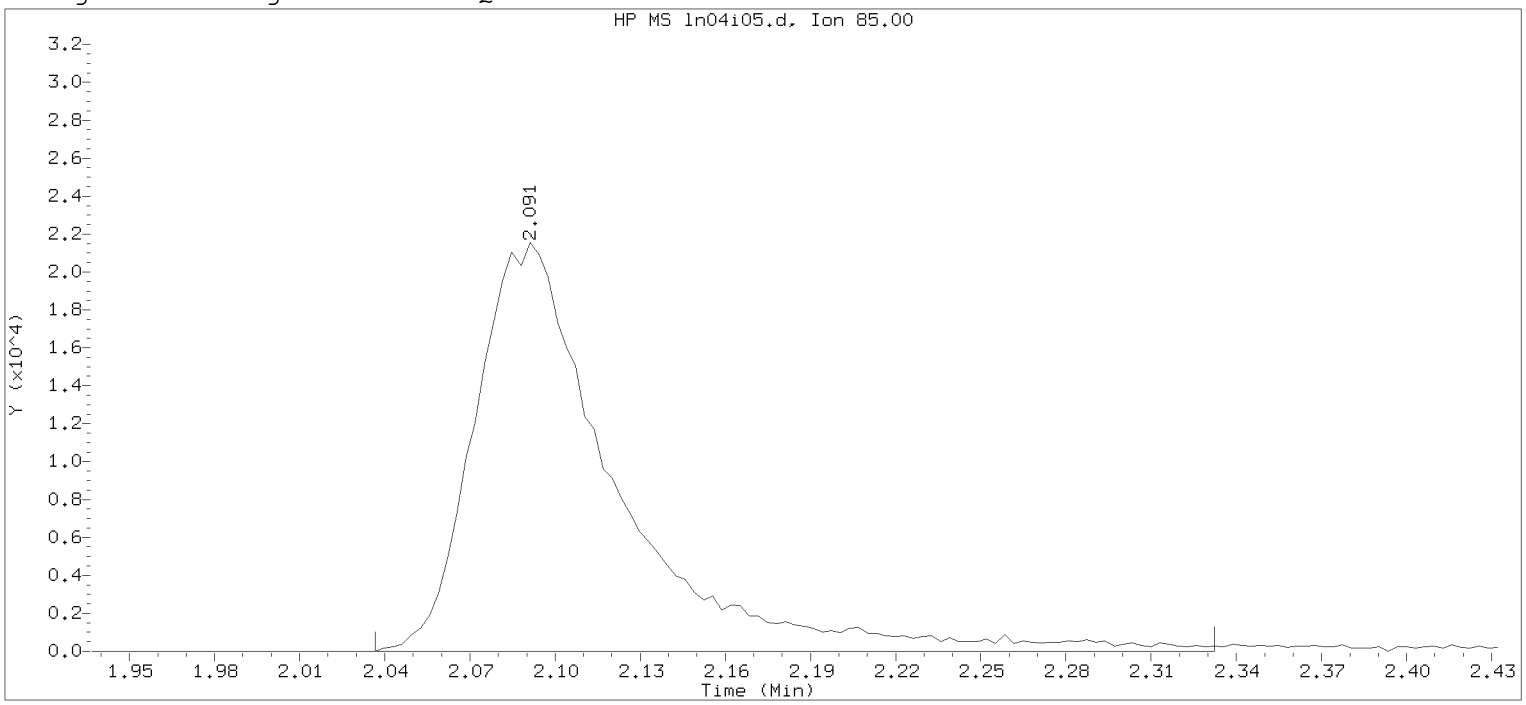
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

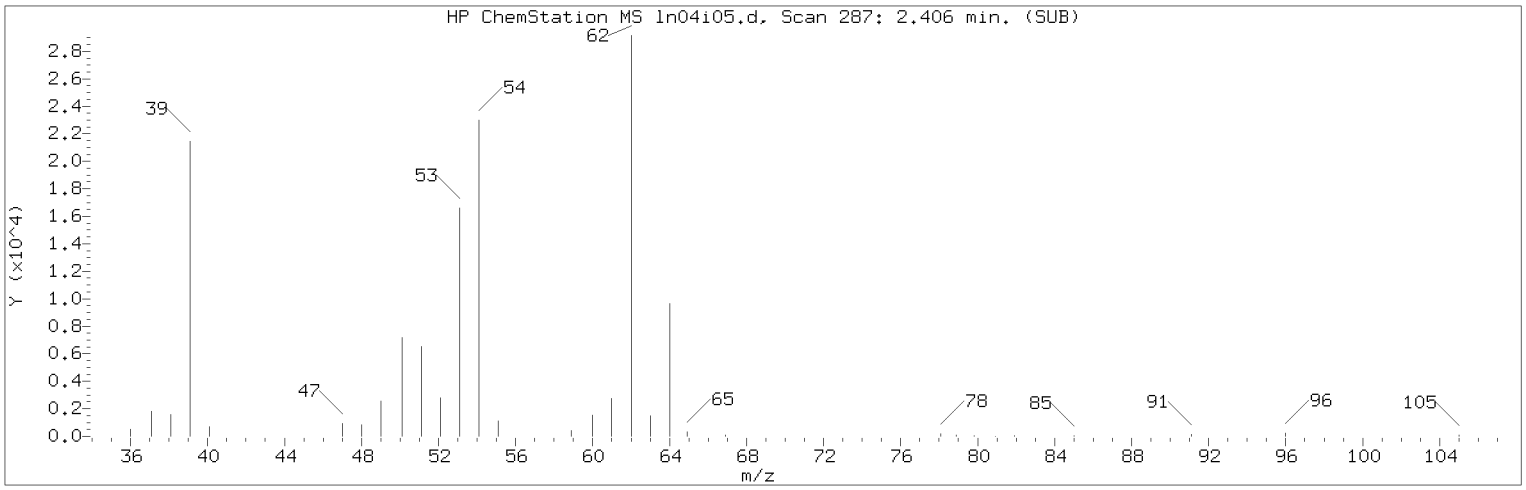
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

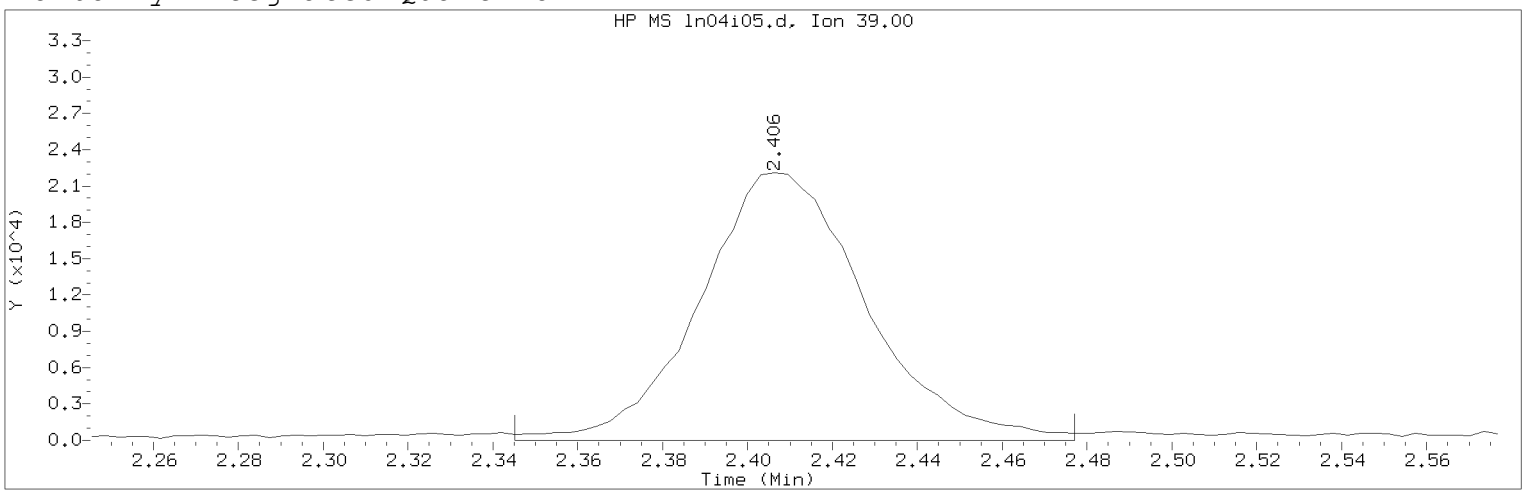
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 189
Retention Time (minutes): 2.091
Quant Ion : 85.00
Area : 74877
On-column Amount (ng) : 9.3136
Integration start scan : 171 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

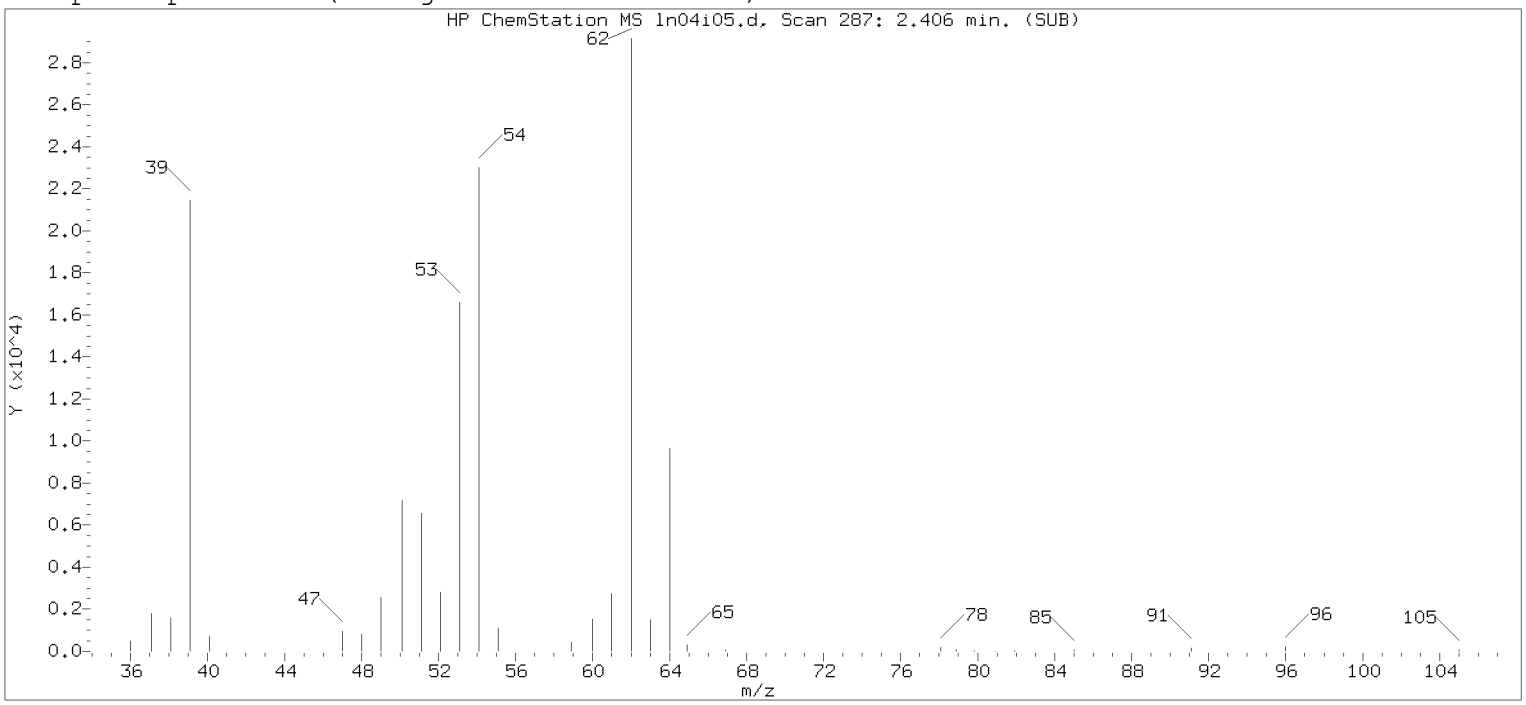
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 60141M
On-Column Amount (ng) : 9.3042
Integration start scan : 267 Integration stop scan: 308
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

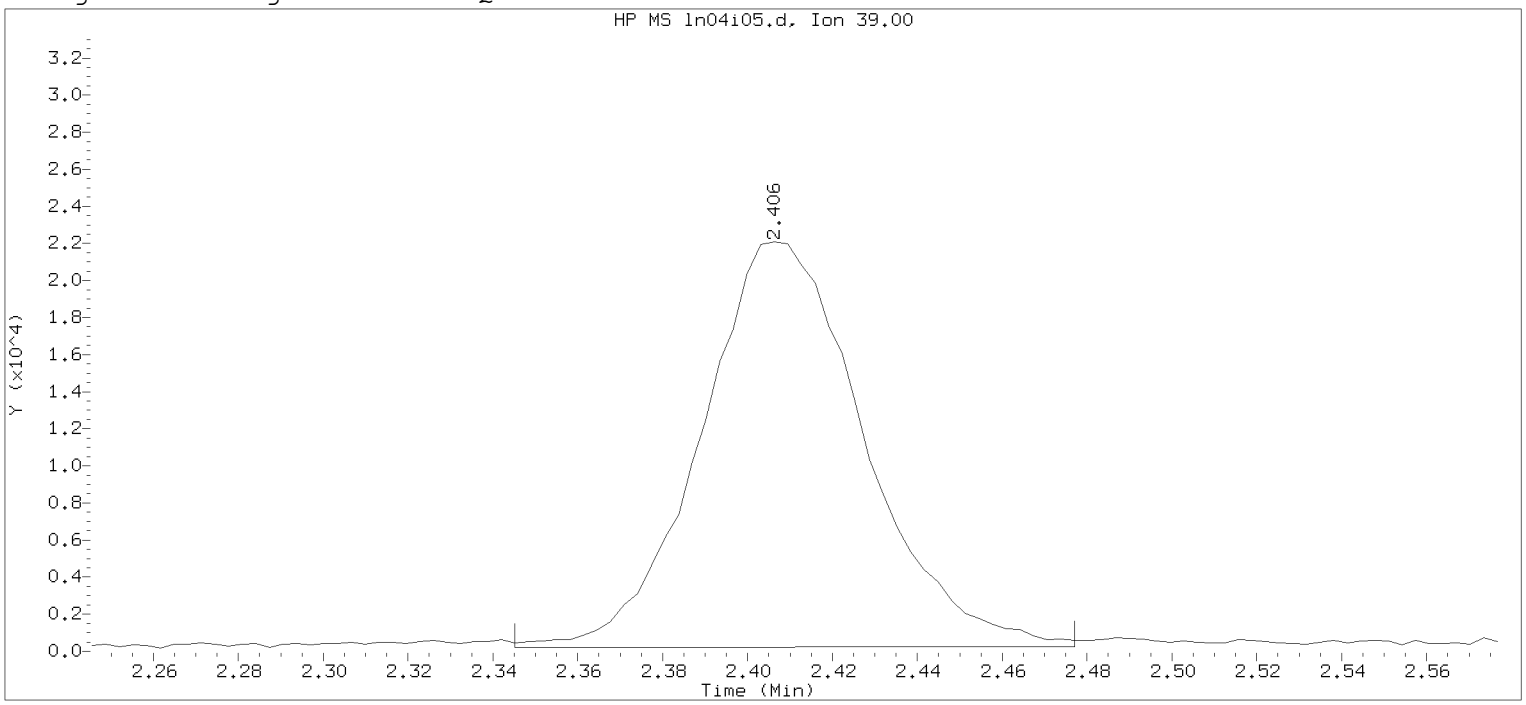
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 58240
On-column Amount (ng) : 9.5707
Integration start scan : 267 Integration stop scan: 308
Y at integration start : 206 Y at integration end: 250

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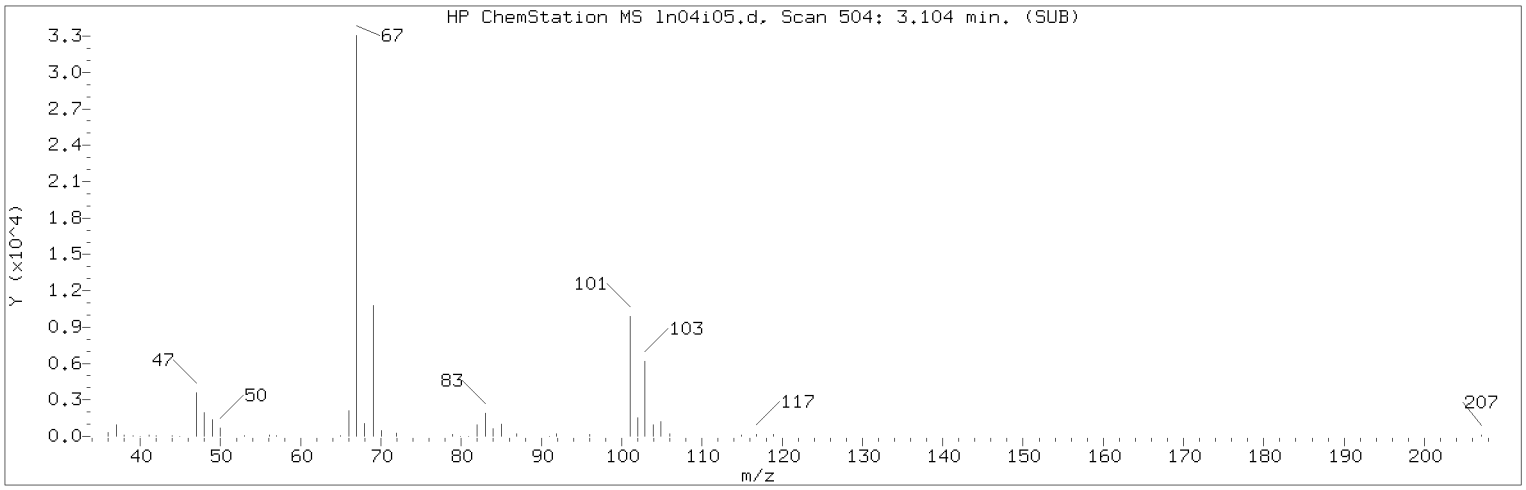
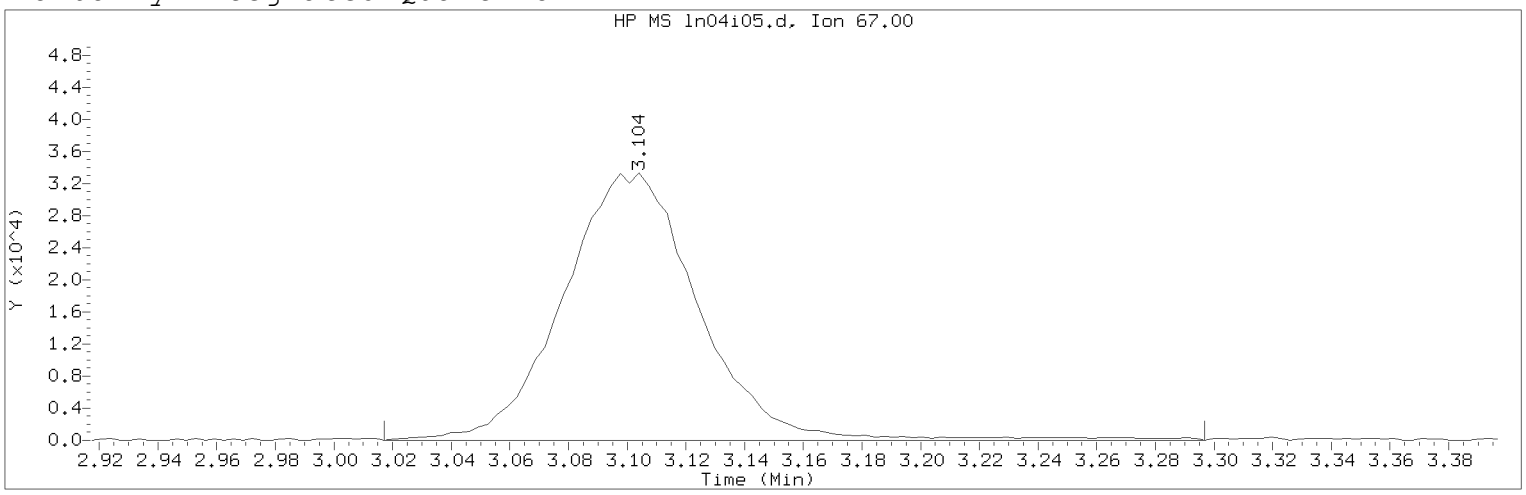
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

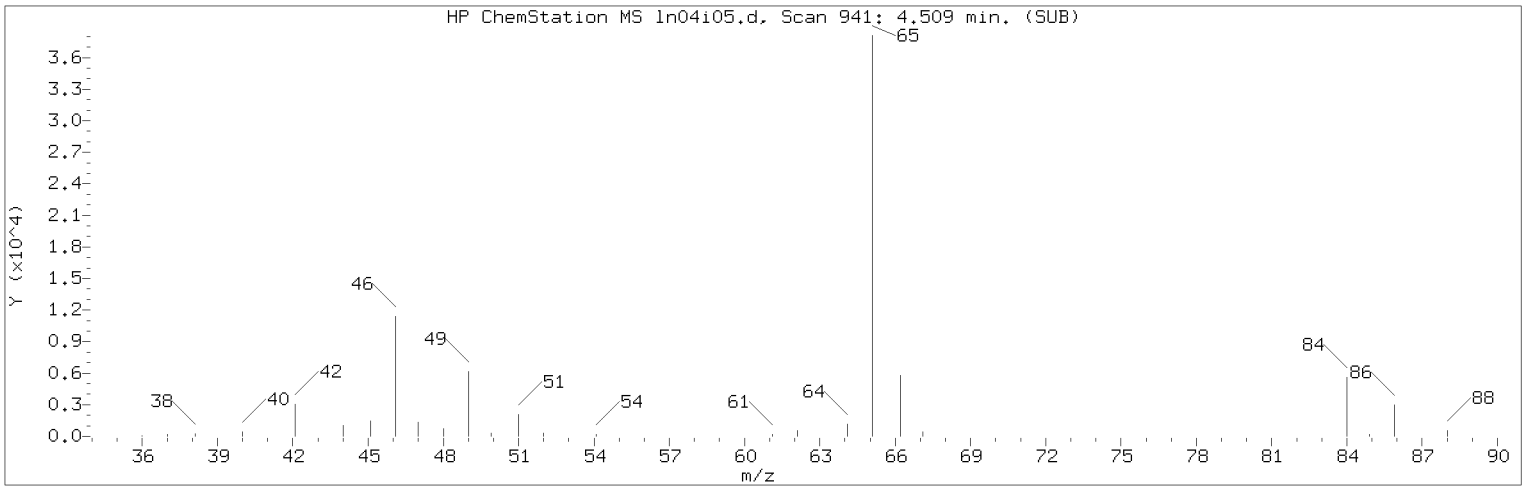
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 504
Retention Time (minutes): 3.104
Quant Ion : 67.00
Area (flag) : 106956M
On-Column Amount (ng) : 10.4593
Integration start scan : 476 Integration stop scan: 563
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

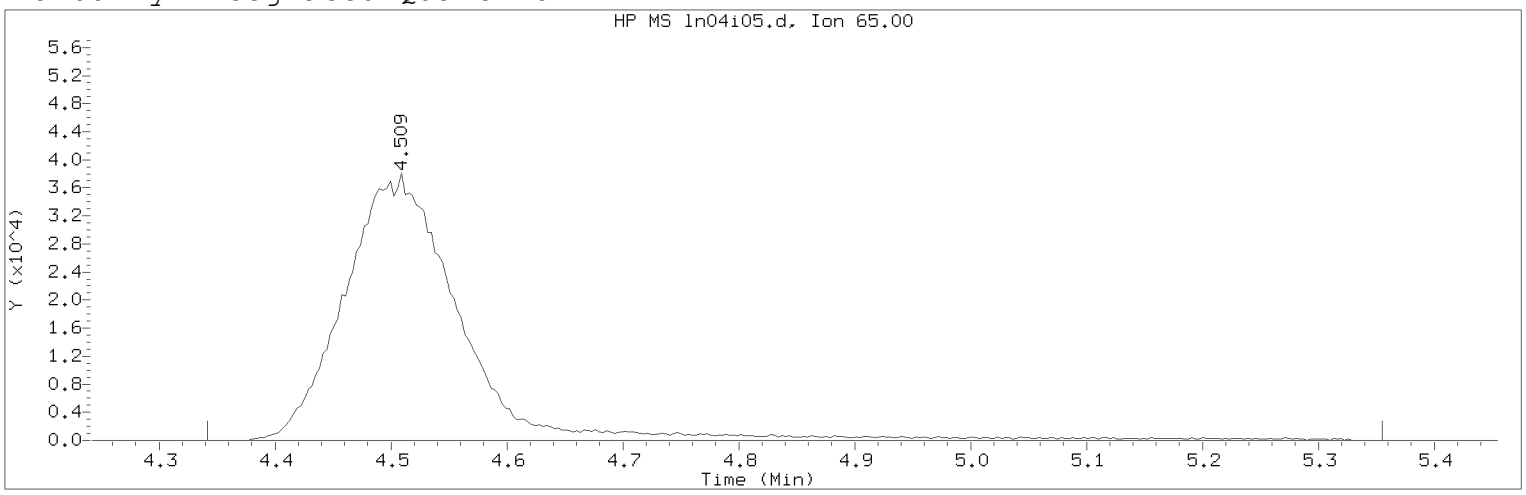
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

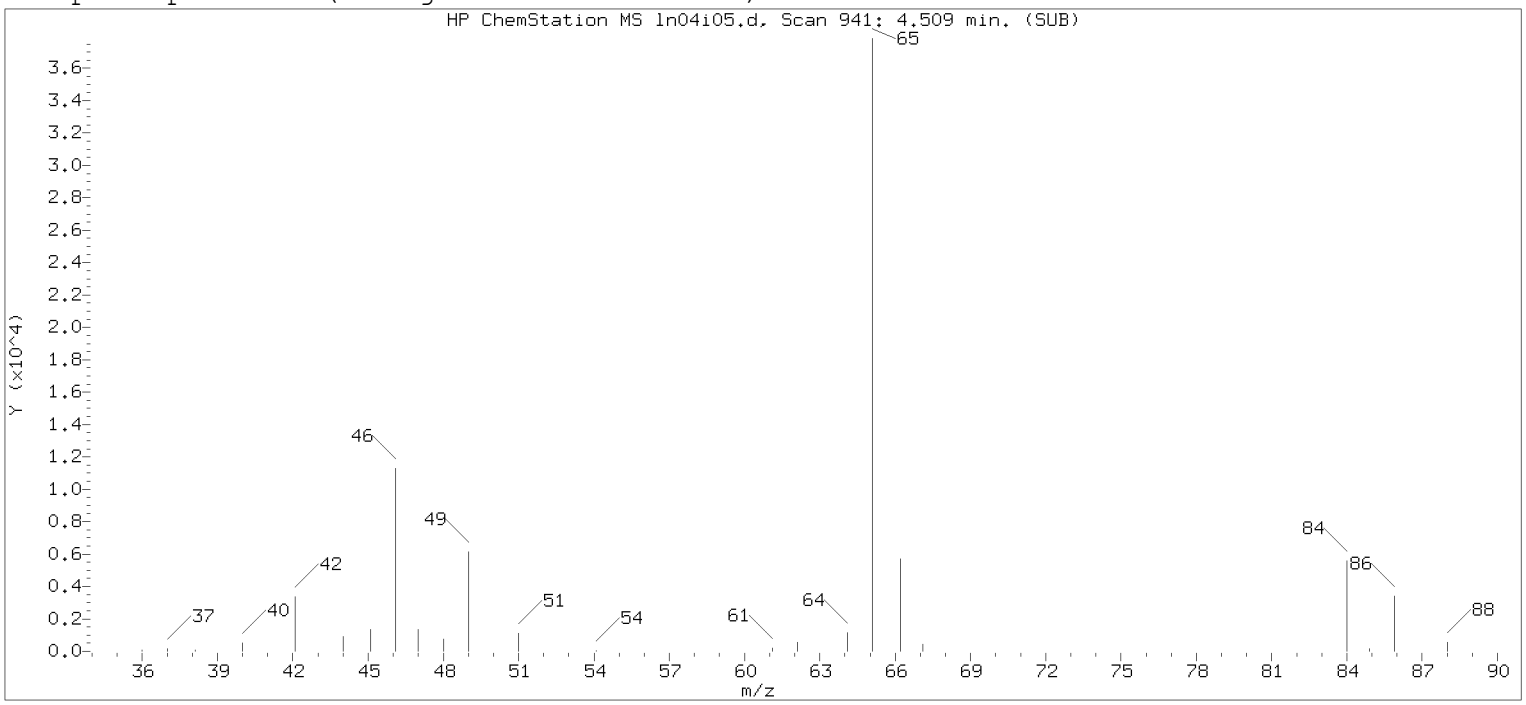
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 263427M
On-Column Amount (ng) : 250.0000
Integration start scan : 888 Integration stop scan: 1203
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

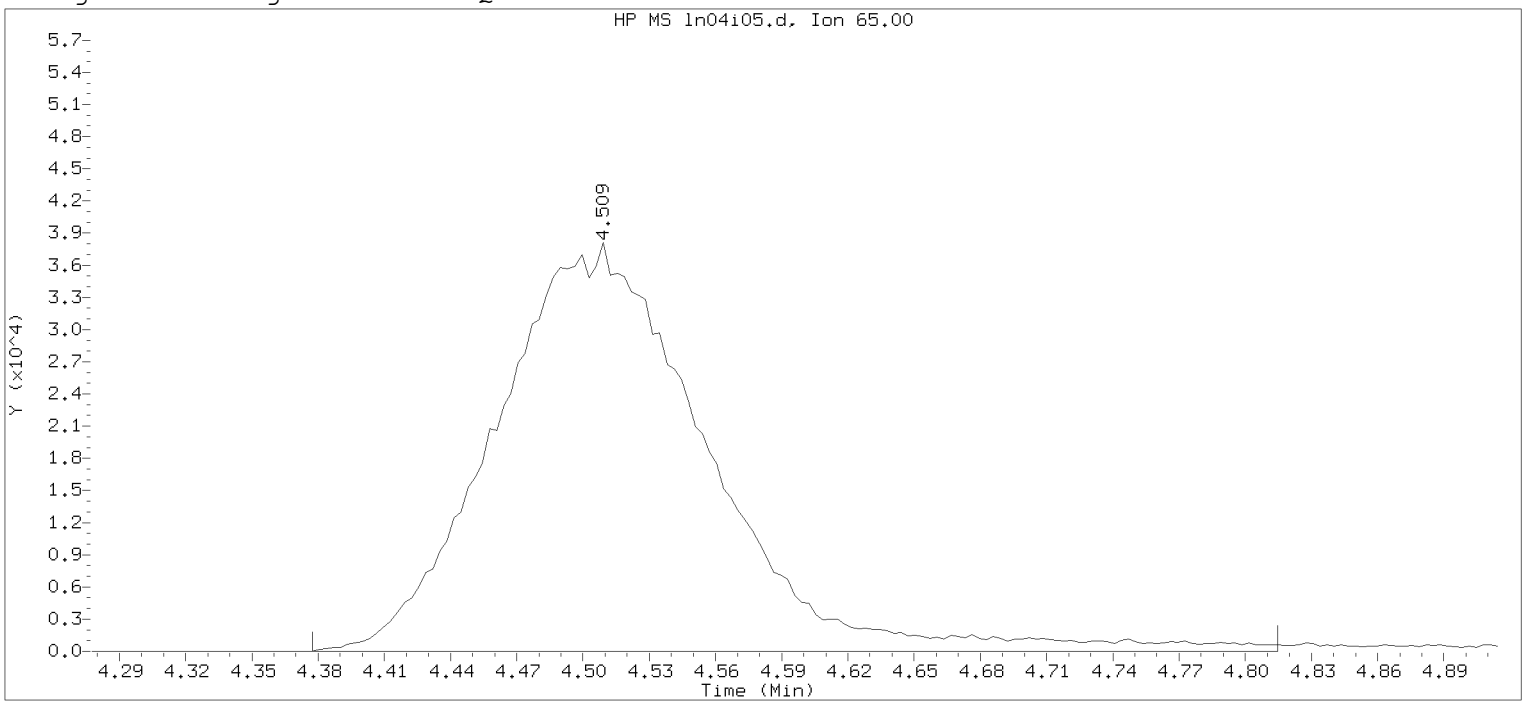
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

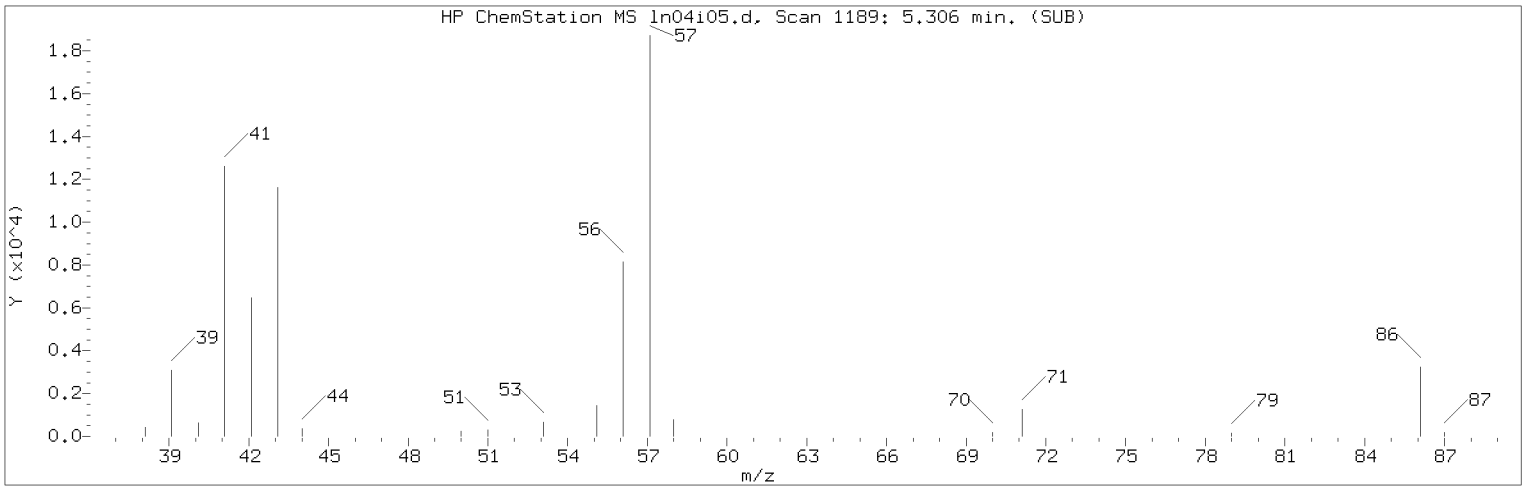
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

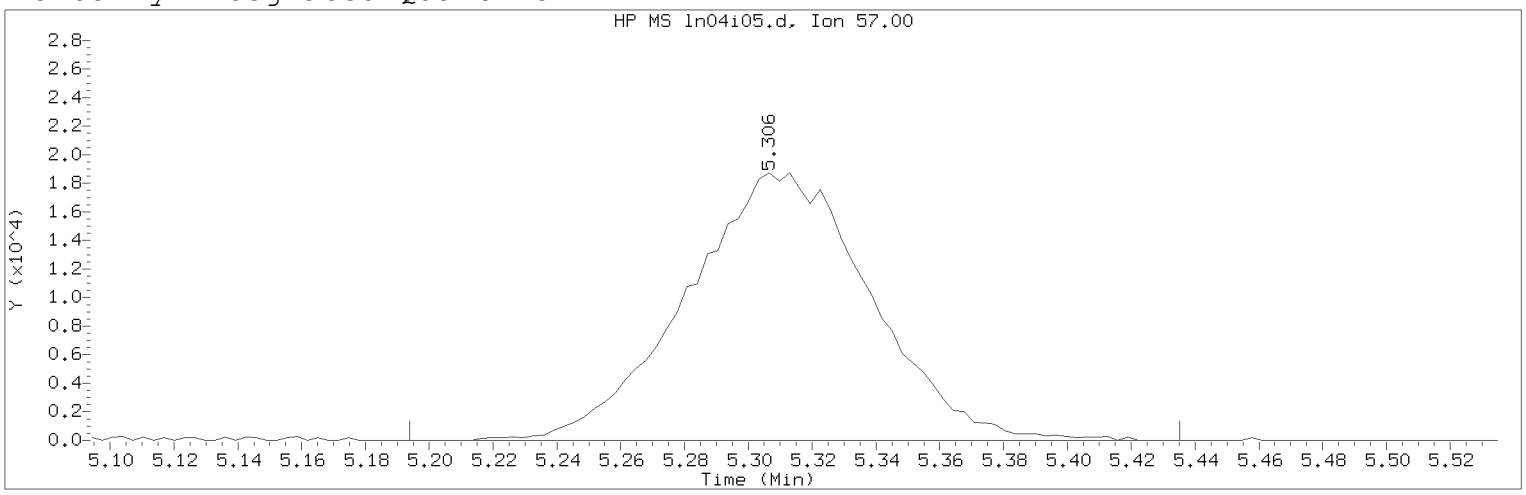
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 253092
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1035
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

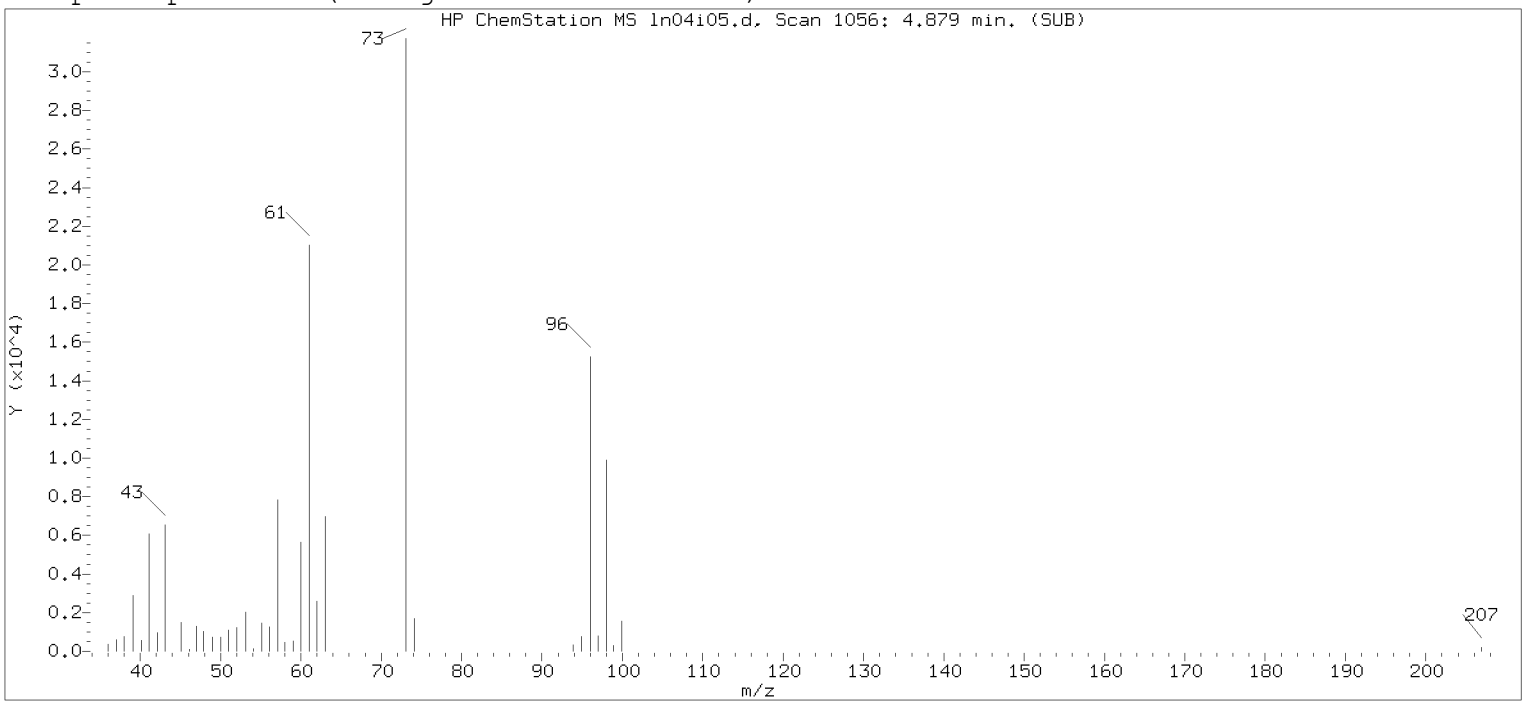
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1189
Retention Time (minutes): 5.306
Quant Ion : 57.00
Area (flag) : 75187M
On-Column Amount (ng) : 8.5083
Integration start scan : 1153 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

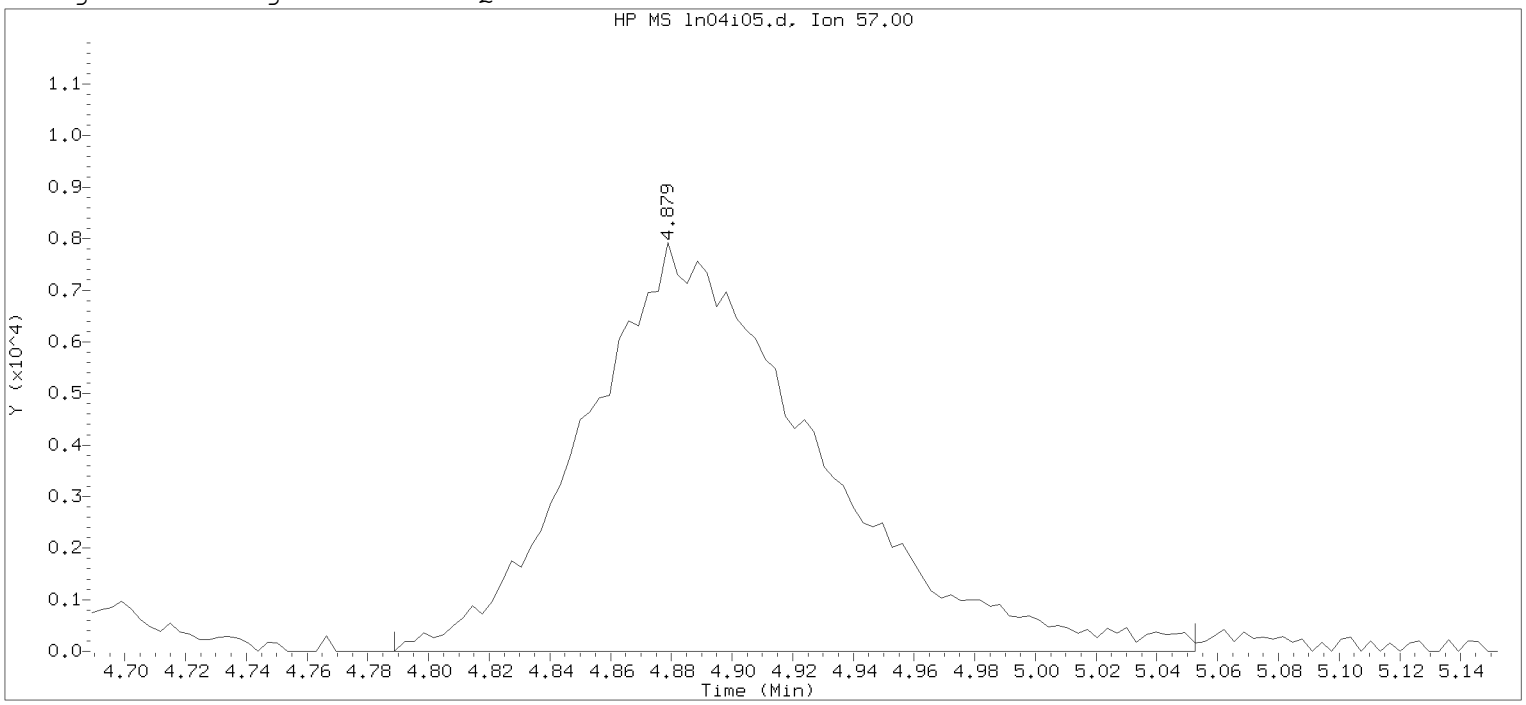
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

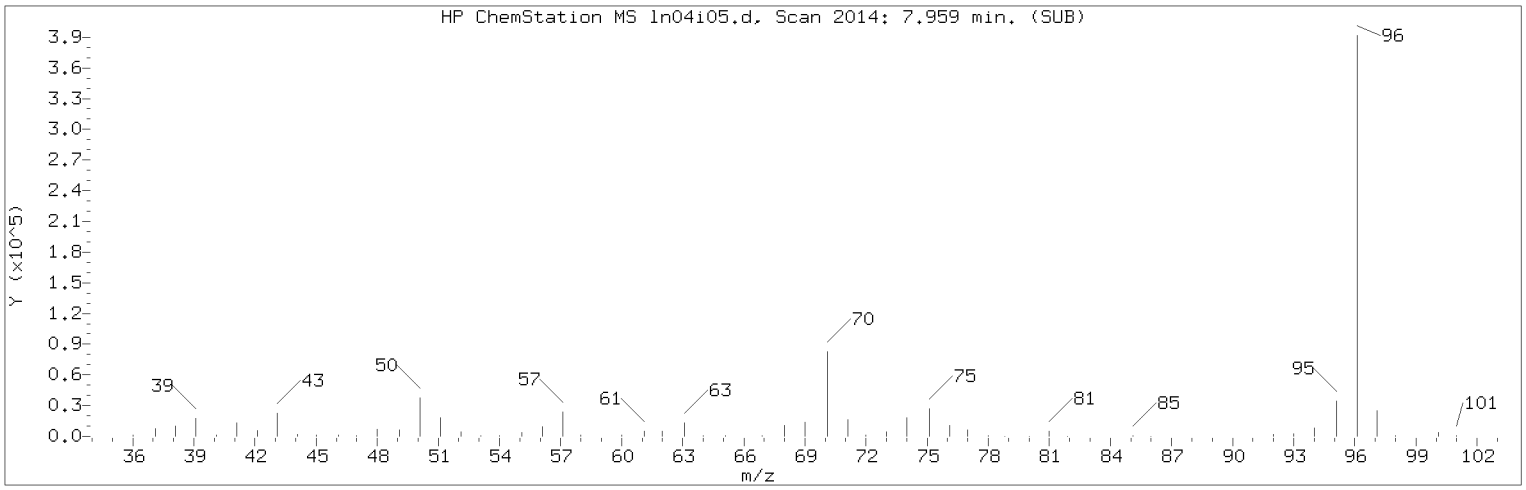
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

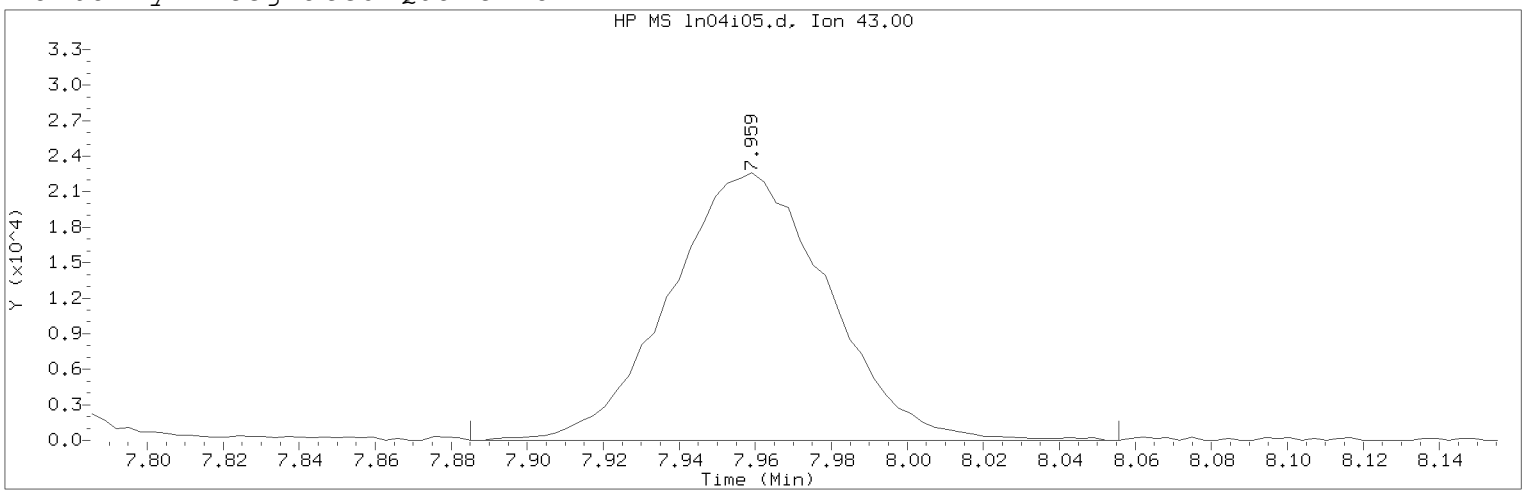
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1056
Retention Time (minutes): 4.879
Quant Ion : 57.00
Area : 42116
On-column Amount (ng) : 11.5193
Integration start scan : 1027 Integration stop scan: 1109
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

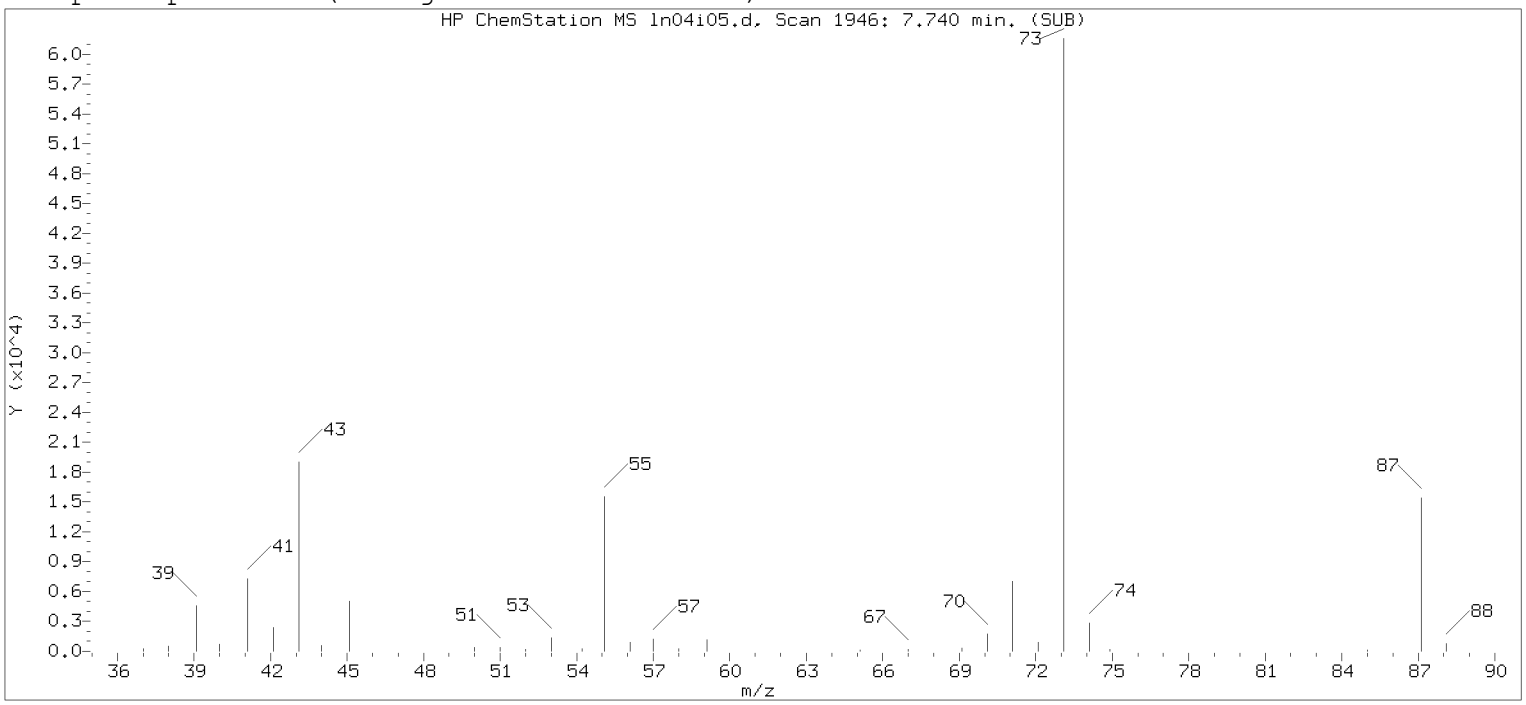
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2014
Retention Time (minutes): 7.959
Quant Ion : 43.00
Area (flag) : 65347MA
On-Column Amount (ng) : 7.9157
Integration start scan : 1990 Integration stop scan: 2043
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

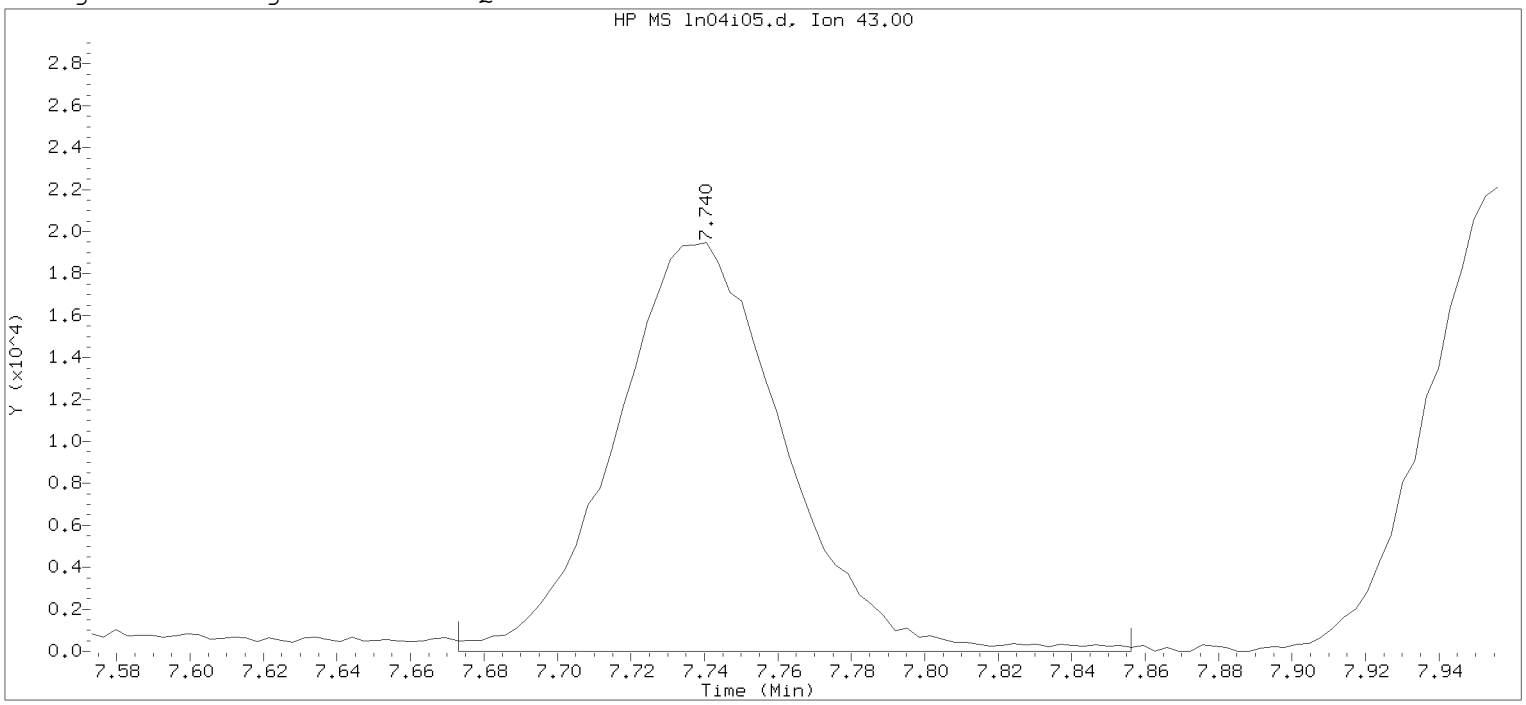
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

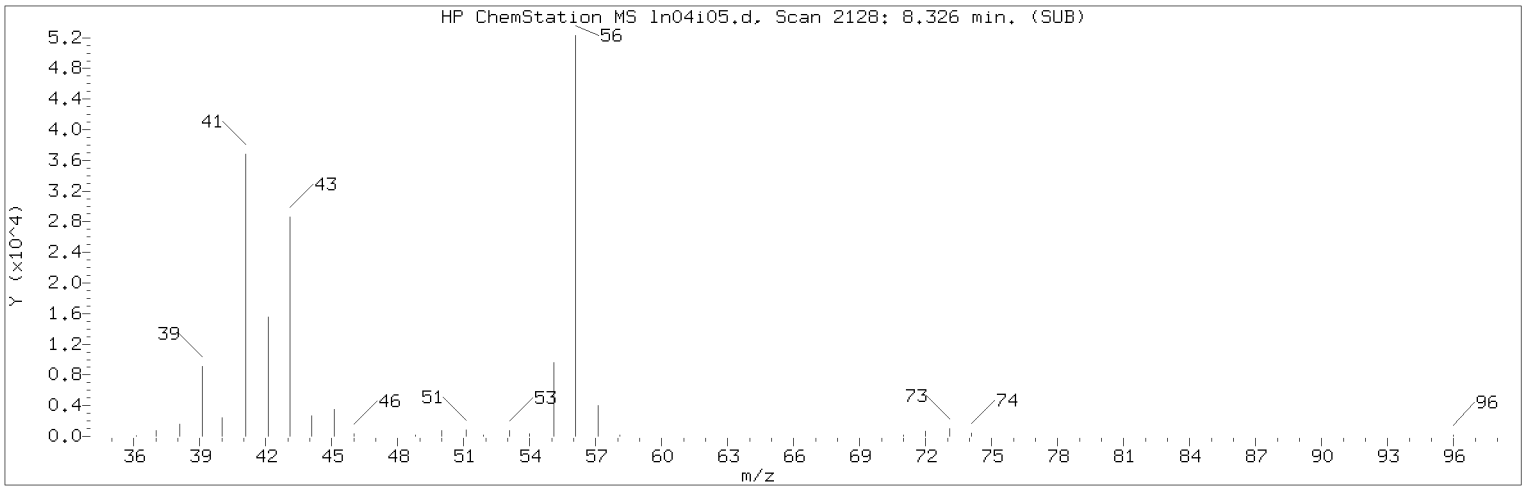
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

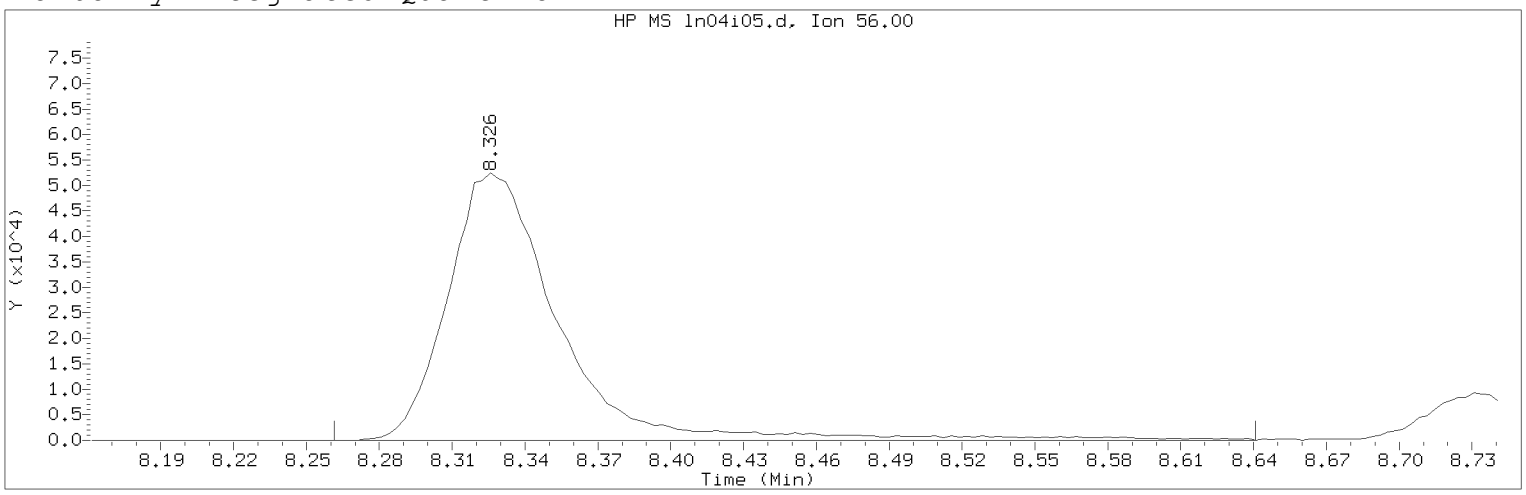
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.740
Quant Ion : 43.00
Area : 62104
On-column Amount (ng) : 10.1613
Integration start scan : 1924 Integration stop scan: 1981
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

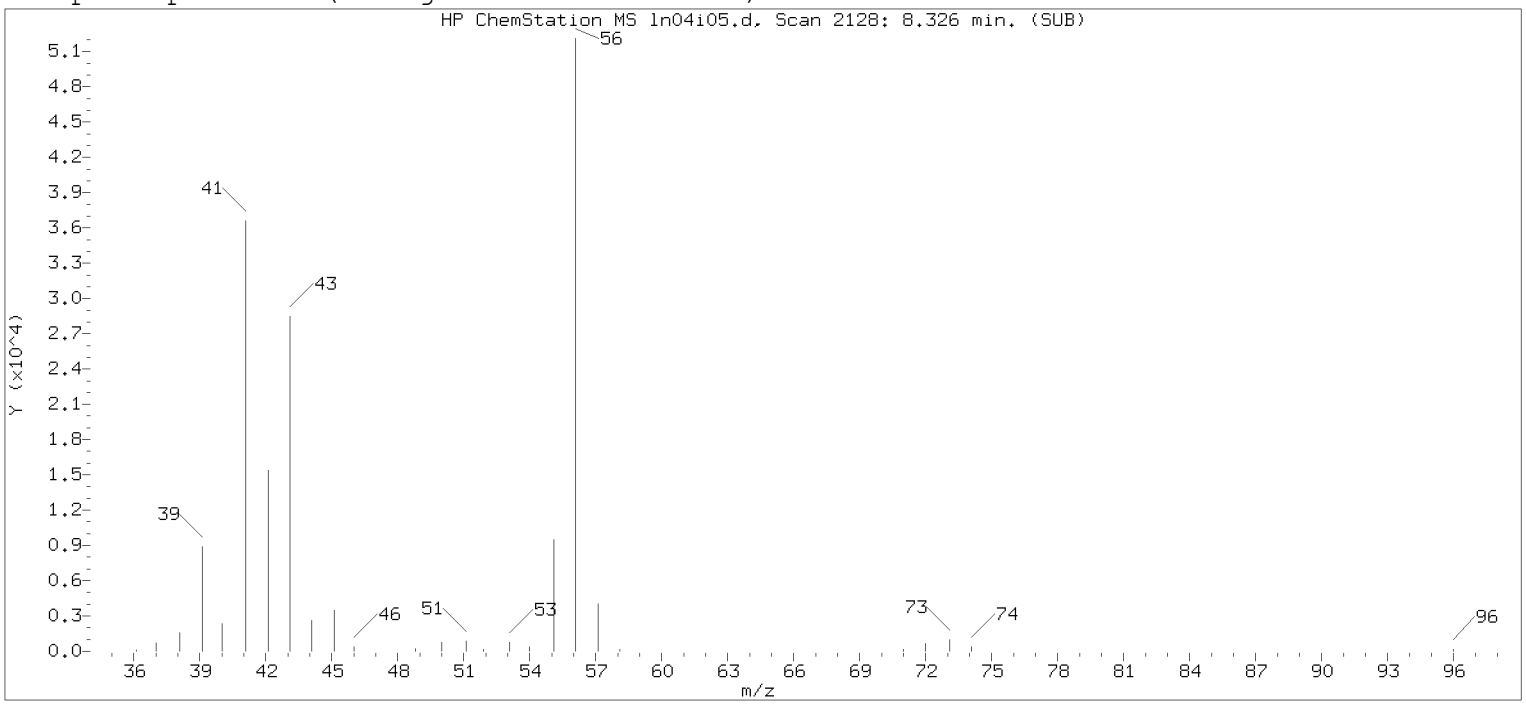
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area (flag) : 166674M
On-Column Amount (ng) : 518.8682
Integration start scan : 2107 Integration stop scan: 2225
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

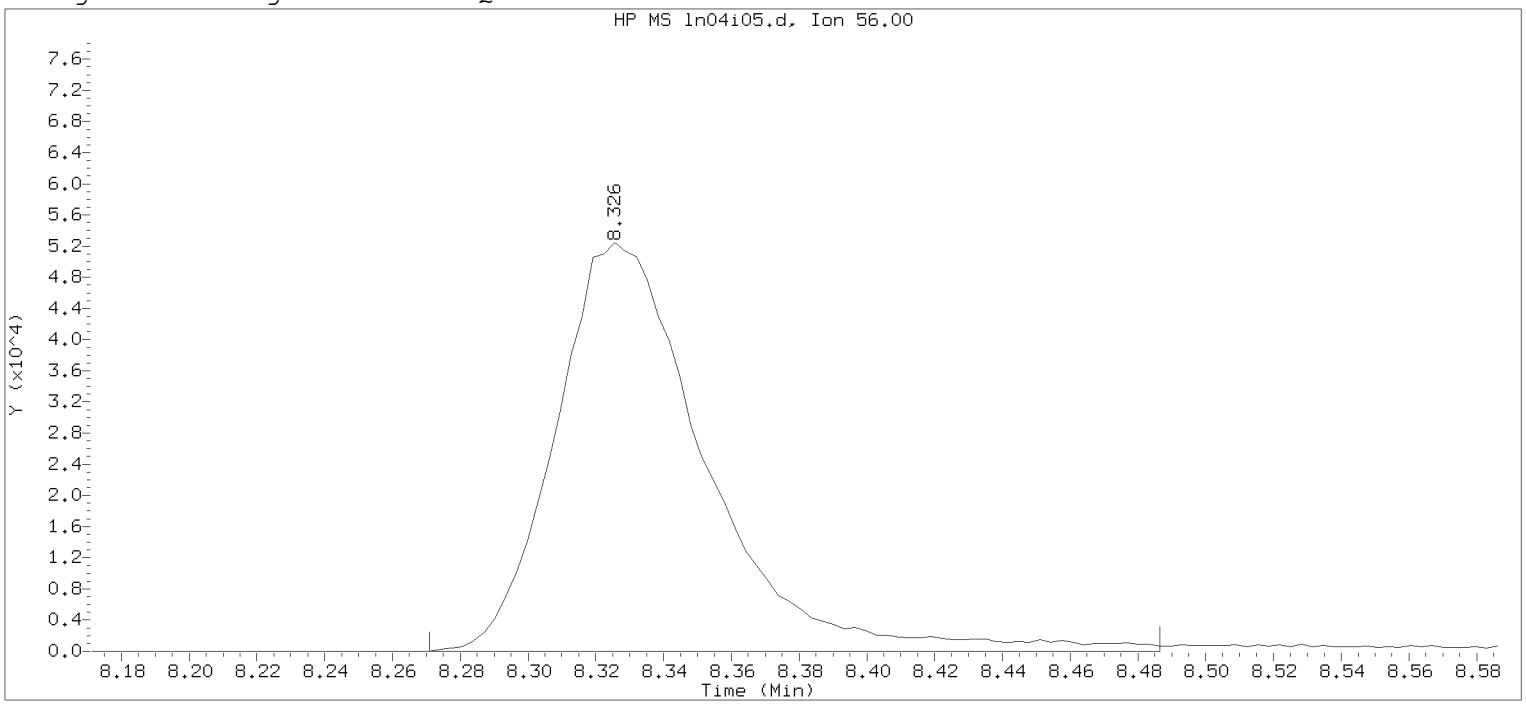
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

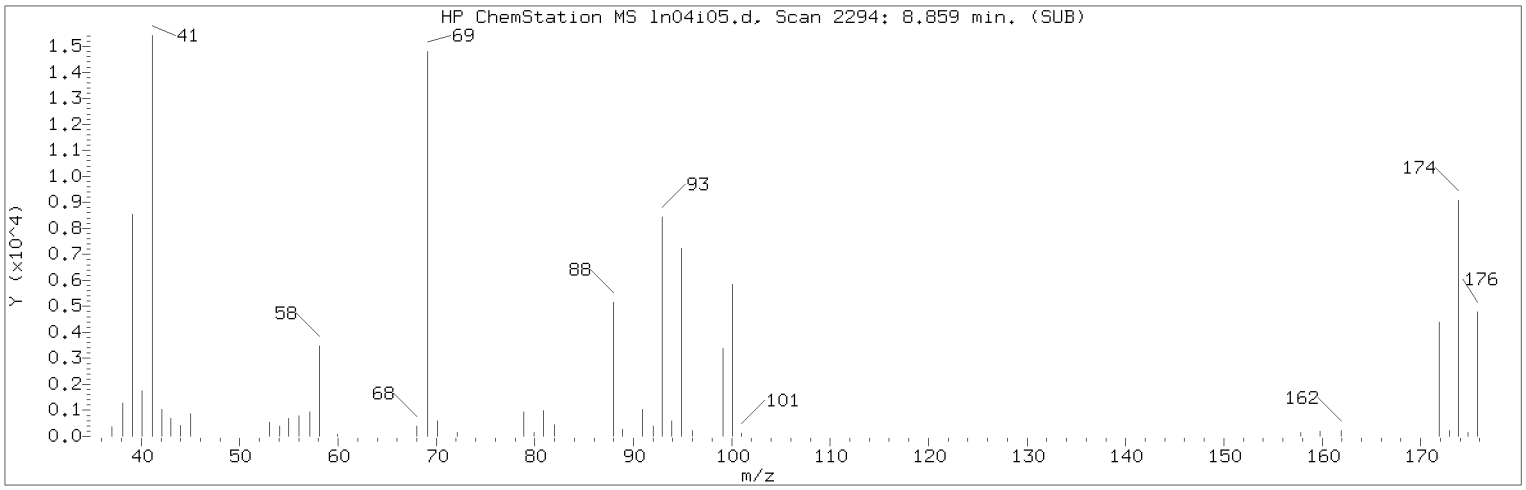
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

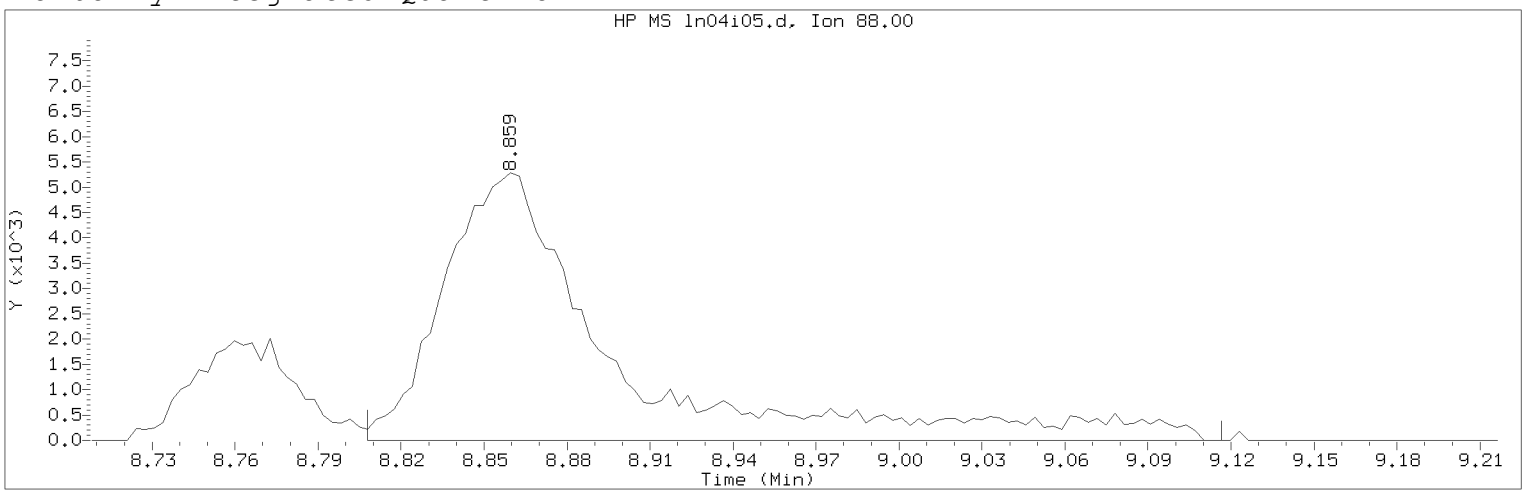
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area : 161642
On-column Amount (ng) : 524.2963
Integration start scan : 2110 Integration stop scan: 2177
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

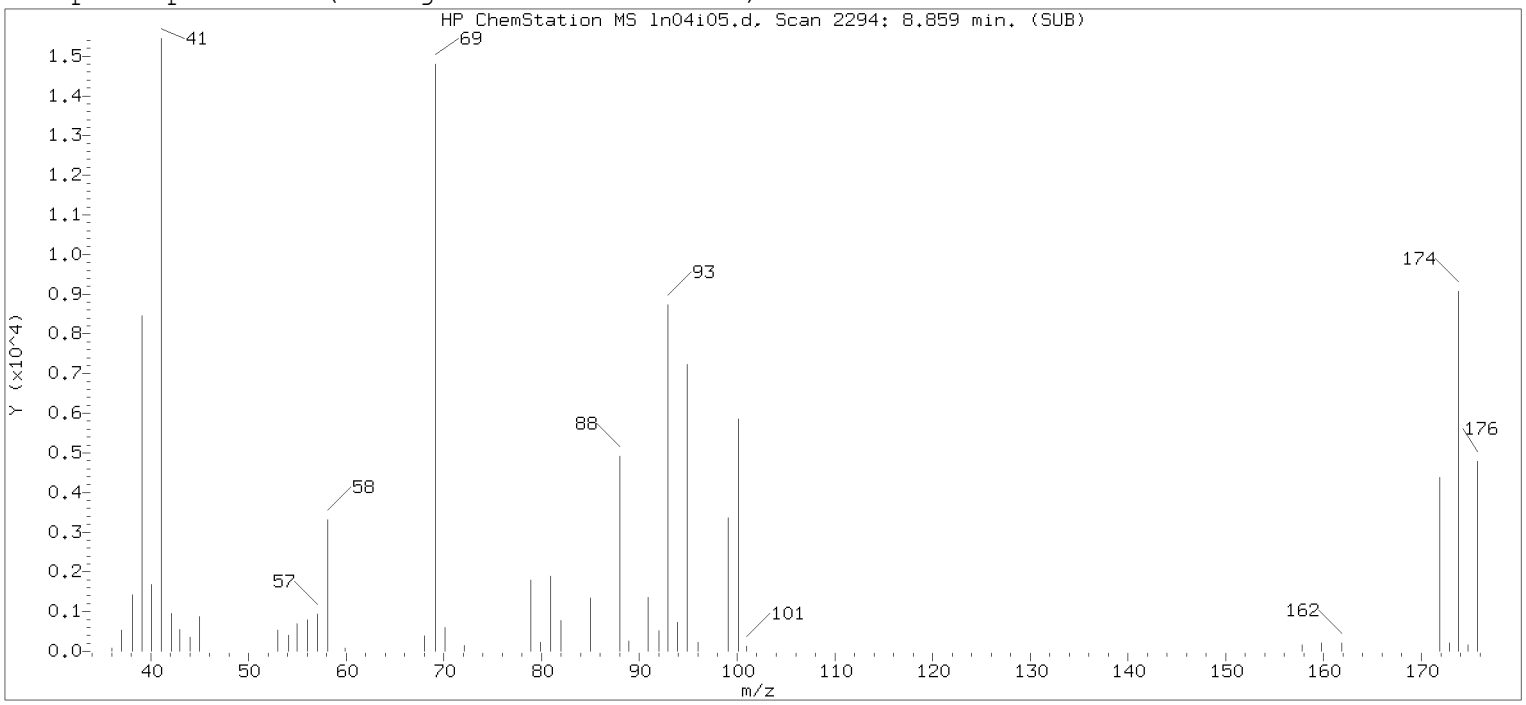
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2294
Retention Time (minutes): 8.859
Quant Ion : 88.00
Area (flag) : 22251M
On-Column Amount (ng) : 252.0176
Integration start scan : 2277 Integration stop scan: 2373
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

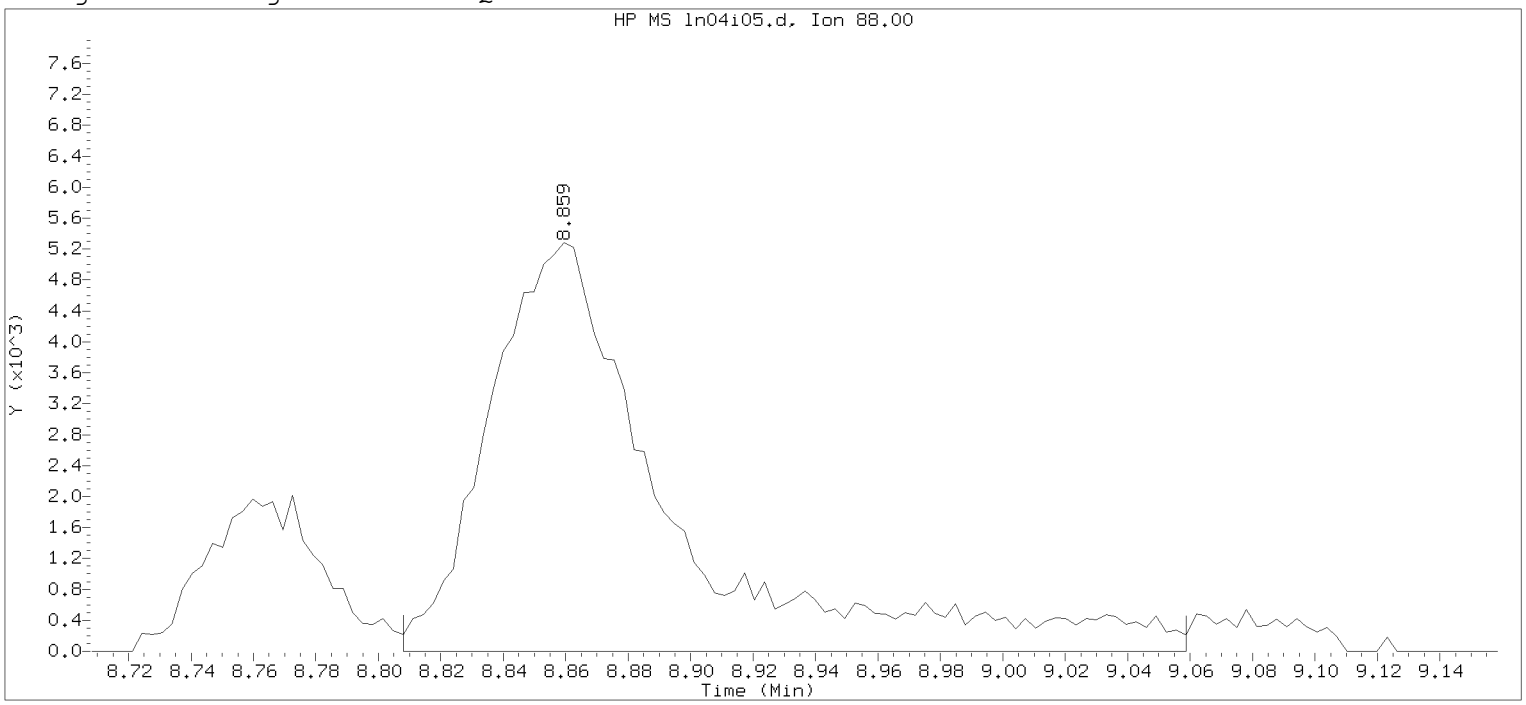
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

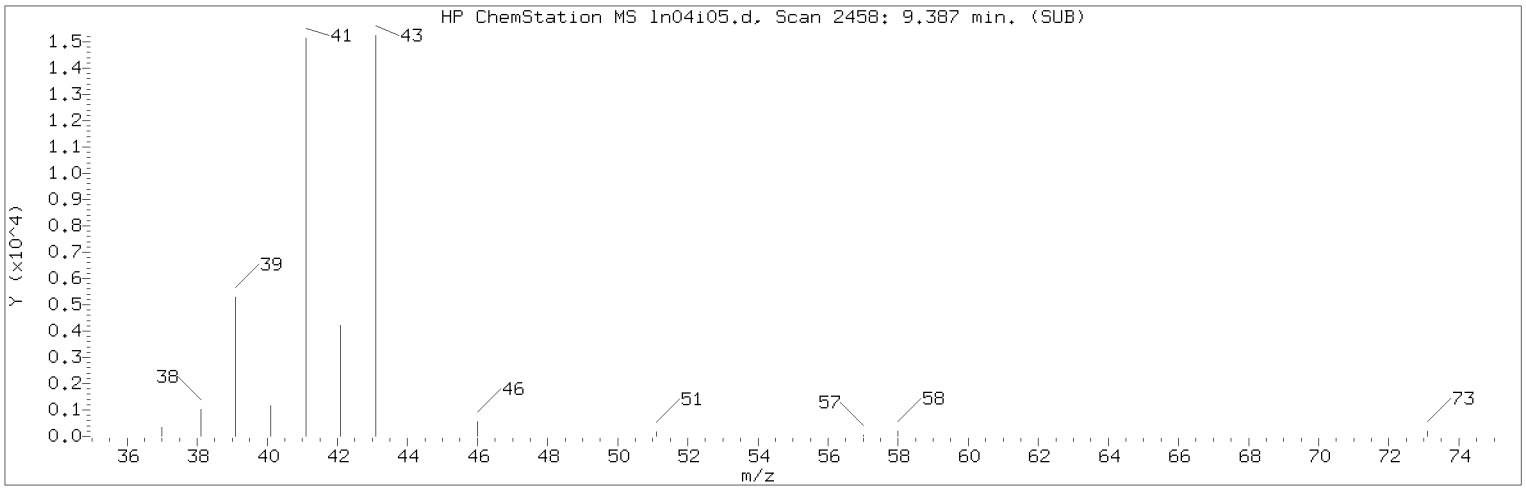
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

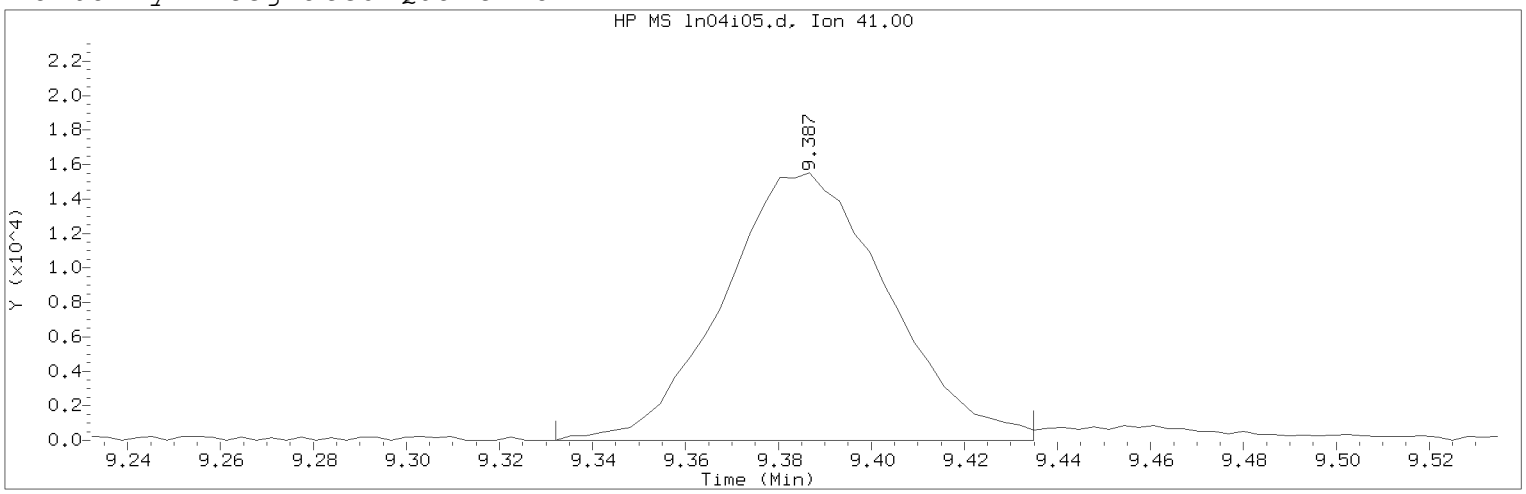
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2294
Retention Time (minutes): 8.859
Quant Ion : 88.00
Area : 21165
On-column Amount (ng) : 248.6410
Integration start scan : 2277 Integration stop scan: 2355
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

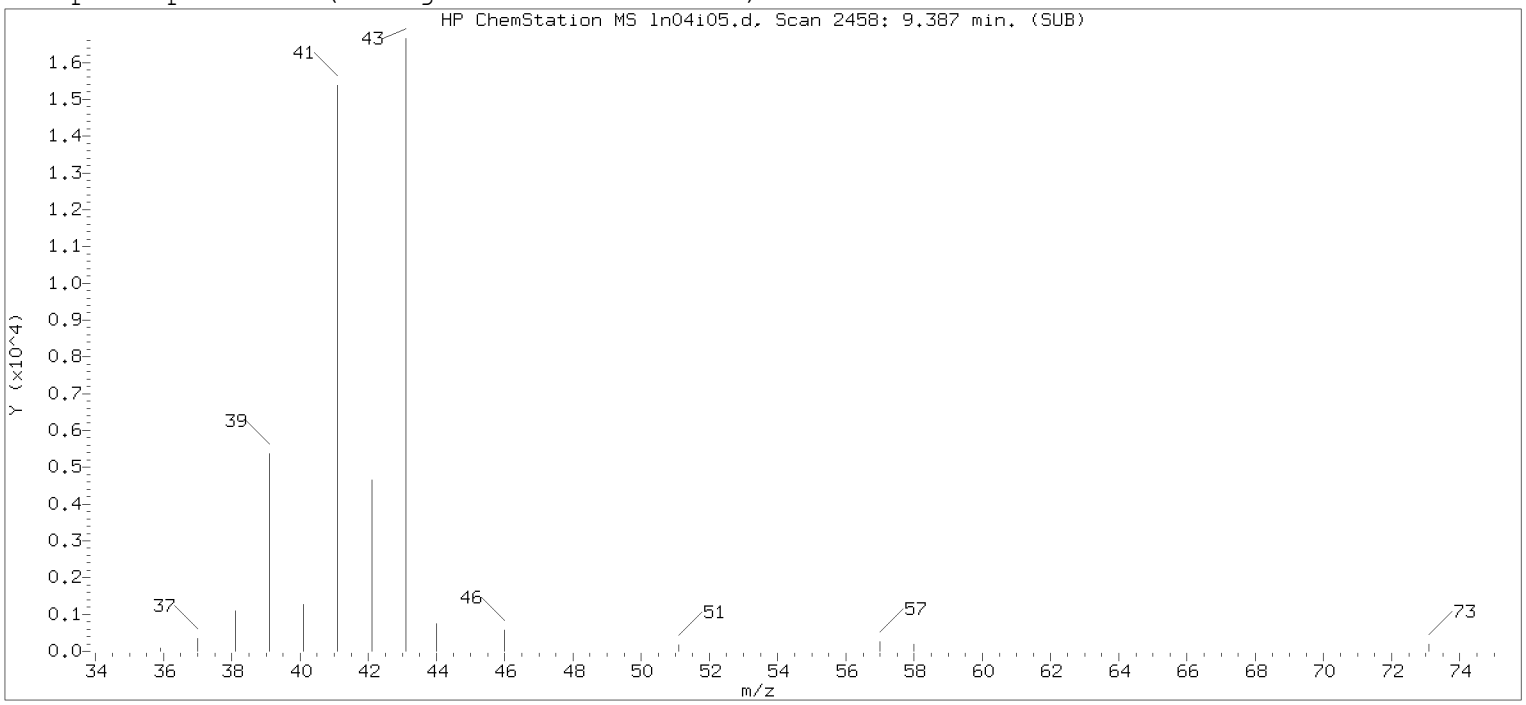
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2458
Retention Time (minutes): 9.387
Quant Ion : 41.00
Area (flag) : 38245M
On-Column Amount (ng) : 18.1785
Integration start scan : 2440 Integration stop scan: 2472
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

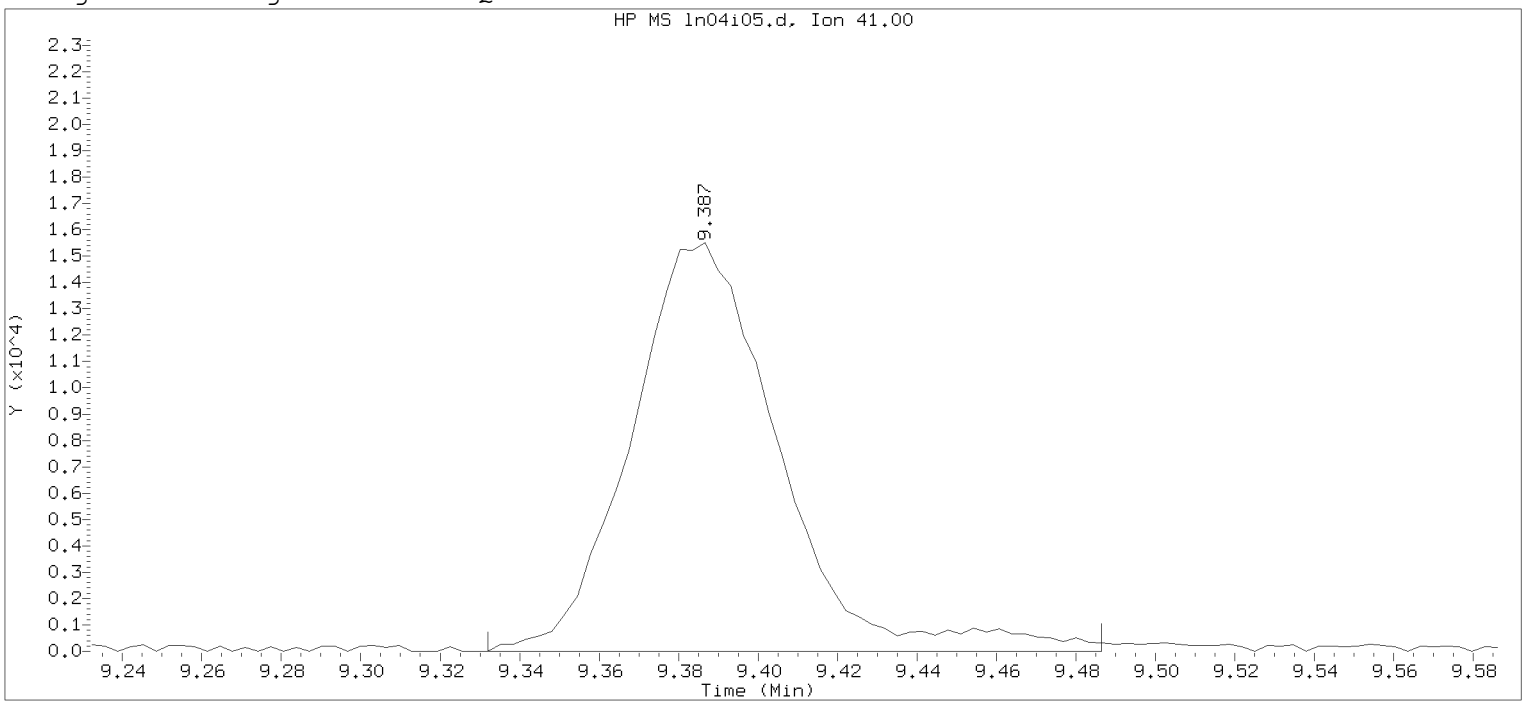
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

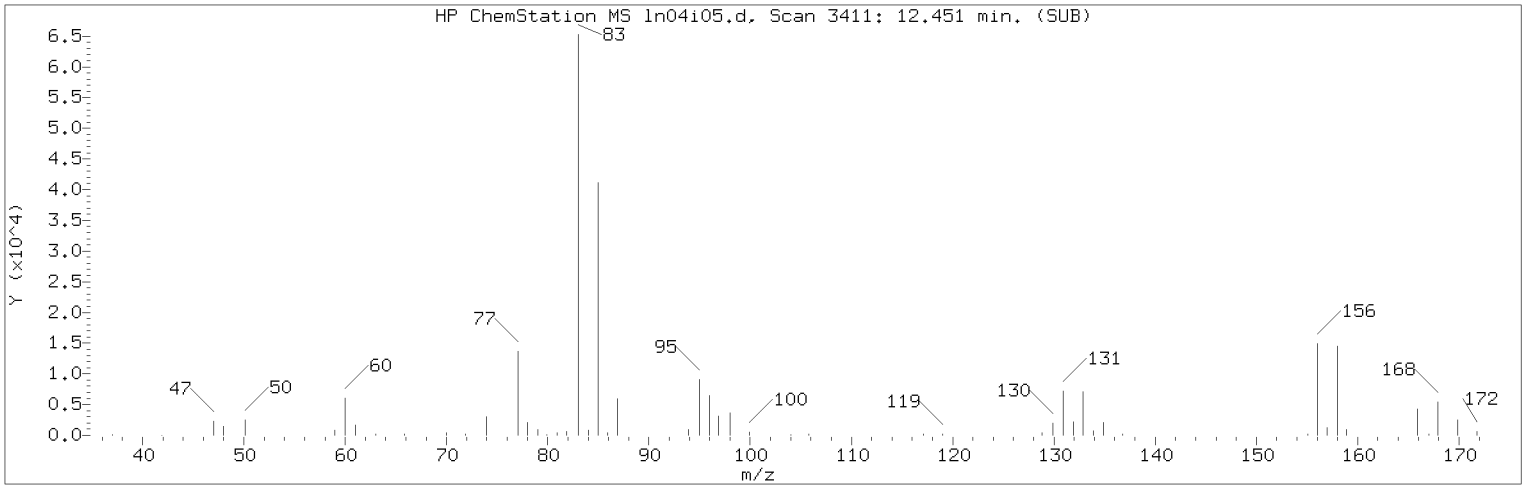
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

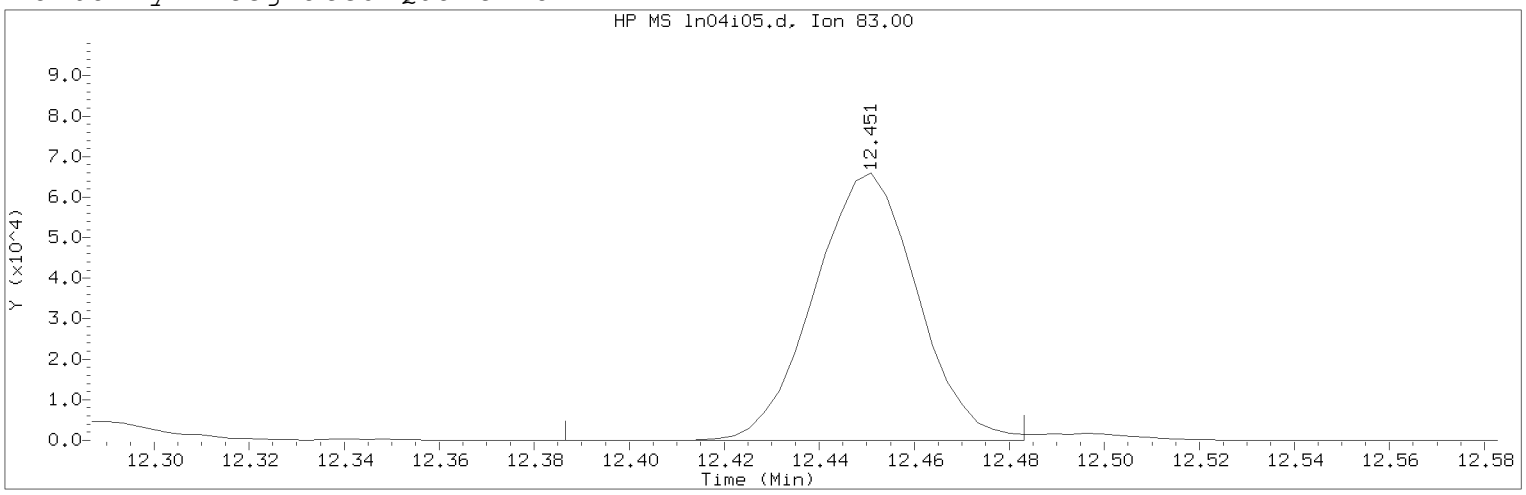
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2458
Retention Time (minutes): 9.387
Quant Ion : 41.00
Area : 40127
On-column Amount (ng) : 18.9522
Integration start scan : 2440 Integration stop scan: 2488
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

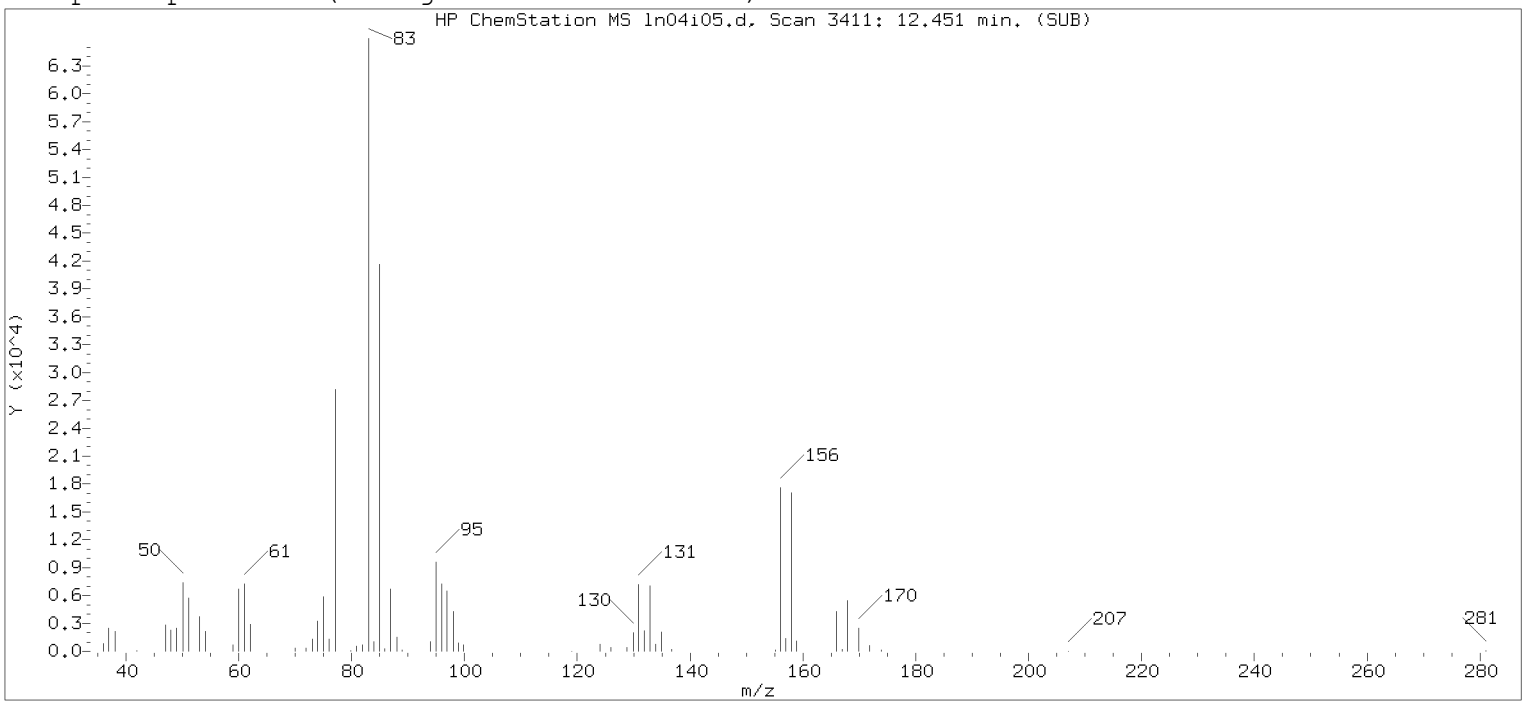
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 99221M
On-Column Amount (ng) : 10.5834
Integration start scan : 3390 Integration stop scan: 3420
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

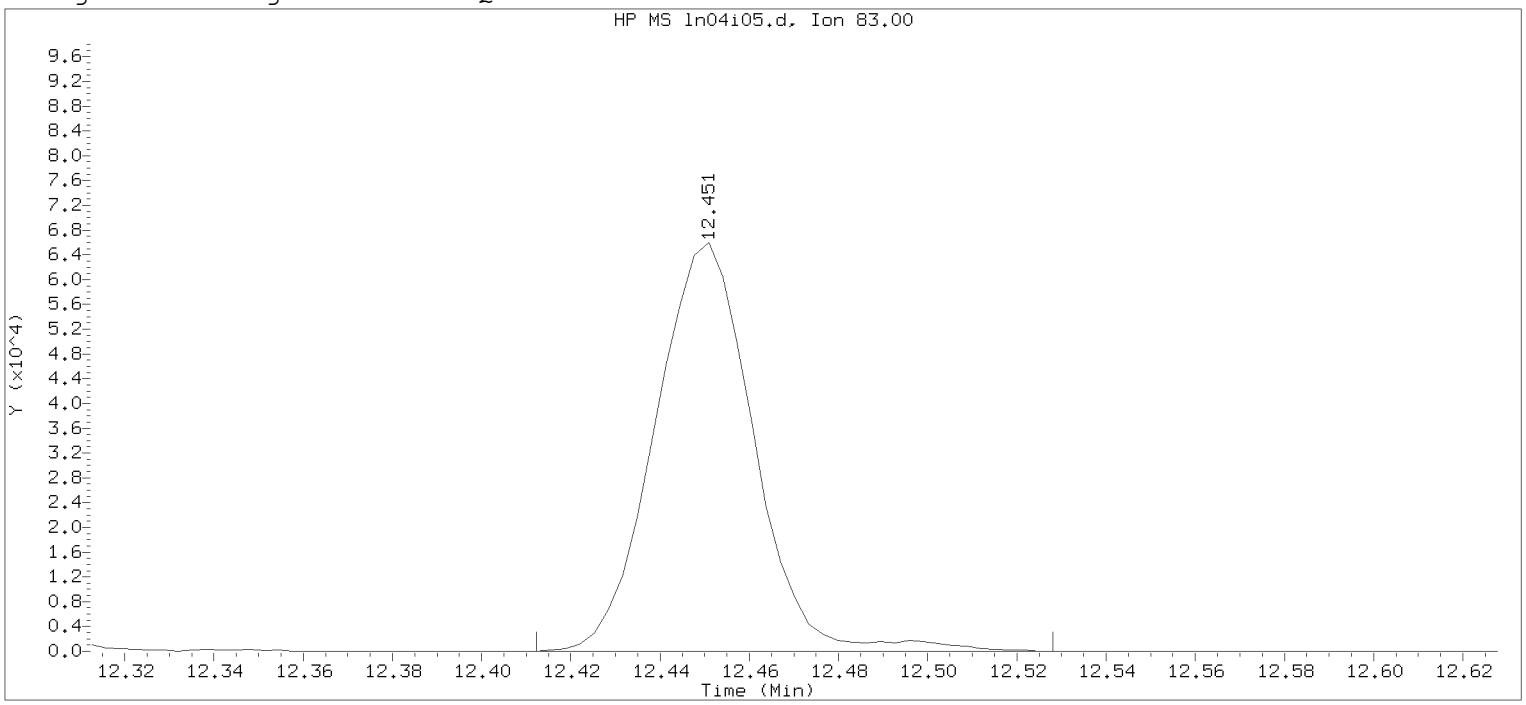
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

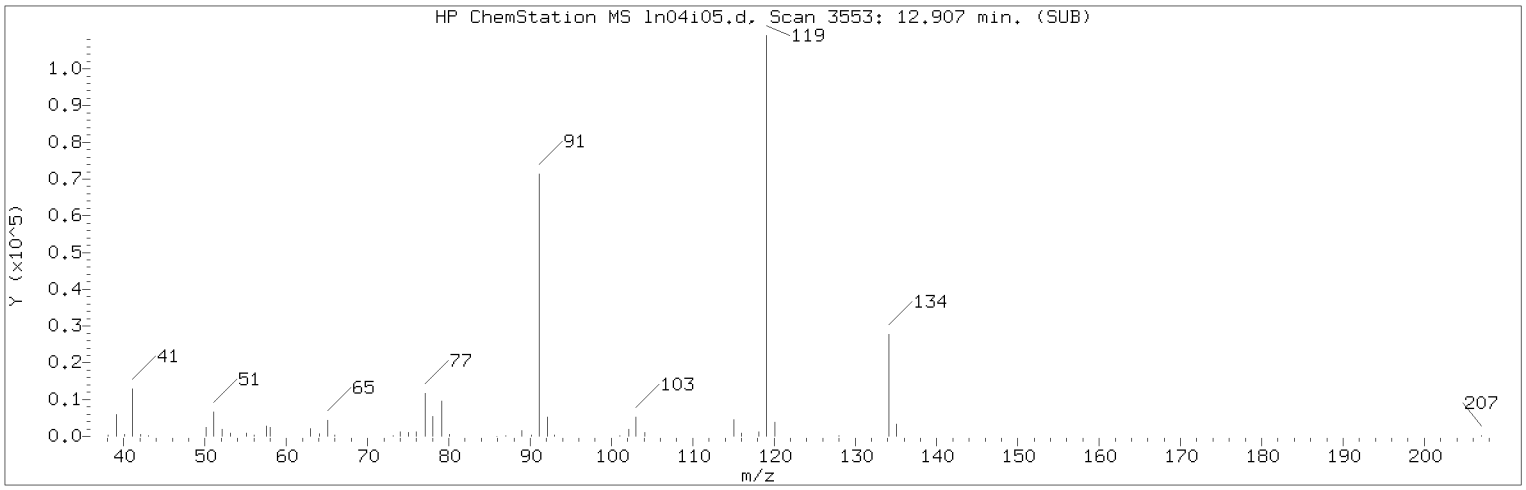
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

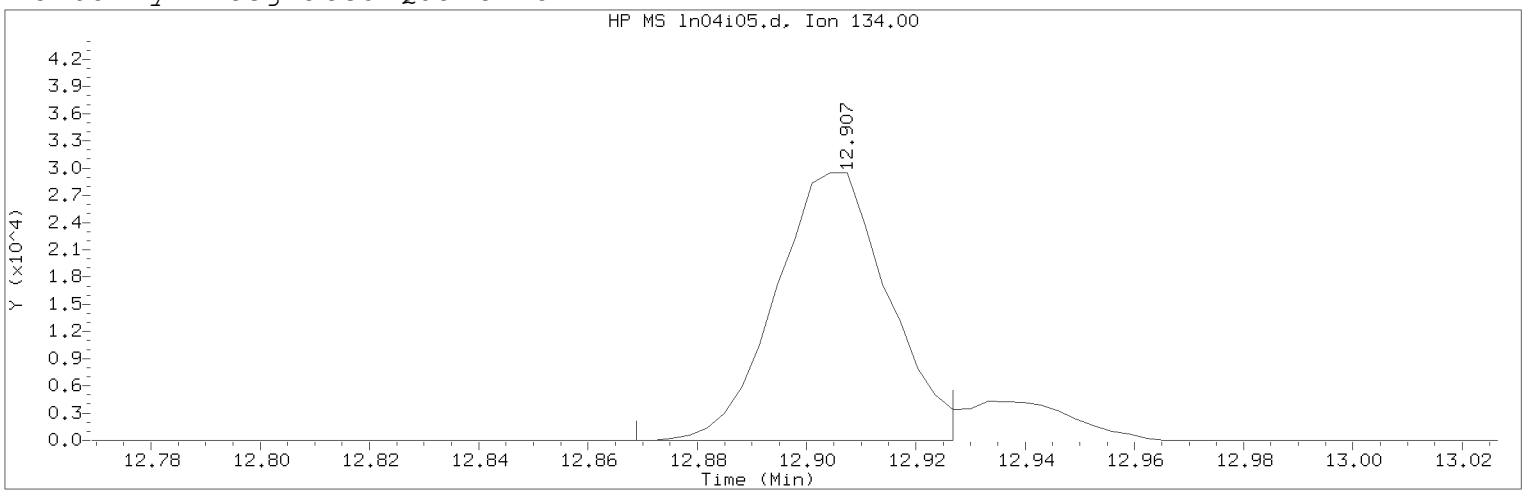
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 101487
On-column Amount (ng) : 10.6325
Integration start scan : 3398 Integration stop scan: 3434
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

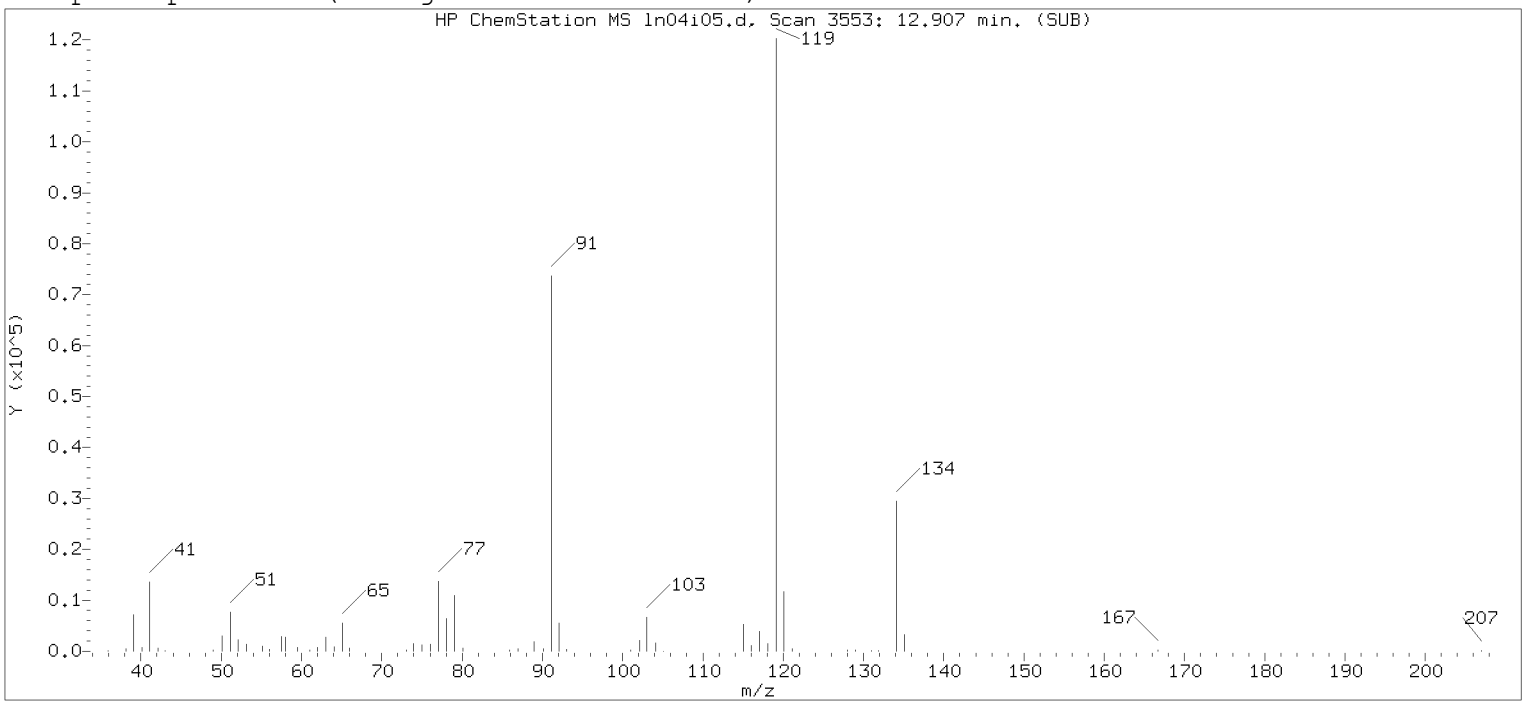
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area (flag) : 42119M
On-Column Amount (ng) : 8.5994
Integration start scan : 3540 Integration stop scan: 3558
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

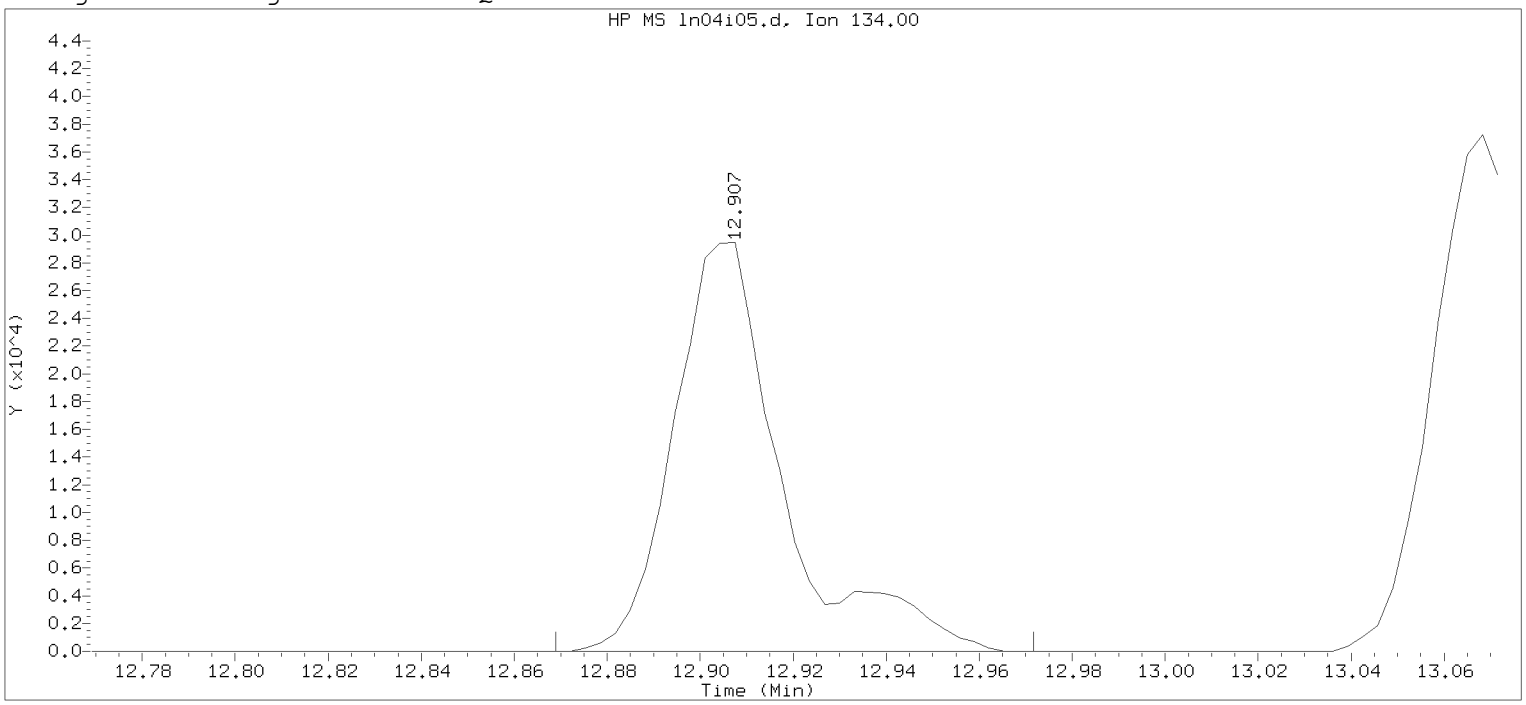
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



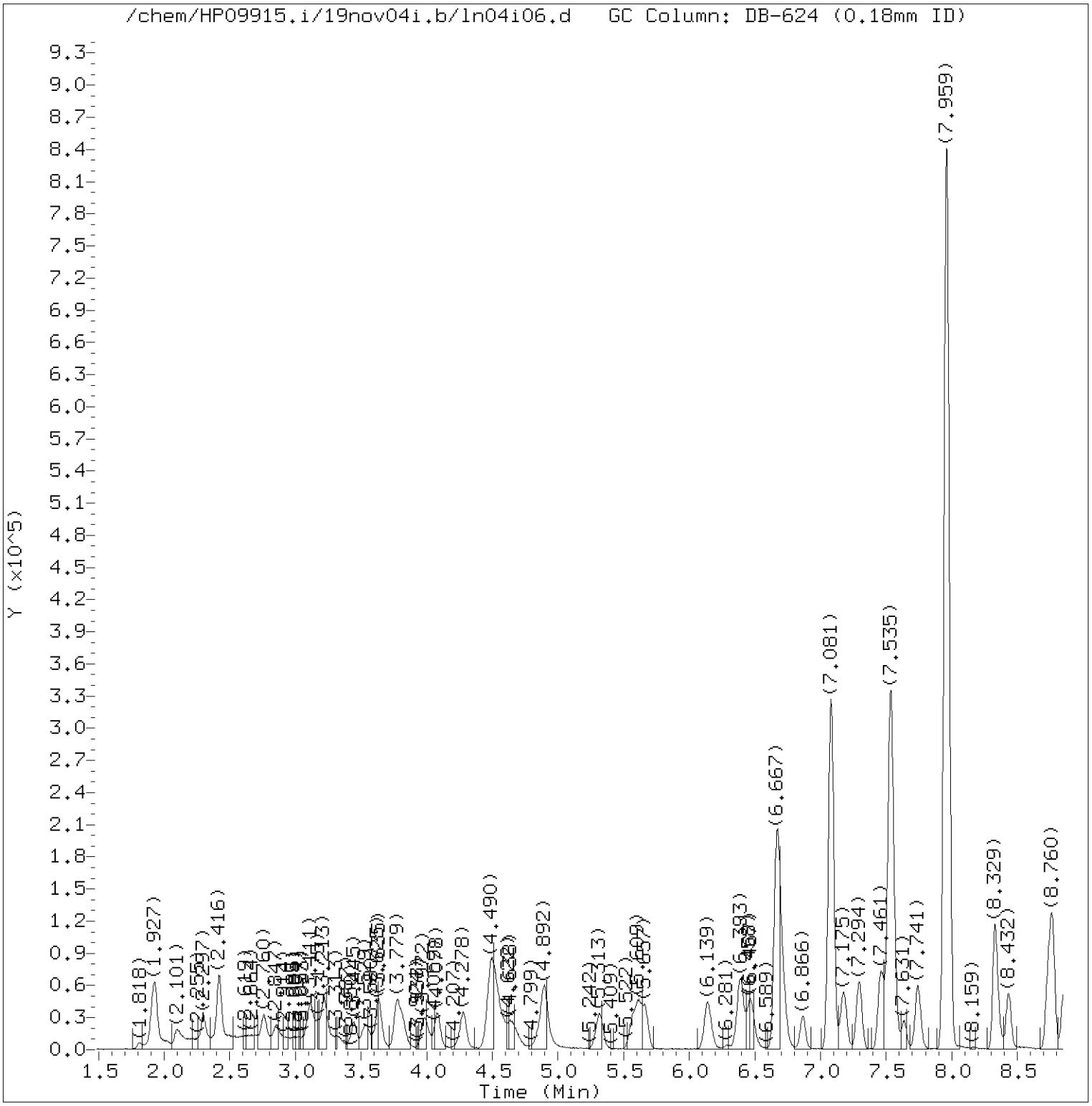
Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area : 47747
On-column Amount (ng) : 9.3569
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

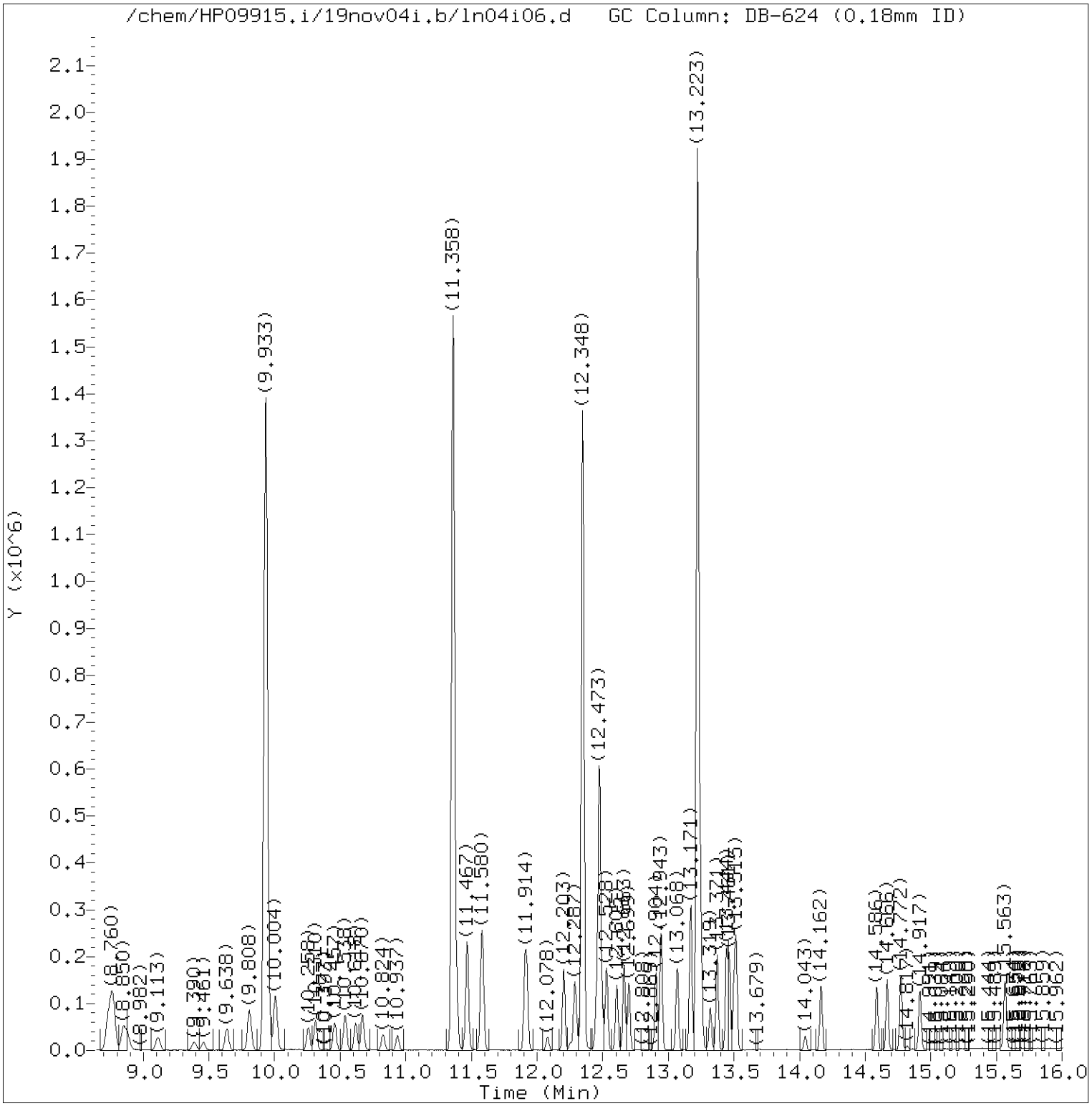
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.098	85	31217M	3.898
4) Chloromethane	(2)	2.297	50	32031	4.150
6) Vinyl Chloride	(2)	2.416	62	30864	4.006
5) 1,3-Butadiene	(2)	2.419	39	27249M	4.252
8) Bromomethane	(2)	2.760	94	23202	4.202
9) Chloroethane	(2)	2.860	64	17298	4.086
10) Dichlorofluoromethane	(2)	3.107	67	40740M	4.015
12) Trichlorofluoromethane	(2)	3.168	101	33532	4.043
11) n-Pentane	(2)	3.223	43	42826M	4.369
14) Ethyl ether	(2)	3.445	59	21059	3.929
15) Freon 123a	(2)	3.538	67	27312	4.094
16) Acrolein	(1)	3.635	56	72021	36.633
17) 1,1-Dichloroethene	(2)	3.773	96	19372	3.979
17) 1,1-Dichloroethene	(2)	3.773	63	9734	3.988
19) Freon 113	(2)	3.805	101	22601	4.069
18) Acetone	(1)	3.815	58	6763M	7.673
22) Methyl Iodide	(2)	3.972	142	39671	3.933
21) 2-Propanol	(1)	4.004	45	45871	72.395
23) Carbon Disulfide	(2)	4.082	76	71681	3.907
27) Methyl Acetate	(2)	4.258	43	24928M	3.976
25) Allyl Chloride	(2)	4.281	41	34775	3.982
28) Methylene Chloride	(2)	4.477	84	22693	3.917
29)*t-Butyl alcohol-d10	(1)	4.512	65	262044M	250.000
30) t-Butyl alcohol	(1)	4.638	59	80219	72.713
31) Acrylonitrile	(2)	4.840	53	12699	3.765
32) trans-1,2-Dichloroethene	(2)	4.901	96	22231	3.947
33) Methyl Tertiary Butyl Ether	(2)	4.901	73	71515	3.869
34) n-Hexane	(2)	5.323	57	33969M	3.877
36) 1,1-Dichloroethane	(2)	5.564	63	39317	4.002
38) di-Isopropyl ether	(2)	5.615	45	72628	3.833
39) 2-Chloro-1,3-butadiene	(2)	5.663	53	34190	3.879
40) Ethyl t-butyl ether	(2)	6.139	59	70845	3.853
43) 1,2-Dichloroethene (Total)	(2)		96	47253	7.906
44) 2-Butanone	(2)	6.371	43	32547	7.516
42) cis-1,2-Dichloroethene	(2)	6.390	96	25022	3.958
45) 2,2-Dichloropropane	(2)	6.400	77	29877	3.912
47) Propionitrile	(1)	6.467	54	100934	73.427
48) Methacrylonitrile	(2)	6.670	67	134092	36.850

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.718	128	12879	3.842
50) Tetrahydrofuran	(1)	6.734	71	9128	7.351
51) Chloroform	(2)	6.869	83	36176	3.850
52)$Dibromofluoromethane	(2)	7.081	113	280667	49.988
52)$Dibromofluoromethane	(2)	7.078	111	287593	50.237
53) 1,1,1-Trichloroethane	(2)	7.091	97	31167	3.886
54) Cyclohexane	(2)	7.178	56	42347	3.949
54) Cyclohexane	(2)	7.175	84	36627	3.932
54) Cyclohexane	(2)	7.181	69	13119	3.955
56) Carbon Tetrachloride	(2)	7.287	117	25509	3.750
55) 1,1-Dichloropropene	(2)	7.297	75	30762	3.960
58) Isobutyl Alcohol	(1)	7.464	41	65125	175.416
57)$1,2-Dichloroethane-d4	(2)	7.532	102	72246	50.488
57)$1,2-Dichloroethane-d4	(2)	7.535	65	323654	50.754
57)$1,2-Dichloroethane-d4	(2)	7.538	104	45694	49.994
60) Benzene	(2)	7.564	78	92488	3.959
61) 1,2-Dichloroethane	(2)	7.638	62	29321	3.902
61) 1,2-Dichloroethane	(2)	7.628	98	2899	3.899
65) t-Amyl methyl ether	(2)	7.744	73	70267	3.807
66)*Fluorobenzene	(2)	7.959	96	1148427	50.000
67) n-Heptane	(2)	7.962	43	32502MA	3.971
69) n-Butanol	(1)	8.329	56	110027M	344.330
71) Trichloroethene	(2)	8.435	95	22766	3.871
72) Methylcyclohexane	(2)	8.737	83	42437	3.889
72) Methylcyclohexane	(2)	8.731	98	19822	4.014
73) 1,2-Dichloropropane	(2)	8.773	63	22762	3.837
76) Methyl Methacrylate	(2)	8.843	69	20713M	3.611
75) 1,4-Dioxane	(1)	8.850	88	16188	184.315
74) Dibromomethane	(2)	8.879	93	14634	3.813
78) Bromodichloromethane	(2)	9.110	83	24167	3.509
79) 2-Nitropropane	(2)	9.387	41	14154	6.785
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	8979	3.525
81) cis-1,3-Dichloropropene	(2)	9.638	75	32112	3.511
82) 4-Methyl-2-pentanone	(2)	9.808	43	67922	7.431
83)$Toluene-d8	(3)	9.933	98	1152733	49.832
83)$Toluene-d8	(3)	9.933	100	745821	49.773
88) Toluene	(3)	10.004	92	56092	3.868
90) 1,3-Dichloropropene (total)	(3)		100	60153	6.917

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	28041	3.406
91) Ethyl Methacrylate	(3)	10.310	69	34660	3.464
92) 1,1,2-Trichloroethane	(3)	10.457	97	20516	3.731
93) Tetrachloroethene	(3)	10.538	166	24234	3.946
94) 1,3-Dichloropropane	(3)	10.618	76	34762	3.703
96) 2-Hexanone	(3)	10.670	43	50570	7.572
97) Dibromochloromethane	(3)	10.824	129	18906	3.357
99) 1,2-Dibromoethane	(3)	10.937	107	21586	3.615
100)*Chlorobenzene-d5	(3)	11.358	117	884065	50.000
101) 1-Chlorohexane	(3)	11.364	91	31055	3.986
102) Chlorobenzene	(3)	11.387	112	63883	3.895
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	19618	3.631
104) Ethylbenzene	(3)	11.467	91	109318	3.944
106) m+p-Xylene	(3)	11.580	106	85093	7.804
108) Xylene (Total)	(3)		106	126157	11.616
107) o-Xylene	(3)	11.908	106	41064	3.813
109) Styrene	(3)	11.924	104	65784	3.696
110) Bromoform	(3)	12.078	173	12196	2.898
111) Isopropylbenzene	(3)	12.203	105	107056	3.963
112) Cyclohexanone	(1)	12.287	55	63391	184.289
114)$4-Bromofluorobenzene	(3)	12.348	95	440415	50.280
114)$4-Bromofluorobenzene	(3)	12.348	174	367241	50.573
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	33170M	3.658
115) Bromobenzene	(4)	12.467	156	27559	3.820
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	101806	36.395
117) 1,2,3-Trichloropropane	(4)	12.496	110	10208	3.668
119) n-Propylbenzene	(4)	12.528	91	126543	4.014
120) 2-Chlorotoluene	(4)	12.609	126	25381	3.790
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	89290	3.898
121) 4-Chlorotoluene	(4)	12.699	126	27169	3.898
124) tert-Butylbenzene	(4)	12.904	134	18608M	3.928
125) Pentachloroethane	(4)	12.940	167	14303	3.506
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	93258	3.863
127) sec-Butylbenzene	(4)	13.068	105	111847	3.956
129) 1,3-Dichlorobenzene	(4)	13.168	146	51597	3.892
130) p-Isopropyltoluene	(4)	13.174	119	96571	3.948
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	480071	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	53736	3.910

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	99398	3.886
135) Benzyl Chloride	(4)	13.319	91	57244	2.956
136) 1,3-Diethylbenzene	(4)	13.371	119	61603	3.870
141) Diethylbenzene (total)	(4)		100	179922	11.677
137) 1,4-Diethylbenzene	(4)	13.444	119	66423	3.939
139) n-Butylbenzene	(4)	13.464	92	51213	4.095
138) 1,2-Dichlorobenzene	(4)	13.502	146	50972	3.896
140) 1,2-Diethylbenzene	(4)	13.518	119	51896	3.868
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	6542	3.295
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	39801	3.960
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	38013	3.889
147) Hexachlorobutadiene	(4)	14.670	225	23904	5.180
148) Naphthalene	(4)	14.772	128	115354	3.671
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	37152	3.907
150) 2-Methylnaphthalene	(4)	15.563	142	72506	3.747

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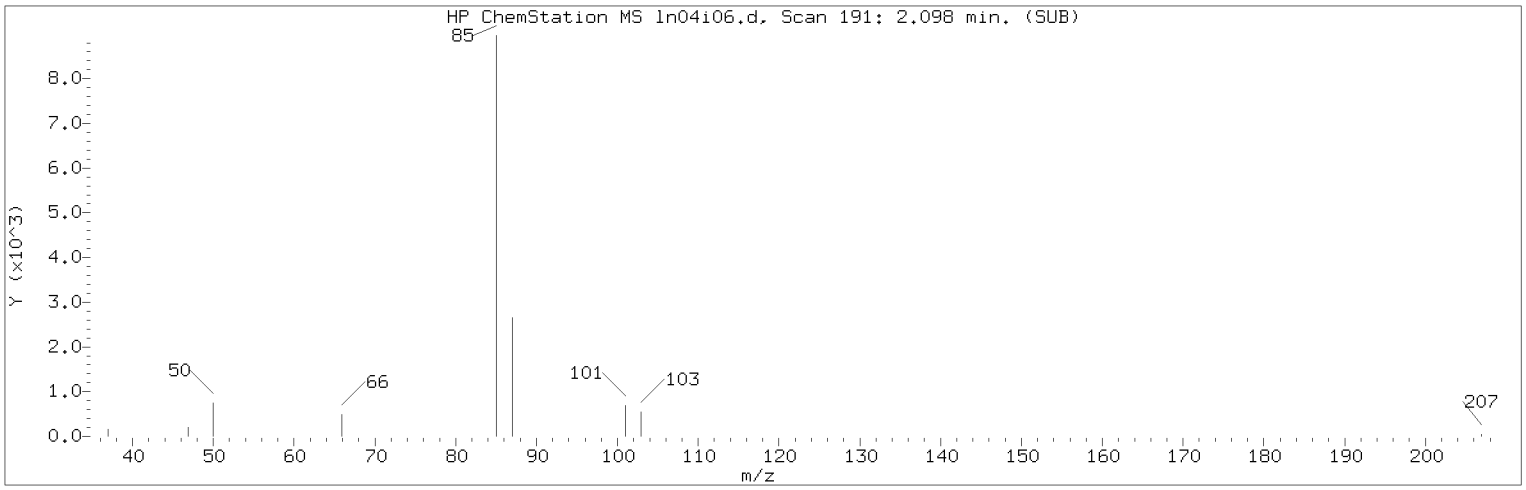
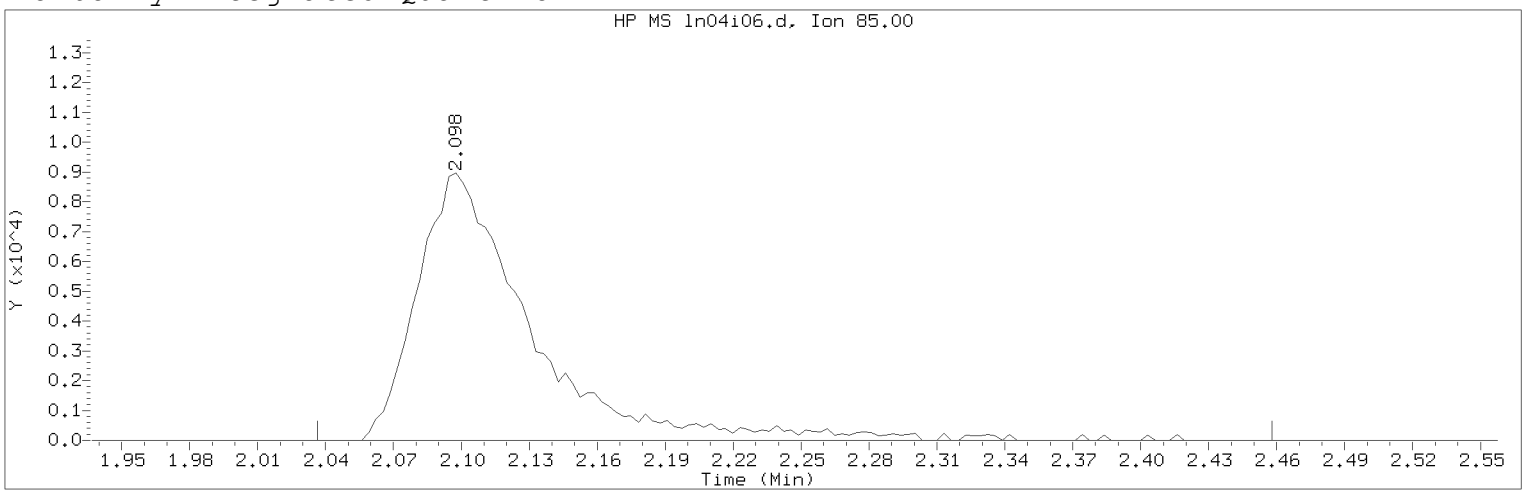
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

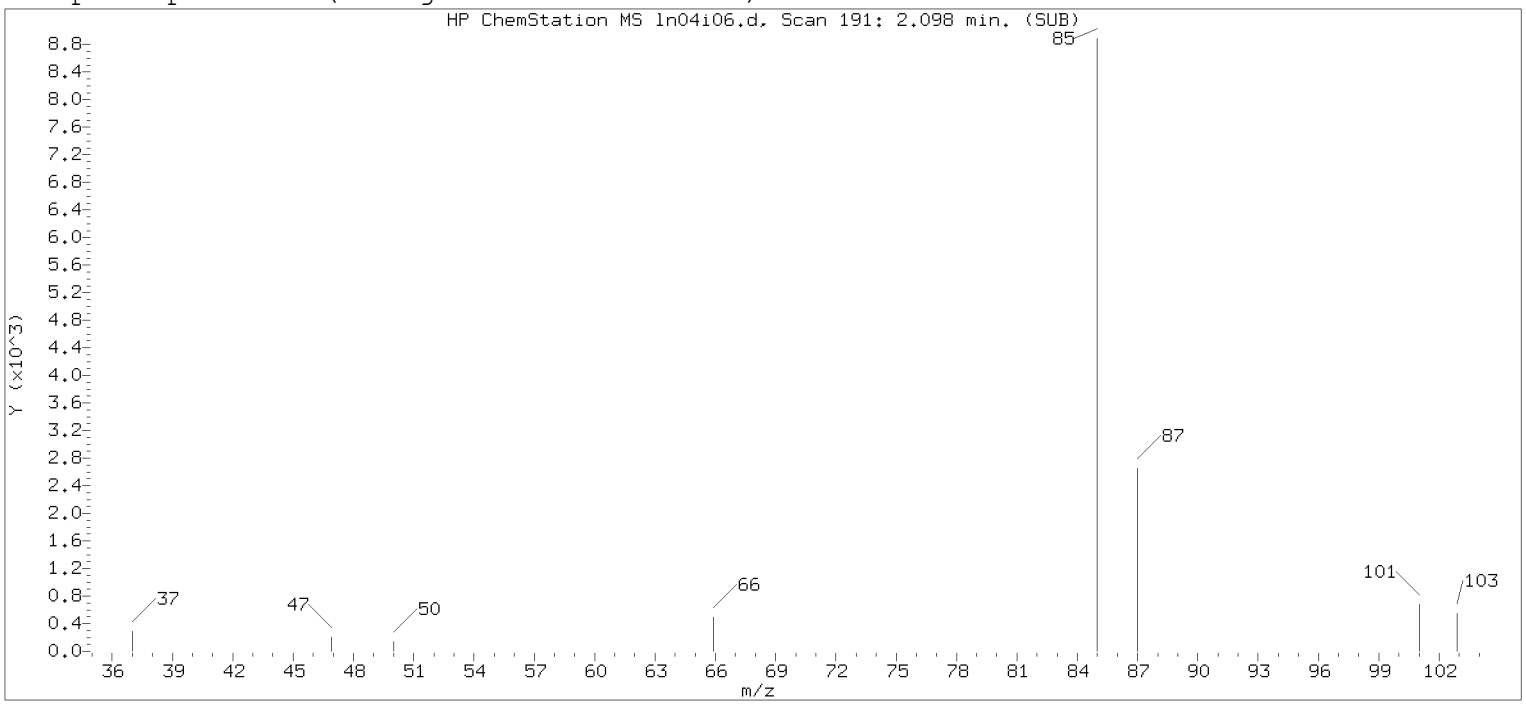
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 191
Retention Time (minutes): 2.098
Quant Ion : 85.00
Area (flag) : 31217M
On-Column Amount (ng) : 3.8978
Integration start scan : 171 Integration stop scan: 302
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

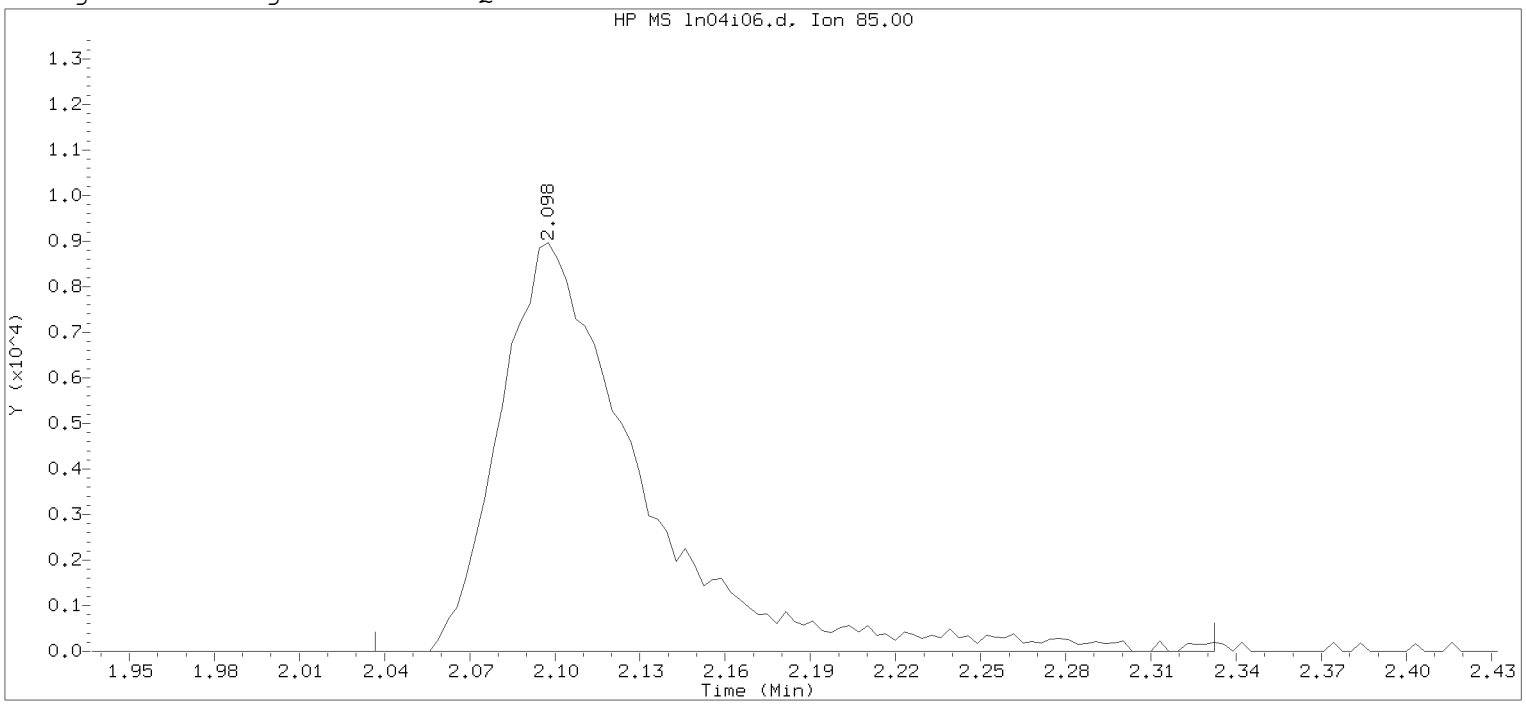
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

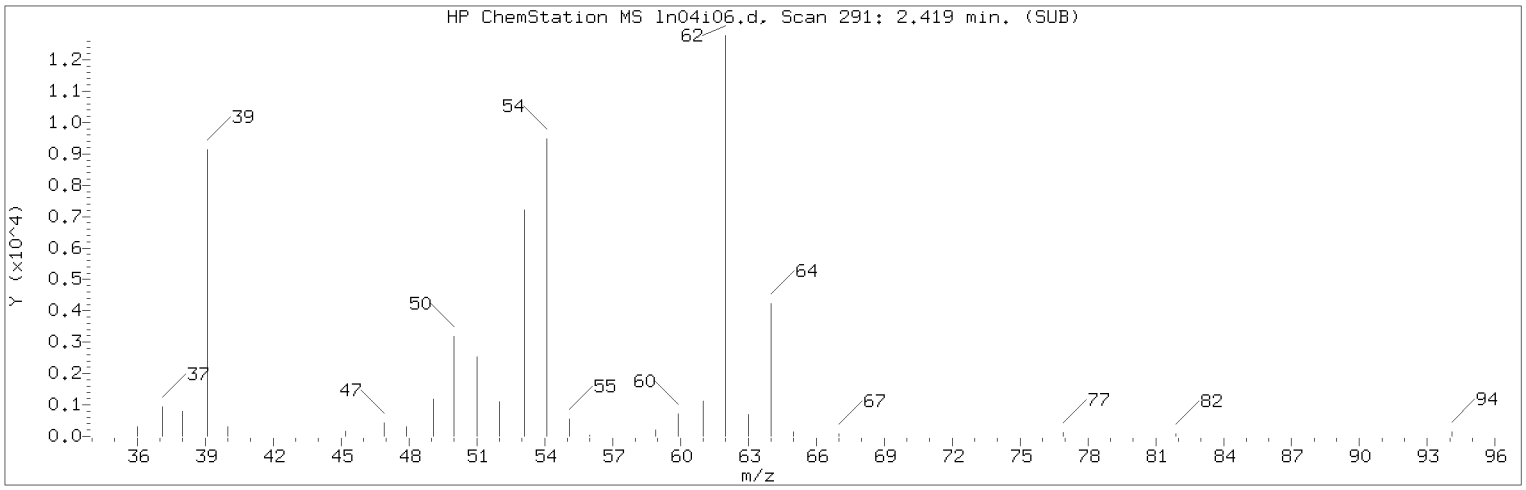
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

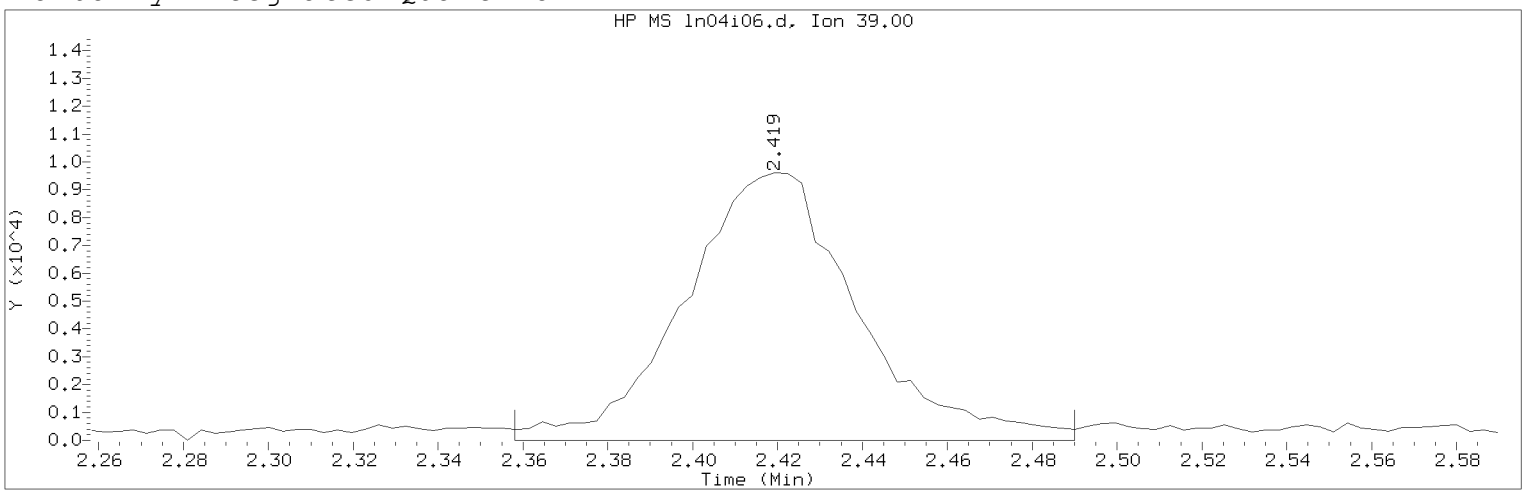
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 191
Retention Time (minutes): 2.098
Quant Ion : 85.00
Area : 30987
On-column Amount (ng) : 3.8874
Integration start scan : 171 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

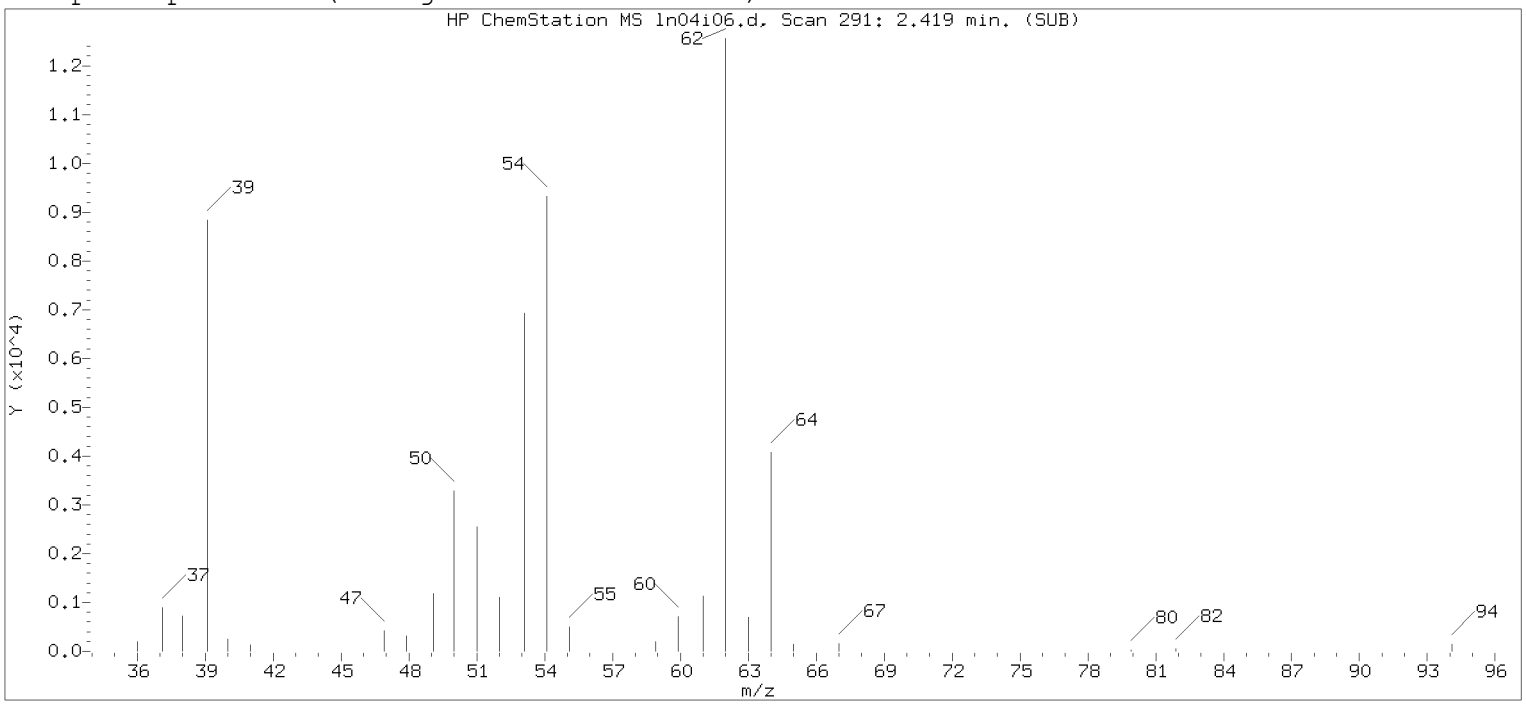
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 291
Retention Time (minutes): 2.419
Quant Ion : 39.00
Area (flag) : 27249M
On-Column Amount (ng) : 4.2517
Integration start scan : 271 Integration stop scan: 312
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

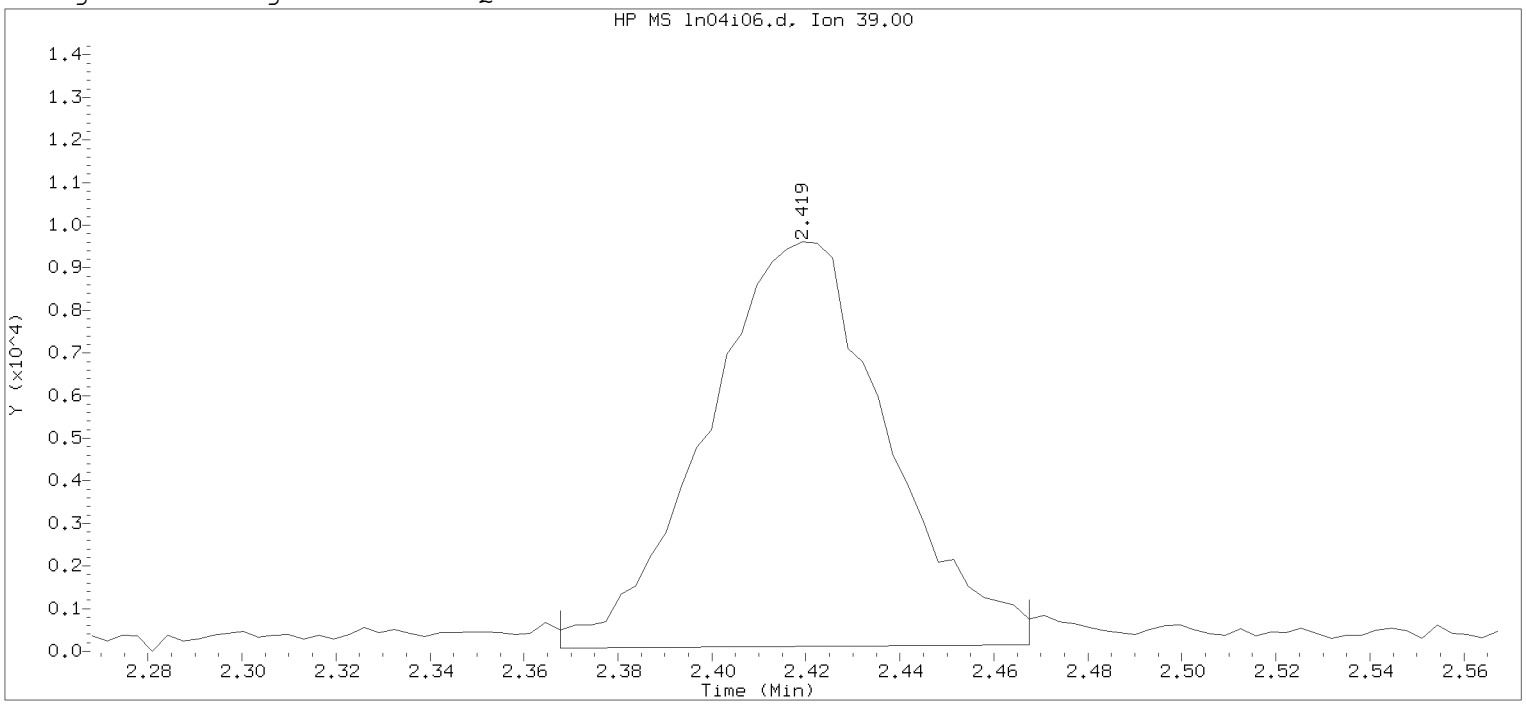
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 291
Retention Time (minutes): 2.419
Quant Ion : 39.00
Area : 25391
On-column Amount (ng) : 4.2082
Integration start scan : 274 Integration stop scan: 305
Y at integration start : 76 Y at integration end: 147

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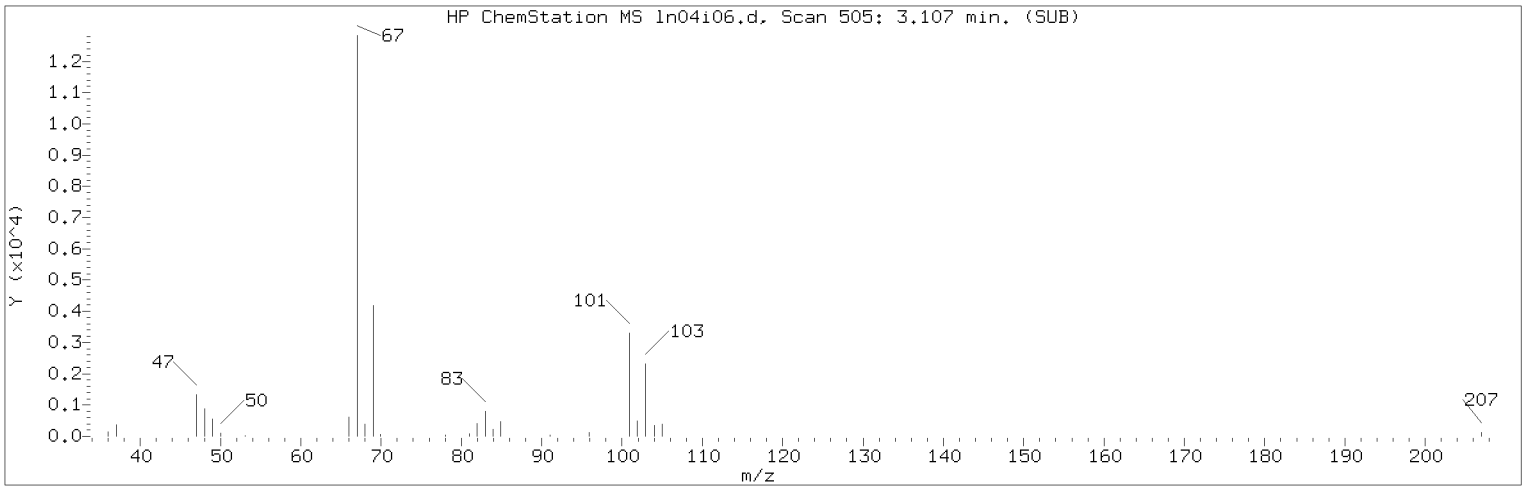
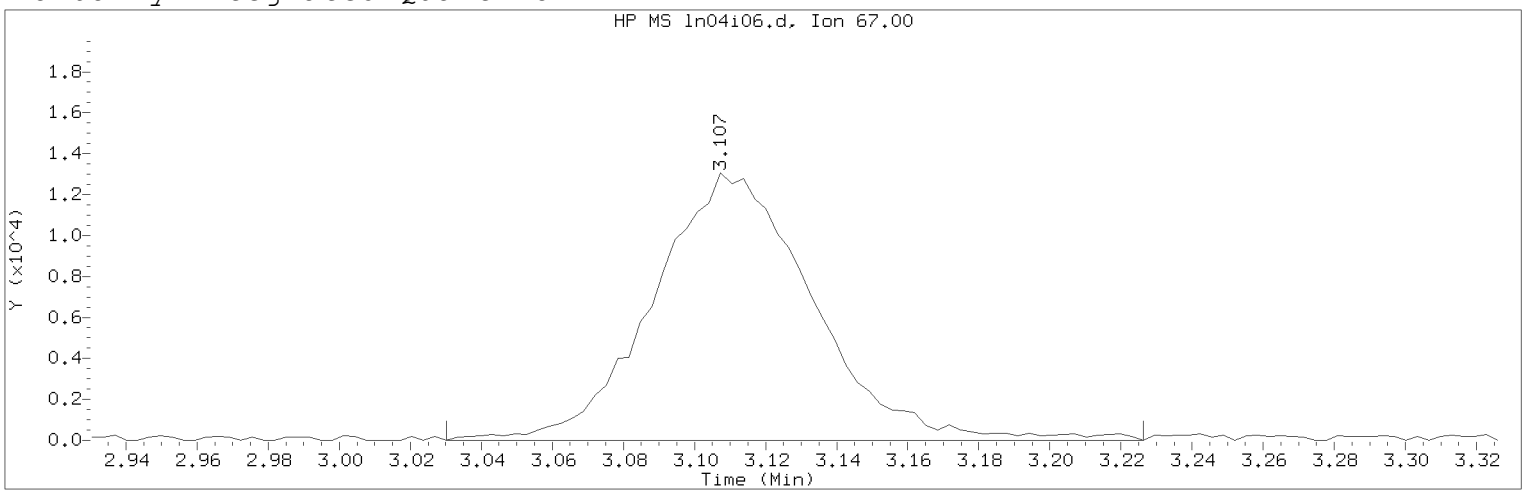
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

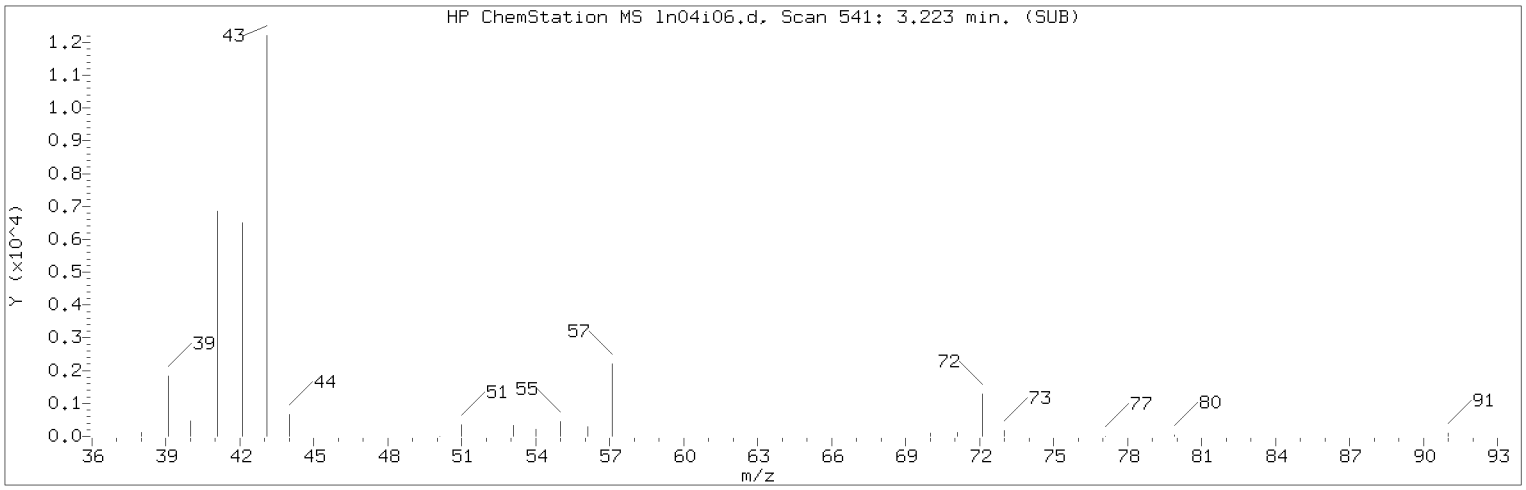
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 505
Retention Time (minutes): 3.107
Quant Ion : 67.00
Area (flag) : 40740M
On-Column Amount (ng) : 4.0151
Integration start scan : 480 Integration stop scan: 541
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

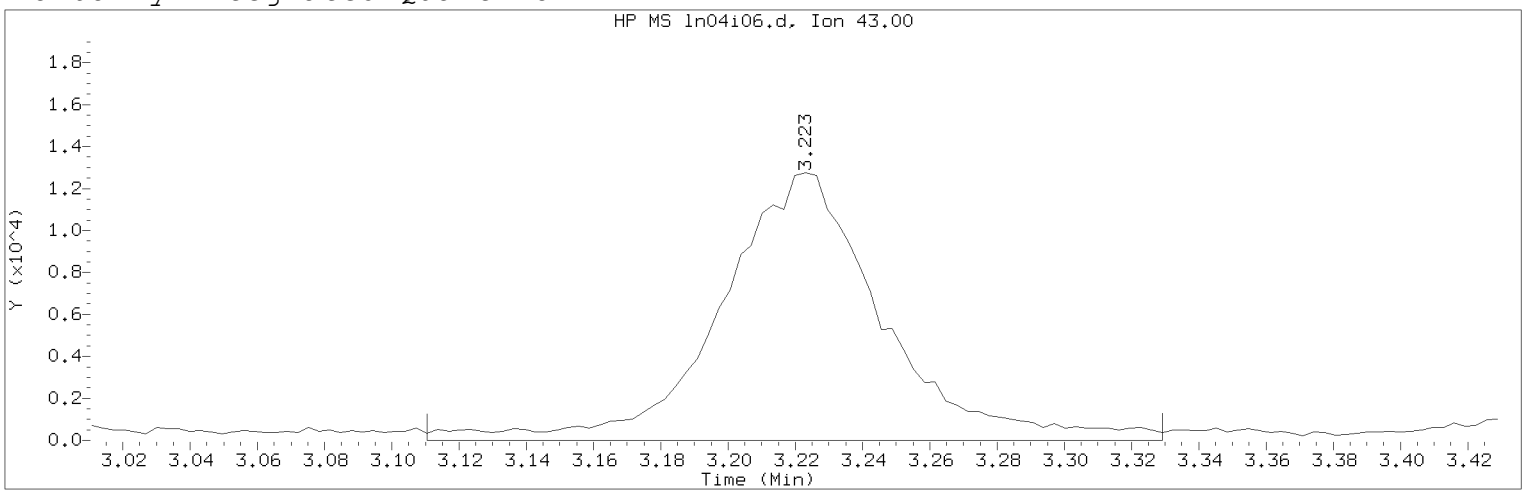
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

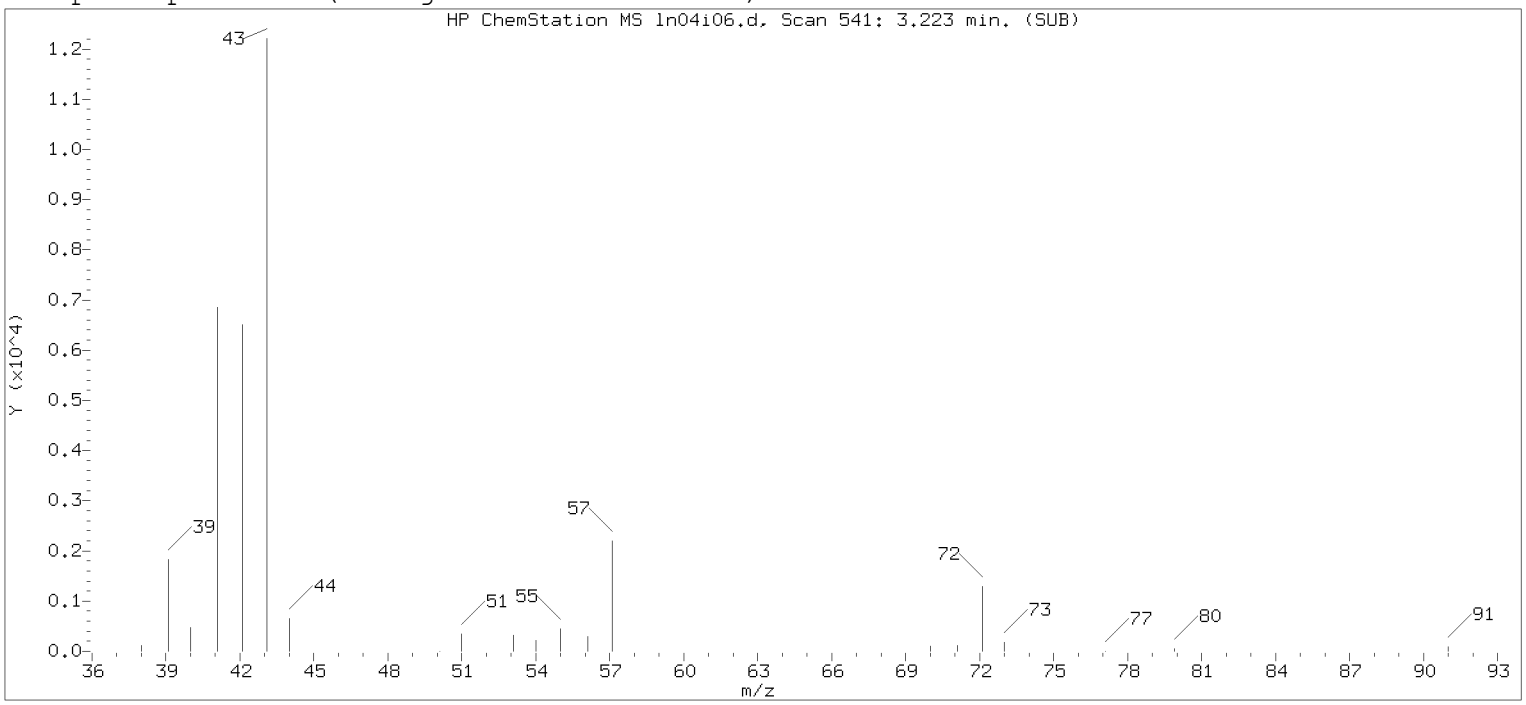
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 541
Retention Time (minutes): 3.223
Quant Ion : 43.00
Area (flag) : 42826M
On-Column Amount (ng) : 4.3694
Integration start scan : 505 Integration stop scan: 573
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

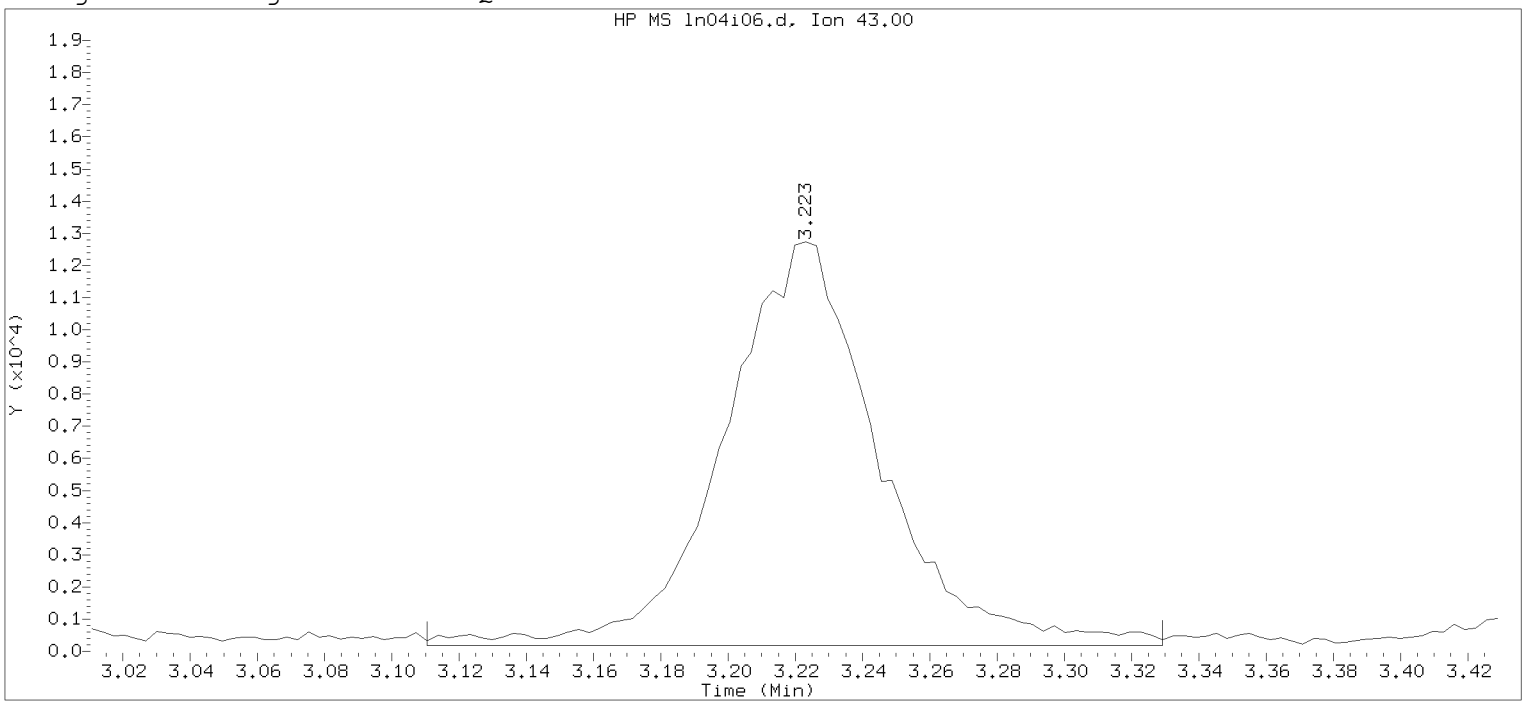
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

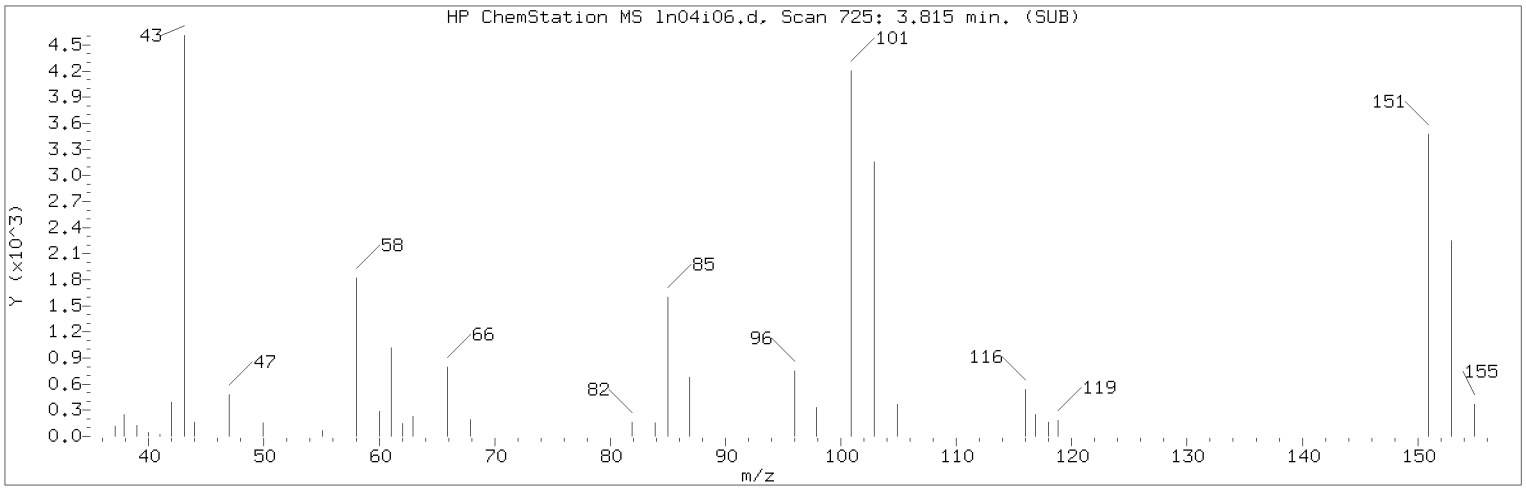
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

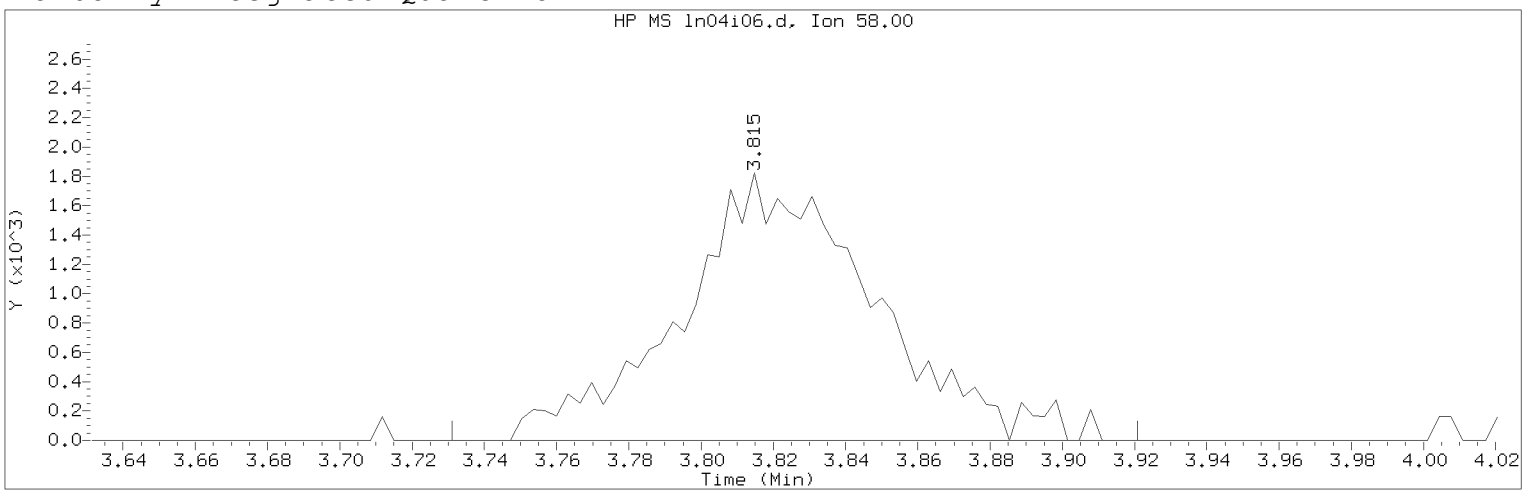
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 541
Retention Time (minutes): 3.223
Quant Ion : 43.00
Area : 40359
On-column Amount (ng) : 4.1550
Integration start scan : 505 Integration stop scan: 573
Y at integration start : 183 Y at integration end: 183

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

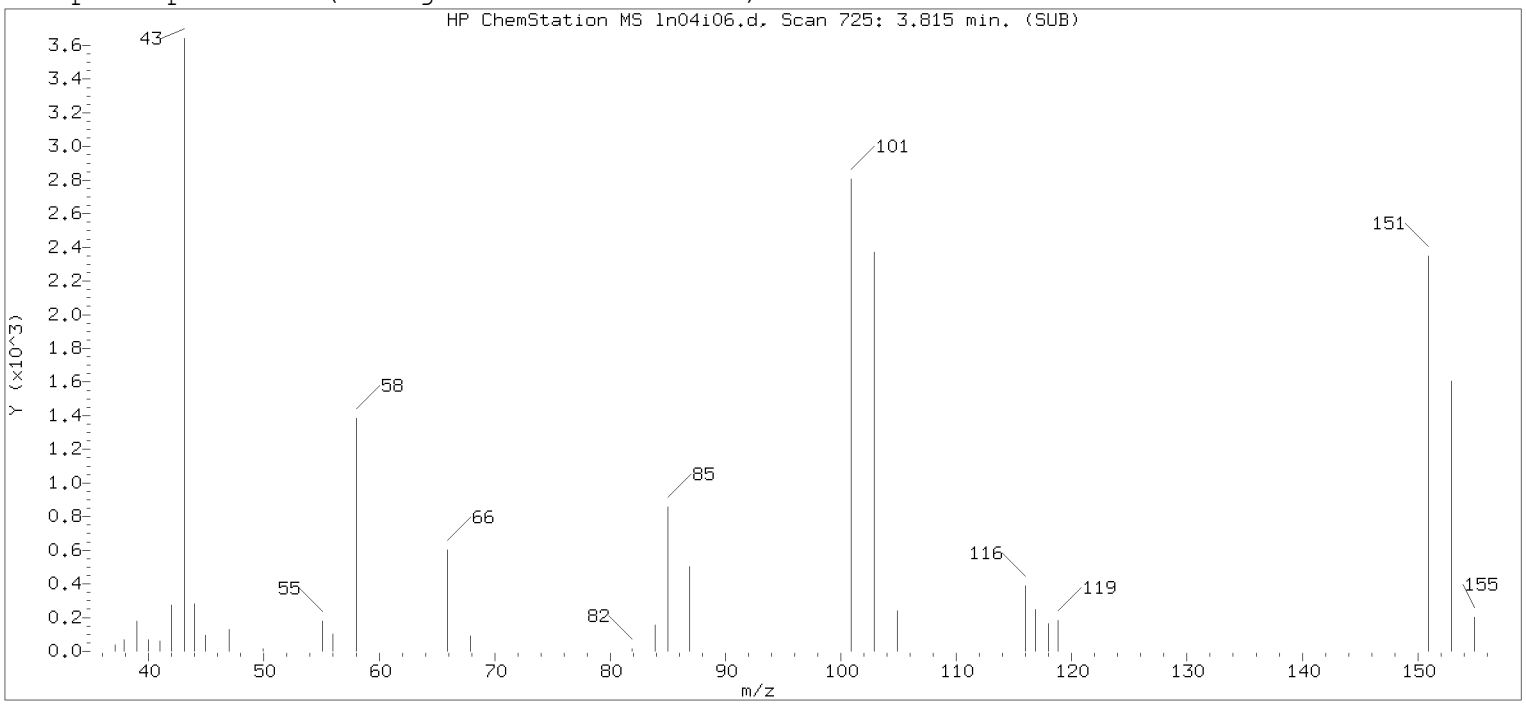
Compound Number : 18
Compound Name : Acetone
Scan Number : 725
Retention Time (minutes): 3.815
Quant Ion : 58.00
Area (flag) : 6763M
On-Column Amount (ng) : 7.6731
Integration start scan : 698 Integration stop scan: 757
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

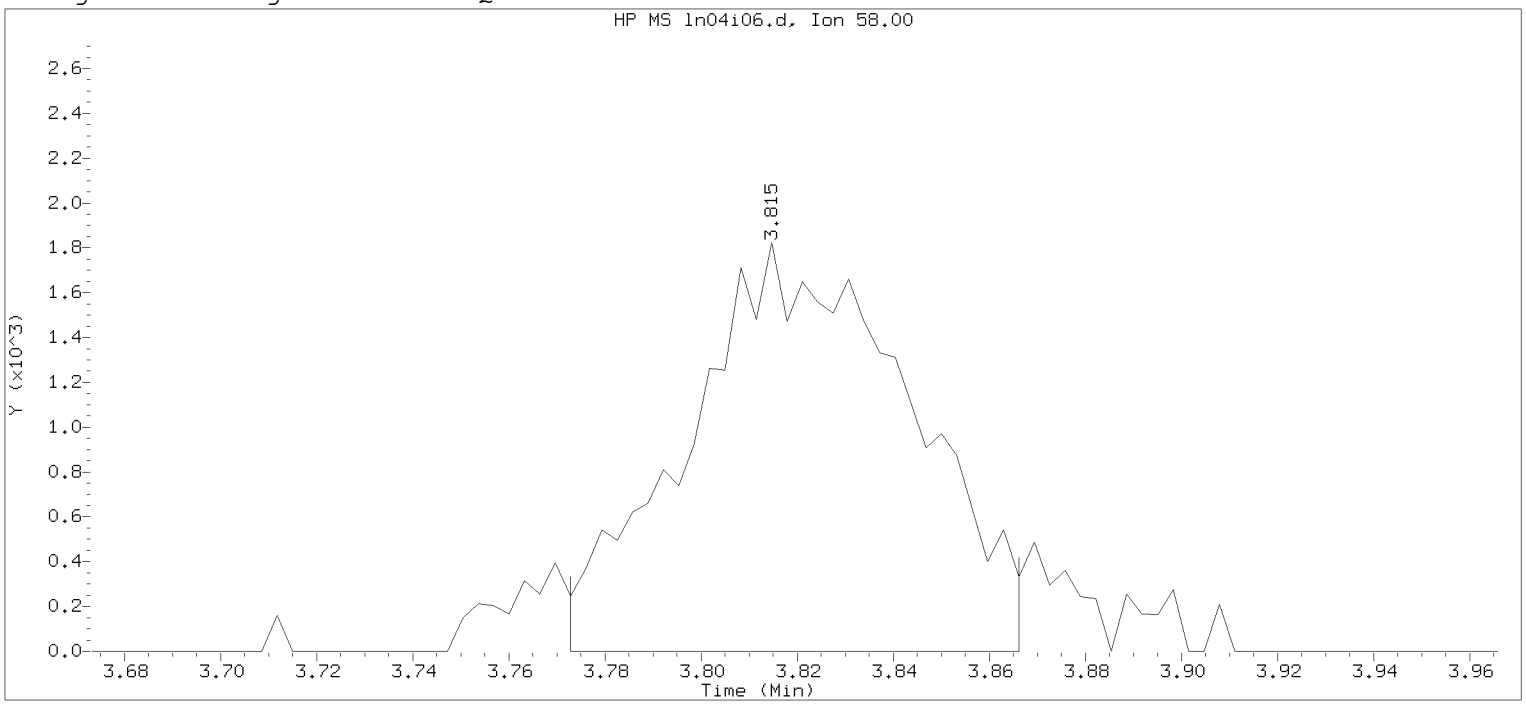
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

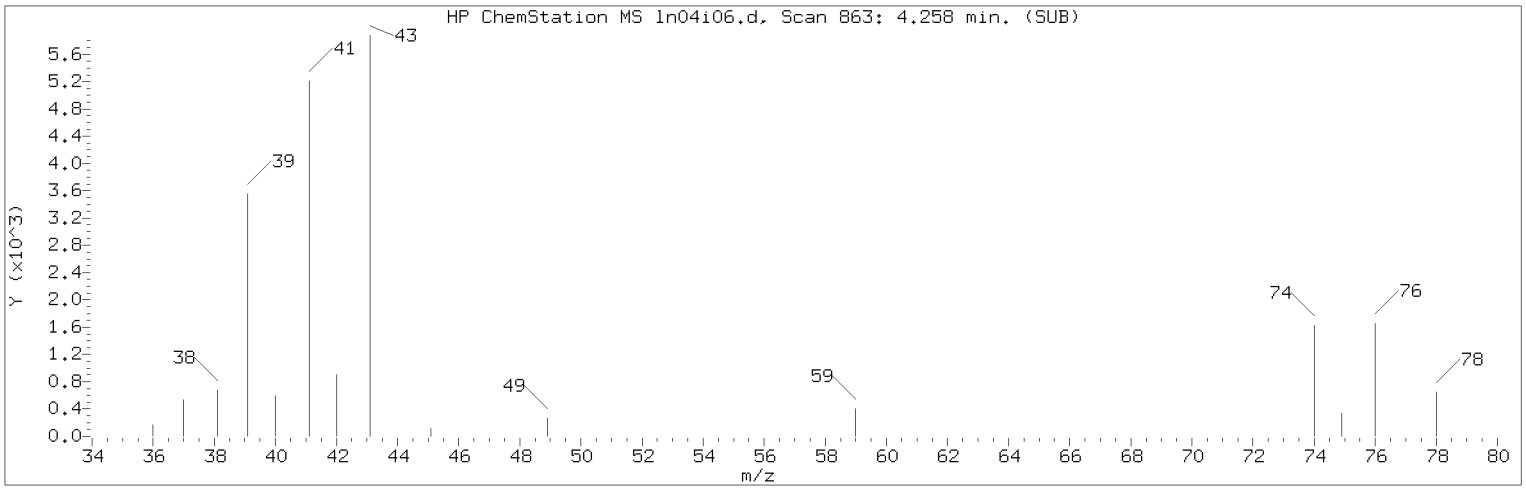
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

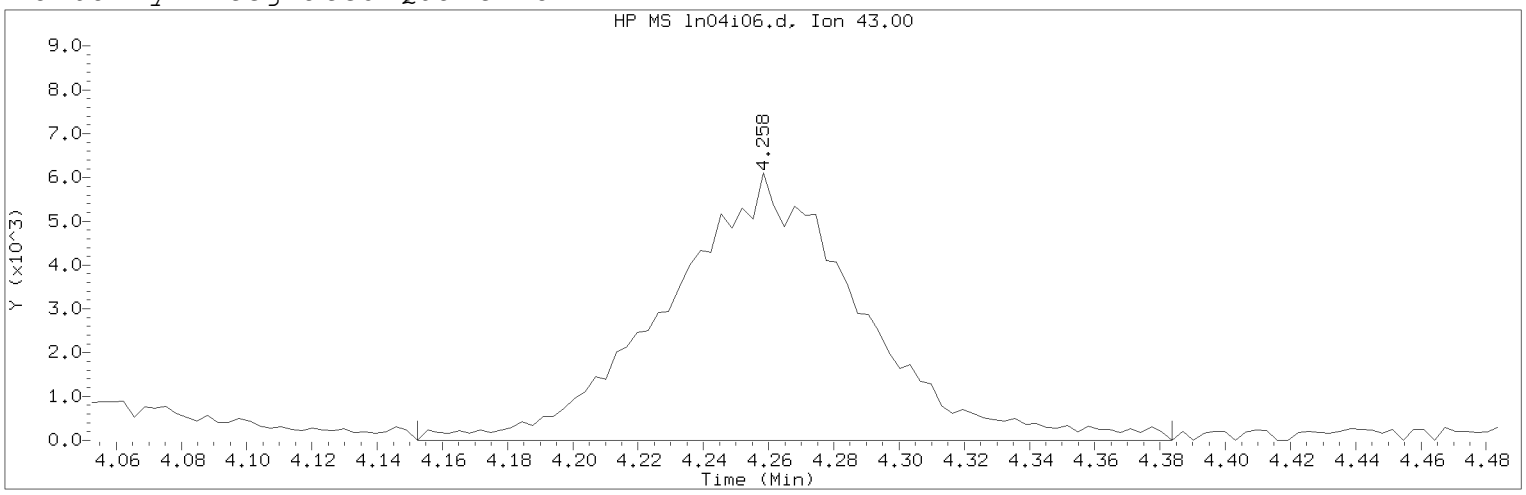
Compound Number : 18
Compound Name : Acetone
Scan Number : 725
Retention Time (minutes): 3.815
Quant Ion : 58.00
Area : 5862
On-column Amount (ng) : 7.7134
Integration start scan : 711 Integration stop scan: 740
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

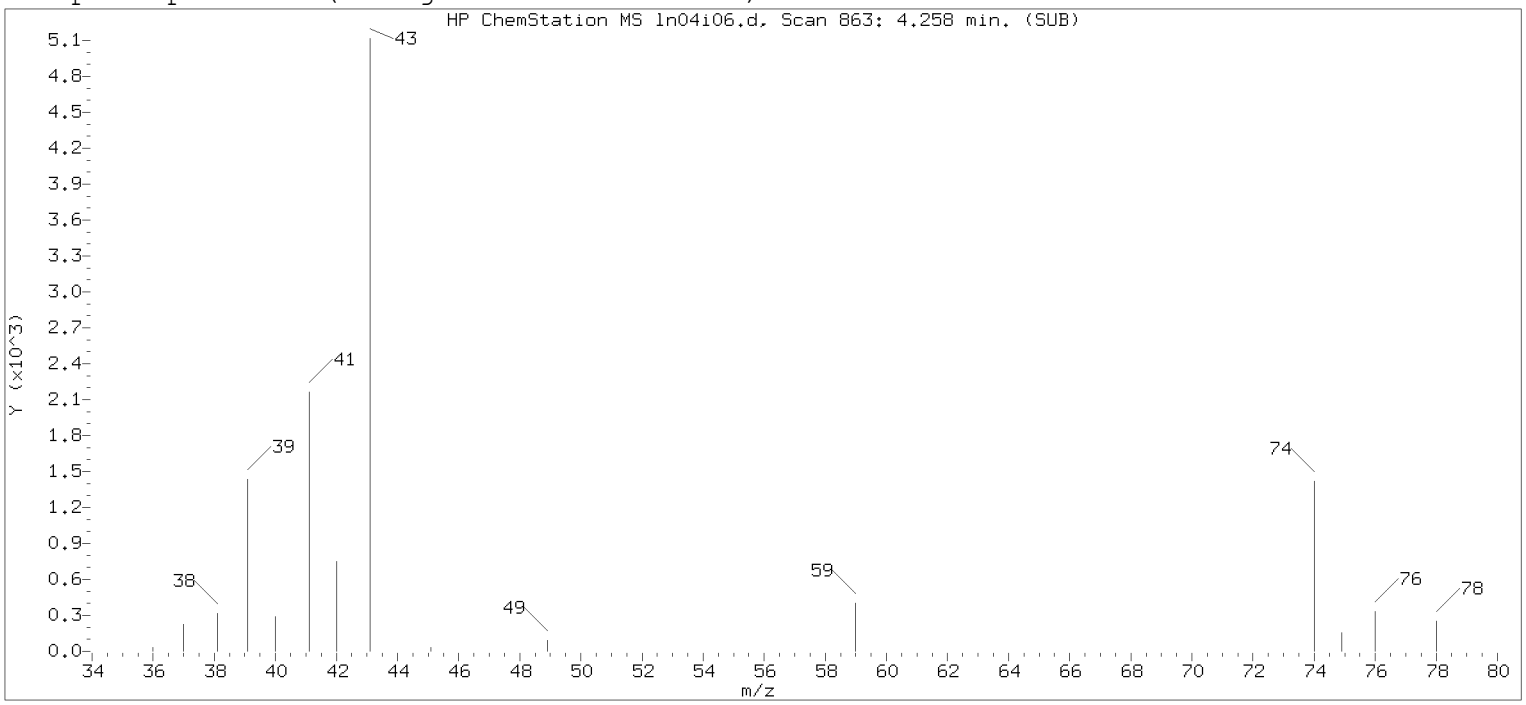
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 863
Retention Time (minutes): 4.258
Quant Ion : 43.00
Area (flag) : 24928M
On-Column Amount (ng) : 3.9757
Integration start scan : 829 Integration stop scan: 901
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

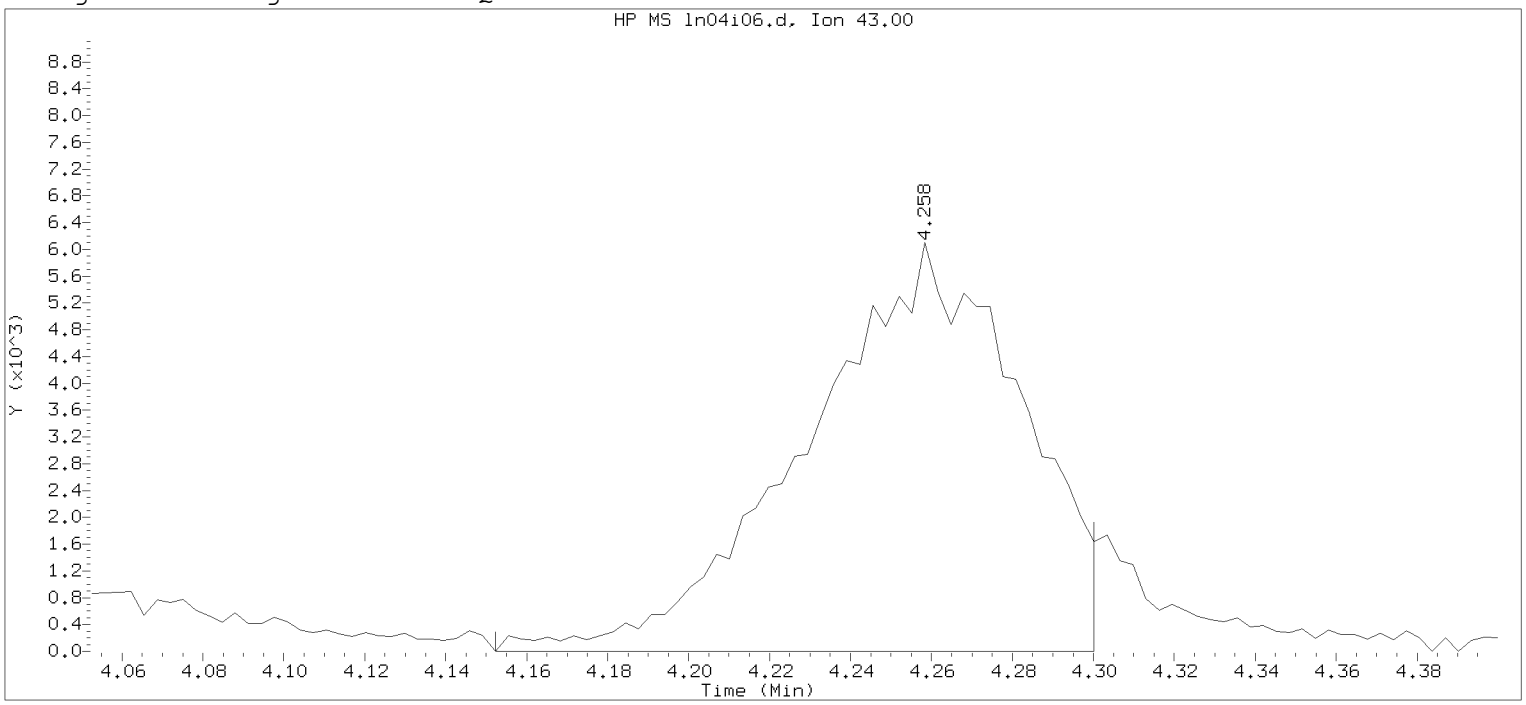
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

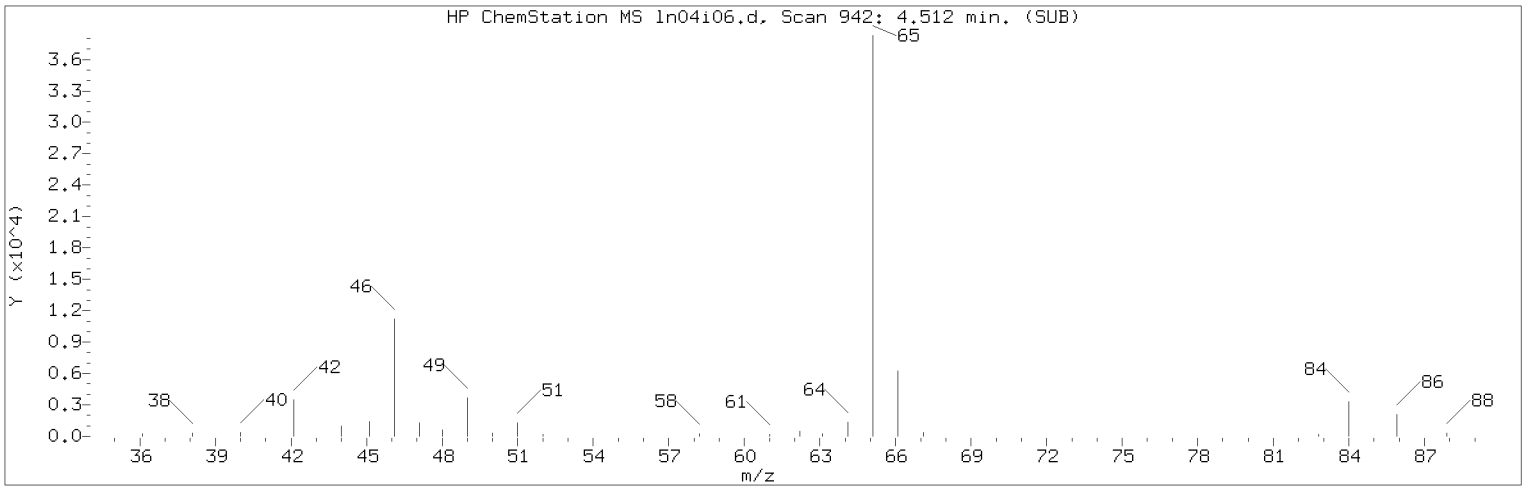
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

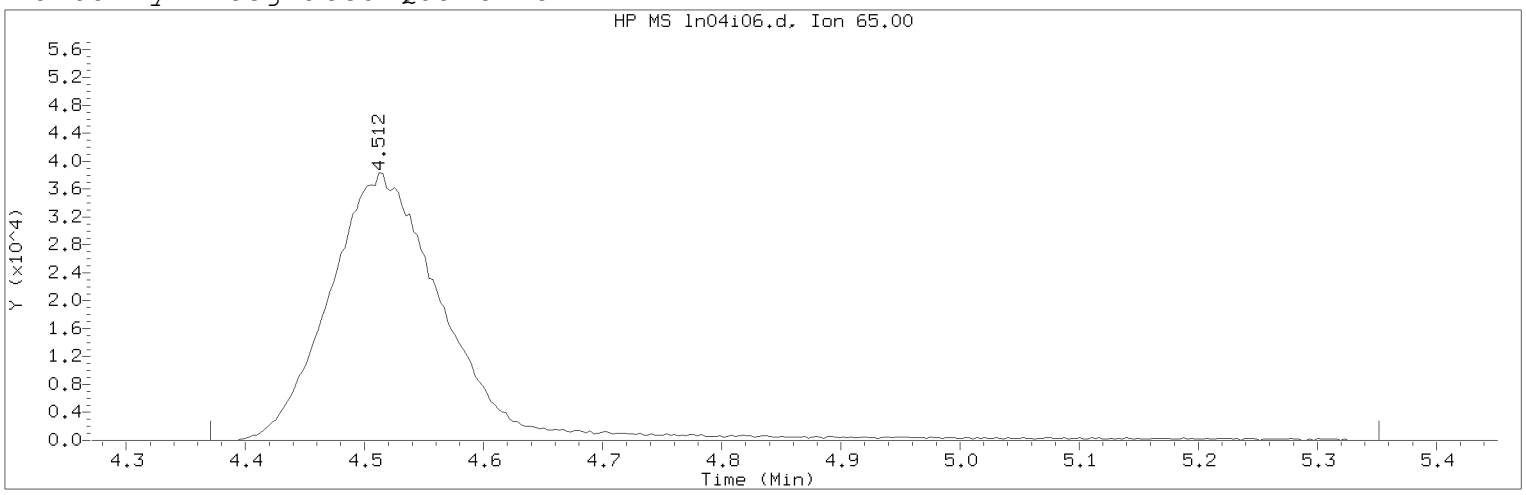
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 863
Retention Time (minutes): 4.258
Quant Ion : 43.00
Area : 22302
On-column Amount (ng) : 3.7243
Integration start scan : 829 Integration stop scan: 875
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

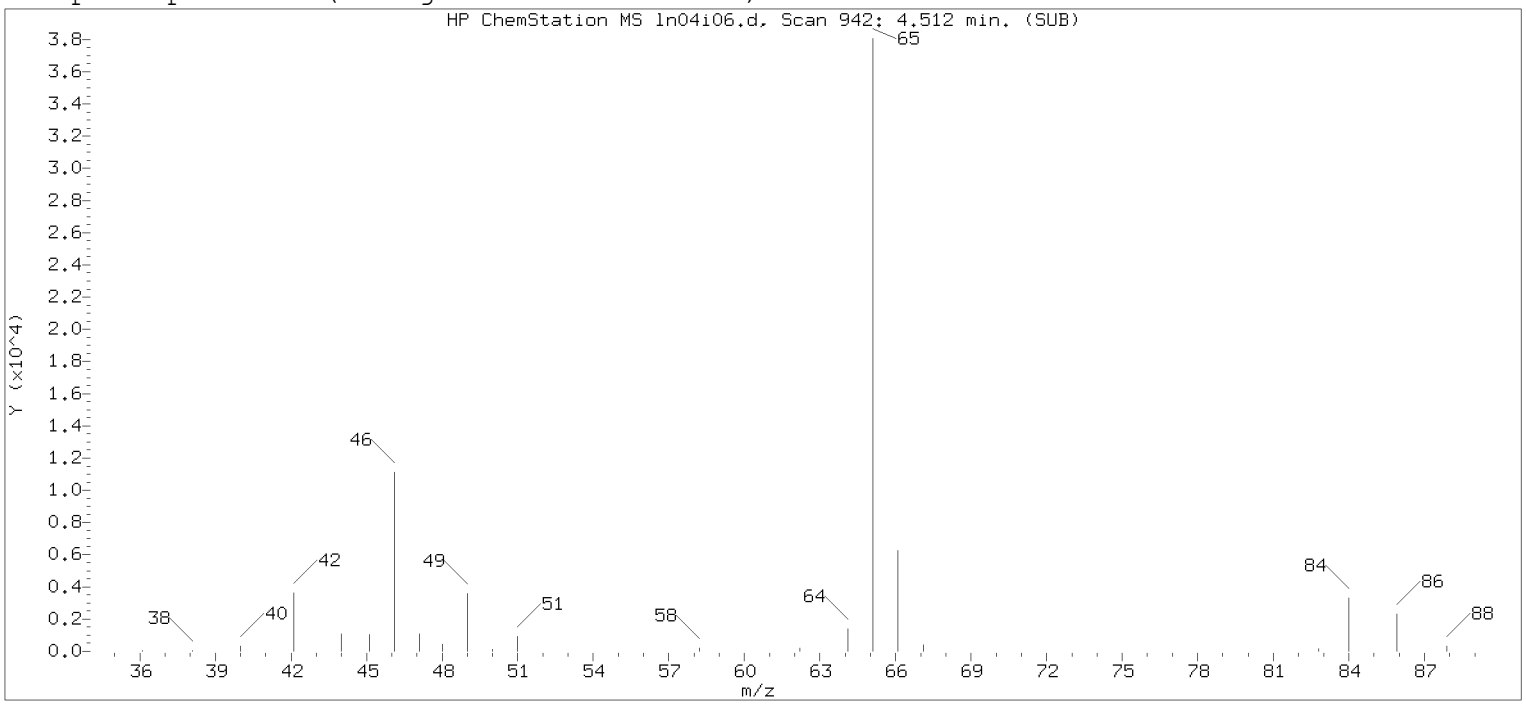
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area (flag) : 262044M
On-Column Amount (ng) : 250.0000
Integration start scan : 897 Integration stop scan: 1202
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

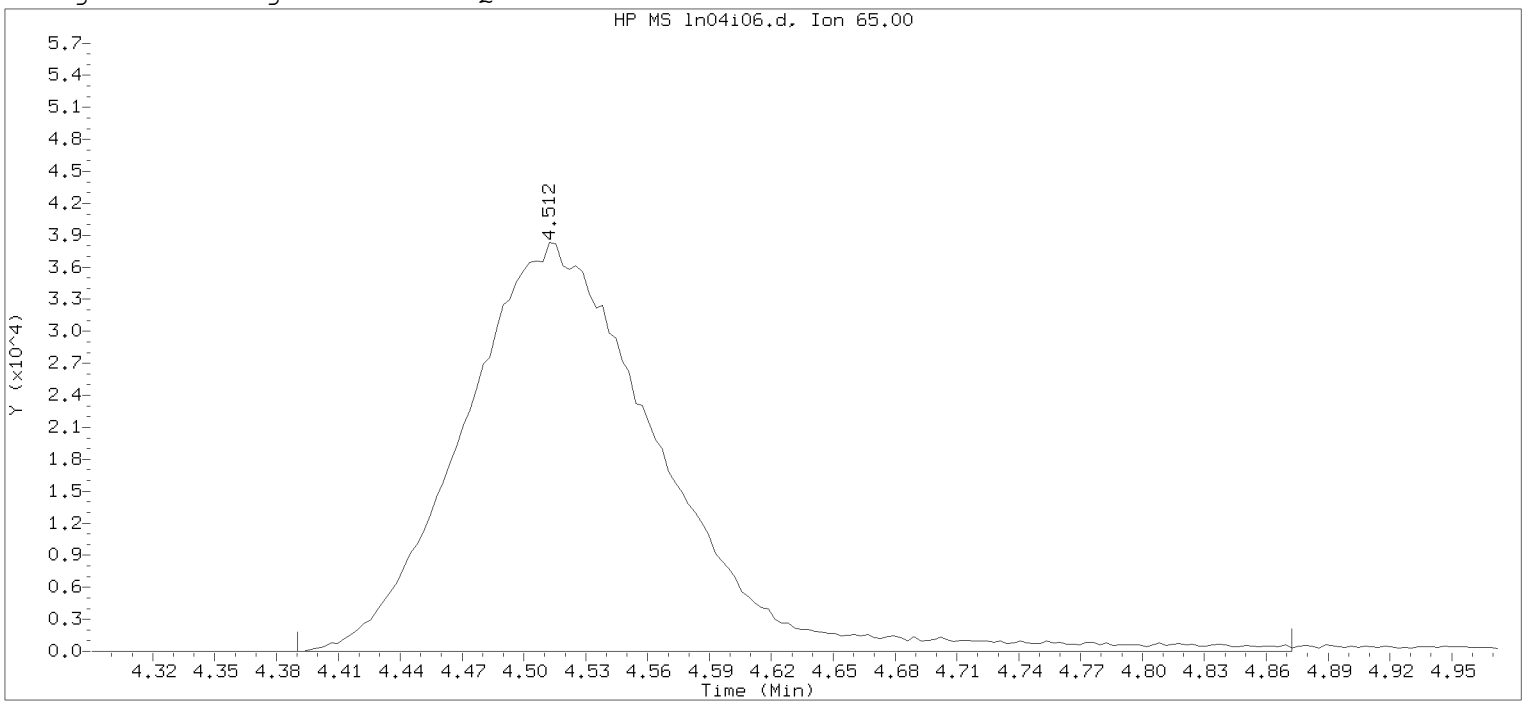
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

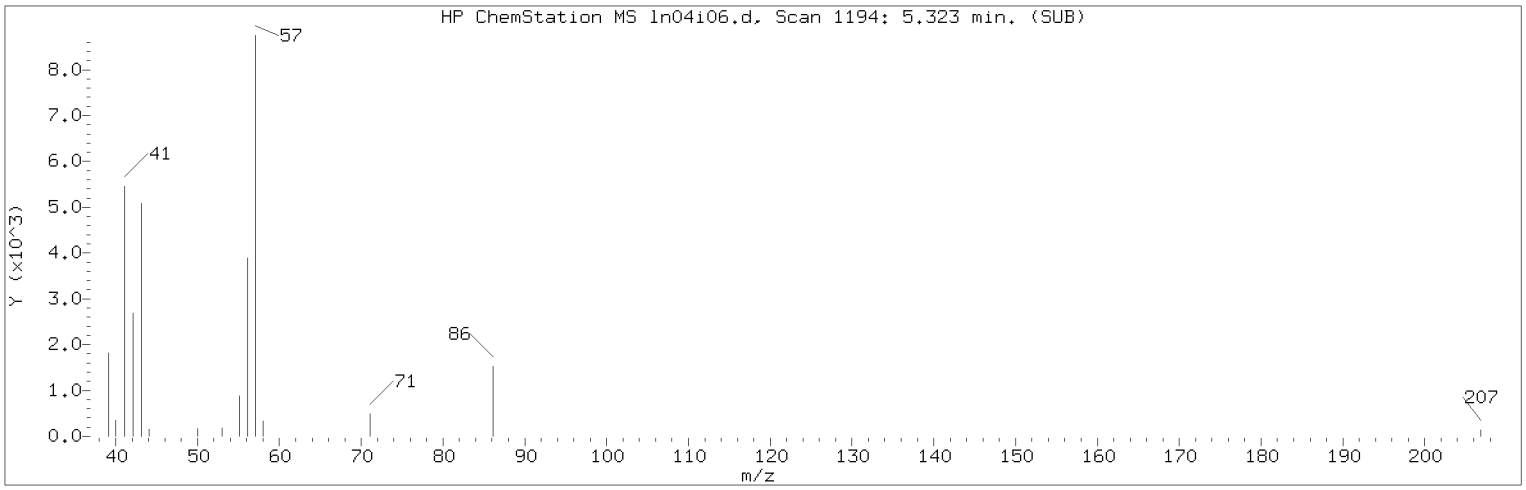
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

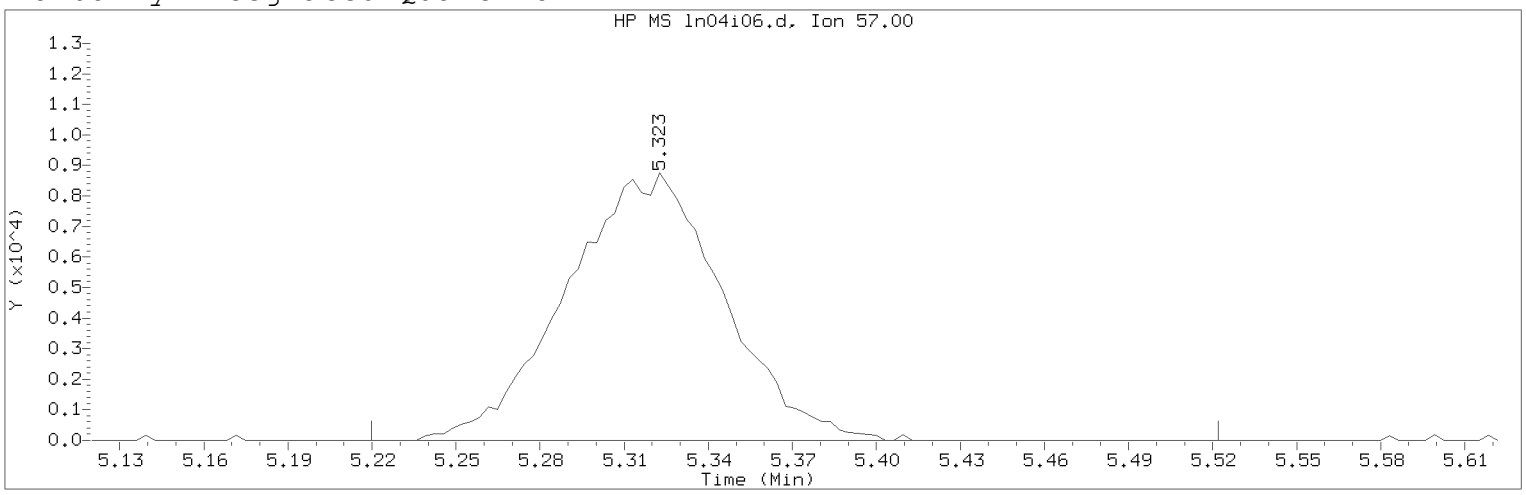
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area : 254362
On-column Amount (ng) : 250.0000
Integration start scan : 903 Integration stop scan: 1053
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

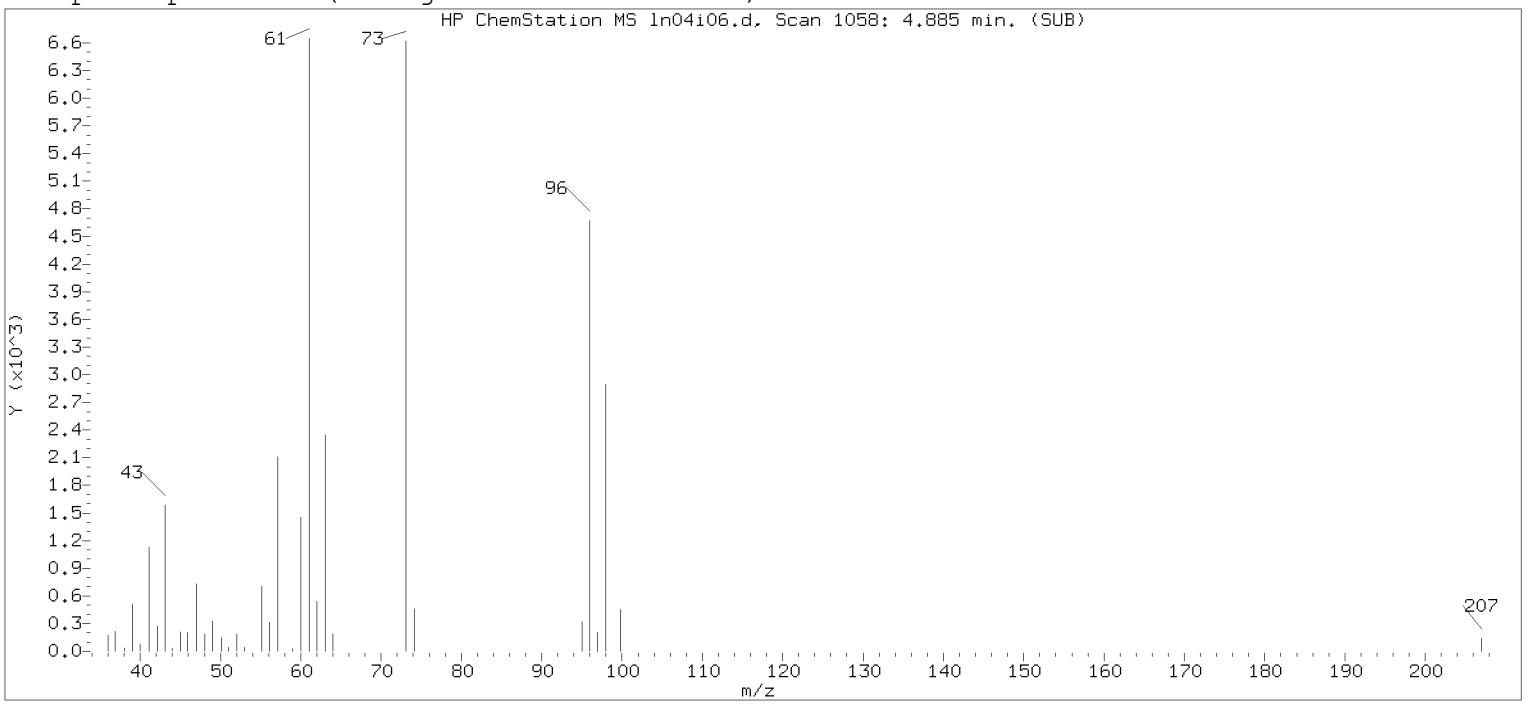
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1194
Retention Time (minutes): 5.323
Quant Ion : 57.00
Area (flag) : 33969M
On-Column Amount (ng) : 3.8769
Integration start scan : 1161 Integration stop scan: 1255
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

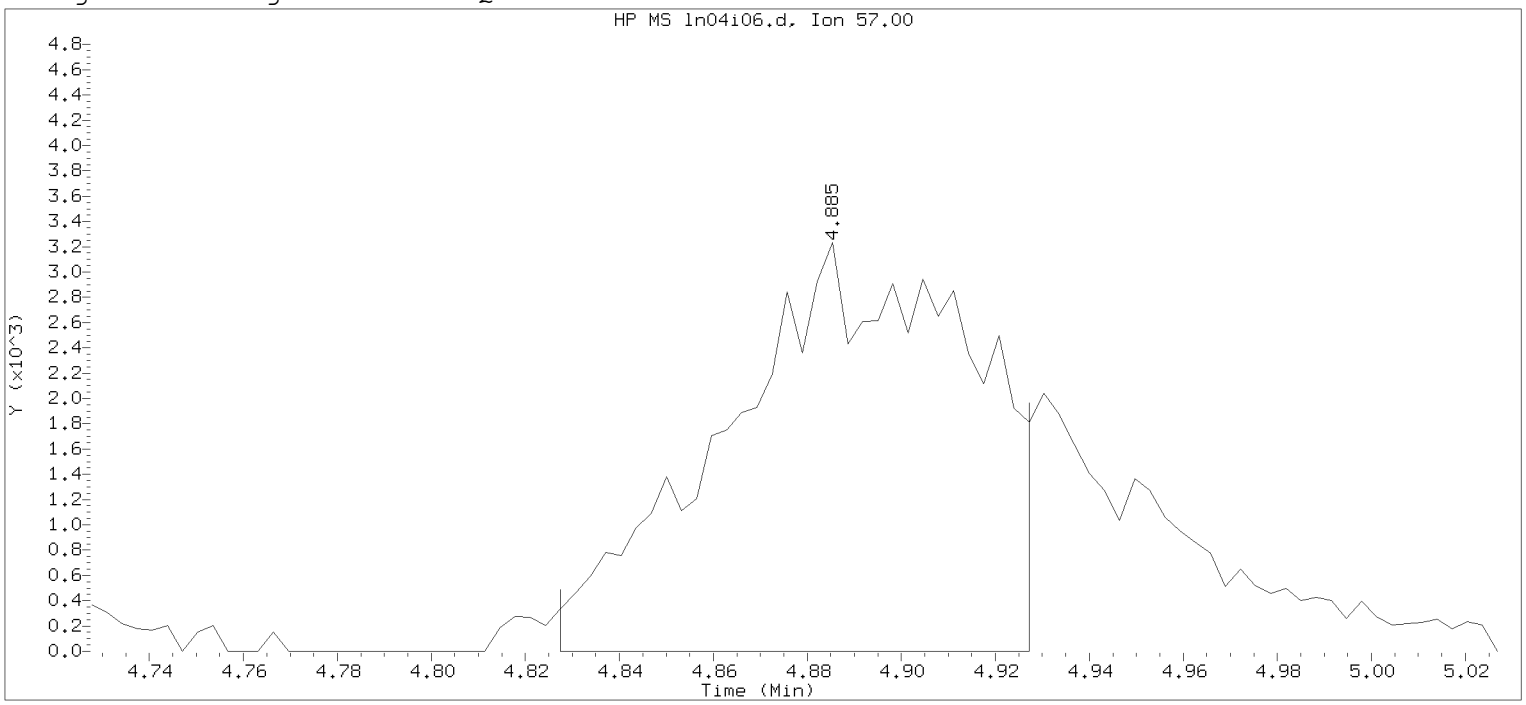
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

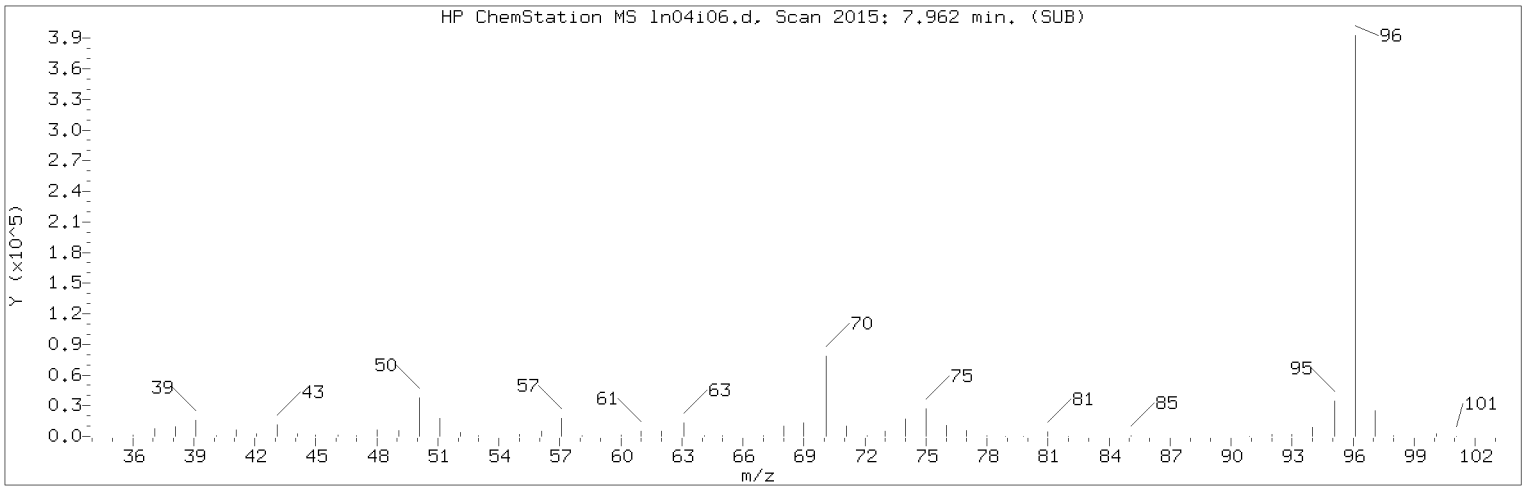
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

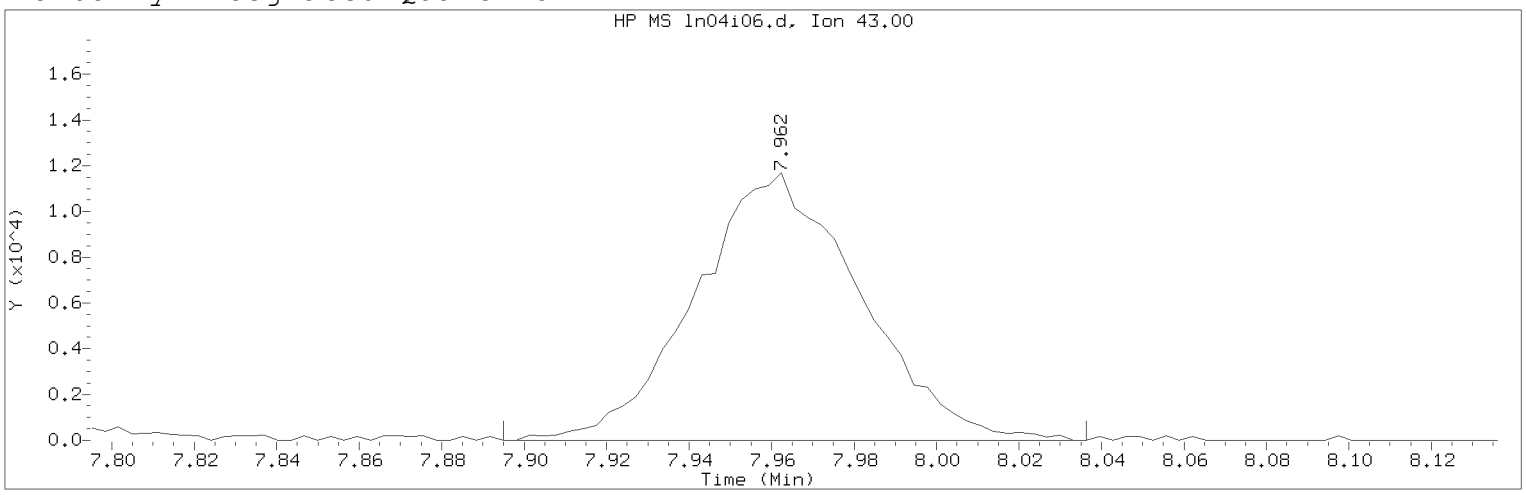
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1058		
Retention Time (minutes)	: 4.885		
Quant Ion	: 57.00		
Area	: 11708		
On-column Amount (ng)	: 3.2297		
Integration start scan	: 1039	Integration stop scan:	1070
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

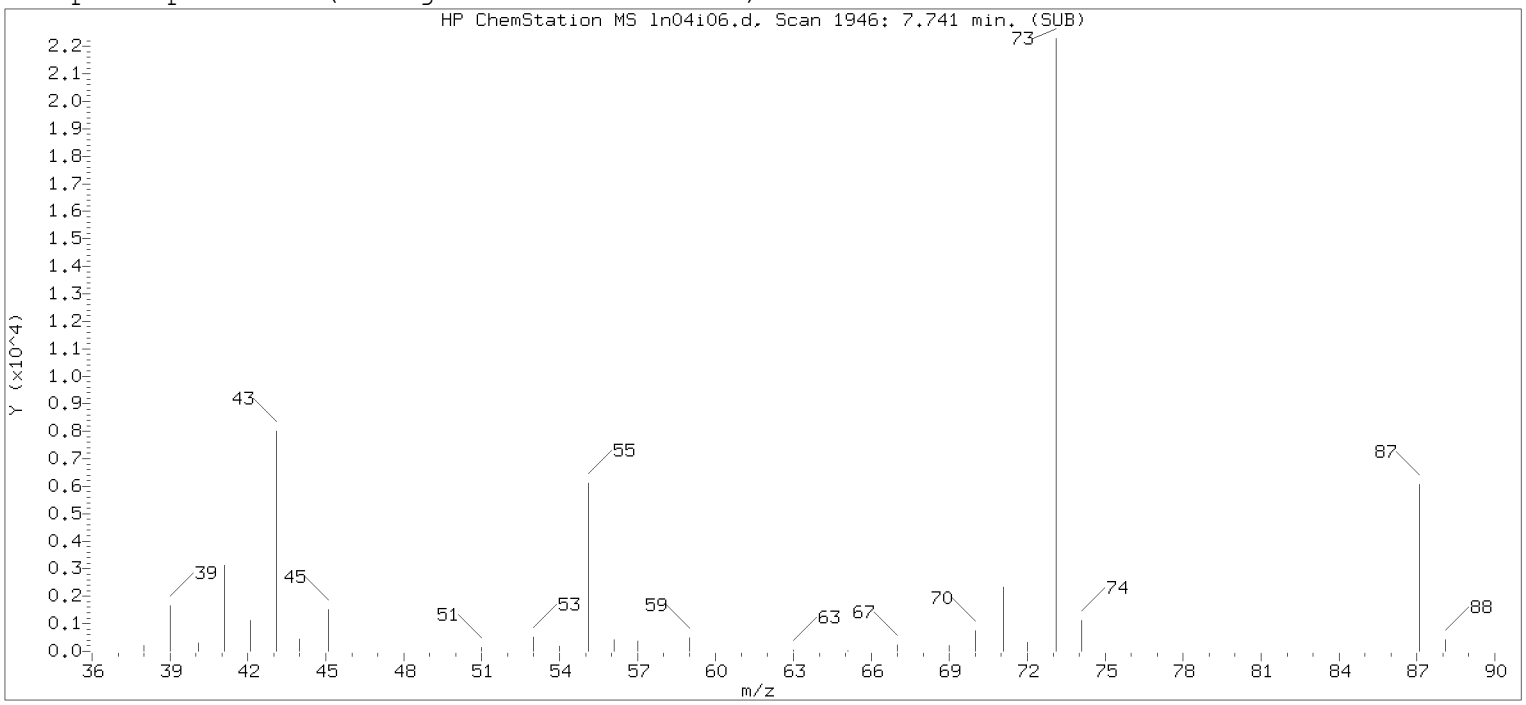
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2015
Retention Time (minutes): 7.962
Quant Ion : 43.00
Area (flag) : 32502MA
On-Column Amount (ng) : 3.9708
Integration start scan : 1993 Integration stop scan: 2037
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

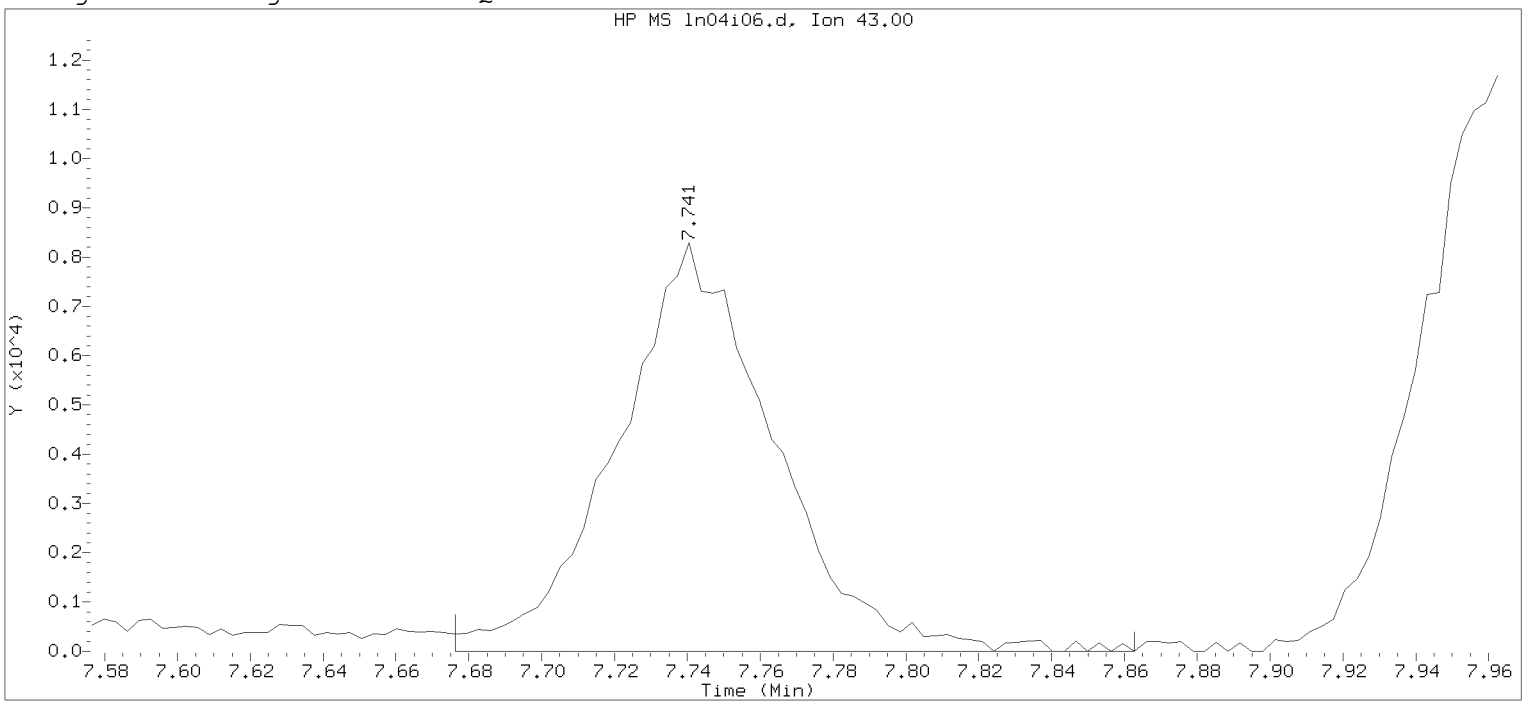
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

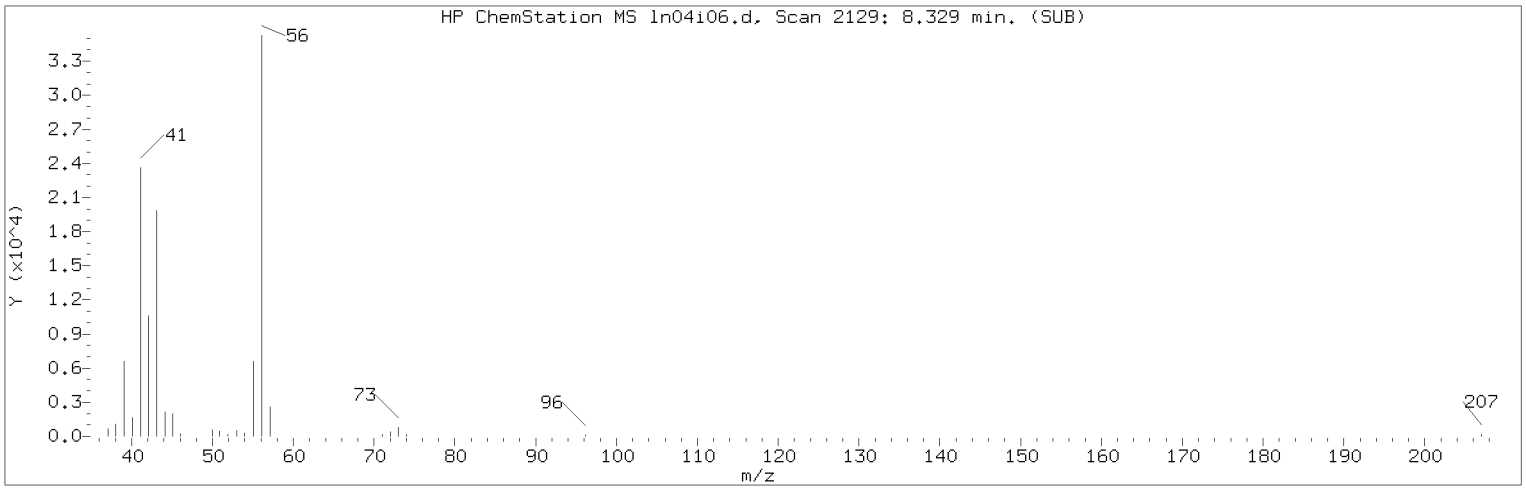
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

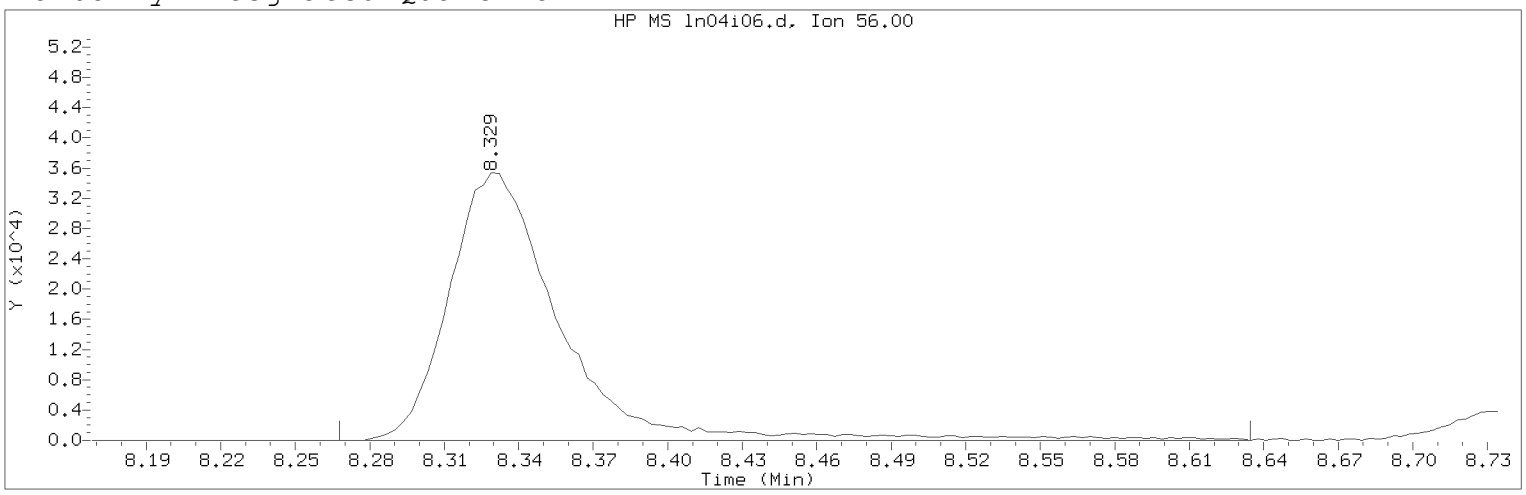
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.741
Quant Ion : 43.00
Area : 24793
On-column Amount (ng) : 4.0913
Integration start scan : 1925 Integration stop scan: 1983
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

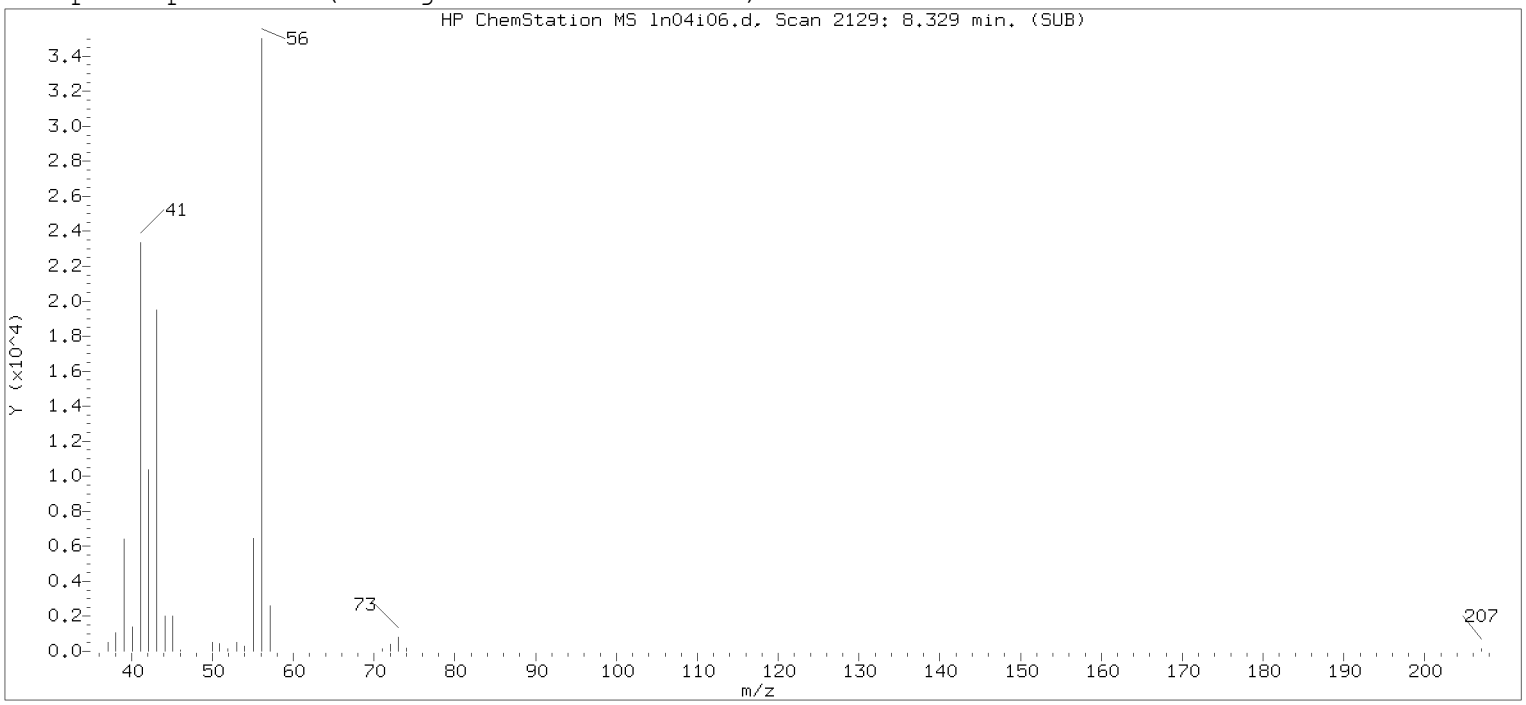
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area (flag) : 110027M
On-Column Amount (ng) : 344.3298
Integration start scan : 2109 Integration stop scan: 2223
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

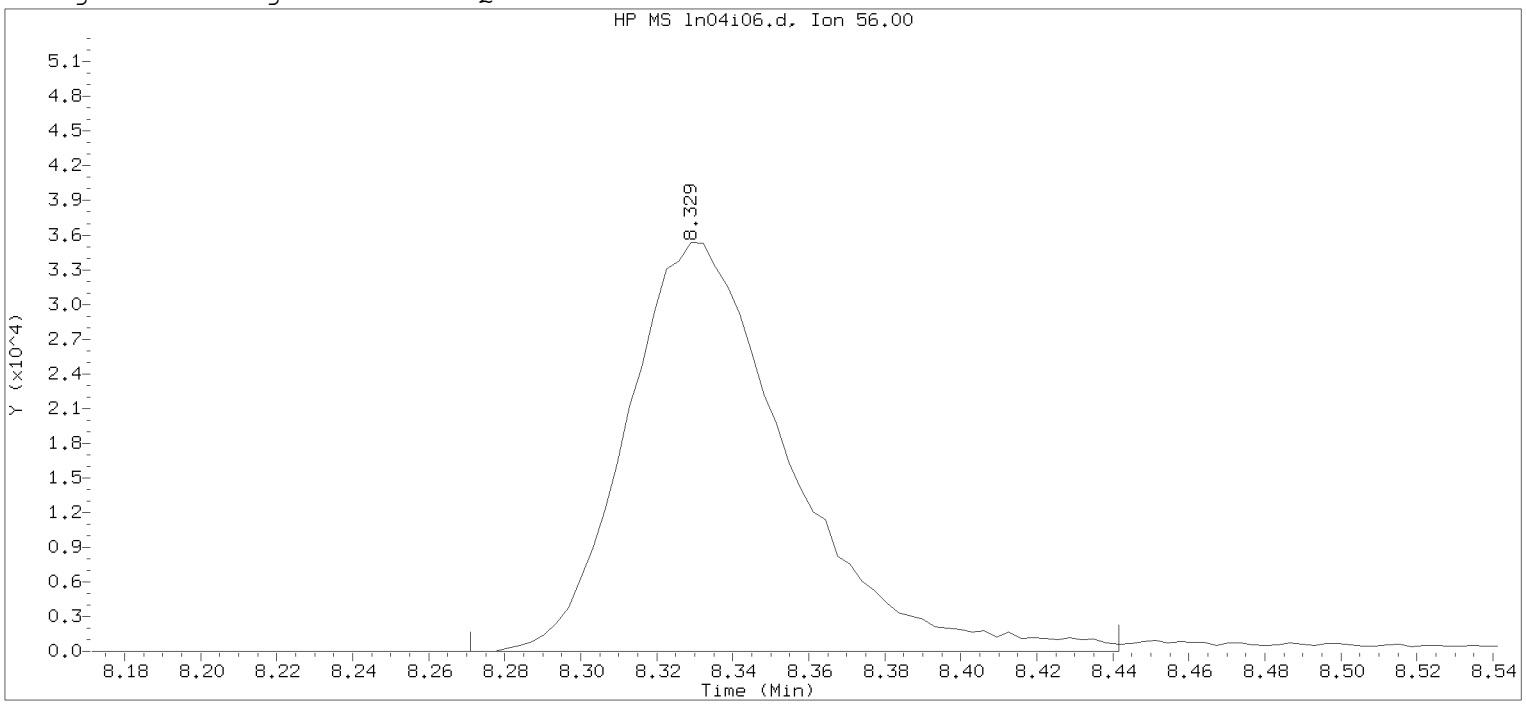
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

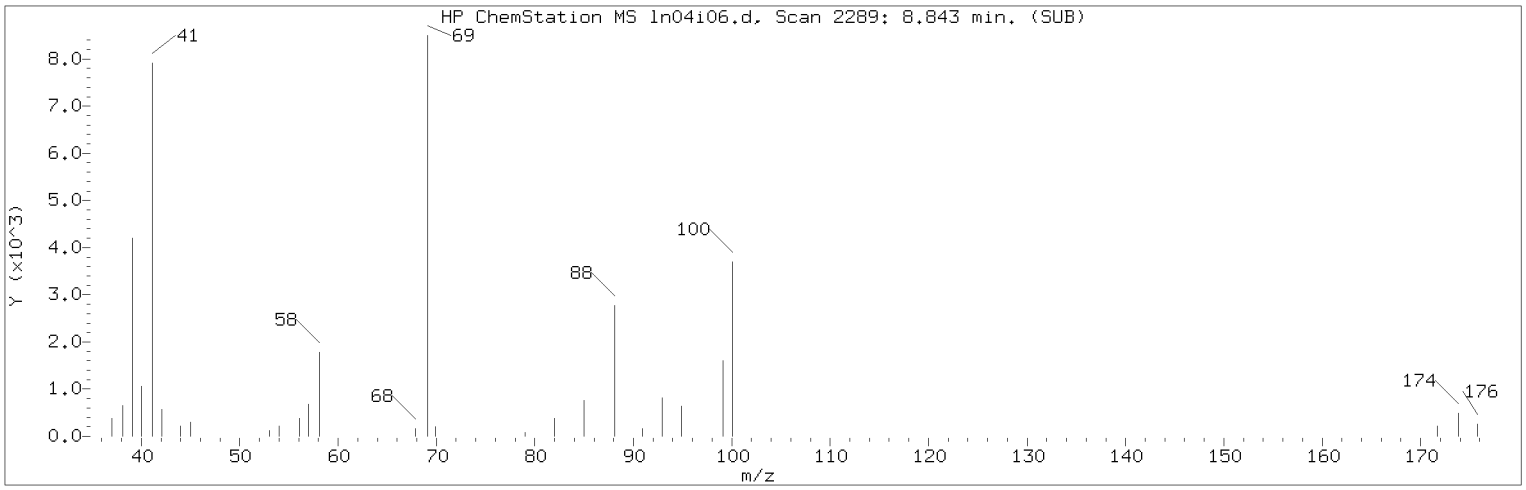
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

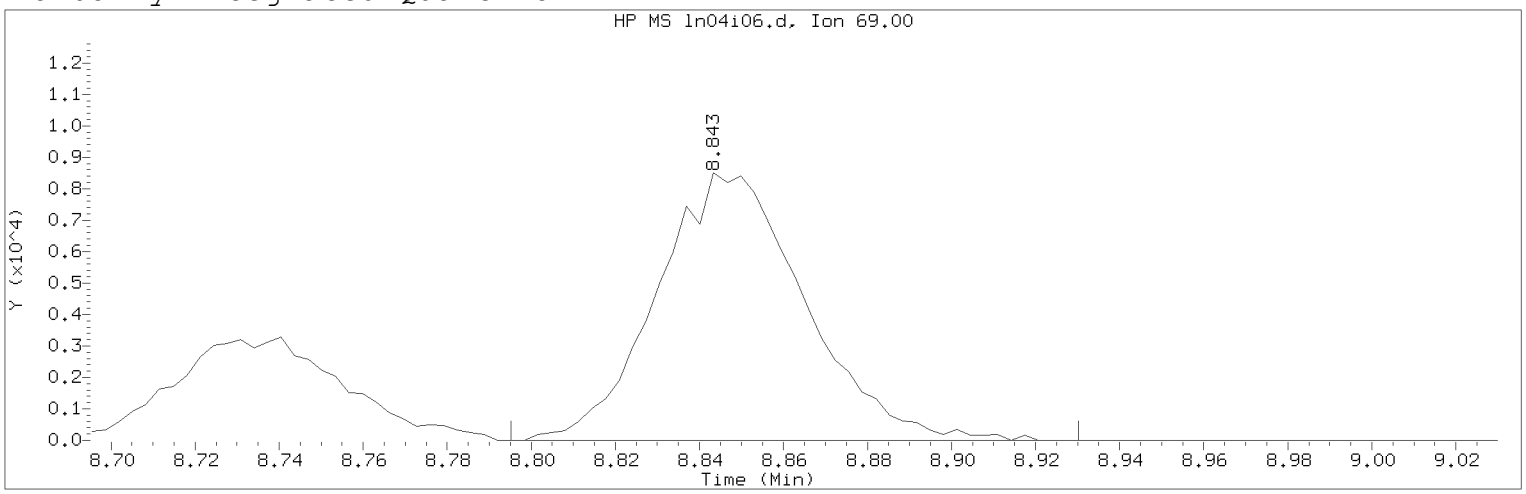
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area : 104688
On-column Amount (ng) : 337.8676
Integration start scan : 2110 Integration stop scan: 2163
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

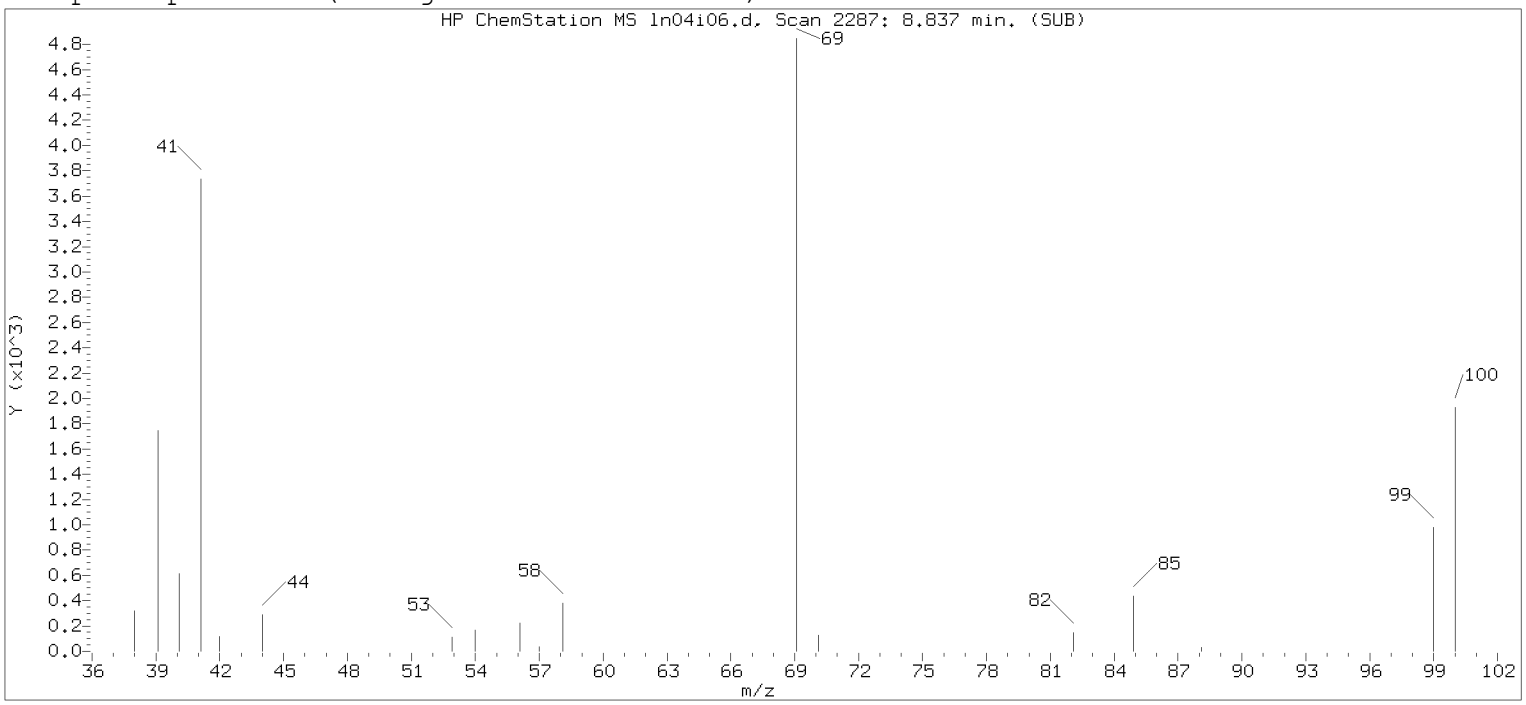
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2289
Retention Time (minutes): 8.843
Quant Ion : 69.00
Area (flag) : 20713M
On-Column Amount (ng) : 3.6110
Integration start scan : 2273 Integration stop scan: 2315
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

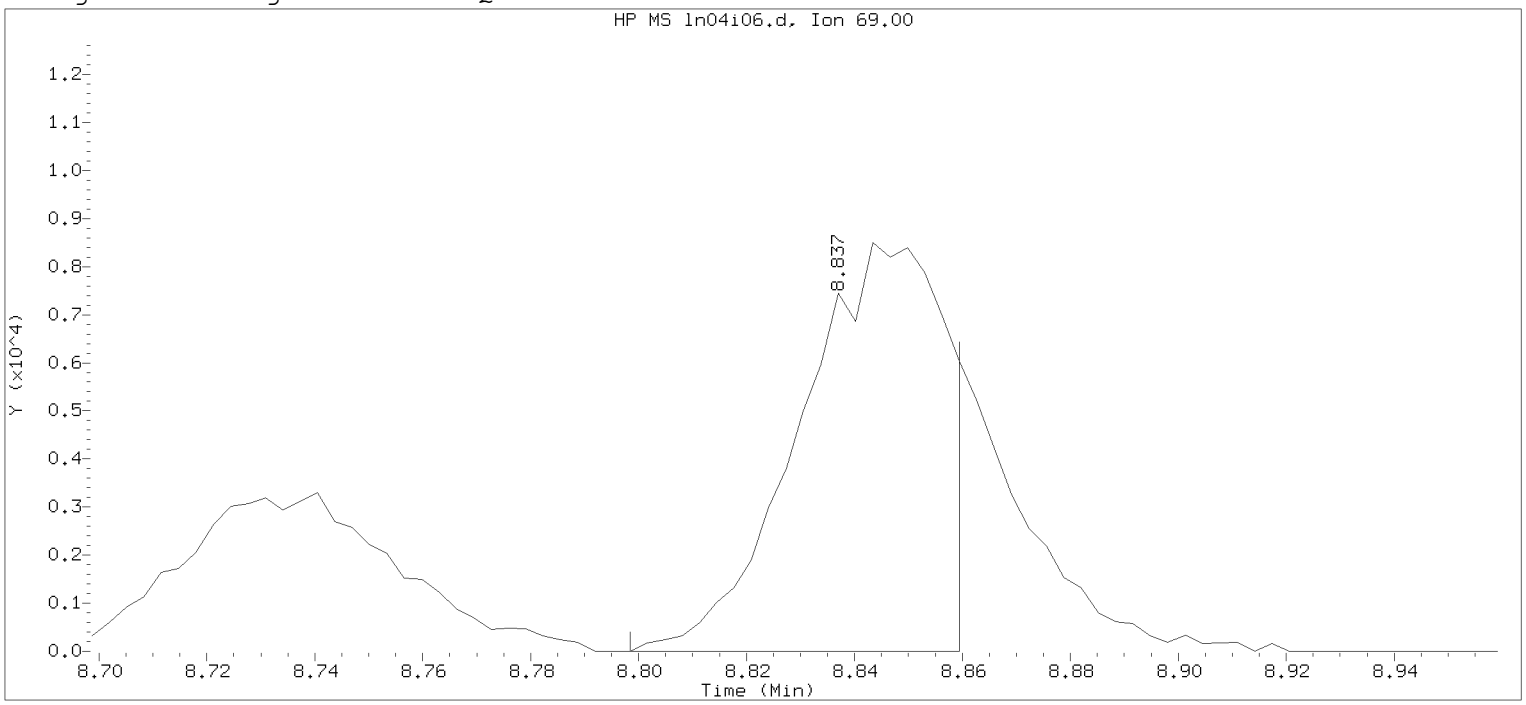
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

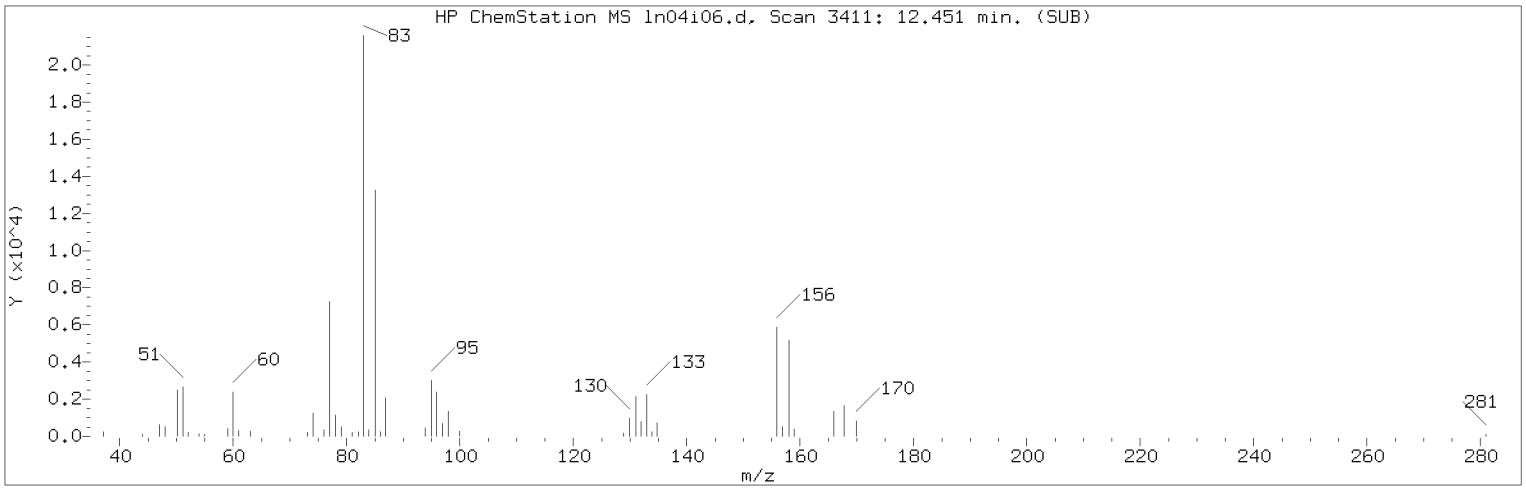
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

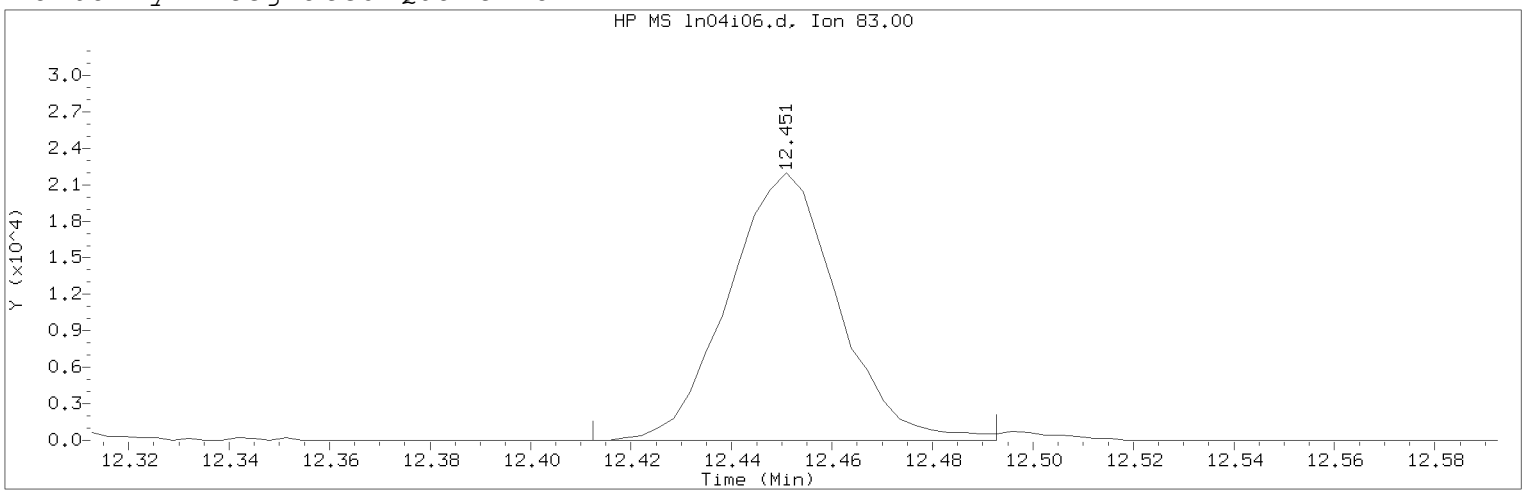
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2287
Retention Time (minutes): 8.837
Quant Ion : 69.00
Area : 15546
On-column Amount (ng) : 2.8548
Integration start scan : 2274 Integration stop scan: 2293
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

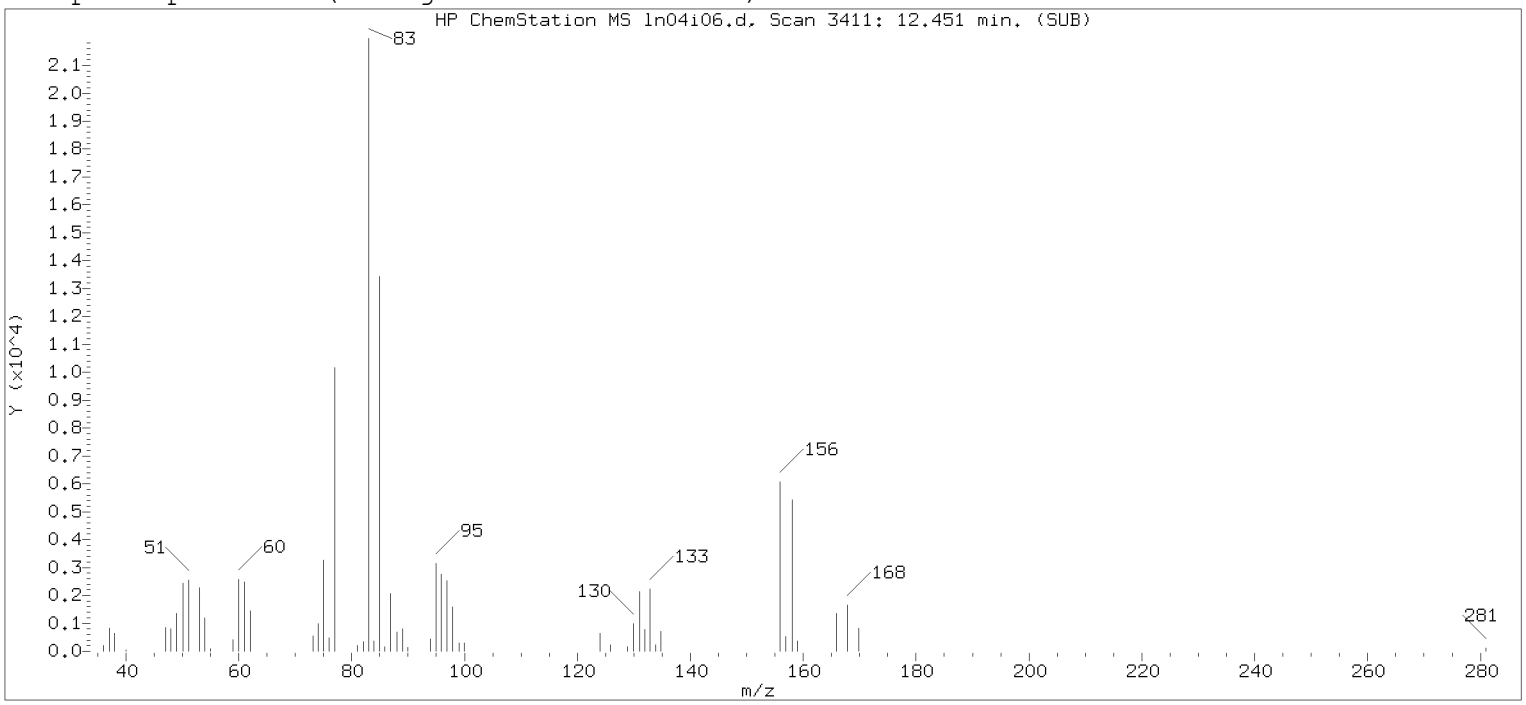
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 33170M
On-Column Amount (ng) : 3.6577
Integration start scan : 3398 Integration stop scan: 3423
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

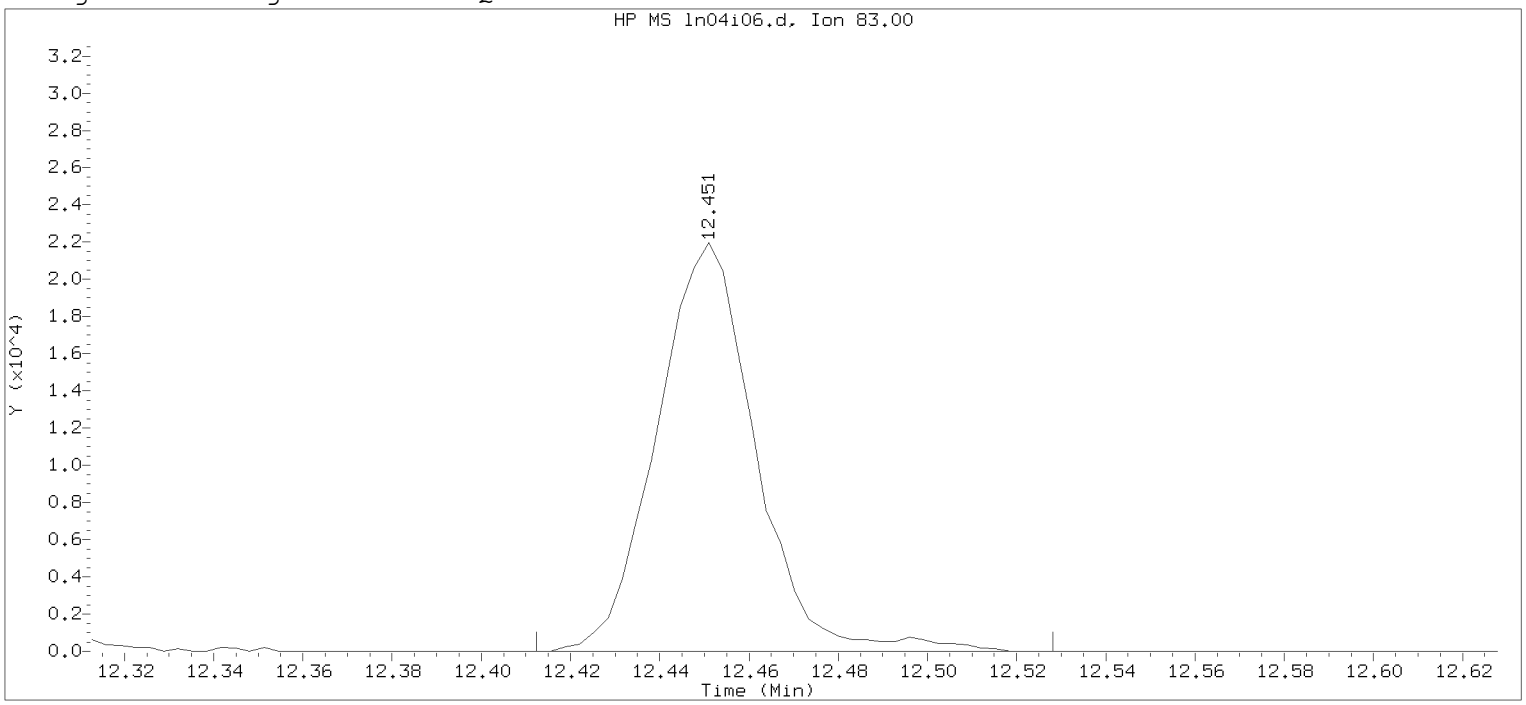
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

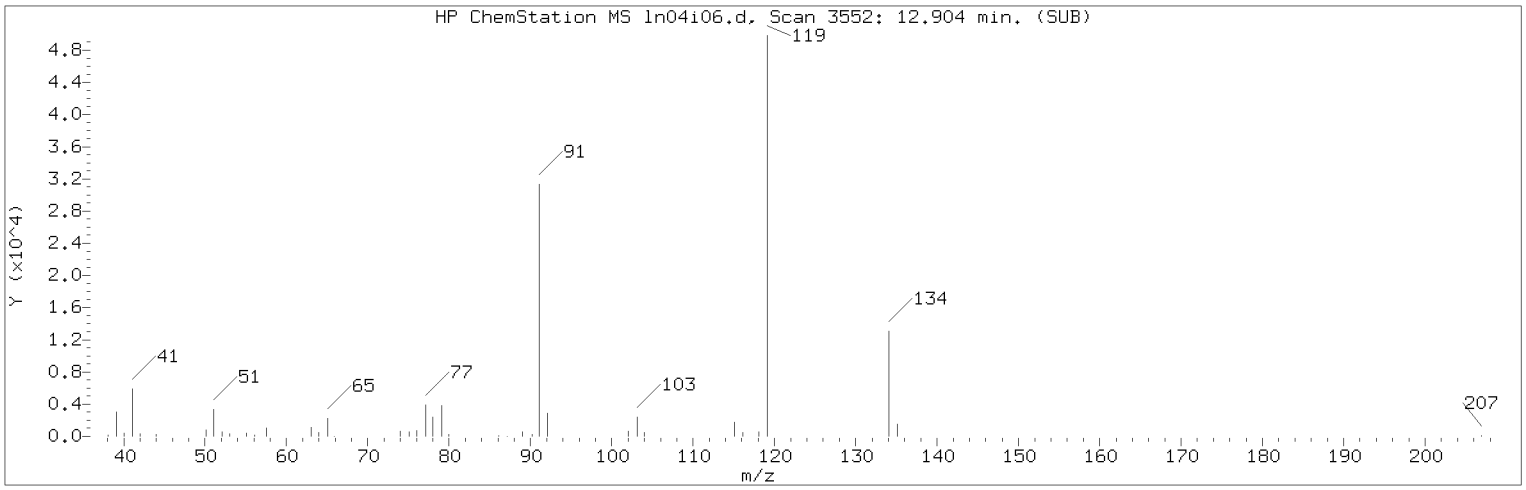
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

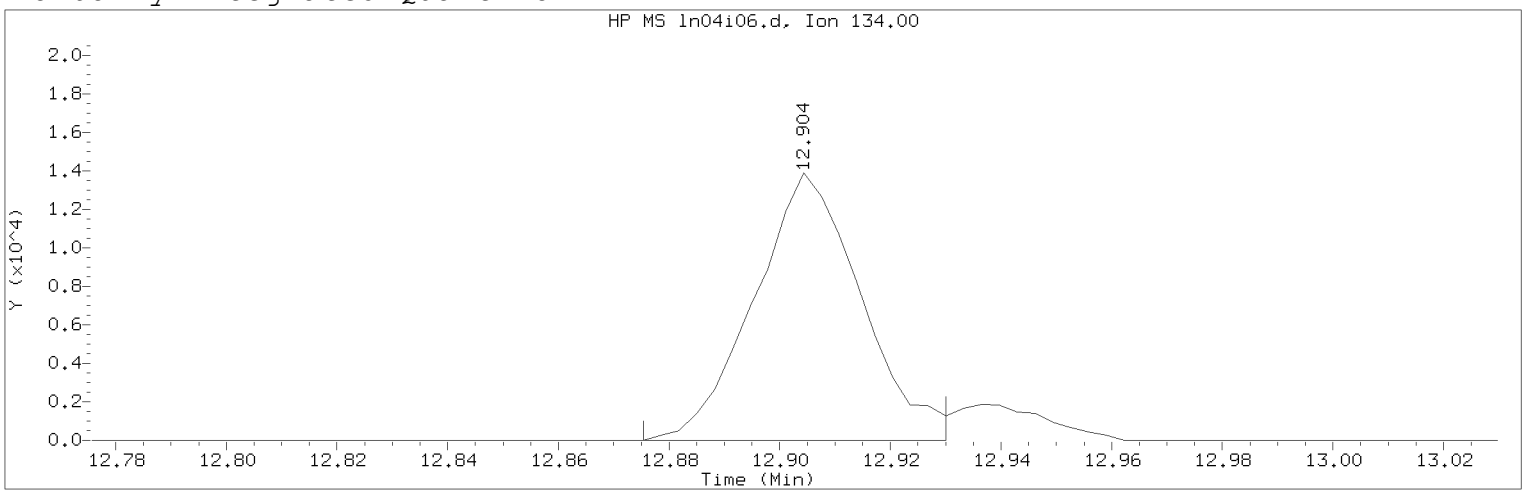
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 33718
On-column Amount (ng) : 3.6520
Integration start scan : 3398 Integration stop scan: 3434
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

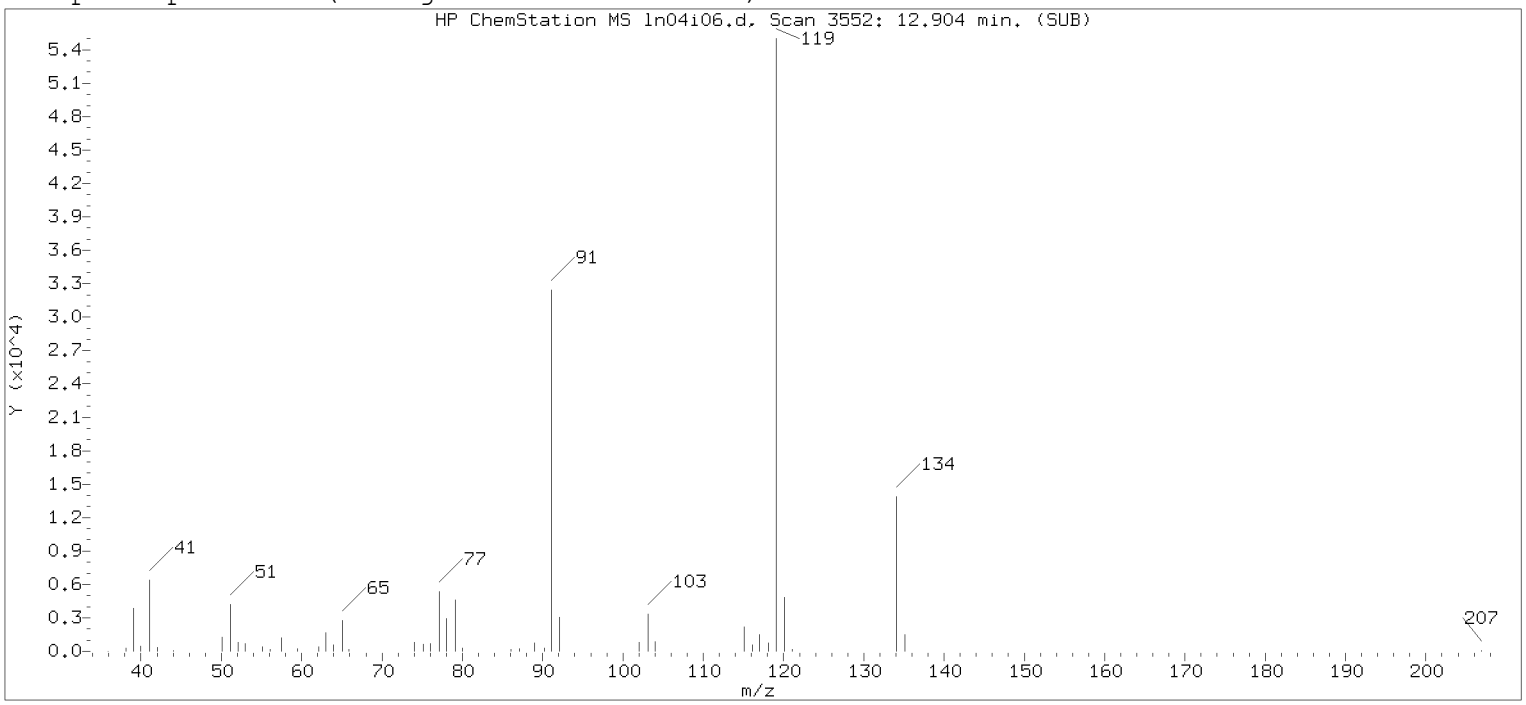
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 18608M
On-Column Amount (ng) : 3.9276
Integration start scan : 3542 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

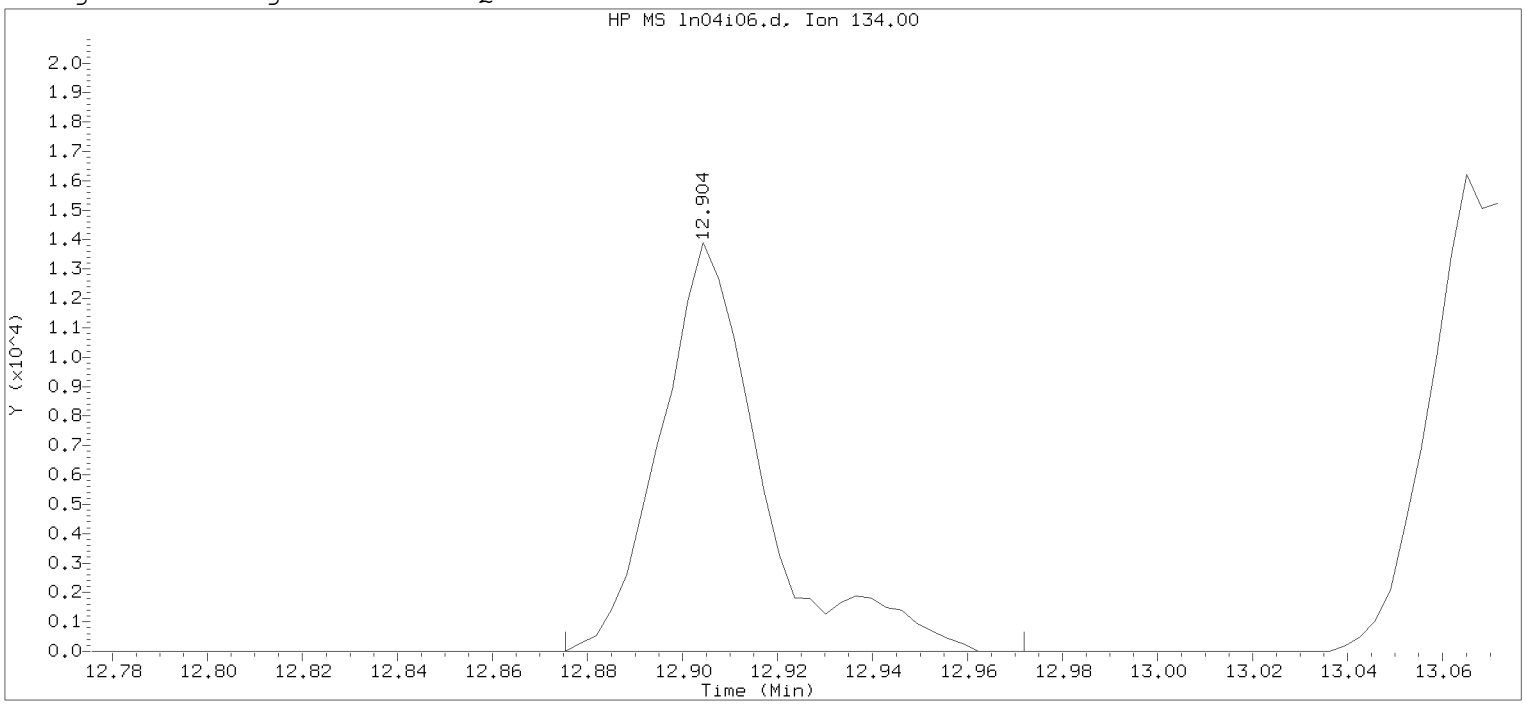
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



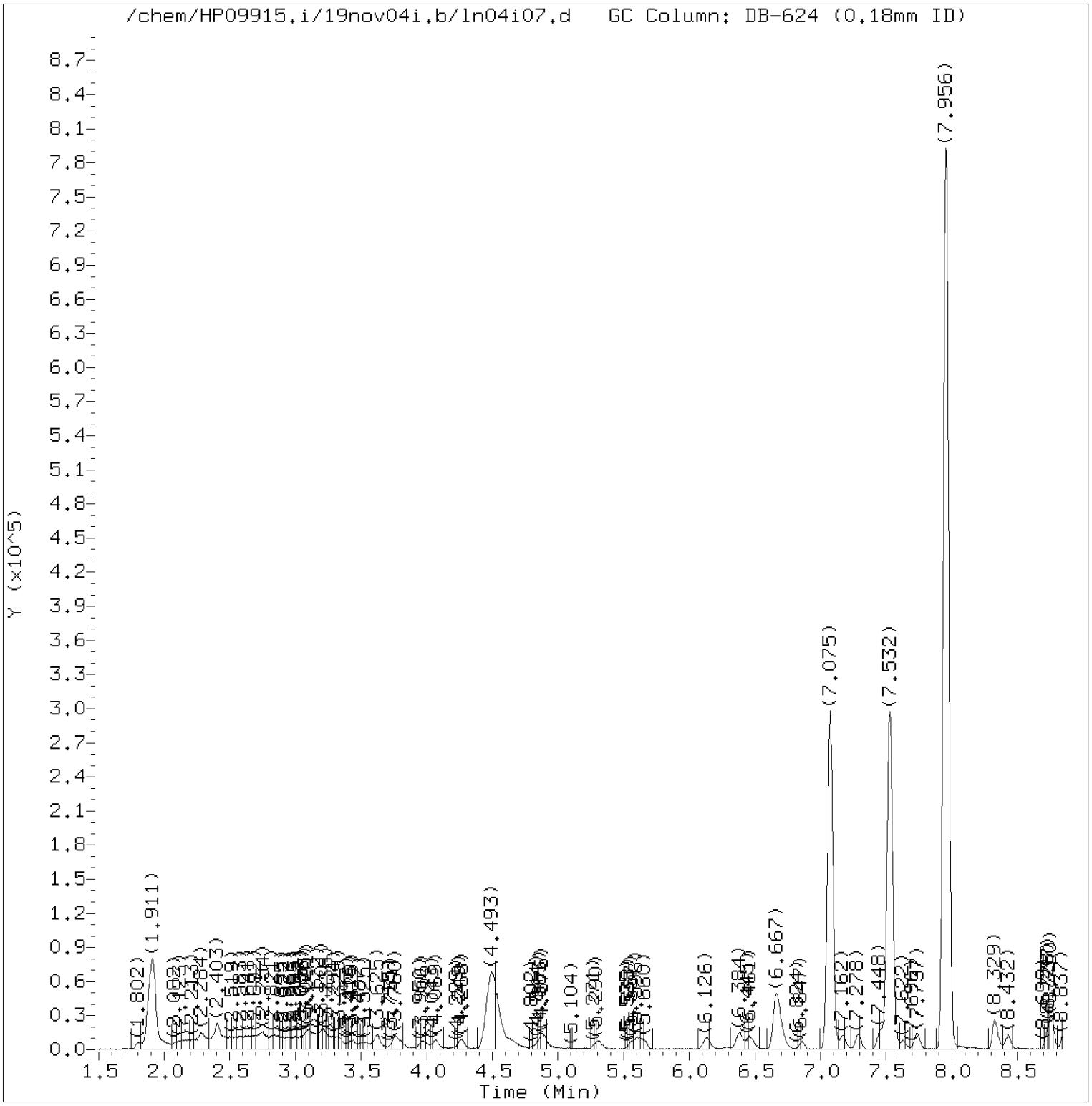
Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 20636
On-column Amount (ng) : 4.1808
Integration start scan : 3542 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

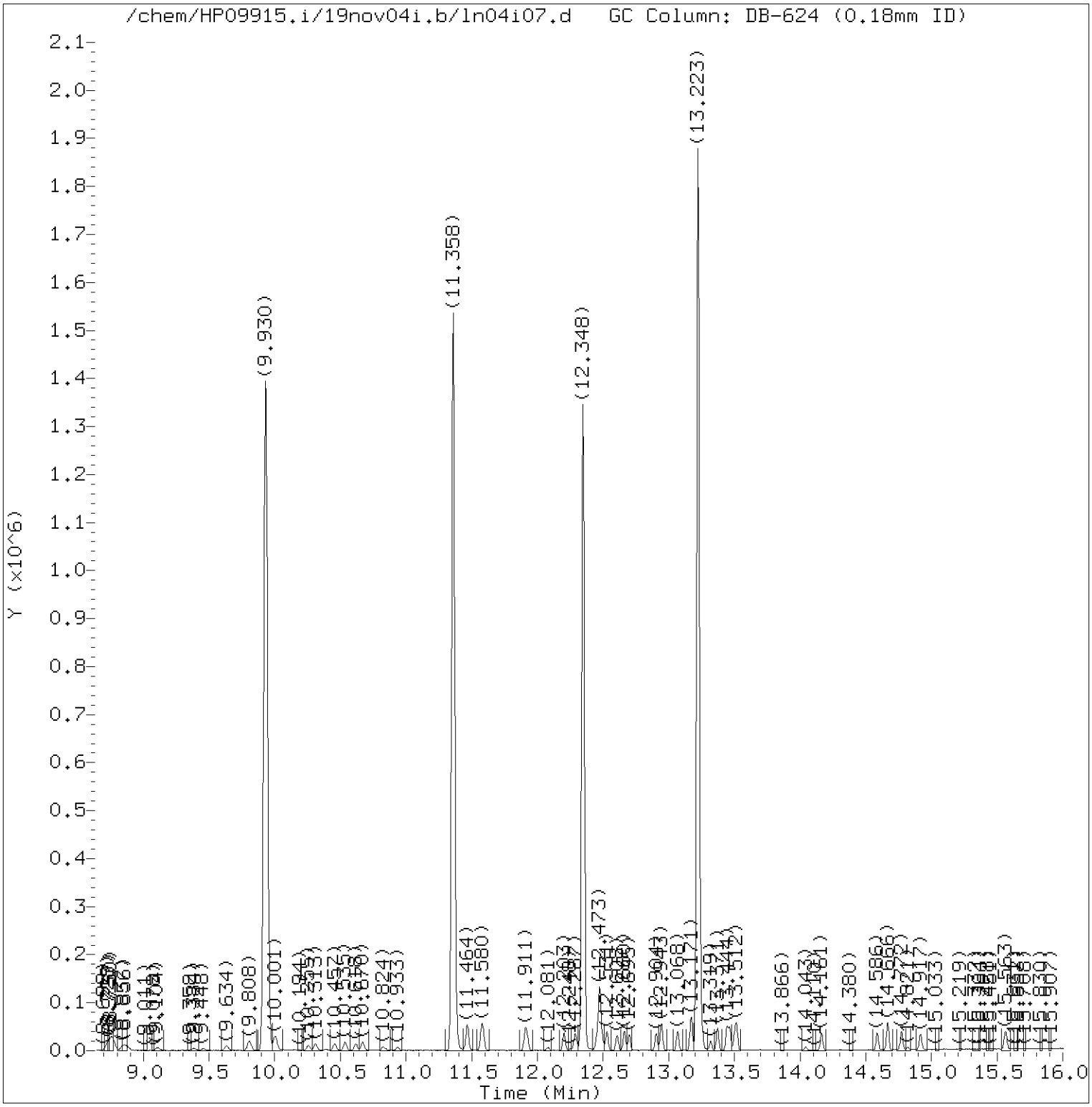
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.078	85	6299	0.794
4) Chloromethane	(2)	2.284	50	6896	0.902
5) 1,3-Butadiene	(2)	2.403	39	7255M	1.143
6) Vinyl Chloride	(2)	2.410	62	7160	0.939
8) Bromomethane	(2)	2.744	94	5605	1.025
9) Chloroethane	(2)	2.840	64	4160M	0.992
10) Dichlorofluoromethane	(2)	3.094	67	10094M	1.004
12) Trichlorofluoromethane	(2)	3.146	101	7129	0.868
11) n-Pentane	(2)	3.204	43	10269	1.058
14) Ethyl ether	(2)	3.429	59	4640M	0.874
15) Freon 123a	(2)	3.516	67	6210	0.940
16) Acrolein	(1)	3.622	56	17644	9.654
17) 1,1-Dichloroethene	(2)	3.750	96	4176	0.866
17) 1,1-Dichloroethene	(2)	3.754	63	2326	0.963
19) Freon 113	(2)	3.779	101	4754	0.864
18) Acetone	(1)	3.831	58	1588M	1.938
22) Methyl Iodide	(2)	3.966	142	8860	0.887
21) 2-Propanol	(1)	4.011	45	12063	20.480
23) Carbon Disulfide	(2)	4.075	76	15443	0.850
27) Methyl Acetate	(2)	4.255	43	6274M	1.011
25) Allyl Chloride	(2)	4.271	41	8168	0.945
28) Methylene Chloride	(2)	4.474	84	5404	0.942
29)*t-Butyl alcohol-d10	(1)	4.496	65	243591	250.000
30) t-Butyl alcohol	(1)	4.622	59	19461	18.976
31) Acrylonitrile	(2)	4.856	53	2960	0.886
33) Methyl Tertiary Butyl Ether	(2)	4.879	73	16848	0.920
32) trans-1,2-Dichloroethene	(2)	4.885	96	5035	0.903
34) n-Hexane	(2)	5.316	57	7475M	0.862
36) 1,1-Dichloroethane	(2)	5.548	63	8436	0.867
38) di-Isopropyl ether	(2)	5.606	45	16654	0.888
39) 2-Chloro-1,3-butadiene	(2)	5.663	53	7448	0.853
40) Ethyl t-butyl ether	(2)	6.126	59	16060	0.882
43) 1,2-Dichloroethene (Total)	(2)		96	10762	1.818
44) 2-Butanone	(2)	6.361	43	8098	1.889
42) cis-1,2-Dichloroethene	(2)	6.377	96	5727	0.915
45) 2,2-Dichloropropane	(2)	6.390	77	6419M	0.849
47) Propionitrile	(1)	6.461	54	24221	18.955
48) Methacrylonitrile	(2)	6.670	67	32346	8.977

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	2849	0.858
50) Tetrahydrofuran	(1)	6.728	71	2319	2.009
51) Chloroform	(2)	6.860	83	8108	0.871
52)$Dibromofluoromethane	(2)	7.075	113	273696	49.231
52)$Dibromofluoromethane	(2)	7.075	111	279412	49.293
53) 1,1,1-Trichloroethane	(2)	7.078	97	6588	0.830
54) Cyclohexane	(2)	7.171	56	8997	0.847
54) Cyclohexane	(2)	7.178	84	7859	0.852
54) Cyclohexane	(2)	7.178	69	2772	0.844
56) Carbon Tetrachloride	(2)	7.284	117	5549	0.824
55) 1,1-Dichloropropene	(2)	7.287	75	6611	0.860
58) Isobutyl Alcohol	(1)	7.458	41	16978	49.195
57)$1,2-Dichloroethane-d4	(2)	7.528	102	69641	49.151
57)$1,2-Dichloroethane-d4	(2)	7.528	65	311703	49.366
57)$1,2-Dichloroethane-d4	(2)	7.535	104	44286	48.935
60) Benzene	(2)	7.551	78	20445	0.884
61) 1,2-Dichloroethane	(2)	7.631	62	7810	1.050
61) 1,2-Dichloroethane	(2)	7.631	98	696	0.945
65) t-Amyl methyl ether	(2)	7.741	73	16286	0.891
67) n-Heptane	(2)	7.956	43	7535M	0.930
66)*Fluorobenzene	(2)	7.959	96	1137124	50.000
69) n-Butanol	(1)	8.329	56	24322	81.882
71) Trichloroethene	(2)	8.432	95	5231	0.898
72) Methylcyclohexane	(2)	8.737	83	9247	0.856
72) Methylcyclohexane	(2)	8.731	98	4032	0.825
73) 1,2-Dichloropropane	(2)	8.760	63	5229	0.890
76) Methyl Methacrylate	(2)	8.837	69	4607M	0.811
75) 1,4-Dioxane	(1)	8.856	88	3548M	43.457
74) Dibromomethane	(2)	8.866	93	3298	0.868
78) Bromodichloromethane	(2)	9.107	83	5648	0.828
79) 2-Nitropropane	(2)	9.384	41	3333	1.614
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	2007	0.796
81) cis-1,3-Dichloropropene	(2)	9.638	75	6973	0.770
82) 4-Methyl-2-pentanone	(2)	9.808	43	16006	1.769
83)$Toluene-d8	(3)	9.930	98	1156948	50.253
83)$Toluene-d8	(3)	9.930	100	746174	50.033
88) Toluene	(3)	10.007	92	12902	0.894
90) 1,3-Dichloropropene (total)	(3)		100	13101	1.518

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.255	75	6128	0.748
91) Ethyl Methacrylate	(3)	10.313	69	7873	0.791
92) 1,1,2-Trichloroethane	(3)	10.461	97	4897	0.895
93) Tetrachloroethene	(3)	10.538	166	5565	0.910
94) 1,3-Dichloropropane	(3)	10.618	76	8504	0.910
96) 2-Hexanone	(3)	10.670	43	11811	1.777
97) Dibromochloromethane	(3)	10.827	129	4109	0.733
99) 1,2-Dibromoethane	(3)	10.937	107	5163	0.869
100)*Chlorobenzene-d5	(3)	11.358	117	879875	50.000
101) 1-Chlorohexane	(3)	11.361	91	8103	1.045
102) Chlorobenzene	(3)	11.383	112	14367	0.880
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	4138	0.769
104) Ethylbenzene	(3)	11.464	91	24192	0.877
106) m+p-Xylene	(3)	11.583	106	18914	1.743
108) Xylene (Total)	(3)		106	28415	2.629
107) o-Xylene	(3)	11.908	106	9501	0.886
109) Styrene	(3)	11.917	104	14106	0.796
110) Bromoform	(3)	12.081	173	2729	0.652
111) Isopropylbenzene	(3)	12.203	105	22719	0.845
112) Cyclohexanone	(1)	12.287	55	15983	49.985
114)$4-Bromofluorobenzene	(3)	12.348	95	436282	50.046
114)$4-Bromofluorobenzene	(3)	12.348	174	360511	49.883
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	7596	0.849
115) Bromobenzene	(4)	12.461	156	6426	0.903
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	22650	8.211
117) 1,2,3-Trichloropropane	(4)	12.496	110	2425	0.884
119) n-Propylbenzene	(4)	12.528	91	27655	0.890
120) 2-Chlorotoluene	(4)	12.612	126	6138M	0.929
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	18836	0.834
121) 4-Chlorotoluene	(4)	12.702	126	6403M	0.931
124) tert-Butylbenzene	(4)	12.904	134	4060M	0.869
125) Pentachloroethane	(4)	12.940	167	2751	0.684
126) 1,2,4-Trimethylbenzene	(4)	12.943	105	20498	0.861
127) sec-Butylbenzene	(4)	13.065	105	24344	0.873
129) 1,3-Dichlorobenzene	(4)	13.165	146	12468	0.954
130) p-Isopropyltoluene	(4)	13.174	119	21126	0.876
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	473433	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	13174	0.972

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

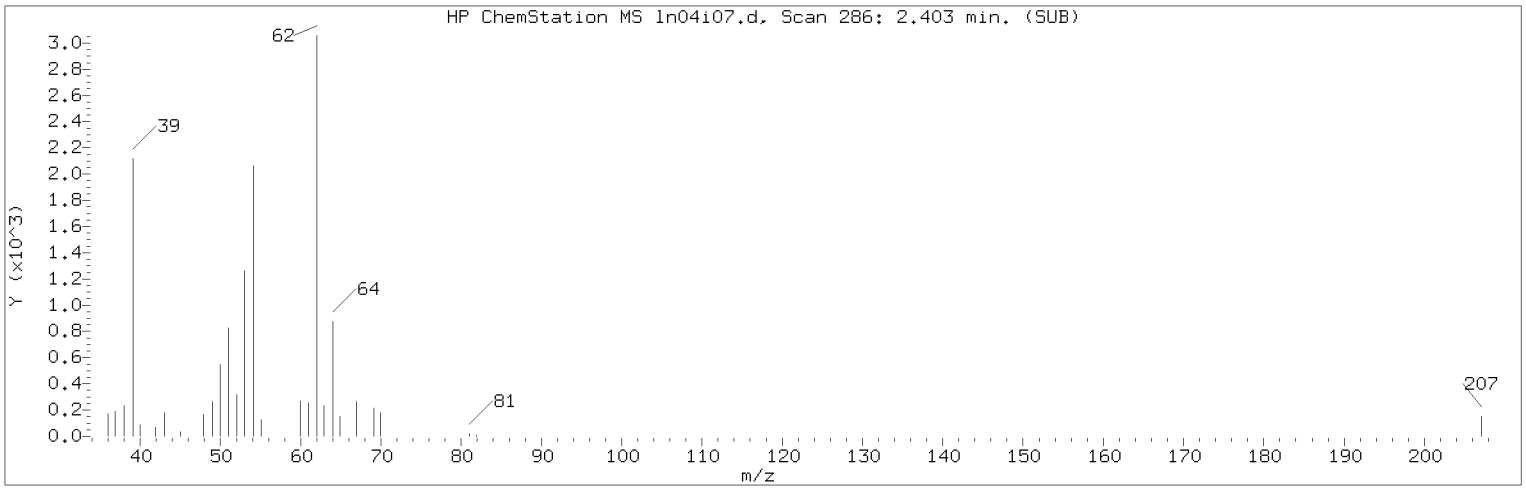
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	22457	0.890
135) Benzyl Chloride	(4)	13.319	91	11494	0.602
136) 1,3-Diethylbenzene	(4)	13.374	119	13985	0.891
141) Diethylbenzene (total)	(4)		100	41423	2.726
137) 1,4-Diethylbenzene	(4)	13.441	119	15446	0.929
139) n-Butylbenzene	(4)	13.464	92	11964M	0.970
138) 1,2-Dichlorobenzene	(4)	13.502	146	12171	0.943
140) 1,2-Diethylbenzene	(4)	13.515	119	11992	0.906
142) 1,2-Dibromo-3-chloropropane	(4)	14.046	75	1565	0.799
144) 1,3,5-Trichlorobenzene	(4)	14.161	180	10166	1.026
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	10347	1.074
147) Hexachlorobutadiene	(4)	14.666	225	9370	2.059
148) Naphthalene	(4)	14.772	128	28210	0.910
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	10052	1.072
150) 2-Methylnaphthalene	(4)	15.567	142	18783M	0.984

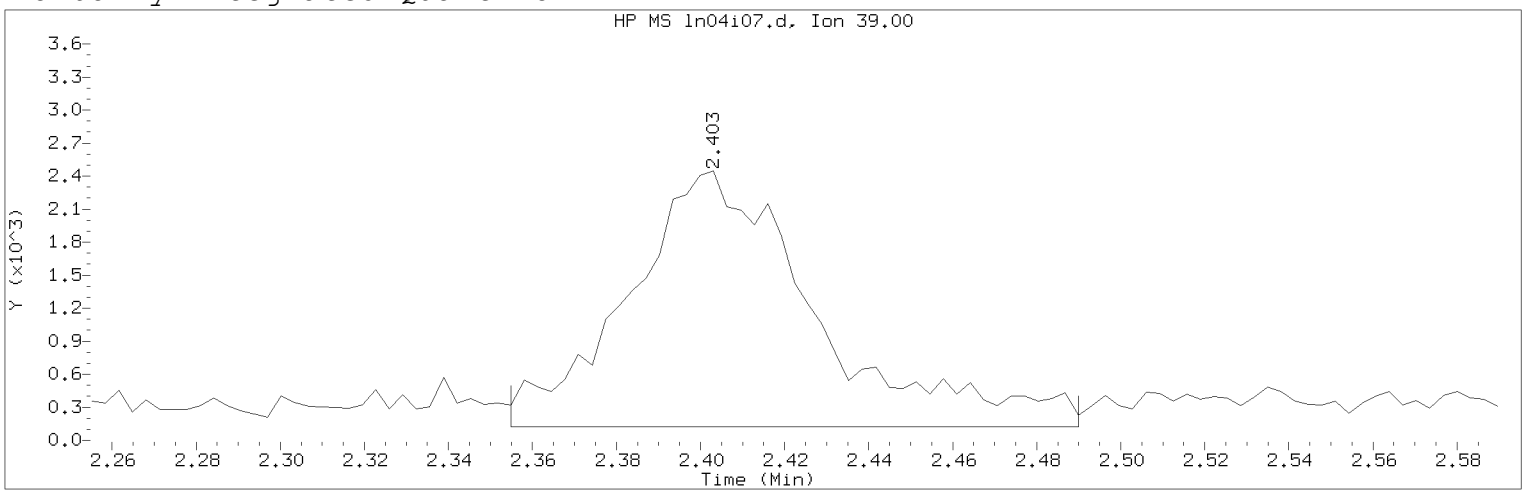
M = Compound was manually integrated.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

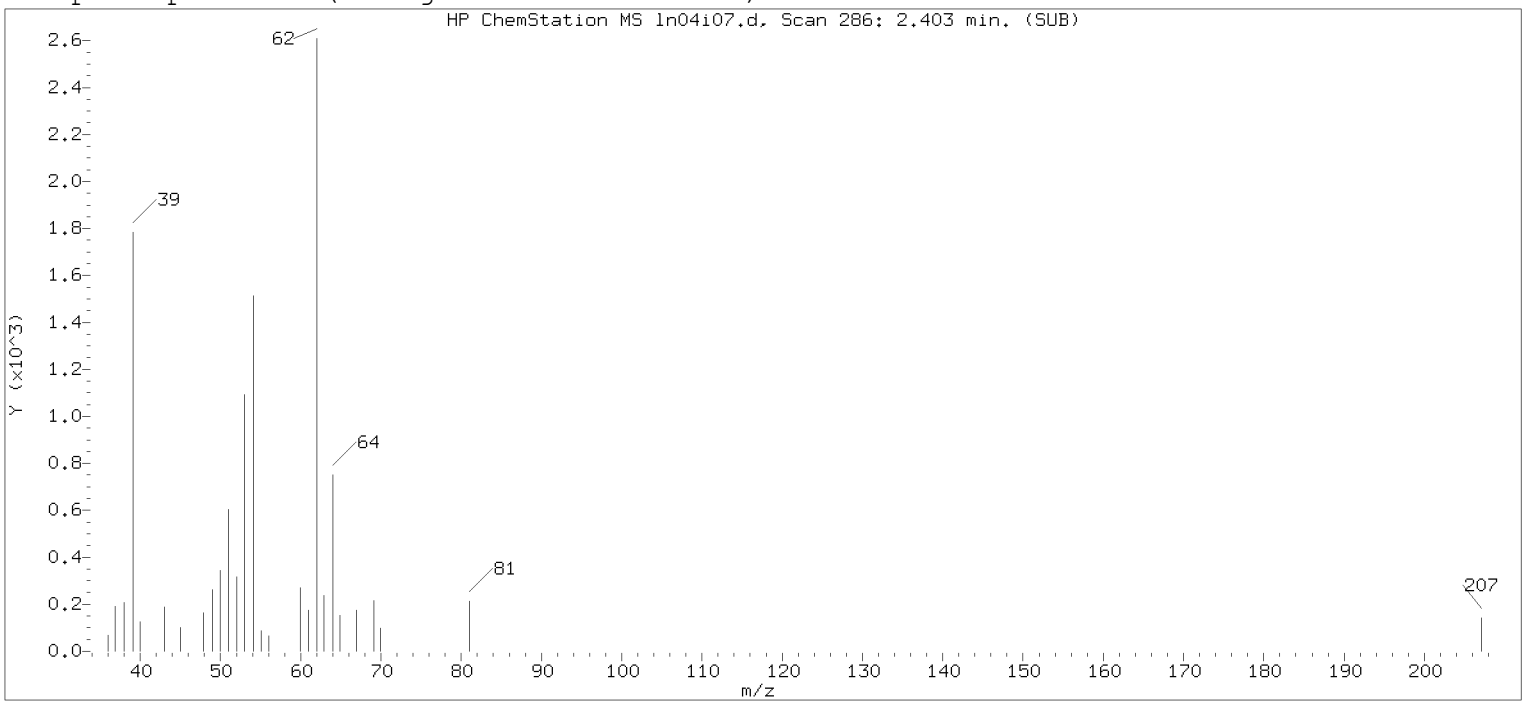
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 286
Retention Time (minutes): 2.403
Quant Ion : 39.00
Area (flag) : 7255M
On-Column Amount (ng) : 1.1432
Integration start scan : 270 Integration stop scan: 312
Y at integration start : 120 Y at integration end: 120

Reason for manual integration: improper integration

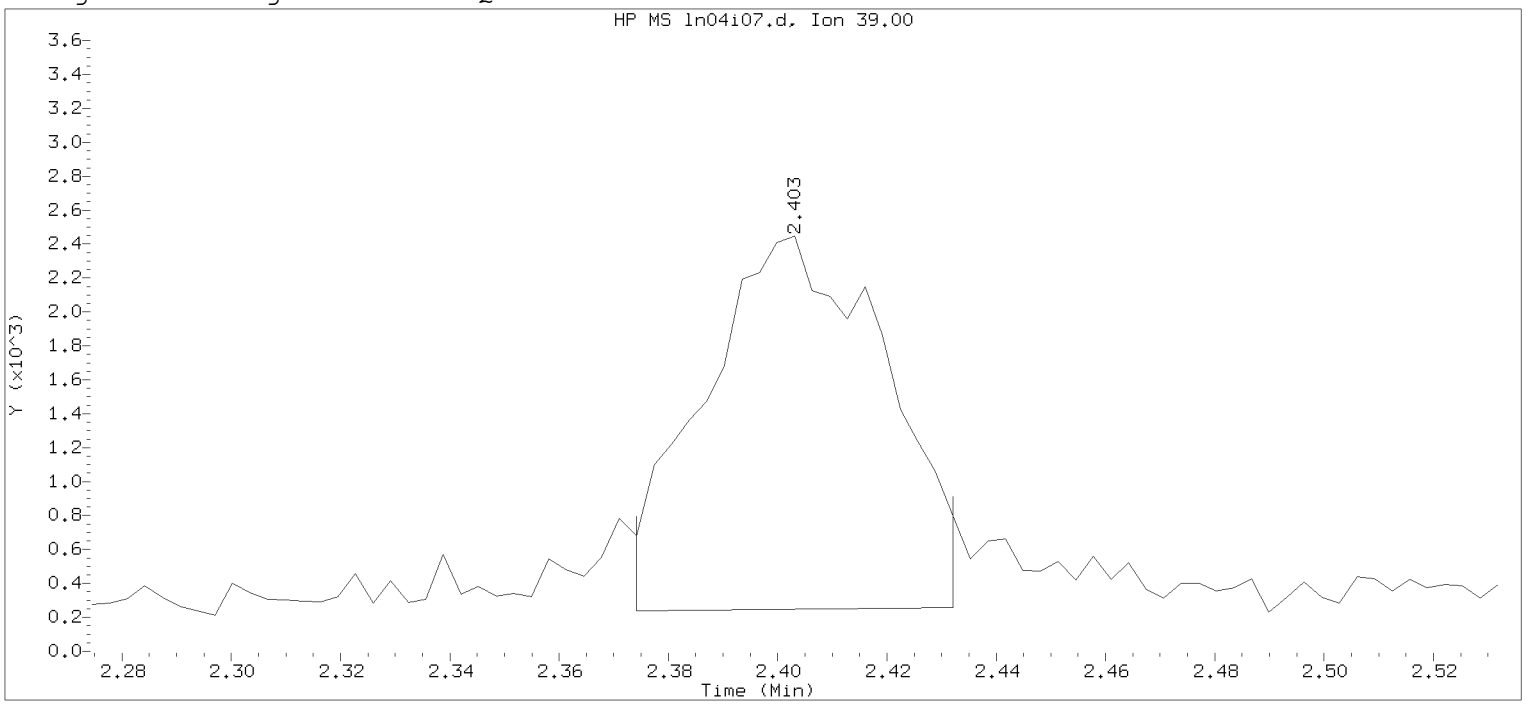
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

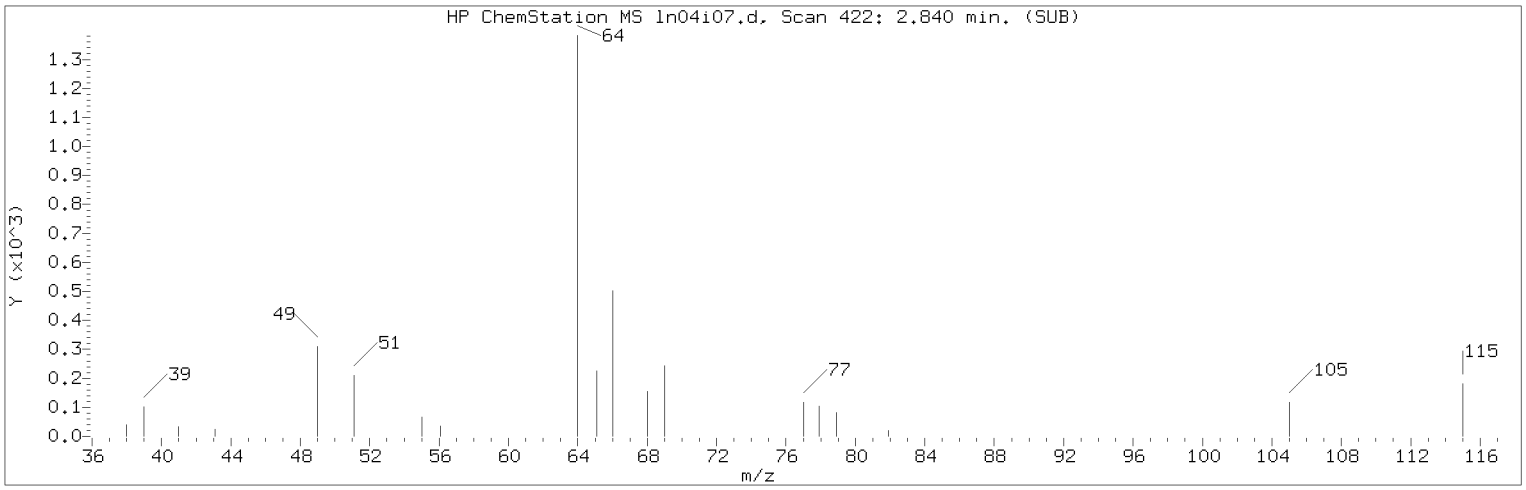
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

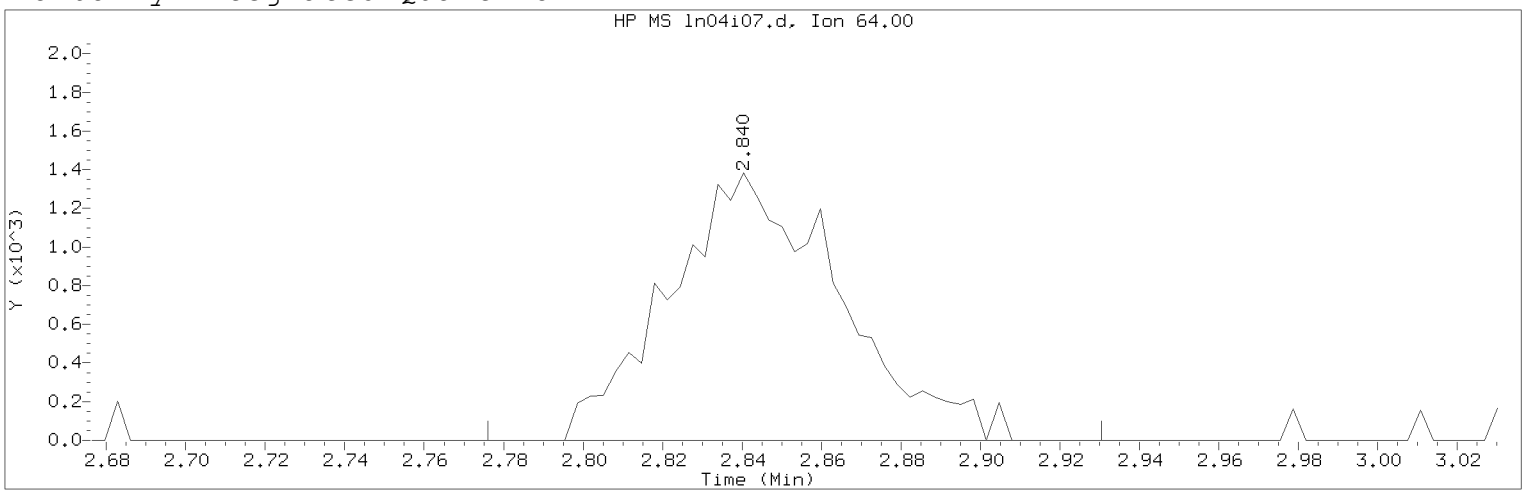
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 286
Retention Time (minutes): 2.403
Quant Ion : 39.00
Area : 5073
On-column Amount (ng) : 0.8493
Integration start scan : 276 Integration stop scan: 294
Y at integration start : 239 Y at integration end: 258

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

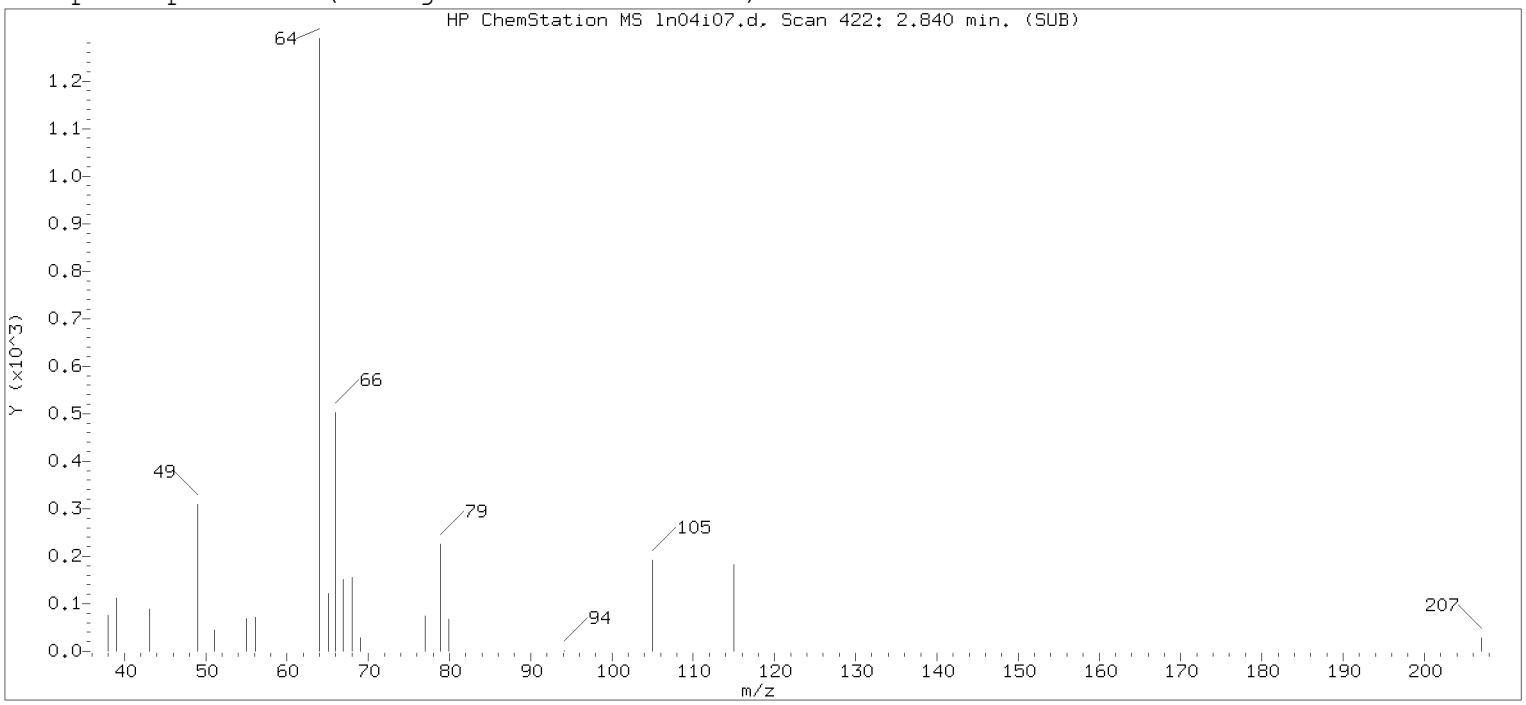
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 422
Retention Time (minutes): 2.840
Quant Ion : 64.00
Area (flag) : 4160M
On-Column Amount (ng) : 0.9924
Integration start scan : 401 Integration stop scan: 449
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

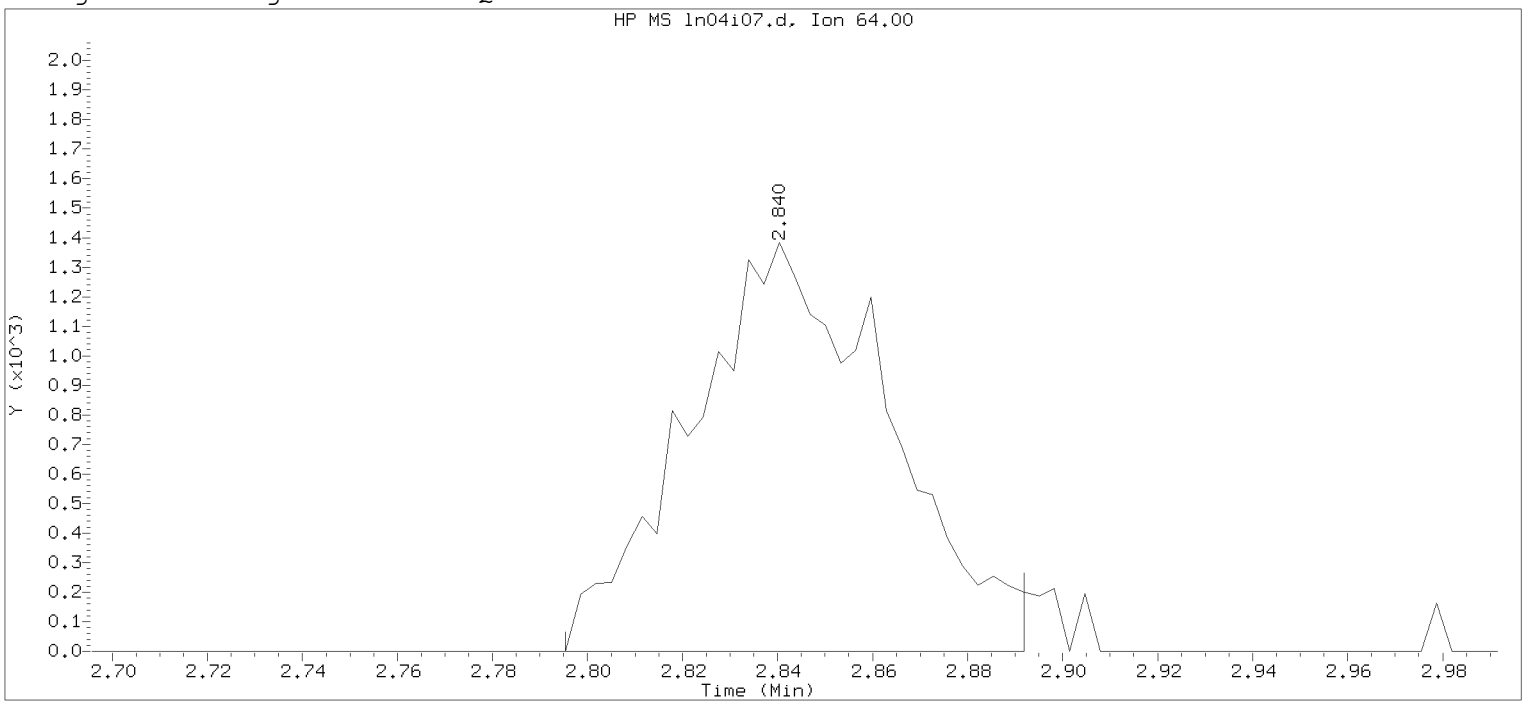
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

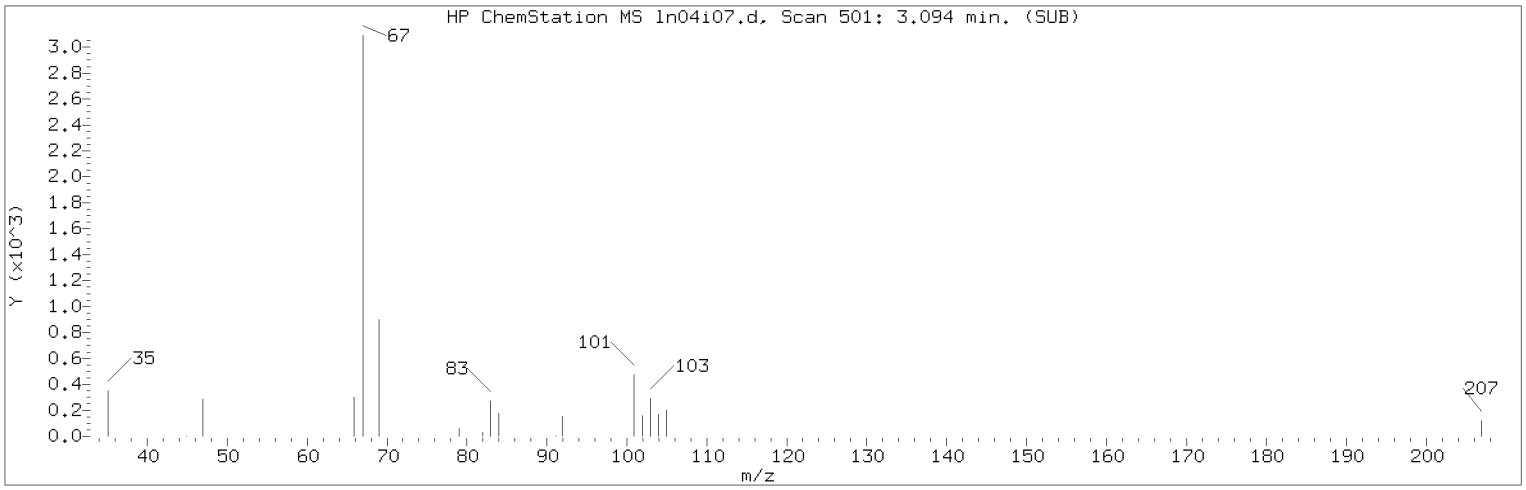
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

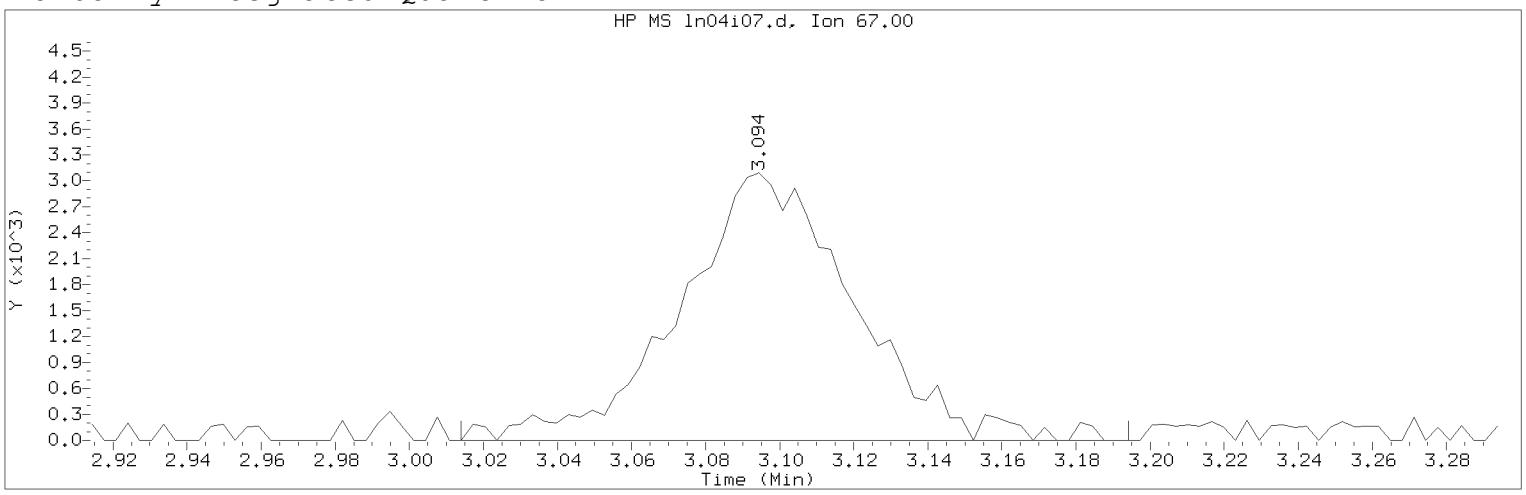
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 422
Retention Time (minutes): 2.840
Quant Ion : 64.00
Area : 4026
On-column Amount (ng) : 0.9650
Integration start scan : 407 Integration stop scan: 437
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

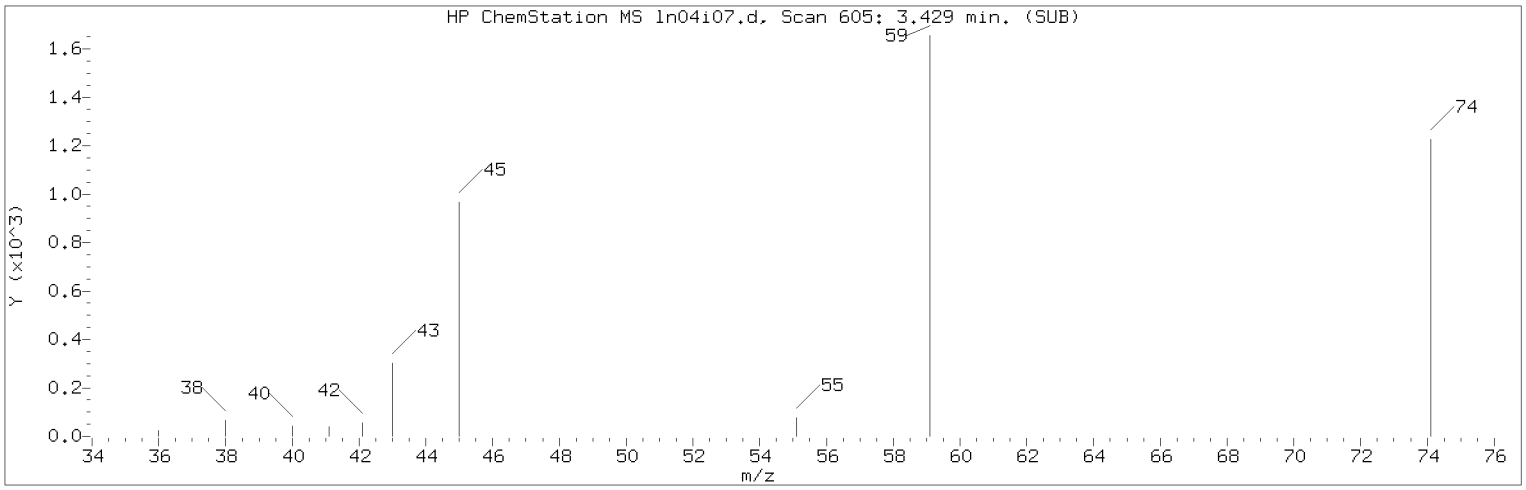
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 501
Retention Time (minutes): 3.094
Quant Ion : 67.00
Area (flag) : 10094M
On-Column Amount (ng) : 1.0040
Integration start scan : 475 Integration stop scan: 531
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

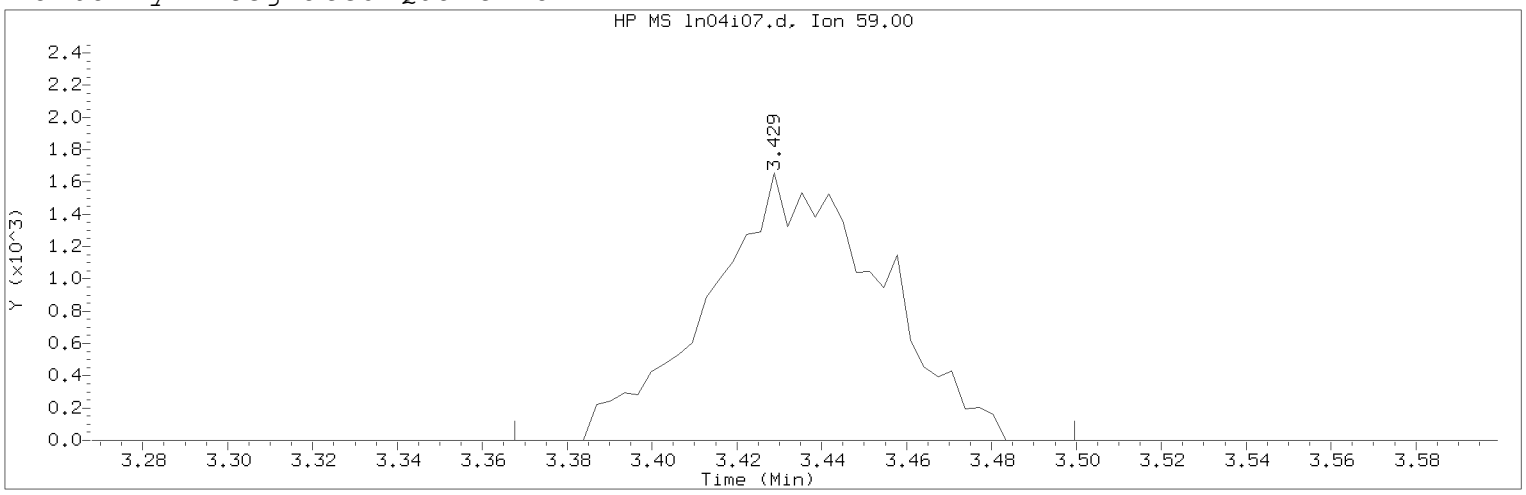
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

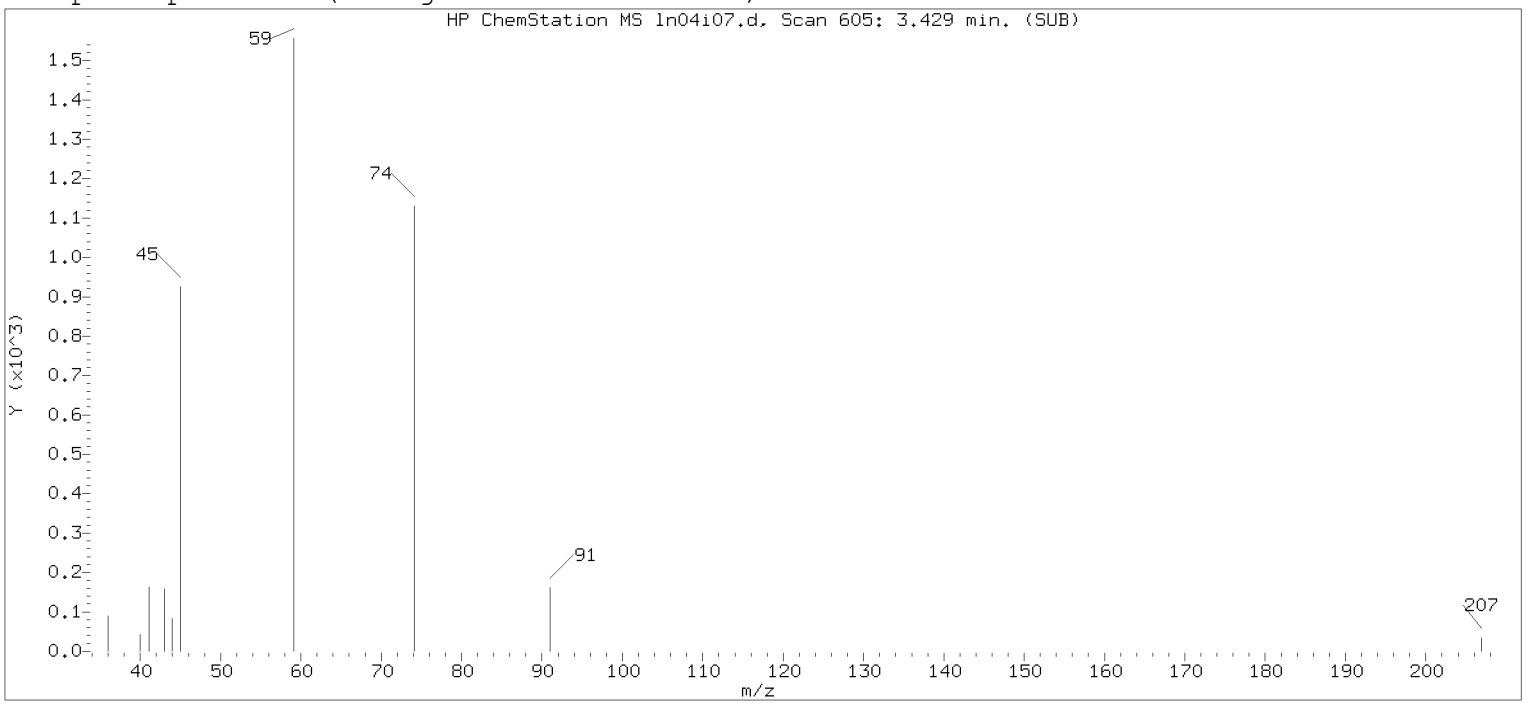
Compound Number : 14
Compound Name : Ethyl ether
Scan Number : 605
Retention Time (minutes): 3.429
Quant Ion : 59.00
Area (flag) : 4640M
On-Column Amount (ng) : 0.8744
Integration start scan : 585 Integration stop scan: 626
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

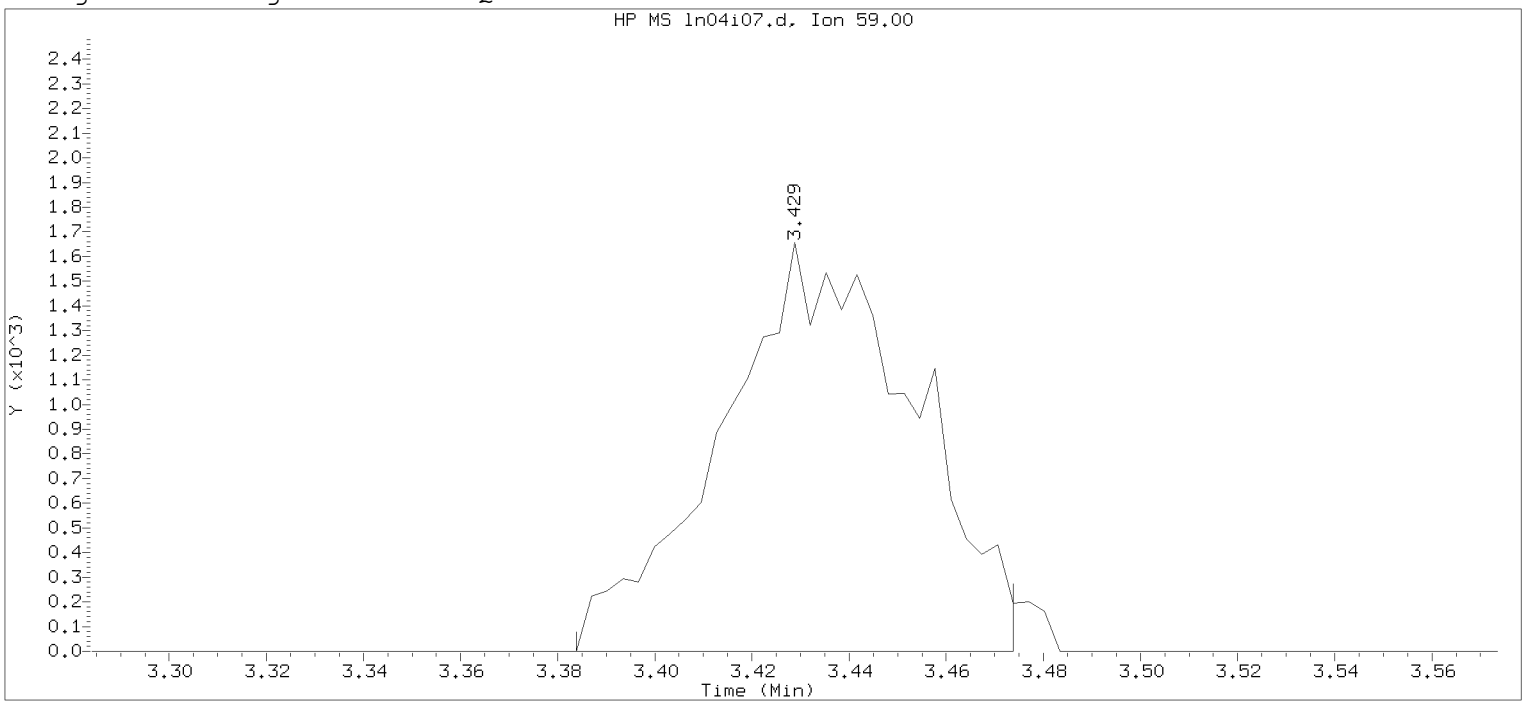
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

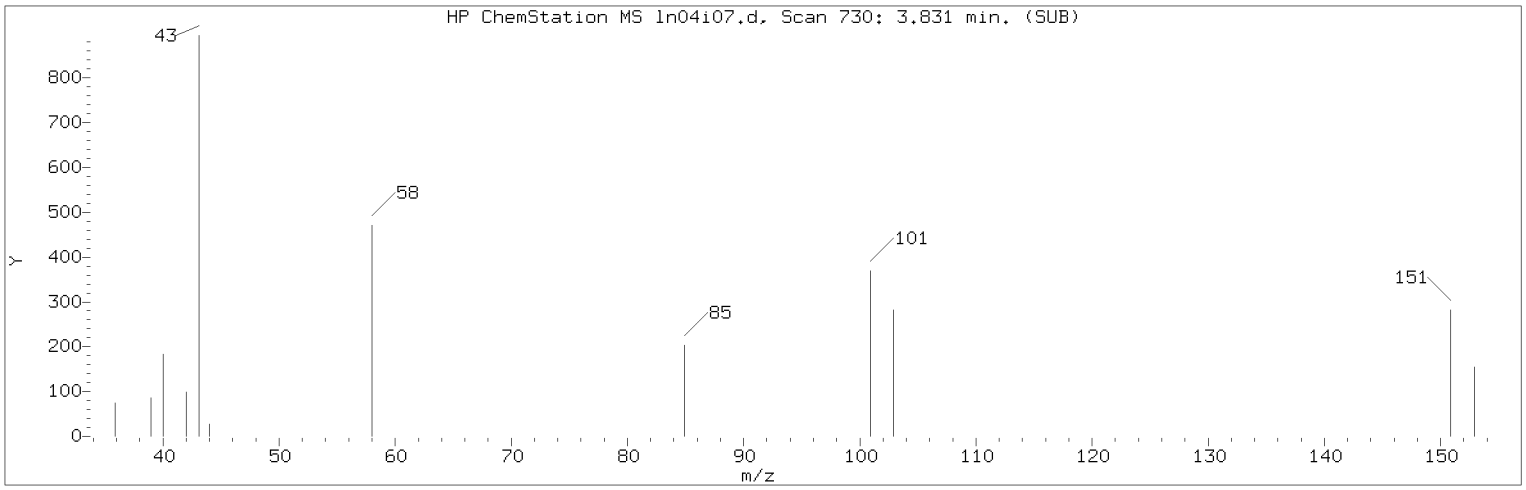
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

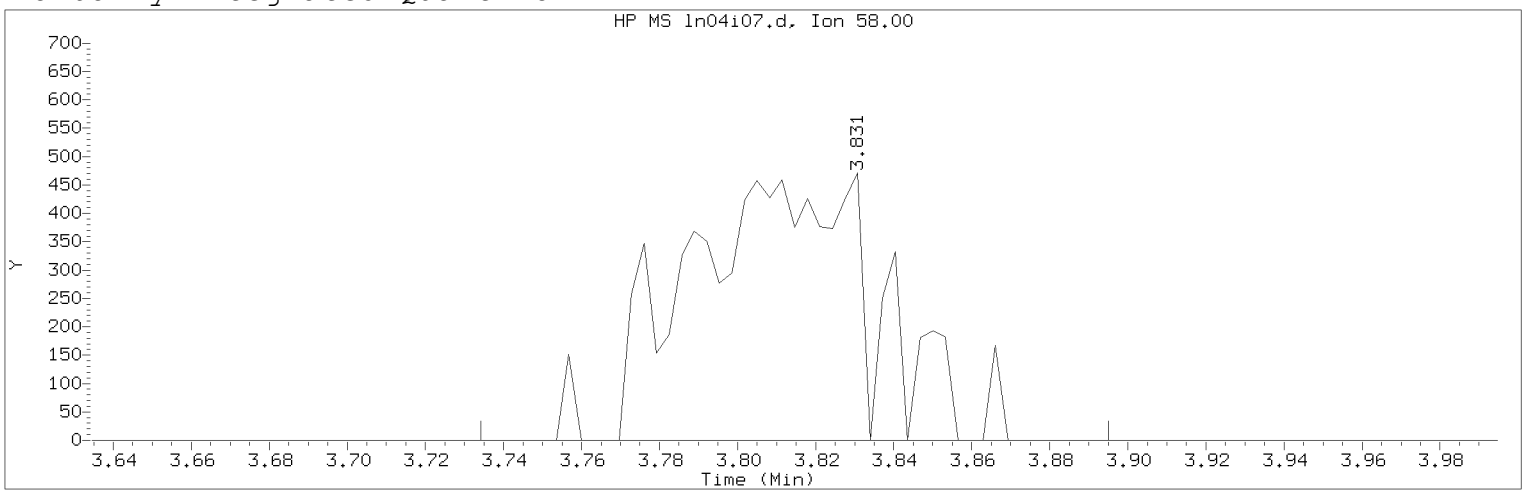
Compound Number : 14
Compound Name : Ethyl ether
Scan Number : 605
Retention Time (minutes): 3.429
Quant Ion : 59.00
Area : 4552
On-column Amount (ng) : 0.8599
Integration start scan : 590 Integration stop scan: 618
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

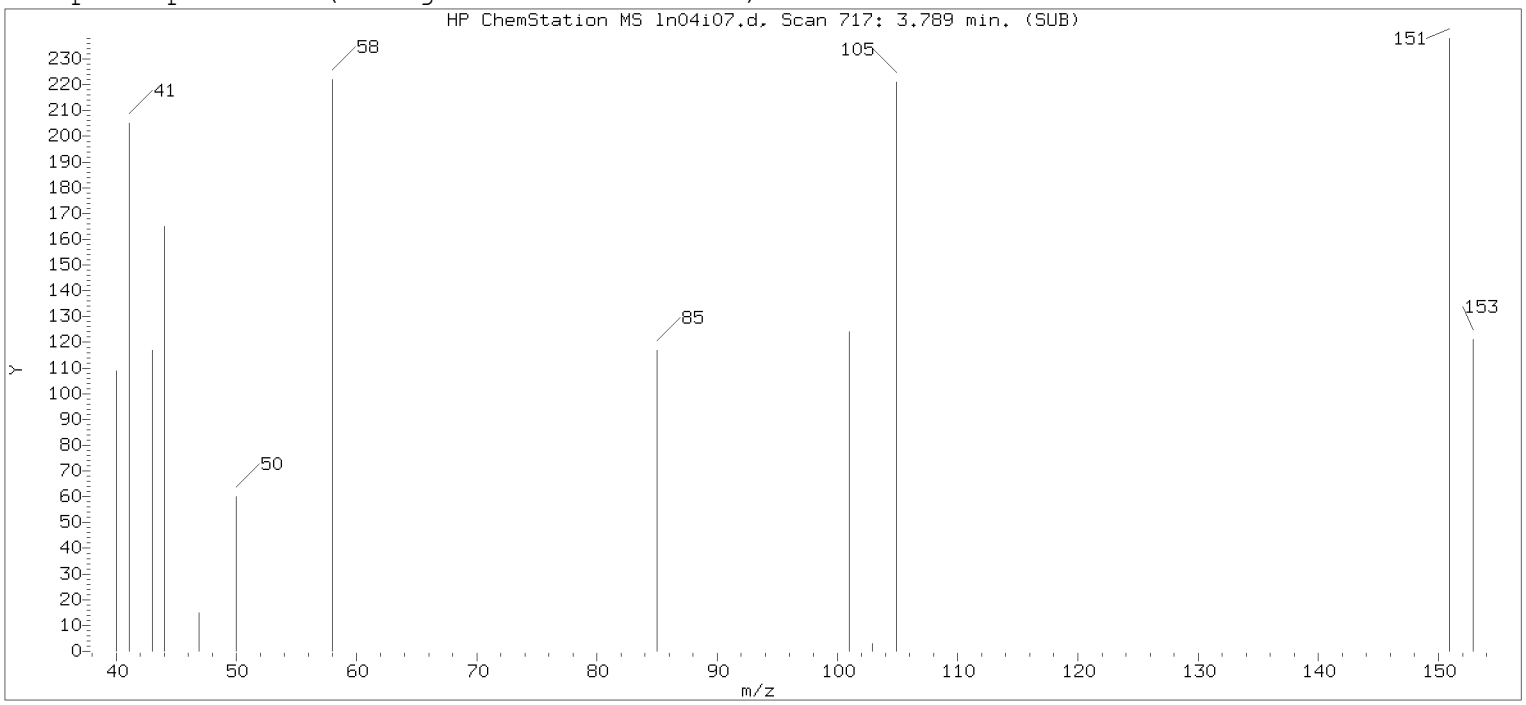
Compound Number : 18
Compound Name : Acetone
Scan Number : 730
Retention Time (minutes): 3.831
Quant Ion : 58.00
Area (flag) : 1588M
On-Column Amount (ng) : 1.9382
Integration start scan : 699 Integration stop scan: 749
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

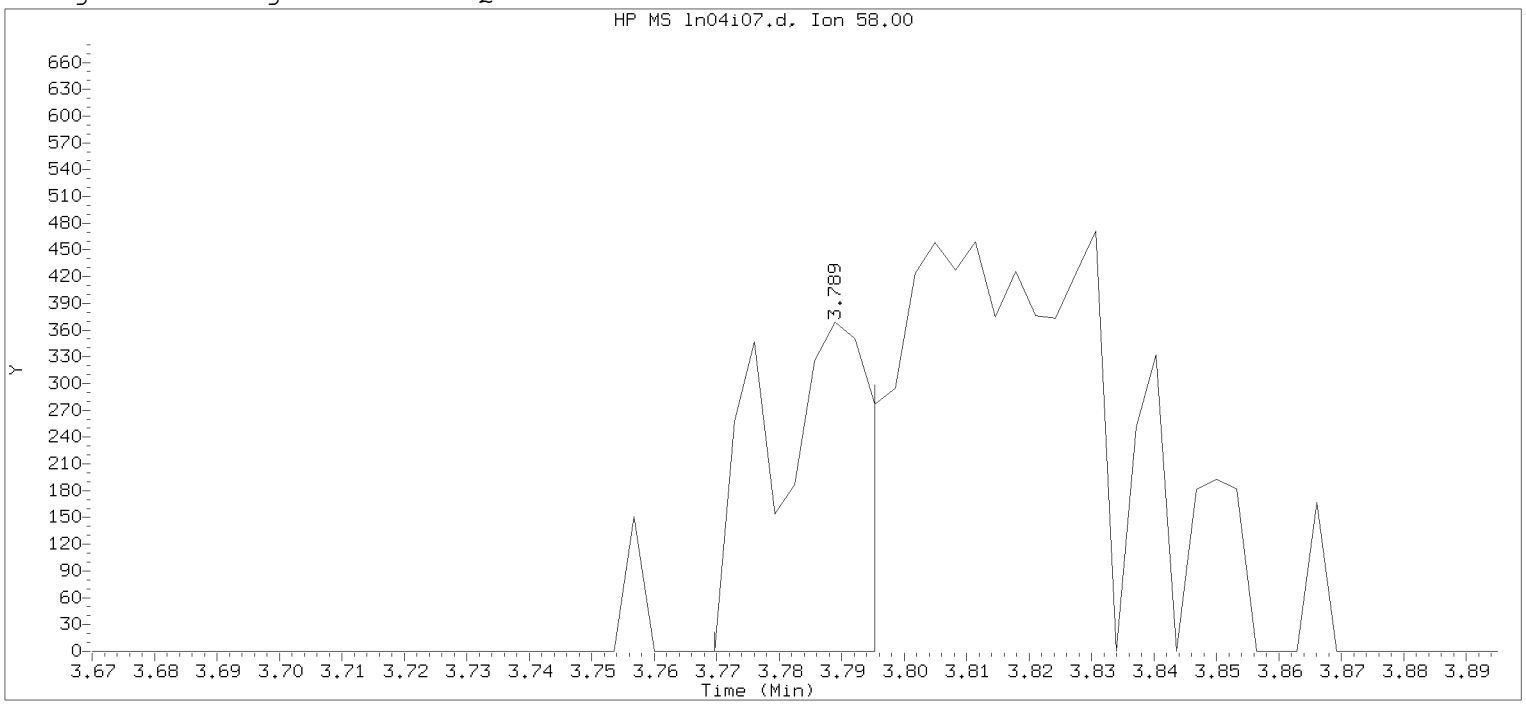
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

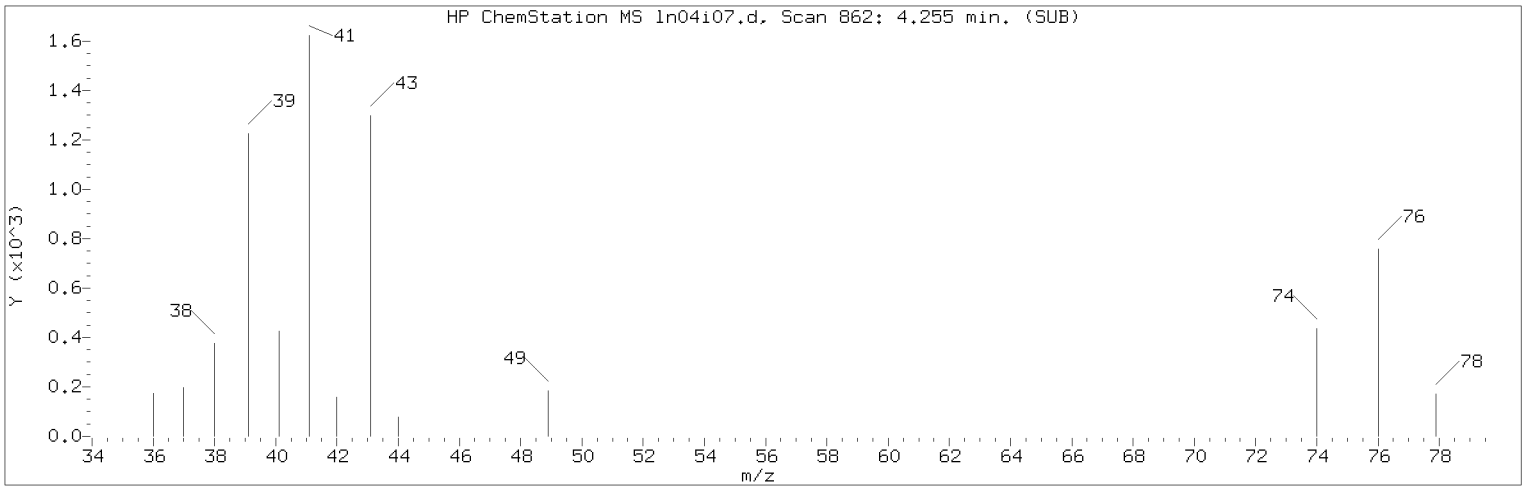
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

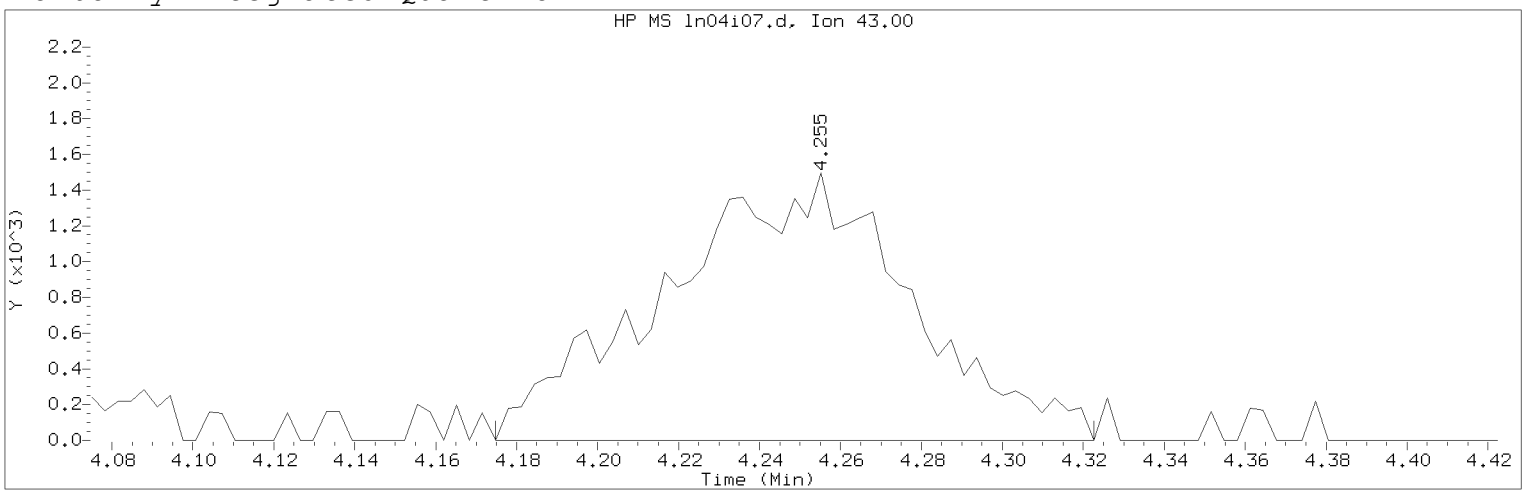
Compound Number : 18
Compound Name : Acetone
Scan Number : 717
Retention Time (minutes): 3.789
Quant Ion : 58.00
Area : 410
On-column Amount (ng) : 0.5644
Integration start scan : 710 Integration stop scan: 718
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

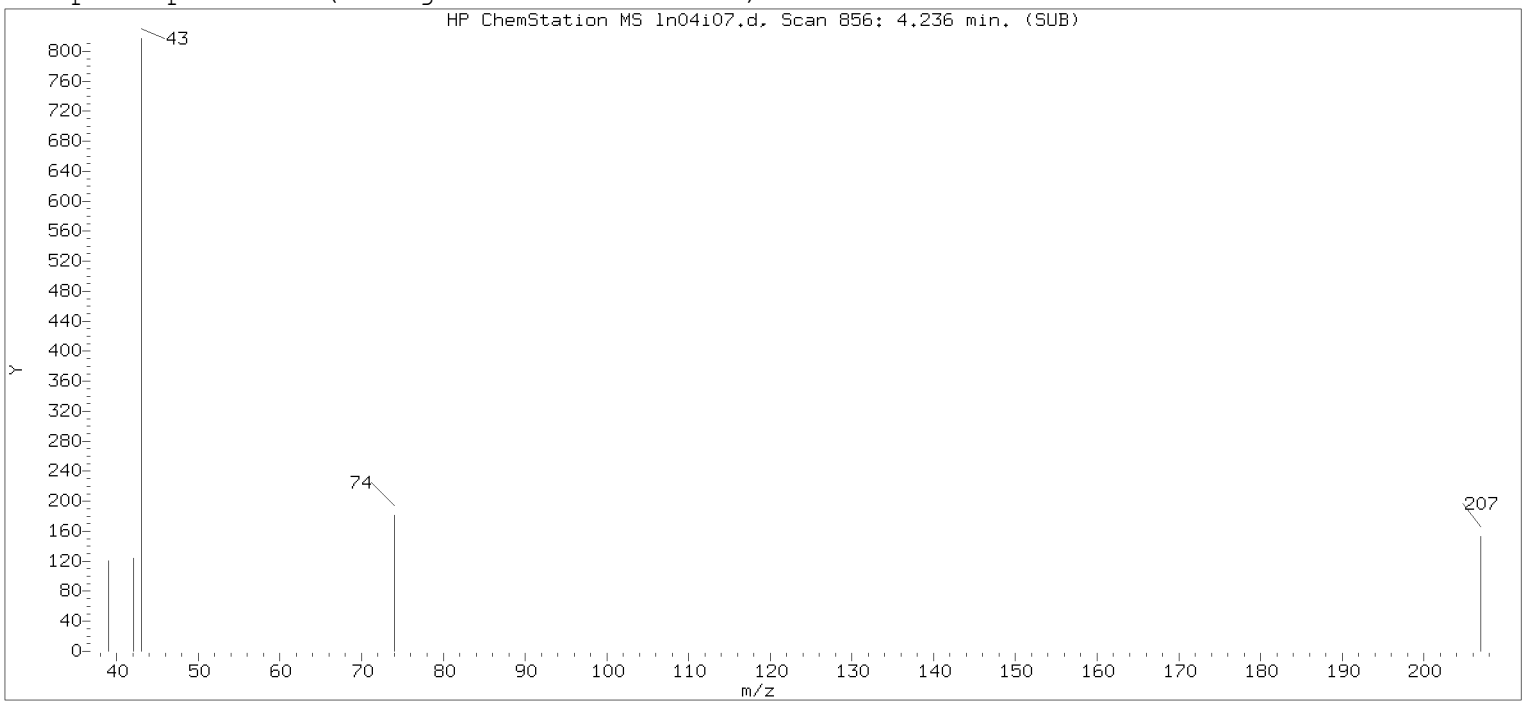
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 862
Retention Time (minutes): 4.255
Quant Ion : 43.00
Area (flag) : 6274M
On-Column Amount (ng) : 1.0106
Integration start scan : 836 Integration stop scan: 882
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

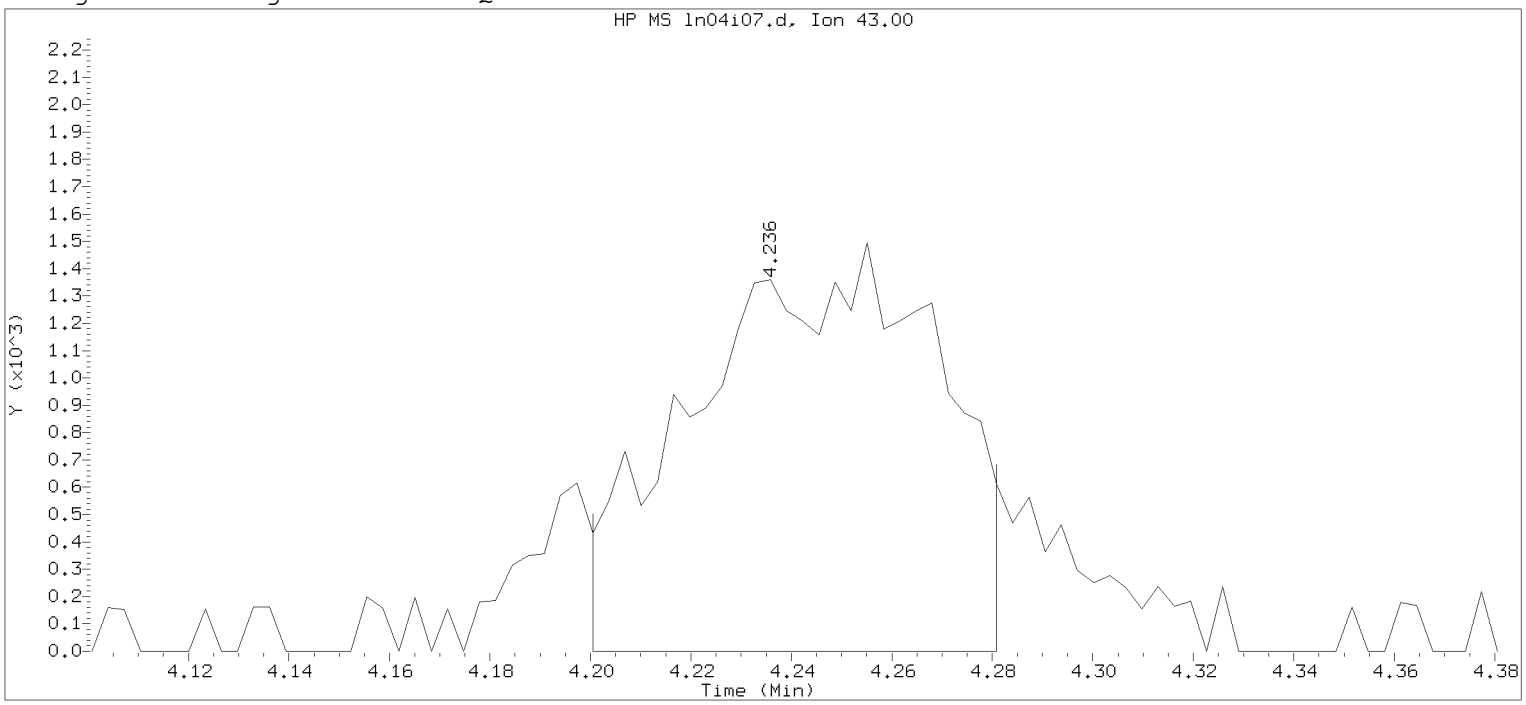
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

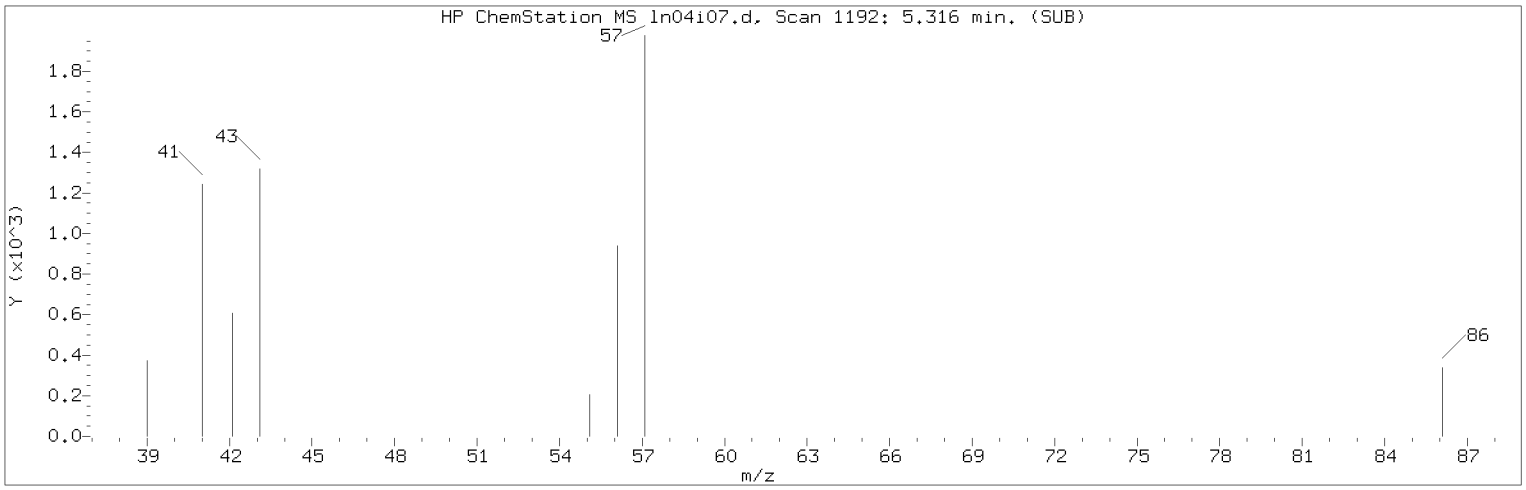
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

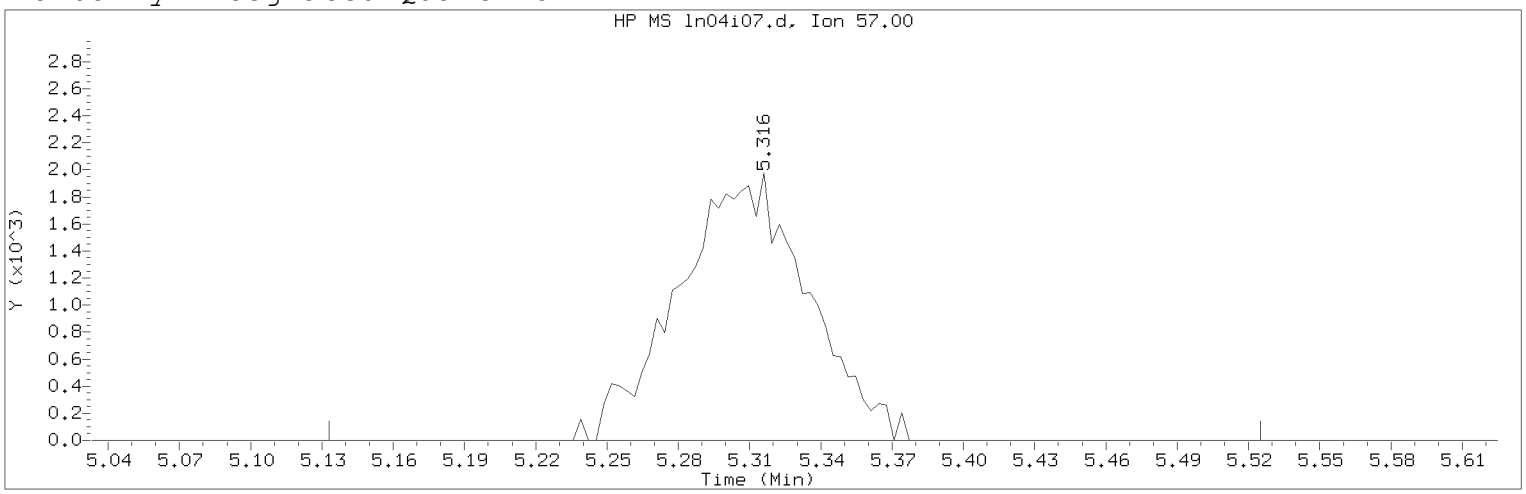
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 856
Retention Time (minutes): 4.236
Quant Ion : 43.00
Area : 4972
On-column Amount (ng) : 0.8386
Integration start scan : 844 Integration stop scan: 869
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

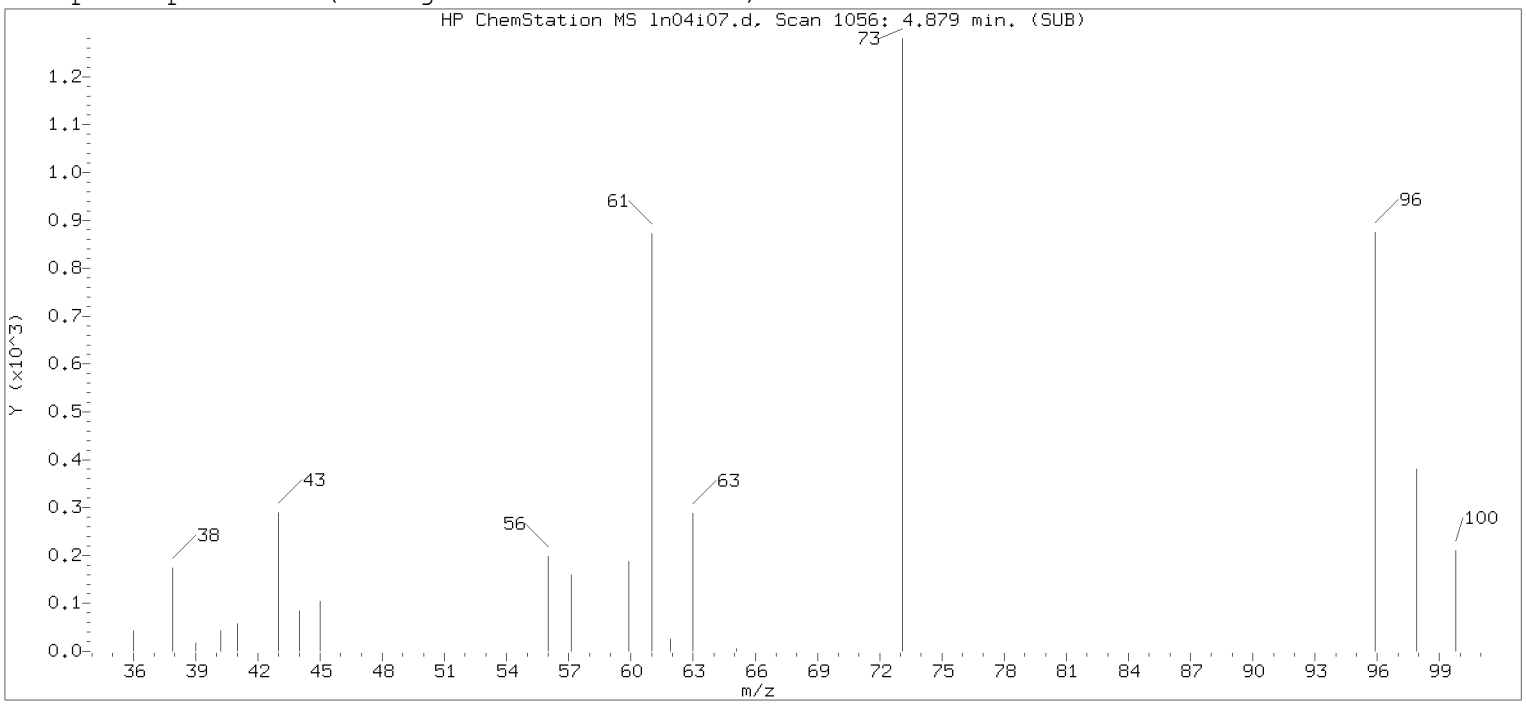
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1192
Retention Time (minutes): 5.316
Quant Ion : 57.00
Area (flag) : 7475M
On-Column Amount (ng) : 0.8616
Integration start scan : 1134 Integration stop scan: 1256
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

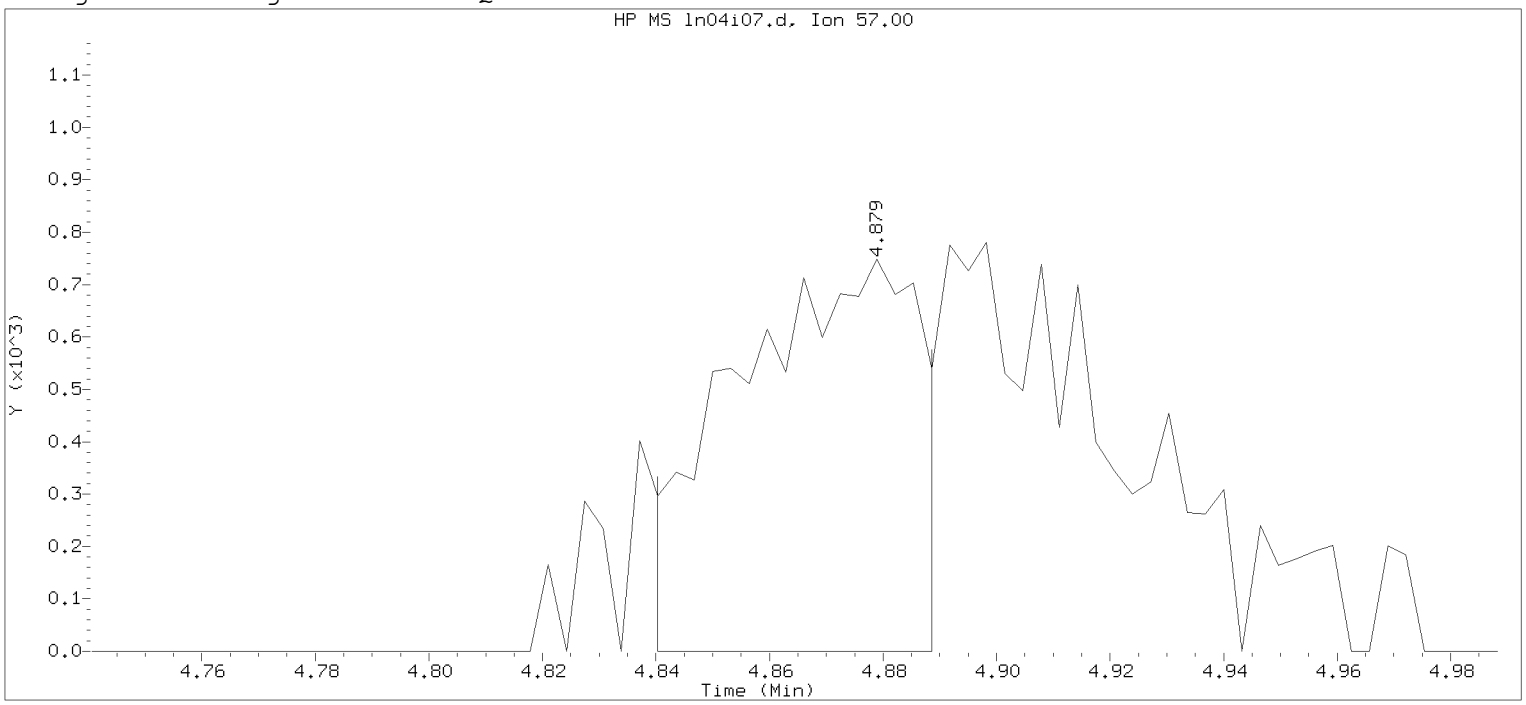
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

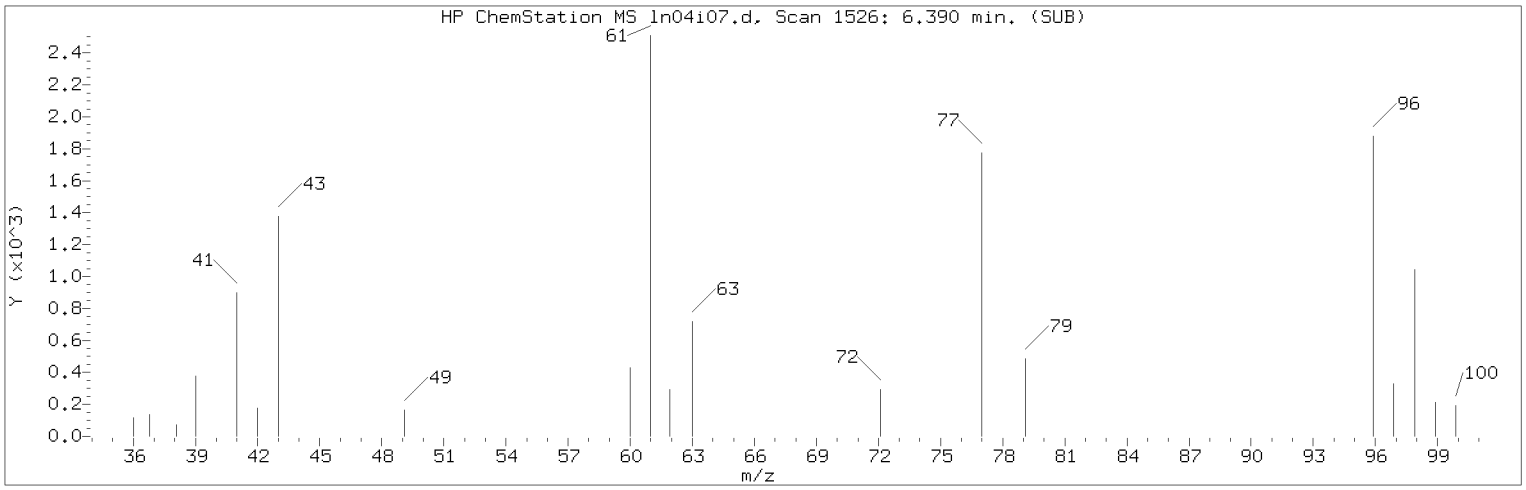
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

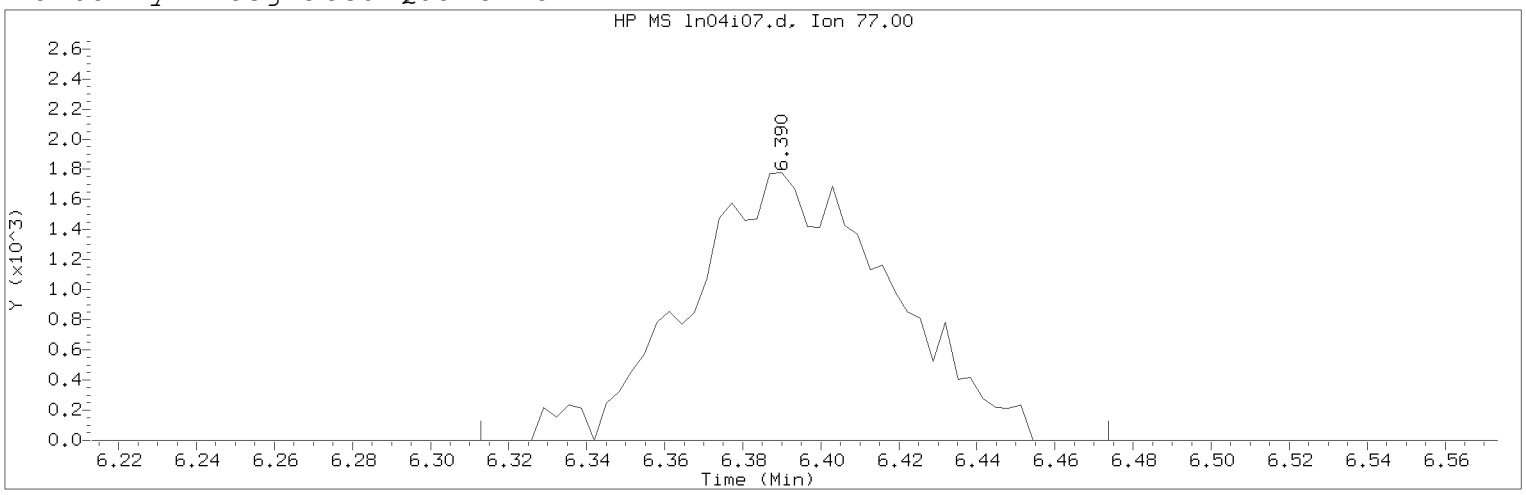
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1056
Retention Time (minutes): 4.879
Quant Ion : 57.00
Area : 1663
On-column Amount (ng) : 0.4635
Integration start scan : 1043 Integration stop scan: 1058
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

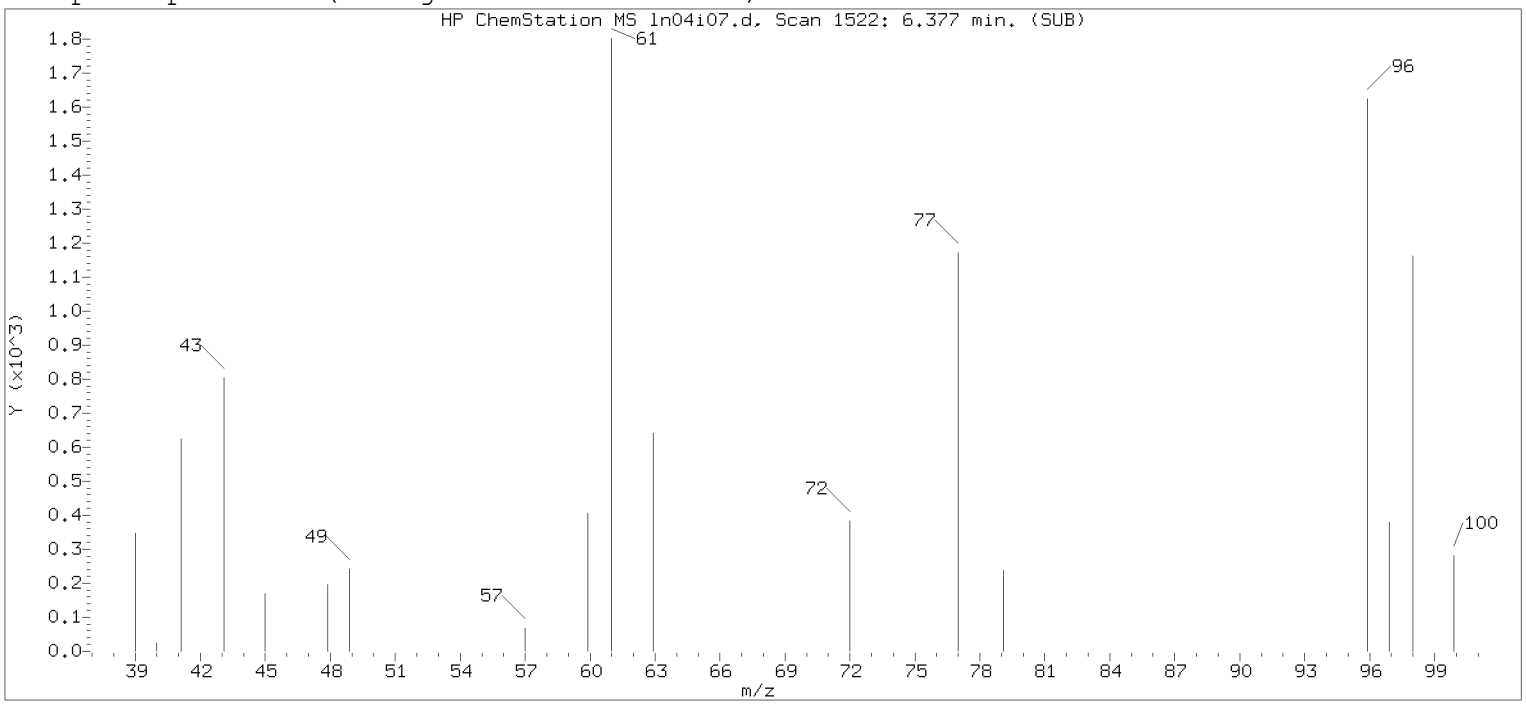
Compound Number : 45
Compound Name : 2,2-Dichloropropane
Scan Number : 1526
Retention Time (minutes): 6.390
Quant Ion : 77.00
Area (flag) : 6419M
On-Column Amount (ng) : 0.8488
Integration start scan : 1501 Integration stop scan: 1551
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

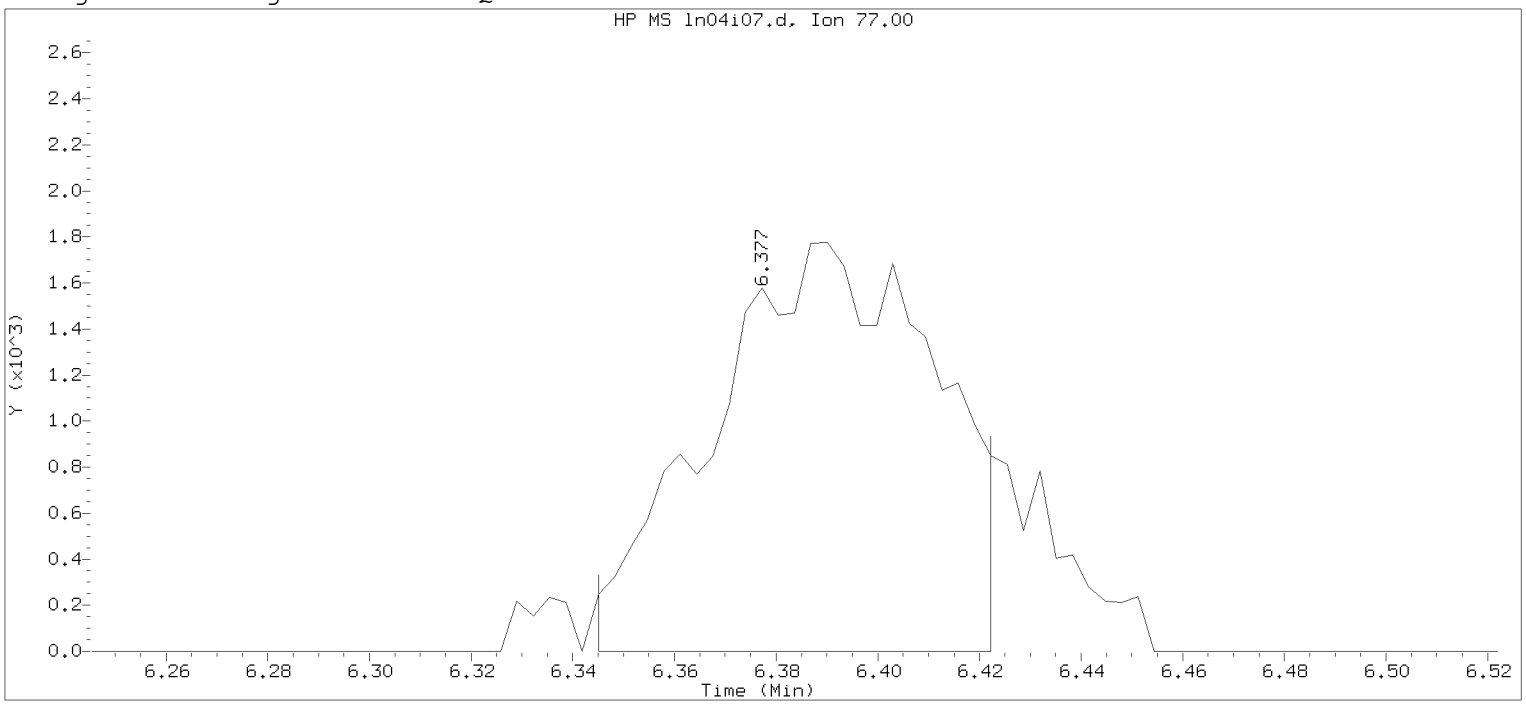
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

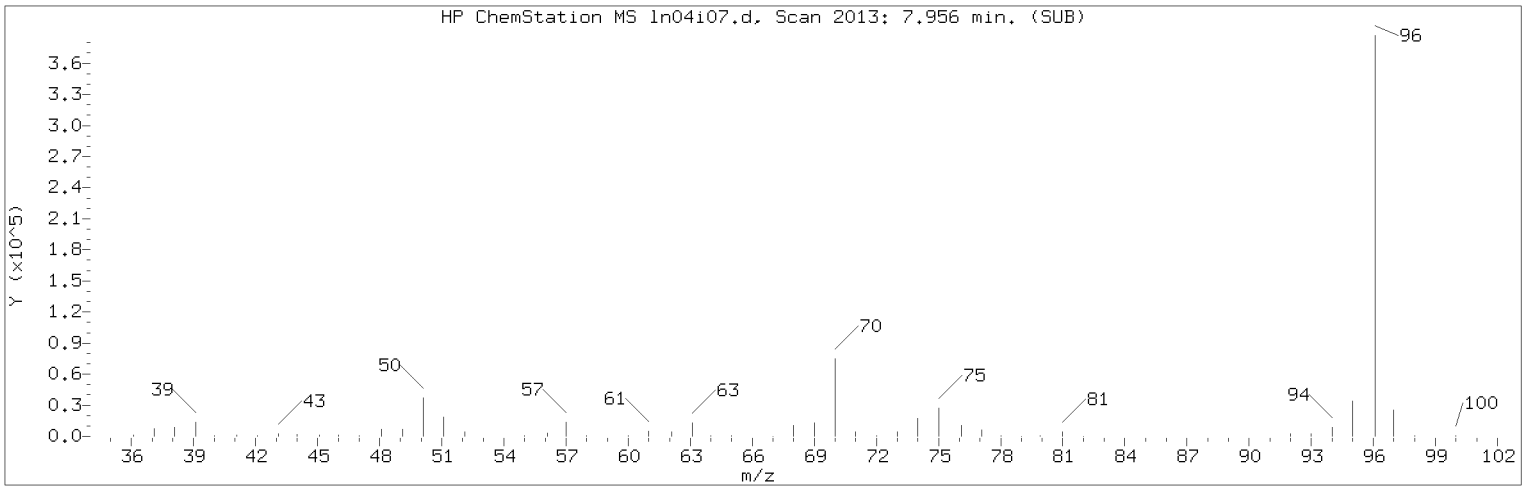
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

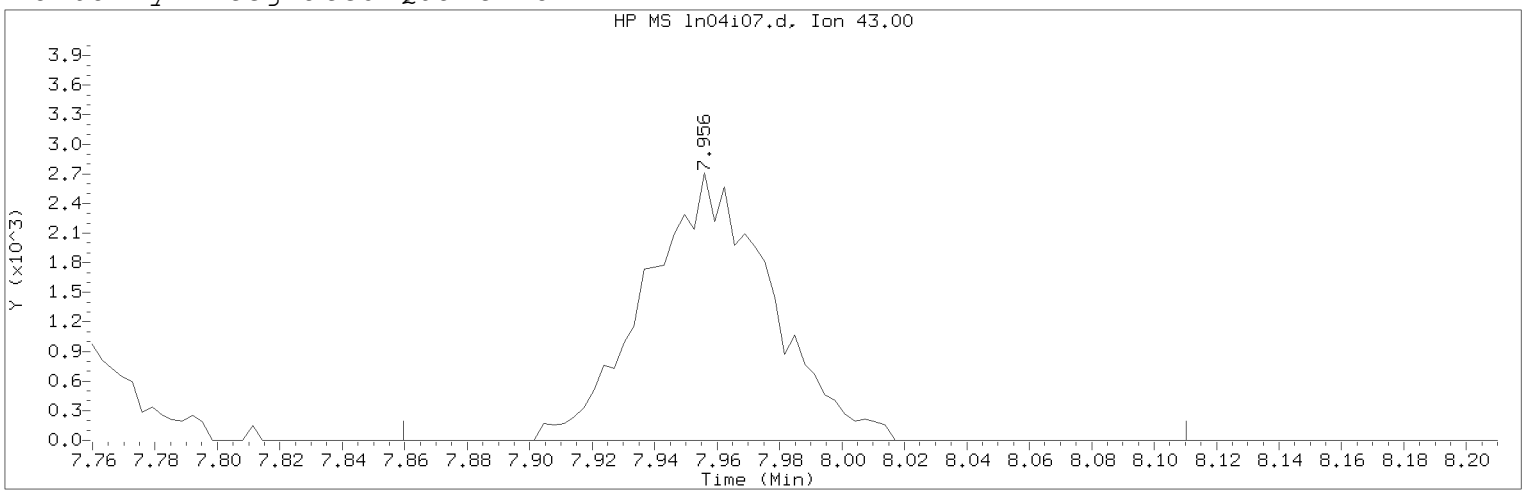
Compound Number : 45
Compound Name : 2,2-Dichloropropane
Scan Number : 1522
Retention Time (minutes): 6.377
Quant Ion : 77.00
Area : 5406
On-column Amount (ng) : 0.7289
Integration start scan : 1511 Integration stop scan: 1535
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

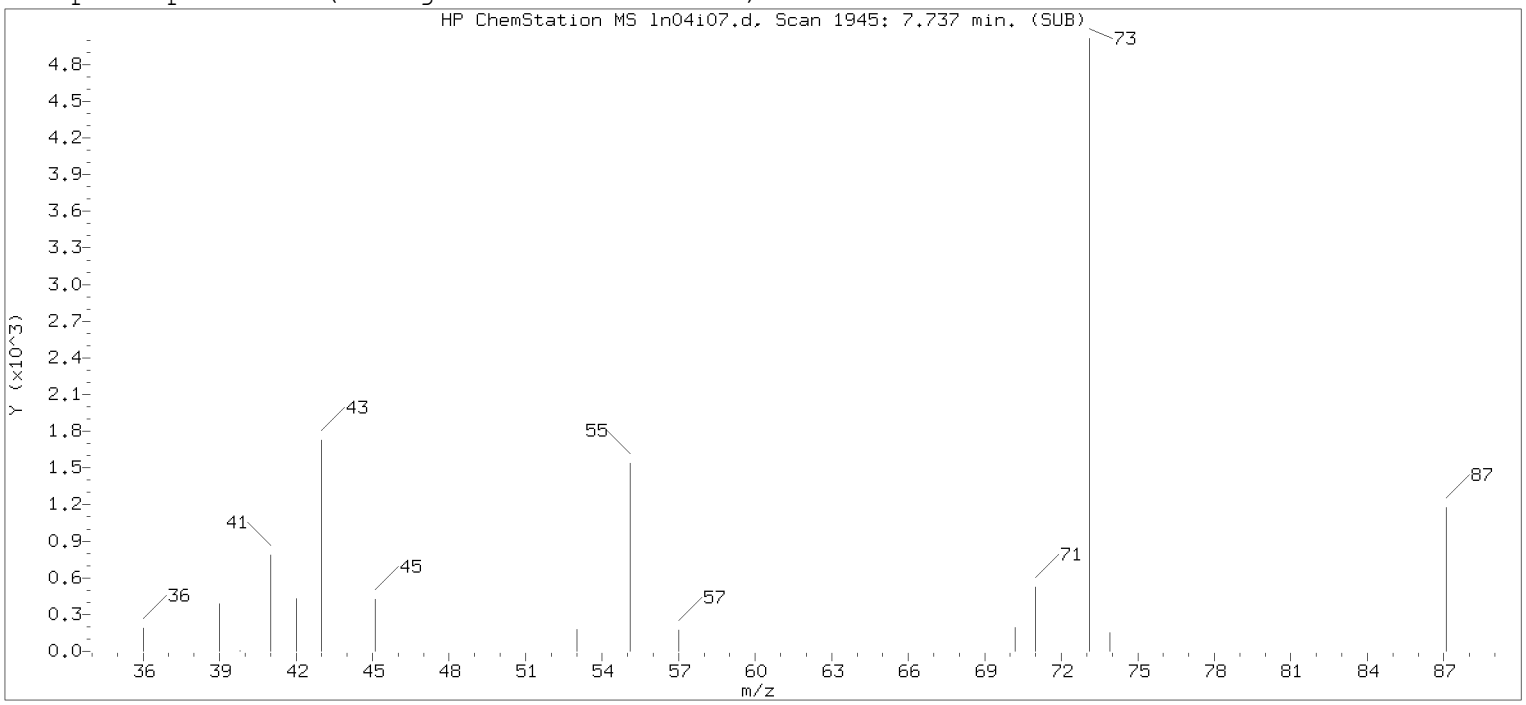
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2013
Retention Time (minutes): 7.956
Quant Ion : 43.00
Area (flag) : 7535M
On-Column Amount (ng) : 0.9297
Integration start scan : 1982 Integration stop scan: 2060
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

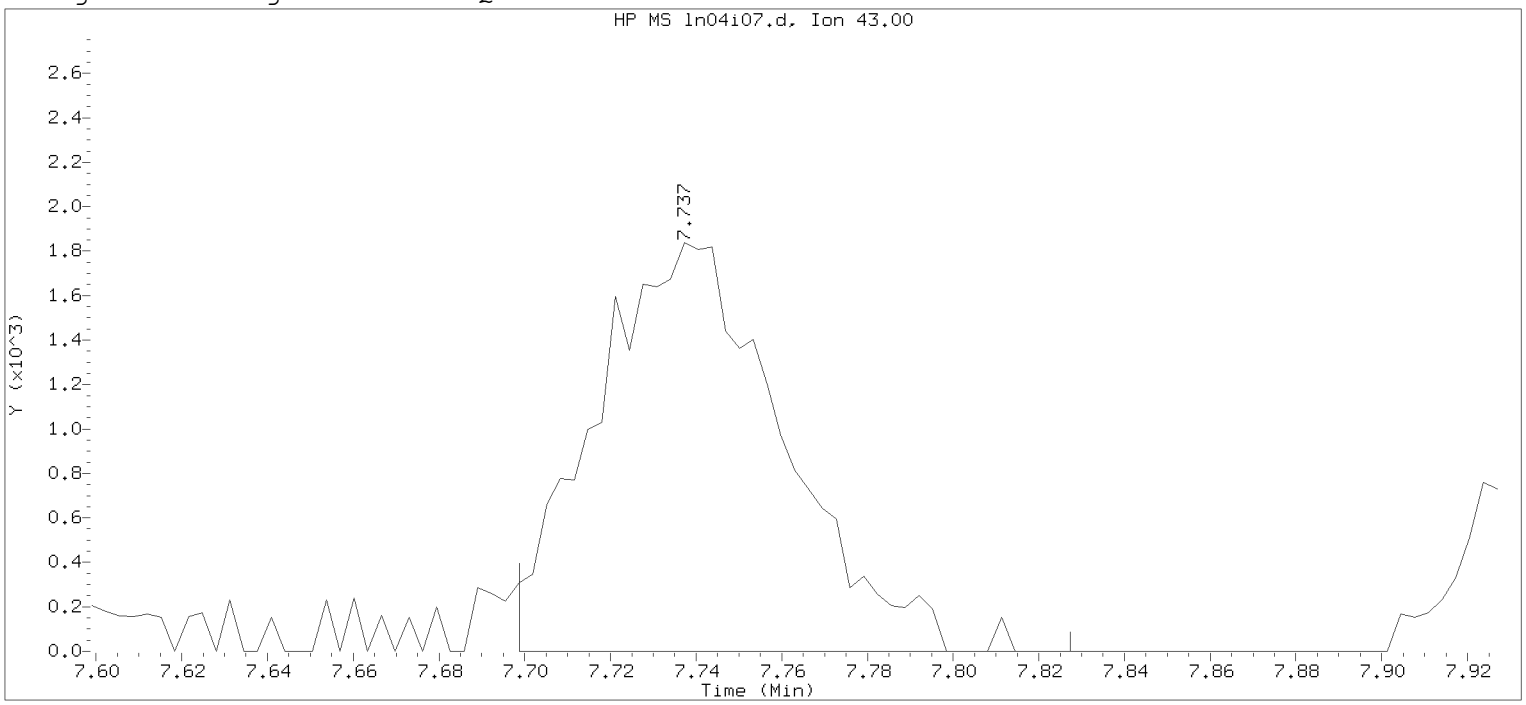
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

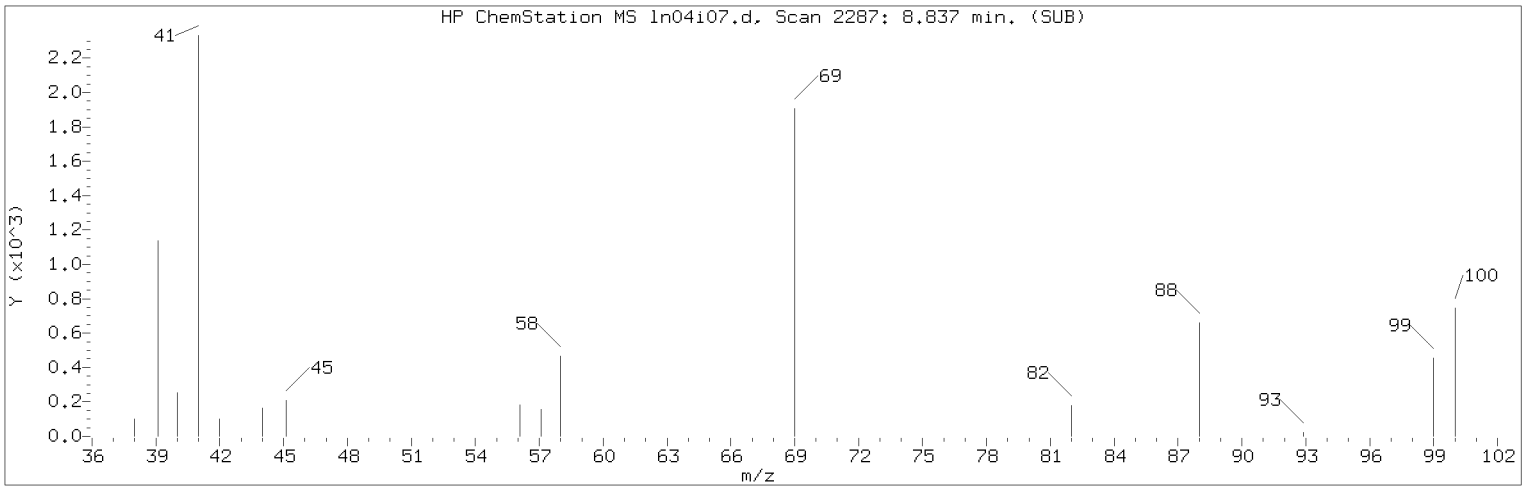
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

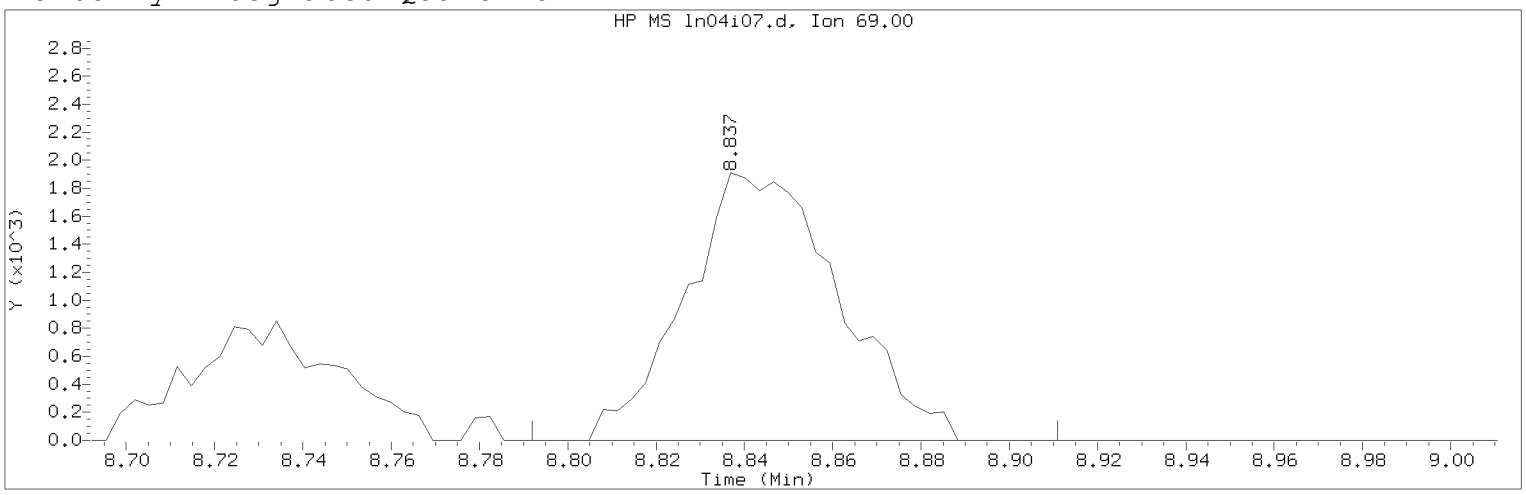
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1945
Retention Time (minutes): 7.737
Quant Ion : 43.00
Area : 5623
On-column Amount (ng) : 0.9372
Integration start scan : 1932 Integration stop scan: 1972
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

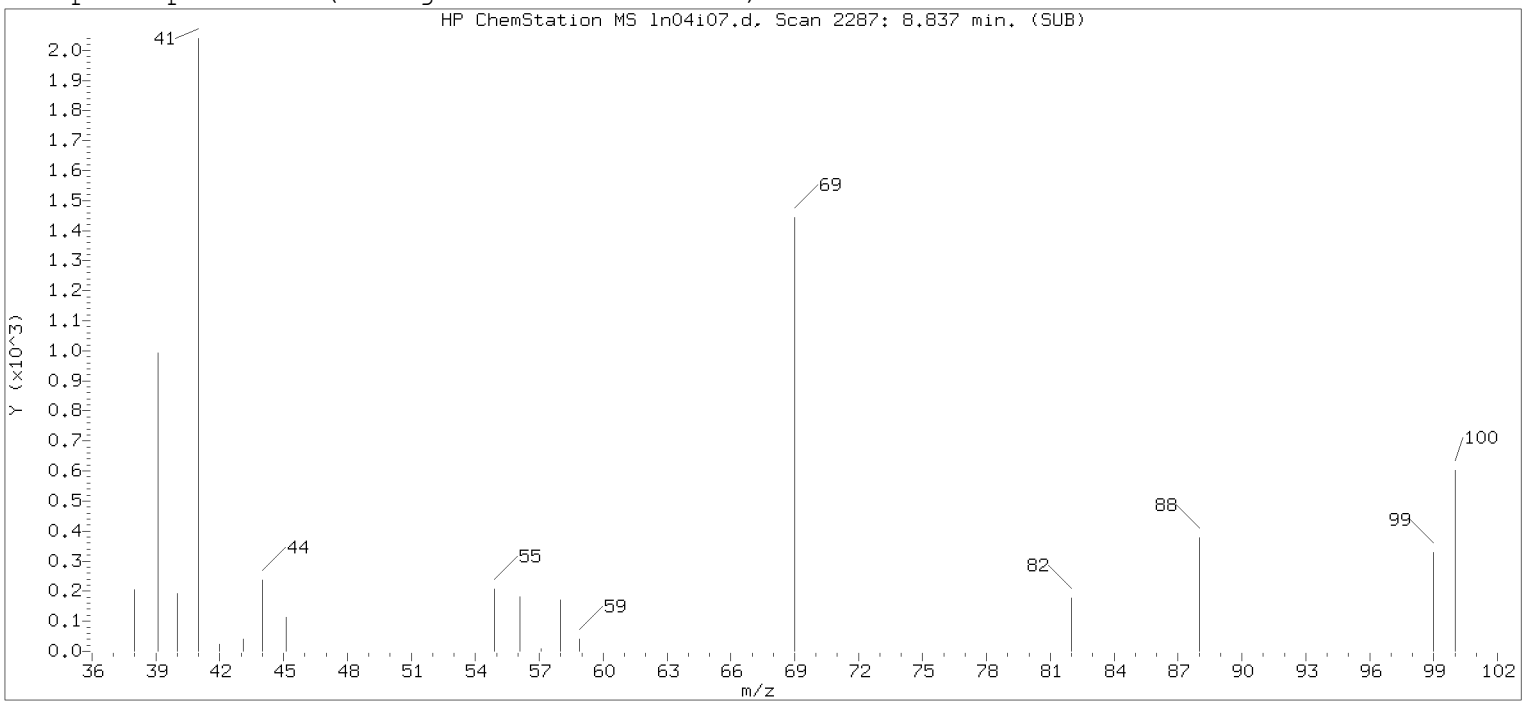
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2287
Retention Time (minutes): 8.837
Quant Ion : 69.00
Area (flag) : 4607M
On-Column Amount (ng) : 0.8112
Integration start scan : 2272 Integration stop scan: 2309
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

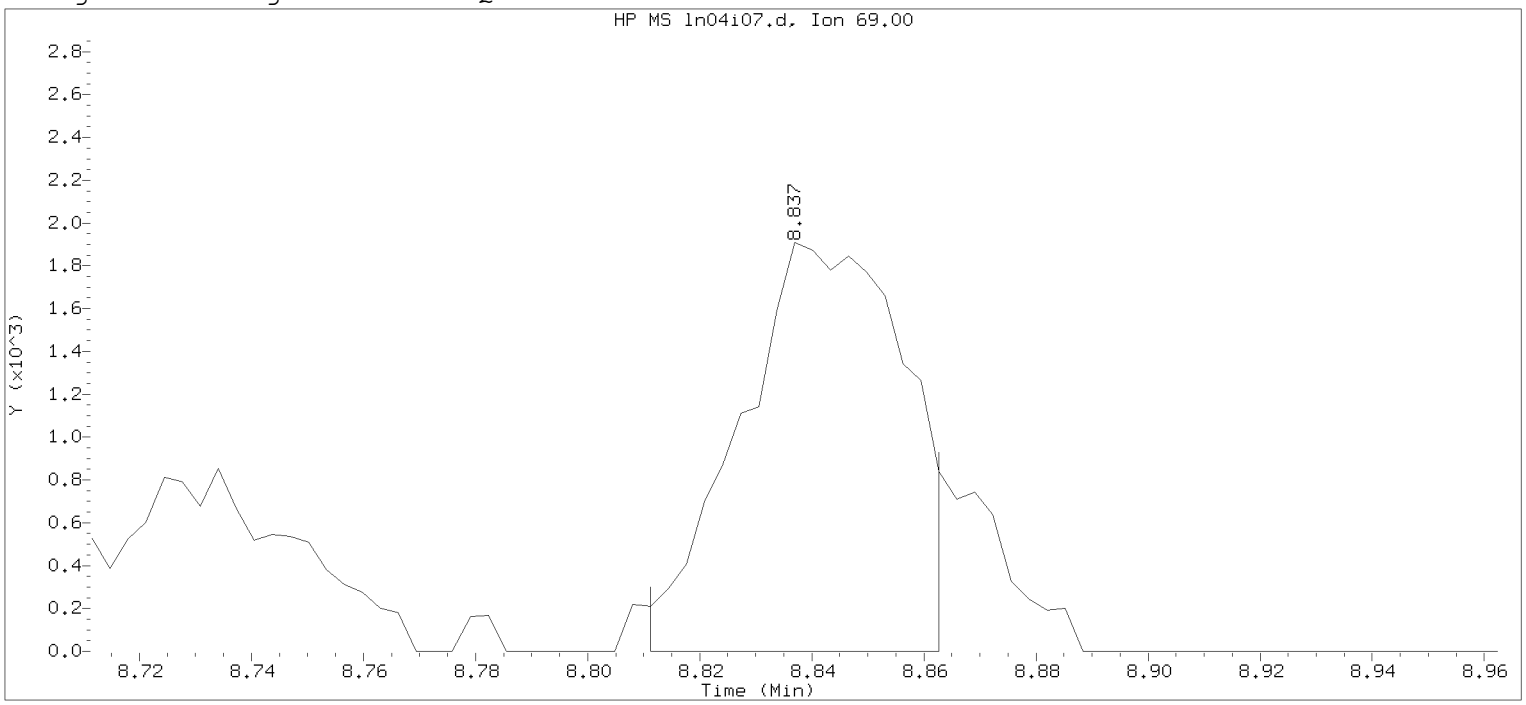
Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

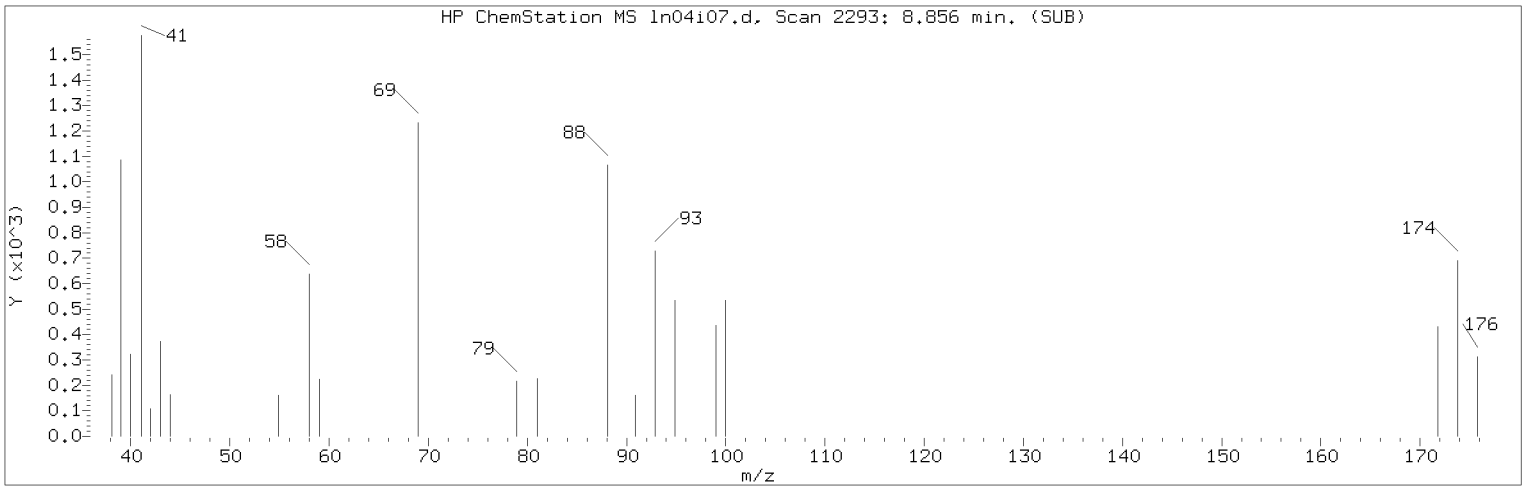
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

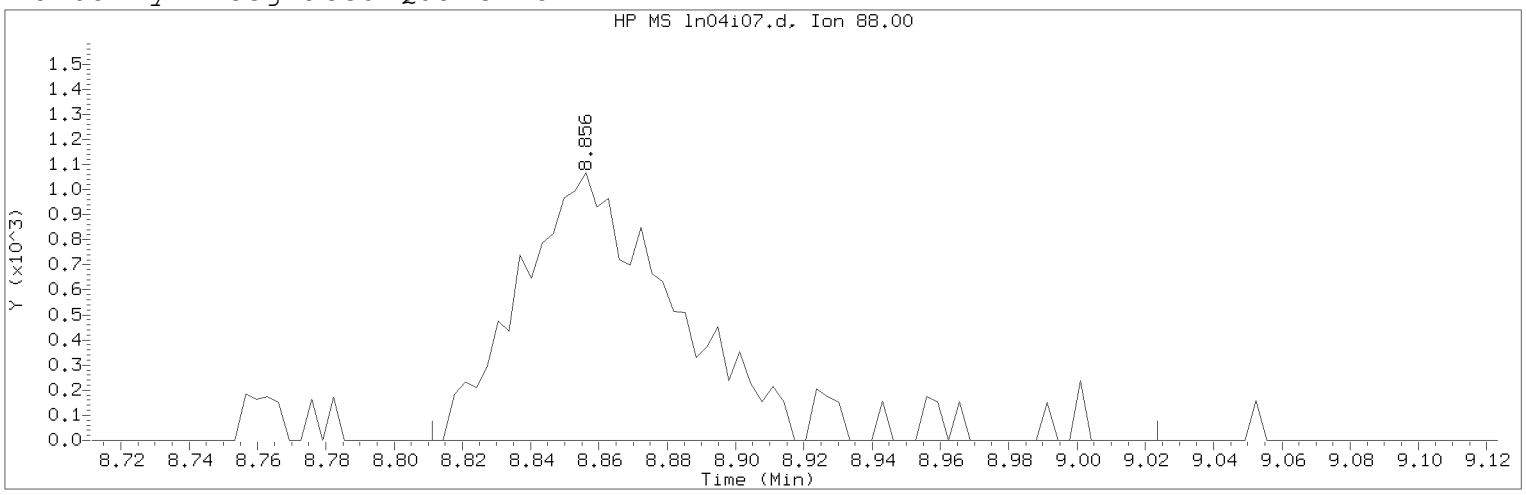
Compound Number	: 76		
Compound Name	: Methyl Methacrylate		
Scan Number	: 2287		
Retention Time (minutes)	: 8.837		
Quant Ion	: 69.00		
Area	: 3874		
On-column Amount (ng)	: 0.7186		
Integration start scan	: 2278	Integration stop scan:	2294
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

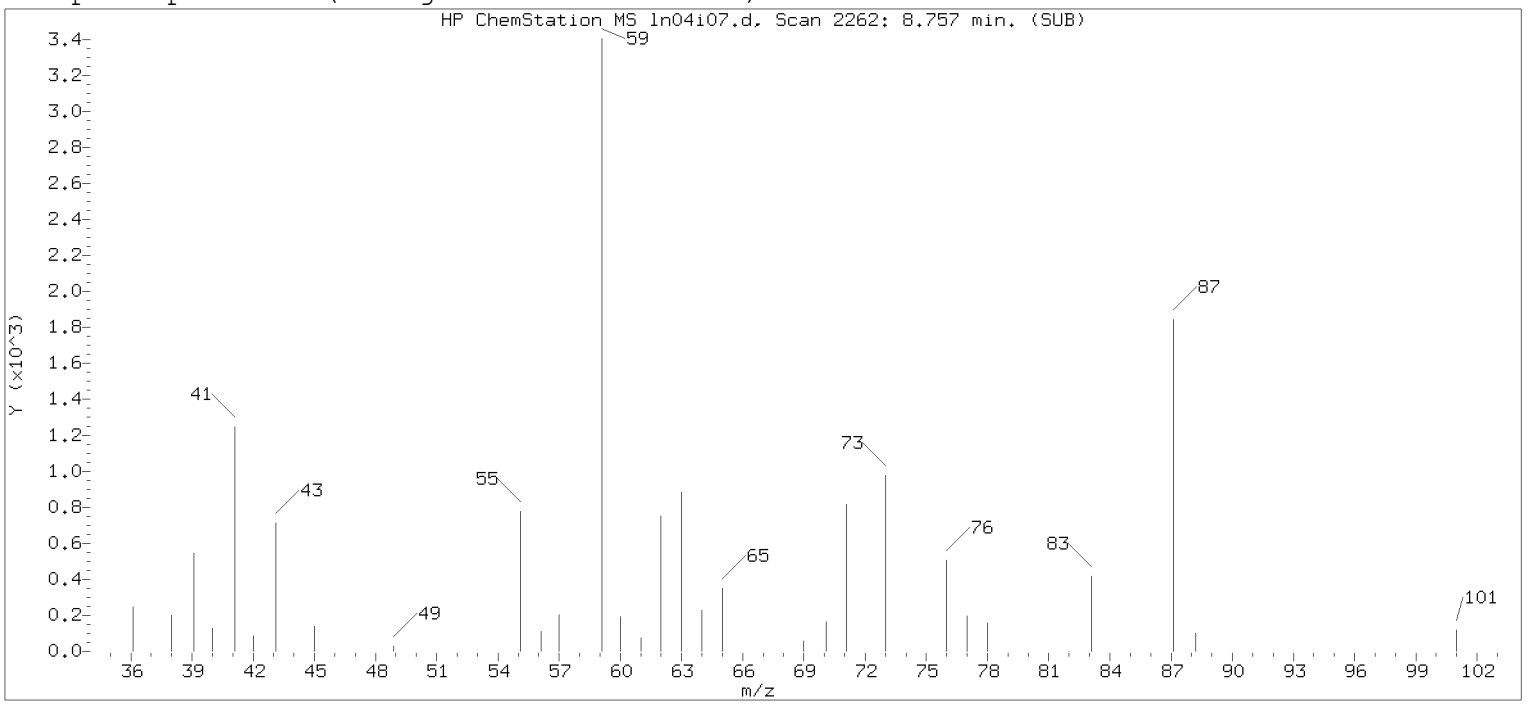
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 3548M
On-Column Amount (ng) : 43.4574
Integration start scan : 2278 Integration stop scan: 2344
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

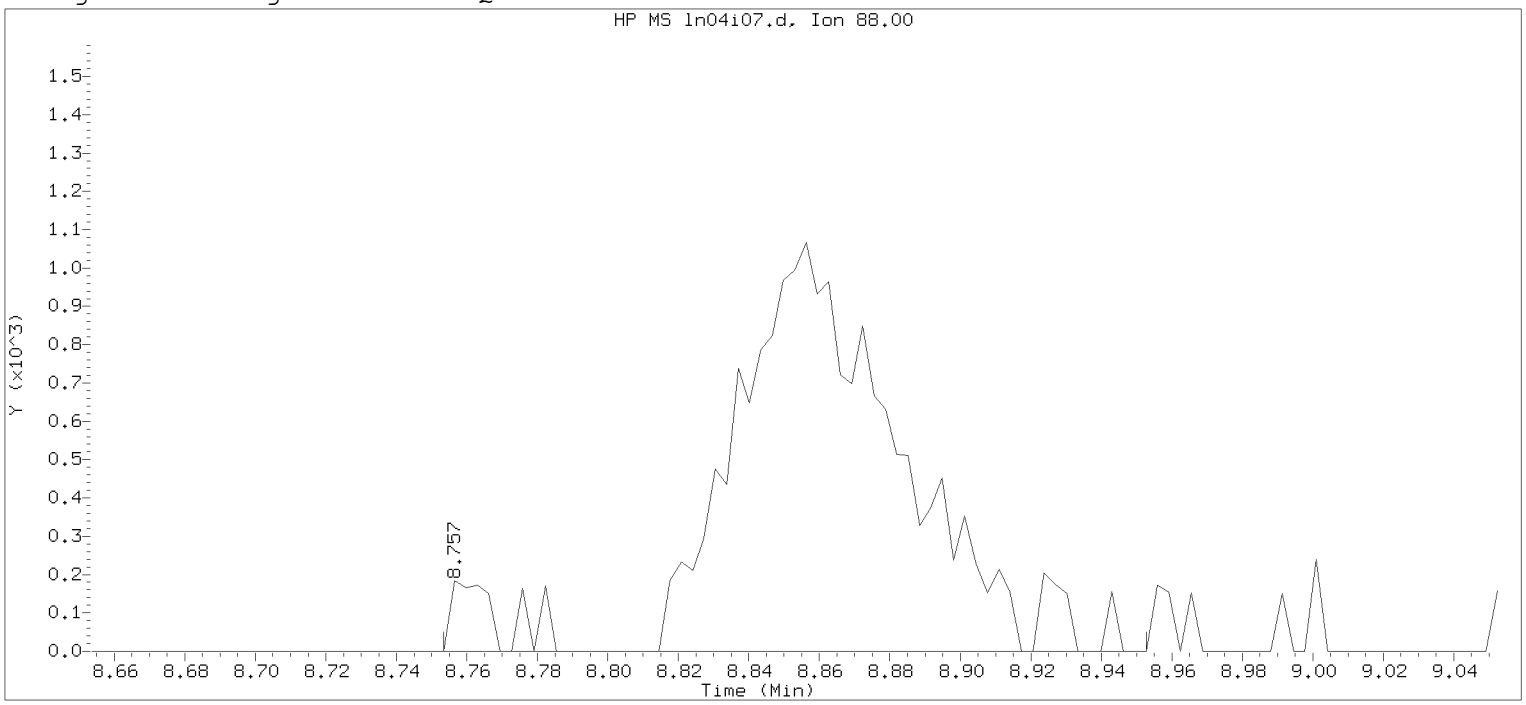
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

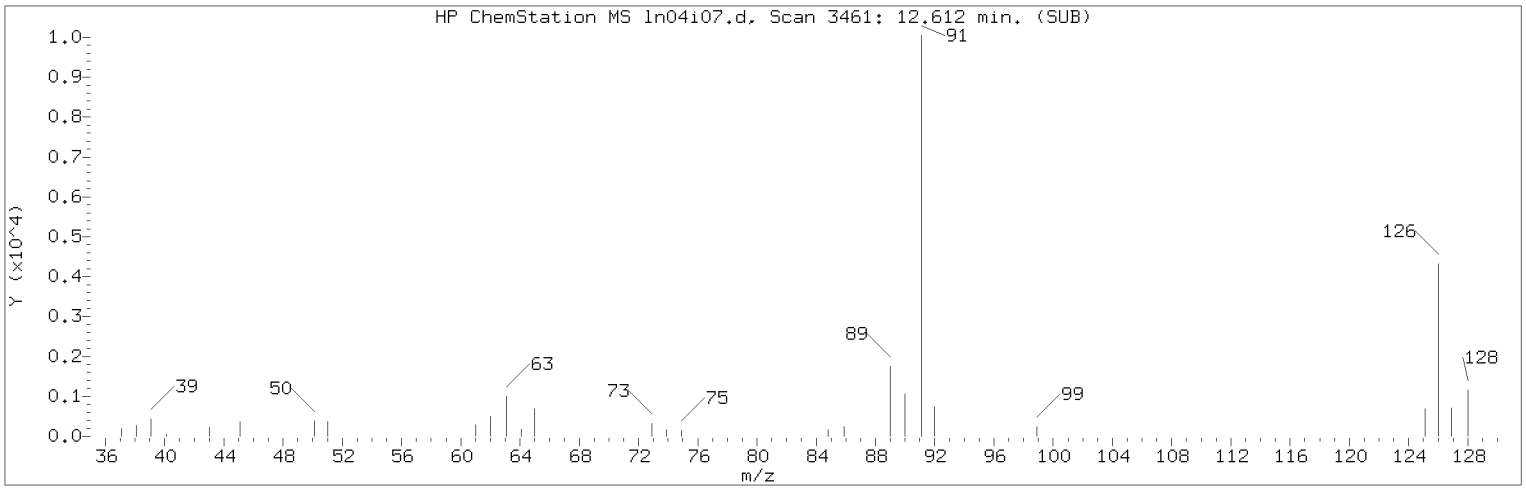
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

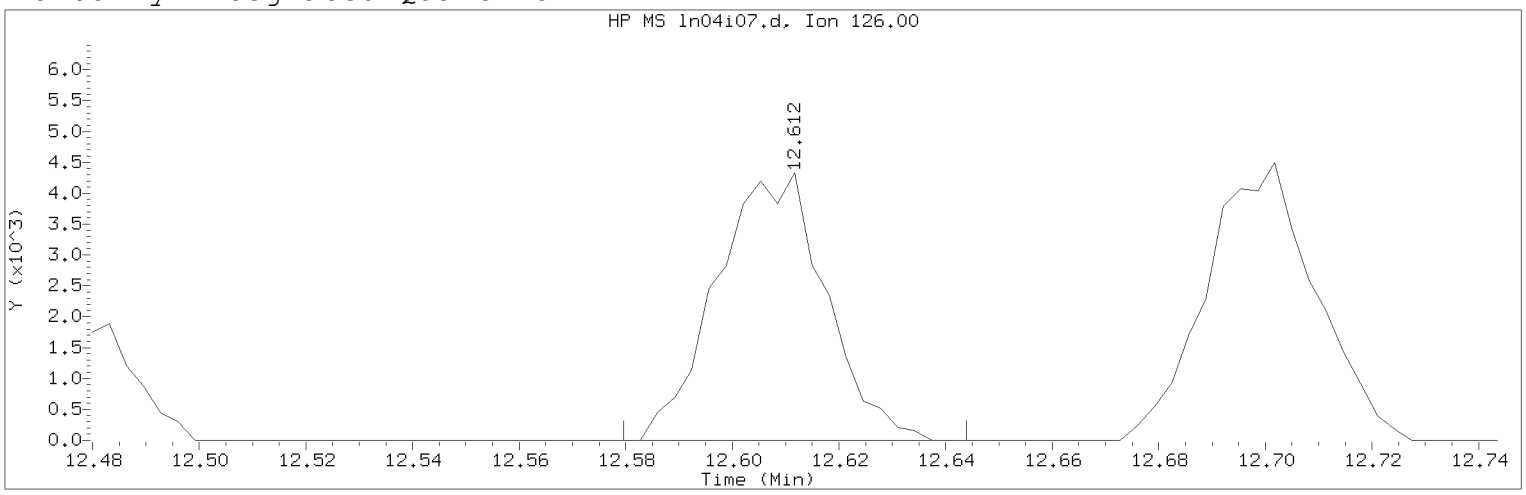
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2262
Retention Time (minutes): 8.757
Quant Ion : 88.00
Area : 3575
On-column Amount (ng) : 43.6406
Integration start scan : 2260 Integration stop scan: 2322
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

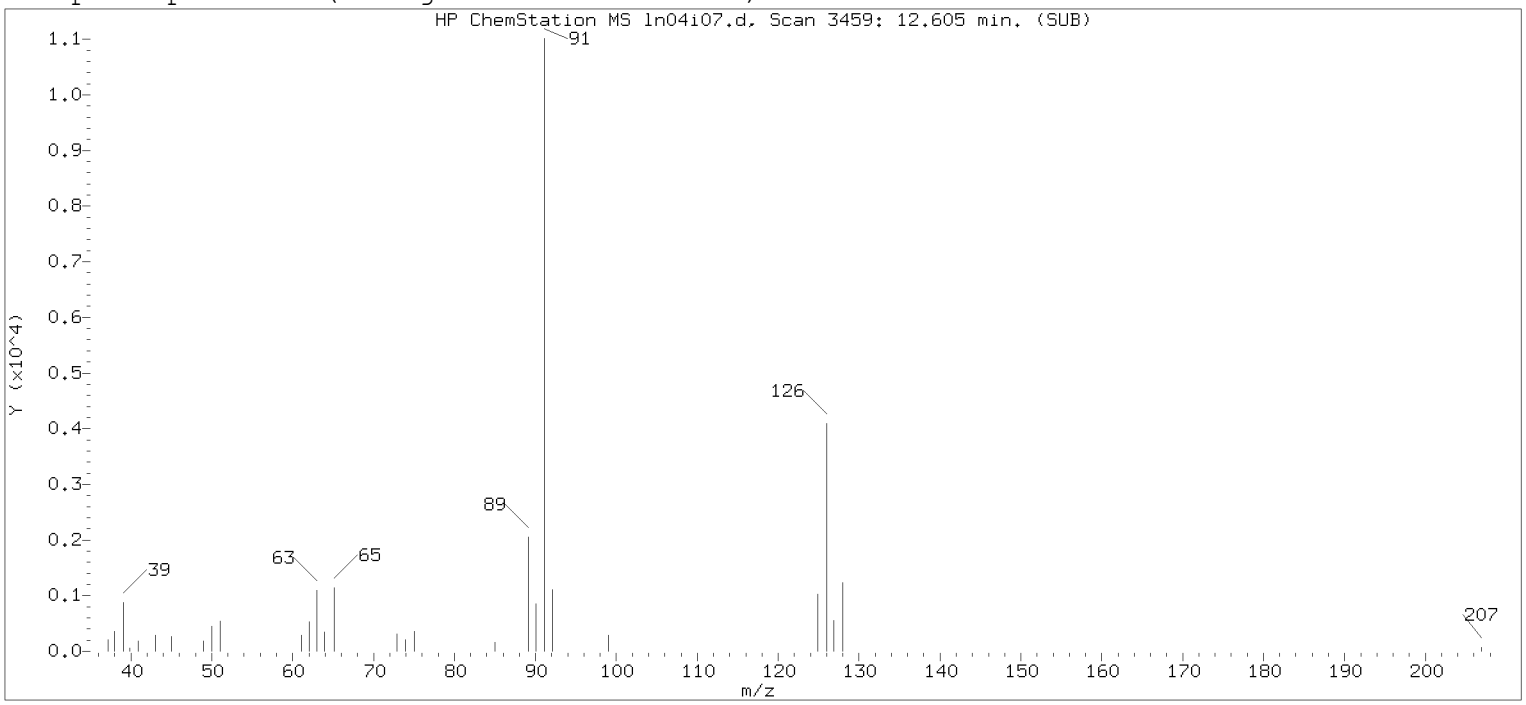
Compound Number : 120
Compound Name : 2-Chlorotoluene
Scan Number : 3461
Retention Time (minutes): 12.612
Quant Ion : 126.00
Area (flag) : 6138M
On-Column Amount (ng) : 0.9294
Integration start scan : 3450 Integration stop scan: 3470
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

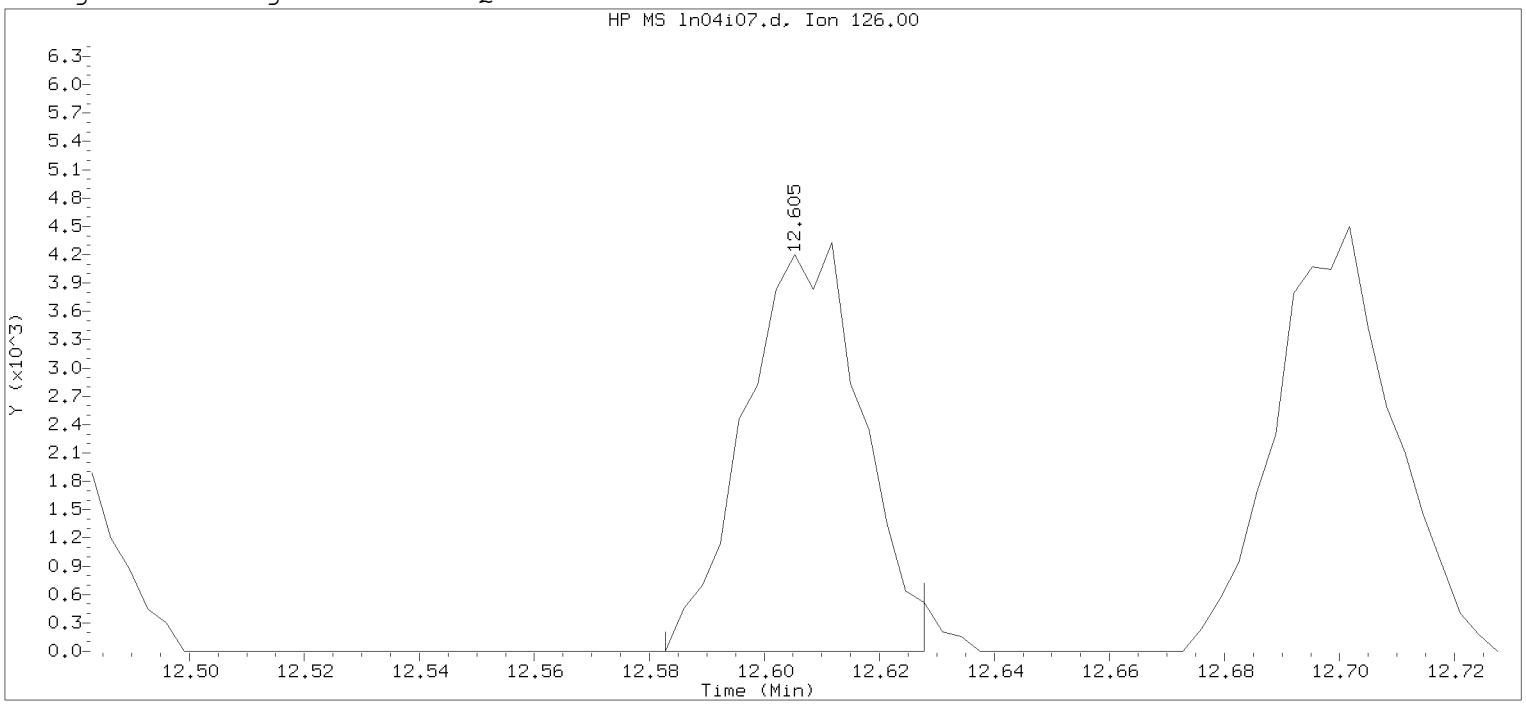
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

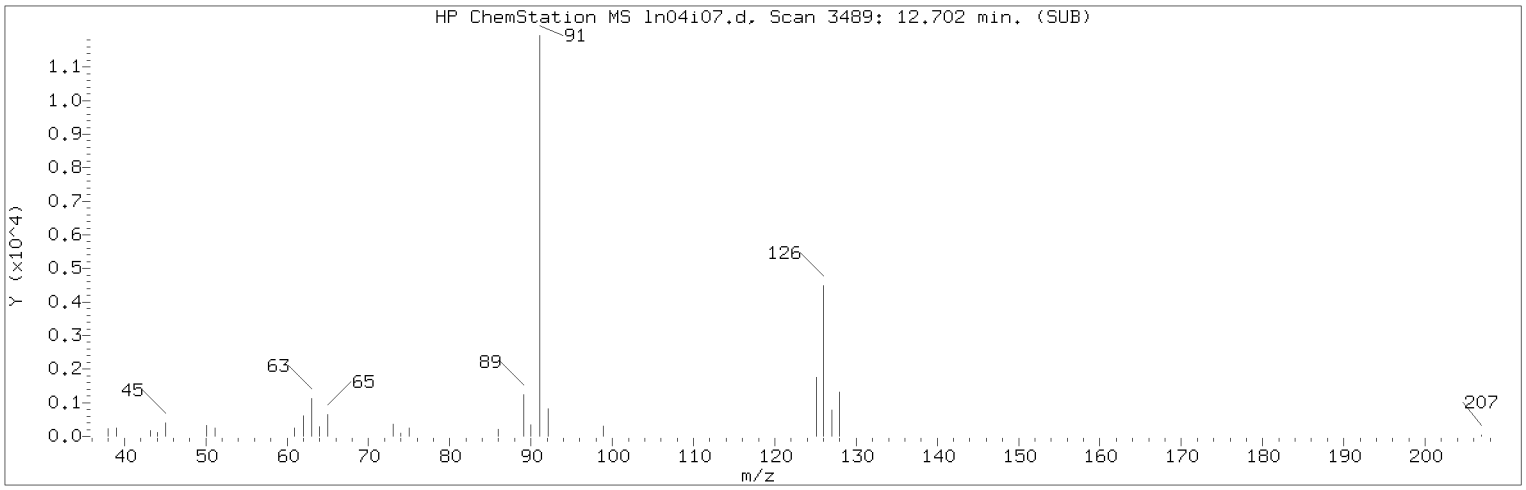
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

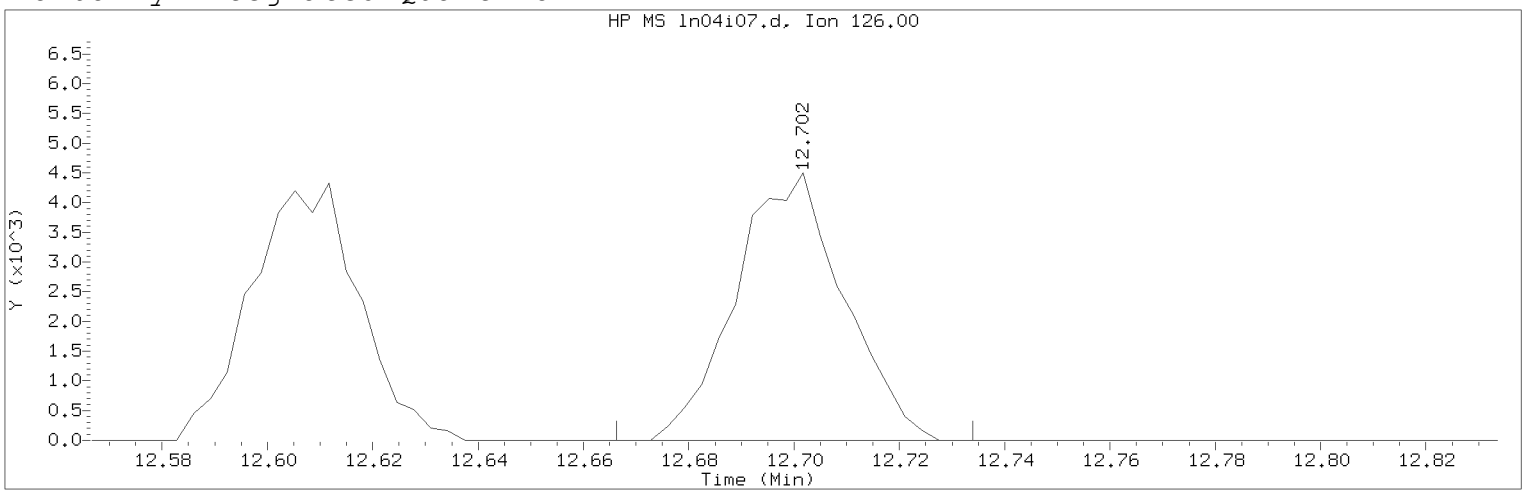
Compound Number : 120
Compound Name : 2-Chlorotoluene
Scan Number : 3459
Retention Time (minutes): 12.605
Quant Ion : 126.00
Area : 6018
On-column Amount (ng) : 0.9136
Integration start scan : 3451 Integration stop scan: 3465
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

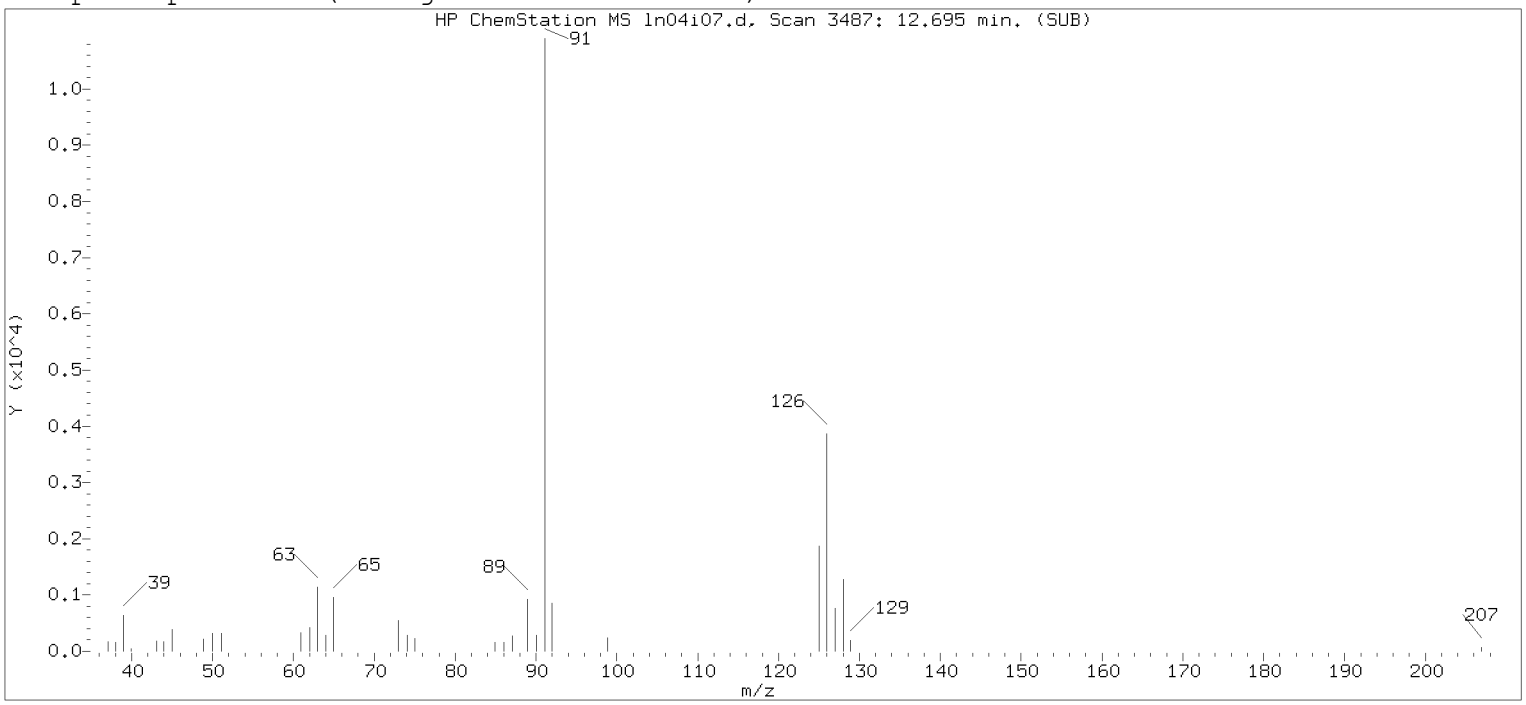
Compound Number : 121
Compound Name : 4-Chlorotoluene
Scan Number : 3489
Retention Time (minutes): 12.702
Quant Ion : 126.00
Area (flag) : 6403M
On-Column Amount (ng) : 0.9314
Integration start scan : 3477 Integration stop scan: 3498
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

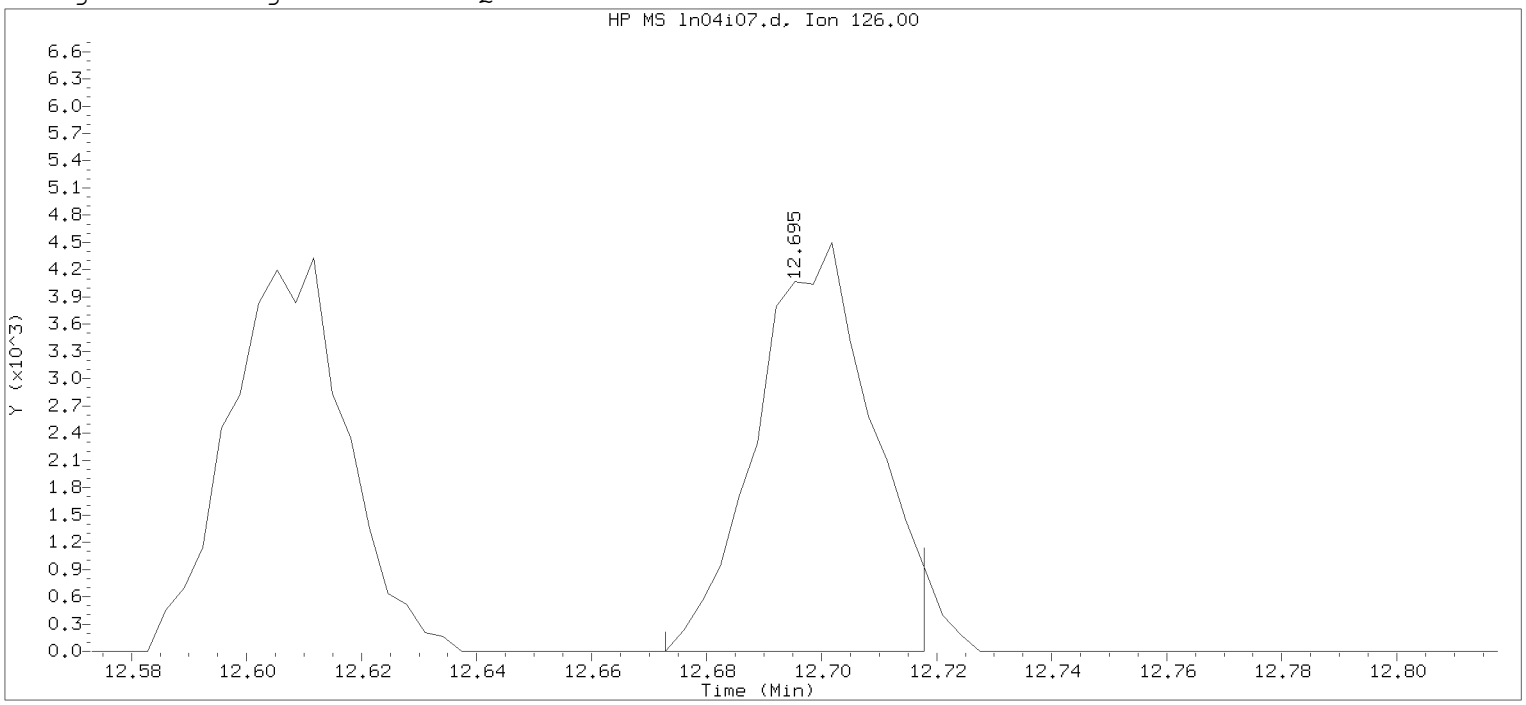
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

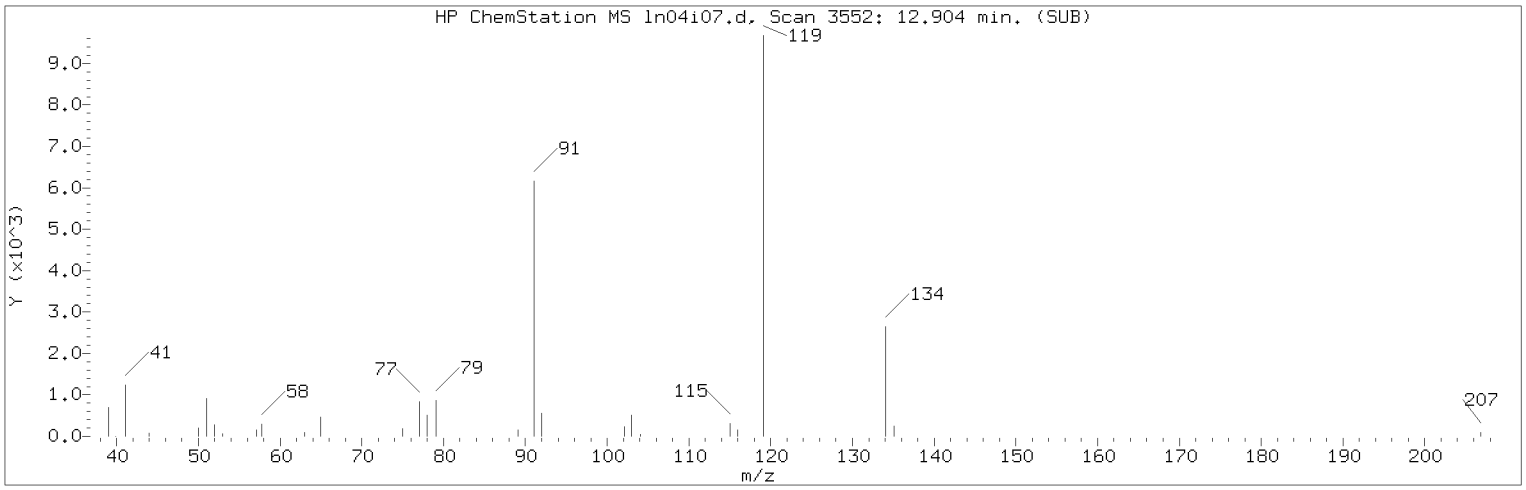
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

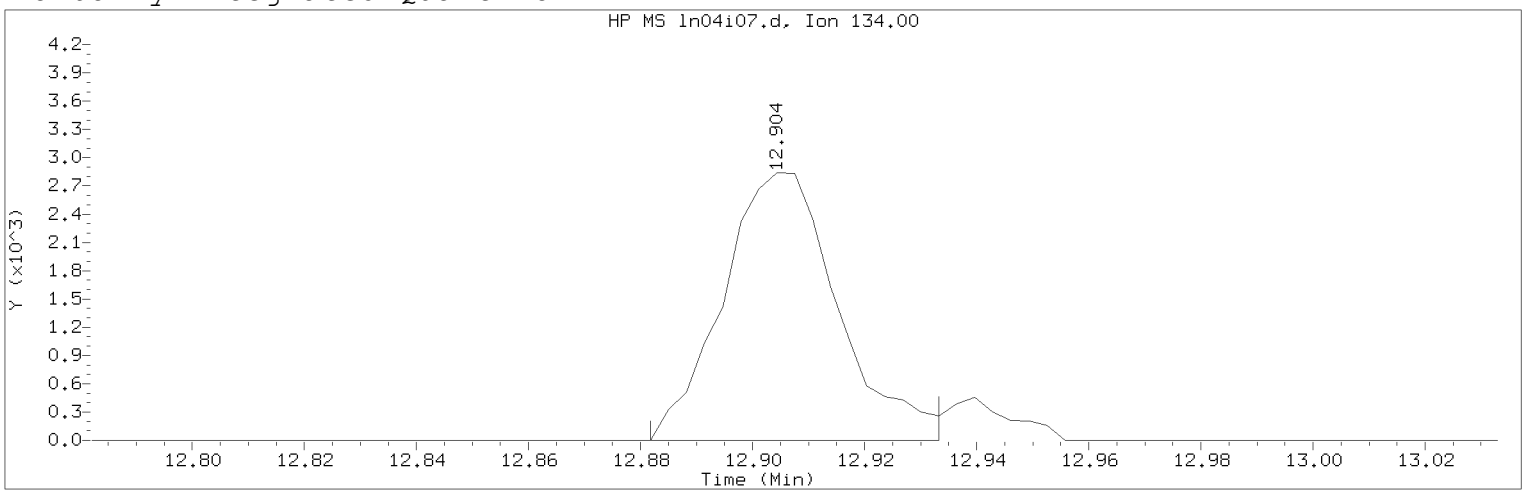
Compound Number : 121
Compound Name : 4-Chlorotoluene
Scan Number : 3487
Retention Time (minutes): 12.695
Quant Ion : 126.00
Area : 6203
On-column Amount (ng) : 0.9062
Integration start scan : 3479 Integration stop scan: 3493
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

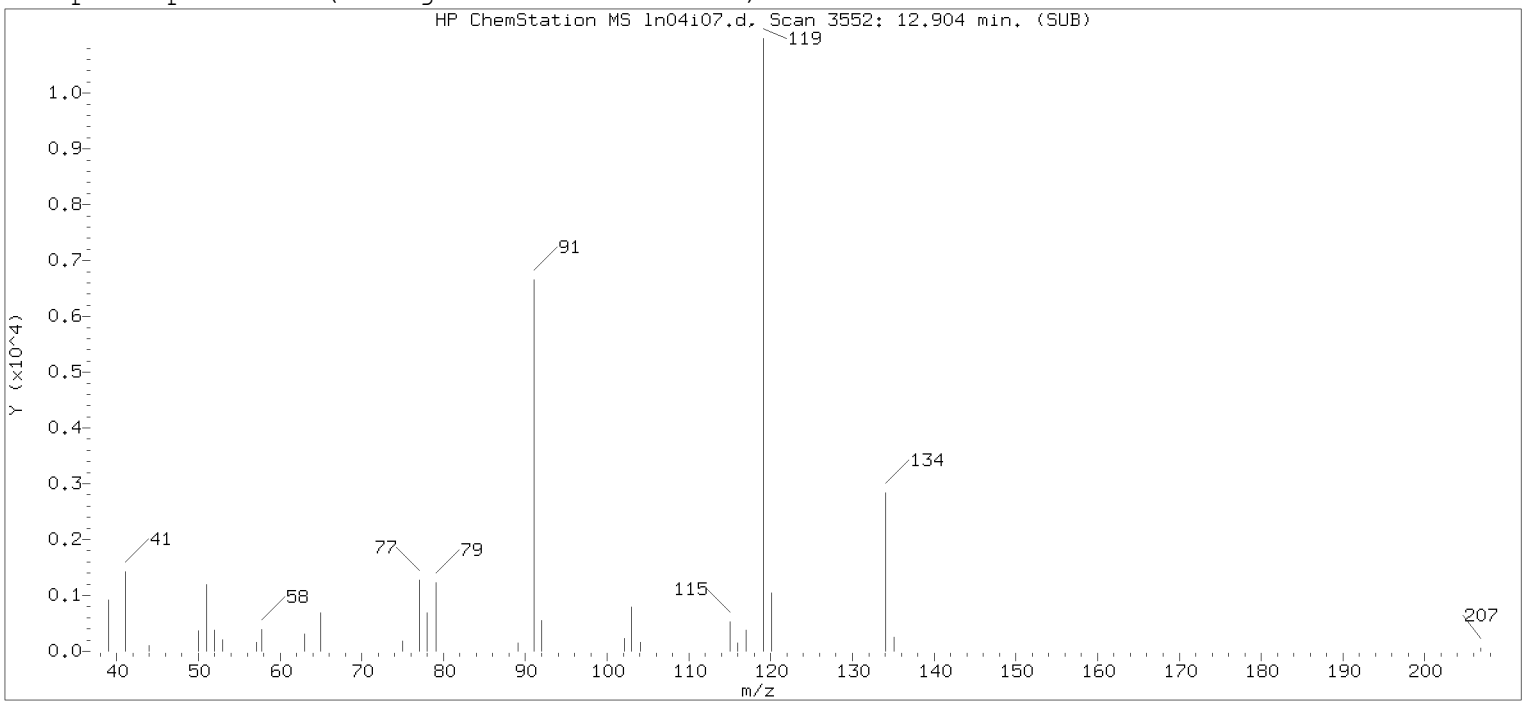
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 4060M
On-Column Amount (ng) : 0.8690
Integration start scan : 3544 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

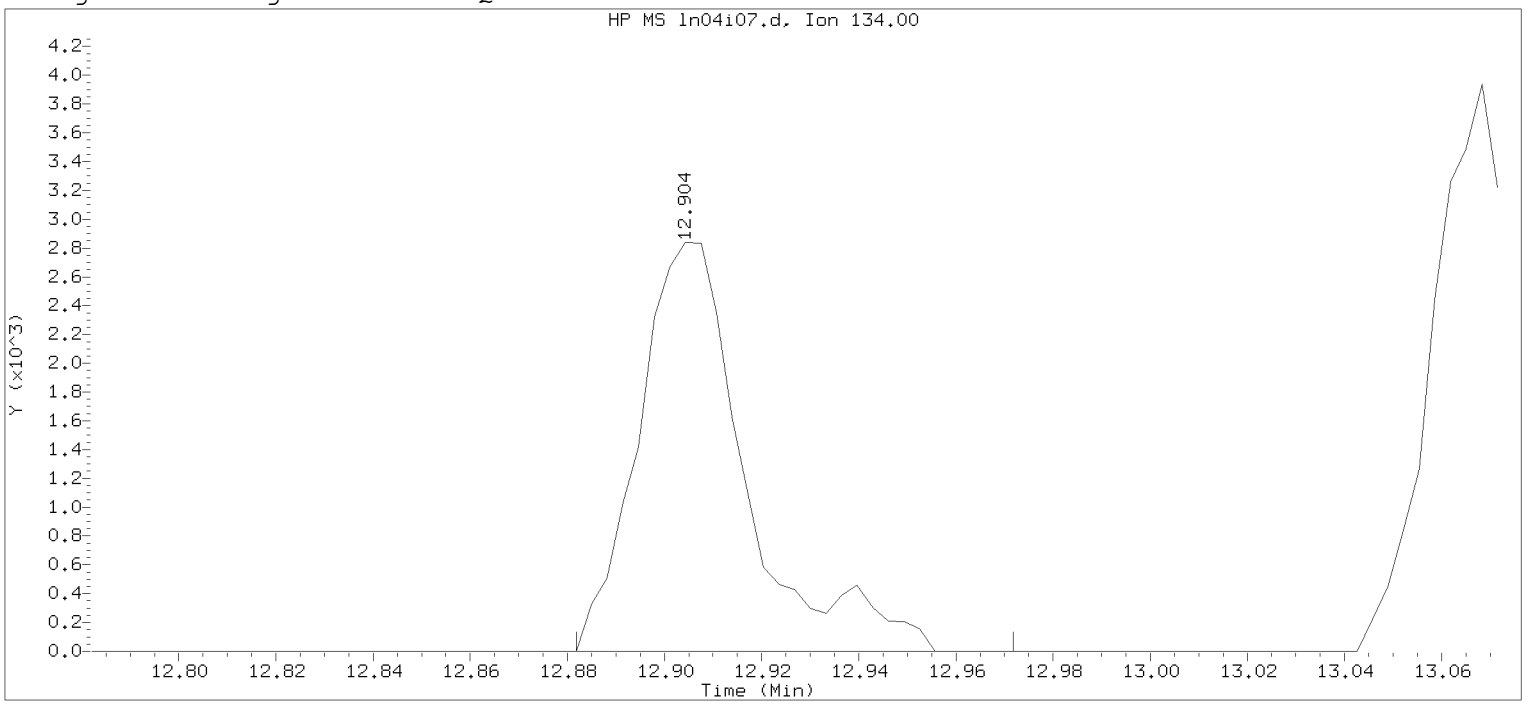
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

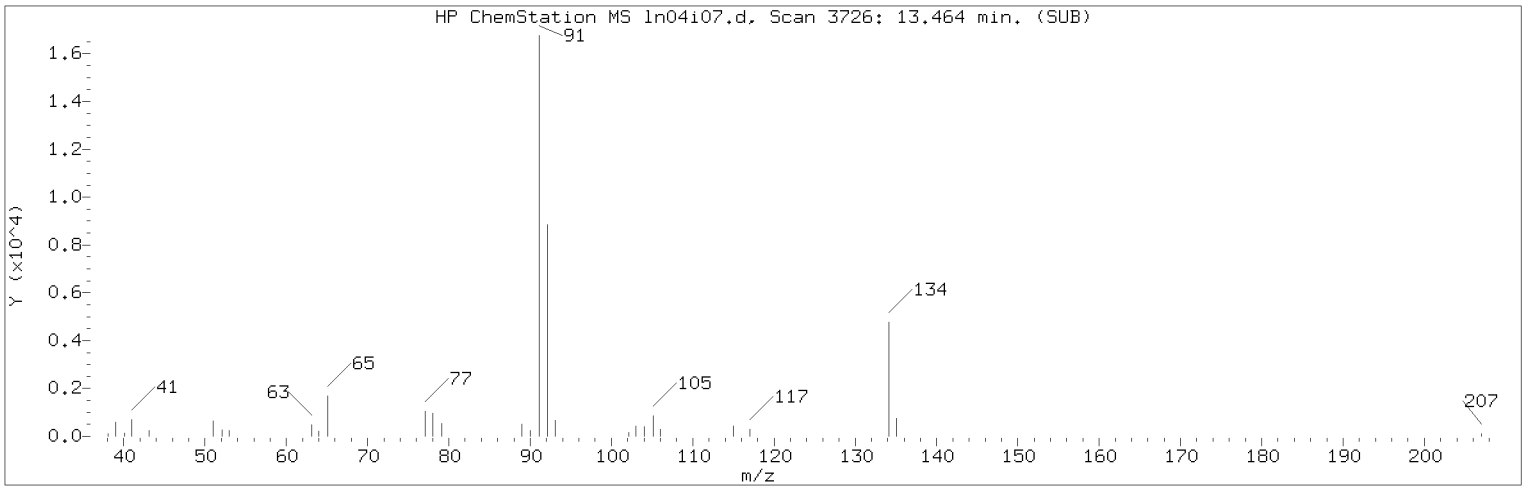
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

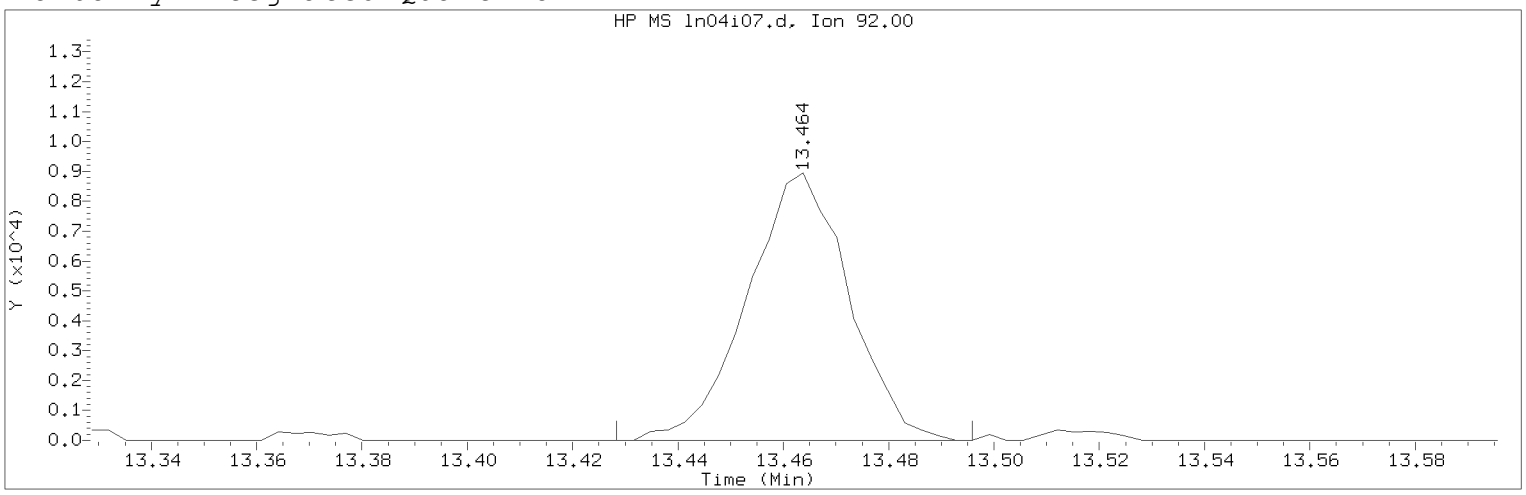
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 4392
On-column Amount (ng) : 0.9024
Integration start scan : 3544 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

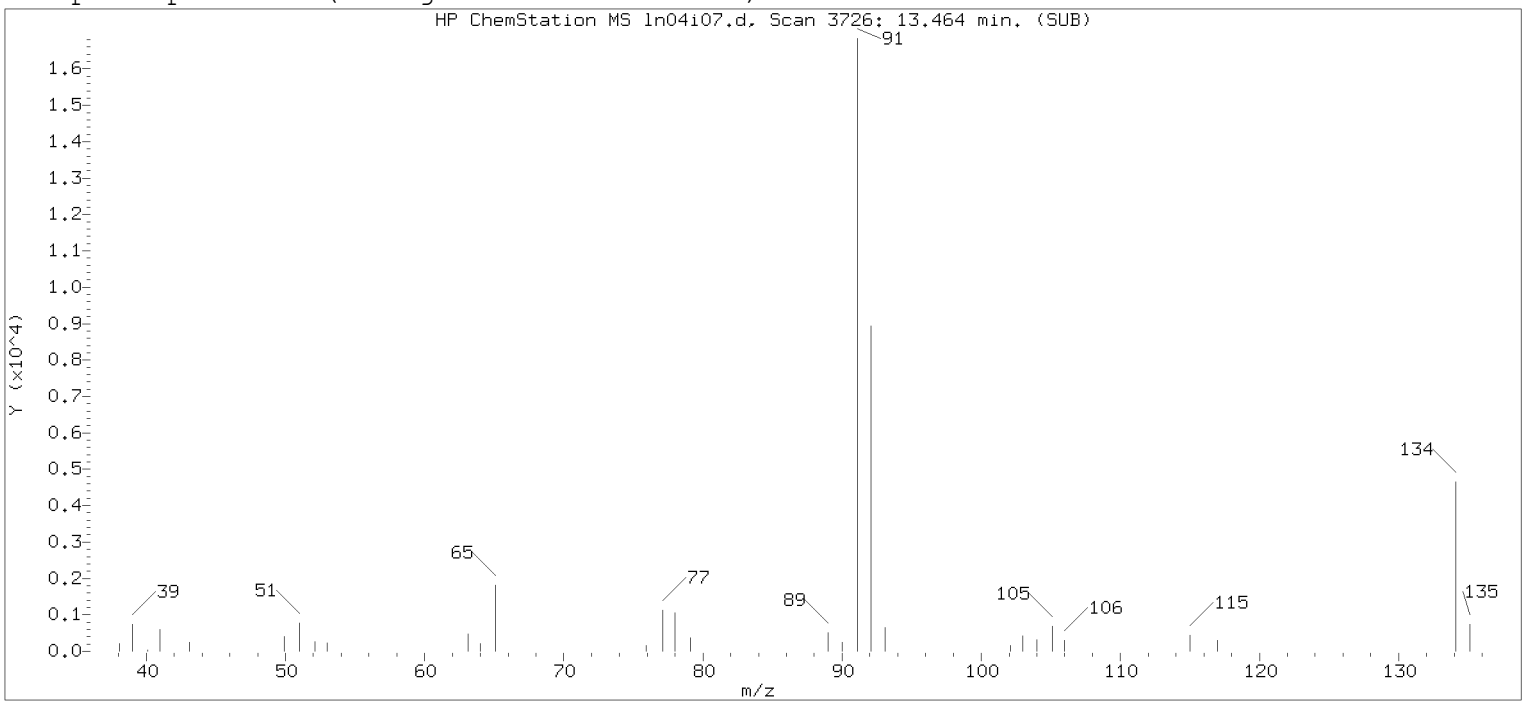
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 3726
Retention Time (minutes): 13.464
Quant Ion : 92.00
Area (flag) : 11964M
On-Column Amount (ng) : 0.9701
Integration start scan : 3714 Integration stop scan: 3735
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

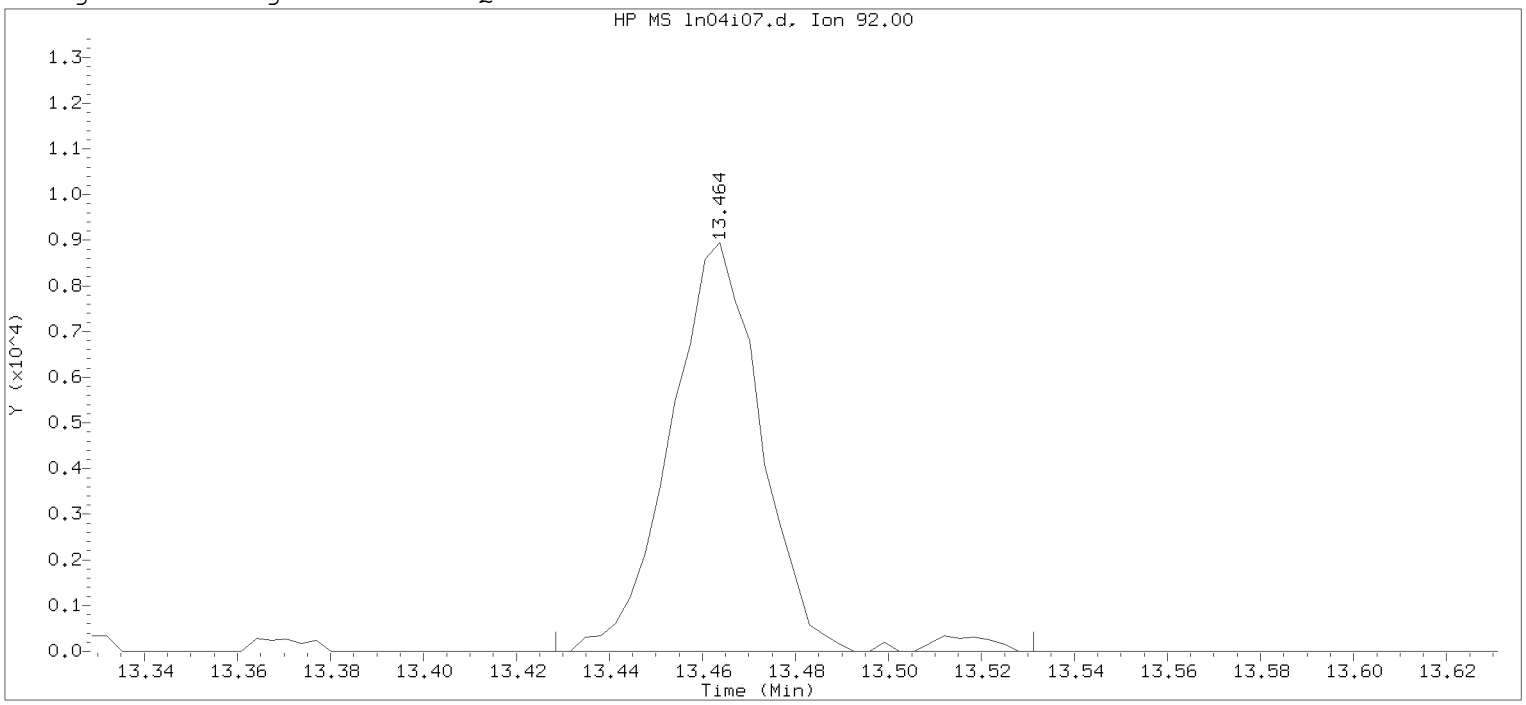
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

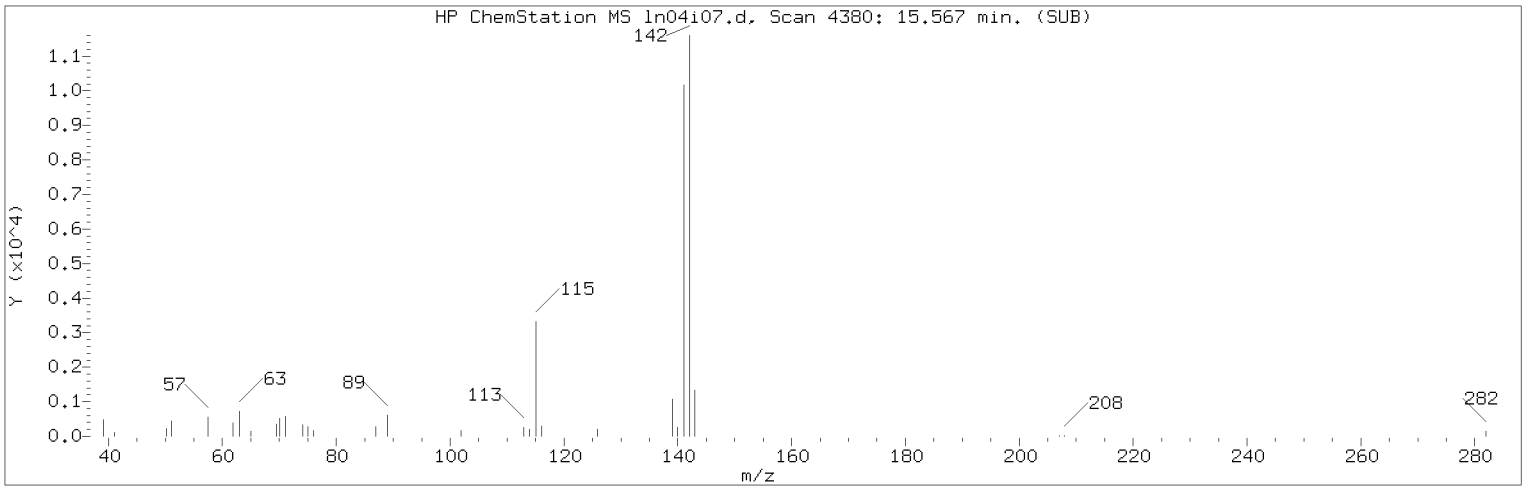
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

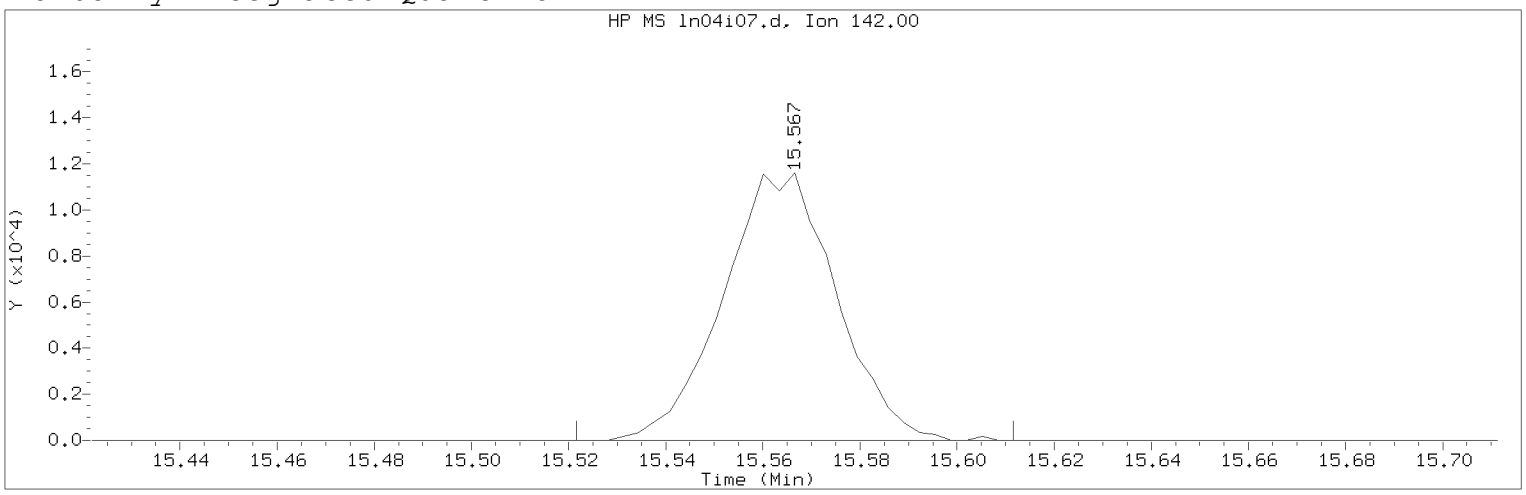
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 3726
Retention Time (minutes): 13.464
Quant Ion : 92.00
Area : 12291
On-column Amount (ng) : 0.9929
Integration start scan : 3714 Integration stop scan: 3746
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

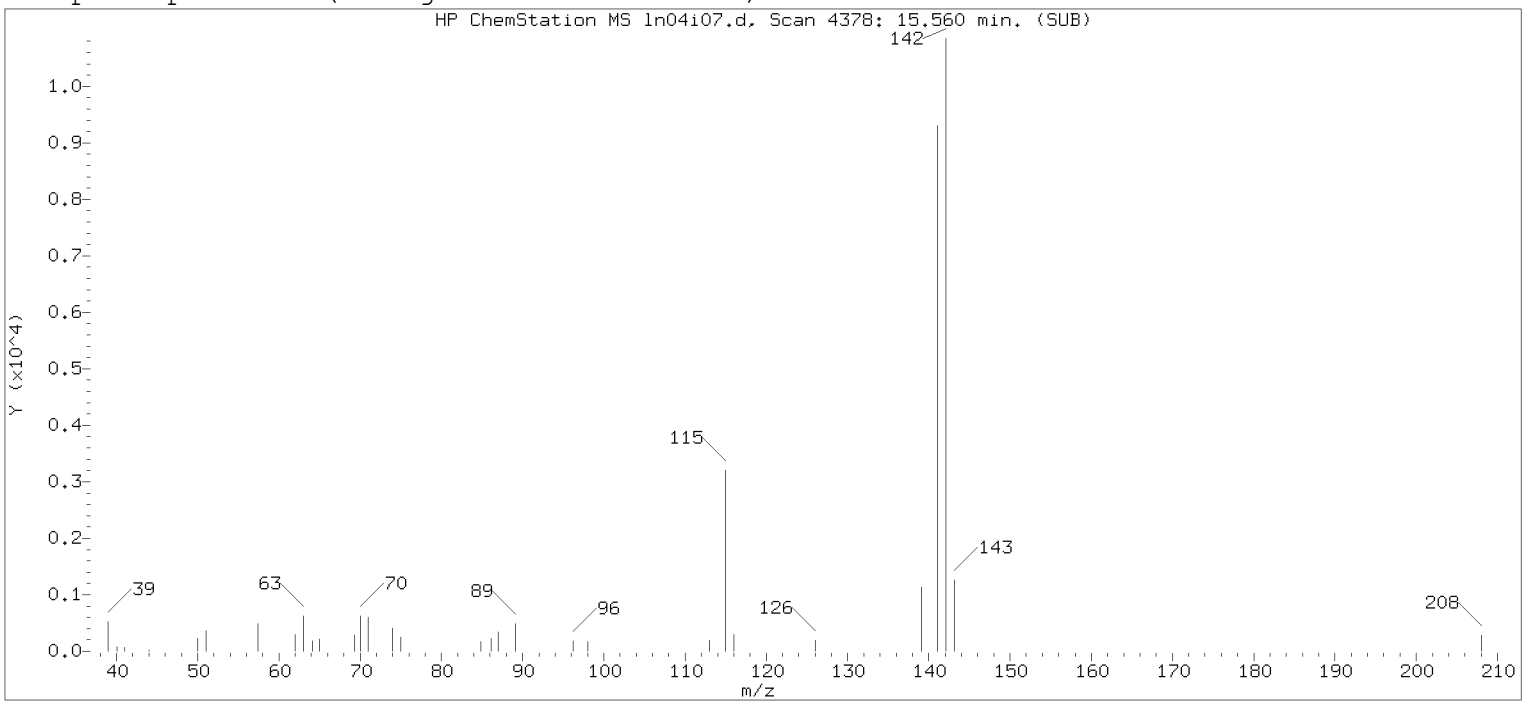
Compound Number : 150
Compound Name : 2-Methylnaphthalene
Scan Number : 4380
Retention Time (minutes): 15.567
Quant Ion : 142.00
Area (flag) : 18783M
On-Column Amount (ng) : 0.9844
Integration start scan : 4365 Integration stop scan: 4393
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

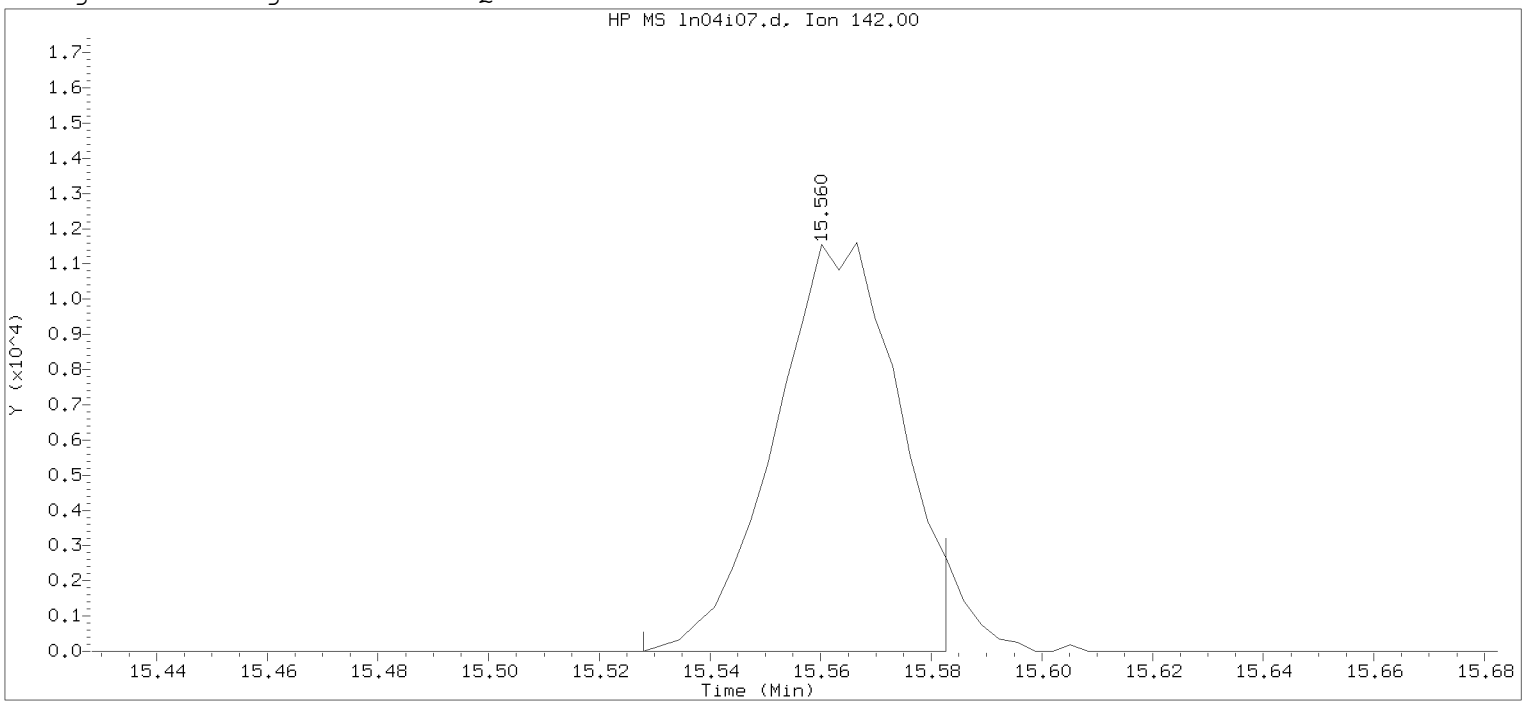
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



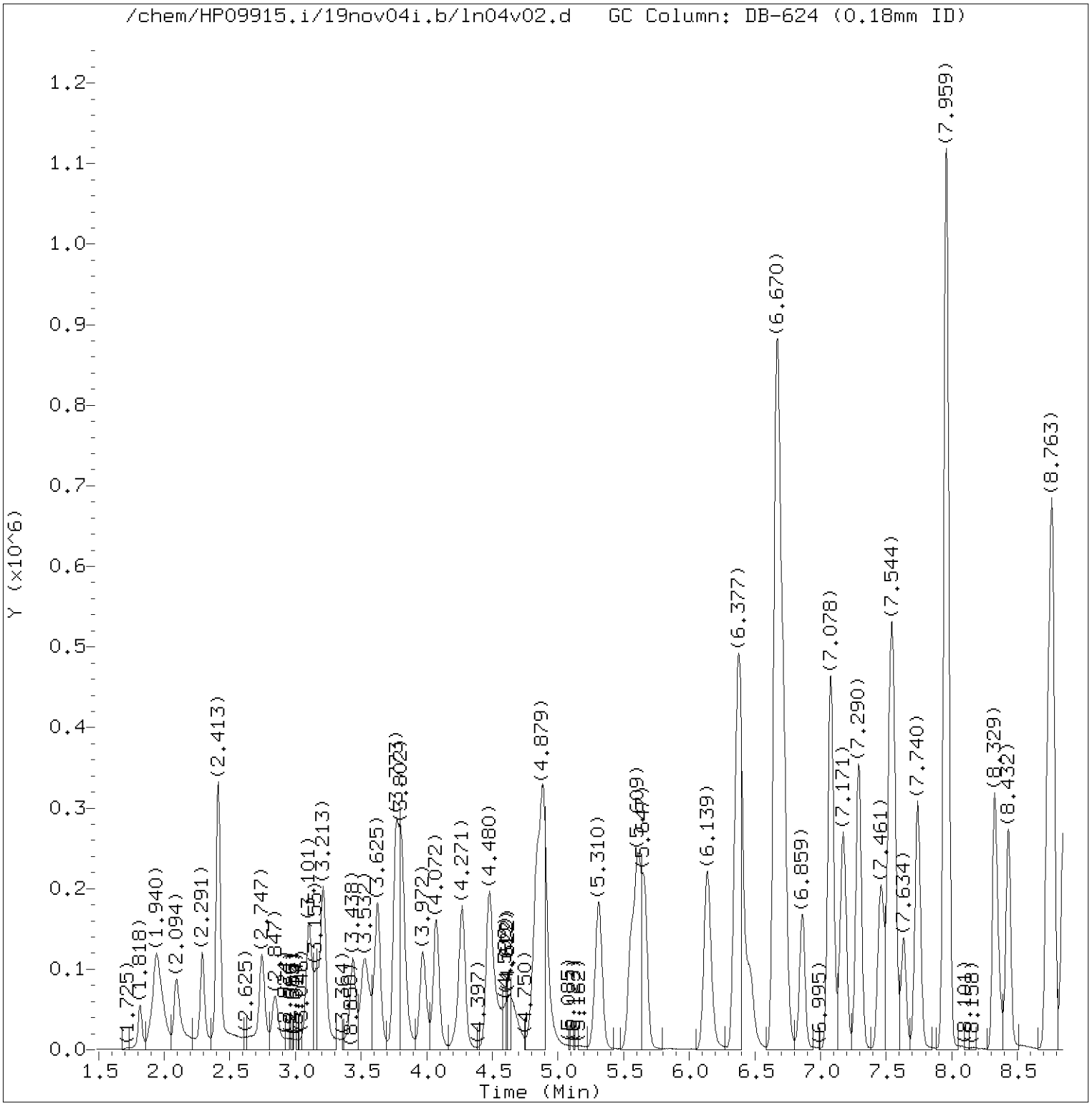
Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 150
Compound Name : 2-Methylnaphthalene
Scan Number : 4378
Retention Time (minutes): 15.560
Quant Ion : 142.00
Area : 17962
On-column Amount (ng) : 0.9472
Integration start scan : 4367 Integration stop scan: 4384
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

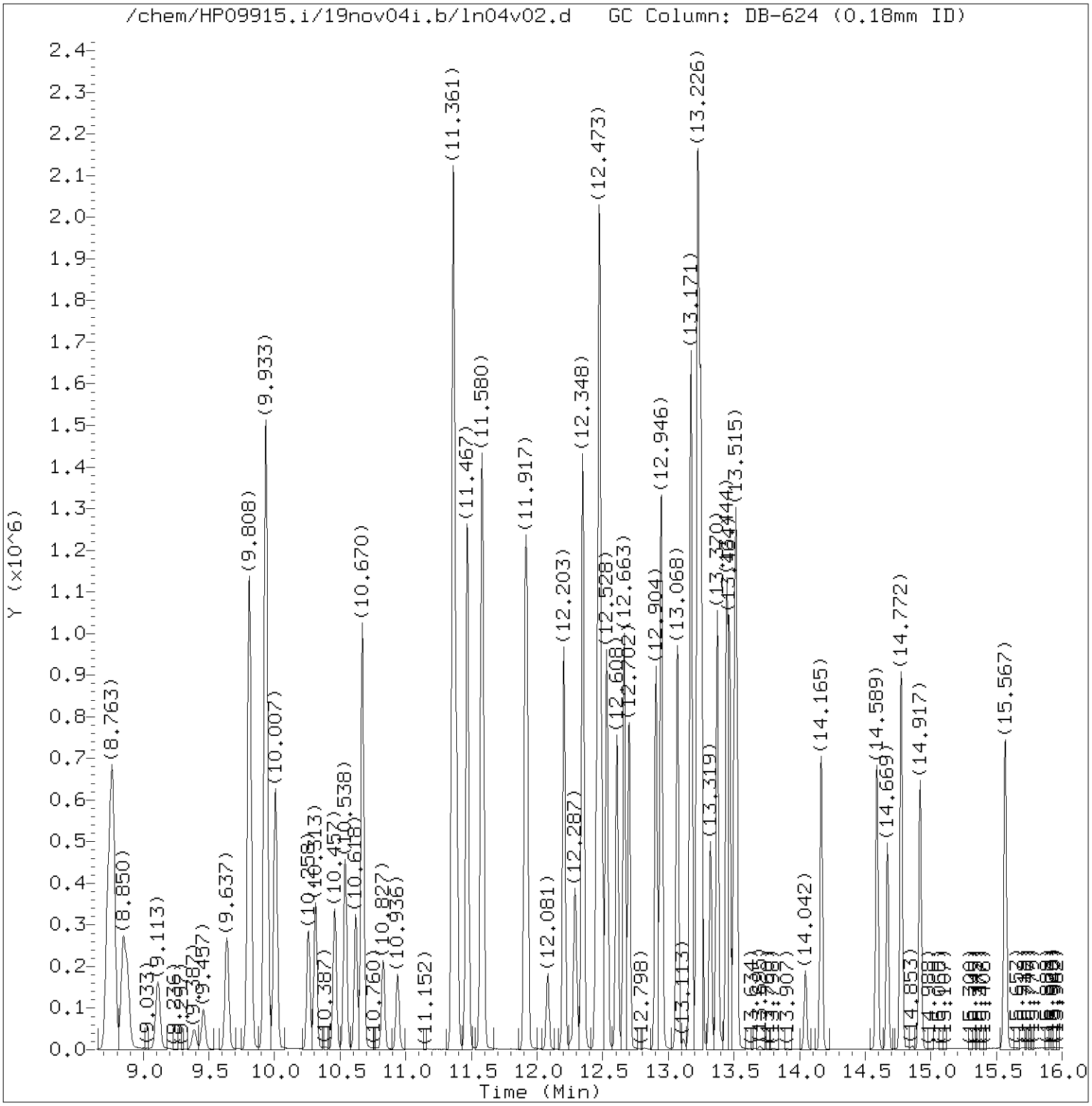
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.094	85	158021M	18.732
4) Chloromethane	(2)	2.291	50	153886	18.927
5) 1,3-Butadiene	(2)	2.413	39	132622M	19.645
6) Vinyl Chloride	(2)	2.413	62	157013	19.349
8) Bromomethane	(2)	2.747	94	104324	17.935
9) Chloroethane	(2)	2.847	64	82467	18.493
10) Dichlorofluoromethane	(2)	3.101	67	174118M	16.224
12) Trichlorofluoromethane	(2)	3.159	101	181238	20.746
11) n-Pentane	(2)	3.213	43	196297	19.014
14) Ethyl ether	(2)	3.438	59	93832	16.622
15) Freon 123a	(2)	3.528	67	136689	19.450
16) Acrolein	(1)	3.625	56	286690	135.125
17) 1,1-Dichloroethene	(2)	3.766	96	107244	20.914
19) Freon 113	(2)	3.795	101	115842	19.801
18) Acetone	(1)	3.805	58	130076	136.752
22) Methyl Iodide	(2)	3.969	142	197263	18.564
21) 2-Propanol	(1)	4.008	45	98510	144.063
23) Carbon Disulfide	(2)	4.075	76	360582	18.660
27) Methyl Acetate	(2)	4.249	43	126109	19.095
25) Allyl Chloride	(2)	4.271	41	171048	18.595
28) Methylene Chloride	(2)	4.474	84	124367	20.377
29)*t-Butyl alcohol-d10	(1)	4.503	65	282794M	250.000
30) t-Butyl alcohol	(1)	4.641	59	227283	190.899
31) Acrylonitrile	(2)	4.834	53	337483	94.980
32) trans-1,2-Dichloroethene	(2)	4.888	96	118658	20.003
33) Methyl Tertiary Butyl Ether	(2)	4.892	73	367523	18.875
34) n-Hexane	(2)	5.310	57	185206M	20.067
36) 1,1-Dichloroethane	(2)	5.554	63	201428	19.465
38) di-Isopropyl ether	(2)	5.609	45	380712	19.075
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	177031	19.067
40) Ethyl t-butyl ether	(2)	6.139	59	369375	19.070
43) 1,2-Dichloroethene (Total)	(2)		96	258427	40.995
44) 2-Butanone	(2)	6.361	43	651073	142.743
42) cis-1,2-Dichloroethene	(2)	6.384	96	139769	20.992
45) 2,2-Dichloropropane	(2)	6.396	77	163413	20.314
47) Propionitrile	(1)	6.461	54	209265	141.065
48) Methacrylonitrile	(2)	6.670	67	556962	145.312
49) Bromochloromethane	(2)	6.712	128	66215	18.755

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.721	71	123960	92.508
51) Chloroform	(2)	6.866	83	199497	20.156
52)$Dibromofluoromethane	(2)	7.075	113	293558	49.637
53) 1,1,1-Trichloroethane	(2)	7.081	97	172182	20.382
54) Cyclohexane	(2)	7.171	56	214913	19.025
56) Carbon Tetrachloride	(2)	7.287	117	143405	20.016
55) 1,1-Dichloropropene	(2)	7.294	75	164177	20.065
58) Isobutyl Alcohol	(1)	7.461	41	180862	451.413
57)$1,2-Dichloroethane-d4	(2)	7.531	102	74610	49.500
60) Benzene	(2)	7.560	78	492012	19.996
61) 1,2-Dichloroethane	(2)	7.638	62	163231	20.625
65) t-Amyl methyl ether	(2)	7.740	73	369180	18.989
67) n-Heptane	(2)	7.956	43	163362M	18.948
66)*Fluorobenzene	(2)	7.959	96	1209671	50.000
69) n-Butanol	(1)	8.326	56	314470M	911.924
71) Trichloroethene	(2)	8.429	95	124893	20.159
72) Methylcyclohexane	(2)	8.731	83	222042	19.318
73) 1,2-Dichloropropane	(2)	8.769	63	127774	20.450
76) Methyl Methacrylate	(2)	8.847	69	115569	19.128
75) 1,4-Dioxane	(1)	8.853	88	47747M	503.753
74) Dibromomethane	(2)	8.879	93	80909	20.014
78) Bromodichloromethane	(2)	9.113	83	144408	19.907
79) 2-Nitropropane	(2)	9.383	41	35869	16.324
80) 2-Chloroethyl Vinyl Ether	(2)	9.457	63	51088	19.038
81) cis-1,3-Dichloropropene	(2)	9.637	75	191486	19.874
82) 4-Methyl-2-pentanone	(2)	9.808	43	893533	92.810
83)$Toluene-d8	(3)	9.933	98	1243931	50.214
88) Toluene	(3)	10.007	92	314091	20.224
90) 1,3-Dichloropropene (total)	(3)		100	360855	39.085
89) trans-1,3-Dichloropropene	(3)	10.258	75	169369	19.211
91) Ethyl Methacrylate	(3)	10.313	69	194593	18.162
92) 1,1,2-Trichloroethane	(3)	10.457	97	120085	20.394
93) Tetrachloroethene	(3)	10.538	166	145489	22.119
94) 1,3-Dichloropropane	(3)	10.618	76	197817	19.676
96) 2-Hexanone	(3)	10.670	43	659041	92.150
97) Dibromochloromethane	(3)	10.827	129	119169	19.757
99) 1,2-Dibromoethane	(3)	10.936	107	127100	19.878
100)*Chlorobenzene-d5	(3)	11.361	117	946755	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) 1-Chlorohexane	(3)	11.364	91	162531	19.480
102) Chlorobenzene	(3)	11.387	112	355167	20.223
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	114709	19.823
104) Ethylbenzene	(3)	11.470	91	602093	20.283
106) m+p-Xylene	(3)	11.583	106	478306	40.959
108) Xylene (Total)	(3)		106	712690	61.279
107) o-Xylene	(3)	11.908	106	234384	20.320
109) Styrene	(3)	11.924	104	391950	20.563
110) Bromoform	(3)	12.081	173	80910	17.952
111) Isopropylbenzene	(3)	12.203	105	603598	20.864
112) Cyclohexanone	(1)	12.287	55	166810	449.364
114)$4-Bromofluorobenzene	(3)	12.348	95	469009	49.999
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	188446M	19.576
115) Bromobenzene	(4)	12.467	156	151805	19.821
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	290498	97.834
117) 1,2,3-Trichloropropane	(4)	12.496	110	58902M	19.940
119) n-Propylbenzene	(4)	12.531	91	694916	20.768
120) 2-Chlorotoluene	(4)	12.608	126	143440	20.178
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	499772	20.552
121) 4-Chlorotoluene	(4)	12.702	126	148830	20.114
124) tert-Butylbenzene	(4)	12.907	134	103762M	20.632
125) Pentachloroethane	(4)	12.943	167	74538	17.213
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	511834	19.971
127) sec-Butylbenzene	(4)	13.068	105	616554	20.545
129) 1,3-Dichlorobenzene	(4)	13.168	146	282424	20.067
130) p-Isopropyltoluene	(4)	13.174	119	533278	20.541
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	509597	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	298831	20.482
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	539562	19.874
135) Benzyl Chloride	(4)	13.319	91	329267	16.019
136) 1,3-Diethylbenzene	(4)	13.374	119	322622	19.095
141) Diethylbenzene (total)	(4)		100	935720	57.258
137) 1,4-Diethylbenzene	(4)	13.444	119	340230	19.006
139) n-Butylbenzene	(4)	13.464	92	258920	19.505
138) 1,2-Dichlorobenzene	(4)	13.502	146	282807	20.364
140) 1,2-Diethylbenzene	(4)	13.518	119	272868	19.158
142) 1,2-Dibromo-3-chloropropane	(4)	14.042	75	40654	19.292
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	203102	19.035

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

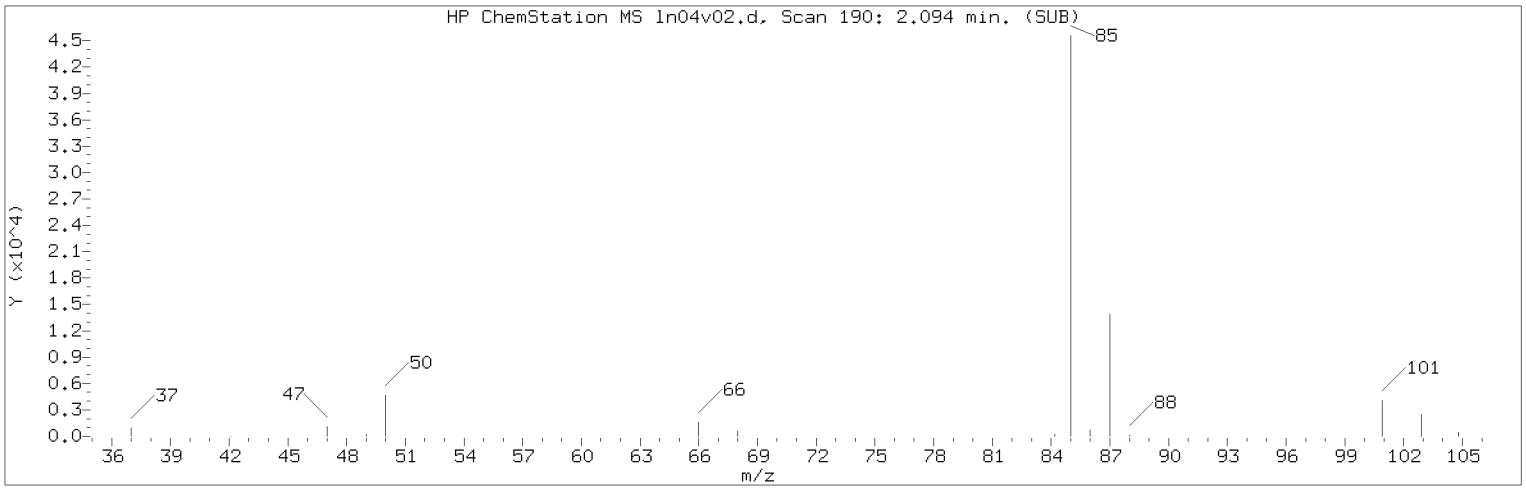
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

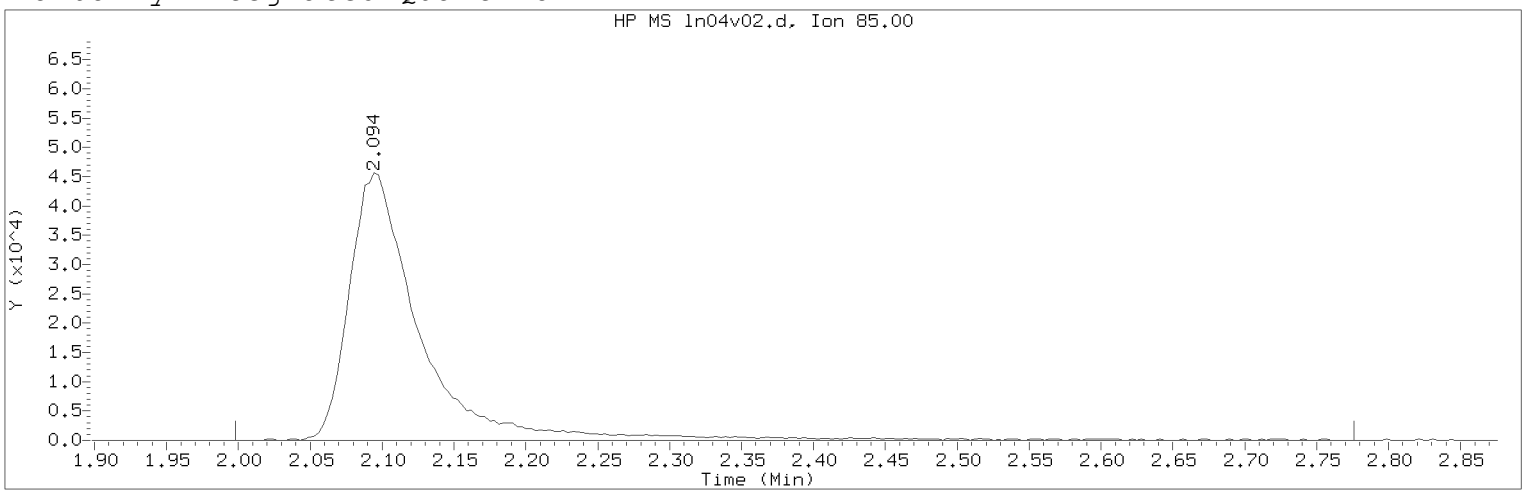
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	199046	19.186
147) Hexachlorobutadiene	(4)	14.666	225	82991	16.942
148) Naphthalene	(4)	14.772	128	666056	19.970
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	192487	19.067
150) 2-Methylnaphthalene	(4)	15.567	142	374385	18.228

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

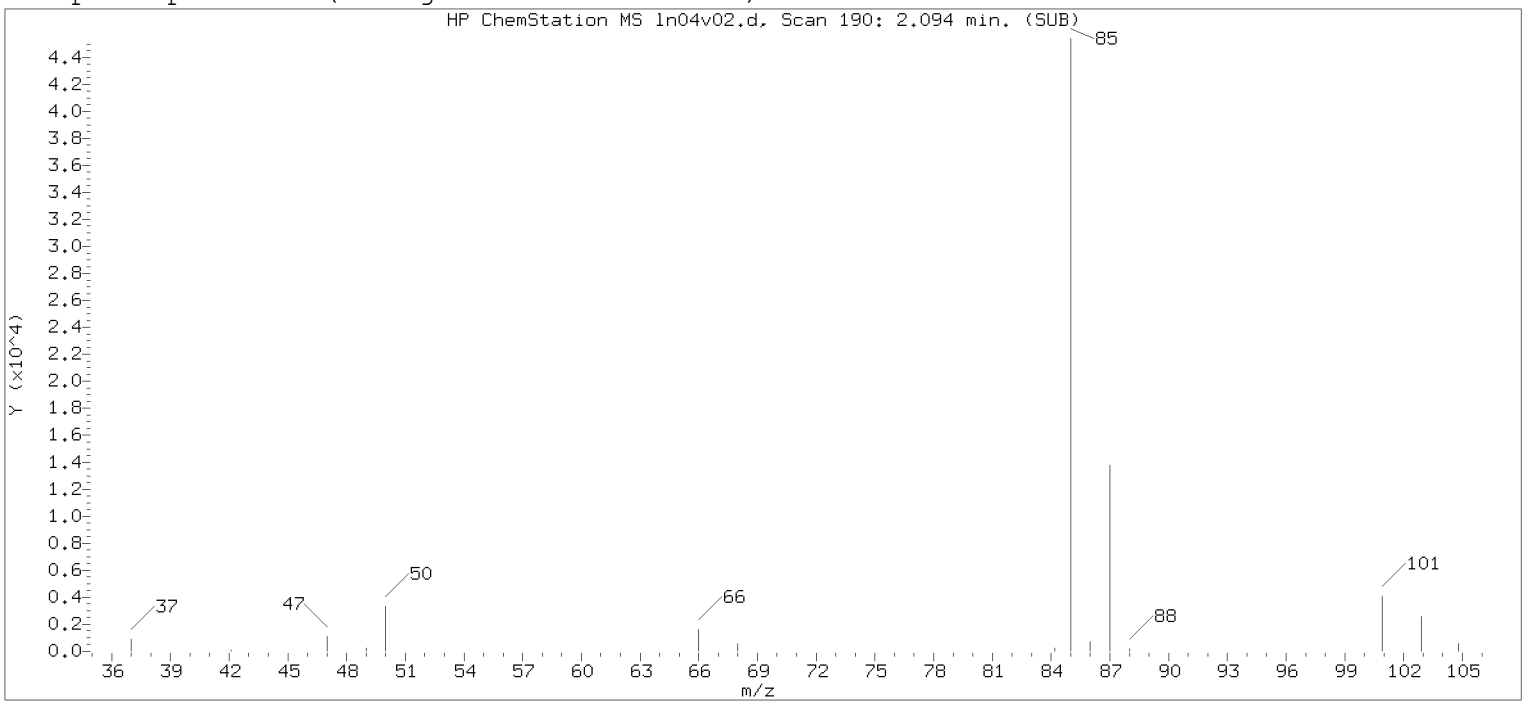
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area (flag) : 158021M
On-Column Amount (ng) : 18.7320
Integration start scan : 159 Integration stop scan: 401
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

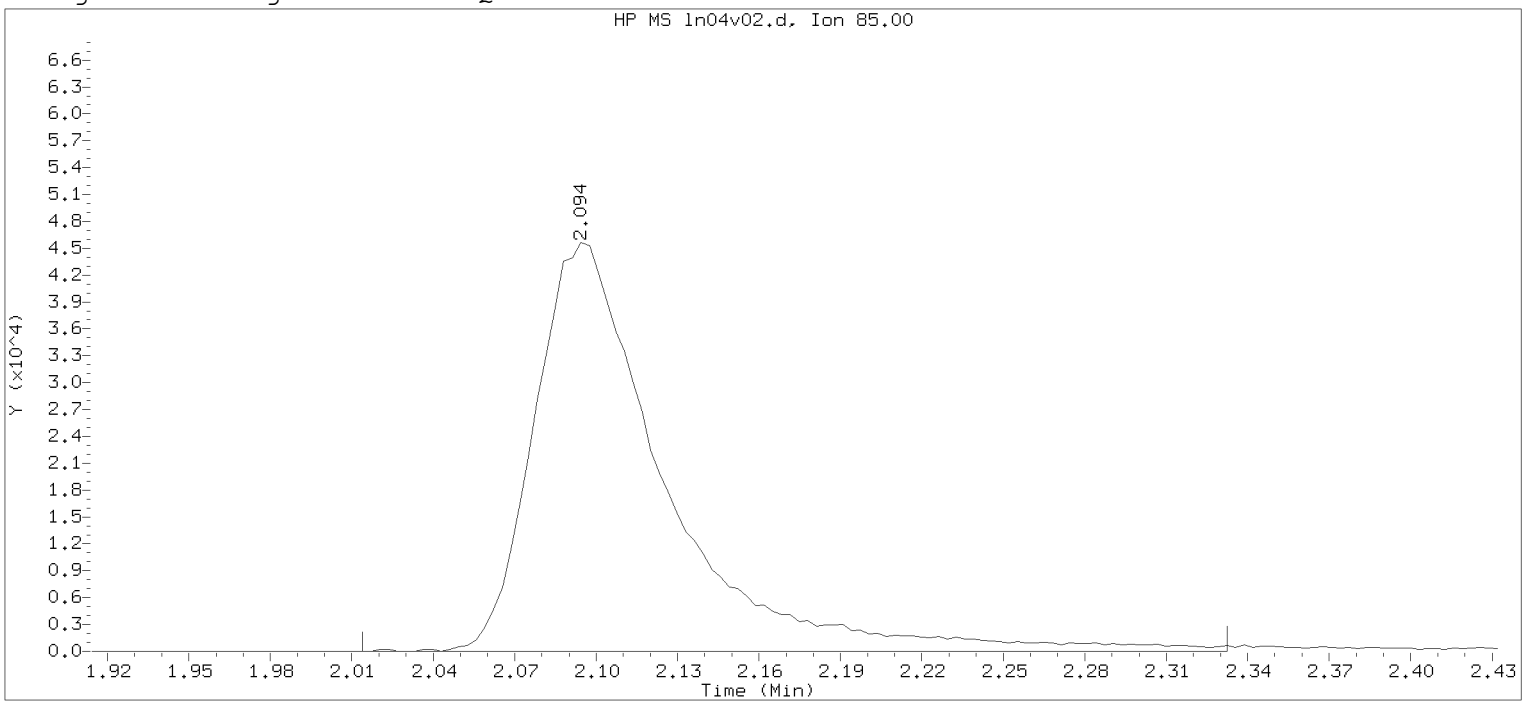
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

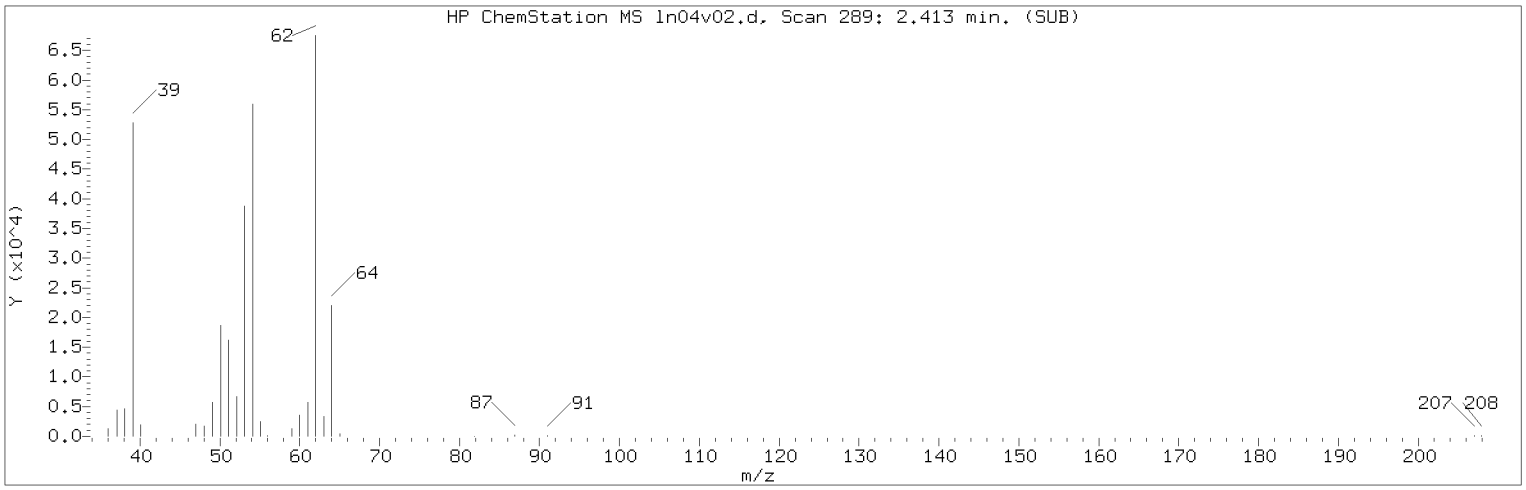
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

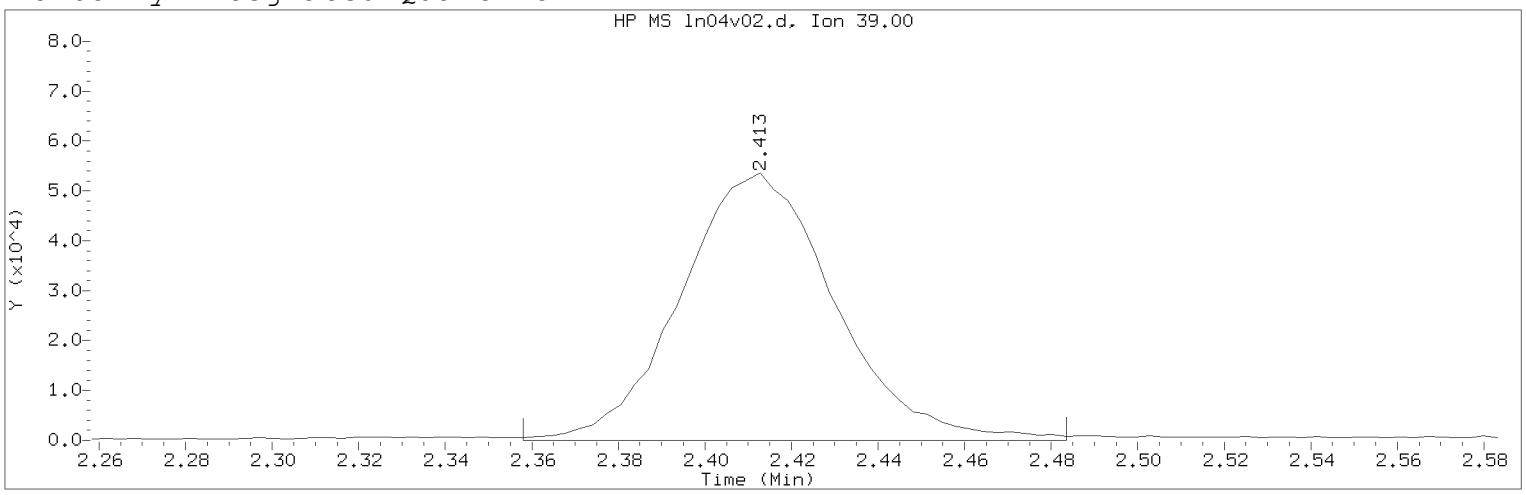
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area : 152845
On-column Amount (ng) : 18.1184
Integration start scan : 164 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

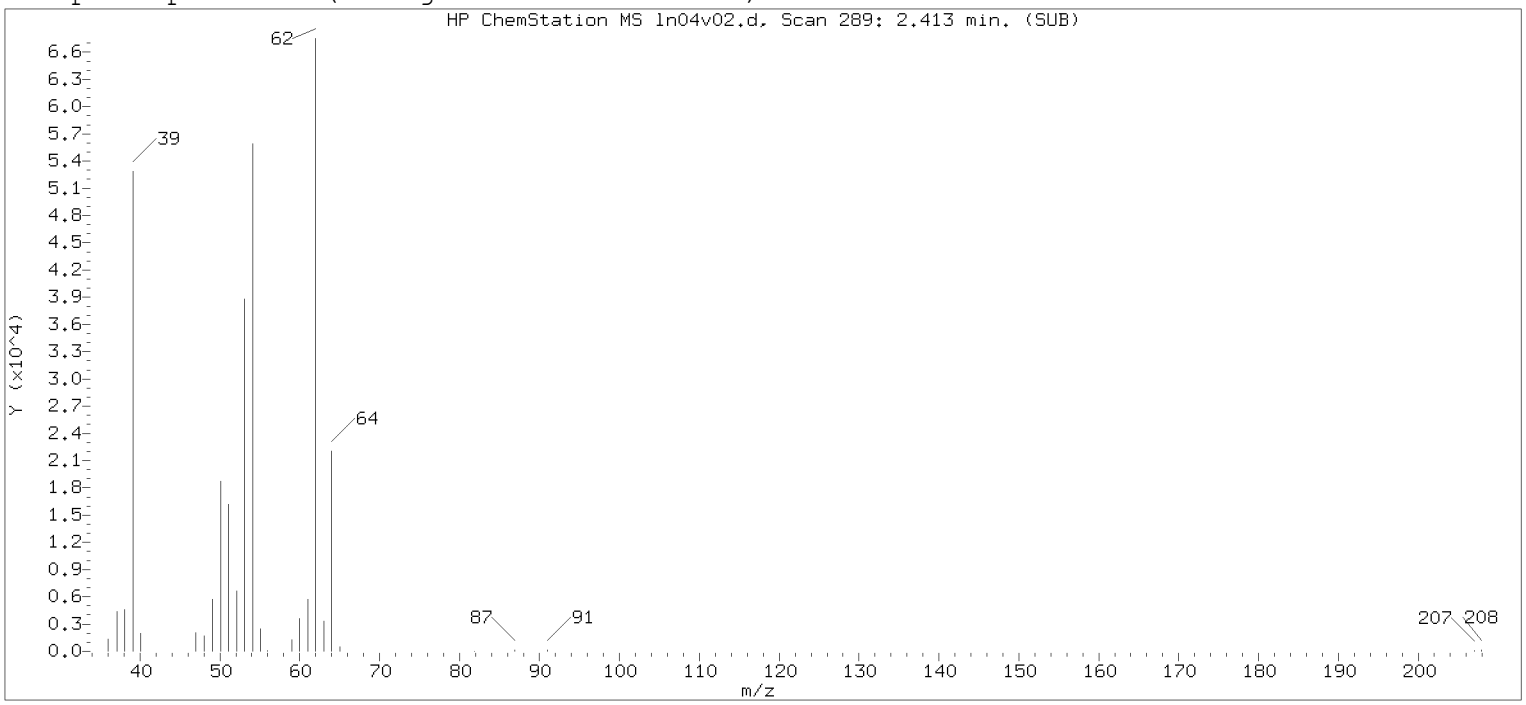
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area (flag) : 132622M
On-Column Amount (ng) : 19.6453
Integration start scan : 271 Integration stop scan: 310
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

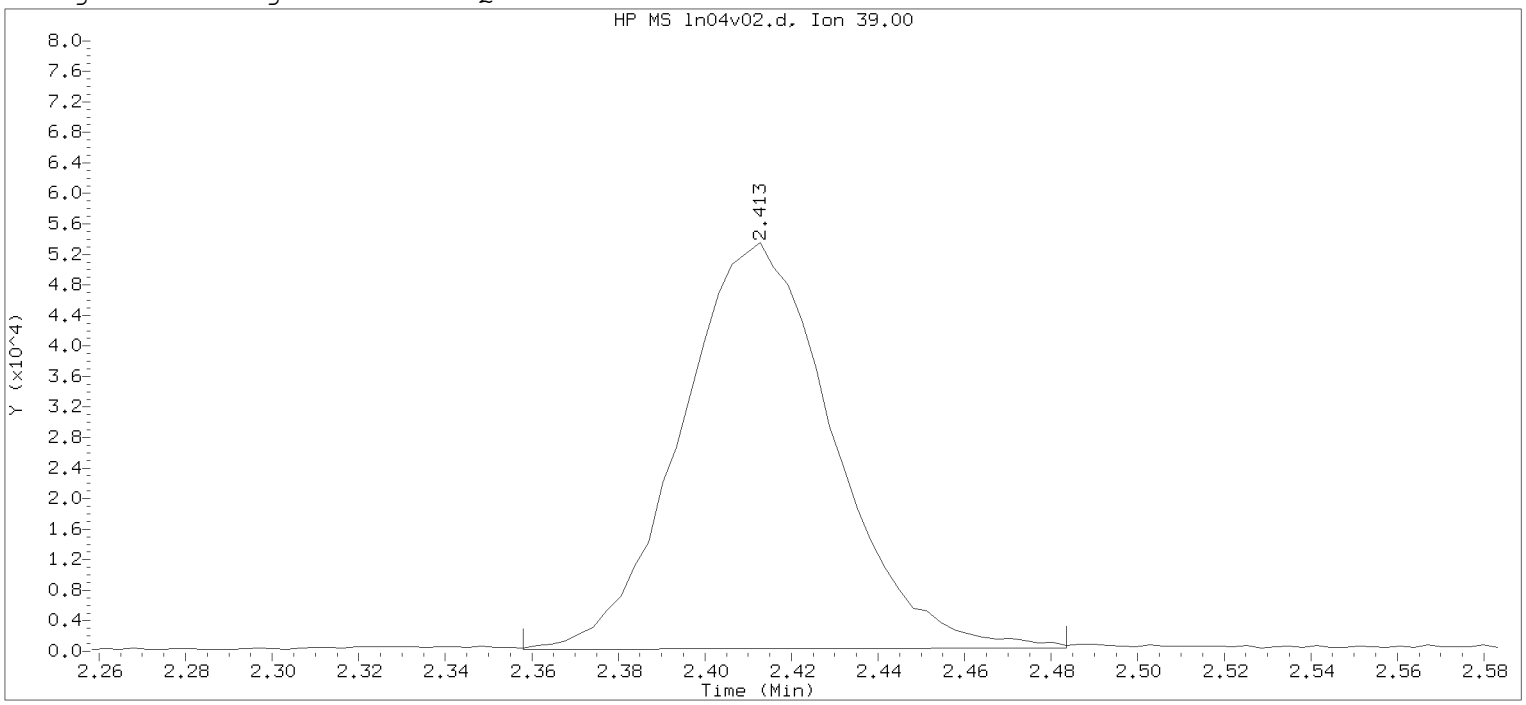
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

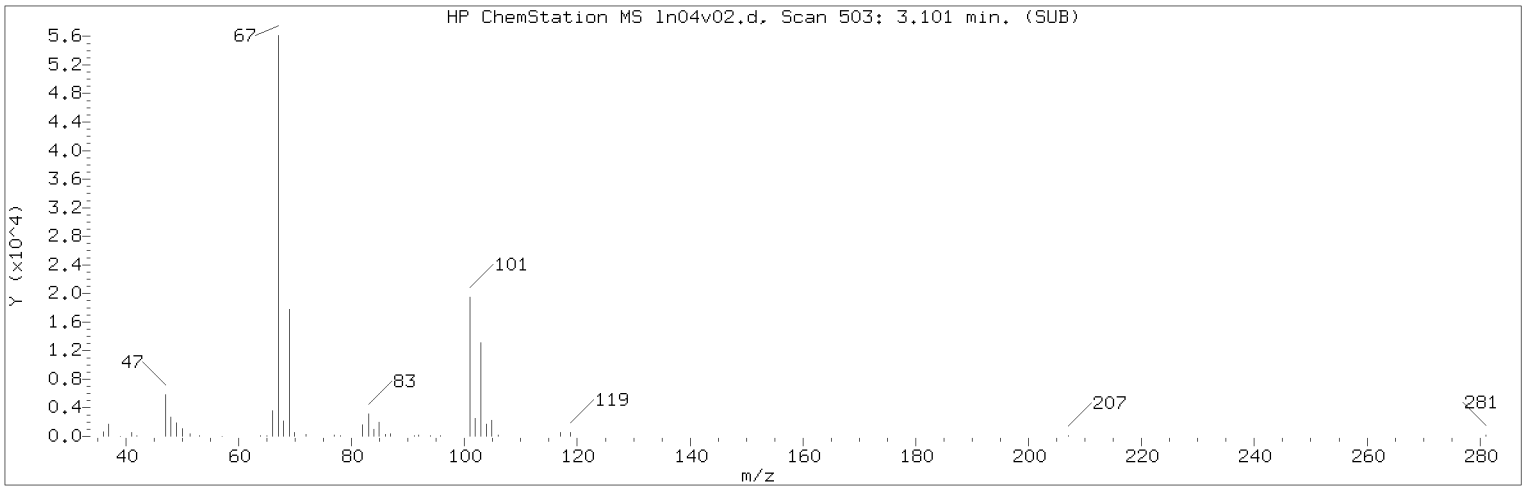
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

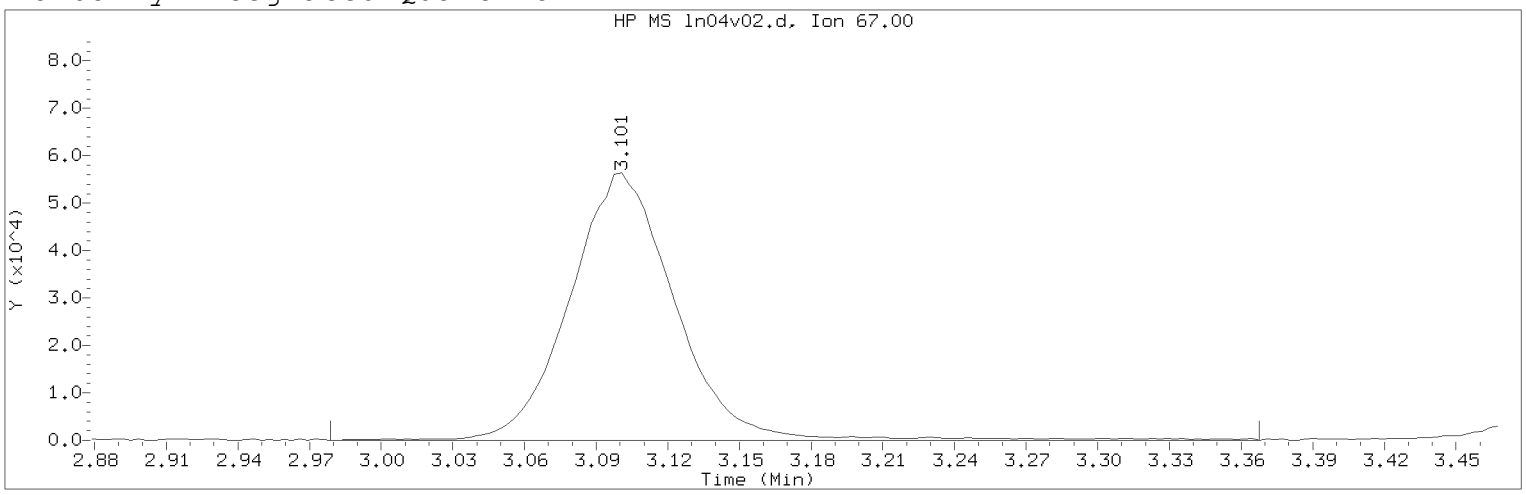
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area : 129885
On-column Amount (ng) : 19.2400
Integration start scan : 271 Integration stop scan: 310
Y at integration start : 283 Y at integration end: 414

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

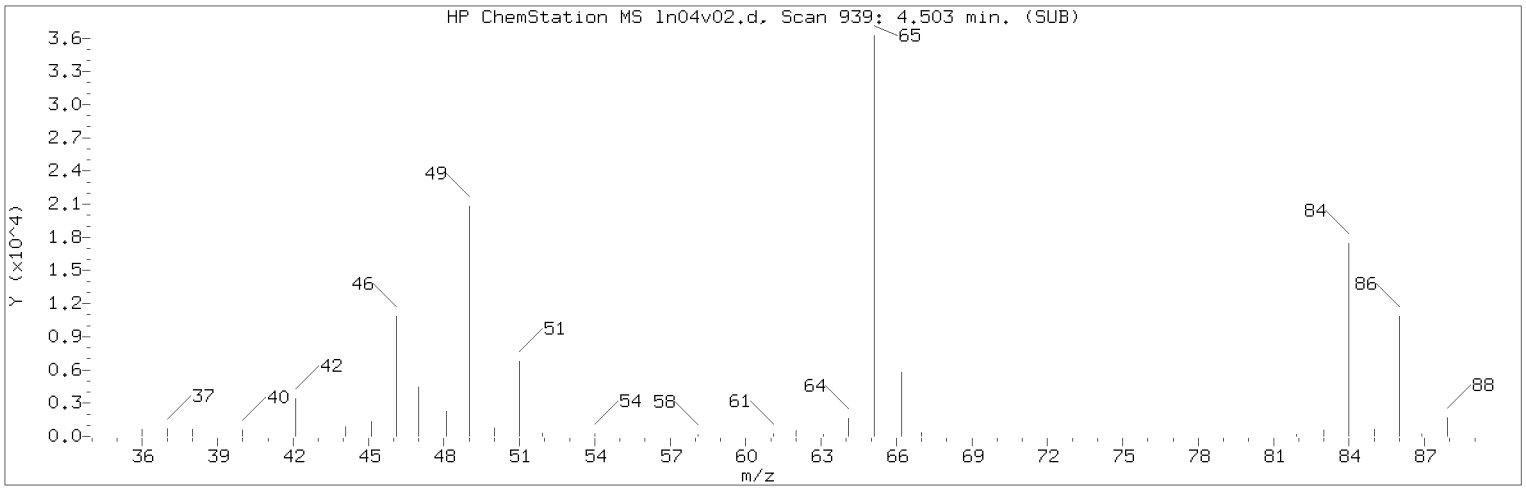
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 503
Retention Time (minutes): 3.101
Quant Ion : 67.00
Area (flag) : 174118M
On-Column Amount (ng) : 16.2240
Integration start scan : 464 Integration stop scan: 585
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

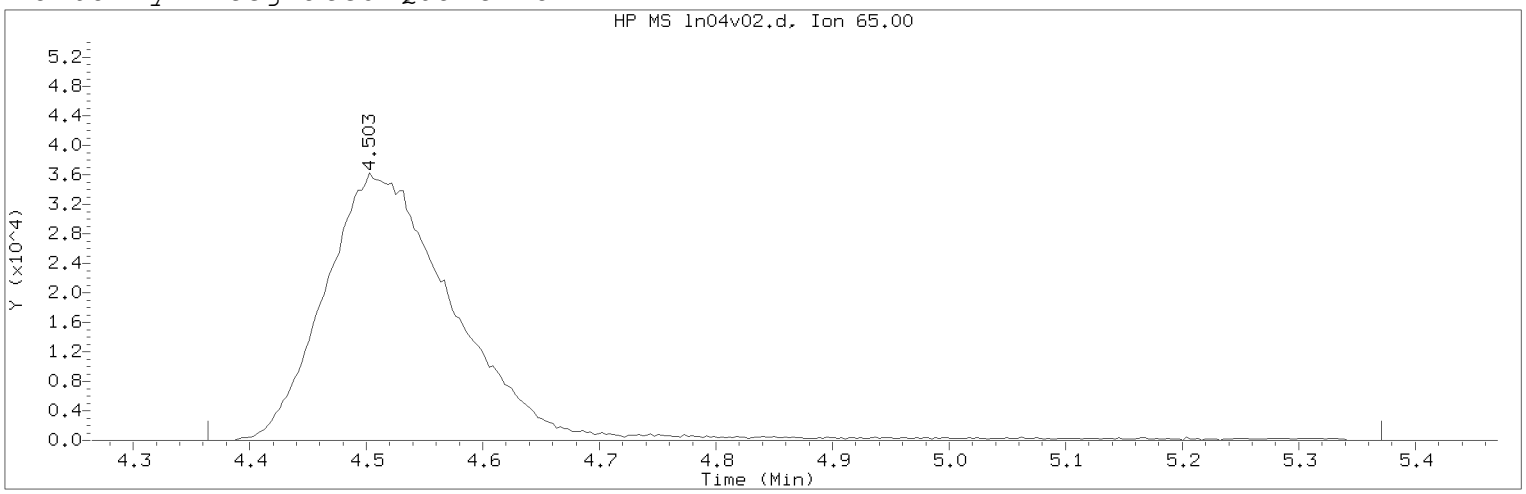
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

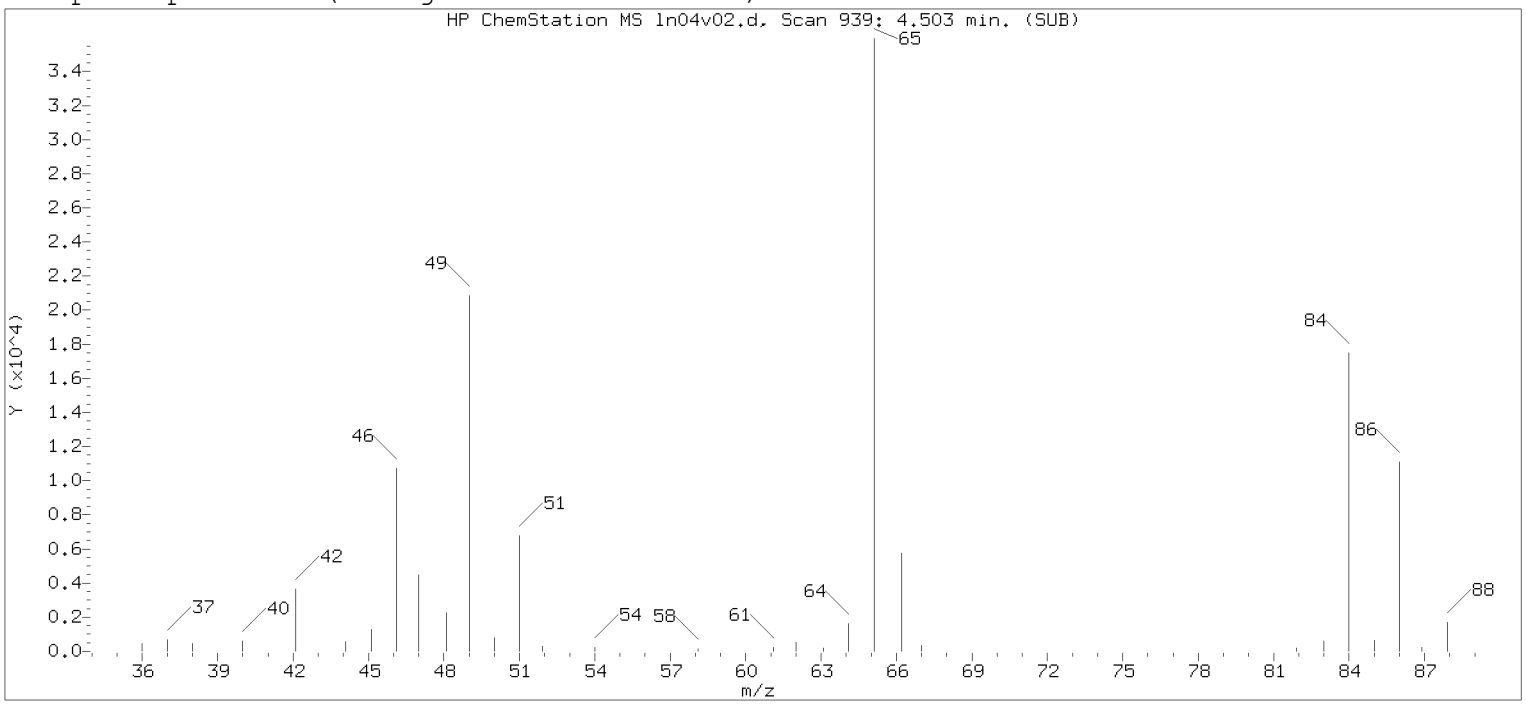
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area (flag) : 282794M
On-Column Amount (ng) : 250.0000
Integration start scan : 895 Integration stop scan: 1208
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

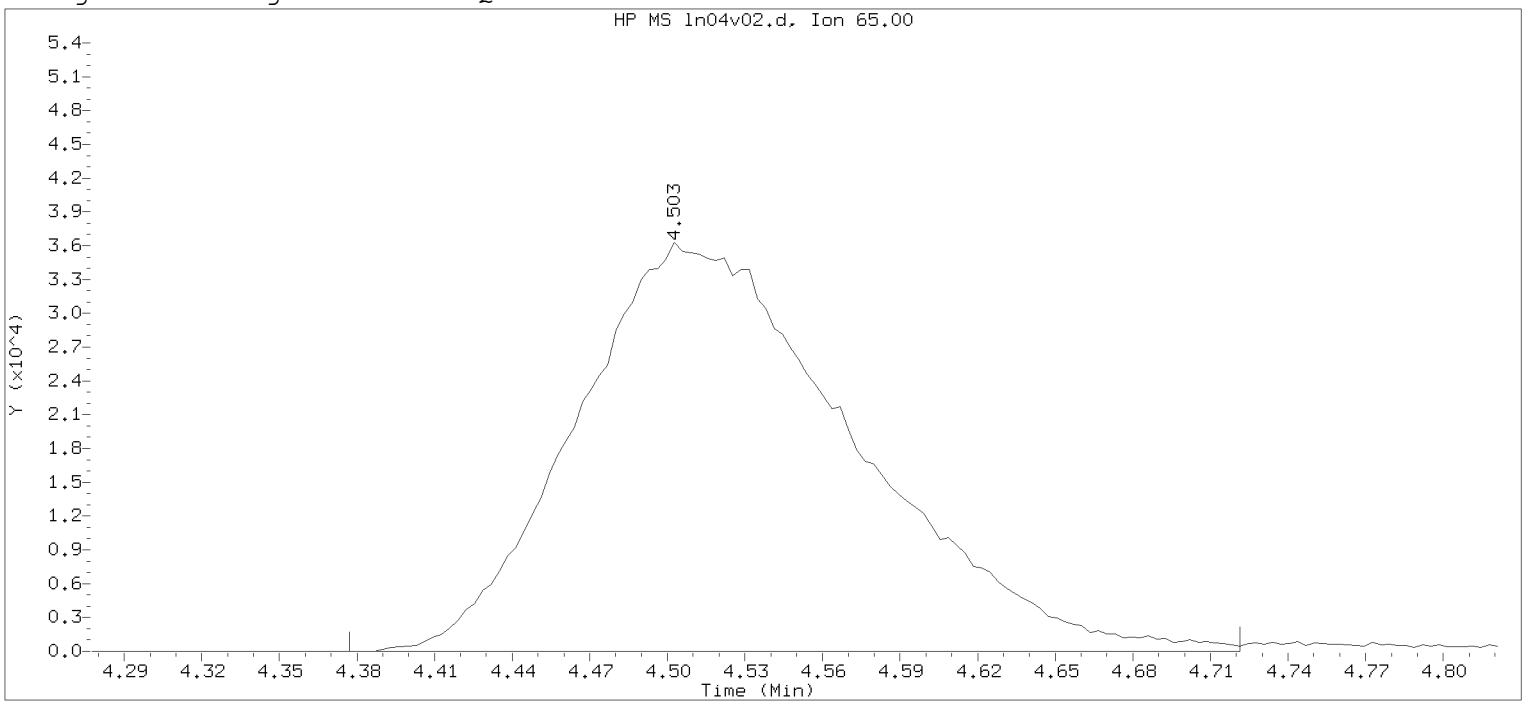
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

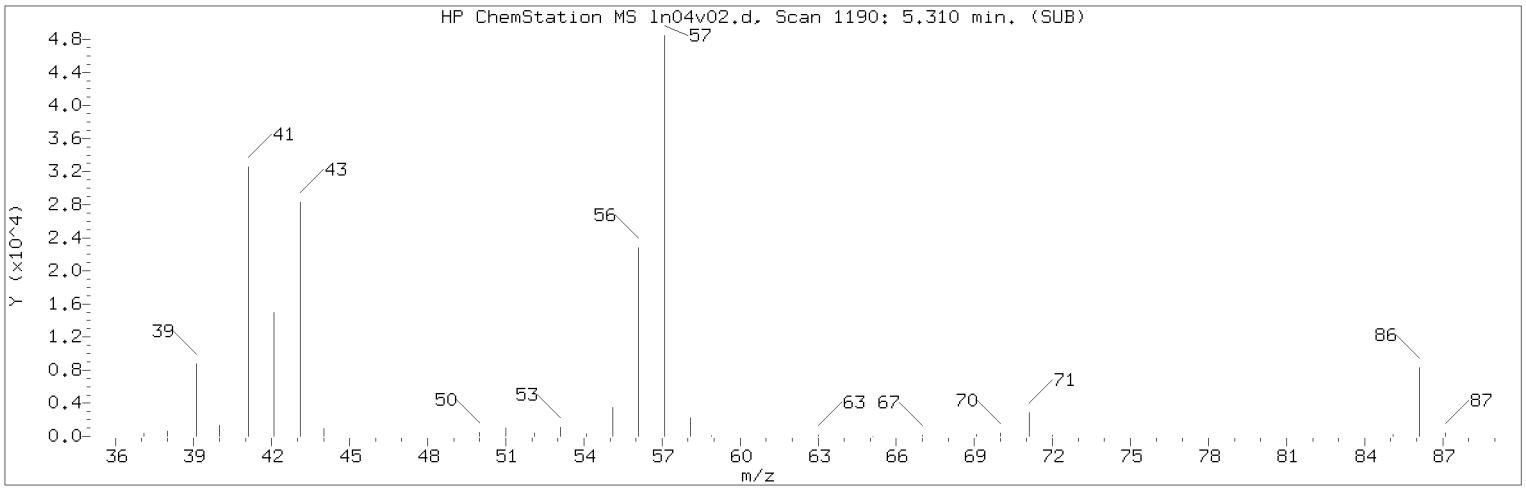
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

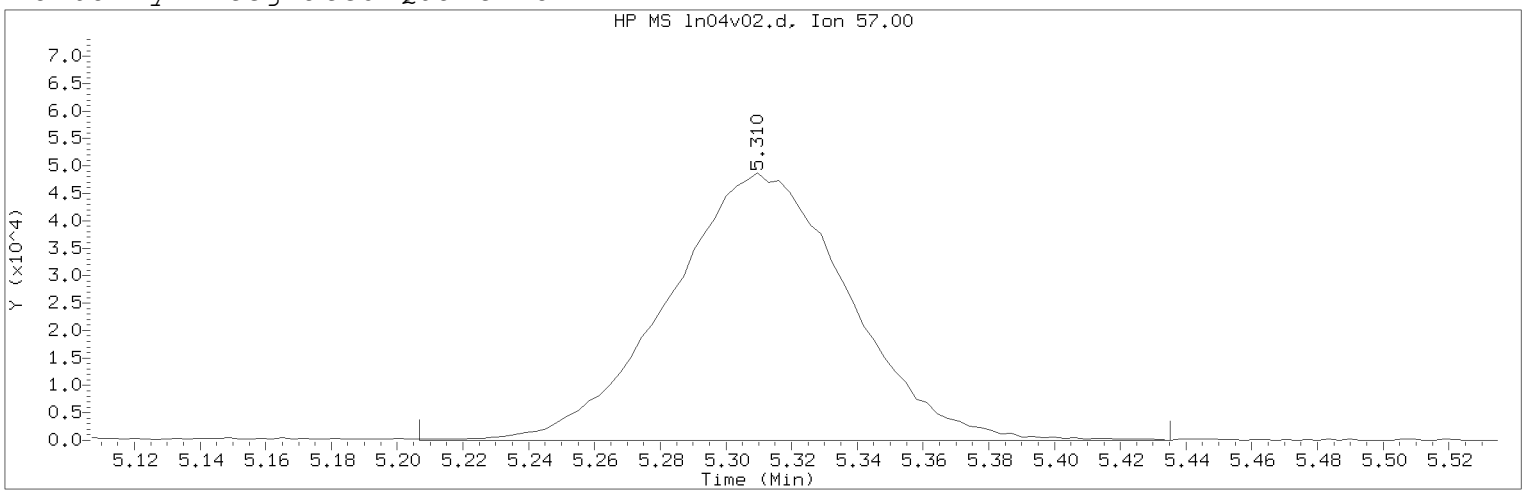
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area : 270950
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1006
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

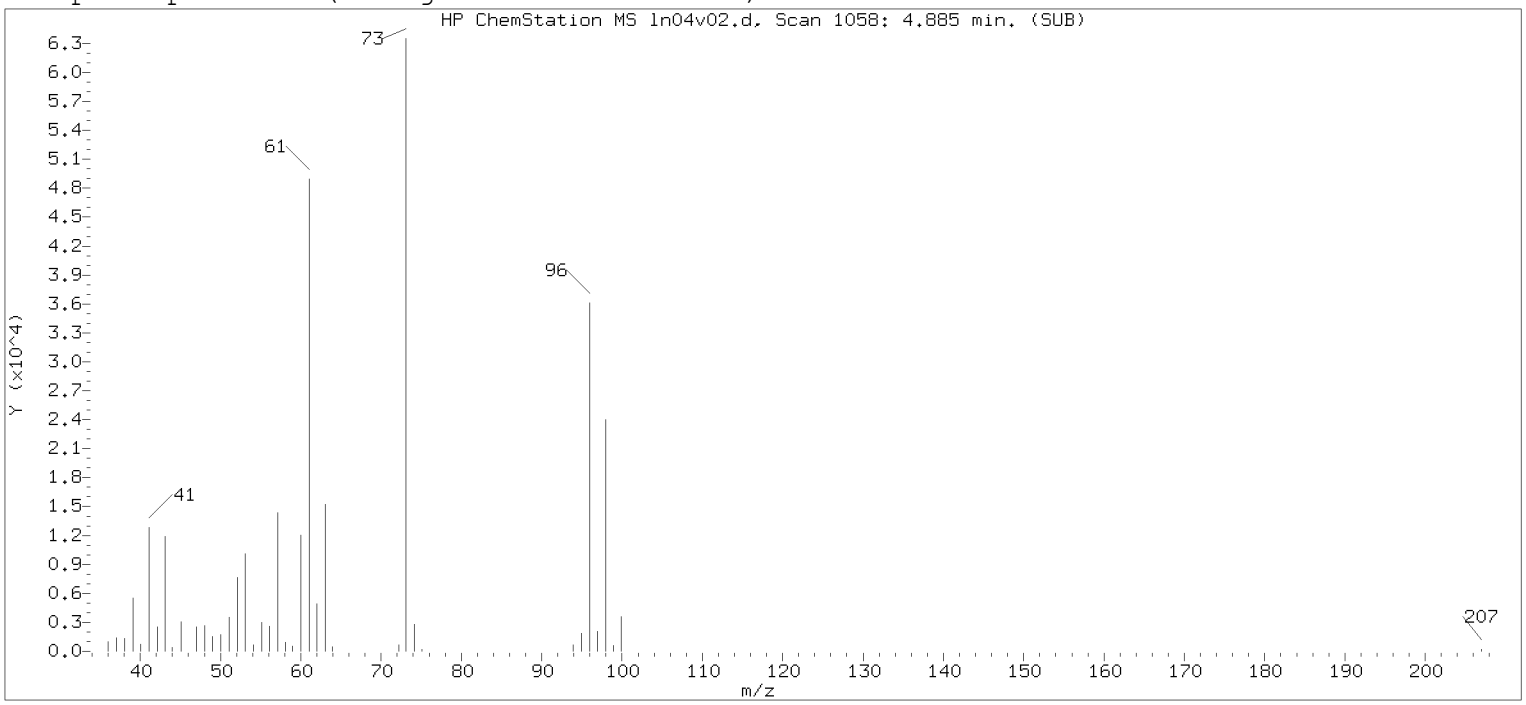
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1190
Retention Time (minutes): 5.310
Quant Ion : 57.00
Area (flag) : 185206M
On-Column Amount (ng) : 20.0675
Integration start scan : 1157 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

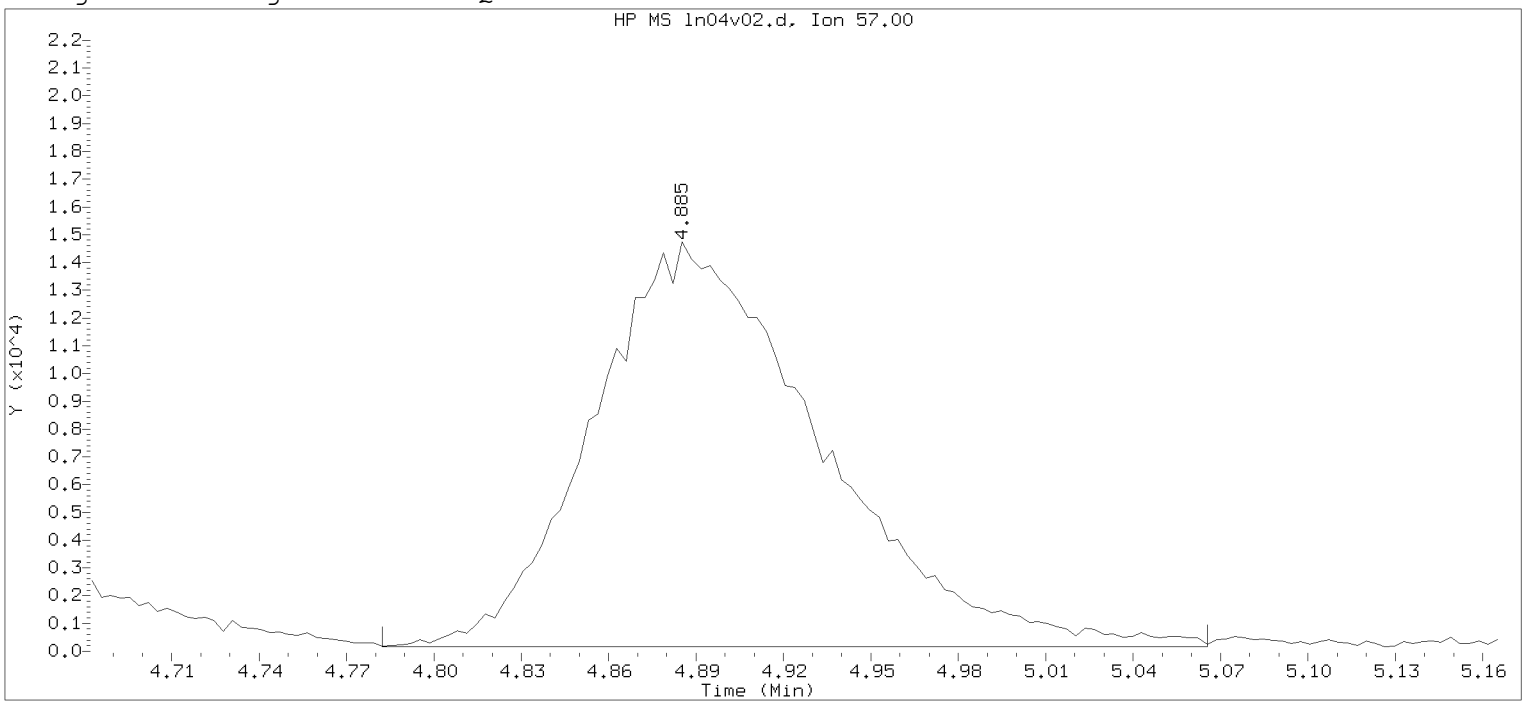
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

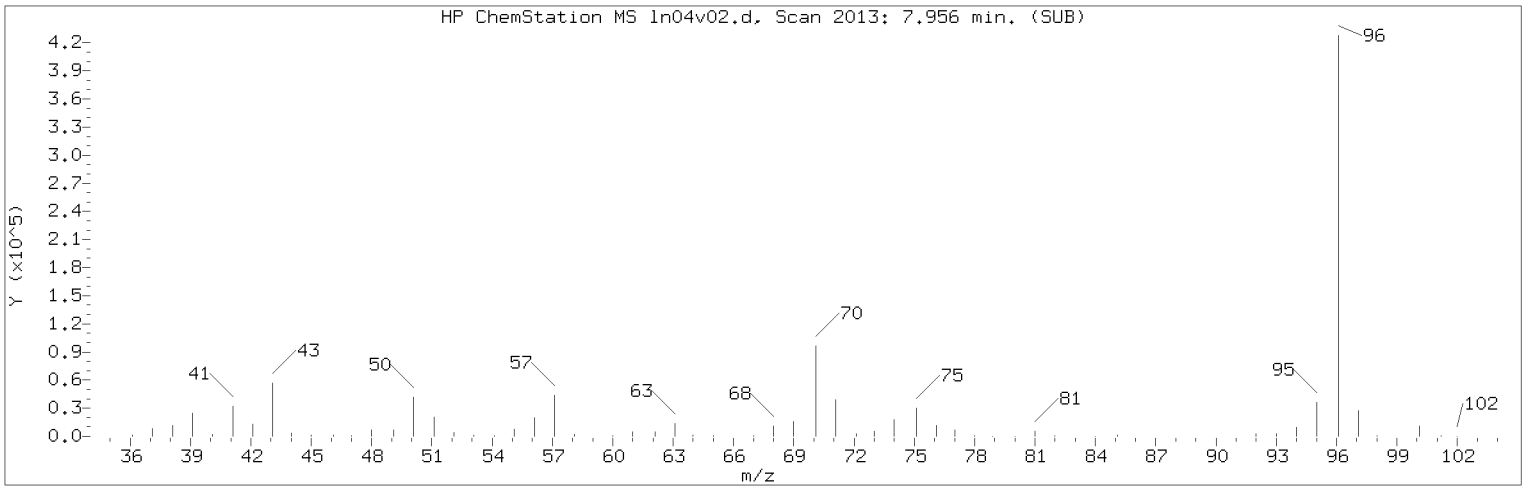
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

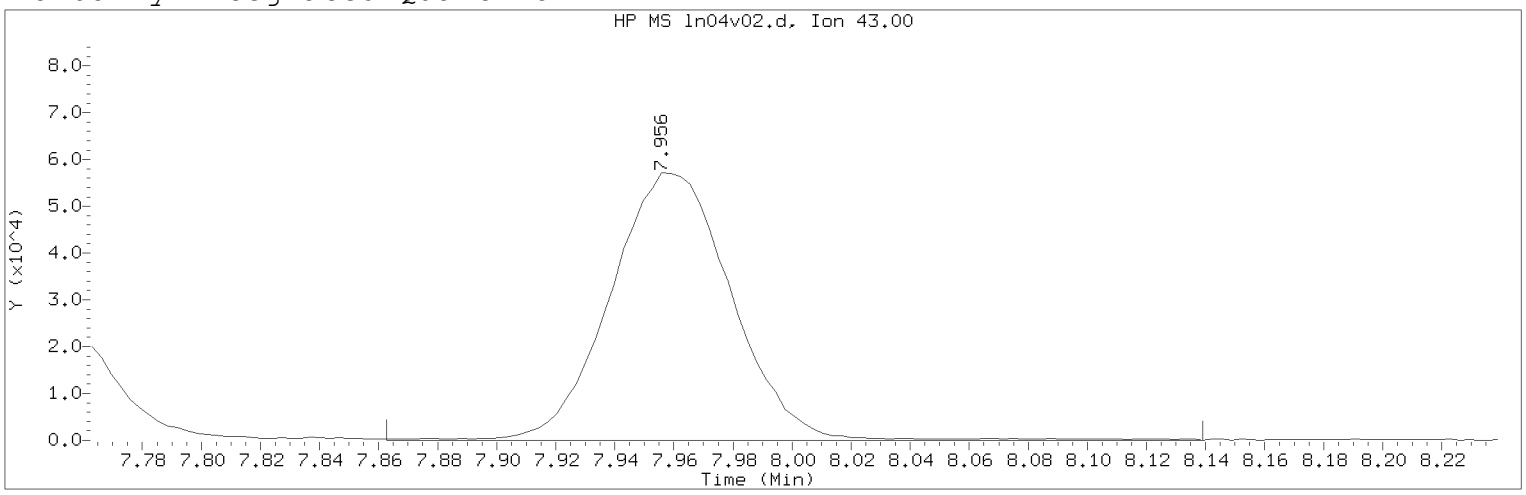
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1058
Retention Time (minutes): 4.885
Quant Ion : 57.00
Area : 79381
On-column Amount (ng) : 18.4374
Integration start scan : 1025 Integration stop scan: 1113
Y at integration start : 160 Y at integration end: 160

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

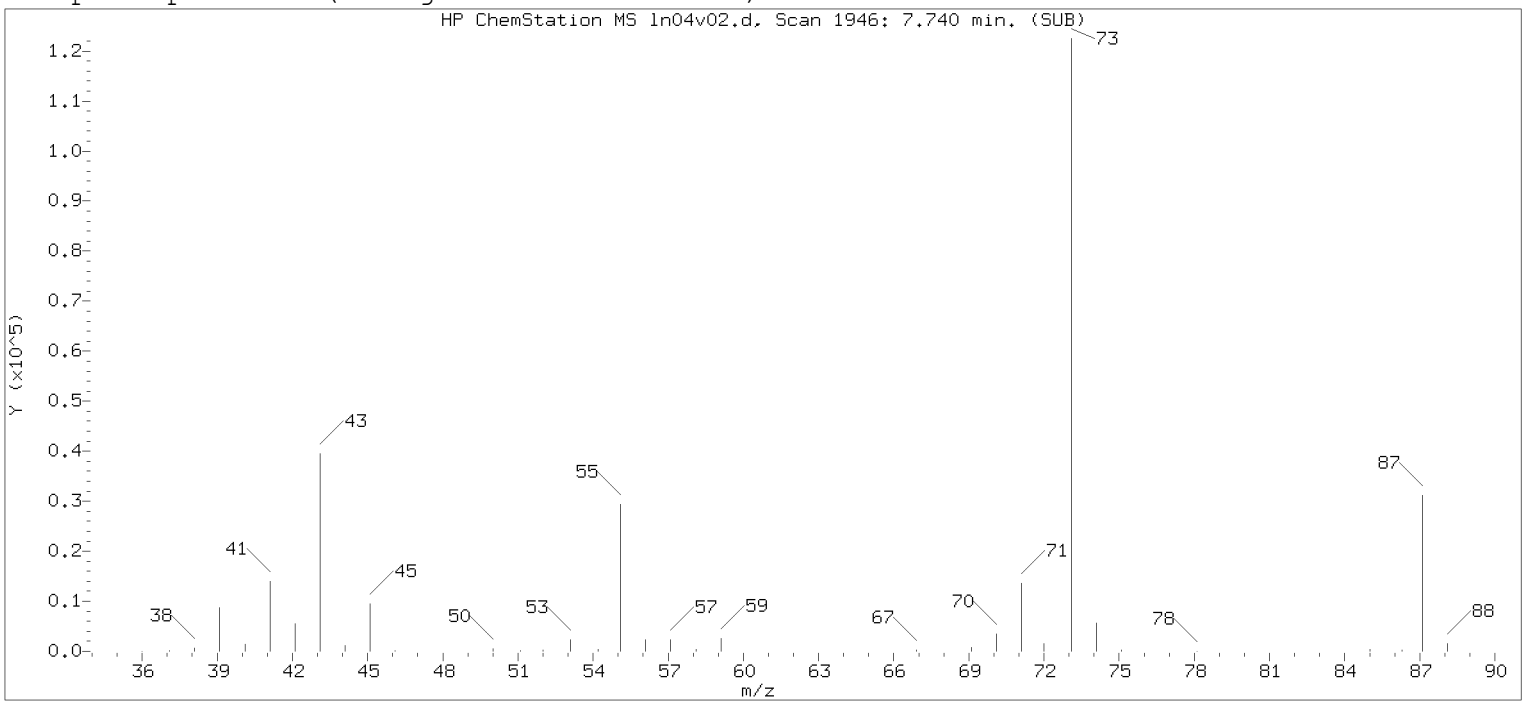
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2013
Retention Time (minutes): 7.956
Quant Ion : 43.00
Area (flag) : 163362M
On-Column Amount (ng) : 18.9476
Integration start scan : 1983 Integration stop scan: 2069
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

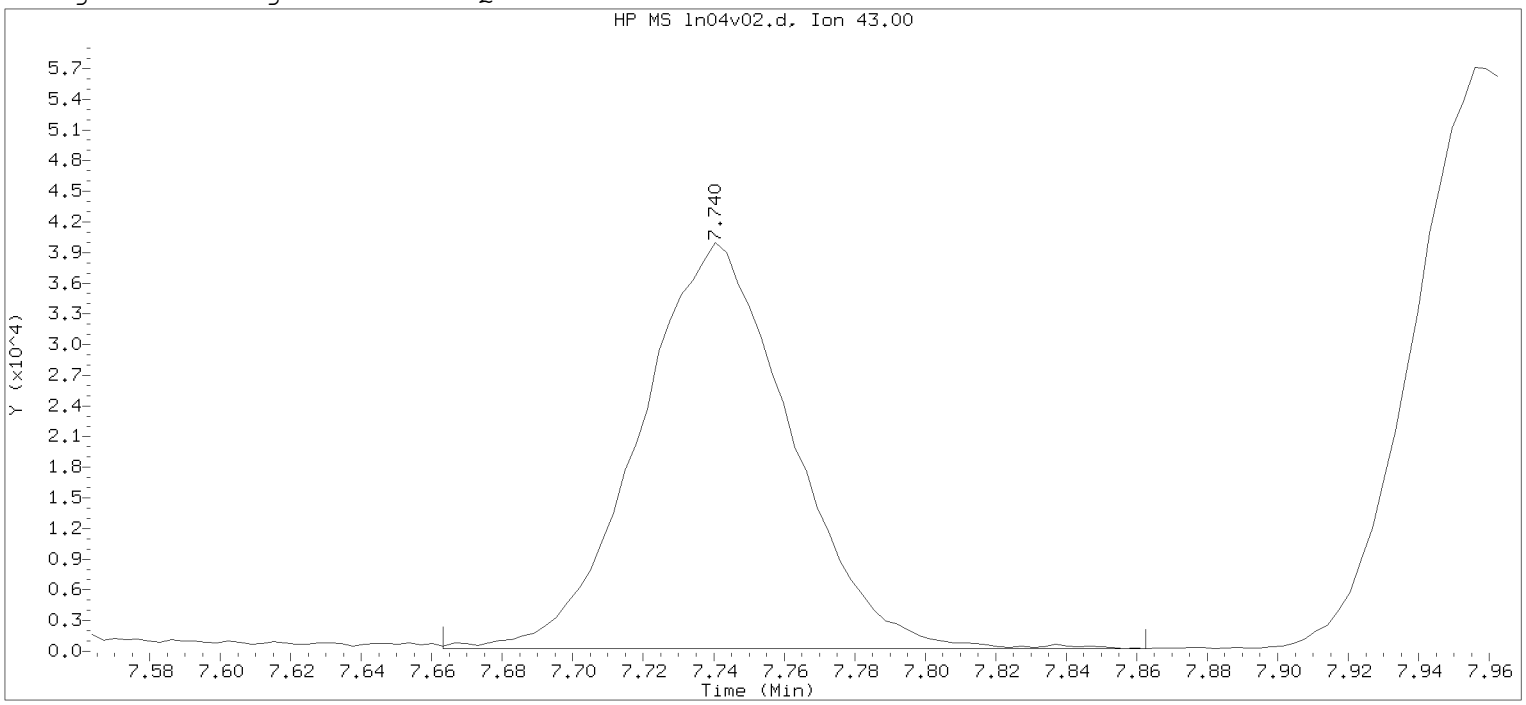
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

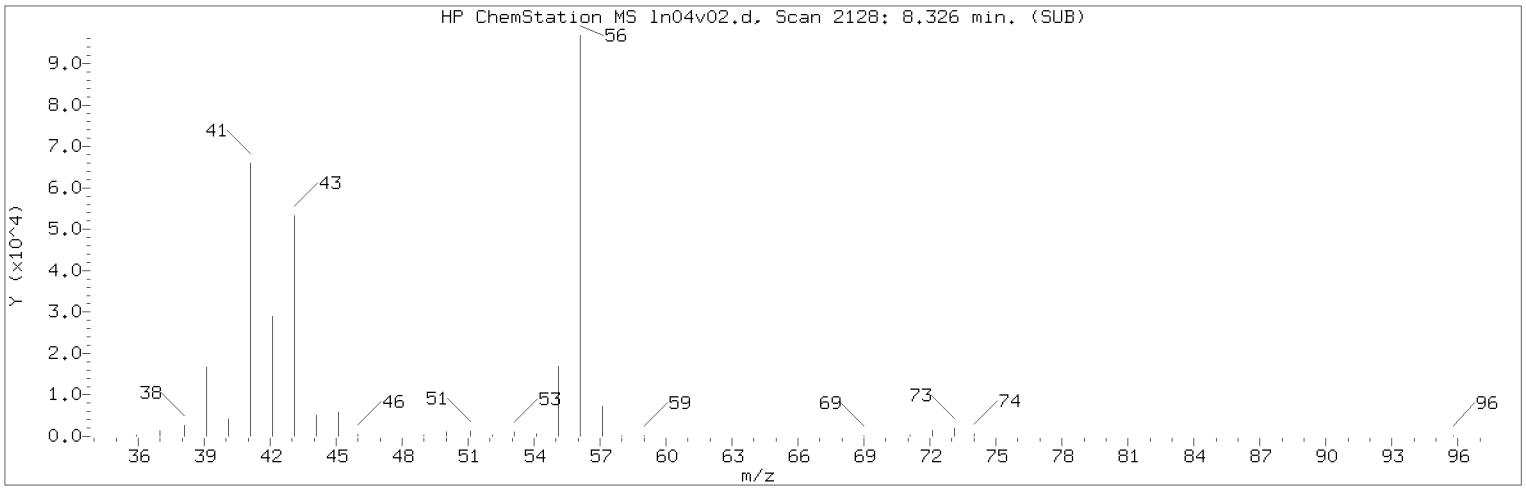
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

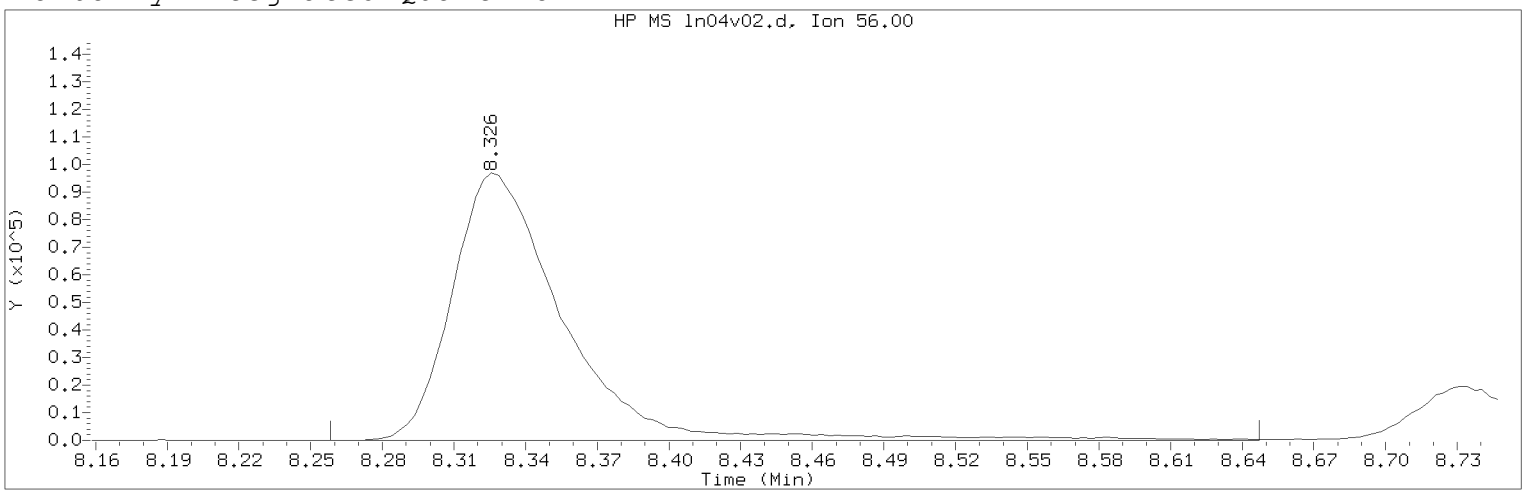
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.740
Quant Ion : 43.00
Area : 118529
On-column Amount (ng) : 18.5036
Integration start scan : 1921 Integration stop scan: 1983
Y at integration start : 255 Y at integration end: 255

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

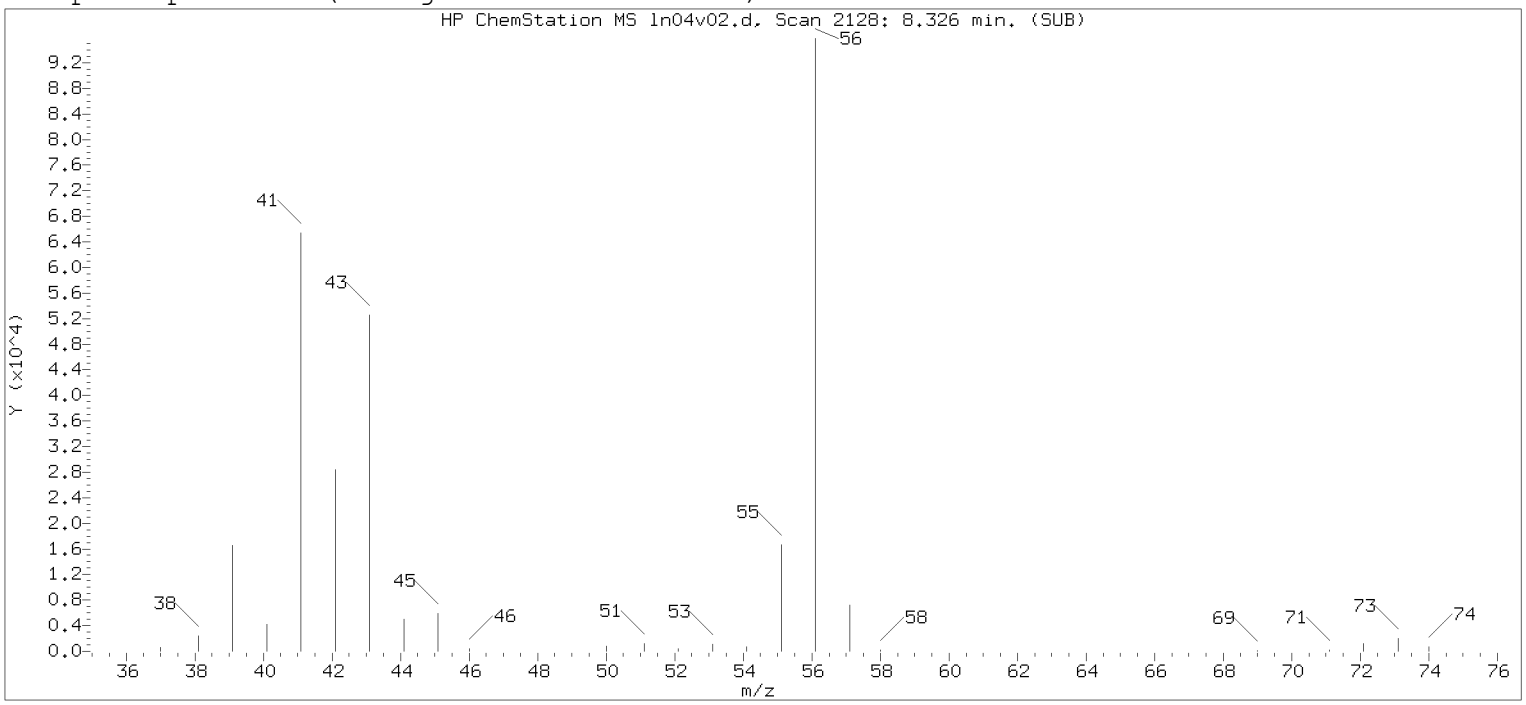
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area (flag) : 314470M
On-Column Amount (ng) : 911.9238
Integration start scan : 2106 Integration stop scan: 2227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

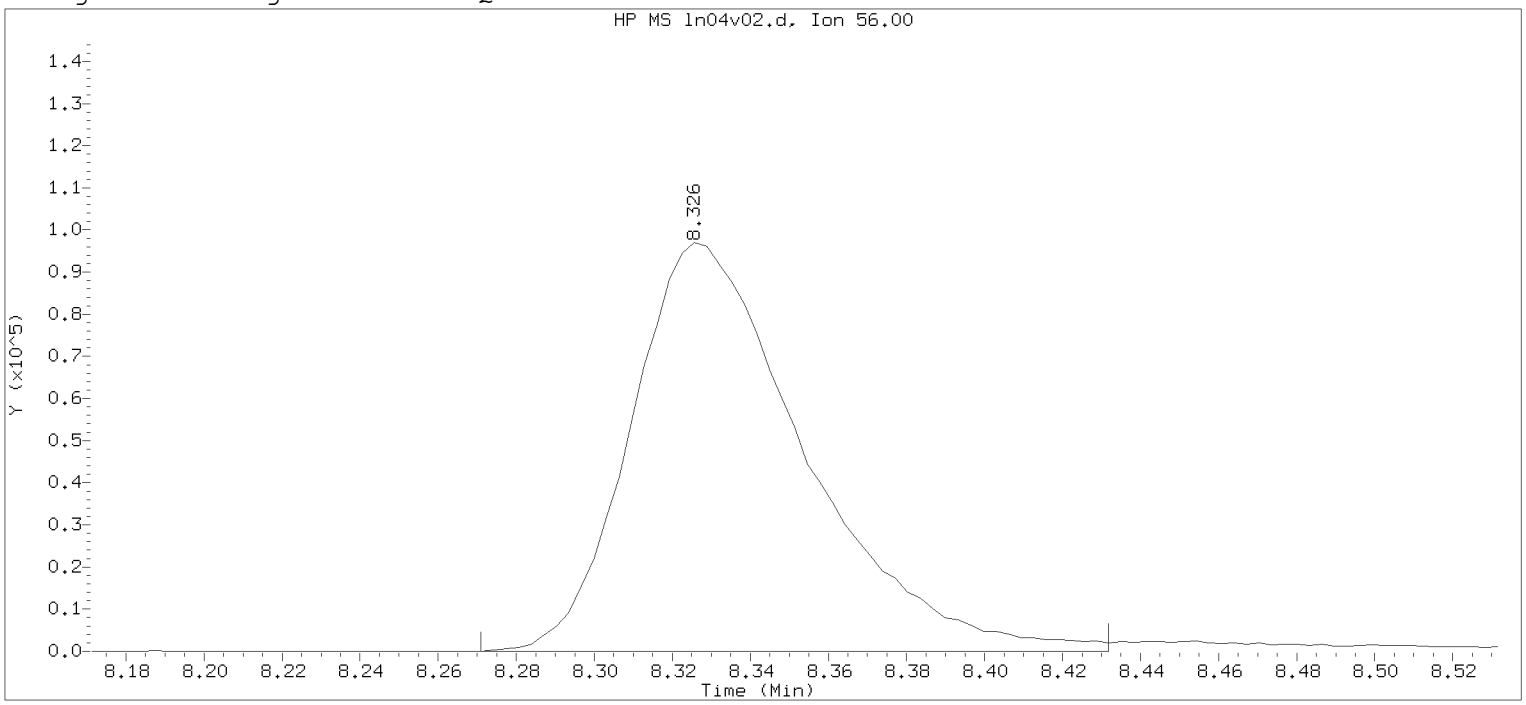
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

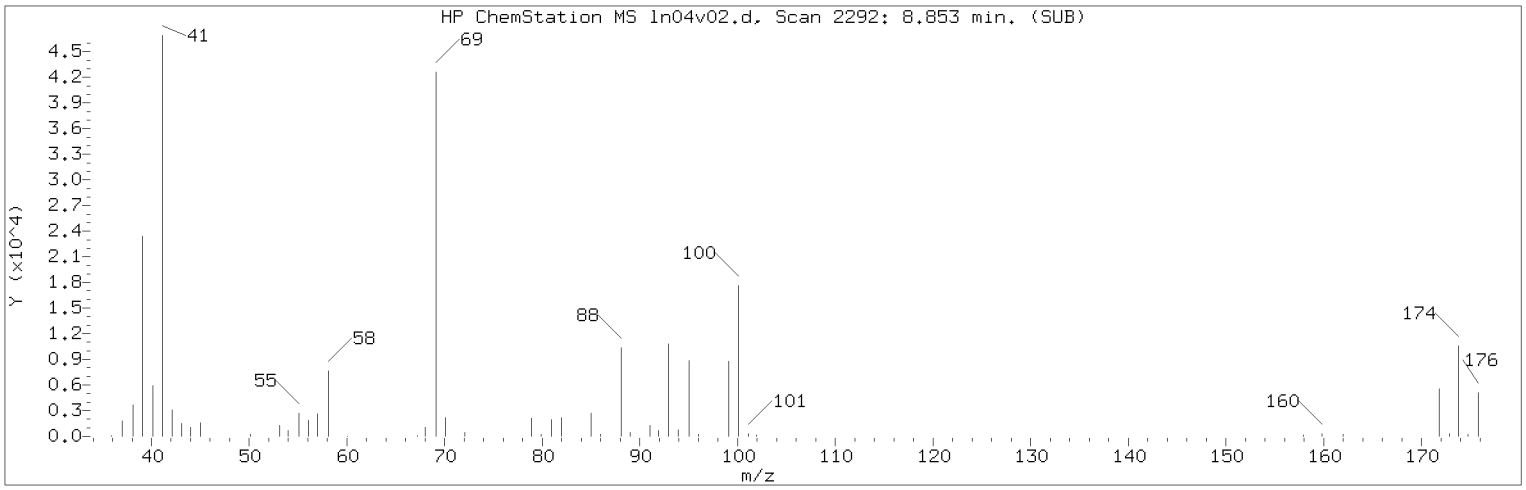
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

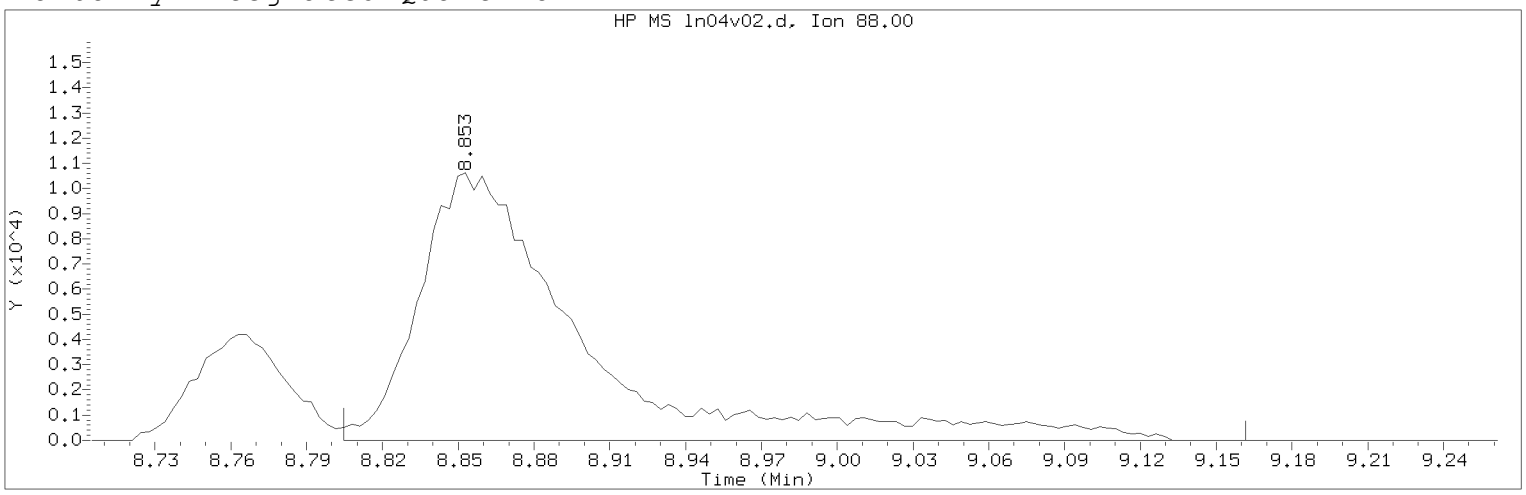
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area : 299611
On-column Amount (ng) : 906.8122
Integration start scan : 2110 Integration stop scan: 2160
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

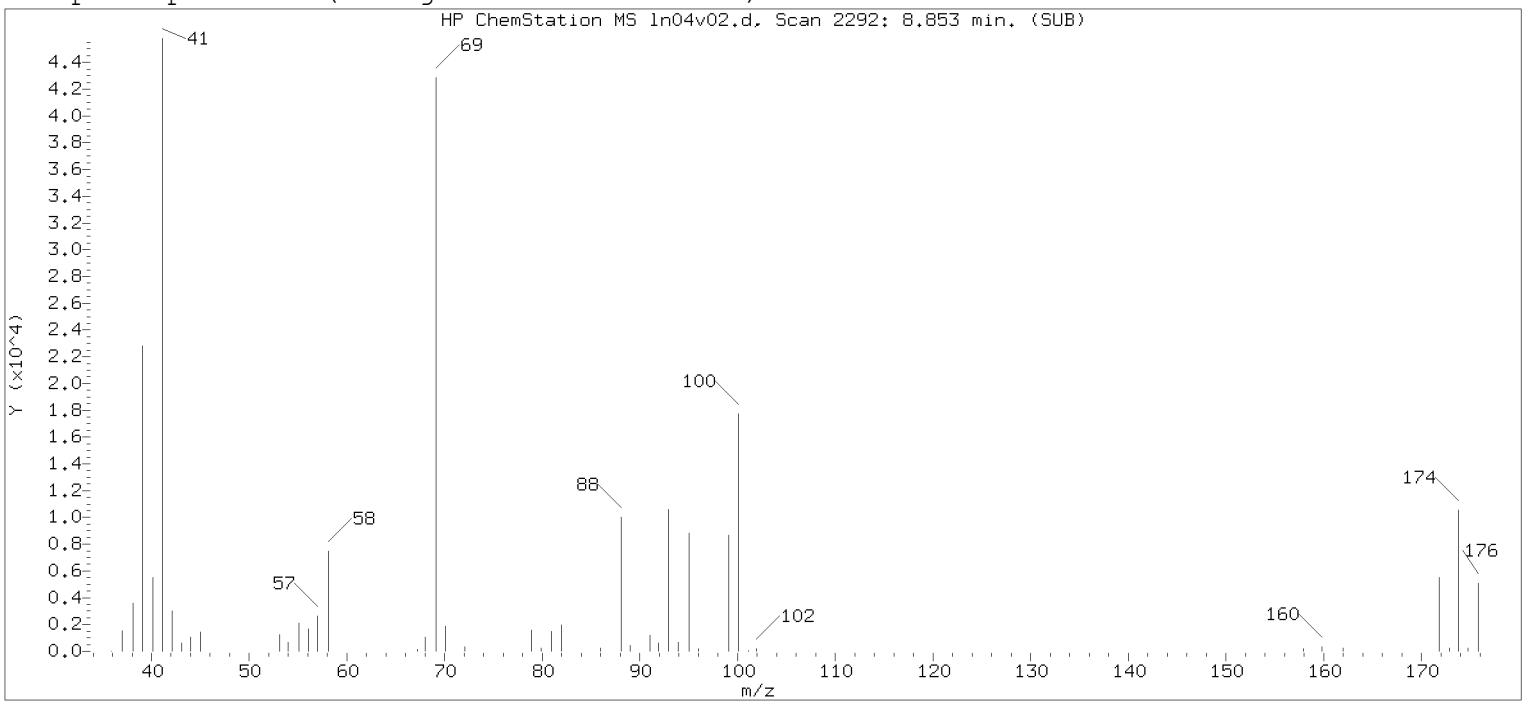
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area (flag) : 47747M
On-Column Amount (ng) : 503.7529
Integration start scan : 2276 Integration stop scan: 2387
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

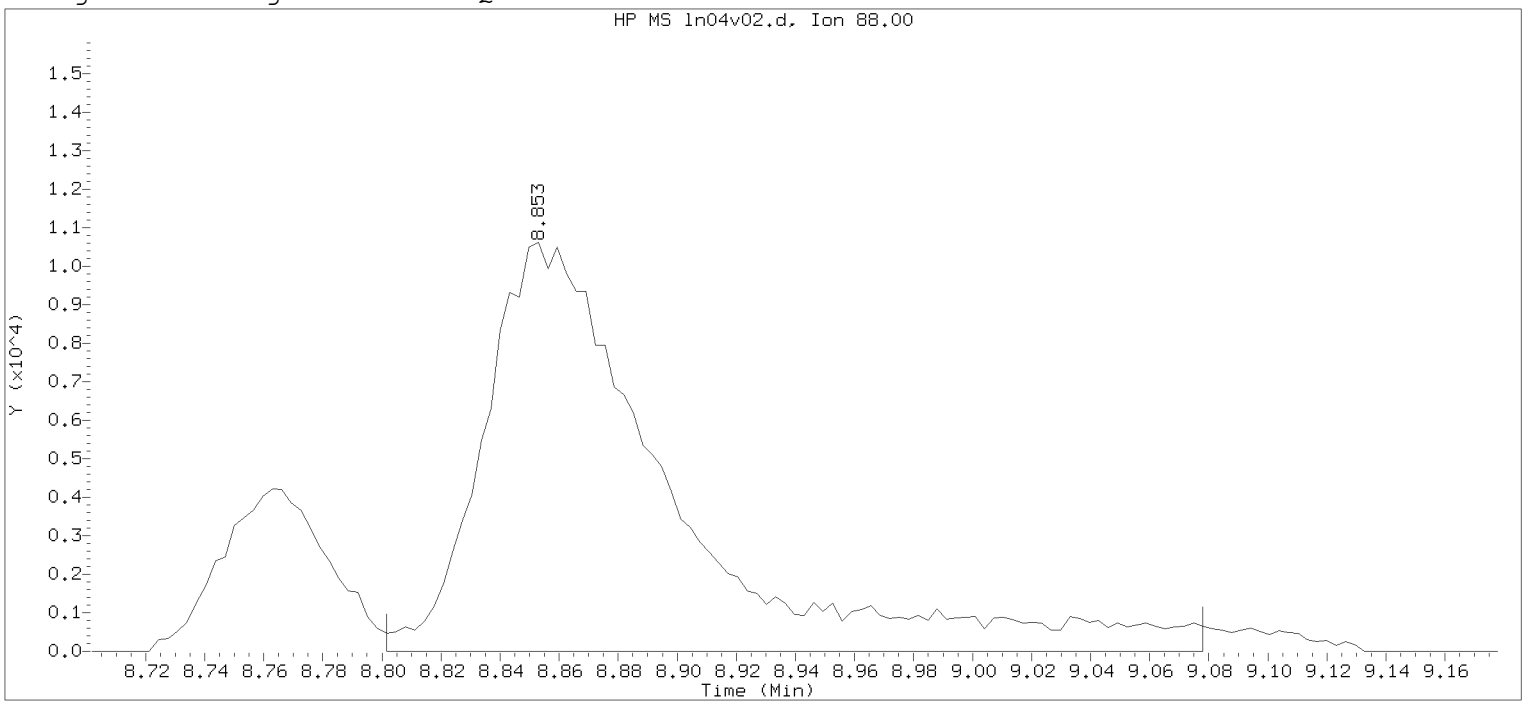
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

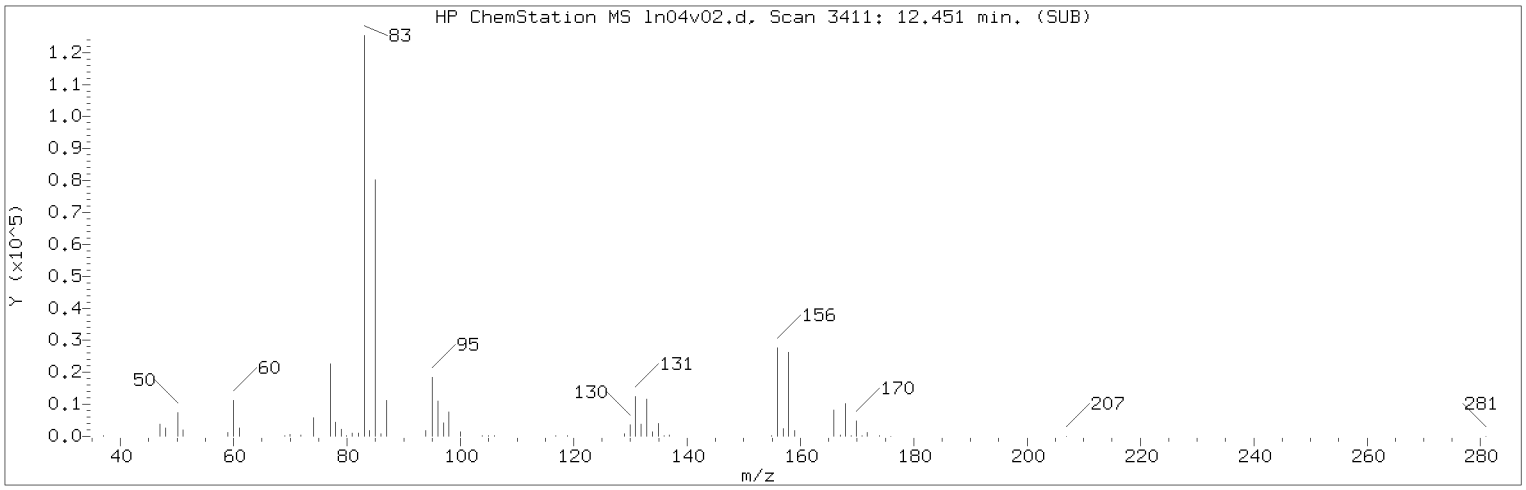
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

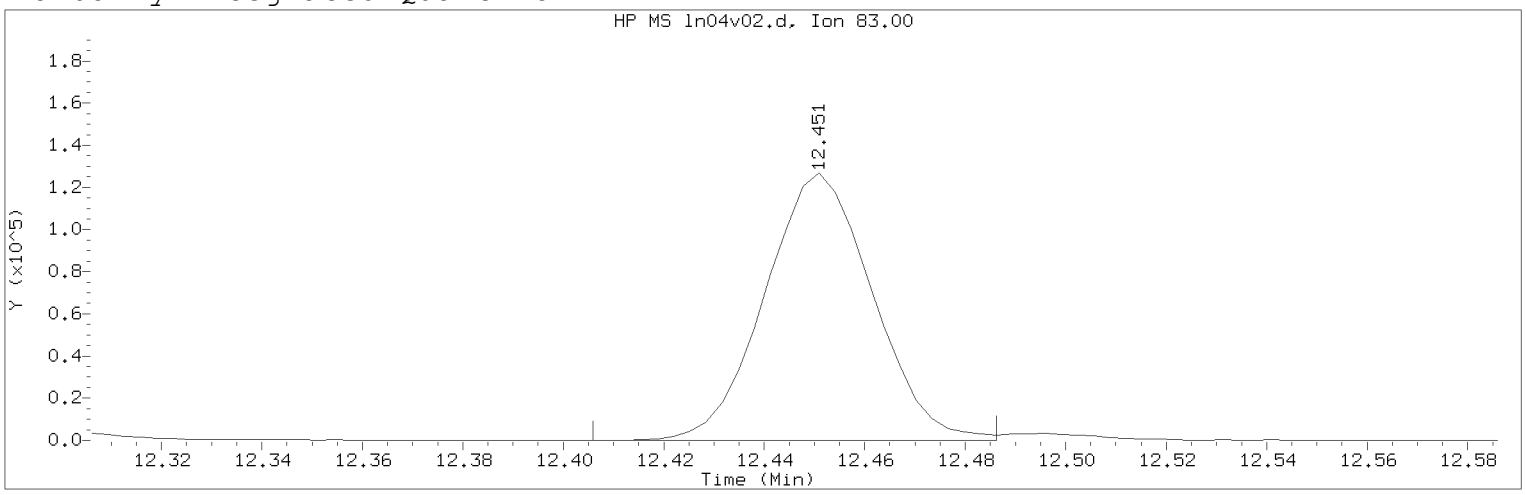
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area : 46453
On-column Amount (ng) : 511.5262
Integration start scan : 2275 Integration stop scan: 2361
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

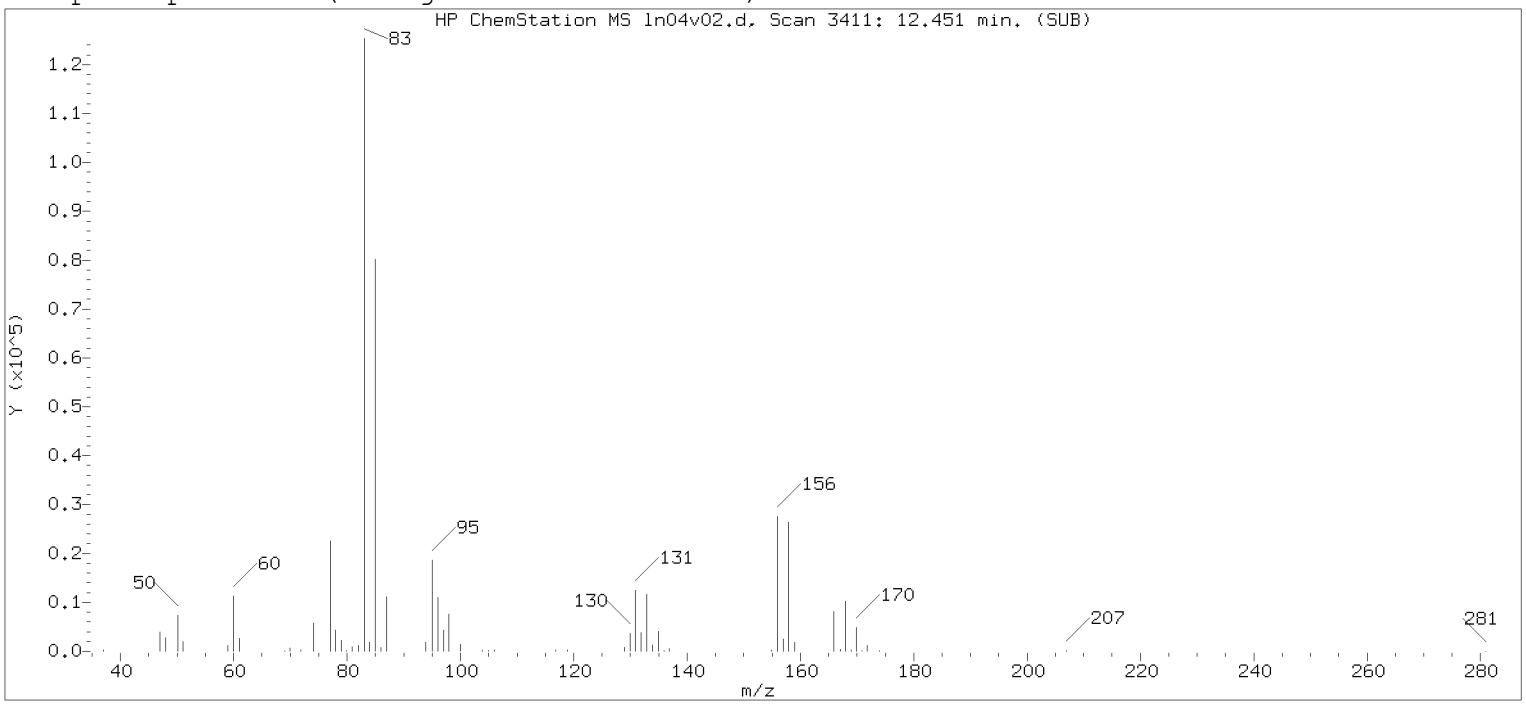
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 188446M
On-Column Amount (ng) : 19.5761
Integration start scan : 3396 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

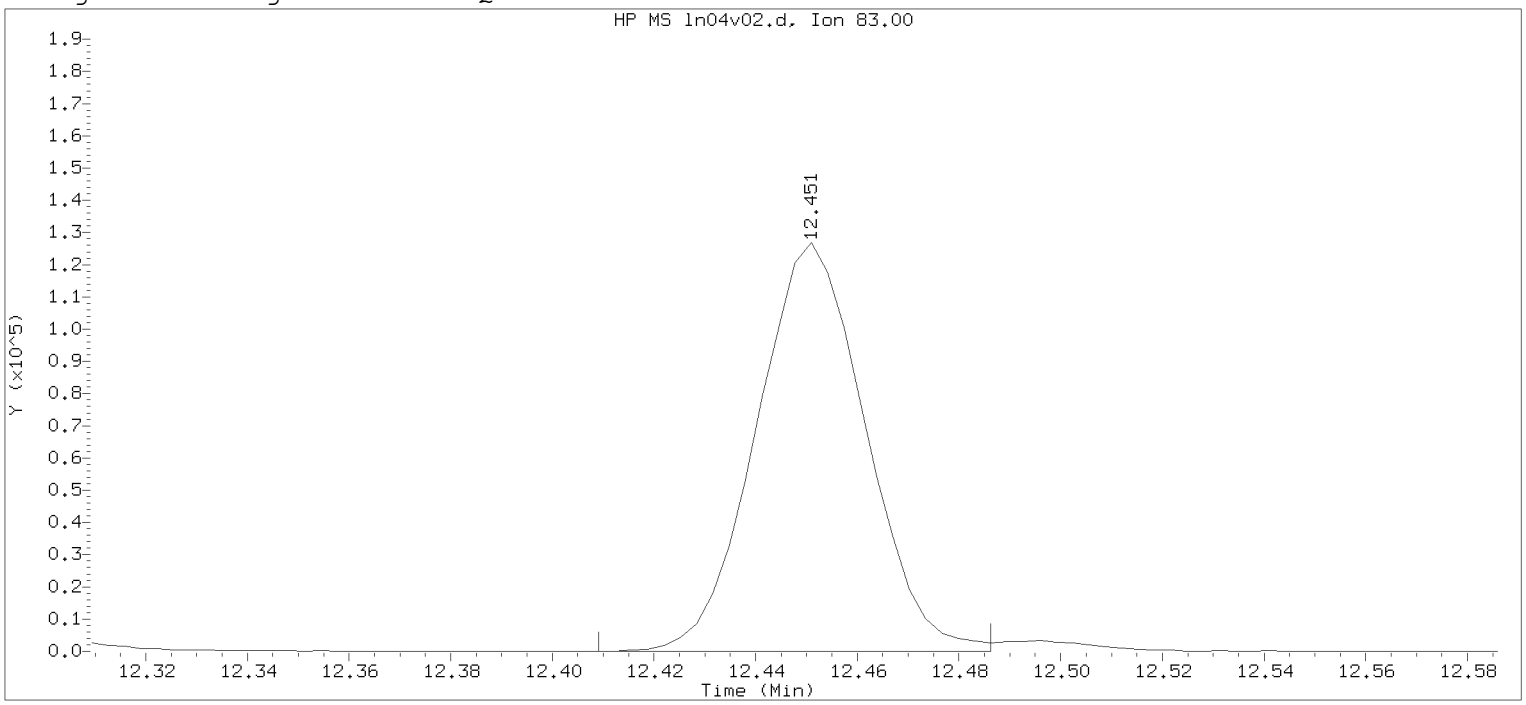
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

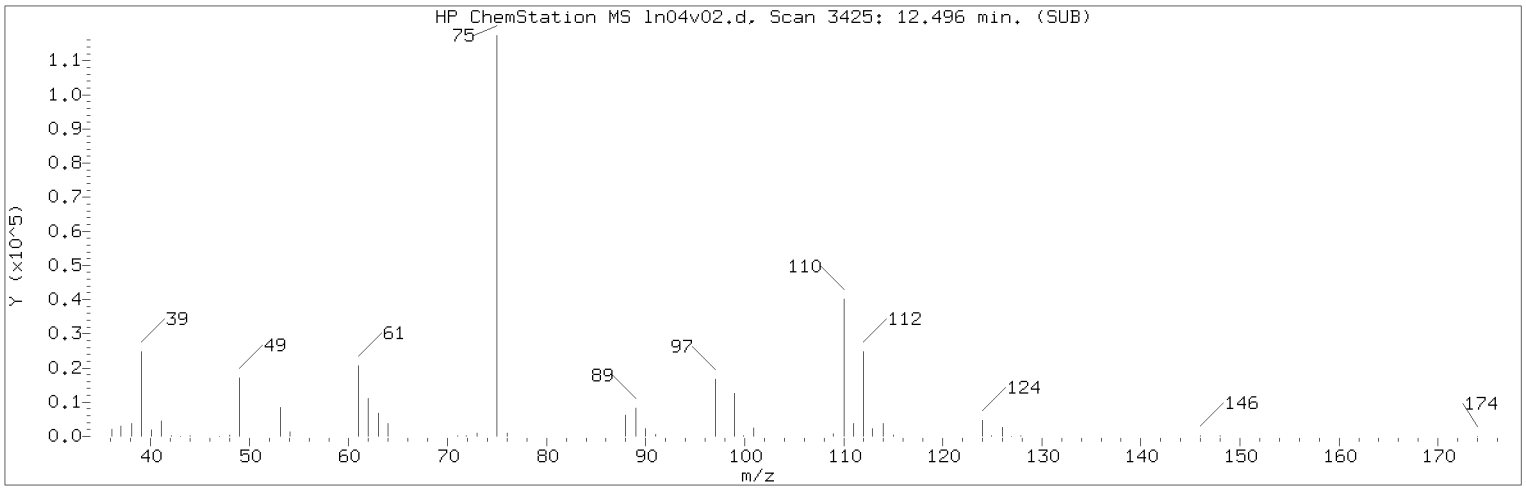
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

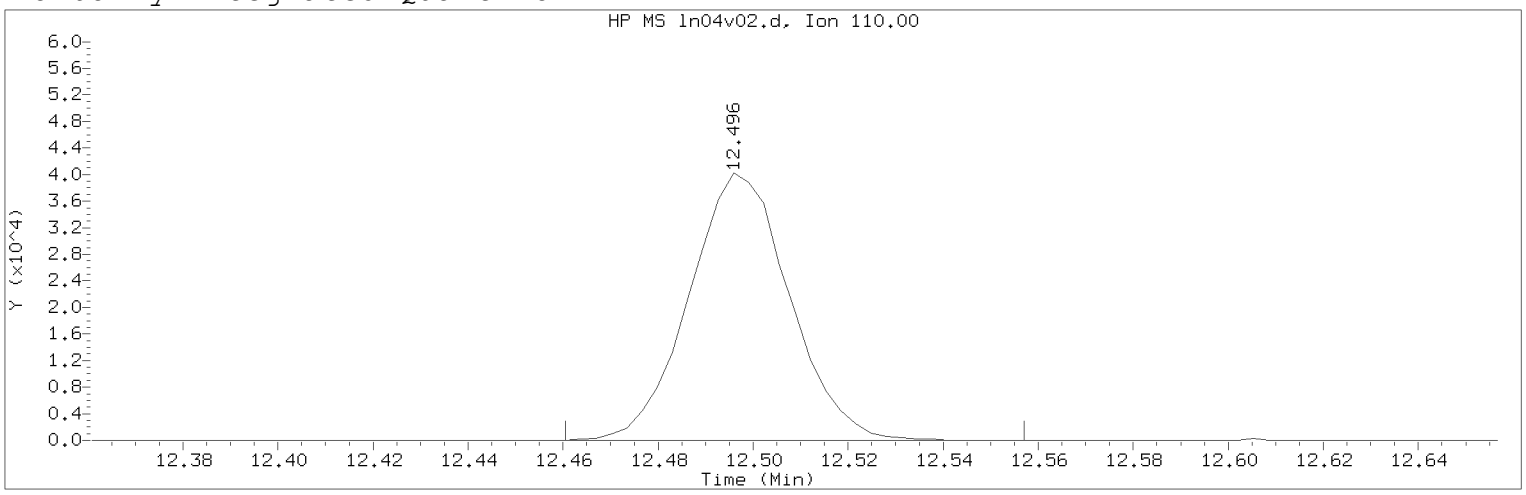
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 188196
On-column Amount (ng) : 19.2022
Integration start scan : 3397 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

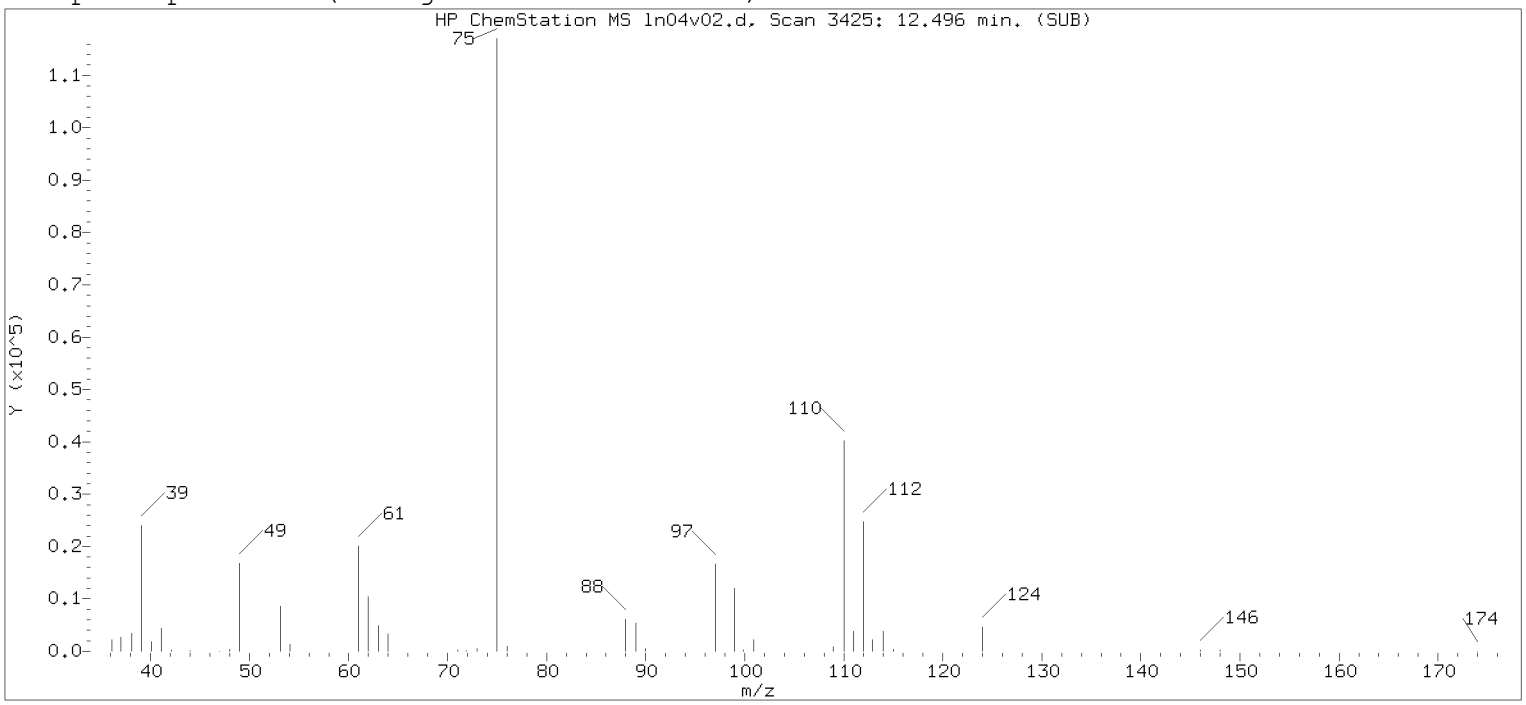
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 3425
Retention Time (minutes): 12.496
Quant Ion : 110.00
Area (flag) : 58902M
On-Column Amount (ng) : 19.9401
Integration start scan : 3413 Integration stop scan: 3443
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

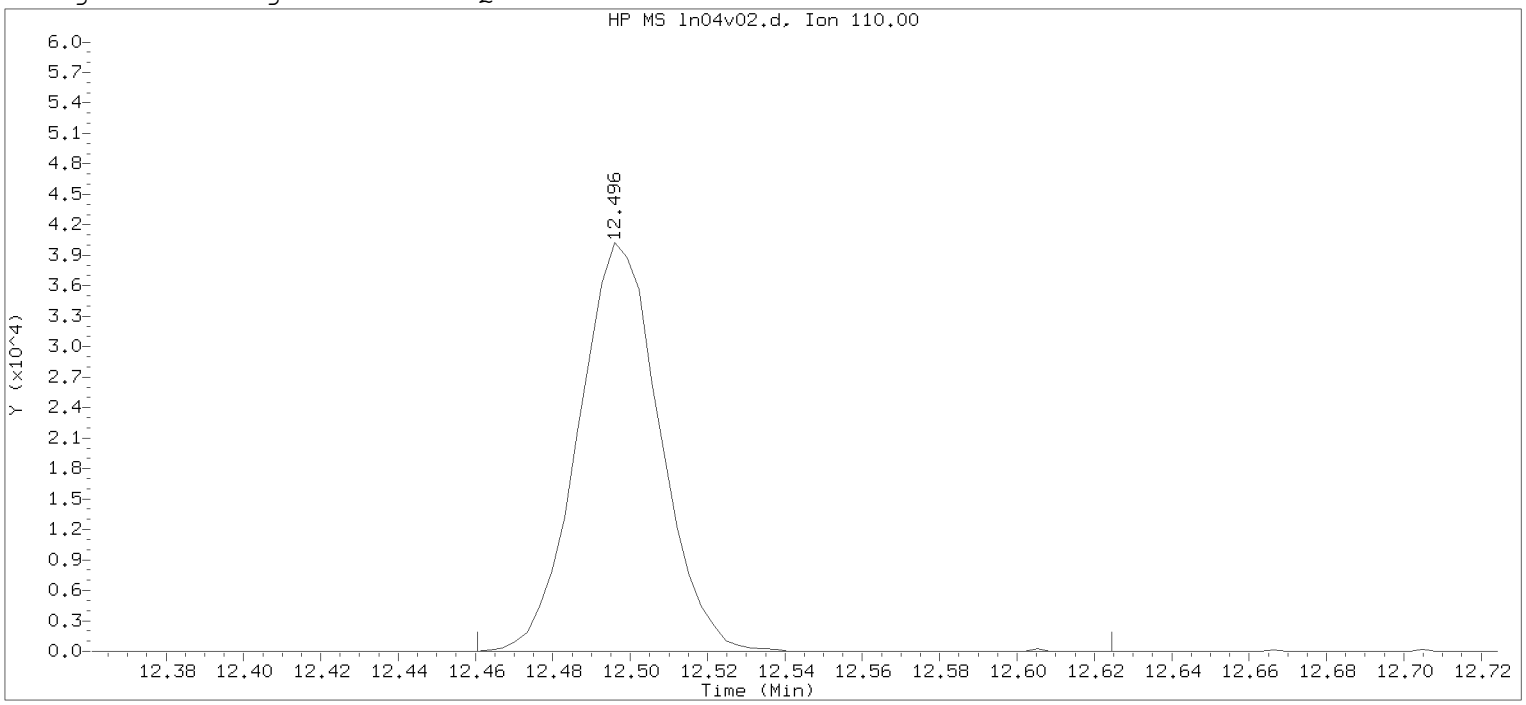
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

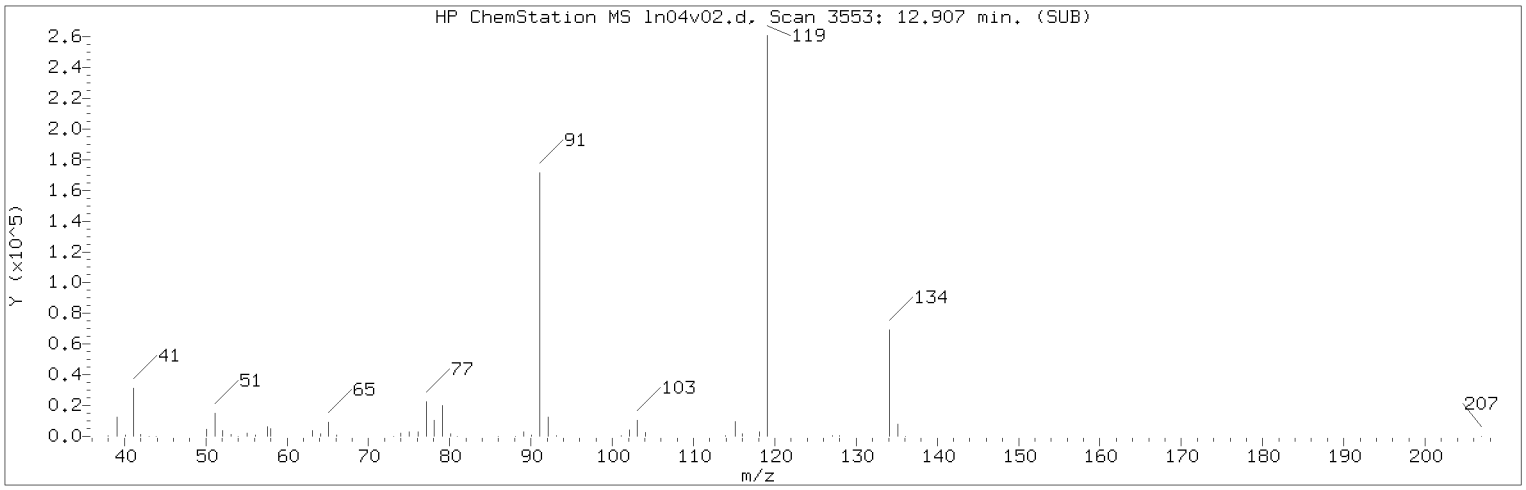
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

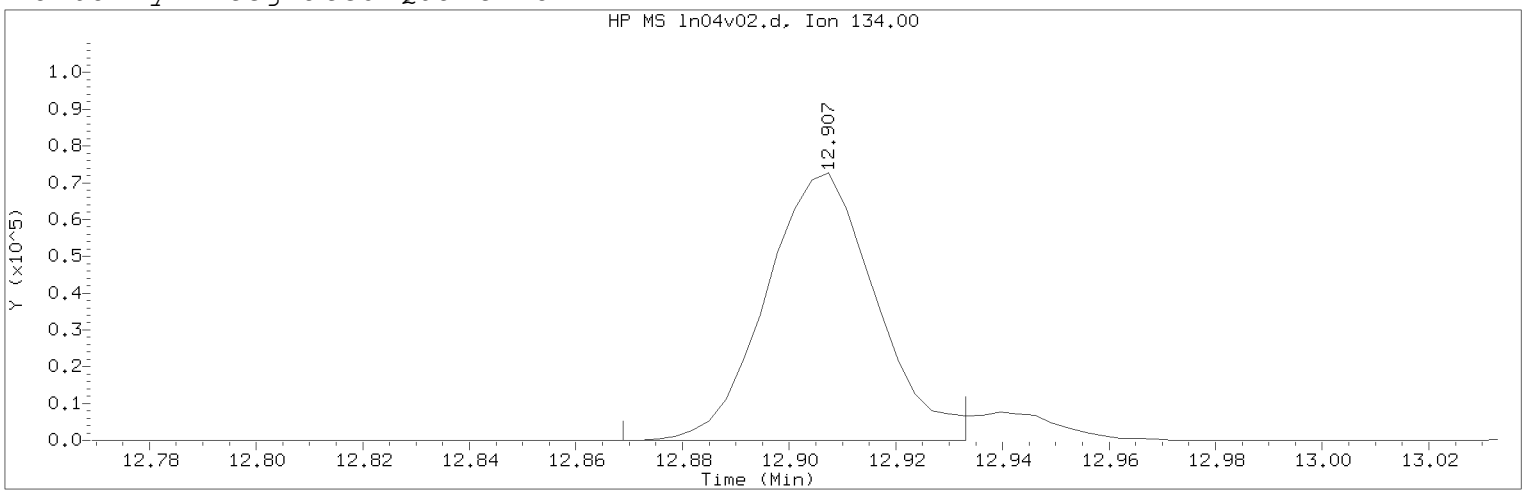
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 3425
Retention Time (minutes): 12.496
Quant Ion : 110.00
Area : 58948
On-column Amount (ng) : 19.9559
Integration start scan : 3413 Integration stop scan: 3464
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

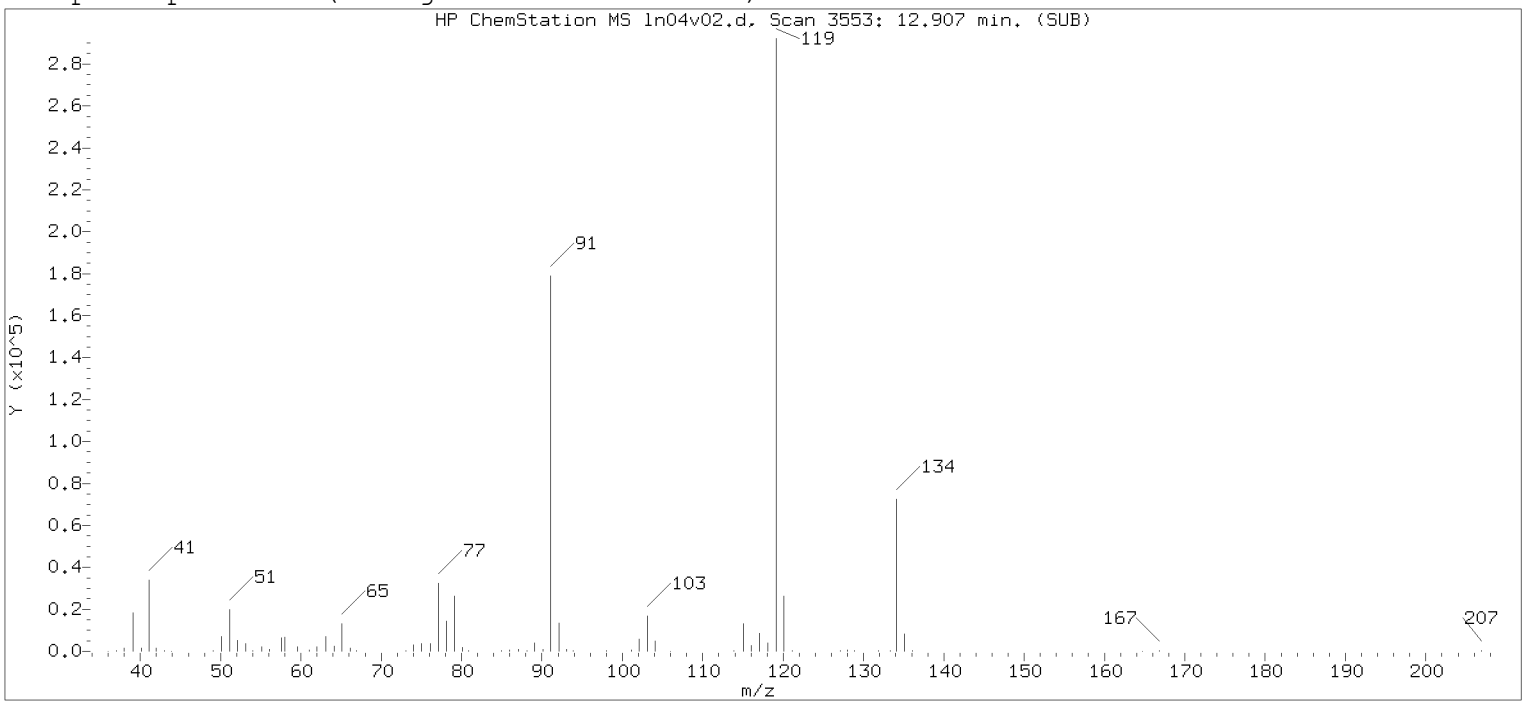
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area (flag) : 103762M
On-Column Amount (ng) : 20.6322
Integration start scan : 3540 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

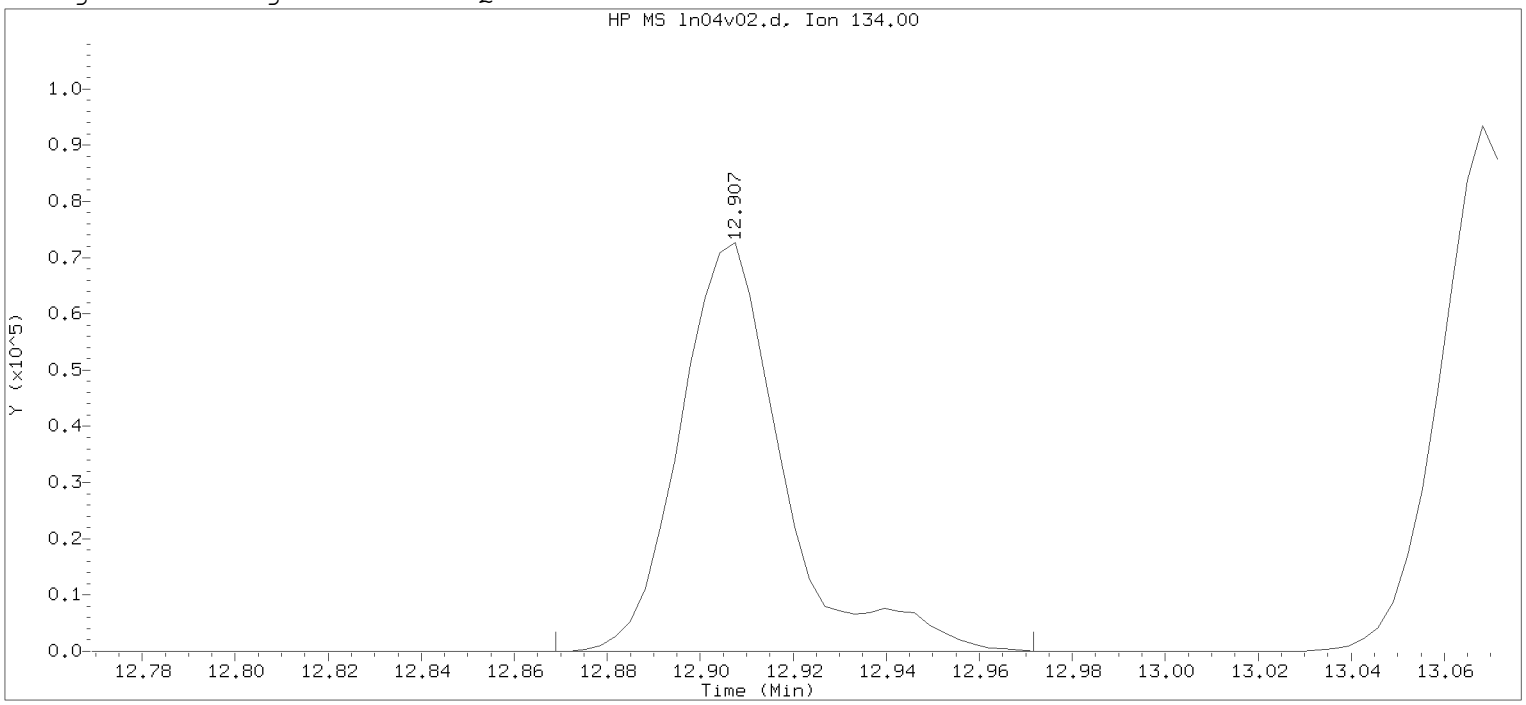
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area : 111654
On-column Amount (ng) : 22.2016
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASPOSITO

Data File: /chem/HP09915.i/19nov23a.b/ln23t02.d

Date : 23-NOV-2019 07:57

Client ID: aug-02-19

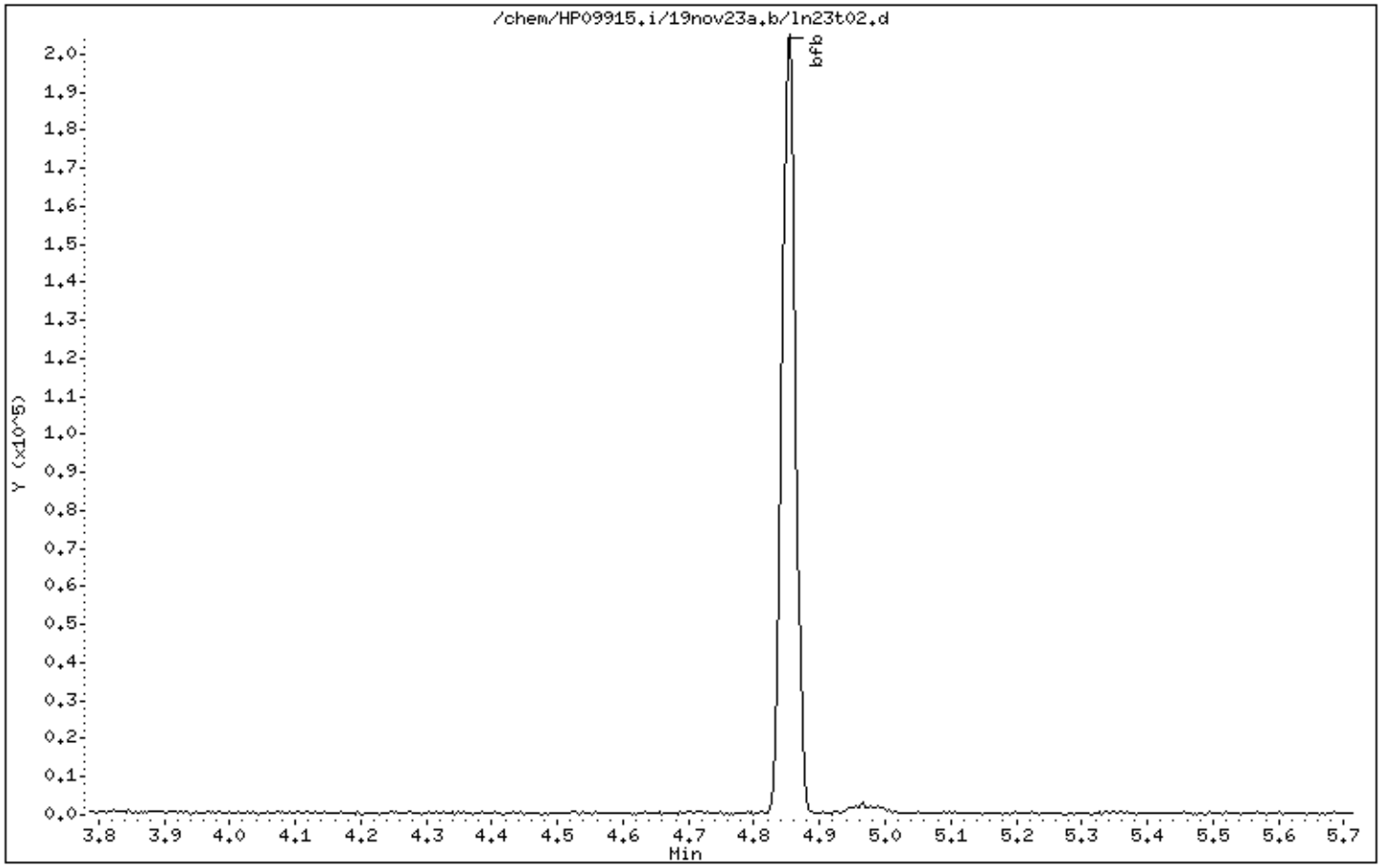
Instrument: HP09915.i

Sample Info: aug-02-19;50NGBFB;1;3;;;;;;

Operator: CLM27445

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem/HP09915.i/19nov23a.b/ln23t02.d

Date : 23-NOV-2019 07:57

Client ID: aug-02-19

Instrument: HP09915.i

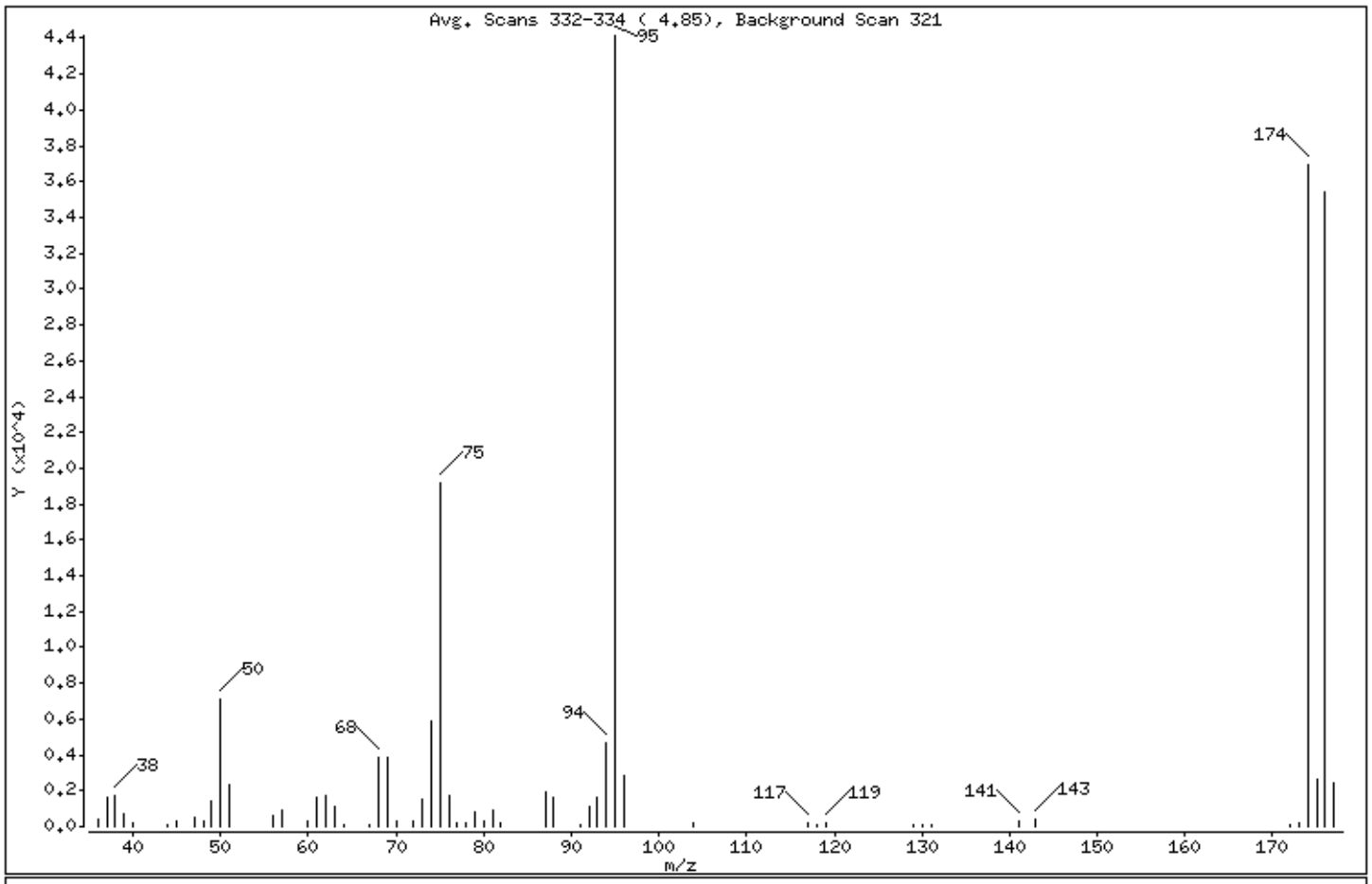
Sample Info: aug-02-19;50NGBFB;1;3;;;;;;

Operator: CLM27445

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.16
75	30.00 - 60.00% of mass 95	43.53
96	5.00 - 9.00% of mass 95	6.39
173	Less than 2.00% of mass 174	0.55 (0.66)
174	50.00 - 100.00% of mass 95	83.68
175	5.00 - 9.00% of mass 174	6.06 (7.25)
176	95.00 - 101.00% of mass 174	80.15 (95.78)
177	5.00 - 9.00% of mass 176	5.44 (6.78)

Date : 23-NOV-2019 07:57

Client ID: aug-02-19 Instrument: HP09915.i

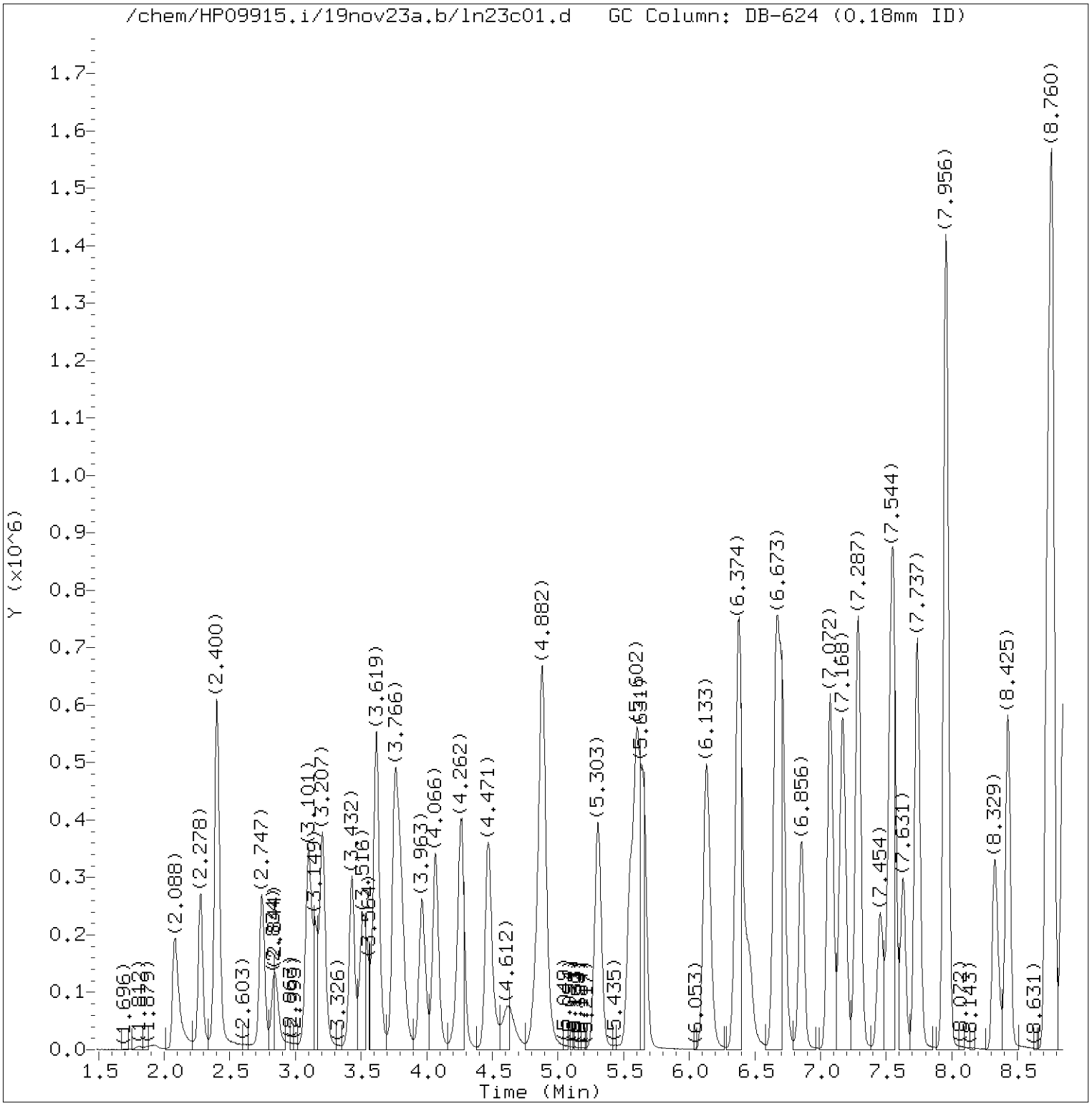
Sample Info: aug-02-19;50NGBFB;1;3;;;;;;

Operator: CLM27445

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: ln23t02.d
Spectrum: Avg. Scans 332-334 (4.85), Background Scan 321
Location of Maximum: 95.00
Number of points: 57

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	371	61.00	1626	79.00	835	119.00	198
37.00	1659	62.00	1729	80.00	340	129.00	55
38.00	1713	63.00	1142	81.00	937	130.00	83
39.00	697	64.00	132	82.00	206	131.00	58
40.00	168	67.00	144	87.00	1893	141.00	254
44.00	143	68.00	3907	88.00	1611	143.00	370
45.00	324	69.00	3810	91.00	54	172.00	143
47.00	460	70.00	306	92.00	1144	173.00	244
48.00	285	72.00	257	93.00	1645	174.00	36944
49.00	1402	73.00	1566	94.00	4717	175.00	2677
50.00	7136	74.00	5916	95.00	44152	176.00	35384
51.00	2379	75.00	19216	96.00	2820	177.00	2400
56.00	617	76.00	1741	104.00	191		
57.00	926	77.00	239	117.00	245		
60.00	342	78.00	218	118.00	59		



Total Ion Chromatogram (TIC)

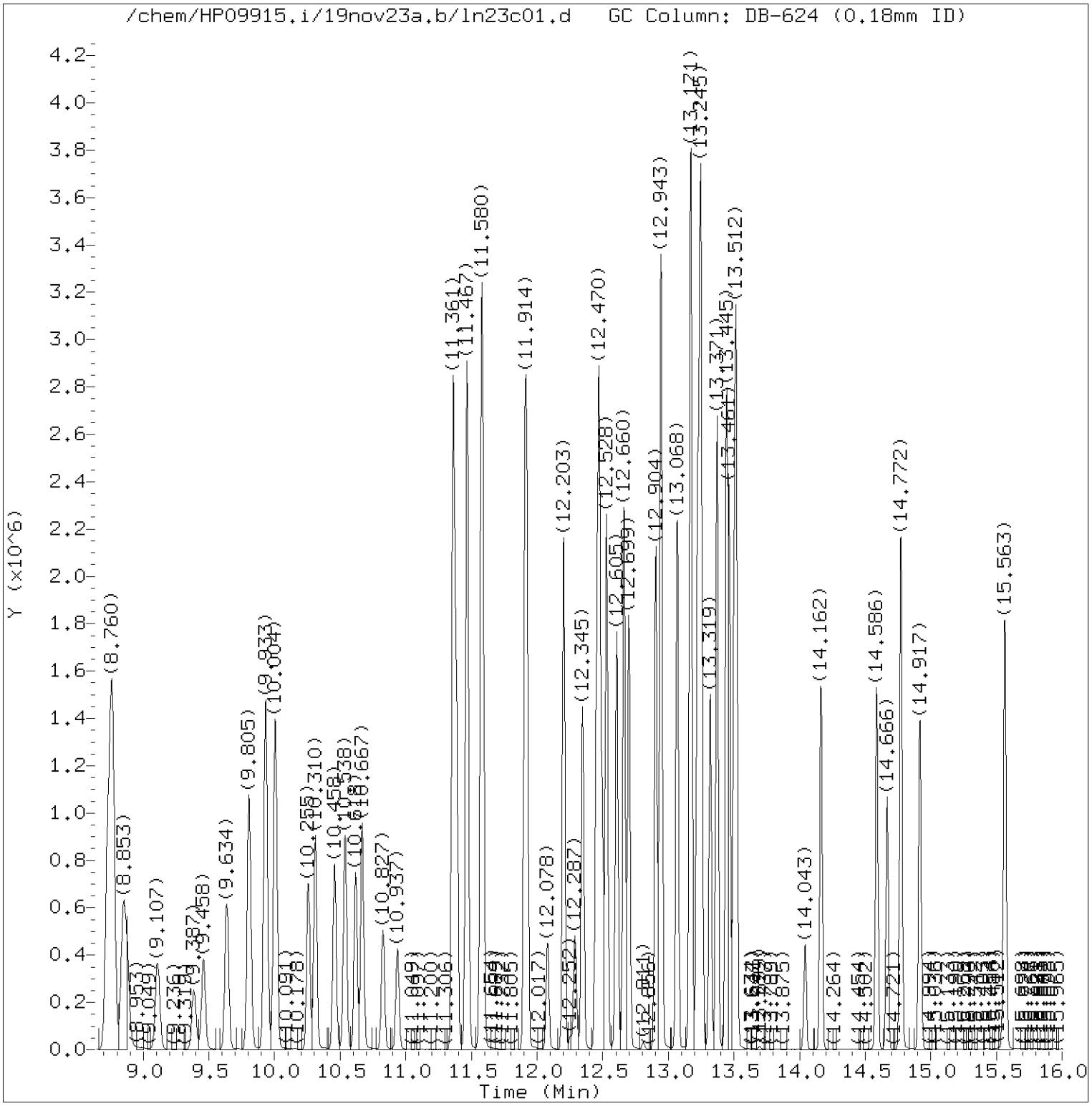
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.085	85	426647	54.170
4) Chloromethane	(2)	2.278	50	395979	52.166
6) Vinyl Chloride	(2)	2.400	62	390013	51.480
5) 1,3-Butadiene	(2)	2.406	39	259783	41.217
8) Bromomethane	(2)	2.741	94	276278	50.873
9) Chloroethane	(2)	2.844	64	209700	50.367
10) Dichlorofluoromethane	(2)	3.098	67	399390	39.860
12) Trichlorofluoromethane	(2)	3.149	101	448631	55.004
11) n-Pentane	(2)	3.204	43	360401	37.390
14) Ethyl ether	(2)	3.429	59	273084	51.813
15) Freon 123a	(2)	3.522	67	301358	45.931
16) Acrolein	(1)	3.615	56	841370	512.444
17) 1,1-Dichloroethene	(2)	3.754	96	215176	44.946
17) 1,1-Dichloroethene	(2)	3.754	63	105439	43.930
18) Acetone	(1)	3.795	58	77055	104.683
19) Freon 113	(2)	3.799	101	249953	45.761
22) Methyl Iodide	(2)	3.963	142	454457	45.809
21) 2-Propanol	(1)	3.985	45	132231	249.887
23) Carbon Disulfide	(2)	4.066	76	799496	44.315
27) Methyl Acetate	(2)	4.236	43	283759	46.019
25) Allyl Chloride	(2)	4.268	41	380893	44.350
28) Methylene Chloride	(2)	4.467	84	268162	47.062
29)*t-Butyl alcohol-d10	(1)	4.490	65	218843	250.000
30) t-Butyl alcohol	(1)	4.622	59	222936	241.966
31) Acrylonitrile	(2)	4.831	53	152489	45.967
33) Methyl Tertiary Butyl Ether	(2)	4.876	73	763776	42.014
32) trans-1,2-Dichloroethene	(2)	4.882	96	256465	46.307
34) n-Hexane	(2)	5.303	57	379461	44.038
36) 1,1-Dichloroethane	(2)	5.545	63	445094	46.069
38) di-Isopropyl ether	(2)	5.602	45	840159	45.088
39) 2-Chloro-1,3-butadiene	(2)	5.654	53	394866	45.553
40) Ethyl t-butyl ether	(2)	6.136	59	784651	43.390
43) 1,2-Dichloroethene (Total)	(2)		96	549419	93.434
44) 2-Butanone	(2)	6.361	43	374479	87.938
42) cis-1,2-Dichloroethene	(2)	6.377	96	292954	47.126
45) 2,2-Dichloropropane	(2)	6.390	77	342986	45.667
47) Propionitrile	(1)	6.451	54	325864	283.854
48) Methacrylonitrile	(2)	6.663	67	435635	121.737

* = Compound is an internal standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.702	128	166357	50.469
50) Tetrahydrofuran	(1)	6.718	71	109845	105.929
51) Chloroform	(2)	6.856	83	445256	48.184
52)$Dibromofluoromethane	(2)	7.072	113	275545	49.903
52)$Dibromofluoromethane	(2)	7.072	111	279116	49.578
53) 1,1,1-Trichloroethane	(2)	7.081	97	368717	46.750
54) Cyclohexane	(2)	7.168	56	471025	44.660
54) Cyclohexane	(2)	7.168	84	417552	45.576
54) Cyclohexane	(2)	7.175	69	147071	45.084
56) Carbon Tetrachloride	(2)	7.281	117	311124	46.511
55) 1,1-Dichloropropene	(2)	7.290	75	354863	46.453
58) Isobutyl Alcohol	(1)	7.454	41	199717	644.138
57)$1,2-Dichloroethane-d4	(2)	7.528	102	71008	50.460
57)$1,2-Dichloroethane-d4	(2)	7.528	65	321059	51.196
57)$1,2-Dichloroethane-d4	(2)	7.528	104	45768	50.919
60) Benzene	(2)	7.557	78	1092018	47.536
61) 1,2-Dichloroethane	(2)	7.631	62	354351	47.957
61) 1,2-Dichloroethane	(2)	7.628	98	35318	48.300
65) t-Amyl methyl ether	(2)	7.737	73	829046	45.675
66)*Fluorobenzene	(2)	7.956	96	1129387	50.000
67) n-Heptane	(2)	7.959	43	367404	45.643
69) n-Butanol	(1)	8.332	56	340740	1276.850
71) Trichloroethene	(2)	8.425	95	278257	48.106
72) Methylcyclohexane	(2)	8.728	83	505175	47.076
72) Methylcyclohexane	(2)	8.728	98	229307	47.222
73) 1,2-Dichloropropane	(2)	8.766	63	280113	48.019
76) Methyl Methacrylate	(2)	8.843	69	280393	49.707
75) 1,4-Dioxane	(1)	8.853	88	65102M	887.571
74) Dibromomethane	(2)	8.876	93	186925	49.526
78) Bromodichloromethane	(2)	9.107	83	331866	48.999
79) 2-Nitropropane	(2)	9.384	41	195731	95.412
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	213296	85.137
81) cis-1,3-Dichloropropene	(2)	9.634	75	449906	50.015
82) 4-Methyl-2-pentanone	(2)	9.805	43	820810	91.317
83)$Toluene-d8	(3)	9.933	98	1206568	48.944
83)$Toluene-d8	(3)	9.933	100	772586	48.381
88) Toluene	(3)	10.007	92	717271	46.410
90) 1,3-Dichloropropene (total)	(3)		100	872271	98.158

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.255	75	422365	48.142
91) Ethyl Methacrylate	(3)	10.310	69	501676	47.052
92) 1,1,2-Trichloroethane	(3)	10.458	97	279687	47.732
93) Tetrachloroethene	(3)	10.535	166	299047	45.688
94) 1,3-Dichloropropane	(3)	10.618	76	472234	47.202
96) 2-Hexanone	(3)	10.667	43	608236	85.463
97) Dibromochloromethane	(3)	10.827	129	287076	47.827
99) 1,2-Dibromoethane	(3)	10.937	107	305899	48.076
100)*Chlorobenzene-d5	(3)	11.358	117	942140	50.000
101) 1-Chlorohexane	(3)	11.364	91	357494	43.058
102) Chlorobenzene	(3)	11.387	112	823619	47.126
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	270952	47.053
104) Ethylbenzene	(3)	11.467	91	1388430	47.002
106) m+p-Xylene	(3)	11.580	106	1100827	94.730
108) Xylene (Total)	(3)		106	1640642	141.759
107) o-Xylene	(3)	11.908	106	539815	47.029
109) Styrene	(3)	11.920	104	921222	48.568
110) Bromoform	(3)	12.081	173	201677	44.966
111) Isopropylbenzene	(3)	12.203	105	1358883	47.200
112) Cyclohexanone	(1)	12.287	55	195406	680.224
114)$4-Bromofluorobenzene	(3)	12.345	95	475891	50.982
114)$4-Bromofluorobenzene	(3)	12.348	174	390248	50.429
116) 1,1,2,2-Tetrachloroethane	(4)	12.448	83	453102	45.942
115) Bromobenzene	(4)	12.464	156	353786	45.087
118) trans-1,4-Dichloro-2-butene	(4)	12.474	53	332260	109.220
117) 1,2,3-Trichloropropane	(4)	12.496	110	138812	45.867
119) n-Propylbenzene	(4)	12.528	91	1592058	46.440
120) 2-Chlorotoluene	(4)	12.609	126	331322	45.493
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	1173871	47.117
121) 4-Chlorotoluene	(4)	12.699	126	345450	45.569
124) tert-Butylbenzene	(4)	12.904	134	230705M	44.776
125) Pentachloroethane	(4)	12.937	167	213232	48.061
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	1234172	47.002
127) sec-Butylbenzene	(4)	13.068	105	1409138	45.832
129) 1,3-Dichlorobenzene	(4)	13.168	146	656157	45.506
130) p-Isopropyltoluene	(4)	13.171	119	1218604	45.814
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	522095	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	675899	45.217

M = Compound was manually integrated.
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Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	1347453	48.445
135) Benzyl Chloride	(4)	13.319	91	969998	46.061
136) 1,3-Diethylbenzene	(4)	13.371	119	799617	46.193
141) Diethylbenzene (total)	(4)		100	2318753	138.613
137) 1,4-Diethylbenzene	(4)	13.441	119	834323	45.492
139) n-Butylbenzene	(4)	13.464	92	599219	44.060
138) 1,2-Dichlorobenzene	(4)	13.502	146	651315	45.776
140) 1,2-Diethylbenzene	(4)	13.515	119	684813	46.929
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	99289	45.989
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	452085	41.356
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	430638	40.515
147) Hexachlorobutadiene	(4)	14.666	225	175764	35.022
148) Naphthalene	(4)	14.772	128	1577744	46.172
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	424272	41.022
150) 2-Methylnaphthalene	(4)	15.563	142	908098	43.156

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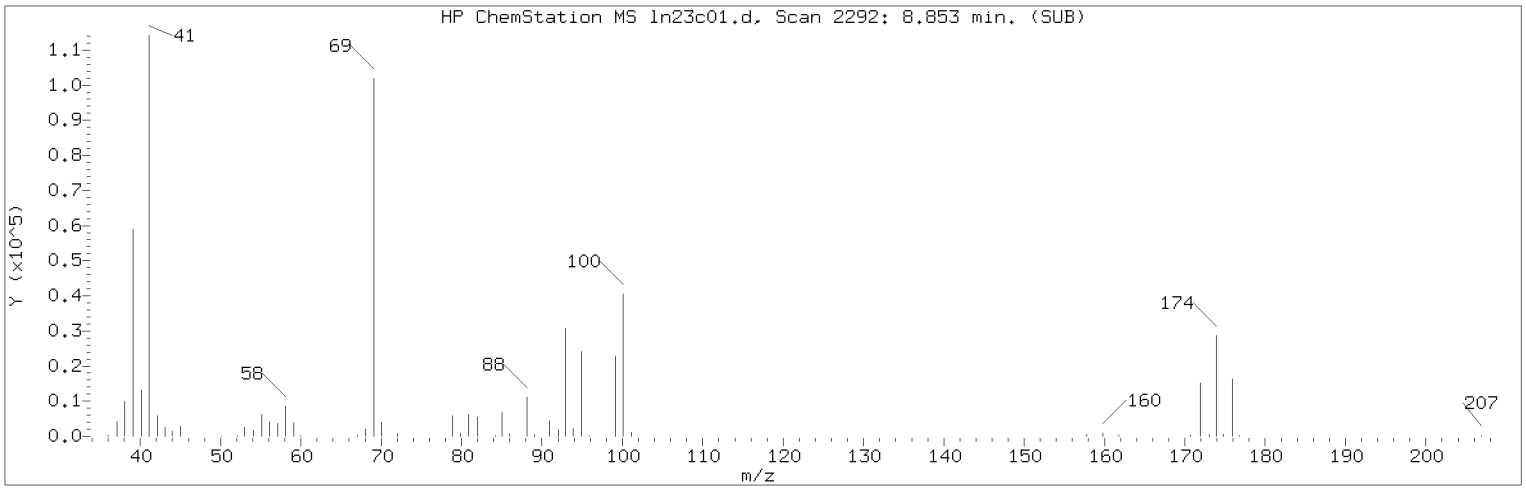
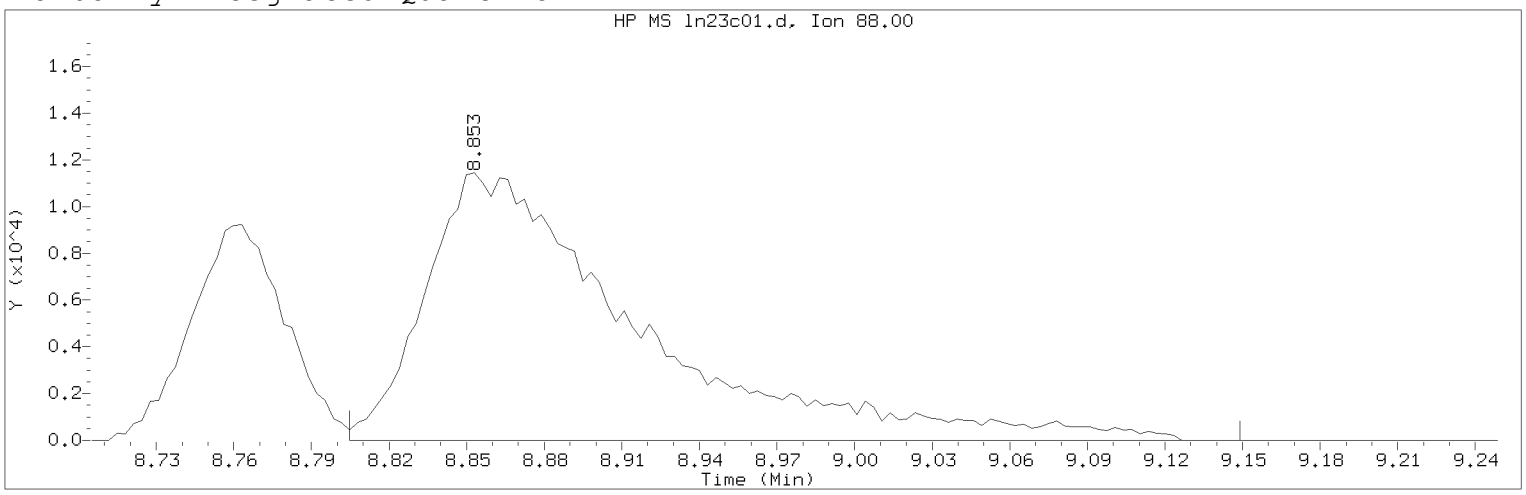
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

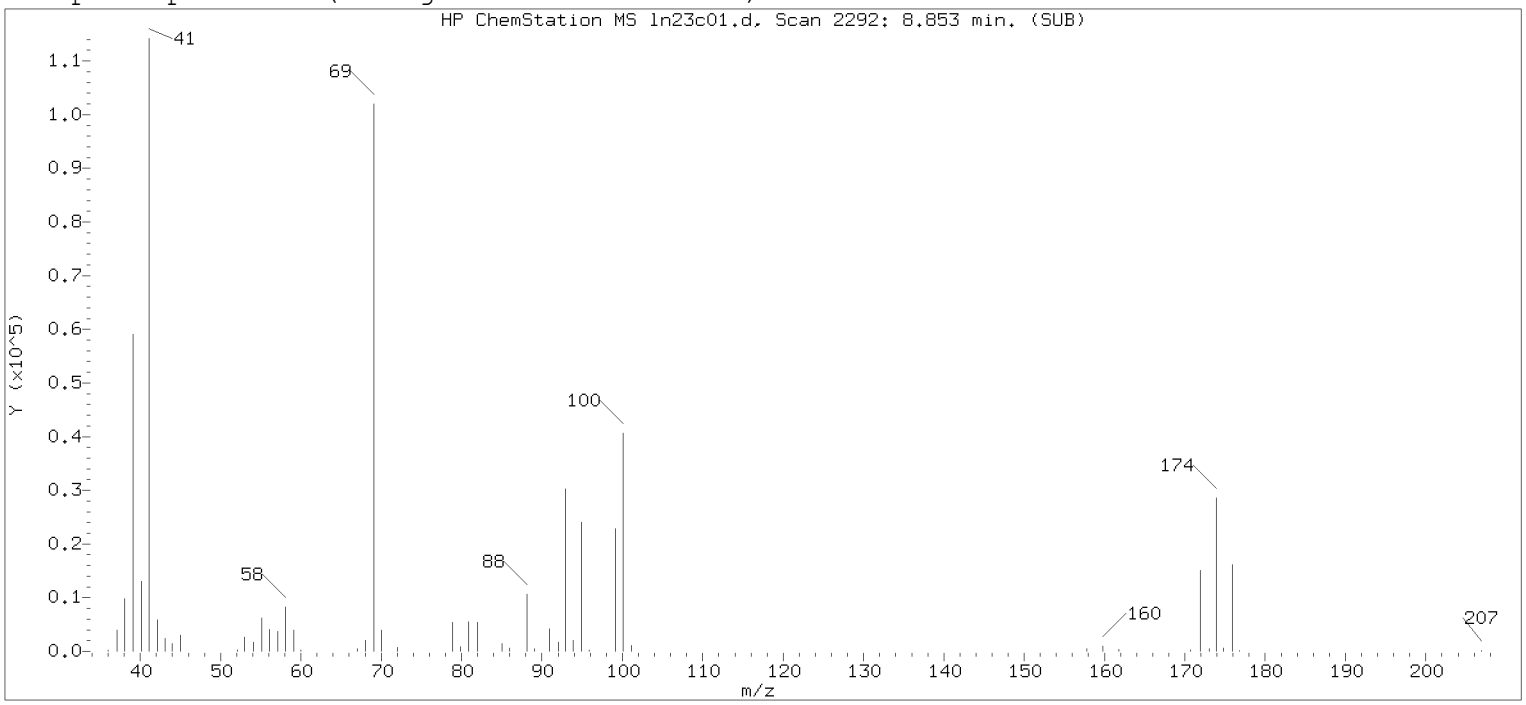
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area (flag) : 65102M
On-Column Amount (ng) : 887.5715
Integration start scan : 2276 Integration stop scan: 2383
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

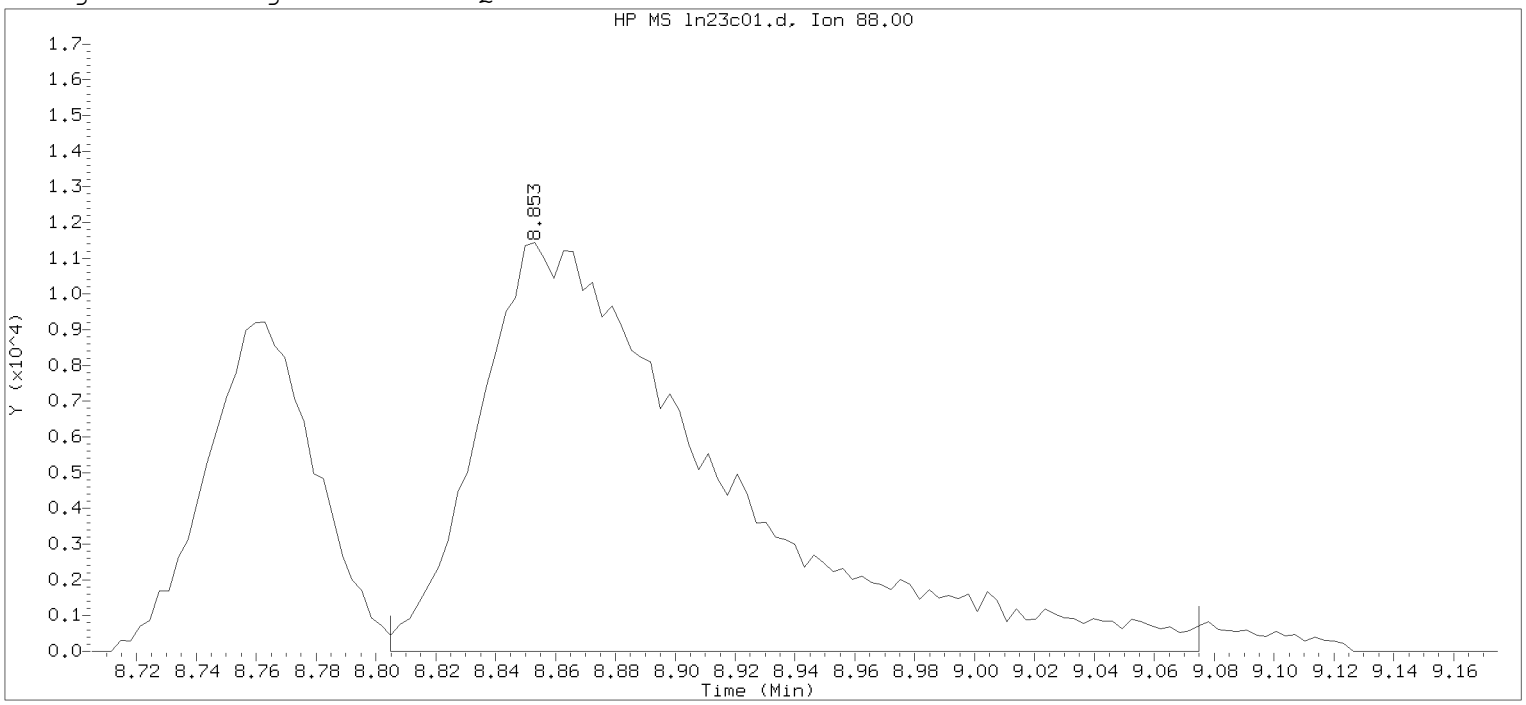
Analyst responsible for change: Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:45.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

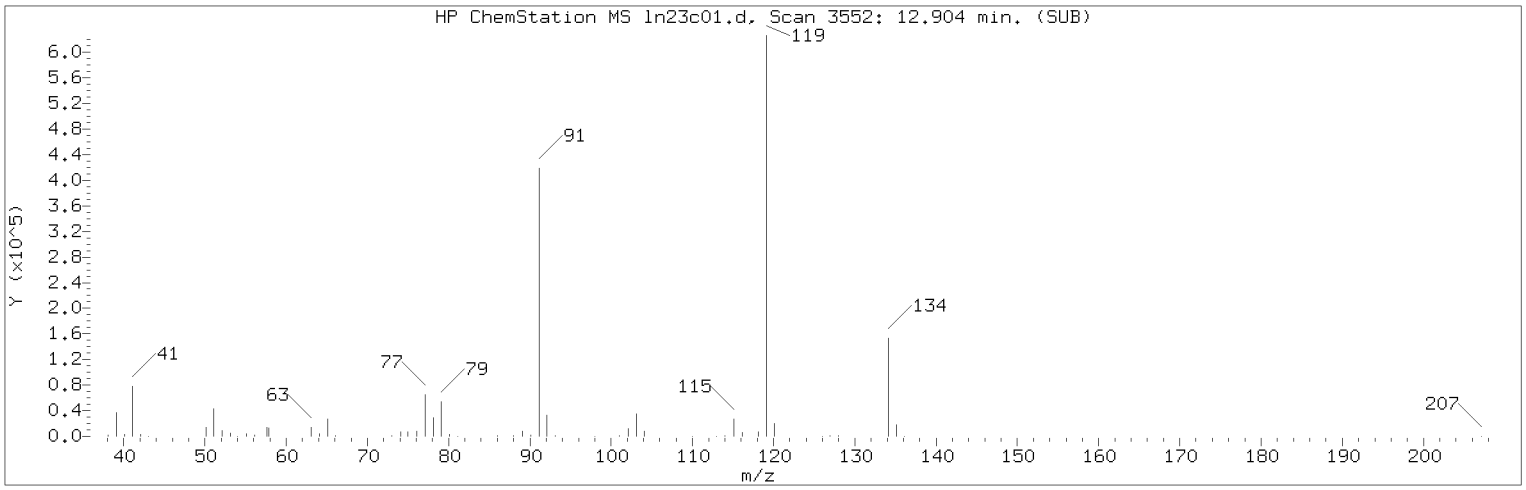
Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 08:59
Date, time and analyst ID of latest file update: 23-Nov-2019 08:59 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

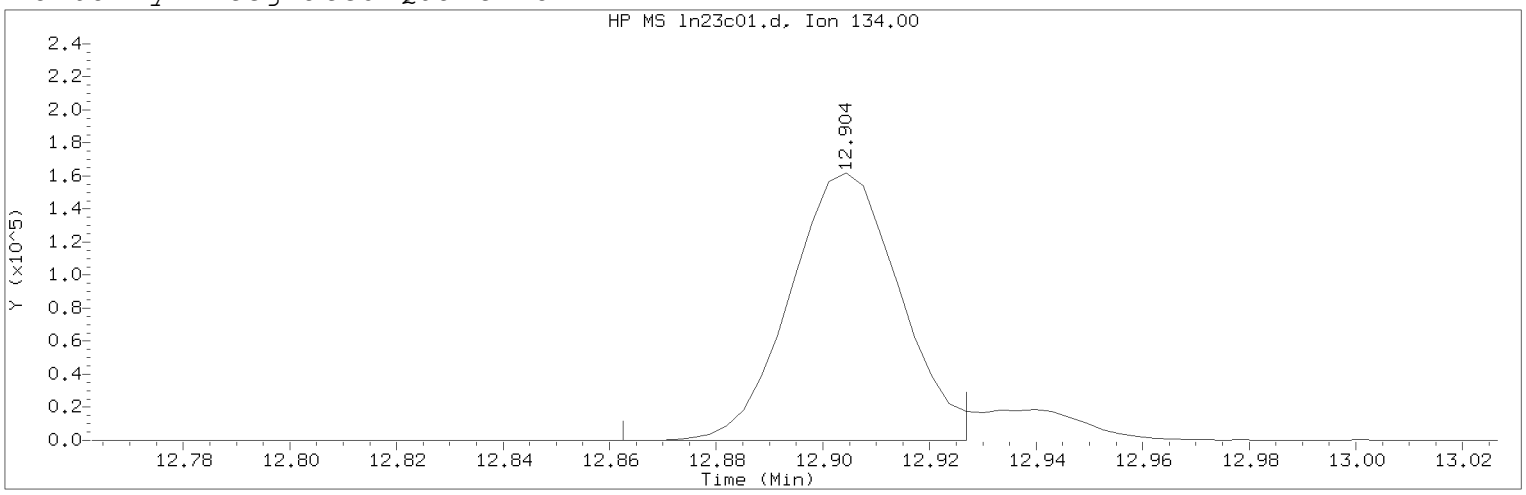
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area : 63644
On-column Amount (ng) : 867.7000
Integration start scan : 2276 Integration stop scan: 2360
Y at integration start : 0 Y at integration end: 0

Digitally signed by Corie L. Mellinger on 11/23/2019 at 09:09.
Target 3.5 esignature user: CLM27445

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

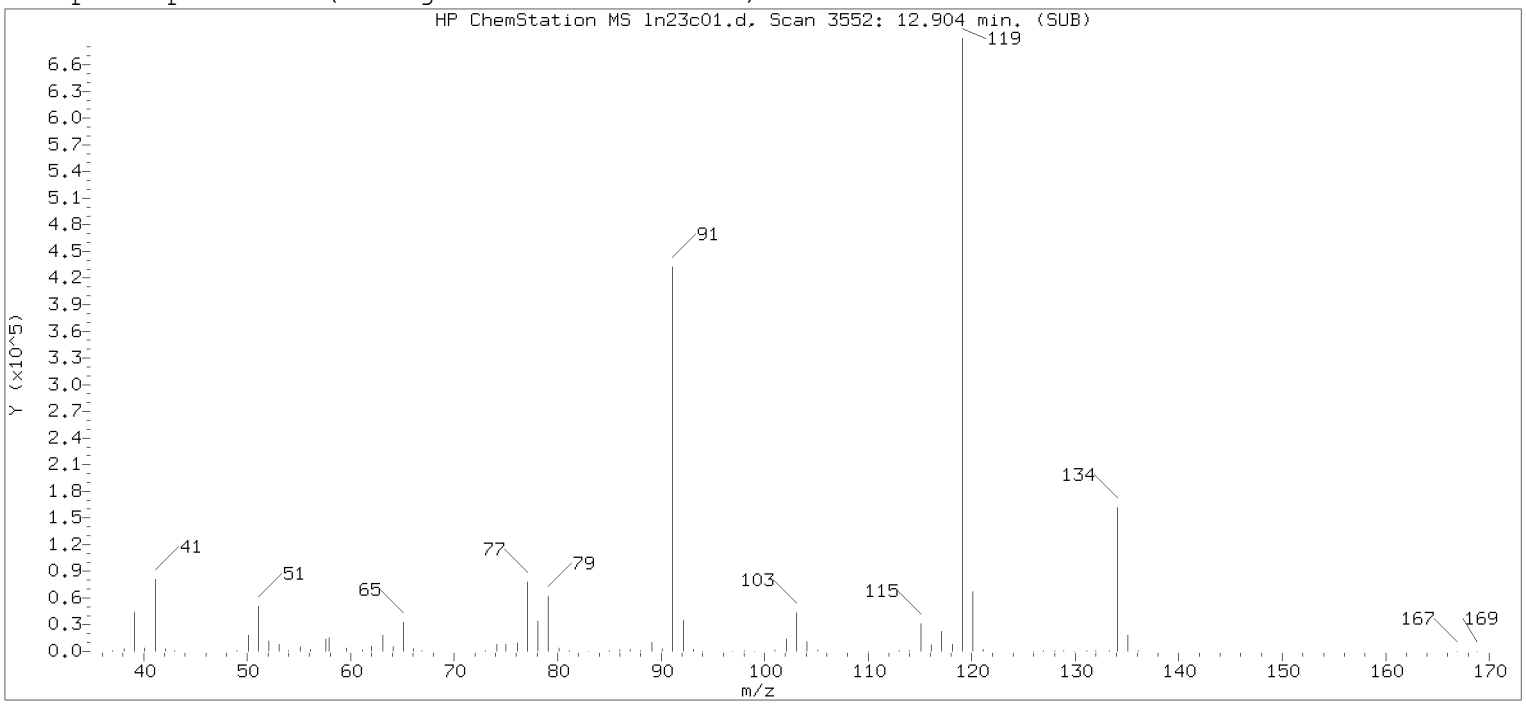
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 230705M
On-Column Amount (ng) : 44.7756
Integration start scan : 3538 Integration stop scan: 3558
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

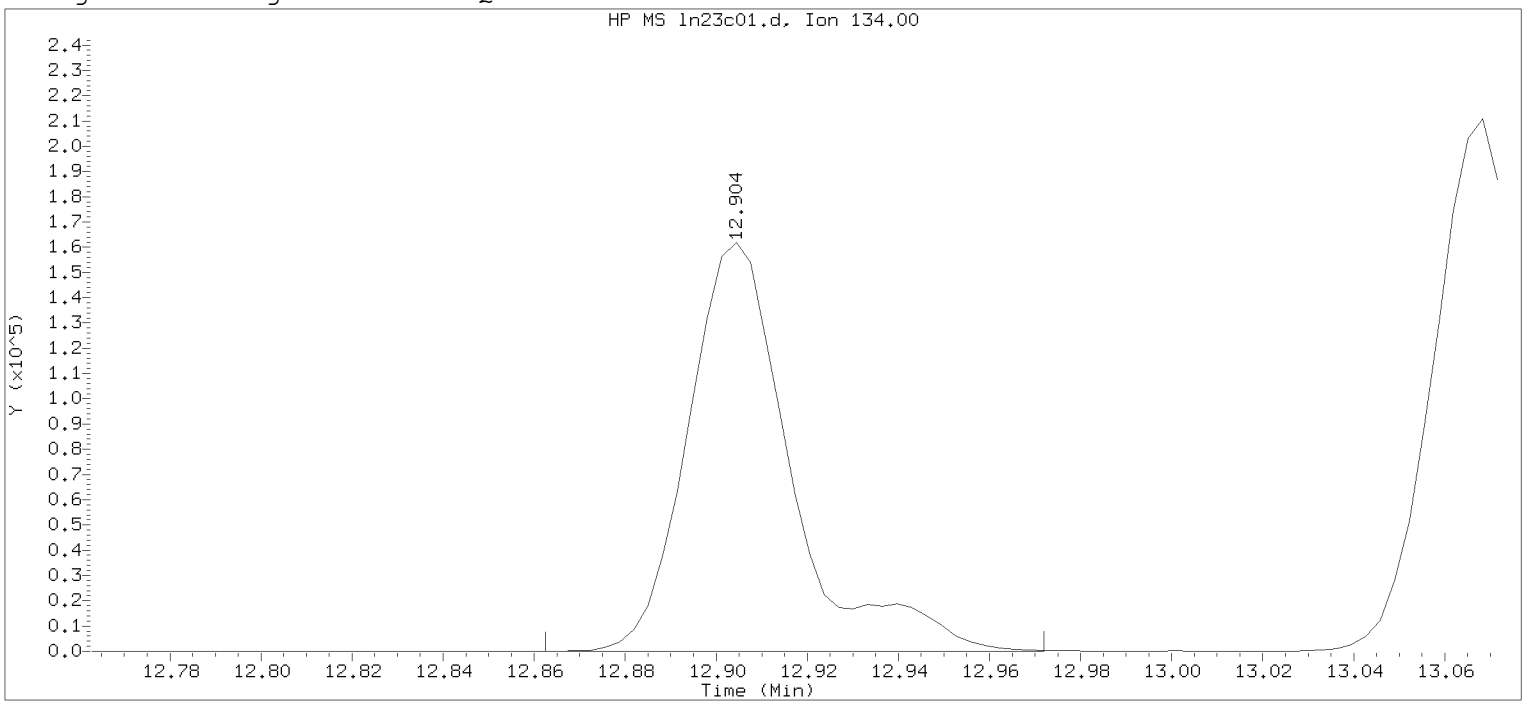
Analyst responsible for change: Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:45.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 08:59
Date, time and analyst ID of latest file update: 23-Nov-2019 08:59 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 255483
On-column Amount (ng) : 49.5846
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Corie L. Mellinger on 11/23/2019 at 09:09.
Target 3.5 esignature user: CLM27445

Raw QC Data

Volatiles by GC/MS

Data file: /chem/HP09915.i/19nov23a.b/ln23b01.d Injection date and time: **23-NOV-2019 09:48**
Data file Sample Info. Line: VBLKL87;VBLKL87;1;3;;;;;; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493	(-0.003)	936	65	224793	(3)	250.00	
66) Fluorobenzene	7.953	(0.003)	2012	96	1154568	(2)	50.00	
100) Chlorobenzene-d5	11.358	(0.000)	3071	117	947038	(1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.220	(0.003)	3650	152	506608	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(-0.001)	113	273712	48.490	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	73640	51.189	102%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	1203589	48.571	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	460603	49.089	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)				Not Detected					0.2	1
4) Chloromethane	(2)				Not Detected					0.2	1
5) 1,3-Butadiene	(2)				Not Detected					1	3
6) Vinyl Chloride	(2)				Not Detected					0.2	1
8) Bromomethane	(2)				Not Detected					0.3	1
9) Chloroethane	(2)				Not Detected					0.2	1
11) n-Pentane	(2)				Not Detected					0.4	10
12) Trichlorofluoromethane	(2)				Not Detected					0.2	1
14) Ethyl ether	(2)				Not Detected					0.2	5
15) Freon 123a	(2)				Not Detected					0.4	5
16) Acrolein	(1)				Not Detected					2	100
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
21) 2-Propanol	(1)				Not Detected					18	100
22) Methyl Iodide	(2)				Not Detected					0.2	1
23) Carbon Disulfide	(2)				Not Detected					0.2	5
25) Allyl Chloride	(2)				Not Detected					0.3	5
27) Methyl Acetate	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
30) t-Butyl alcohol	(1)				Not Detected					12	50
31) Acrylonitrile	(2)				Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.2	1
34) n-Hexane	(2)				Not Detected					2	5
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
38) di-Isopropyl ether	(2)				Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)				Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)				Not Detected					0.4	2

Digitally signed by Linda C. Pape on 11/25/2019 at 13:55. Target 3.5 esignature user ID: lcp00895

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23b01.d Injection date and time: **23-NOV-2019 09:48**
Data file Sample Info. Line: VBLKL87;VBLKL87;1;3;;;;;; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)				Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					1	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
72) Methylcyclohexane	(2)				Not Detected					0.5	5
73) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
74) Dibromomethane	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
76) Methyl Methacrylate	(2)				Not Detected					0.2	5
78) Bromodichloromethane	(2)				Not Detected					0.2	1
79) 2-Nitropropane	(2)				Not Detected					0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
81) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
82) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
88) Toluene	(3)				Not Detected					0.2	1
89) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
90) 1,3-Dichloropropene (total)	(3)				Not Detected					0.4	2
91) Ethyl Methacrylate	(3)				Not Detected					0.2	5
92) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
94) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
96) 2-Hexanone	(3)				Not Detected					0.3	10
97) Dibromochloromethane	(3)				Not Detected					0.2	1
99) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
101) 1-Chlorohexane	(3)				Not Detected					0.3	5
102) Chlorobenzene	(3)				Not Detected					0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
109) Styrene	(3)				Not Detected					0.2	5
110) Bromoform	(3)				Not Detected					1	4
111) Isopropylbenzene	(3)				Not Detected					0.2	5
112) Cyclohexanone	(1)				Not Detected					25	100
115) Bromobenzene	(4)				Not Detected					0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
117) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
118) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50
119) n-Propylbenzene	(4)				Not Detected					0.2	5

Digitally signed by Linda C. Pape on 11/25/2019 at 13:55. Target 3.5 esignature user ID: lcp00895

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23b01.d Injection date and time: **23-NOV-2019 09:48**
Data file Sample Info. Line: VBLKL87;VBLKL87;1;3;;;;;; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

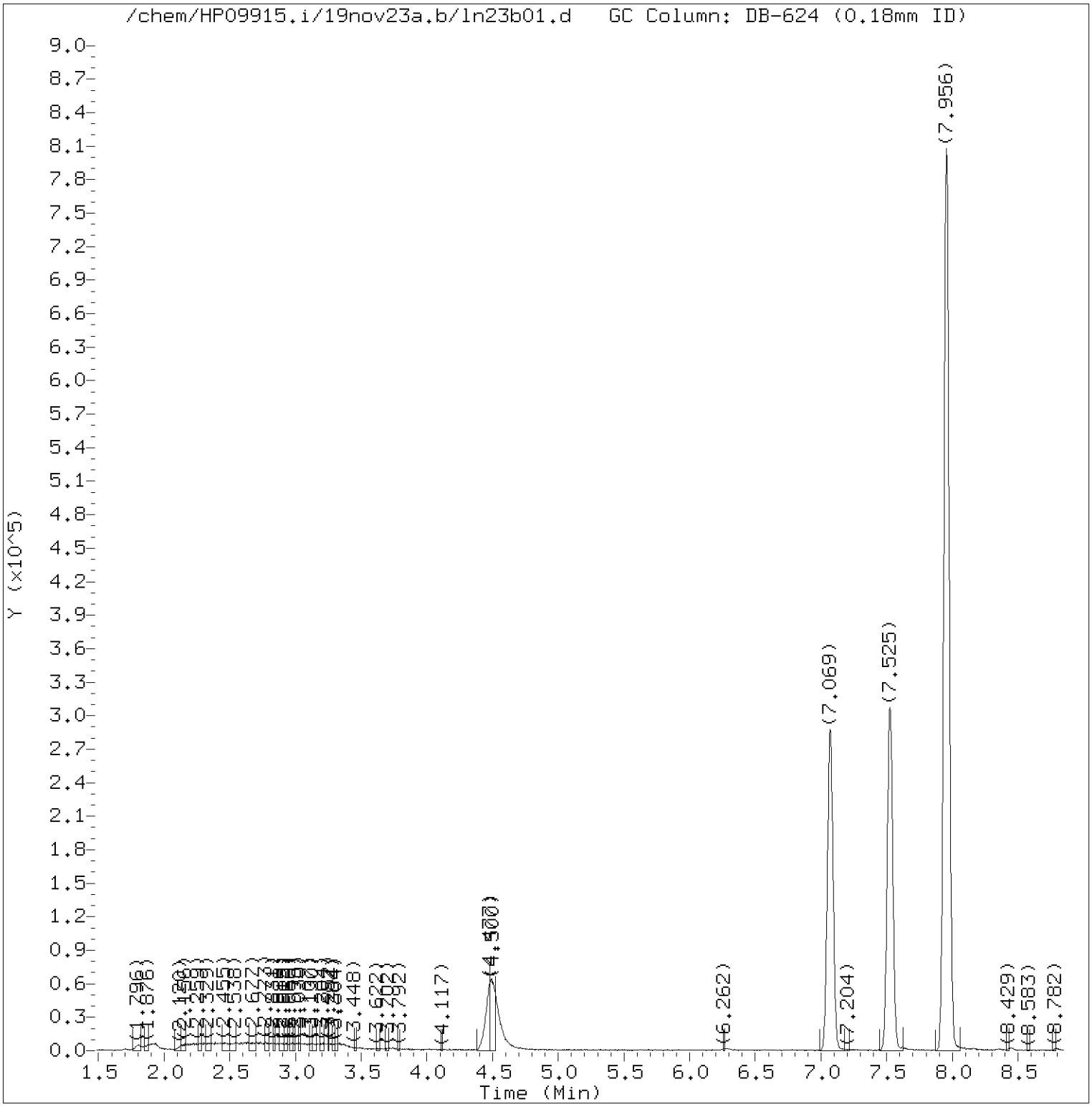
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)			Not Detected					0.2	5
121) 4-Chlorotoluene	(4)			Not Detected					0.2	5
122) 1,3,5-Trimethylbenzene	(4)			Not Detected					0.3	5
124) tert-Butylbenzene	(4)			Not Detected					0.3	5
125) Pentachloroethane	(4)			Not Detected					0.2	5
126) 1,2,4-Trimethylbenzene	(4)			Not Detected					1	5
127) sec-Butylbenzene	(4)			Not Detected					0.2	5
129) 1,3-Dichlorobenzene	(4)			Not Detected					0.2	5
130) p-Isopropyltoluene	(4)			Not Detected					0.2	5
133) 1,4-Dichlorobenzene	(4)			Not Detected					0.2	5
134) 1,2,3-Trimethylbenzene	(4)			Not Detected					0.3	5
135) Benzyl Chloride	(4)			Not Detected					1	5
136) 1,3-Diethylbenzene	(4)			Not Detected					0.2	5
137) 1,4-Diethylbenzene	(4)	13.441(-0.000)	119	3836	0.216	0.22		J	0.2	5
138) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
139) n-Butylbenzene	(4)	13.461(-0.000)	92	4540	0.344	0.34		J	0.2	5
140) 1,2-Diethylbenzene	(4)			Not Detected					0.2	5
141) Diethylbenzene (total)	(4)			Not Detected					0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)			Not Detected					0.3	5
144) 1,3,5-Trichlorobenzene	(4)	14.165(-0.000)	180	5851	0.552	0.55		J	0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.586(-0.000)	180	5468	0.530	0.53		J	0.3	5
147) Hexachlorobutadiene	(4)			Not Detected					2	5
148) Naphthalene	(4)			Not Detected					1	5
149) 1,2,3-Trichlorobenzene	(4)	14.914(-0.000)	180	5973	0.595	0.60		J	0.4	5
150) 2-Methylnaphthalene	(4)			Not Detected					2	4

Total number of targets = 110

Digitally signed by Linda C. Pape on 11/25/2019 at 13:55. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:45. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

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Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

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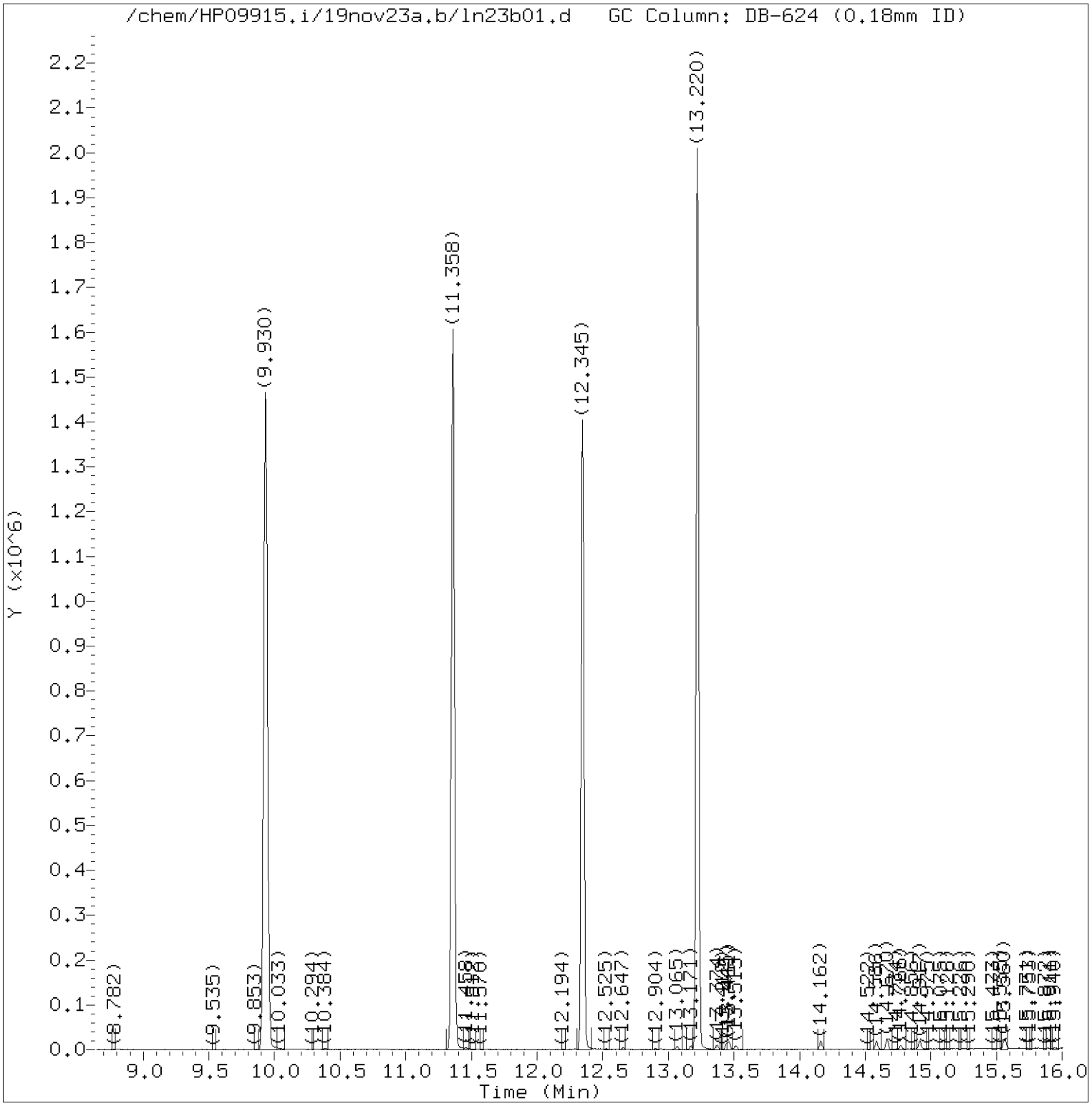
on 11/25/2019 at 13:55.
Target 3.5 esignature user ID: lcp00895



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Quant Report

Target Revision 3.5

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Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.493	65	224793	250.000
52)$Dibromofluoromethane	(2)	7.075	113	273712	48.490
57)$1,2-Dichloroethane-d4	(2)	7.525	102	73640	51.189
66)*Fluorobenzene	(2)	7.953	96	1154568	50.000
83)$Toluene-d8	(3)	9.930	98	1203589	48.571
100)*Chlorobenzene-d5	(3)	11.358	117	947038	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	460603	49.089
131)*1,4-Dichlorobenzene-d4	(4)	13.220	152	506608	50.000
137) 1,4-Diethylbenzene	(4)	13.441	119	3836	0.216
139) n-Butylbenzene	(4)	13.461	92	4540	0.344
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	5851	0.552
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	5468	0.530
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	5973	0.595

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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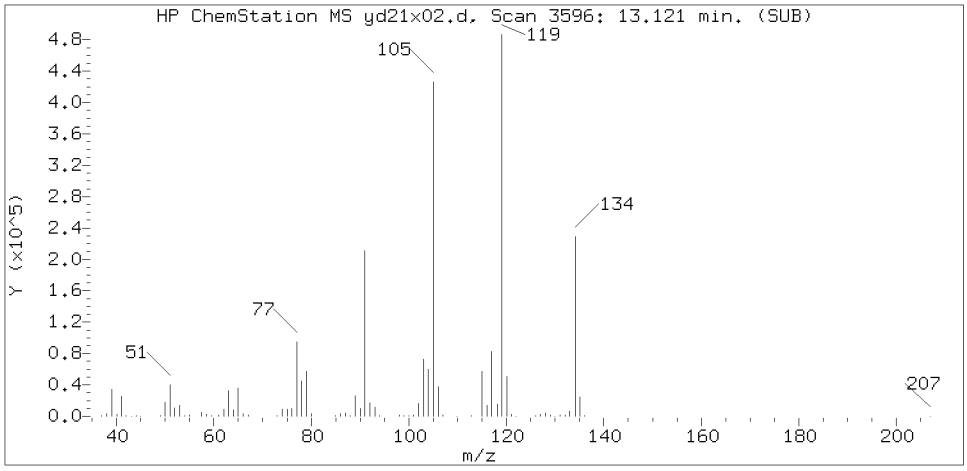
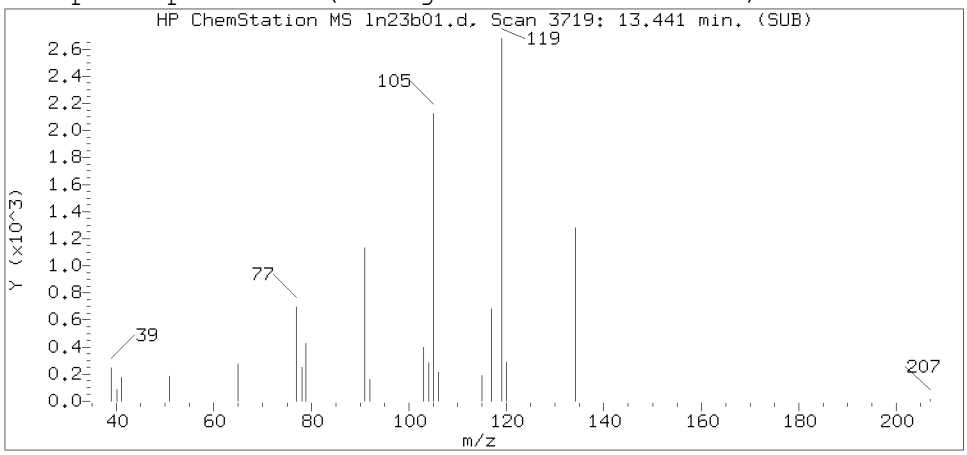
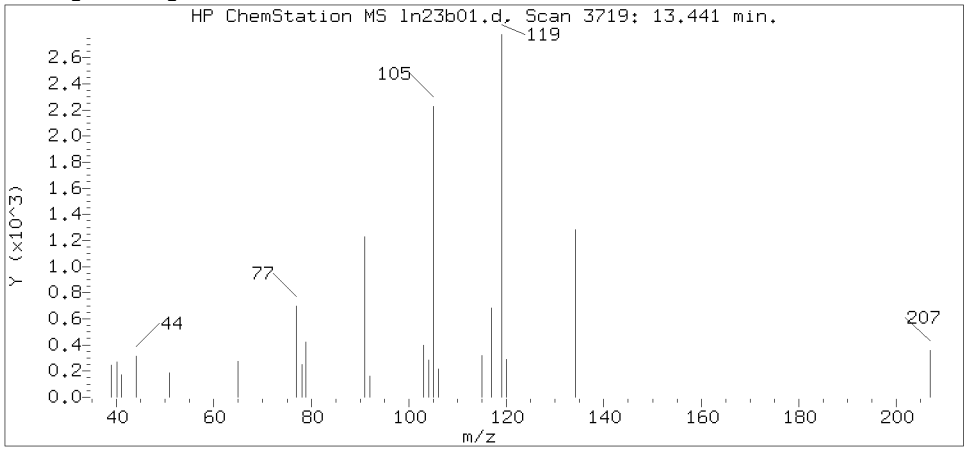
Reference Standard Spectrum for 1,4-Diethylbenzene

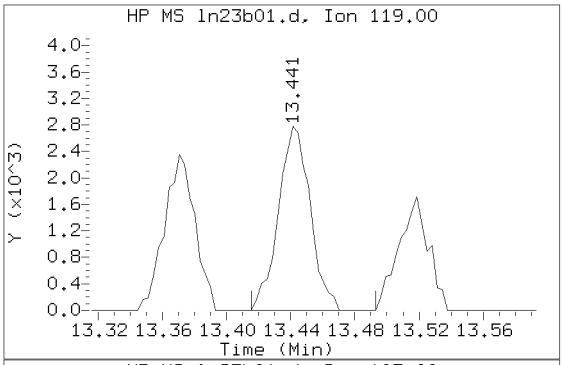


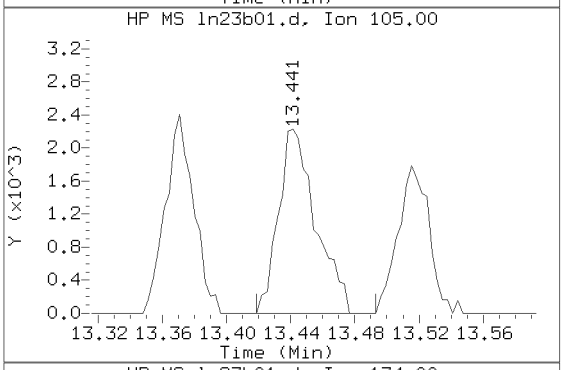
Sample Spectrum (Background Subtracted)

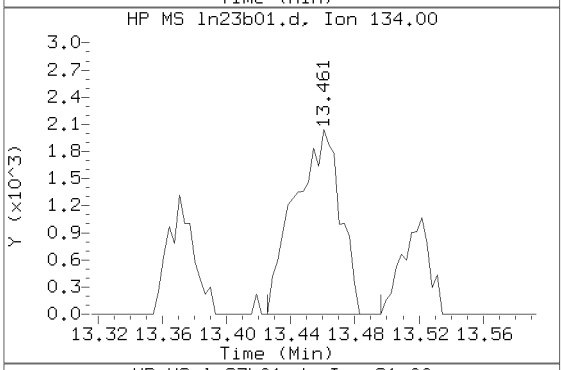


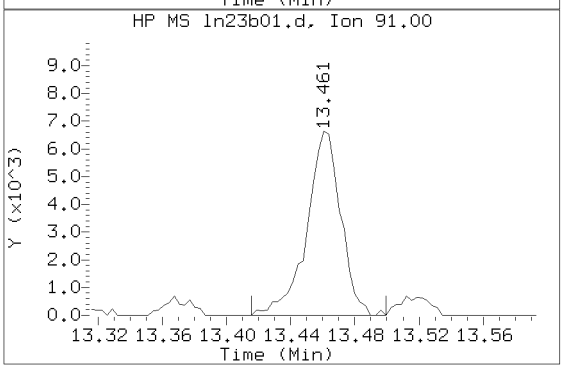
Sample Spectrum (Unaltered)











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Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compound Number : 137
Compound Name : 1,4-Diethylbenzene
Scan Number : 3719
Retention Time (minutes): 13.441
Relative Retention Time :-0.00025
Quant Ion : 119.00
Area (flag) : 3836
On-Column Amount (ng) : 0.2156

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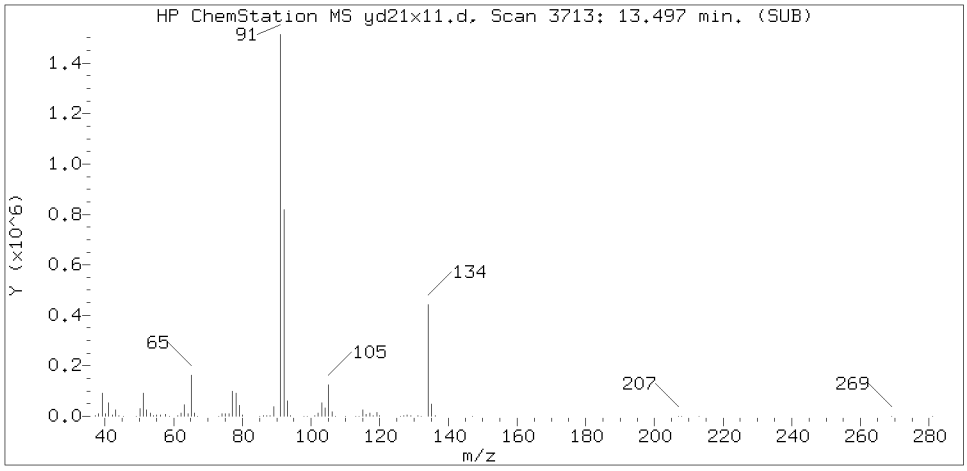
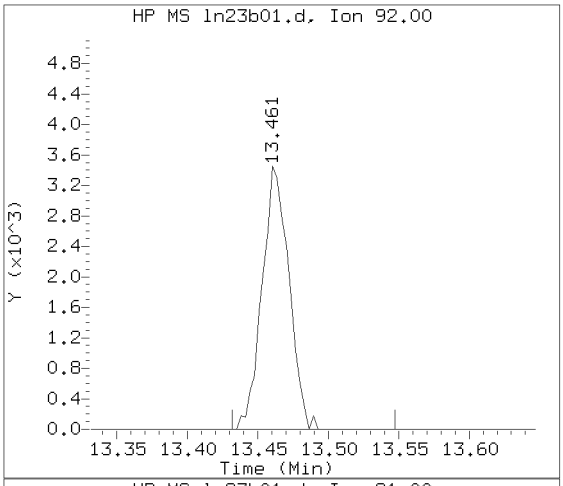
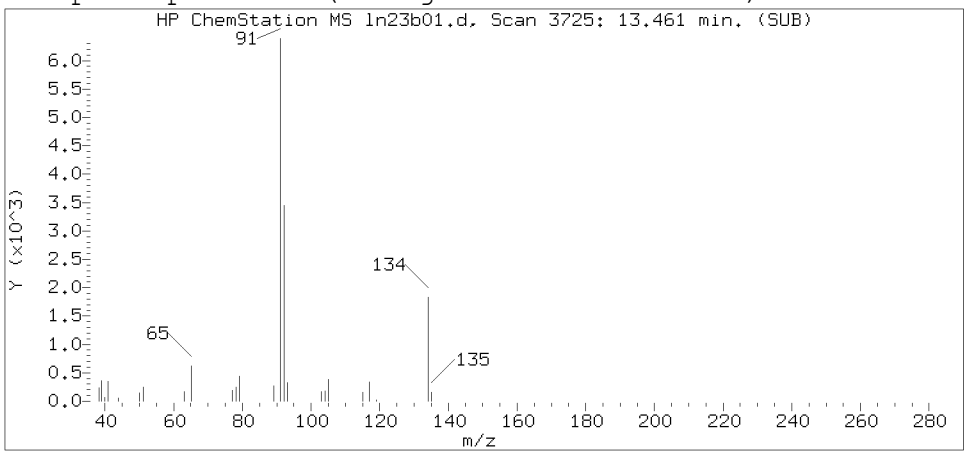
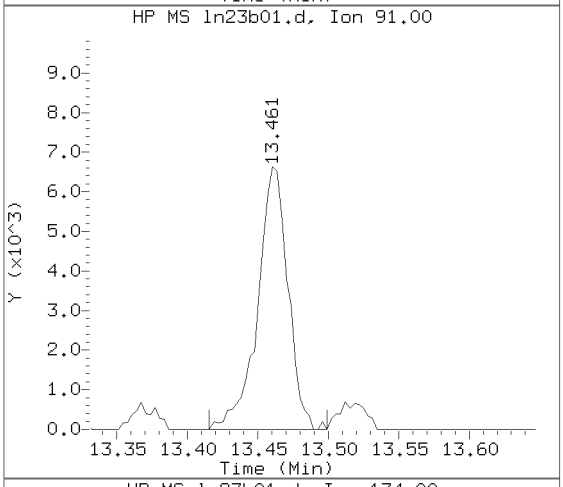
Reference Standard Spectrum for n-Butylbenzene



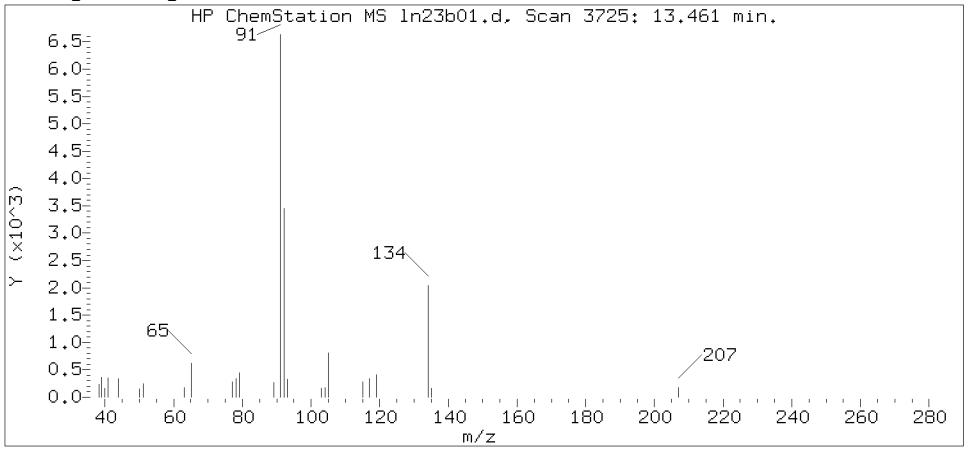


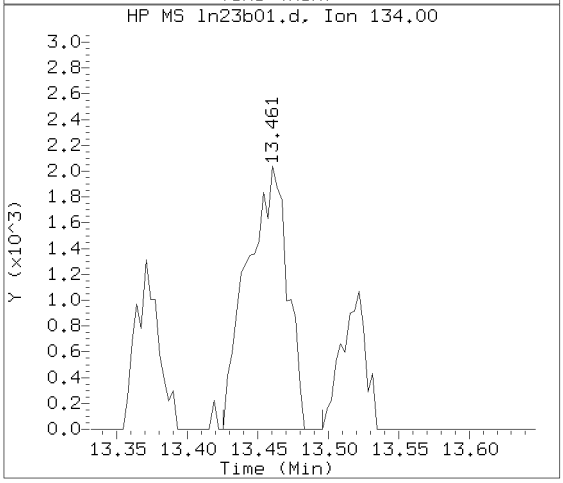
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





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Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 3725
Retention Time (minutes): 13.461
Relative Retention Time :-0.00000
Quant Ion : 92.00
Area (flag) : 4540
On-Column Amount (ng) : 0.3440

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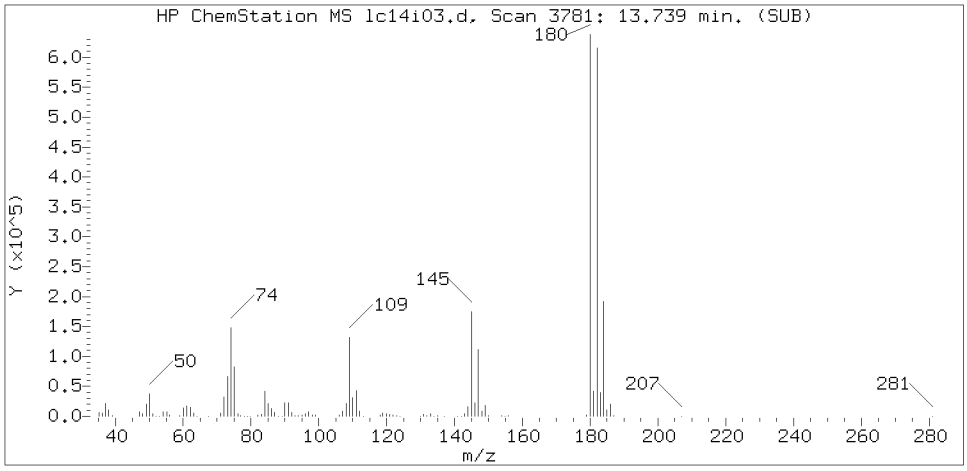
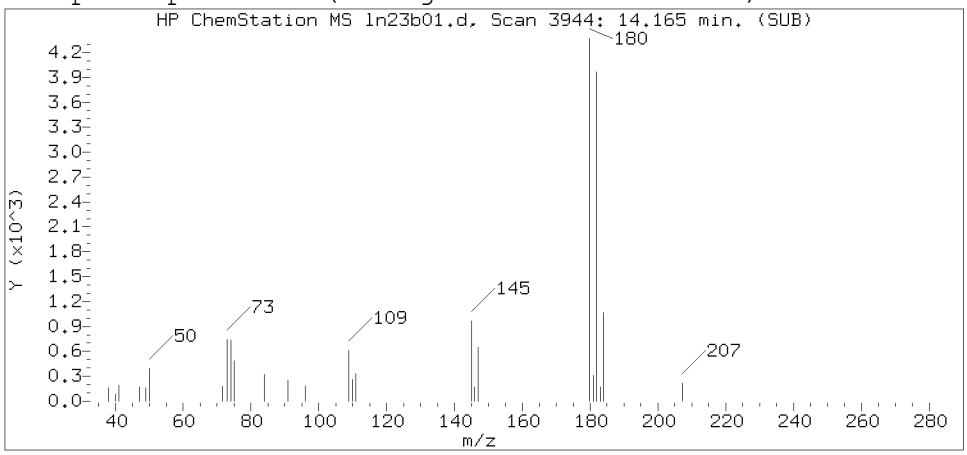
Target 3.5 esignature user ID: lcp00895

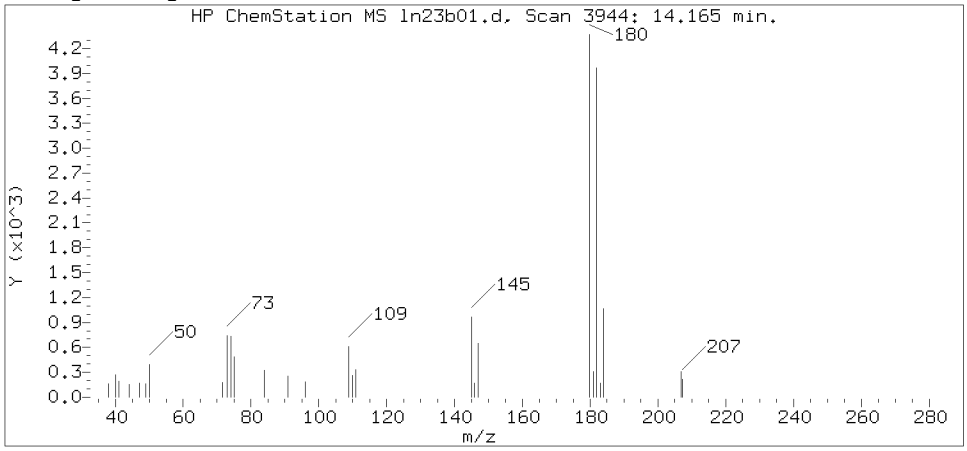
Reference Standard Spectrum for 1,3,5-Trichlorobenzene

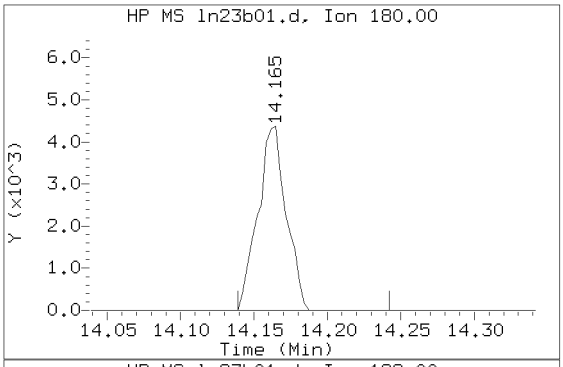


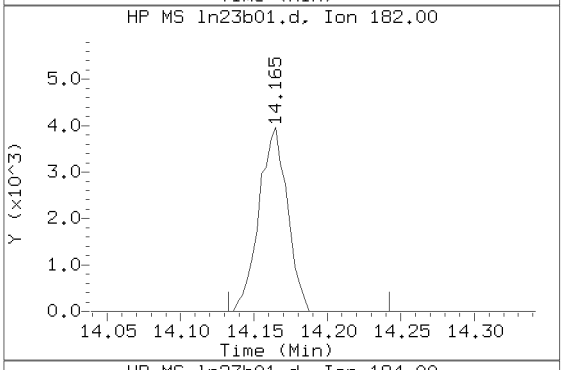
Sample Spectrum (Background Subtracted)

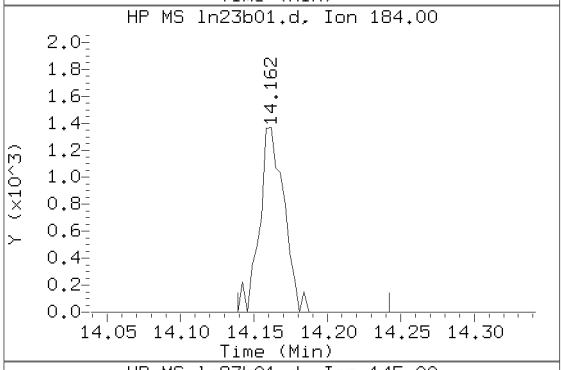


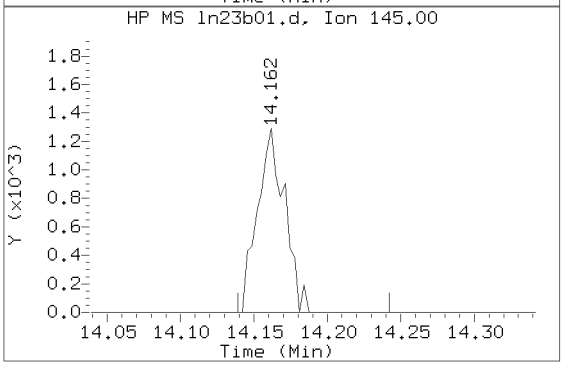
Sample Spectrum (Unaltered)











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Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compound Number : 144
Compound Name : 1,3,5-Trichlorobenzene
Scan Number : 3944
Retention Time (minutes): 14.165
Relative Retention Time :-0.00026
Quant Ion : 180.00
Area (flag) : 5851
On-Column Amount (ng) : 0.5516

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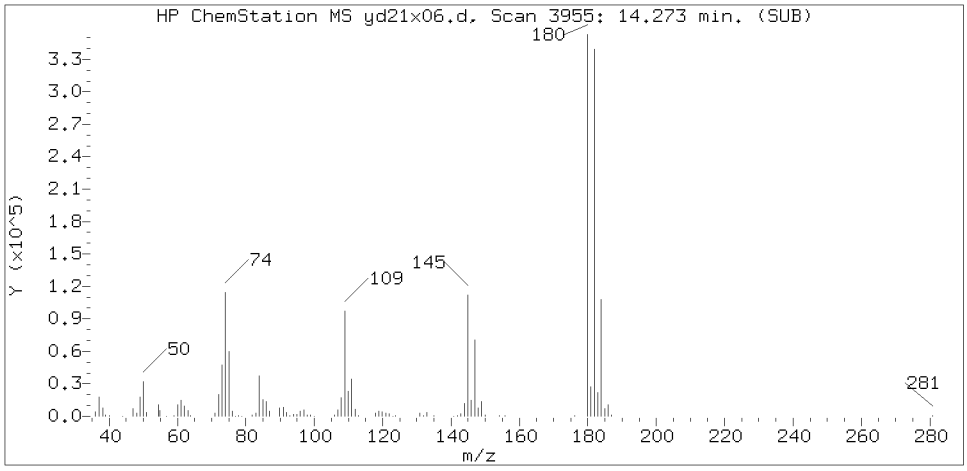
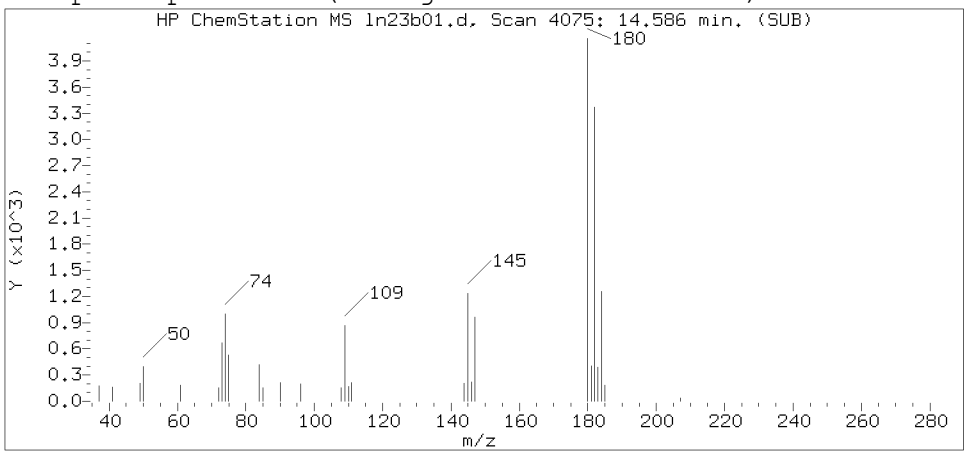
Target 3.5 esignature user ID: lcp00895

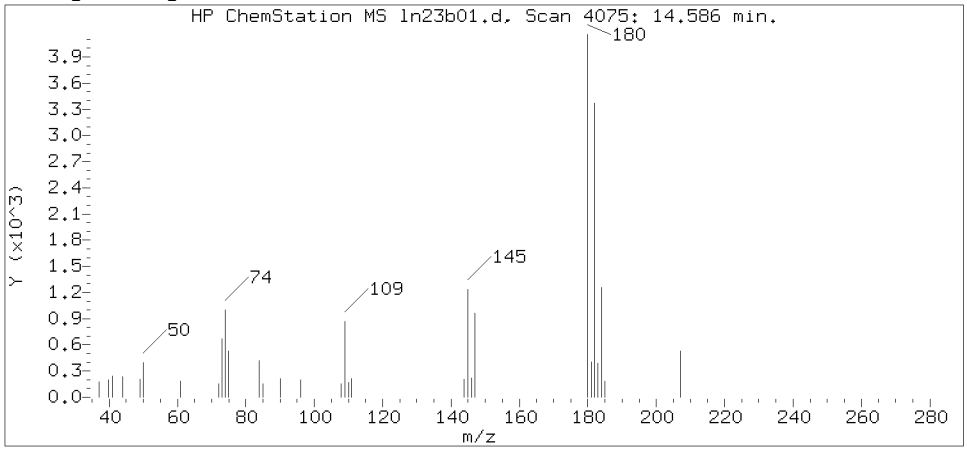
Reference Standard Spectrum for 1,2,4-Trichlorobenzene

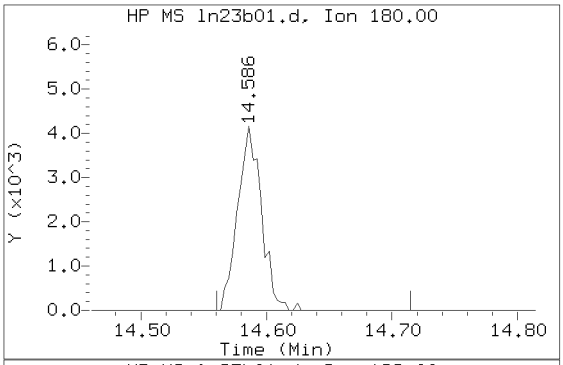


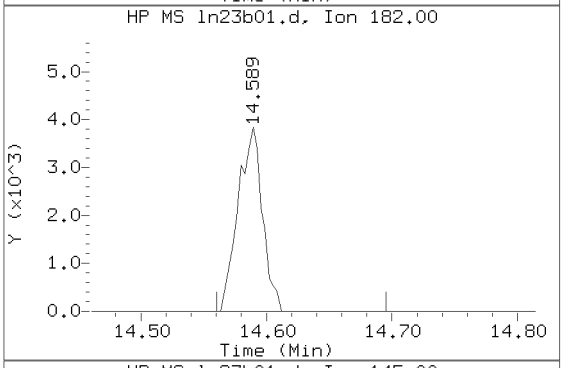
Sample Spectrum (Background Subtracted)

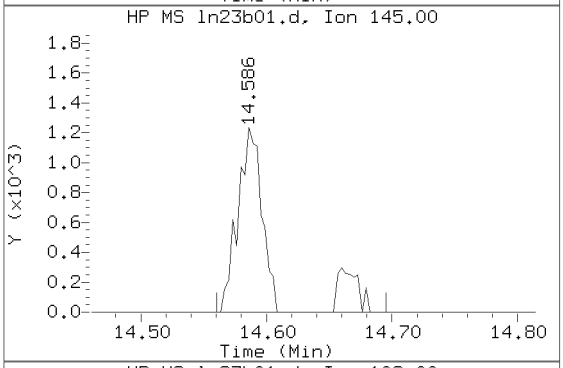


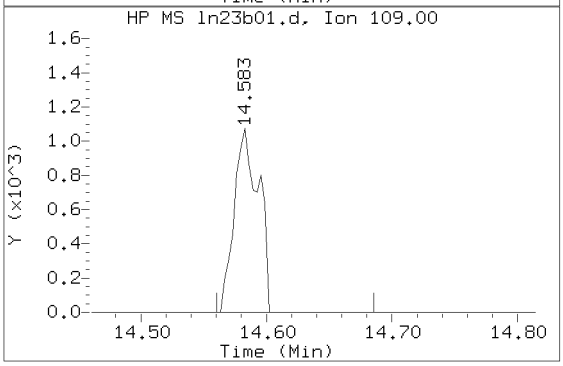
Sample Spectrum (Unaltered)











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Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compound Number : 146
Compound Name : 1,2,4-Trichlorobenzene
Scan Number : 4075
Retention Time (minutes): 14.586
Relative Retention Time :-0.00027
Quant Ion : 180.00
Area (flag) : 5468
On-Column Amount (ng) : 0.5302

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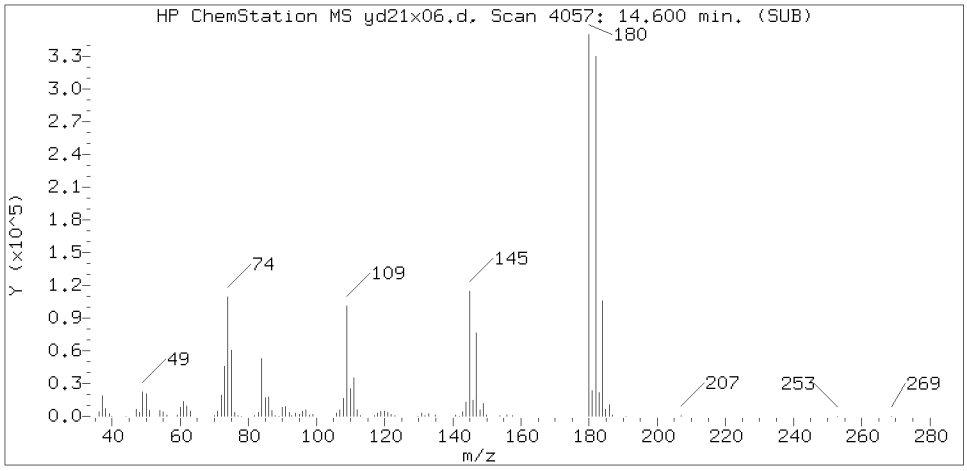
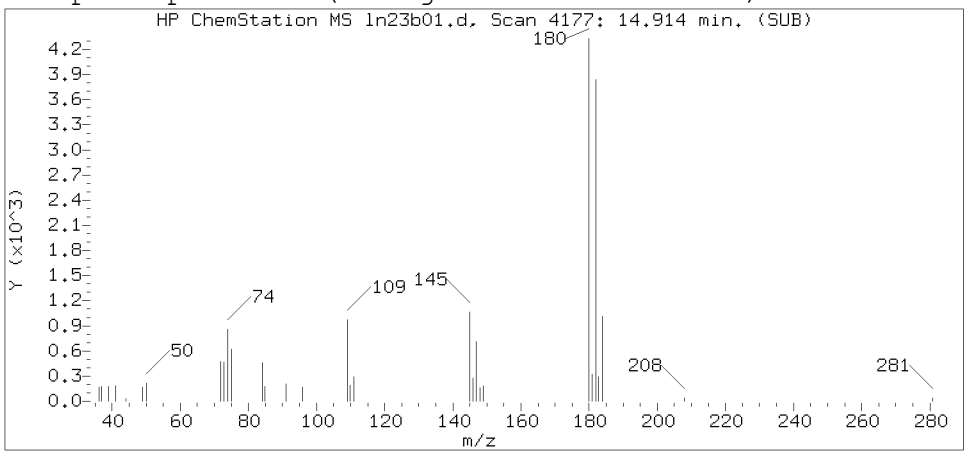
Target 3.5 esignature user ID: lcp00895

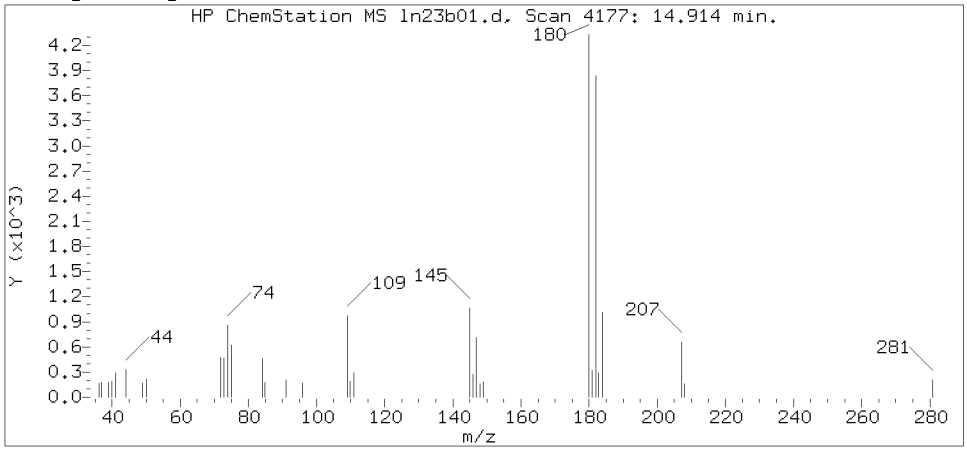
Reference Standard Spectrum for 1,2,3-Trichlorobenzene

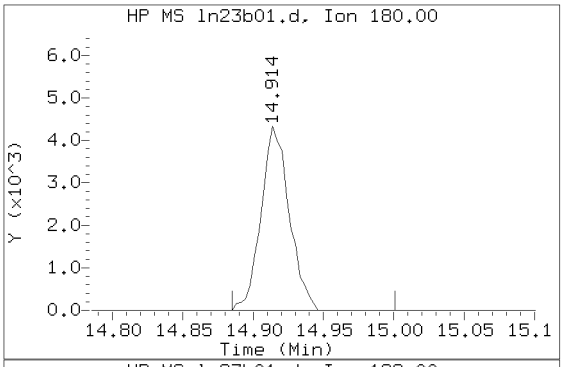


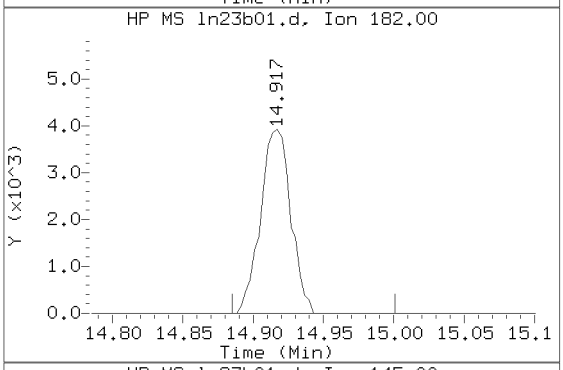
Sample Spectrum (Background Subtracted)

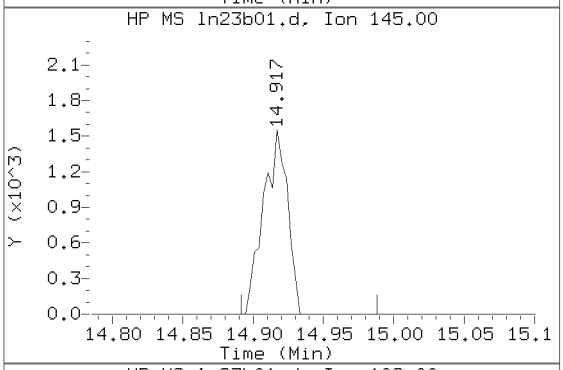


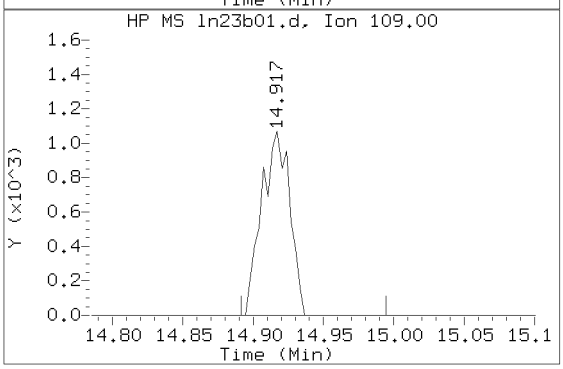
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compound Number : 149
Compound Name : 1,2,3-Trichlorobenzene
Scan Number : 4177
Retention Time (minutes): 14.914
Relative Retention Time :-0.00003
Quant Ion : 180.00
Area (flag) : 5973
On-Column Amount (ng) : 0.5952

Digitally signed by Linda C. Pape on 11/25/2019 at 13:55.
Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL87

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL87

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	17	
74-87-3	Chloromethane	18	
106-99-0	1,3-Butadiene	20	
75-01-4	Vinyl Chloride	18	
74-83-9	Bromomethane	18	
75-00-3	Chloroethane	18	
109-66-0	n-Pentane	15	
75-69-4	Trichlorofluoromethane	20	
60-29-7	Ethyl ether	20	
354-23-4	Freon 123a	20	
107-02-8	Acrolein	150	
75-35-4	1,1-Dichloroethene	20	
67-64-1	Acetone	170	
76-13-1	Freon 113	18	
67-63-0	2-Propanol	150	
74-88-4	Methyl Iodide	18	
75-15-0	Carbon Disulfide	17	
107-05-1	Allyl Chloride	18	
79-20-9	Methyl Acetate	19	
75-09-2	Methylene Chloride	21	
75-65-0	t-Butyl alcohol	200	
107-13-1	Acrylonitrile	94	
156-60-5	trans-1,2-Dichloroethene	20	
1634-04-4	Methyl Tertiary Butyl Ether	17	
110-54-3	n-Hexane	18	
75-34-3	1,1-Dichloroethane	20	
108-20-3	di-Isopropyl ether	18	
126-99-8	2-Chloro-1,3-butadiene	18	
637-92-3	Ethyl t-butyl ether	17	
156-59-2	cis-1,2-Dichloroethene	21	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL87

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL87

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	41	
78-93-3	2-Butanone	140	
594-20-7	2,2-Dichloropropane	19	
107-12-0	Propionitrile	170	
126-98-7	Methacrylonitrile	150	
74-97-5	Bromochloromethane	20	
109-99-9	Tetrahydrofuran	110	
67-66-3	Chloroform	21	
71-55-6	1,1,1-Trichloroethane	20	
110-82-7	Cyclohexane	17	
563-58-6	1,1-Dichloropropene	20	
56-23-5	Carbon Tetrachloride	19	
78-83-1	Isobutyl Alcohol	520	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	21	
994-05-8	t-Amyl methyl ether	18	
142-82-5	n-Heptane	17	
71-36-3	n-Butanol	960	
79-01-6	Trichloroethene	21	
108-87-2	Methylcyclohexane	19	
78-87-5	1,2-Dichloropropane	21	
74-95-3	Dibromomethane	21	
123-91-1	1,4-Dioxane	540	
80-62-6	Methyl Methacrylate	19	
75-27-4	Bromodichloromethane	20	
79-46-9	2-Nitropropane	15	
110-75-8	2-Chloroethyl Vinyl Ether	31	
10061-01-5	cis-1,3-Dichloropropene	20	
108-10-1	4-Methyl-2-pentanone	91	
108-88-3	Toluene	20	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL87

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL87

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	19	
542-75-6	1,3-Dichloropropene (total)	39	
97-63-2	Ethyl Methacrylate	17	
79-00-5	1,1,2-Trichloroethane	21	
127-18-4	Tetrachloroethene	20	
142-28-9	1,3-Dichloropropane	20	
591-78-6	2-Hexanone	87	
124-48-1	Dibromochloromethane	19	
106-93-4	1,2-Dibromoethane	20	
544-10-5	1-Chlorohexane	18	
108-90-7	Chlorobenzene	20	
630-20-6	1,1,1,2-Tetrachloroethane	19	
100-41-4	Ethylbenzene	20	
179601-23-1	m+p-Xylene	41	
95-47-6	o-Xylene	20	
1330-20-7	Xylene (Total)	61	
100-42-5	Styrene	20	
75-25-2	Bromoform	17	
98-82-8	Isopropylbenzene	20	
108-94-1	Cyclohexanone	480	
108-86-1	Bromobenzene	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	
96-18-4	1,2,3-Trichloropropane	20	
110-57-6	trans-1,4-Dichloro-2-butene	86	
103-65-1	n-Propylbenzene	20	
95-49-8	2-Chlorotoluene	20	
106-43-4	4-Chlorotoluene	20	
108-67-8	1,3,5-Trimethylbenzene	20	
98-06-6	tert-Butylbenzene	19	
76-01-7	Pentachloroethane	18	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL87

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL87

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
95-63-6	1,2,4-Trimethylbenzene	20	
135-98-8	sec-Butylbenzene	20	
541-73-1	1,3-Dichlorobenzene	20	
99-87-6	p-Isopropyltoluene	20	
106-46-7	1,4-Dichlorobenzene	20	
526-73-8	1,2,3-Trimethylbenzene	19	
100-44-7	Benzyl Chloride	16	
141-93-5	1,3-Diethylbenzene	18	
105-05-5	1,4-Diethylbenzene	18	B
95-50-1	1,2-Dichlorobenzene	20	
104-51-8	n-Butylbenzene	19	B
135-01-3	1,2-Diethylbenzene	18	
25340-17-4	Diethylbenzene (total)	54	
96-12-8	1,2-Dibromo-3-chloropropane	18	
108-70-3	1,3,5-Trichlorobenzene	18	B
120-82-1	1,2,4-Trichlorobenzene	17	B
87-68-3	Hexachlorobutadiene	15	
91-20-3	Naphthalene	18	
87-61-6	1,2,3-Trichlorobenzene	17	B
91-57-6	2-Methylnaphthalene	14	

Data file: /chem/HP09915.i/19nov23a.b/ln23s01.d Injection date and time: **23-NOV-2019 09:26**
Data file Sample Info. Line: LCSL87;LCSL87;1;3;LCS;;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493	(-0.003)	936	65	219124	(0)	250.00	
66) Fluorobenzene	7.956	(0.000)	2013	96	1149568	(2)	50.00	
100) Chlorobenzene-d5	11.358	(0.000)	3071	117	954034	(1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.219	(0.003)	3650	152	518331	(-1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.065	(0.001)	113	279543	49.739	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	73161	51.077	102%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	1224920	49.069	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	482775	51.074	102%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	2.082	(0.000)	85	136297	17.002	17.00			0.2	1
4) Chloromethane	(2)	2.278	(0.000)	50	138166	17.882	17.88			0.2	1
5) 1,3-Butadiene	(2)	2.406	(0.000)	39	130178	20.291	20.29			1	3
6) Vinyl Chloride	(2)	2.397	(0.000)	62	137718	17.859	17.86			0.2	1
8) Bromomethane	(2)	2.741	(0.000)	94	97922	17.715	17.71			0.3	1
9) Chloroethane	(2)	2.837	(0.000)	64	75570	17.832	17.83			0.2	1
11) n-Pentane	(2)	3.200	(0.000)	43	151384	15.430	15.43			0.4	10
12) Trichlorofluoromethane	(2)	3.149	(0.000)	101	168712	20.322	20.32			0.2	1
14) Ethyl ether	(2)	3.432	(-0.000)	59	105121	19.595	19.59			0.2	5
15) Freon 123a	(2)	3.519	(0.000)	67	132374	19.821	19.82			0.4	5
16) Acrolein	(1)	3.612	(0.001)	56	249441	151.730	151.73			2	100
17) 1,1-Dichloroethene	(2)	3.750	(0.000)	96	98797	20.274	20.27			0.2	1
18) Acetone	(1)	3.798	(-0.000)	58	122187	165.784	165.78			0.7	20
19) Freon 113	(2)	3.795	(0.000)	101	101611	18.276	18.28			0.2	10
21) 2-Propanol	(1)	3.985	(0.000)	45	78385	147.940	147.94			18	100
22) Methyl Iodide	(2)	3.962	(0.000)	142	179282	17.754	17.75			0.2	1
23) Carbon Disulfide	(2)	4.065	(0.000)	76	308657	16.808	16.81			0.2	5
25) Allyl Chloride	(2)	4.265	(0.000)	41	157036	17.964	17.96			0.3	5
27) Methyl Acetate	(2)	4.242	(-0.000)	43	118037	18.807	18.81			0.2	5
28) Methylene Chloride	(2)	4.464	(0.000)	84	120393	20.758	20.76			0.3	1
30) t-Butyl alcohol	(1)	4.622	(0.000)	59	183342	198.737	198.74			12	50
31) Acrylonitrile	(2)	4.831	(0.000)	53	316407	93.704	93.70			0.3	20
32) trans-1,2-Dichloroethene	(2)	4.882	(0.000)	96	113295	20.097	20.10			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	4.872	(0.000)	73	315427	17.046	17.05			0.2	1
34) n-Hexane	(2)	5.306	(-0.000)	57	153781	17.534	17.53			2	5
36) 1,1-Dichloroethane	(2)	5.544	(0.000)	63	195838	19.914	19.91			0.2	1
38) di-Isopropyl ether	(2)	5.599	(0.000)	45	343897	18.131	18.13			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	5.657	(-0.000)	53	159972	18.131	18.13			0.2	5
40) Ethyl t-butyl ether	(2)	6.133	(0.000)	59	320696	17.423	17.42			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.374	(0.000)	96	134446	21.248	21.25			0.2	1
43) 1,2-Dichloroethene (Total)	(2)			96	247741	41.345	41.35			0.4	2

Digitally signed by Corie L. Mellinger on 11/23/2019 at 10:16. Target 3.5 esignature user ID: clm27445

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23s01.d Injection date and time: **23-NOV-2019 09:26**
Data file Sample Info. Line: LCSL87;LCSL87;1;3;LCS;;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	6.358(0.000)	43	596366	137.585	137.59			0.3	10
45) 2,2-Dichloropropane	(2)	6.387(0.000)	77	147462	19.289	19.29			0.3	1
47) Propionitrile	(1)	6.458(-0.000)	54	195546	170.118	170.12			14	100
48) Methacrylonitrile	(2)	6.666(-0.000)	67	536833	147.383	147.38			6	50
49) Bromochloromethane	(2)	6.708(-0.000)	128	65482	19.517	19.52			0.2	5
50) Tetrahydrofuran	(1)	6.718(0.001)	71	116538	112.239	112.24			0.7	10
51) Chloroform	(2)	6.856(0.000)	83	194950	20.726	20.73			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.078(0.000)	97	159852	19.912	19.91			0.3	1
54) Cyclohexane	(2)	7.165(0.000)	56	186666	17.388	17.39			1	5
55) 1,1-Dichloropropene	(2)	7.290(0.000)	75	153454	19.735	19.74			0.2	5
56) Carbon Tetrachloride	(2)	7.277(0.000)	117	131745	19.349	19.35			0.2	1
58) Isobutyl Alcohol	(1)	7.454(0.001)	41	160914	518.323	518.32			36	250
60) Benzene	(2)	7.551(0.000)	78	482008	20.614	20.61			0.2	1
61) 1,2-Dichloroethane	(2)	7.625(0.000)	62	157726	20.971	20.97			0.3	1
65) t-Amyl methyl ether	(2)	7.734(0.000)	73	332235	17.983	17.98			0.8	5
67) n-Heptane	(2)	7.959(0.000)	43	138196	16.867	16.87			2	5
69) n-Butanol	(1)	8.329(0.002)	56	256065	958.318	958.32			61	250
71) Trichloroethene	(2)	8.428(-0.000)	95	121790	20.686	20.69			0.2	1
72) Methylcyclohexane	(2)	8.728(-0.000)	83	204135	18.689	18.69			0.5	5
73) 1,2-Dichloropropane	(2)	8.763(0.000)	63	123397	20.782	20.78			0.2	1
74) Dibromomethane	(2)	8.875(0.000)	93	79710	20.748	20.75			0.2	1
75) 1,4-Dioxane	(1)	8.856(0.000)	88	39582M	538.951	538.95			29	250
76) Methyl Methacrylate	(2)	8.846(-0.000)	69	111030	19.337	19.34			0.2	5
78) Bromodichloromethane	(2)	9.110(-0.000)	83	140364	20.361	20.36			0.2	1
79) 2-Nitropropane	(2)	9.390(-0.000)	41	31840	15.248	15.25			0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)	9.461(-0.000)	63	78938	30.955	30.95			0.2	10
81) cis-1,3-Dichloropropene	(2)	9.634(-0.000)	75	185790	20.291	20.29			0.2	1
82) 4-Methyl-2-pentanone	(2)	9.805(-0.000)	43	832198	90.959	90.96			0.5	10
88) Toluene	(3)	10.007(0.000)	92	313711	20.045	20.05			0.2	1
89) trans-1,3-Dichloropropene	(3)	10.258(-0.000)	75	165350	18.612	18.61			0.2	1
90) 1,3-Dichloropropene (total)	(3)		100	351140	38.903	38.90			0.4	2
91) Ethyl Methacrylate	(3)	10.310(-0.000)	69	185379	17.170	17.17			0.2	5
92) 1,1,2-Trichloroethane	(3)	10.457(-0.000)	97	123325	20.784	20.78			0.2	1
93) Tetrachloroethene	(3)	10.538(-0.000)	166	129265	19.503	19.50			0.2	1
94) 1,3-Dichloropropane	(3)	10.618(-0.000)	76	201364	19.876	19.88			0.2	1
96) 2-Hexanone	(3)	10.666(-0.000)	43	627871	87.122	87.12			0.3	10
97) Dibromochloromethane	(3)	10.824(0.000)	129	115965	19.079	19.08			0.2	1
99) 1,2-Dibromoethane	(3)	10.933(0.000)	107	129008	20.022	20.02			0.2	1
101) 1-Chlorohexane	(3)	11.361(0.000)	91	154355	18.359	18.36			0.3	5
102) Chlorobenzene	(3)	11.383(0.000)	112	359998	20.341	20.34			0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)	11.464(-0.000)	131	112152	19.233	19.23			0.2	1
104) Ethylbenzene	(3)	11.467(-0.000)	91	597136	19.963	19.96			0.4	1
106) m+p-Xylene	(3)	11.580(-0.000)	106	479979	40.789	40.79			1	5
107) o-Xylene	(3)	11.908(-0.000)	106	229466	19.742	19.74			0.4	1
108) Xylene (Total)	(3)		106	709445	60.531	60.53			1	6
109) Styrene	(3)	11.920(-0.000)	104	386872	20.142	20.14			0.2	5
110) Bromoform	(3)	12.078(0.000)	173	75317	16.583	16.58			1	4
111) Isopropylbenzene	(3)	12.203(-0.000)	105	586751	20.127	20.13			0.2	5
112) Cyclohexanone	(1)	12.287(0.001)	55	136932	476.060	476.06			25	100
115) Bromobenzene	(4)	12.464(-0.000)	156	152936	19.632	19.63			0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	12.448(-0.000)	83	197038	20.124	20.12			0.2	1
117) 1,2,3-Trichloropropane	(4)	12.496(-0.000)	110	59005	19.638	19.64			0.2	5
118) trans-1,4-Dichloro-2-butene	(4)	12.473(-0.000)	53	259700	85.988	85.99			6	50
119) n-Propylbenzene	(4)	12.528(-0.000)	91	696154	20.454	20.45			0.2	5

M = Compound was manually integrated.

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23s01.d Injection date and time: **23-NOV-2019 09:26**
Data file Sample Info. Line: LCSL87;LCSL87;1;3;LCS;;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)	12.605(0.000)	126	141098	19.514	19.51			0.2	5
121) 4-Chlorotoluene	(4)	12.698(-0.000)	126	147115	19.547	19.55			0.2	5
122) 1,3,5-Trimethylbenzene	(4)	12.660(0.000)	105	498236	20.144	20.14			0.3	5
124) tert-Butylbenzene	(4)	12.904(-0.000)	134	97397	19.040	19.04			0.3	5
125) Pentachloroethane	(4)	12.936(-0.000)	167	80055	18.175	18.18			0.2	5
126) 1,2,4-Trimethylbenzene	(4)	12.946(-0.000)	105	516617	19.818	19.82			1	5
127) sec-Butylbenzene	(4)	13.065(0.000)	105	596790	19.552	19.55			0.2	5
129) 1,3-Dichlorobenzene	(4)	13.168(-0.000)	146	284643	19.884	19.88			0.2	5
130) p-Isopropyltoluene	(4)	13.171(-0.000)	119	516072	19.543	19.54			0.2	5
133) 1,4-Dichlorobenzene	(4)	13.239(-0.000)	146	297218	20.028	20.03			0.2	5
134) 1,2,3-Trimethylbenzene	(4)	13.248(-0.000)	105	535390	19.388	19.39			0.3	5
135) Benzyl Chloride	(4)	13.319(-0.000)	91	324287	15.511	15.51			1	5
136) 1,3-Diethylbenzene	(4)	13.370(-0.000)	119	312049	18.158	18.16			0.2	5
137) 1,4-Diethylbenzene	(4)	13.441(-0.000)	119	327147	17.967	17.97	0.216	B	0.2	5
138) 1,2-Dichlorobenzene	(4)	13.499(-0.000)	146	283246	20.052	20.05			0.2	5
139) n-Butylbenzene	(4)	13.464(-0.000)	92	251889	18.656	18.66	0.344	B	0.2	5
140) 1,2-Diethylbenzene	(4)	13.515(-0.000)	119	265561	18.330	18.33			0.2	5
141) Diethylbenzene (total)	(4)		100	904757	54.455	54.46			0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)	14.039(-0.000)	75	39020	18.205	18.20			0.3	5
144) 1,3,5-Trichlorobenzene	(4)	14.161(-0.000)	180	191170	17.615	17.61	0.552	B	0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.586(-0.000)	180	179583	17.018	17.02	0.530	B	0.3	5
147) Hexachlorobutadiene	(4)	14.666(-0.000)	225	75520	15.157	15.16			2	5
148) Naphthalene	(4)	14.772(-0.000)	128	623142	18.368	18.37			1	5
149) 1,2,3-Trichlorobenzene	(4)	14.914(-0.000)	180	174866	17.030	17.03	0.595	B	0.4	5
150) 2-Methylnaphthalene	(4)	15.563(-0.000)	142	295754	14.157	14.16			2	4

B = Compound detected in referenced method blank.

Total number of targets = 110

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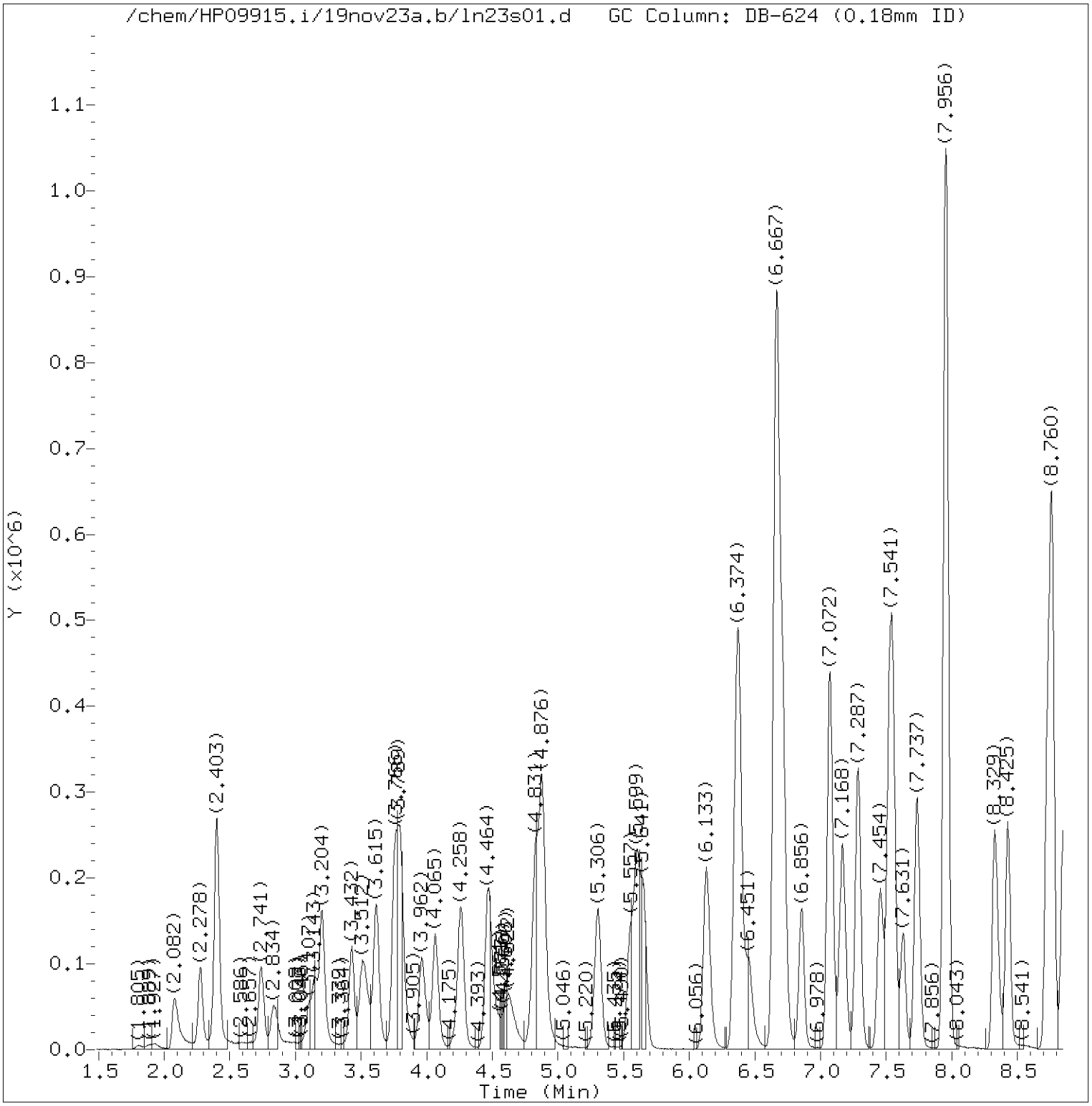
Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:45. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

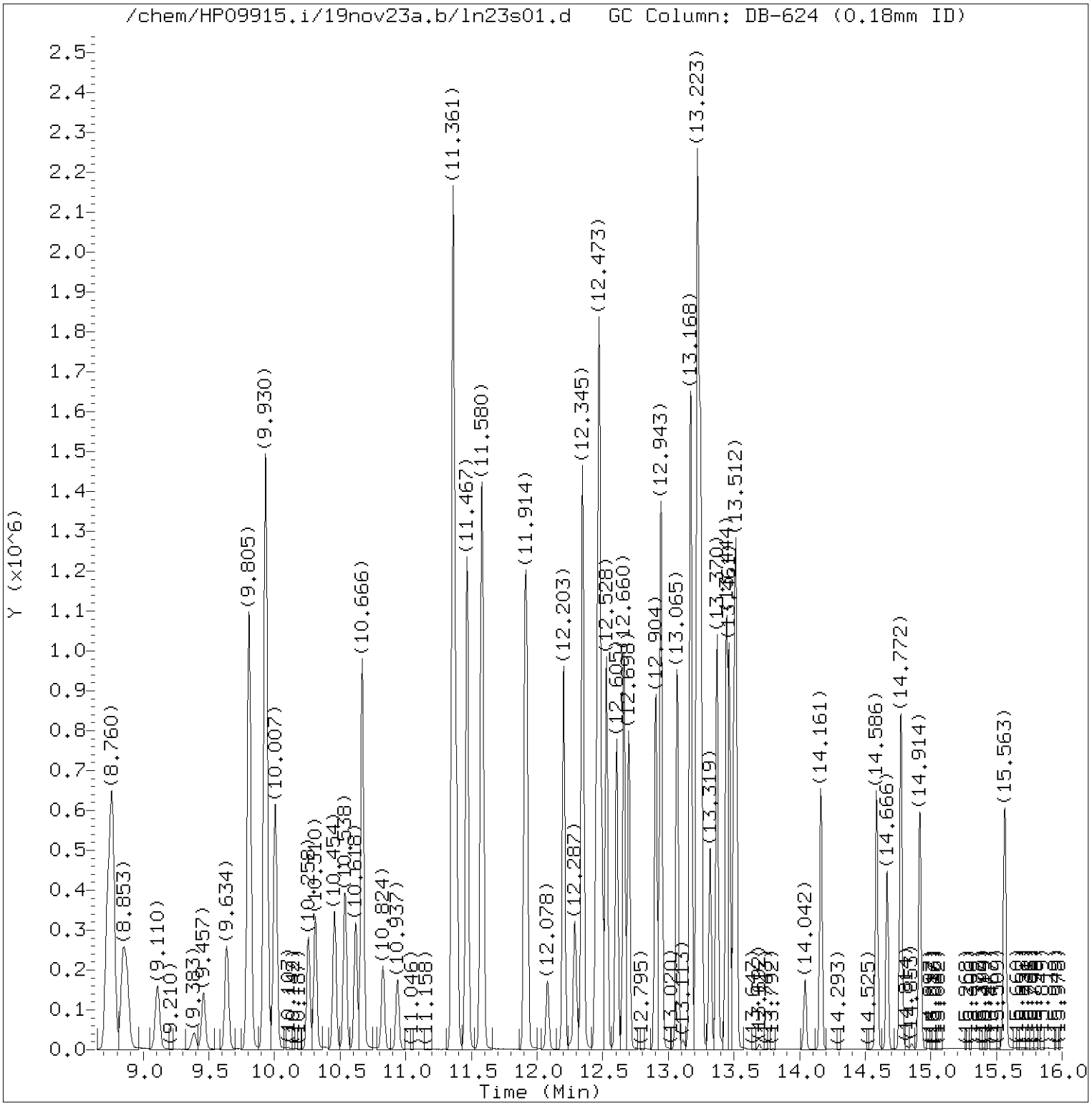
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.082	85	136297	17.002
4) Chloromethane	(2)	2.278	50	138166	17.882
6) Vinyl Chloride	(2)	2.397	62	137718	17.859
5) 1,3-Butadiene	(2)	2.406	39	130178	20.291
8) Bromomethane	(2)	2.741	94	97922	17.715
9) Chloroethane	(2)	2.837	64	75570	17.832
12) Trichlorofluoromethane	(2)	3.149	101	168712	20.322
11) n-Pentane	(2)	3.200	43	151384	15.430
14) Ethyl ether	(2)	3.432	59	105121	19.595
15) Freon 123a	(2)	3.519	67	132374	19.821
16) Acrolein	(1)	3.612	56	249441	151.730
17) 1,1-Dichloroethene	(2)	3.750	96	98797	20.274
19) Freon 113	(2)	3.795	101	101611	18.276
18) Acetone	(1)	3.799	58	122187	165.784
22) Methyl Iodide	(2)	3.962	142	179282	17.754
21) 2-Propanol	(1)	3.985	45	78385	147.940
23) Carbon Disulfide	(2)	4.065	76	308657	16.808
27) Methyl Acetate	(2)	4.242	43	118037	18.807
25) Allyl Chloride	(2)	4.265	41	157036	17.964
28) Methylene Chloride	(2)	4.464	84	120393	20.758
29)*t-Butyl alcohol-d10	(1)	4.493	65	219124	250.000
30) t-Butyl alcohol	(1)	4.622	59	183342	198.737
31) Acrylonitrile	(2)	4.831	53	316407	93.704
33) Methyl Tertiary Butyl Ether	(2)	4.872	73	315427	17.046
32) trans-1,2-Dichloroethene	(2)	4.882	96	113295	20.097
34) n-Hexane	(2)	5.306	57	153781	17.534
36) 1,1-Dichloroethane	(2)	5.544	63	195838	19.914
38) di-Isopropyl ether	(2)	5.599	45	343897	18.131
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	159972	18.131
40) Ethyl t-butyl ether	(2)	6.133	59	320696	17.423
43) 1,2-Dichloroethene (Total)	(2)		96	247741	41.345
44) 2-Butanone	(2)	6.358	43	596366	137.585
42) cis-1,2-Dichloroethene	(2)	6.374	96	134446	21.248
45) 2,2-Dichloropropane	(2)	6.387	77	147462	19.289
47) Propionitrile	(1)	6.458	54	195546	170.118
48) Methacrylonitrile	(2)	6.667	67	536833	147.383
49) Bromochloromethane	(2)	6.708	128	65482	19.517
50) Tetrahydrofuran	(1)	6.718	71	116538	112.239

* = Compound is an internal standard.

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on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	6.856	83	194950	20.726
52)$Dibromofluoromethane	(2)	7.065	113	279543	49.739
53) 1,1,1-Trichloroethane	(2)	7.078	97	159852	19.912
54) Cyclohexane	(2)	7.165	56	186666	17.388
56) Carbon Tetrachloride	(2)	7.277	117	131745	19.349
55) 1,1-Dichloropropene	(2)	7.290	75	153454	19.735
58) Isobutyl Alcohol	(1)	7.454	41	160914	518.323
57)$1,2-Dichloroethane-d4	(2)	7.525	102	73161	51.077
60) Benzene	(2)	7.551	78	482008	20.614
61) 1,2-Dichloroethane	(2)	7.625	62	157726	20.971
65) t-Amyl methyl ether	(2)	7.734	73	332235	17.983
66)*Fluorobenzene	(2)	7.956	96	1149568	50.000
67) n-Heptane	(2)	7.959	43	138196	16.867
69) n-Butanol	(1)	8.329	56	256065	958.318
71) Trichloroethene	(2)	8.429	95	121790	20.686
72) Methylcyclohexane	(2)	8.728	83	204135	18.689
73) 1,2-Dichloropropane	(2)	8.763	63	123397	20.782
76) Methyl Methacrylate	(2)	8.847	69	111030	19.337
75) 1,4-Dioxane	(1)	8.856	88	39582M	538.951
74) Dibromomethane	(2)	8.875	93	79710	20.748
78) Bromodichloromethane	(2)	9.110	83	140364	20.361
79) 2-Nitropropane	(2)	9.390	41	31840	15.248
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	78938	30.955
81) cis-1,3-Dichloropropene	(2)	9.634	75	185790	20.291
82) 4-Methyl-2-pentanone	(2)	9.805	43	832198	90.959
83)$Toluene-d8	(3)	9.930	98	1224920	49.069
88) Toluene	(3)	10.007	92	313711	20.045
90) 1,3-Dichloropropene (total)	(3)		100	351140	38.903
89) trans-1,3-Dichloropropene	(3)	10.258	75	165350	18.612
91) Ethyl Methacrylate	(3)	10.310	69	185379	17.170
92) 1,1,2-Trichloroethane	(3)	10.457	97	123325	20.784
93) Tetrachloroethene	(3)	10.538	166	129265	19.503
94) 1,3-Dichloropropane	(3)	10.618	76	201364	19.876
96) 2-Hexanone	(3)	10.666	43	627871	87.122
97) Dibromochloromethane	(3)	10.824	129	115965	19.079
99) 1,2-Dibromoethane	(3)	10.933	107	129008	20.022
100)*Chlorobenzene-d5	(3)	11.358	117	954034	50.000
101) 1-Chlorohexane	(3)	11.361	91	154355	18.359

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
102) Chlorobenzene	(3)	11.383	112	359998	20.341
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	112152	19.233
104) Ethylbenzene	(3)	11.467	91	597136	19.963
106) m+p-Xylene	(3)	11.580	106	479979	40.789
108) Xylene (Total)	(3)		106	709445	60.531
107) o-Xylene	(3)	11.908	106	229466	19.742
109) Styrene	(3)	11.920	104	386872	20.142
110) Bromoform	(3)	12.078	173	75317	16.583
111) Isopropylbenzene	(3)	12.203	105	586751	20.127
112) Cyclohexanone	(1)	12.287	55	136932	476.060
114)$4-Bromofluorobenzene	(3)	12.345	95	482775	51.074
116) 1,1,2,2-Tetrachloroethane	(4)	12.448	83	197038	20.124
115) Bromobenzene	(4)	12.464	156	152936	19.632
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	259700	85.988
117) 1,2,3-Trichloropropane	(4)	12.496	110	59005	19.638
119) n-Propylbenzene	(4)	12.528	91	696154	20.454
120) 2-Chlorotoluene	(4)	12.605	126	141098	19.514
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	498236	20.144
121) 4-Chlorotoluene	(4)	12.698	126	147115	19.547
124) tert-Butylbenzene	(4)	12.904	134	97397	19.040
125) Pentachloroethane	(4)	12.936	167	80055	18.175
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	516617	19.818
127) sec-Butylbenzene	(4)	13.065	105	596790	19.552
129) 1,3-Dichlorobenzene	(4)	13.168	146	284643	19.884
130) p-Isopropyltoluene	(4)	13.171	119	516072	19.543
131)*1,4-Dichlorobenzene-d4	(4)	13.219	152	518331	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	297218	20.028
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	535390	19.388
135) Benzyl Chloride	(4)	13.319	91	324287	15.511
136) 1,3-Diethylbenzene	(4)	13.370	119	312049	18.158
141) Diethylbenzene (total)	(4)		100	904757	54.455
137) 1,4-Diethylbenzene	(4)	13.441	119	327147	17.967
139) n-Butylbenzene	(4)	13.464	92	251889	18.656
138) 1,2-Dichlorobenzene	(4)	13.499	146	283246	20.052
140) 1,2-Diethylbenzene	(4)	13.515	119	265561	18.330
142) 1,2-Dibromo-3-chloropropane	(4)	14.039	75	39020	18.205
144) 1,3,5-Trichlorobenzene	(4)	14.161	180	191170	17.615
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	179583	17.018

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

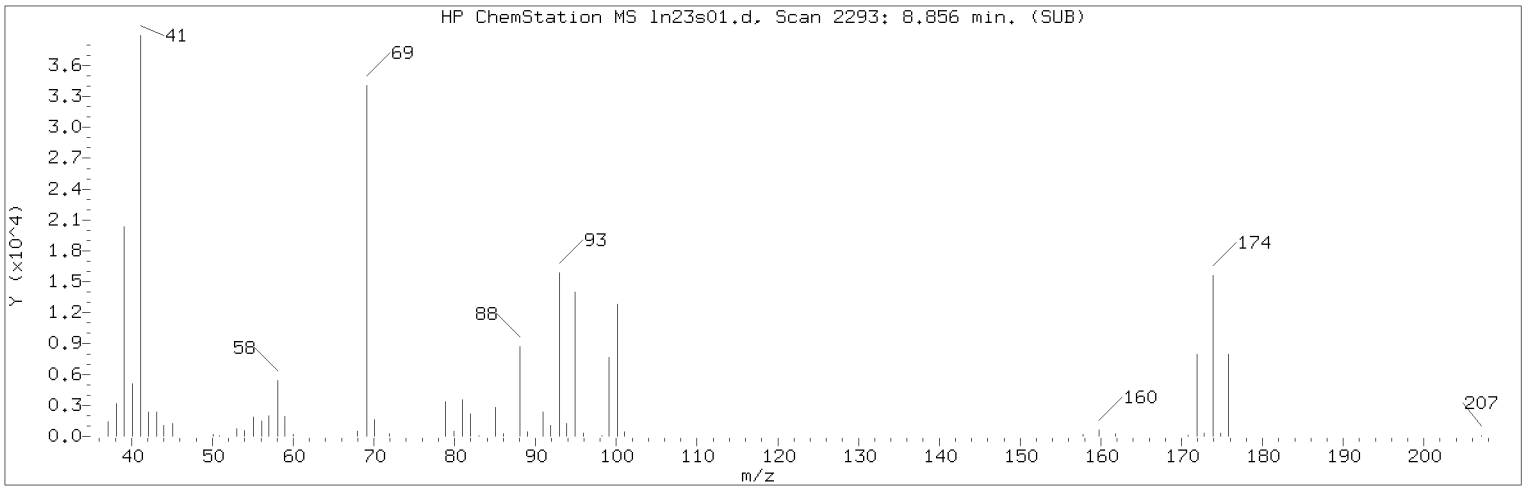
Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

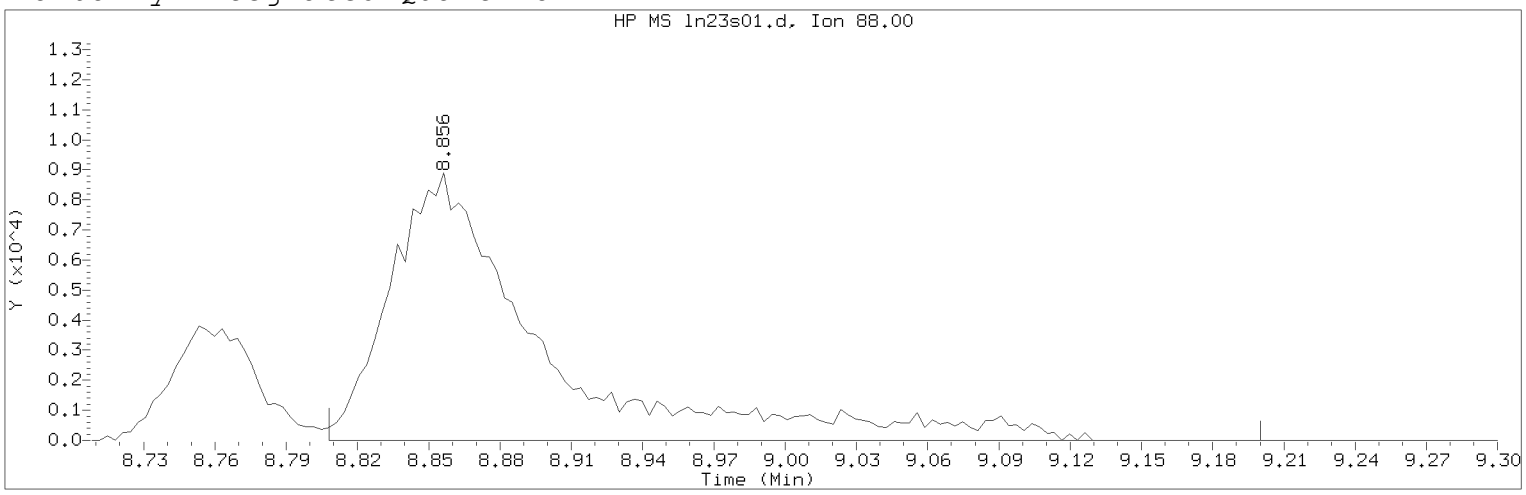
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Hexachlorobutadiene	(4)	14.666	225	75520	15.157
148) Naphthalene	(4)	14.772	128	623142	18.368
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	174866	17.030
150) 2-Methylnaphthalene	(4)	15.563	142	295754	14.157

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

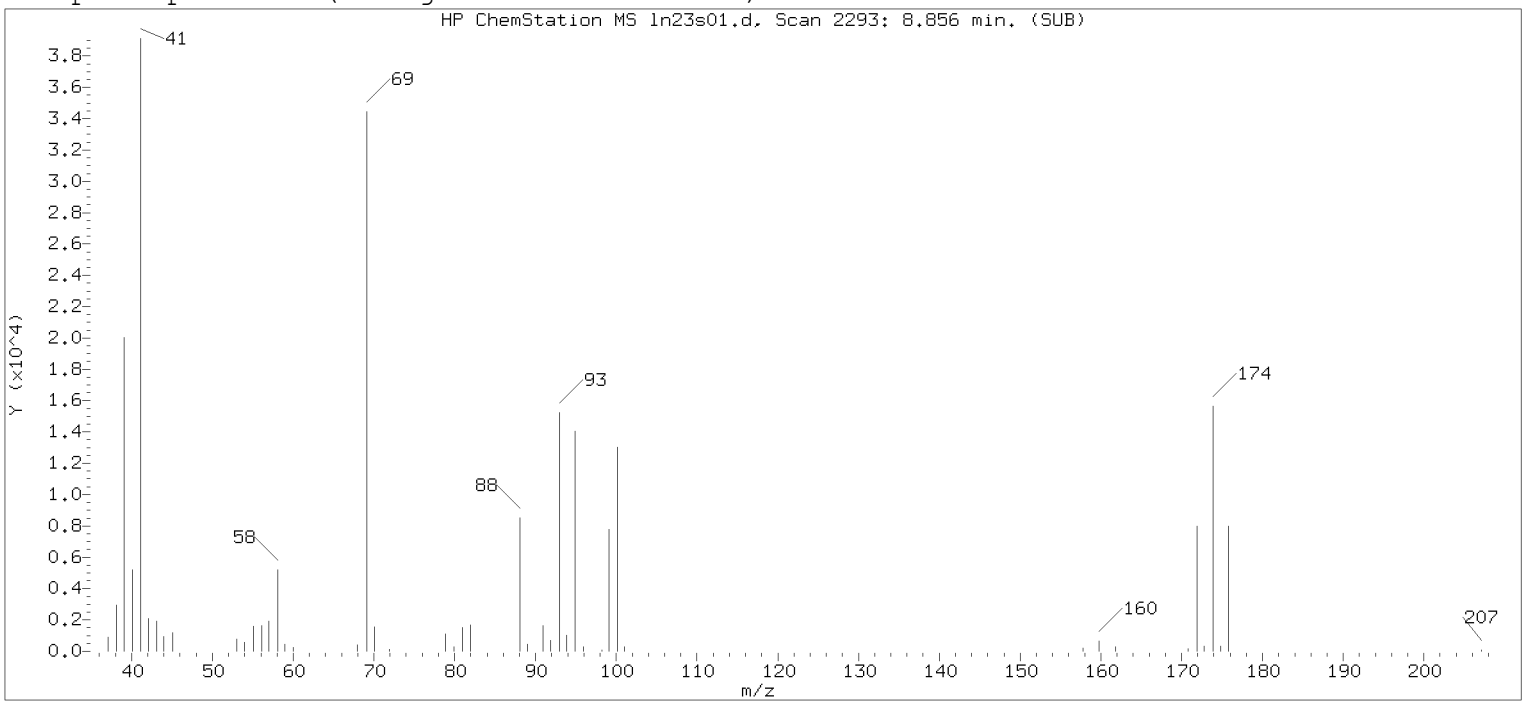
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 39582M
On-Column Amount (ng) : 538.9512
Integration start scan : 2277 Integration stop scan: 2399
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

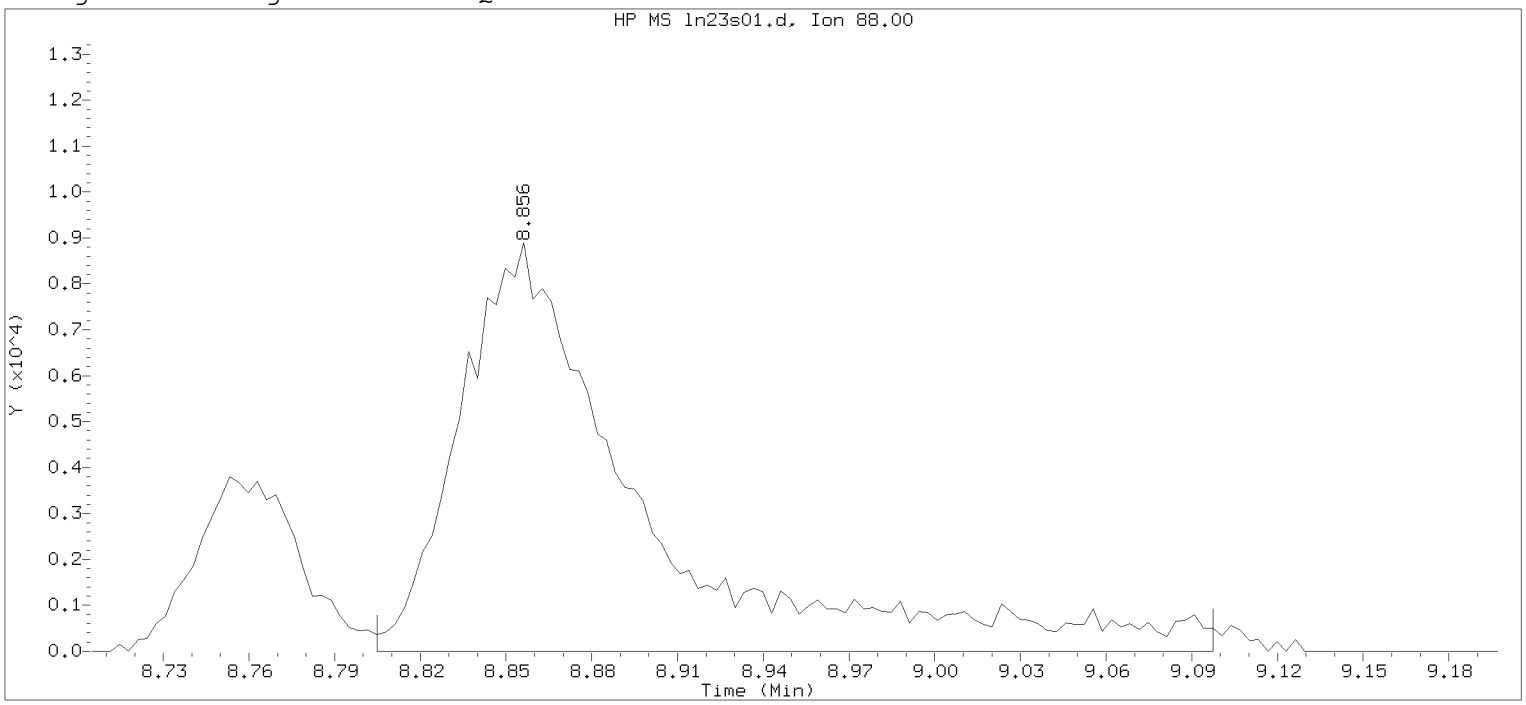
Analyst responsible for change: Digitally signed by Corie L. Mellinger
on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:45.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:43 Automation

Sample Name: LCSL87 Lab Sample ID: LCSL87

Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2293		
Retention Time (minutes)	: 8.856		
Quant Ion	: 88.00		
Area	: 39126		
On-column Amount (ng)	: 532.7524		
Integration start scan	: 2276	Integration stop scan:	2367
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Corie L. Mellinger on 11/23/2019 at 10:16.
Target 3.5 esignature user: CLM27445

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NYSDEC ASP Category B Data Package

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Project: AD-New Windsor, NY
Groundwater and Water Samples
Collected on 11/17/19-11/19/19

SDG# JCW26

GROUP	SAMPLE NUMBERS
2075623	1206729-1206746

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-18-27
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman **Date:** **12/18/2019**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Katherine Klinefelter at (717) 556-7256.

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Sample Reference List for SDG Number JCW26
with a Data Package Type of NYSDEC B

06556 - The Johnson Company, Inc.
Project: AD-New Windsor, NY

Lab Sample Number	Client Sample ID	Collection Date	Date Received	Lab Sample Code
1206729	MW-1S	11/18/2019 09:08	11/20/2019 10:50	WIN01
1206730	Dup-03	11/18/2019 10:00	11/20/2019 10:50	WIN02
1206731	MW-1D	11/18/2019 10:22	11/20/2019 10:50	WIN03
1206732	J23-UC02	11/18/2019 11:42	11/20/2019 10:50	WIN04
1206733	J23-UC01	11/18/2019 12:27	11/20/2019 10:50	WIN05
1206734	J17-BR01	11/18/2019 15:13	11/20/2019 10:50	WIN06
1206735	J06-UC02	11/19/2019 08:30	11/20/2019 10:50	WIN07
1206736	J07-UC02	11/19/2019 09:38	11/20/2019 10:50	WIN08
1206737	RIZ-19	11/19/2019 10:24	11/20/2019 10:50	WIN09
1206738	J11-UC02	11/17/2019 09:07	11/20/2019 10:50	WIN10
1206739	J11-BR02	11/17/2019 10:10	11/20/2019 10:50	WIN11
1206740	J11-UC01	11/17/2019 11:07	11/20/2019 10:50	WIN12
1206741	J11-BR01	11/17/2019 12:06	11/20/2019 10:50	WIN13
1206742	Dup-02	11/17/2019 12:30	11/20/2019 10:50	WIN14
1206743	MW-2	11/17/2019 13:32	11/20/2019 10:50	WIN15
1206744	MW-2I	11/17/2019 15:30	11/20/2019 10:50	WIN16
1206745	EB-AWR-111919	11/19/2019 11:00	11/20/2019 10:50	WIN17
1206746	TB-AWR-111719	11/17/2019 00:00	11/20/2019 10:50	WIN18

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Sample pH Log

SDG: JCW26

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
1206729	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/27/2019 3:06:55PM	1693
1206730	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/27/2019 3:06:52PM	1693
1206731	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/27/2019 3:06:52PM	1693
1206732	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/27/2019 3:06:52PM	1693
1206732	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/30/2019 1:38:35PM	895
1206733	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/27/2019 3:06:52PM	1693
1206733	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/30/2019 1:38:35PM	895
1206734	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/30/2019 1:38:35PM	895
1206735	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/27/2019 3:06:52PM	1693
1206736	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/27/2019 3:06:52PM	1693
1206737	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/27/2019 3:06:52PM	1693
1206738	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/25/2019 1:54:45PM	895
1206739	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/25/2019 1:54:45PM	895
1206740	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/25/2019 1:54:45PM	895
1206741	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/27/2019 3:06:52PM	1693
1206742	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/27/2019 3:06:52PM	1693
1206742	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/30/2019 1:38:35PM	895
1206743	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/27/2019 3:06:52PM	1693
1206743	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/30/2019 1:38:36PM	895
1206744	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/27/2019 3:06:52PM	1693
1206745	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/27/2019 3:06:52PM	1693
1206746	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/27/2019 3:06:52PM	1693

pH Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

Chlorine Present Code Key
NA = Chlorine Not Checked
Y = Chlorine Present
N = Chlorine Not Present

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11997 VOCs- 5ml Water by 8260C/D

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Report Date: December 03, 2019 13:42

Project: AD-New Windsor, NY

Account #: 06556
Group Number: 2075623
SDG: JCW26
PO Number: 1-0145-05
Release Number: 58300.00
State of Sample Origin: NY

Electronic Copy To	The Johnson Company, Inc.	Attn: Tristan Hardy
Electronic Copy To	The Johnson Company, Inc.	Attn: George Lester
Electronic Copy To	The Johnson Company, Inc.	Attn: Nicole Saitta
Electronic Copy To	VHB	Attn: Quinn Ledak

Respectfully Submitted,

Katherine A. Klinefelter

Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
MW-1S Grab Groundwater	11/18/2019 09:08	1206729
Dup-03 Grab Groundwater	11/18/2019 10:00	1206730
MW-1D Grab Groundwater	11/18/2019 10:22	1206731
J23-UC02 Grab Groundwater	11/18/2019 11:42	1206732
J23-UC01 Grab Groundwater	11/18/2019 12:27	1206733
J17-BR01 Grab Groundwater	11/18/2019 15:13	1206734
J06-UC02 Grab Groundwater	11/19/2019 08:30	1206735
J07-UC02 Grab Groundwater	11/19/2019 09:38	1206736
RIZ-19 Grab Groundwater	11/19/2019 10:24	1206737
J11-UC02 Grab Groundwater	11/17/2019 09:07	1206738
J11-BR02 Grab Groundwater	11/17/2019 10:10	1206739
J11-UC01 Grab Groundwater	11/17/2019 11:07	1206740
J11-BR01 Grab Groundwater	11/17/2019 12:06	1206741
Dup-02 Grab Groundwater	11/17/2019 12:30	1206742
MW-2 Grab Groundwater	11/17/2019 13:32	1206743
MW-2I Grab Groundwater	11/17/2019 15:30	1206744
EB-AWR-111919 Grab Water	11/19/2019 11:00	1206745
TB-AWR-111719 Water	11/17/2019	1206746

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **MW-1S Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/20/2019 10:50
Collection Date/Time: 11/18/2019 09:08
SDG#: JCW26-01

The Johnson Company, Inc.
ELLE Sample #: GW 1206729
ELLE Group #: 2075623
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.4 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	0.4 J	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	1	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	1	0.3	1	1
11997	Trichloroethene	79-01-6	6	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E193301AA	11/26/2019 13:24	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E193301AA	11/26/2019 13:23	Jason M Long	1

*=This limit was used in the evaluation of the final result

Sample Description: **Dup-03 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/20/2019 10:50
Collection Date/Time: 11/18/2019 10:00
SDG#: JCW26-02FD

The Johnson Company, Inc.
ELLE Sample #: GW 1206730
ELLE Group #: 2075623
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.4 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	0.4 J	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	1	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	1	0.3	1	1
11997	Trichloroethene	79-01-6	6	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E193301AA	11/26/2019 13:44	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E193301AA	11/26/2019 13:43	Jason M Long	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-1D Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/20/2019 10:50
Collection Date/Time: 11/18/2019 10:22
SDG#: JCW26-03

The Johnson Company, Inc.
ELLE Sample #: GW 1206731
ELLE Group #: 2075623
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	1	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	1	0.3	1	1
11997	Trichloroethene	79-01-6	1	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E193301AA	11/26/2019 14:04	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E193301AA	11/26/2019 14:03	Jason M Long	1

*=This limit was used in the evaluation of the final result

Sample Description: **J23-UC02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/20/2019 10:50
Collection Date/Time: 11/18/2019 11:42
SDG#: JCW26-04

The Johnson Company, Inc.
ELLE Sample #: GW 1206732
ELLE Group #: 2075623
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.9 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	19	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	1	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	0.9 J	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	4	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	230	0.3	1	1
11997	Trichloroethene	79-01-6	460	2	10	10
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E193301AA	11/26/2019 14:24	Jason M Long	1
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193312AA	11/28/2019 00:44	Don V Viray	10
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E193301AA	11/26/2019 14:23	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	Y193312AA	11/28/2019 00:43	Don V Viray	10

*=This limit was used in the evaluation of the final result

Sample Description: **J23-UC01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/20/2019 10:50
Collection Date/Time: 11/18/2019 12:27
SDG#: JCW26-05

The Johnson Company, Inc.
ELLE Sample #: GW 1206733
ELLE Group #: 2075623
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	9	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	0.7 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	0.4 J	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	4	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	130	0.3	1	1
11997	Trichloroethene	79-01-6	530	2	10	10
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E193301AA	11/26/2019 14:44	Jason M Long	1
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193312AA	11/28/2019 01:06	Don V Viray	10
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E193301AA	11/26/2019 14:43	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	Y193312AA	11/28/2019 01:05	Don V Viray	10

*=This limit was used in the evaluation of the final result

Sample Description: **J17-BR01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/20/2019 10:50
Collection Date/Time: 11/18/2019 15:13
SDG#: JCW26-06

The Johnson Company, Inc.
ELLE Sample #: GW 1206734
ELLE Group #: 2075623
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193312AA	11/27/2019 22:32	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193312AA	11/27/2019 22:31	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **J06-UC02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/20/2019 10:50
Collection Date/Time: 11/19/2019 08:30
SDG#: JCW26-07

The Johnson Company, Inc.
ELLE Sample #: GW 1206735
ELLE Group #: 2075623
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E193301AA	11/26/2019 15:25	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E193301AA	11/26/2019 15:24	Jason M Long	1

*=This limit was used in the evaluation of the final result

Sample Description: **J07-UC02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/20/2019 10:50
Collection Date/Time: 11/19/2019 09:38
SDG#: JCW26-08

The Johnson Company, Inc.
ELLE Sample #: GW 1206736
ELLE Group #: 2075623
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	2	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E193301AA	11/26/2019 15:45	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E193301AA	11/26/2019 15:44	Jason M Long	1

*=This limit was used in the evaluation of the final result

Sample Description: **RIZ-19 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/20/2019 10:50
Collection Date/Time: 11/19/2019 10:24
SDG#: JCW26-09

The Johnson Company, Inc.
ELLE Sample #: GW 1206737
ELLE Group #: 2075623
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	0.4 J	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	1	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E193301AA	11/26/2019 16:05	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E193301AA	11/26/2019 16:04	Jason M Long	1

*=This limit was used in the evaluation of the final result

Sample Description: **J11-UC02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/20/2019 10:50
Collection Date/Time: 11/17/2019 09:07
SDG#: JCW26-10

The Johnson Company, Inc.
ELLE Sample #: GW 1206738
ELLE Group #: 2075623
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193271AA	11/23/2019 16:59	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193271AA	11/23/2019 16:58	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

Sample Description: **J11-BR02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/20/2019 10:50
Collection Date/Time: 11/17/2019 10:10
SDG#: JCW26-11

The Johnson Company, Inc.
ELLE Sample #: GW 1206739
ELLE Group #: 2075623
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193271AA	11/23/2019 17:21	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193271AA	11/23/2019 17:20	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

Sample Description: **J11-UC01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/20/2019 10:50
Collection Date/Time: 11/17/2019 11:07
SDG#: JCW26-12

The Johnson Company, Inc.
ELLE Sample #: GW 1206740
ELLE Group #: 2075623
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193271AA	11/23/2019 17:43	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193271AA	11/23/2019 17:42	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

Sample Description: **J11-BR01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/20/2019 10:50
Collection Date/Time: 11/17/2019 12:06
SDG#: JCW26-13

The Johnson Company, Inc.
ELLE Sample #: GW 1206741
ELLE Group #: 2075623
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E193301AA	11/26/2019 16:26	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E193301AA	11/26/2019 16:25	Jason M Long	1

*=This limit was used in the evaluation of the final result

Sample Description: **Dup-02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/20/2019 10:50
Collection Date/Time: 11/17/2019 12:30
SDG#: JCW26-14FD

The Johnson Company, Inc.
ELLE Sample #: GW 1206742
ELLE Group #: 2075623
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	1	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	7	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	16	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	0.2 J	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	0.2 J	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	3	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	58	0.3	1	1
11997	Trichloroethene	79-01-6	360	2	10	10
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E193301AA	11/26/2019 16:46	Jason M Long	1
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193312AA	11/28/2019 01:28	Don V Viray	10
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E193301AA	11/26/2019 16:45	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	Y193312AA	11/28/2019 01:27	Don V Viray	10

*=This limit was used in the evaluation of the final result

Sample Description: **MW-2 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/20/2019 10:50
Collection Date/Time: 11/17/2019 13:32
SDG#: JCW26-15

The Johnson Company, Inc.
ELLE Sample #: GW 1206743
ELLE Group #: 2075623
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	1	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	7	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	16	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	3	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	60	0.3	1	1
11997	Trichloroethene	79-01-6	360	2	10	10
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E193301AA	11/26/2019 17:06	Jason M Long	1
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193312AA	11/28/2019 01:50	Don V Viray	10
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E193301AA	11/26/2019 17:05	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	Y193312AA	11/28/2019 01:49	Don V Viray	10

*=This limit was used in the evaluation of the final result

Sample Description: **MW-2I Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/20/2019 10:50
Collection Date/Time: 11/17/2019 15:30
SDG#: JCW26-16

The Johnson Company, Inc.
ELLE Sample #: GW 1206744
ELLE Group #: 2075623
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	3	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	0.4 J	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	5	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	4	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	2	0.3	1	1
11997	Trichloroethene	79-01-6	8	0.2	1	1
11997	Vinyl Chloride	75-01-4	1	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E193301AA	11/26/2019 17:26	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E193301AA	11/26/2019 17:25	Jason M Long	1

*=This limit was used in the evaluation of the final result

Sample Description: **EB-AWR-111919 Grab Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/20/2019 10:50
Collection Date/Time: 11/19/2019 11:00
SDG#: JCW26-17EB

The Johnson Company, Inc.
ELLE Sample #: GW 1206745
ELLE Group #: 2075623
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E193301AA	11/26/2019 12:43	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E193301AA	11/26/2019 12:42	Jason M Long	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB-AWR-111719 Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/20/2019 10:50
Collection Date/Time: 11/17/2019
SDG#: JCW26-18TB

The Johnson Company, Inc.
ELLE Sample #: GW 1206746
ELLE Group #: 2075623
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	E193301AA	11/26/2019 13:03	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E193301AA	11/26/2019 13:02	Jason M Long	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2075623
Reported: 12/03/2019 13:42

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: E193301AA	Sample number(s): 1206729-1206733,1206735-1206737,1206741-1206746		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	6
Batch number: L193271AA	Sample number(s): 1206738-1206740		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2075623
Reported: 12/03/2019 13:42

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	6
Batch number: Y193312AA	Sample number(s): 1206732-1206734,1206742-1206743		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	6

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: E193301AA	Sample number(s): 1206729-1206733,1206735-1206737,1206741-1206746								
Acetone	150	176.67	150	191.14	118	127	54-157	8	30
Benzene	20	20.55	20	19.82	103	99	80-120	4	30
2-Butanone	150	153.4	150	153.7	102	102	59-135	0	30
Carbon Disulfide	20	19.47	20	18.45	97	92	65-128	5	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2075623
Reported: 12/03/2019 13:42

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Chloroform	20	20.96	20	19.93	105	100	80-120	5	30
1,2-Dichlorobenzene	20	20.87	20	20.17	104	101	80-120	3	30
1,1-Dichloroethane	20	20.63	20	19.64	103	98	80-120	5	30
1,2-Dichloroethane	20	20.79	20	19.76	104	99	73-124	5	30
1,1-Dichloroethene	20	21.6	20	20.7	108	104	80-131	4	30
cis-1,2-Dichloroethene	20	22.16	20	21.3	111	107	80-125	4	30
trans-1,2-Dichloroethene	20	21.12	20	20.05	106	100	80-126	5	30
1,4-Dioxane	500	450.7	500	473.83	90	95	63-146	5	30
Ethylbenzene	20	20.85	20	19.69	104	98	80-120	6	30
Freon 113	20	18.62	20	17.84	93	89	73-139	4	30
Methylene Chloride	20	21.12	20	20.31	106	102	80-120	4	30
Naphthalene	20	20.22	20	19.06	101	95	53-124	6	30
Tetrachloroethene	20	19.66	20	18.81	98	94	80-120	4	30
Toluene	20	20.79	20	20.08	104	100	80-120	3	30
1,1,1-Trichloroethane	20	20.74	20	19.85	104	99	67-126	4	30
Trichloroethene	20	20.92	20	19.77	105	99	80-120	6	30
Vinyl Chloride	20	20.4	20	19.9	102	100	56-120	2	30
Xylene (Total)	60	63.23	60	60.12	105	100	80-120	5	30
Batch number: L193271AA	Sample number(s): 1206738-1206740								
Acetone	150	165.78			111		54-157		
Benzene	20	20.61			103		80-120		
2-Butanone	150	137.59			92		59-135		
Carbon Disulfide	20	16.81			84		65-128		
Chloroform	20	20.73			104		80-120		
1,2-Dichlorobenzene	20	20.05			100		80-120		
1,1-Dichloroethane	20	19.91			100		80-120		
1,2-Dichloroethane	20	20.97			105		73-124		
1,1-Dichloroethene	20	20.27			101		80-131		
cis-1,2-Dichloroethene	20	21.25			106		80-125		
trans-1,2-Dichloroethene	20	20.1			100		80-126		
1,4-Dioxane	500	538.96			108		63-146		
Ethylbenzene	20	19.96			100		80-120		
Freon 113	20	18.28			91		73-139		
Methylene Chloride	20	20.76			104		80-120		
Naphthalene	20	18.37			92		53-124		
Tetrachloroethene	20	19.5			98		80-120		
Toluene	20	20.05			100		80-120		
1,1,1-Trichloroethane	20	19.91			100		67-126		
Trichloroethene	20	20.69			103		80-120		
Vinyl Chloride	20	17.86			89		56-120		
Xylene (Total)	60	60.53			101		80-120		
Batch number: Y193312AA	Sample number(s): 1206732-1206734,1206742-1206743								
Acetone	150	171.25	150	172.48	114	115	54-157	1	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2075623
Reported: 12/03/2019 13:42

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Benzene	20	22.79	20	22.75	114	114	80-120	0	30
2-Butanone	150	168.29	150	169.96	112	113	59-135	1	30
Carbon Disulfide	20	19.66	20	19.18	98	96	65-128	2	30
Chloroform	20	21.41	20	21.36	107	107	80-120	0	30
1,2-Dichlorobenzene	20	22.53	20	22.39	113	112	80-120	1	30
1,1-Dichloroethane	20	22.51	20	22.34	113	112	80-120	1	30
1,2-Dichloroethane	20	20.14	20	20.26	101	101	73-124	1	30
1,1-Dichloroethene	20	21.18	20	21.2	106	106	80-131	0	30
cis-1,2-Dichloroethene	20	23.1	20	22.92	116	115	80-125	1	30
trans-1,2-Dichloroethene	20	21.67	20	21.81	108	109	80-126	1	30
1,4-Dioxane	500	564.11	500	571.67	113	114	63-146	1	30
Ethylbenzene	20	22.87	20	22.82	114	114	80-120	0	30
Freon 113	20	17.29	20	16.76	86	84	73-139	3	30
Methylene Chloride	20	22.8	20	22.52	114	113	80-120	1	30
Naphthalene	20	21.87	20	21.57	109	108	53-124	1	30
Tetrachloroethene	20	21	20	20.66	105	103	80-120	2	30
Toluene	20	22.8	20	22.82	114	114	80-120	0	30
1,1,1-Trichloroethane	20	19.51	20	19.36	98	97	67-126	1	30
Trichloroethene	20	21.34	20	21.2	107	106	80-120	1	30
Vinyl Chloride	20	16.01	20	15.87	80	79	56-120	1	30
Xylene (Total)	60	67.28	60	67.08	112	112	80-120	0	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: E193301AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1206729	101	99	99	99
1206730	100	99	99	98
1206731	100	100	99	99
1206732	99	100	99	99
1206733	98	98	100	99
1206735	99	101	99	98
1206736	99	101	98	97
1206737	99	100	98	96
1206741	98	101	99	99
1206742	99	99	99	97
1206743	100	101	100	99
1206744	100	101	99	99

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2075623
Reported: 12/03/2019 13:42

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: E193301AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1206745	98	99	99	100
1206746	100	100	99	100
Blank	99	99	100	99
LCS	100	100	100	100
LCSD	100	100	99	99
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: L193271AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1206738	100	104	97	98
1206739	100	104	97	97
1206740	99	103	98	98
Blank	97	102	97	98
LCS	99	102	98	102
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: Y193312AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1206734	92	97	98	94
Blank	91	97	98	95
LCS	91	96	99	96
LCSD	92	97	99	96
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 6556 Group # 2078623 Sample # 1706729-46

COC # 596352

Client Information

Client: VHB / The Johnson Company	Acct. #: 06556
Project Name/#: AD - New Windsor / 58300	PWSID #:
Project Manager: George Lester	P.O. #:
Sampler: Adam Rodday	Quote #:
State where samples were collected: NY	For Compliance: Yes ☐ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☒ Surface ☐ NPDES ☐ | Other: ____

Analysis Requested

Preservation and Filtration Codes: H

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	8260C - VOCs
MW-15	11/18/19	908	X		3	X
Dup-03	11/18/19	1000	X		3	X
MW-1D	11/18/19	1022	X		3	X
J23-UC02	11/18/19	1142	X		3	X
J23-UC01	11/18/19	1227	X		3	X
J17-BR01	11/18/19	1513	X		3	X
J06-UC02	11/19/19	830	X		3	X
J07-UC02	11/19/19	938	X		3	X
RIZ-19	11/19/19	1024	X		3	X

For Lab Use Only
FSC:
SCR#:

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days:

E-mail address: Glester@vhb.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	11/19/19	1130			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	11/20/19	10:50

EDD Required? Yes No
If yes, format: Excel

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx Y Other ____

Temperature upon receipt 2.0 °C

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 6556 Group # 207823 Sample # 120629-46

COC # 596351

Client Information

Client: VHB/The Johnson Company	Acct. #: 06556
Project Name/#: AD-New Windsor / 58300	PWSID #:
Project Manager: George Lester	P.O. #:
Sampler: Adam Robfoy	Quote #:
State where samples were collected: NY	For Compliance: Yes ☐ No ☒

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☒ NPDES ☐ Surface ☐ | Other: ____

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only

FSC:
SCR#:

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	8260 C - VOCs	Remarks
J11-UC02	11/17/19	907	X		3	X	
J11-BR02	11/17/19	1010	X		3	X	
J11-UC01	11/17/19	1107	X		3	X	
J11-BR01	11/17/19	1206	X		3	X	
DUP-02	11/17/19	1230	X		3	X	
MW-2	11/17/19	1332	X		3	X	
MW-2I	11/17/19	1530	X		3	X	
EB-AWR-111919	11/19/19	1100	X		3	X	Equipment Blank
TB-AWR-111719	—	—	—		2	X	TRIP BLANK

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: _____

E-mail address: Glester@vhb.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP)
Type VI (Raw Data Only)
Type III (Reduced non-CLP)
NJ DKQP
TX TRRP-13
NYSDEC Category A or B
MA MCP
CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	11/19/19	1130			
			CM Wells	11/20/19	10:50

EDD Required? Yes No
If yes, format: Excel

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS _____ FedEx X Other _____

Temperature upon receipt 2.0 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 267134

Group Number(s): 2075623

Client: VHB

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	11/20/2019
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Tamara Lugardo

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192050133	2.0	IR	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17601-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCW26

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
1206729	MW-1S	X		1	
1206730	Dup-03	X		1	Field Duplicate Sample
1206731	MW-1D	X		1	
1206732	J23-UC02	X		1; 10	
1206733	J23-UC01	X		1; 10	
1206734	J17-BR01	X		1	
1206735	J06-UC02	X		1	
1206736	J07-UC02	X		1	
1206737	RIZ-19	X		1	
1206738	J11-UC02	X		1	
1206739	J11-BR02	X		1	
1206740	J11-UC01	X		1	
1206741	J11-BR01	X		1	
1206742	Dup-02	X		1; 10	Field Duplicate Sample
1206743	MW-2	X		1; 10	
1206744	MW-2I	X		1	
1206745	EB-AWR-111919	X		1	Equipment Blank
1206746	TB-AWR-111719	X		1	Trip Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCW26

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS/LCSD

(Sample number(s): 1206734: Analysis: 11997)
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

1. Relative Response Factor (RRF)

$$RRF = \frac{AX}{Ais} \times \frac{Cis}{Cx}$$

Where:

Ax = Area of the characteristic ion for the compound to be measured
Ais = Area of the characteristic ion for the specific internal standard to be measured
Cis = Concentration of the internal standard
Cx = Concentration of the compound to be measured

2. % Relative Standard Deviation (%RSD)

$$\%RSD = \frac{standard\ deviation}{Mean} \times 100$$

3. % Difference

$$\%D = \frac{RRFc - RRFi}{RRFi} \times 100$$

Where:

RRFc = Relative response factor from the continuing calibration standard
RRFi = Mean relative response factor from the initial calibration

4. Concentration

$$Concentration\ (\mu g / L) = \frac{(Ax)(Is)(Df)}{(Ais)(RRF)}$$

Where:

Ax, Ais, and RRF are as given in 1. above
Is = Amount of internal standard added in parts per billion (µg/L)
Df = Dilution factor

5. % Recovery (% Rec)

$$\%Rec = \frac{SSR - SR}{SA} \times 100$$

Where:

SSR = Spiked sample result
SR = Sample result
SA = Spike added

6. Relative Percent Difference (RPD)

$$RPD = \frac{(MSR - MSRD)}{(1/2)(MSR + MSRD)} \times 100$$

Where:

MSR = Matrix spike recovery
MSRD = Matrix spike recovery duplicate

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: The Johnson Company, Inc.
SDG: JCW26

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
VOCs- 5ml Water by 8260C/D	E193301AA	VBLKE76	11/26/2019 11:41
		LCSE76	11/26/2019 10:40
		LCDE76	11/26/2019 11:00
		1206729	11/26/2019 13:24
		1206730	11/26/2019 13:44
		1206731	11/26/2019 14:04
		1206732	11/26/2019 14:24
		1206733	11/26/2019 14:44
		1206735	11/26/2019 15:25
		1206736	11/26/2019 15:45
		1206737	11/26/2019 16:05
		1206741	11/26/2019 16:26
		1206742	11/26/2019 16:46
		1206743	11/26/2019 17:06
		1206744	11/26/2019 17:26
		1206745	11/26/2019 12:43
		1206746	11/26/2019 13:03
VOCs- 5ml Water by 8260C/D	L193271AA	VBLKL87	11/23/2019 09:48
		LCSL87	11/23/2019 09:26
		1206738	11/23/2019 16:59
		1206739	11/23/2019 17:21
		1206740	11/23/2019 17:43
VOCs- 5ml Water by 8260C/D	Y193312AA	VBLKY09	11/27/2019 21:12
		LCSY09	11/27/2019 20:05
		LCDY09	11/27/2019 20:28
		1206732	11/28/2019 00:44
		1206733	11/28/2019 01:06
		1206734	11/27/2019 22:32
		1206742	11/28/2019 01:28
		1206743	11/28/2019 01:50

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: JCW26
Matrix: LIQUID

Fraction: Volatiles by GC/MS

E193301AA / VBLKE76 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	11/26/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	11/26/19	N.D.	ug/l	0.2	1
Acetone	11/26/19	N.D.	ug/l	0.7	20
Freon 113	11/26/19	N.D.	ug/l	0.2	10
Carbon Disulfide	11/26/19	N.D.	ug/l	0.2	5
Methylene Chloride	11/26/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	11/26/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	11/26/19	N.D.	ug/l	0.2	1
2-Butanone	11/26/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	11/26/19	N.D.	ug/l	0.2	1
Chloroform	11/26/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	11/26/19	N.D.	ug/l	0.3	1
Benzene	11/26/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	11/26/19	N.D.	ug/l	0.3	1
Trichloroethene	11/26/19	N.D.	ug/l	0.2	1
1,4-Dioxane	11/26/19	N.D.	ug/l	29	250
Toluene	11/26/19	N.D.	ug/l	0.2	1
Tetrachloroethene	11/26/19	N.D.	ug/l	0.2	1
Ethylbenzene	11/26/19	N.D.	ug/l	0.4	1
Xylene (Total)	11/26/19	N.D.	ug/l	1	6
1,2-Dichlorobenzene	11/26/19	N.D.	ug/l	0.2	5
Naphthalene	11/26/19	N.D.	ug/l	1	5

L193271AA / VBLKL87 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	11/23/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	11/23/19	N.D.	ug/l	0.2	1
Acetone	11/23/19	N.D.	ug/l	0.7	20
Freon 113	11/23/19	N.D.	ug/l	0.2	10
Carbon Disulfide	11/23/19	N.D.	ug/l	0.2	5
Methylene Chloride	11/23/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	11/23/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	11/23/19	N.D.	ug/l	0.2	1
2-Butanone	11/23/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	11/23/19	N.D.	ug/l	0.2	1
Chloroform	11/23/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	11/23/19	N.D.	ug/l	0.3	1
Benzene	11/23/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	11/23/19	N.D.	ug/l	0.3	1
Trichloroethene	11/23/19	N.D.	ug/l	0.2	1
1,4-Dioxane	11/23/19	N.D.	ug/l	29	250
Toluene	11/23/19	N.D.	ug/l	0.2	1
Tetrachloroethene	11/23/19	N.D.	ug/l	0.2	1
Ethylbenzene	11/23/19	N.D.	ug/l	0.4	1
Xylene (Total)	11/23/19	N.D.	ug/l	1	6

Fraction: Volatiles by GC/MS

L193271AA / VBLKL87 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
1,2-Dichlorobenzene	11/23/19	N.D.	ug/l	0.2	5
Naphthalene	11/23/19	N.D.	ug/l	1	5

Y193312AA / VBLKY09 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	11/27/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	11/27/19	N.D.	ug/l	0.2	1
Acetone	11/27/19	N.D.	ug/l	0.7	20
Freon 113	11/27/19	N.D.	ug/l	0.2	10
Carbon Disulfide	11/27/19	N.D.	ug/l	0.2	5
Methylene Chloride	11/27/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	11/27/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	11/27/19	N.D.	ug/l	0.2	1
2-Butanone	11/27/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	11/27/19	N.D.	ug/l	0.2	1
Chloroform	11/27/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	11/27/19	N.D.	ug/l	0.3	1
Benzene	11/27/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	11/27/19	N.D.	ug/l	0.3	1
Trichloroethene	11/27/19	N.D.	ug/l	0.2	1
1,4-Dioxane	11/27/19	N.D.	ug/l	29	250
Toluene	11/27/19	N.D.	ug/l	0.2	1
Tetrachloroethene	11/27/19	N.D.	ug/l	0.2	1
Ethylbenzene	11/27/19	N.D.	ug/l	0.4	1
Xylene (Total)	11/27/19	N.D.	ug/l	1	6
1,2-Dichlorobenzene	11/27/19	N.D.	ug/l	0.2	5
Naphthalene	11/27/19	N.D.	ug/l	1	5

Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: JCW26
Matrix: LIQUID

Fraction: Volatiles by GC/MS

E193301AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKE76	99	80 - 120	99	80 - 120	99	80 - 120	100	80 - 120
LCSE76	100	80 - 120	100	80 - 120	100	80 - 120	100	80 - 120
LCDE76	100	80 - 120	99	80 - 120	100	80 - 120	99	80 - 120
1206729	99	80 - 120	99	80 - 120	101	80 - 120	99	80 - 120
1206730	99	80 - 120	98	80 - 120	100	80 - 120	99	80 - 120
1206731	100	80 - 120	99	80 - 120	100	80 - 120	99	80 - 120
1206732	100	80 - 120	99	80 - 120	99	80 - 120	99	80 - 120
1206733	98	80 - 120	99	80 - 120	98	80 - 120	100	80 - 120
1206735	101	80 - 120	98	80 - 120	99	80 - 120	99	80 - 120
1206736	101	80 - 120	97	80 - 120	99	80 - 120	98	80 - 120
1206737	100	80 - 120	96	80 - 120	99	80 - 120	98	80 - 120
1206741	101	80 - 120	99	80 - 120	98	80 - 120	99	80 - 120
1206742	99	80 - 120	97	80 - 120	99	80 - 120	99	80 - 120
1206743	101	80 - 120	99	80 - 120	100	80 - 120	100	80 - 120
1206744	101	80 - 120	99	80 - 120	100	80 - 120	99	80 - 120
1206745	99	80 - 120	100	80 - 120	98	80 - 120	99	80 - 120
1206746	100	80 - 120	100	80 - 120	100	80 - 120	99	80 - 120

L193271AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKL87	102	80 - 120	98	80 - 120	97	80 - 120	97	80 - 120
LCSL87	102	80 - 120	102	80 - 120	99	80 - 120	98	80 - 120
1206738	104	80 - 120	98	80 - 120	100	80 - 120	97	80 - 120
1206739	104	80 - 120	97	80 - 120	100	80 - 120	97	80 - 120
1206740	103	80 - 120	98	80 - 120	99	80 - 120	98	80 - 120

Y193312AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKY09	97	80 - 120	95	80 - 120	91	80 - 120	98	80 - 120
LCSY09	96	80 - 120	96	80 - 120	91	80 - 120	99	80 - 120
LCDY09	97	80 - 120	96	80 - 120	92	80 - 120	99	80 - 120
1206734	97	80 - 120	94	80 - 120	92	80 - 120	98	80 - 120

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: JCW26
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSE76 LCSD: LCDE76	Batch: **E193301AA** (Sample number(s): 1206729-1206733, 1206735-1206737, 1206741-1206746)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	20.4	19.9	102	100	56-120	2	30
1,1-Dichloroethene	20	21.6	20.7	108	104	80-131	4	30
Acetone	150	176.67	191.14	118	127	54-157	8	30
Freon 113	20	18.62	17.84	93	89	73-139	4	30
Carbon Disulfide	20	19.47	18.45	97	92	65-128	5	30
Methylene Chloride	20	21.12	20.31	106	102	80-120	4	30
trans-1,2-Dichloroethene	20	21.12	20.05	106	100	80-126	5	30
1,1-Dichloroethane	20	20.63	19.64	103	98	80-120	5	30
2-Butanone	150	153.4	153.7	102	102	59-135	0	30
cis-1,2-Dichloroethene	20	22.16	21.3	111	107	80-125	4	30
1,1,1-Trichloroethane	20	20.74	19.85	104	99	67-126	4	30
Chloroform	20	20.96	19.93	105	100	80-120	5	30
1,2-Dichloroethane	20	20.79	19.76	104	99	73-124	5	30
Benzene	20	20.55	19.82	103	99	80-120	4	30
Trichloroethene	20	20.92	19.77	105	99	80-120	6	30
1,4-Dioxane	500	450.7	473.83	90	95	63-146	5	30
Toluene	20	20.79	20.08	104	100	80-120	3	30
Tetrachloroethene	20	19.66	18.81	98	94	80-120	4	30
Ethylbenzene	20	20.85	19.69	104	98	80-120	6	30
Xylene (Total)	60	63.23	60.12	105	100	80-120	5	30
1,2-Dichlorobenzene	20	20.87	20.17	104	101	80-120	3	30
Naphthalene	20	20.22	19.06	101	95	53-124	6	30

LCS: LCSL87	Batch: **L193271AA** (Sample number(s): 1206738-1206740)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	17.86	NA	89	NA	56-120	NA	NA
1,1-Dichloroethene	20	20.27	NA	101	NA	80-131	NA	NA
Acetone	150	165.78	NA	111	NA	54-157	NA	NA
Freon 113	20	18.28	NA	91	NA	73-139	NA	NA
Carbon Disulfide	20	16.81	NA	84	NA	65-128	NA	NA
Methylene Chloride	20	20.76	NA	104	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	20.1	NA	100	NA	80-126	NA	NA
1,1-Dichloroethane	20	19.91	NA	100	NA	80-120	NA	NA
2-Butanone	150	137.59	NA	92	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	21.25	NA	106	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	19.91	NA	100	NA	67-126	NA	NA
Chloroform	20	20.73	NA	104	NA	80-120	NA	NA
1,2-Dichloroethane	20	20.97	NA	105	NA	73-124	NA	NA
Benzene	20	20.61	NA	103	NA	80-120	NA	NA

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSL87	Batch: **L193271AA** (Sample number(s): 1206738-1206740)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Trichloroethene	20	20.69	NA	103	NA	80-120	NA	NA
1,4-Dioxane	500	538.96	NA	108	NA	63-146	NA	NA
Toluene	20	20.05	NA	100	NA	80-120	NA	NA
Tetrachloroethene	20	19.5	NA	98	NA	80-120	NA	NA
Ethylbenzene	20	19.96	NA	100	NA	80-120	NA	NA
Xylene (Total)	60	60.53	NA	101	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	20.05	NA	100	NA	80-120	NA	NA
Naphthalene	20	18.37	NA	92	NA	53-124	NA	NA

LCS: LCSY09 LCSD: LCDY09	Batch: **Y193312AA** (Sample number(s): 1206732-1206734, 1206742-1206743)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	16.01	15.87	80	79	56-120	1	30
1,1-Dichloroethene	20	21.18	21.2	106	106	80-131	0	30
Acetone	150	171.25	172.48	114	115	54-157	1	30
Freon 113	20	17.29	16.76	86	84	73-139	3	30
Carbon Disulfide	20	19.66	19.18	98	96	65-128	2	30
Methylene Chloride	20	22.8	22.52	114	113	80-120	1	30
trans-1,2-Dichloroethene	20	21.67	21.81	108	109	80-126	1	30
1,1-Dichloroethane	20	22.51	22.34	113	112	80-120	1	30
2-Butanone	150	168.29	169.96	112	113	59-135	1	30
cis-1,2-Dichloroethene	20	23.1	22.92	116	115	80-125	1	30
1,1,1-Trichloroethane	20	19.51	19.36	98	97	67-126	1	30
Chloroform	20	21.41	21.36	107	107	80-120	0	30
1,2-Dichloroethane	20	20.14	20.26	101	101	73-124	1	30
Benzene	20	22.79	22.75	114	114	80-120	0	30
Trichloroethene	20	21.34	21.2	107	106	80-120	1	30
1,4-Dioxane	500	564.11	571.67	113	114	63-146	1	30
Toluene	20	22.8	22.82	114	114	80-120	0	30
Tetrachloroethene	20	21	20.66	105	103	80-120	2	30
Ethylbenzene	20	22.87	22.82	114	114	80-120	0	30
Xylene (Total)	60	67.28	67.08	112	112	80-120	0	30
1,2-Dichlorobenzene	20	22.53	22.39	113	112	80-120	1	30
Naphthalene	20	21.87	21.57	109	108	53-124	1	30

Fraction: Volatiles by GC/MS

11997: VOCs- 5ml Water by 8260C/D Analyte Name	Default MDL	Default LOQ	Units
Vinyl Chloride	0.2	1	ug/l
1,1-Dichloroethene	0.2	1	ug/l
Acetone	0.7	20	ug/l
Freon 113	0.2	10	ug/l
Carbon Disulfide	0.2	5	ug/l
Methylene Chloride	0.3	1	ug/l
trans-1,2-Dichloroethene	0.2	1	ug/l
1,1-Dichloroethane	0.2	1	ug/l
2-Butanone	0.3	10	ug/l
cis-1,2-Dichloroethene	0.2	1	ug/l
Chloroform	0.2	1	ug/l
1,1,1-Trichloroethane	0.3	1	ug/l
Benzene	0.2	1	ug/l
1,2-Dichloroethane	0.3	1	ug/l
Trichloroethene	0.2	1	ug/l
1,4-Dioxane	29	250	ug/l
Toluene	0.2	1	ug/l
Tetrachloroethene	0.2	1	ug/l
Ethylbenzene	0.4	1	ug/l
Xylene (Total)	1	6	ug/l
1,2-Dichlorobenzene	0.2	5	ug/l
Naphthalene	1	5	ug/l

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ys10t51.d BFB Injection Date: 09/10/19

Instrument ID: HP09355 BFB Injection Time: 12:17

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.02
75	30.0 - 60.0% of mass 95	46.48
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.79
173	Less than 2.0% of mass 174	0.17 (0.22)1
174	Greater than 50.0% of mass 95	79.43
175	5.0 - 9.0% of mass 174	5.80 (7.30)1
176	Greater than 95.0%, but less than 101.0% of mass 174	77.18 (97.17)1
177	5.0 - 9.0% of mass 176	4.97 (6.44)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	ys10i51.d	09/10/19	12:50
02	VSTD100	ys10i52.d	09/10/19	13:12
03	VSTD50	ys10i53.d	09/10/19	13:34
04	VSTD20	ys10i54.d	09/10/19	13:57
05	VSTD10	ys10i55.d	09/10/19	14:18
06	VSTD4	ys10i56.d	09/10/19	14:40
07	VSTD1	ys10i57.d	09/10/19	15:02
08	YLGICVC	ys10v51.d	09/10/19	16:58
09	VSTD300	ys10i61.d	09/10/19	17:44
10	VSTD100	ys10i62.d	09/10/19	18:06
11	VSTD50	ys10i63.d	09/10/19	18:28
12	VSTD20	ys10i64.d	09/10/19	18:50
13	VSTD10	ys10i65.d	09/10/19	19:12
14	VSTD4	ys10i66.d	09/10/19	19:34
15	SMCICV	ys10v61.d	09/10/19	19:56

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: yn27t05.d BFB Injection Date: 11/27/19

Instrument ID: HP09355 BFB Injection Time: 19:32

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.49
75	30.0 - 60.0% of mass 95	45.34
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.71
173	Less than 2.0% of mass 174	0.18 (0.23)1
174	Greater than 50.0% of mass 95	78.26
175	5.0 - 9.0% of mass 174	5.50 (7.03)1
176	Greater than 95.0%, but less than 101.0% of mass 174	76.93 (98.29)1
177	5.0 - 9.0% of mass 176	4.87 (6.33)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	yn27c05.d	11/27/19	19:43
02	LCSY09	yn27s31.d	11/27/19	20:05
03	LCDY09	yn27s32.d	11/27/19	20:28
04	LCSY10	yn27s61.d	11/27/19	20:28
05	RLVY09 - RLVY09	yn27r31.d	11/27/19	20:50
06	VBLKY09	yn27b31.d	11/27/19	21:12
07	VBLKY10	yn27b61.d	11/27/19	21:12
08	1206931	yn27s33.d	11/27/19	21:48
09	1206929	yn27s34.d	11/27/19	22:10
10	1206734	yn27s35.d	11/27/19	22:32
11	1206928	yn27s36.d	11/27/19	22:54
12	1206648	yn27s37.d	11/27/19	23:16
13	1206790	yn27s39.d	11/28/19	00:00
14	1206791	yn27s40.d	11/28/19	00:22
15	1206732DL	yn27s41.d	11/28/19	00:44
16	1206733DL	yn27s42.d	11/28/19	01:06
17	1206742DL	yn27s43.d	11/28/19	01:28
18	1206743DL	yn27s44.d	11/28/19	01:50
19	1209672	yn27s45.d	11/28/19	02:12
20	1209658	yn27s46.d	11/28/19	02:34
21	1209658MS	yn27s47.d	11/28/19	02:56
22	1209658MSD	yn27s48.d	11/28/19	03:18

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: yn27t05.d BFB Injection Date: 11/27/19

Instrument ID: HP09355 BFB Injection Time: 19:32

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.49
75	30.0 - 60.0% of mass 95	45.34
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.71
173	Less than 2.0% of mass 174	0.18 (0.23)1
174	Greater than 50.0% of mass 95	78.26
175	5.0 - 9.0% of mass 174	5.50 (7.03)1
176	Greater than 95.0%, but less than 101.0% of mass 174	76.93 (98.29)1
177	5.0 - 9.0% of mass 176	4.87 (6.33)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1209659	yn27s49.d	11/28/19	04:02
24	1209660	yn27s50.d	11/28/19	04:24
25	1209660DL	yn27s51.d	11/28/19	04:46
26	1203659DL	yn27s52.d	11/28/19	05:08
27	1203660DL	yn27s53.d	11/28/19	05:30
28	1205502DL	yn27s54.d	11/28/19	05:52
29	1206564	yn27s62.d	11/28/19	06:14
30	1206720	yn27s63.d	11/28/19	06:36

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln04t06.d BFB Injection Date: 11/04/19

Instrument ID: HP09915 BFB Injection Time: 14:18

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.48
75	30.0 - 60.0% of mass 95	44.65
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.22
173	Less than 2.0% of mass 174	0.51 (0.61)1
174	Greater than 50.0% of mass 95	83.73
175	5.0 - 9.0% of mass 174	5.92 (7.07)1
176	Greater than 95.0%, but less than 101.0% of mass 174	82.66 (98.72)1
177	5.0 - 9.0% of mass 176	5.37 (6.49)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	ln04i01.d	11/04/19	14:51
02	VSTD100	ln04i02.d	11/04/19	15:13
03	VSTD50	ln04i03.d	11/04/19	15:35
04	VSTD20	ln04i04.d	11/04/19	15:57
05	VSTD10	ln04i05.d	11/04/19	16:19
06	VSTD4	ln04i06.d	11/04/19	16:41
07	VSTD1	ln04i07.d	11/04/19	17:03
08	ICVLLG	ln04v02.d	11/04/19	18:42

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln23t02.d BFB Injection Date: 11/23/19

Instrument ID: HP09915 BFB Injection Time: 07:57

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.16
75	30.0 - 60.0% of mass 95	43.53
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.39
173	Less than 2.0% of mass 174	0.55 (0.66)1
174	Greater than 50.0% of mass 95	83.68
175	5.0 - 9.0% of mass 174	6.06 (7.25)1
176	Greater than 95.0%, but less than 101.0% of mass 174	80.15 (95.78)1
177	5.0 - 9.0% of mass 176	5.44 (6.78)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	ln23c01.d	11/23/19	08:42
02	LCSL87	ln23s01.d	11/23/19	09:26
03	VBLKL87	ln23b01.d	11/23/19	09:48
04	1205905	ln23s02.d	11/23/19	10:44
05	1205900	ln23s03.d	11/23/19	11:06
06	1205901MS	ln23s04.d	11/23/19	11:28
07	1205902MSD	ln23s05.d	11/23/19	11:50
08	1205903	ln23s06.d	11/23/19	12:12
09	1205904	ln23s07.d	11/23/19	12:34
10	1205910	ln23s08.d	11/23/19	12:56
11	1205911	ln23s09.d	11/23/19	13:18
12	1205912	ln23s10.d	11/23/19	13:40
13	1205913	ln23s11.d	11/23/19	14:02
14	1205914	ln23s12.d	11/23/19	14:24
15	1205915	ln23s13.d	11/23/19	14:46
16	1205916	ln23s14.d	11/23/19	15:08
17	1205917	ln23s15.d	11/23/19	15:31
18	1205918	ln23s16.d	11/23/19	15:53
19	1205928	ln23s17.d	11/23/19	16:15
20	1205929	ln23s18.d	11/23/19	16:37
21	1206738	ln23s19.d	11/23/19	16:59
22	1206739	ln23s20.d	11/23/19	17:21

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ln23t02.d BFB Injection Date: 11/23/19

Instrument ID: HP09915 BFB Injection Time: 07:57

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.16
75	30.0 - 60.0% of mass 95	43.53
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.39
173	Less than 2.0% of mass 174	0.55 (0.66)1
174	Greater than 50.0% of mass 95	83.68
175	5.0 - 9.0% of mass 174	6.06 (7.25)1
176	Greater than 95.0%, but less than 101.0% of mass 174	80.15 (95.78)1
177	5.0 - 9.0% of mass 176	5.44 (6.78)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1206740	ln23s21.d	11/23/19	17:43

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: en25t01.d BFB Injection Date: 11/25/19

Instrument ID: HP15648 BFB Injection Time: 14:06

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.93
75	30.0 - 60.0% of mass 95	46.02
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.70
173	Less than 2.0% of mass 174	0.45 (0.72)1
174	Greater than 50.0% of mass 95	62.35
175	5.0 - 9.0% of mass 174	4.56 (7.32)1
176	Greater than 95.0%, but less than 101.0% of mass 174	61.18 (98.12)1
177	5.0 - 9.0% of mass 176	3.92 (6.41)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	en25i01.d	11/25/19	14:39
02	VSTD100	en25i02.d	11/25/19	14:59
03	VSTD50	en25i03.d	11/25/19	15:19
04	VSTD20	en25i04.d	11/25/19	15:39
05	VSTD10	en25i05.d	11/25/19	15:59
06	VSTD4	en25i06.d	11/25/19	16:20
07	VSTD1	en25i07.d	11/25/19	16:40
08	ICVELG	en25v01.d	11/25/19	17:21

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: en26t01.d BFB Injection Date: 11/26/19

Instrument ID: HP15648 BFB Injection Time: 09:39

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.32
75	30.0 - 60.0% of mass 95	46.30
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.72
173	Less than 2.0% of mass 174	0.59 (0.85)1
174	Greater than 50.0% of mass 95	69.40
175	5.0 - 9.0% of mass 174	4.95 (7.13)1
176	Greater than 95.0%, but less than 101.0% of mass 174	67.41 (97.13)1
177	5.0 - 9.0% of mass 176	4.42 (6.55)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	en26c01.d	11/26/19	10:20
02	LCSE76	en26s01.d	11/26/19	10:40
03	LCDE76	en26s02.d	11/26/19	11:00
04	VBLKE76	en26b01.d	11/26/19	11:41
05	1206745	en26s03.d	11/26/19	12:43
06	1206746	en26s04.d	11/26/19	13:03
07	1206729	en26s05.d	11/26/19	13:24
08	1206730	en26s06.d	11/26/19	13:44
09	1206731	en26s07.d	11/26/19	14:04
10	1206732	en26s08.d	11/26/19	14:24
11	1206733	en26s09.d	11/26/19	14:44
12	1206735	en26s11.d	11/26/19	15:25
13	1206736	en26s12.d	11/26/19	15:45
14	1206737	en26s13.d	11/26/19	16:05
15	1206741	en26s14.d	11/26/19	16:26
16	1206742	en26s15.d	11/26/19	16:46
17	1206743	en26s16.d	11/26/19	17:06
18	1206744	en26s17.d	11/26/19	17:26
19	1207905	en26s18.d	11/26/19	17:47
20	1207906	en26s19.d	11/26/19	18:07
21	1207903	en26s20.d	11/26/19	18:27
22	1207904	en26s21.d	11/26/19	18:47

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: en26t01.d BFB Injection Date: 11/26/19

Instrument ID: HP15648 BFB Injection Time: 09:39

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.32
75	30.0 - 60.0% of mass 95	46.30
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.72
173	Less than 2.0% of mass 174	0.59 (0.85)1
174	Greater than 50.0% of mass 95	69.40
175	5.0 - 9.0% of mass 174	4.95 (7.13)1
176	Greater than 95.0%, but less than 101.0% of mass 174	67.41 (97.13)1
177	5.0 - 9.0% of mass 176	4.42 (6.55)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1208157	en26s22.d	11/26/19	19:08

FORM V VOA

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6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 Calibration Date(s): 09/10/19 09/10/19

Heated Purge: (Y/N) Y Calibration Times: 12:50 15:02

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ys10i57.d RRF 4 = ys10i56.d RRF 10= ys10i55.d
RRF 20= ys10i54.d RRF 50= ys10i53.d RRF100= ys10i52.d RRF300= ys10i51.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
Dichlorodifluoromethane	#0.3606	0.4714	0.5014	0.4609	0.4661	0.4843	0.4654	0.4586	10	AVG	#
Chloromethane	#0.3646	0.3985	0.4263	0.4017	0.4004	0.3987	0.3689	0.3942	5	AVG	#
1,3-Butadiene	0.3388	0.3337	0.2913	0.3136	0.2915	0.2964	0.2815	0.3067	7	AVG	
Vinyl Chloride	#0.3401	0.3921	0.4154	0.3896	0.3970	0.4022	0.3724	0.3870	6	AVG	#
Bromomethane	#0.2656	0.2936	0.3104	0.2960	0.2946	0.2909	0.2586	0.2871	6	AVG	#
Chloroethane	#0.2102	0.2324	0.2386	0.2272	0.2271	0.2292	0.2072	0.2246	5	AVG	#
Dichlorofluoromethane	0.4472	0.4868	0.5034	0.4786	0.4841	0.4680	0.4440	0.4732	5	AVG	
n-Pentane	0.5357	0.5085	0.4551	0.4845	0.4616	0.4639	0.4411	0.4786	7	AVG	
Trichlorofluoromethane	#0.4307	0.5015	0.5265	0.4906	0.5107	0.5111	0.4844	0.4936	6	AVG	#
Ethyl ether	0.2378	0.2584	0.2477	0.2718	0.2612	0.2608	0.2616	0.2571	4	AVG	
Freon 123a	0.2652	0.3075	0.2959	0.3177	0.2998	0.3042	0.2962	0.2981	5	AVG	
Acrolein	1.8108	1.7859	1.9644	1.8816	2.0562	1.9391	1.8531	1.8987	5	AVG	
1,1-Dichloroethene	#0.1798	0.2196	0.2148	0.2298	0.2230	0.2255	0.2265	0.2170	8	AVG	#
1,1-Dichloroethene(2)	#0.0960	0.1131	0.1092	0.1197	0.1143	0.1155	0.1138	0.1117	7	AVG	#
Acetone	#0.7861	0.8708	0.9497	0.9038	0.9422	0.9177	0.8837	0.8934	6	AVG	#
Freon 113	#0.1939	0.2537	0.2397	0.2635	0.2581	0.2605	0.2601	0.2471	10	AVG	#
2-Propanol	0.5287	0.5164	0.5442	0.5293	0.5465	0.5566	0.5438	0.5379	3	AVG	
Methyl Iodide	0.3846	0.4295	0.4220	0.4477	0.4352	0.4362	0.4279	0.4261	5	AVG	
Carbon Disulfide	#0.6717	0.7635	0.7565	0.8294	0.8150	0.8312	0.8239	0.7844	7	AVG	#
Allyl Chloride	0.3239	0.3792	0.3783	0.3916	0.3922	0.3888	0.3801	0.3763	6	AVG	
Methyl Acetate	#0.3816	0.3956	0.3647	0.3797	0.3822	0.3798	0.3721	0.3794	3	AVG	#
Methylene Chloride	#0.2312	0.2618	0.2575	0.2717	0.2648	0.2661	0.2609	0.2591	5	AVG	#
t-Butyl alcohol	1.1189	1.1151	1.1513	1.1341	1.1312	1.1167	1.1075	1.1250	1	AVG	
Acrylonitrile	0.1504	0.1915	0.2105	0.2078	0.2143	0.2141	0.2022	0.1987	11	AVG	
trans-1,2-Dichloroethene	#0.2181	0.2559	0.2478	0.2625	0.2573	0.2594	0.2586	0.2514	6	AVG	#
Methyl Tertiary Butyl Ether	#0.8156	0.8622	0.8647	0.8981	0.8937	0.8784	0.8407	0.8648	3	AVG	#
n-Hexane	0.3602	0.4302	0.3995	0.4645	0.4386	0.4476	0.4428	0.4262	8	AVG	
1,1-Dichloroethane	#0.4094	0.4525	0.4561	0.4849	0.4692	0.4698	0.4579	0.4571	5	AVG	#
di-Isopropyl ether	0.8033	0.8719	0.8673	0.9222	0.9014	0.8968	0.8493	0.8732	4	AVG	
2-Chloro-1,3-butadiene	0.3364	0.4092	0.4041	0.4439	0.4357	0.4394	0.4314	0.4143	9	AVG	
Ethyl t-butyl ether	0.8030	0.8594	0.8584	0.9048	0.8828	0.8675	0.8149	0.8558	4	AVG	
cis-1,2-Dichloroethene	#0.2553	0.2865	0.2816	0.2997	0.2928	0.2930	0.2914	0.2858	5	AVG	#
2-Butanone	#0.2793	0.2858	0.3131	0.2990	0.3178	0.3016	0.2790	0.2965	5	AVG	#
2,2-Dichloropropane	0.2859	0.3489	0.3437	0.3726	0.3694	0.3722	0.3638	0.3509	9	AVG	
Propionitrile	1.2492	1.2600	1.3044	1.2877	1.3387	1.2973	1.3199	1.2939	2	AVG	
Methacrylonitrile	0.1924	0.2032	0.2100	0.2183	0.2179	0.2201	0.2167	0.2112	5	AVG	
Bromochloromethane	0.1305	0.1461	0.1486	0.1562	0.1546	0.1544	0.1532	0.1491	6	AVG	
Tetrahydrofuran	1.3702	1.3214	1.4428	1.3660	1.4954	1.4169	1.4126	1.4036	4	AVG	
Chloroform	#0.3945	0.4415	0.4372	0.4680	0.4550	0.4550	0.4471	0.4426	5	AVG	#
1,1,1-Trichloroethane	#0.3328	0.3841	0.3707	0.4057	0.3958	0.3985	0.3974	0.3836	7	AVG	#
Cyclohexane	#0.4405	0.5104	0.4755	0.5336	0.5142	0.5173	0.5089	0.5001	6	AVG	#
Cyclohexane(2)	#0.3789	0.4396	0.4118	0.4600	0.4461	0.4459	0.4414	0.4320	6	AVG	#
Cyclohexane(3)	#0.1273	0.1603	0.1475	0.1684	0.1630	0.1639	0.1633	0.1563	9	AVG	#
1,1-Dichloropropene	0.3238	0.3771	0.3649	0.3918	0.3779	0.3801	0.3763	0.3702	6	AVG	
Carbon Tetrachloride	#0.2637	0.3126	0.3103	0.3459	0.3456	0.3537	0.3575	0.3270	10	AVG	#
Isobutyl Alcohol	0.3988	0.3883	0.4061	0.3979	0.3810	0.3777	0.3700	0.3885	3	AVG	
Benzene	#0.9964	1.1088	1.0780	1.1409	1.0982	1.0951	1.0599	1.0825	4	AVG	#
1,2-Dichloroethane	#0.4160	0.3854	0.3720	0.3891	0.3798	0.3783	0.3668	0.3839	4	AVG	#
1,2-Dichloroethane(2)	#0.0139	0.0314	0.0321	0.0352	0.0340	0.0345	0.0343	0.0308	25	AVG	#<-
t-Amyl methyl ether	0.8088	0.8620	0.8719	0.9138	0.8851	0.8601	0.7946	0.8566	5	AVG	
n-Heptane	0.4116	0.4538	0.4158	0.4836	0.4666	0.4671	0.4548	0.4505	6	AVG	
n-Butanol	0.3325	0.3541	0.3823	0.3903	0.3798	0.3695	0.3425	0.3644	6	AVG	

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 Calibration Date(s): 09/10/19 09/10/19

Heated Purge: (Y/N) Y Calibration Times: 12:50 15:02

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ys10i57.d RRF 4 = ys10i56.d RRF 10= ys10i55.d
RRF 20= ys10i54.d RRF 50= ys10i53.d RRF100= ys10i52.d RRF300= ys10i51.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
Trichloroethene	#0.2513	0.2852	0.2764	0.2941	0.2829	0.2852	0.2852	0.2800	5	AVG	#
Methylcyclohexane	#0.4669	0.5223	0.5338	0.5608	0.5466	0.5439	0.5445	0.5313	6	AVG	#
Methylcyclohexane(2)	#0.1939	0.2309	0.2333	0.2475	0.2433	0.2426	0.2453	0.2338	8	AVG	#
1,2-Dichloropropane	#0.2474	0.2688	0.2732	0.2905	0.2859	0.2855	0.2802	0.2759	5	AVG	#
Dibromomethane	0.1677	0.1766	0.1779	0.1888	0.1877	0.1880	0.1874	0.1820	4	AVG	
1,4-Dioxane	0.0544	0.0769	0.0809	0.0848	0.0810	0.0845	0.0816	0.0777	14	AVG	
Methyl Methacrylate	0.2753	0.3067	0.3208	0.3388	0.3379	0.3435	0.3440	0.3239	8	AVG	
Bromodichloromethane	#0.2616	0.2861	0.3027	0.3341	0.3377	0.3495	0.3516	0.3176	11	AVG	#
2-Nitropropane	0.0989	0.1128	0.1332	0.1411	0.1597	0.1547	0.1469	0.1353	16	AVG	
2-Chloroethyl Vinyl Ether	0.1927	0.2182	0.2321	0.2514	0.2477	0.2387	0.2515	0.2332	9	AVG	
cis-1,3-Dichloropropene	#0.3401	0.3946	0.4135	0.4572	0.4612	0.4692	0.4636	0.4285	11	AVG	#
4-Methyl-2-pentanone	#0.4956	0.5222	0.5738	0.5933	0.6344	0.5751	0.5173	0.5588	9	AVG	#
Toluene	#0.8421	0.9488	0.9146	0.9843	0.9529	0.9366	0.9028	0.9260	5	AVG	#
trans-1,3-Dichloropropene	#0.4211	0.4773	0.5187	0.5781	0.5931	0.6028	0.5936	0.5407	13	AVG	#
Ethyl Methacrylate	0.5442	0.6300	0.6765	0.7418	0.7392	0.7409	0.7238	0.6852	11	AVG	
1,1,2-Trichloroethane	#0.3275	0.3548	0.3527	0.3755	0.3680	0.3641	0.3569	0.3571	4	AVG	#
Tetrachloroethene	#0.3547	0.4099	0.3902	0.4133	0.3966	0.3989	0.3795	0.3919	5	AVG	#
1,3-Dichloropropane	0.5792	0.6122	0.6170	0.6552	0.6375	0.6303	0.6091	0.6201	4	AVG	
2-Hexanone	#0.5291	0.5672	0.6300	0.6579	0.7194	0.6271	0.5503	0.6116	11	AVG	#
Dibromochloromethane	#0.2511	0.3036	0.3243	0.3717	0.3862	0.3969	0.3981	0.3474	16	AVG	#
1,2-Dibromoethane	#0.3352	0.3703	0.3852	0.4115	0.4094	0.4085	0.4008	0.3887	7	AVG	#
1-Chlorohexane	0.5270	0.5361	0.4826	0.5412	0.5196	0.5210	0.5156	0.5204	4	AVG	
Chlorobenzene	#0.9955	1.0586	1.0254	1.1073	1.0613	1.0481	0.9969	1.0419	4	AVG	#
1,1,1,2-Tetrachloroethane	0.2760	0.3119	0.3202	0.3582	0.3574	0.3600	0.3449	0.3327	9	AVG	
Ethylbenzene	#1.6203	1.8230	1.7448	1.9068	1.8440	1.8121	1.6625	1.7734	6	AVG	#
m+p-Xylene	#0.6530	0.7160	0.6865	0.7536	0.7251	0.7115	0.6528	0.6998	5	AVG	#
o-Xylene	#0.6064	0.6915	0.6685	0.7347	0.7114	0.7010	0.6578	0.6816	6	AVG	#
Styrene	#0.9164	1.0864	1.1041	1.2354	1.2159	1.2065	1.1185	1.1262	10	AVG	#
Bromoform	#0.1747	0.1991	0.2275	0.2678	0.2814	0.2963	0.3046	0.2502	20	AVG	#
Isopropylbenzene	#1.6077	1.8315	1.7198	1.9066	1.8436	1.7958	1.6246	1.7614	6	AVG	#
Cyclohexanone	0.3834	0.4053	0.4133	0.4294	0.4218	0.4319	0.4035	0.4126	4	AVG	
Bromobenzene	0.7551	0.8295	0.8043	0.8789	0.8472	0.8536	0.7808	0.8213	5	AVG	
1,1,2,2-Tetrachloroethane	#1.0731	1.1801	1.1837	1.2641	1.1992	1.1980	1.1752	1.1819	5	AVG	#
1,2,3-Trichloropropane	0.3515	0.3728	0.3748	0.3966	0.3789	0.3785	0.3747	0.3754	4	AVG	
trans-1,4-Dichloro-2-butene	0.3458	0.3877	0.4102	0.4456	0.4385	0.4407	0.3911	0.4085	9	AVG	
n-Propylbenzene	3.6477	4.0878	3.8003	4.2362	4.0400	3.9594	3.4963	3.8954	7	AVG	
2-Chlorotoluene	0.7311	0.8086	0.7780	0.8544	0.8236	0.8163	0.8048	0.8024	5	AVG	
4-Chlorotoluene	0.7585	0.8517	0.8105	0.9024	0.8558	0.8531	0.8395	0.8388	5	AVG	
1,3,5-Trimethylbenzene	2.6173	2.9301	2.7721	3.1341	2.9977	2.9638	2.7571	2.8818	6	AVG	
tert-Butylbenzene	0.5453	0.6090	0.5605	0.6499	0.6242	0.6234	0.6118	0.6035	6	AVG	
Pentachloroethane	0.3530	0.3974	0.4336	0.4903	0.5118	0.5069	0.5152	0.4583	14	AVG	
1,2,4-Trimethylbenzene	2.7984	3.0527	2.9047	3.2847	3.1692	3.1377	2.8392	3.0266	6	AVG	
sec-Butylbenzene	3.3235	3.8094	3.5043	4.0022	3.8292	3.7604	3.3192	3.6497	7	AVG	
1,3-Dichlorobenzene	#1.5794	1.6507	1.5601	1.7307	1.6444	1.6290	1.4671	1.6088	5	AVG	#
p-Isopropyltoluene	2.7618	3.2442	3.0185	3.4758	3.3288	3.2840	2.8391	3.1360	9	AVG	
1,4-Dichlorobenzene	#1.6157	1.6816	1.6012	1.7611	1.6797	1.6538	1.5087	1.6431	5	AVG	#
1,2,3-Trimethylbenzene	2.9494	3.2043	3.2453	3.3874	3.3339	3.2507	2.8859	3.1796	6	AVG	
Benzyl Chloride	1.5799	1.9160	2.1478	2.5550	2.5846	2.6810	2.5871	2.2931	18	AVG	
1,3-Diethylbenzene	1.7801	2.0671	2.0864	2.2027	2.1448	2.0904	1.9644	2.0480	7	AVG	
1,4-Diethylbenzene	1.9087	2.1946	2.2073	2.3288	2.2747	2.2116	2.0369	2.1661	7	AVG	
1,2-Dichlorobenzene	#1.5367	1.6186	1.5309	1.6771	1.5932	1.5784	1.4779	1.5733	4	AVG	#
n-Butylbenzene	1.4762	1.7199	1.5714	1.8009	1.7252	1.7093	1.6028	1.6580	7	AVG	

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 Calibration Date(s): 09/10/19 09/10/19

Heated Purge: (Y/N) Y Calibration Times: 12:50 15:02

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ys10i57.d RRF 4 = ys10i56.d RRF 10= ys10i55.d
RRF 20= ys10i54.d RRF 50= ys10i53.d RRF100= ys10i52.d RRF300= ys10i51.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
1,2-Diethylbenzene	1.5190	1.7476	1.7575	1.8382	1.7985	1.7621	1.6384	1.7230	6	AVG	
1,2-Dibromo-3-chloropropane	#0.2462	0.2761	0.2908	0.3328	0.3181	0.3342	0.3361	0.3049	11	AVG	#
1,3,5-Trichlorobenzene	1.1707	1.2601	1.1475	1.3051	1.2239	1.2093	1.1497	1.2095	5	AVG	
1,2,4-Trichlorobenzene	#1.1824	1.1750	1.0875	1.2423	1.1716	1.1607	1.0928	1.1589	5	AVG	#
Hexachlorobutadiene	0.4948	0.5329	0.4649	0.5495	0.5315	0.5347	0.5068	0.5164	6	AVG	
Naphthalene	4.0783	4.1391	4.0781	4.5247	4.2327	4.1725	3.5361	4.1088	7	AVG	
1,2,3-Trichlorobenzene	1.1417	1.1542	1.0788	1.2031	1.1298	1.1201	1.0554	1.1262	4	AVG	
2-Methylnaphthalene	2.5994	2.5802	2.7009	2.9649	2.8702	2.8272	2.4706	2.7162	7	AVG	
Dibromofluoromethane	0.2322	0.2338	0.2342	0.2346	0.2350	0.2372	0.2352	0.2346	1	AVG	
Dibromofluoromethane(2)	0.2376	0.2388	0.2403	0.2405	0.2415	0.2417	0.2409	0.2402	1	AVG	
1,2-Dichloroethane-d4	0.0616	0.0614	0.0623	0.0613	0.0615	0.0607	0.0605	0.0613	1	AVG	
1,2-Dichloroethane-d4(2)	0.2999	0.2987	0.3001	0.2945	0.2949	0.2929	0.2902	0.2959	1	AVG	
1,2-Dichloroethane-d4(3)	0.0390	0.0394	0.0395	0.0386	0.0392	0.0387	0.0381	0.0389	1	AVG	
Toluene-d8	1.3532	1.3585	1.3576	1.3563	1.3616	1.3510	1.3316	1.3528	1	AVG	
Toluene-d8(2)	0.8705	0.8709	0.8747	0.8741	0.8779	0.8725	0.8651	0.8723	0	AVG	
4-Bromofluorobenzene	0.5158	0.5174	0.5176	0.5186	0.5192	0.5171	0.5125	0.5169	0	AVG	
4-Bromofluorobenzene(2)	0.3943	0.3956	0.3937	0.3926	0.3937	0.3912	0.3861	0.3925	1	AVG	

Average %RSD 7

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP09355.i/19sep10c.b/ys10i51.d	VSTD300
/chem2/HP09355.i/19sep10c.b/ys10i52.d	VSTD100
/chem2/HP09355.i/19sep10c.b/ys10i53.d	VSTD050
/chem2/HP09355.i/19sep10c.b/ys10i54.d	VSTD020
/chem2/HP09355.i/19sep10c.b/ys10i55.d	VSTD010
/chem2/HP09355.i/19sep10c.b/ys10i56.d	VSTD004
/chem2/HP09355.i/19sep10c.b/ys10i57.d	VSTD001

Area Summary

File ID:

Internal Standard Name	ys10i51.d	ys10i52.d	ys10i53.d	ys10i54.d	ys10i55.d	ys10i56.d	ys10i57.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	354941	371904	357387	372209	356814	363057	350956	361038	2	Yes
Fluorobenzene	1182603	1184522	1177736	1181643	1173038	1170589	1150977	1174444	1	Yes
Chlorobenzene-d5	893298	887141	875116	880146	875099	871706	862765	877896	1	Yes
1,4-Dichlorobenzene-d4	467308	472377	470034	471052	470858	469299	465037	469424	1	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	ys10i51.d	ys10i52.d	ys10i53.d	ys10i54.d	ys10i55.d	ys10i56.d	ys10i57.d	Avg. RT
t-Butyl alcohol-d10	4.374	4.367	4.355	4.368	4.349	4.368	4.355	4.362
Fluorobenzene	7.878	7.872	7.872	7.872	7.866	7.872	7.872	7.872
Chlorobenzene-d5	11.309	11.309	11.309	11.309	11.309	11.309	11.309	11.309
1,4-Dichlorobenzene-d4	13.189	13.189	13.189	13.183	13.183	13.183	13.183	13.185

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 09/13/2019 at 14:33.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 ICV Date: 09/10/19 Time: 16:58

Lab File ID: ys10v51.d Init. Calib. Date(s): 09/10/19 09/10/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.4586	0.3819	16.66	20	-17	#
# Chloromethane	0.3942	0.3675	18.65	20	-7	#
1,3-Butadiene	0.3067	0.2883	18.80	20	-6	
# Vinyl Chloride	0.3870	0.3742	19.34	20	-3	#
# Bromomethane	0.2871	0.2074	14.45	20	-28	#
# Chloroethane	0.2246	0.1863	16.59	20	-17	#
Dichlorofluoromethane	0.4732	0.4494	19.00	20	-5	
n-Pentane	0.4786	0.4230	17.67	20	-12	
# Trichlorofluoromethane	0.4936	0.4264	17.28	20	-14	#
Ethyl ether	0.2571	0.2580	20.08	20	0	
Freon 123a	0.2981	0.3092	20.75	20	4	
Acrolein	1.8987	1.8020	142.36	150	-5	
# 1,1-Dichloroethene	0.2170	0.2349	21.64	20	8	#
# Acetone	0.8934	1.1419	191.72	150	28	#
# Freon 113	0.2471	0.2447	19.81	20	-1	#
2-Propanol	0.5379	0.5150	143.61	150	-4	
Methyl Iodide	0.4261	0.4057	19.04	20	-5	
# Carbon Disulfide	0.7844	0.7080	18.05	20	-10	#
Allyl Chloride	0.3763	0.3475	18.47	20	-8	
# Methyl Acetate	0.3794	0.3713	19.58	20	-2	#
# Methylene Chloride	0.2591	0.2793	21.55	20	8	#
t-Butyl alcohol	1.1250	1.0964	194.92	200	-3	
Acrylonitrile	0.1987	0.1957	98.51	100	-1	
# trans-1,2-Dichloroethene	0.2514	0.2664	21.20	20	6	#
# Methyl Tertiary Butyl Ether	0.8648	0.8469	19.59	20	-2	#
n-Hexane	0.4262	0.4349	20.41	20	2	
# 1,1-Dichloroethane	0.4571	0.4791	20.96	20	5	#
di-Isopropyl ether	0.8732	0.8726	19.99	20	0	
2-Chloro-1,3-butadiene	0.4143	0.4226	20.40	20	2	
Ethyl t-butyl ether	0.8558	0.8417	19.67	20	-2	
# cis-1,2-Dichloroethene	0.2858	0.3154	22.08	20	10	#
# 2-Butanone	0.2965	0.3191	161.42	150	8	#
2,2-Dichloropropane	0.3509	0.3770	21.49	20	7	
Propionitrile	1.2939	1.3416	155.53	150	4	
Methacrylonitrile	0.2112	0.2150	152.65	150	2	
Bromochloromethane	0.1491	0.1480	19.85	20	-1	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 ICV Date: 09/10/19 Time: 16:58

Lab File ID: ys10v51.d Init. Calib. Date(s): 09/10/19 09/10/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Tetrahydrofuran	1.4036	1.4279	101.73	100	2	
#	Chloroform	0.4426	0.4690	21.19	20	6	#
#	1,1,1-Trichloroethane	0.3836	0.4059	21.16	20	6	#
#	Cyclohexane	0.5001	0.4834	19.33	20	-3	#
	1,1-Dichloropropene	0.3702	0.3918	21.16	20	6	
#	Carbon Tetrachloride	0.3270	0.3410	20.85	20	4	#
	Isobutyl Alcohol	0.3885	0.3796	488.48	500	-2	
#	Benzene	1.0825	1.1425	21.11	20	6	#
#	1,2-Dichloroethane	0.3839	0.4086	21.29	20	6	#
	t-Amyl methyl ether	0.8566	0.8504	19.85	20	-1	
	n-Heptane	0.4505	0.4348	19.30	20	-3	
	n-Butanol	0.3644	0.3657	1003.59	1000	0	
#	Trichloroethene	0.2800	0.2949	21.06	20	5	#
#	Methylcyclohexane	0.5313	0.5080	19.12	20	-4	#
#	1,2-Dichloropropane	0.2759	0.2985	21.63	20	8	#
	Dibromomethane	0.1820	0.1926	21.16	20	6	
	1,4-Dioxane	0.0777	0.0867	558.02	500	12	
	Methyl Methacrylate	0.3239	0.3206	19.80	20	-1	
#	Bromodichloromethane	0.3176	0.3374	21.24	20	6	#
	2-Nitropropane	0.1353	0.1162	17.18	20	-14	
	2-Chloroethyl Vinyl Ether	0.2332	0.2391	20.51	20	3	
#	cis-1,3-Dichloropropene	0.4285	0.4540	21.19	20	6	#
#	4-Methyl-2-pentanone	0.5588	0.5325	95.30	100	-5	#
#	Toluene	0.9260	0.9937	21.46	20	7	#
#	trans-1,3-Dichloropropene	0.5407	0.5591	20.68	20	3	#
	Ethyl Methacrylate	0.6852	0.6814	19.89	20	-1	
#	1,1,2-Trichloroethane	0.3571	0.3924	21.98	20	10	#
#	Tetrachloroethene	0.3919	0.4113	20.99	20	5	#
	1,3-Dichloropropane	0.6201	0.6572	21.20	20	6	
#	2-Hexanone	0.6116	0.6184	101.12	100	1	#
#	Dibromochloromethane	0.3474	0.3699	21.29	20	6	#
#	1,2-Dibromoethane	0.3887	0.4151	21.36	20	7	#
	1-Chlorohexane	0.5204	0.5331	20.49	20	2	
#	Chlorobenzene	1.0419	1.1191	21.48	20	7	#
	1,1,1,2-Tetrachloroethane	0.3327	0.3511	21.11	20	6	
#	Ethylbenzene	1.7734	1.9105	21.55	20	8	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 ICV Date: 09/10/19 Time: 16:58

Lab File ID: ys10v51.d Init. Calib. Date(s): 09/10/19 09/10/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# m+p-Xylene	0.6998	0.7601	43.45	40	9	#
# o-Xylene	0.6816	0.7388	21.68	20	8	#
# Styrene	1.1262	1.2392	22.01	20	10	#
# Bromoform	0.2502	0.2494	19.93	20	0	#
# Isopropylbenzene	1.7614	1.9349	21.97	20	10	#
Cyclohexanone	0.4126	0.3626	439.35	500	-12	
Bromobenzene	0.8213	0.8823	21.48	20	7	
# 1,1,2,2-Tetrachloroethane	1.1819	1.2423	21.02	20	5	#
1,2,3-Trichloropropane	0.3754	0.3958	21.09	20	5	
trans-1,4-Dichloro-2-butene	0.4085	0.4287	104.95	100	5	
n-Propylbenzene	3.8954	4.2848	22.00	20	10	
2-Chlorotoluene	0.8024	0.8629	21.51	20	8	
4-Chlorotoluene	0.8388	0.8976	21.40	20	7	
1,3,5-Trimethylbenzene	2.8818	3.1115	21.59	20	8	
tert-Butylbenzene	0.6035	0.6449	21.37	20	7	
Pentachloroethane	0.4583	0.4863	21.22	20	6	
1,2,4-Trimethylbenzene	3.0266	3.2248	21.31	20	7	
sec-Butylbenzene	3.6497	3.9988	21.91	20	10	
# 1,3-Dichlorobenzene	1.6088	1.7333	21.55	20	8	#
p-Isopropyltoluene	3.1360	3.4576	22.05	20	10	
# 1,4-Dichlorobenzene	1.6431	1.7848	21.72	20	9	#
1,2,3-Trimethylbenzene	3.1796	3.3709	21.20	20	6	
Benzyl Chloride	2.2931	2.2363	19.50	20	-2	
1,3-Diethylbenzene	2.0480	2.1188	20.69	20	3	
1,4-Diethylbenzene	2.1661	2.2485	20.76	20	4	
# 1,2-Dichlorobenzene	1.5733	1.6903	21.49	20	7	#
n-Butylbenzene	1.6580	1.7772	21.44	20	7	
1,2-Diethylbenzene	1.7230	1.7647	20.48	20	2	
# 1,2-Dibromo-3-chloropropane	0.3049	0.3081	20.21	20	1	#
1,3,5-Trichlorobenzene	1.2095	1.2789	21.15	20	6	
# 1,2,4-Trichlorobenzene	1.1589	1.2269	21.17	20	6	#
Hexachlorobutadiene	0.5164	0.5456	21.13	20	6	
Naphthalene	4.1088	4.3229	21.04	20	5	
1,2,3-Trichlorobenzene	1.1262	1.1792	20.94	20	5	
2-Methylnaphthalene	2.7162	2.5956	19.11	20	-4	
			Average %Drift		6	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

page 3 of 3 FORM VII VOA

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6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 11/04/19 11/04/19

Heated Purge: (Y/N) Y Calibration Times: 14:51 17:03

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ln04i07.d RRF 4 = ln04i06.d RRF 10= ln04i05.d
RRF 20= ln04i04.d RRF 50= ln04i03.d RRF100= ln04i02.d RRF300= ln04i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
Dichlorodifluoromethane	#0.2770	0.3398	0.3322	0.3567	0.3683	0.3624	0.4044	0.3487	11	AVG	#
Chloromethane	#0.3032	0.3486	0.3309	0.3441	0.3366	0.3315	0.3574	0.3361	5	AVG	#
1,3-Butadiene	0.3190	0.2966	0.2596	0.2831	0.2680	0.2614	0.2655	0.2790	8	AVG	
Vinyl Chloride	#0.3148	0.3359	0.3281	0.3461	0.3340	0.3300	0.3588	0.3354	4	AVG	#
Bromomethane	#0.2465	0.2525	0.2338	0.2435	0.2351	0.2280	0.2436	0.2404	4	AVG	#
Chloroethane	#0.1829	0.1883	0.1826	0.1903	0.1829	0.1768	0.1864	0.1843	2	AVG	#
Dichlorofluoromethane	0.4438	0.4434	0.4617	0.4547	0.4393	0.4194	0.4429	0.4436	3	AVG	
n-Pentane	0.4515	0.4661	0.3729	0.4321	0.4220	0.4236	0.4188	0.4267	7	AVG	
Trichlorofluoromethane	#0.3135	0.3650	0.3480	0.3680	0.3738	0.3637	0.3957	0.3611	7	AVG	#
Ethyl ether	0.2040	0.2292	0.2248	0.2407	0.2462	0.2325	0.2560	0.2333	7	AVG	
Freon 123a	0.2731	0.2973	0.2841	0.3052	0.2905	0.2871	0.2961	0.2905	4	AVG	
Acrolein	1.8108	1.7178	1.8759	1.9357	1.9501	1.9507	1.8885	1.8756	5	AVG	
1,1-Dichloroethene	#0.1836	0.2109	0.2092	0.2256	0.2170	0.2158	0.2215	0.2120	6	AVG	#
1,1-Dichloroethene(2)	#0.1023	0.1059	0.1045	0.1117	0.1063	0.1059	0.1072	0.1063	3	AVG	#
Acetone	#0.8149	0.8065	0.8248	0.8719	0.8448	0.8521	0.8711	0.8409	3	AVG	#
Freon 113	#0.2090	0.2460	0.2241	0.2555	0.2493	0.2512	0.2576	0.2418	8	AVG	#
2-Propanol	0.6190	0.5470	0.6059	0.5854	0.6149	0.6455	0.6138	0.6045	5	AVG	
Methyl Iodide	0.3896	0.4318	0.4390	0.4699	0.4471	0.4440	0.4531	0.4392	6	AVG	
Carbon Disulfide	#0.6790	0.7802	0.7759	0.8606	0.8244	0.8268	0.8441	0.7987	8	AVG	#
Allyl Chloride	0.3592	0.3785	0.3741	0.3853	0.3781	0.3777	0.4087	0.3802	4	AVG	
Methyl Acetate	#0.2759	0.2713	0.2678	0.2699	0.2708	0.2665	0.2887	0.2730	3	AVG	#
Methylene Chloride	#0.2376	0.2470	0.2510	0.2643	0.2542	0.2521	0.2596	0.2523	3	AVG	#
t-Butyl alcohol	0.9987	0.9567	1.0535	1.0361	1.0823	1.1654	1.0751	1.0525	6	AVG	
Acrylonitrile	0.1302	0.1382	0.1473	0.1543	0.1516	0.1518	0.1546	0.1469	6	AVG	
trans-1,2-Dichloroethene	#0.2214	0.2420	0.2423	0.2603	0.2478	0.2478	0.2548	0.2452	5	AVG	#
Methyl Tertiary Butyl Ether	#0.7408	0.7784	0.8166	0.8514	0.8245	0.8033	0.8186	0.8048	4	AVG	#
n-Hexane	0.3287	0.3697	0.3246	0.4104	0.3995	0.4116	0.4257	0.3815	11	AVG	
1,1-Dichloroethane	#0.3709	0.4279	0.4277	0.4500	0.4356	0.4348	0.4472	0.4277	6	AVG	#
di-Isopropyl ether	0.7323	0.7905	0.8261	0.8844	0.8488	0.8391	0.8535	0.8250	6	AVG	
2-Chloro-1,3-butadiene	0.3275	0.3721	0.3665	0.4087	0.3982	0.4003	0.4129	0.3838	8	AVG	
Ethyl t-butyl ether	0.7062	0.7711	0.8131	0.8688	0.8314	0.8069	0.8067	0.8006	6	AVG	
cis-1,2-Dichloroethene	#0.2518	0.2724	0.2701	0.2905	0.2780	0.2764	0.2874	0.2752	5	AVG	#
2-Butanone	#0.1780	0.1771	0.1844	0.1937	0.1954	0.1945	0.1965	0.1885	4	AVG	#
2,2-Dichloropropane	0.2822	0.3252	0.3231	0.3546	0.3451	0.3438	0.3535	0.3325	8	AVG	
Propionitrile	1.2429	1.2037	1.2978	1.3520	1.3266	1.3641	1.3930	1.3114	5	AVG	
Methacrylonitrile	0.1422	0.1460	0.1564	0.1674	0.1637	0.1633	0.1700	0.1584	7	AVG	
Bromochloromethane	0.1253	0.1402	0.1475	0.1518	0.1494	0.1475	0.1599	0.1459	7	AVG	
Tetrahydrofuran	1.1900	1.0886	1.1667	1.2087	1.1678	1.2286	1.2418	1.1846	4	AVG	
Chloroform	#0.3565	0.3938	0.4037	0.4404	0.4177	0.4181	0.4336	0.4091	7	AVG	#
1,1,1-Trichloroethane	#0.2897	0.3392	0.3356	0.3727	0.3627	0.3635	0.3807	0.3492	9	AVG	#
Cyclohexane	#0.3956	0.4609	0.4169	0.5022	0.4885	0.4944	0.5099	0.4669	10	AVG	#
Cyclohexane(2)	#0.3456	0.3987	0.3627	0.4329	0.4236	0.4319	0.4438	0.4056	9	AVG	#
Cyclohexane(3)	#0.1219	0.1428	0.1291	0.1542	0.1510	0.1531	0.1588	0.1444	10	AVG	#
1,1-Dichloropropene	0.2907	0.3348	0.3278	0.3579	0.3462	0.3479	0.3620	0.3382	7	AVG	
Carbon Tetrachloride	#0.2440	0.2777	0.2747	0.3128	0.3114	0.3175	0.3350	0.2961	11	AVG	#
Isobutyl Alcohol	0.3485	0.3107	0.3595	0.3421	0.3590	0.3974	0.3623	0.3542	7	AVG	
Benzene	#0.8990	1.0067	1.0148	1.0842	1.0359	1.0238	1.0549	1.0170	6	AVG	#
1,2-Dichloroethane	#0.3434	0.3191	0.3218	0.3337	0.3212	0.3202	0.3304	0.3271	3	AVG	#
1,2-Dichloroethane(2)	#0.0306	0.0316	0.0313	0.0343	0.0326	0.0322	0.0340	0.0324	4	AVG	#<-
t-Amyl methyl ether	0.7161	0.7648	0.8115	0.8675	0.8369	0.8221	0.8061	0.8036	6	AVG	
n-Heptane	0.3313	0.3538	0.2821	0.3843	0.3724	0.3852	0.3855	0.3564	11	AVG	
n-Butanol	0.2496	0.2624	0.3164	0.3024	0.3250	0.3551	0.3230	0.3049	12	AVG	

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 11/04/19 11/04/19

Heated Purge: (Y/N) Y Calibration Times: 14:51 17:03

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ln04i07.d RRF 4 = ln04i06.d RRF 10= ln04i05.d
RRF 20= ln04i04.d RRF 50= ln04i03.d RRF100= ln04i02.d RRF300= ln04i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Trichloroethene	#0.2300	0.2478	0.2477	0.2710	0.2607	0.2615	0.2739	0.2561	6	AVG #
Methylcyclohexane	#0.4066	0.4619	0.4494	0.4907	0.4946	0.4918	0.5306	0.4751	8	AVG #
Methylcyclohexane(2)	#0.1773	0.2158	0.2019	0.2198	0.2245	0.2228	0.2428	0.2150	10	AVG #
1,2-Dichloropropane	#0.2299	0.2478	0.2567	0.2731	0.2644	0.2644	0.2715	0.2582	6	AVG #
Dibromomethane	0.1450	0.1593	0.1638	0.1764	0.1719	0.1732	0.1801	0.1671	7	AVG
1,4-Dioxane	0.0728	0.0772	0.0845	0.0860	0.0888	0.0886	0.0887	0.0838	8	AVG
Methyl Methacrylate	0.2026	0.2254	0.2423	0.2604	0.2637	0.2705	0.2832	0.2497	11	AVG
Bromodichloromethane	#0.2483	0.2630	0.2867	0.3150	0.3161	0.3256	0.3442	0.2998	12	AVG #
2-Nitropropane	0.0733	0.0770	0.0825	0.0914	0.1013	0.1033	0.1070	0.0908	15	AVG
2-Chloroethyl Vinyl Ether	0.0882	0.0977	0.1040	0.1130	0.1155	0.1203	0.1378	0.1109	15	AVG
cis-1,3-Dichloropropene	#0.3066	0.3495	0.3874	0.4270	0.4265	0.4334	0.4572	0.3982	13	AVG #
4-Methyl-2-pentanone	#0.3519	0.3696	0.3930	0.4183	0.4328	0.4167	0.4032	0.3979	7	AVG #
Toluene	#0.7332	0.7931	0.8181	0.8731	0.8456	0.8312	0.8473	0.8202	6	AVG #
trans-1,3-Dichloropropene	#0.3482	0.3965	0.4507	0.4938	0.5103	0.5177	0.5421	0.4656	15	AVG #
Ethyl Methacrylate	0.4474	0.4901	0.5672	0.5969	0.6125	0.6196	0.6273	0.5659	12	AVG
1,1,2-Trichloroethane	#0.2783	0.2901	0.3087	0.3230	0.3222	0.3239	0.3306	0.3110	6	AVG #
Tetrachloroethene	#0.3162	0.3426	0.3214	0.3690	0.3559	0.3544	0.3721	0.3474	6	AVG #
1,3-Dichloropropane	0.4832	0.4915	0.5312	0.5551	0.5463	0.5472	0.5620	0.5309	6	AVG
2-Hexanone	#0.3356	0.3575	0.3750	0.3917	0.4210	0.3894	0.3737	0.3777	7	AVG #
Dibromochloromethane	#0.2335	0.2673	0.3027	0.3338	0.3491	0.3626	0.3808	0.3185	17	AVG #
1,2-Dibromoethane	#0.2934	0.3052	0.3308	0.3537	0.3534	0.3557	0.3715	0.3377	9	AVG #
1-Chlorohexane	0.4605	0.4391	0.3819	0.4601	0.4417	0.4418	0.4594	0.4406	6	AVG
Chlorobenzene	#0.8164	0.9033	0.9335	0.9825	0.9556	0.9405	0.9609	0.9275	6	AVG #
1,1,1,2-Tetrachloroethane	0.2351	0.2774	0.2999	0.3286	0.3310	0.3327	0.3346	0.3056	12	AVG
Ethylbenzene	#1.3747	1.5457	1.5220	1.6801	1.6314	1.6113	1.6087	1.5677	6	AVG #
m+p-Xylene	#0.5374	0.6016	0.5976	0.6715	0.6453	0.6383	0.6253	0.6167	7	AVG #
o-Xylene	#0.5399	0.5806	0.5978	0.6590	0.6427	0.6294	0.6148	0.6092	7	AVG #
Styrene	#0.8016	0.9301	1.0102	1.0972	1.0847	1.0669	1.0557	1.0066	11	AVG #
Bromoform	#	0.1724	0.2151	0.2312	0.2542	0.2685	0.2868	0.2380	17	AVG #
Isopropylbenzene	#1.2910	1.5137	1.4363	1.6684	1.6105	1.5929	1.5825	1.5279	8	AVG #
Cyclohexanone	0.3281	0.3024	0.3195	0.3248	0.3437	0.3247	0.3541	0.3282	5	AVG
Bromobenzene	0.6787	0.7176	0.7360	0.7885	0.7819	0.7772	0.7803	0.7515	6	AVG
1,1,2,2-Tetrachloroethane	#0.8022	0.8637	0.9996	0.9771	0.9960	0.9947	0.9782	0.9445	8	AVG #
1,2,3-Trichloropropane	0.2561	0.2658	0.3031	0.2987	0.2999	0.3027	0.3026	0.2898	7	AVG
trans-1,4-Dichloro-2-butene	0.2392	0.2651	0.2913	0.3105	0.3171	0.3156	0.3005	0.2913	10	AVG
n-Propylbenzene	2.9207	3.2949	2.9806	3.5724	3.4357	3.4054	3.3722	3.2831	7	AVG
2-Chlorotoluene	0.6482	0.6609	0.6535	0.7438	0.7252	0.7177	0.7330	0.6975	6	AVG
4-Chlorotoluene	0.6762	0.7074	0.6870	0.7741	0.7474	0.7369	0.7530	0.7260	5	AVG
1,3,5-Trimethylbenzene	1.9893	2.3249	2.1852	2.6169	2.5322	2.5250	2.5281	2.3860	10	AVG
tert-Butylbenzene	0.4288	0.4845	0.4243	0.5332	0.5247	0.5261	0.5325	0.4934	10	AVG
Pentachloroethane	0.2905	0.3724	0.4105	0.4466	0.4692	0.4744	0.5106	0.4249	18	AVG
1,2,4-Trimethylbenzene	2.1648	2.4282	2.3275	2.7429	2.6696	2.6607	2.6088	2.5147	8	AVG
sec-Butylbenzene	2.5710	2.9123	2.5624	3.2580	3.1256	3.1495	3.0325	2.9444	9	AVG
1,3-Dichlorobenzene	#1.3168	1.3435	1.3443	1.4749	1.4337	1.4053	1.3479	1.3809	4	AVG #
p-Isopropyltoluene	2.2311	2.5145	2.2448	2.8322	2.7191	2.7434	2.5461	2.5473	9	AVG
1,4-Dichlorobenzene	#1.3913	1.3992	1.3855	1.5164	1.4765	1.4501	1.4018	1.4315	4	AVG #
1,2,3-Trimethylbenzene	2.3717	2.5881	2.6584	2.7814	2.7739	2.7079	2.7646	2.6637	6	AVG
Benzyl Chloride		1.4905	1.9042	2.0277	2.1892	2.2241	2.2651	2.0168	14	AVG
1,3-Diethylbenzene	1.4770	1.6040	1.6373	1.7518	1.7206	1.7031	1.7107	1.6578	6	AVG
1,4-Diethylbenzene	1.6313	1.7295	1.7208	1.8600	1.8134	1.7888	1.7510	1.7564	4	AVG
1,2-Dichlorobenzene	#1.2854	1.3272	1.3476	1.4407	1.4096	1.3800	1.3479	1.3626	4	AVG #
n-Butylbenzene	1.2635	1.3335	1.1354	1.4216	1.3485	1.3543	1.2604	1.3024	7	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 11/04/19 11/04/19

Heated Purge: (Y/N) Y Calibration Times: 14:51 17:03

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ln04i07.d RRF 4 = ln04i06.d RRF 10= ln04i05.d
RRF 20= ln04i04.d RRF 50= ln04i03.d RRF100= ln04i02.d RRF300= ln04i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
1,2-Diethylbenzene	1.2665	1.3513	1.3737	1.4741	1.4581	1.4365	1.4223	1.3975	5	AVG
1,2-Dibromo-3-chloropropane#	0.1653	0.1703	0.2163	0.2130	0.2240	0.2247	0.2337	0.2068	13	AVG #
1,3,5-Trichlorobenzene	1.0736	1.0363	0.9506	1.1293	1.0680	1.0728	0.9975	1.0469	6	AVG
1,2,4-Trichlorobenzene #	1.0928	0.9898	0.9467	1.0851	1.0411	1.0335	0.9366	1.0179	6	AVG #
Hexachlorobutadiene		0.6224	0.4463	0.5319	0.4489	0.4300	0.4042	0.4806	17	AVG
Naphthalene	2.9793	3.0036	3.3068	3.4936	3.4918	3.4237	3.2086	3.2725	7	AVG
1,2,3-Trichlorobenzene	1.0616	0.9674	0.9274	1.0684	1.0300	1.0095	0.8692	0.9905	7	AVG
2-Methylnaphthalene	1.9837	1.8879	2.0390	2.2209	2.2298	2.1150	1.6300	2.0152	10	AVG
Dibromofluoromethane	0.2407	0.2444	0.2426	0.2463	0.2437	0.2470	0.2465	0.2445	1	AVG
Dibromofluoromethane(2)	0.2457	0.2504	0.2472	0.2513	0.2494	0.2516	0.2491	0.2492	1	AVG
1,2-Dichloroethane-d4	0.0612	0.0629	0.0625	0.0629	0.0628	0.0627	0.0611	0.0623	1	AVG
1,2-Dichloroethane-d4(2)	0.2741	0.2818	0.2744	0.2819	0.2771	0.2799	0.2742	0.2776	1	AVG
1,2-Dichloroethane-d4(3)	0.0389	0.0398	0.0398	0.0408	0.0397	0.0402	0.0393	0.0398	2	AVG
Toluene-d8	1.3149	1.3039	1.3148	1.3125	1.3146	1.3005	1.2968	1.3083	1	AVG
Toluene-d8(2)	0.8480	0.8436	0.8547	0.8509	0.8480	0.8442	0.8428	0.8475	1	AVG
4-Bromofluorobenzene	0.4958	0.4982	0.5005	0.4967	0.4932	0.4898	0.4935	0.4954	1	AVG
4-Bromofluorobenzene(2)	0.4097	0.4154	0.4152	0.4118	0.4097	0.4065	0.4066	0.4107	1	AVG

Average %RSD 7

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

FORM VI VOA

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP09915.i/19nov04i.b/ln04i01.d	VSTD300
/chem/HP09915.i/19nov04i.b/ln04i02.d	VSTD100
/chem/HP09915.i/19nov04i.b/ln04i03.d	VSTD050
/chem/HP09915.i/19nov04i.b/ln04i04.d	VSTD020
/chem/HP09915.i/19nov04i.b/ln04i05.d	VSTD010
/chem/HP09915.i/19nov04i.b/ln04i06.d	VSTD004
/chem/HP09915.i/19nov04i.b/ln04i07.d	VSTD001

Area Summary

File ID:

Internal Standard Name	ln04i01.d	ln04i02.d	ln04i03.d	ln04i04.d	ln04i05.d	ln04i06.d	ln04i07.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	254406	265971	269779	258058	263427	262044	243591	259611	3	Yes
Fluorobenzene	1120873	1183605	1160755	1128743	1158257	1148427	1137124	1148255	2	Yes
Chlorobenzene-d5	891668	935628	904578	883281	897139	884065	879875	896605	2	Yes
1,4-Dichlorobenzene-d4	477171	500629	483927	476218	496298	480071	473433	483964	2	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	ln04i01.d	ln04i02.d	ln04i03.d	ln04i04.d	ln04i05.d	ln04i06.d	ln04i07.d	Avg. RT
t-Butyl alcohol-d10	4.503	4.509	4.509	4.512	4.509	4.512	4.496	4.507
Fluorobenzene	7.959	7.962	7.959	7.962	7.956	7.959	7.959	7.960
Chlorobenzene-d5	11.361	11.361	11.361	11.361	11.358	11.358	11.358	11.360
1,4-Dichlorobenzene-d4	13.223	13.223	13.223	13.223	13.223	13.223	13.223	13.223

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 11/05/2019 at 16:07.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 11/04/19 Time: 18:42

Lab File ID: ln04v02.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3487	0.3266	18.73	20	-6	#
# Chloromethane	0.3361	0.3180	18.93	20	-5	#
1,3-Butadiene	0.2790	0.2741	19.65	20	-2	
# Vinyl Chloride	0.3354	0.3245	19.35	20	-3	#
# Bromomethane	0.2404	0.2156	17.93	20	-10	#
# Chloroethane	0.1843	0.1704	18.49	20	-8	#
Dichlorofluoromethane	0.4436	0.3598	16.22	20	-19	
n-Pentane	0.4267	0.4057	19.01	20	-5	
# Trichlorofluoromethane	0.3611	0.3746	20.75	20	4	#
Ethyl ether	0.2333	0.1939	16.62	20	-17	
Freon 123a	0.2905	0.2825	19.45	20	-3	
Acrolein	1.8756	1.6896	135.12	150	-10	
# 1,1-Dichloroethene	0.2120	0.2216	20.91	20	5	#
# Acetone	0.8409	0.7666	136.75	150	-9	#
# Freon 113	0.2418	0.2394	19.80	20	-1	#
2-Propanol	0.6045	0.5806	144.06	150	-4	
Methyl Iodide	0.4392	0.4077	18.56	20	-7	
# Carbon Disulfide	0.7987	0.7452	18.66	20	-7	#
Allyl Chloride	0.3802	0.3535	18.59	20	-7	
# Methyl Acetate	0.2730	0.2606	19.09	20	-5	#
# Methylene Chloride	0.2523	0.2570	20.38	20	2	#
t-Butyl alcohol	1.0525	1.0046	190.90	200	-5	
Acrylonitrile	0.1469	0.1395	94.98	100	-5	
# trans-1,2-Dichloroethene	0.2452	0.2452	20.00	20	0	#
# Methyl Tertiary Butyl Ether	0.8048	0.7596	18.87	20	-6	#
n-Hexane	0.3815	0.3828	20.07	20	0	
# 1,1-Dichloroethane	0.4277	0.4163	19.46	20	-3	#
di-Isopropyl ether	0.8250	0.7868	19.08	20	-5	
2-Chloro-1,3-butadiene	0.3838	0.3659	19.07	20	-5	
Ethyl t-butyl ether	0.8006	0.7634	19.07	20	-5	
# cis-1,2-Dichloroethene	0.2752	0.2889	20.99	20	5	#
# 2-Butanone	0.1885	0.1794	142.74	150	-5	#
2,2-Dichloropropane	0.3325	0.3377	20.31	20	2	
Propionitrile	1.3114	1.2333	141.06	150	-6	
Methacrylonitrile	0.1584	0.1535	145.31	150	-3	
Bromochloromethane	0.1459	0.1368	18.75	20	-6	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 11/04/19 Time: 18:42

Lab File ID: ln04v02.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
	COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
	Tetrahydrofuran	1.1846	1.0959	92.51	100	-7	
#	Chloroform	0.4091	0.4123	20.16	20	1	#
#	1,1,1-Trichloroethane	0.3492	0.3558	20.38	20	2	#
#	Cyclohexane	0.4669	0.4442	19.02	20	-5	#
	1,1-Dichloropropene	0.3382	0.3393	20.07	20	0	
#	Carbon Tetrachloride	0.2961	0.2964	20.02	20	0	#
	Isobutyl Alcohol	0.3542	0.3198	451.41	500	-10	
#	Benzene	1.0170	1.0168	20.00	20	0	#
#	1,2-Dichloroethane	0.3271	0.3373	20.62	20	3	#
	t-Amyl methyl ether	0.8036	0.7630	18.99	20	-5	
	n-Heptane	0.3564	0.3376	18.95	20	-5	
	n-Butanol	0.3049	0.2780	911.92	1000	-9	
#	Trichloroethene	0.2561	0.2581	20.16	20	1	#
#	Methylcyclohexane	0.4751	0.4589	19.32	20	-3	#
#	1,2-Dichloropropane	0.2582	0.2641	20.45	20	2	#
	Dibromomethane	0.1671	0.1672	20.01	20	0	
	1,4-Dioxane	0.0838	0.0844	503.75	500	1	
	Methyl Methacrylate	0.2497	0.2388	19.13	20	-4	
#	Bromodichloromethane	0.2998	0.2984	19.91	20	0	#
	2-Nitropropane	0.0908	0.0741	16.32	20	-18	
	2-Chloroethyl Vinyl Ether	0.1109	0.1056	19.04	20	-5	
#	cis-1,3-Dichloropropene	0.3982	0.3957	19.87	20	-1	#
#	4-Methyl-2-pentanone	0.3979	0.3693	92.81	100	-7	#
#	Toluene	0.8202	0.8294	20.22	20	1	#
#	trans-1,3-Dichloropropene	0.4656	0.4472	19.21	20	-4	#
	Ethyl Methacrylate	0.5659	0.5138	18.16	20	-9	
#	1,1,2-Trichloroethane	0.3110	0.3171	20.39	20	2	#
#	Tetrachloroethene	0.3474	0.3842	22.12	20	11	#
	1,3-Dichloropropane	0.5309	0.5224	19.68	20	-2	
#	2-Hexanone	0.3777	0.3481	92.15	100	-8	#
#	Dibromochloromethane	0.3185	0.3147	19.76	20	-1	#
#	1,2-Dibromoethane	0.3377	0.3356	19.88	20	-1	#
	1-Chlorohexane	0.4406	0.4292	19.48	20	-3	
#	Chlorobenzene	0.9275	0.9379	20.22	20	1	#
	1,1,1,2-Tetrachloroethane	0.3056	0.3029	19.82	20	-1	
#	Ethylbenzene	1.5677	1.5899	20.28	20	1	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 11/04/19 Time: 18:42

Lab File ID: ln04v02.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# m+p-Xylene	0.6167	0.6315	40.96	40	2	#
# o-Xylene	0.6092	0.6189	20.32	20	2	#
# Styrene	1.0066	1.0350	20.56	20	3	#
# Bromoform	0.2380	0.2137	17.95	20	-10	#
# Isopropylbenzene	1.5279	1.5939	20.86	20	4	#
Cyclohexanone	0.3282	0.2949	449.36	500	-10	
Bromobenzene	0.7515	0.7447	19.82	20	-1	
# 1,1,2,2-Tetrachloroethane	0.9445	0.9245	19.58	20	-2	#
1,2,3-Trichloropropane	0.2898	0.2890	19.94	20	0	
trans-1,4-Dichloro-2-butene	0.2913	0.2850	97.83	100	-2	
n-Propylbenzene	3.2831	3.4091	20.77	20	4	
2-Chlorotoluene	0.6975	0.7037	20.18	20	1	
4-Chlorotoluene	0.7260	0.7301	20.11	20	1	
1,3,5-Trimethylbenzene	2.3860	2.4518	20.55	20	3	
tert-Butylbenzene	0.4934	0.5090	20.63	20	3	
Pentachloroethane	0.4249	0.3657	17.21	20	-14	
1,2,4-Trimethylbenzene	2.5147	2.5110	19.97	20	0	
sec-Butylbenzene	2.9444	3.0247	20.55	20	3	
# 1,3-Dichlorobenzene	1.3809	1.3855	20.07	20	0	#
p-Isopropyltoluene	2.5473	2.6162	20.54	20	3	
# 1,4-Dichlorobenzene	1.4315	1.4660	20.48	20	2	#
1,2,3-Trimethylbenzene	2.6637	2.6470	19.87	20	-1	
Benzyl Chloride	2.0168	1.6153	16.02	20	-20	
1,3-Diethylbenzene	1.6578	1.5827	19.09	20	-5	
1,4-Diethylbenzene	1.7564	1.6691	19.01	20	-5	
# 1,2-Dichlorobenzene	1.3626	1.3874	20.36	20	2	#
n-Butylbenzene	1.3024	1.2702	19.50	20	-2	
1,2-Diethylbenzene	1.3975	1.3386	19.16	20	-4	
# 1,2-Dibromo-3-chloropropane	0.2068	0.1994	19.29	20	-4	#
1,3,5-Trichlorobenzene	1.0469	0.9964	19.04	20	-5	
# 1,2,4-Trichlorobenzene	1.0179	0.9765	19.19	20	-4	#
Hexachlorobutadiene	0.4806	0.4071	16.94	20	-15	
Naphthalene	3.2725	3.2676	19.97	20	0	
1,2,3-Trichlorobenzene	0.9905	0.9443	19.07	20	-5	
2-Methylnaphthalene	2.0152	1.8367	18.23	20	-9	

Average %Drift 5

Compounds with required minimum RRF.
Maximum % Drift = 30 %

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6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 Calibration Date(s): 11/25/19 11/25/19

Heated Purge: (Y/N) Y Calibration Times: 14:39 16:40

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = en25i07.d RRF 4 = en25i06.d RRF 10= en25i05.d
RRF 20= en25i04.d RRF 50= en25i03.d RRF100= en25i02.d RRF300= en25i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Dichlorodifluoromethane	#0.2839	0.3502	0.3694	0.3539	0.3628	0.3908	0.3818	0.3561	10	AVG #
Chloromethane	#0.4226	0.4291	0.4623	0.4402	0.4258	0.4430	0.4451	0.4383	3	AVG #
1,3-Butadiene	0.3657	0.3559	0.3140	0.3240	0.2908	0.2997	0.2907	0.3201	10	AVG
Vinyl Chloride	#0.3414	0.3907	0.4019	0.3962	0.3896	0.4149	0.4027	0.3911	6	AVG #
Bromomethane	#0.1884	0.2060	0.2225	0.2194	0.2080	0.2175	0.1972	0.2084	6	AVG #
Chloroethane	#0.1895	0.2104	0.2225	0.2096	0.2078	0.2155	0.2033	0.2084	5	AVG #
Dichlorofluoromethane	0.4577	0.4931	0.5305	0.5036	0.5014	0.5105	0.4924	0.4985	4	AVG
n-Pentane	0.4191	0.4709	0.4809	0.4929	0.4681	0.4945	0.4771	0.4719	5	AVG
Trichlorofluoromethane	#0.3363	0.3780	0.3928	0.3777	0.3816	0.4088	0.3921	0.3810	6	AVG #
Ethyl ether	0.2164	0.2450	0.2528	0.2596	0.2495	0.2595	0.2577	0.2486	6	AVG
Freon 123a	0.2764	0.2998	0.3091	0.3143	0.2990	0.3109	0.2968	0.3009	4	AVG
Acrolein	2.0297	1.9798	2.1938	2.1083	2.0788	2.1736	2.2123	2.1109	4	AVG
1,1-Dichloroethene	#0.1708	0.1934	0.1939	0.2033	0.1916	0.2001	0.1914	0.1921	5	AVG #
1,1-Dichloroethene(2)	#0.0978	0.1080	0.1092	0.1148	0.1082	0.1121	0.1081	0.1083	5	AVG #
Acetone	#0.6316	0.8684	0.9538	0.9263	0.9130	0.9548	0.9547	0.8861	13	AVG #
Freon 113	#0.1783	0.2273	0.2299	0.2348	0.2269	0.2388	0.2223	0.2226	9	AVG #
2-Propanol	0.5907	0.5822	0.6405	0.6182	0.6447	0.6368	0.6130	0.6180	4	AVG
Methyl Iodide	0.3215	0.3327	0.3410	0.3479	0.3369	0.3487	0.3432	0.3388	3	AVG
Carbon Disulfide	#0.6799	0.7186	0.6891	0.7230	0.6874	0.7252	0.7067	0.7043	3	AVG #
Allyl Chloride	0.4212	0.4253	0.4401	0.4529	0.4284	0.4407	0.4418	0.4358	3	AVG
Methyl Acetate	#0.2519	0.2516	0.2380	0.2442	0.2420	0.2490	0.2579	0.2478	3	AVG #
Methylene Chloride	#0.2260	0.2341	0.2356	0.2379	0.2288	0.2386	0.2358	0.2338	2	AVG #
t-Butyl alcohol	0.9801	0.9181	1.0072	0.9609	1.0067	0.9287	0.8889	0.9558	5	AVG
Acrylonitrile	0.1236	0.1315	0.1498	0.1457	0.1491	0.1536	0.1500	0.1433	8	AVG
trans-1,2-Dichloroethene	#0.2191	0.2203	0.2200	0.2284	0.2201	0.2300	0.2218	0.2228	2	AVG #
Methyl Tertiary Butyl Ether	#0.7120	0.7496	0.7615	0.7844	0.7578	0.7740	0.7550	0.7563	3	AVG #
n-Hexane	0.3697	0.4476	0.4641	0.4735	0.4627	0.4897	0.4868	0.4563	9	AVG
1,1-Dichloroethane	#0.4555	0.4744	0.4775	0.4856	0.4668	0.4840	0.4757	0.4742	2	AVG #
di-Isopropyl ether	0.9351	0.9742	0.9821	0.9913	0.9704	0.9986	0.9875	0.9770	2	AVG
2-Chloro-1,3-butadiene	0.3706	0.4432	0.4422	0.4545	0.4460	0.4696	0.4549	0.4401	7	AVG
Ethyl t-butyl ether	0.8274	0.8711	0.8770	0.8953	0.8675	0.8816	0.8455	0.8665	3	AVG
cis-1,2-Dichloroethene	#0.2360	0.2574	0.2597	0.2605	0.2525	0.2630	0.2556	0.2549	4	AVG #
2-Butanone	#0.1559	0.1651	0.1941	0.1830	0.1865	0.1967	0.1922	0.1819	9	AVG #
2,2-Dichloropropane	0.3110	0.3565	0.3480	0.3656	0.3567	0.3736	0.3430	0.3506	6	AVG
Propionitrile	1.3578	1.3965	1.4199	1.4459	1.3852	1.4679	1.6008	1.4391	6	AVG
Methacrylonitrile	0.1316	0.1356	0.1446	0.1470	0.1413	0.1476	0.1511	0.1427	5	AVG
Bromochloromethane	0.1032	0.1117	0.1130	0.1200	0.1151	0.1199	0.1217	0.1149	6	AVG
Tetrahydrofuran	0.9992	1.1337	1.2595	1.1990	1.1963	1.2490	1.3002	1.1910	8	AVG
Chloroform	#0.3852	0.4040	0.4021	0.4149	0.4046	0.4181	0.4081	0.4053	3	AVG #
1,1,1-Trichloroethane	#0.3046	0.3440	0.3371	0.3498	0.3439	0.3584	0.3315	0.3385	5	AVG #
Cyclohexane	#0.4947	0.5552	0.5722	0.5856	0.5671	0.5962	0.5704	0.5631	6	AVG #
Cyclohexane(2)	#0.3878	0.4261	0.4521	0.4515	0.4399	0.4605	0.4406	0.4369	6	AVG #
Cyclohexane(3)	#0.1450	0.1697	0.1642	0.1678	0.1642	0.1749	0.1657	0.1645	6	AVG #
1,1-Dichloropropene	0.3298	0.3560	0.3690	0.3708	0.3565	0.3762	0.3619	0.3600	4	AVG
Carbon Tetrachloride	#0.2206	0.2577	0.2651	0.2762	0.2698	0.2890	0.2586	0.2624	8	AVG #
Isobutyl Alcohol	0.2905	0.2873	0.3104	0.3133	0.3276	0.3196	0.3434	0.3132	6	AVG
Benzene	#0.9931	1.0792	1.0747	1.0962	1.0539	1.0968	1.0711	1.0664	3	AVG #
1,2-Dichloroethane	#0.3711	0.3246	0.3230	0.3291	0.3180	0.3291	0.3294	0.3320	5	AVG #
1,2-Dichloroethane(2)	#0.0270	0.0278	0.0272	0.0284	0.0280	0.0288	0.0289	0.0280	3	AVG #<-
t-Amyl methyl ether	0.8022	0.7998	0.8106	0.8302	0.8115	0.8190	0.7851	0.8084	2	AVG
n-Heptane	0.4635	0.4984	0.5248	0.5196	0.5038	0.5453	0.5672	0.5175	6	AVG
n-Butanol	0.2072	0.2276	0.2596	0.2563	0.2895	0.2794	0.3089	0.2612	14	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

FORM VI VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 Calibration Date(s): 11/25/19 11/25/19

Heated Purge: (Y/N) Y Calibration Times: 14:39 16:40

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = en25i07.d RRF 4 = en25i06.d RRF 10= en25i05.d
RRF 20= en25i04.d RRF 50= en25i03.d RRF100= en25i02.d RRF300= en25i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Trichloroethene	#0.2183	0.2519	0.2513	0.2590	0.2458	0.2583	0.2520	0.2481	6	AVG #
Methylcyclohexane	#0.4400	0.5096	0.5329	0.5568	0.5346	0.5550	0.5813	0.5300	9	AVG #
Methylcyclohexane(2)	#0.1820	0.2213	0.2350	0.2483	0.2366	0.2457	0.2554	0.2320	11	AVG #
1,2-Dichloropropane	#0.2447	0.2779	0.2802	0.2890	0.2801	0.2911	0.2895	0.2789	6	AVG #
Dibromomethane	0.1292	0.1333	0.1390	0.1460	0.1409	0.1464	0.1474	0.1403	5	AVG
1,4-Dioxane	0.0620	0.0791	0.0900	0.0872	0.0901	0.0919	0.0991	0.0856	14	AVG
Methyl Methacrylate	0.1865	0.2039	0.2194	0.2289	0.2276	0.2392	0.2460	0.2217	9	AVG
Bromodichloromethane	#0.2560	0.2726	0.2847	0.2945	0.2919	0.3080	0.3039	0.2874	6	AVG #
2-Nitropropane	0.0521	0.0465	0.0520	0.0501	0.0517	0.0551	0.0564	0.0520	6	AVG
2-Chloroethyl Vinyl Ether	0.1733	0.1902	0.1935	0.2428	0.2097	0.2186	0.2245	0.2075	11	AVG
cis-1,3-Dichloropropene	#0.3533	0.3911	0.3854	0.4139	0.4121	0.4354	0.4345	0.4037	7	AVG #
4-Methyl-2-pentanone	#0.3252	0.3459	0.3920	0.3844	0.3997	0.4235	0.3980	0.3812	9	AVG #
Toluene	#0.8714	0.9258	0.9391	0.9569	0.9197	0.9620	0.9233	0.9283	3	AVG #
trans-1,3-Dichloropropene	#0.4693	0.4653	0.4969	0.5281	0.5252	0.5559	0.5501	0.5130	7	AVG #
Ethyl Methacrylate	0.4656	0.5369	0.5665	0.5780	0.5915	0.6153	0.6138	0.5668	9	AVG
1,1,2-Trichloroethane	#0.2597	0.2915	0.2926	0.2991	0.2962	0.3060	0.3035	0.2926	5	AVG #
Tetrachloroethene	#0.2956	0.3507	0.3747	0.3907	0.3354	0.3446	0.3251	0.3453	9	AVG #
1,3-Dichloropropane	0.5223	0.5432	0.5732	0.5709	0.5666	0.5857	0.5853	0.5639	4	AVG
2-Hexanone	#0.3108	0.3346	0.4064	0.3979	0.4010	0.4359	0.3937	0.3829	11	AVG #
Dibromochloromethane	#0.2225	0.2489	0.2670	0.2740	0.2863	0.2985	0.2958	0.2704	10	AVG #
1,2-Dibromoethane	#0.2846	0.2836	0.3009	0.3076	0.3062	0.3160	0.3149	0.3020	4	AVG #
1-Chlorohexane	0.5541	0.5604	0.5453	0.5491	0.5325	0.5576	0.5322	0.5473	2	AVG
Chlorobenzene	#0.9222	0.9593	0.9816	0.9855	0.9590	0.9982	0.9609	0.9667	3	AVG #
1,1,1,2-Tetrachloroethane	0.2242	0.2731	0.2835	0.2936	0.2955	0.3096	0.3037	0.2833	10	AVG
Ethylbenzene	#1.6462	1.8198	1.8302	1.8675	1.8138	1.8995	1.8229	1.8143	4	AVG #
m+p-Xylene	#0.6279	0.6721	0.6927	0.7009	0.6842	0.7082	0.6767	0.6804	4	AVG #
o-Xylene	#0.5739	0.6549	0.6849	0.6785	0.6745	0.6954	0.6645	0.6609	6	AVG #
Styrene	#0.8947	0.9970	1.0845	1.1104	1.1104	1.1627	1.1312	1.0701	9	AVG #
Bromoform	#0.1301	0.1482	0.1568	0.1685	0.1797	0.1854	0.1884	0.1653	13	AVG #
Isopropylbenzene	#1.5951	1.7747	1.7991	1.8552	1.8169	1.9015	1.8159	1.7941	5	AVG #
Cyclohexanone	0.2974	0.3116	0.3313	0.3397	0.3378	0.3550	0.3930	0.3380	9	AVG
Bromobenzene	0.6295	0.7085	0.7284	0.7366	0.7300	0.7564	0.7604	0.7214	6	AVG
1,1,2,2-Tetrachloroethane	#0.8928	0.9676	0.9782	0.9515	0.9767	0.9715	0.9911	0.9614	3	AVG #
1,2,3-Trichloropropane	0.2496	0.2685	0.2726	0.2671	0.2736	0.2700	0.2804	0.2688	4	AVG
trans-1,4-Dichloro-2-butene	0.2407	0.2730	0.3045	0.3077	0.3138	0.3212	0.3346	0.2994	11	AVG
n-Propylbenzene	3.8407	4.3214	4.4615	4.5693	4.4755	4.6337	4.5440	4.4066	6	AVG
2-Chlorotoluene	0.6828	0.7941	0.8200	0.8169	0.8155	0.8381	0.8277	0.7993	7	AVG
4-Chlorotoluene	0.7386	0.8056	0.8435	0.8329	0.8288	0.8572	0.8317	0.8198	5	AVG
1,3,5-Trimethylbenzene	2.7096	2.9513	3.0599	3.1434	3.1421	3.2851	3.2171	3.0726	6	AVG
tert-Butylbenzene	0.5402	0.6244	0.6573	0.6846	0.6682	0.7035	0.6954	0.6534	9	AVG
Pentachloroethane	0.2705	0.3218	0.3091	0.3297	0.3906	0.4312	0.4647	0.3596	20	AVG
1,2,4-Trimethylbenzene	2.7231	3.0775	3.1807	3.2612	3.2615	3.3590	3.3465	3.1727	7	AVG
sec-Butylbenzene	3.3469	3.9038	4.0676	4.1738	4.1169	4.3565	4.2720	4.0339	8	AVG
1,3-Dichlorobenzene	#1.4051	1.4496	1.4644	1.4745	1.4865	1.5185	1.5213	1.4743	3	AVG #
p-Isopropyltoluene	2.7959	3.2354	3.3311	3.4195	3.3991	3.6008	3.5483	3.3329	8	AVG
1,4-Dichlorobenzene	#1.4041	1.4555	1.4947	1.4863	1.4774	1.5241	1.5112	1.4790	3	AVG #
1,2,3-Trimethylbenzene	2.8336	3.0865	3.2226	3.4261	3.3198	3.4163	3.5354	3.2629	7	AVG
Benzyl Chloride	1.4109	1.5530	1.6983	1.7486	1.9051	2.0067	2.1393	1.7803	14	AVG
1,3-Diethylbenzene	1.7256	1.9387	2.0905	2.2047	2.1175	2.1970	2.2807	2.0793	9	AVG
1,4-Diethylbenzene	1.8356	2.0116	2.1552	2.3135	2.2103	2.3097	2.3691	2.1721	9	AVG
1,2-Dichlorobenzene	#1.2894	1.3652	1.3977	1.3844	1.3992	1.4199	1.3922	1.3783	3	AVG #
n-Butylbenzene	1.5127	1.6985	1.7700	1.8084	1.7969	1.8830	1.8515	1.7601	7	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 Calibration Date(s): 11/25/19 11/25/19

Heated Purge: (Y/N) Y Calibration Times: 14:39 16:40

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = en25i07.d RRF 4 = en25i06.d RRF 10= en25i05.d
RRF 20= en25i04.d RRF 50= en25i03.d RRF100= en25i02.d RRF300= en25i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
1,2-Diethylbenzene	1.5310	1.6132	1.7504	1.8381	1.7418	1.8162	1.8883	1.7399	7	AVG
1,2-Dibromo-3-chloropropane#	0.1658	0.1844	0.2112	0.1969	0.2107	0.2124	0.2200	0.2002	10	AVG #
1,3,5-Trichlorobenzene	0.9628	0.9601	1.0061	1.0376	1.0448	1.0928	1.0786	1.0261	5	AVG
1,2,4-Trichlorobenzene #	0.8427	0.8991	0.9018	0.9289	0.9380	0.9718	0.9410	0.9176	5	AVG #
Hexachlorobutadiene	0.3235	0.3705	0.3710	0.3802	0.3776	0.4193	0.4073	0.3785	8	AVG
Naphthalene	3.2603	3.0731	3.1705	3.1783	3.2231	3.2867	3.1401	3.1903	2	AVG
1,2,3-Trichlorobenzene	0.9198	0.8537	0.8661	0.8806	0.8841	0.9132	0.8557	0.8819	3	AVG
2-Methylnaphthalene	2.0707	1.7587	1.8817	2.0562	1.9467	2.1022	1.7826	1.9427	7	AVG
Dibromofluoromethane	0.2122	0.2127	0.2130	0.2137	0.2121	0.2114	0.2137	0.2127	0	AVG
Dibromofluoromethane(2)	0.2200	0.2181	0.2206	0.2228	0.2175	0.2196	0.2216	0.2200	1	AVG
1,2-Dichloroethane-d4	0.0576	0.0552	0.0568	0.0565	0.0574	0.0567	0.0567	0.0567	1	AVG
1,2-Dichloroethane-d4(2)	0.2858	0.2852	0.2852	0.2828	0.2798	0.2811	0.2862	0.2837	1	AVG
1,2-Dichloroethane-d4(3)	0.0358	0.0353	0.0363	0.0359	0.0358	0.0362	0.0363	0.0360	1	AVG
Toluene-d8	1.4143	1.4254	1.4242	1.4240	1.4178	1.4155	1.4153	1.4195	0	AVG
Toluene-d8(2)	0.9172	0.9054	0.9179	0.9068	0.9119	0.9105	0.9099	0.9114	1	AVG
4-Bromofluorobenzene	0.5376	0.5331	0.5384	0.5366	0.5331	0.5261	0.5396	0.5349	1	AVG
4-Bromofluorobenzene(2)	0.3532	0.3573	0.3582	0.3579	0.3606	0.3574	0.3564	0.3573	1	AVG

Average %RSD 6

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP15648.i/19nov25i.b/en25i01.d	VSTD300
/chem/HP15648.i/19nov25i.b/en25i02.d	VSTD100
/chem/HP15648.i/19nov25i.b/en25i03.d	VSTD050
/chem/HP15648.i/19nov25i.b/en25i04.d	VSTD020
/chem/HP15648.i/19nov25i.b/en25i05.d	VSTD010
/chem/HP15648.i/19nov25i.b/en25i06.d	VSTD004
/chem/HP15648.i/19nov25i.b/en25i07.d	VSTD001

Area Summary

File ID:

Internal Standard Name	en25i01.d	en25i02.d	en25i03.d	en25i04.d	en25i05.d	en25i06.d	en25i07.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	180286	192080	203316	192993	193229	186523	189786	191173	4	Yes
Fluorobenzene	987485	988465	1035873	1005332	991370	1015688	1024915	1007018	2	Yes
Chlorobenzene-d5	704278	690332	723457	700535	686567	702042	713562	702968	2	Yes
1,4-Dichlorobenzene-d4	338973	338579	355491	345565	338762	350505	354105	345997	2	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	en25i01.d	en25i02.d	en25i03.d	en25i04.d	en25i05.d	en25i06.d	en25i07.d	Avg. RT
t-Butyl alcohol-d10	2.493	2.474	2.474	2.474	2.487	2.468	2.480	2.479
Fluorobenzene	4.730	4.724	4.724	4.718	4.724	4.718	4.718	4.722
Chlorobenzene-d5	7.870	7.870	7.870	7.870	7.870	7.869	7.870	7.870
1,4-Dichlorobenzene-d4	9.784	9.784	9.784	9.778	9.784	9.784	9.778	9.782

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 11/26/2019 at 10:10.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 ICV Date: 11/25/19 Time: 17:21

Lab File ID: en25v01.d Init. Calib. Date(s): 11/25/19 11/25/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3561	0.3160	17.75	20	-11	#
# Chloromethane	0.4383	0.3816	17.41	20	-13	#
1,3-Butadiene	0.3201	0.3738	23.35	20	17	
# Vinyl Chloride	0.3911	0.3546	18.14	20	-9	#
# Bromomethane	0.2084	0.1727	16.57	20	-17	#
# Chloroethane	0.2084	0.1772	17.01	20	-15	#
Dichlorofluoromethane	0.4985	0.4256	17.08	20	-15	
n-Pentane	0.4719	0.5169	21.91	20	10	
# Trichlorofluoromethane	0.3810	0.3633	19.07	20	-5	#
Ethyl ether	0.2486	0.2269	18.25	20	-9	
Freon 123a	0.3009	0.2974	19.76	20	-1	
Acrolein	2.1109	1.9041	135.30	150	-10	
# 1,1-Dichloroethene	0.1921	0.2034	21.18	20	6	#
# Acetone	0.8861	0.8473	143.43	150	-4	#
# Freon 113	0.2226	0.2219	19.94	20	0	#
2-Propanol	0.6180	0.5177	125.65	150	-16	
Methyl Iodide	0.3388	0.3159	18.65	20	-7	
# Carbon Disulfide	0.7043	0.6757	19.19	20	-4	#
Allyl Chloride	0.4358	0.4287	19.67	20	-2	
# Methyl Acetate	0.2478	0.2293	18.51	20	-7	#
# Methylene Chloride	0.2338	0.2314	19.79	20	-1	#
t-Butyl alcohol	0.9558	0.8428	176.36	200	-12	
Acrylonitrile	0.1433	0.1238	86.36	100	-14	
# trans-1,2-Dichloroethene	0.2228	0.2179	19.56	20	-2	#
# Methyl Tertiary Butyl Ether	0.7563	0.6867	18.16	20	-9	#
n-Hexane	0.4563	0.4491	19.68	20	-2	
# 1,1-Dichloroethane	0.4742	0.4542	19.16	20	-4	#
di-Isopropyl ether	0.9770	0.8948	18.32	20	-8	
2-Chloro-1,3-butadiene	0.4401	0.4168	18.94	20	-5	
Ethyl t-butyl ether	0.8665	0.7771	17.94	20	-10	
# cis-1,2-Dichloroethene	0.2549	0.2576	20.21	20	1	#
# 2-Butanone	0.1819	0.1561	128.70	150	-14	#
2,2-Dichloropropane	0.3506	0.3346	19.08	20	-5	
Propionitrile	1.4391	1.3721	143.01	150	-5	
Methacrylonitrile	0.1427	0.1293	135.94	150	-9	
Bromochloromethane	0.1149	0.1063	18.50	20	-8	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 ICV Date: 11/25/19 Time: 17:21

Lab File ID: en25v01.d Init. Calib. Date(s): 11/25/19 11/25/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Tetrahydrofuran	1.1910	1.1309	94.96	100	-5	
#	Chloroform	0.4053	0.3935	19.42	20	-3	#
#	1,1,1-Trichloroethane	0.3385	0.3279	19.37	20	-3	#
#	Cyclohexane	0.5631	0.5209	18.50	20	-7	#
	1,1-Dichloropropene	0.3600	0.3498	19.43	20	-3	
#	Carbon Tetrachloride	0.2624	0.2467	18.80	20	-6	#
	Isobutyl Alcohol	0.3132	0.2683	428.43	500	-14	
#	Benzene	1.0664	1.0276	19.27	20	-4	#
#	1,2-Dichloroethane	0.3320	0.3208	19.33	20	-3	#
	t-Amyl methyl ether	0.8084	0.7312	18.09	20	-10	
	n-Heptane	0.5175	0.4480	17.32	20	-13	
	n-Butanol	0.2612	0.2070	792.56	1000	-21	
#	Trichloroethene	0.2481	0.2375	19.15	20	-4	#
#	Methylcyclohexane	0.5300	0.5034	18.99	20	-5	#
#	1,2-Dichloropropane	0.2789	0.2748	19.71	20	-1	#
	Dibromomethane	0.1403	0.1333	19.00	20	-5	
	1,4-Dioxane	0.0856	0.0704	410.82	500	-18	
	Methyl Methacrylate	0.2217	0.2033	18.35	20	-8	
#	Bromodichloromethane	0.2874	0.2701	18.80	20	-6	#
	2-Nitropropane	0.0520	0.0440	16.93	20	-15	
	2-Chloroethyl Vinyl Ether	0.2075	0.1862	17.94	20	-10	
#	cis-1,3-Dichloropropene	0.4037	0.3745	18.56	20	-7	#
#	4-Methyl-2-pentanone	0.3812	0.3272	85.82	100	-14	#
#	Toluene	0.9283	0.8973	19.33	20	-3	#
#	trans-1,3-Dichloropropene	0.5130	0.4659	18.17	20	-9	#
	Ethyl Methacrylate	0.5668	0.4892	17.26	20	-14	
#	1,1,2-Trichloroethane	0.2926	0.2901	19.83	20	-1	#
#	Tetrachloroethene	0.3453	0.3315	19.20	20	-4	#
	1,3-Dichloropropane	0.5639	0.5345	18.96	20	-5	
#	2-Hexanone	0.3829	0.3374	88.10	100	-12	#
#	Dibromochloromethane	0.2704	0.2476	18.31	20	-8	#
#	1,2-Dibromoethane	0.3020	0.2879	19.07	20	-5	#
	1-Chlorohexane	0.5473	0.5051	18.46	20	-8	
#	Chlorobenzene	0.9667	0.9205	19.05	20	-5	#
	1,1,1,2-Tetrachloroethane	0.2833	0.2595	18.32	20	-8	
#	Ethylbenzene	1.8143	1.7373	19.15	20	-4	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 ICV Date: 11/25/19 Time: 17:21

Lab File ID: en25v01.d Init. Calib. Date(s): 11/25/19 11/25/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	m+p-Xylene	0.6804	0.6543	38.47	40	-4	#
#	o-Xylene	0.6609	0.6309	19.09	20	-5	#
#	Styrene	1.0701	1.0337	19.32	20	-3	#
#	Bromoform	0.1653	0.1380	16.70	20	-17	#
#	Isopropylbenzene	1.7941	1.7292	19.28	20	-4	#
	Cyclohexanone	0.3380	0.2899	428.89	500	-14	
	Bromobenzene	0.7214	0.6946	19.26	20	-4	
#	1,1,2,2-Tetrachloroethane	0.9614	0.8894	18.50	20	-7	#
	1,2,3-Trichloropropane	0.2688	0.2553	19.00	20	-5	
	trans-1,4-Dichloro-2-butene	0.2994	0.2621	87.57	100	-12	
	n-Propylbenzene	4.4066	4.2811	19.43	20	-3	
	2-Chlorotoluene	0.7993	0.7629	19.09	20	-5	
	4-Chlorotoluene	0.8198	0.7873	19.21	20	-4	
	1,3,5-Trimethylbenzene	3.0726	2.9679	19.32	20	-3	
	tert-Butylbenzene	0.6534	0.6334	19.39	20	-3	
	Pentachloroethane	0.3596	0.3175	17.66	20	-12	
	1,2,4-Trimethylbenzene	3.1727	2.9931	18.87	20	-6	
	sec-Butylbenzene	4.0339	3.8818	19.25	20	-4	
#	1,3-Dichlorobenzene	1.4743	1.3756	18.66	20	-7	#
	p-Isopropyltoluene	3.3329	3.2477	19.49	20	-3	
#	1,4-Dichlorobenzene	1.4790	1.4007	18.94	20	-5	#
	1,2,3-Trimethylbenzene	3.2629	3.0184	18.50	20	-7	
	Benzyl Chloride	1.7803	1.2988	14.59	20	-27	
	1,3-Diethylbenzene	2.0793	1.8757	18.04	20	-10	
	1,4-Diethylbenzene	2.1721	1.9957	18.38	20	-8	
#	1,2-Dichlorobenzene	1.3783	1.3111	19.03	20	-5	#
	n-Butylbenzene	1.7601	1.6736	19.02	20	-5	
	1,2-Diethylbenzene	1.7399	1.5885	18.26	20	-9	
#	1,2-Dibromo-3-chloropropane	0.2002	0.1778	17.76	20	-11	#
	1,3,5-Trichlorobenzene	1.0261	0.9688	18.88	20	-6	
#	1,2,4-Trichlorobenzene	0.9176	0.8435	18.38	20	-8	#
	Hexachlorobutadiene	0.3785	0.3405	17.99	20	-10	
	Naphthalene	3.1903	2.7789	17.42	20	-13	
	1,2,3-Trichlorobenzene	0.8819	0.7968	18.07	20	-10	
	2-Methylnaphthalene	1.9427	1.4259	14.68	20	-27	

Average %Drift 8

Compounds with required minimum RRF.
Maximum % Drift = 30 %

^

Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP09355.i/19sep10c.b/ys10i57.d
/chem2/HP09355.i/19sep10c.b/ys10i56.d
/chem2/HP09355.i/19sep10c.b/ys10i55.d
/chem2/HP09355.i/19sep10c.b/ys10i54.d
/chem2/HP09355.i/19sep10c.b/ys10i53.d
/chem2/HP09355.i/19sep10c.b/ys10i52.d
/chem2/HP09355.i/19sep10c.b/ys10i51.d

File /chem2/HP09355.i/19sep10c.b/ys10i53.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP09355.i/19nov27b.b/yn27c05.d

RT Summary

Internal Standard Name	File ID: yn27c05.d	ICAL RT	In Spec
t-Butyl alcohol-d10	4.355	4.355	Yes
Fluorobenzene	7.872	7.872	Yes
Chlorobenzene-d5	11.309	11.309	Yes
1,4-Dichlorobenzene-d4	13.183	13.189	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: yn27c05.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	323461	357387	178694	714774	Yes
Fluorobenzene	1025066	1177736	588868	2355472	Yes
Chlorobenzene-d5	747414	875116	437558	1750232	Yes
1,4-Dichlorobenzene-d4	386398	470034	235017	940068	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 Calibration Date: 11/27/19 Time: 19:43

Lab File ID: yn27c05.d Init. Calib. Date(s): 09/10/19 09/10/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.4586	0.2925	31.89	50	-36	#<-
# Chloromethane	0.3942	0.3480	44.15	50	-12	#
1,3-Butadiene	0.3067	0.2837	46.25	50	-8	
# Vinyl Chloride	0.3870	0.3388	43.77	50	-12	#
# Bromomethane	0.2871	0.2319	40.39	50	-19	#
# Chloroethane	0.2246	0.1968	43.82	50	-12	#
n-Pentane	0.4786	0.3892	40.65	50	-19	
# Trichlorofluoromethane	0.4936	0.3310	33.53	50	-33	#<-
Ethyl ether	0.2571	0.2779	54.05	50	8	
Freon 123a	0.2981	0.3128	52.47	50	5	
Acrolein	1.8987	1.7162	451.93	500	-10	
# 1,1-Dichloroethene	0.2170	0.2427	55.92	50	12	#
# 1,1-Dichloroethene(2)	0.1117	0.1240	55.55	50	11	#
# Acetone	0.8934	0.9953	111.40	100	11	#
# Freon 113	0.2471	0.2231	45.14	50	-10	#
2-Propanol	0.5379	0.6776	314.94	250	26	<-
Methyl Iodide	0.4261	0.4142	48.60	50	-3	
# Carbon Disulfide	0.7844	0.8576	54.66	50	9	#
Allyl Chloride	0.3763	0.4762	63.27	50	27	<-
# Methyl Acetate	0.3794	0.4561	60.11	50	20	#
# Methylene Chloride	0.2591	0.2964	57.19	50	14	#
t-Butyl alcohol	1.1250	1.2261	272.48	250	9	
Acrylonitrile	0.1987	0.2332	58.69	50	17	
# trans-1,2-Dichloroethene	0.2514	0.2829	56.28	50	13	#
# Methyl Tertiary Butyl Ether	0.8648	0.8207	47.45	50	-5	#
n-Hexane	0.4262	0.4417	51.82	50	4	
# 1,1-Dichloroethane	0.4571	0.5227	57.17	50	14	#
di-Isopropyl ether	0.8732	1.0416	59.64	50	19	
2-Chloro-1,3-butadiene	0.4143	0.4557	54.99	50	10	
Ethyl t-butyl ether	0.8558	0.8575	50.10	50	0	
# cis-1,2-Dichloroethene	0.2858	0.3205	56.09	50	12	#
# 2-Butanone	0.2965	0.3301	111.32	100	11	#
2,2-Dichloropropane	0.3509	0.3513	50.05	50	0	
Propionitrile	1.2939	1.6213	313.26	250	25	<-
Methacrylonitrile	0.2112	0.2402	142.15	125	14	
Bromochloromethane	0.1491	0.1522	51.04	50	2	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 Calibration Date: 11/27/19 Time: 19:43

Lab File ID: yn27c05.d Init. Calib. Date(s): 09/10/19 09/10/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
	COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
	Tetrahydrofuran	1.4036	1.3768	98.09	100	-2	
#	Chloroform	0.4426	0.4829	54.55	50	9	#
#	1,1,1-Trichloroethane	0.3836	0.3940	51.36	50	3	#
#	Cyclohexane	0.5001	0.5187	51.86	50	4	#
#	Cyclohexane(2)	0.4320	0.4045	46.82	50	-6	#
#	Cyclohexane(3)	0.1563	0.1556	49.80	50	0	#
	1,1-Dichloropropene	0.3702	0.4052	54.72	50	9	
#	Carbon Tetrachloride	0.3270	0.3168	48.44	50	-3	#
	Isobutyl Alcohol	0.3885	0.4605	740.85	625	19	
#	Benzene	1.0825	1.2574	58.08	50	16	#
#	1,2-Dichloroethane	0.3839	0.3907	50.88	50	2	#
#	1,2-Dichloroethane(2)	0.0308	0.0376	61.14	50	22	#<-
	t-Amyl methyl ether	0.8566	0.8338	48.67	50	-3	
	n-Heptane	0.4505	0.5058	56.14	50	12	
	n-Butanol	0.3644	0.4035	1384.11	1250	11	
#	Trichloroethene	0.2800	0.3042	54.31	50	9	#
#	Methylcyclohexane	0.5313	0.5237	49.29	50	-1	#
#	Methylcyclohexane(2)	0.2338	0.2256	48.24	50	-4	#
#	1,2-Dichloropropane	0.2759	0.3374	61.14	50	22	#<-
	Dibromomethane	0.1820	0.1988	54.59	50	9	
	1,4-Dioxane	0.0777	0.0935	752.33	625	20	
	Methyl Methacrylate	0.3239	0.3675	56.74	50	13	
#	Bromodichloromethane	0.3176	0.3590	56.52	50	13	#
	2-Nitropropane	0.1353	0.1358	100.34	100	0	
	2-Chloroethyl Vinyl Ether	0.2332	0.2839	60.87	50	22	<-
#	cis-1,3-Dichloropropene	0.4285	0.5001	58.35	50	17	#
#	4-Methyl-2-pentanone	0.5588	0.6269	112.18	100	12	#
#	Toluene	0.9260	1.0684	57.69	50	15	#
#	trans-1,3-Dichloropropene	0.5407	0.6442	59.58	50	19	#
	Ethyl Methacrylate	0.6852	0.8115	59.22	50	18	
#	1,1,2-Trichloroethane	0.3571	0.4207	58.91	50	18	#
#	Tetrachloroethene	0.3919	0.4260	54.35	50	9	#
	1,3-Dichloropropane	0.6201	0.7270	58.63	50	17	
#	2-Hexanone	0.6116	0.6944	113.54	100	14	#
#	Dibromochloromethane	0.3474	0.3962	57.02	50	14	#
#	1,2-Dibromoethane	0.3887	0.4551	58.54	50	17	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 Calibration Date: 11/27/19 Time: 19:43

Lab File ID: yn27c05.d Init. Calib. Date(s): 09/10/19 09/10/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
1-Chlorohexane	0.5204	0.5907	56.75	50	13	
Chlorobenzene	1.0419	1.1626	55.79	50	12	#
1,1,1,2-Tetrachloroethane	0.3327	0.3712	55.80	50	12	
Ethylbenzene	1.7734	2.0848	58.78	50	18	#
m+p-Xylene	0.6998	0.8032	114.77	100	15	#
o-Xylene	0.6816	0.7783	57.09	50	14	#
Styrene	1.1262	1.3521	60.03	50	20	#
Bromoform	0.2502	0.2883	57.61	50	15	#
Isopropylbenzene	1.7614	2.0009	56.80	50	14	#
Cyclohexanone	0.4126	0.3744	567.03	625	-9	
Bromobenzene	0.8213	0.9655	58.77	50	18	
1,1,2,2-Tetrachloroethane	1.1819	1.4485	61.28	50	23	#<-
1,2,3-Trichloropropane	0.3754	0.4189	55.80	50	12	
trans-1,4-Dichloro-2-butene	0.4085	0.4361	133.46	125	7	
n-Propylbenzene	3.8954	4.7166	60.54	50	21	<-
2-Chlorotoluene	0.8024	0.9204	57.35	50	15	
4-Chlorotoluene	0.8388	0.9641	57.47	50	15	
1,3,5-Trimethylbenzene	2.8818	3.3517	58.15	50	16	
tert-Butylbenzene	0.6035	0.6813	56.45	50	13	
Pentachloroethane	0.4583	0.5149	56.18	50	12	
1,2,4-Trimethylbenzene	3.0266	3.5360	58.41	50	17	
sec-Butylbenzene	3.6497	4.3362	59.40	50	19	
1,3-Dichlorobenzene	1.6088	1.8499	57.49	50	15	#
p-Isopropyltoluene	3.1360	3.6964	58.94	50	18	
1,4-Dichlorobenzene	1.6431	1.8949	57.66	50	15	#
1,2,3-Trimethylbenzene	3.1796	3.4090	53.61	50	7	
Benzyl Chloride	2.2931	2.7102	59.10	50	18	
1,3-Diethylbenzene	2.0480	2.2109	53.98	50	8	
1,4-Diethylbenzene	2.1661	2.3493	54.23	50	8	
1,2-Dichlorobenzene	1.5733	1.7808	56.59	50	13	#
n-Butylbenzene	1.6580	1.9845	59.85	50	20	
1,2-Diethylbenzene	1.7230	1.8337	53.21	50	6	
1,2-Dibromo-3-chloropropane	0.3049	0.3485	57.16	50	14	#
1,3,5-Trichlorobenzene	1.2095	1.3616	56.29	50	13	
1,2,4-Trichlorobenzene	1.1589	1.2629	54.49	50	9	#
Hexachlorobutadiene	0.5164	0.5502	53.27	50	7	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 Calibration Date: 11/27/19 Time: 19:43

Lab File ID: yn27c05.d Init. Calib. Date(s): 09/10/19 09/10/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Naphthalene	4.1088	4.6958	57.14	50	14
1,2,3-Trichlorobenzene	1.1262	1.1965	53.12	50	6
2-Methylnaphthalene	2.7162	2.6023	47.90	50	-4
Dibromofluoromethane	0.2346	0.2175	46.36	50	-7
Dibromofluoromethane(2)	0.2402	0.2228	46.39	50	-7
1,2-Dichloroethane-d4	0.0613	0.0591	48.20	50	-4
1,2-Dichloroethane-d4(2)	0.2959	0.2732	46.17	50	-8
1,2-Dichloroethane-d4(3)	0.0389	0.0379	48.68	50	-3
Toluene-d8	1.3528	1.3422	49.61	50	-1
Toluene-d8(2)	0.8723	0.8552	49.02	50	-2
4-Bromofluorobenzene	0.5169	0.4958	47.96	50	-4
4-Bromofluorobenzene(2)	0.3925	0.3840	48.92	50	-2

Average %Drift 12

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem/HP09915.i/19nov04i.b/ln04i07.d
/chem/HP09915.i/19nov04i.b/ln04i06.d
/chem/HP09915.i/19nov04i.b/ln04i05.d
/chem/HP09915.i/19nov04i.b/ln04i04.d
/chem/HP09915.i/19nov04i.b/ln04i03.d
/chem/HP09915.i/19nov04i.b/ln04i02.d
/chem/HP09915.i/19nov04i.b/ln04i01.d

File /chem/HP09915.i/19nov04i.b/ln04i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem/HP09915.i/19nov23a.b/ln23c01.d

RT Summary

Internal Standard Name	File ID: ln23c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	4.490	4.509	Yes
Fluorobenzene	7.956	7.959	Yes
Chlorobenzene-d5	11.358	11.361	Yes
1,4-Dichlorobenzene-d4	13.223	13.223	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: ln23c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	218843	269779	134890	539558	Yes
Fluorobenzene	1129387	1160755	580378	2321510	Yes
Chlorobenzene-d5	942140	904578	452289	1809156	Yes
1,4-Dichlorobenzene-d4	522095	483927	241964	967854	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments:_____

report generated on 11/23/2019 at 09:09

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/23/19 Time: 08:42

Lab File ID: ln23c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3487	0.3778	54.17	50	8	#
# Chloromethane	0.3361	0.3506	52.17	50	4	#
1,3-Butadiene	0.2790	0.2300	41.22	50	-18	
# Vinyl Chloride	0.3354	0.3453	51.48	50	3	#
# Bromomethane	0.2404	0.2446	50.87	50	2	#
# Chloroethane	0.1843	0.1857	50.37	50	1	#
Dichlorofluoromethane	0.4436	0.3536	39.86	50	-20	
n-Pentane	0.4267	0.3191	37.39	50	-25	<-
# Trichlorofluoromethane	0.3611	0.3972	55.00	50	10	#
Ethyl ether	0.2333	0.2418	51.81	50	4	
Freon 123a	0.2905	0.2668	45.93	50	-8	
Acrolein	1.8756	1.9223	512.44	500	2	
# 1,1-Dichloroethene	0.2120	0.1905	44.95	50	-10	#
# 1,1-Dichloroethene(2)	0.1063	0.0934	43.93	50	-12	#<-
# Acetone	0.8409	0.8803	104.68	100	5	#
# Freon 113	0.2418	0.2213	45.76	50	-8	#
2-Propanol	0.6045	0.6042	249.89	250	0	
Methyl Iodide	0.4392	0.4024	45.81	50	-8	
# Carbon Disulfide	0.7987	0.7079	44.31	50	-11	#
Allyl Chloride	0.3802	0.3373	44.35	50	-11	
# Methyl Acetate	0.2730	0.2512	46.02	50	-8	#
# Methylene Chloride	0.2523	0.2374	47.06	50	-6	#
t-Butyl alcohol	1.0525	1.0187	241.97	250	-3	
Acrylonitrile	0.1469	0.1350	45.97	50	-8	
# trans-1,2-Dichloroethene	0.2452	0.2271	46.31	50	-7	#
# Methyl Tertiary Butyl Ether	0.8048	0.6763	42.01	50	-16	#
n-Hexane	0.3815	0.3360	44.04	50	-12	
# 1,1-Dichloroethane	0.4277	0.3941	46.07	50	-8	#
di-Isopropyl ether	0.8250	0.7439	45.09	50	-10	
2-Chloro-1,3-butadiene	0.3838	0.3496	45.55	50	-9	
Ethyl t-butyl ether	0.8006	0.6948	43.39	50	-13	
# cis-1,2-Dichloroethene	0.2752	0.2594	47.13	50	-6	#
# 2-Butanone	0.1885	0.1658	87.94	100	-12	#
2,2-Dichloropropane	0.3325	0.3037	45.67	50	-9	
Propionitrile	1.3114	1.4890	283.85	250	14	
Methacrylonitrile	0.1584	0.1543	121.74	125	-3	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/23/19 Time: 08:42

Lab File ID: ln23c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
Bromochloromethane	0.1459	0.1473	50.47	50	1	
Tetrahydrofuran	1.1846	1.2548	105.93	100	6	
# Chloroform	0.4091	0.3942	48.18	50	-4	#
# 1,1,1-Trichloroethane	0.3492	0.3265	46.75	50	-6	#
# Cyclohexane	0.4669	0.4171	44.66	50	-11	#
# Cyclohexane(2)	0.4056	0.3697	45.58	50	-9	#
# Cyclohexane(3)	0.1444	0.1302	45.08	50	-10	#
1,1-Dichloropropene	0.3382	0.3142	46.45	50	-7	
# Carbon Tetrachloride	0.2961	0.2755	46.51	50	-7	#
Isobutyl Alcohol	0.3542	0.3650	644.14	625	3	
# Benzene	1.0170	0.9669	47.54	50	-5	#
# 1,2-Dichloroethane	0.3271	0.3138	47.96	50	-4	#
# 1,2-Dichloroethane(2)	0.0324	0.0313	48.30	50	-3	#<-
t-Amyl methyl ether	0.8036	0.7341	45.67	50	-9	
n-Heptane	0.3564	0.3253	45.64	50	-9	
n-Butanol	0.3049	0.3114	1276.85	1250	2	
# Trichloroethene	0.2561	0.2464	48.11	50	-4	#
# Methylcyclohexane	0.4751	0.4473	47.08	50	-6	#
# Methylcyclohexane(2)	0.2150	0.2030	47.22	50	-6	#
# 1,2-Dichloropropane	0.2582	0.2480	48.02	50	-4	#
Dibromomethane	0.1671	0.1655	49.53	50	-1	
1,4-Dioxane	0.0838	0.1190	887.57	625	42	<-
Methyl Methacrylate	0.2497	0.2483	49.71	50	-1	
# Bromodichloromethane	0.2998	0.2938	49.00	50	-2	#
2-Nitropropane	0.0908	0.0867	95.41	100	-5	
2-Chloroethyl Vinyl Ether	0.1109	0.1889	85.14	50	70	<-
# cis-1,3-Dichloropropene	0.3982	0.3984	50.02	50	0	#
# 4-Methyl-2-pentanone	0.3979	0.3634	91.32	100	-9	#
# Toluene	0.8202	0.7613	46.41	50	-7	#
# trans-1,3-Dichloropropene	0.4656	0.4483	48.14	50	-4	#
Ethyl Methacrylate	0.5659	0.5325	47.05	50	-6	
# 1,1,2-Trichloroethane	0.3110	0.2969	47.73	50	-5	#
# Tetrachloroethene	0.3474	0.3174	45.69	50	-9	#
1,3-Dichloropropane	0.5309	0.5012	47.20	50	-6	
# 2-Hexanone	0.3777	0.3228	85.46	100	-15	#
# Dibromochloromethane	0.3185	0.3047	47.83	50	-4	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/23/19 Time: 08:42

Lab File ID: ln23c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	1,2-Dibromoethane	0.3377	0.3247	48.08	50	-4	#
	1-Chlorohexane	0.4406	0.3794	43.06	50	-14	
#	Chlorobenzene	0.9275	0.8742	47.13	50	-6	#
	1,1,1,2-Tetrachloroethane	0.3056	0.2876	47.05	50	-6	
#	Ethylbenzene	1.5677	1.4737	47.00	50	-6	#
#	m+p-Xylene	0.6167	0.5842	94.73	100	-5	#
#	o-Xylene	0.6092	0.5730	47.03	50	-6	#
#	Styrene	1.0066	0.9778	48.57	50	-3	#
#	Bromoform	0.2380	0.2141	44.97	50	-10	#
#	Isopropylbenzene	1.5279	1.4423	47.20	50	-6	#
	Cyclohexanone	0.3282	0.3572	680.22	625	9	
	Bromobenzene	0.7515	0.6776	45.09	50	-10	
#	1,1,2,2-Tetrachloroethane	0.9445	0.8679	45.94	50	-8	#
	1,2,3-Trichloropropane	0.2898	0.2659	45.87	50	-8	
	trans-1,4-Dichloro-2-butene	0.2913	0.2546	109.22	125	-13	
	n-Propylbenzene	3.2831	3.0494	46.44	50	-7	
	2-Chlorotoluene	0.6975	0.6346	45.49	50	-9	
	4-Chlorotoluene	0.7260	0.6617	45.57	50	-9	
	1,3,5-Trimethylbenzene	2.3860	2.2484	47.12	50	-6	
	tert-Butylbenzene	0.4934	0.4419	44.78	50	-10	
	Pentachloroethane	0.4249	0.4084	48.06	50	-4	
	1,2,4-Trimethylbenzene	2.5147	2.3639	47.00	50	-6	
	sec-Butylbenzene	2.9444	2.6990	45.83	50	-8	
#	1,3-Dichlorobenzene	1.3809	1.2568	45.51	50	-9	#
	p-Isopropyltoluene	2.5473	2.3341	45.81	50	-8	
#	1,4-Dichlorobenzene	1.4315	1.2946	45.22	50	-10	#
	1,2,3-Trimethylbenzene	2.6637	2.5809	48.44	50	-3	
	Benzyl Chloride	2.0168	1.8579	46.06	50	-8	
	1,3-Diethylbenzene	1.6578	1.5316	46.19	50	-8	
	1,4-Diethylbenzene	1.7564	1.5980	45.49	50	-9	
#	1,2-Dichlorobenzene	1.3626	1.2475	45.78	50	-8	#
	n-Butylbenzene	1.3024	1.1477	44.06	50	-12	
	1,2-Diethylbenzene	1.3975	1.3117	46.93	50	-6	
#	1,2-Dibromo-3-chloropropane	0.2068	0.1902	45.99	50	-8	#
	1,3,5-Trichlorobenzene	1.0469	0.8659	41.36	50	-17	
#	1,2,4-Trichlorobenzene	1.0179	0.8248	40.51	50	-19	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 11/23/19 Time: 08:42

Lab File ID: ln23c01.d Init. Calib. Date(s): 11/04/19 11/04/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
Hexachlorobutadiene	0.4806	0.3367	35.02	50	-30	<-
Naphthalene	3.2725	3.0219	46.17	50	-8	
1,2,3-Trichlorobenzene	0.9905	0.8126	41.02	50	-18	
2-Methylnaphthalene	2.0152	1.7393	43.16	50	-14	
Dibromofluoromethane	0.2445	0.2440	49.90	50	0	
Dibromofluoromethane(2)	0.2492	0.2471	49.58	50	-1	
1,2-Dichloroethane-d4	0.0623	0.0629	50.46	50	1	
1,2-Dichloroethane-d4(2)	0.2776	0.2843	51.20	50	2	
1,2-Dichloroethane-d4(3)	0.0398	0.0405	50.92	50	2	
Toluene-d8	1.3083	1.2807	48.94	50	-2	
Toluene-d8(2)	0.8475	0.8200	48.38	50	-3	
4-Bromofluorobenzene	0.4954	0.5051	50.98	50	2	
4-Bromofluorobenzene(2)	0.4107	0.4142	50.43	50	1	

Average %Drift 8

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem/HP15648.i/19nov25i.b/en25i07.d
/chem/HP15648.i/19nov25i.b/en25i06.d
/chem/HP15648.i/19nov25i.b/en25i05.d
/chem/HP15648.i/19nov25i.b/en25i04.d
/chem/HP15648.i/19nov25i.b/en25i03.d
/chem/HP15648.i/19nov25i.b/en25i02.d
/chem/HP15648.i/19nov25i.b/en25i01.d

File /chem/HP15648.i/19nov25i.b/en25i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem/HP15648.i/19nov26a.b/en26c01.d

RT Summary

Internal Standard Name	File ID: en26c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	2.481	2.474	Yes
Fluorobenzene	4.724	4.724	Yes
Chlorobenzene-d5	7.870	7.870	Yes
1,4-Dichlorobenzene-d4	9.778	9.784	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: en26c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	189540	203316	101658	406632	Yes
Fluorobenzene	1009065	1035873	517936	2071746	Yes
Chlorobenzene-d5	706562	723457	361728	1446914	Yes
1,4-Dichlorobenzene-d4	343022	355491	177746	710982	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 11/26/2019 at 12:17

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 Calibration Date: 11/26/19 Time: 10:20

Lab File ID: en26c01.d Init. Calib. Date(s): 11/25/19 11/25/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3561	0.3602	50.58	50	1	#
# Chloromethane	0.4383	0.4197	47.88	50	-4	#
1,3-Butadiene	0.3201	0.3615	56.46	50	13	
# Vinyl Chloride	0.3911	0.3899	49.86	50	0	#
# Bromomethane	0.2084	0.2069	49.63	50	-1	#
# Chloroethane	0.2084	0.2085	50.03	50	0	#
Dichlorofluoromethane	0.4985	0.4829	48.44	50	-3	
n-Pentane	0.4719	0.5590	59.23	50	18	
# Trichlorofluoromethane	0.3810	0.3765	49.41	50	-1	#
Ethyl ether	0.2486	0.2267	45.59	50	-9	
Freon 123a	0.3009	0.3103	51.55	50	3	
Acrolein	2.1109	2.1656	512.96	500	3	
# 1,1-Dichloroethene	0.1921	0.2050	53.37	50	7	#
# 1,1-Dichloroethene(2)	0.1083	0.1156	53.37	50	7	#
# Acetone	0.8861	0.9403	106.12	100	6	#
# Freon 113	0.2226	0.2398	53.86	50	8	#
2-Propanol	0.6180	0.5868	237.39	250	-5	
Methyl Iodide	0.3388	0.3641	53.72	50	7	
# Carbon Disulfide	0.7043	0.7742	54.97	50	10	#
Allyl Chloride	0.4358	0.4164	47.78	50	-4	
# Methyl Acetate	0.2478	0.2419	48.81	50	-2	#
# Methylene Chloride	0.2338	0.2413	51.59	50	3	#
t-Butyl alcohol	0.9558	0.8673	226.85	250	-9	
Acrylonitrile	0.1433	0.1458	50.86	50	2	
# trans-1,2-Dichloroethene	0.2228	0.2292	51.42	50	3	#
# Methyl Tertiary Butyl Ether	0.7563	0.7772	51.38	50	3	#
n-Hexane	0.4563	0.4940	54.13	50	8	
# 1,1-Dichloroethane	0.4742	0.4861	51.25	50	3	#
di-Isopropyl ether	0.9770	1.0021	51.28	50	3	
2-Chloro-1,3-butadiene	0.4401	0.4632	52.62	50	5	
Ethyl t-butyl ether	0.8665	0.8783	50.68	50	1	
# cis-1,2-Dichloroethene	0.2549	0.2575	50.50	50	1	#
# 2-Butanone	0.1819	0.1881	103.41	100	3	#
2,2-Dichloropropane	0.3506	0.3522	50.23	50	0	
Propionitrile	1.4391	1.5211	264.24	250	6	
Methacrylonitrile	0.1427	0.1475	129.27	125	3	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 Calibration Date: 11/26/19 Time: 10:20

Lab File ID: en26c01.d Init. Calib. Date(s): 11/25/19 11/25/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Bromochloromethane	0.1149	0.1133	49.31	50	-1	
	Tetrahydrofuran	1.1910	1.2072	101.36	100	1	
#	Chloroform	0.4053	0.4106	50.65	50	1	#
#	1,1,1-Trichloroethane	0.3385	0.3367	49.74	50	-1	#
#	Cyclohexane	0.5631	0.5872	52.15	50	4	#
#	Cyclohexane(2)	0.4369	0.4493	51.41	50	3	#
#	Cyclohexane(3)	0.1645	0.1710	51.99	50	4	#
	1,1-Dichloropropene	0.3600	0.3655	50.76	50	2	
#	Carbon Tetrachloride	0.2624	0.2493	47.51	50	-5	#
	Isobutyl Alcohol	0.3132	0.2773	553.32	625	-11	
#	Benzene	1.0664	1.0819	50.72	50	1	#
#	1,2-Dichloroethane	0.3320	0.3223	48.53	50	-3	#
#	1,2-Dichloroethane(2)	0.0280	0.0279	49.76	50	0	#<-
	t-Amyl methyl ether	0.8084	0.8087	50.02	50	0	
	n-Heptane	0.5175	0.5181	50.05	50	0	
	n-Butanol	0.2612	0.2376	1136.96	1250	-9	
#	Trichloroethene	0.2481	0.2513	50.65	50	1	#
#	Methylcyclohexane	0.5300	0.4995	47.12	50	-6	#
#	Methylcyclohexane(2)	0.2320	0.2200	47.40	50	-5	#
#	1,2-Dichloropropane	0.2789	0.2856	51.19	50	2	#
	Dibromomethane	0.1403	0.1407	50.14	50	0	
	1,4-Dioxane	0.0856	0.0920	671.49	625	7	
	Methyl Methacrylate	0.2217	0.2232	50.34	50	1	
#	Bromodichloromethane	0.2874	0.2836	49.34	50	-1	#
	2-Nitropropane	0.0520	0.0456	87.69	100	-12	
	2-Chloroethyl Vinyl Ether	0.2075	0.2048	49.34	50	-1	
#	cis-1,3-Dichloropropene	0.4037	0.4005	49.61	50	-1	#
#	4-Methyl-2-pentanone	0.3812	0.3828	100.40	100	0	#
#	Toluene	0.9283	0.9227	49.70	50	-1	#
#	trans-1,3-Dichloropropene	0.5130	0.5069	49.41	50	-1	#
	Ethyl Methacrylate	0.5668	0.5562	49.06	50	-2	
#	1,1,2-Trichloroethane	0.2926	0.2922	49.93	50	0	#
#	Tetrachloroethene	0.3453	0.3225	46.71	50	-7	#
	1,3-Dichloropropane	0.5639	0.5702	50.56	50	1	
#	2-Hexanone	0.3829	0.3821	99.79	100	0	#
#	Dibromochloromethane	0.2704	0.2560	47.33	50	-5	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 Calibration Date: 11/26/19 Time: 10:20

Lab File ID: en26c01.d Init. Calib. Date(s): 11/25/19 11/25/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	1,2-Dibromoethane	0.3020	0.2986	49.44	50	-1	#
	1-Chlorohexane	0.5473	0.5246	47.93	50	-4	
#	Chlorobenzene	0.9667	0.9557	49.43	50	-1	#
	1,1,1,2-Tetrachloroethane	0.2833	0.2775	48.98	50	-2	
#	Ethylbenzene	1.8143	1.8109	49.91	50	0	#
#	m+p-Xylene	0.6804	0.6800	99.94	100	0	#
#	o-Xylene	0.6609	0.6649	50.30	50	1	#
#	Styrene	1.0701	1.0988	51.34	50	3	#
#	Bromoform	0.1653	0.1496	45.23	50	-10	#
#	Isopropylbenzene	1.7941	1.8145	50.57	50	1	#
	Cyclohexanone	0.3380	0.3568	659.76	625	6	
	Bromobenzene	0.7214	0.7296	50.57	50	1	
#	1,1,2,2-Tetrachloroethane	0.9614	0.9492	49.37	50	-1	#
	1,2,3-Trichloropropane	0.2688	0.2708	50.36	50	1	
	trans-1,4-Dichloro-2-butene	0.2994	0.3085	128.83	125	3	
	n-Propylbenzene	4.4066	4.4566	50.57	50	1	
	2-Chlorotoluene	0.7993	0.8170	51.10	50	2	
	4-Chlorotoluene	0.8198	0.8301	50.63	50	1	
	1,3,5-Trimethylbenzene	3.0726	3.1384	51.07	50	2	
	tert-Butylbenzene	0.6534	0.6762	51.75	50	3	
	Pentachloroethane	0.3596	0.3541	49.23	50	-2	
	1,2,4-Trimethylbenzene	3.1727	3.2638	51.44	50	3	
	sec-Butylbenzene	4.0339	4.1097	50.94	50	2	
#	1,3-Dichlorobenzene	1.4743	1.4593	49.49	50	-1	#
	p-Isopropyltoluene	3.3329	3.4096	51.15	50	2	
#	1,4-Dichlorobenzene	1.4790	1.4441	48.82	50	-2	#
	1,2,3-Trimethylbenzene	3.2629	3.1696	48.57	50	-3	
	Benzyl Chloride	1.7803	1.7343	48.71	50	-3	
	1,3-Diethylbenzene	2.0793	2.0363	48.97	50	-2	
	1,4-Diethylbenzene	2.1721	2.1187	48.77	50	-2	
#	1,2-Dichlorobenzene	1.3783	1.3726	49.79	50	0	#
	n-Butylbenzene	1.7601	1.7843	50.69	50	1	
	1,2-Diethylbenzene	1.7399	1.6917	48.62	50	-3	
#	1,2-Dibromo-3-chloropropane	0.2002	0.1907	47.62	50	-5	#
	1,3,5-Trichlorobenzene	1.0261	1.0218	49.79	50	0	
#	1,2,4-Trichlorobenzene	0.9176	0.8951	48.78	50	-2	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP15648 Calibration Date: 11/26/19 Time: 10:20

Lab File ID: en26c01.d Init. Calib. Date(s): 11/25/19 11/25/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Hexachlorobutadiene	0.3785	0.3629	47.94	50	-4
Naphthalene	3.1903	3.0589	47.94	50	-4
1,2,3-Trichlorobenzene	0.8819	0.8318	47.16	50	-6
2-Methylnaphthalene	1.9427	1.6514	42.50	50	-15
Dibromofluoromethane	0.2127	0.2119	49.82	50	0
Dibromofluoromethane(2)	0.2200	0.2201	50.01	50	0
1,2-Dichloroethane-d4	0.0567	0.0563	49.66	50	-1
1,2-Dichloroethane-d4(2)	0.2837	0.2826	49.80	50	0
1,2-Dichloroethane-d4(3)	0.0360	0.0359	49.92	50	0
Toluene-d8	1.4195	1.4124	49.75	50	-1
Toluene-d8(2)	0.9114	0.9093	49.89	50	0
4-Bromofluorobenzene	0.5349	0.5349	50.00	50	0
4-Bromofluorobenzene(2)	0.3573	0.3545	49.61	50	-1

Average %Drift 3

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): yn27c05.d Date Analyzed: 11/27/19

Instrument ID: HP09355 Time Analyzed: 19:43

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	323461	4.355	1025066	7.872	747414	11.309	386398	13.183
UPPER LIMIT	646922	4.855	2050132	8.372	1494828	11.809	772796	13.683
LOWER LIMIT	161730	3.855	512533	7.372	373707	10.809	193199	12.683
LAB SAMPLE ID								
01 LCSY09	302899	4.349	1010184	7.866	736366	11.309	378717	13.183
02 LCDY09	302179	4.355	1013086	7.872	737455	11.309	382214	13.183
03 LCSY10	302179	4.355	1013086	7.872	737455	11.309	382214	13.183
04 RLVY09 - RL	297685	4.343	1014326	7.866	733342	11.309	379947	13.183
05 VBLKY09	295886	4.349	1003948	7.866	726737	11.309	372875	13.183
06 VBLKY10	295886	4.349	1003948	7.866	726737	11.309	372875	13.183
07 1206931	311620	4.349	1001379	7.872	727888	11.309	372881	13.183
08 1206929	289388	4.362	994511	7.872	719532	11.309	369141	13.183
09 1206734	281050	4.355	995284	7.872	719499	11.309	369417	13.183
10 1206928	281178	4.349	989080	7.872	714632	11.309	369793	13.183
11 1206648	243165	4.355	989751	7.865	721247	11.309	372178	13.182
12 1206790	293208	4.349	993938	7.866	718452	11.309	373487	13.182
13 1206791	295933	4.349	1004470	7.866	726360	11.309	373578	13.182
14 1206732DL	302193	4.355	997518	7.872	721197	11.309	373853	13.183
15 1206733DL	297889	4.362	998567	7.872	721614	11.309	371735	13.183
16 1206742DL	294861	4.355	996513	7.866	720157	11.309	370732	13.183
17 1206743DL	297640	4.349	996601	7.866	722303	11.303	370613	13.183
18 1209672	286866	4.349	998537	7.866	720558	11.309	372864	13.182
19 1209658	299292	4.349	987712	7.866	713259	11.303	372458	13.183
20 1209658MS	311666	4.349	1005896	7.866	732184	11.309	378068	13.183
21 1209658MSD	315763	4.355	1012588	7.866	737016	11.309	380198	13.183
22 1209659	307425	4.349	1020856	7.866	738288	11.309	380566	13.182

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): yn27c05.d Date Analyzed: 11/27/19

Instrument ID: HP09355 Time Analyzed: 19:43

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA) AREA #	RT #	IS2(FBZ) AREA #	RT #	IS3(CBZ) AREA #	RT #	IS4(DCB) AREA #	RT #
12 HOUR STD	323461	4.355	1025066	7.872	747414	11.309	386398	13.183
UPPER LIMIT	646922	4.855	2050132	8.372	1494828	11.809	772796	13.683
LOWER LIMIT	161730	3.855	512533	7.372	373707	10.809	193199	12.683
	LAB SAMPLE ID							
23	1209660	344976	4.337	1019659	7.872	740688	11.309	378760	13.182
24	1209660DL	323437	4.343	1016474	7.866	734783	11.309	376367	13.183
25	1203659DL	310820	4.349	1028996	7.866	737463	11.309	379939	13.183
26	1203660DL	287805	4.362	1010796	7.872	720538	11.309	373987	13.183
27	1205502DL	294723	4.361	1002731	7.872	719674	11.309	373444	13.182
28	1206564	299687	4.362	995298	7.866	718594	11.309	371261	13.183
29	1206720	301261	4.343	1001759	7.866	721464	11.309	371098	13.183

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

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8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ln23c01.d Date Analyzed: 11/23/19

Instrument ID: HP09915 Time Analyzed: 08:42

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	218843	4.490	1129387	7.956	942140	11.358	522095	13.223
UPPER LIMIT	437686	4.990	2258774	8.456	1884280	11.858	1044190	13.723
LOWER LIMIT	109422	3.990	564694	7.456	471070	10.858	261048	12.723
LAB SAMPLE ID								
01 LCSL87	219124	4.493	1149568	7.956	954034	11.358	518331	13.219
02 VBLKL87	224793	4.493	1154568	7.953	947038	11.358	506608	13.220
03 1205905	243725	4.496	1211224	7.956	996466	11.358	533216	13.223
04 1205900	220082	4.503	1136731	7.959	925300	11.361	497134	13.223
05 1205901MS	215519	4.493	1138753	7.956	930333	11.358	508418	13.220
06 1205902MSD	233889	4.493	1180531	7.956	965531	11.358	526780	13.219
07 1205903	229063	4.500	1158906	7.956	945973	11.361	499869	13.223
08 1205904	224307	4.499	1139589	7.959	935660	11.361	499734	13.219
09 1205910	220711	4.503	1143515	7.956	932224	11.358	501787	13.223
10 1205911	215340	4.490	1115518	7.953	916138	11.361	490394	13.222
11 1205912	211986	4.512	1107133	7.962	918426	11.361	498430	13.222
12 1205913	203330	4.503	1115082	7.959	907956	11.358	482597	13.223
13 1205914	203647	4.503	1085952	7.959	899726	11.358	482459	13.223
14 1205915	210558	4.493	1104338	7.956	909387	11.358	493457	13.223
15 1205916	205783	4.493	1080825	7.956	894854	11.358	483096	13.219
16 1205917	200795	4.493	1098052	7.956	912322	11.358	495866	13.220
17 1205918	195105	4.493	1064106	7.956	883986	11.358	478718	13.223
18 1205928	196703	4.496	1065783	7.962	880752	11.361	479141	13.223
19 1205929	194903	4.493	1055579	7.959	877530	11.358	479286	13.222
20 1206738	196772	4.509	1059926	7.962	880492	11.361	482281	13.223
21 1206739	194579	4.506	1027064	7.962	860023	11.361	466803	13.222
22 1206740	209748	4.506	1073027	7.959	886519	11.361	491209	13.223

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

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8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): en26c01.d Date Analyzed: 11/26/19

Instrument ID: HP15648 Time Analyzed: 10:20

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	189540	2.480	1009065	4.724	706562	7.870	343022	9.778
UPPER LIMIT	379080	2.980	2018130	5.224	1413124	8.370	686044	10.278
LOWER LIMIT	94770	1.980	504532	4.224	353281	7.370	171511	9.278
LAB SAMPLE ID								
01 LCSE76	193919	2.474	1018786	4.724	705611	7.870	347966	9.784
02 LCDE76	203775	2.487	1068744	4.724	746975	7.870	367863	9.784
03 VBLKE76	188217	2.474	1013282	4.724	704121	7.870	344772	9.784
04 1206745	176463	2.480	993886	4.724	691892	7.870	336877	9.784
05 1206746	175404	2.480	1003451	4.724	702625	7.870	343097	9.784
06 1206729	181859	2.474	1049425	4.724	735320	7.870	362912	9.784
07 1206730	170934	2.480	1006566	4.718	700540	7.870	345906	9.778
08 1206731	173839	2.474	1028743	4.718	714802	7.870	358644	9.784
09 1206732	171141	2.480	1013903	4.724	702128	7.870	347072	9.784
10 1206733	181780	2.480	1048381	4.724	722402	7.870	354389	9.784
11 1206735	198544	2.468	1080587	4.718	749910	7.870	365527	9.784
12 1206736	188641	2.468	1063351	4.718	745896	7.870	364961	9.784
13 1206737	181297	2.480	1048788	4.718	743154	7.870	371192	9.784
14 1206741	189437	2.474	1053250	4.724	732959	7.870	360361	9.778
15 1206742	186702	2.486	1043941	4.718	730667	7.870	358163	9.778
16 1206743	183296	2.474	1020583	4.724	708285	7.870	350306	9.784
17 1206744	177342	2.480	1015771	4.724	707265	7.870	350595	9.784
18 1207905	186638	2.474	1054590	4.718	736197	7.870	363154	9.784
19 1207906	169995	2.474	993039	4.718	688273	7.870	339837	9.784
20 1207903	221048	2.493	1081827	4.724	749523	7.870	376196	9.784
21 1207904	218455	2.486	1082441	4.724	757062	7.870	372924	9.784
22 1208157	185131	2.480	1022084	4.718	711821	7.870	354738	9.778

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

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Sample Data

Volatiles by GC/MS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WIN01

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1206729

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19nov26a.b/en26s05.d

Level: (low/med) LOW Date Received: 11/20/19

Moisture: not dec. _____ Date Analyzed: 11/26/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L		Q
75-01-4	Vinyl Chloride		1	U
75-35-4	1,1-Dichloroethene		0.4	J
67-64-1	Acetone		20	U
76-13-1	Freon 113		10	U
75-15-0	Carbon Disulfide		5	U
75-09-2	Methylene Chloride		1	U
156-60-5	trans-1,2-Dichloroethene		1	U
75-34-3	1,1-Dichloroethane		0.4	J
156-59-2	cis-1,2-Dichloroethene		1	
78-93-3	2-Butanone		10	U
67-66-3	Chloroform		1	U
71-55-6	1,1,1-Trichloroethane		1	
71-43-2	Benzene		1	U
107-06-2	1,2-Dichloroethane		1	U
79-01-6	Trichloroethene		6	
123-91-1	1,4-Dioxane		250	U
108-88-3	Toluene		1	U
127-18-4	Tetrachloroethene		1	U
100-41-4	Ethylbenzene		1	U
1330-20-7	Xylene (Total)		6	U
95-50-1	1,2-Dichlorobenzene		5	U
91-20-3	Naphthalene		5	U

FORM I VOA

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WIN01 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1206729

Data file: /chem/HP15648.i/19nov26a.b/en26s05.d Injection date and time: **26-NOV-2019 13:24**
Data file Sample Info. Line: WIN01;1206729;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 13:40 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.474	(0.006)	244	65	181859	(-4)	250.00	
66) Fluorobenzene	4.724	(0.000)	613	96	1049425	(4)	50.00	
101) Chlorobenzene-d5	7.870	(0.000)	1129	117	735320	(4)	50.00	
132) 1,4-Dichlorobenzene-d4	9.784	(-0.006)	1443	152	362912	(6)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.066	(0.000)	113	224347	50.258	101%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.383	(0.001)	102	58906	49.509	99%		80 - 120
84) Toluene-d8	(3)	6.364	(0.000)	98	1030023	49.340	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.900	(-0.001)	95	387591	49.269	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	2.096	(0.001)	96	1810	0.449	0.45		J	0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	3.078	(0.000)	63	4326	0.435	0.43		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	3.608	(0.000)	96	6246	1.167	1.17			0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	4.102	(-0.002)	97	7838	1.103	1.10			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	5.090	(0.001)	95	28729	5.518	5.52			0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	6
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Jason M. Long on 11/27/2019 at 14:38. Target 3.5 esignature user ID: jml01693

WIN01 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1206729

Data file: /chem/HP15648.i/19nov26a.b/en26s05.d Injection date and time: **26-NOV-2019 13:24**
Data file Sample Info. Line: WIN01;1206729;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 13:40 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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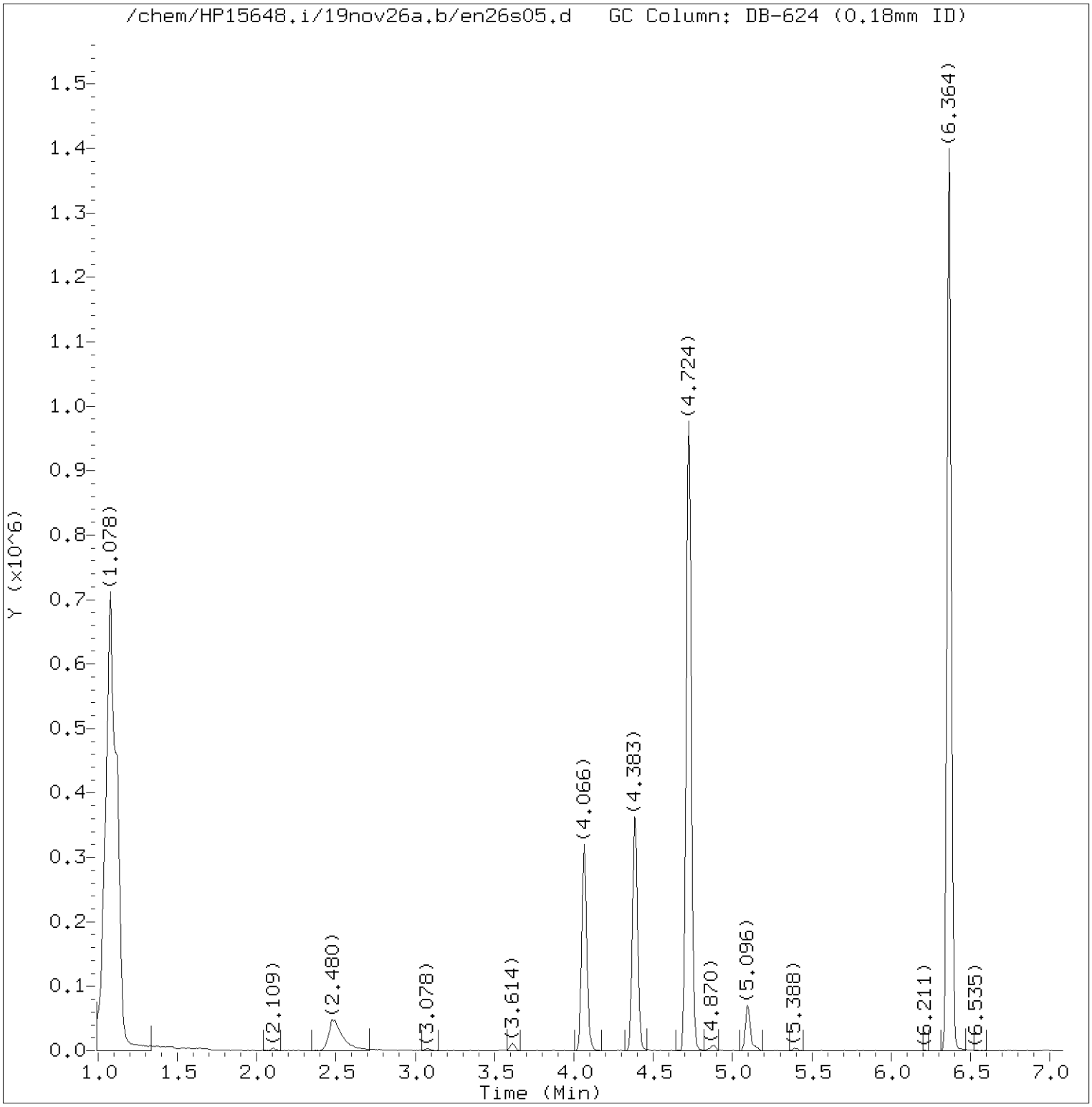
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Jason M. Long on 11/27/2019 at 14:38. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 12:19. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

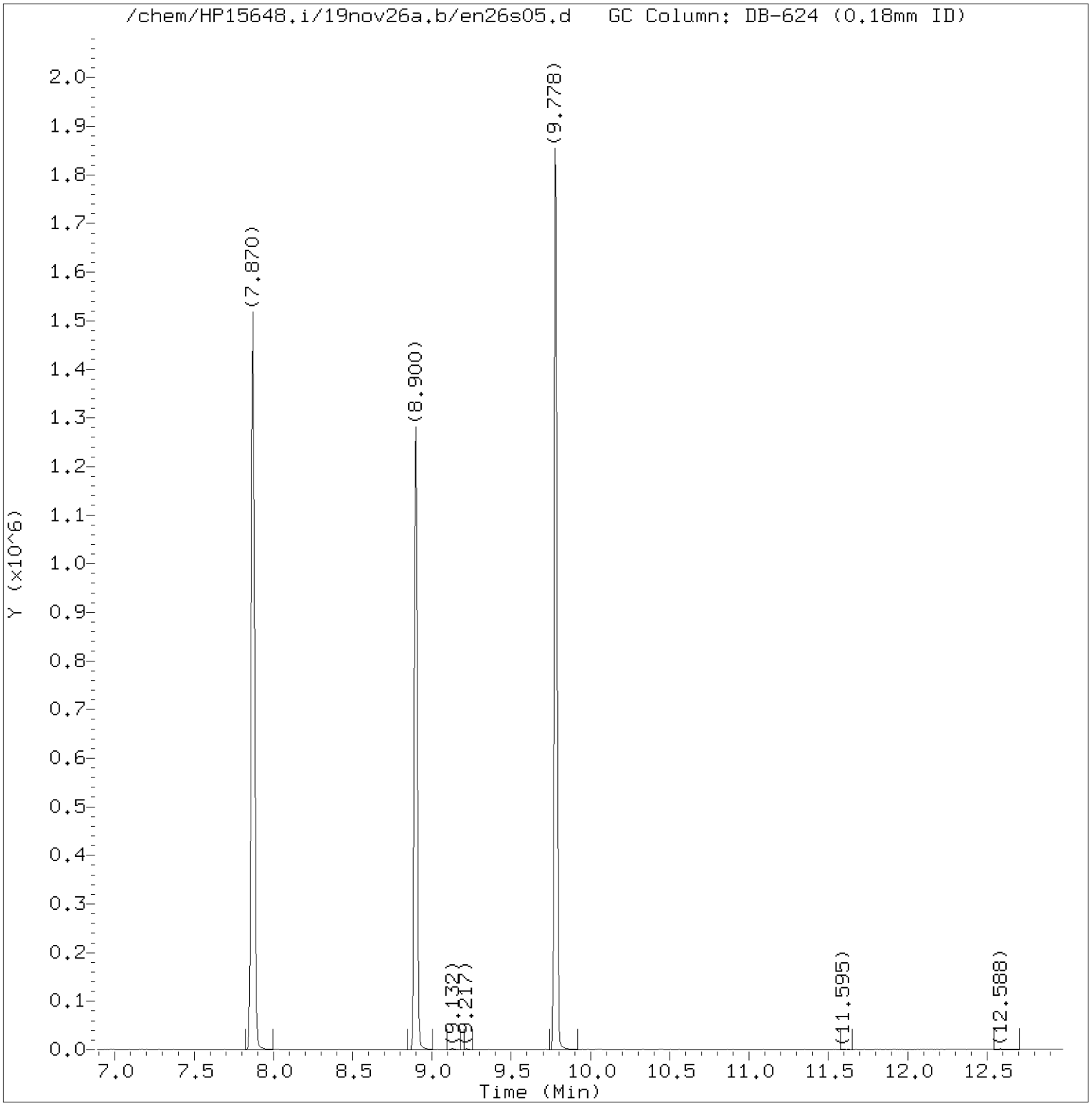
Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s05.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 13:24 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 13:40 Automation

Sample Name: WIN01 Lab Sample ID: 1206729

Digitally signed by Jason M. Long
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s05.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 13:24 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 13:40 Automation

Sample Name: WIN01 Lab Sample ID: 1206729

Digitally signed by Jason M. Long
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s05.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 13:24 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 13:40 Automation

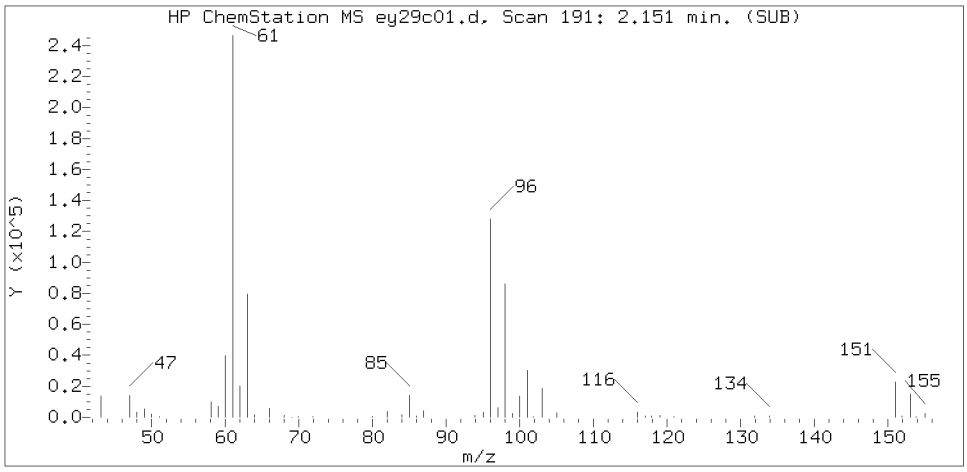
Sample Name: WIN01 Lab Sample ID: 1206729

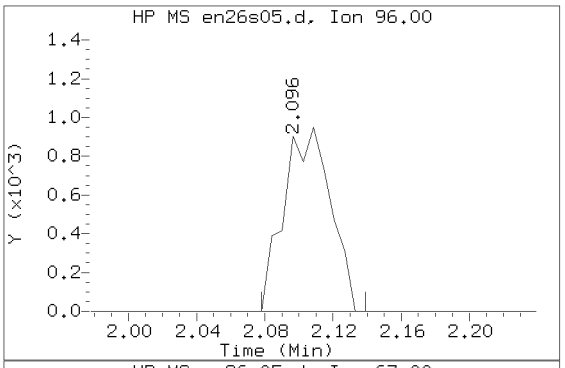
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	2.096	96	1810	0.449
29)*t-Butyl alcohol-d10	(1)	2.474	65	181859	250.000
36) 1,1-Dichloroethane	(2)	3.078	63	4326	0.435
42) cis-1,2-Dichloroethene	(2)	3.608	96	6246	1.167
52)$Dibromofluoromethane	(2)	4.066	113	224347	50.258
53) 1,1,1-Trichloroethane	(2)	4.102	97	7838	1.103
57)$1,2-Dichloroethane-d4	(2)	4.383	102	58906	49.509
66)*Fluorobenzene	(2)	4.724	96	1049425	50.000
71) Trichloroethene	(2)	5.090	95	28729	5.518
84)$Toluene-d8	(3)	6.364	98	1030023	49.340
101)*Chlorobenzene-d5	(3)	7.870	117	735320	50.000
115)$4-Bromofluorobenzene	(3)	8.900	95	387591	49.269
132)*1,4-Dichlorobenzene-d4	(4)	9.784	152	362912	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

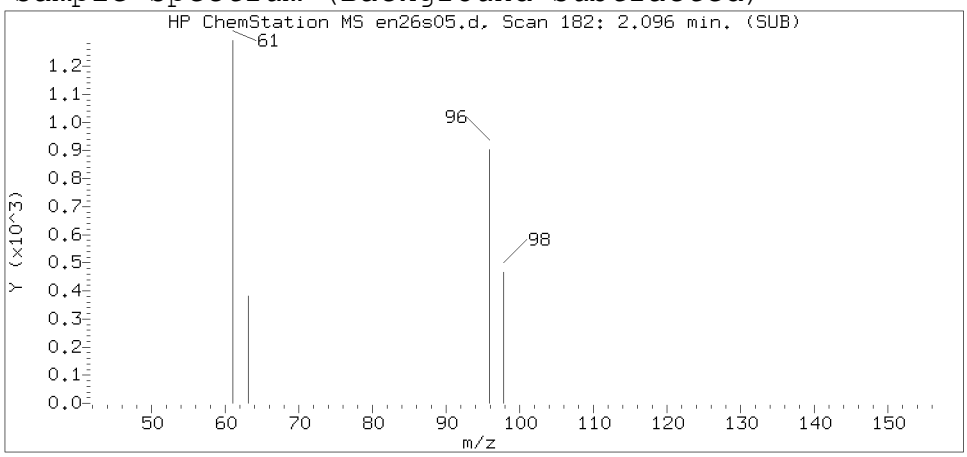
Digitally signed by Jason M. Long
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

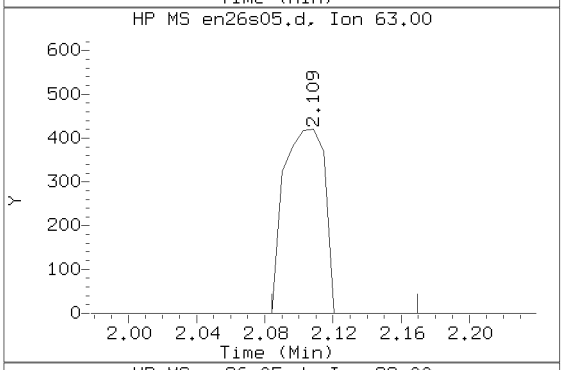
Reference Standard Spectrum for 1,1-Dichloroethene

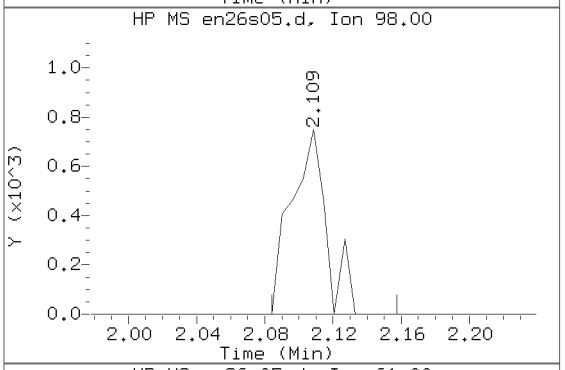




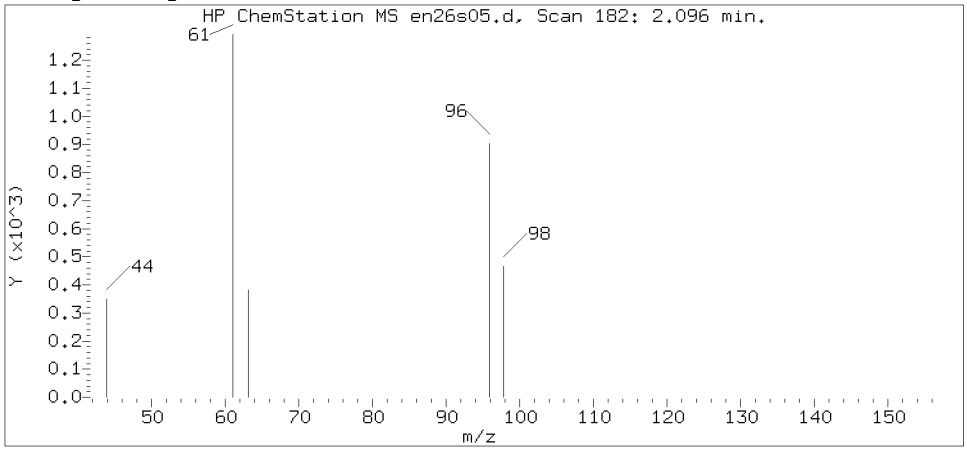
Sample Spectrum (Background Subtracted)

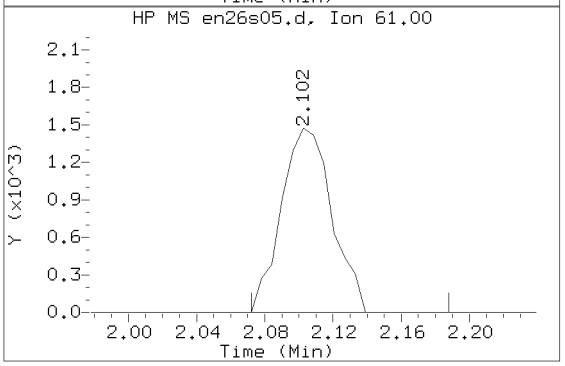






Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19nov26a.b/en26s05.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 13:24 Analyst ID: jml01693

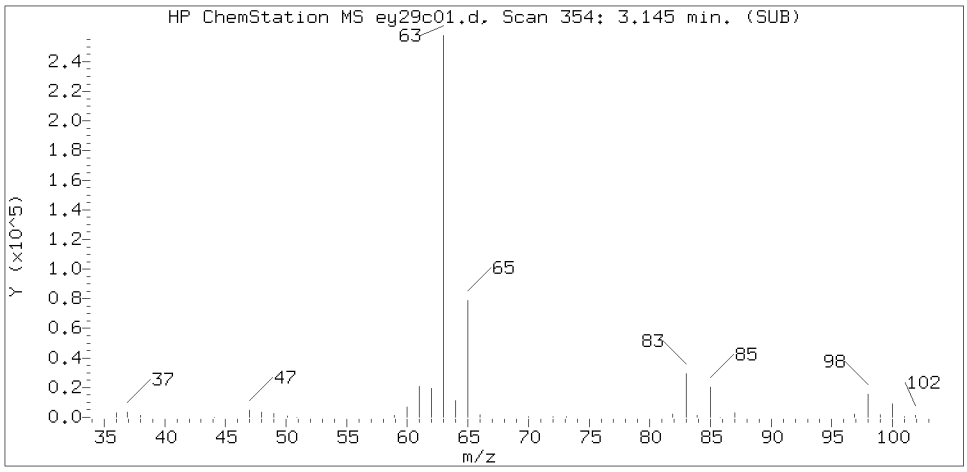
Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 13:40 Automation

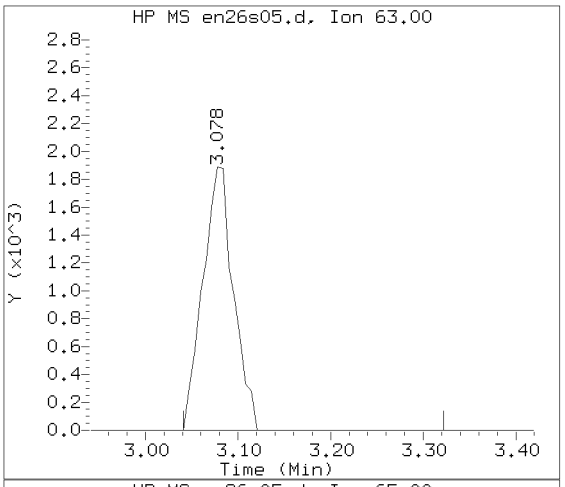
Sample Name: WIN01 Lab Sample ID: 1206729

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 182
Retention Time (minutes): 2.096
Relative Retention Time : 0.00130
Quant Ion : 96.00
Area (flag) : 1810
On-Column Amount (ng) : 0.4492

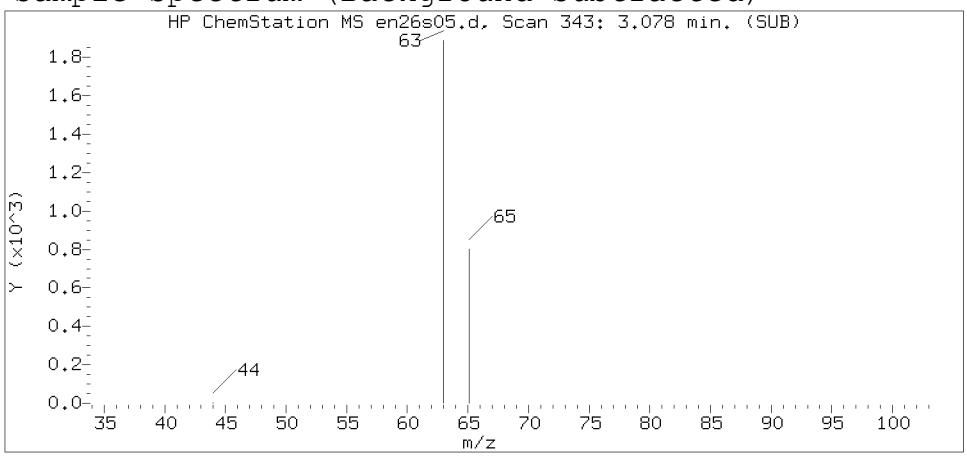
Digitally signed by Jason M. Long on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

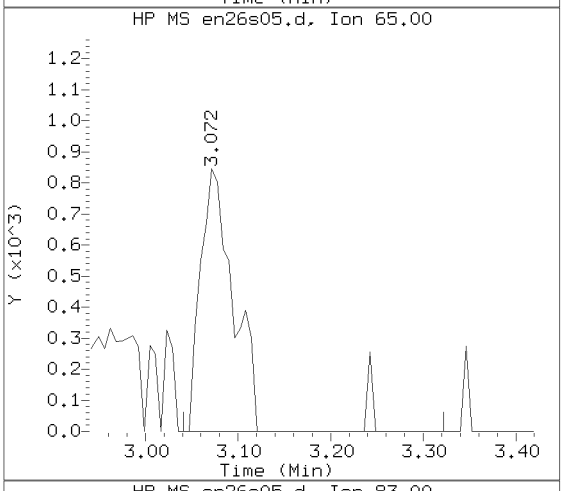
Reference Standard Spectrum for 1,1-Dichloroethane



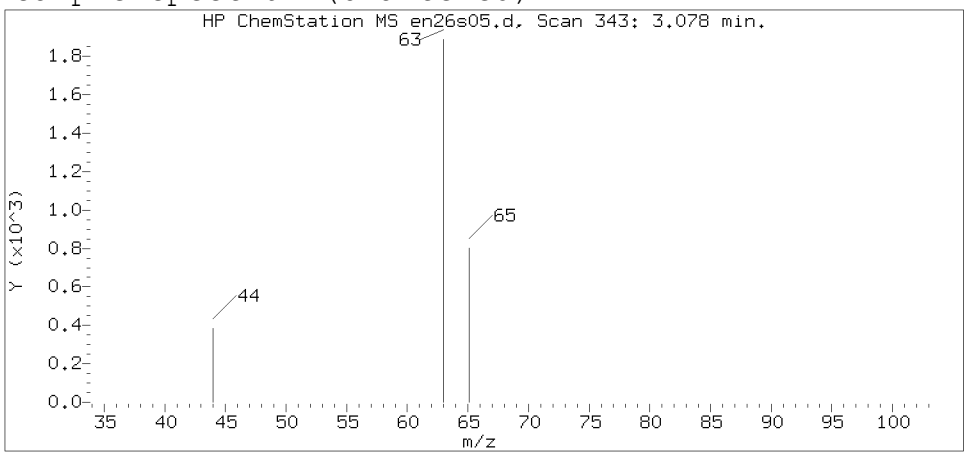


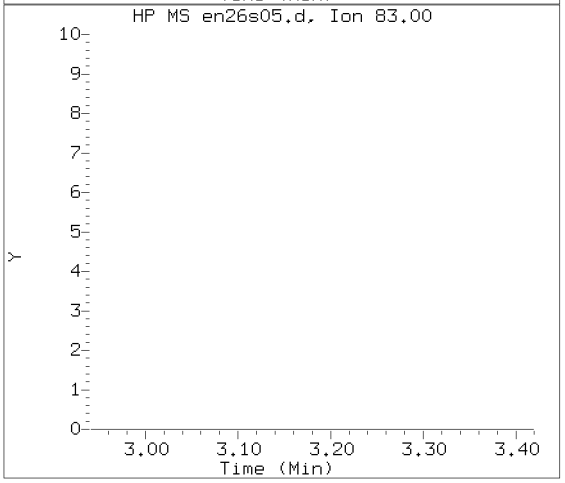
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19nov26a.b/en26s05.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 13:24 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 13:40 Automation

Sample Name: WIN01 Lab Sample ID: 1206729

Compound Number	: 36
Compound Name	: 1,1-Dichloroethane
Scan Number	: 343
Retention Time (minutes)	: 3.078
Relative Retention Time	: 0.00001
Quant Ion	: 63.00
Area (flag)	: 4326
On-Column Amount (ng)	: 0.4347

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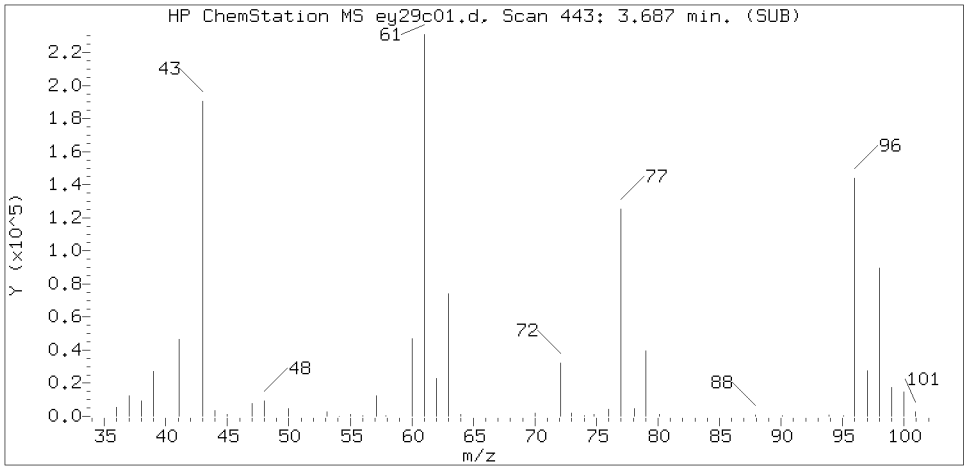
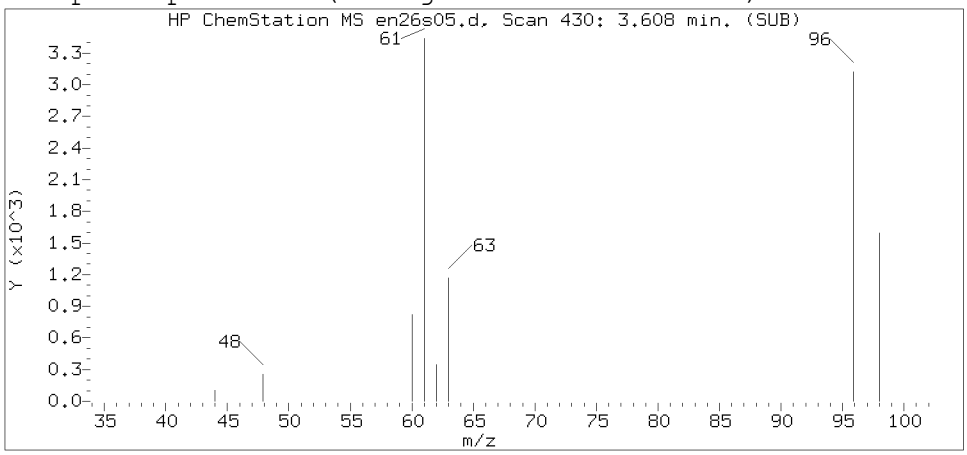
Target 3.5 esignature user ID: jml01693

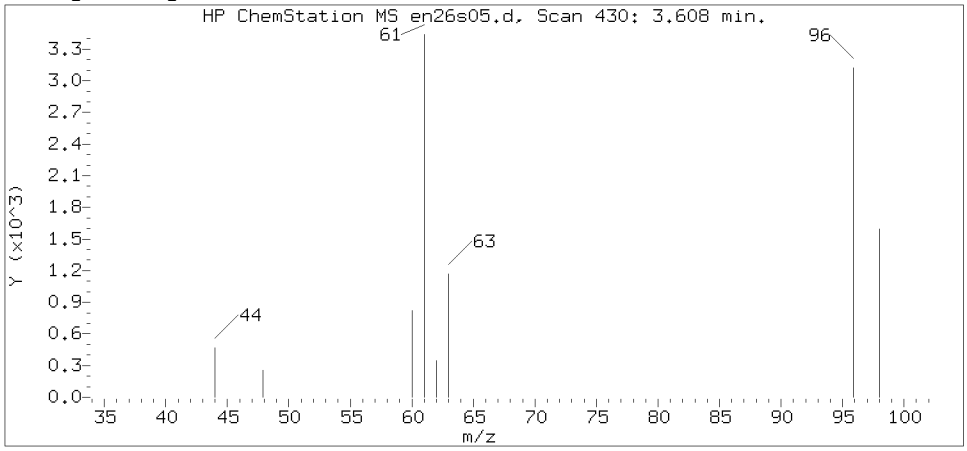
Reference Standard Spectrum for cis-1,2-Dichloroethene

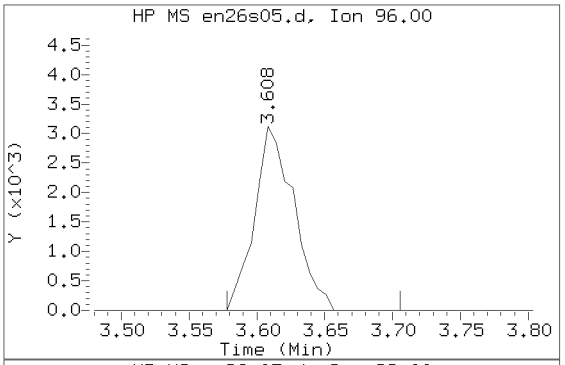


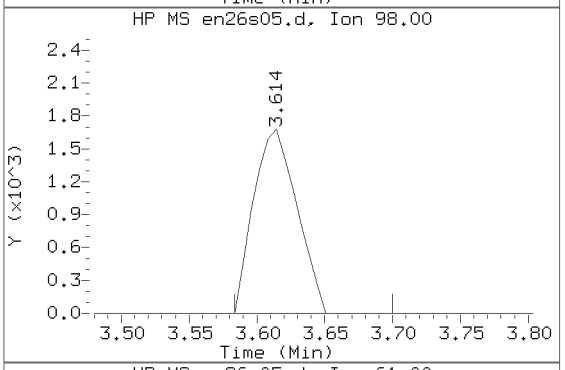
Sample Spectrum (Background Subtracted)

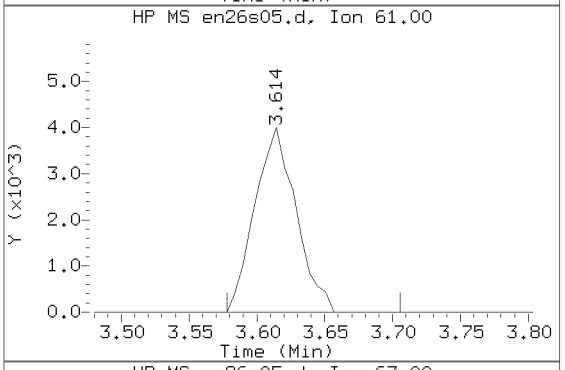


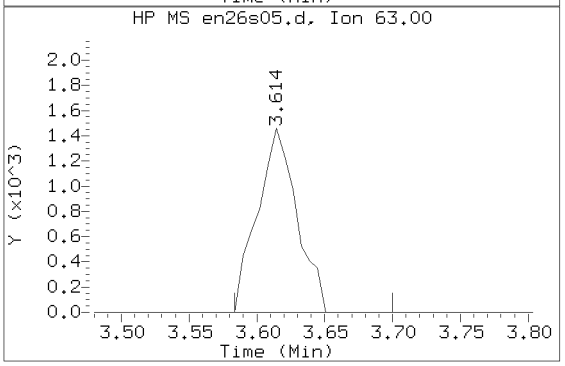
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19nov26a.b/en26s05.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 13:24 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 13:40 Automation

Sample Name: WIN01 Lab Sample ID: 1206729

Compound Number	: 42
Compound Name	: cis-1,2-Dichloroethene
Scan Number	: 430
Retention Time (minutes)	: 3.608
Relative Retention Time	: 0.00001
Quant Ion	: 96.00
Area (flag)	: 6246
On-Column Amount (ng)	: 1.1672

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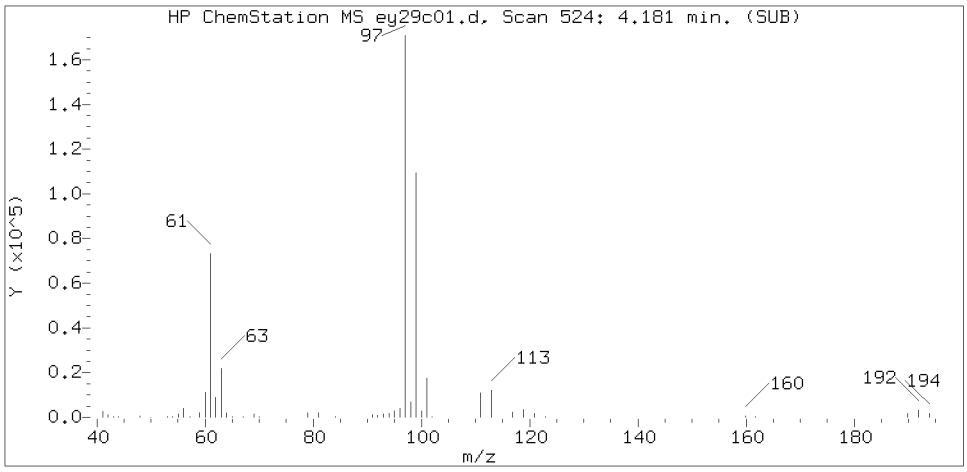
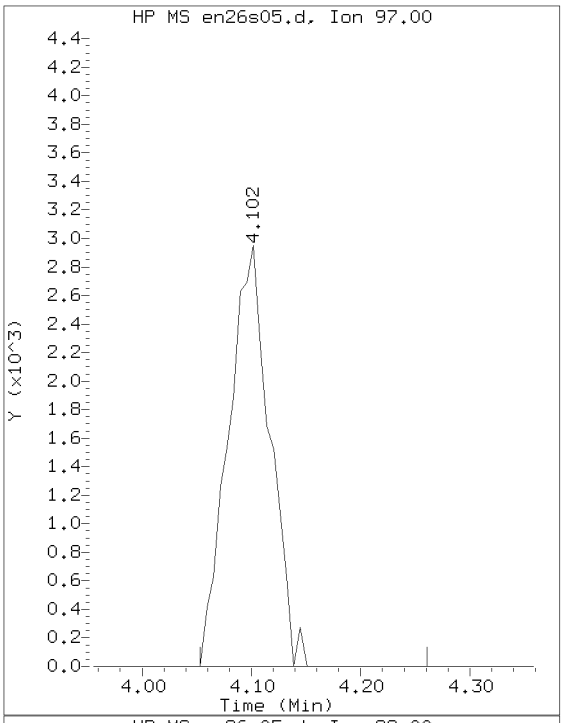
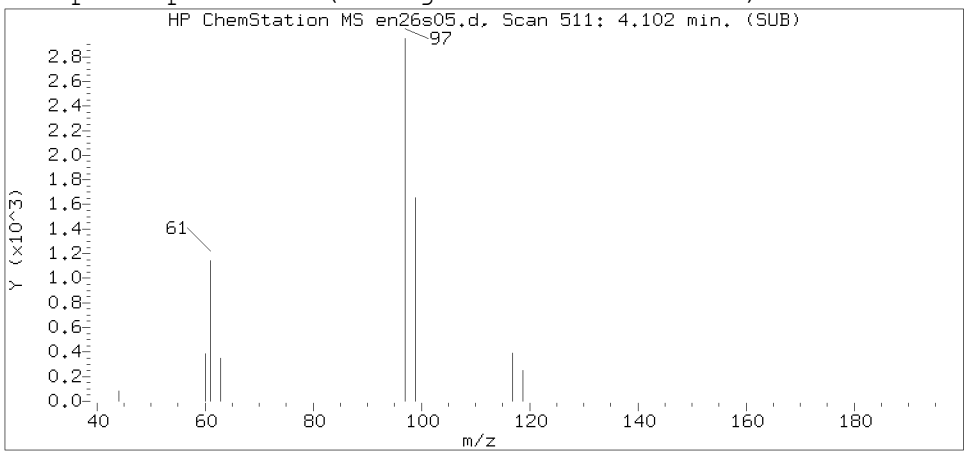
Target 3.5 esignature user ID: jml01693

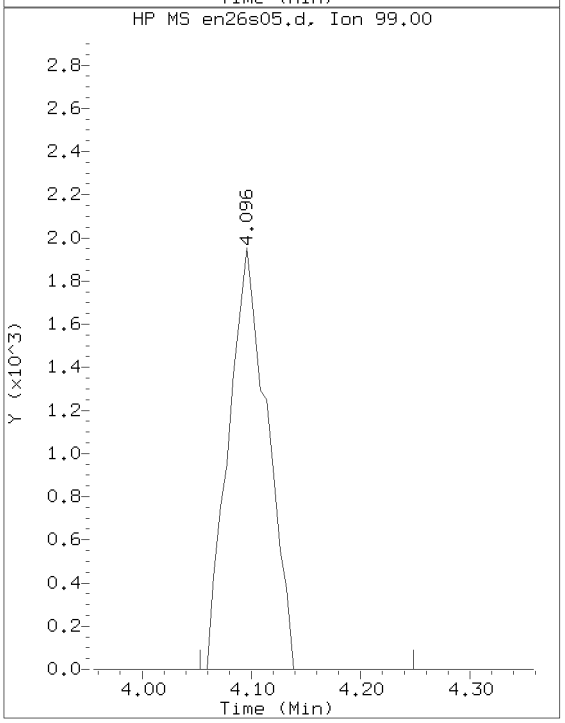
Reference Standard Spectrum for 1,1,1-Trichloroethane



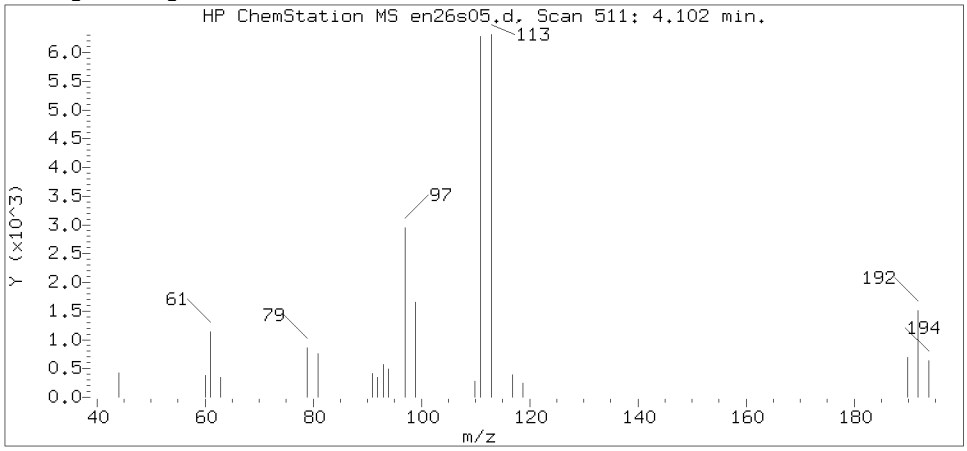


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP15648.i/19nov26a.b/en26s05.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 13:24 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 13:40 Automation

Sample Name: WIN01 Lab Sample ID: 1206729

Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 511
Retention Time (minutes): 4.102
Relative Retention Time :-0.00258
Quant Ion : 97.00
Area (flag) : 7838
On-Column Amount (ng) : 1.1033

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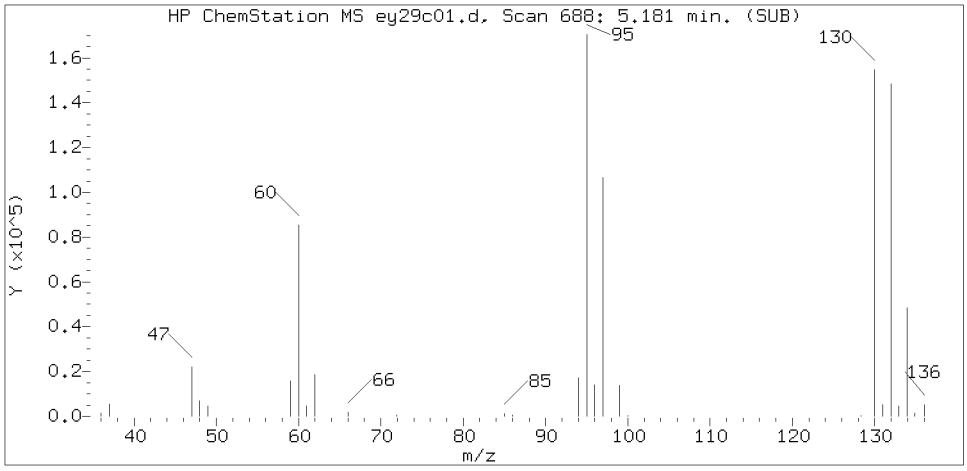
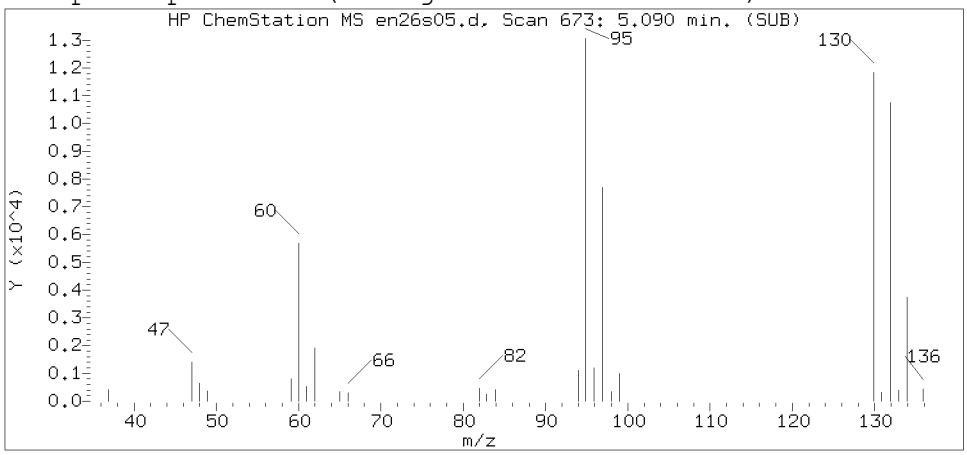
Target 3.5 esignature user ID: jml01693

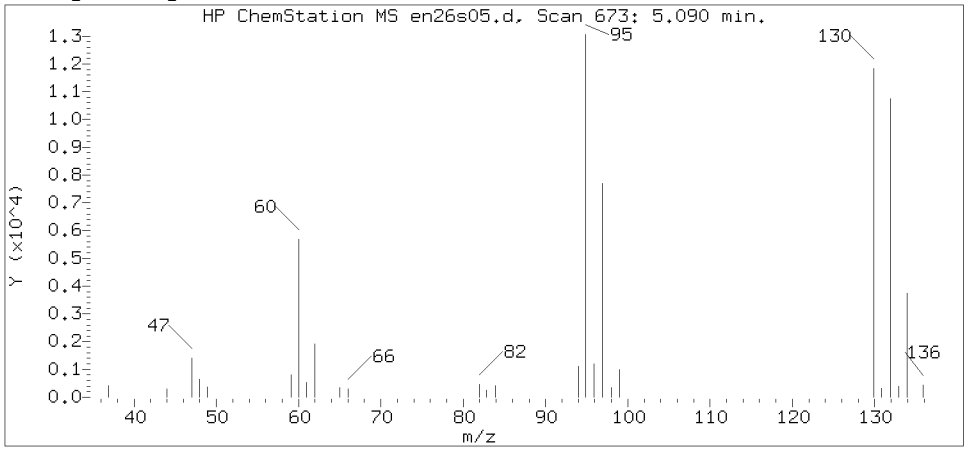
Reference Standard Spectrum for Trichloroethene

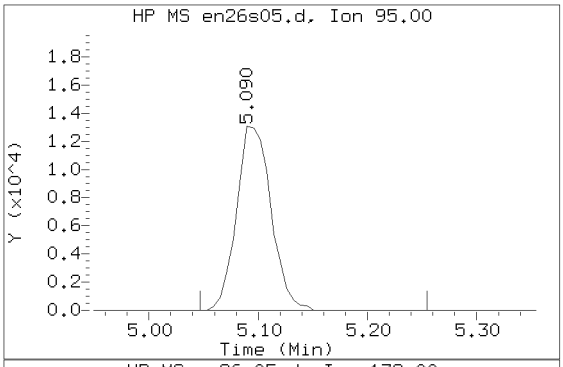


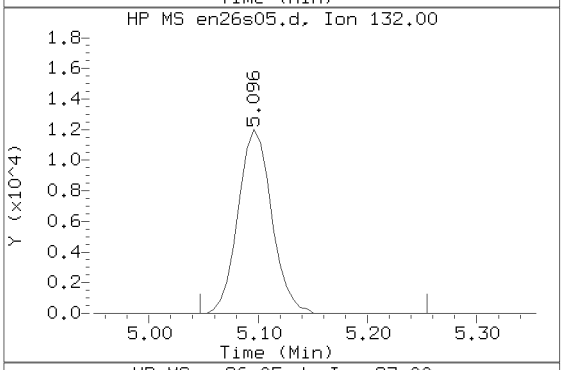
Sample Spectrum (Background Subtracted)

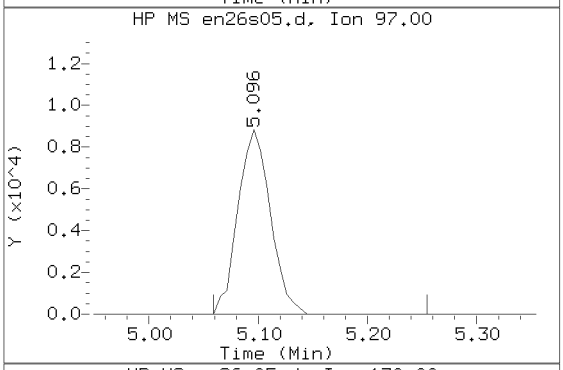


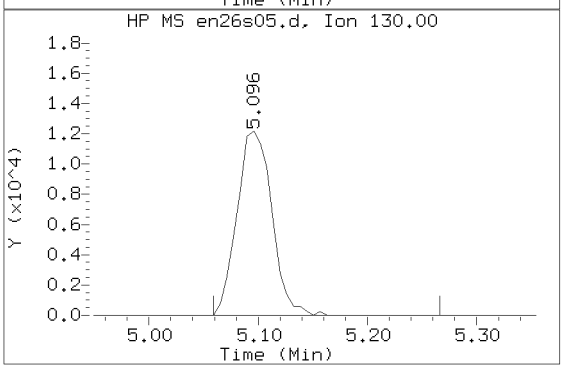
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19nov26a.b/en26s05.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 13:24 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 13:40 Automation

Sample Name: WIN01 Lab Sample ID: 1206729

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 673
Retention Time (minutes)	: 5.090
Relative Retention Time	: 0.00129
Quant Ion	: 95.00
Area (flag)	: 28729
On-Column Amount (ng)	: 5.5178

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Target 3.5 esignature user ID: jml01693

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WIN02

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1206730

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19nov26a.b/en26s06.d

Level: (low/med) LOW Date Received: 11/20/19

Moisture: not dec. _____ Date Analyzed: 11/26/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	0.4	J
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.4	J
156-59-2	cis-1,2-Dichloroethene	1	
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	6	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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WIN02 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1206730

Data file: /chem/HP15648.i/19nov26a.b/en26s06.d Injection date and time: **26-NOV-2019 13:44**
Data file Sample Info. Line: WIN02;1206730;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 14:01 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.480	(0.000)	245	65	170934	(-10)	250.00	
66) Fluorobenzene	4.718	(0.006)	612	96	1006566	(0)	50.00	
101) Chlorobenzene-d5	7.870	(0.000)	1129	117	700540	(-1)	50.00	
132) 1,4-Dichlorobenzene-d4	9.778	(0.000)	1442	152	345906	(1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.059	(0.000)	113	213596	49.887	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.383	(0.000)	102	56754	49.730	99%		80 - 120
84) Toluene-d8	(3)	6.364	(0.000)	98	988511	49.703	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.900	(-0.001)	95	368839	49.213	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	2.096	(0.000)	96	1497	0.387	0.39		J	0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	3.072	(0.000)	63	4215	0.442	0.44		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	3.602	(0.000)	96	5955	1.160	1.16			0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	4.096	(-0.002)	97	8128	1.193	1.19			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	5.096	(-0.001)	95	28376	5.682	5.68			0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	6
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

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Data file: /chem/HP15648.i/19nov26a.b/en26s06.d Injection date and time: **26-NOV-2019 13:44**
Data file Sample Info. Line: WIN02;1206730;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 14:01 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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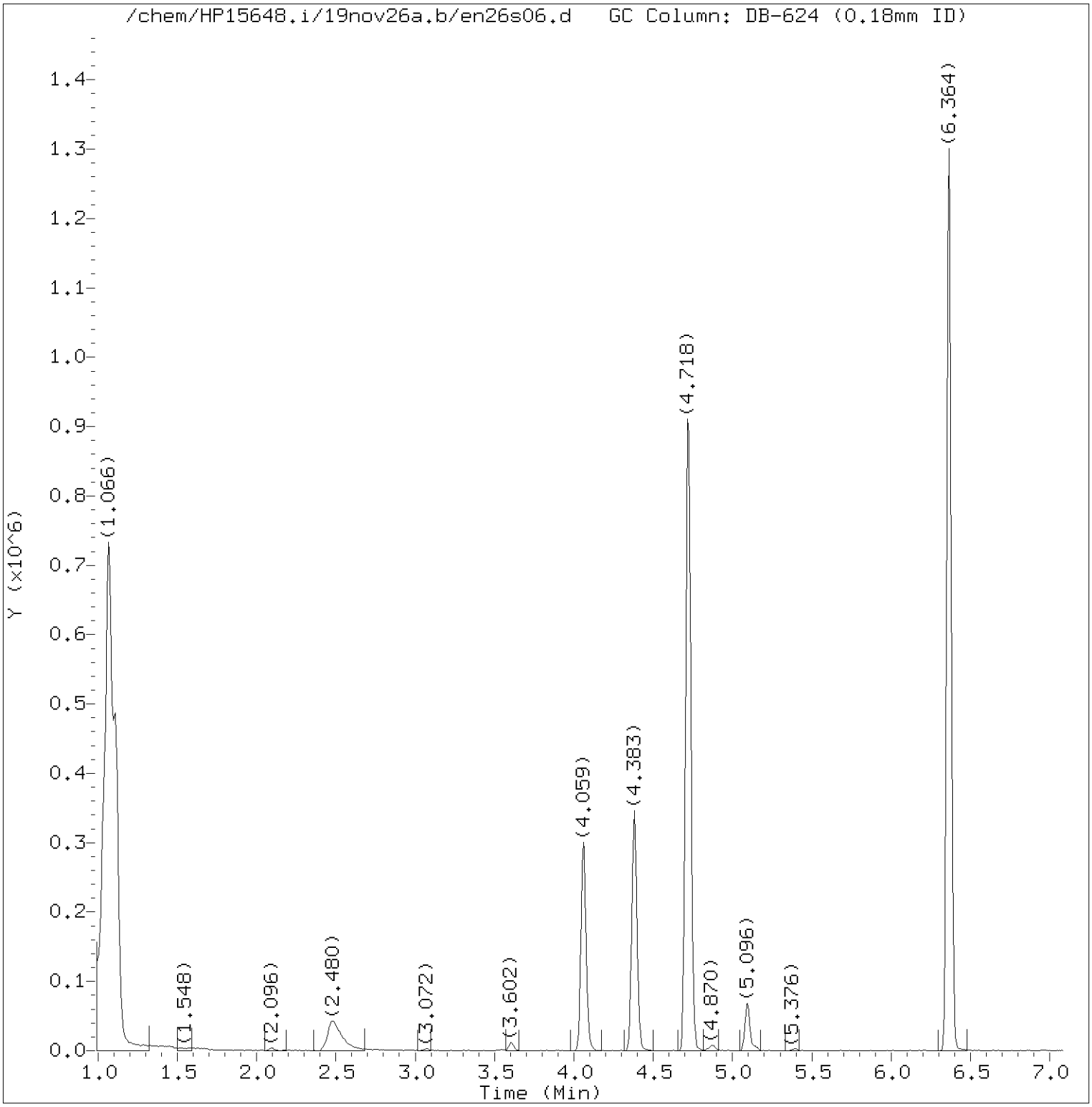
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Jason M. Long on 11/27/2019 at 14:38. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 12:19. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

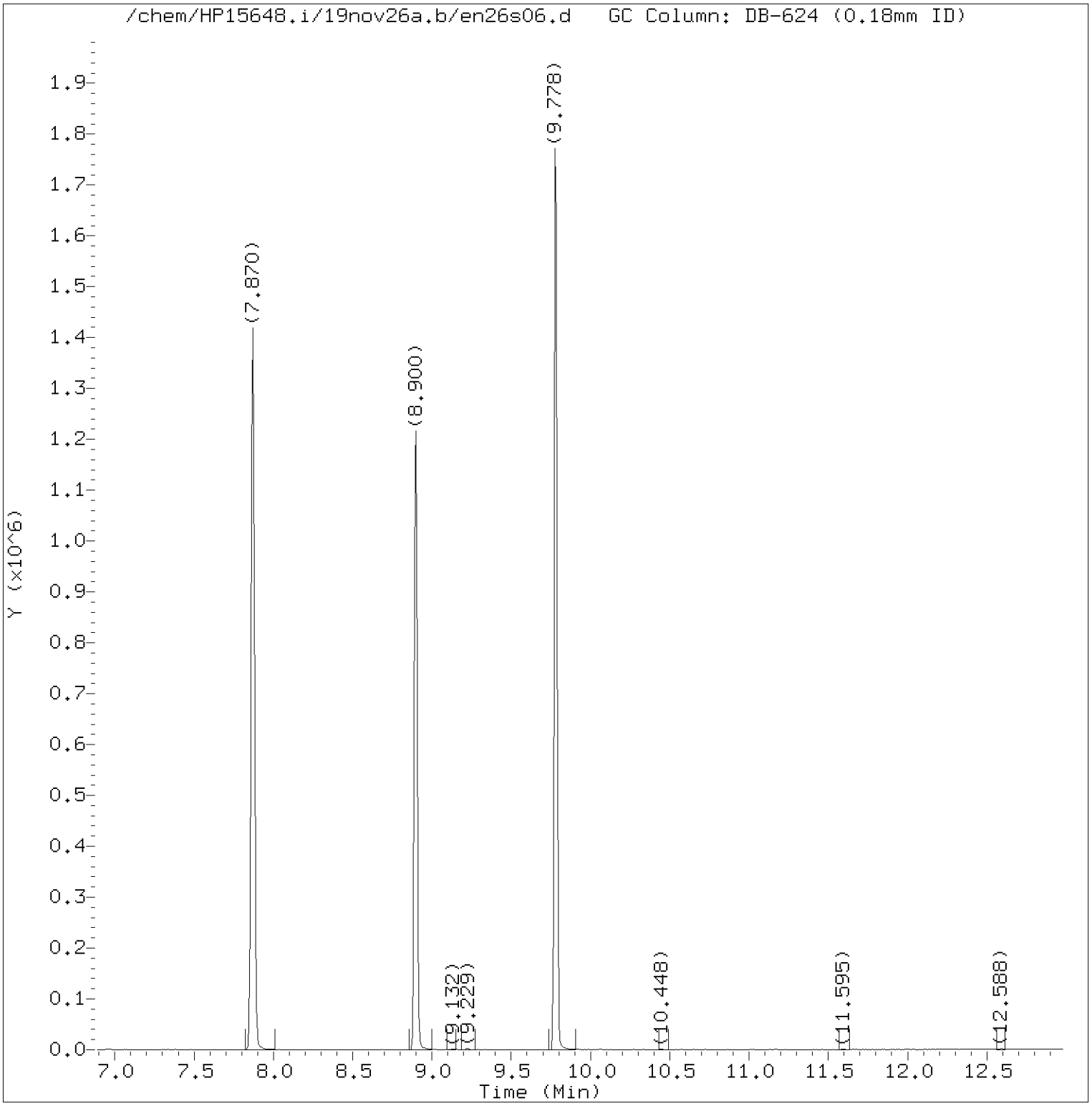
Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s06.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 13:44 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 14:01 Automation

Sample Name: WIN02 Lab Sample ID: 1206730

Digitally signed by Jason M. Long
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s06.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 13:44 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 14:01 Automation

Sample Name: WIN02 Lab Sample ID: 1206730

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on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s06.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 13:44 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 14:01 Automation

Sample Name: WIN02 Lab Sample ID: 1206730

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	2.096	96	1497	0.387
29)*t-Butyl alcohol-d10	(1)	2.480	65	170934	250.000
36) 1,1-Dichloroethane	(2)	3.072	63	4215	0.442
42) cis-1,2-Dichloroethene	(2)	3.602	96	5955	1.160
52)$Dibromofluoromethane	(2)	4.059	113	213596	49.887
53) 1,1,1-Trichloroethane	(2)	4.096	97	8128	1.193
57)$1,2-Dichloroethane-d4	(2)	4.383	102	56754	49.730
66)*Fluorobenzene	(2)	4.718	96	1006566	50.000
71) Trichloroethene	(2)	5.096	95	28376	5.682
84)$Toluene-d8	(3)	6.364	98	988511	49.703
101)*Chlorobenzene-d5	(3)	7.870	117	700540	50.000
115)$4-Bromofluorobenzene	(3)	8.900	95	368839	49.213
132)*1,4-Dichlorobenzene-d4	(4)	9.778	152	345906	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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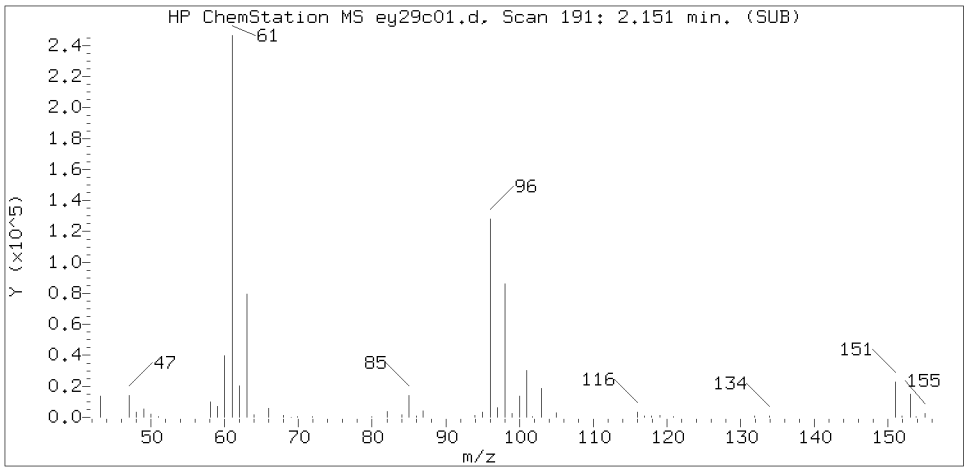
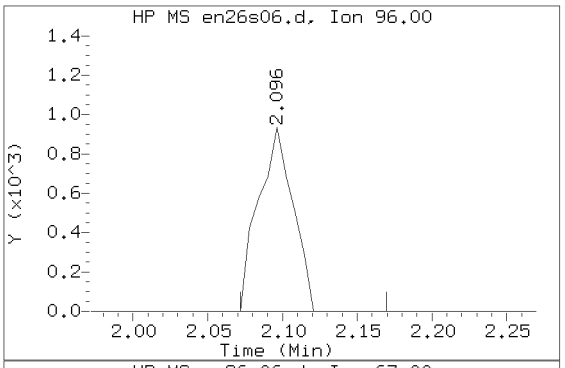
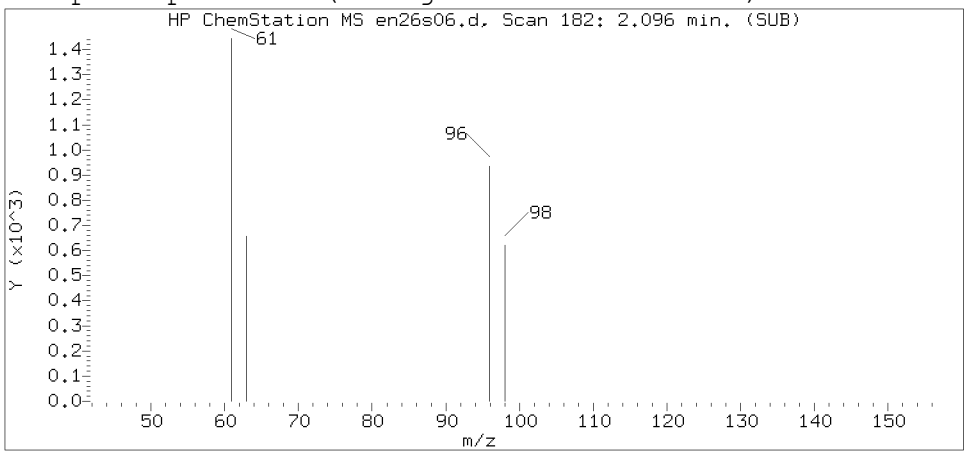
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

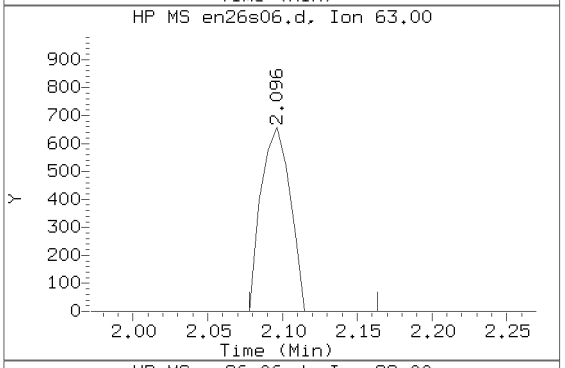
Reference Standard Spectrum for 1,1-Dichloroethene

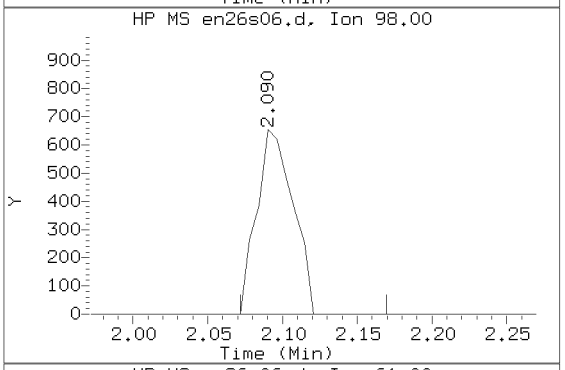




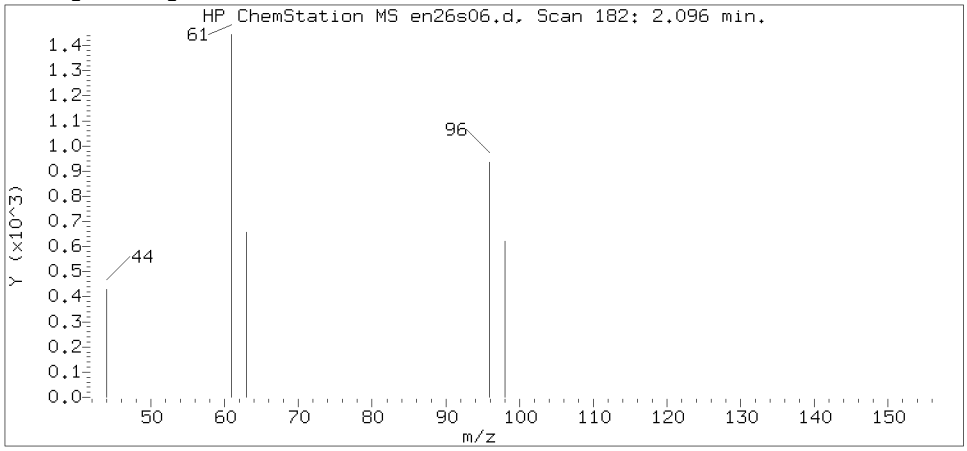
Sample Spectrum (Background Subtracted)

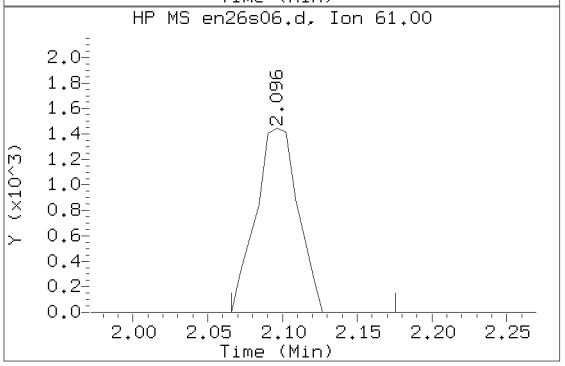






Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19nov26a.b/en26s06.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 13:44 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 14:01 Automation

Sample Name: WIN02 Lab Sample ID: 1206730

Compound Number	: 17
Compound Name	: 1,1-Dichloroethene
Scan Number	: 182
Retention Time (minutes)	: 2.096
Relative Retention Time	: 0.00073
Quant Ion	: 96.00
Area (flag)	: 1497
On-Column Amount (ng)	: 0.3874

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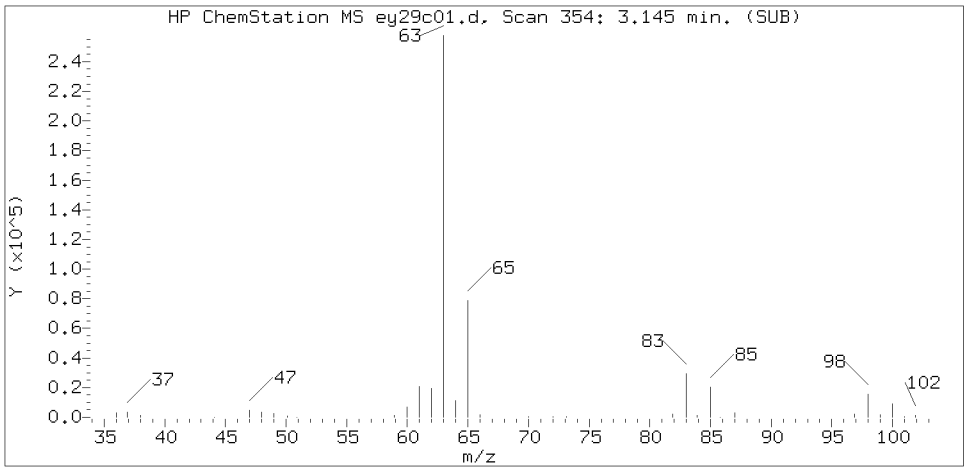
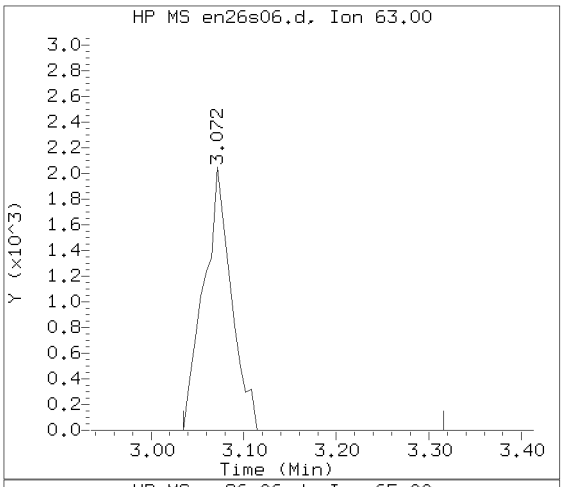
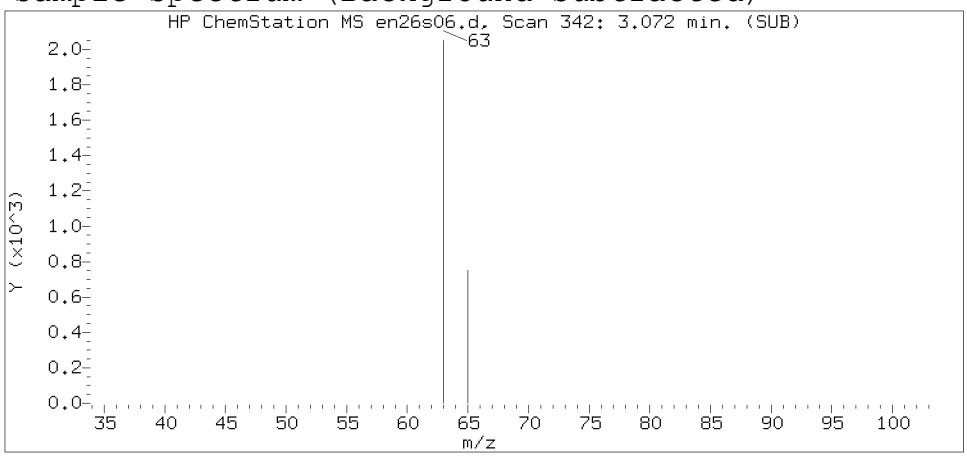
Target 3.5 esignature user ID: jml01693

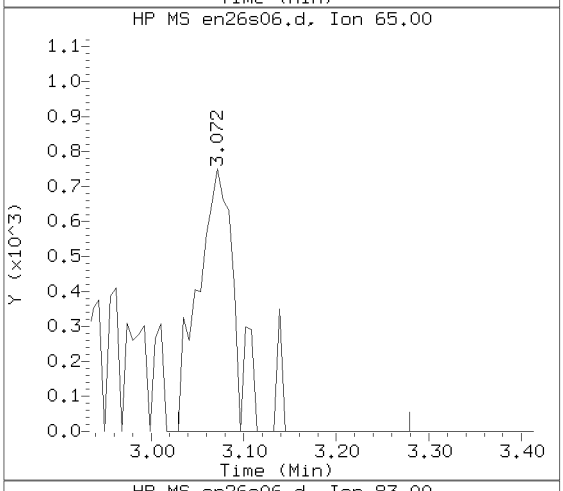
Reference Standard Spectrum for 1,1-Dichloroethane



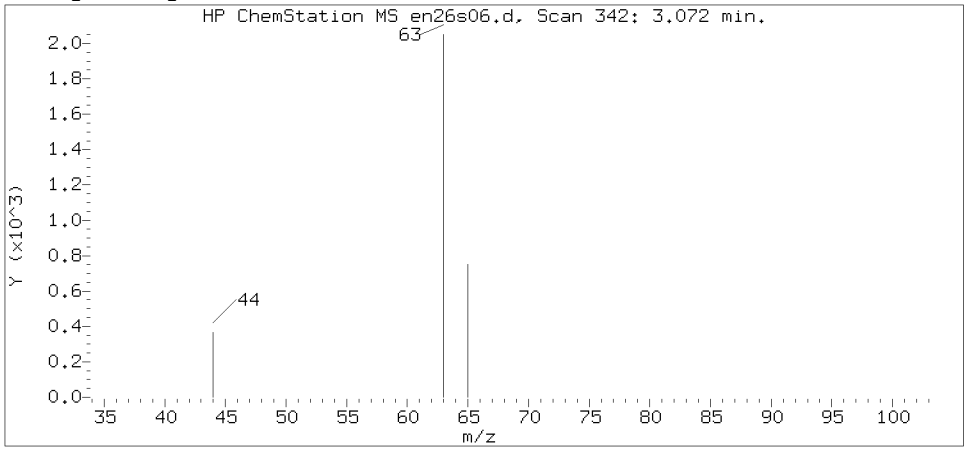


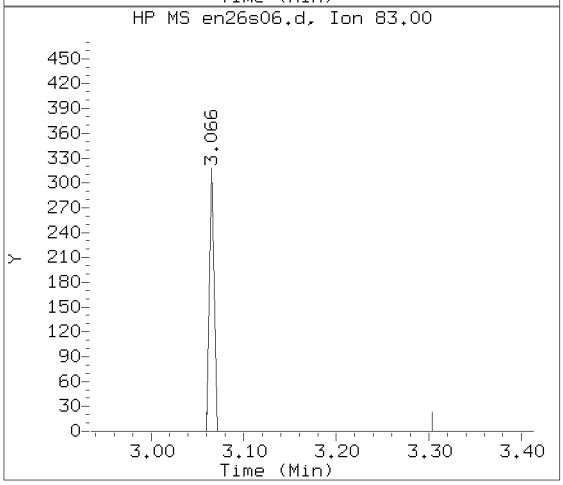
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19nov26a.b/en26s06.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 13:44 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 14:01 Automation

Sample Name: WIN02 Lab Sample ID: 1206730

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 342
Retention Time (minutes): 3.072
Relative Retention Time : 0.00046
Quant Ion : 63.00
Area (flag) : 4215
On-Column Amount (ng) : 0.4416

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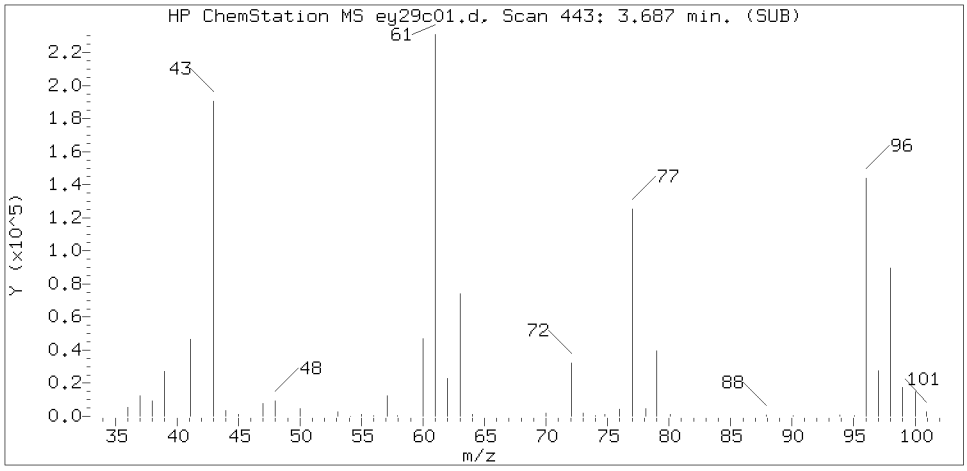
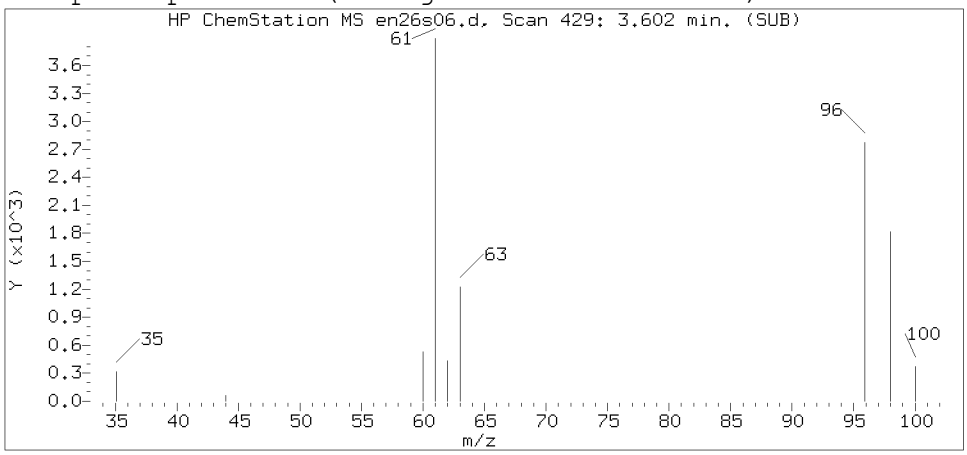
Target 3.5 esignature user ID: jml01693

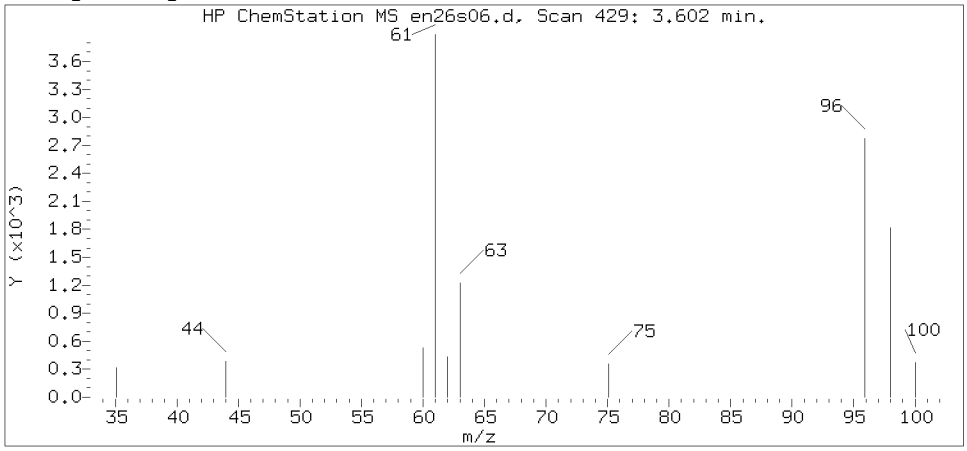
Reference Standard Spectrum for cis-1,2-Dichloroethene

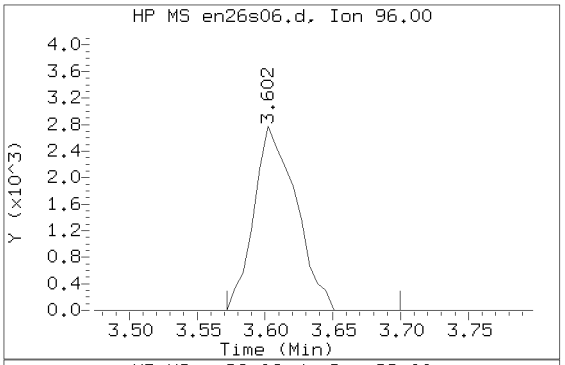


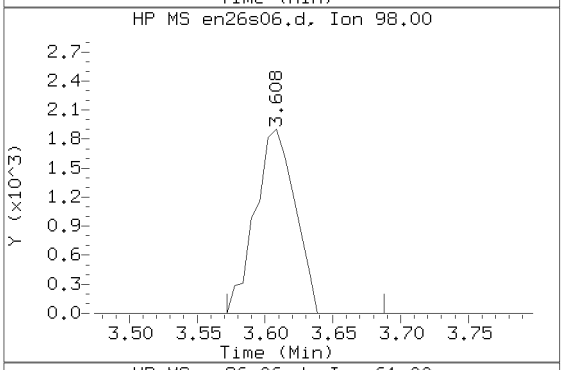
Sample Spectrum (Background Subtracted)

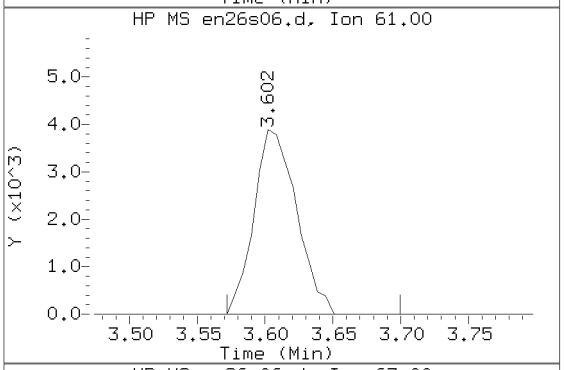


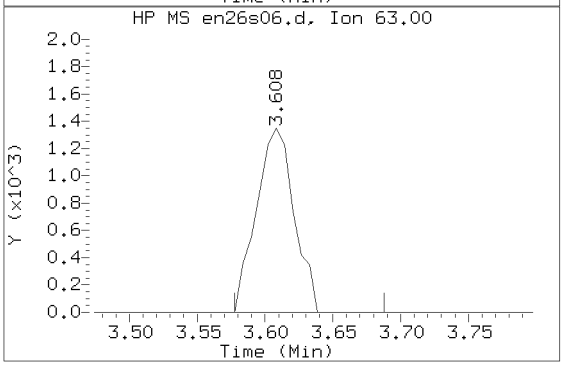
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19nov26a.b/en26s06.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 13:44 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 14:01 Automation

Sample Name: WIN02 Lab Sample ID: 1206730

Compound Number	: 42
Compound Name	: cis-1,2-Dichloroethene
Scan Number	: 429
Retention Time (minutes)	: 3.602
Relative Retention Time	: 0.00031
Quant Ion	: 96.00
Area (flag)	: 5955
On-Column Amount (ng)	: 1.1603

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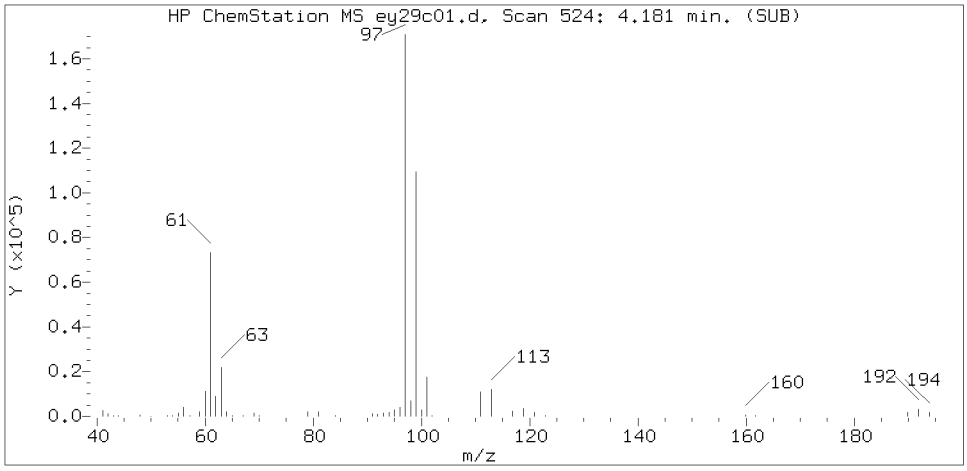
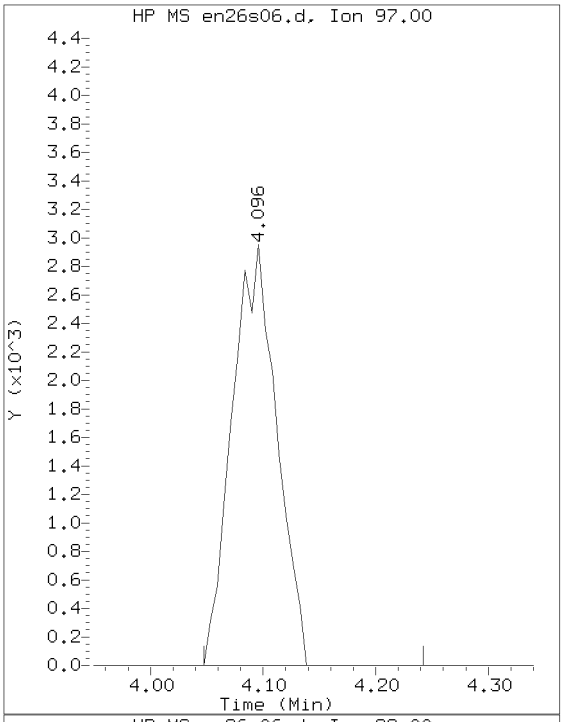
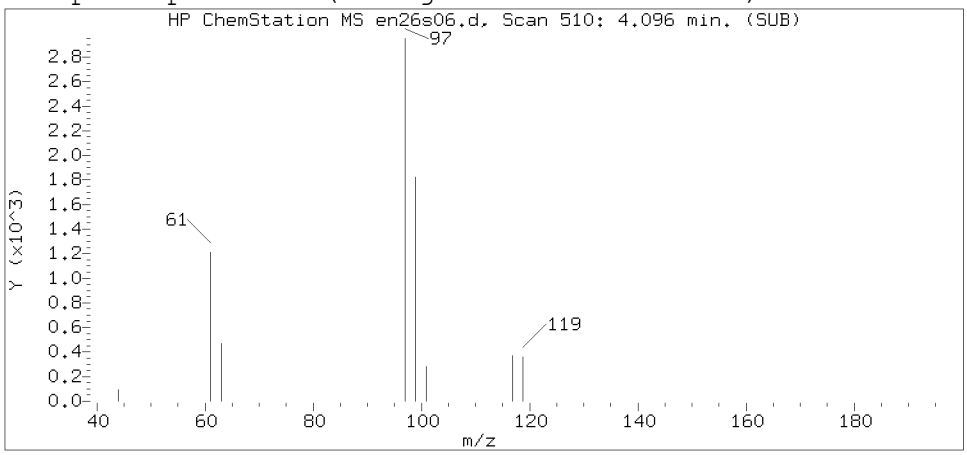
Target 3.5 esignature user ID: jml01693

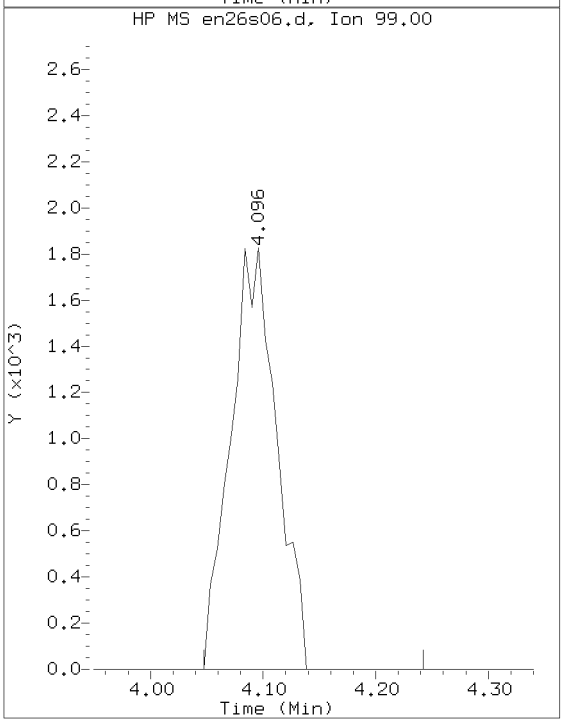
Reference Standard Spectrum for 1,1,1-Trichloroethane



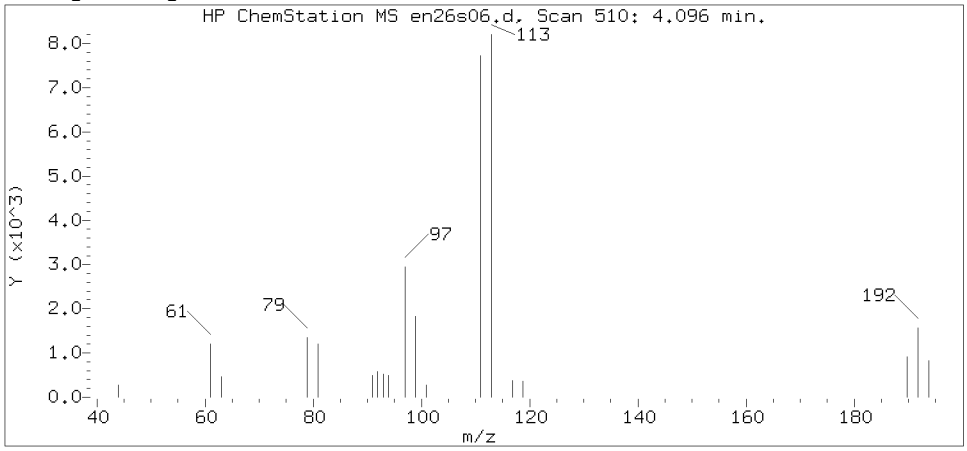


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP15648.i/19nov26a.b/en26s06.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 13:44 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 14:01 Automation

Sample Name: WIN02 Lab Sample ID: 1206730

Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 510
Retention Time (minutes): 4.096
Relative Retention Time :-0.00241
Quant Ion : 97.00
Area (flag) : 8128
On-Column Amount (ng) : 1.1929

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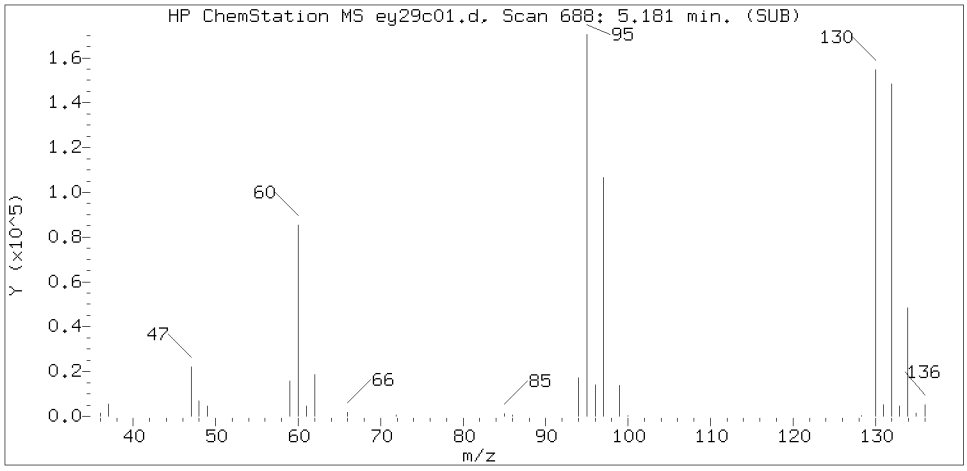
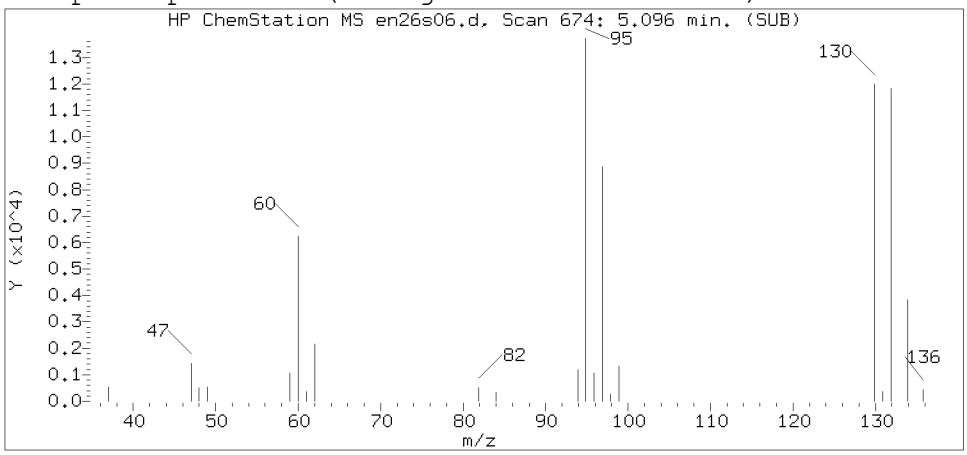
Target 3.5 esignature user ID: jml01693

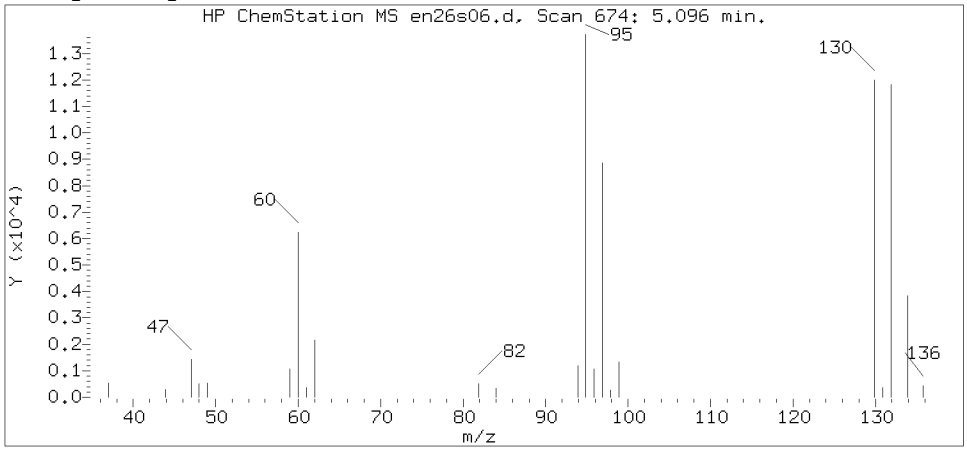
Reference Standard Spectrum for Trichloroethene

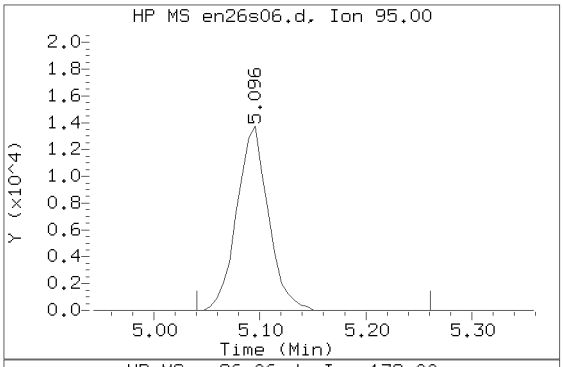


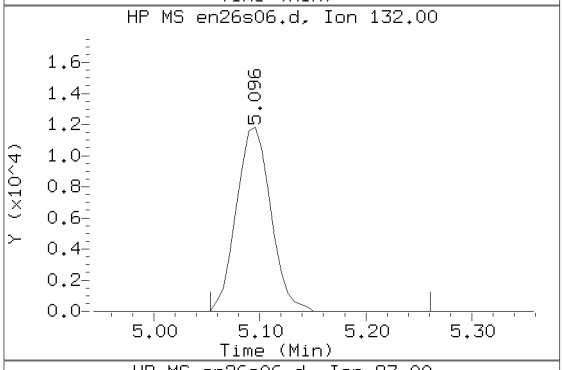
Sample Spectrum (Background Subtracted)

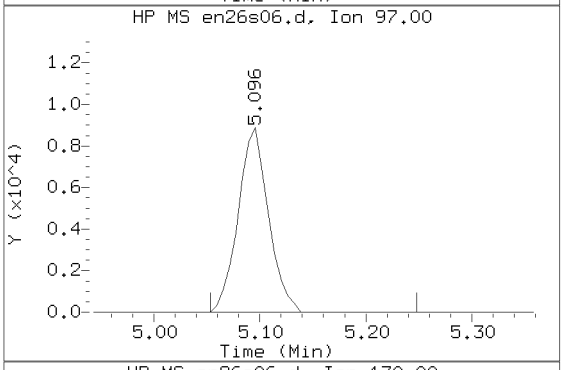


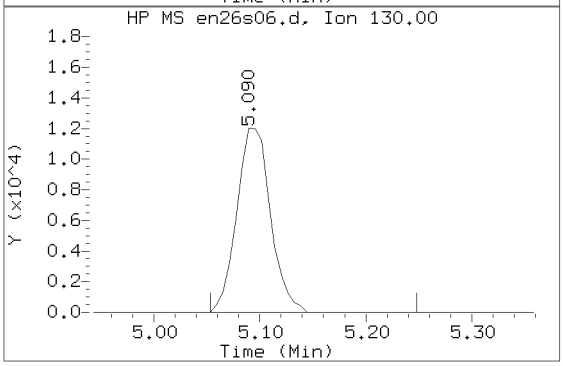
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19nov26a.b/en26s06.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 13:44 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 14:01 Automation

Sample Name: WIN02 Lab Sample ID: 1206730

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 674
Retention Time (minutes)	: 5.096
Relative Retention Time	:-0.00140
Quant Ion	: 95.00
Area (flag)	: 28376
On-Column Amount (ng)	: 5.6819

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Target 3.5 esignature user ID: jml01693

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WIN03

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1206731

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19nov26a.b/en26s07.d

Level: (low/med) LOW Date Received: 11/20/19

Moisture: not dec. _____ Date Analyzed: 11/26/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L		Q
75-01-4	Vinyl Chloride		1	U
75-35-4	1,1-Dichloroethene		1	U
67-64-1	Acetone		20	U
76-13-1	Freon 113		10	U
75-15-0	Carbon Disulfide		5	U
75-09-2	Methylene Chloride		1	U
156-60-5	trans-1,2-Dichloroethene		1	U
75-34-3	1,1-Dichloroethane		1	
156-59-2	cis-1,2-Dichloroethene		1	U
78-93-3	2-Butanone		10	U
67-66-3	Chloroform		1	U
71-55-6	1,1,1-Trichloroethane		1	
71-43-2	Benzene		1	U
107-06-2	1,2-Dichloroethane		1	U
79-01-6	Trichloroethene		1	
123-91-1	1,4-Dioxane		250	U
108-88-3	Toluene		1	U
127-18-4	Tetrachloroethene		1	U
100-41-4	Ethylbenzene		1	U
1330-20-7	Xylene (Total)		6	U
95-50-1	1,2-Dichlorobenzene		5	U
91-20-3	Naphthalene		5	U

WIN03 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1206731

Data file: /chem/HP15648.i/19nov26a.b/en26s07.d Injection date and time: **26-NOV-2019 14:04**
Data file Sample Info. Line: WIN03;1206731;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 14:21 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.474	(0.006)	244	65	173839	(-8)	250.00	
66) Fluorobenzene	4.718	(0.006)	612	96	1028743	(2)	50.00	
101) Chlorobenzene-d5	7.870	(0.000)	1129	117	714802	(1)	50.00	
132) 1,4-Dichlorobenzene-d4	9.784	(-0.006)	1443	152	358644	(5)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.059	(0.000)	113	218629	49.961	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.383	(0.000)	102	58087	49.801	100%		80 - 120
84) Toluene-d8	(3)	6.364	(0.000)	98	1008718	49.707	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.900	(-0.001)	95	378835	49.538	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	3.072	(0.000)	63	12511	1.282	1.28			0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	4.090	(-0.001)	97	8234	1.182	1.18			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	5.096	(-0.001)	95	6951	1.362	1.36			0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	6
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Jason M. Long on 11/27/2019 at 14:38. Target 3.5 esignature user ID: jml01693

WIN03 Lancaster Laboratories 1206731
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19nov26a.b/en26s07.d Injection date and time: **26-NOV-2019 14:04**
Data file Sample Info. Line: WIN03;1206731;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 14:21 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

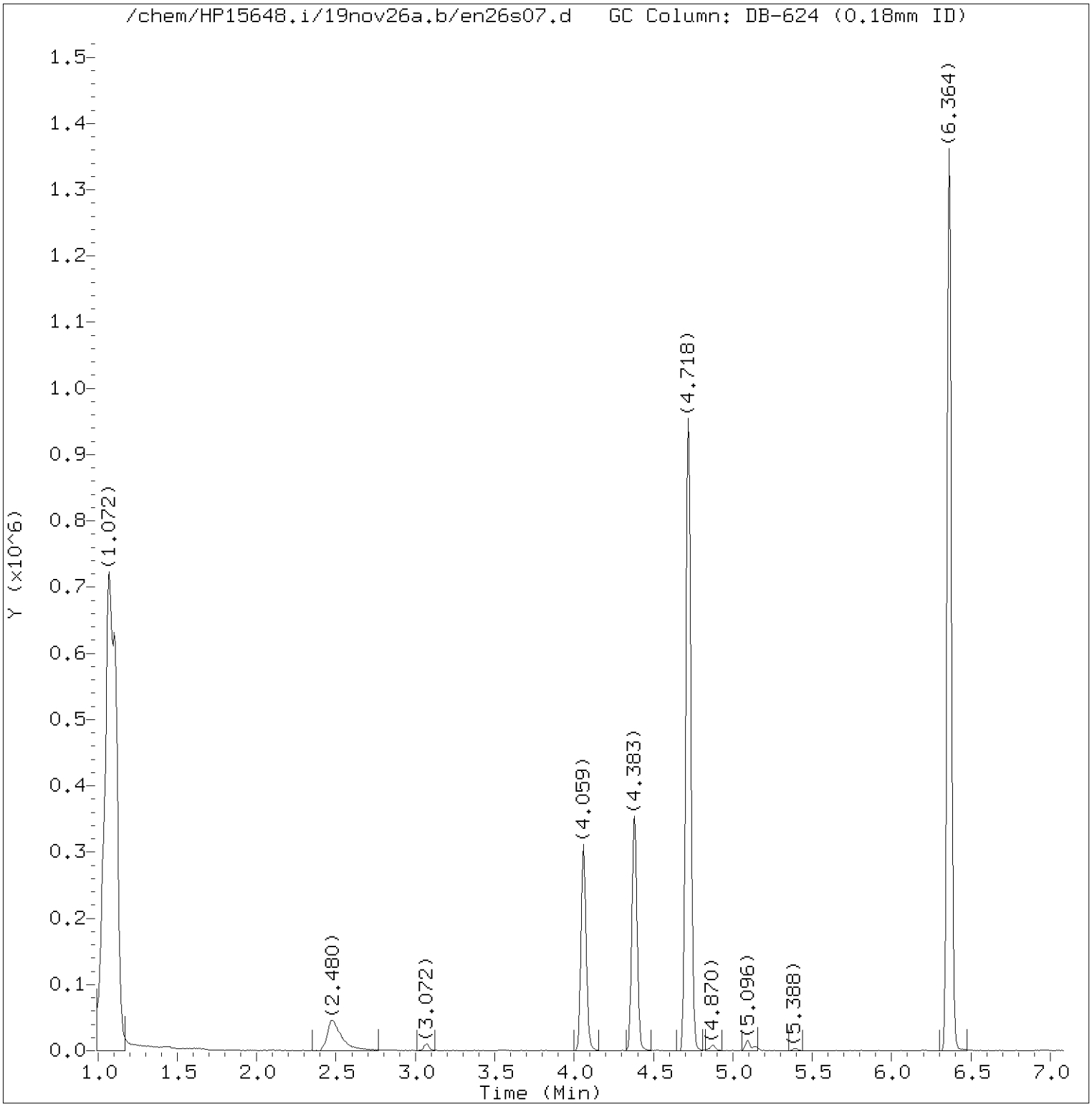
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Jason M. Long on 11/27/2019 at 14:38. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 12:19. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

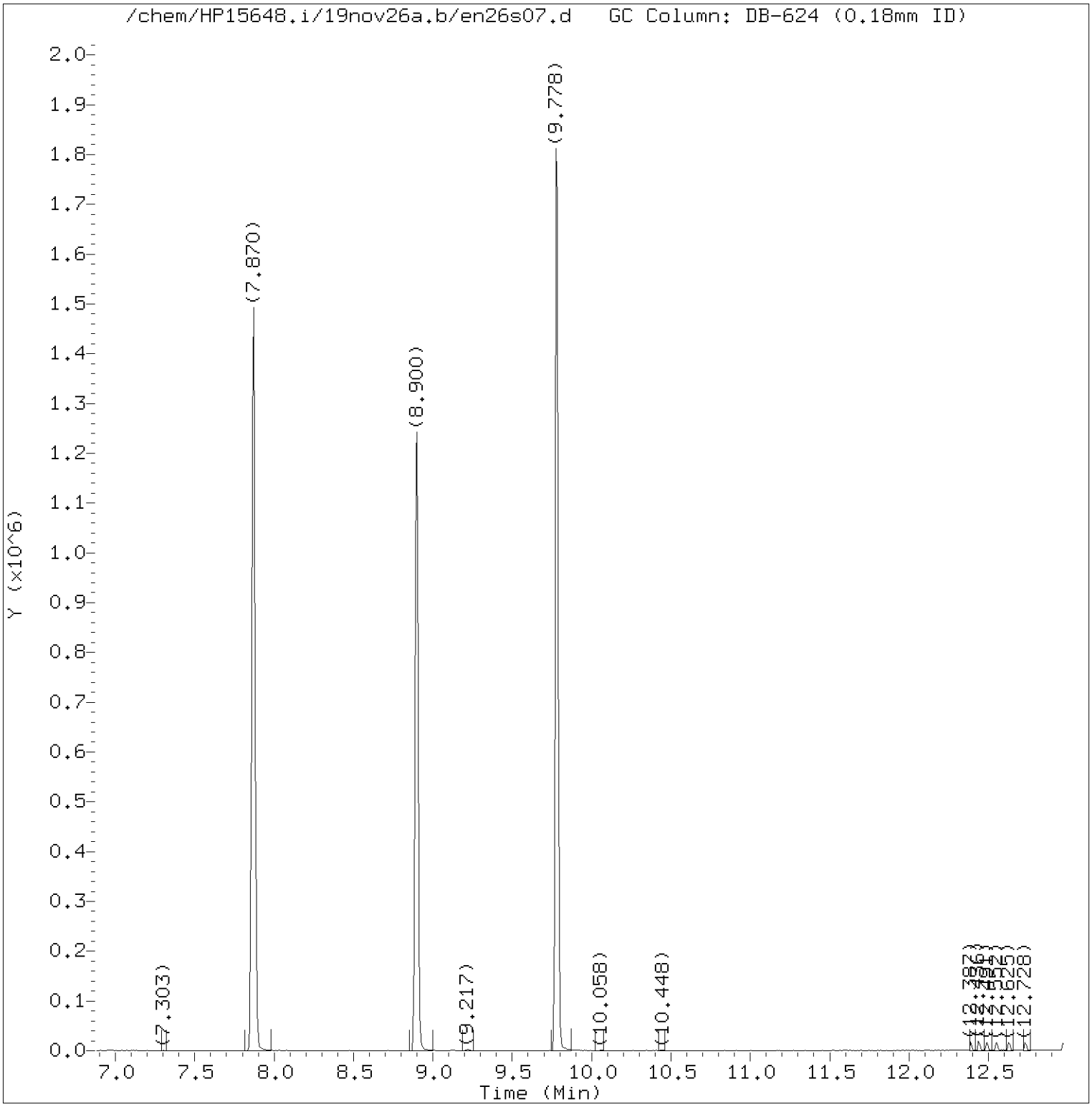
Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s07.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 14:04 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 14:21 Automation

Sample Name: WIN03 Lab Sample ID: 1206731

Digitally signed by Jason M. Long
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s07.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 14:04 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 14:21 Automation

Sample Name: WIN03 Lab Sample ID: 1206731

Digitally signed by Jason M. Long
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s07.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 14:04 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 14:21 Automation

Sample Name: WIN03 Lab Sample ID: 1206731

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.474	65	173839	250.000
36) 1,1-Dichloroethane	(2)	3.072	63	12511	1.282
52)$Dibromofluoromethane	(2)	4.059	113	218629	49.961
53) 1,1,1-Trichloroethane	(2)	4.090	97	8234	1.182
57)$1,2-Dichloroethane-d4	(2)	4.383	102	58087	49.801
66)*Fluorobenzene	(2)	4.718	96	1028743	50.000
71) Trichloroethene	(2)	5.096	95	6951	1.362
84)$Toluene-d8	(3)	6.364	98	1008718	49.707
101)*Chlorobenzene-d5	(3)	7.870	117	714802	50.000
115)$4-Bromofluorobenzene	(3)	8.900	95	378835	49.538
132)*1,4-Dichlorobenzene-d4	(4)	9.784	152	358644	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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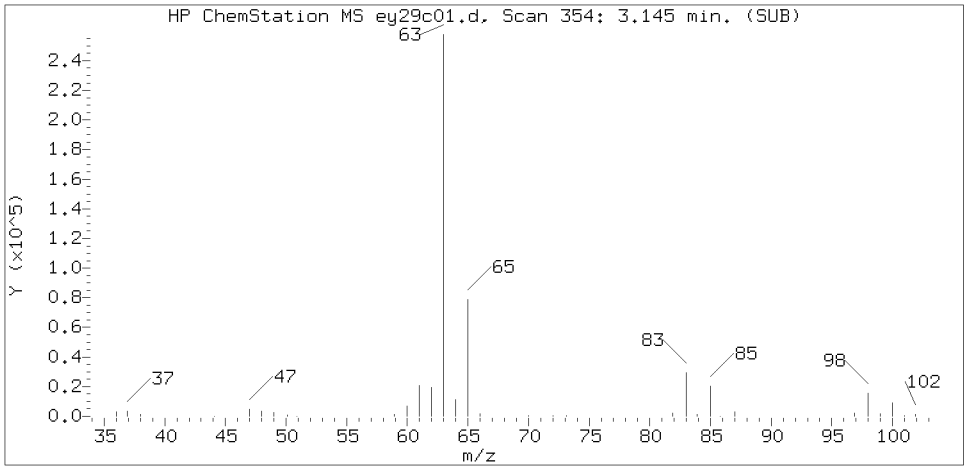
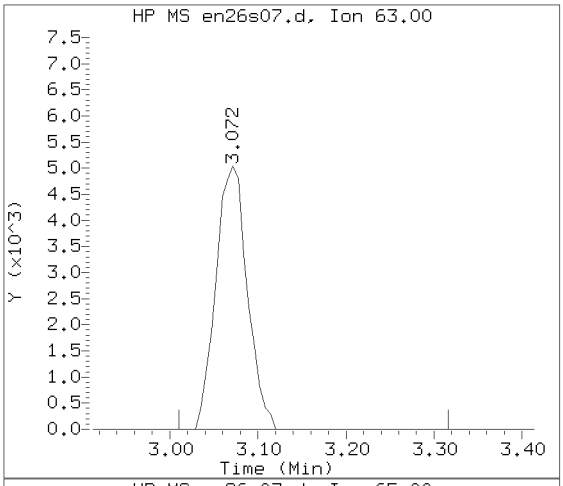
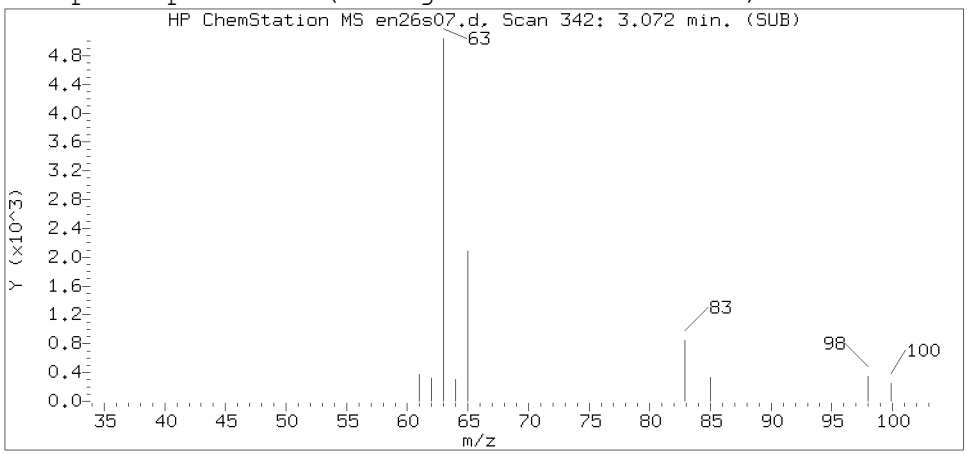
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

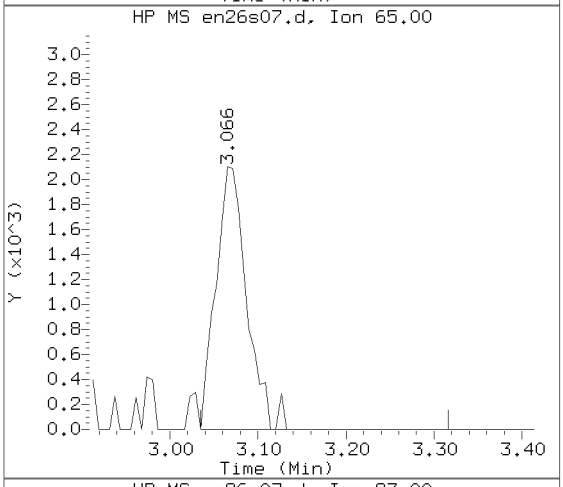
Reference Standard Spectrum for 1,1-Dichloroethane



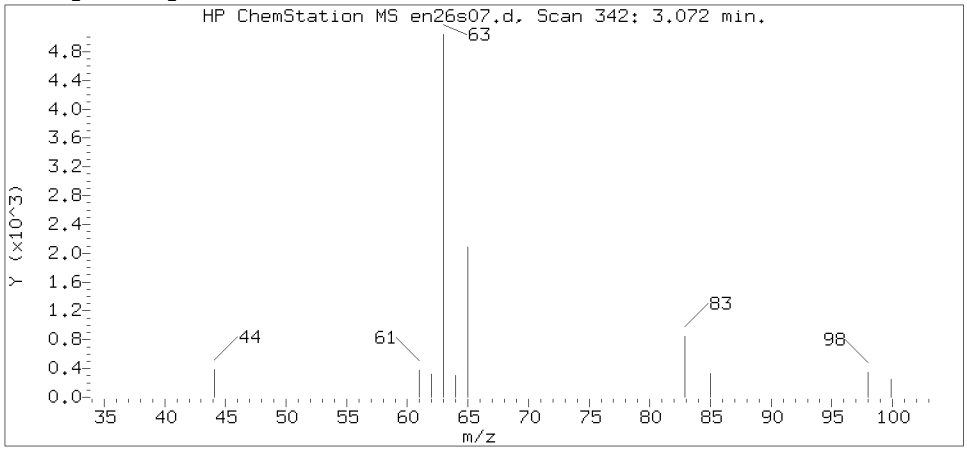


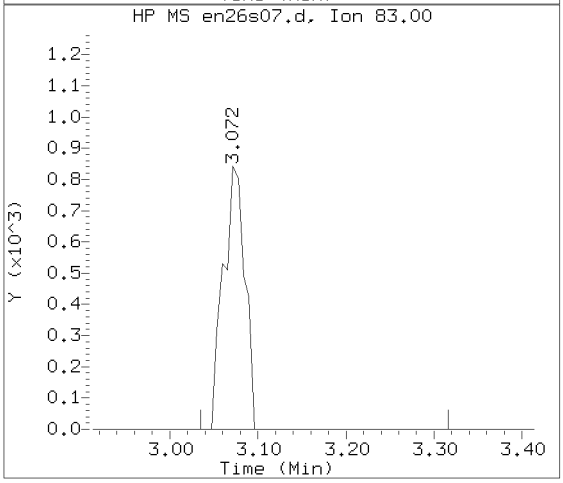
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19nov26a.b/en26s07.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 14:04 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 14:21 Automation

Sample Name: WIN03 Lab Sample ID: 1206731

Compound Number	: 36
Compound Name	: 1,1-Dichloroethane
Scan Number	: 342
Retention Time (minutes)	: 3.072
Relative Retention Time	: 0.00046
Quant Ion	: 63.00
Area (flag)	: 12511
On-Column Amount (ng)	: 1.2824

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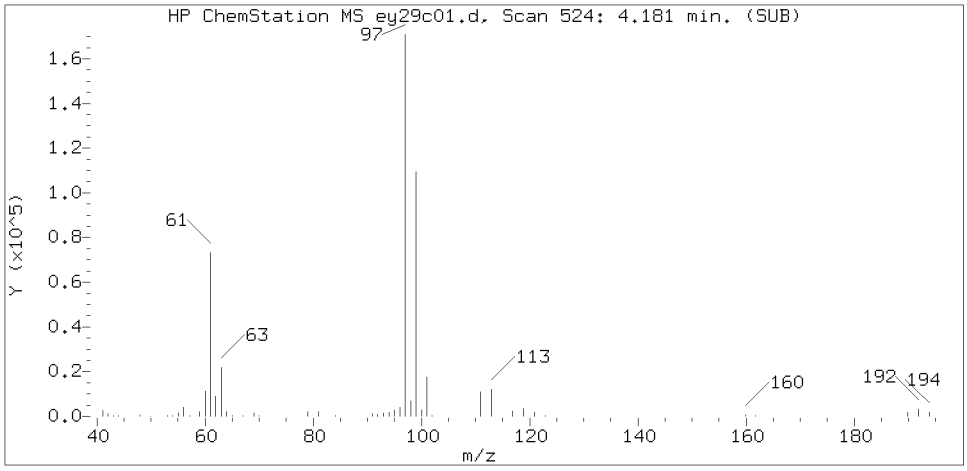
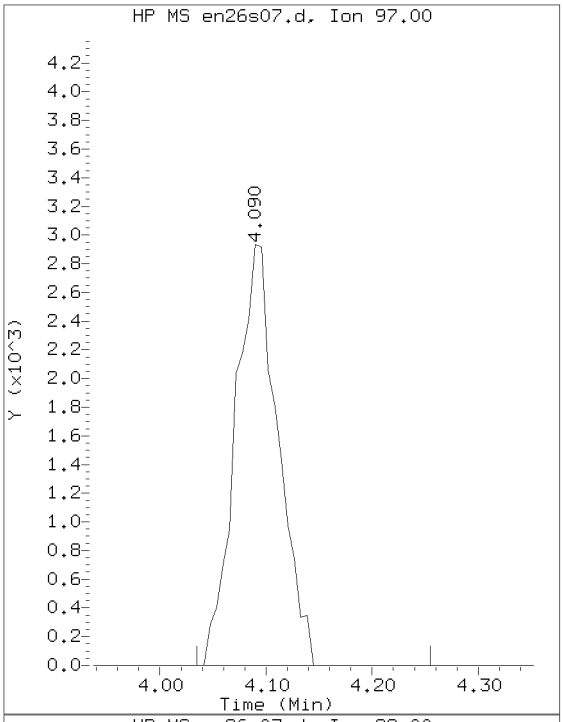
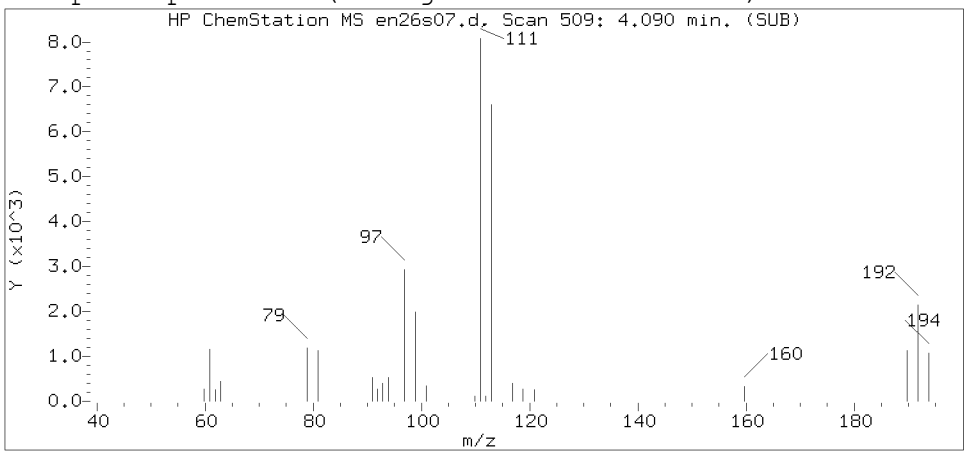
Target 3.5 esignature user ID: jml01693

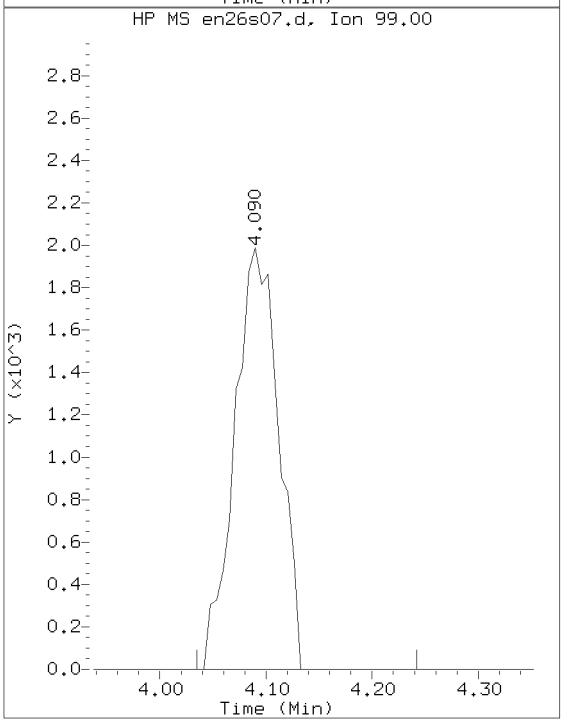
Reference Standard Spectrum for 1,1,1-Trichloroethane



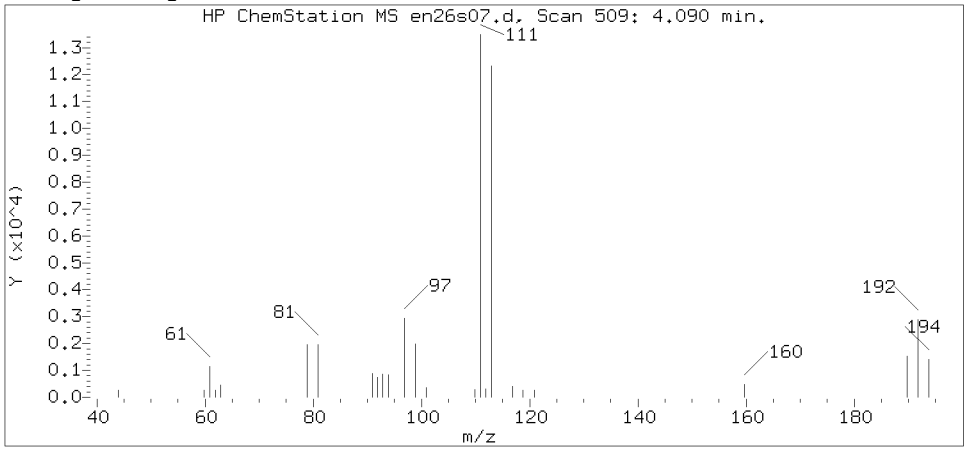


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP15648.i/19nov26a.b/en26s07.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 14:04 Analyst ID: jml01693

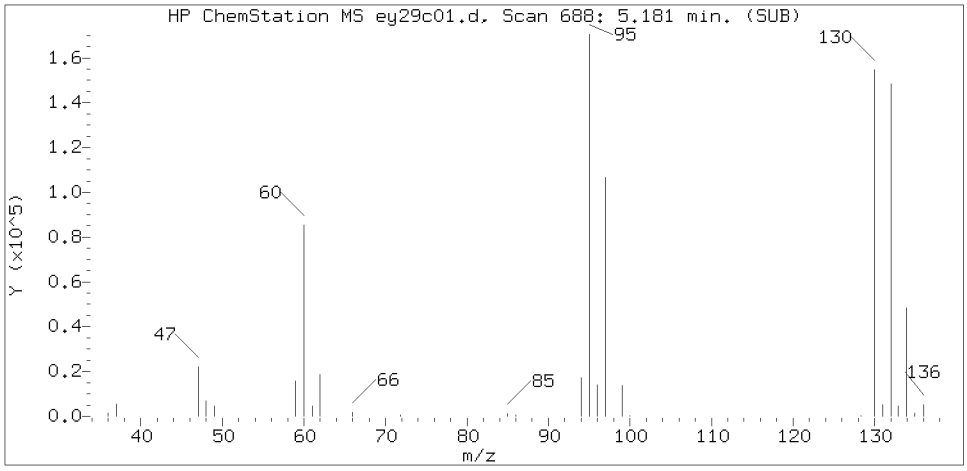
Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 14:21 Automation

Sample Name: WIN03 Lab Sample ID: 1206731

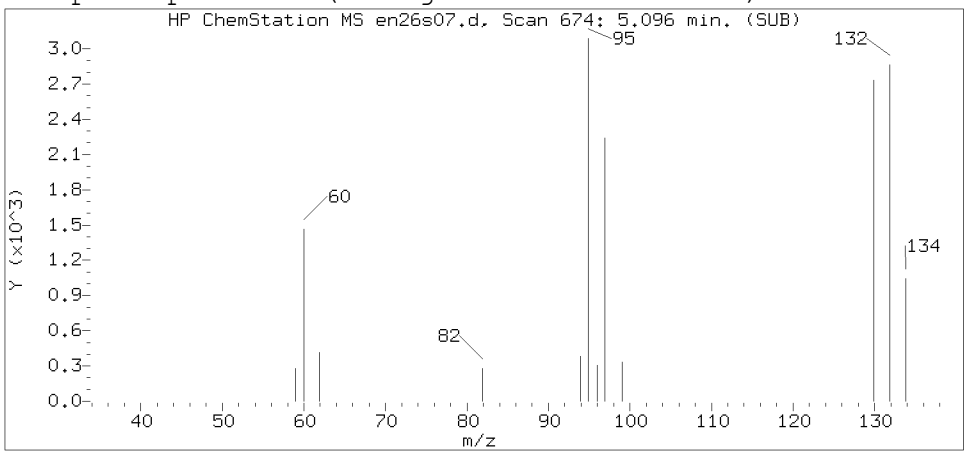
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 509
Retention Time (minutes): 4.090
Relative Retention Time :-0.00112
Quant Ion : 97.00
Area (flag) : 8234
On-Column Amount (ng) : 1.1824

Digitally signed by Jason M. Long on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

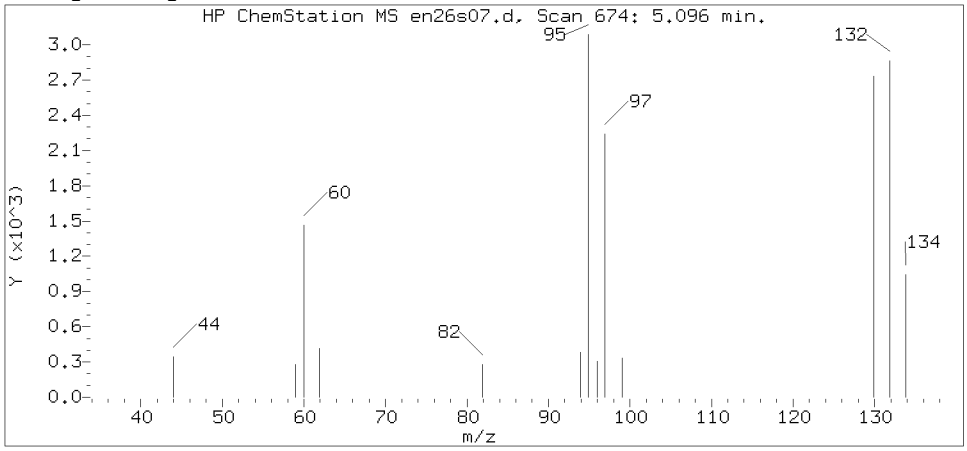
Reference Standard Spectrum for Trichloroethene

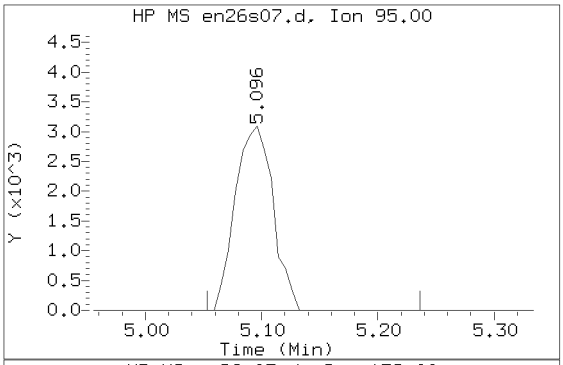


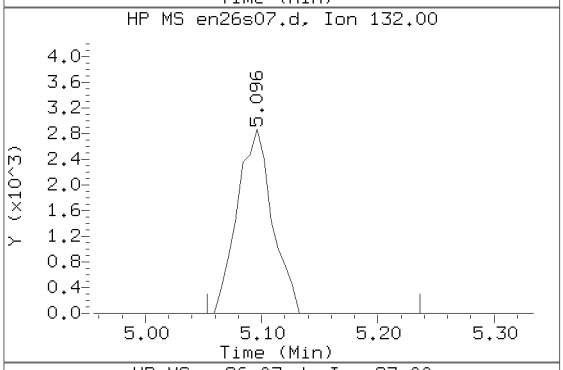
Sample Spectrum (Background Subtracted)

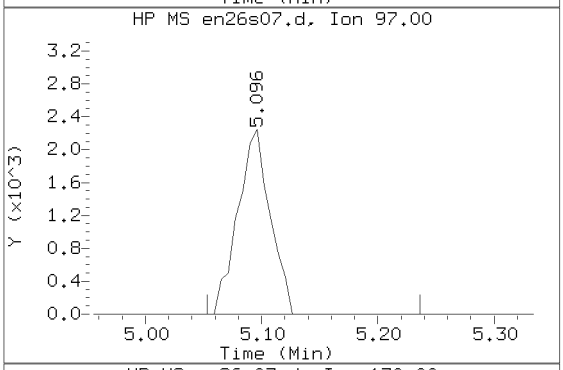


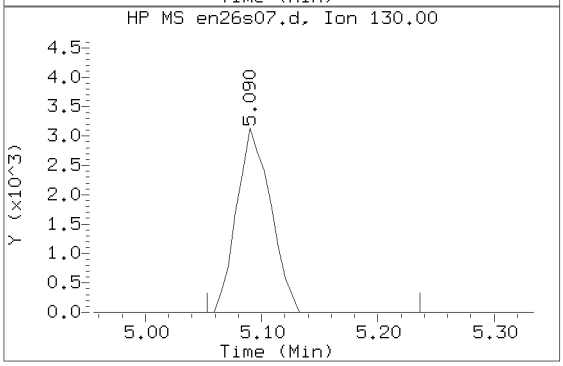
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19nov26a.b/en26s07.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 14:04 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 14:21 Automation

Sample Name: WIN03 Lab Sample ID: 1206731

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 674
Retention Time (minutes): 5.096
Relative Retention Time :-0.00140
Quant Ion : 95.00
Area (flag) : 6951
On-Column Amount (ng) : 1.3620

Digitally signed by Jason M. Long on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
WIN04

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1206732

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19nov26a.b/en26s08.d

Level: (low/med) LOW Date Received: 11/20/19

Moisture: not dec. _____ Date Analyzed: 11/26/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	19	
67-64-1	Acetone	20	U
76-13-1	Freon 113	0.9	J
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.9	J
156-59-2	cis-1,2-Dichloroethene	1	
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	230	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	510	E
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	4	
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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WIN04 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1206732

Data file: /chem/HP15648.i/19nov26a.b/en26s08.d Injection date and time: **26-NOV-2019 14:24**
Data file Sample Info. Line: WIN04;1206732;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 14:41 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.480(0.000)	245	65	171141 (-10)	250.00	
66) Fluorobenzene	4.724(0.000)	613	96	1013903 (0)	50.00	
101) Chlorobenzene-d5	7.870(0.000)	1129	117	702128 (-1)	50.00	
132) 1,4-Dichlorobenzene-d4	9.784(-0.006)	1443	152	347072 (1)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.065(0.000)	113	214498	49.735	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.389(0.000)	102	57286	49.834	100%		80 - 120
84) Toluene-d8	(3)	6.364(0.000)	98	988518	49.590	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.900(-0.001)	95	370263	49.291	99%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	2.102(0.000)	96	75912	19.490	19.49			0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)	2.108(0.003)	101	4088	0.906	0.91		J	0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	3.072(0.001)	63	9098	0.946	0.95		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	3.614(-0.001)	96	6491	1.256	1.26			0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	4.096(-0.001)	97	1577120	229.768	229.77			0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	5.096(-0.000)	95	2581508	513.171	513.17		E	0.2	1
76) 1,4-Dioxane	(1)			Not Detected					29	250
89) Toluene	(3)			Not Detected					0.2	1
94) Tetrachloroethene	(3)	7.034(0.000)	166	20605	4.250	4.25			0.2	1
105) Ethylbenzene	(3)			Not Detected					0.4	1
107) m+p-Xylene	(3)			Not Detected					1	5
108) o-Xylene	(3)			Not Detected					0.4	1
109) Xylene (Total)	(3)			Not Detected					1	6
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
149) Naphthalene	(4)			Not Detected					1	5

E = Compound concentration above calibration range.

Digitally signed by Jason M. Long on 11/27/2019 at 14:38. Target 3.5 esignature user ID: jml01693

Data file: /chem/HP15648.i/19nov26a.b/en26s08.d Injection date and time: **26-NOV-2019 14:24**
Data file Sample Info. Line: WIN04;1206732;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 14:41 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

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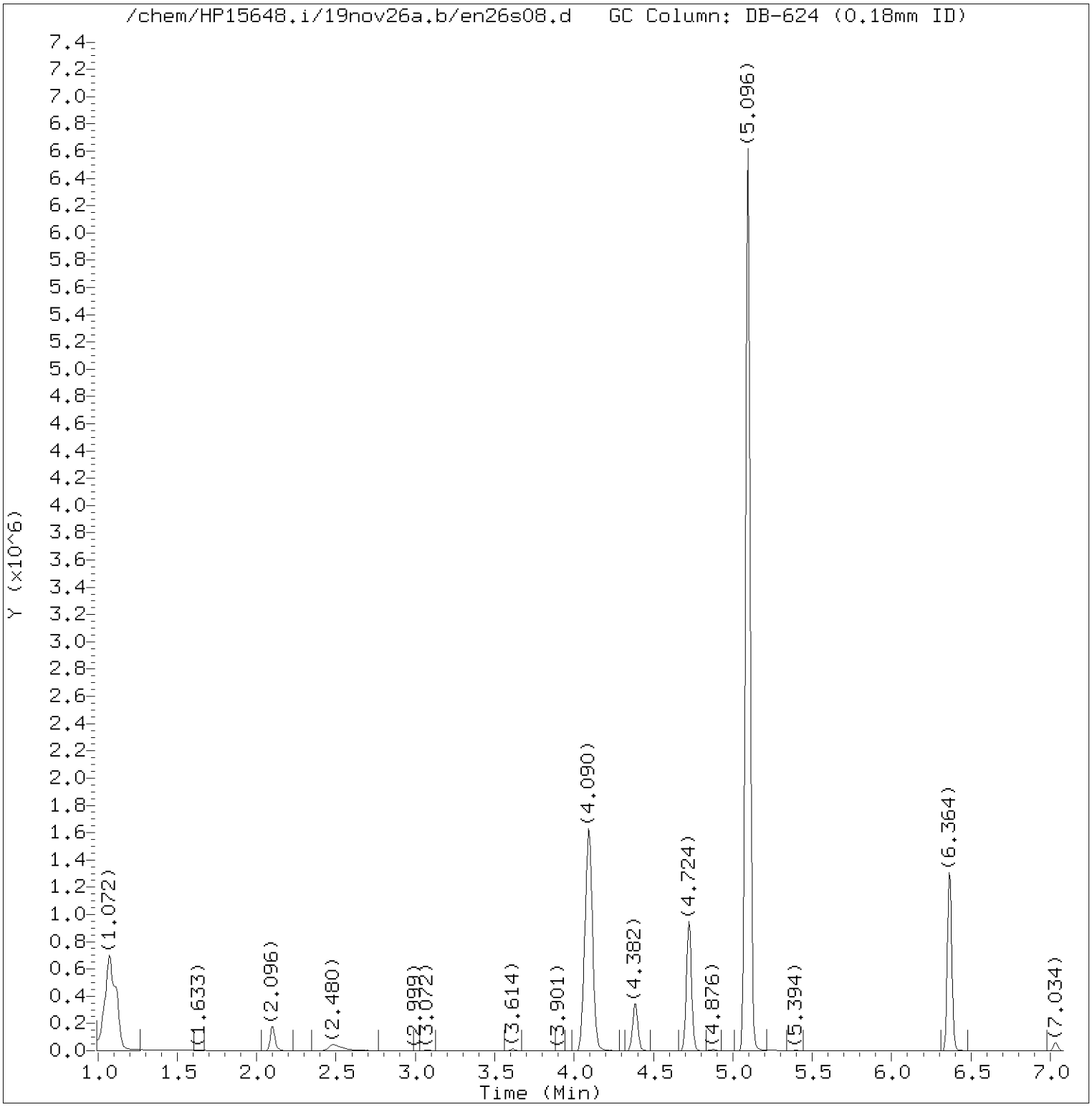
Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 12:19. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

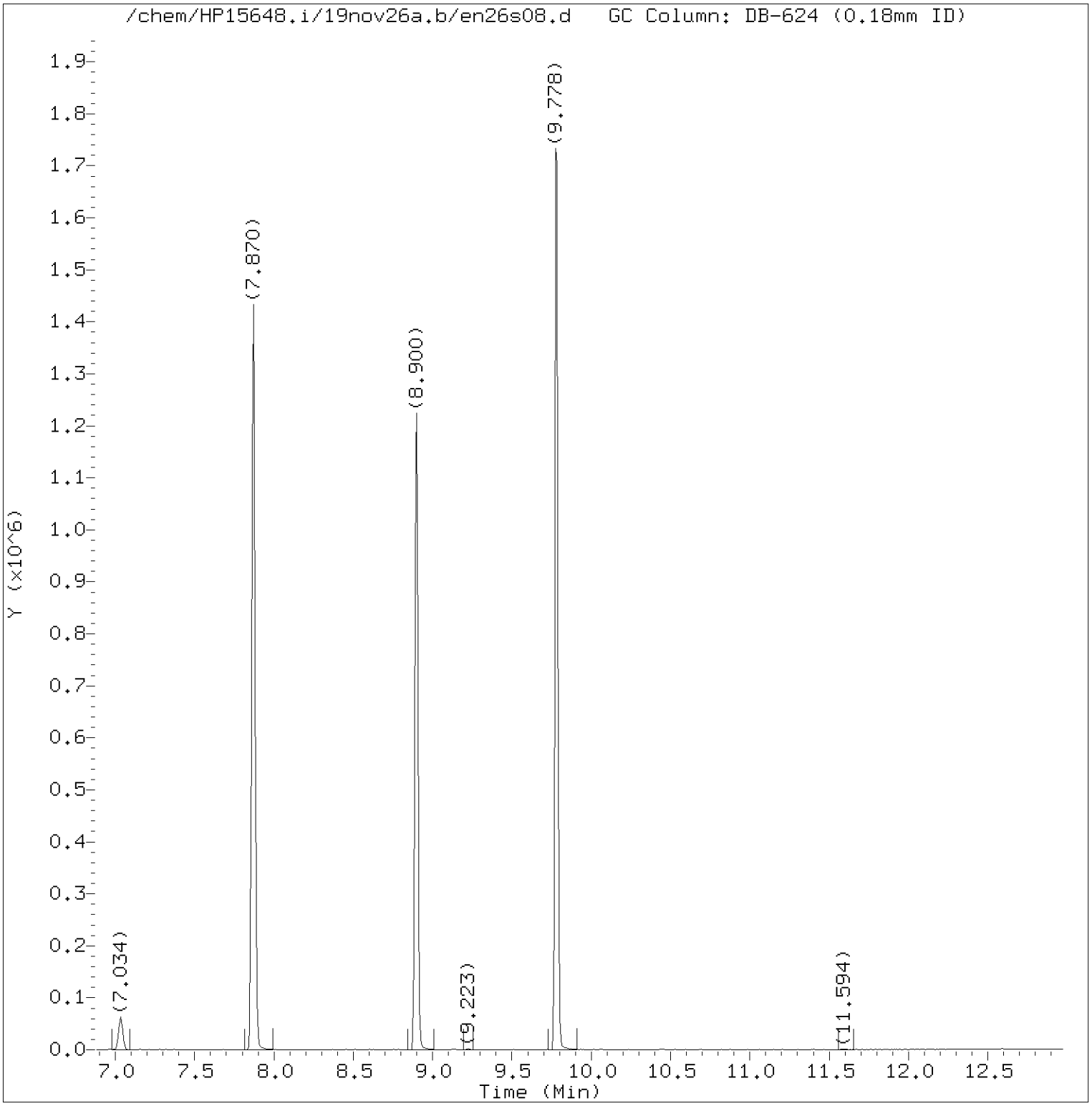
Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s08.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 14:24 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 14:41 Automation

Sample Name: WIN04 Lab Sample ID: 1206732

Digitally signed by Jason M. Long
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s08.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 14:24 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 14:41 Automation

Sample Name: WIN04 Lab Sample ID: 1206732

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on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s08.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 14:24 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 14:41 Automation

Sample Name: WIN04 Lab Sample ID: 1206732

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	2.102	96	75912	19.490
19) Freon 113	(2)	2.108	101	4088	0.906
29)*t-Butyl alcohol-d10	(1)	2.480	65	171141	250.000
36) 1,1-Dichloroethane	(2)	3.072	63	9098	0.946
42) cis-1,2-Dichloroethene	(2)	3.614	96	6491	1.256
52)$Dibromofluoromethane	(2)	4.065	113	214498	49.735
53) 1,1,1-Trichloroethane	(2)	4.096	97	1577120	229.768
57)$1,2-Dichloroethane-d4	(2)	4.389	102	57286	49.834
66)*Fluorobenzene	(2)	4.724	96	1013903	50.000
71) Trichloroethene	(2)	5.096	95	2581508	513.171
84)$Toluene-d8	(3)	6.364	98	988518	49.590
94) Tetrachloroethene	(3)	7.034	166	20605	4.250
101)*Chlorobenzene-d5	(3)	7.870	117	702128	50.000
115)$4-Bromofluorobenzene	(3)	8.900	95	370263	49.291
132)*1,4-Dichlorobenzene-d4	(4)	9.784	152	347072	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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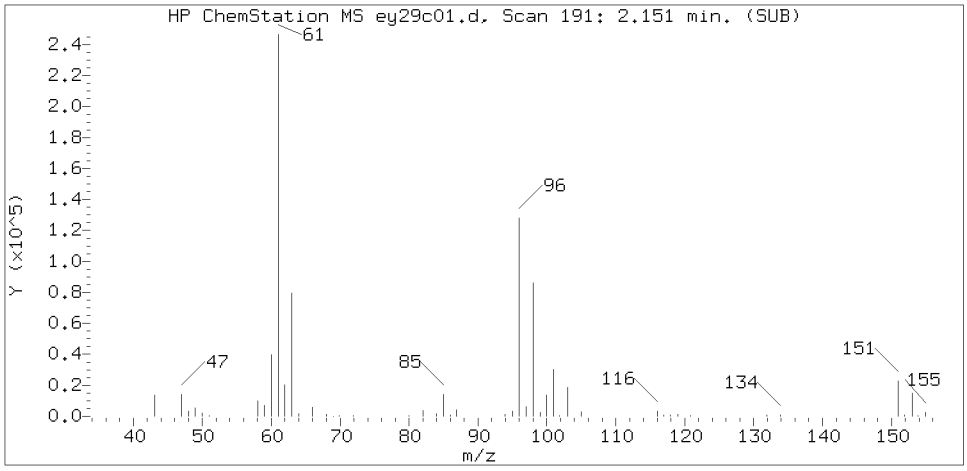
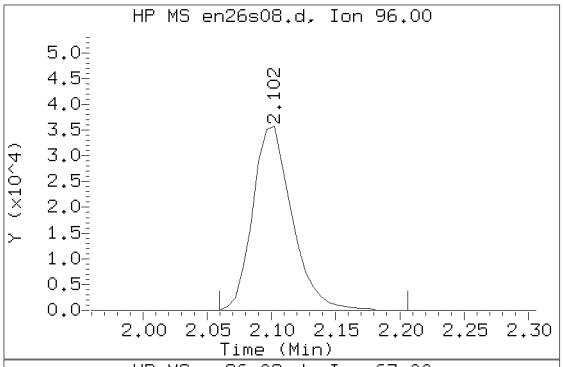
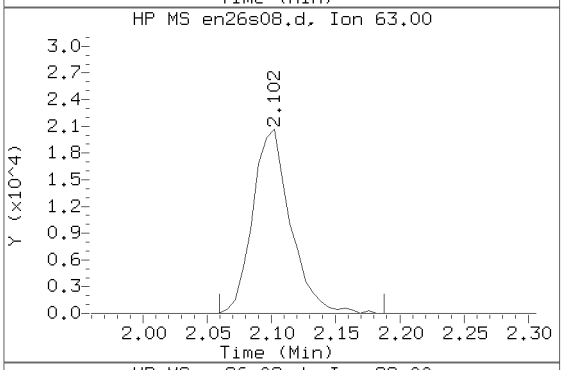
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

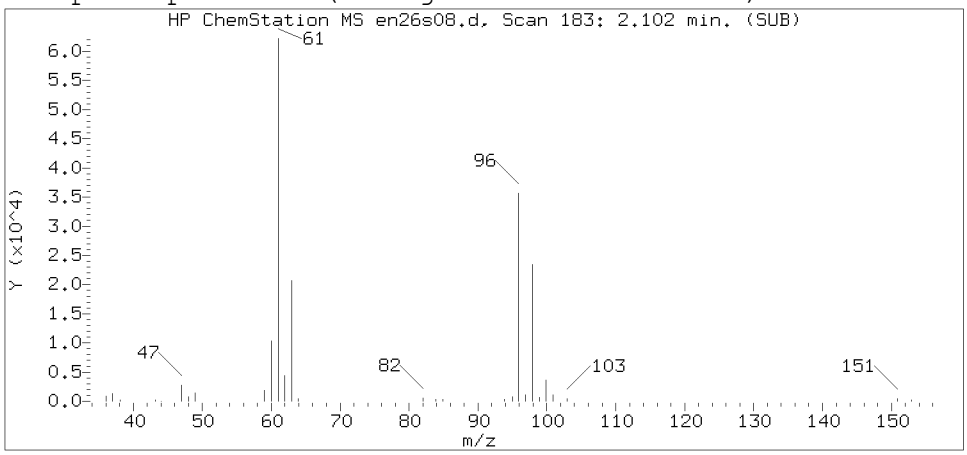
Reference Standard Spectrum for 1,1-Dichloroethene

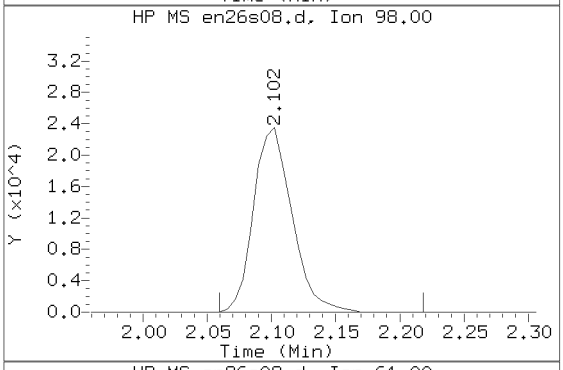




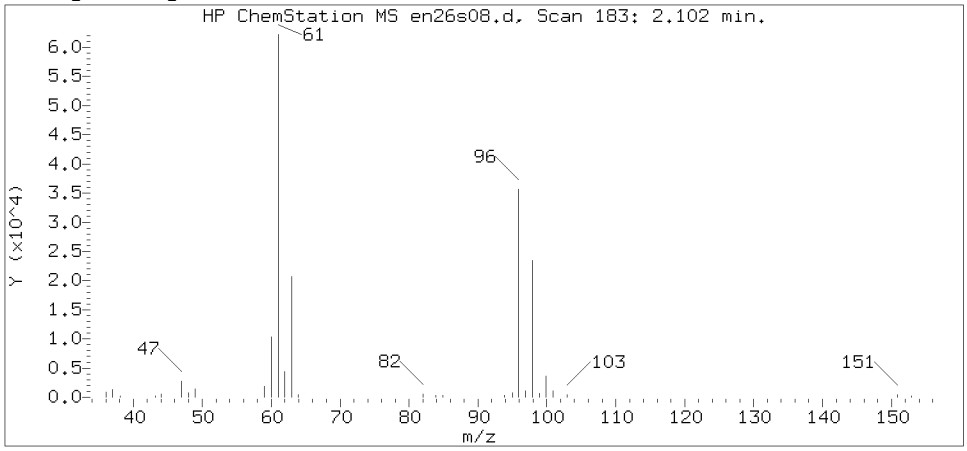


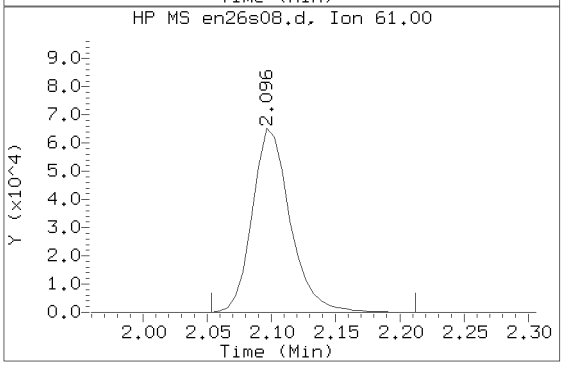
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19nov26a.b/en26s08.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 14:24 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 14:41 Automation

Sample Name: WIN04 Lab Sample ID: 1206732

Compound Number	: 17
Compound Name	: 1,1-Dichloroethene
Scan Number	: 183
Retention Time (minutes)	: 2.102
Relative Retention Time	: 0.00002
Quant Ion	: 96.00
Area (flag)	: 75912
On-Column Amount (ng)	: 19.4905

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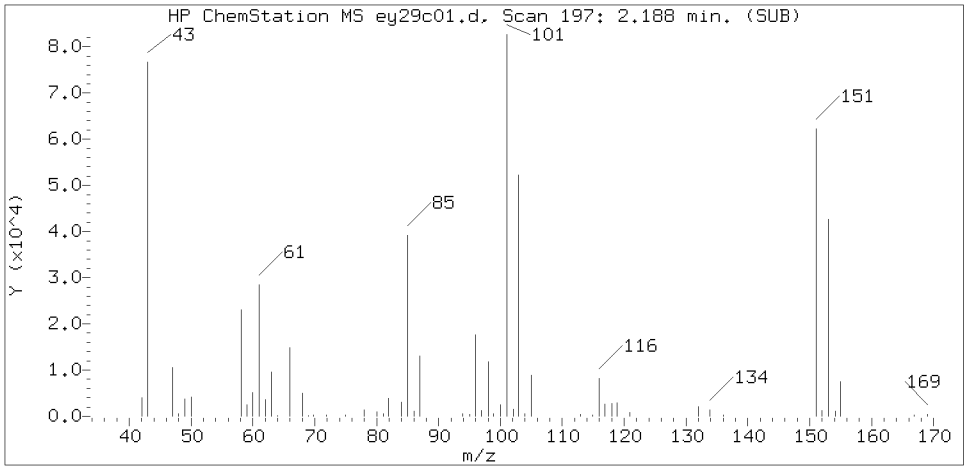
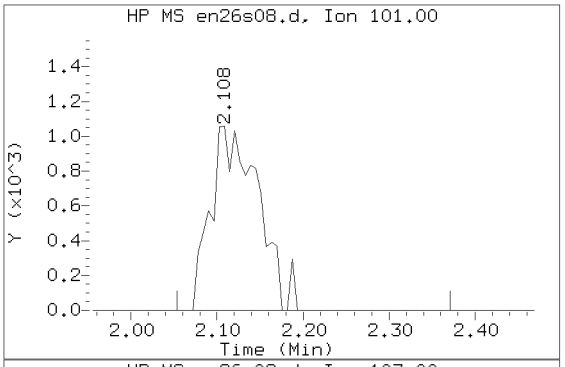
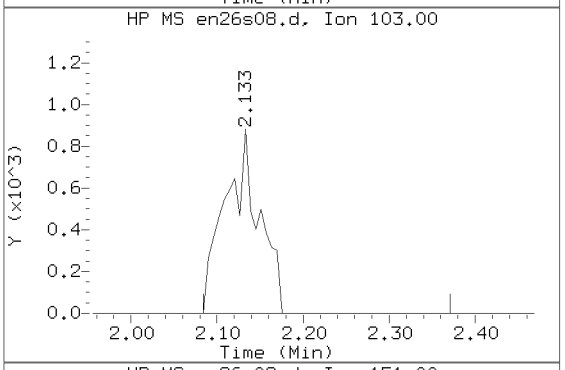
Target 3.5 esignature user ID: jml01693

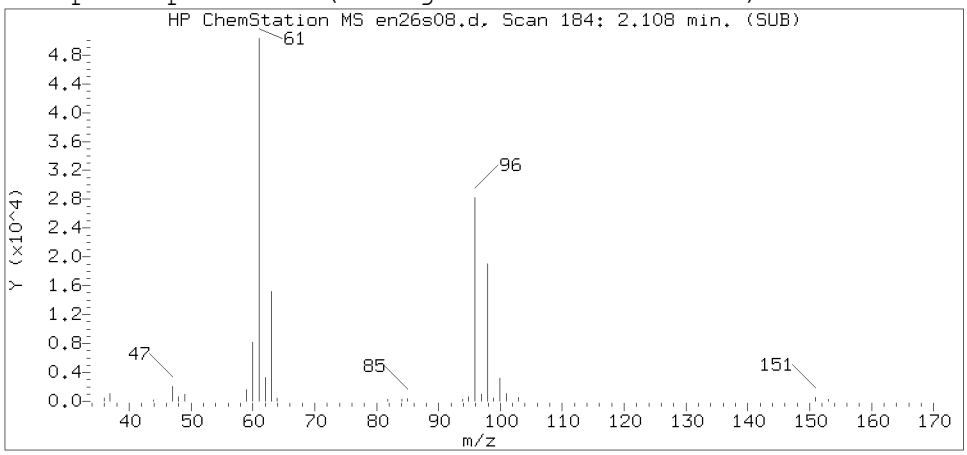
Reference Standard Spectrum for Freon 113

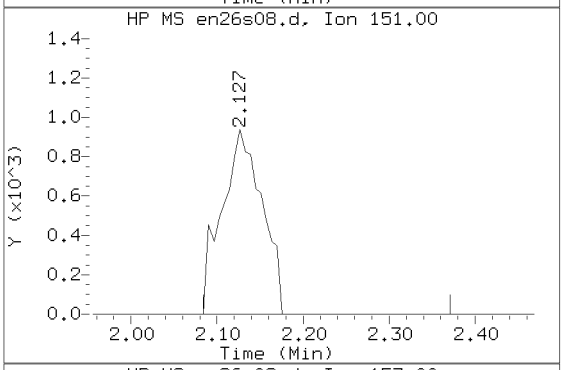




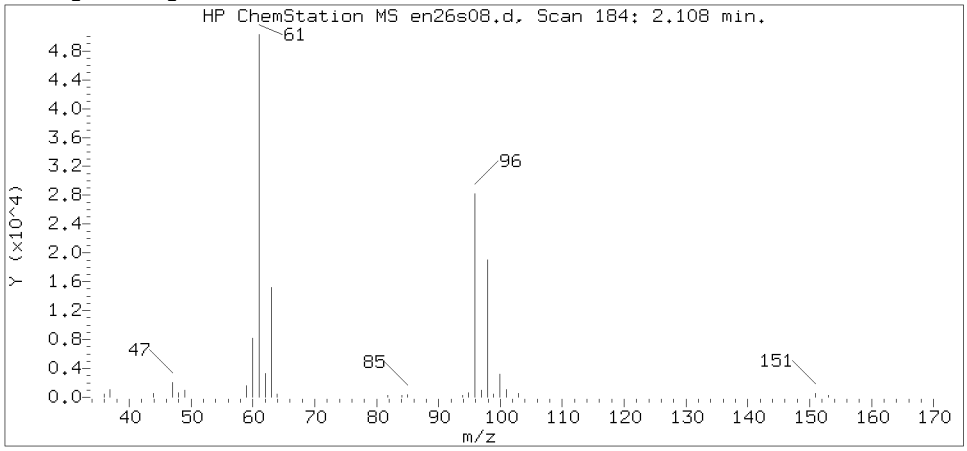


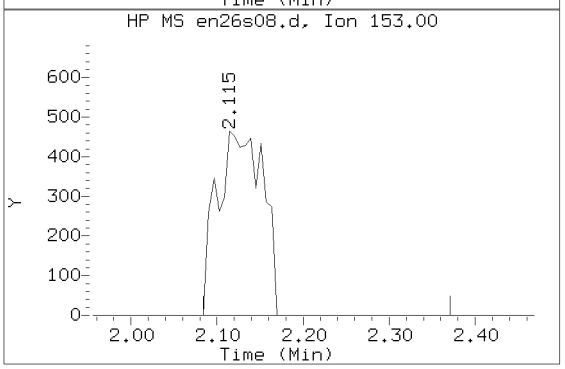
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19nov26a.b/en26s08.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 14:24 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 14:41 Automation

Sample Name: WIN04 Lab Sample ID: 1206732

Compound Number	: 19
Compound Name	: Freon 113
Scan Number	: 184
Retention Time (minutes)	: 2.108
Relative Retention Time	: 0.00389
Quant Ion	: 101.00
Area (flag)	: 4088
On-Column Amount (ng)	: 0.9057

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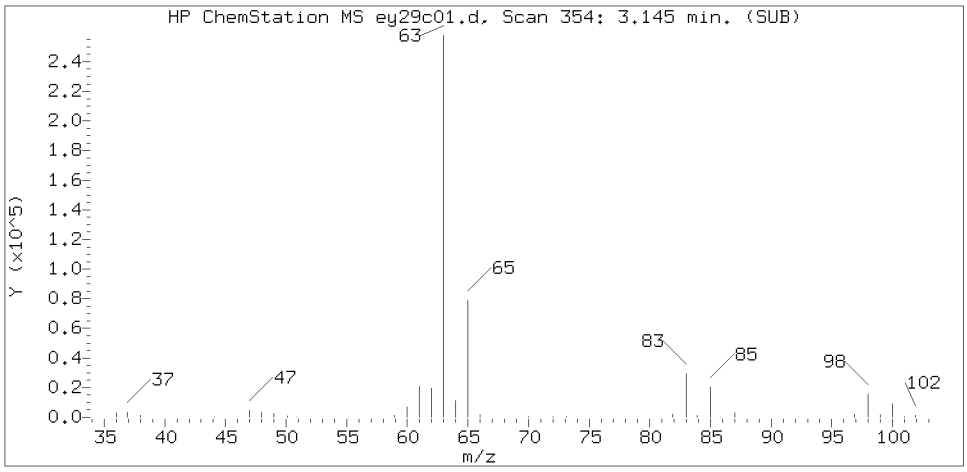
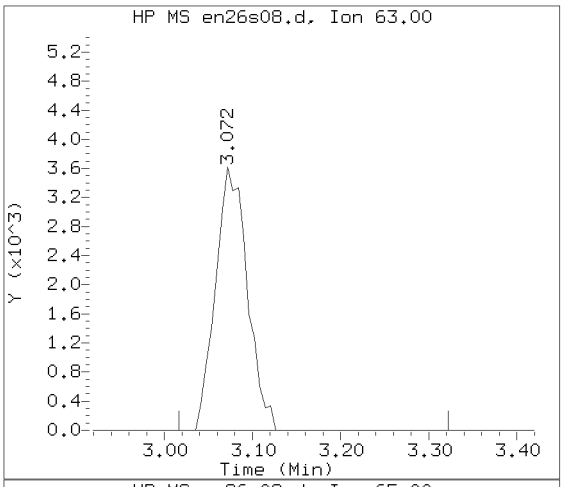
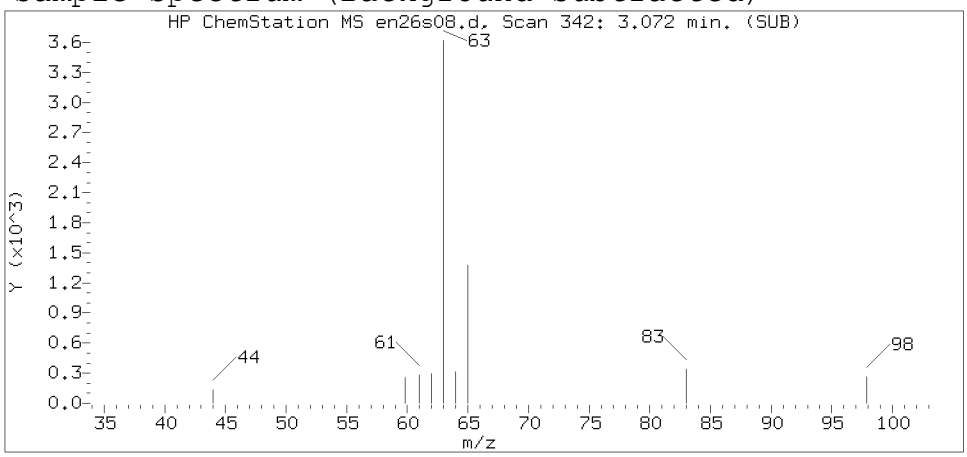
Target 3.5 esignature user ID: jml01693

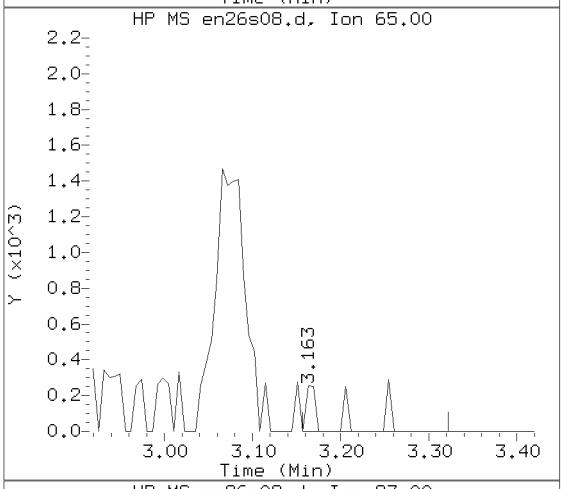
Reference Standard Spectrum for 1,1-Dichloroethane



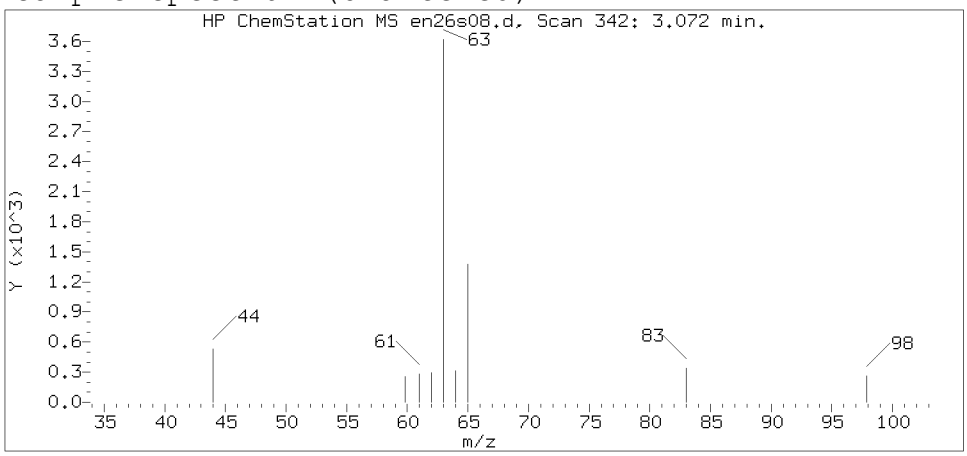


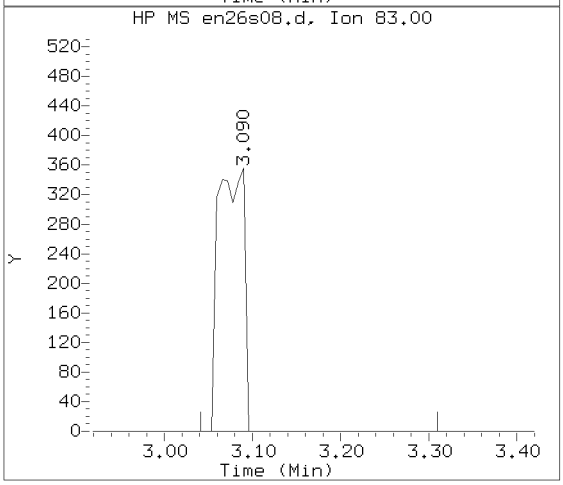
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19nov26a.b/en26s08.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 14:24 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 14:41 Automation

Sample Name: WIN04 Lab Sample ID: 1206732

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 342
Retention Time (minutes): 3.072
Relative Retention Time : 0.00131
Quant Ion : 63.00
Area (flag) : 9098
On-Column Amount (ng) : 0.9462

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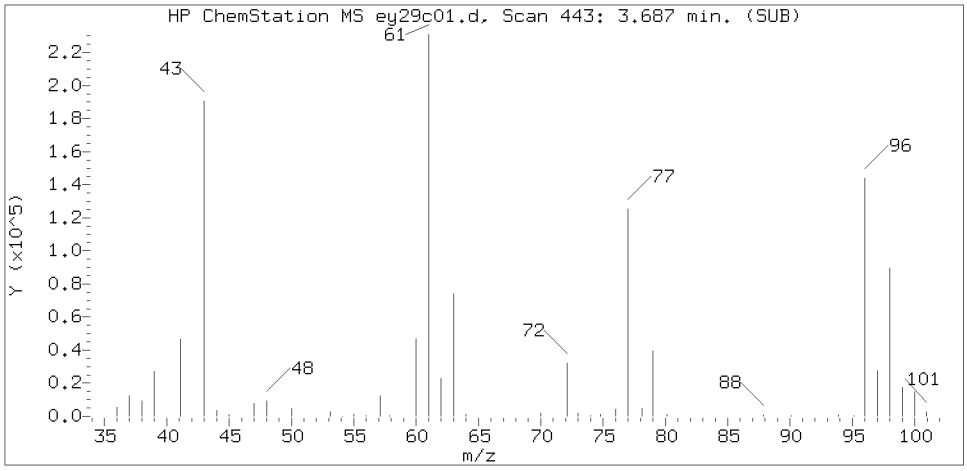
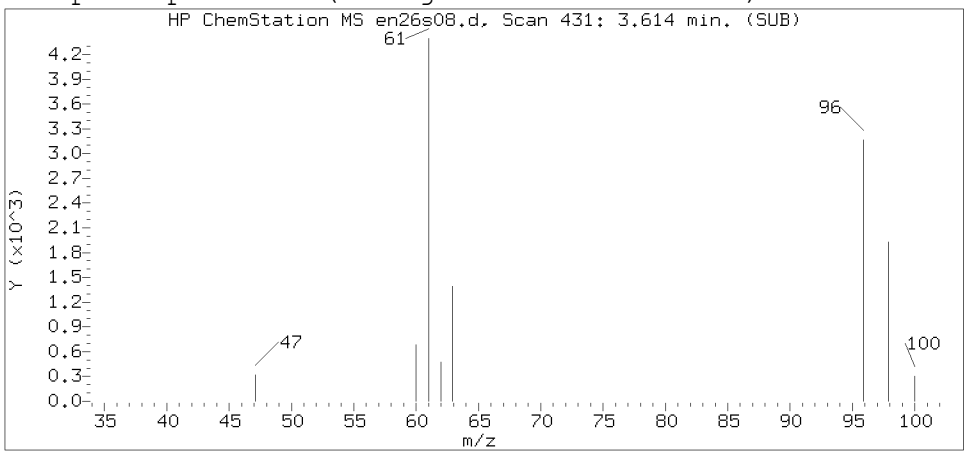
Target 3.5 esignature user ID: jml01693

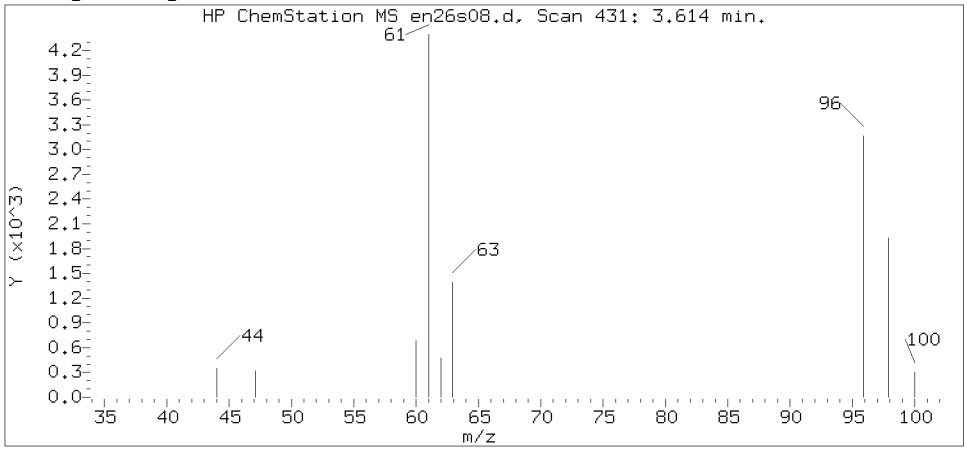
Reference Standard Spectrum for cis-1,2-Dichloroethene

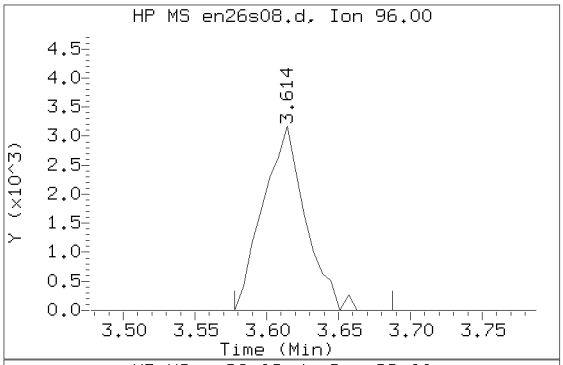


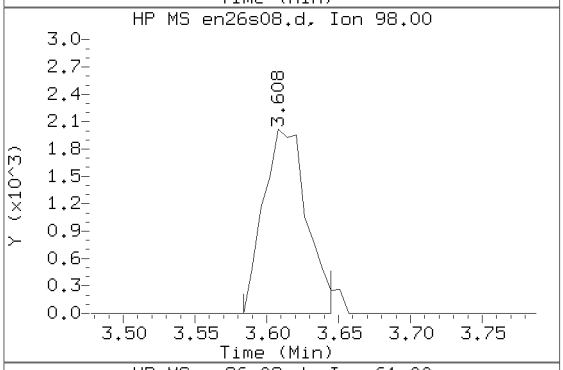
Sample Spectrum (Background Subtracted)

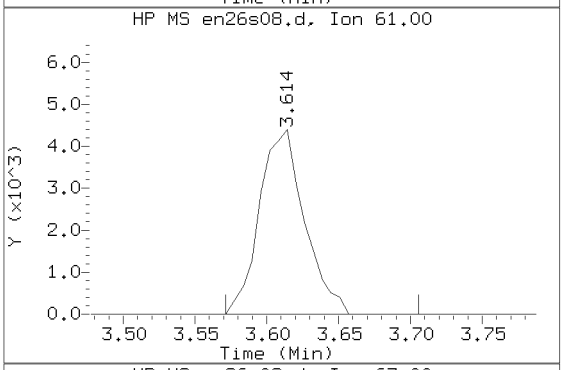


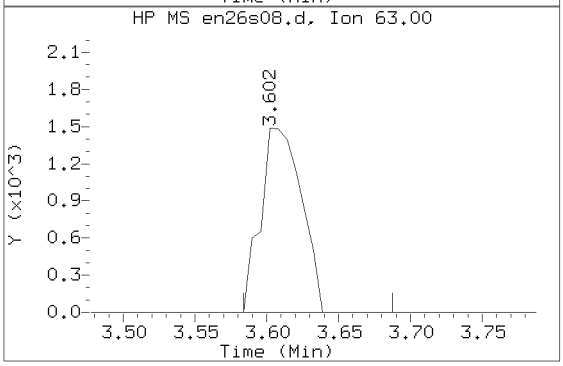
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19nov26a.b/en26s08.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 14:24 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 14:41 Automation

Sample Name: WIN04 Lab Sample ID: 1206732

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 431
Retention Time (minutes): 3.614
Relative Retention Time :-0.00128
Quant Ion : 96.00
Area (flag) : 6491
On-Column Amount (ng) : 1.2555

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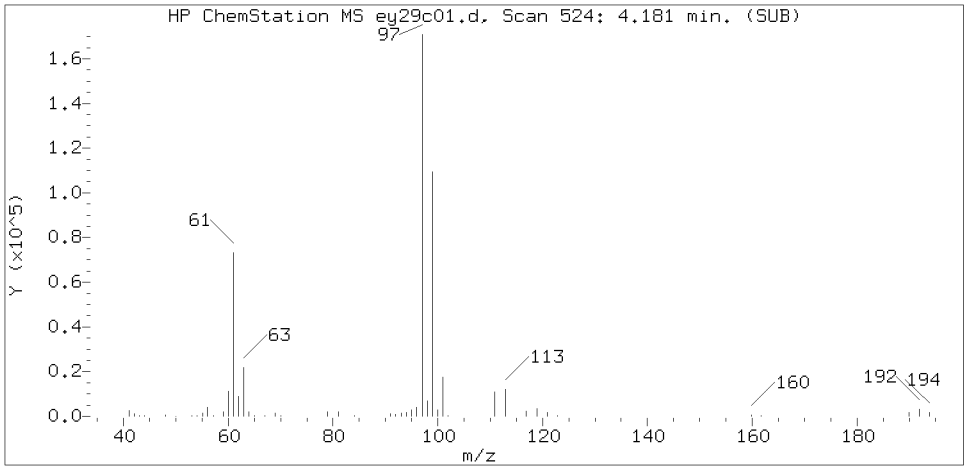
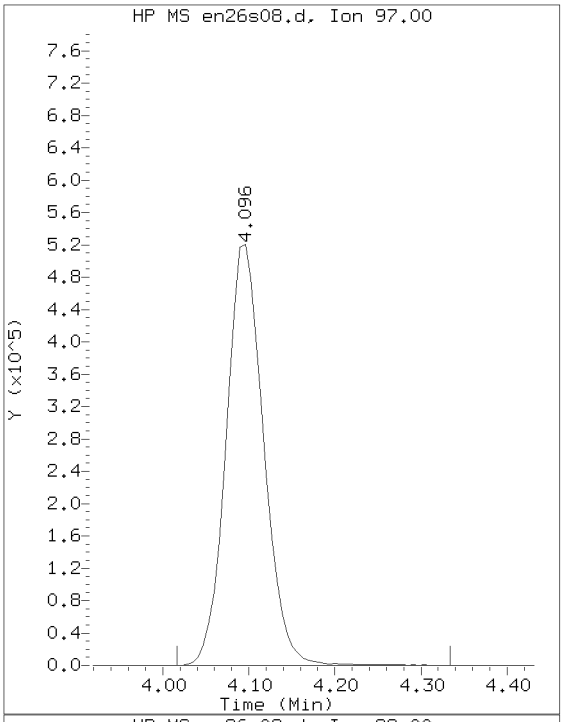
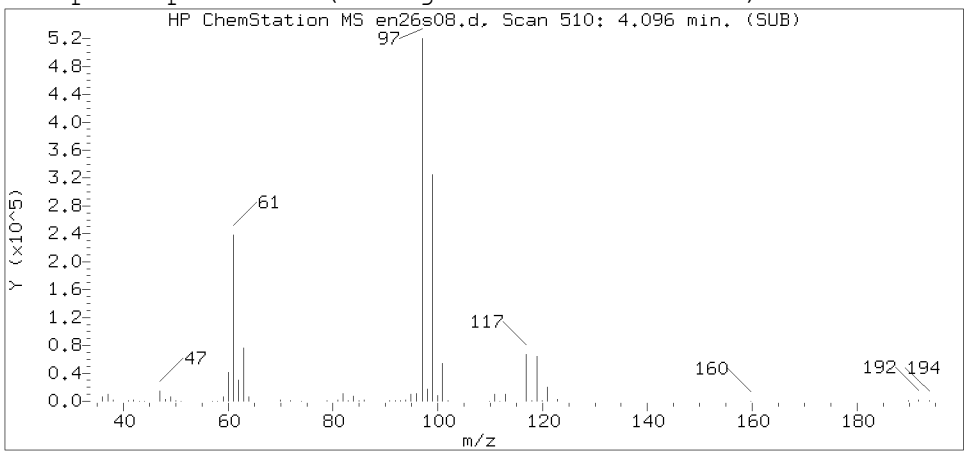
Target 3.5 esignature user ID: jml01693

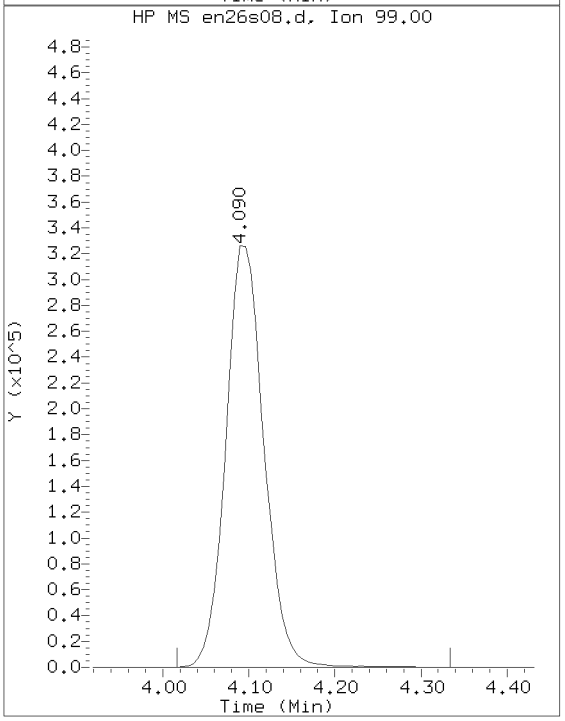
Reference Standard Spectrum for 1,1,1-Trichloroethane



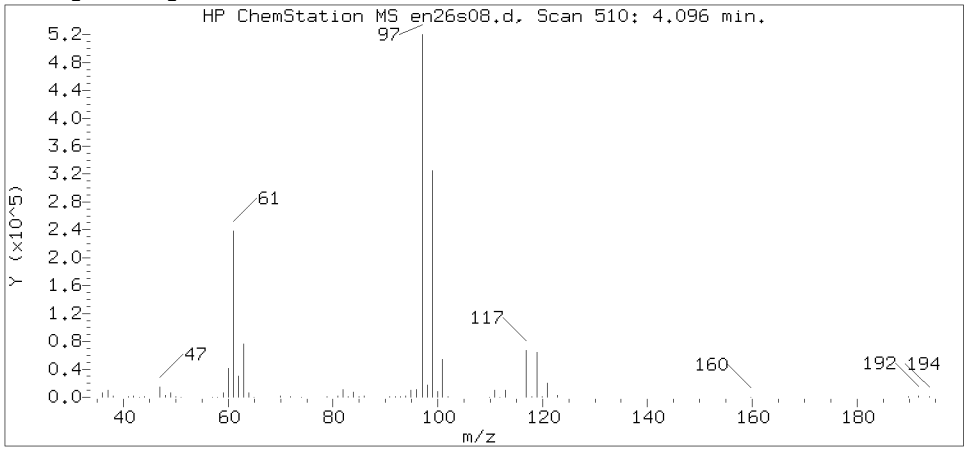


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP15648.i/19nov26a.b/en26s08.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 14:24 Analyst ID: jml01693

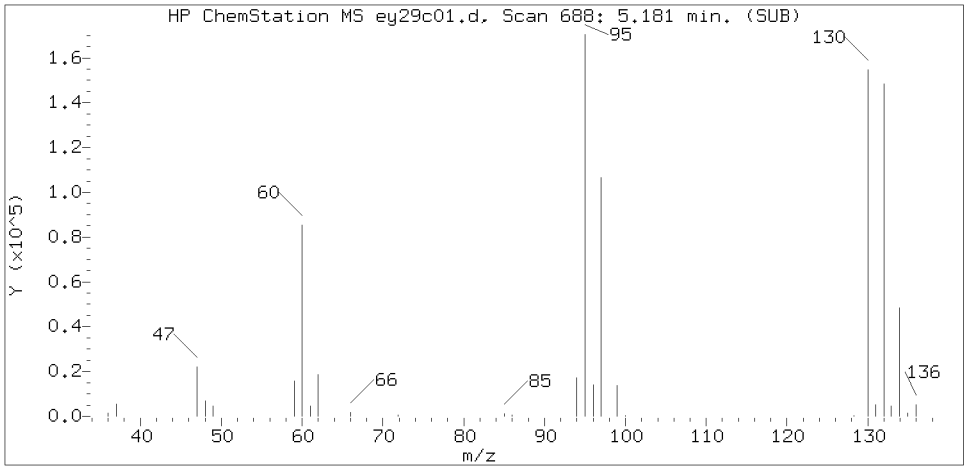
Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 14:41 Automation

Sample Name: WIN04 Lab Sample ID: 1206732

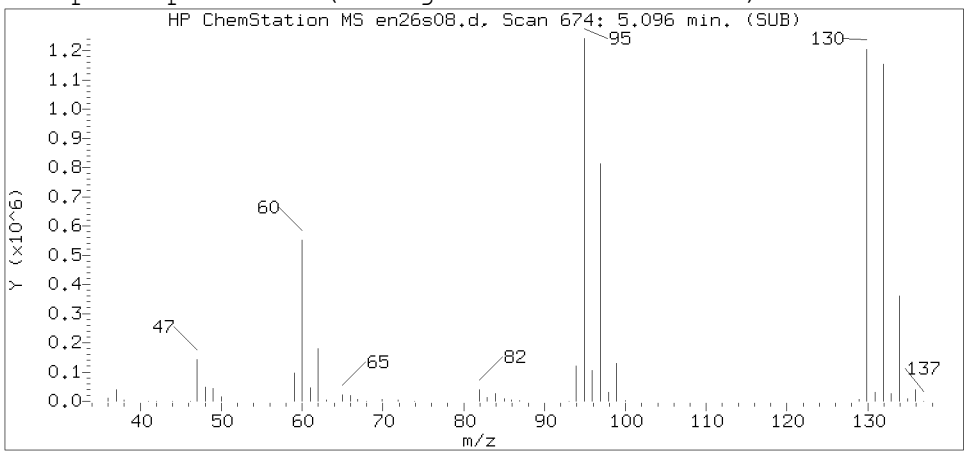
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 510
Retention Time (minutes): 4.096
Relative Retention Time :-0.00129
Quant Ion : 97.00
Area (flag) : 1577120
On-Column Amount (ng) : 229.7681

Digitally signed by Jason M. Long on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

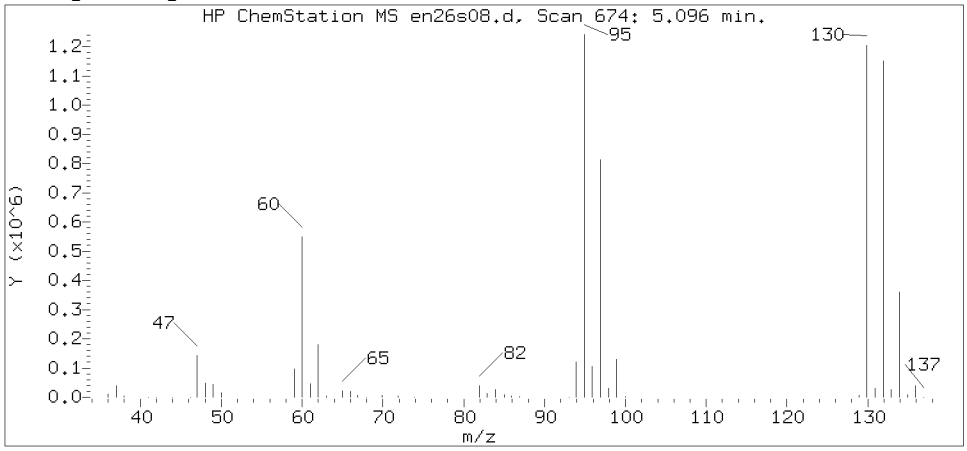
Reference Standard Spectrum for Trichloroethene

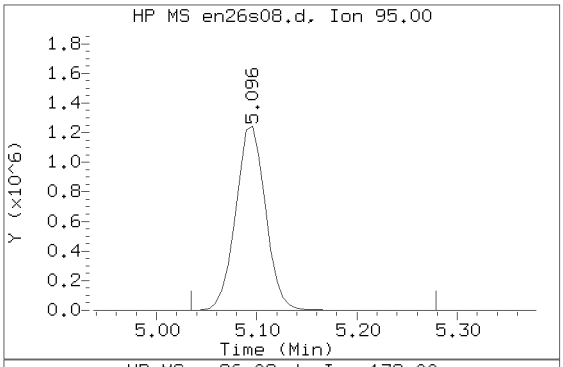


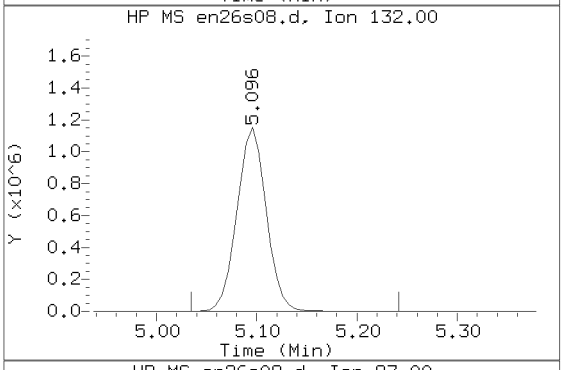
Sample Spectrum (Background Subtracted)

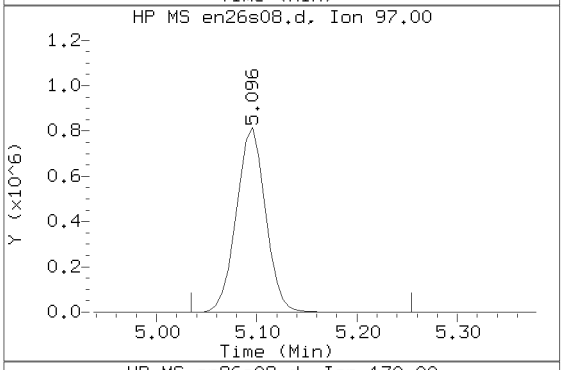


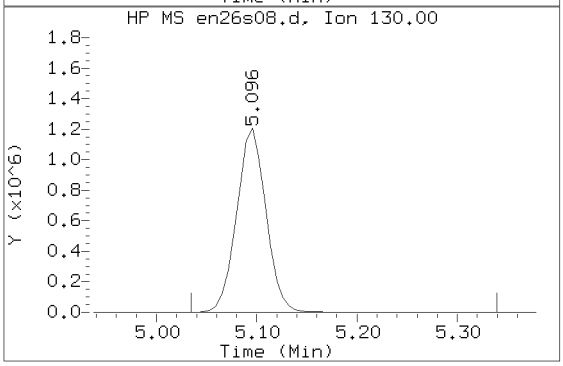
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19nov26a.b/en26s08.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 14:24 Analyst ID: jml01693

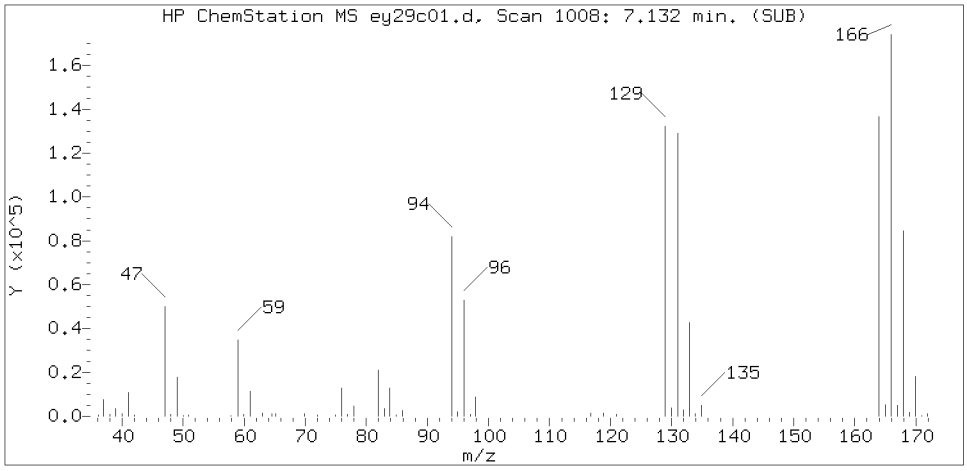
Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 14:41 Automation

Sample Name: WIN04 Lab Sample ID: 1206732

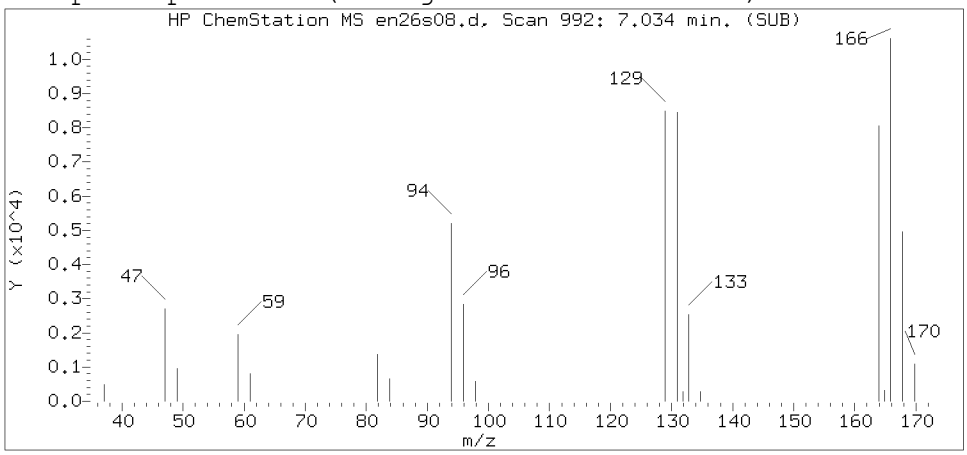
Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 674
Retention Time (minutes): 5.096
Relative Retention Time :-0.00001
Quant Ion : 95.00
Area (flag) : 2581508
On-Column Amount (ng) : 513.1713

Digitally signed by Jason M. Long on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

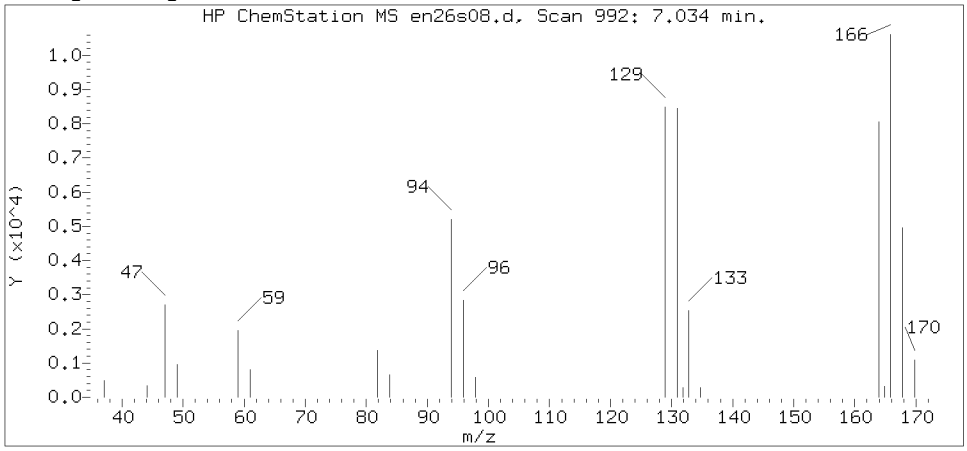
Reference Standard Spectrum for Tetrachloroethene

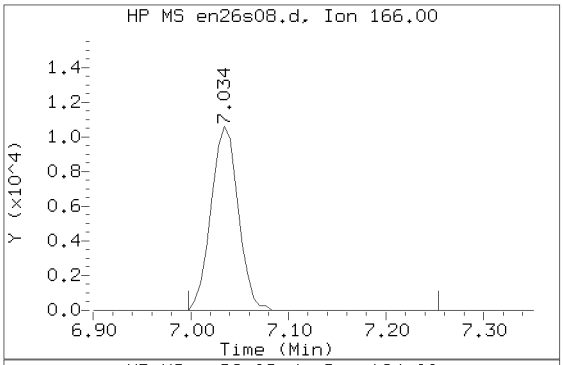


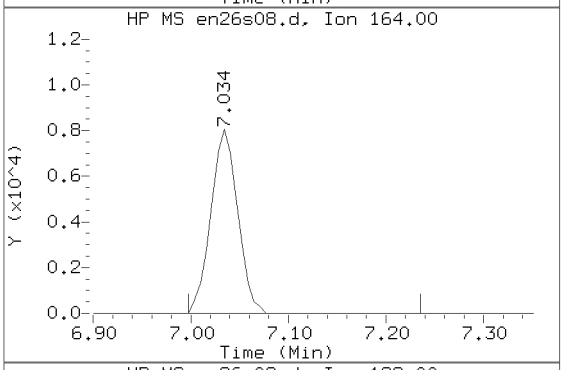
Sample Spectrum (Background Subtracted)

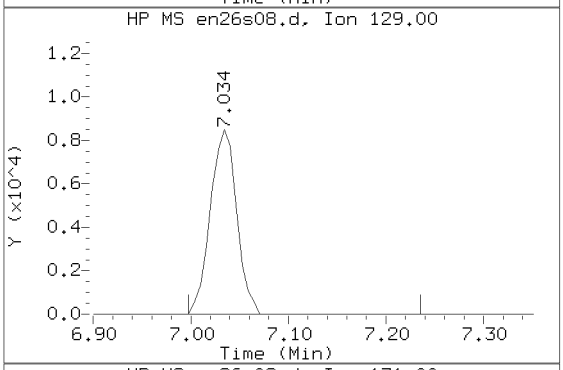


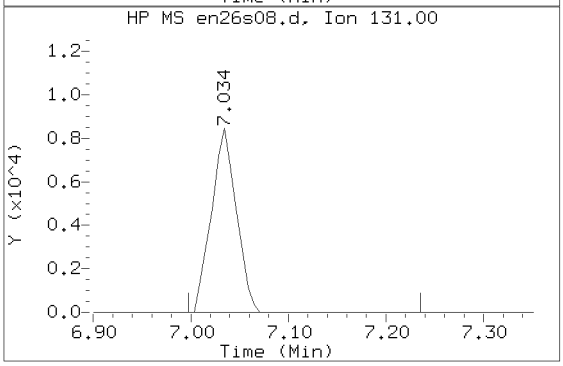
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19nov26a.b/en26s08.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 14:24 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 14:41 Automation

Sample Name: WIN04 Lab Sample ID: 1206732

Compound Number : 94
Compound Name : Tetrachloroethene
Scan Number : 992
Retention Time (minutes): 7.034
Relative Retention Time : 0.00000
Quant Ion : 166.00
Area (flag) : 20605
On-Column Amount (ng) : 4.2501

Digitally signed by Jason M. Long on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
WIN04DL

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1206732

Sample wt/vol: 0.50 (g/mL) mL Lab File ID: HP09355.i/19nov27b.b/yn27s41.d

Level: (low/med) LOW Date Received: 11/20/19

Moisture: not dec. _____ Date Analyzed: 11/28/19

Column: (pack/cap) CAP Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	10	U
75-35-4	1,1-Dichloroethene	15	D
67-64-1	Acetone	200	U
76-13-1	Freon 113	100	U
75-15-0	Carbon Disulfide	50	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	100	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	180	D
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	460	D
123-91-1	1,4-Dioxane	2500	U
108-88-3	Toluene	10	U
127-18-4	Tetrachloroethene	4	J D
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (Total)	60	U
95-50-1	1,2-Dichlorobenzene	50	U
91-20-3	Naphthalene	50	U

FORM I VOA

^

WIN04DL

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1206732DL

Data file: /chem2/HP09355.i/19nov27b.b/yn27s41.d Injection date and time: **28-NOV-2019 00:44**
Data file Sample Info. Line: WIN04DL;1206732DL;1;0;;JCW26;;;yn27b31; Instrument ID: **HP09355.i** Batch: **Y193312AA**
Date, time and analyst ID of latest file update: 28-Nov-2019 01:01 Automation

Blank Data file reference: **/chem2/HP09355.i/19nov27b.b/yn27b31.d**

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 27-NOV-2019 21:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19nov27b.b/yn27c05.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 0.5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.355	(0.000)	456	65	302193	(-7)	250.00	
66) Fluorobenzene	7.872	(0.000)	1034	96	997518	(-3)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	721197	(-4)	50.00	
131) 1,4-Dichlorobenzene-d4	13.183	(0.000)	1907	152	373853	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.971	(0.001)	113	213530	45.619	91%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434	(0.000)	102	59447	48.581	97%		80 - 120
83) Toluene-d8	(3)	9.867	(0.000)	98	967561	49.585	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.301	(0.001)	95	353083	47.359	95%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					2	10
17) 1,1-Dichloroethene	(2)	3.692	(-0.000)	96	6696	1.547	15.47			2	10
18) Acetone	(1)				Not Detected					7	200
19) Freon 113	(2)				Not Detected					2	100
23) Carbon Disulfide	(2)				Not Detected					2	50
28) Methylene Chloride	(2)				Not Detected					3	10
32) trans-1,2-Dichloroethene	(2)				Not Detected					2	10
36) 1,1-Dichloroethane	(2)				Not Detected					2	10
42) cis-1,2-Dichloroethene	(2)				Not Detected					2	10
44) 2-Butanone	(2)				Not Detected					3	100
51) Chloroform	(2)				Not Detected					2	10
53) 1,1,1-Trichloroethane	(2)	6.990	(0.000)	97	140106	18.309	183.09			3	10
60) Benzene	(2)				Not Detected					2	10
61) 1,2-Dichloroethane	(2)				Not Detected					3	10
71) Trichloroethene	(2)	8.352	(0.000)	95	255661	45.763	457.63			2	10
75) 1,4-Dioxane	(1)				Not Detected					290	2500
88) Toluene	(3)				Not Detected					2	10
93) Tetrachloroethene	(3)	10.488	(-0.000)	166	1994	0.353	3.53		J	2	10
104) Ethylbenzene	(3)				Not Detected					4	10
106) m+p-Xylene	(3)				Not Detected					10	50
107) o-Xylene	(3)				Not Detected					4	10
108) Xylene (Total)	(3)				Not Detected					14	60
138) 1,2-Dichlorobenzene	(4)				Not Detected					2	50
148) Naphthalene	(4)				Not Detected					10	50

Digitally signed by Linda C. Pape on 11/30/2019 at 13:12. Target 3.5 esignature user ID: lcp00895

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09355.i/19nov27b.b/yn27s41.d Injection date and time: **28-NOV-2019 00:44**
Data file Sample Info. Line: WIN04DL;1206732DL;1;0;;JCW26;;;yn27b31; Instrument ID: **HP09355.i** Batch: **Y193312AA**
Date, time and analyst ID of latest file update: 28-Nov-2019 01:01 Automation

Blank Data file reference: **/chem2/HP09355.i/19nov27b.b/yn27b31.d**

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 27-NOV-2019 21:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19nov27b.b/yn27c05.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 0.5 ml

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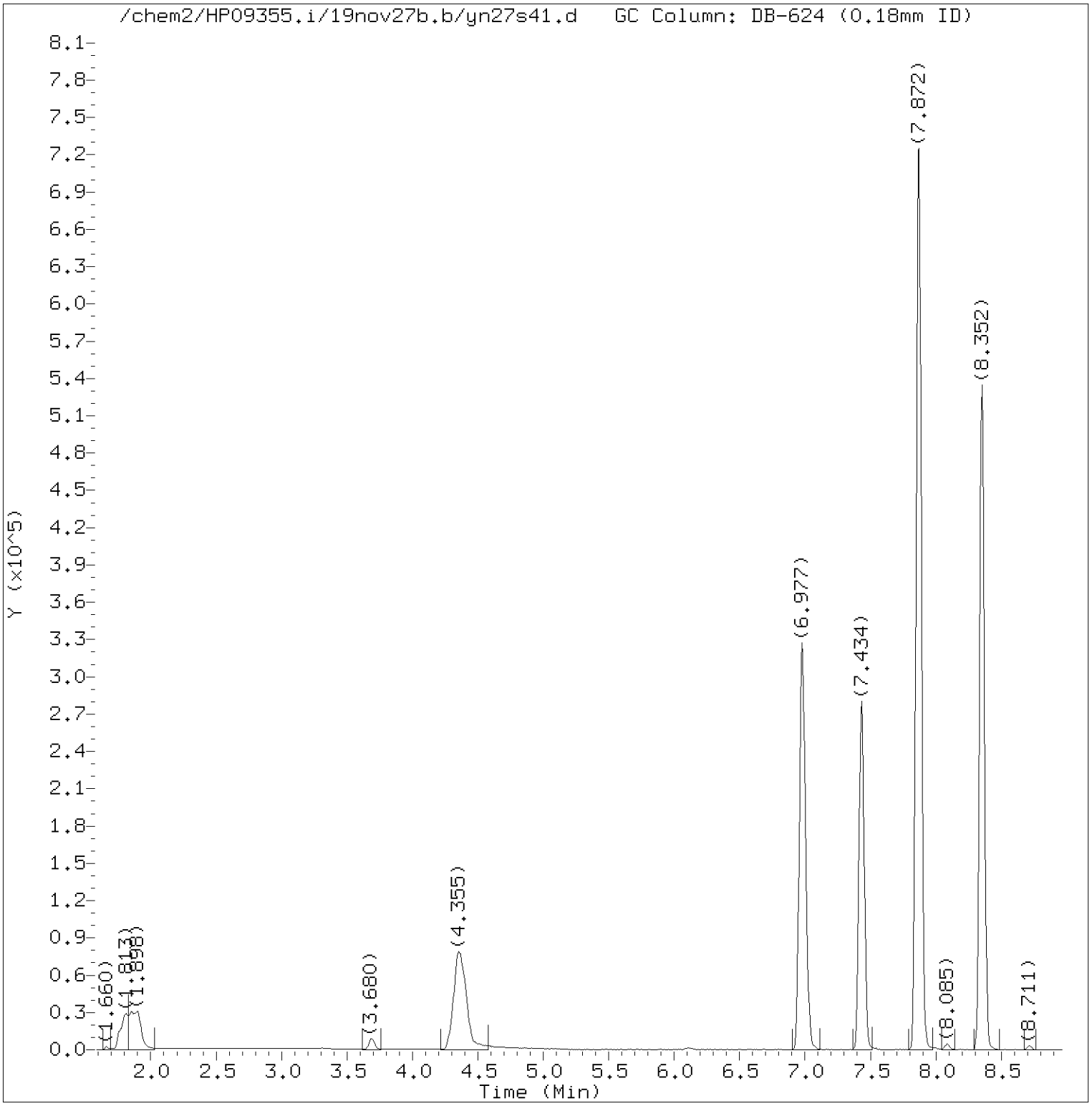
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Linda C. Pape on 11/30/2019 at 13:12. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

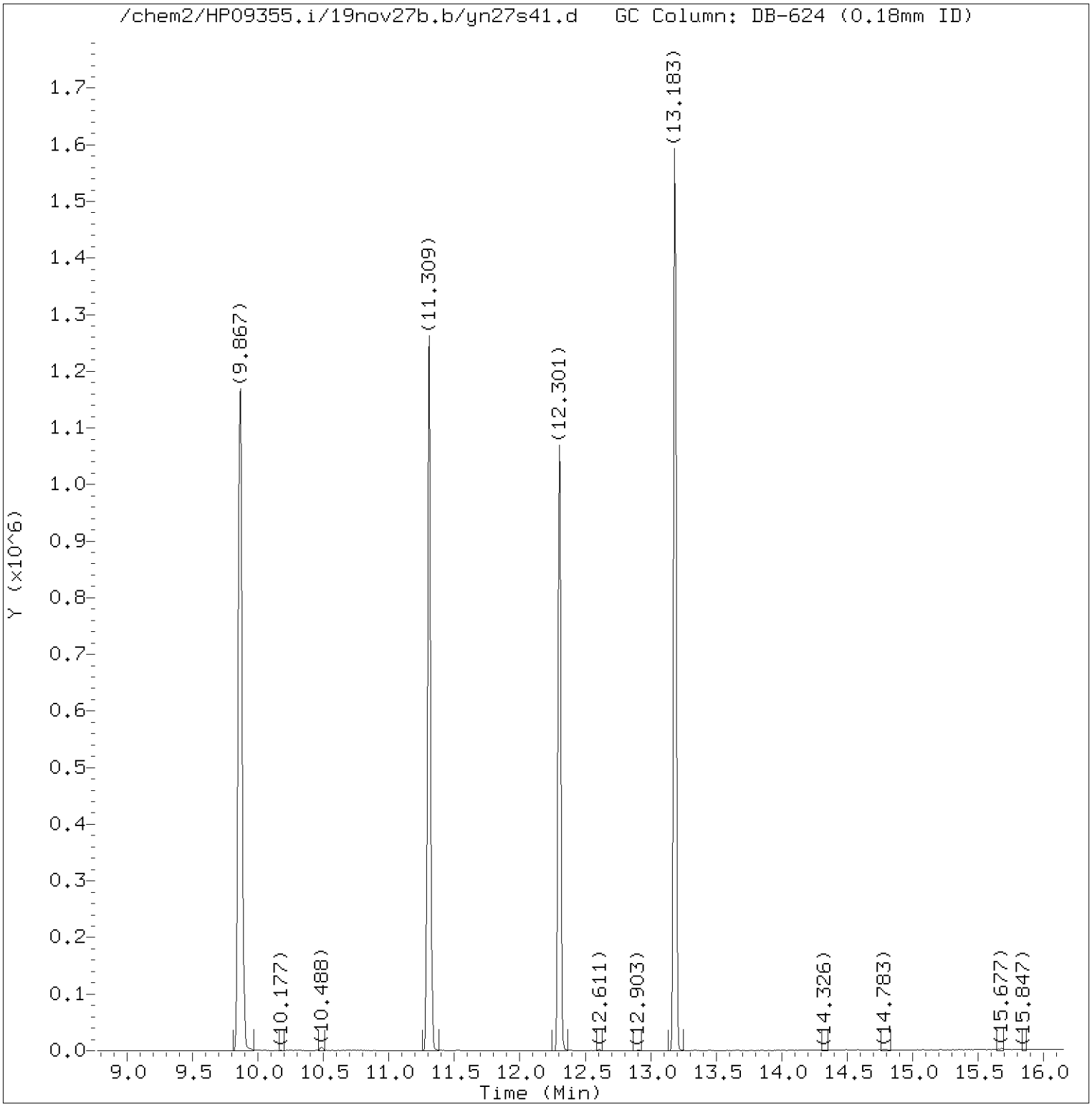
Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27s41.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 00:44 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 01:01 Automation

Sample Name: WIN04DL Lab Sample ID: 1206732DL

Digitally signed by Linda C. Pape
on 11/30/2019 at 13:12.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27s41.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 00:44 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 01:01 Automation

Sample Name: WIN04DL Lab Sample ID: 1206732DL

Digitally signed by Linda C. Pape
on 11/30/2019 at 13:12.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27s41.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 00:44 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 01:01 Automation

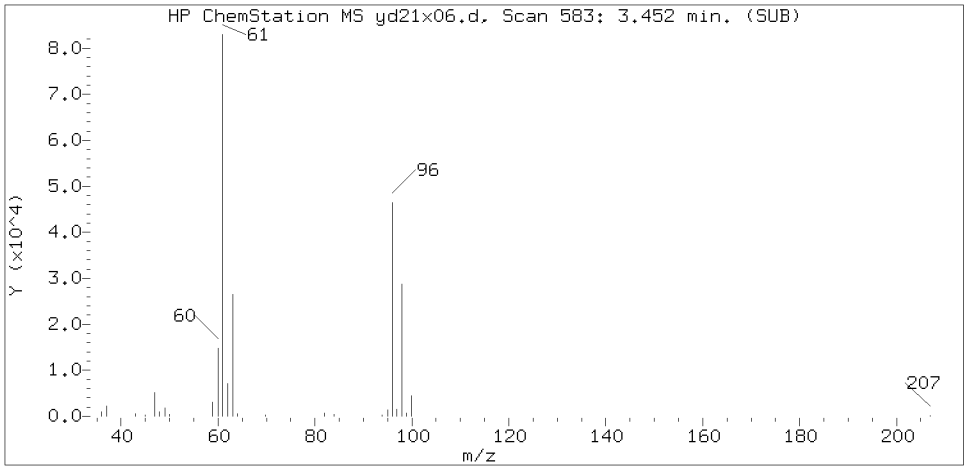
Sample Name: WIN04DL Lab Sample ID: 1206732DL

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	3.692	96	6696	1.547
29)*t-Butyl alcohol-d10	(1)	4.355	65	302193	250.000
52)$Dibromofluoromethane	(2)	6.971	113	213530	45.619
53) 1,1,1-Trichloroethane	(2)	6.990	97	140106	18.309
57)$1,2-Dichloroethane-d4	(2)	7.434	102	59447	48.581
66)*Fluorobenzene	(2)	7.872	96	997518	50.000
71) Trichloroethene	(2)	8.352	95	255661	45.763
83)$Toluene-d8	(3)	9.867	98	967561	49.585
93) Tetrachloroethene	(3)	10.488	166	1994	0.353
100)*Chlorobenzene-d5	(3)	11.309	117	721197	50.000
114)$4-Bromofluorobenzene	(3)	12.301	95	353083	47.359
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	373853	50.000

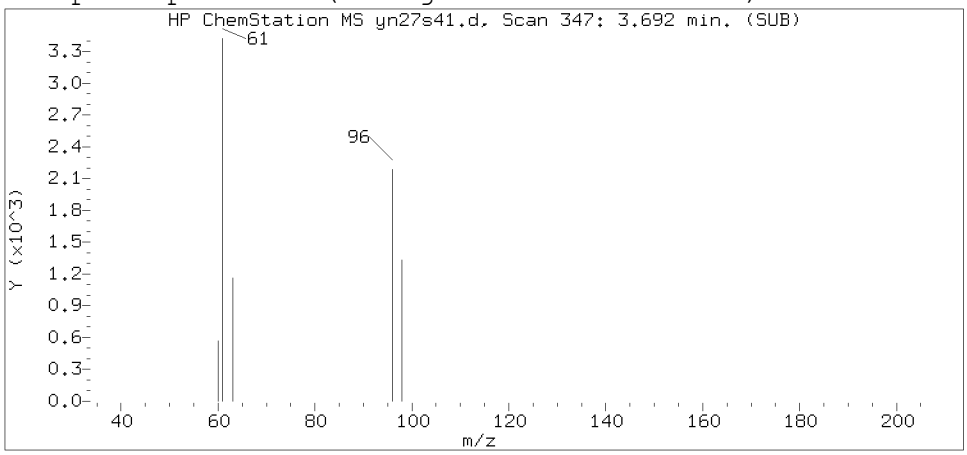
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/30/2019 at 13:12.
Target 3.5 esignature user ID: lcp00895

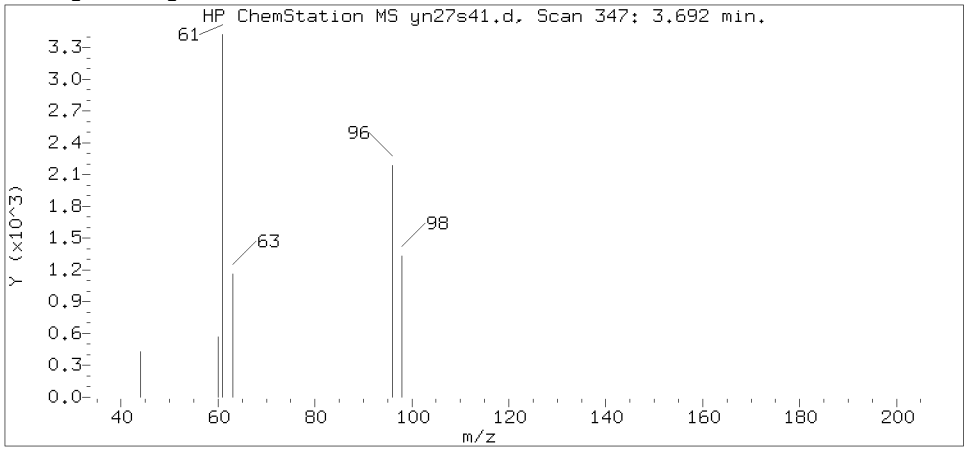
Reference Standard Spectrum for 1,1-Dichloroethene

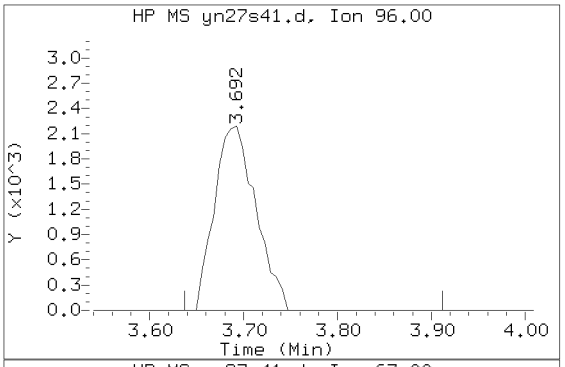


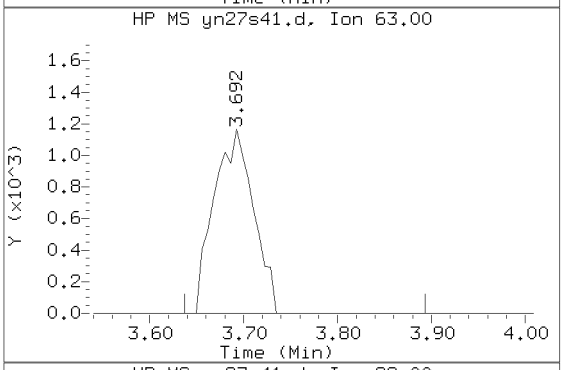
Sample Spectrum (Background Subtracted)

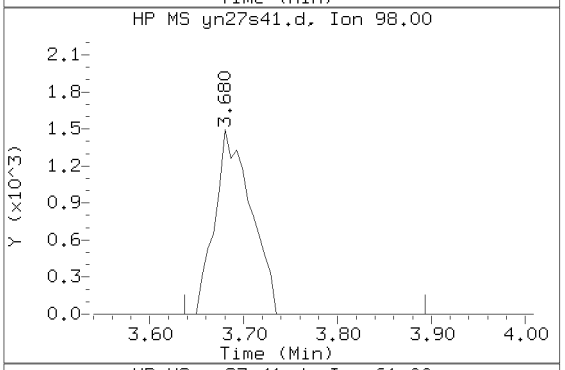


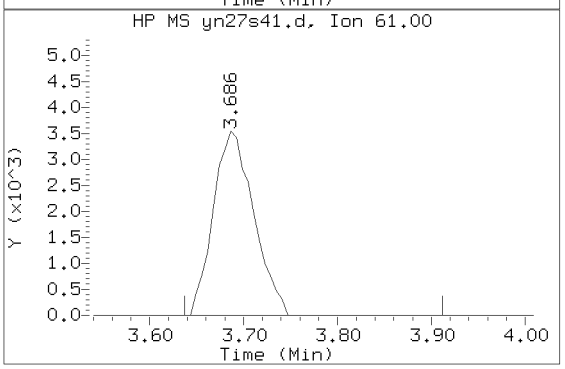
Sample Spectrum (Unaltered)











Data File: /chem2/HP09355.i/19nov27b.b/yn27s41.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 00:44 Analyst ID: DVV10203

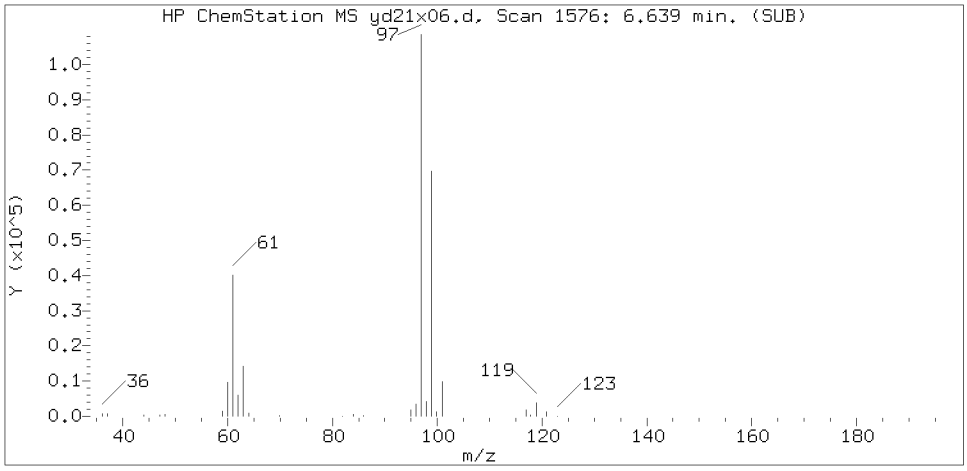
Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 01:01 Automation

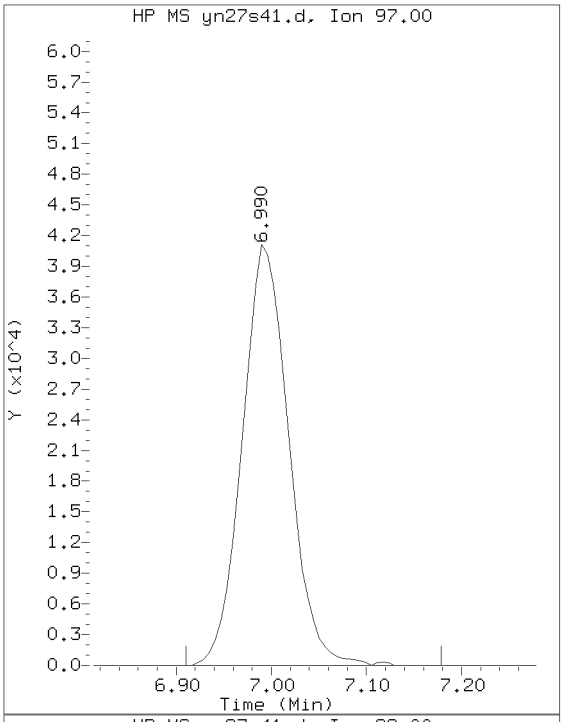
Sample Name: WIN04DL Lab Sample ID: 1206732DL

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 347
Retention Time (minutes): 3.692
Relative Retention Time :-0.00000
Quant Ion : 96.00
Area (flag) : 6696
On-Column Amount (ng) : 1.5467

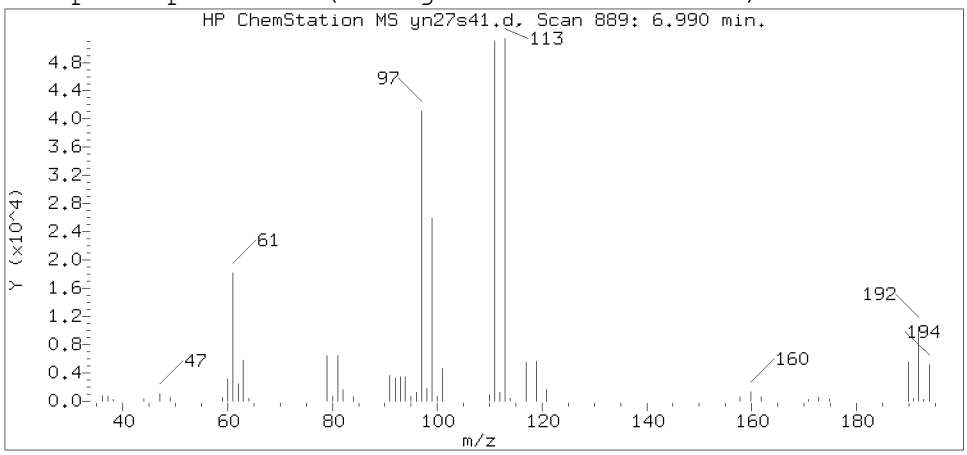
Digitally signed by Linda C. Pape on 11/30/2019 at 13:12.
Target 3.5 esignature user ID: lcp00895

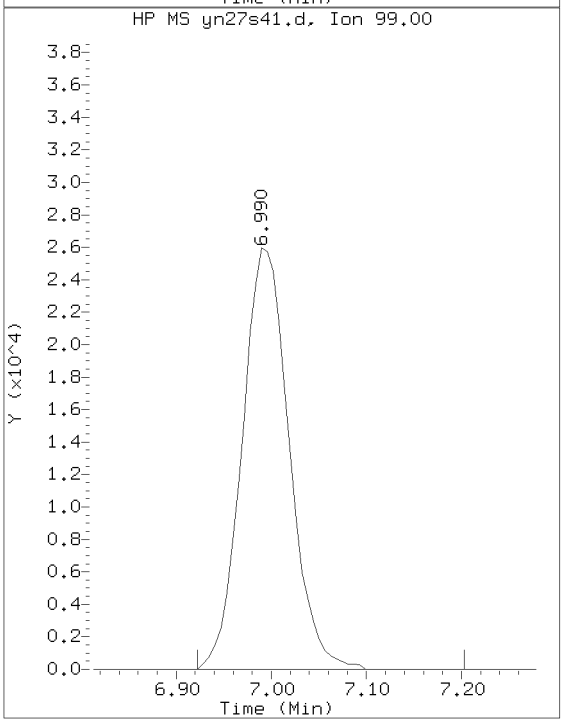
Reference Standard Spectrum for 1,1,1-Trichloroethane



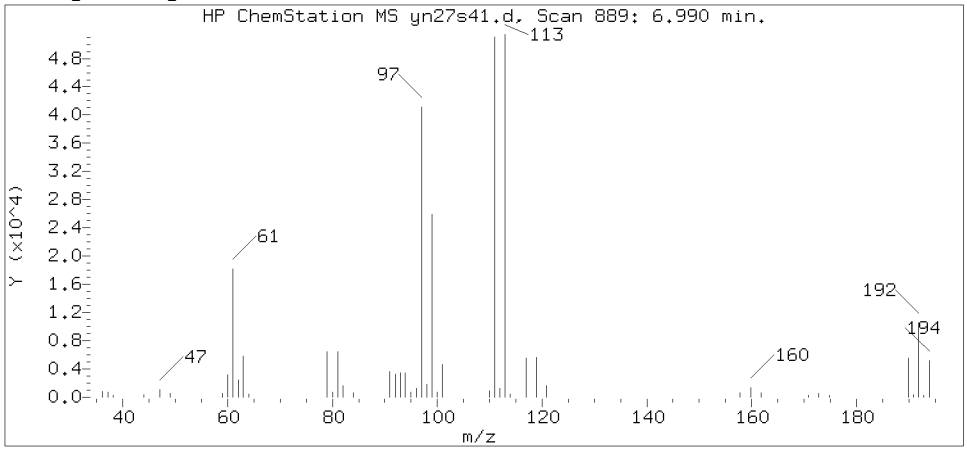


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09355.i/19nov27b.b/yn27s41.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 00:44 Analyst ID: DVV10203

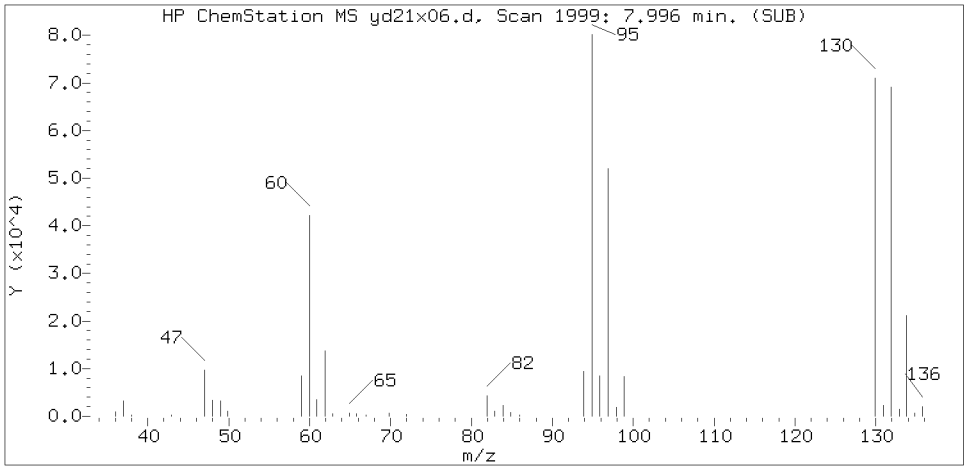
Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 01:01 Automation

Sample Name: WIN04DL Lab Sample ID: 1206732DL

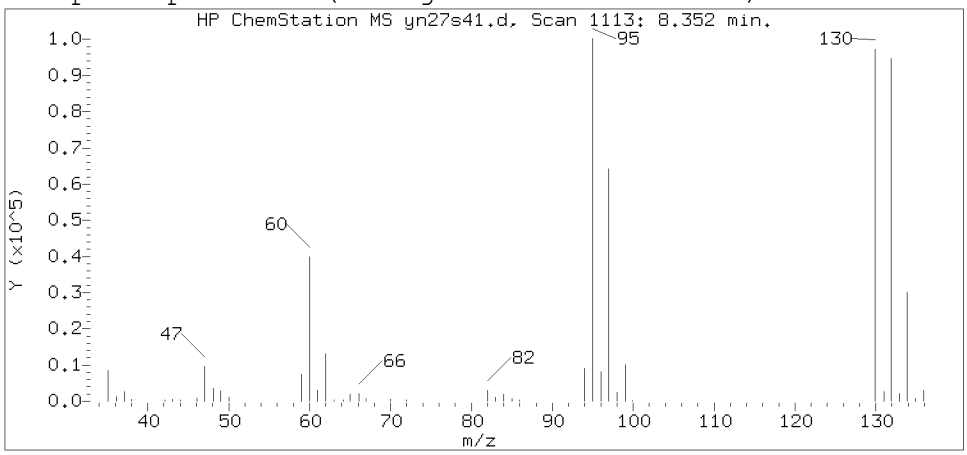
Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 889
Retention Time (minutes)	: 6.990
Relative Retention Time	: 0.00077
Quant Ion	: 97.00
Area (flag)	: 140106
On-Column Amount (ng)	: 18.3087

Digitally signed by Linda C. Pape on 11/30/2019 at 13:12.
Target 3.5 esignature user ID: lcp00895

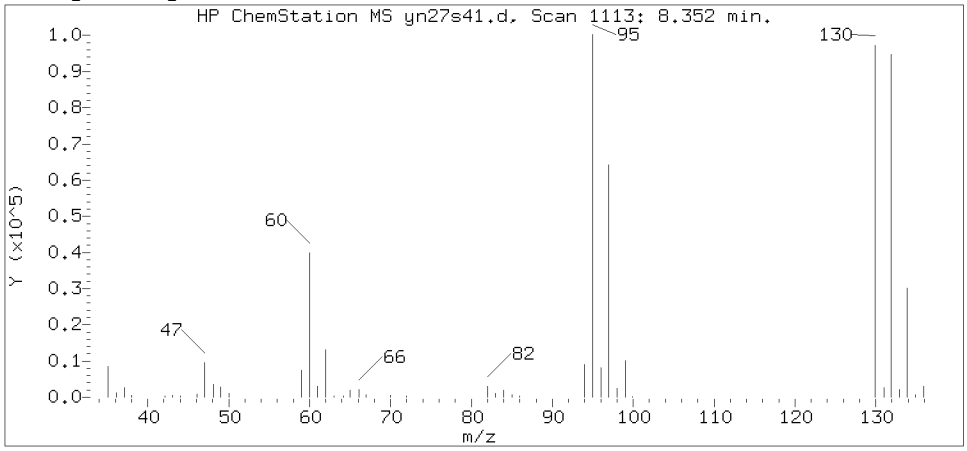
Reference Standard Spectrum for Trichloroethene

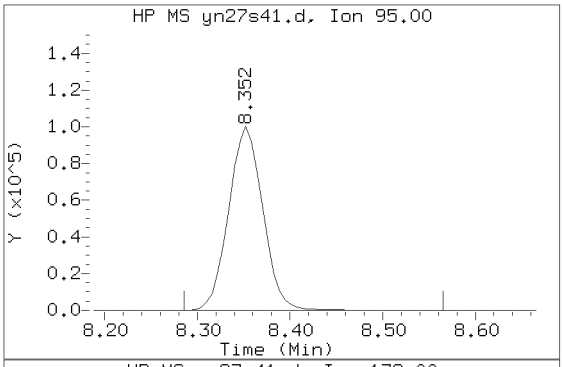


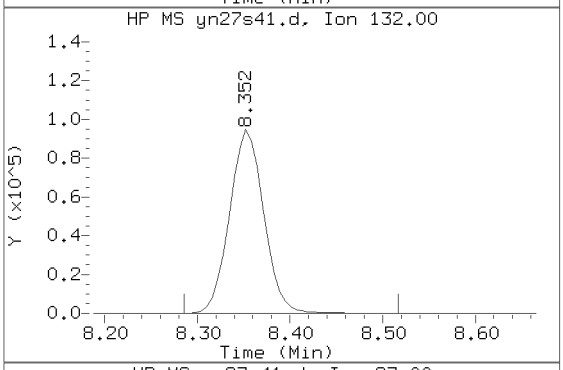
Sample Spectrum (Background Subtracted)

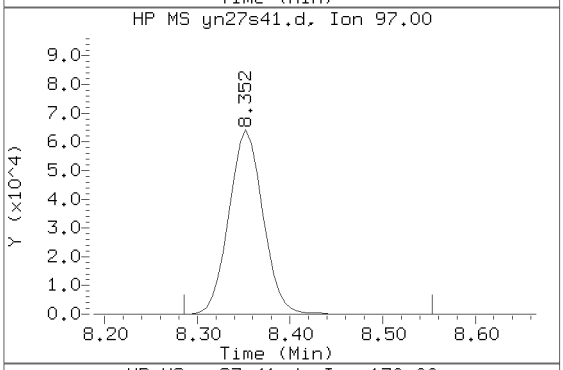


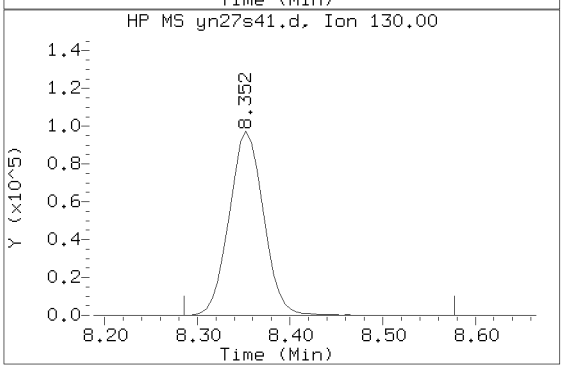
Sample Spectrum (Unaltered)











Data File: /chem2/HP09355.i/19nov27b.b/yn27s41.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 00:44 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 01:01 Automation

Sample Name: WIN04DL Lab Sample ID: 1206732DL

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 1113
Retention Time (minutes): 8.352
Relative Retention Time : 0.00078
Quant Ion : 95.00
Area (flag) : 255661
On-Column Amount (ng) : 45.7632

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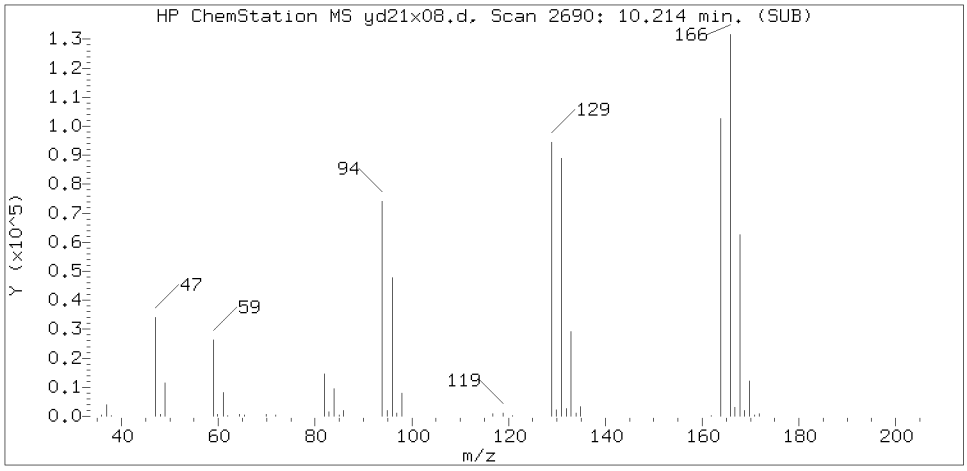
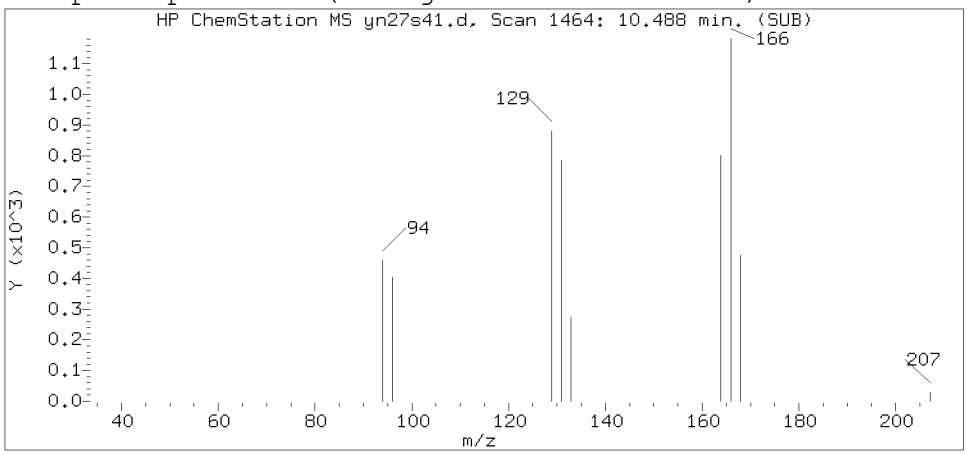
Target 3.5 esignature user ID: lcp00895

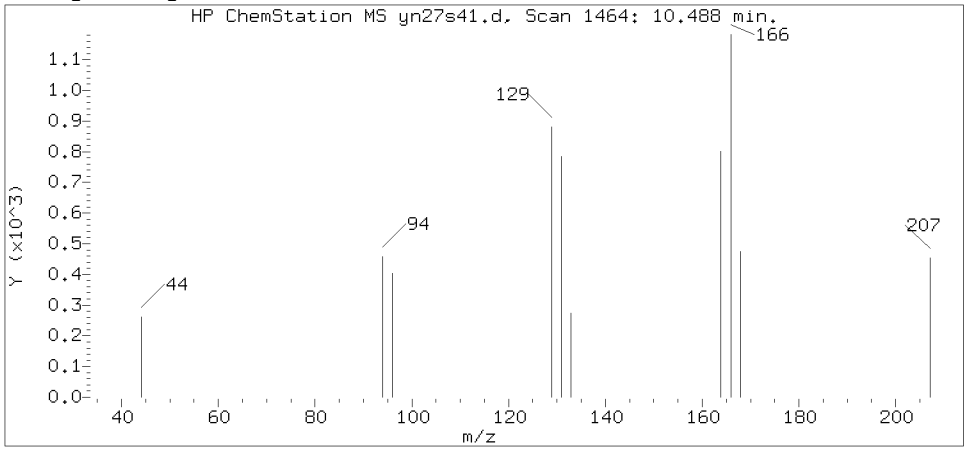
Reference Standard Spectrum for Tetrachloroethene

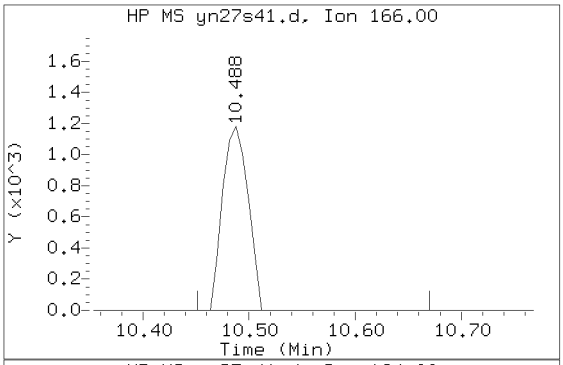


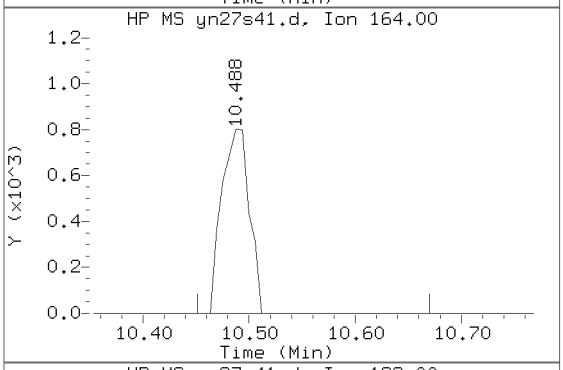
Sample Spectrum (Background Subtracted)

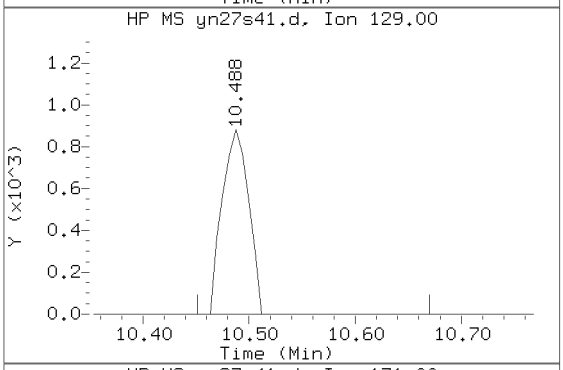


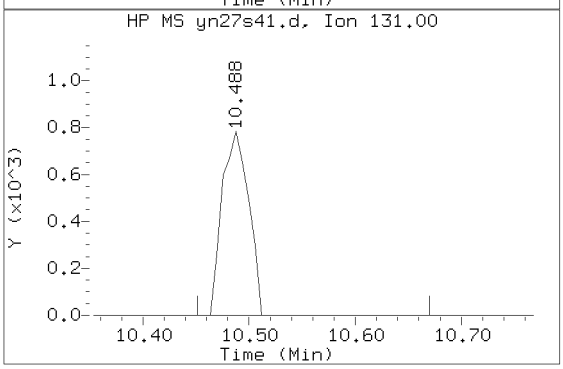
Sample Spectrum (Unaltered)











Data File: /chem2/HP09355.i/19nov27b.b/yn27s41.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 00:44 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 01:01 Automation

Sample Name: WIN04DL Lab Sample ID: 1206732DL

Compound Number : 93
Compound Name : Tetrachloroethene
Scan Number : 1464
Retention Time (minutes): 10.488
Relative Retention Time :-0.00000
Quant Ion : 166.00
Area (flag) : 1994
On-Column Amount (ng) : 0.3528

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Target 3.5 esignature user ID: lcp00895

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
WIN05

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1206733

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19nov26a.b/en26s09.d

Level: (low/med) LOW Date Received: 11/20/19

Moisture: not dec. _____ Date Analyzed: 11/26/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	9	
67-64-1	Acetone	20	U
76-13-1	Freon 113	0.4	J
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	0.7	J
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	130	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	590	E
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	4	
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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WIN05 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1206733

Data file: /chem/HP15648.i/19nov26a.b/en26s09.d Injection date and time: **26-NOV-2019 14:44**
Data file Sample Info. Line: WIN05;1206733;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 15:01 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.480	(0.000)	245	65	181780	(-4)	250.00	
66) Fluorobenzene	4.724	(0.000)	613	96	1048381	(4)	50.00	
101) Chlorobenzene-d5	7.870	(0.000)	1129	117	722402	(2)	50.00	
132) 1,4-Dichlorobenzene-d4	9.784	(-0.006)	1443	152	354389	(3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.059	(0.001)	113	217638	48.803	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.382	(0.001)	102	58302	49.050	98%		80 - 120
84) Toluene-d8	(3)	6.364	(0.000)	98	1026939	50.072	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.894	(0.000)	95	382908	49.544	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	2.096	(0.001)	96	34253	8.505	8.51			0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)	2.114	(0.002)	101	1720	0.369	0.37		J	0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)	3.608	(0.000)	96	3997	0.748	0.75		J	0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	4.090	(0.000)	97	894223	125.994	125.99			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	5.090	(0.001)	95	3051157	586.585	586.59		E	0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)	7.034	(0.000)	166	21859	4.382	4.38			0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	6
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

E = Compound concentration above calibration range.

Digitally signed by Jason M. Long on 11/27/2019 at 14:38. Target 3.5 esignature user ID: jml01693

Data file: /chem/HP15648.i/19nov26a.b/en26s09.d Injection date and time: **26-NOV-2019 14:44**
Data file Sample Info. Line: WIN05;1206733;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 15:01 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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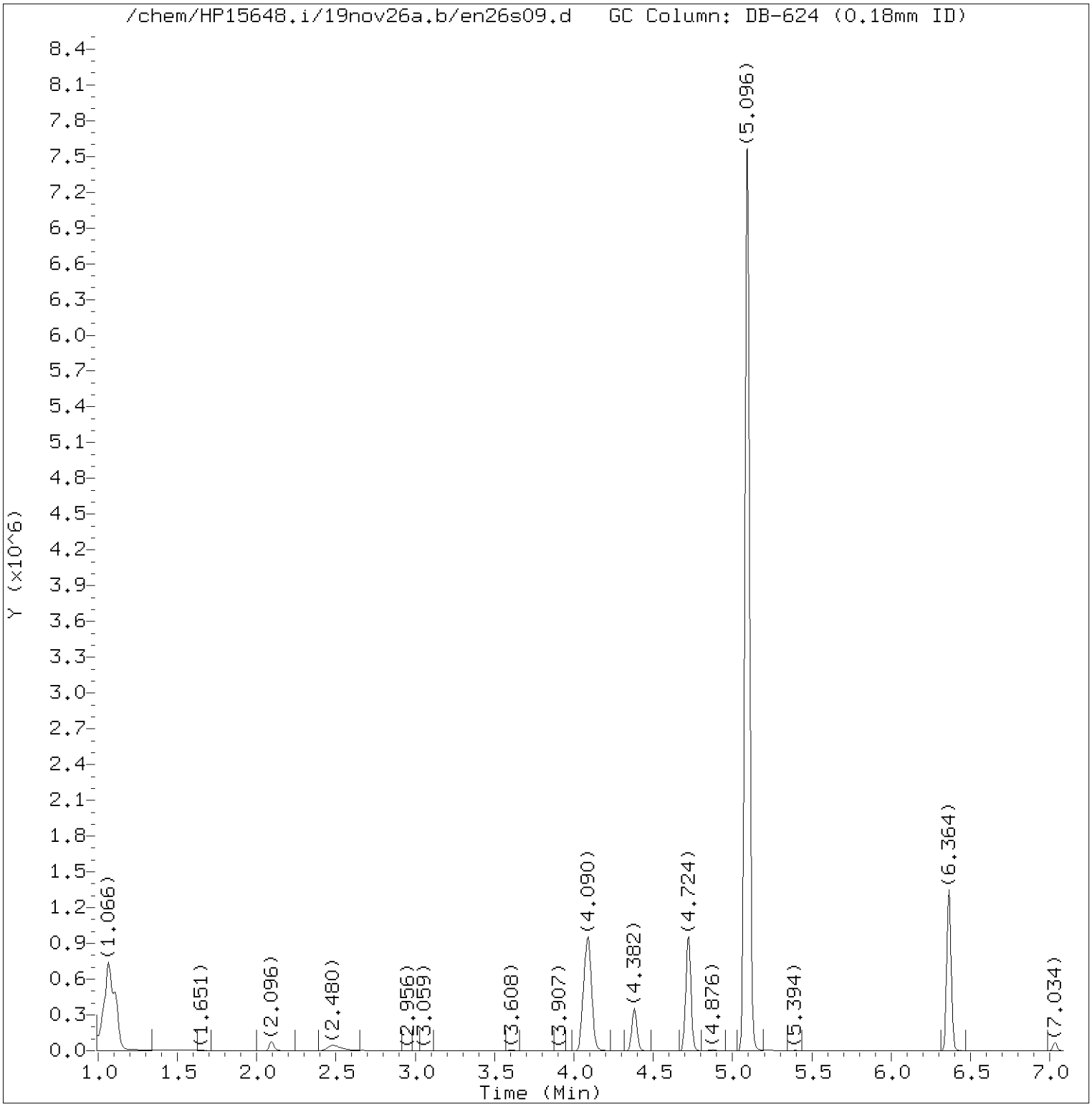
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Jason M. Long on 11/27/2019 at 14:38. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 12:19. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

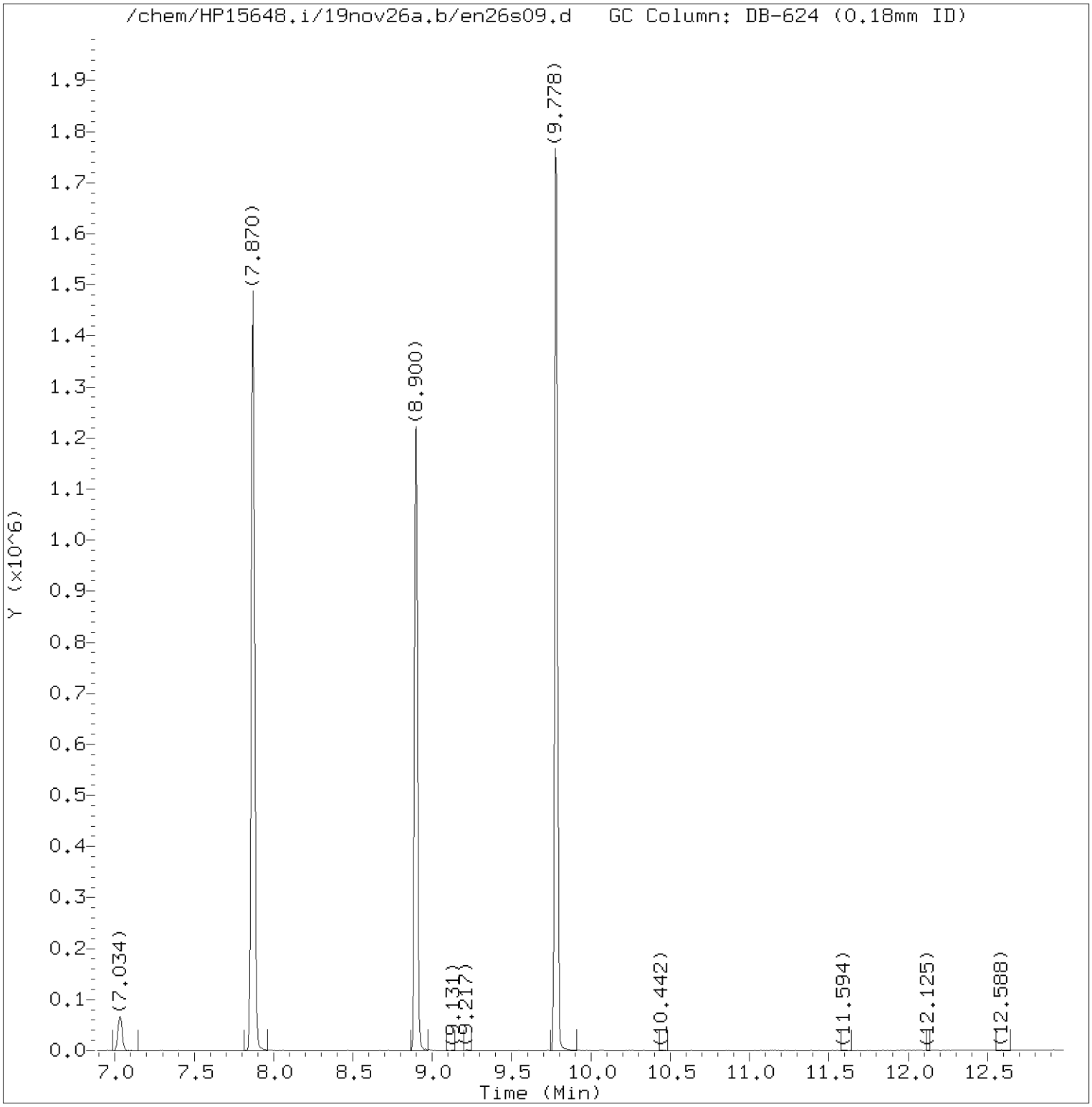
Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s09.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 14:44 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 15:01 Automation

Sample Name: WIN05 Lab Sample ID: 1206733

Digitally signed by Jason M. Long
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s09.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 14:44 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 15:01 Automation

Sample Name: WIN05 Lab Sample ID: 1206733

Digitally signed by Jason M. Long
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s09.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 14:44 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 15:01 Automation

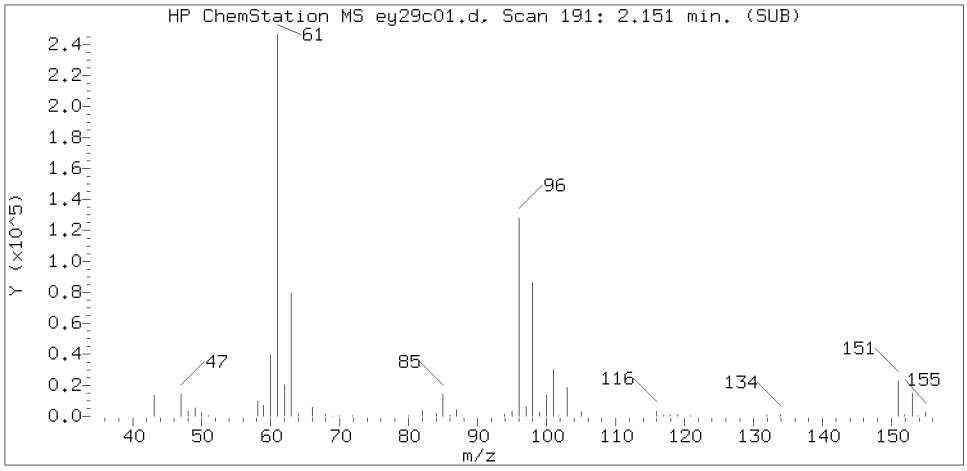
Sample Name: WIN05 Lab Sample ID: 1206733

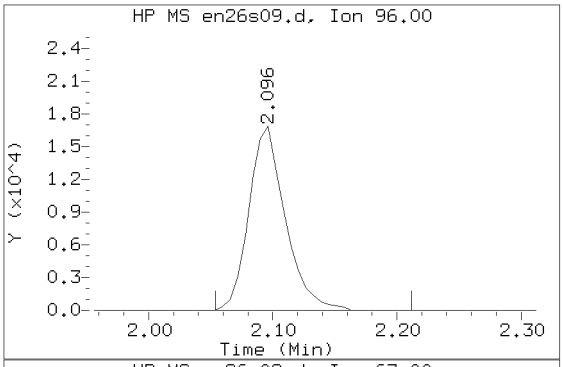
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	2.096	96	34253	8.505
19) Freon 113	(2)	2.115	101	1720	0.369
29)*t-Butyl alcohol-d10	(1)	2.480	65	181780	250.000
42) cis-1,2-Dichloroethene	(2)	3.608	96	3997	0.748
52)$Dibromofluoromethane	(2)	4.059	113	217638	48.803
53) 1,1,1-Trichloroethane	(2)	4.090	97	894223	125.994
57)$1,2-Dichloroethane-d4	(2)	4.382	102	58302	49.050
66)*Fluorobenzene	(2)	4.724	96	1048381	50.000
71) Trichloroethene	(2)	5.090	95	3051157	586.585
84)$Toluene-d8	(3)	6.364	98	1026939	50.072
94) Tetrachloroethene	(3)	7.034	166	21859	4.382
101)*Chlorobenzene-d5	(3)	7.870	117	722402	50.000
115)$4-Bromofluorobenzene	(3)	8.894	95	382908	49.544
132)*1,4-Dichlorobenzene-d4	(4)	9.784	152	354389	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

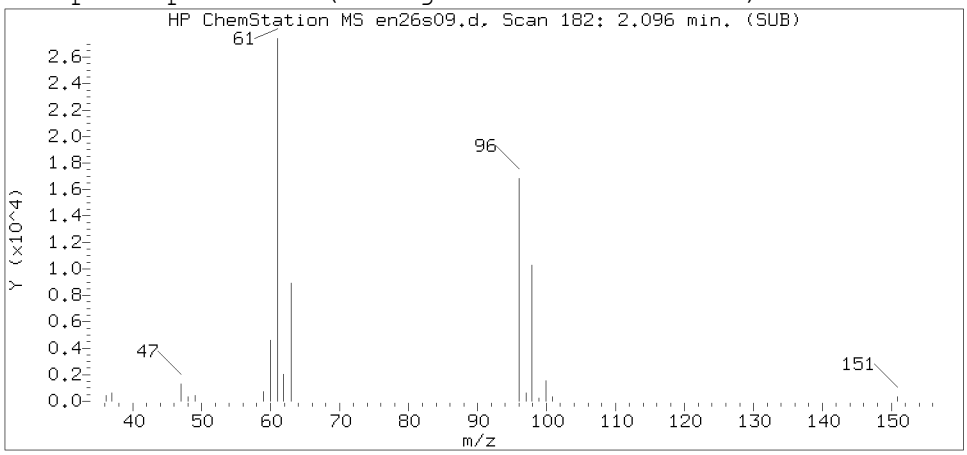
Digitally signed by Jason M. Long
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

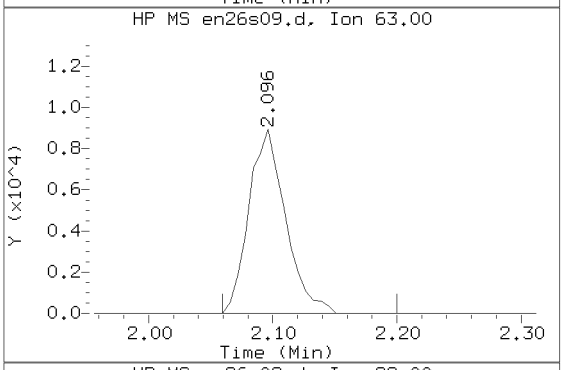
Reference Standard Spectrum for 1,1-Dichloroethene

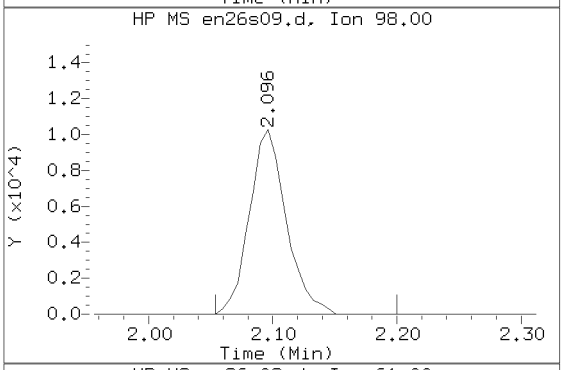




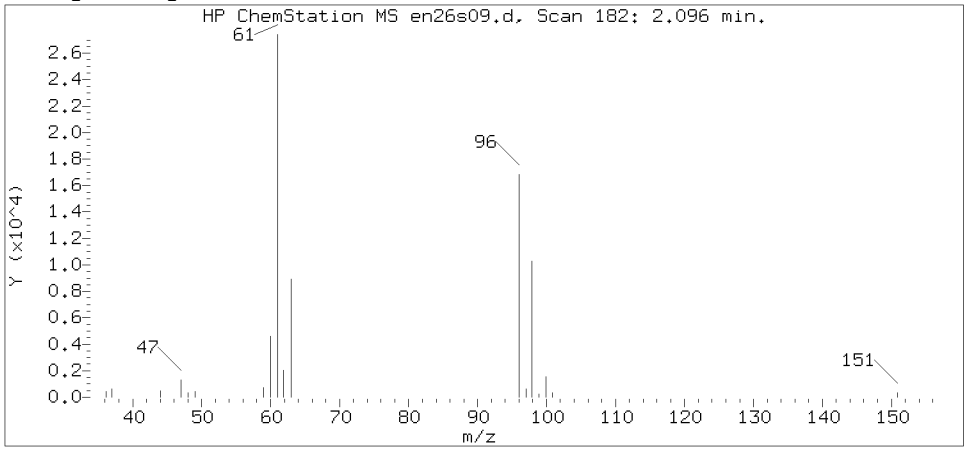
Sample Spectrum (Background Subtracted)

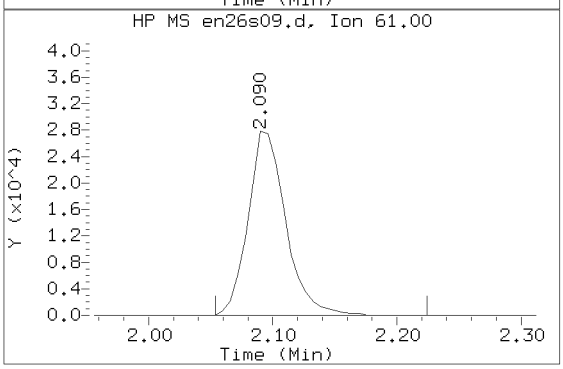






Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19nov26a.b/en26s09.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 14:44 Analyst ID: jml01693

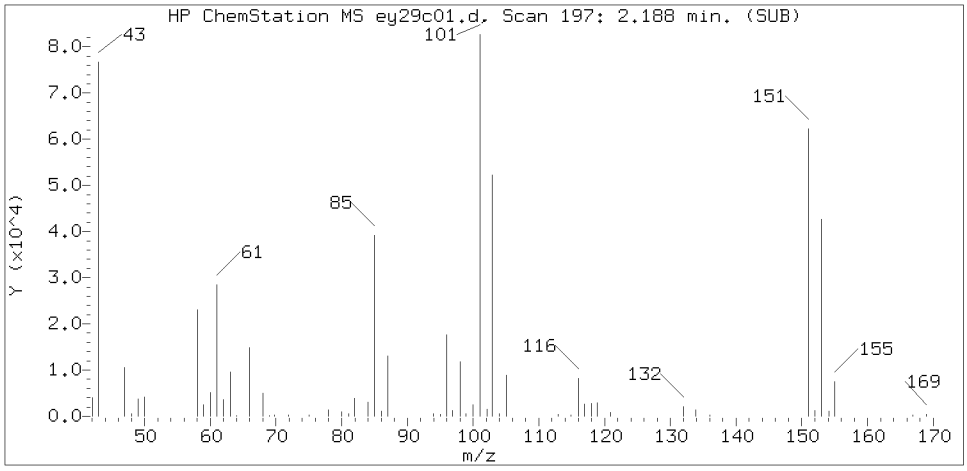
Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 15:01 Automation

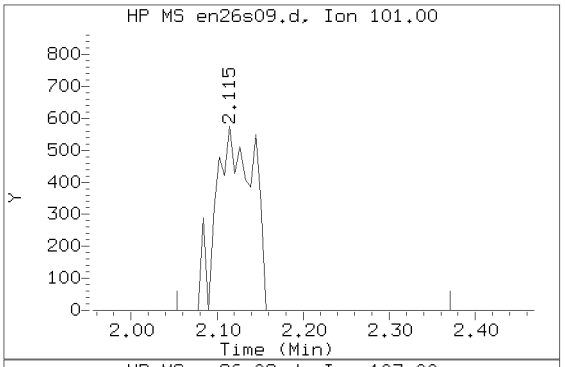
Sample Name: WIN05 Lab Sample ID: 1206733

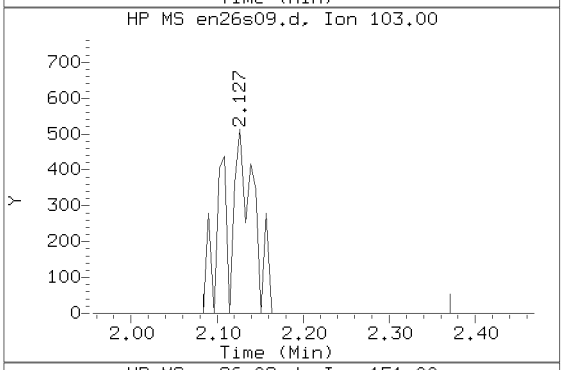
Compound Number	: 17
Compound Name	: 1,1-Dichloroethene
Scan Number	: 182
Retention Time (minutes)	: 2.096
Relative Retention Time	: 0.00132
Quant Ion	: 96.00
Area (flag)	: 34253
On-Column Amount (ng)	: 8.5054

Digitally signed by Jason M. Long on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

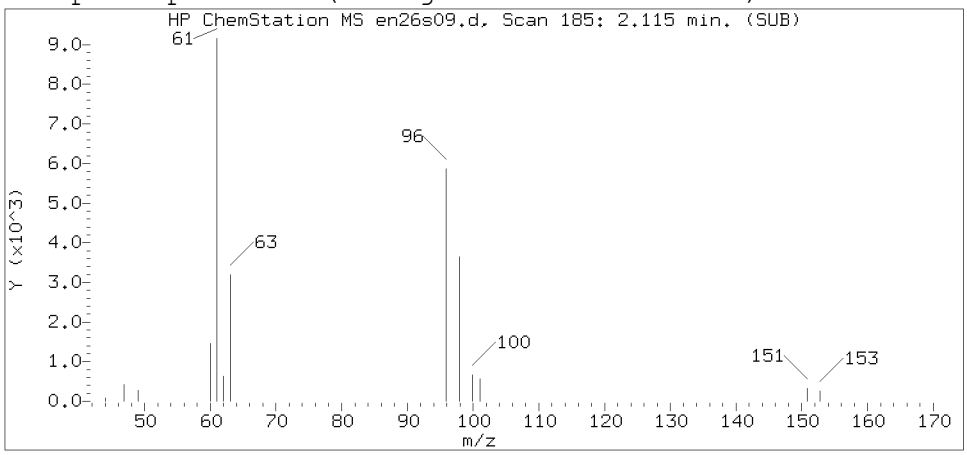
Reference Standard Spectrum for Freon 113

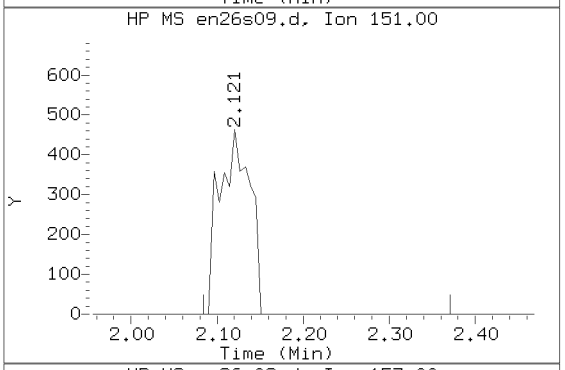




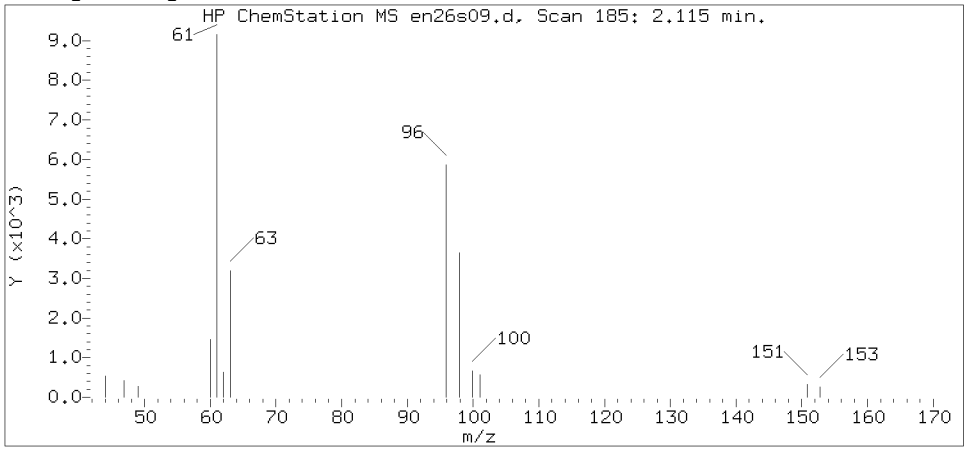


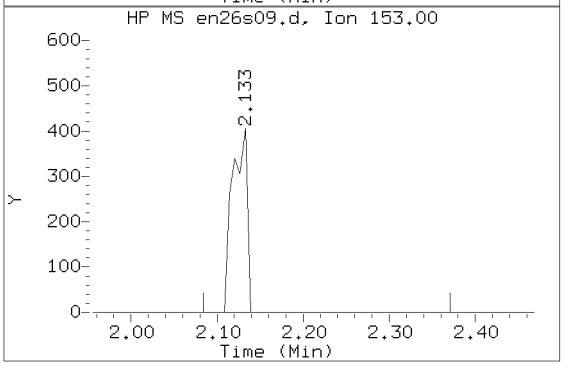
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19nov26a.b/en26s09.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 14:44 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 15:01 Automation

Sample Name: WIN05 Lab Sample ID: 1206733

Compound Number	: 19
Compound Name	: Freon 113
Scan Number	: 185
Retention Time (minutes)	: 2.115
Relative Retention Time	: 0.00261
Quant Ion	: 101.00
Area (flag)	: 1720
On-Column Amount (ng)	: 0.3686

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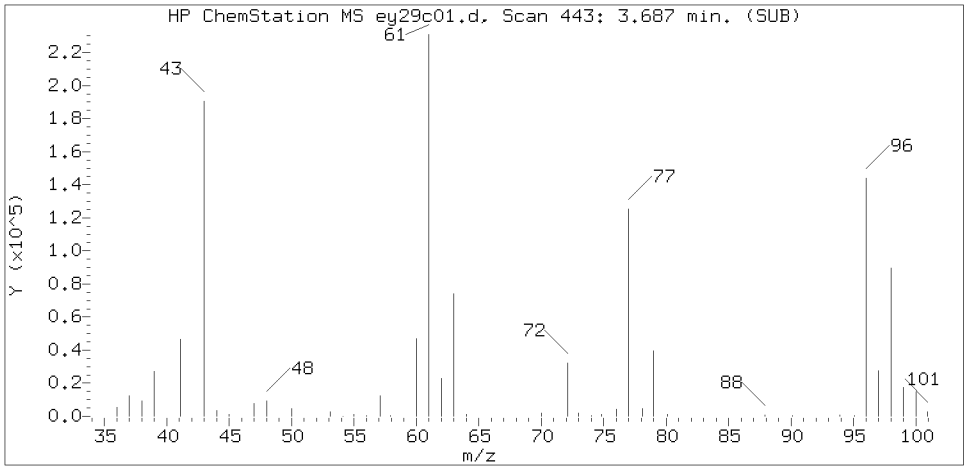
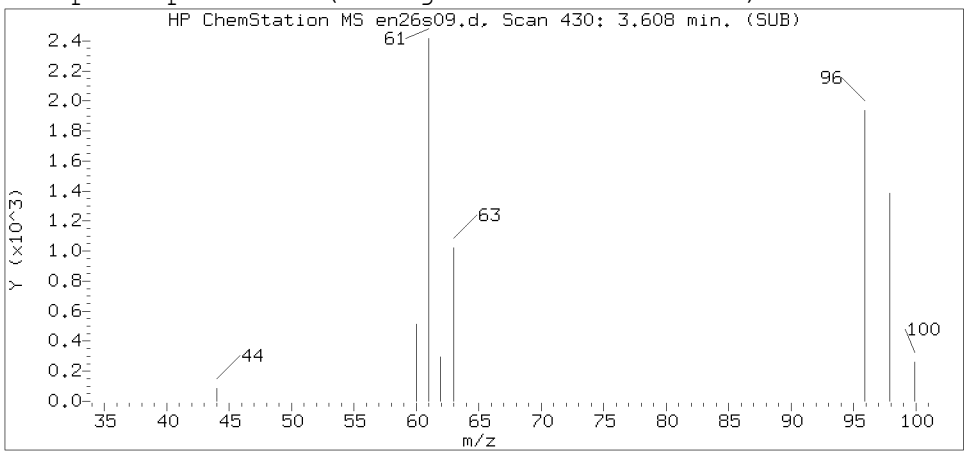
Target 3.5 esignature user ID: jml01693

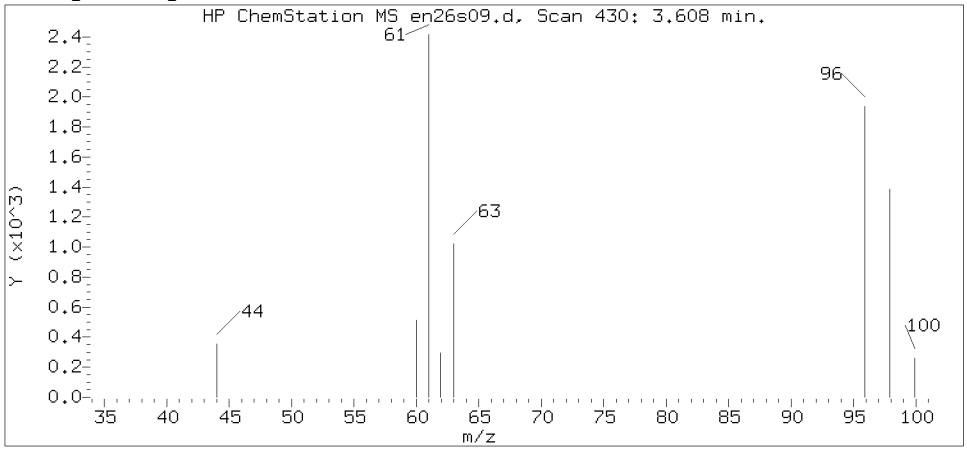
Reference Standard Spectrum for cis-1,2-Dichloroethene

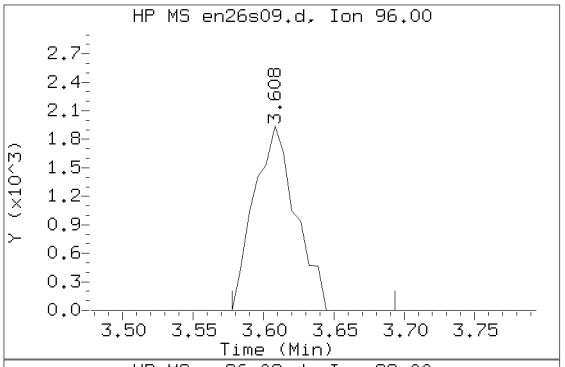


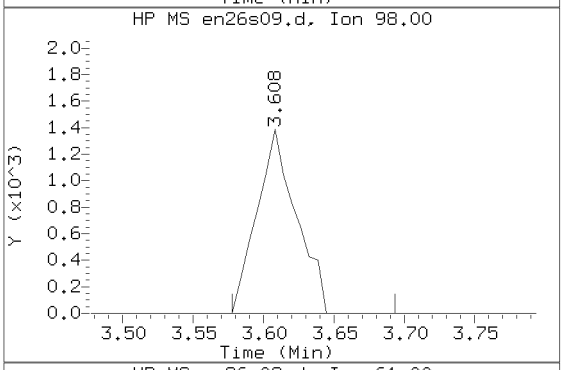
Sample Spectrum (Background Subtracted)

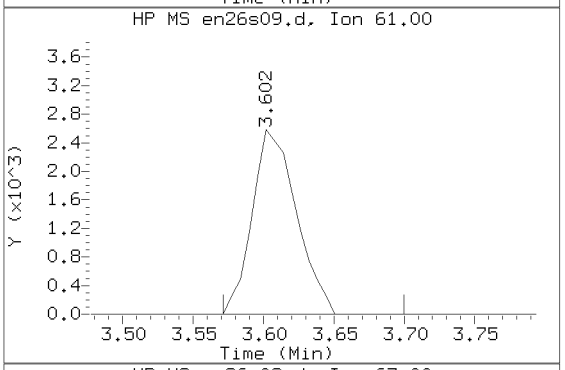


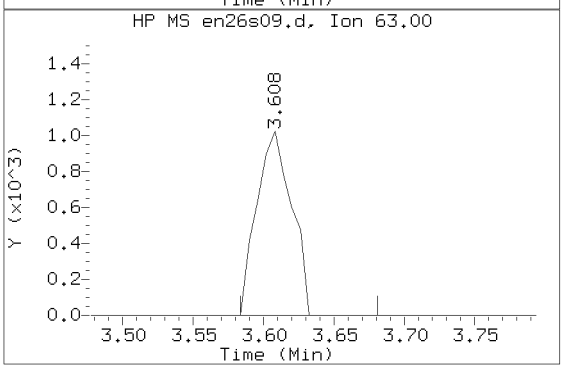
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19nov26a.b/en26s09.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 14:44 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 15:01 Automation

Sample Name: WIN05 Lab Sample ID: 1206733

Compound Number	: 42
Compound Name	: cis-1,2-Dichloroethene
Scan Number	: 430
Retention Time (minutes)	: 3.608
Relative Retention Time	: 0.00001
Quant Ion	: 96.00
Area (flag)	: 3997
On-Column Amount (ng)	: 0.7479

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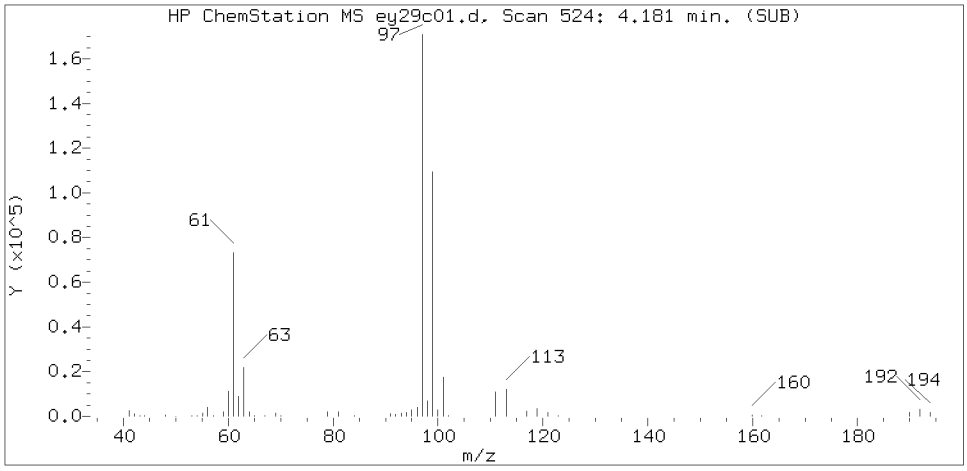
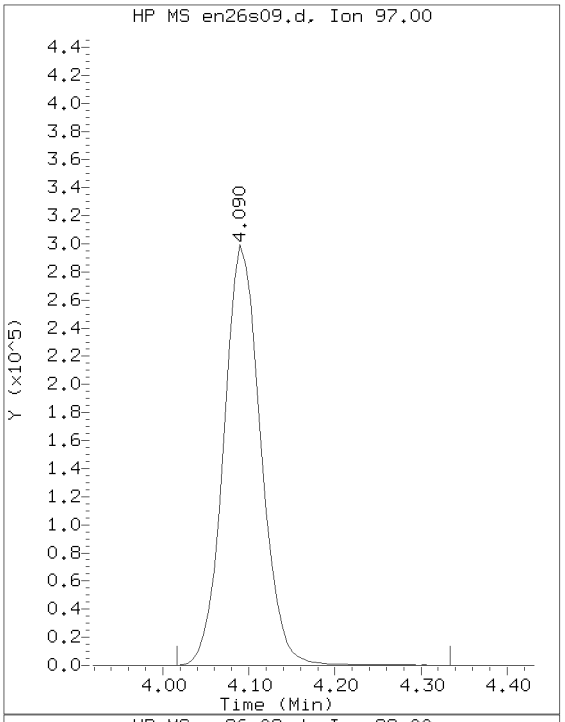
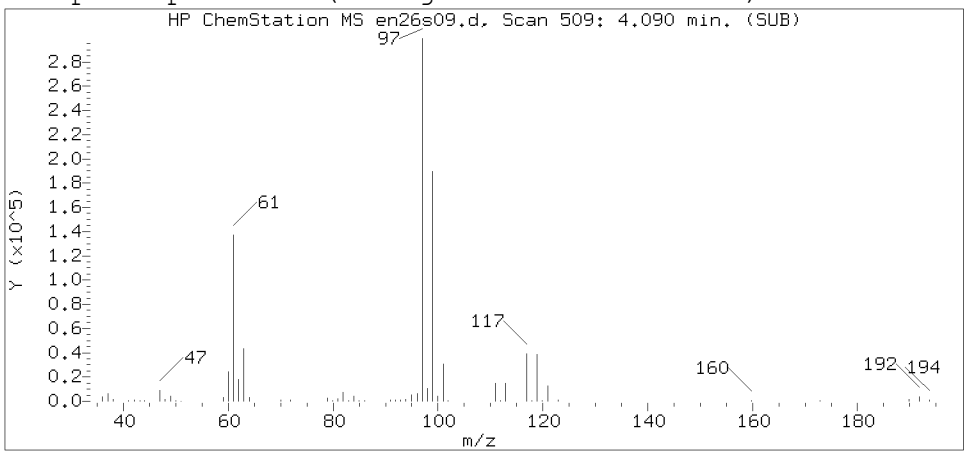
Target 3.5 esignature user ID: jml01693

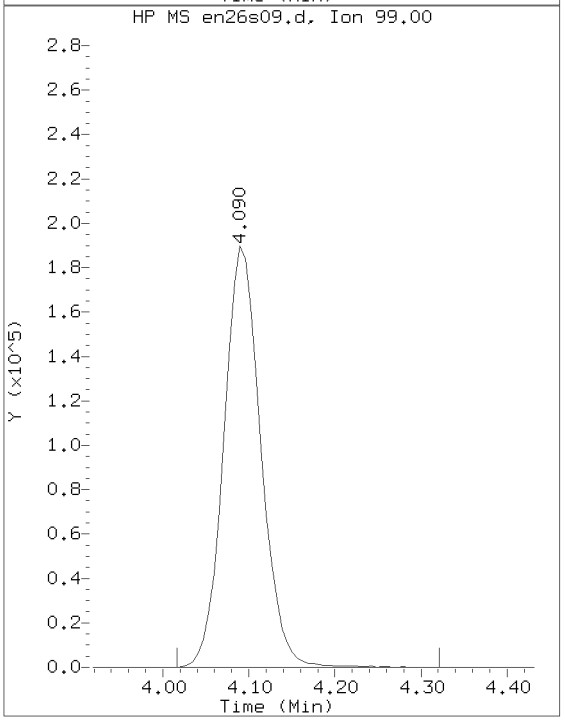
Reference Standard Spectrum for 1,1,1-Trichloroethane



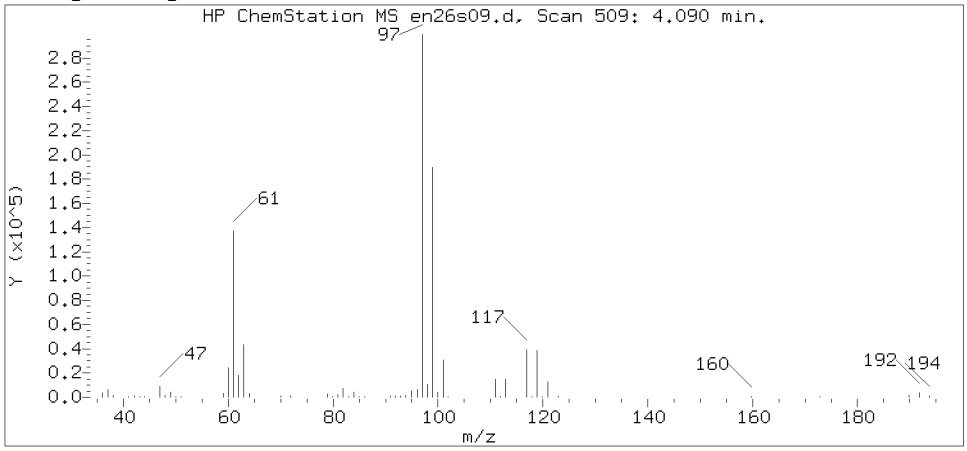


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP15648.i/19nov26a.b/en26s09.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 14:44 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 15:01 Automation

Sample Name: WIN05 Lab Sample ID: 1206733

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 509
Retention Time (minutes)	: 4.090
Relative Retention Time	: 0.00000
Quant Ion	: 97.00
Area (flag)	: 894223
On-Column Amount (ng)	: 125.9937

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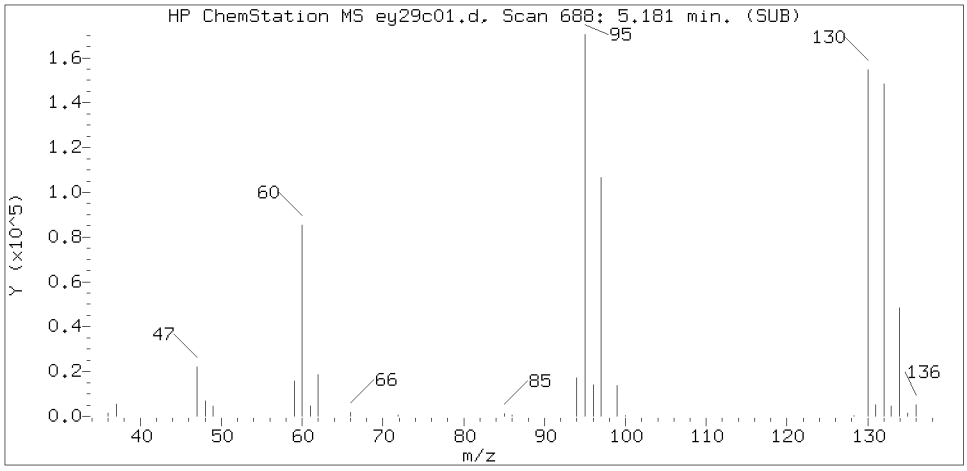
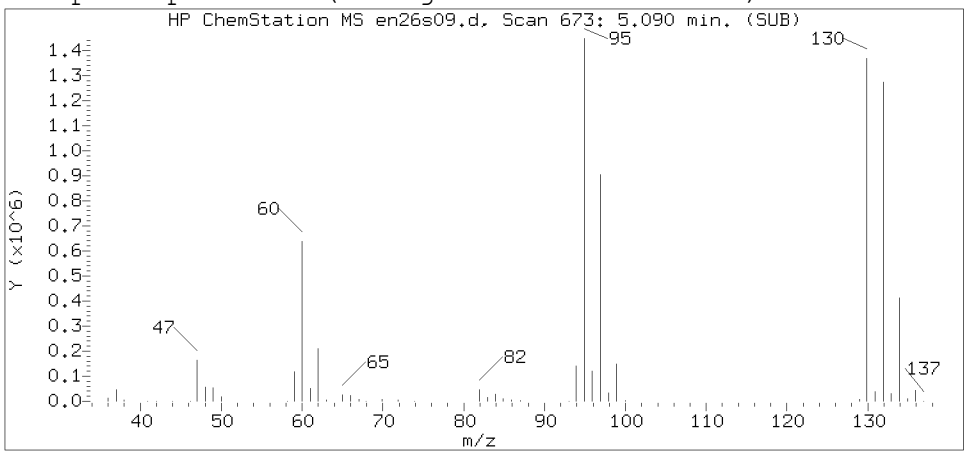
Target 3.5 esignature user ID: jml01693

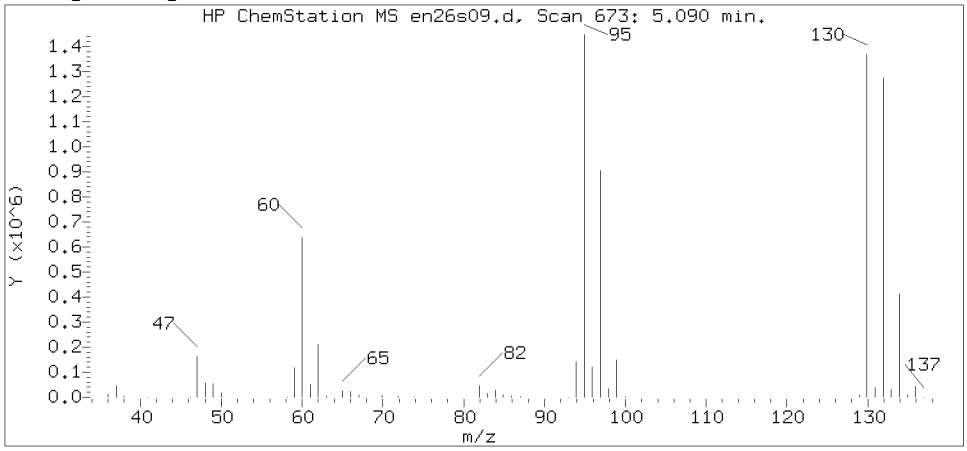
Reference Standard Spectrum for Trichloroethene

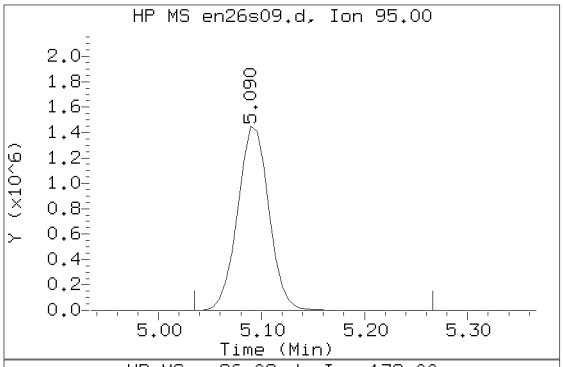


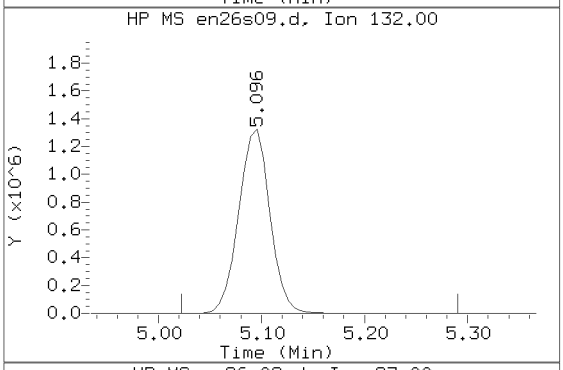
Sample Spectrum (Background Subtracted)

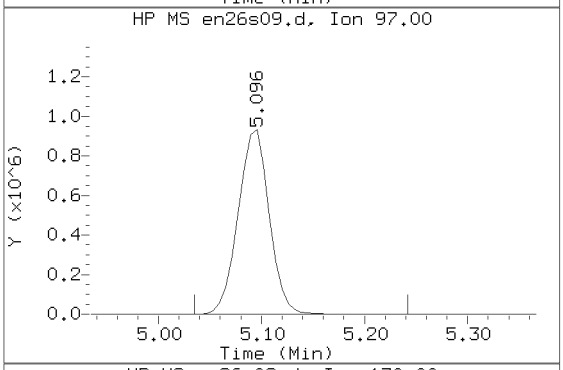


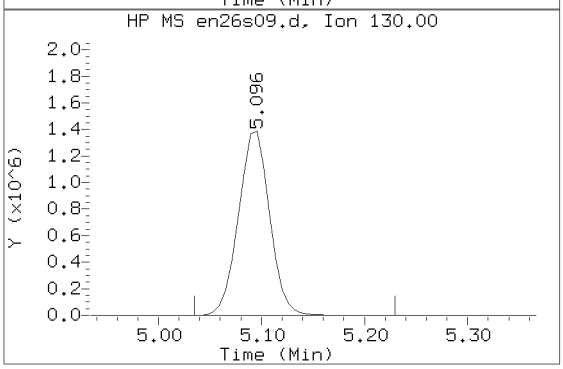
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19nov26a.b/en26s09.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 14:44 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 15:01 Automation

Sample Name: WIN05 Lab Sample ID: 1206733

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 673
Retention Time (minutes)	: 5.090
Relative Retention Time	: 0.00128
Quant Ion	: 95.00
Area (flag)	: 3051157
On-Column Amount (ng)	: 586.5850

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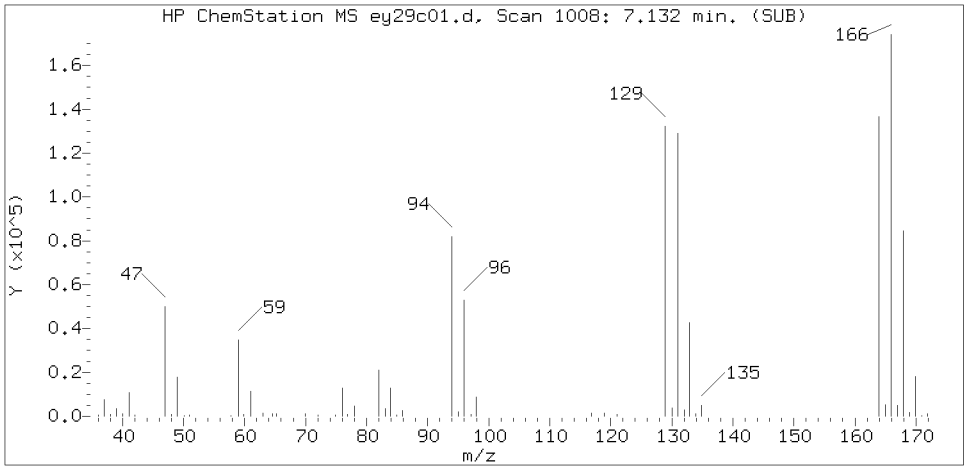
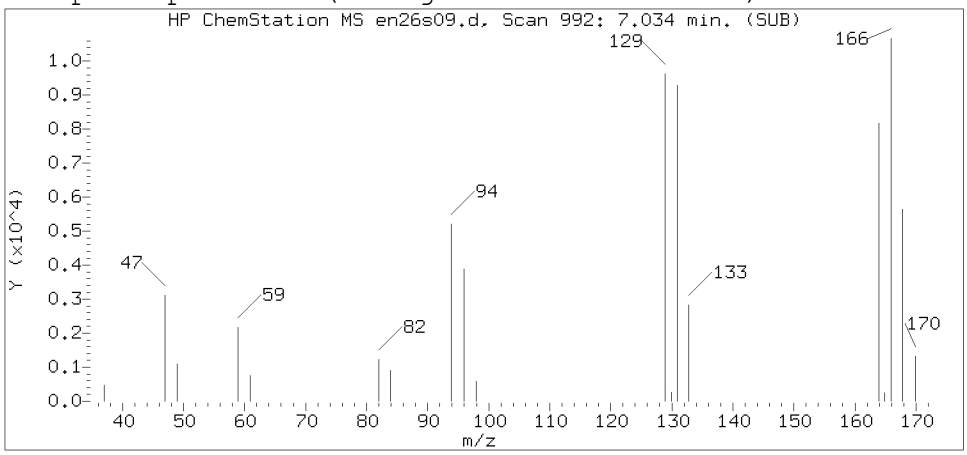
Target 3.5 esignature user ID: jml01693

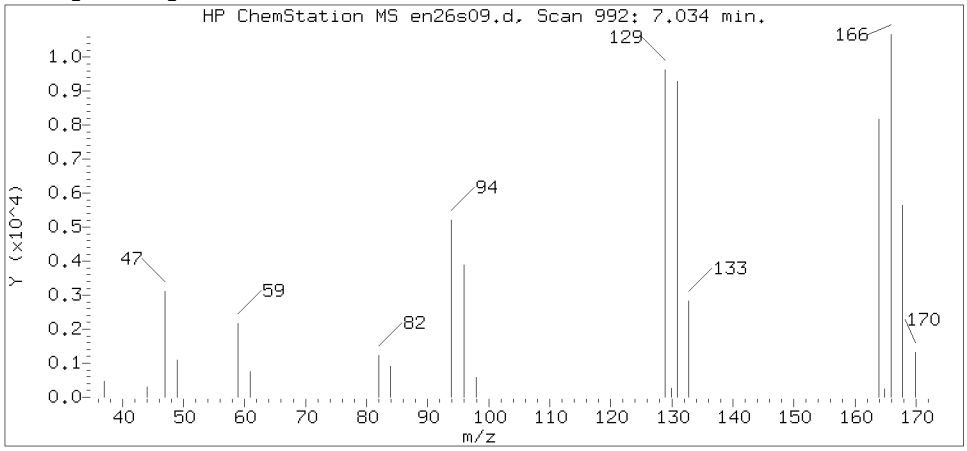
Reference Standard Spectrum for Tetrachloroethene

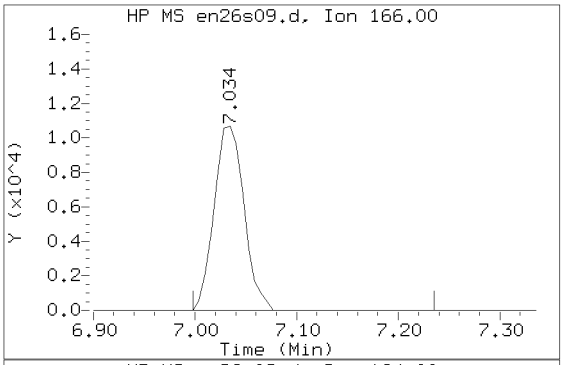


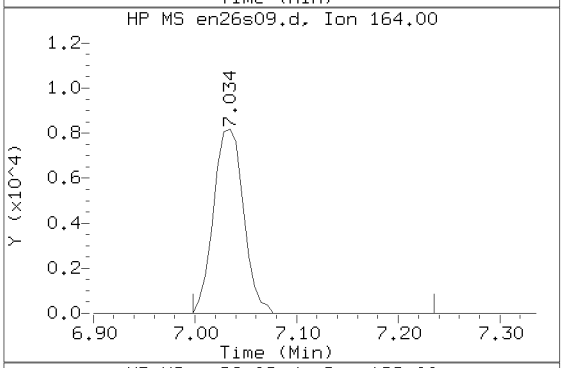
Sample Spectrum (Background Subtracted)

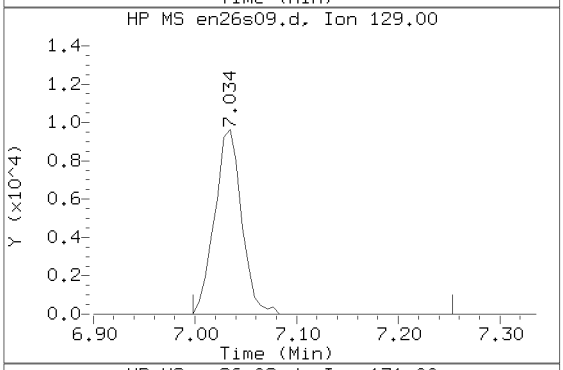


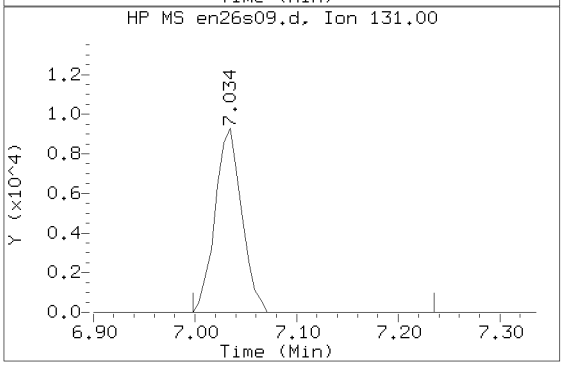
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19nov26a.b/en26s09.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 14:44 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 15:01 Automation

Sample Name: WIN05 Lab Sample ID: 1206733

Compound Number : 94
Compound Name : Tetrachloroethene
Scan Number : 992
Retention Time (minutes): 7.034
Relative Retention Time : 0.00000
Quant Ion : 166.00
Area (flag) : 21859
On-Column Amount (ng) : 4.3822

Digitally signed by Jason M. Long on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WIN05DL

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1206733

Sample wt/vol: 0.50 (g/mL) mL Lab File ID: HP09355.i/19nov27b.b/yn27s42.d

Level: (low/med) LOW Date Received: 11/20/19

Moisture: not dec. _____ Date Analyzed: 11/28/19

Column: (pack/cap) CAP Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	10	U
75-35-4	1,1-Dichloroethene	7	J D
67-64-1	Acetone	200	U
76-13-1	Freon 113	100	U
75-15-0	Carbon Disulfide	50	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	100	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	100	D
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	530	D
123-91-1	1,4-Dioxane	2500	U
108-88-3	Toluene	10	U
127-18-4	Tetrachloroethene	3	J D
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (Total)	60	U
95-50-1	1,2-Dichlorobenzene	50	U
91-20-3	Naphthalene	50	U

FORM I VOA

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WIN05DL

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1206733DL

Data file: /chem2/HP09355.i/19nov27b.b/yn27s42.d Injection date and time: **28-NOV-2019 01:06**
Data file Sample Info. Line: WIN05DL;1206733DL;1;0;;JCW26;;;yn27b31; Instrument ID: **HP09355.i** Batch: **Y193312AA**
Date, time and analyst ID of latest file update: 28-Nov-2019 01:23 Automation

Blank Data file reference: **/chem2/HP09355.i/19nov27b.b/yn27b31.d**

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 27-NOV-2019 21:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19nov27b.b/yn27c05.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 0.5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.362	(-0.006)	457	65	297889	(-8)	250.00	
66) Fluorobenzene	7.872	(0.000)	1034	96	998567	(-3)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	721614	(-3)	50.00	
131) 1,4-Dichlorobenzene-d4	13.183	(0.000)	1907	152	371735	(-4)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.971	(0.001)	113	213735	45.615	91%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434	(0.000)	102	59254	48.373	97%		80 - 120
83) Toluene-d8	(3)	9.861	(0.001)	98	963788	49.363	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.301	(0.001)	95	354499	47.522	95%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					2	10
17) 1,1-Dichloroethene	(2)	3.692	(-0.000)	96	2957	0.682	6.82		J	2	10
18) Acetone	(1)				Not Detected					7	200
19) Freon 113	(2)				Not Detected					2	100
23) Carbon Disulfide	(2)				Not Detected					2	50
28) Methylene Chloride	(2)				Not Detected					3	10
32) trans-1,2-Dichloroethene	(2)				Not Detected					2	10
36) 1,1-Dichloroethane	(2)				Not Detected					2	10
42) cis-1,2-Dichloroethene	(2)				Not Detected					2	10
44) 2-Butanone	(2)				Not Detected					3	100
51) Chloroform	(2)				Not Detected					2	10
53) 1,1,1-Trichloroethane	(2)	6.990	(0.000)	97	76648	10.006	100.06			3	10
60) Benzene	(2)				Not Detected					2	10
61) 1,2-Dichloroethane	(2)				Not Detected					3	10
71) Trichloroethene	(2)	8.352	(0.000)	95	295601	52.857	528.57			2	10
75) 1,4-Dioxane	(1)				Not Detected					290	2500
88) Toluene	(3)				Not Detected					2	10
93) Tetrachloroethene	(3)	10.488	(-0.000)	166	1955	0.346	3.46		J	2	10
104) Ethylbenzene	(3)				Not Detected					4	10
106) m+p-Xylene	(3)				Not Detected					10	50
107) o-Xylene	(3)				Not Detected					4	10
108) Xylene (Total)	(3)				Not Detected					14	60
138) 1,2-Dichlorobenzene	(4)				Not Detected					2	50
148) Naphthalene	(4)				Not Detected					10	50

Digitally signed by Linda C. Pape on 11/30/2019 at 13:12. Target 3.5 esignature user ID: lcp00895

Data file: /chem2/HP09355.i/19nov27b.b/yn27s42.d Injection date and time: **28-NOV-2019 01:06**
Data file Sample Info. Line: WIN05DL;1206733DL;1;0;;JCW26;;;yn27b31; Instrument ID: **HP09355.i** Batch: **Y193312AA**
Date, time and analyst ID of latest file update: 28-Nov-2019 01:23 Automation

Blank Data file reference: **/chem2/HP09355.i/19nov27b.b/yn27b31.d**

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 27-NOV-2019 21:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19nov27b.b/yn27c05.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 0.5 ml

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WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

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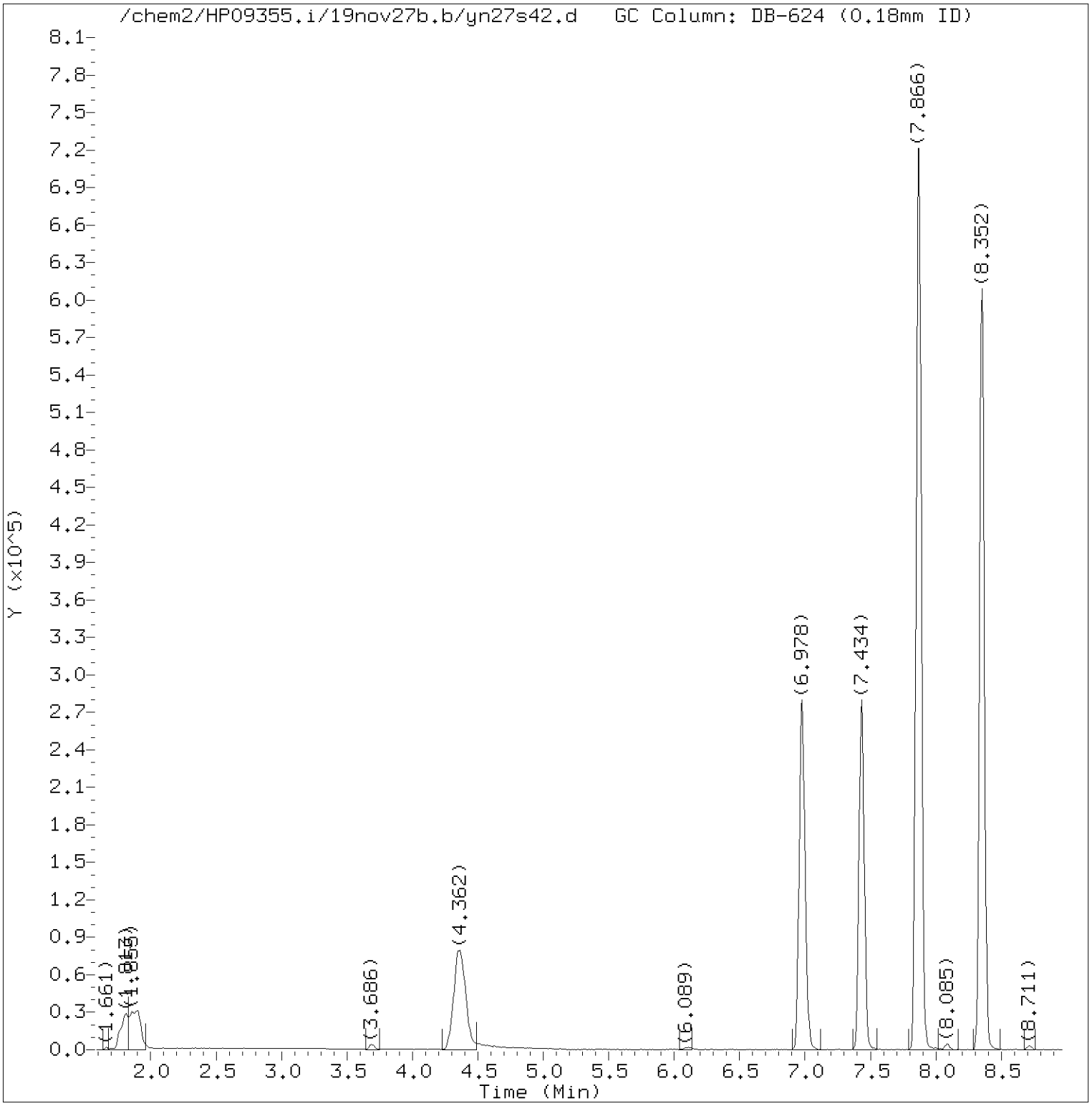
Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

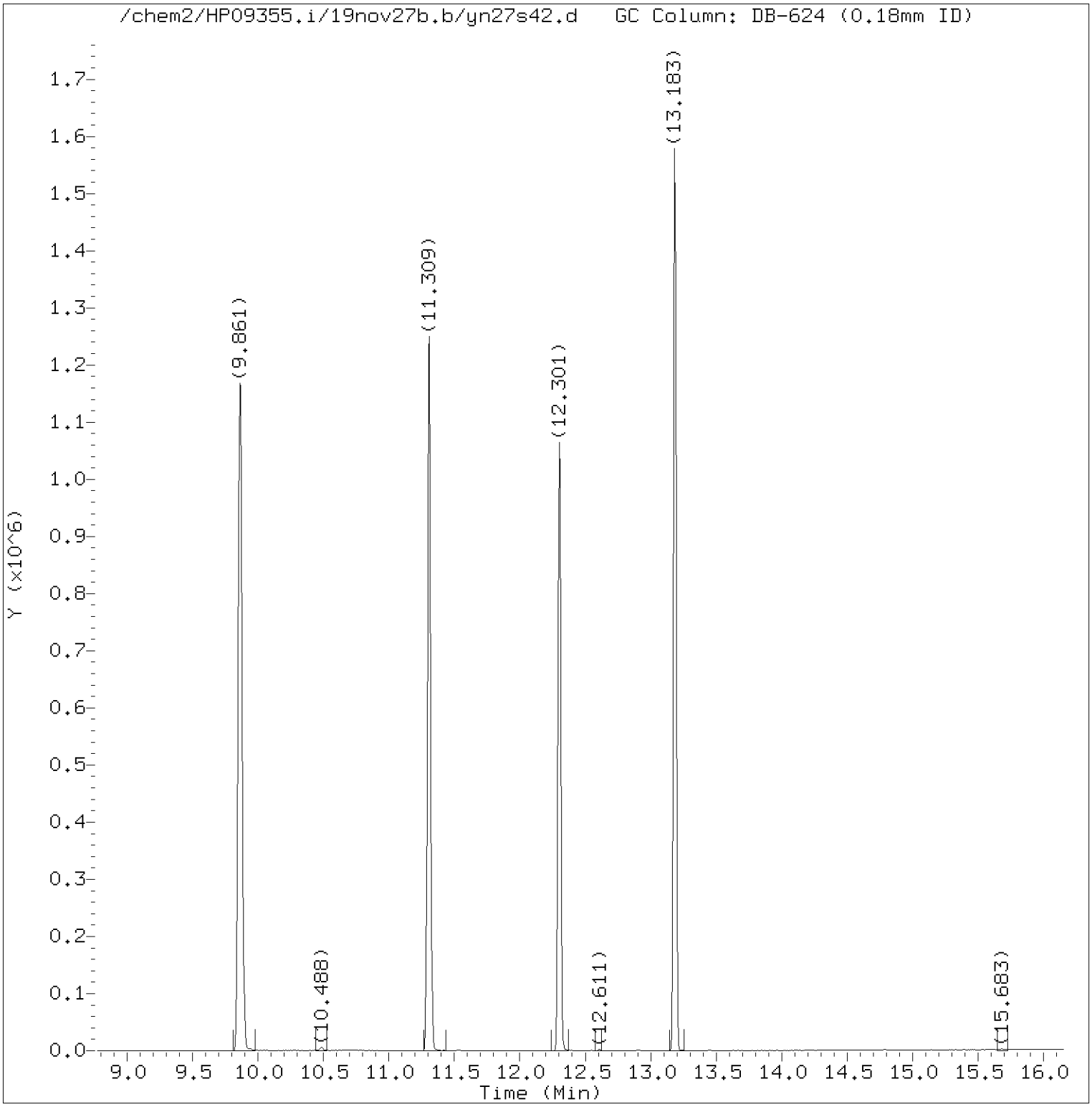
Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27s42.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 01:06 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 01:23 Automation

Sample Name: WIN05DL Lab Sample ID: 1206733DL

Digitally signed by Linda C. Pape
on 11/30/2019 at 13:12.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27s42.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 01:06 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 01:23 Automation

Sample Name: WIN05DL Lab Sample ID: 1206733DL

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on 11/30/2019 at 13:12.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27s42.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 01:06 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 01:23 Automation

Sample Name: WIN05DL Lab Sample ID: 1206733DL

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	3.692	96	2957	0.682
29)*t-Butyl alcohol-d10	(1)	4.362	65	297889	250.000
52)$Dibromofluoromethane	(2)	6.971	113	213735	45.615
53) 1,1,1-Trichloroethane	(2)	6.990	97	76648	10.006
57)$1,2-Dichloroethane-d4	(2)	7.434	102	59254	48.373
66)*Fluorobenzene	(2)	7.872	96	998567	50.000
71) Trichloroethene	(2)	8.352	95	295601	52.857
83)$Toluene-d8	(3)	9.861	98	963788	49.363
93) Tetrachloroethene	(3)	10.488	166	1955	0.346
100)*Chlorobenzene-d5	(3)	11.309	117	721614	50.000
114)$4-Bromofluorobenzene	(3)	12.301	95	354499	47.522
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	371735	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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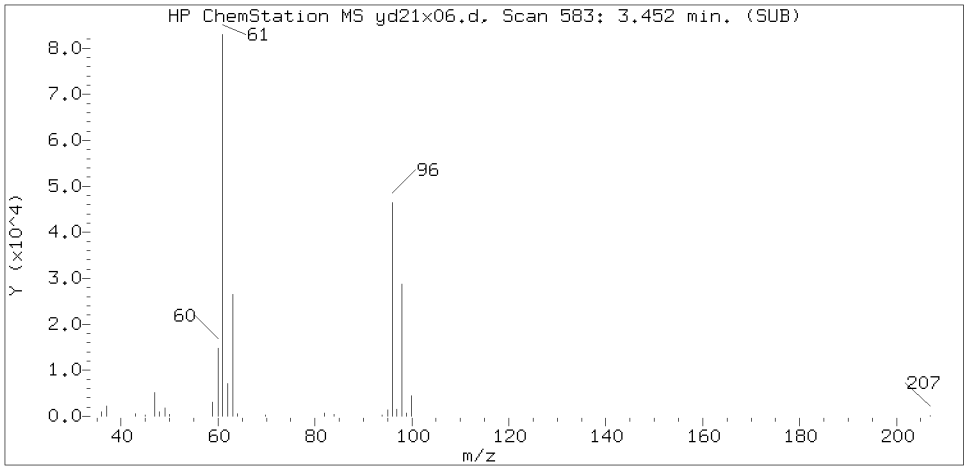
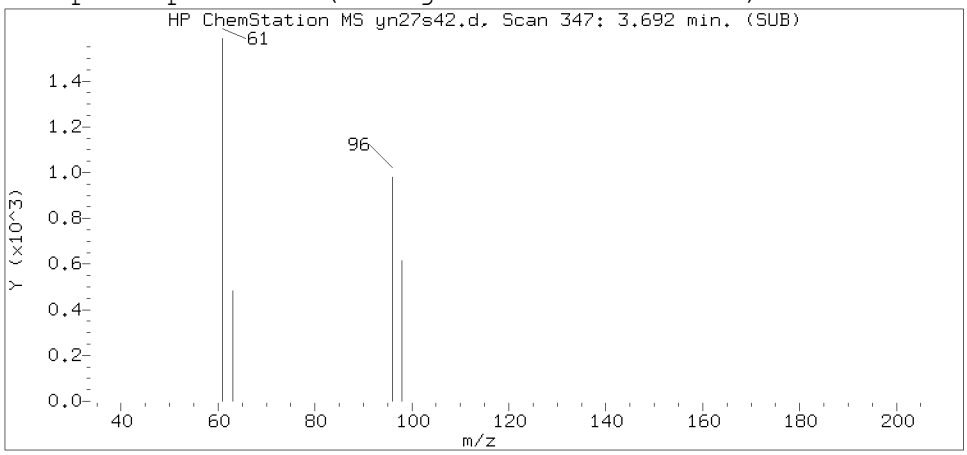
on 11/30/2019 at 13:12.
Target 3.5 esignature user ID: lcp00895

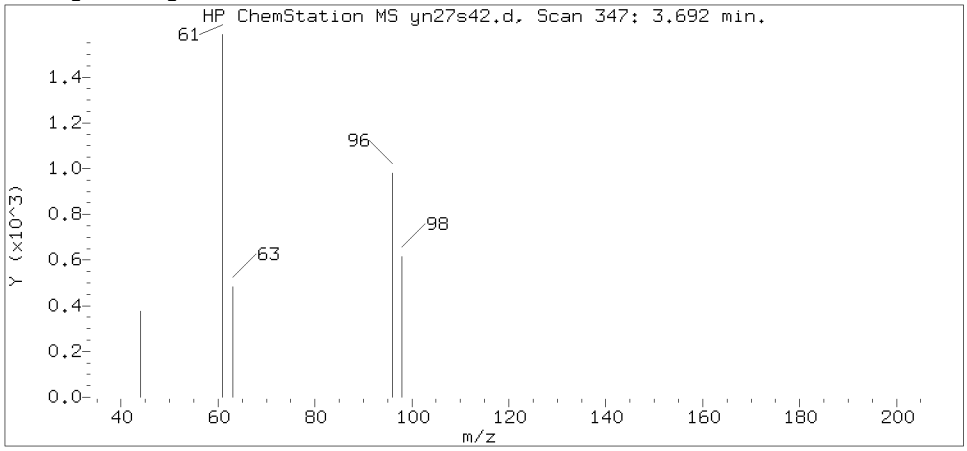
Reference Standard Spectrum for 1,1-Dichloroethene

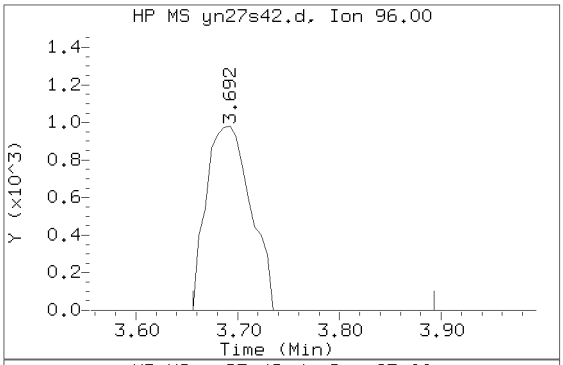


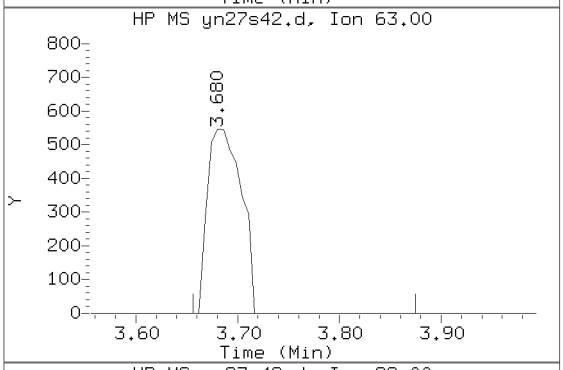
Sample Spectrum (Background Subtracted)

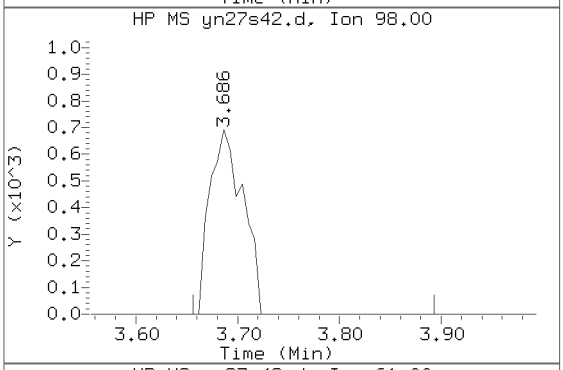


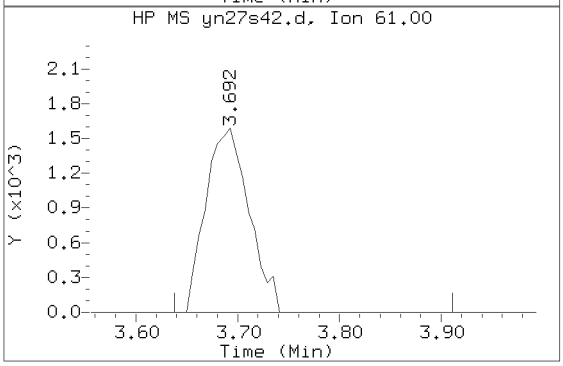
Sample Spectrum (Unaltered)











Data File: /chem2/HP09355.i/19nov27b.b/yn27s42.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 01:06 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 01:23 Automation

Sample Name: WIN05DL Lab Sample ID: 1206733DL

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 347
Retention Time (minutes): 3.692
Relative Retention Time :-0.00001
Quant Ion : 96.00
Area (flag) : 2957
On-Column Amount (ng) : 0.6823

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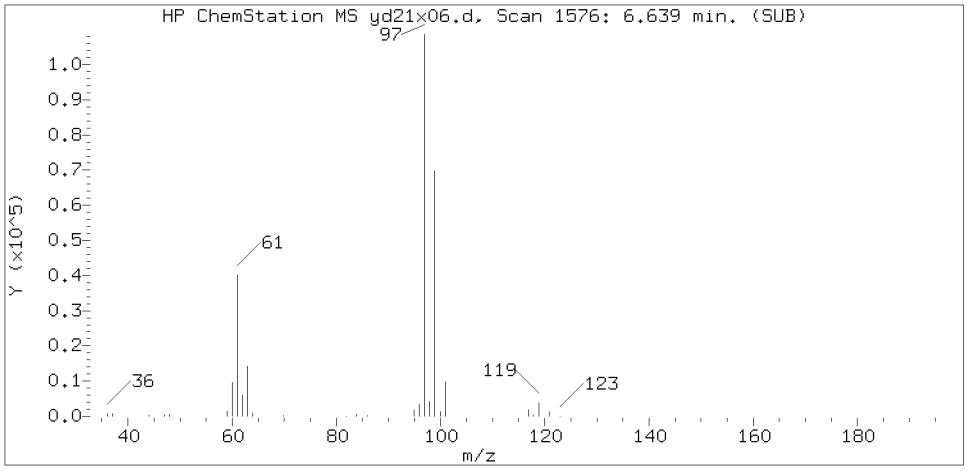
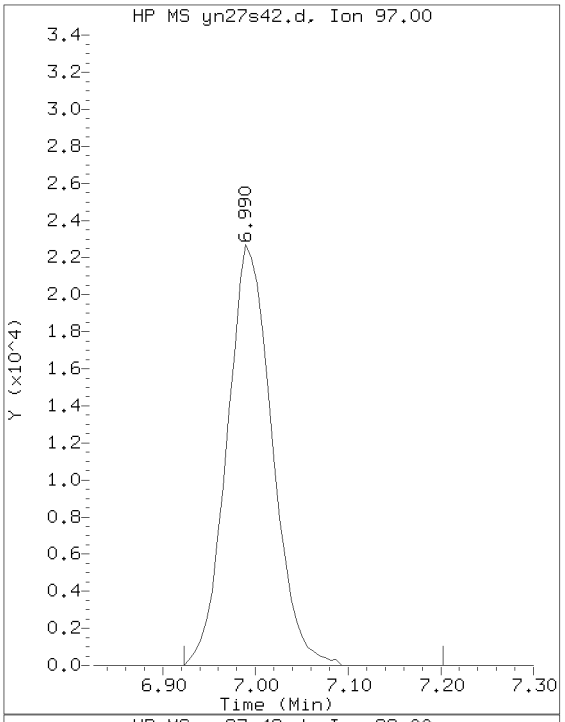
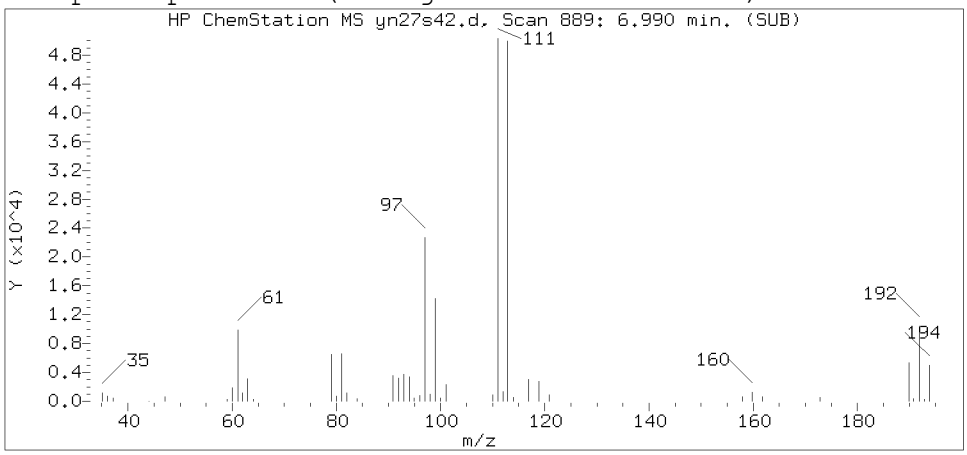
Target 3.5 esignature user ID: lcp00895

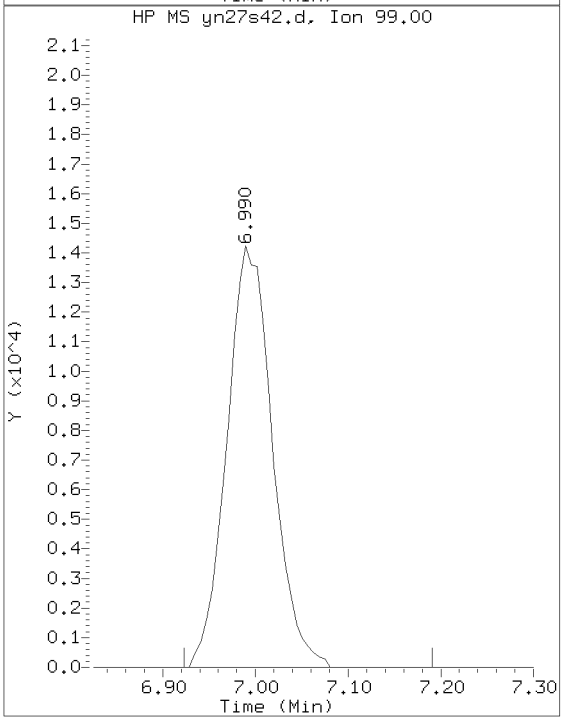
Reference Standard Spectrum for 1,1,1-Trichloroethane



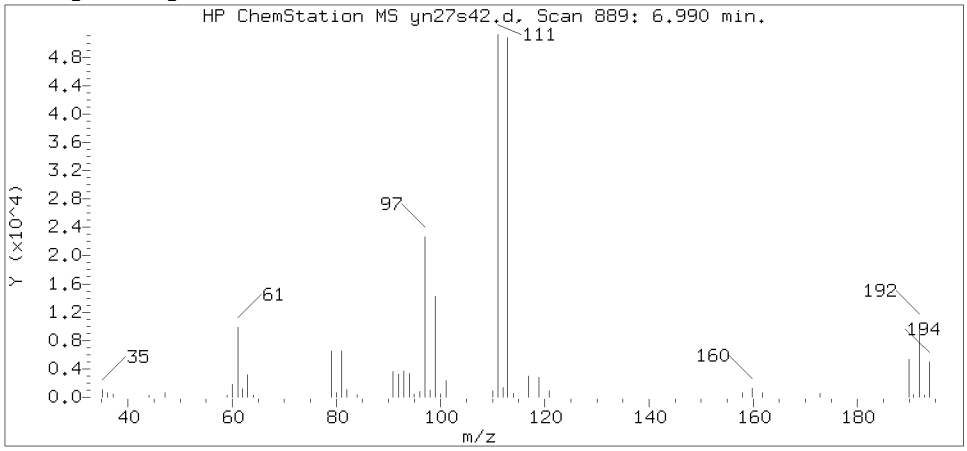


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09355.i/19nov27b.b/yn27s42.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 01:06 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 01:23 Automation

Sample Name: WIN05DL Lab Sample ID: 1206733DL

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 889
Retention Time (minutes)	: 6.990
Relative Retention Time	: 0.00077
Quant Ion	: 97.00
Area (flag)	: 76648
On-Column Amount (ng)	: 10.0057

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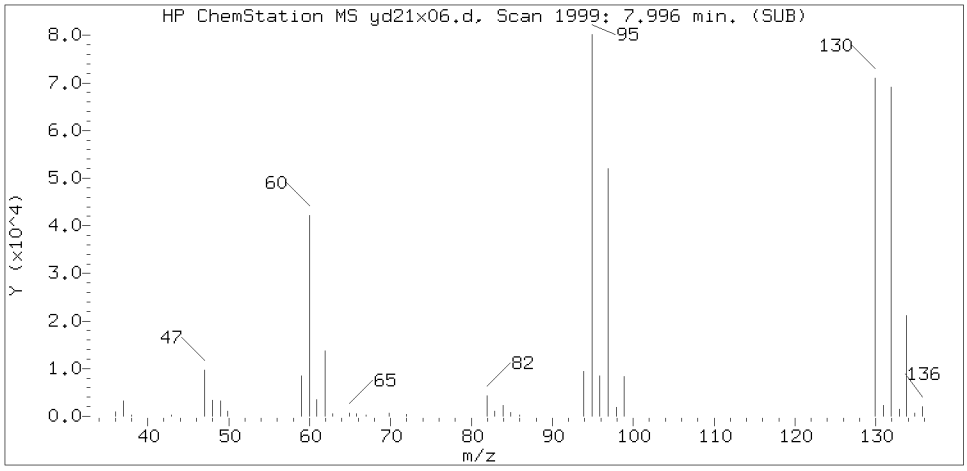
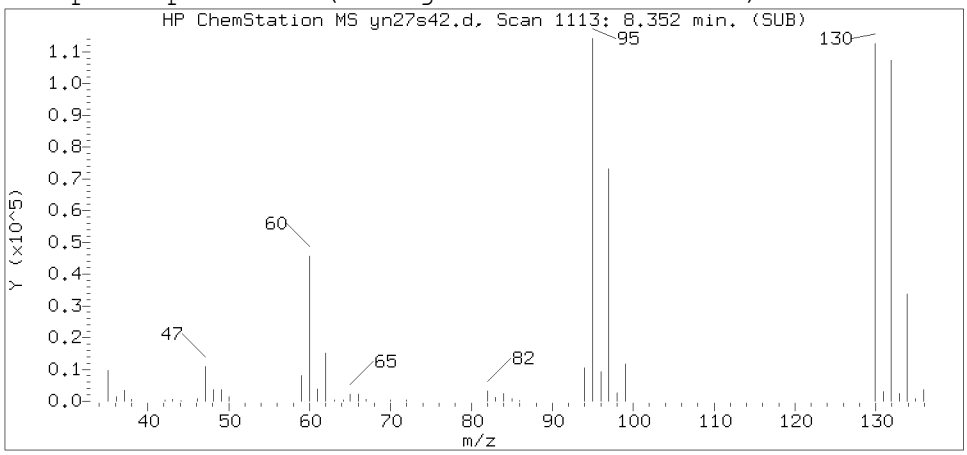
Target 3.5 esignature user ID: lcp00895

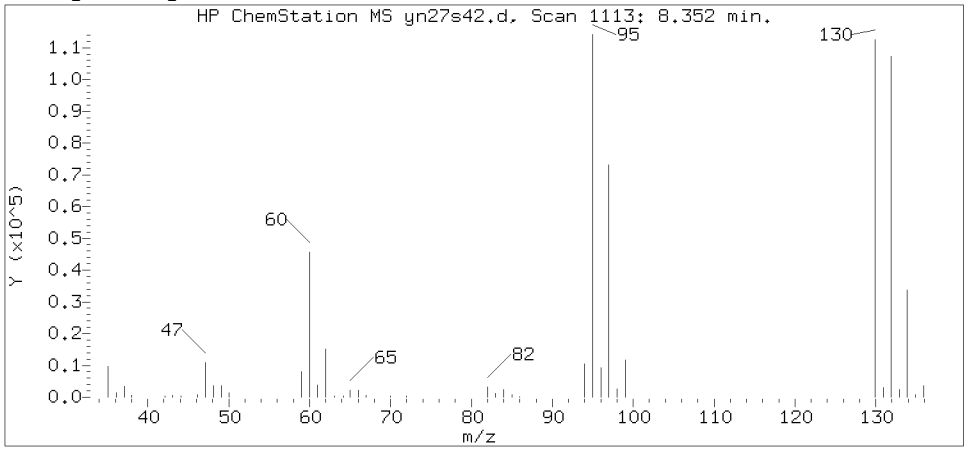
Reference Standard Spectrum for Trichloroethene

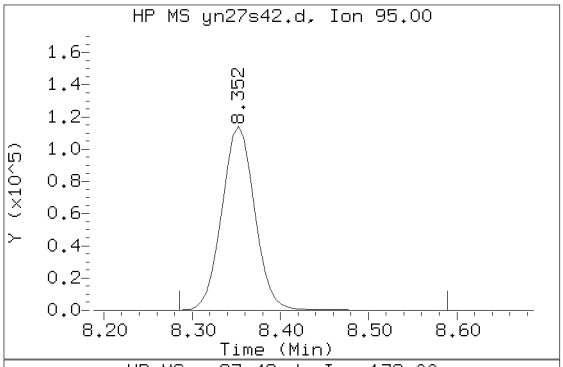


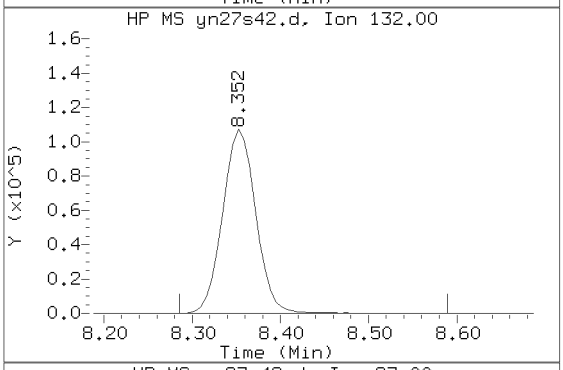
Sample Spectrum (Background Subtracted)

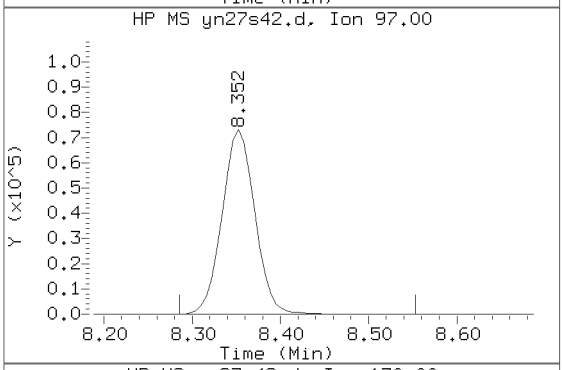


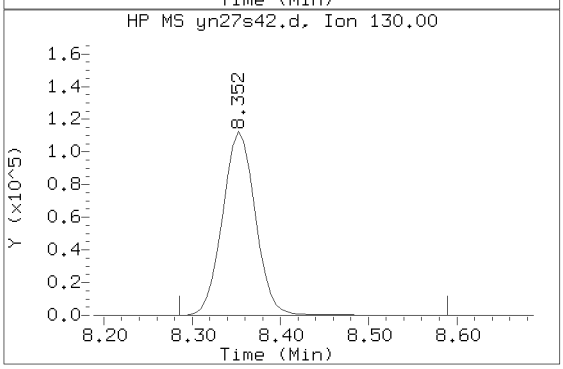
Sample Spectrum (Unaltered)











Data File: /chem2/HP09355.i/19nov27b.b/yn27s42.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 01:06 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 01:23 Automation

Sample Name: WIN05DL Lab Sample ID: 1206733DL

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 1113
Retention Time (minutes): 8.352
Relative Retention Time : 0.00078
Quant Ion : 95.00
Area (flag) : 295601
On-Column Amount (ng) : 52.8568

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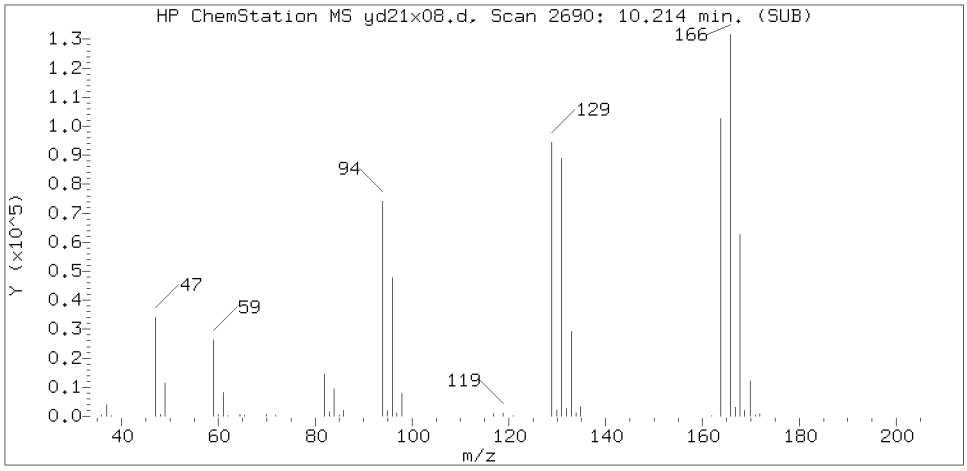
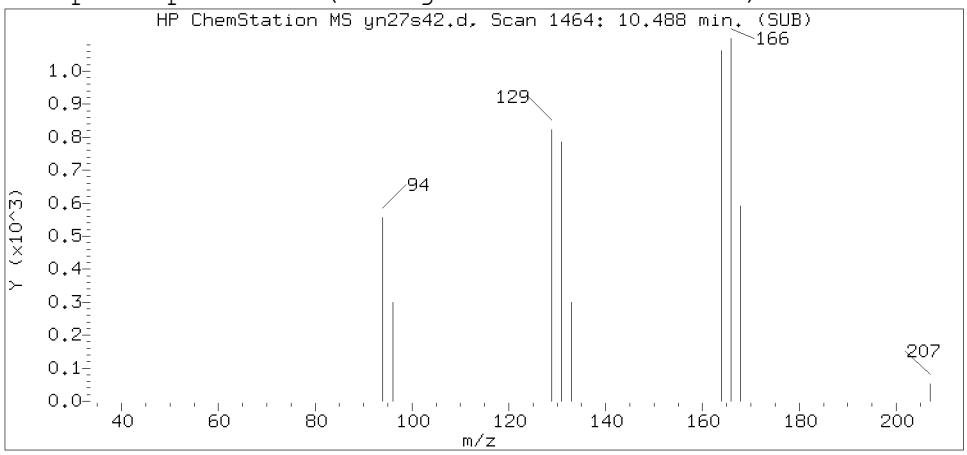
Target 3.5 esignature user ID: lcp00895

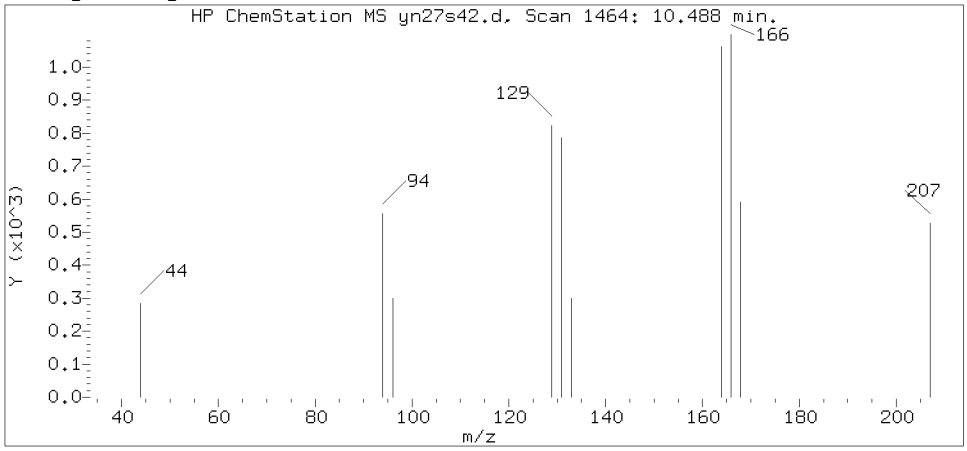
Reference Standard Spectrum for Tetrachloroethene

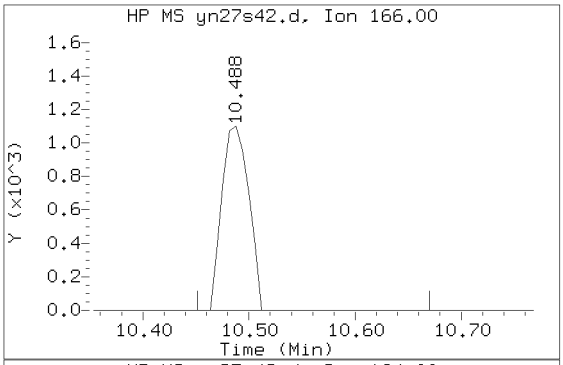


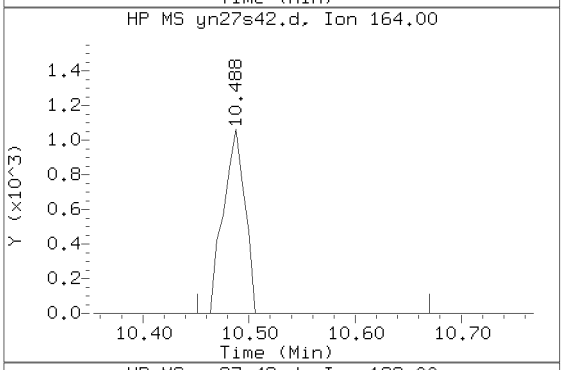
Sample Spectrum (Background Subtracted)

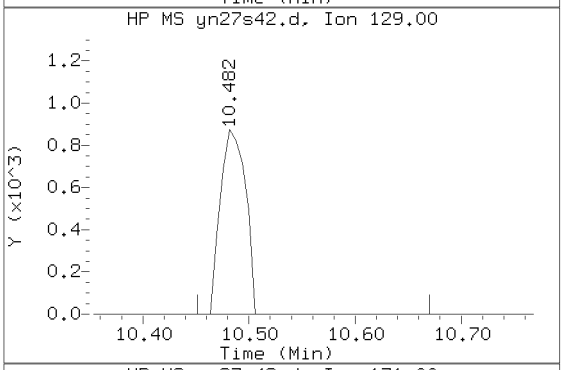


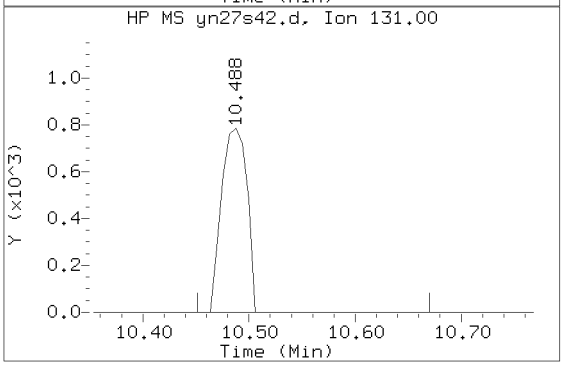
Sample Spectrum (Unaltered)











Data File: /chem2/HP09355.i/19nov27b.b/yn27s42.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 01:06 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 01:23 Automation

Sample Name: WIN05DL Lab Sample ID: 1206733DL

Compound Number : 93
Compound Name : Tetrachloroethene
Scan Number : 1464
Retention Time (minutes): 10.488
Relative Retention Time :-0.00000
Quant Ion : 166.00
Area (flag) : 1955
On-Column Amount (ng) : 0.3458

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Target 3.5 esignature user ID: lcp00895

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
WIN06

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1206734

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09355.i/19nov27b.b/yn27s35.d

Level: (low/med) LOW Date Received: 11/20/19

Moisture: not dec. _____ Date Analyzed: 11/27/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

^

WIN06 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1206734

Data file: /chem2/HP09355.i/19nov27b.b/yn27s35.d Injection date and time: **27-NOV-2019 22:32**
Data file Sample Info. Line: WIN06;1206734;1;0;;JCW26;;;yn27b31; Instrument ID: **HP09355.i** Batch: **Y193312AA**
Date, time and analyst ID of latest file update: 27-Nov-2019 22:50 Automation

Blank Data file reference: **/chem2/HP09355.i/19nov27b.b/yn27b31.d**

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 27-NOV-2019 21:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19nov27b.b/yn27c05.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.355	(0.000)	456	65	281050	(-13)	250.00	
66) Fluorobenzene	7.872	(0.000)	1034	96	995284	(-3)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	719499	(-4)	50.00	
131) 1,4-Dichlorobenzene-d4	13.183	(0.000)	1907	152	369417	(-4)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.971	(0.001)	113	214400	45.908	92%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434	(0.000)	102	59253	48.531	97%		80 - 120
83) Toluene-d8	(3)	9.867	(0.000)	98	958721	49.248	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.301	(0.001)	95	350068	47.066	94%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Linda C. Pape on 11/30/2019 at 13:02. Target 3.5 esignature user ID: lcp00895

Data file: /chem2/HP09355.i/19nov27b.b/yn27s35.d Injection date and time: **27-NOV-2019 22:32**
Data file Sample Info. Line: WIN06;1206734;1;0;;JCW26;;;yn27b31; Instrument ID: **HP09355.i** Batch: **Y193312AA**
Date, time and analyst ID of latest file update: 27-Nov-2019 22:50 Automation

Blank Data file reference: **/chem2/HP09355.i/19nov27b.b/yn27b31.d**

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 27-NOV-2019 21:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19nov27b.b/yn27c05.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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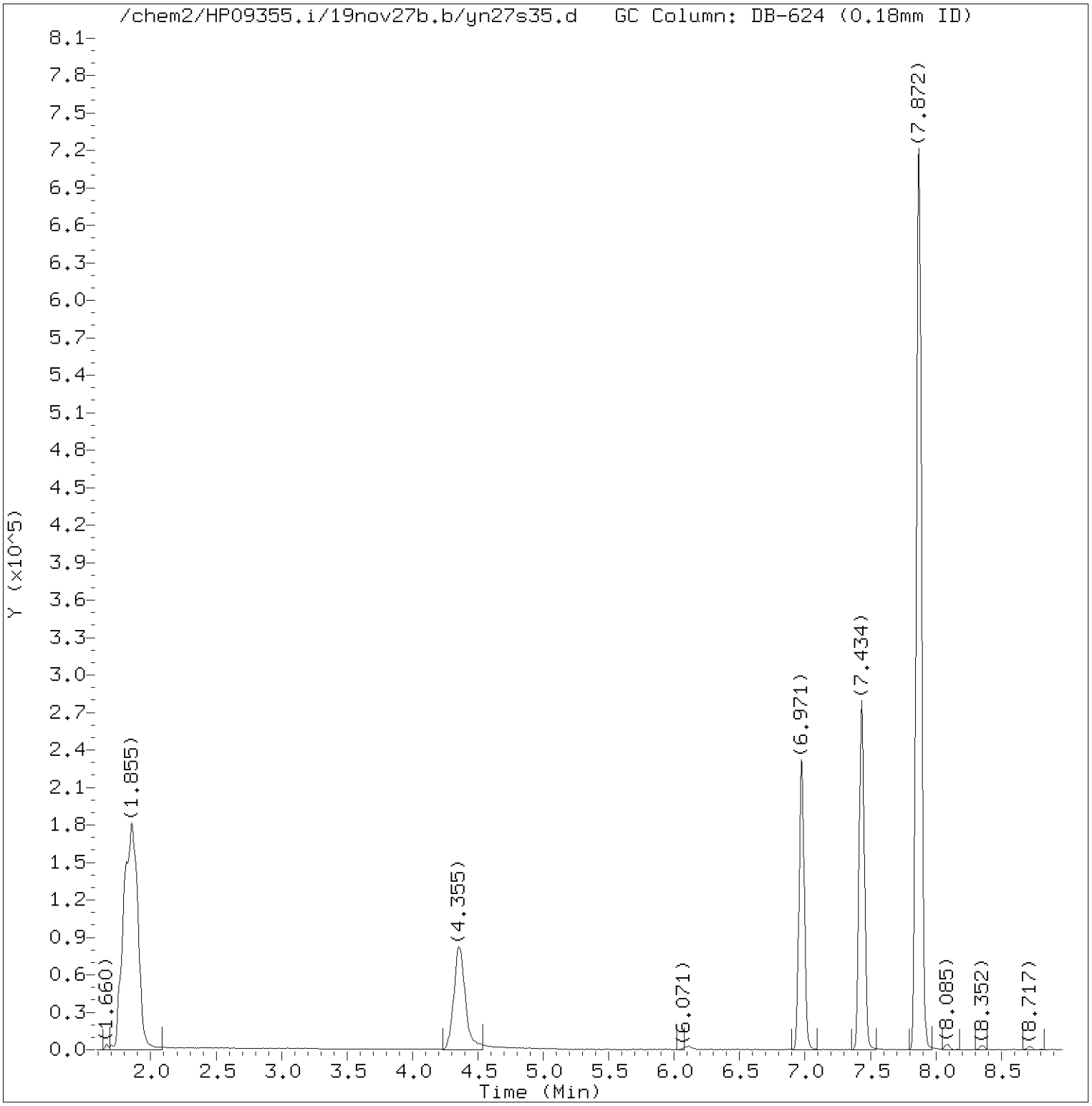
Total number of targets = 24

Digitally signed by Linda C. Pape on 11/30/2019 at 13:02. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

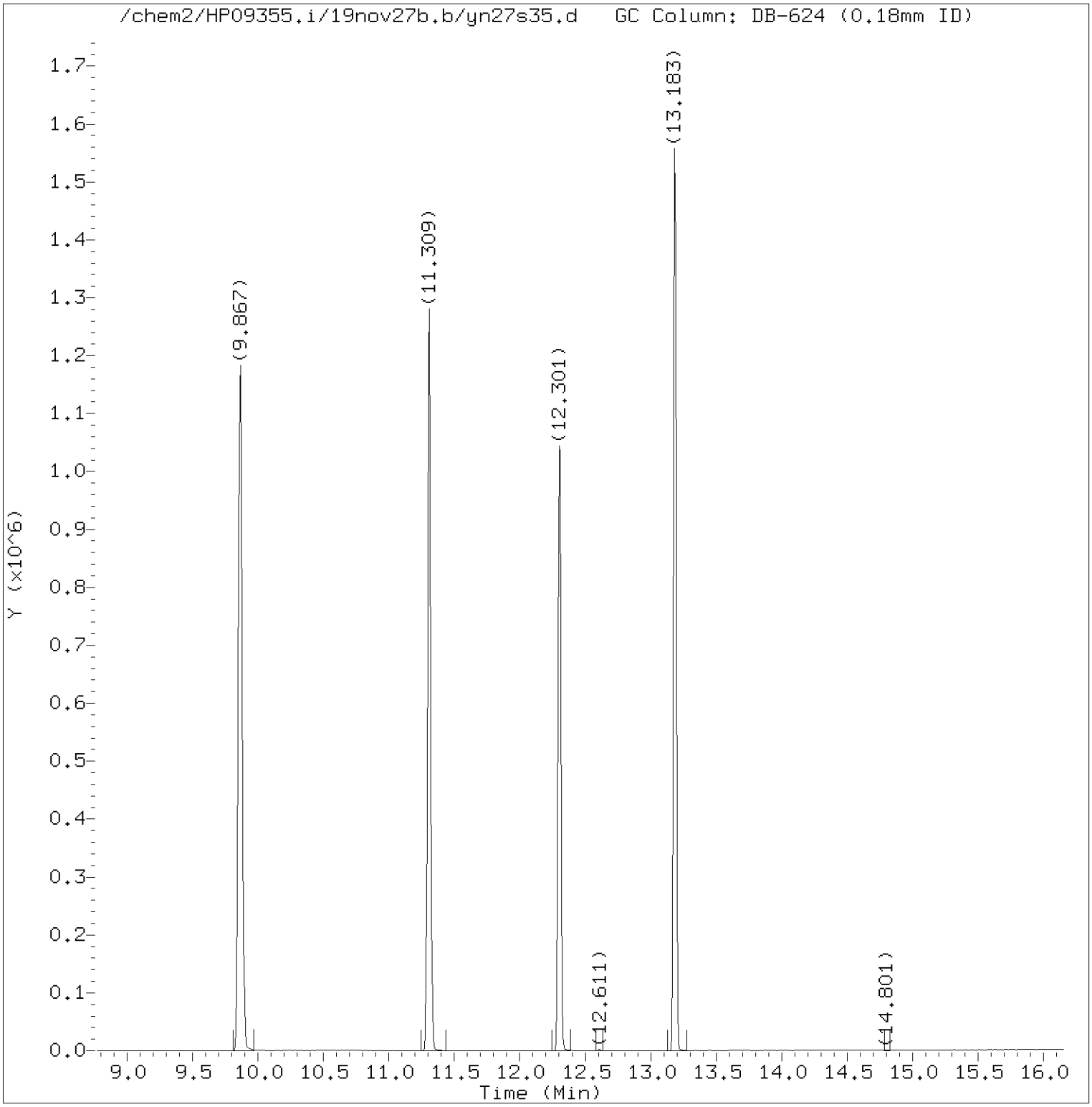
Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27s35.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 22:32 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 27-Nov-2019 22:50 Automation

Sample Name: WIN06 Lab Sample ID: 1206734

Digitally signed by Linda C. Pape
on 11/30/2019 at 13:02.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27s35.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 22:32 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 27-Nov-2019 22:50 Automation

Sample Name: WIN06 Lab Sample ID: 1206734

Digitally signed by Linda C. Pape
on 11/30/2019 at 13:02.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27s35.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 22:32 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 27-Nov-2019 22:50 Automation

Sample Name: WIN06 Lab Sample ID: 1206734

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.355	65	281050	250.000
52)$Dibromofluoromethane	(2)	6.971	113	214400	45.908
57)$1,2-Dichloroethane-d4	(2)	7.434	102	59253	48.531
66)*Fluorobenzene	(2)	7.872	96	995284	50.000
83)$Toluene-d8	(3)	9.867	98	958721	49.248
100)*Chlorobenzene-d5	(3)	11.309	117	719499	50.000
114)$4-Bromofluorobenzene	(3)	12.301	95	350068	47.066
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	369417	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/30/2019 at 13:02.
Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WIN07

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1206735

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19nov26a.b/en26s11.d

Level: (low/med) LOW Date Received: 11/20/19

Moisture: not dec. _____ Date Analyzed: 11/26/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

WIN07 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1206735

Data file: /chem/HP15648.i/19nov26a.b/en26s11.d Injection date and time: **26-NOV-2019 15:25**
Data file Sample Info. Line: WIN07;1206735;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 15:42 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.468	(0.012)	243	65	198544	(5)	250.00	
66) Fluorobenzene	4.718	(0.006)	612	96	1080587	(7)	50.00	
101) Chlorobenzene-d5	7.870	(0.000)	1129	117	749910	(6)	50.00	
132) 1,4-Dichlorobenzene-d4	9.784	(-0.006)	1443	152	365527	(7)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.059	(0.000)	113	228439	49.698	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.383	(0.000)	102	61809	50.450	101%		80 - 120
84) Toluene-d8	(3)	6.364	(0.000)	98	1052299	49.427	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.894	(0.000)	95	393167	49.005	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	6
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Jason M. Long on 11/27/2019 at 14:38. Target 3.5 esignature user ID: jml01693

WIN07 Lancaster Laboratories 1206735
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19nov26a.b/en26s11.d Injection date and time: **26-NOV-2019 15:25**
Data file Sample Info. Line: WIN07;1206735;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 15:42 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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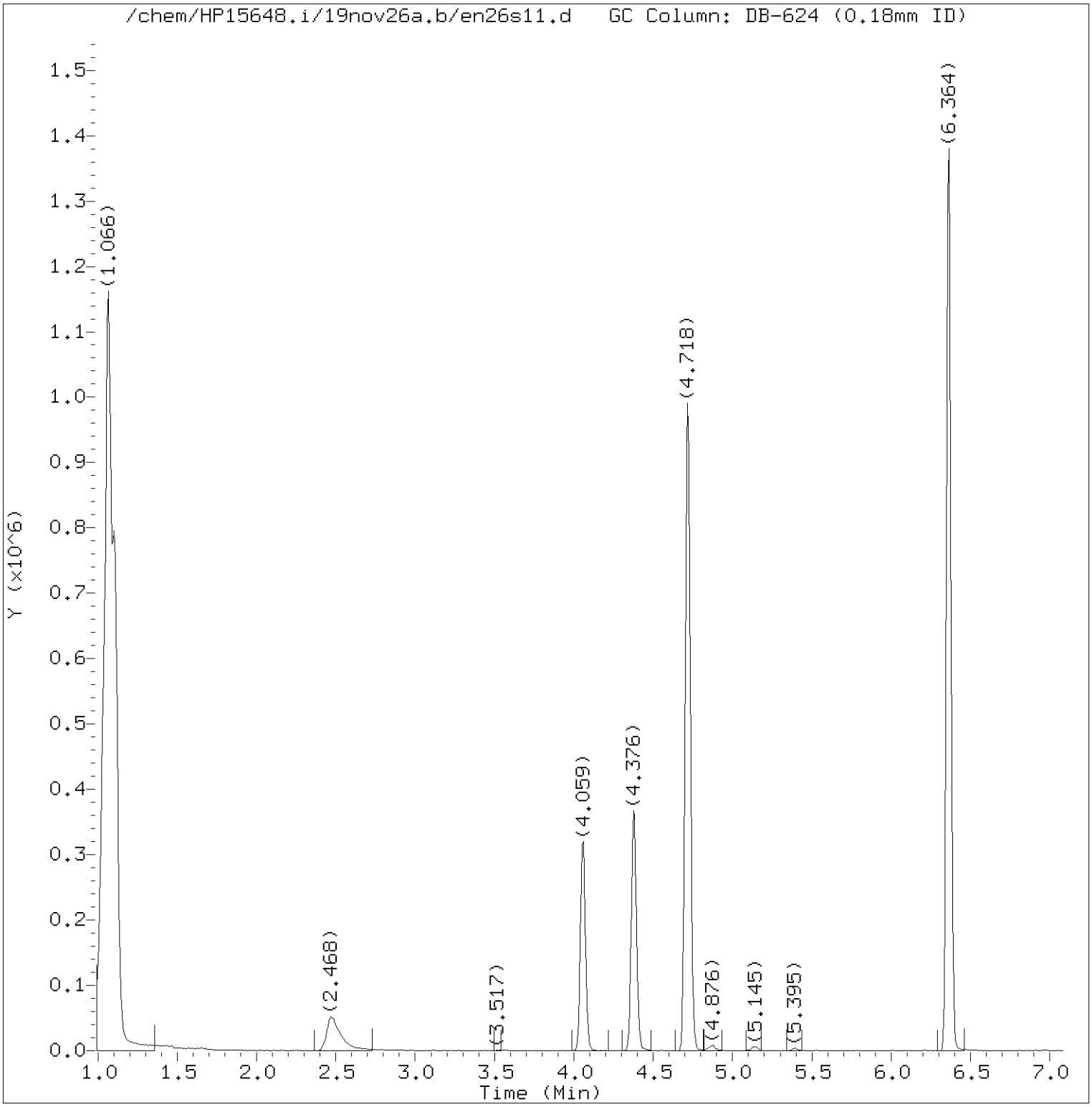
Total number of targets = 24

Digitally signed by Jason M. Long on 11/27/2019 at 14:38. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 12:19. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

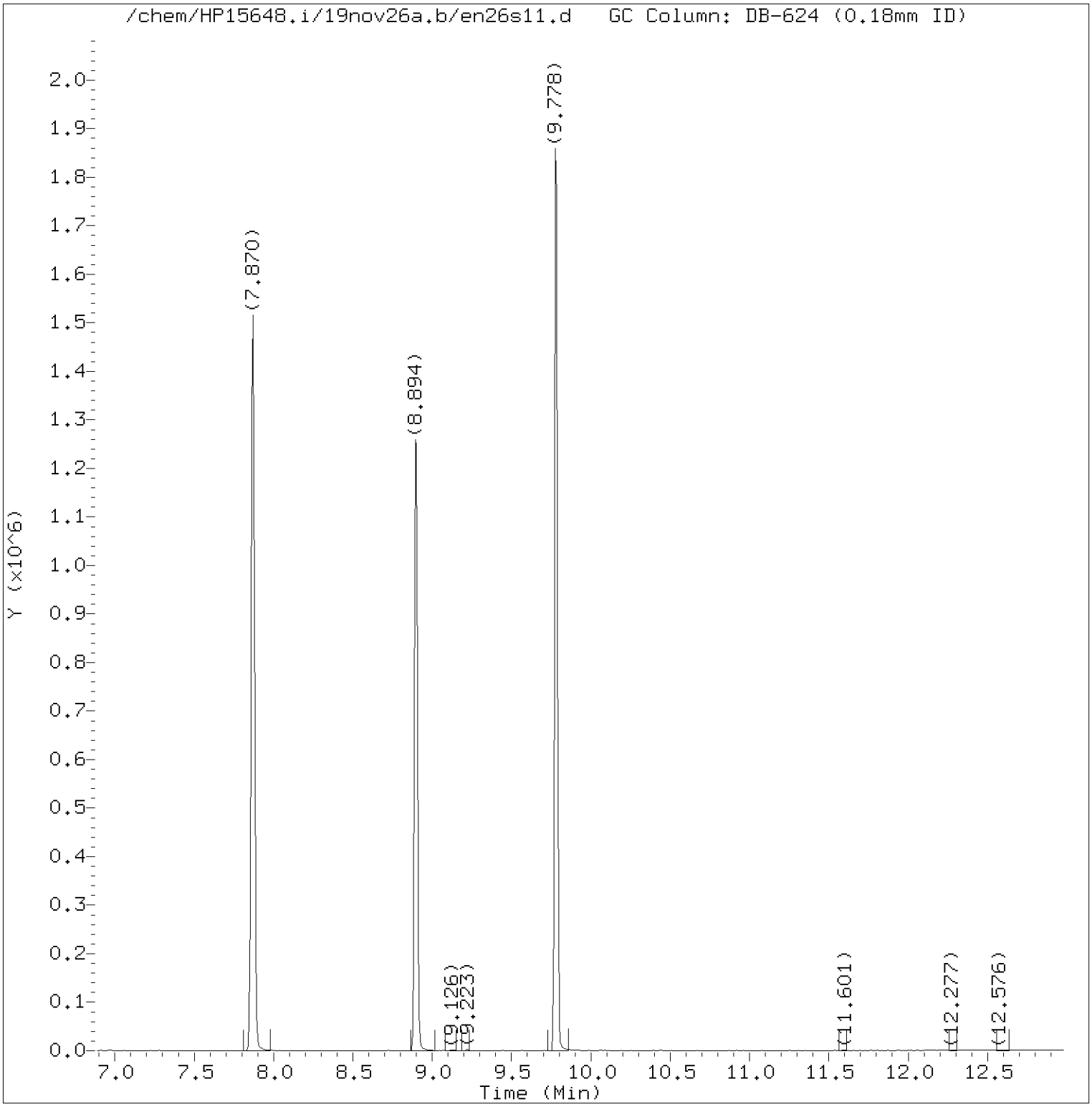
Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s11.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 15:25 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 15:42 Automation

Sample Name: WIN07 Lab Sample ID: 1206735

Digitally signed by Jason M. Long
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s11.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 15:25 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 15:42 Automation

Sample Name: WIN07 Lab Sample ID: 1206735

Digitally signed by Jason M. Long
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s11.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 15:25 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 15:42 Automation

Sample Name: WIN07 Lab Sample ID: 1206735

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.468	65	198544	250.000
52)$Dibromofluoromethane	(2)	4.059	113	228439	49.698
57)$1,2-Dichloroethane-d4	(2)	4.383	102	61809	50.450
66)*Fluorobenzene	(2)	4.718	96	1080587	50.000
84)$Toluene-d8	(3)	6.364	98	1052299	49.427
101)*Chlorobenzene-d5	(3)	7.870	117	749910	50.000
115)$4-Bromofluorobenzene	(3)	8.894	95	393167	49.005
132)*1,4-Dichlorobenzene-d4	(4)	9.784	152	365527	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WIN08

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1206736

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19nov26a.b/en26s12.d

Level: (low/med) LOW Date Received: 11/20/19

Moisture: not dec. _____ Date Analyzed: 11/26/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	2	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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WIN08 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1206736

Data file: /chem/HP15648.i/19nov26a.b/en26s12.d Injection date and time: **26-NOV-2019 15:45**
Data file Sample Info. Line: WIN08;1206736;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 16:03 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.468	(0.012)	243	65	188641	(0)	250.00	
66) Fluorobenzene	4.718	(0.006)	612	96	1063351	(5)	50.00	
101) Chlorobenzene-d5	7.870	(0.000)	1129	117	745896	(6)	50.00	
132) 1,4-Dichlorobenzene-d4	9.784	(-0.006)	1443	152	364961	(6)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.059	(0.000)	113	222888	49.277	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.383	(0.000)	102	60848	50.471	101%		80 - 120
84) Toluene-d8	(3)	6.364	(0.000)	98	1036771	48.959	98%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.900	(-0.001)	95	387075	48.505	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	5.090	(-0.000)	95	10814	2.050	2.05			0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	6
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Jason M. Long on 11/27/2019 at 14:38. Target 3.5 esignature user ID: jml01693

WIN08 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1206736

Data file: /chem/HP15648.i/19nov26a.b/en26s12.d Injection date and time: **26-NOV-2019 15:45**
Data file Sample Info. Line: WIN08;1206736;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 16:03 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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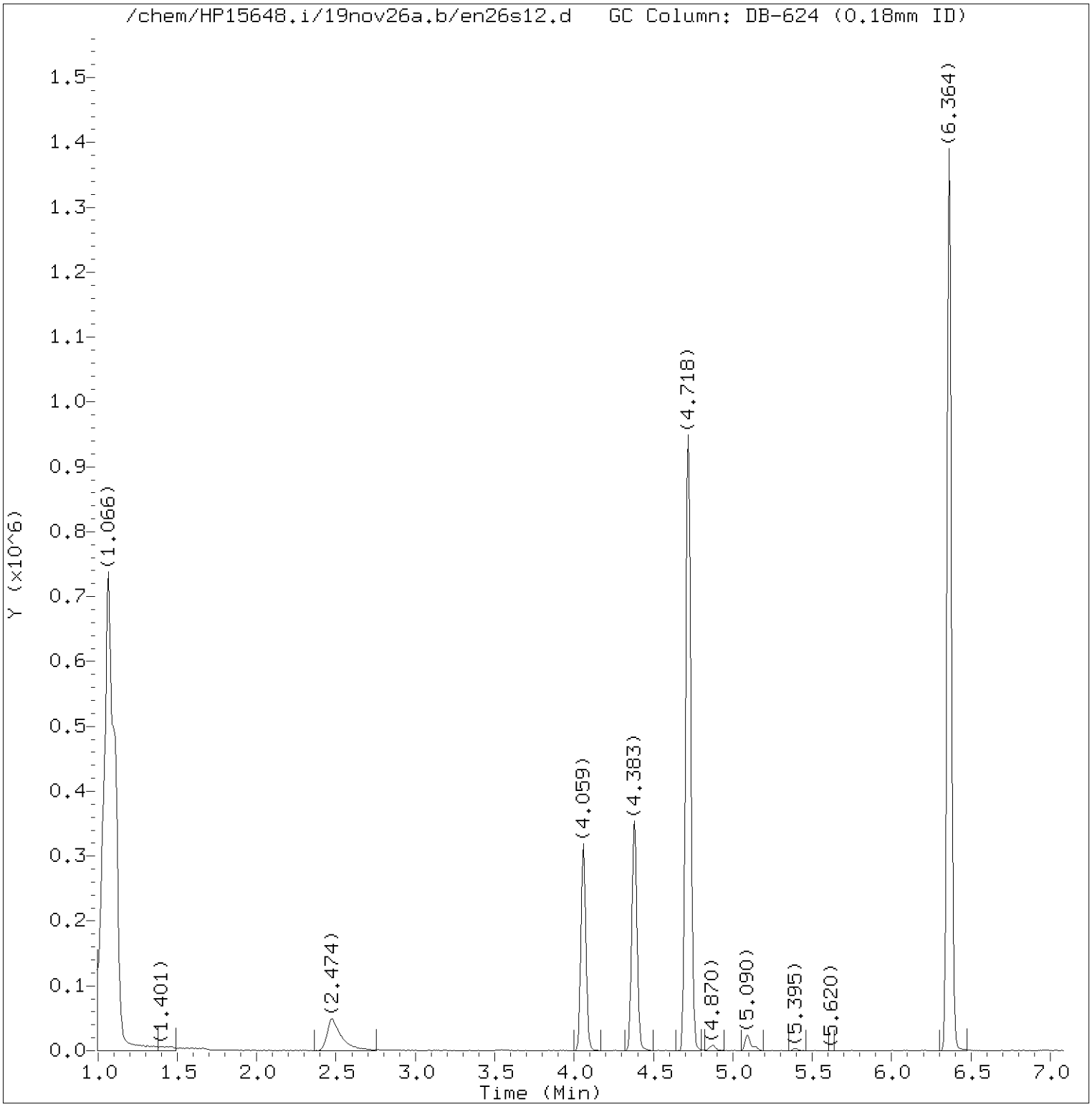
Total number of targets = 24

Digitally signed by Jason M. Long on 11/27/2019 at 14:38. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 12:19. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

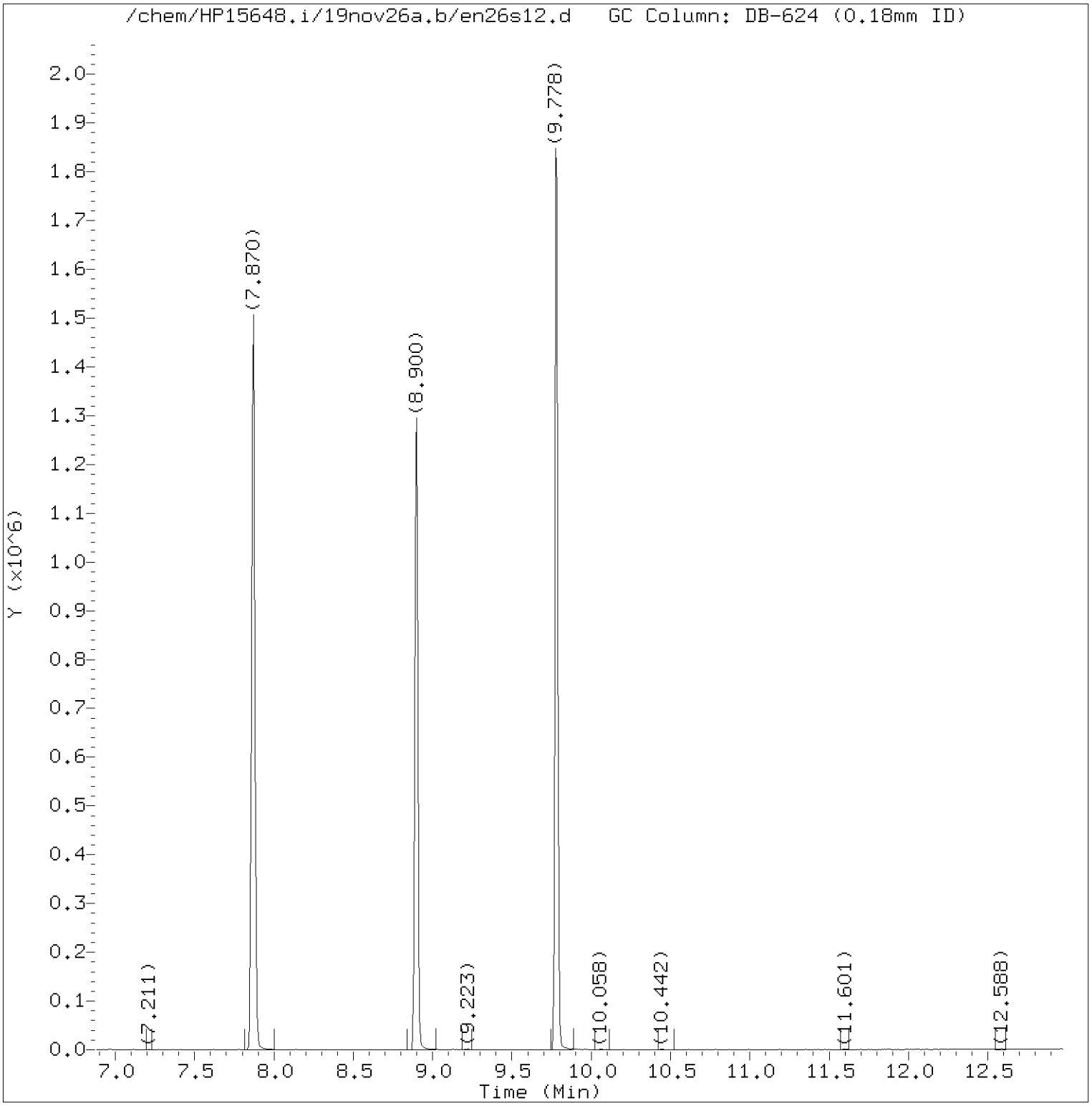
Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s12.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 15:45 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 16:03 Automation

Sample Name: WIN08 Lab Sample ID: 1206736

Digitally signed by Jason M. Long
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s12.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 15:45 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 16:03 Automation

Sample Name: WIN08 Lab Sample ID: 1206736

Digitally signed by Jason M. Long
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s12.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 15:45 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 16:03 Automation

Sample Name: WIN08 Lab Sample ID: 1206736

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.468	65	188641	250.000
52)$Dibromofluoromethane	(2)	4.059	113	222888	49.277
57)$1,2-Dichloroethane-d4	(2)	4.383	102	60848	50.471
66)*Fluorobenzene	(2)	4.718	96	1063351	50.000
71) Trichloroethene	(2)	5.090	95	10814	2.050
84)$Toluene-d8	(3)	6.364	98	1036771	48.959
101)*Chlorobenzene-d5	(3)	7.870	117	745896	50.000
115)$4-Bromofluorobenzene	(3)	8.900	95	387075	48.505
132)*1,4-Dichlorobenzene-d4	(4)	9.784	152	364961	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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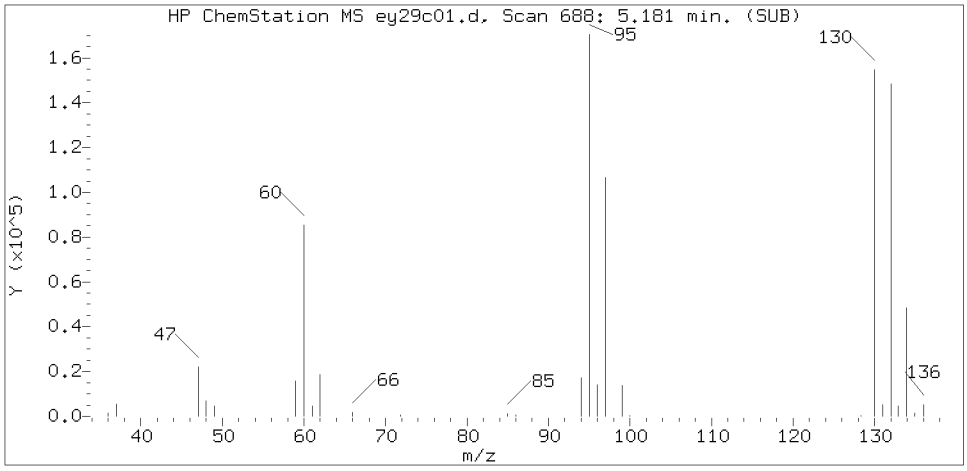
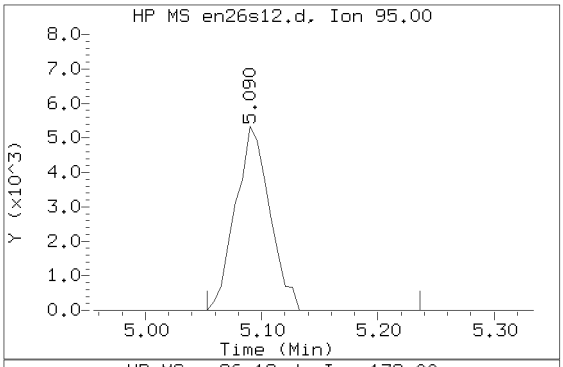
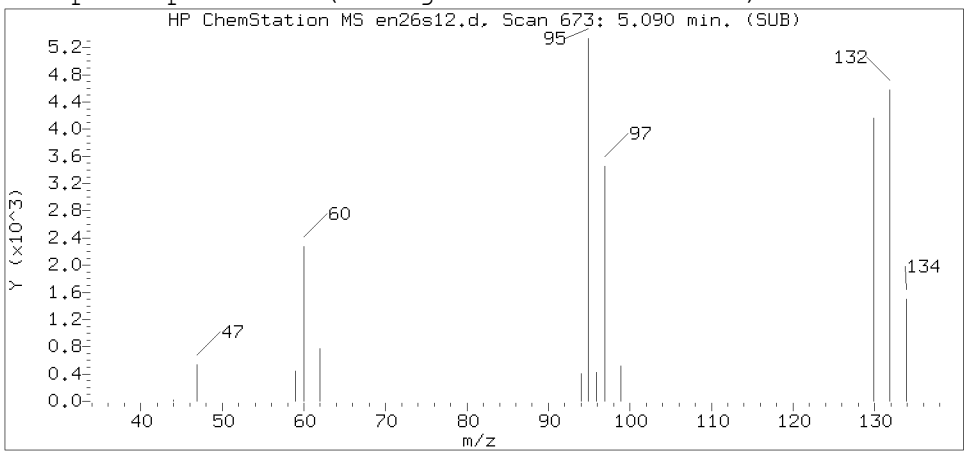
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

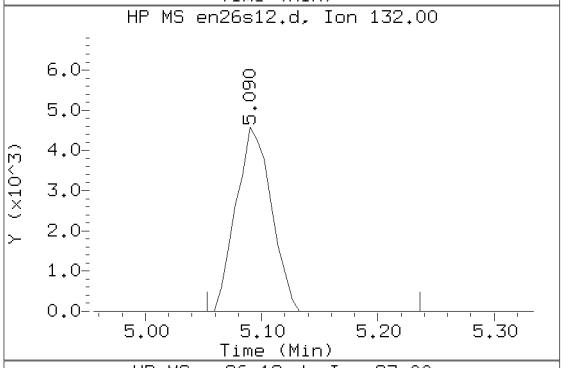
Reference Standard Spectrum for Trichloroethene

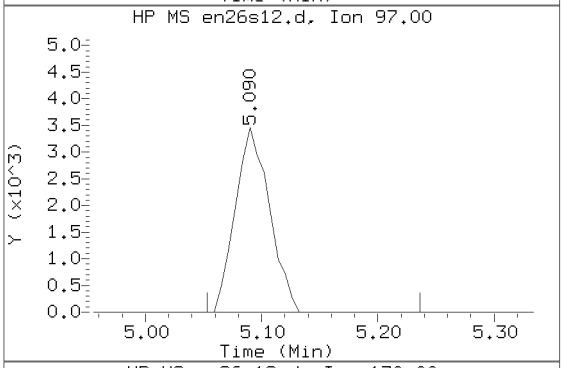




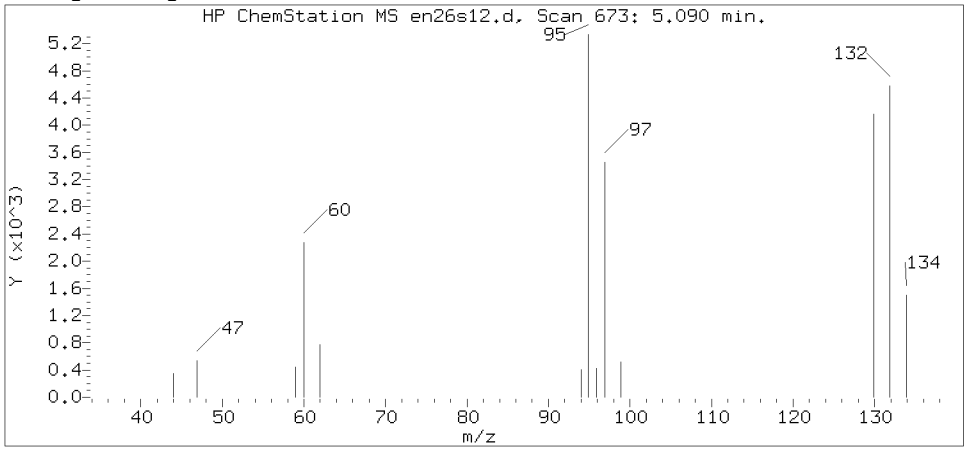
Sample Spectrum (Background Subtracted)

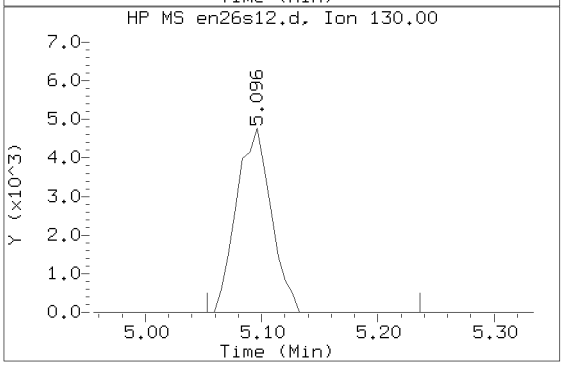






Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19nov26a.b/en26s12.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 15:45 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 16:03 Automation

Sample Name: WIN08 Lab Sample ID: 1206736

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 673
Retention Time (minutes): 5.090
Relative Retention Time :-0.00011
Quant Ion : 95.00
Area (flag) : 10814
On-Column Amount (ng) : 2.0498

Digitally signed by Jason M. Long on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
WIN09

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1206737

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19nov26a.b/en26s13.d

Level: (low/med) LOW Date Received: 11/20/19

Moisture: not dec. _____ Date Analyzed: 11/26/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	0.4	J
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

^

WIN09 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1206737

Data file: /chem/HP15648.i/19nov26a.b/en26s13.d Injection date and time: **26-NOV-2019 16:05**
Data file Sample Info. Line: WIN09;1206737;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 16:23 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.480	(0.000)	245	65	181297	(-4)	250.00	
66) Fluorobenzene	4.718	(0.006)	612	96	1048788	(4)	50.00	
101) Chlorobenzene-d5	7.870	(0.000)	1129	117	743154	(5)	50.00	
132) 1,4-Dichlorobenzene-d4	9.784	(-0.006)	1443	152	371192	(8)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.059	(0.000)	113	220813	49.496	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.376	(0.001)	102	59233	49.814	100%		80 - 120
84) Toluene-d8	(3)	6.364	(0.000)	98	1033035	48.963	98%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.894	(0.000)	95	382053	48.053	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	5.090	(-0.000)	95	7365	1.415	1.42			0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)	7.034	(0.000)	166	2066	0.403	0.40		J	0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	6
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Jason M. Long on 11/27/2019 at 14:38. Target 3.5 esignature user ID: jml01693

WIN09 Lancaster Laboratories 1206737
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19nov26a.b/en26s13.d Injection date and time: **26-NOV-2019 16:05**
Data file Sample Info. Line: WIN09;1206737;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 16:23 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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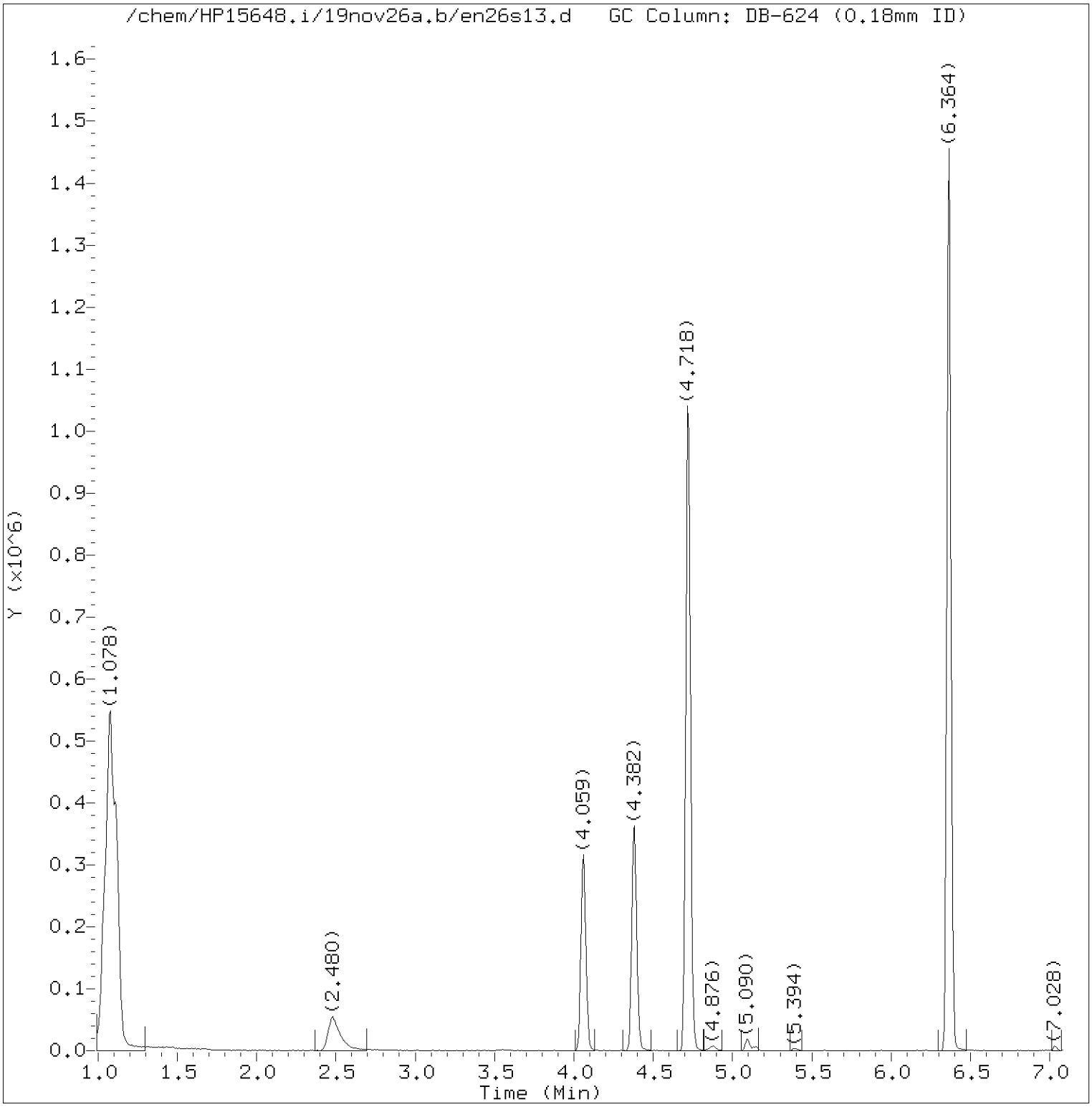
Total number of targets = 24

Digitally signed by Jason M. Long on 11/27/2019 at 14:38. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 12:19. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

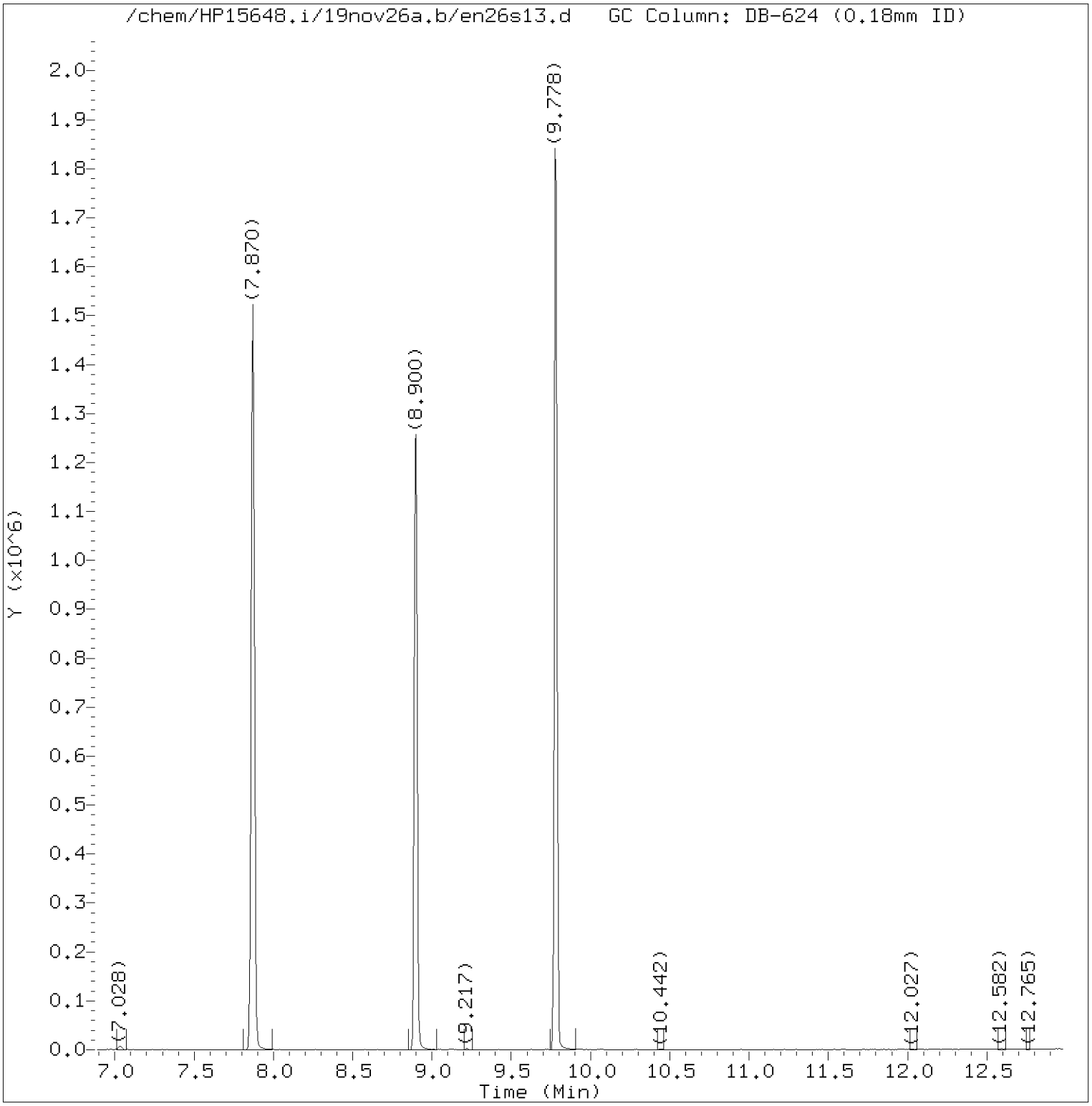
Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s13.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 16:05 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 16:23 Automation

Sample Name: WIN09 Lab Sample ID: 1206737

Digitally signed by Jason M. Long
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s13.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 16:05 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 16:23 Automation

Sample Name: WIN09 Lab Sample ID: 1206737

Digitally signed by Jason M. Long
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s13.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 16:05 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 16:23 Automation

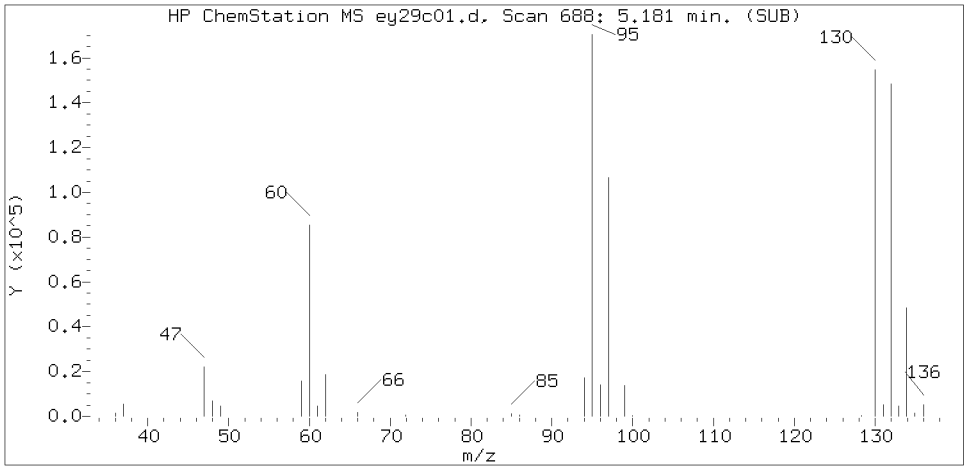
Sample Name: WIN09 Lab Sample ID: 1206737

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.480	65	181297	250.000
52)$Dibromofluoromethane	(2)	4.059	113	220813	49.496
57)$1,2-Dichloroethane-d4	(2)	4.376	102	59233	49.814
66)*Fluorobenzene	(2)	4.718	96	1048788	50.000
71) Trichloroethene	(2)	5.090	95	7365	1.415
84)$Toluene-d8	(3)	6.364	98	1033035	48.963
94) Tetrachloroethene	(3)	7.034	166	2066	0.403
101)*Chlorobenzene-d5	(3)	7.870	117	743154	50.000
115)$4-Bromofluorobenzene	(3)	8.894	95	382053	48.053
132)*1,4-Dichlorobenzene-d4	(4)	9.784	152	371192	50.000

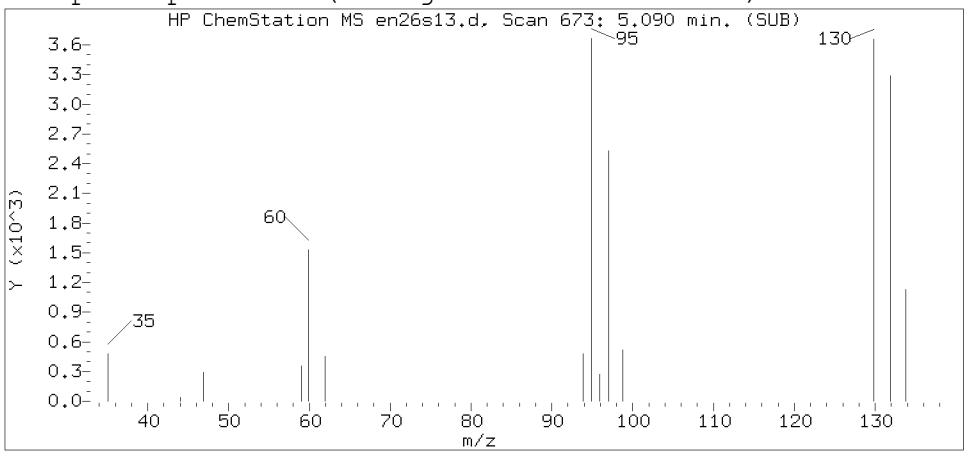
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

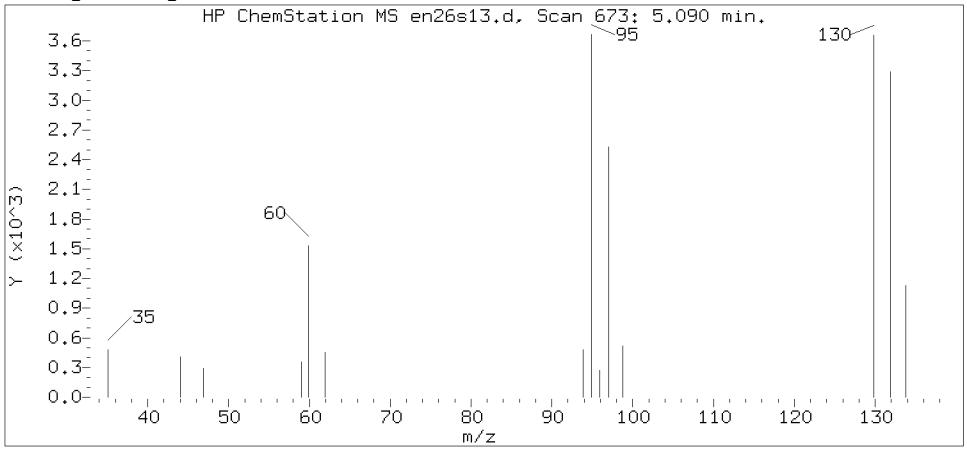
Reference Standard Spectrum for Trichloroethene

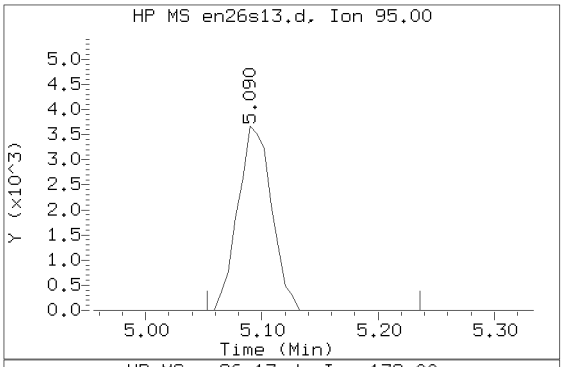


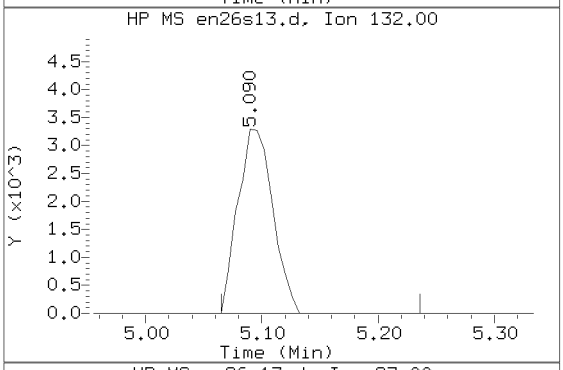
Sample Spectrum (Background Subtracted)

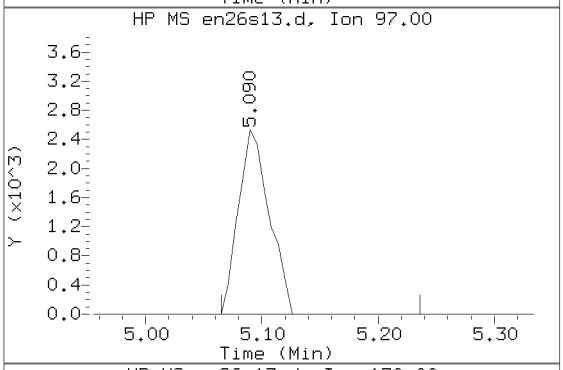


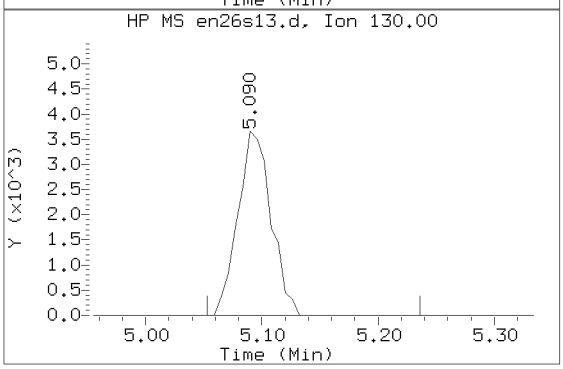
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19nov26a.b/en26s13.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 16:05 Analyst ID: jml01693

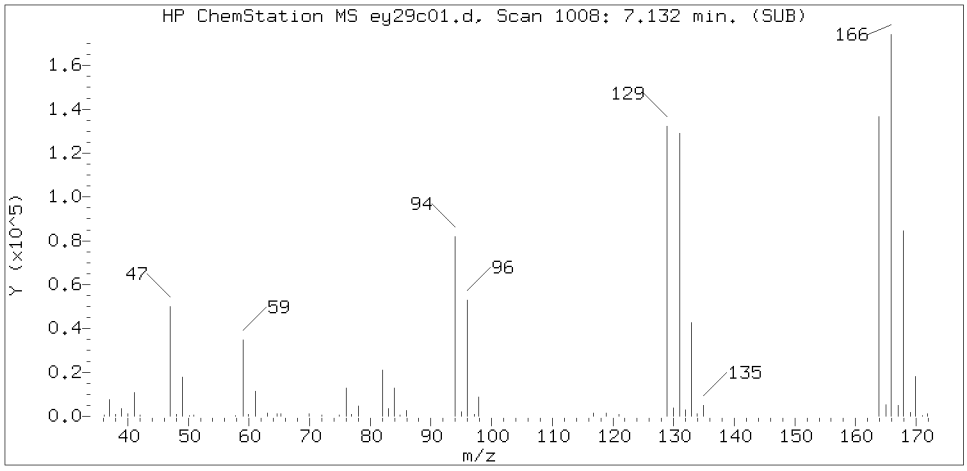
Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 16:23 Automation

Sample Name: WIN09 Lab Sample ID: 1206737

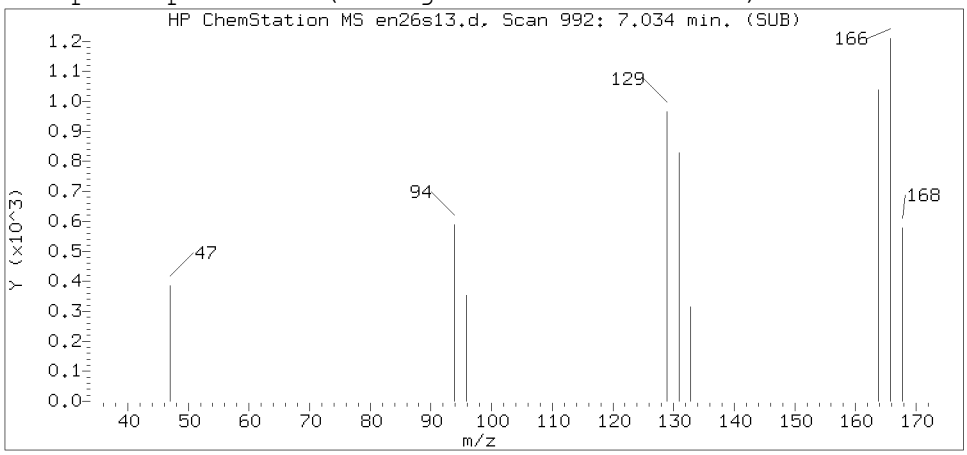
Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 673
Retention Time (minutes): 5.090
Relative Retention Time :-0.00011
Quant Ion : 95.00
Area (flag) : 7365
On-Column Amount (ng) : 1.4154

Digitally signed by Jason M. Long on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

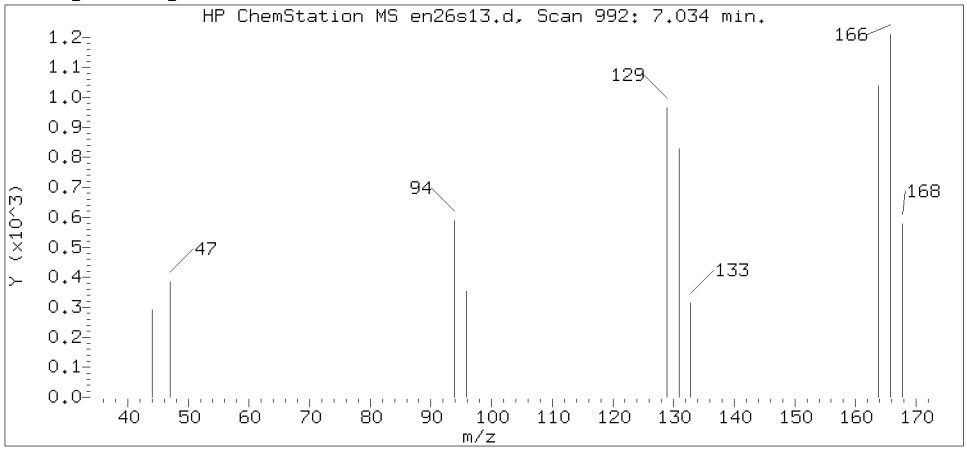
Reference Standard Spectrum for Tetrachloroethene

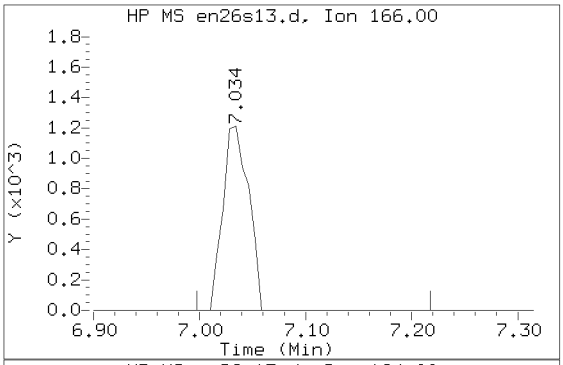


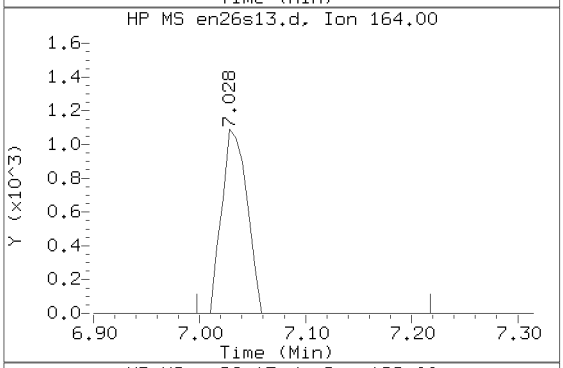
Sample Spectrum (Background Subtracted)

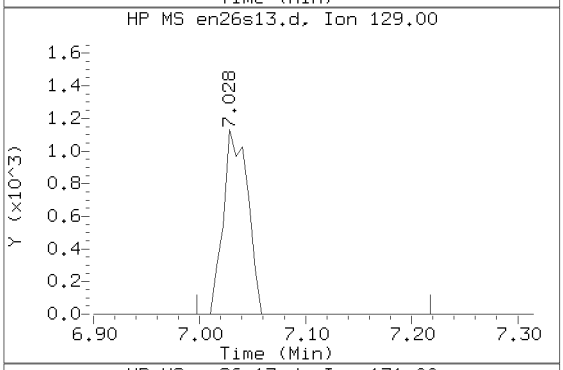


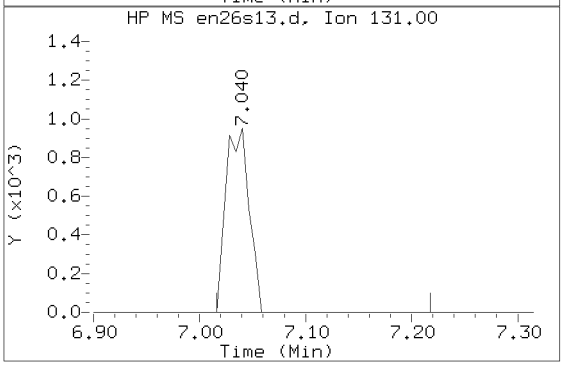
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19nov26a.b/en26s13.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 16:05 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 16:23 Automation

Sample Name: WIN09 Lab Sample ID: 1206737

Compound Number : 94
Compound Name : Tetrachloroethene
Scan Number : 992
Retention Time (minutes): 7.034
Relative Retention Time : 0.00000
Quant Ion : 166.00
Area (flag) : 2066
On-Column Amount (ng) : 0.4027

Digitally signed by Jason M. Long on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
WIN10

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1206738

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s19.d

Level: (low/med) LOW Date Received: 11/20/19

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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WIN10 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1206738

Data file: /chem/HP09915.i/19nov23a.b/ln23s19.d Injection date and time: **23-NOV-2019 16:59**
Data file Sample Info. Line: WIN10;1206738;1;0;;JCW26;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 17:16 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.509	(-0.019)	941	65	196772	(-10)	250.00	
66) Fluorobenzene	7.963	(-0.006)	2015	96	1059926	(-6)	50.00	
100) Chlorobenzene-d5	11.361	(-0.003)	3072	117	880492	(-7)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	482281	(-8)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(0.000)	113	258456	49.876	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.532	(0.000)	102	68437	51.820	104%		80 - 120
83) Toluene-d8	(3)	9.934	(0.000)	98	1119414	48.588	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.348	(0.000)	95	427633	49.019	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Linda C. Pape on 11/25/2019 at 13:34. Target 3.5 esignature user ID: lcp00895

Data file: /chem/HP09915.i/19nov23a.b/ln23s19.d Injection date and time: **23-NOV-2019 16:59**
Data file Sample Info. Line: WIN10;1206738;1;0;;JCW26;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 17:16 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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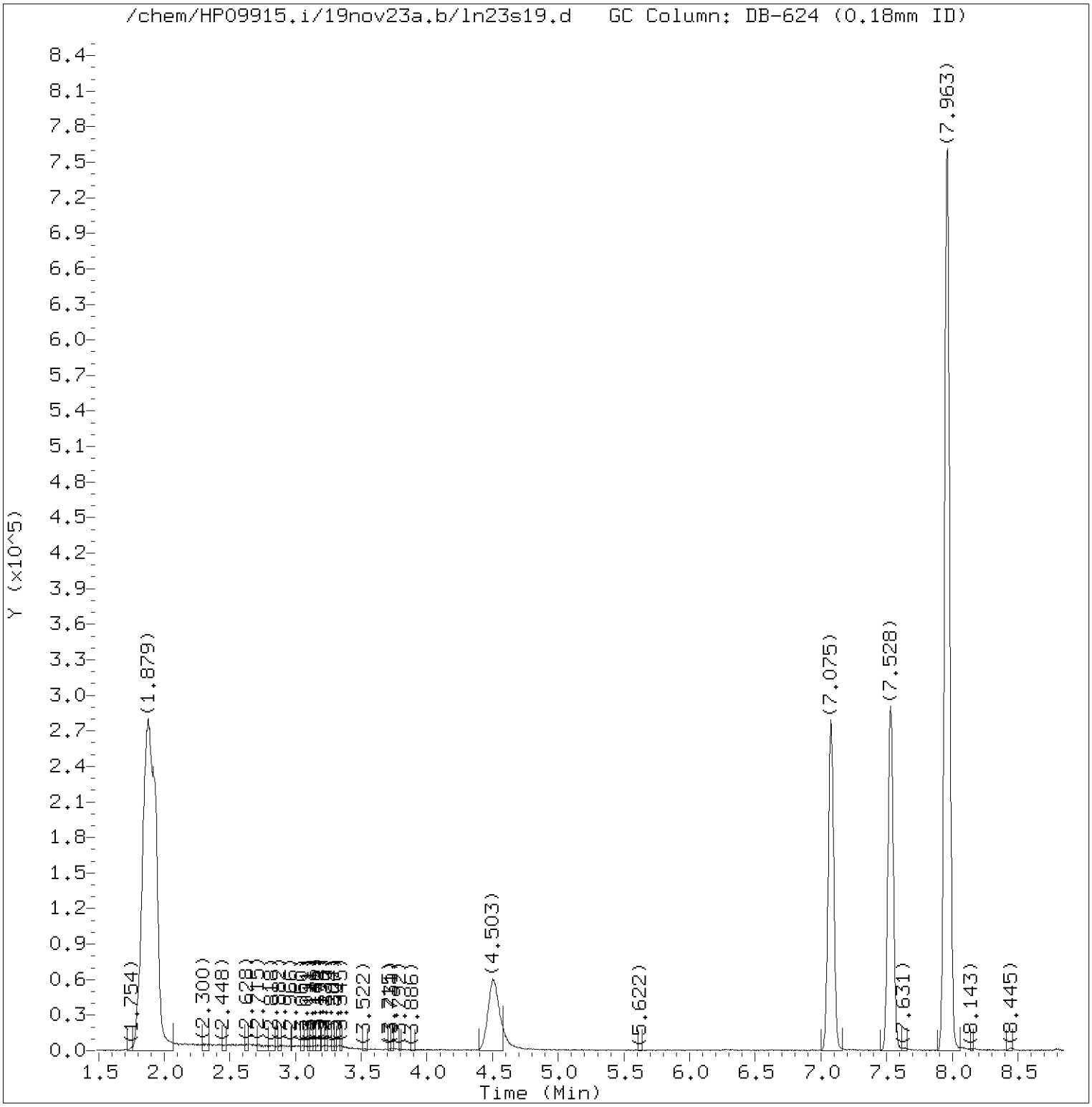
Total number of targets = 24

Digitally signed by Linda C. Pape on 11/25/2019 at 13:34. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

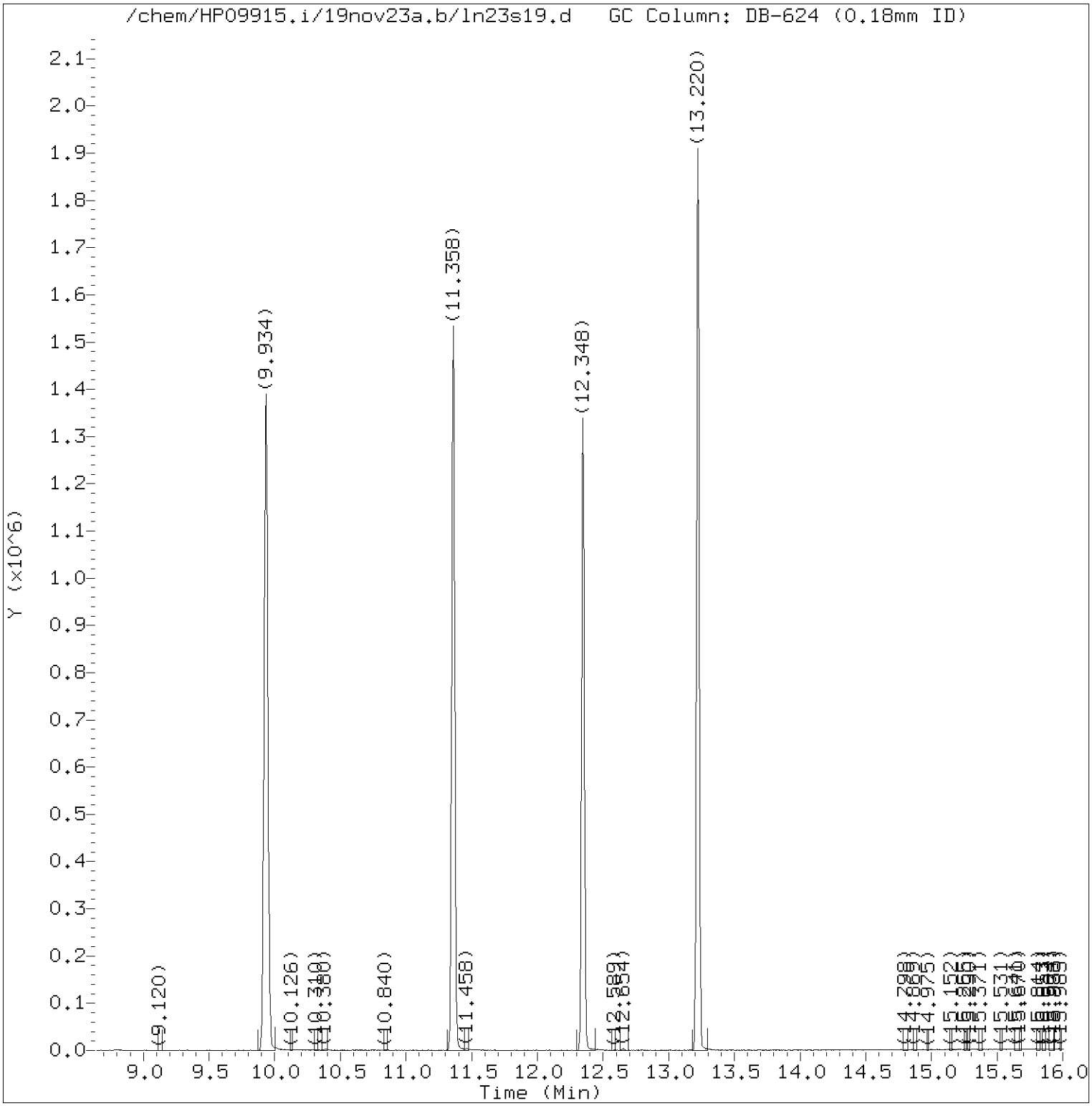
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s19.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 16:59 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 17:16 Automation

Sample Name: WIN10 Lab Sample ID: 1206738

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:34.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s19.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 16:59 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 17:16 Automation

Sample Name: WIN10 Lab Sample ID: 1206738

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:34.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s19.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 16:59 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 17:16 Automation

Sample Name: WIN10 Lab Sample ID: 1206738

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.509	65	196772	250.000
52)$Dibromofluoromethane	(2)	7.075	113	258456	49.876
57)$1,2-Dichloroethane-d4	(2)	7.532	102	68437	51.820
66)*Fluorobenzene	(2)	7.963	96	1059926	50.000
83)$Toluene-d8	(3)	9.934	98	1119414	48.588
100)*Chlorobenzene-d5	(3)	11.361	117	880492	50.000
114)$4-Bromofluorobenzene	(3)	12.348	95	427633	49.019
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	482281	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:34.
Target 3.5 esignature user ID: lcp00895

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
WIN11

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1206739

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s20.d

Level: (low/med) LOW Date Received: 11/20/19

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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WIN11 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1206739

Data file: /chem/HP09915.i/19nov23a.b/ln23s20.d Injection date and time: **23-NOV-2019 17:21**
Data file Sample Info. Line: WIN11;1206739;1;0;;JCW26;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 17:38 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.506	(-0.016)	940	65	194579	(-11)	250.00	
66) Fluorobenzene	7.962	(-0.006)	2015	96	1027064	(-9)	50.00	
100) Chlorobenzene-d5	11.361	(-0.003)	3072	117	860023	(-9)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	466803	(-11)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(0.000)	113	251353	50.057	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.528	(0.001)	102	66459	51.932	104%		80 - 120
83) Toluene-d8	(3)	9.933	(0.000)	98	1089522	48.416	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	415219	48.729	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Linda C. Pape on 11/25/2019 at 13:34. Target 3.5 esignature user ID: lcp00895

WIN11 Lancaster Laboratories 1206739
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23s20.d Injection date and time: **23-NOV-2019 17:21**
Data file Sample Info. Line: WIN11;1206739;1;0;;JCW26;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 17:38 Automation

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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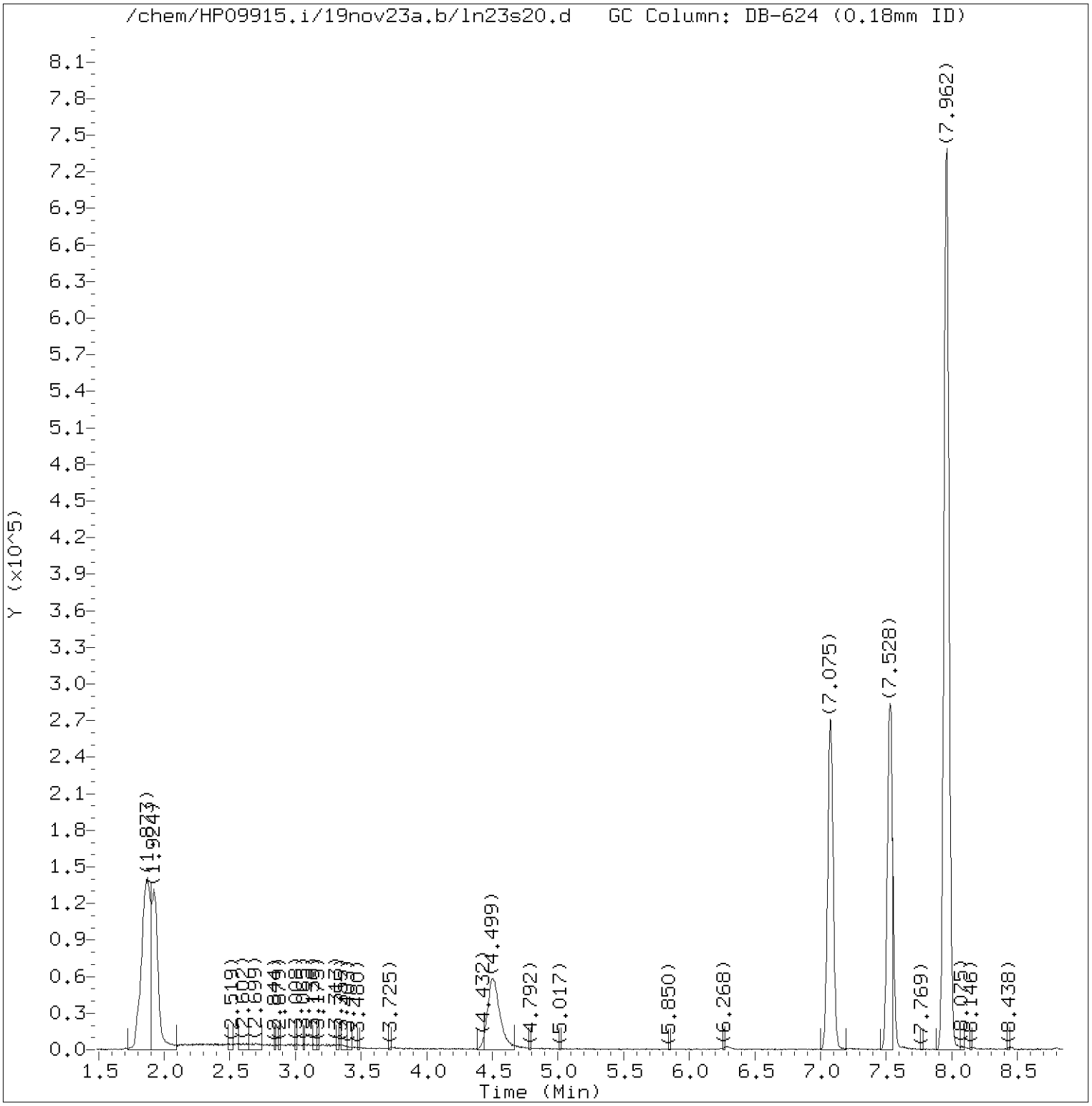
Total number of targets = 24

Digitally signed by Linda C. Pape on 11/25/2019 at 13:34. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

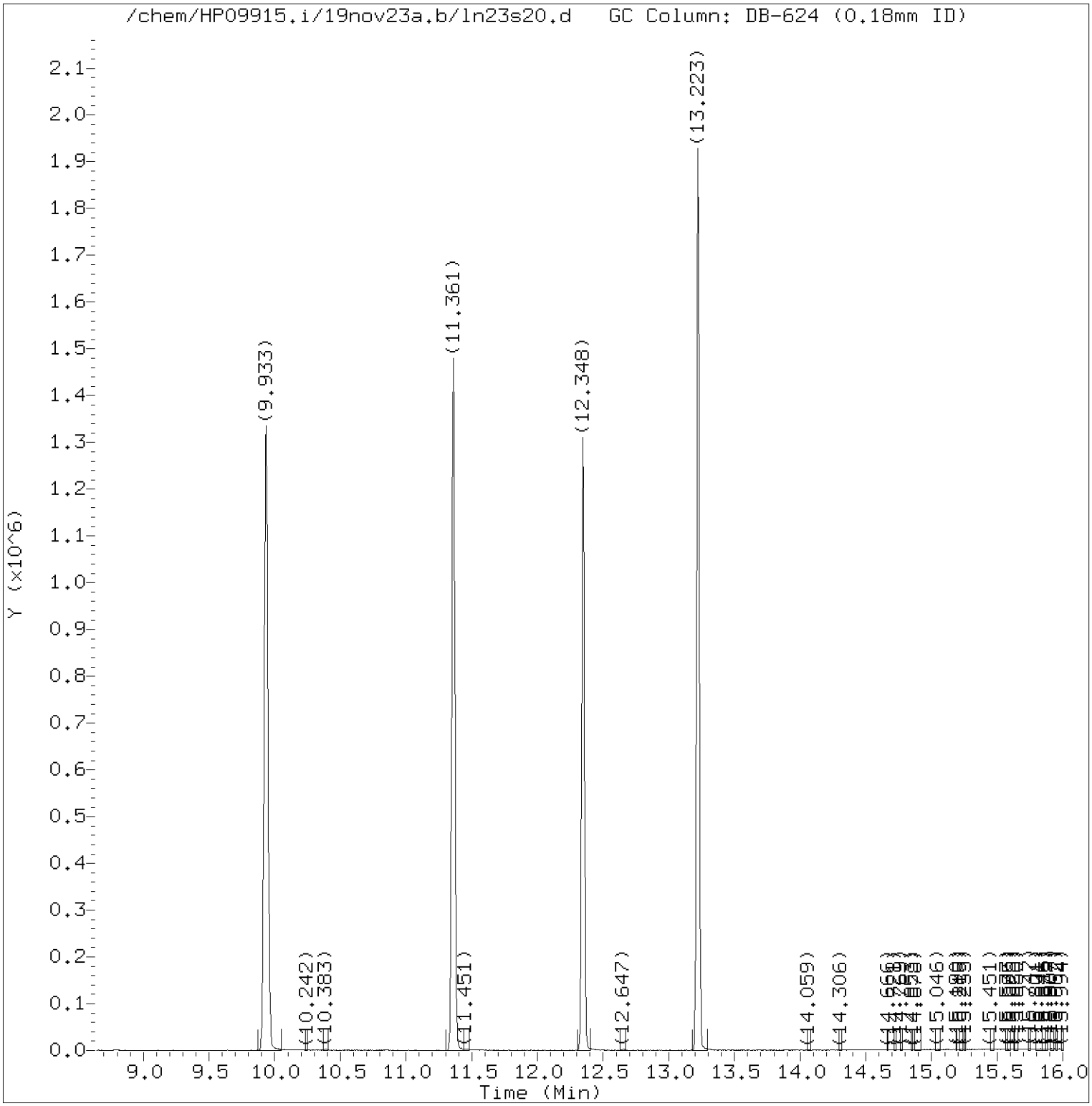
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s20.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 17:21 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 17:38 Automation

Sample Name: WIN11 Lab Sample ID: 1206739

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:34.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s20.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 17:21 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 17:38 Automation

Sample Name: WIN11 Lab Sample ID: 1206739

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:34.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s20.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 17:21 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 17:38 Automation

Sample Name: WIN11 Lab Sample ID: 1206739

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.506	65	194579	250.000
52)$Dibromofluoromethane	(2)	7.075	113	251353	50.057
57)$1,2-Dichloroethane-d4	(2)	7.528	102	66459	51.932
66)*Fluorobenzene	(2)	7.962	96	1027064	50.000
83)$Toluene-d8	(3)	9.933	98	1089522	48.416
100)*Chlorobenzene-d5	(3)	11.361	117	860023	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	415219	48.729
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	466803	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:34.
Target 3.5 esignature user ID: lcp00895

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
WIN12

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1206740

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s21.d

Level: (low/med) LOW Date Received: 11/20/19

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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WIN12 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1206740

Data file: /chem/HP09915.i/19nov23a.b/ln23s21.d Injection date and time: **23-NOV-2019 17:43**
Data file Sample Info. Line: WIN12;1206740;1;0;;JCW26;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 25-Nov-2019 13:34 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.506	(-0.016)	940	65	209748	(-4)	250.00	
66) Fluorobenzene	7.959	(-0.003)	2014	96	1073027	(-5)	50.00	
100) Chlorobenzene-d5	11.361	(-0.003)	3072	117	886519	(-6)	50.00	
131) 1,4-Dichlorobenzene-d4	13.223	(0.000)	3651	152	491209	(-6)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(0.000)	113	259793	49.522	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.001)	102	68843	51.491	103%		80 - 120
83) Toluene-d8	(3)	9.934	(0.000)	98	1135089	48.934	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.348	(0.000)	95	431411	49.116	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Linda C. Pape on 11/25/2019 at 13:34. Target 3.5 esignature user ID: lcp00895

WIN12 Lancaster Laboratories 1206740
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23s21.d Injection date and time: **23-NOV-2019 17:43**
Data file Sample Info. Line: WIN12;1206740;1;0;;JCW26;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 25-Nov-2019 13:34 lcp00895

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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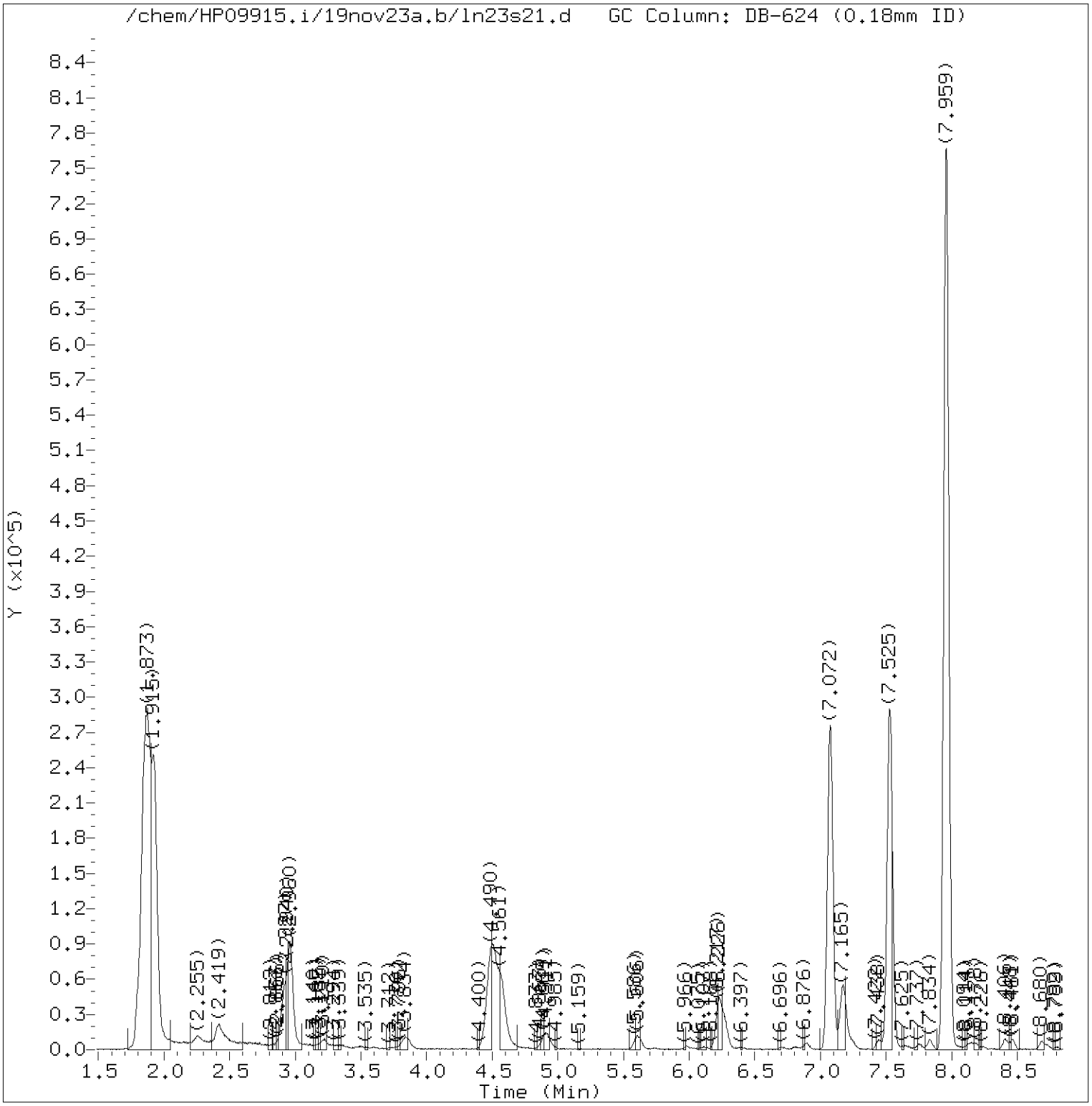
Total number of targets = 24

Digitally signed by Linda C. Pape on 11/25/2019 at 13:34. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:53. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

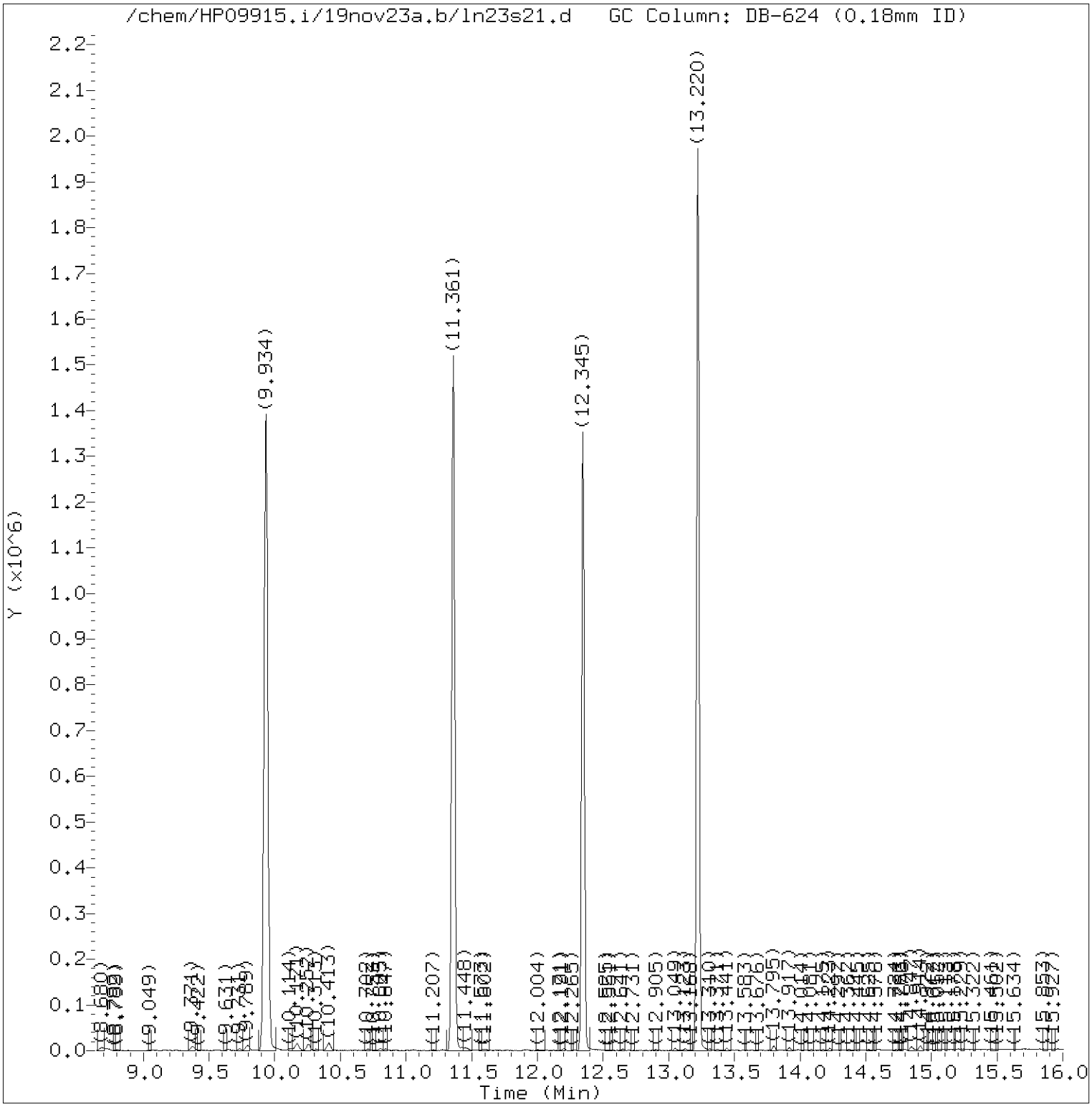
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s21.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 17:43 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 25-Nov-2019 13:34 lcp00895

Sample Name: WIN12 Lab Sample ID: 1206740

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:34.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s21.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 17:43 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 25-Nov-2019 13:34 lcp00895

Sample Name: WIN12 Lab Sample ID: 1206740

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:34.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s21.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 17:43 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 25-Nov-2019 13:34 lcp00895

Sample Name: WIN12 Lab Sample ID: 1206740

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.506	65	209748	250.000
52)$Dibromofluoromethane	(2)	7.075	113	259793	49.522
57)$1,2-Dichloroethane-d4	(2)	7.525	102	68843	51.491
66)*Fluorobenzene	(2)	7.959	96	1073027	50.000
83)$Toluene-d8	(3)	9.934	98	1135089	48.934
100)*Chlorobenzene-d5	(3)	11.361	117	886519	50.000
114)$4-Bromofluorobenzene	(3)	12.348	95	431411	49.116
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	491209	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:34.
Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WIN13

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1206741

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19nov26a.b/en26s14.d

Level: (low/med) LOW Date Received: 11/20/19

Moisture: not dec. _____ Date Analyzed: 11/26/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

WIN13 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1206741

Data file: /chem/HP15648.i/19nov26a.b/en26s14.d Injection date and time: **26-NOV-2019 16:26**
Data file Sample Info. Line: WIN13;1206741;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 16:42 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.474	(0.006)	244	65	189437	(0)	250.00	
66) Fluorobenzene	4.724	(0.000)	613	96	1053250	(4)	50.00	
101) Chlorobenzene-d5	7.870	(0.000)	1129	117	732959	(4)	50.00	
132) 1,4-Dichlorobenzene-d4	9.778	(0.000)	1442	152	360361	(5)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.059	(0.001)	113	220643	49.248	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.383	(0.001)	102	60019	50.261	101%		80 - 120
84) Toluene-d8	(3)	6.364	(0.000)	98	1030826	49.538	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.894	(0.000)	95	387928	49.470	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	6
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Jason M. Long on 11/27/2019 at 14:39. Target 3.5 esignature user ID: jml01693

WIN13 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1206741

Data file: /chem/HP15648.i/19nov26a.b/en26s14.d Injection date and time: **26-NOV-2019 16:26**
Data file Sample Info. Line: WIN13;1206741;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 16:42 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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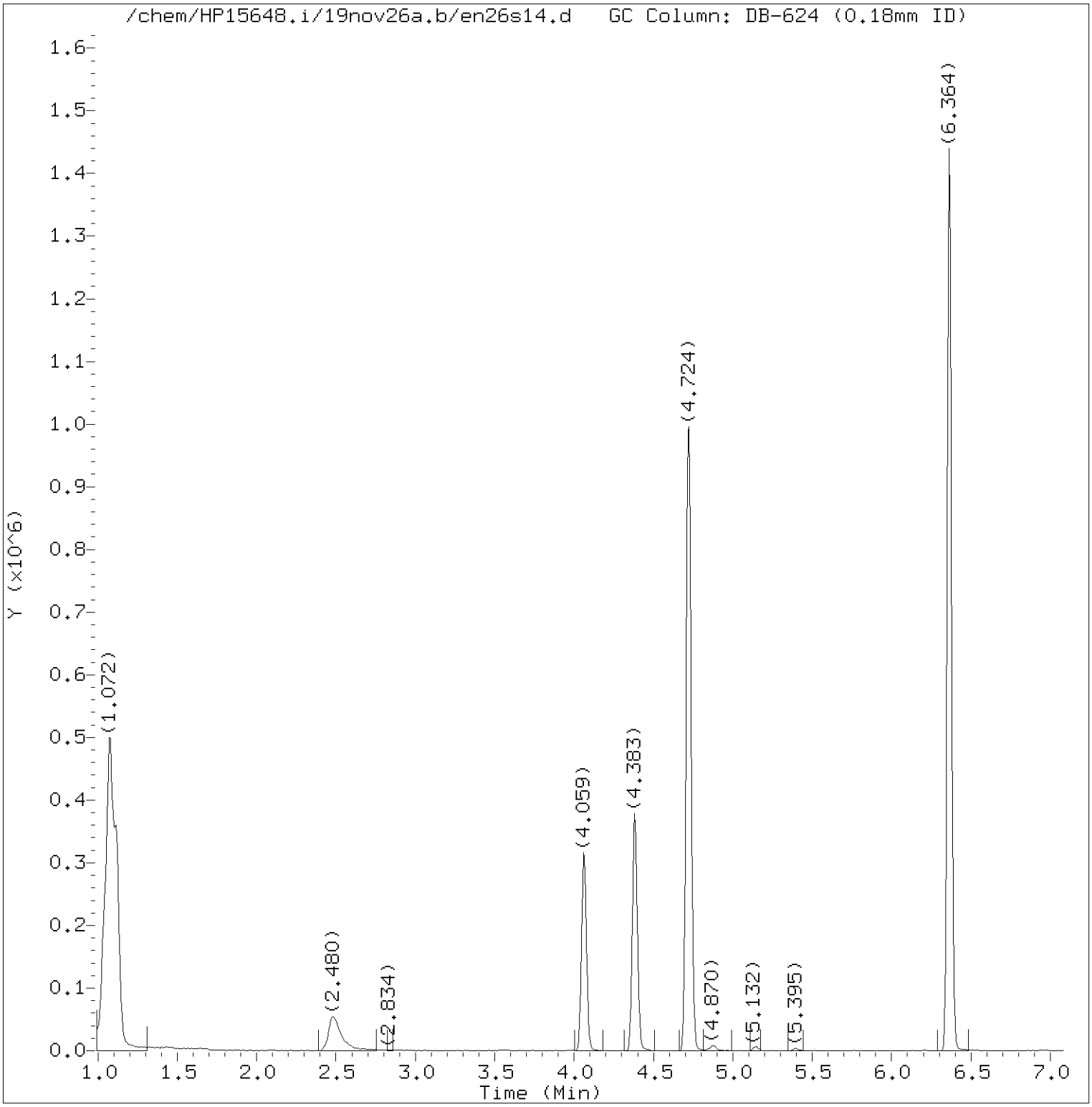
Total number of targets = 24

Digitally signed by Jason M. Long on 11/27/2019 at 14:39. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 12:19. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

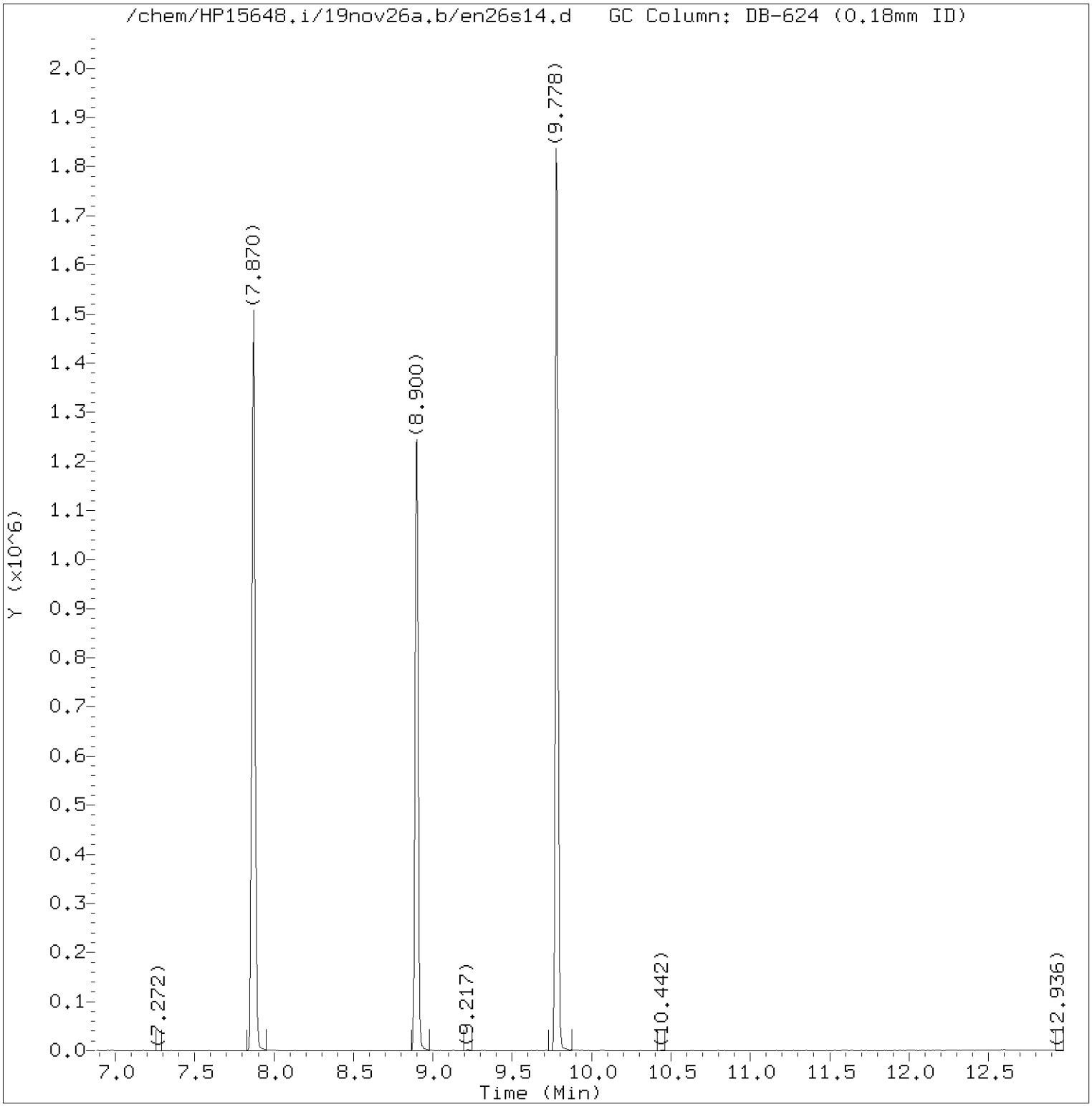
Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s14.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 16:26 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 16:42 Automation

Sample Name: WIN13 Lab Sample ID: 1206741

Digitally signed by Jason M. Long
on 11/27/2019 at 14:39.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s14.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 16:26 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 16:42 Automation

Sample Name: WIN13 Lab Sample ID: 1206741

Digitally signed by Jason M. Long
on 11/27/2019 at 14:39.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s14.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 16:26 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 16:42 Automation

Sample Name: WIN13 Lab Sample ID: 1206741

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.474	65	189437	250.000
52)$Dibromofluoromethane	(2)	4.059	113	220643	49.248
57)$1,2-Dichloroethane-d4	(2)	4.383	102	60019	50.261
66)*Fluorobenzene	(2)	4.724	96	1053250	50.000
84)$Toluene-d8	(3)	6.364	98	1030826	49.538
101)*Chlorobenzene-d5	(3)	7.870	117	732959	50.000
115)$4-Bromofluorobenzene	(3)	8.894	95	387928	49.470
132)*1,4-Dichlorobenzene-d4	(4)	9.778	152	360361	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 11/27/2019 at 14:39.
Target 3.5 esignature user ID: jml01693

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WIN14

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1206742

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19nov26a.b/en26s15.d

Level: (low/med) LOW Date Received: 11/20/19

Moisture: not dec. _____ Date Analyzed: 11/26/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	7	
67-64-1	Acetone	20	U
76-13-1	Freon 113	0.2	J
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	0.2	J
75-34-3	1,1-Dichloroethane	1	
156-59-2	cis-1,2-Dichloroethene	16	
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	58	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	400	E
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	3	
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

^

WIN14 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1206742

Data file: /chem/HP15648.i/19nov26a.b/en26s15.d Injection date and time: **26-NOV-2019 16:46**
Data file Sample Info. Line: WIN14;1206742;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 17:04 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.487	(-0.006)	246	65	186702	(-1)	250.00	
66) Fluorobenzene	4.718	(0.006)	612	96	1043941	(3)	50.00	
101) Chlorobenzene-d5	7.870	(0.000)	1129	117	730667	(3)	50.00	
132) 1,4-Dichlorobenzene-d4	9.778	(0.000)	1442	152	358163	(4)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.059	(0.000)	113	219843	49.507	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.376	(0.001)	102	58836	49.709	99%		80 - 120
84) Toluene-d8	(3)	6.364	(0.000)	98	1029242	49.617	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.894	(0.000)	95	380831	48.718	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	2.096	(0.000)	96	28594	7.130	7.13			0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)	2.096	(0.005)	101	1106	0.238	0.24		J	0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)	2.706	(-0.000)	96	1035	0.223	0.22		J	0.2	1
36) 1,1-Dichloroethane	(2)	3.078	(-0.000)	63	12524	1.265	1.27			0.2	1
42) cis-1,2-Dichloroethene	(2)	3.608	(-0.000)	96	87427	16.424	16.42			0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	4.090	(-0.001)	97	409604	57.958	57.96			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	5.090	(-0.000)	95	2056658	397.074	397.07		E	0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)	7.034	(0.000)	166	14852	2.944	2.94			0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	6
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

E = Compound concentration above calibration range.

Digitally signed by Jason M. Long on 11/27/2019 at 14:39. Target 3.5 esignature user ID: jml01693

Data file: /chem/HP15648.i/19nov26a.b/en26s15.d Injection date and time: **26-NOV-2019 16:46**
Data file Sample Info. Line: WIN14;1206742;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 17:04 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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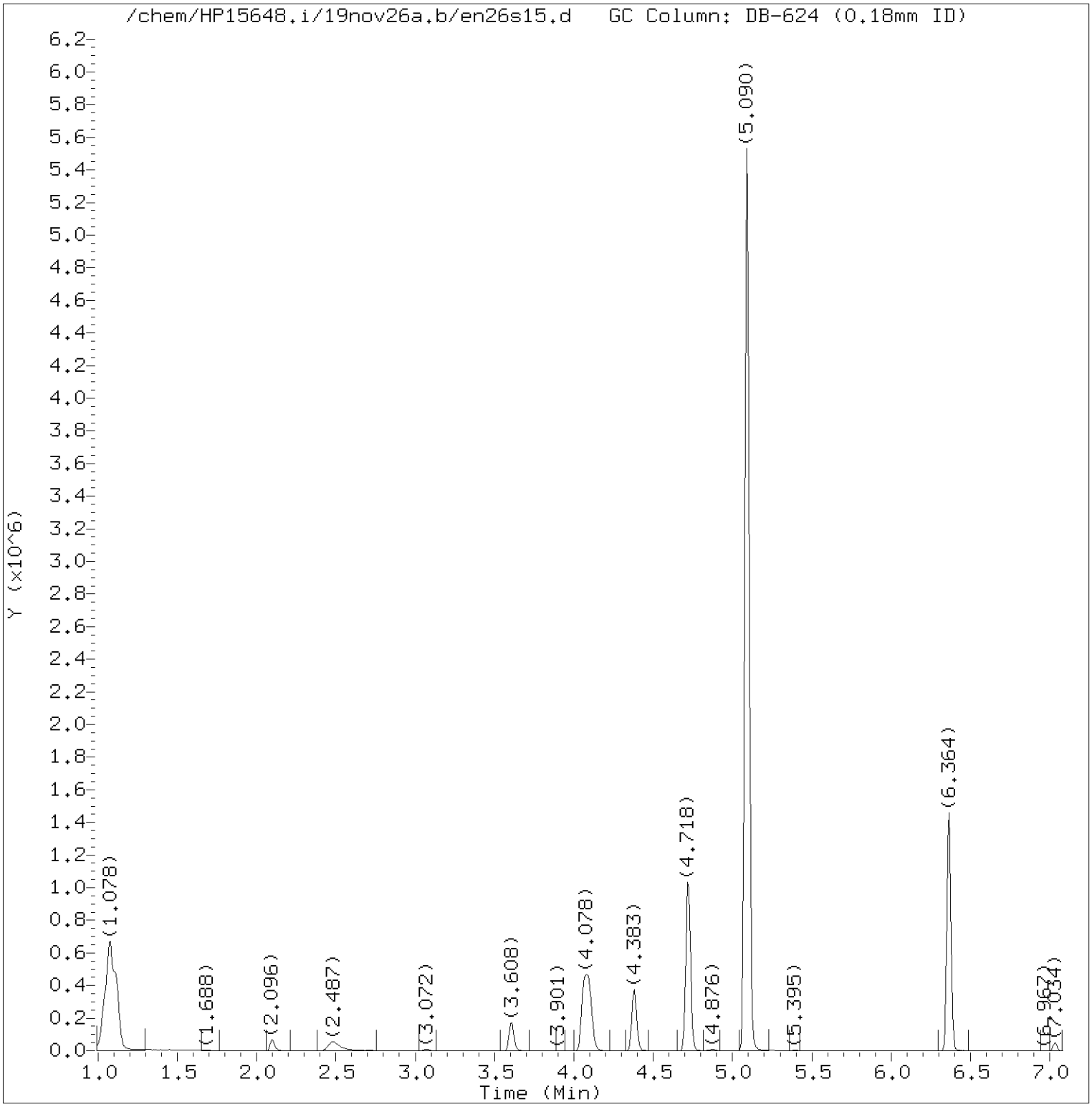
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Jason M. Long on 11/27/2019 at 14:39. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 12:19. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

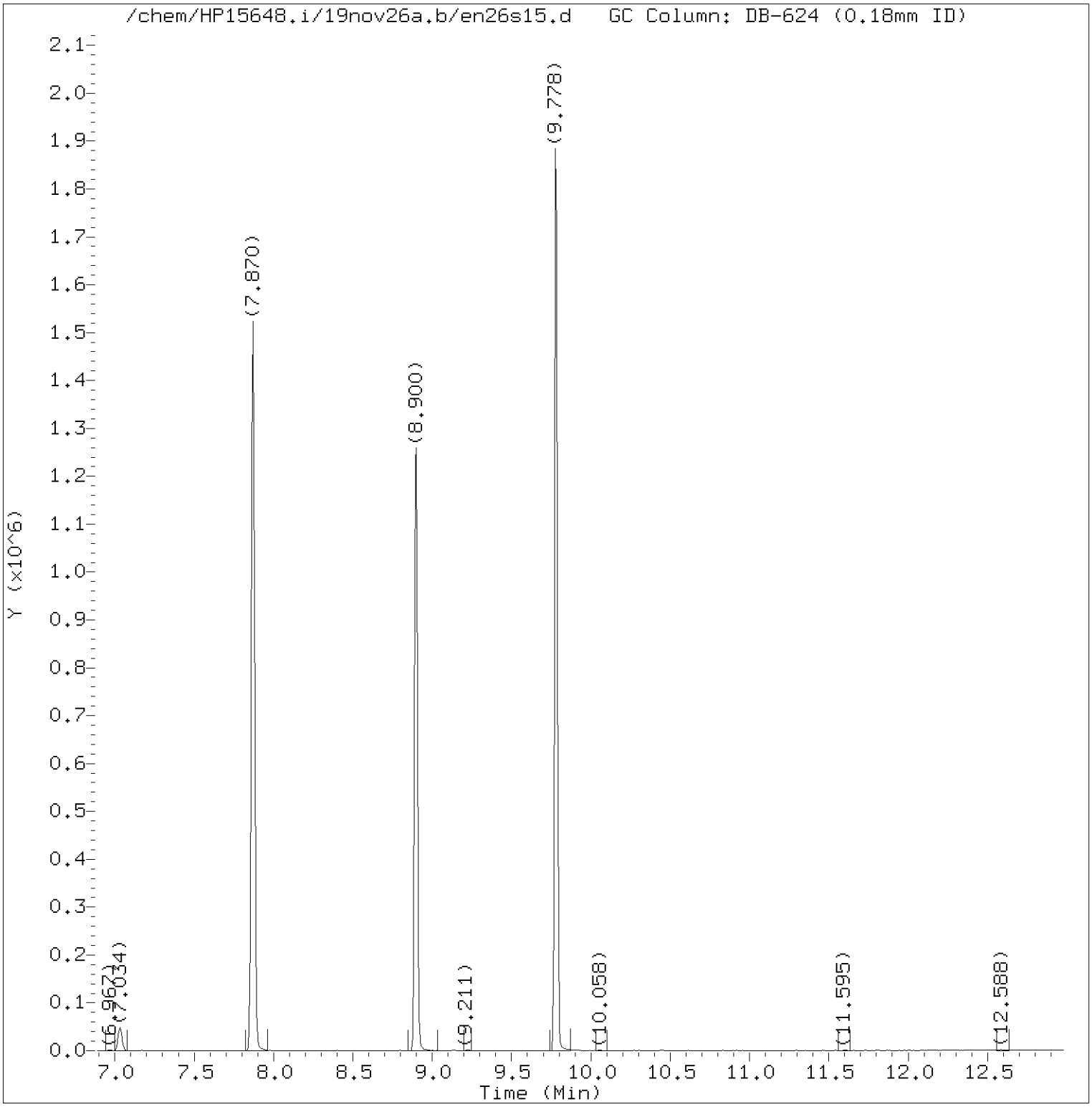
Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s15.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 16:46 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:04 Automation

Sample Name: WIN14 Lab Sample ID: 1206742

Digitally signed by Jason M. Long
on 11/27/2019 at 14:39.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s15.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 16:46 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:04 Automation

Sample Name: WIN14 Lab Sample ID: 1206742

Digitally signed by Jason M. Long
on 11/27/2019 at 14:39.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s15.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 16:46 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:04 Automation

Sample Name: WIN14 Lab Sample ID: 1206742

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	2.096	96	28594	7.130
19) Freon 113	(2)	2.096	101	1106	0.238
29)*t-Butyl alcohol-d10	(1)	2.487	65	186702	250.000
32) trans-1,2-Dichloroethene	(2)	2.706	96	1035	0.223
36) 1,1-Dichloroethane	(2)	3.078	63	12524	1.265
42) cis-1,2-Dichloroethene	(2)	3.608	96	87427	16.424
52)$Dibromofluoromethane	(2)	4.059	113	219843	49.507
53) 1,1,1-Trichloroethane	(2)	4.090	97	409604	57.958
57)$1,2-Dichloroethane-d4	(2)	4.376	102	58836	49.709
66)*Fluorobenzene	(2)	4.718	96	1043941	50.000
71) Trichloroethene	(2)	5.090	95	2056658	397.074
84)$Toluene-d8	(3)	6.364	98	1029242	49.617
94) Tetrachloroethene	(3)	7.034	166	14852	2.944
101)*Chlorobenzene-d5	(3)	7.870	117	730667	50.000
115)$4-Bromofluorobenzene	(3)	8.894	95	380831	48.718
132)*1,4-Dichlorobenzene-d4	(4)	9.778	152	358163	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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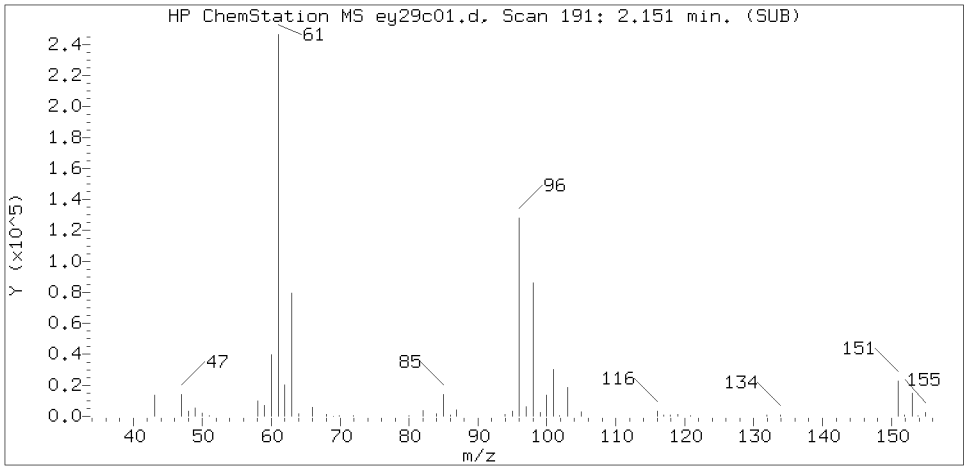
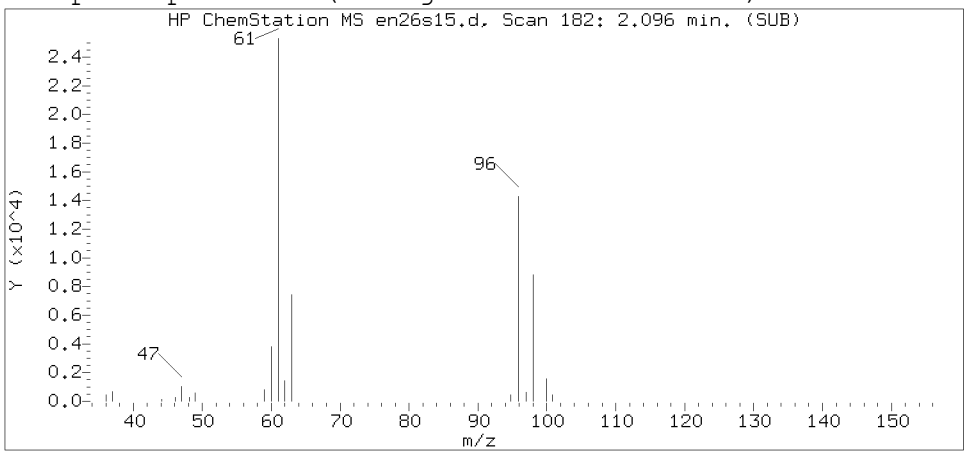
on 11/27/2019 at 14:39.
Target 3.5 esignature user ID: jml01693

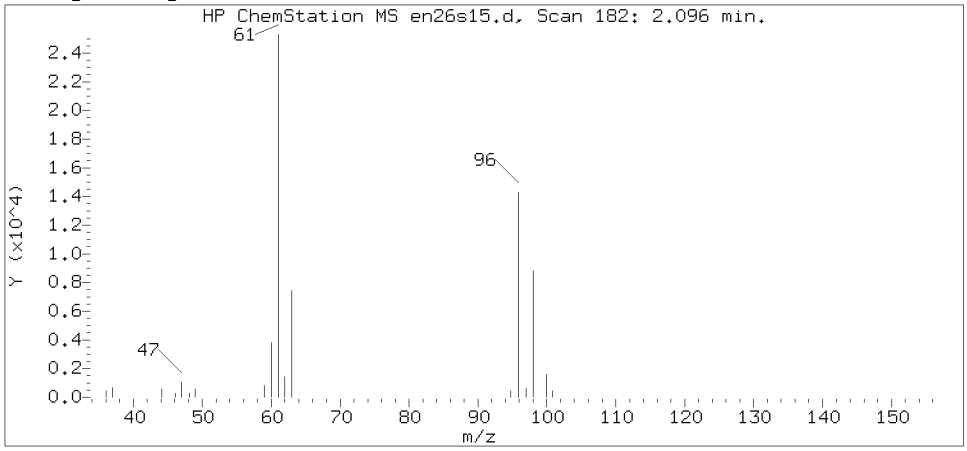
Reference Standard Spectrum for 1,1-Dichloroethene

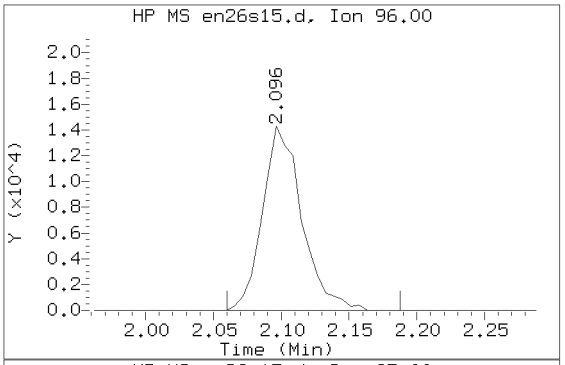


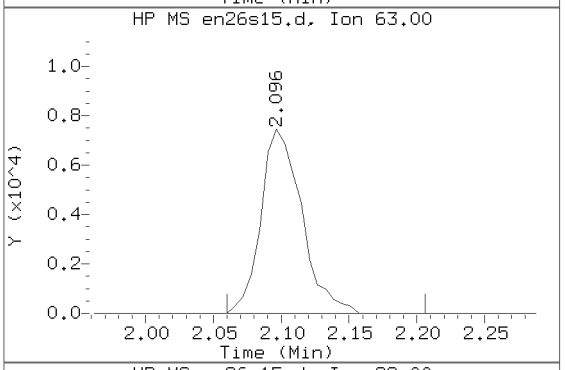
Sample Spectrum (Background Subtracted)

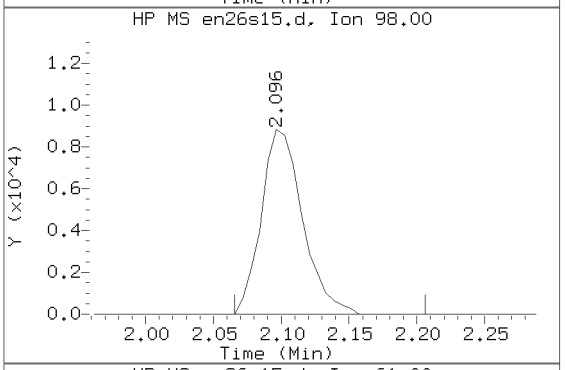


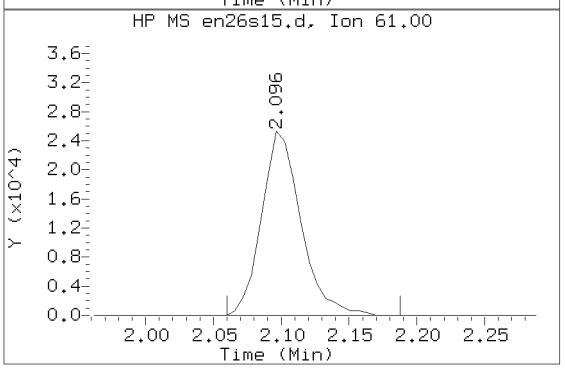
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19nov26a.b/en26s15.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 16:46 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:04 Automation

Sample Name: WIN14 Lab Sample ID: 1206742

Compound Number	: 17
Compound Name	: 1,1-Dichloroethene
Scan Number	: 182
Retention Time (minutes)	: 2.096
Relative Retention Time	: 0.00073
Quant Ion	: 96.00
Area (flag)	: 28594
On-Column Amount (ng)	: 7.1304

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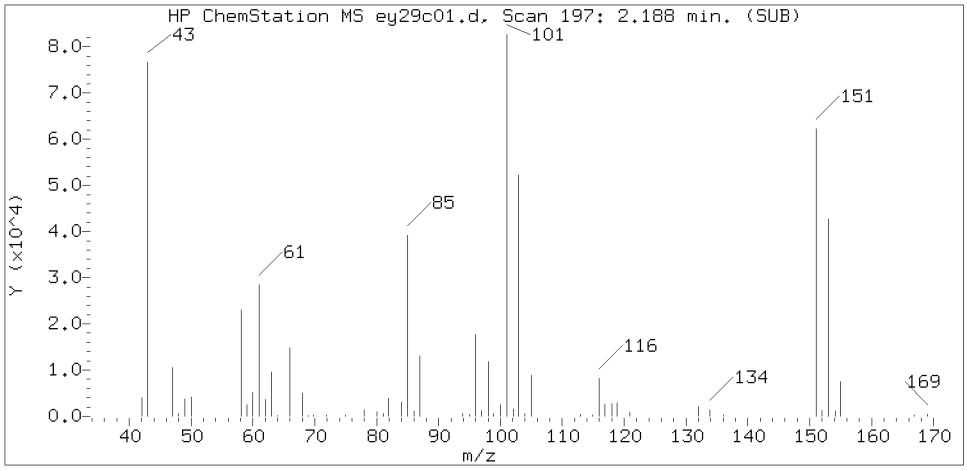
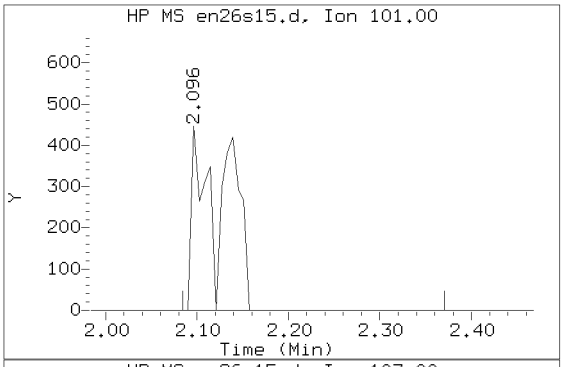
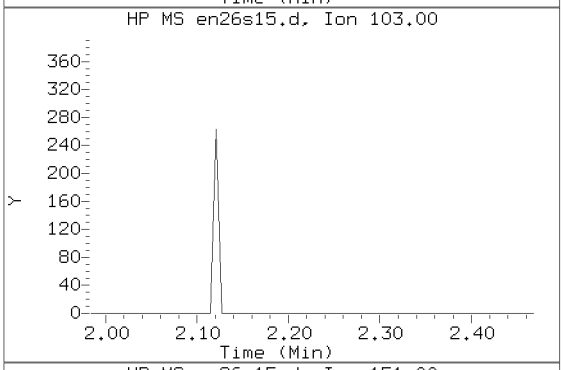
Target 3.5 esignature user ID: jml01693

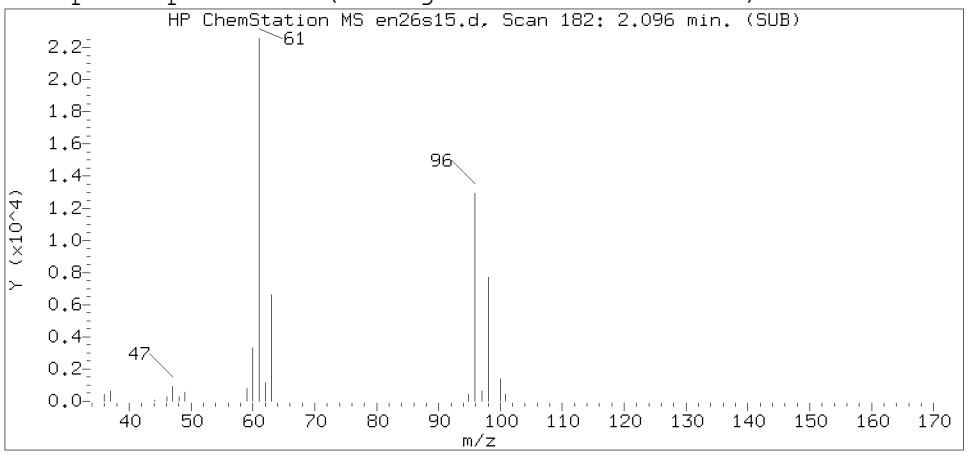
Reference Standard Spectrum for Freon 113

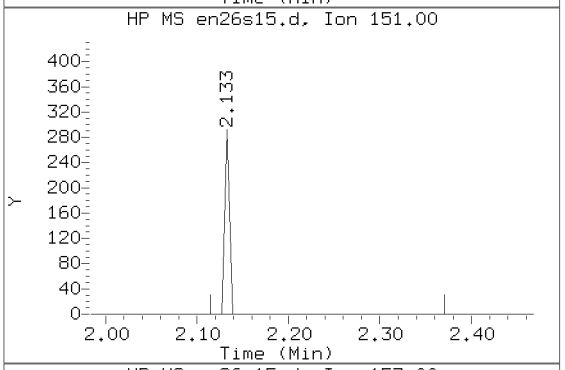




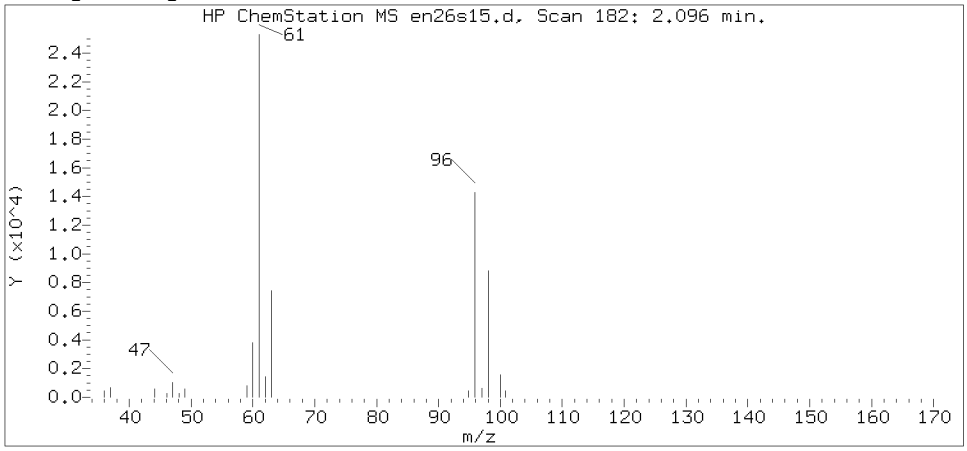


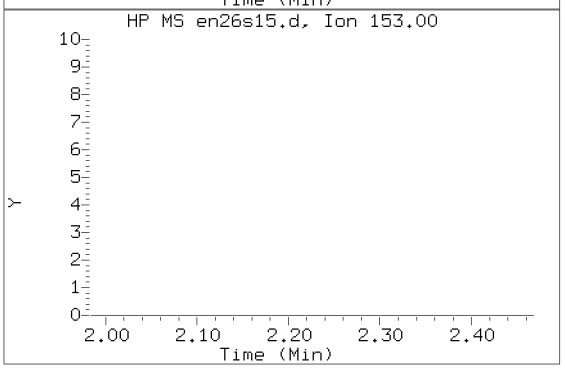
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19nov26a.b/en26s15.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 16:46 Analyst ID: jml01693

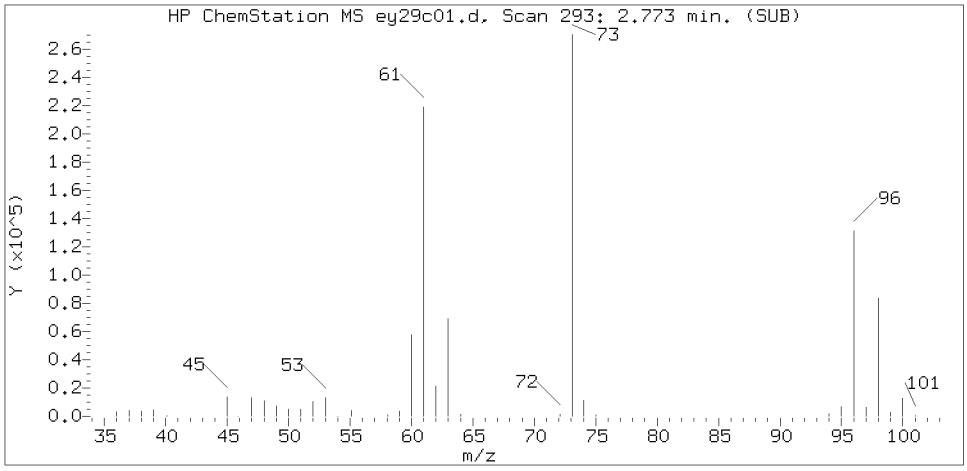
Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:04 Automation

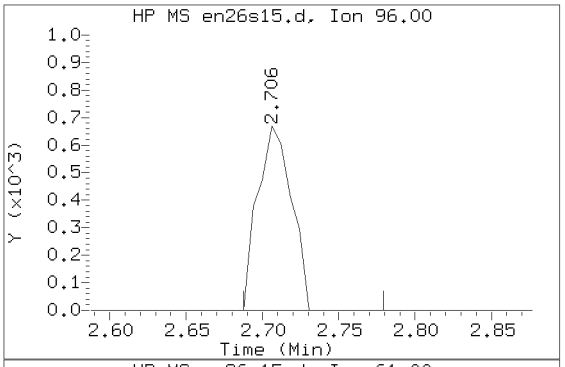
Sample Name: WIN14 Lab Sample ID: 1206742

Compound Number	: 19
Compound Name	: Freon 113
Scan Number	: 182
Retention Time (minutes)	: 2.096
Relative Retention Time	: 0.00589
Quant Ion	: 101.00
Area (flag)	: 1106
On-Column Amount (ng)	: 0.2382

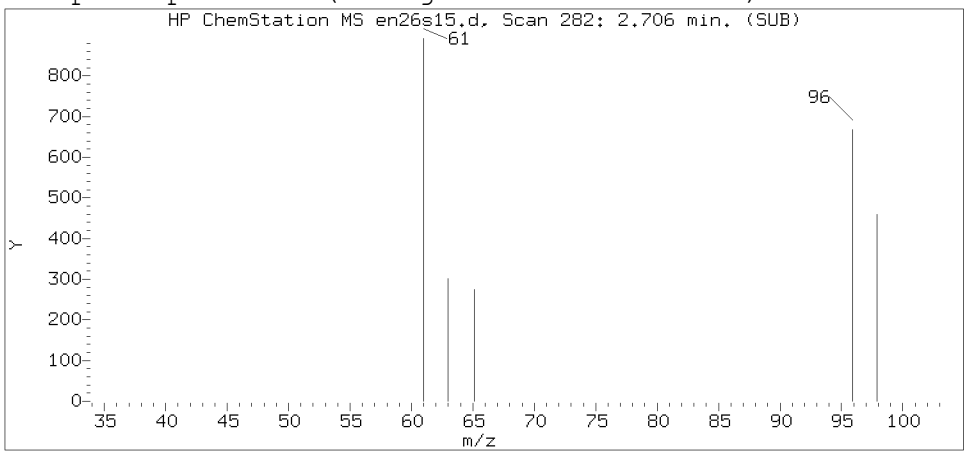
Digitally signed by Jason M. Long on 11/27/2019 at 14:39.
Target 3.5 esignature user ID: jml01693

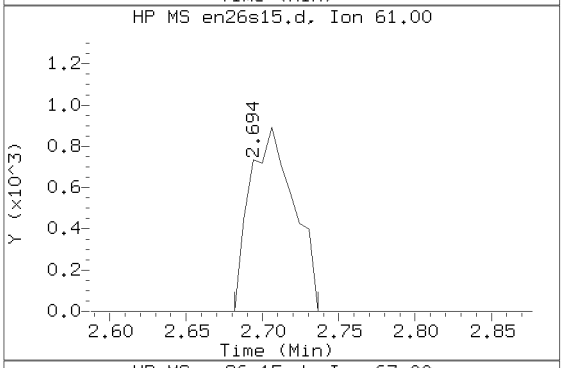
Reference Standard Spectrum for trans-1,2-Dichloroethene

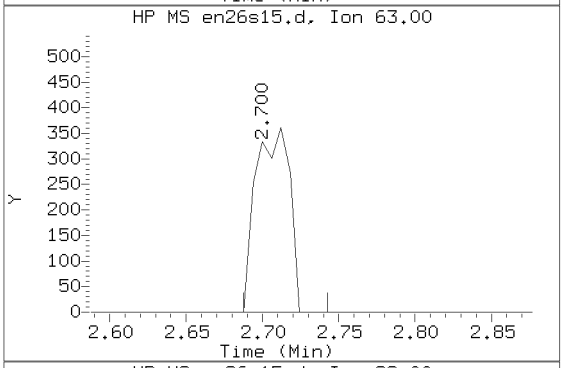




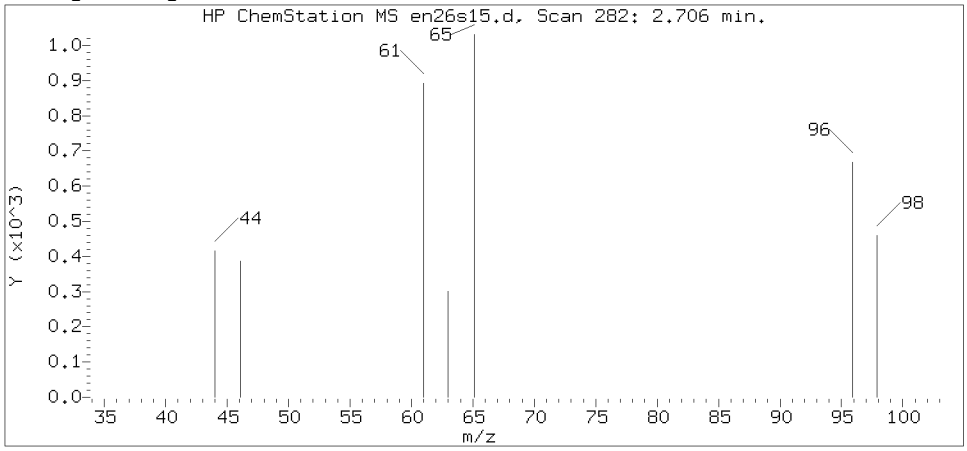
Sample Spectrum (Background Subtracted)

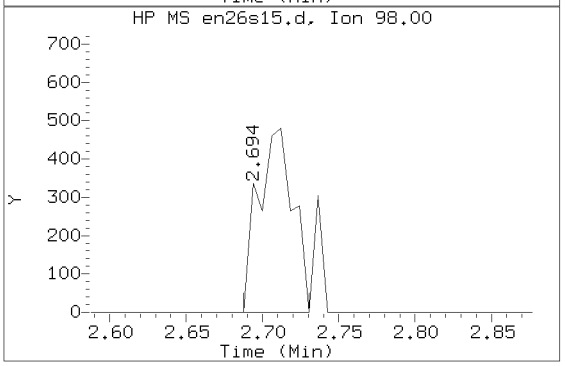






Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19nov26a.b/en26s15.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 16:46 Analyst ID: jml01693

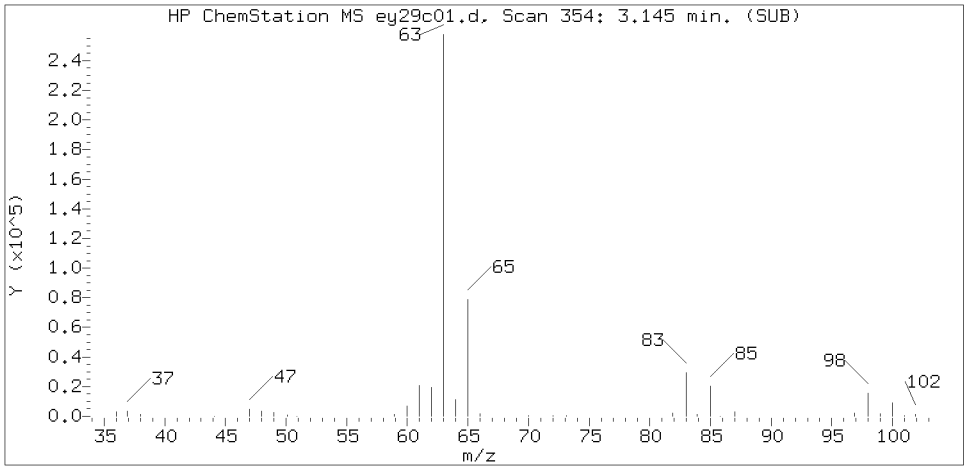
Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:04 Automation

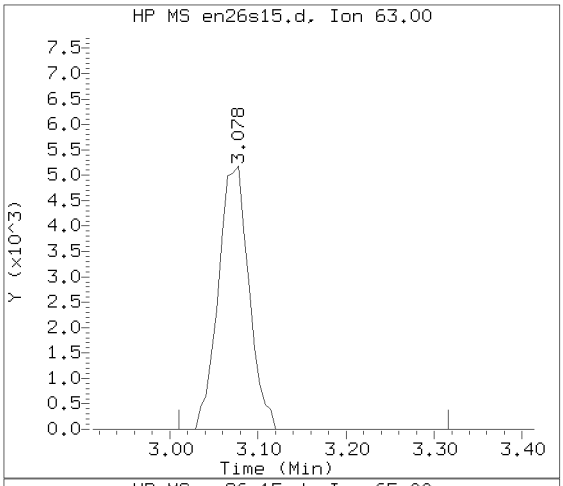
Sample Name: WIN14 Lab Sample ID: 1206742

Compound Number : 32
Compound Name : trans-1,2-Dichloroethene
Scan Number : 282
Retention Time (minutes): 2.706
Relative Retention Time :-0.00073
Quant Ion : 96.00
Area (flag) : 1035
On-Column Amount (ng) : 0.2227

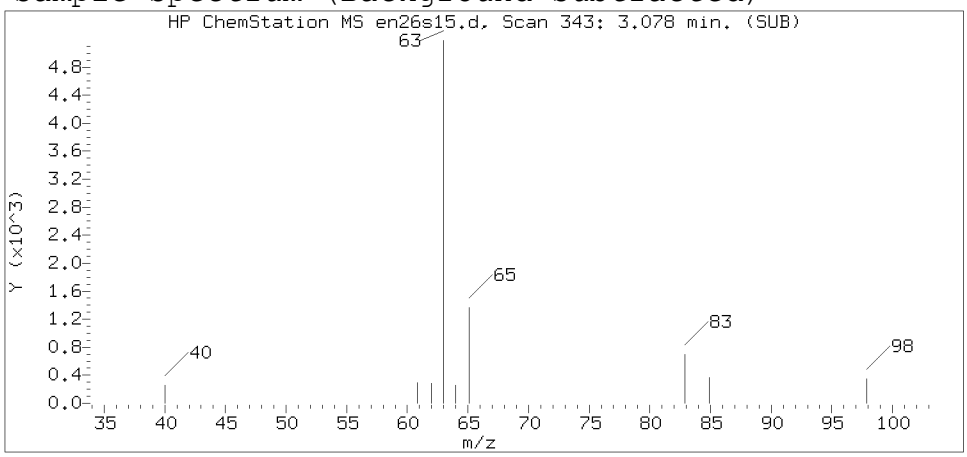
Digitally signed by Jason M. Long on 11/27/2019 at 14:39.
Target 3.5 esignature user ID: jml01693

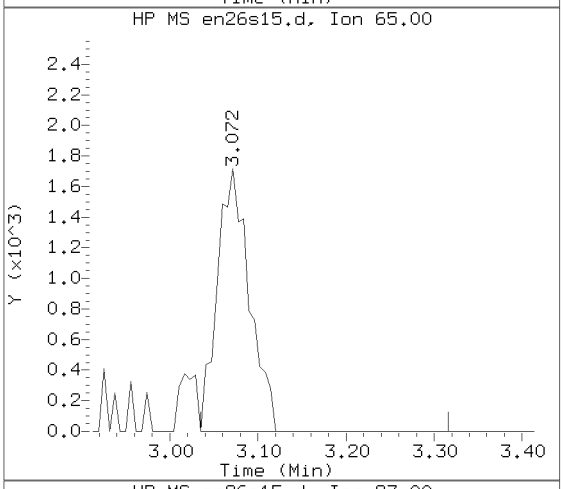
Reference Standard Spectrum for 1,1-Dichloroethane



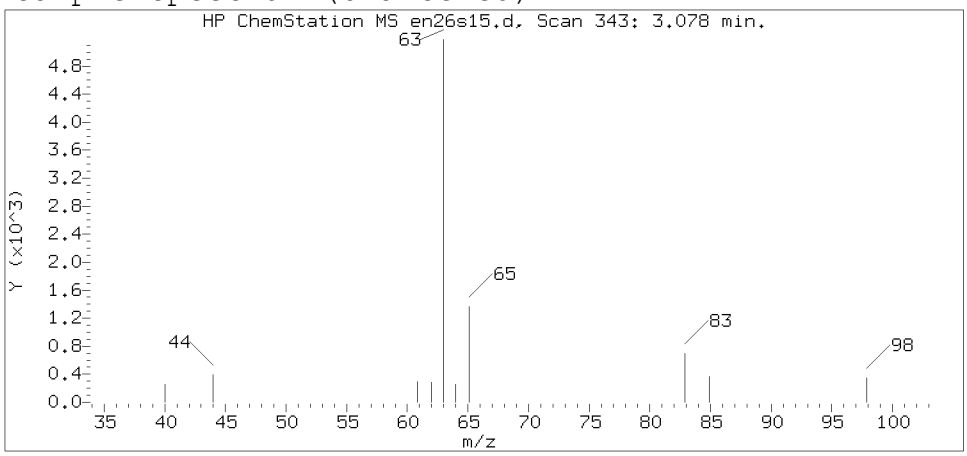


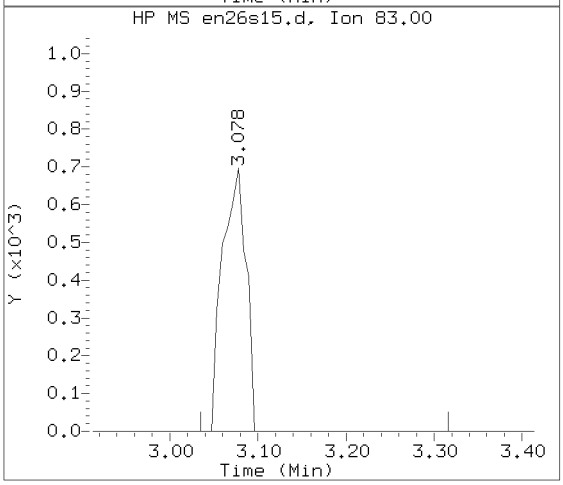
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19nov26a.b/en26s15.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 16:46 Analyst ID: jml01693

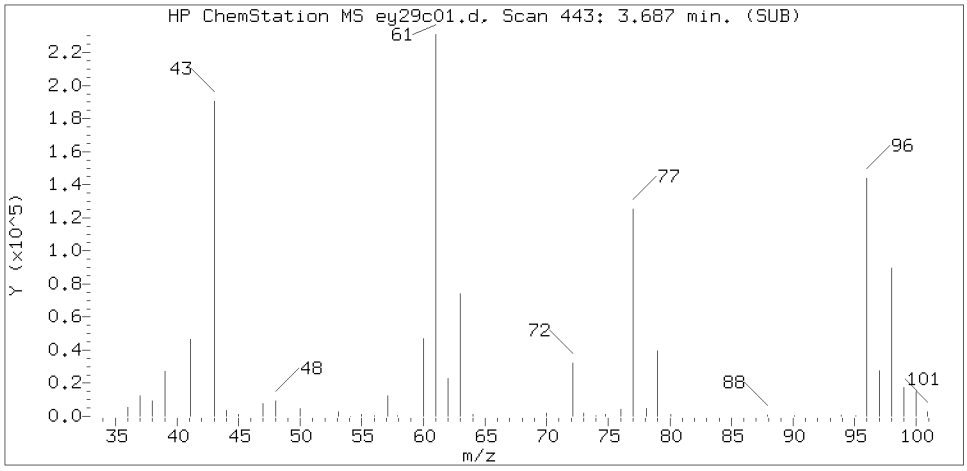
Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:04 Automation

Sample Name: WIN14 Lab Sample ID: 1206742

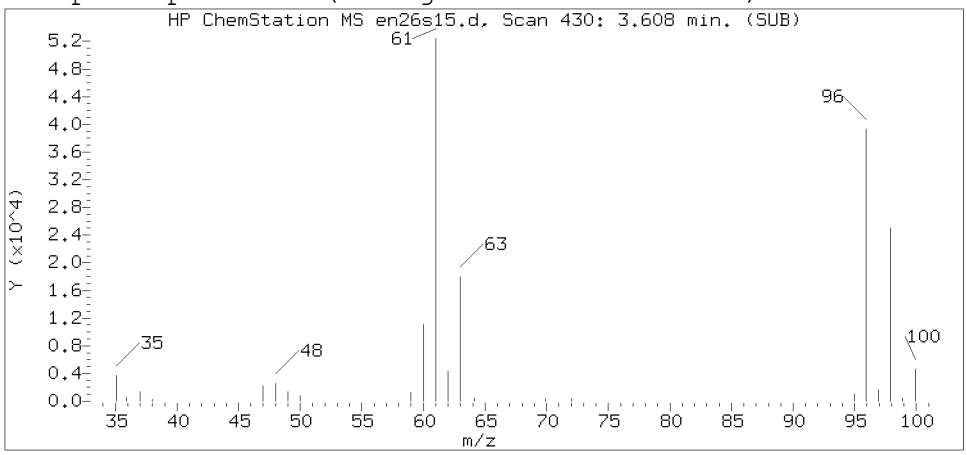
Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 343
Retention Time (minutes): 3.078
Relative Retention Time :-0.00083
Quant Ion : 63.00
Area (flag) : 12524
On-Column Amount (ng) : 1.2650

Digitally signed by Jason M. Long on 11/27/2019 at 14:39.
Target 3.5 esignature user ID: jml01693

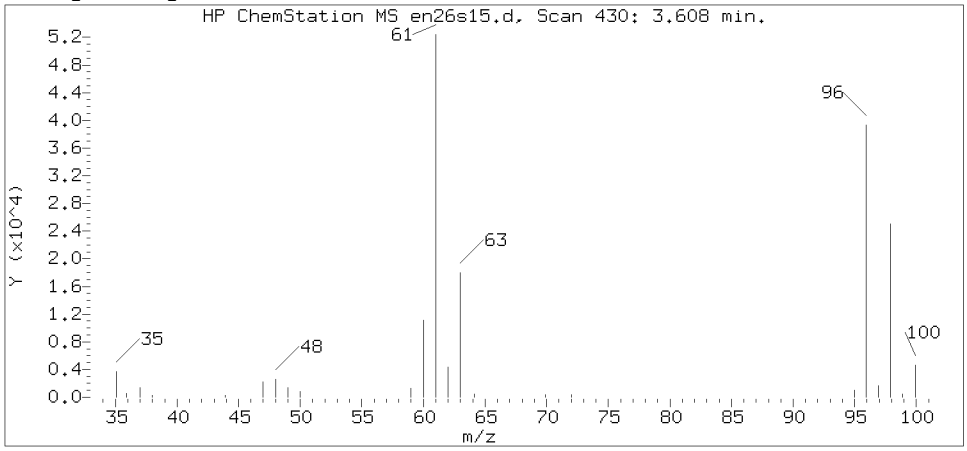
Reference Standard Spectrum for cis-1,2-Dichloroethene

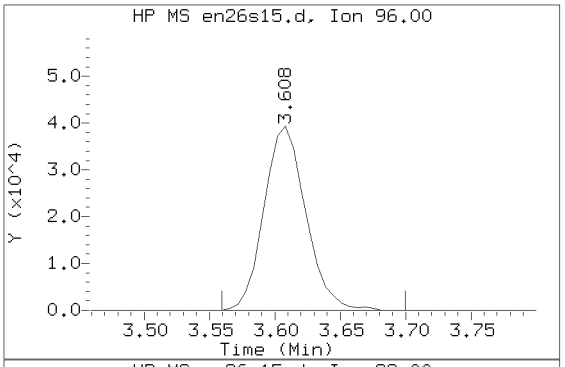


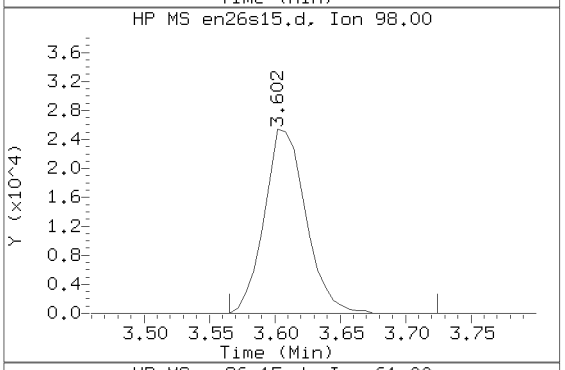
Sample Spectrum (Background Subtracted)

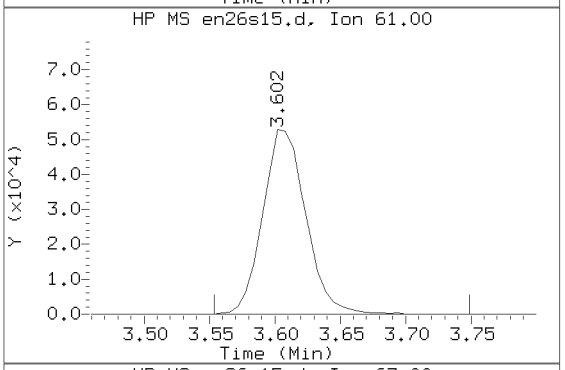


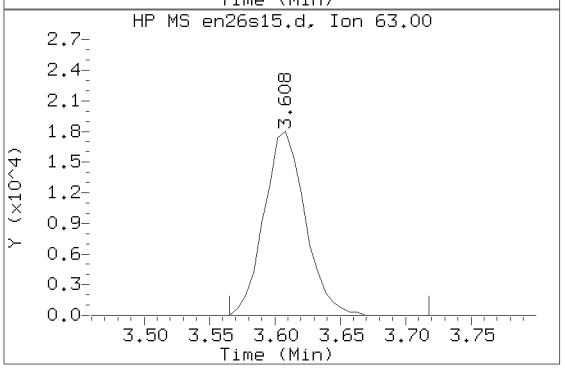
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19nov26a.b/en26s15.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 16:46 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:04 Automation

Sample Name: WIN14 Lab Sample ID: 1206742

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 430
Retention Time (minutes): 3.608
Relative Retention Time :-0.00098
Quant Ion : 96.00
Area (flag) : 87427
On-Column Amount (ng) : 16.4239

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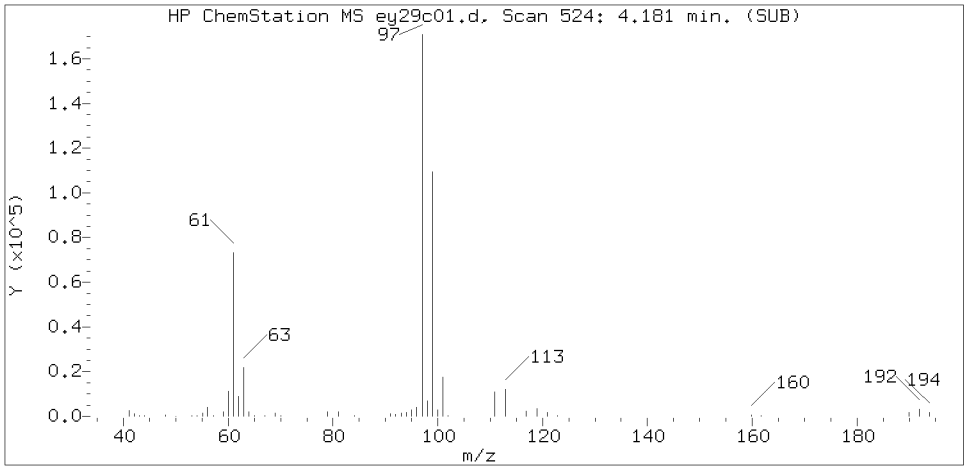
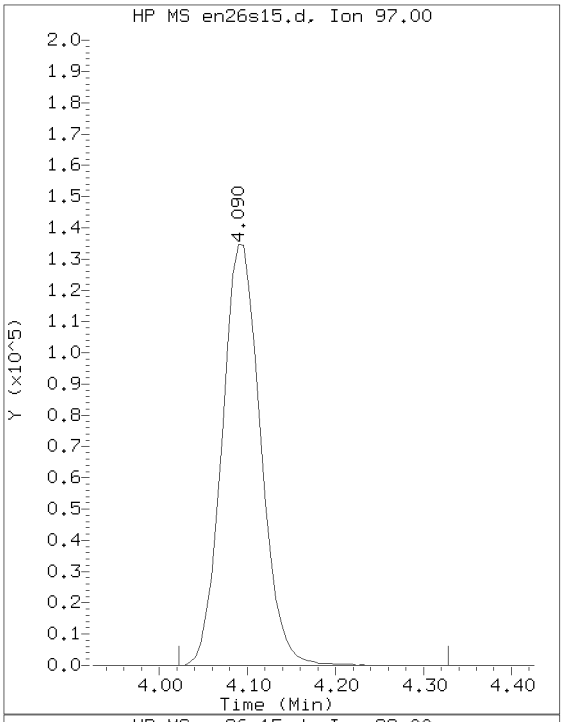
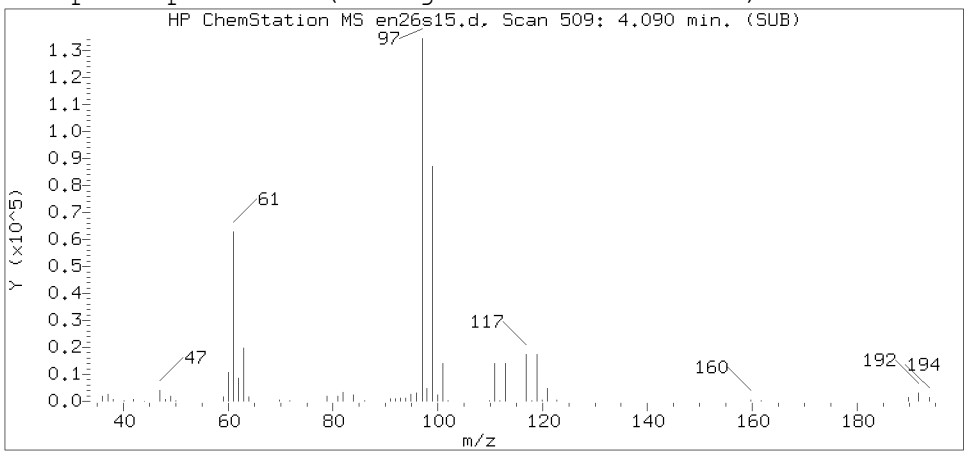
Target 3.5 esignature user ID: jml01693

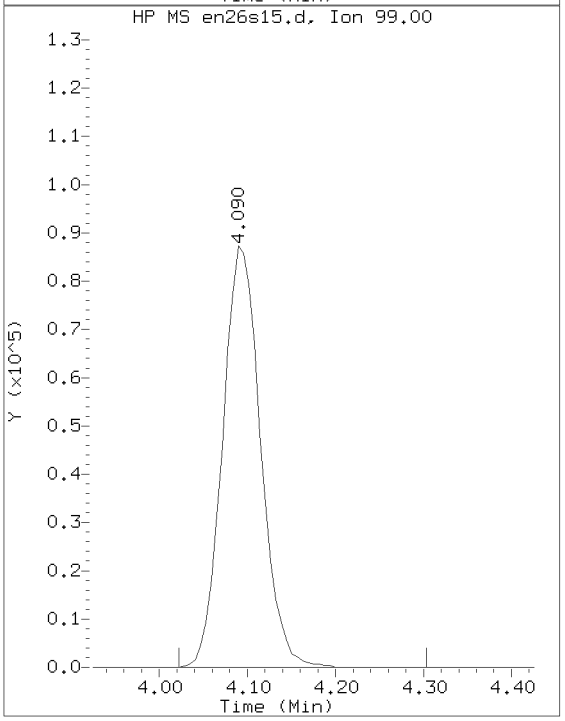
Reference Standard Spectrum for 1,1,1-Trichloroethane



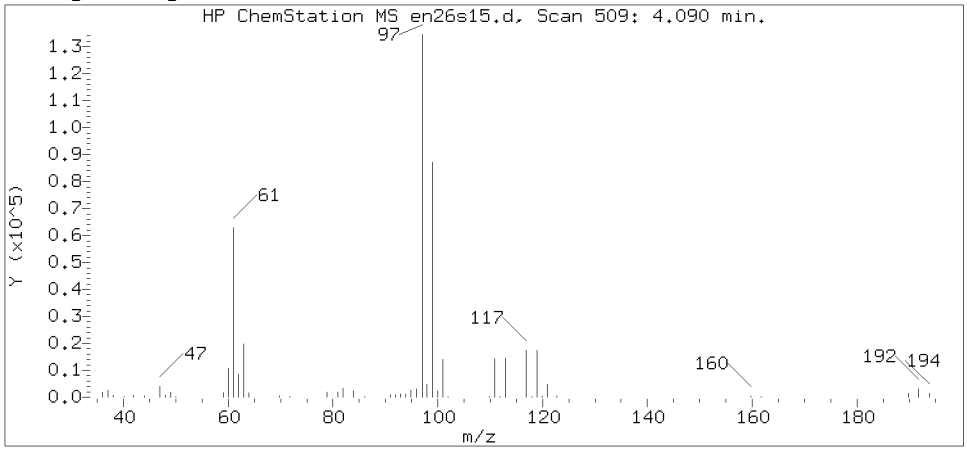


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP15648.i/19nov26a.b/en26s15.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 16:46 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:04 Automation

Sample Name: WIN14 Lab Sample ID: 1206742

Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 509
Retention Time (minutes): 4.090
Relative Retention Time :-0.00112
Quant Ion : 97.00
Area (flag) : 409604
On-Column Amount (ng) : 57.9576

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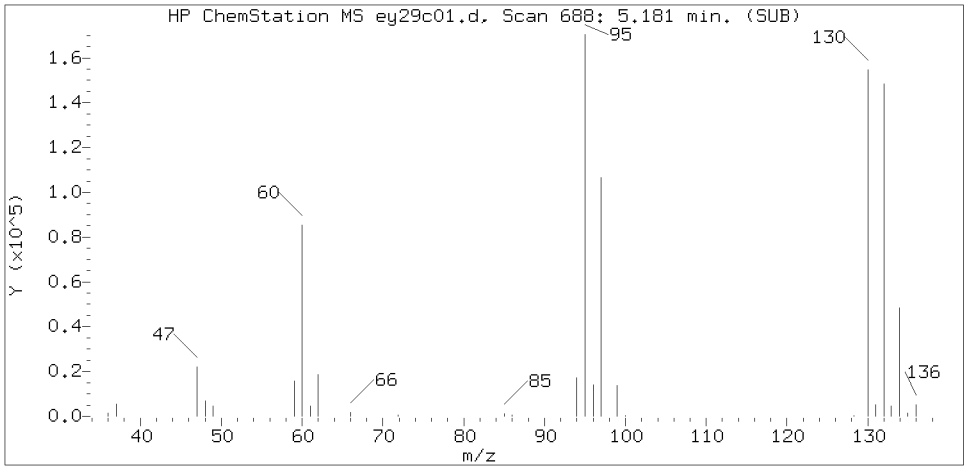
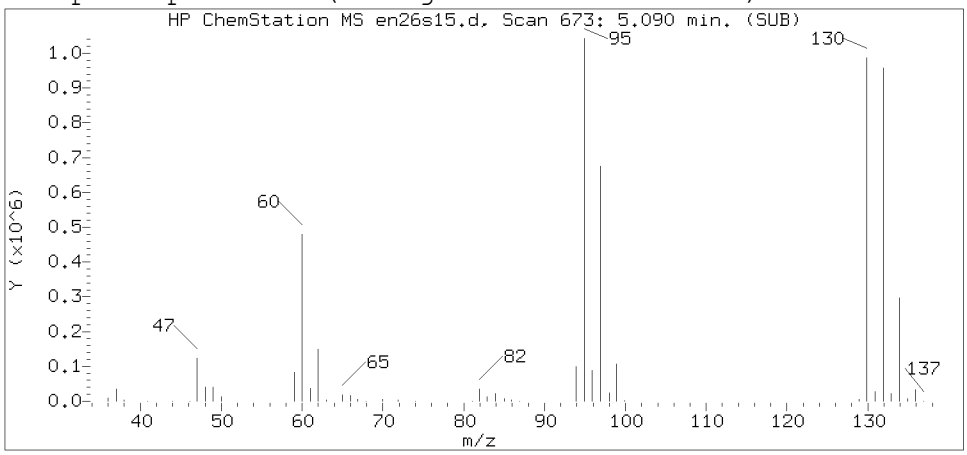
Target 3.5 esignature user ID: jml01693

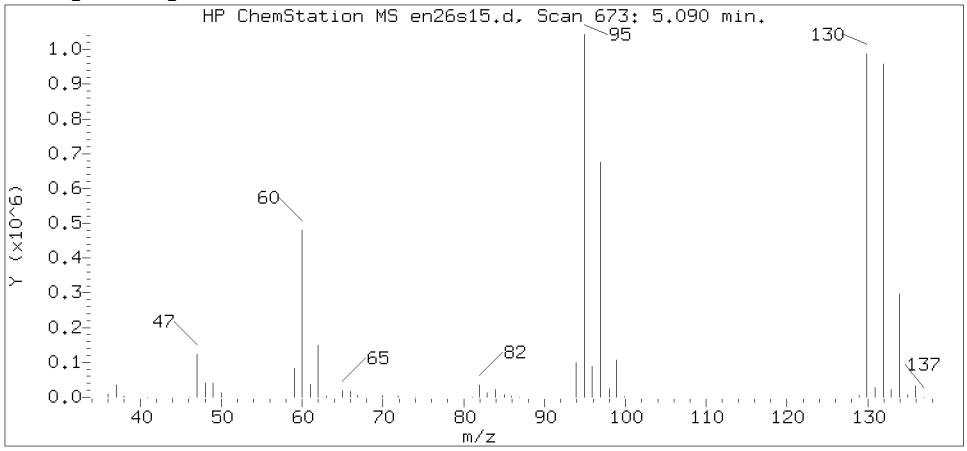
Reference Standard Spectrum for Trichloroethene

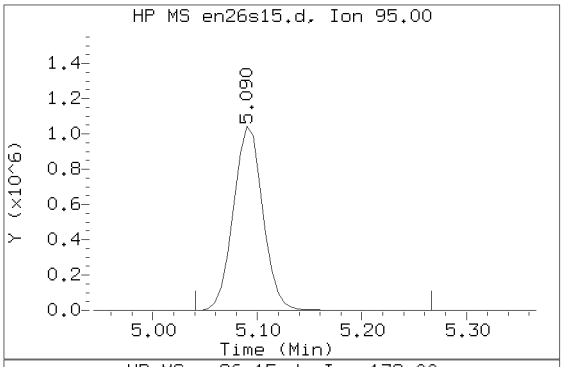


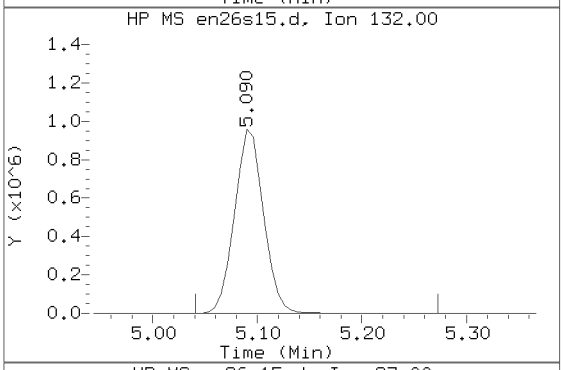
Sample Spectrum (Background Subtracted)

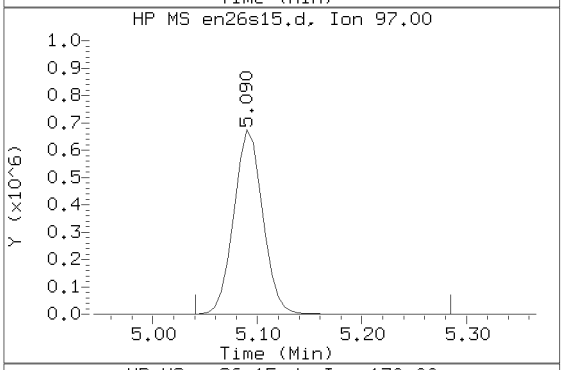


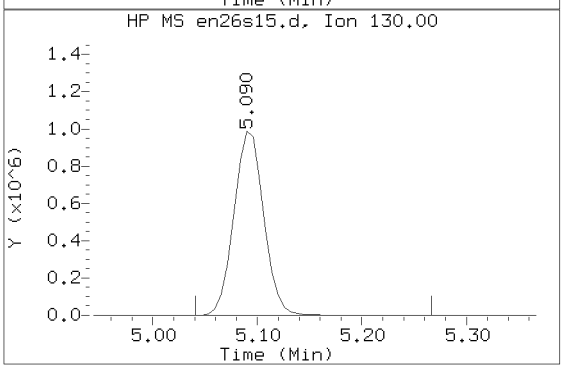
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19nov26a.b/en26s15.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 16:46 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:04 Automation

Sample Name: WIN14 Lab Sample ID: 1206742

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 673
Retention Time (minutes): 5.090
Relative Retention Time :-0.00011
Quant Ion : 95.00
Area (flag) : 2056658
On-Column Amount (ng) : 397.0742

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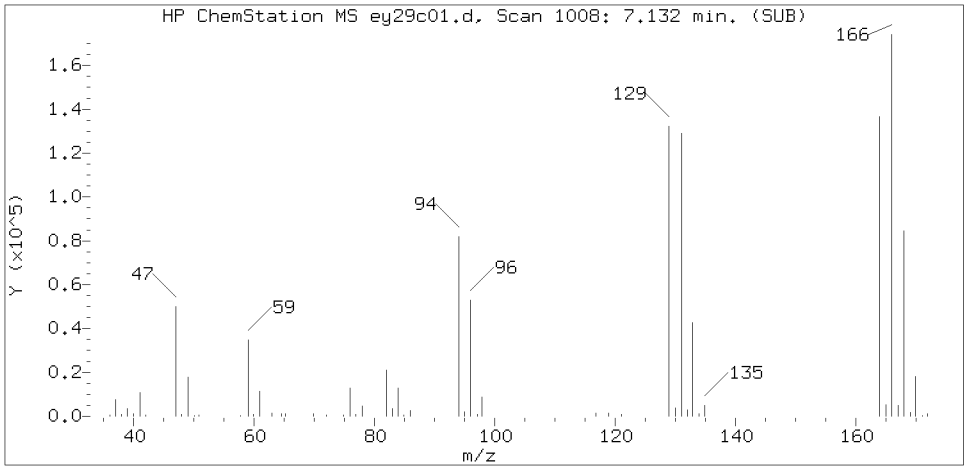
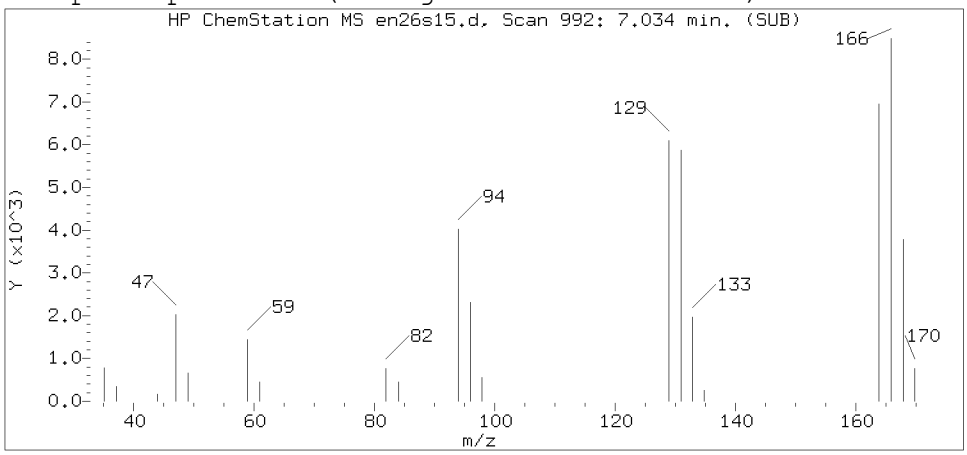
Target 3.5 esignature user ID: jml01693

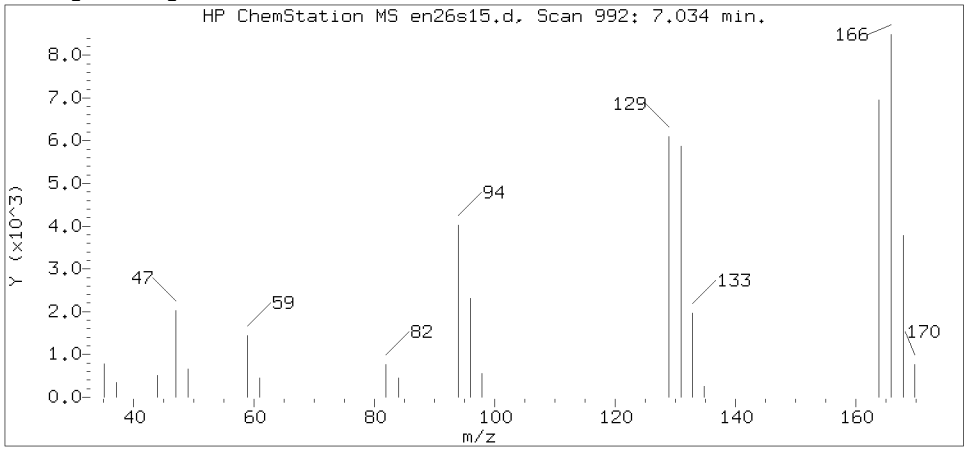
Reference Standard Spectrum for Tetrachloroethene

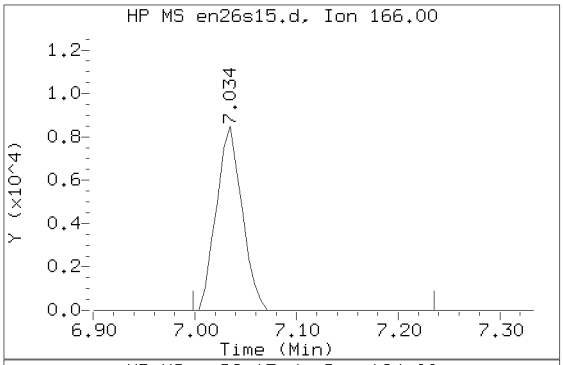


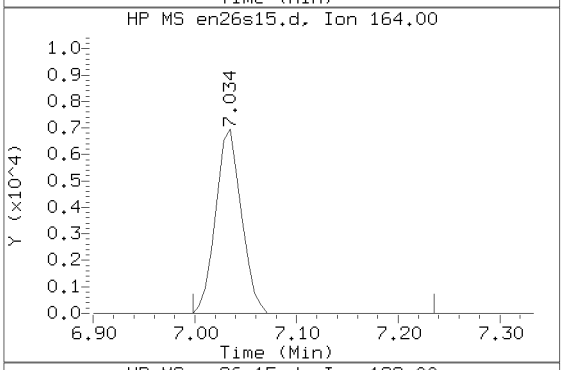
Sample Spectrum (Background Subtracted)

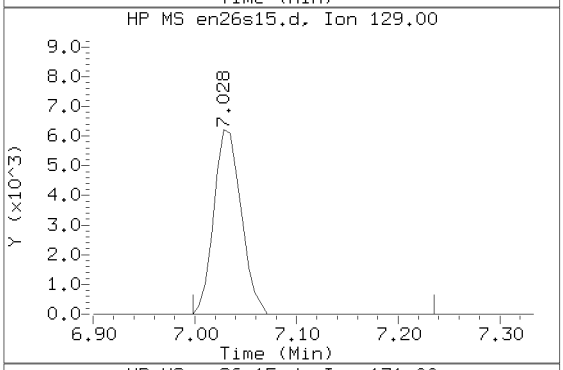


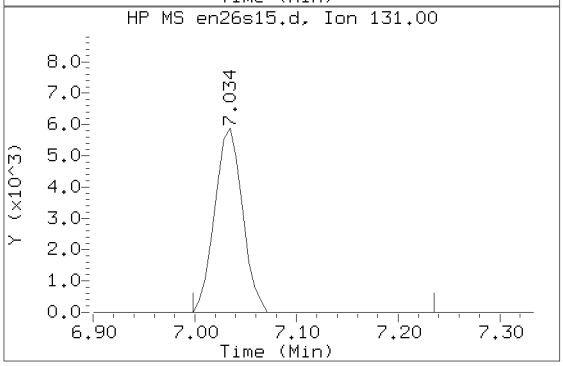
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19nov26a.b/en26s15.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 16:46 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:04 Automation

Sample Name: WIN14 Lab Sample ID: 1206742

Compound Number : 94
Compound Name : Tetrachloroethene
Scan Number : 992
Retention Time (minutes): 7.034
Relative Retention Time : 0.00000
Quant Ion : 166.00
Area (flag) : 14852
On-Column Amount (ng) : 2.9439

Digitally signed by Jason M. Long on 11/27/2019 at 14:39.
Target 3.5 esignature user ID: jml01693

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WIN14DL

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1206742

Sample wt/vol: 0.50 (g/mL) mL Lab File ID: HP09355.i/19nov27b.b/yn27s43.d

Level: (low/med) LOW Date Received: 11/20/19

Moisture: not dec. _____ Date Analyzed: 11/28/19

Column: (pack/cap) CAP Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	10	U
75-35-4	1,1-Dichloroethene	5	J D
67-64-1	Acetone	200	U
76-13-1	Freon 113	100	U
75-15-0	Carbon Disulfide	50	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	14	D
78-93-3	2-Butanone	100	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	46	D
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	360	D
123-91-1	1,4-Dioxane	2500	U
108-88-3	Toluene	10	U
127-18-4	Tetrachloroethene	2	J D
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (Total)	60	U
95-50-1	1,2-Dichlorobenzene	50	U
91-20-3	Naphthalene	50	U

FORM I VOA

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WIN14DL

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1206742DL

Data file: /chem2/HP09355.i/19nov27b.b/yn27s43.d Injection date and time: **28-NOV-2019 01:28**
Data file Sample Info. Line: WIN14DL;1206742DL;1;0;;JCW26;;;yn27b31; Instrument ID: **HP09355.i** Batch: **Y193312AA**
Date, time and analyst ID of latest file update: 28-Nov-2019 01:45 Automation

Blank Data file reference: **/chem2/HP09355.i/19nov27b.b/yn27b31.d**

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 27-NOV-2019 21:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19nov27b.b/yn27c05.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 0.5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.355	(0.000)	456	65	294861	(-9)	250.00	
66) Fluorobenzene	7.866	(0.006)	1033	96	996513	(-3)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	720157	(-4)	50.00	
131) 1,4-Dichlorobenzene-d4	13.183	(0.000)	1907	152	370732	(-4)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.971	(0.000)	113	213323	45.621	91%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434	(-0.001)	102	58980	48.248	96%		80 - 120
83) Toluene-d8	(3)	9.861	(0.001)	98	958173	49.175	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.301	(0.001)	95	349569	46.956	94%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					2	10
17) 1,1-Dichloroethene	(2)	3.686	(0.000)	96	2348	0.543	5.43		J	2	10
18) Acetone	(1)				Not Detected					7	200
19) Freon 113	(2)				Not Detected					2	100
23) Carbon Disulfide	(2)				Not Detected					2	50
28) Methylene Chloride	(2)				Not Detected					3	10
32) trans-1,2-Dichloroethene	(2)				Not Detected					2	10
36) 1,1-Dichloroethane	(2)				Not Detected					2	10
42) cis-1,2-Dichloroethene	(2)	6.278	(-0.000)	96	8014	1.407	14.07			2	10
44) 2-Butanone	(2)				Not Detected					3	100
51) Chloroform	(2)				Not Detected					2	10
53) 1,1,1-Trichloroethane	(2)	6.990	(0.000)	97	35238	4.609	46.09			3	10
60) Benzene	(2)				Not Detected					2	10
61) 1,2-Dichloroethane	(2)				Not Detected					3	10
71) Trichloroethene	(2)	8.352	(-0.000)	95	199630	35.770	357.70			2	10
75) 1,4-Dioxane	(1)				Not Detected					290	2500
88) Toluene	(3)				Not Detected					2	10
93) Tetrachloroethene	(3)	10.482	(0.000)	166	1385	0.246	2.46		J	2	10
104) Ethylbenzene	(3)				Not Detected					4	10
106) m+p-Xylene	(3)				Not Detected					10	50
107) o-Xylene	(3)				Not Detected					4	10
108) Xylene (Total)	(3)				Not Detected					14	60
138) 1,2-Dichlorobenzene	(4)				Not Detected					2	50
148) Naphthalene	(4)				Not Detected					10	50

Digitally signed by Linda C. Pape on 11/30/2019 at 13:13. Target 3.5 esignature user ID: lcp00895

Data file: /chem2/HP09355.i/19nov27b.b/yn27s43.d Injection date and time: **28-NOV-2019 01:28**
Data file Sample Info. Line: WIN14DL;1206742DL;1;0;;JCW26;;;yn27b31; Instrument ID: **HP09355.i** Batch: **Y193312AA**
Date, time and analyst ID of latest file update: 28-Nov-2019 01:45 Automation

Blank Data file reference: **/chem2/HP09355.i/19nov27b.b/yn27b31.d**

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 27-NOV-2019 21:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19nov27b.b/yn27c05.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

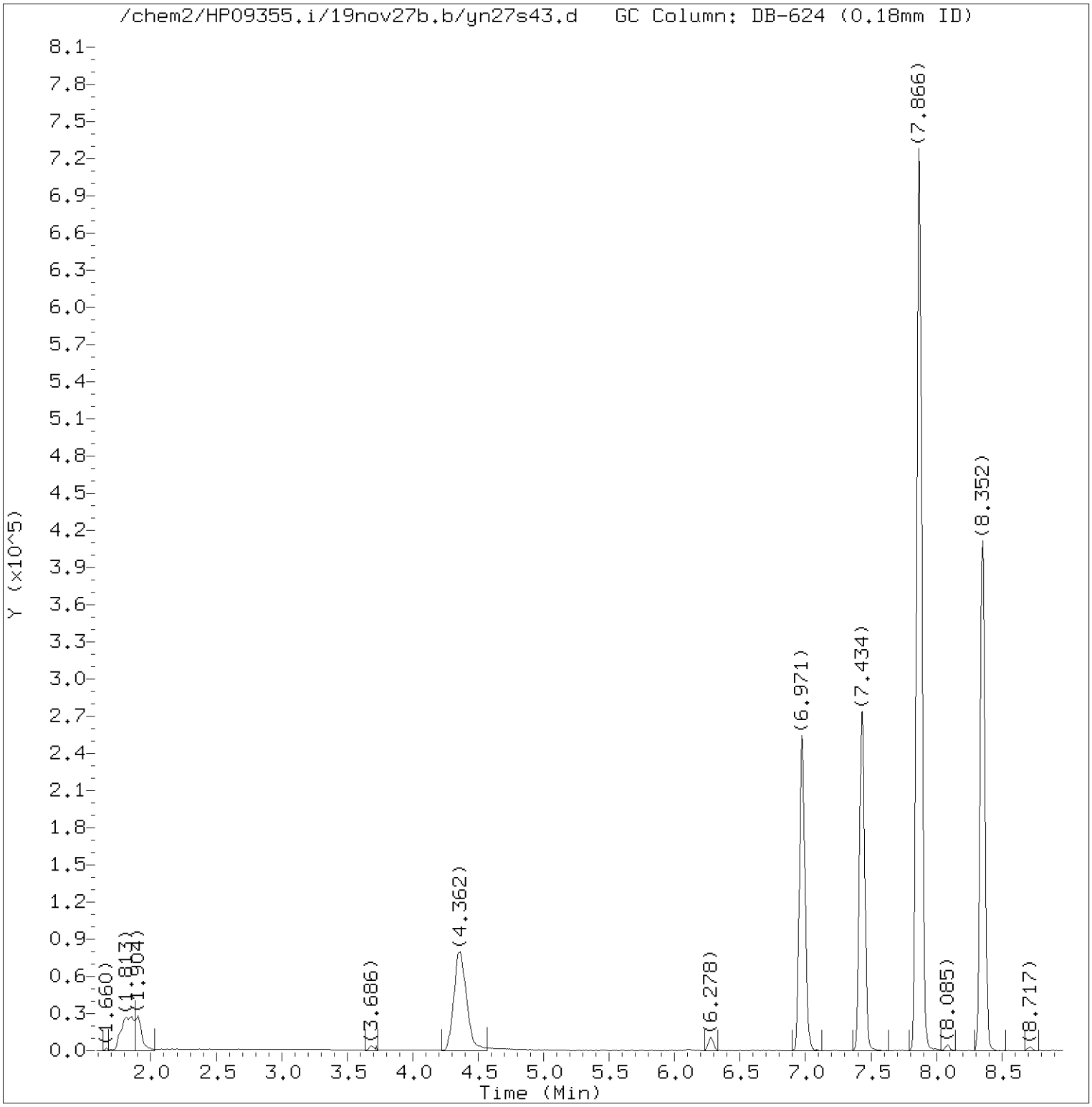
Volume Purged (Vt): 5 ml Sample Volume (Vo): 0.5 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Linda C. Pape on 11/30/2019 at 13:13. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

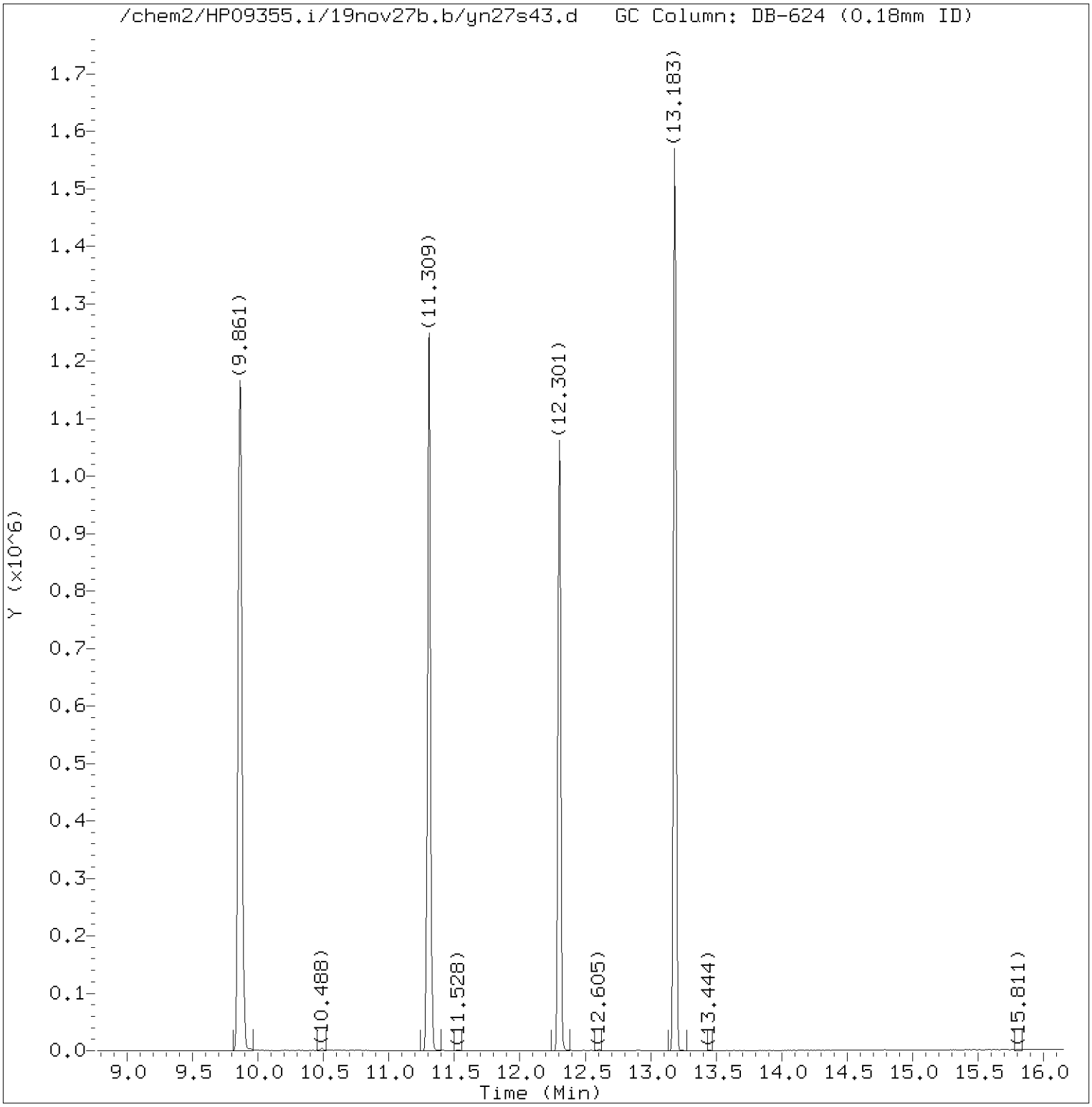
Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27s43.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 01:28 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 01:45 Automation

Sample Name: WIN14DL Lab Sample ID: 1206742DL

Digitally signed by Linda C. Pape
on 11/30/2019 at 13:13.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27s43.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 01:28 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 01:45 Automation

Sample Name: WIN14DL Lab Sample ID: 1206742DL

Digitally signed by Linda C. Pape
on 11/30/2019 at 13:13.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27s43.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 01:28 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 01:45 Automation

Sample Name: WIN14DL Lab Sample ID: 1206742DL

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	3.686	96	2348	0.543
29)*t-Butyl alcohol-d10	(1)	4.355	65	294861	250.000
42) cis-1,2-Dichloroethene	(2)	6.278	96	8014	1.407
52)$Dibromofluoromethane	(2)	6.971	113	213323	45.621
53) 1,1,1-Trichloroethane	(2)	6.990	97	35238	4.609
57)$1,2-Dichloroethane-d4	(2)	7.434	102	58980	48.248
66)*Fluorobenzene	(2)	7.866	96	996513	50.000
71) Trichloroethene	(2)	8.352	95	199630	35.770
83)$Toluene-d8	(3)	9.861	98	958173	49.175
93) Tetrachloroethene	(3)	10.482	166	1385	0.246
100)*Chlorobenzene-d5	(3)	11.309	117	720157	50.000
114)$4-Bromofluorobenzene	(3)	12.301	95	349569	46.956
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	370732	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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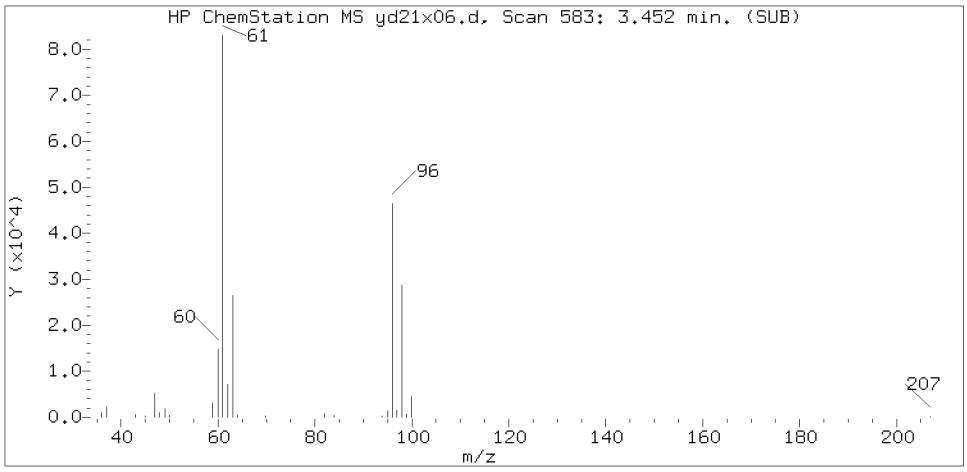
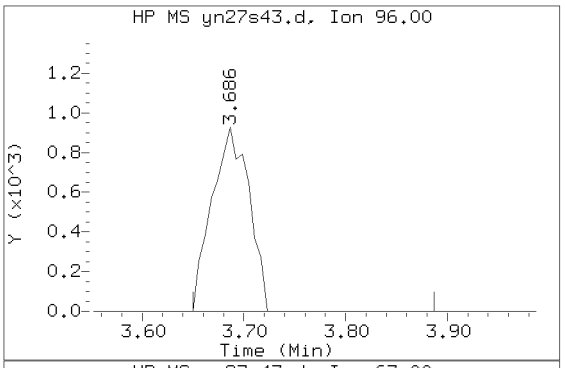
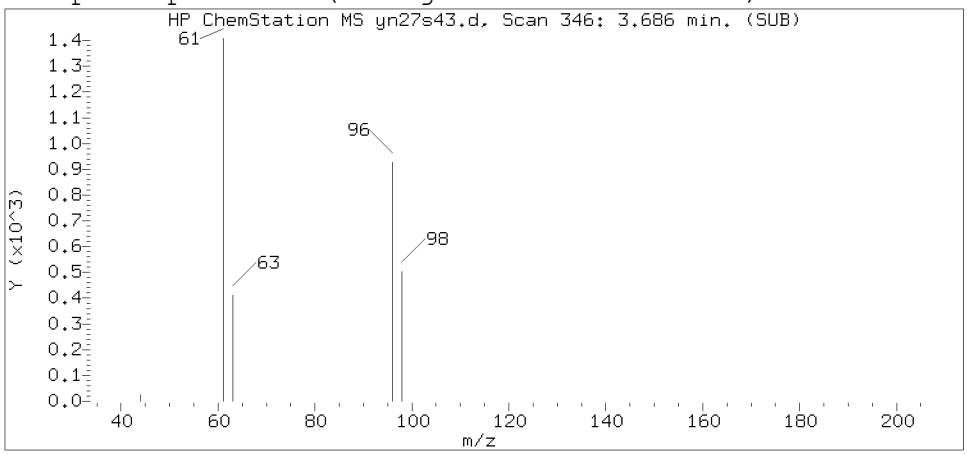
on 11/30/2019 at 13:13.
Target 3.5 esignature user ID: lcp00895

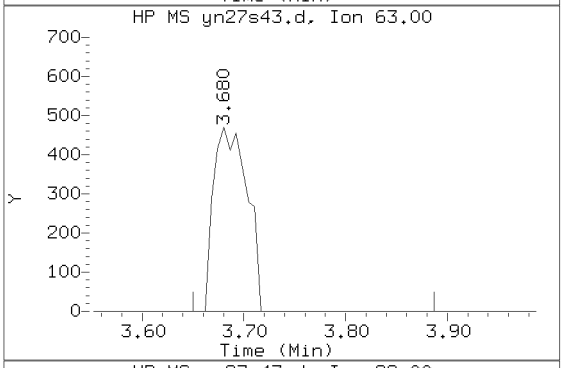
Reference Standard Spectrum for 1,1-Dichloroethene

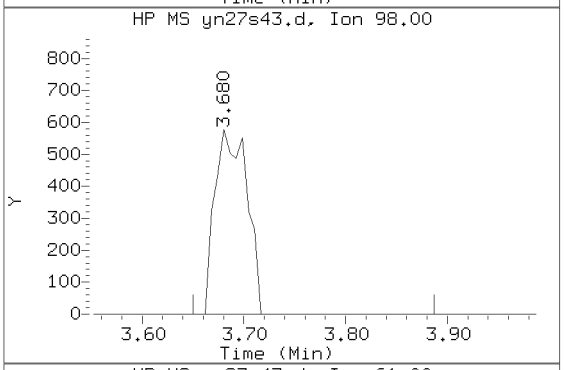




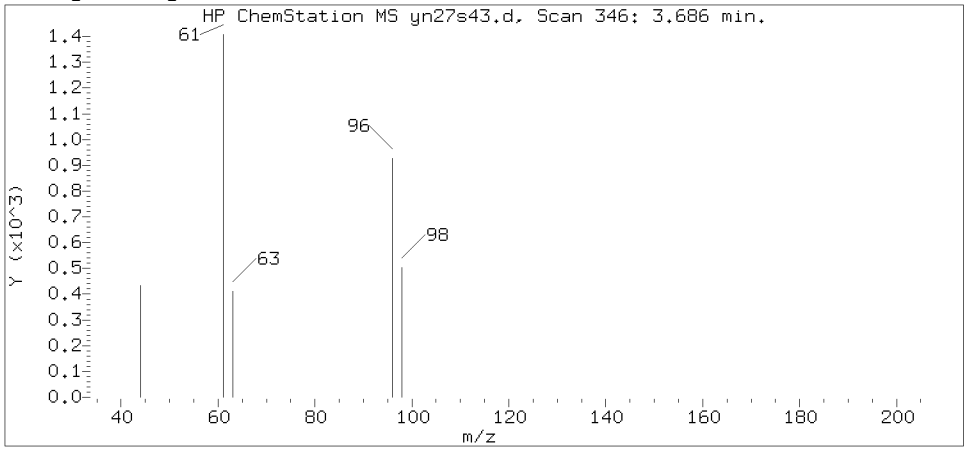
Sample Spectrum (Background Subtracted)

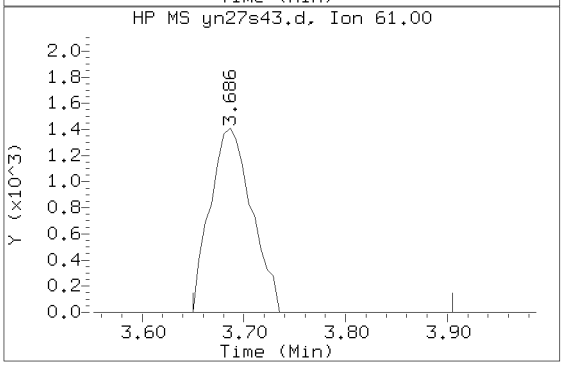






Sample Spectrum (Unaltered)





Data File: /chem2/HP09355.i/19nov27b.b/yn27s43.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 01:28 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 01:45 Automation

Sample Name: WIN14DL Lab Sample ID: 1206742DL

Compound Number	: 17
Compound Name	: 1,1-Dichloroethene
Scan Number	: 346
Retention Time (minutes)	: 3.686
Relative Retention Time	: 0.00041
Quant Ion	: 96.00
Area (flag)	: 2348
On-Column Amount (ng)	: 0.5429

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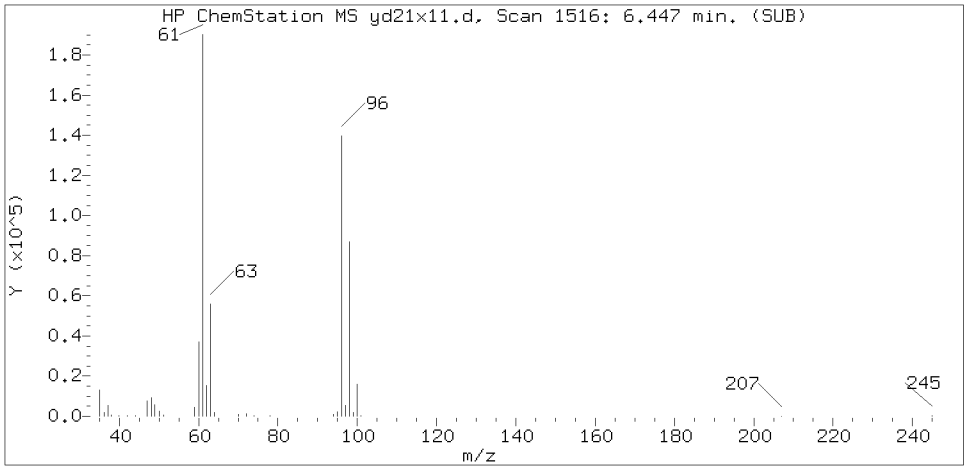
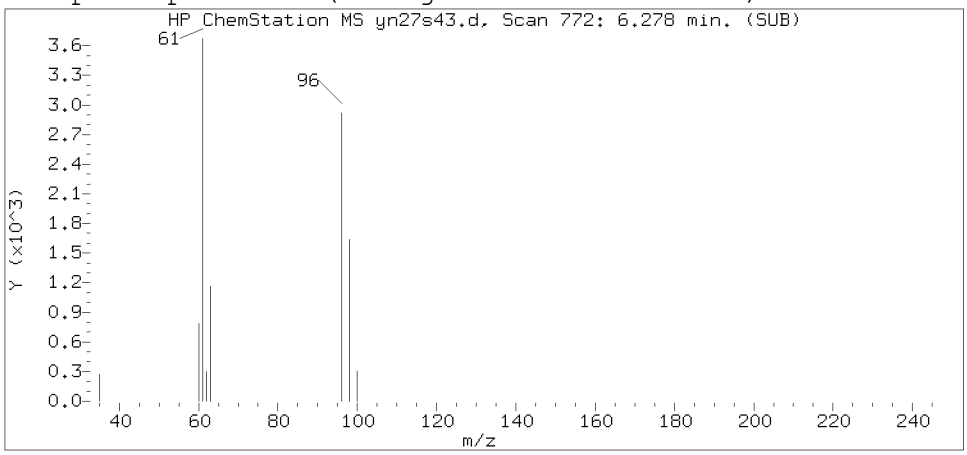
Target 3.5 esignature user ID: lcp00895

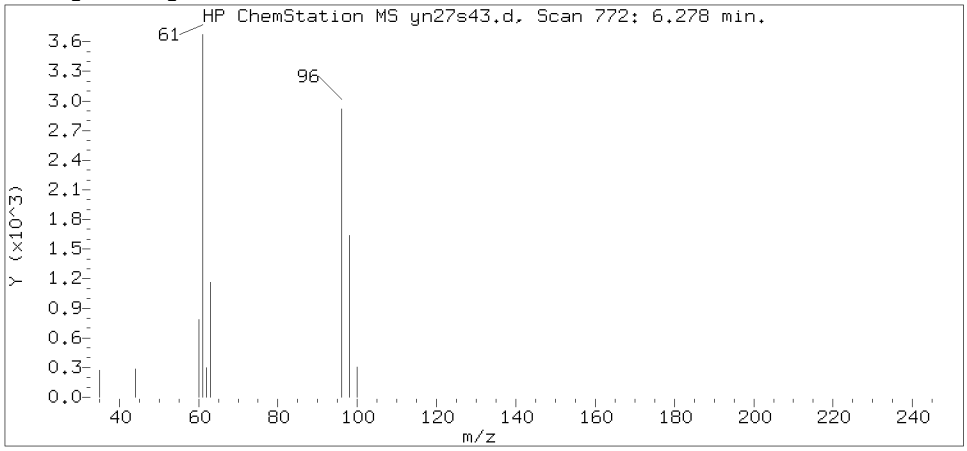
Reference Standard Spectrum for cis-1,2-Dichloroethene

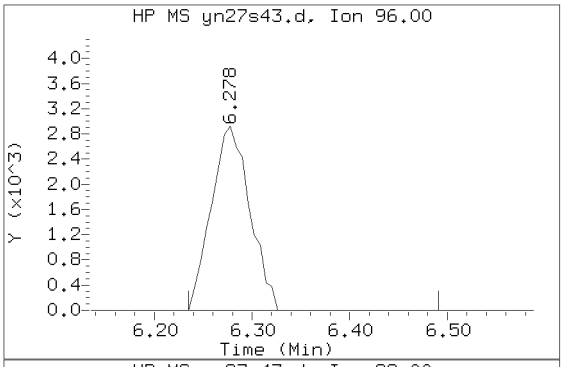


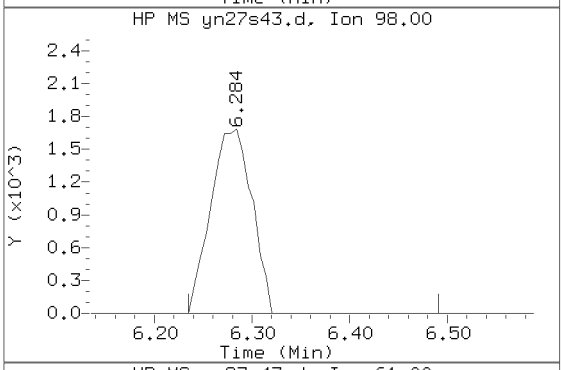
Sample Spectrum (Background Subtracted)

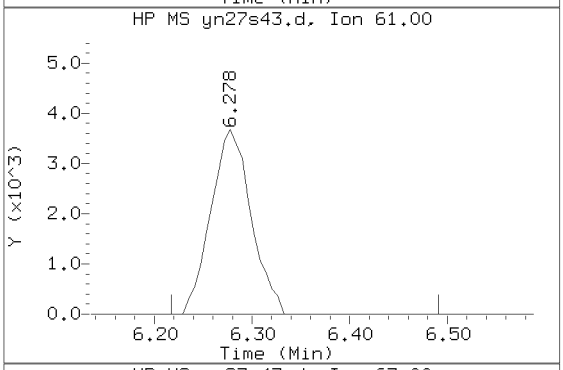


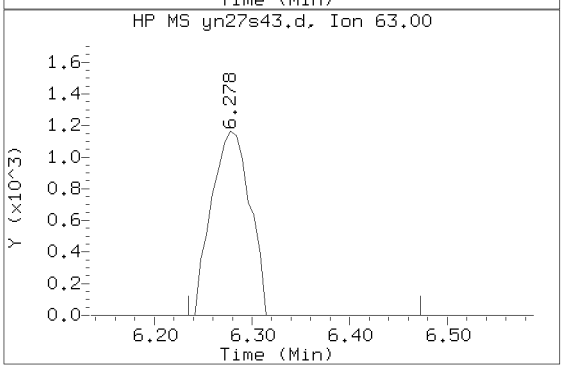
Sample Spectrum (Unaltered)











Data File: /chem2/HP09355.i/19nov27b.b/yn27s43.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 01:28 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 01:45 Automation

Sample Name: WIN14DL Lab Sample ID: 1206742DL

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 772
Retention Time (minutes): 6.278
Relative Retention Time :-0.00062
Quant Ion : 96.00
Area (flag) : 8014
On-Column Amount (ng) : 1.4072

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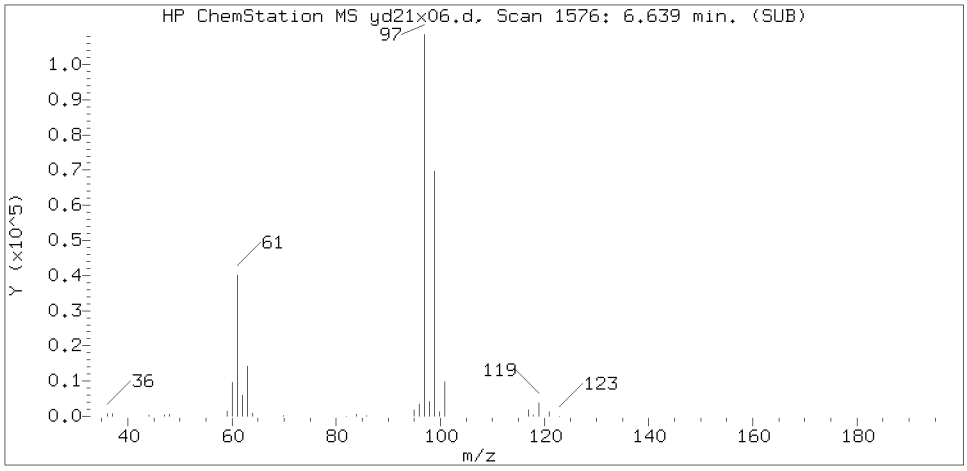
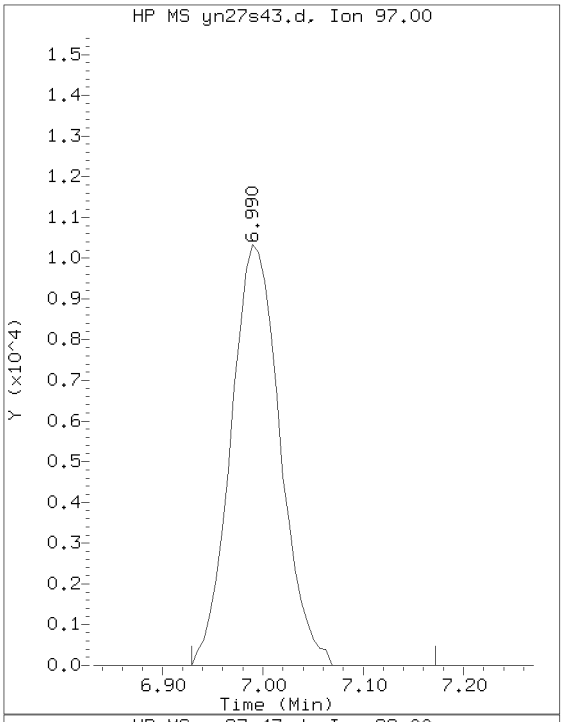
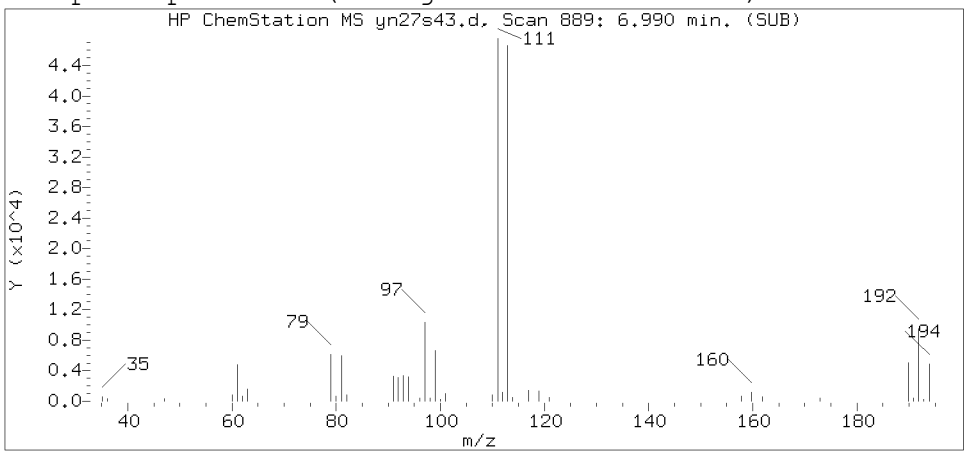
Target 3.5 esignature user ID: lcp00895

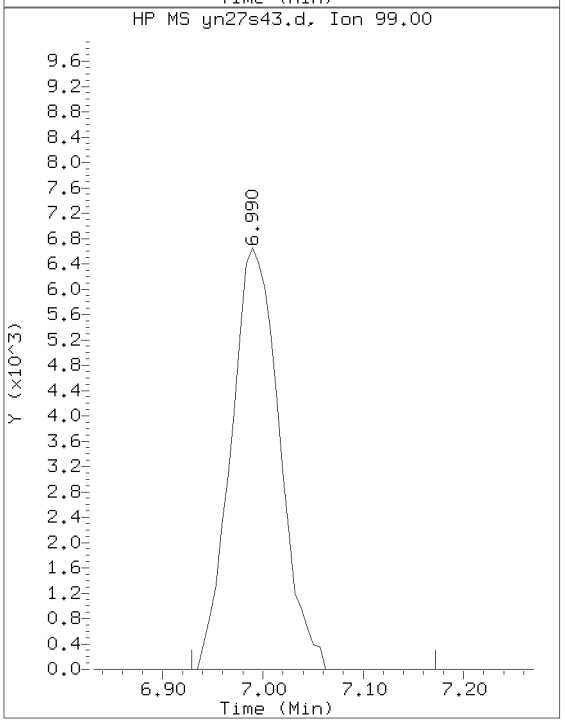
Reference Standard Spectrum for 1,1,1-Trichloroethane



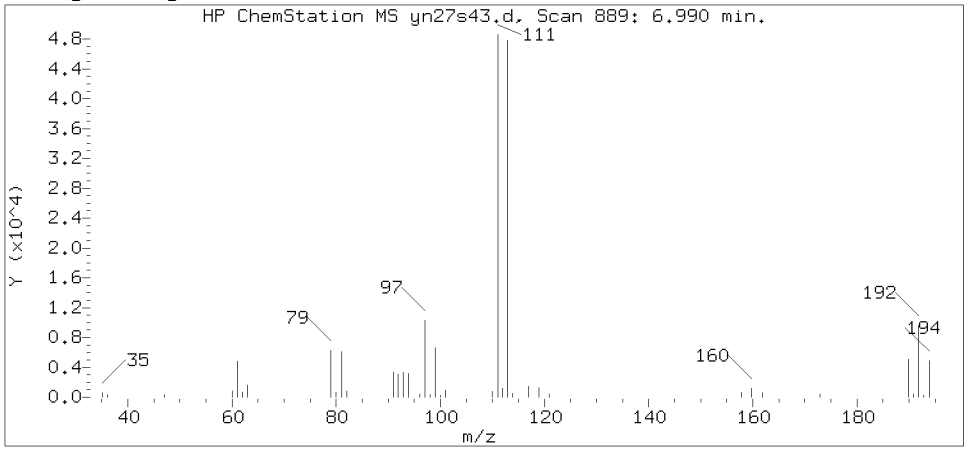


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09355.i/19nov27b.b/yn27s43.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 01:28 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 01:45 Automation

Sample Name: WIN14DL Lab Sample ID: 1206742DL

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 889
Retention Time (minutes)	: 6.990
Relative Retention Time	: 0.00009
Quant Ion	: 97.00
Area (flag)	: 35238
On-Column Amount (ng)	: 4.6095

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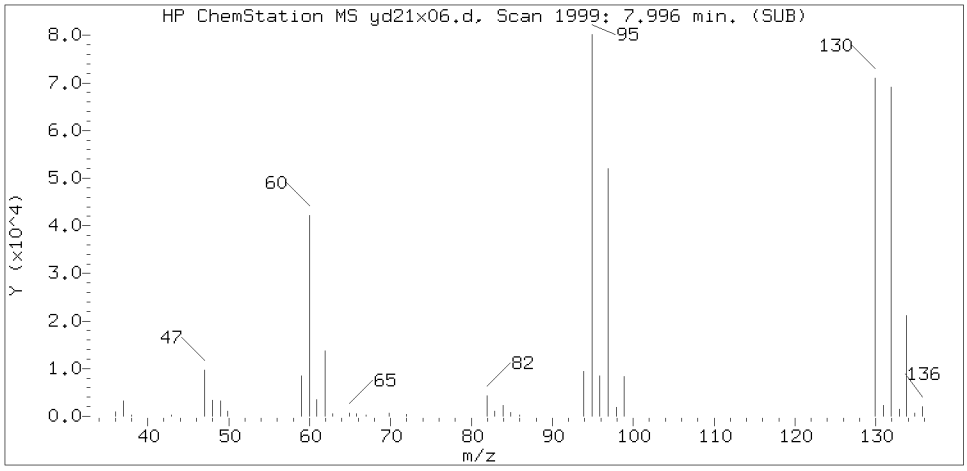
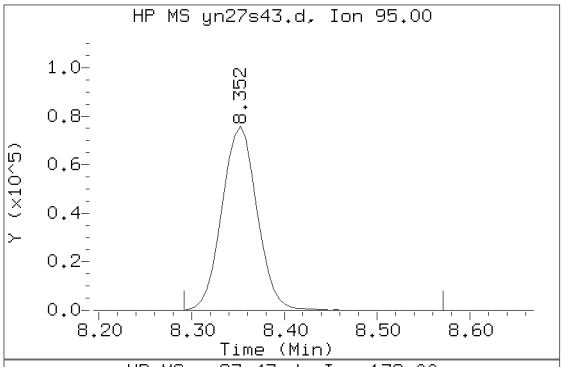
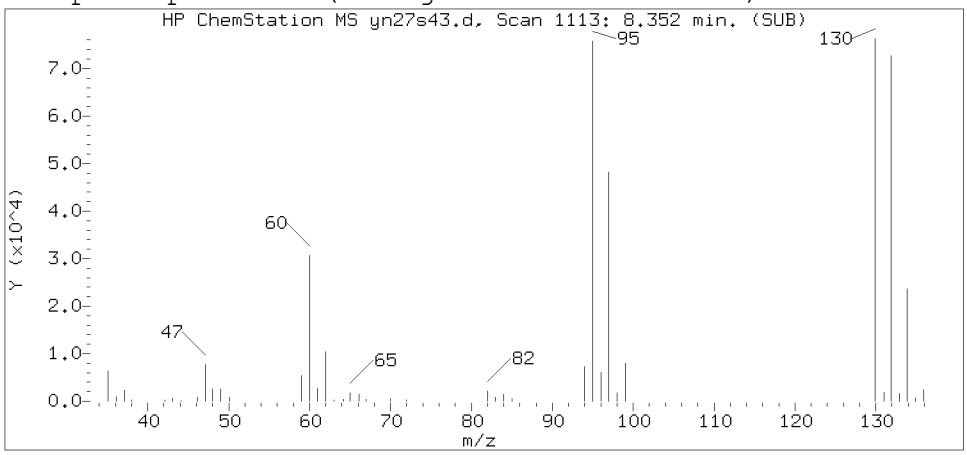
Target 3.5 esignature user ID: lcp00895

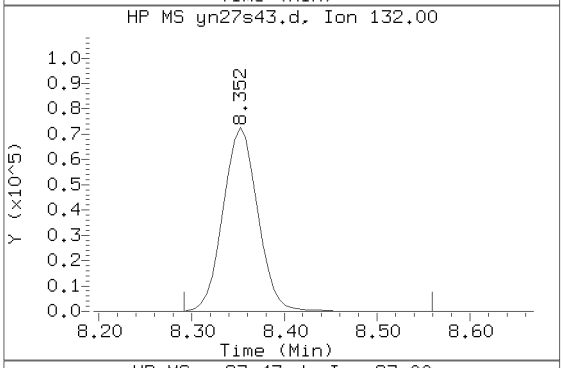
Reference Standard Spectrum for Trichloroethene

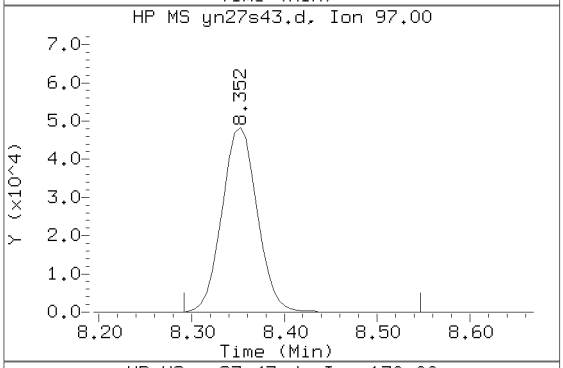




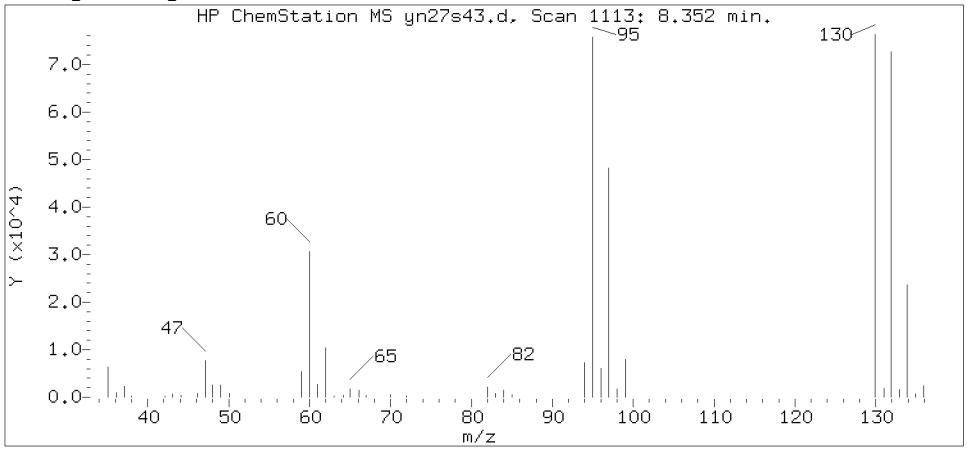
Sample Spectrum (Background Subtracted)

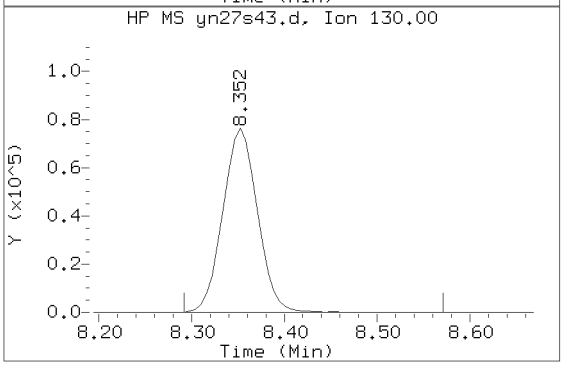






Sample Spectrum (Unaltered)





Data File: /chem2/HP09355.i/19nov27b.b/yn27s43.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 01:28 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 01:45 Automation

Sample Name: WIN14DL Lab Sample ID: 1206742DL

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 1113
Retention Time (minutes): 8.352
Relative Retention Time :-0.00005
Quant Ion : 95.00
Area (flag) : 199630
On-Column Amount (ng) : 35.7697

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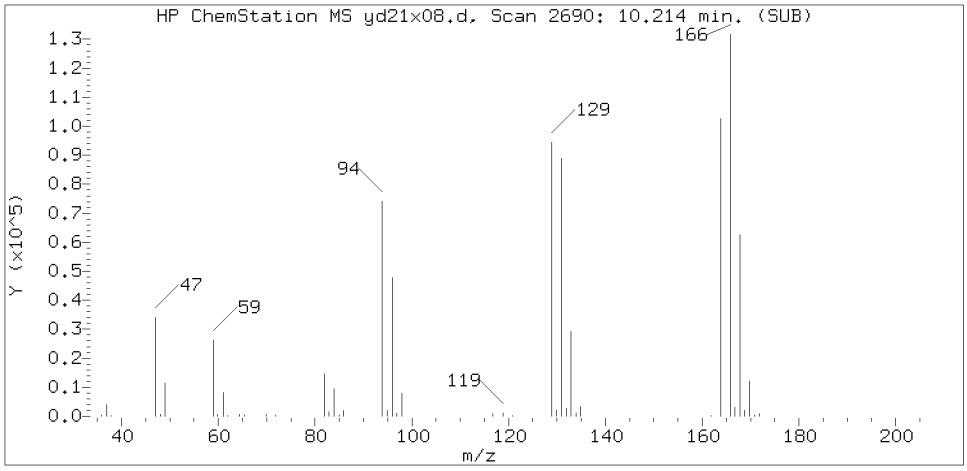
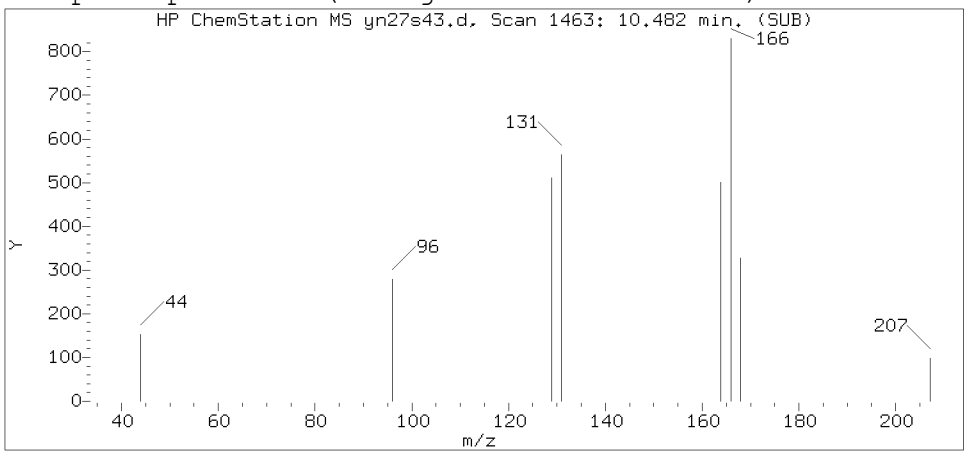
Target 3.5 esignature user ID: lcp00895

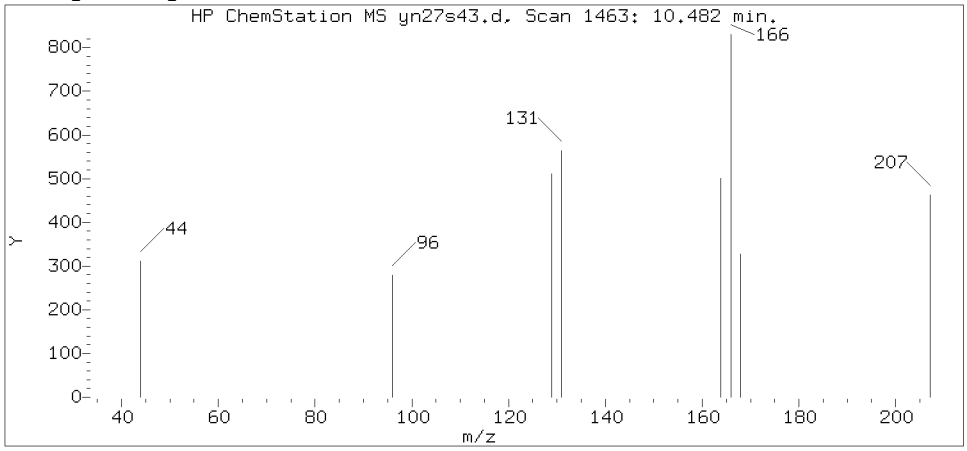
Reference Standard Spectrum for Tetrachloroethene

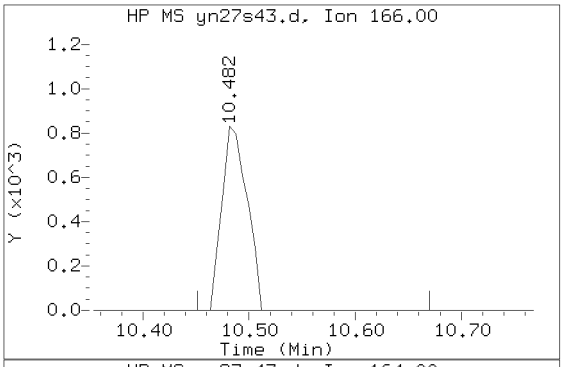


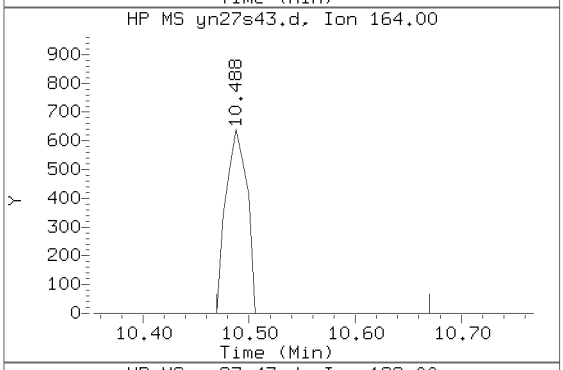
Sample Spectrum (Background Subtracted)

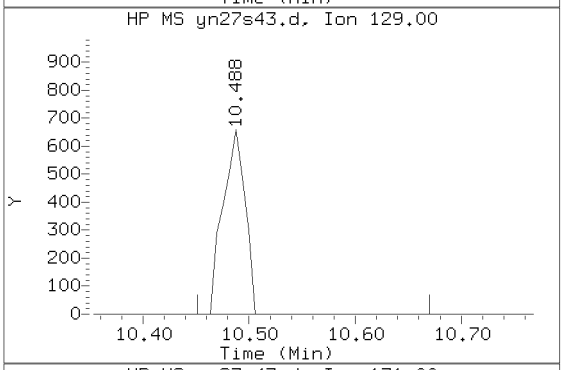


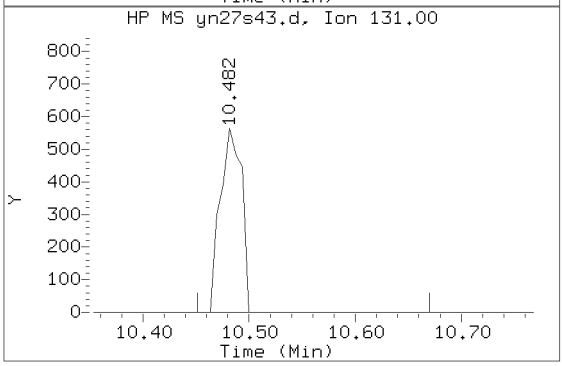
Sample Spectrum (Unaltered)











Data File: /chem2/HP09355.i/19nov27b.b/yn27s43.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 01:28 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 01:45 Automation

Sample Name: WIN14DL Lab Sample ID: 1206742DL

Compound Number : 93
Compound Name : Tetrachloroethene
Scan Number : 1463
Retention Time (minutes): 10.482
Relative Retention Time : 0.00054
Quant Ion : 166.00
Area (flag) : 1385
On-Column Amount (ng) : 0.2456

Digitally signed by Linda C. Pape on 11/30/2019 at 13:13.
Target 3.5 esignature user ID: lcp00895

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
WIN15

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1206743

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19nov26a.b/en26s16.d

Level: (low/med) LOW Date Received: 11/20/19

Moisture: not dec. _____ Date Analyzed: 11/26/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	7	
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	
156-59-2	cis-1,2-Dichloroethene	16	
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	60	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	410	E
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	3	
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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WIN15 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1206743

Data file: /chem/HP15648.i/19nov26a.b/en26s16.d Injection date and time: **26-NOV-2019 17:06**
Data file Sample Info. Line: WIN15;1206743;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 17:24 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.474	(0.006)	244	65	183296	(-3)	250.00	
66) Fluorobenzene	4.724	(0.000)	613	96	1020583	(1)	50.00	
101) Chlorobenzene-d5	7.870	(0.000)	1129	117	708285	(0)	50.00	
132) 1,4-Dichlorobenzene-d4	9.784	(-0.006)	1443	152	350306	(2)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.065	(0.000)	113	217681	50.142	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.382	(0.001)	102	58220	50.315	101%		80 - 120
84) Toluene-d8	(3)	6.364	(0.000)	98	1007878	50.122	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.900	(-0.001)	95	374115	49.371	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	2.102	(0.000)	96	29147	7.435	7.43			0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	3.078	(0.000)	63	11711	1.210	1.21			0.2	1
42) cis-1,2-Dichloroethene	(2)	3.608	(0.000)	96	84459	16.229	16.23			0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	4.096	(-0.001)	97	411480	59.556	59.56			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	5.096	(-0.000)	95	2064630	407.736	407.74		E	0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)	7.034	(0.000)	166	14397	2.944	2.94			0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	6
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

E = Compound concentration above calibration range.

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WIN15 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1206743

Data file: /chem/HP15648.i/19nov26a.b/en26s16.d Injection date and time: **26-NOV-2019 17:06**
Data file Sample Info. Line: WIN15;1206743;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 17:24 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

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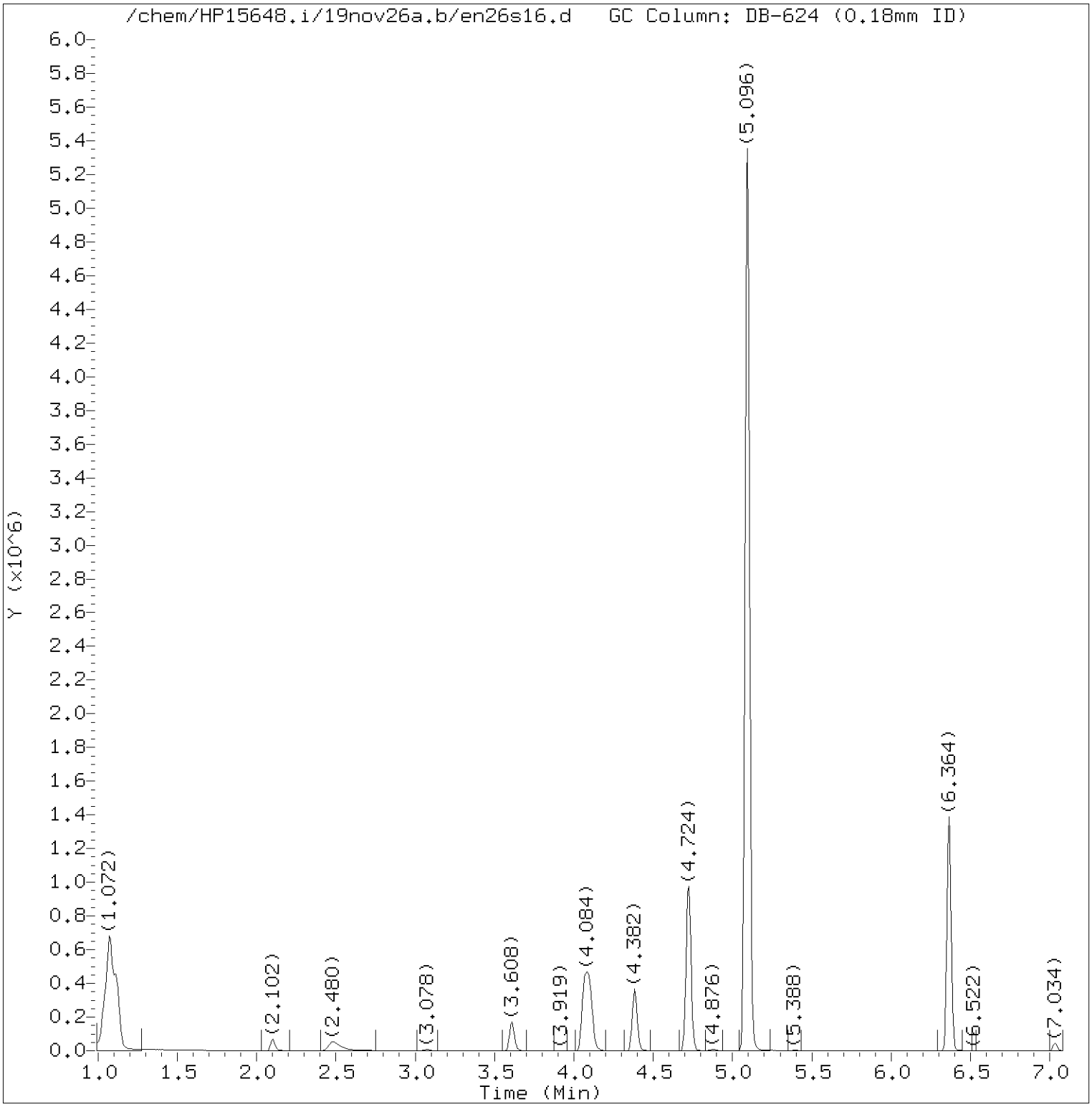
Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 12:19. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

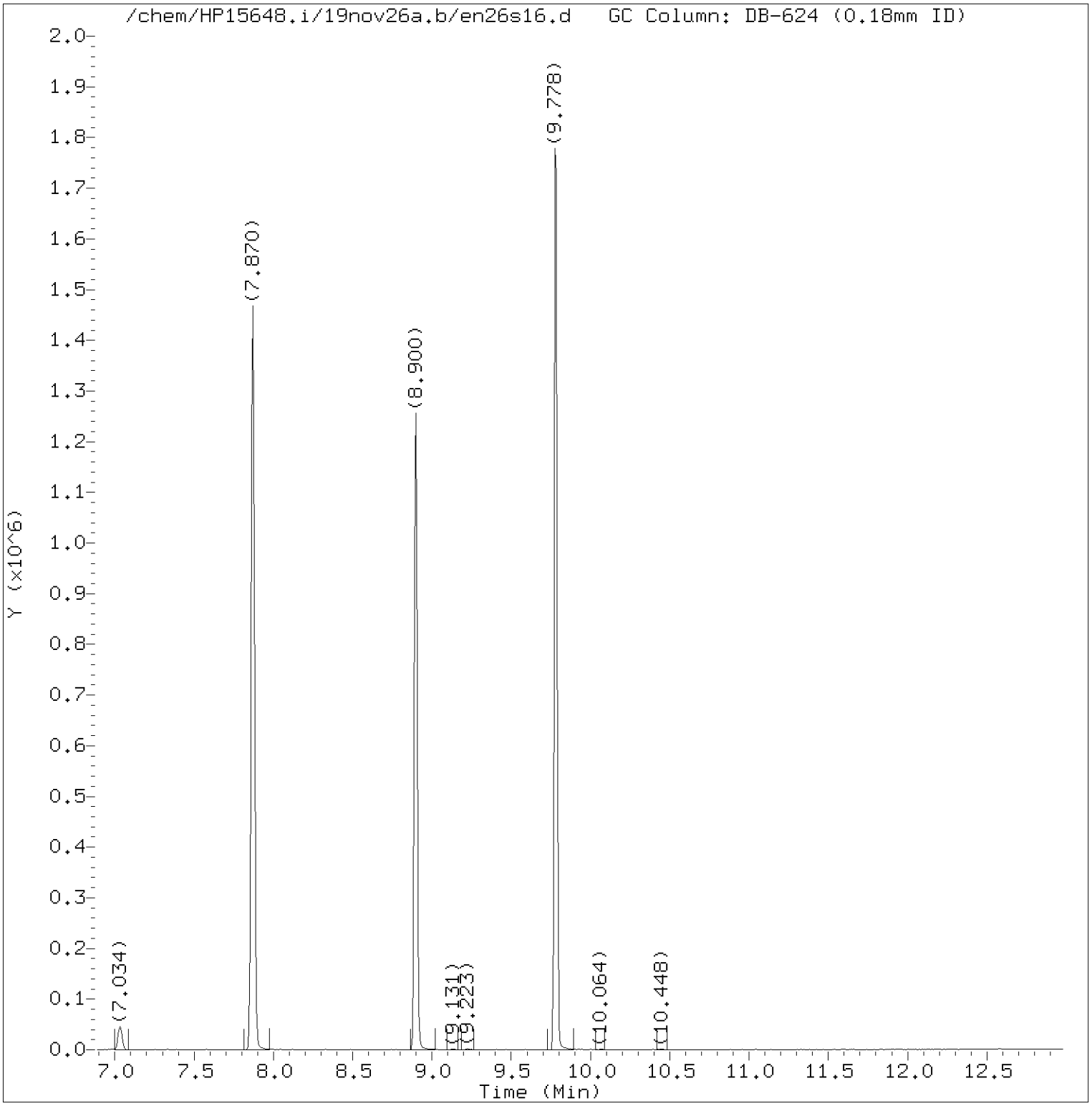
Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s16.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 17:06 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:24 Automation

Sample Name: WIN15 Lab Sample ID: 1206743

Digitally signed by Jason M. Long
on 11/27/2019 at 14:39.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s16.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 17:06 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:24 Automation

Sample Name: WIN15 Lab Sample ID: 1206743

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on 11/27/2019 at 14:39.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s16.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 17:06 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:24 Automation

Sample Name: WIN15 Lab Sample ID: 1206743

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	2.102	96	29147	7.435
29)*t-Butyl alcohol-d10	(1)	2.474	65	183296	250.000
36) 1,1-Dichloroethane	(2)	3.078	63	11711	1.210
42) cis-1,2-Dichloroethene	(2)	3.608	96	84459	16.229
52)$Dibromofluoromethane	(2)	4.065	113	217681	50.142
53) 1,1,1-Trichloroethane	(2)	4.096	97	411480	59.556
57)$1,2-Dichloroethane-d4	(2)	4.382	102	58220	50.315
66)*Fluorobenzene	(2)	4.724	96	1020583	50.000
71) Trichloroethene	(2)	5.096	95	2064630	407.736
84)$Toluene-d8	(3)	6.364	98	1007878	50.122
94) Tetrachloroethene	(3)	7.034	166	14397	2.944
101)*Chlorobenzene-d5	(3)	7.870	117	708285	50.000
115)$4-Bromofluorobenzene	(3)	8.900	95	374115	49.371
132)*1,4-Dichlorobenzene-d4	(4)	9.784	152	350306	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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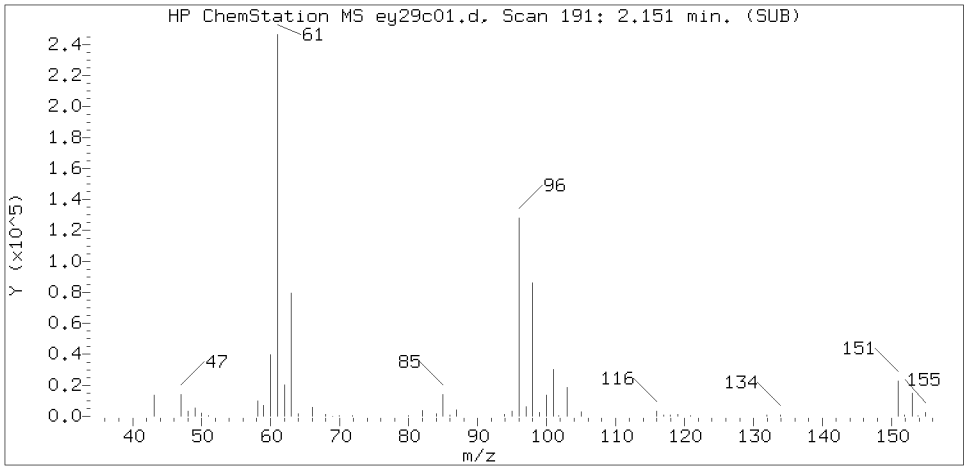
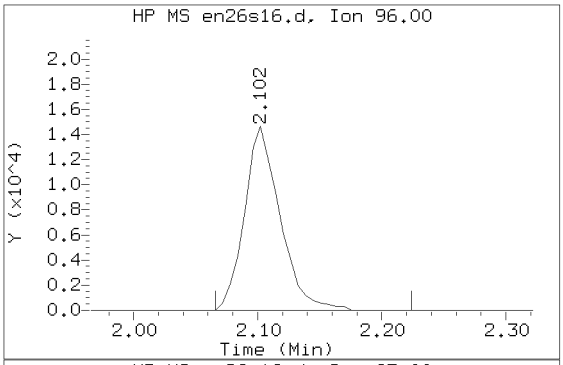
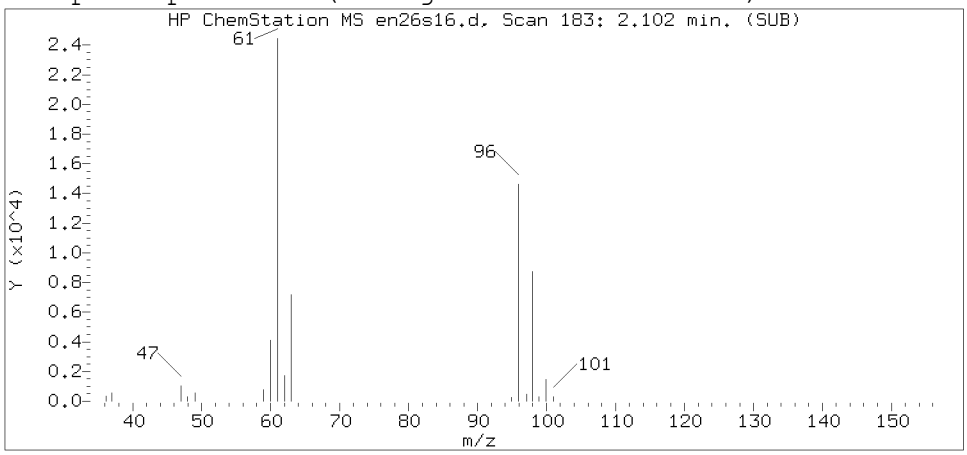
on 11/27/2019 at 14:39.
Target 3.5 esignature user ID: jml01693

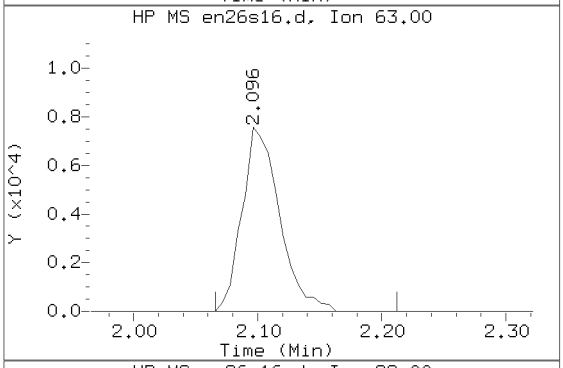
Reference Standard Spectrum for 1,1-Dichloroethene

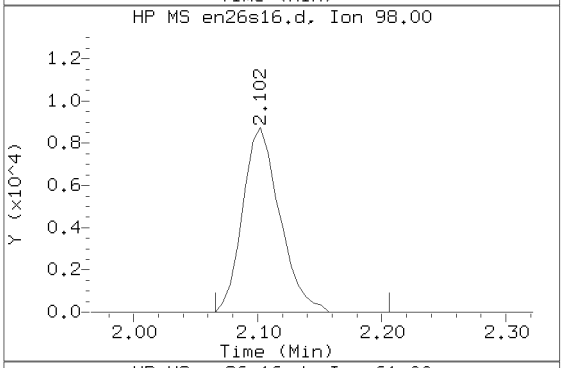




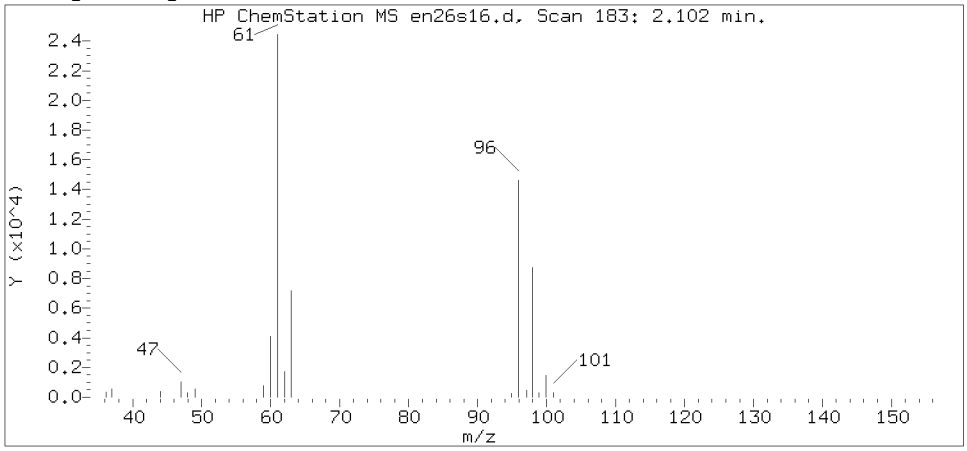
Sample Spectrum (Background Subtracted)

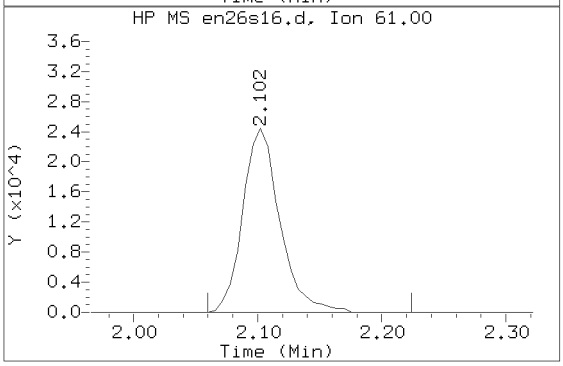






Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19nov26a.b/en26s16.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 17:06 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:24 Automation

Sample Name: WIN15 Lab Sample ID: 1206743

Compound Number	: 17
Compound Name	: 1,1-Dichloroethene
Scan Number	: 183
Retention Time (minutes)	: 2.102
Relative Retention Time	: 0.00003
Quant Ion	: 96.00
Area (flag)	: 29147
On-Column Amount (ng)	: 7.4347

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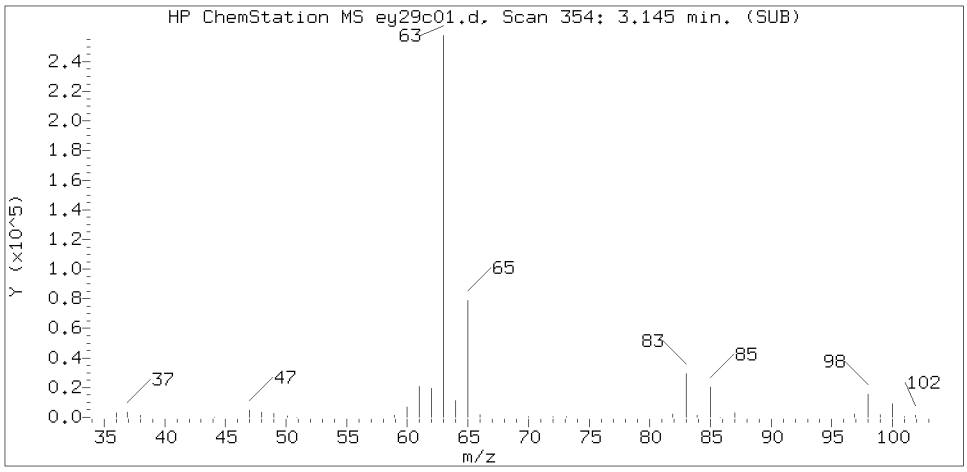
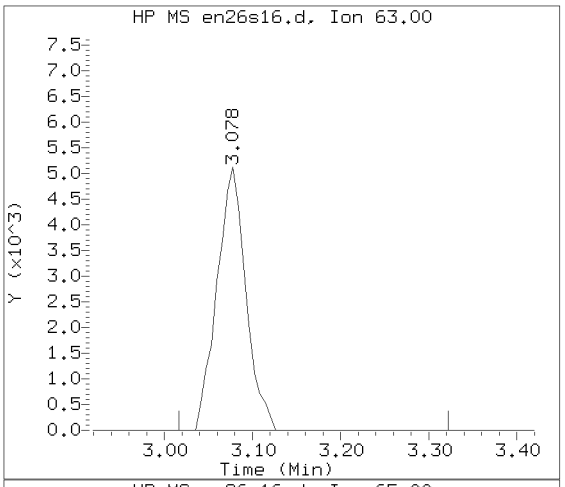
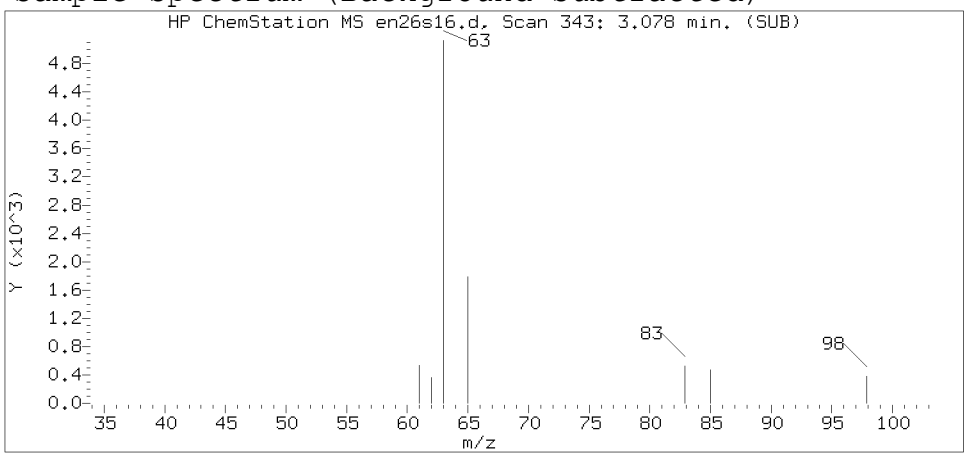
Target 3.5 esignature user ID: jml01693

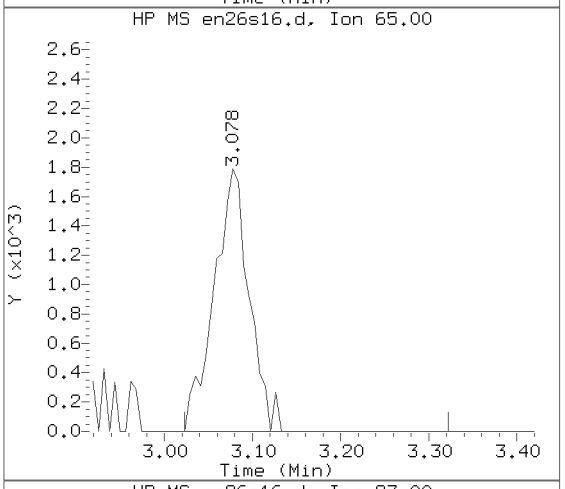
Reference Standard Spectrum for 1,1-Dichloroethane



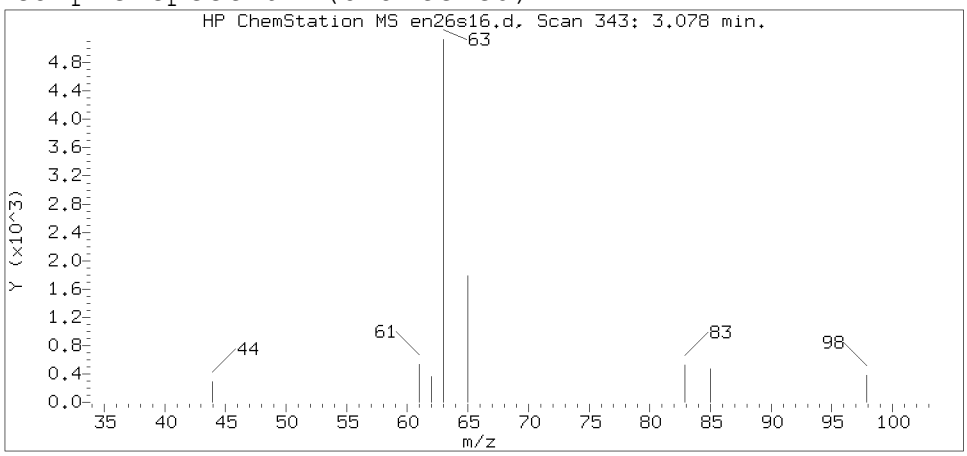


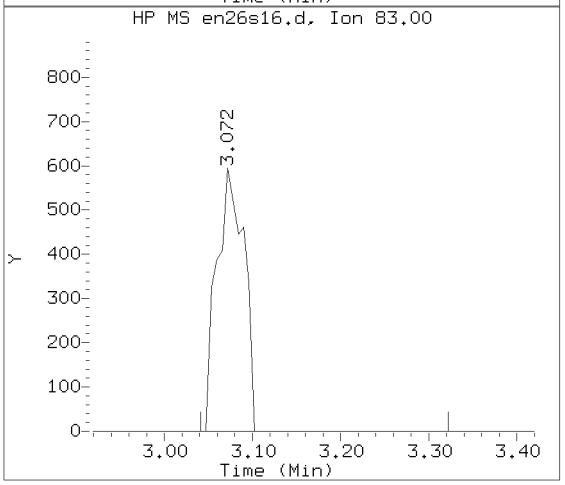
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19nov26a.b/en26s16.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 17:06 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:24 Automation

Sample Name: WIN15 Lab Sample ID: 1206743

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 343
Retention Time (minutes): 3.078
Relative Retention Time : 0.00002
Quant Ion : 63.00
Area (flag) : 11711
On-Column Amount (ng) : 1.2100

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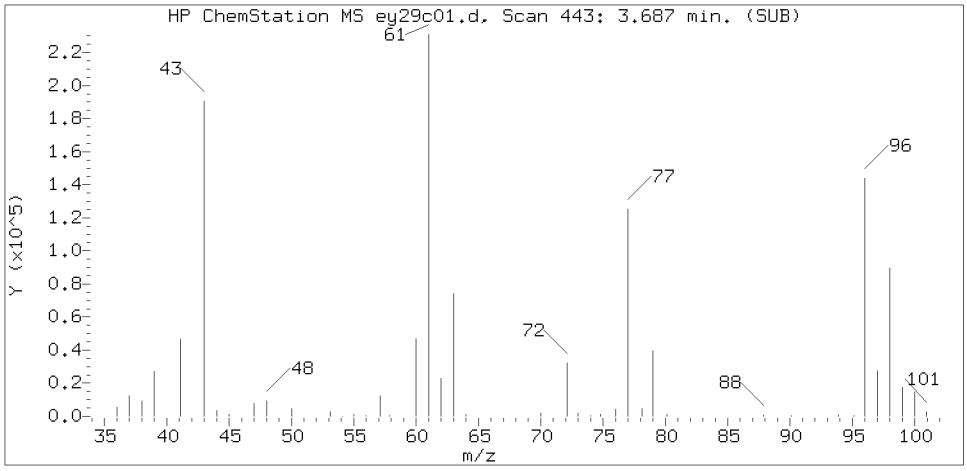
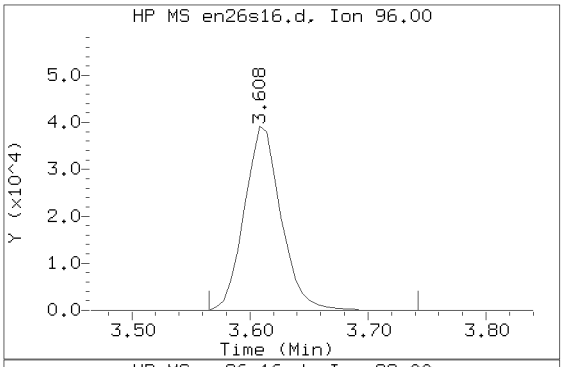
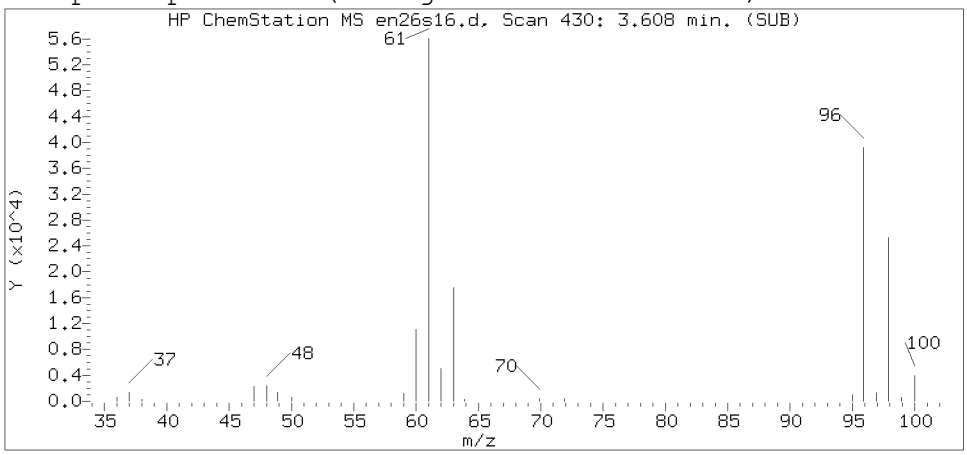
Target 3.5 esignature user ID: jml01693

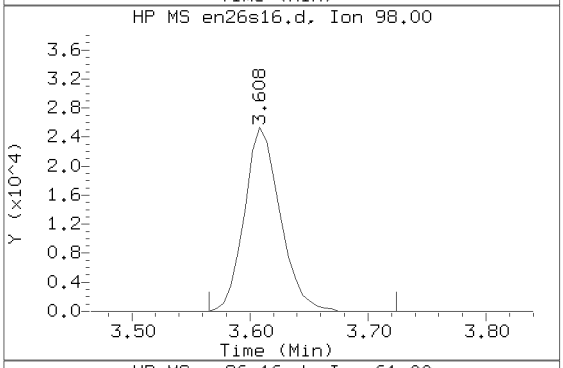
Reference Standard Spectrum for cis-1,2-Dichloroethene

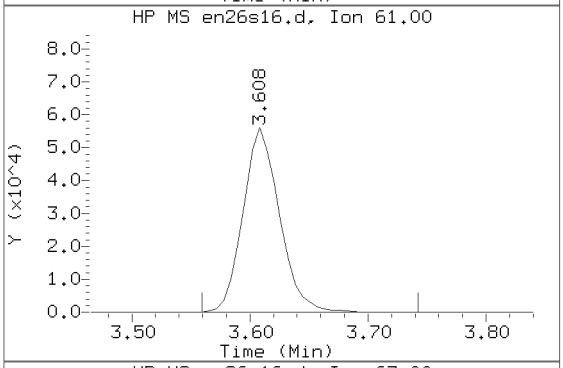




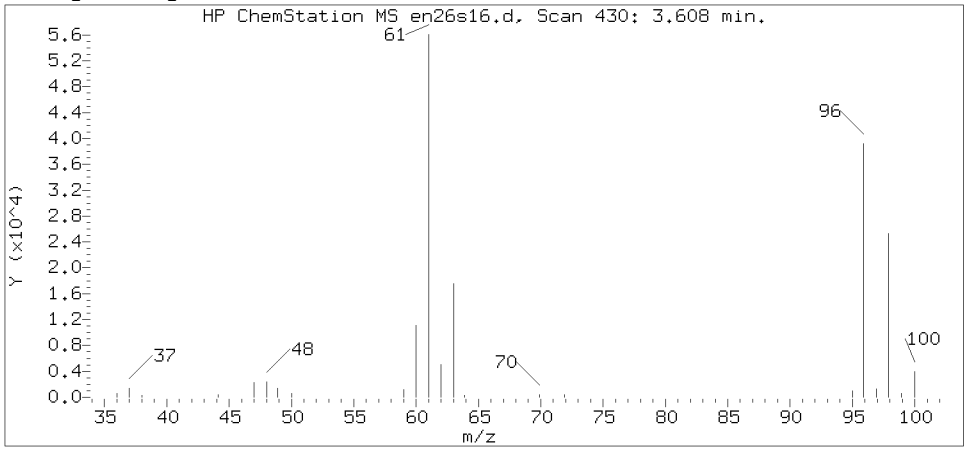
Sample Spectrum (Background Subtracted)

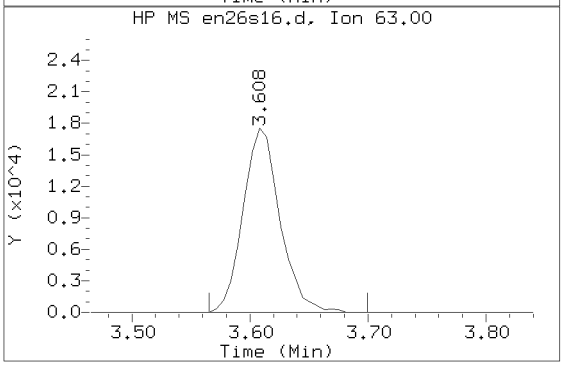






Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19nov26a.b/en26s16.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 17:06 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:24 Automation

Sample Name: WIN15 Lab Sample ID: 1206743

Compound Number	: 42
Compound Name	: cis-1,2-Dichloroethene
Scan Number	: 430
Retention Time (minutes)	: 3.608
Relative Retention Time	: 0.00001
Quant Ion	: 96.00
Area (flag)	: 84459
On-Column Amount (ng)	: 16.2295

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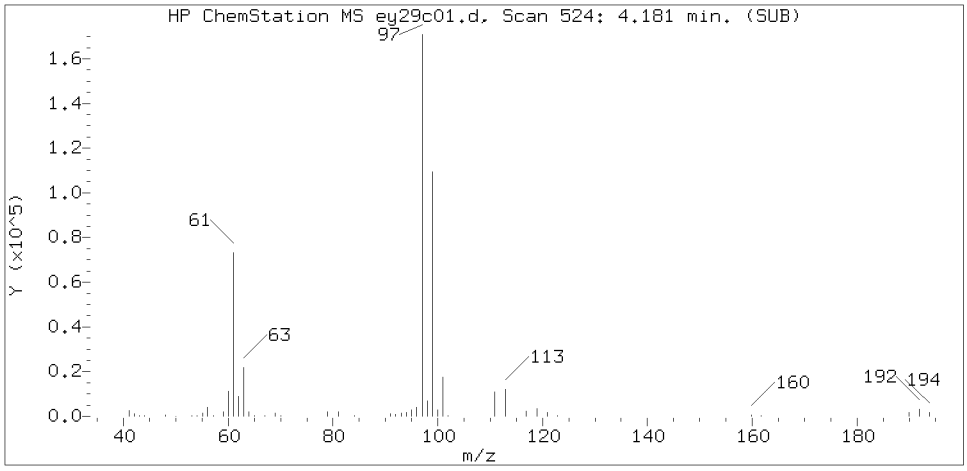
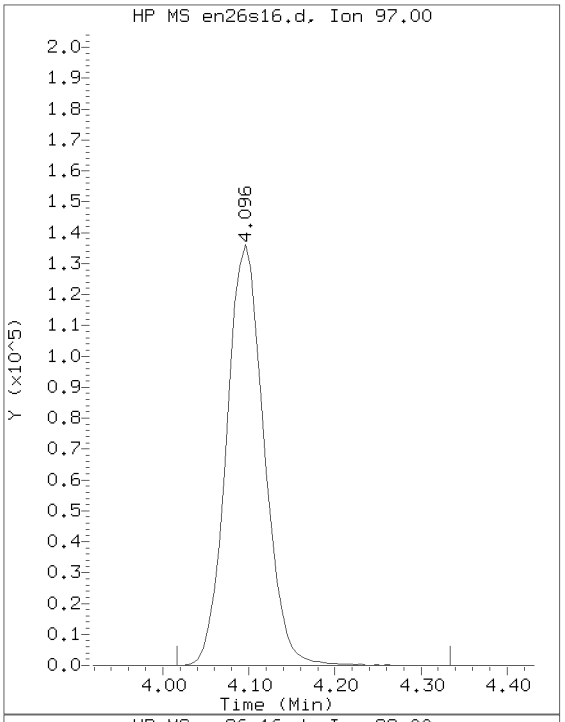
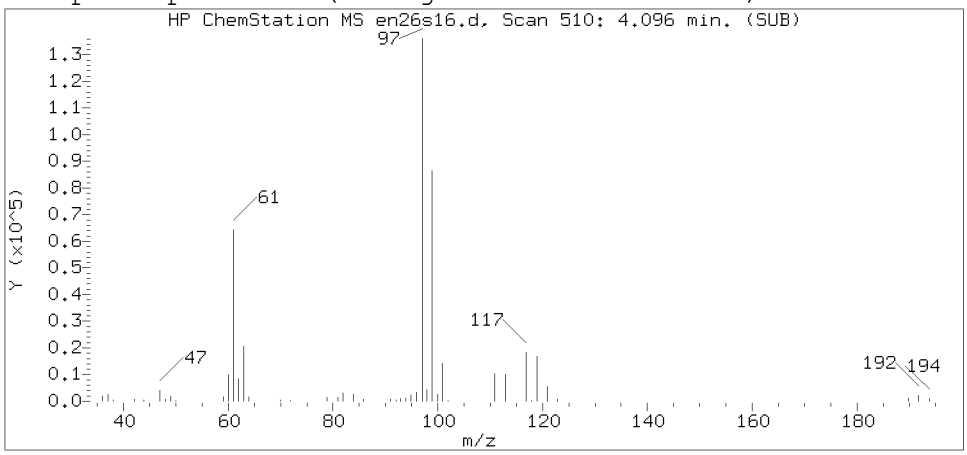
Target 3.5 esignature user ID: jml01693

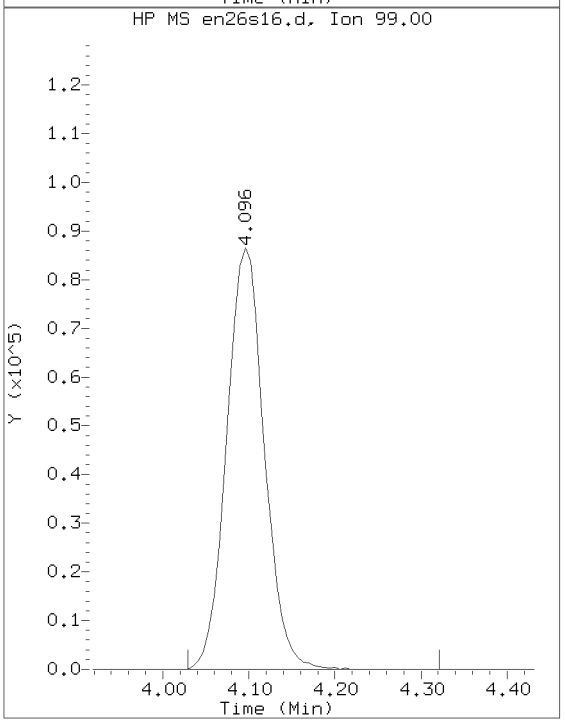
Reference Standard Spectrum for 1,1,1-Trichloroethane



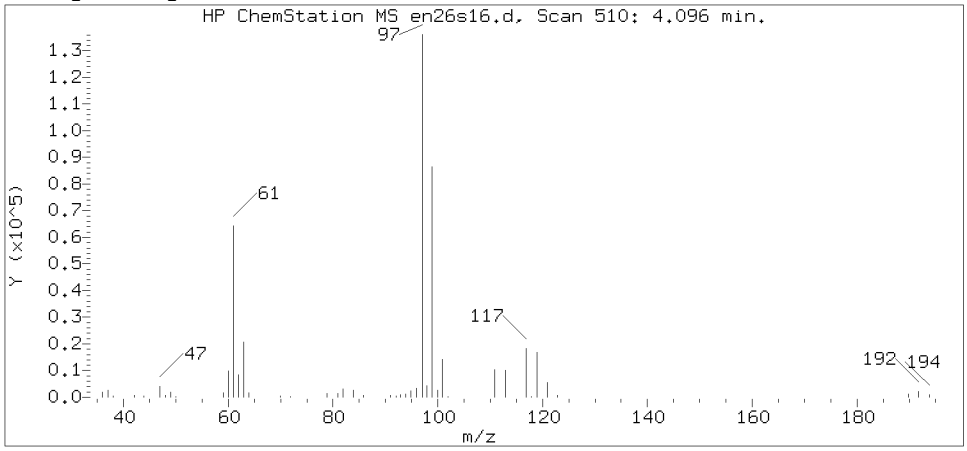


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP15648.i/19nov26a.b/en26s16.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 17:06 Analyst ID: jml01693

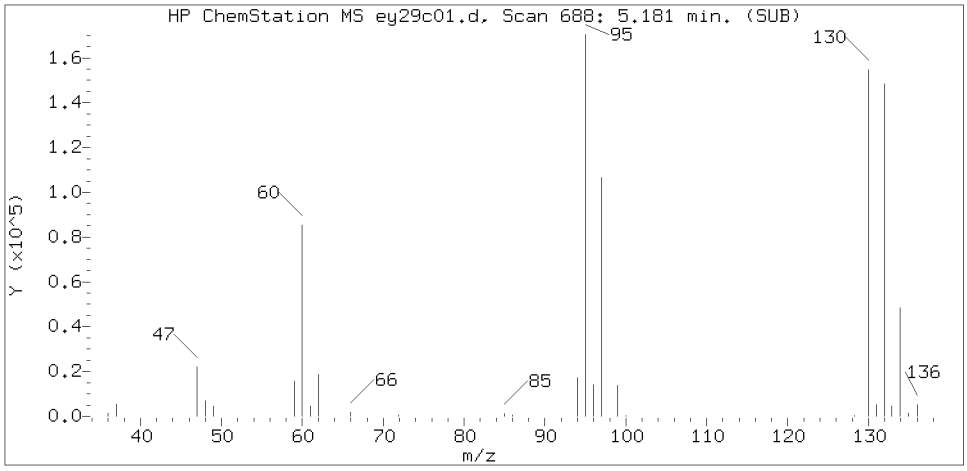
Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:24 Automation

Sample Name: WIN15 Lab Sample ID: 1206743

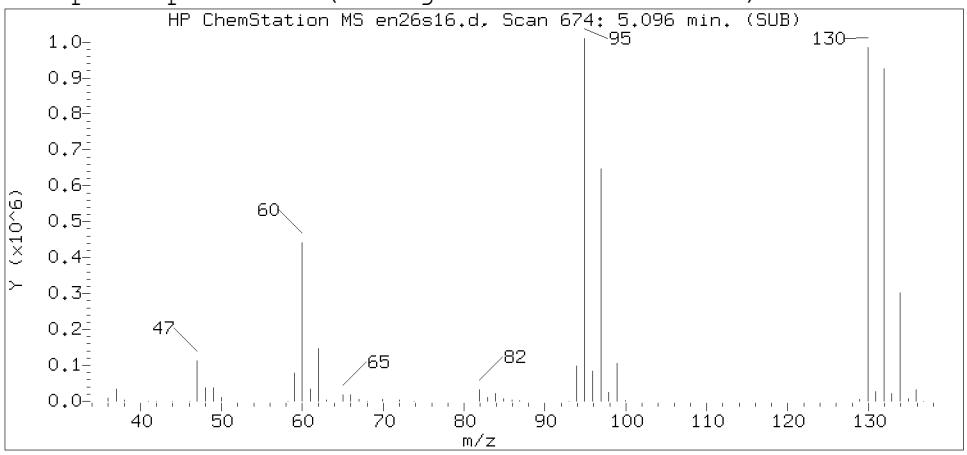
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 510
Retention Time (minutes): 4.096
Relative Retention Time :-0.00129
Quant Ion : 97.00
Area (flag) : 411480
On-Column Amount (ng) : 59.5556

Digitally signed by Jason M. Long on 11/27/2019 at 14:39.
Target 3.5 esignature user ID: jml01693

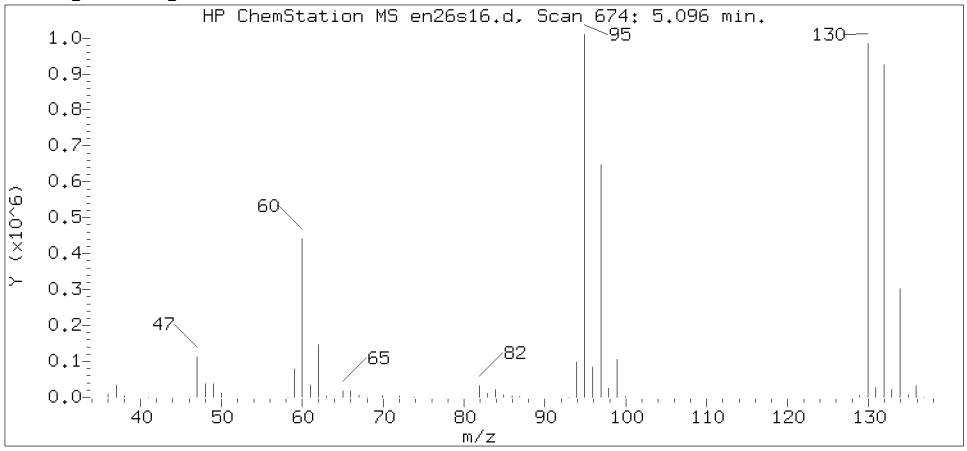
Reference Standard Spectrum for Trichloroethene

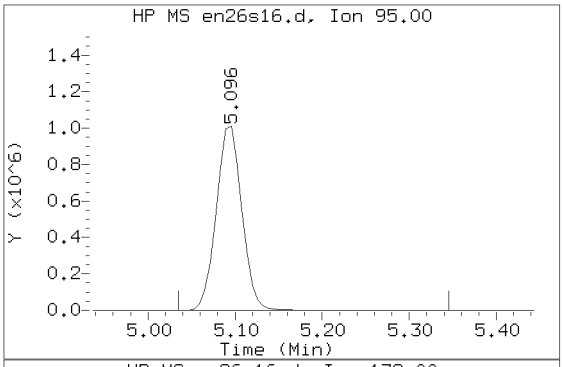


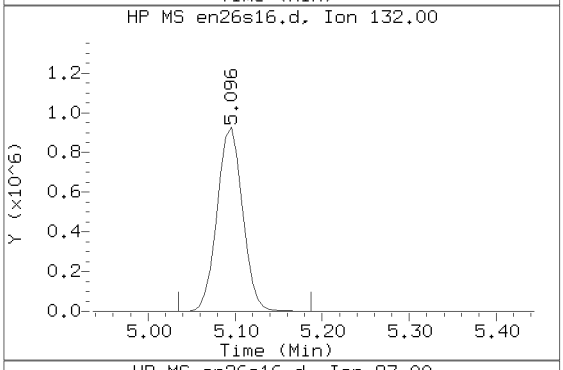
Sample Spectrum (Background Subtracted)

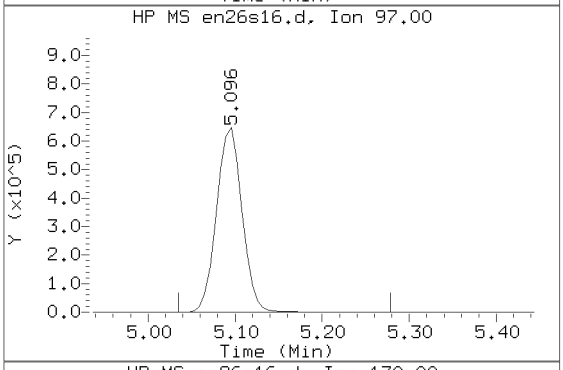


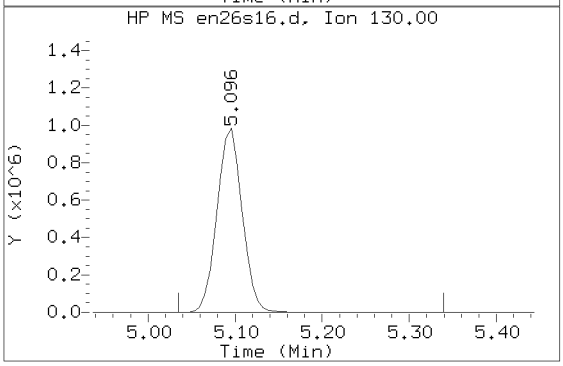
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19nov26a.b/en26s16.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 17:06 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:24 Automation

Sample Name: WIN15 Lab Sample ID: 1206743

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 674
Retention Time (minutes): 5.096
Relative Retention Time :-0.00001
Quant Ion : 95.00
Area (flag) : 2064630
On-Column Amount (ng) : 407.7360

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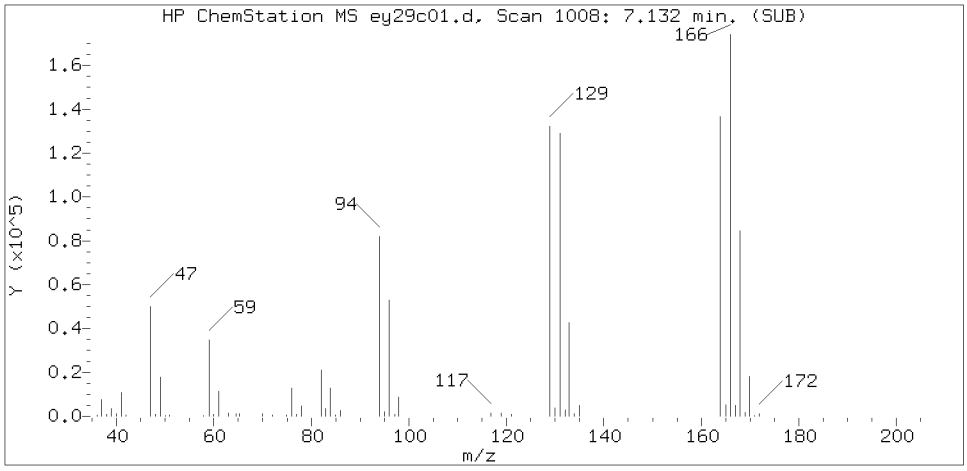
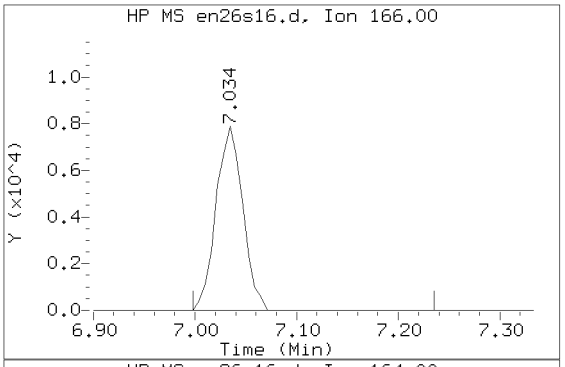
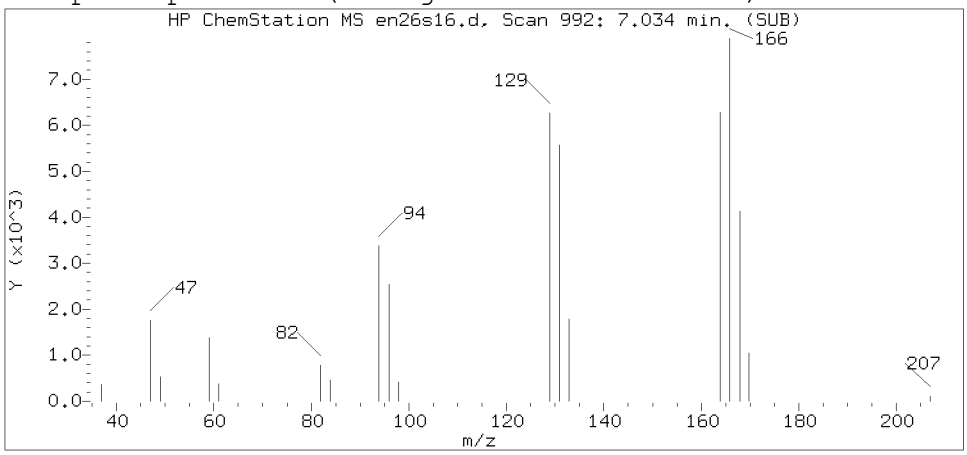
Target 3.5 esignature user ID: jml01693

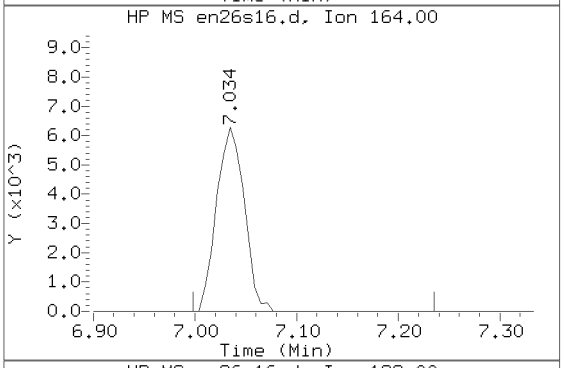
Reference Standard Spectrum for Tetrachloroethene

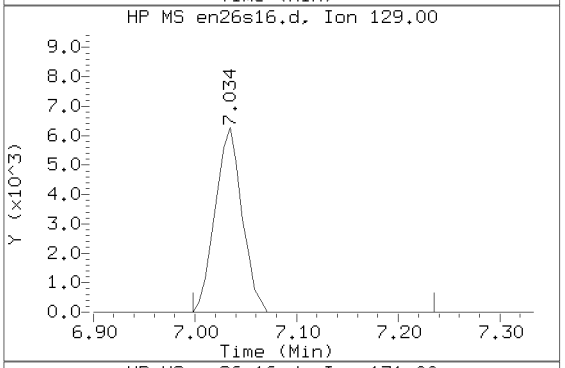




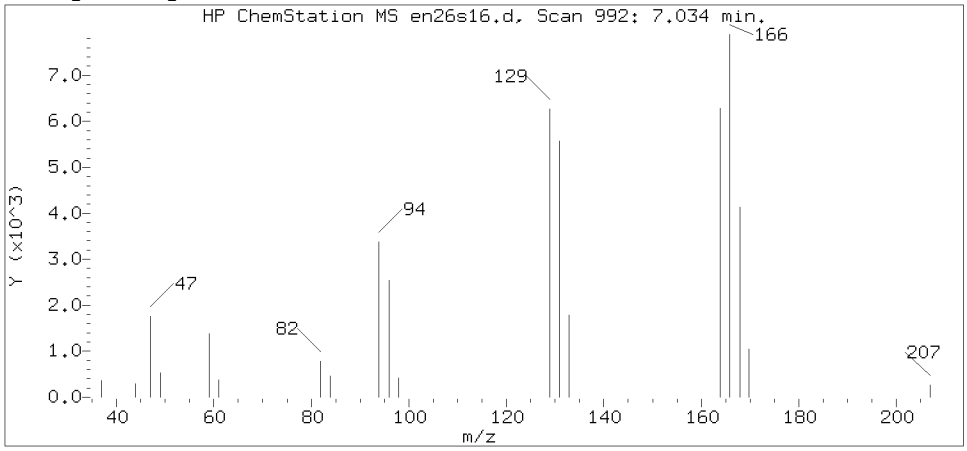
Sample Spectrum (Background Subtracted)

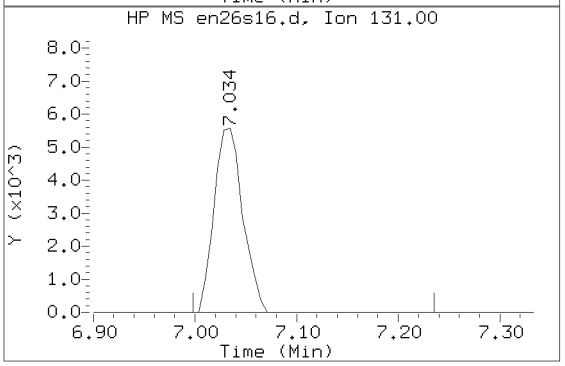






Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19nov26a.b/en26s16.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 17:06 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:24 Automation

Sample Name: WIN15 Lab Sample ID: 1206743

Compound Number : 94
Compound Name : Tetrachloroethene
Scan Number : 992
Retention Time (minutes): 7.034
Relative Retention Time : 0.00000
Quant Ion : 166.00
Area (flag) : 14397
On-Column Amount (ng) : 2.9438

Digitally signed by Jason M. Long on 11/27/2019 at 14:39.
Target 3.5 esignature user ID: jml01693

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WIN15DL

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1206743

Sample wt/vol: 0.50 (g/mL) mL Lab File ID: HP09355.i/19nov27b.b/yn27s44.d

Level: (low/med) LOW Date Received: 11/20/19

Moisture: not dec. _____ Date Analyzed: 11/28/19

Column: (pack/cap) CAP Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	10	U
75-35-4	1,1-Dichloroethene	5	J D
67-64-1	Acetone	200	U
76-13-1	Freon 113	100	U
75-15-0	Carbon Disulfide	50	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	14	D
78-93-3	2-Butanone	100	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	47	D
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	360	D
123-91-1	1,4-Dioxane	2500	U
108-88-3	Toluene	10	U
127-18-4	Tetrachloroethene	2	J D
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (Total)	60	U
95-50-1	1,2-Dichlorobenzene	50	U
91-20-3	Naphthalene	50	U

FORM I VOA

^

WIN15DL

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1206743DL

Data file: /chem2/HP09355.i/19nov27b.b/yn27s44.d Injection date and time: **28-NOV-2019 01:50**
Data file Sample Info. Line: WIN15DL;1206743DL;1;0;;JCW26;;;yn27b31; Instrument ID: **HP09355.i** Batch: **Y193312AA**
Date, time and analyst ID of latest file update: 28-Nov-2019 02:07 Automation

Blank Data file reference: **/chem2/HP09355.i/19nov27b.b/yn27b31.d**

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 27-NOV-2019 21:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19nov27b.b/yn27c05.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 0.5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.349	(0.006)	455	65	297640	(-8)	250.00	
66) Fluorobenzene	7.866	(0.006)	1033	96	996601	(-3)	50.00	
100) Chlorobenzene-d5	11.303	(0.006)	1598	117	722303	(-3)	50.00	
131) 1,4-Dichlorobenzene-d4	13.183	(0.000)	1907	152	370613	(-4)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.965	(0.001)	113	213592	45.675	91%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.428	(0.000)	102	58849	48.137	96%		80 - 120
83) Toluene-d8	(3)	9.861	(0.000)	98	964650	49.360	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.301	(0.000)	95	349799	46.847	94%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					2	10
17) 1,1-Dichloroethene	(2)	3.680	(0.001)	96	2276	0.526	5.26		J	2	10
18) Acetone	(1)				Not Detected					7	200
19) Freon 113	(2)				Not Detected					2	100
23) Carbon Disulfide	(2)				Not Detected					2	50
28) Methylene Chloride	(2)				Not Detected					3	10
32) trans-1,2-Dichloroethene	(2)				Not Detected					2	10
36) 1,1-Dichloroethane	(2)				Not Detected					2	10
42) cis-1,2-Dichloroethene	(2)	6.266	(0.000)	96	8174	1.435	14.35			2	10
44) 2-Butanone	(2)				Not Detected					3	100
51) Chloroform	(2)				Not Detected					2	10
53) 1,1,1-Trichloroethane	(2)	6.984	(0.000)	97	35751	4.676	46.76			3	10
60) Benzene	(2)				Not Detected					2	10
61) 1,2-Dichloroethane	(2)				Not Detected					3	10
71) Trichloroethene	(2)	8.346	(0.000)	95	201702	36.138	361.38			2	10
75) 1,4-Dioxane	(1)				Not Detected					290	2500
88) Toluene	(3)				Not Detected					2	10
93) Tetrachloroethene	(3)	10.488	(-0.000)	166	1290	0.228	2.28		J	2	10
104) Ethylbenzene	(3)				Not Detected					4	10
106) m+p-Xylene	(3)				Not Detected					10	50
107) o-Xylene	(3)				Not Detected					4	10
108) Xylene (Total)	(3)				Not Detected					14	60
138) 1,2-Dichlorobenzene	(4)				Not Detected					2	50
148) Naphthalene	(4)				Not Detected					10	50

Digitally signed by Linda C. Pape on 11/30/2019 at 13:14. Target 3.5 esignature user ID: lcp00895

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09355.i/19nov27b.b/yn27s44.d Injection date and time: **28-NOV-2019 01:50**
Data file Sample Info. Line: WIN15DL;1206743DL;1;0;;JCW26;;;yn27b31; Instrument ID: **HP09355.i** Batch: **Y193312AA**
Date, time and analyst ID of latest file update: 28-Nov-2019 02:07 Automation

Blank Data file reference: **/chem2/HP09355.i/19nov27b.b/yn27b31.d**

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 27-NOV-2019 21:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19nov27b.b/yn27c05.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 0.5 ml

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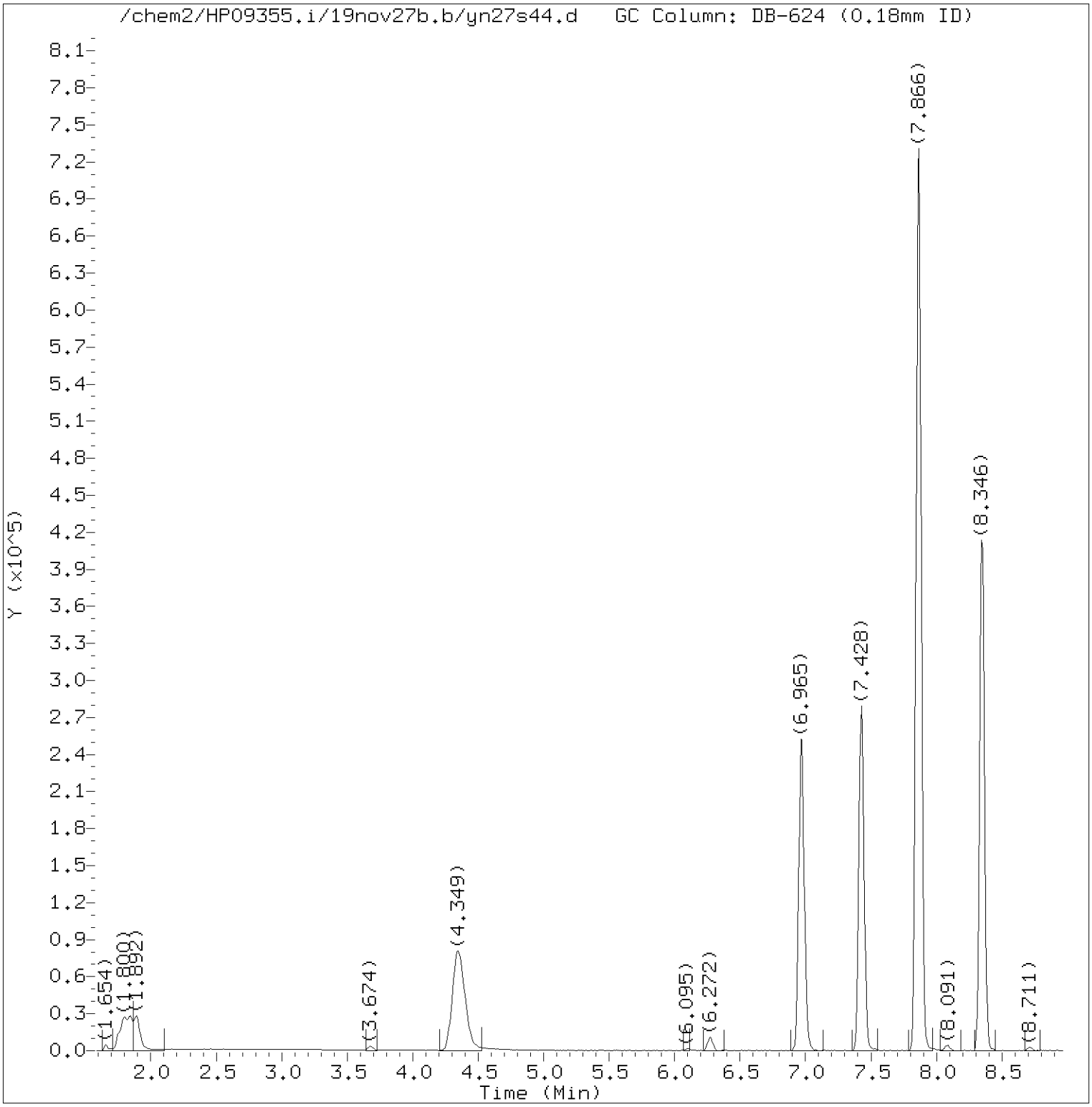
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Linda C. Pape on 11/30/2019 at 13:14. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

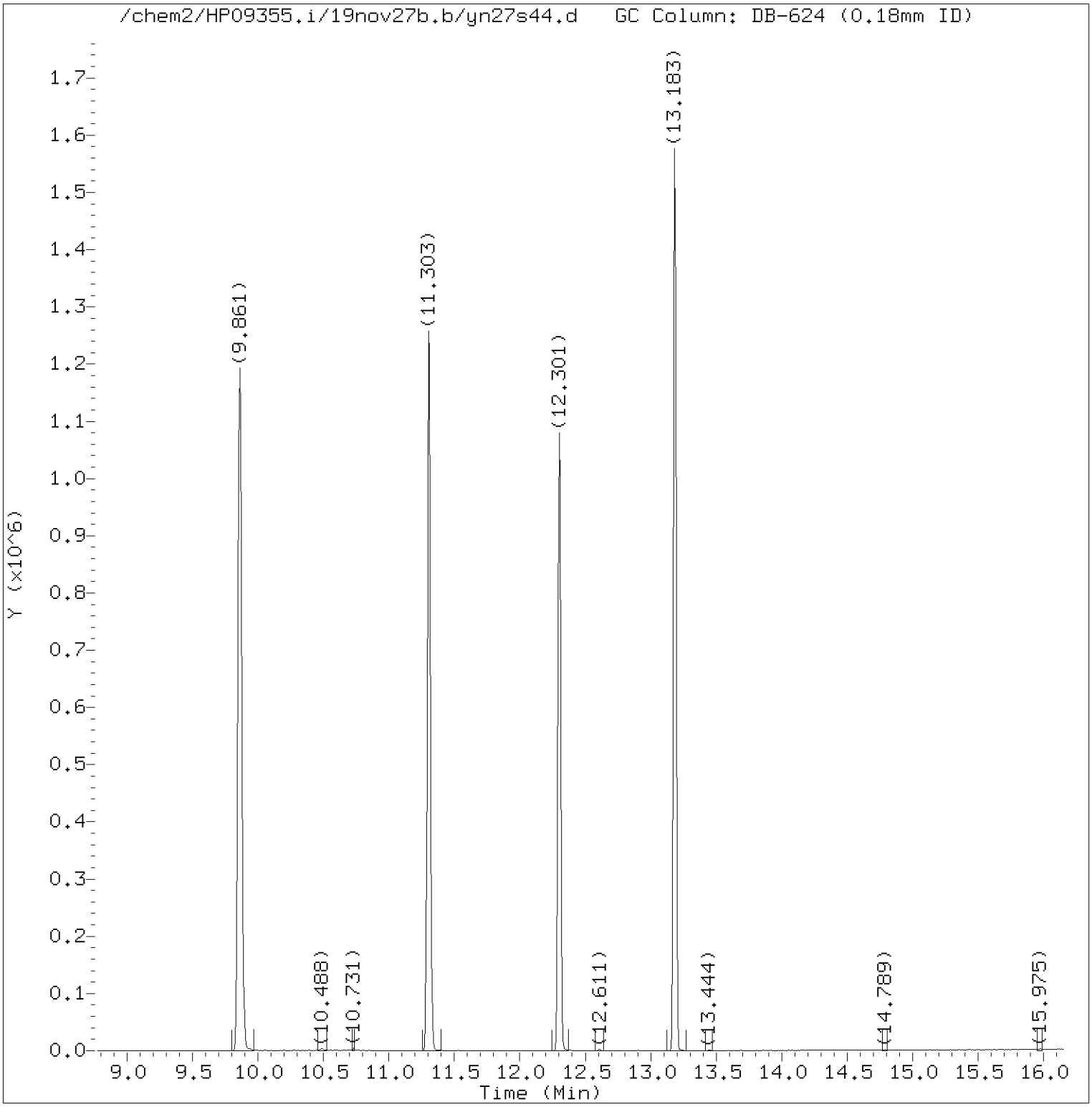
Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27s44.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 01:50 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 02:07 Automation

Sample Name: WIN15DL Lab Sample ID: 1206743DL

Digitally signed by Linda C. Pape
on 11/30/2019 at 13:14.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27s44.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 01:50 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 02:07 Automation

Sample Name: WIN15DL Lab Sample ID: 1206743DL

Digitally signed by Linda C. Pape
on 11/30/2019 at 13:14.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27s44.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 01:50 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 02:07 Automation

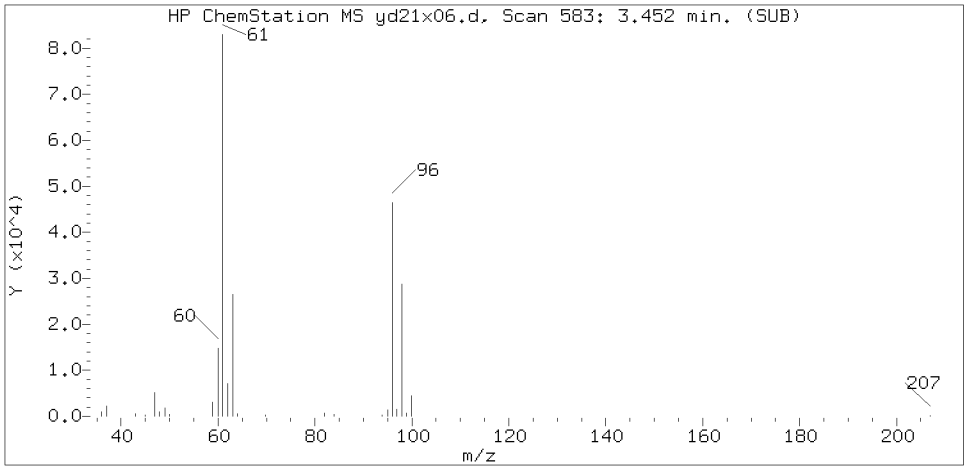
Sample Name: WIN15DL Lab Sample ID: 1206743DL

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	3.680	96	2276	0.526
29)*t-Butyl alcohol-d10	(1)	4.349	65	297640	250.000
42) cis-1,2-Dichloroethene	(2)	6.266	96	8174	1.435
52)$Dibromofluoromethane	(2)	6.965	113	213592	45.675
53) 1,1,1-Trichloroethane	(2)	6.984	97	35751	4.676
57)$1,2-Dichloroethane-d4	(2)	7.428	102	58849	48.137
66)*Fluorobenzene	(2)	7.866	96	996601	50.000
71) Trichloroethene	(2)	8.346	95	201702	36.138
83)$Toluene-d8	(3)	9.861	98	964650	49.360
93) Tetrachloroethene	(3)	10.488	166	1290	0.228
100)*Chlorobenzene-d5	(3)	11.303	117	722303	50.000
114)$4-Bromofluorobenzene	(3)	12.301	95	349799	46.847
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	370613	50.000

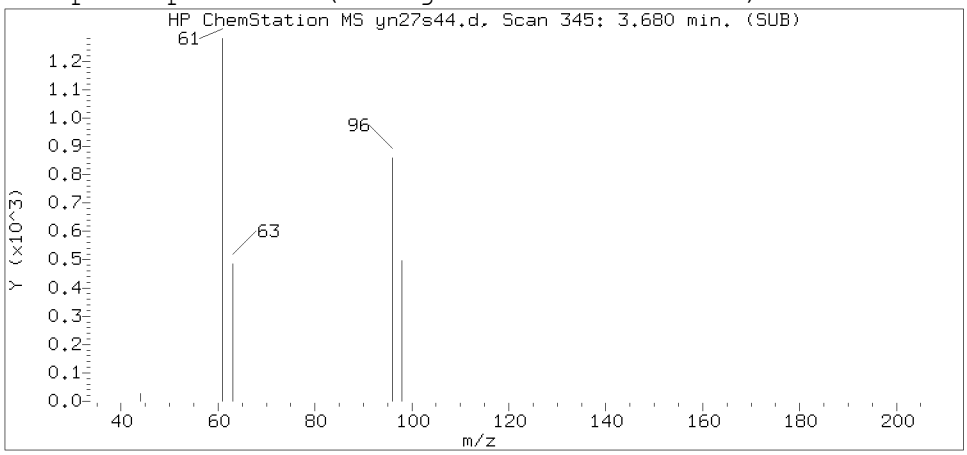
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 11/30/2019 at 13:14.
Target 3.5 esignature user ID: lcp00895

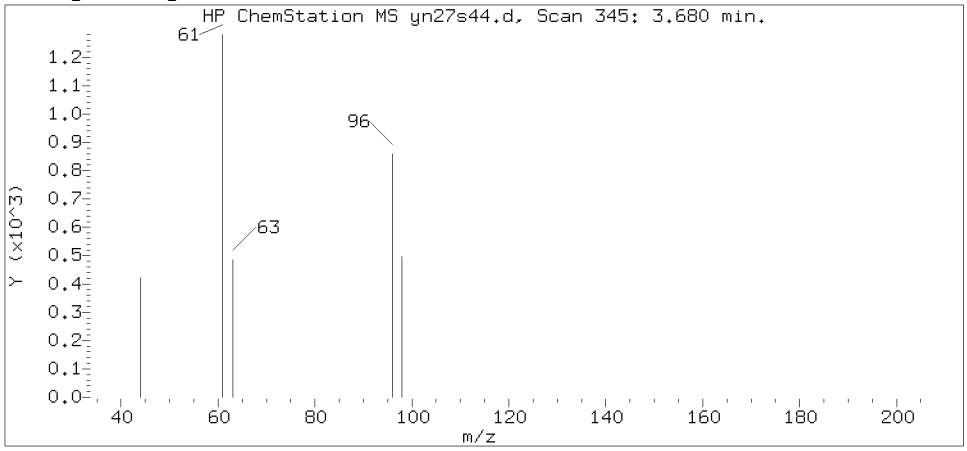
Reference Standard Spectrum for 1,1-Dichloroethene

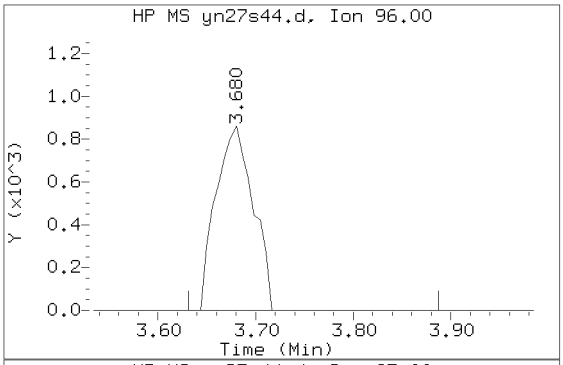


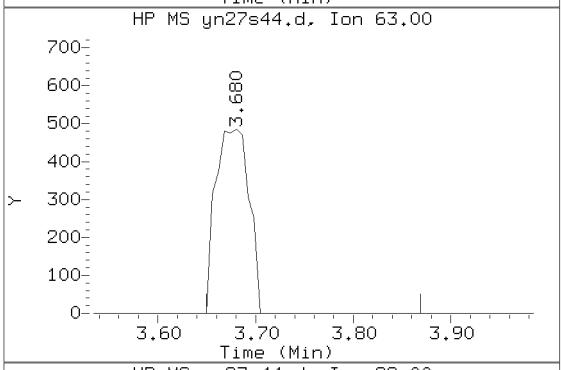
Sample Spectrum (Background Subtracted)

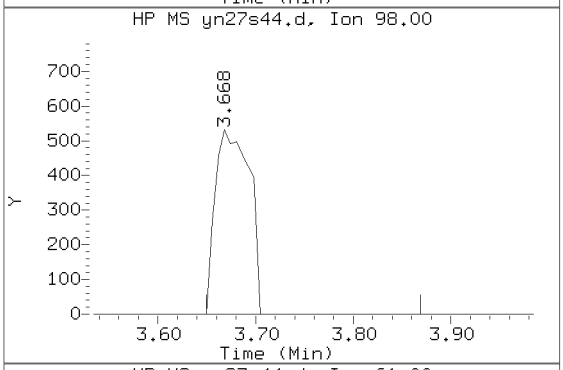


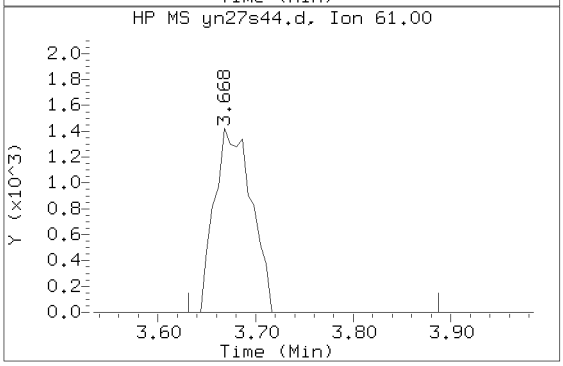
Sample Spectrum (Unaltered)











Data File: /chem2/HP09355.i/19nov27b.b/yn27s44.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 01:50 Analyst ID: DVV10203

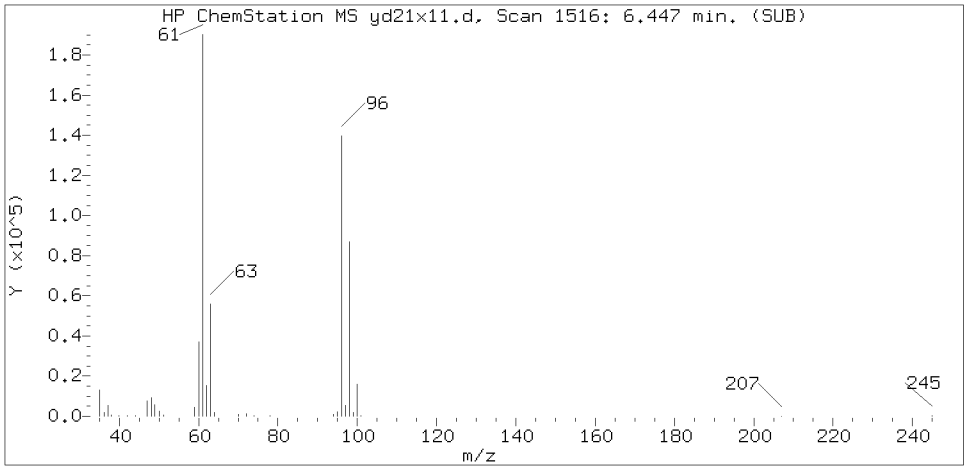
Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 02:07 Automation

Sample Name: WIN15DL Lab Sample ID: 1206743DL

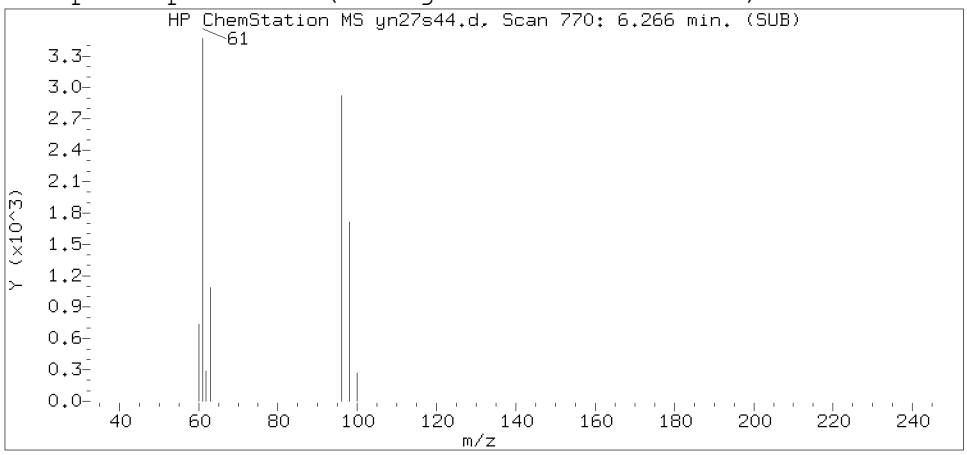
Compound Number	: 17
Compound Name	: 1,1-Dichloroethene
Scan Number	: 345
Retention Time (minutes)	: 3.680
Relative Retention Time	: 0.00118
Quant Ion	: 96.00
Area (flag)	: 2276
On-Column Amount (ng)	: 0.5262

Digitally signed by Linda C. Pape on 11/30/2019 at 13:14.
Target 3.5 esignature user ID: lcp00895

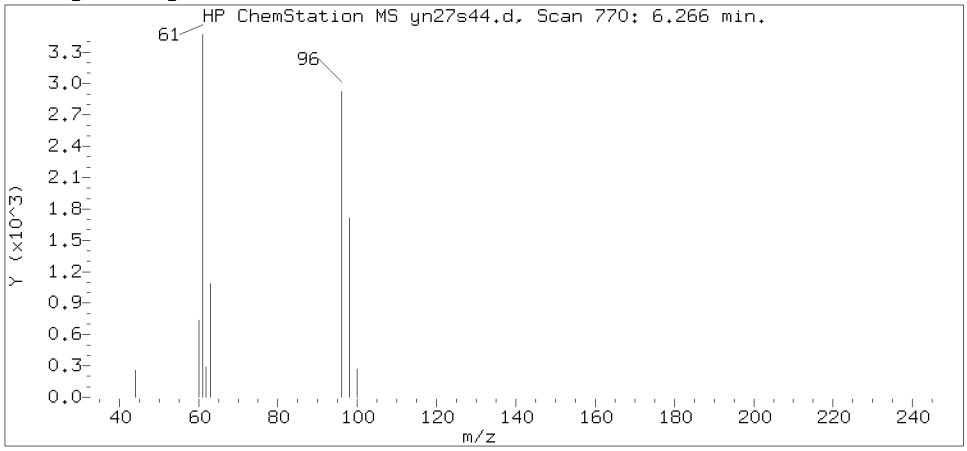
Reference Standard Spectrum for cis-1,2-Dichloroethene

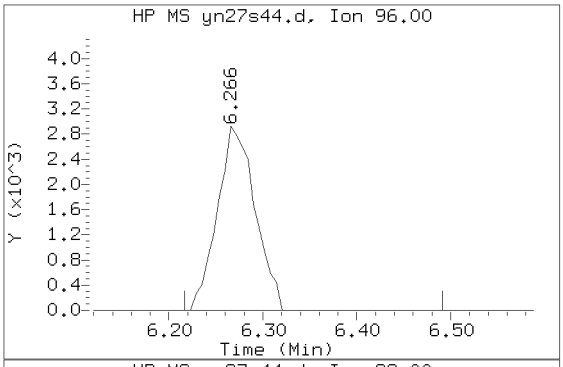


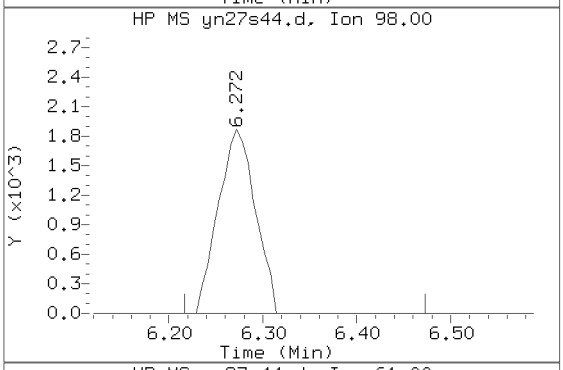
Sample Spectrum (Background Subtracted)

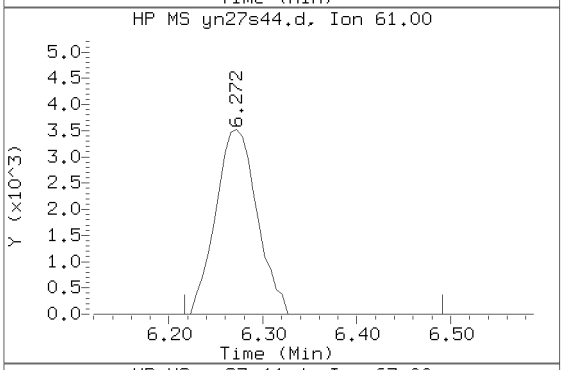


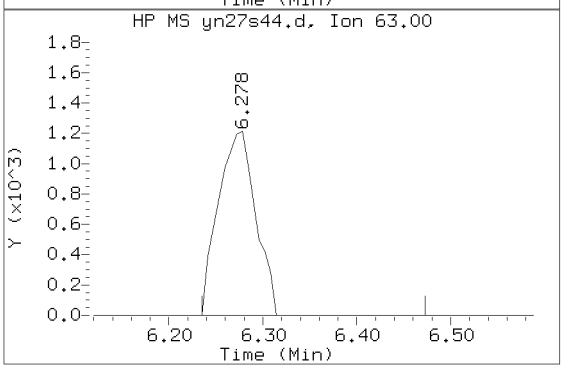
Sample Spectrum (Unaltered)











Data File: /chem2/HP09355.i/19nov27b.b/yn27s44.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 01:50 Analyst ID: DVV10203

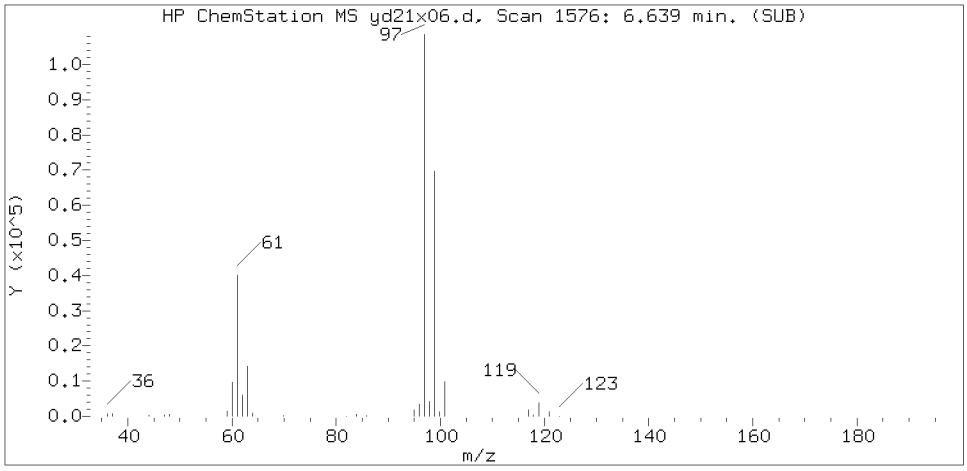
Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 02:07 Automation

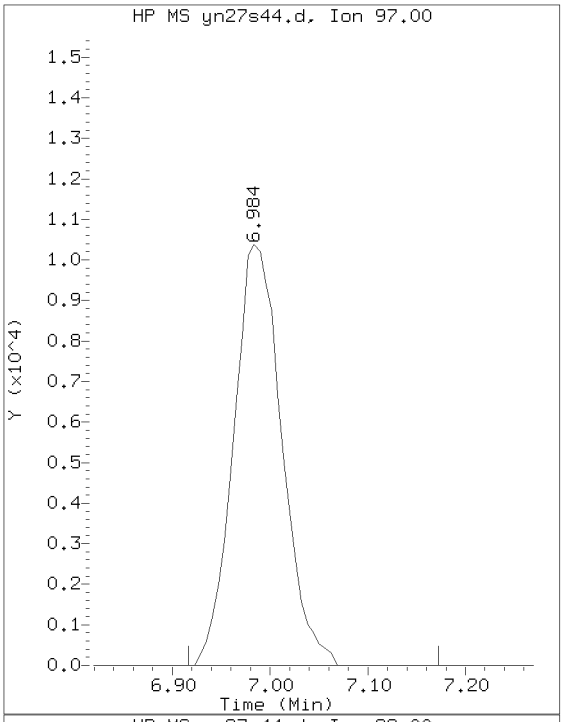
Sample Name: WIN15DL Lab Sample ID: 1206743DL

Compound Number	: 42
Compound Name	: cis-1,2-Dichloroethene
Scan Number	: 770
Retention Time (minutes)	: 6.266
Relative Retention Time	: 0.00093
Quant Ion	: 96.00
Area (flag)	: 8174
On-Column Amount (ng)	: 1.4353

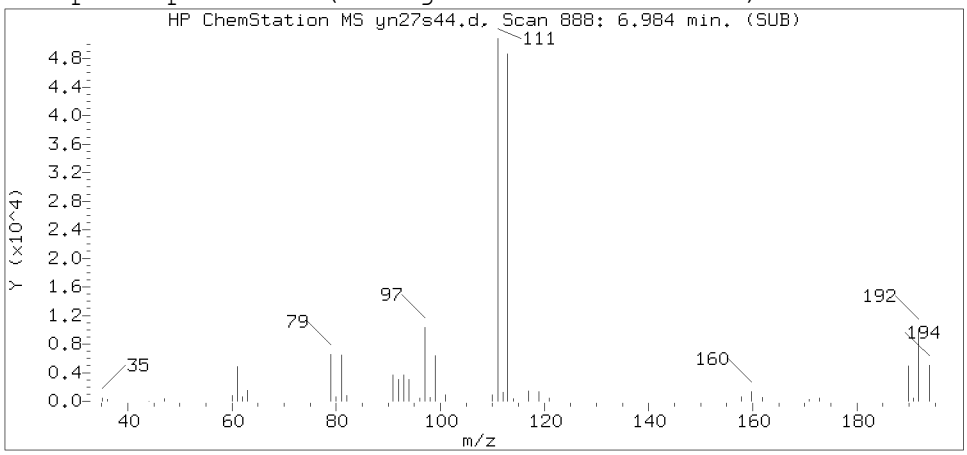
Digitally signed by Linda C. Pape on 11/30/2019 at 13:14.
Target 3.5 esignature user ID: lcp00895

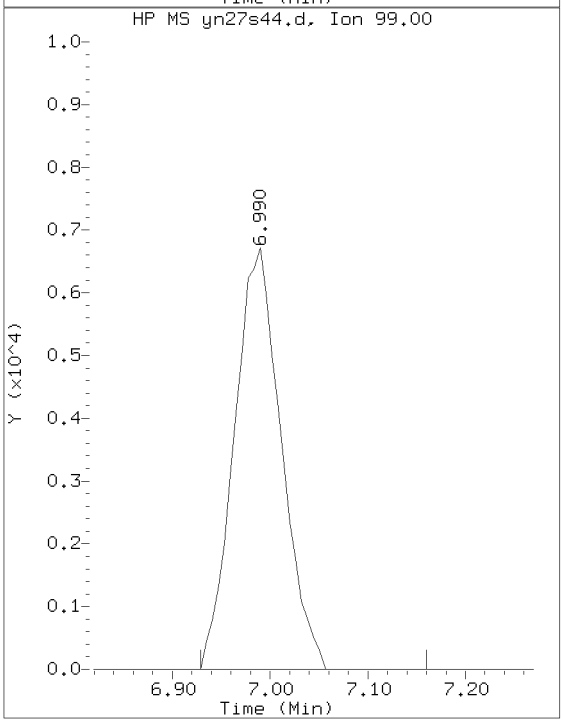
Reference Standard Spectrum for 1,1,1-Trichloroethane



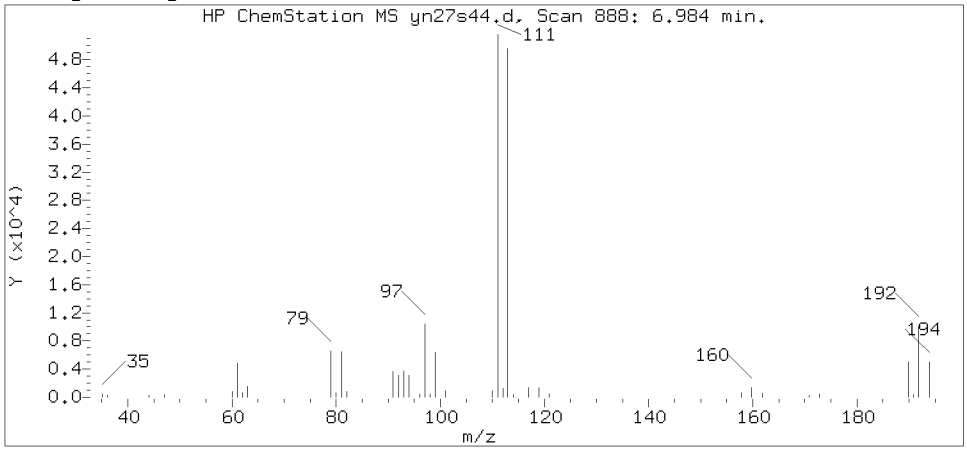


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09355.i/19nov27b.b/yn27s44.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 01:50 Analyst ID: DVV10203

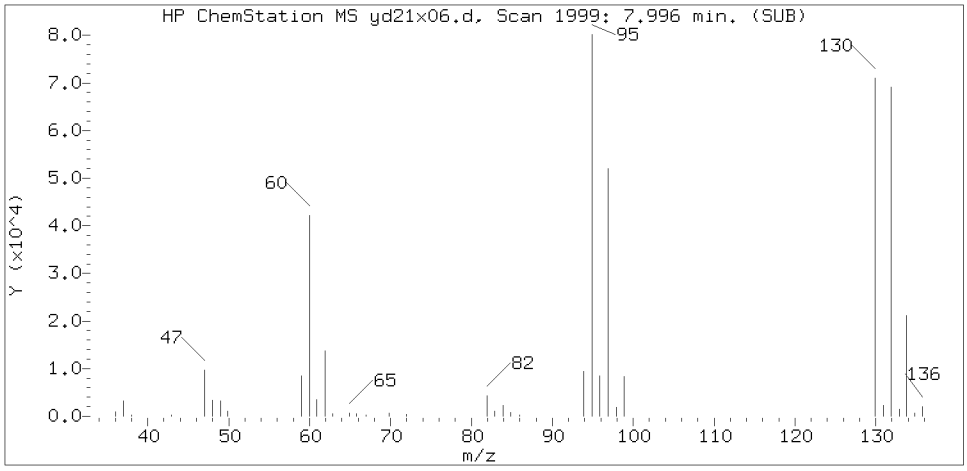
Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 02:07 Automation

Sample Name: WIN15DL Lab Sample ID: 1206743DL

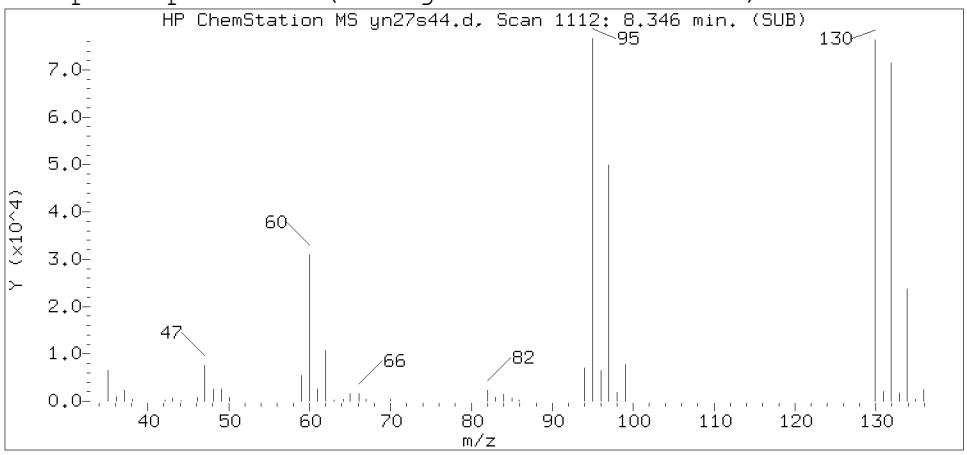
Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 888
Retention Time (minutes)	: 6.984
Relative Retention Time	: 0.00086
Quant Ion	: 97.00
Area (flag)	: 35751
On-Column Amount (ng)	: 4.6761

Digitally signed by Linda C. Pape on 11/30/2019 at 13:14.
Target 3.5 esignature user ID: lcp00895

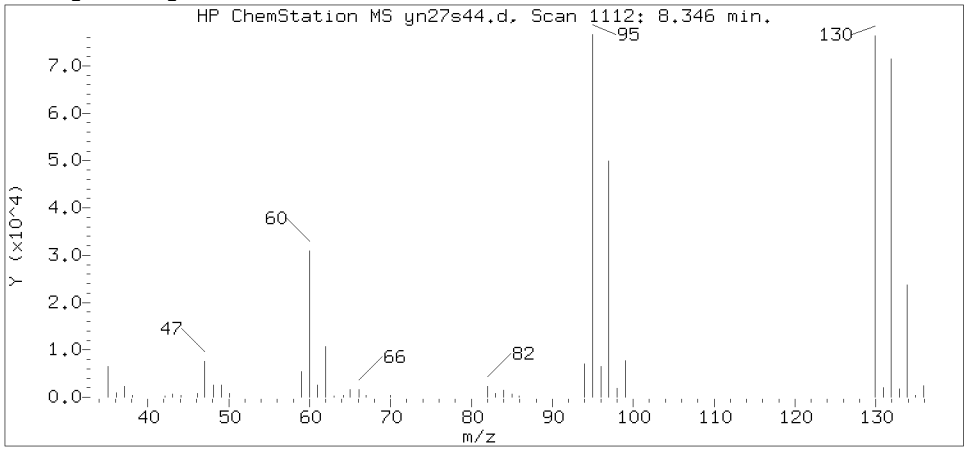
Reference Standard Spectrum for Trichloroethene

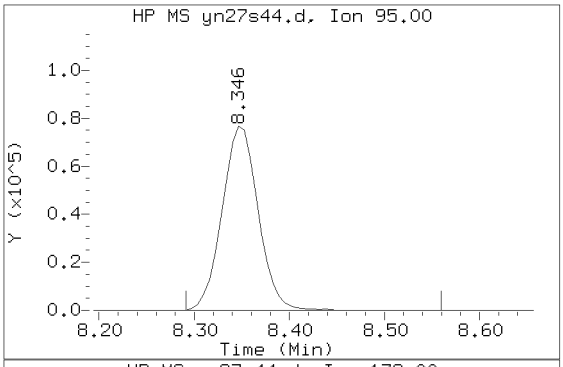


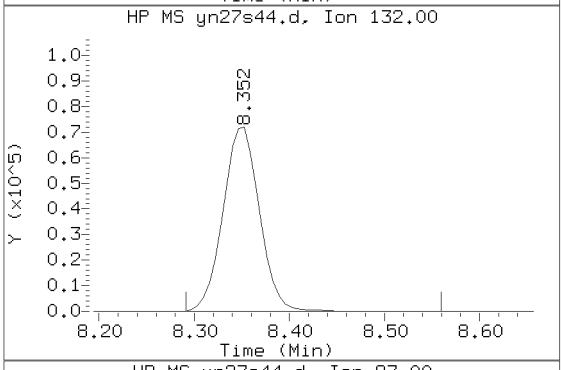
Sample Spectrum (Background Subtracted)

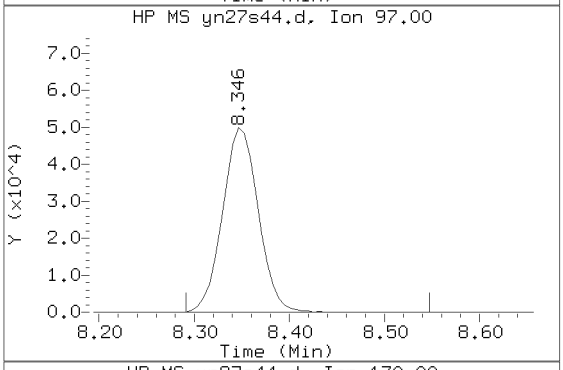


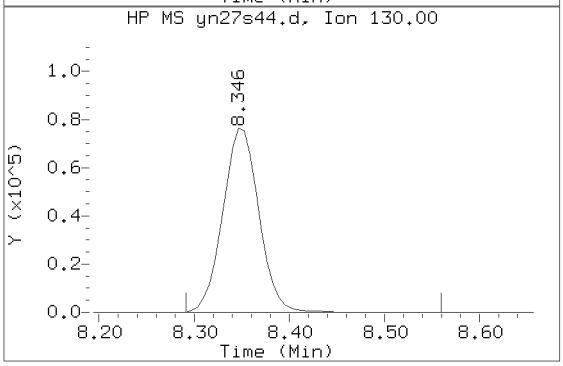
Sample Spectrum (Unaltered)











Data File: /chem2/HP09355.i/19nov27b.b/yn27s44.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 01:50 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 02:07 Automation

Sample Name: WIN15DL Lab Sample ID: 1206743DL

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 1112
Retention Time (minutes): 8.346
Relative Retention Time : 0.00073
Quant Ion : 95.00
Area (flag) : 201702
On-Column Amount (ng) : 36.1377

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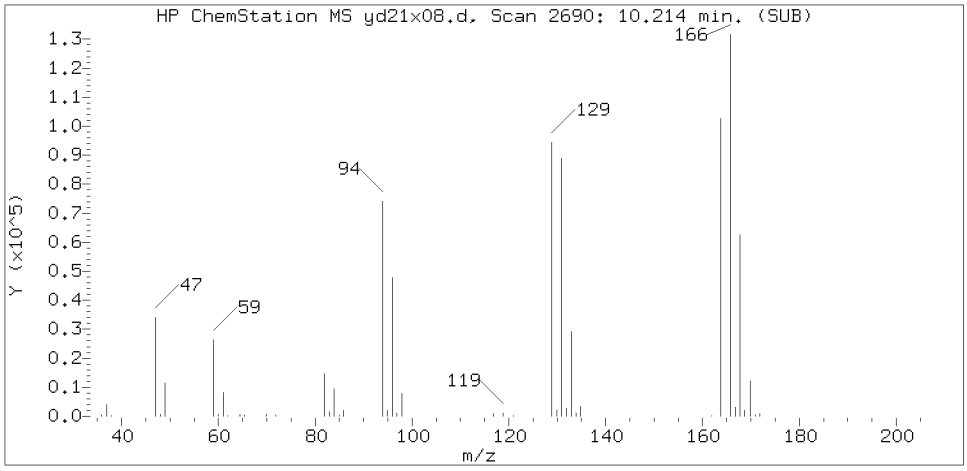
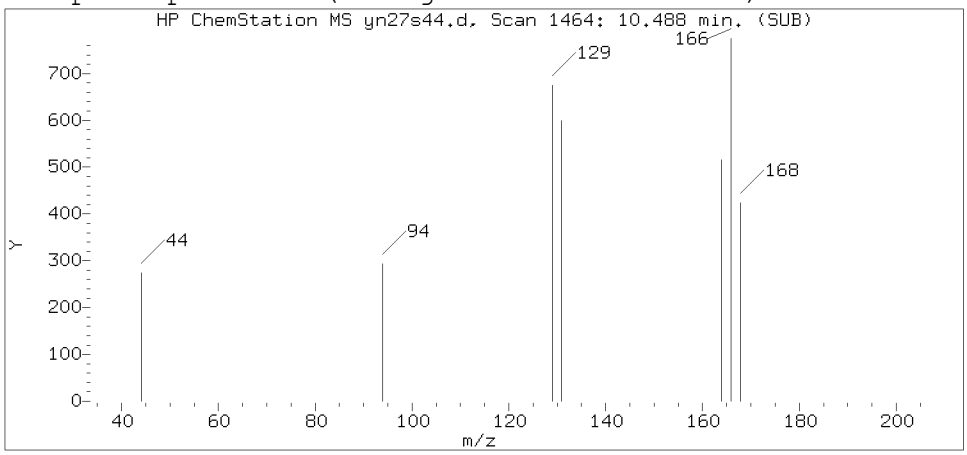
Target 3.5 esignature user ID: lcp00895

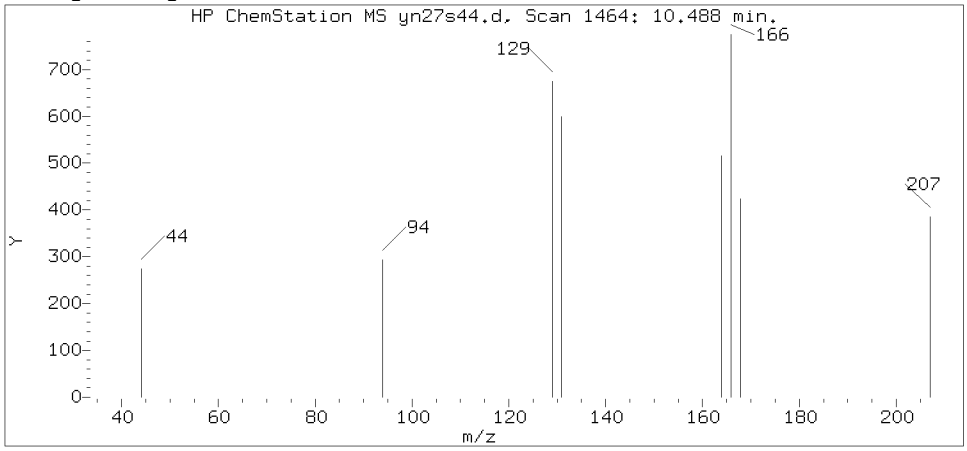
Reference Standard Spectrum for Tetrachloroethene

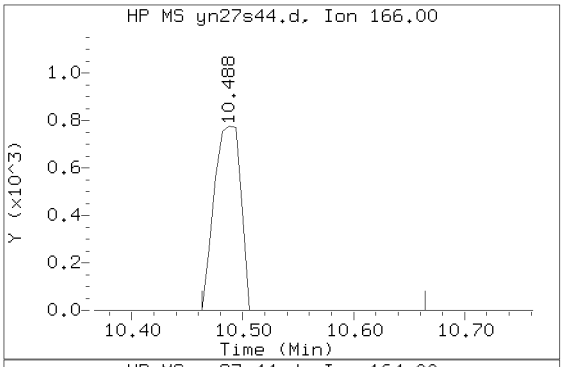


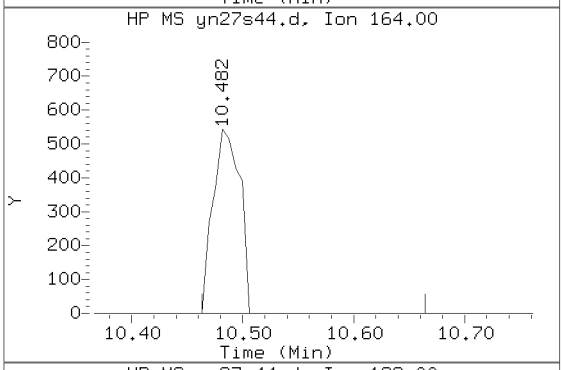
Sample Spectrum (Background Subtracted)

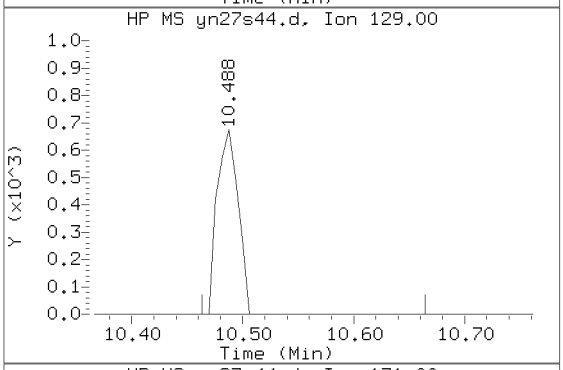


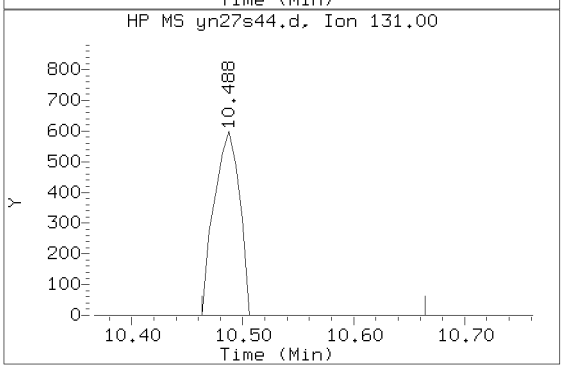
Sample Spectrum (Unaltered)











Data File: /chem2/HP09355.i/19nov27b.b/yn27s44.d Instrument ID: HP09355.i
Injection date and time: 28-NOV-2019 01:50 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 27374
Calibration date and time: 27-NOV-2019 21:38
Date, time and analyst ID of latest file update: 28-Nov-2019 02:07 Automation

Sample Name: WIN15DL Lab Sample ID: 1206743DL

Compound Number : 93
Compound Name : Tetrachloroethene
Scan Number : 1464
Retention Time (minutes): 10.488
Relative Retention Time :-0.00050
Quant Ion : 166.00
Area (flag) : 1290
On-Column Amount (ng) : 0.2280

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Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WIN16

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1206744

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19nov26a.b/en26s17.d

Level: (low/med) LOW Date Received: 11/20/19

Moisture: not dec. _____ Date Analyzed: 11/26/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	
75-35-4	1,1-Dichloroethene	0.4	J
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	4	
75-34-3	1,1-Dichloroethane	3	
156-59-2	cis-1,2-Dichloroethene	5	
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	2	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	8	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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WIN16 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1206744

Data file: /chem/HP15648.i/19nov26a.b/en26s17.d Injection date and time: **26-NOV-2019 17:26**
Data file Sample Info. Line: WIN16;1206744;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 17:43 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.481	(0.000)	245	65	177342	(-6)	250.00	
66) Fluorobenzene	4.724	(0.000)	613	96	1015771	(1)	50.00	
101) Chlorobenzene-d5	7.870	(0.000)	1129	117	707265	(0)	50.00	
132) 1,4-Dichlorobenzene-d4	9.784	(-0.006)	1443	152	350595	(2)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.066	(0.000)	113	216072	50.008	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.383	(0.001)	102	58084	50.435	101%		80 - 120
84) Toluene-d8	(3)	6.364	(0.000)	98	993601	49.484	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.900	(-0.001)	95	375651	49.645	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)	1.377	(0.000)	62	9052	1.139	1.14			0.2	1
17) 1,1-Dichloroethene	(2)	2.109	(-0.001)	96	1392	0.357	0.36		J	0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)	2.712	(-0.001)	96	15948	3.523	3.52			0.2	1
36) 1,1-Dichloroethane	(2)	3.078	(0.000)	63	29266	3.038	3.04			0.2	1
42) cis-1,2-Dichloroethene	(2)	3.608	(0.000)	96	23442	4.526	4.53			0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	4.090	(0.000)	97	11535	1.677	1.68			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	5.096	(-0.000)	95	38334	7.606	7.61			0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	6
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Jason M. Long on 11/27/2019 at 14:39. Target 3.5 esignature user ID: jml01693

Data file: /chem/HP15648.i/19nov26a.b/en26s17.d Injection date and time: **26-NOV-2019 17:26**
Data file Sample Info. Line: WIN16;1206744;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 17:43 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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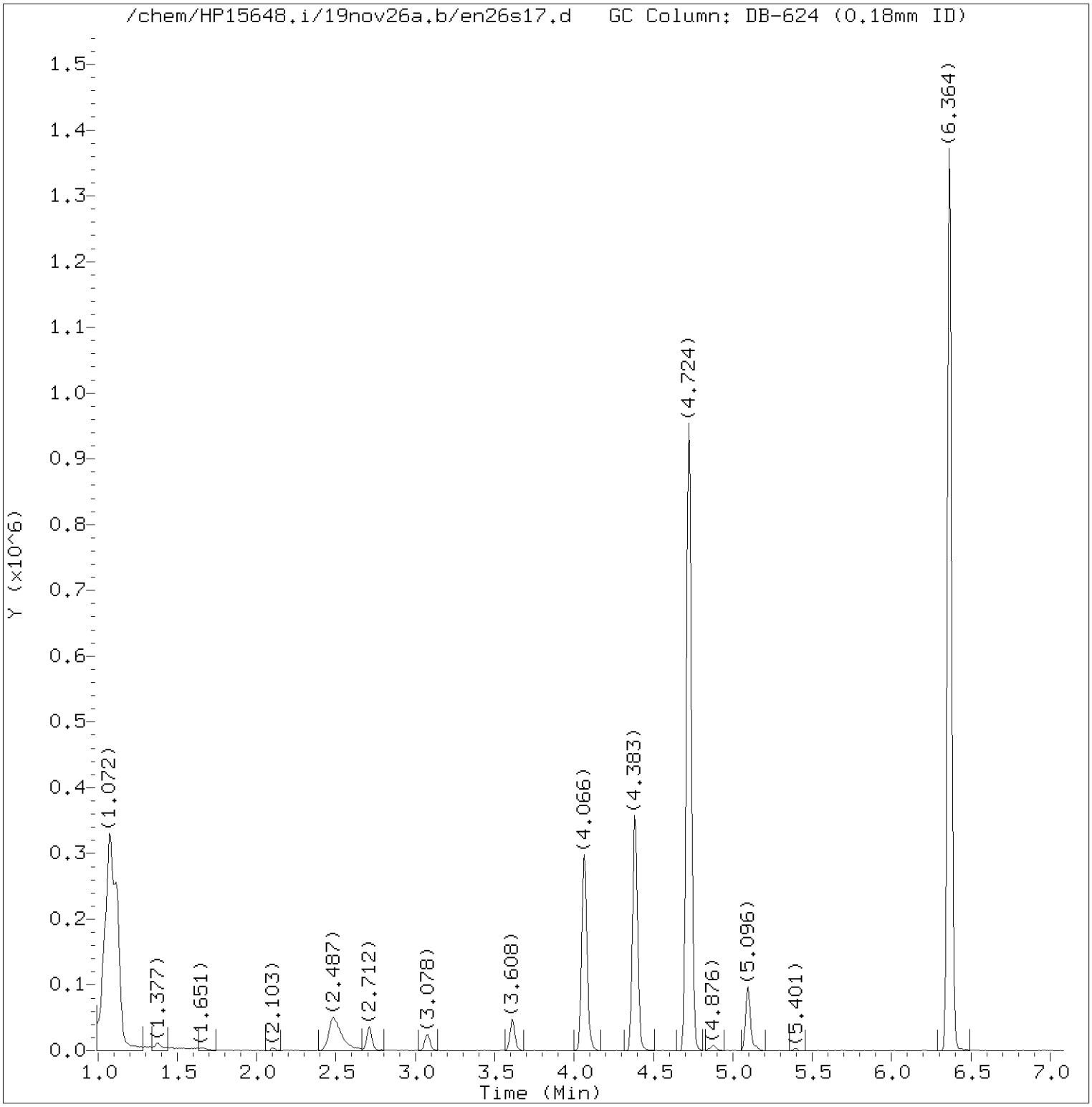
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Jason M. Long on 11/27/2019 at 14:39. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 12:19. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

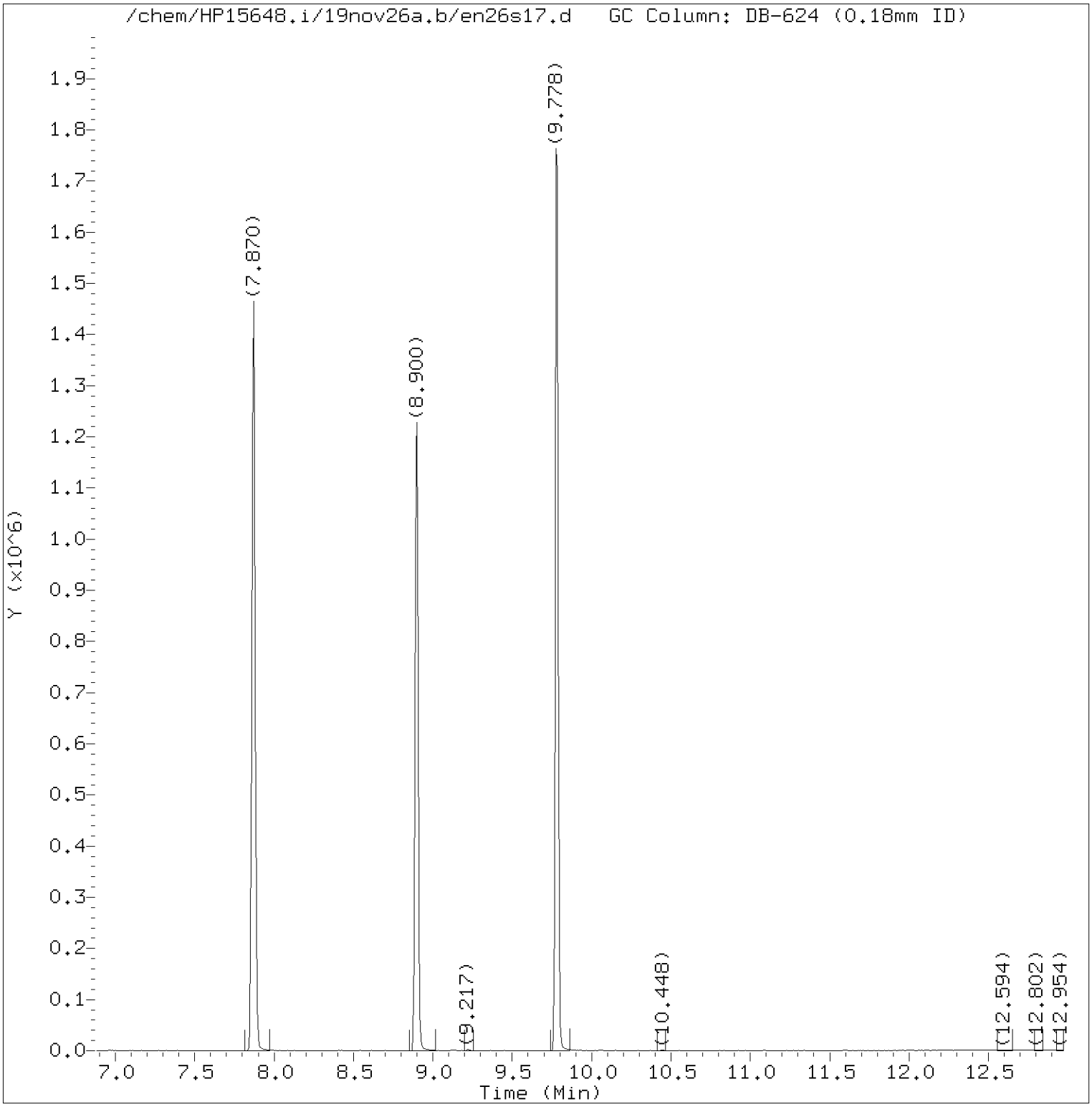
Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s17.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 17:26 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:43 Automation

Sample Name: WIN16 Lab Sample ID: 1206744

Digitally signed by Jason M. Long
on 11/27/2019 at 14:39.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s17.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 17:26 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:43 Automation

Sample Name: WIN16 Lab Sample ID: 1206744

Digitally signed by Jason M. Long
on 11/27/2019 at 14:39.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s17.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 17:26 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:43 Automation

Sample Name: WIN16 Lab Sample ID: 1206744

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
6) Vinyl Chloride	(2)	1.377	62	9052	1.139
17) 1,1-Dichloroethene	(2)	2.109	96	1392	0.357
29)*t-Butyl alcohol-d10	(1)	2.481	65	177342	250.000
32) trans-1,2-Dichloroethene	(2)	2.712	96	15948	3.523
36) 1,1-Dichloroethane	(2)	3.078	63	29266	3.038
42) cis-1,2-Dichloroethene	(2)	3.608	96	23442	4.526
52)$Dibromofluoromethane	(2)	4.066	113	216072	50.008
53) 1,1,1-Trichloroethane	(2)	4.090	97	11535	1.677
57)$1,2-Dichloroethane-d4	(2)	4.383	102	58084	50.435
66)*Fluorobenzene	(2)	4.724	96	1015771	50.000
71) Trichloroethene	(2)	5.096	95	38334	7.606
84)$Toluene-d8	(3)	6.364	98	993601	49.484
101)*Chlorobenzene-d5	(3)	7.870	117	707265	50.000
115)$4-Bromofluorobenzene	(3)	8.900	95	375651	49.645
132)*1,4-Dichlorobenzene-d4	(4)	9.784	152	350595	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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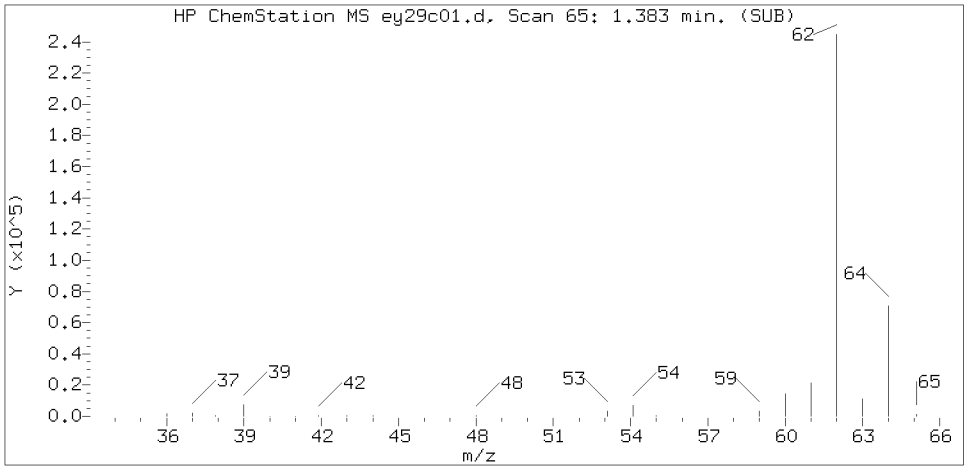
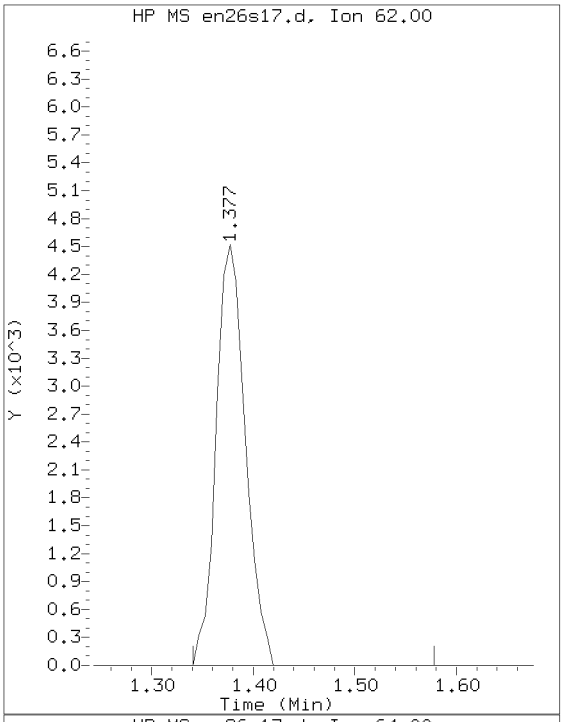
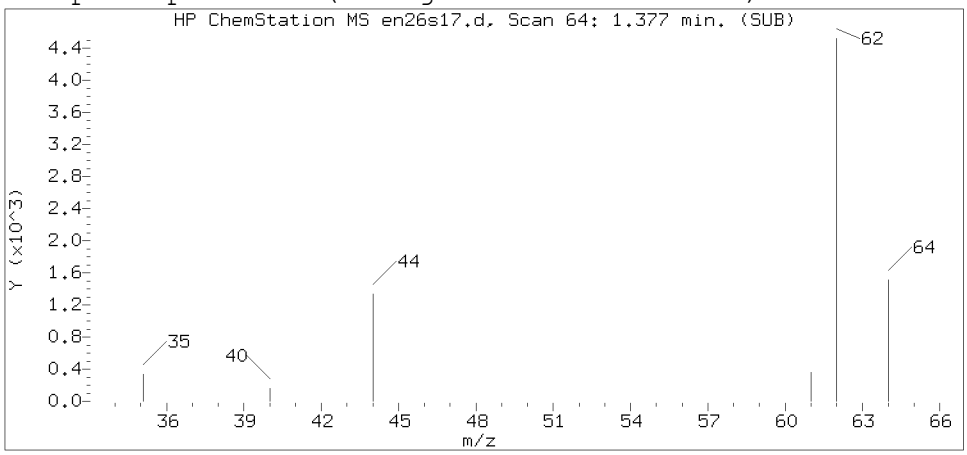
on 11/27/2019 at 14:39.
Target 3.5 esignature user ID: jml01693

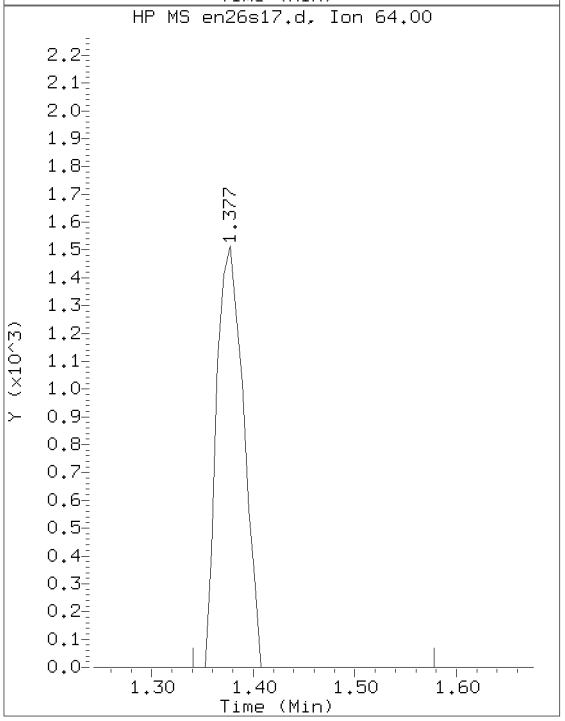
Reference Standard Spectrum for Vinyl Chloride



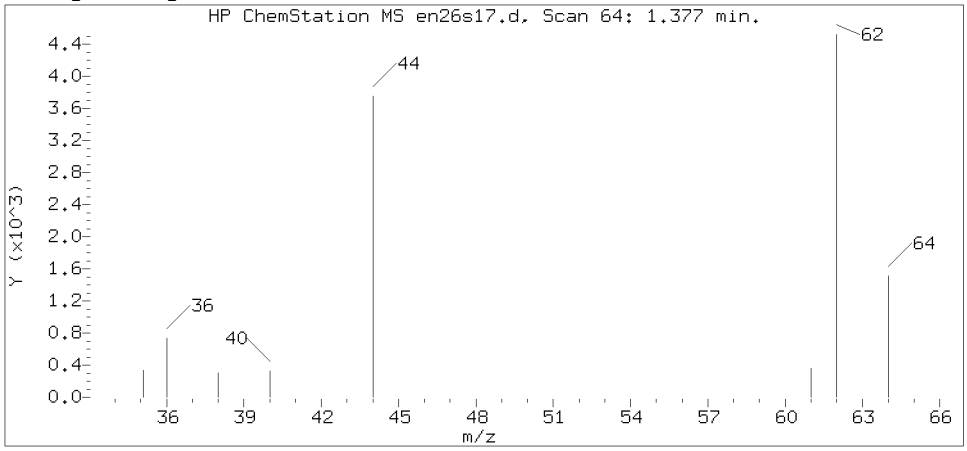


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP15648.i/19nov26a.b/en26s17.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 17:26 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:43 Automation

Sample Name: WIN16 Lab Sample ID: 1206744

Compound Number	: 6
Compound Name	: Vinyl Chloride
Scan Number	: 64
Retention Time (minutes)	: 1.377
Relative Retention Time	: 0.00000
Quant Ion	: 62.00
Area (flag)	: 9052
On-Column Amount (ng)	: 1.1395

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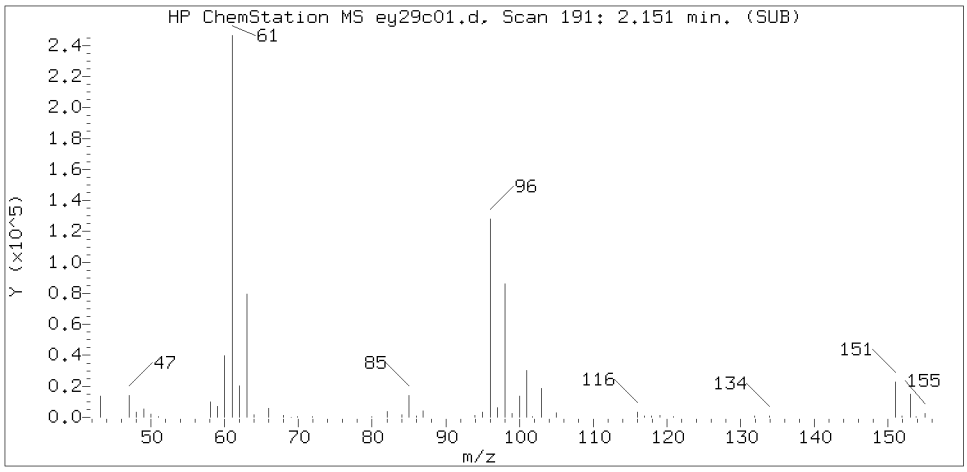
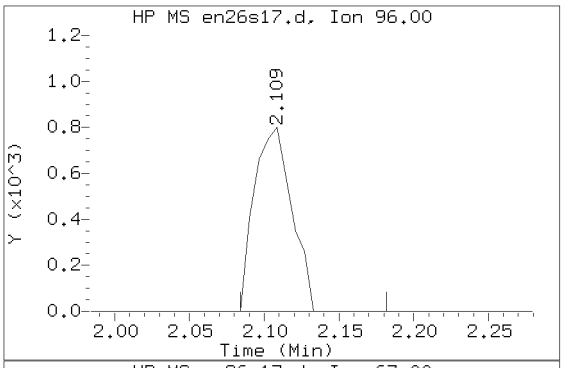
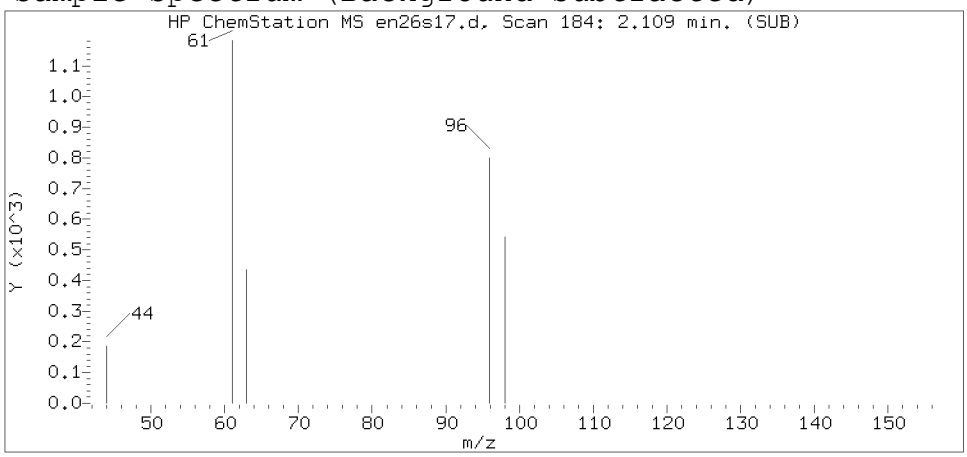
Target 3.5 esignature user ID: jml01693

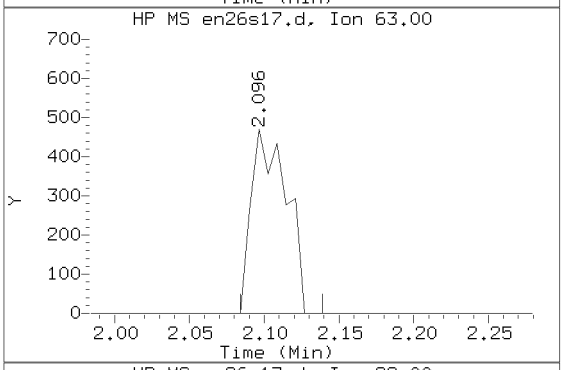
Reference Standard Spectrum for 1,1-Dichloroethene

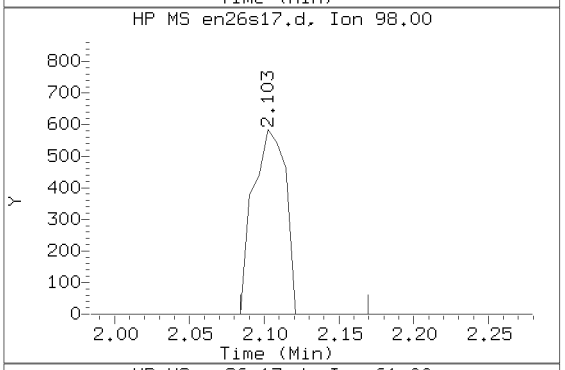




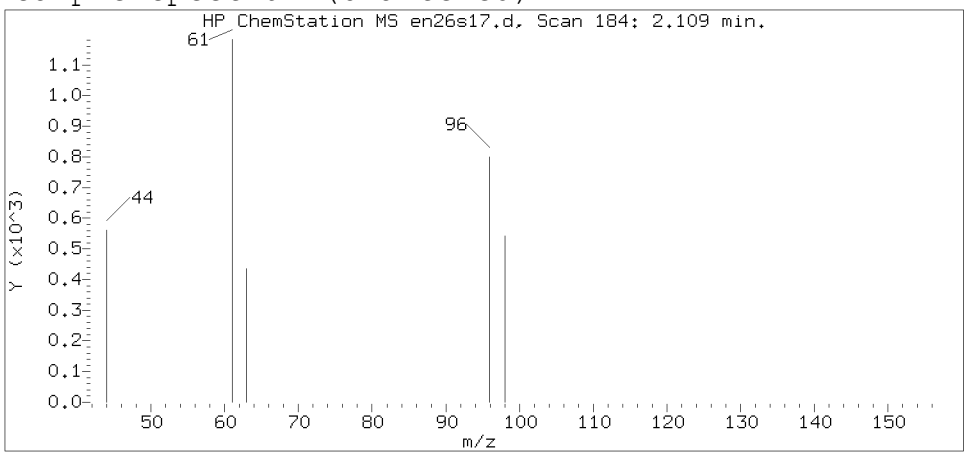
Sample Spectrum (Background Subtracted)

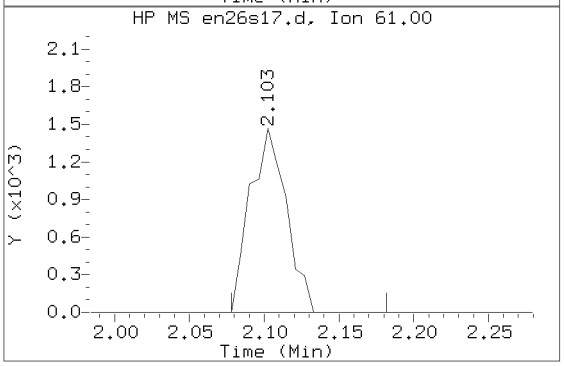






Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19nov26a.b/en26s17.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 17:26 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:43 Automation

Sample Name: WIN16 Lab Sample ID: 1206744

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 184
Retention Time (minutes): 2.109
Relative Retention Time :-0.00129
Quant Ion : 96.00
Area (flag) : 1392
On-Column Amount (ng) : 0.3568

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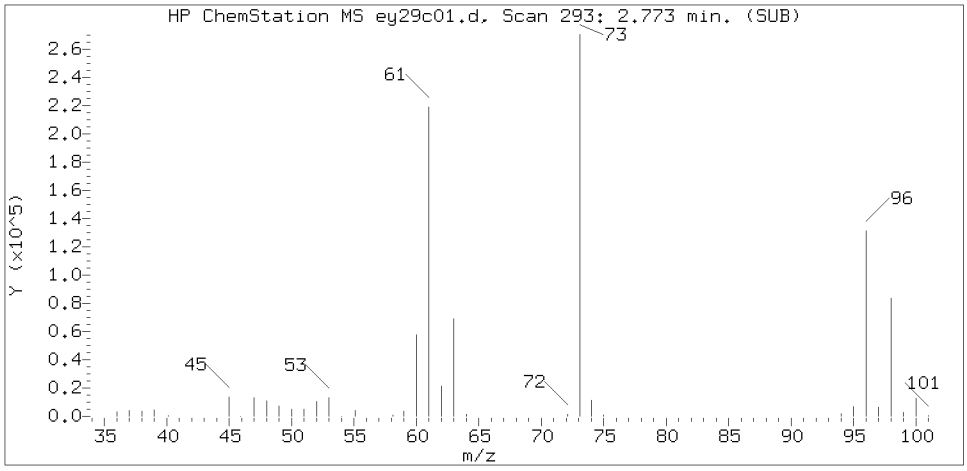
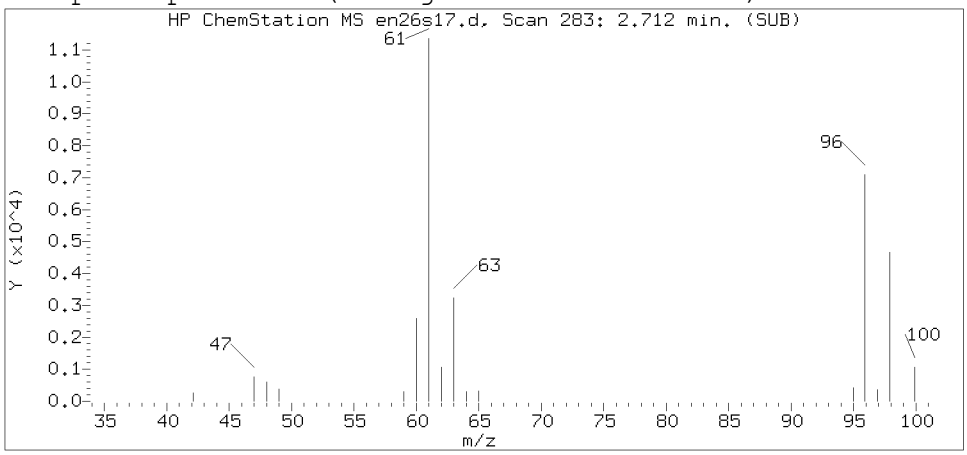
Target 3.5 esignature user ID: jml01693

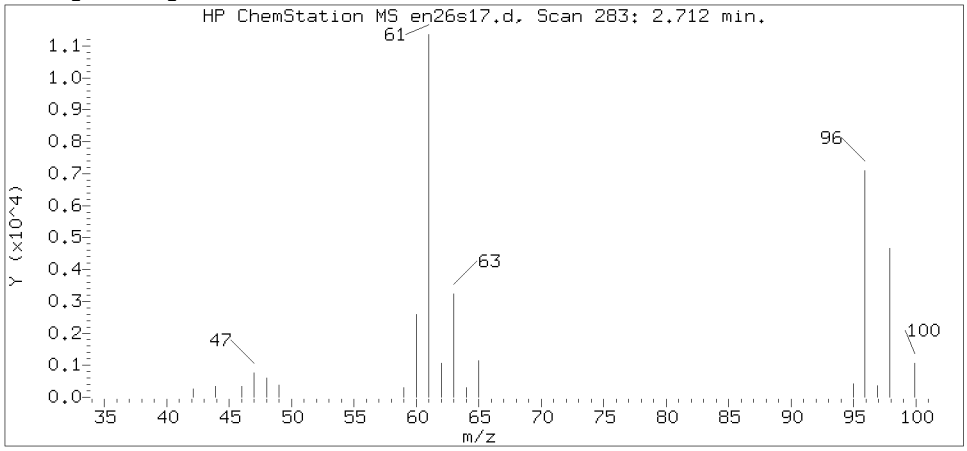
Reference Standard Spectrum for trans-1,2-Dichloroethene

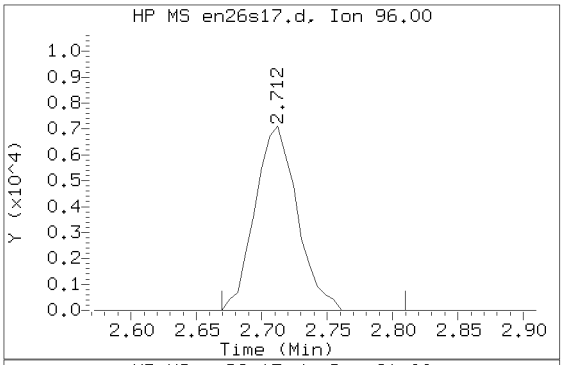


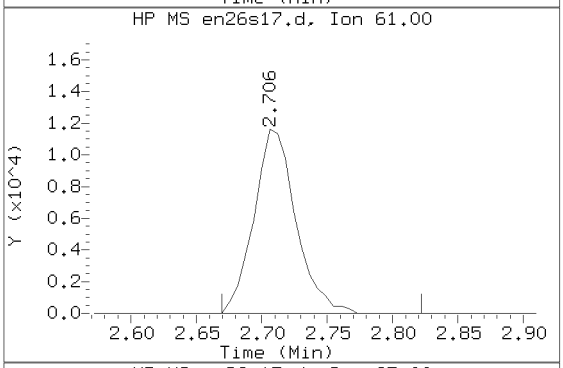
Sample Spectrum (Background Subtracted)

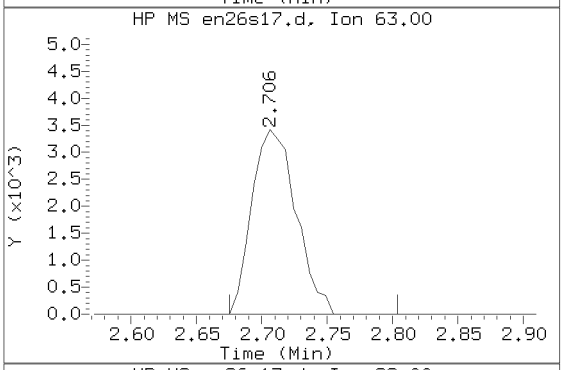


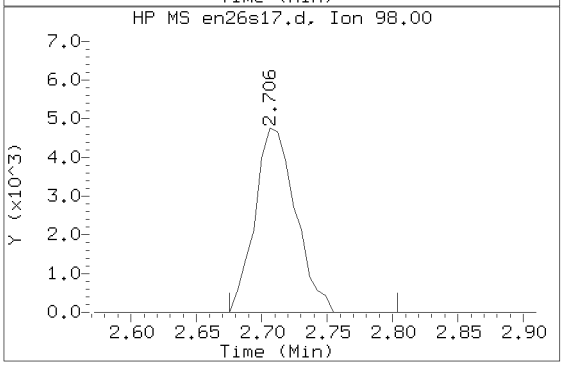
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19nov26a.b/en26s17.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 17:26 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:43 Automation

Sample Name: WIN16 Lab Sample ID: 1206744

Compound Number : 32
Compound Name : trans-1,2-Dichloroethene
Scan Number : 283
Retention Time (minutes): 2.712
Relative Retention Time :-0.00128
Quant Ion : 96.00
Area (flag) : 15948
On-Column Amount (ng) : 3.5232

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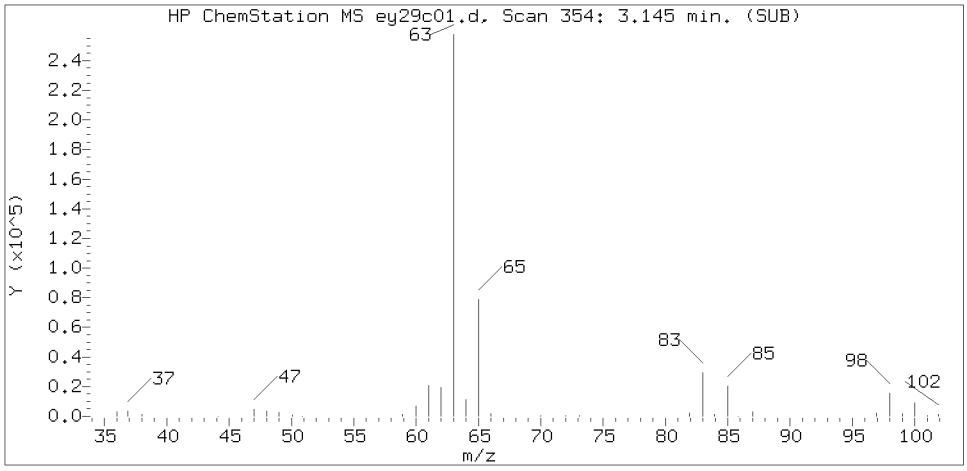
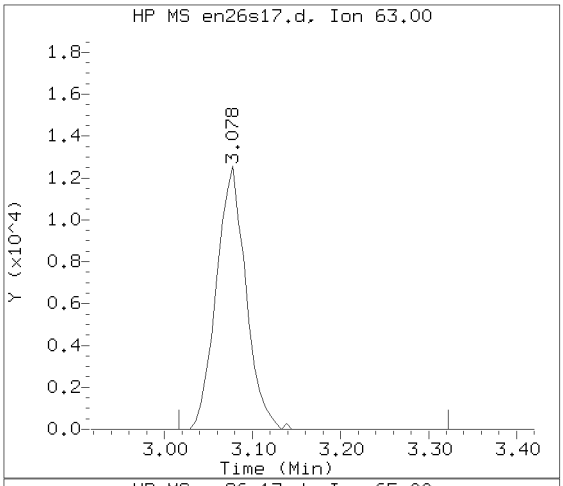
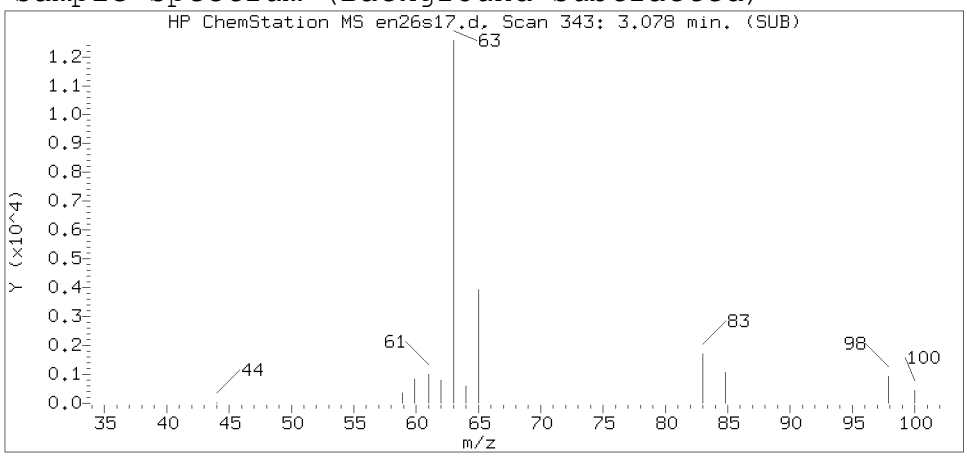
Target 3.5 esignature user ID: jml01693

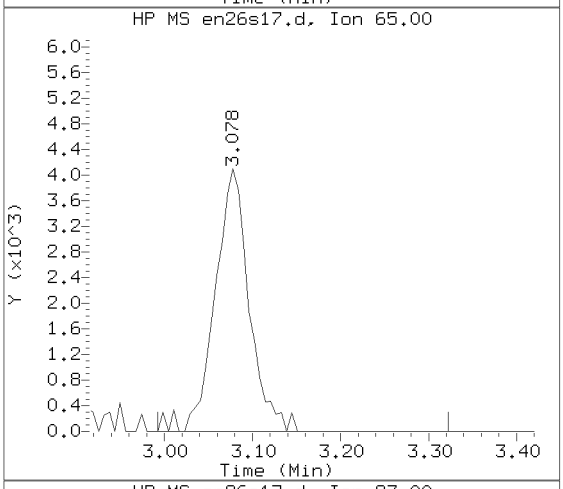
Reference Standard Spectrum for 1,1-Dichloroethane



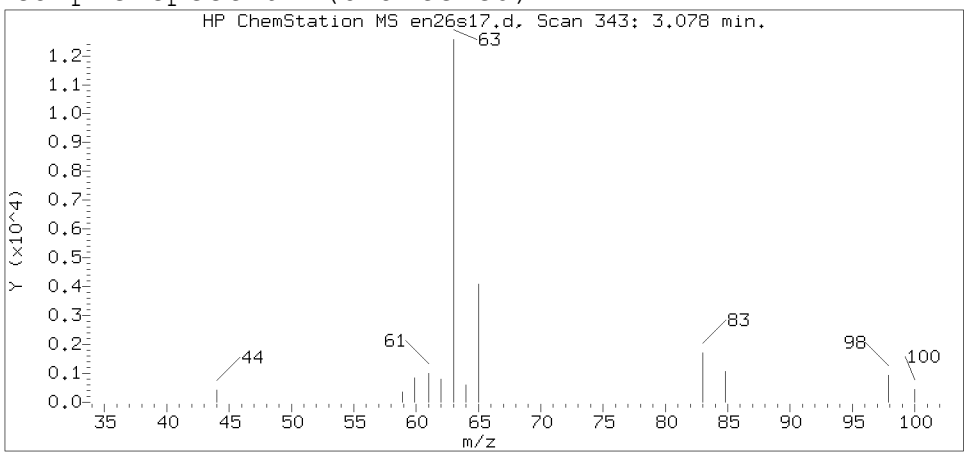


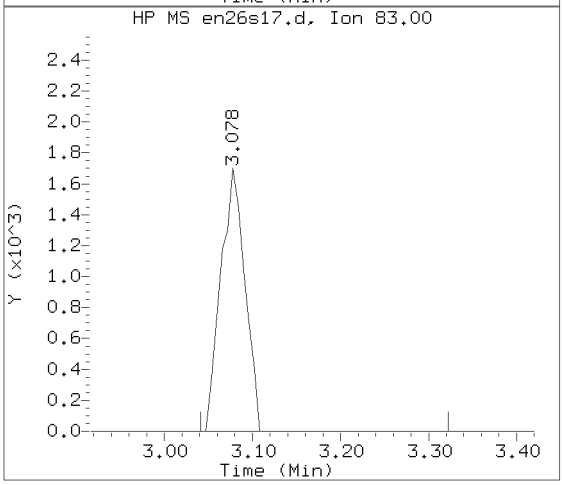
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP15648.i/19nov26a.b/en26s17.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 17:26 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:43 Automation

Sample Name: WIN16 Lab Sample ID: 1206744

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 343
Retention Time (minutes): 3.078
Relative Retention Time : 0.00001
Quant Ion : 63.00
Area (flag) : 29266
On-Column Amount (ng) : 3.0379

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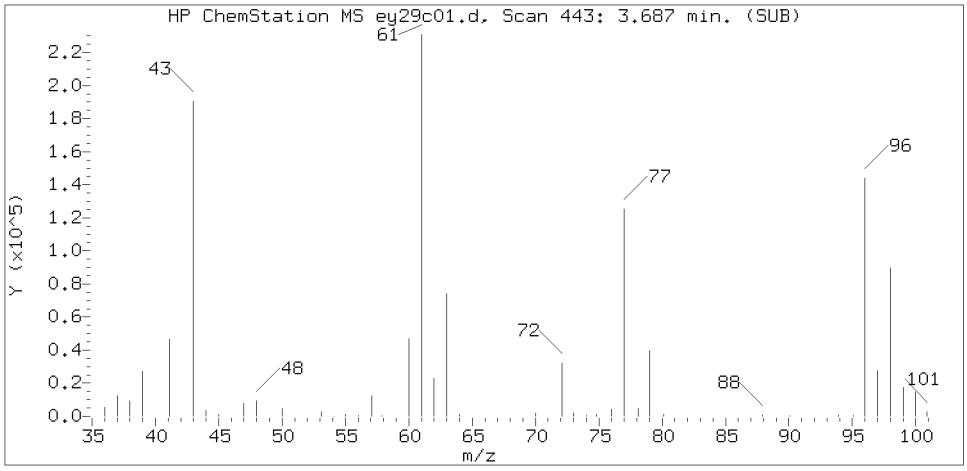
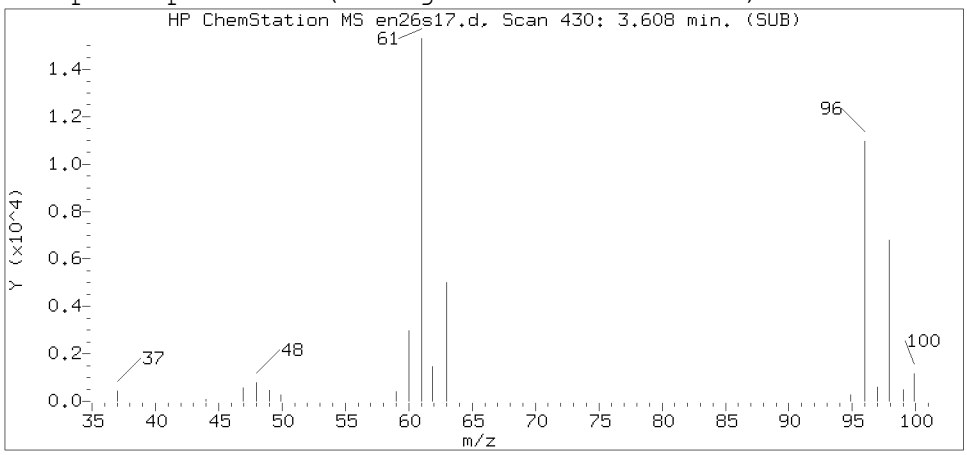
Target 3.5 esignature user ID: jml01693

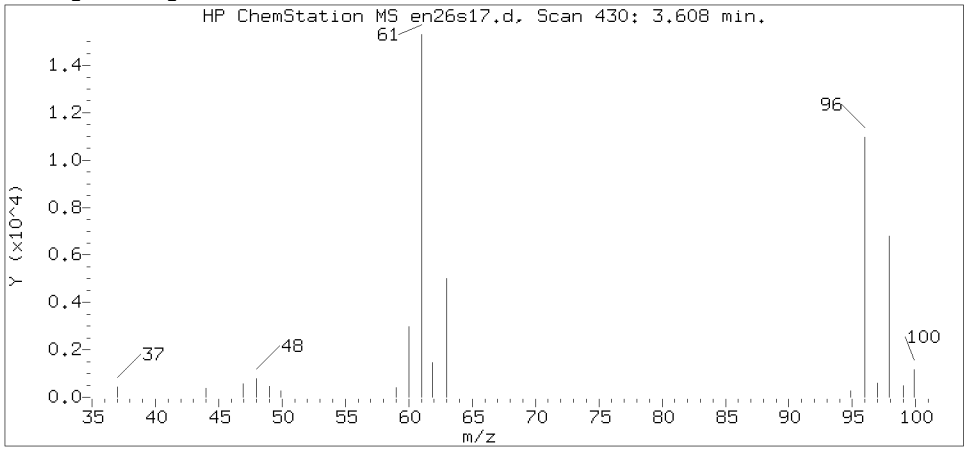
Reference Standard Spectrum for cis-1,2-Dichloroethene

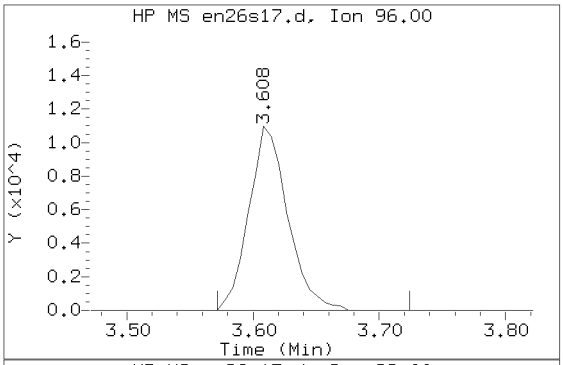


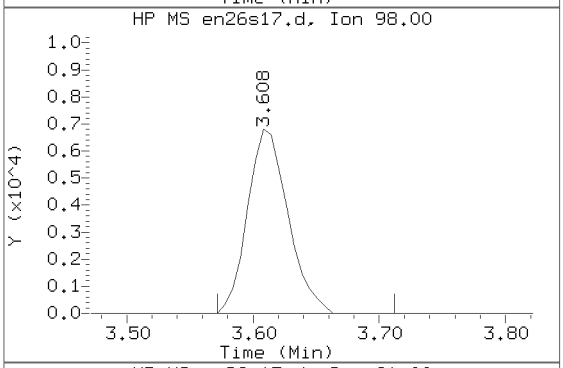
Sample Spectrum (Background Subtracted)

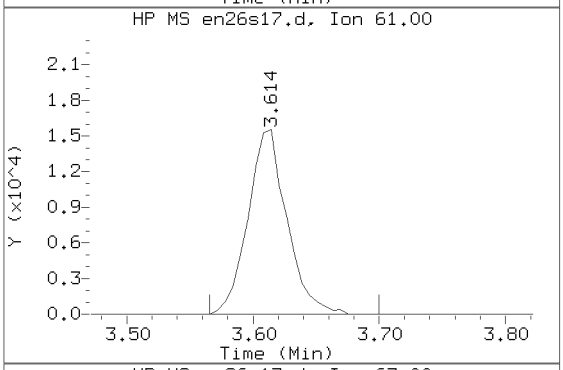


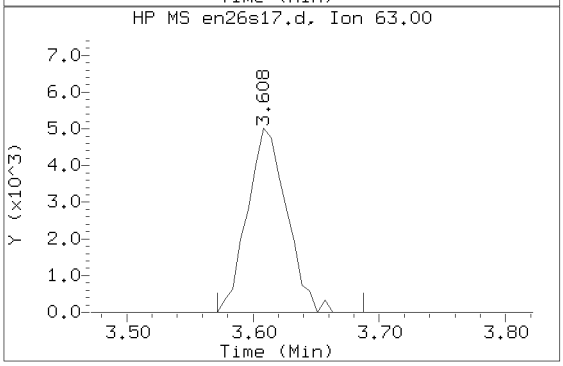
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19nov26a.b/en26s17.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 17:26 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:43 Automation

Sample Name: WIN16 Lab Sample ID: 1206744

Compound Number	: 42
Compound Name	: cis-1,2-Dichloroethene
Scan Number	: 430
Retention Time (minutes)	: 3.608
Relative Retention Time	: 0.00001
Quant Ion	: 96.00
Area (flag)	: 23442
On-Column Amount (ng)	: 4.5260

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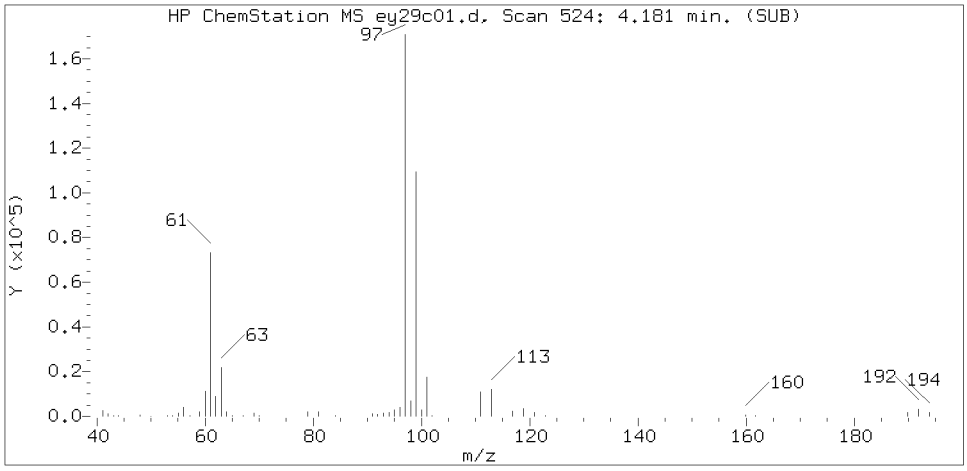
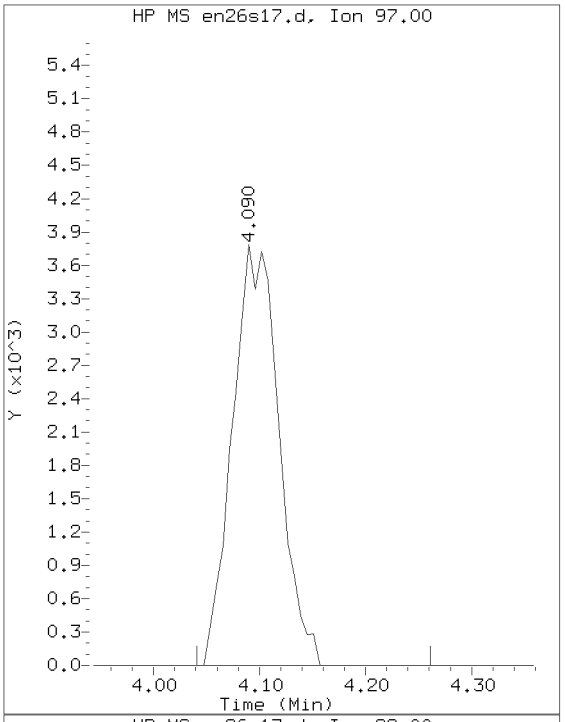
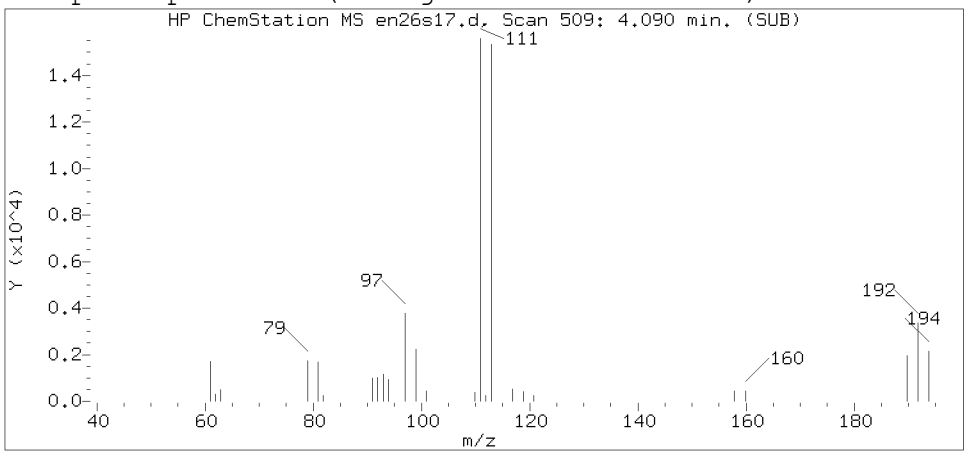
Target 3.5 esignature user ID: jml01693

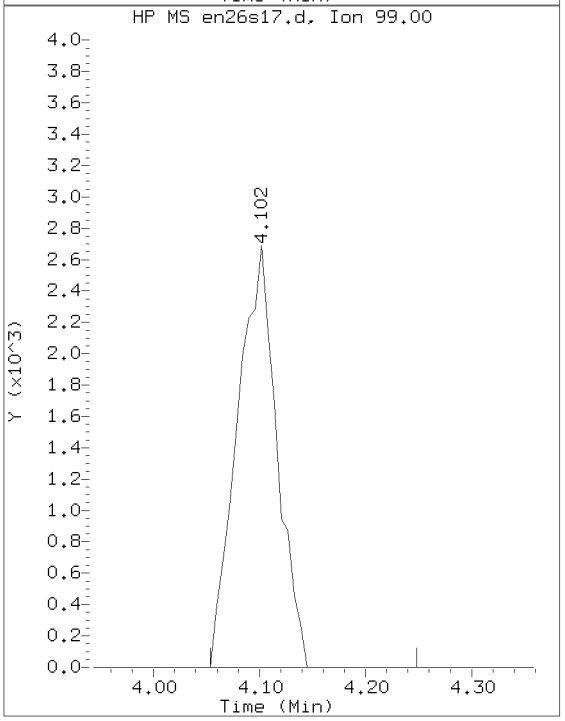
Reference Standard Spectrum for 1,1,1-Trichloroethane



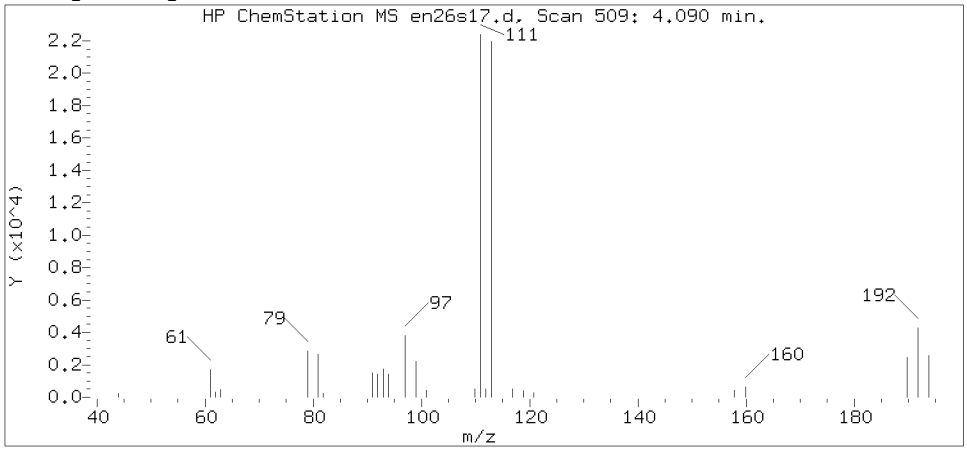


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP15648.i/19nov26a.b/en26s17.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 17:26 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:43 Automation

Sample Name: WIN16 Lab Sample ID: 1206744

Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 509
Retention Time (minutes): 4.090
Relative Retention Time : 0.00000
Quant Ion : 97.00
Area (flag) : 11535
On-Column Amount (ng) : 1.6775

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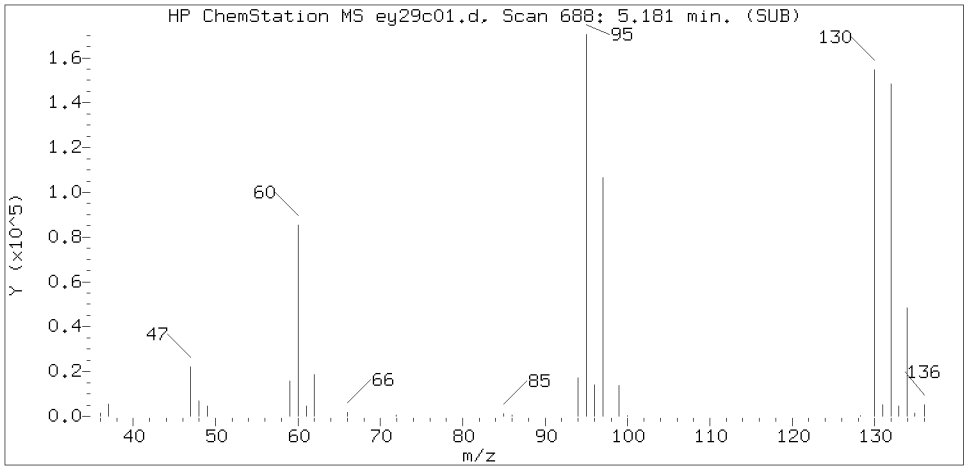
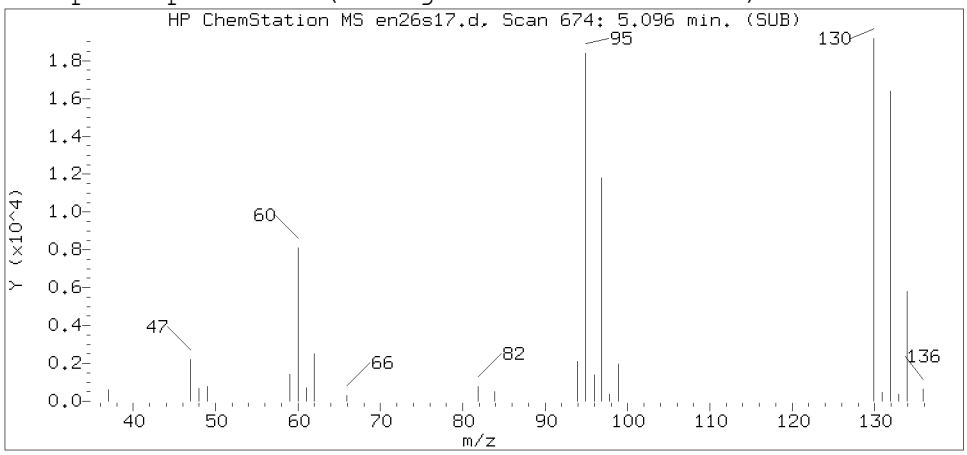
Target 3.5 esignature user ID: jml01693

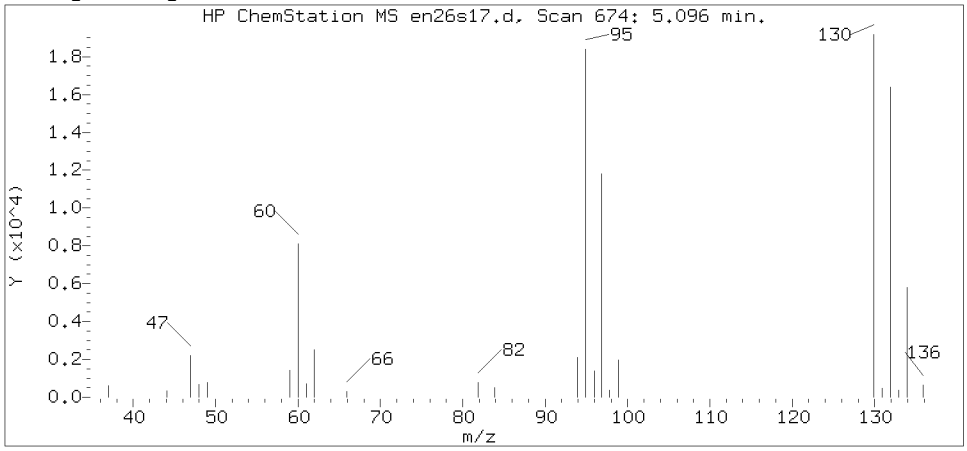
Reference Standard Spectrum for Trichloroethene

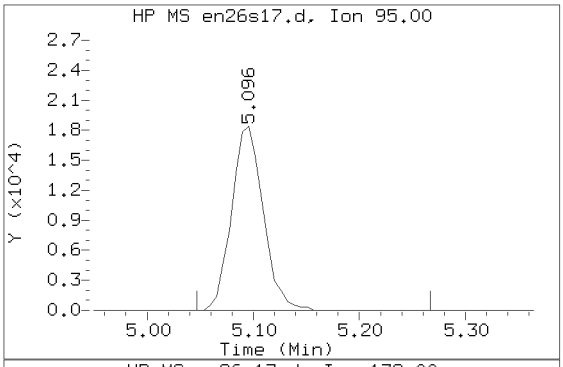


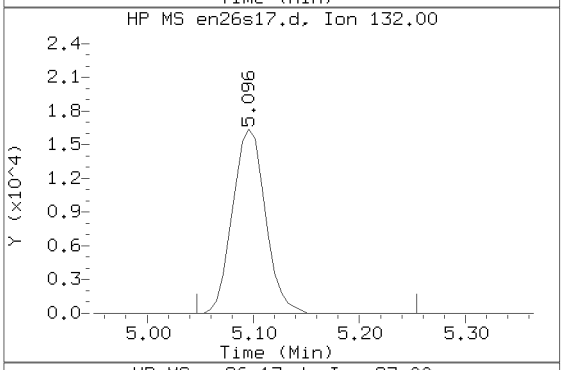
Sample Spectrum (Background Subtracted)

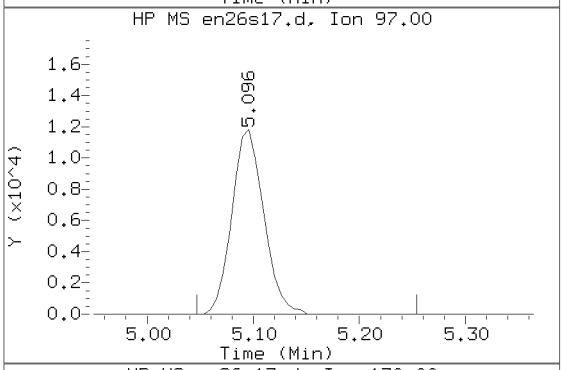


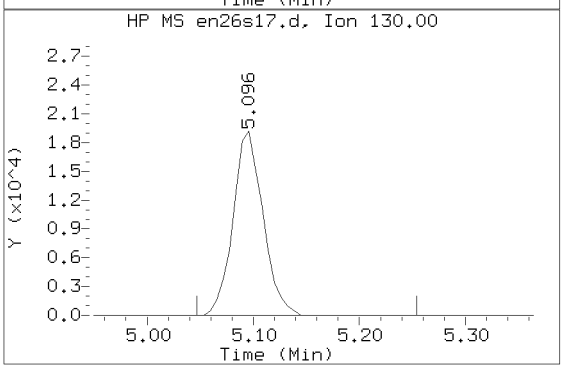
Sample Spectrum (Unaltered)











Data File: /chem/HP15648.i/19nov26a.b/en26s17.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 17:26 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 17:43 Automation

Sample Name: WIN16 Lab Sample ID: 1206744

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 674
Retention Time (minutes): 5.096
Relative Retention Time :-0.00000
Quant Ion : 95.00
Area (flag) : 38334
On-Column Amount (ng) : 7.6064

Digitally signed by Jason M. Long on 11/27/2019 at 14:39.
Target 3.5 esignature user ID: jml01693

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WIN17

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1206745

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19nov26a.b/en26s03.d

Level: (low/med) LOW Date Received: 11/20/19

Moisture: not dec. _____ Date Analyzed: 11/26/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

WIN17 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1206745

Data file: /chem/HP15648.i/19nov26a.b/en26s03.d Injection date and time: **26-NOV-2019 12:43**
Data file Sample Info. Line: WIN17;1206745;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 13:00 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.480	(0.000)	245	65	176463	(-7)	250.00	
66) Fluorobenzene	4.724	(0.000)	613	96	993886	(-2)	50.00	
101) Chlorobenzene-d5	7.870	(0.000)	1129	117	691892	(-2)	50.00	
132) 1,4-Dichlorobenzene-d4	9.784	(-0.006)	1443	152	336877	(-2)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.059	(0.001)	113	207910	49.178	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.382	(0.001)	102	55953	49.654	99%		80 - 120
84) Toluene-d8	(3)	6.364	(0.000)	98	973247	49.547	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.900	(-0.001)	95	369097	49.863	100%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	6
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Jason M. Long on 11/27/2019 at 14:38. Target 3.5 esignature user ID: jml01693

Data file: /chem/HP15648.i/19nov26a.b/en26s03.d Injection date and time: **26-NOV-2019 12:43**
Data file Sample Info. Line: WIN17;1206745;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 13:00 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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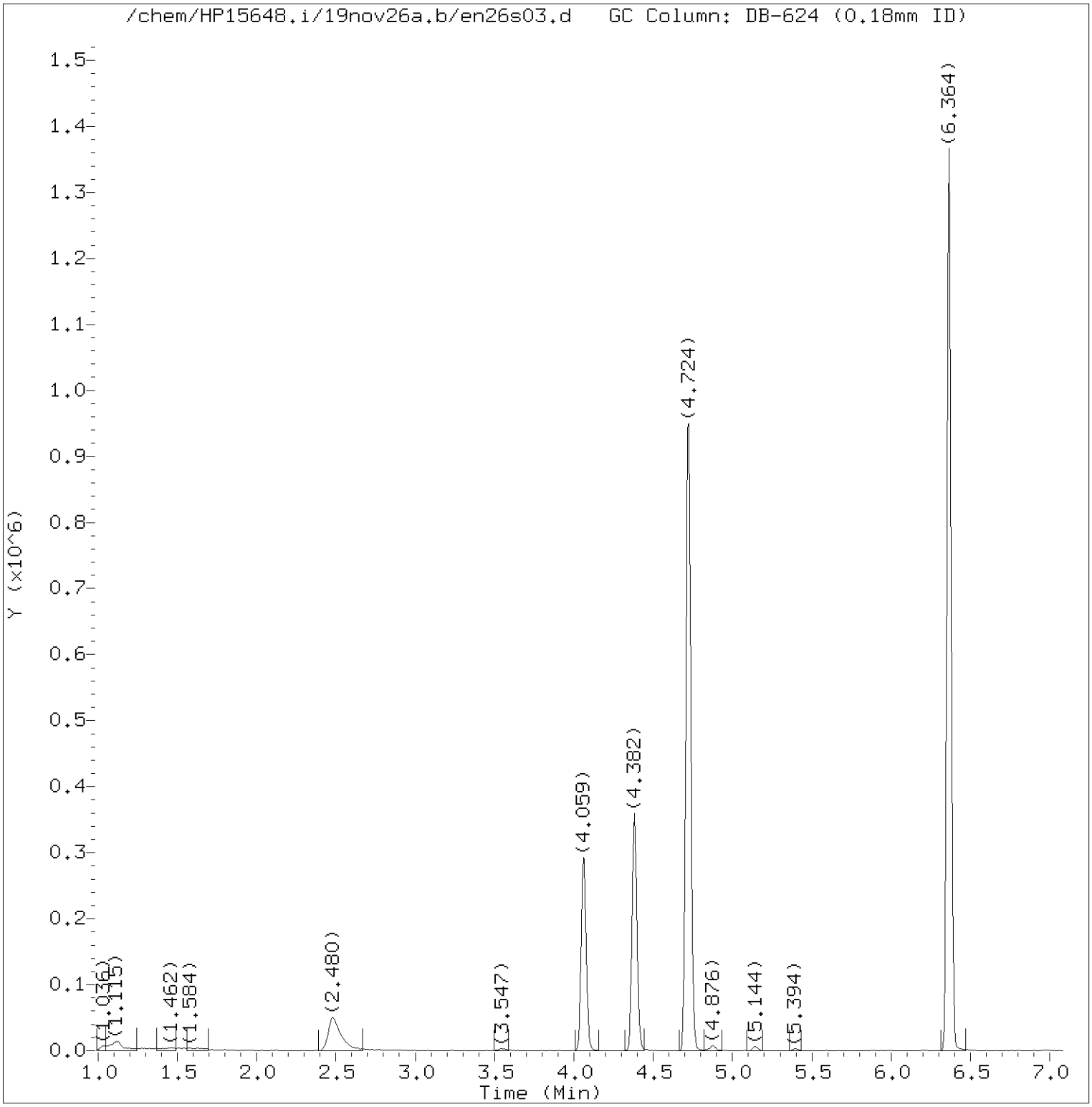
Total number of targets = 24

Digitally signed by Jason M. Long on 11/27/2019 at 14:38. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 12:19. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

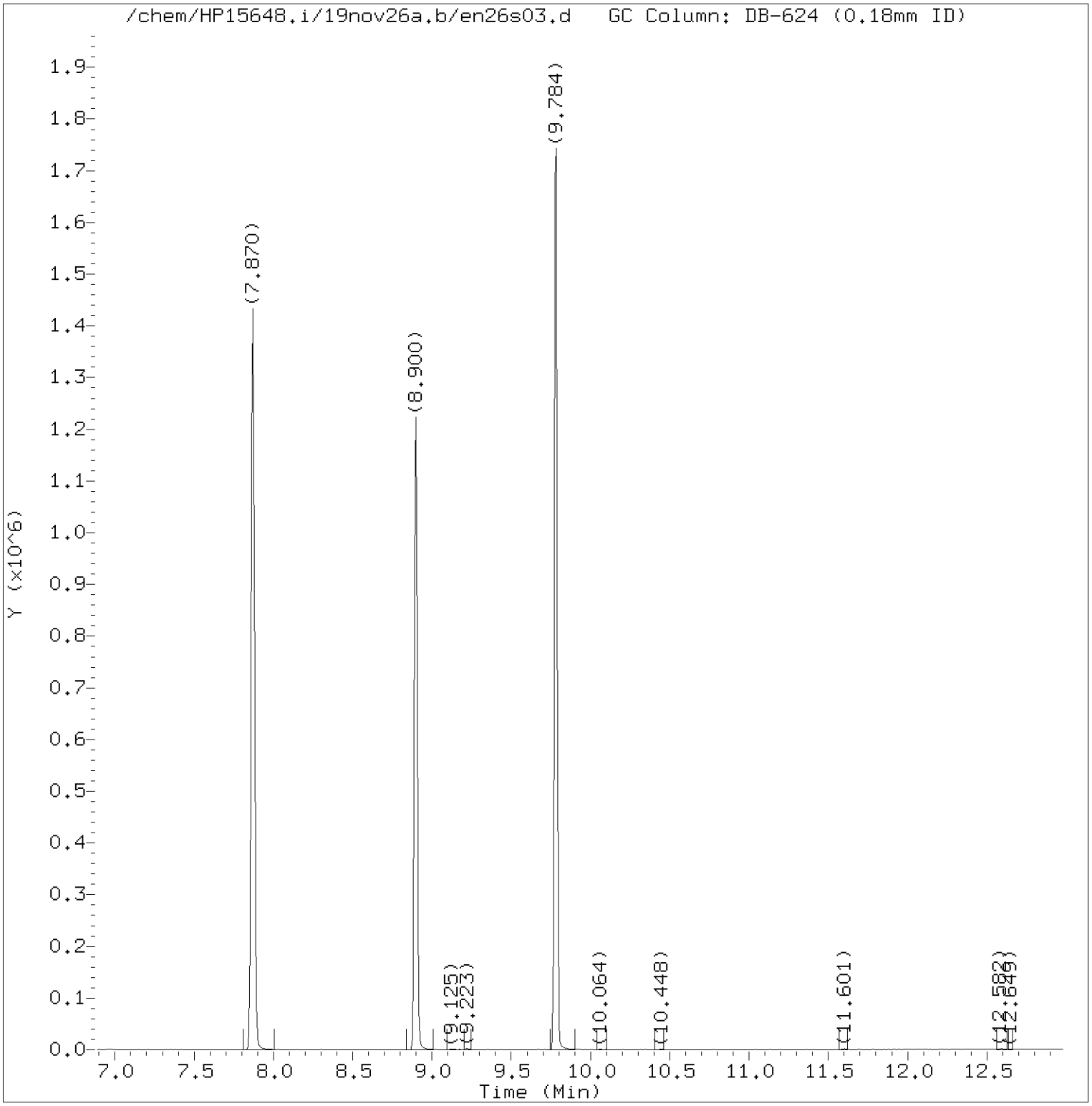
Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s03.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 12:43 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 13:00 Automation

Sample Name: WIN17 Lab Sample ID: 1206745

Digitally signed by Jason M. Long
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s03.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 12:43 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 13:00 Automation

Sample Name: WIN17 Lab Sample ID: 1206745

Digitally signed by Jason M. Long
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s03.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 12:43 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 13:00 Automation

Sample Name: WIN17 Lab Sample ID: 1206745

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.480	65	176463	250.000
52)$Dibromofluoromethane	(2)	4.059	113	207910	49.178
57)$1,2-Dichloroethane-d4	(2)	4.382	102	55953	49.654
66)*Fluorobenzene	(2)	4.724	96	993886	50.000
84)$Toluene-d8	(3)	6.364	98	973247	49.547
101)*Chlorobenzene-d5	(3)	7.870	117	691892	50.000
115)$4-Bromofluorobenzene	(3)	8.900	95	369097	49.863
132)*1,4-Dichlorobenzene-d4	(4)	9.784	152	336877	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
WIN18

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1206746

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19nov26a.b/en26s04.d

Level: (low/med) LOW Date Received: 11/20/19

Moisture: not dec. _____ Date Analyzed: 11/26/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

^

WIN18 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1206746

Data file: /chem/HP15648.i/19nov26a.b/en26s04.d Injection date and time: **26-NOV-2019 13:03**
Data file Sample Info. Line: WIN18;1206746;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 13:20 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.480	(0.000)	245	65	175404	(-7)	250.00	
66) Fluorobenzene	4.724	(0.000)	613	96	1003451	(-1)	50.00	
101) Chlorobenzene-d5	7.870	(0.000)	1129	117	702625	(-1)	50.00	
132) 1,4-Dichlorobenzene-d4	9.784	(-0.006)	1443	152	343097	(0)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.059	(0.001)	113	213491	50.017	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.382	(0.001)	102	56965	50.070	100%		80 - 120
84) Toluene-d8	(3)	6.364	(0.000)	98	985843	49.421	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.900	(-0.001)	95	374830	49.864	100%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
89) Toluene	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	6
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
149) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Jason M. Long on 11/27/2019 at 14:38. Target 3.5 esignature user ID: jml01693

WIN18 Lancaster Laboratories 1206746
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19nov26a.b/en26s04.d Injection date and time: **26-NOV-2019 13:03**
Data file Sample Info. Line: WIN18;1206746;1;0;;JCW26;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 13:20 Automation

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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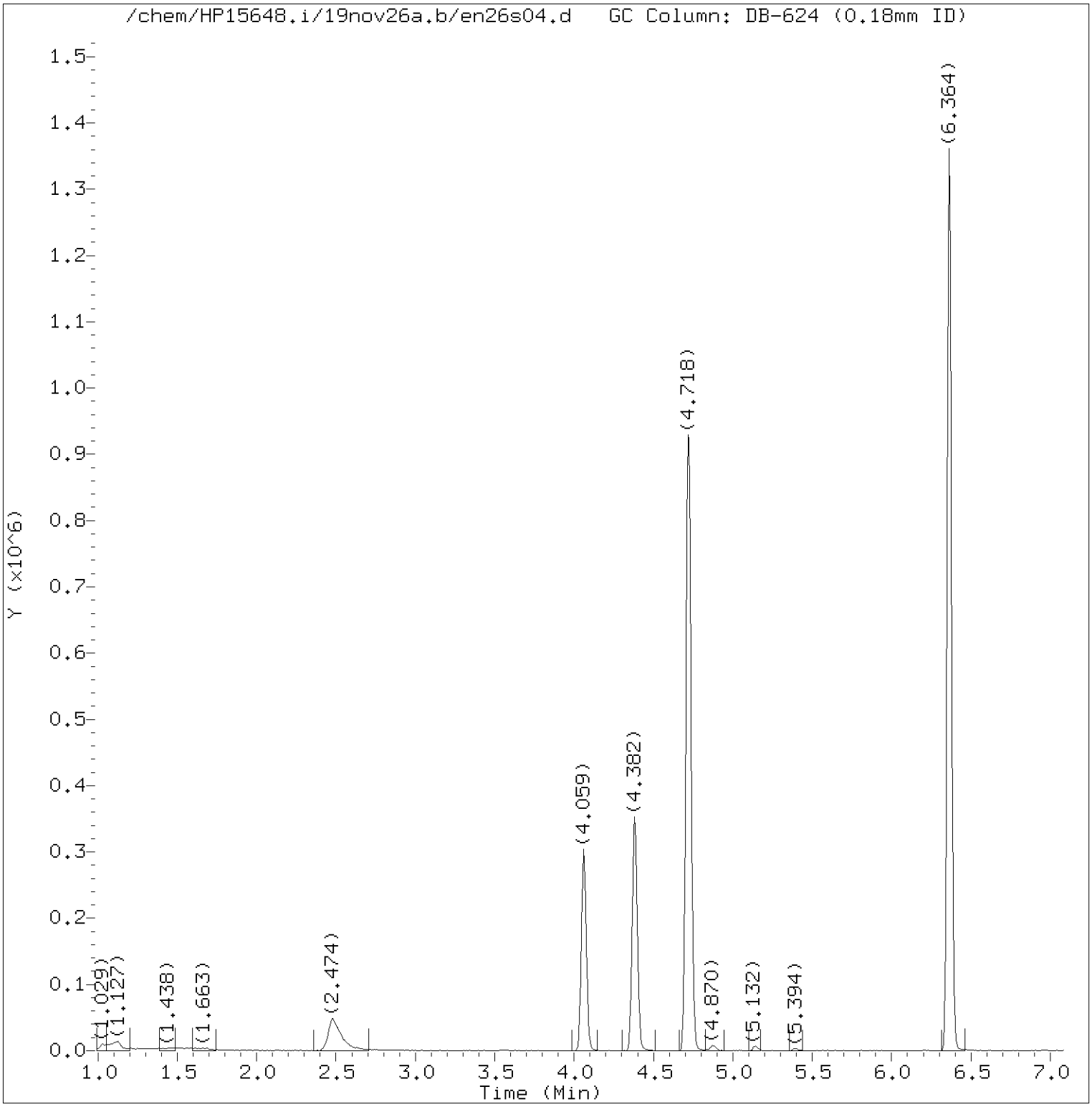
Total number of targets = 24

Digitally signed by Jason M. Long on 11/27/2019 at 14:38. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 12:19. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

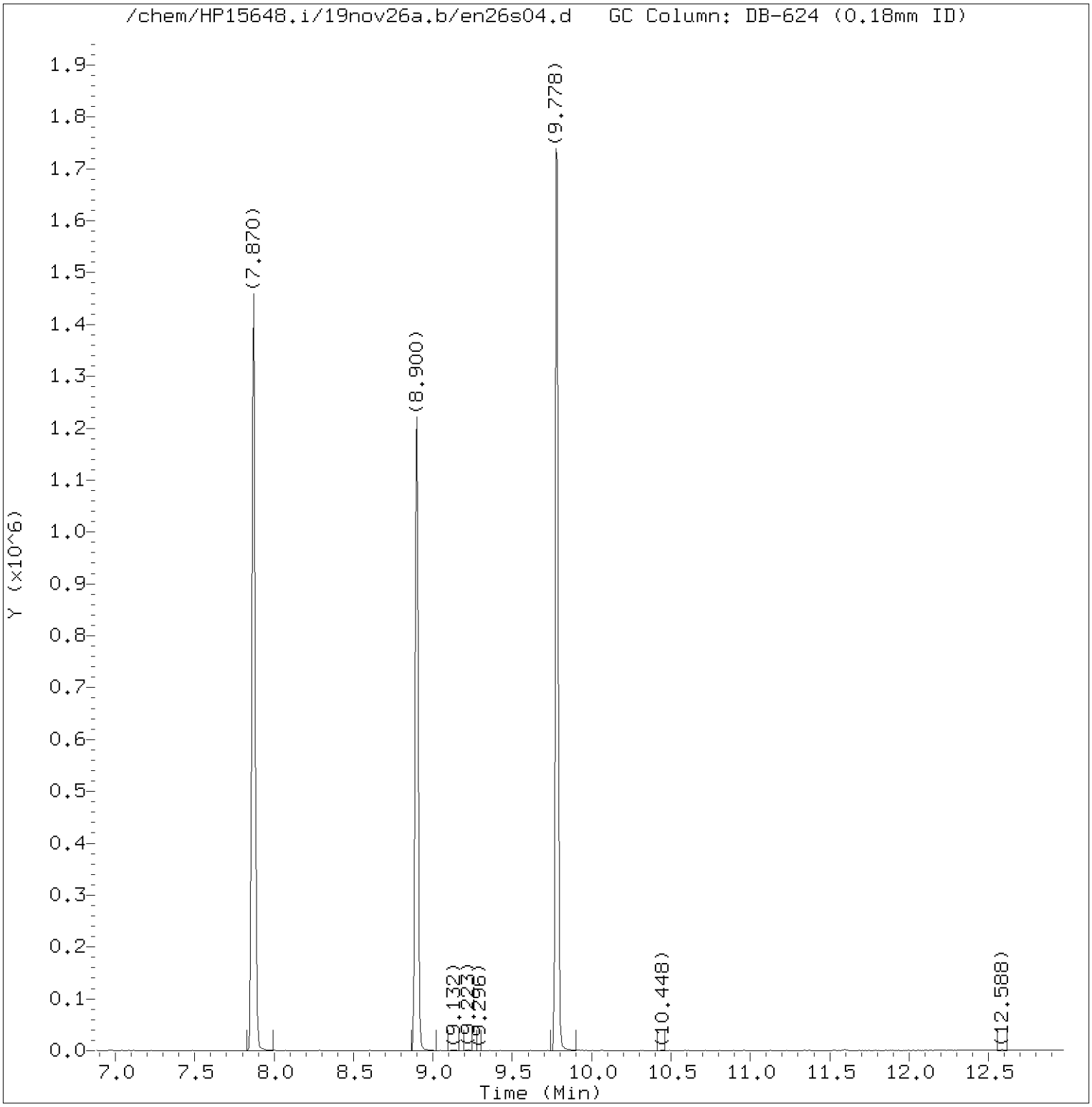
Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s04.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 13:03 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 13:20 Automation

Sample Name: WIN18 Lab Sample ID: 1206746

Digitally signed by Jason M. Long
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s04.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 13:03 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 13:20 Automation

Sample Name: WIN18 Lab Sample ID: 1206746

Digitally signed by Jason M. Long
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s04.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 13:03 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 13:20 Automation

Sample Name: WIN18 Lab Sample ID: 1206746

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.480	65	175404	250.000
52)$Dibromofluoromethane	(2)	4.059	113	213491	50.017
57)$1,2-Dichloroethane-d4	(2)	4.382	102	56965	50.070
66)*Fluorobenzene	(2)	4.724	96	1003451	50.000
84)$Toluene-d8	(3)	6.364	98	985843	49.421
101)*Chlorobenzene-d5	(3)	7.870	117	702625	50.000
115)$4-Bromofluorobenzene	(3)	8.900	95	374830	49.864
132)*1,4-Dichlorobenzene-d4	(4)	9.784	152	343097	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 11/27/2019 at 14:38.
Target 3.5 esignature user ID: jml01693

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09355 **HP #20**

Data Directory Path is - C:\MSDCHEM\1\DATA\19SEP10C\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
KAS02648	YS10T51.D	50NGBFB	09/10/2019	12:17		
KAS02648	YS10X01.D	BLANK	09/10/2019	12:28		
KAS02648	YS10I51.D	VSTD300	09/10/2019	12:50		
KAS02648	YS10I52.D	VSTD100	09/10/2019	13:12		
KAS02648	YS10I53.D	VSTD050	09/10/2019	13:34		
KAS02648	YS10I54.D	VSTD020	09/10/2019	13:57		
KAS02648	YS10I55.D	VSTD010	09/10/2019	14:18		
KAS02648	YS10I56.D	VSTD004	09/10/2019	14:40		
KAS02648	YS10I57.D	VSTD001	09/10/2019	15:02		
KAS02648	YS10X11.D	BLANK	09/10/2019	16:35		
KAS02648	YS10V51.D	YLGICV	09/10/2019	16:58		
KAS02648	YS10X12.D	BLANK	09/10/2019	17:22		
KAS02648	YS10I61.D	VSTD300	09/10/2019	17:44		
KAS02648	YS10I62.D	VSTD100	09/10/2019	18:06		
KAS02648	YS10I63.D	VSTD050	09/10/2019	18:28		
KAS02648	YS10I64.D	VSTD020	09/10/2019	18:50		
KAS02648	YS10I65.D	VSTD010	09/10/2019	19:12		
KAS02648	YS10I66.D	VSTD004	09/10/2019	19:34		
KAS02648	YS10V61.D	SMGICV	09/10/2019	19:56		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\19nov04i\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
KAS02648	LN04T01.D	50NGBFB	11/04/2019	12:52	L191821AA	
KAS02648	LN04T02.D	50NGBFB	11/04/2019	13:05	L191821AA	
KAS02648	LN04T03.D	50NGBFB	11/04/2019	13:27	L191821AA	
KAS02648	LN04T04.D	50NGBFB	11/04/2019	13:45	L191821AA	
KAS02648	LN04T05.D	50NGBFB	11/04/2019	14:07	L191821AA	
KAS02648	LN04T06.D	50NGBFB	11/04/2019	14:18	L191821AA	
KAS02648	LN04X01.D	CLNBLK	11/04/2019	14:29		
KAS02648	LN04I01.D	VSTD300	11/04/2019	14:51		
KAS02648	LN04I02.D	VSTD100	11/04/2019	15:13		
KAS02648	LN04I03.D	VSTD050	11/04/2019	15:35		
KAS02648	LN04I04.D	VSTD020	11/04/2019	15:57		
KAS02648	LN04I05.D	VSTD010	11/04/2019	16:19		
KAS02648	LN04I06.D	VSTD004	11/04/2019	16:41		
KAS02648	LN04I07.D	VSTD001	11/04/2019	17:03		
KAS02648	LN04V01.D	ICVLLG	11/04/2019	17:25		
KAS02648	LN04V02.D	ICVLLG	11/04/2019	18:42		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP15648 **HP #27**

Data Directory Path is - d:\data\19NOV25I\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
KAS02648	EN25T01.D	50ng BFB	11/25/2019	14:06		
KAS02648	EN25X01.D	BLK	11/25/2019	14:18		
KAS02648	EN25I01.D	VSTD300	11/25/2019	14:39		
KAS02648	EN25I02.D	VSTD100	11/25/2019	14:59		
KAS02648	EN25I03.D	VSTD050	11/25/2019	15:19		
KAS02648	EN25I04.D	VSTD020	11/25/2019	15:39		
KAS02648	EN25I05.D	VSTD010	11/25/2019	15:59		
KAS02648	EN25I06.D	VSTD004	11/25/2019	16:20		
KAS02648	EN25I07.D	VSTD001	11/25/2019	16:40		
KAS02648	EN25X02.D	BLK	11/25/2019	17:00		
KAS02648	EN25V01.D	ICVELG	11/25/2019	17:21		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09355 **HP #20**

Data Directory Path is - C:\MSDCHEM\1\DATA\19nov27b\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
DVV10203	YN27T05.D	50NGBFB	11/27/2019	19:32		
DVV10203	YN27C05.D	VSTD050	11/27/2019	19:43	Y193312AA	
DVV10203	YN27S31.D	LCSY09	11/27/2019	20:05	Y193312AA	
DVV10203	YN27S32.D	LCDY09	11/27/2019	20:28	Y193312AA	
DVV10203	YN27R31.D	RLVY09	11/27/2019	20:50	Y193312AA	
DVV10203	YN27B31.D	VBLKY09	11/27/2019	21:12	Y193312AA	
DVV10203	YN27S33.D	1206931	11/27/2019	21:48	Y193312AA	
DVV10203	YN27S34.D	1206929	11/27/2019	22:10	Y193312AA	
DVV10203	YN27S35.D	1206734	11/27/2019	22:32	Y193312AA	
DVV10203	YN27S36.D	1206928	11/27/2019	22:54	Y193312AA	
DVV10203	YN27S37.D	1206648	11/27/2019	23:16	Y193312AA	
DVV10203	YN27S38.D	1206789	11/27/2019	23:38	Y193312AA	
DVV10203	YN27S39.D	1206790	11/28/2019	00:00	Y193312AA	
DVV10203	YN27S40.D	1206791	11/28/2019	00:22	Y193312AA	10
DVV10203	YN27S41.D	1206732DL	11/28/2019	00:44	Y193312AA	10
DVV10203	YN27S42.D	1206733DL	11/28/2019	01:06	Y193312AA	10
DVV10203	YN27S43.D	1206742DL	11/28/2019	01:28	Y193312AA	10
DVV10203	YN27S44.D	1206743DL	11/28/2019	01:50	Y193312AA	10
DVV10203	YN27S45.D	1209672	11/28/2019	02:12	Y193312AA	
DVV10203	YN27S46.D	1209658	11/28/2019	02:34	Y193312AA	
DVV10203	YN27S47.D	1209658MS	11/28/2019	02:56	Y193312AA	
DVV10203	YN27S48.D	1209658MSD	11/28/2019	03:18	Y193312AA	
DVV10203	YN27X35.D	VBLKY09	11/28/2019	03:40	Y193312AA	
DVV10203	YN27S49.D	1209659	11/28/2019	04:02	Y193312AA	
DVV10203	YN27S50.D	1209660	11/28/2019	04:24	Y193312AA	2
DVV10203	YN27S51.D	1209660DL	11/28/2019	04:46	Y193312AA	20
DVV10203	YN27S52.D	1203659DL	11/28/2019	05:08	Y193312AA	10
DVV10203	YN27S53.D	1203660DL	11/28/2019	05:30	Y193312AA	10
DVV10203	YN27S54.D	1205502DL	11/28/2019	05:52	Y193312AA	50
DVV10203	YN27S62.D	1206564	11/28/2019	06:14	Y193303AB	
DVV10203	YN27S63.D	1206720	11/28/2019	06:36	Y193303AB	5

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\19nov23a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
CLM27445	LN23X55.D	VBLKL85	11/23/2019	06:24	L193261AA	
CLM27445	LN23T01.D	50NGBFB	11/23/2019	07:45	L193271AA	
CLM27445	LN23T02.D	50NGBFB	11/23/2019	07:57	L193271AA	
CLM27445	LN23X00.D	VBLKL87	11/23/2019	08:20	L193271AA	
CLM27445	LN23C01.D	VSTD050	11/23/2019	08:42	L193271AA	
CLM27445	LN23X60.D	VBLKL87	11/23/2019	09:04	L193271AA	
CLM27445	LN23S01.D	LCSL87	11/23/2019	09:26	L193271AA	
CLM27445	LN23B01.D	VBLKL87	11/23/2019	09:48	L193271AA	
CLM27445	LN23S02.D	1205905	11/23/2019	10:44	L193271AA	
CLM27445	LN23S03.D	1205900	11/23/2019	11:06	L193271AA	
CLM27445	LN23S04.D	1205901MS	11/23/2019	11:28	L193271AA	
CLM27445	LN23S05.D	1205902MSD	11/23/2019	11:50	L193271AA	
CLM27445	LN23S06.D	1205903	11/23/2019	12:12	L193271AA	
CLM27445	LN23S07.D	1205904	11/23/2019	12:34	L193271AA	
CLM27445	LN23S08.D	1205910	11/23/2019	12:56	L193271AA	
CLM27445	LN23S09.D	1205911	11/23/2019	13:18	L193271AA	
CLM27445	LN23S10.D	1205912	11/23/2019	13:40	L193271AA	
CLM27445	LN23S11.D	1205913	11/23/2019	14:02	L193271AA	
CLM27445	LN23S12.D	1205914	11/23/2019	14:24	L193271AA	
CLM27445	LN23S13.D	1205915	11/23/2019	14:46	L193271AA	
CLM27445	LN23S14.D	1205916	11/23/2019	15:08	L193271AA	
CLM27445	LN23S15.D	1205917	11/23/2019	15:31	L193271AA	
CLM27445	LN23S16.D	1205918	11/23/2019	15:53	L193271AA	
CLM27445	LN23S17.D	1205928	11/23/2019	16:15	L193271AA	
CLM27445	LN23S18.D	1205929	11/23/2019	16:37	L193271AA	
CLM27445	LN23S19.D	1206738	11/23/2019	16:59	L193271AA	
CLM27445	LN23S20.D	1206739	11/23/2019	17:21	L193271AA	
CLM27445	LN23S21.D	1206740	11/23/2019	17:43	L193271AA	

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP15648 **HP #27**

Data Directory Path is - d:\data\19NOV26A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
jml01693	EN26T01.D	50ng BFB	11/26/2019	09:39		
jml01693	EN26X01.D	BLK	11/26/2019	09:59	E193301AA	
jml01693	EN26C01.D	VSTD050	11/26/2019	10:20	E193301AA	
jml01693	EN26S01.D	LCSE76	11/26/2019	10:40	E193301AA	
jml01693	EN26S02.D	LCDE76	11/26/2019	11:00	E193301AA	
jml01693	EN26B00.D	VBLKE76	11/26/2019	11:20	E193301AA	
jml01693	EN26B01.D	VBLKE76	11/26/2019	11:41	E193301AA	
jml01693	EN26X02.D	BLK	11/26/2019	12:23	E193301AA	
jml01693	EN26S03.D	1206745	11/26/2019	12:43	E193301AA	
jml01693	EN26S04.D	1206746	11/26/2019	13:03	E193301AA	
jml01693	EN26S05.D	1206729	11/26/2019	13:24	E193301AA	
jml01693	EN26S06.D	1206730	11/26/2019	13:44	E193301AA	
jml01693	EN26S07.D	1206731	11/26/2019	14:04	E193301AA	
jml01693	EN26S08.D	1206732	11/26/2019	14:24	E193301AA	
jml01693	EN26S09.D	1206733	11/26/2019	14:44	E193301AA	
jml01693	EN26S10.D	1206734	11/26/2019	15:04	E193301AA	
jml01693	EN26S11.D	1206735	11/26/2019	15:25	E193301AA	
jml01693	EN26S12.D	1206736	11/26/2019	15:45	E193301AA	
jml01693	EN26S13.D	1206737	11/26/2019	16:05	E193301AA	
jml01693	EN26S14.D	1206741	11/26/2019	16:26	E193301AA	
jml01693	EN26S15.D	1206742	11/26/2019	16:46	E193301AA	
jml01693	EN26S16.D	1206743	11/26/2019	17:06	E193301AA	
jml01693	EN26S17.D	1206744	11/26/2019	17:26	E193301AA	
jml01693	EN26S18.D	1207905	11/26/2019	17:47	E193301AA	
jml01693	EN26S19.D	1207906	11/26/2019	18:07	E193301AA	
jml01693	EN26S20.D	1207903	11/26/2019	18:27	E193301AA	
jml01693	EN26S21.D	1207904	11/26/2019	18:47	E193301AA	
jml01693	EN26S22.D	1208157	11/26/2019	19:08	E193301AA	

Data File: /chem2/HP09355.i/19sep10c.b/ys10t51.d

Date : 10-SEP-2019 12:17

Client ID: BFB Aug02-19

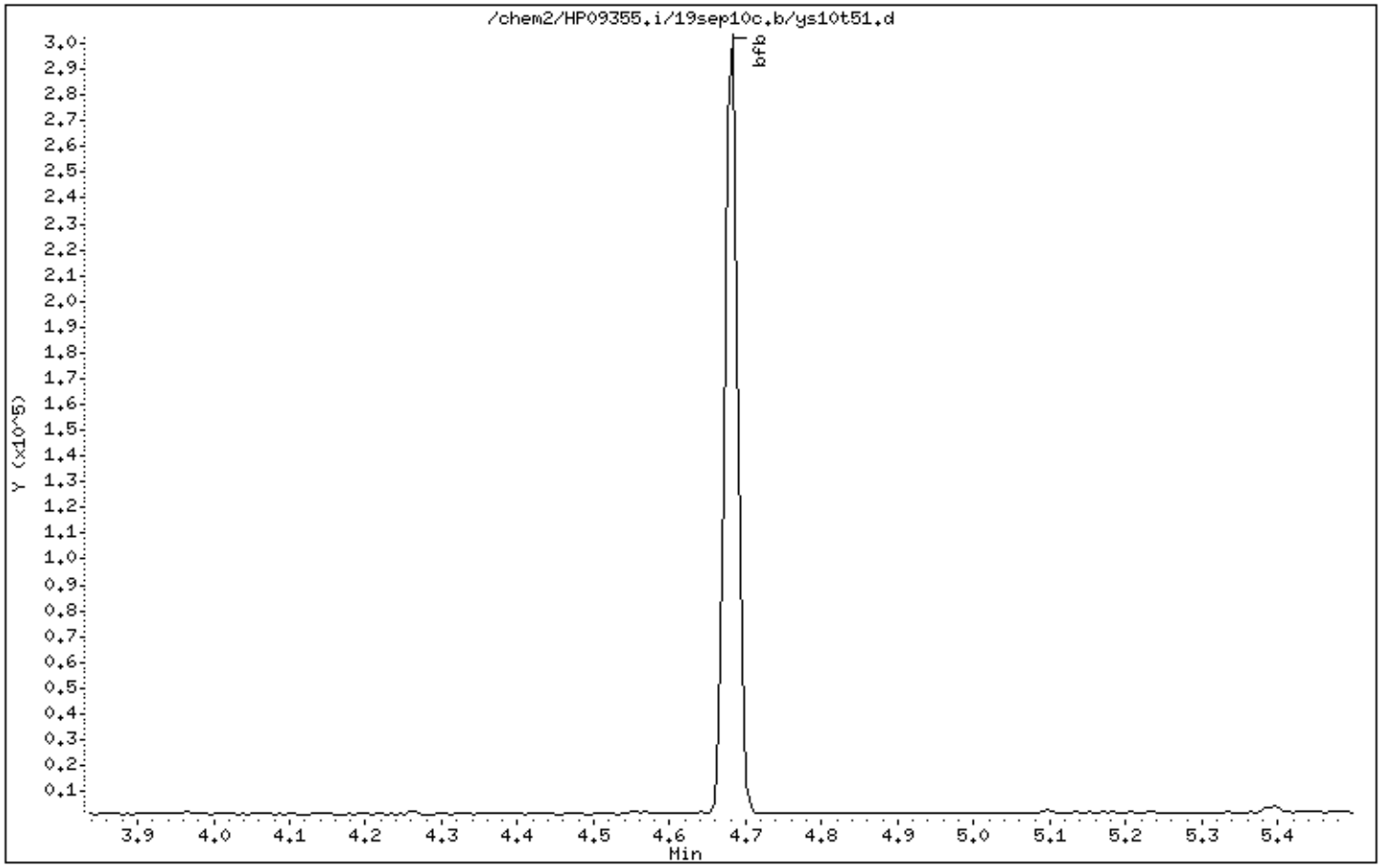
Instrument: HP09355.i

Sample Info: BFB Aug02-19;50NGBFB;1;2;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem2/HP09355.i/19sep10c.b/ys10t51.d

Date : 10-SEP-2019 12:17

Client ID: BFB Aug02-19

Instrument: HP09355.i

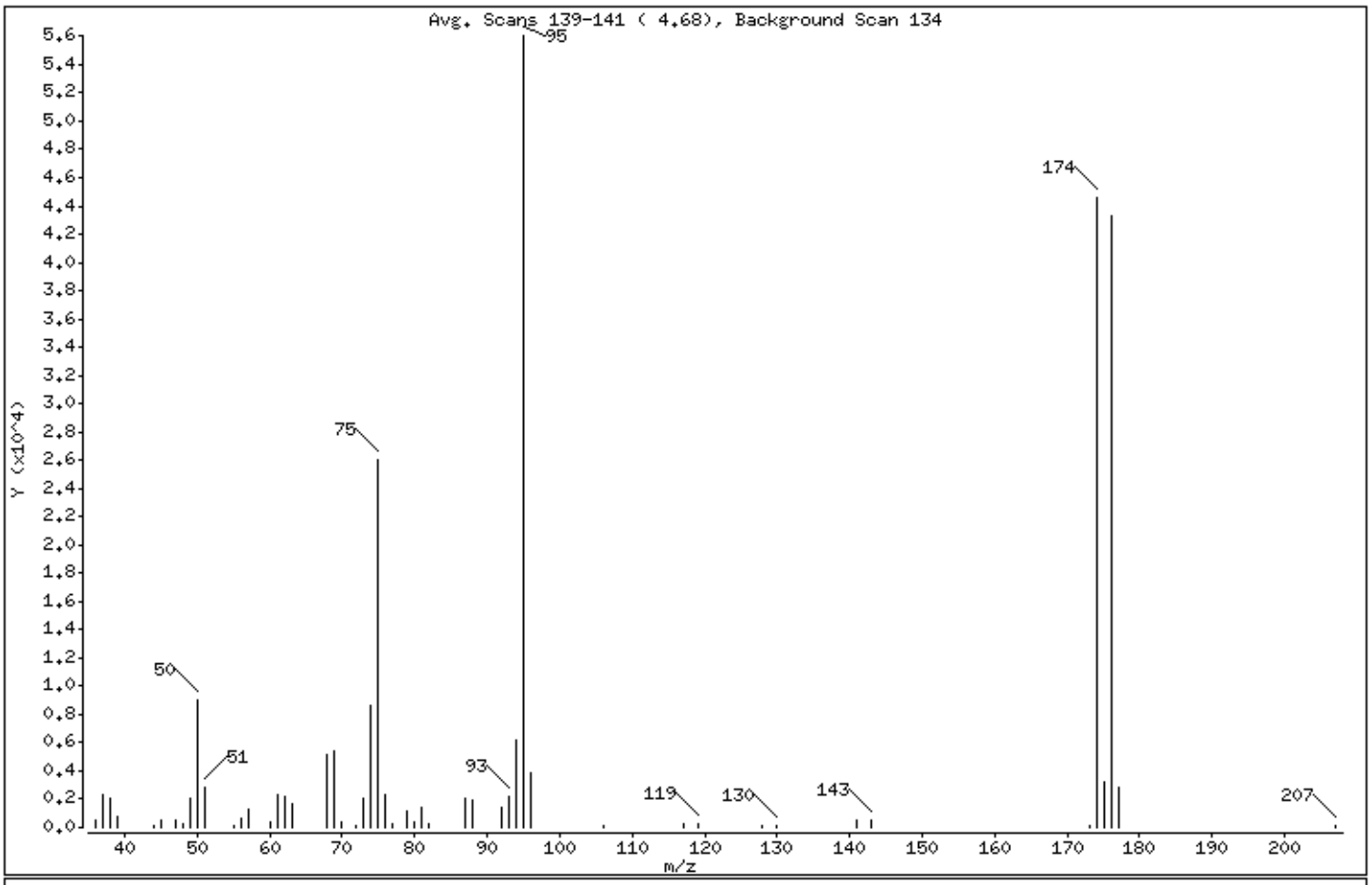
Sample Info: BFB Aug02-19;50NGBFB;1;2;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.02
75	30.00 - 60.00% of mass 95	46.48
96	5.00 - 9.00% of mass 95	6.79
173	Less than 2.00% of mass 174	0.17 (0.22)
174	50.00 - 100.00% of mass 95	79.43
175	5.00 - 9.00% of mass 174	5.80 (7.30)
176	95.00 - 101.00% of mass 174	77.18 (97.17)
177	5.00 - 9.00% of mass 176	4.97 (6.44)

Date : 10-SEP-2019 12:17

Client ID: BFB Aug02-19 Instrument: HP09355.i

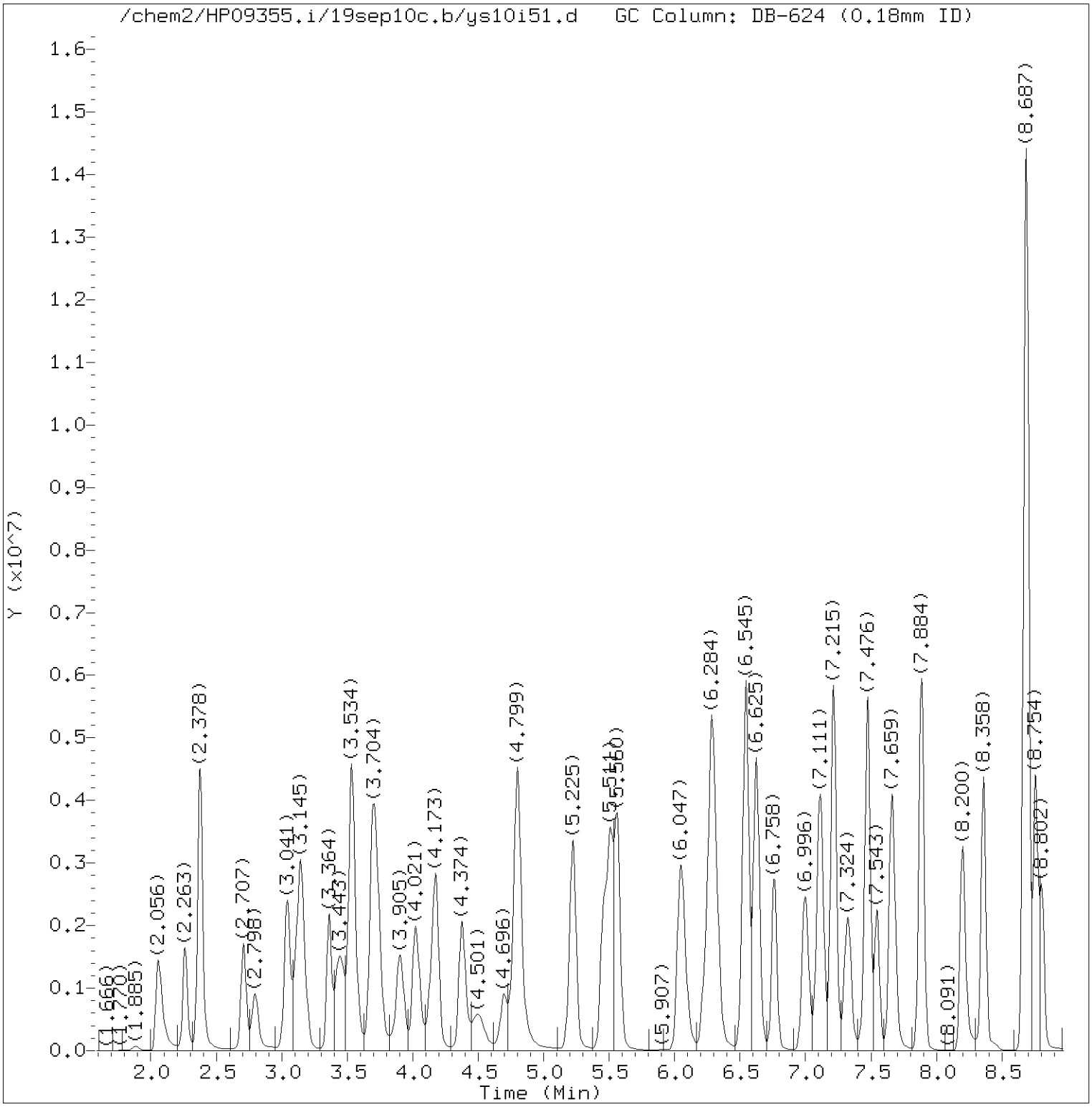
Sample Info: BFB Aug02-19;50NGBFB;1;2;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: ys10t51.d
Spectrum: Avg. Scans 139-141 (4.68), Background Scan 134
Location of Maximum: 95.00
Number of points: 51

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	485	57.00	1308	77.00	270	117.00	221
37.00	2322	60.00	341	79.00	1137	119.00	234
38.00	2095	61.00	2274	80.00	394	128.00	86
39.00	752	62.00	2207	81.00	1358	130.00	96
44.00	166	63.00	1619	82.00	243	141.00	481
45.00	473	68.00	5121	87.00	2078	143.00	512
47.00	568	69.00	5362	88.00	1893	173.00	98
48.00	215	70.00	405	92.00	1443	174.00	44520
49.00	2028	72.00	108	93.00	2186	175.00	3251
50.00	8977	73.00	2114	94.00	6230	176.00	43256
51.00	2865	74.00	8645	95.00	56048	177.00	2784
55.00	85	75.00	26048	96.00	3807	207.00	100
56.00	687	76.00	2266	106.00	87		



Total Ion Chromatogram (TIC)

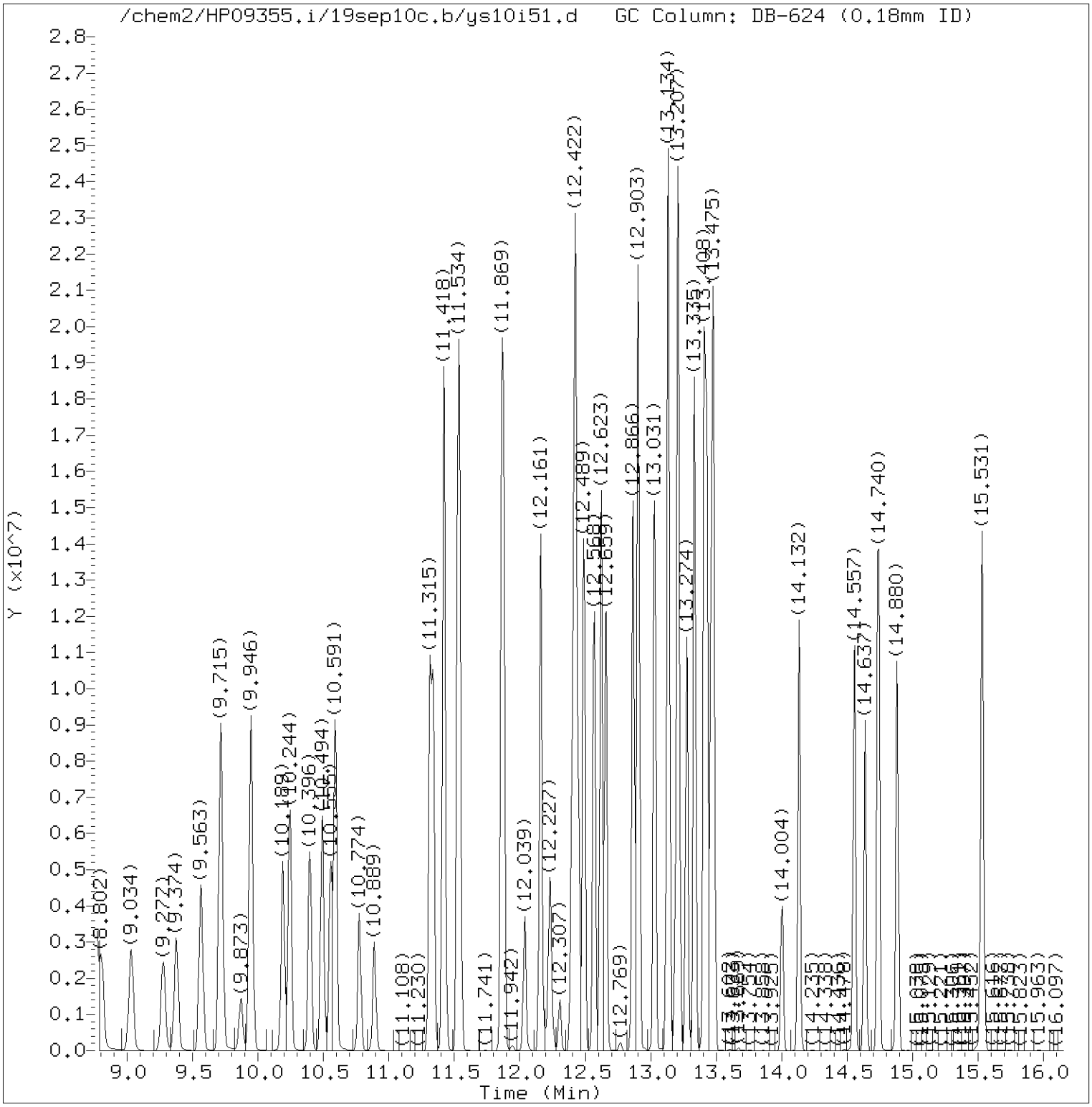
Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 12:50 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:43
Date, time and analyst ID of latest file update: 24-Sep-2019 13:43 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 12:50 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:43
Date, time and analyst ID of latest file update: 24-Sep-2019 13:43 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 12:50 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:43
Date, time and analyst ID of latest file update: 24-Sep-2019 13:43 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.056	85	3302621	300.000
4) Chloromethane	(2)	2.263	50	2617525	300.000
5) 1,3-Butadiene	(2)	2.372	39	1997488	300.000
6) Vinyl Chloride	(2)	2.378	62	2642450	300.000
8) Bromomethane	(2)	2.707	94	1835037	300.000
9) Chloroethane	(2)	2.798	64	1470002	300.000
10) Dichlorofluoromethane	(2)	3.041	67	3150461	300.000
12) Trichlorofluoromethane	(2)	3.114	101	3437421	300.000
11) n-Pentane	(2)	3.151	43	3129940	300.000
14) Ethyl ether	(2)	3.358	59	1856477	300.000
15) Freon 123a	(2)	3.437	67	2101728	300.000
16) Acrolein	(1)	3.534	56	7892985	3000.000
17) 1,1-Dichloroethene	(2)	3.692	96	1607504	300.000
17) 1,1-Dichloroethene	(2)	3.692	63	807772	300.000
18) Acetone	(1)	3.704	58	752807	600.000
19) Freon 113	(2)	3.729	101	1845927	300.000
21) 2-Propanol	(1)	3.875	45	1158028	1500.000
22) Methyl Iodide	(2)	3.905	142	3036220	300.000
23) Carbon Disulfide	(2)	4.021	76	5845742	300.000
27) Methyl Acetate	(2)	4.142	43	2640375	300.000
25) Allyl Chloride	(2)	4.179	41	2696712	300.000
28) Methylene Chloride	(2)	4.374	84	1851316	300.000
29)*t-Butyl alcohol-d10	(1)	4.374	65	354941M	250.000
30) t-Butyl alcohol	(1)	4.501	59	2358571	1500.000
31) Acrylonitrile	(2)	4.696	53	1434818	300.000
33) Methyl Tertiary Butyl Ether	(2)	4.787	73	5964951	300.000
32) trans-1,2-Dichloroethene	(2)	4.806	96	1834987	300.000
34) n-Hexane	(2)	5.225	57	3141643	300.000
36) 1,1-Dichloroethane	(2)	5.456	63	3249176	300.000
38) di-Isopropyl ether	(2)	5.511	45	6026359	300.000
39) 2-Chloro-1,3-butadiene	(2)	5.566	53	3061390	300.000
40) Ethyl t-butyl ether	(2)	6.047	59	5782407	300.000
43) 1,2-Dichloroethene (Total)	(2)		96	3902304	600.000
44) 2-Butanone	(2)	6.241	43	3959459	600.000
42) cis-1,2-Dichloroethene	(2)	6.278	96	2067317	300.000
45) 2,2-Dichloropropane	(2)	6.302	77	2581114	300.000
47) Propionitrile	(1)	6.320	54	2811001	1500.000
48) Methacrylonitrile	(2)	6.545	67	3843252	750.000

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 12:50 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:43
Date, time and analyst ID of latest file update: 24-Sep-2019 13:43 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.618	128	1086773	300.000
50) Tetrahydrofuran	(1)	6.631	71	1203361	600.000
51) Chloroform	(2)	6.758	83	3172682	300.000
52)$Dibromofluoromethane	(2)	6.977	113	278159	50.000
52)$Dibromofluoromethane	(2)	6.977	111	284864	50.000
53) 1,1,1-Trichloroethane	(2)	7.002	97	2819927	300.000
54) Cyclohexane	(2)	7.111	56	3611221	300.000
54) Cyclohexane	(2)	7.111	84	3132183	300.000
54) Cyclohexane	(2)	7.111	69	1158609	300.000
55) 1,1-Dichloropropene	(2)	7.215	75	2670224	300.000
56) Carbon Tetrachloride	(2)	7.221	117	2536383	300.000
58) Isobutyl Alcohol	(1)	7.324	41	1969759	3750.000
57)$1,2-Dichloroethane-d4	(2)	7.440	102	71576	50.000
57)$1,2-Dichloroethane-d4	(2)	7.440	65	343154	50.000
57)$1,2-Dichloroethane-d4	(2)	7.440	104	45089	50.000
60) Benzene	(2)	7.476	78	7520831	300.000
61) 1,2-Dichloroethane	(2)	7.543	62	2602523	300.000
61) 1,2-Dichloroethane	(2)	7.549	98	243333	300.000
65) t-Amyl methyl ether	(2)	7.659	73	5638185	300.000
66)*Fluorobenzene	(2)	7.878	96	1182603	50.000
67) n-Heptane	(2)	7.890	43	3227137	300.000
69) n-Butanol	(1)	8.200	56	3646668	7500.000
71) Trichloroethene	(2)	8.358	95	2023721	300.000
72) Methylcyclohexane	(2)	8.675	83	3863837	300.000
72) Methylcyclohexane	(2)	8.675	98	1740597	300.000
73) 1,2-Dichloropropane	(2)	8.687	63	1987963	300.000
76) Methyl Methacrylate	(2)	8.754	69	2440613	300.000
75) 1,4-Dioxane	(1)	8.766	88	434577M	3750.000
74) Dibromomethane	(2)	8.802	93	1330042	300.000
78) Bromodichloromethane	(2)	9.034	83	2495067	300.000
79) 2-Nitropropane	(2)	9.277	41	2084046	600.000
80) 2-Chloroethyl Vinyl Ether	(2)	9.374	63	1784409	300.000
81) cis-1,3-Dichloropropene	(2)	9.563	75	3289680	300.000
82) 4-Methyl-2-pentanone	(2)	9.715	43	7340766	600.000
83)$Toluene-d8	(3)	9.873	98	1189557	50.000
83)$Toluene-d8	(3)	9.873	100	772827	50.000
88) Toluene	(3)	9.946	92	4839053	300.000
90) 1,3-Dichloropropene (total)	(3)		100	6471219	600.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 12:50 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:43
Date, time and analyst ID of latest file update: 24-Sep-2019 13:43 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.189	75	3181539	300.000
91) Ethyl Methacrylate	(3)	10.244	69	3879288	300.000
92) 1,1,2-Trichloroethane	(3)	10.396	97	1913131	300.000
93) Tetrachloroethene	(3)	10.494	166	2033936	300.000
94) 1,3-Dichloropropane	(3)	10.555	76	3264800	300.000
96) 2-Hexanone	(3)	10.591	43	5899218	600.000
97) Dibromochloromethane	(3)	10.774	129	2133659	300.000
99) 1,2-Dibromoethane	(3)	10.889	107	2148102	300.000
100)*Chlorobenzene-d5	(3)	11.309	117	893298	50.000
101) 1-Chlorohexane	(3)	11.315	91	2763517	300.000
102) Chlorobenzene	(3)	11.339	112	5343244	300.000
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	1848362	300.000
104) Ethylbenzene	(3)	11.418	91	8910456	300.000
106) m+p-Xylene	(3)	11.534	106	6997723	600.000
108) Xylene (Total)	(3)		106	10523531	900.000
107) o-Xylene	(3)	11.862	106	3525808	300.000
109) Styrene	(3)	11.875	104	5994793	300.000
110) Bromoform	(3)	12.039	173	1632569	300.000
111) Isopropylbenzene	(3)	12.161	105	8707428	300.000
112) Cyclohexanone	(1)	12.227	55	2148202	3750.000
114)$4-Bromofluorobenzene	(3)	12.307	95	457840	50.000
114)$4-Bromofluorobenzene	(3)	12.307	174	344892	50.000
116) 1,1,2,2-Tetrachloroethane	(4)	12.398	83	3295026	300.000
118) trans-1,4-Dichloro-2-butene	(4)	12.422	53	2741228	750.000
115) Bromobenzene	(4)	12.422	156	2189293	300.000
117) 1,2,3-Trichloropropane	(4)	12.446	110	1050528	300.000
119) n-Propylbenzene	(4)	12.489	91	9803232	300.000
120) 2-Chlorotoluene	(4)	12.568	126	2256418	300.000
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	7730551	300.000
121) 4-Chlorotoluene	(4)	12.659	126	2353742	300.000
124) tert-Butylbenzene	(4)	12.866	134	1715287M	300.000
125) Pentachloroethane	(4)	12.897	167	1444541	300.000
126) 1,2,4-Trimethylbenzene	(4)	12.909	105	7960604	300.000
127) sec-Butylbenzene	(4)	13.031	105	9306402	300.000
129) 1,3-Dichlorobenzene	(4)	13.128	146	4113515	300.000
130) p-Isopropyltoluene	(4)	13.134	119	7960519	300.000
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	467308	50.000
133) 1,4-Dichlorobenzene	(4)	13.201	146	4230102	300.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 12:50 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:43
Date, time and analyst ID of latest file update: 24-Sep-2019 13:43 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134)	1,2,3-Trimethylbenzene	(4)	13.213	105	8091657	300.000
135)	Benzyl Chloride	(4)	13.274	91	7253849	300.000
136)	1,3-Diethylbenzene	(4)	13.335	119	5507761	300.000
141)	Diethylbenzene (total)	(4)		100	15812635	900.000
137)	1,4-Diethylbenzene	(4)	13.408	119	5711083	300.000
139)	n-Butylbenzene	(4)	13.426	92	4494025	300.000
138)	1,2-Dichlorobenzene	(4)	13.462	146	4143710	300.000
140)	1,2-Diethylbenzene	(4)	13.481	119	4593791	300.000
142)	1,2-Dibromo-3-chloropropane	(4)	14.004	75	942506	300.000
144)	1,3,5-Trichlorobenzene	(4)	14.132	180	3223555	300.000
146)	1,2,4-Trichlorobenzene	(4)	14.557	180	3064182	300.000
147)	Hexachlorobutadiene	(4)	14.637	225	1420951	300.000
148)	Naphthalene	(4)	14.740	128	9914649	300.000
149)	1,2,3-Trichlorobenzene	(4)	14.880	180	2959221	300.000
150)	2-Methylnaphthalene	(4)	15.531	142	6927204	300.000

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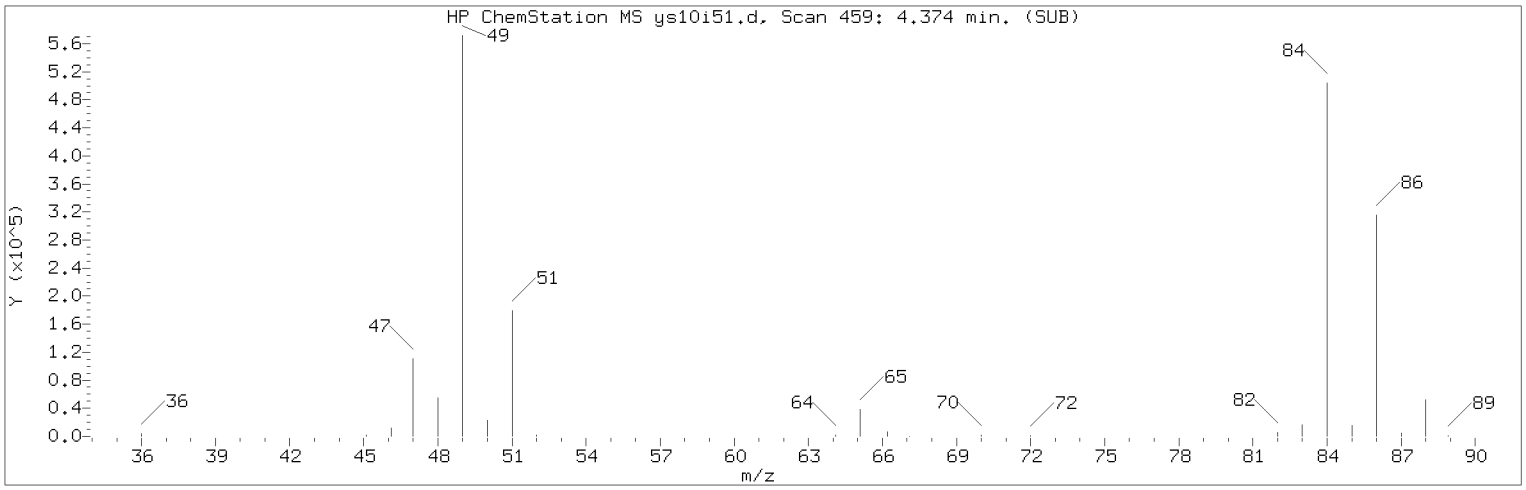
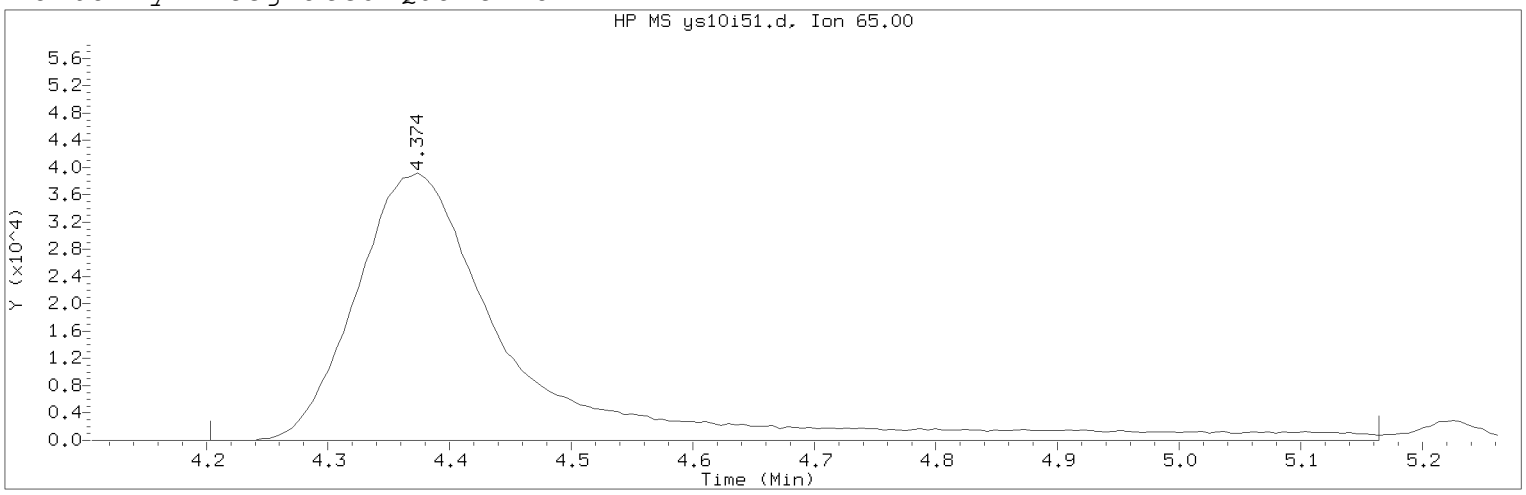
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 12:50 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:43
Date, time and analyst ID of latest file update: 24-Sep-2019 13:43 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

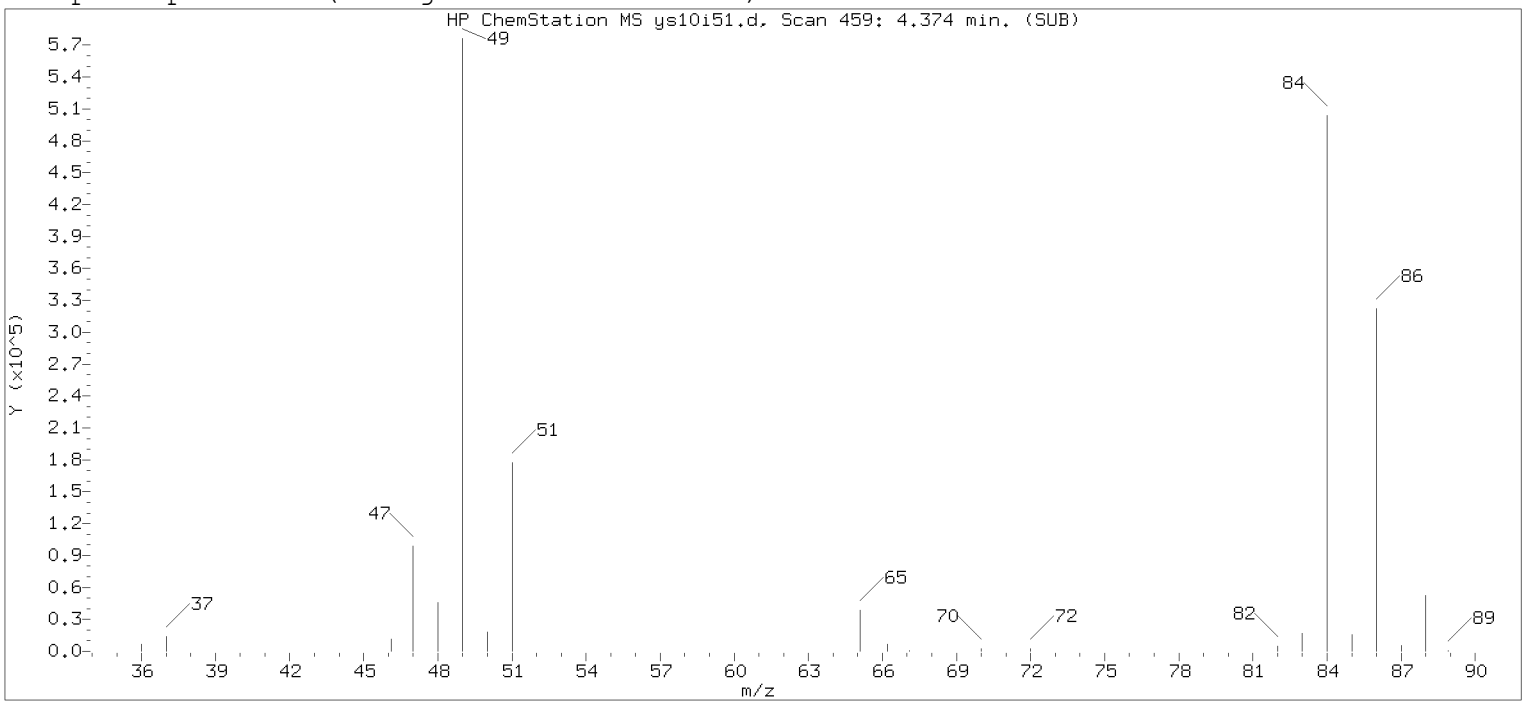
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 459
Retention Time (minutes): 4.374
Quant Ion : 65.00
Area (flag) : 354941M
On-Column Amount (ng) : 250.0000
Integration start scan : 430 Integration stop scan: 588
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

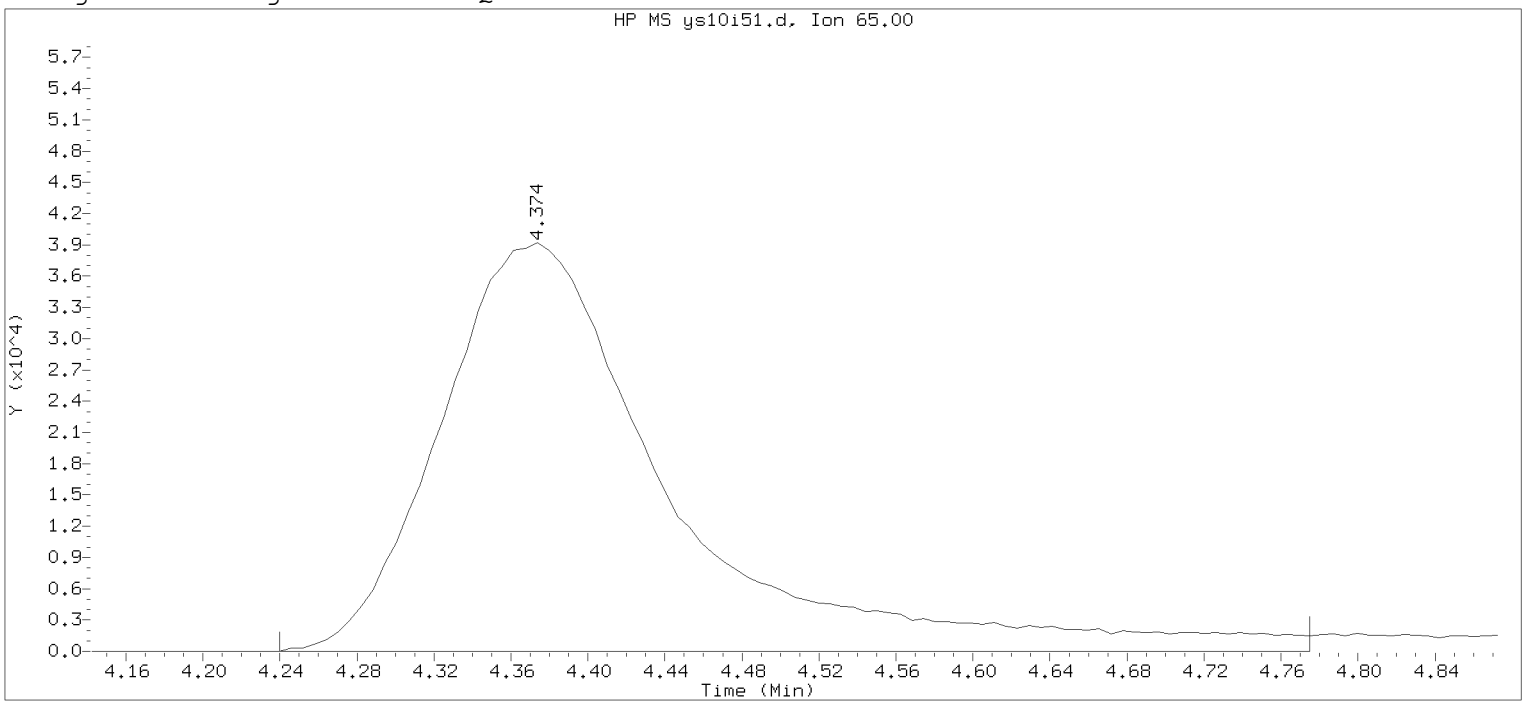
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 12:50 Analyst ID: KAS02648

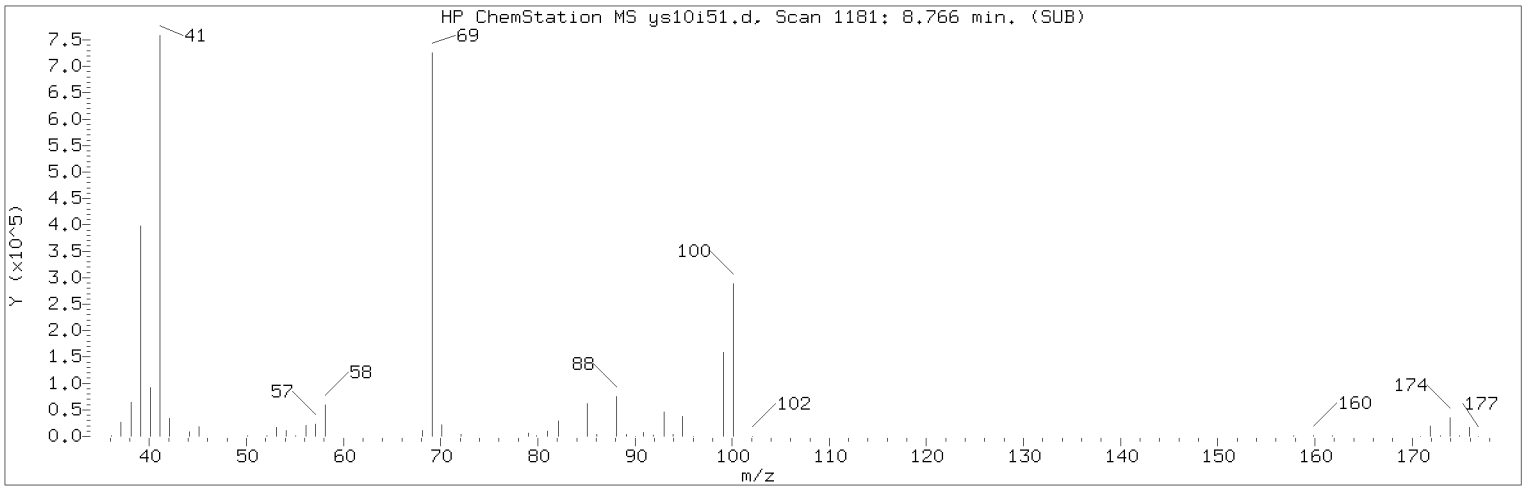
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

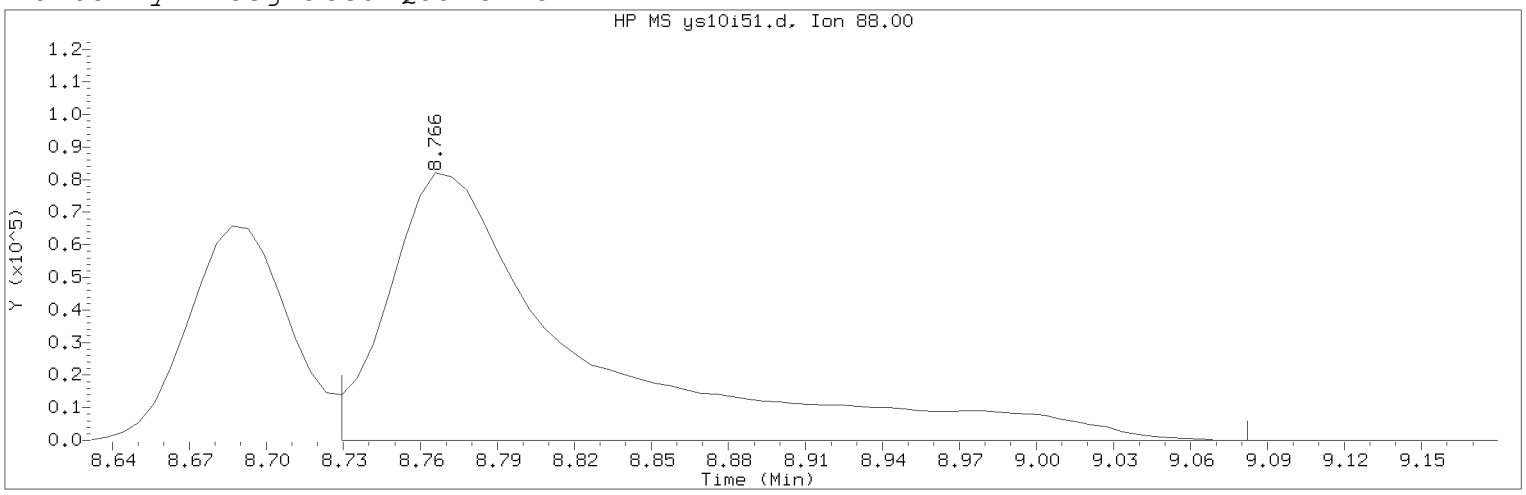
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 459
Retention Time (minutes): 4.374
Quant Ion : 65.00
Area : 324619
On-column Amount (ng) : 250.0000
Integration start scan : 436 Integration stop scan: 524
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 12:50 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:43
Date, time and analyst ID of latest file update: 24-Sep-2019 13:43 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

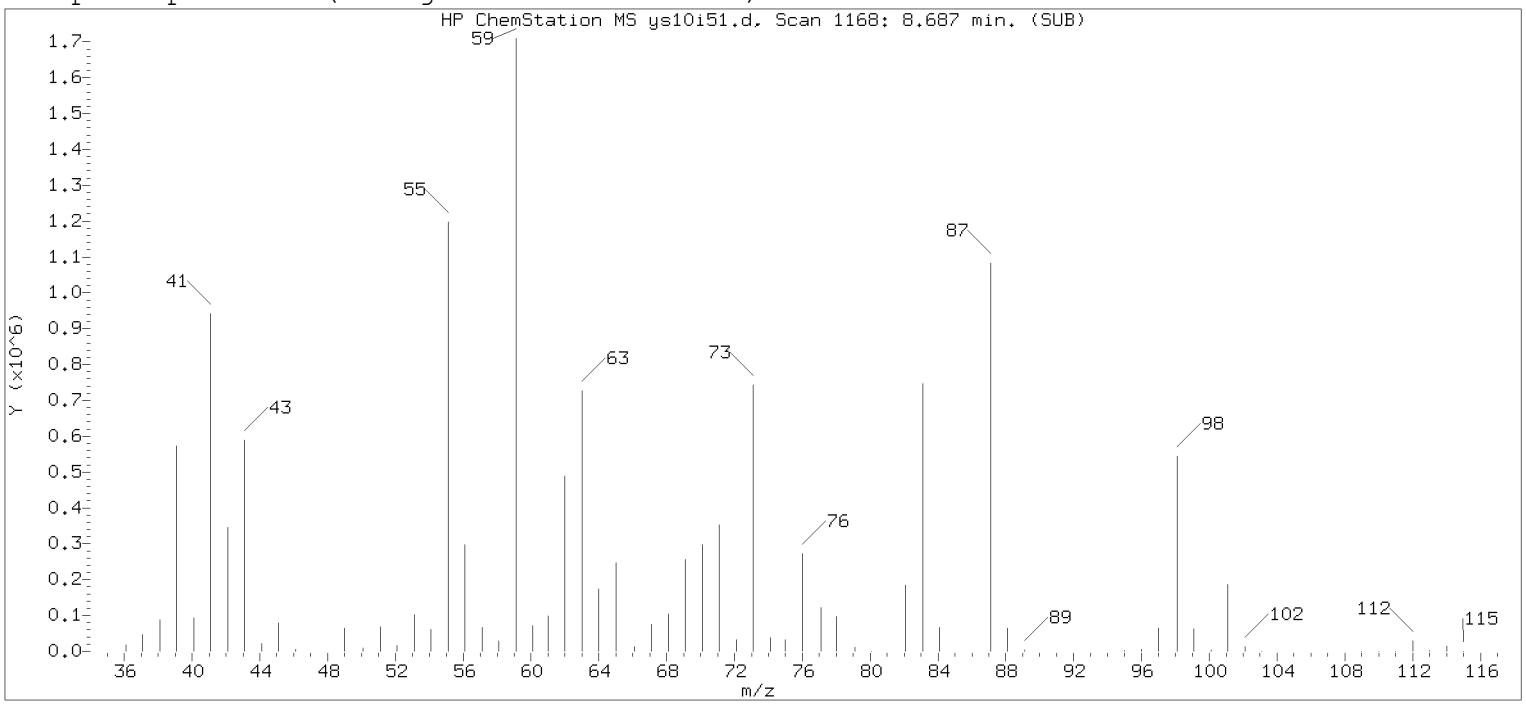
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1181
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area (flag) : 434577M
On-Column Amount (ng) : 3750.0000
Integration start scan : 1174 Integration stop scan: 1232
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

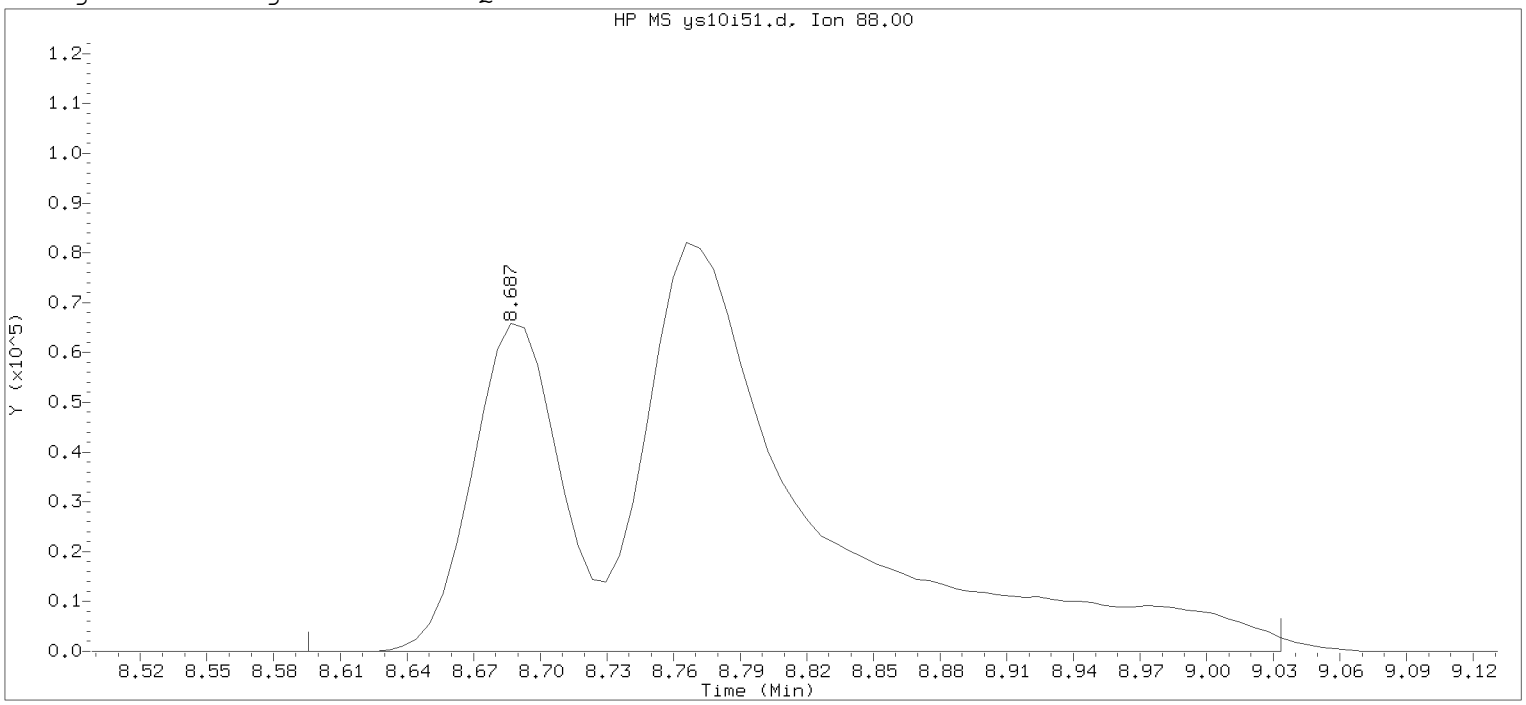
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 12:50 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1168
Retention Time (minutes): 8.687
Quant Ion : 88.00
Area : 610000
On-column Amount (ng) : 4554.9510
Integration start scan : 1152 Integration stop scan: 1224
Y at integration start : 0 Y at integration end: 0

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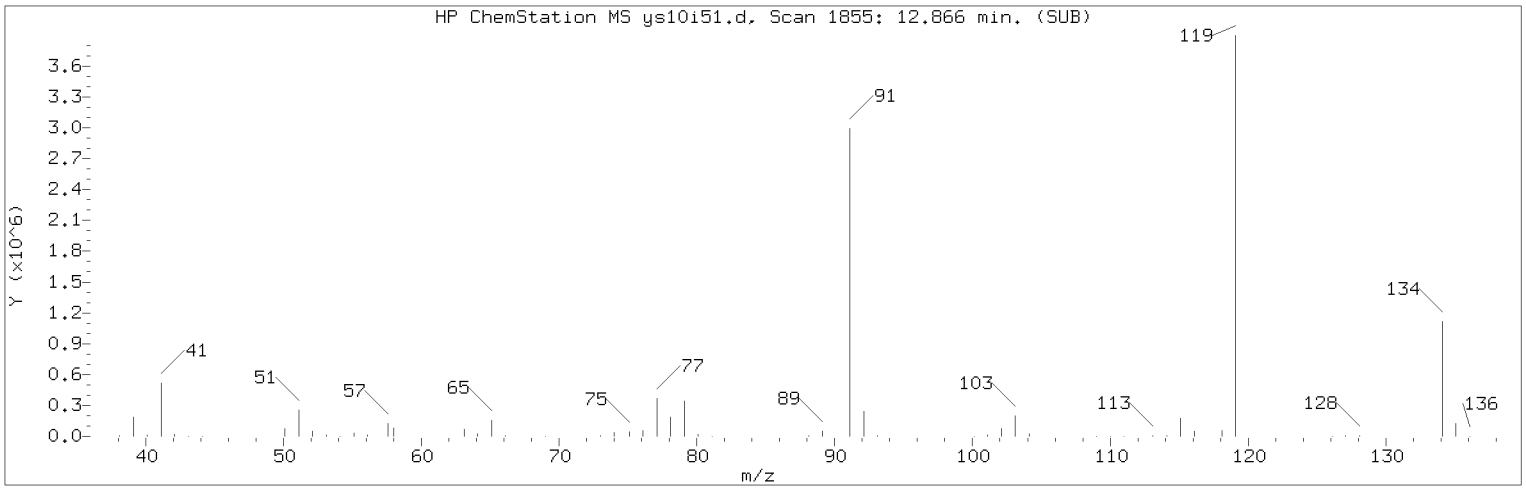
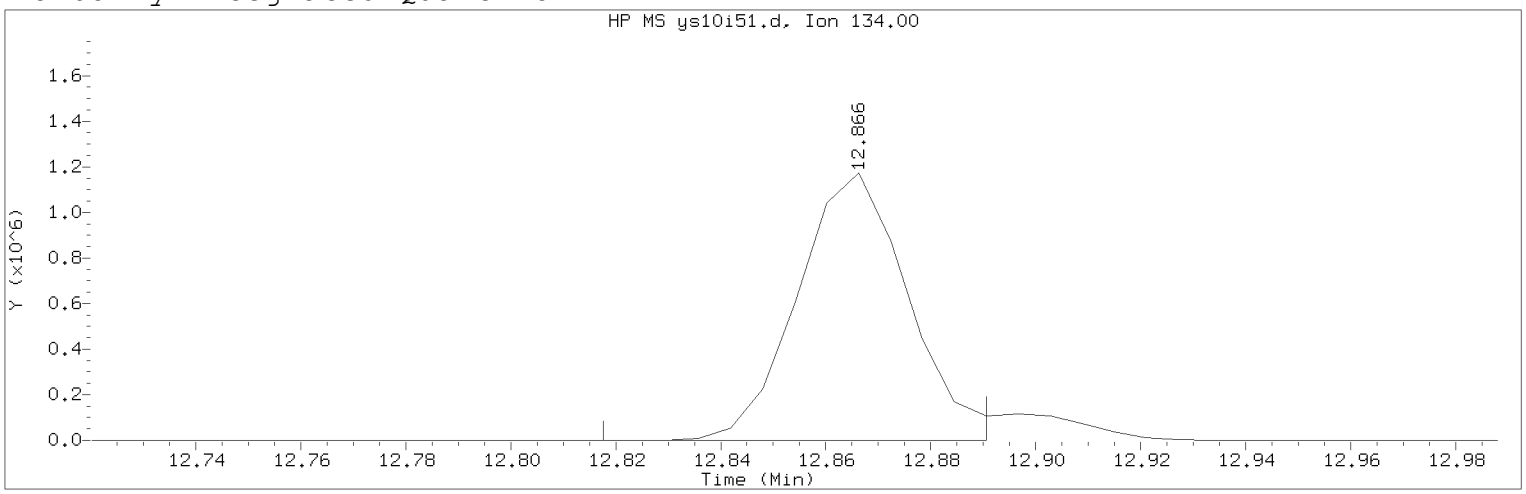
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 12:50 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:43
Date, time and analyst ID of latest file update: 24-Sep-2019 13:43 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

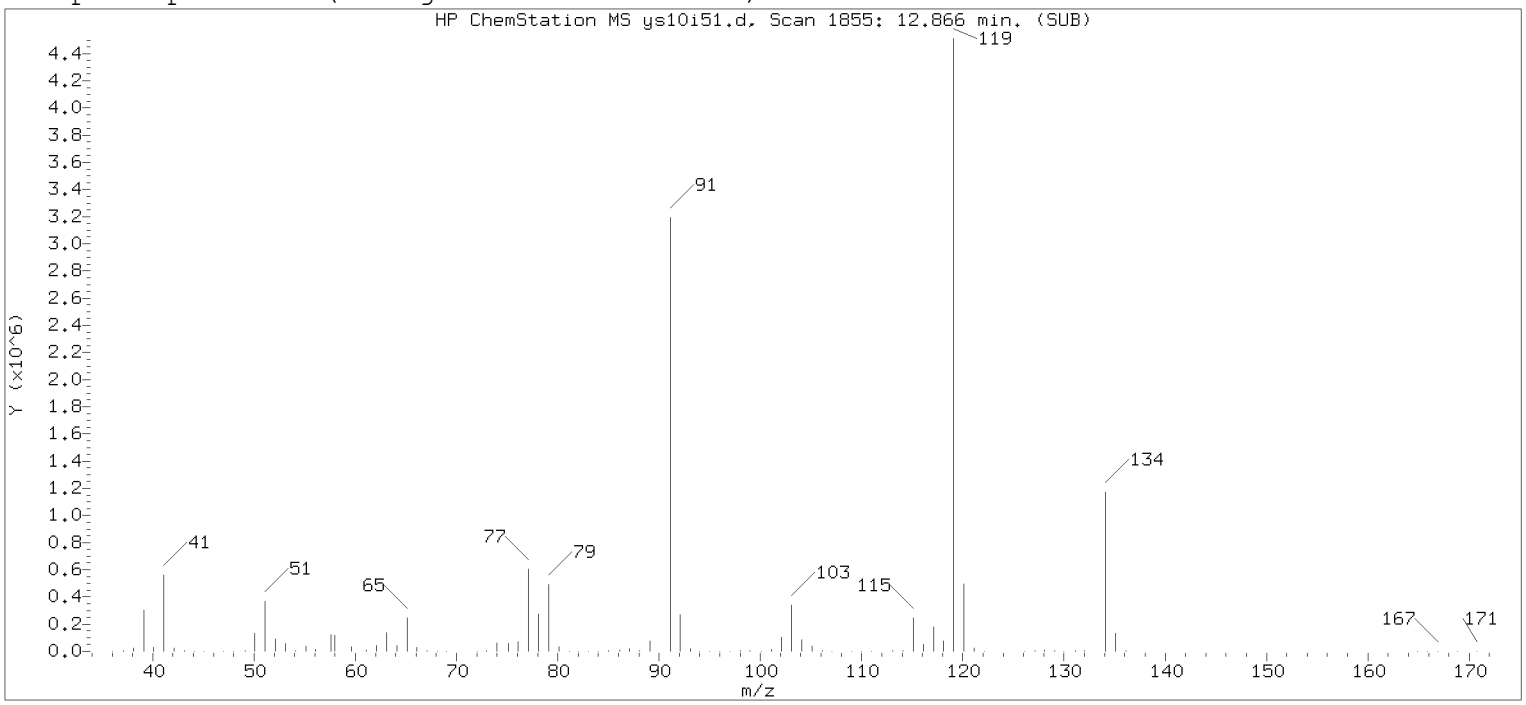
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area (flag) : 1715287M
On-Column Amount (ng) : 300.0000
Integration start scan : 1846 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

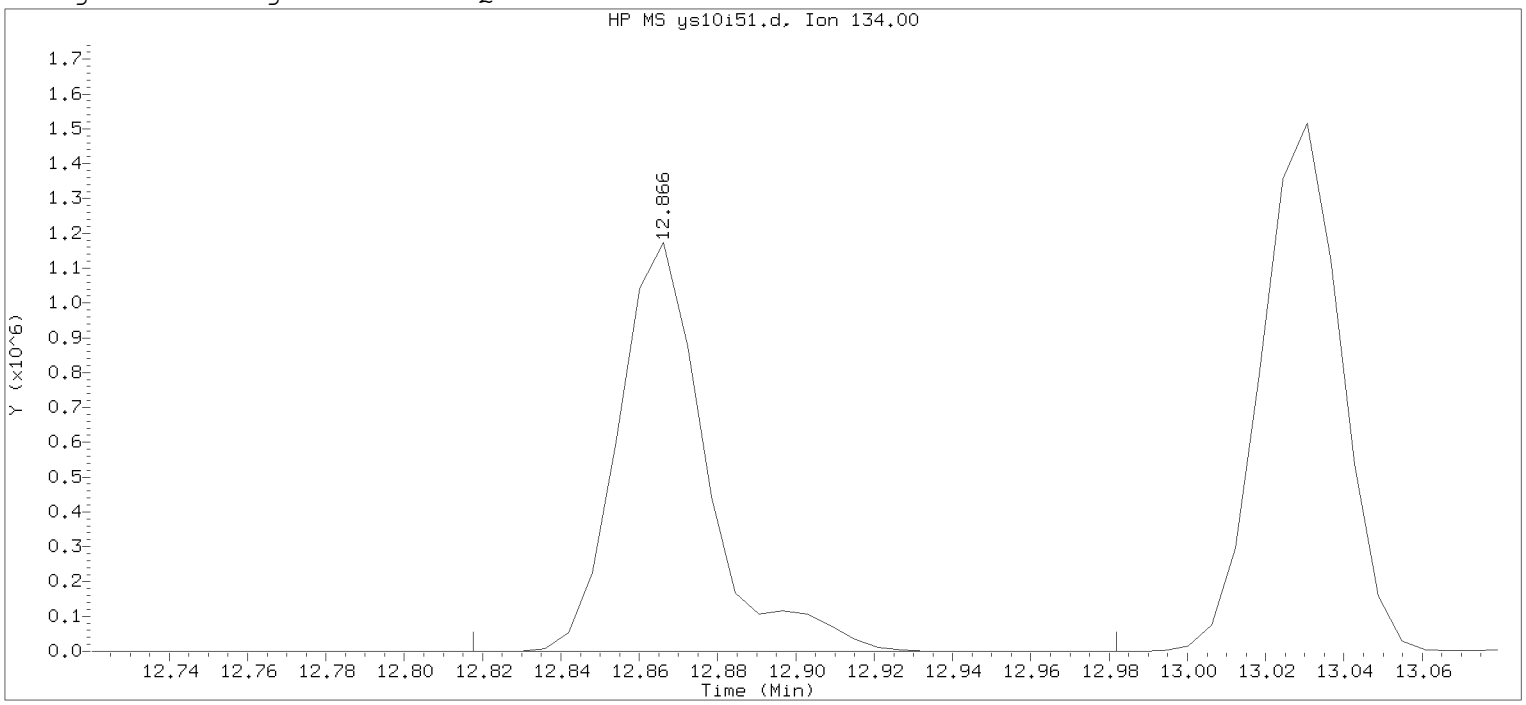
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



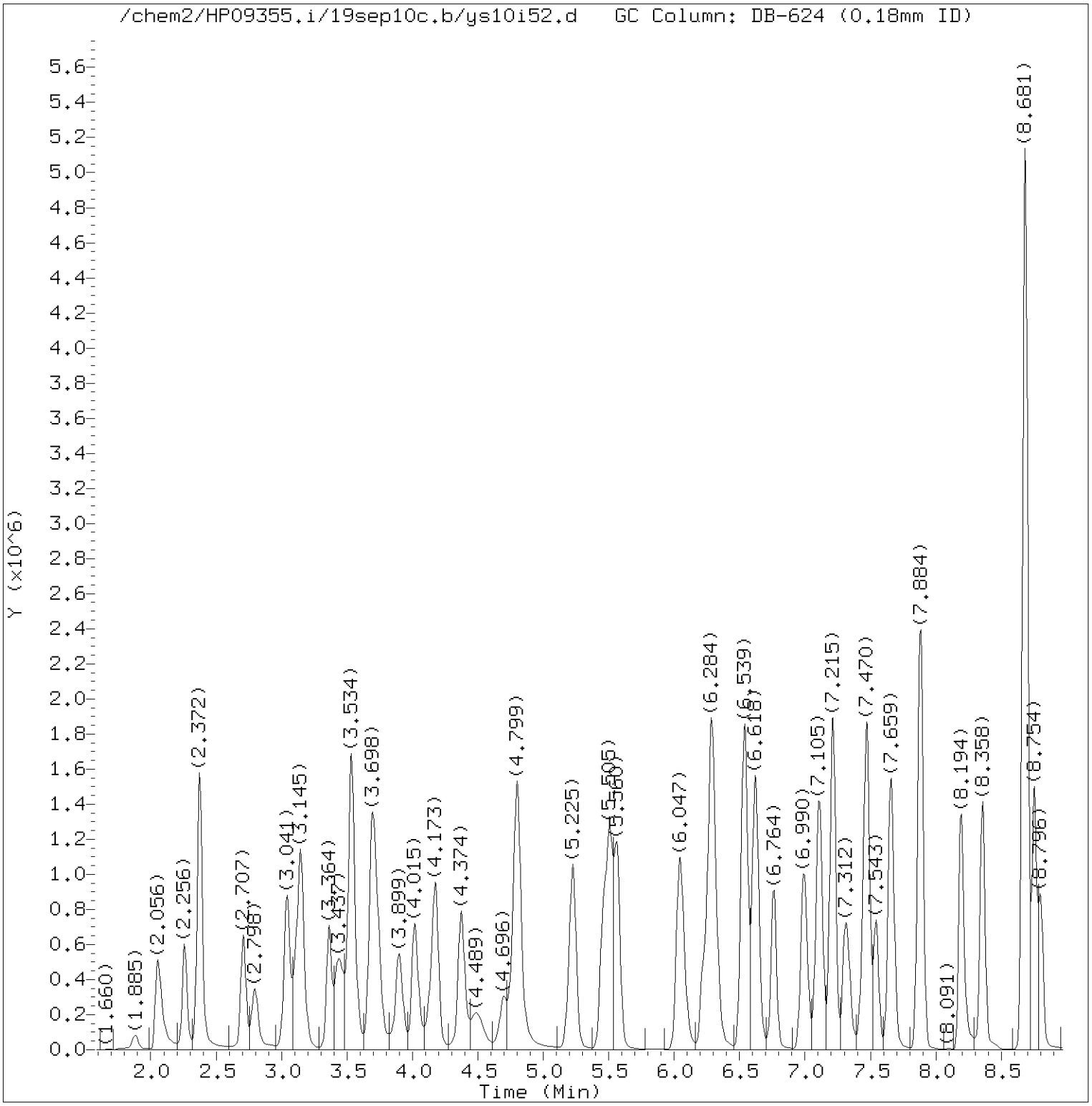
Data File: /chem2/HP09355.i/19sep10c.b/ys10i51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 12:50 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area : 1841356
On-column Amount (ng) : 307.6112
Integration start scan : 1846 Integration stop scan: 1873
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KASPOSITO



Total Ion Chromatogram (TIC)

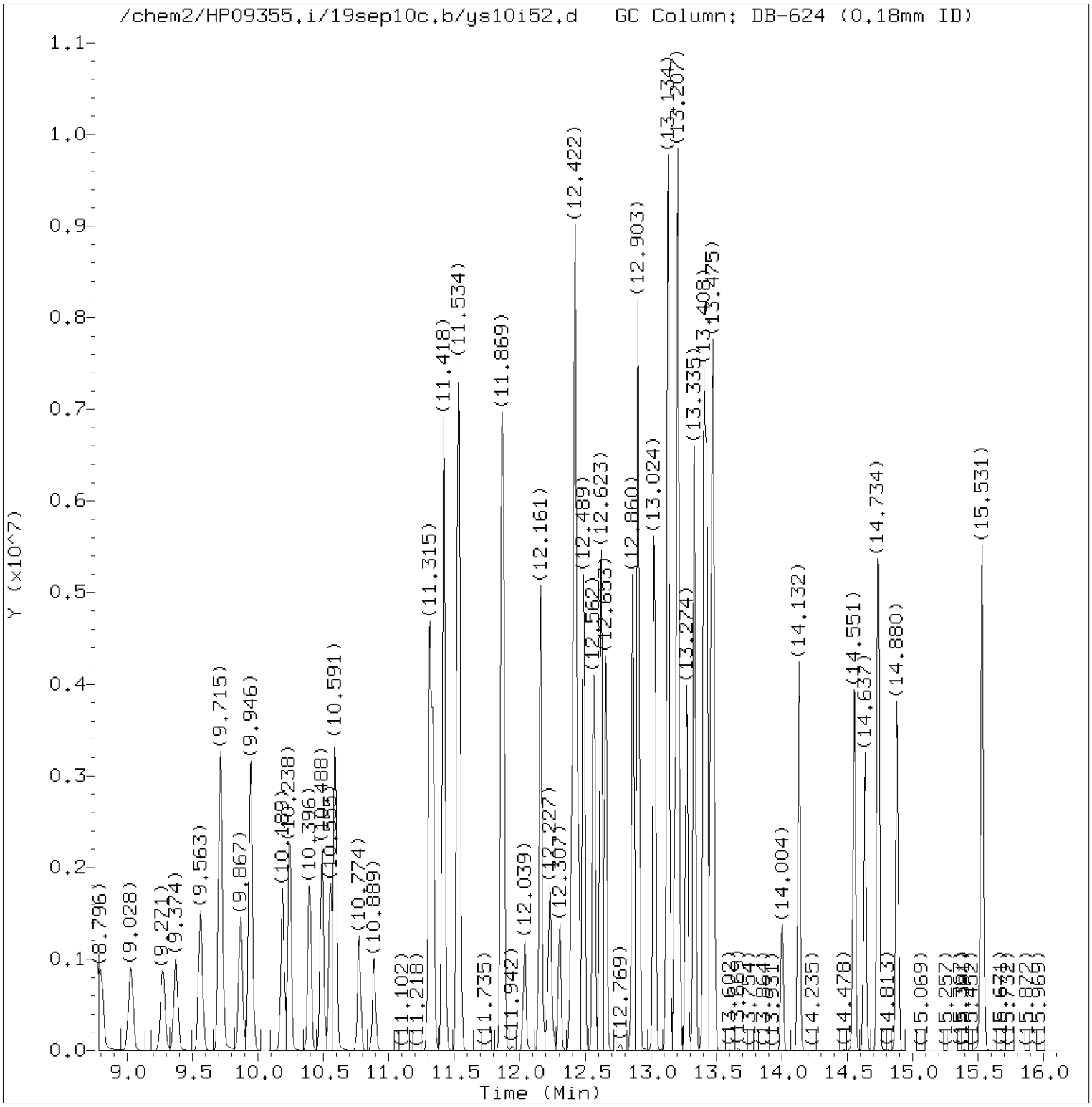
Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.056	85	1147359	101.987
4) Chloromethane	(2)	2.256	50	944564	103.885
5) 1,3-Butadiene	(2)	2.372	39	702236	102.580
6) Vinyl Chloride	(2)	2.378	62	952831	103.846
8) Bromomethane	(2)	2.707	94	689143	105.874
9) Chloroethane	(2)	2.798	64	543101	105.059
10) Dichlorofluoromethane	(2)	3.041	67	1108619	102.627
12) Trichlorofluoromethane	(2)	3.108	101	1210855	102.679
11) n-Pentane	(2)	3.151	43	1099102	102.523
14) Ethyl ether	(2)	3.364	59	617910	99.845
15) Freon 123a	(2)	3.437	67	720737M	101.337
16) Acrolein	(1)	3.534	56	2884658	1022.676
17) 1,1-Dichloroethene	(2)	3.686	96	534280	99.774
17) 1,1-Dichloroethene	(2)	3.686	63	273699	100.737
18) Acetone	(1)	3.698	58	273051	203.777
19) Freon 113	(2)	3.723	101	617061	100.061
21) 2-Propanol	(1)	3.869	45	413976	505.815
22) Methyl Iodide	(2)	3.899	142	1033371	100.960
23) Carbon Disulfide	(2)	4.015	76	1969048	100.441
27) Methyl Acetate	(2)	4.142	43	899672	101.017
25) Allyl Chloride	(2)	4.179	41	921129	101.140
29)*t-Butyl alcohol-d10	(1)	4.367	65	371904M	250.000
28) Methylene Chloride	(2)	4.374	84	630499	100.992
30) t-Butyl alcohol	(1)	4.489	59	830589	502.063
31) Acrylonitrile	(2)	4.696	53	507268	102.861
33) Methyl Tertiary Butyl Ether	(2)	4.787	73	2081087	102.199
32) trans-1,2-Dichloroethene	(2)	4.806	96	614593	100.158
34) n-Hexane	(2)	5.225	57	1060397	100.544
36) 1,1-Dichloroethane	(2)	5.456	63	1112882	101.277
38) di-Isopropyl ether	(2)	5.505	45	2124571	102.720
39) 2-Chloro-1,3-butadiene	(2)	5.566	53	1041021M	100.916
40) Ethyl t-butyl ether	(2)	6.047	59	2055230	103.127
43) 1,2-Dichloroethene (Total)	(2)		96	1308720	200.440
44) 2-Butanone	(2)	6.235	43	1429165	207.793
42) cis-1,2-Dichloroethene	(2)	6.278	96	694127	100.282
45) 2,2-Dichloropropane	(2)	6.302	77	881771	101.147
47) Propionitrile	(1)	6.308	54	964959	495.680
48) Methacrylonitrile	(2)	6.539	67	1303653	251.980

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.618	128	365798	100.405
50) Tetrahydrofuran	(1)	6.631	71	421571	200.304
51) Chloroform	(2)	6.764	83	1078014	100.877
52)$Dibromofluoromethane	(2)	6.977	113	281011	50.214
52)$Dibromofluoromethane	(2)	6.977	111	286329	50.088
53) 1,1,1-Trichloroethane	(2)	6.996	97	944073	100.136
54) Cyclohexane	(2)	7.105	56	1225519	100.815
54) Cyclohexane	(2)	7.111	84	1056451	100.509
54) Cyclohexane	(2)	7.111	69	388311	100.191
55) 1,1-Dichloropropene	(2)	7.209	75	900522	100.502
56) Carbon Tetrachloride	(2)	7.215	117	837940	99.472
58) Isobutyl Alcohol	(1)	7.318	41	702321	1262.907
57)$1,2-Dichloroethane-d4	(2)	7.440	102	71951	50.090
57)$1,2-Dichloroethane-d4	(2)	7.440	65	346940	50.234
57)$1,2-Dichloroethane-d4	(2)	7.440	104	45822	50.363
60) Benzene	(2)	7.476	78	2594248	101.630
61) 1,2-Dichloroethane	(2)	7.543	62	896168	101.544
61) 1,2-Dichloroethane	(2)	7.543	98	81740	100.305
65) t-Amyl methyl ether	(2)	7.659	73	2037697	103.960
66)*Fluorobenzene	(2)	7.872	96	1184522	50.000
67) n-Heptane	(2)	7.884	43	1106685	101.338
69) n-Butanol	(1)	8.194	56	1374199	2594.936
71) Trichloroethene	(2)	8.358	95	675631	99.997
72) Methylcyclohexane	(2)	8.675	83	1288405	99.937
72) Methylcyclohexane	(2)	8.675	98	574772	99.449
73) 1,2-Dichloropropane	(2)	8.687	63	676427	100.947
76) Methyl Methacrylate	(2)	8.754	69	813764	99.933
75) 1,4-Dioxane	(1)	8.766	88	157044M	1271.299
74) Dibromomethane	(2)	8.802	93	445464	100.157
78) Bromodichloromethane	(2)	9.028	83	828036	99.699
79) 2-Nitropropane	(2)	9.271	41	733145	205.226
80) 2-Chloroethyl Vinyl Ether	(2)	9.374	63	565474	97.391
81) cis-1,3-Dichloropropene	(2)	9.563	75	1111602	100.600
82) 4-Methyl-2-pentanone	(2)	9.715	43	2724684	210.580
83)$Toluene-d8	(3)	9.867	98	1198512	50.360
83)$Toluene-d8	(3)	9.867	100	774060	50.213
88) Toluene	(3)	9.946	92	1661853	101.837
90) 1,3-Dichloropropene (total)	(3)		100	2181104	201.368

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on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.189	75	1069502	100.768
91) Ethyl Methacrylate	(3)	10.244	69	1314551	101.169
92) 1,1,2-Trichloroethane	(3)	10.396	97	645930	100.986
93) Tetrachloroethene	(3)	10.488	166	707822	102.499
94) 1,3-Dichloropropane	(3)	10.555	76	1118302	101.707
96) 2-Hexanone	(3)	10.591	43	2225376	213.045
97) Dibromochloromethane	(3)	10.774	129	704152	99.846
99) 1,2-Dibromoethane	(3)	10.889	107	724883	100.960
100)*Chlorobenzene-d5	(3)	11.309	117	887141	50.000
101) 1-Chlorohexane	(3)	11.315	91	924388	100.520
102) Chlorobenzene	(3)	11.339	112	1859545	102.501
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	638681	102.144
104) Ethylbenzene	(3)	11.418	91	3215249	104.308
106) m+p-Xylene	(3)	11.534	106	2524900	208.609
108) Xylene (Total)	(3)		106	3768618	311.784
107) o-Xylene	(3)	11.862	106	1243718	103.175
109) Styrene	(3)	11.875	104	2140719	103.787
110) Bromoform	(3)	12.039	173	525774	98.625
111) Isopropylbenzene	(3)	12.161	105	3186335	105.007
112) Cyclohexanone	(1)	12.227	55	803216	1292.587
114)$4-Bromofluorobenzene	(3)	12.307	95	458744	50.222
114)$4-Bromofluorobenzene	(3)	12.307	174	347038	50.328
116) 1,1,2,2-Tetrachloroethane	(4)	12.398	83	1131821	100.962
118) trans-1,4-Dichloro-2-butene	(4)	12.422	53	1040841	264.913
115) Bromobenzene	(4)	12.422	156	806401	104.451
117) 1,2,3-Trichloropropane	(4)	12.446	110	357637	100.515
119) n-Propylbenzene	(4)	12.489	91	3740682	106.211
120) 2-Chlorotoluene	(4)	12.568	126	771206	100.712
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	2800105	103.613
121) 4-Chlorotoluene	(4)	12.659	126	805927	100.803
124) tert-Butylbenzene	(4)	12.866	134	588973M	100.943
125) Pentachloroethane	(4)	12.897	167	478922	99.191
126) 1,2,4-Trimethylbenzene	(4)	12.903	105	2964362	104.995
127) sec-Butylbenzene	(4)	13.024	105	3552695	106.233
129) 1,3-Dichlorobenzene	(4)	13.128	146	1538997	105.229
130) p-Isopropyltoluene	(4)	13.134	119	3102536	107.265
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	472377	50.000
133) 1,4-Dichlorobenzene	(4)	13.207	146	1562410	104.588

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Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.207	105	3071118	105.945
135) Benzyl Chloride	(4)	13.274	91	2532840	101.781
136) 1,3-Diethylbenzene	(4)	13.335	119	1974888	103.108
141) Diethylbenzene (total)	(4)		100	5729065	310.859
137) 1,4-Diethylbenzene	(4)	13.408	119	2089382	104.112
139) n-Butylbenzene	(4)	13.426	92	1614874M	103.215
138) 1,2-Dichlorobenzene	(4)	13.462	146	1491233	103.291
140) 1,2-Diethylbenzene	(4)	13.481	119	1664795	103.639
142) 1,2-Dibromo-3-chloropropane	(4)	14.004	75	315738	99.710
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	1142462	102.526
146) 1,2,4-Trichlorobenzene	(4)	14.557	180	1096553	103.010
147) Hexachlorobutadiene	(4)	14.637	225	505131	102.677
148) Naphthalene	(4)	14.740	128	3942009	108.256
149) 1,2,3-Trichlorobenzene	(4)	14.880	180	1058199	102.972
150) 2-Methylnaphthalene	(4)	15.531	142	2670961	106.730

M = Compound was manually integrated.

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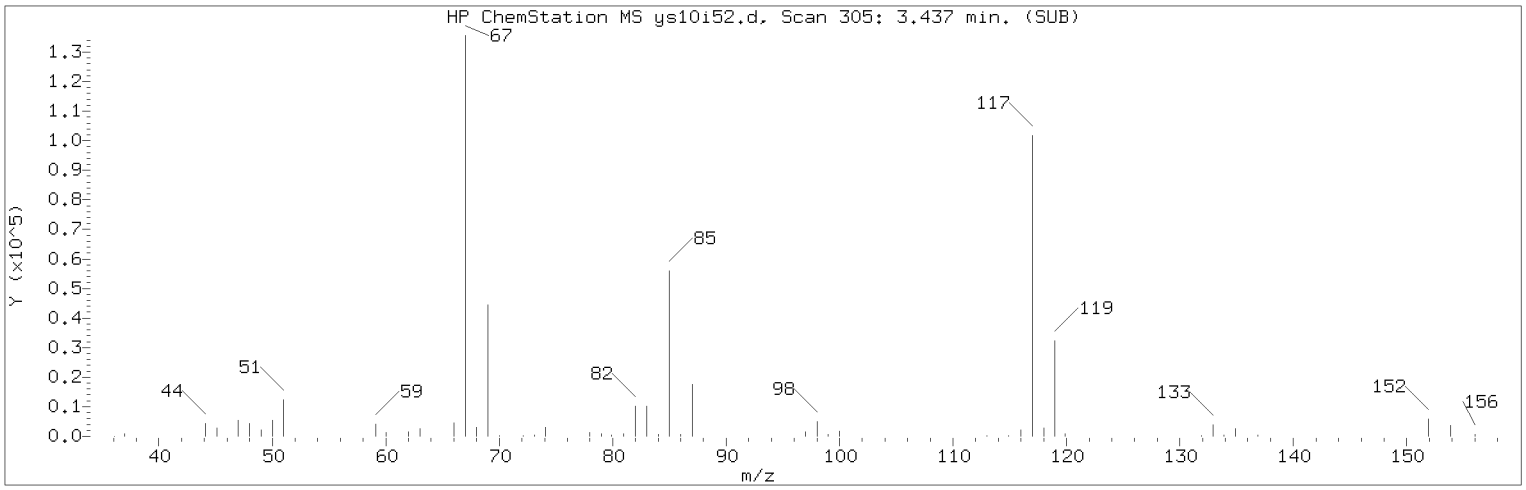
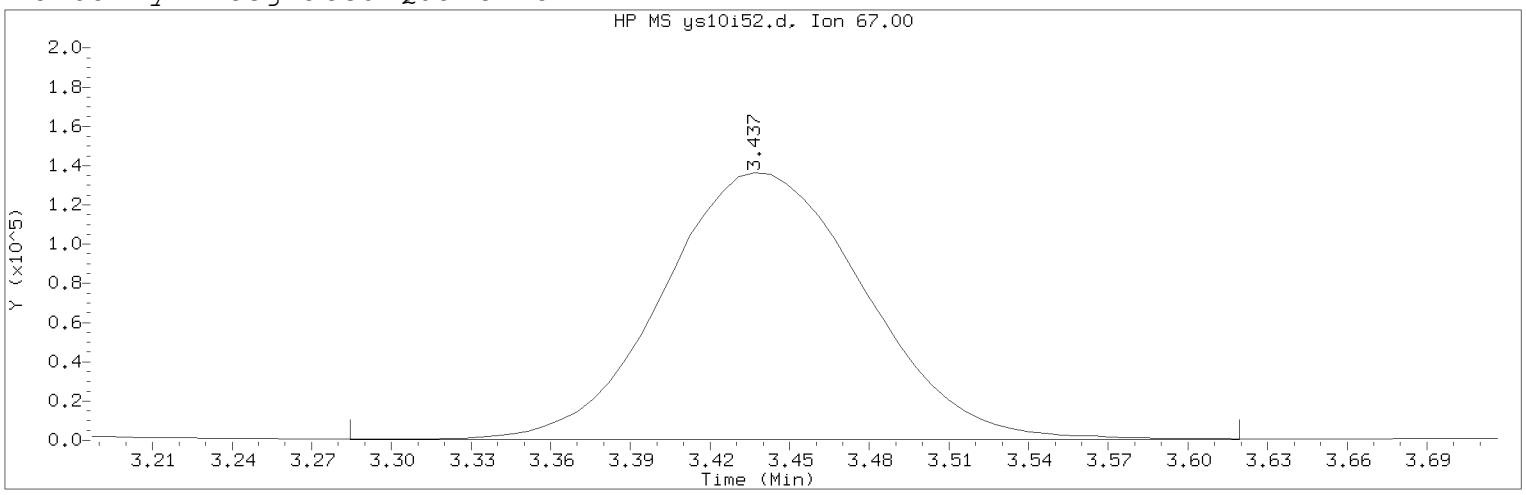
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

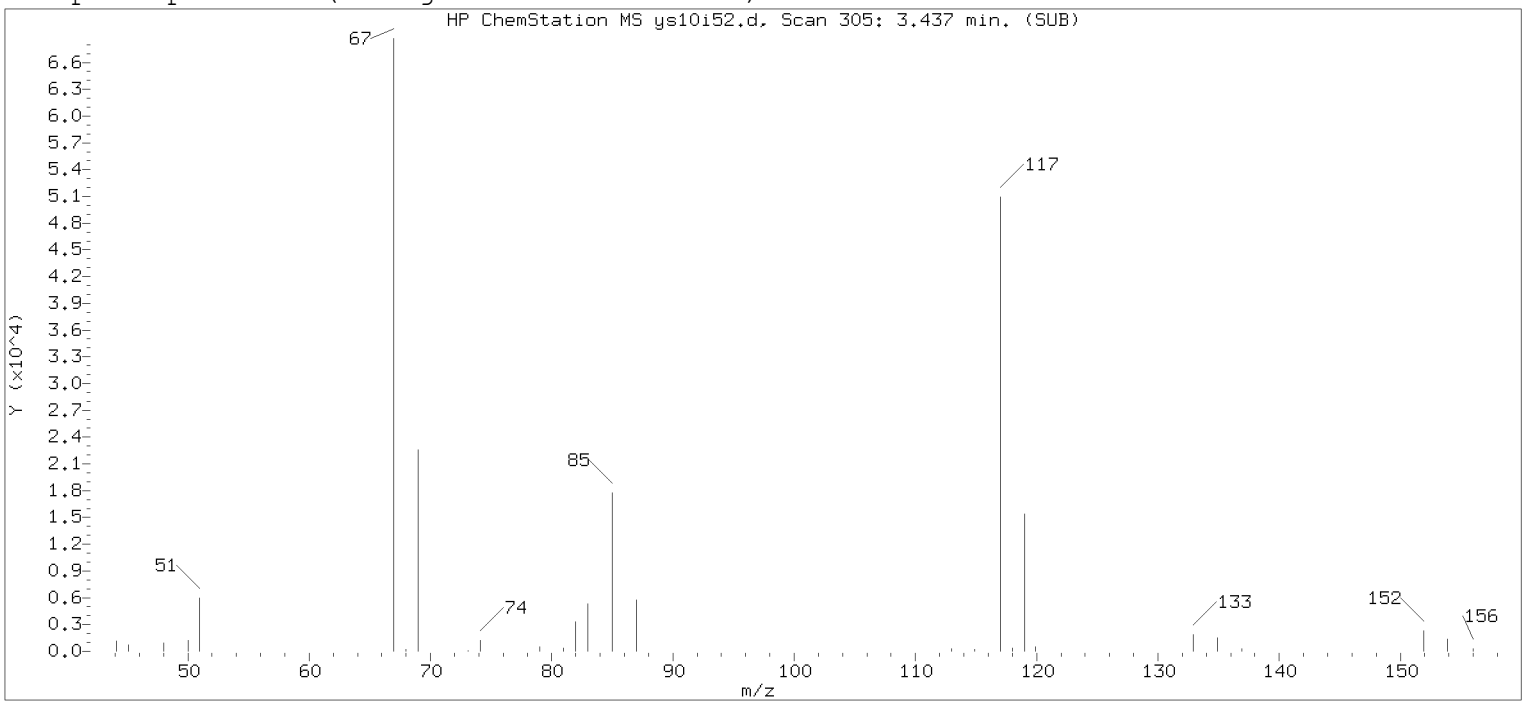
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 305
Retention Time (minutes): 3.437
Quant Ion : 67.00
Area (flag) : 720737M
On-Column Amount (ng) : 101.3374
Integration start scan : 279 Integration stop scan: 334
Y at integration start : 415 Y at integration end: 415

Reason for manual integration: improper integration

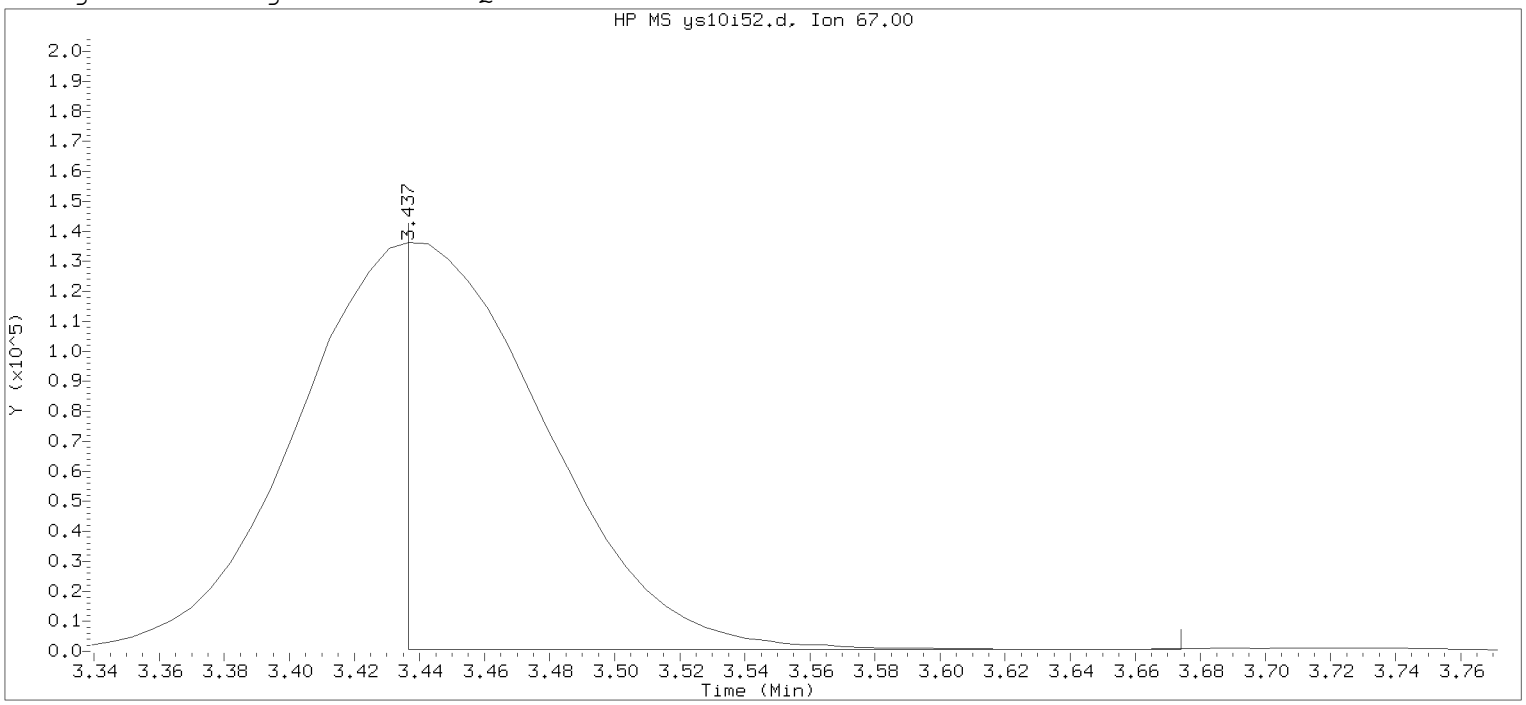
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

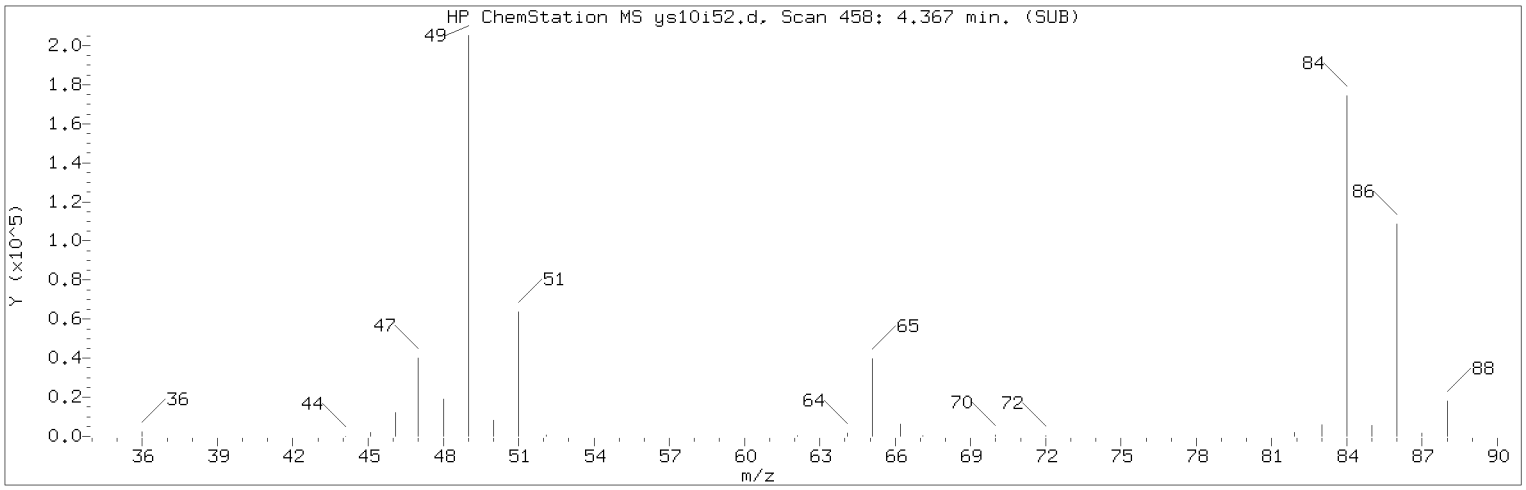
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

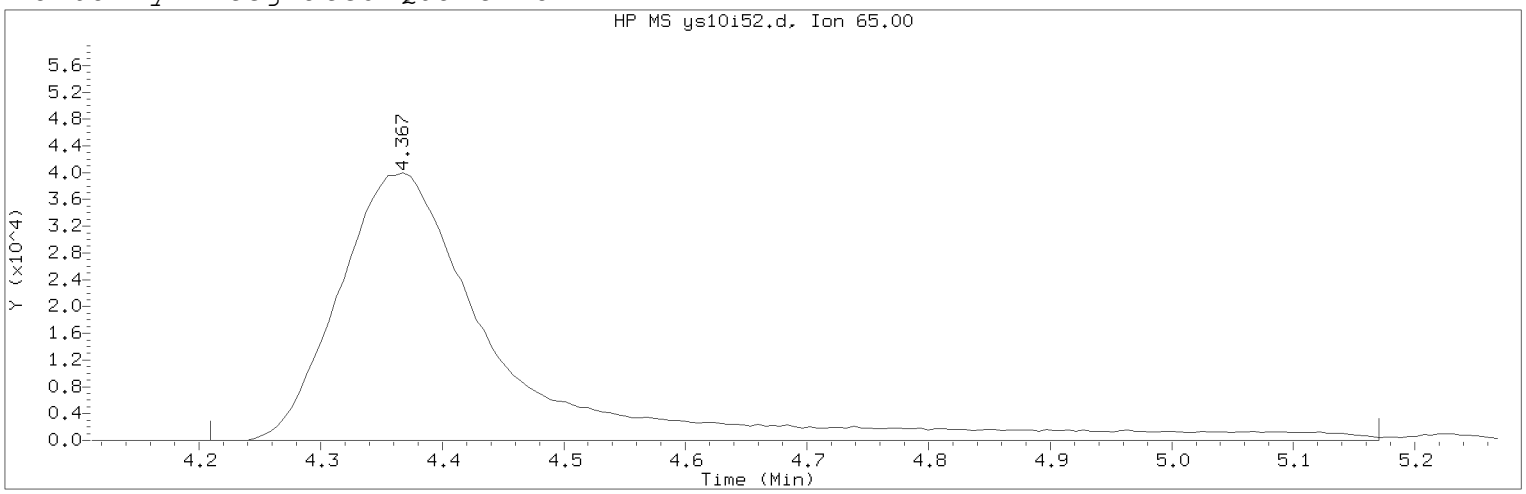
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 305
Retention Time (minutes): 3.437
Quant Ion : 67.00
Area : 393782
On-column Amount (ng) : 65.4221
Integration start scan : 304 Integration stop scan: 343
Y at integration start : 552 Y at integration end: 666

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

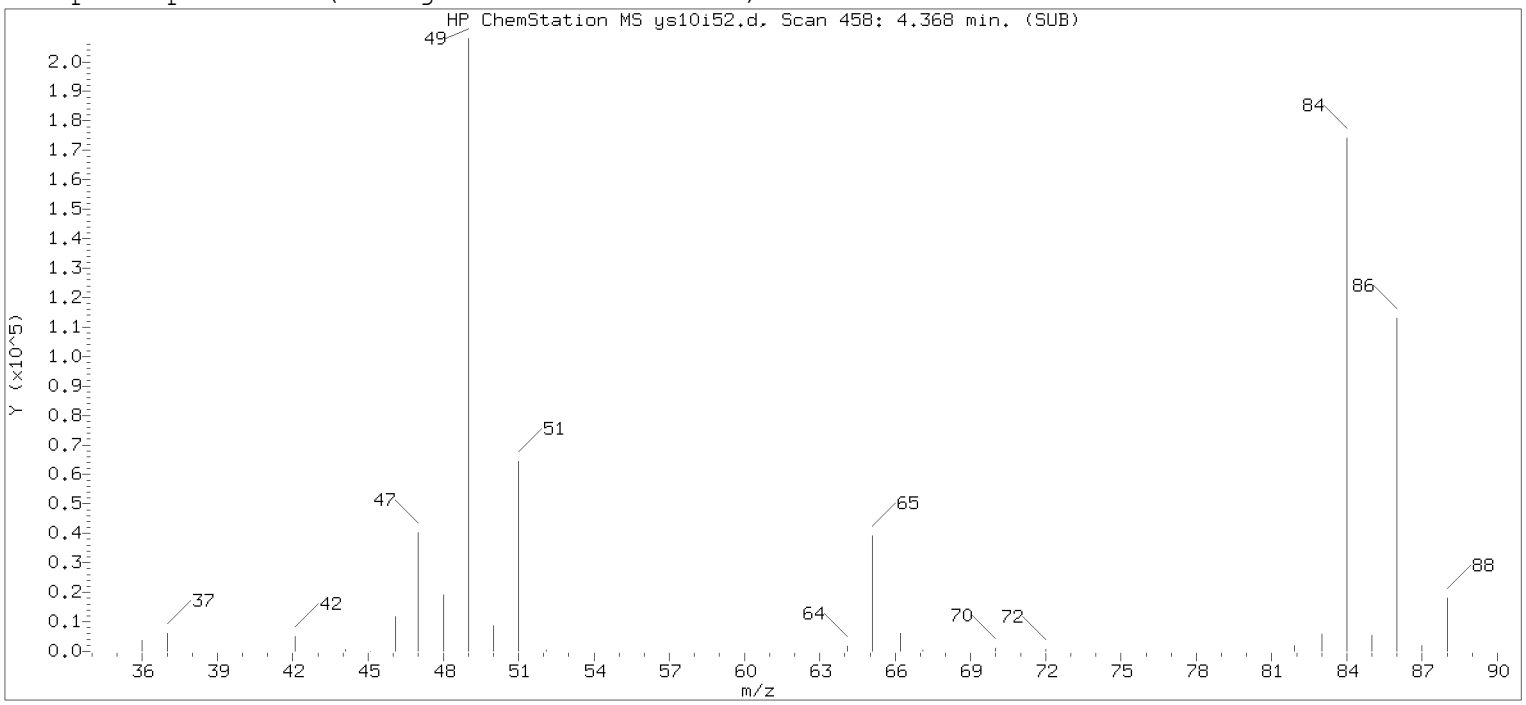
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 458
Retention Time (minutes): 4.367
Quant Ion : 65.00
Area (flag) : 371904M
On-Column Amount (ng) : 250.0000
Integration start scan : 431 Integration stop scan: 589
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

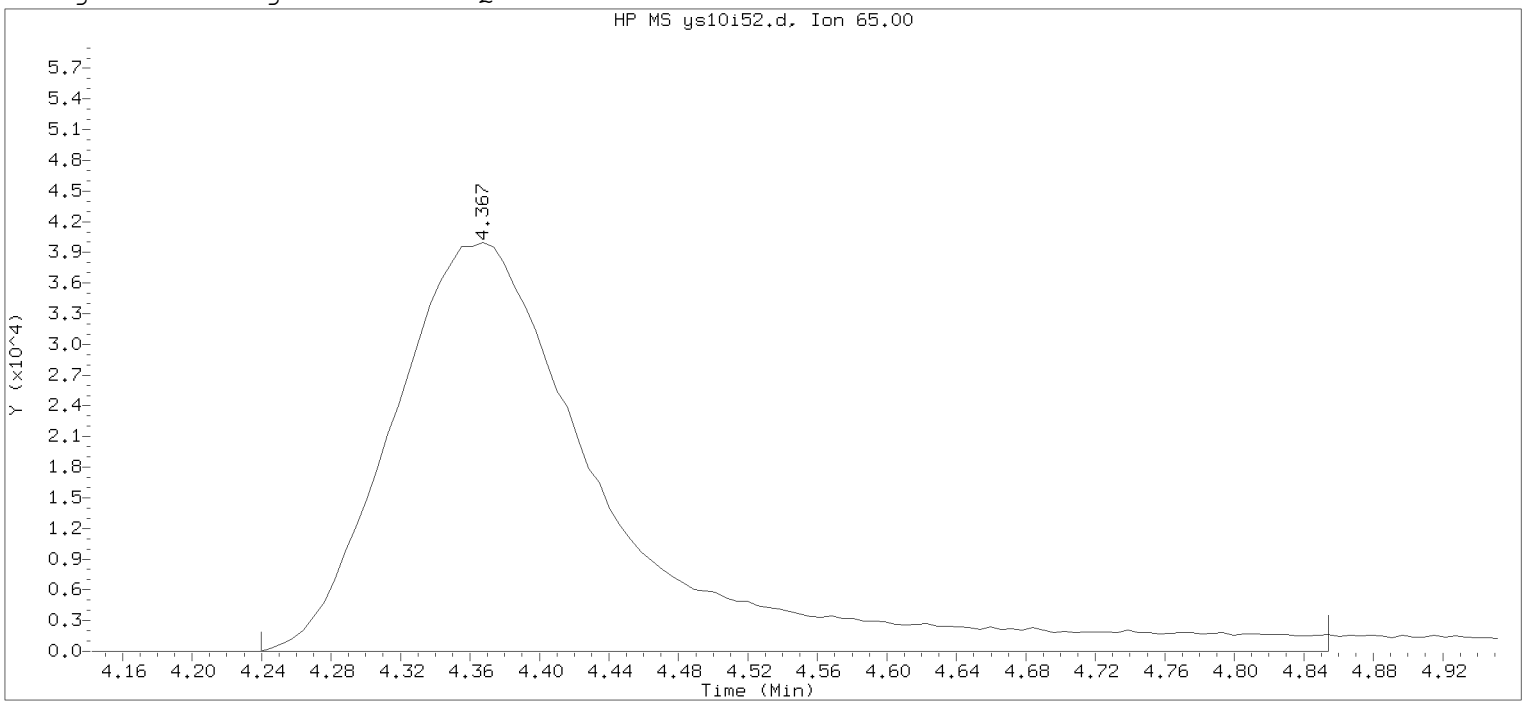
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

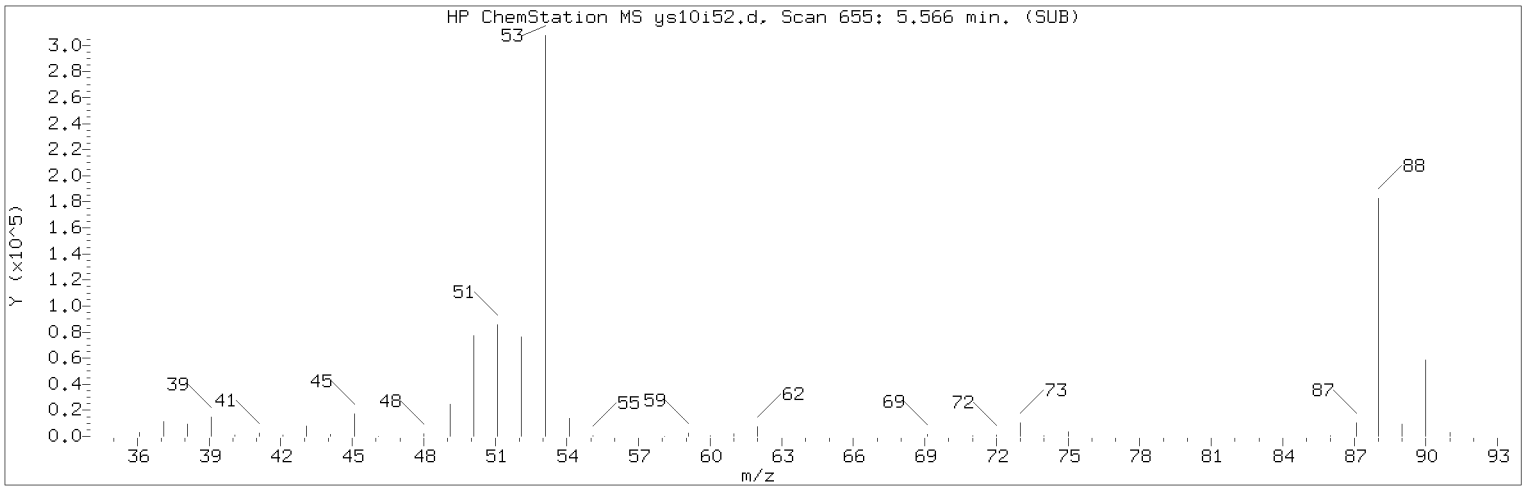
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

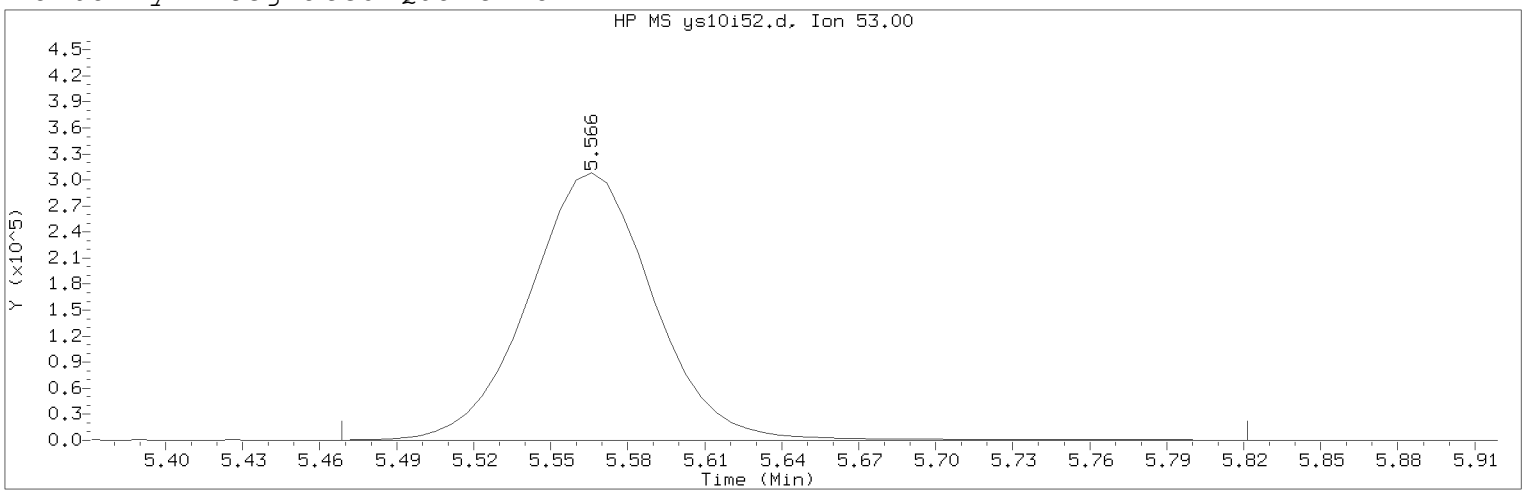
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 458
Retention Time (minutes): 4.367
Quant Ion : 65.00
Area : 347960
On-column Amount (ng) : 250.0000
Integration start scan : 436 Integration stop scan: 537
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

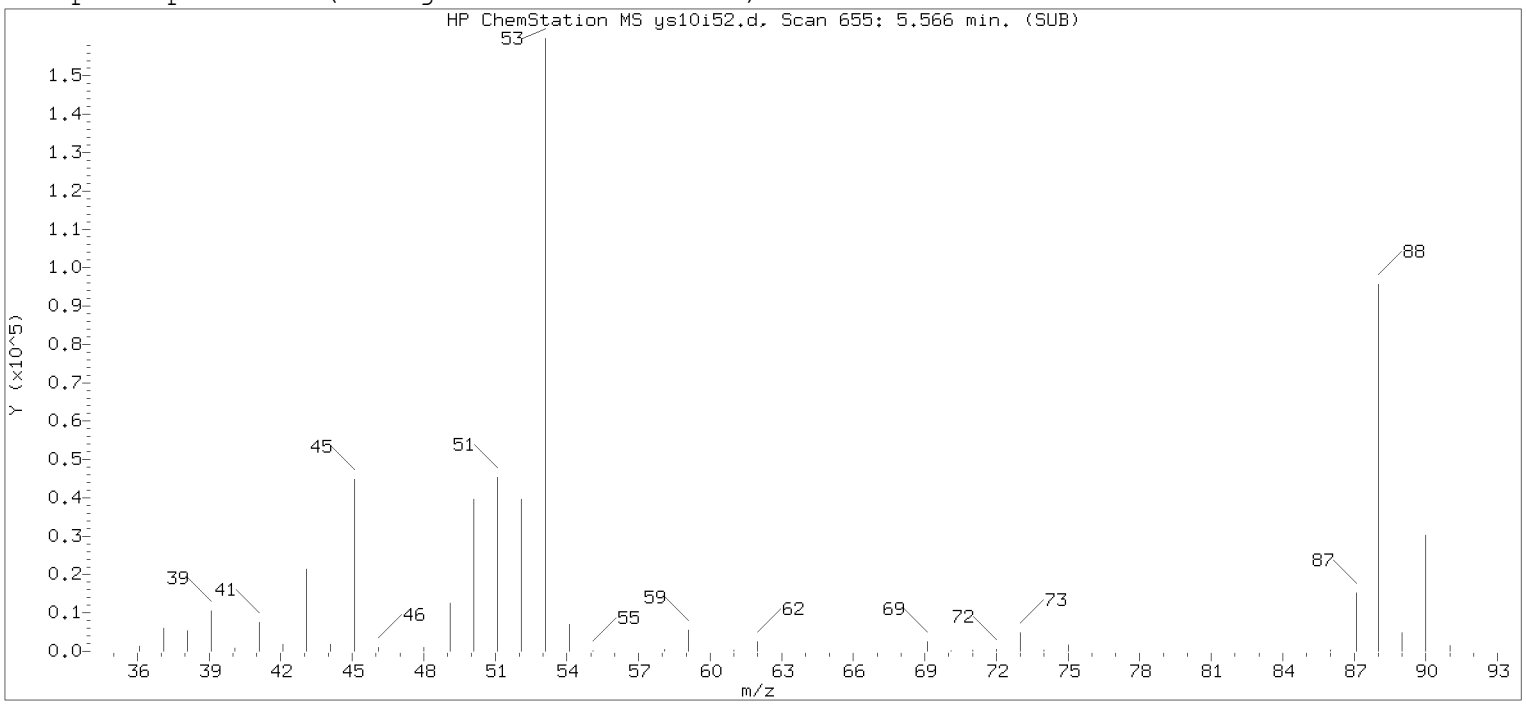
Compound Number : 39
Compound Name : 2-Chloro-1,3-butadiene
Scan Number : 655
Retention Time (minutes): 5.566
Quant Ion : 53.00
Area (flag) : 1041021M
On-Column Amount (ng) : 100.9162
Integration start scan : 638 Integration stop scan: 696
Y at integration start : 234 Y at integration end: 234

Reason for manual integration: improper integration

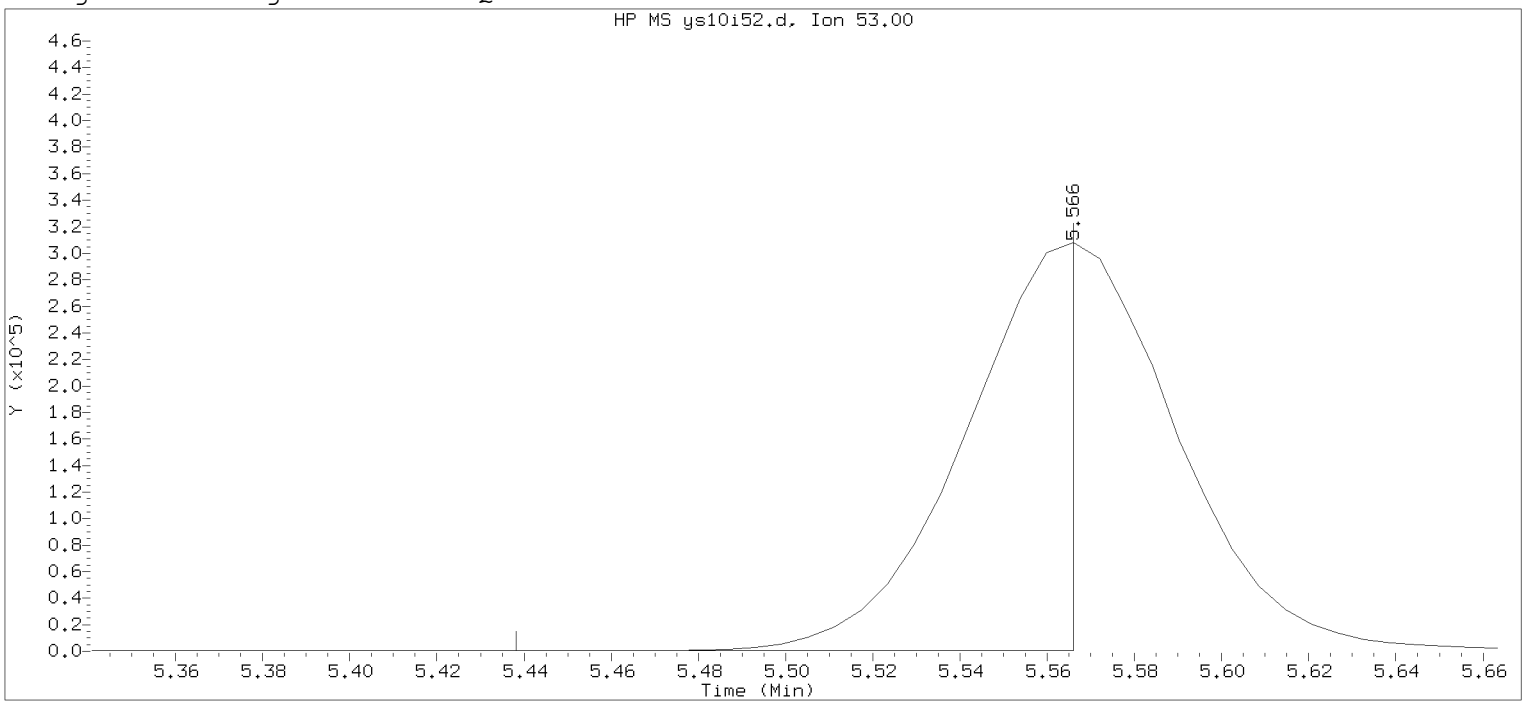
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

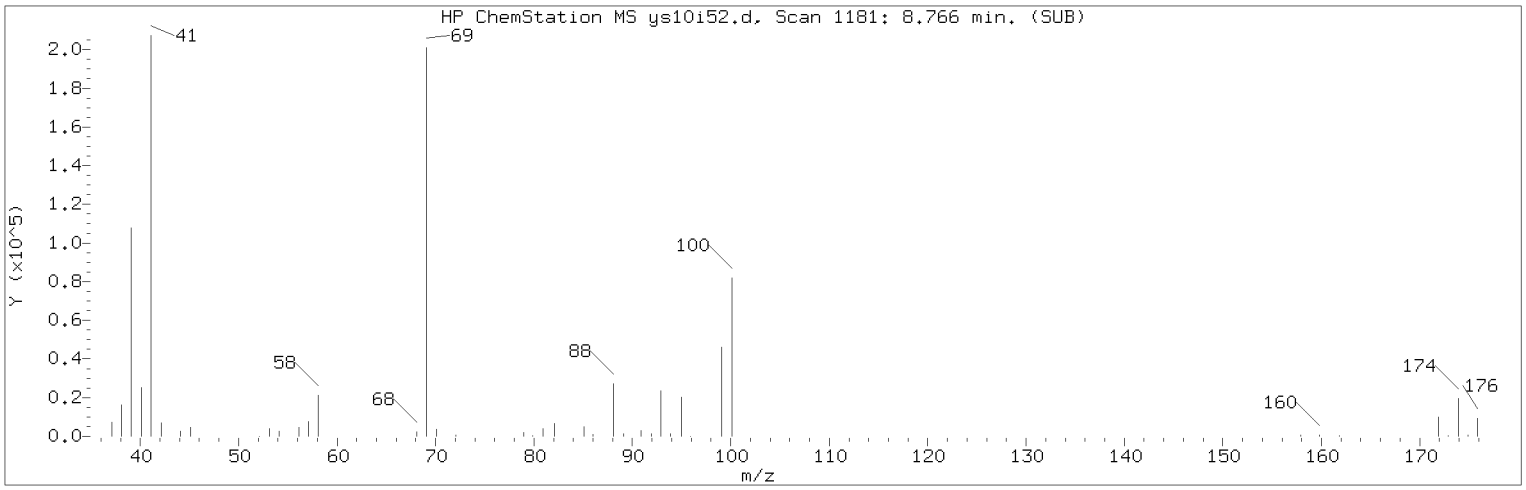
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

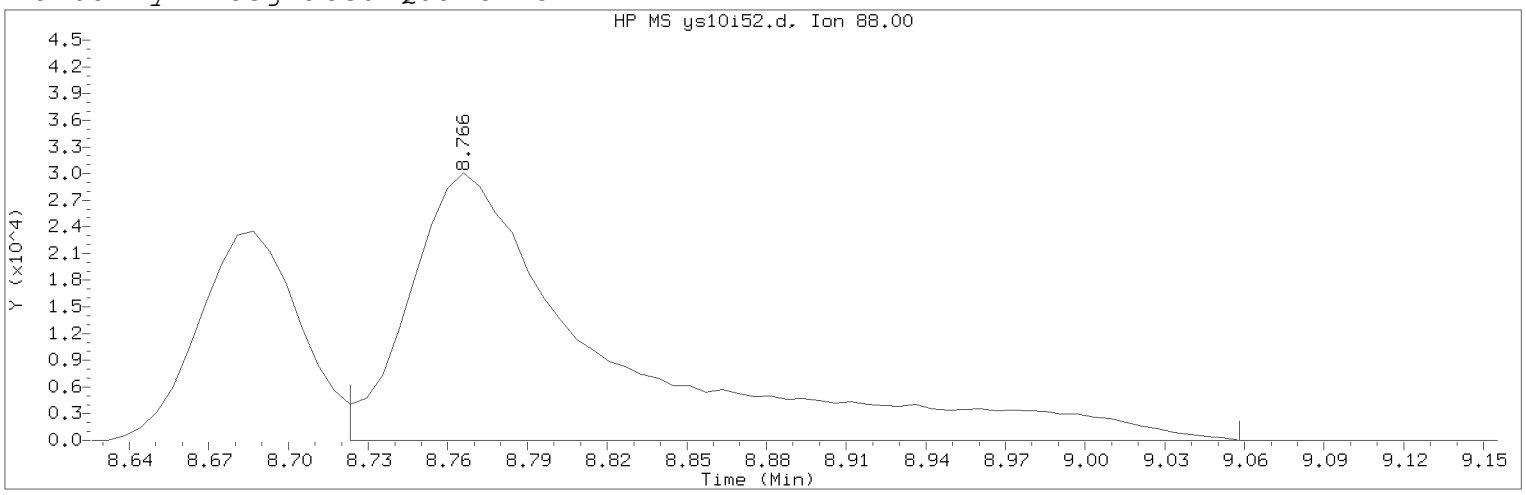
Compound Number : 39
Compound Name : 2-Chloro-1,3-butadiene
Scan Number : 655
Retention Time (minutes): 5.566
Quant Ion : 53.00
Area : 519100
On-column Amount (ng) : 60.5155
Integration start scan : 633 Integration stop scan: 654
Y at integration start : 274 Y at integration end: 274

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

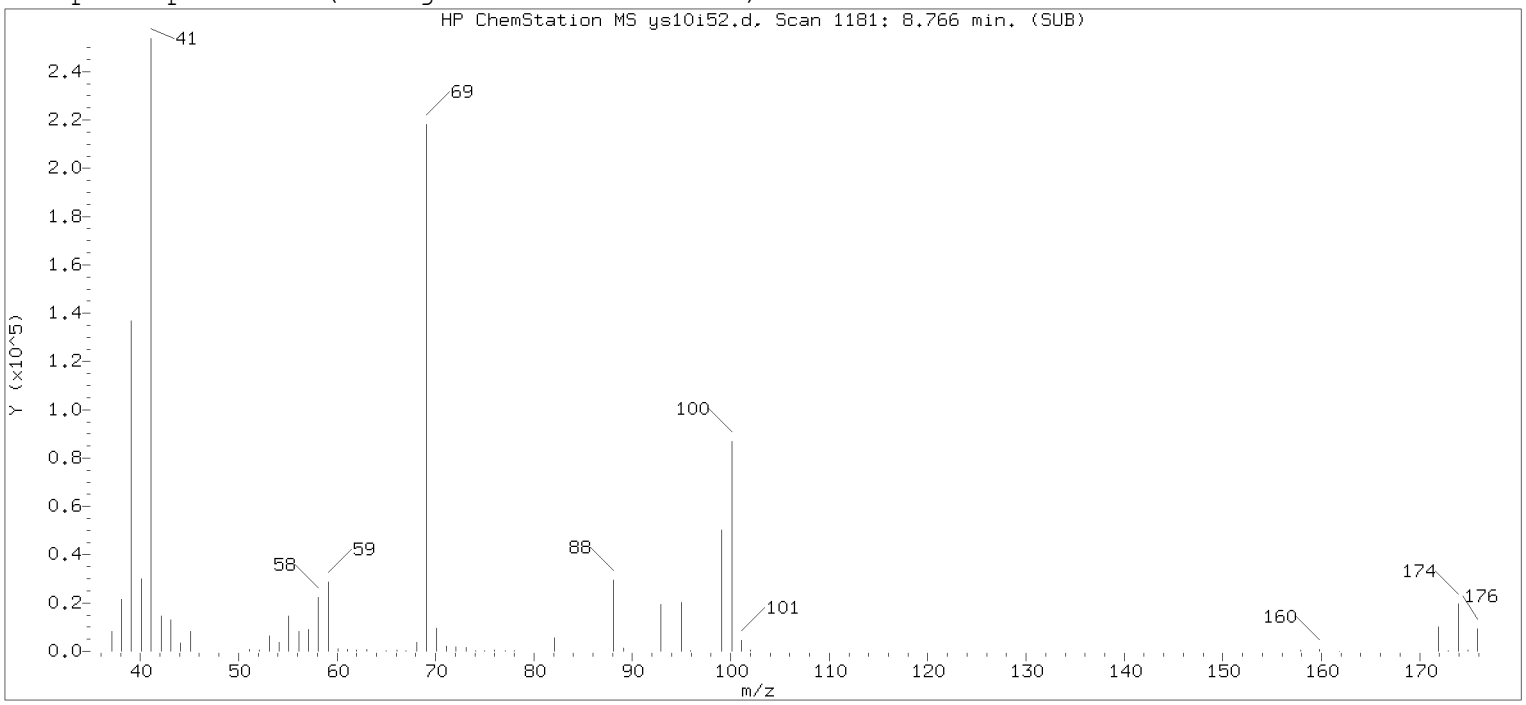
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1181
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area (flag) : 157044M
On-Column Amount (ng) : 1271.2986
Integration start scan : 1173 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

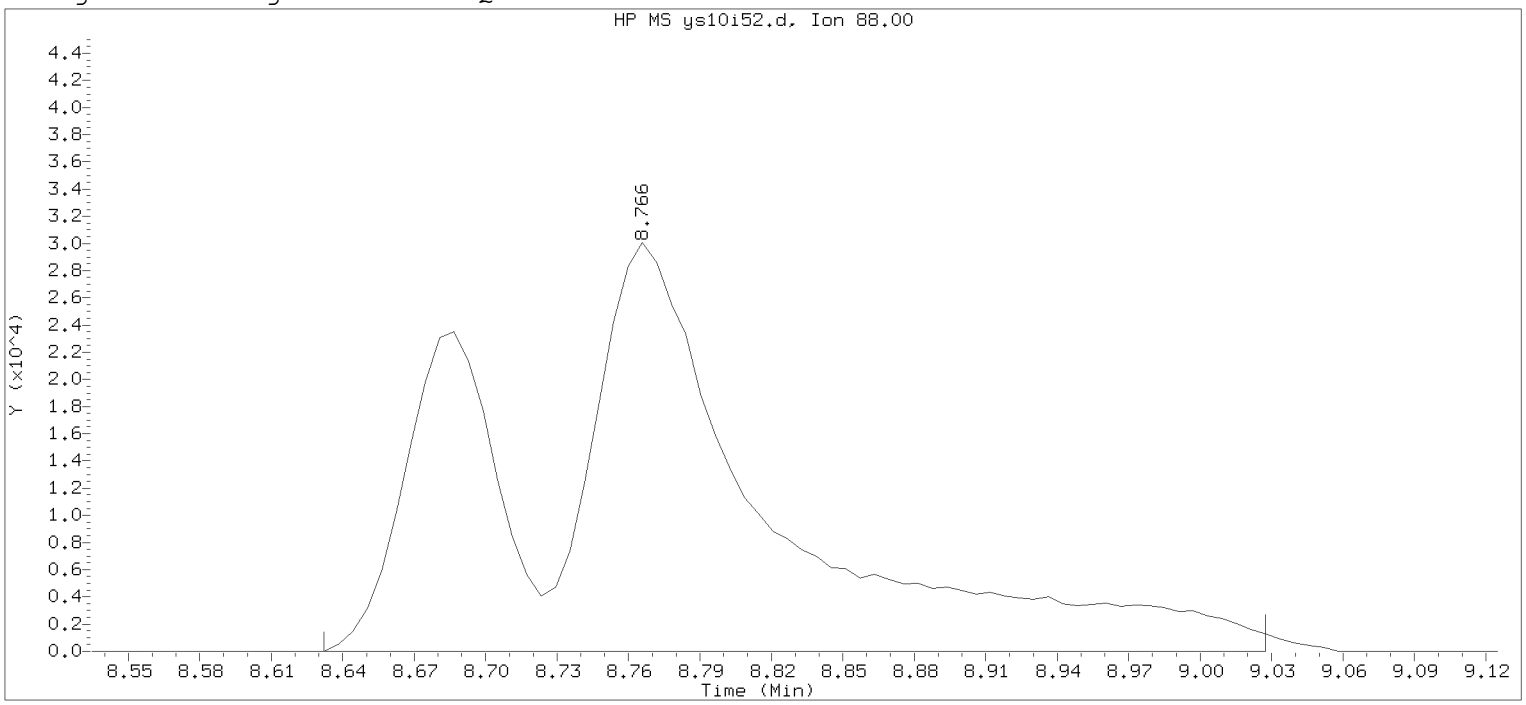
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

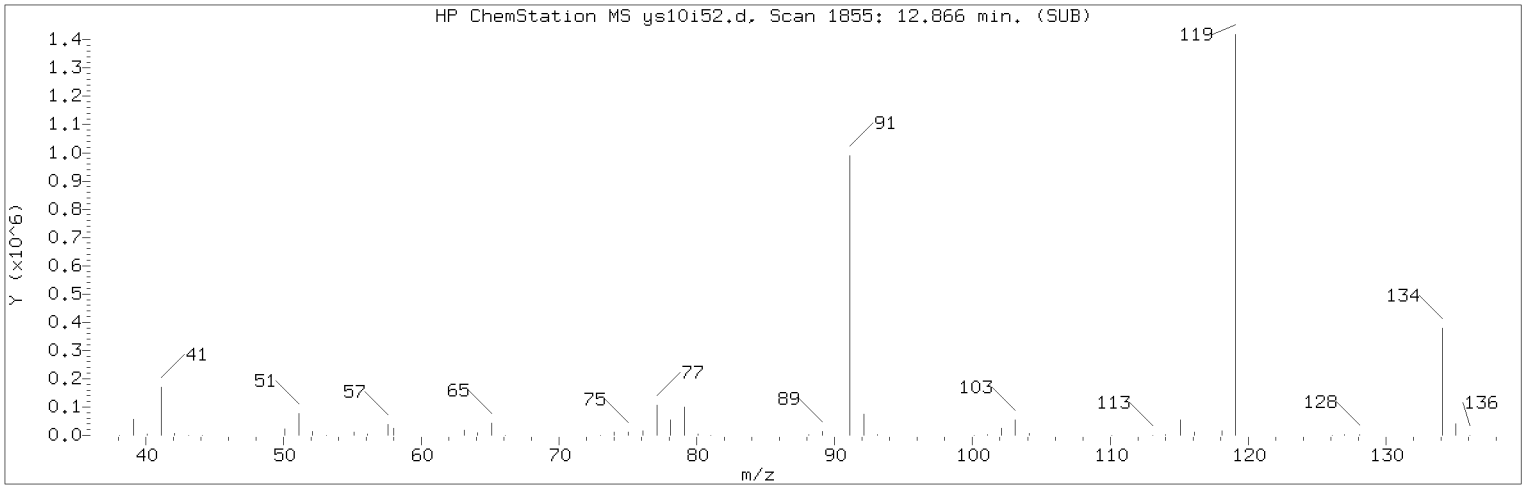
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

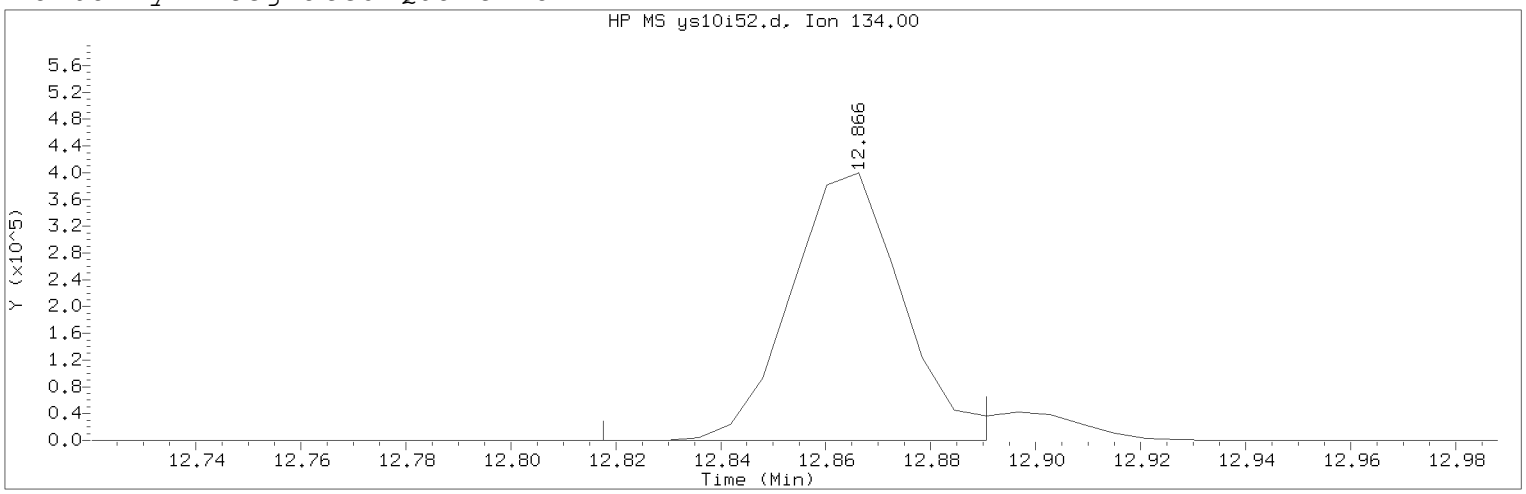
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1181
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area : 217495
On-column Amount (ng) : 1415.0788
Integration start scan : 1158 Integration stop scan: 1223
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

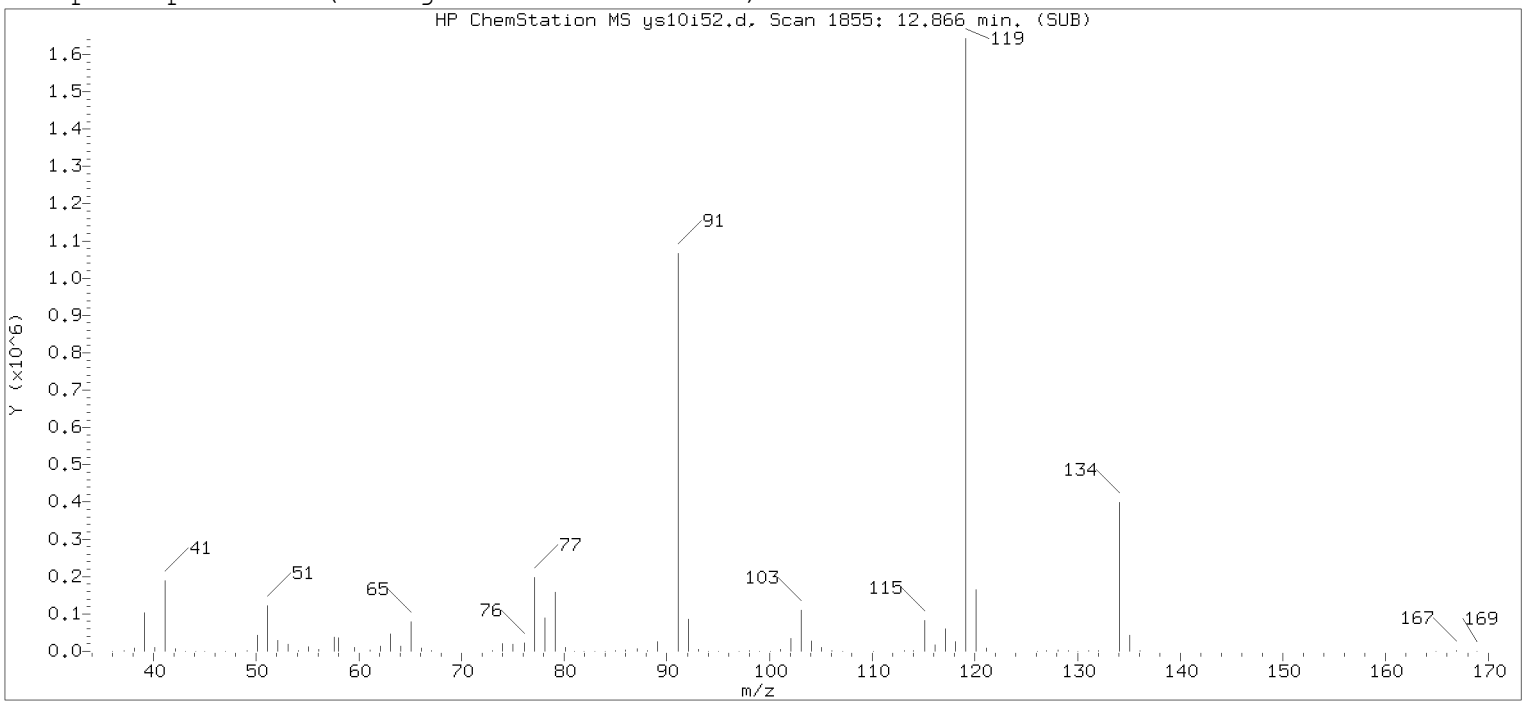
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area (flag) : 588973M
On-Column Amount (ng) : 100.9434
Integration start scan : 1846 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

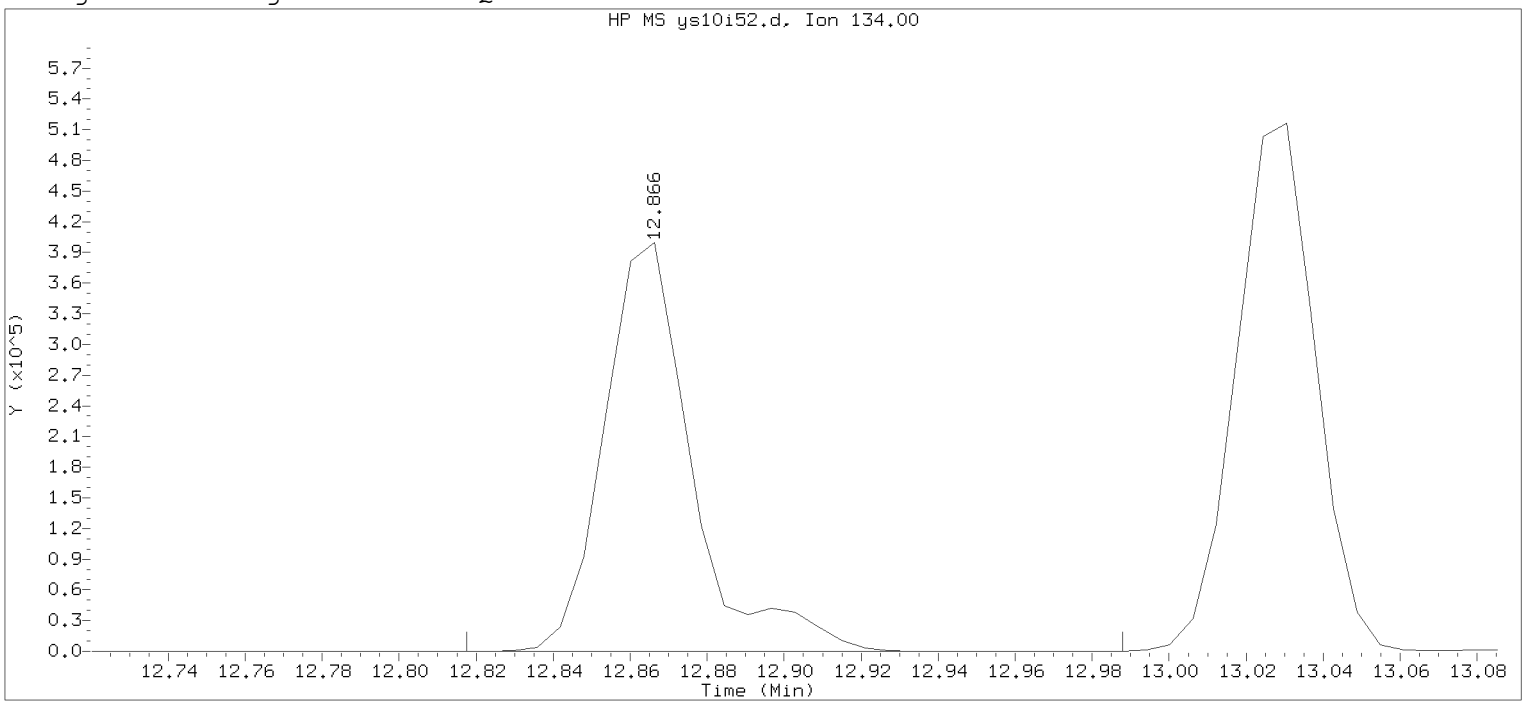
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

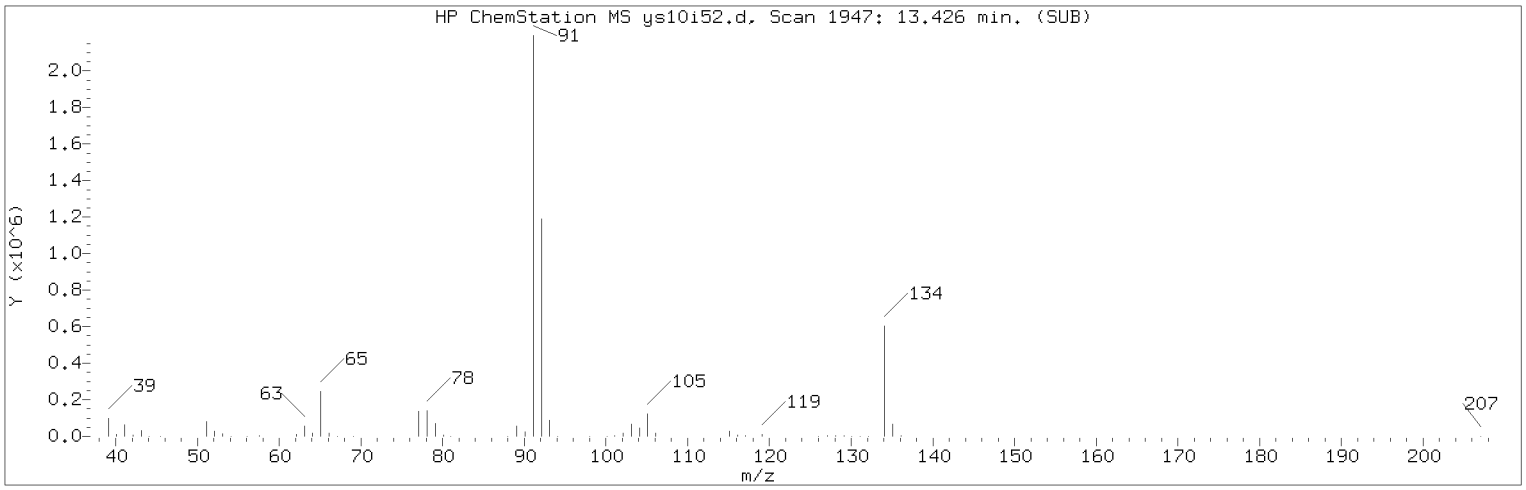
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

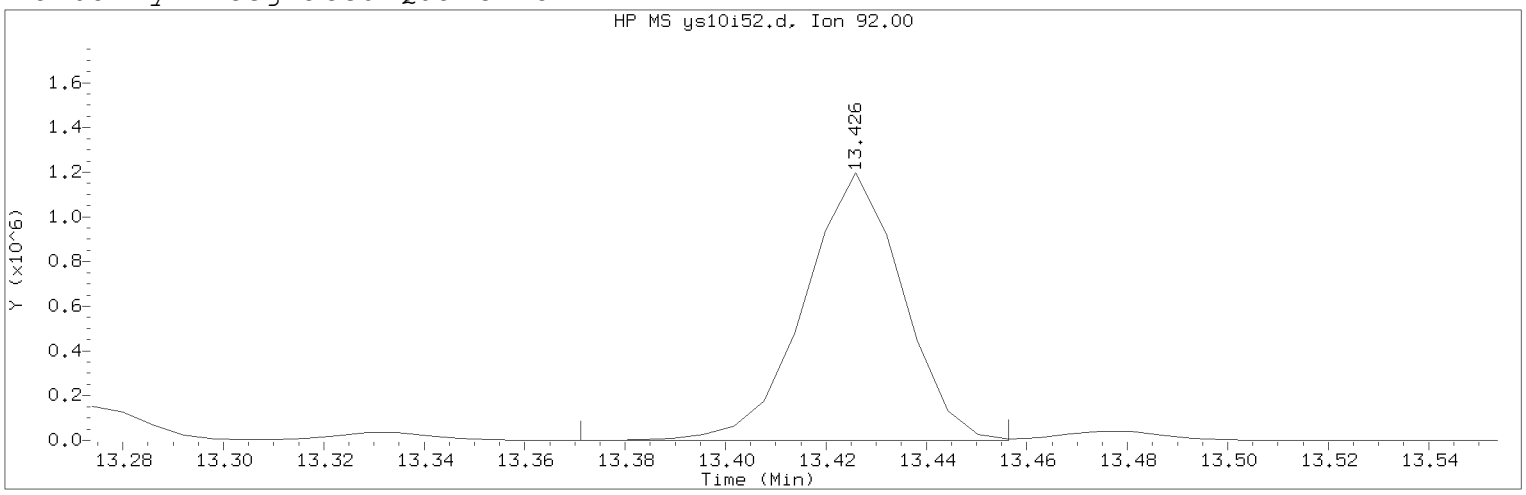
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area : 632288
On-column Amount (ng) : 102.9522
Integration start scan : 1846 Integration stop scan: 1874
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

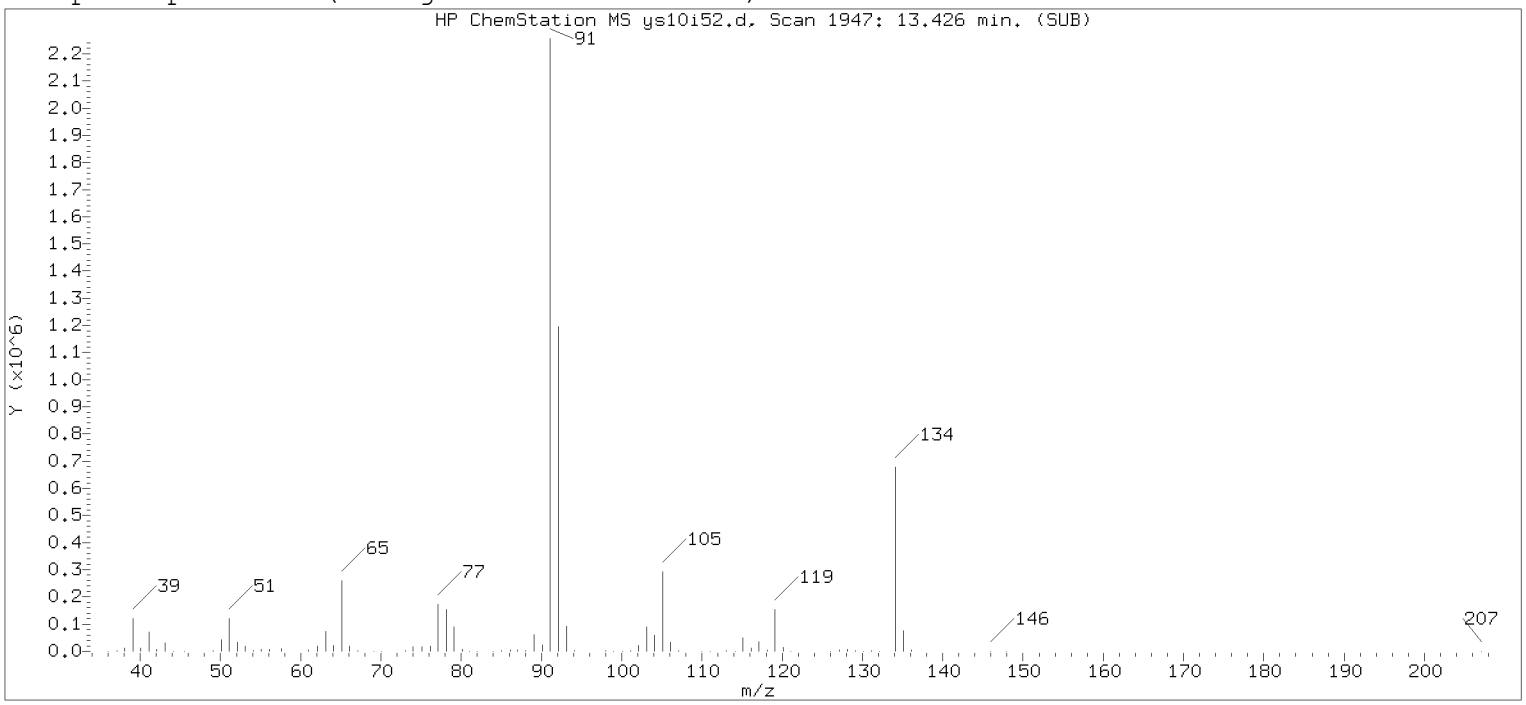
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1947
Retention Time (minutes): 13.426
Quant Ion : 92.00
Area (flag) : 1614874M
On-Column Amount (ng) : 103.2155
Integration start scan : 1937 Integration stop scan: 1951
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

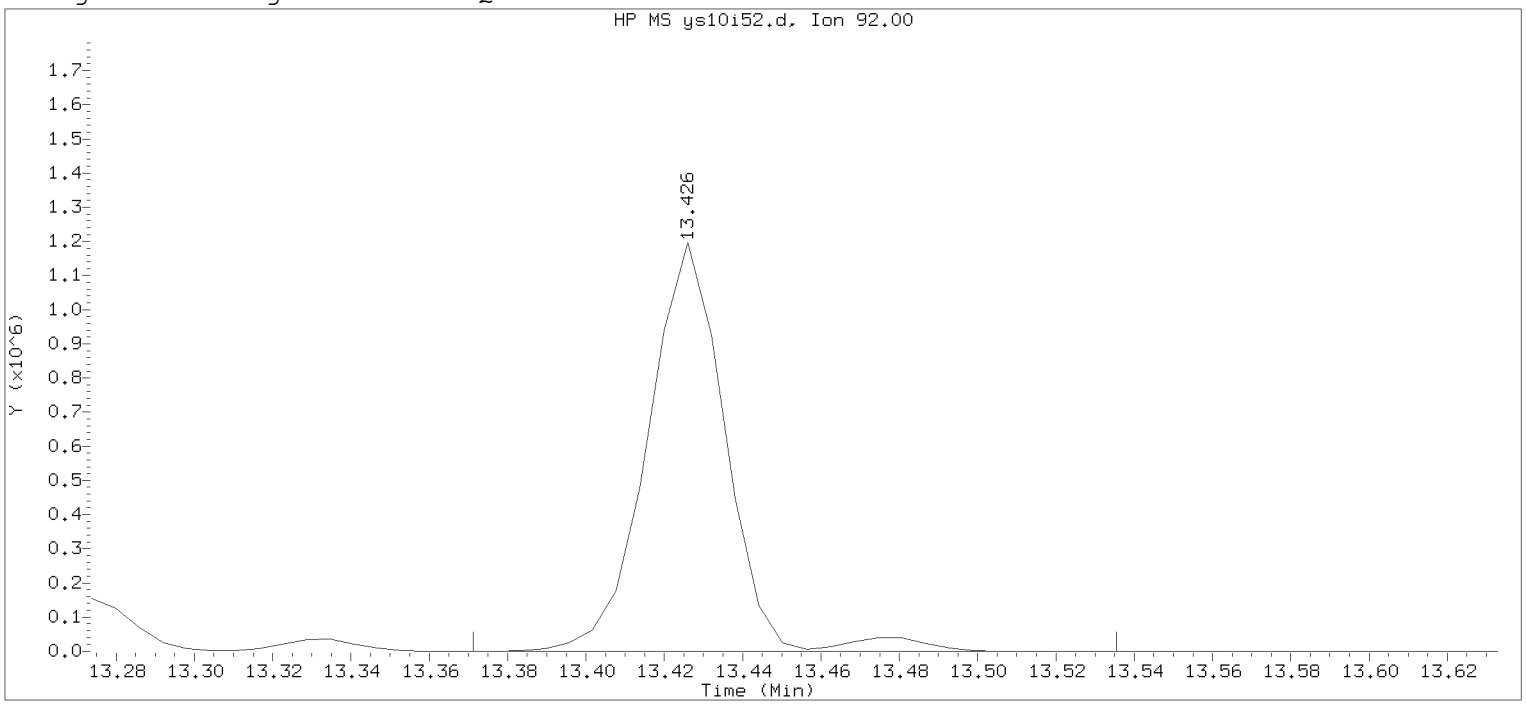
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



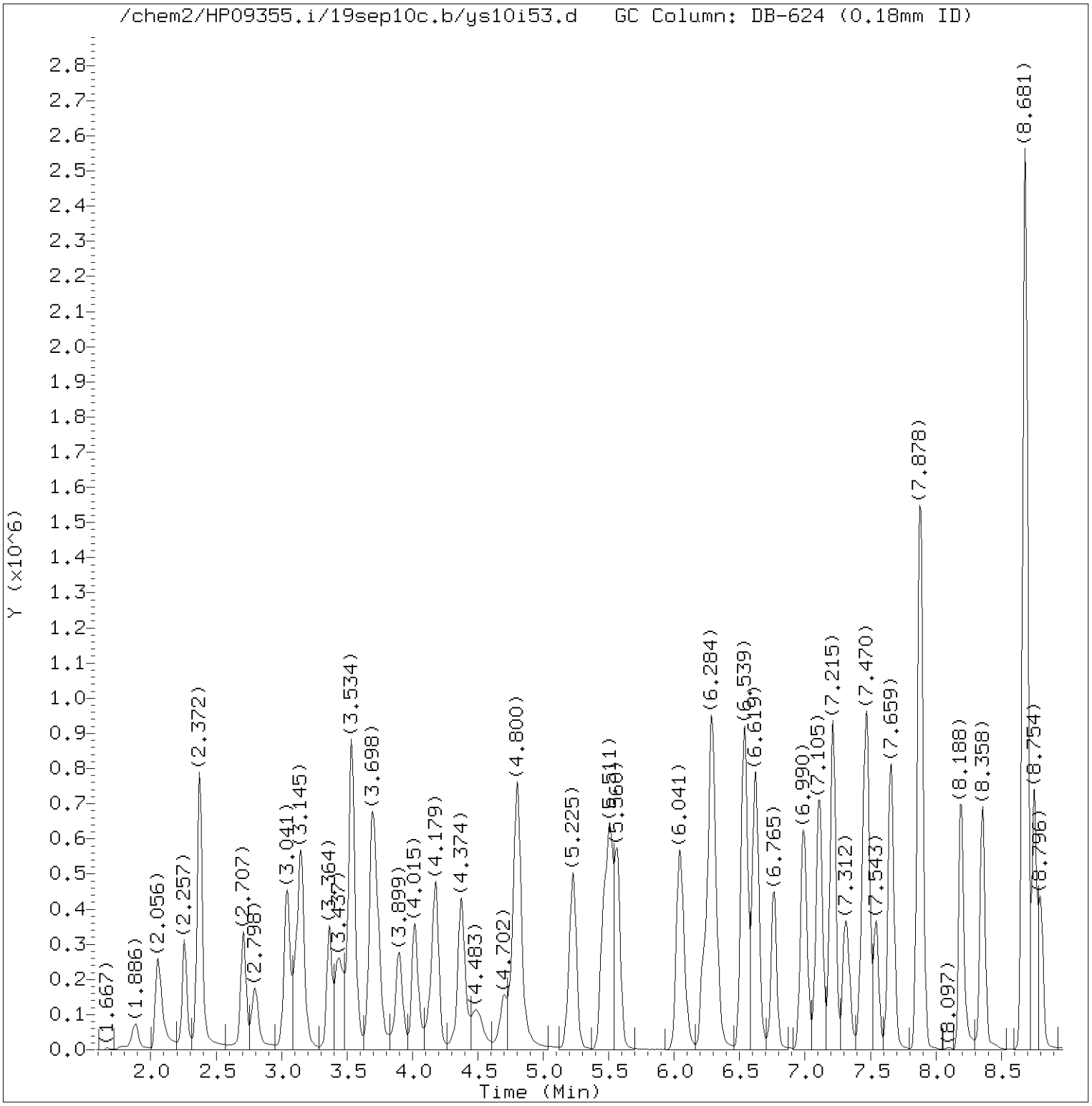
Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1947
Retention Time (minutes): 13.426
Quant Ion : 92.00
Area : 1671023
On-column Amount (ng) : 104.1091
Integration start scan : 1937 Integration stop scan: 1964
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648



Total Ion Chromatogram (TIC)

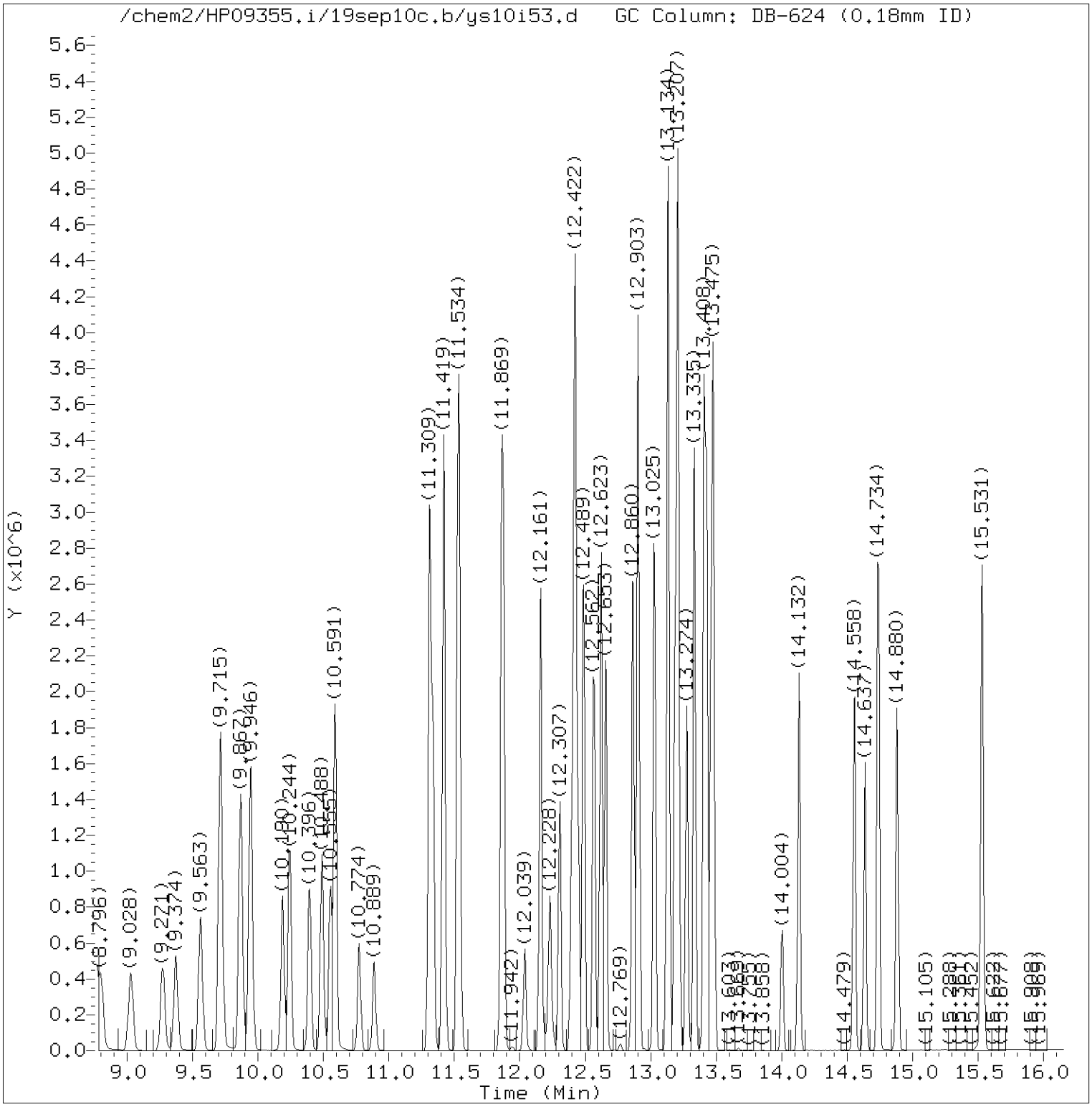
Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.056	85	548911	49.378
4) Chloromethane	(2)	2.257	50	471565	51.421
5) 1,3-Butadiene	(2)	2.372	39	343252MA	50.286
6) Vinyl Chloride	(2)	2.378	62	467617	50.832
8) Bromomethane	(2)	2.707	94	346907	52.346
9) Chloroethane	(2)	2.798	64	267511	51.346
10) Dichlorofluoromethane	(2)	3.041	67	570147	52.014
12) Trichlorofluoromethane	(2)	3.114	101	601473	50.858
11) n-Pentane	(2)	3.151	43	543651A	50.664
14) Ethyl ether	(2)	3.364	59	307605	49.994
15) Freon 123a	(2)	3.437	67	353083	49.954
16) Acrolein	(1)	3.534	56	1469695	527.366
17) 1,1-Dichloroethene	(2)	3.686	96	262667	49.554
17) 1,1-Dichloroethene	(2)	3.686	63	134595	49.883
18) Acetone	(1)	3.705	58	134692	103.023
19) Freon 113	(2)	3.729	101	303960	49.715
21) 2-Propanol	(1)	3.875	45	195294	248.872
22) Methyl Iodide	(2)	3.899	142	512547	50.242
23) Carbon Disulfide	(2)	4.015	76	959848	49.493
27) Methyl Acetate	(2)	4.143	43	450114	50.551
25) Allyl Chloride	(2)	4.179	41	461949	50.672
29)*t-Butyl alcohol-d10	(1)	4.355	65	357387M	250.000
28) Methylene Chloride	(2)	4.374	84	311910	50.166
30) t-Butyl alcohol	(1)	4.489	59	404287	252.853
31) Acrylonitrile	(2)	4.696	53	252369	50.970
33) Methyl Tertiary Butyl Ether	(2)	4.787	73	1052596M	51.309
32) trans-1,2-Dichloroethene	(2)	4.806	96	303051	49.781
34) n-Hexane	(2)	5.225	57	516552	49.505
36) 1,1-Dichloroethane	(2)	5.457	63	552643	50.387
38) di-Isopropyl ether	(2)	5.511	45	1061584	51.070
39) 2-Chloro-1,3-butadiene	(2)	5.566	53	513129	50.019
40) Ethyl t-butyl ether	(2)	6.041	59	1039665	51.619
43) 1,2-Dichloroethene (Total)	(2)		96	647894	99.852
44) 2-Butanone	(2)	6.229	43	748452	106.106
42) cis-1,2-Dichloroethene	(2)	6.284	96	344843	50.071
45) 2,2-Dichloropropane	(2)	6.302	77	435056	50.128
47) Propionitrile	(1)	6.308	54	478448	253.805
48) Methacrylonitrile	(2)	6.539	67	641651	124.825

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.619	128	182131	50.186
50) Tetrahydrofuran	(1)	6.625	71	213773	103.727
51) Chloroform	(2)	6.765	83	535849	50.287
52)$Dibromofluoromethane	(2)	6.978	113	276761	49.826
52)$Dibromofluoromethane	(2)	6.978	111	284472	50.033
53) 1,1,1-Trichloroethane	(2)	6.996	97	466185	49.821
54) Cyclohexane	(2)	7.105	56	605613	50.071
54) Cyclohexane	(2)	7.111	84	525401	50.182
54) Cyclohexane	(2)	7.105	69	192024	49.887
55) 1,1-Dichloropropene	(2)	7.209	75	445031	49.969
56) Carbon Tetrachloride	(2)	7.215	117	407064	49.059
58) Isobutyl Alcohol	(1)	7.312	41	340427	632.961
57)$1,2-Dichloroethane-d4	(2)	7.440	102	72384	50.453
57)$1,2-Dichloroethane-d4	(2)	7.440	65	347363	50.388
57)$1,2-Dichloroethane-d4	(2)	7.440	104	46138	50.664
60) Benzene	(2)	7.476	78	1293384	50.636
61) 1,2-Dichloroethane	(2)	7.543	62	447310	50.647
61) 1,2-Dichloroethane	(2)	7.543	98	39994	49.572
65) t-Amyl methyl ether	(2)	7.659	73	1042425	52.273
66)*Fluorobenzene	(2)	7.872	96	1177736	50.000
67) n-Heptane	(2)	7.884	43	549548	50.406
69) n-Butanol	(1)	8.194	56	678692	1304.550
71) Trichloroethene	(2)	8.358	95	333170	49.729
72) Methylcyclohexane	(2)	8.675	83	643765	50.148
72) Methylcyclohexane	(2)	8.675	98	286528	49.908
73) 1,2-Dichloropropane	(2)	8.687	63	336720	50.359
76) Methyl Methacrylate	(2)	8.754	69	397917	49.428
75) 1,4-Dioxane	(1)	8.766	88	72369	614.673
74) Dibromomethane	(2)	8.803	93	221074	49.995
78) Bromodichloromethane	(2)	9.028	83	397768	48.764
79) 2-Nitropropane	(2)	9.271	41	376265	103.879
80) 2-Chloroethyl Vinyl Ether	(2)	9.374	63	291679	50.349
81) cis-1,3-Dichloropropene	(2)	9.563	75	543178	49.626
82) 4-Methyl-2-pentanone	(2)	9.715	43	1494354	110.222
83)$Toluene-d8	(3)	9.867	98	1191537	50.501
83)$Toluene-d8	(3)	9.867	100	768233	50.345
88) Toluene	(3)	9.946	92	833881	51.187
90) 1,3-Dichloropropene (total)	(3)		100	1062219	99.342

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.190	75	519041	49.716
91) Ethyl Methacrylate	(3)	10.244	69	646860	50.310
92) 1,1,2-Trichloroethane	(3)	10.396	97	322082	50.693
93) Tetrachloroethene	(3)	10.488	166	347045	50.627
94) 1,3-Dichloropropane	(3)	10.555	76	557865	50.947
96) 2-Hexanone	(3)	10.591	43	1259178	113.782
97) Dibromochloromethane	(3)	10.774	129	337968	49.045
99) 1,2-Dibromoethane	(3)	10.889	107	358270	50.388
100)*Chlorobenzene-d5	(3)	11.309	117	875116	50.000
101) 1-Chlorohexane	(3)	11.315	91	454668	50.081
102) Chlorobenzene	(3)	11.339	112	928739	51.249
103) 1,1,1,2-Tetrachloroethane	(3)	11.419	131	312774	50.470
104) Ethylbenzene	(3)	11.419	91	1613728	52.006
106) m+p-Xylene	(3)	11.534	106	1269166	104.114
108) Xylene (Total)	(3)		106	1891753	155.661
107) o-Xylene	(3)	11.863	106	622587	51.547
109) Styrene	(3)	11.875	104	1064041	51.508
110) Bromoform	(3)	12.039	173	246220	47.834
111) Isopropylbenzene	(3)	12.161	105	1613388	52.534
112) Cyclohexanone	(1)	12.228	55	376842MA	629.035
114)$4-Bromofluorobenzene	(3)	12.307	95	454387	50.285
114)$4-Bromofluorobenzene	(3)	12.307	174	344525	50.432
116) 1,1,2,2-Tetrachloroethane	(4)	12.398	83	563651	50.352
118) trans-1,4-Dichloro-2-butene	(4)	12.422	53	515257	129.450
115) Bromobenzene	(4)	12.422	156	398191	51.208
117) 1,2,3-Trichloropropane	(4)	12.447	110	178080	50.199
119) n-Propylbenzene	(4)	12.489	91	1898944	52.715
120) 2-Chlorotoluene	(4)	12.568	126	387139	50.536
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	1409037	51.574
121) 4-Chlorotoluene	(4)	12.660	126	402237	50.373
124) tert-Butylbenzene	(4)	12.866	134	293407M	50.357
125) Pentachloroethane	(4)	12.897	167	240581	50.050
126) 1,2,4-Trimethylbenzene	(4)	12.903	105	1489642	51.977
127) sec-Butylbenzene	(4)	13.025	105	1799844	52.653
129) 1,3-Dichlorobenzene	(4)	13.128	146	772938	52.033
130) p-Isopropyltoluene	(4)	13.134	119	1564631	52.827
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	470034	50.000
133) 1,4-Dichlorobenzene	(4)	13.207	146	789508	52.033

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.207	105	1567062	52.805
135) Benzyl Chloride	(4)	13.274	91	1214867	49.371
136) 1,3-Diethylbenzene	(4)	13.335	119	1008122	51.894
141) Diethylbenzene (total)	(4)		100	2922665	156.090
137) 1,4-Diethylbenzene	(4)	13.408	119	1069173	52.306
139) n-Butylbenzene	(4)	13.426	92	810919	51.373
138) 1,2-Dichlorobenzene	(4)	13.463	146	748864	51.399
140) 1,2-Diethylbenzene	(4)	13.481	119	845370	51.890
142) 1,2-Dibromo-3-chloropropane	(4)	14.004	75	149511	48.271
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	575253	51.239
146) 1,2,4-Trichlorobenzene	(4)	14.558	180	550714	51.310
147) Hexachlorobutadiene	(4)	14.637	225	249819	50.684
148) Naphthalene	(4)	14.740	128	1989492	53.168
149) 1,2,3-Trichlorobenzene	(4)	14.880	180	531024	51.271
150) 2-Methylnaphthalene	(4)	15.531	142	1349074	52.709

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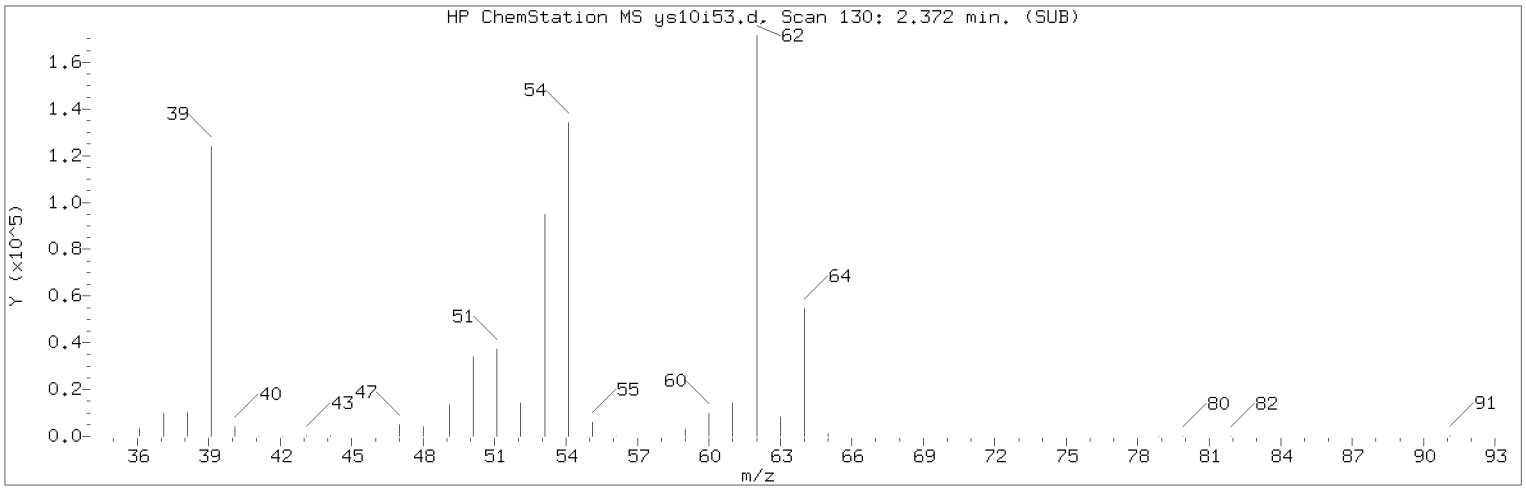
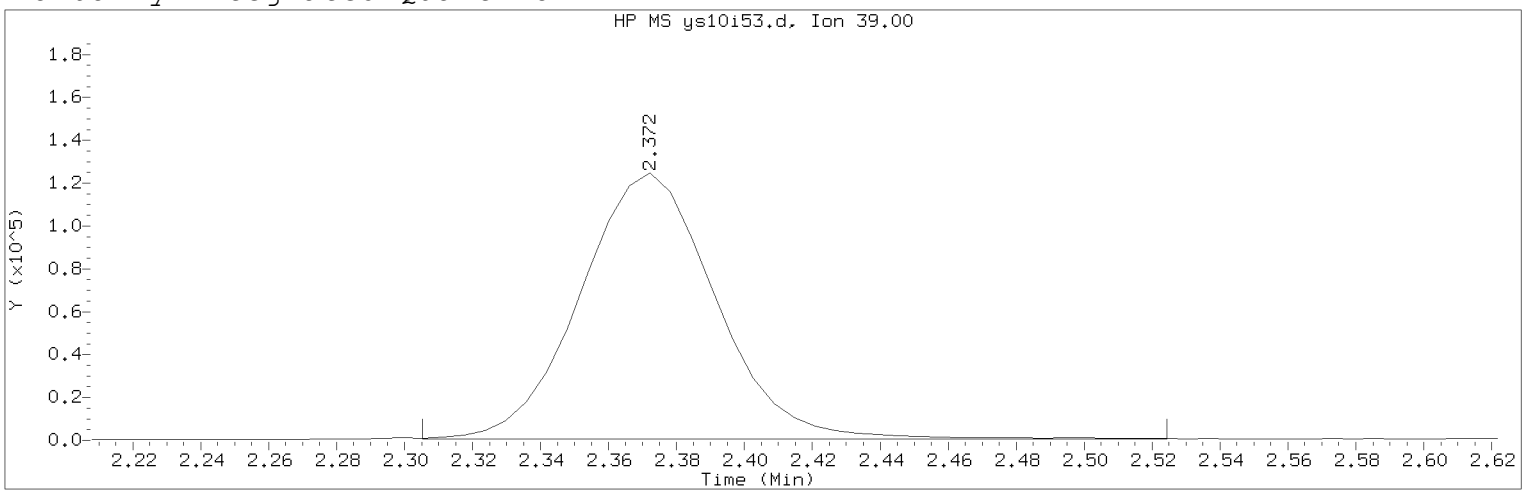
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

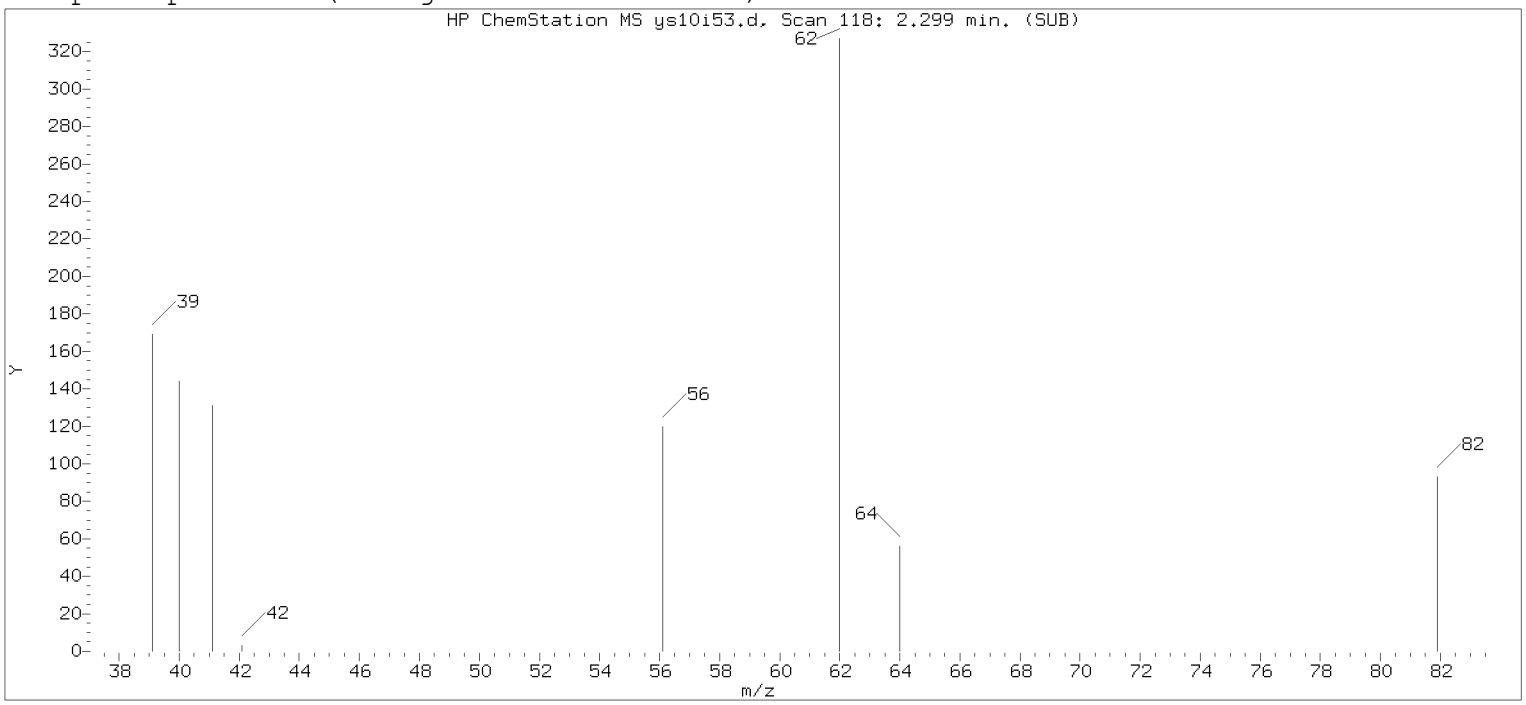
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 130
Retention Time (minutes): 2.372
Quant Ion : 39.00
Area (flag) : 343252MA
On-Column Amount (ng) : 50.2858
Integration start scan : 118 Integration stop scan: 154
Y at integration start : 636 Y at integration end: 636

Reason for manual integration: improper integration

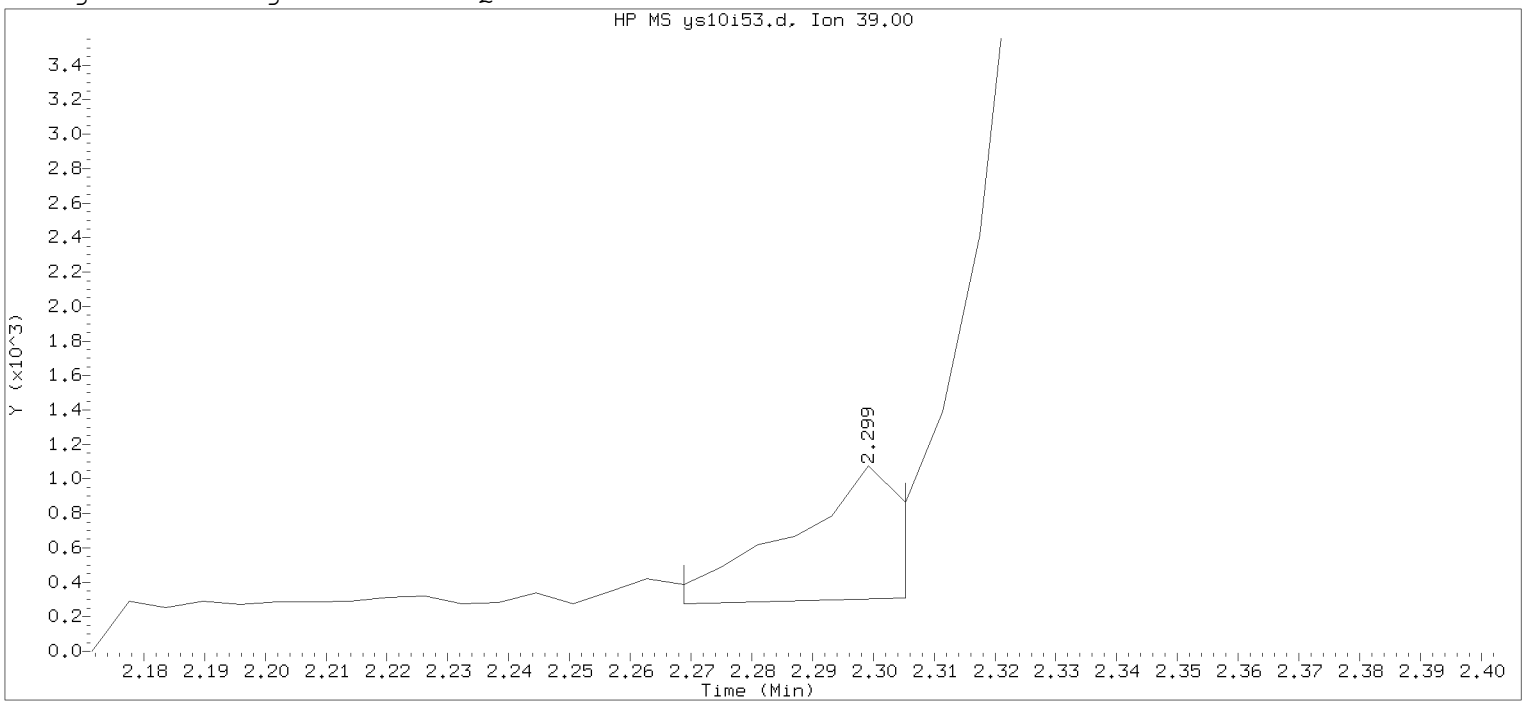
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:17
Date, time and analyst ID of latest file update: 13-Sep-2019 14:17 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 118
Retention Time (minutes): 2.299
Quant Ion : 39.00
Area : 916
On-column Amount (ng) : 50.0000
Integration start scan : 112 Integration stop scan: 118
Y at integration start : 274 Y at integration end: 309

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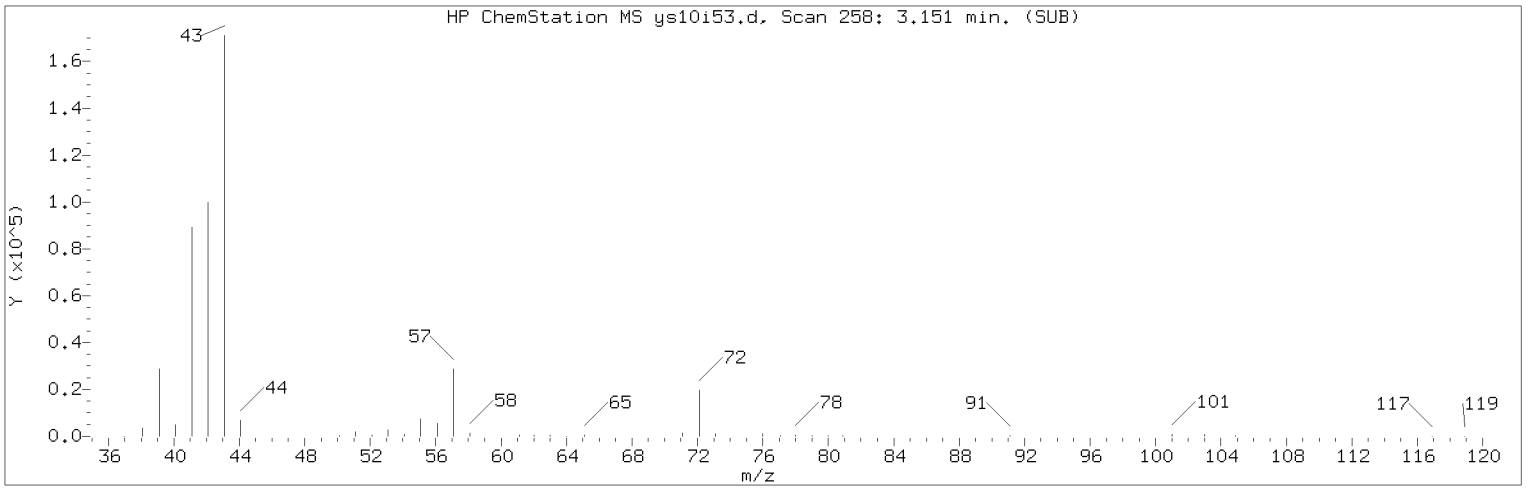
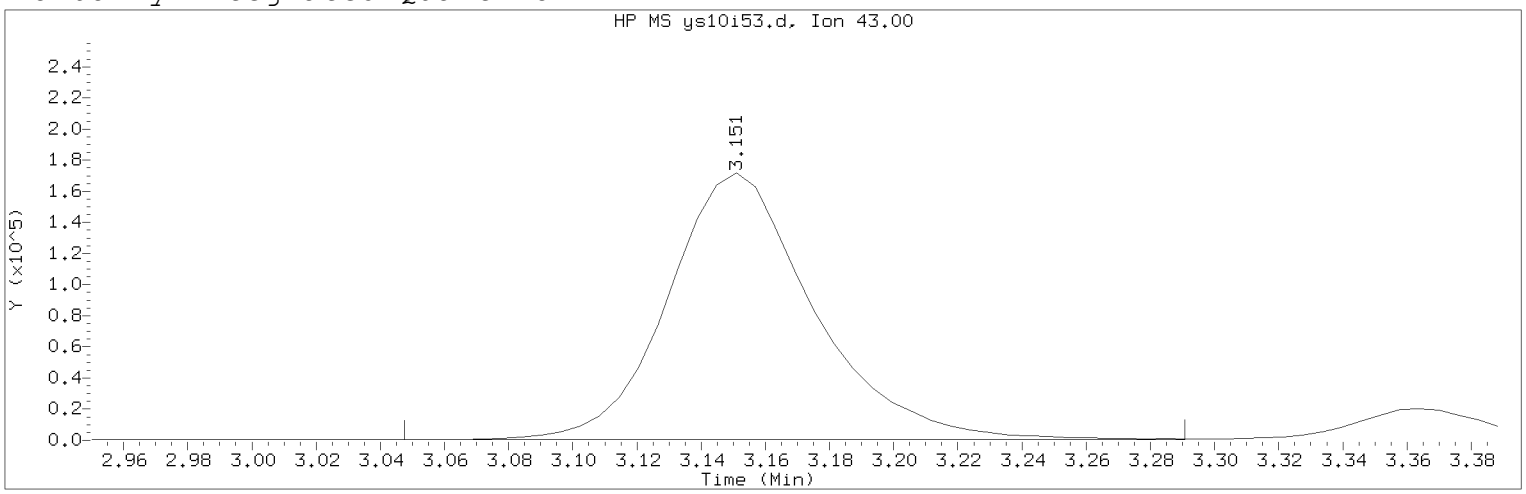
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

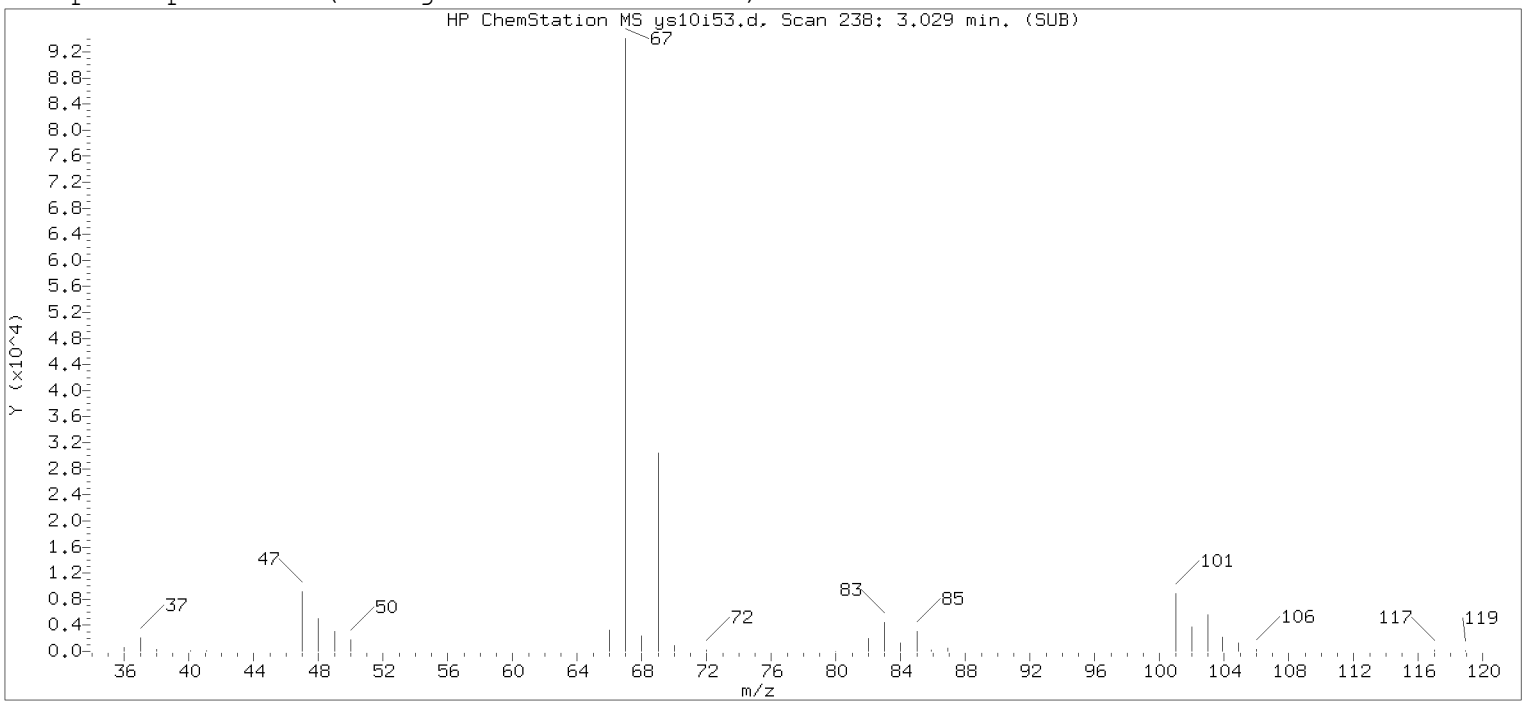
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 258
Retention Time (minutes): 3.151
Quant Ion : 43.00
Area (flag) : 543651A
On-Column Amount (ng) : 50.6645
Integration start scan : 240 Integration stop scan: 280
Y at integration start : 313 Y at integration end: 313

Reason for manual integration: improper integration

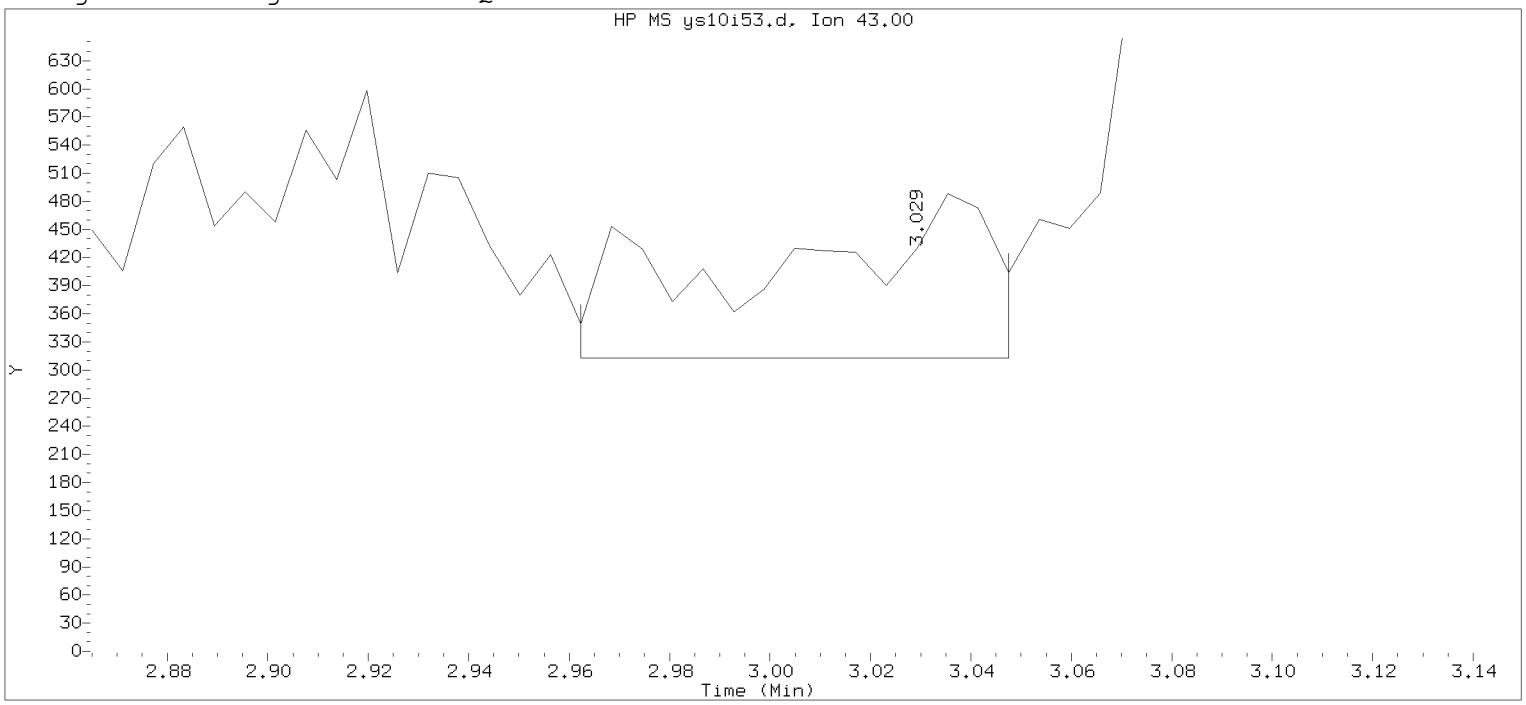
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

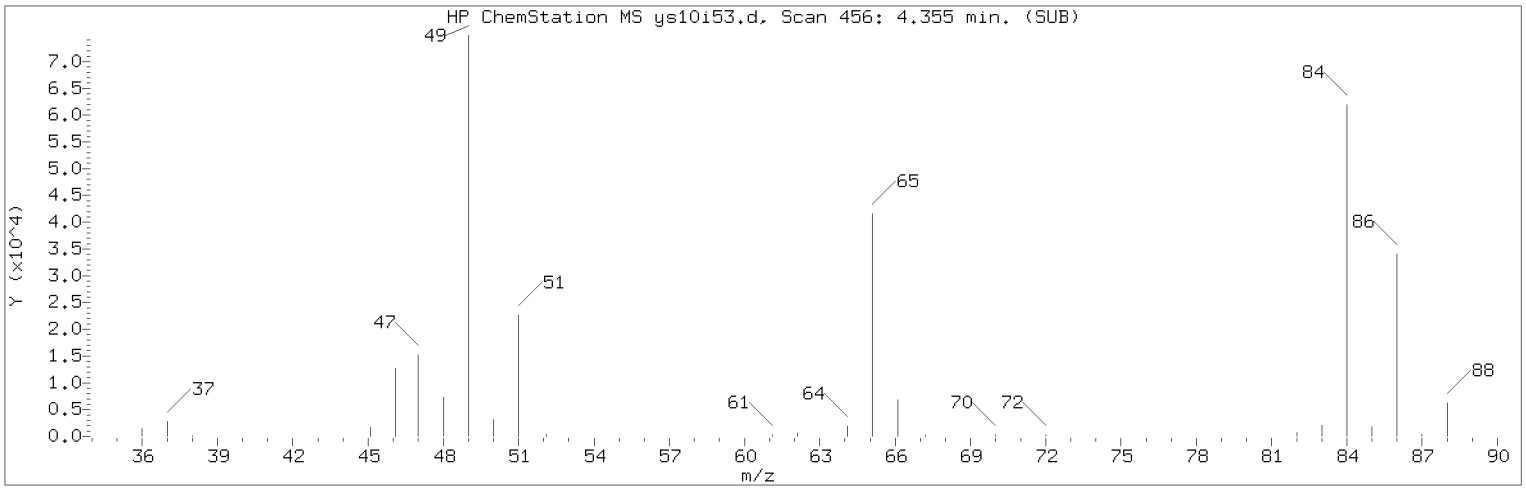
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:17
Date, time and analyst ID of latest file update: 13-Sep-2019 14:17 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

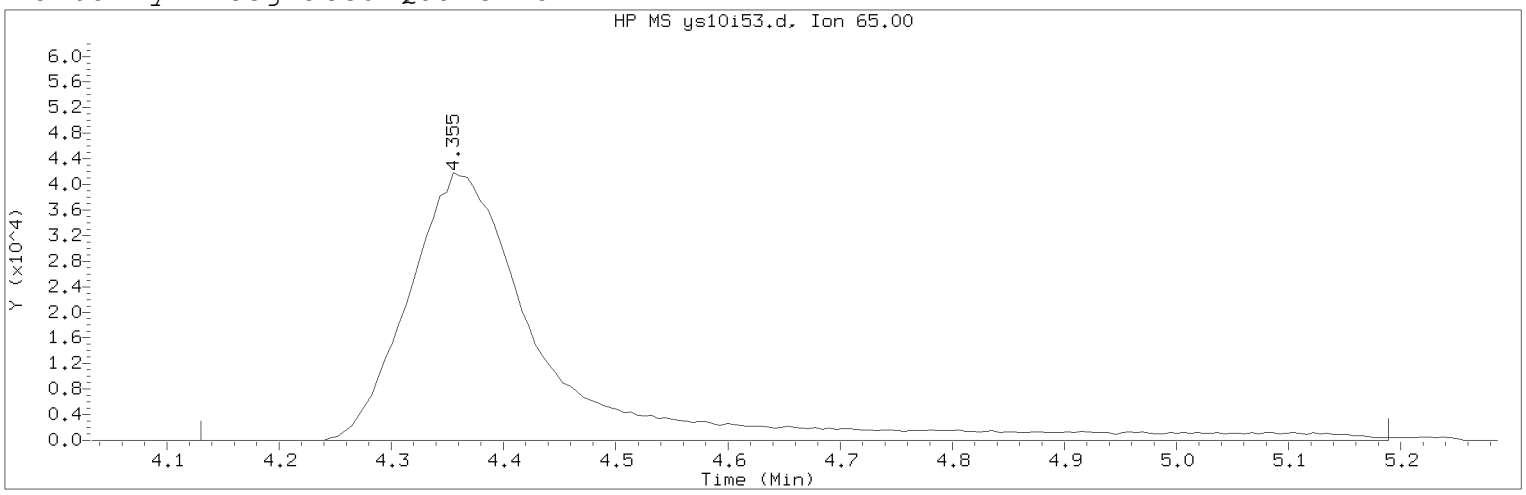
Compound Number	: 11		
Compound Name	: n-Pentane		
Scan Number	: 238		
Retention Time (minutes)	: 3.029		
Quant Ion	: 43.00		
Area	: 536		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 226	Integration stop scan:	240
Y at integration start	: 313	Y at integration end:	313

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

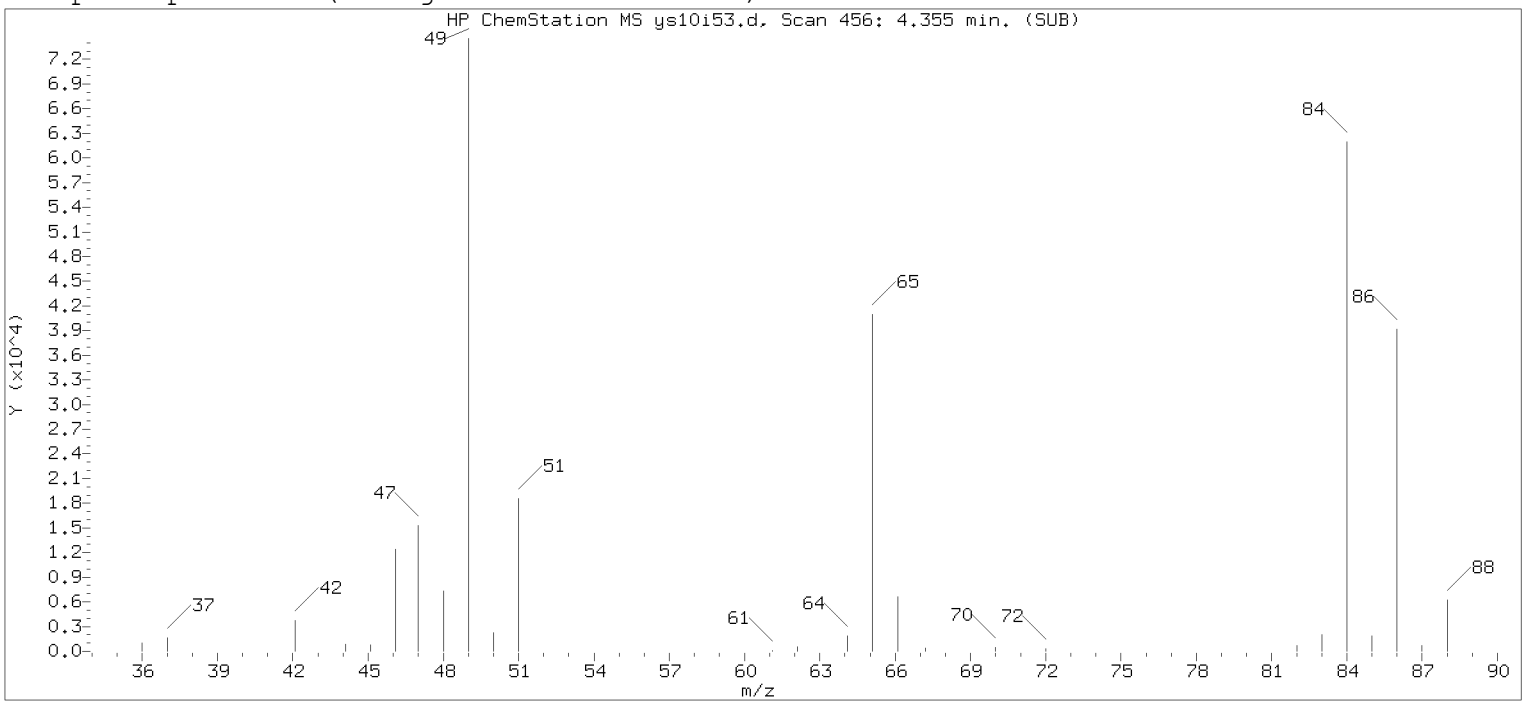
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 456
Retention Time (minutes): 4.355
Quant Ion : 65.00
Area (flag) : 357387M
On-Column Amount (ng) : 250.0000
Integration start scan : 418 Integration stop scan: 592
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

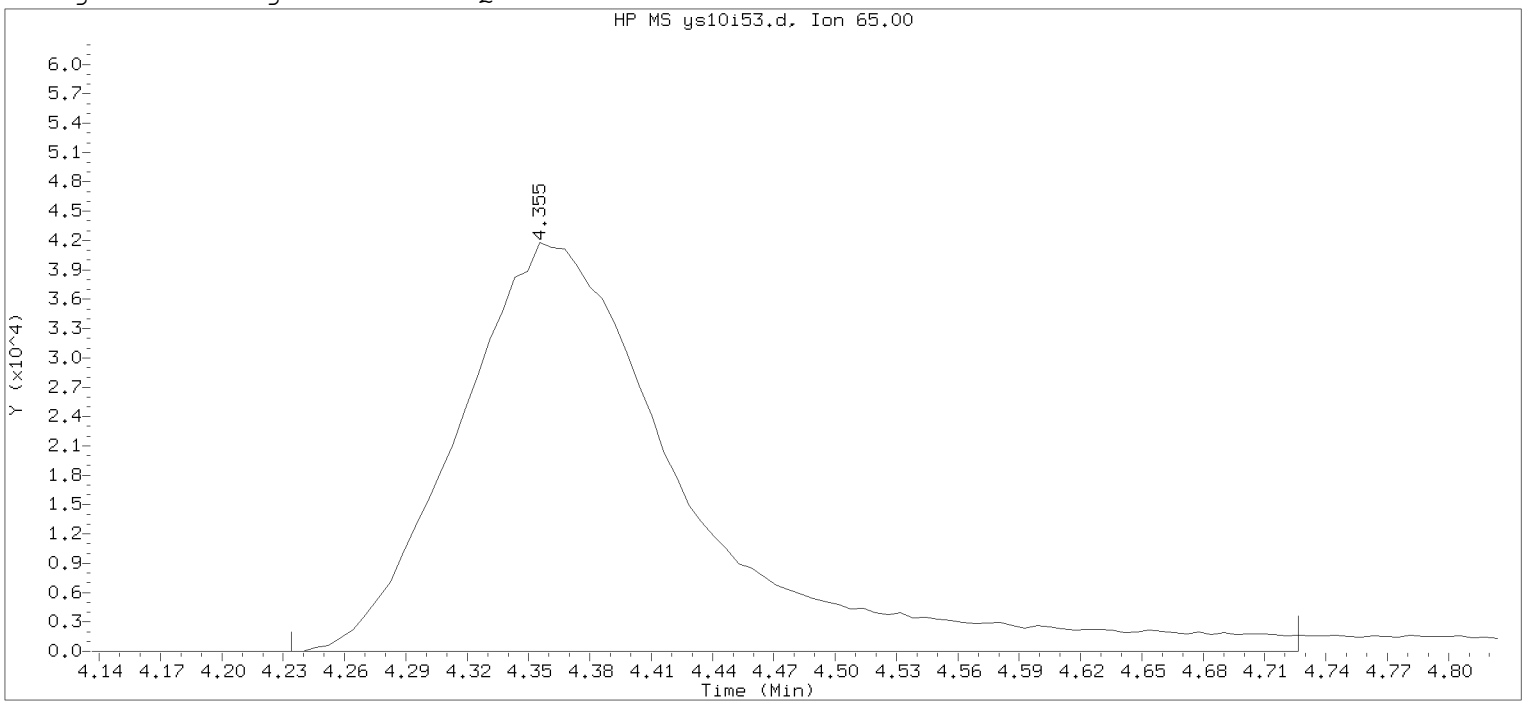
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:17
Date, time and analyst ID of latest file update: 13-Sep-2019 14:17 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 456
Retention Time (minutes): 4.355
Quant Ion : 65.00
Area : 324168
On-column Amount (ng) : 250.0000
Integration start scan : 435 Integration stop scan: 516
Y at integration start : 0 Y at integration end: 0

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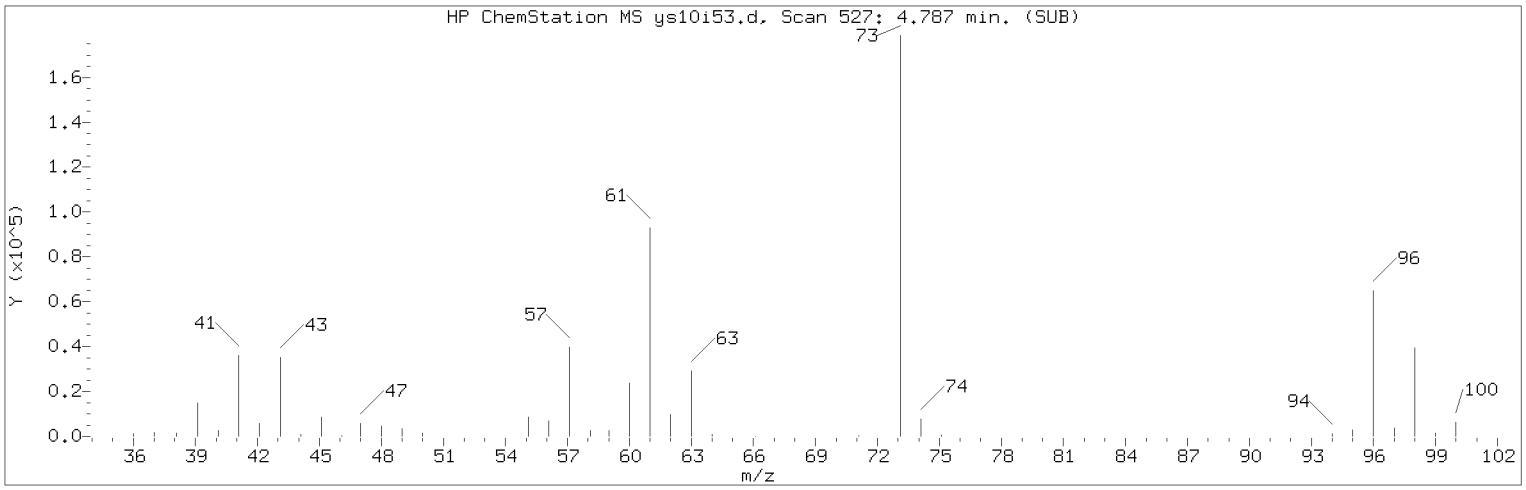
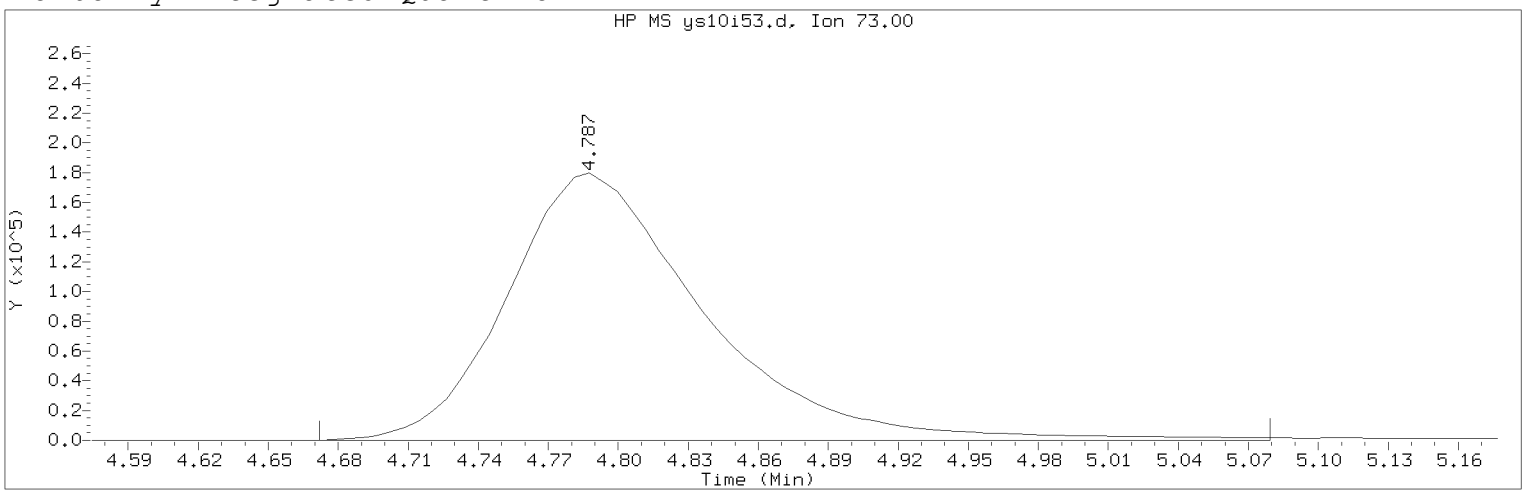
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

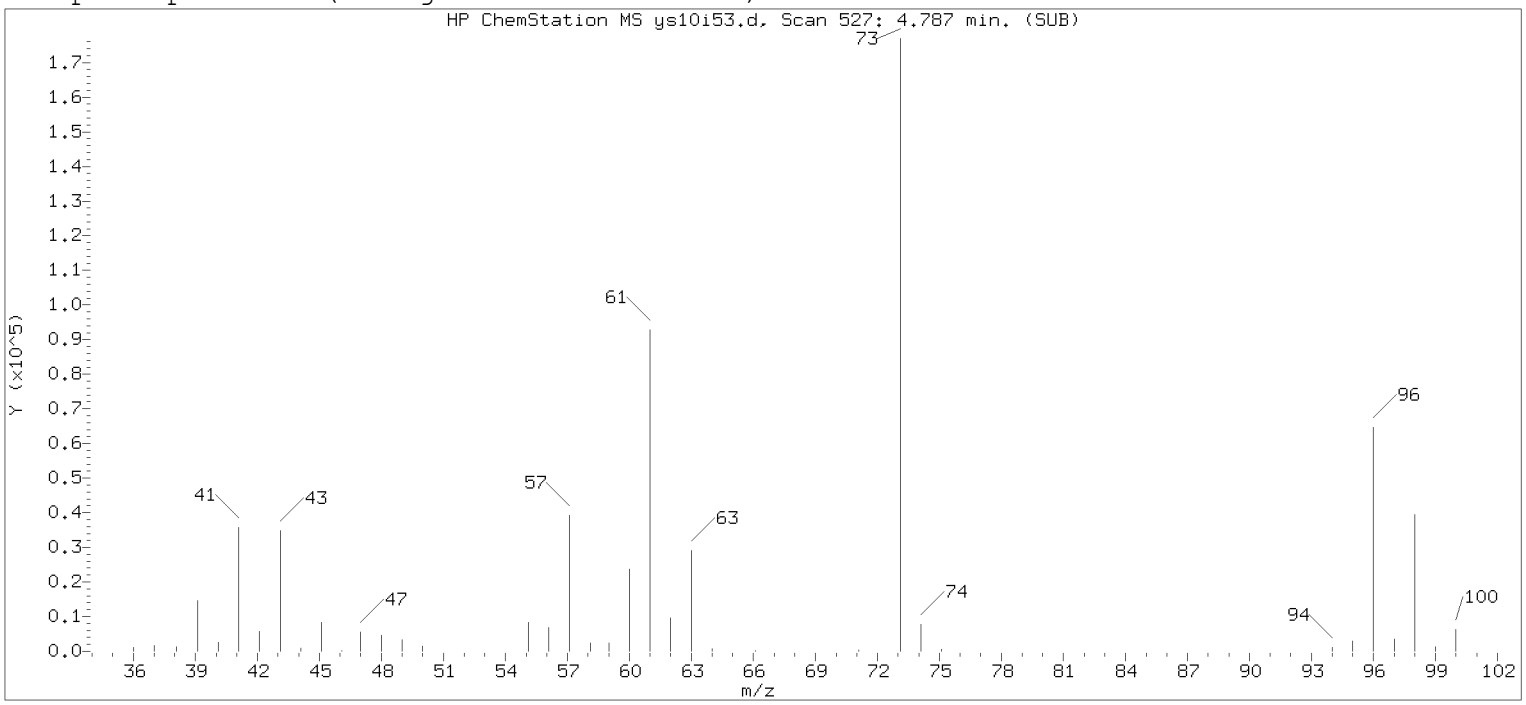
Compound Number : 33
Compound Name : Methyl Tertiary Butyl Ether
Scan Number : 527
Retention Time (minutes): 4.787
Quant Ion : 73.00
Area (flag) : 1052596M
On-Column Amount (ng) : 51.3087
Integration start scan : 507 Integration stop scan: 574
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

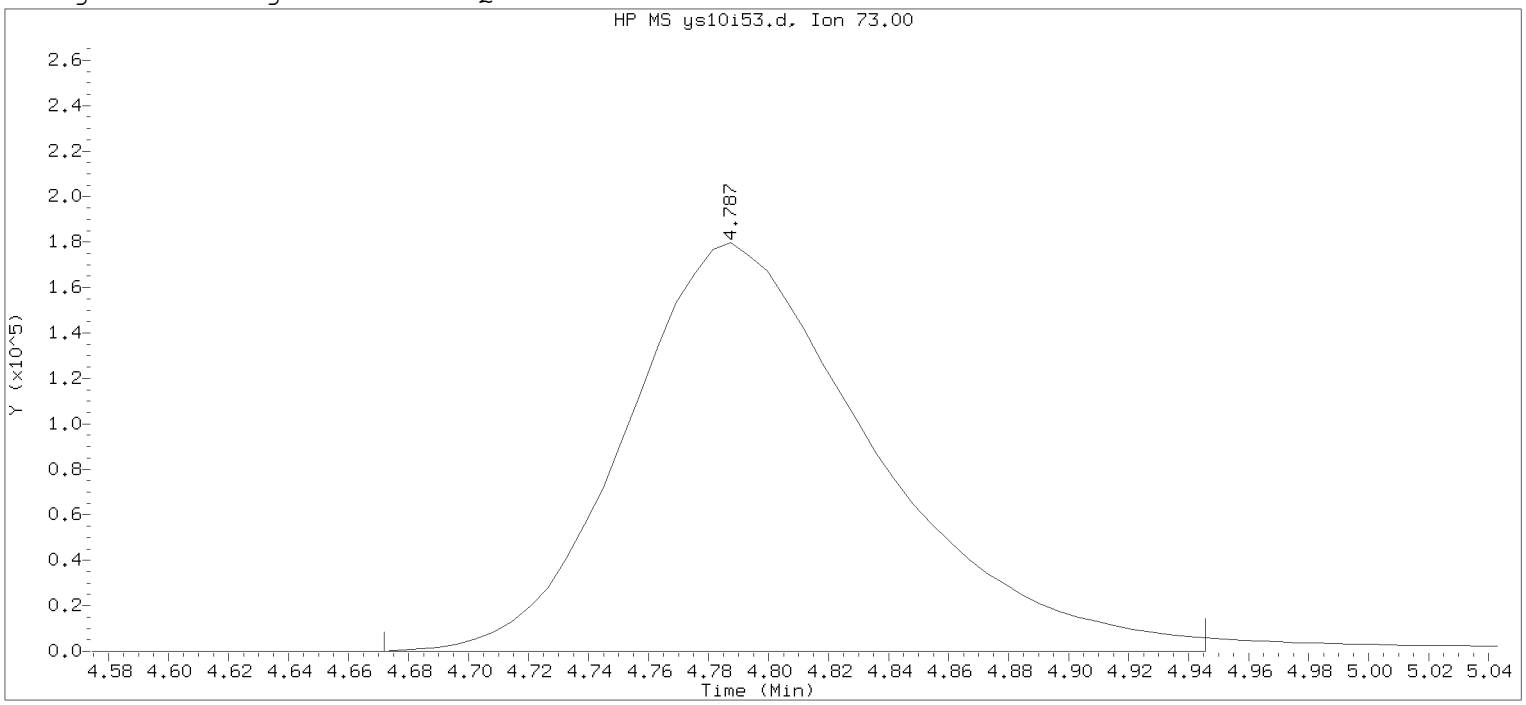
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

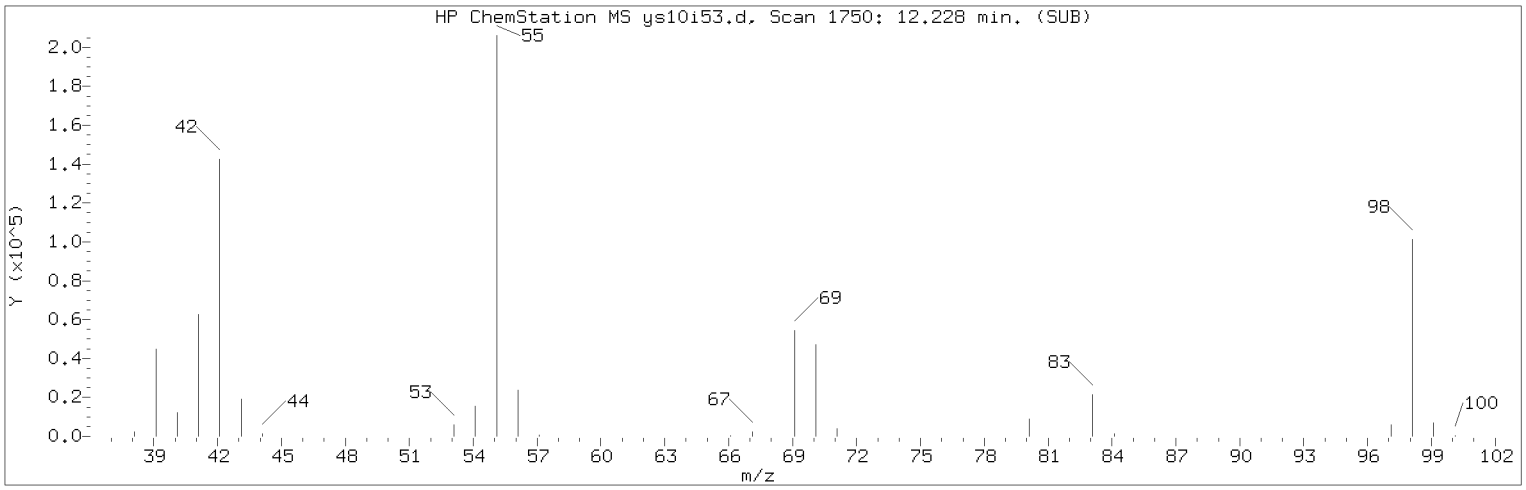
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:17
Date, time and analyst ID of latest file update: 13-Sep-2019 14:17 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

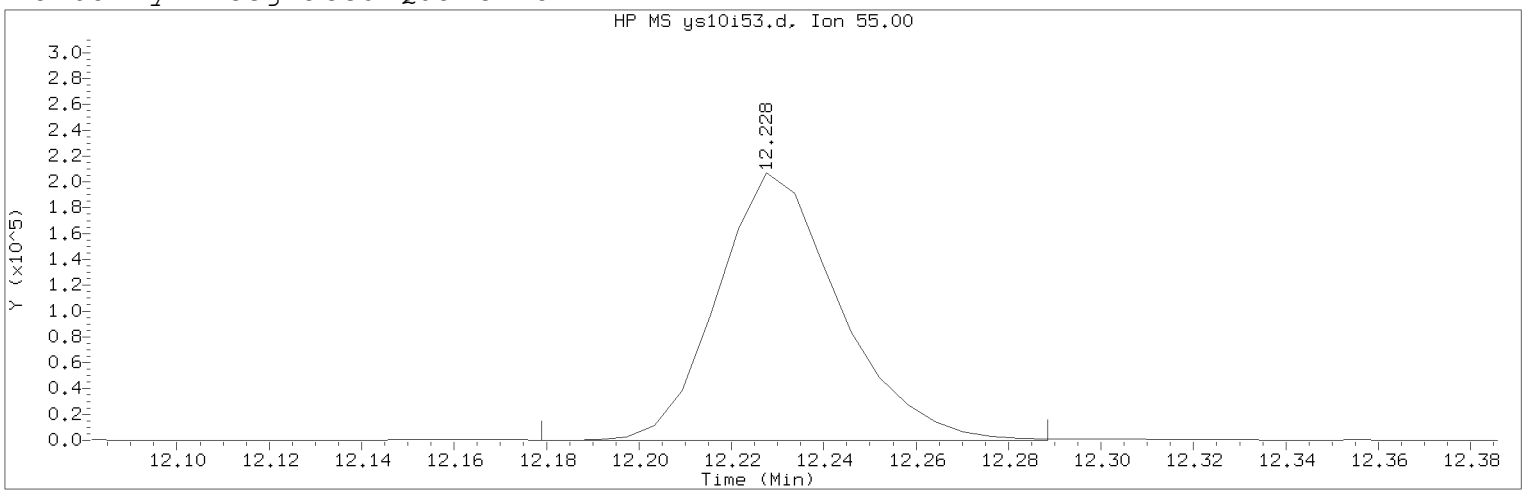
Compound Number : 33
Compound Name : Methyl Tertiary Butyl Ether
Scan Number : 527
Retention Time (minutes): 4.787
Quant Ion : 73.00
Area : 1027801
On-column Amount (ng) : 50.0000
Integration start scan : 507 Integration stop scan: 552
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

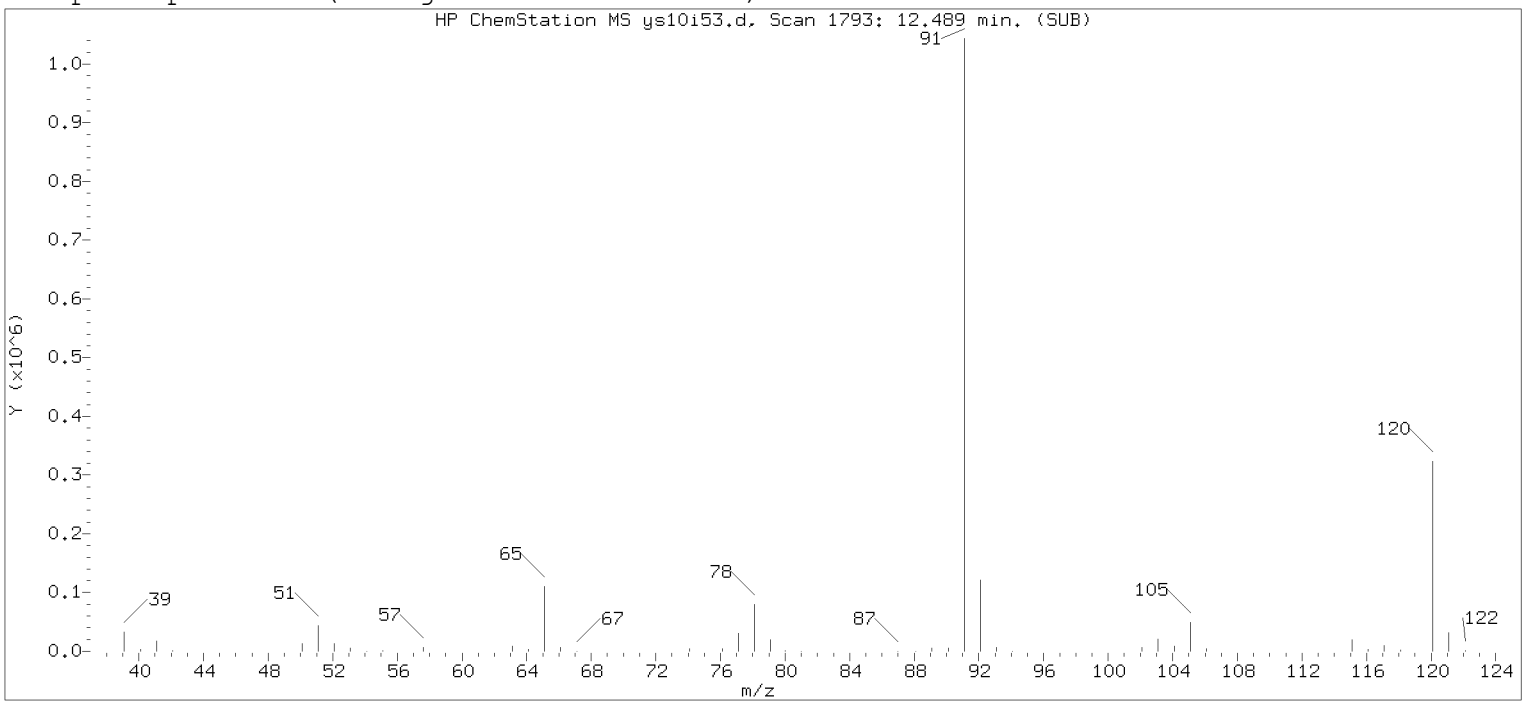
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1750
Retention Time (minutes): 12.228
Quant Ion : 55.00
Area (flag) : 376842MA
On-Column Amount (ng) : 629.0348
Integration start scan : 1741 Integration stop scan: 1759
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

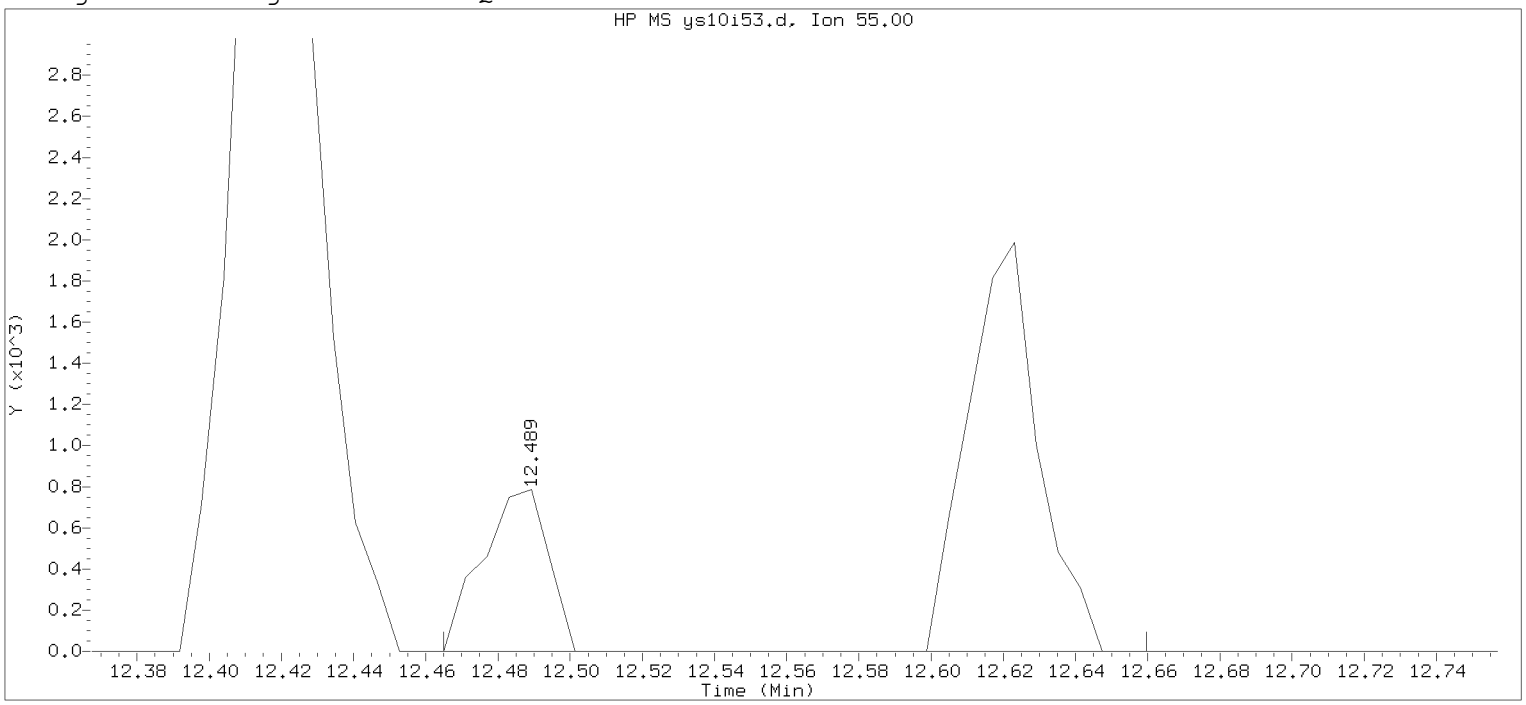
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

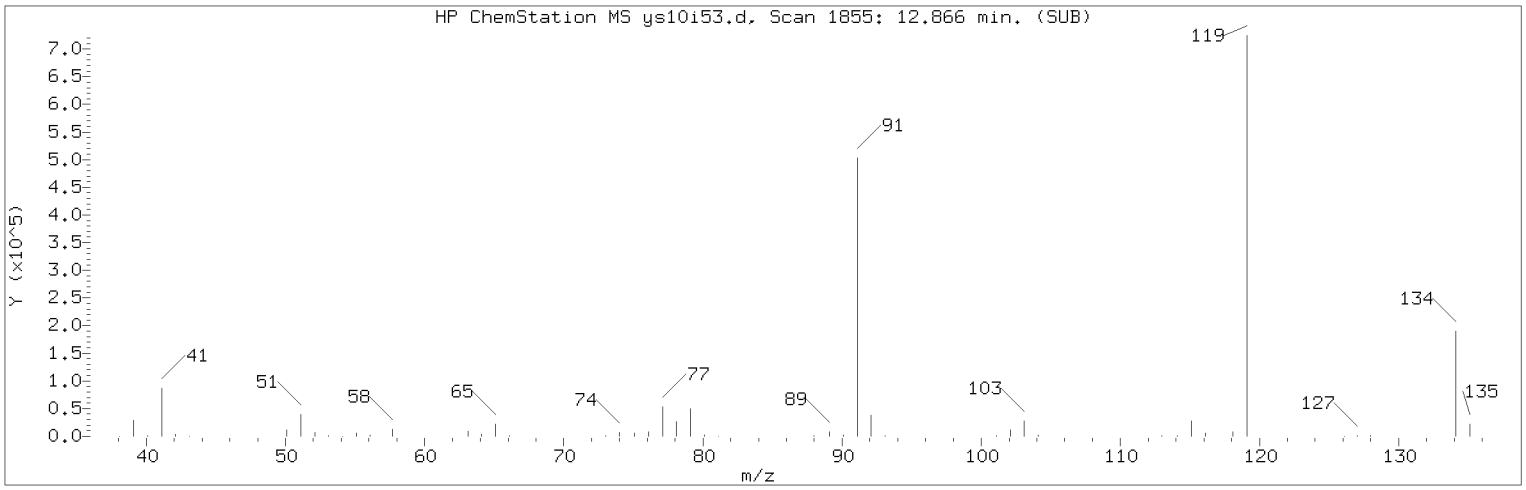
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:17
Date, time and analyst ID of latest file update: 13-Sep-2019 14:17 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

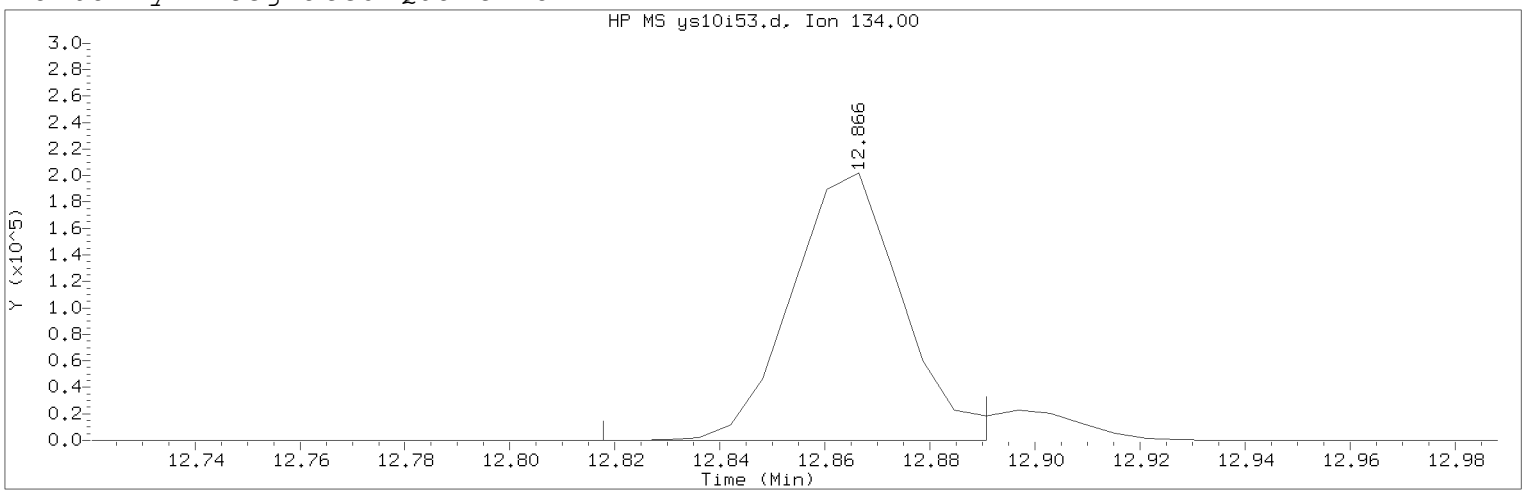
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1793
Retention Time (minutes): 12.489
Quant Ion : 55.00
Area : 3722
On-column Amount (ng) : 625.0000
Integration start scan : 1788 Integration stop scan: 1820
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

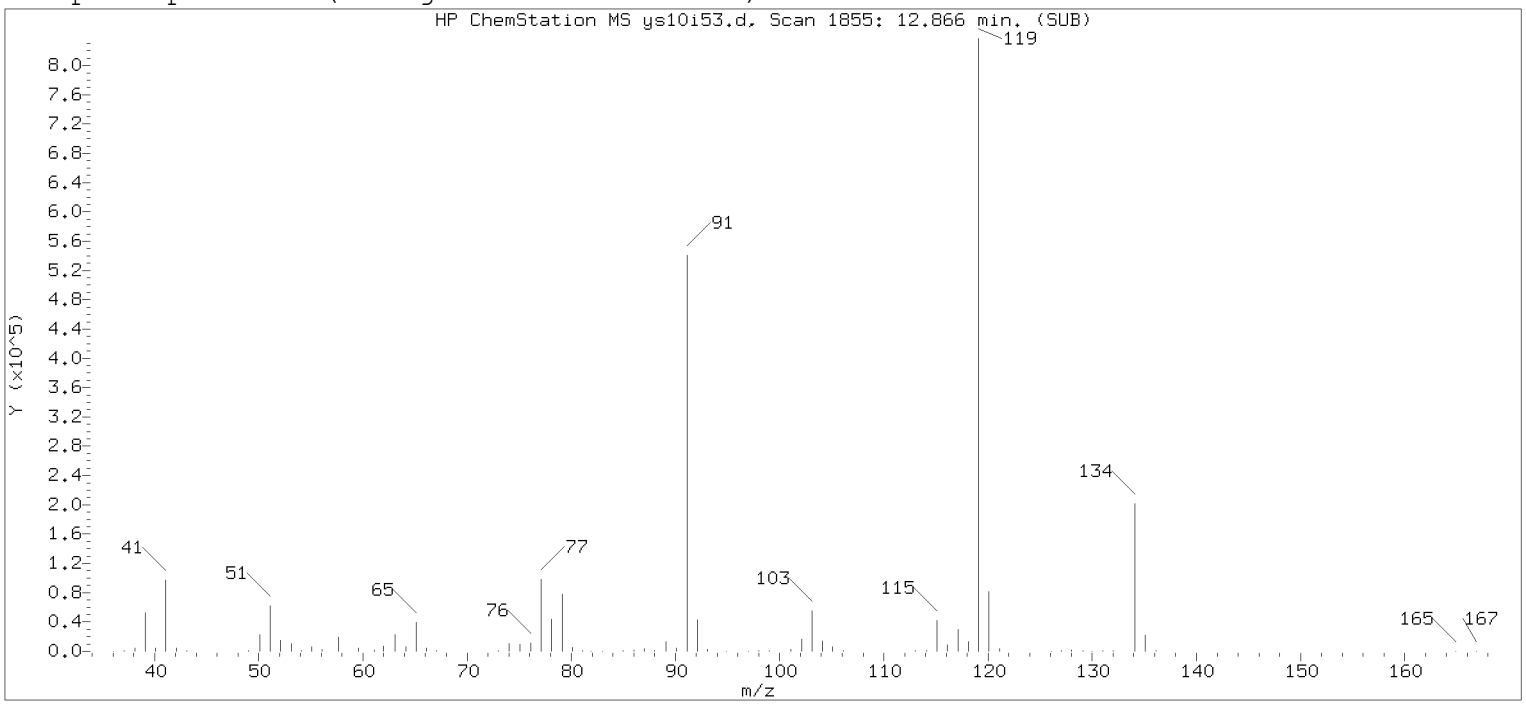
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area (flag) : 293407M
On-Column Amount (ng) : 50.3569
Integration start scan : 1846 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

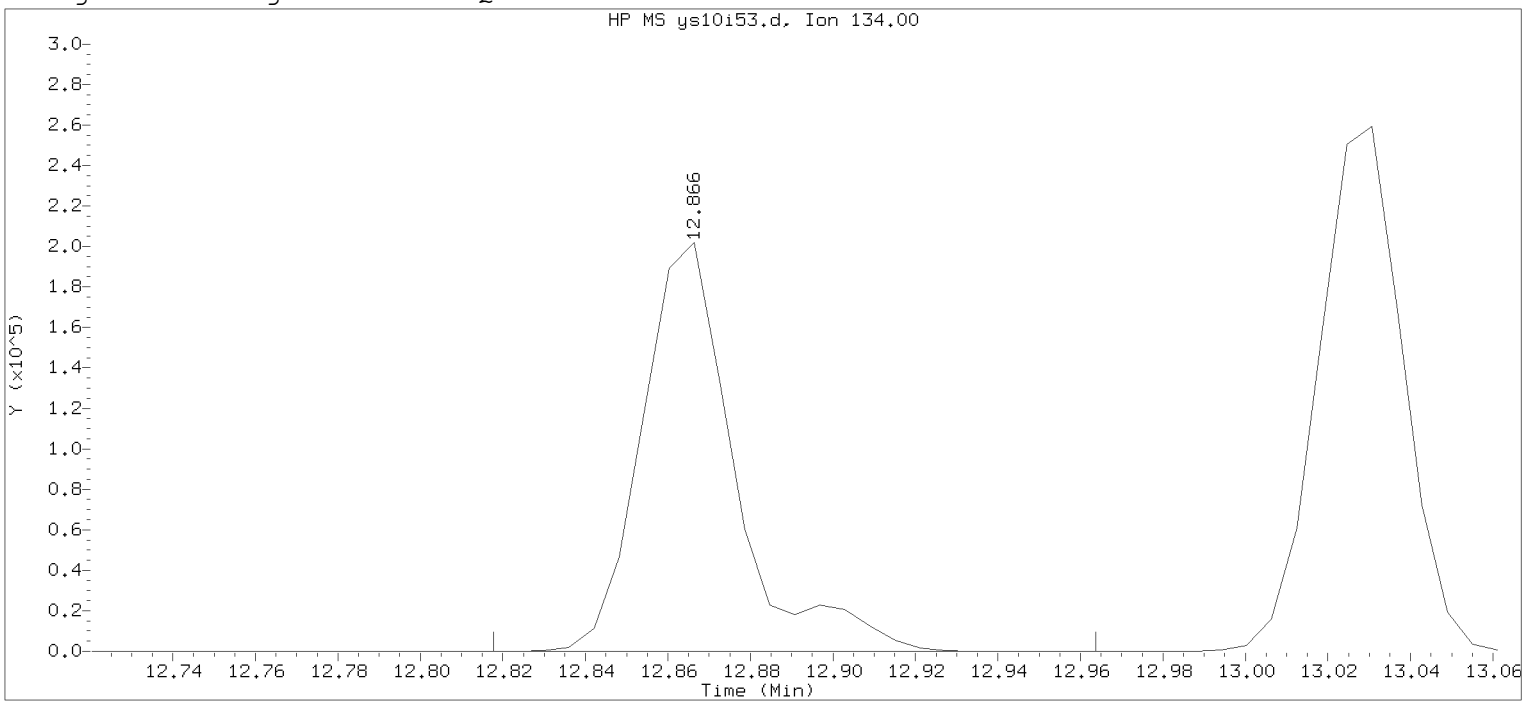
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:17
Date, time and analyst ID of latest file update: 13-Sep-2019 14:17 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area : 316439
On-column Amount (ng) : 50.0000
Integration start scan : 1846 Integration stop scan: 1870
Y at integration start : 0 Y at integration end: 0

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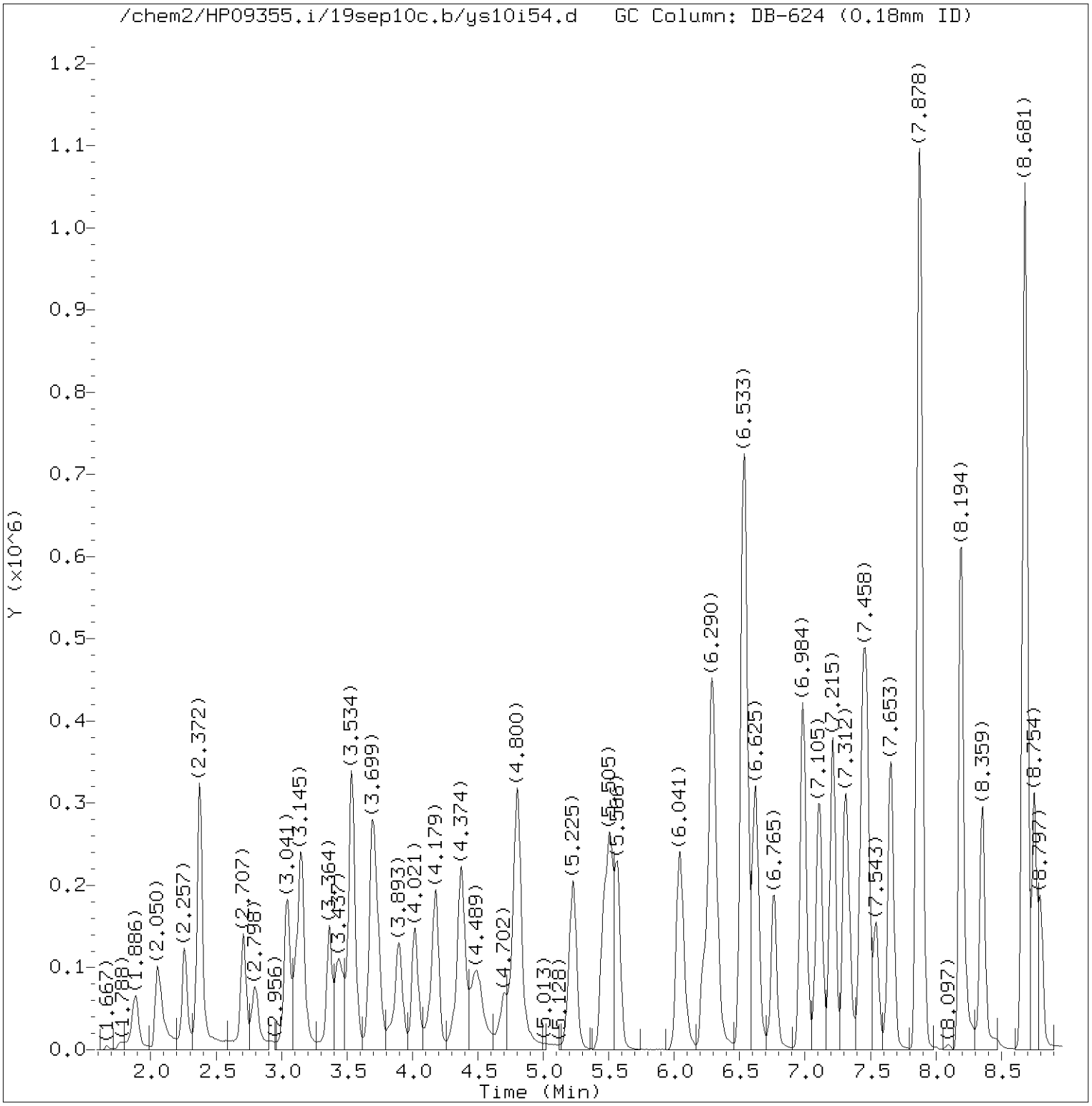
Target 3.5 esignature user: KAS02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

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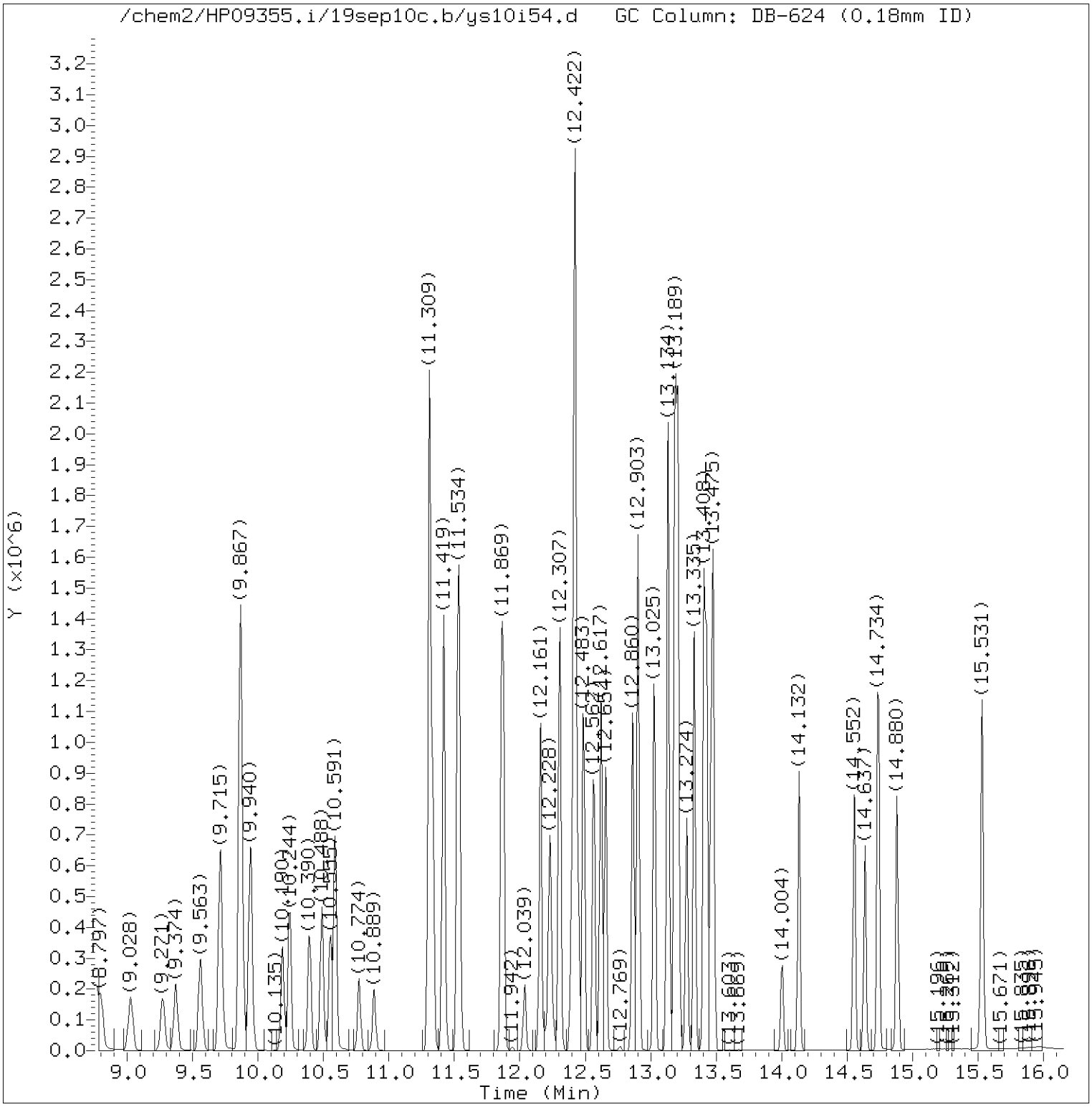
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.050	85	217866	19.648
4) Chloromethane	(2)	2.257	50	189878	20.474
5) 1,3-Butadiene	(2)	2.372	39	148242	21.209
6) Vinyl Chloride	(2)	2.378	62	184149	19.964
8) Bromomethane	(2)	2.707	94	139888	20.769
9) Chloroethane	(2)	2.798	64	107396	20.406
10) Dichlorofluoromethane	(2)	3.041	67	226206	20.423
12) Trichlorofluoromethane	(2)	3.114	101	231885	19.655
11) n-Pentane	(2)	3.151	43	229009	20.939
14) Ethyl ether	(2)	3.364	59	128459	20.601
15) Freon 123a	(2)	3.443	67	150143	20.866
16) Acrolein	(1)	3.534	56	560274	194.731
17) 1,1-Dichloroethene	(2)	3.692	96	108639	20.319
17) 1,1-Dichloroethene	(2)	3.692	63	56575	20.666
18) Acetone	(1)	3.705	58	53827	39.648
19) Freon 113	(2)	3.723	101	124526	20.224
21) 2-Propanol	(1)	3.875	45	157606	194.587
22) Methyl Iodide	(2)	3.899	142	211623	20.503
23) Carbon Disulfide	(2)	4.021	76	392002	20.110
27) Methyl Acetate	(2)	4.143	43	179450	20.065
25) Allyl Chloride	(2)	4.179	41	185102	20.177
29)*t-Butyl alcohol-d10	(1)	4.368	65	372209M	250.000
28) Methylene Chloride	(2)	4.374	84	128439	20.439
30) t-Butyl alcohol	(1)	4.489	59	337706	202.093
31) Acrylonitrile	(2)	4.696	53	98232	19.830
33) Methyl Tertiary Butyl Ether	(2)	4.787	73	424506	20.464
32) trans-1,2-Dichloroethene	(2)	4.806	96	124066	20.233
34) n-Hexane	(2)	5.232	57	219572	20.721
36) 1,1-Dichloroethane	(2)	5.457	63	229181	20.613
38) di-Isopropyl ether	(2)	5.511	45	435904	20.668
39) 2-Chloro-1,3-butadiene	(2)	5.566	53	209796	20.286
40) Ethyl t-butyl ether	(2)	6.041	59	427655	20.860
43) 1,2-Dichloroethene (Total)	(2)		96	265741	40.608
44) 2-Butanone	(2)	6.229	43	282635	39.952
42) cis-1,2-Dichloroethene	(2)	6.284	96	141675	20.375
45) 2,2-Dichloropropane	(2)	6.302	77	176120	20.169
47) Propionitrile	(1)	6.308	54	383426	196.453
48) Methacrylonitrile	(2)	6.533	67	515989	100.035

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.625	128	73828	20.206
50) Tetrahydrofuran	(1)	6.625	71	81350	38.405
51) Chloroform	(2)	6.765	83	221184	20.512
52)$Dibromofluoromethane	(2)	6.978	113	277264	49.814
52)$Dibromofluoromethane	(2)	6.978	111	284149	49.858
53) 1,1,1-Trichloroethane	(2)	6.996	97	191769	20.318
54) Cyclohexane	(2)	7.105	56	252208	20.582
54) Cyclohexane	(2)	7.105	84	217405	20.518
54) Cyclohexane	(2)	7.105	69	79580	20.451
55) 1,1-Dichloropropene	(2)	7.209	75	185169	20.537
56) Carbon Tetrachloride	(2)	7.215	117	163487	19.727
58) Isobutyl Alcohol	(1)	7.306	41	296170	521.253
57)$1,2-Dichloroethane-d4	(2)	7.440	102	72422	50.234
57)$1,2-Dichloroethane-d4	(2)	7.440	65	347972	50.232
57)$1,2-Dichloroethane-d4	(2)	7.440	104	45634	49.958
60) Benzene	(2)	7.470	78	539255	20.772
61) 1,2-Dichloroethane	(2)	7.543	62	183928	20.562
61) 1,2-Dichloroethane	(2)	7.537	98	16658	20.431
65) t-Amyl methyl ether	(2)	7.653	73	431918	21.167
66)*Fluorobenzene	(2)	7.872	96	1181643	50.000
67) n-Heptane	(2)	7.884	43	228564	20.664
69) n-Butanol	(1)	8.188	56	581079	1053.367
71) Trichloroethene	(2)	8.359	95	138999	20.505
72) Methylcyclohexane	(2)	8.675	83	265064	20.432
72) Methylcyclohexane	(2)	8.675	98	116975	20.230
73) 1,2-Dichloropropane	(2)	8.687	63	137317	20.350
76) Methyl Methacrylate	(2)	8.748	69	160150	19.870
75) 1,4-Dioxane	(1)	8.766	88	63132M	511.066
74) Dibromomethane	(2)	8.797	93	89261	20.089
78) Bromodichloromethane	(2)	9.028	83	157912	19.467
79) 2-Nitropropane	(2)	9.271	41	133405	37.479
80) 2-Chloroethyl Vinyl Ether	(2)	9.374	63	118846	20.333
81) cis-1,3-Dichloropropene	(2)	9.563	75	216122	19.759
82) 4-Methyl-2-pentanone	(2)	9.715	43	560831	40.915
83)$Toluene-d8	(3)	9.867	98	1193727	50.228
83)$Toluene-d8	(3)	9.867	100	769374	50.099
88) Toluene	(3)	9.940	92	346541	20.851
90) 1,3-Dichloropropene (total)	(3)		100	419656	39.294

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$ = Compound is a surrogate standard.

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on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.190	75	203534	19.534
91) Ethyl Methacrylate	(3)	10.244	69	261169	20.147
92) 1,1,2-Trichloroethane	(3)	10.390	97	132182	20.510
93) Tetrachloroethene	(3)	10.488	166	145490	20.816
94) 1,3-Dichloropropane	(3)	10.555	76	230676	20.701
96) 2-Hexanone	(3)	10.591	43	463247	41.203
97) Dibromochloromethane	(3)	10.774	129	130867	19.150
99) 1,2-Dibromoethane	(3)	10.889	107	144863	20.193
100)*Chlorobenzene-d5	(3)	11.309	117	880146	50.000
101) 1-Chlorohexane	(3)	11.315	91	190533	20.643
102) Chlorobenzene	(3)	11.333	112	389826	21.023
103) 1,1,1,2-Tetrachloroethane	(3)	11.419	131	126103	20.174
104) Ethylbenzene	(3)	11.419	91	671288	21.112
106) m+p-Xylene	(3)	11.534	106	530622	42.411
108) Xylene (Total)	(3)		106	789263	63.364
107) o-Xylene	(3)	11.863	106	258641	20.954
109) Styrene	(3)	11.875	104	434947	20.693
110) Bromoform	(3)	12.039	173	94297	18.631
111) Isopropylbenzene	(3)	12.161	105	671252	21.272
112) Cyclohexanone	(1)	12.228	55	319629	509.159
114)$4-Bromofluorobenzene	(3)	12.307	95	456423	50.166
114)$4-Bromofluorobenzene	(3)	12.307	174	345557	50.220
116) 1,1,2,2-Tetrachloroethane	(4)	12.392	83	238175	20.909
118) trans-1,4-Dichloro-2-butene	(4)	12.422	53	419845	103.887
115) Bromobenzene	(4)	12.422	156	165604	20.924
117) 1,2,3-Trichloropropane	(4)	12.447	110	74732	20.756
119) n-Propylbenzene	(4)	12.483	91	798188	21.542
120) 2-Chlorotoluene	(4)	12.562	126	160986	20.718
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	590521	21.153
121) 4-Chlorotoluene	(4)	12.654	126	170023	20.920
124) tert-Butylbenzene	(4)	12.866	134	122448M	20.719
125) Pentachloroethane	(4)	12.897	167	92377	19.376
126) 1,2,4-Trimethylbenzene	(4)	12.903	105	618915	21.139
127) sec-Butylbenzene	(4)	13.025	105	754106	21.473
129) 1,3-Dichlorobenzene	(4)	13.128	146	326108	21.396
130) p-Isopropyltoluene	(4)	13.134	119	654905	21.509
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	471052	50.000
133) 1,4-Dichlorobenzene	(4)	13.207	146	331826	21.336

M = Compound was manually integrated.
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on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

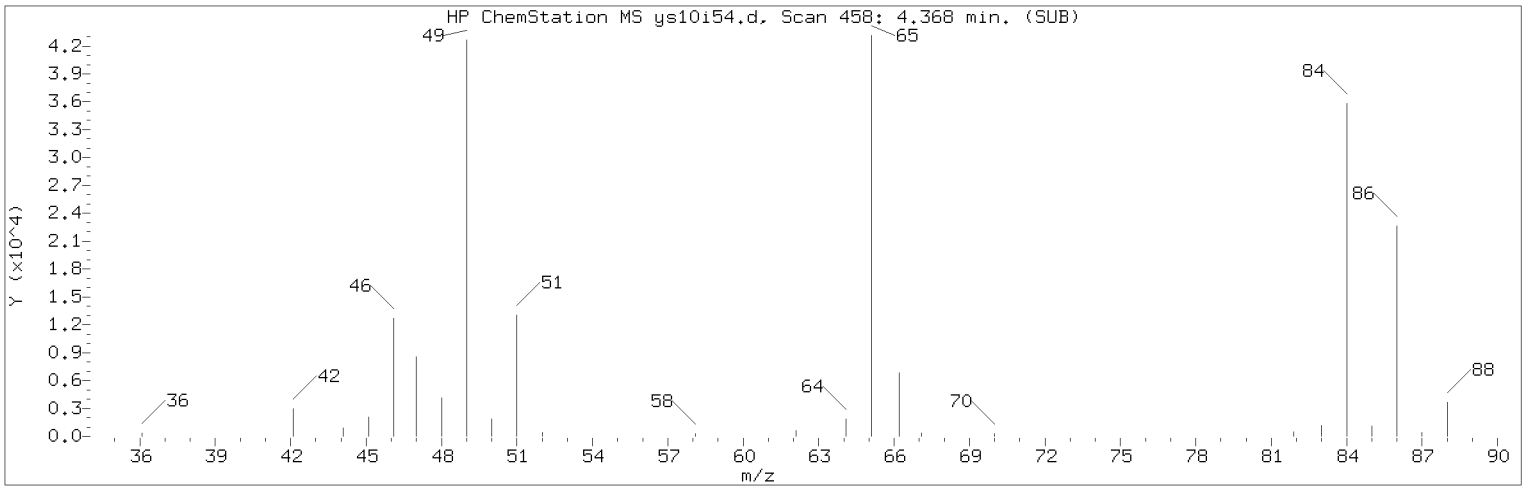
Sample Name: VSTD020 Lab Sample ID: VSTD020

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134)	1,2,3-Trimethylbenzene	(4)	13.207	105	638257	21.076
135)	Benzyl Chloride	(4)	13.274	91	481419	19.639
136)	1,3-Diethylbenzene	(4)	13.335	119	415027	20.972
141)	Diethylbenzene (total)	(4)		100	1200185	62.916
137)	1,4-Diethylbenzene	(4)	13.408	119	438802	21.047
139)	n-Butylbenzene	(4)	13.426	92	339326	21.069
138)	1,2-Dichlorobenzene	(4)	13.463	146	316008	21.207
140)	1,2-Diethylbenzene	(4)	13.475	119	346356M	20.897
142)	1,2-Dibromo-3-chloropropane	(4)	14.004	75	62698	20.149
144)	1,3,5-Trichlorobenzene	(4)	14.132	180	245906	21.360
146)	1,2,4-Trichlorobenzene	(4)	14.558	180	234073	21.293
147)	Hexachlorobutadiene	(4)	14.637	225	103538	20.712
148)	Naphthalene	(4)	14.740	128	852551	21.983
149)	1,2,3-Trichlorobenzene	(4)	14.880	180	226684	21.348
150)	2-Methylnaphthalene	(4)	15.531	142	558654	21.306

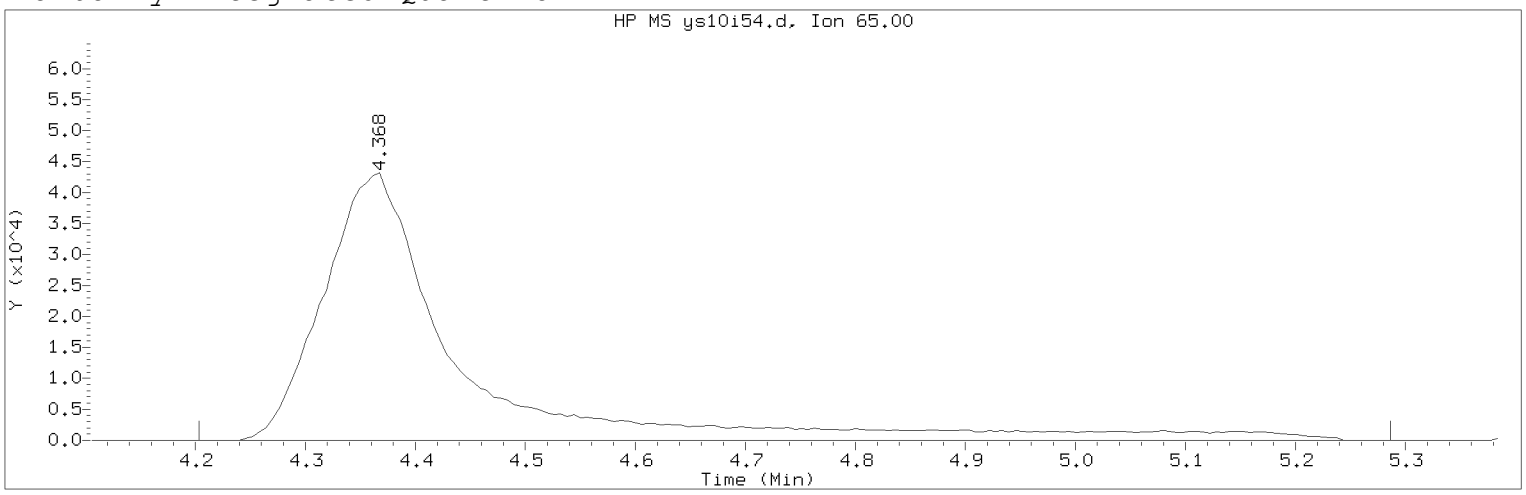
M = Compound was manually integrated.

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

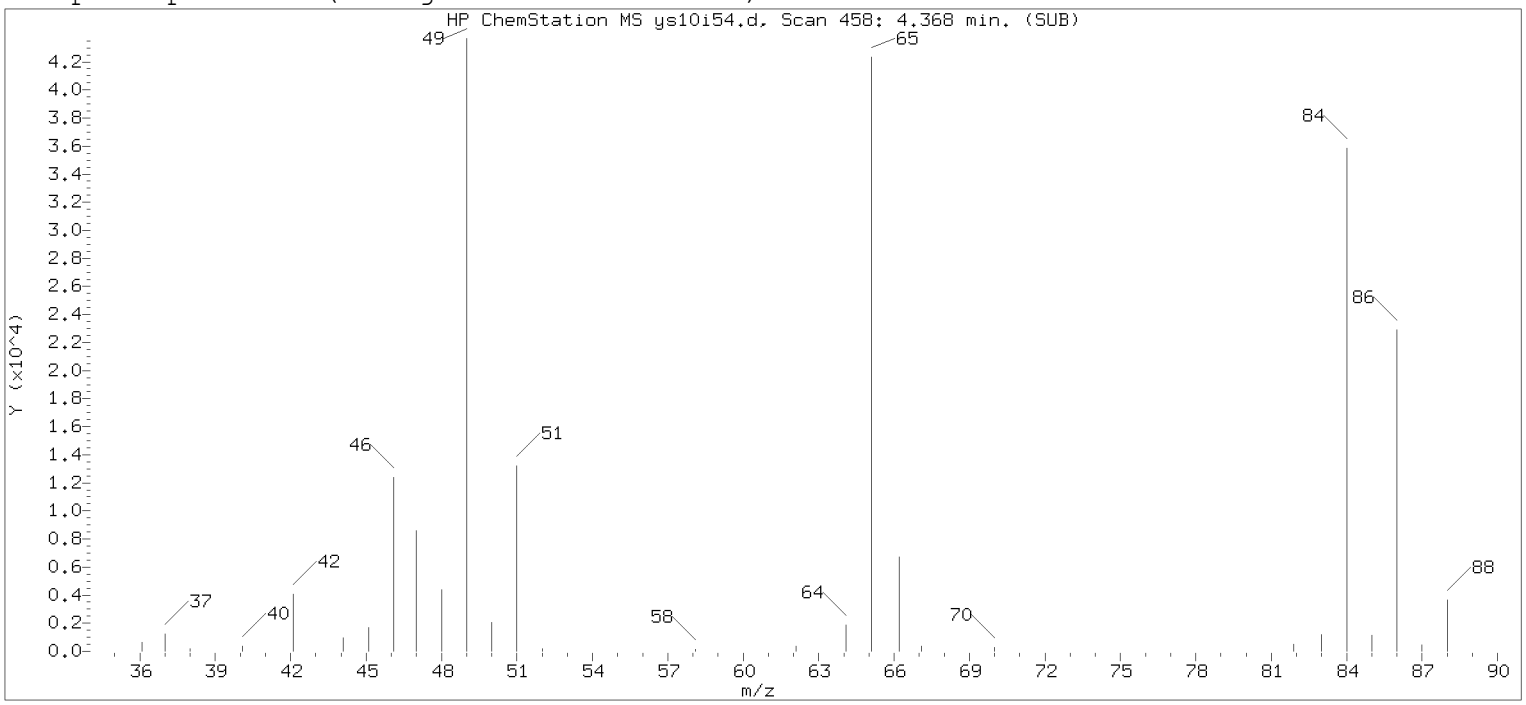
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 458
Retention Time (minutes): 4.368
Quant Ion : 65.00
Area (flag) : 372209M
On-Column Amount (ng) : 250.0000
Integration start scan : 430 Integration stop scan: 608
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

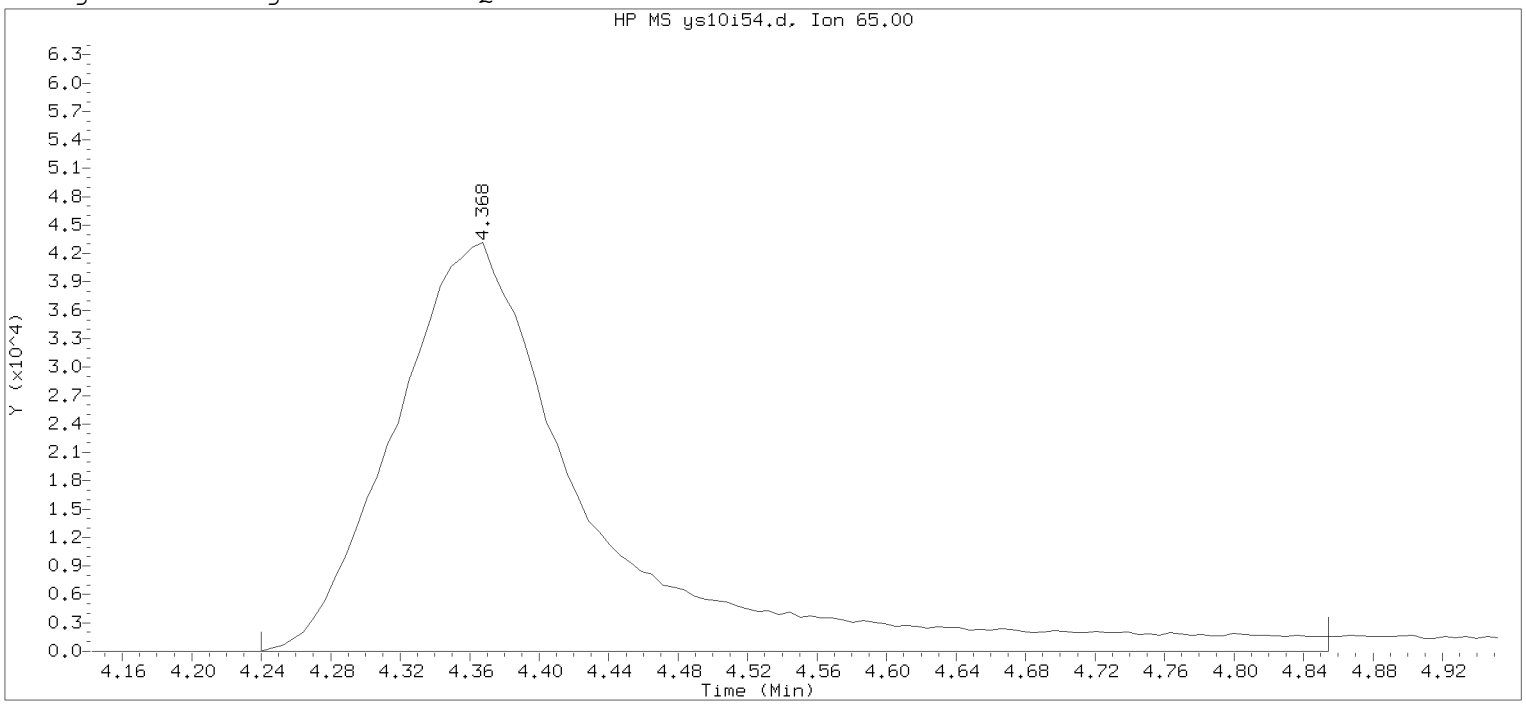
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

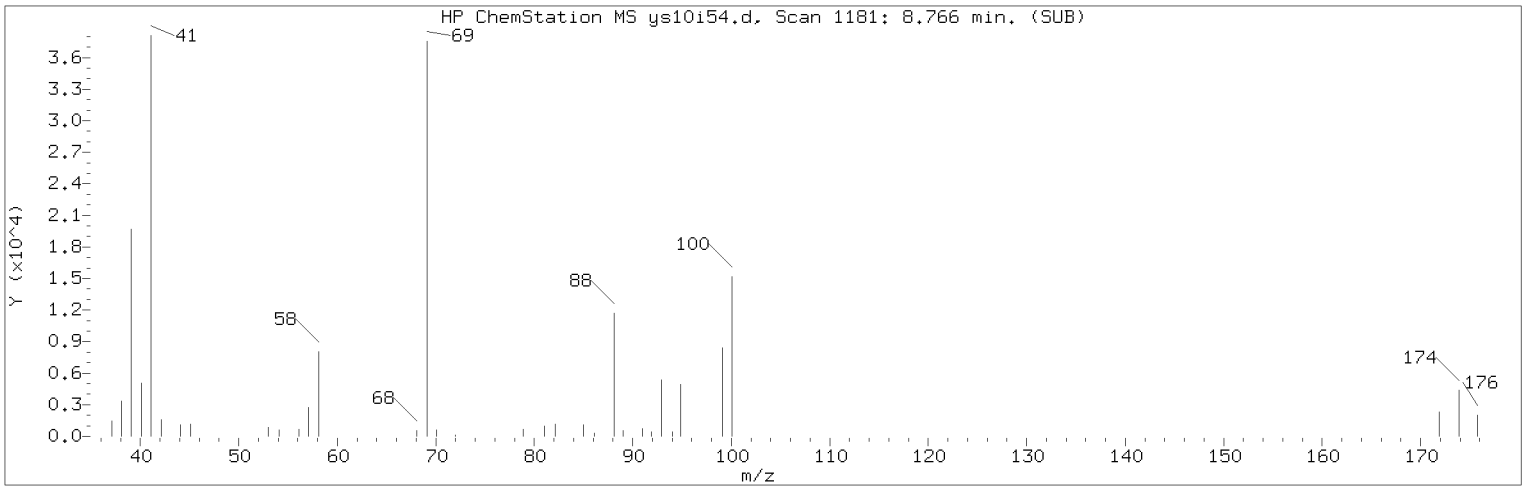
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

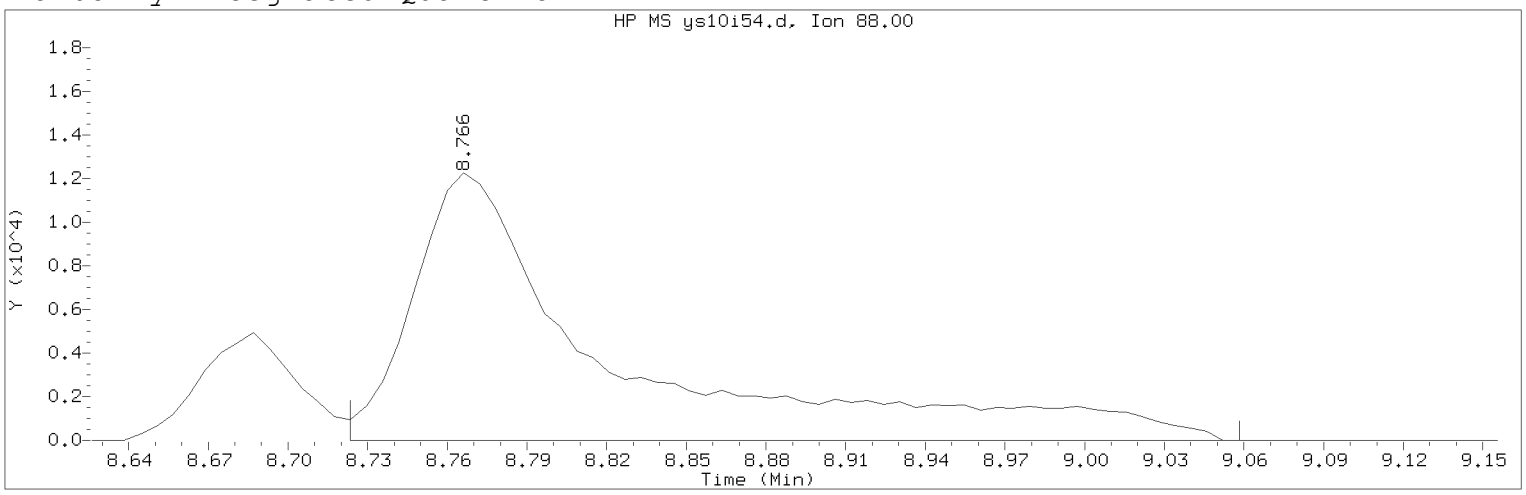
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 458
Retention Time (minutes): 4.368
Quant Ion : 65.00
Area : 341876
On-column Amount (ng) : 250.0000
Integration start scan : 436 Integration stop scan: 537
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

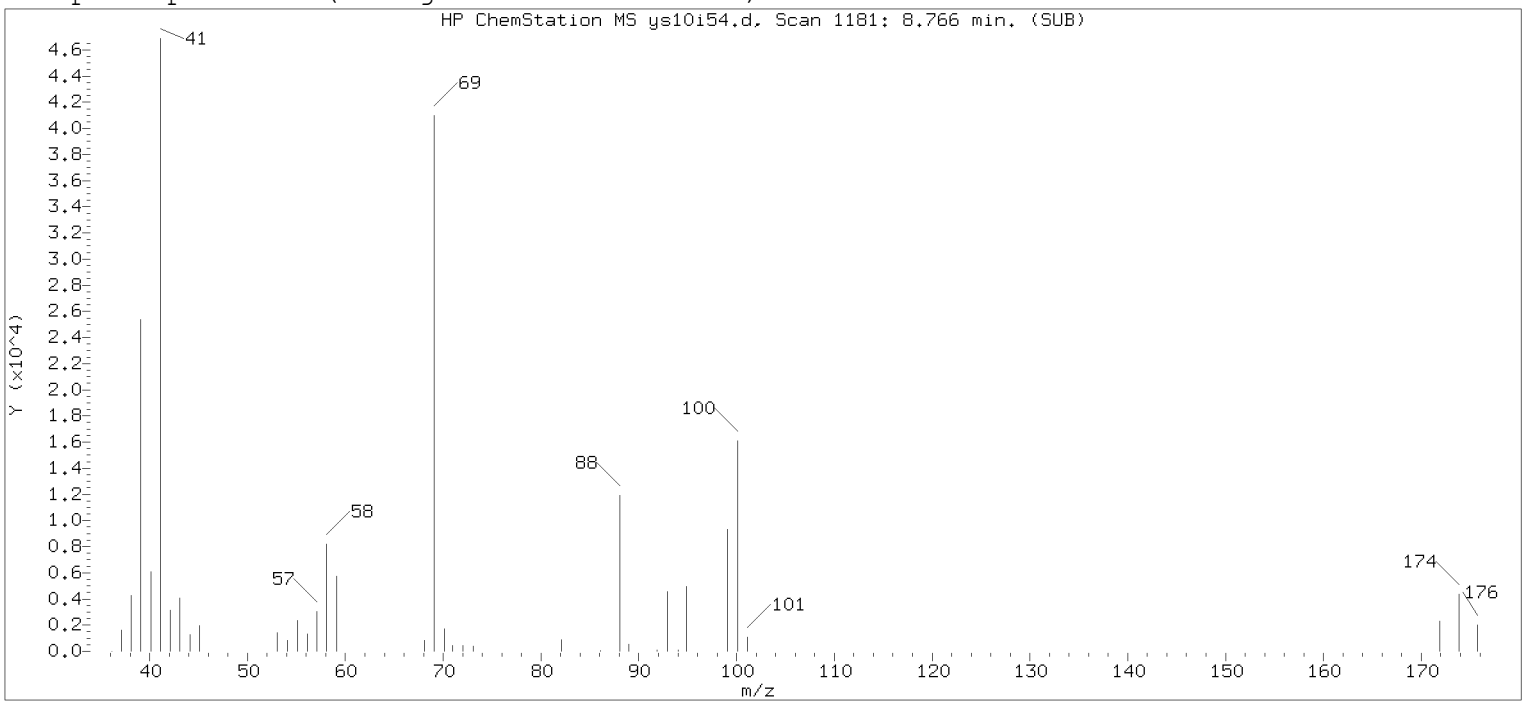
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1181
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area (flag) : 63132M
On-Column Amount (ng) : 511.0661
Integration start scan : 1173 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

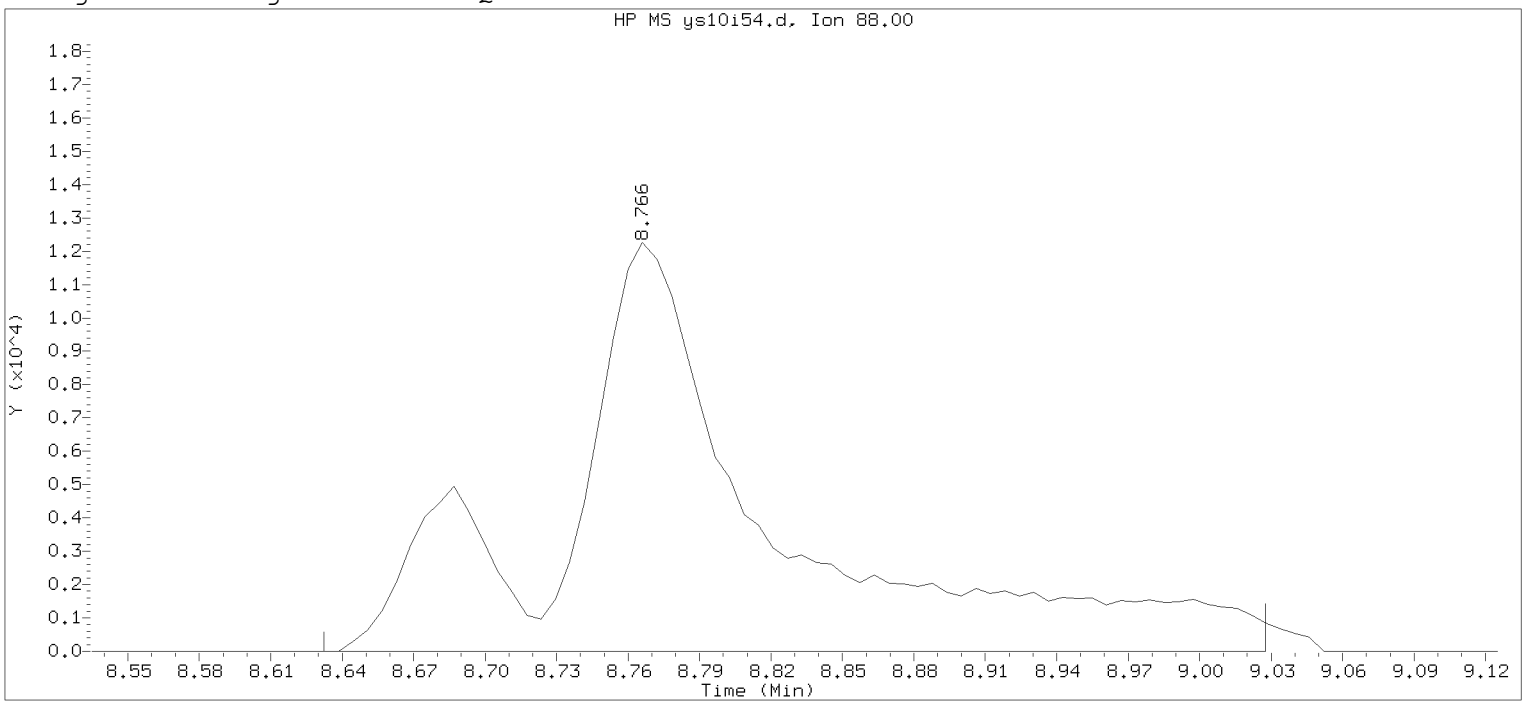
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

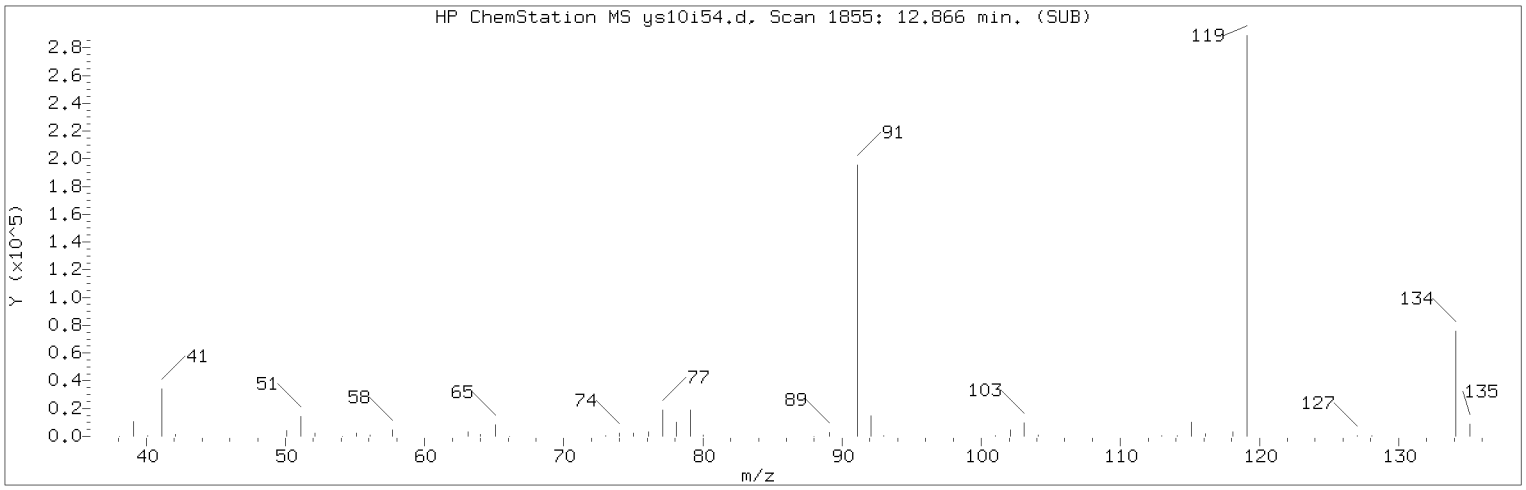
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

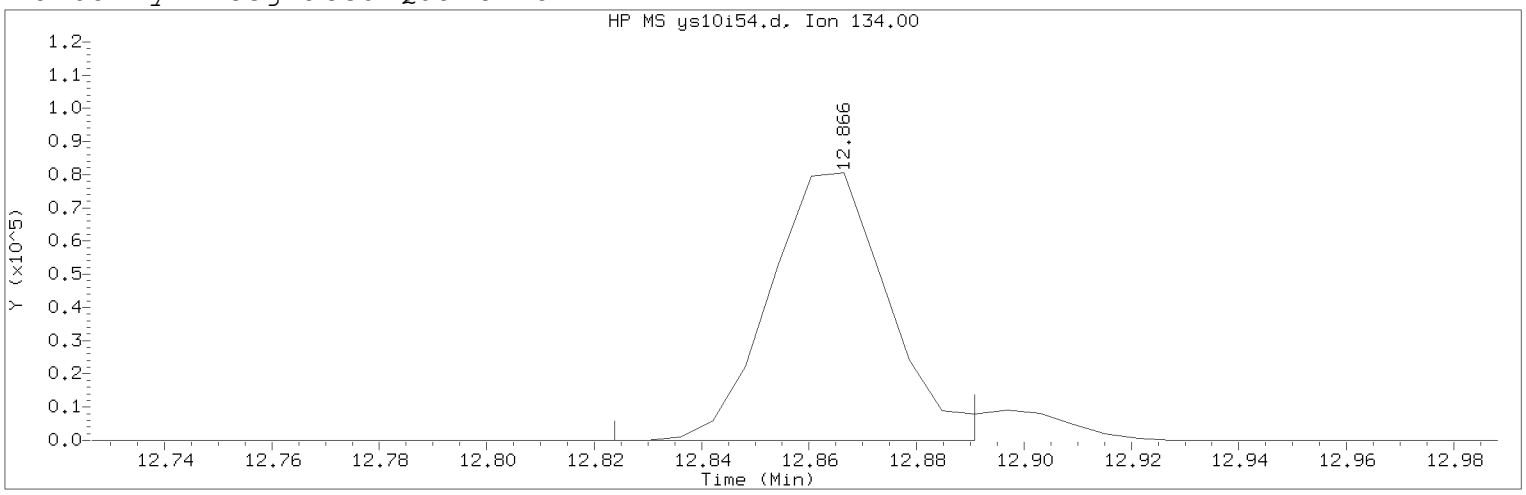
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1181		
Retention Time (minutes)	: 8.766		
Quant Ion	: 88.00		
Area	: 74645		
On-column Amount (ng)	: 495.7177		
Integration start scan	: 1158	Integration stop scan:	1223
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

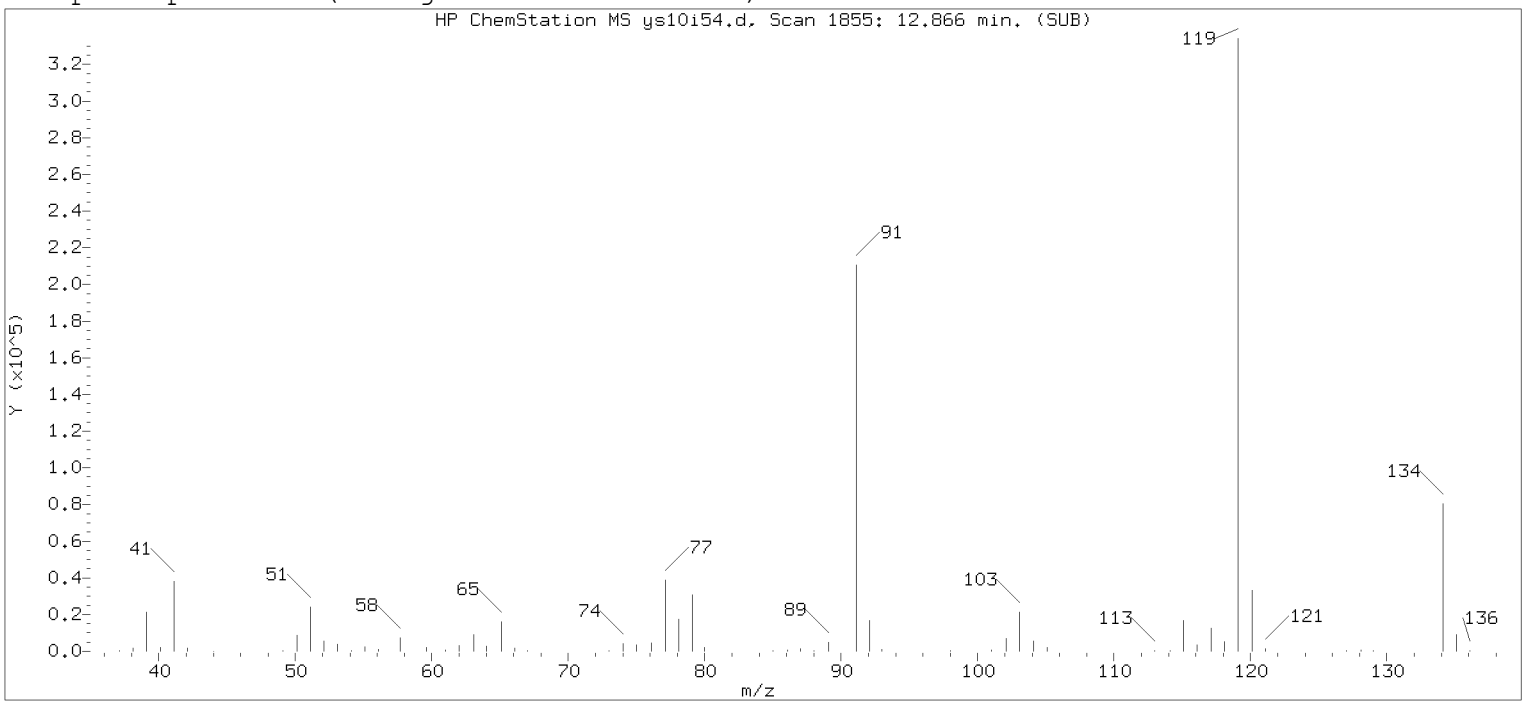
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area (flag) : 122448M
On-Column Amount (ng) : 20.7189
Integration start scan : 1847 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

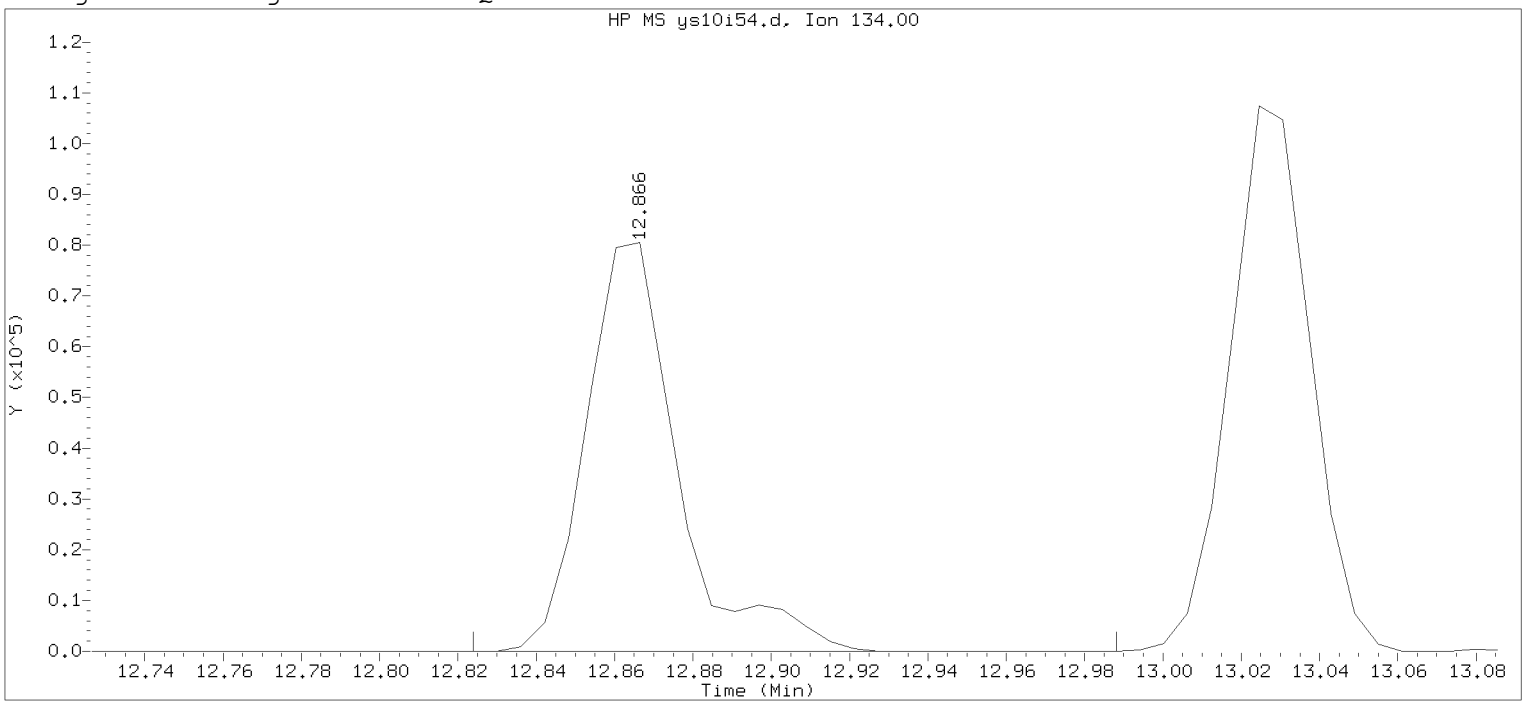
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

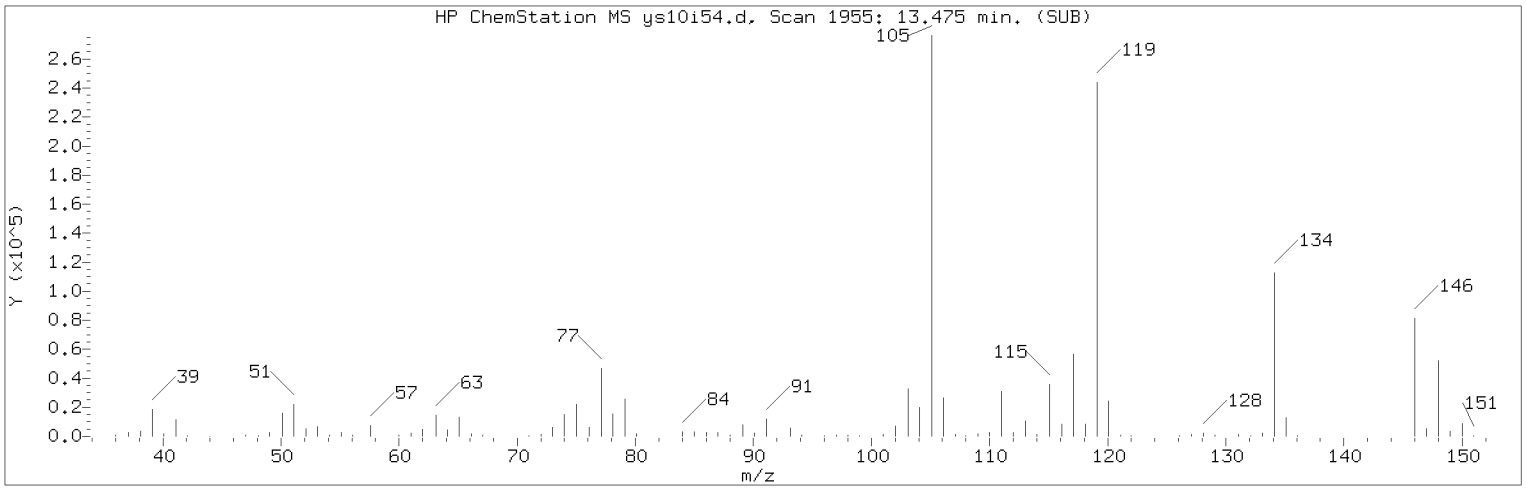
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

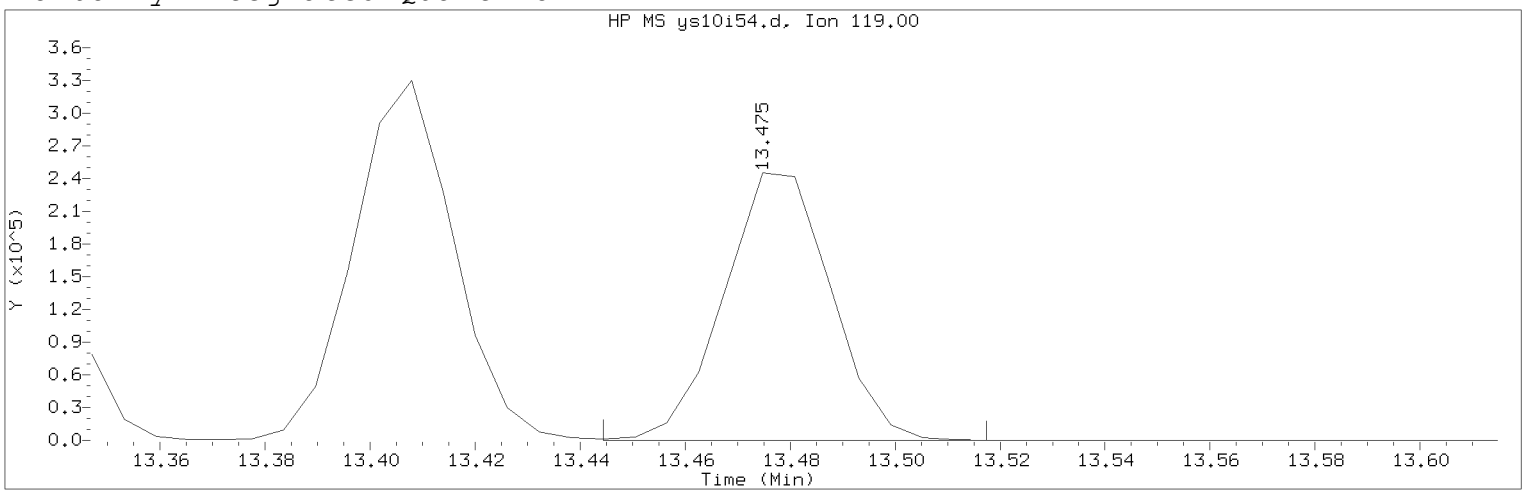
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area : 131437
On-column Amount (ng) : 21.0765
Integration start scan : 1847 Integration stop scan: 1874
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

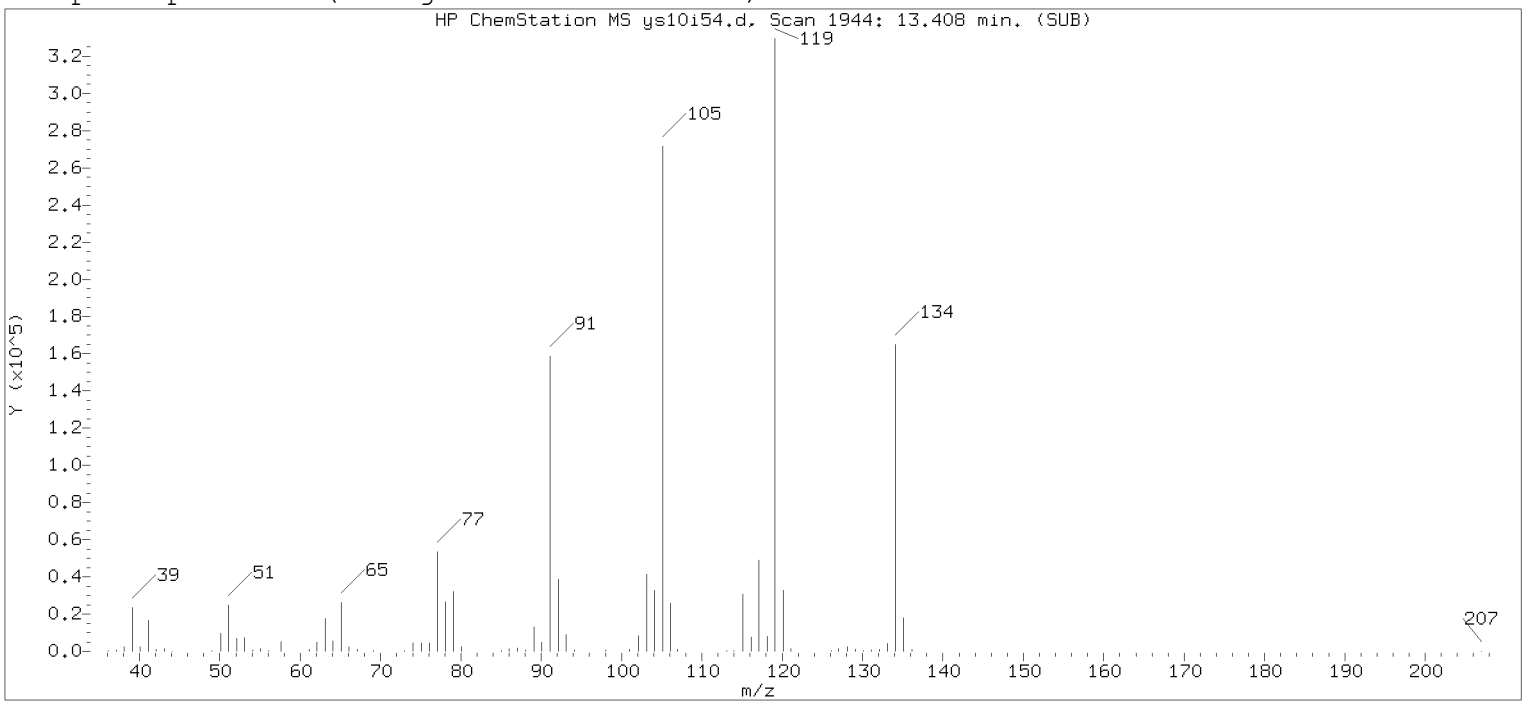
Compound Number : 140
Compound Name : 1,2-Diethylbenzene
Scan Number : 1955
Retention Time (minutes): 13.475
Quant Ion : 119.00
Area (flag) : 346356M
On-Column Amount (ng) : 20.8968
Integration start scan : 1949 Integration stop scan: 1961
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

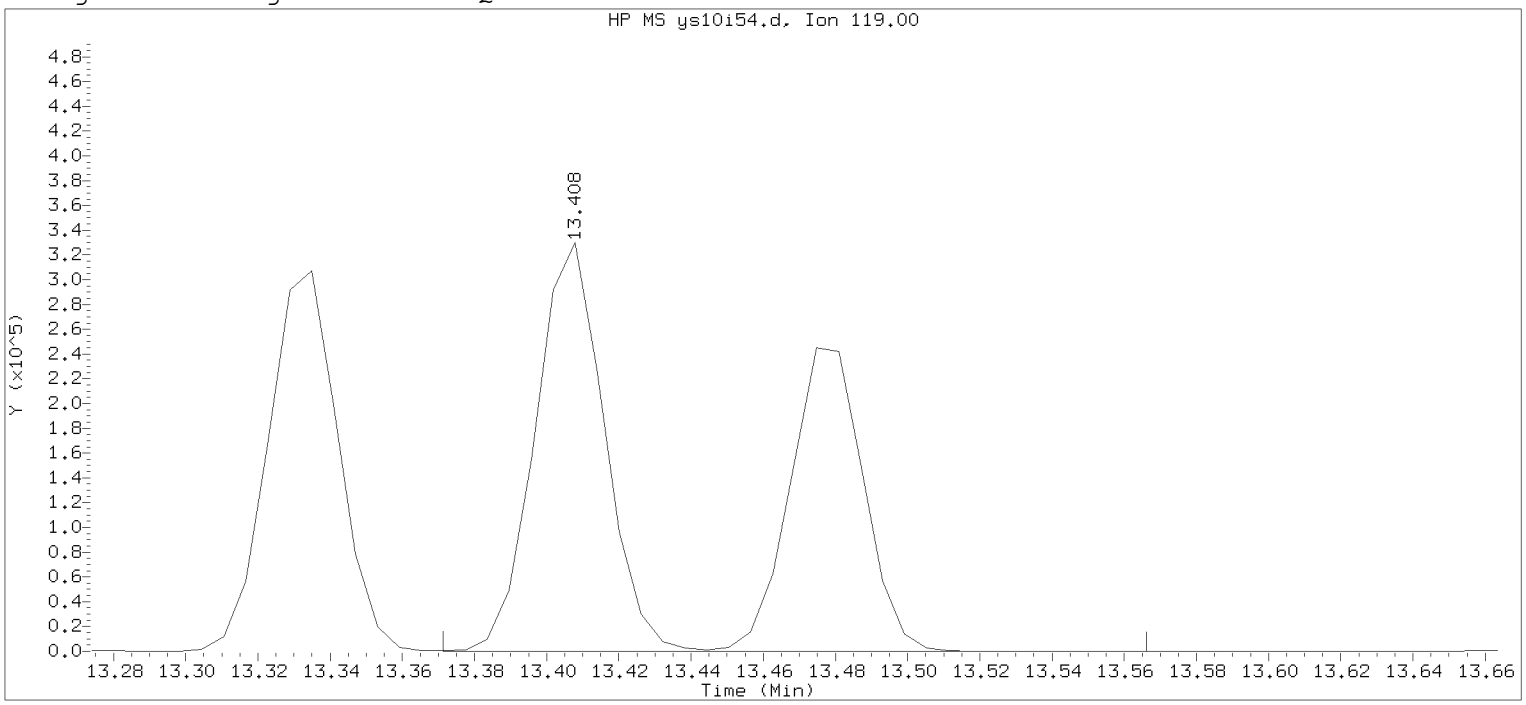
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



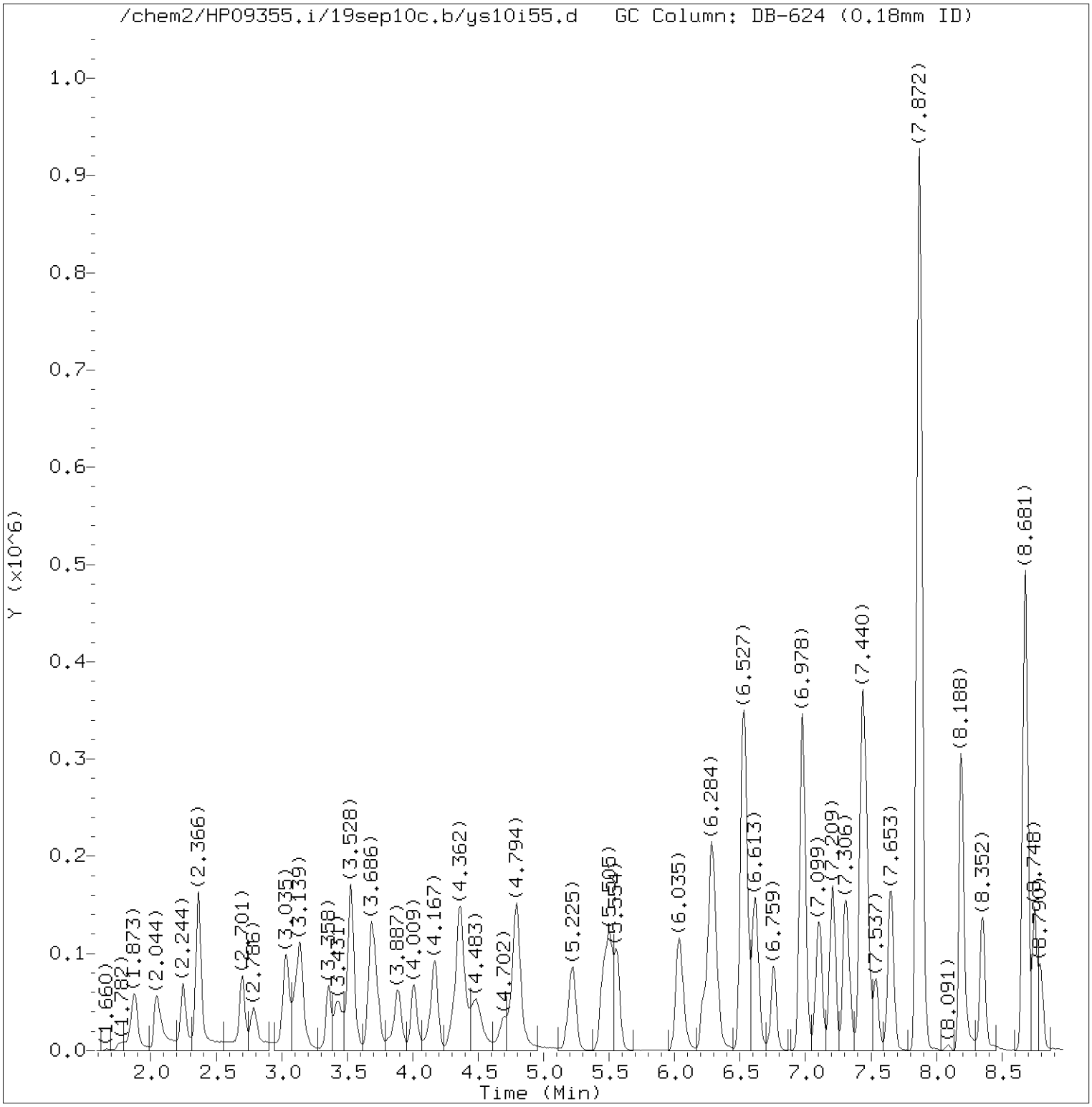
Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number : 140
Compound Name : 1,2-Diethylbenzene
Scan Number : 1944
Retention Time (minutes): 13.408
Quant Ion : 119.00
Area : 784934
On-column Amount (ng) : 35.5869
Integration start scan : 1937 Integration stop scan: 1969
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648



Total Ion Chromatogram (TIC)

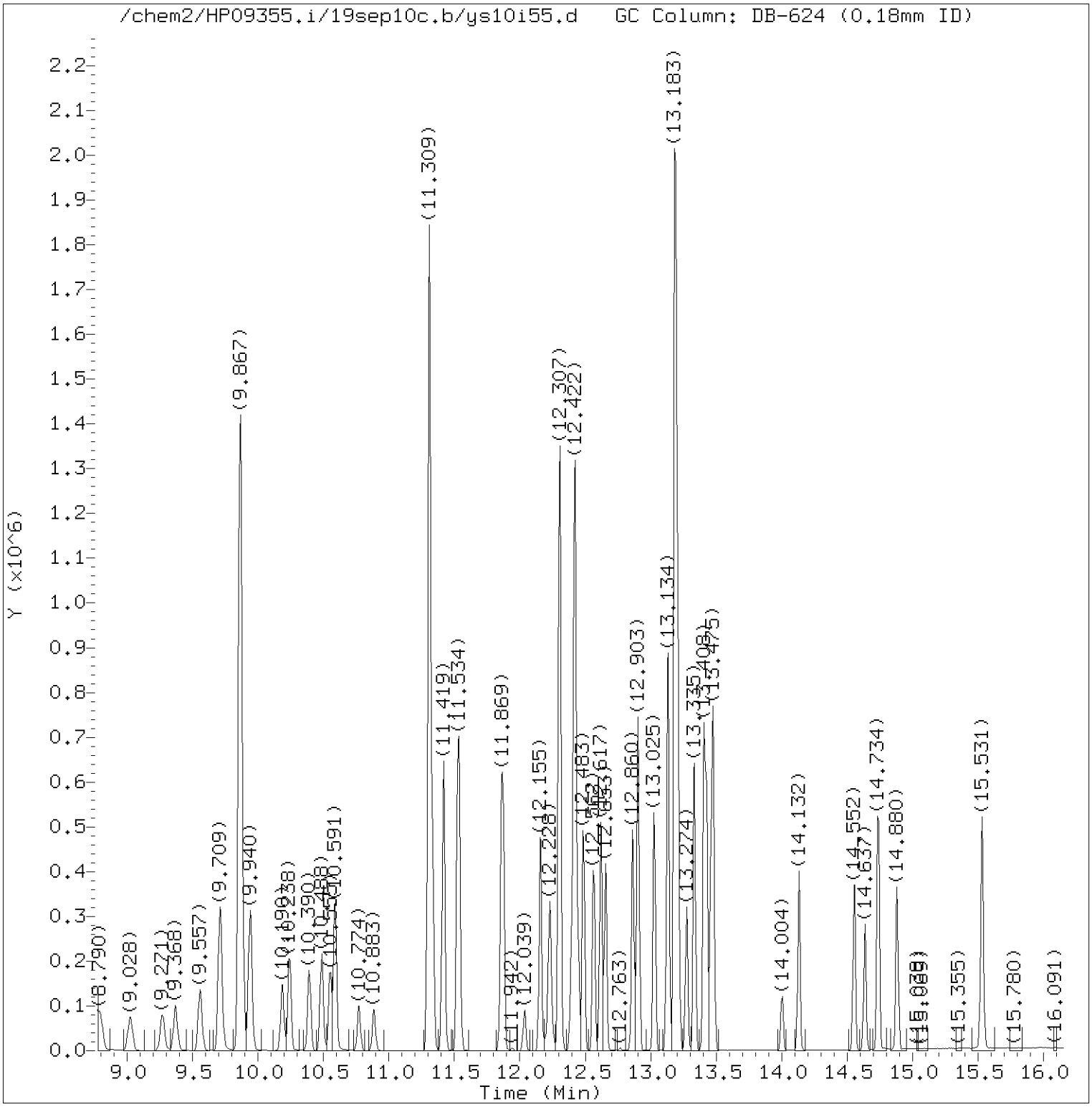
Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.044	85	117626	10.541
4) Chloromethane	(2)	2.244	50	100023	10.680
5) 1,3-Butadiene	(2)	2.360	39	68344	9.879
6) Vinyl Chloride	(2)	2.366	62	97457	10.508
8) Bromomethane	(2)	2.701	94	72833	10.702
9) Chloroethane	(2)	2.786	64	55970	10.562
10) Dichlorofluoromethane	(2)	3.029	67	118113	10.585
12) Trichlorofluoromethane	(2)	3.102	101	123527	10.433
11) n-Pentane	(2)	3.145	43	106768	9.866
14) Ethyl ether	(2)	3.358	59	58119	9.505
15) Freon 123a	(2)	3.431	67	69409	9.772
16) Acrolein	(1)	3.528	56	280370	101.316
17) 1,1-Dichloroethene	(2)	3.680	96	50385	9.590
17) 1,1-Dichloroethene	(2)	3.680	63	25617	9.536
18) Acetone	(1)	3.692	58	27110	20.659
19) Freon 113	(2)	3.717	101	56228	9.349
21) 2-Propanol	(1)	3.863	45	77672	100.028
22) Methyl Iodide	(2)	3.893	142	98998	9.727
23) Carbon Disulfide	(2)	4.009	76	177488	9.326
27) Methyl Acetate	(2)	4.143	43	85550	9.707
25) Allyl Chloride	(2)	4.173	41	88751	9.795
29)*t-Butyl alcohol-d10	(1)	4.349	65	356814M	250.000
28) Methylene Chloride	(2)	4.368	84	60400	9.744
30) t-Butyl alcohol	(1)	4.483	59	164326	102.054
31) Acrylonitrile	(2)	4.696	53	49394	10.035
33) Methyl Tertiary Butyl Ether	(2)	4.781	73	202854	9.880
32) trans-1,2-Dichloroethene	(2)	4.800	96	58139	9.638
34) n-Hexane	(2)	5.213	57	93733	9.109
36) 1,1-Dichloroethane	(2)	5.451	63	107010	9.755
38) di-Isopropyl ether	(2)	5.505	45	203464	9.773
39) 2-Chloro-1,3-butadiene	(2)	5.560	53	94813	9.379
40) Ethyl t-butyl ether	(2)	6.035	59	201382	9.916
43) 1,2-Dichloroethene (Total)	(2)		96	124206	19.292
44) 2-Butanone	(2)	6.223	43	146910	20.728
42) cis-1,2-Dichloroethene	(2)	6.278	96	66067	9.654
45) 2,2-Dichloropropane	(2)	6.296	77	80624	9.433
47) Propionitrile	(1)	6.302	54	186170	99.601
48) Methacrylonitrile	(2)	6.527	67	246317	48.472

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.619	128	34871	9.689
50) Tetrahydrofuran	(1)	6.625	71	41186	20.225
51) Chloroform	(2)	6.759	83	102576	9.663
52)$Dibromofluoromethane	(2)	6.971	113	274694	49.771
52)$Dibromofluoromethane	(2)	6.971	111	281939	49.866
53) 1,1,1-Trichloroethane	(2)	6.996	97	86974	9.418
54) Cyclohexane	(2)	7.105	56	111564	9.326
54) Cyclohexane	(2)	7.105	84	96622	9.338
54) Cyclohexane	(2)	7.111	69	34610	9.150
55) 1,1-Dichloropropene	(2)	7.209	75	85598	9.648
56) Carbon Tetrachloride	(2)	7.209	117	72801	9.058
58) Isobutyl Alcohol	(1)	7.306	41	144901	262.658
57)$1,2-Dichloroethane-d4	(2)	7.434	102	73131	50.874
57)$1,2-Dichloroethane-d4	(2)	7.434	65	352011	50.946
57)$1,2-Dichloroethane-d4	(2)	7.428	104	46326	50.867
60) Benzene	(2)	7.470	78	252915	9.850
61) 1,2-Dichloroethane	(2)	7.537	62	87271	9.862
61) 1,2-Dichloroethane	(2)	7.537	98	7542	9.447
65) t-Amyl methyl ether	(2)	7.647	73	204559	10.079
66)*Fluorobenzene	(2)	7.866	96	1173038	50.000
67) n-Heptane	(2)	7.878	43	97552	9.087
69) n-Butanol	(1)	8.188	56	272808	512.622
71) Trichloroethene	(2)	8.352	95	64834	9.705
72) Methylcyclohexane	(2)	8.669	83	125230	9.778
72) Methylcyclohexane	(2)	8.675	98	54736	9.625
73) 1,2-Dichloropropane	(2)	8.681	63	64096	9.652
76) Methyl Methacrylate	(2)	8.748	69	75254	9.519
75) 1,4-Dioxane	(1)	8.760	88	28854M	244.900
74) Dibromomethane	(2)	8.797	93	41735	9.565
78) Bromodichloromethane	(2)	9.028	83	71006	9.031
79) 2-Nitropropane	(2)	9.271	41	62518	18.111
80) 2-Chloroethyl Vinyl Ether	(2)	9.368	63	54444	9.500
81) cis-1,3-Dichloropropene	(2)	9.557	75	97013	9.129
82) 4-Methyl-2-pentanone	(2)	9.709	43	269216	19.827
83)$Toluene-d8	(3)	9.867	98	1188069	50.222
83)$Toluene-d8	(3)	9.867	100	765429	50.103
88) Toluene	(3)	9.940	92	160069	9.748
90) 1,3-Dichloropropene (total)	(3)		100	187800	18.115

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$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.184	75	90787	8.986
91) Ethyl Methacrylate	(3)	10.238	69	118403	9.338
92) 1,1,2-Trichloroethane	(3)	10.390	97	61734	9.705
93) Tetrachloroethene	(3)	10.488	166	68292	9.861
94) 1,3-Dichloropropane	(3)	10.555	76	107996	9.797
96) 2-Hexanone	(3)	10.591	43	220523	19.781
97) Dibromochloromethane	(3)	10.774	129	56766	8.639
99) 1,2-Dibromoethane	(3)	10.883	107	67421	9.557
100)*Chlorobenzene-d5	(3)	11.309	117	875099	50.000
101) 1-Chlorohexane	(3)	11.309	91	84457	9.352
102) Chlorobenzene	(3)	11.333	112	179459	9.786
104) Ethylbenzene	(3)	11.419	91	305369	9.725
103) 1,1,1,2-Tetrachloroethane	(3)	11.419	131	56046	9.198
106) m+p-Xylene	(3)	11.534	106	240305	19.450
108) Xylene (Total)	(3)		106	357307	29.073
107) o-Xylene	(3)	11.857	106	117002	9.623
109) Styrene	(3)	11.875	104	193242	9.388
110) Bromoform	(3)	12.039	173	39821	8.258
111) Isopropylbenzene	(3)	12.161	105	301000	9.672
112) Cyclohexanone	(1)	12.228	55	147464M	246.017
114)$4-Bromofluorobenzene	(3)	12.307	95	452914	50.054
114)$4-Bromofluorobenzene	(3)	12.307	174	344562	50.291
116) 1,1,2,2-Tetrachloroethane	(4)	12.392	83	111471	9.831
118) trans-1,4-Dichloro-2-butene	(4)	12.416	53	193145	48.234
115) Bromobenzene	(4)	12.422	156	75740	9.656
117) 1,2,3-Trichloropropane	(4)	12.447	110	35297	9.845
119) n-Propylbenzene	(4)	12.483	91	357877	9.728
120) 2-Chlorotoluene	(4)	12.562	126	73265	9.541
122) 1,3,5-Trimethylbenzene	(4)	12.617	105	261050	9.477
121) 4-Chlorotoluene	(4)	12.653	126	76325	9.510
124) tert-Butylbenzene	(4)	12.860	134	52784M	9.129
125) Pentachloroethane	(4)	12.897	167	40837	8.822
126) 1,2,4-Trimethylbenzene	(4)	12.903	105	273538	9.470
127) sec-Butylbenzene	(4)	13.025	105	330003	9.515
129) 1,3-Dichlorobenzene	(4)	13.128	146	146914	9.712
130) p-Isopropyltoluene	(4)	13.134	119	284257	9.465
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	470858	50.000
133) 1,4-Dichlorobenzene	(4)	13.201	146	150792	9.758

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Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.207	105	305611	10.076
135) Benzyl Chloride	(4)	13.274	91	202264	8.553
136) 1,3-Diethylbenzene	(4)	13.335	119	196483	9.946
141) Diethylbenzene (total)	(4)		100	569857	29.917
137) 1,4-Diethylbenzene	(4)	13.408	119	207865	9.979
139) n-Butylbenzene	(4)	13.426	92	147980	9.343
138) 1,2-Dichlorobenzene	(4)	13.463	146	144172	9.742
140) 1,2-Diethylbenzene	(4)	13.475	119	165509M	9.992
142) 1,2-Dibromo-3-chloropropane	(4)	14.004	75	27382	9.019
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	108066	9.507
146) 1,2,4-Trichlorobenzene	(4)	14.558	180	102410	9.448
147) Hexachlorobutadiene	(4)	14.637	225	43782	8.984
148) Naphthalene	(4)	14.734	128	384045	9.925
149) 1,2,3-Trichlorobenzene	(4)	14.880	180	101596	9.655
150) 2-Methylnaphthalene	(4)	15.531	142	254347	9.762

M = Compound was manually integrated.

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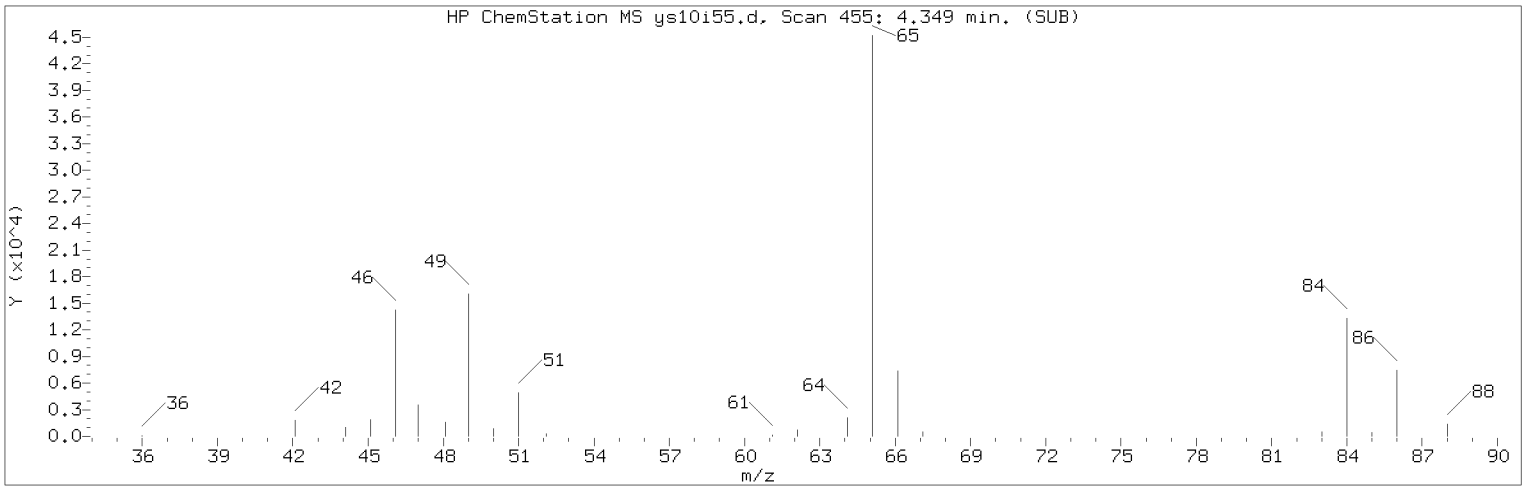
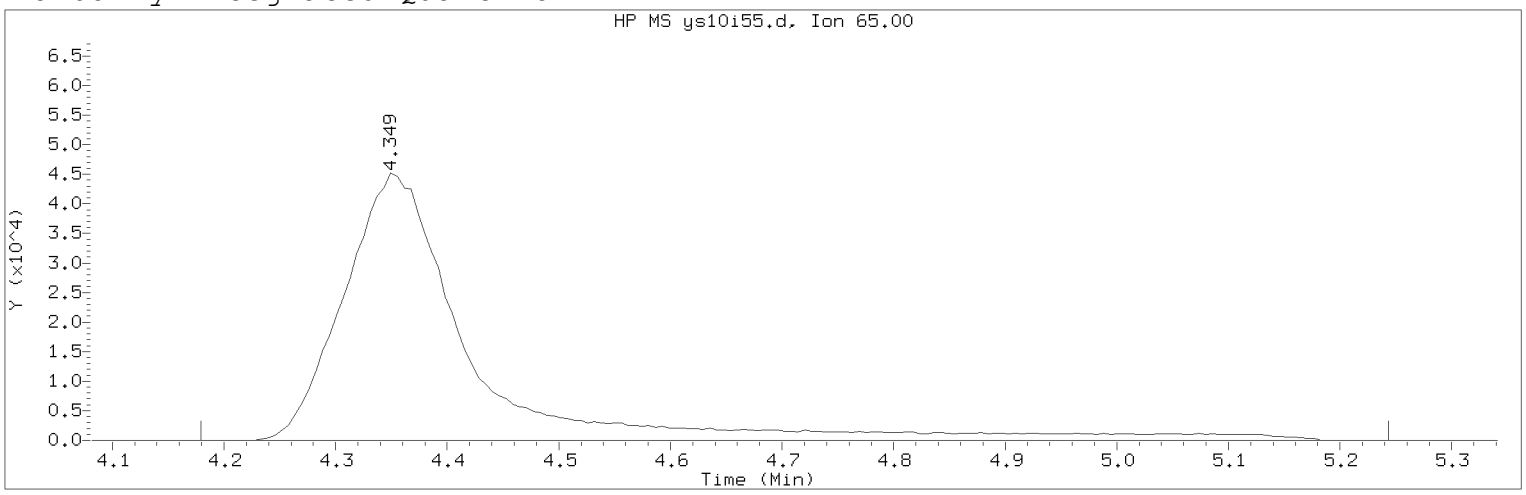
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

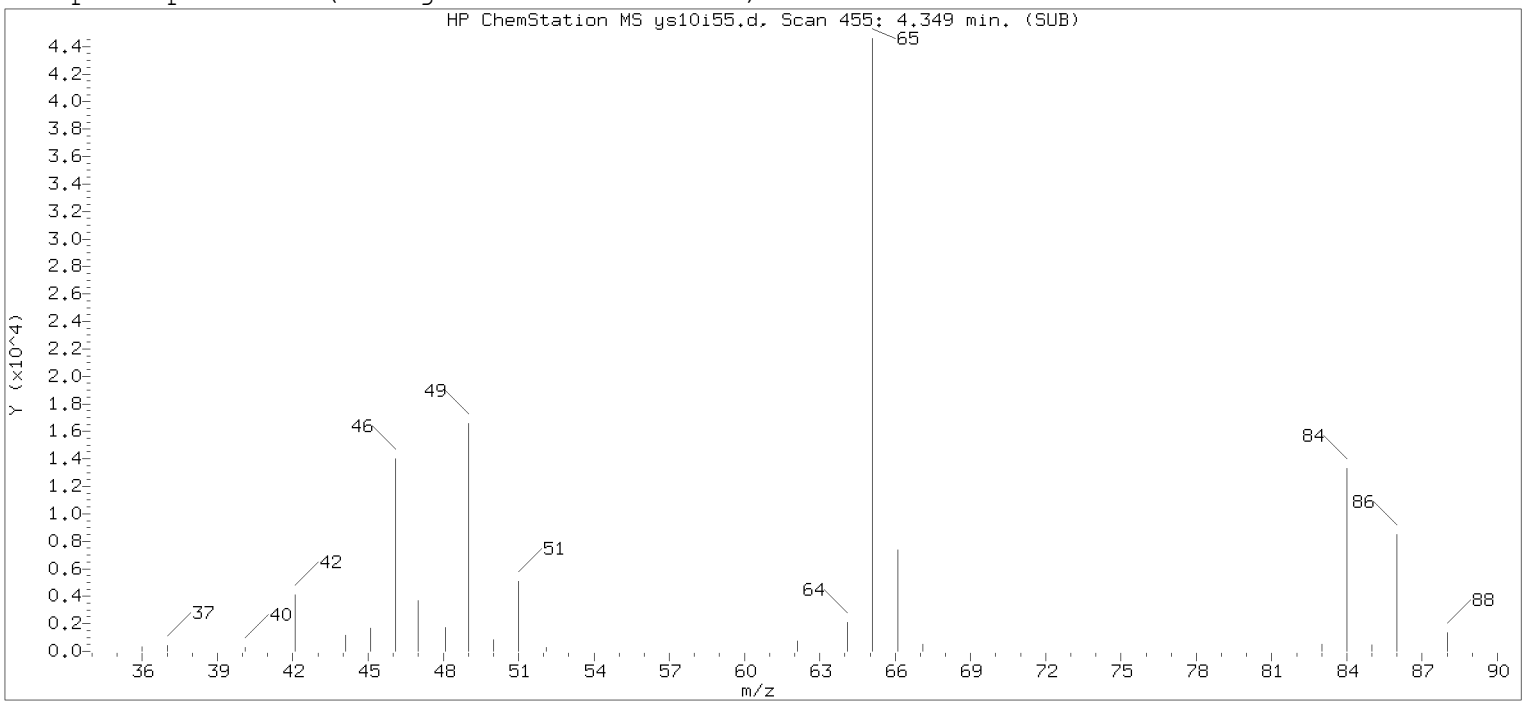
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 455
Retention Time (minutes): 4.349
Quant Ion : 65.00
Area (flag) : 356814M
On-Column Amount (ng) : 250.0000
Integration start scan : 426 Integration stop scan: 601
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

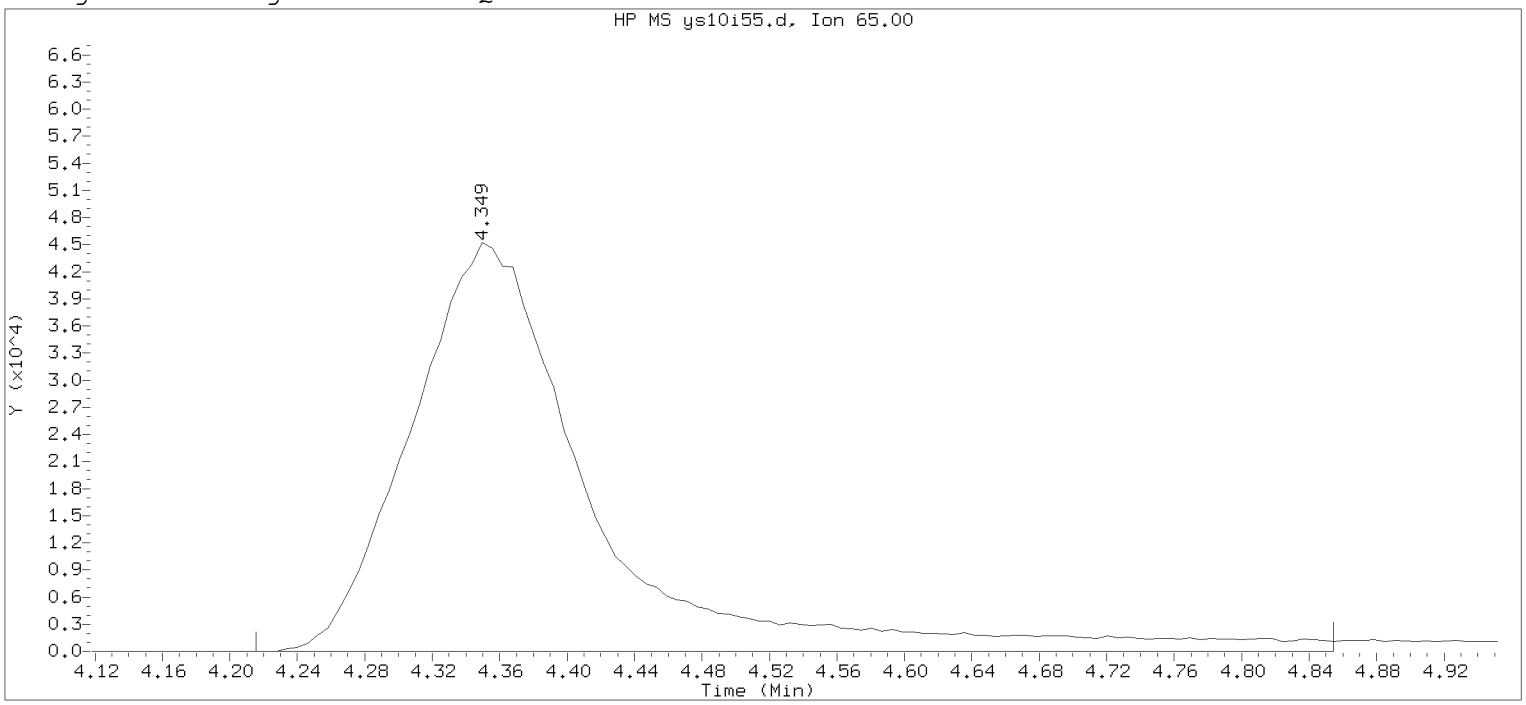
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

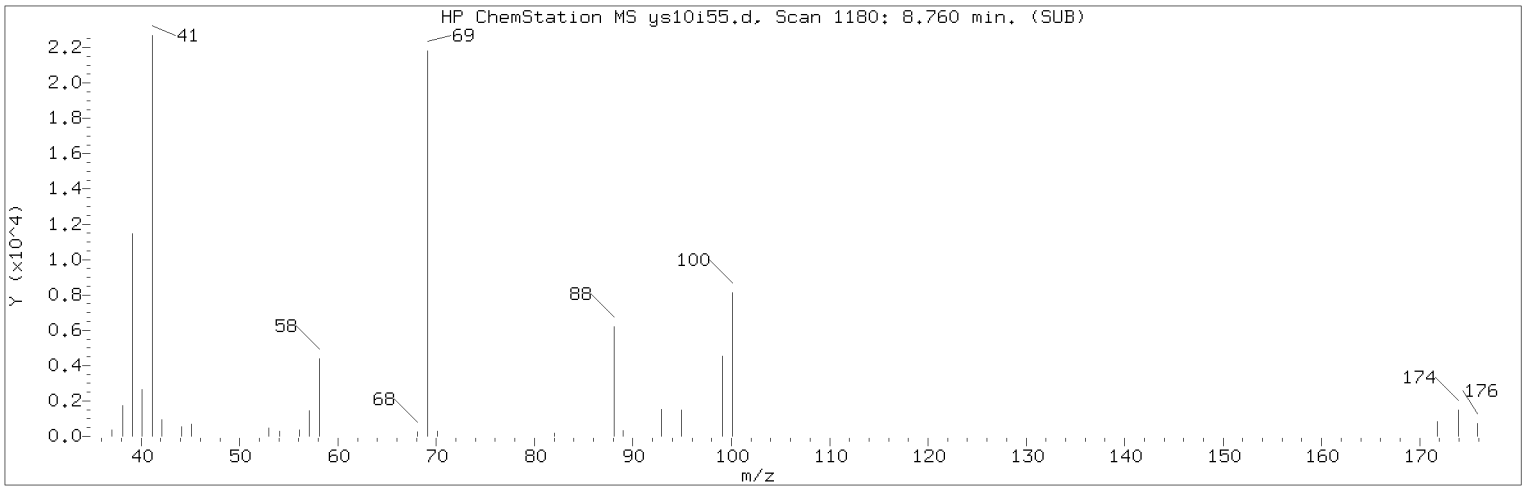
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

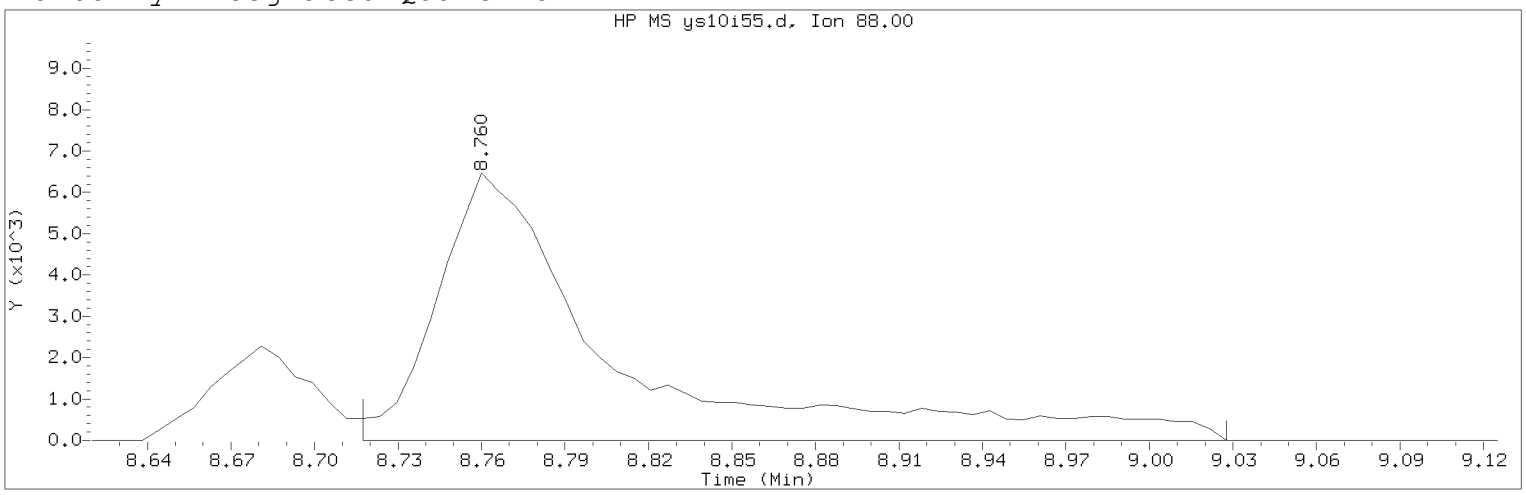
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 455
Retention Time (minutes): 4.349
Quant Ion : 65.00
Area : 337341
On-column Amount (ng) : 250.0000
Integration start scan : 432 Integration stop scan: 537
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

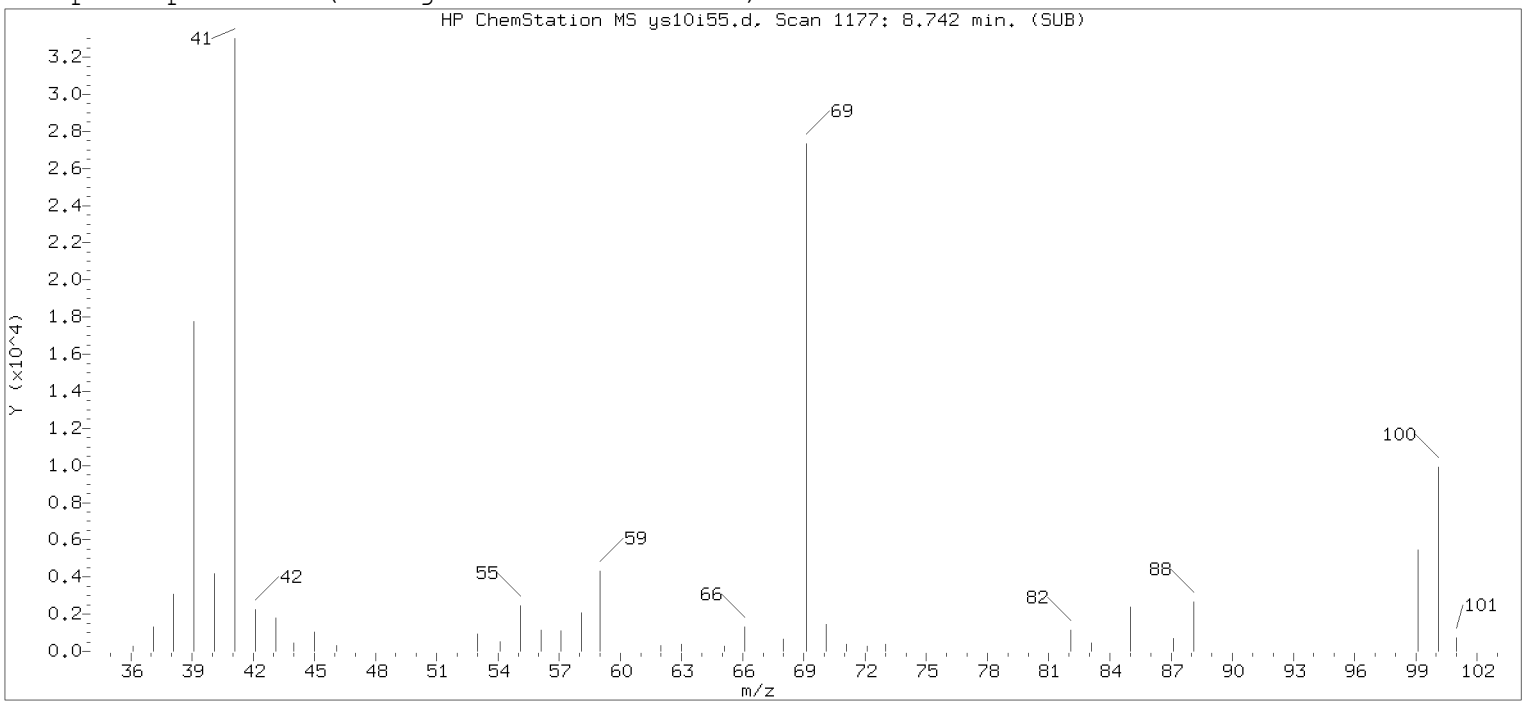
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1180
Retention Time (minutes): 8.760
Quant Ion : 88.00
Area (flag) : 28854M
On-Column Amount (ng) : 244.8996
Integration start scan : 1172 Integration stop scan: 1223
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

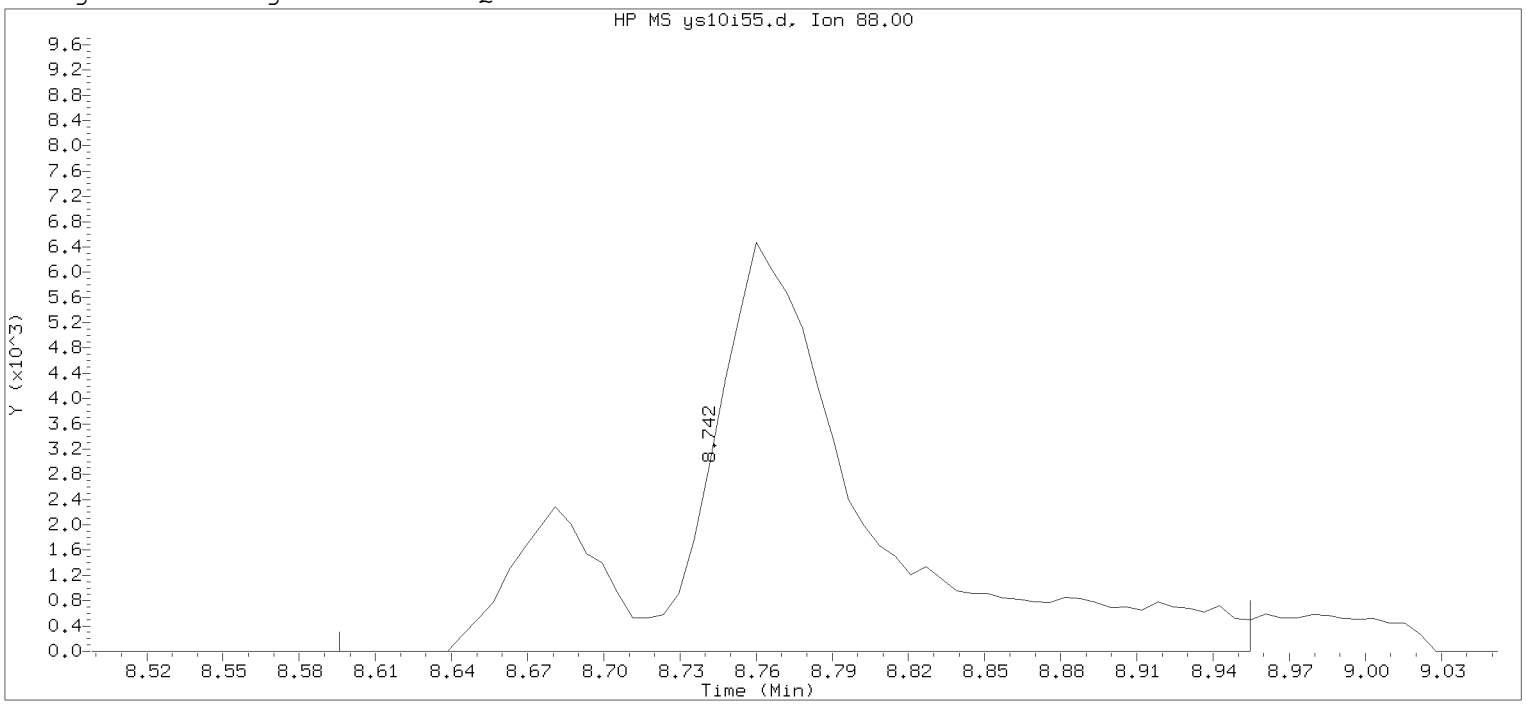
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

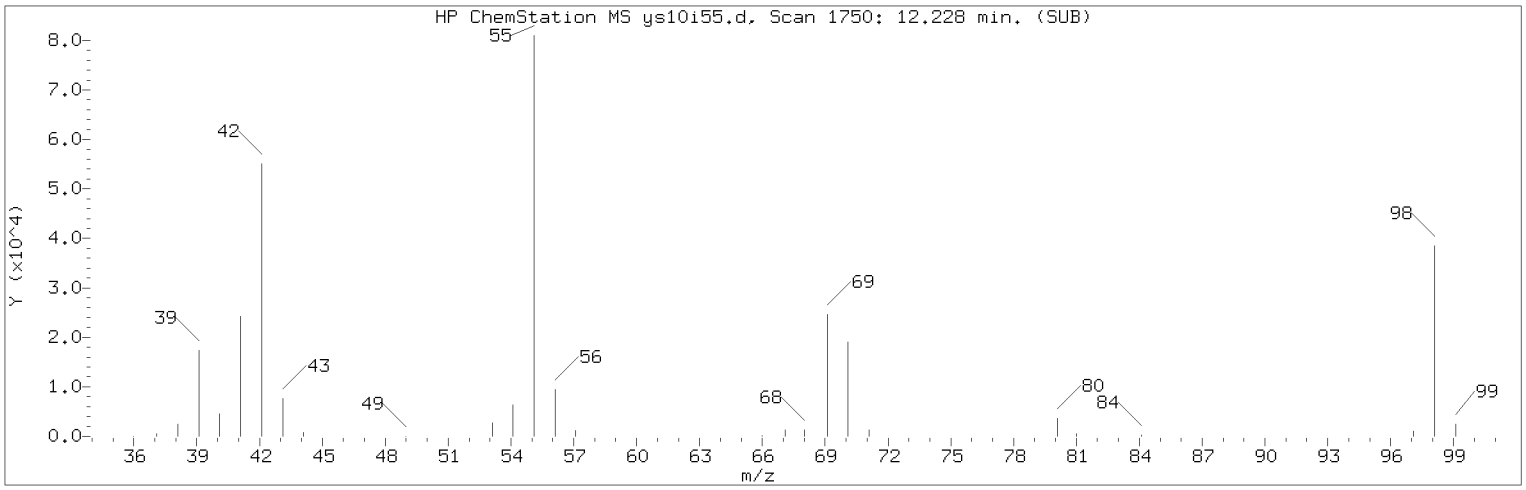
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

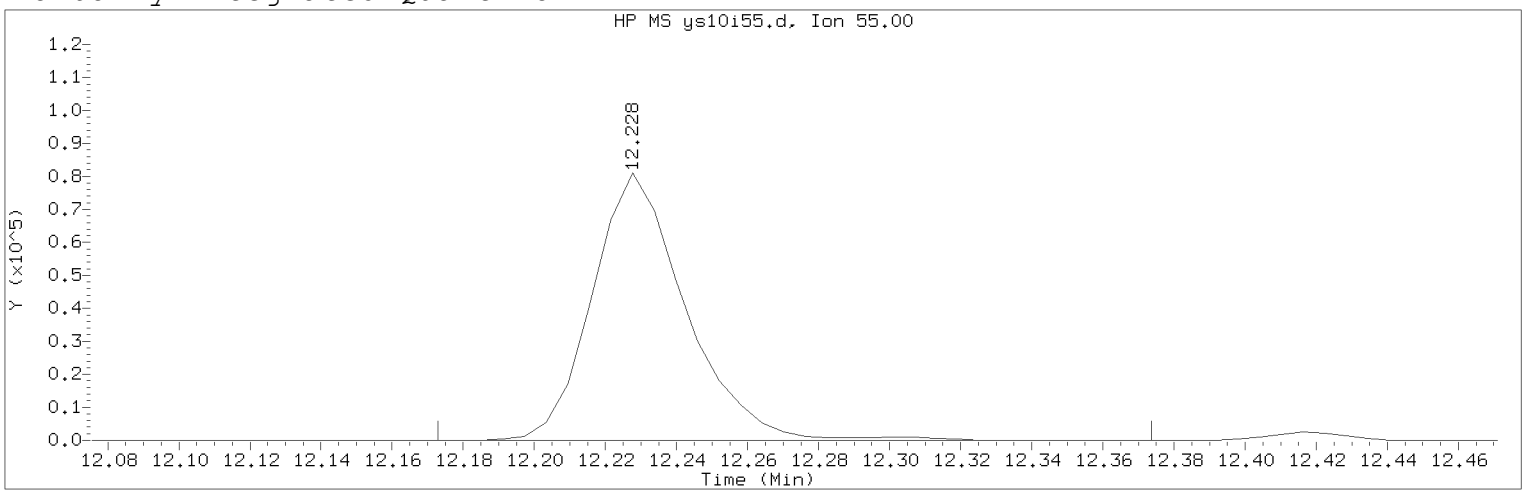
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1177		
Retention Time (minutes)	: 8.742		
Quant Ion	: 88.00		
Area	: 32298		
On-column Amount (ng)	: 223.2004		
Integration start scan	: 1152	Integration stop scan:	1211
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

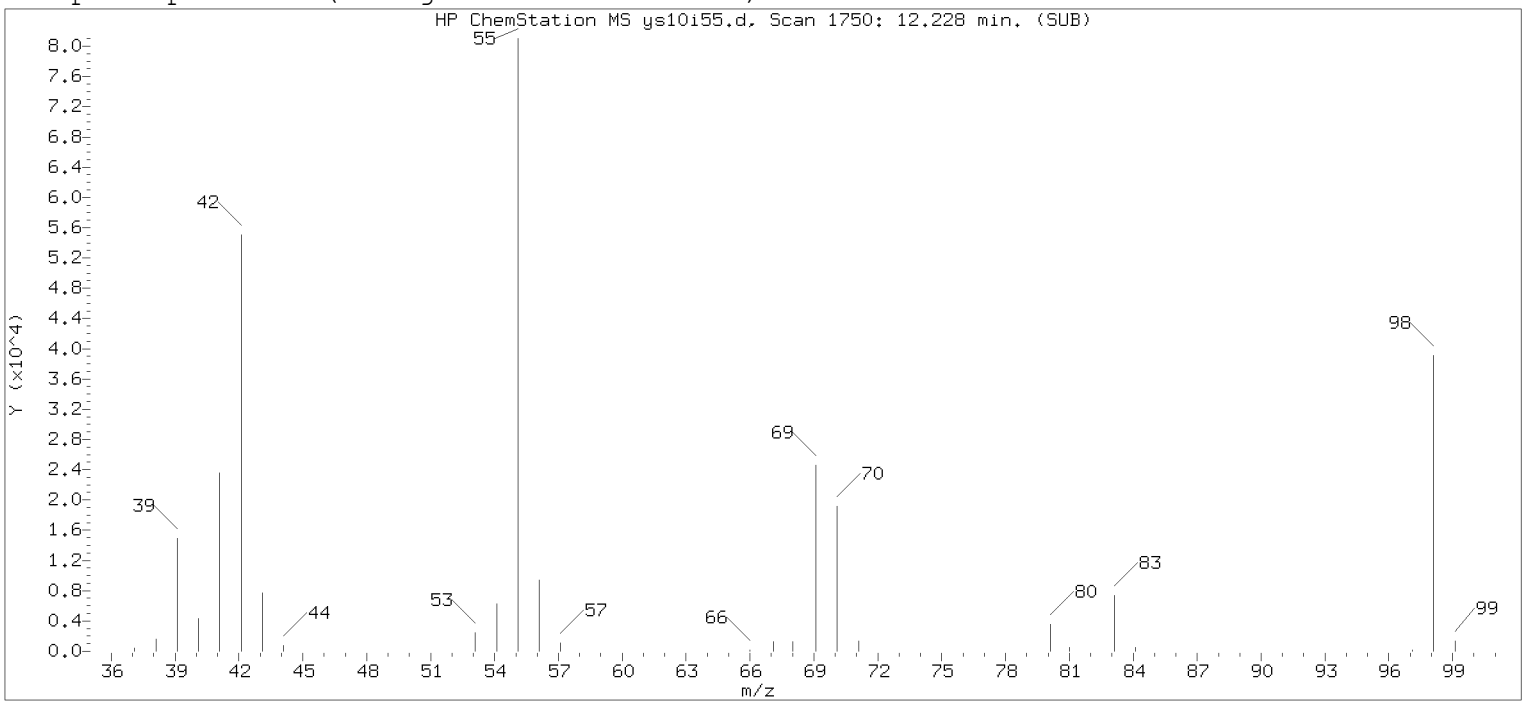
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1750
Retention Time (minutes): 12.228
Quant Ion : 55.00
Area (flag) : 147464M
On-Column Amount (ng) : 246.0168
Integration start scan : 1740 Integration stop scan: 1773
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

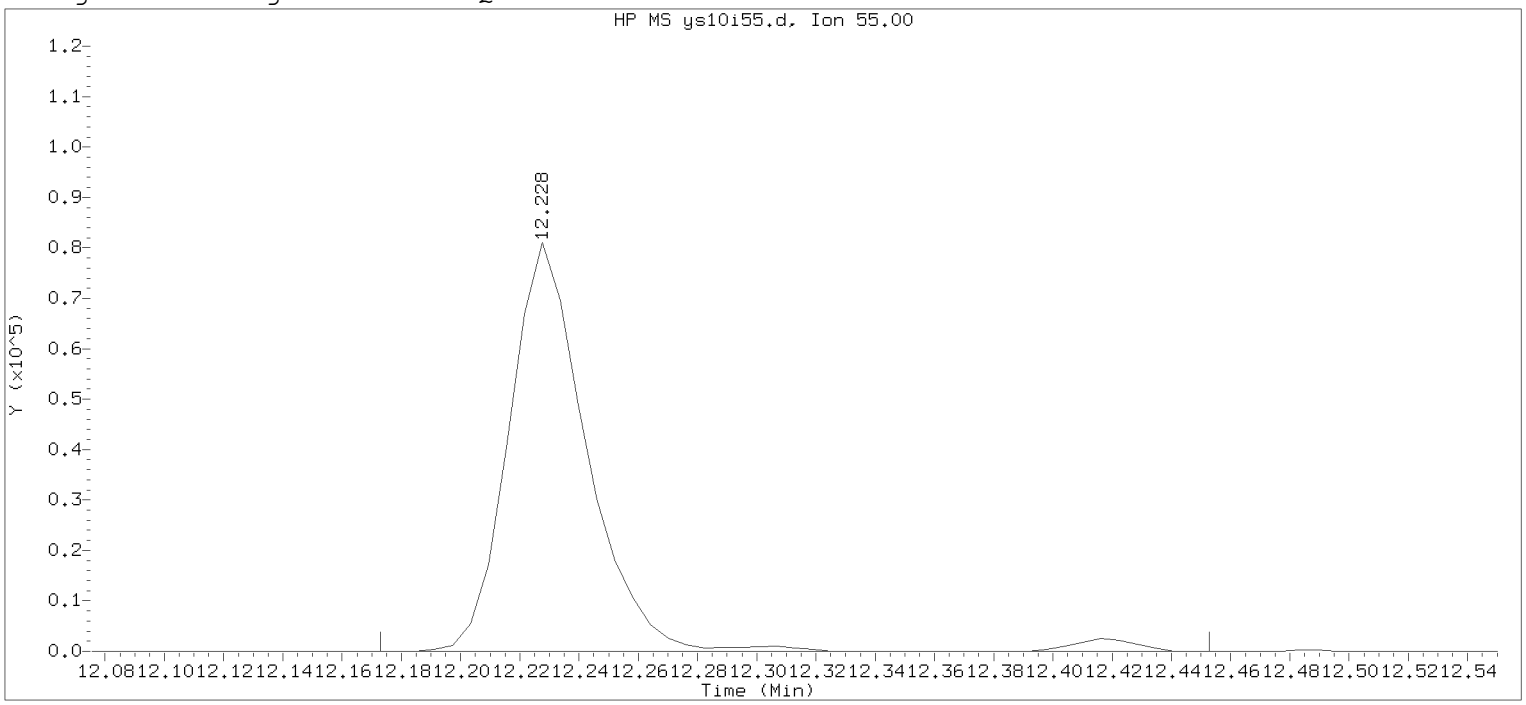
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

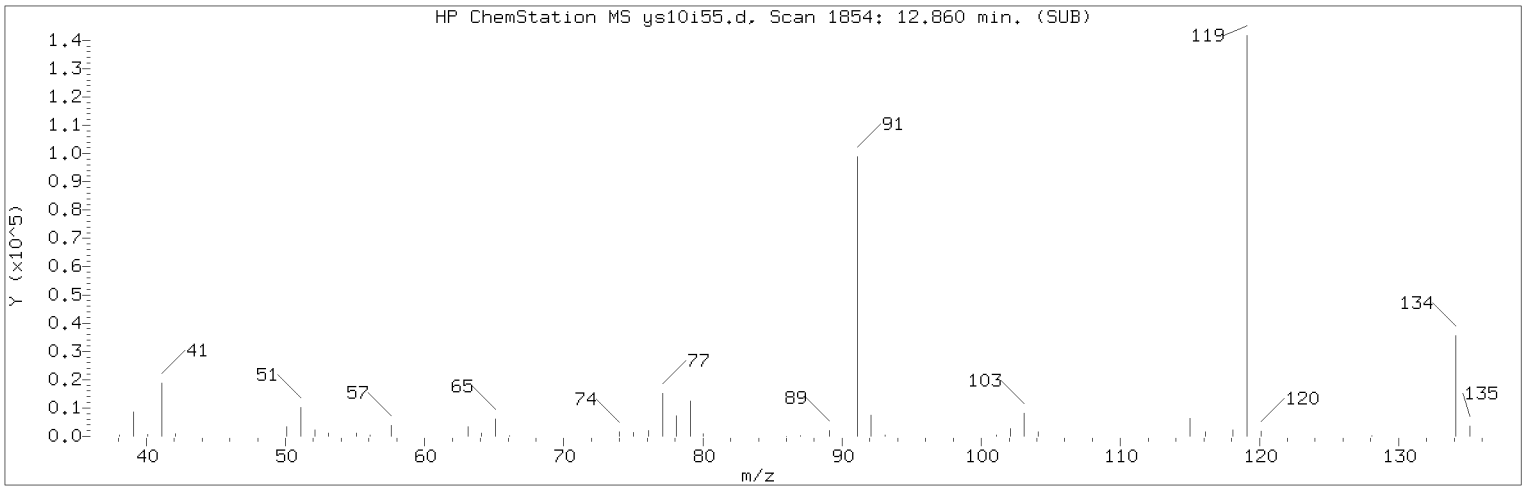
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

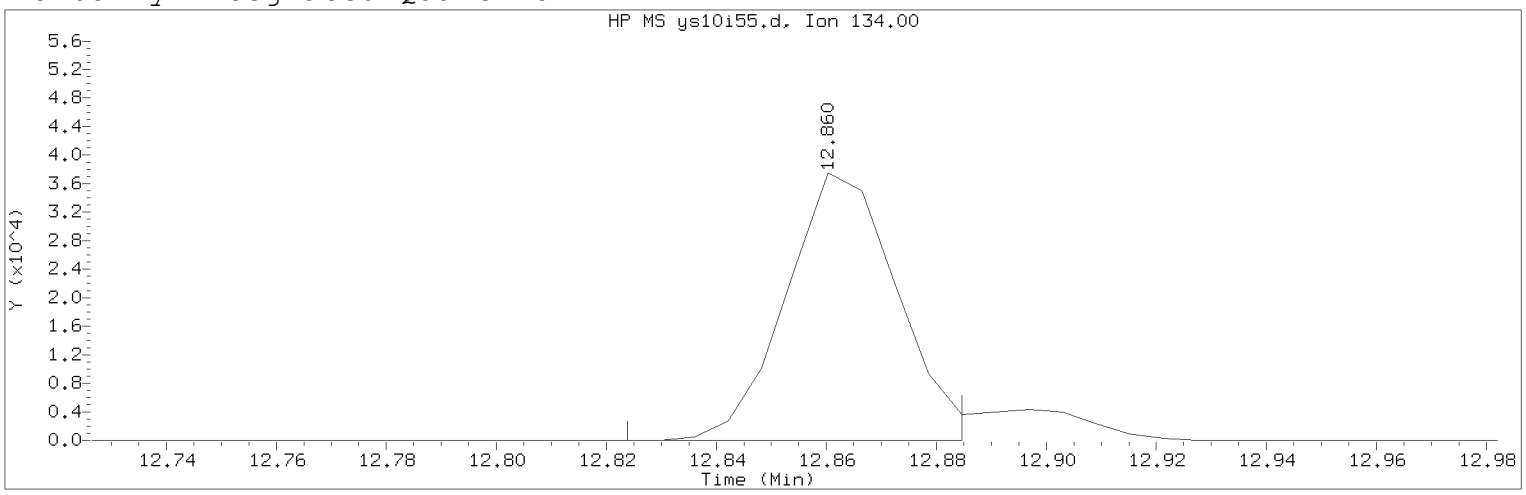
Compound Number	: 112		
Compound Name	: Cyclohexanone		
Scan Number	: 1750		
Retention Time (minutes)	: 12.228		
Quant Ion	: 55.00		
Area	: 151043		
On-column Amount (ng)	: 249.8776		
Integration start scan	: 1740	Integration stop scan:	1786
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

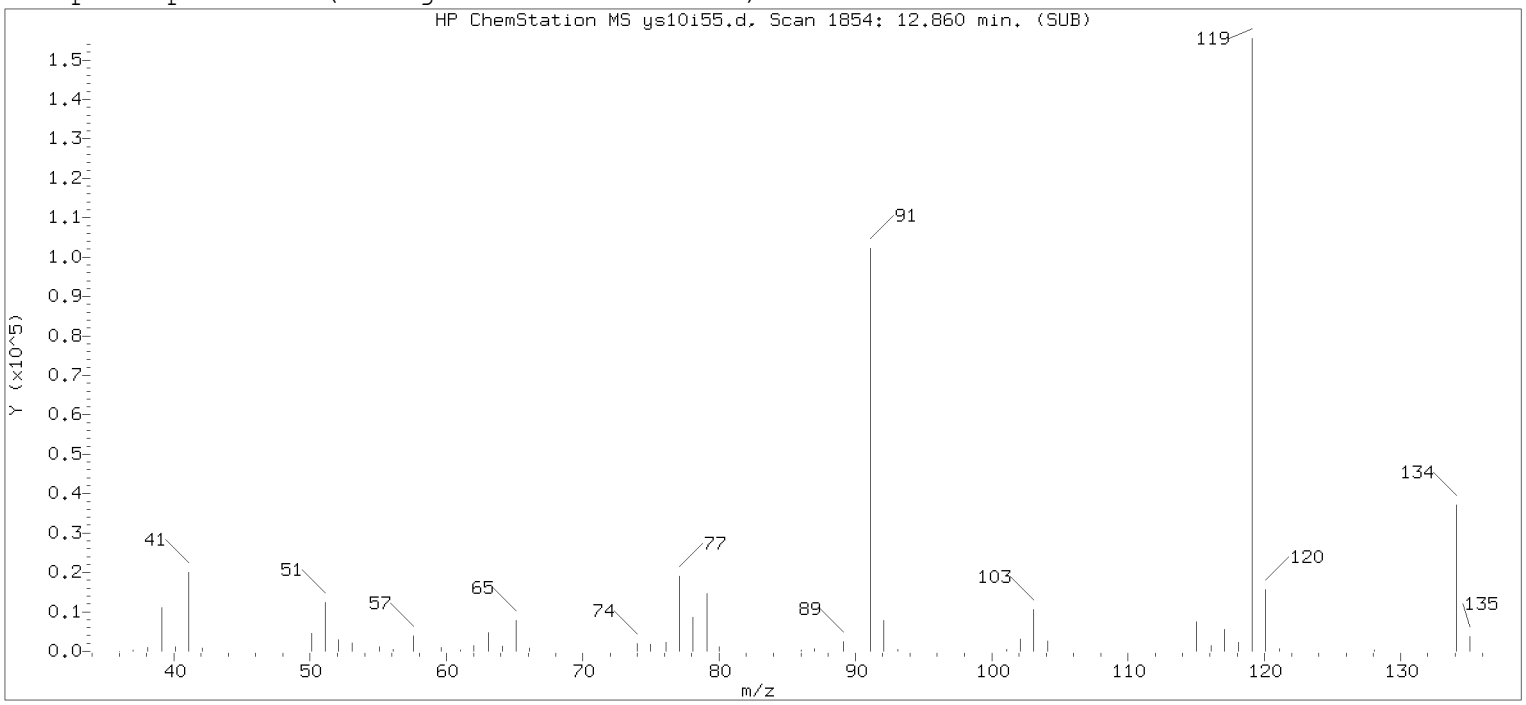
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area (flag) : 52784M
On-Column Amount (ng) : 9.1295
Integration start scan : 1847 Integration stop scan: 1857
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

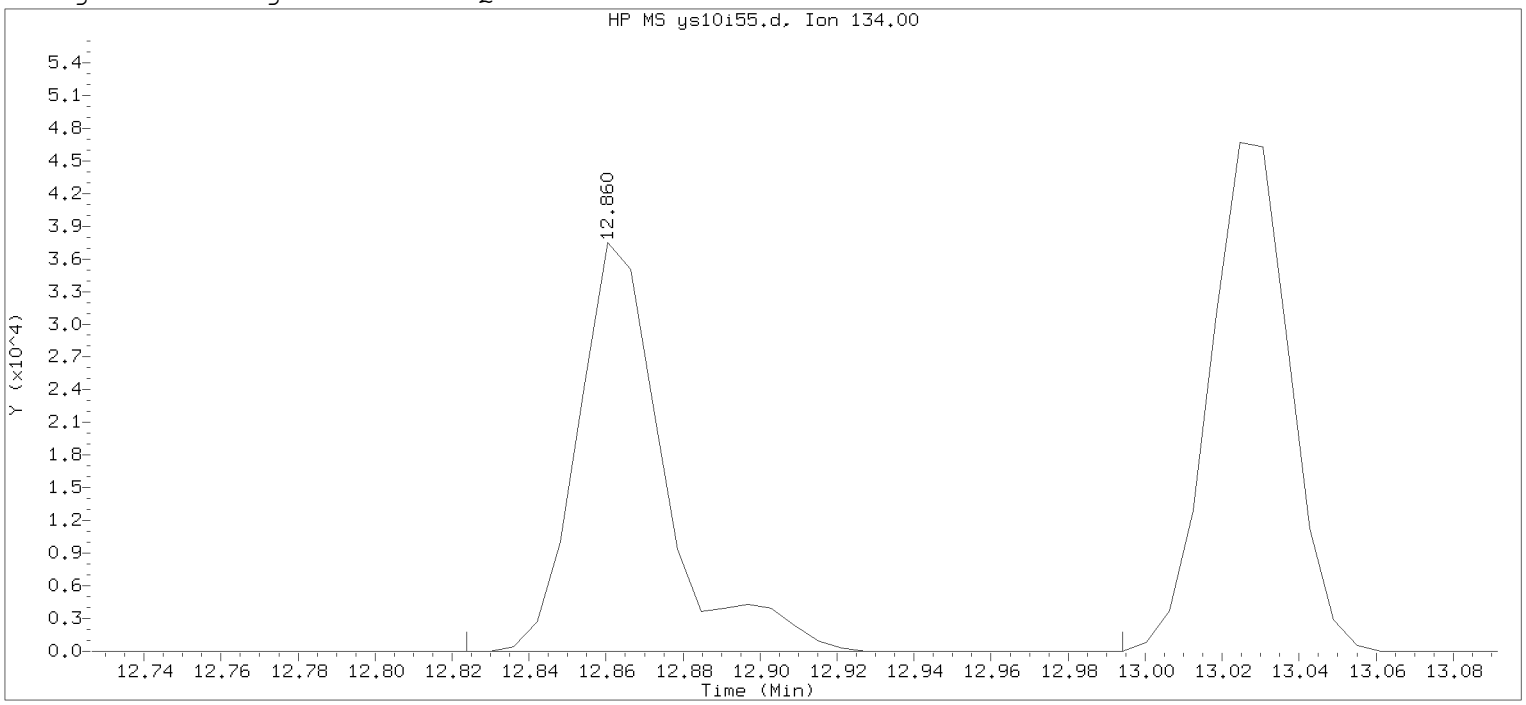
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

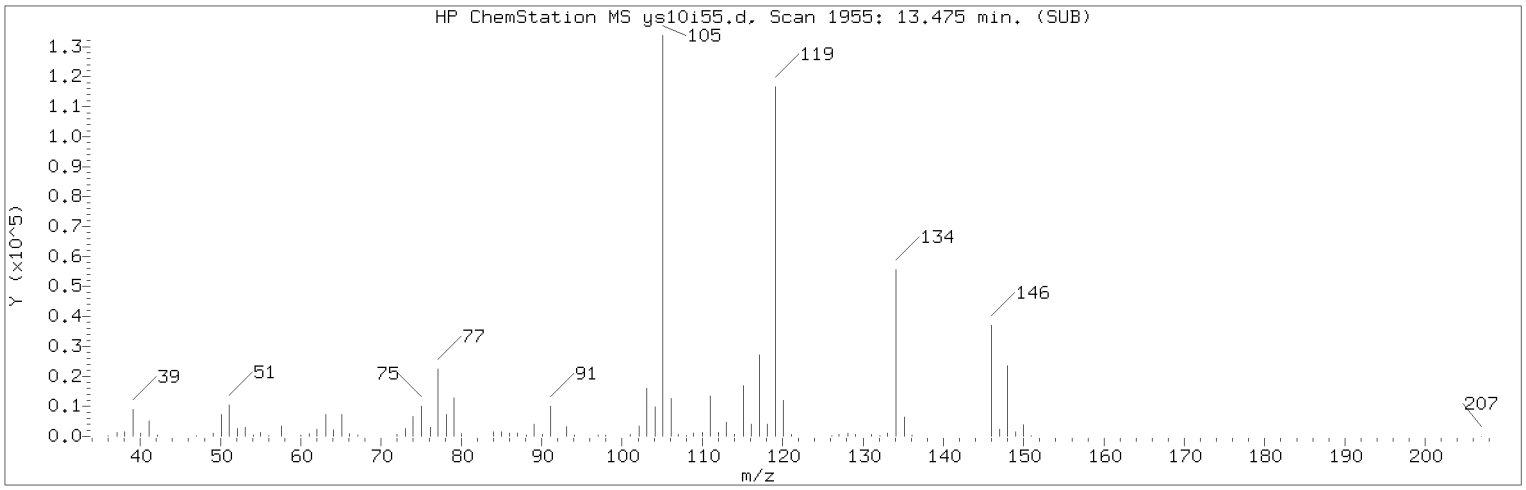
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

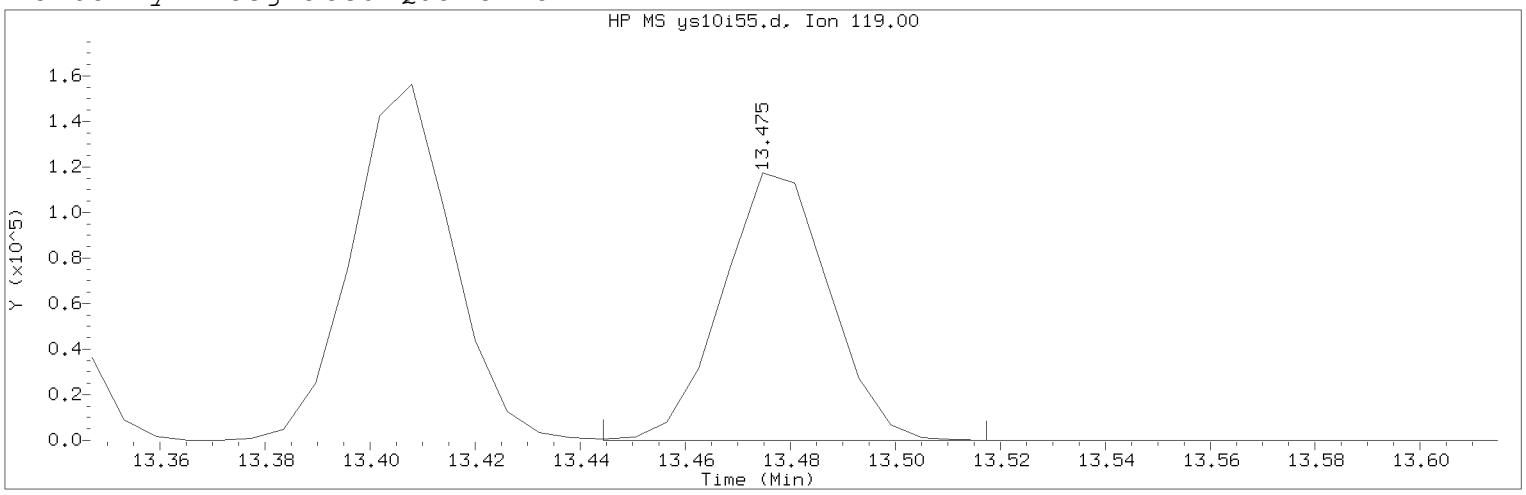
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area : 58516
On-column Amount (ng) : 9.5037
Integration start scan : 1847 Integration stop scan: 1875
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

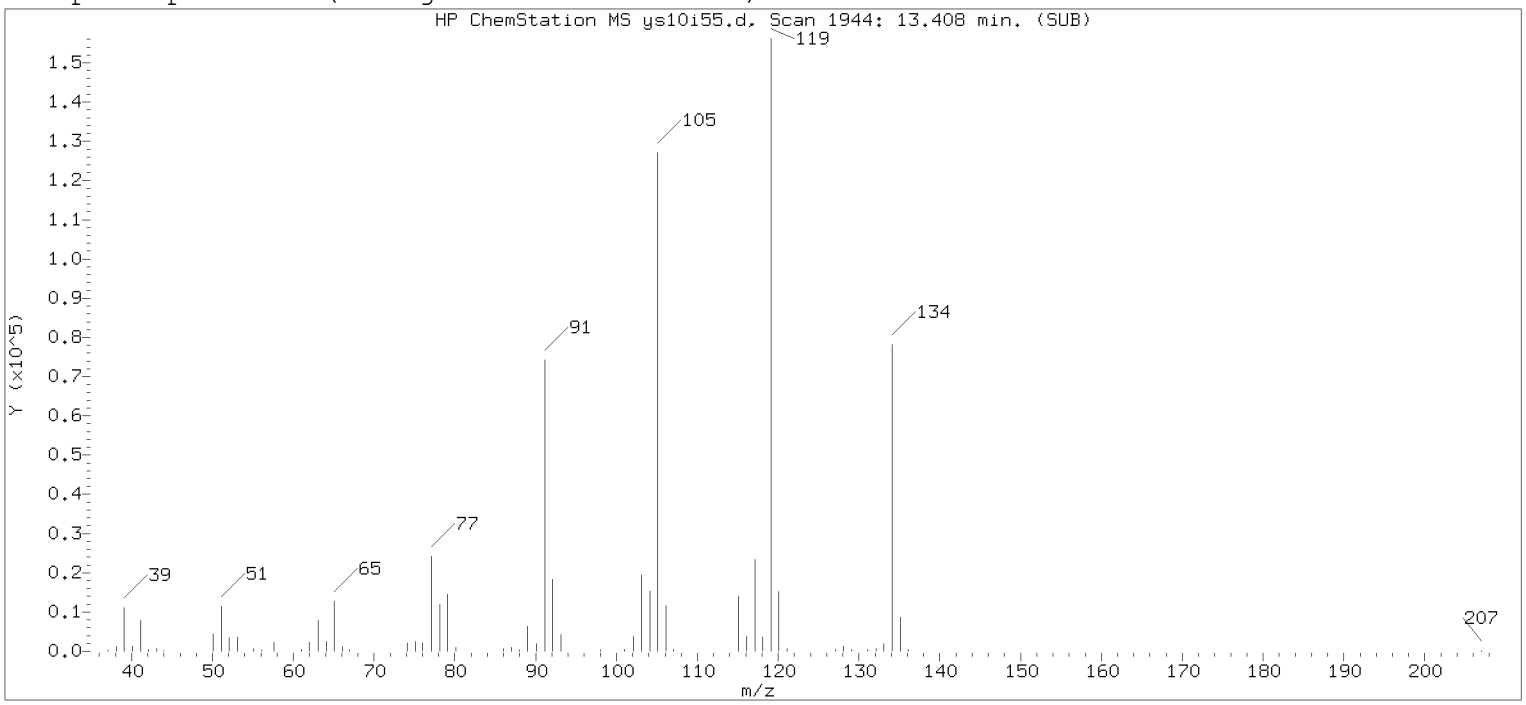
Compound Number : 140
Compound Name : 1,2-Diethylbenzene
Scan Number : 1955
Retention Time (minutes): 13.475
Quant Ion : 119.00
Area (flag) : 165509M
On-Column Amount (ng) : 9.9919
Integration start scan : 1949 Integration stop scan: 1961
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

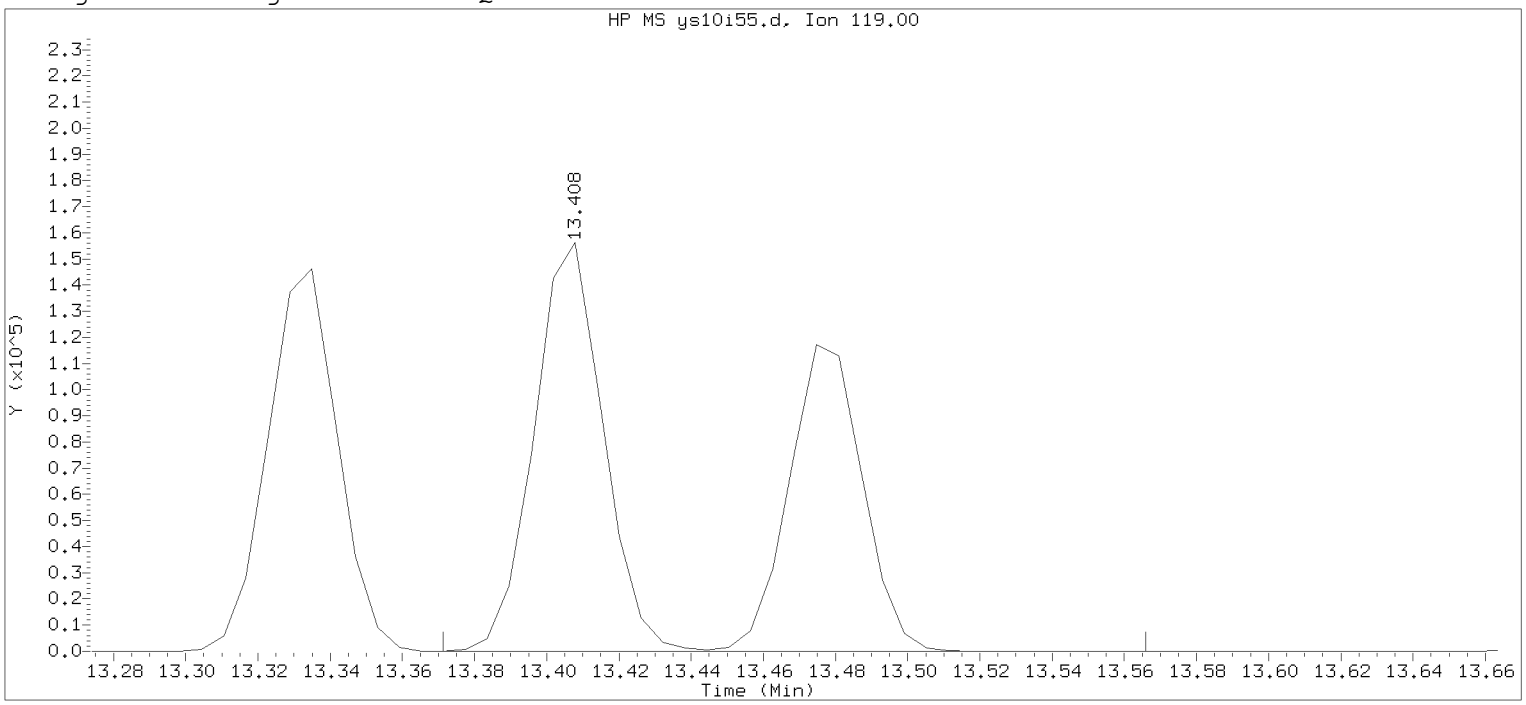
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



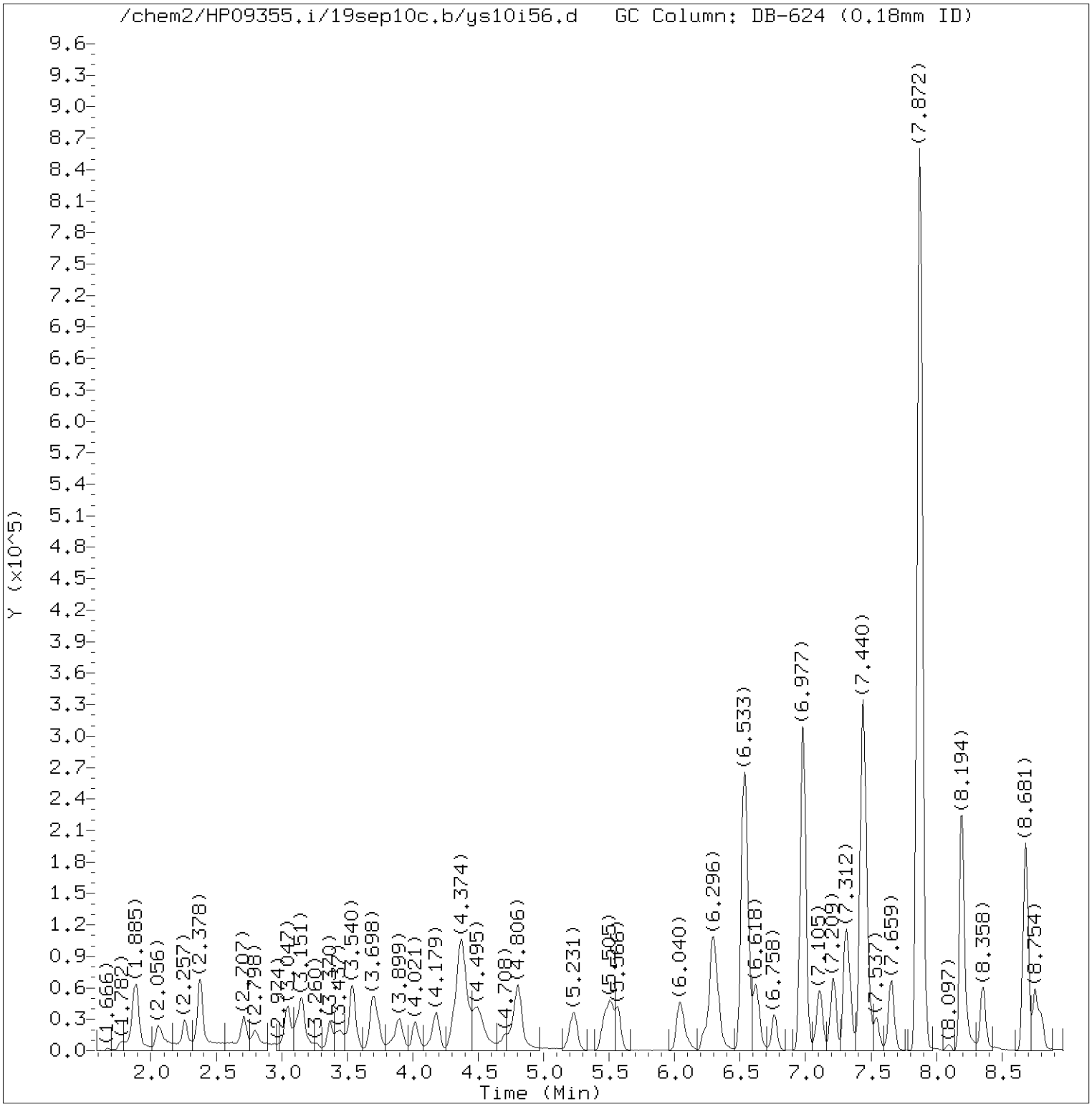
Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 140
Compound Name : 1,2-Diethylbenzene
Scan Number : 1944
Retention Time (minutes): 13.408
Quant Ion : 119.00
Area : 373260
On-column Amount (ng) : 14.8689
Integration start scan : 1937 Integration stop scan: 1969
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648



Total Ion Chromatogram (TIC)

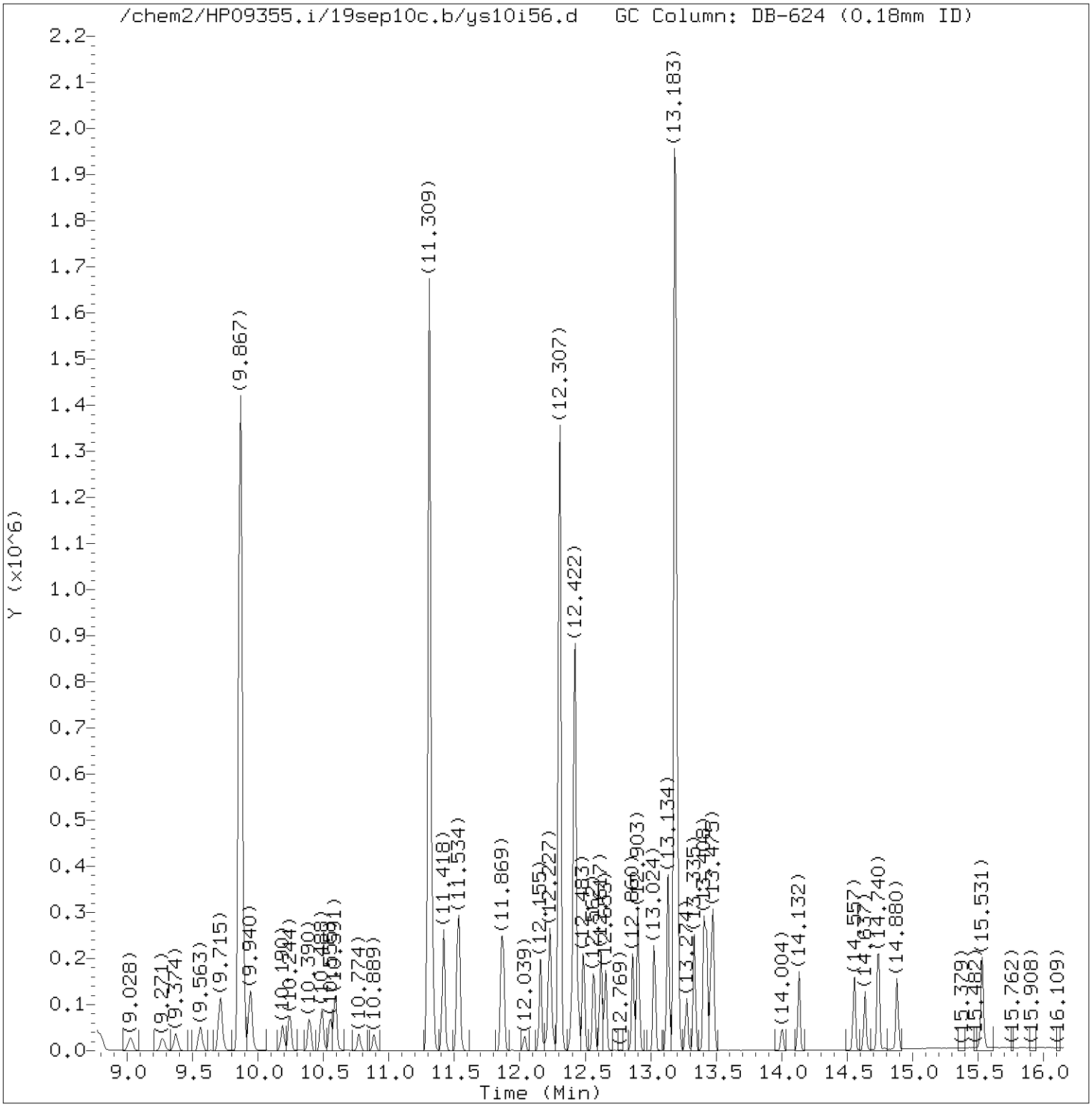
Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i56.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i56.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i56.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.056	85	44143	3.970
4) Chloromethane	(2)	2.263	50	37315	3.994
5) 1,3-Butadiene	(2)	2.372	39	31253	4.430
6) Vinyl Chloride	(2)	2.378	62	36716	3.972
8) Bromomethane	(2)	2.707	94	27497	4.040
9) Chloroethane	(2)	2.798	64	21765	4.096
10) Dichlorofluoromethane	(2)	3.041	67	45587	4.078
12) Trichlorofluoromethane	(2)	3.114	101	46961	3.979
11) n-Pentane	(2)	3.151	43	47620	4.336
14) Ethyl ether	(2)	3.370	59	24200	3.972
15) Freon 123a	(2)	3.449	67	28798	4.052
16) Acrolein	(1)	3.540	56	103740	37.335
17) 1,1-Dichloroethene	(2)	3.686	96	20565	3.935
17) 1,1-Dichloroethene	(2)	3.686	63	10591	3.959
18) Acetone	(1)	3.710	58	10117	7.644
19) Freon 113	(2)	3.723	101	23754	3.965
21) 2-Propanol	(1)	3.875	45	60000	76.588
22) Methyl Iodide	(2)	3.899	142	40218	3.967
23) Carbon Disulfide	(2)	4.021	76	71504	3.802
27) Methyl Acetate	(2)	4.149	43	37047	4.175
25) Allyl Chloride	(2)	4.179	41	35513	3.940
29)*t-Butyl alcohol-d10	(1)	4.368	65	363057M	250.000
28) Methylene Chloride	(2)	4.374	84	24513	3.969
30) t-Butyl alcohol	(1)	4.495	59	129551	79.226
31) Acrylonitrile	(2)	4.708	53	17931	3.705
33) Methyl Tertiary Butyl Ether	(2)	4.787	73	80745	3.951
32) trans-1,2-Dichloroethene	(2)	4.806	96	23966	3.984
34) n-Hexane	(2)	5.237	57	40285	3.936
36) 1,1-Dichloroethane	(2)	5.456	63	42374	3.892
38) di-Isopropyl ether	(2)	5.505	45	81655	3.942
39) 2-Chloro-1,3-butadiene	(2)	5.566	53	38324	3.831
40) Ethyl t-butyl ether	(2)	6.040	59	80480	3.976
43) 1,2-Dichloroethene (Total)	(2)		96	50795	7.925
44) 2-Butanone	(2)	6.229	43	53533	7.638
42) cis-1,2-Dichloroethene	(2)	6.284	96	26829	3.940
45) 2,2-Dichloropropane	(2)	6.302	77	32672	3.858
47) Propionitrile	(1)	6.308	54	146382	77.457
48) Methacrylonitrile	(2)	6.533	67	190321	37.921

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i56.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.625	128	13679	3.839
50) Tetrahydrofuran	(1)	6.631	71	15352	7.502
51) Chloroform	(2)	6.758	83	41349	3.919
52)$Dibromofluoromethane	(2)	6.977	113	273732	49.750
52)$Dibromofluoromethane	(2)	6.977	111	279562	49.624
53) 1,1,1-Trichloroethane	(2)	6.996	97	35967	3.919
54) Cyclohexane	(2)	7.105	56	47800	4.003
54) Cyclohexane	(2)	7.105	84	41166	3.989
54) Cyclohexane	(2)	7.111	69	15016	3.982
55) 1,1-Dichloropropene	(2)	7.209	75	35314	3.990
56) Carbon Tetrachloride	(2)	7.221	117	29275	3.704
58) Isobutyl Alcohol	(1)	7.312	41	112777	200.760
57)$1,2-Dichloroethane-d4	(2)	7.440	102	71863	50.081
57)$1,2-Dichloroethane-d4	(2)	7.440	65	349677	50.593
57)$1,2-Dichloroethane-d4	(2)	7.440	104	46102	50.604
60) Benzene	(2)	7.476	78	103834	4.044
61) 1,2-Dichloroethane	(2)	7.543	62	36093	4.072
61) 1,2-Dichloroethane	(2)	7.537	98	2936	3.734
65) t-Amyl methyl ether	(2)	7.659	73	80727	3.988
66)*Fluorobenzene	(2)	7.872	96	1170589	50.000
67) n-Heptane	(2)	7.878	43	42499	3.973
69) n-Butanol	(1)	8.194	56	205677	383.052
71) Trichloroethene	(2)	8.352	95	26708	4.005
72) Methylcyclohexane	(2)	8.675	83	48913	3.855
72) Methylcyclohexane	(2)	8.669	98	21626	3.841
73) 1,2-Dichloropropane	(2)	8.687	63	25175	3.831
76) Methyl Methacrylate	(2)	8.754	69	28723	3.696
75) 1,4-Dioxane	(1)	8.766	88	22328M	188.410
74) Dibromomethane	(2)	8.796	93	16541	3.831
78) Bromodichloromethane	(2)	9.028	83	26793	3.500
79) 2-Nitropropane	(2)	9.271	41	21124	6.380
80) 2-Chloroethyl Vinyl Ether	(2)	9.374	63	20432	3.638
81) cis-1,3-Dichloropropene	(2)	9.557	75	36954	3.561
82) 4-Methyl-2-pentanone	(2)	9.715	43	97805	7.338
83)$Toluene-d8	(3)	9.867	98	1184240	50.213
83)$Toluene-d8	(3)	9.867	100	759194	49.907
88) Toluene	(3)	9.940	92	66167	4.037
90) 1,3-Dichloropropene (total)	(3)		100	70238	6.967

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i56.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.190	75	33284	3.405
91) Ethyl Methacrylate	(3)	10.238	69	43932	3.556
92) 1,1,2-Trichloroethane	(3)	10.390	97	24744	3.921
93) Tetrachloroethene	(3)	10.488	166	28588	4.119
94) 1,3-Dichloropropane	(3)	10.555	76	42694	3.906
96) 2-Hexanone	(3)	10.591	43	79112	7.257
97) Dibromochloromethane	(3)	10.774	129	21171	3.341
99) 1,2-Dibromoethane	(3)	10.883	107	25824	3.725
100)*Chlorobenzene-d5	(3)	11.309	117	871706	50.000
101) 1-Chlorohexane	(3)	11.315	91	37388	4.129
102) Chlorobenzene	(3)	11.333	112	73824	4.034
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	21753	3.647
104) Ethylbenzene	(3)	11.418	91	127132	4.054
106) m+p-Xylene	(3)	11.534	106	99869	8.095
108) Xylene (Total)	(3)		106	148095	12.080
107) o-Xylene	(3)	11.862	106	48226	3.985
109) Styrene	(3)	11.875	104	75761	3.742
110) Bromoform	(3)	12.039	173	13882	3.030
111) Isopropylbenzene	(3)	12.161	105	127722	4.100
112) Cyclohexanone	(1)	12.227	55	117714	194.139
114)$4-Bromofluorobenzene	(3)	12.307	95	450978	50.028
114)$4-Bromofluorobenzene	(3)	12.307	174	344824	50.437
116) 1,1,2,2-Tetrachloroethane	(4)	12.398	83	44304	3.933
118) trans-1,4-Dichloro-2-butene	(4)	12.416	53	145544	37.012
115) Bromobenzene	(4)	12.422	156	31142	3.986
117) 1,2,3-Trichloropropane	(4)	12.447	110	13995	3.930
119) n-Propylbenzene	(4)	12.483	91	153472	4.154
120) 2-Chlorotoluene	(4)	12.562	126	30359	3.972
122) 1,3,5-Trimethylbenzene	(4)	12.617	105	110008	4.006
121) 4-Chlorotoluene	(4)	12.653	126	31976	3.998
124) tert-Butylbenzene	(4)	12.860	134	22866M	3.973
125) Pentachloroethane	(4)	12.897	167	14919	3.340
126) 1,2,4-Trimethylbenzene	(4)	12.903	105	114609	3.984
127) sec-Butylbenzene	(4)	13.024	105	143021	4.114
129) 1,3-Dichlorobenzene	(4)	13.128	146	61972	4.092
130) p-Isopropyltoluene	(4)	13.134	119	121799	4.057
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	469299	50.000
133) 1,4-Dichlorobenzene	(4)	13.201	146	63133	4.082

M = Compound was manually integrated.
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on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i56.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.207	105	120301	3.983
135) Benzyl Chloride	(4)	13.274	91	71934	3.178
136) 1,3-Diethylbenzene	(4)	13.335	119	77606	3.951
141) Diethylbenzene (total)	(4)		100	225610	11.904
137) 1,4-Diethylbenzene	(4)	13.408	119	82394	3.974
139) n-Butylbenzene	(4)	13.426	92	64571	4.075
138) 1,2-Dichlorobenzene	(4)	13.462	146	60770	4.099
140) 1,2-Diethylbenzene	(4)	13.475	119	65610M	3.978
142) 1,2-Dibromo-3-chloropropane	(4)	14.004	75	10364	3.509
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	47309	4.145
146) 1,2,4-Trichlorobenzene	(4)	14.557	180	44115	4.069
147) Hexachlorobutadiene	(4)	14.637	225	20007	4.099
148) Naphthalene	(4)	14.740	128	155397	4.025
149) 1,2,3-Trichlorobenzene	(4)	14.880	180	43333	4.109
150) 2-Methylnaphthalene	(4)	15.531	142	96869	3.773

M = Compound was manually integrated.

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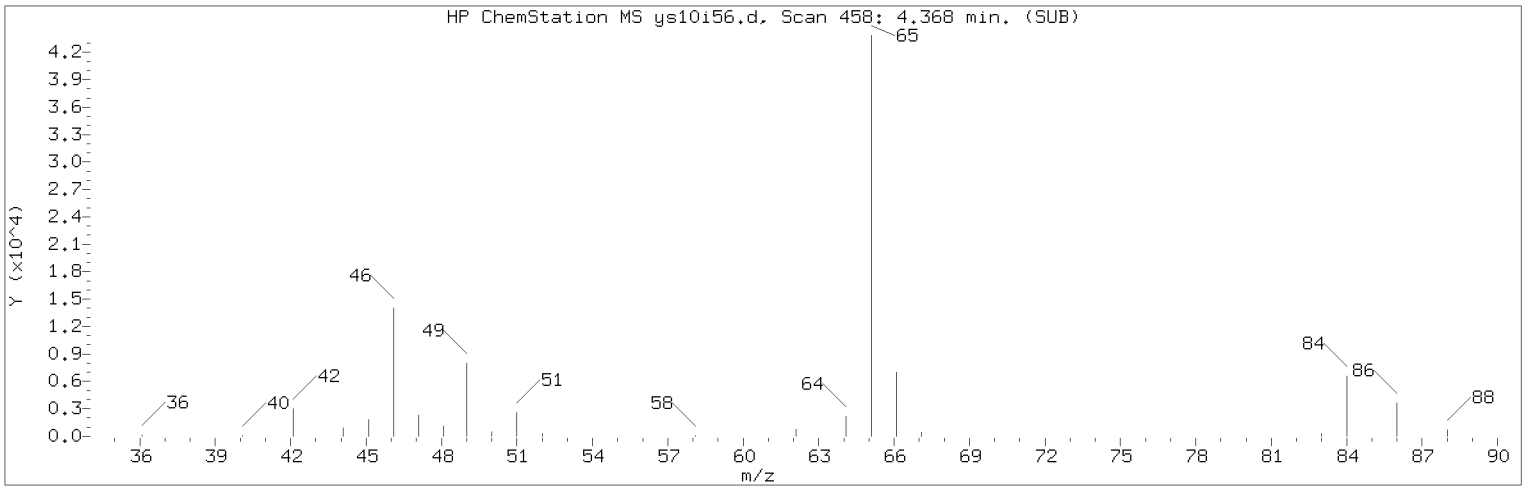
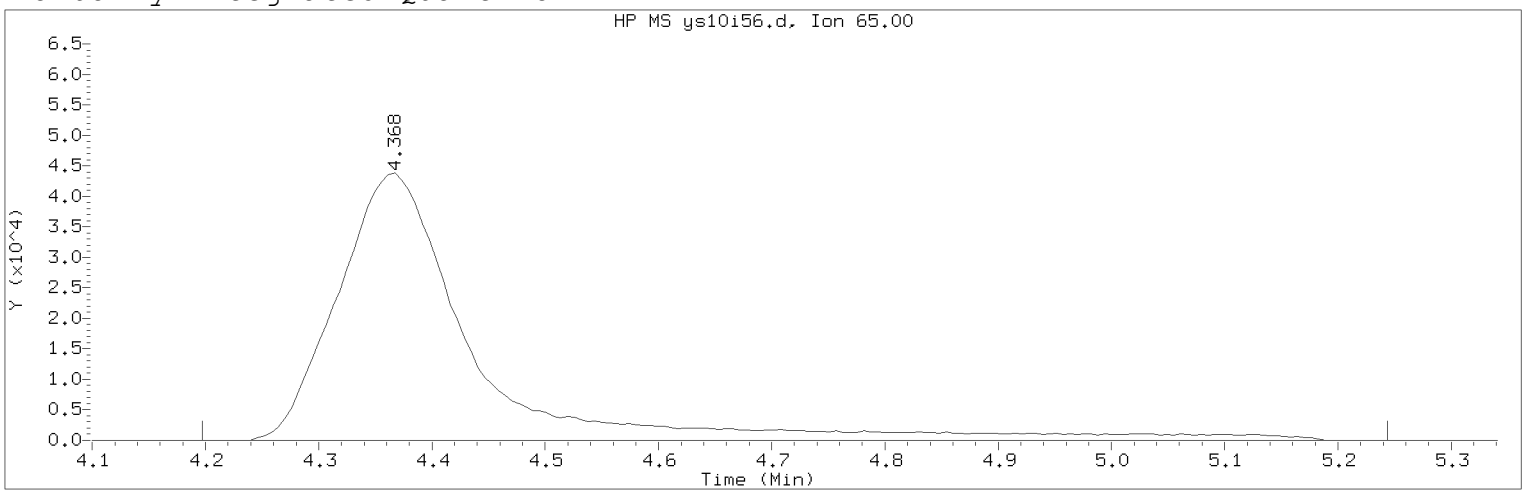
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i56.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

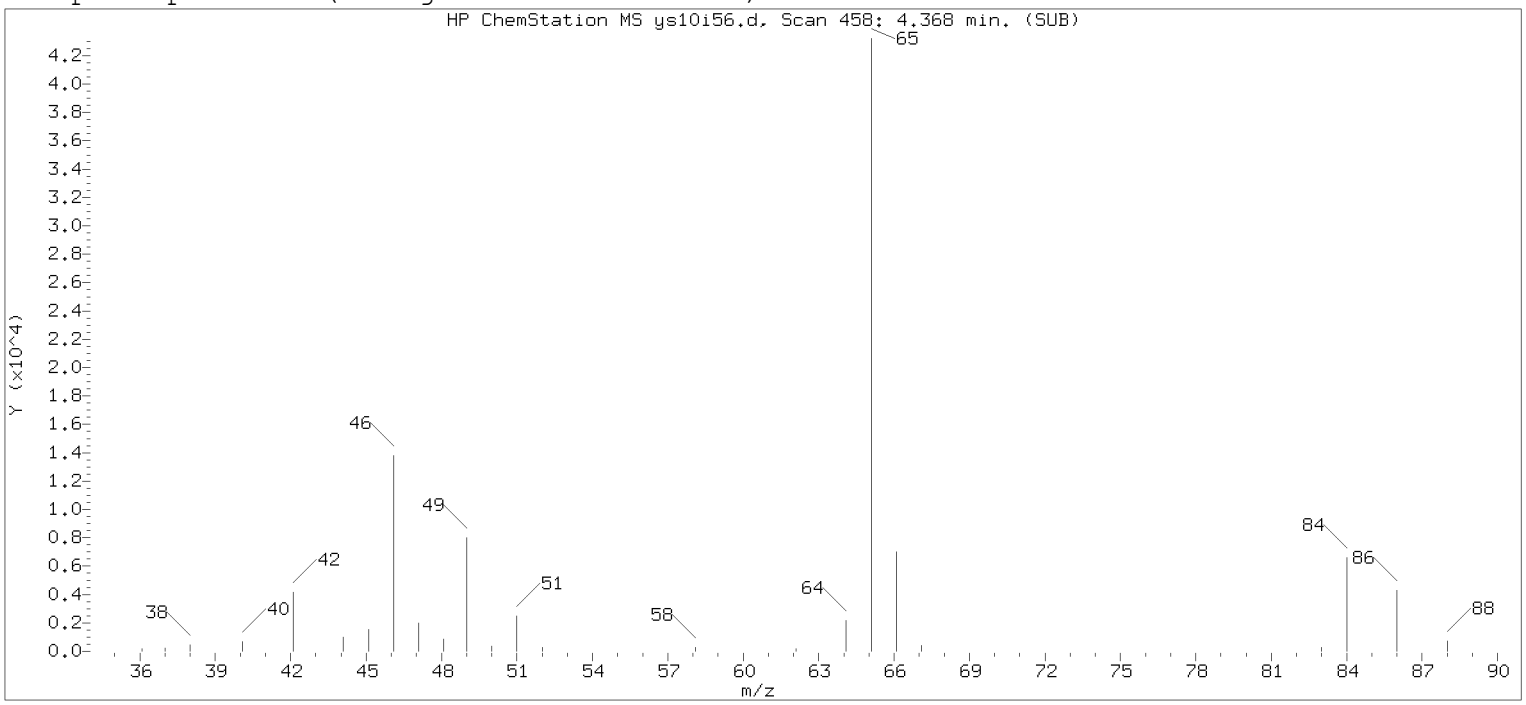
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 458
Retention Time (minutes): 4.368
Quant Ion : 65.00
Area (flag) : 363057M
On-Column Amount (ng) : 250.0000
Integration start scan : 429 Integration stop scan: 601
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

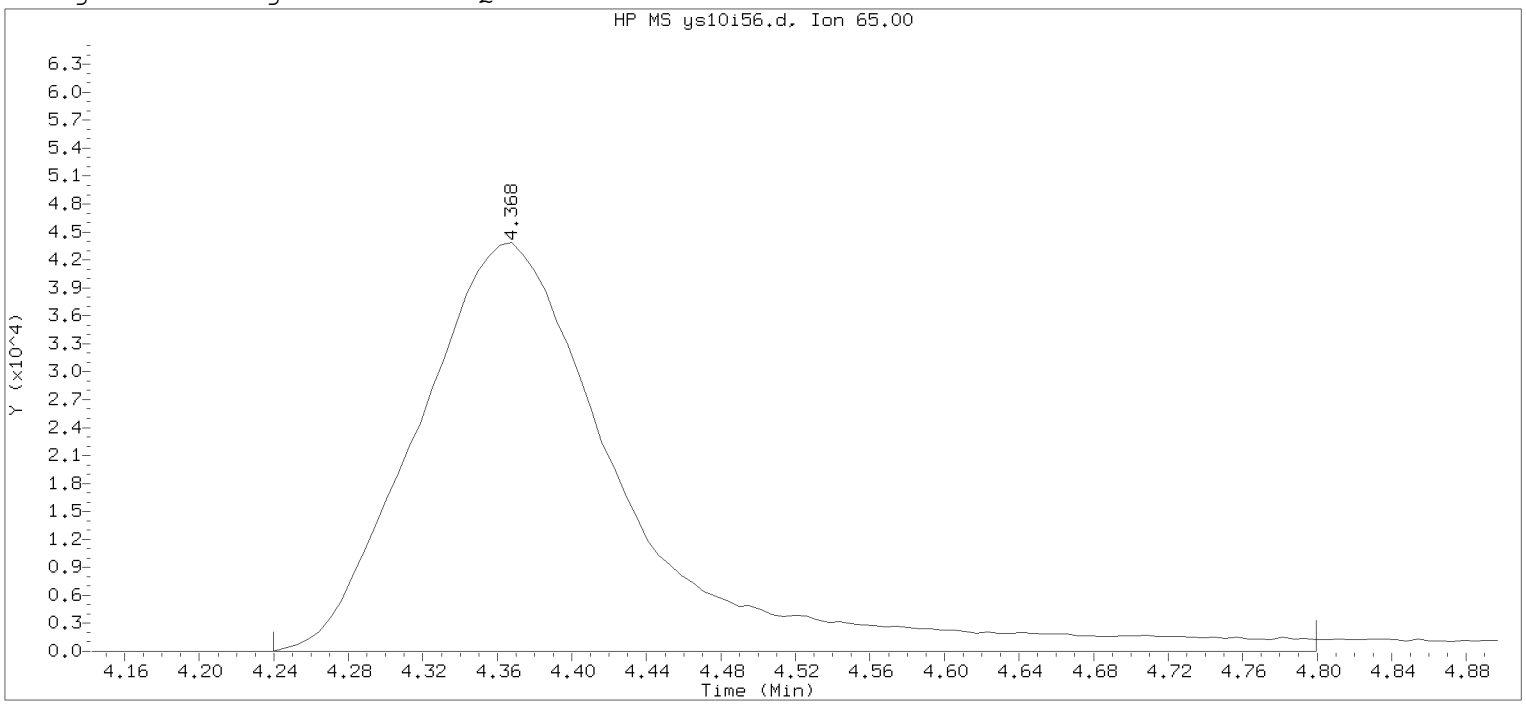
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i56.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

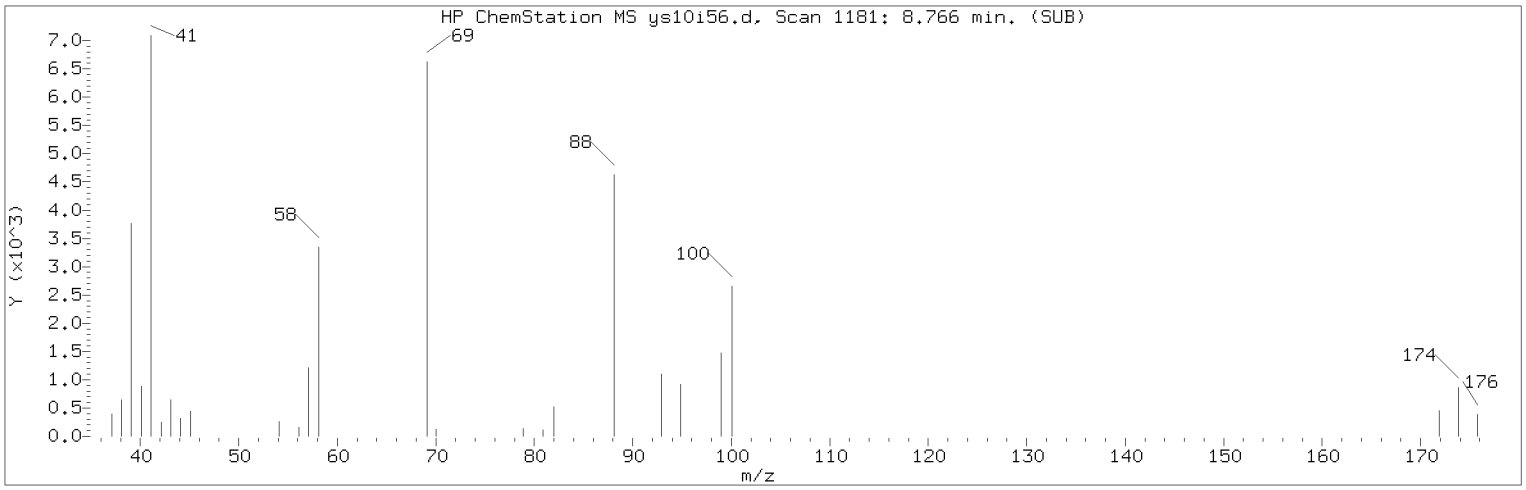
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

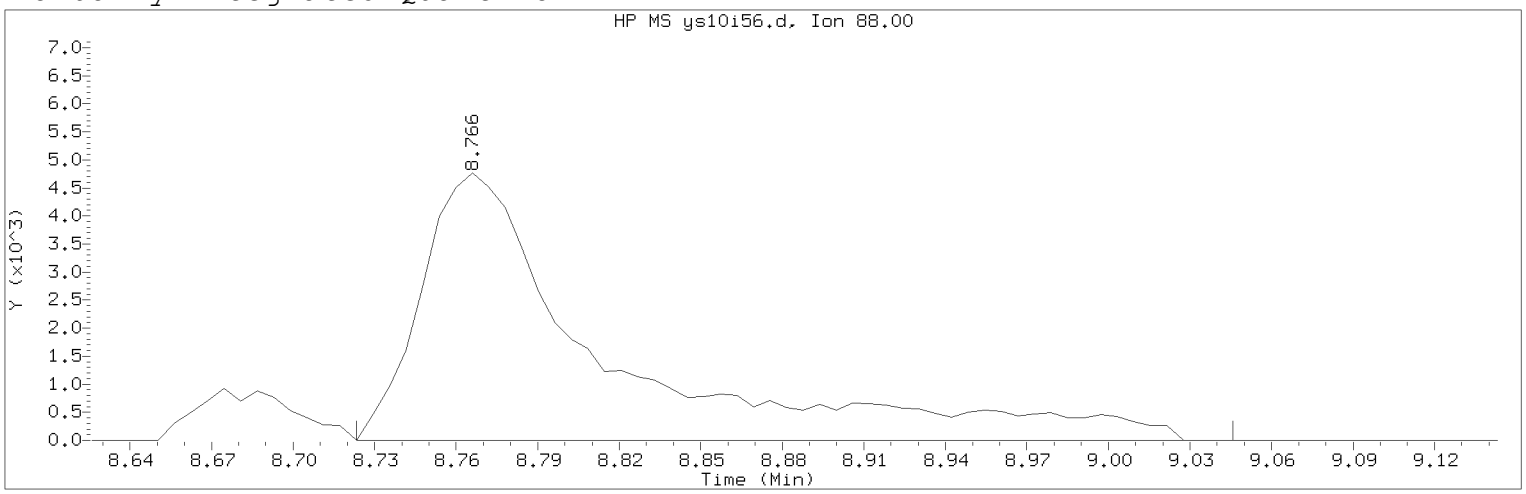
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 458
Retention Time (minutes): 4.368
Quant Ion : 65.00
Area : 340201
On-column Amount (ng) : 250.0000
Integration start scan : 436 Integration stop scan: 528
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i56.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

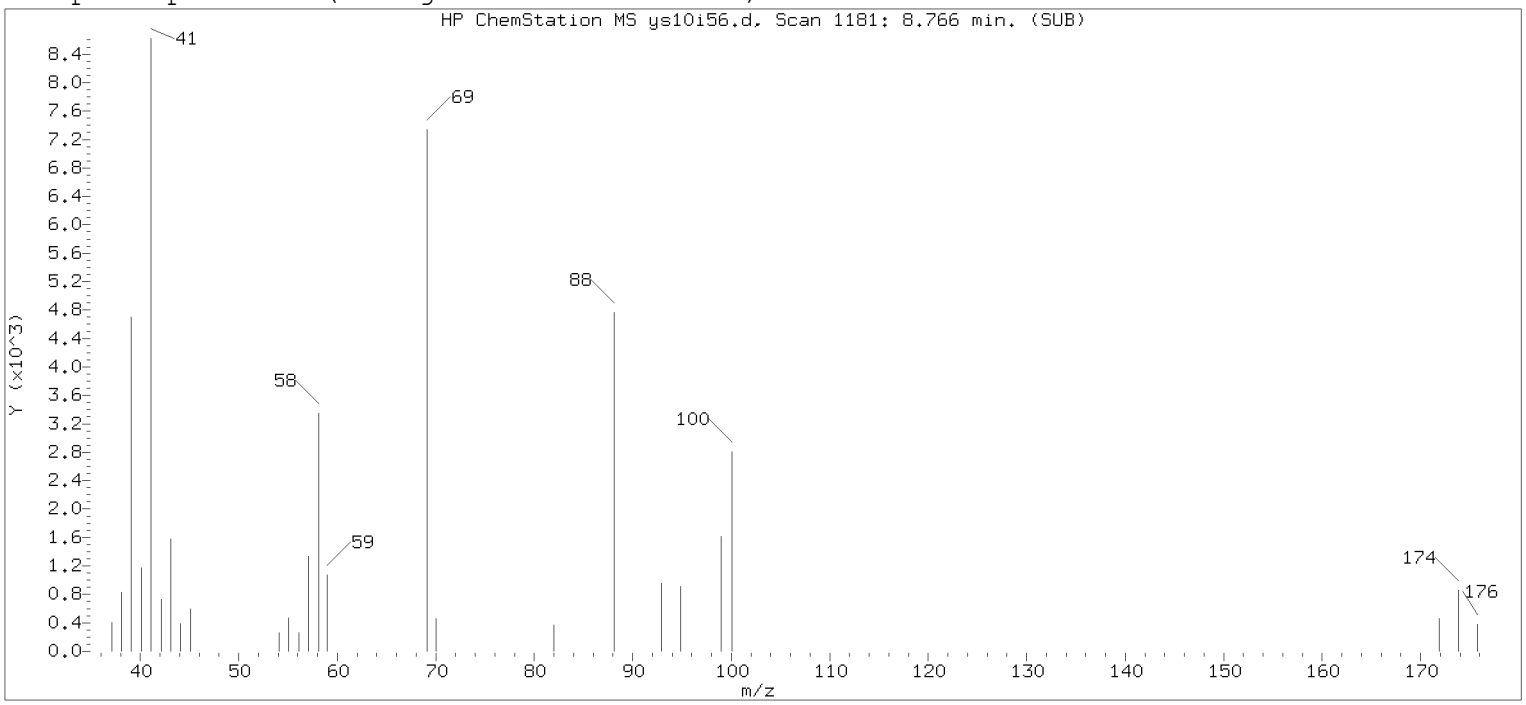
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1181
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area (flag) : 22328M
On-Column Amount (ng) : 188.4098
Integration start scan : 1173 Integration stop scan: 1226
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

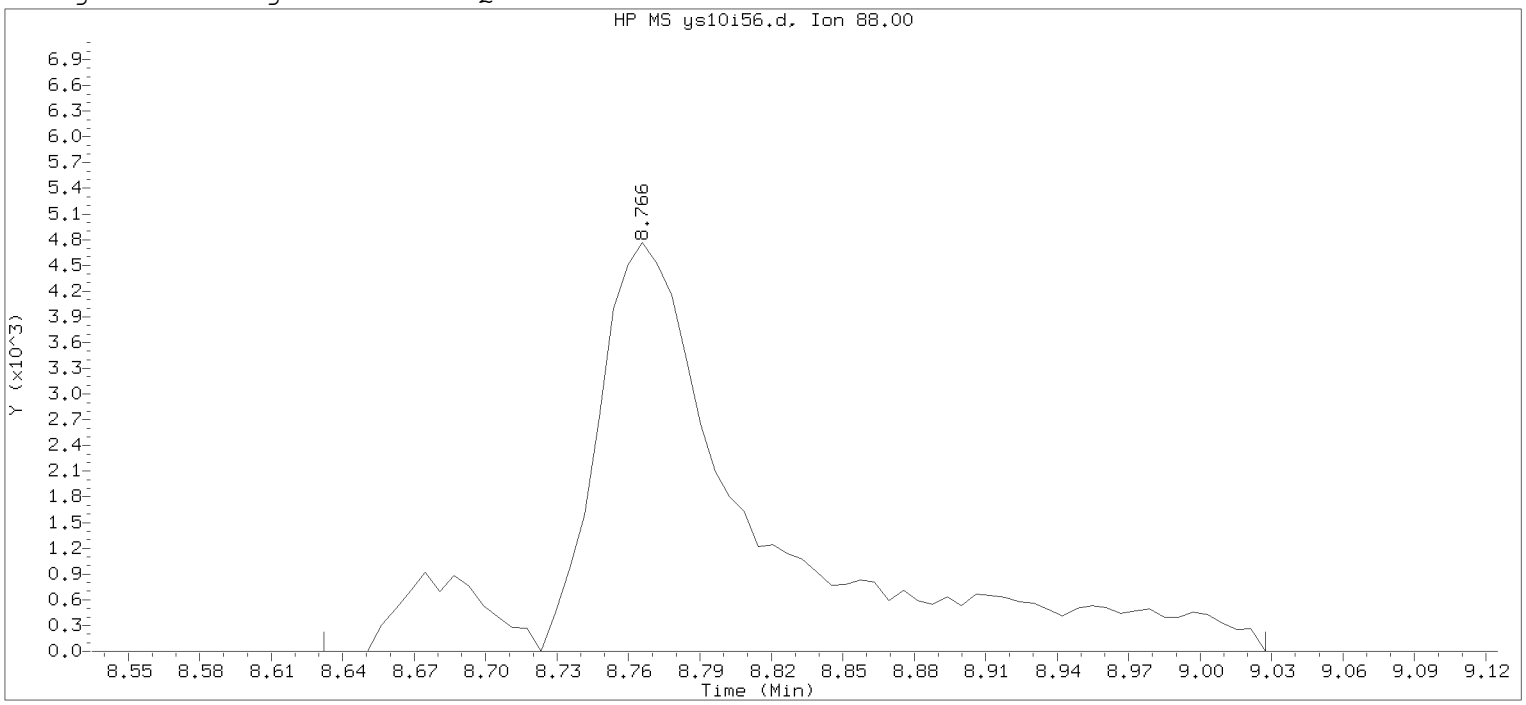
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i56.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1181		
Retention Time (minutes)	: 8.766		
Quant Ion	: 88.00		
Area	: 24615		
On-column Amount (ng)	: 173.1998		
Integration start scan	: 1158	Integration stop scan:	1223
Y at integration start	: 0	Y at integration end:	0

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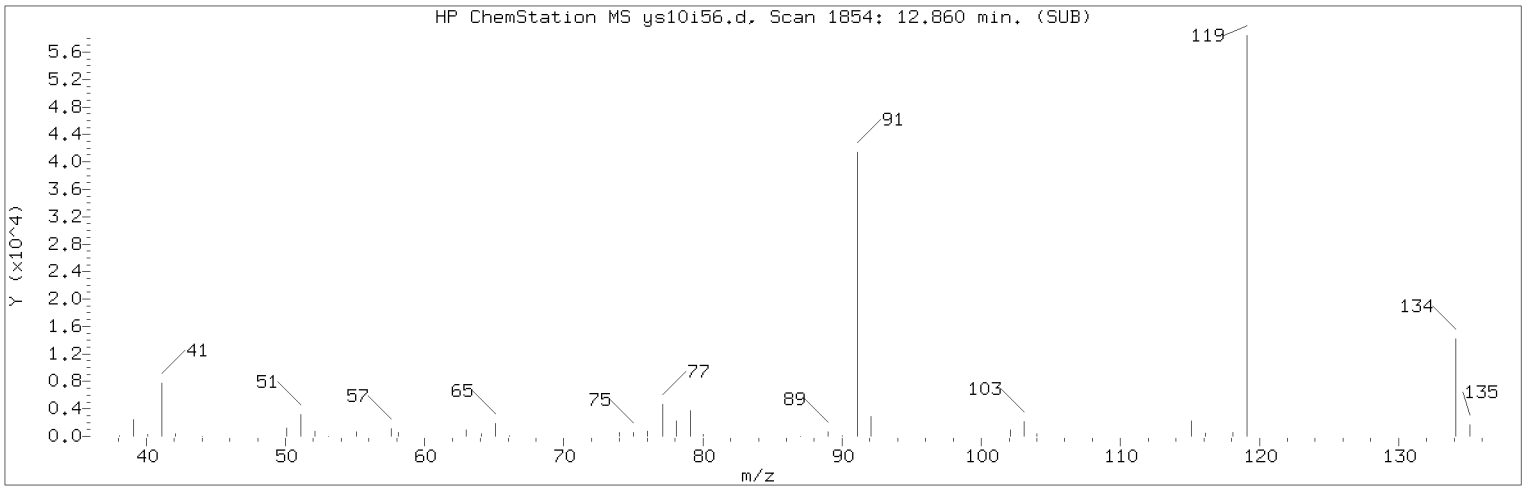
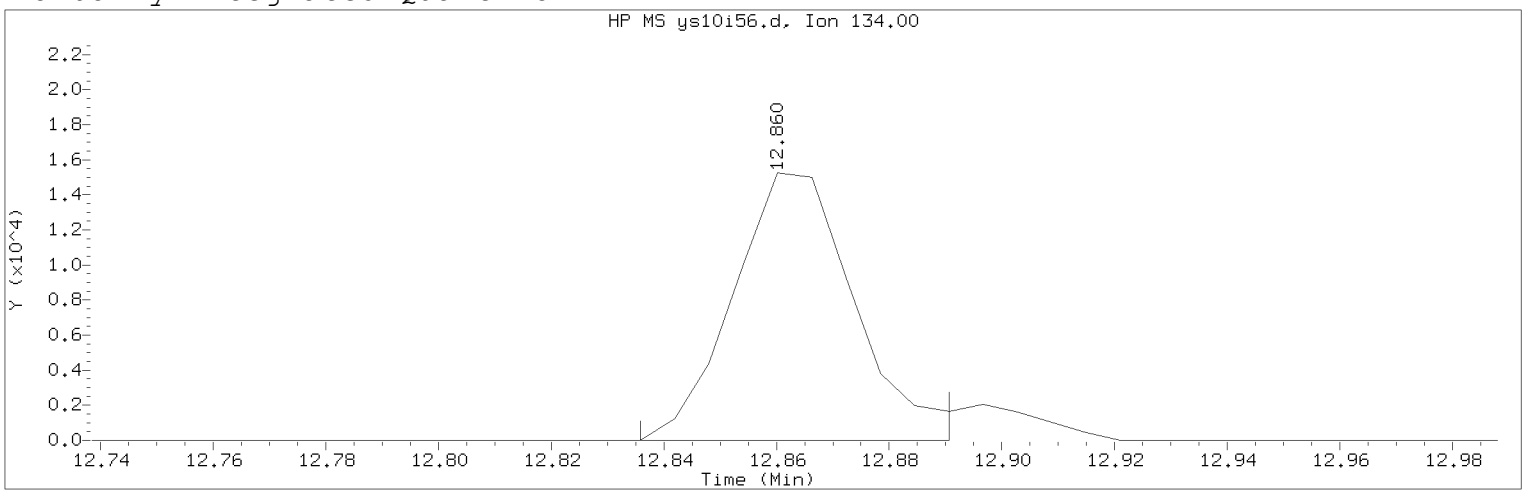
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

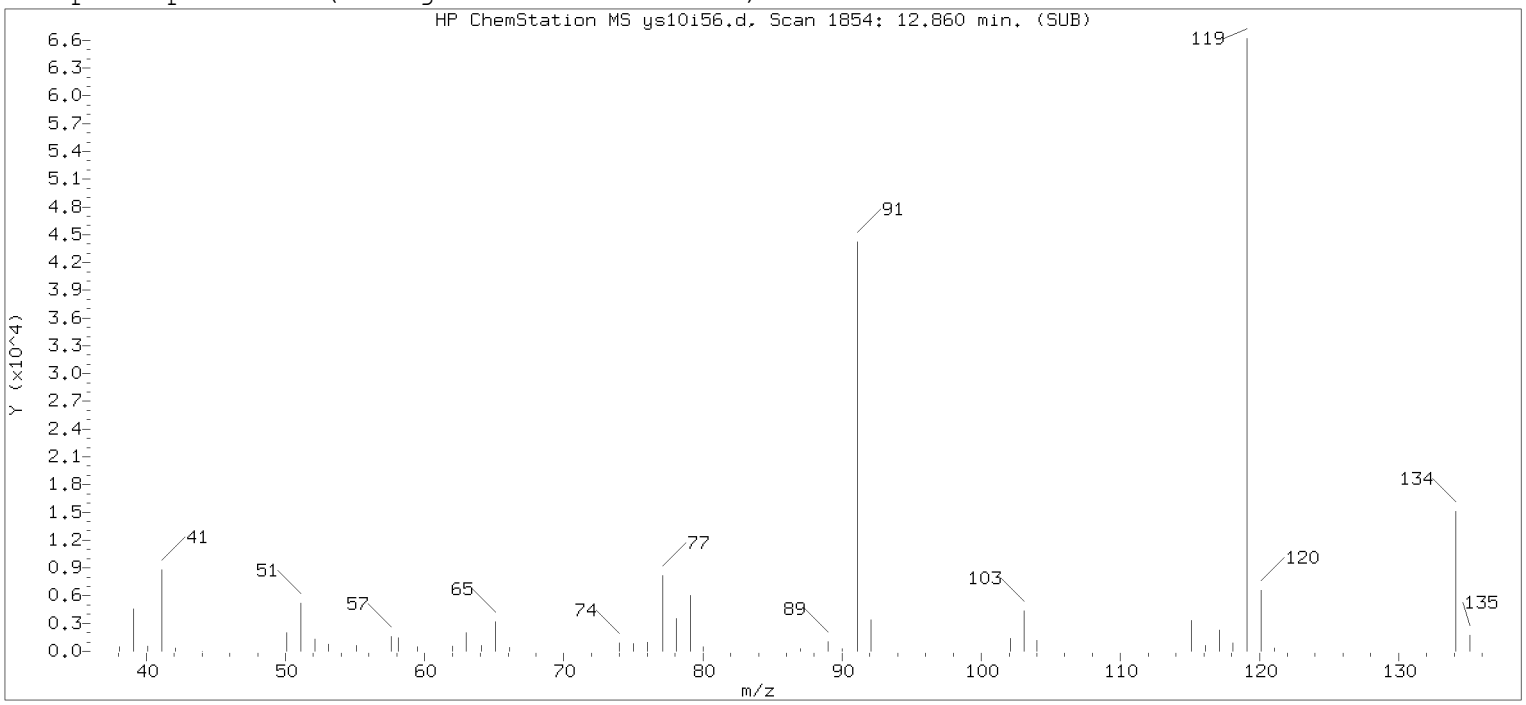
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area (flag) : 22866M
On-Column Amount (ng) : 3.9733
Integration start scan : 1849 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

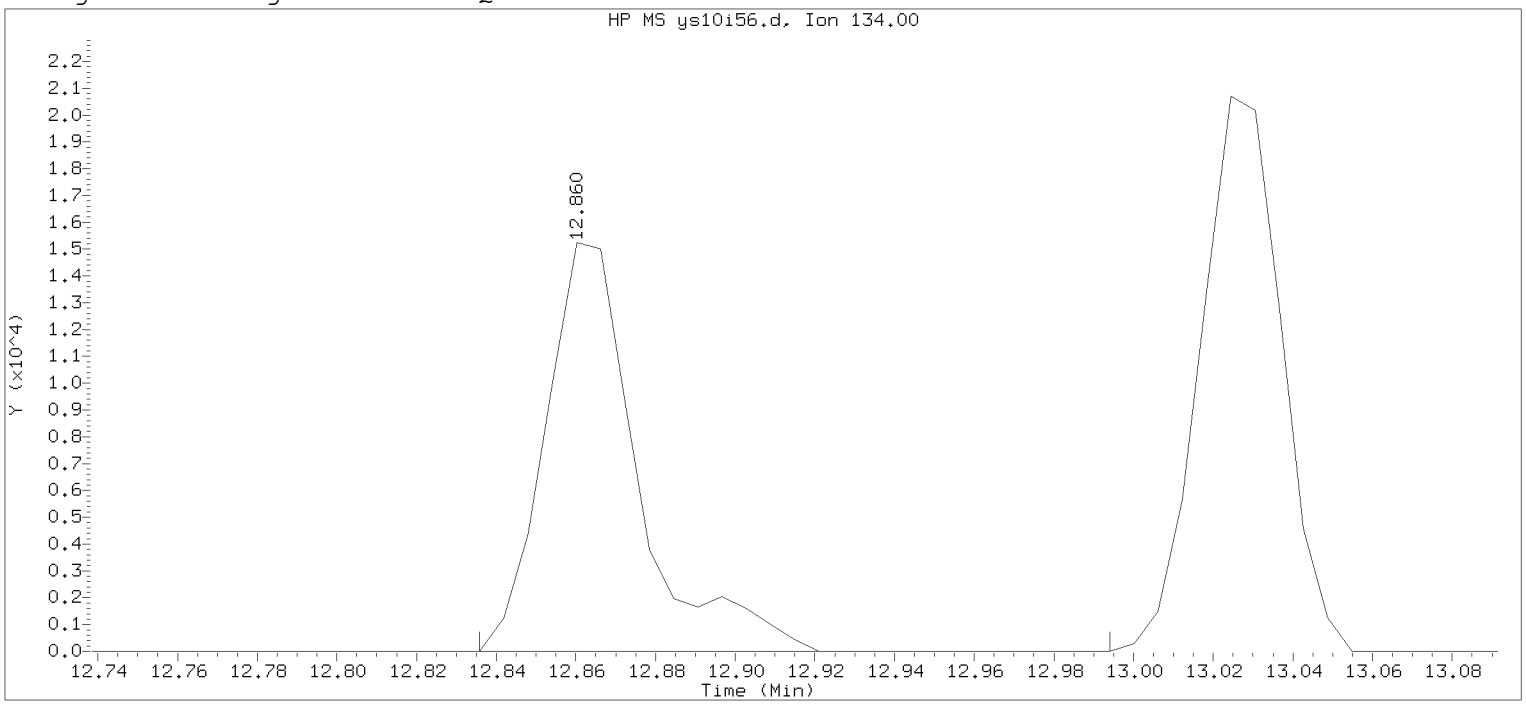
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i56.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

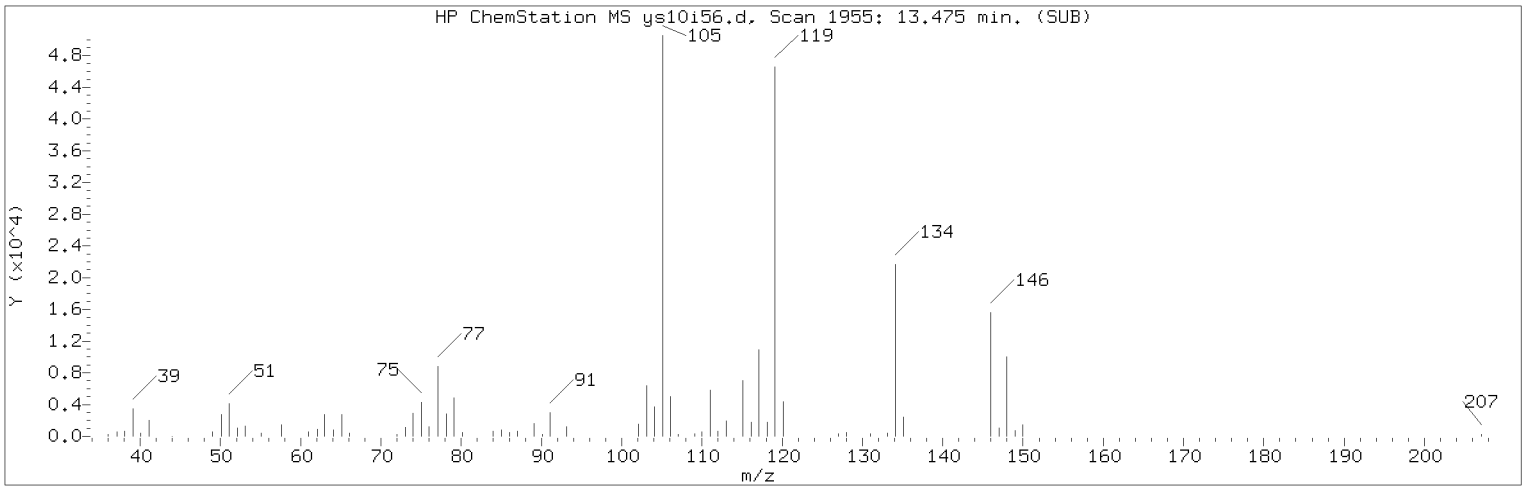
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

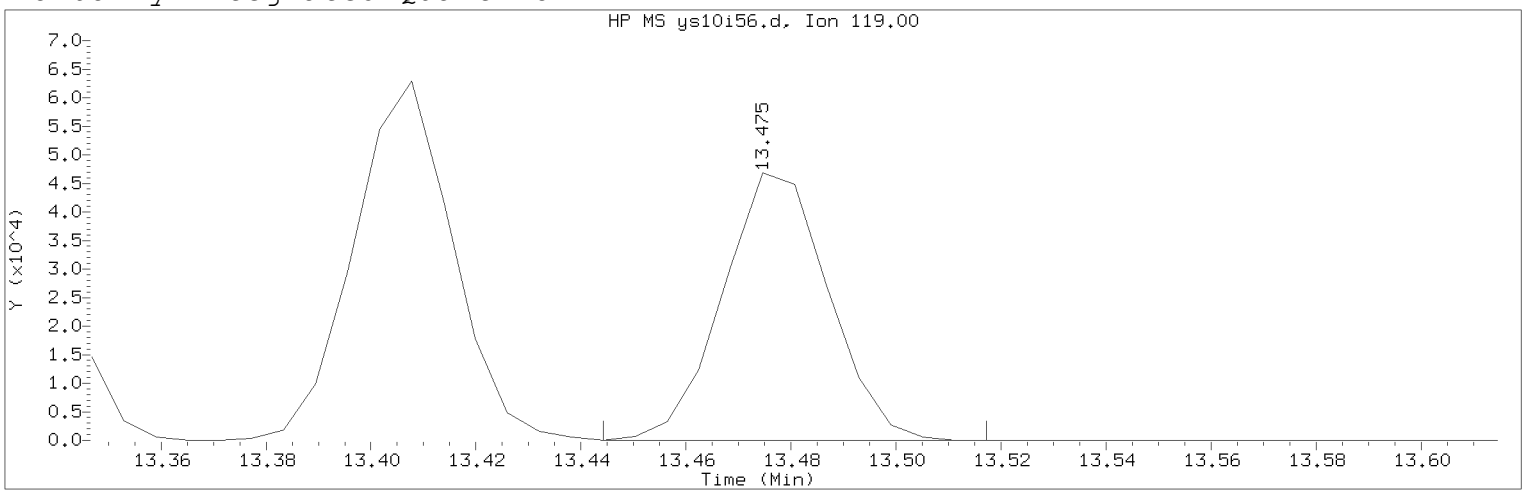
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area : 24722
On-column Amount (ng) : 4.0237
Integration start scan : 1849 Integration stop scan: 1875
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i56.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

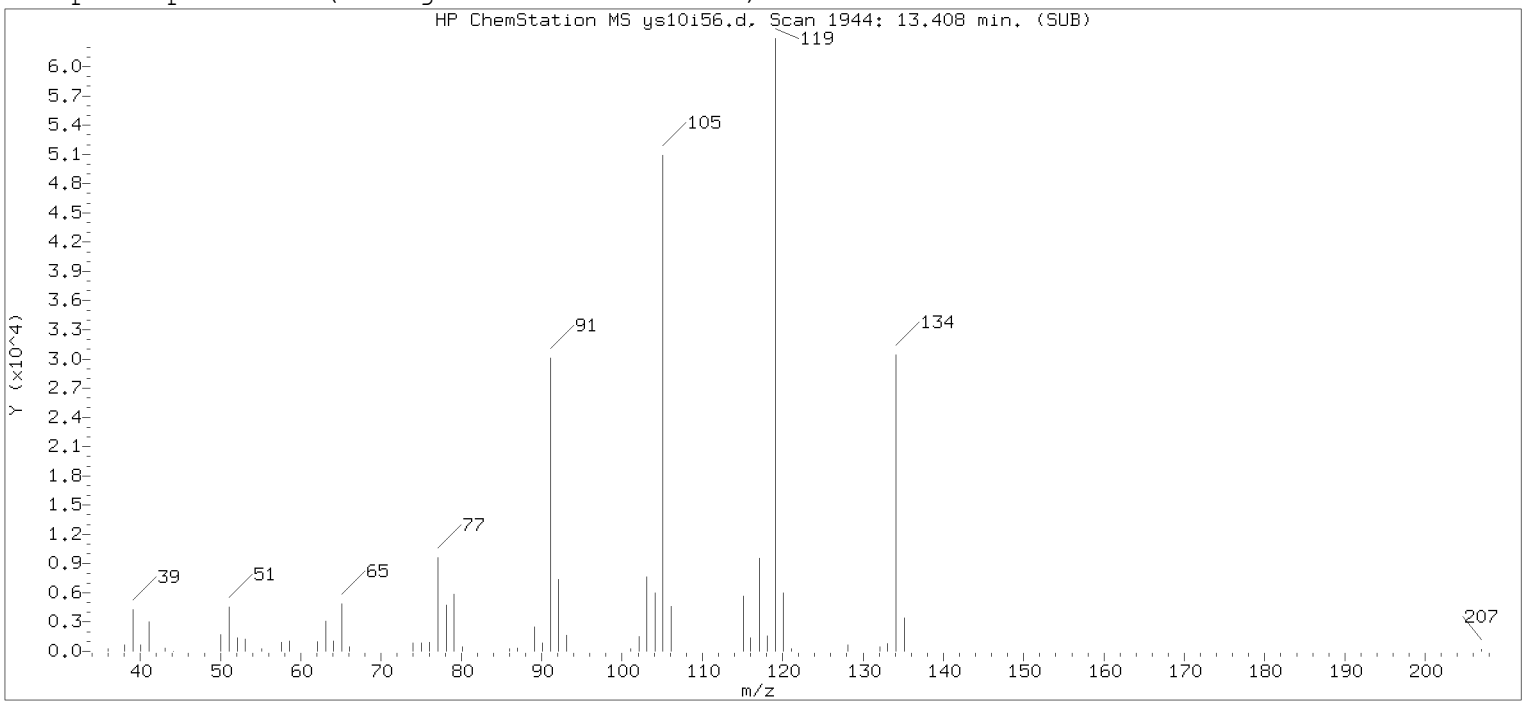
Compound Number : 140
Compound Name : 1,2-Diethylbenzene
Scan Number : 1955
Retention Time (minutes): 13.475
Quant Ion : 119.00
Area (flag) : 65610M
On-Column Amount (ng) : 3.9784
Integration start scan : 1949 Integration stop scan: 1961
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

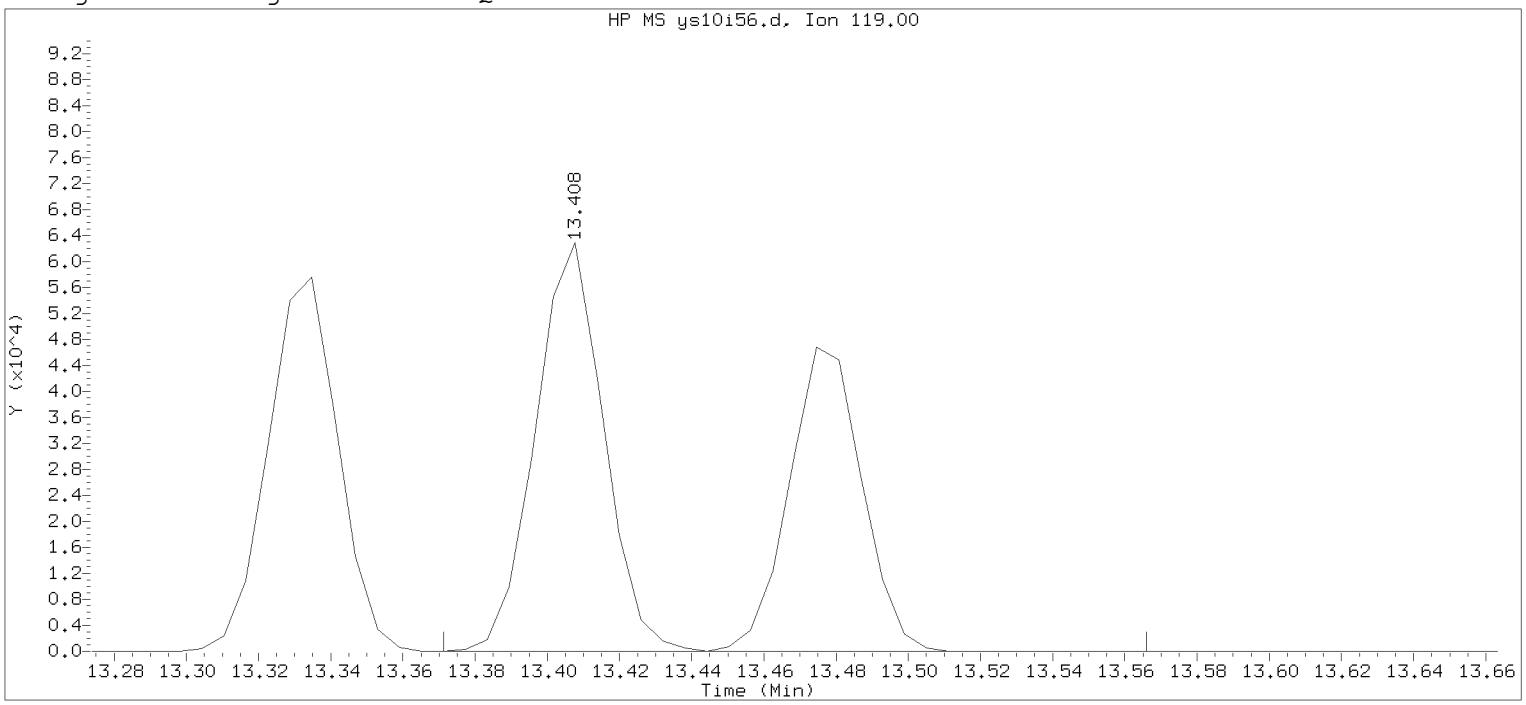
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



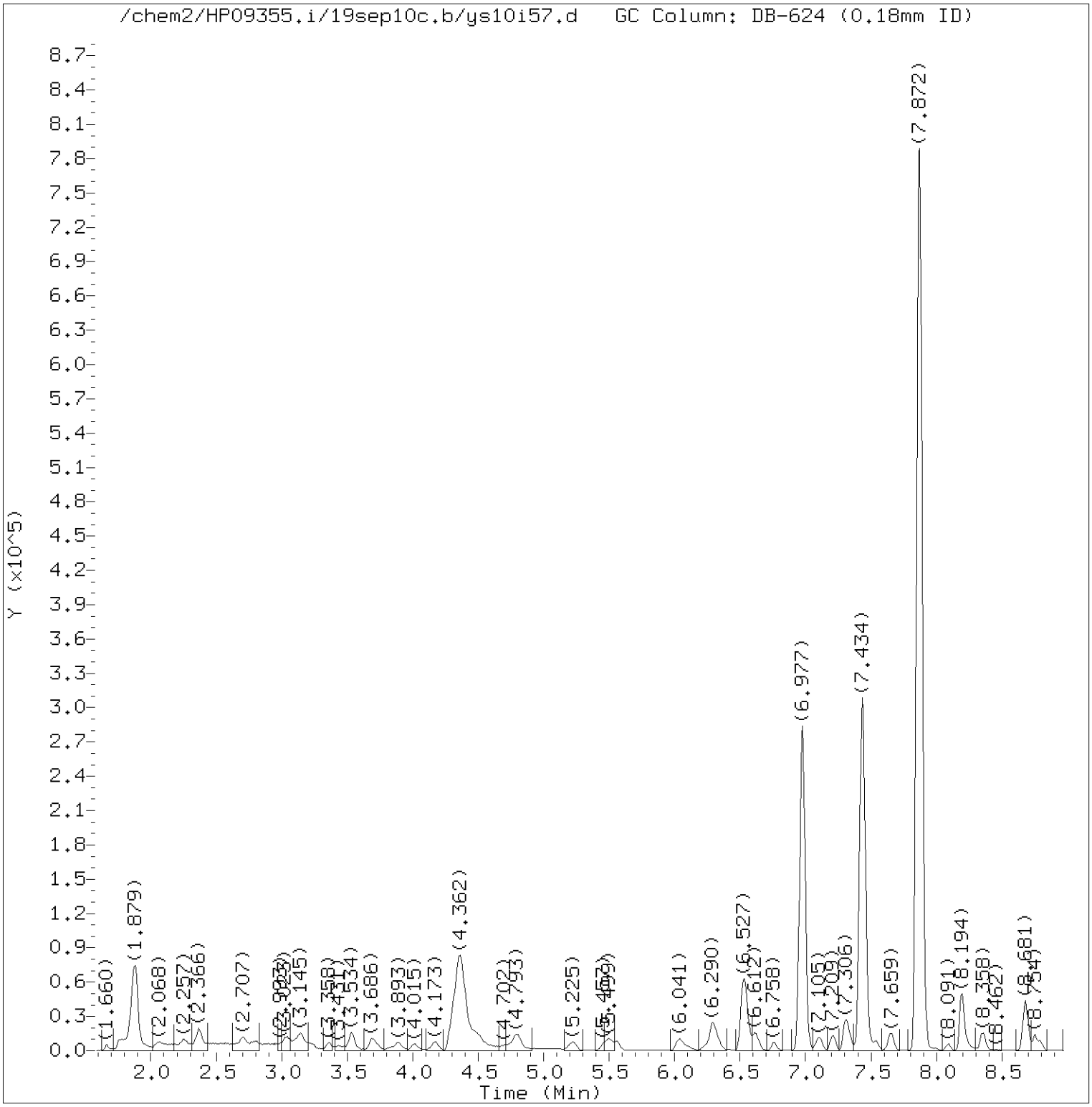
Data File: /chem2/HP09355.i/19sep10c.b/ys10i56.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 140
Compound Name : 1,2-Diethylbenzene
Scan Number : 1944
Retention Time (minutes): 13.408
Quant Ion : 119.00
Area : 148004
On-column Amount (ng) : 5.4782
Integration start scan : 1937 Integration stop scan: 1969
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648



Total Ion Chromatogram (TIC)

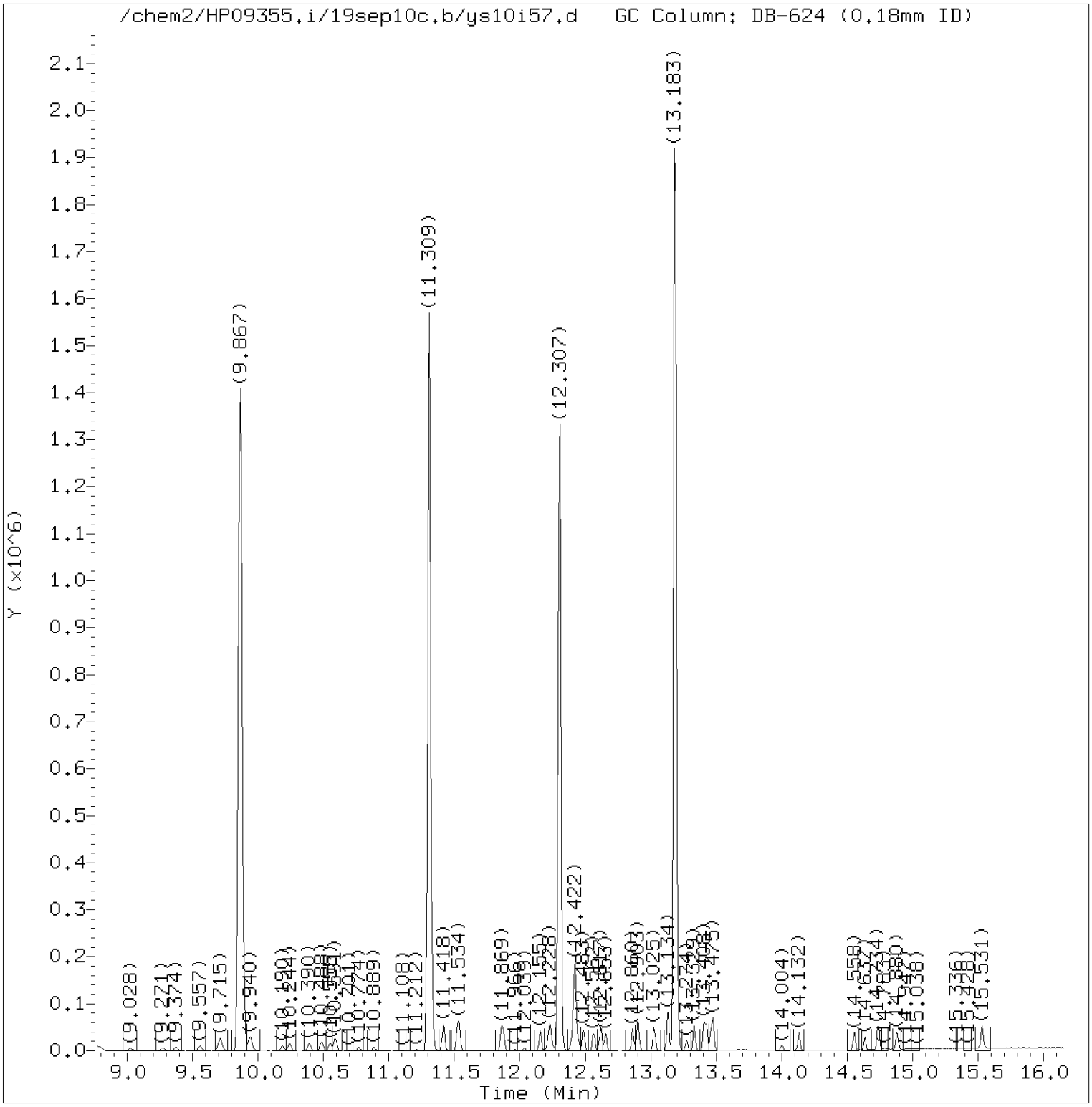
Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.056	85	8301	0.786
4) Chloromethane	(2)	2.251	50	8394	0.925
5) 1,3-Butadiene	(2)	2.360	39	7800	1.105
6) Vinyl Chloride	(2)	2.366	62	7828	0.879
8) Bromomethane	(2)	2.707	94	6113	0.925
9) Chloroethane	(2)	2.792	64	4839	0.936
10) Dichlorofluoromethane	(2)	3.035	67	10294	0.945
12) Trichlorofluoromethane	(2)	3.102	101	9915	0.873
11) n-Pentane	(2)	3.145	43	12332	1.119
14) Ethyl ether	(2)	3.364	59	5474	0.925
15) Freon 123a	(2)	3.431	67	6104	0.890
16) Acrolein	(1)	3.534	56	25420	9.537
17) 1,1-Dichloroethene	(2)	3.686	96	4140	0.829
17) 1,1-Dichloroethene	(2)	3.680	63	2210	0.860
18) Acetone	(1)	3.698	58	2207	1.760
19) Freon 113	(2)	3.717	101	4464	0.785
21) 2-Propanol	(1)	3.875	45	14844	19.657
22) Methyl Iodide	(2)	3.893	142	8854	0.903
23) Carbon Disulfide	(2)	4.015	76	15463	0.856
27) Methyl Acetate	(2)	4.149	43	8785M	1.006
25) Allyl Chloride	(2)	4.185	41	7457	0.861
29)*t-Butyl alcohol-d10	(1)	4.355	65	350956M	250.000
28) Methylene Chloride	(2)	4.374	84	5322	0.892
30) t-Butyl alcohol	(1)	4.483	59	31415	19.892
31) Acrylonitrile	(2)	4.702	53	3462	0.757
33) Methyl Tertiary Butyl Ether	(2)	4.781	73	18775	0.943
32) trans-1,2-Dichloroethene	(2)	4.812	96	5020	0.868
34) n-Hexane	(2)	5.219	57	8292	0.845
36) 1,1-Dichloroethane	(2)	5.457	63	9425	0.896
38) di-Isopropyl ether	(2)	5.505	45	18491	0.920
39) 2-Chloro-1,3-butadiene	(2)	5.566	53	7743	0.812
40) Ethyl t-butyl ether	(2)	6.041	59	18485	0.938
43) 1,2-Dichloroethene (Total)	(2)		96	10897	1.761
44) 2-Butanone	(2)	6.235	43	12860	1.884
42) cis-1,2-Dichloroethene	(2)	6.284	96	5877	0.893
45) 2,2-Dichloropropane	(2)	6.290	77	6581	0.815
47) Propionitrile	(1)	6.302	54	35073	19.309
48) Methacrylonitrile	(2)	6.527	67	44281	9.107

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.619	71	3847	1.952
49) Bromochloromethane	(2)	6.625	128	3005	0.876
51) Chloroform	(2)	6.752	83	9081	0.891
52)$Dibromofluoromethane	(2)	6.977	113	267287	49.490
52)$Dibromofluoromethane	(2)	6.977	111	273450	49.456
53) 1,1,1-Trichloroethane	(2)	7.002	97	7660	0.868
54) Cyclohexane	(2)	7.117	56	10139	0.881
54) Cyclohexane	(2)	7.105	84	8722	0.877
54) Cyclohexane	(2)	7.111	69	2931	0.815
55) 1,1-Dichloropropene	(2)	7.209	75	7453	0.874
56) Carbon Tetrachloride	(2)	7.215	117	6070	0.806
58) Isobutyl Alcohol	(1)	7.312	41	27993	51.323
57)$1,2-Dichloroethane-d4	(2)	7.434	102	70903	50.217
57)$1,2-Dichloroethane-d4	(2)	7.434	65	345122	50.672
57)$1,2-Dichloroethane-d4	(2)	7.434	104	44897	50.104
60) Benzene	(2)	7.464	78	22937	0.920
61) 1,2-Dichloroethane	(2)	7.537	62	9576	1.084
61) 1,2-Dichloroethane	(2)	7.543	98	319	0.450
65) t-Amyl methyl ether	(2)	7.653	73	18619	0.944
66)*Fluorobenzene	(2)	7.872	96	1150977	50.000
67) n-Heptane	(2)	7.878	43	9474	0.914
69) n-Butanol	(1)	8.194	56	46682	91.250
71) Trichloroethene	(2)	8.352	95	5784	0.897
72) Methylcyclohexane	(2)	8.675	83	10747	0.879
72) Methylcyclohexane	(2)	8.675	98	4464	0.829
73) 1,2-Dichloropropane	(2)	8.687	63	5694	0.896
76) Methyl Methacrylate	(2)	8.754	69	6338	0.850
75) 1,4-Dioxane	(1)	8.766	88	3816	34.979
74) Dibromomethane	(2)	8.796	93	3860	0.921
78) Bromodichloromethane	(2)	9.028	83	6022	0.824
79) 2-Nitropropane	(2)	9.265	41	4555	1.462
80) 2-Chloroethyl Vinyl Ether	(2)	9.374	63	4437	0.827
81) cis-1,3-Dichloropropene	(2)	9.557	75	7828	0.794
82) 4-Methyl-2-pentanone	(2)	9.709	43	22819	1.774
83)$Toluene-d8	(3)	9.867	98	1167495	50.013
83)$Toluene-d8	(3)	9.867	100	751014	49.898
88) Toluene	(3)	9.940	92	14531	0.909
90) 1,3-Dichloropropene (total)	(3)		100	15094	1.572

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$ = Compound is a surrogate standard.

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on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.190	75	7266	0.779
91) Ethyl Methacrylate	(3)	10.244	69	9391	0.794
92) 1,1,2-Trichloroethane	(3)	10.390	97	5651	0.917
93) Tetrachloroethene	(3)	10.488	166	6121	0.905
94) 1,3-Dichloropropane	(3)	10.555	76	9994	0.934
96) 2-Hexanone	(3)	10.591	43	18259	1.730
97) Dibromochloromethane	(3)	10.774	129	4332	0.723
99) 1,2-Dibromoethane	(3)	10.889	107	5784	0.862
100)*Chlorobenzene-d5	(3)	11.309	117	862765	50.000
101) 1-Chlorohexane	(3)	11.309	91	9093	1.013
102) Chlorobenzene	(3)	11.333	112	17178	0.956
104) Ethylbenzene	(3)	11.418	91	27959	0.914
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	4763	0.830
106) m+p-Xylene	(3)	11.534	106	22536	1.866
108) Xylene (Total)	(3)		106	33000	2.756
107) o-Xylene	(3)	11.856	106	10464	0.890
109) Styrene	(3)	11.875	104	15813	0.814
110) Bromoform	(3)	12.039	173	3015	0.698
111) Isopropylbenzene	(3)	12.155	105	27741	0.913
112) Cyclohexanone	(1)	12.228	55	26914M	46.460
114)$4-Bromofluorobenzene	(3)	12.307	95	445011	49.895
114)$4-Bromofluorobenzene	(3)	12.307	174	340194	50.236
116) 1,1,2,2-Tetrachloroethane	(4)	12.392	83	9981	0.908
118) trans-1,4-Dichloro-2-butene	(4)	12.416	53	32162	8.465
115) Bromobenzene	(4)	12.422	156	7023	0.919
117) 1,2,3-Trichloropropane	(4)	12.447	110	3269	0.936
119) n-Propylbenzene	(4)	12.483	91	33926	0.936
120) 2-Chlorotoluene	(4)	12.562	126	6800	0.911
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	24343	0.908
121) 4-Chlorotoluene	(4)	12.653	126	7055	0.904
124) tert-Butylbenzene	(4)	12.860	134	5072M	0.904
125) Pentachloroethane	(4)	12.897	167	3283	0.770
126) 1,2,4-Trimethylbenzene	(4)	12.903	105	26027	0.925
127) sec-Butylbenzene	(4)	13.025	105	30911	0.911
129) 1,3-Dichlorobenzene	(4)	13.128	146	14690	0.982
130) p-Isopropyltoluene	(4)	13.134	119	25687	0.881
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	465037	50.000
133) 1,4-Dichlorobenzene	(4)	13.201	146	15027	0.983

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on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.207	105	27432	0.928
135) Benzyl Chloride	(4)	13.274	91	14694	0.689
136) 1,3-Diethylbenzene	(4)	13.335	119	16556	0.869
141) Diethylbenzene (total)	(4)		100	48436	2.632
137) 1,4-Diethylbenzene	(4)	13.408	119	17752	0.881
139) n-Butylbenzene	(4)	13.426	92	13730	0.890
138) 1,2-Dichlorobenzene	(4)	13.463	146	14292	0.977
140) 1,2-Diethylbenzene	(4)	13.475	119	14128M	0.882
142) 1,2-Dibromo-3-chloropropane	(4)	13.998	75	2290	0.808
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	10888	0.968
146) 1,2,4-Trichlorobenzene	(4)	14.558	180	10997	1.020
147) Hexachlorobutadiene	(4)	14.637	225	4602	0.958
148) Naphthalene	(4)	14.740	128	37931	0.993
149) 1,2,3-Trichlorobenzene	(4)	14.880	180	10619	1.014
150) 2-Methylnaphthalene	(4)	15.531	142	24176	0.957

M = Compound was manually integrated.

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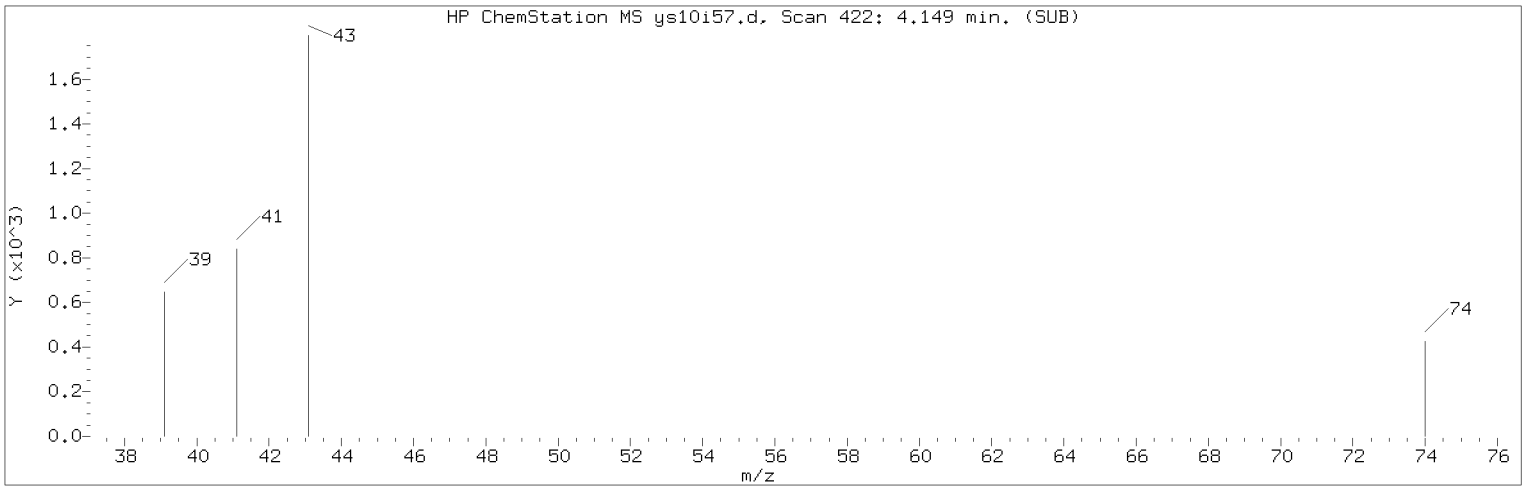
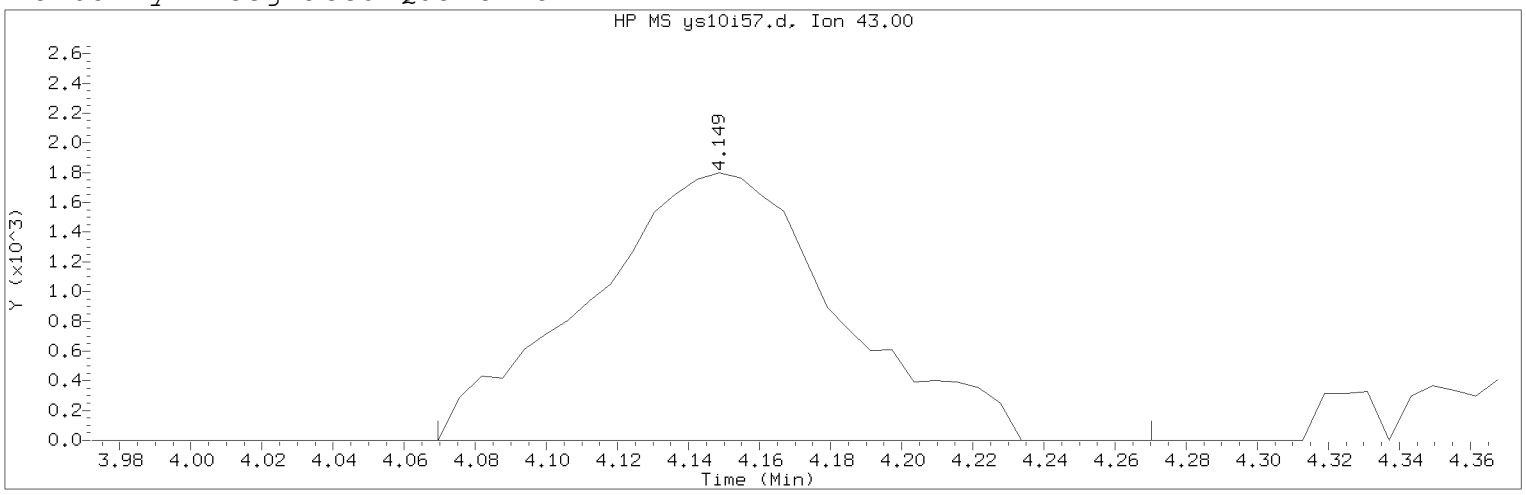
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

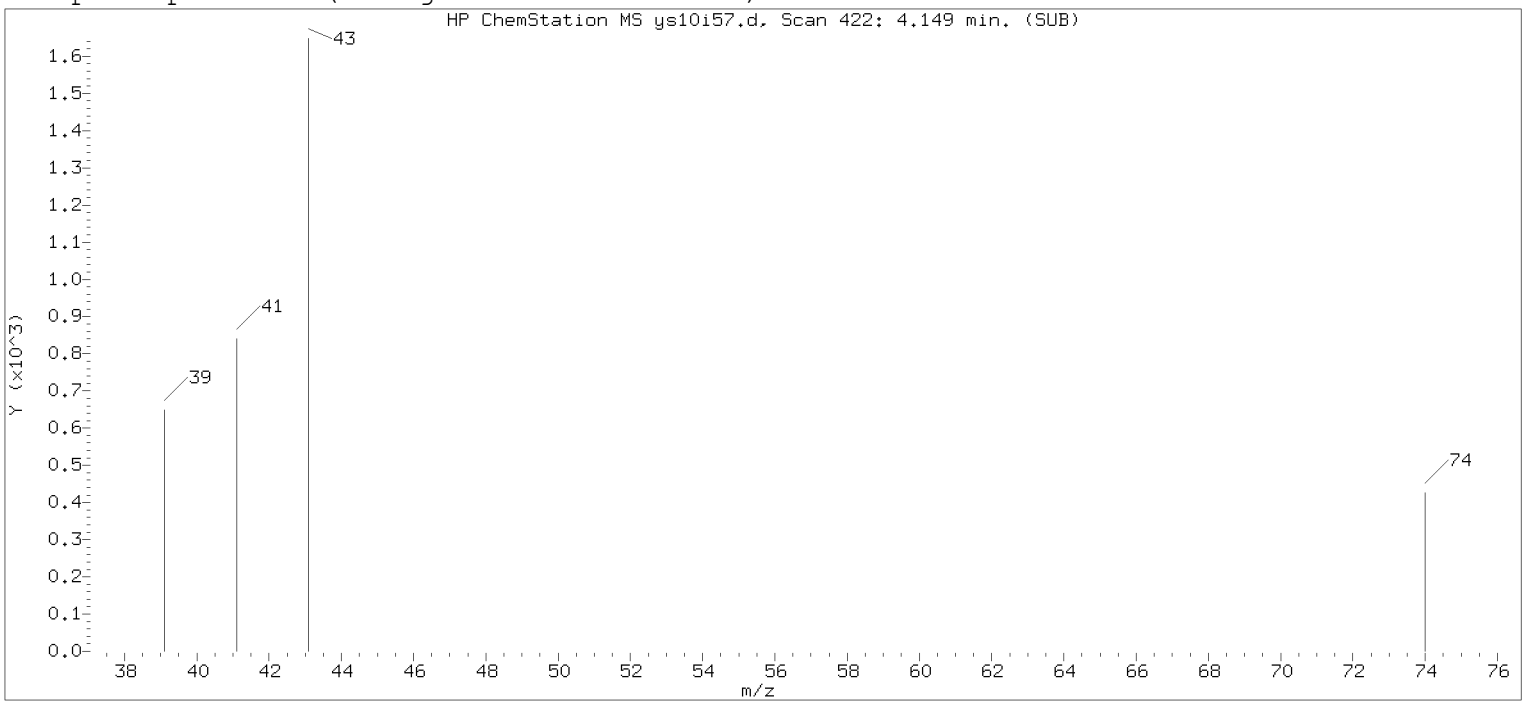
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 422
Retention Time (minutes): 4.149
Quant Ion : 43.00
Area (flag) : 8785M
On-Column Amount (ng) : 1.0060
Integration start scan : 408 Integration stop scan: 441
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

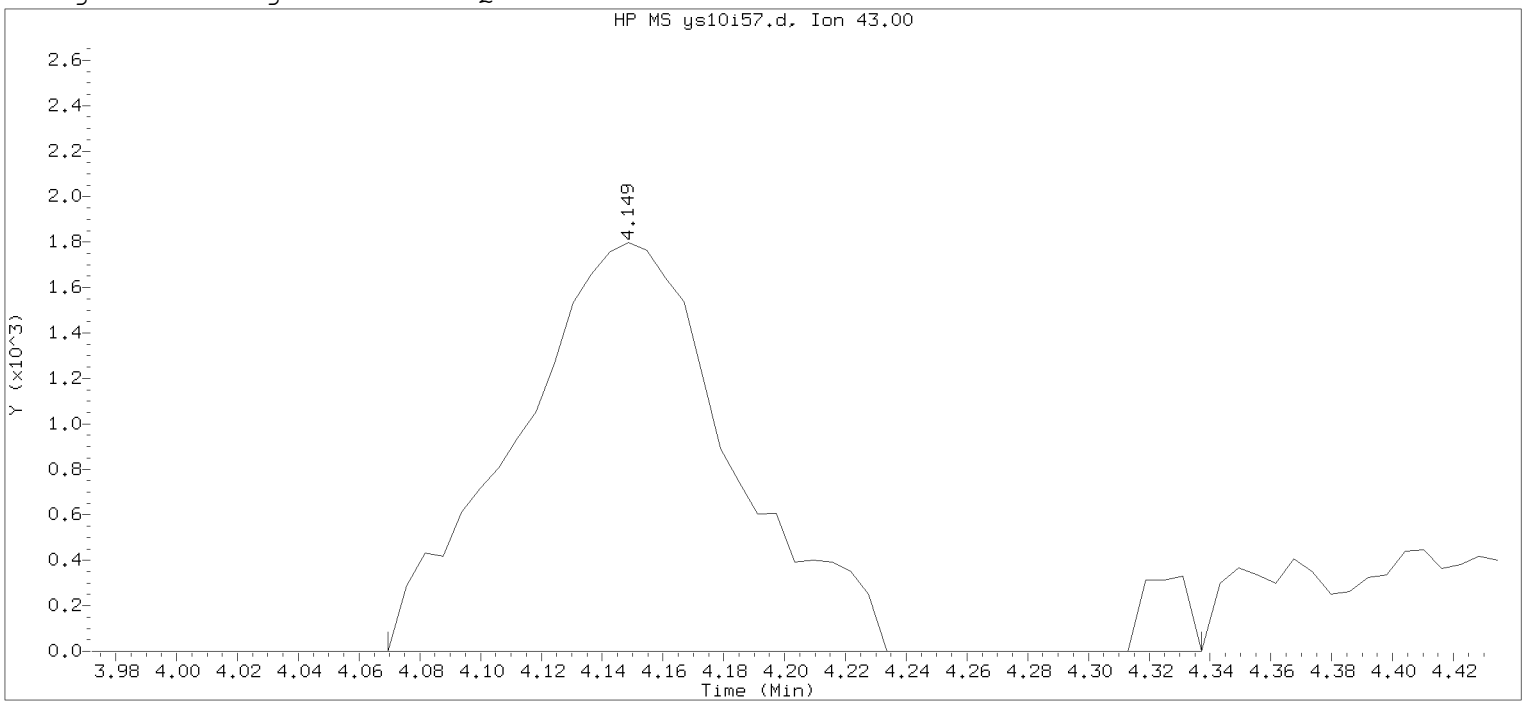
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

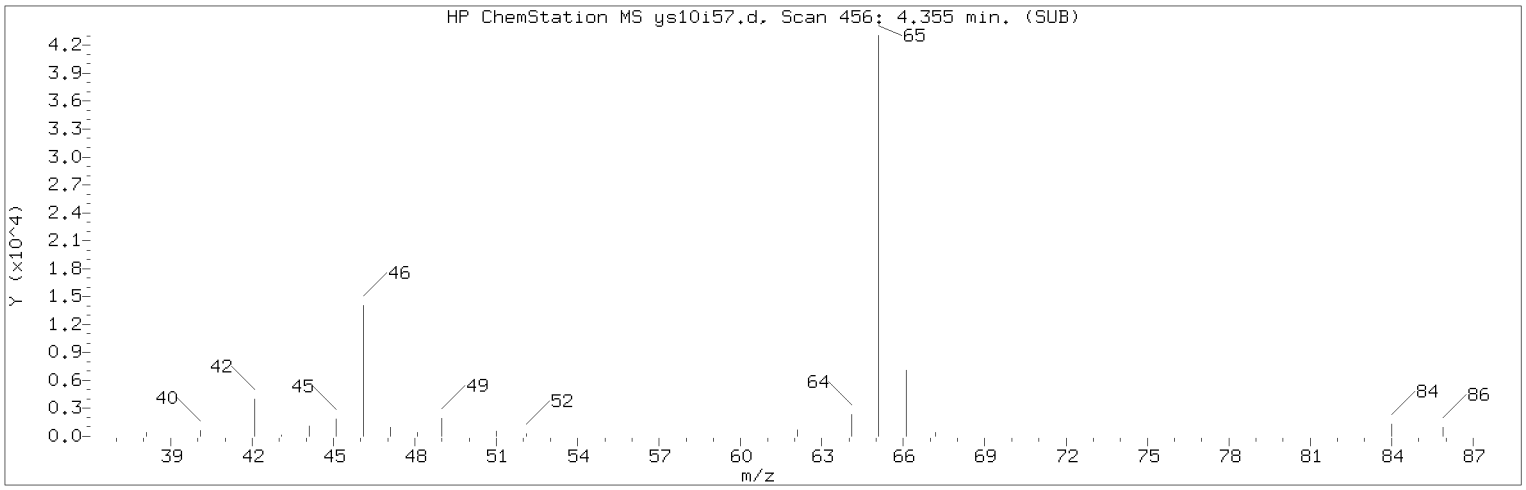
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

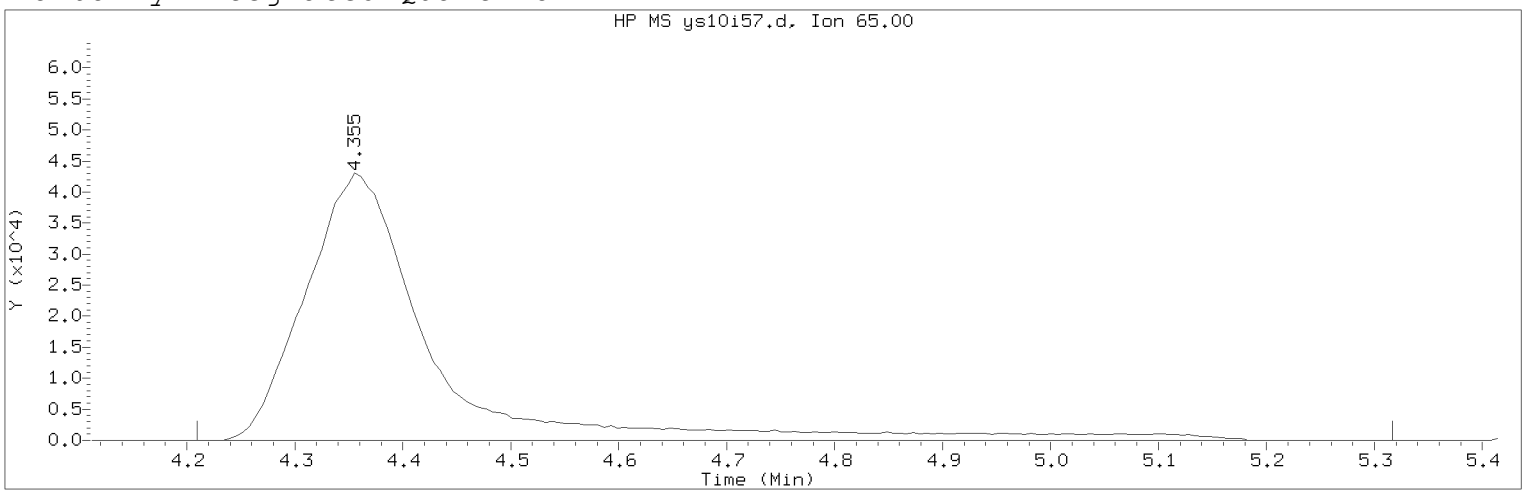
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 422
Retention Time (minutes): 4.149
Quant Ion : 43.00
Area : 9135
On-column Amount (ng) : 1.0401
Integration start scan : 408 Integration stop scan: 452
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

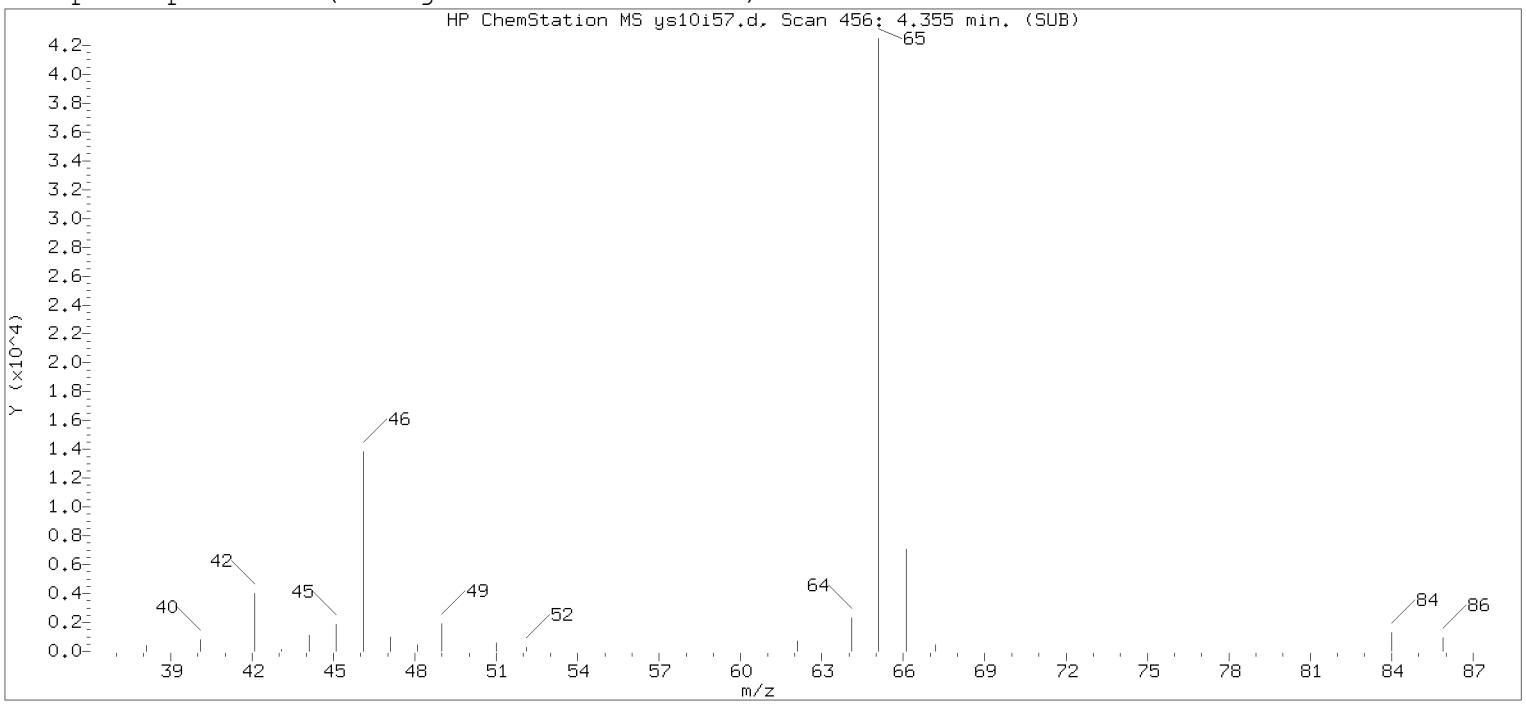
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 456
Retention Time (minutes): 4.355
Quant Ion : 65.00
Area (flag) : 350956M
On-Column Amount (ng) : 250.0000
Integration start scan : 431 Integration stop scan: 613
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

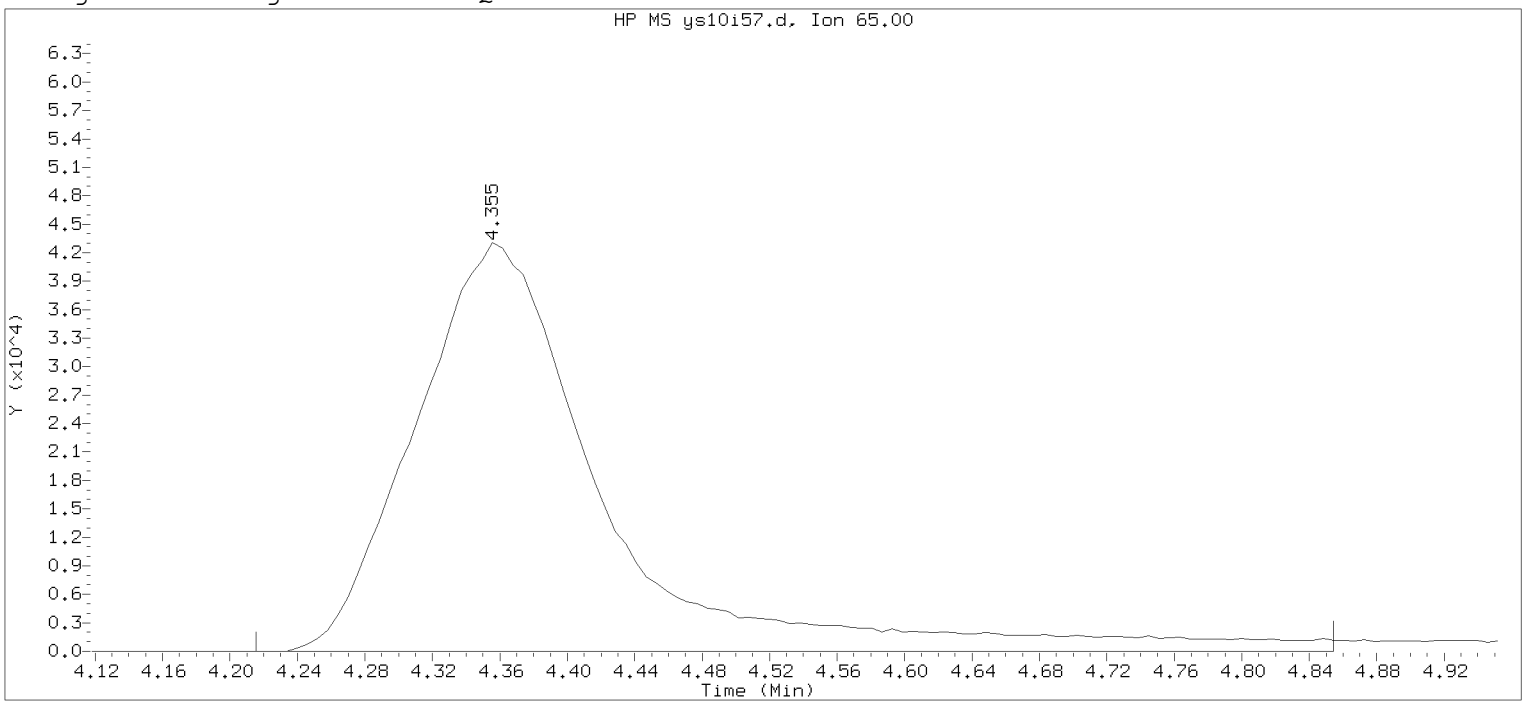
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

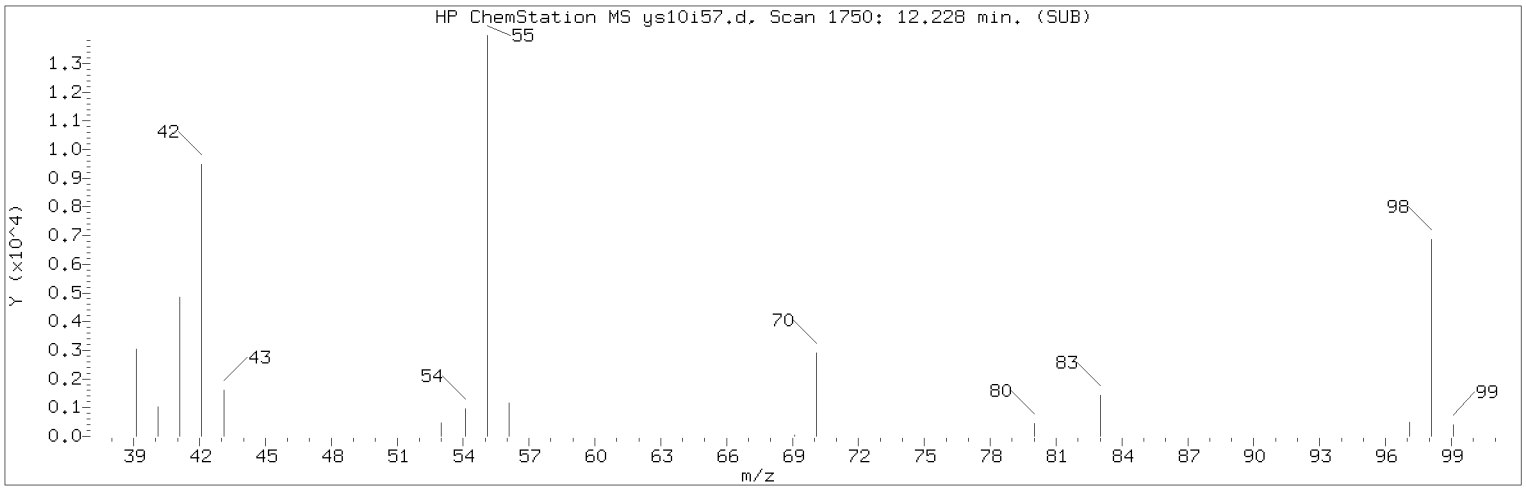
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

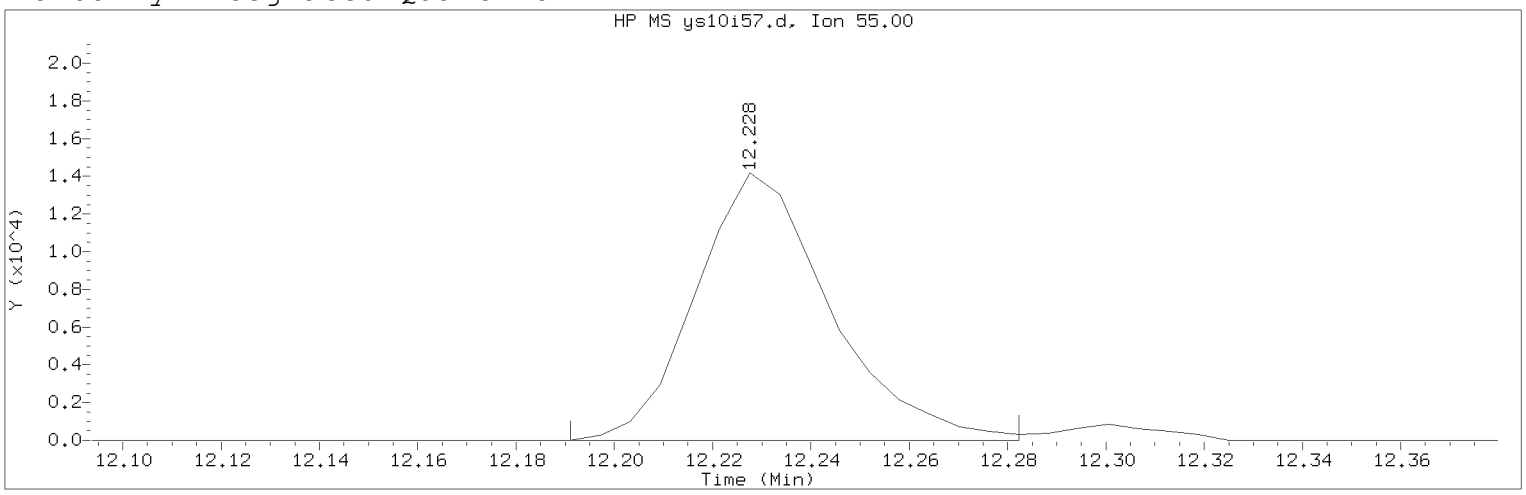
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 456
Retention Time (minutes): 4.355
Quant Ion : 65.00
Area : 332707
On-column Amount (ng) : 250.0000
Integration start scan : 432 Integration stop scan: 537
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

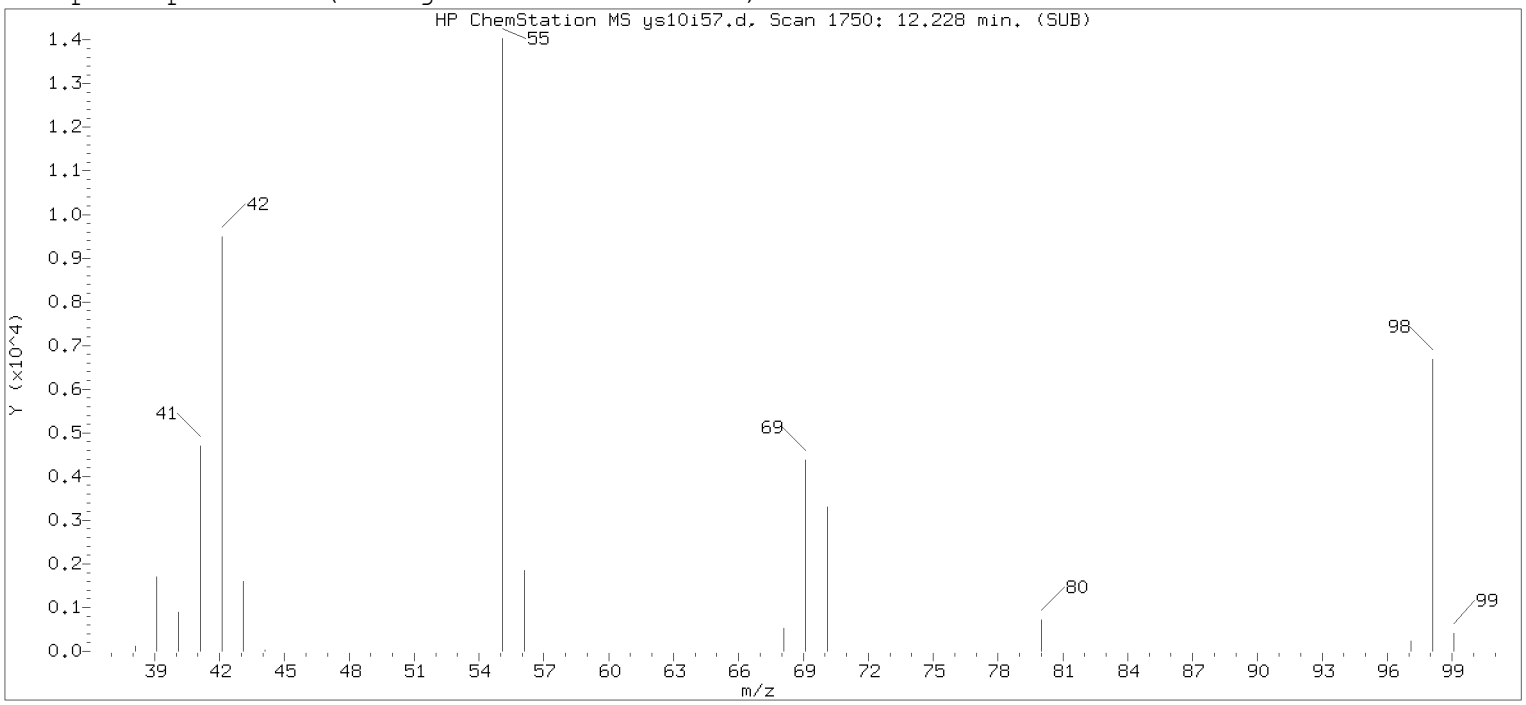
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1750
Retention Time (minutes): 12.228
Quant Ion : 55.00
Area (flag) : 26914M
On-Column Amount (ng) : 46.4600
Integration start scan : 1743 Integration stop scan: 1758
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

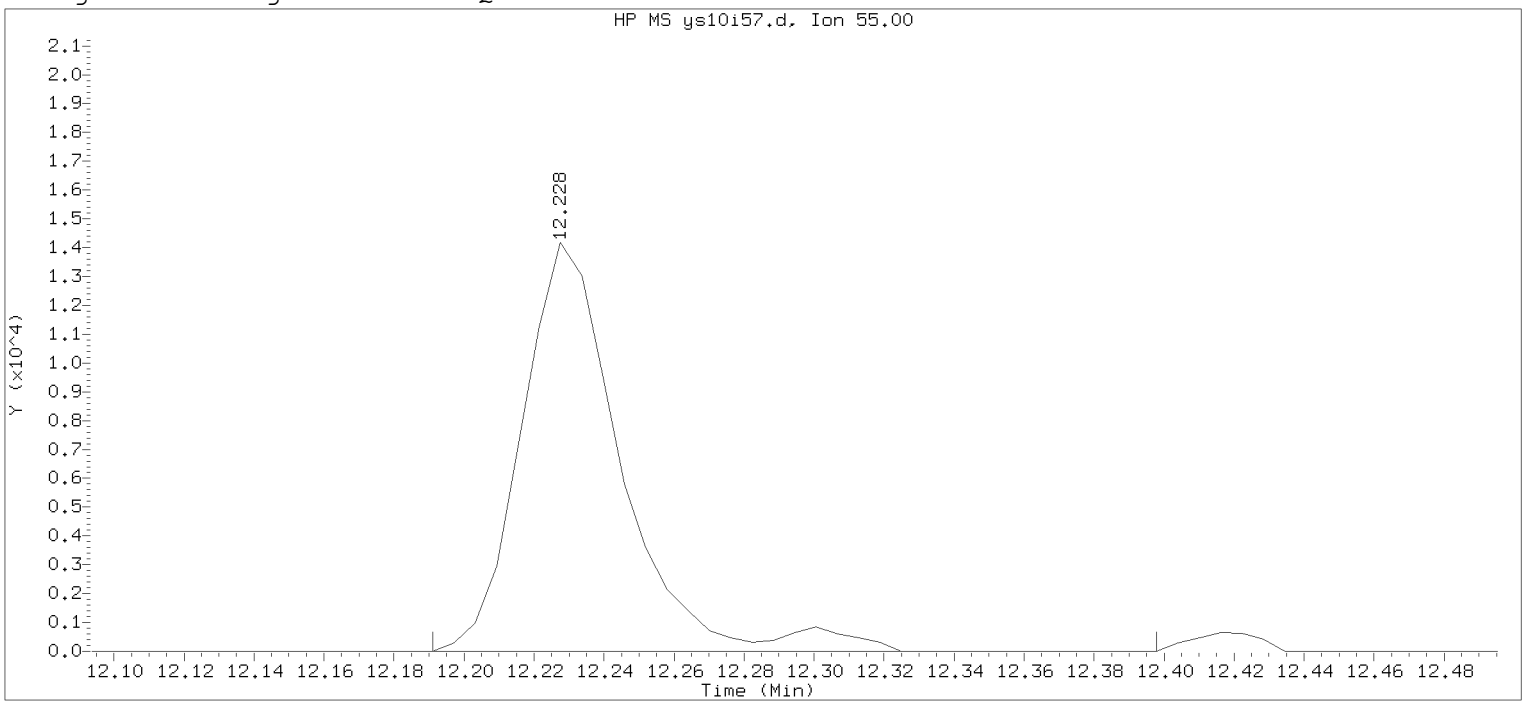
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

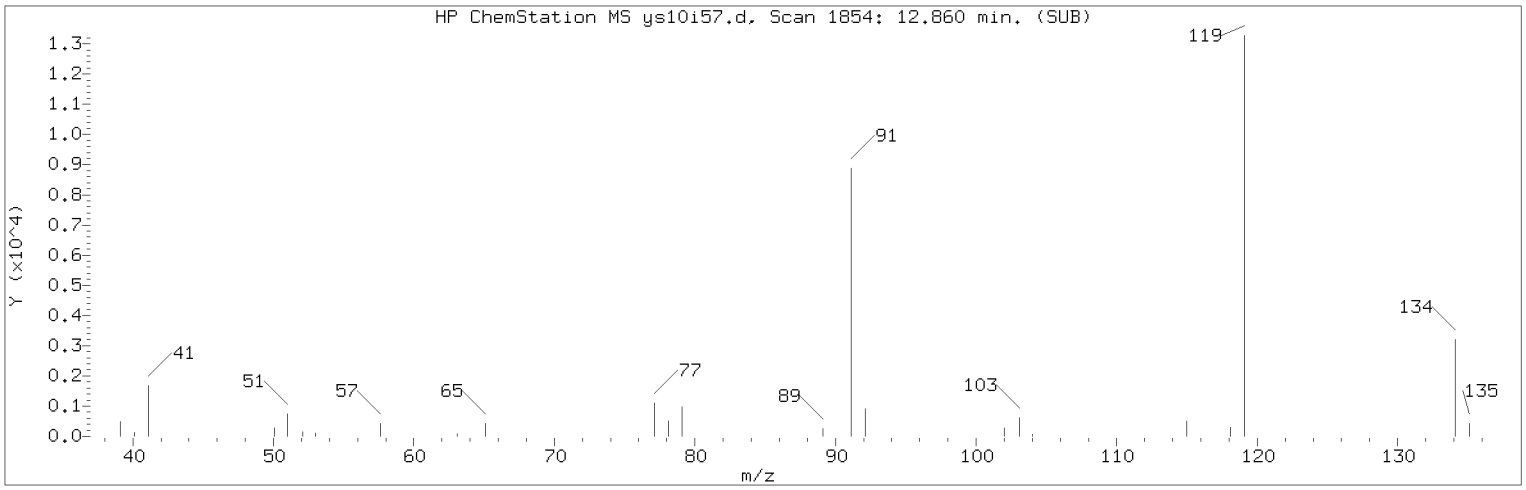
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

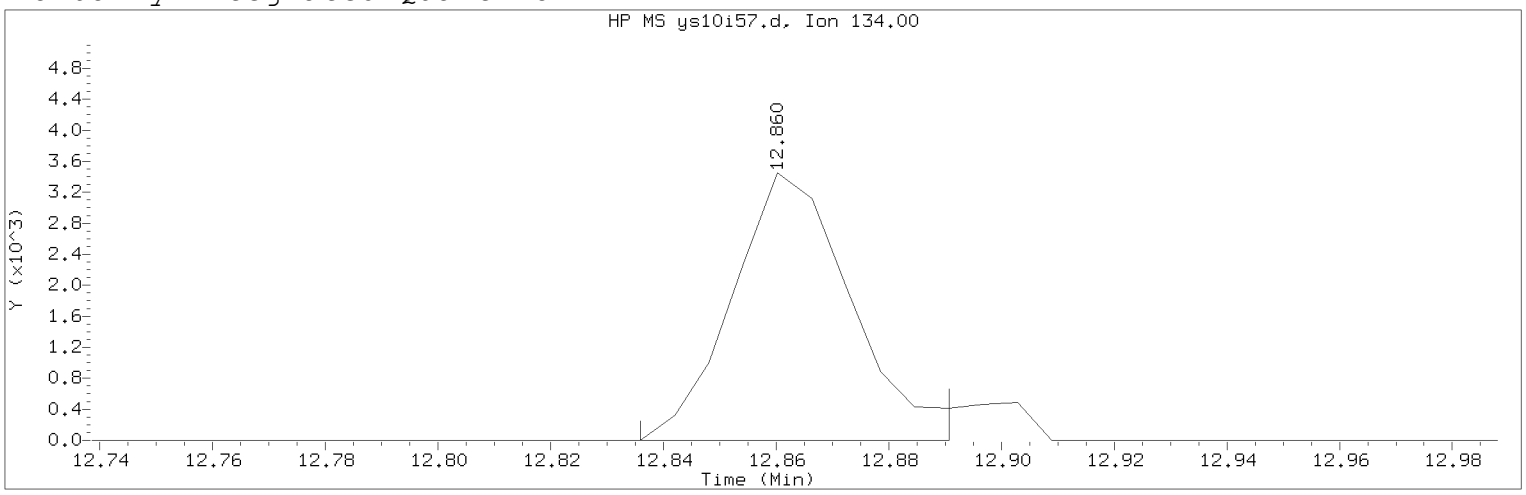
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1750
Retention Time (minutes): 12.228
Quant Ion : 55.00
Area : 28105
On-column Amount (ng) : 47.7685
Integration start scan : 1743 Integration stop scan: 1777
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

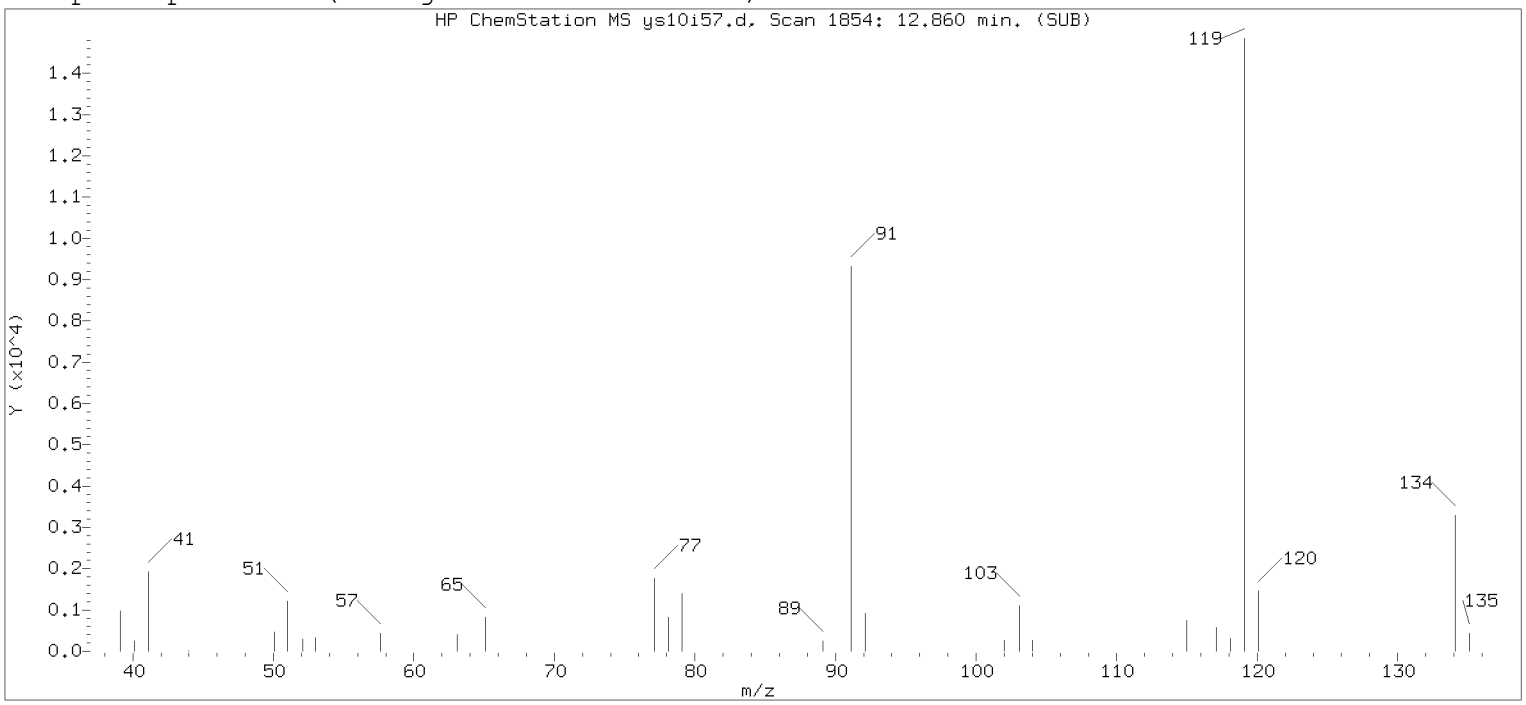
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area (flag) : 5072M
On-Column Amount (ng) : 0.9037
Integration start scan : 1849 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

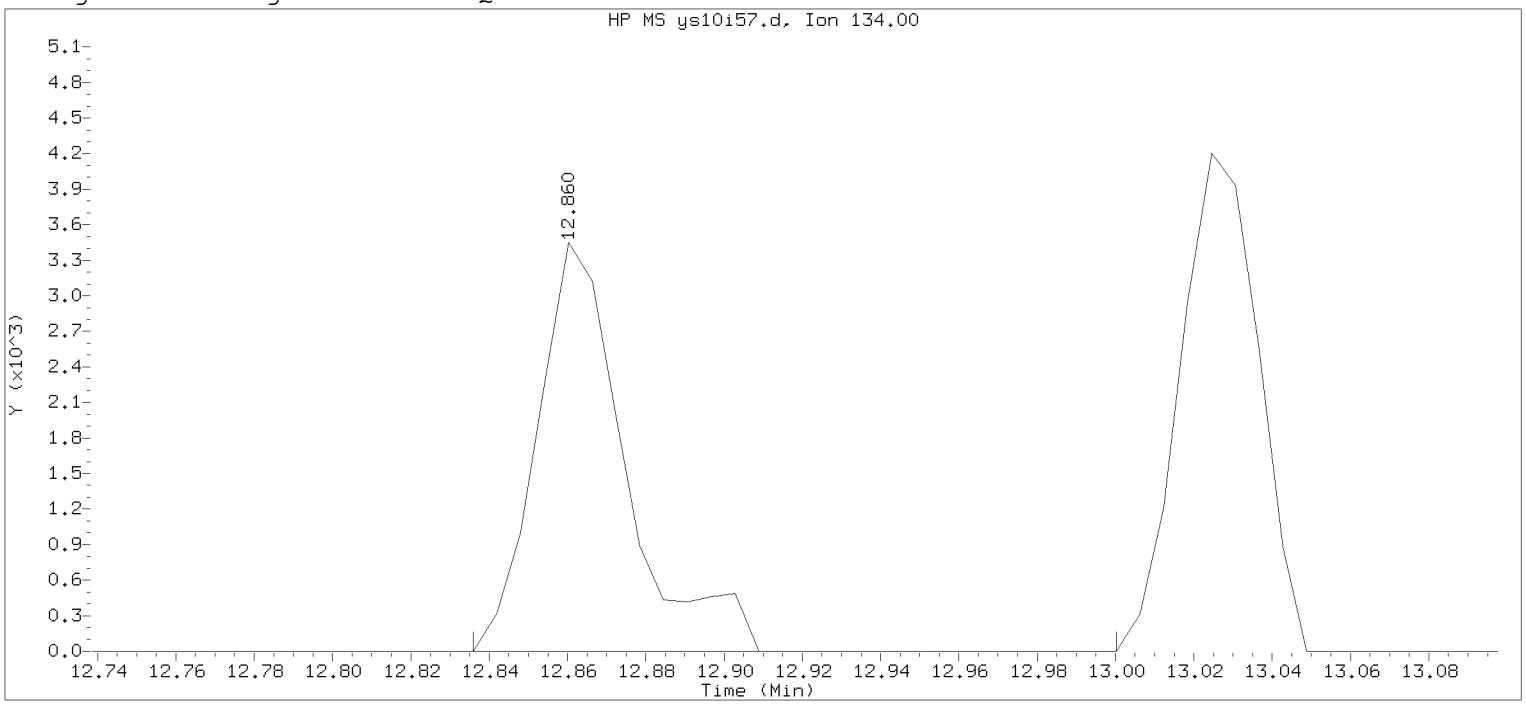
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

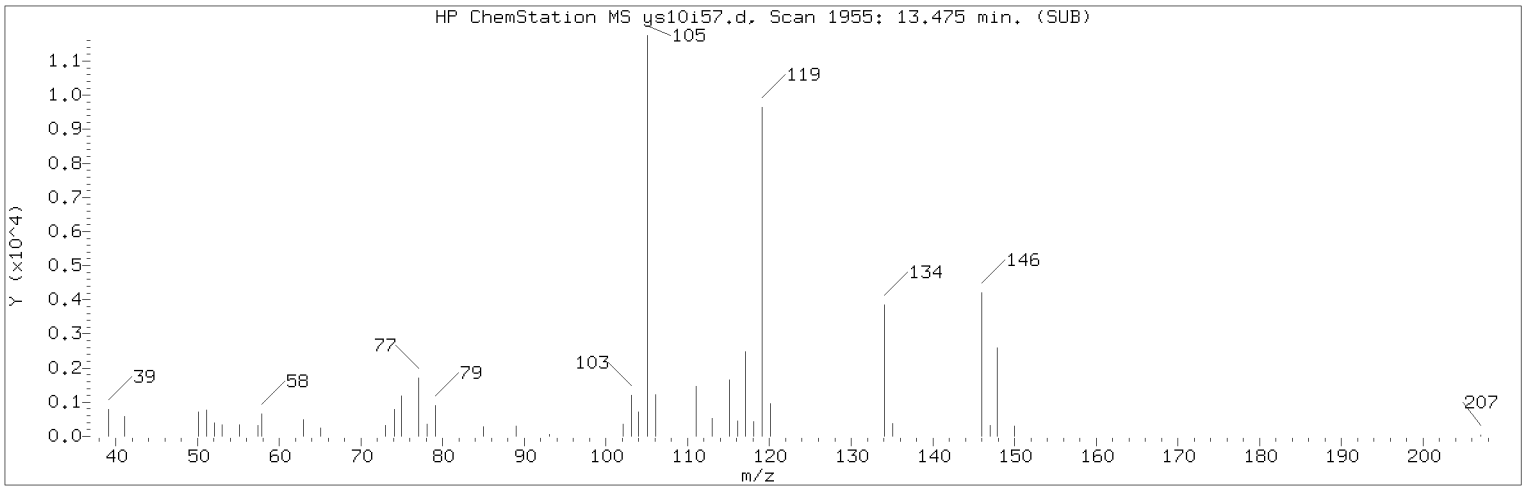
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

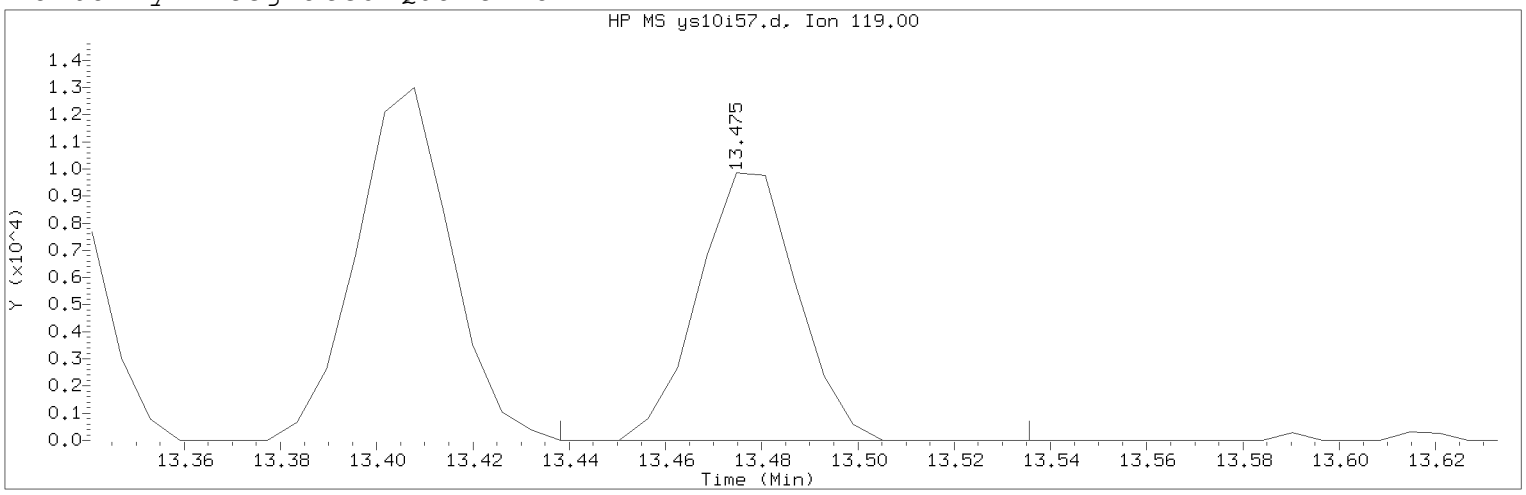
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area : 5419
On-column Amount (ng) : 0.9043
Integration start scan : 1849 Integration stop scan: 1876
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

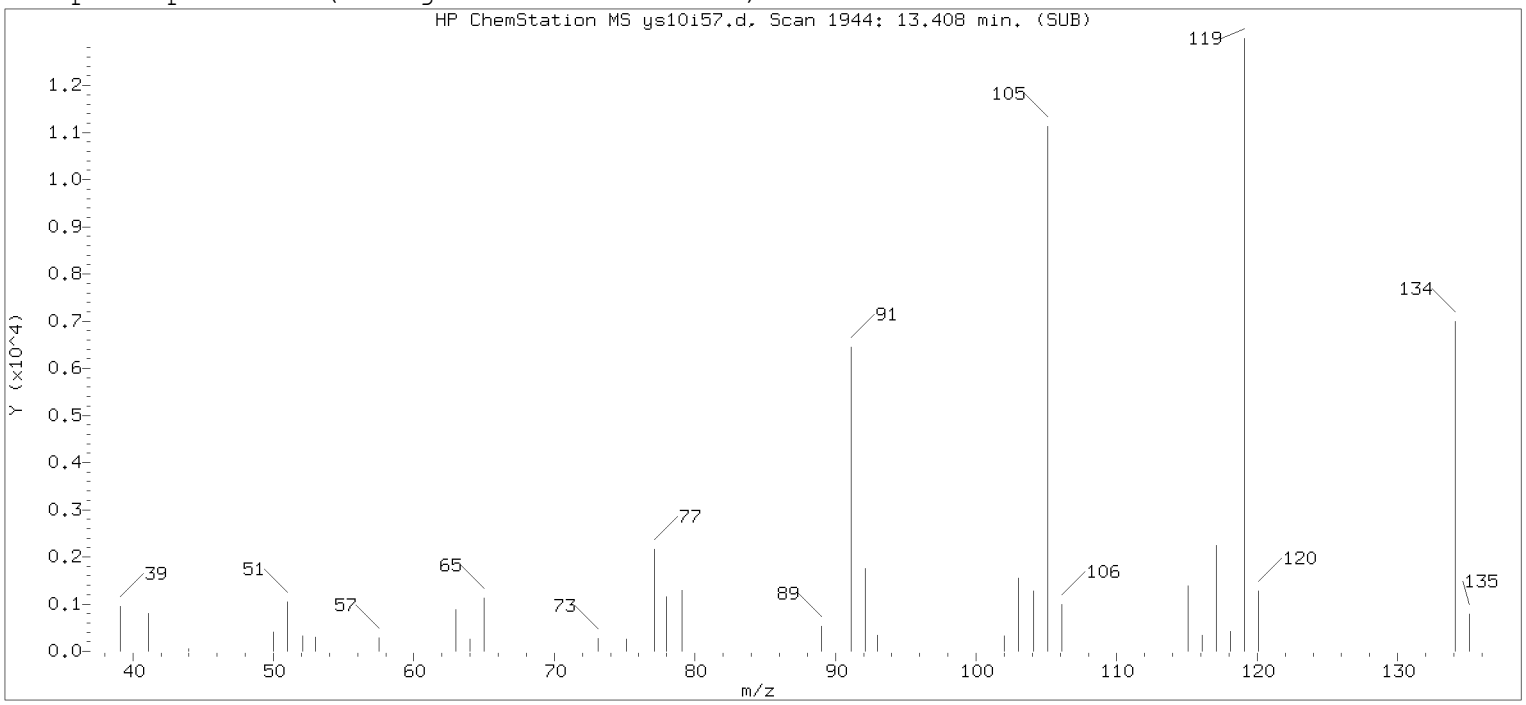
Compound Number : 140
Compound Name : 1,2-Diethylbenzene
Scan Number : 1955
Retention Time (minutes): 13.475
Quant Ion : 119.00
Area (flag) : 14128M
On-Column Amount (ng) : 0.8816
Integration start scan : 1948 Integration stop scan: 1964
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

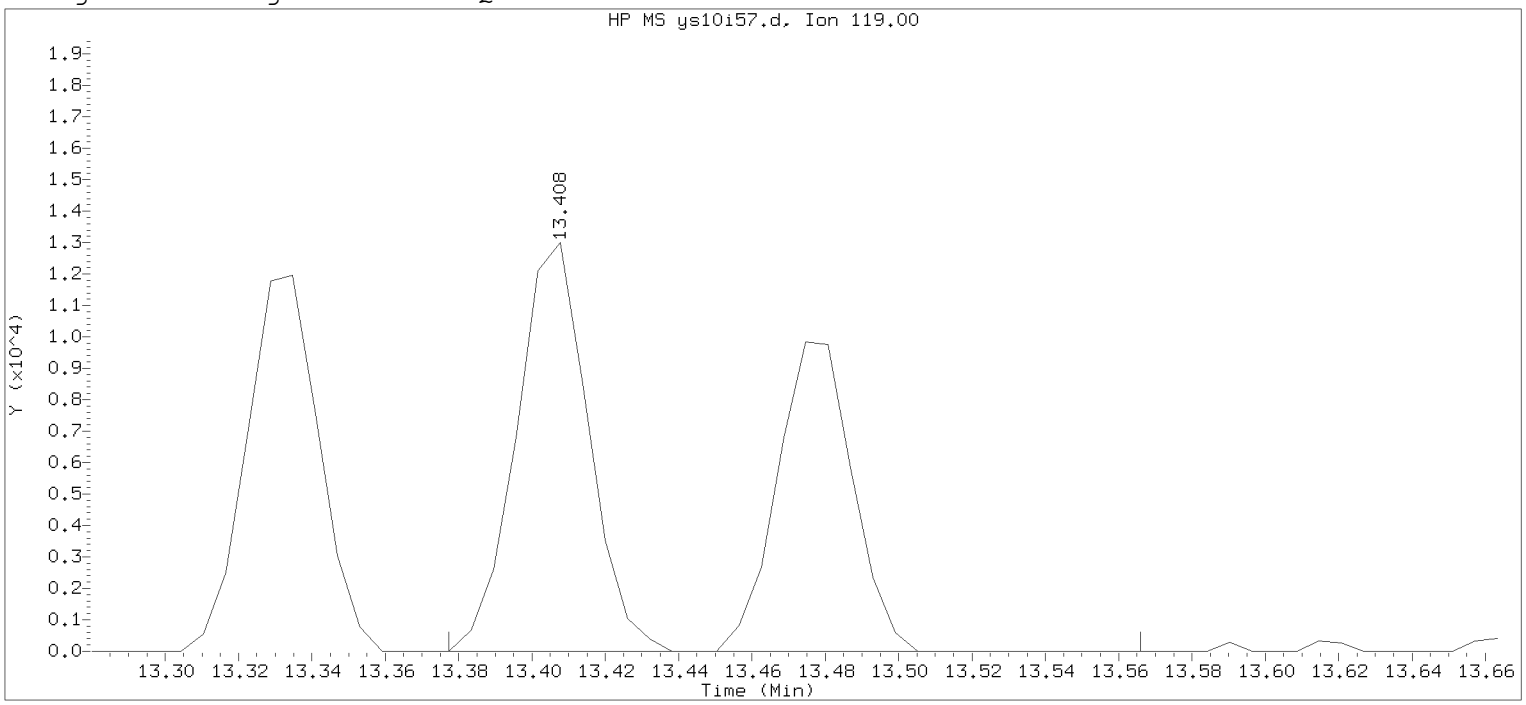
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



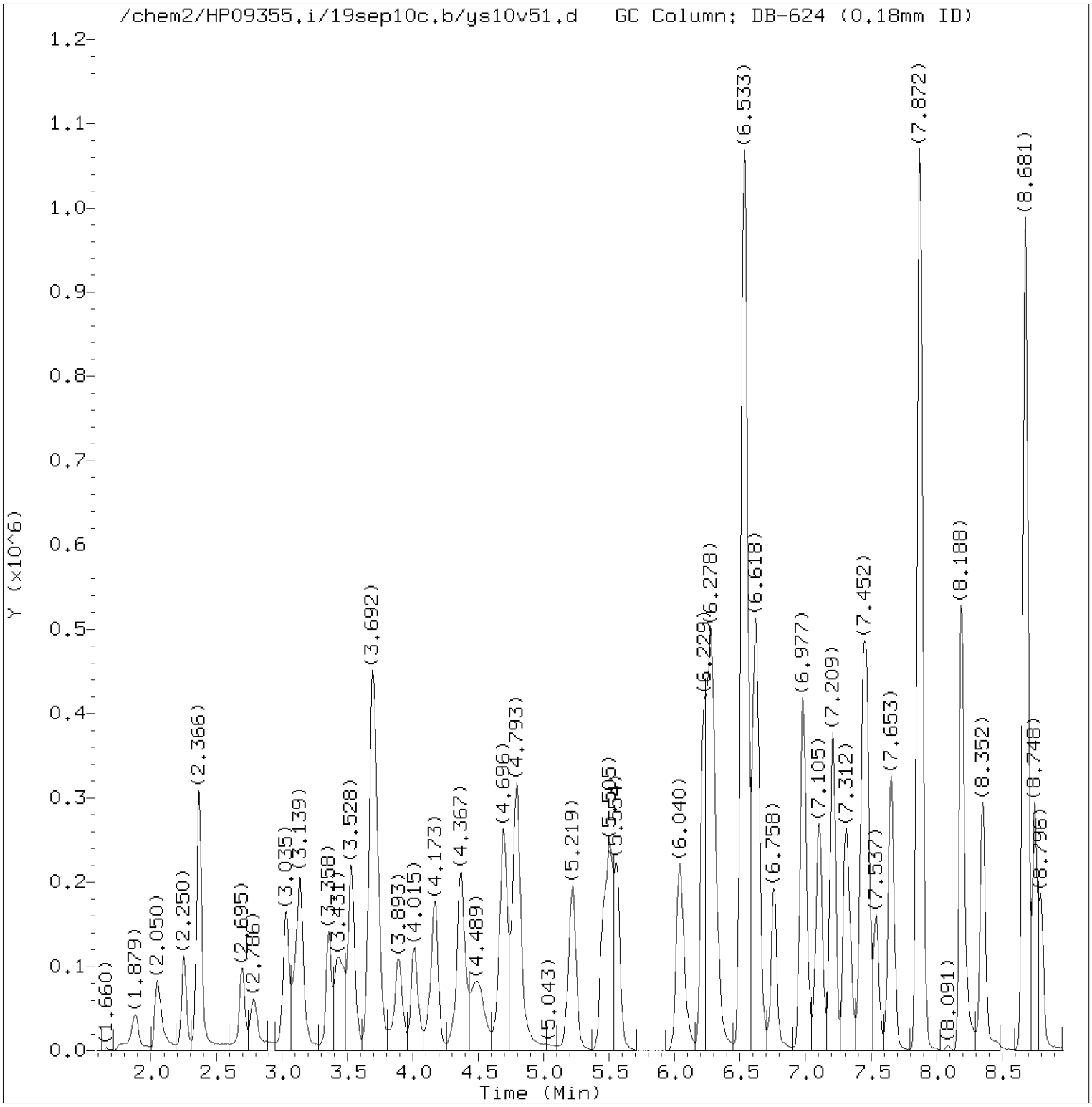
Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 140
Compound Name : 1,2-Diethylbenzene
Scan Number : 1944
Retention Time (minutes): 13.408
Quant Ion : 119.00
Area : 31880
On-column Amount (ng) : 1.1592
Integration start scan : 1938 Integration stop scan: 1969
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648



Total Ion Chromatogram (TIC)

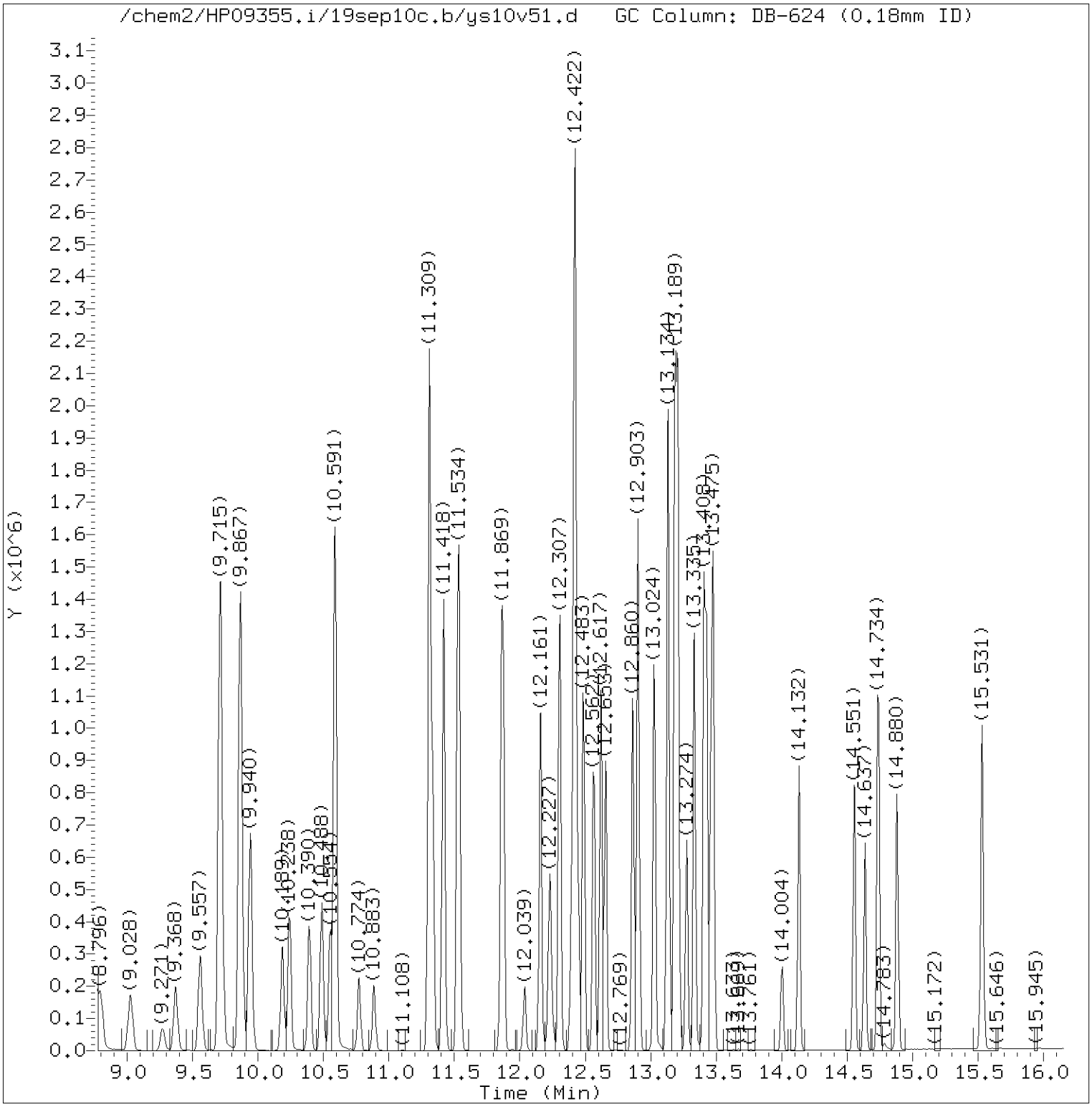
Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 14:36 kek01027

Sample Name: YLGICVC Lab Sample ID: YLGICVC

Digitally signed by Kevin A. Sposito
on 09/25/2019 at 07:38.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

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Date, time and analyst ID of latest file update: 24-Sep-2019 14:36 kek01027

Sample Name: YLGICVC Lab Sample ID: YLGICVC

Digitally signed by Kevin A. Sposito
on 09/25/2019 at 07:38.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 14:36 kek01027

Sample Name: YLGICVC Lab Sample ID: YLGICVC

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.050	85	178125	16.657
4) Chloromethane	(2)	2.250	50	171396	18.647
5) 1,3-Butadiene	(2)	2.366	39	134447	18.799
6) Vinyl Chloride	(2)	2.372	62	174495	19.338
8) Bromomethane	(2)	2.701	94	96705	14.445
9) Chloroethane	(2)	2.786	64	86862	16.587
10) Dichlorofluoromethane	(2)	3.029	67	209607	18.998
12) Trichlorofluoromethane	(2)	3.102	101	198877	17.277
11) n-Pentane	(2)	3.139	43	197257	17.673
14) Ethyl ether	(2)	3.358	59	120346	20.077
15) Freon 123a	(2)	3.431	67	144203	20.748
16) Acrolein	(1)	3.528	56	367294	142.359
17) 1,1-Dichloroethene	(2)	3.680	96	109537	21.645
18) Acetone	(1)	3.698	58	232755M	191.718
19) Freon 113	(2)	3.717	101	114143	19.813
21) 2-Propanol	(1)	3.875	45	104971	143.611
22) Methyl Iodide	(2)	3.893	142	189211	19.040
23) Carbon Disulfide	(2)	4.015	76	330188	18.051
27) Methyl Acetate	(2)	4.142	43	173170	19.575
25) Allyl Chloride	(2)	4.173	41	162072	18.470
29)*t-Butyl alcohol-d10	(1)	4.361	65	339709M	250.000
28) Methylene Chloride	(2)	4.374	84	130254	21.555
30) t-Butyl alcohol	(1)	4.495	59	297967	194.919
31) Acrylonitrile	(2)	4.690	53	456442	98.514
33) Methyl Tertiary Butyl Ether	(2)	4.781	73	394972	19.587
32) trans-1,2-Dichloroethene	(2)	4.799	96	124259	21.198
34) n-Hexane	(2)	5.219	57	202809	20.406
36) 1,1-Dichloroethane	(2)	5.450	63	223427	20.961
38) di-Isopropyl ether	(2)	5.505	45	406936	19.986
39) 2-Chloro-1,3-butadiene	(2)	5.566	53	197070	20.398
40) Ethyl t-butyl ether	(2)	6.040	59	392563	19.671
43) 1,2-Dichloroethene (Total)	(2)		96	271370	43.275
44) 2-Butanone	(2)	6.229	43	1116129	161.421
42) cis-1,2-Dichloroethene	(2)	6.278	96	147111	22.077
45) 2,2-Dichloropropane	(2)	6.296	77	175839	21.489
47) Propionitrile	(1)	6.308	54	273445	155.527
48) Methacrylonitrile	(2)	6.533	67	751916	152.655
49) Bromochloromethane	(2)	6.612	128	69024	19.853

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 09/25/2019 at 07:38.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 14:36 kek01027

Sample Name: YLGICVC Lab Sample ID: YLGICVC

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.625	71	194031	101.731
51) Chloroform	(2)	6.758	83	218740	21.193
52)$Dibromofluoromethane	(2)	6.977	113	270982	49.531
53) 1,1,1-Trichloroethane	(2)	6.996	97	189289	21.163
54) Cyclohexane	(2)	7.105	56	225436	19.333
55) 1,1-Dichloropropene	(2)	7.209	75	182734	21.165
56) Carbon Tetrachloride	(2)	7.215	117	159024	20.852
58) Isobutyl Alcohol	(1)	7.312	41	257894	488.480
57)$1,2-Dichloroethane-d4	(2)	7.440	102	71246	49.813
60) Benzene	(2)	7.470	78	532811	21.108
61) 1,2-Dichloroethane	(2)	7.537	62	190563	21.286
65) t-Amyl methyl ether	(2)	7.653	73	396612	19.855
66)*Fluorobenzene	(2)	7.872	96	1165932	50.000
67) n-Heptane	(2)	7.884	43	202764	19.303
69) n-Butanol	(1)	8.188	56	496969	1003.591
71) Trichloroethene	(2)	8.352	95	137513	21.059
72) Methylcyclohexane	(2)	8.675	83	236903	19.124
73) 1,2-Dichloropropane	(2)	8.681	63	139205	21.635
76) Methyl Methacrylate	(2)	8.748	69	149519	19.799
75) 1,4-Dioxane	(1)	8.766	88	58926M	558.017
74) Dibromomethane	(2)	8.796	93	89806	21.157
78) Bromodichloromethane	(2)	9.028	83	157350	21.245
79) 2-Nitropropane	(2)	9.271	41	54214	17.178
80) 2-Chloroethyl Vinyl Ether	(2)	9.368	63	111525	20.510
81) cis-1,3-Dichloropropene	(2)	9.557	75	211724	21.189
82) 4-Methyl-2-pentanone	(2)	9.715	43	1241772	95.297
83)$Toluene-d8	(3)	9.867	98	1184150	50.322
88) Toluene	(3)	9.940	92	345677	21.461
90) 1,3-Dichloropropene (total)	(3)		100	406209	41.869
89) trans-1,3-Dichloropropene	(3)	10.189	75	194485	20.680
91) Ethyl Methacrylate	(3)	10.238	69	237062	19.890
92) 1,1,2-Trichloroethane	(3)	10.390	97	136513	21.979
93) Tetrachloroethene	(3)	10.488	166	143069	20.989
94) 1,3-Dichloropropane	(3)	10.554	76	228615	21.196
96) 2-Hexanone	(3)	10.591	43	1075695	101.118
97) Dibromochloromethane	(3)	10.774	129	128680	21.295
99) 1,2-Dibromoethane	(3)	10.883	107	144422	21.360
100)*Chlorobenzene-d5	(3)	11.309	117	869710	50.000

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on 09/25/2019 at 07:38.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 14:36 kek01027

Sample Name: YLGICVC Lab Sample ID: YLGICVC

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) 1-Chlorohexane	(3)	11.309	91	185469	20.488
102) Chlorobenzene	(3)	11.333	112	389301	21.482
104) Ethylbenzene	(3)	11.418	91	664641	21.547
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	122137	21.108
106) m+p-Xylene	(3)	11.534	106	528842	43.445
108) Xylene (Total)	(3)		106	785859	65.123
107) o-Xylene	(3)	11.862	106	257017	21.678
109) Styrene	(3)	11.875	104	431106	22.008
110) Bromoform	(3)	12.039	173	86756	19.934
111) Isopropylbenzene	(3)	12.161	105	673137	21.971
112) Cyclohexanone	(1)	12.227	55	246358	439.352
114)$4-Bromofluorobenzene	(3)	12.307	95	451835	50.256
116) 1,1,2,2-Tetrachloroethane	(4)	12.392	83	231301	21.022
118) trans-1,4-Dichloro-2-butene	(4)	12.416	53	399138	104.952
115) Bromobenzene	(4)	12.422	156	164279	21.485
117) 1,2,3-Trichloropropane	(4)	12.446	110	73690	21.086
119) n-Propylbenzene	(4)	12.483	91	797792	21.999
120) 2-Chlorotoluene	(4)	12.562	126	160657	21.507
122) 1,3,5-Trimethylbenzene	(4)	12.617	105	579346	21.595
121) 4-Chlorotoluene	(4)	12.653	126	167125	21.403
124) tert-Butylbenzene	(4)	12.860	134	120074M	21.373
125) Pentachloroethane	(4)	12.897	167	90552	21.223
126) 1,2,4-Trimethylbenzene	(4)	12.903	105	600436	21.309
127) sec-Butylbenzene	(4)	13.024	105	744545	21.913
129) 1,3-Dichlorobenzene	(4)	13.128	146	322723	21.548
130) p-Isopropyltoluene	(4)	13.134	119	643779	22.051
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	465481	50.000
133) 1,4-Dichlorobenzene	(4)	13.201	146	332315	21.725
134) 1,2,3-Trimethylbenzene	(4)	13.207	105	627629	21.203
135) Benzyl Chloride	(4)	13.274	91	416380	19.505
136) 1,3-Diethylbenzene	(4)	13.335	119	394509	20.692
141) Diethylbenzene (total)	(4)		100	1141728	61.936
137) 1,4-Diethylbenzene	(4)	13.408	119	418647	20.761
139) n-Butylbenzene	(4)	13.426	92	330902	21.438
138) 1,2-Dichlorobenzene	(4)	13.462	146	314712	21.487
140) 1,2-Diethylbenzene	(4)	13.475	119	328572M	20.483
142) 1,2-Dibromo-3-chloropropane	(4)	14.004	75	57362	20.209
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	238123	21.148

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on 09/25/2019 at 07:38.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
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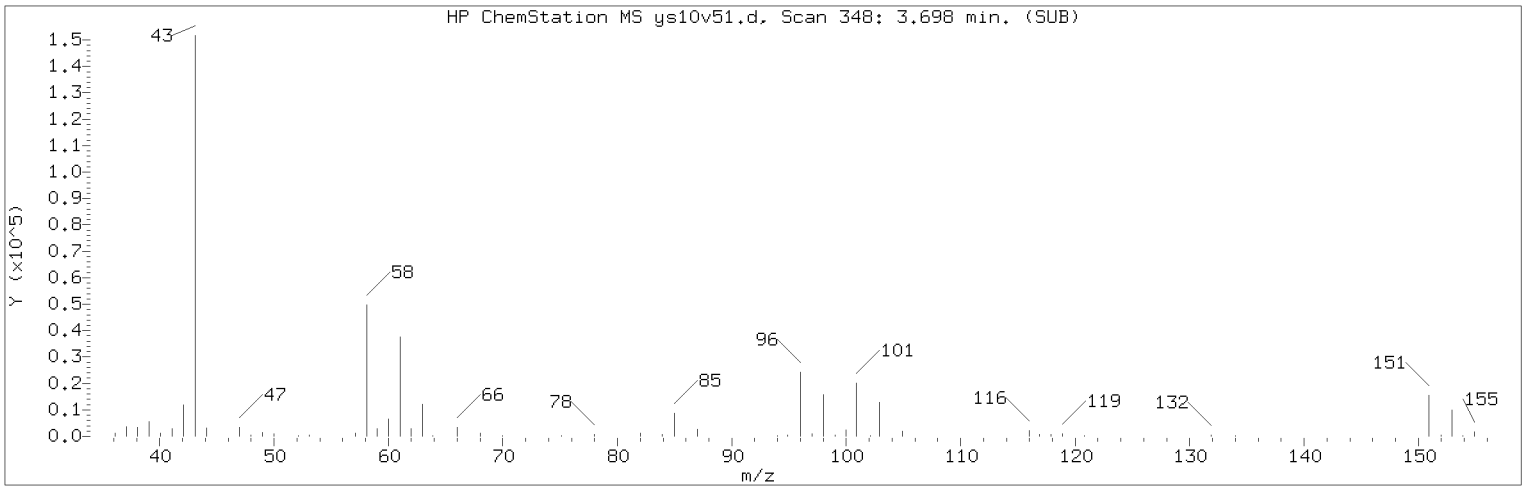
Date, time and analyst ID of latest file update: 24-Sep-2019 14:36 kek01027

Sample Name: YLGICVC Lab Sample ID: YLGICVC

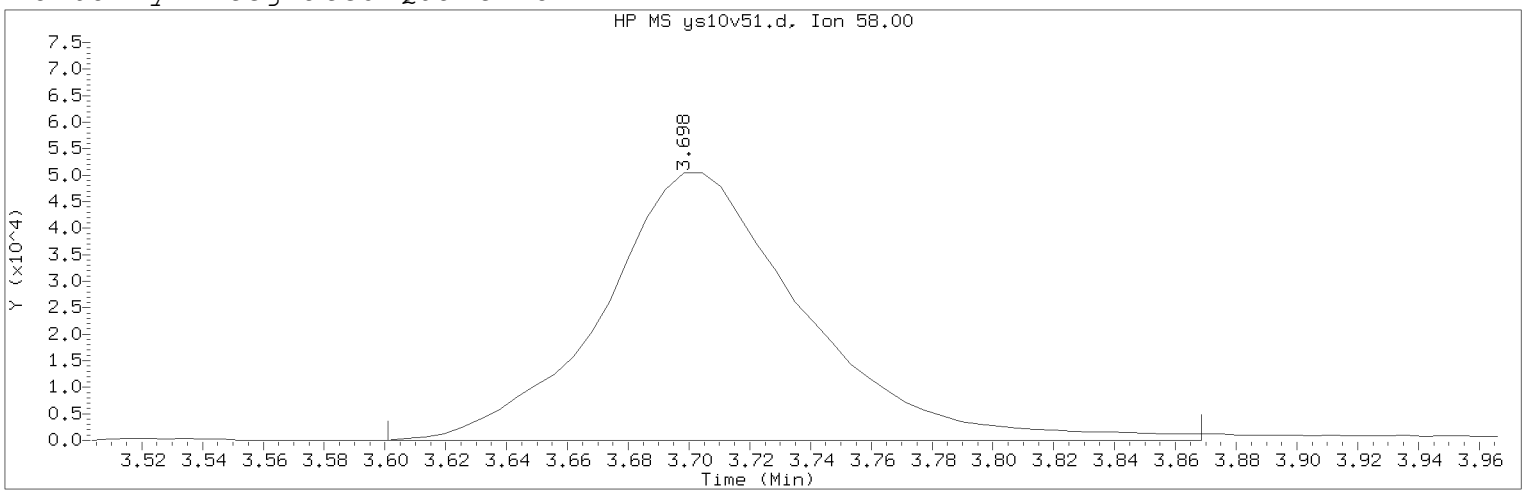
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) 1,2,4-Trichlorobenzene	(4)	14.557	180	228434	21.173
147) Hexachlorobutadiene	(4)	14.637	225	101580	21.128
148) Naphthalene	(4)	14.740	128	804894	21.042
149) 1,2,3-Trichlorobenzene	(4)	14.880	180	219567	20.943
150) 2-Methylnaphthalene	(4)	15.531	142	483280	19.112

Digitally signed by Kevin A. Sposito
on 09/25/2019 at 07:38.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 14:36 kek01027

Sample Name: YLGICVC Lab Sample ID: YLGICVC

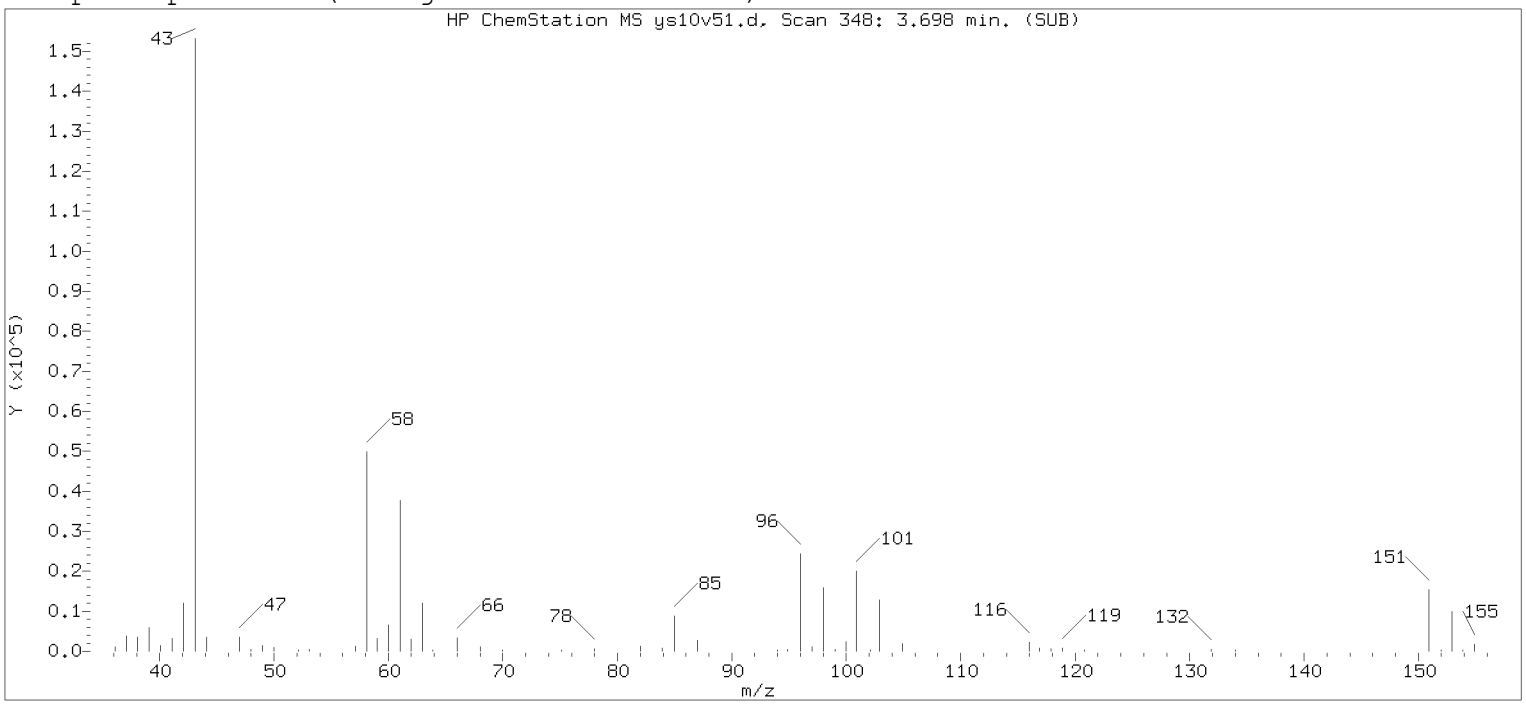
Compound Number : 18
Compound Name : Acetone
Scan Number : 348
Retention Time (minutes): 3.698
Quant Ion : 58.00
Area (flag) : 232755M
On-Column Amount (ng) : 191.7183
Integration start scan : 331 Integration stop scan: 375
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

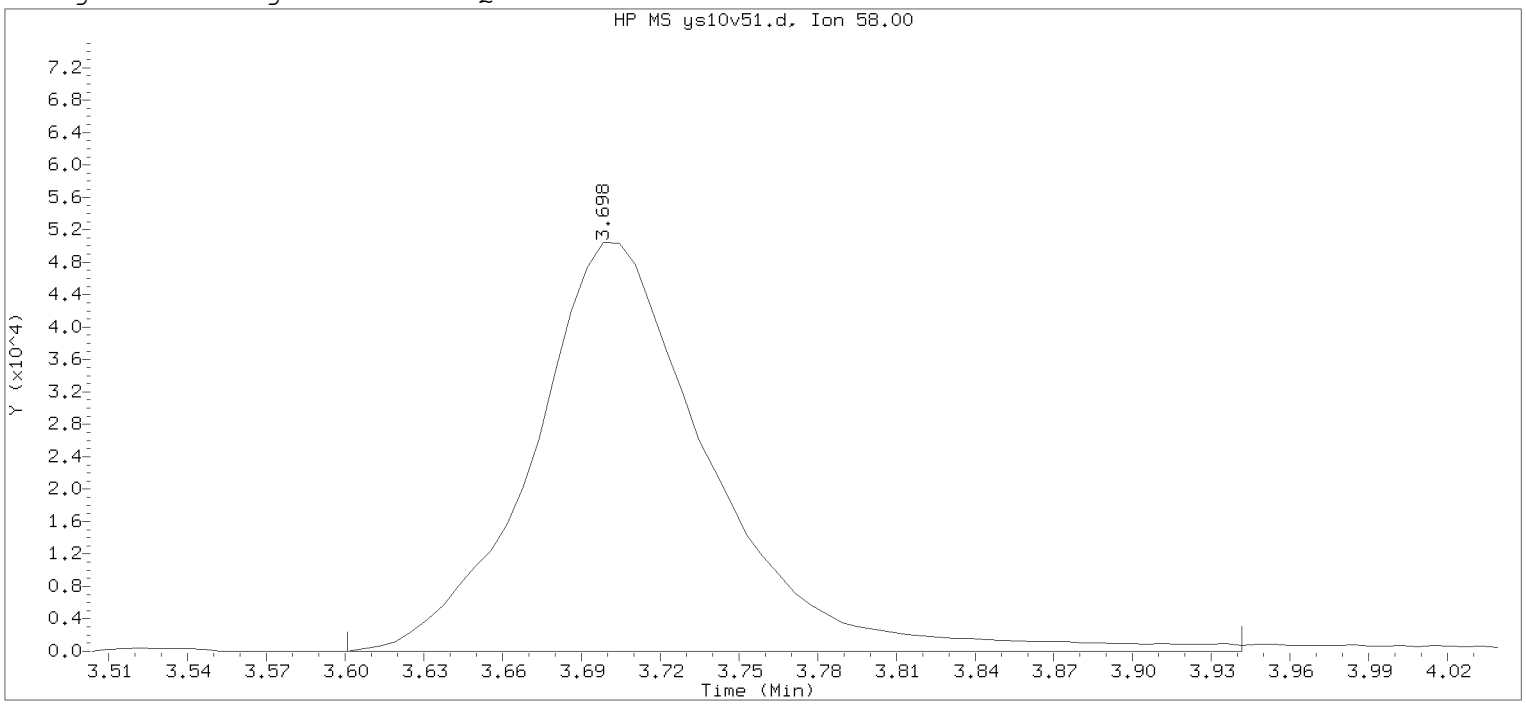
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/25/2019 at 07:38.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:59.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

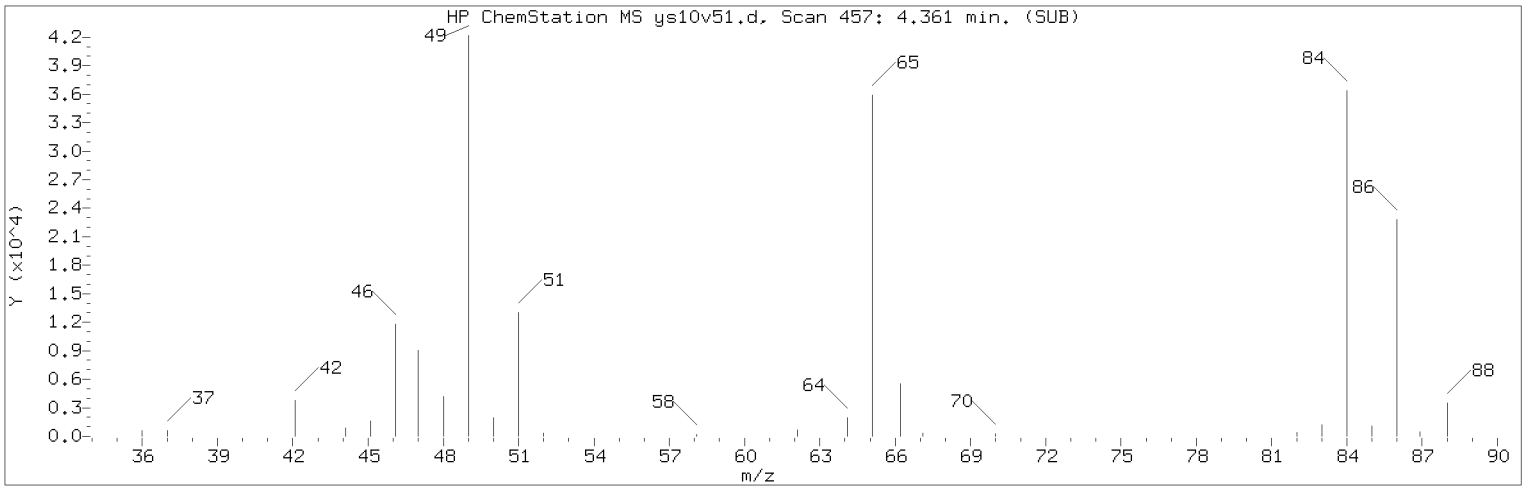
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:35 kas02648

Sample Name: YLGICVC Lab Sample ID: YLGICVC

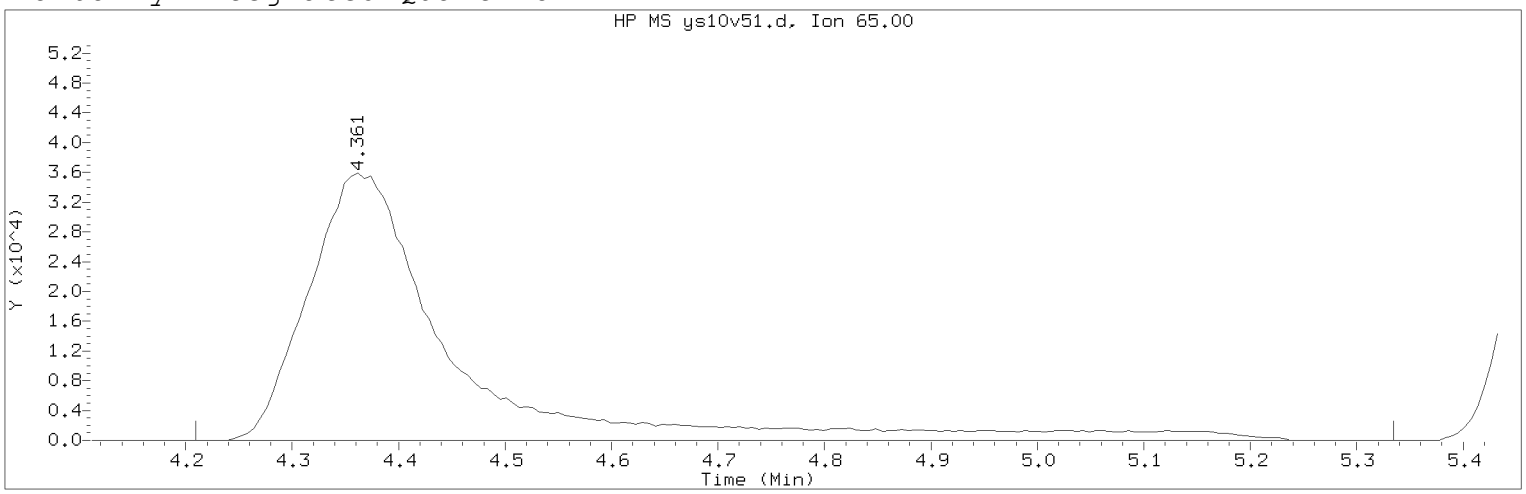
Compound Number : 18
Compound Name : Acetone
Scan Number : 348
Retention Time (minutes): 3.698
Quant Ion : 58.00
Area : 236719
On-column Amount (ng) : 214.0386
Integration start scan : 331 Integration stop scan: 387
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/25/2019 at 07:38.
Target 3.5 esignature user: KASPOSITO@

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 14:36 kek01027

Sample Name: YLGICVC Lab Sample ID: YLGICVC

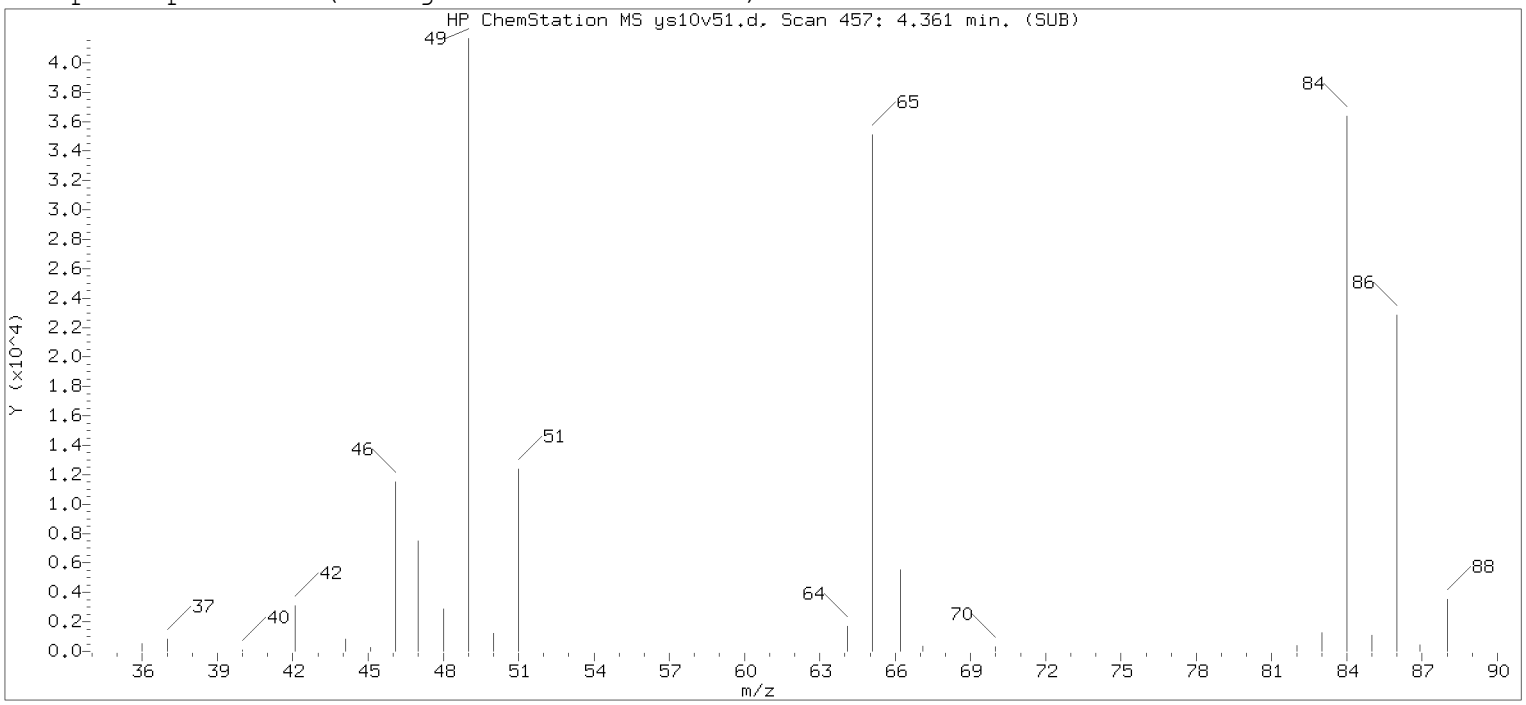
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 457
Retention Time (minutes): 4.361
Quant Ion : 65.00
Area (flag) : 339709M
On-Column Amount (ng) : 250.0000
Integration start scan : 431 Integration stop scan: 616
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

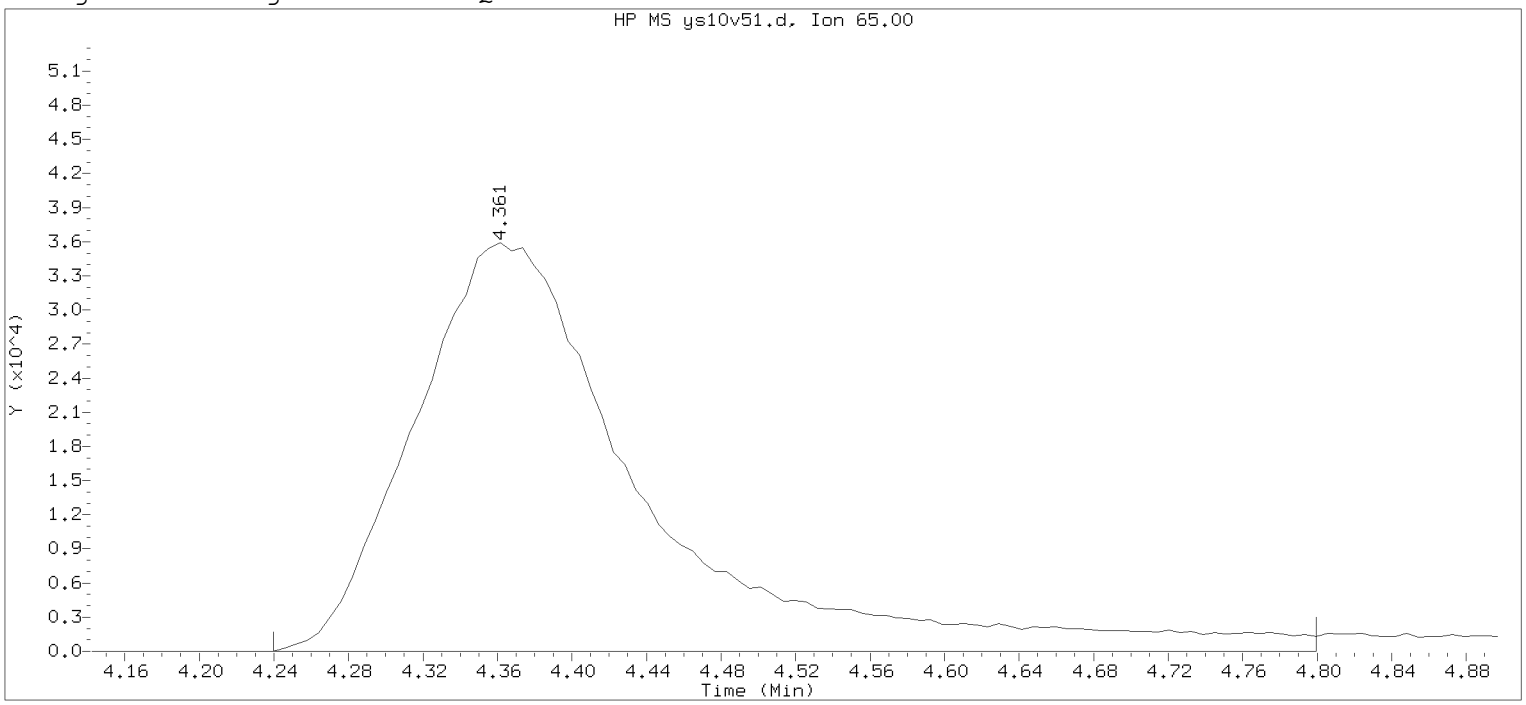
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/25/2019 at 07:38.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:59.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

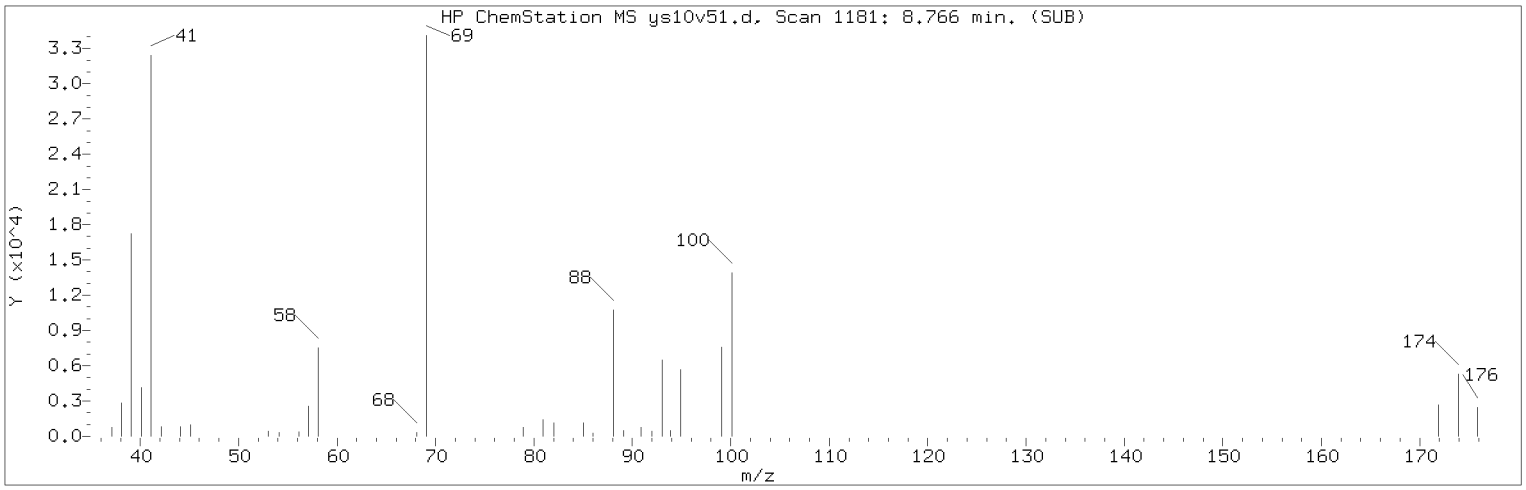
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:35 kas02648

Sample Name: YLGICVC Lab Sample ID: YLGICVC

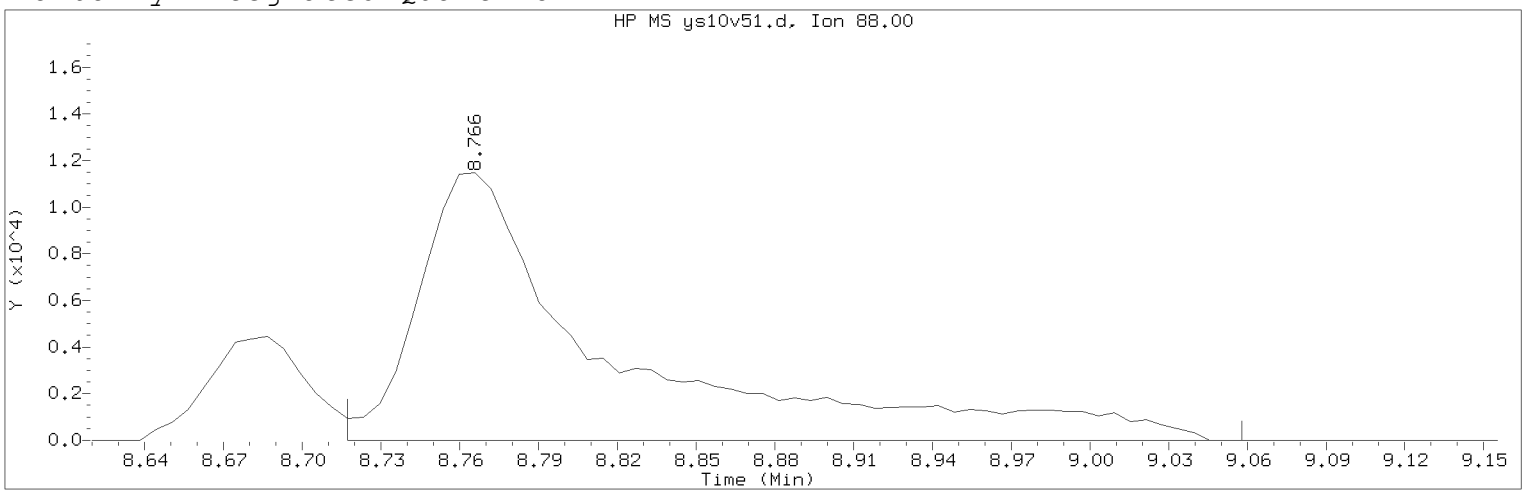
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 457
Retention Time (minutes): 4.361
Quant Ion : 65.00
Area : 309465
On-column Amount (ng) : 250.0000
Integration start scan : 436 Integration stop scan: 528
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/25/2019 at 07:38.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 14:36 kek01027

Sample Name: YLGICVC Lab Sample ID: YLGICVC

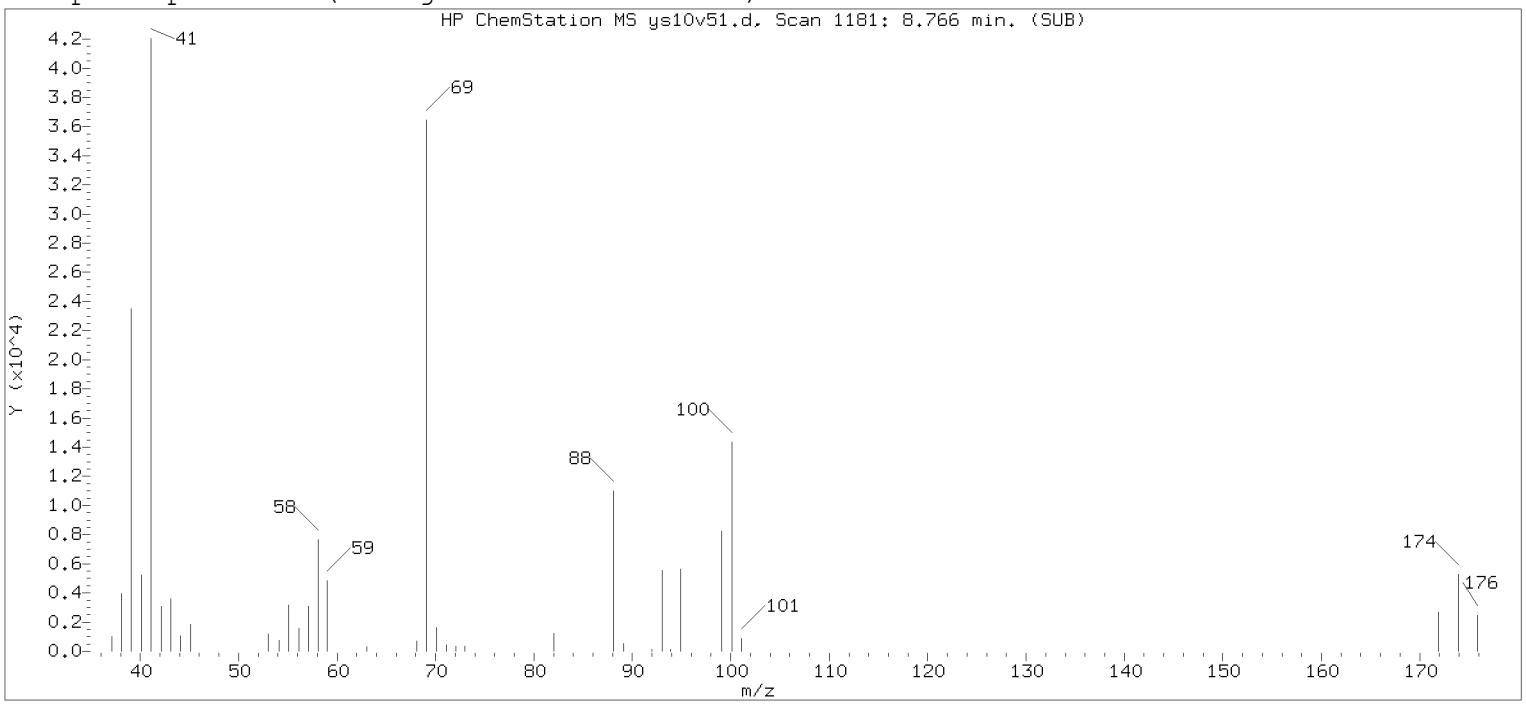
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1181
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area (flag) : 58926M
On-Column Amount (ng) : 558.0166
Integration start scan : 1172 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

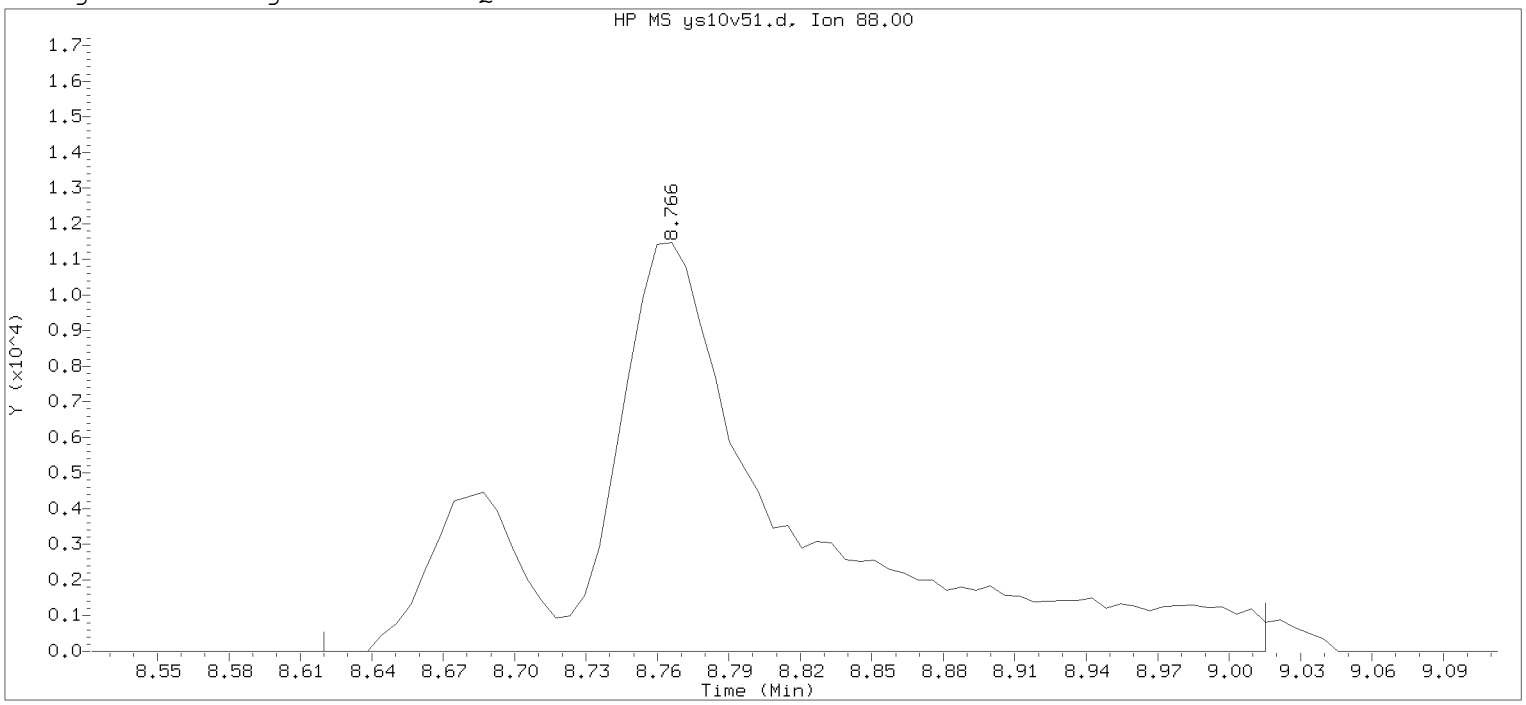
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/25/2019 at 07:38.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:59.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

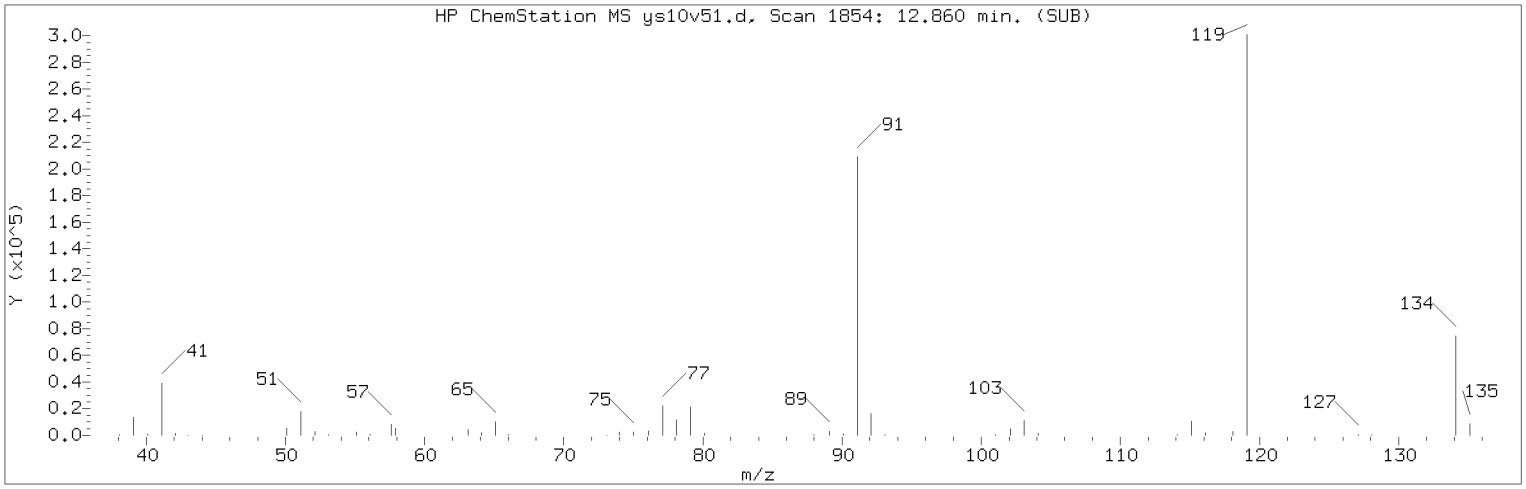
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:35 kas02648

Sample Name: YLGICVC Lab Sample ID: YLGICVC

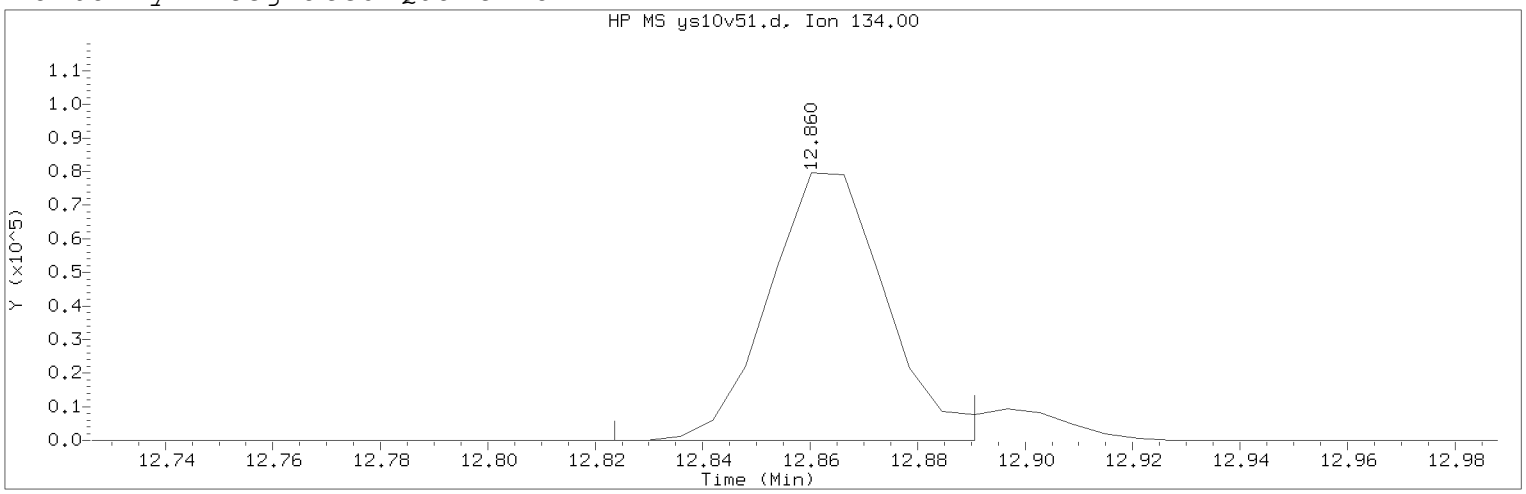
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1181		
Retention Time (minutes)	: 8.766		
Quant Ion	: 88.00		
Area	: 69351		
On-column Amount (ng)	: 720.9255		
Integration start scan	: 1156	Integration stop scan:	1221
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 09/25/2019 at 07:38.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 14:36 kek01027

Sample Name: YLGICVC Lab Sample ID: YLGICVC

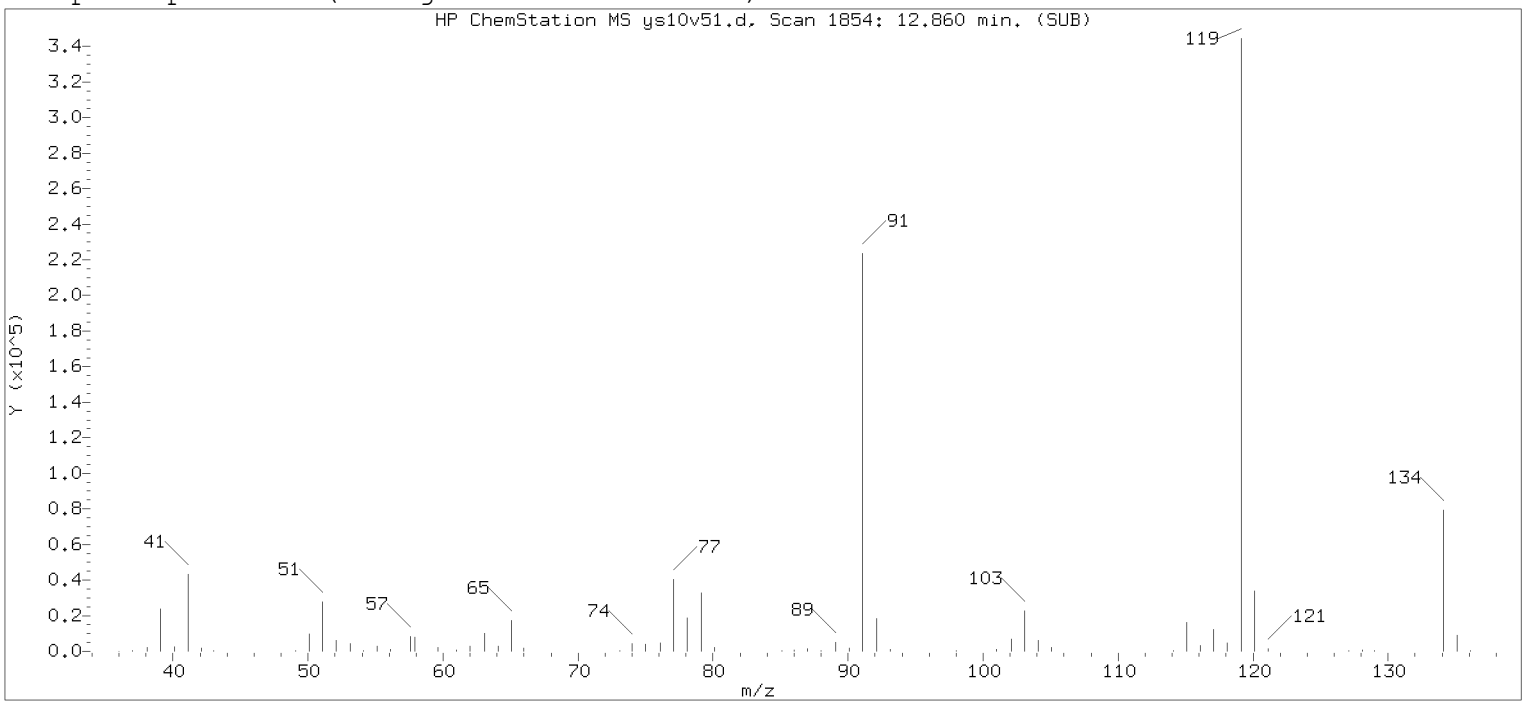
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area (flag) : 120074M
On-Column Amount (ng) : 21.3735
Integration start scan : 1847 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

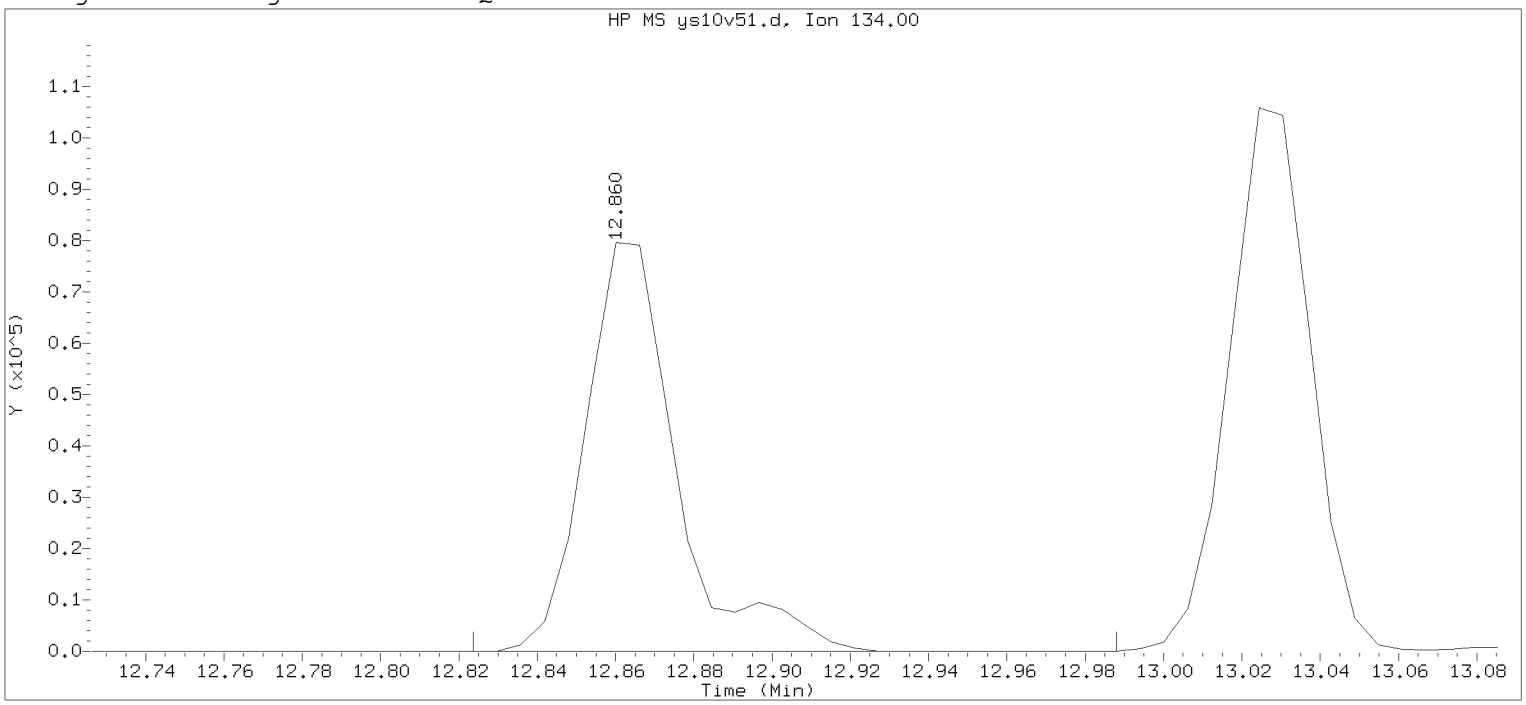
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/25/2019 at 07:38.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:59.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

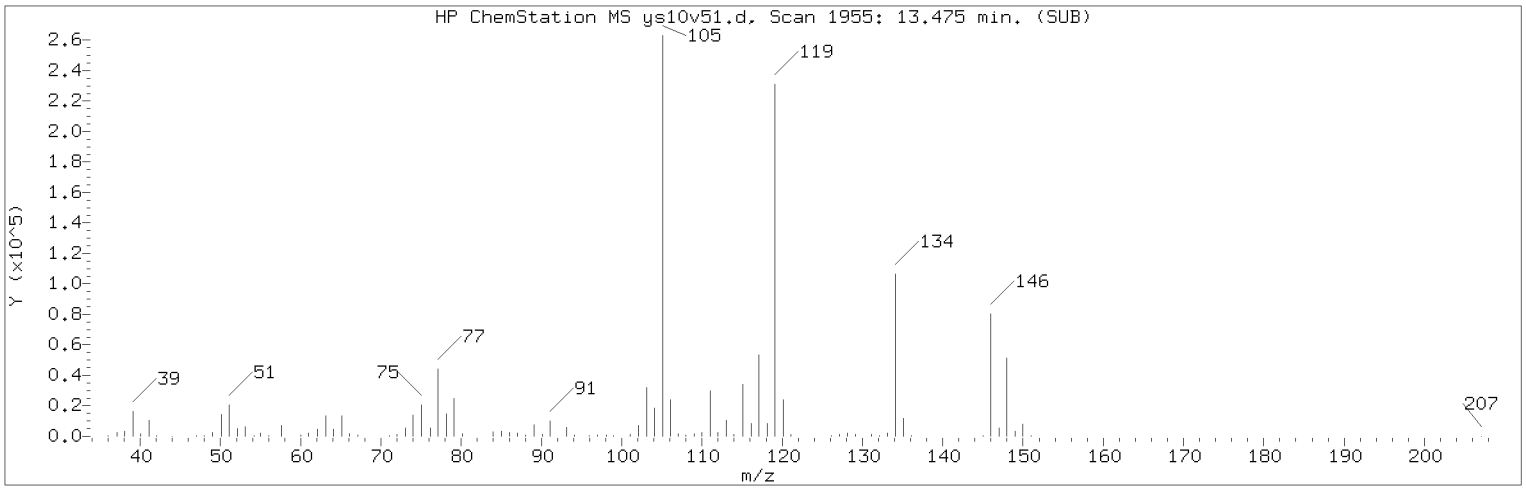
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:35 kas02648

Sample Name: YLGICVC Lab Sample ID: YLGICVC

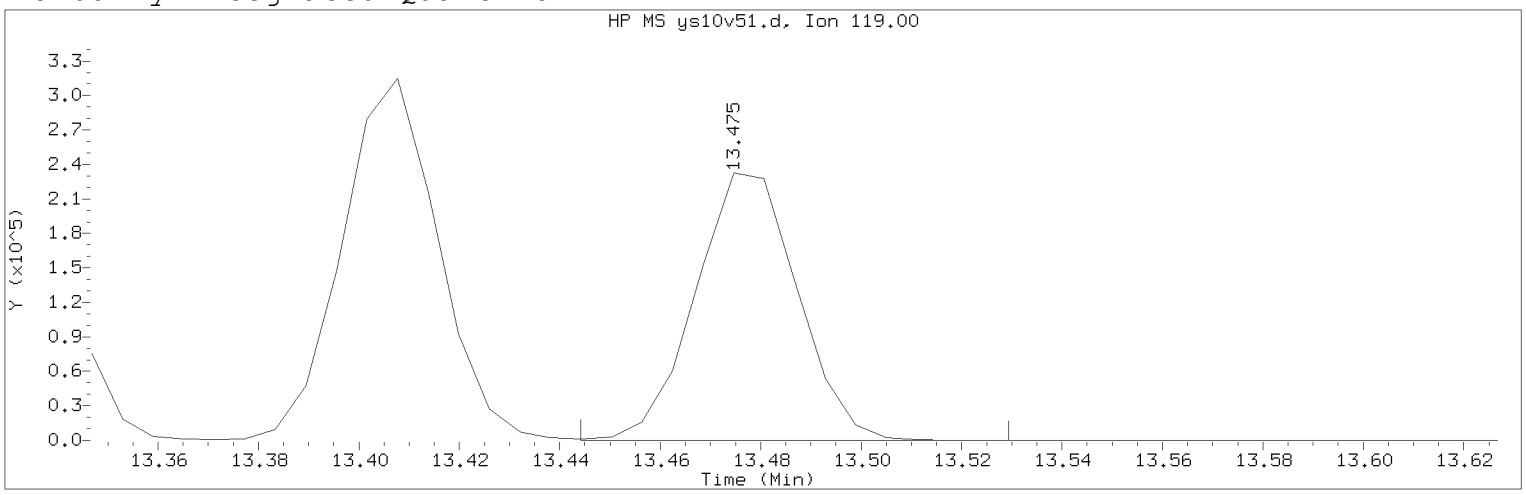
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area : 129219
On-column Amount (ng) : 23.0013
Integration start scan : 1847 Integration stop scan: 1874
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/25/2019 at 07:38.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 14:36 kek01027

Sample Name: YLGICVC Lab Sample ID: YLGICVC

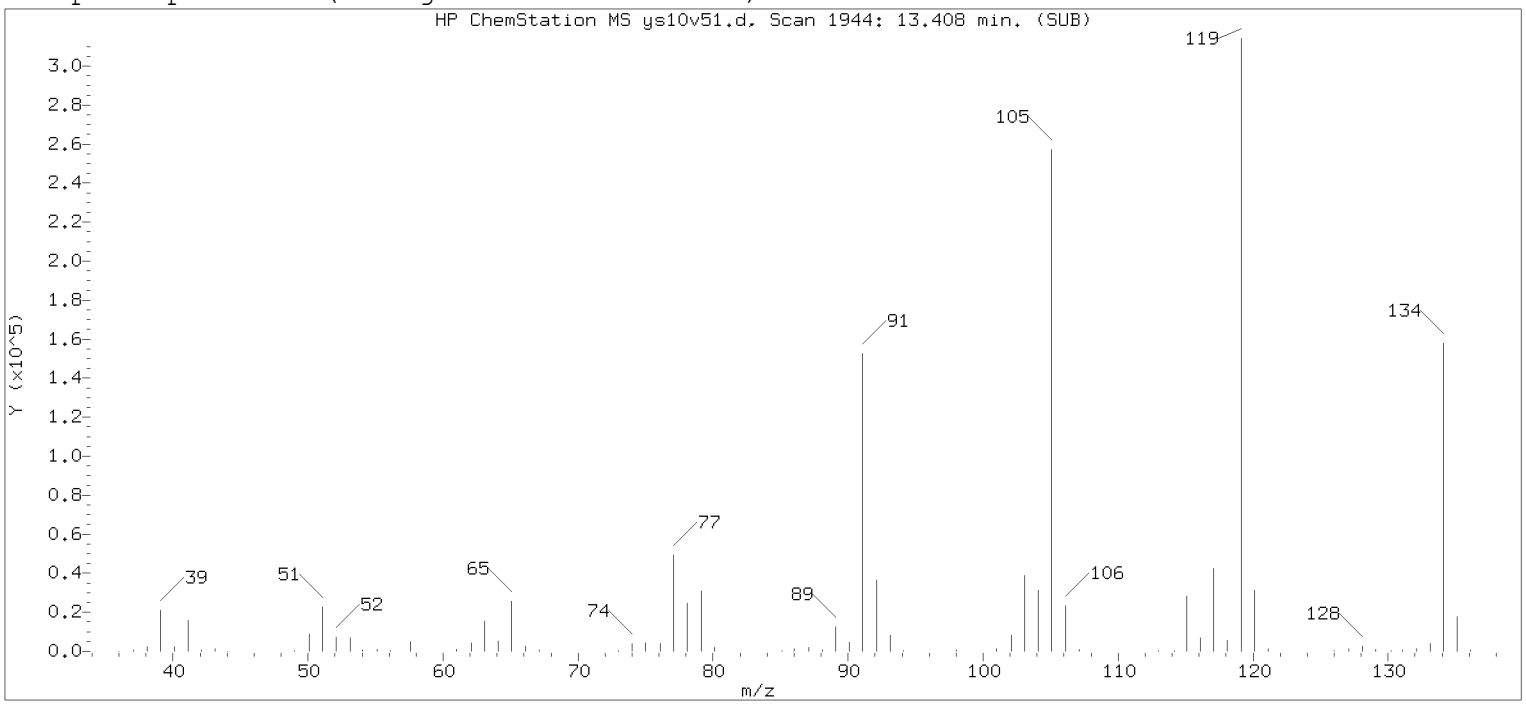
Compound Number : 140
Compound Name : 1,2-Diethylbenzene
Scan Number : 1955
Retention Time (minutes): 13.475
Quant Ion : 119.00
Area (flag) : 328572M
On-Column Amount (ng) : 20.4833
Integration start scan : 1949 Integration stop scan: 1963
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

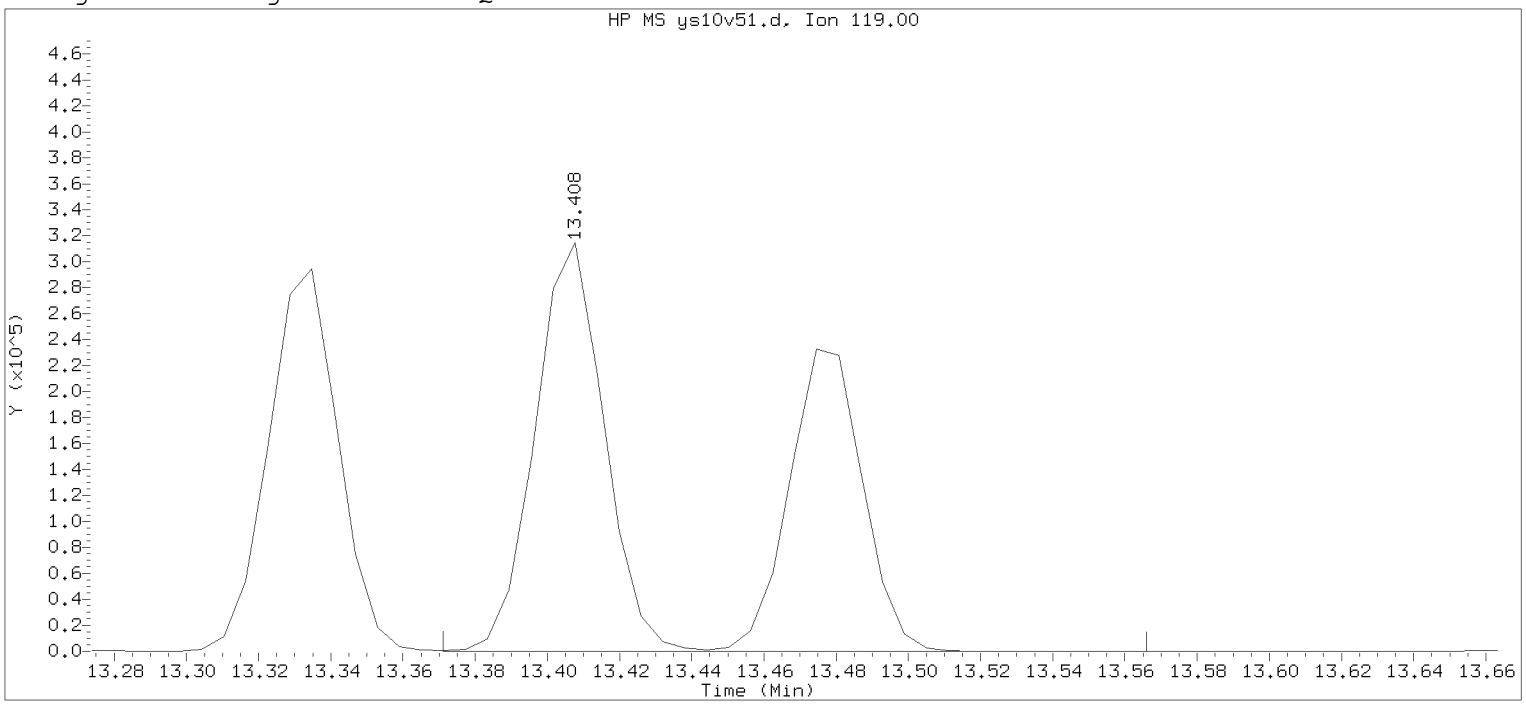
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/25/2019 at 07:38.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:59.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:35 kas02648

Sample Name: YLGICVC Lab Sample ID: YLGICVC

Compound Number : 140
Compound Name : 1,2-Diethylbenzene
Scan Number : 1944
Retention Time (minutes): 13.408
Quant Ion : 119.00
Area : 747027
On-column Amount (ng) : 46.5699
Integration start scan : 1937 Integration stop scan: 1969
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/25/2019 at 07:38.
Target 3.5 esignature user: KAS02648

Data File: /chem2/HP09355.i/19nov27b.b/yn27t05.d

Date : 27-NOV-2019 19:32

Client ID: BFB Aug02-19

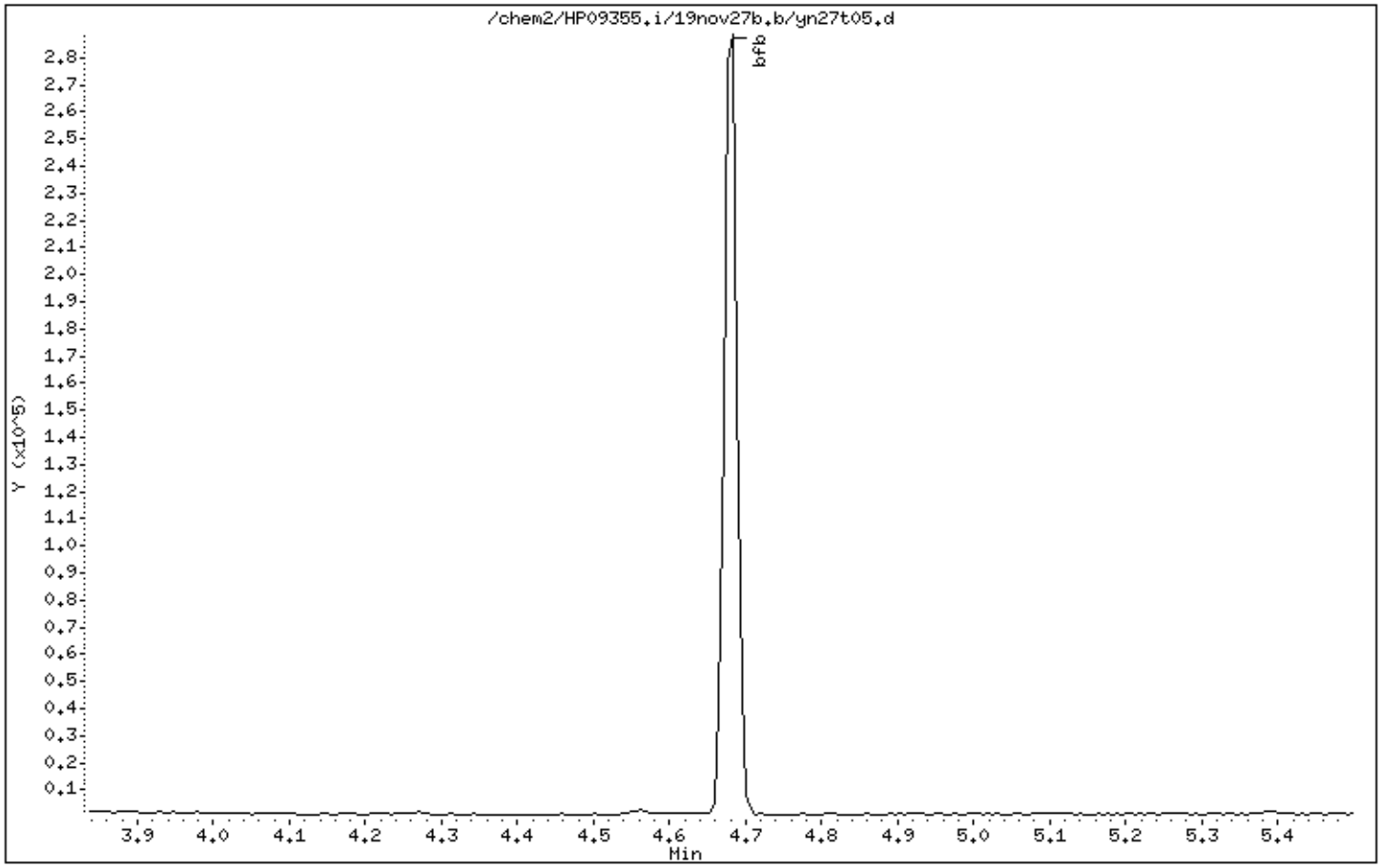
Instrument: HP09355.i

Sample Info: BFB Aug02-19;50NGBFB;1;2;;;;;;

Operator: DVV10203

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem2/HP09355.i/19nov27b.b/yn27t05.d

Date : 27-NOV-2019 19:32

Client ID: BFB Aug02-19

Instrument: HP09355.i

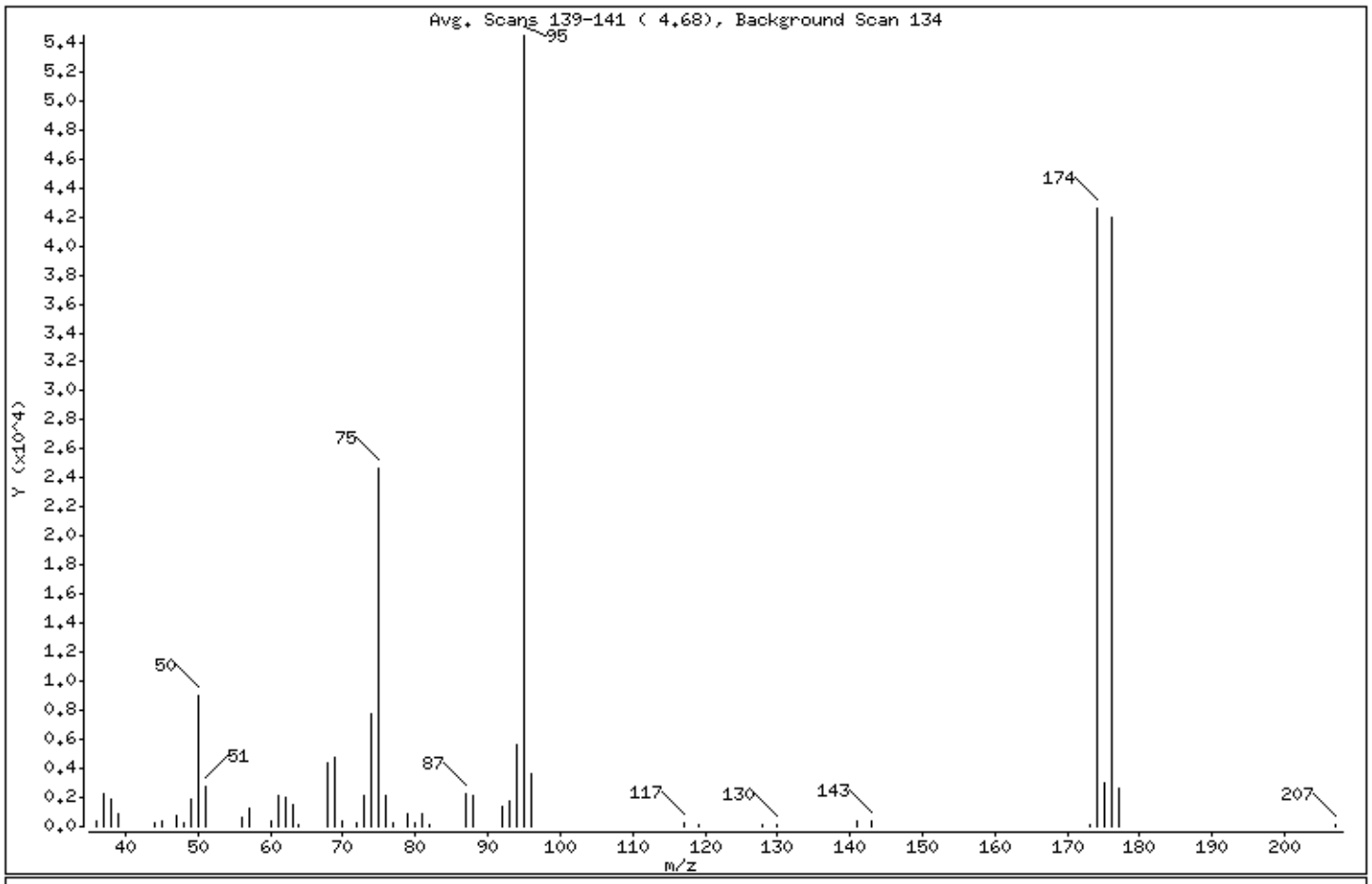
Sample Info: BFB Aug02-19;50NGBFB;1;2;;;;;;

Operator: DVV10203

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.49
75	30.00 - 60.00% of mass 95	45.34
96	5.00 - 9.00% of mass 95	6.71
173	Less than 2.00% of mass 174	0.18 (0.23)
174	50.00 - 100.00% of mass 95	78.26
175	5.00 - 9.00% of mass 174	5.50 (7.03)
176	95.00 - 101.00% of mass 174	76.93 (98.29)
177	5.00 - 9.00% of mass 176	4.87 (6.33)

Date : 27-NOV-2019 19:32

Client ID: BFB Aug02-19 Instrument: HP09355.i

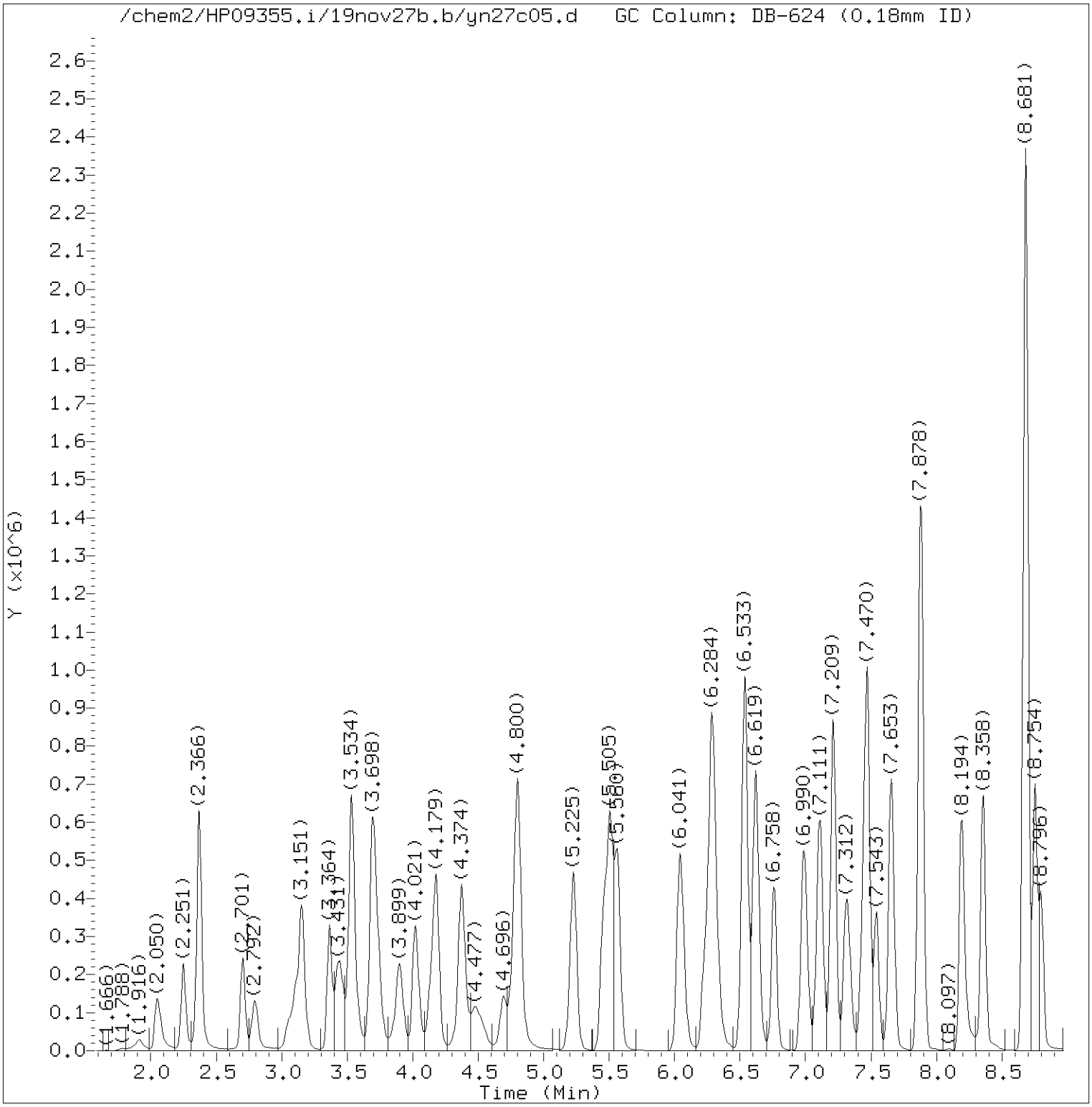
Sample Info: BFB Aug02-19;50NGBFB;1;2;;;;;;

Operator: DVV10203

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: yn27t05.d
Spectrum: Avg. Scans 139-141 (4.68), Background Scan 134
Location of Maximum: 95.00
Number of points: 50

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	320	60.00	419	77.00	254	119.00	183
37.00	2234	61.00	2082	79.00	903	128.00	84
38.00	1909	62.00	1977	80.00	253	130.00	91
39.00	826	63.00	1536	81.00	929	141.00	377
44.00	222	64.00	86	82.00	176	143.00	400
45.00	356	68.00	4420	87.00	2308	173.00	100
47.00	741	69.00	4813	88.00	2124	174.00	42640
48.00	234	70.00	380	92.00	1337	175.00	2999
49.00	1821	72.00	221	93.00	1760	176.00	41912
50.00	8985	73.00	2161	94.00	5651	177.00	2652
51.00	2769	74.00	7780	95.00	54480	207.00	67
56.00	615	75.00	24704	96.00	3654		
57.00	1262	76.00	2158	117.00	249		



Total Ion Chromatogram (TIC)

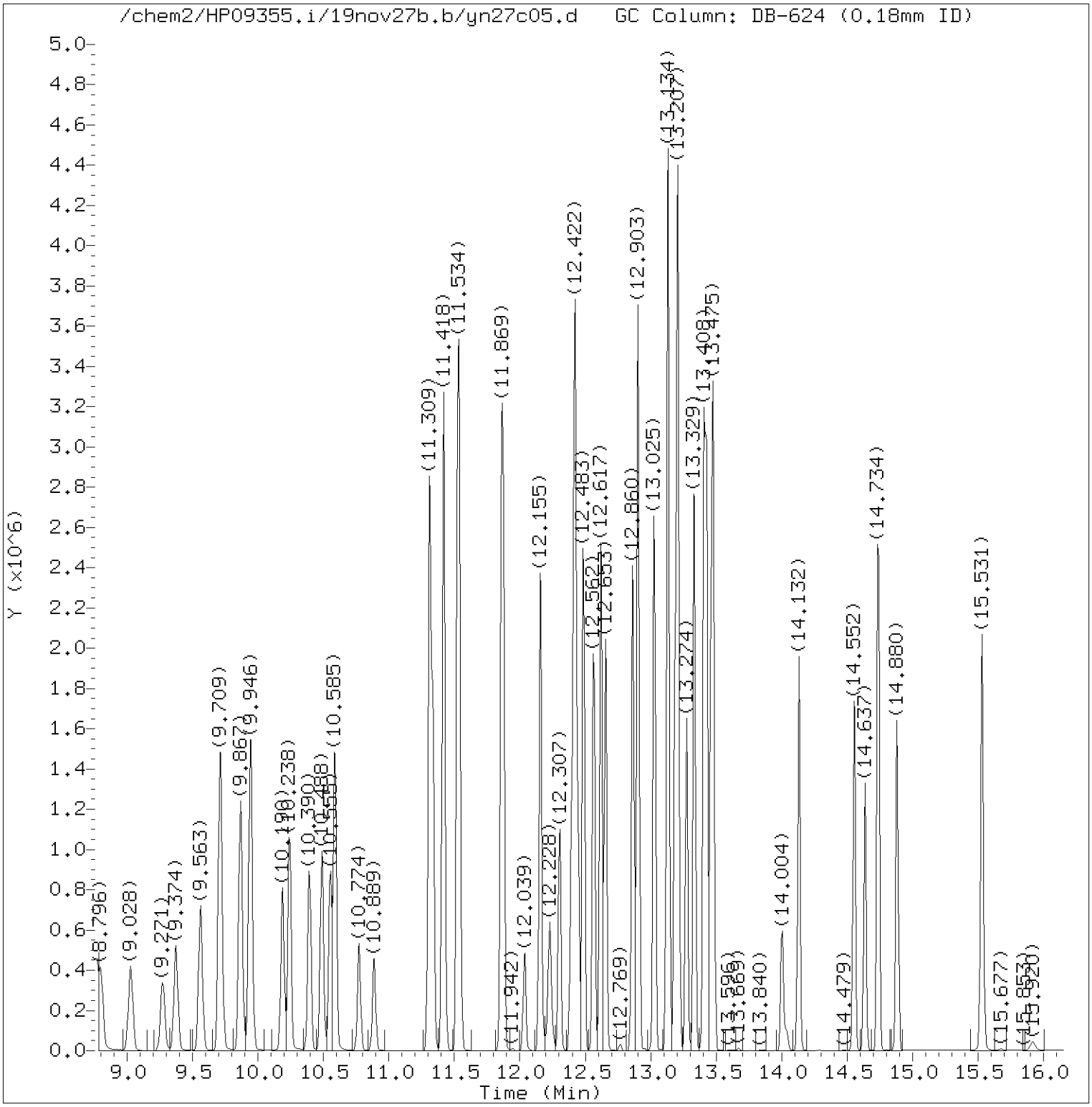
Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27c05.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 19:43 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:35 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Don V. Viray
on 11/27/2019 at 20:35.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27c05.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 19:43 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:35 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Don V. Viray
on 11/27/2019 at 20:35.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27c05.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 19:43 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:35 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.050	85	299785	31.886
4) Chloromethane	(2)	2.251	50	356758	44.148
6) Vinyl Chloride	(2)	2.366	62	347261	43.772
5) 1,3-Butadiene	(2)	2.372	39	290801	46.249
8) Bromomethane	(2)	2.701	94	237731	40.391
9) Chloroethane	(2)	2.792	64	201725	43.816
12) Trichlorofluoromethane	(2)	3.102	101	339312	33.527
11) n-Pentane	(2)	3.151	43	398925	40.654
14) Ethyl ether	(2)	3.364	59	284818	54.046
15) Freon 123a	(2)	3.437	67	320629	52.471
16) Acrolein	(1)	3.534	56	1110242	451.933
17) 1,1-Dichloroethene	(2)	3.692	96	248815	55.923
17) 1,1-Dichloroethene	(2)	3.692	63	127156	55.545
18) Acetone	(1)	3.698	58	128777	111.400
19) Freon 113	(2)	3.723	101	228643	45.141
21) 2-Propanol	(1)	3.863	45	219190	314.936
22) Methyl Iodide	(2)	3.899	142	424608	48.600
23) Carbon Disulfide	(2)	4.021	76	879054	54.660
27) Methyl Acetate	(2)	4.143	43	467547	60.114
25) Allyl Chloride	(2)	4.179	41	488128	63.271
29)*t-Butyl alcohol-d10	(1)	4.355	65	323461M	250.000
28) Methylene Chloride	(2)	4.374	84	303848	57.191
30) t-Butyl alcohol	(1)	4.483	59	396605	272.477
31) Acrylonitrile	(2)	4.690	53	239056	58.686
33) Methyl Tertiary Butyl Ether	(2)	4.781	73	841283	47.452
32) trans-1,2-Dichloroethene	(2)	4.806	96	290023	56.276
34) n-Hexane	(2)	5.225	57	452785	51.819
36) 1,1-Dichloroethane	(2)	5.457	63	535774	57.170
38) di-Isopropyl ether	(2)	5.505	45	1067660	59.642
39) 2-Chloro-1,3-butadiene	(2)	5.566	53	467122	54.995
40) Ethyl t-butyl ether	(2)	6.041	59	878963	50.096
43) 1,2-Dichloroethene (Total)	(2)		96	618597	112.362
44) 2-Butanone	(2)	6.235	43	676707	111.319
42) cis-1,2-Dichloroethene	(2)	6.278	96	328574	56.086
45) 2,2-Dichloropropane	(2)	6.302	77	360087	50.052
47) Propionitrile	(1)	6.308	54	524424	313.258
48) Methacrylonitrile	(2)	6.533	67	615585	142.151
49) Bromochloromethane	(2)	6.619	128	156004	51.038

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 11/27/2019 at 20:35.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27c05.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 19:43 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:35 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.625	71	178139	98.090
51) Chloroform	(2)	6.758	83	495032	54.553
52)$Dibromofluoromethane	(2)	6.977	113	222993	46.361
52)$Dibromofluoromethane	(2)	6.977	111	228416	46.385
53) 1,1,1-Trichloroethane	(2)	6.996	97	403914	51.364
54) Cyclohexane	(2)	7.111	56	531709	51.864
54) Cyclohexane	(2)	7.111	84	414600	46.816
54) Cyclohexane	(2)	7.105	69	159531	49.799
55) 1,1-Dichloropropene	(2)	7.209	75	415391	54.723
56) Carbon Tetrachloride	(2)	7.215	117	324778	48.440
58) Isobutyl Alcohol	(1)	7.312	41	372425	740.847
57)$1,2-Dichloroethane-d4	(2)	7.434	102	60606	48.197
57)$1,2-Dichloroethane-d4	(2)	7.434	65	280044	46.167
57)$1,2-Dichloroethane-d4	(2)	7.440	104	38850	48.681
60) Benzene	(2)	7.470	78	1288932	58.081
61) 1,2-Dichloroethane	(2)	7.543	62	400501	50.885
61) 1,2-Dichloroethane	(2)	7.543	98	38563	61.141
65) t-Amyl methyl ether	(2)	7.653	73	854742	48.670
66)*Fluorobenzene	(2)	7.872	96	1025066	50.000
67) n-Heptane	(2)	7.890	43	518471	56.140
69) n-Butanol	(1)	8.194	56	652618	1384.111
71) Trichloroethene	(2)	8.358	95	311799	54.312
72) Methylcyclohexane	(2)	8.675	83	536873	49.294
72) Methylcyclohexane	(2)	8.675	98	231283	48.245
73) 1,2-Dichloropropane	(2)	8.687	63	345864	61.140
76) Methyl Methacrylate	(2)	8.754	69	376724	56.741
75) 1,4-Dioxane	(1)	8.766	88	75645M	752.327
74) Dibromomethane	(2)	8.803	93	203734	54.592
78) Bromodichloromethane	(2)	9.028	83	368031	56.519
79) 2-Nitropropane	(2)	9.271	41	278411	100.337
80) 2-Chloroethyl Vinyl Ether	(2)	9.374	63	290978	60.867
81) cis-1,3-Dichloropropene	(2)	9.563	75	512613	58.353
82) 4-Methyl-2-pentanone	(2)	9.709	43	1285134	112.178
83)$Toluene-d8	(3)	9.867	98	1003149	49.605
83)$Toluene-d8	(3)	9.867	100	639162	49.021
88) Toluene	(3)	9.946	92	798551	57.688
90) 1,3-Dichloropropene (total)	(3)		100	994123	117.930
89) trans-1,3-Dichloropropene	(3)	10.190	75	481510	59.577

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Digitally signed by Don V. Viray
on 11/27/2019 at 20:35.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27c05.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 19:43 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:35 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	10.238	69	606561	59.220
92) 1,1,2-Trichloroethane	(3)	10.390	97	314429	58.907
93) Tetrachloroethene	(3)	10.488	166	318384	54.352
94) 1,3-Dichloropropane	(3)	10.555	76	543404	58.625
96) 2-Hexanone	(3)	10.585	43	1037963	113.536
97) Dibromochloromethane	(3)	10.774	129	296116	57.021
99) 1,2-Dibromoethane	(3)	10.889	107	340161	58.543
100)*Chlorobenzene-d5	(3)	11.309	117	747414	50.000
101) 1-Chlorohexane	(3)	11.309	91	441480	56.749
102) Chlorobenzene	(3)	11.333	112	868917	55.793
104) Ethylbenzene	(3)	11.418	91	1558186	58.780
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	277468	55.799
106) m+p-Xylene	(3)	11.534	106	1200632	114.773
108) Xylene (Total)	(3)		106	1782323	171.863
107) o-Xylene	(3)	11.856	106	581691	57.090
109) Styrene	(3)	11.875	104	1010566	60.030
110) Bromoform	(3)	12.039	173	215481	57.613
111) Isopropylbenzene	(3)	12.155	105	1495477	56.798
112) Cyclohexanone	(1)	12.228	55	302742	567.026
114)$4-Bromofluorobenzene	(3)	12.307	95	370560	47.960
114)$4-Bromofluorobenzene	(3)	12.307	174	286973	48.917
116) 1,1,2,2-Tetrachloroethane	(4)	12.392	83	559698	61.278
118) trans-1,4-Dichloro-2-butene	(4)	12.416	53	421311	133.456
115) Bromobenzene	(4)	12.422	156	373051	58.774
117) 1,2,3-Trichloropropane	(4)	12.447	110	161868	55.796
119) n-Propylbenzene	(4)	12.483	91	1822499	60.541
120) 2-Chlorotoluene	(4)	12.562	126	355641	57.353
122) 1,3,5-Trimethylbenzene	(4)	12.617	105	1295076M	58.153
121) 4-Chlorotoluene	(4)	12.653	126	372517	57.470
124) tert-Butylbenzene	(4)	12.860	134	263235M	56.447
125) Pentachloroethane	(4)	12.897	167	198969	56.176
126) 1,2,4-Trimethylbenzene	(4)	12.903	105	1366314	58.415
127) sec-Butylbenzene	(4)	13.025	105	1675480	59.403
129) 1,3-Dichlorobenzene	(4)	13.128	146	714793	57.494
130) p-Isopropyltoluene	(4)	13.134	119	1428297	58.935
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	386398	50.000
133) 1,4-Dichlorobenzene	(4)	13.201	146	732197	57.663
134) 1,2,3-Trimethylbenzene	(4)	13.207	105	1317241	53.608

M = Compound was manually integrated.
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Digitally signed by Don V. Viray
on 11/27/2019 at 20:35.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27c05.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 19:43 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:35 dvv10203

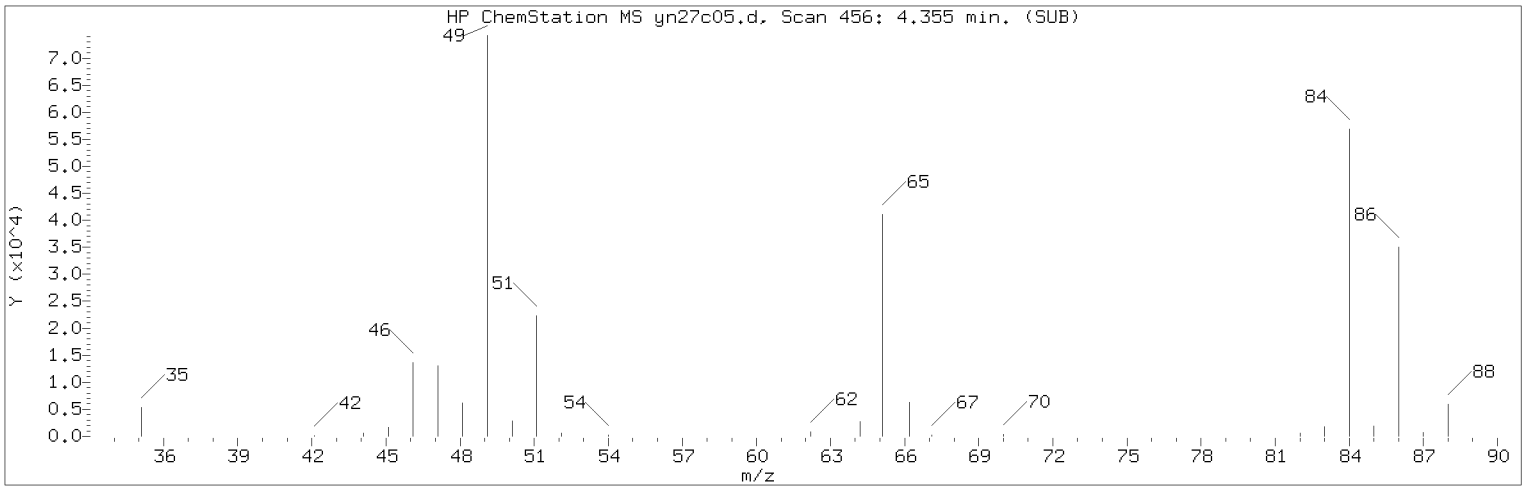
Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.274	91	1047222	59.096
136) 1,3-Diethylbenzene	(4)	13.335	119	854290	53.978
141) Diethylbenzene (total)	(4)		100	2470592	161.419
137) 1,4-Diethylbenzene	(4)	13.408	119	907754	54.229
139) n-Butylbenzene	(4)	13.426	92	766798M	59.847
138) 1,2-Dichlorobenzene	(4)	13.463	146	688082	56.594
140) 1,2-Diethylbenzene	(4)	13.475	119	708548M	53.212
142) 1,2-Dibromo-3-chloropropane	(4)	14.004	75	134672	57.157
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	526116	56.289
146) 1,2,4-Trichlorobenzene	(4)	14.558	180	487993	54.488
147) Hexachlorobutadiene	(4)	14.637	225	212595	53.268
148) Naphthalene	(4)	14.734	128	1814458	57.144
149) 1,2,3-Trichlorobenzene	(4)	14.880	180	462319	53.122
150) 2-Methylnaphthalene	(4)	15.531	142	1005519	47.903

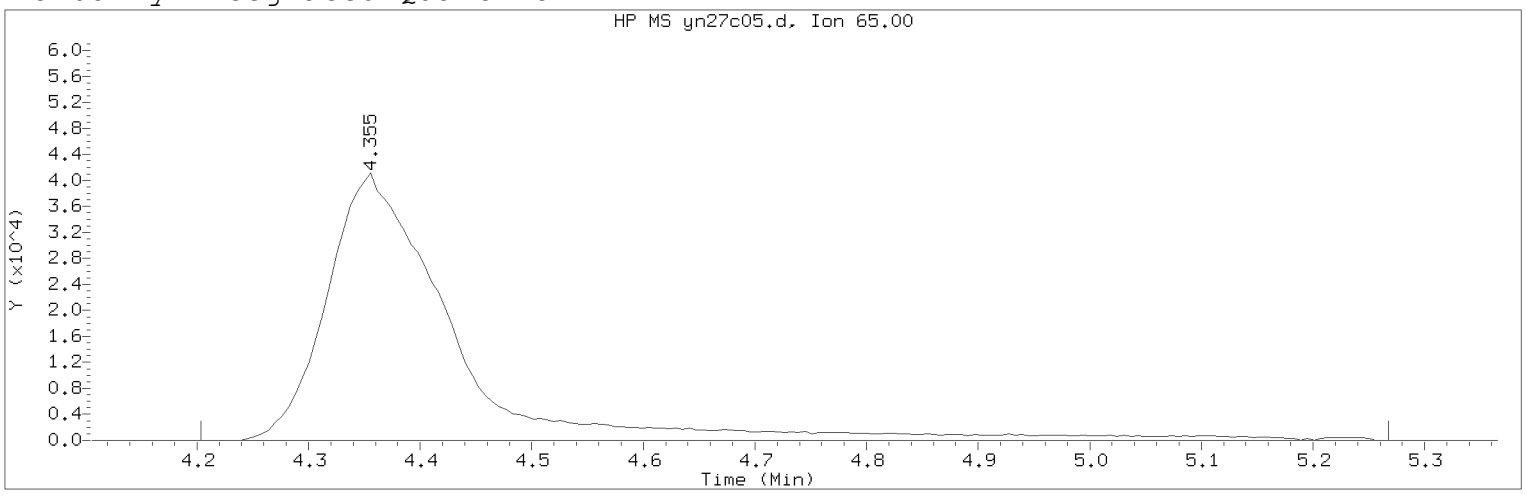
M = Compound was manually integrated.

Digitally signed by Don V. Viray
on 11/27/2019 at 20:35.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 27-NOV-2019 19:43 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:35 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

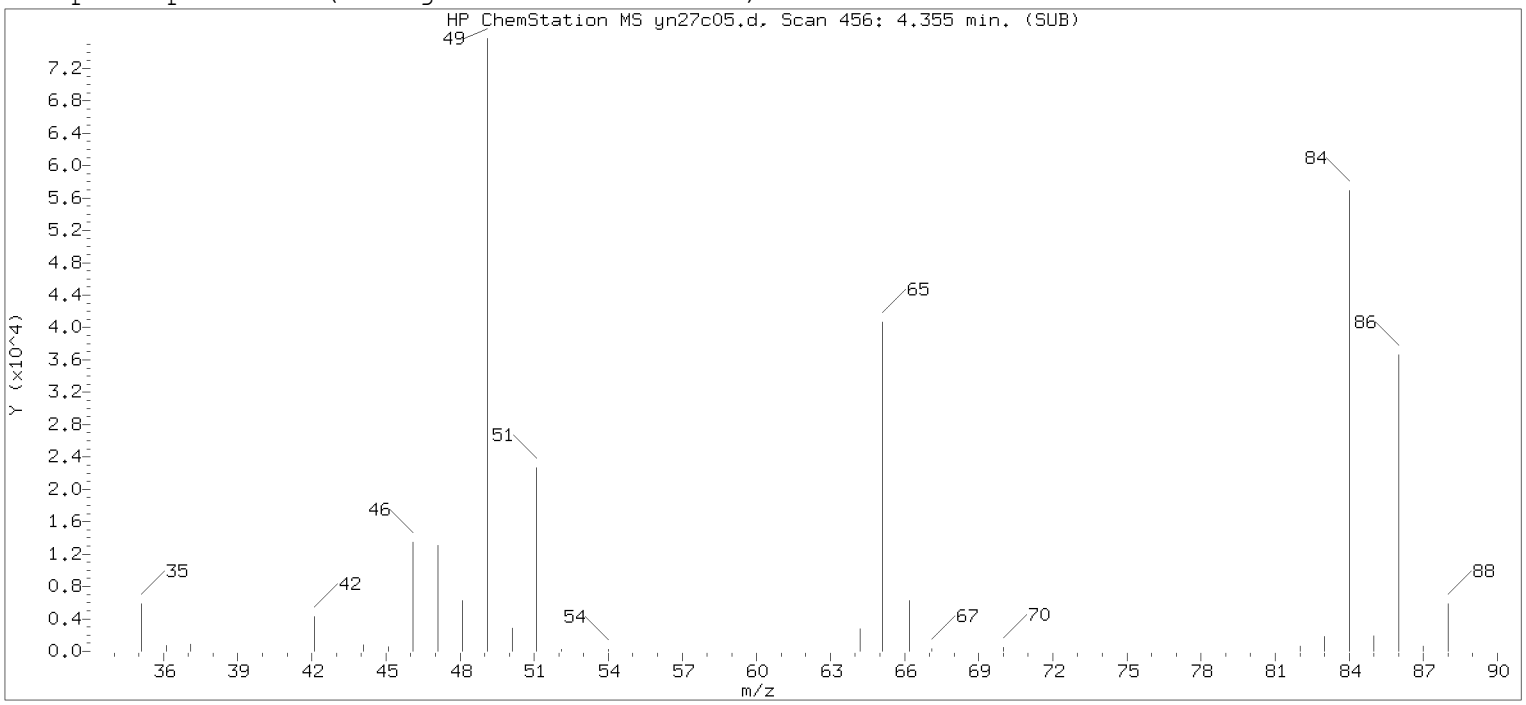
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 456
Retention Time (minutes): 4.355
Quant Ion : 65.00
Area (flag) : 323461M
On-Column Amount (ng) : 250.0000
Integration start scan : 430 Integration stop scan: 605
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

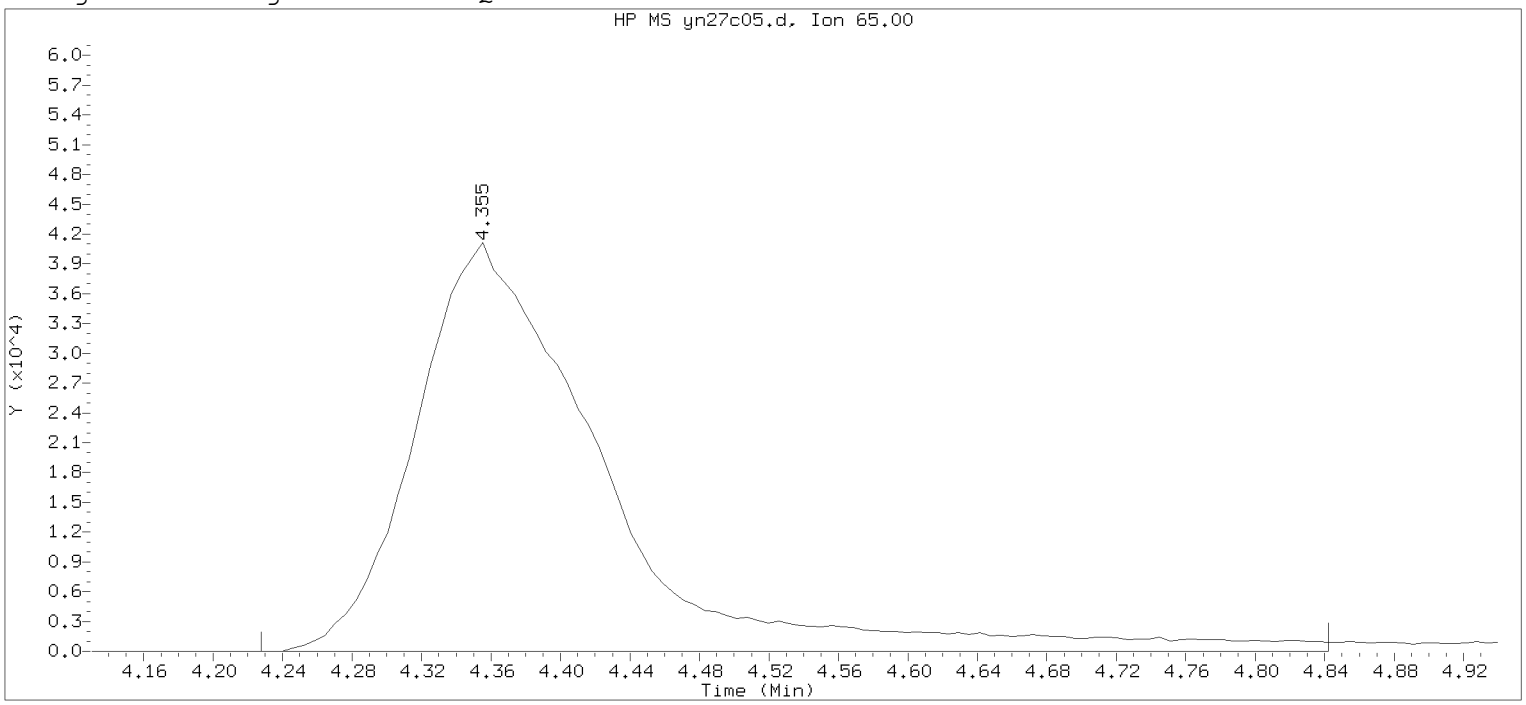
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/27/2019 at 20:35.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27c05.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 19:43 Analyst ID: DVV10203

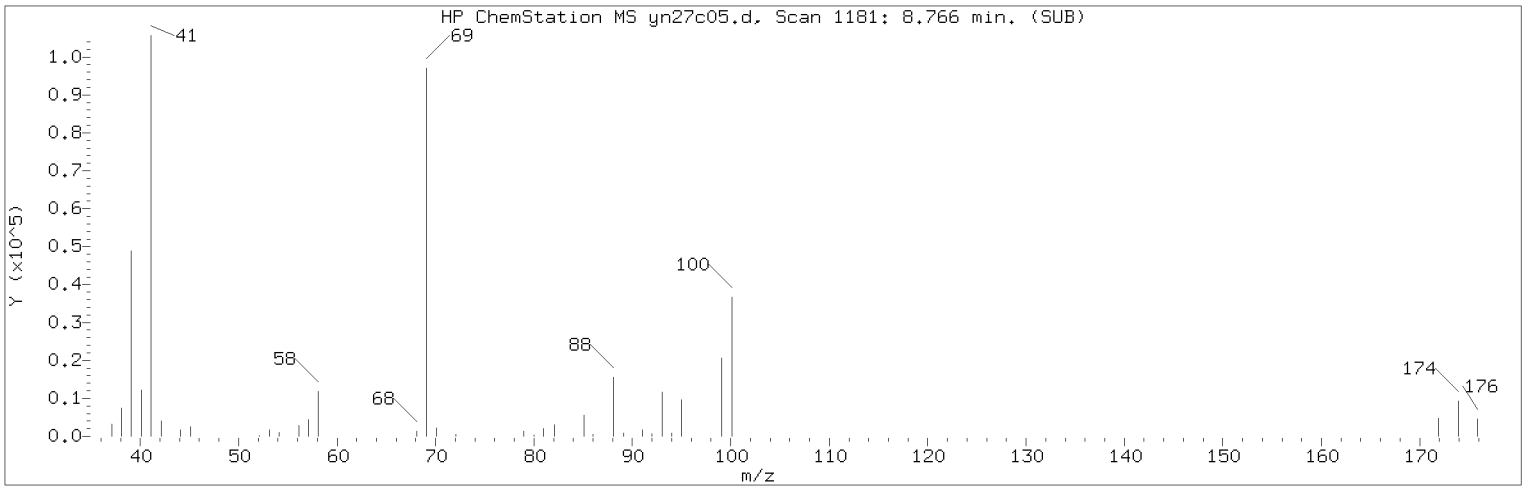
Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:01 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

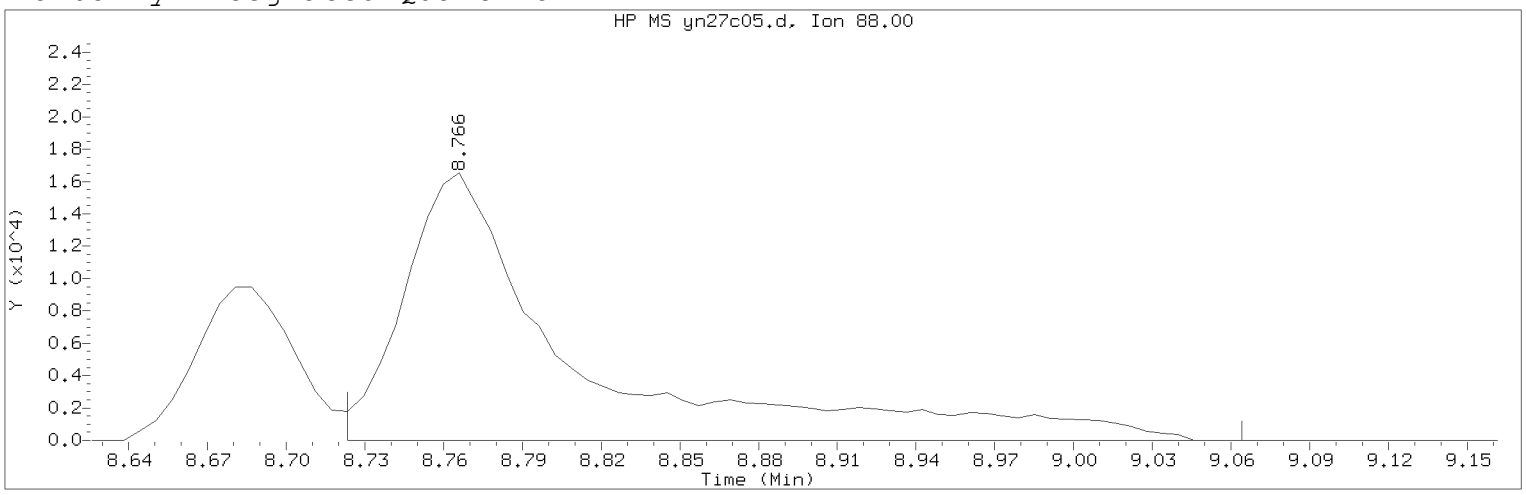
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 456
Retention Time (minutes): 4.355
Quant Ion : 65.00
Area : 308074
On-column Amount (ng) : 250.0000
Integration start scan : 434 Integration stop scan: 535
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/27/2019 at 20:35.
Target 3.5 esignature user id: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27c05.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 19:43 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:35 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

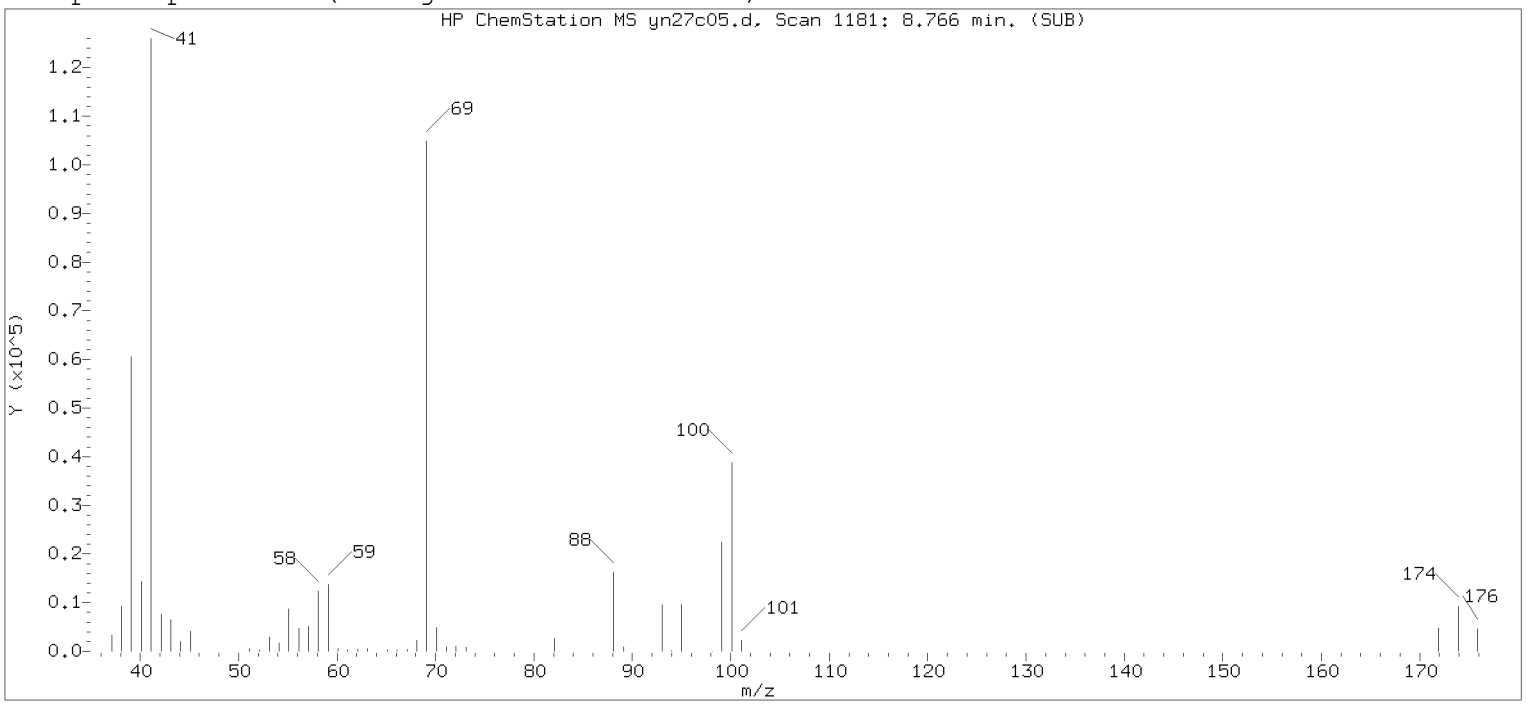
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1181
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area (flag) : 75645M
On-Column Amount (ng) : 752.3266
Integration start scan : 1173 Integration stop scan: 1229
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

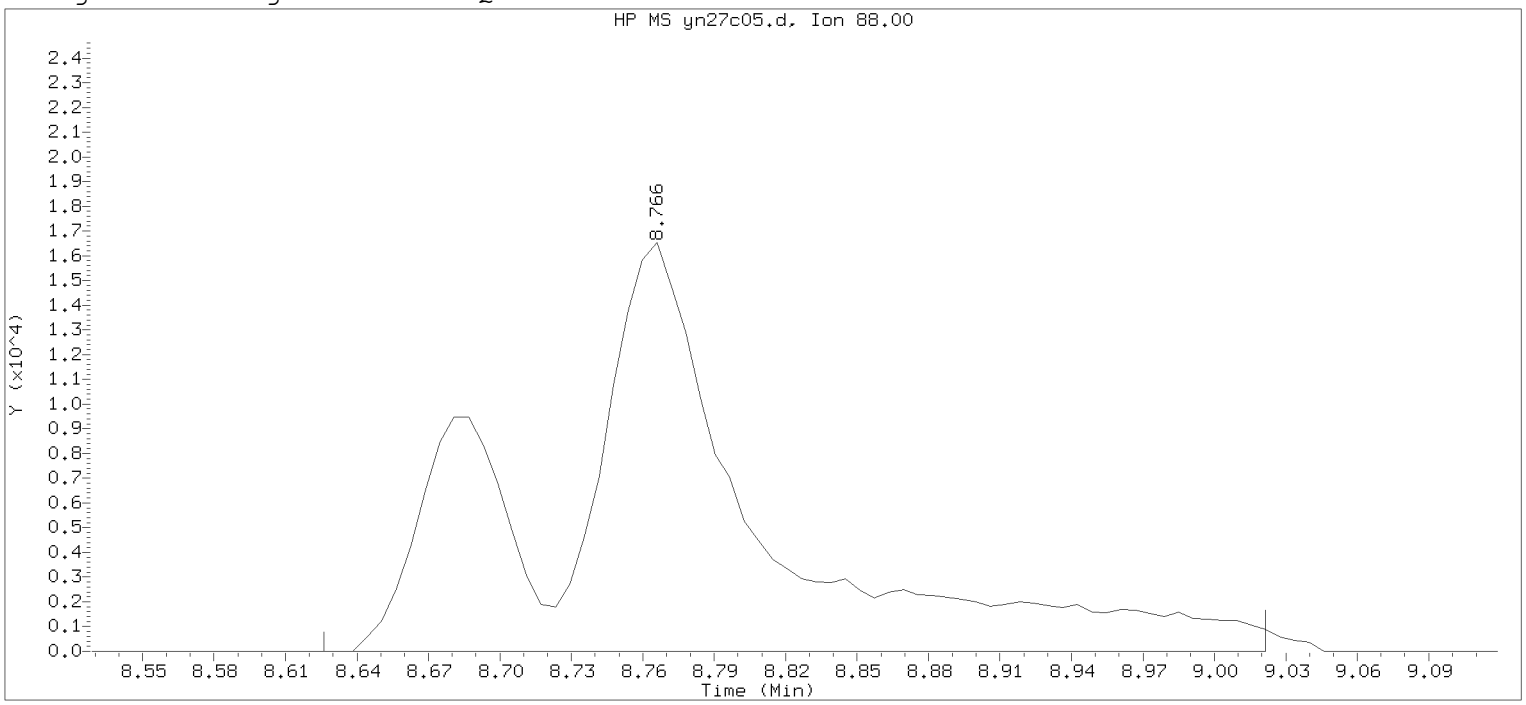
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/27/2019 at 20:35.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27c05.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 19:43 Analyst ID: DVV10203

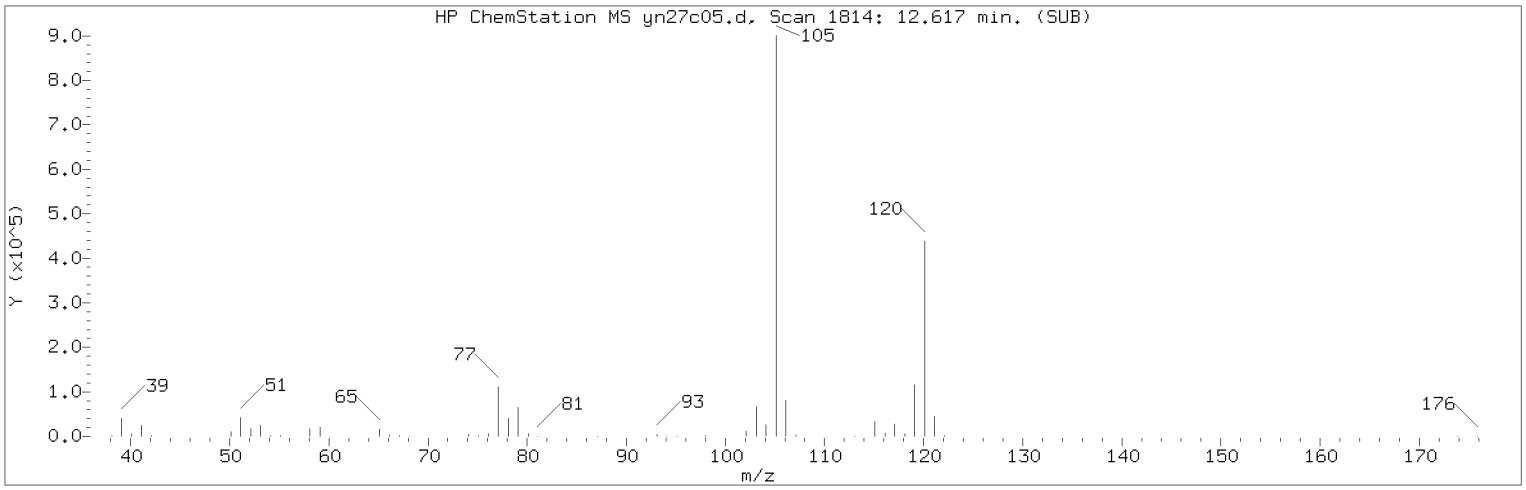
Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:01 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

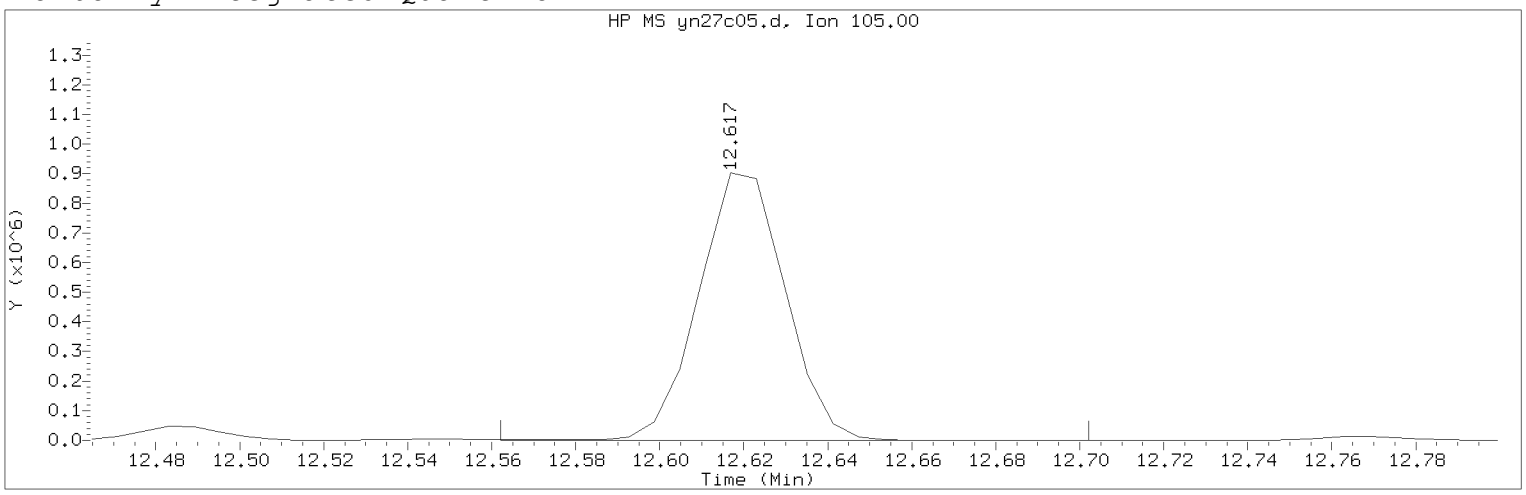
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1181		
Retention Time (minutes)	: 8.766		
Quant Ion	: 88.00		
Area	: 99596		
On-column Amount (ng)	: 1040.0022		
Integration start scan	: 1157	Integration stop scan:	1222
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 11/27/2019 at 20:35.
Target 3.5 esignature user id: dviray0203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27c05.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 19:43 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:35 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

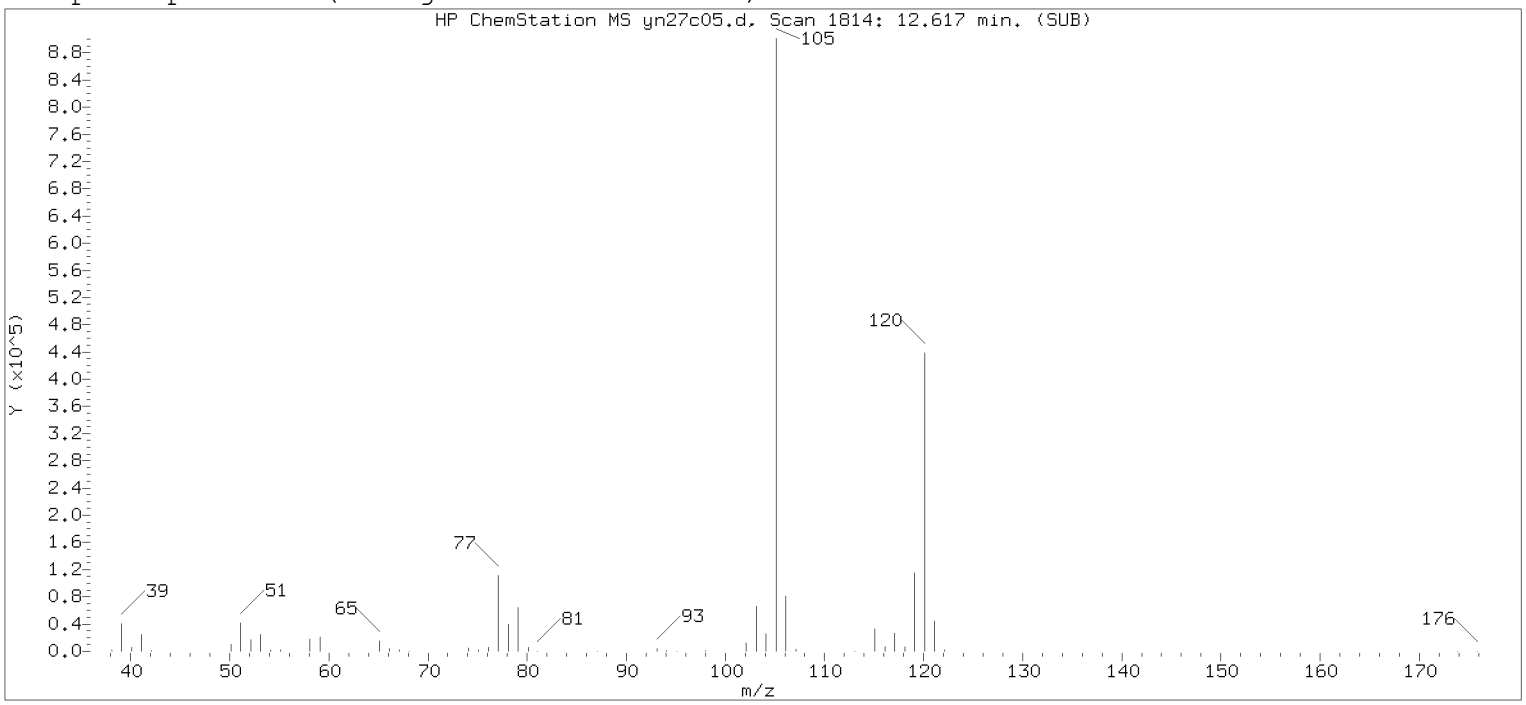
Compound Number : 122
Compound Name : 1,3,5-Trimethylbenzene
Scan Number : 1814
Retention Time (minutes): 12.617
Quant Ion : 105.00
Area (flag) : 1295076M
On-Column Amount (ng) : 58.1533
Integration start scan : 1804 Integration stop scan: 1827
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

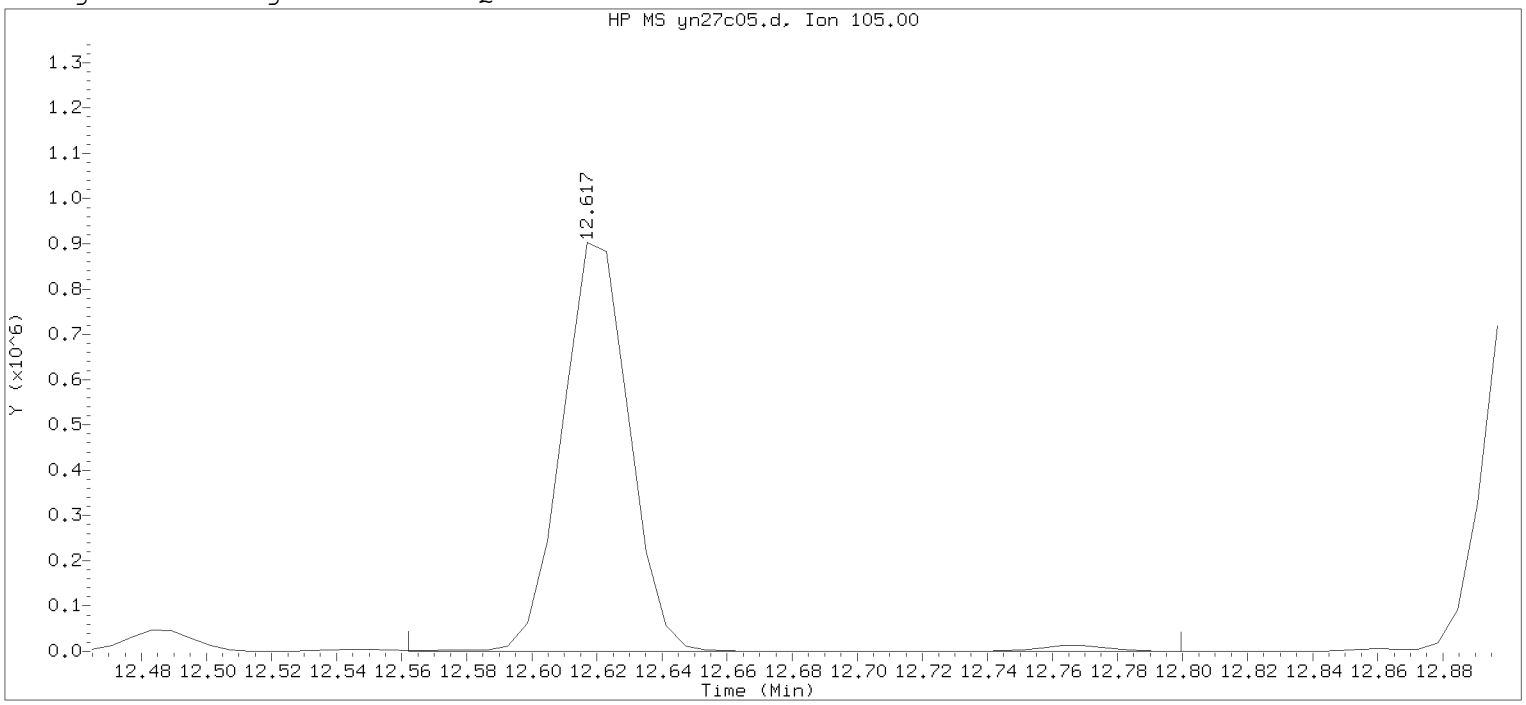
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/27/2019 at 20:35.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27c05.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 19:43 Analyst ID: DVV10203

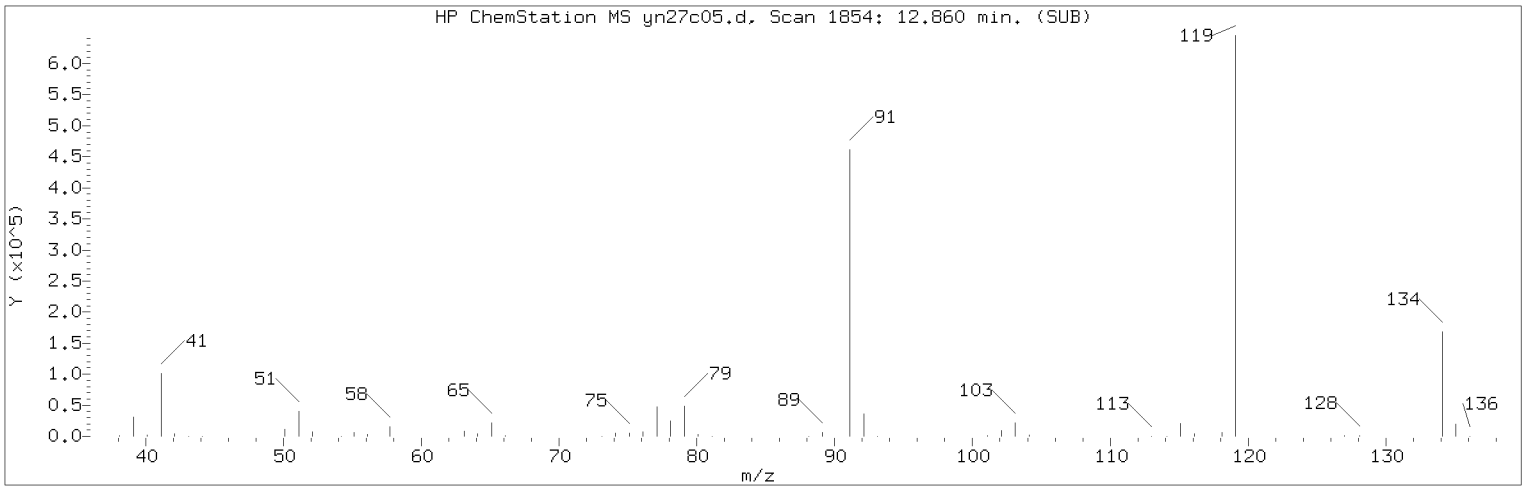
Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:01 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

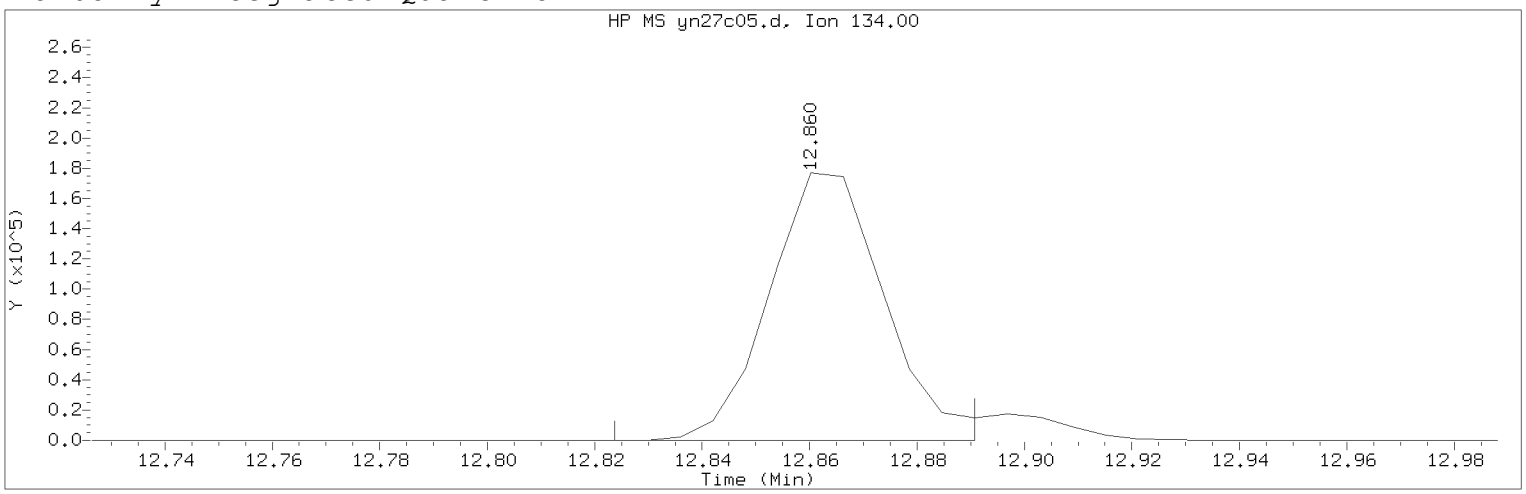
Compound Number : 122
Compound Name : 1,3,5-Trimethylbenzene
Scan Number : 1814
Retention Time (minutes): 12.617
Quant Ion : 105.00
Area : 1313085
On-column Amount (ng) : 58.9618
Integration start scan : 1804 Integration stop scan: 1843
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/27/2019 at 20:35.
Target 3.5 esignature user id: dviray10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27c05.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 19:43 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:35 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

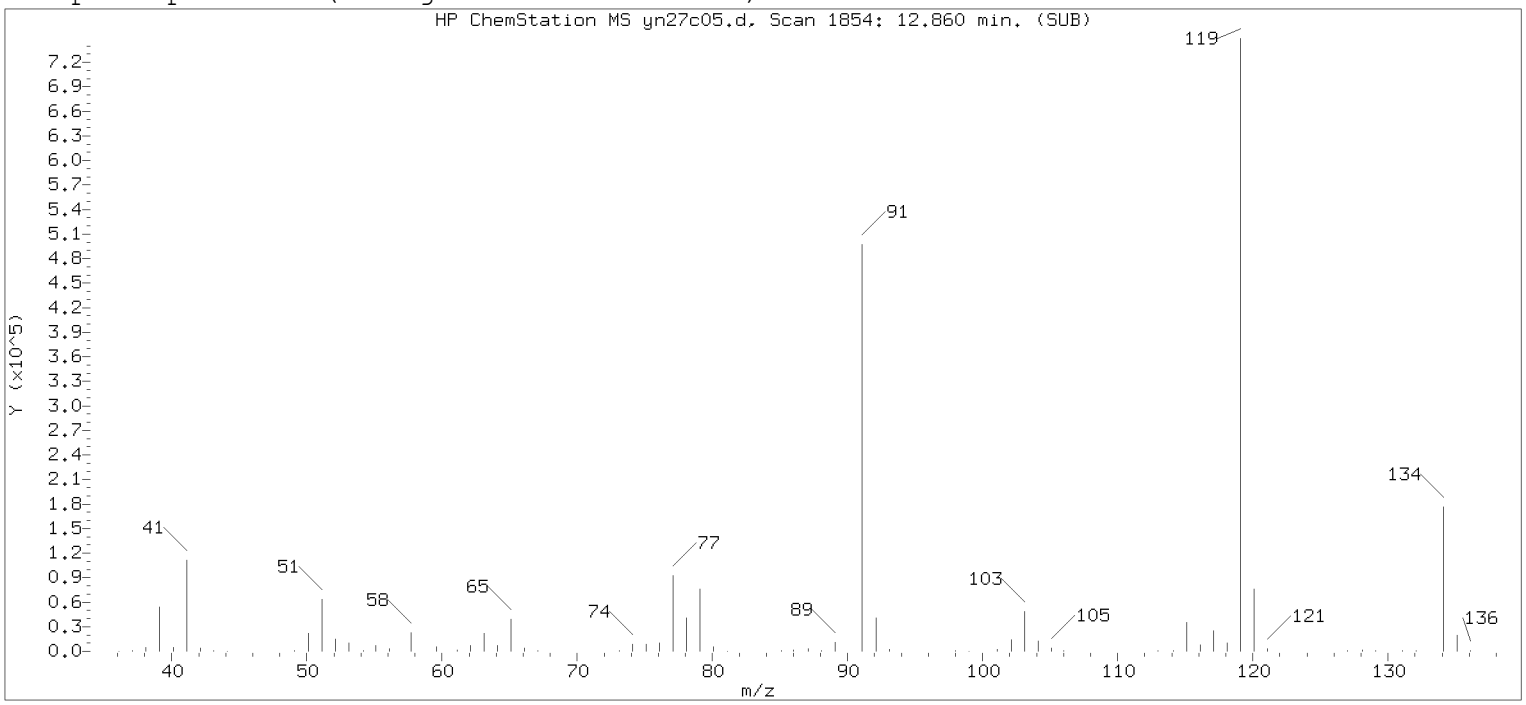
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area (flag) : 263235M
On-Column Amount (ng) : 56.4466
Integration start scan : 1847 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

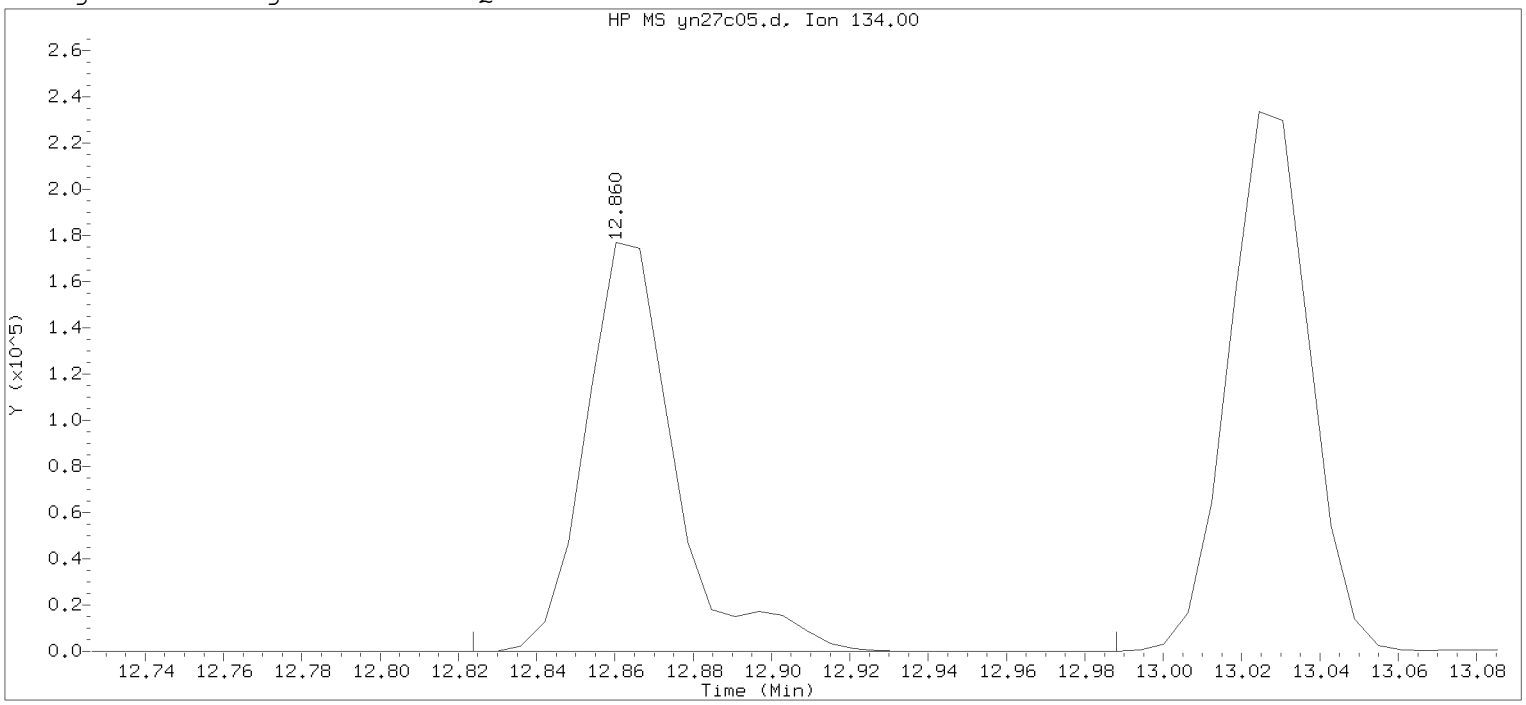
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/27/2019 at 20:35.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27c05.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 19:43 Analyst ID: DVV10203

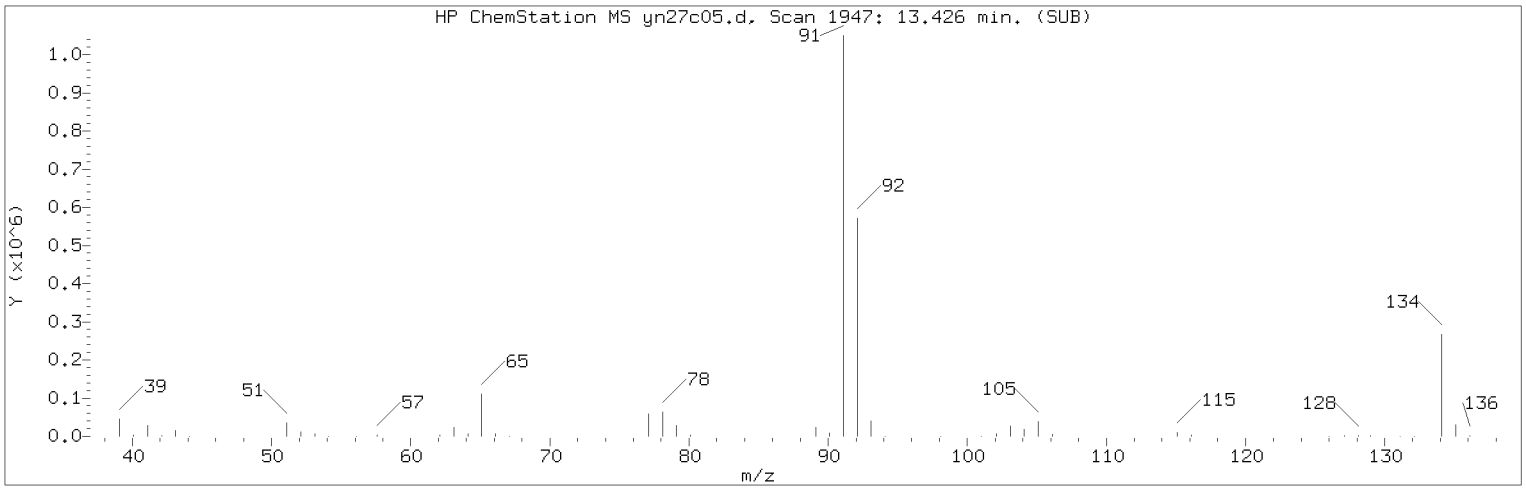
Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:01 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

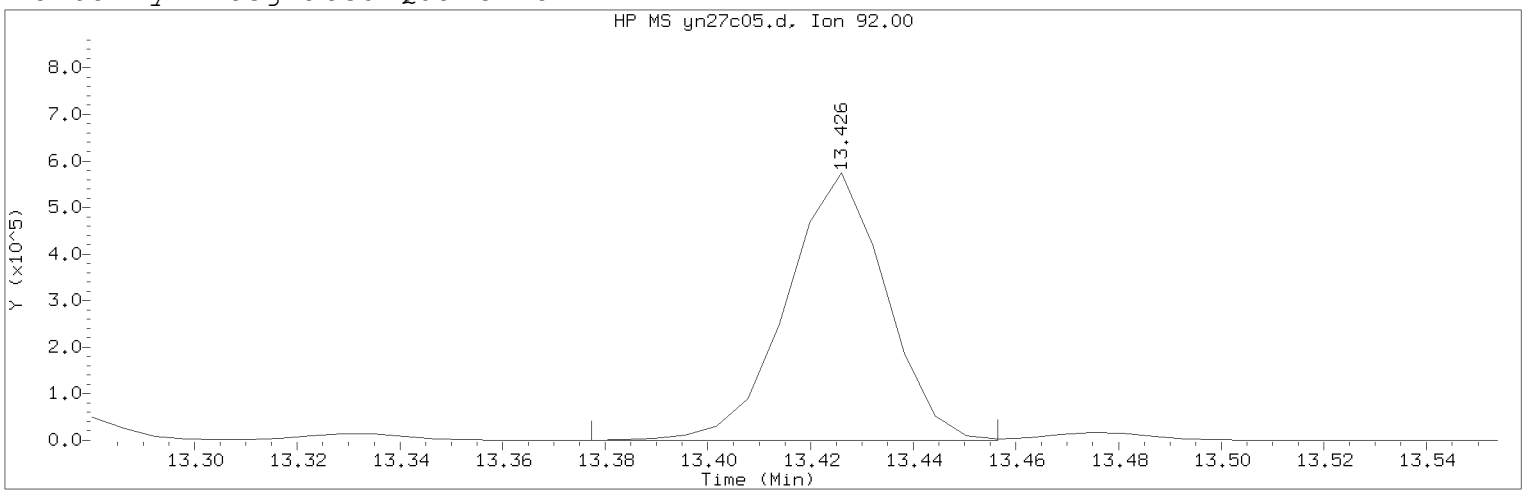
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area : 280172
On-column Amount (ng) : 60.0784
Integration start scan : 1847 Integration stop scan: 1874
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/27/2019 at 20:35.
Target 3.5 esignature user id: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27c05.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 19:43 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:35 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

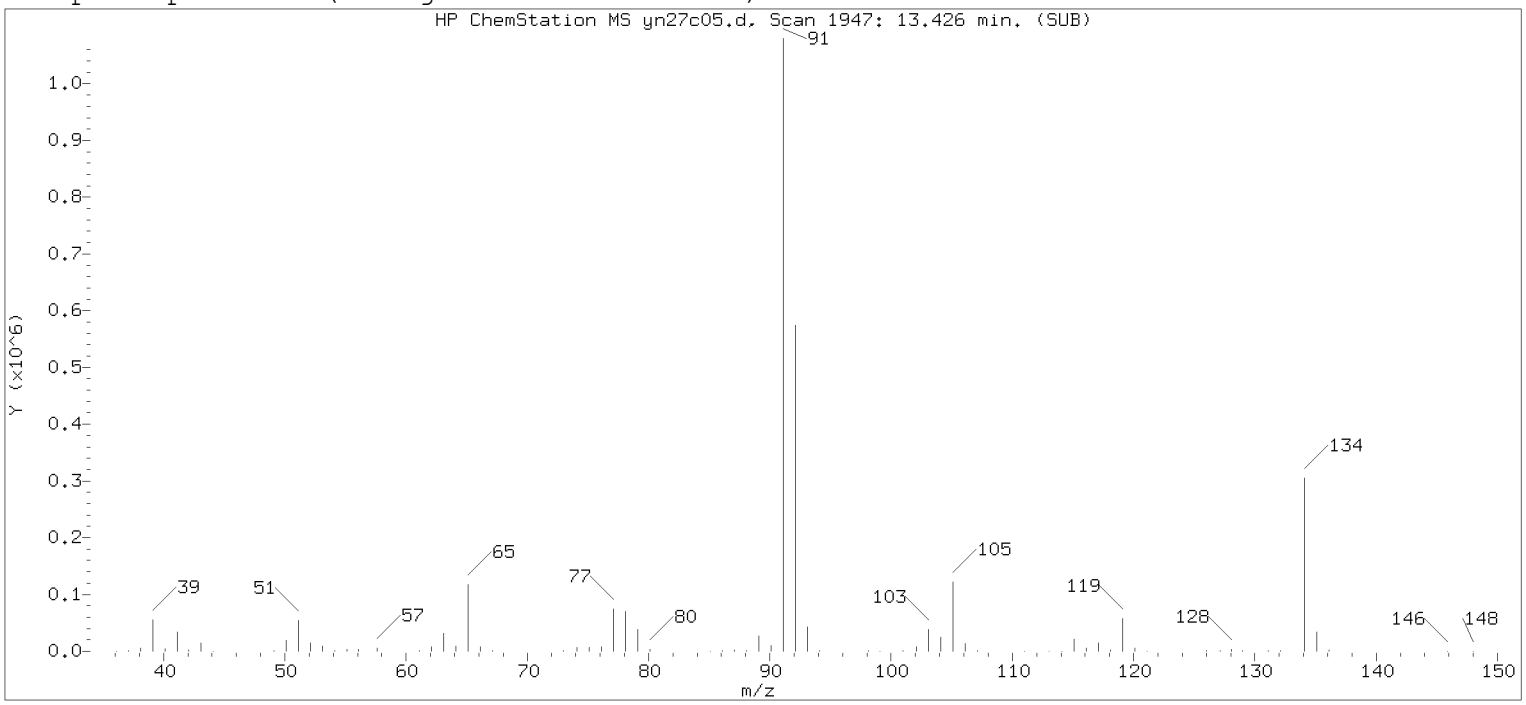
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1947
Retention Time (minutes): 13.426
Quant Ion : 92.00
Area (flag) : 766798M
On-Column Amount (ng) : 59.8469
Integration start scan : 1938 Integration stop scan: 1951
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

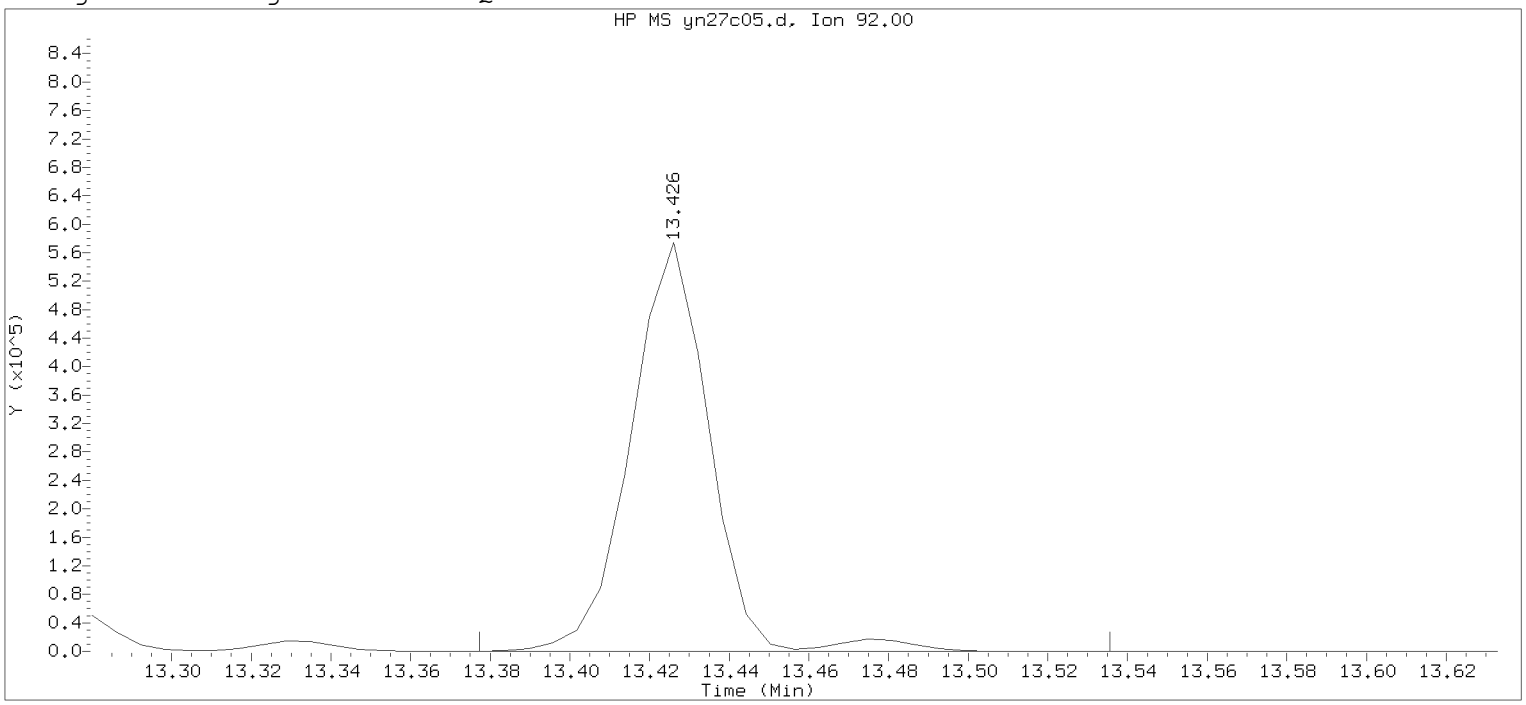
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/27/2019 at 20:35.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27c05.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 19:43 Analyst ID: DVV10203

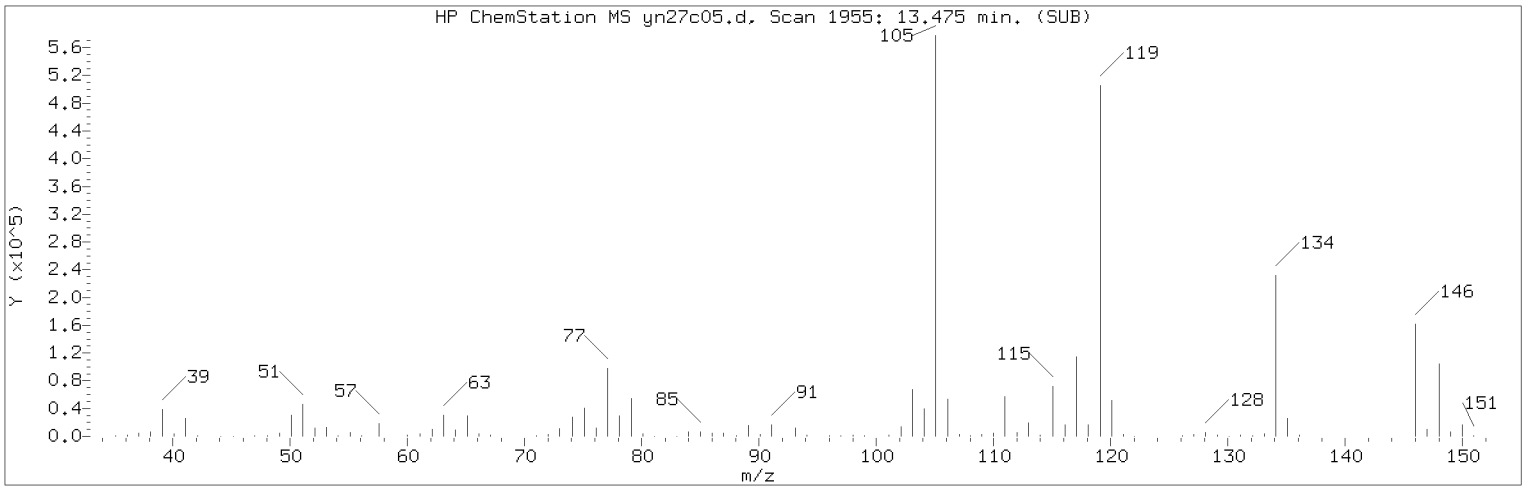
Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:01 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

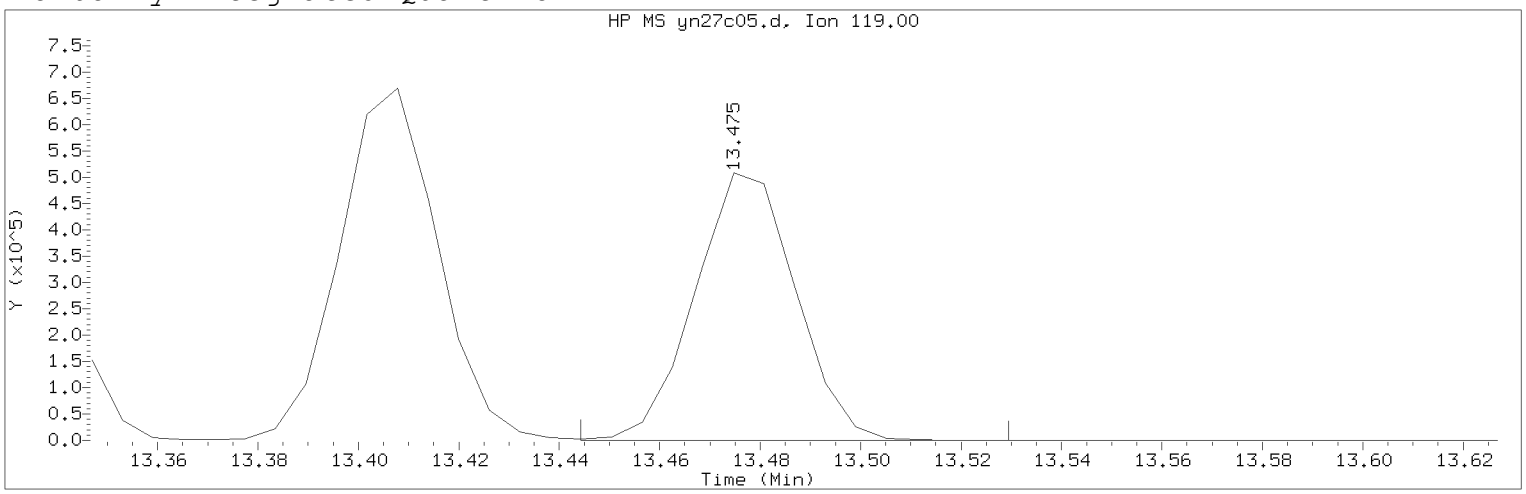
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1947
Retention Time (minutes): 13.426
Quant Ion : 92.00
Area : 789698
On-column Amount (ng) : 61.6341
Integration start scan : 1938 Integration stop scan: 1964
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/27/2019 at 20:35.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27c05.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 19:43 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:35 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

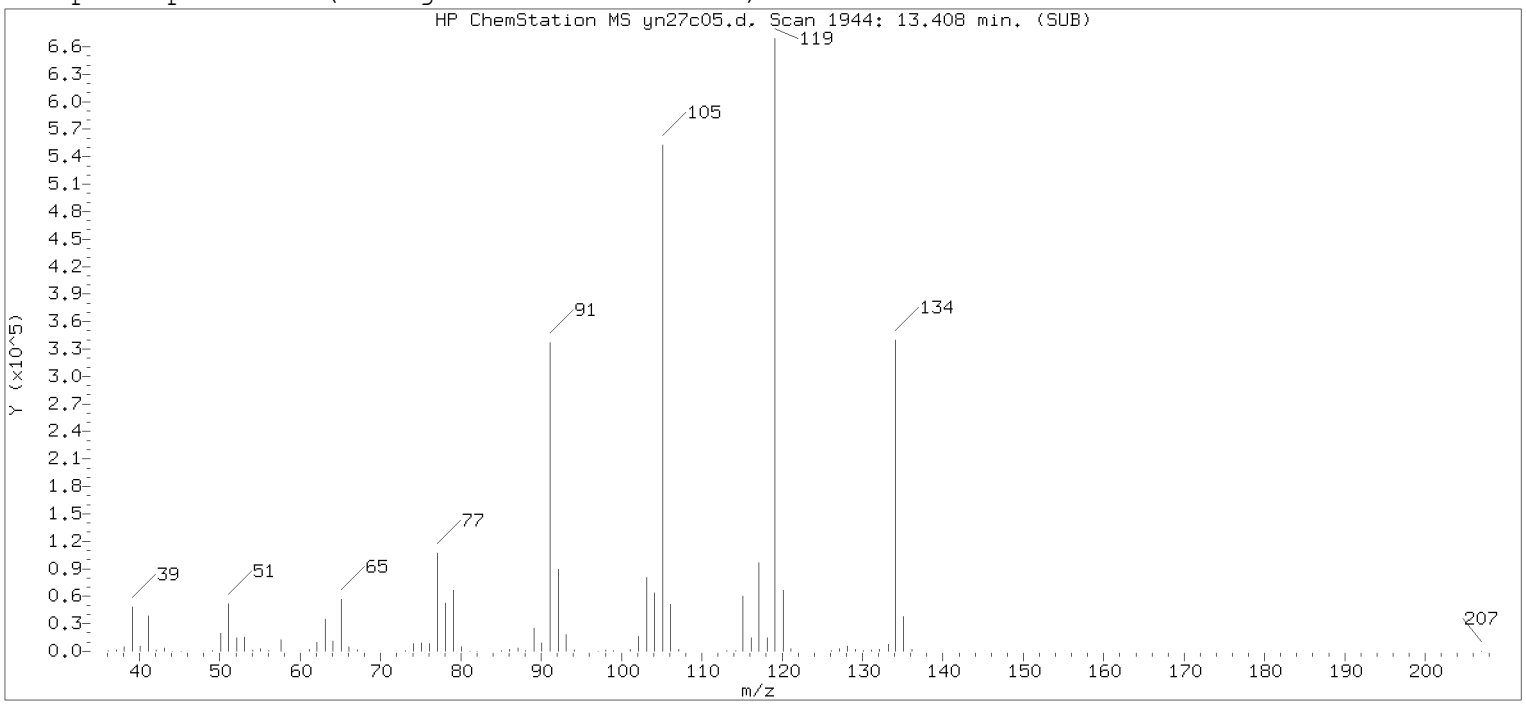
Compound Number : 140
Compound Name : 1,2-Diethylbenzene
Scan Number : 1955
Retention Time (minutes): 13.475
Quant Ion : 119.00
Area (flag) : 708548M
On-Column Amount (ng) : 53.2116
Integration start scan : 1949 Integration stop scan: 1963
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

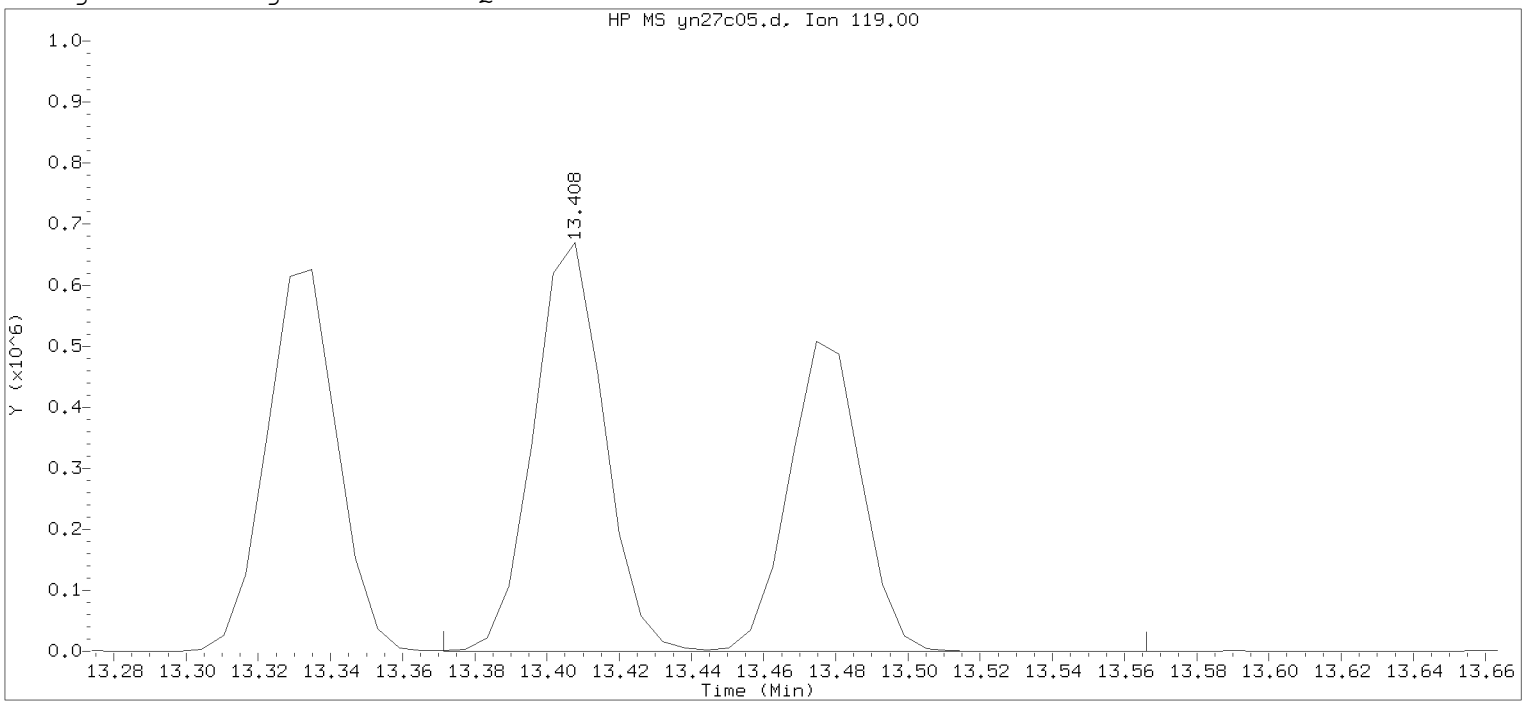
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/27/2019 at 20:35.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27c05.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 19:43 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:01 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 140
Compound Name : 1,2-Diethylbenzene
Scan Number : 1944
Retention Time (minutes): 13.408
Quant Ion : 119.00
Area : 1615875
On-column Amount (ng) : 121.3510
Integration start scan : 1937 Integration stop scan: 1969
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/27/2019 at 20:35.
Target 3.5 esignature user ID: dvv10203

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

RLVY09

Data file: /chem2/HP09355.i/19nov27b.b/yn27r31.d Injection date and time: **27-NOV-2019 20:50**
Data file Sample Info. Line: RLVY09;RLVY09;1;3;MDL/LOQ;;;;yn27b31; Instrument ID: **HP09355.i** Batch: **Y193312AA**
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Blank Data file reference: **/chem2/HP09355.i/19nov27b.b/yn27b31.d**

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: **RLVY09**
Calibration date and time (Last Method Edit): 27-NOV-2019 20:01
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19nov27b.b/yn27c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.343	(0.012)	454	65	297685	(-8)	250.00	
66) Fluorobenzene	7.866	(0.006)	1033	96	1014326	(-1)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	733342	(-2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.183	(0.000)	1907	152	379947	(-2)	50.00	

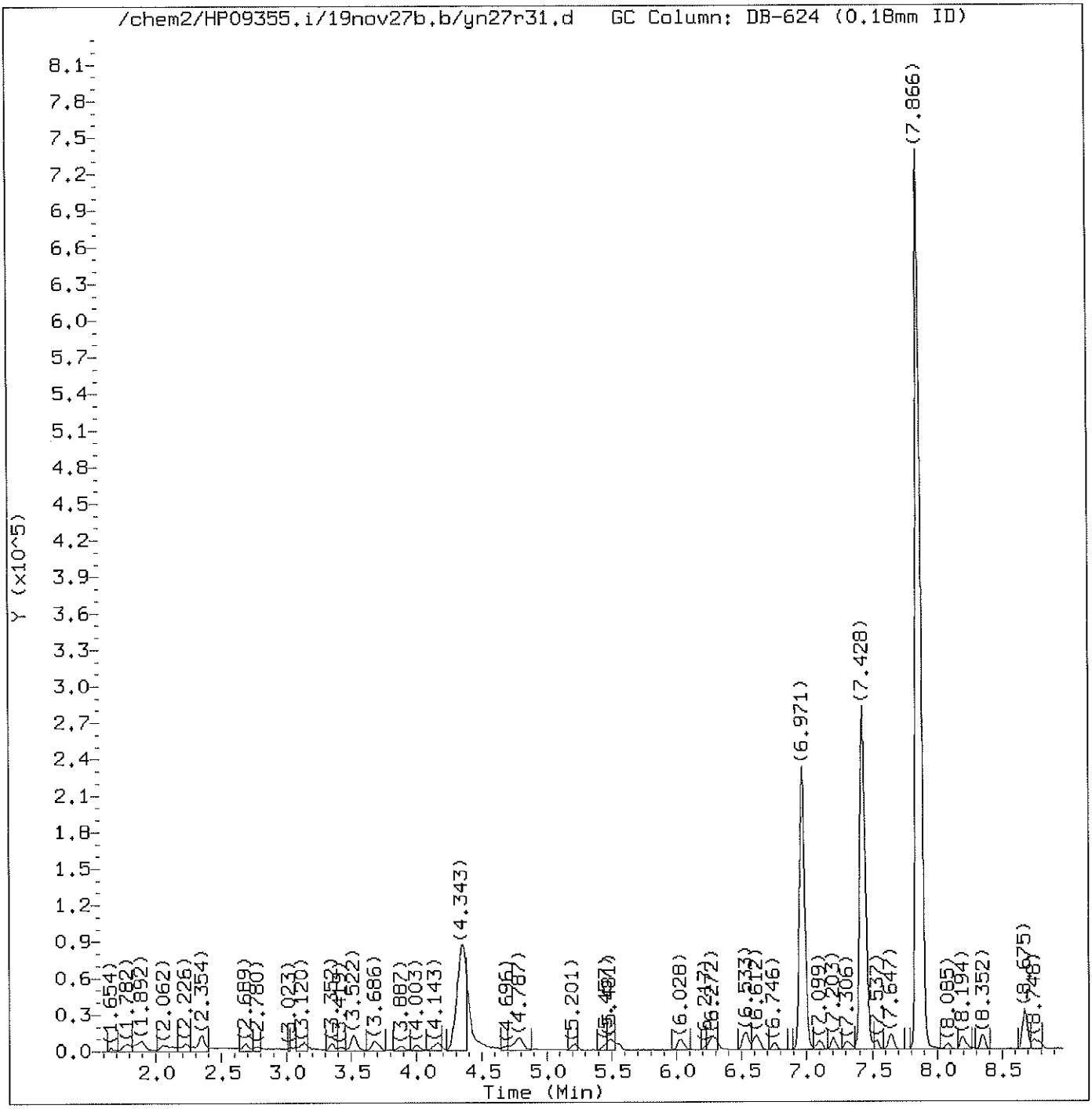
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.971	(0.000)	113	214857	45.142	90%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.428	(0.000)	102	59874	48.119	96%		80 - 120
83) Toluene-d8	(3)	9.861	(0.001)	98	986609	49.724	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.301	(0.001)	95	363904	48.002	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	2.038	(0.001)	85	3136	0.337	0.34		J	0.2	1
12) Trichlorofluoromethane	(2)	3.084	(0.002)	101	3981	0.398	0.40		J	0.2	1

Total number of targets = 2

Digitally signed by Don V. Viray on 11/27/2019 at 21:39. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

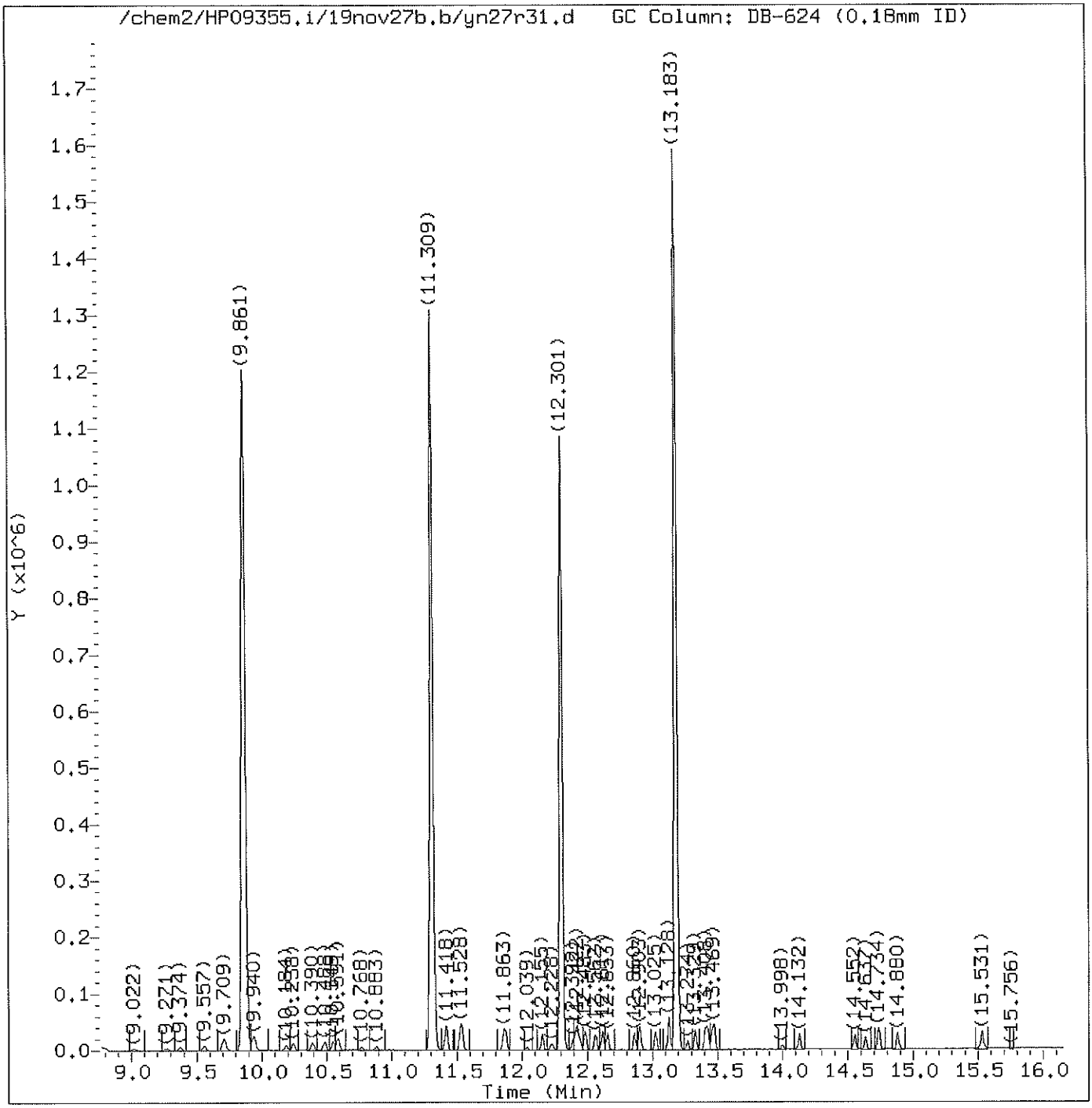
Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27r31.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:50 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: RLVY09
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: RLVY09 Lab Sample ID: RLVY09

Digitally signed by Don V. Viray
on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27r31.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:50 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: RLVY09
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: RLVY09 Lab Sample ID: RLVY09

Digitally signed by Don V. Viray
on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27r31.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:50 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: RLVY09
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: RLVY09 Lab Sample ID: RLVY09

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.038	85	3136	0.337
12) Trichlorofluoromethane	(2)	3.084	101	3981	0.398
29)*t-Butyl alcohol-d10	(1)	4.343	65	297685	250.000
52)$Dibromofluoromethane	(2)	6.971	113	214857	45.142
57)$1,2-Dichloroethane-d4	(2)	7.428	102	59874	48.119
66)*Fluorobenzene	(2)	7.866	96	1014326	50.000
83)$Toluene-d8	(3)	9.861	98	986609	49.724
100)*Chlorobenzene-d5	(3)	11.309	117	733342	50.000
114)$4-Bromofluorobenzene	(3)	12.301	95	363904	48.002
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	379947	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203

Data File: /chem/HP09915.i/19nov04i.b/ln04t06.d

Date : 04-NOV-2019 14:18

Client ID: AUG02-19

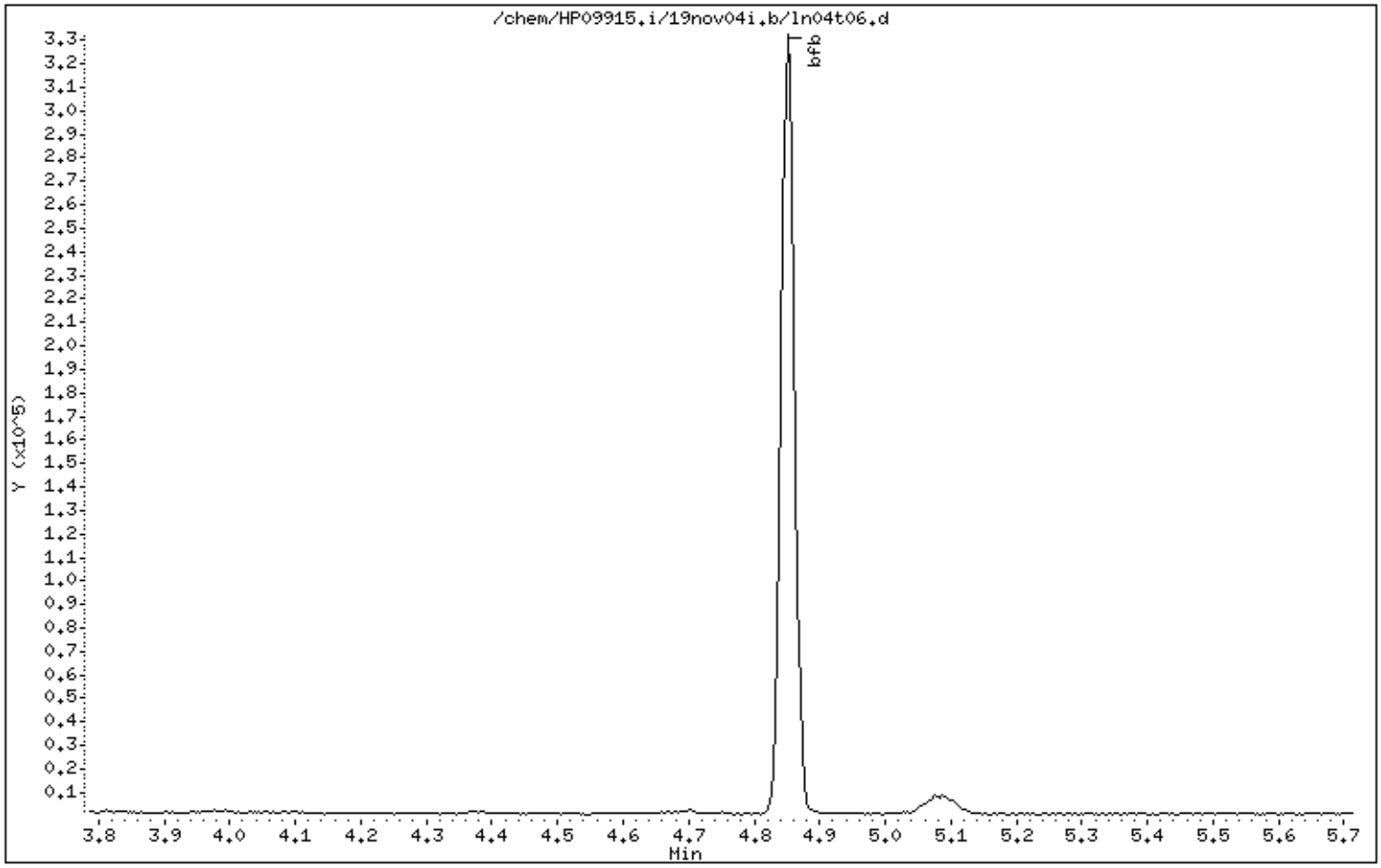
Instrument: HP09915.i

Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem/HP09915.i/19nov04i.b/ln04t06.d

Date : 04-NOV-2019 14:18

Client ID: AUG02-19

Instrument: HP09915.i

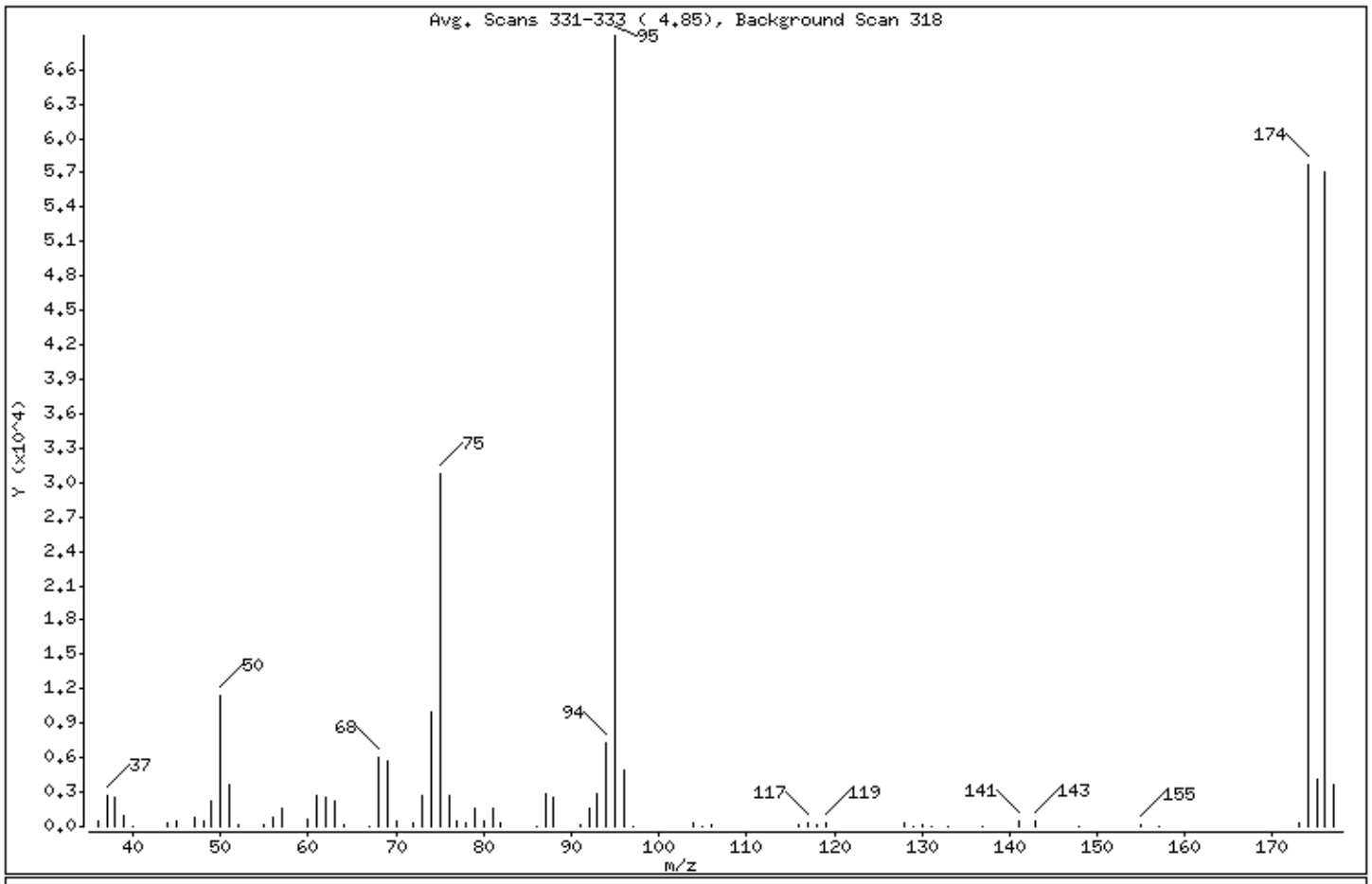
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.48
75	30.00 - 60.00% of mass 95	44.65
96	5.00 - 9.00% of mass 95	7.22
173	Less than 2.00% of mass 174	0.51 (0.61)
174	50.00 - 100.00% of mass 95	83.73
175	5.00 - 9.00% of mass 174	5.92 (7.07)
176	95.00 - 101.00% of mass 174	82.66 (98.72)
177	5.00 - 9.00% of mass 176	5.37 (6.49)

Data File: /chem/HP09915.i/19nov04i.b/ln04t06.d

Date : 04-NOV-2019 14:18

Client ID: AUG02-19 Instrument: HP09915.i

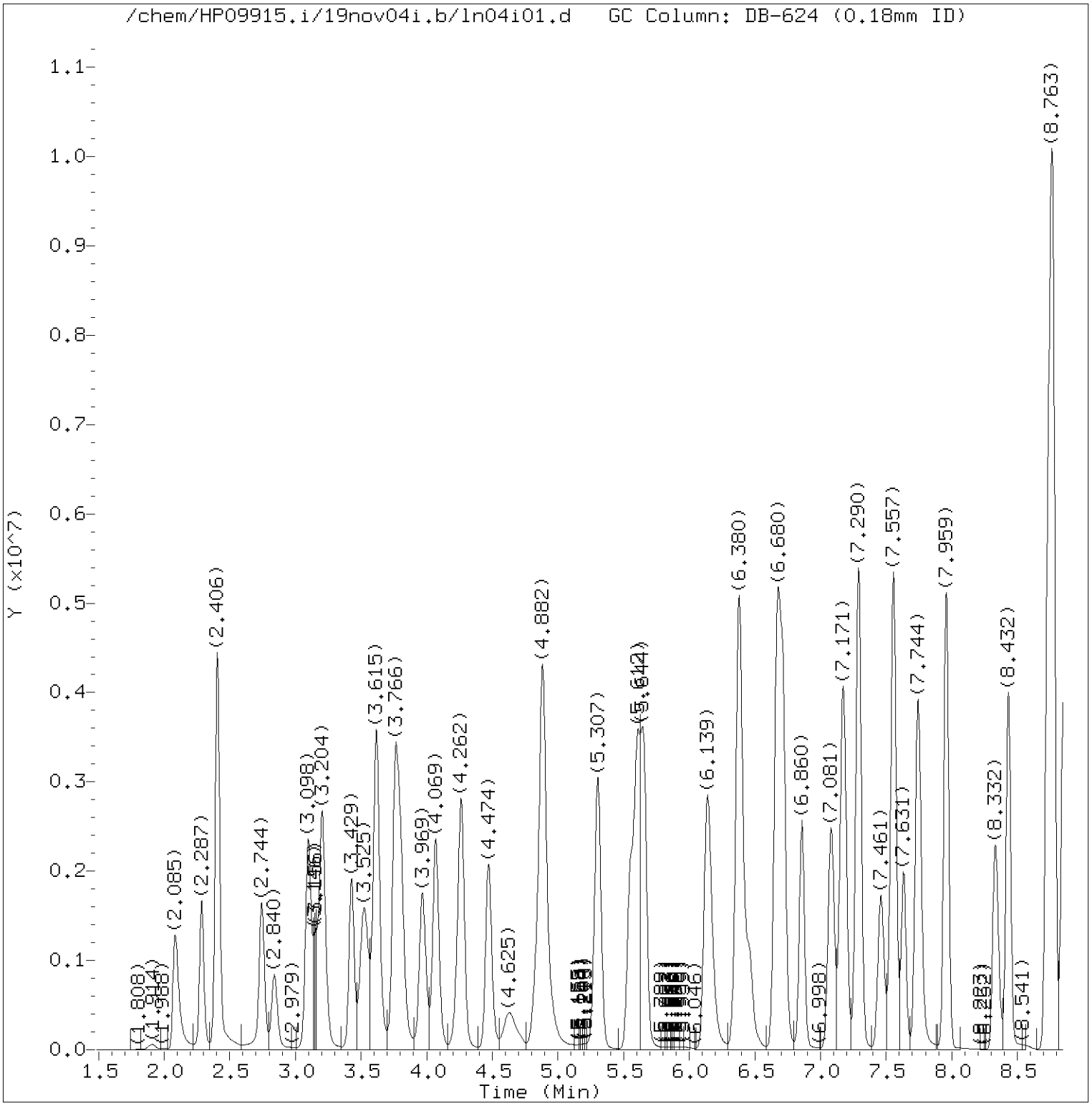
Sample Info: AUG02-19;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: ln04t06.d
Spectrum: Avg. Scans 331-333 (4.85), Background Scan 318
Location of Maximum: 95.00
Number of points: 69

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	529	62.00	2498	86.00	55	129.00	53
37.00	2736	63.00	2218	87.00	2840	130.00	112
38.00	2557	64.00	150	88.00	2593	131.00	53
39.00	971	67.00	71	91.00	144	133.00	52
40.00	22	68.00	6076	92.00	1588	137.00	53
44.00	270	69.00	5647	93.00	2845	141.00	538
45.00	457	70.00	476	94.00	7275	143.00	484
47.00	784	72.00	322	95.00	68968	148.00	77
48.00	424	73.00	2656	96.00	4977	155.00	162
49.00	2292	74.00	10024	97.00	62	157.00	63
50.00	11364	75.00	30792	104.00	284	173.00	350
51.00	3586	76.00	2712	105.00	50	174.00	57744
52.00	134	77.00	405	106.00	233	175.00	4082
55.00	217	78.00	267	116.00	189	176.00	57008
56.00	871	79.00	1601	117.00	348	177.00	3701
57.00	1629	80.00	440	118.00	231		
60.00	555	81.00	1543	119.00	348		
61.00	2700	82.00	307	128.00	239		



Total Ion Chromatogram (TIC)

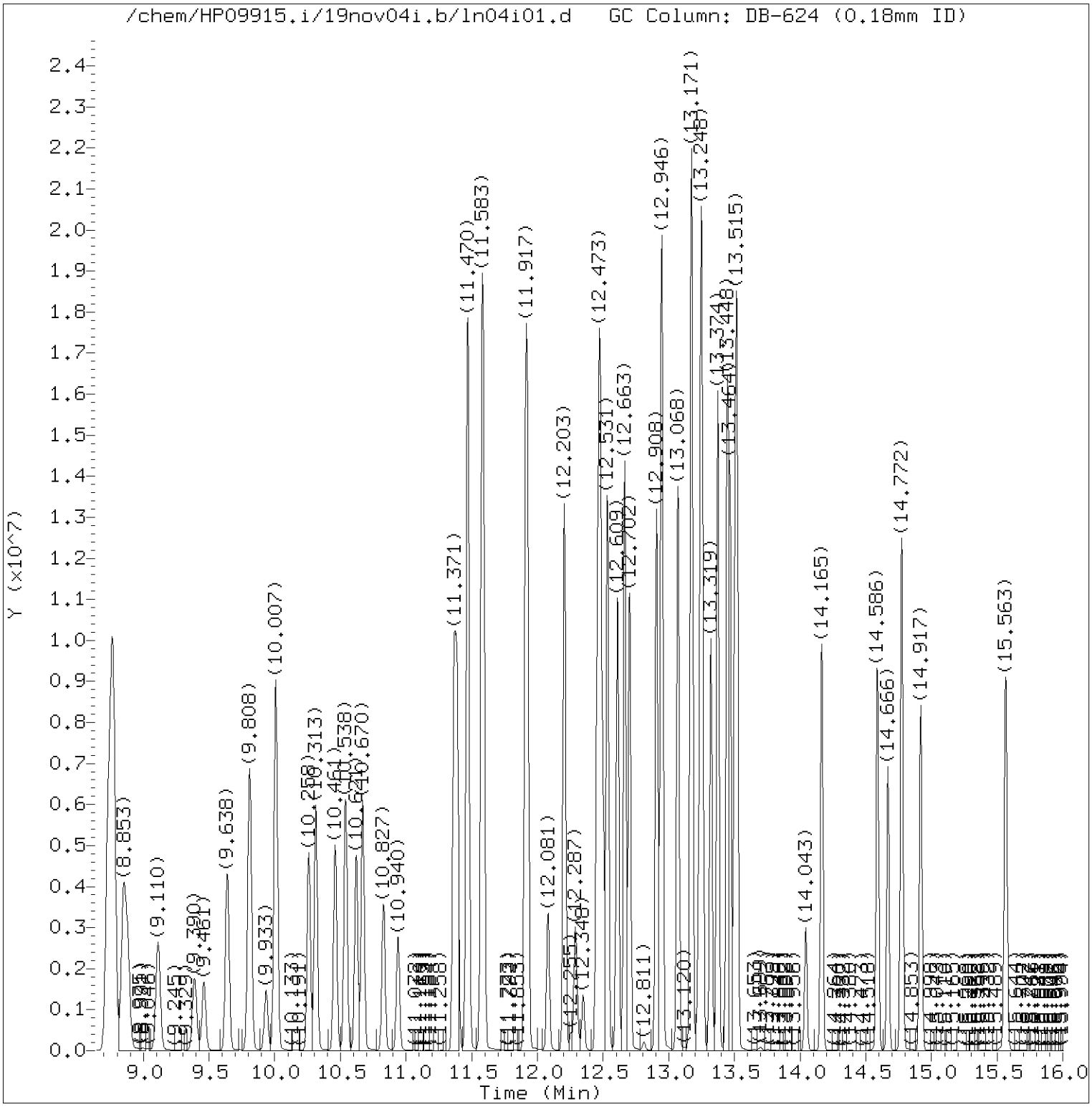
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.085	85	2719746M	347.943
4) Chloromethane	(2)	2.287	50	2403581	319.051
5) 1,3-Butadiene	(2)	2.406	39	1785787M	285.486
6) Vinyl Chloride	(2)	2.406	62	2412855	320.904
8) Bromomethane	(2)	2.744	94	1638575	304.015
9) Chloroethane	(2)	2.837	64	1253478	303.356
12) Trichlorofluoromethane	(2)	3.152	101	2661050	328.734
11) n-Pentane	(2)	3.204	43	2816823	294.455
14) Ethyl ether	(2)	3.429	59	1721693	329.146
15) Freon 123a	(2)	3.525	67	1991616	305.852
16) Acrolein	(1)	3.615	56	5765354	3020.583
17) 1,1-Dichloroethene	(2)	3.760	96	1489890	313.570
17) 1,1-Dichloroethene	(2)	3.757	63	721205	302.767
19) Freon 113	(2)	3.792	101	1732433	319.583
18) Acetone	(1)	3.802	58	531845	621.534
22) Methyl Iodide	(2)	3.966	142	3047145	309.483
21) 2-Propanol	(1)	3.995	45	936919	1523.065
23) Carbon Disulfide	(2)	4.069	76	5676465	317.027
27) Methyl Acetate	(2)	4.239	43	1941315	317.230
25) Allyl Chloride	(2)	4.265	41	2748698	322.482
28) Methylene Chloride	(2)	4.474	84	1745840	308.716
29)*t-Butyl alcohol-d10	(1)	4.503	65	254406M	250.000
30) t-Butyl alcohol	(1)	4.638	59	1641037	1532.140
31) Acrylonitrile	(2)	4.827	53	1039800	315.820
32) trans-1,2-Dichloroethene	(2)	4.885	96	1713357	311.714
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	5505439	305.143
34) n-Hexane	(2)	5.307	57	2863189M	334.811
36) 1,1-Dichloroethane	(2)	5.548	63	3007196	313.618
38) di-Isopropyl ether	(2)	5.609	45	5739955	310.377
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	2776921	322.788
40) Ethyl t-butyl ether	(2)	6.139	59	5425034	302.275
43) 1,2-Dichloroethene (Total)	(2)		96	3646040	624.977
44) 2-Butanone	(2)	6.364	43	2642793	625.317
42) cis-1,2-Dichloroethene	(2)	6.380	96	1932683	313.263
45) 2,2-Dichloropropane	(2)	6.397	77	2377411	318.945
47) Propionitrile	(1)	6.458	54	2126389	1593.336
48) Methacrylonitrile	(2)	6.670	67	2858148	804.768
49) Bromochloromethane	(2)	6.708	128	1075154	328.655

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.718	71	758236	628.991
51) Chloroform	(2)	6.860	83	2916299	317.988
52)$Dibromofluoromethane	(2)	7.075	113	276322	50.424
52)$Dibromofluoromethane	(2)	7.075	111	279197	49.969
53) 1,1,1-Trichloroethane	(2)	7.081	97	2560601	327.130
54) Cyclohexane	(2)	7.171	56	3429211	327.611
54) Cyclohexane	(2)	7.171	84	2984908	328.282
54) Cyclohexane	(2)	7.171	69	1068201	329.937
56) Carbon Tetrachloride	(2)	7.287	117	2252864	339.350
55) 1,1-Dichloropropene	(2)	7.294	75	2434619	321.125
58) Isobutyl Alcohol	(1)	7.461	41	1382486	3835.573
57)$1,2-Dichloroethane-d4	(2)	7.528	102	68480	49.033
57)$1,2-Dichloroethane-d4	(2)	7.532	65	307306	49.375
57)$1,2-Dichloroethane-d4	(2)	7.528	104	44002	49.326
60) Benzene	(2)	7.557	78	7094466	311.169
61) 1,2-Dichloroethane	(2)	7.634	62	2222342	303.049
61) 1,2-Dichloroethane	(2)	7.634	98	228988	315.535
65) t-Amyl methyl ether	(2)	7.744	73	5421278	300.945
67) n-Heptane	(2)	7.959	43	2592531MA	324.518
66)*Fluorobenzene	(2)	7.959	96	1120873	50.000
69) n-Butanol	(1)	8.332	56	2465385M	7947.068
71) Trichloroethene	(2)	8.432	95	1841720	320.821
72) Methylcyclohexane	(2)	8.734	83	3568410	335.054
72) Methylcyclohexane	(2)	8.734	98	1632993	338.844
73) 1,2-Dichloropropane	(2)	8.769	63	1825943	315.397
76) Methyl Methacrylate	(2)	8.850	69	1904896A	340.256
75) 1,4-Dioxane	(1)	8.856	88	338379M	3968.421
74) Dibromomethane	(2)	8.879	93	1210939	323.274
78) Bromodichloromethane	(2)	9.113	83	2314651	344.351
79) 2-Nitropropane	(2)	9.390	41	1438925	706.755
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	926413	372.584
81) cis-1,3-Dichloropropene	(2)	9.638	75	3074664	344.402
82) 4-Methyl-2-pentanone	(2)	9.808	43	5422938	607.899
83)$Toluene-d8	(3)	9.933	98	1156351	49.563
83)$Toluene-d8	(3)	9.933	100	751534	49.726
88) Toluene	(3)	10.007	92	4532879	309.894
90) 1,3-Dichloropropene (total)	(3)		100	5974636	693.659
89) trans-1,3-Dichloropropene	(3)	10.258	75	2899972	349.257

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	10.313	69	3356305	332.603
92) 1,1,2-Trichloroethane	(3)	10.461	97	1768710	318.935
93) Tetrachloroethene	(3)	10.541	166	1990565	321.327
94) 1,3-Dichloropropane	(3)	10.621	76	3006585	317.532
96) 2-Hexanone	(3)	10.670	43	3998423	593.616
97) Dibromochloromethane	(3)	10.827	129	2037523	358.670
99) 1,2-Dibromoethane	(3)	10.940	107	1987783	330.088
100)*Chlorobenzene-d5	(3)	11.361	117	891668	50.000
101) 1-Chlorohexane	(3)	11.364	91	2458057	312.814
102) Chlorobenzene	(3)	11.387	112	5140609	310.783
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	1789998	328.446
104) Ethylbenzene	(3)	11.470	91	8606821	307.854
106) m+p-Xylene	(3)	11.583	106	6690837	608.359
108) Xylene (Total)	(3)		106	9979970	911.130
107) o-Xylene	(3)	11.908	106	3289133	302.771
109) Styrene	(3)	11.924	104	5647939	314.619
110) Bromoform	(3)	12.081	173	1534520	361.500
111) Isopropylbenzene	(3)	12.203	105	8466138	310.714
112) Cyclohexanone	(1)	12.287	55	1351186	4046.080
114)$4-Bromofluorobenzene	(3)	12.348	95	440049	49.810
114)$4-Bromofluorobenzene	(3)	12.348	174	362553	49.502
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	2800639M	310.705
115) Bromobenzene	(4)	12.467	156	2234066	311.517
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	2150976	773.637
117) 1,2,3-Trichloropropane	(4)	12.499	110	866230	313.172
119) n-Propylbenzene	(4)	12.531	91	9654812	308.142
120) 2-Chlorotoluene	(4)	12.609	126	2098494	315.266
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	7238022	317.873
121) 4-Chlorotoluene	(4)	12.702	126	2155793	311.148
124) tert-Butylbenzene	(4)	12.908	134	1524421M	323.717
125) Pentachloroethane	(4)	12.940	167	1461833	360.511
126) 1,2,4-Trimethylbenzene	(4)	12.949	105	7469187	311.236
127) sec-Butylbenzene	(4)	13.068	105	8682126	308.971
129) 1,3-Dichlorobenzene	(4)	13.168	146	3858953	292.822
130) p-Isopropyltoluene	(4)	13.174	119	7289488	299.854
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	477171	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	4013510	293.777
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	7915203	311.364

M = Compound was manually integrated.
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on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.319	91	6484944	336.931
136) 1,3-Diethylbenzene	(4)	13.374	119	4897725	309.573
141) Diethylbenzene (total)	(4)		100	13982971	913.975
137) 1,4-Diethylbenzene	(4)	13.444	119	5013123	299.077
139) n-Butylbenzene	(4)	13.467	92	3608595	290.316
138) 1,2-Dichlorobenzene	(4)	13.502	146	3859125	296.761
140) 1,2-Diethylbenzene	(4)	13.518	119	4072123	305.325
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	669008	339.050
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	2855960	285.855
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	2681523	276.030
147) Hexachlorobutadiene	(4)	14.670	225	1157297	252.311
148) Naphthalene	(4)	14.772	128	9186333	294.145
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	2488608	263.270
150) 2-Methylnaphthalene	(4)	15.563	142	4666682	242.655

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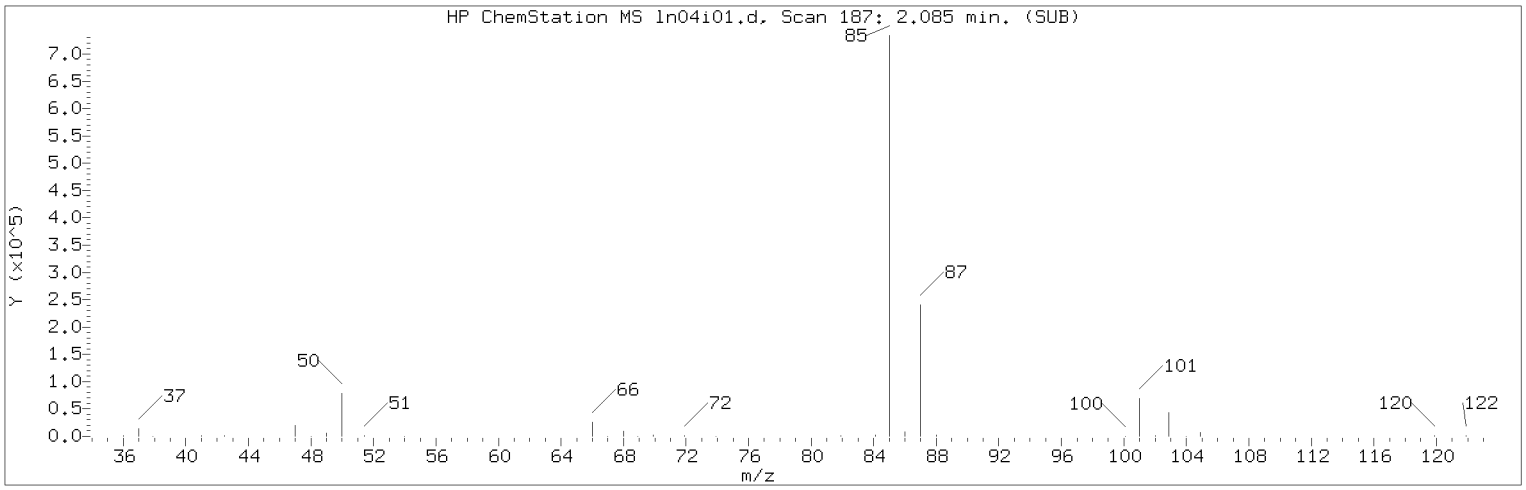
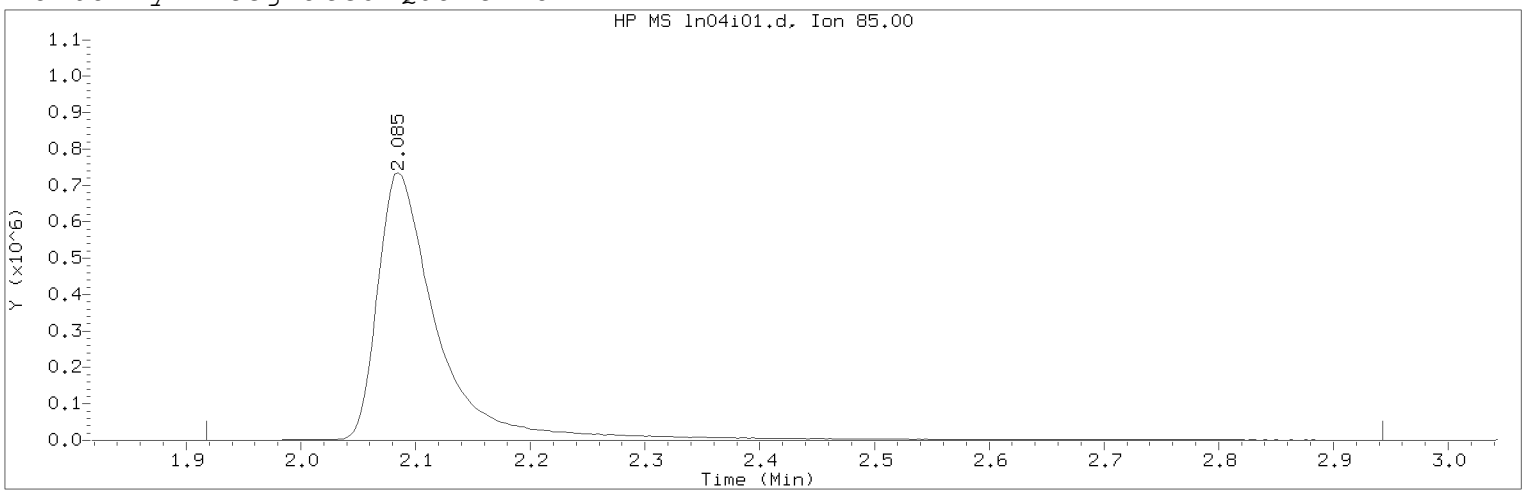
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

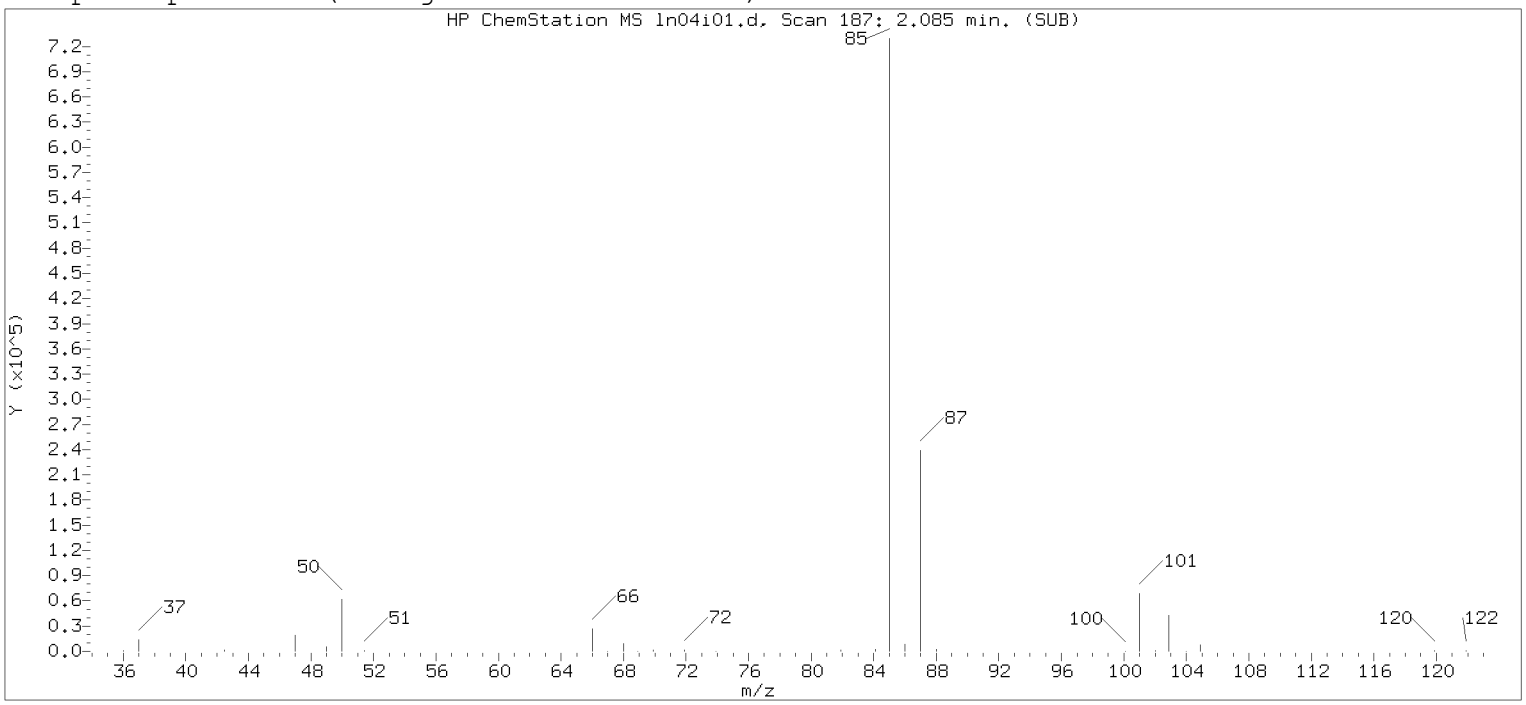
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area (flag) : 2719746M
On-Column Amount (ng) : 347.9426
Integration start scan : 134 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

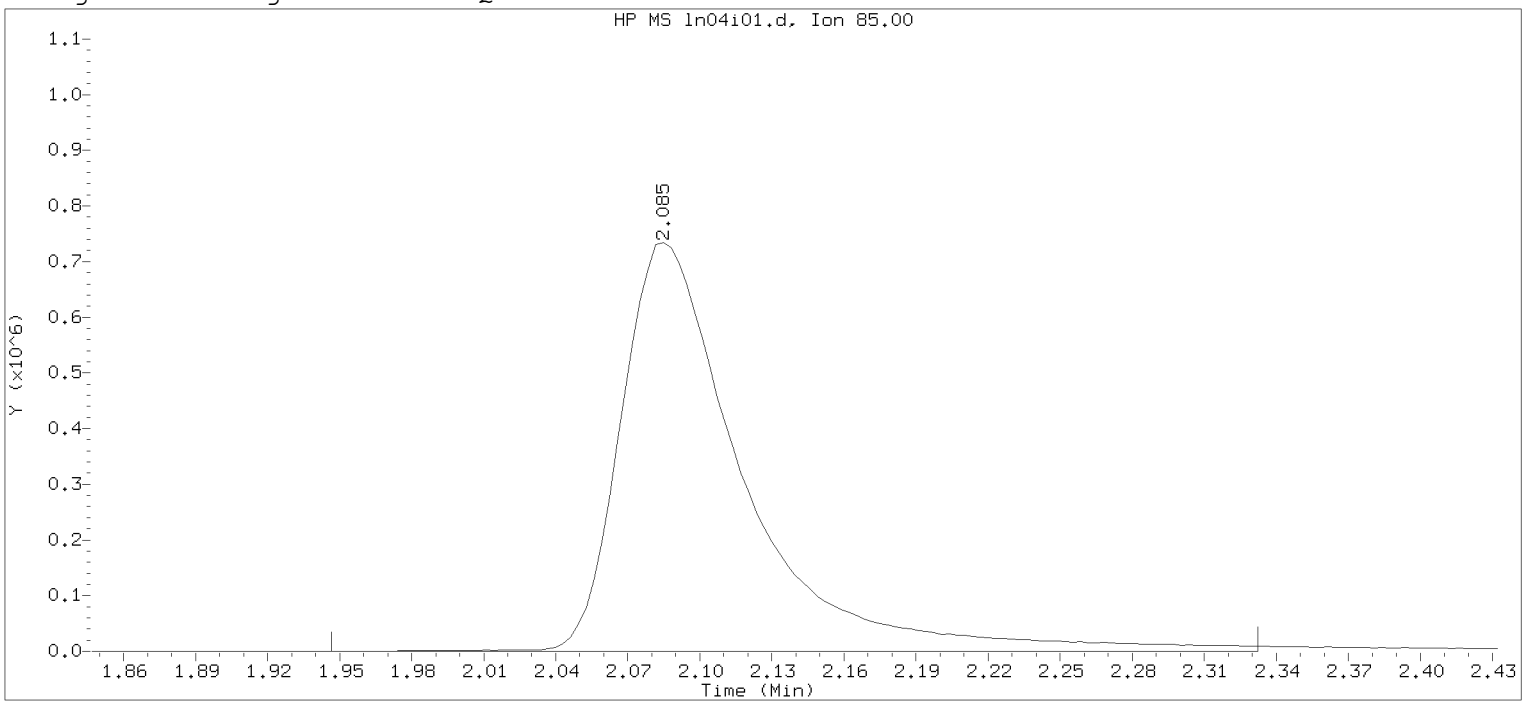
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

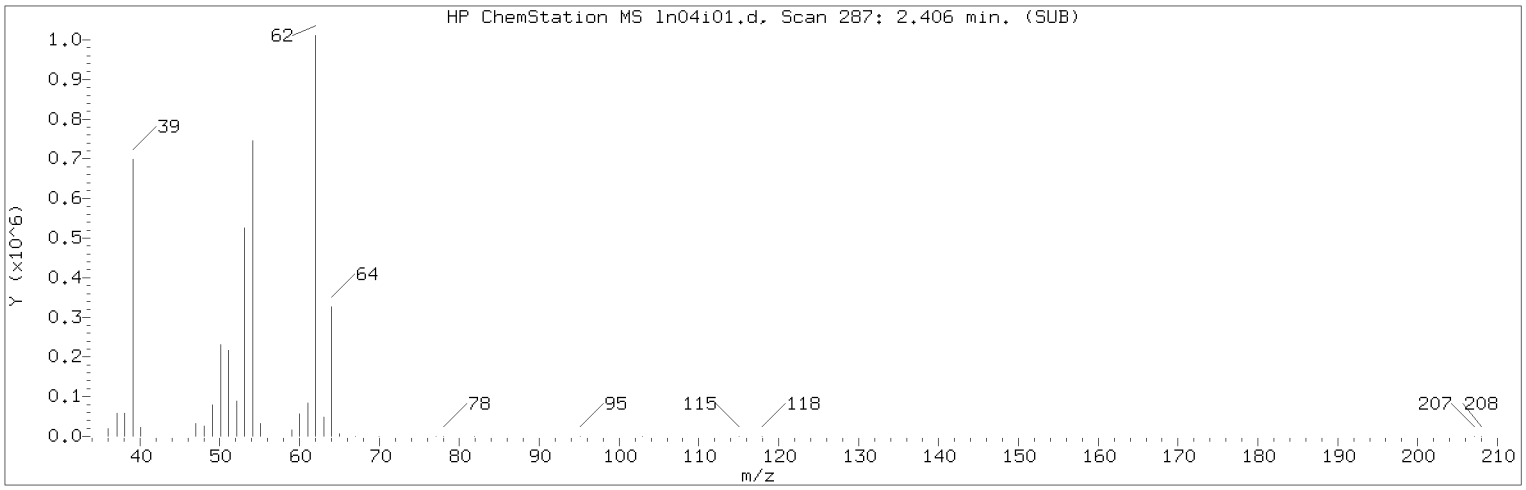
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

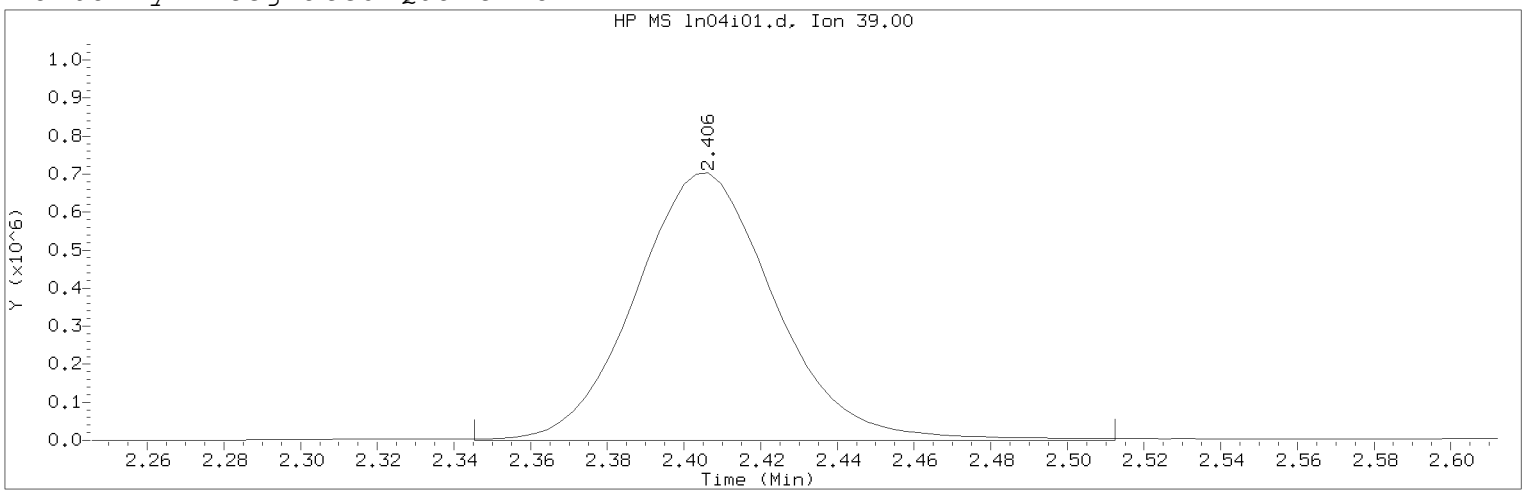
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area : 2624212
On-column Amount (ng) : 308.6520
Integration start scan : 143 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh00052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

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Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

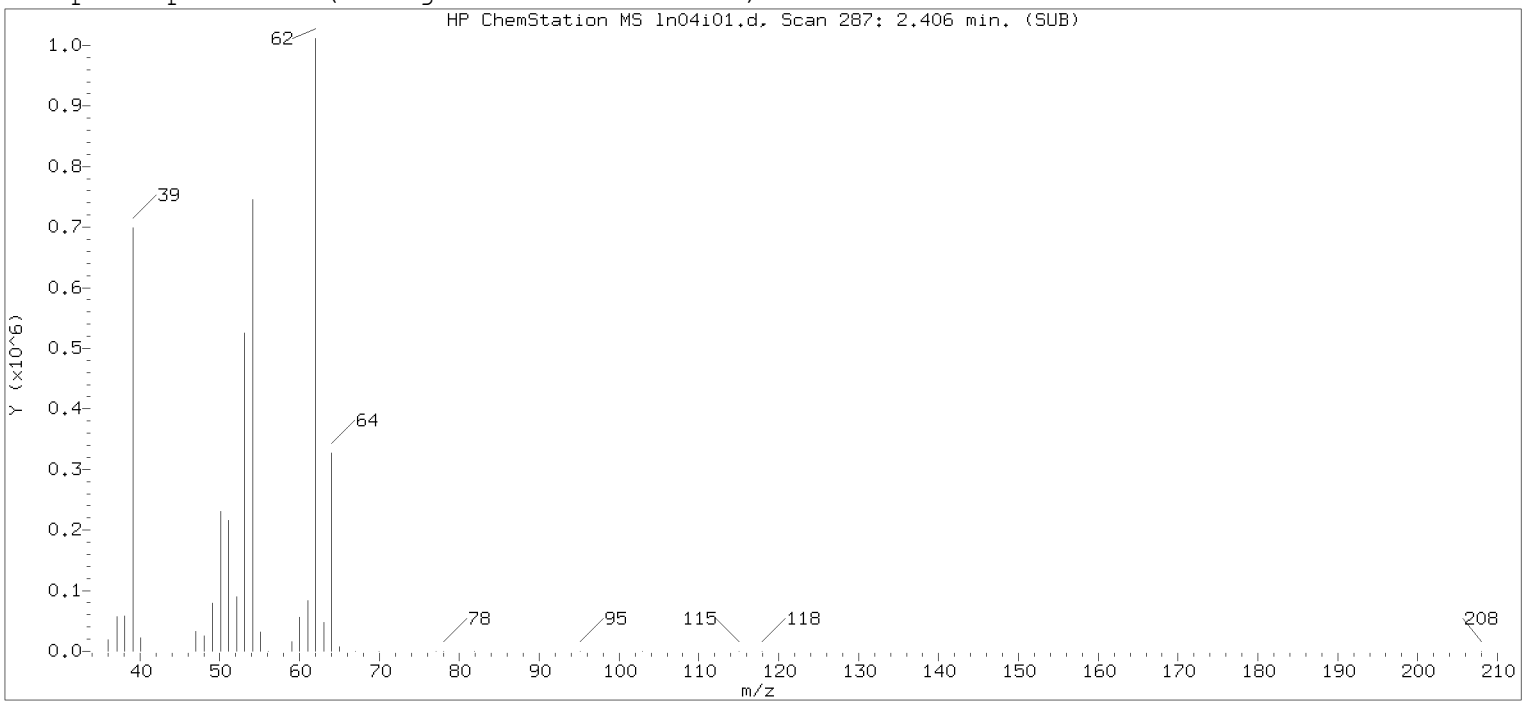
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 1785787M
On-Column Amount (ng) : 285.4858
Integration start scan : 267 Integration stop scan: 319
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

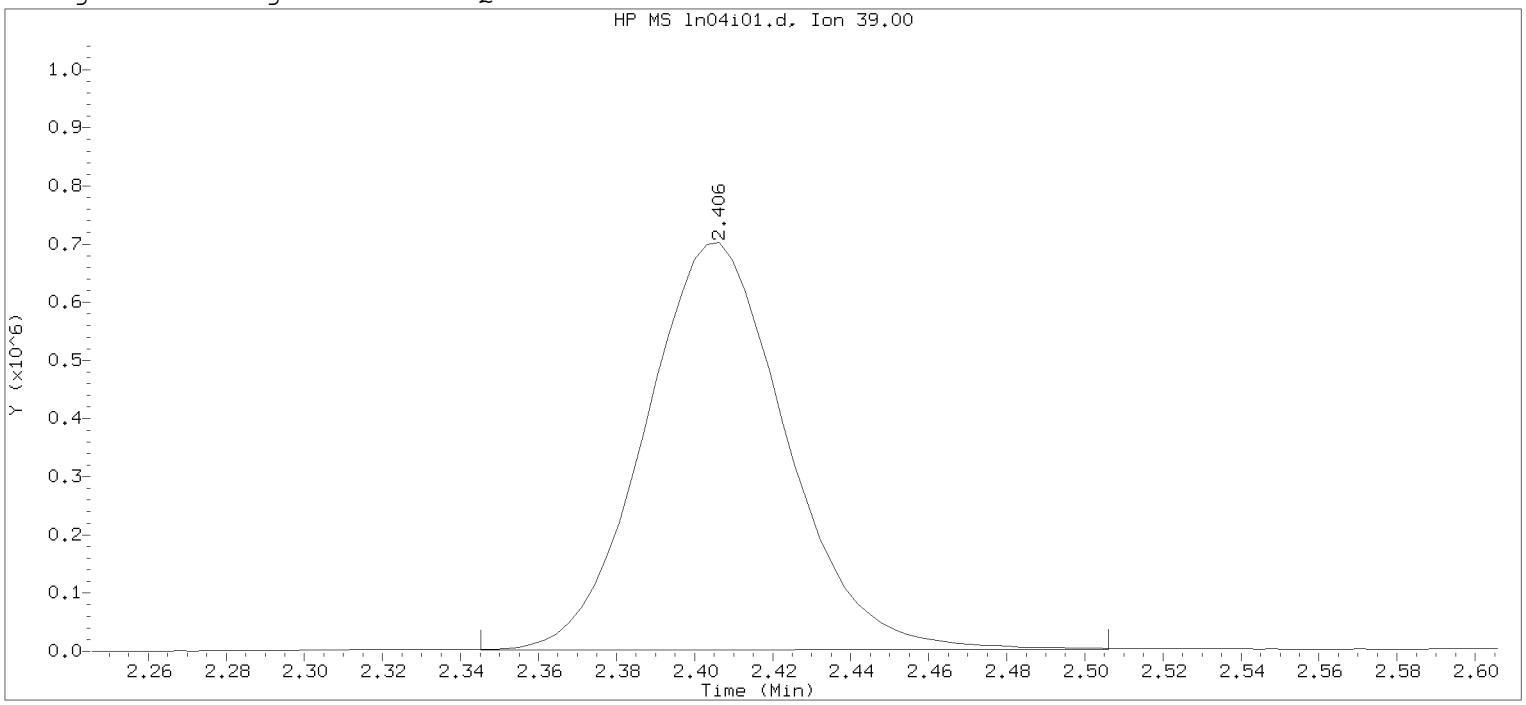
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

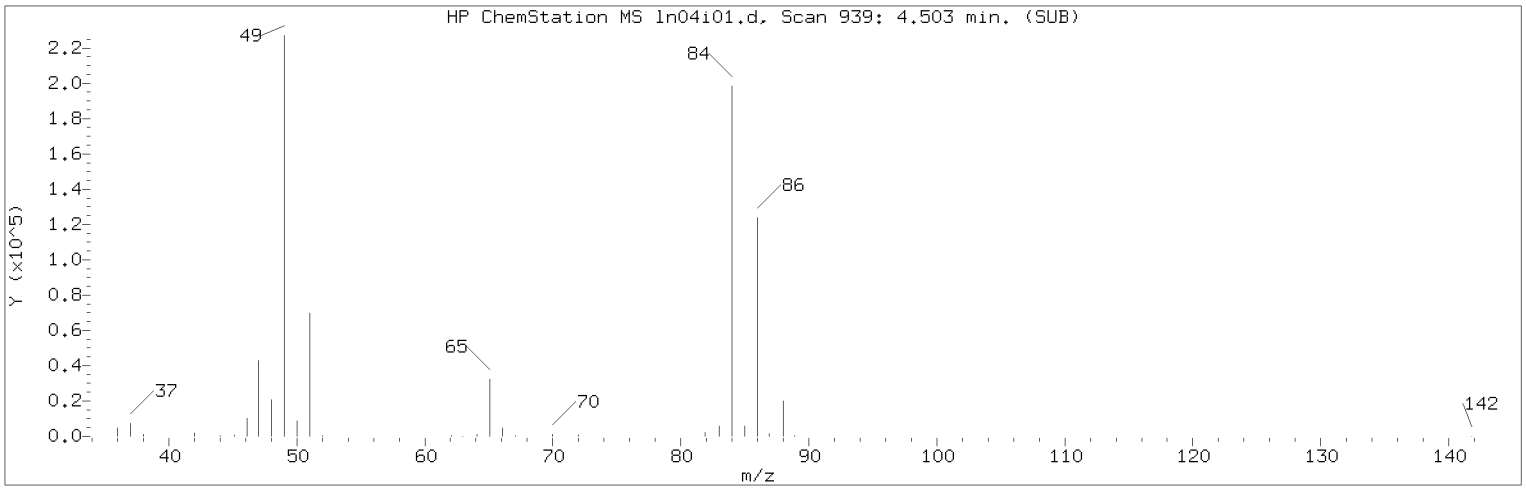
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

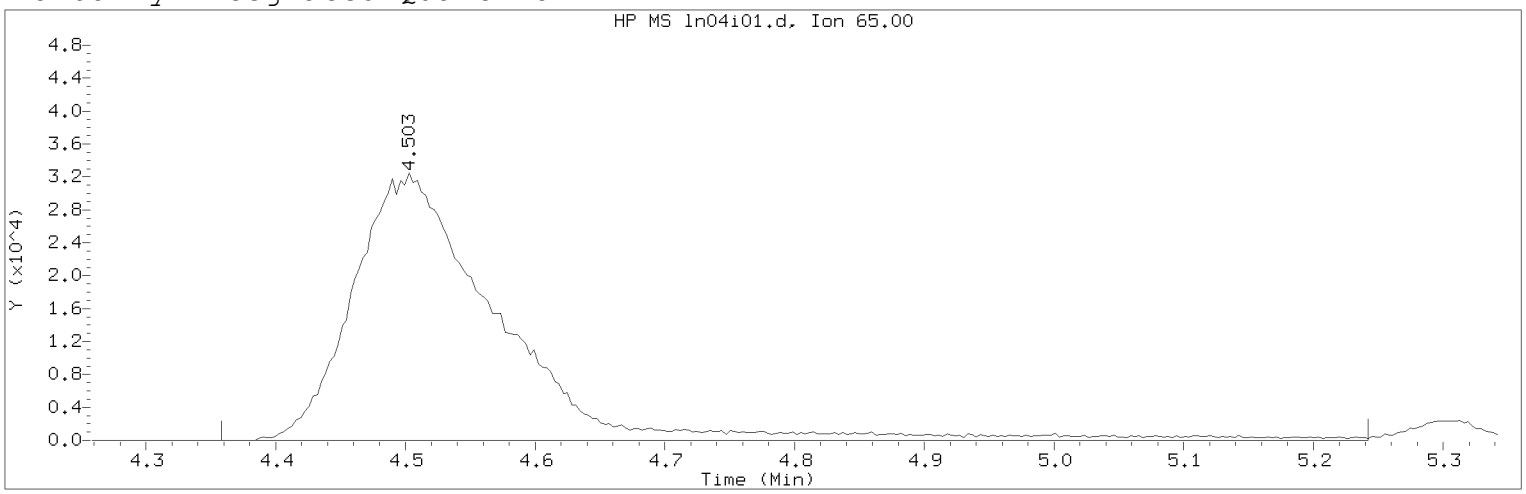
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 1755596
On-column Amount (ng) : 295.0708
Integration start scan : 267 Integration stop scan: 317
Y at integration start : 2196 Y at integration end: 3553

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh00052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

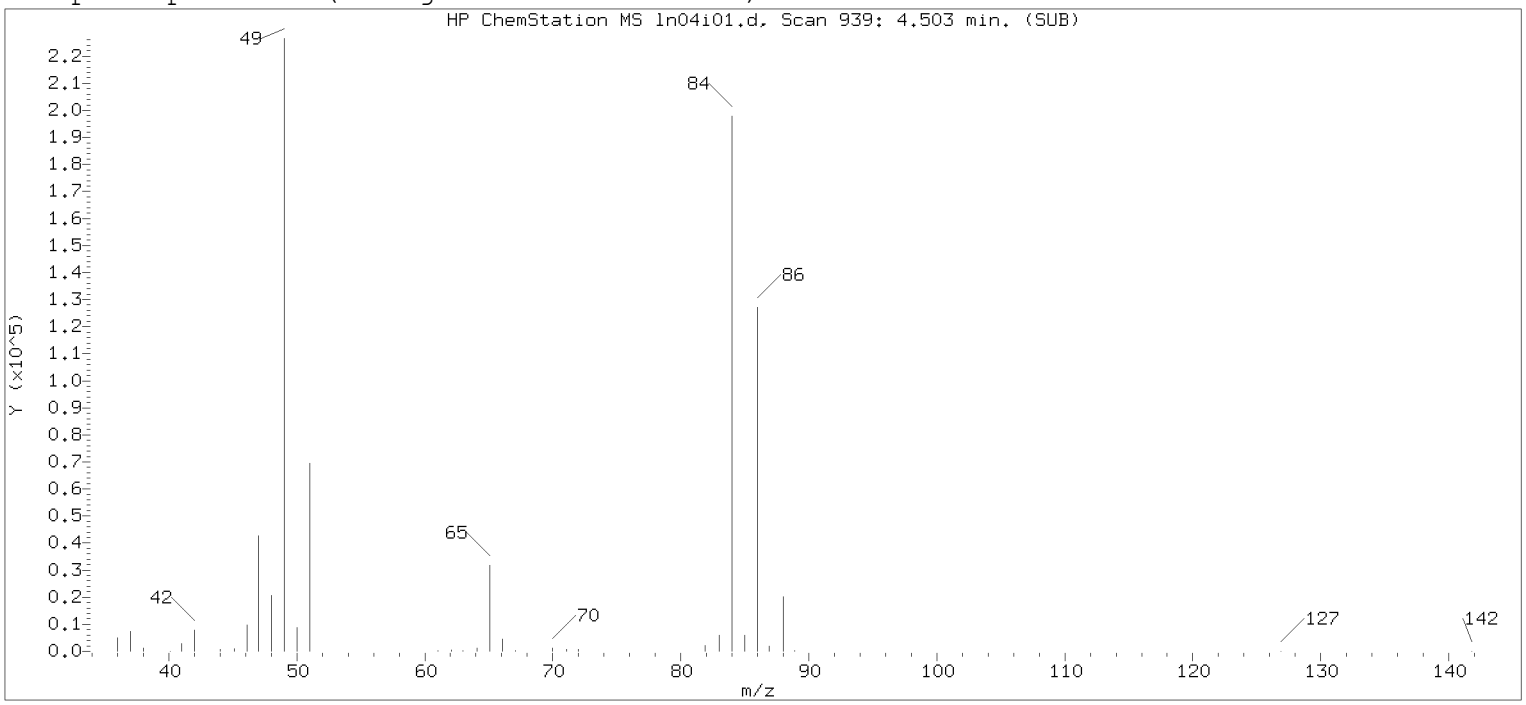
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area (flag) : 254406M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1168
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

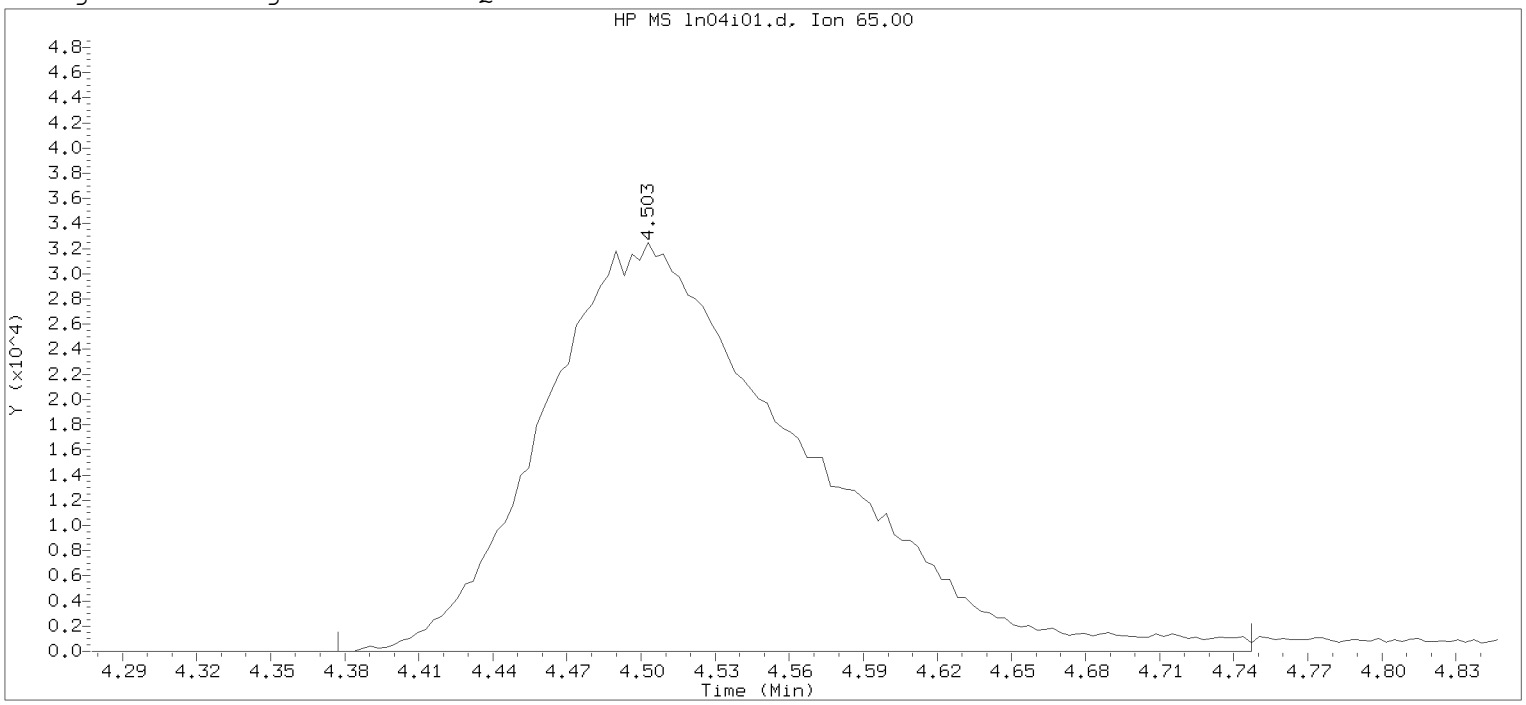
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

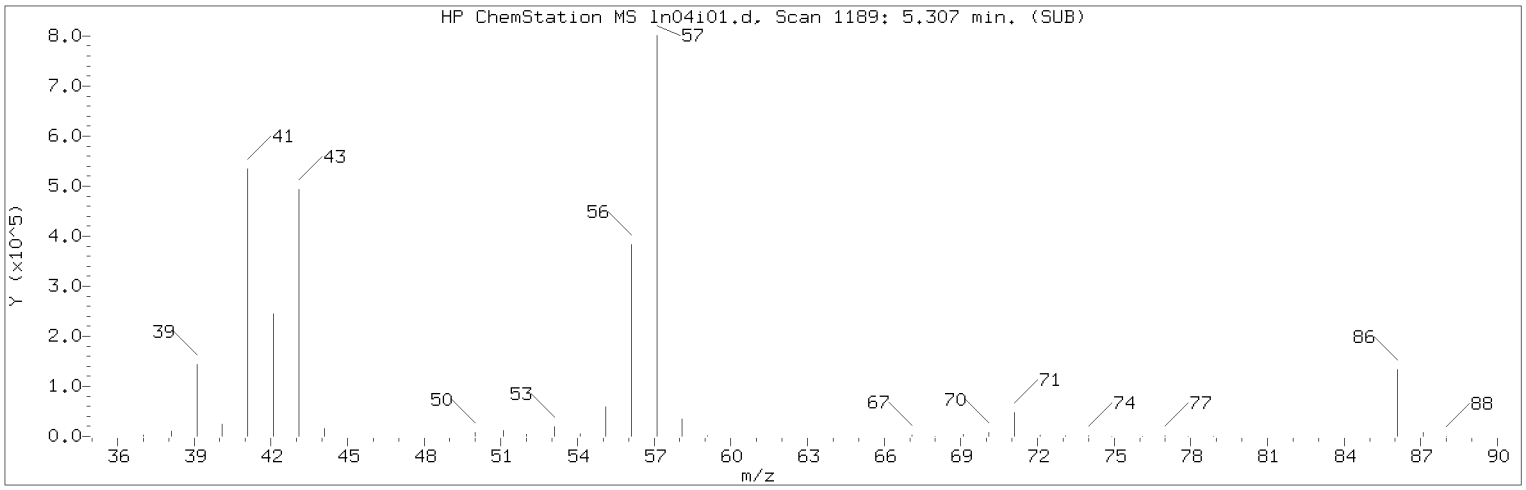
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

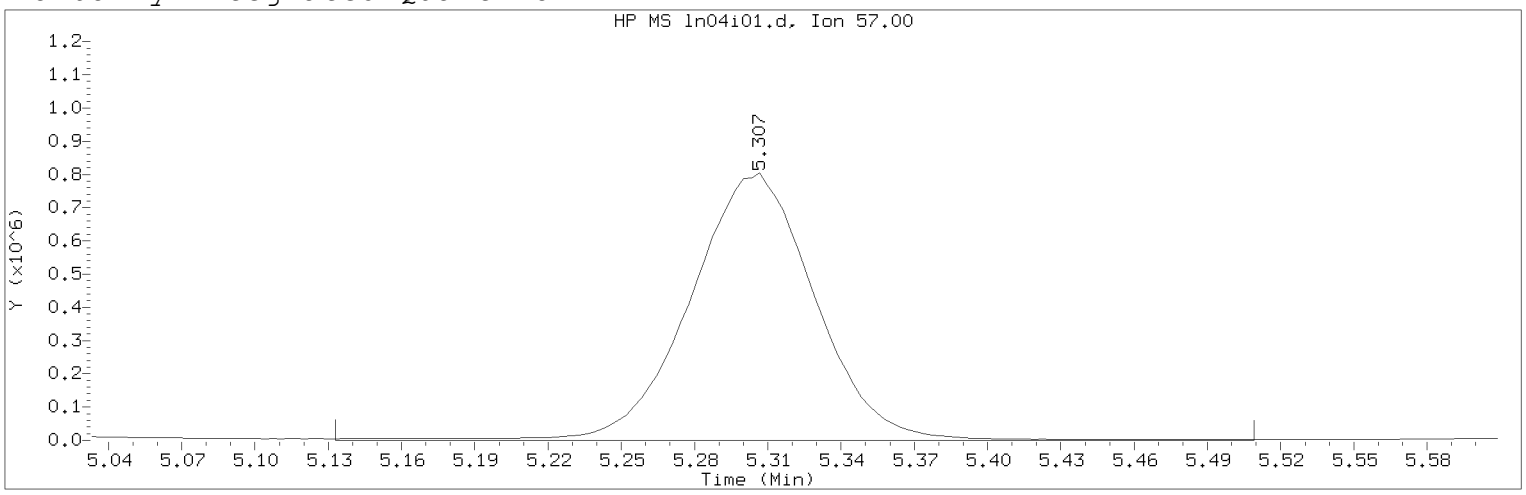
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area : 237264
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user id: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

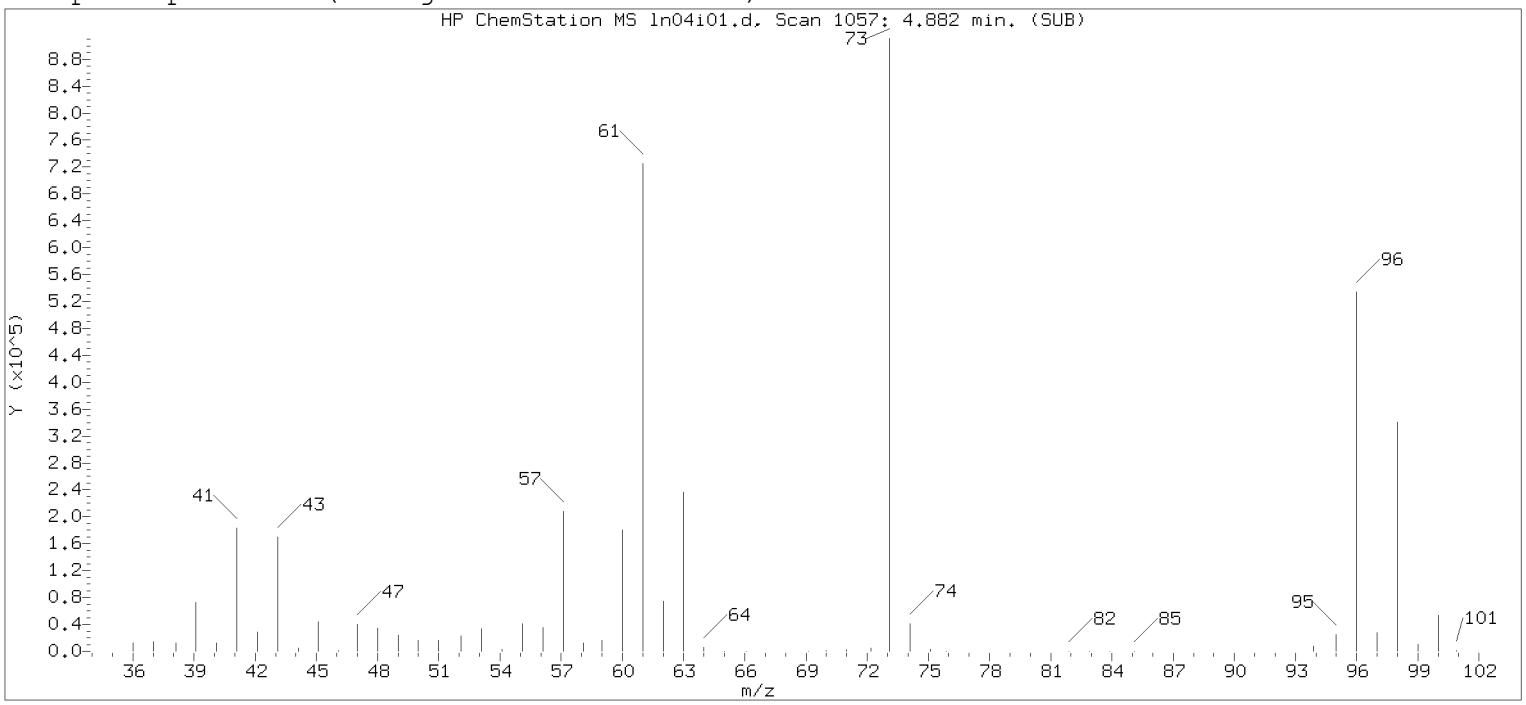
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1189
Retention Time (minutes): 5.307
Quant Ion : 57.00
Area (flag) : 2863189M
On-Column Amount (ng) : 334.8105
Integration start scan : 1134 Integration stop scan: 1251
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

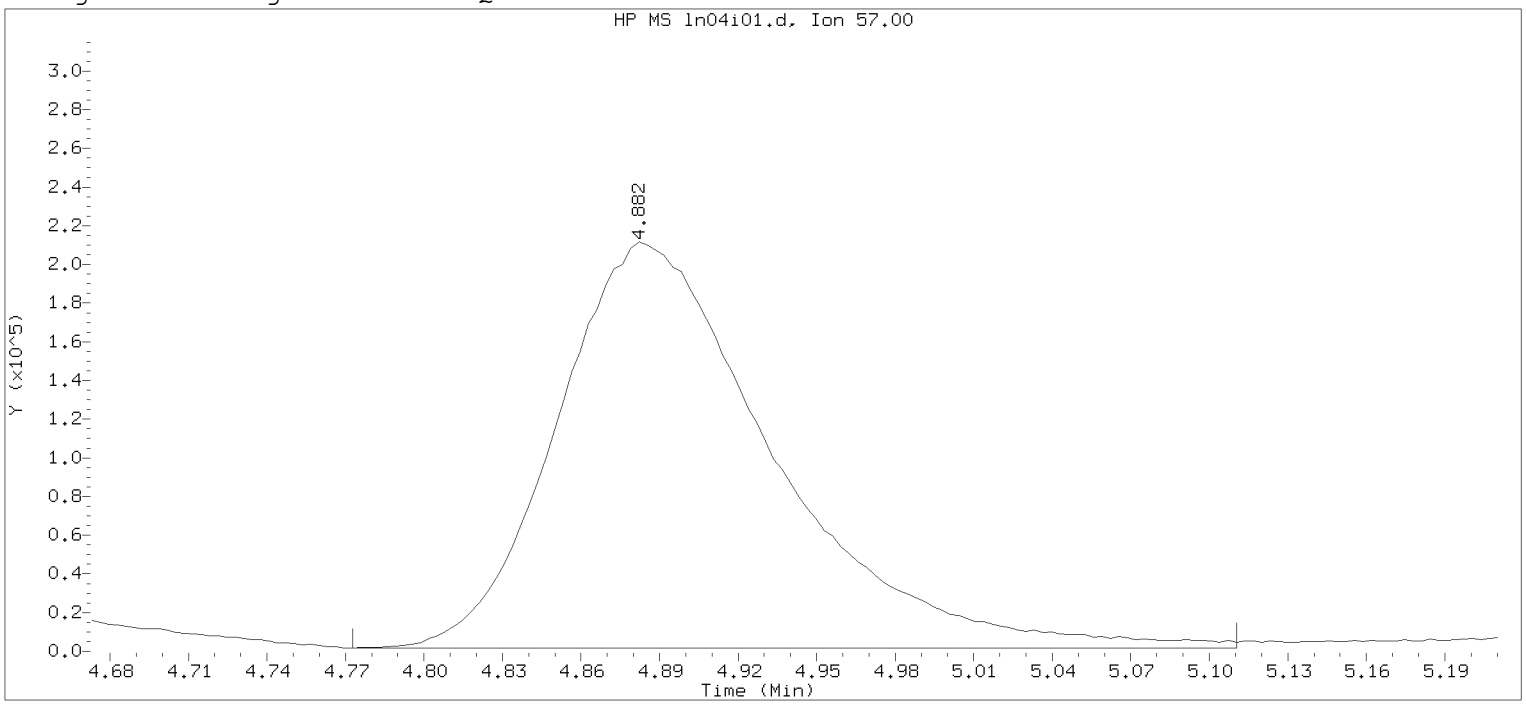
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

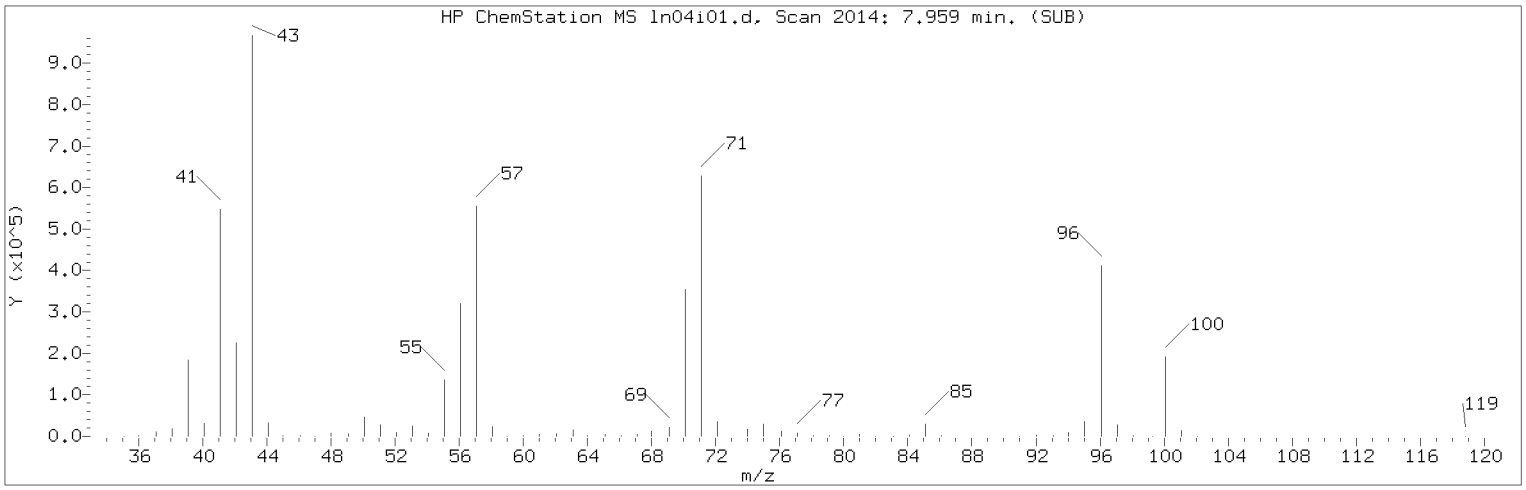
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

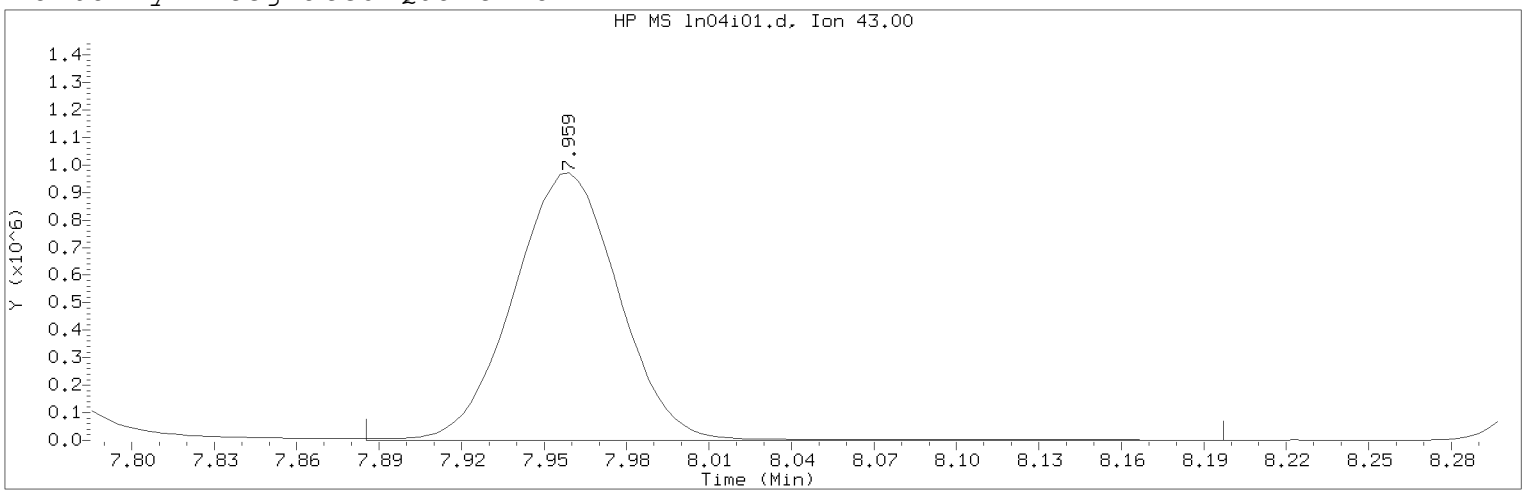
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1057
Retention Time (minutes): 4.882
Quant Ion : 57.00
Area : 1202378
On-column Amount (ng) : 301.4561
Integration start scan : 1022 Integration stop scan: 1127
Y at integration start : 1806 Y at integration end: 1806

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user id: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

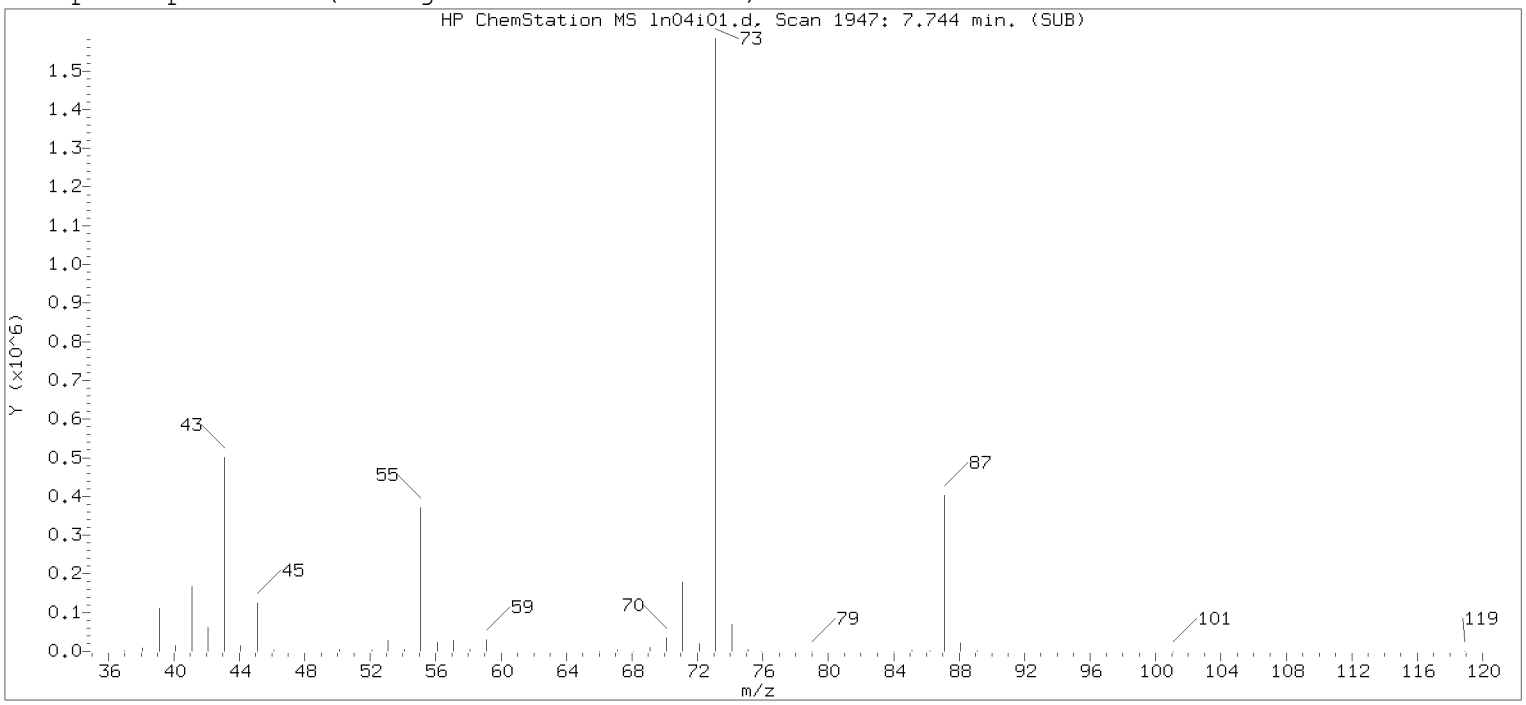
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2014
Retention Time (minutes): 7.959
Quant Ion : 43.00
Area (flag) : 2592531MA
On-Column Amount (ng) : 324.5176
Integration start scan : 1990 Integration stop scan: 2087
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

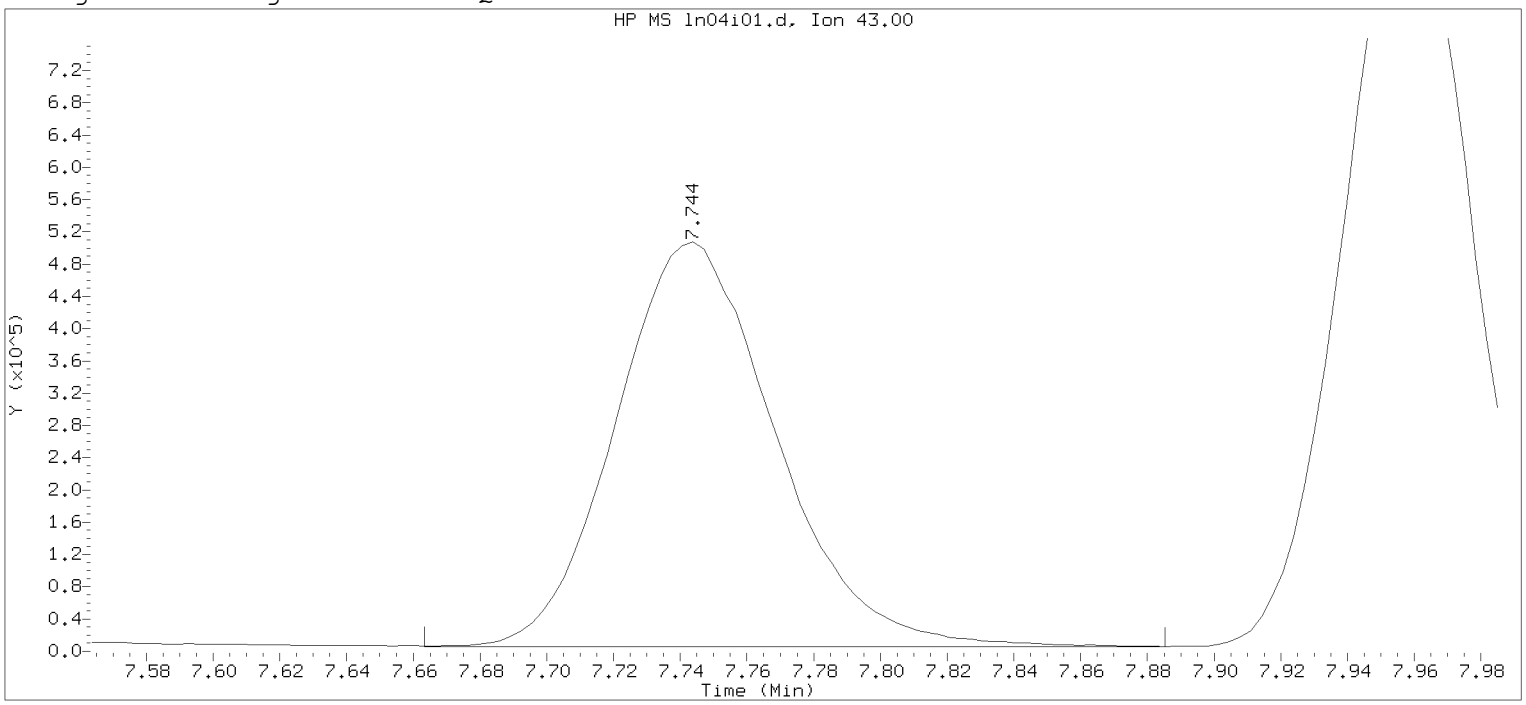
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1947
Retention Time (minutes): 7.744
Quant Ion : 43.00
Area : 1668813
On-column Amount (ng) : 288.4319
Integration start scan : 1921 Integration stop scan: 1990
Y at integration start : 5866 Y at integration end: 5866

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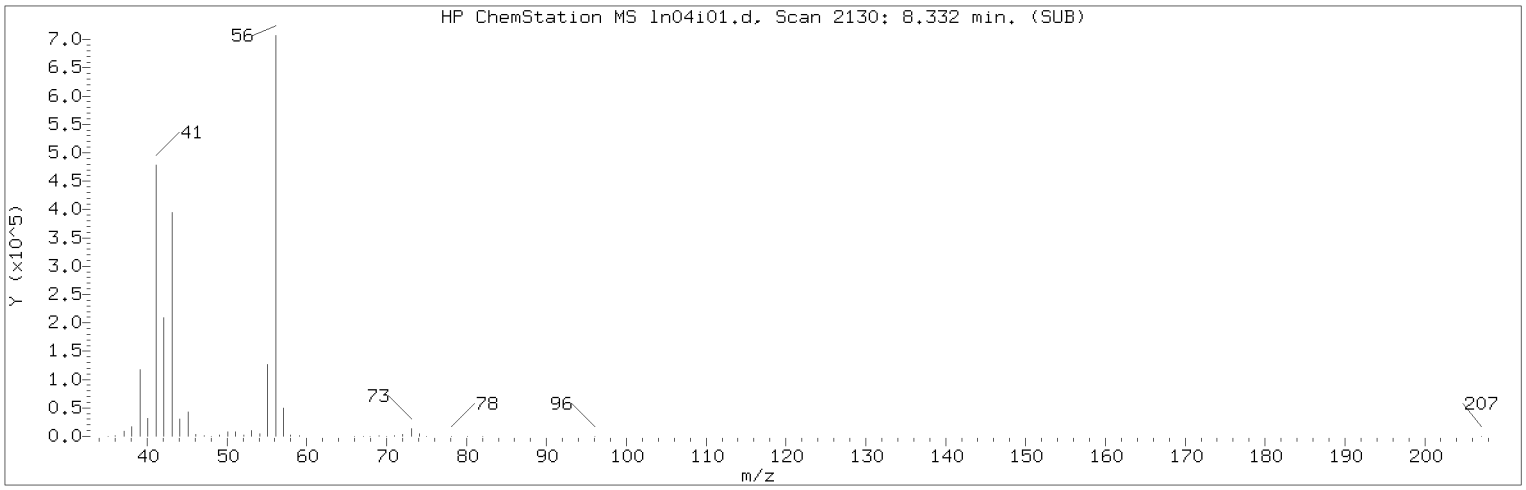
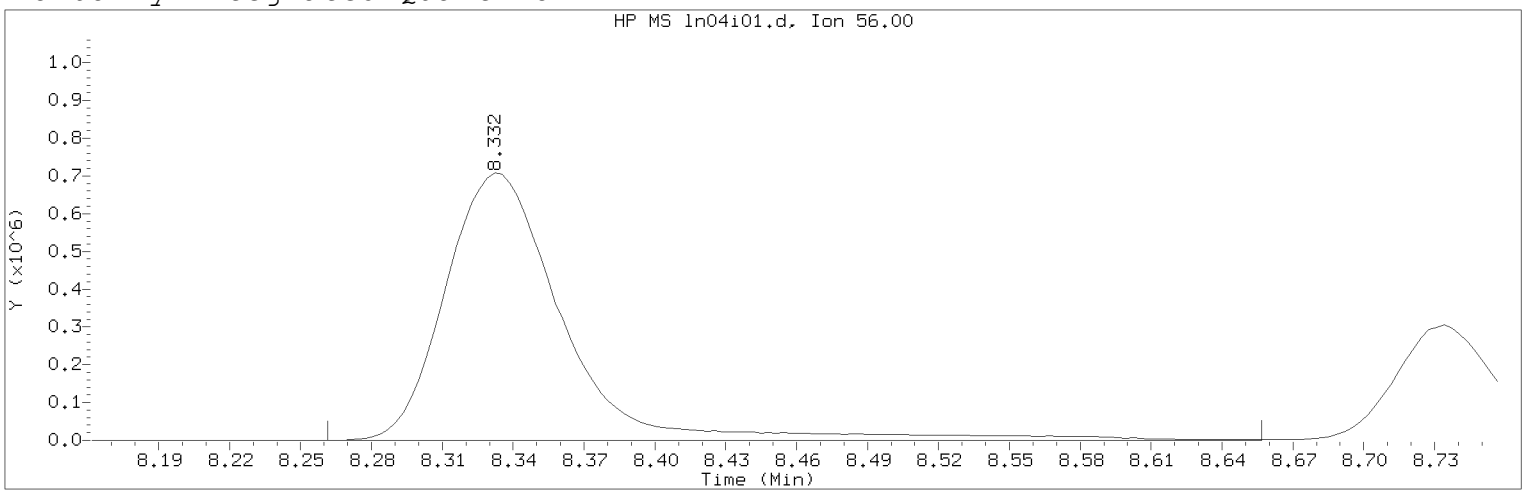
Target 3.5 esignature user ID: jkh00081

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

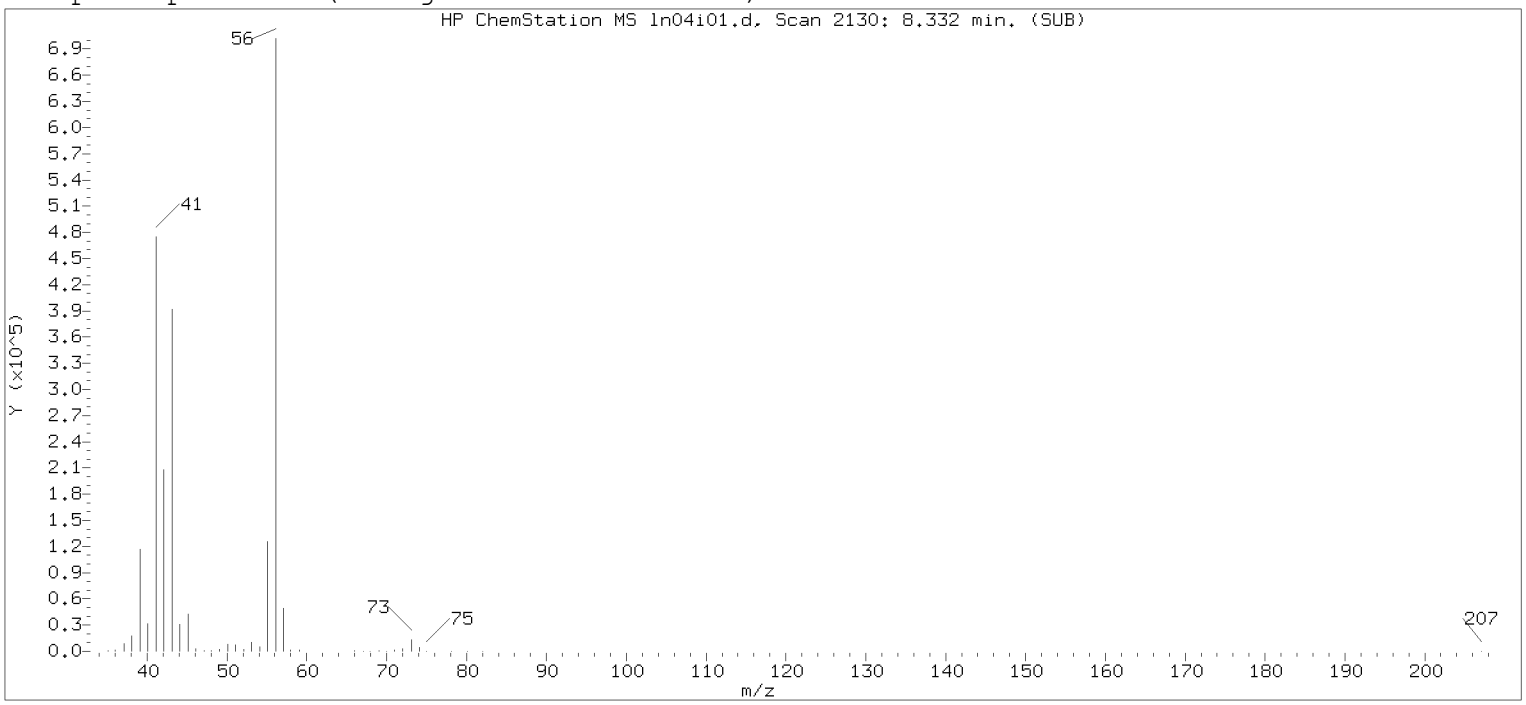
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area (flag) : 2465385M
On-Column Amount (ng) : 7947.0678
Integration start scan : 2107 Integration stop scan: 2230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

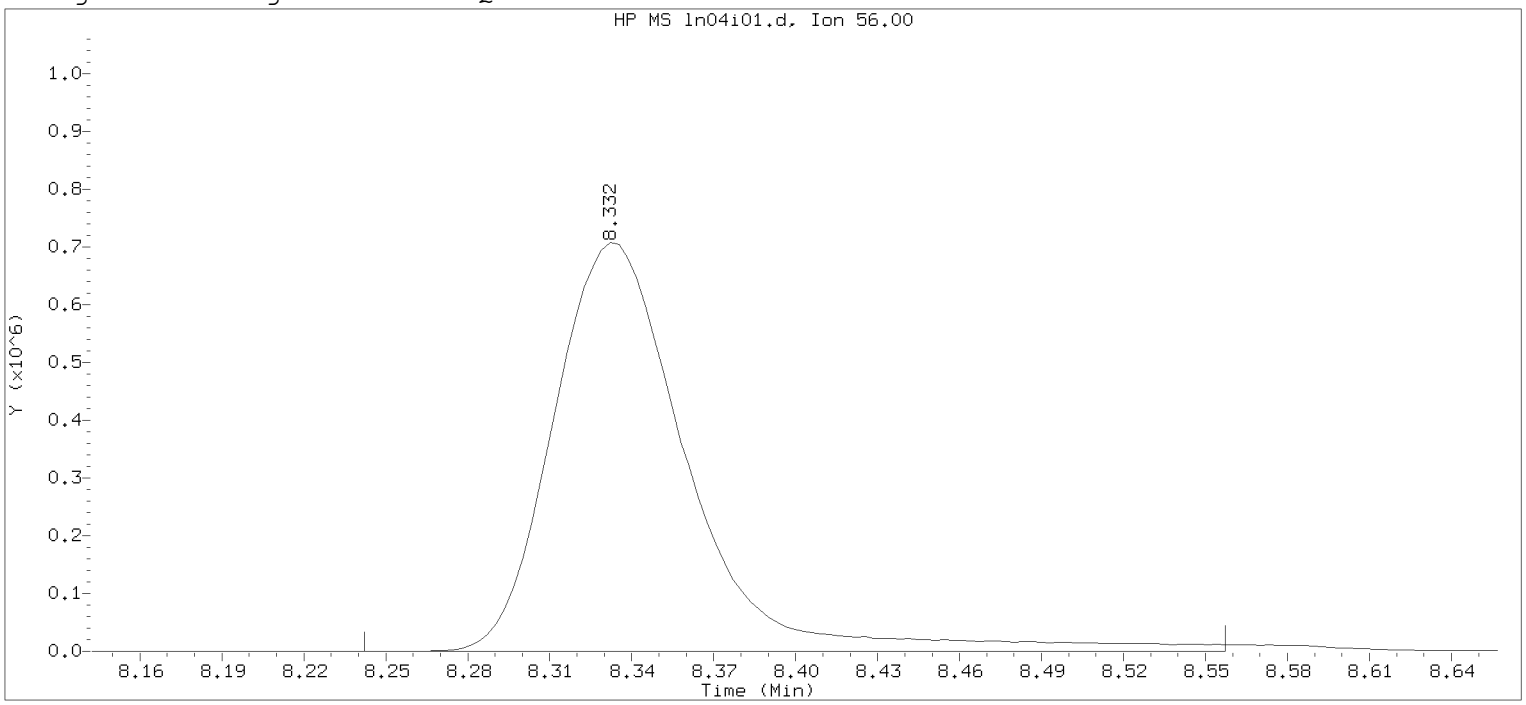
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

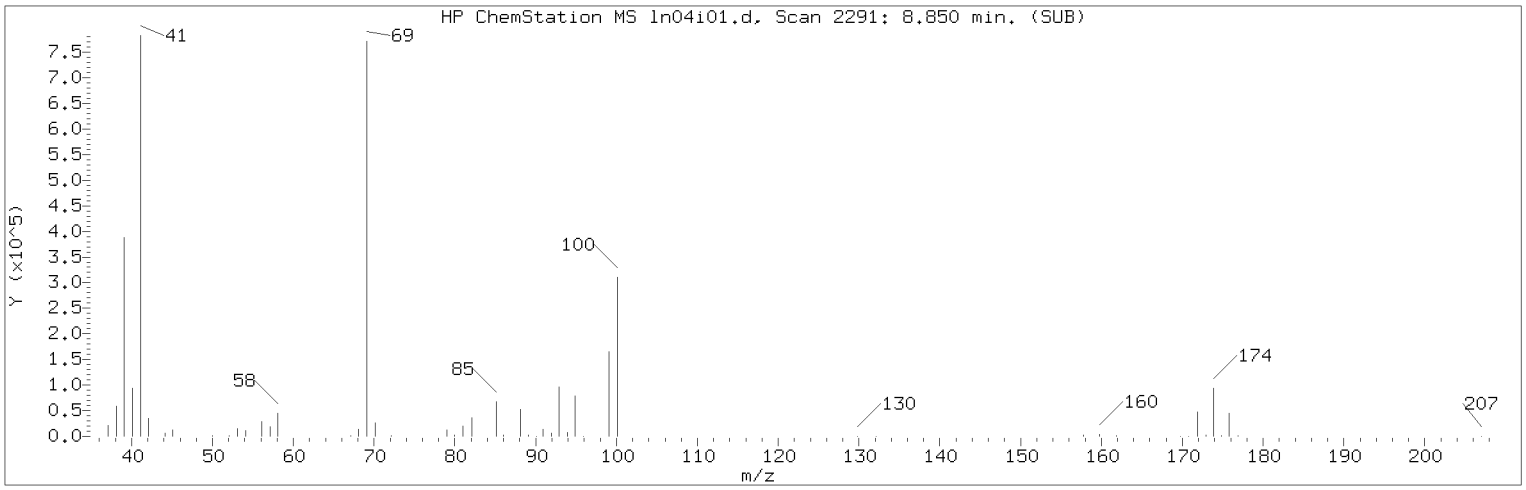
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

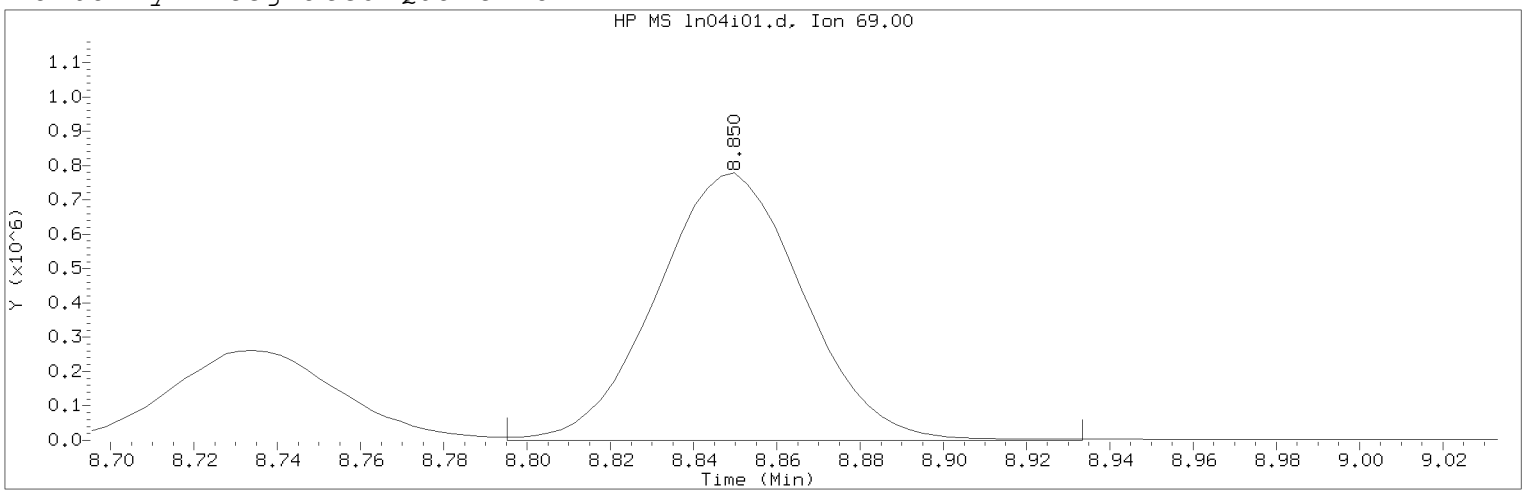
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area : 2429255
On-column Amount (ng) : 7682.9381
Integration start scan : 2101 Integration stop scan: 2199
Y at integration start : 176 Y at integration end: 176

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user id: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

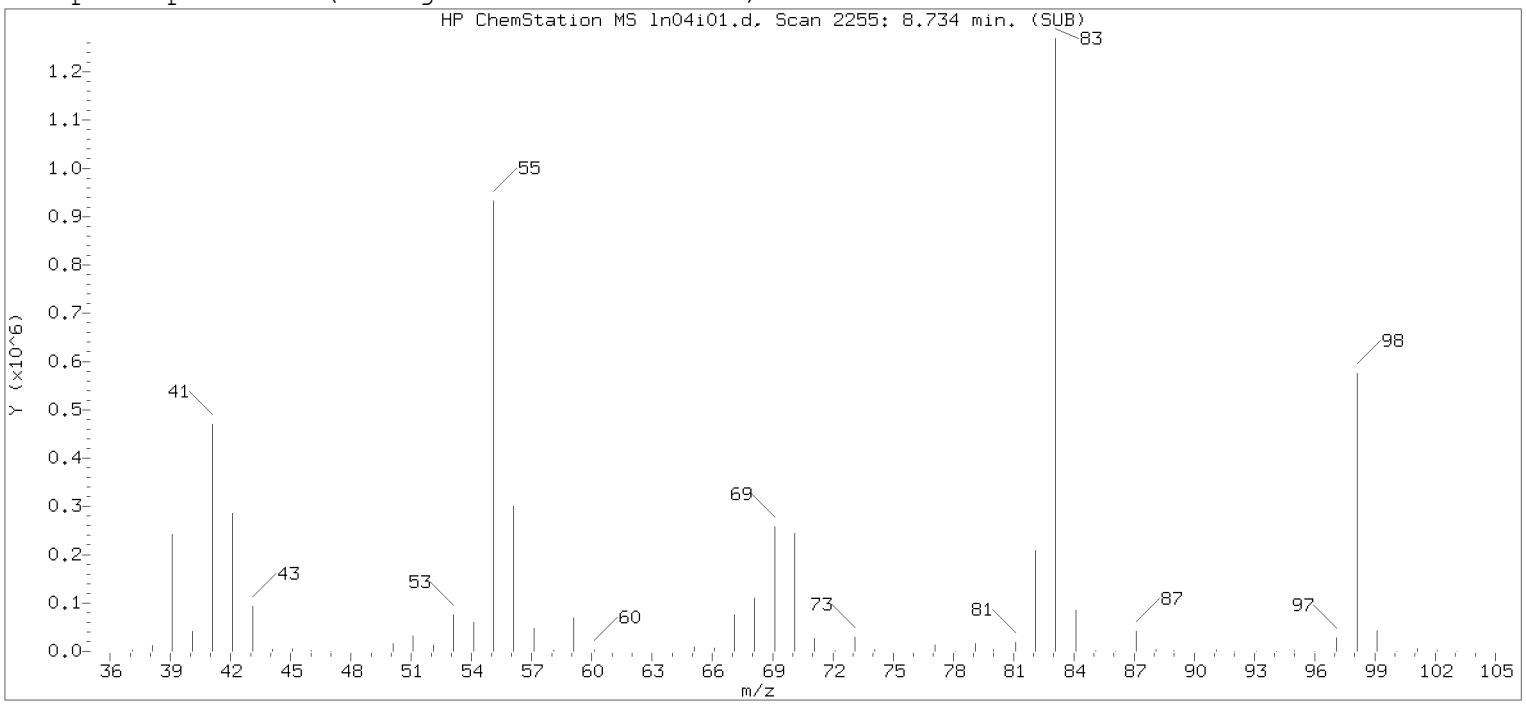
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2291
Retention Time (minutes): 8.850
Quant Ion : 69.00
Area (flag) : 1904896A
On-Column Amount (ng) : 340.2564
Integration start scan : 2273 Integration stop scan: 2316
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

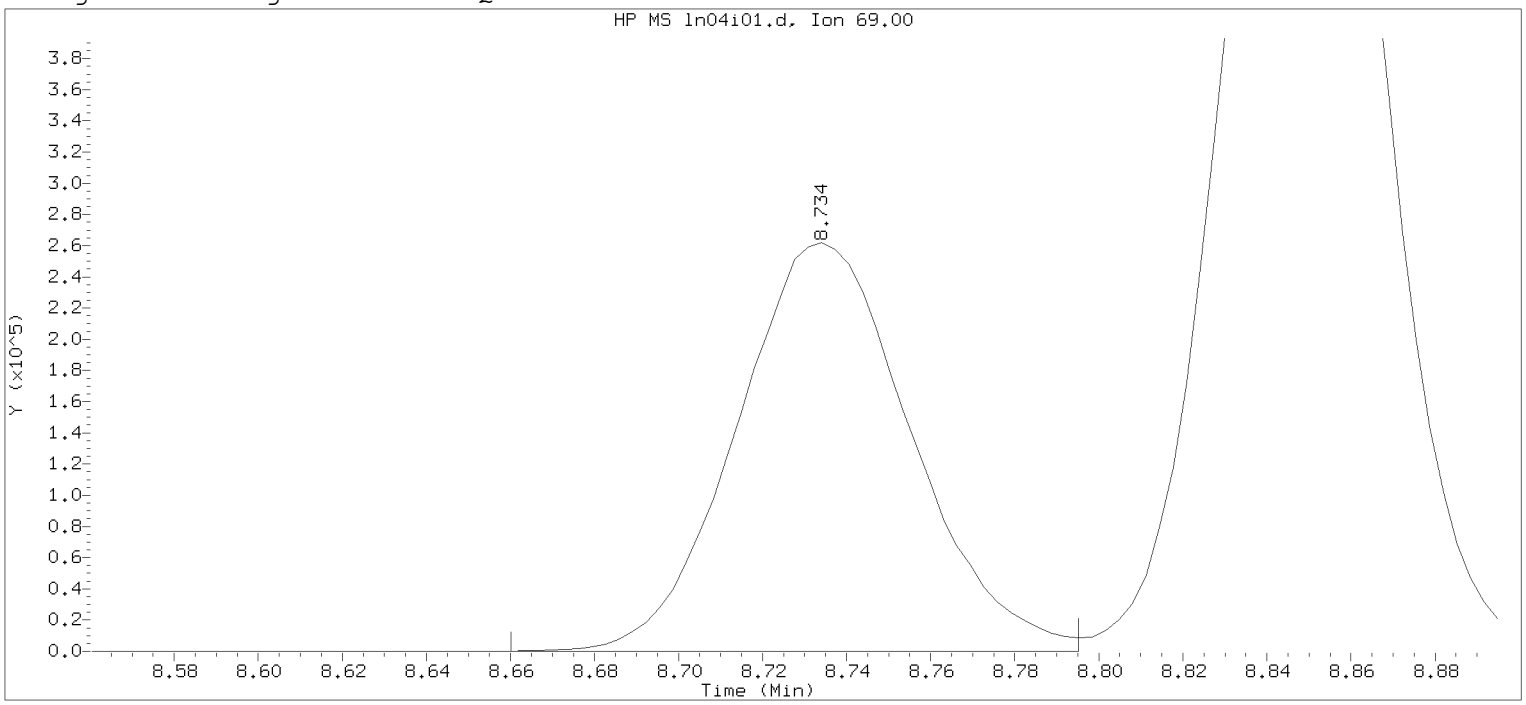
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

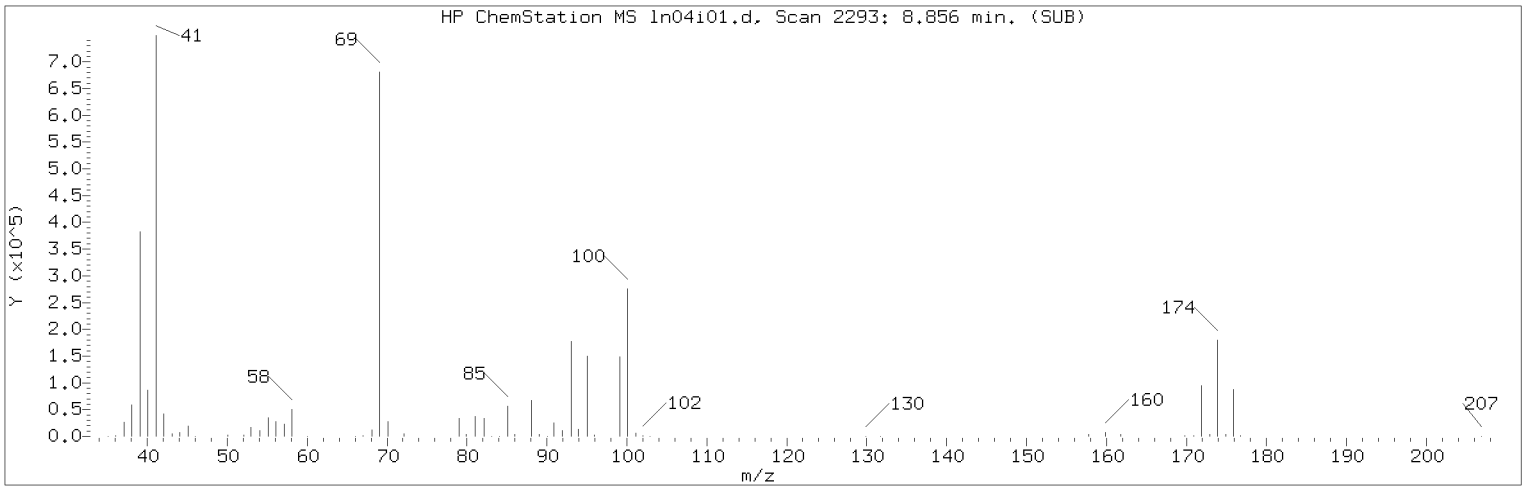
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

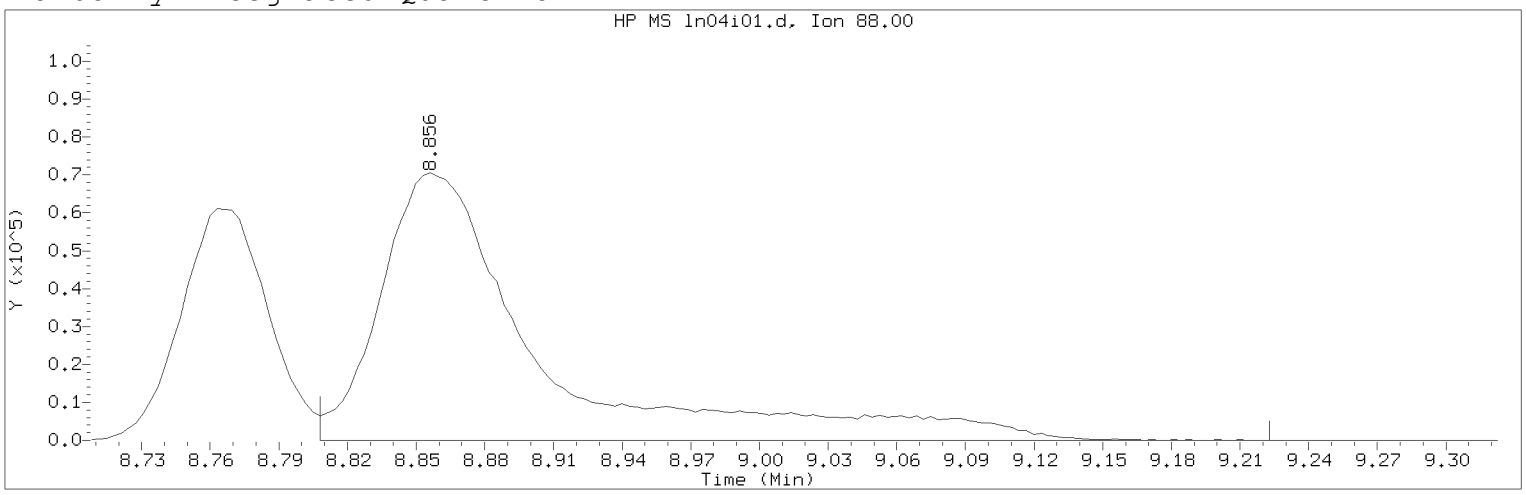
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 752058
On-column Amount (ng) : 311.1363
Integration start scan : 2231 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh00082

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

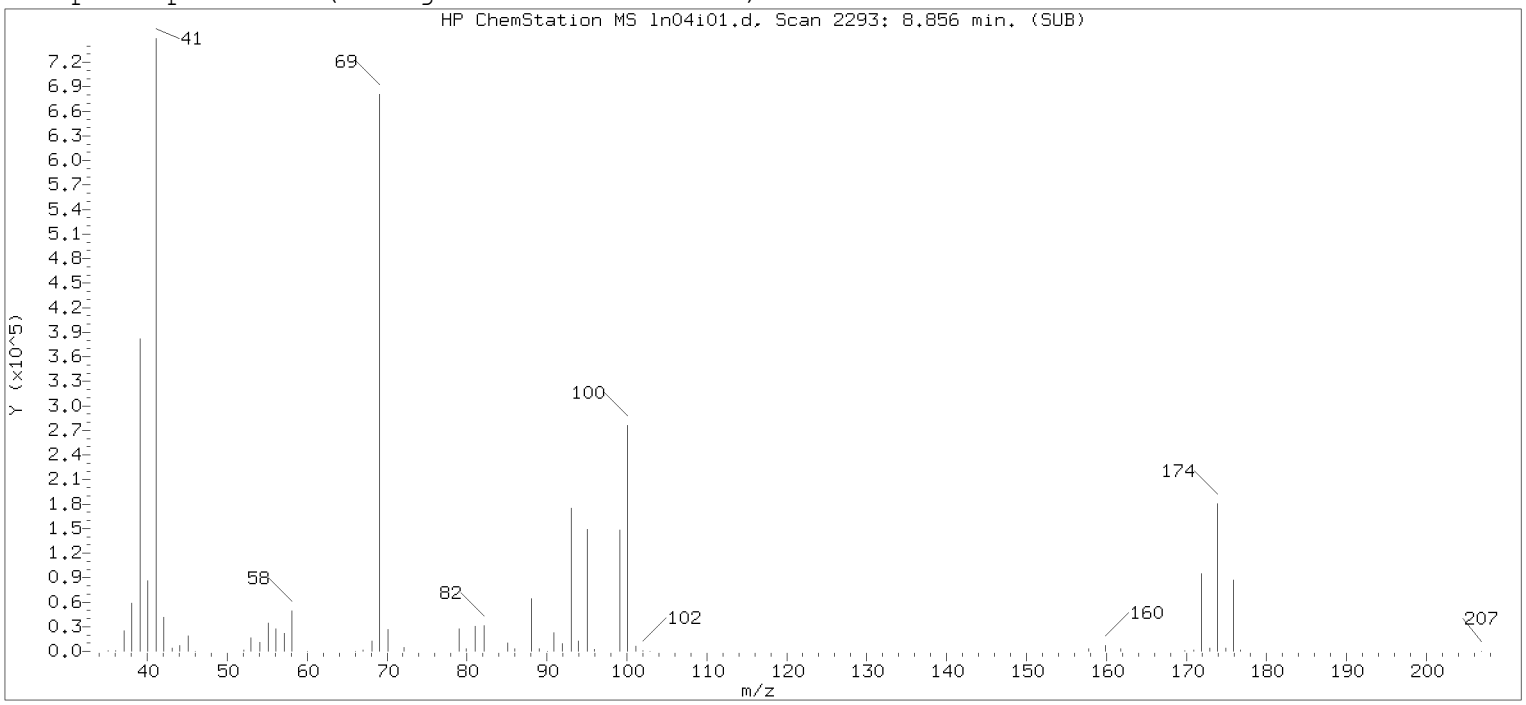
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 338379M
On-Column Amount (ng) : 3968.4208
Integration start scan : 2277 Integration stop scan: 2406
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

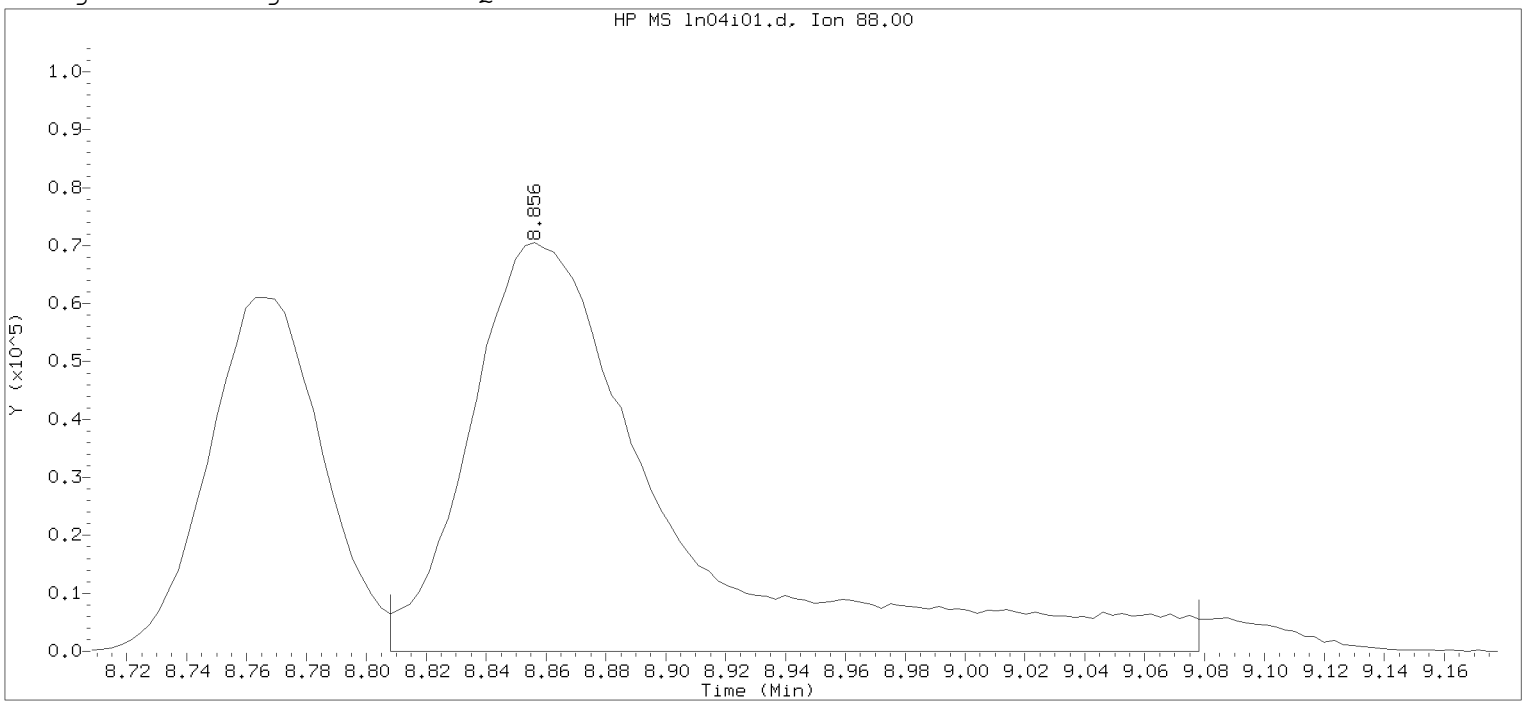
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

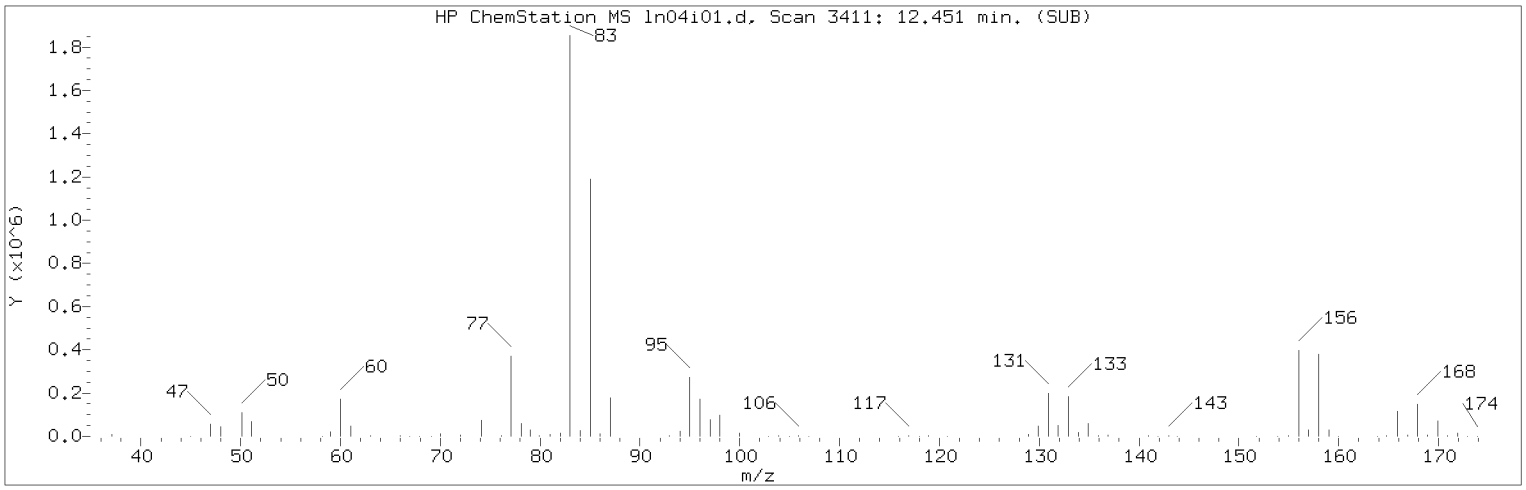
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

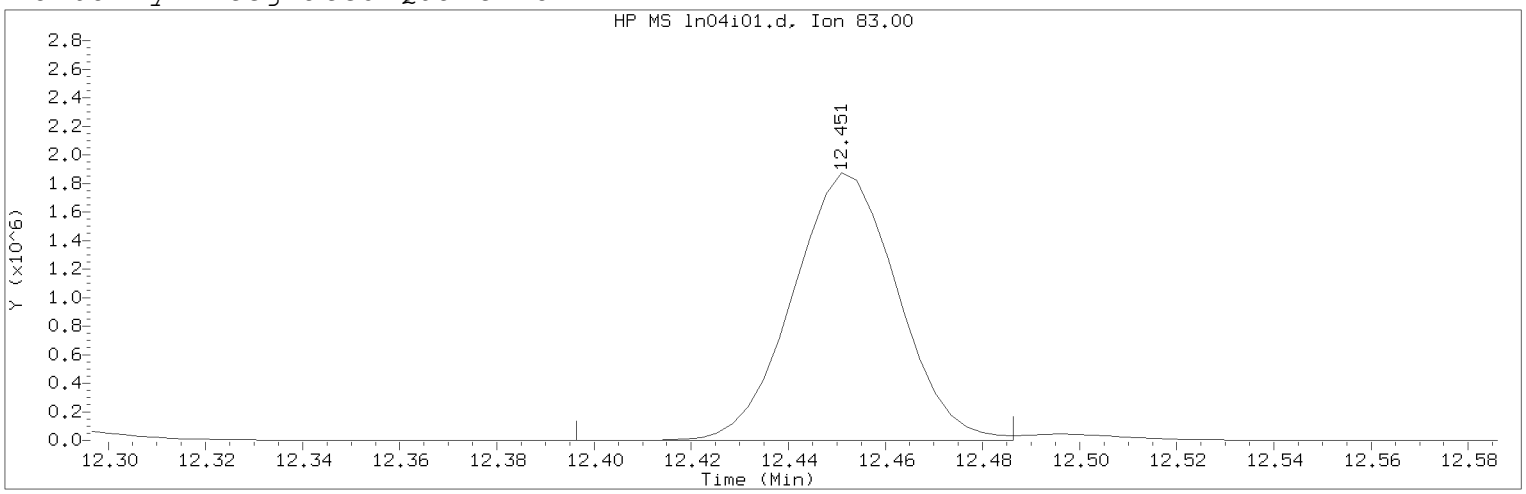
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2293		
Retention Time (minutes)	: 8.856		
Quant Ion	: 88.00		
Area	: 325164		
On-column Amount (ng)	: 3803.8575		
Integration start scan	: 2277	Integration stop scan:	2361
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user id: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

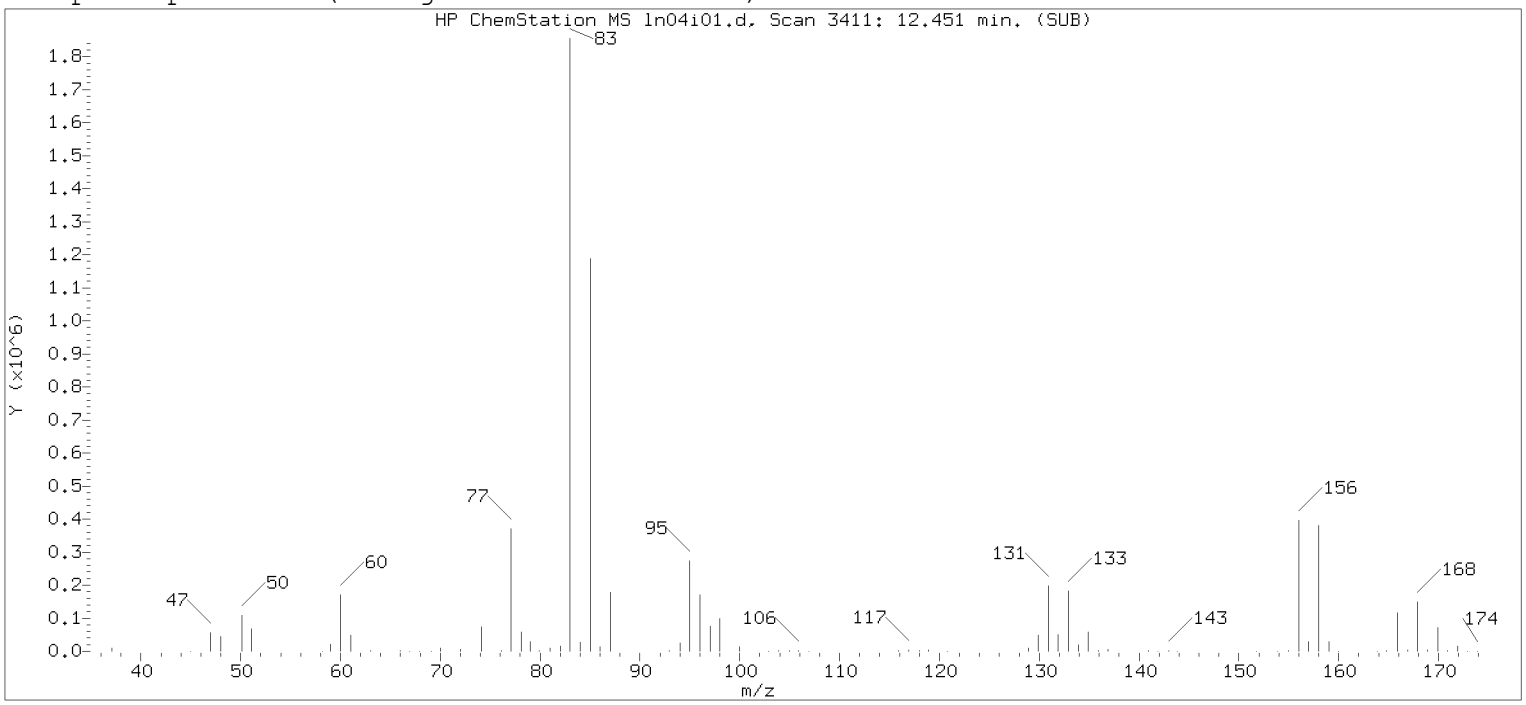
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 2800639M
On-Column Amount (ng) : 310.7054
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

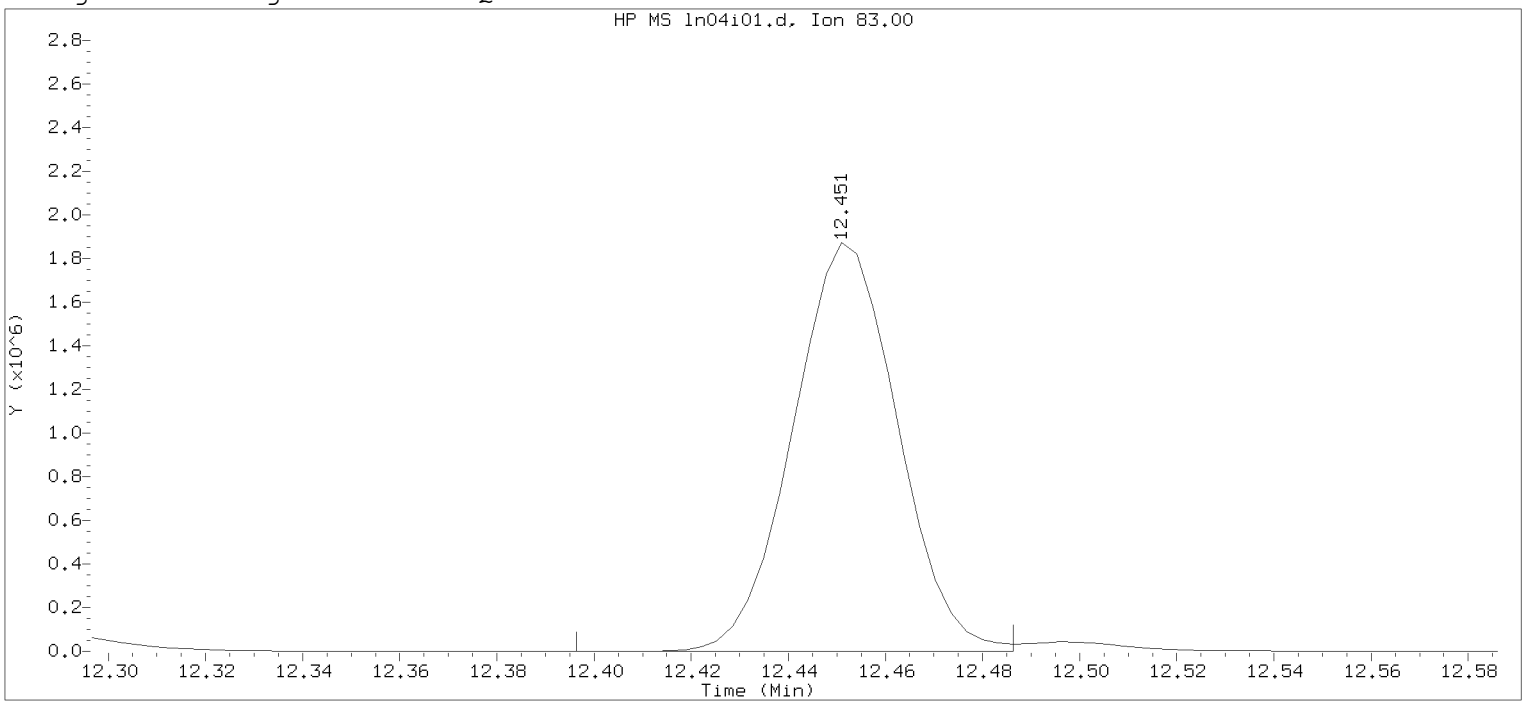
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

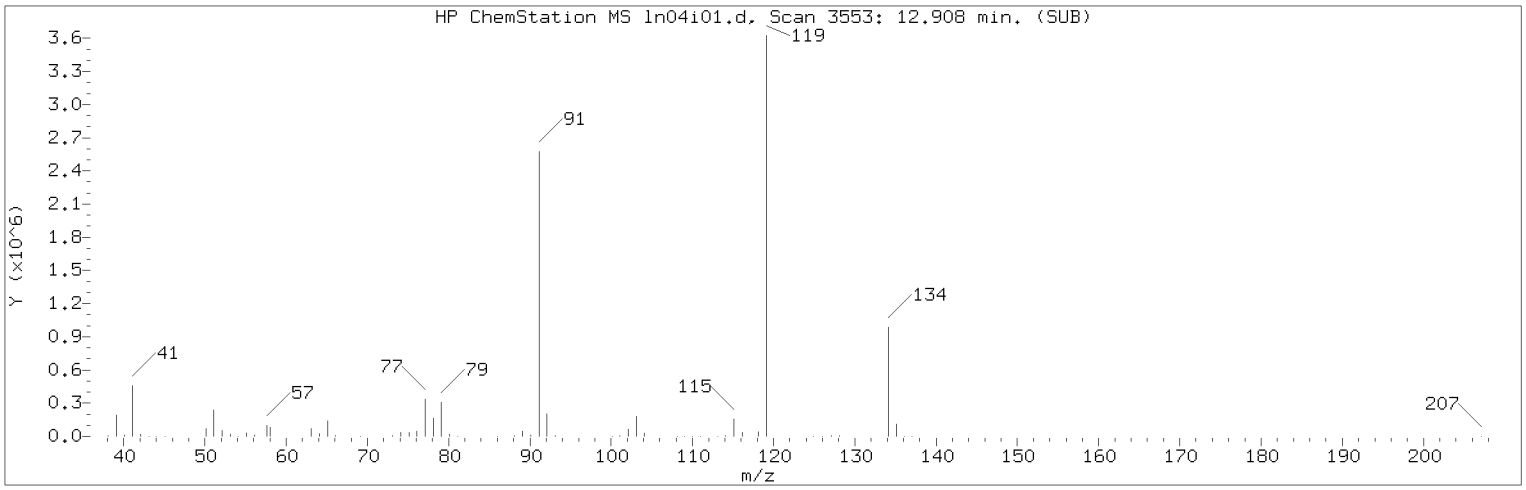
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

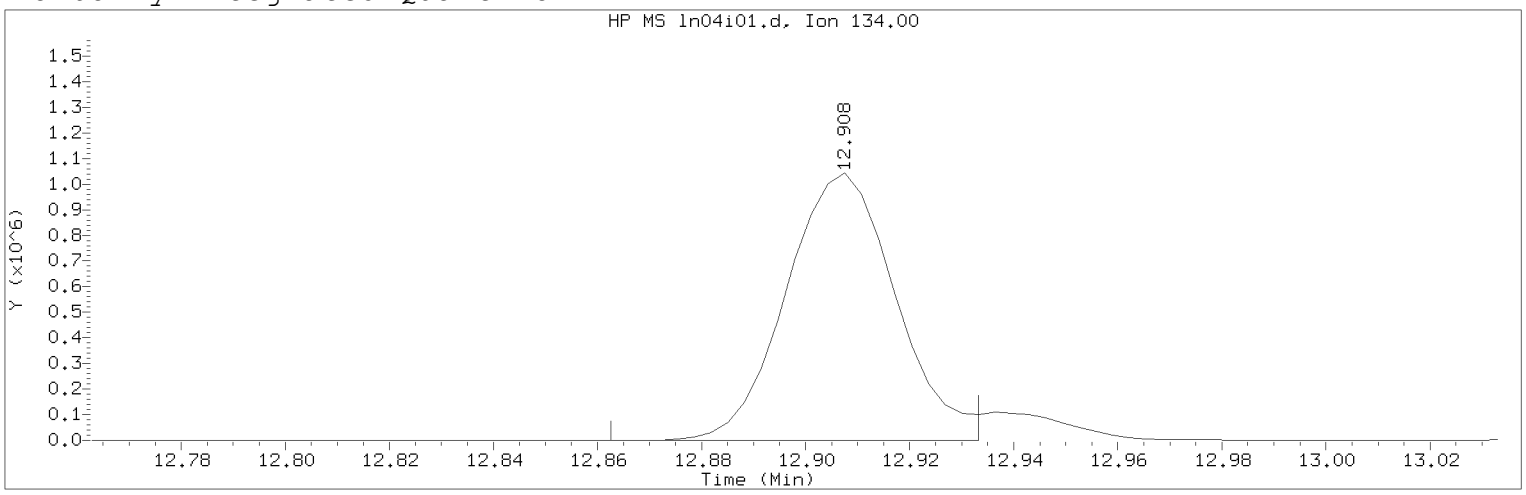
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 2797364
On-column Amount (ng) : 294.0638
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh00052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-NOV-2019 13:14
Date, time and analyst ID of latest file update: 05-Nov-2019 13:14 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

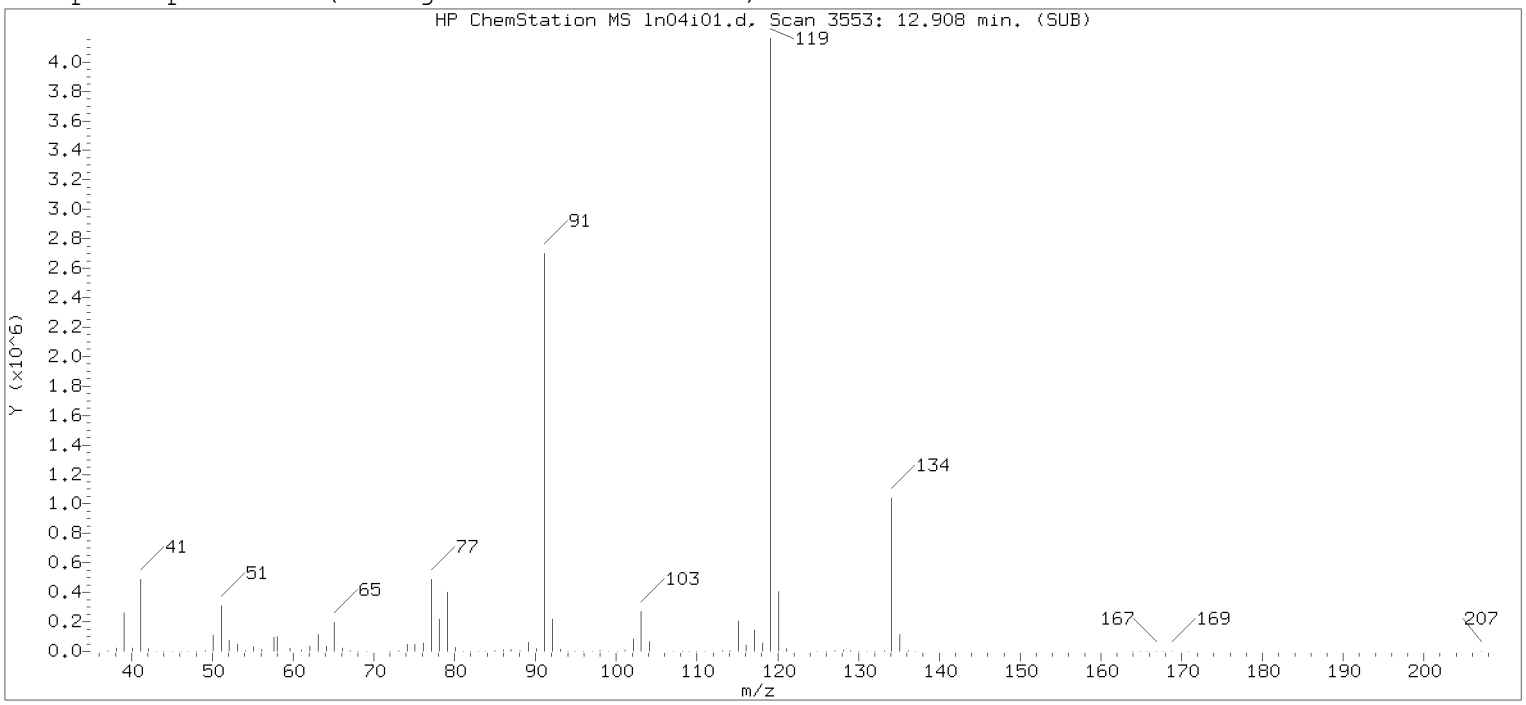
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area (flag) : 1524421M
On-Column Amount (ng) : 323.7167
Integration start scan : 3538 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

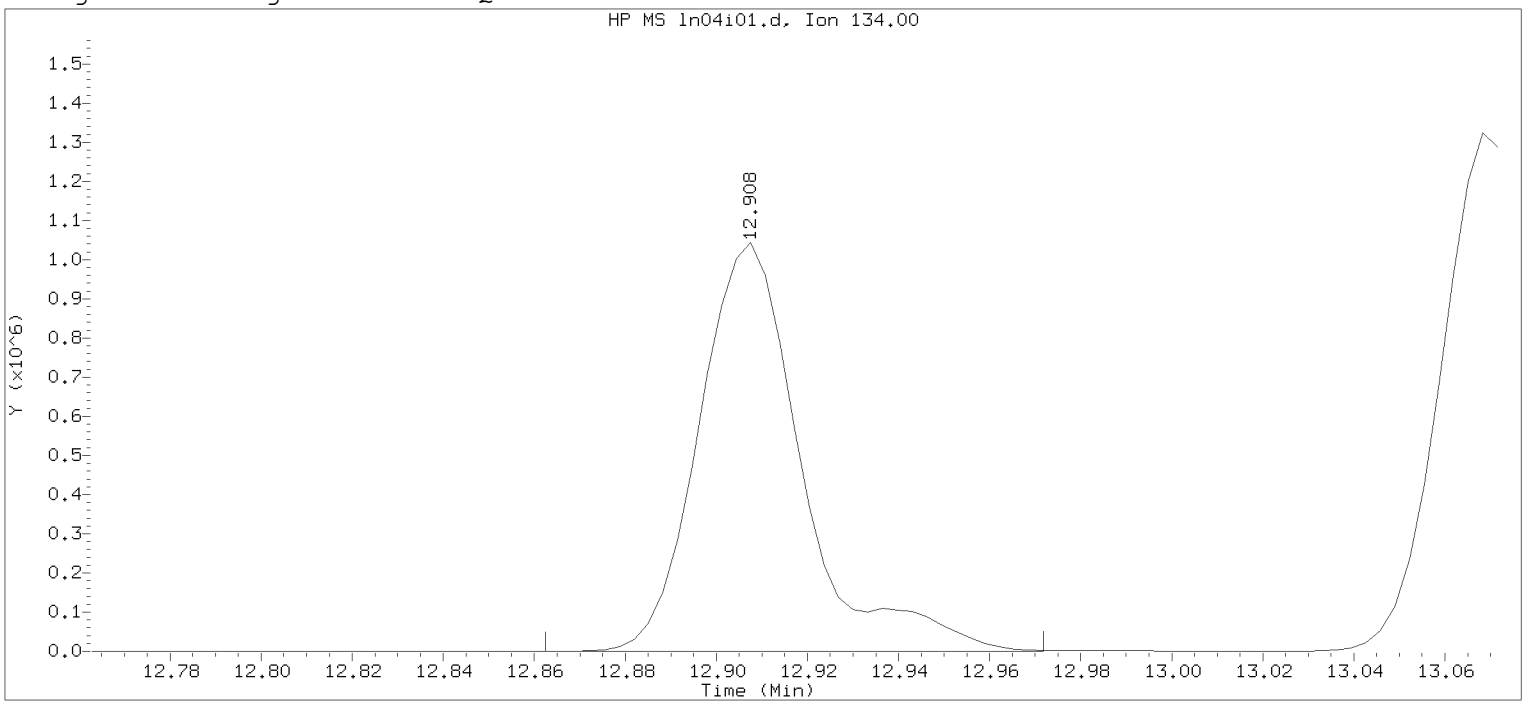
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 11/05/2019 at 13:48.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



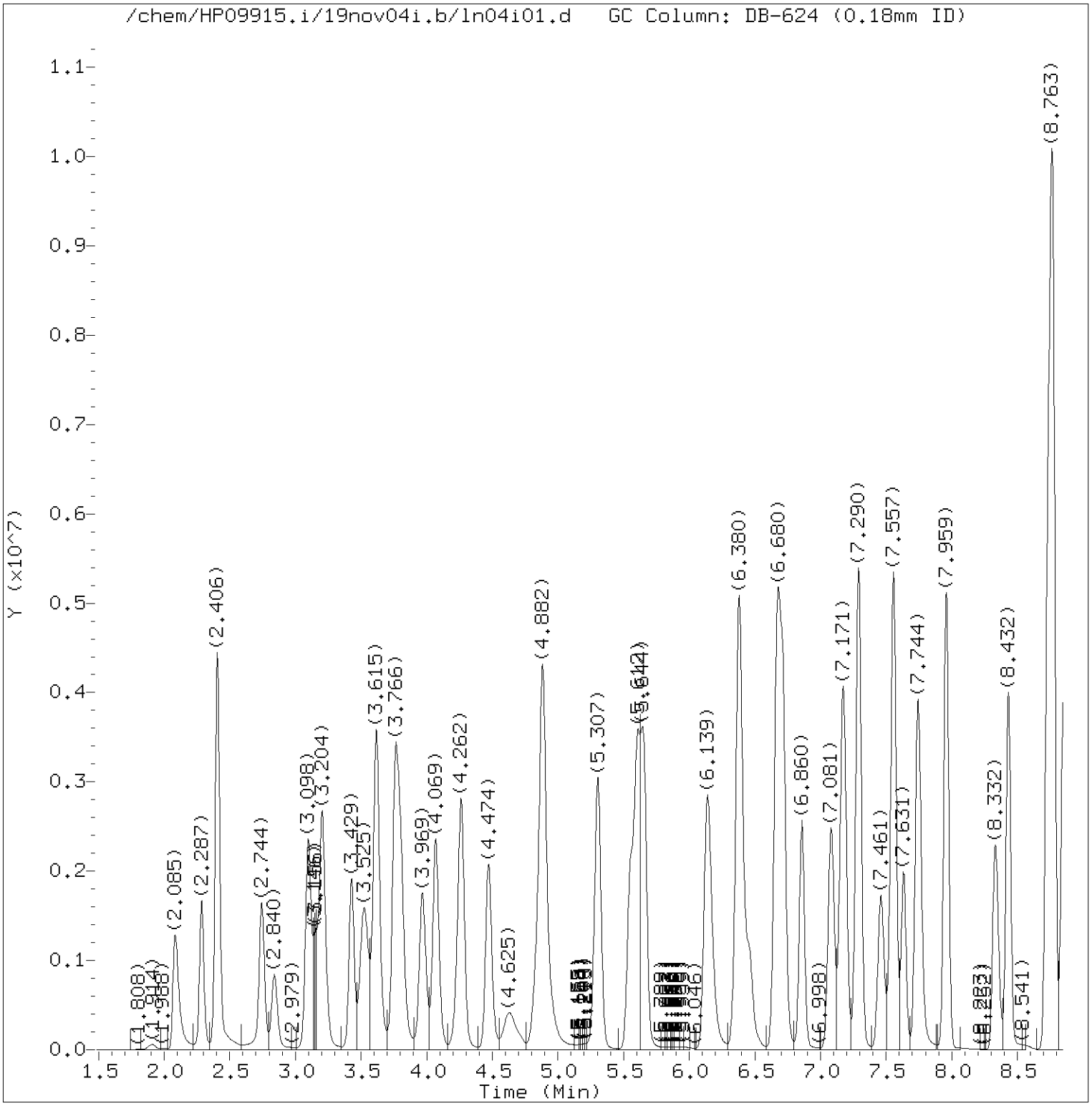
Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area : 1639624
On-column Amount (ng) : 313.1253
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/05/2019 at 13:15.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

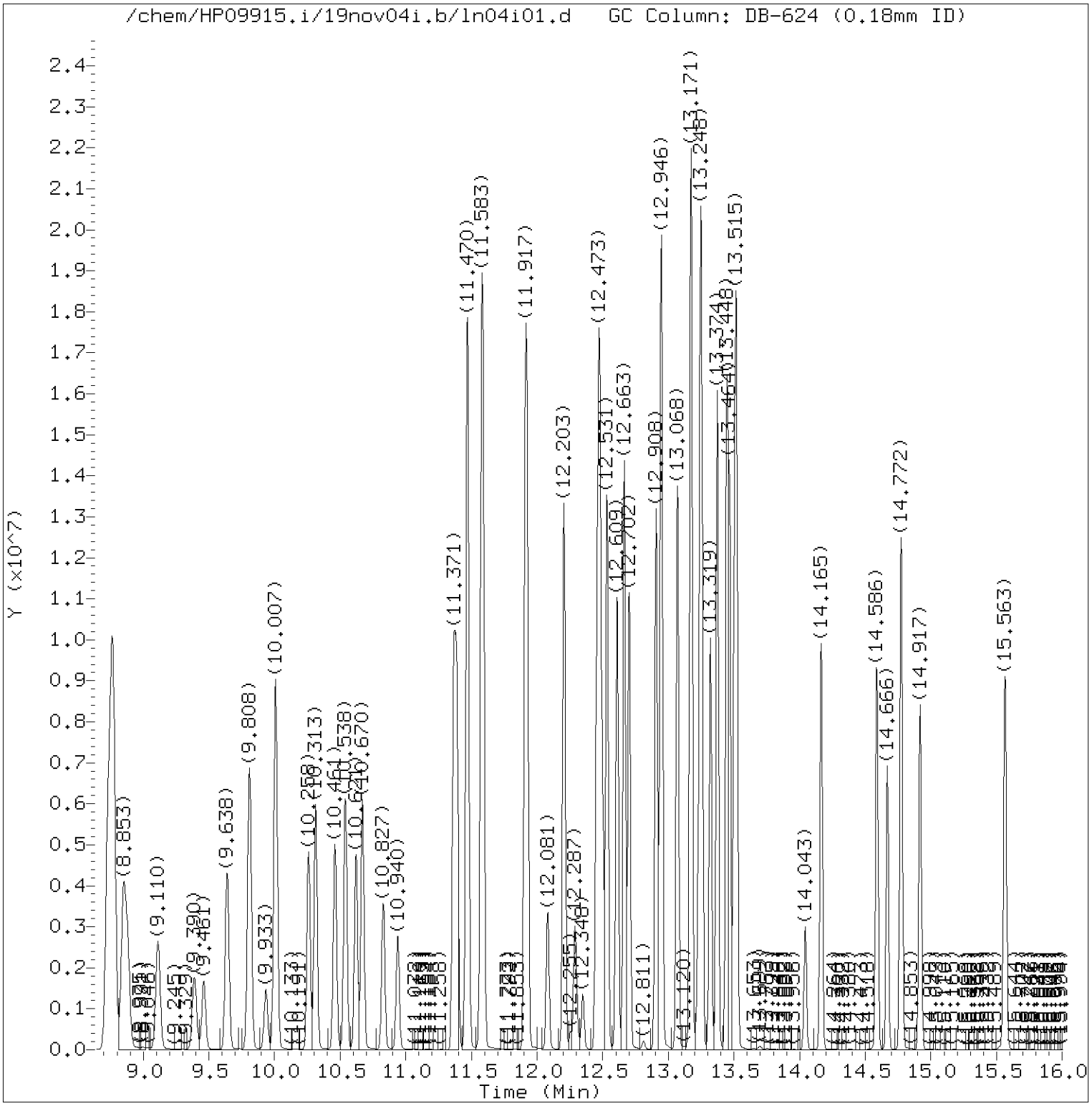
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.085	85	2719746M	347.943
4) Chloromethane	(2)	2.287	50	2403581	319.051
5) 1,3-Butadiene	(2)	2.406	39	1785787M	285.486
6) Vinyl Chloride	(2)	2.406	62	2412855	320.904
8) Bromomethane	(2)	2.744	94	1638575	304.015
9) Chloroethane	(2)	2.837	64	1253478	303.356
10) Dichlorofluoromethane	(2)	3.098	67	2978303M	300.258
12) Trichlorofluoromethane	(2)	3.152	101	2661050	328.734
11) n-Pentane	(2)	3.204	43	2816823	294.455
14) Ethyl ether	(2)	3.429	59	1721693	329.146
15) Freon 123a	(2)	3.525	67	1991616	305.852
16) Acrolein	(1)	3.615	56	5765354	3020.583
17) 1,1-Dichloroethene	(2)	3.760	96	1489890	313.570
17) 1,1-Dichloroethene	(2)	3.757	63	721205	302.767
19) Freon 113	(2)	3.792	101	1732433	319.583
18) Acetone	(1)	3.802	58	531845	621.534
22) Methyl Iodide	(2)	3.966	142	3047145	309.483
21) 2-Propanol	(1)	3.995	45	936919	1523.065
23) Carbon Disulfide	(2)	4.069	76	5676465	317.027
27) Methyl Acetate	(2)	4.239	43	1941315	317.230
25) Allyl Chloride	(2)	4.265	41	2748698	322.482
28) Methylene Chloride	(2)	4.474	84	1745840	308.716
29)*t-Butyl alcohol-d10	(1)	4.503	65	254406M	250.000
30) t-Butyl alcohol	(1)	4.638	59	1641037	1532.140
31) Acrylonitrile	(2)	4.827	53	1039800	315.820
32) trans-1,2-Dichloroethene	(2)	4.885	96	1713357	311.714
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	5505439	305.143
34) n-Hexane	(2)	5.307	57	2863189M	334.811
36) 1,1-Dichloroethane	(2)	5.548	63	3007196	313.618
38) di-Isopropyl ether	(2)	5.609	45	5739955	310.377
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	2776921	322.788
40) Ethyl t-butyl ether	(2)	6.139	59	5425034	302.275
43) 1,2-Dichloroethene (Total)	(2)		96	3646040	624.977
44) 2-Butanone	(2)	6.364	43	2642793	625.317
42) cis-1,2-Dichloroethene	(2)	6.380	96	1932683	313.263
45) 2,2-Dichloropropane	(2)	6.397	77	2377411	318.945
47) Propionitrile	(1)	6.458	54	2126389	1593.336
48) Methacrylonitrile	(2)	6.670	67	2858148	804.768

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.708	128	1075154	328.655
50) Tetrahydrofuran	(1)	6.718	71	758236	628.991
51) Chloroform	(2)	6.860	83	2916299	317.988
52)$Dibromofluoromethane	(2)	7.075	113	276322	50.424
52)$Dibromofluoromethane	(2)	7.075	111	279197	49.969
53) 1,1,1-Trichloroethane	(2)	7.081	97	2560601	327.130
54) Cyclohexane	(2)	7.171	56	3429211	327.611
54) Cyclohexane	(2)	7.171	84	2984908	328.282
54) Cyclohexane	(2)	7.171	69	1068201	329.937
56) Carbon Tetrachloride	(2)	7.287	117	2252864	339.350
55) 1,1-Dichloropropene	(2)	7.294	75	2434619	321.125
58) Isobutyl Alcohol	(1)	7.461	41	1382486	3835.573
57)$1,2-Dichloroethane-d4	(2)	7.528	102	68480	49.033
57)$1,2-Dichloroethane-d4	(2)	7.532	65	307306	49.375
57)$1,2-Dichloroethane-d4	(2)	7.528	104	44002	49.326
60) Benzene	(2)	7.557	78	7094466	311.169
61) 1,2-Dichloroethane	(2)	7.634	62	2222342	303.049
61) 1,2-Dichloroethane	(2)	7.634	98	228988	315.535
65) t-Amyl methyl ether	(2)	7.744	73	5421278	300.945
67) n-Heptane	(2)	7.959	43	2592531MA	324.518
66)*Fluorobenzene	(2)	7.959	96	1120873	50.000
69) n-Butanol	(1)	8.332	56	2465385M	7947.068
71) Trichloroethene	(2)	8.432	95	1841720	320.821
72) Methylcyclohexane	(2)	8.734	83	3568410	335.054
72) Methylcyclohexane	(2)	8.734	98	1632993	338.844
73) 1,2-Dichloropropane	(2)	8.769	63	1825943	315.397
76) Methyl Methacrylate	(2)	8.850	69	1904896A	340.256
75) 1,4-Dioxane	(1)	8.856	88	338379M	3968.421
74) Dibromomethane	(2)	8.879	93	1210939	323.274
78) Bromodichloromethane	(2)	9.113	83	2314651	344.351
79) 2-Nitropropane	(2)	9.390	41	1438925	706.755
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	926413	372.584
81) cis-1,3-Dichloropropene	(2)	9.638	75	3074664	344.402
82) 4-Methyl-2-pentanone	(2)	9.808	43	5422938	607.899
83)$Toluene-d8	(3)	9.933	98	1156351	49.563
83)$Toluene-d8	(3)	9.933	100	751534	49.726
88) Toluene	(3)	10.007	92	4532879	309.894
90) 1,3-Dichloropropene (total)	(3)		100	5974636	693.659

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	2899972	349.257
91) Ethyl Methacrylate	(3)	10.313	69	3356305	332.603
92) 1,1,2-Trichloroethane	(3)	10.461	97	1768710	318.935
93) Tetrachloroethene	(3)	10.541	166	1990565	321.327
94) 1,3-Dichloropropane	(3)	10.621	76	3006585	317.532
96) 2-Hexanone	(3)	10.670	43	3998423	593.616
97) Dibromochloromethane	(3)	10.827	129	2037523	358.670
99) 1,2-Dibromoethane	(3)	10.940	107	1987783	330.088
100)*Chlorobenzene-d5	(3)	11.361	117	891668	50.000
101) 1-Chlorohexane	(3)	11.364	91	2458057	312.814
102) Chlorobenzene	(3)	11.387	112	5140609	310.783
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	1789998	328.446
104) Ethylbenzene	(3)	11.470	91	8606821	307.854
106) m+p-Xylene	(3)	11.583	106	6690837	608.359
108) Xylene (Total)	(3)		106	9979970	911.130
107) o-Xylene	(3)	11.908	106	3289133	302.771
109) Styrene	(3)	11.924	104	5647939	314.619
110) Bromoform	(3)	12.081	173	1534520	361.500
111) Isopropylbenzene	(3)	12.203	105	8466138	310.714
112) Cyclohexanone	(1)	12.287	55	1351186	4046.080
114)$4-Bromofluorobenzene	(3)	12.348	95	440049	49.810
114)$4-Bromofluorobenzene	(3)	12.348	174	362553	49.502
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	2800639M	310.705
115) Bromobenzene	(4)	12.467	156	2234066	311.517
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	2150976	773.637
117) 1,2,3-Trichloropropane	(4)	12.499	110	866230	313.172
119) n-Propylbenzene	(4)	12.531	91	9654812	308.142
120) 2-Chlorotoluene	(4)	12.609	126	2098494	315.266
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	7238022	317.873
121) 4-Chlorotoluene	(4)	12.702	126	2155793	311.148
124) tert-Butylbenzene	(4)	12.908	134	1524421M	323.717
125) Pentachloroethane	(4)	12.940	167	1461833	360.511
126) 1,2,4-Trimethylbenzene	(4)	12.949	105	7469187	311.236
127) sec-Butylbenzene	(4)	13.068	105	8682126	308.971
129) 1,3-Dichlorobenzene	(4)	13.168	146	3858953	292.822
130) p-Isopropyltoluene	(4)	13.174	119	7289488	299.854
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	477171	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	4013510	293.777

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

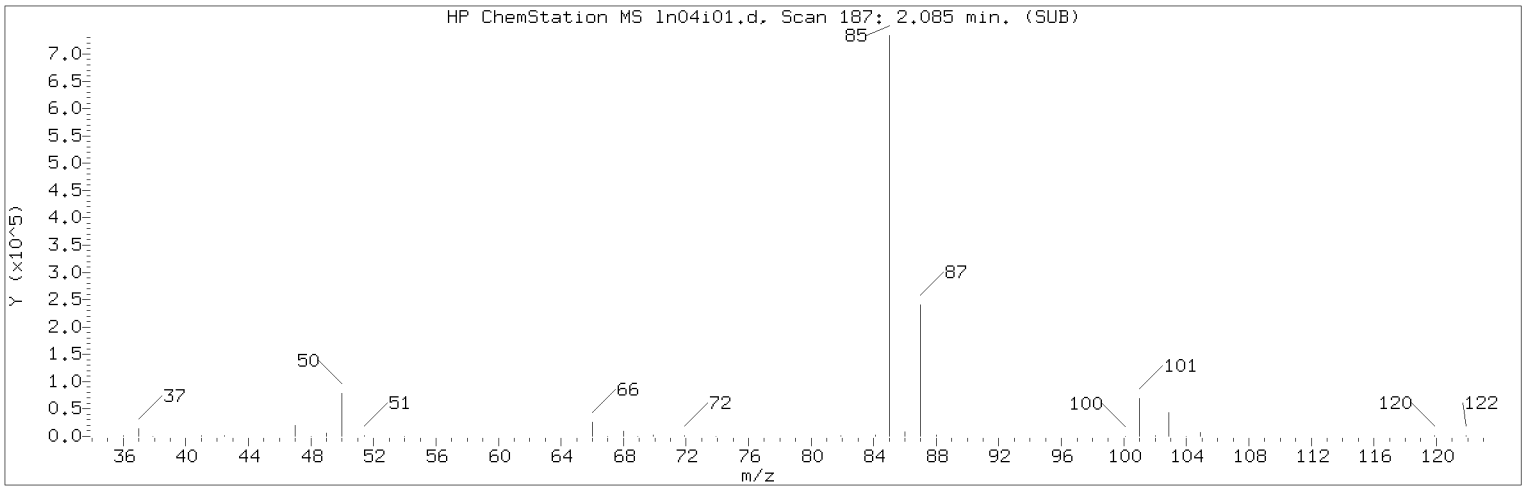
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

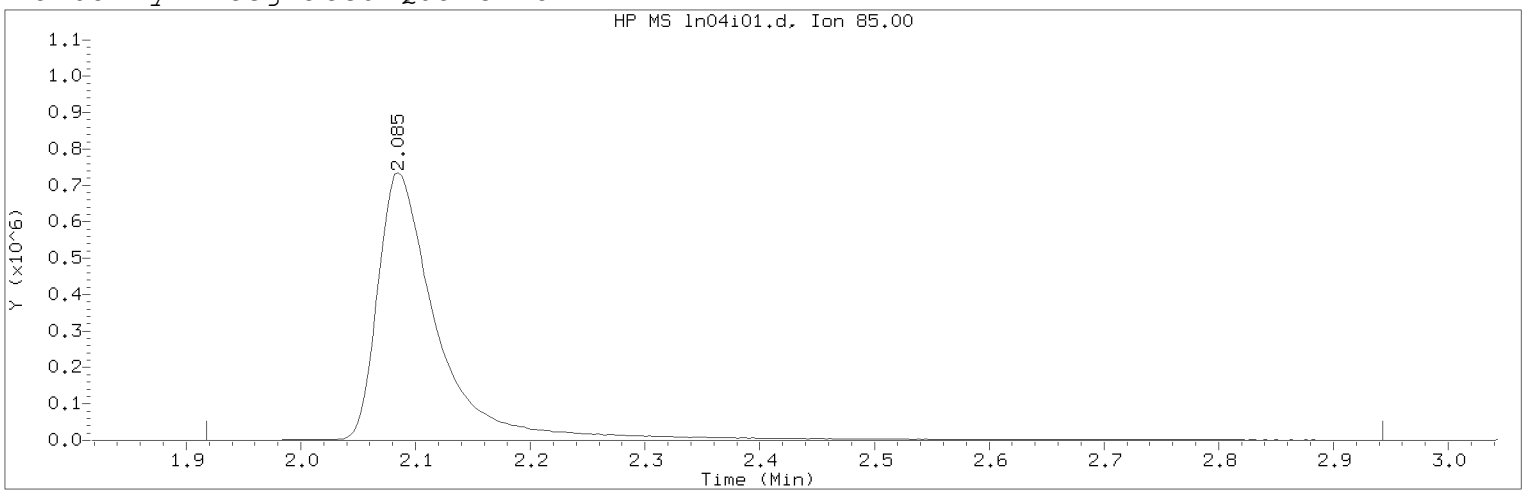
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	7915203	311.364
135) Benzyl Chloride	(4)	13.319	91	6484944	336.931
136) 1,3-Diethylbenzene	(4)	13.374	119	4897725	309.573
141) Diethylbenzene (total)	(4)		100	13982971	913.975
137) 1,4-Diethylbenzene	(4)	13.444	119	5013123	299.077
139) n-Butylbenzene	(4)	13.467	92	3608595	290.316
138) 1,2-Dichlorobenzene	(4)	13.502	146	3859125	296.761
140) 1,2-Diethylbenzene	(4)	13.518	119	4072123	305.325
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	669008	339.050
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	2855960	285.855
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	2681523	276.030
147) Hexachlorobutadiene	(4)	14.670	225	1157297	252.311
148) Naphthalene	(4)	14.772	128	9186333	294.145
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	2488608	263.270
150) 2-Methylnaphthalene	(4)	15.563	142	4666682	242.655

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

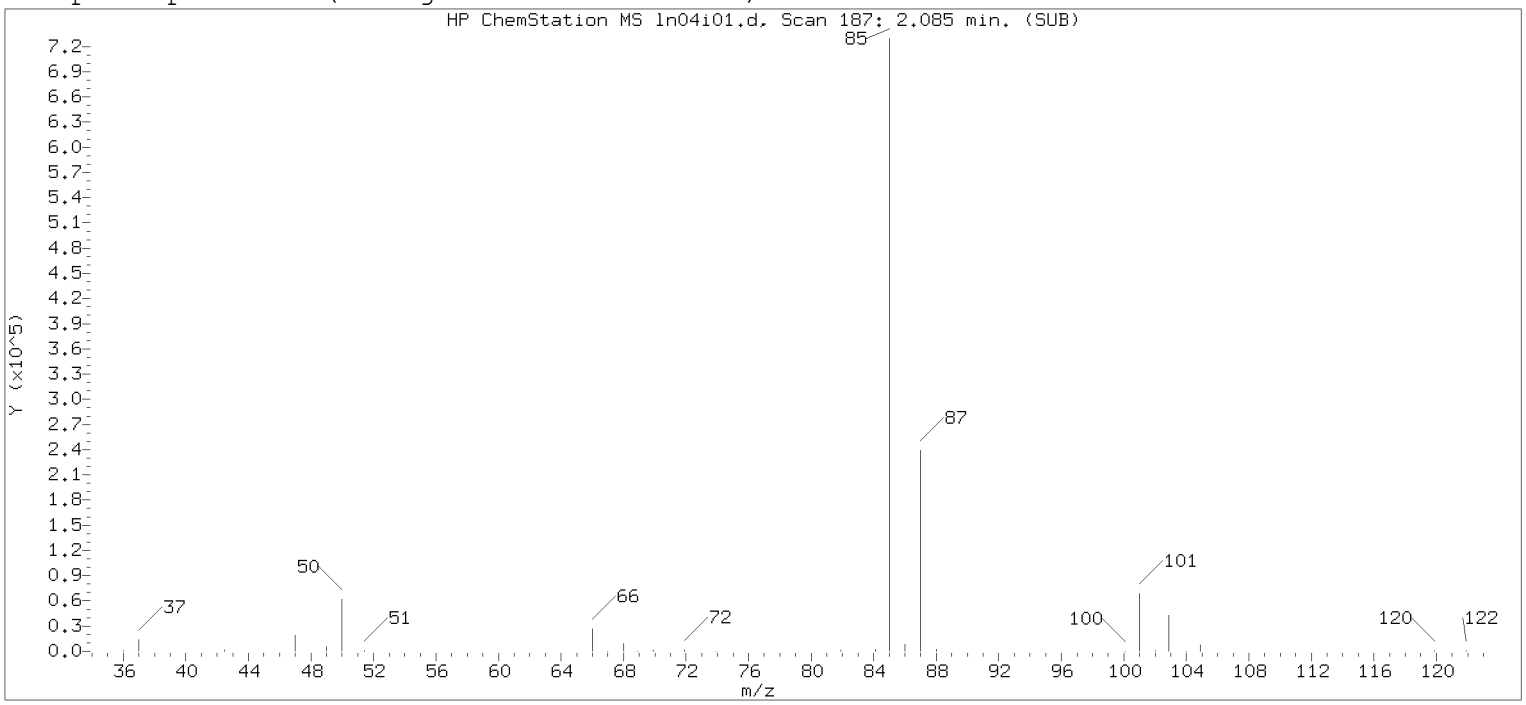
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area (flag) : 2719746M
On-Column Amount (ng) : 347.9426
Integration start scan : 134 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

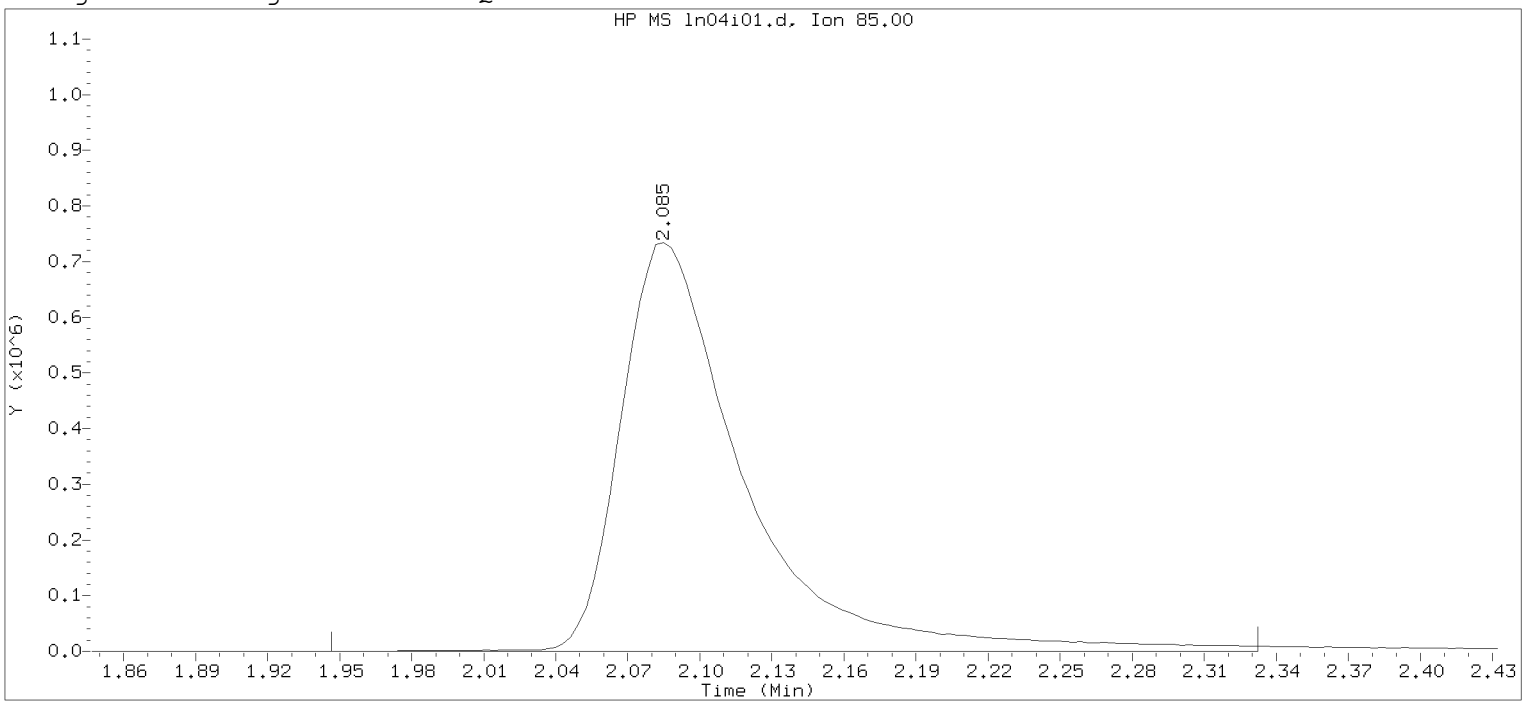
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

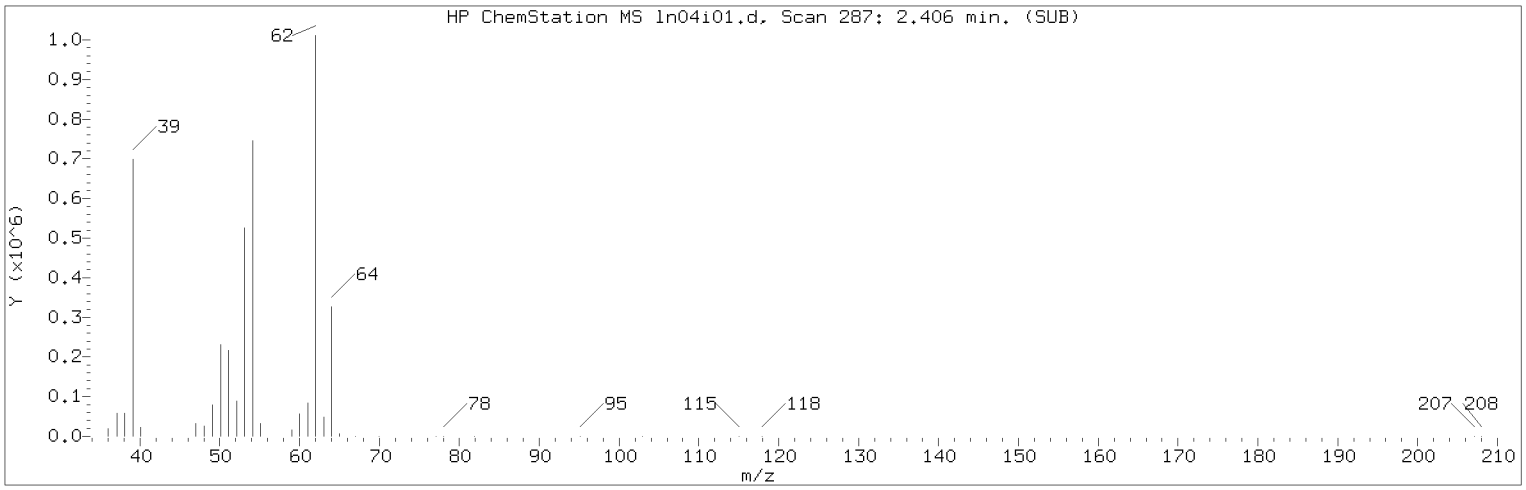
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

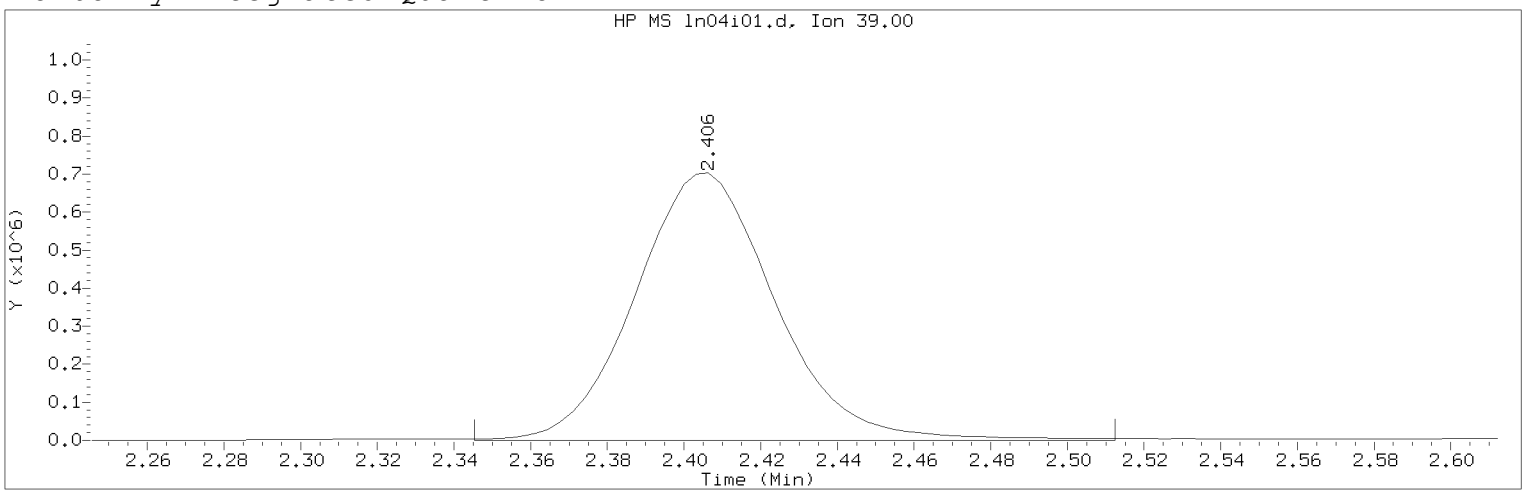
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 187
Retention Time (minutes): 2.085
Quant Ion : 85.00
Area : 2624212
On-column Amount (ng) : 308.6520
Integration start scan : 143 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

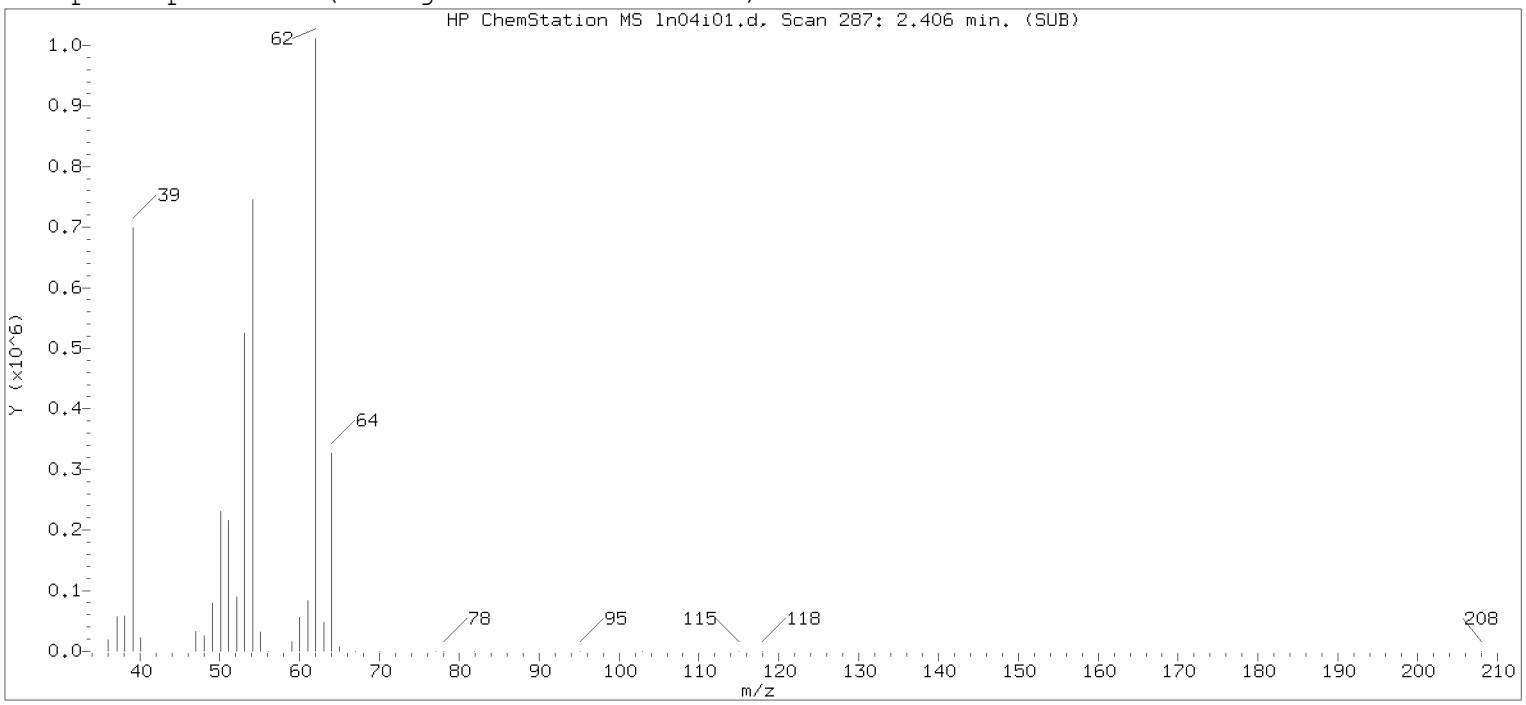
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 1785787M
On-Column Amount (ng) : 285.4858
Integration start scan : 267 Integration stop scan: 319
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

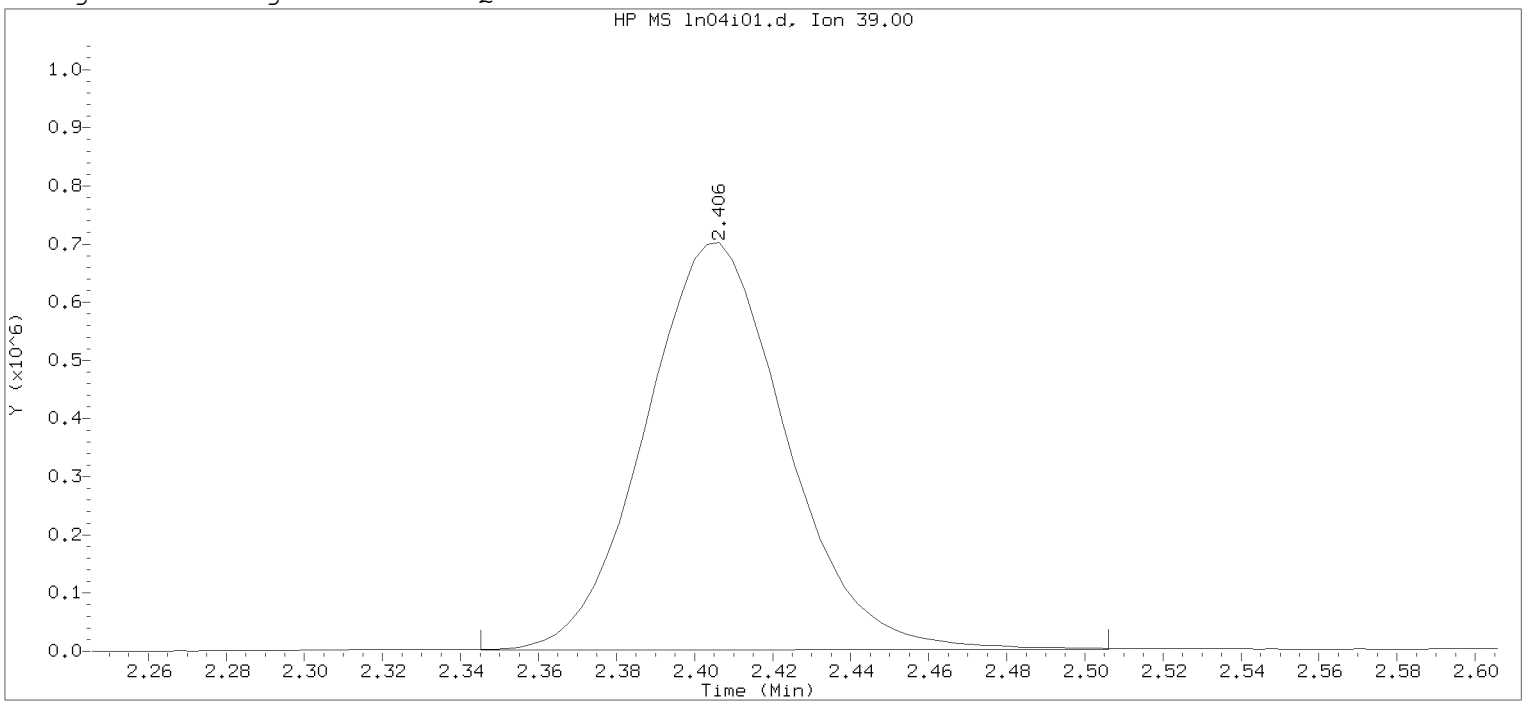
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

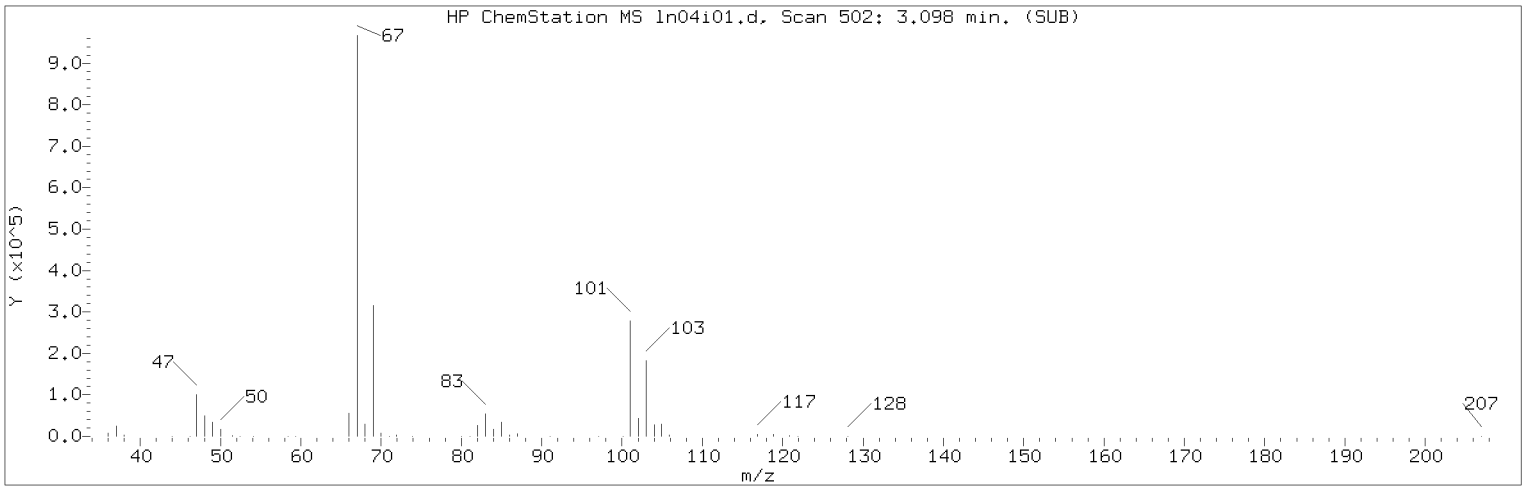
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

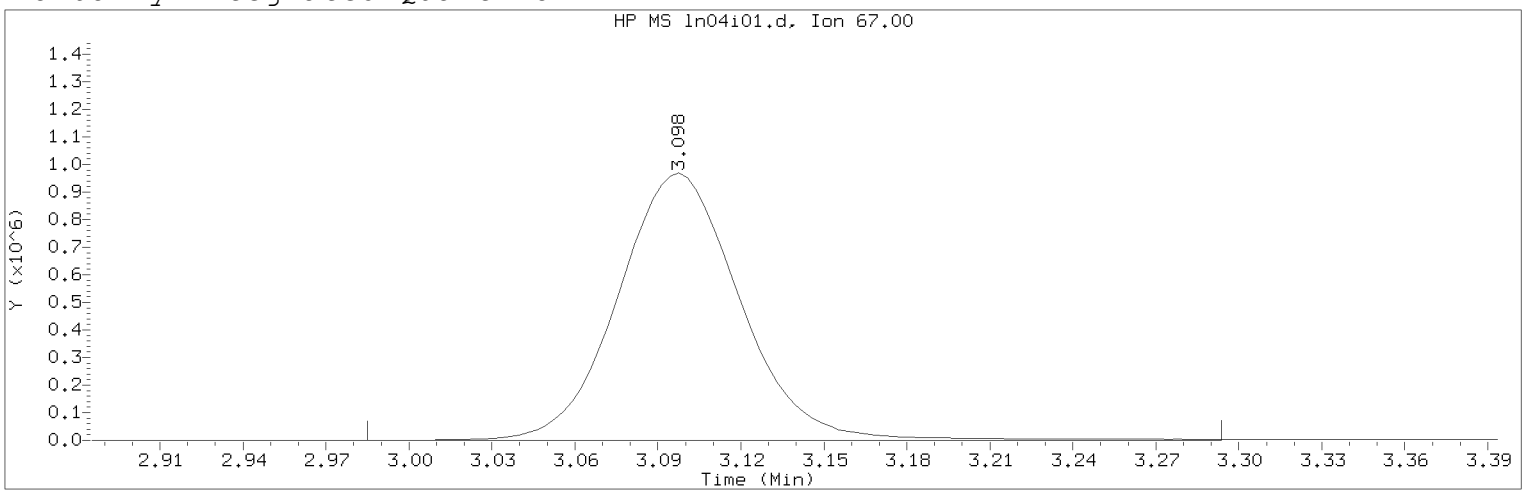
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 1755596
On-column Amount (ng) : 295.0708
Integration start scan : 267 Integration stop scan: 317
Y at integration start : 2196 Y at integration end: 3553

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

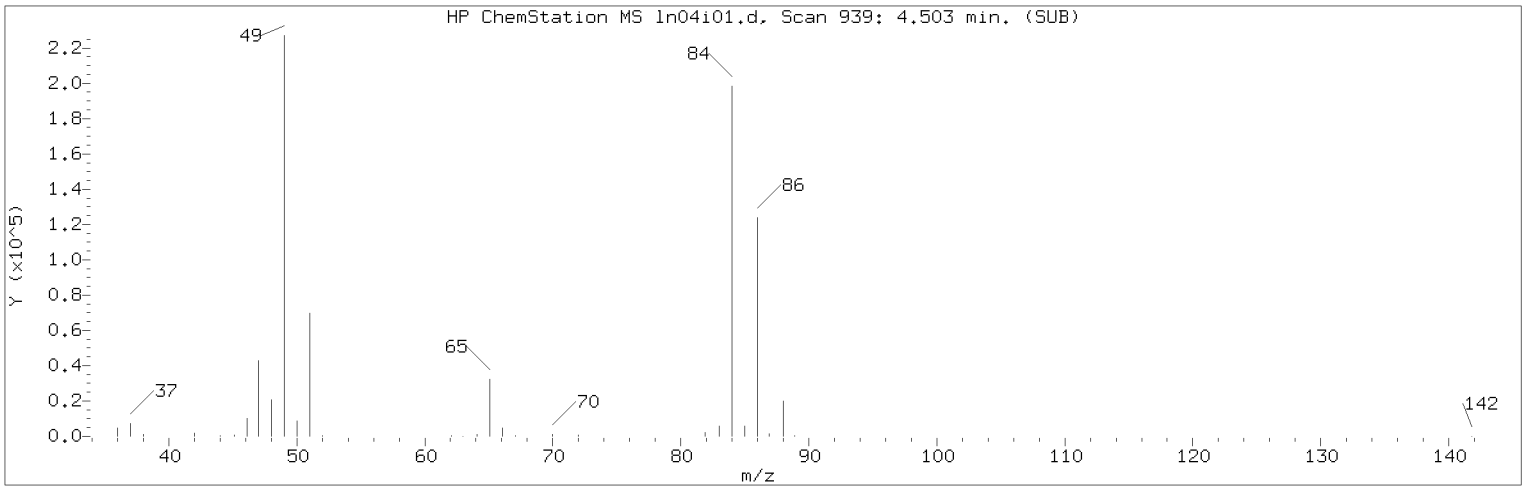
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 502
Retention Time (minutes): 3.098
Quant Ion : 67.00
Area (flag) : 2978303M
On-Column Amount (ng) : 300.2583
Integration start scan : 466 Integration stop scan: 562
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

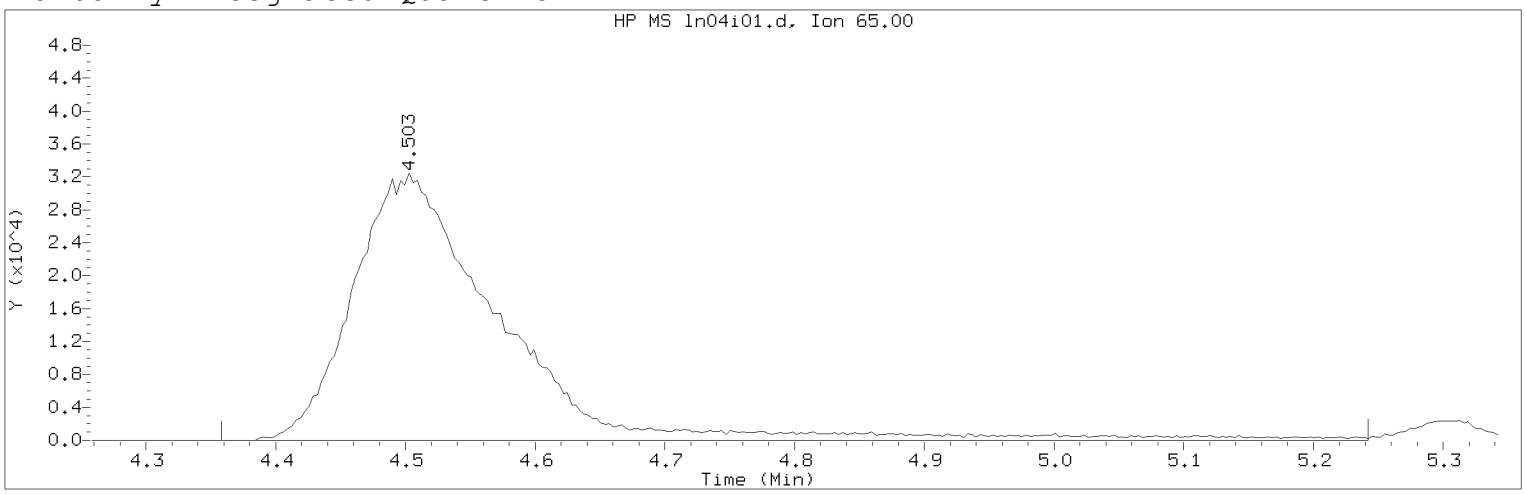
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

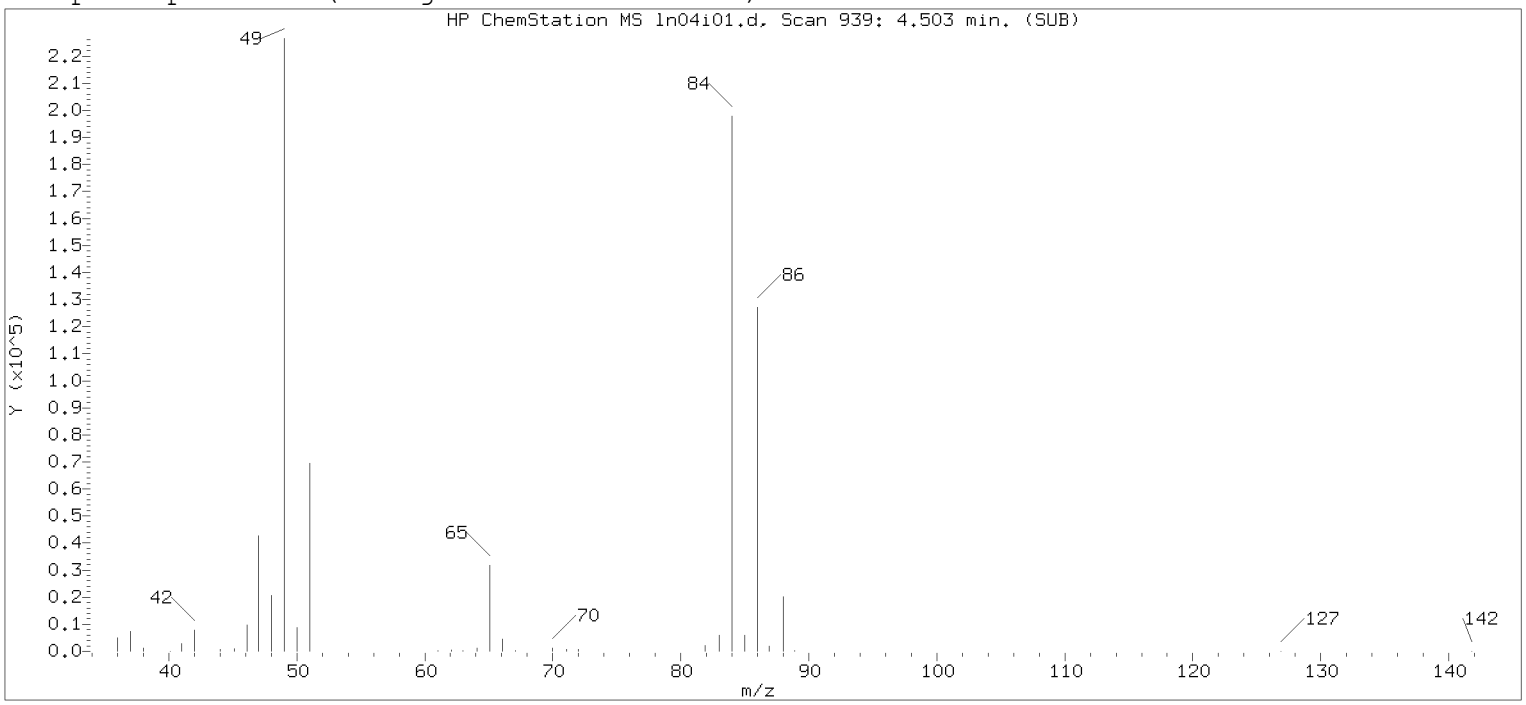
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area (flag) : 254406M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1168
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

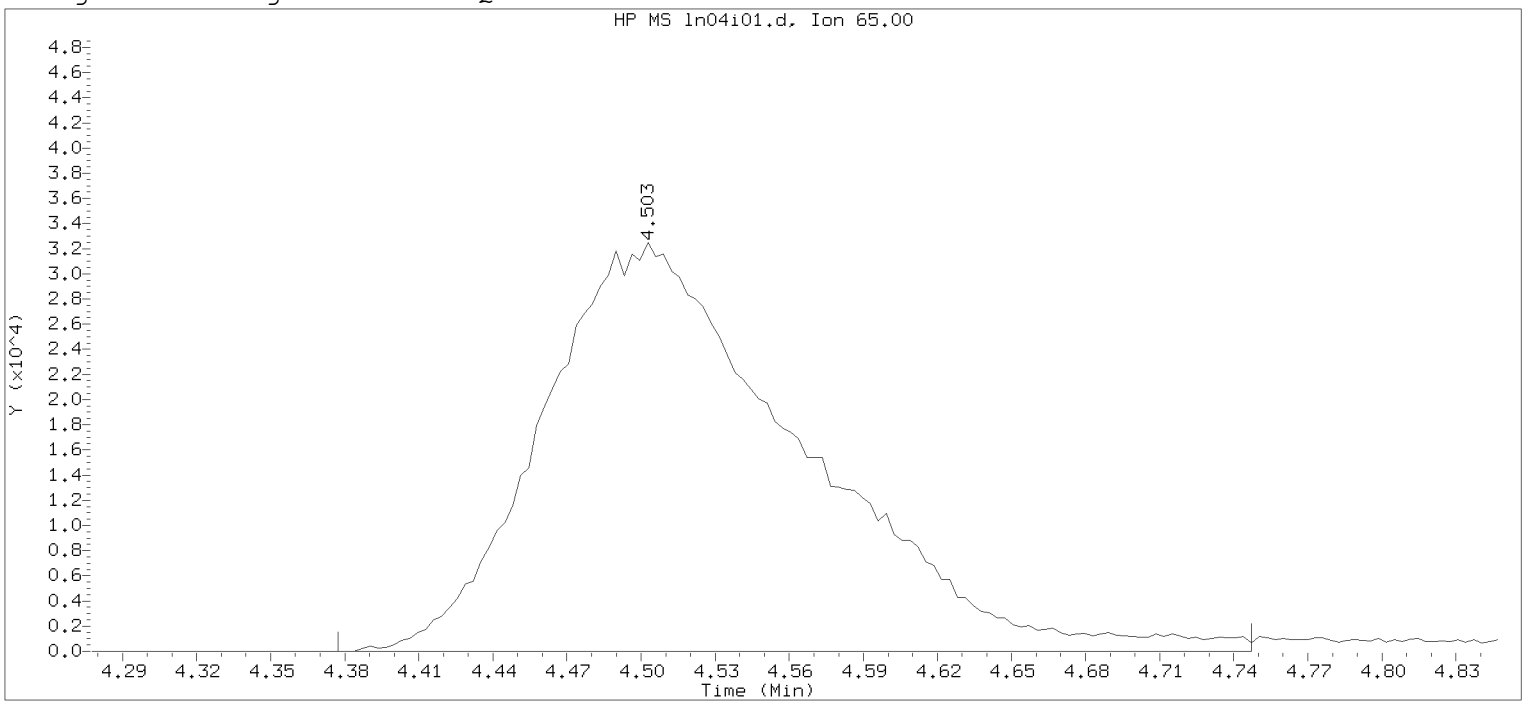
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

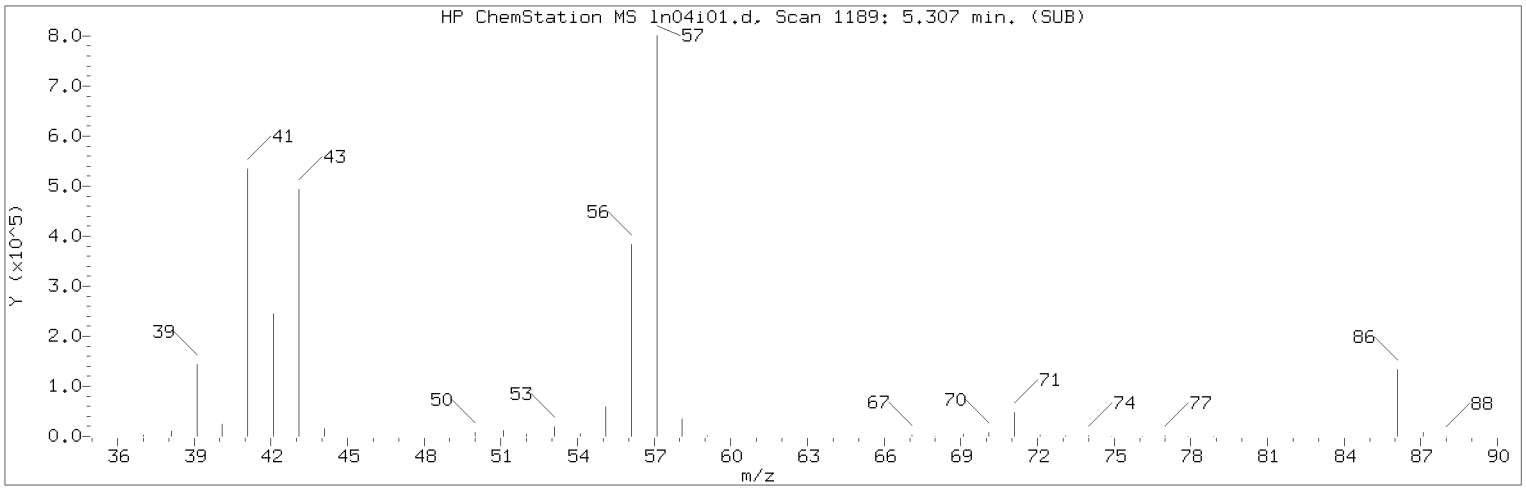
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

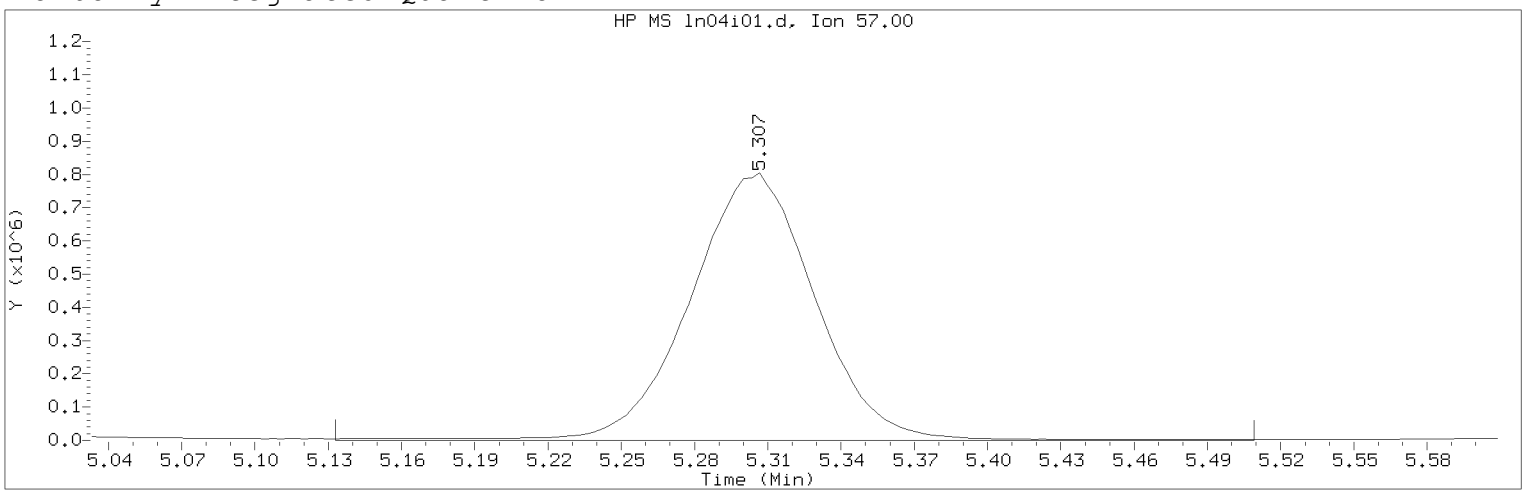
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area : 237264
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

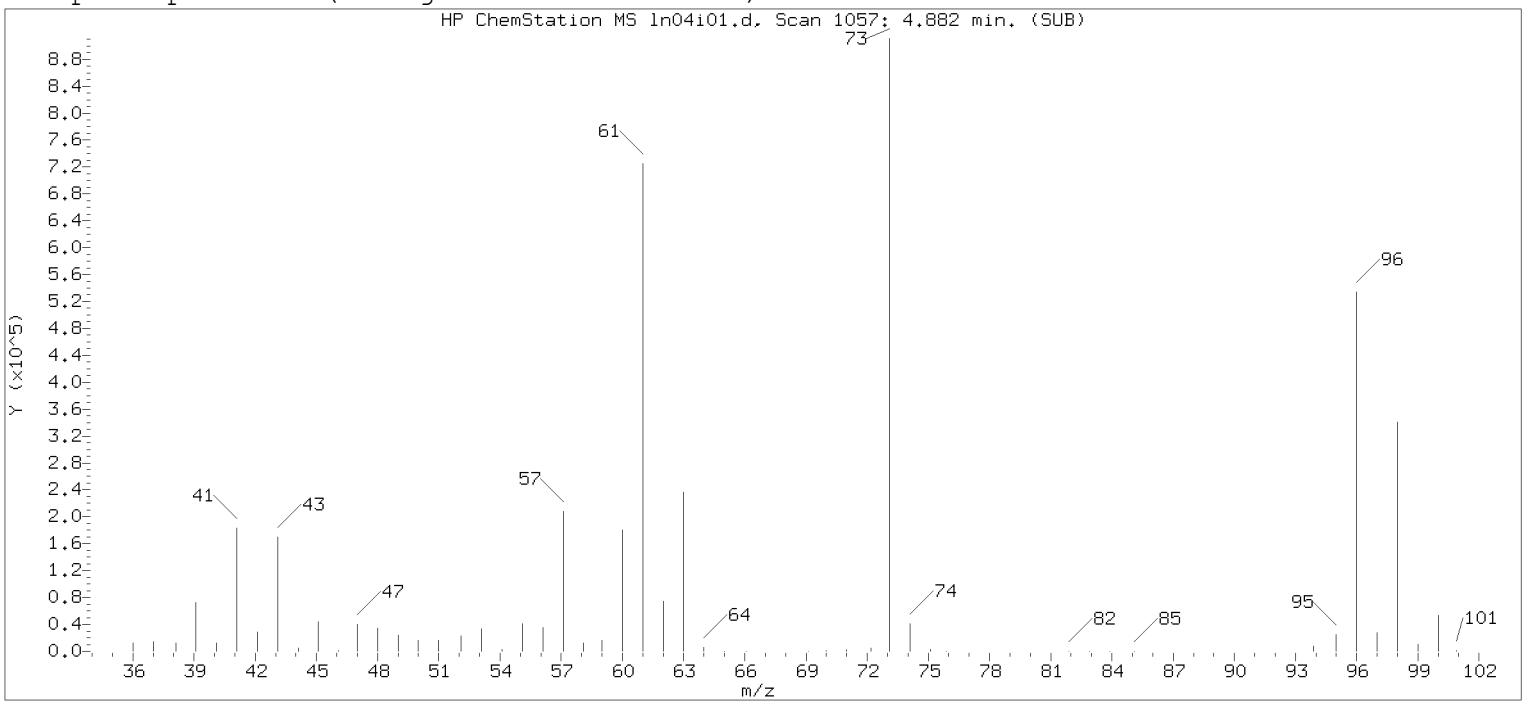
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1189
Retention Time (minutes): 5.307
Quant Ion : 57.00
Area (flag) : 2863189M
On-Column Amount (ng) : 334.8105
Integration start scan : 1134 Integration stop scan: 1251
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

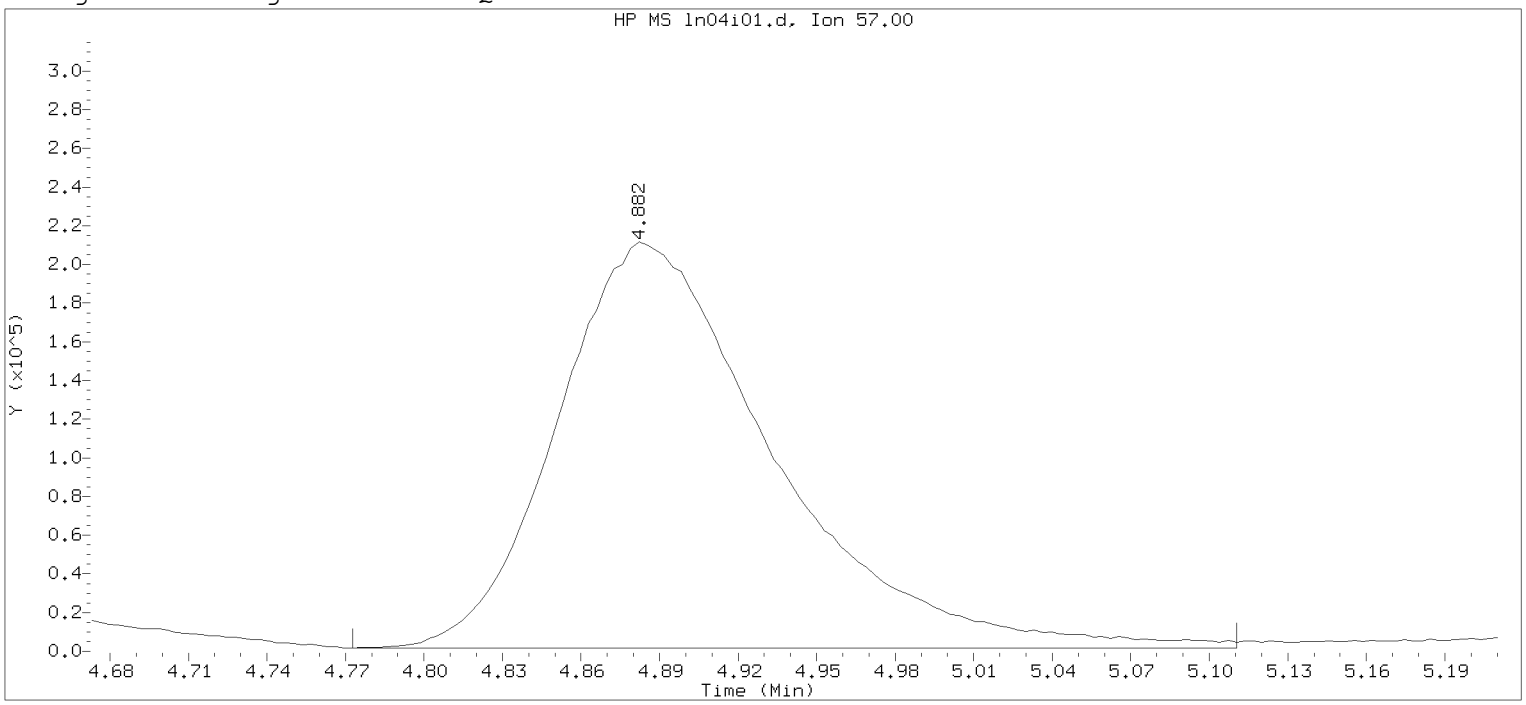
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1057
Retention Time (minutes): 4.882
Quant Ion : 57.00
Area : 1202378
On-column Amount (ng) : 301.4561
Integration start scan : 1022 Integration stop scan: 1127
Y at integration start : 1806 Y at integration end: 1806

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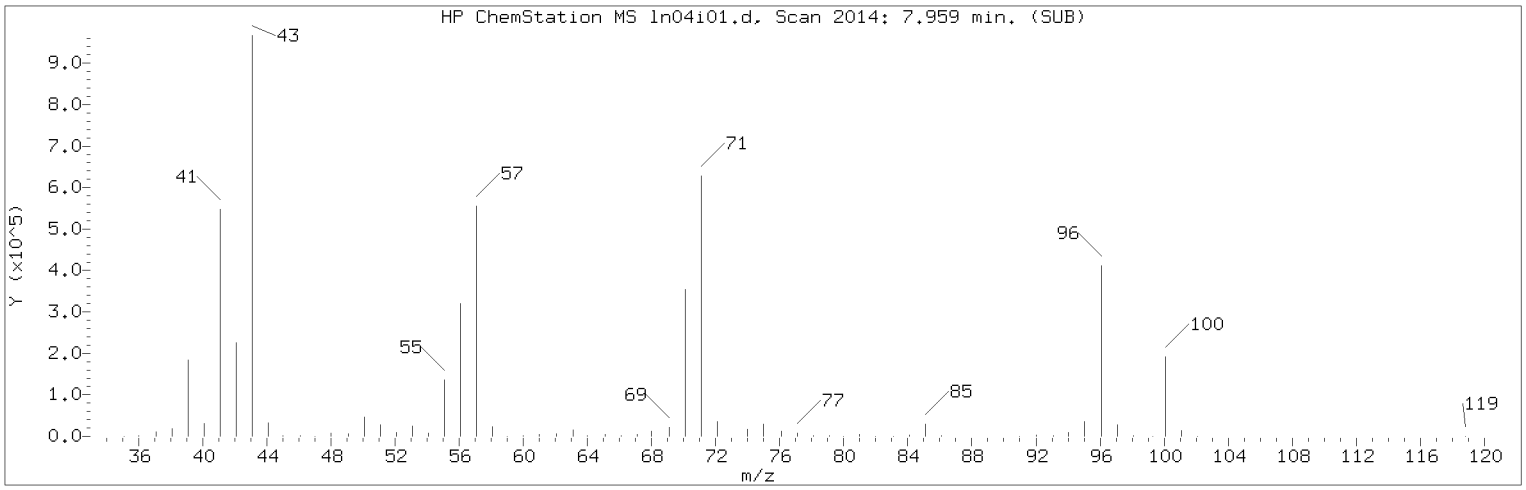
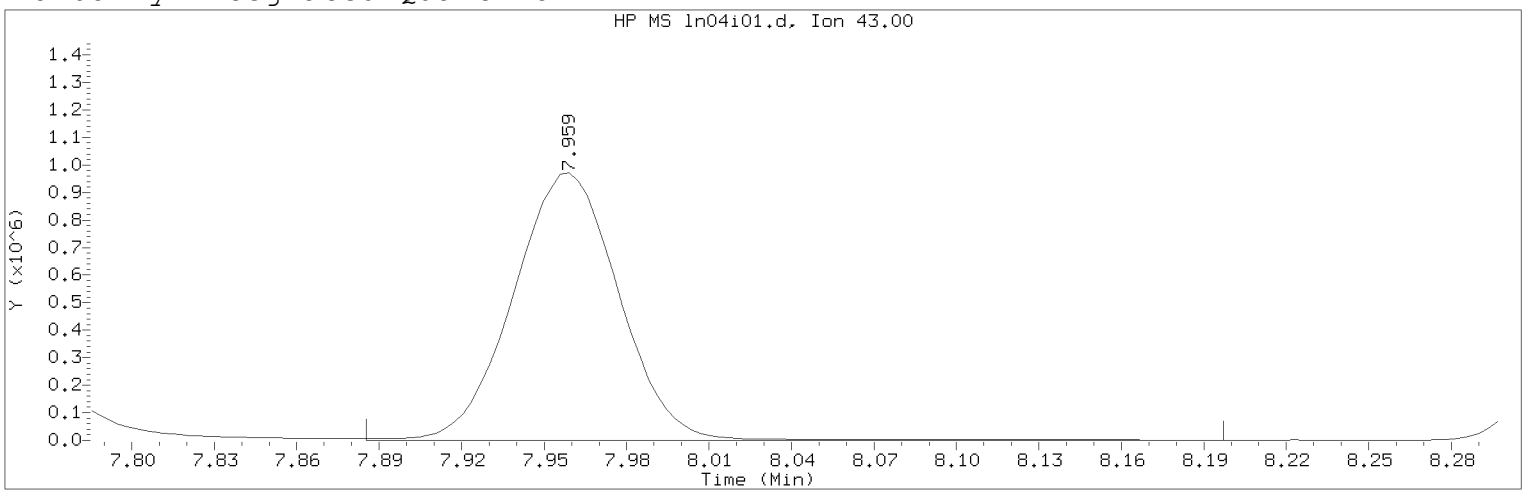
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

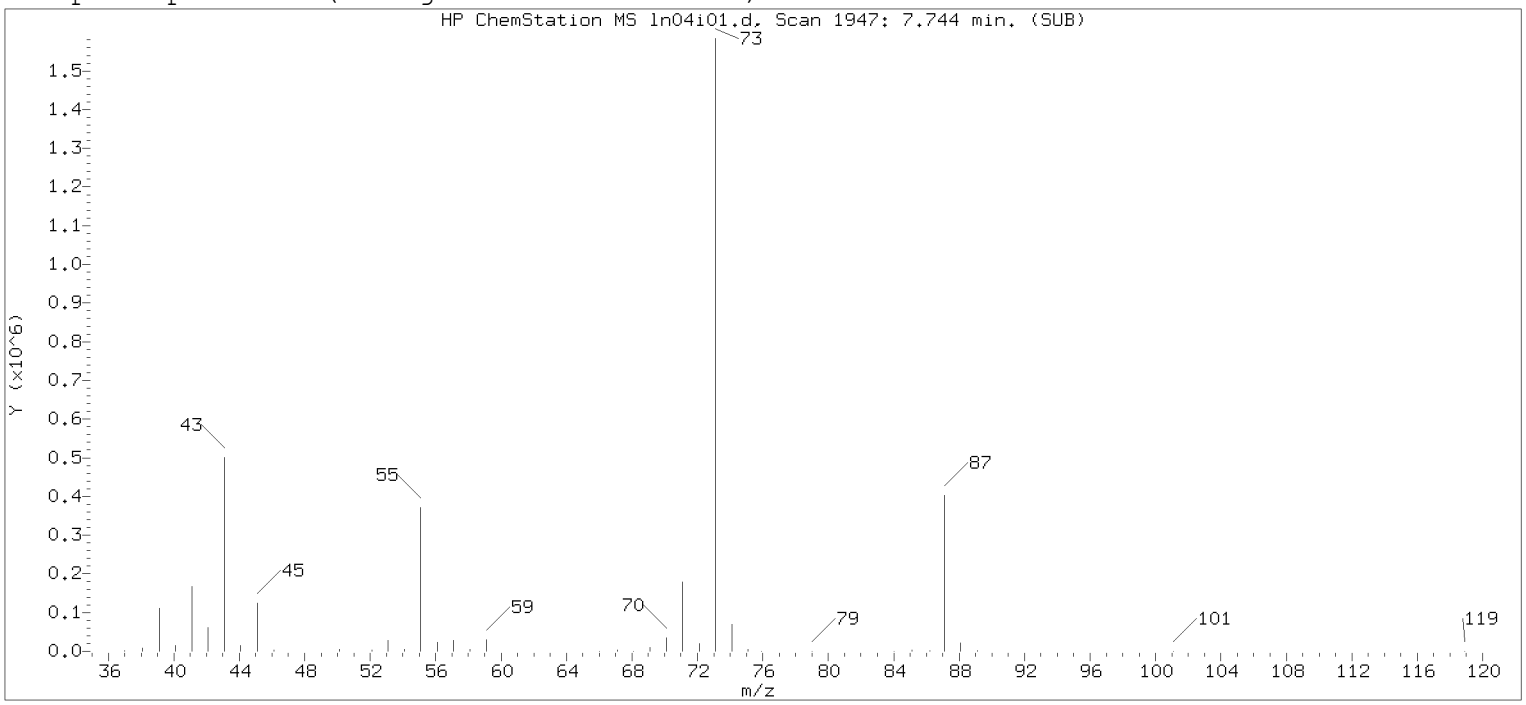
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2014
Retention Time (minutes): 7.959
Quant Ion : 43.00
Area (flag) : 2592531MA
On-Column Amount (ng) : 324.5176
Integration start scan : 1990 Integration stop scan: 2087
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

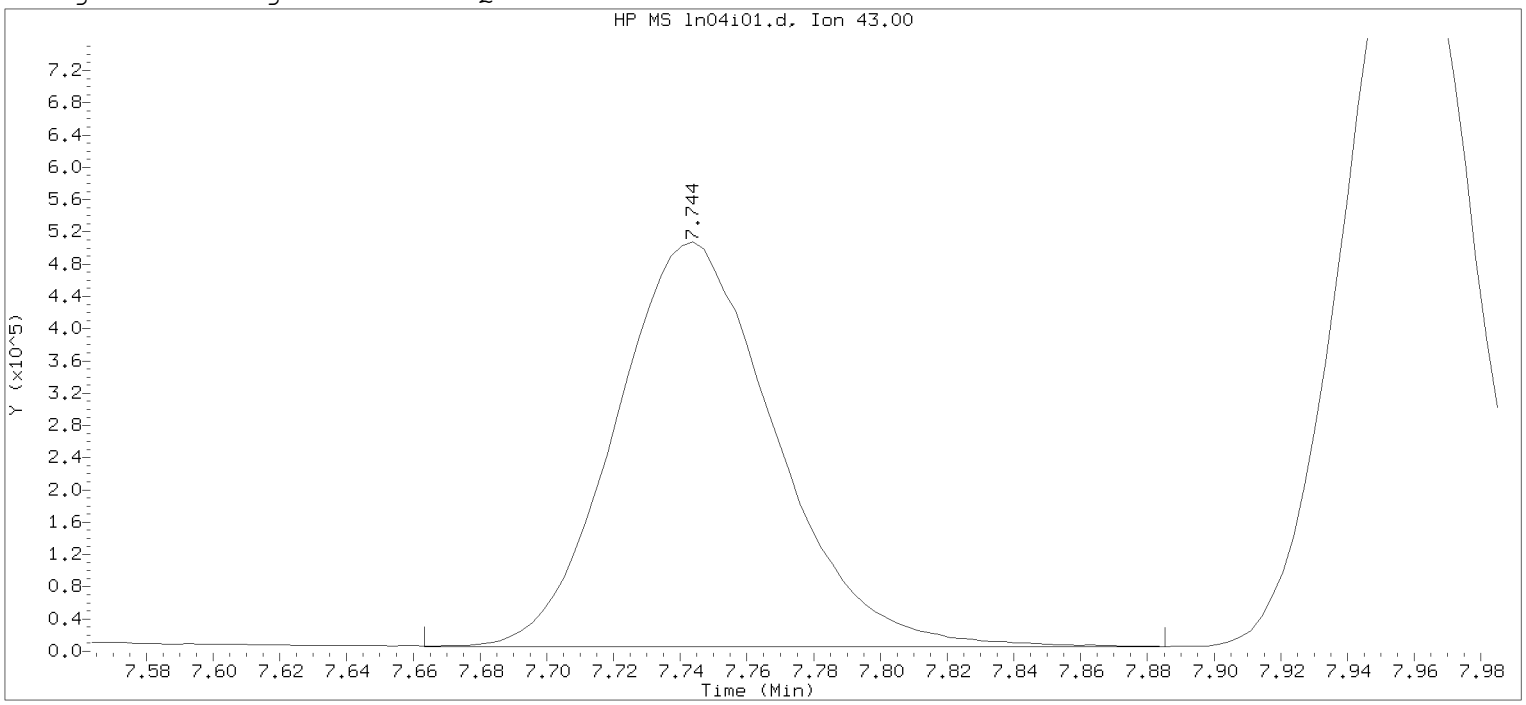
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

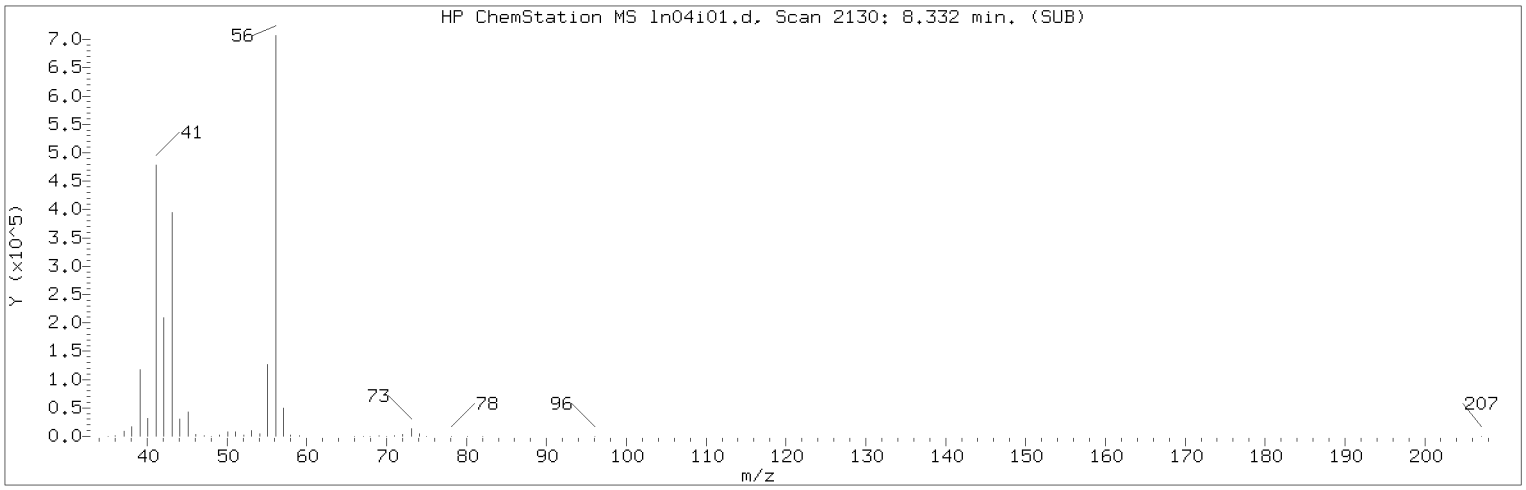
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

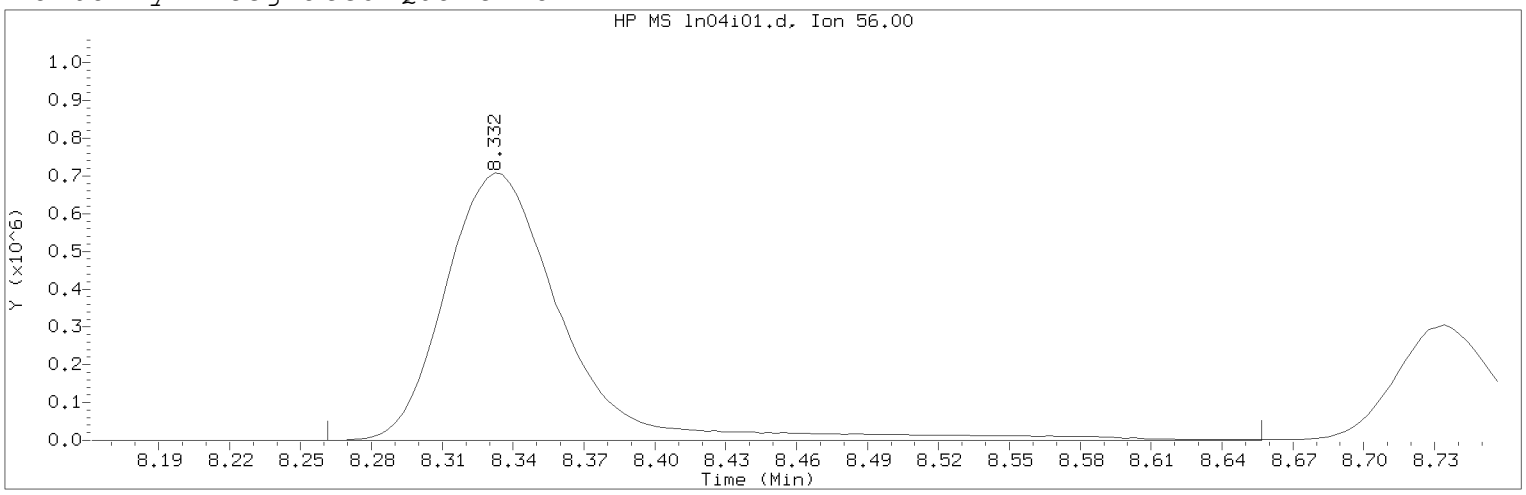
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1947
Retention Time (minutes): 7.744
Quant Ion : 43.00
Area : 1668813
On-column Amount (ng) : 288.4319
Integration start scan : 1921 Integration stop scan: 1990
Y at integration start : 5866 Y at integration end: 5866

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

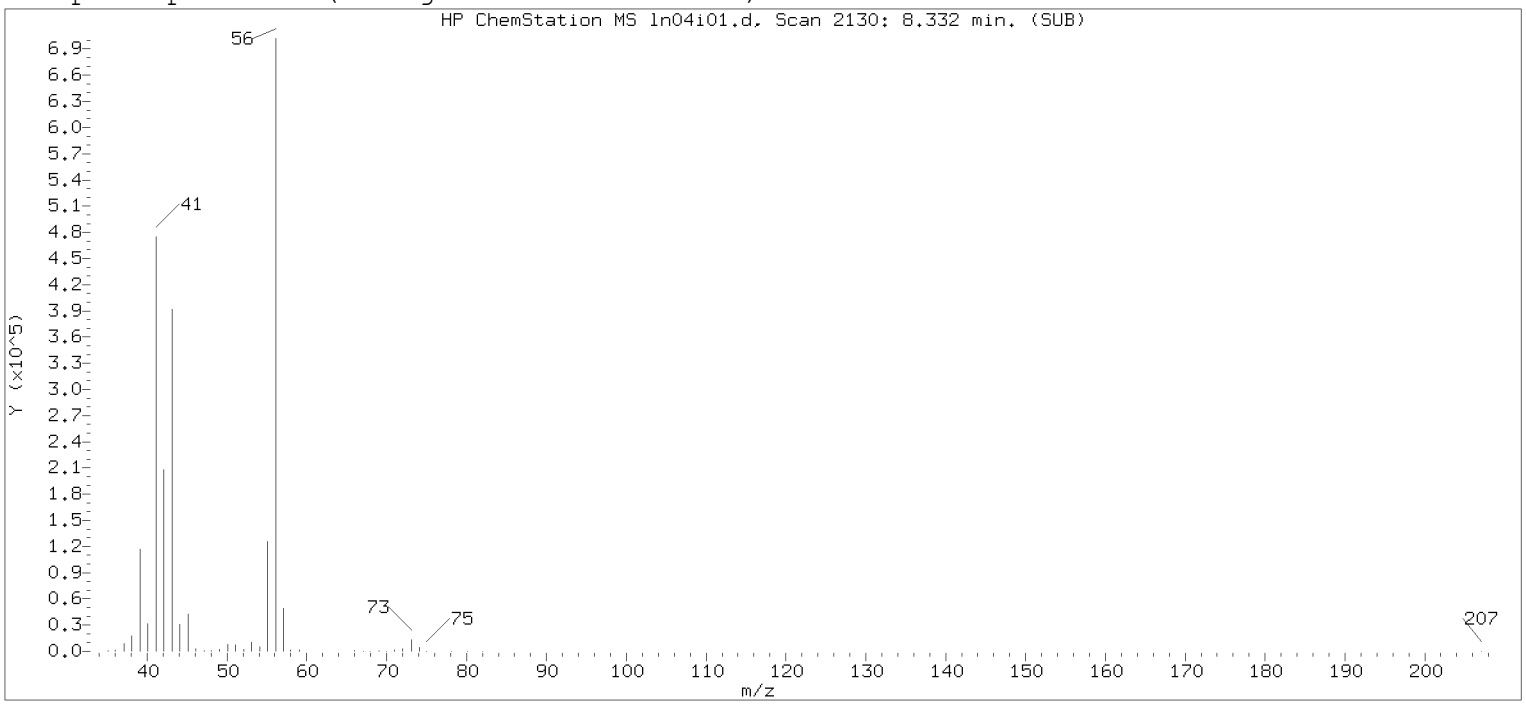
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area (flag) : 2465385M
On-Column Amount (ng) : 7947.0678
Integration start scan : 2107 Integration stop scan: 2230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

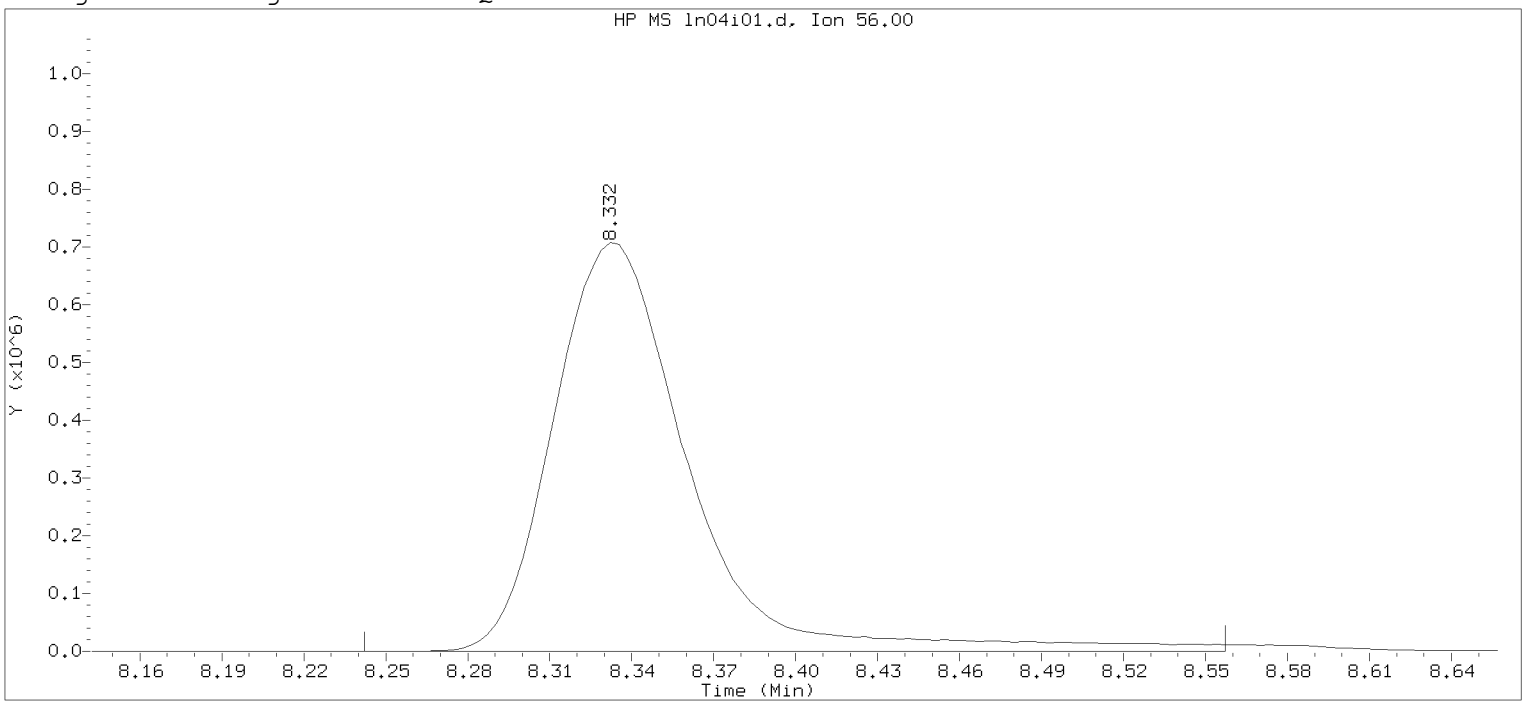
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

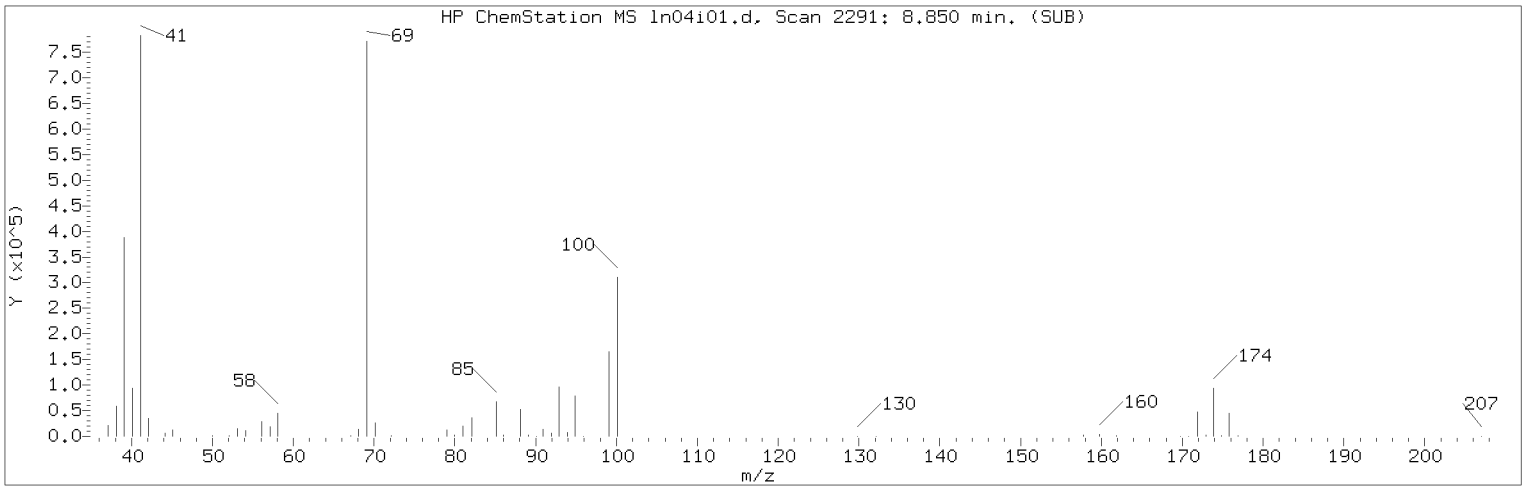
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

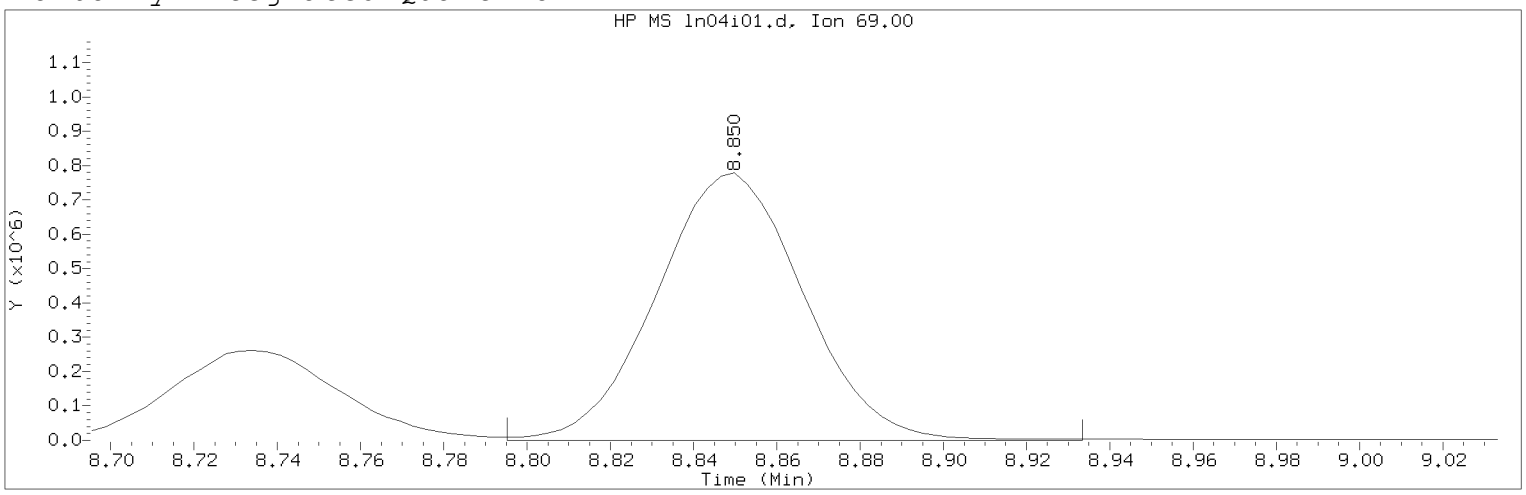
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2130
Retention Time (minutes): 8.332
Quant Ion : 56.00
Area : 2429255
On-column Amount (ng) : 7682.9381
Integration start scan : 2101 Integration stop scan: 2199
Y at integration start : 176 Y at integration end: 176

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

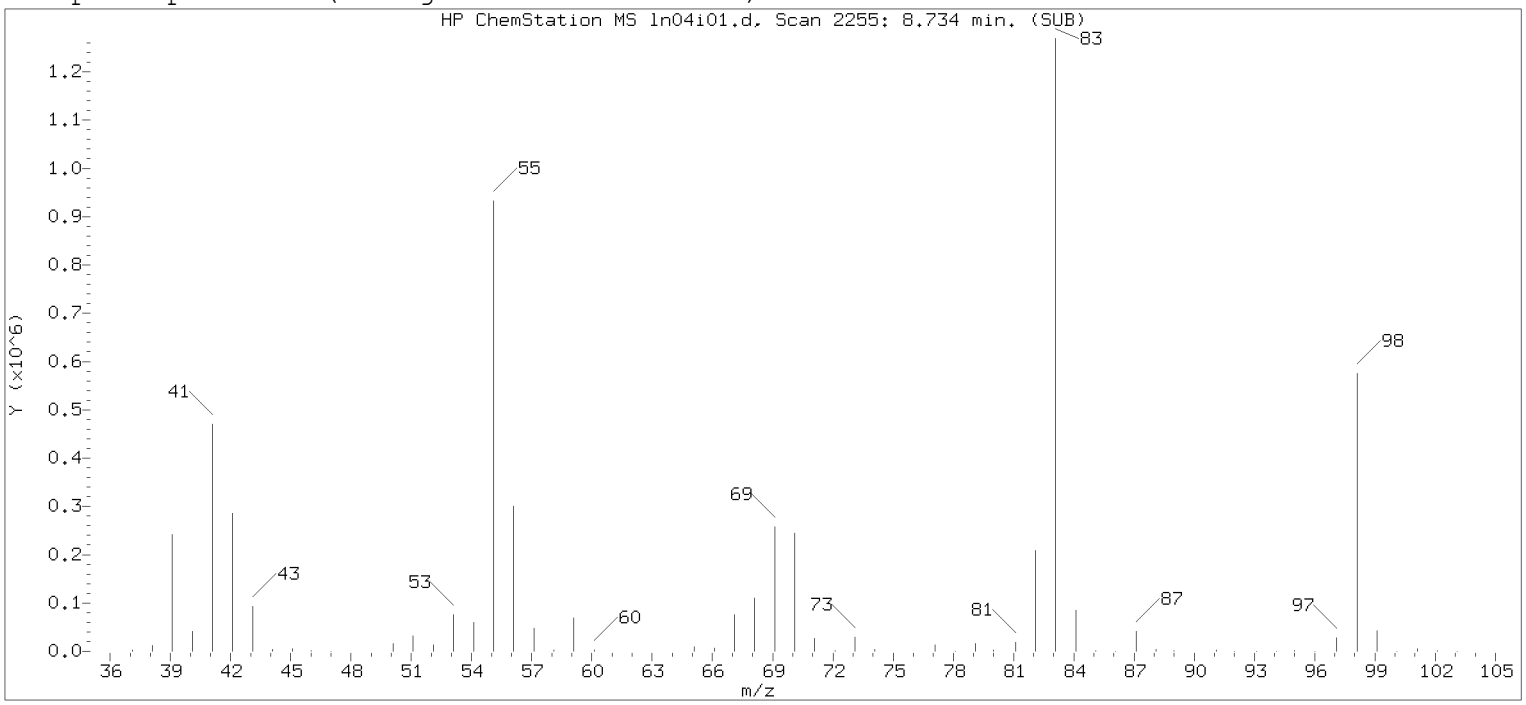
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2291
Retention Time (minutes): 8.850
Quant Ion : 69.00
Area (flag) : 1904896A
On-Column Amount (ng) : 340.2564
Integration start scan : 2273 Integration stop scan: 2316
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

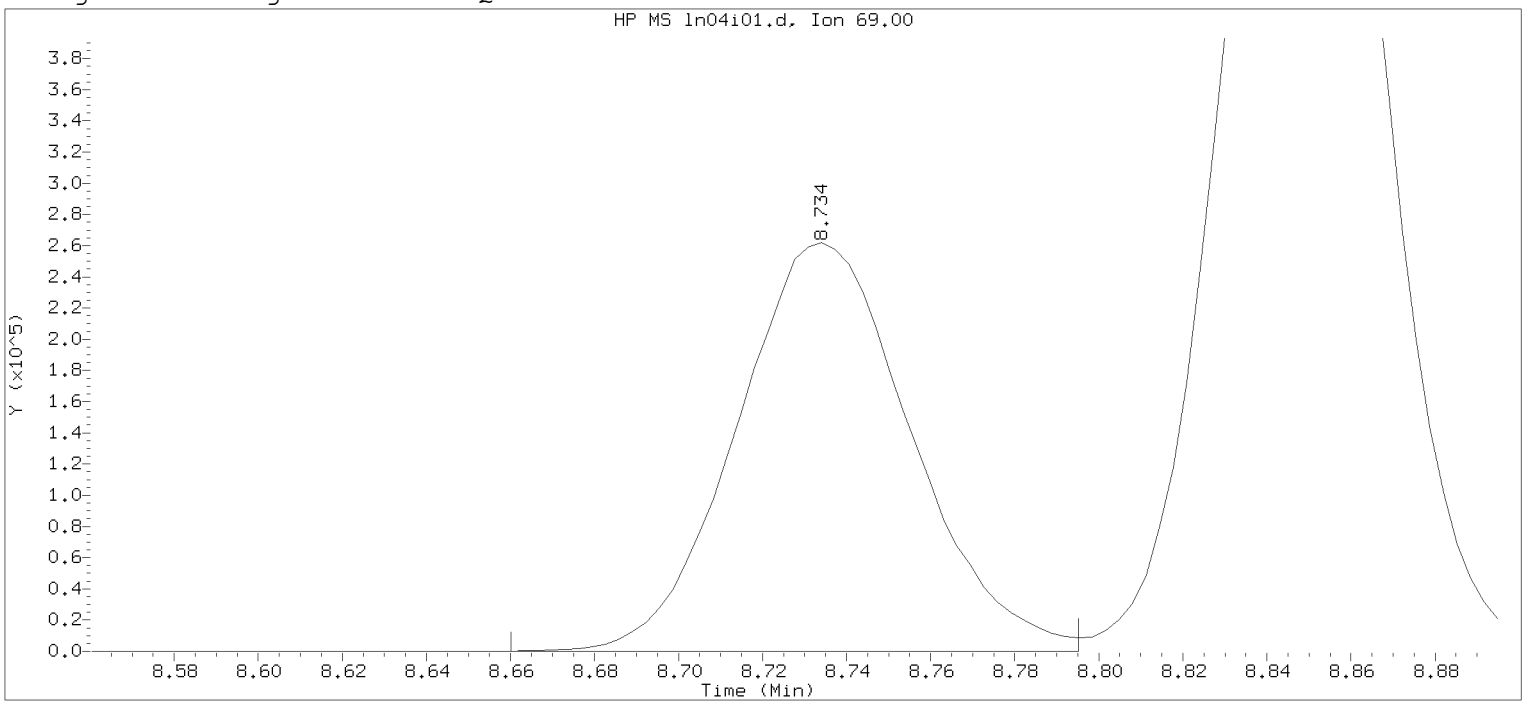
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

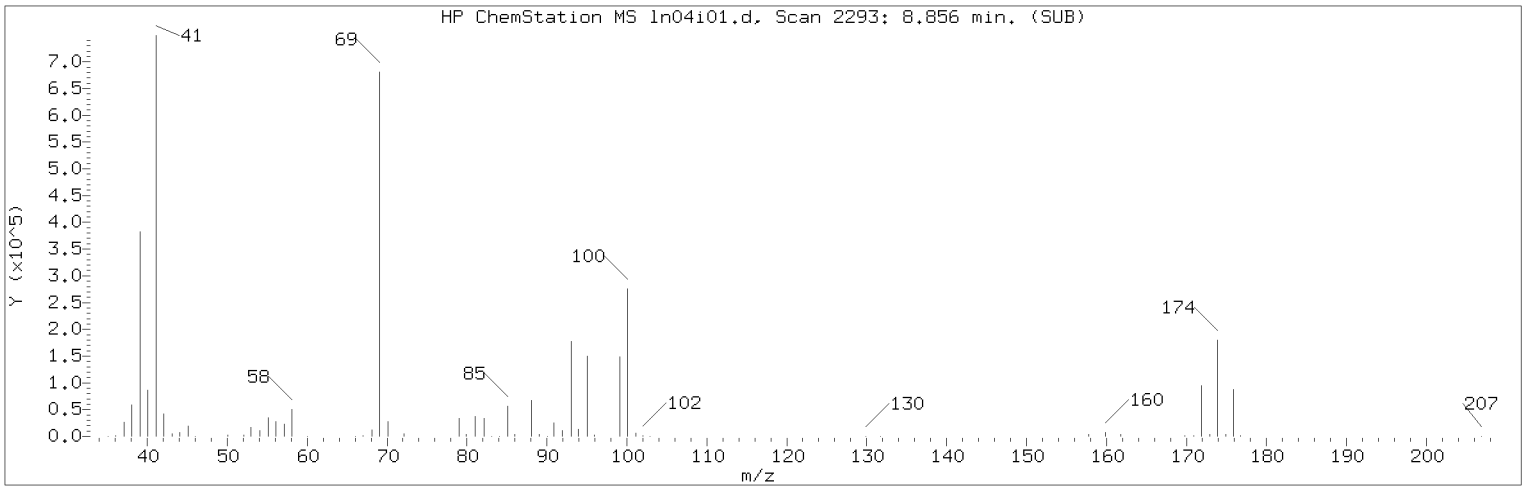
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

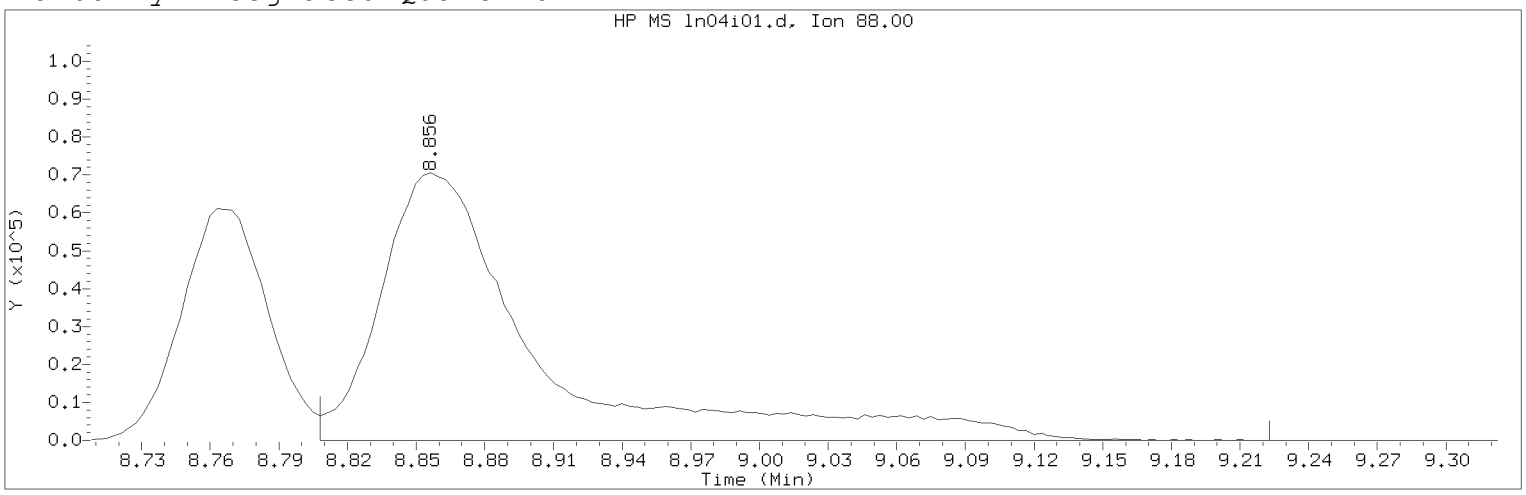
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 752058
On-column Amount (ng) : 311.1363
Integration start scan : 2231 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

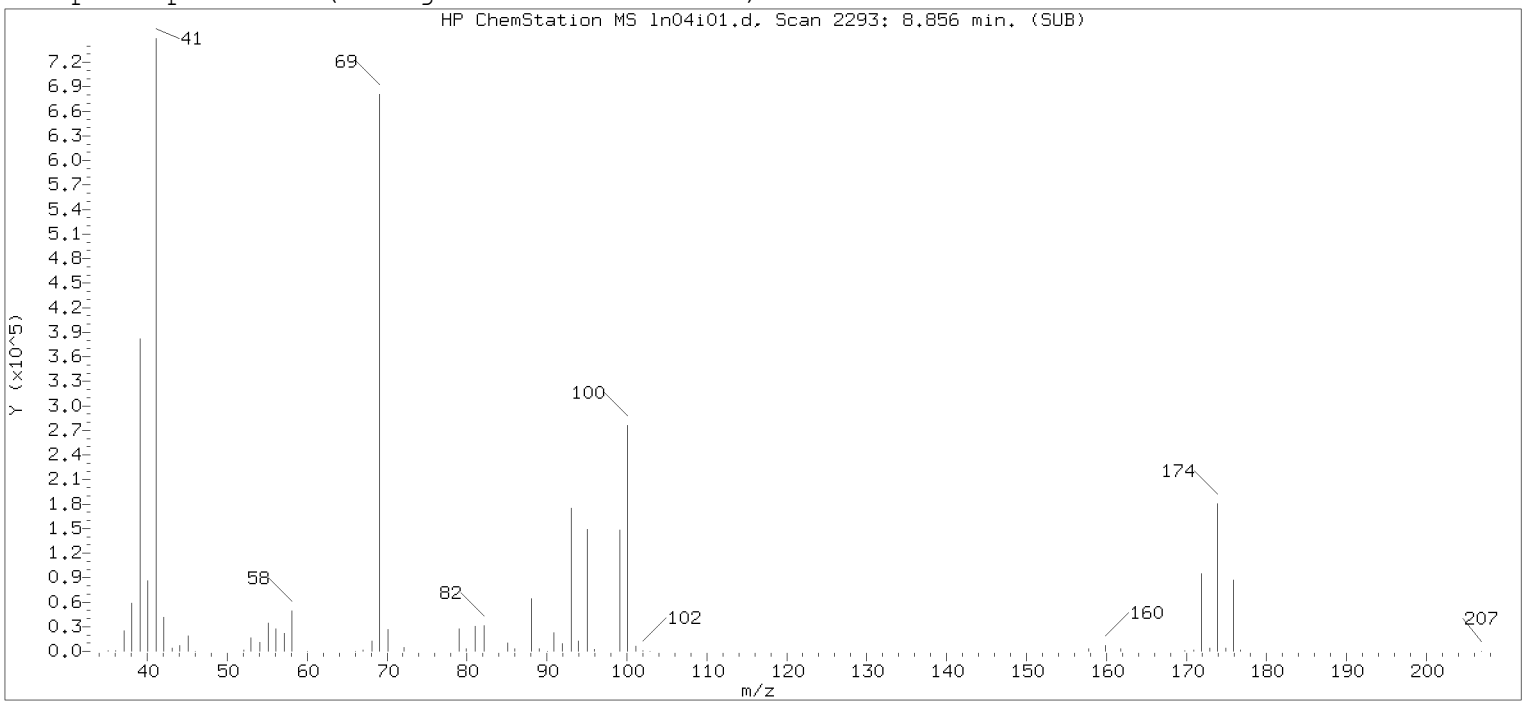
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 338379M
On-Column Amount (ng) : 3968.4208
Integration start scan : 2277 Integration stop scan: 2406
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

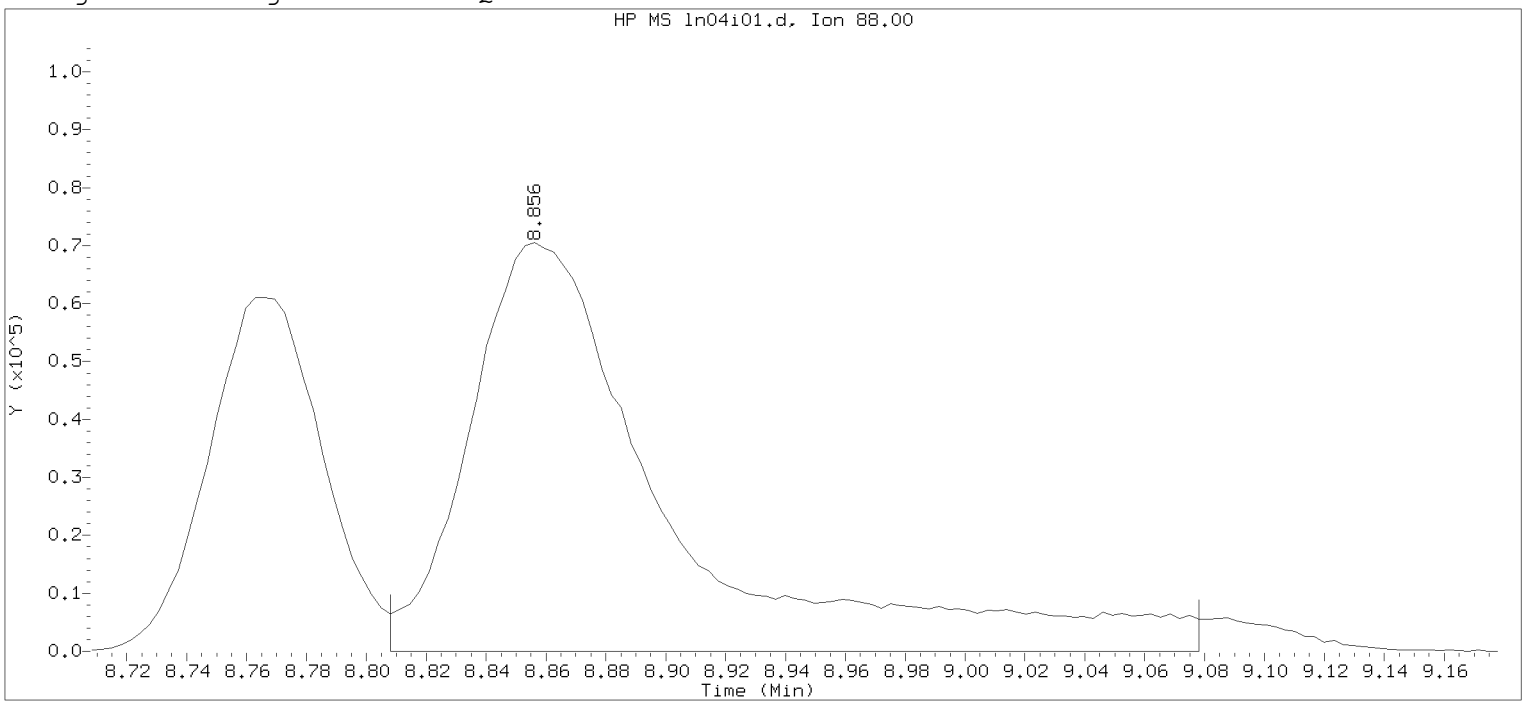
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

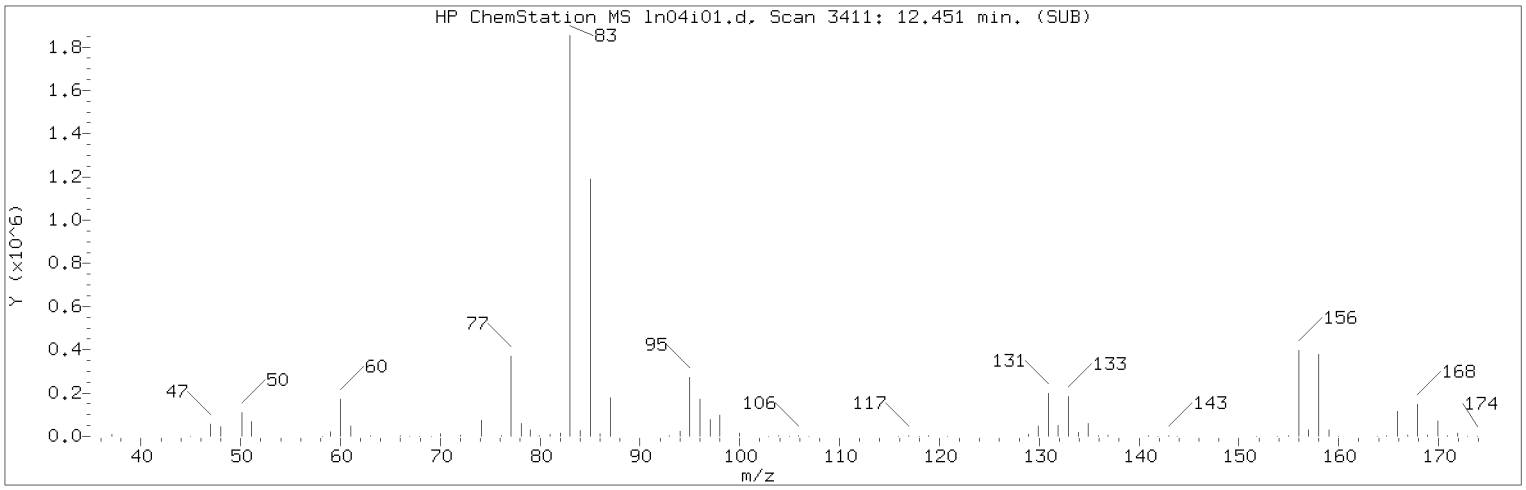
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

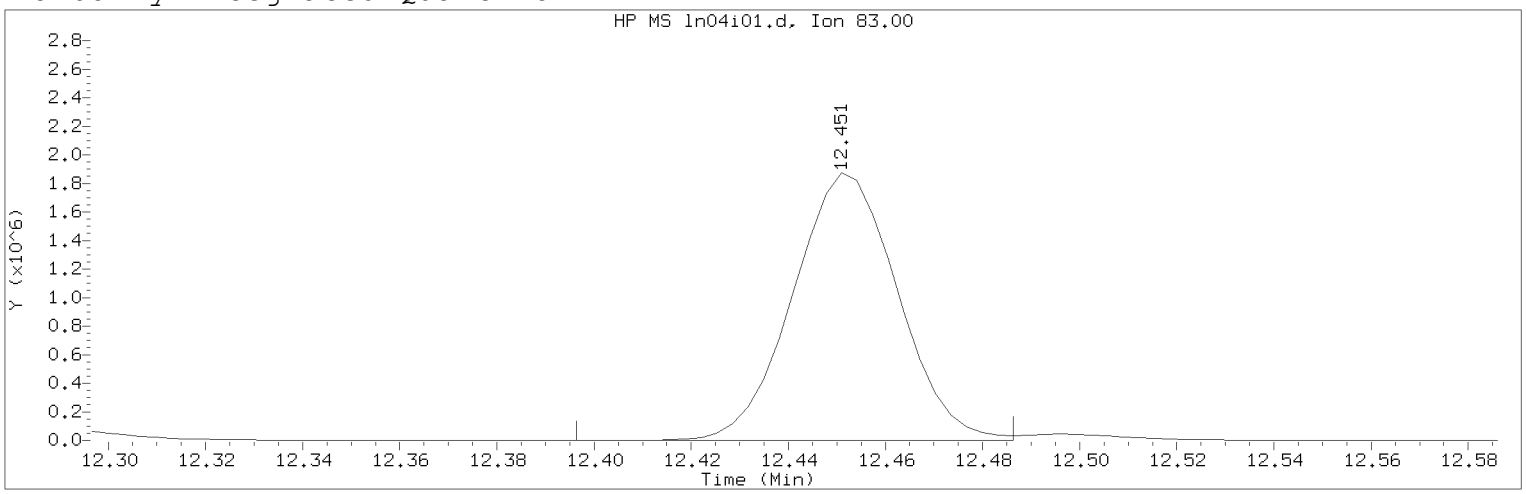
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2293		
Retention Time (minutes)	: 8.856		
Quant Ion	: 88.00		
Area	: 325164		
On-column Amount (ng)	: 3803.8575		
Integration start scan	: 2277	Integration stop scan:	2361
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

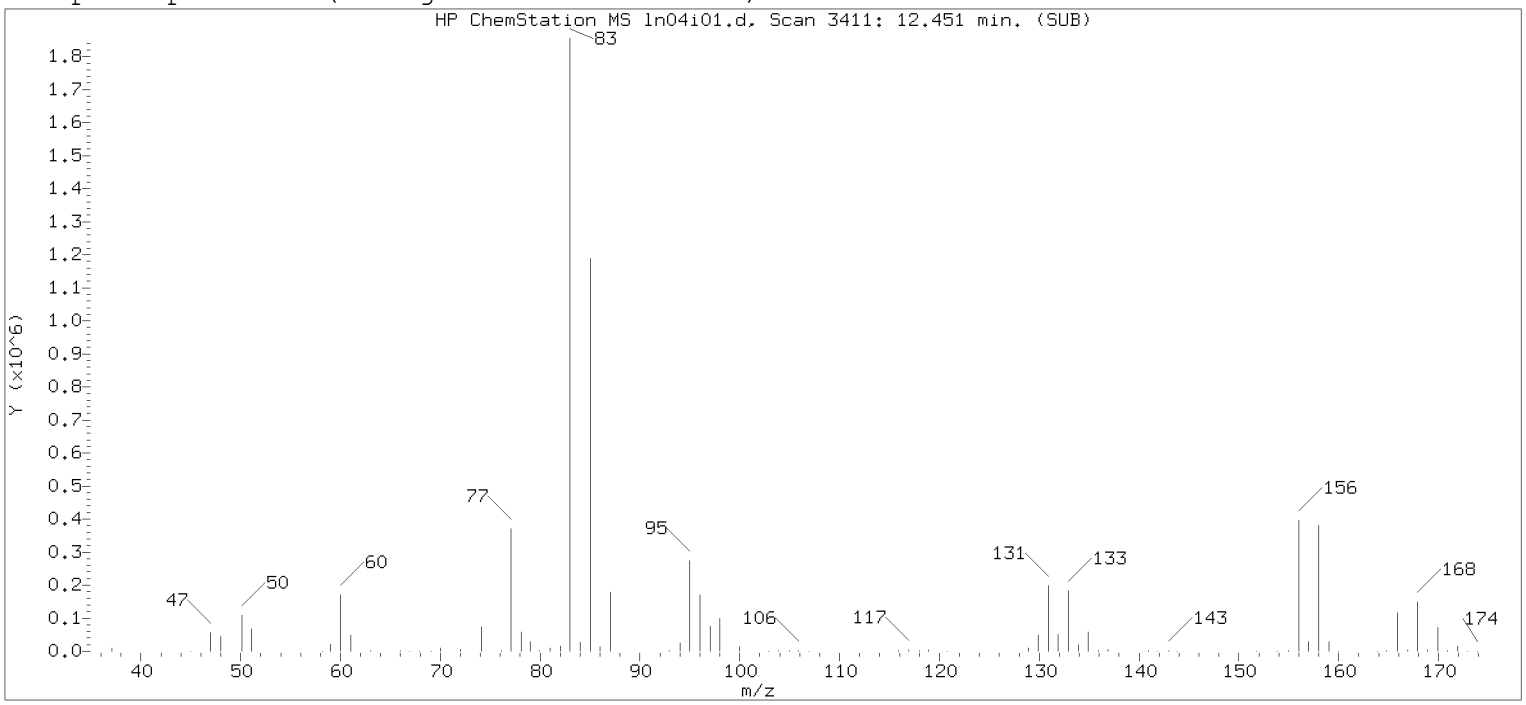
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 2800639M
On-Column Amount (ng) : 310.7054
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

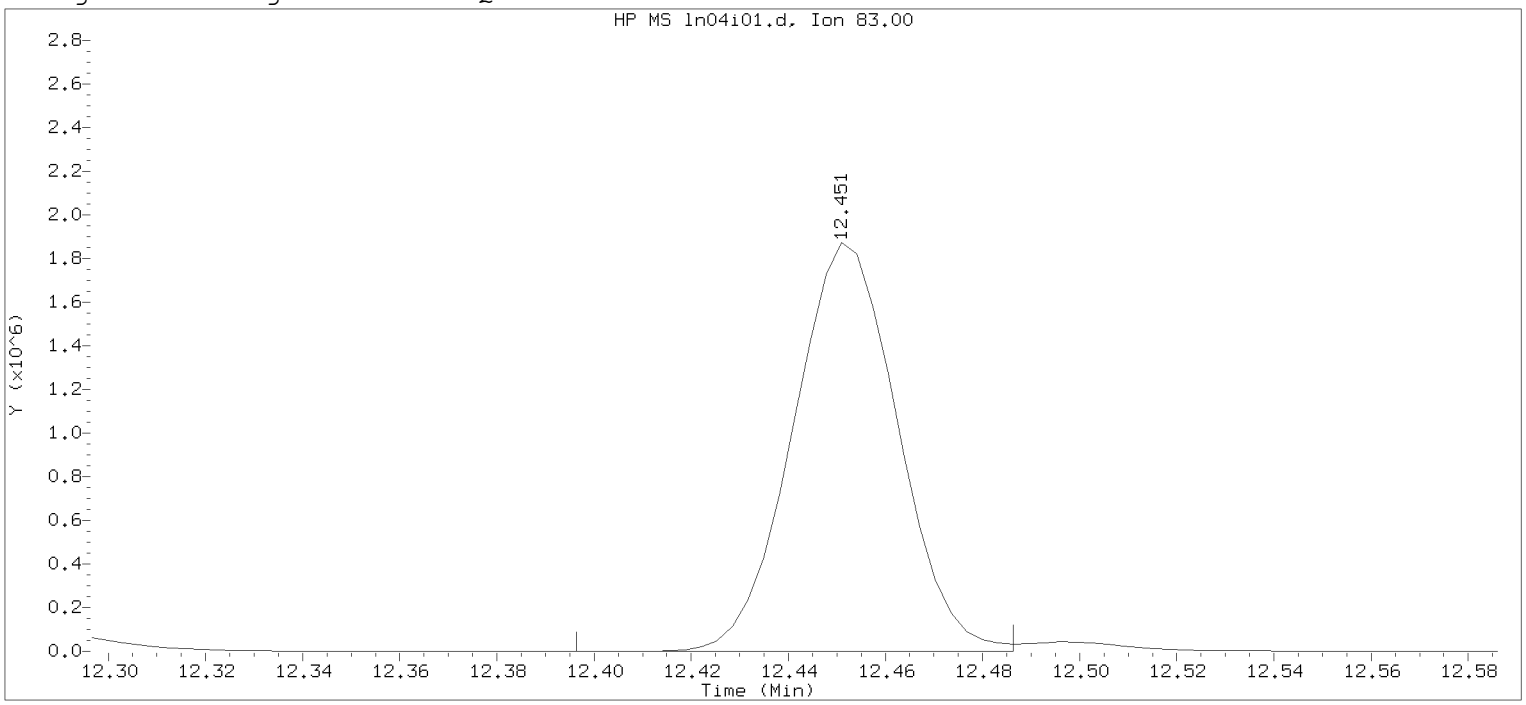
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

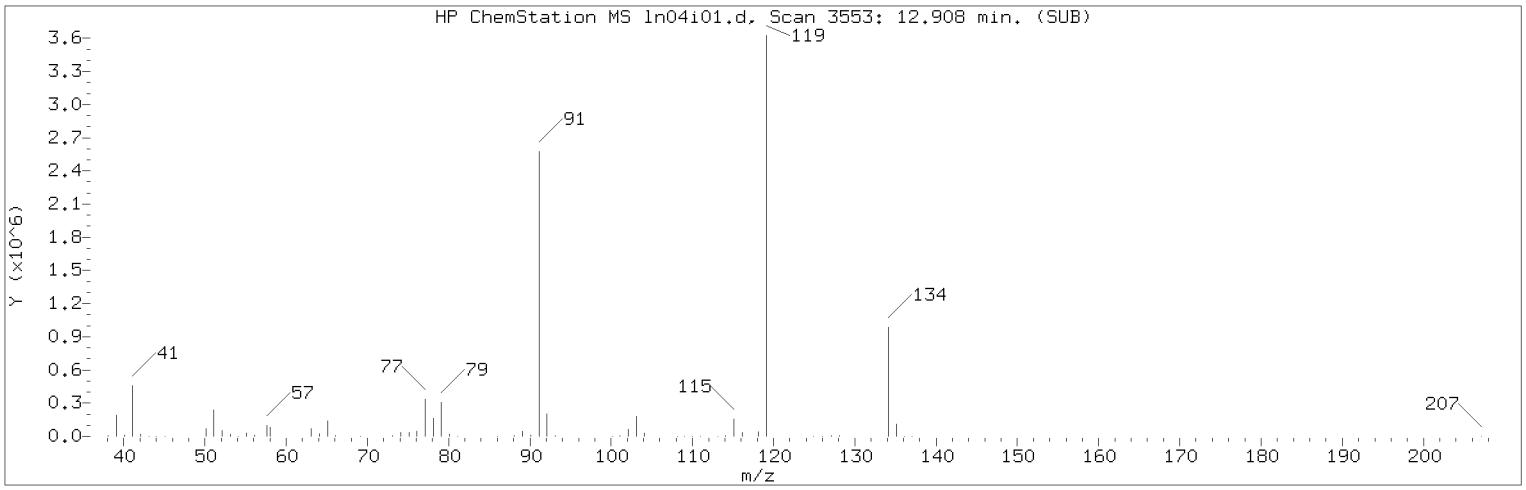
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

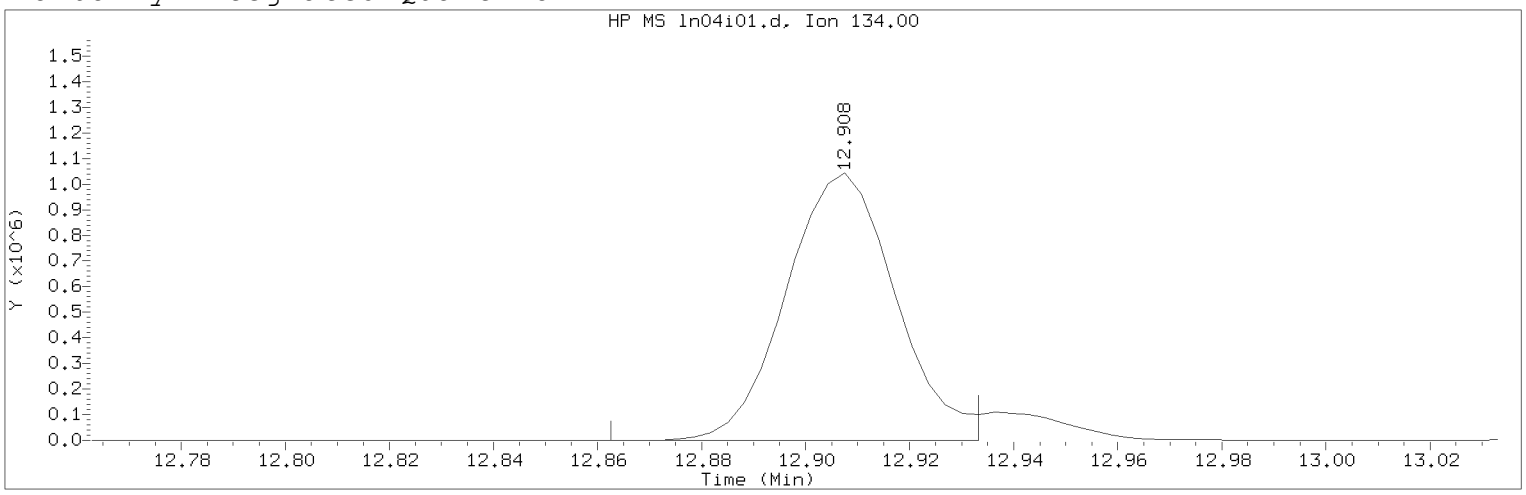
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 2797364
On-column Amount (ng) : 294.0638
Integration start scan : 3393 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

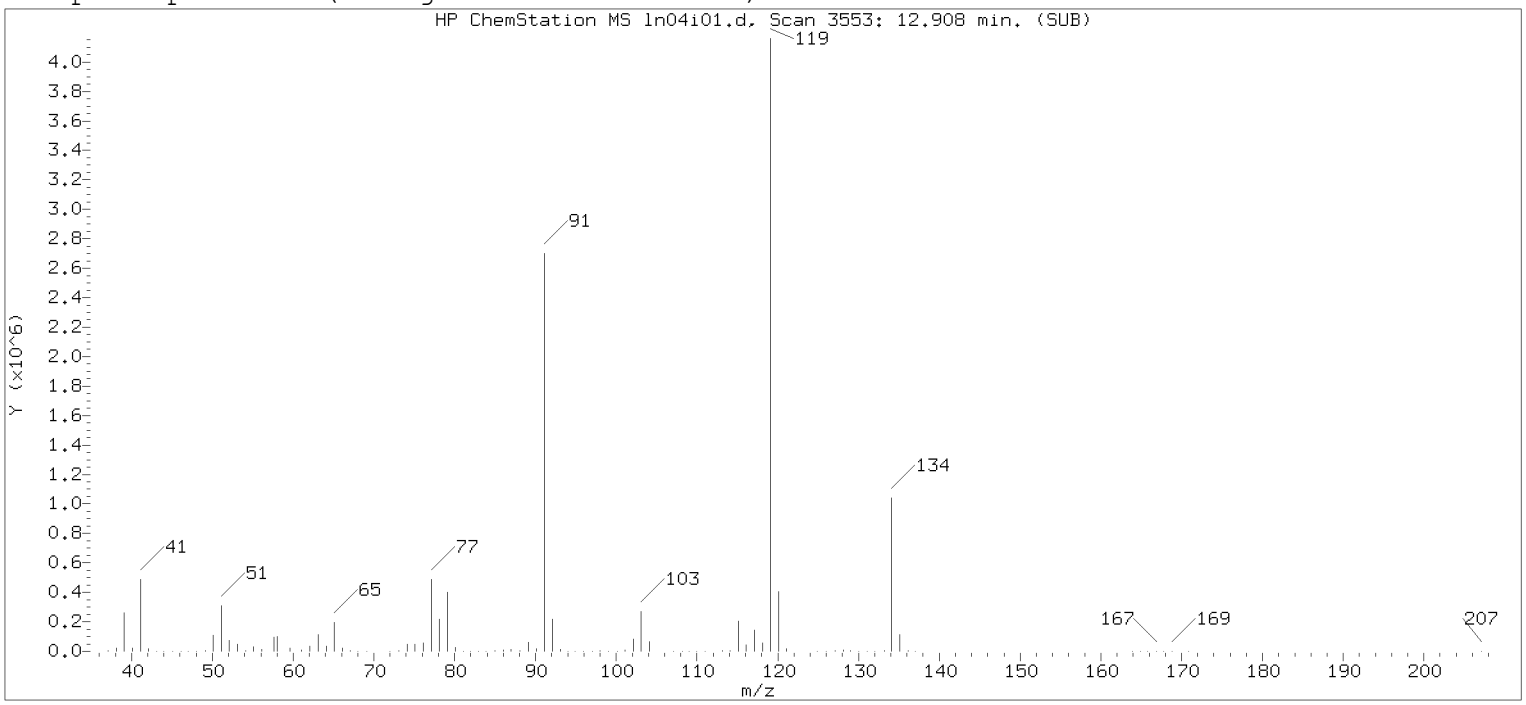
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area (flag) : 1524421M
On-Column Amount (ng) : 323.7167
Integration start scan : 3538 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

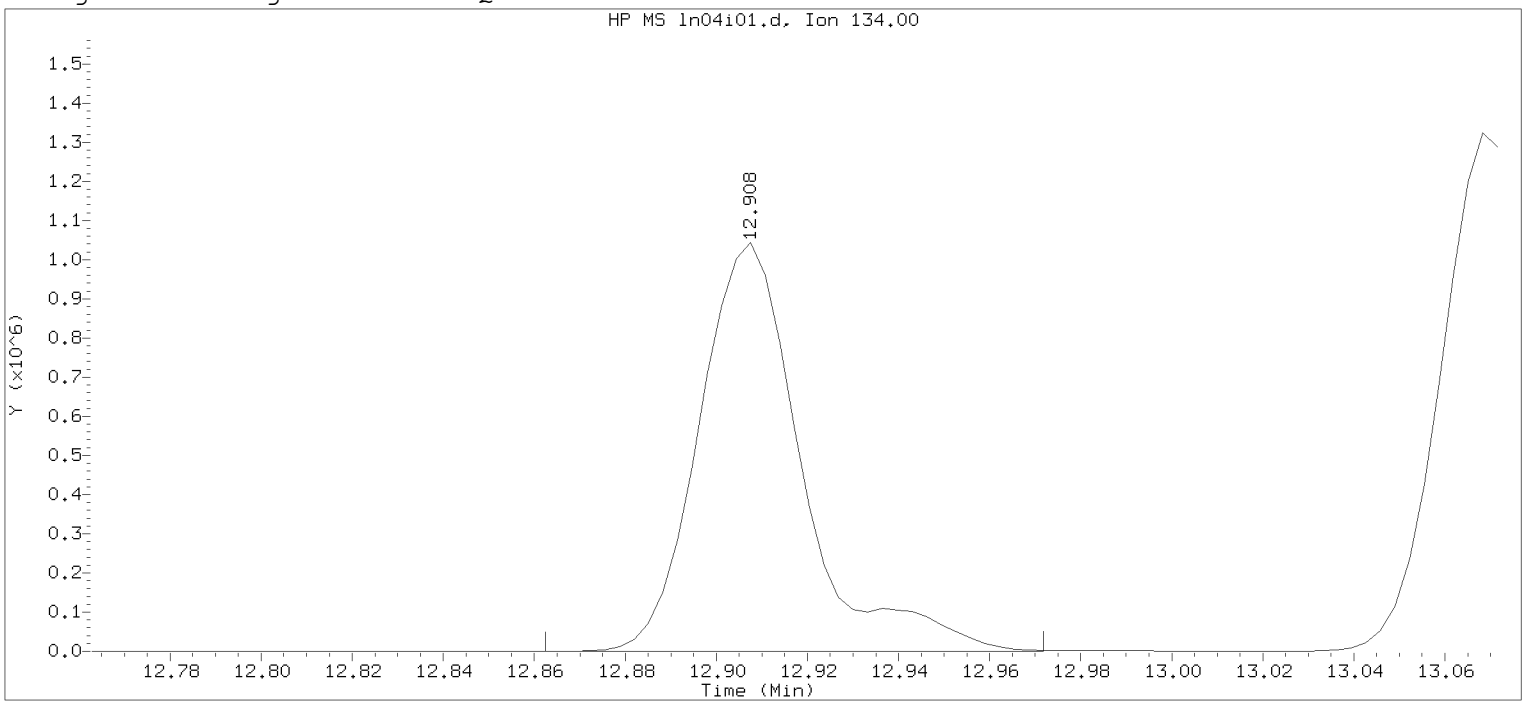
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



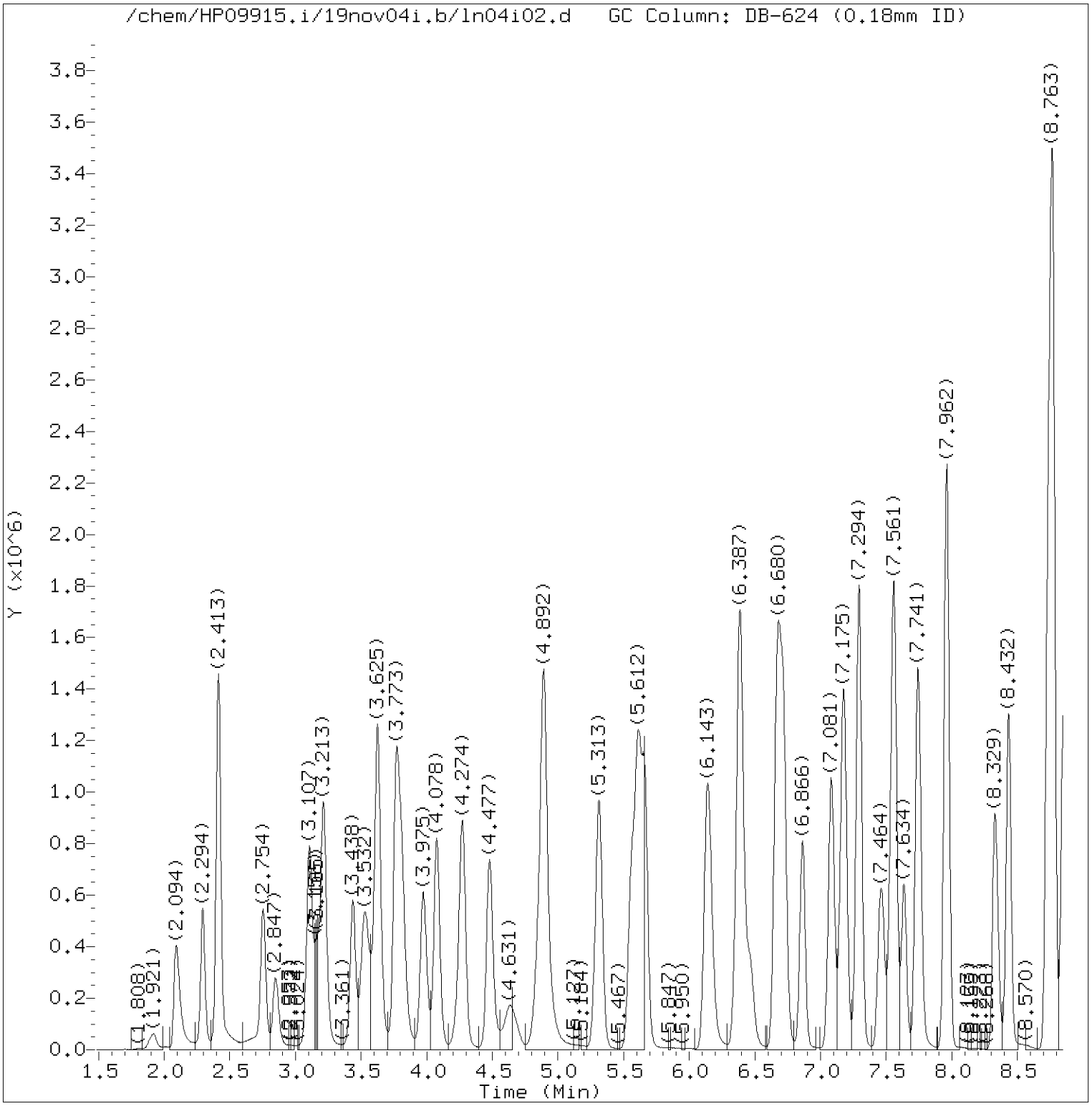
Data File: /chem/HP09915.i/19nov04i.b/ln04i01.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 14:51 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.908
Quant Ion : 134.00
Area : 1639624
On-column Amount (ng) : 313.1253
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

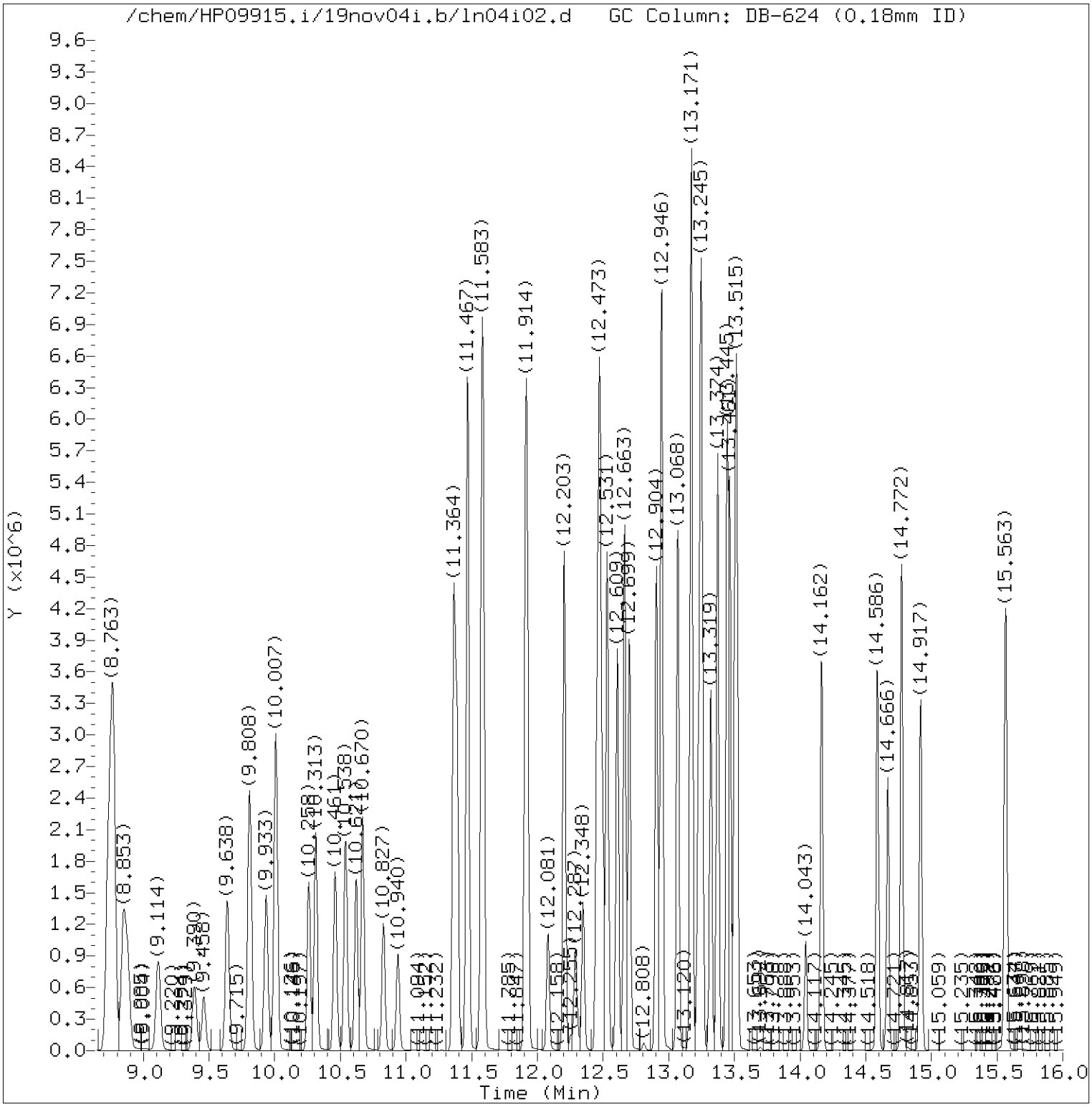
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.094	85	857961M	103.943
4) Chloromethane	(2)	2.294	50	784780	98.650
5) 1,3-Butadiene	(2)	2.413	39	618713M	93.669
6) Vinyl Chloride	(2)	2.416	62	781267	98.400
8) Bromomethane	(2)	2.754	94	539686	94.824
9) Chloroethane	(2)	2.847	64	418524	95.919
10) Dichlorofluoromethane	(2)	3.104	67	992796M	94.678
12) Trichlorofluoromethane	(2)	3.162	101	860893	100.714
11) n-Pentane	(2)	3.217	43	1002713	99.263
14) Ethyl ether	(2)	3.435	59	550266	99.622
15) Freon 123a	(2)	3.532	67	679642	98.841
16) Acrolein	(1)	3.625	56	2075331	1040.029
17) 1,1-Dichloroethene	(2)	3.763	96	510815	101.811
17) 1,1-Dichloroethene	(2)	3.766	63	250669	99.655
19) Freon 113	(2)	3.799	101	594686	103.888
18) Acetone	(1)	3.805	58	181313	202.676
22) Methyl Iodide	(2)	3.972	142	1051103	101.097
21) 2-Propanol	(1)	4.001	45	343390	533.946
23) Carbon Disulfide	(2)	4.078	76	1957296	103.520
27) Methyl Acetate	(2)	4.252	43	630892	97.630
25) Allyl Chloride	(2)	4.274	41	894091	99.337
28) Methylene Chloride	(2)	4.477	84	596882	99.952
29)*t-Butyl alcohol-d10	(1)	4.509	65	265971M	250.000
30) t-Butyl alcohol	(1)	4.631	59	619917	553.614
31) Acrylonitrile	(2)	4.837	53	359403	103.376
33) Methyl Tertiary Butyl Ether	(2)	4.889	73	1901626	99.813
32) trans-1,2-Dichloroethene	(2)	4.892	96	586662	101.076
34) n-Hexane	(2)	5.313	57	974442M	107.908
36) 1,1-Dichloroethane	(2)	5.557	63	1029230	101.649
38) di-Isopropyl ether	(2)	5.609	45	1986383	101.717
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	947614	104.312
40) Ethyl t-butyl ether	(2)	6.143	59	1910218	100.794
43) 1,2-Dichloroethene (Total)	(2)		96	1240957	201.508
44) 2-Butanone	(2)	6.364	43	920731	206.310
42) cis-1,2-Dichloroethene	(2)	6.384	96	654295	100.432
45) 2,2-Dichloropropane	(2)	6.400	77	813782	103.388
47) Propionitrile	(1)	6.464	54	725632	520.085
48) Methacrylonitrile	(2)	6.676	67	966183	257.629

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	349204	101.088
50) Tetrahydrofuran	(1)	6.721	71	261419	207.429
51) Chloroform	(2)	6.866	83	989698	102.195
52)$Dibromofluoromethane	(2)	7.078	113	292391	50.529
52)$Dibromofluoromethane	(2)	7.078	111	297764	50.467
53) 1,1,1-Trichloroethane	(2)	7.088	97	860519	104.109
54) Cyclohexane	(2)	7.175	56	1170449	105.893
54) Cyclohexane	(2)	7.181	84	1022362	106.481
54) Cyclohexane	(2)	7.175	69	362451	106.017
56) Carbon Tetrachloride	(2)	7.290	117	751477	107.196
55) 1,1-Dichloropropene	(2)	7.297	75	823627	102.878
58) Isobutyl Alcohol	(1)	7.461	41	528441	1402.358
57)$1,2-Dichloroethane-d4	(2)	7.535	102	74158	50.284
57)$1,2-Dichloroethane-d4	(2)	7.535	65	331294	50.408
57)$1,2-Dichloroethane-d4	(2)	7.535	104	47551	50.479
60) Benzene	(2)	7.561	78	2423634	100.668
61) 1,2-Dichloroethane	(2)	7.638	62	757974	97.883
61) 1,2-Dichloroethane	(2)	7.641	98	76152	99.373
65) t-Amyl methyl ether	(2)	7.741	73	1946110	102.306
67) n-Heptane	(2)	7.962	43	911962MA	108.104
66)*Fluorobenzene	(2)	7.962	96	1183605	50.000
69) n-Butanol	(1)	8.329	56	944383M	2911.812
71) Trichloroethene	(2)	8.432	95	618983	102.110
72) Methylcyclohexane	(2)	8.734	83	1164174	103.516
72) Methylcyclohexane	(2)	8.734	98	527428	103.640
73) 1,2-Dichloropropane	(2)	8.773	63	625914	102.385
76) Methyl Methacrylate	(2)	8.847	69	640445A	108.334
75) 1,4-Dioxane	(1)	8.856	88	117817M	1321.647
74) Dibromomethane	(2)	8.882	93	410059	103.668
78) Bromodichloromethane	(2)	9.114	83	770805	108.595
79) 2-Nitropropane	(2)	9.390	41	488862	227.388
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	284759	108.454
81) cis-1,3-Dichloropropene	(2)	9.638	75	1026055	108.840
82) 4-Methyl-2-pentanone	(2)	9.808	43	1972651	209.410
83)$Toluene-d8	(3)	9.933	98	1216793	49.703
83)$Toluene-d8	(3)	9.933	100	789846	49.806
88) Toluene	(3)	10.007	92	1555339	101.336
90) 1,3-Dichloropropene (total)	(3)		100	1994775	220.026

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	968720	111.186
91) Ethyl Methacrylate	(3)	10.313	69	1159403	109.496
92) 1,1,2-Trichloroethane	(3)	10.461	97	606132	104.163
93) Tetrachloroethene	(3)	10.541	166	663260	102.036
94) 1,3-Dichloropropane	(3)	10.621	76	1023947	103.060
96) 2-Hexanone	(3)	10.670	43	1457165	206.170
97) Dibromochloromethane	(3)	10.827	129	678552	113.835
99) 1,2-Dibromoethane	(3)	10.940	107	665574	105.331
100)*Chlorobenzene-d5	(3)	11.361	117	935628	50.000
101) 1-Chlorohexane	(3)	11.364	91	826713	100.265
102) Chlorobenzene	(3)	11.387	112	1760002	101.404
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	622547	108.864
104) Ethylbenzene	(3)	11.470	91	3015086	102.779
106) m+p-Xylene	(3)	11.583	106	2388845	206.999
108) Xylene (Total)	(3)		106	3566525	310.313
107) o-Xylene	(3)	11.908	106	1177680	103.314
109) Styrene	(3)	11.924	104	1996461	105.988
110) Bromoform	(3)	12.081	173	502388	112.791
111) Isopropylbenzene	(3)	12.203	105	2980812	104.258
112) Cyclohexanone	(1)	12.287	55	431750	1236.644
114)$4-Bromofluorobenzene	(3)	12.348	95	458263	49.435
114)$4-Bromofluorobenzene	(3)	12.348	174	380301	49.485
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	995972M	105.317
115) Bromobenzene	(4)	12.464	156	778170	103.423
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	790040	270.837
117) 1,2,3-Trichloropropane	(4)	12.496	110	303037	104.425
119) n-Propylbenzene	(4)	12.531	91	3409679	103.724
120) 2-Chlorotoluene	(4)	12.609	126	718635	102.905
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	2528195	105.828
121) 4-Chlorotoluene	(4)	12.699	126	737830	101.502
124) tert-Butylbenzene	(4)	12.904	134	526781M	106.622
125) Pentachloroethane	(4)	12.940	167	474988	111.651
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	2664001	105.806
127) sec-Butylbenzene	(4)	13.068	105	3153429	106.963
129) 1,3-Dichlorobenzene	(4)	13.168	146	1407080	101.768
130) p-Isopropyltoluene	(4)	13.171	119	2746850	107.698
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	500629	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	1451933	101.297

M = Compound was manually integrated.
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Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

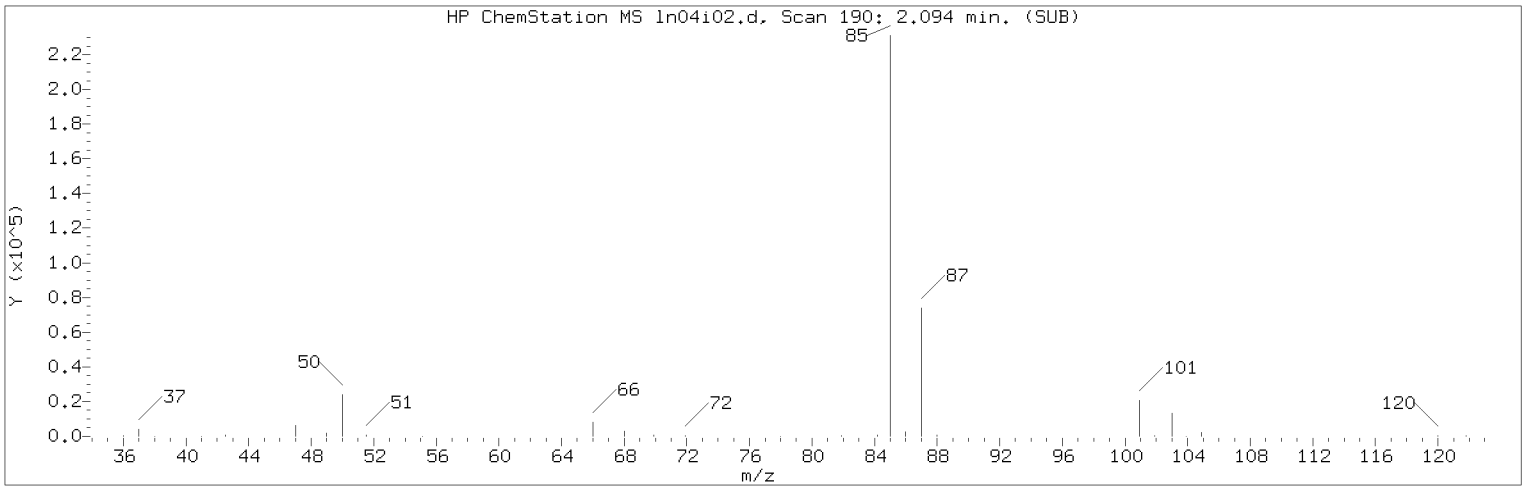
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

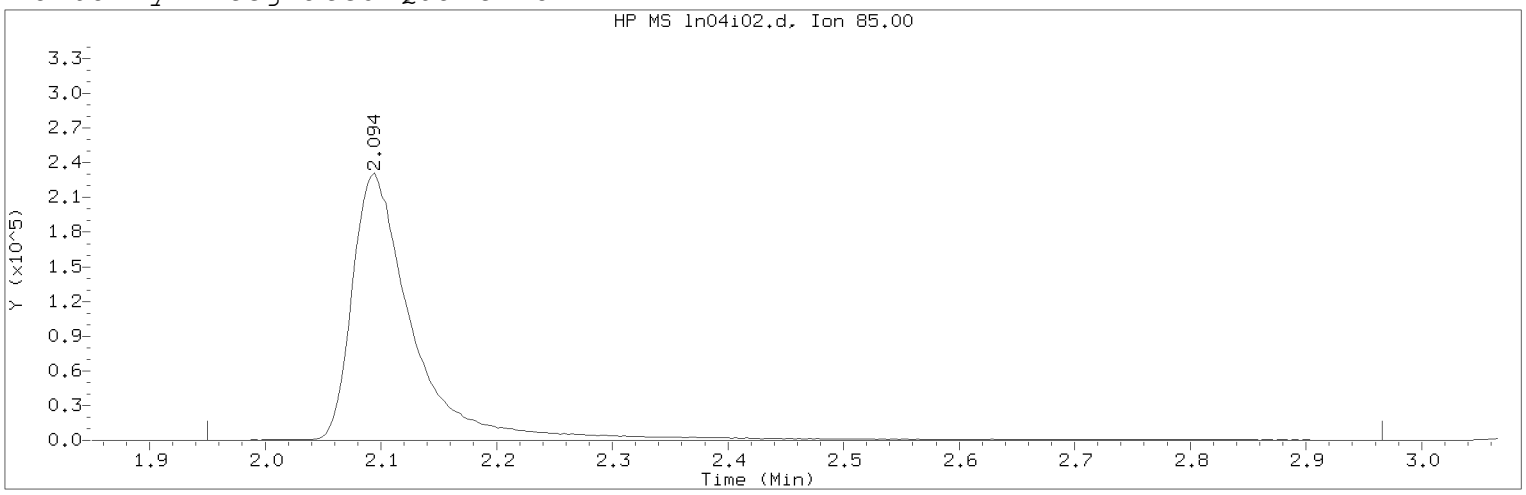
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	2711349	101.660
135) Benzyl Chloride	(4)	13.319	91	2226905	110.280
136) 1,3-Diethylbenzene	(4)	13.374	119	1705244	102.734
141) Diethylbenzene (total)	(4)		100	4934627	307.371
137) 1,4-Diethylbenzene	(4)	13.445	119	1791059	101.846
139) n-Butylbenzene	(4)	13.464	92	1355994	103.980
138) 1,2-Dichlorobenzene	(4)	13.502	146	1381717	101.273
140) 1,2-Diethylbenzene	(4)	13.518	119	1438324	102.791
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	224965	108.669
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	1074198	102.479
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	1034842	101.533
147) Hexachlorobutadiene	(4)	14.666	225	430531	89.465
148) Naphthalene	(4)	14.772	128	3428000	104.621
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	1010801	101.922
150) 2-Methylnaphthalene	(4)	15.563	142	2117626	104.952

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

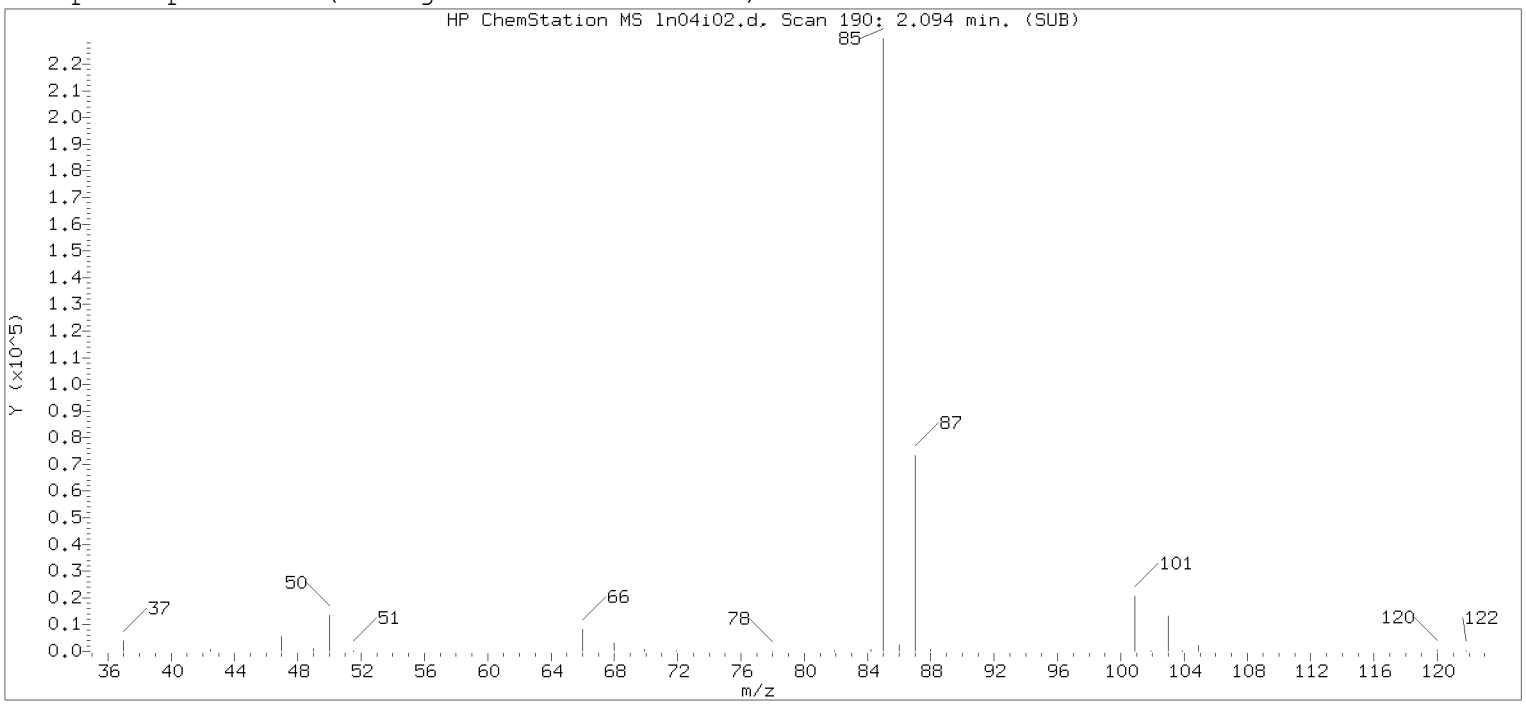
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area (flag) : 857961M
On-Column Amount (ng) : 103.9433
Integration start scan : 144 Integration stop scan: 460
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

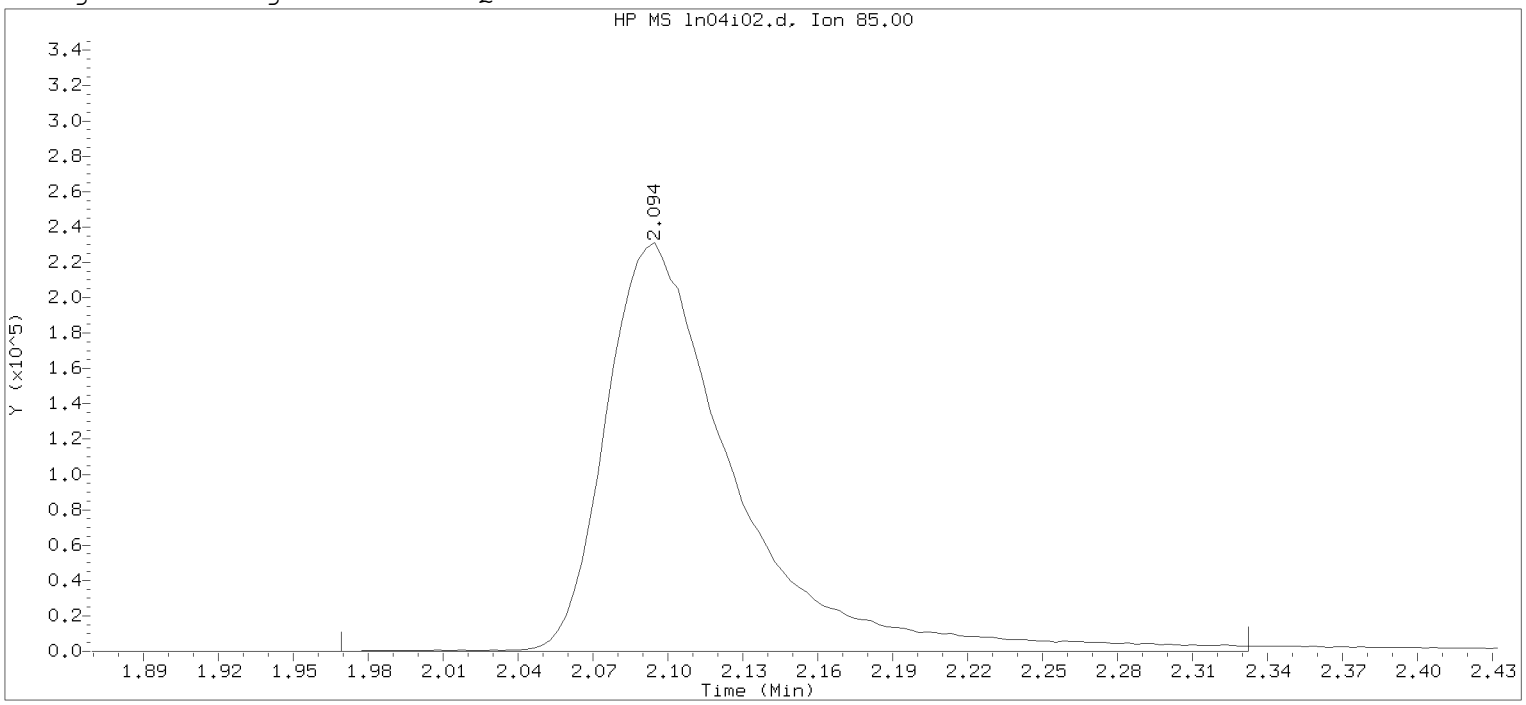
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

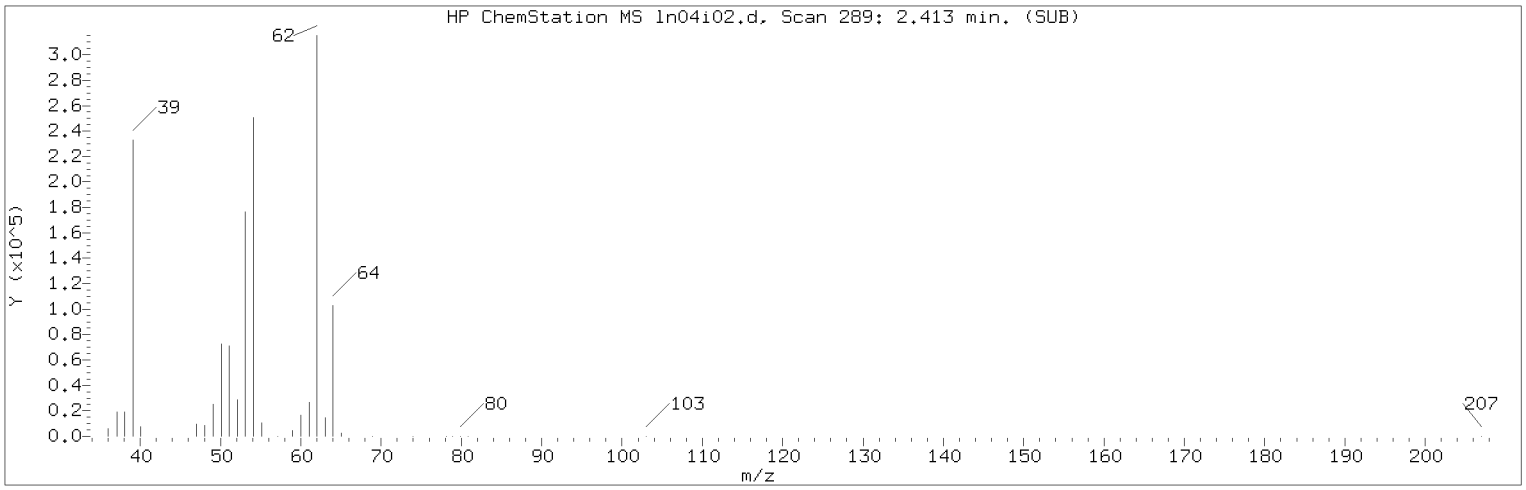
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

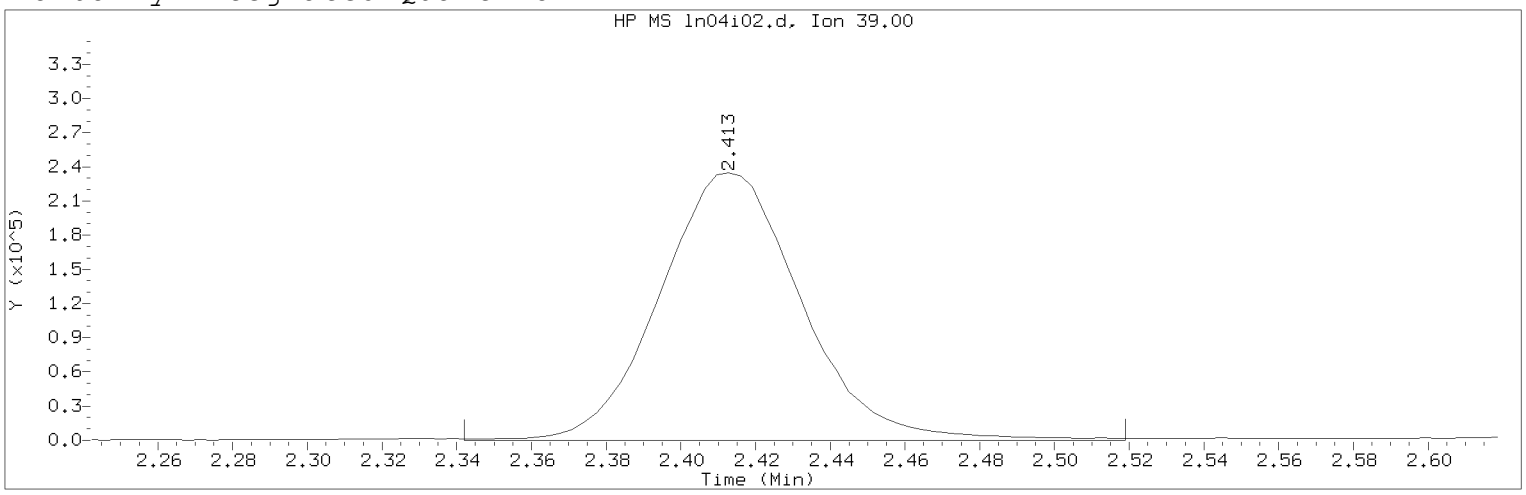
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area : 824639
On-column Amount (ng) : 94.4157
Integration start scan : 150 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

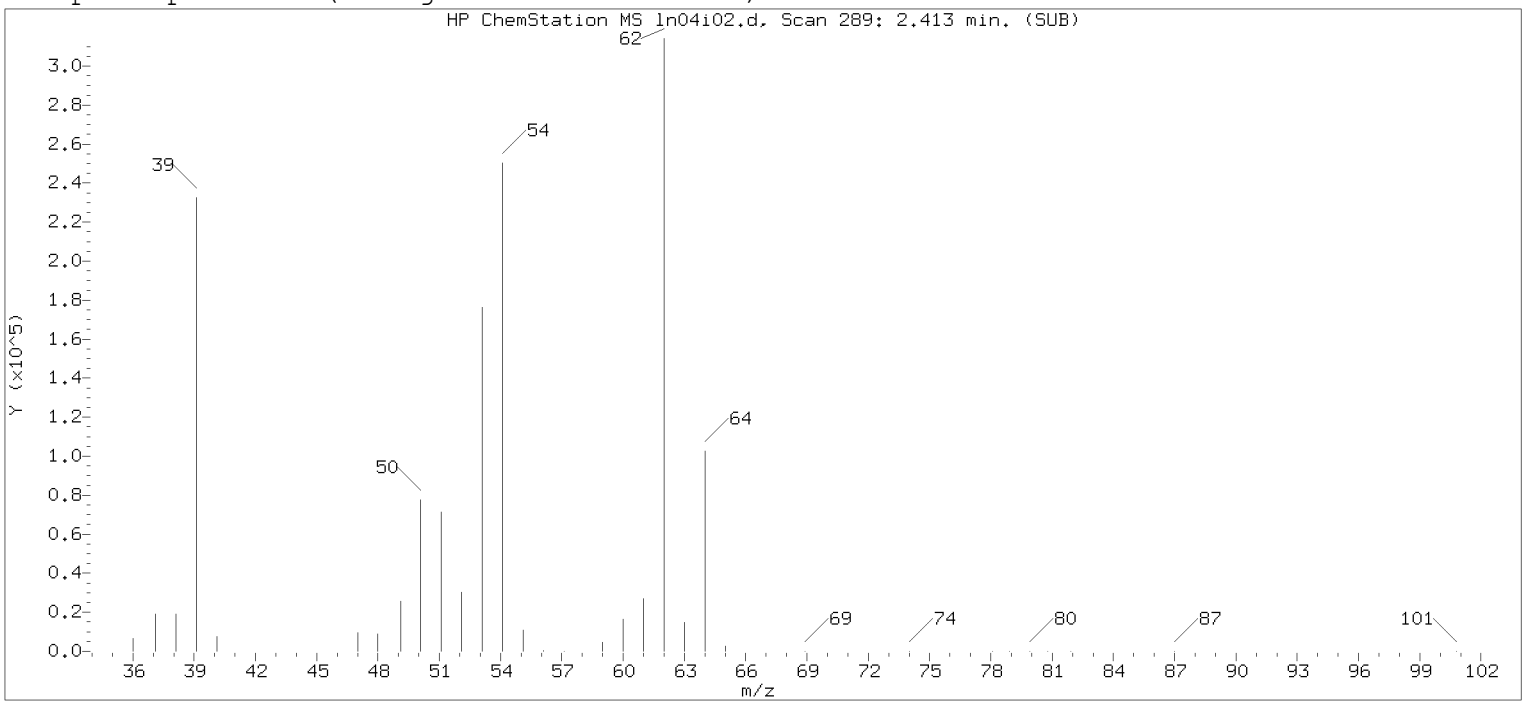
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area (flag) : 618713M
On-Column Amount (ng) : 93.6685
Integration start scan : 266 Integration stop scan: 321
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

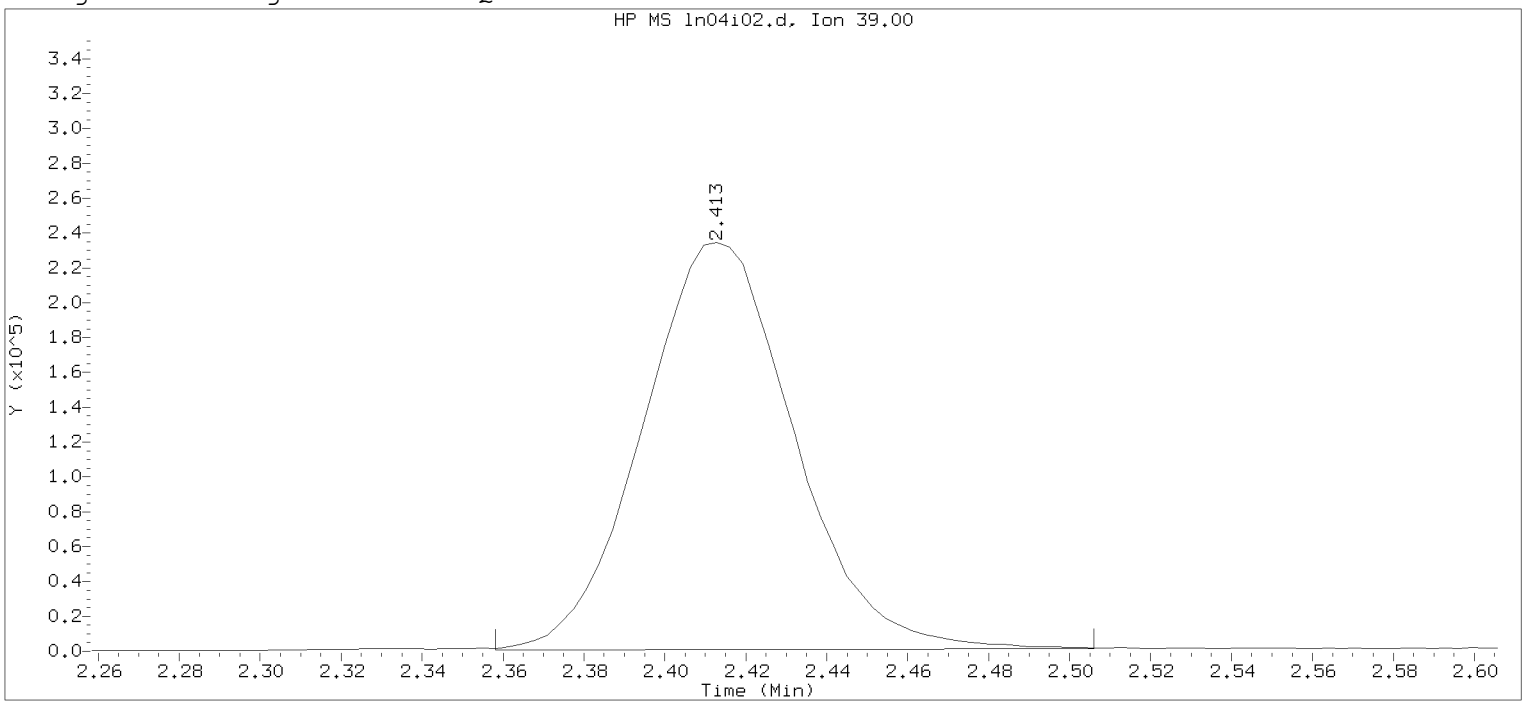
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

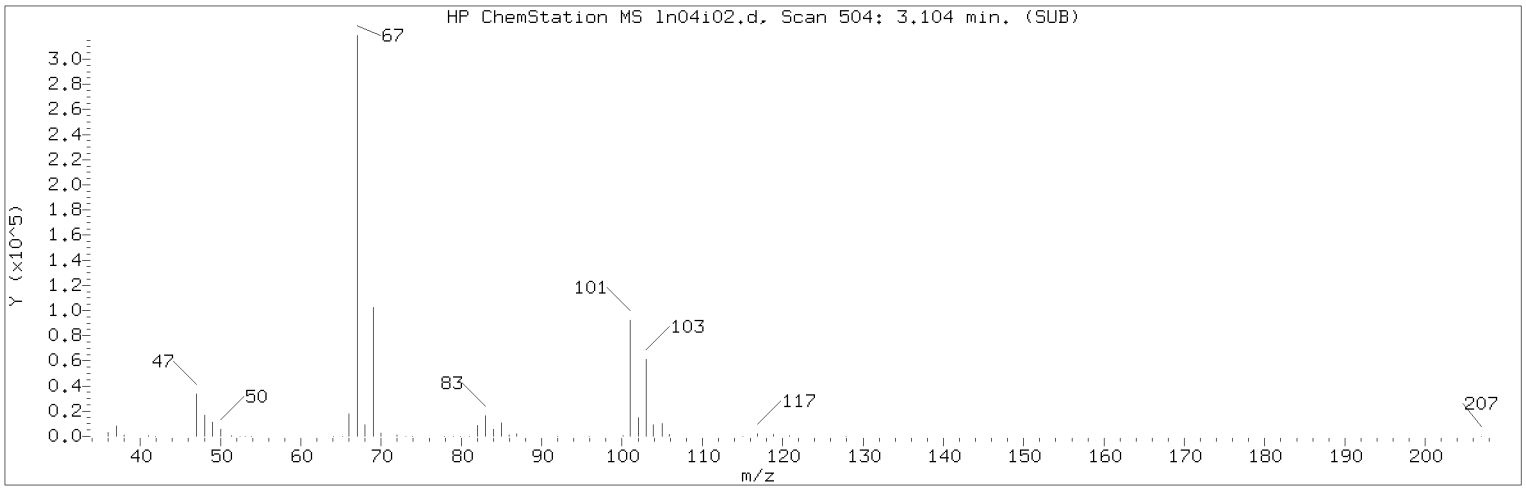
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

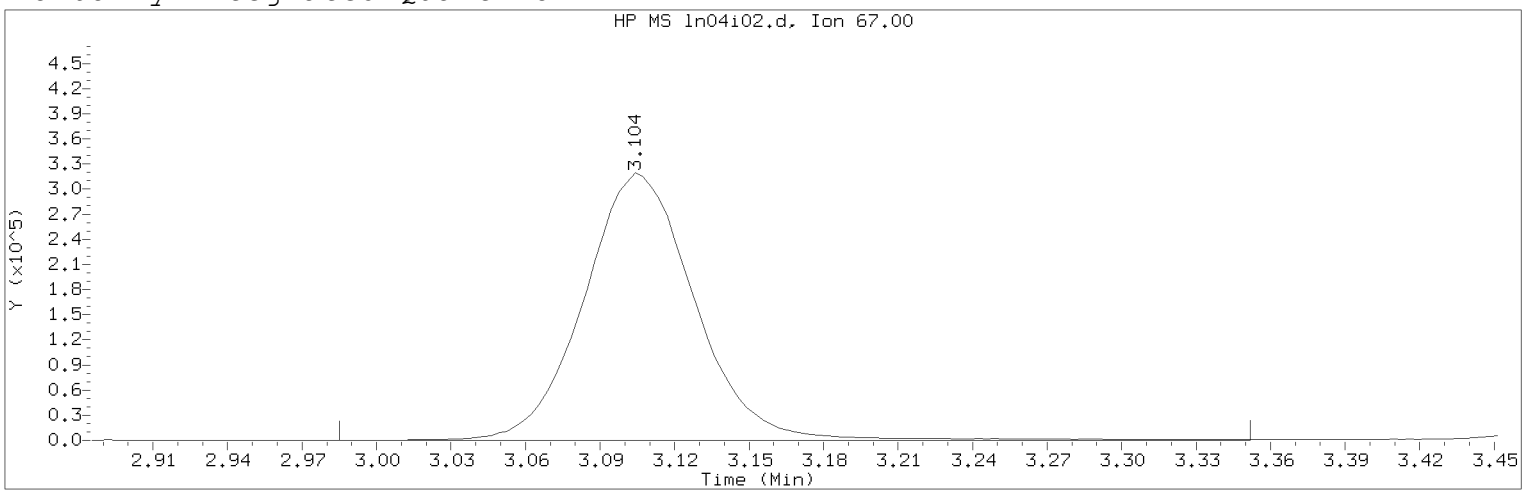
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area : 605602
On-column Amount (ng) : 97.5651
Integration start scan : 271 Integration stop scan: 317
Y at integration start : 806 Y at integration end: 1441

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

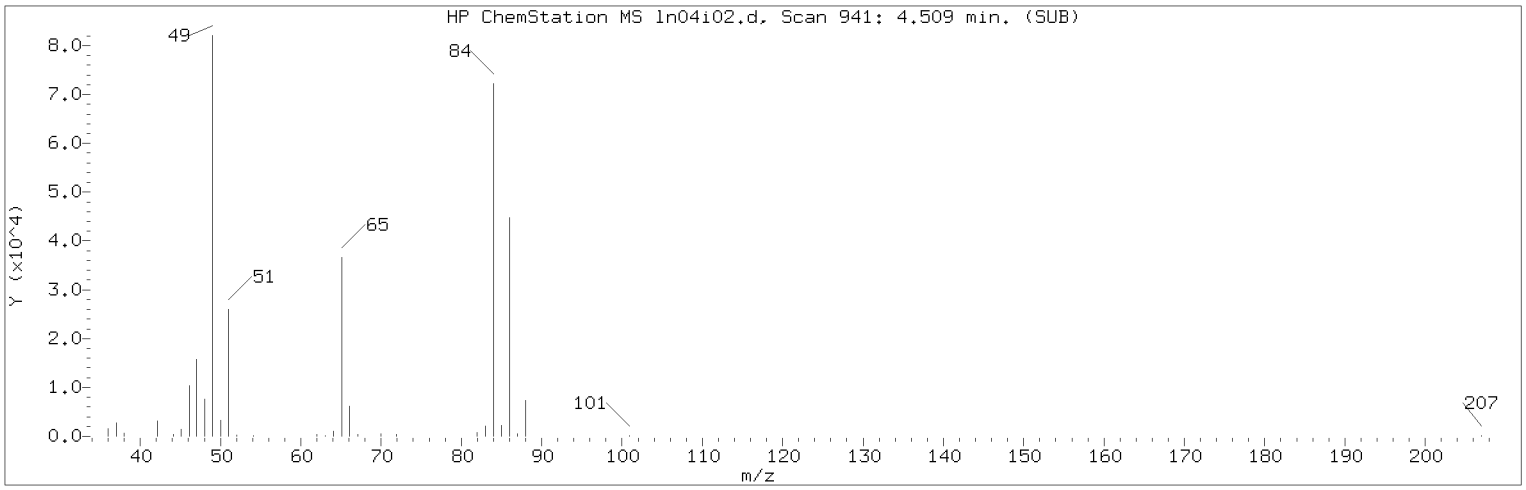
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 504
Retention Time (minutes): 3.104
Quant Ion : 67.00
Area (flag) : 992796M
On-Column Amount (ng) : 94.6777
Integration start scan : 466 Integration stop scan: 580
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

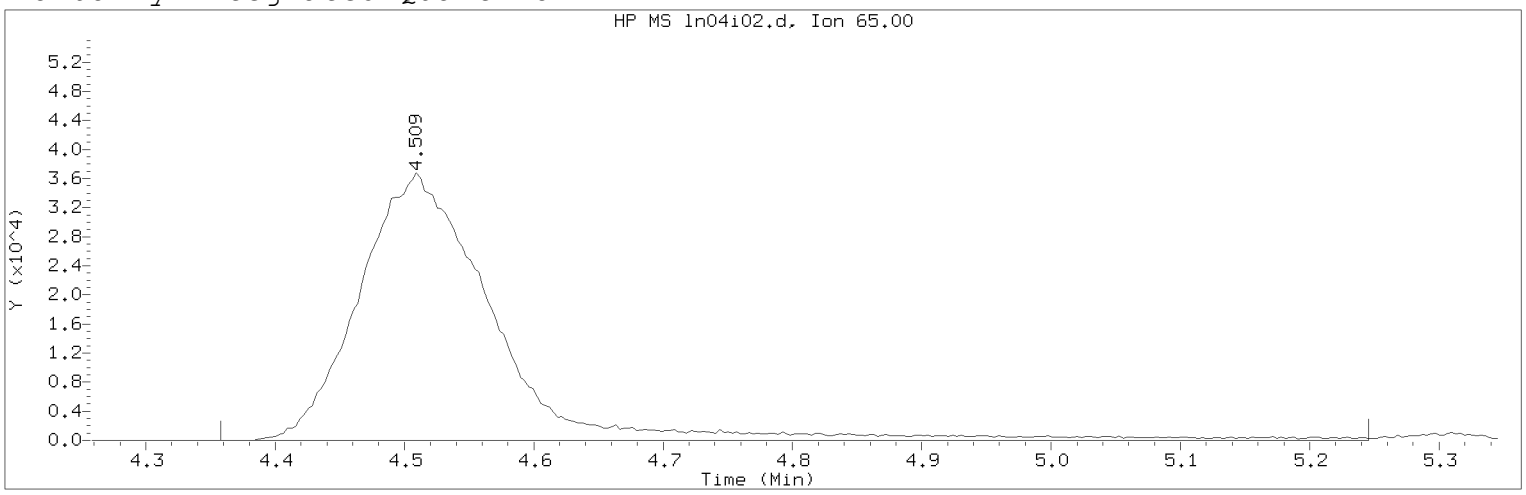
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

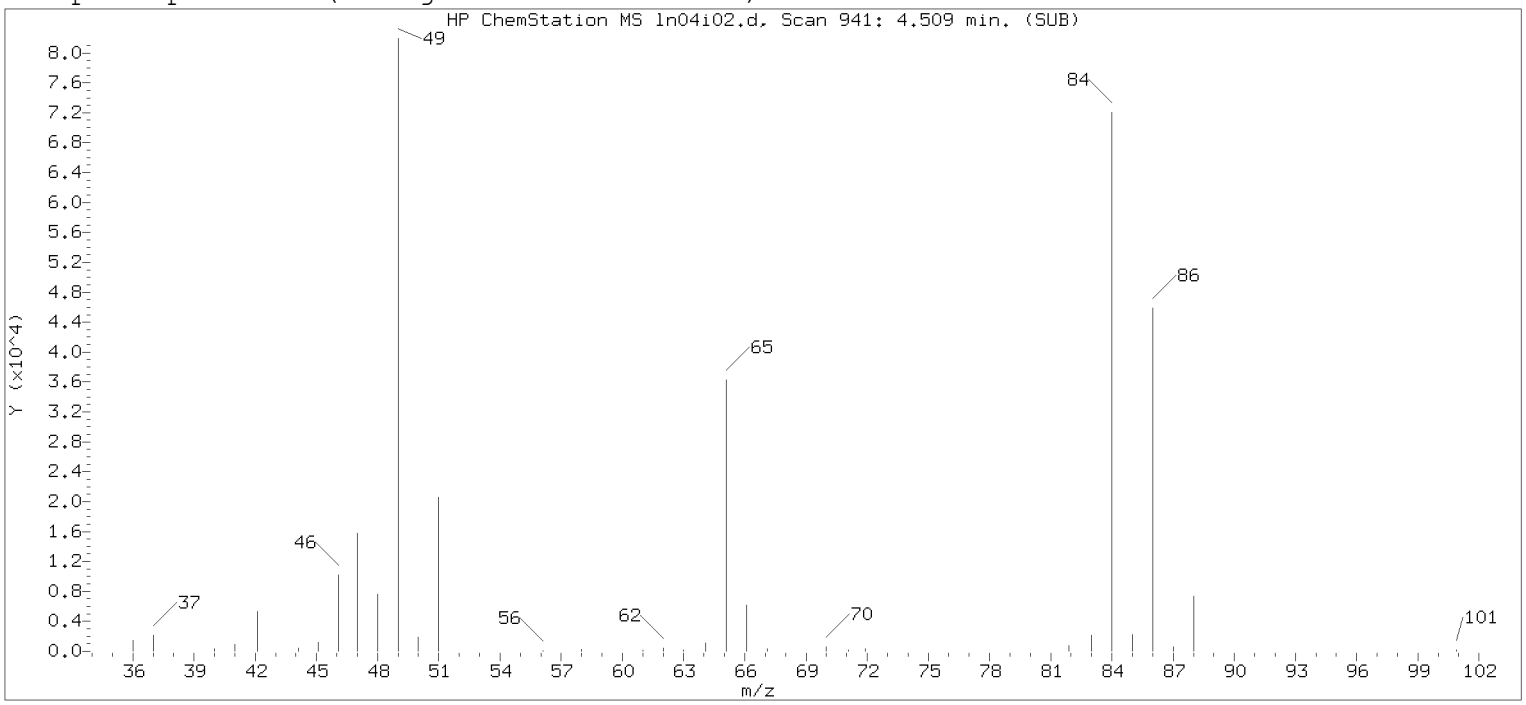
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 265971M
On-Column Amount (ng) : 250.0000
Integration start scan : 893 Integration stop scan: 1169
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

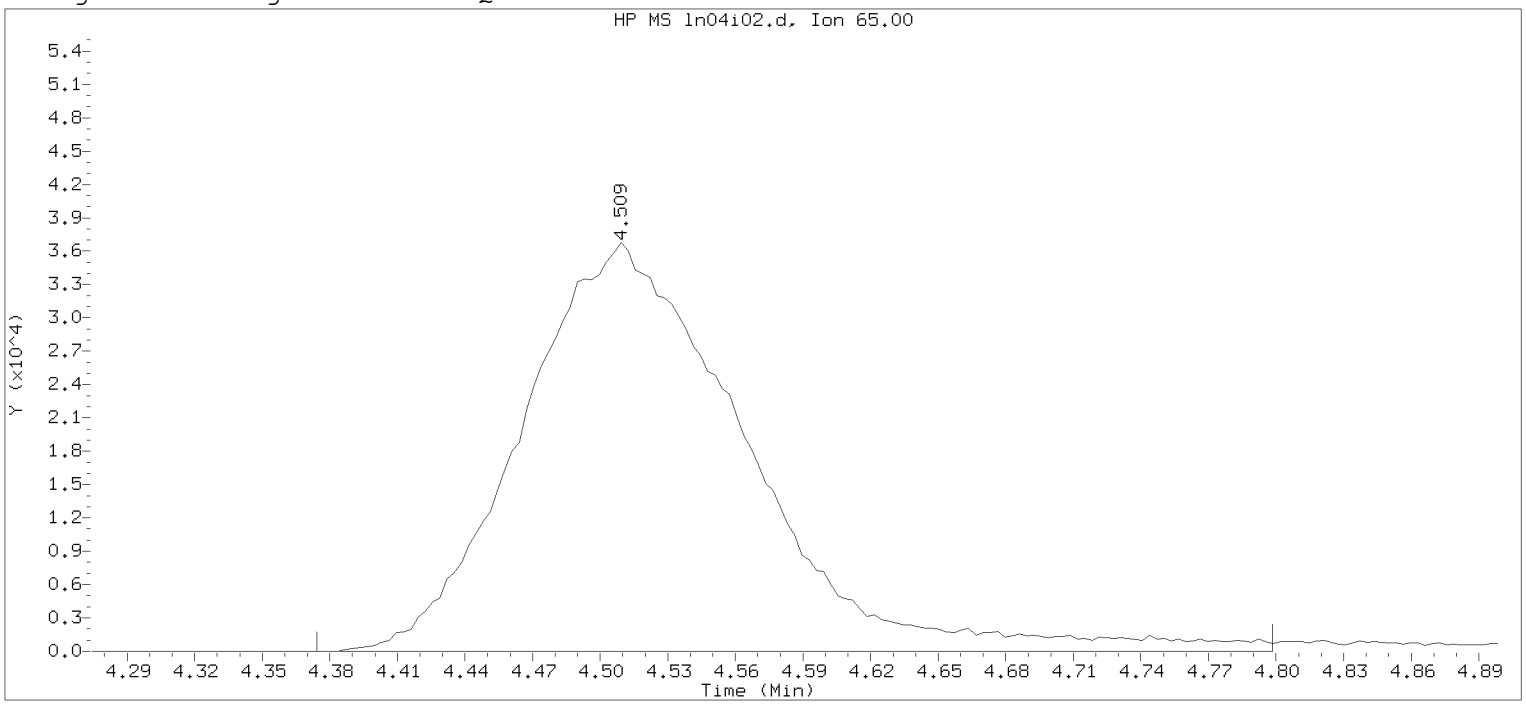
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

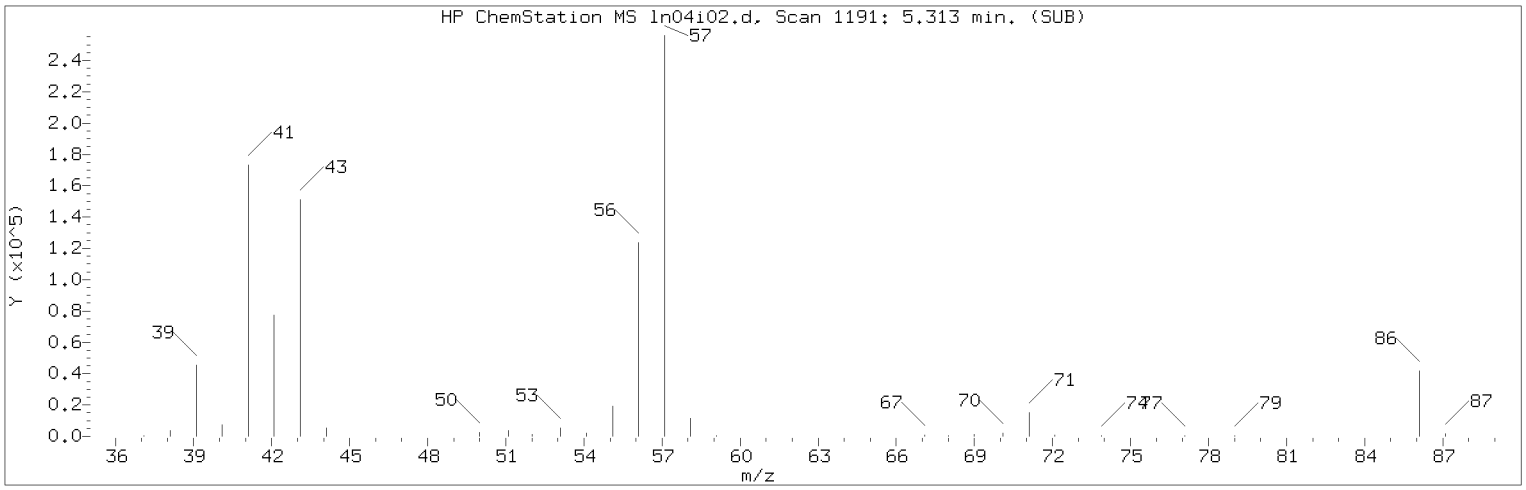
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

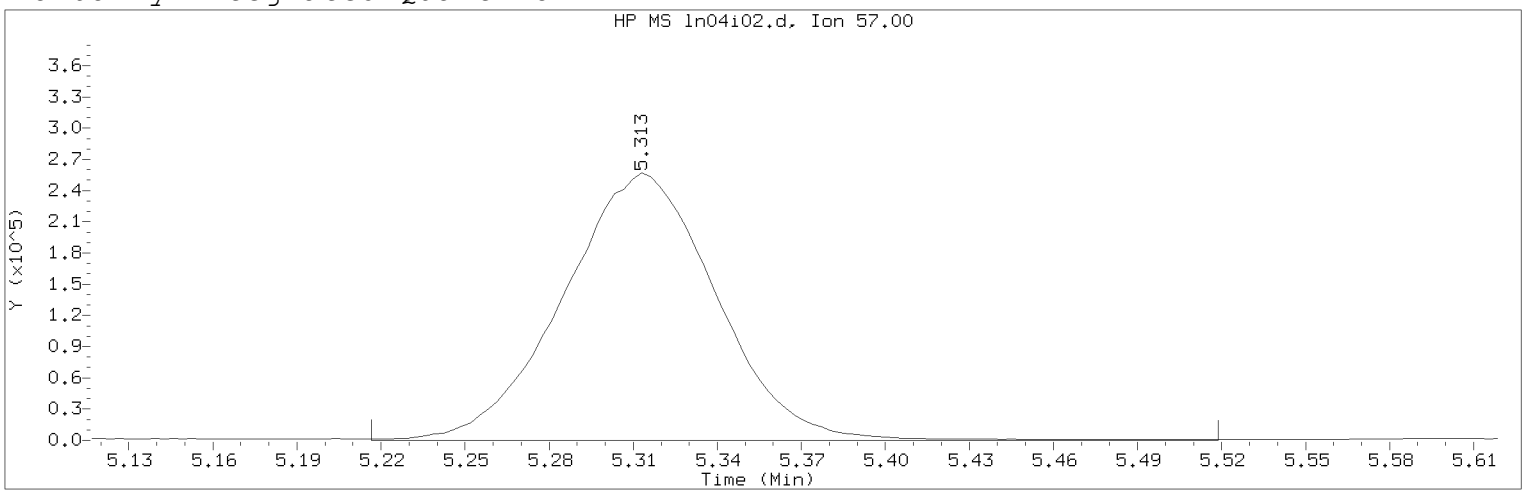
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 252632
On-column Amount (ng) : 250.0000
Integration start scan : 898 Integration stop scan: 1030
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

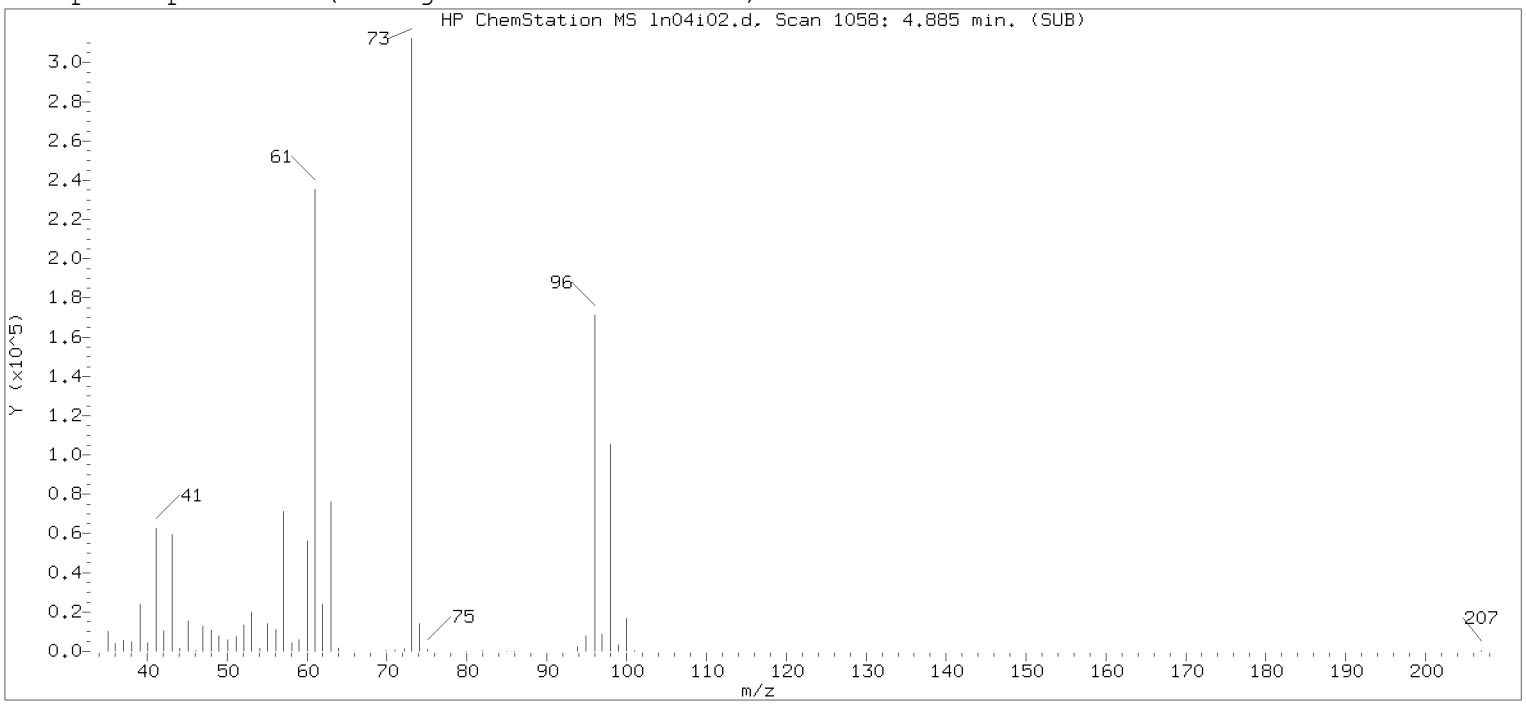
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1191
Retention Time (minutes): 5.313
Quant Ion : 57.00
Area (flag) : 974442M
On-Column Amount (ng) : 107.9083
Integration start scan : 1160 Integration stop scan: 1254
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

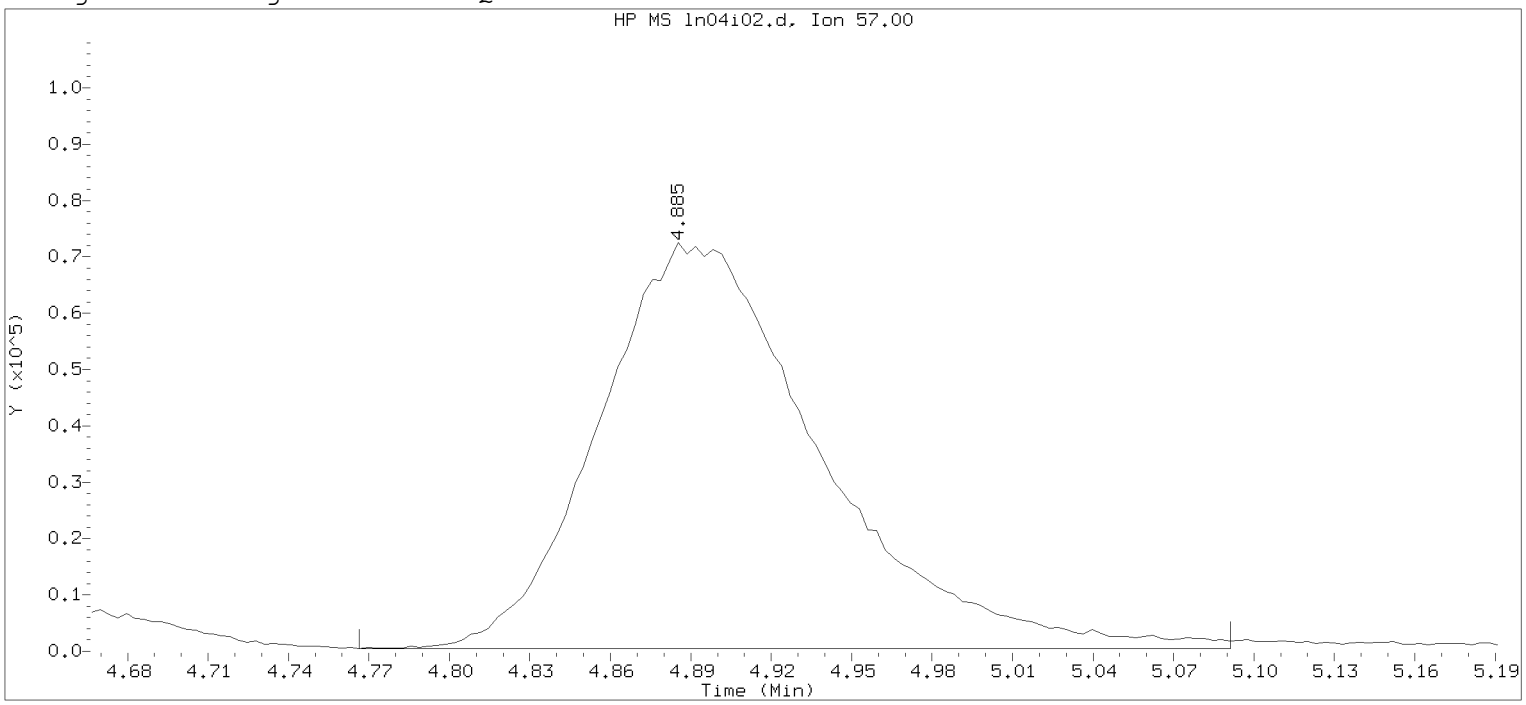
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

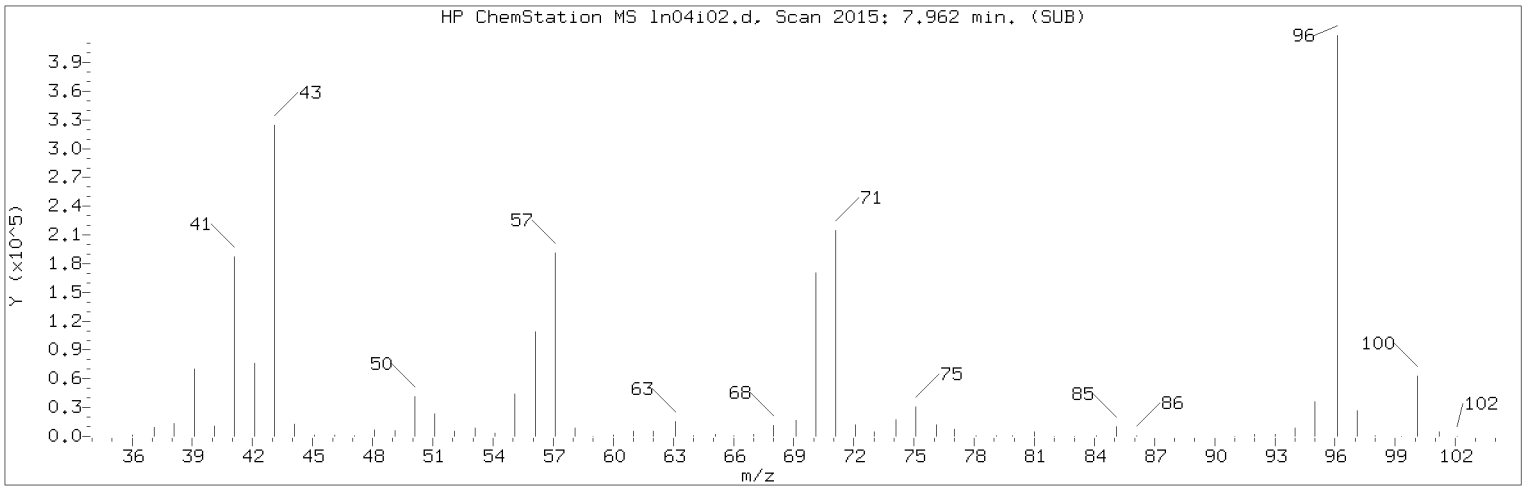
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

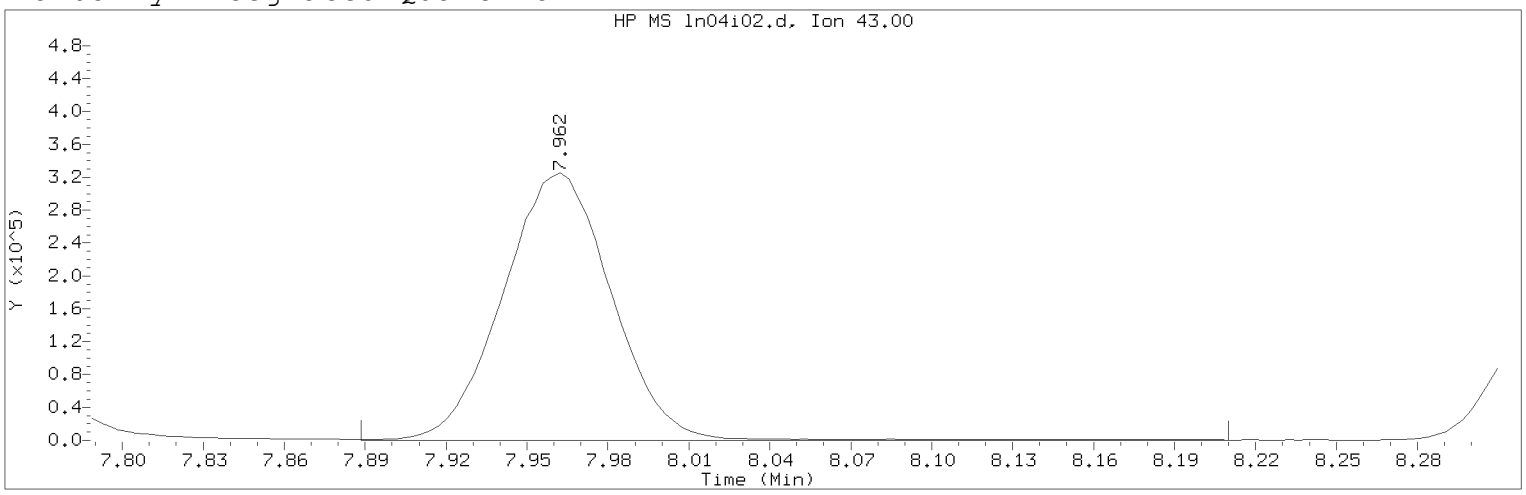
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1058
Retention Time (minutes): 4.885
Quant Ion : 57.00
Area : 414312
On-column Amount (ng) : 98.9070
Integration start scan : 1020 Integration stop scan: 1121
Y at integration start : 485 Y at integration end: 485

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

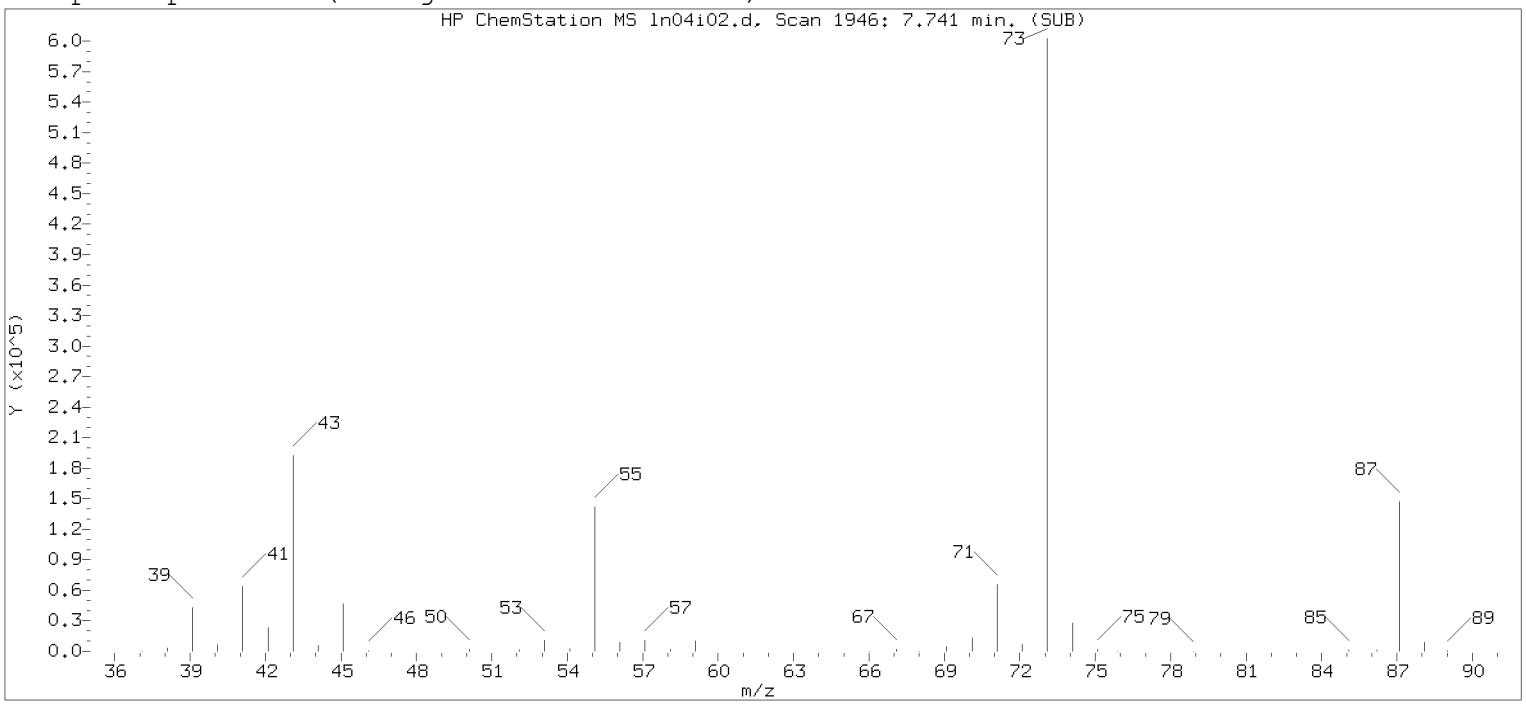
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2015
Retention Time (minutes): 7.962
Quant Ion : 43.00
Area (flag) : 911962MA
On-Column Amount (ng) : 108.1037
Integration start scan : 1991 Integration stop scan: 2091
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

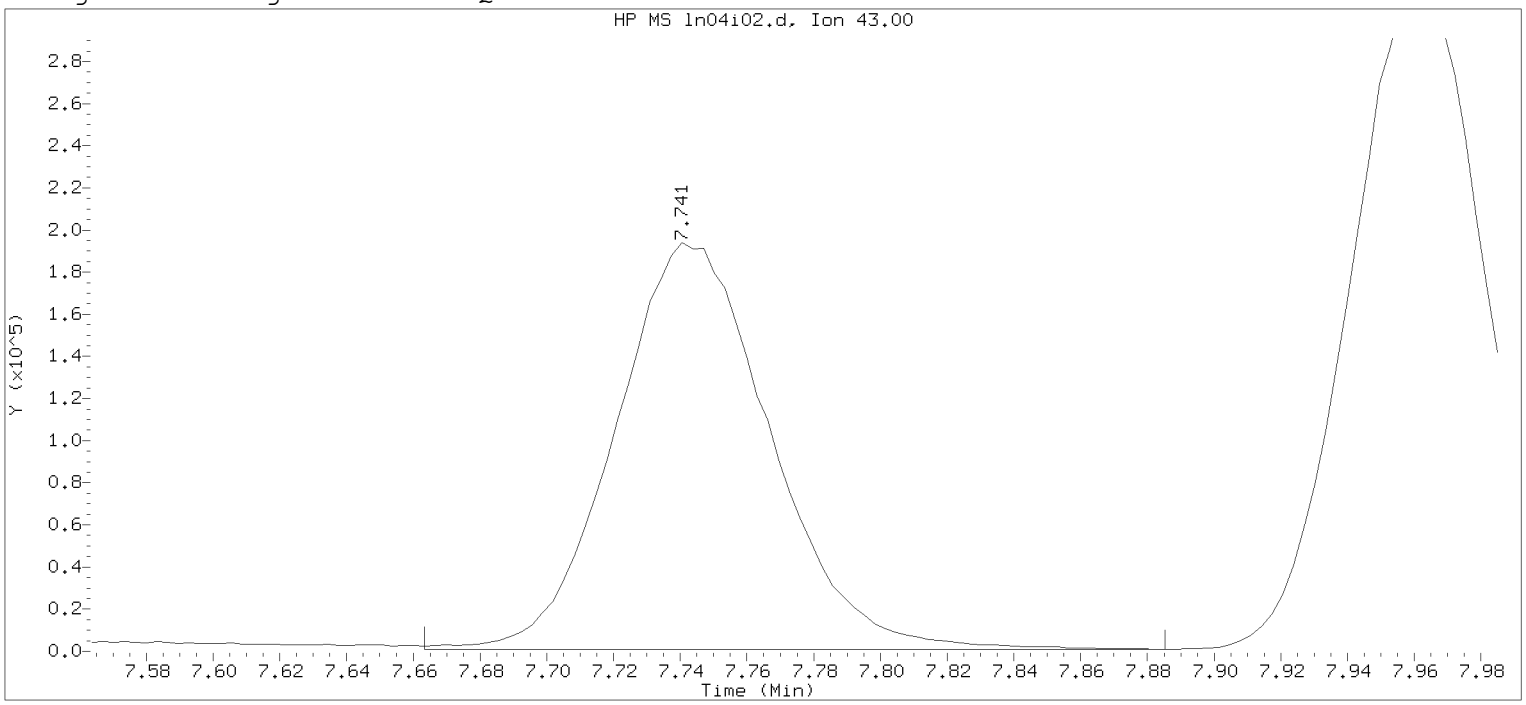
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

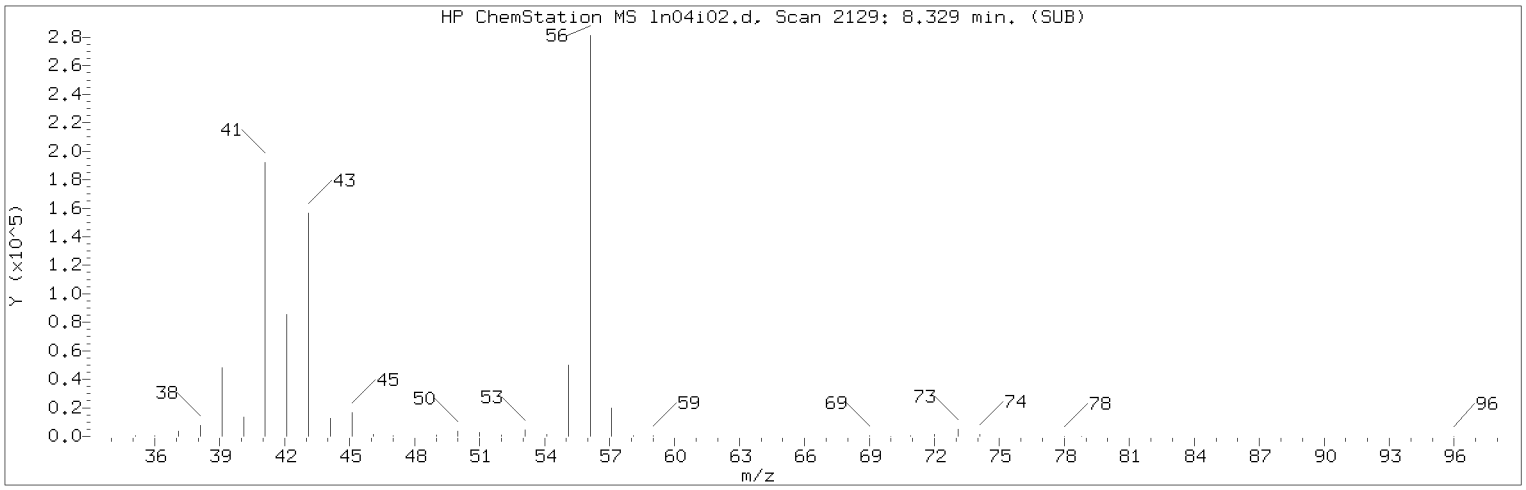
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

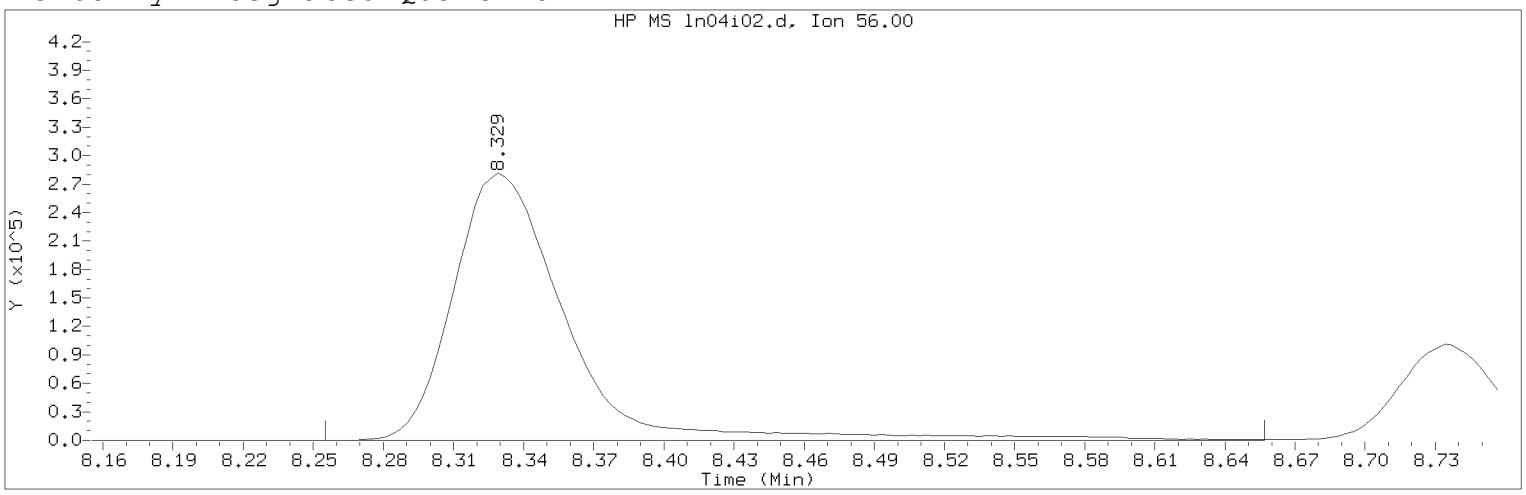
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.741
Quant Ion : 43.00
Area : 623358
On-column Amount (ng) : 101.3435
Integration start scan : 1921 Integration stop scan: 1990
Y at integration start : 845 Y at integration end: 845

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

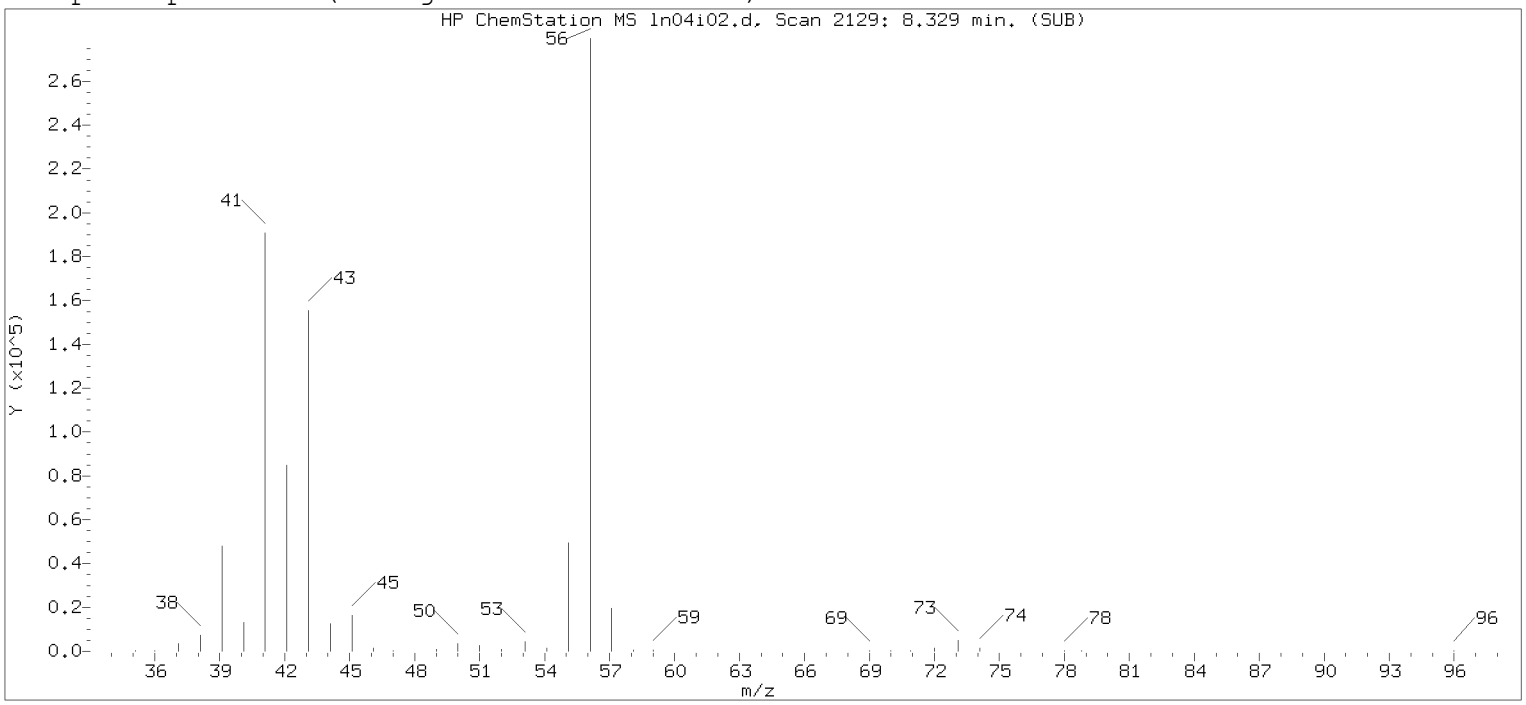
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area (flag) : 944383M
On-Column Amount (ng) : 2911.8124
Integration start scan : 2105 Integration stop scan: 2230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

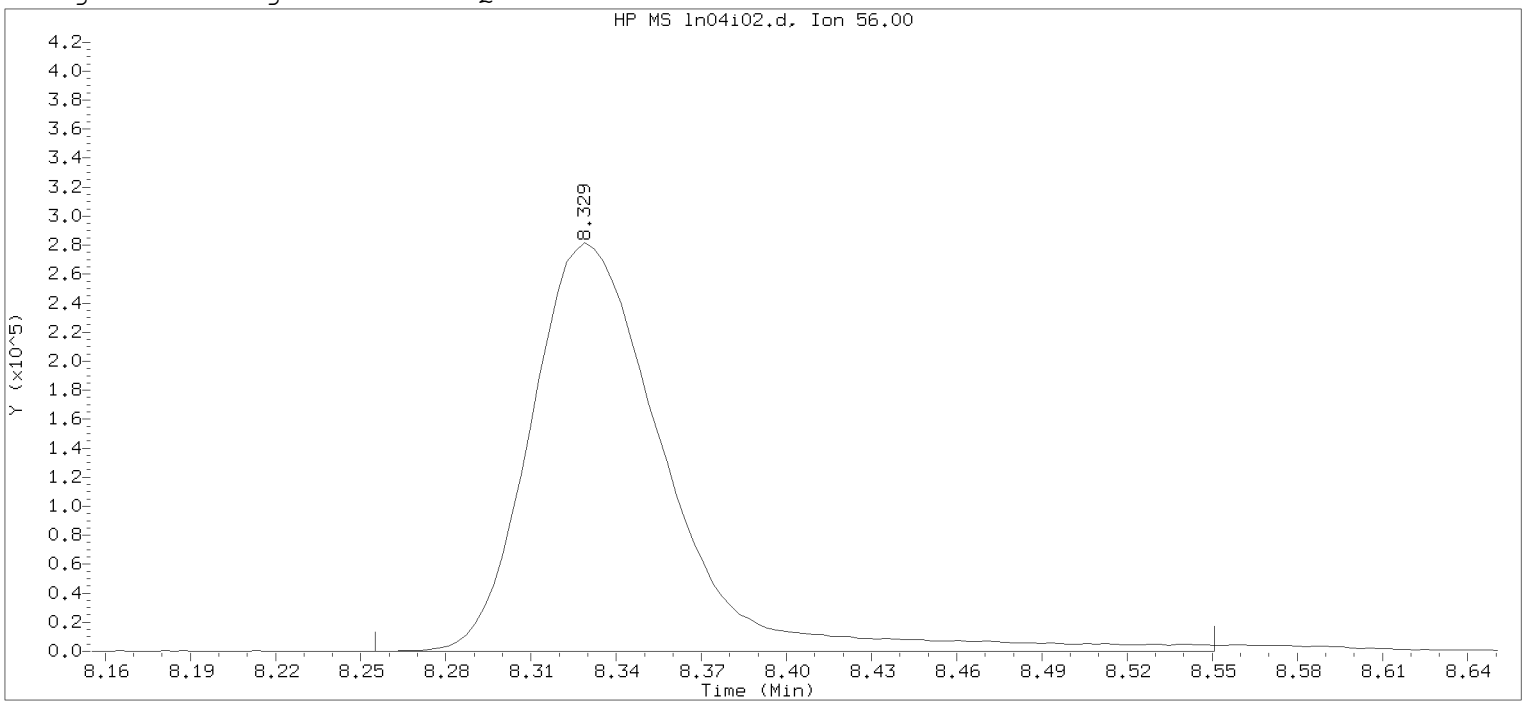
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

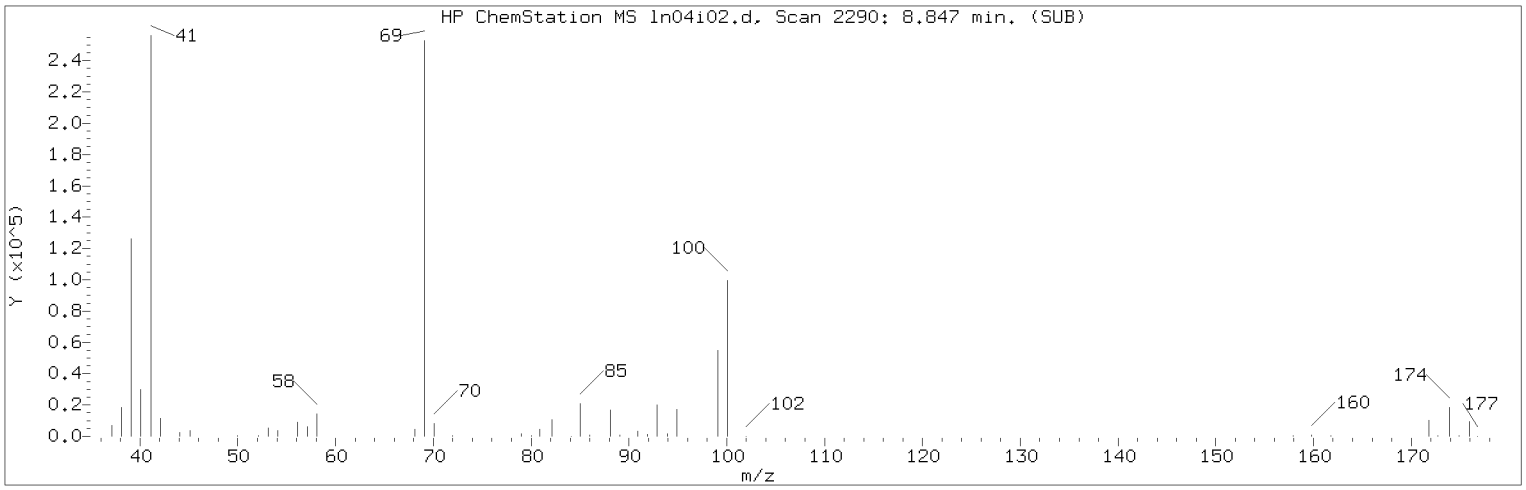
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

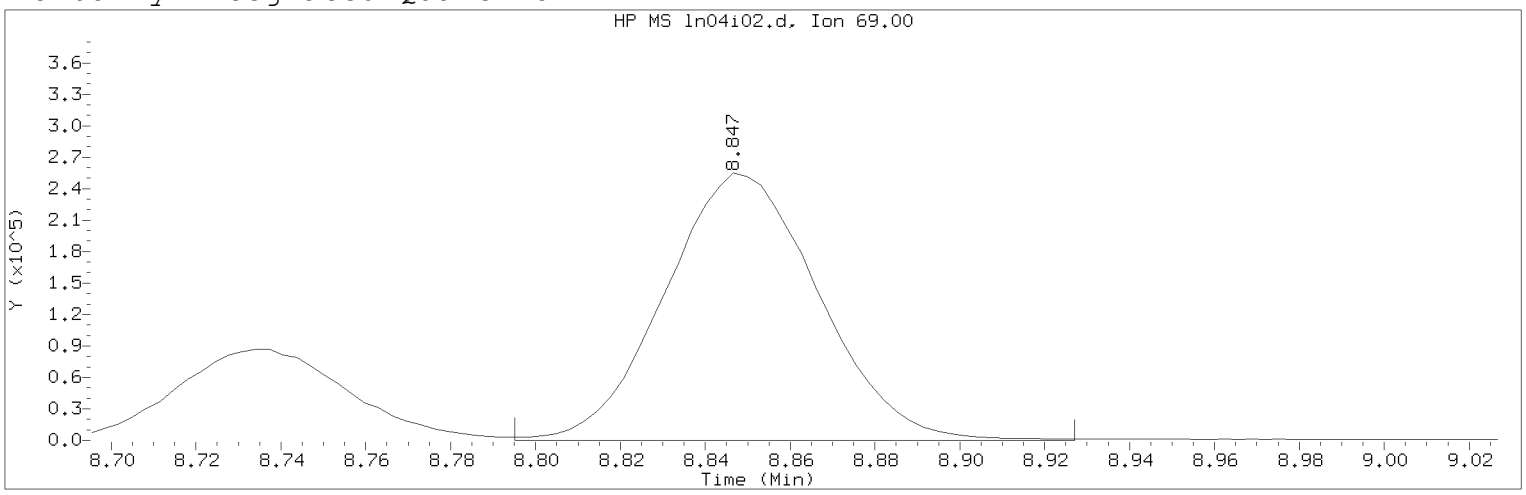
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area : 929615
On-column Amount (ng) : 2668.2803
Integration start scan : 2105 Integration stop scan: 2197
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

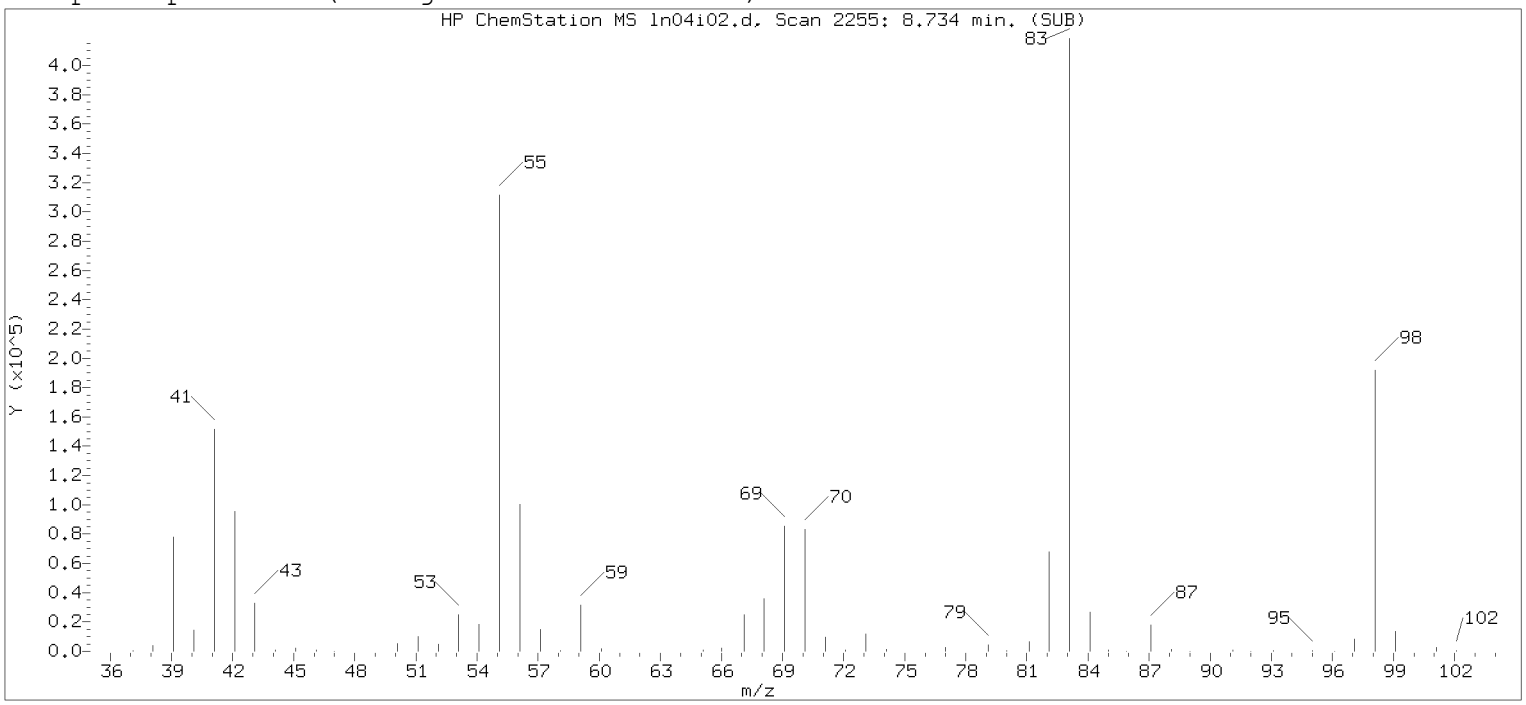
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2290
Retention Time (minutes): 8.847
Quant Ion : 69.00
Area (flag) : 640445A
On-Column Amount (ng) : 108.3344
Integration start scan : 2273 Integration stop scan: 2314
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

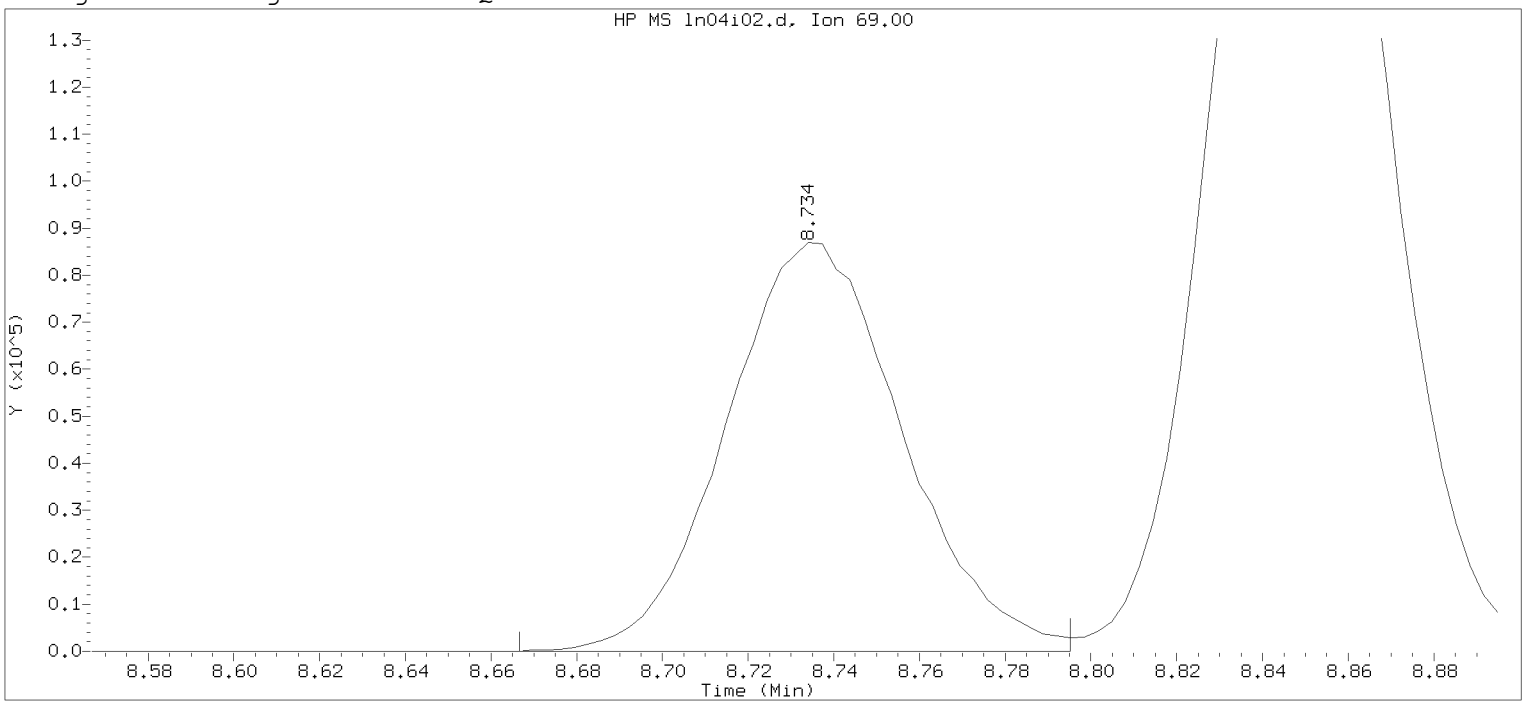
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

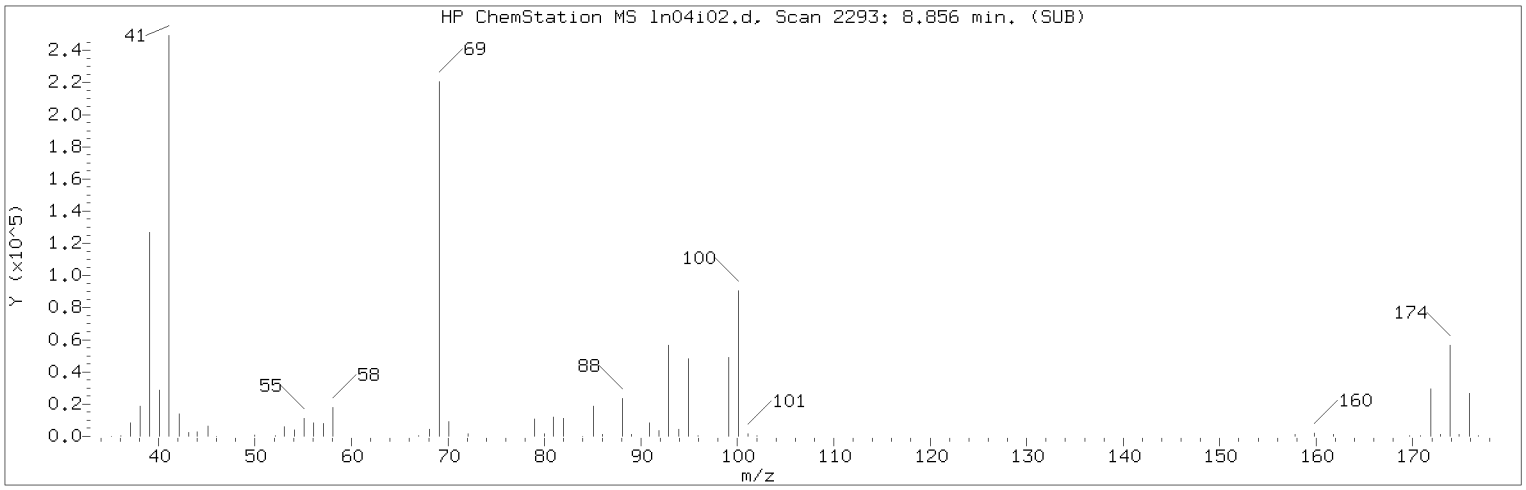
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

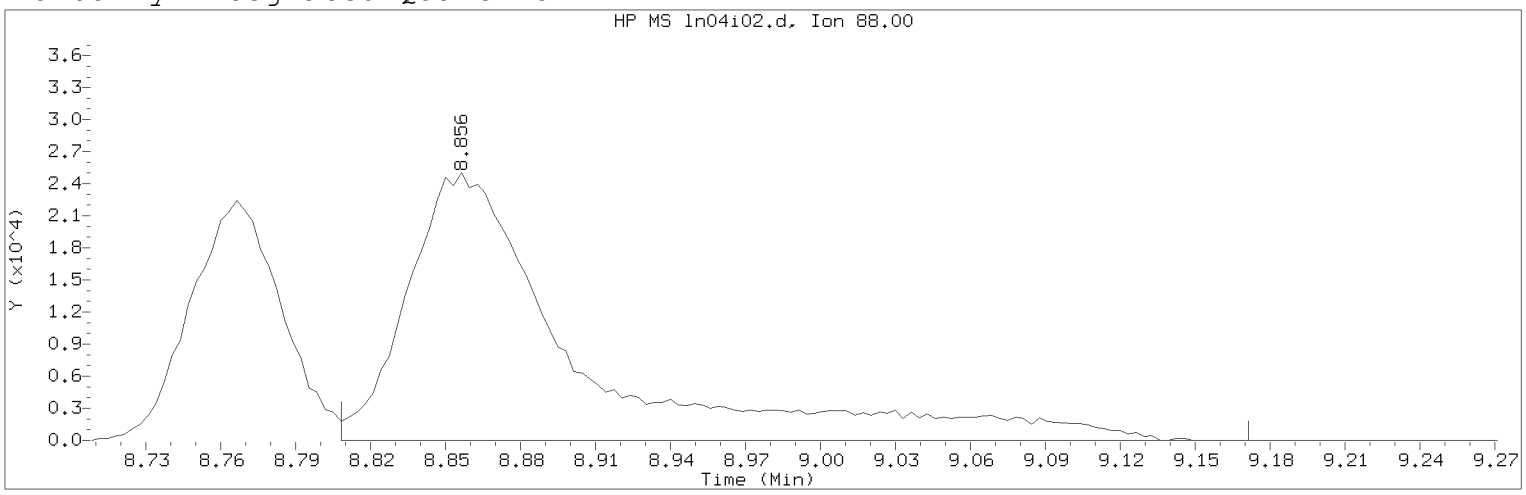
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 247190
On-column Amount (ng) : 97.8749
Integration start scan : 2233 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

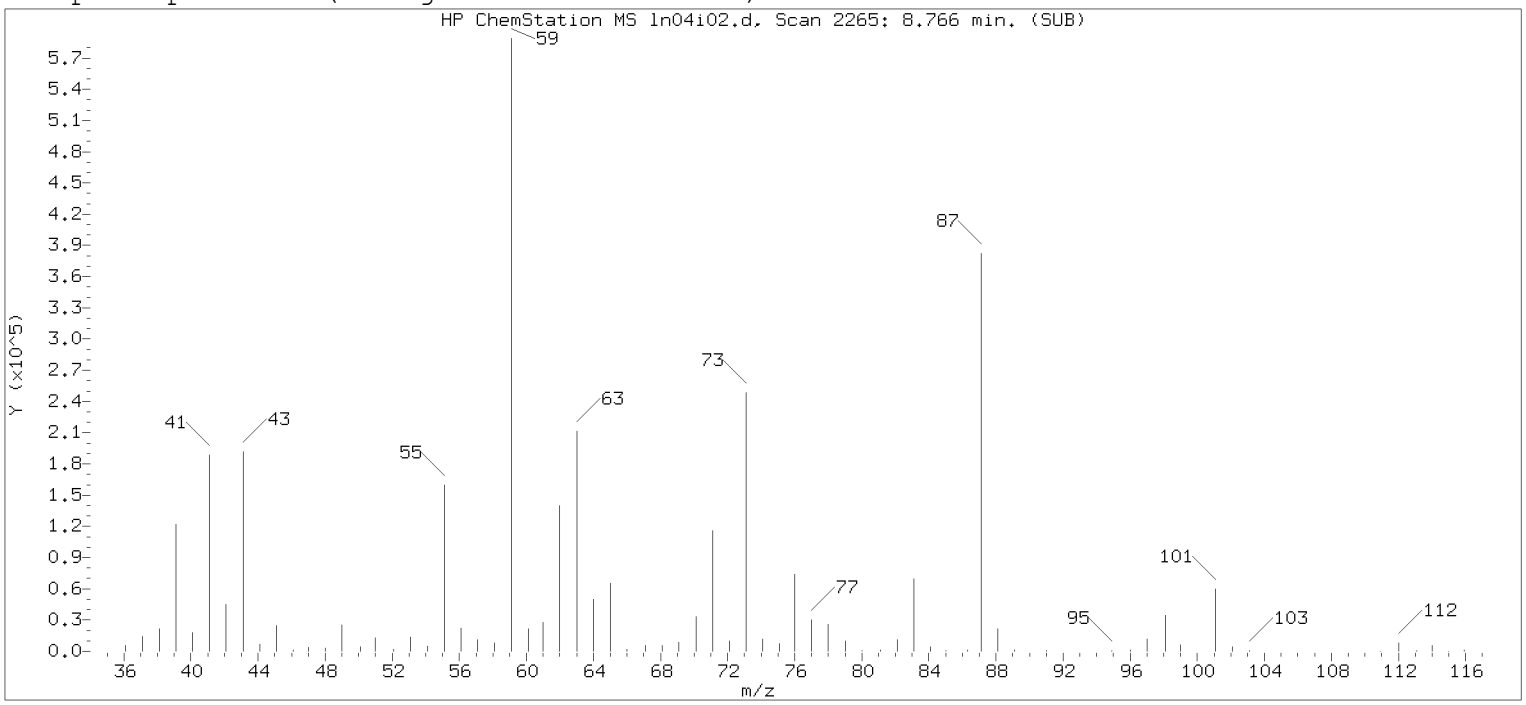
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 117817M
On-Column Amount (ng) : 1321.6466
Integration start scan : 2277 Integration stop scan: 2390
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

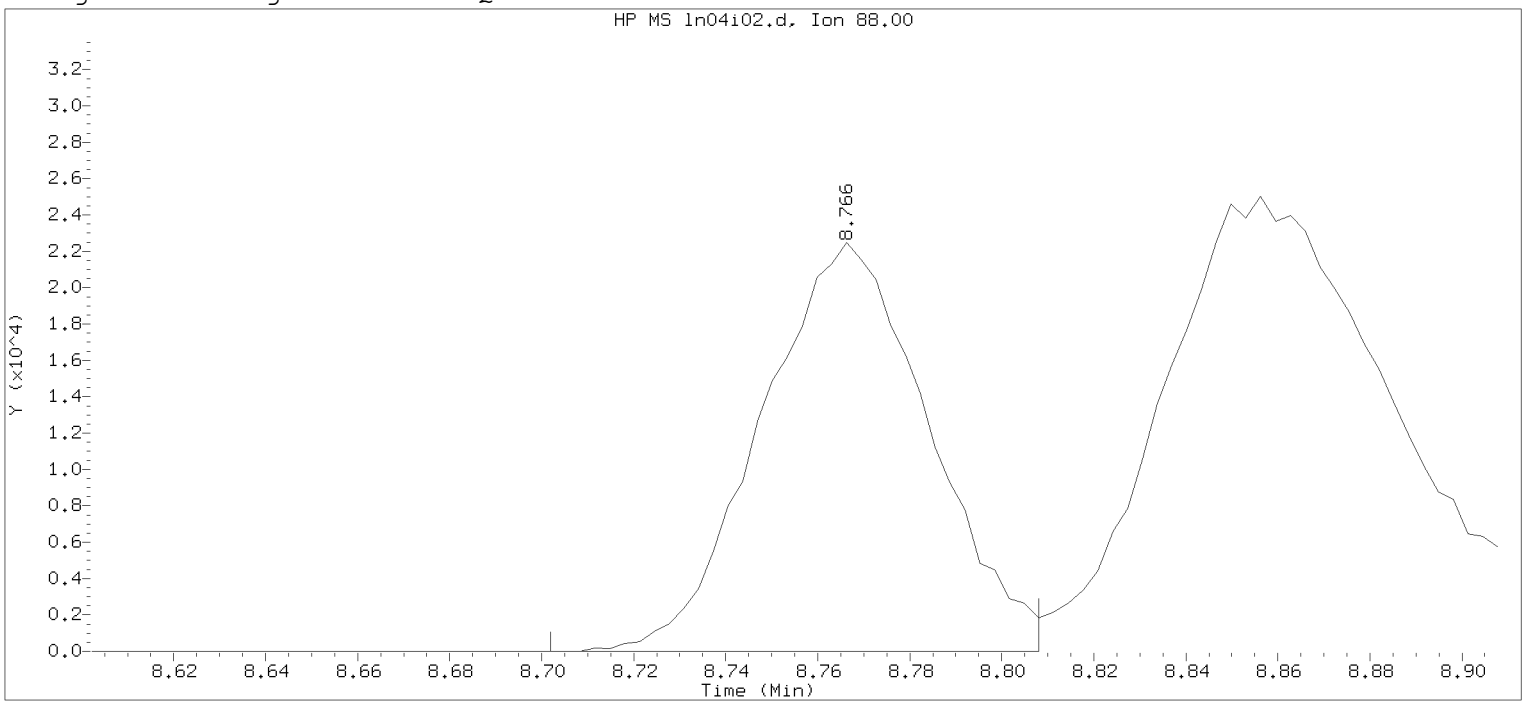
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

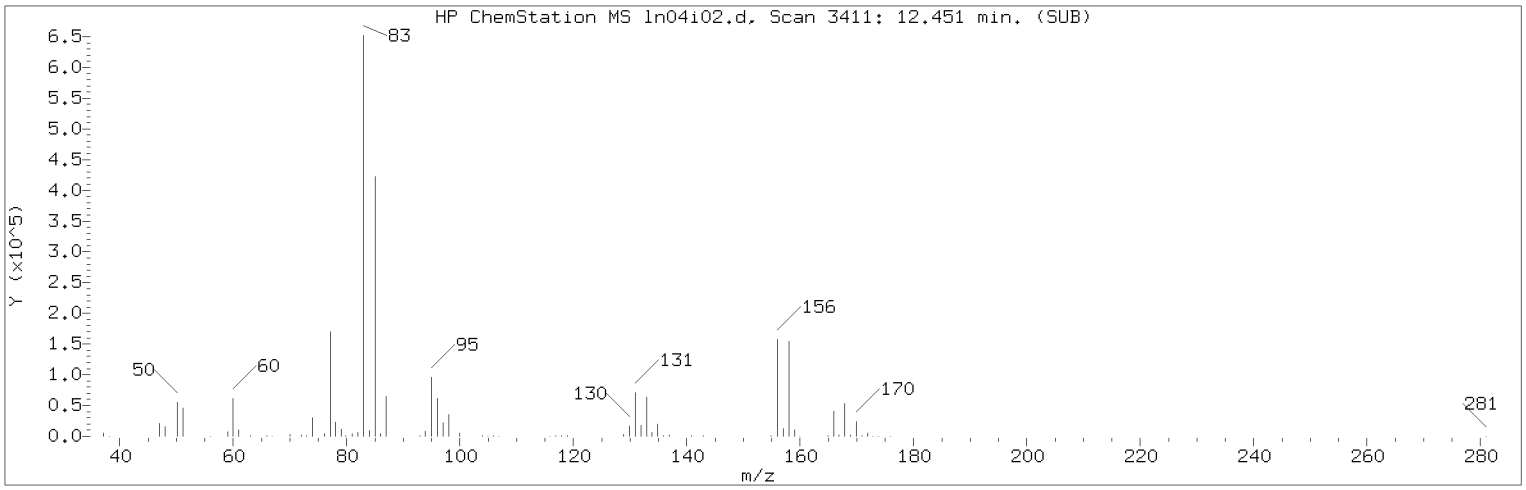
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

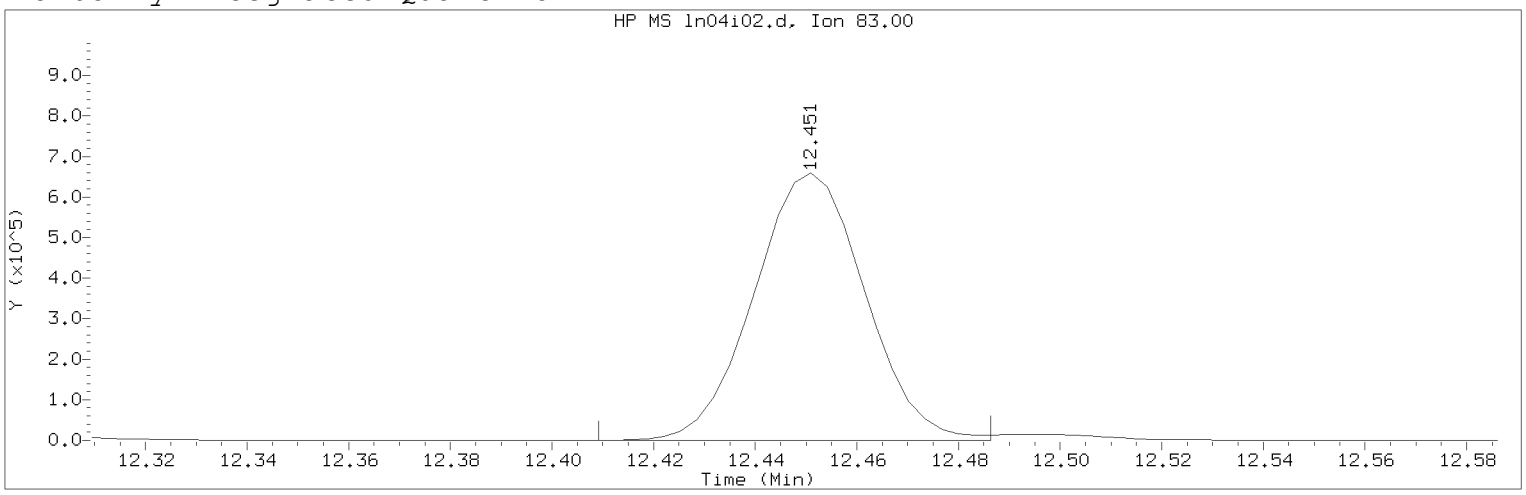
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2265
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area : 56534
On-column Amount (ng) : 746.2694
Integration start scan : 2244 Integration stop scan: 2277
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

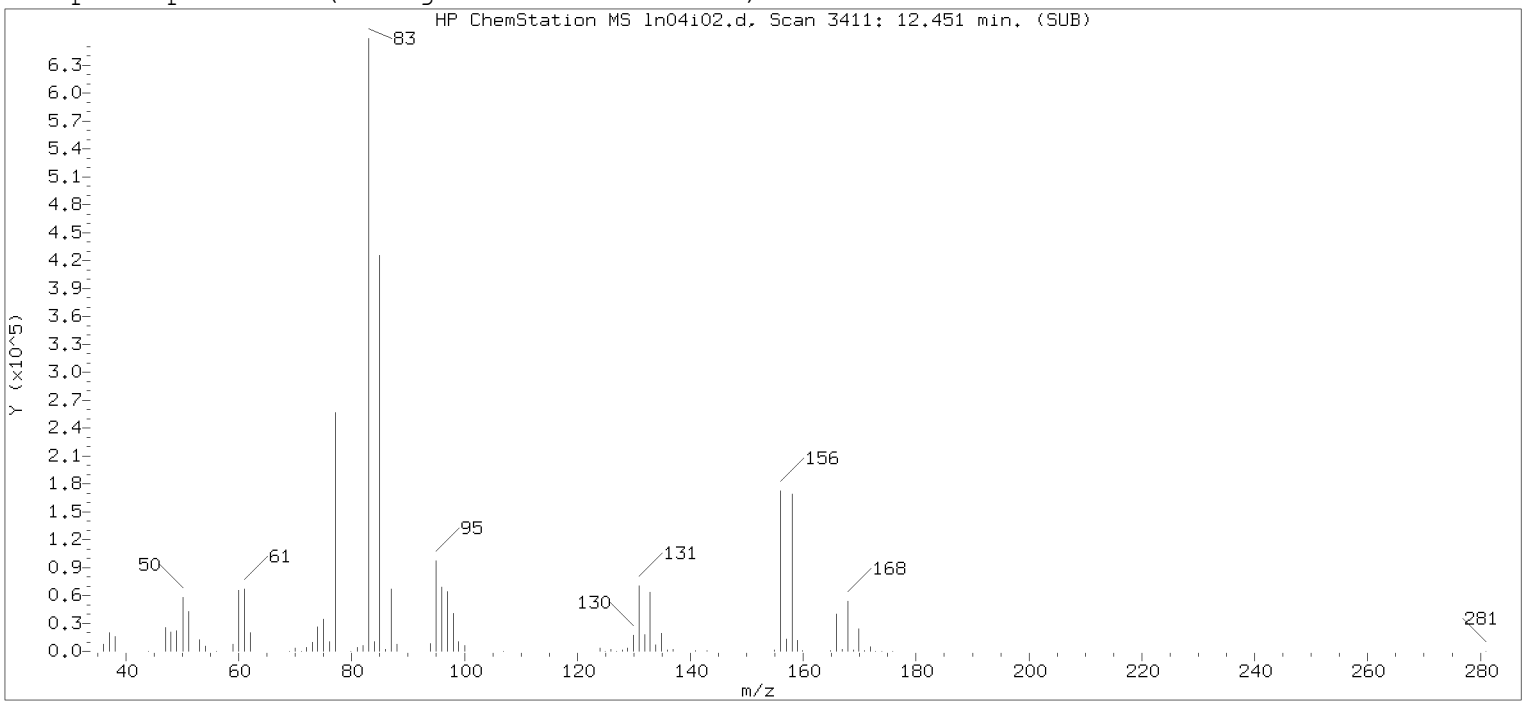
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 995972M
On-Column Amount (ng) : 105.3166
Integration start scan : 3397 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

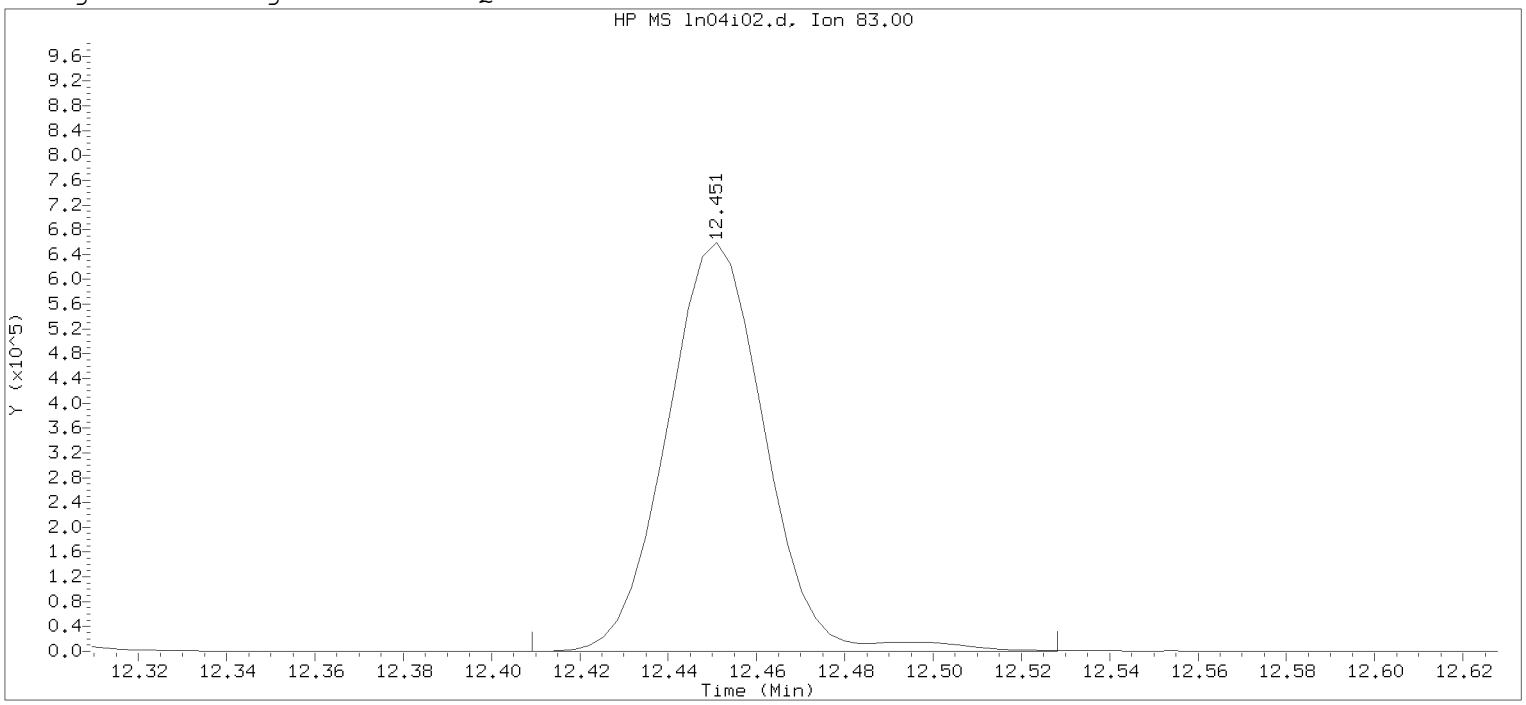
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

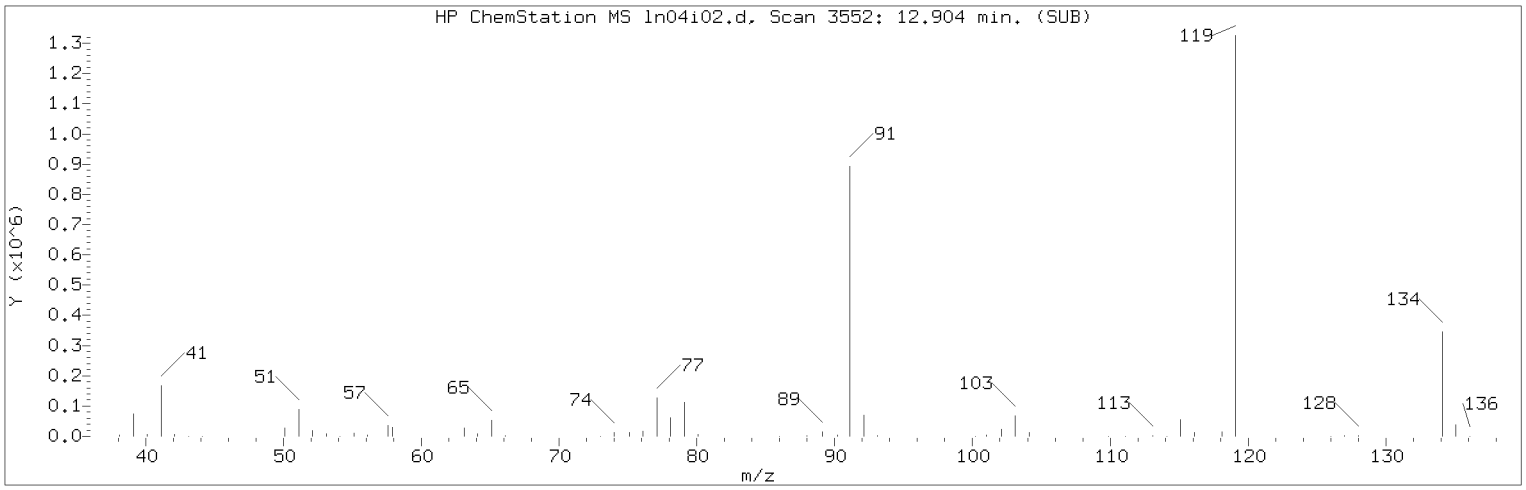
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

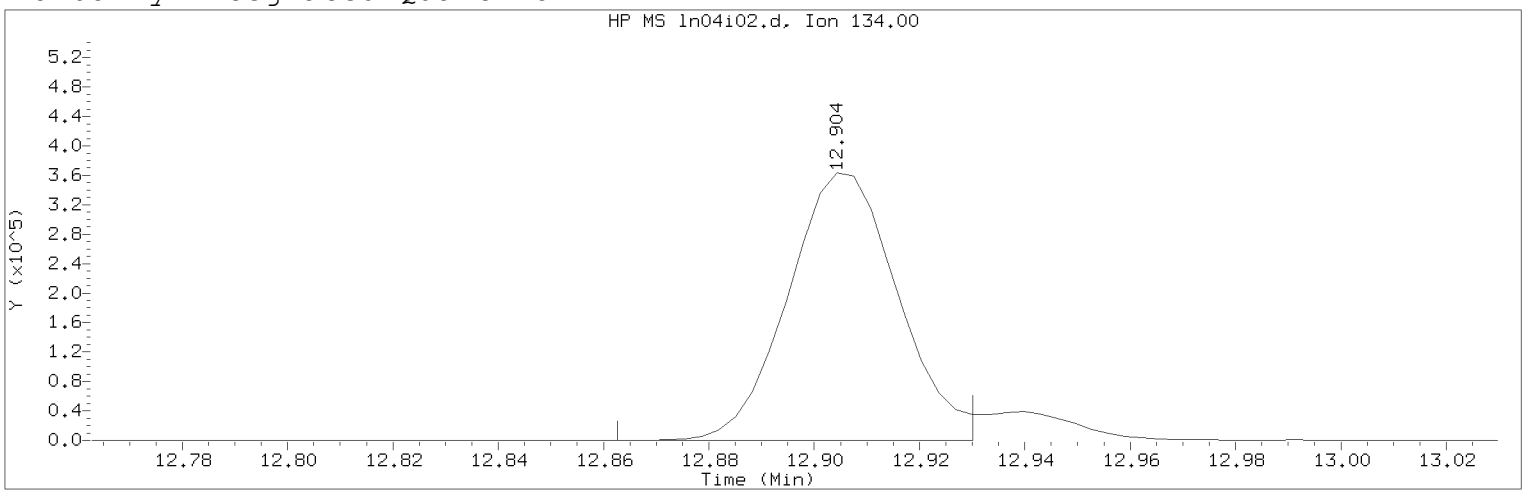
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 1015846
On-column Amount (ng) : 101.1821
Integration start scan : 3397 Integration stop scan: 3434
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:01
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

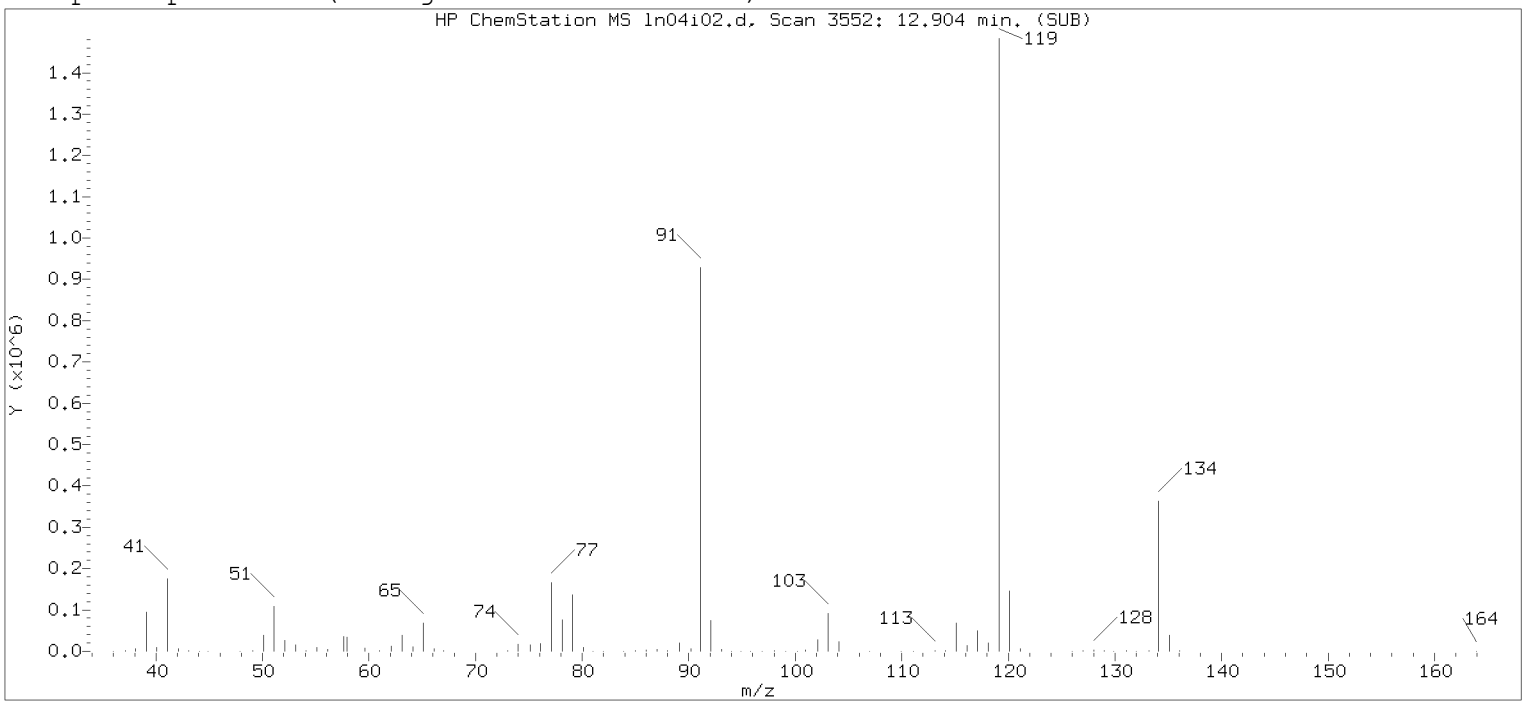
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 526781M
On-Column Amount (ng) : 106.6224
Integration start scan : 3538 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

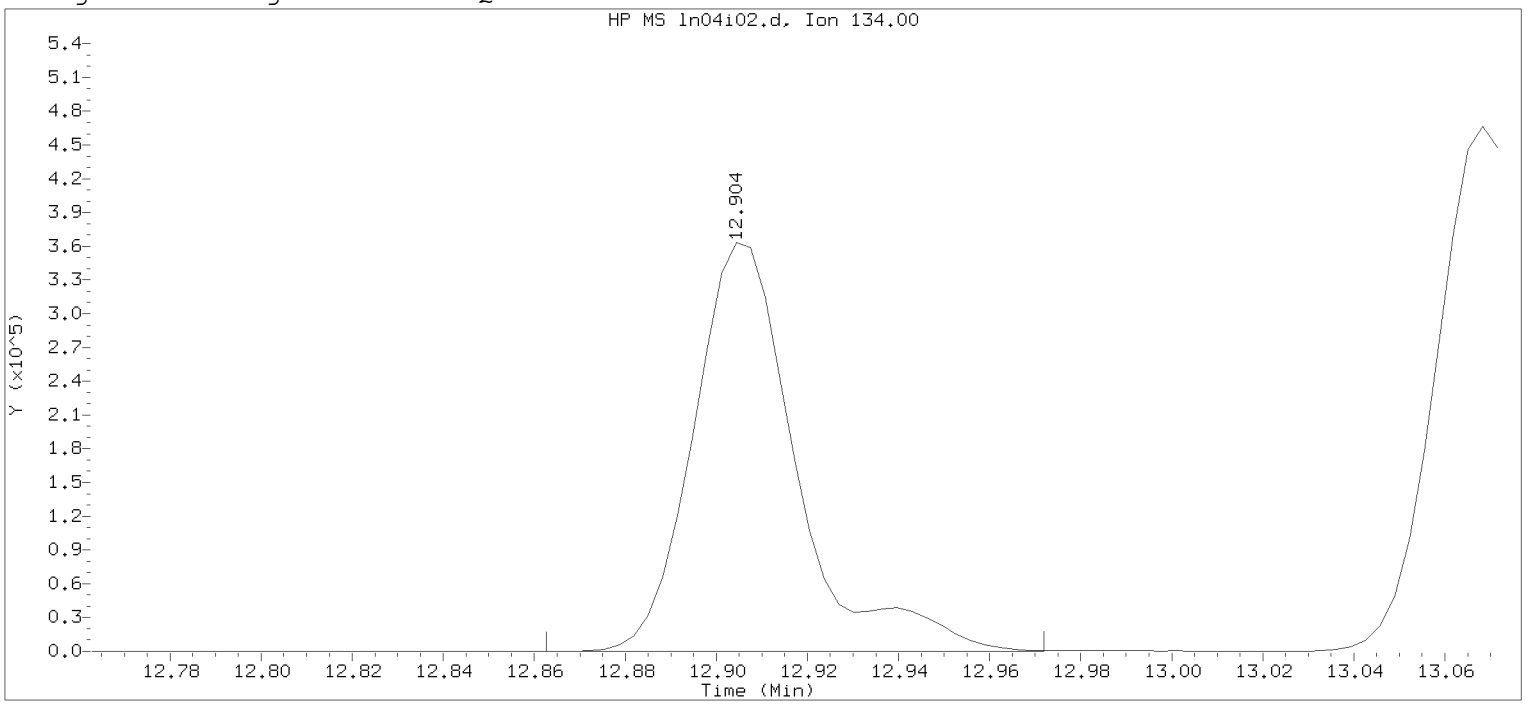
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



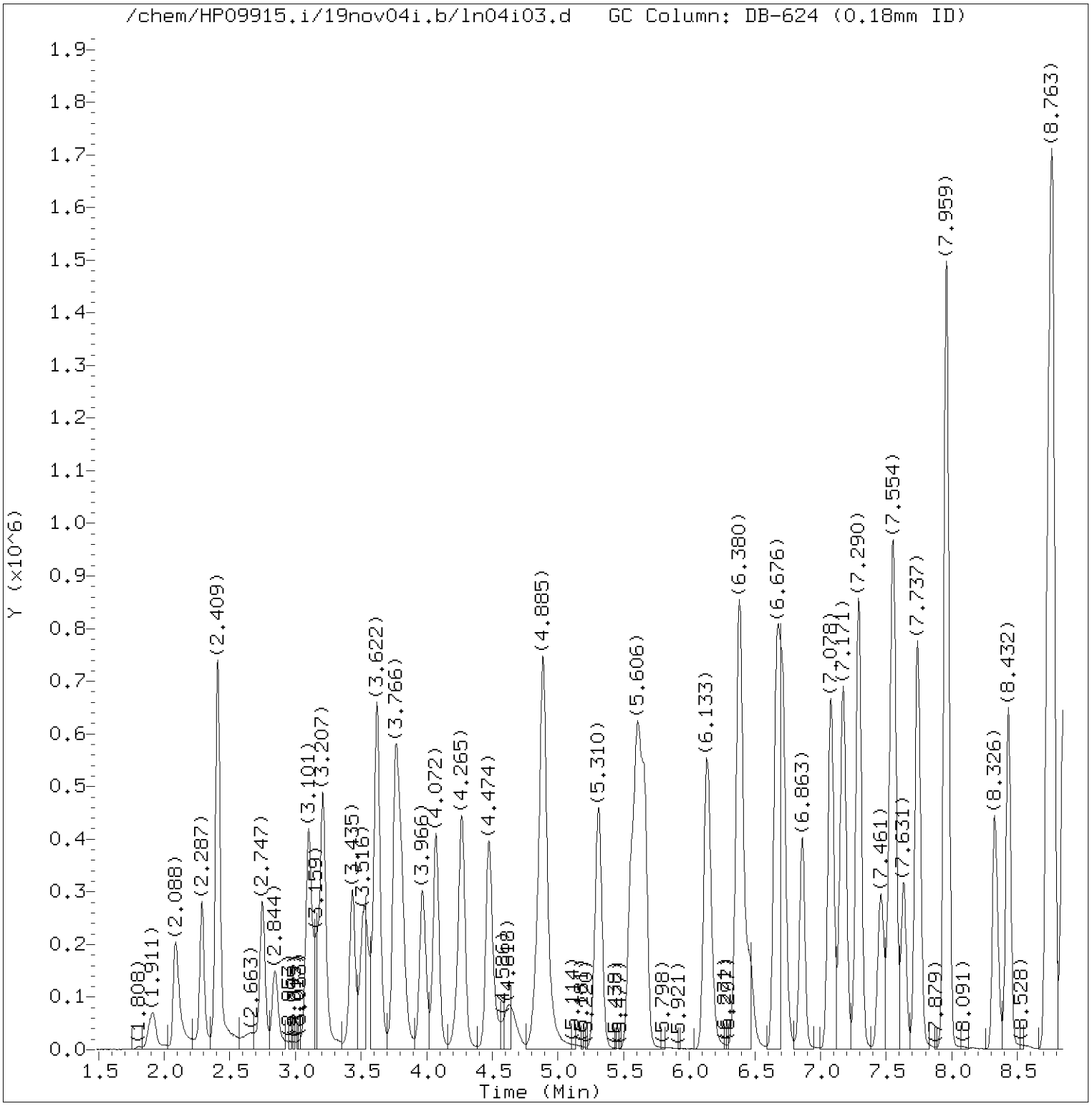
Data File: /chem/HP09915.i/19nov04i.b/ln04i02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 572341
On-column Amount (ng) : 102.7487
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

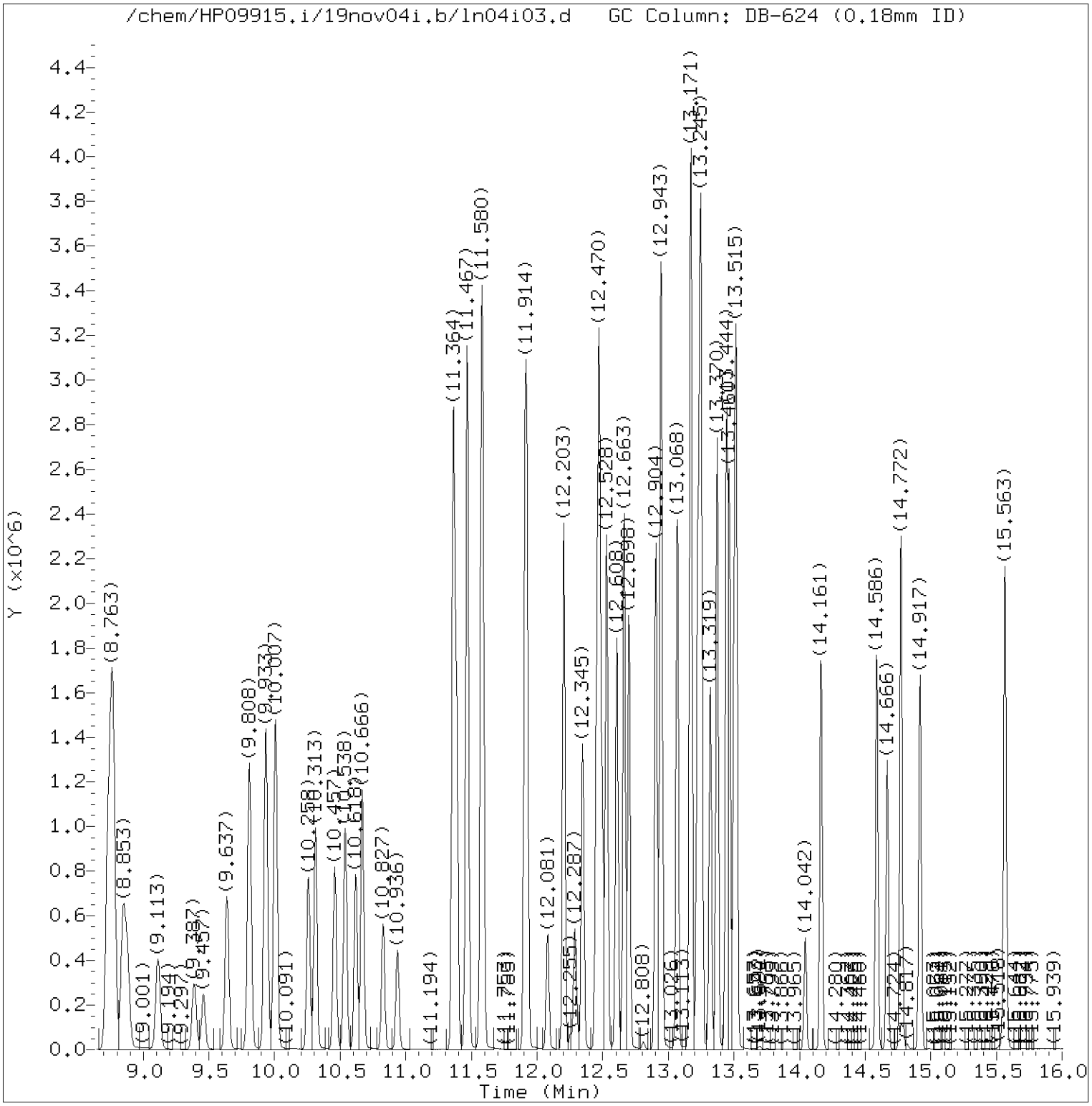
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.088	85	427538M	52.817
4) Chloromethane	(2)	2.287	50	390734	50.084
5) 1,3-Butadiene	(2)	2.406	39	311095M	48.025
6) Vinyl Chloride	(2)	2.409	62	387720	49.794
8) Bromomethane	(2)	2.747	94	272873	48.888
9) Chloroethane	(2)	2.844	64	212325	49.620
10) Dichlorofluoromethane	(2)	3.098	67	509913MA	49.515
12) Trichlorofluoromethane	(2)	3.152	101	433881	51.758
11) n-Pentane	(2)	3.207	43	489872	49.449
14) Ethyl ether	(2)	3.432	59	285731	52.748
15) Freon 123a	(2)	3.525	67	337192	50.003
16) Acrolein	(1)	3.622	56	1052176	519.843
17) 1,1-Dichloroethene	(2)	3.760	96	251911	51.197
17) 1,1-Dichloroethene	(2)	3.760	63	123343	50.001
19) Freon 113	(2)	3.795	101	289343	51.541
18) Acetone	(1)	3.802	58	91161	100.464
22) Methyl Iodide	(2)	3.966	142	518954	50.897
21) 2-Propanol	(1)	3.998	45	165875M	254.283
23) Carbon Disulfide	(2)	4.072	76	956902	51.606
27) Methyl Acetate	(2)	4.245	43	314348	49.603
25) Allyl Chloride	(2)	4.271	41	438915	49.725
28) Methylene Chloride	(2)	4.474	84	295055	50.382
29)*t-Butyl alcohol-d10	(1)	4.509	65	269779M	250.000
30) t-Butyl alcohol	(1)	4.625	59	291988	257.078
31) Acrylonitrile	(2)	4.834	53	175969	51.611
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	957096	51.225
32) trans-1,2-Dichloroethene	(2)	4.888	96	287617	50.529
34) n-Hexane	(2)	5.313	57	463732M	52.364
36) 1,1-Dichloroethane	(2)	5.551	63	505667	50.924
38) di-Isopropyl ether	(2)	5.609	45	985238	51.444
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	462216	51.882
40) Ethyl t-butyl ether	(2)	6.133	59	965104	51.927
43) 1,2-Dichloroethene (Total)	(2)		96	610267	101.029
44) 2-Butanone	(2)	6.361	43	453665	103.655
42) cis-1,2-Dichloroethene	(2)	6.380	96	322650	50.501
45) 2,2-Dichloropropane	(2)	6.400	77	400546	51.890
47) Propionitrile	(1)	6.464	54	357876	252.881
48) Methacrylonitrile	(2)	6.670	67	475036	129.160

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	173386	51.180
50) Tetrahydrofuran	(1)	6.721	71	126019	98.581
51) Chloroform	(2)	6.859	83	484828	51.048
52)$Dibromofluoromethane	(2)	7.075	113	282824	49.838
52)$Dibromofluoromethane	(2)	7.075	111	289462	50.026
53) 1,1,1-Trichloroethane	(2)	7.085	97	420986	51.935
54) Cyclohexane	(2)	7.171	56	567043	52.311
54) Cyclohexane	(2)	7.175	84	491699	52.219
54) Cyclohexane	(2)	7.175	69	175289	52.282
56) Carbon Tetrachloride	(2)	7.284	117	361443	52.574
55) 1,1-Dichloropropene	(2)	7.294	75	401799	51.176
58) Isobutyl Alcohol	(1)	7.461	41	242114	633.444
57)$1,2-Dichloroethane-d4	(2)	7.528	102	72846	50.367
57)$1,2-Dichloroethane-d4	(2)	7.531	65	321603	49.897
57)$1,2-Dichloroethane-d4	(2)	7.531	104	46134	49.939
60) Benzene	(2)	7.557	78	1202424	50.927
61) 1,2-Dichloroethane	(2)	7.638	62	372805	49.091
61) 1,2-Dichloroethane	(2)	7.634	98	37850	50.364
65) t-Amyl methyl ether	(2)	7.737	73	971399	52.071
67) n-Heptane	(2)	7.956	43	432248MA	52.247
66)*Fluorobenzene	(2)	7.959	96	1160755	50.000
69) n-Butanol	(1)	8.326	56	438437M	1332.750
71) Trichloroethene	(2)	8.432	95	302634	50.906
72) Methylcyclohexane	(2)	8.734	83	574135	52.056
72) Methylcyclohexane	(2)	8.731	98	260583	52.213
73) 1,2-Dichloropropane	(2)	8.773	63	306937	51.196
76) Methyl Methacrylate	(2)	8.847	69	306086A	52.795
75) 1,4-Dioxane	(1)	8.853	88	59876M	662.196
74) Dibromomethane	(2)	8.879	93	199498	51.428
78) Bromodichloromethane	(2)	9.113	83	366892	52.707
79) 2-Nitropropane	(2)	9.390	41	235097	111.505
80) 2-Chloroethyl Vinyl Ether	(2)	9.457	63	134015	52.046
81) cis-1,3-Dichloropropene	(2)	9.637	75	495055	53.547
82) 4-Methyl-2-pentanone	(2)	9.808	43	1004831	108.769
83)$Toluene-d8	(3)	9.933	98	1189125	50.240
83)$Toluene-d8	(3)	9.933	100	767119	50.033
88) Toluene	(3)	10.007	92	764927	51.549
90) 1,3-Dichloropropene (total)	(3)		100	956669	108.348

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	461614	54.801
91) Ethyl Methacrylate	(3)	10.313	69	554039	54.121
92) 1,1,2-Trichloroethane	(3)	10.461	97	291480	51.810
93) Tetrachloroethene	(3)	10.538	166	321895	51.220
94) 1,3-Dichloropropane	(3)	10.618	76	494204	51.449
96) 2-Hexanone	(3)	10.670	43	761734	111.475
97) Dibromochloromethane	(3)	10.827	129	315765	54.792
99) 1,2-Dibromoethane	(3)	10.936	107	319699	52.331
100)*Chlorobenzene-d5	(3)	11.361	117	904578	50.000
101) 1-Chlorohexane	(3)	11.364	91	399510	50.116
102) Chlorobenzene	(3)	11.387	112	864419	51.514
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	299375	54.148
104) Ethylbenzene	(3)	11.467	91	1475718	52.031
106) m+p-Xylene	(3)	11.580	106	1167470	104.636
108) Xylene (Total)	(3)		106	1748839	157.389
107) o-Xylene	(3)	11.907	106	581369	52.752
109) Styrene	(3)	11.924	104	981189	53.877
110) Bromoform	(3)	12.081	173	229903	53.387
111) Isopropylbenzene	(3)	12.203	105	1456789	52.702
112) Cyclohexanone	(1)	12.287	55	231776	654.496
114)$4-Bromofluorobenzene	(3)	12.345	95	446156	49.781
114)$4-Bromofluorobenzene	(3)	12.348	174	370576	49.875
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	482004M	52.727
115) Bromobenzene	(4)	12.464	156	378400	52.027
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	383692	136.075
117) 1,2,3-Trichloropropane	(4)	12.496	110	145151	51.744
119) n-Propylbenzene	(4)	12.528	91	1662625	52.323
120) 2-Chlorotoluene	(4)	12.608	126	350943	51.988
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	1225419	53.065
121) 4-Chlorotoluene	(4)	12.698	126	361669	51.471
124) tert-Butylbenzene	(4)	12.904	134	253906M	53.165
125) Pentachloroethane	(4)	12.940	167	227064	55.216
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	1291883	53.080
127) sec-Butylbenzene	(4)	13.068	105	1512547	53.076
129) 1,3-Dichlorobenzene	(4)	13.168	146	693790	51.911
130) p-Isopropyltoluene	(4)	13.174	119	1315828	53.371
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	483927	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	714495	51.569

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

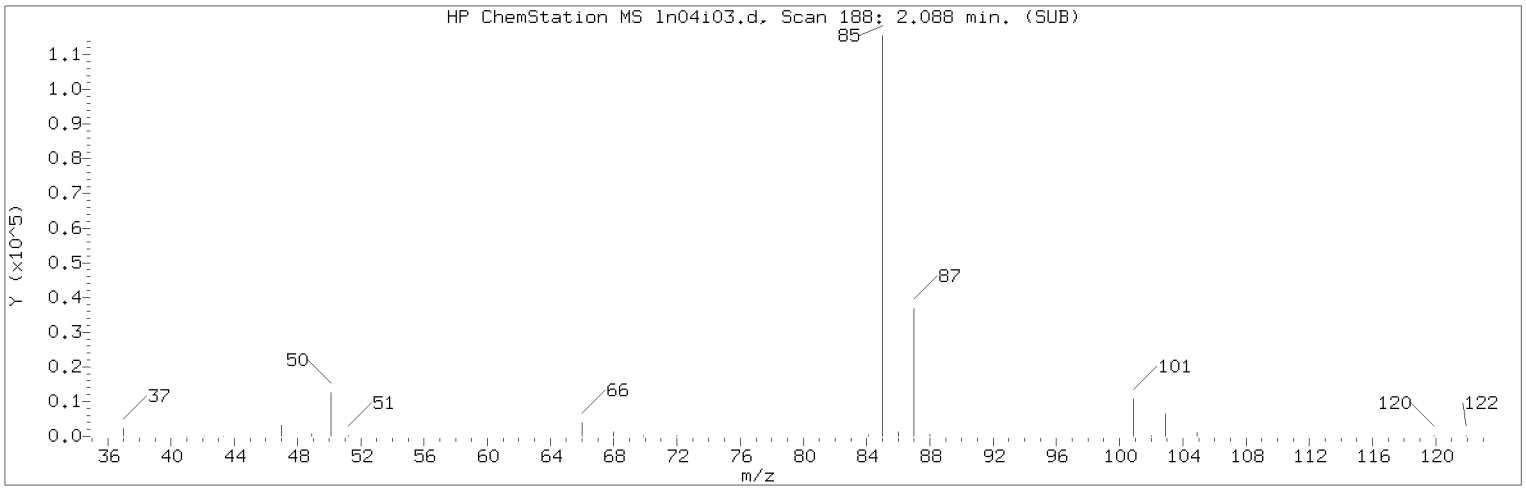
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

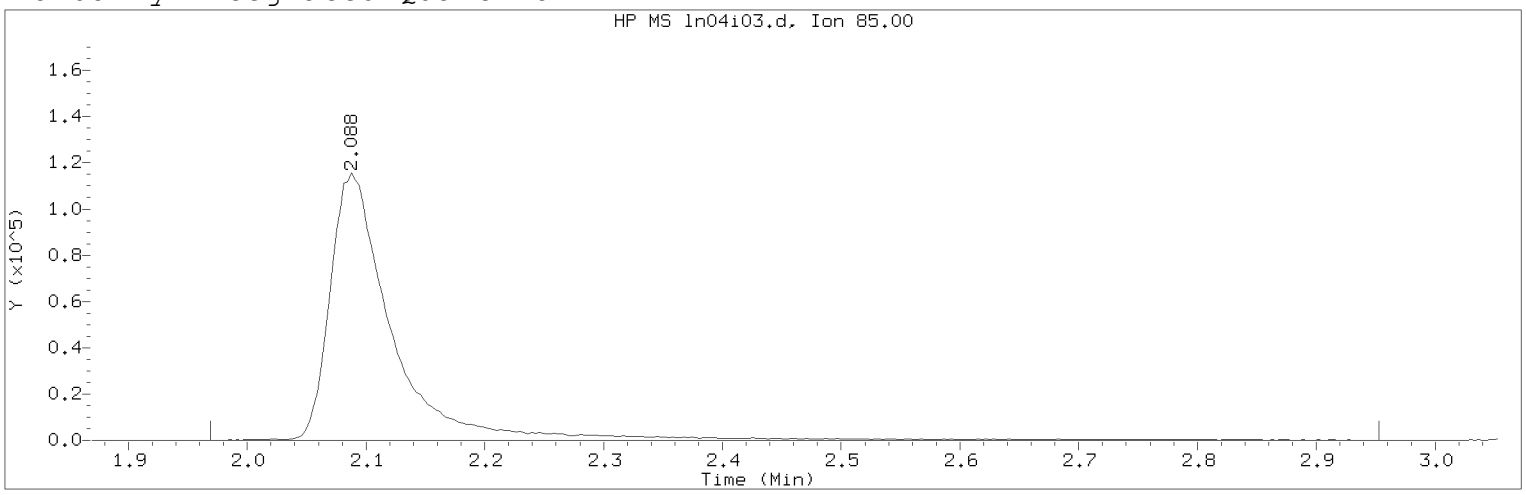
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.251	105	1342367	52.068
135) Benzyl Chloride	(4)	13.319	91	1059398	54.274
136) 1,3-Diethylbenzene	(4)	13.370	119	832647	51.895
141) Diethylbenzene (total)	(4)		100	2415817	155.686
137) 1,4-Diethylbenzene	(4)	13.441	119	877553	51.623
139) n-Butylbenzene	(4)	13.464	92	652599	51.769
138) 1,2-Dichlorobenzene	(4)	13.502	146	682120	51.722
140) 1,2-Diethylbenzene	(4)	13.518	119	705617	52.168
142) 1,2-Dibromo-3-chloropropane	(4)	14.042	75	108388	54.164
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	516839	51.009
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	503797	51.136
147) Hexachlorobutadiene	(4)	14.666	225	217236	46.700
148) Naphthalene	(4)	14.772	128	1689758	53.350
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	498430	51.993
150) 2-Methylnaphthalene	(4)	15.563	142	1079055	55.325

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

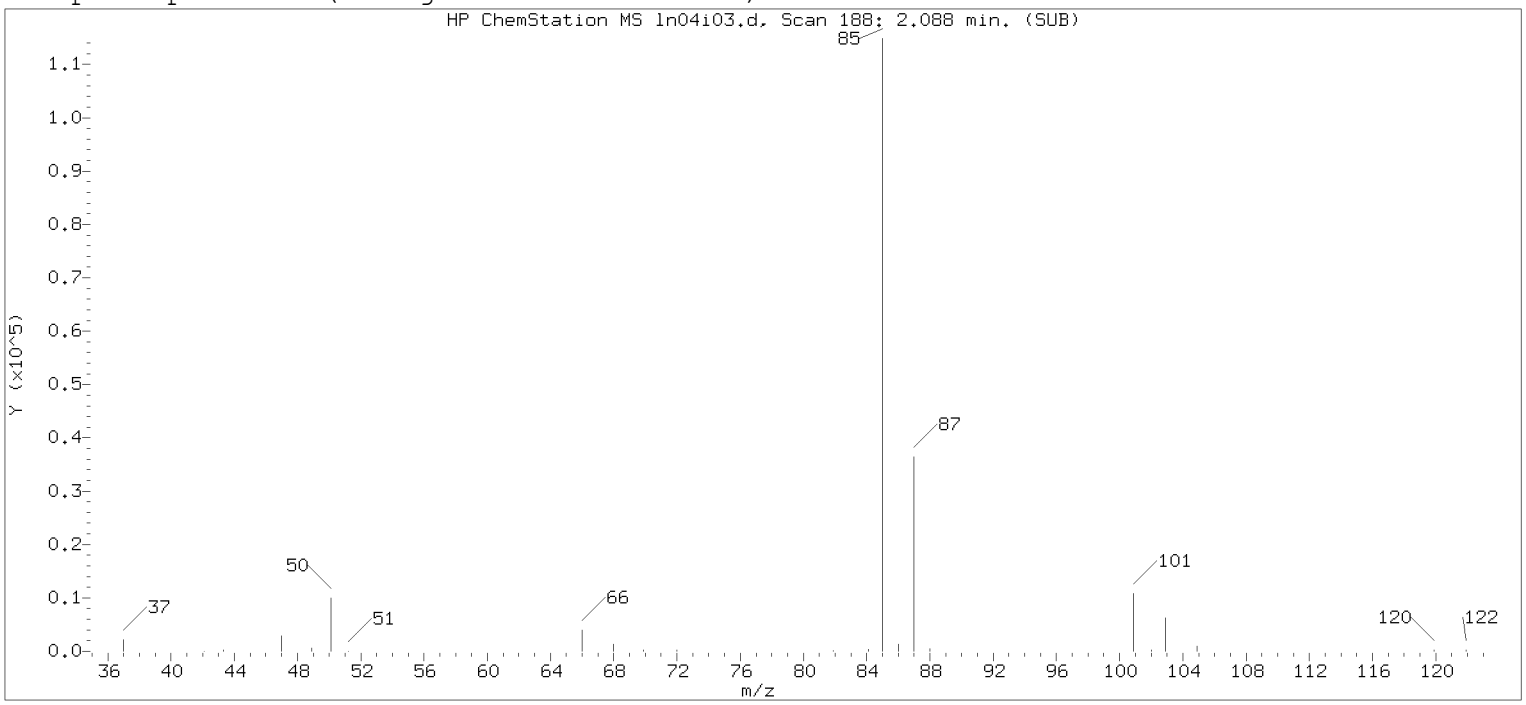
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 188
Retention Time (minutes): 2.088
Quant Ion : 85.00
Area (flag) : 427538M
On-Column Amount (ng) : 52.8165
Integration start scan : 150 Integration stop scan: 456
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

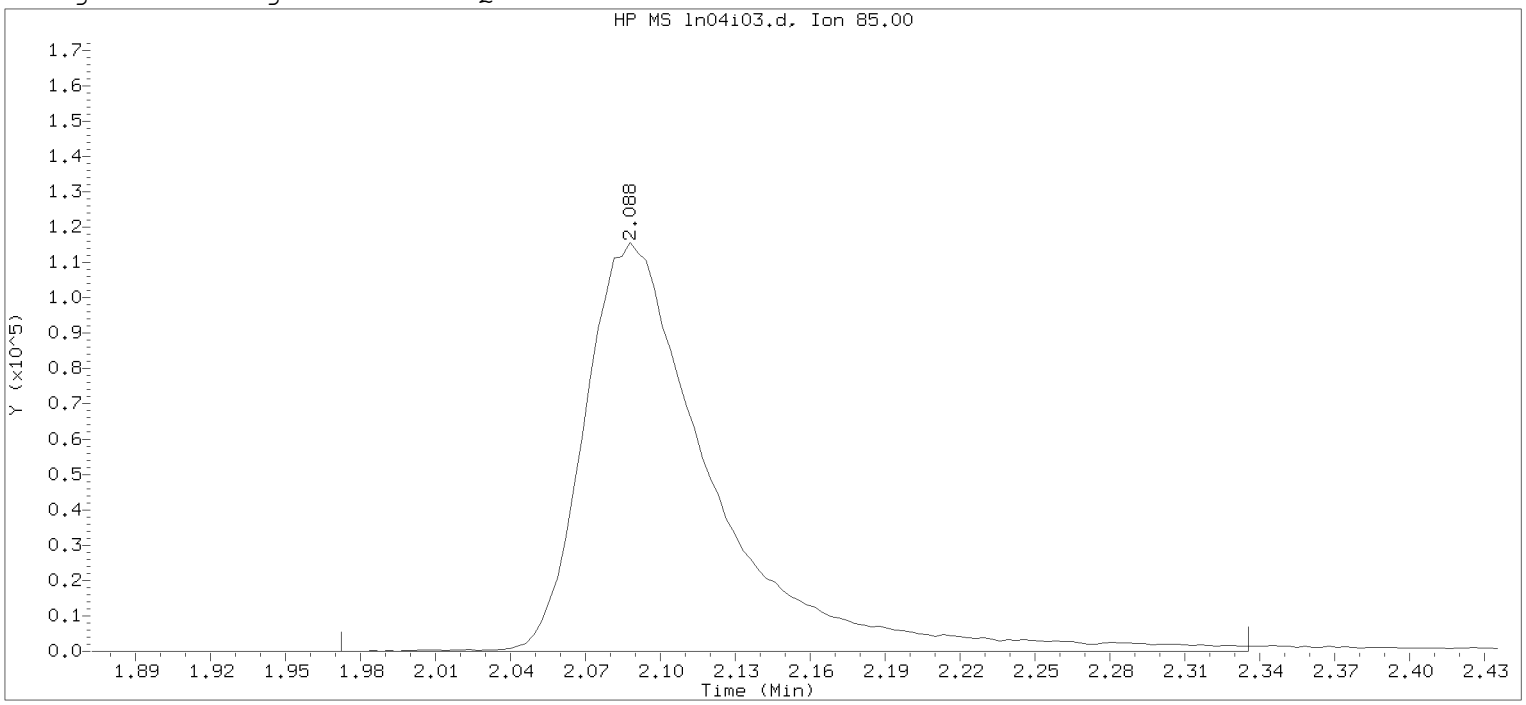
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

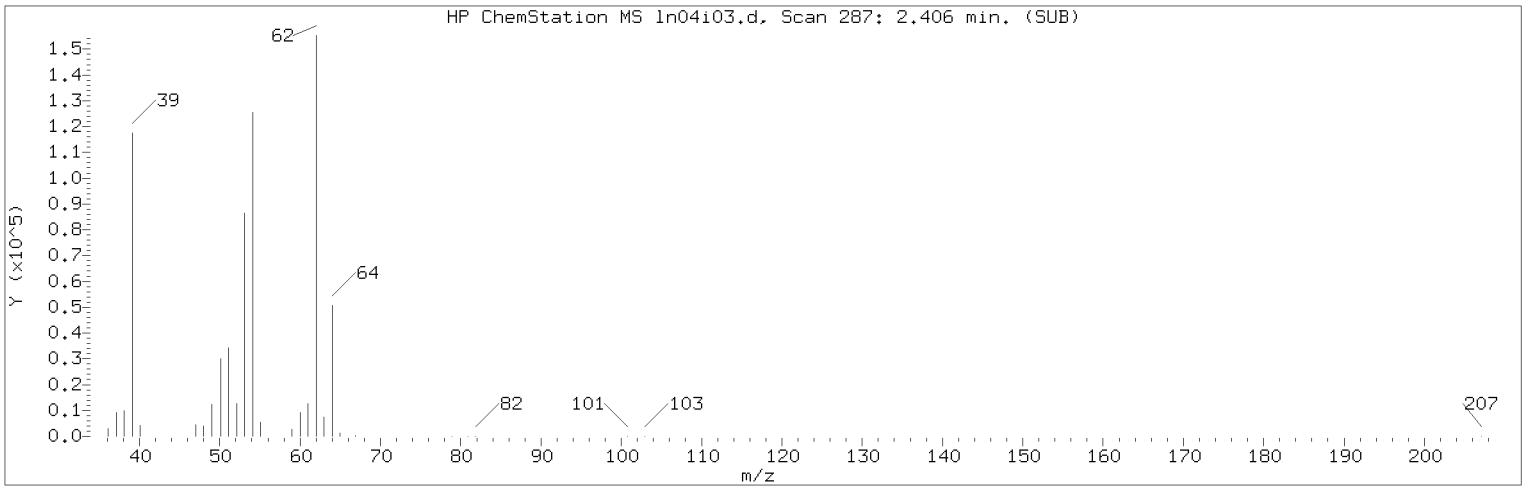
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

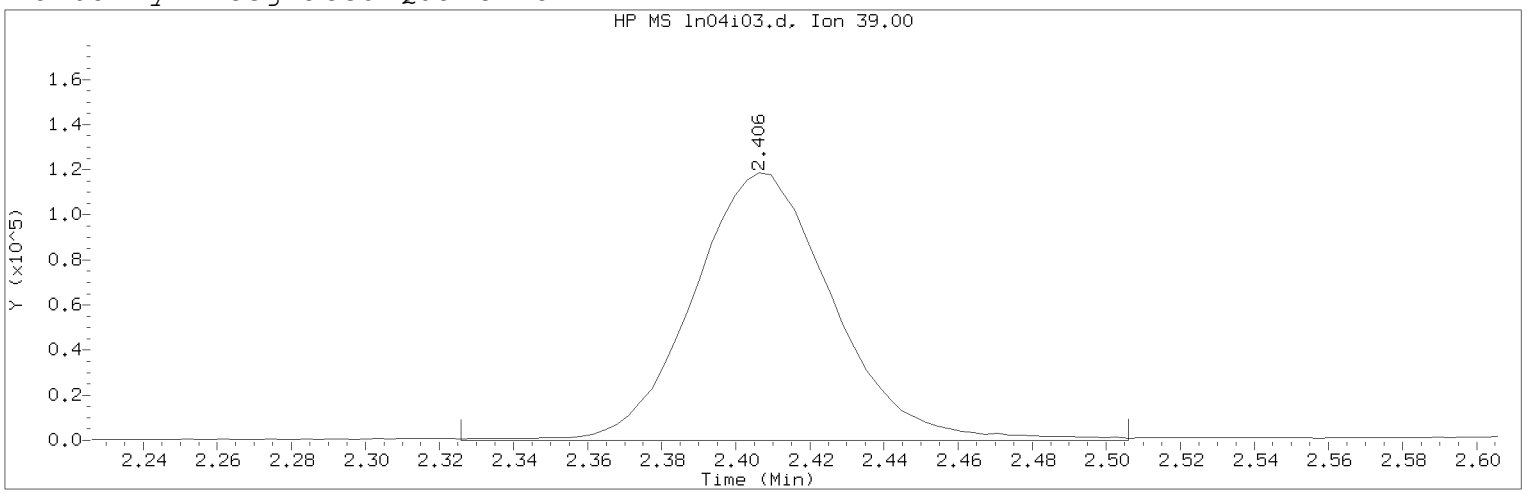
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 188
Retention Time (minutes): 2.088
Quant Ion : 85.00
Area : 411065
On-column Amount (ng) : 48.5918
Integration start scan : 151 Integration stop scan: 264
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

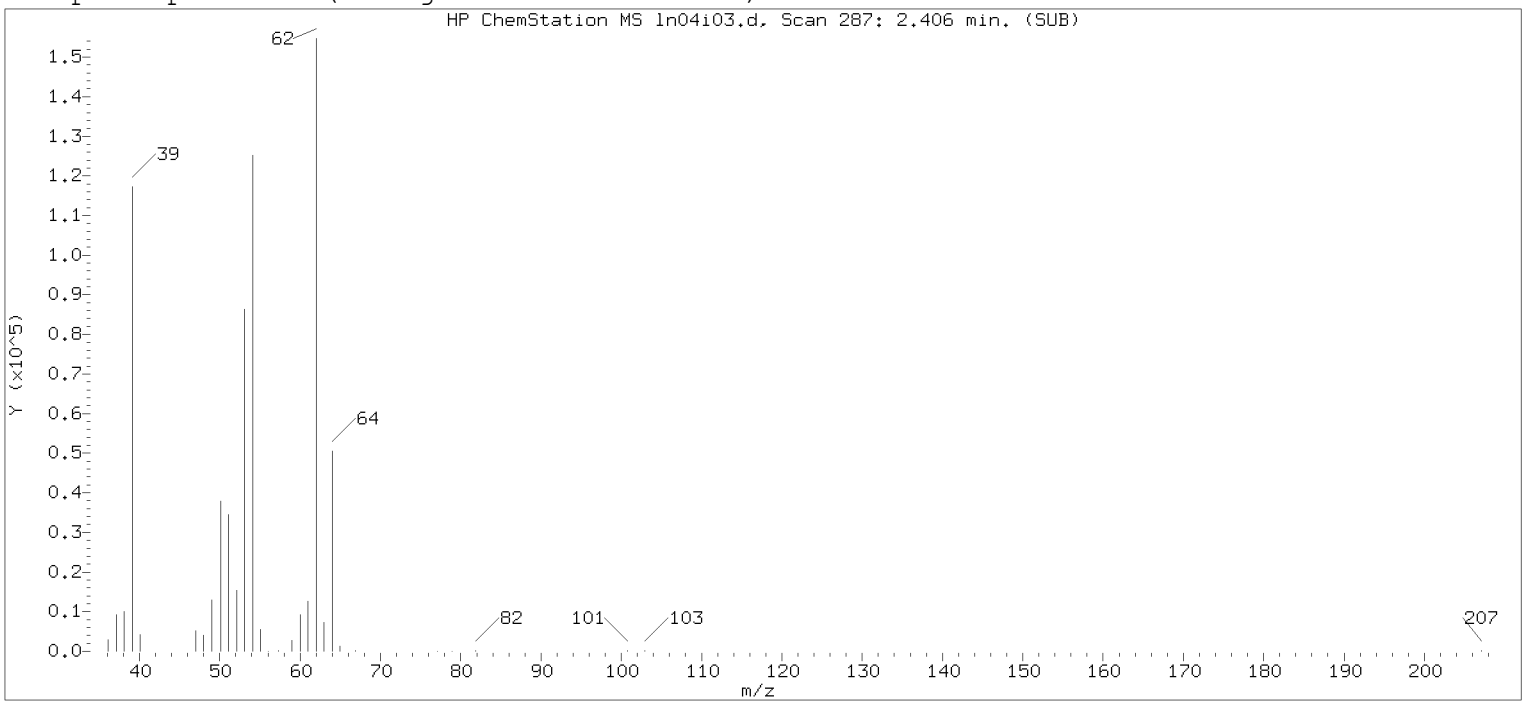
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 311095M
On-Column Amount (ng) : 48.0246
Integration start scan : 261 Integration stop scan: 317
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

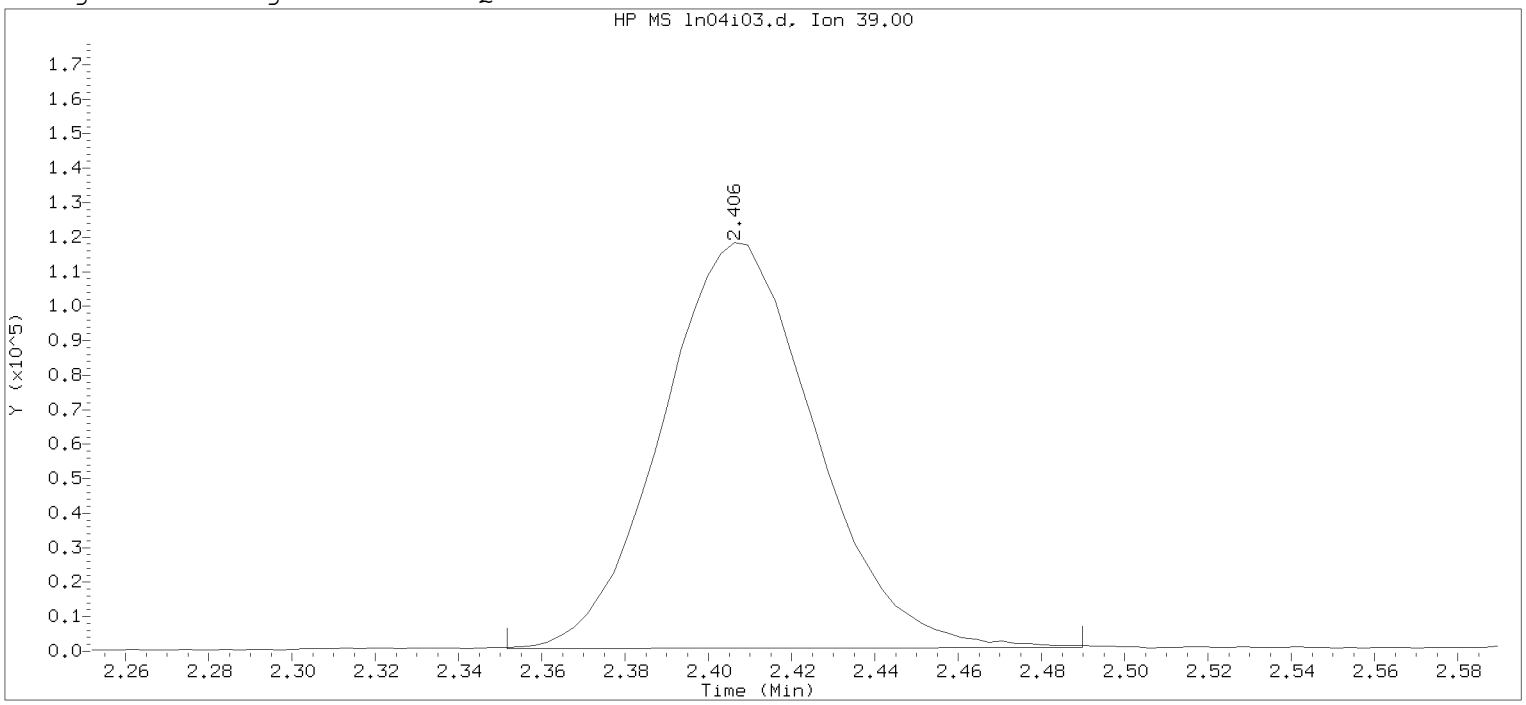
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 300667
On-column Amount (ng) : 50.0756
Integration start scan : 269 Integration stop scan: 312
Y at integration start : 752 Y at integration end: 1063

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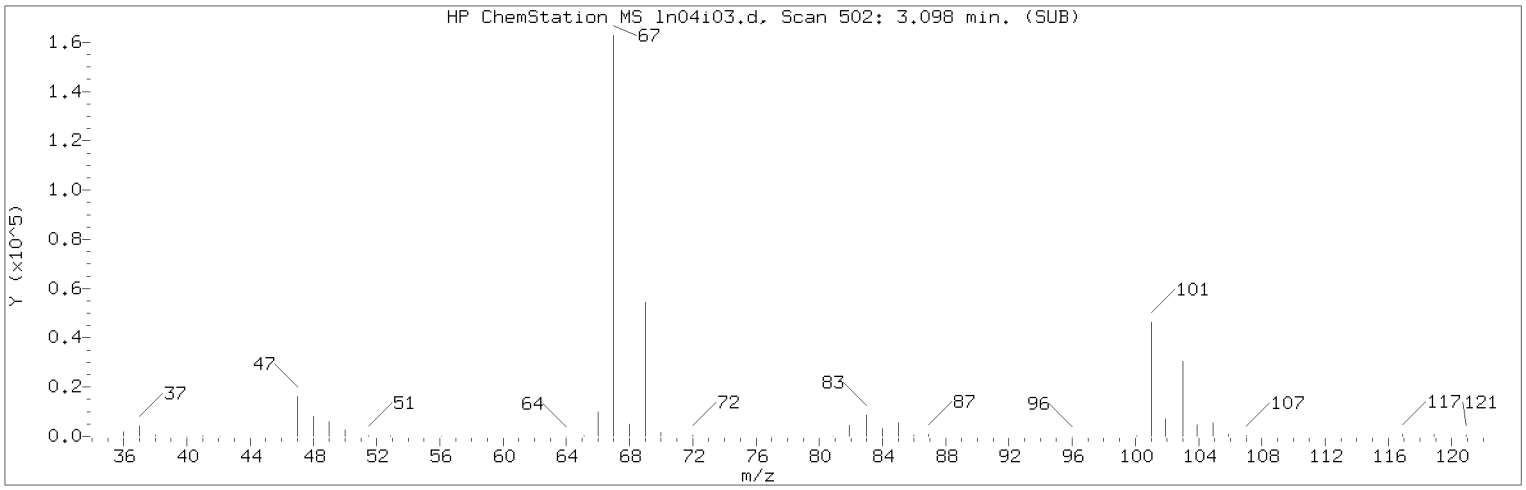
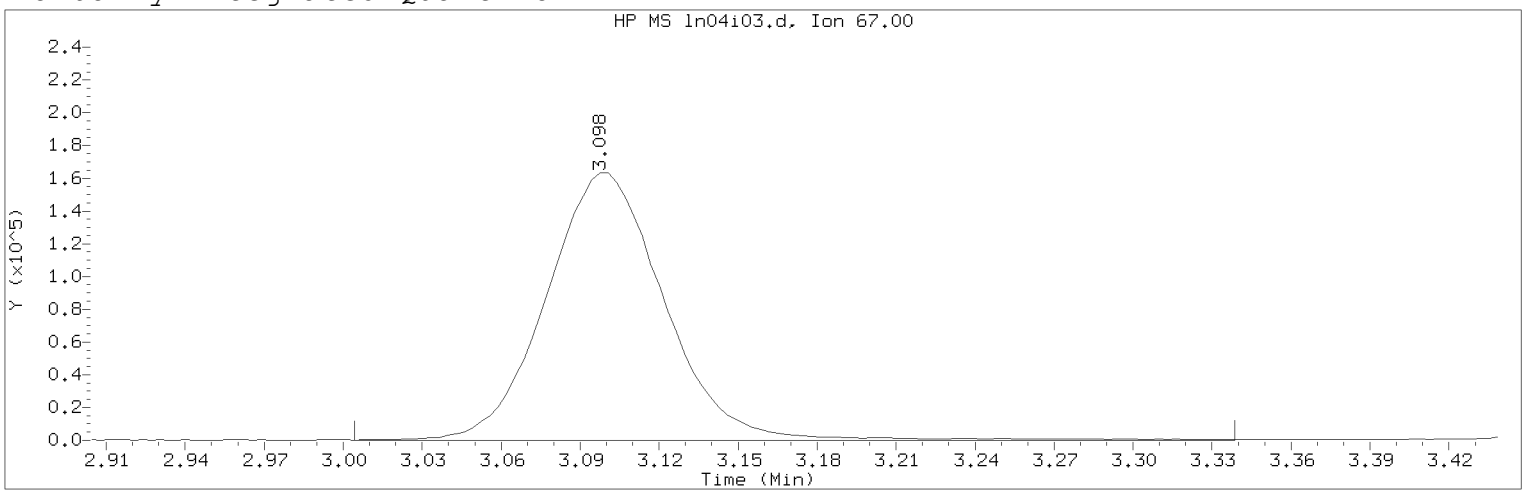
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

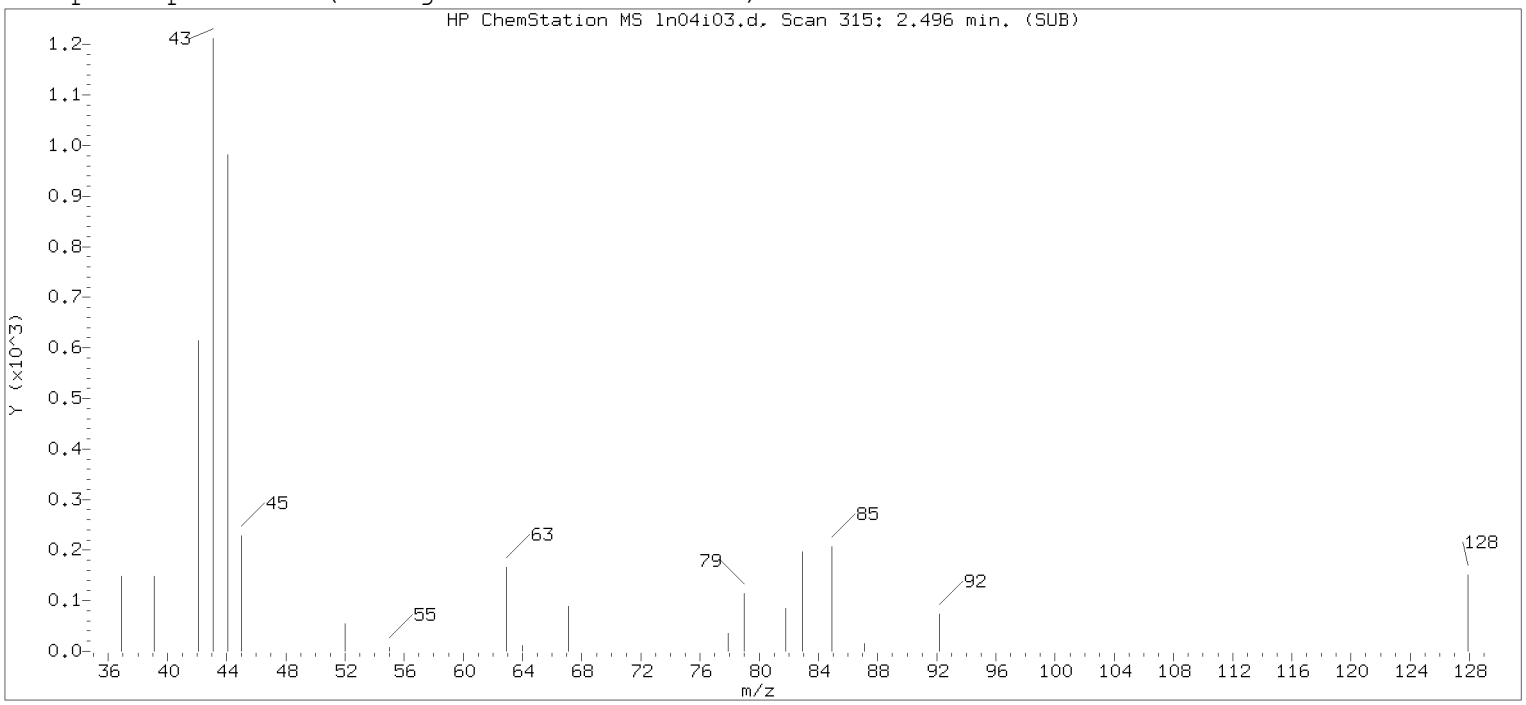
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 502
Retention Time (minutes): 3.098
Quant Ion : 67.00
Area (flag) : 509913MA
On-Column Amount (ng) : 49.5150
Integration start scan : 472 Integration stop scan: 576
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

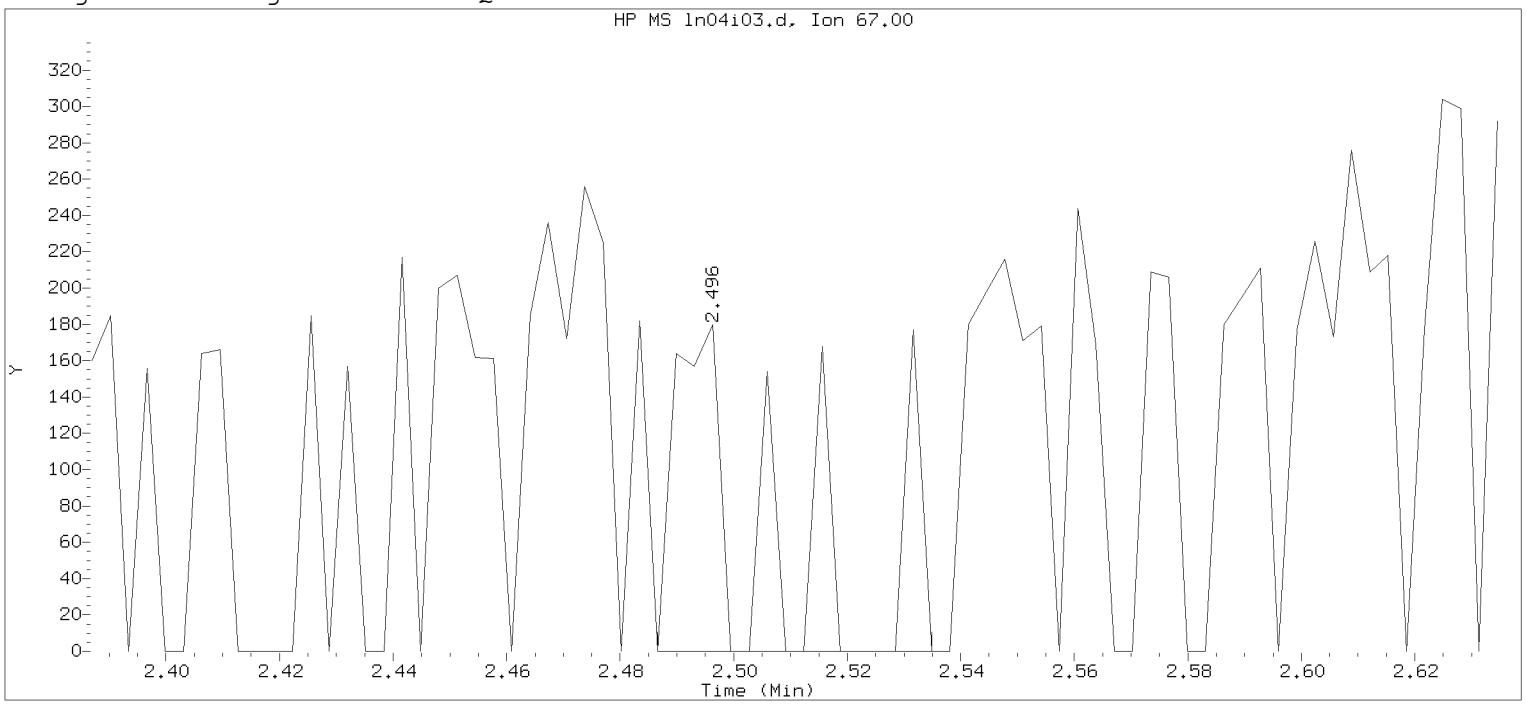
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 315
Retention Time (minutes): 2.496
Quant Ion : 67.00
Area : 192
On-column Amount (ng) : 0.0562
Integration start scan : 311 Integration stop scan: 326
Y at integration start : 0 Y at integration end: 0

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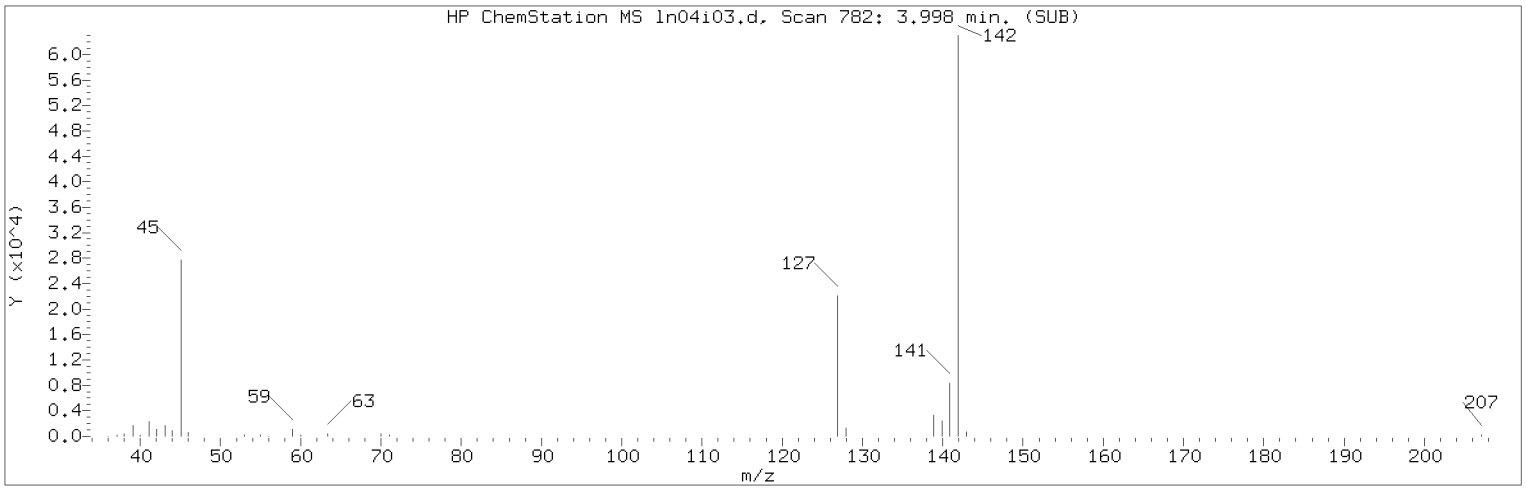
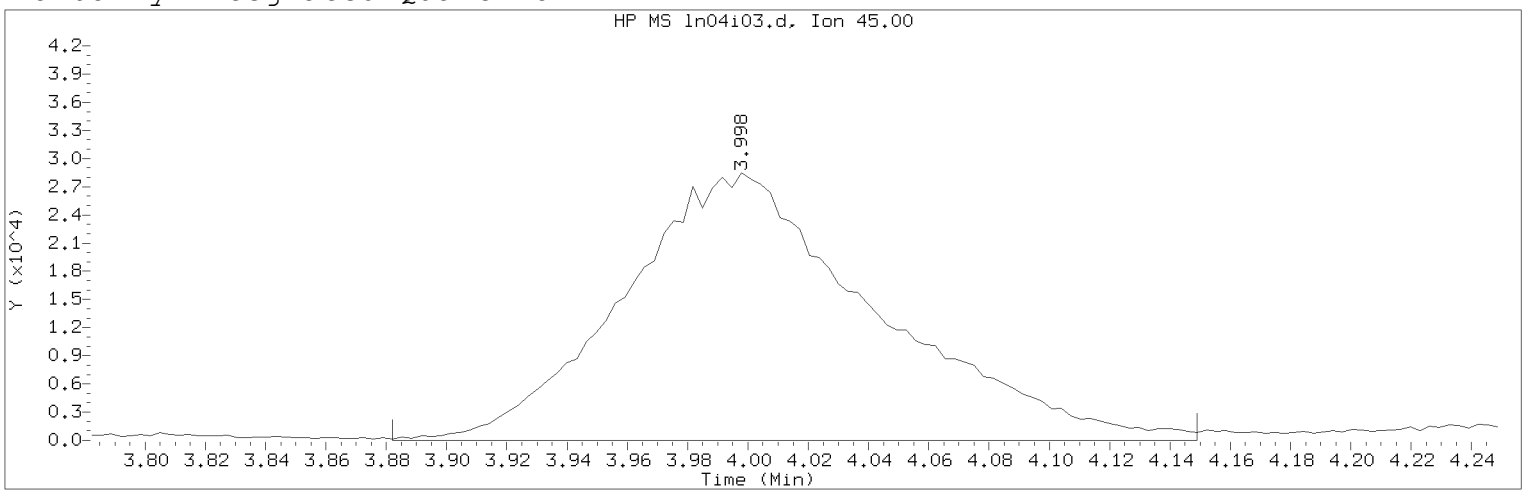
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

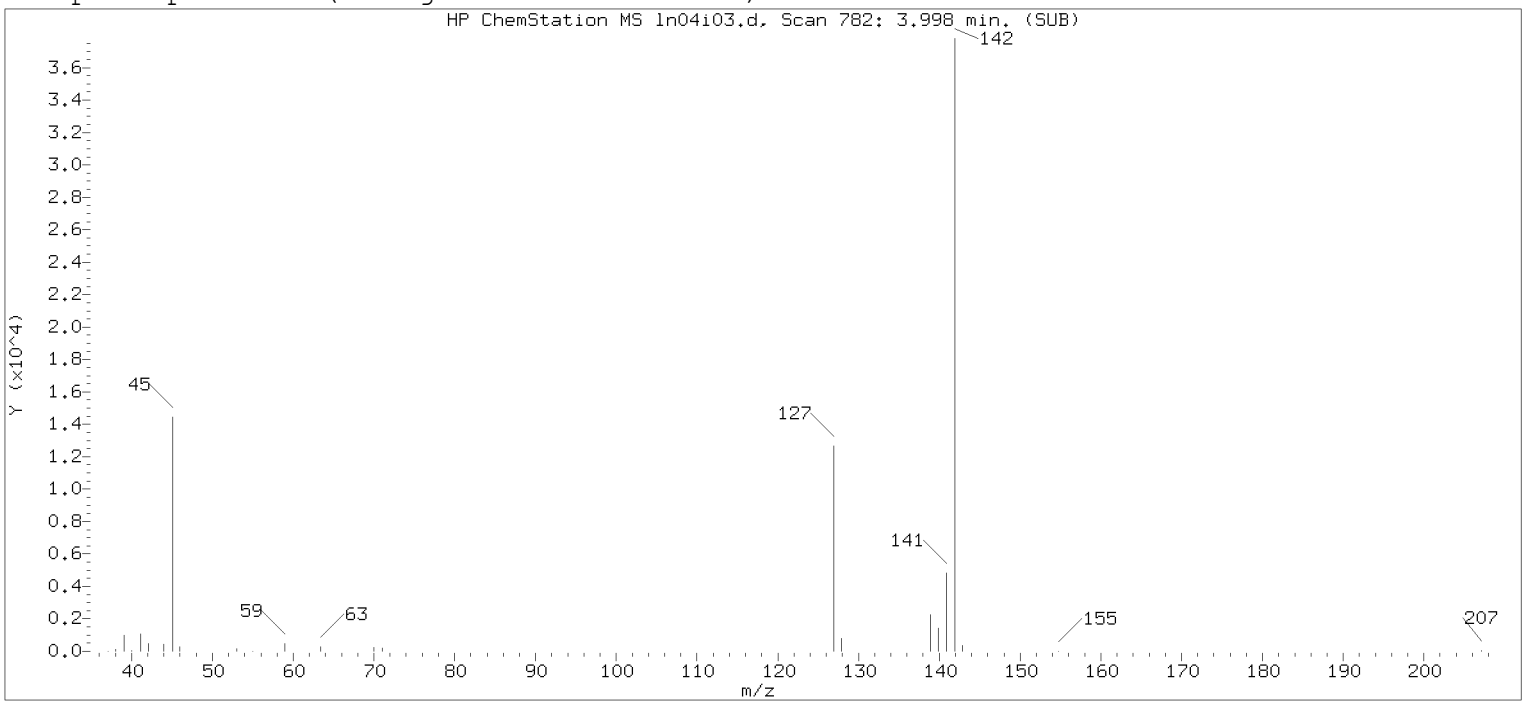
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 782
Retention Time (minutes): 3.998
Quant Ion : 45.00
Area (flag) : 165875M
On-Column Amount (ng) : 254.2825
Integration start scan : 745 Integration stop scan: 828
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

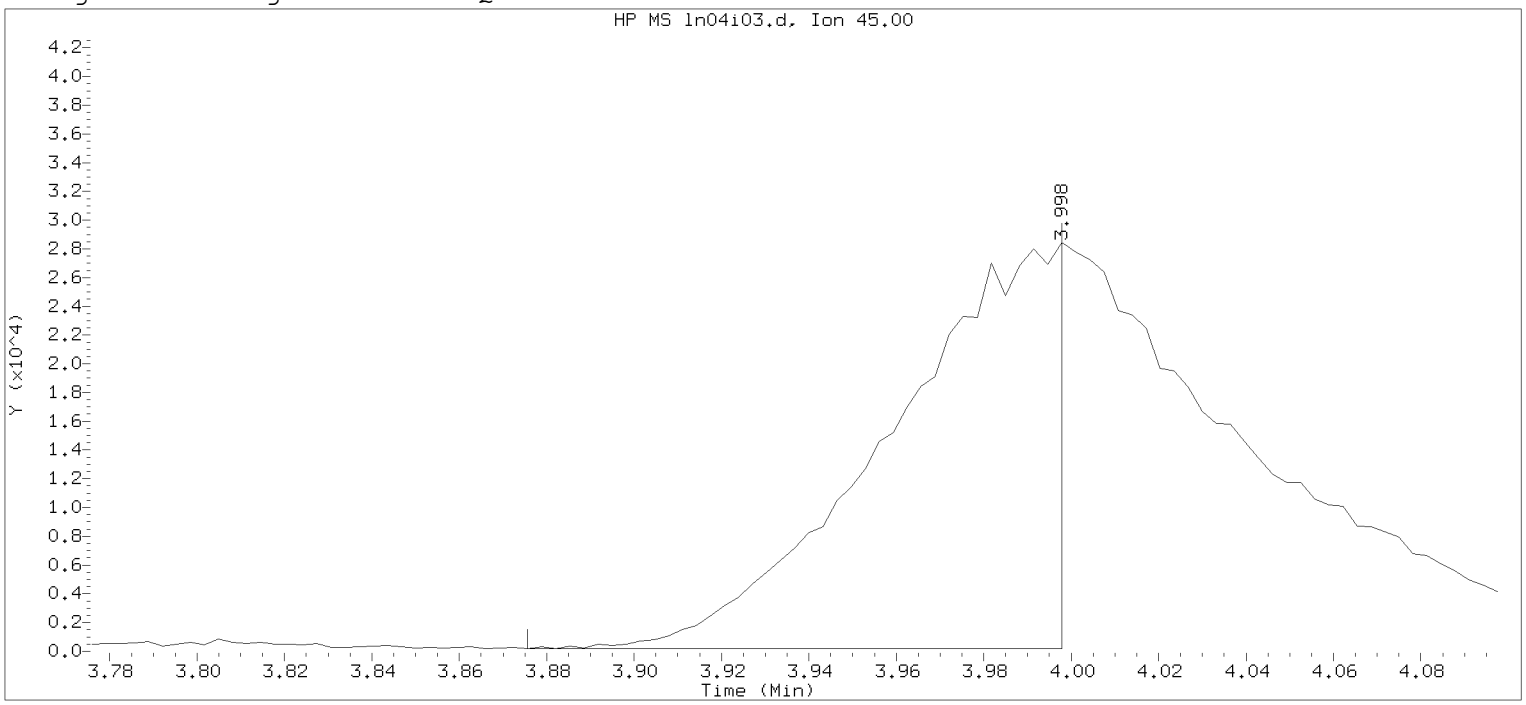
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

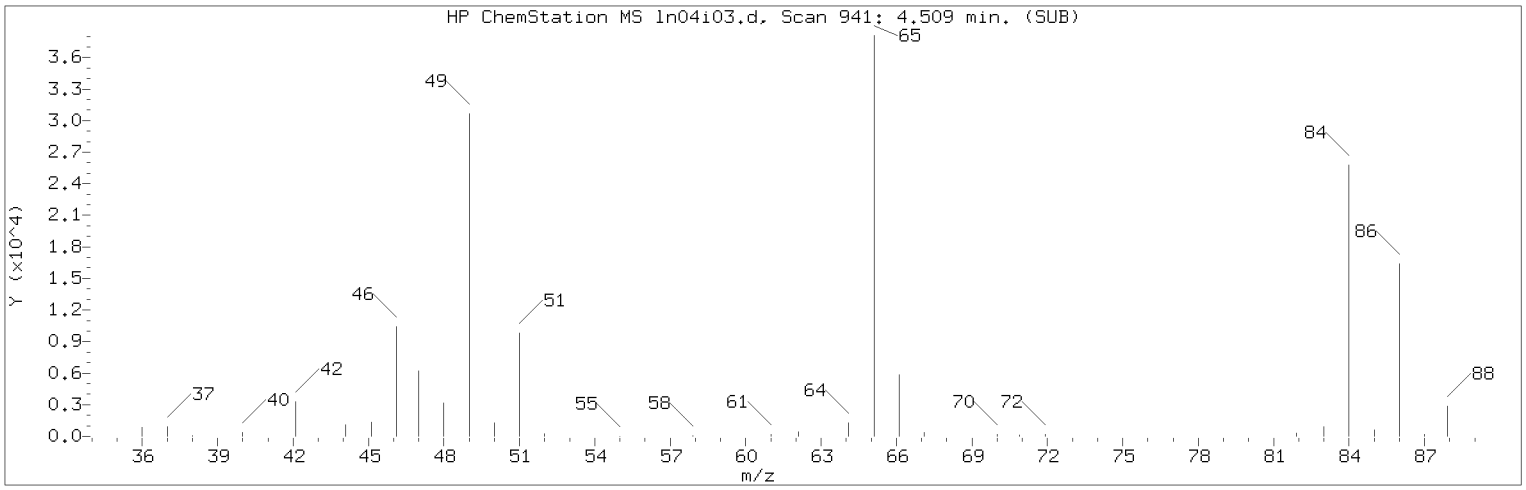
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

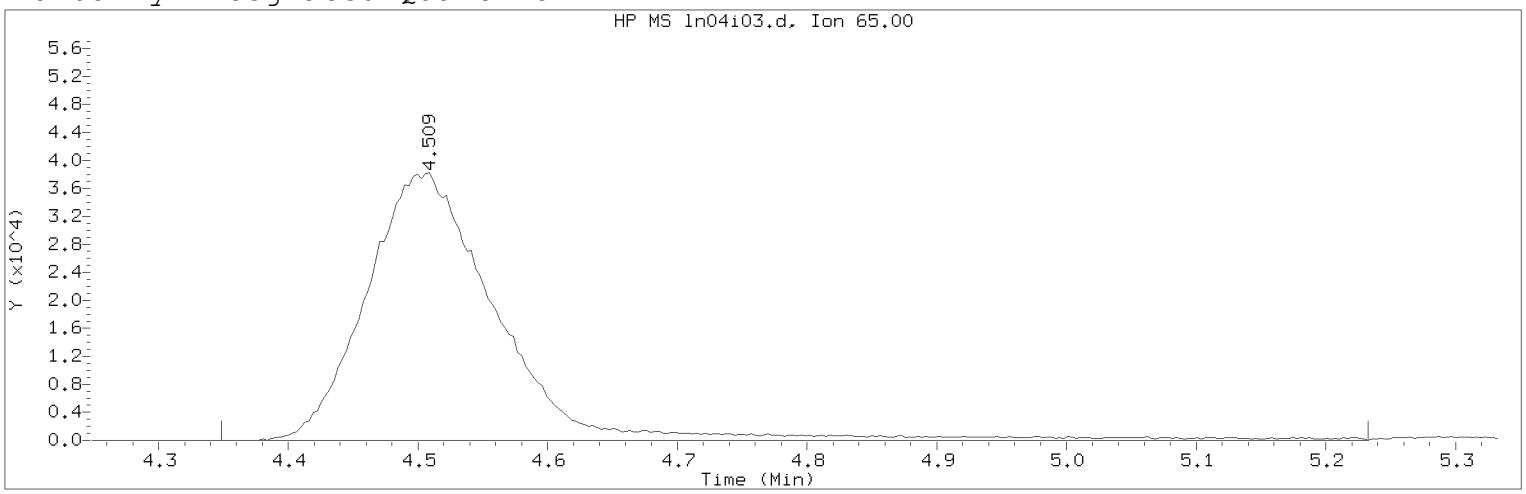
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 782
Retention Time (minutes): 3.998
Quant Ion : 45.00
Area : 74713
On-column Amount (ng) : 135.4026
Integration start scan : 743 Integration stop scan: 781
Y at integration start : 167 Y at integration end: 167

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

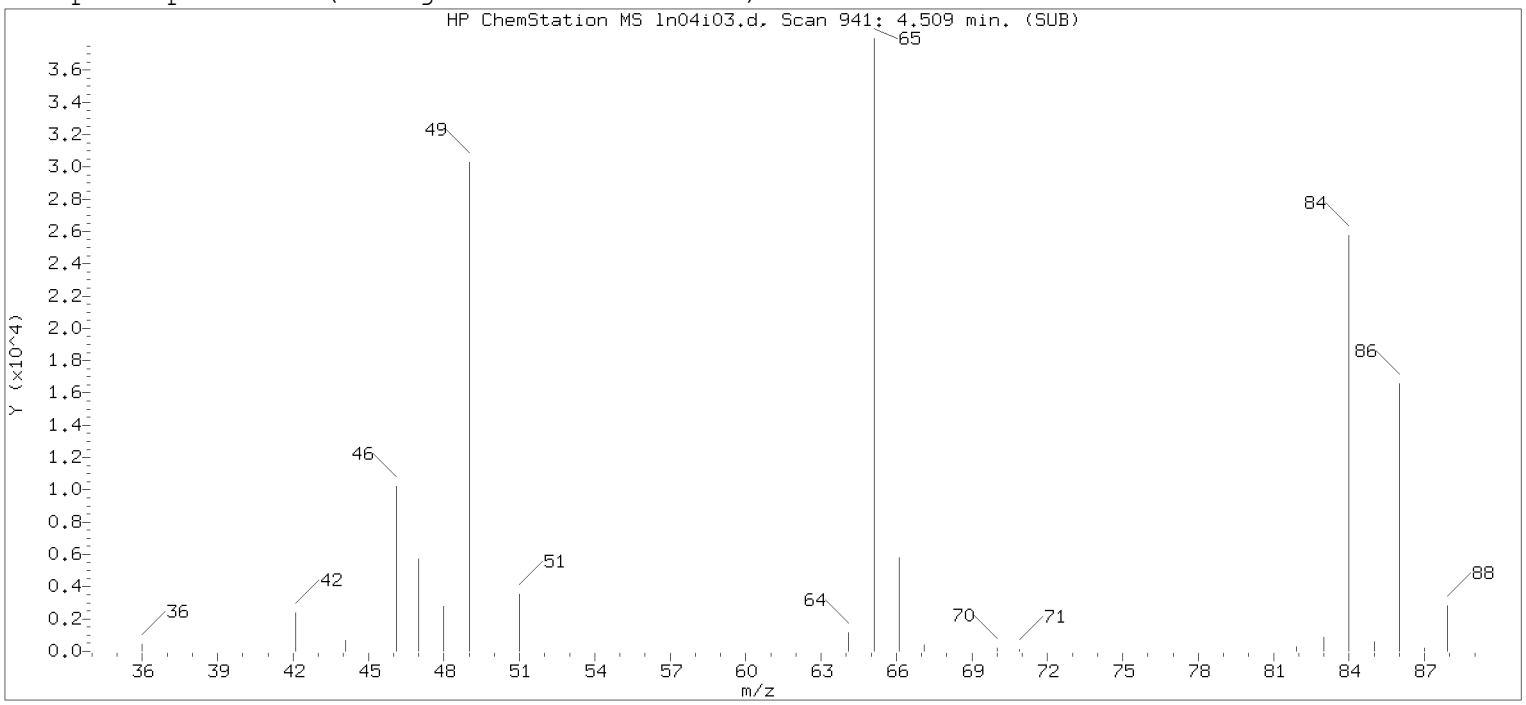
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 269779M
On-Column Amount (ng) : 250.0000
Integration start scan : 890 Integration stop scan: 1165
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

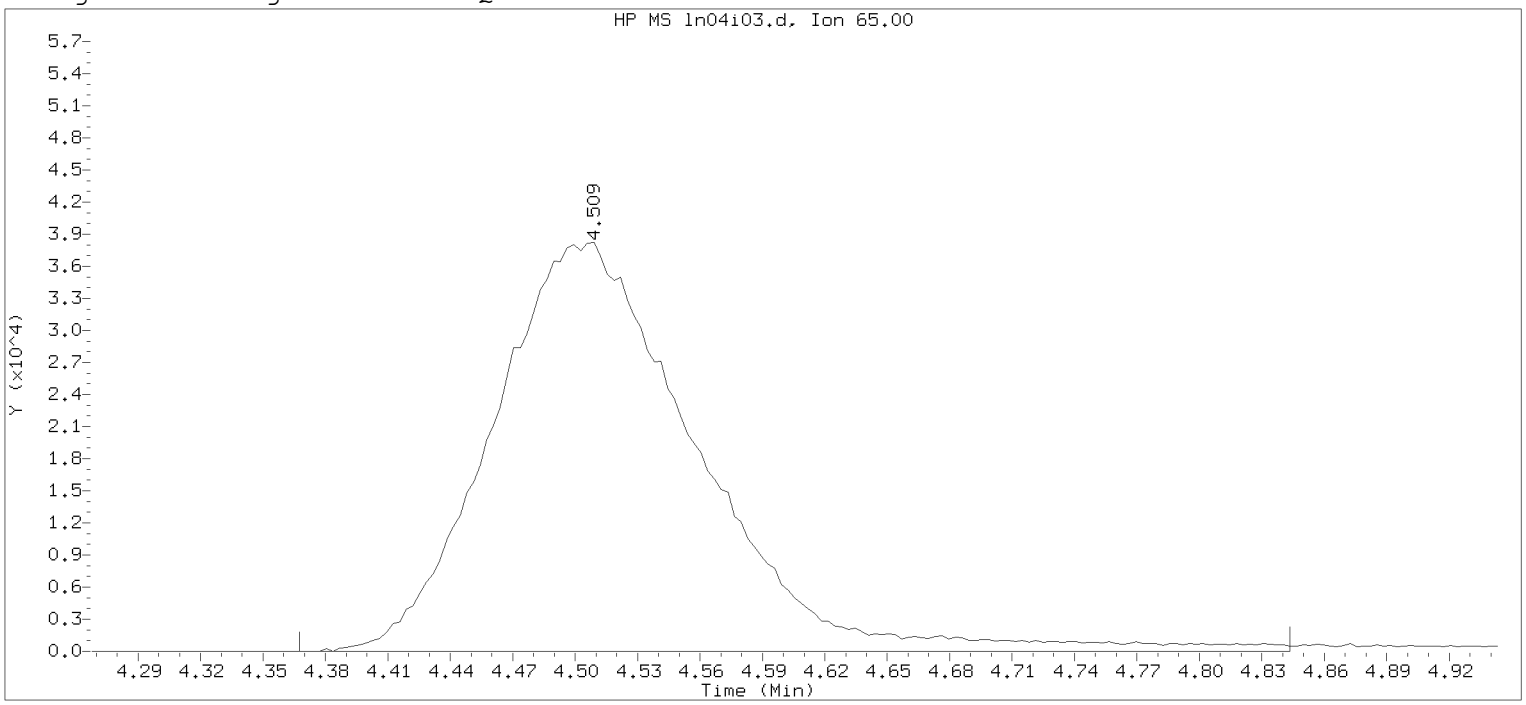
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

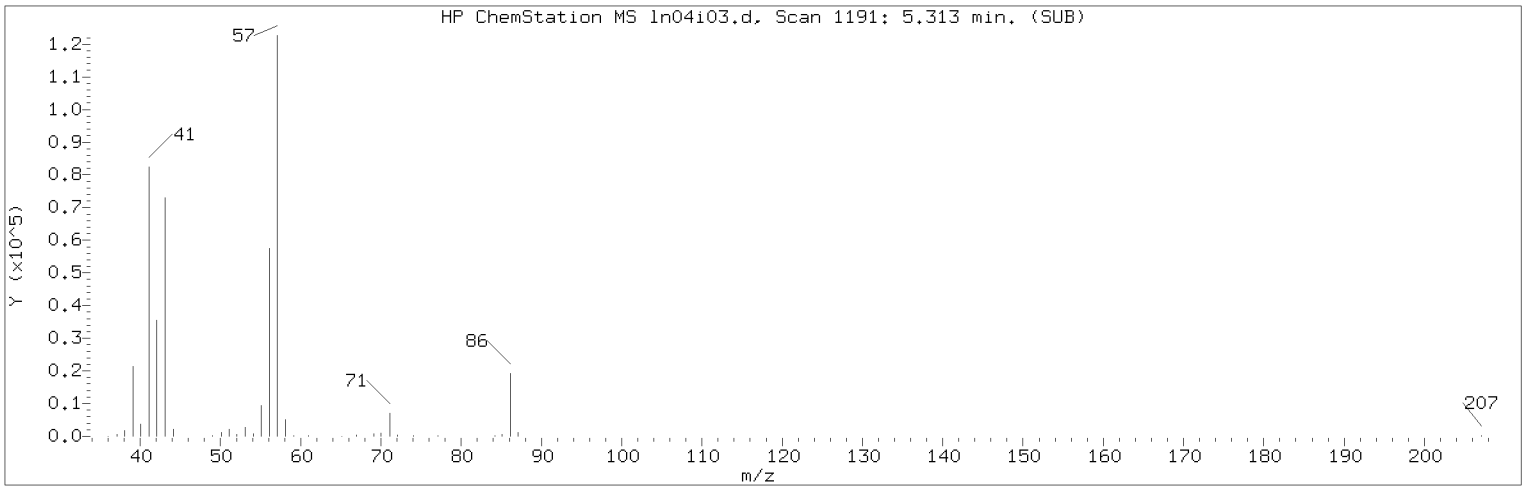
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

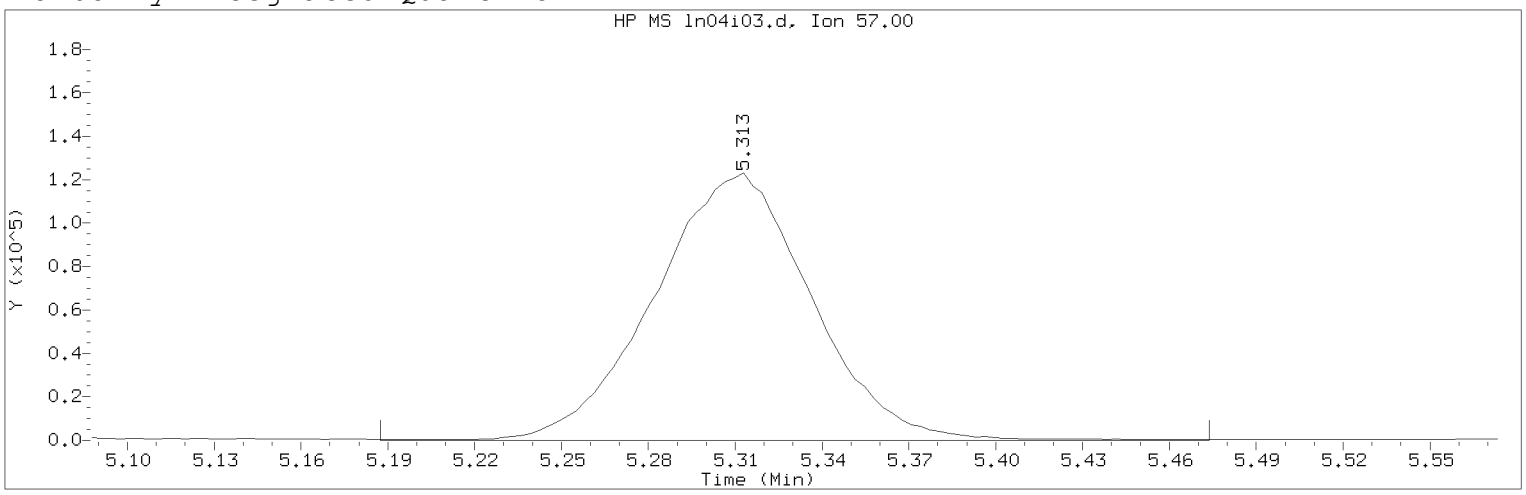
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 261144
On-column Amount (ng) : 250.0000
Integration start scan : 896 Integration stop scan: 1044
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

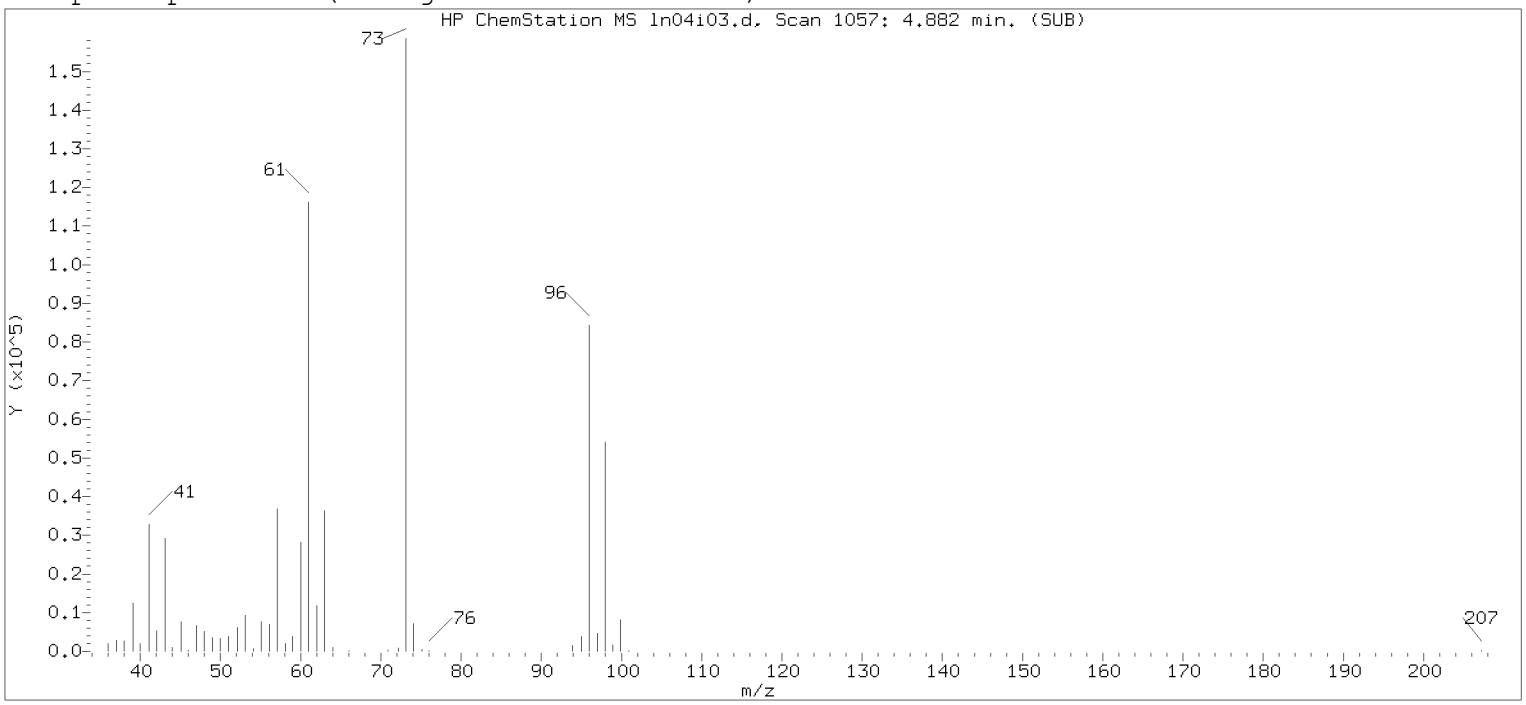
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1191
Retention Time (minutes): 5.313
Quant Ion : 57.00
Area (flag) : 463732M
On-Column Amount (ng) : 52.3639
Integration start scan : 1151 Integration stop scan: 1240
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

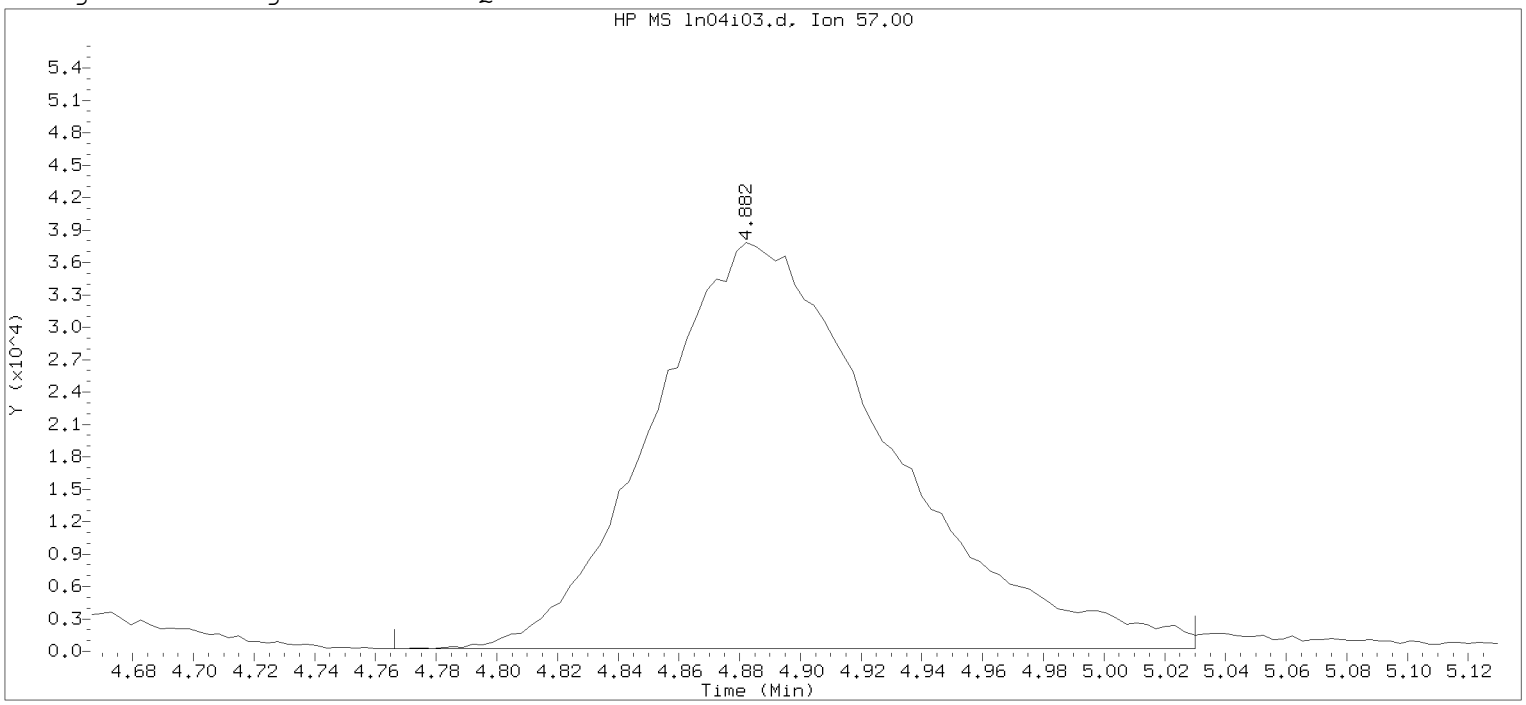
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

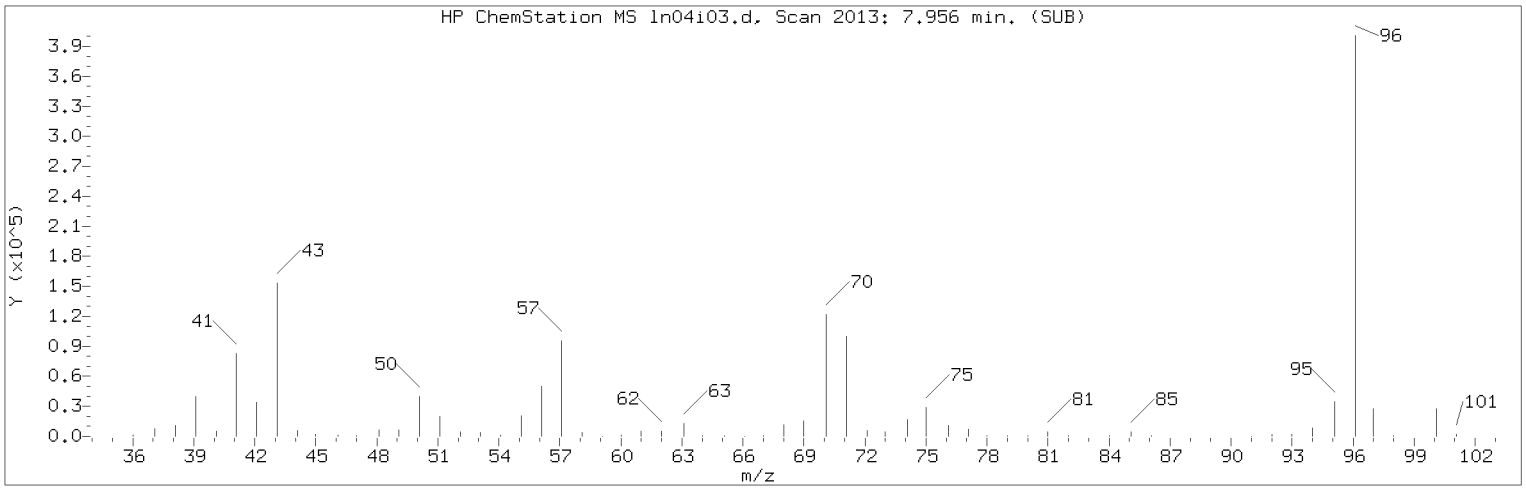
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

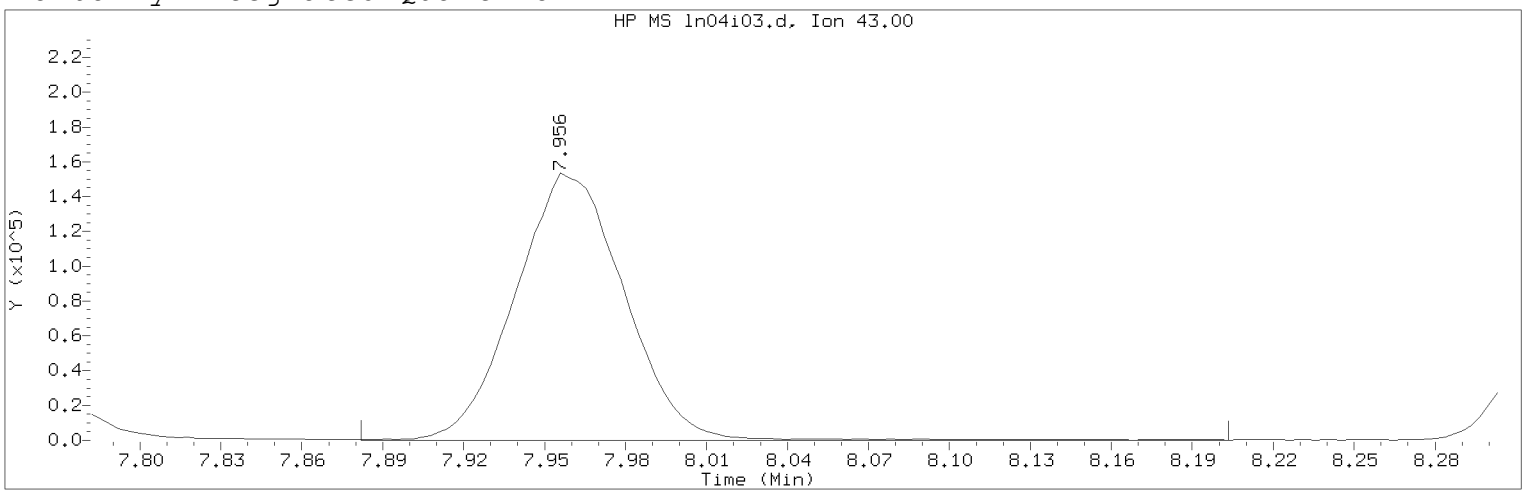
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1057		
Retention Time (minutes)	: 4.882		
Quant Ion	: 57.00		
Area	: 205522		
On-column Amount (ng)	: 50.0557		
Integration start scan	: 1020	Integration stop scan:	1102
Y at integration start	: 228	Y at integration end:	228

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

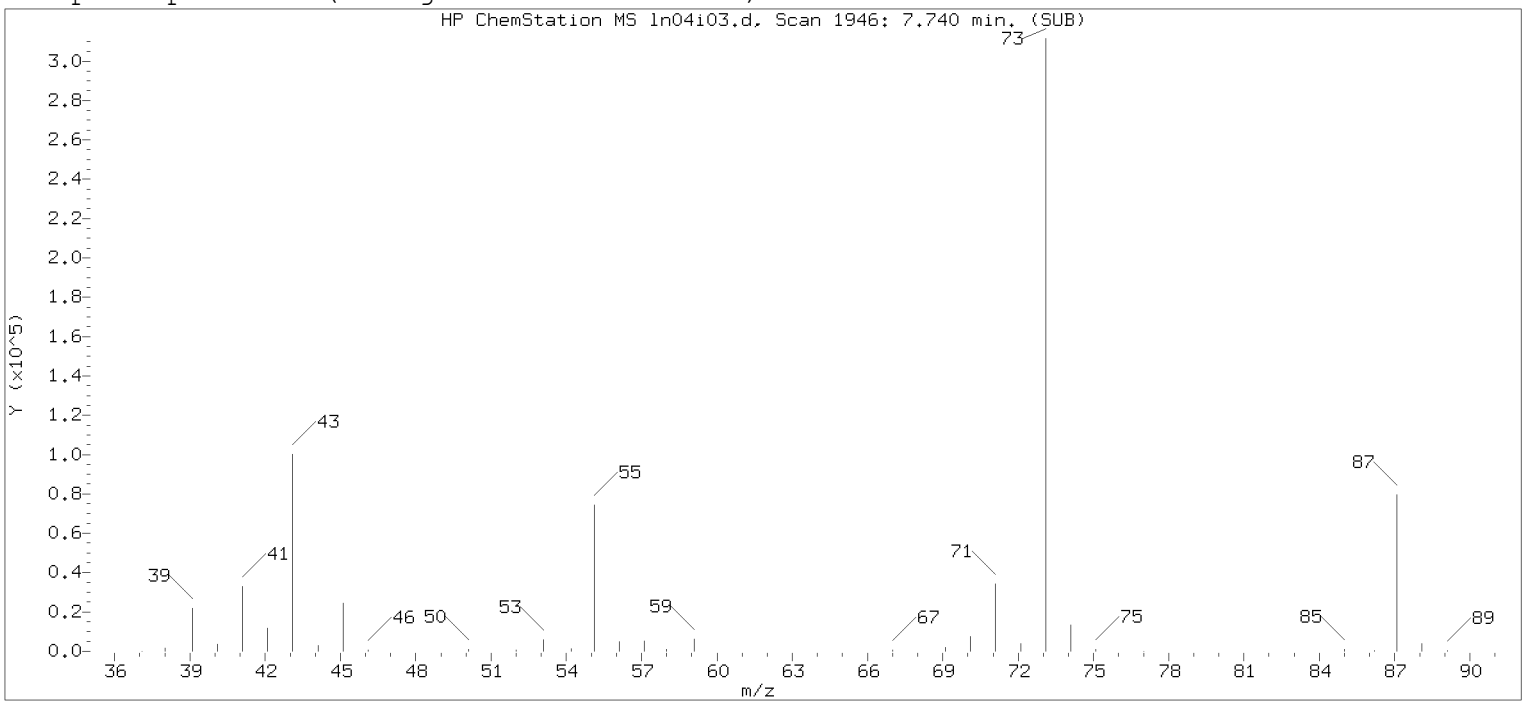
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2013
Retention Time (minutes): 7.956
Quant Ion : 43.00
Area (flag) : 432248MA
On-Column Amount (ng) : 52.2472
Integration start scan : 1989 Integration stop scan: 2089
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

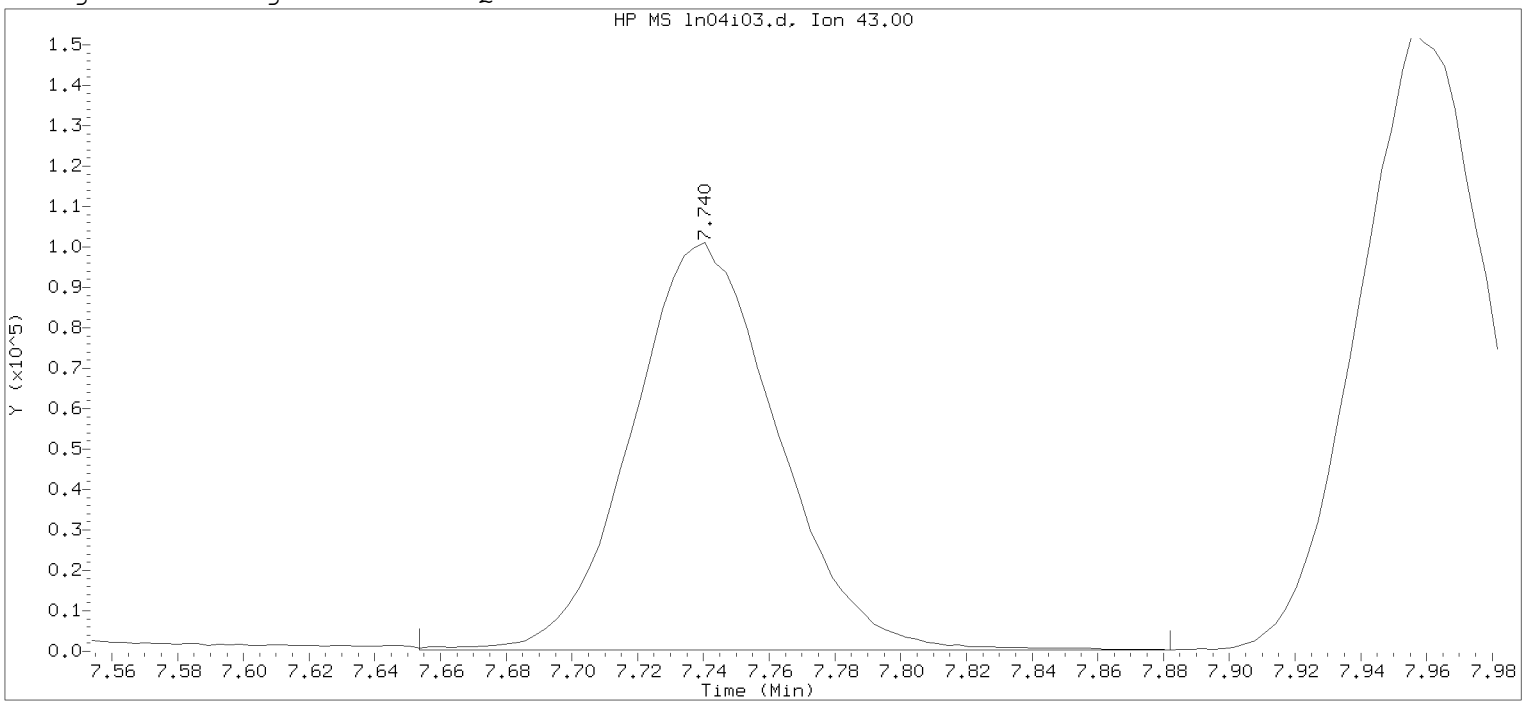
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

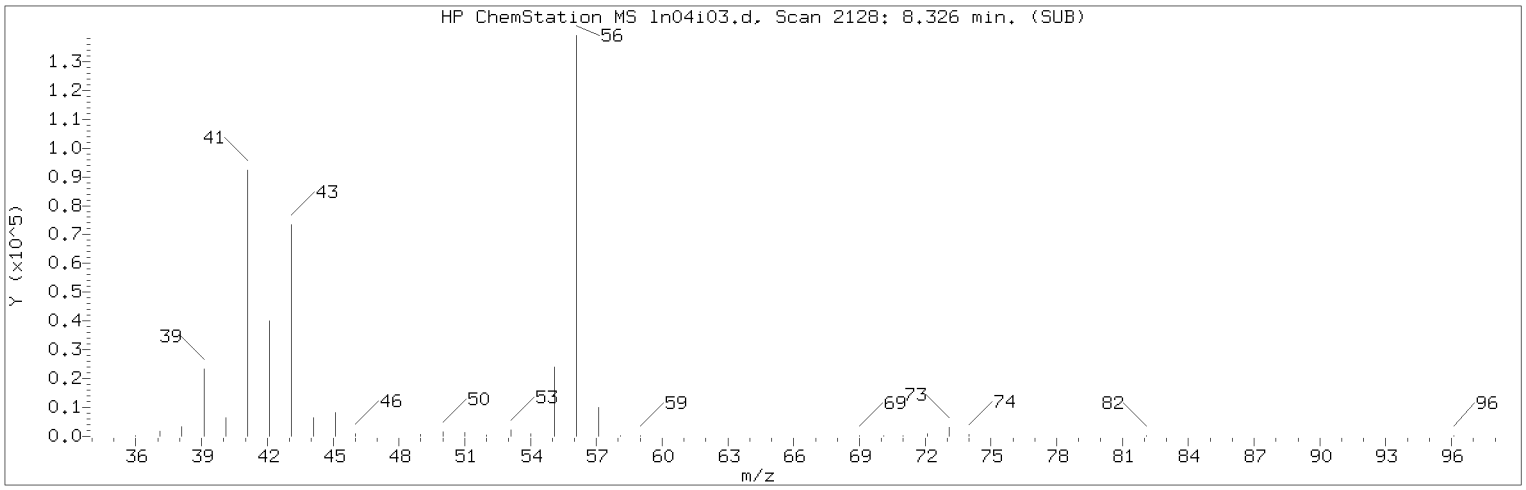
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

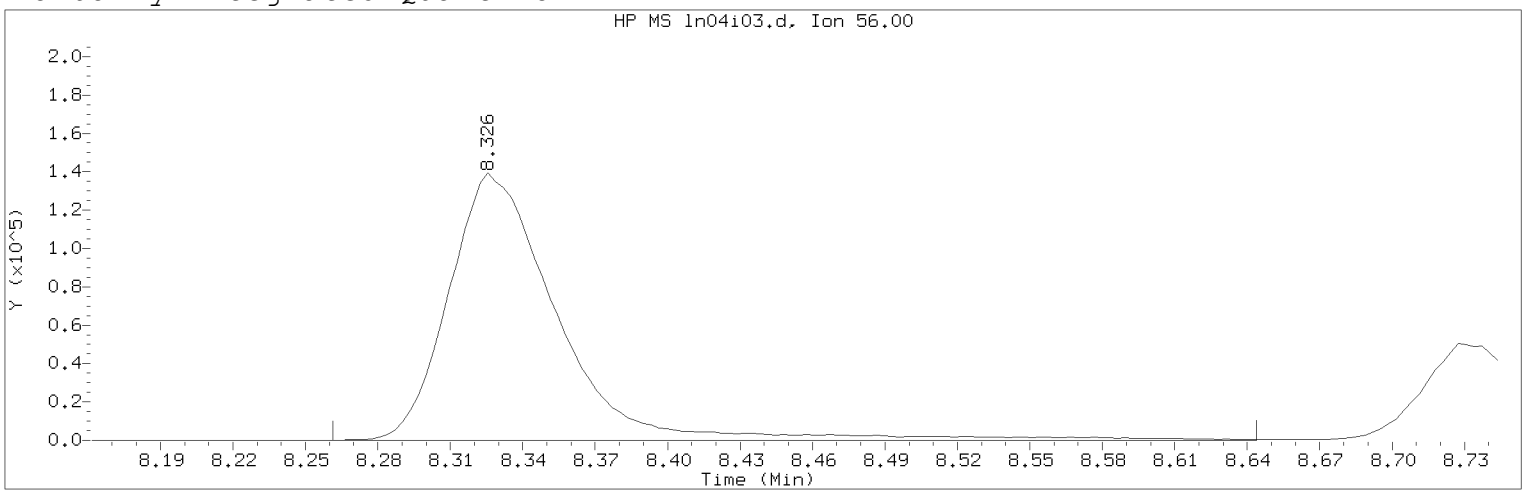
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.740
Quant Ion : 43.00
Area : 311136
On-column Amount (ng) : 51.5793
Integration start scan : 1918 Integration stop scan: 1989
Y at integration start : 288 Y at integration end: 288

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

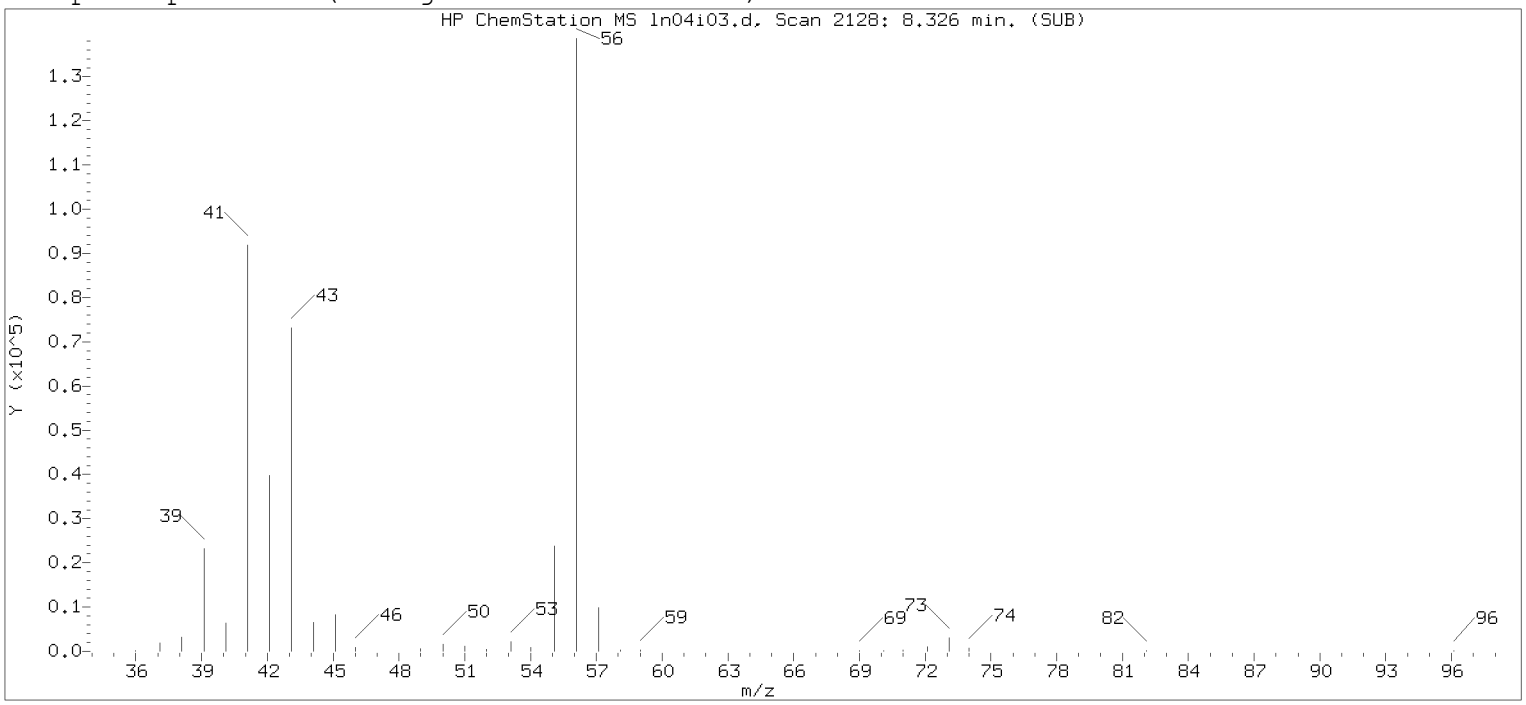
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area (flag) : 438437M
On-Column Amount (ng) : 1332.7496
Integration start scan : 2107 Integration stop scan: 2226
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

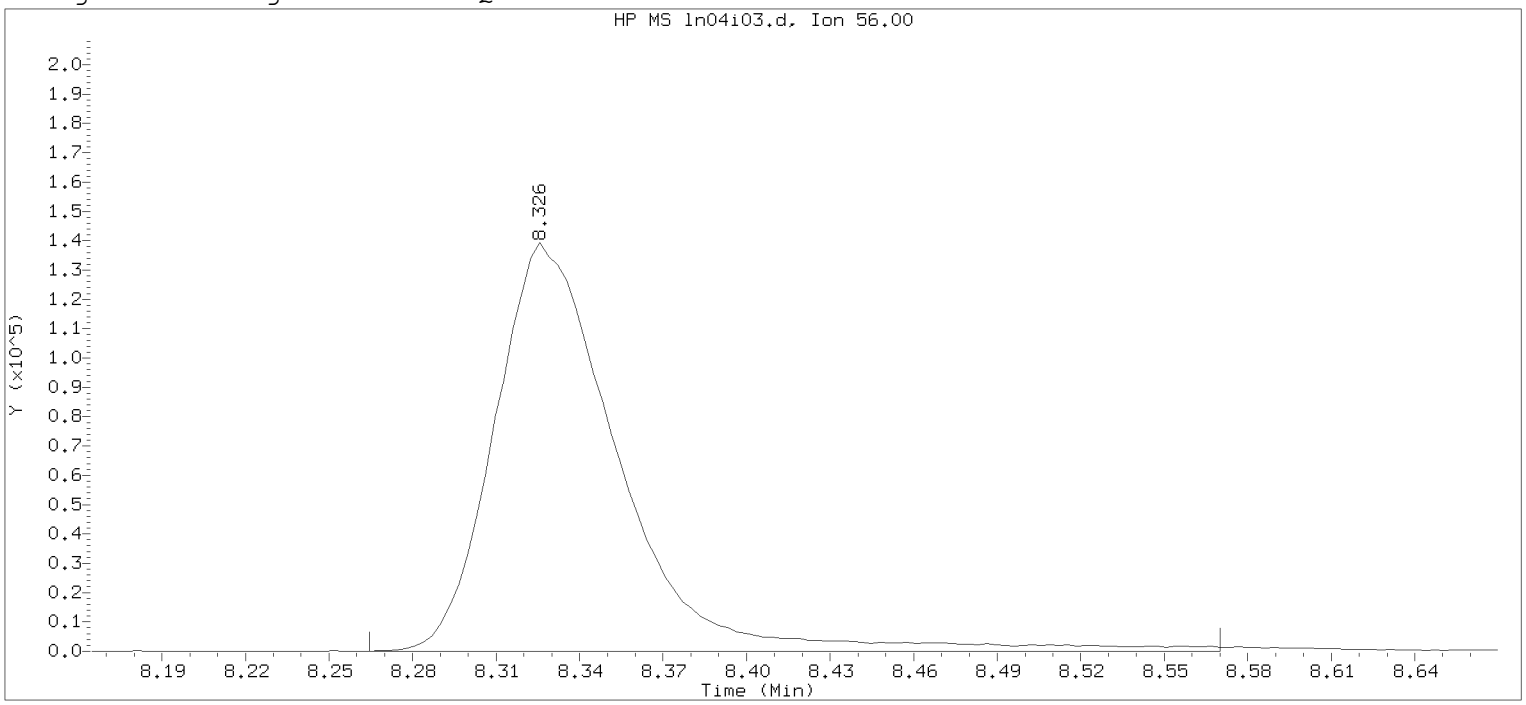
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

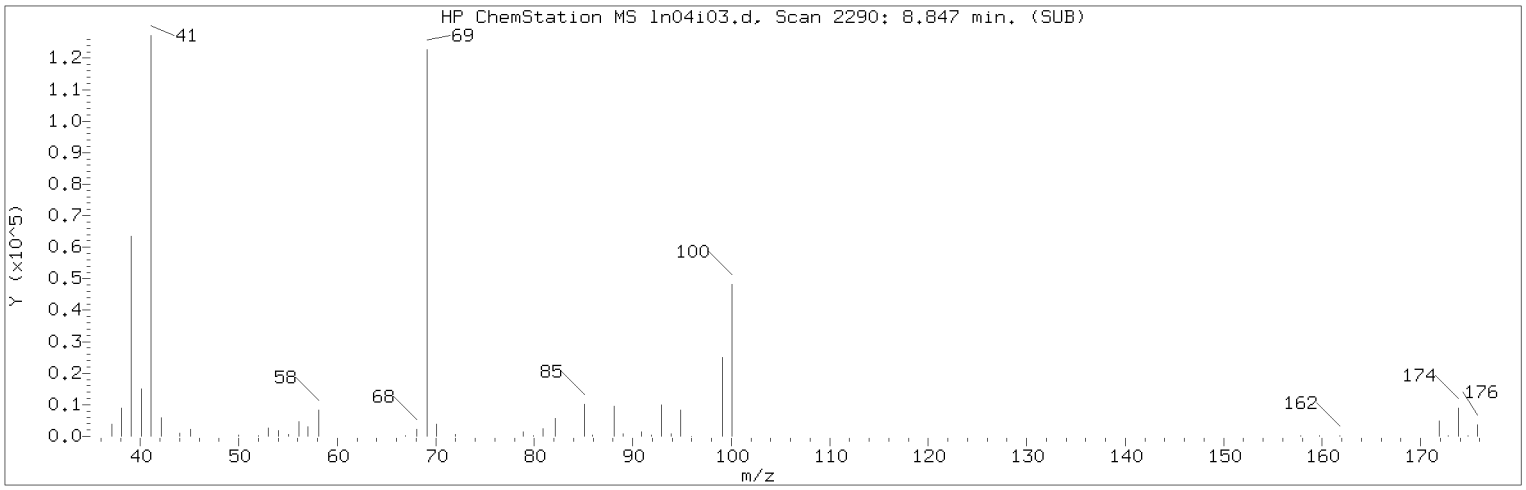
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

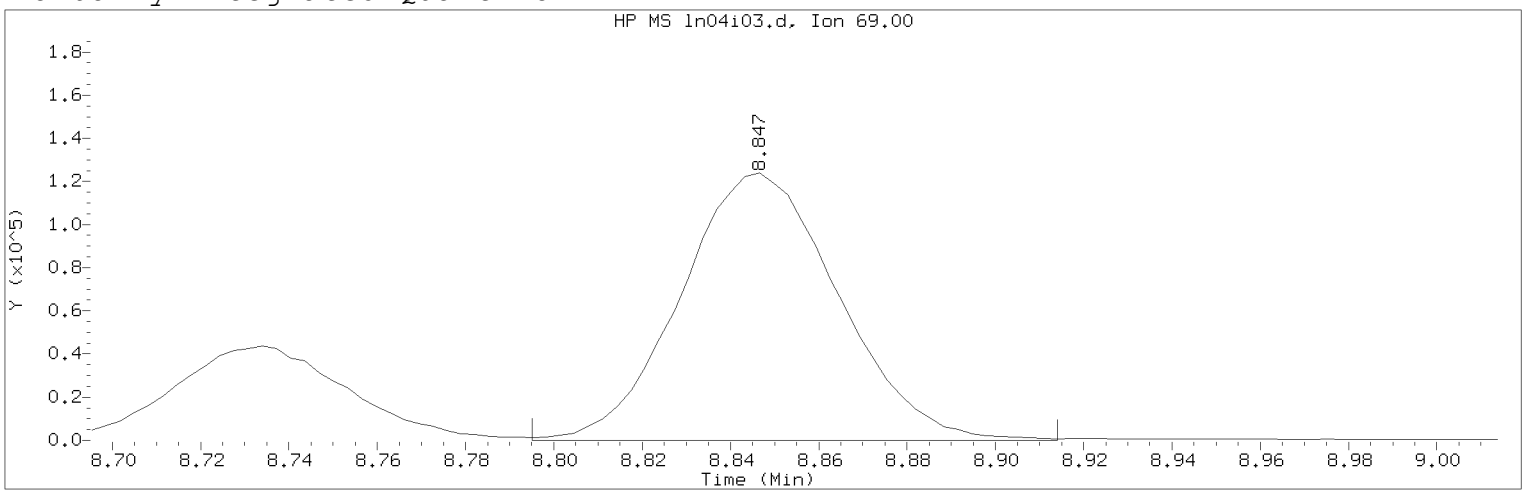
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area : 434385
On-column Amount (ng) : 1223.8707
Integration start scan : 2108 Integration stop scan: 2203
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

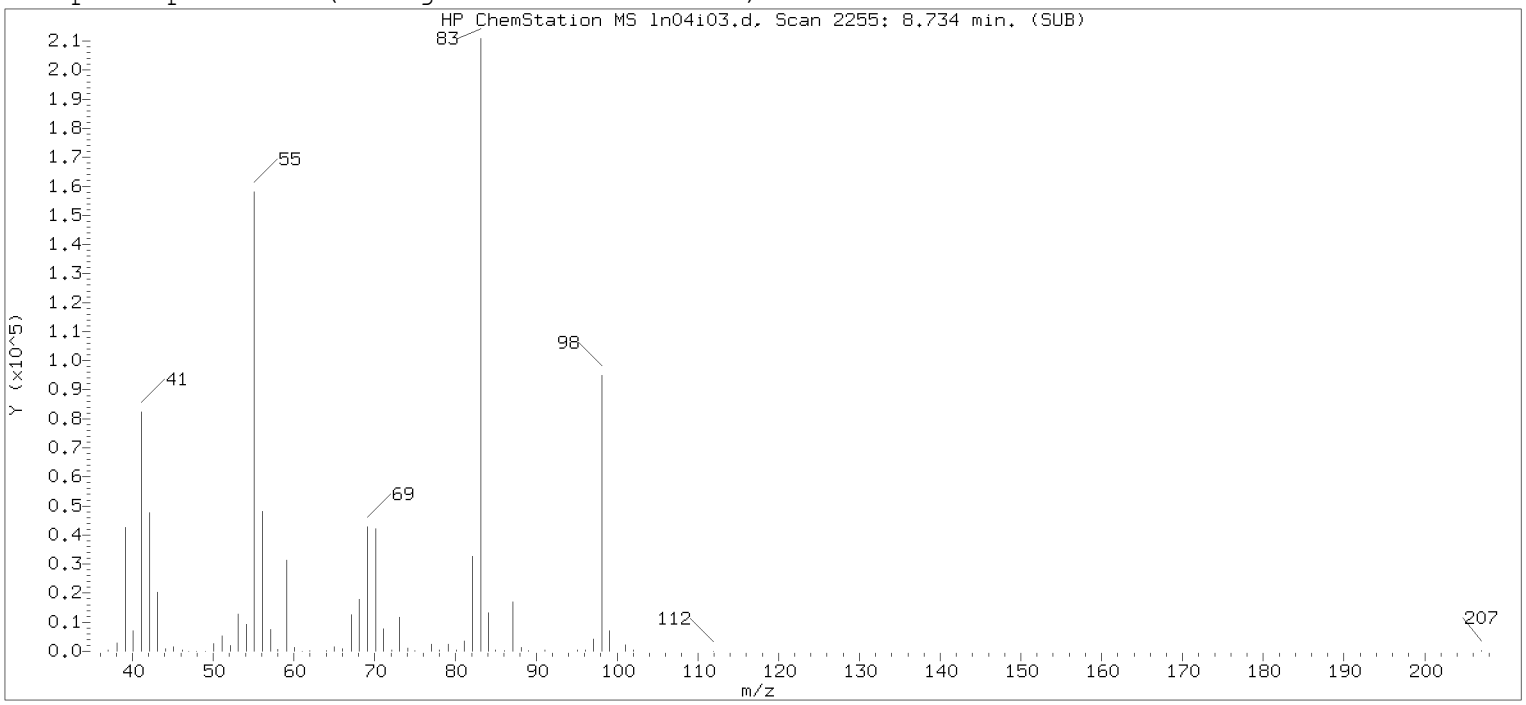
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2290
Retention Time (minutes): 8.847
Quant Ion : 69.00
Area (flag) : 306086A
On-Column Amount (ng) : 52.7952
Integration start scan : 2273 Integration stop scan: 2310
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

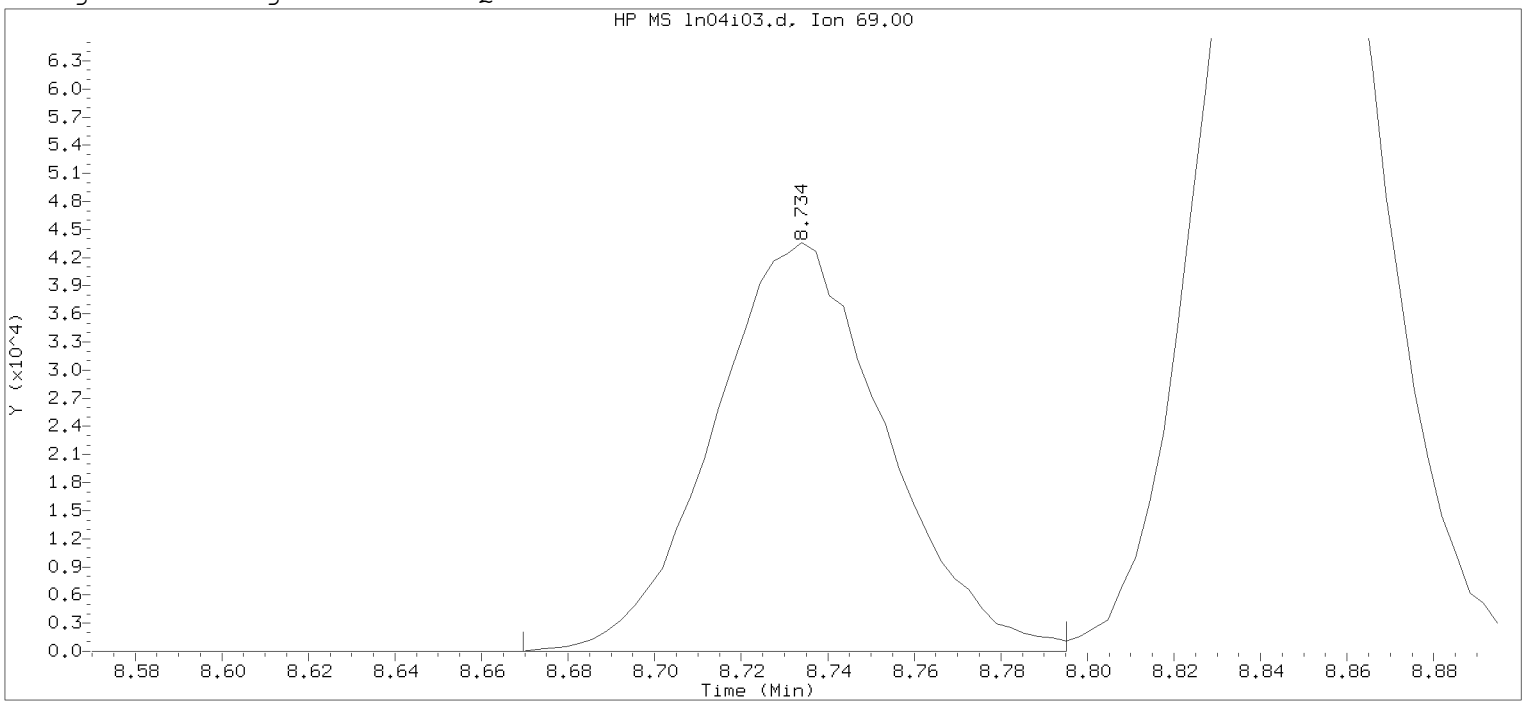
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

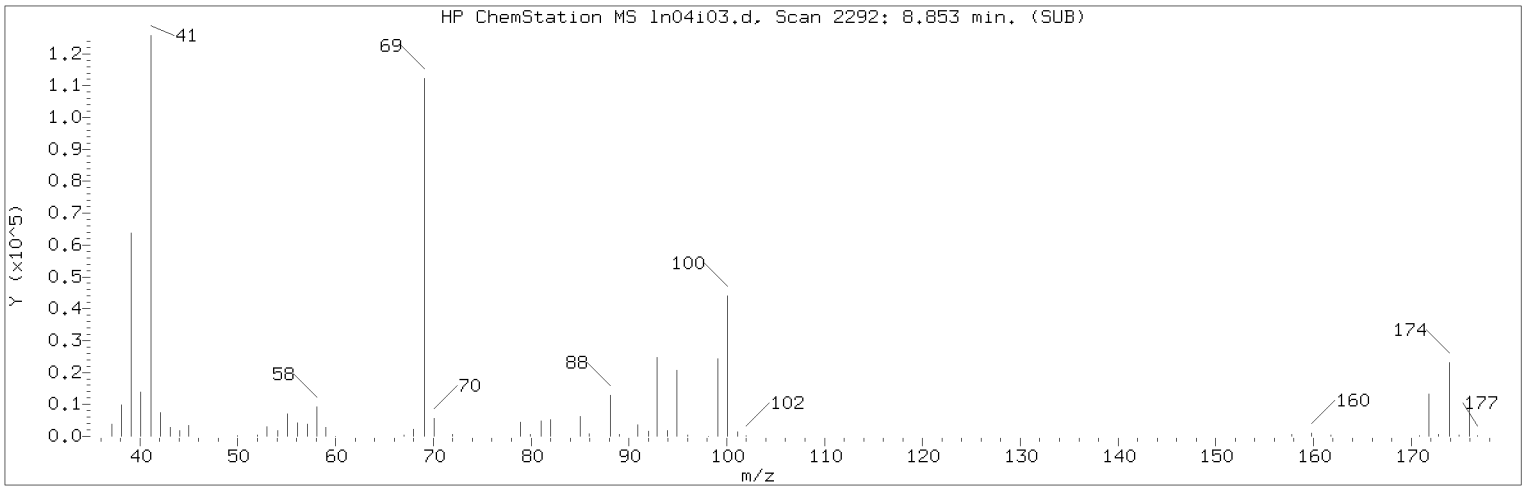
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

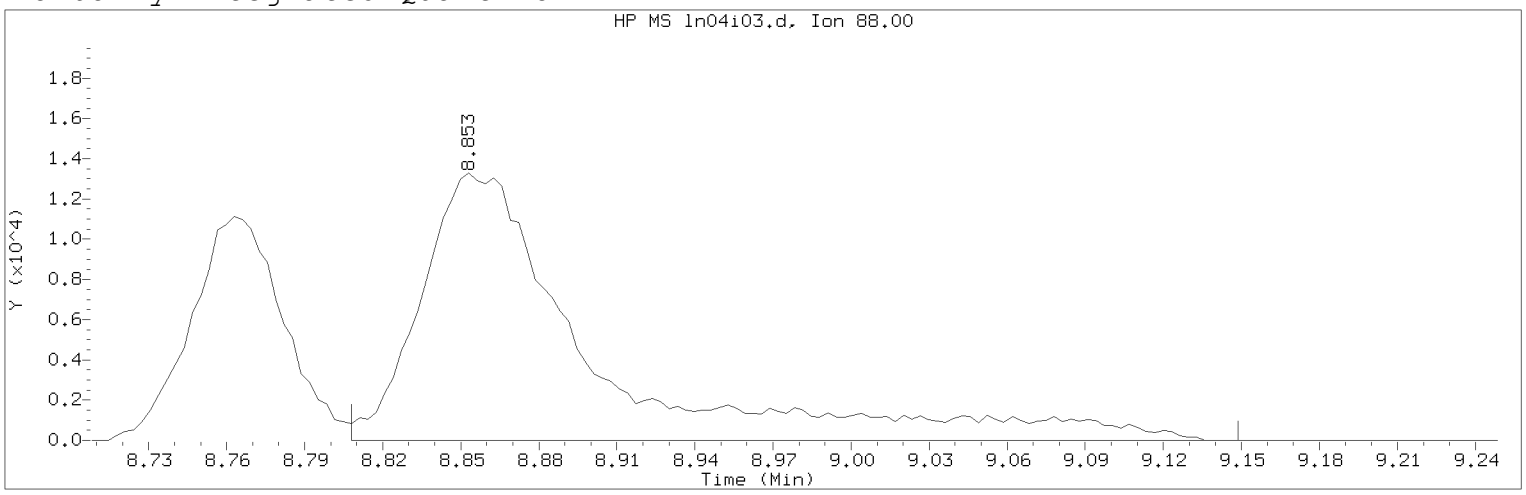
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2255
Retention Time (minutes): 8.734
Quant Ion : 69.00
Area : 120511
On-column Amount (ng) : 48.6556
Integration start scan : 2234 Integration stop scan: 2273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

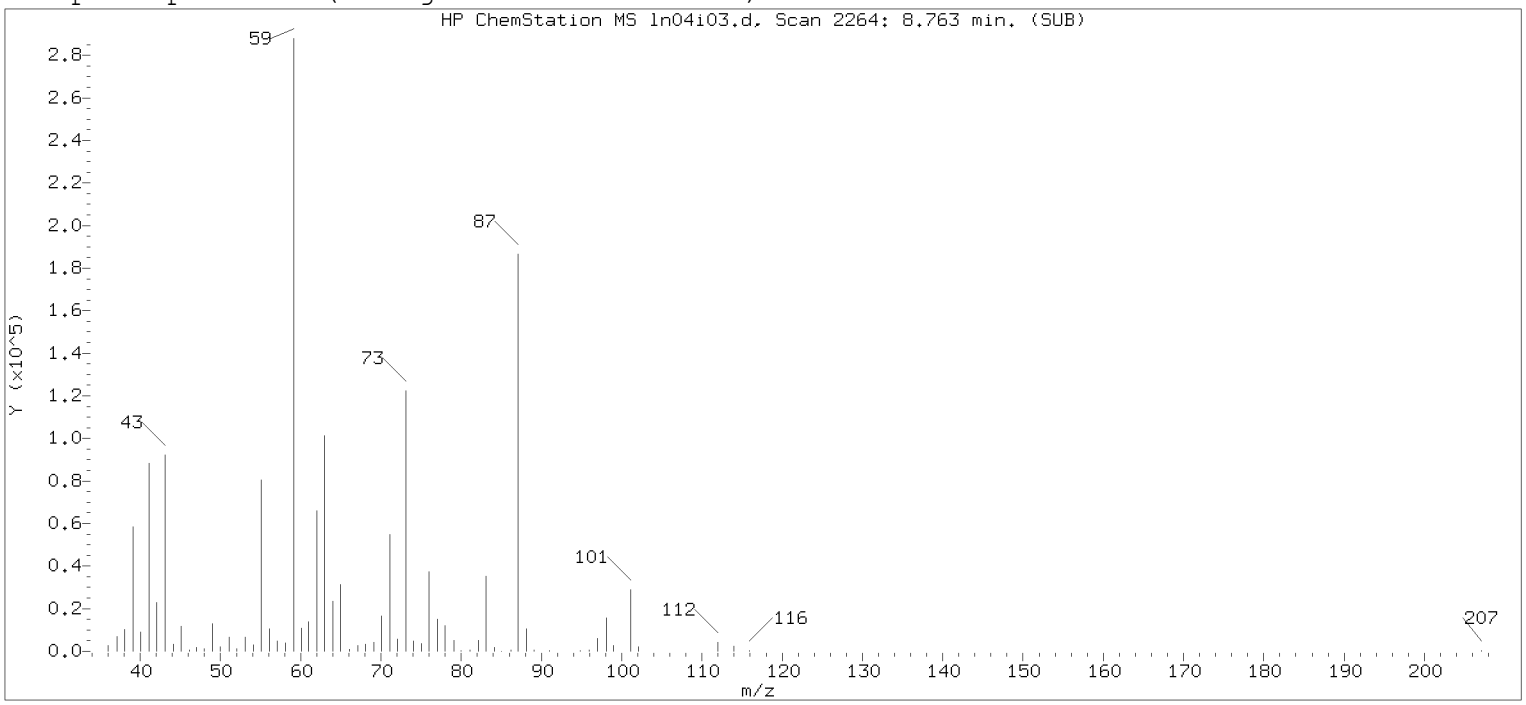
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area (flag) : 59876M
On-Column Amount (ng) : 662.1956
Integration start scan : 2277 Integration stop scan: 2383
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

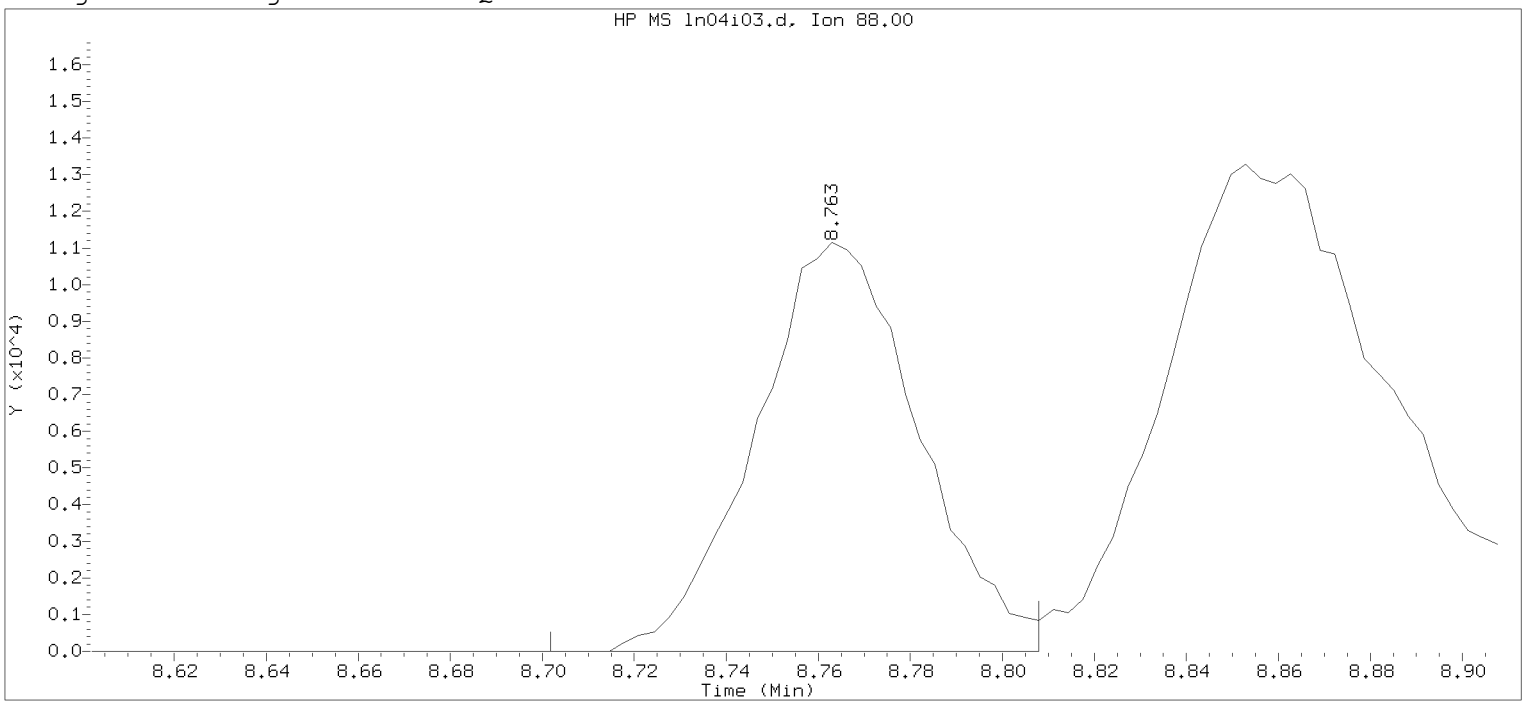
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

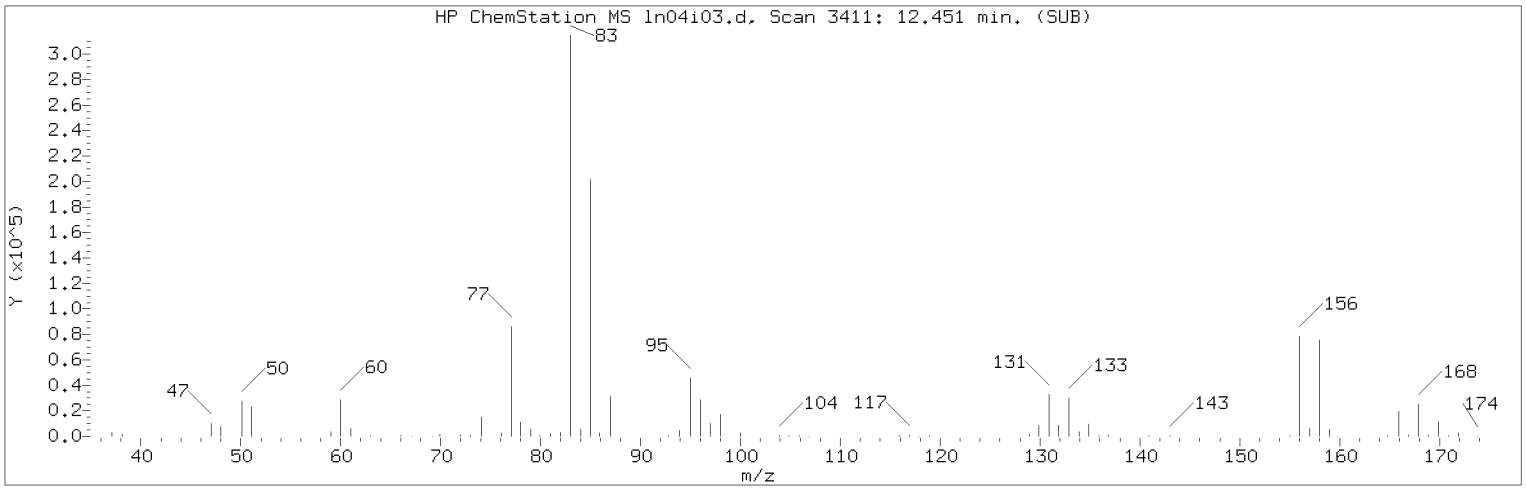
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

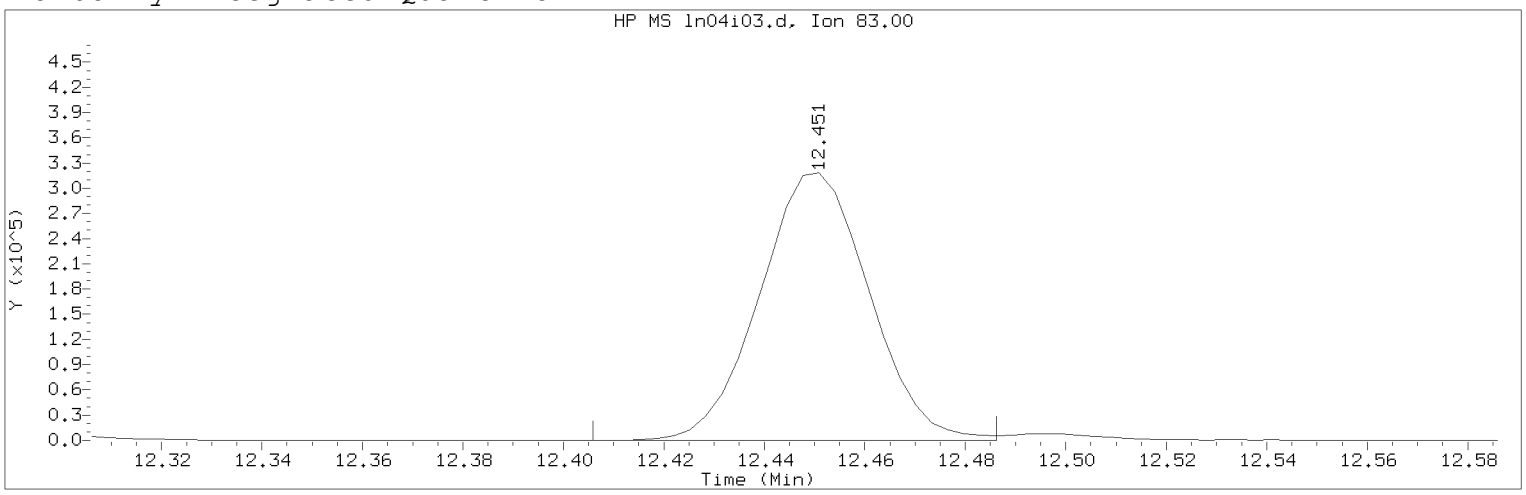
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2264		
Retention Time (minutes)	: 8.763		
Quant Ion	: 88.00		
Area	: 27334		
On-column Amount (ng)	: 447.5530		
Integration start scan	: 2244	Integration stop scan:	2277
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

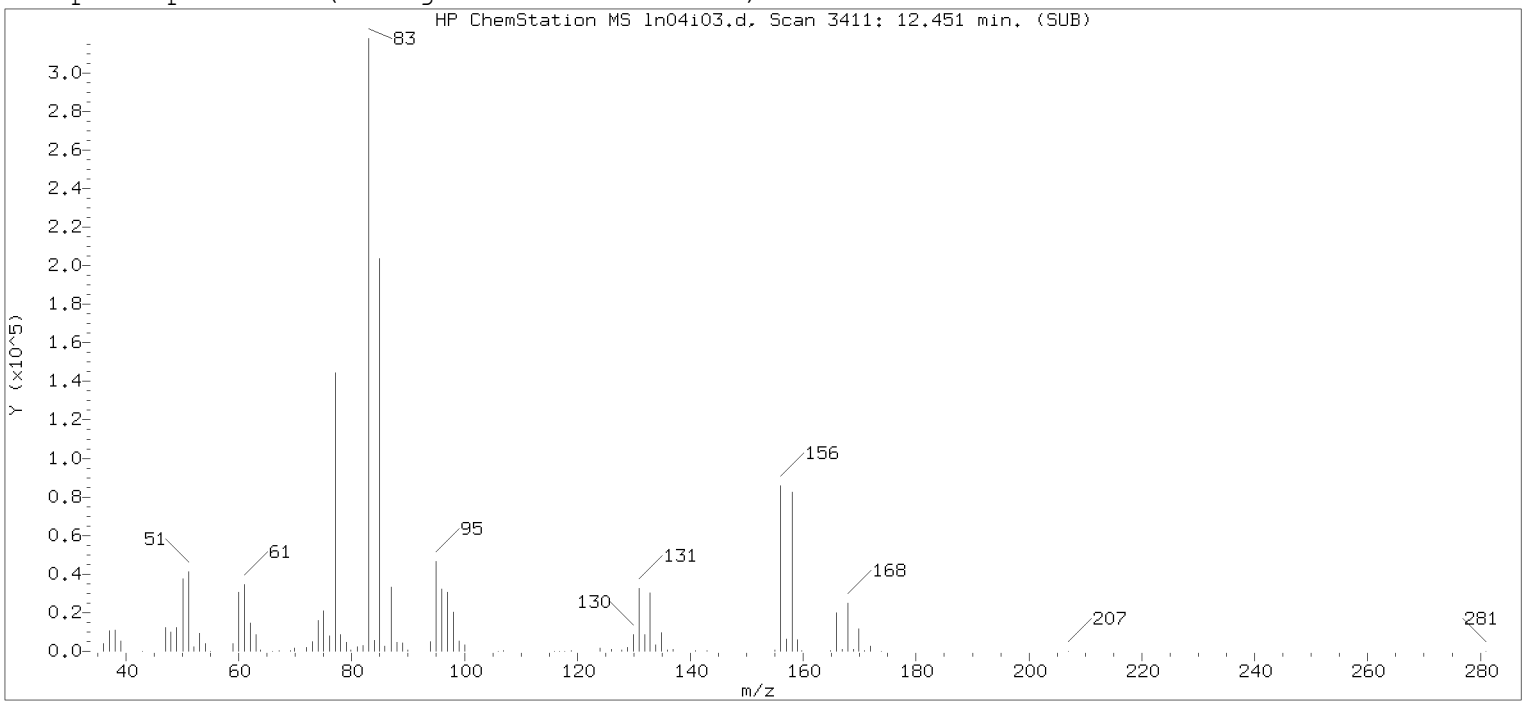
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 482004M
On-Column Amount (ng) : 52.7274
Integration start scan : 3396 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

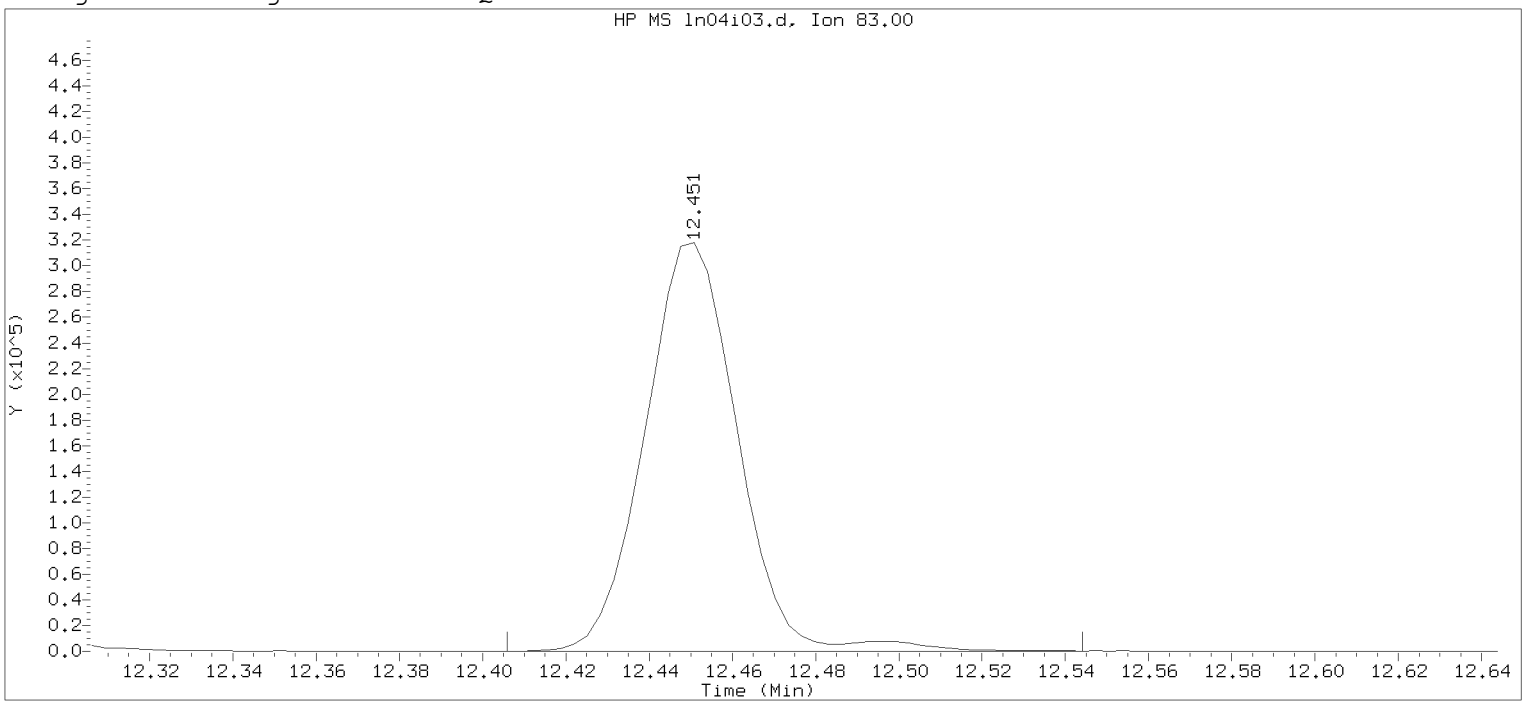
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

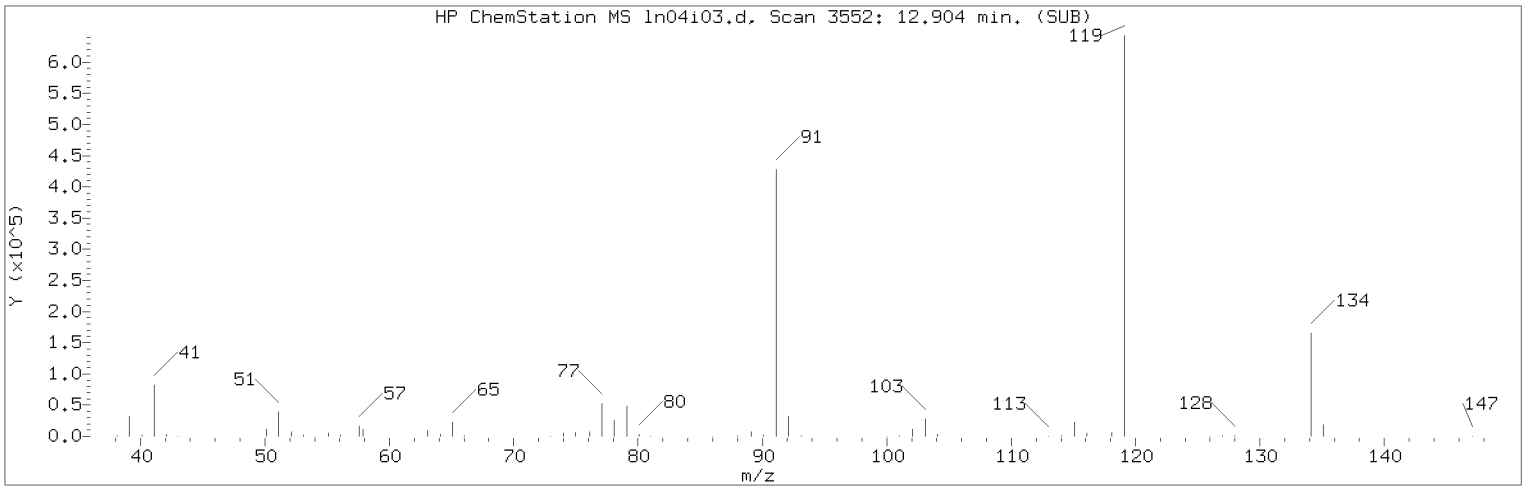
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

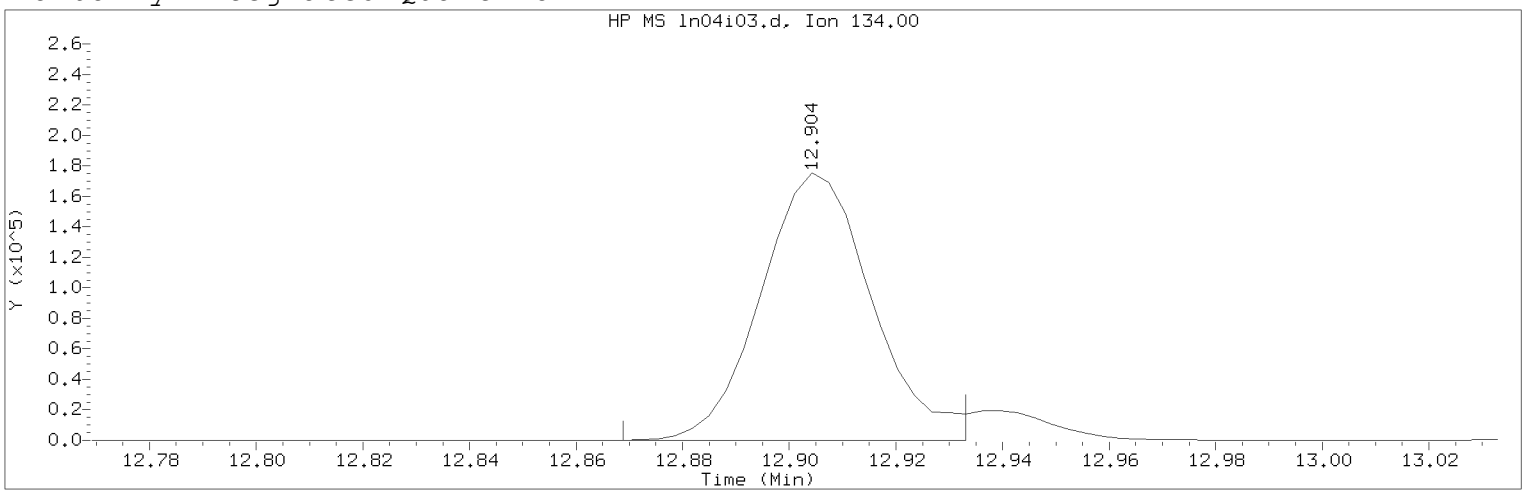
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 491918
On-column Amount (ng) : 50.7154
Integration start scan : 3396 Integration stop scan: 3439
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:05 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

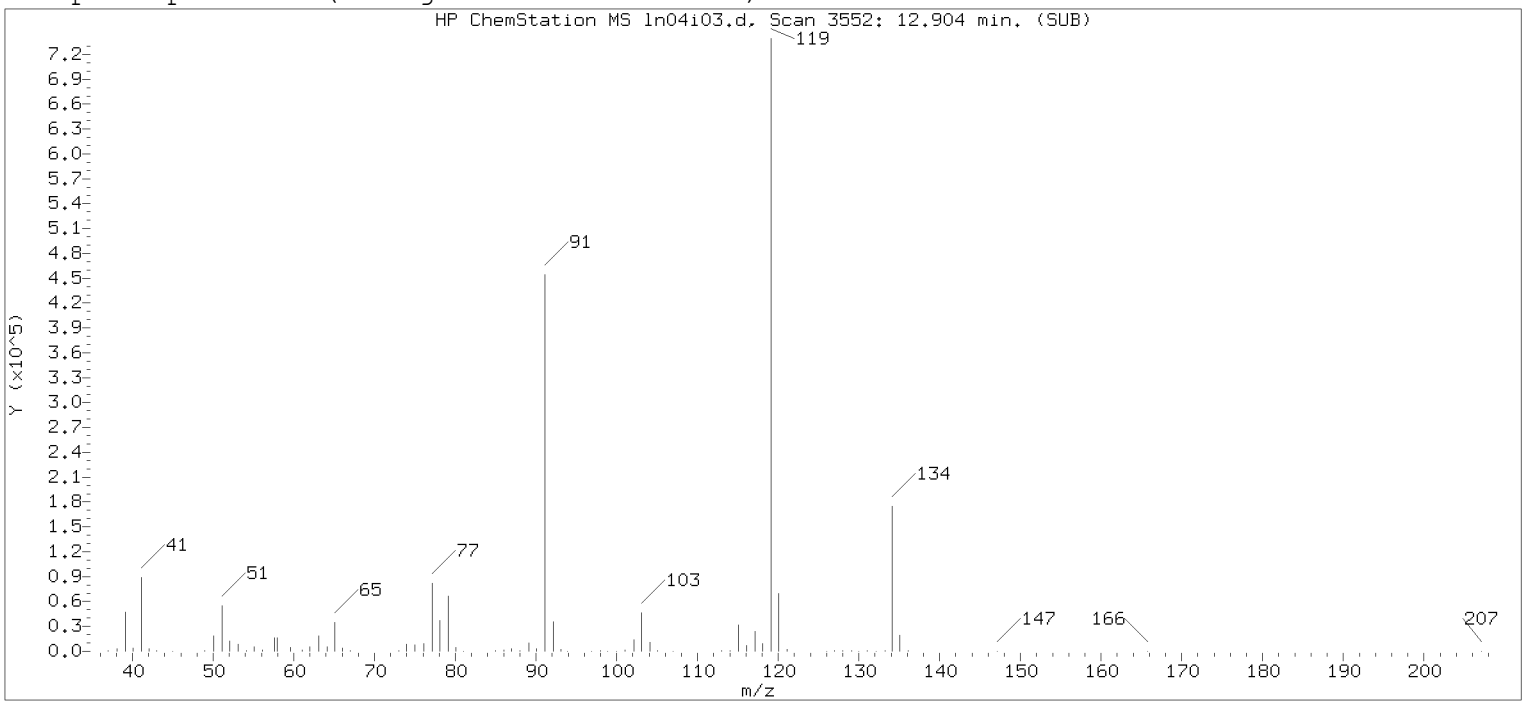
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 253906M
On-Column Amount (ng) : 53.1652
Integration start scan : 3540 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

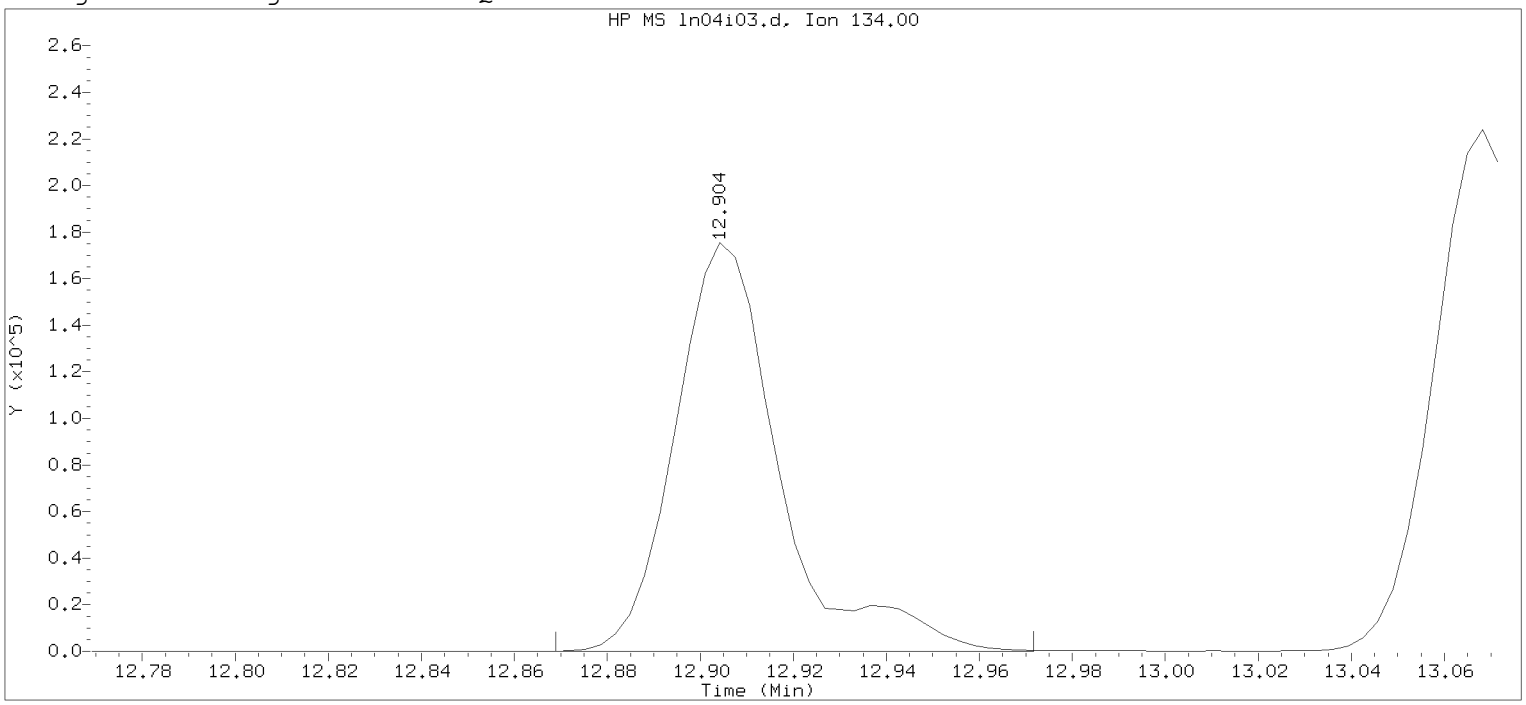
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



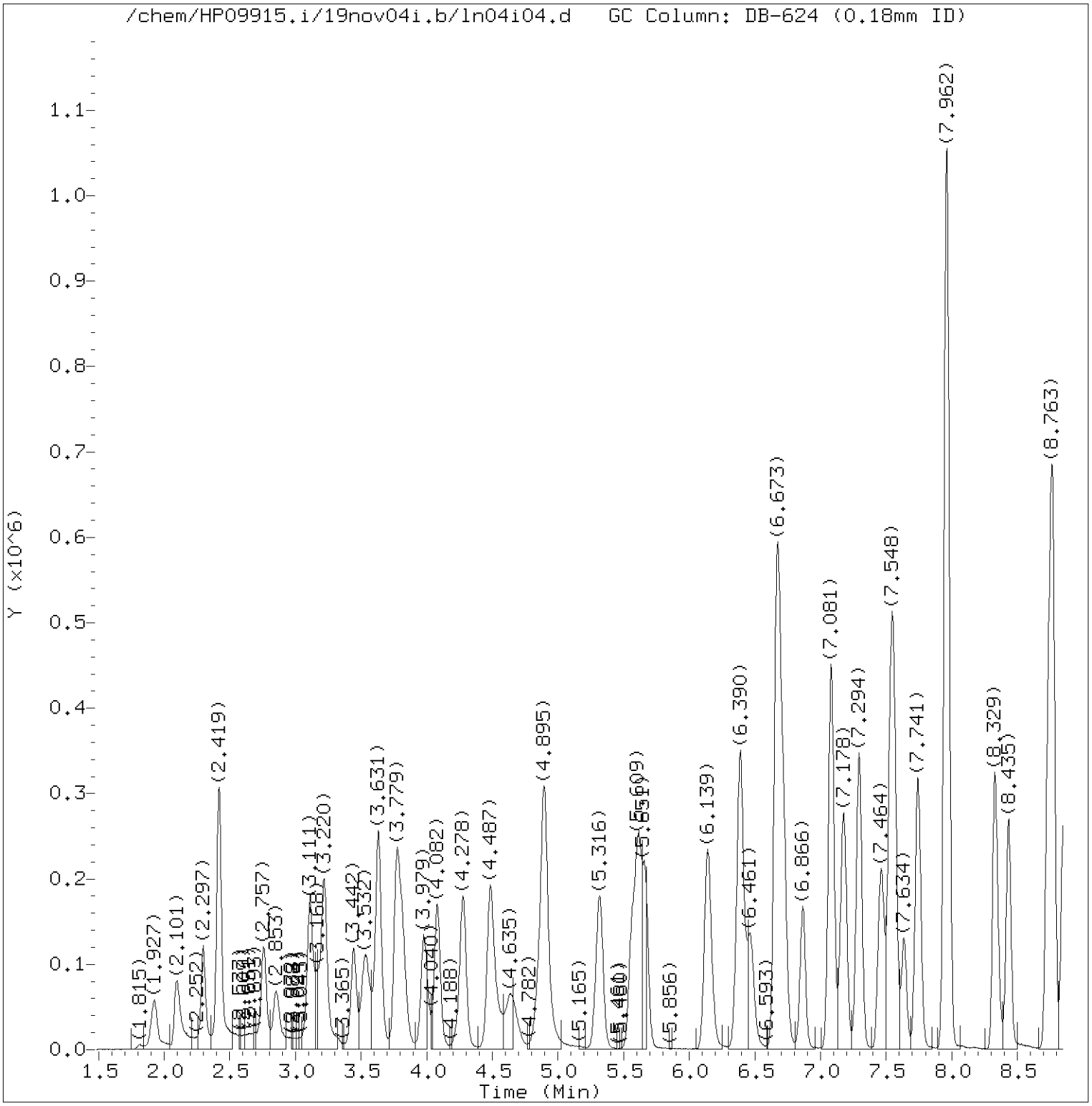
Data File: /chem/HP09915.i/19nov04i.b/ln04i03.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:35 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 04-NOV-2019 15:52
Date, time and analyst ID of latest file update: 04-Nov-2019 15:52 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 273047
On-column Amount (ng) : 50.7591
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: [illegible]



Total Ion Chromatogram (TIC)

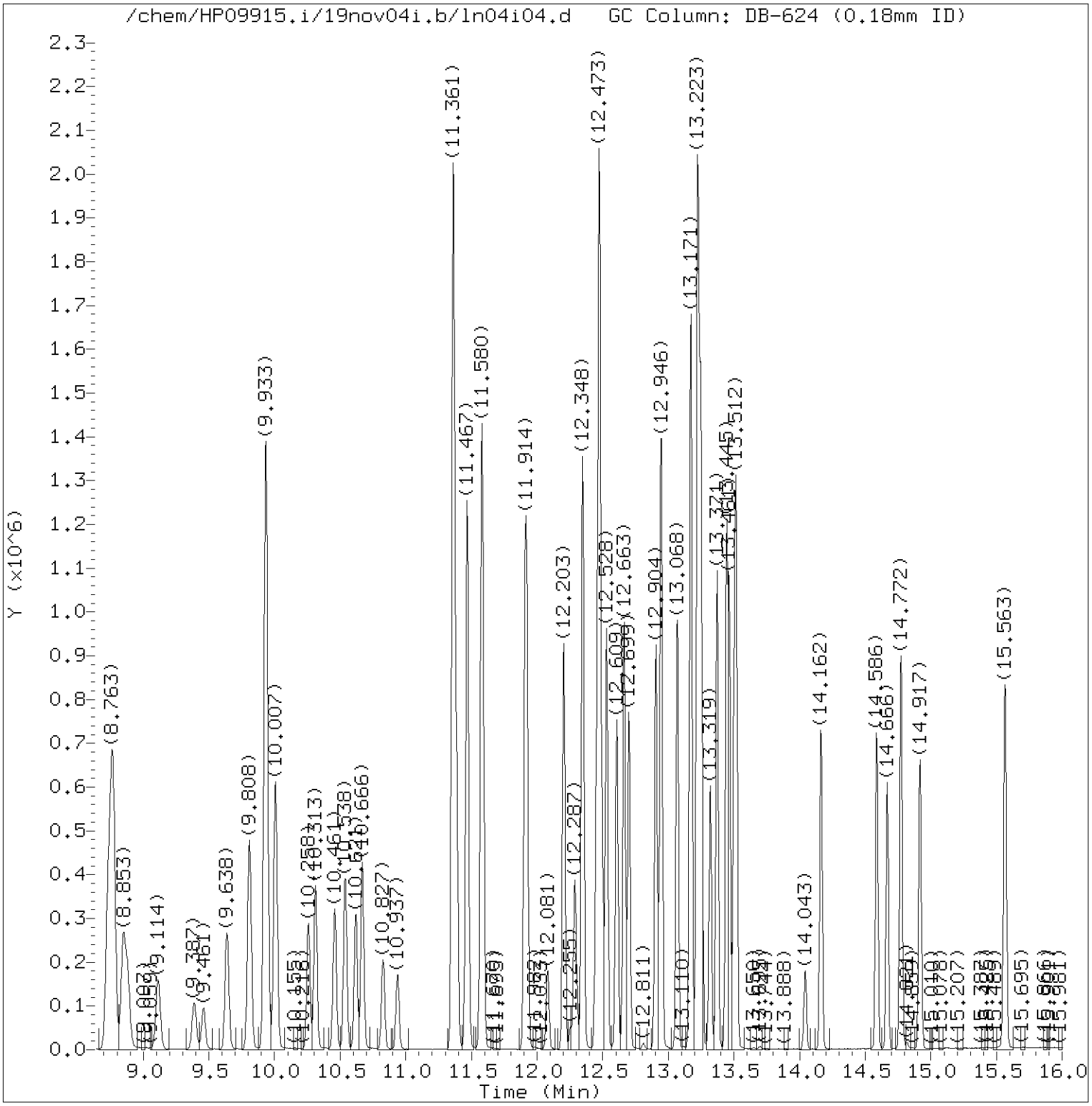
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.095	85	161054M	20.460
4) Chloromethane	(2)	2.297	50	155347	20.477
5) 1,3-Butadiene	(2)	2.416	39	127826M	20.292
6) Vinyl Chloride	(2)	2.419	62	156255	20.637
8) Bromomethane	(2)	2.757	94	109945	20.257
9) Chloroethane	(2)	2.853	64	85938	20.653
10) Dichlorofluoromethane	(2)	3.111	67	205276M	20.838
12) Trichlorofluoromethane	(2)	3.168	101	166167	20.384
11) n-Pentane	(2)	3.220	43	195074	20.250
14) Ethyl ether	(2)	3.442	59	108665	20.629
15) Freon 123a	(2)	3.532	67	137784	21.012
16) Acrolein	(1)	3.631	56	399615	206.403
17) 1,1-Dichloroethene	(2)	3.773	96	101858	21.288
17) 1,1-Dichloroethene	(2)	3.773	63	50444	21.029
19) Freon 113	(2)	3.805	101	115335	21.128
18) Acetone	(1)	3.815	58	36001	41.477
22) Methyl Iodide	(2)	3.979	142	212163	21.398
21) 2-Propanol	(1)	4.004	45	120851	193.676
23) Carbon Disulfide	(2)	4.082	76	388574	21.550
27) Methyl Acetate	(2)	4.255	43	121876	19.777
25) Allyl Chloride	(2)	4.281	41	173950	20.266
28) Methylene Chloride	(2)	4.483	84	119344	20.956
29)*t-Butyl alcohol-d10	(1)	4.512	65	258058M	250.000
30) t-Butyl alcohol	(1)	4.644	59	213903	196.882
31) Acrylonitrile	(2)	4.844	53	69677	21.016
32) trans-1,2-Dichloroethene	(2)	4.898	96	117516	21.231
33) Methyl Tertiary Butyl Ether	(2)	4.898	73	384426	21.159
34) n-Hexane	(2)	5.323	57	185314M	21.519
36) 1,1-Dichloroethane	(2)	5.561	63	203176	21.041
38) di-Isopropyl ether	(2)	5.615	45	399314	21.442
39) 2-Chloro-1,3-butadiene	(2)	5.670	53	184546	21.302
40) Ethyl t-butyl ether	(2)	6.146	59	392243	21.703
43) 1,2-Dichloroethene (Total)	(2)		96	248665	42.340
44) 2-Butanone	(2)	6.371	43	174937	41.104
42) cis-1,2-Dichloroethene	(2)	6.390	96	131149	21.109
45) 2,2-Dichloropropane	(2)	6.397	77	160123	21.332
47) Propionitrile	(1)	6.471	54	279106	206.179
48) Methacrylonitrile	(2)	6.673	67	377980	105.686

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	68547	20.807
50) Tetrahydrofuran	(1)	6.728	71	49905	40.813
51) Chloroform	(2)	6.863	83	198842	21.530
52)$Dibromofluoromethane	(2)	7.078	113	277983	50.374
52)$Dibromofluoromethane	(2)	7.081	111	283696	50.420
53) 1,1,1-Trichloroethane	(2)	7.081	97	168285	21.349
54) Cyclohexane	(2)	7.178	56	226762	21.513
54) Cyclohexane	(2)	7.178	84	195470	21.348
54) Cyclohexane	(2)	7.171	69	69608	21.350
56) Carbon Tetrachloride	(2)	7.290	117	141234	21.126
55) 1,1-Dichloropropene	(2)	7.297	75	161608	21.167
58) Isobutyl Alcohol	(1)	7.464	41	176564	482.927
57)$1,2-Dichloroethane-d4	(2)	7.535	102	71029	50.503
57)$1,2-Dichloroethane-d4	(2)	7.532	65	318244	50.776
57)$1,2-Dichloroethane-d4	(2)	7.535	104	46070	51.284
60) Benzene	(2)	7.561	78	489494	21.320
61) 1,2-Dichloroethane	(2)	7.634	62	150643	20.399
61) 1,2-Dichloroethane	(2)	7.634	98	15487	21.192
65) t-Amyl methyl ether	(2)	7.744	73	391674	21.591
67) n-Heptane	(2)	7.962	43	173500MA	21.566
66)*Fluorobenzene	(2)	7.962	96	1128743	50.000
69) n-Butanol	(1)	8.329	56	312189M	992.087
71) Trichloroethene	(2)	8.435	95	122357	21.166
72) Methylcyclohexane	(2)	8.737	83	221554	20.658
72) Methylcyclohexane	(2)	8.737	98	99234	20.447
73) 1,2-Dichloropropane	(2)	8.769	63	123290	21.148
76) Methyl Methacrylate	(2)	8.850	69	117550A	20.851
75) 1,4-Dioxane	(1)	8.856	88	44376M	513.065
74) Dibromomethane	(2)	8.879	93	79643	21.113
78) Bromodichloromethane	(2)	9.114	83	142226	21.011
79) 2-Nitropropane	(2)	9.390	41	82517M	40.247
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	51005	20.370
81) cis-1,3-Dichloropropene	(2)	9.634	75	192808	21.446
82) 4-Methyl-2-pentanone	(2)	9.808	43	377728	42.047
83)$Toluene-d8	(3)	9.933	98	1159273	50.160
83)$Toluene-d8	(3)	9.933	100	751601	50.203
88) Toluene	(3)	10.007	92	308466	21.289
90) 1,3-Dichloropropene (total)	(3)		100	367273	42.658

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	174465	21.211
91) Ethyl Methacrylate	(3)	10.313	69	210882	21.096
92) 1,1,2-Trichloroethane	(3)	10.461	97	114106	20.771
93) Tetrachloroethene	(3)	10.538	166	130358	21.243
94) 1,3-Dichloropropane	(3)	10.618	76	196136	20.911
96) 2-Hexanone	(3)	10.666	43	276801	41.485
97) Dibromochloromethane	(3)	10.827	129	117920	20.955
99) 1,2-Dibromoethane	(3)	10.940	107	124981	20.951
100)*Chlorobenzene-d5	(3)	11.361	117	883281	50.000
101) 1-Chlorohexane	(3)	11.364	91	162552	20.883
102) Chlorobenzene	(3)	11.387	112	347116	21.185
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	116096	21.505
104) Ethylbenzene	(3)	11.467	91	593614	21.434
106) m+p-Xylene	(3)	11.580	106	474524	43.555
108) Xylene (Total)	(3)		106	707354	65.191
107) o-Xylene	(3)	11.908	106	232830	21.636
109) Styrene	(3)	11.924	104	387652	21.799
110) Bromoform	(3)	12.081	173	81670	19.422
111) Isopropylbenzene	(3)	12.203	105	589458	21.839
112) Cyclohexanone	(1)	12.287	55	167626	494.847
114)$4-Bromofluorobenzene	(3)	12.348	95	438766	50.137
114)$4-Bromofluorobenzene	(3)	12.348	174	363757	50.138
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	186119M	20.690
115) Bromobenzene	(4)	12.464	156	150208	20.987
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	295707	106.569
117) 1,2,3-Trichloropropane	(4)	12.499	110	56899	20.612
119) n-Propylbenzene	(4)	12.528	91	680502	21.762
120) 2-Chlorotoluene	(4)	12.609	126	141675	21.327
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	498486	21.936
121) 4-Chlorotoluene	(4)	12.699	126	147463	21.326
124) tert-Butylbenzene	(4)	12.904	134	101571M	21.612
125) Pentachloroethane	(4)	12.940	167	85065	21.020
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	522495	21.816
127) sec-Butylbenzene	(4)	13.068	105	620603	22.130
129) 1,3-Dichlorobenzene	(4)	13.168	146	280954	21.362
130) p-Isopropyltoluene	(4)	13.171	119	539497	22.237
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	476218	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	288857	21.186

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

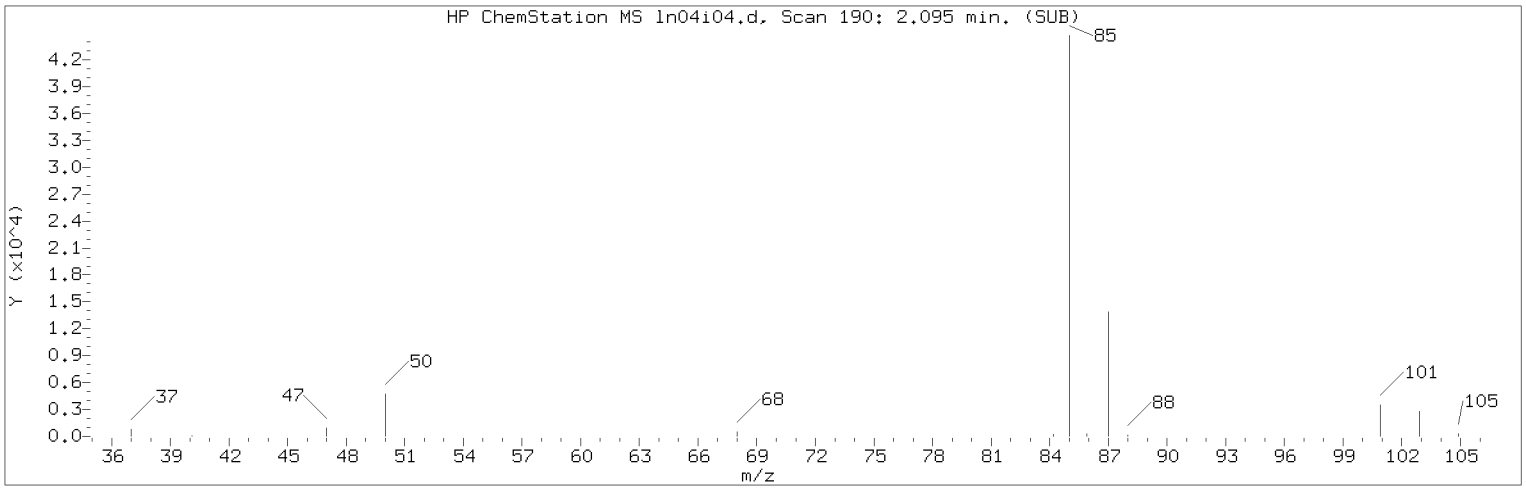
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

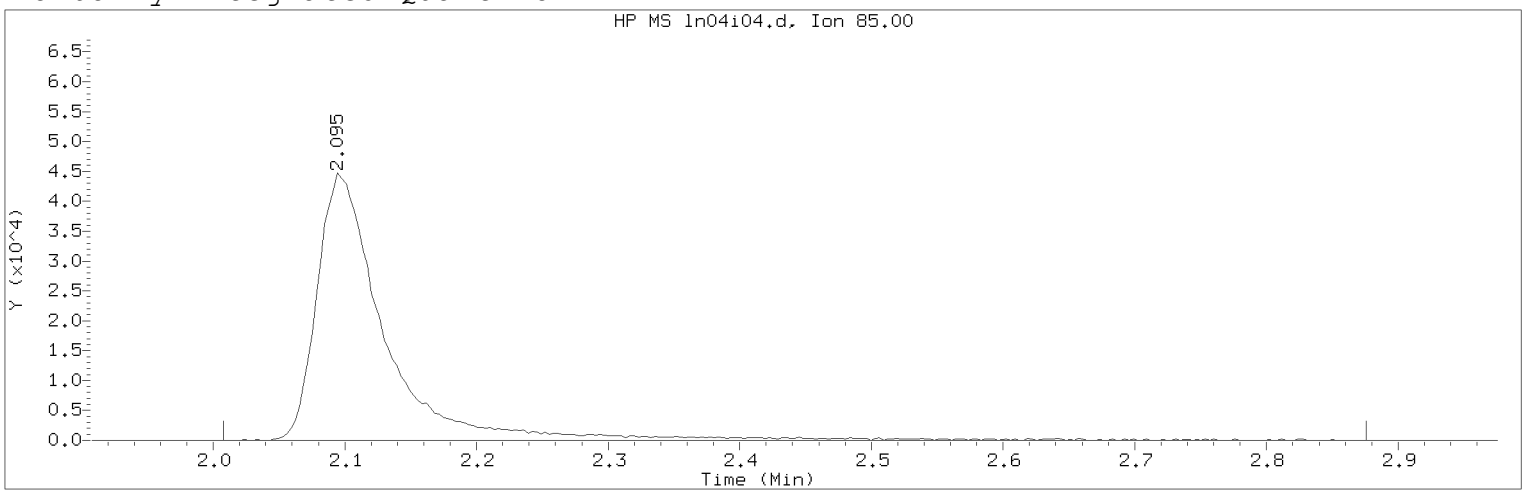
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	529814	20.883
135) Benzyl Chloride	(4)	13.319	91	386244	20.108
136) 1,3-Diethylbenzene	(4)	13.371	119	333696	21.134
141) Diethylbenzene (total)	(4)		100	968804	63.411
137) 1,4-Diethylbenzene	(4)	13.445	119	354305	21.180
139) n-Butylbenzene	(4)	13.464	92	270790	21.829
138) 1,2-Dichlorobenzene	(4)	13.502	146	274435	21.146
140) 1,2-Diethylbenzene	(4)	13.518	119	280803	21.097
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	40583	20.608
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	215108	21.573
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	206700	21.320
147) Hexachlorobutadiene	(4)	14.666	225	101324	22.135
148) Naphthalene	(4)	14.772	128	665482	21.351
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	203518	21.573
150) 2-Methylnaphthalene	(4)	15.563	142	423056	22.042

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

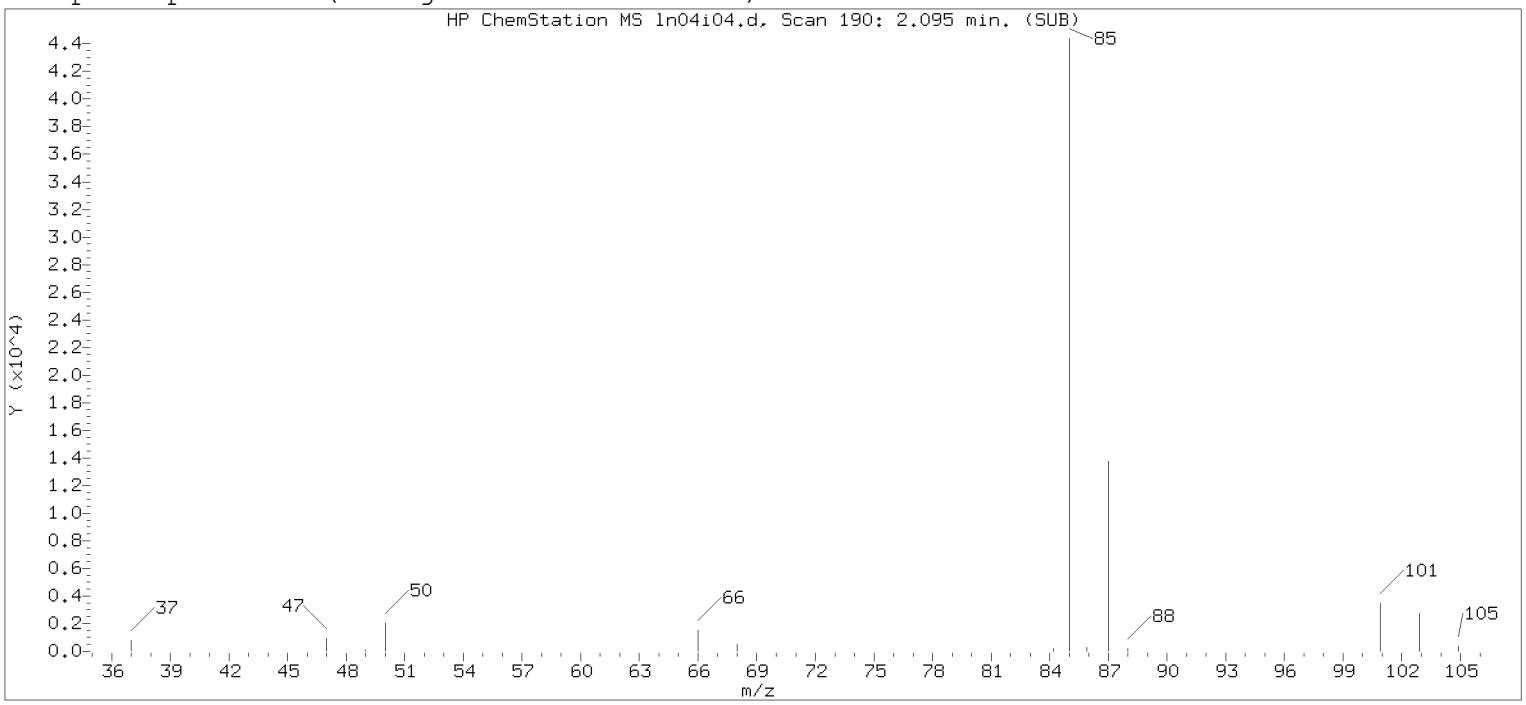
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.095
Quant Ion : 85.00
Area (flag) : 161054M
On-Column Amount (ng) : 20.4603
Integration start scan : 162 Integration stop scan: 432
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

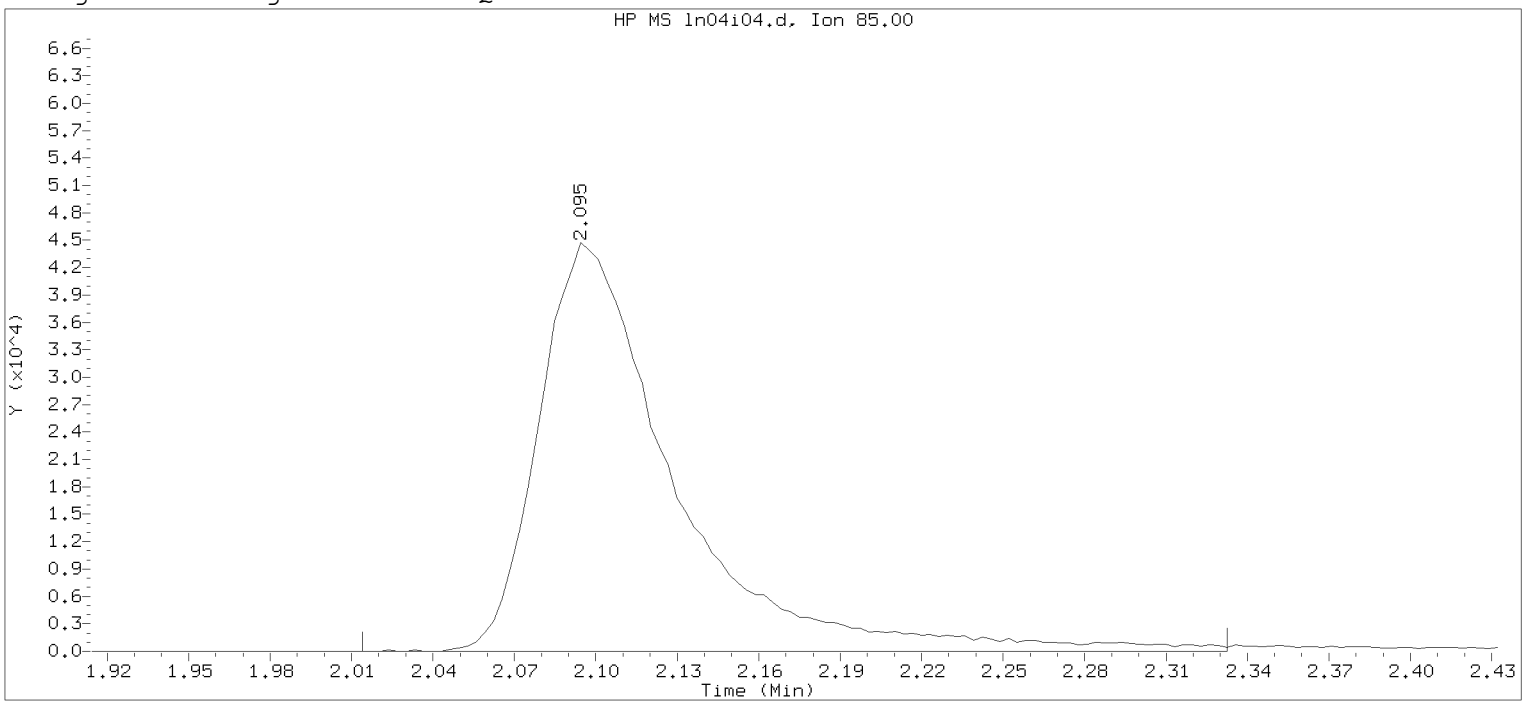
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

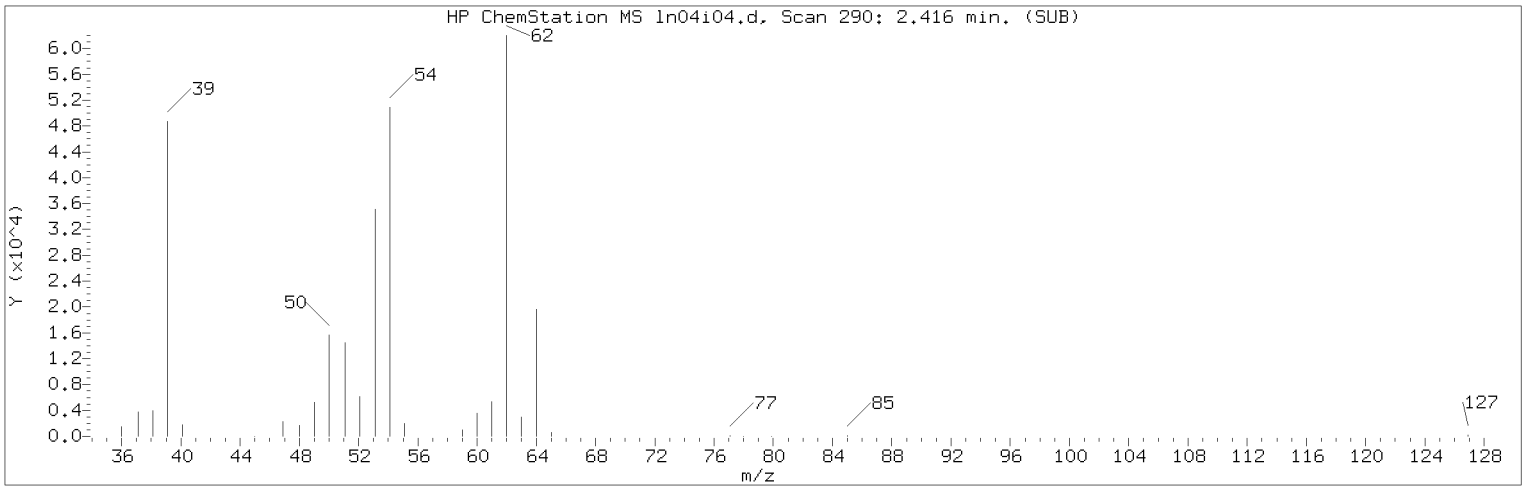
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

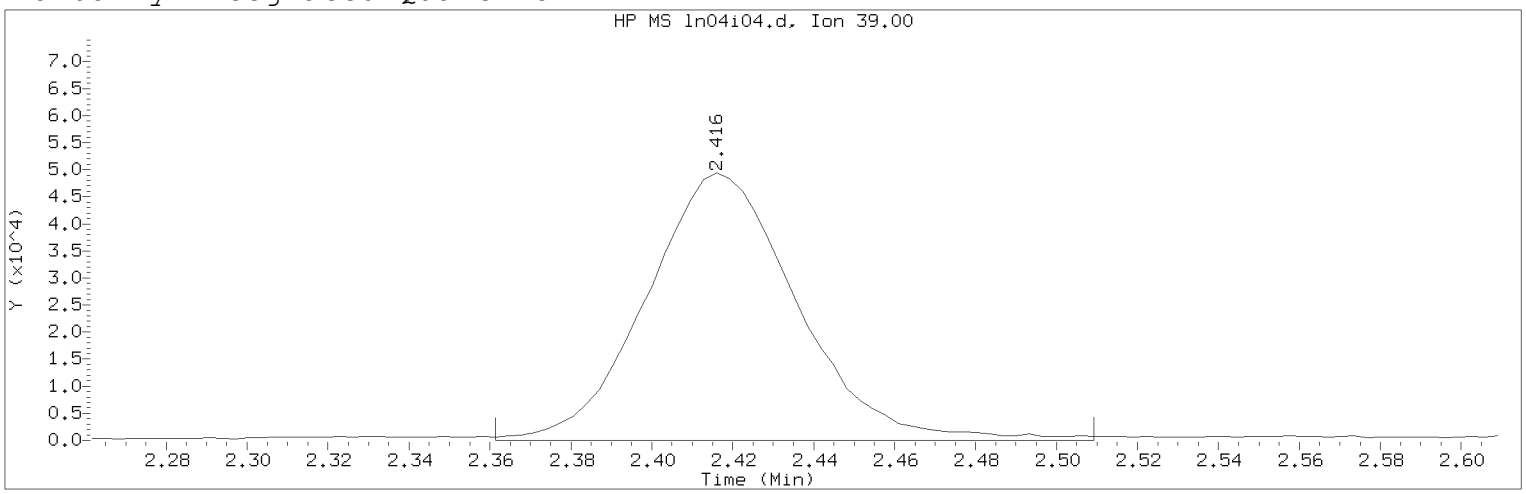
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.095
Quant Ion : 85.00
Area : 154796
On-column Amount (ng) : 18.9193
Integration start scan : 164 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

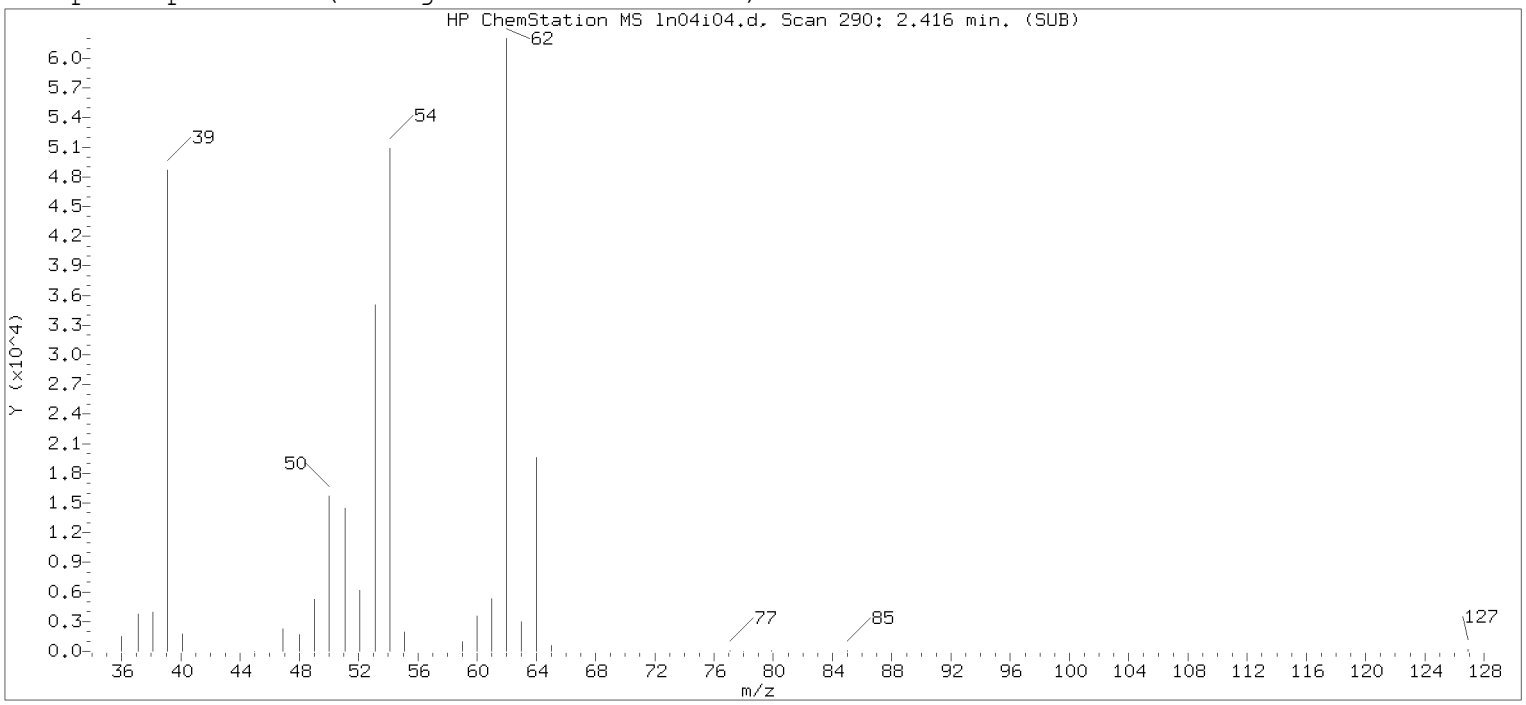
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 290
Retention Time (minutes): 2.416
Quant Ion : 39.00
Area (flag) : 127826M
On-Column Amount (ng) : 20.2925
Integration start scan : 272 Integration stop scan: 318
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

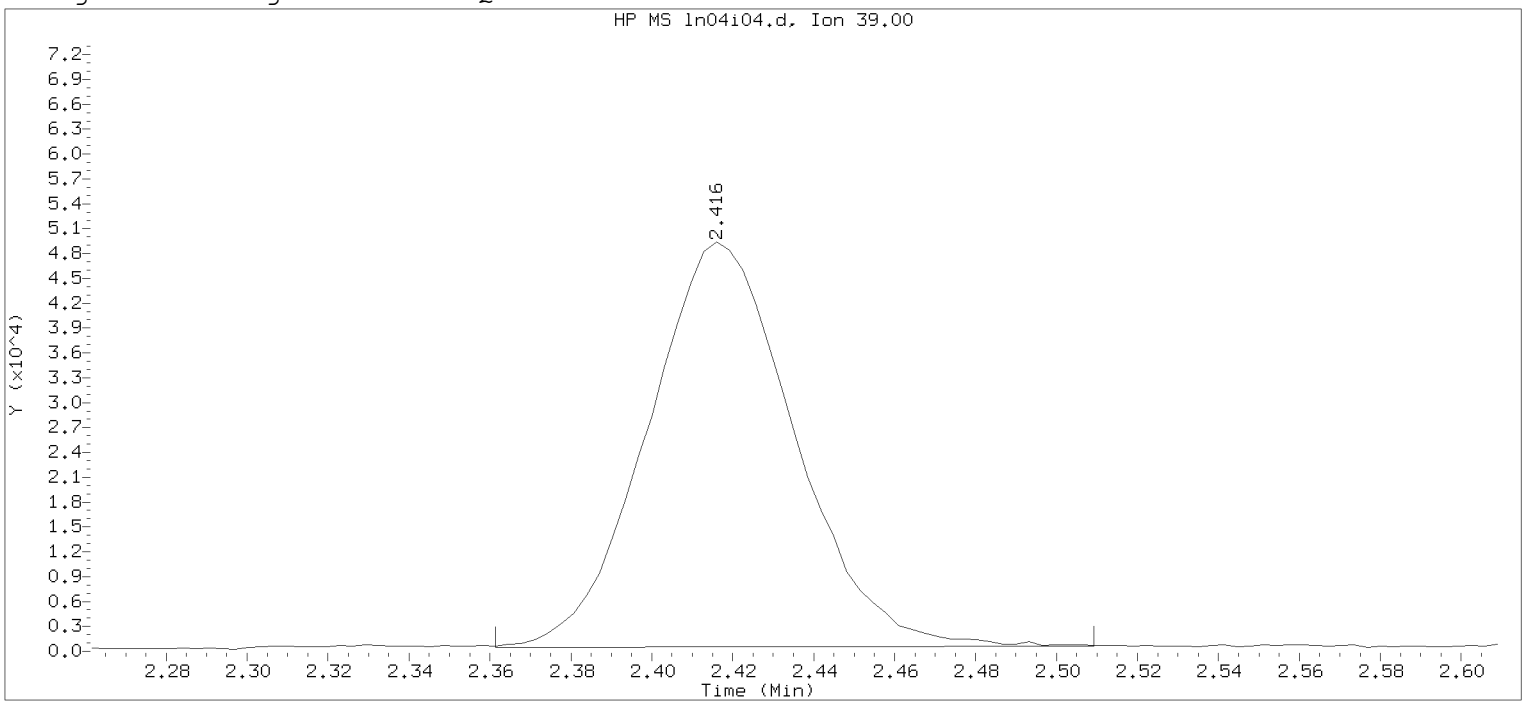
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

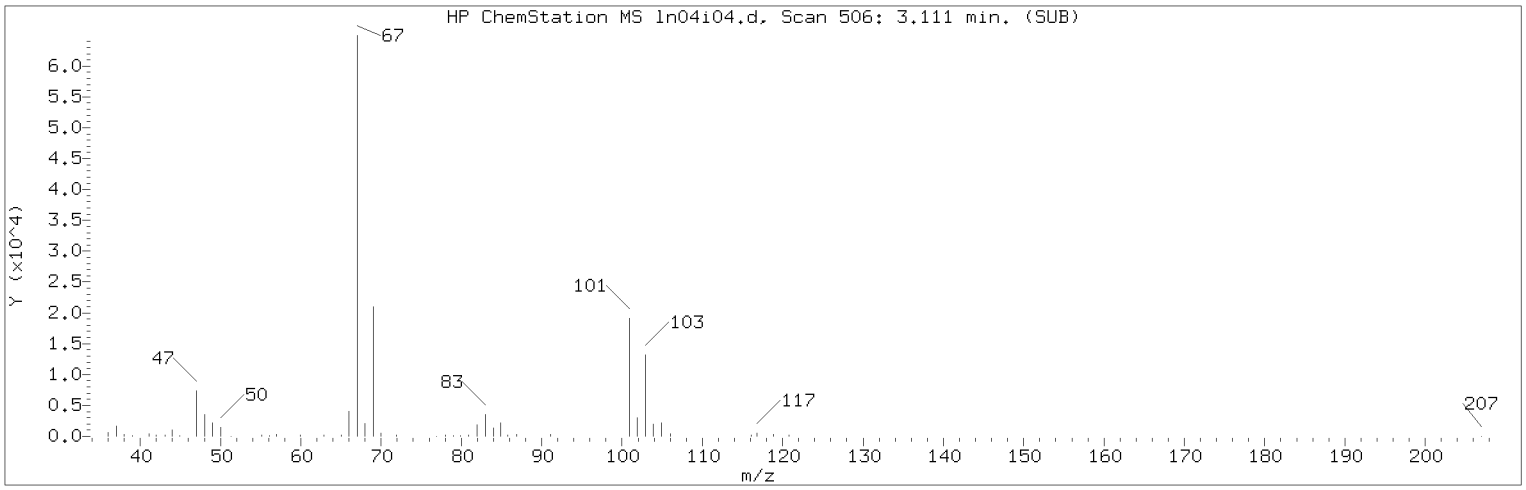
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

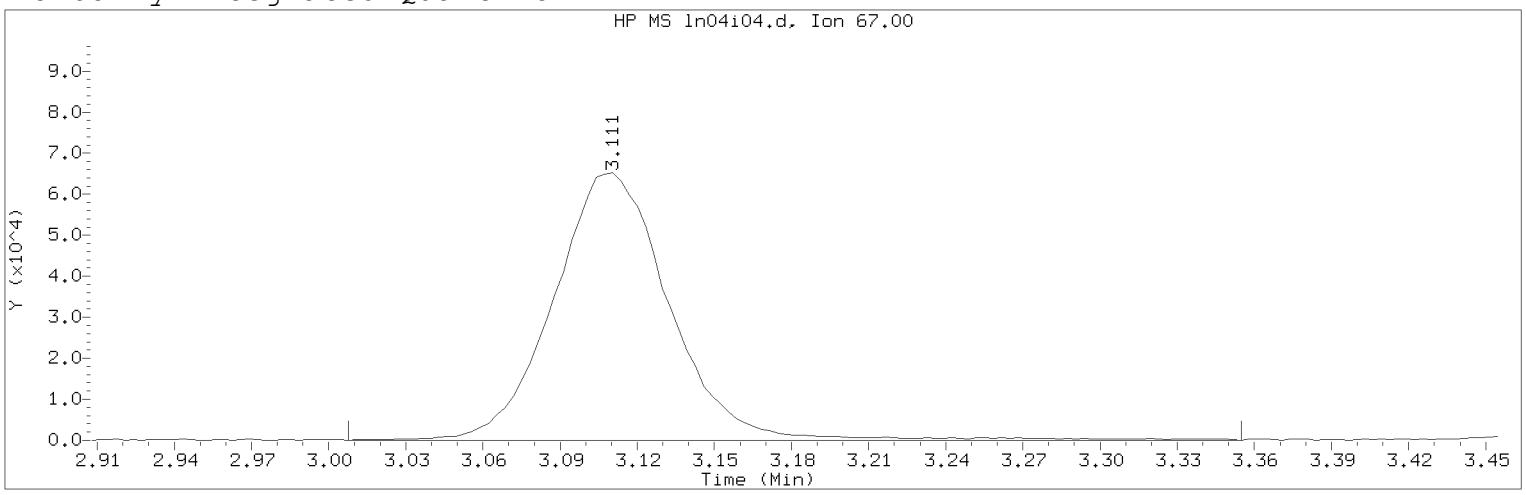
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 290
Retention Time (minutes): 2.416
Quant Ion : 39.00
Area : 122801
On-column Amount (ng) : 20.5539
Integration start scan : 272 Integration stop scan: 318
Y at integration start : 477 Y at integration end: 628

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

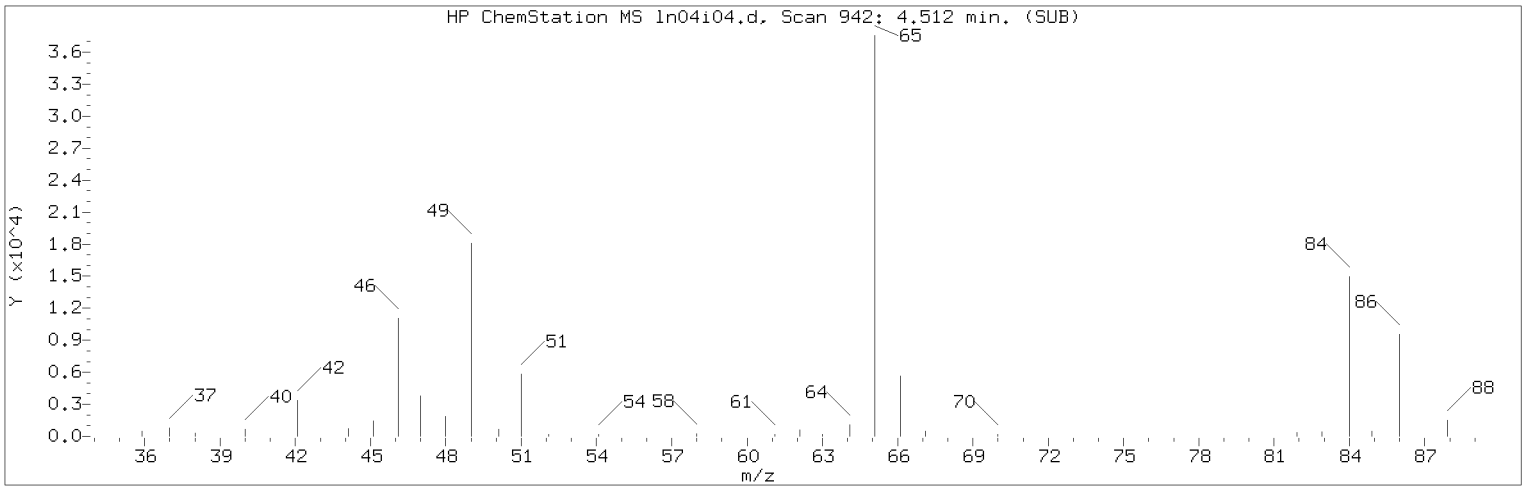
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 506
Retention Time (minutes): 3.111
Quant Ion : 67.00
Area (flag) : 205276M
On-Column Amount (ng) : 20.8381
Integration start scan : 473 Integration stop scan: 581
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

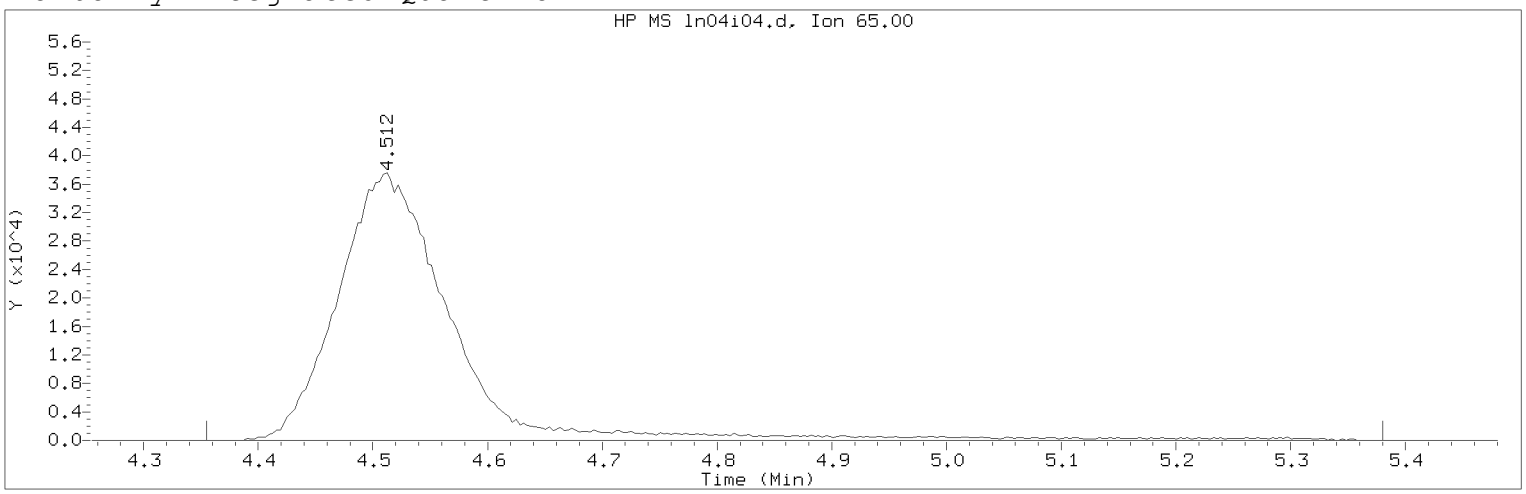
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

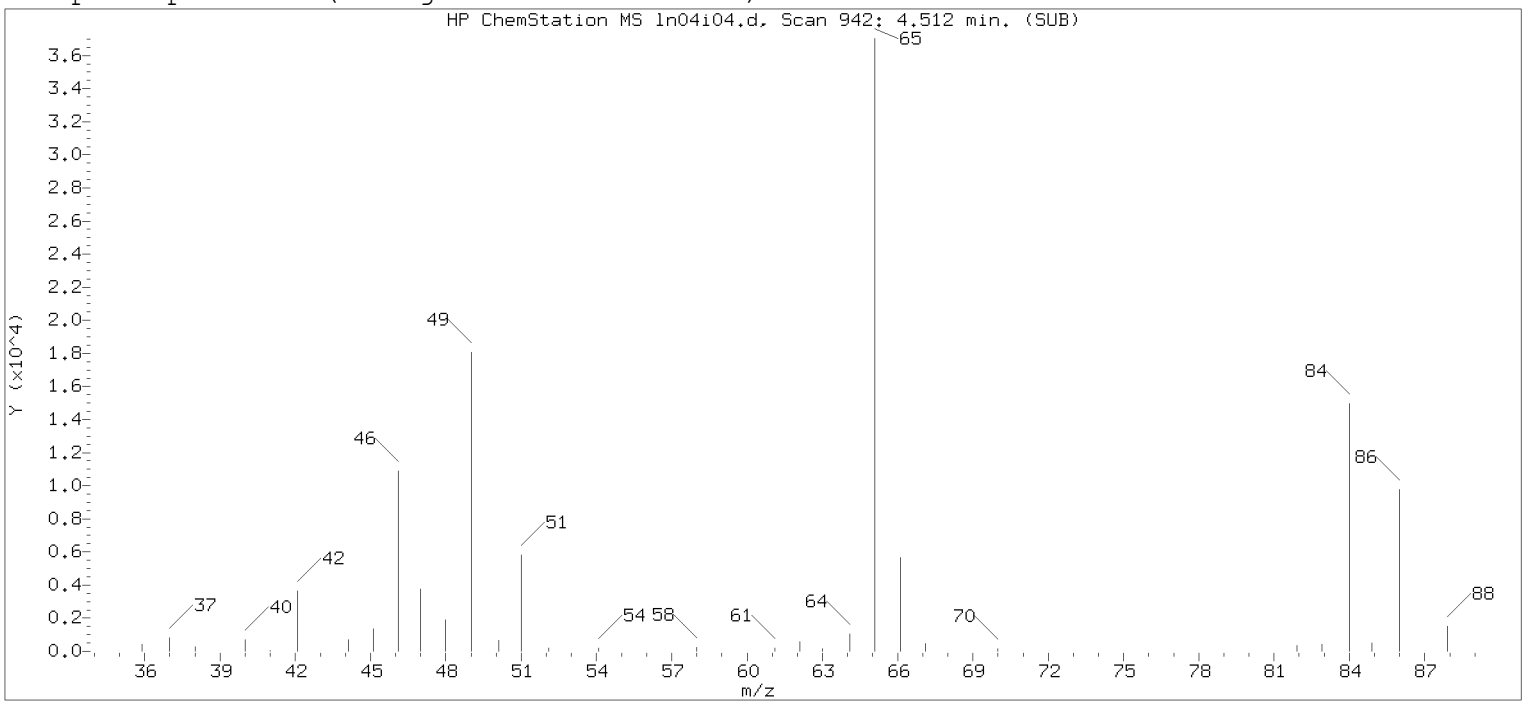
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area (flag) : 258058M
On-Column Amount (ng) : 250.0000
Integration start scan : 892 Integration stop scan: 1211
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

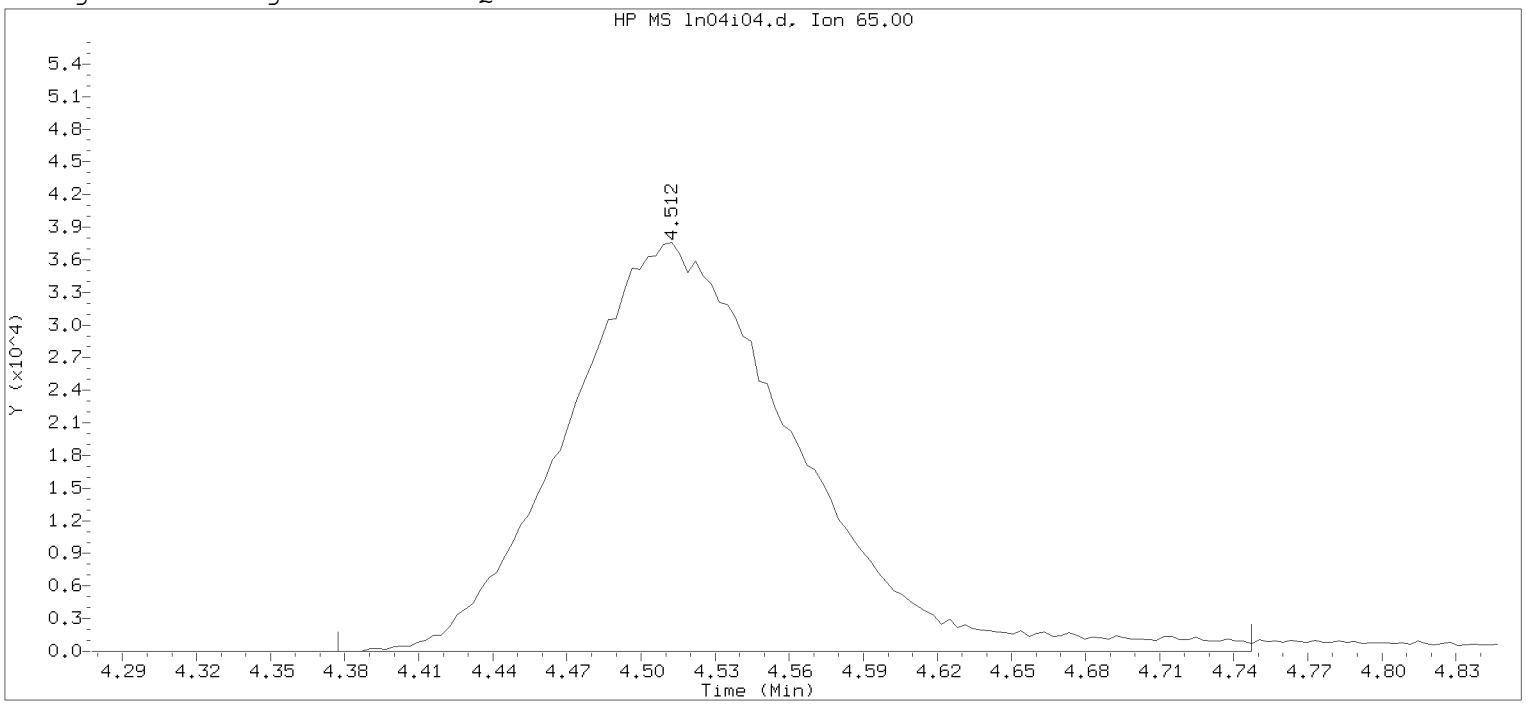
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

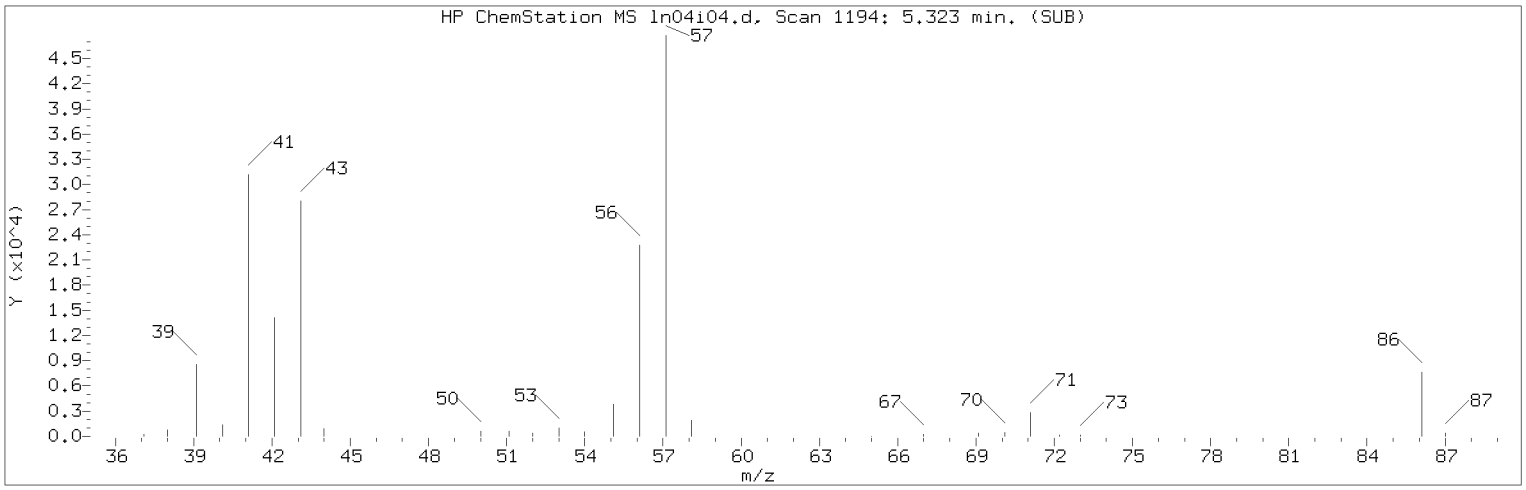
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

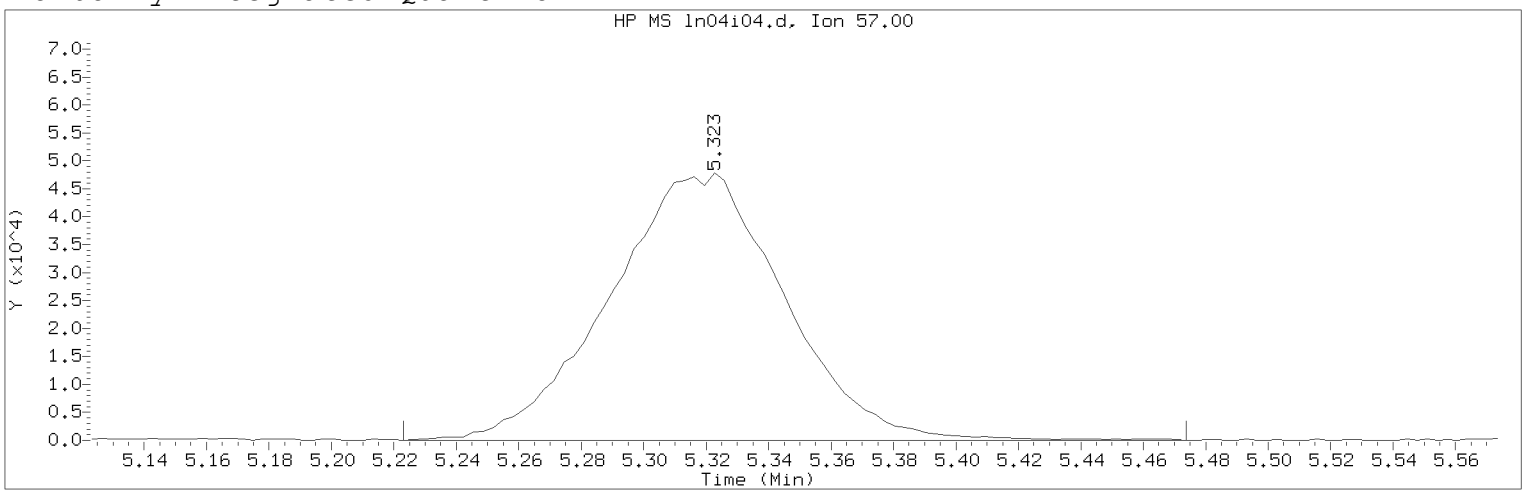
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area : 242565
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

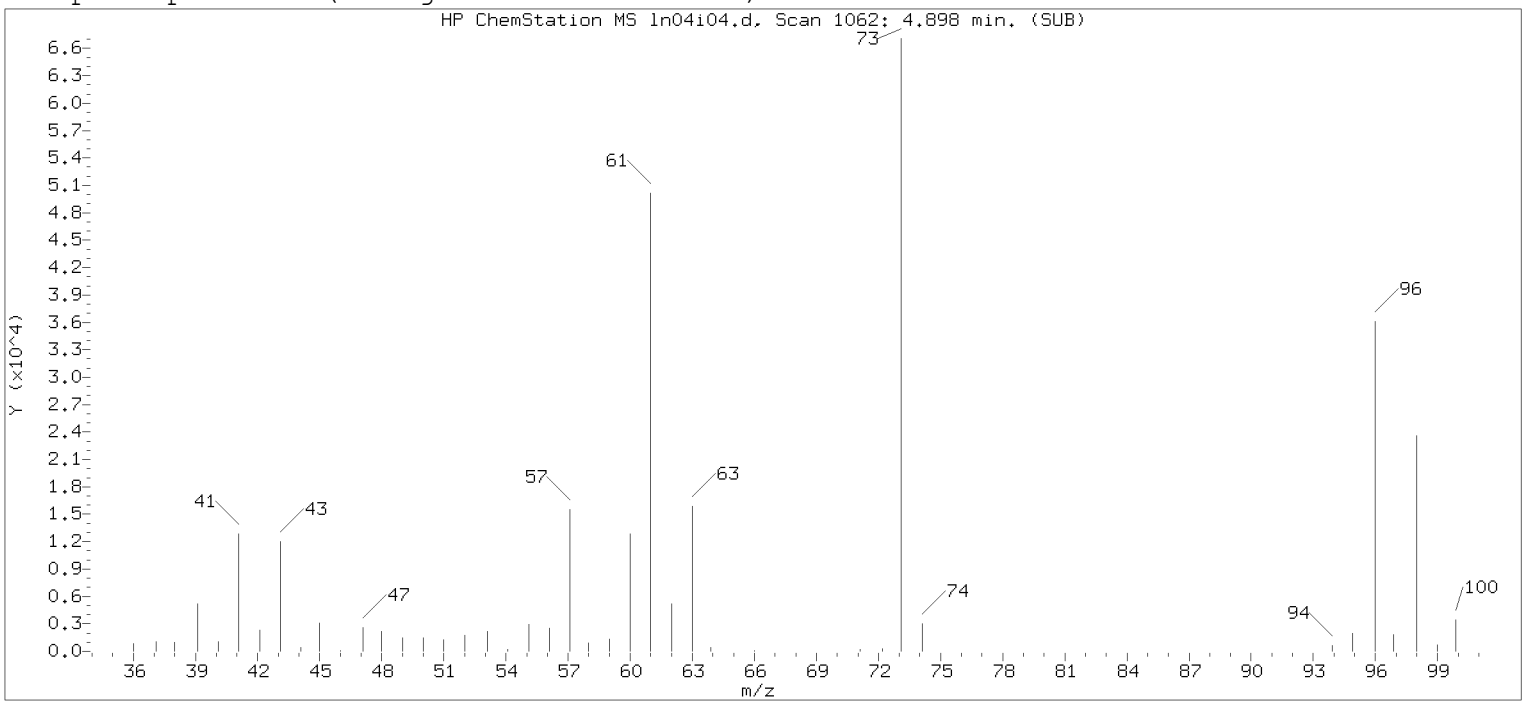
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1194
Retention Time (minutes): 5.323
Quant Ion : 57.00
Area (flag) : 185314M
On-Column Amount (ng) : 21.5188
Integration start scan : 1162 Integration stop scan: 1240
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

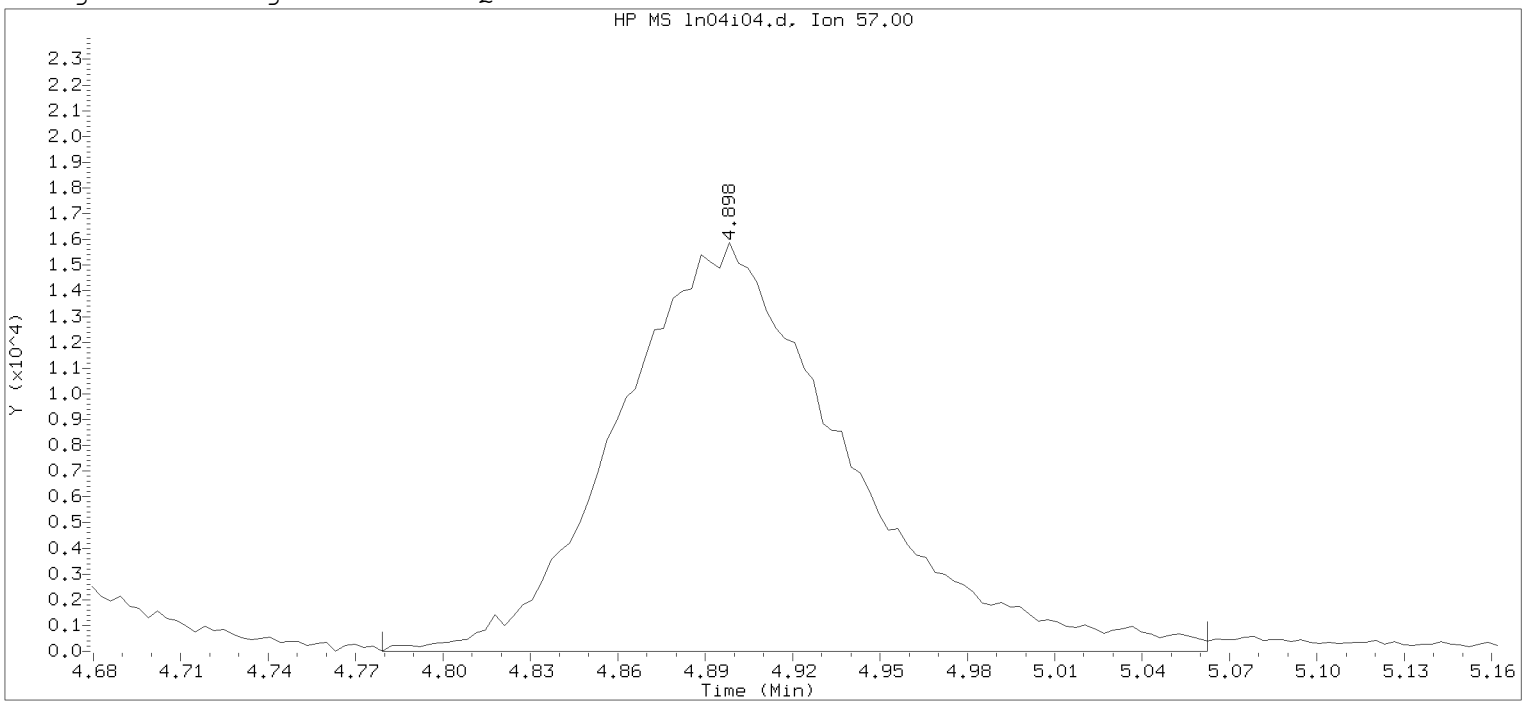
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

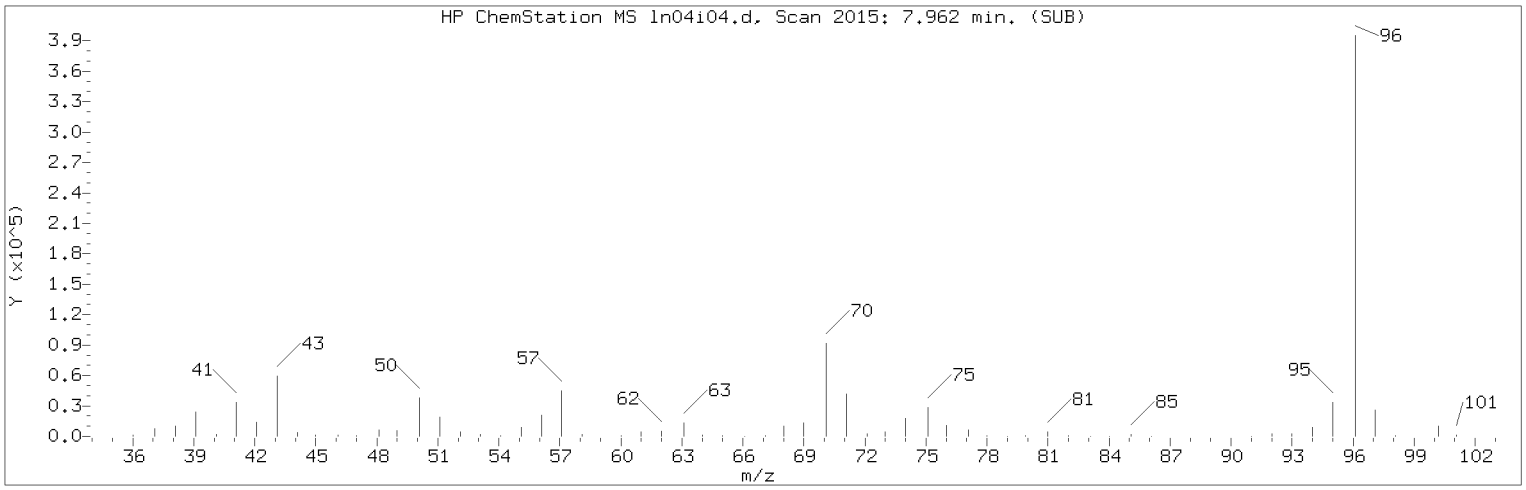
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

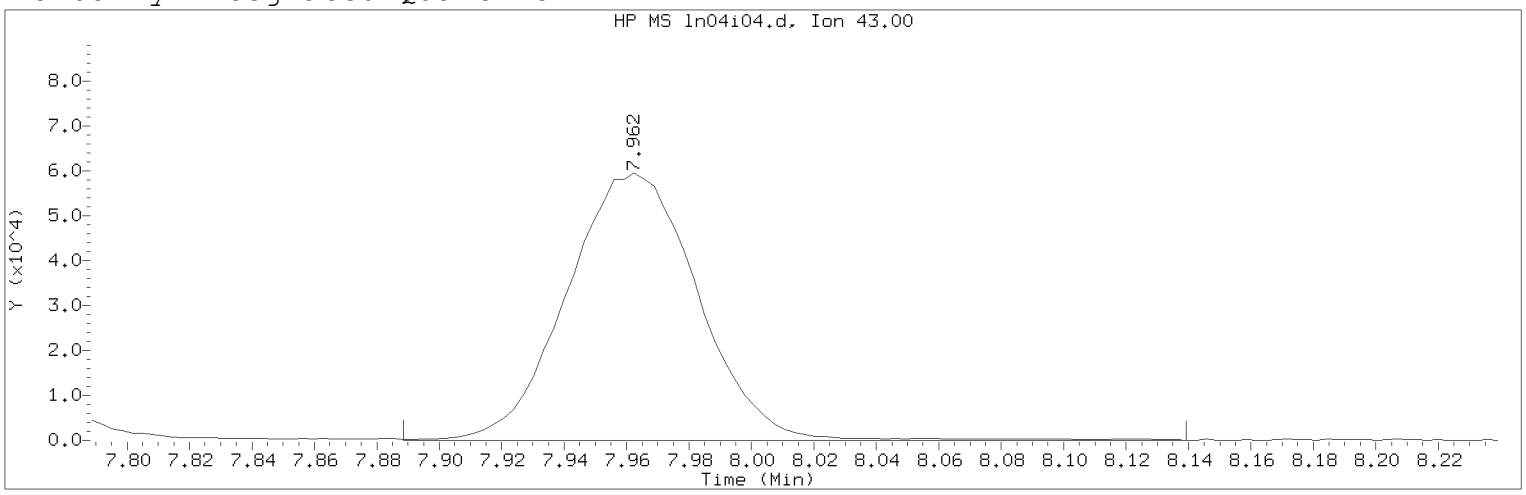
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1062
Retention Time (minutes): 4.898
Quant Ion : 57.00
Area : 86496
On-column Amount (ng) : 21.2144
Integration start scan : 1024 Integration stop scan: 1112
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

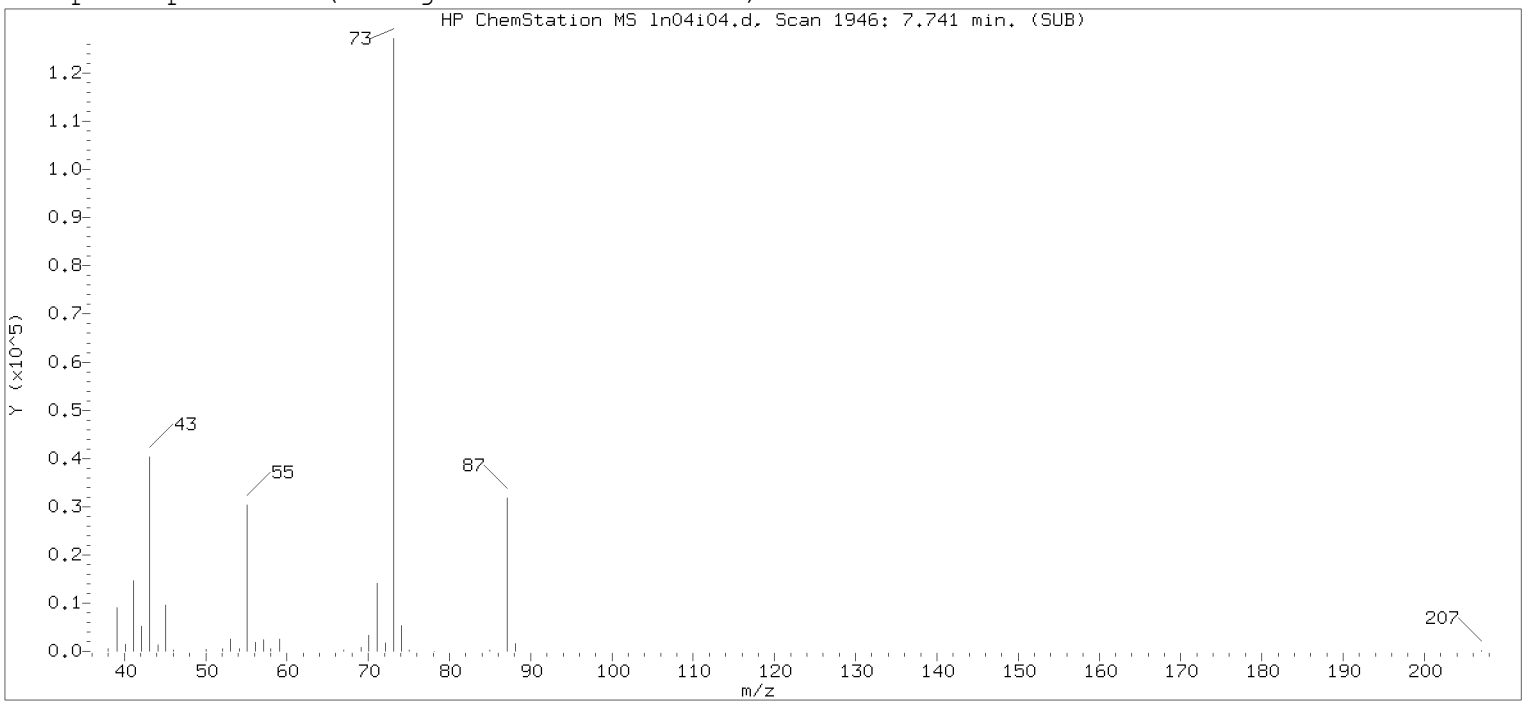
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2015
Retention Time (minutes): 7.962
Quant Ion : 43.00
Area (flag) : 173500MA
On-Column Amount (ng) : 21.5663
Integration start scan : 1991 Integration stop scan: 2069
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

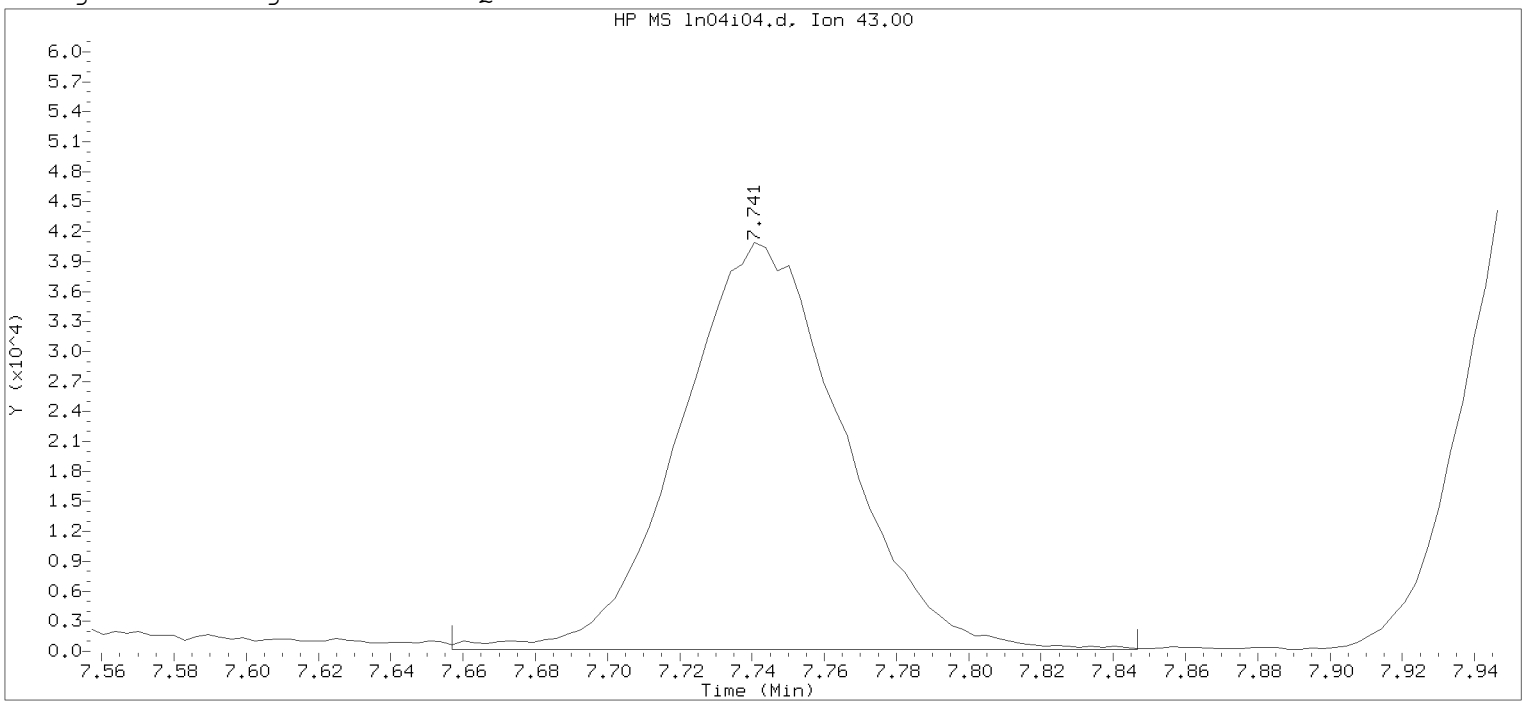
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

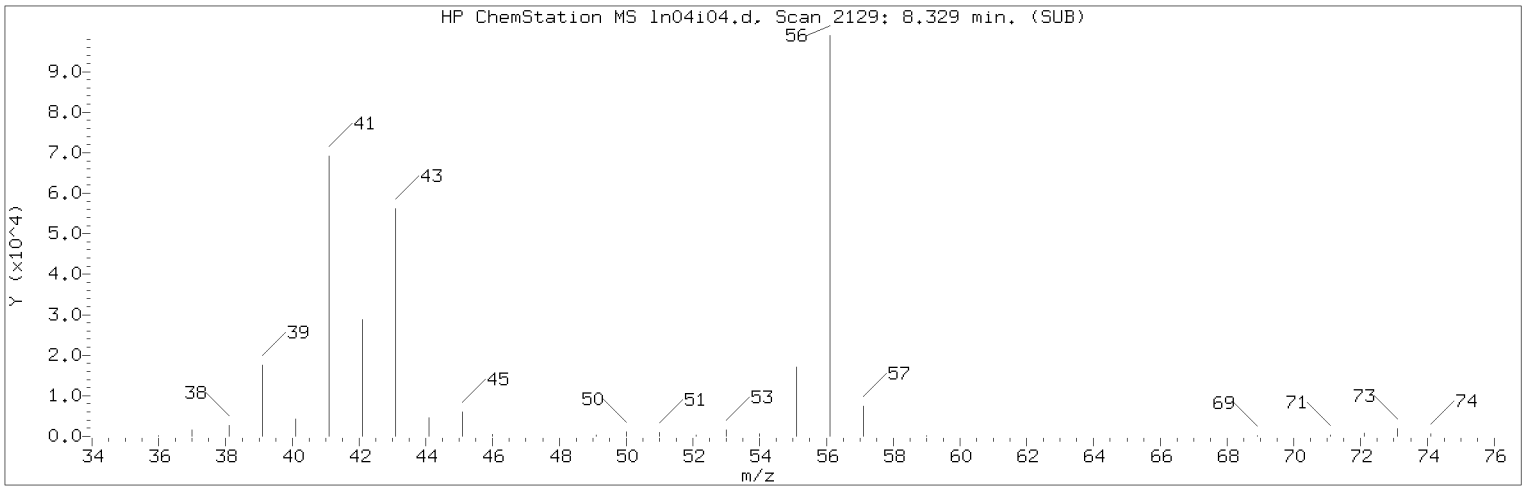
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

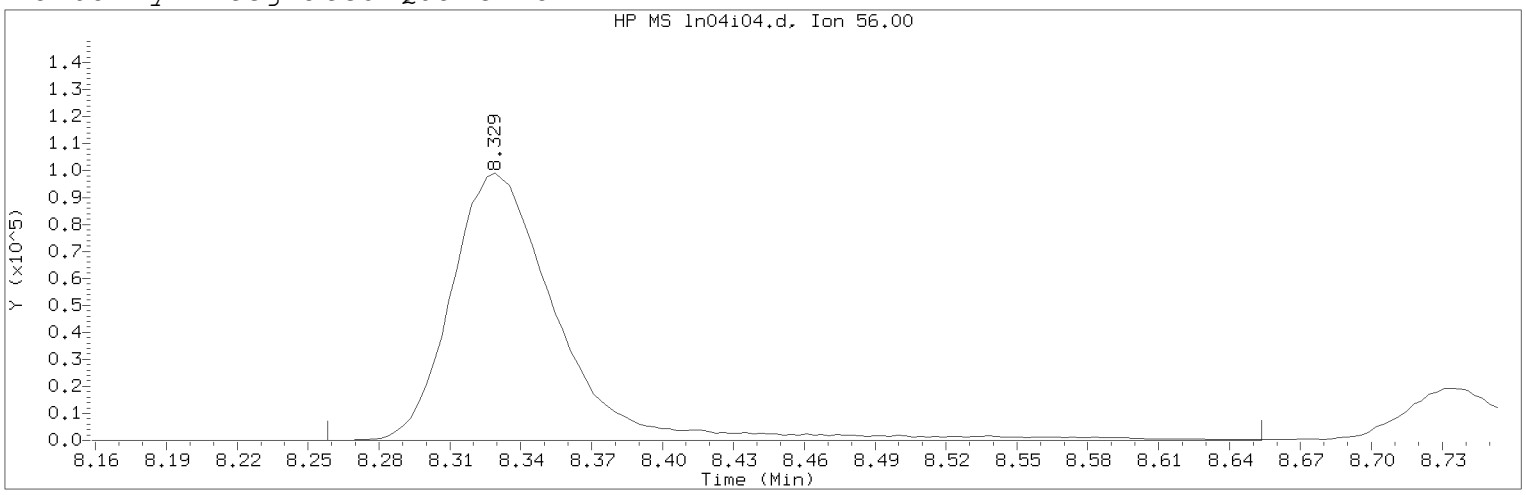
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.741
Quant Ion : 43.00
Area : 127386
On-column Amount (ng) : 21.2604
Integration start scan : 1919 Integration stop scan: 1978
Y at integration start : 203 Y at integration end: 203

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

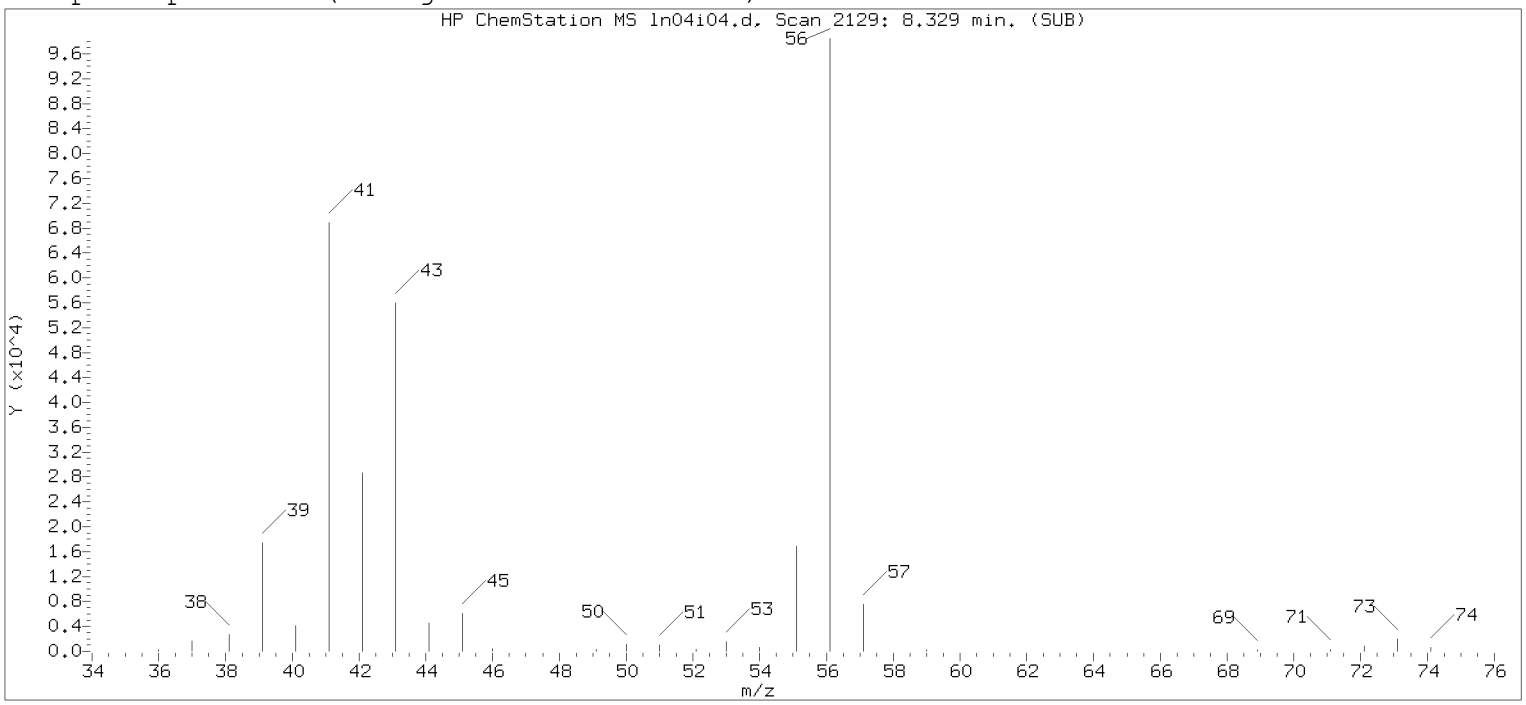
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area (flag) : 312189M
On-Column Amount (ng) : 992.0871
Integration start scan : 2106 Integration stop scan: 2229
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

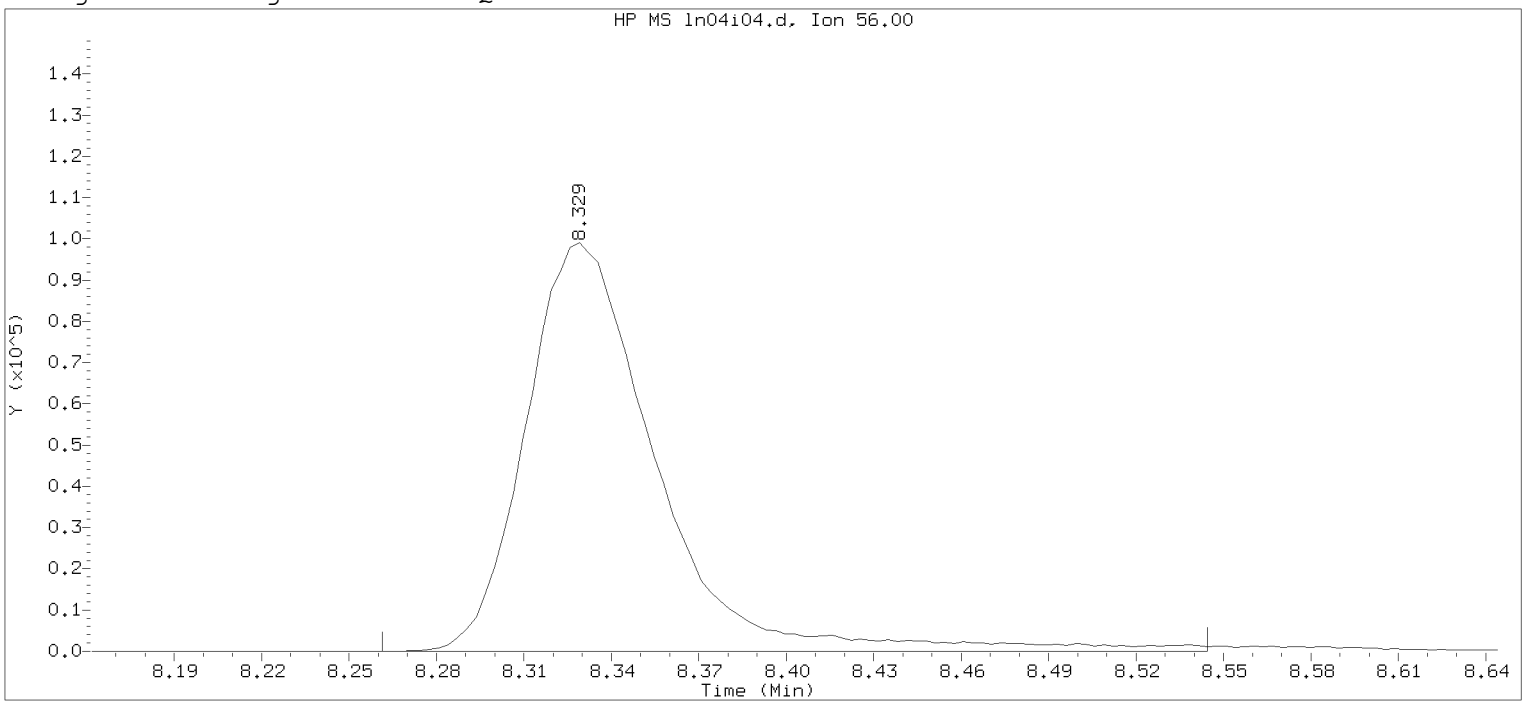
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

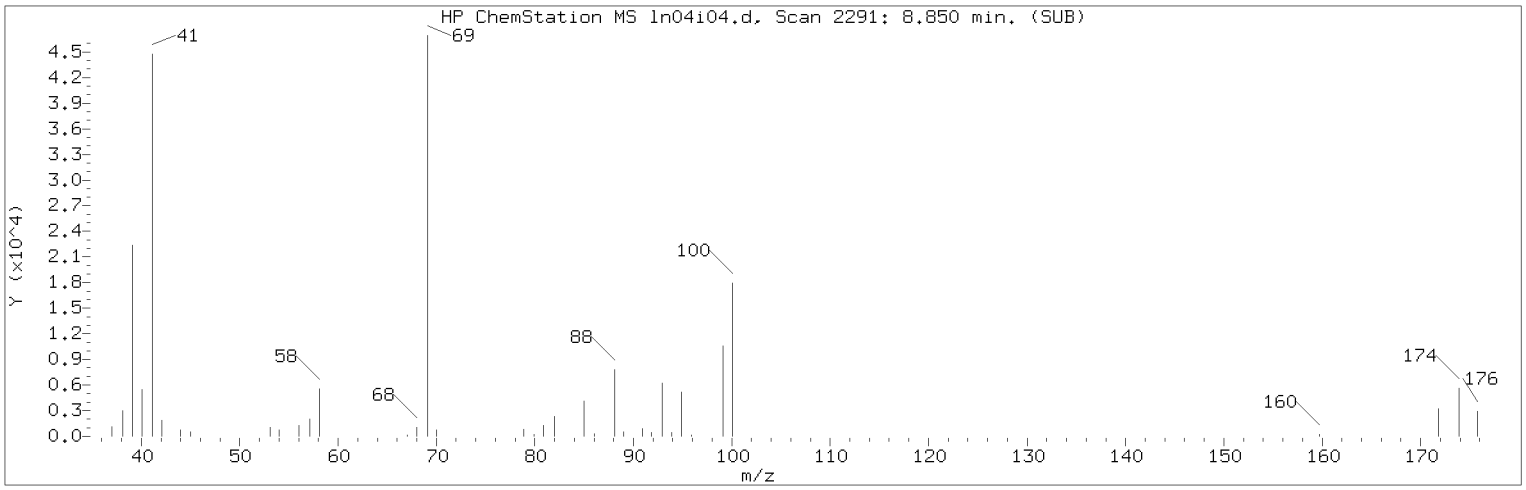
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

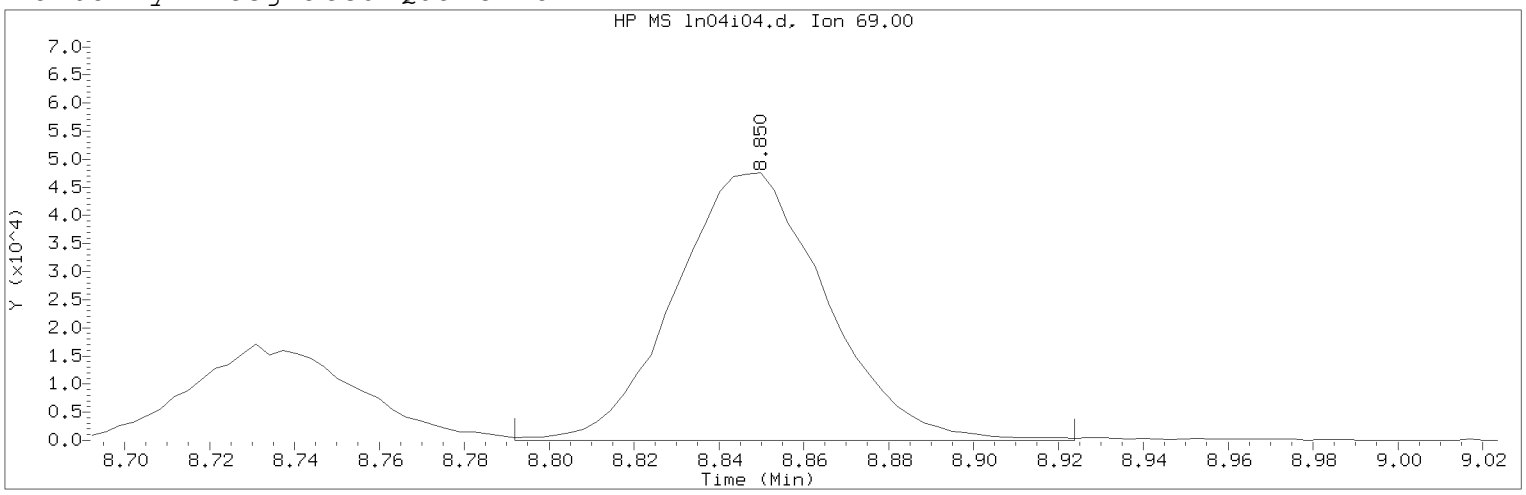
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area : 307443
On-column Amount (ng) : 938.0571
Integration start scan : 2107 Integration stop scan: 2195
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

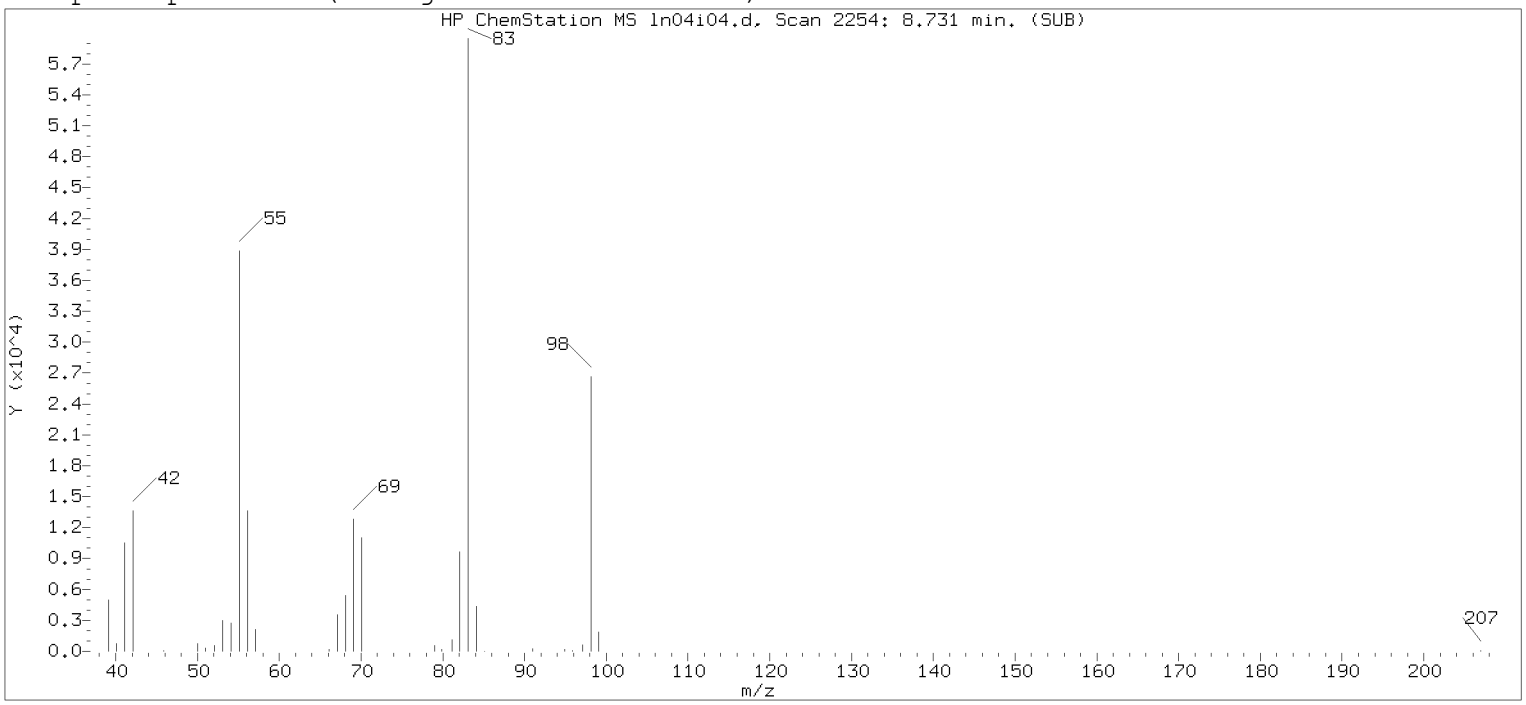
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2291
Retention Time (minutes): 8.850
Quant Ion : 69.00
Area (flag) : 117550A
On-Column Amount (ng) : 20.8506
Integration start scan : 2272 Integration stop scan: 2313
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

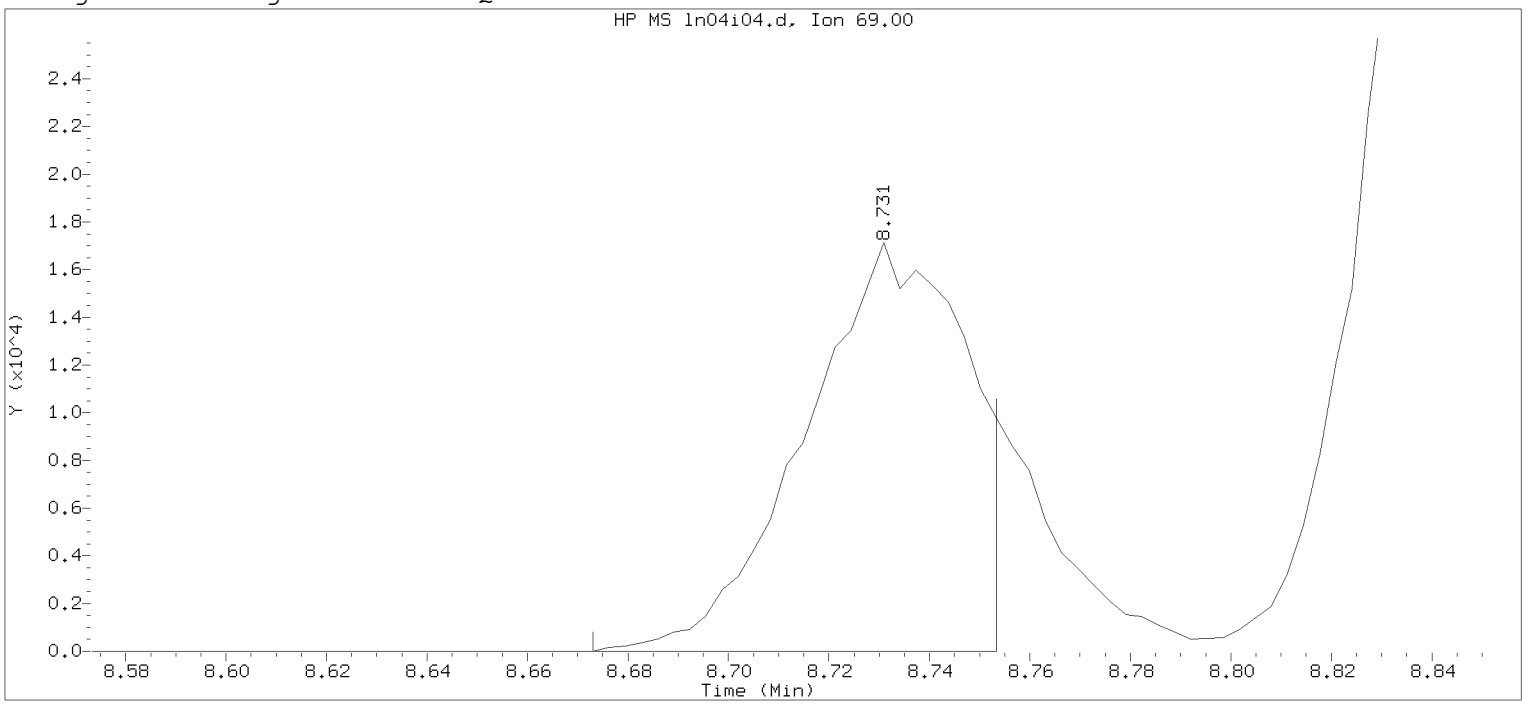
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

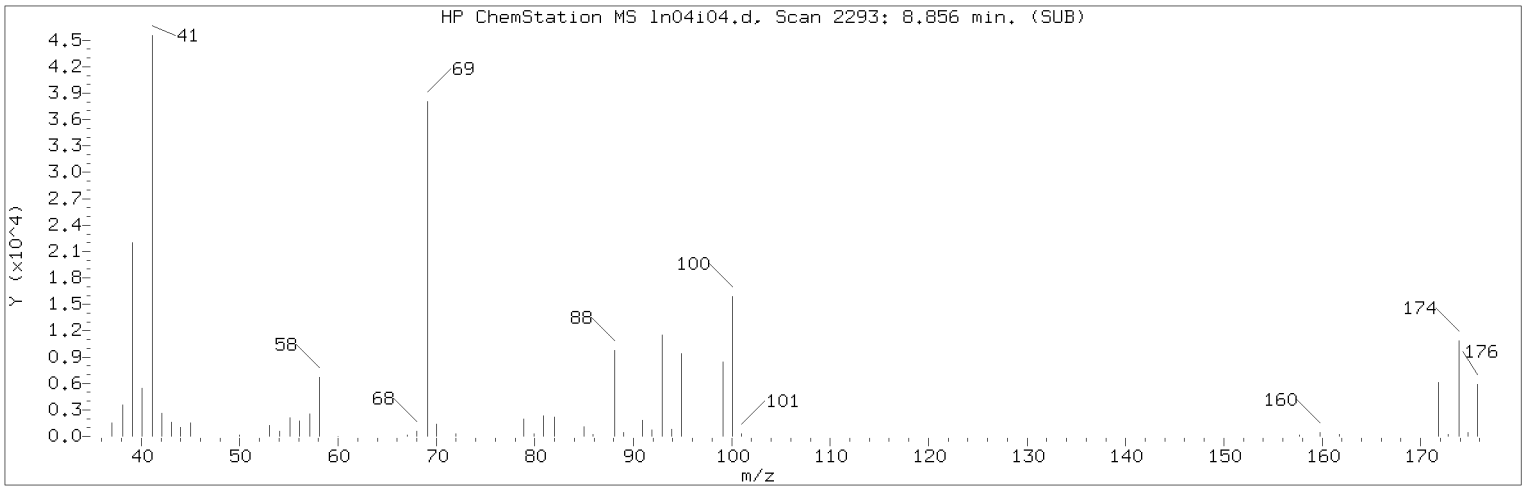
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

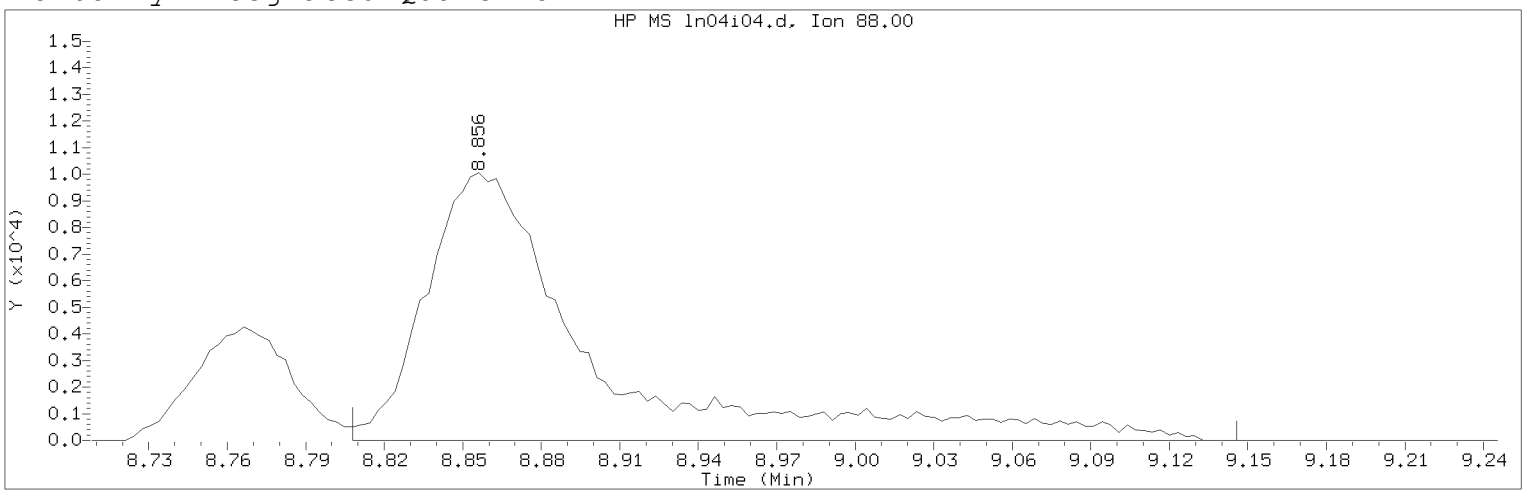
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2254
Retention Time (minutes): 8.731
Quant Ion : 69.00
Area : 37815
On-column Amount (ng) : 16.5923
Integration start scan : 2235 Integration stop scan: 2260
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

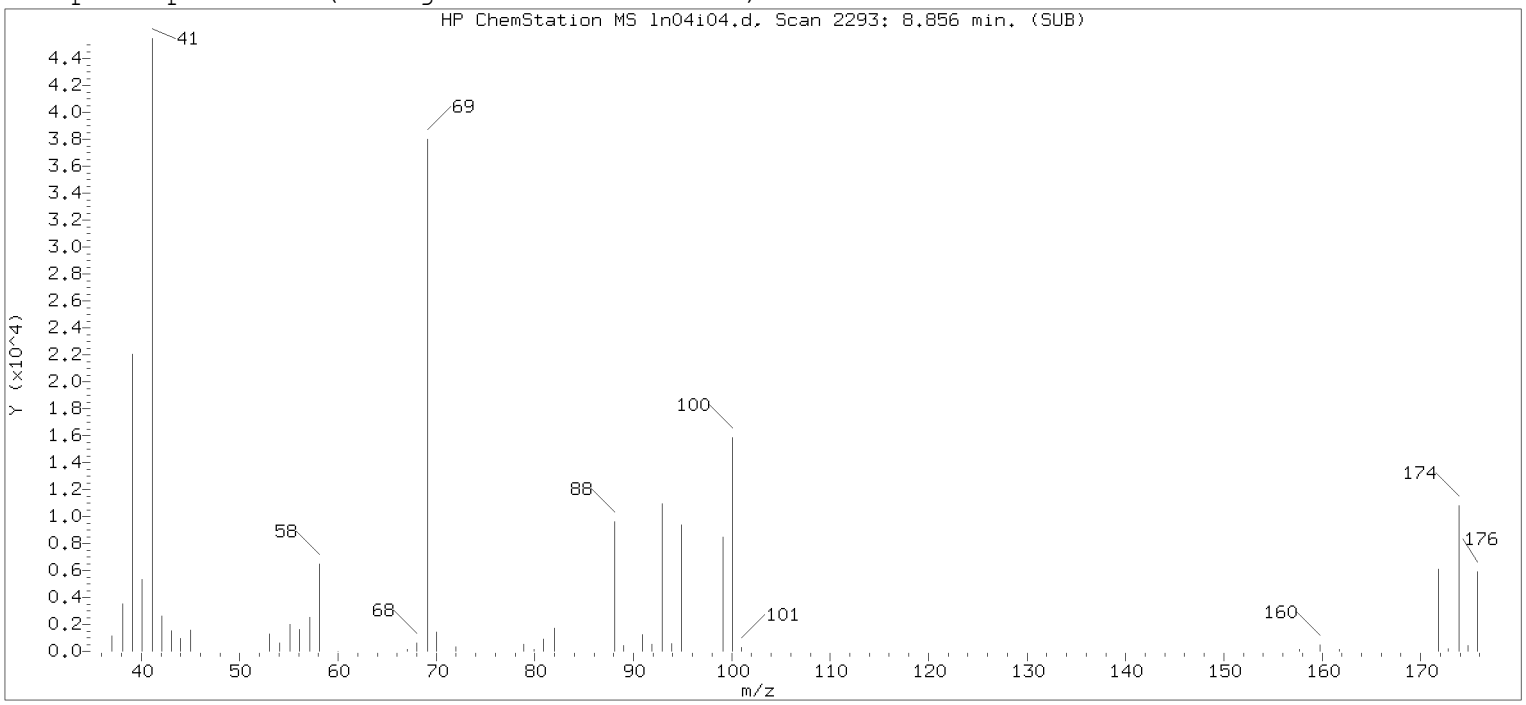
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 44376M
On-Column Amount (ng) : 513.0651
Integration start scan : 2277 Integration stop scan: 2382
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

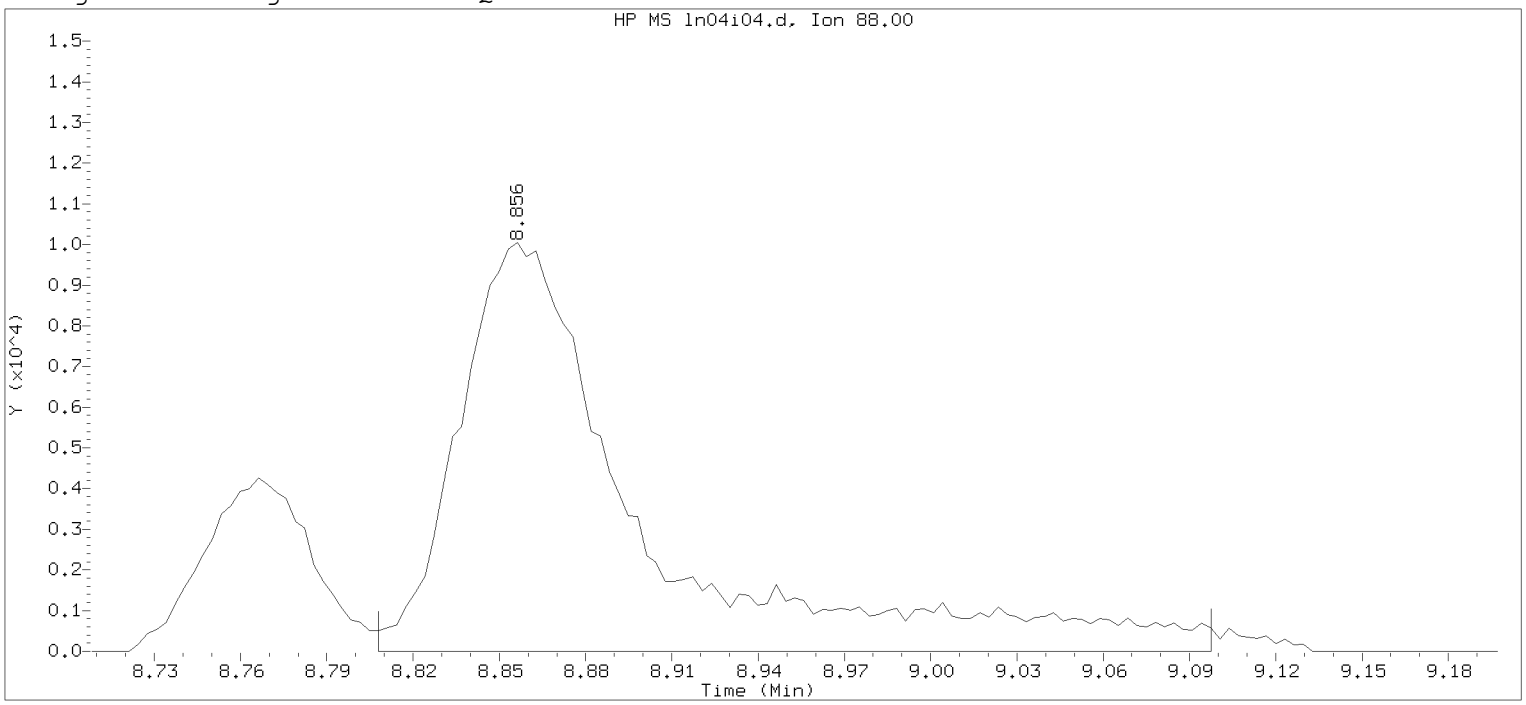
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

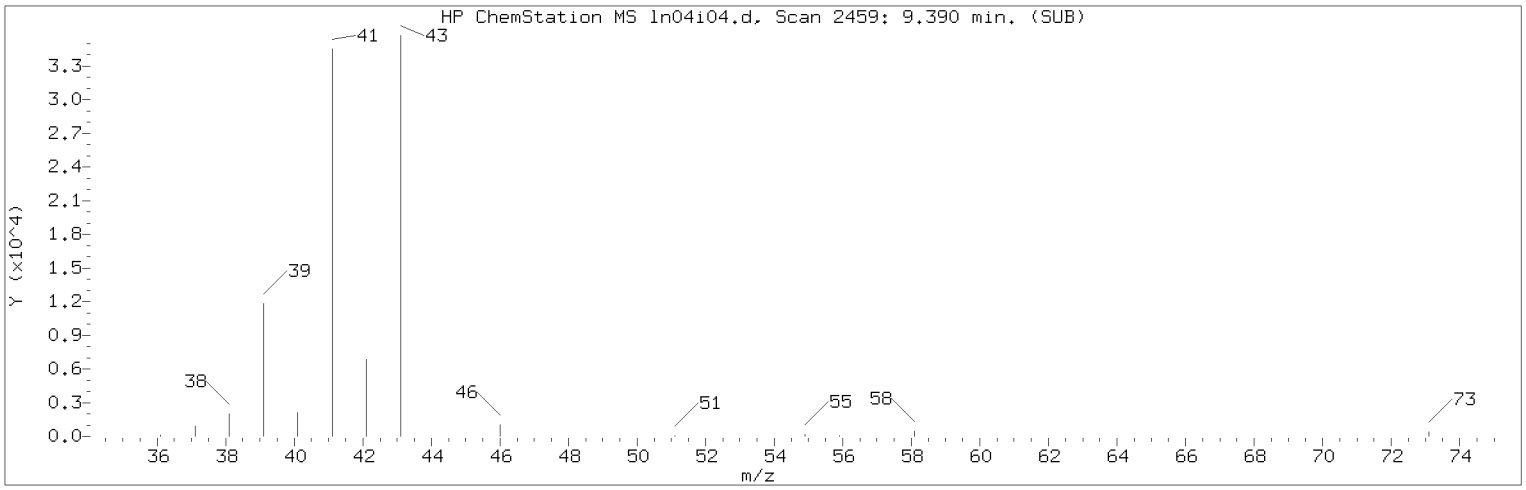
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

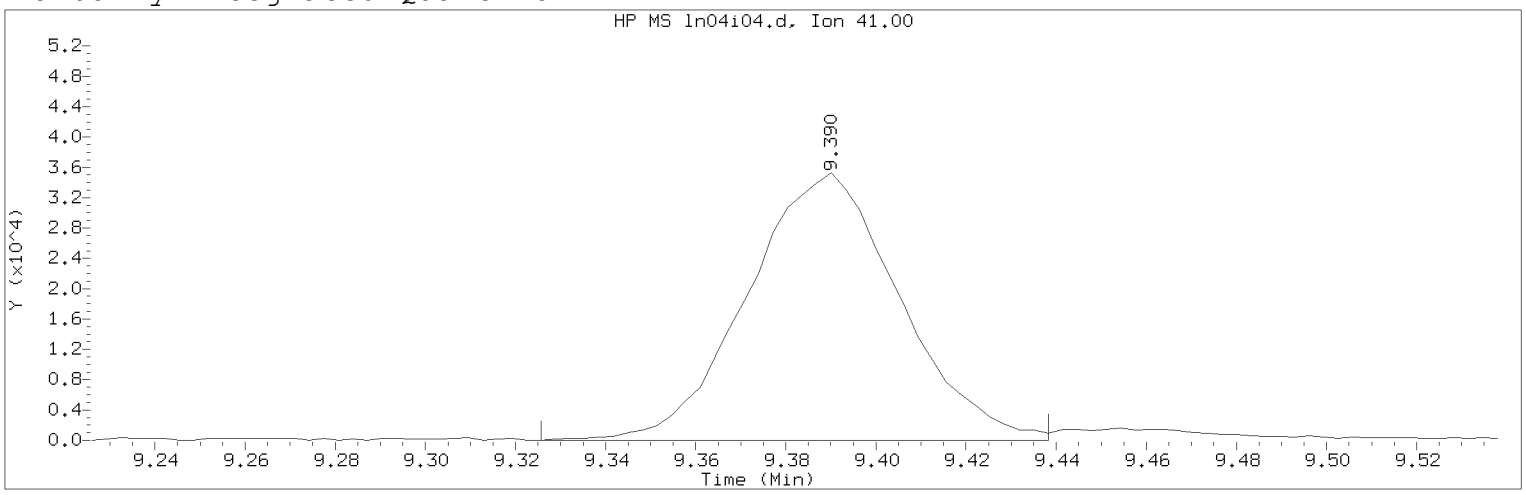
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area : 43671
On-column Amount (ng) : 571.7062
Integration start scan : 2277 Integration stop scan: 2367
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

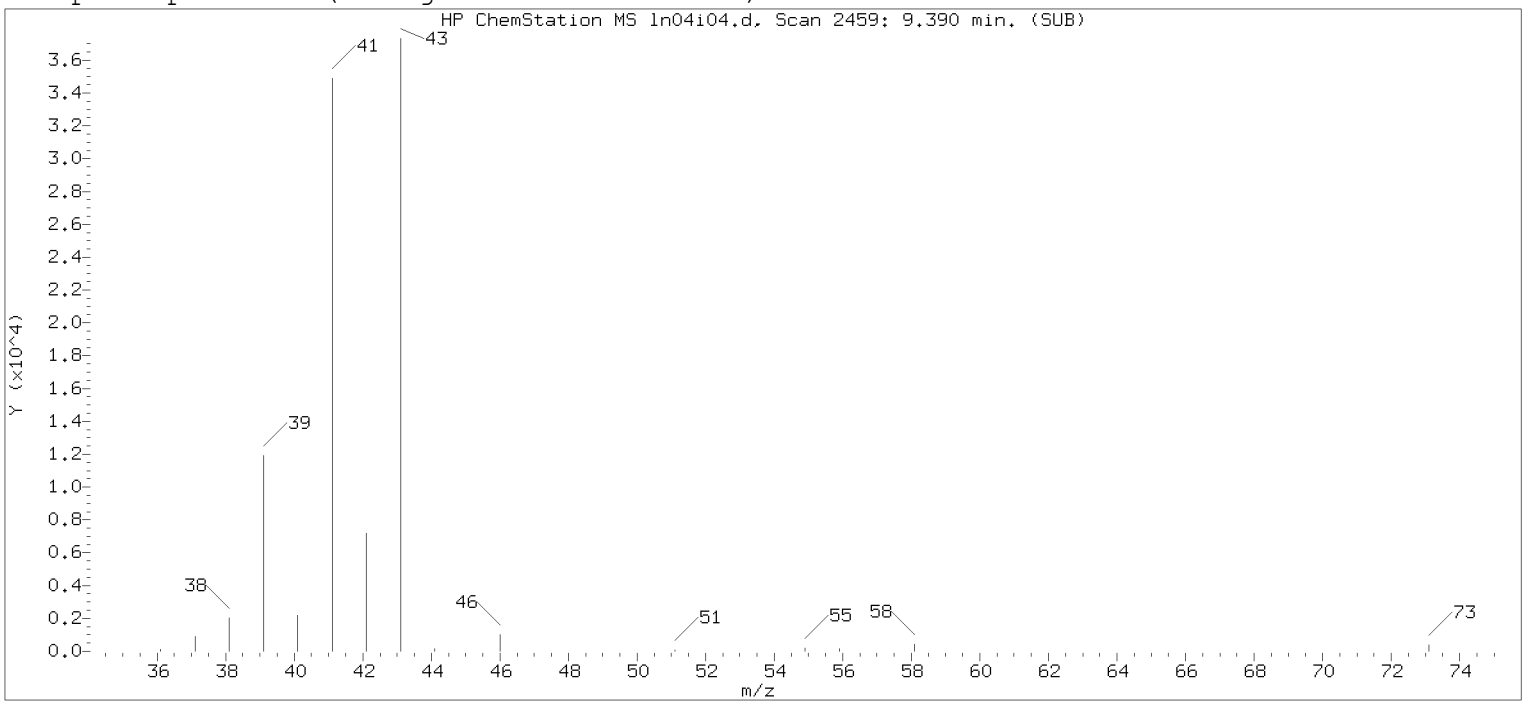
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2459
Retention Time (minutes): 9.390
Quant Ion : 41.00
Area (flag) : 82517M
On-Column Amount (ng) : 40.2472
Integration start scan : 2438 Integration stop scan: 2473
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

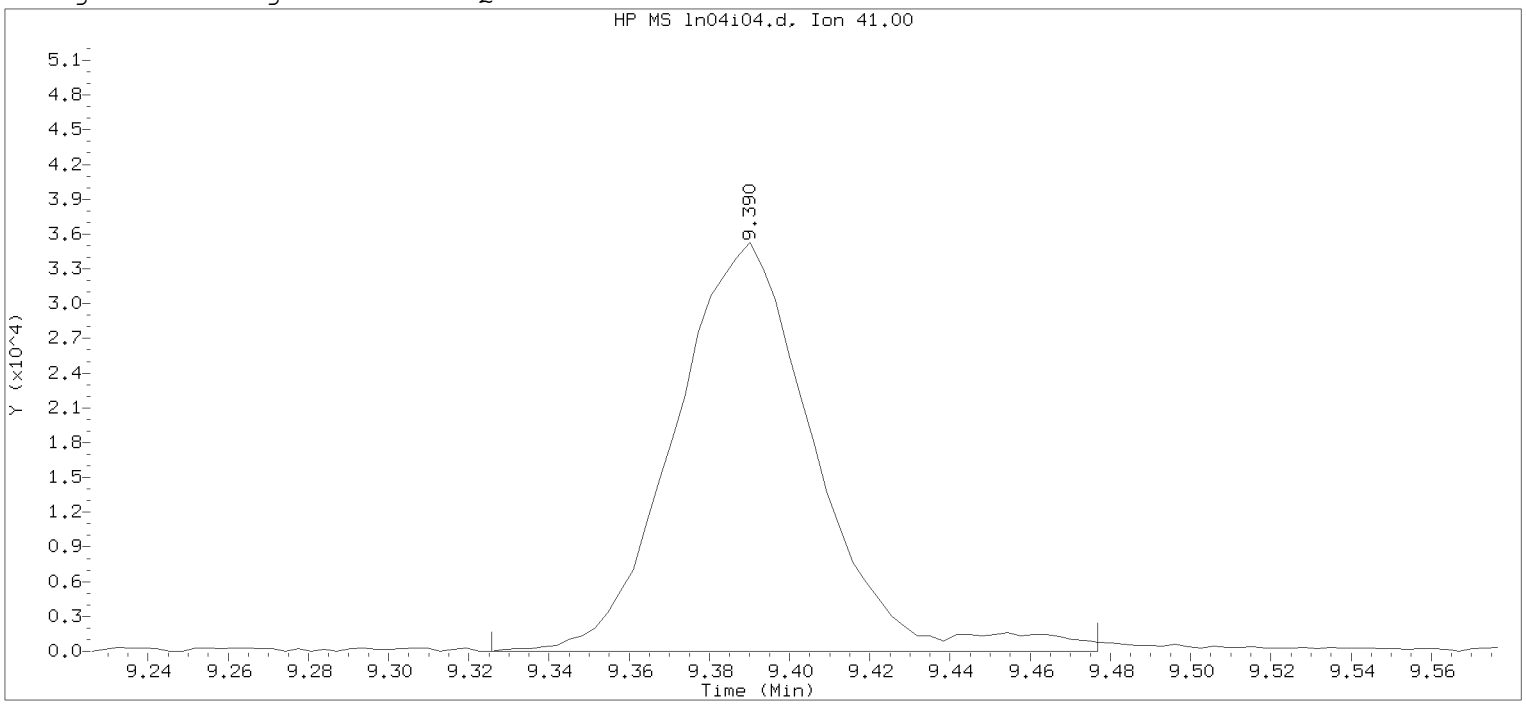
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

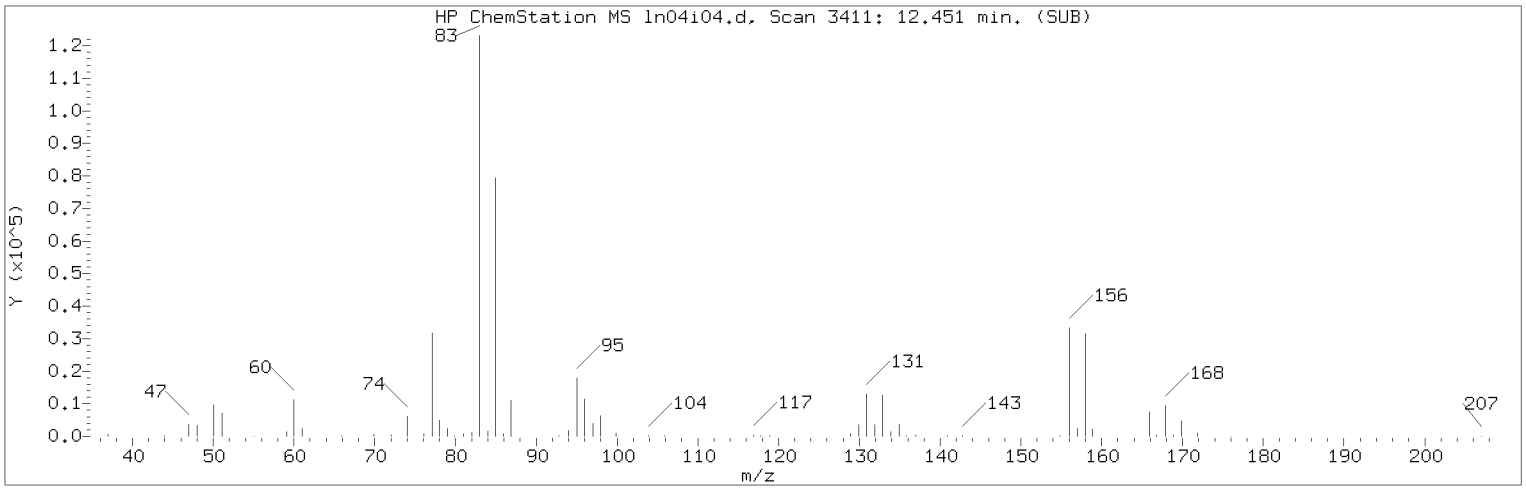
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

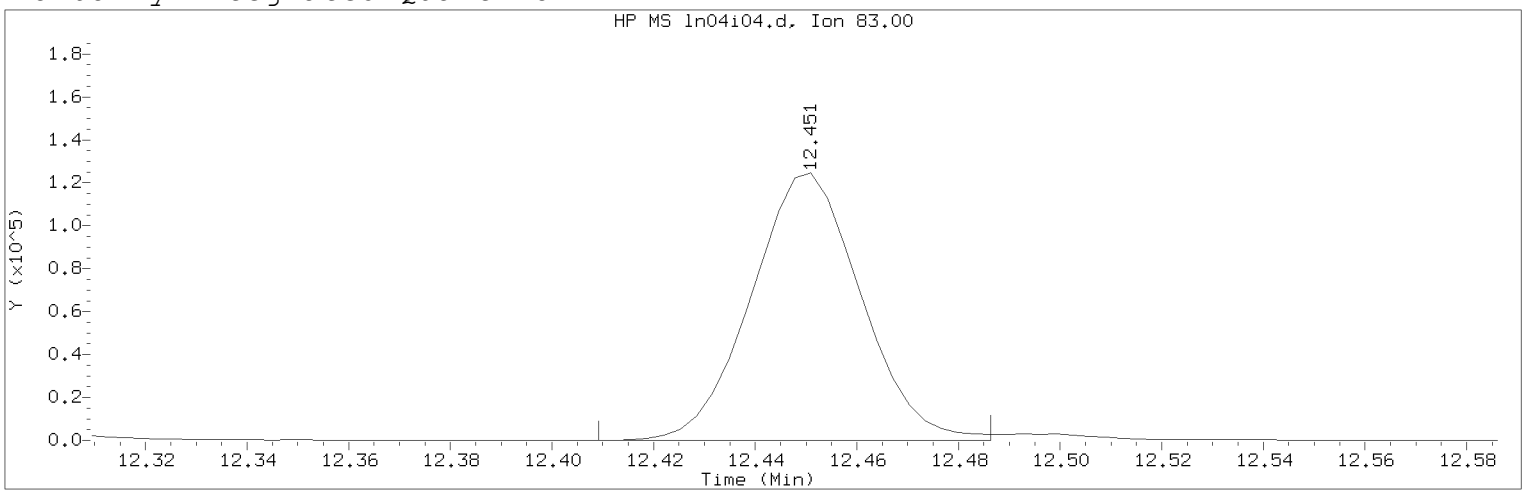
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2459
Retention Time (minutes): 9.390
Quant Ion : 41.00
Area : 85427
On-column Amount (ng) : 37.2727
Integration start scan : 2438 Integration stop scan: 2485
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

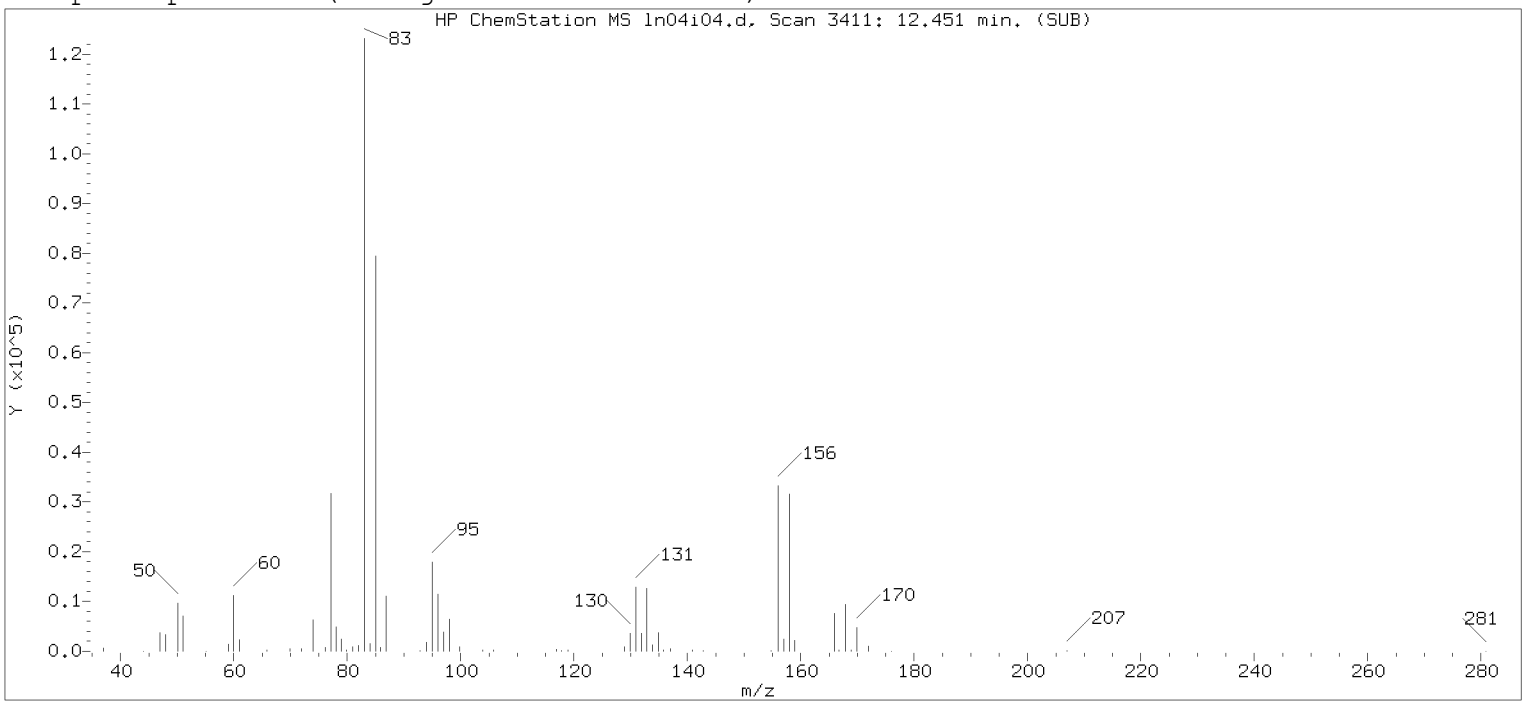
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 186119M
On-Column Amount (ng) : 20.6895
Integration start scan : 3397 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

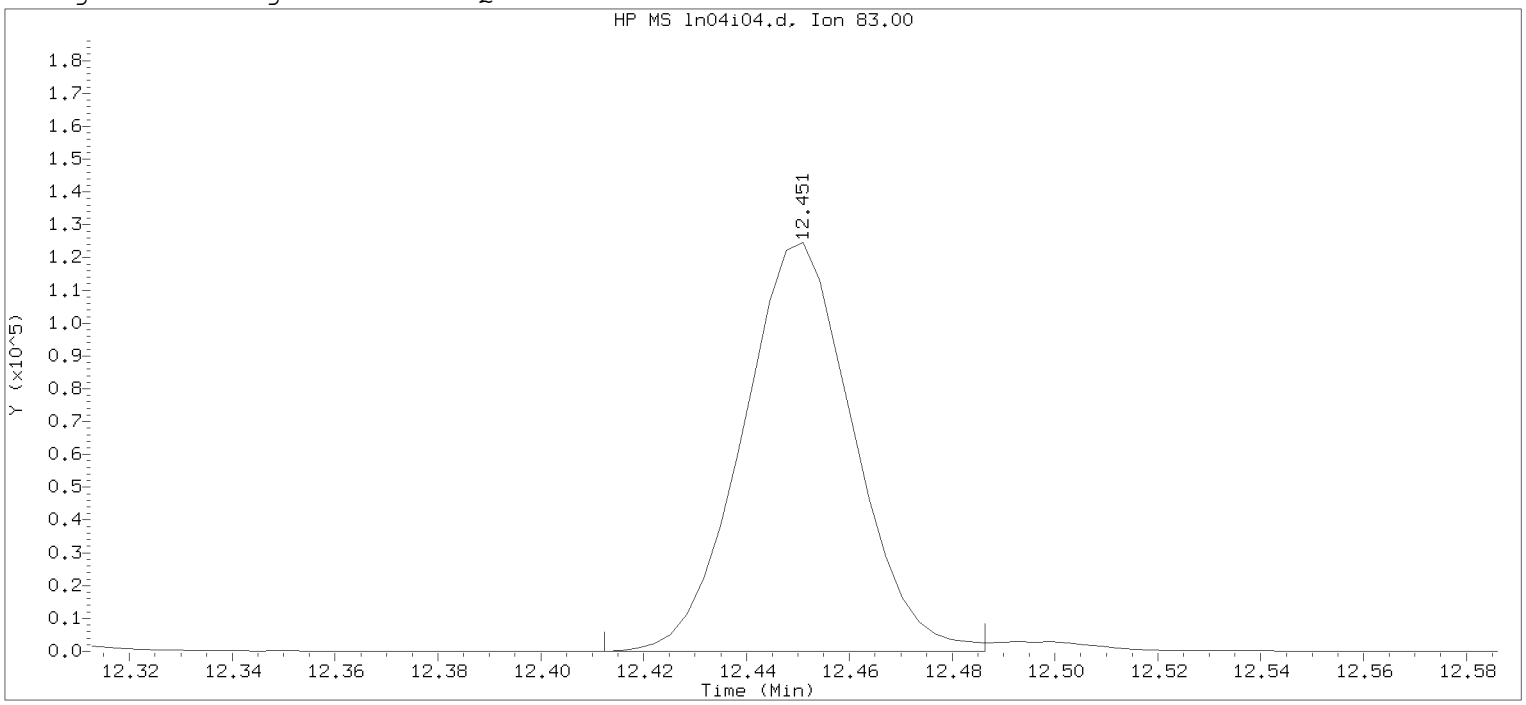
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

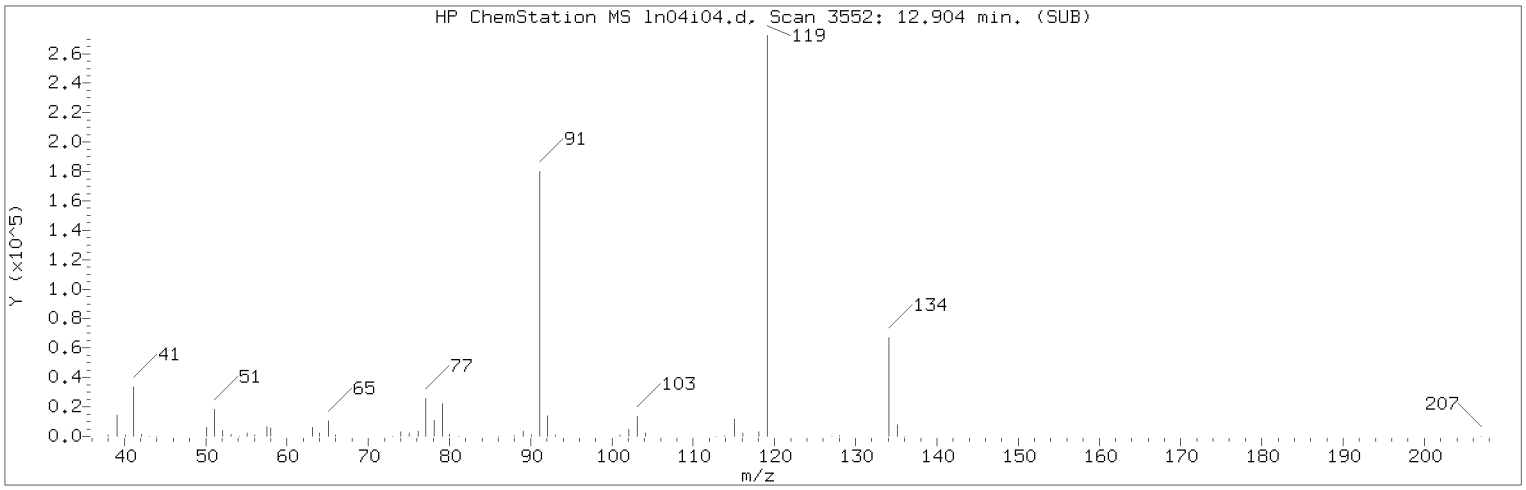
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

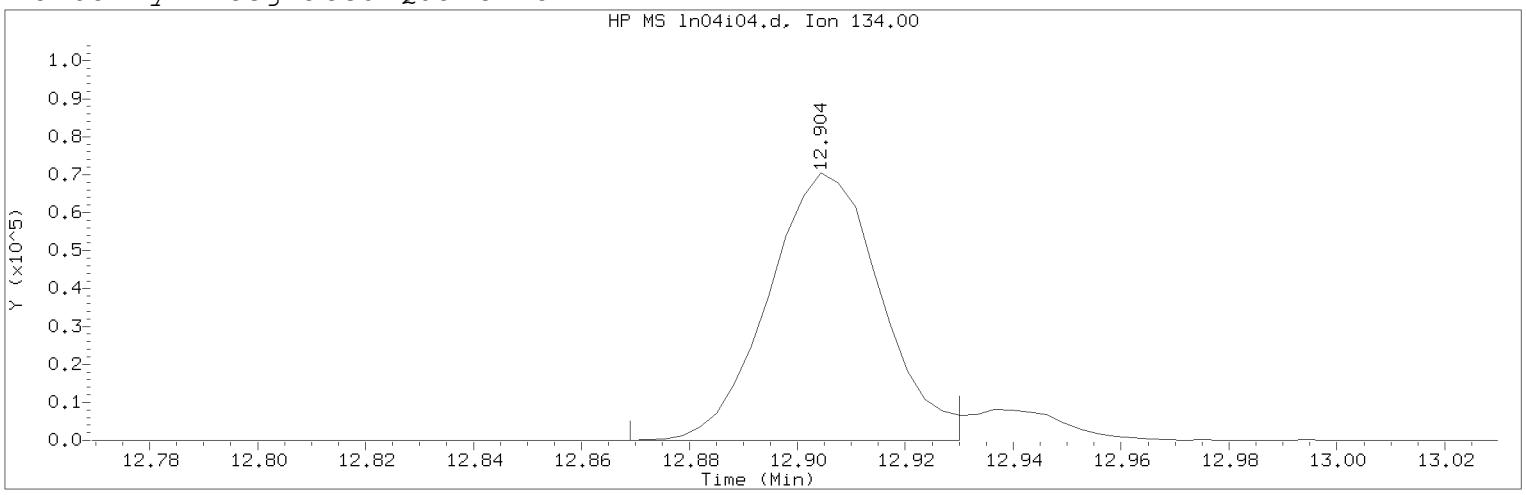
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 185866
On-column Amount (ng) : 19.5938
Integration start scan : 3398 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

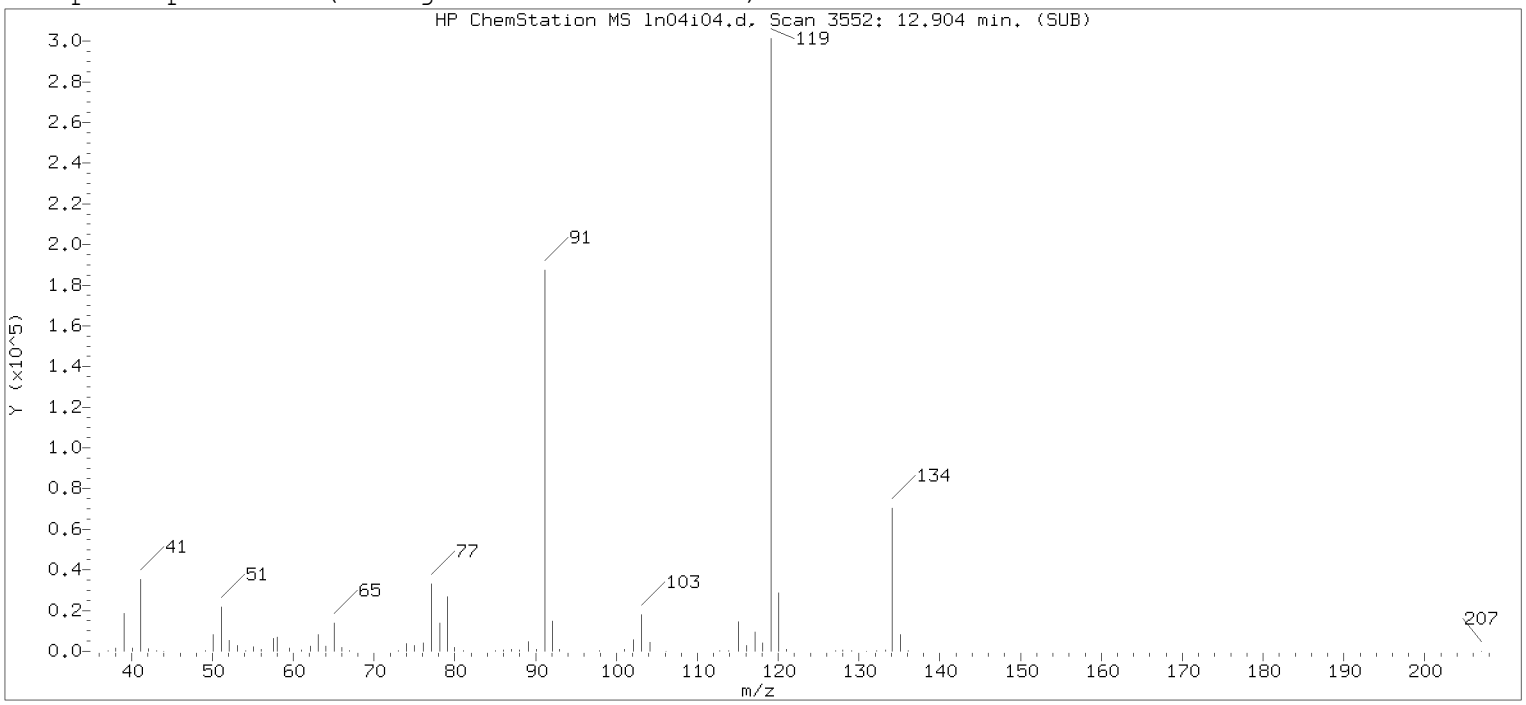
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 101571M
On-Column Amount (ng) : 21.6122
Integration start scan : 3540 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

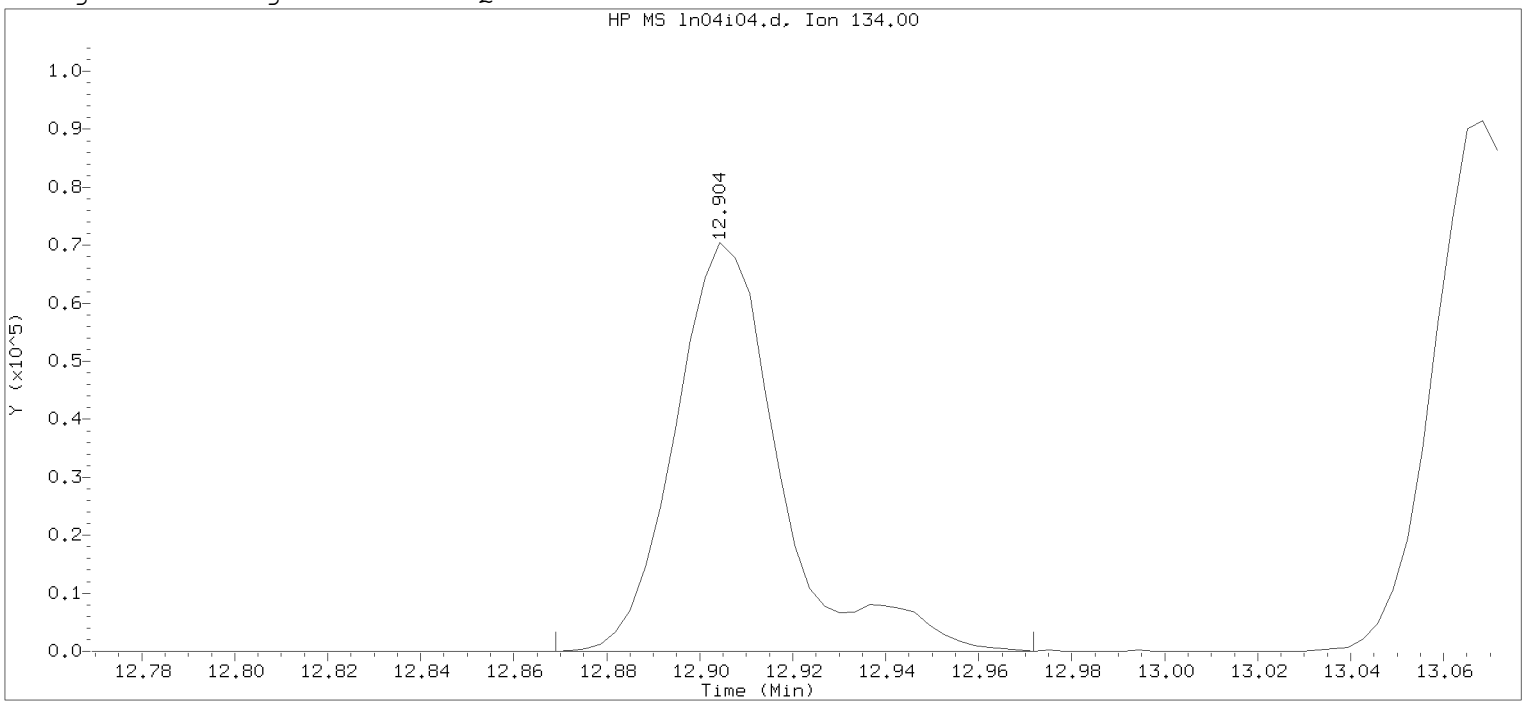
Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



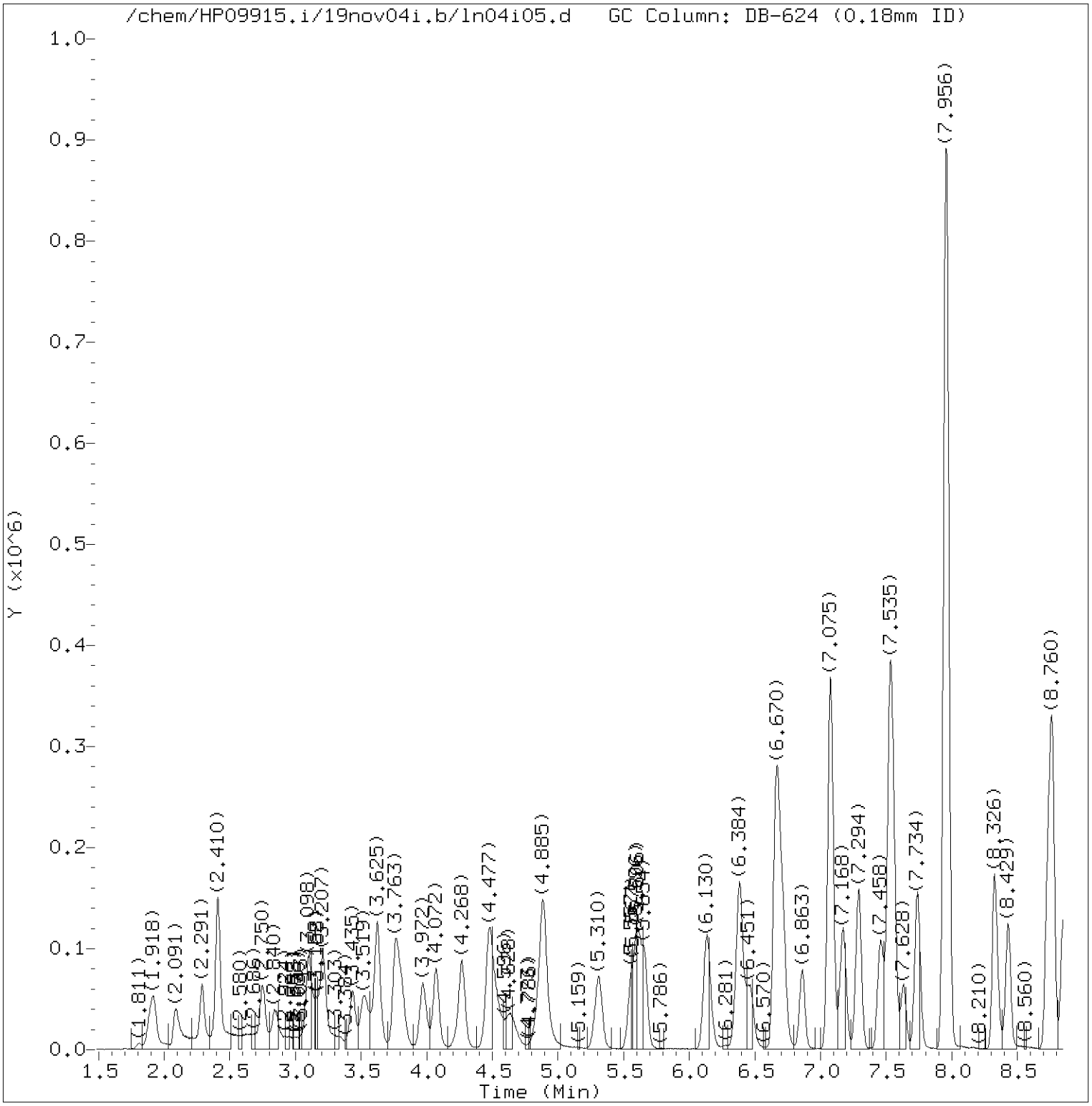
Data File: /chem/HP09915.i/19nov04i.b/ln04i04.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 15:57 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 16:25
Date, time and analyst ID of latest file update: 04-Nov-2019 16:25 mec29284

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 110902
On-column Amount (ng) : 20.6897
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mcampbell



Total Ion Chromatogram (TIC)

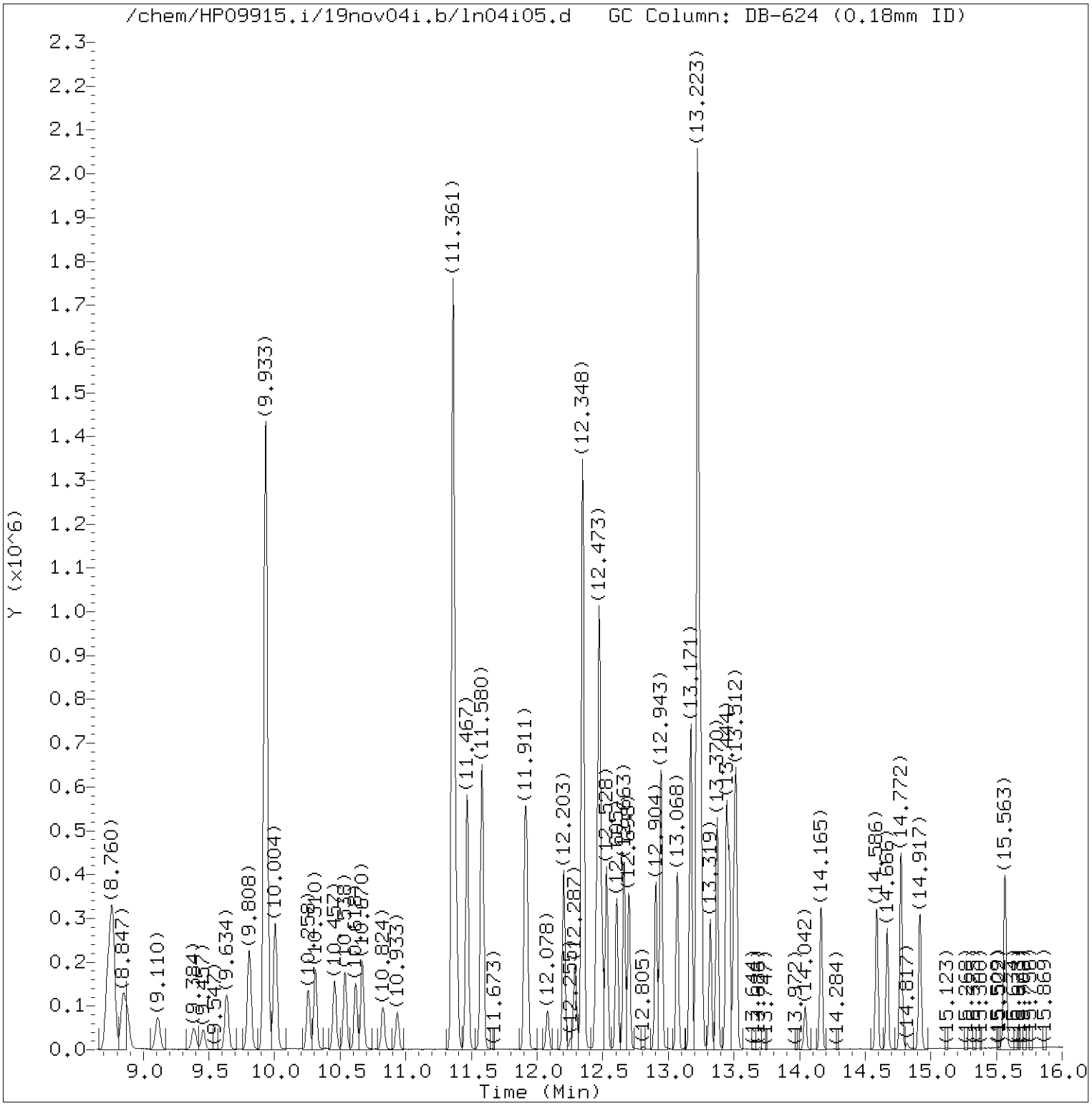
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.091	85	76947M	9.526
4) Chloromethane	(2)	2.291	50	76659	9.847
5) 1,3-Butadiene	(2)	2.406	39	60141M	9.304
6) Vinyl Chloride	(2)	2.413	62	76016	9.784
8) Bromomethane	(2)	2.750	94	54155	9.723
9) Chloroethane	(2)	2.853	64	42303	9.907
10) Dichlorofluoromethane	(2)	3.104	67	106956M	10.459
12) Trichlorofluoromethane	(2)	3.152	101	80624	9.638
11) n-Pentane	(2)	3.213	43	86389	8.739
14) Ethyl ether	(2)	3.438	59	52079	9.635
15) Freon 123a	(2)	3.519	67	65806	9.780
16) Acrolein	(1)	3.625	56	197662	100.013
17) 1,1-Dichloroethene	(2)	3.763	96	48467	9.871
17) 1,1-Dichloroethene	(2)	3.763	63	24200	9.831
19) Freon 113	(2)	3.792	101	51923	9.269
18) Acetone	(1)	3.805	58	17383	19.619
22) Methyl Iodide	(2)	3.969	142	101688	9.995
21) 2-Propanol	(1)	4.001	45	63841	100.227
23) Carbon Disulfide	(2)	4.075	76	179738	9.714
27) Methyl Acetate	(2)	4.245	43	62026	9.809
25) Allyl Chloride	(2)	4.268	41	86653	9.838
28) Methylene Chloride	(2)	4.474	84	58140	9.949
29)*t-Butyl alcohol-d10	(1)	4.509	65	263427M	250.000
30) t-Butyl alcohol	(1)	4.644	59	111005	100.090
31) Acrylonitrile	(2)	4.840	53	34130	10.032
33) Methyl Tertiary Butyl Ether	(2)	4.882	73	189173	10.147
32) trans-1,2-Dichloroethene	(2)	4.889	96	56133	9.883
34) n-Hexane	(2)	5.306	57	75187M	8.508
36) 1,1-Dichloroethane	(2)	5.557	63	99074	9.999
38) di-Isopropyl ether	(2)	5.606	45	191363	10.014
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	84906	9.551
40) Ethyl t-butyl ether	(2)	6.136	59	188350	10.156
43) 1,2-Dichloroethene (Total)	(2)		96	118698	19.696
44) 2-Butanone	(2)	6.364	43	85445	19.565
42) cis-1,2-Dichloroethene	(2)	6.387	96	62565	9.814
45) 2,2-Dichloropropane	(2)	6.396	77	74849	9.717
47) Propionitrile	(1)	6.464	54	136751	98.961
48) Methacrylonitrile	(2)	6.663	67	181171	49.366

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	34163	10.106
50) Tetrahydrofuran	(1)	6.724	71	24588	19.698
51) Chloroform	(2)	6.863	83	93507	9.867
52)$Dibromofluoromethane	(2)	7.072	113	280960	49.616
52)$Dibromofluoromethane	(2)	7.075	111	286315	49.589
53) 1,1,1-Trichloroethane	(2)	7.078	97	77742	9.611
54) Cyclohexane	(2)	7.175	56	96567	8.928
54) Cyclohexane	(2)	7.175	84	84021	8.942
54) Cyclohexane	(2)	7.175	69	29917	8.942
56) Carbon Tetrachloride	(2)	7.287	117	63638	9.276
55) 1,1-Dichloropropene	(2)	7.294	75	75943	9.694
58) Isobutyl Alcohol	(1)	7.458	41	94699	253.736
57)$1,2-Dichloroethane-d4	(2)	7.532	102	72410	50.173
57)$1,2-Dichloroethane-d4	(2)	7.528	65	317862	49.423
57)$1,2-Dichloroethane-d4	(2)	7.528	104	46131	50.043
60) Benzene	(2)	7.557	78	235083	9.978
61) 1,2-Dichloroethane	(2)	7.634	62	74555	9.839
61) 1,2-Dichloroethane	(2)	7.634	98	7256	9.676
65) t-Amyl methyl ether	(2)	7.740	73	187995	10.099
66)*Fluorobenzene	(2)	7.956	96	1158257	50.000
67) n-Heptane	(2)	7.959	43	65347MA	7.916
69) n-Butanol	(1)	8.326	56	166674M	518.868
71) Trichloroethene	(2)	8.425	95	57378	9.672
72) Methylcyclohexane	(2)	8.731	83	104101	9.459
72) Methylcyclohexane	(2)	8.731	98	46774	9.392
73) 1,2-Dichloropropane	(2)	8.766	63	59459	9.939
76) Methyl Methacrylate	(2)	8.843	69	56123	9.701
75) 1,4-Dioxane	(1)	8.859	88	22251M	252.018
74) Dibromomethane	(2)	8.875	93	37949	9.804
78) Bromodichloromethane	(2)	9.110	83	66403	9.560
79) 2-Nitropropane	(2)	9.387	41	38245M	18.178
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	24083	9.373
81) cis-1,3-Dichloropropene	(2)	9.638	75	89740	9.728
82) 4-Methyl-2-pentanone	(2)	9.808	43	182101	19.754
83)$Toluene-d8	(3)	9.933	98	1179588	50.250
83)$Toluene-d8	(3)	9.933	100	766795	50.427
88) Toluene	(3)	10.004	92	146792	9.974
90) 1,3-Dichloropropene (total)	(3)		100	170602	19.407

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.255	75	80862	9.679
91) Ethyl Methacrylate	(3)	10.310	69	101774	10.024
92) 1,1,2-Trichloroethane	(3)	10.457	97	55397	9.928
93) Tetrachloroethene	(3)	10.538	166	57668	9.252
94) 1,3-Dichloropropane	(3)	10.615	76	95319	10.005
96) 2-Hexanone	(3)	10.670	43	134577	19.858
97) Dibromochloromethane	(3)	10.824	129	54317	9.503
99) 1,2-Dibromoethane	(3)	10.937	107	59349	9.795
100)*Chlorobenzene-d5	(3)	11.358	117	897139	50.000
101) 1-Chlorohexane	(3)	11.364	91	68517	8.666
102) Chlorobenzene	(3)	11.383	112	167497	10.065
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	53804	9.812
104) Ethylbenzene	(3)	11.467	91	273085	9.708
106) m+p-Xylene	(3)	11.583	106	214450	19.380
108) Xylene (Total)	(3)		106	321712	29.193
107) o-Xylene	(3)	11.908	106	107262	9.813
109) Styrene	(3)	11.924	104	181265	10.036
110) Bromoform	(3)	12.078	173	38599	9.038
111) Isopropylbenzene	(3)	12.203	105	257704	9.400
112) Cyclohexanone	(1)	12.290	55	84173	243.422
114)$4-Bromofluorobenzene	(3)	12.348	95	448980	50.511
114)$4-Bromofluorobenzene	(3)	12.348	174	372460	50.544
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	99221M	10.583
115) Bromobenzene	(4)	12.464	156	73059	9.795
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	144573	49.994
117) 1,2,3-Trichloropropane	(4)	12.496	110	30082	10.457
119) n-Propylbenzene	(4)	12.528	91	295857	9.079
120) 2-Chlorotoluene	(4)	12.608	126	64871	9.370
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	216905	9.159
121) 4-Chlorotoluene	(4)	12.698	126	68187	9.462
124) tert-Butylbenzene	(4)	12.907	134	42119M	8.599
125) Pentachloroethane	(4)	12.936	167	40747	9.662
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	231031	9.256
127) sec-Butylbenzene	(4)	13.068	105	254340	8.702
129) 1,3-Dichlorobenzene	(4)	13.168	146	133435	9.735
130) p-Isopropyltoluene	(4)	13.171	119	222820	8.812
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	496298	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	137520	9.678

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	263873	9.980
135) Benzyl Chloride	(4)	13.319	91	189013	9.442
136) 1,3-Diethylbenzene	(4)	13.370	119	162518	9.876
141) Diethylbenzene (total)	(4)		100	469676	29.503
137) 1,4-Diethylbenzene	(4)	13.444	119	170802	9.797
139) n-Butylbenzene	(4)	13.464	92	112696	8.717
138) 1,2-Dichlorobenzene	(4)	13.502	146	133767	9.890
140) 1,2-Diethylbenzene	(4)	13.518	119	136356	9.830
142) 1,2-Dibromo-3-chloropropane	(4)	14.042	75	21471	10.462
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	94358	9.080
146) 1,2,4-Trichlorobenzene	(4)	14.589	180	93971	9.300
147) Hexachlorobutadiene	(4)	14.666	225	44299	9.286
148) Naphthalene	(4)	14.772	128	328233	10.105
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	92049	9.363
150) 2-Methylnaphthalene	(4)	15.563	142	202392	10.118

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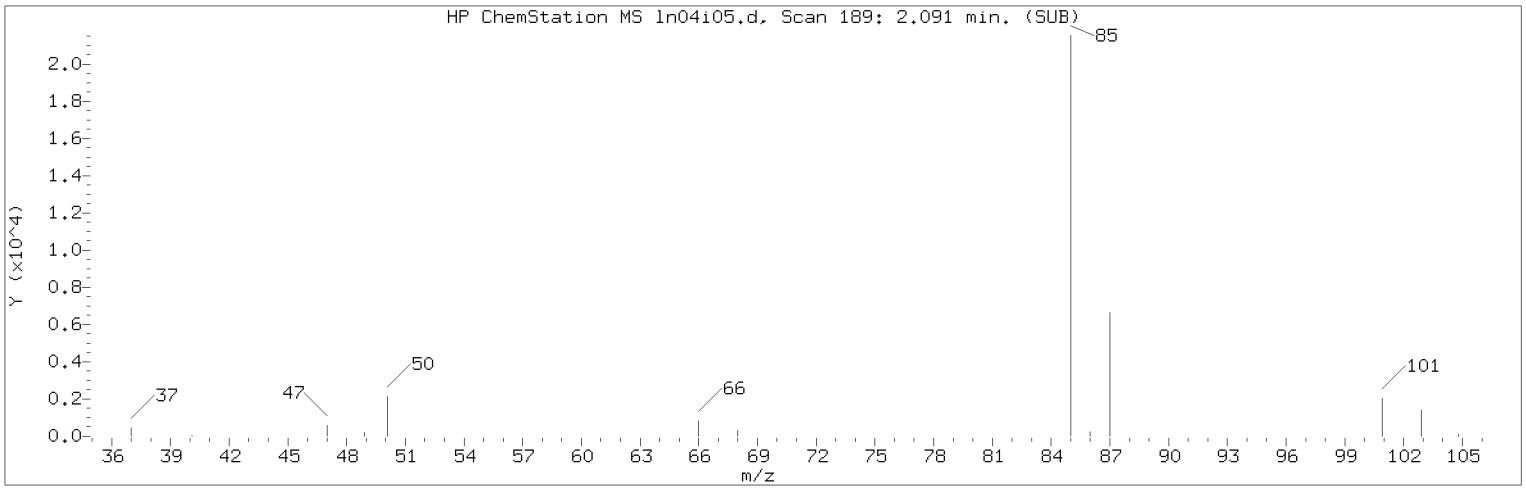
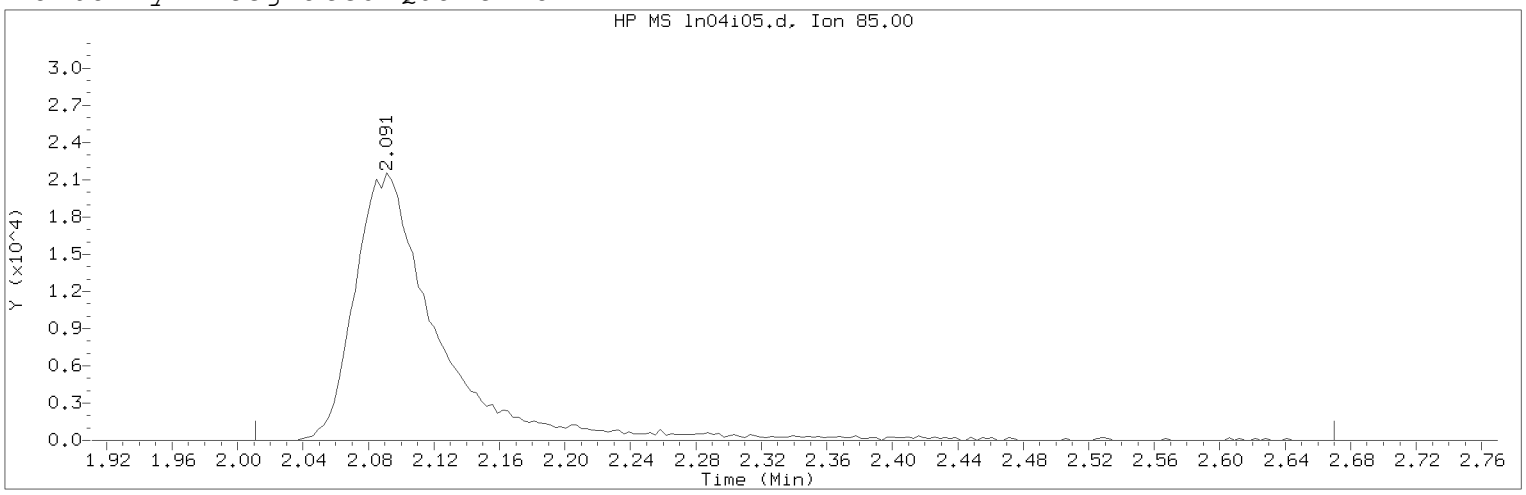
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

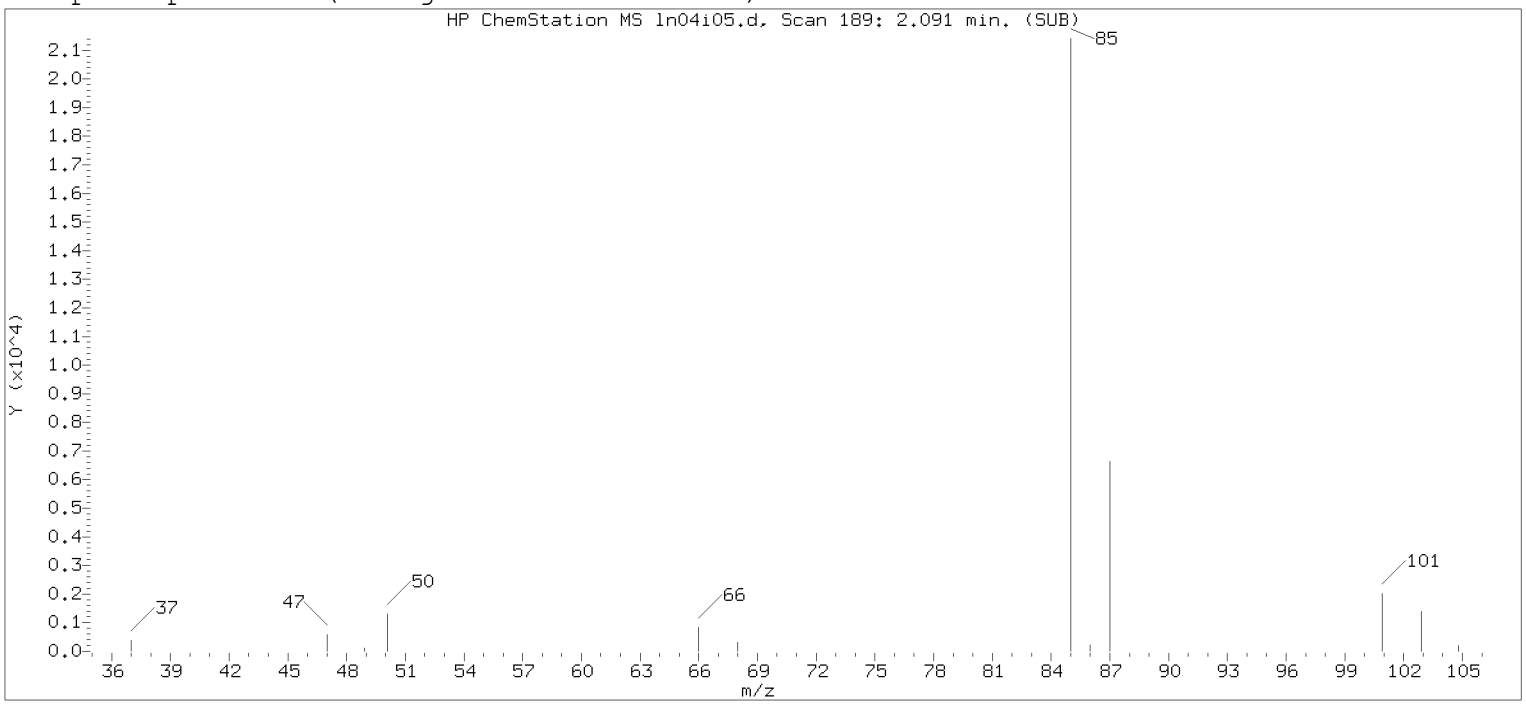
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 189
Retention Time (minutes): 2.091
Quant Ion : 85.00
Area (flag) : 76947M
On-Column Amount (ng) : 9.5263
Integration start scan : 163 Integration stop scan: 368
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

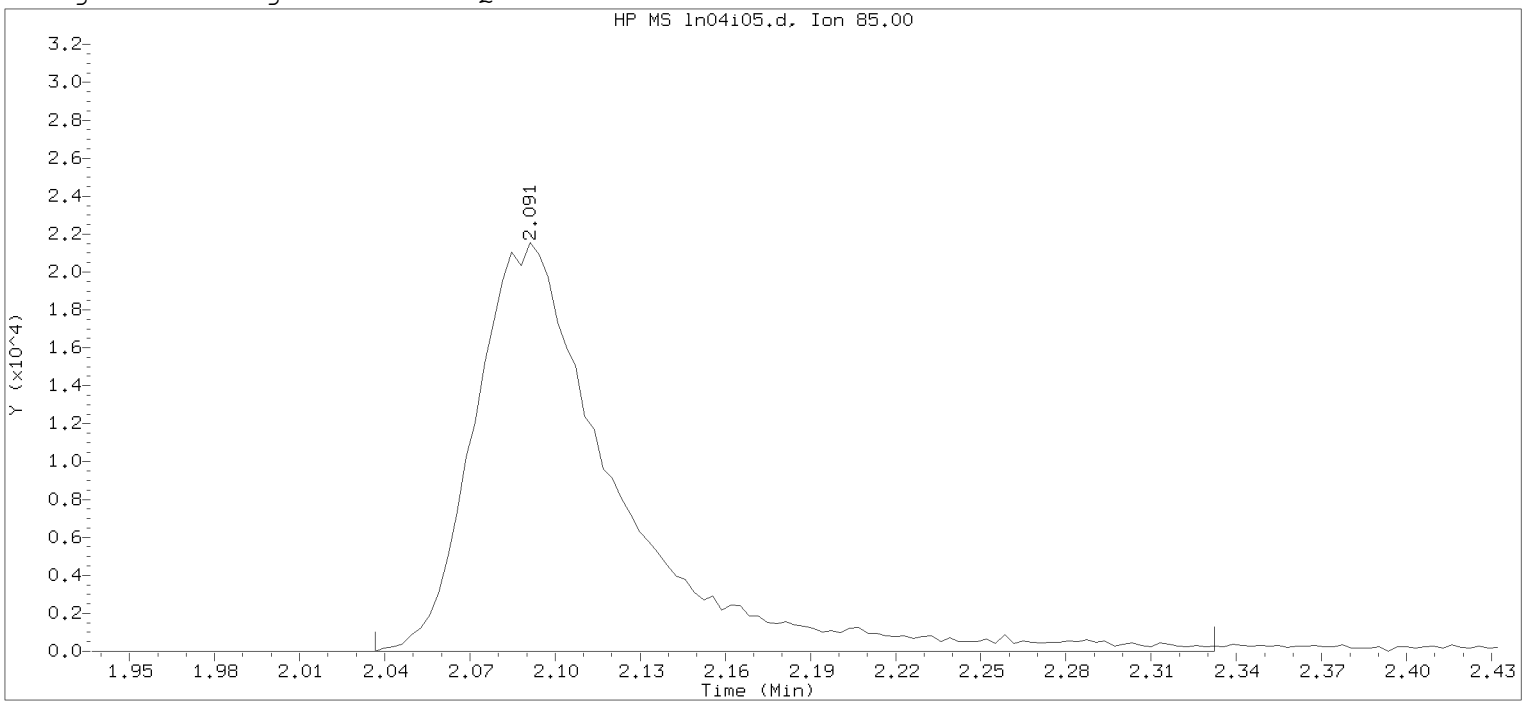
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

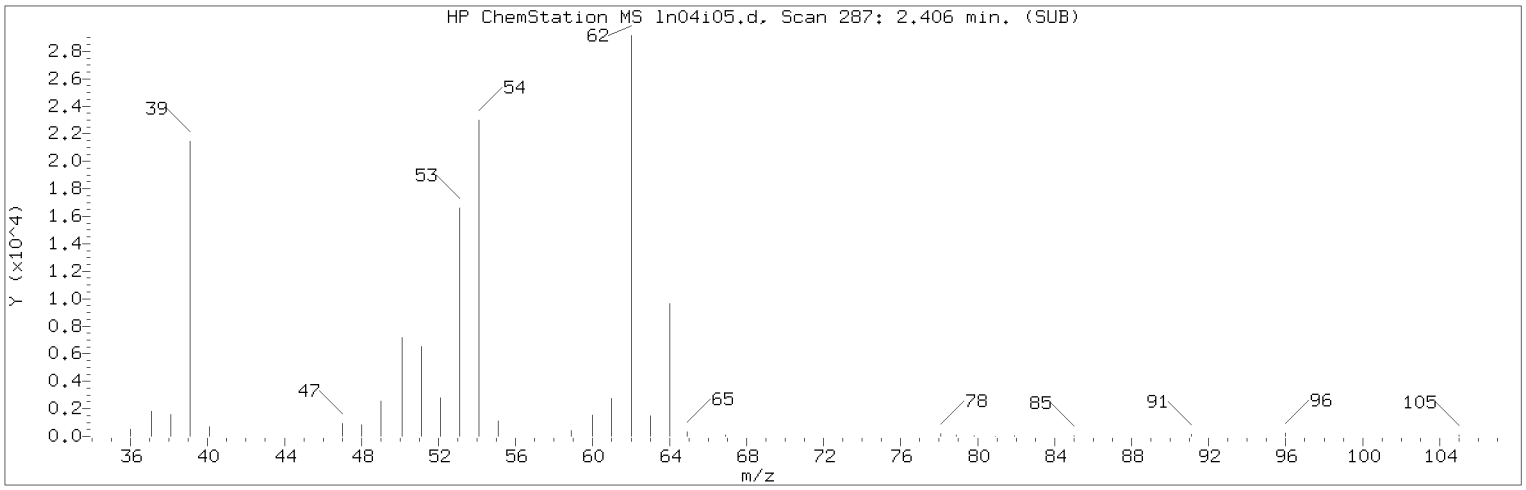
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

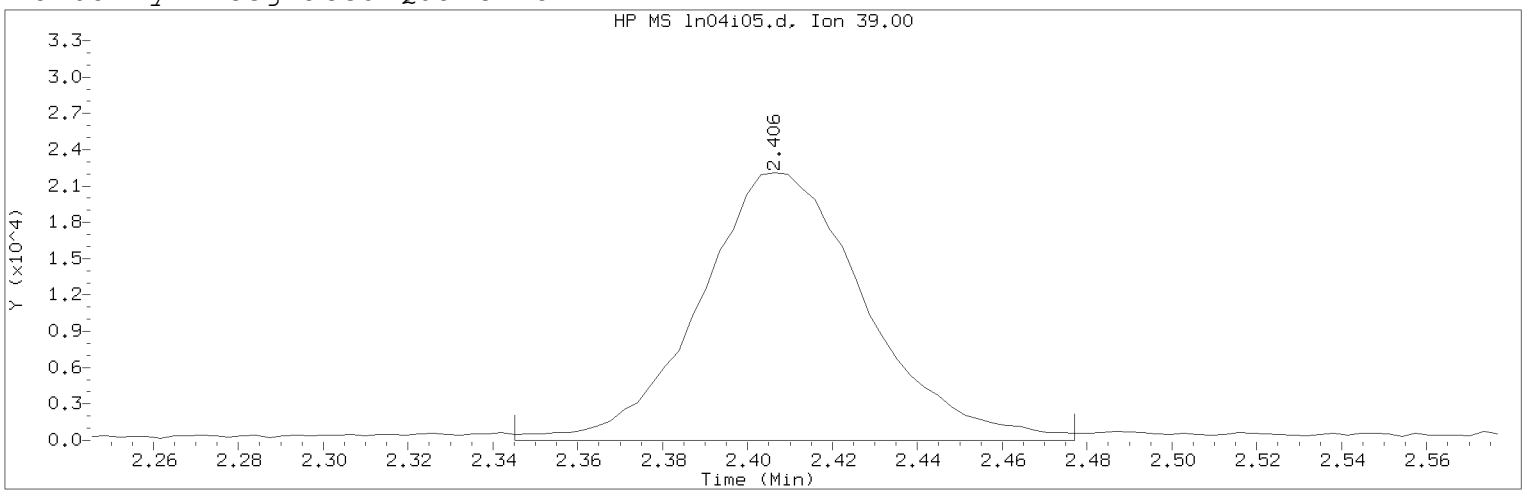
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 189
Retention Time (minutes): 2.091
Quant Ion : 85.00
Area : 74877
On-column Amount (ng) : 9.3136
Integration start scan : 171 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

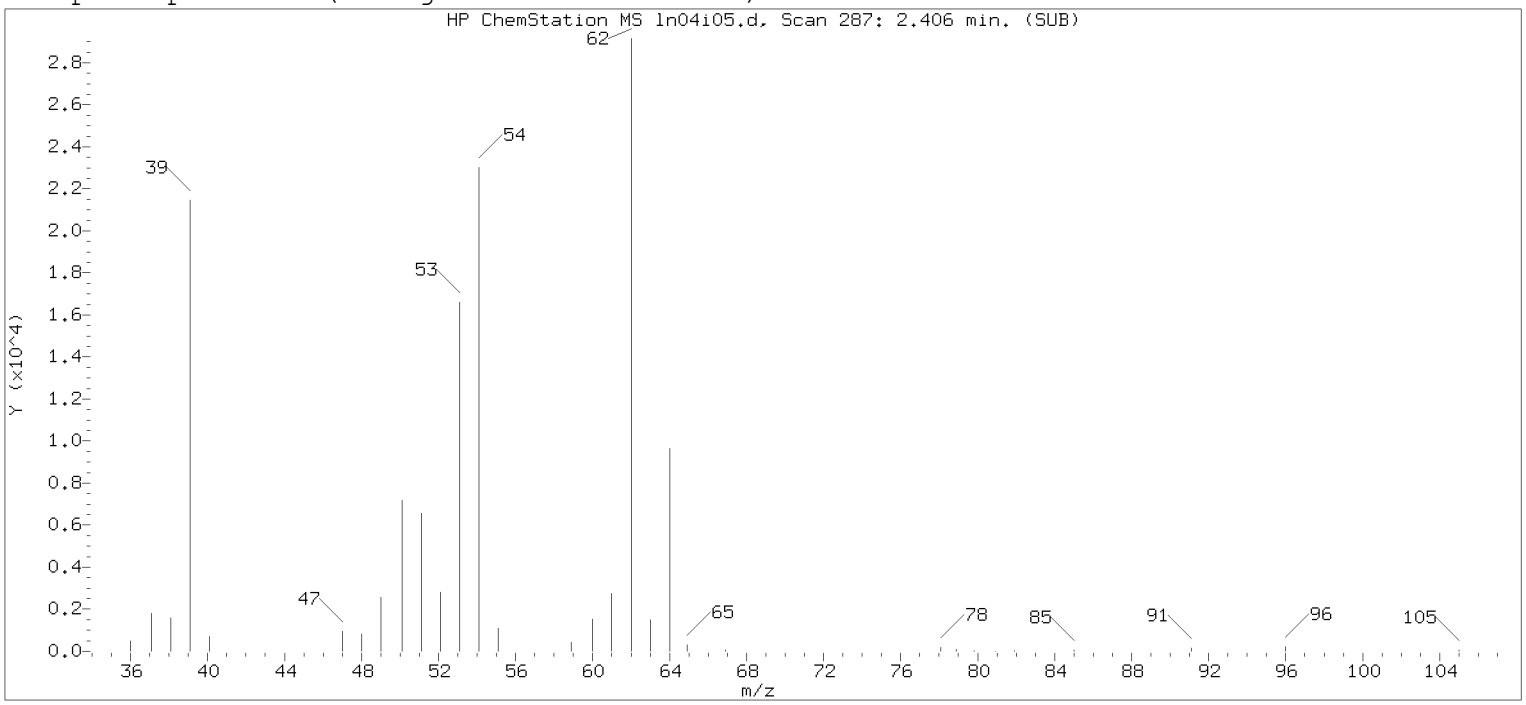
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area (flag) : 60141M
On-Column Amount (ng) : 9.3042
Integration start scan : 267 Integration stop scan: 308
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

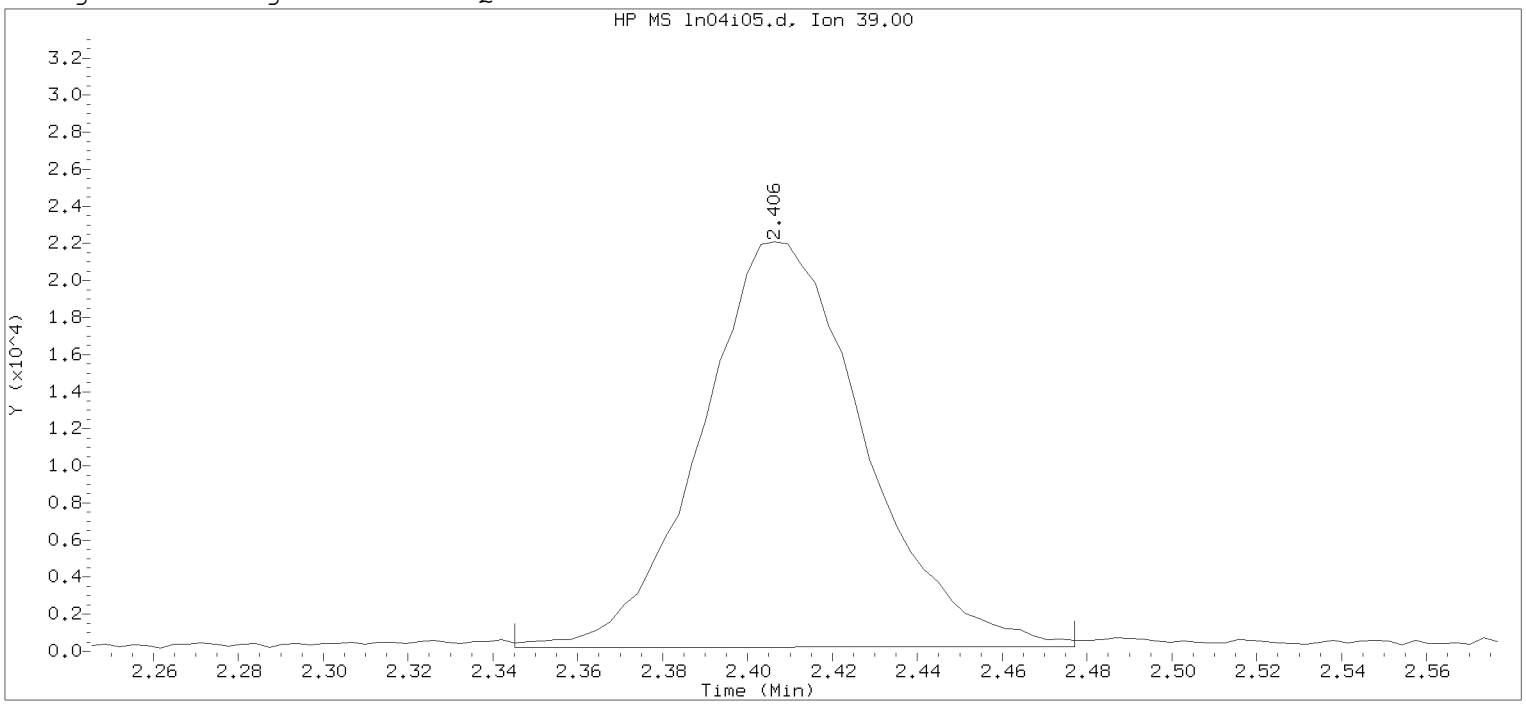
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 287
Retention Time (minutes): 2.406
Quant Ion : 39.00
Area : 58240
On-column Amount (ng) : 9.5707
Integration start scan : 267 Integration stop scan: 308
Y at integration start : 206 Y at integration end: 250

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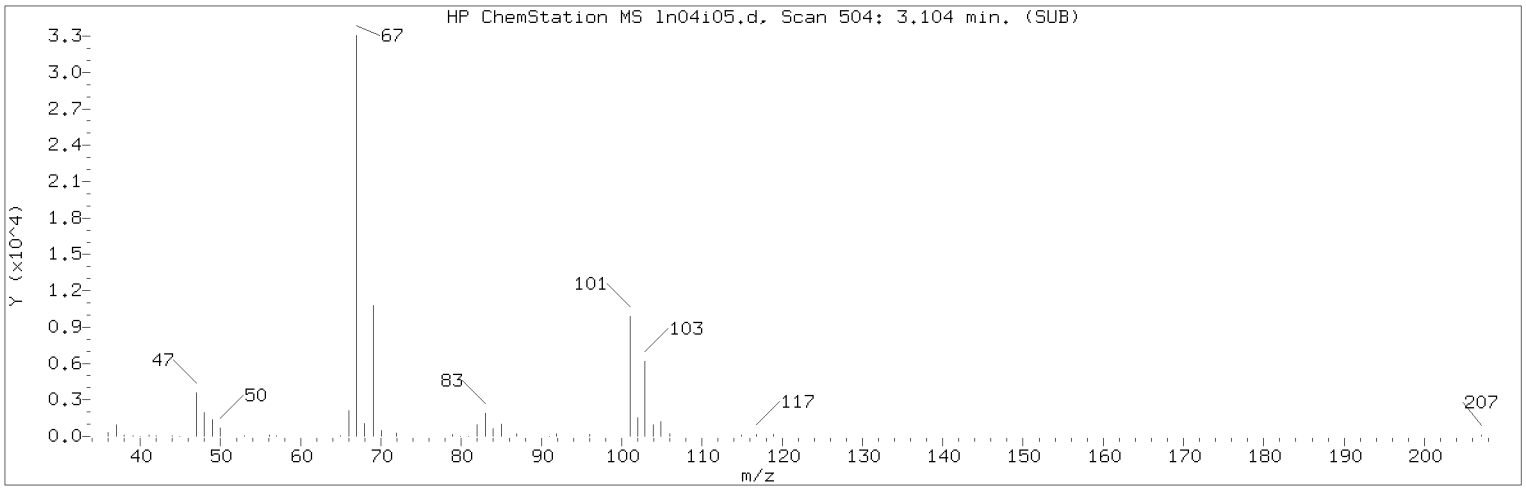
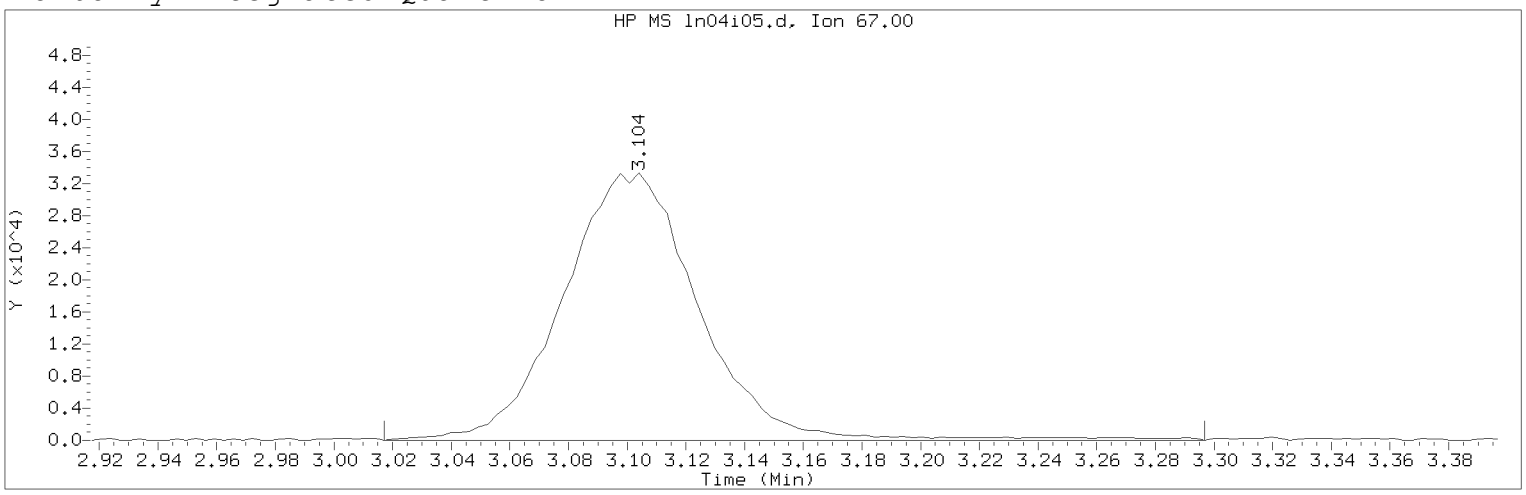
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

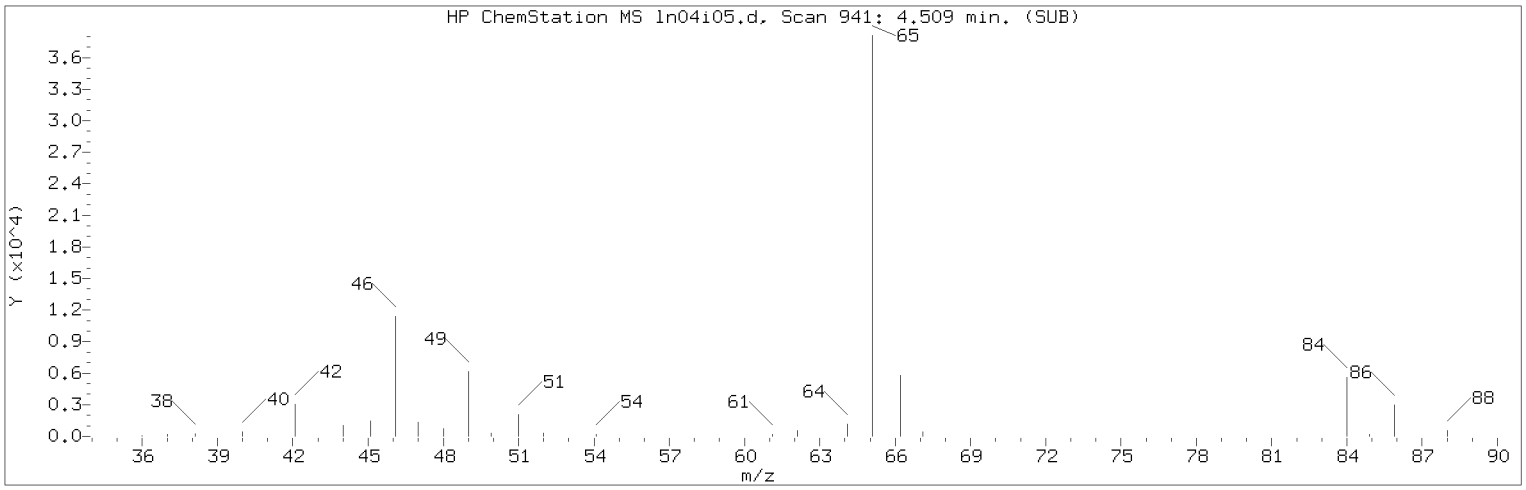
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 504
Retention Time (minutes): 3.104
Quant Ion : 67.00
Area (flag) : 106956M
On-Column Amount (ng) : 10.4593
Integration start scan : 476 Integration stop scan: 563
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

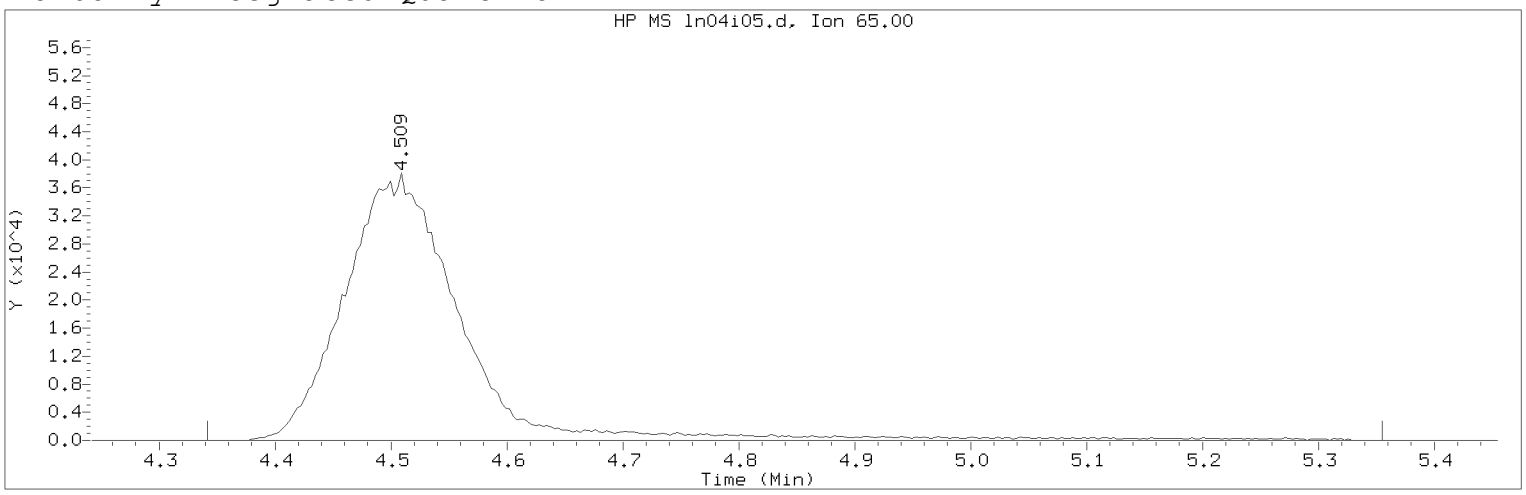
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

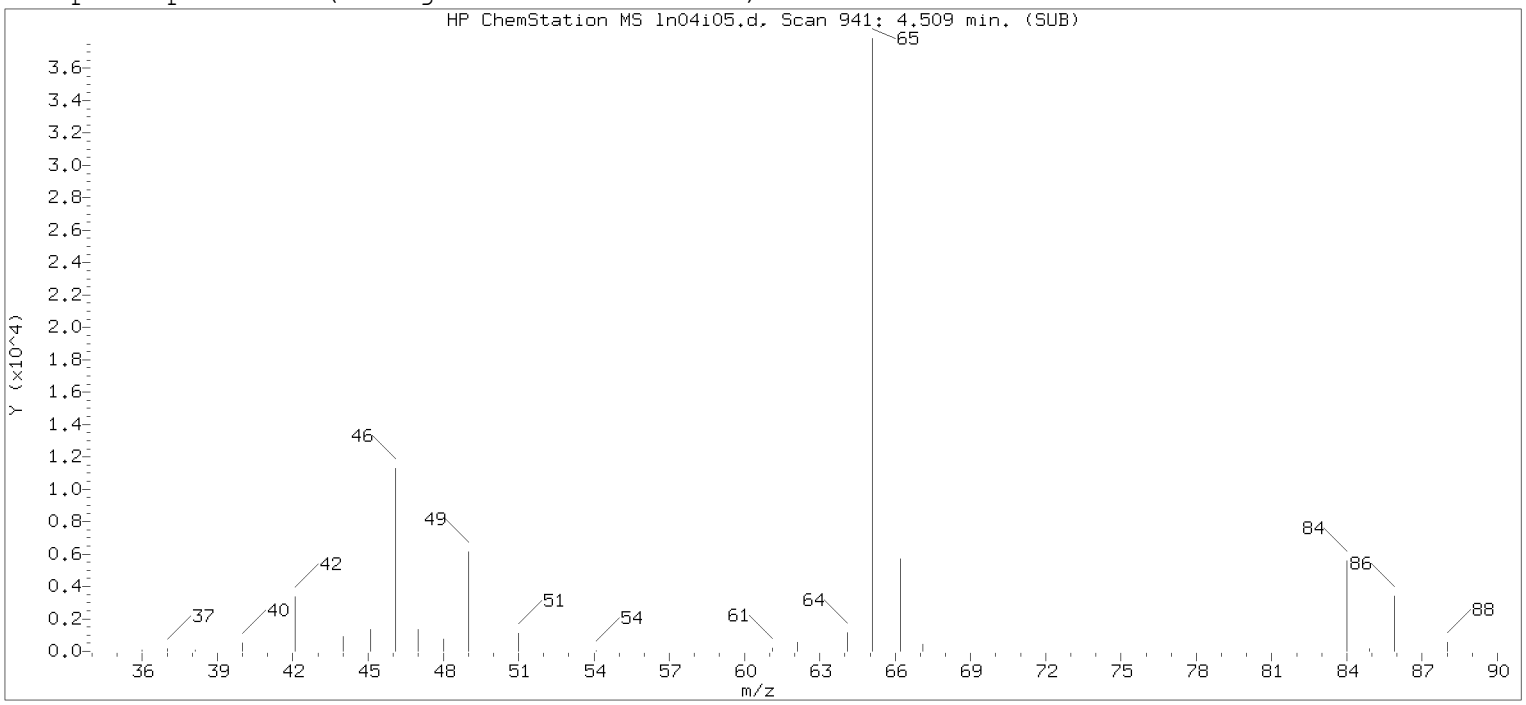
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area (flag) : 263427M
On-Column Amount (ng) : 250.0000
Integration start scan : 888 Integration stop scan: 1203
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

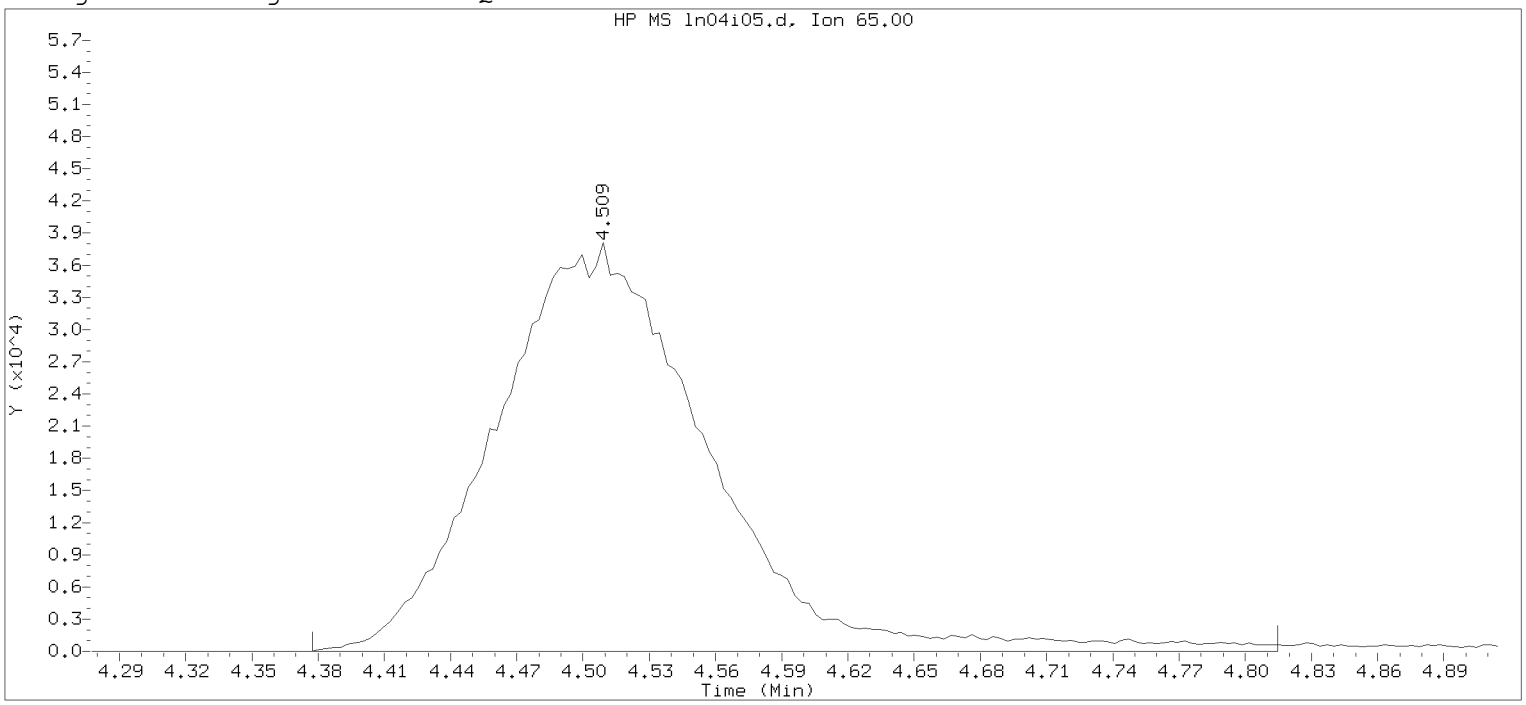
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

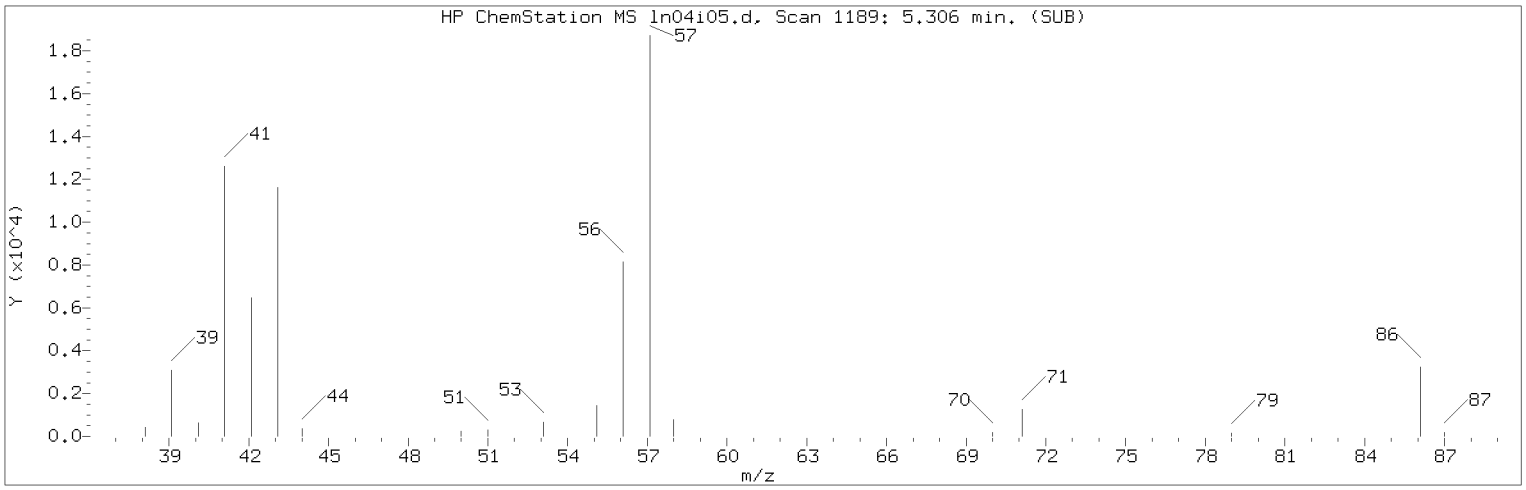
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

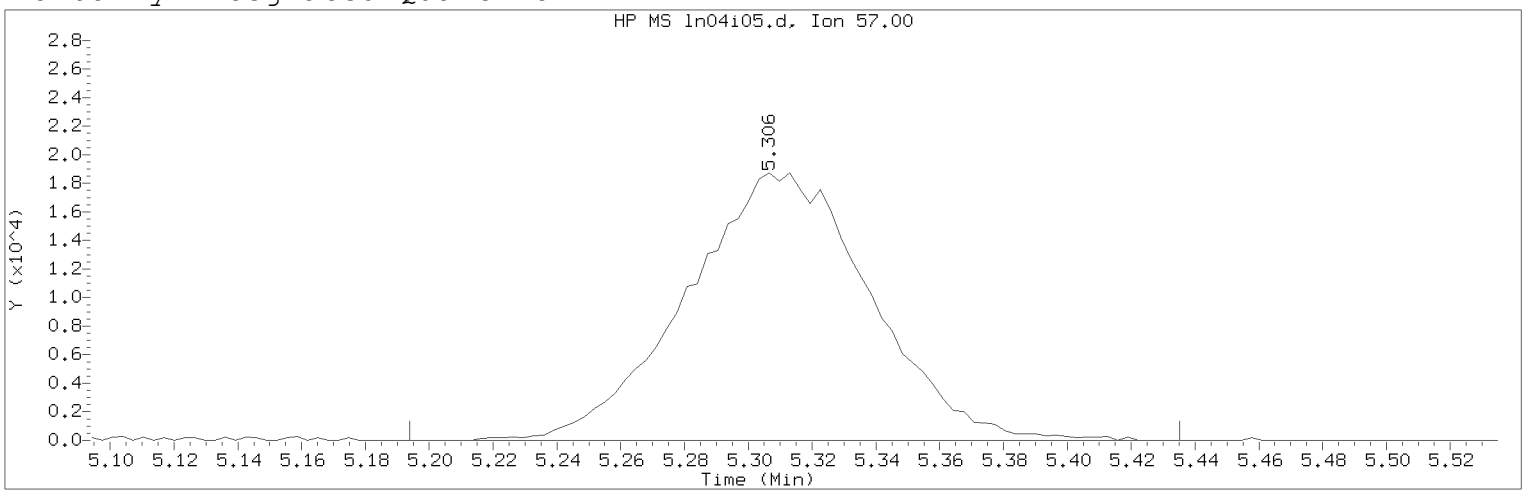
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 941
Retention Time (minutes): 4.509
Quant Ion : 65.00
Area : 253092
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1035
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

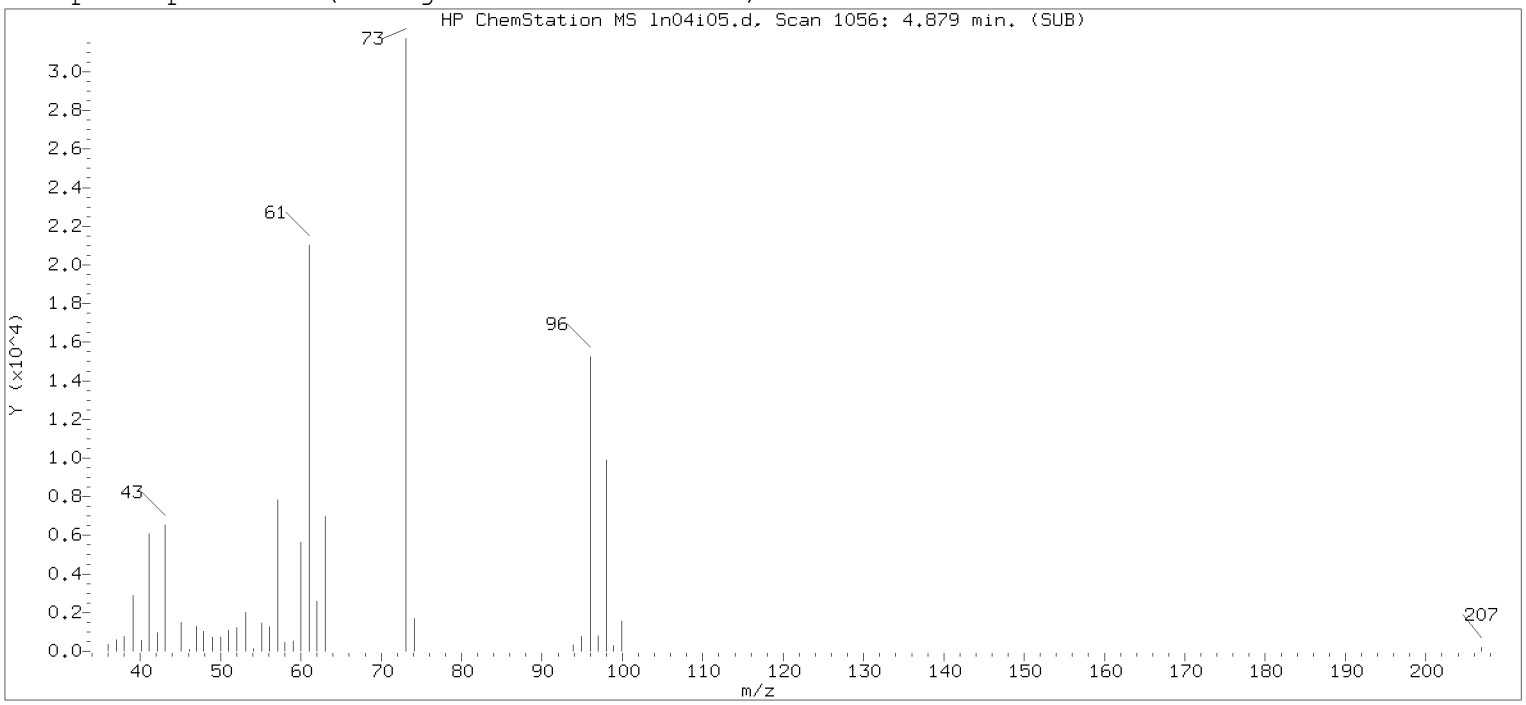
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1189
Retention Time (minutes): 5.306
Quant Ion : 57.00
Area (flag) : 75187M
On-Column Amount (ng) : 8.5083
Integration start scan : 1153 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

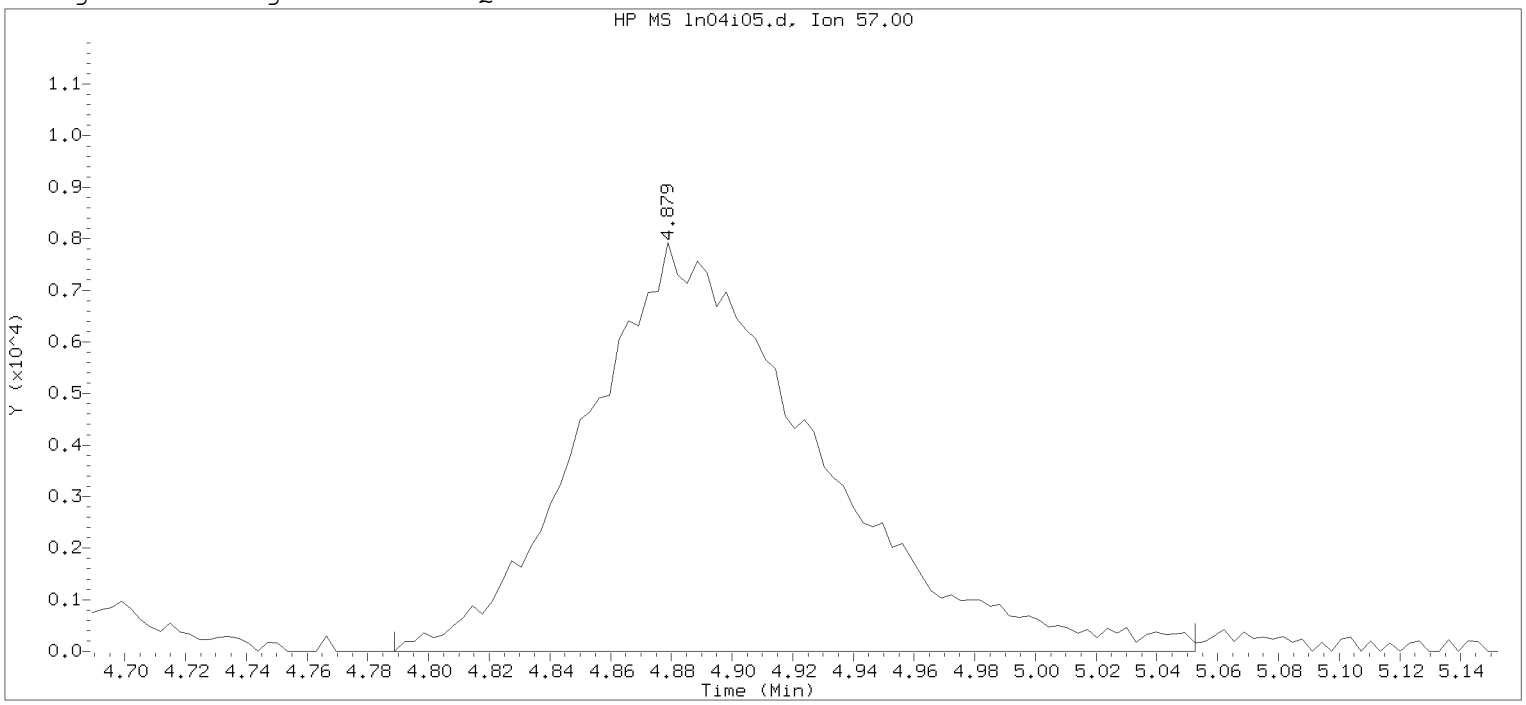
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

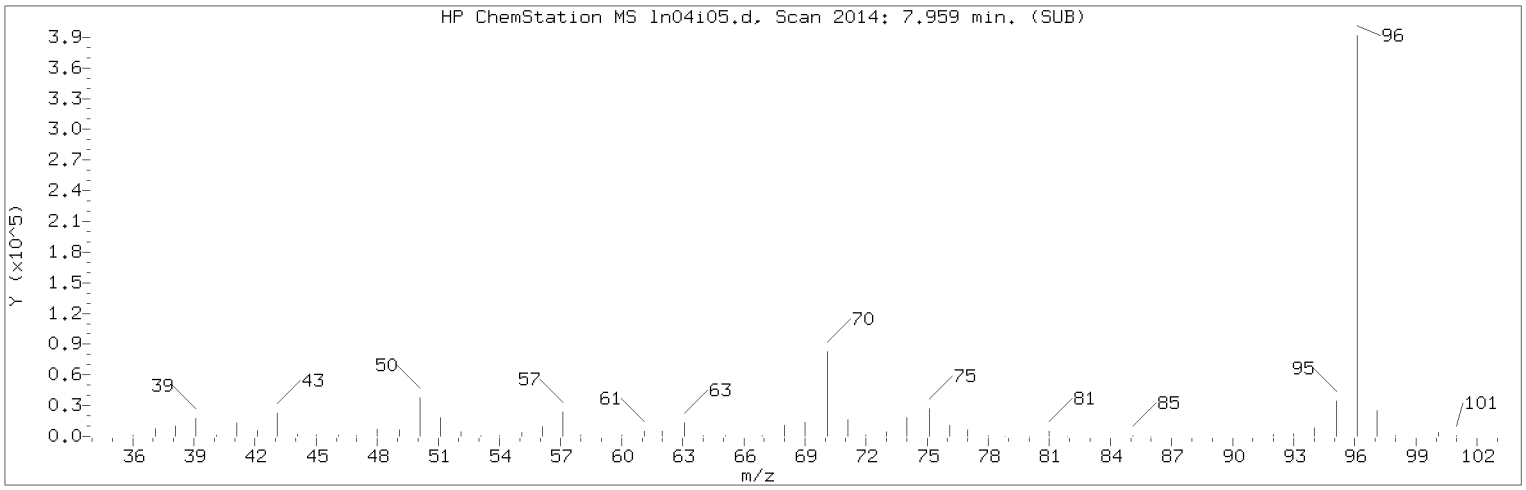
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

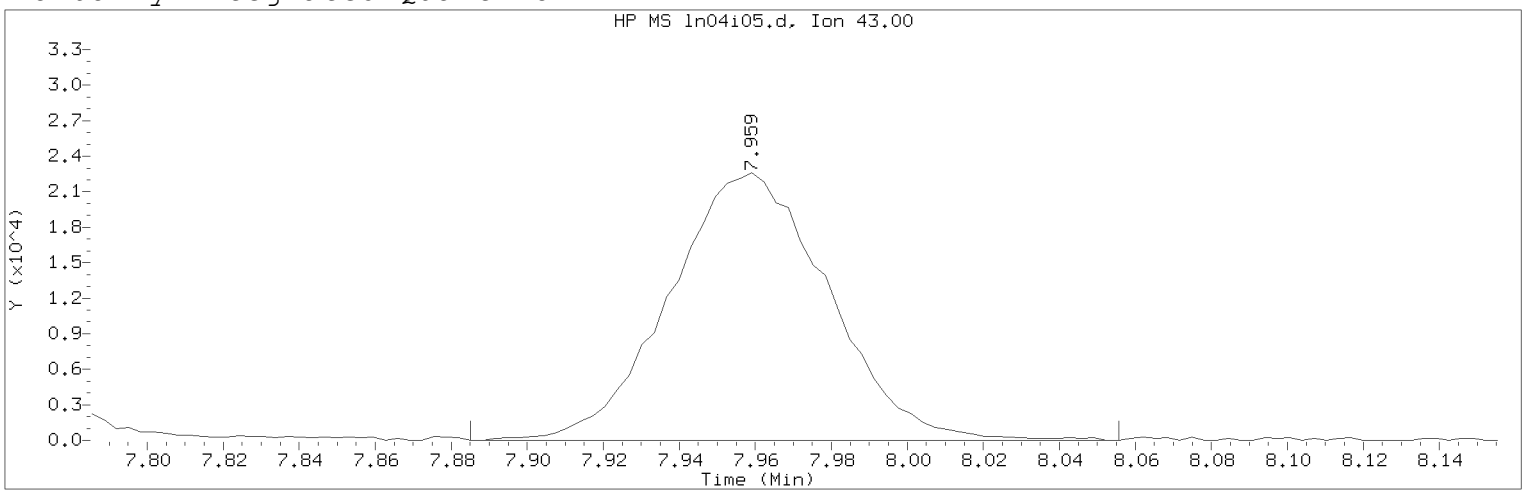
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1056
Retention Time (minutes): 4.879
Quant Ion : 57.00
Area : 42116
On-column Amount (ng) : 11.5193
Integration start scan : 1027 Integration stop scan: 1109
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

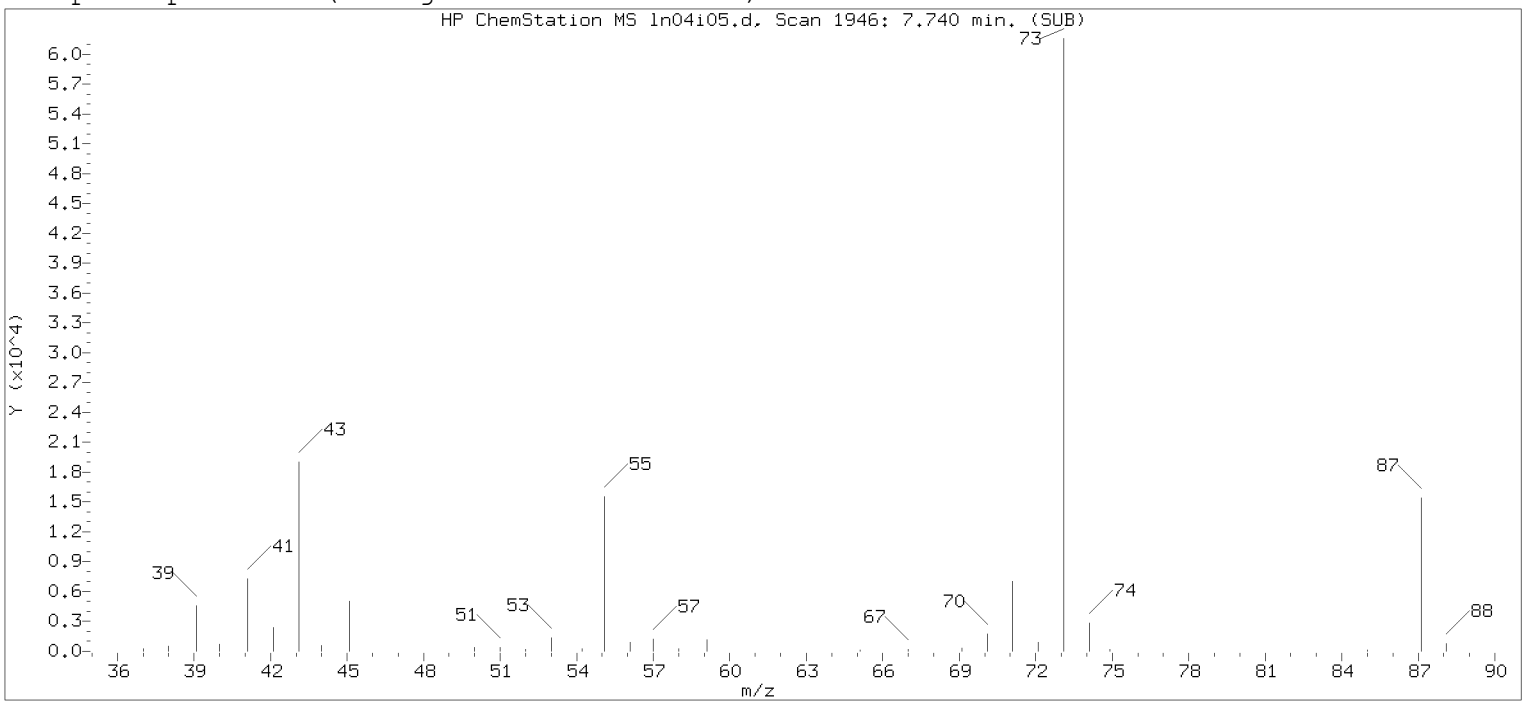
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2014
Retention Time (minutes): 7.959
Quant Ion : 43.00
Area (flag) : 65347MA
On-Column Amount (ng) : 7.9157
Integration start scan : 1990 Integration stop scan: 2043
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

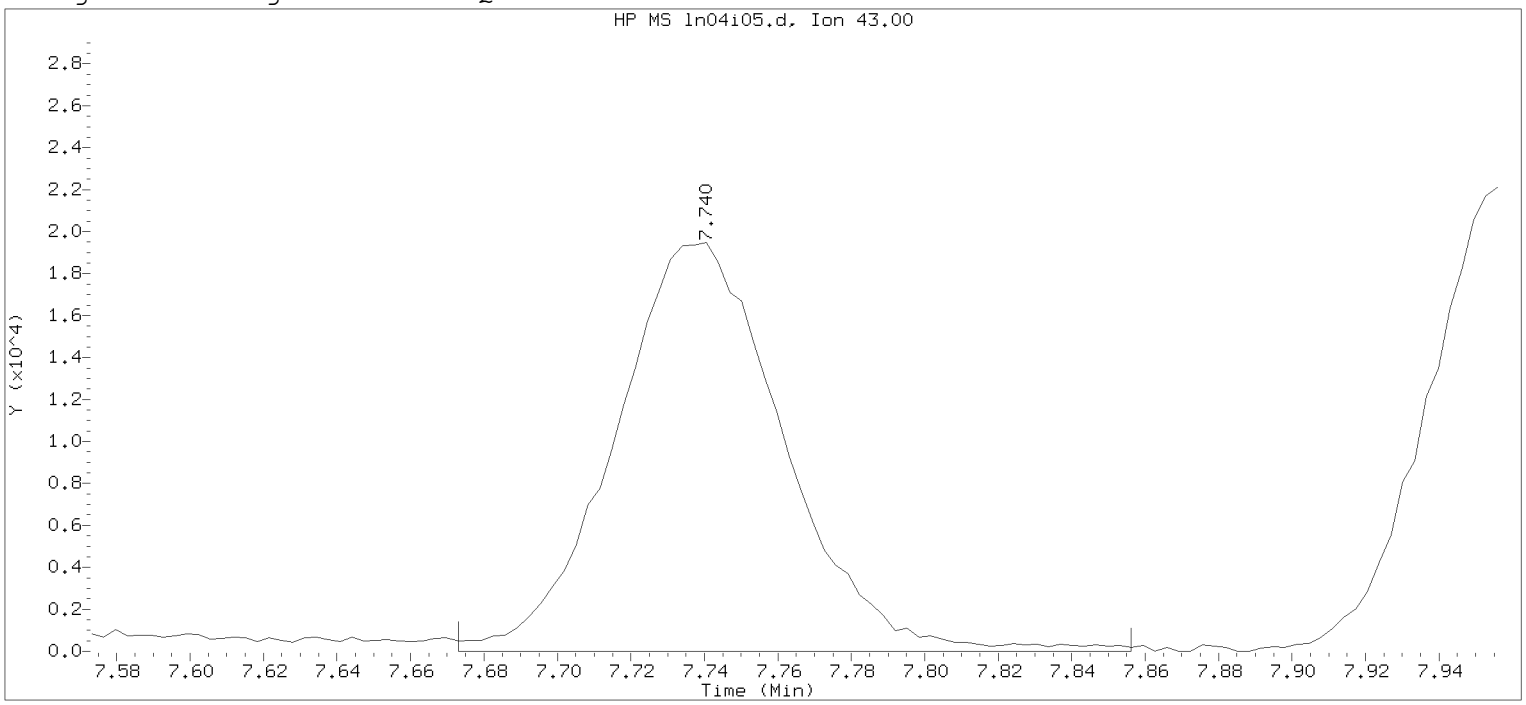
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

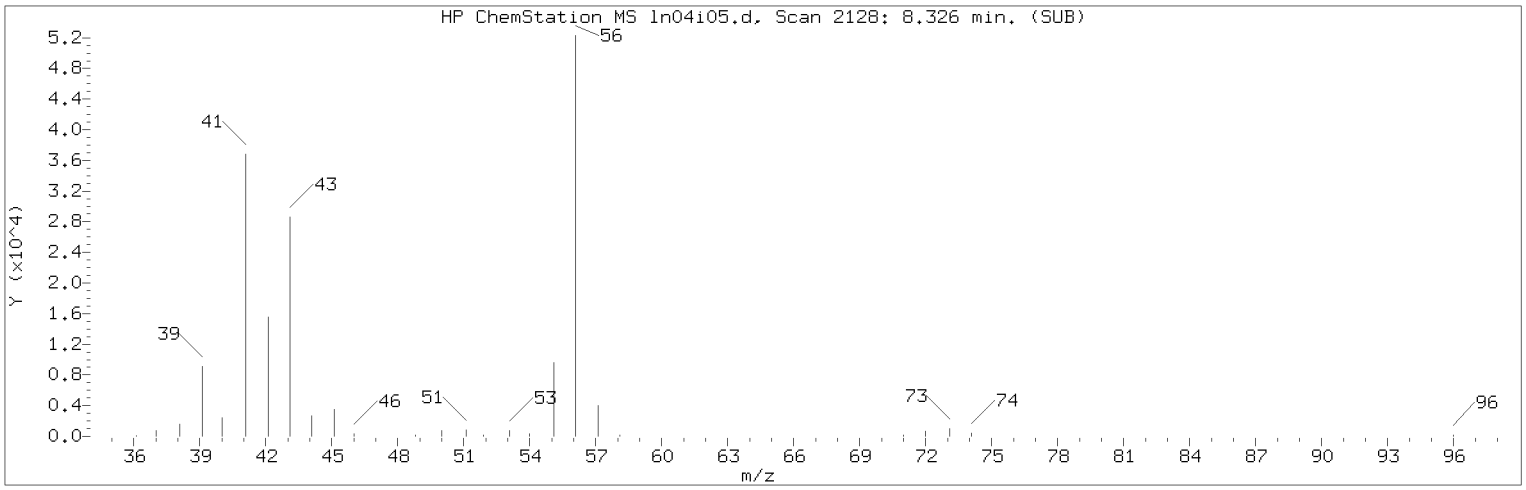
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

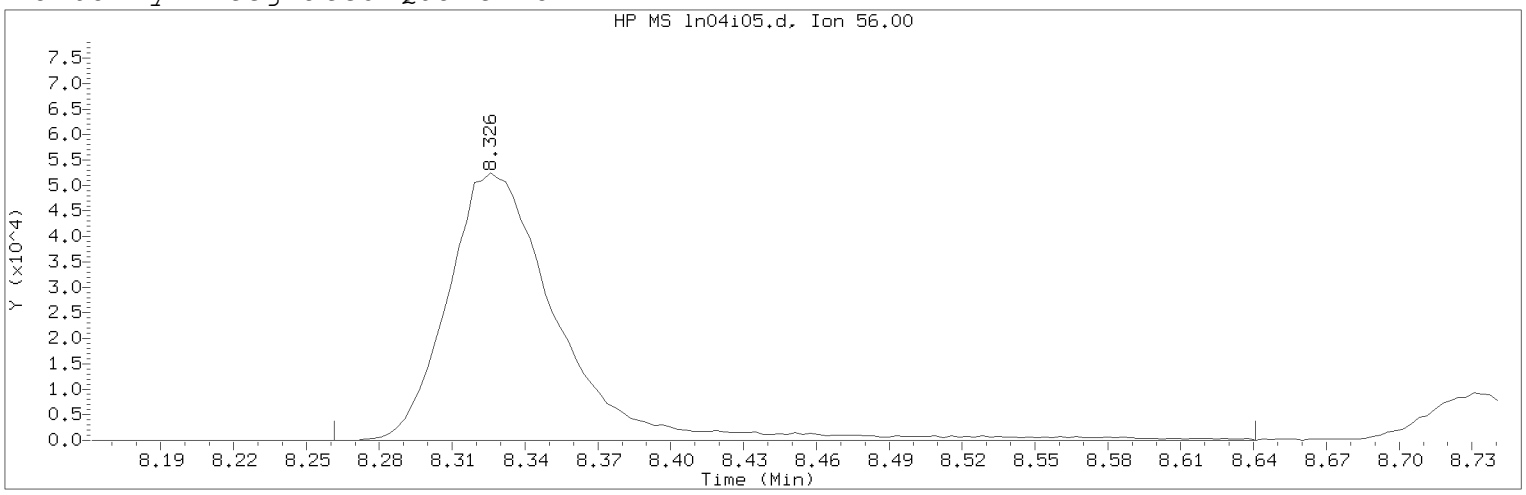
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.740
Quant Ion : 43.00
Area : 62104
On-column Amount (ng) : 10.1613
Integration start scan : 1924 Integration stop scan: 1981
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

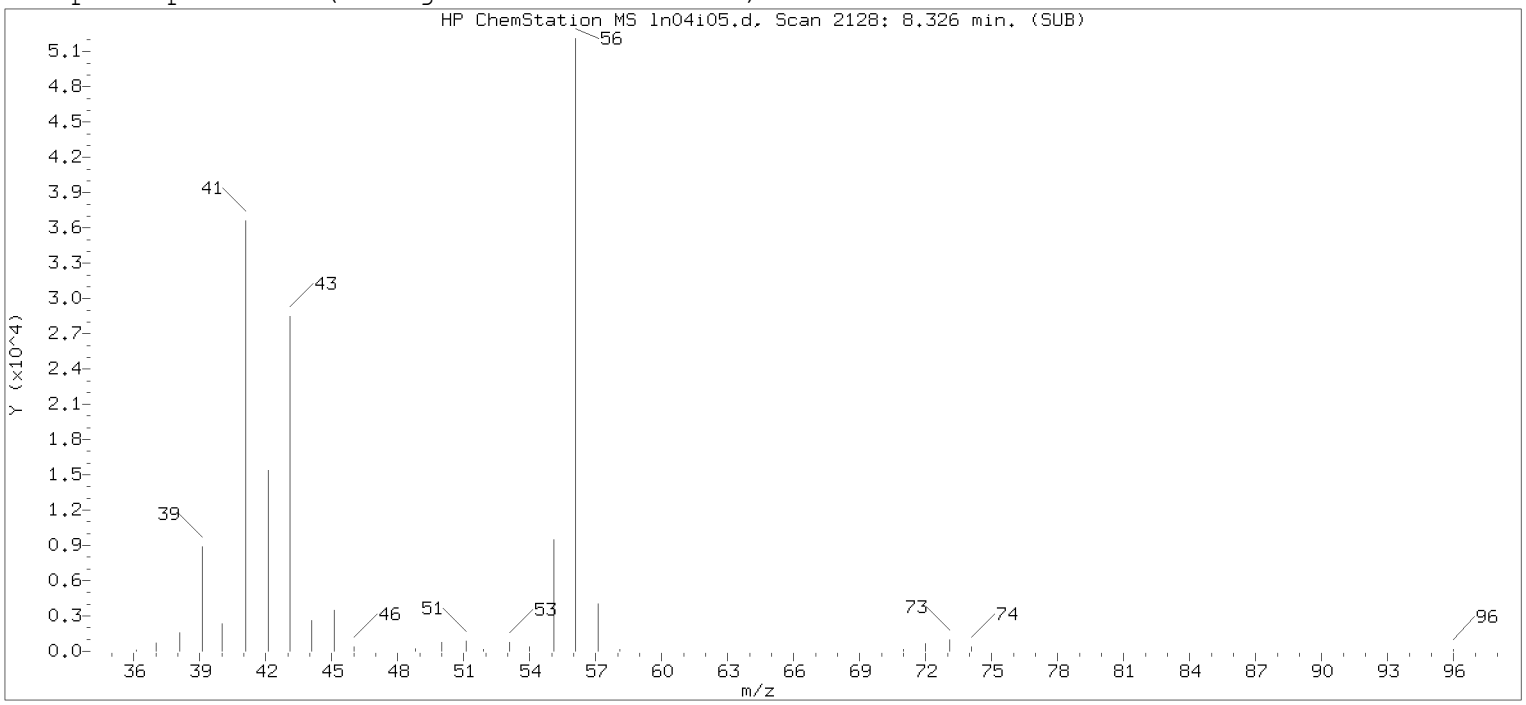
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area (flag) : 166674M
On-Column Amount (ng) : 518.8682
Integration start scan : 2107 Integration stop scan: 2225
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

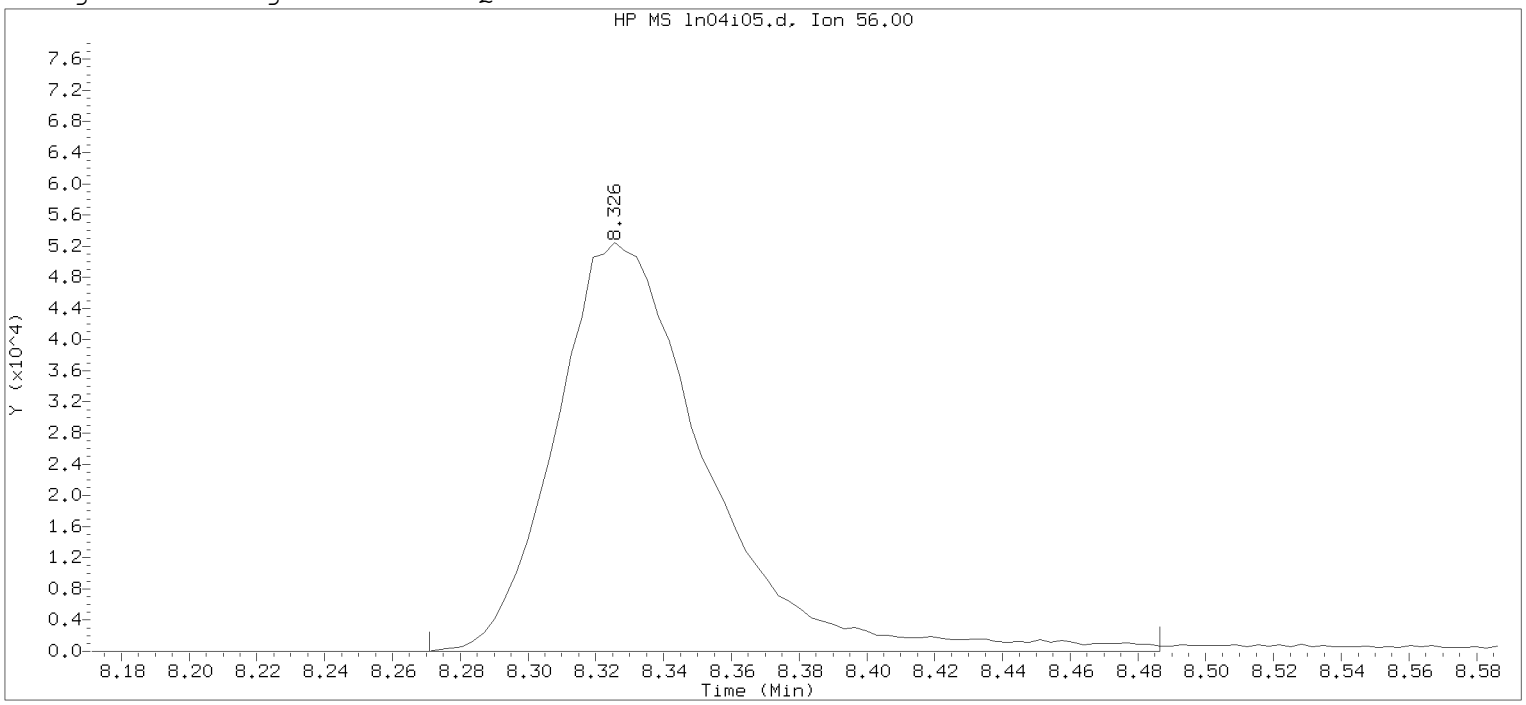
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

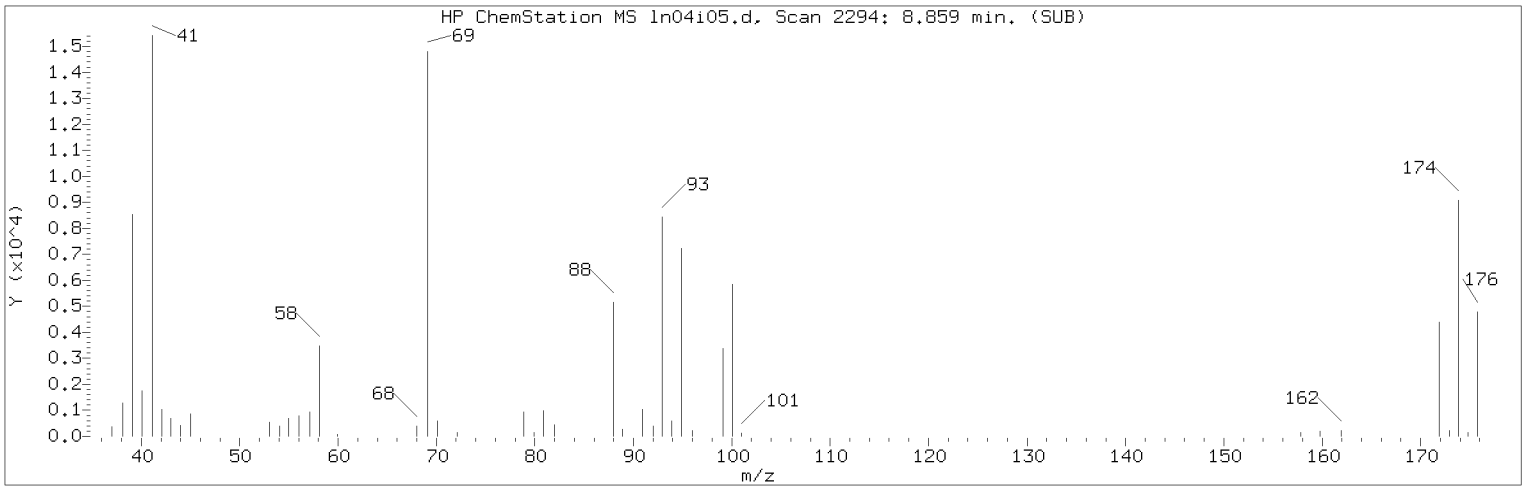
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

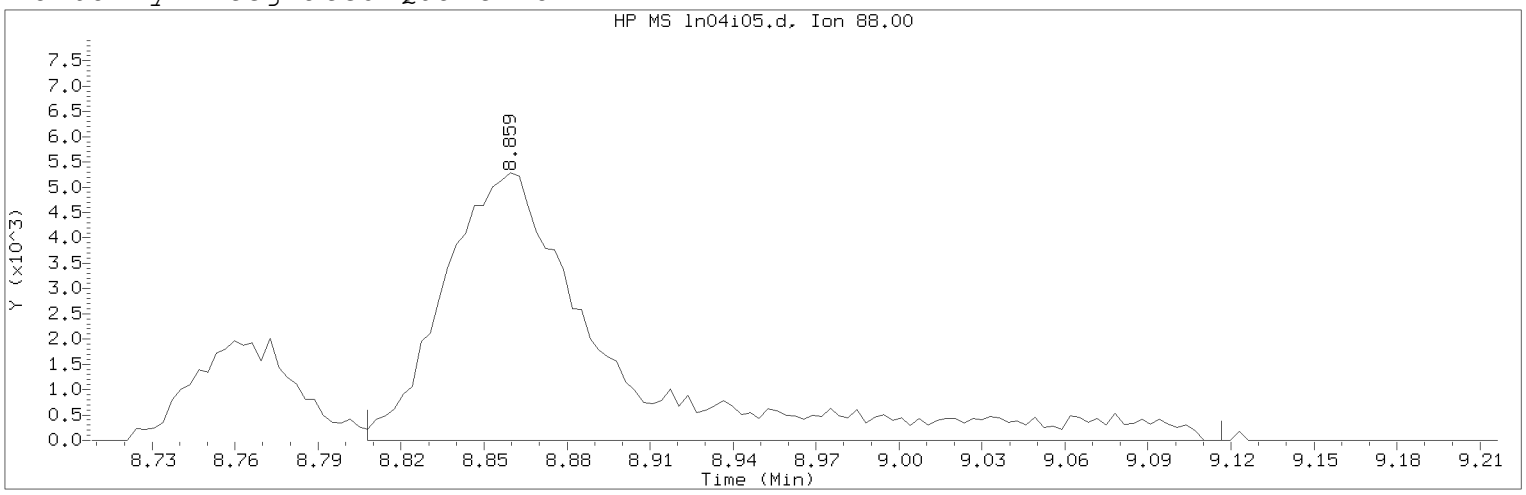
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area : 161642
On-column Amount (ng) : 524.2963
Integration start scan : 2110 Integration stop scan: 2177
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

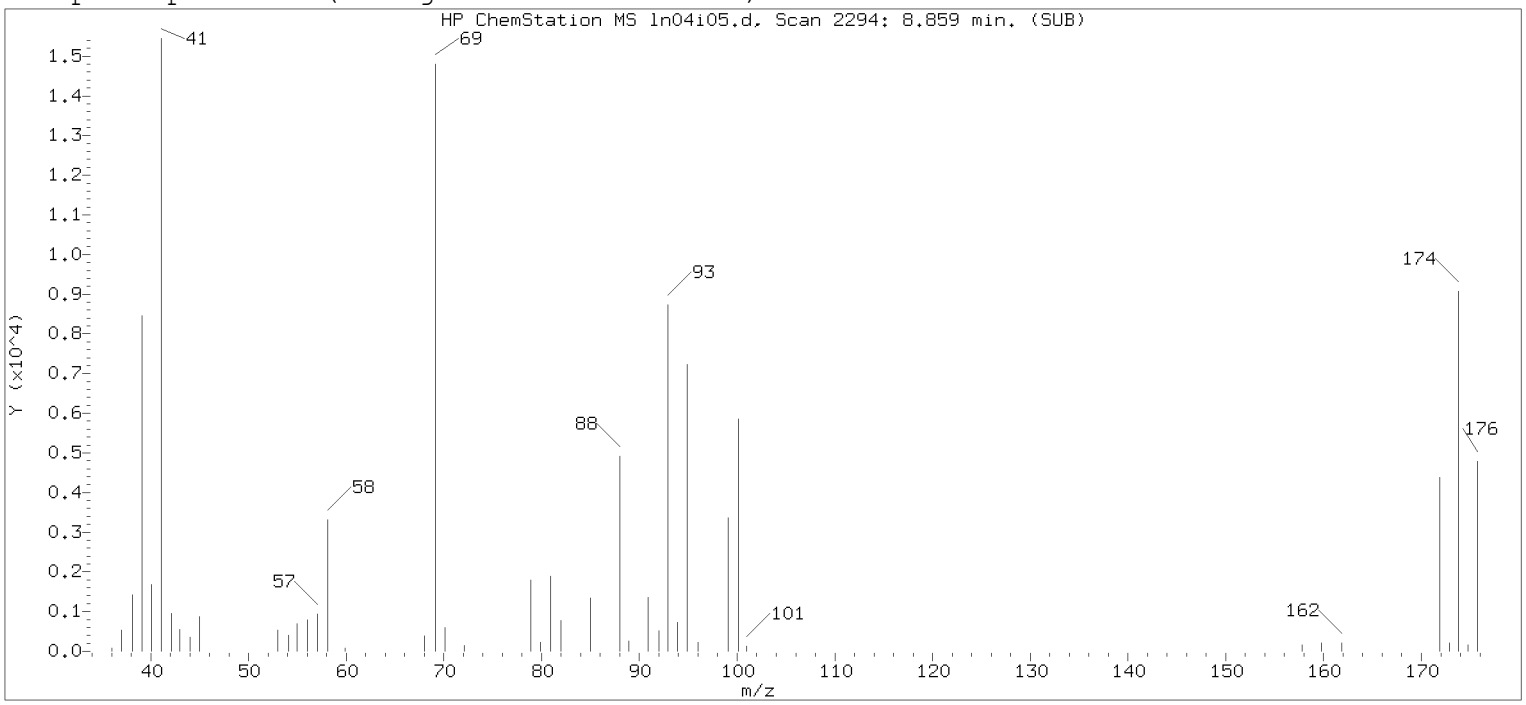
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2294
Retention Time (minutes): 8.859
Quant Ion : 88.00
Area (flag) : 22251M
On-Column Amount (ng) : 252.0176
Integration start scan : 2277 Integration stop scan: 2373
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

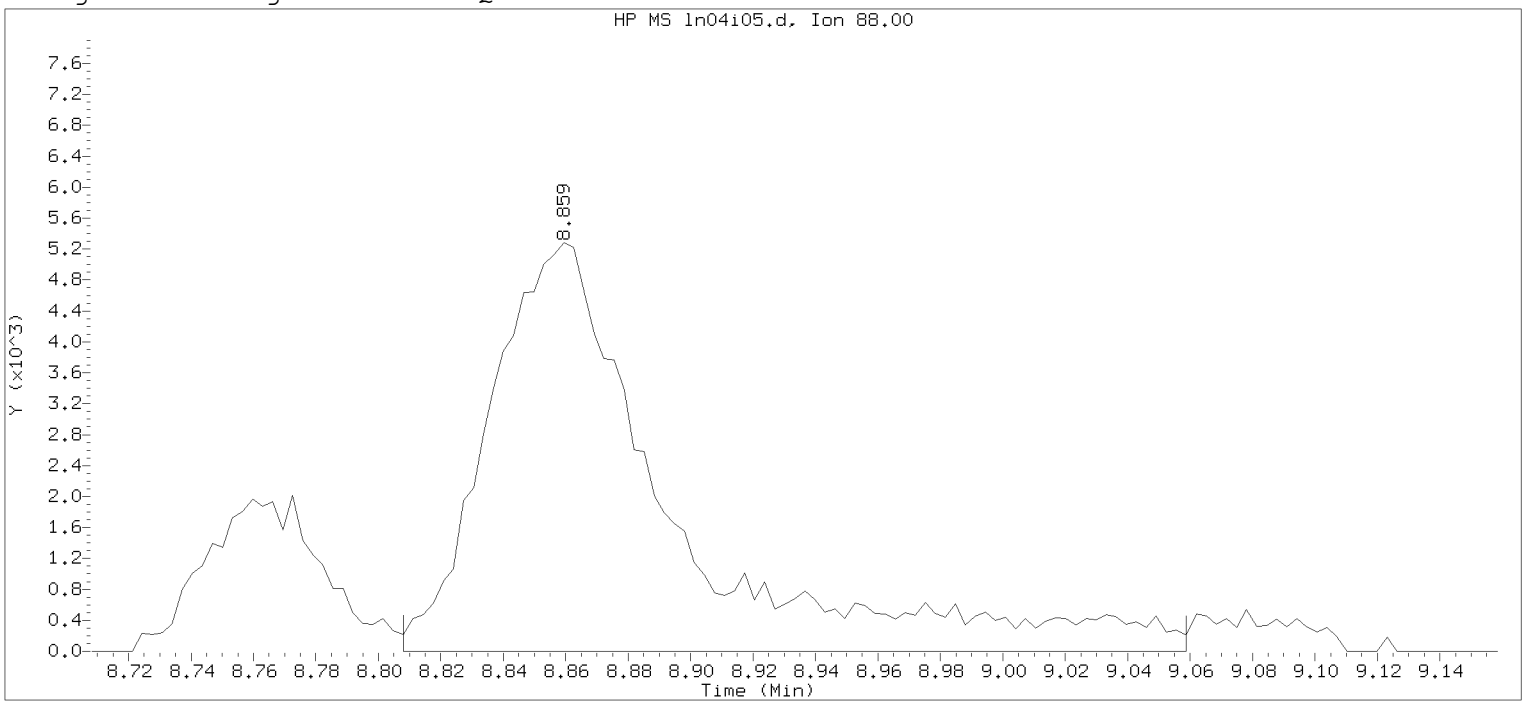
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

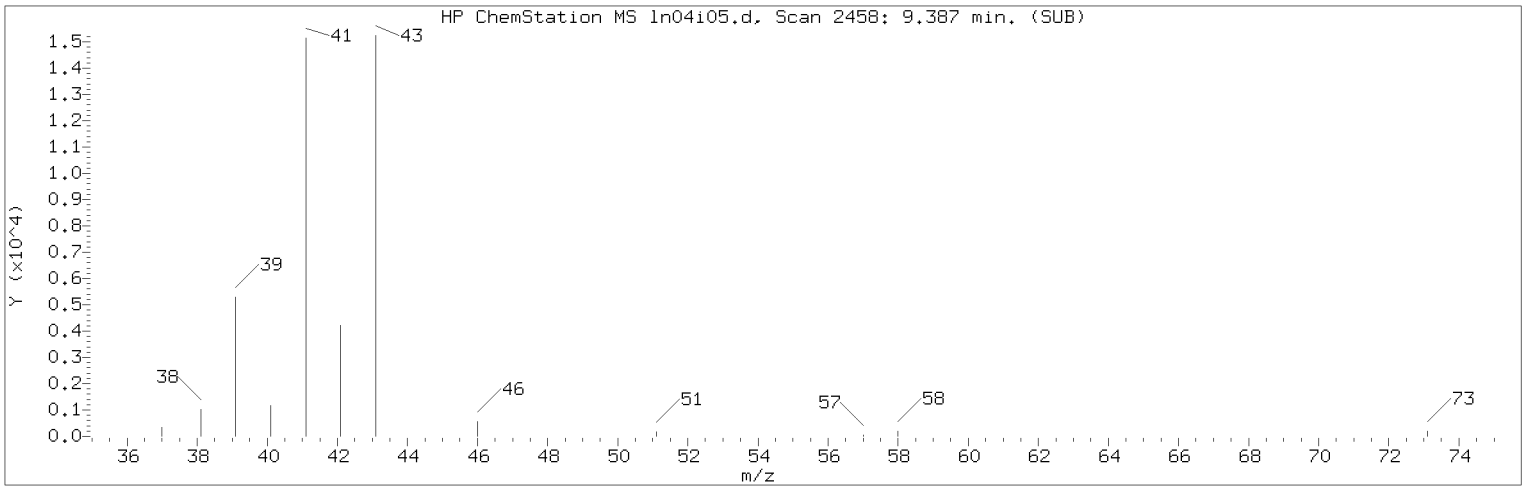
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

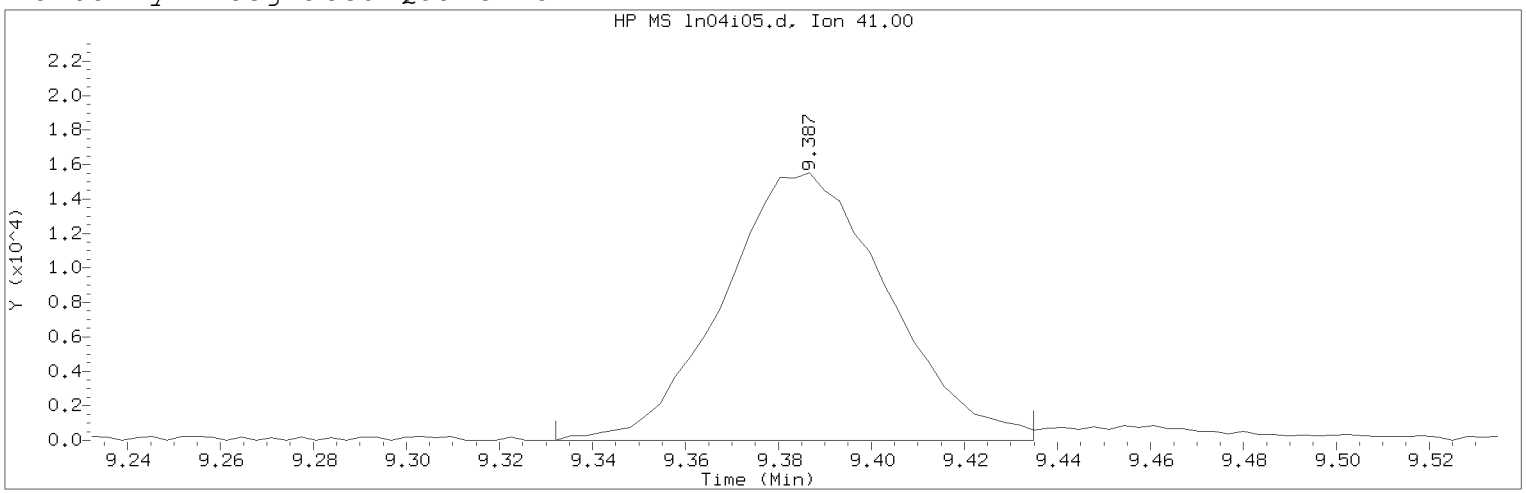
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2294
Retention Time (minutes): 8.859
Quant Ion : 88.00
Area : 21165
On-column Amount (ng) : 248.6410
Integration start scan : 2277 Integration stop scan: 2355
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

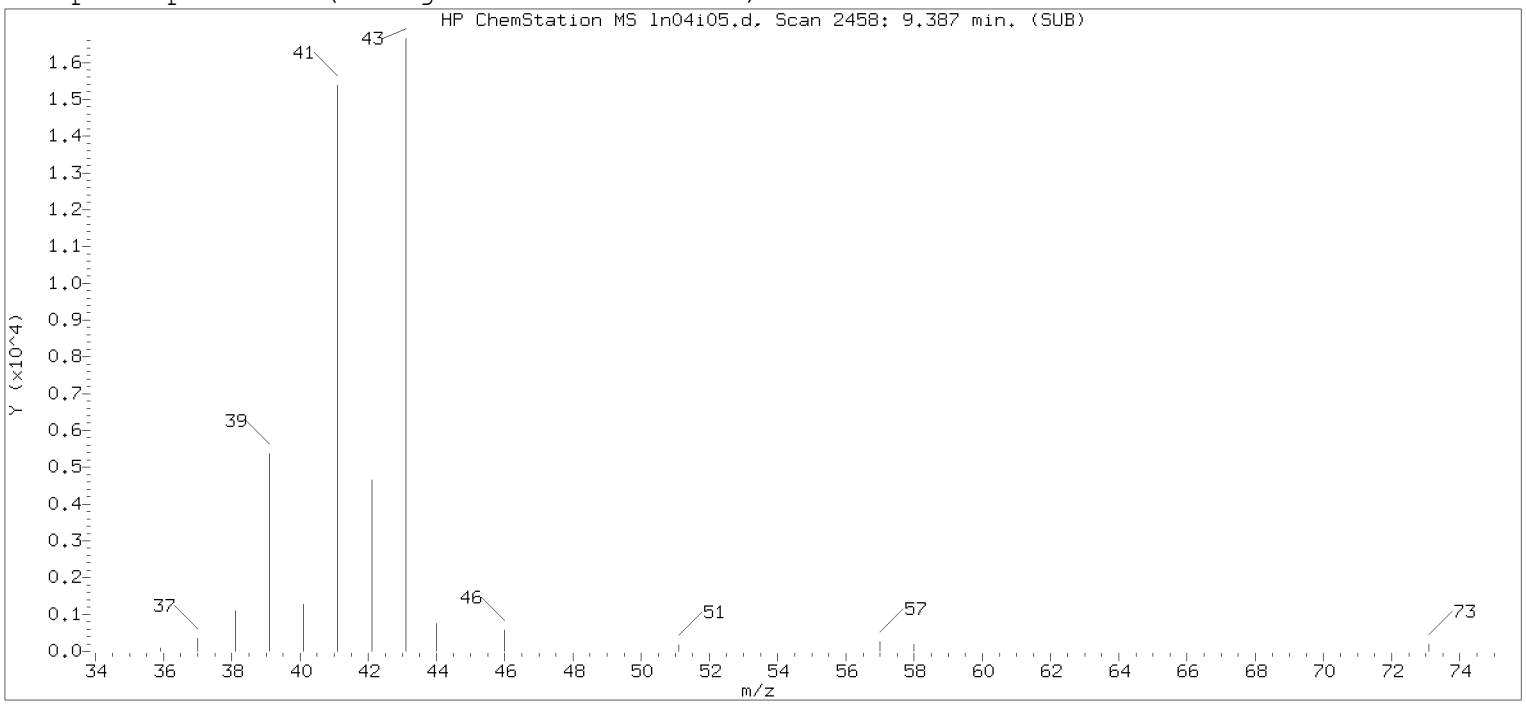
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2458
Retention Time (minutes): 9.387
Quant Ion : 41.00
Area (flag) : 38245M
On-Column Amount (ng) : 18.1785
Integration start scan : 2440 Integration stop scan: 2472
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

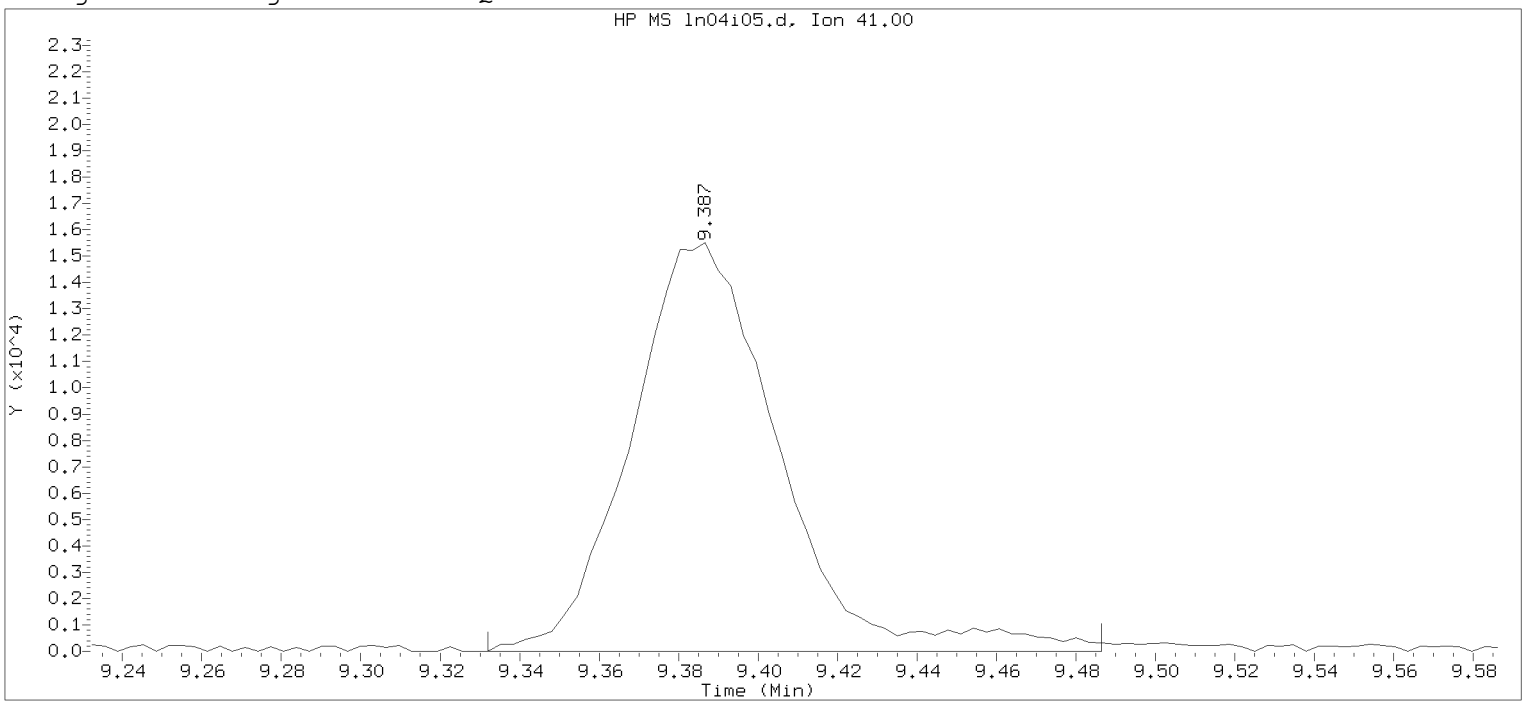
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

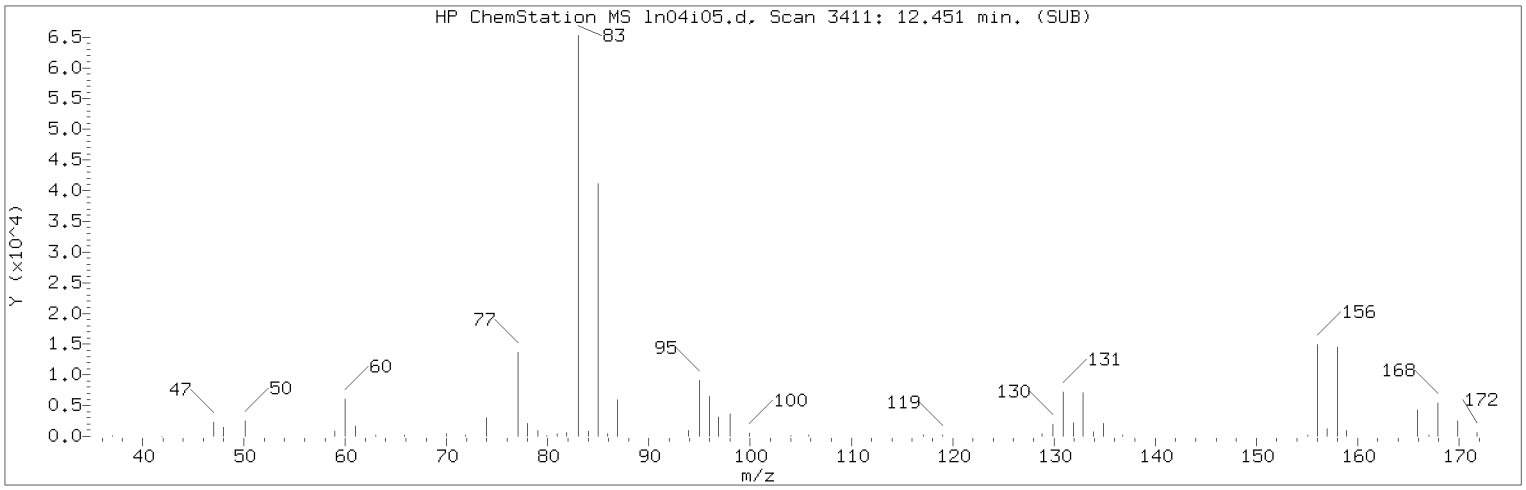
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

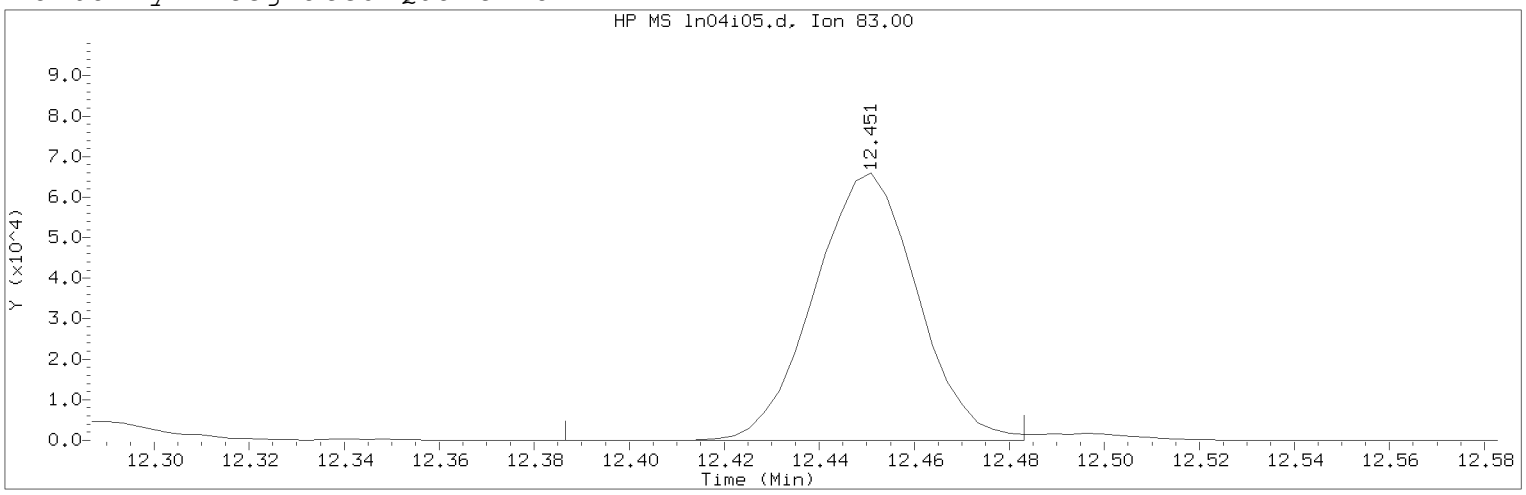
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 2458
Retention Time (minutes): 9.387
Quant Ion : 41.00
Area : 40127
On-column Amount (ng) : 18.9522
Integration start scan : 2440 Integration stop scan: 2488
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

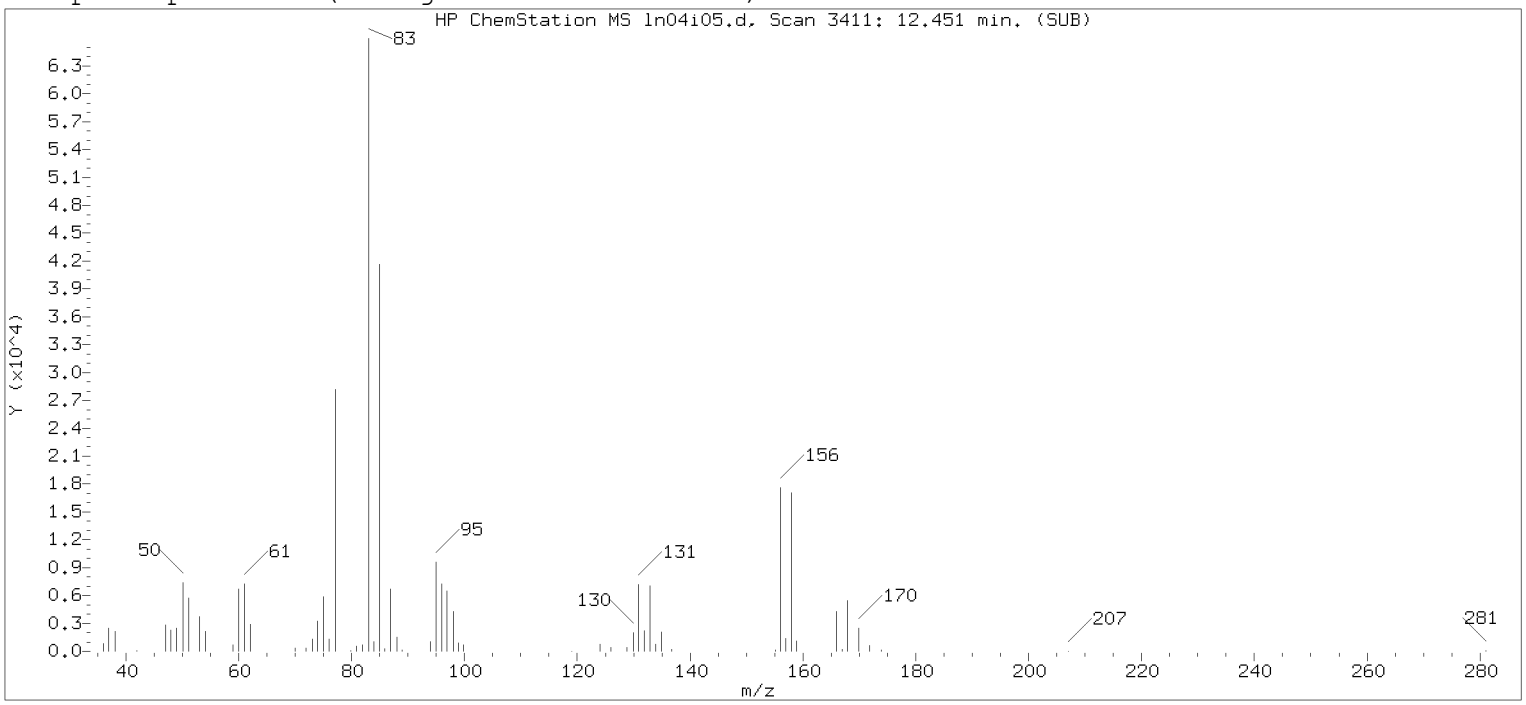
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 99221M
On-Column Amount (ng) : 10.5834
Integration start scan : 3390 Integration stop scan: 3420
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

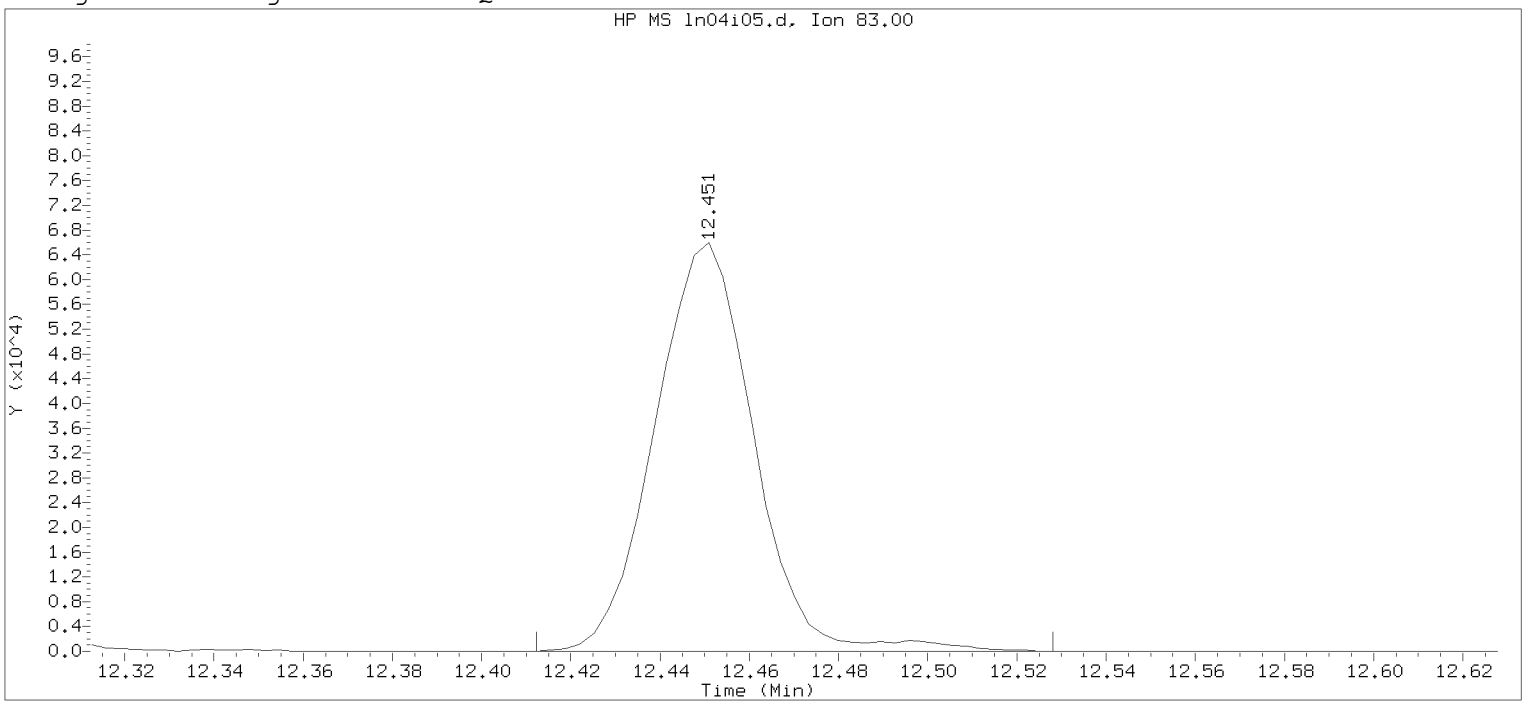
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

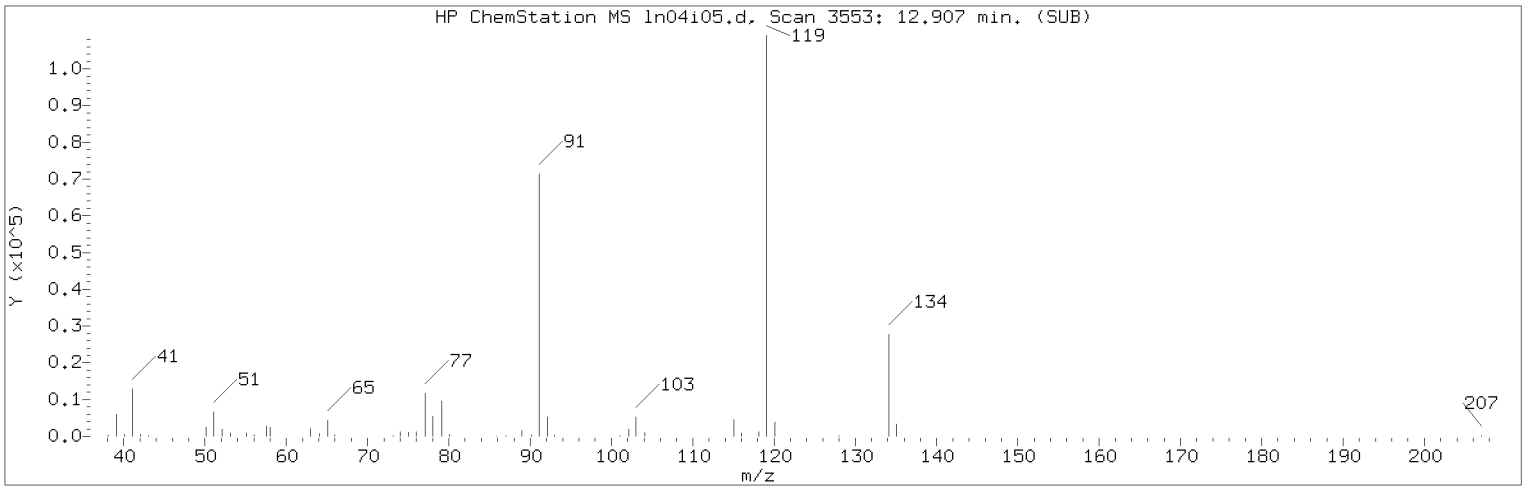
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

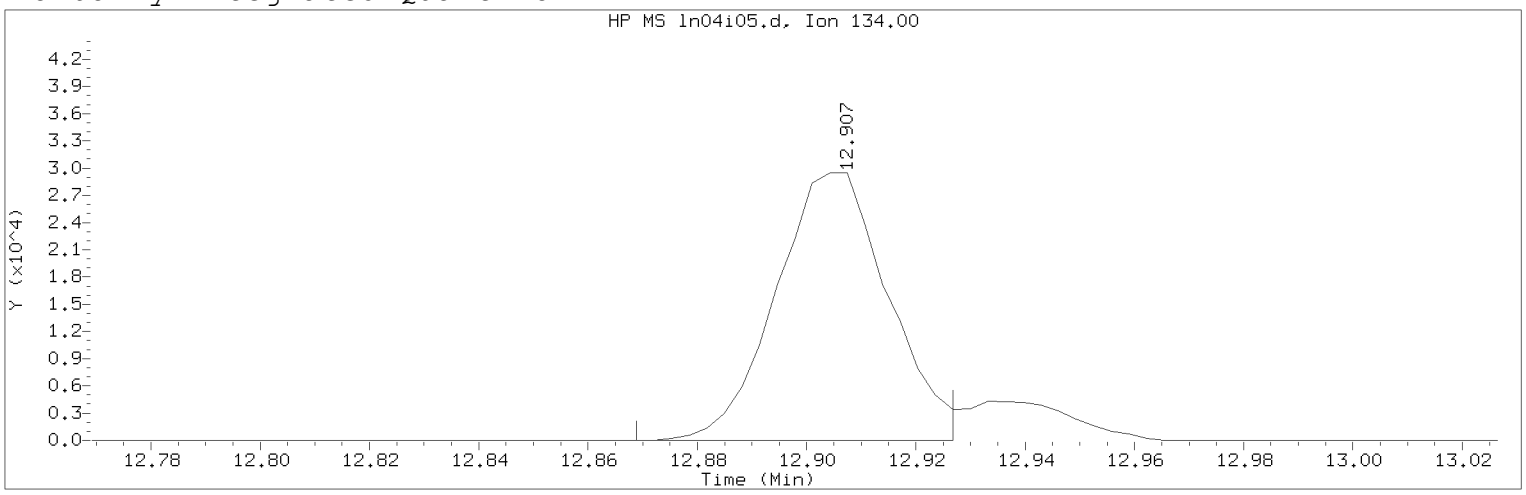
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 101487
On-column Amount (ng) : 10.6325
Integration start scan : 3398 Integration stop scan: 3434
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

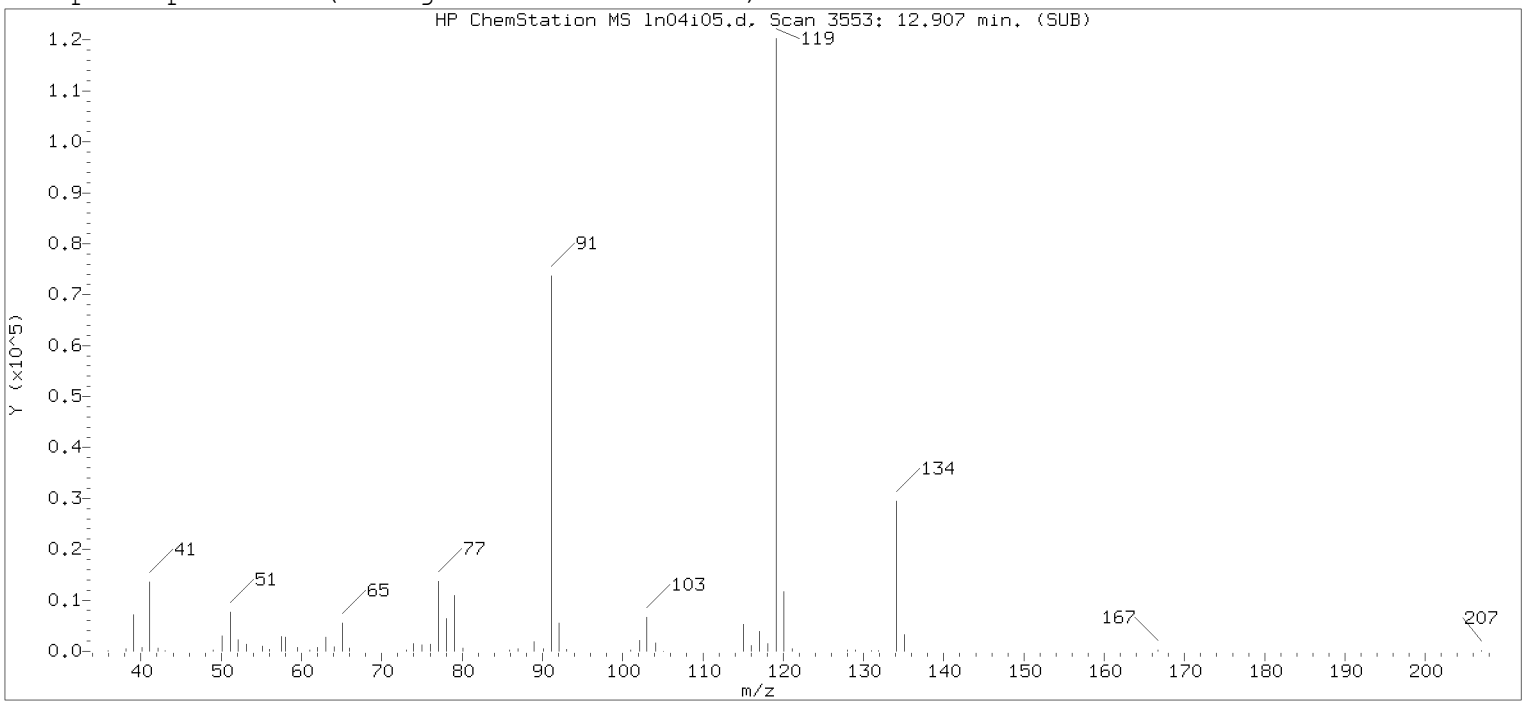
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area (flag) : 42119M
On-Column Amount (ng) : 8.5994
Integration start scan : 3540 Integration stop scan: 3558
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

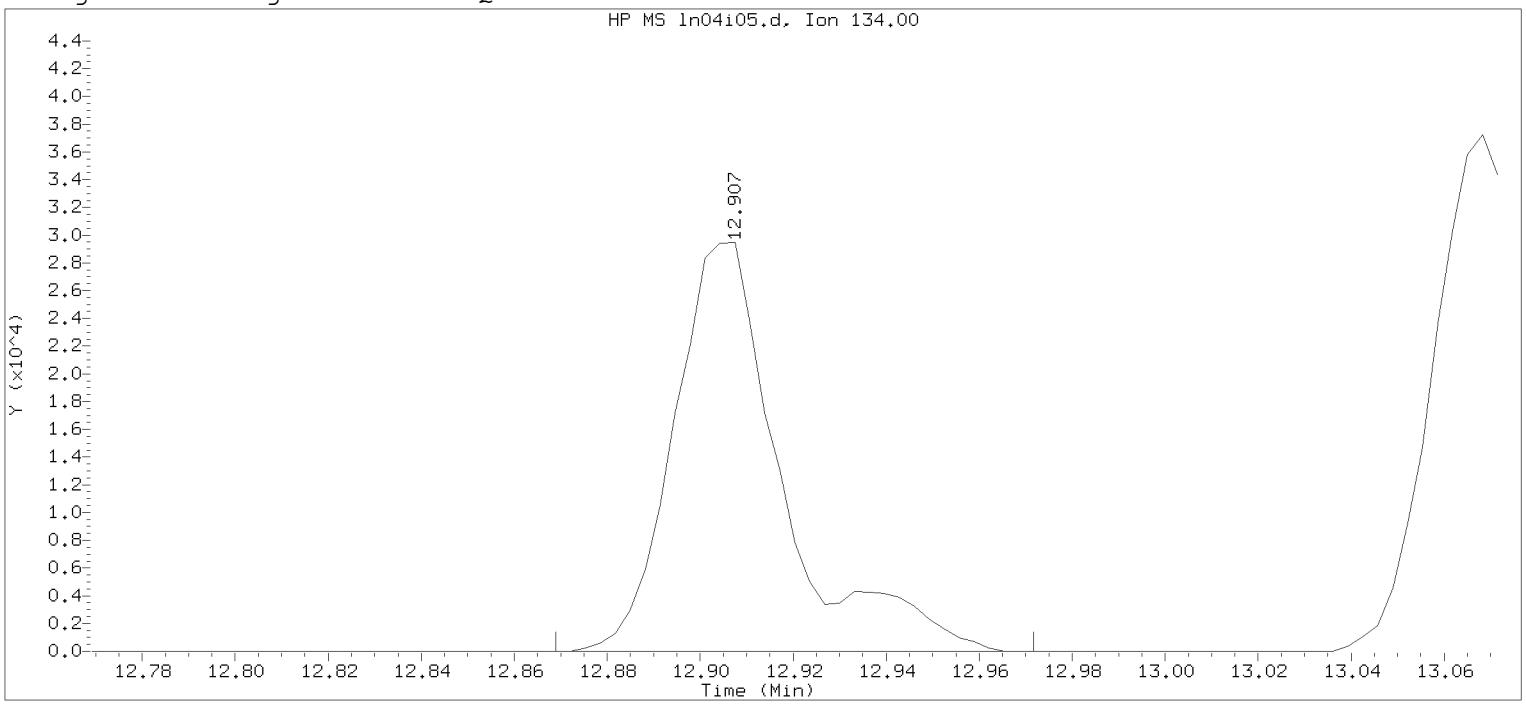
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



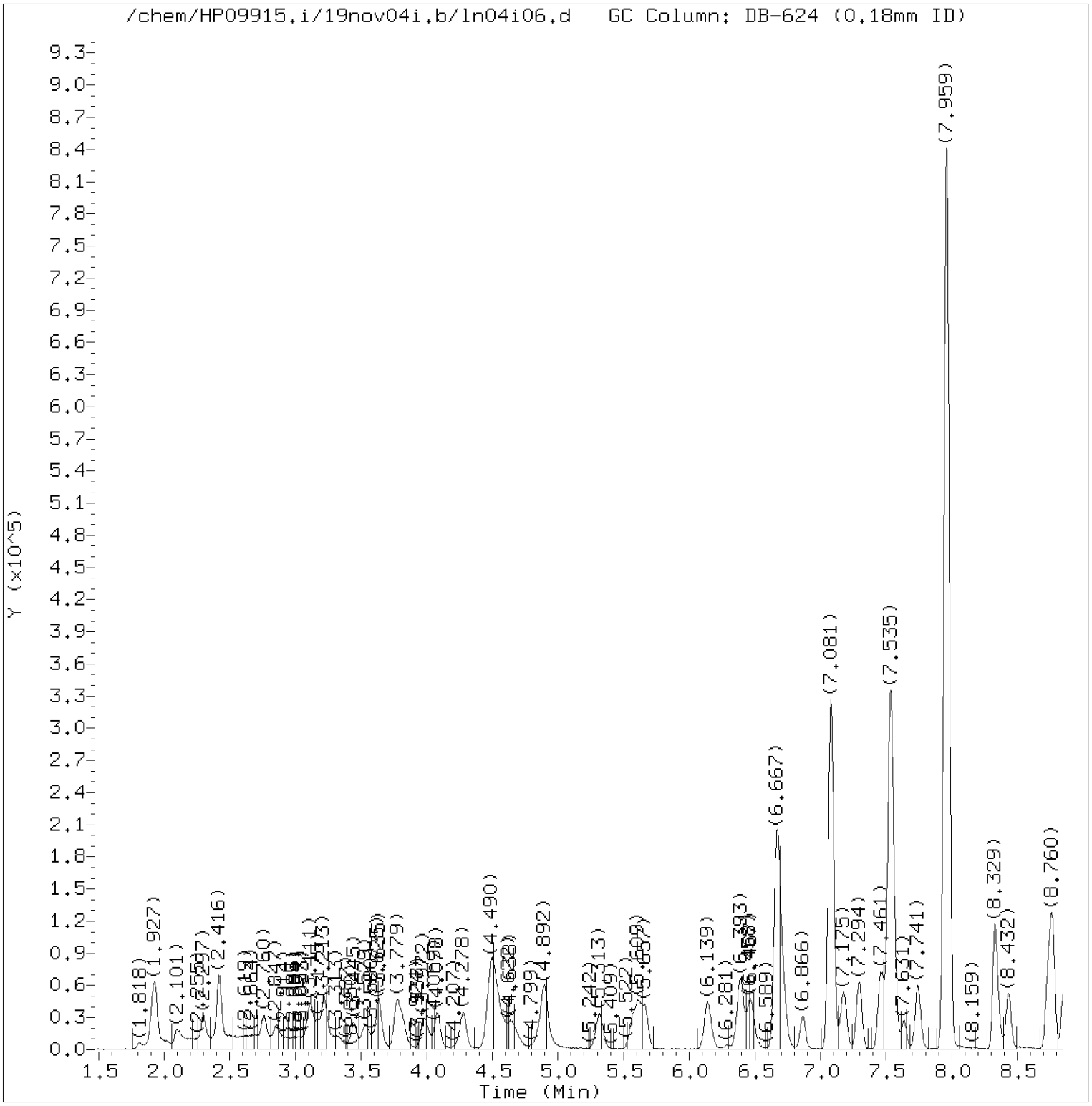
Data File: /chem/HP09915.i/19nov04i.b/ln04i05.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:19 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area : 47747
On-column Amount (ng) : 9.3569
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:08.
Target 3.5 esignature user name: mecampbell



Total Ion Chromatogram (TIC)

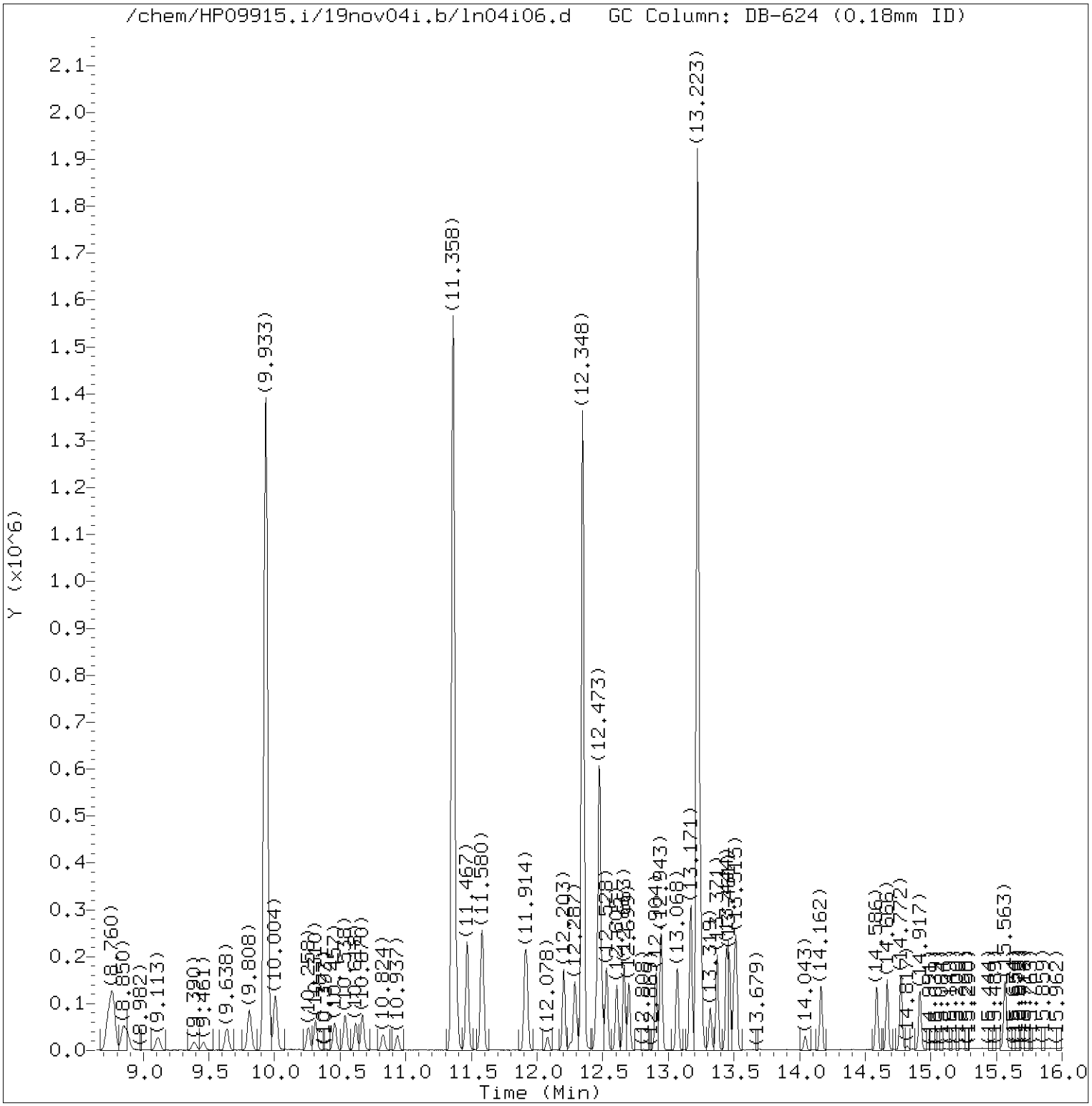
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.098	85	31217M	3.898
4) Chloromethane	(2)	2.297	50	32031	4.150
6) Vinyl Chloride	(2)	2.416	62	30864	4.006
5) 1,3-Butadiene	(2)	2.419	39	27249M	4.252
8) Bromomethane	(2)	2.760	94	23202	4.202
9) Chloroethane	(2)	2.860	64	17298	4.086
10) Dichlorofluoromethane	(2)	3.107	67	40740M	4.015
12) Trichlorofluoromethane	(2)	3.168	101	33532	4.043
11) n-Pentane	(2)	3.223	43	42826M	4.369
14) Ethyl ether	(2)	3.445	59	21059	3.929
15) Freon 123a	(2)	3.538	67	27312	4.094
16) Acrolein	(1)	3.635	56	72021	36.633
17) 1,1-Dichloroethene	(2)	3.773	96	19372	3.979
17) 1,1-Dichloroethene	(2)	3.773	63	9734	3.988
19) Freon 113	(2)	3.805	101	22601	4.069
18) Acetone	(1)	3.815	58	6763M	7.673
22) Methyl Iodide	(2)	3.972	142	39671	3.933
21) 2-Propanol	(1)	4.004	45	45871	72.395
23) Carbon Disulfide	(2)	4.082	76	71681	3.907
27) Methyl Acetate	(2)	4.258	43	24928M	3.976
25) Allyl Chloride	(2)	4.281	41	34775	3.982
28) Methylene Chloride	(2)	4.477	84	22693	3.917
29)*t-Butyl alcohol-d10	(1)	4.512	65	262044M	250.000
30) t-Butyl alcohol	(1)	4.638	59	80219	72.713
31) Acrylonitrile	(2)	4.840	53	12699	3.765
32) trans-1,2-Dichloroethene	(2)	4.901	96	22231	3.947
33) Methyl Tertiary Butyl Ether	(2)	4.901	73	71515	3.869
34) n-Hexane	(2)	5.323	57	33969M	3.877
36) 1,1-Dichloroethane	(2)	5.564	63	39317	4.002
38) di-Isopropyl ether	(2)	5.615	45	72628	3.833
39) 2-Chloro-1,3-butadiene	(2)	5.663	53	34190	3.879
40) Ethyl t-butyl ether	(2)	6.139	59	70845	3.853
43) 1,2-Dichloroethene (Total)	(2)		96	47253	7.906
44) 2-Butanone	(2)	6.371	43	32547	7.516
42) cis-1,2-Dichloroethene	(2)	6.390	96	25022	3.958
45) 2,2-Dichloropropane	(2)	6.400	77	29877	3.912
47) Propionitrile	(1)	6.467	54	100934	73.427
48) Methacrylonitrile	(2)	6.670	67	134092	36.850

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.718	128	12879	3.842
50) Tetrahydrofuran	(1)	6.734	71	9128	7.351
51) Chloroform	(2)	6.869	83	36176	3.850
52)$Dibromofluoromethane	(2)	7.081	113	280667	49.988
52)$Dibromofluoromethane	(2)	7.078	111	287593	50.237
53) 1,1,1-Trichloroethane	(2)	7.091	97	31167	3.886
54) Cyclohexane	(2)	7.178	56	42347	3.949
54) Cyclohexane	(2)	7.175	84	36627	3.932
54) Cyclohexane	(2)	7.181	69	13119	3.955
56) Carbon Tetrachloride	(2)	7.287	117	25509	3.750
55) 1,1-Dichloropropene	(2)	7.297	75	30762	3.960
58) Isobutyl Alcohol	(1)	7.464	41	65125	175.416
57)$1,2-Dichloroethane-d4	(2)	7.532	102	72246	50.488
57)$1,2-Dichloroethane-d4	(2)	7.535	65	323654	50.754
57)$1,2-Dichloroethane-d4	(2)	7.538	104	45694	49.994
60) Benzene	(2)	7.564	78	92488	3.959
61) 1,2-Dichloroethane	(2)	7.638	62	29321	3.902
61) 1,2-Dichloroethane	(2)	7.628	98	2899	3.899
65) t-Amyl methyl ether	(2)	7.744	73	70267	3.807
66)*Fluorobenzene	(2)	7.959	96	1148427	50.000
67) n-Heptane	(2)	7.962	43	32502MA	3.971
69) n-Butanol	(1)	8.329	56	110027M	344.330
71) Trichloroethene	(2)	8.435	95	22766	3.871
72) Methylcyclohexane	(2)	8.737	83	42437	3.889
72) Methylcyclohexane	(2)	8.731	98	19822	4.014
73) 1,2-Dichloropropane	(2)	8.773	63	22762	3.837
76) Methyl Methacrylate	(2)	8.843	69	20713M	3.611
75) 1,4-Dioxane	(1)	8.850	88	16188	184.315
74) Dibromomethane	(2)	8.879	93	14634	3.813
78) Bromodichloromethane	(2)	9.110	83	24167	3.509
79) 2-Nitropropane	(2)	9.387	41	14154	6.785
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	8979	3.525
81) cis-1,3-Dichloropropene	(2)	9.638	75	32112	3.511
82) 4-Methyl-2-pentanone	(2)	9.808	43	67922	7.431
83)$Toluene-d8	(3)	9.933	98	1152733	49.832
83)$Toluene-d8	(3)	9.933	100	745821	49.773
88) Toluene	(3)	10.004	92	56092	3.868
90) 1,3-Dichloropropene (total)	(3)		100	60153	6.917

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.258	75	28041	3.406
91) Ethyl Methacrylate	(3)	10.310	69	34660	3.464
92) 1,1,2-Trichloroethane	(3)	10.457	97	20516	3.731
93) Tetrachloroethene	(3)	10.538	166	24234	3.946
94) 1,3-Dichloropropane	(3)	10.618	76	34762	3.703
96) 2-Hexanone	(3)	10.670	43	50570	7.572
97) Dibromochloromethane	(3)	10.824	129	18906	3.357
99) 1,2-Dibromoethane	(3)	10.937	107	21586	3.615
100)*Chlorobenzene-d5	(3)	11.358	117	884065	50.000
101) 1-Chlorohexane	(3)	11.364	91	31055	3.986
102) Chlorobenzene	(3)	11.387	112	63883	3.895
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	19618	3.631
104) Ethylbenzene	(3)	11.467	91	109318	3.944
106) m+p-Xylene	(3)	11.580	106	85093	7.804
108) Xylene (Total)	(3)		106	126157	11.616
107) o-Xylene	(3)	11.908	106	41064	3.813
109) Styrene	(3)	11.924	104	65784	3.696
110) Bromoform	(3)	12.078	173	12196	2.898
111) Isopropylbenzene	(3)	12.203	105	107056	3.963
112) Cyclohexanone	(1)	12.287	55	63391	184.289
114)$4-Bromofluorobenzene	(3)	12.348	95	440415	50.280
114)$4-Bromofluorobenzene	(3)	12.348	174	367241	50.573
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	33170M	3.658
115) Bromobenzene	(4)	12.467	156	27559	3.820
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	101806	36.395
117) 1,2,3-Trichloropropane	(4)	12.496	110	10208	3.668
119) n-Propylbenzene	(4)	12.528	91	126543	4.014
120) 2-Chlorotoluene	(4)	12.609	126	25381	3.790
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	89290	3.898
121) 4-Chlorotoluene	(4)	12.699	126	27169	3.898
124) tert-Butylbenzene	(4)	12.904	134	18608M	3.928
125) Pentachloroethane	(4)	12.940	167	14303	3.506
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	93258	3.863
127) sec-Butylbenzene	(4)	13.068	105	111847	3.956
129) 1,3-Dichlorobenzene	(4)	13.168	146	51597	3.892
130) p-Isopropyltoluene	(4)	13.174	119	96571	3.948
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	480071	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	53736	3.910

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	99398	3.886
135) Benzyl Chloride	(4)	13.319	91	57244	2.956
136) 1,3-Diethylbenzene	(4)	13.371	119	61603	3.870
141) Diethylbenzene (total)	(4)		100	179922	11.677
137) 1,4-Diethylbenzene	(4)	13.444	119	66423	3.939
139) n-Butylbenzene	(4)	13.464	92	51213	4.095
138) 1,2-Dichlorobenzene	(4)	13.502	146	50972	3.896
140) 1,2-Diethylbenzene	(4)	13.518	119	51896	3.868
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	6542	3.295
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	39801	3.960
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	38013	3.889
147) Hexachlorobutadiene	(4)	14.670	225	23904	5.180
148) Naphthalene	(4)	14.772	128	115354	3.671
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	37152	3.907
150) 2-Methylnaphthalene	(4)	15.563	142	72506	3.747

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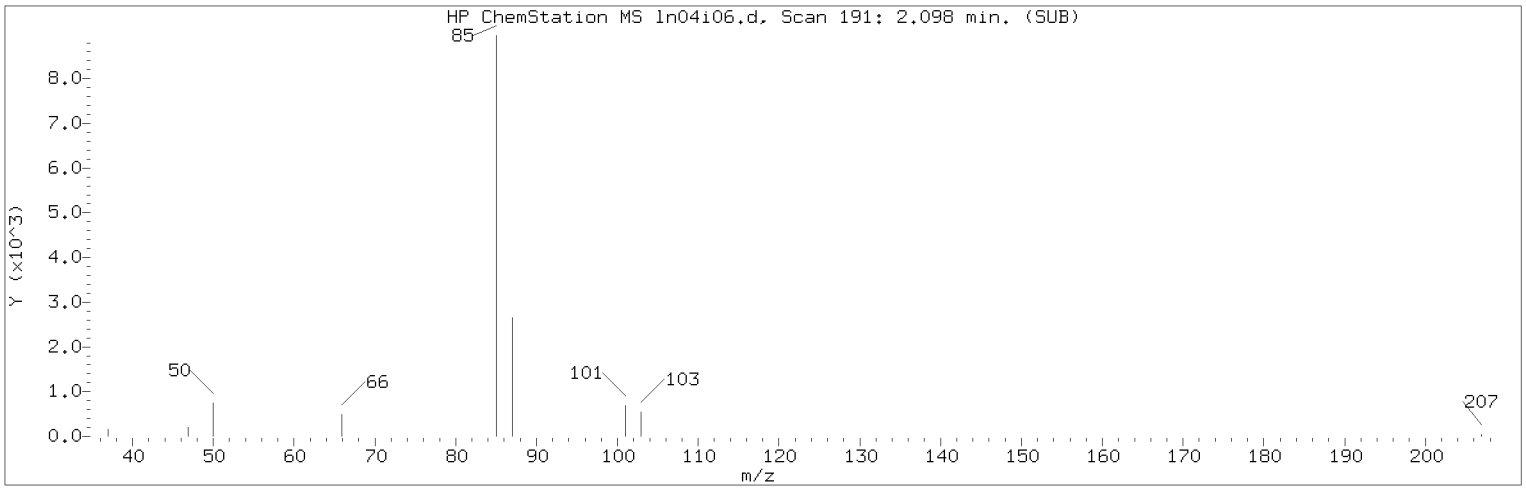
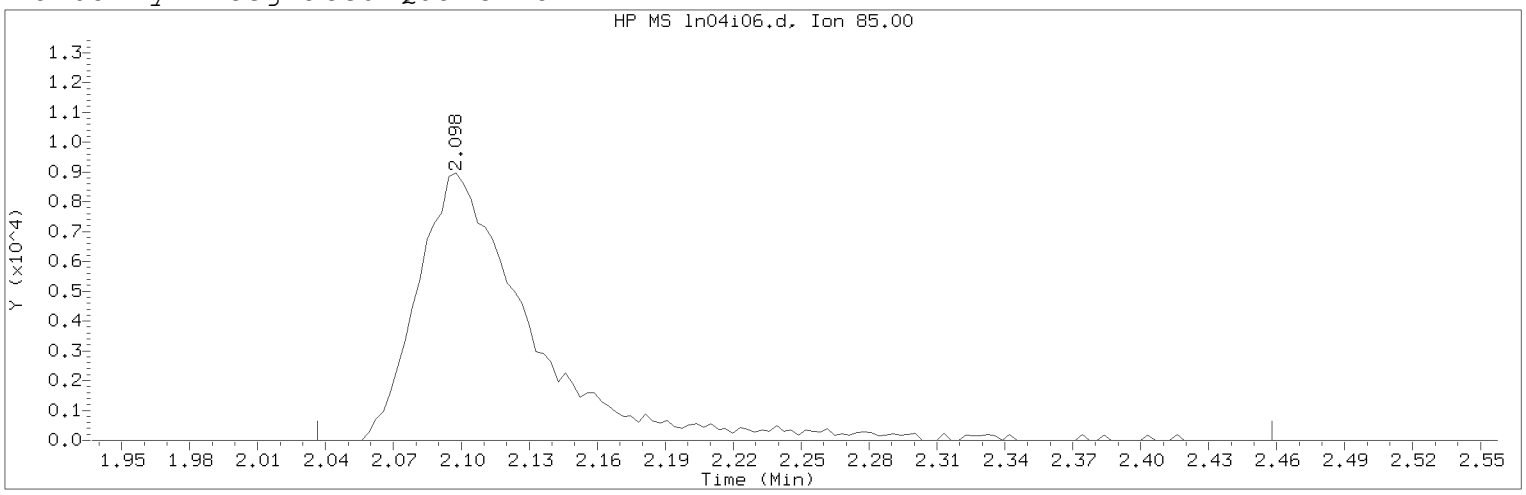
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

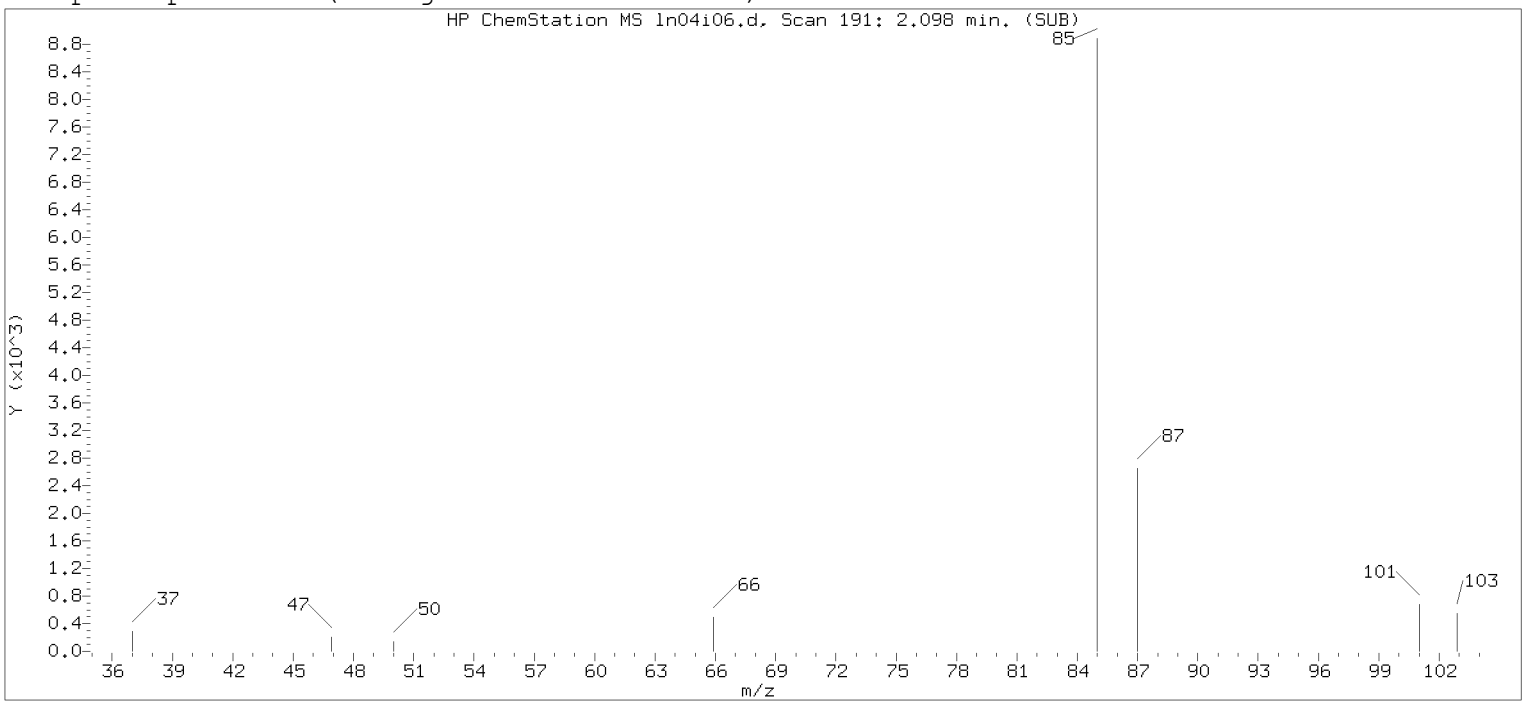
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 191
Retention Time (minutes): 2.098
Quant Ion : 85.00
Area (flag) : 31217M
On-Column Amount (ng) : 3.8978
Integration start scan : 171 Integration stop scan: 302
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

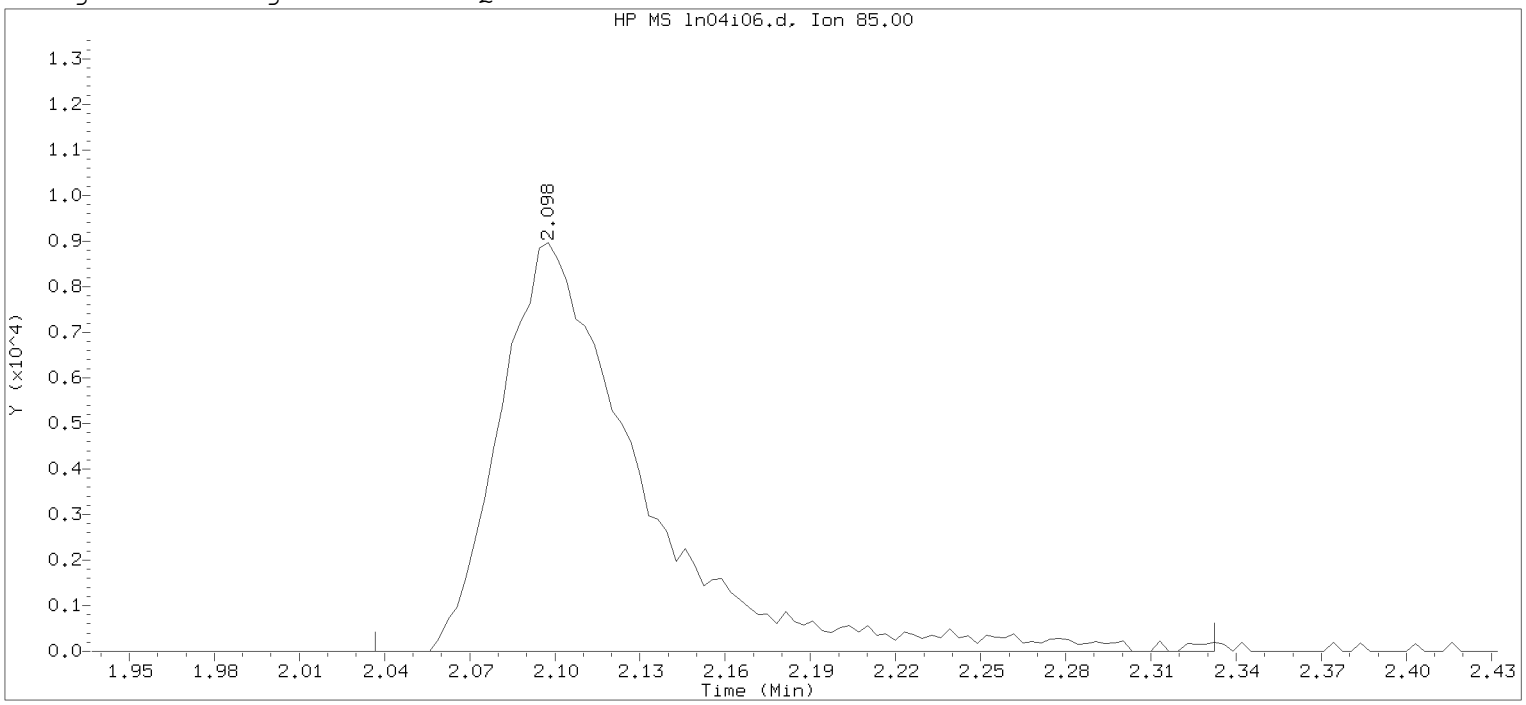
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

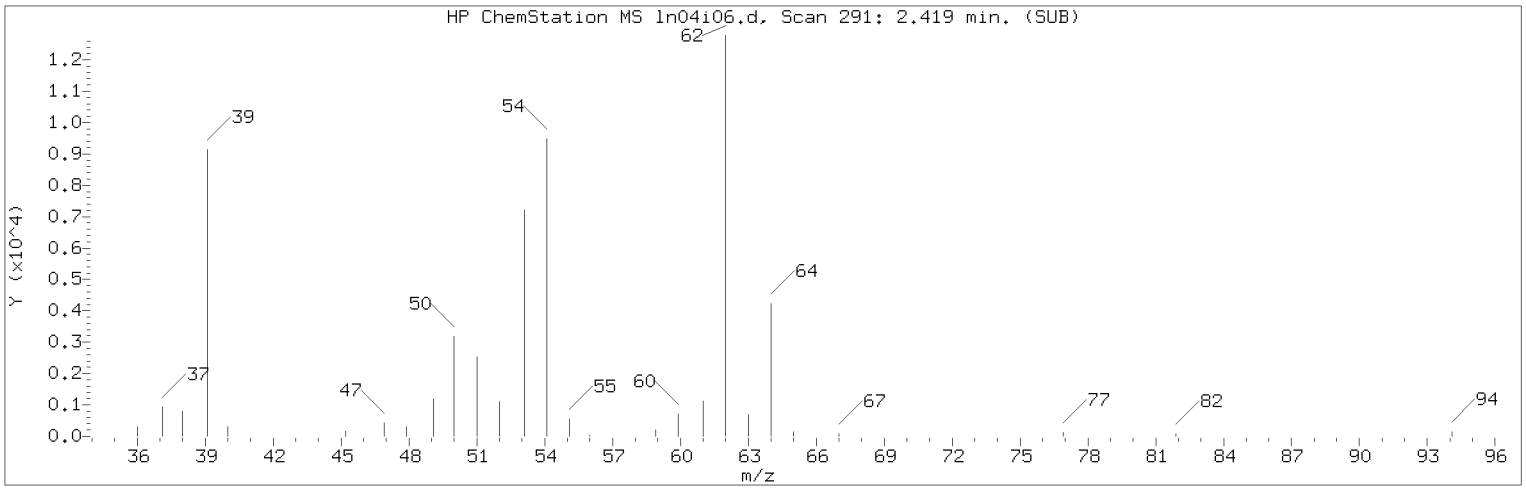
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

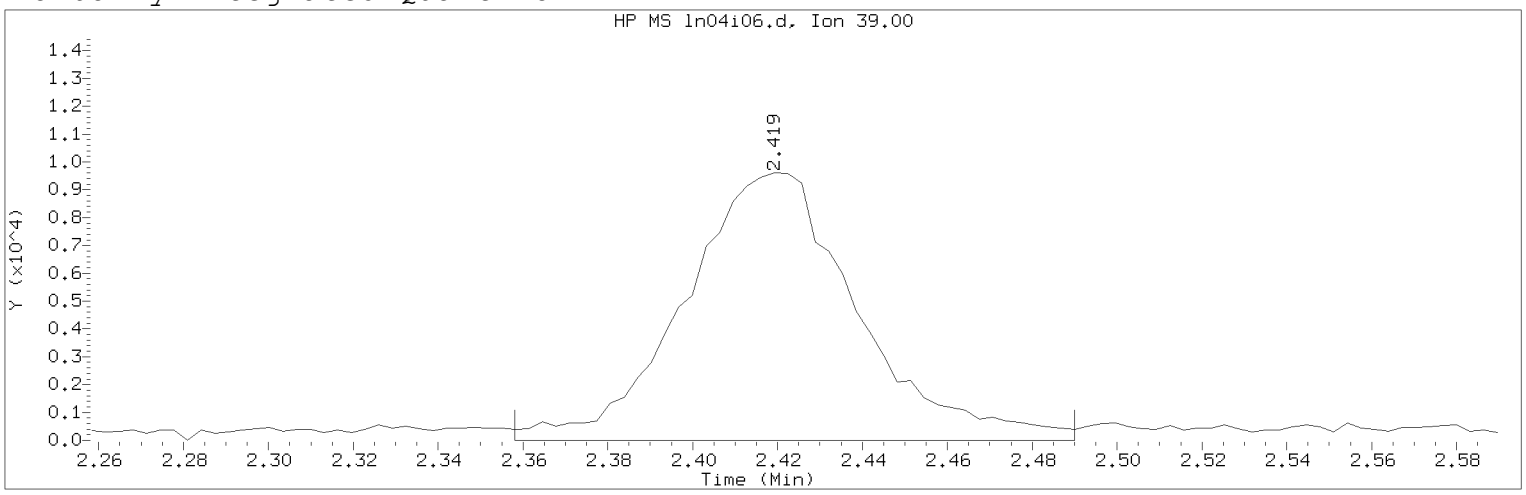
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 191
Retention Time (minutes): 2.098
Quant Ion : 85.00
Area : 30987
On-column Amount (ng) : 3.8874
Integration start scan : 171 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

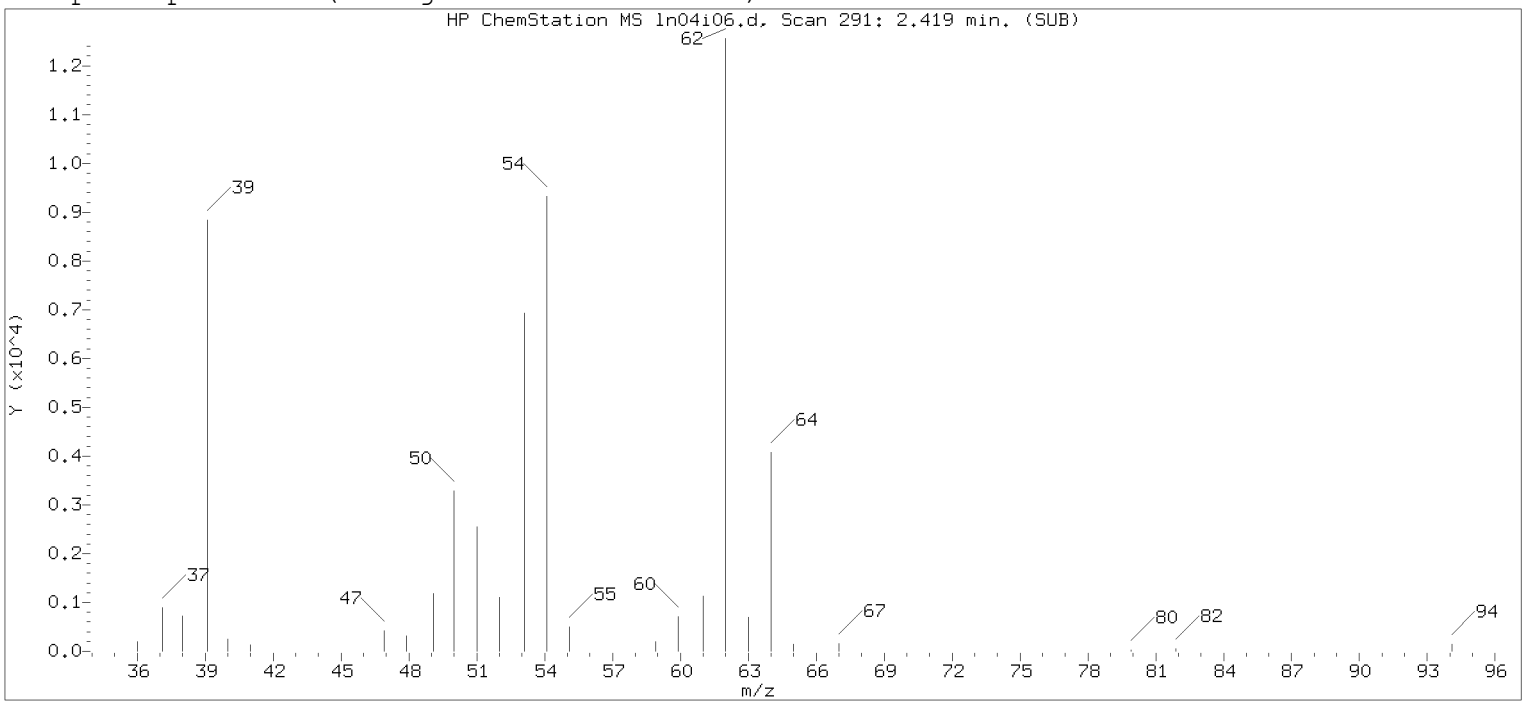
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 291
Retention Time (minutes): 2.419
Quant Ion : 39.00
Area (flag) : 27249M
On-Column Amount (ng) : 4.2517
Integration start scan : 271 Integration stop scan: 312
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

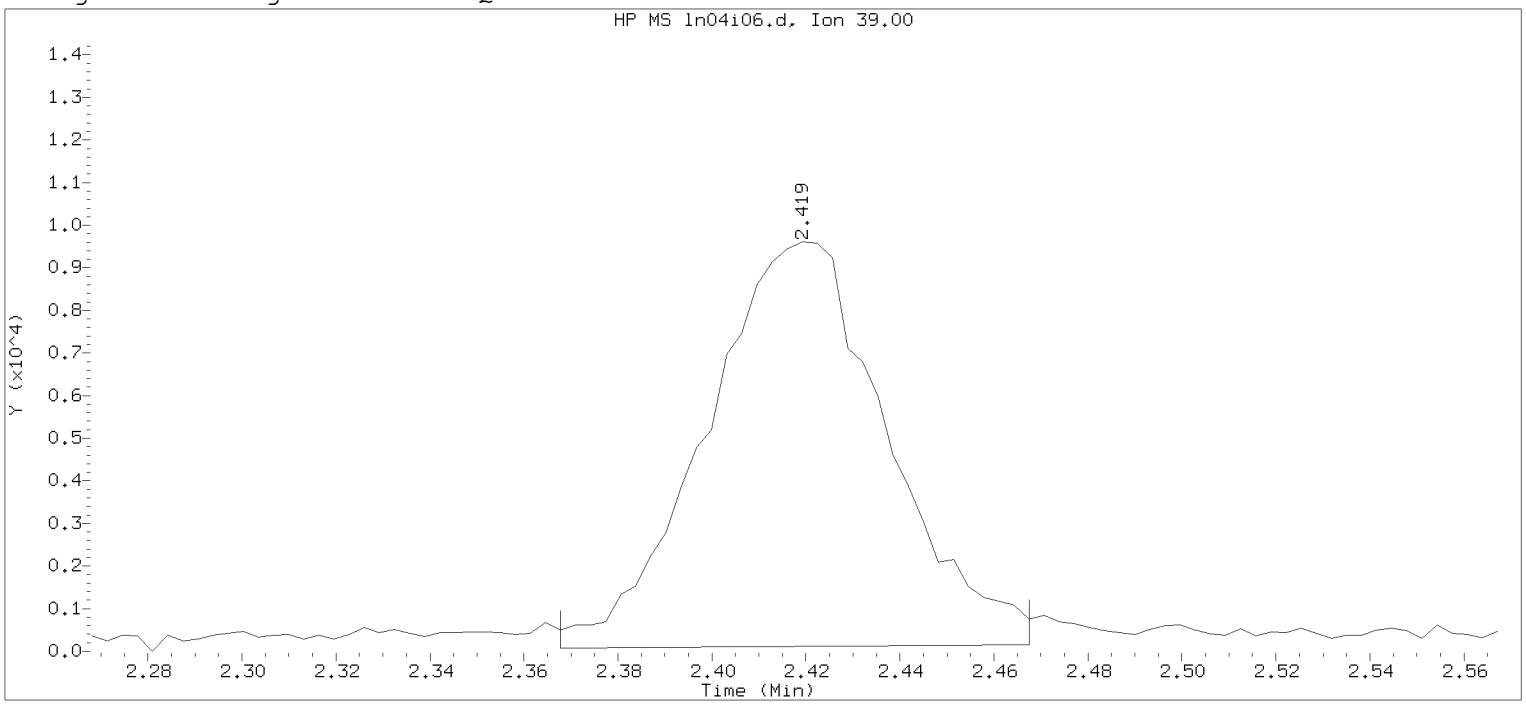
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 291
Retention Time (minutes): 2.419
Quant Ion : 39.00
Area : 25391
On-column Amount (ng) : 4.2082
Integration start scan : 274 Integration stop scan: 305
Y at integration start : 76 Y at integration end: 147

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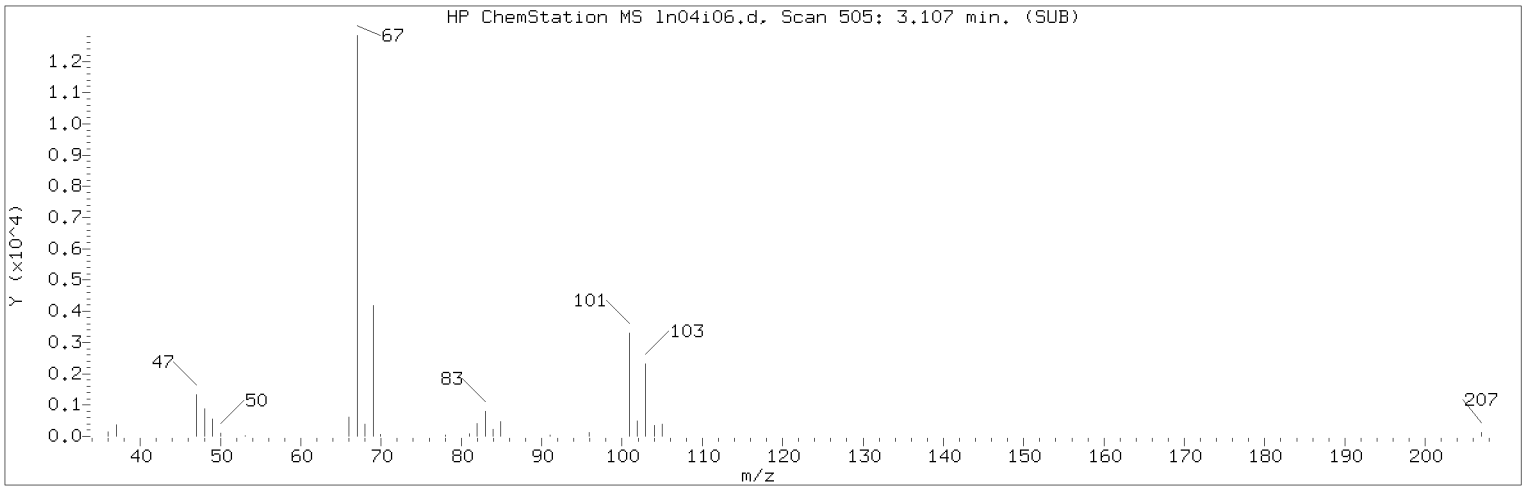
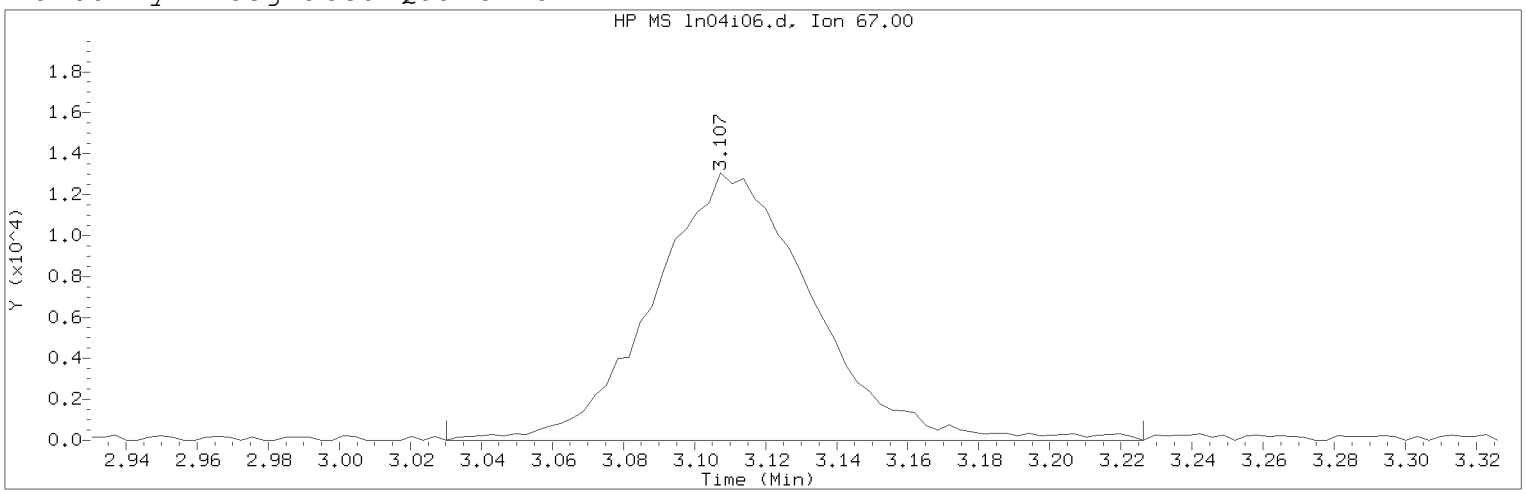
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

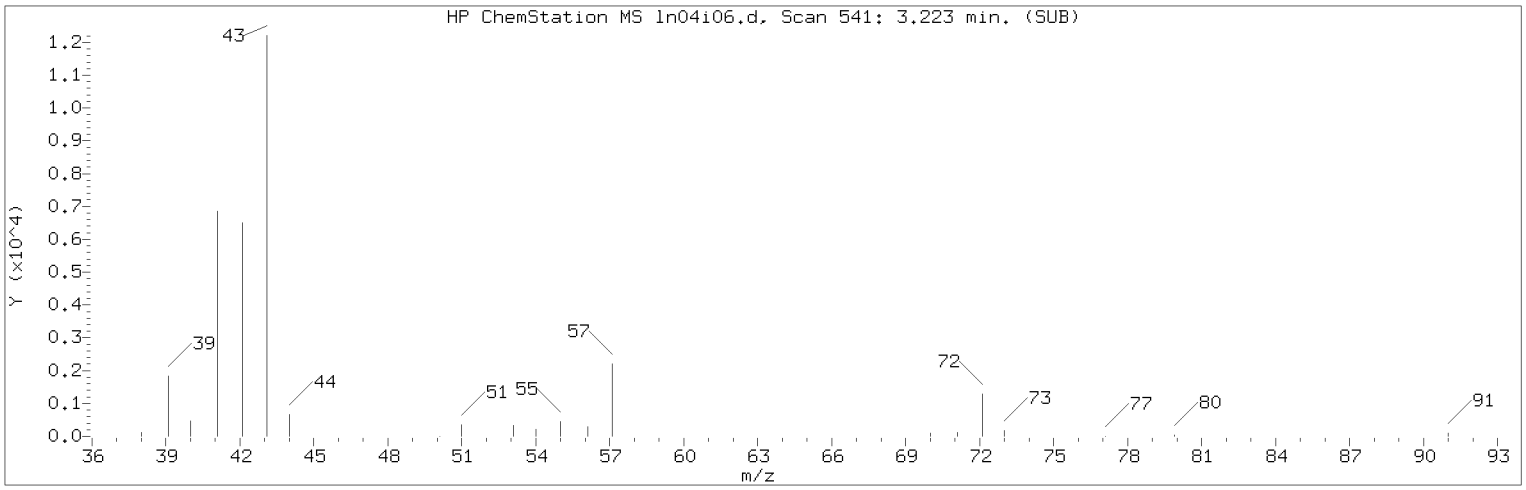
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 505
Retention Time (minutes): 3.107
Quant Ion : 67.00
Area (flag) : 40740M
On-Column Amount (ng) : 4.0151
Integration start scan : 480 Integration stop scan: 541
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

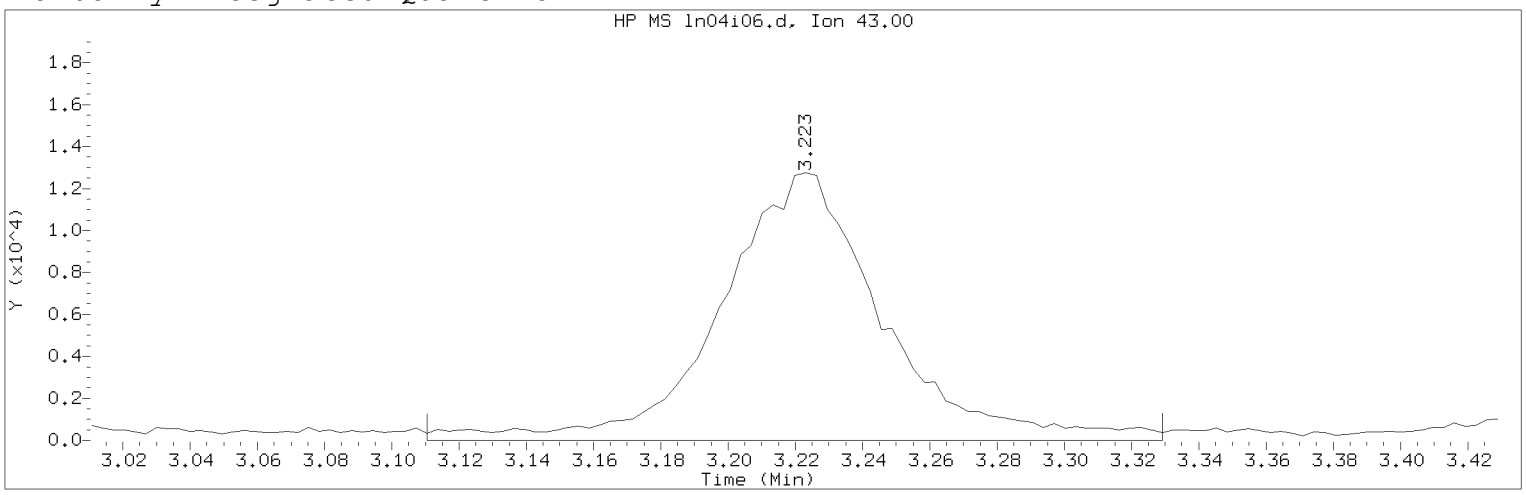
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

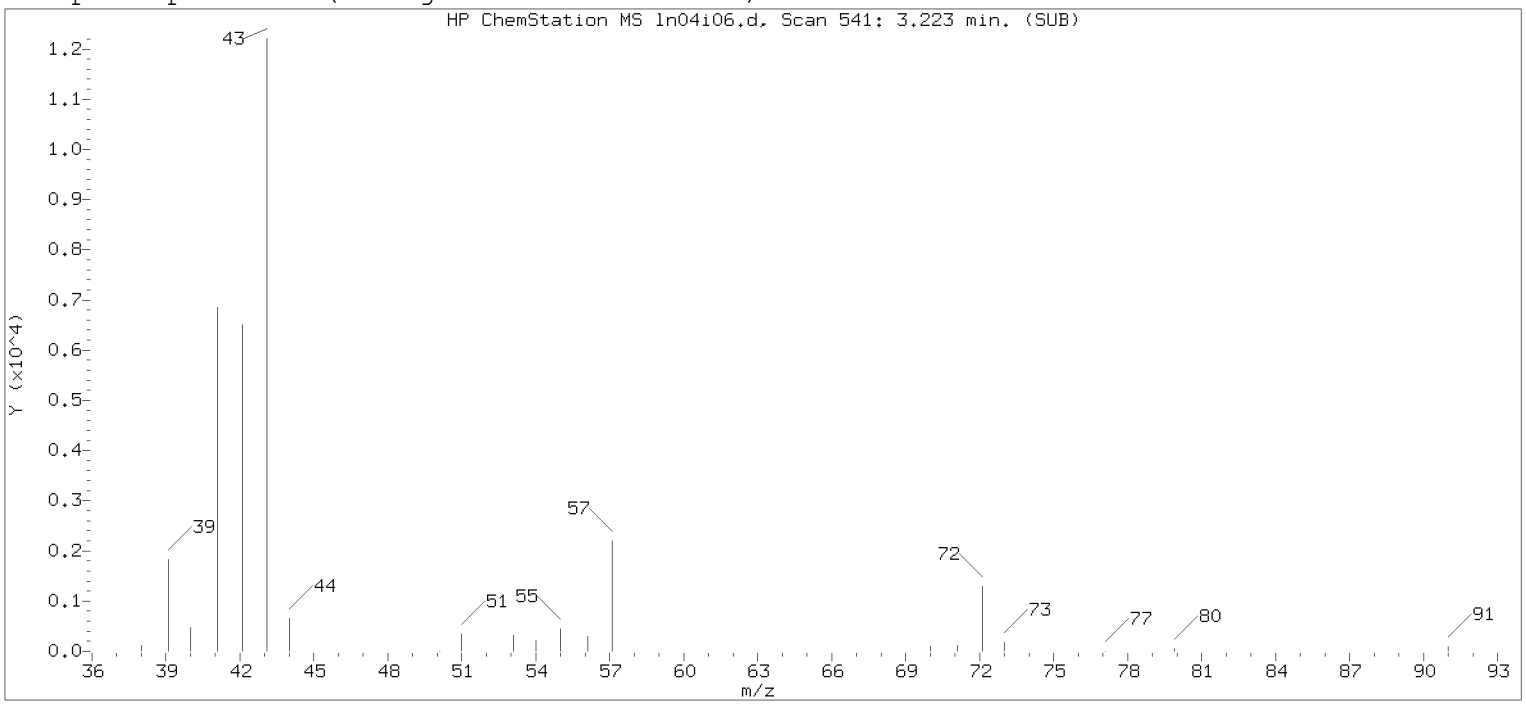
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 541
Retention Time (minutes): 3.223
Quant Ion : 43.00
Area (flag) : 42826M
On-Column Amount (ng) : 4.3694
Integration start scan : 505 Integration stop scan: 573
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

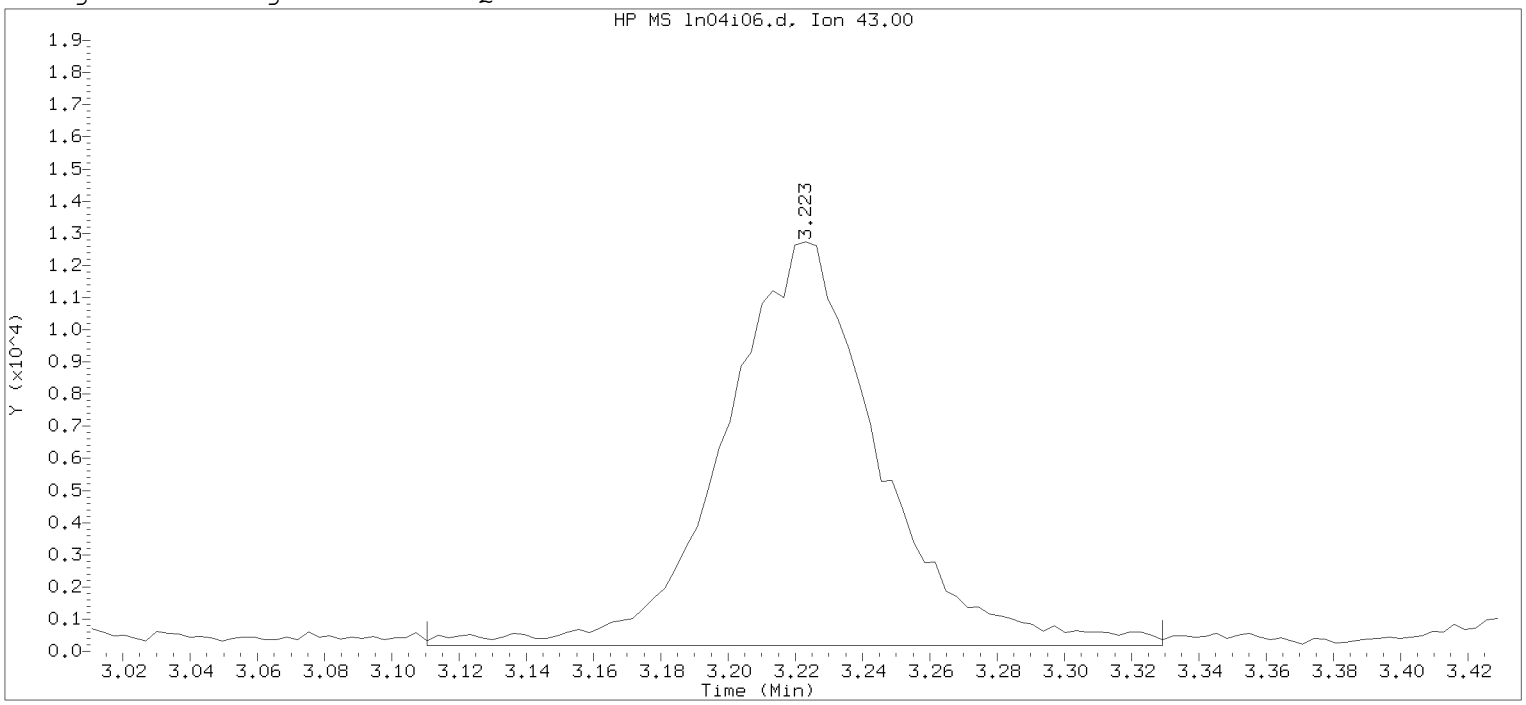
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

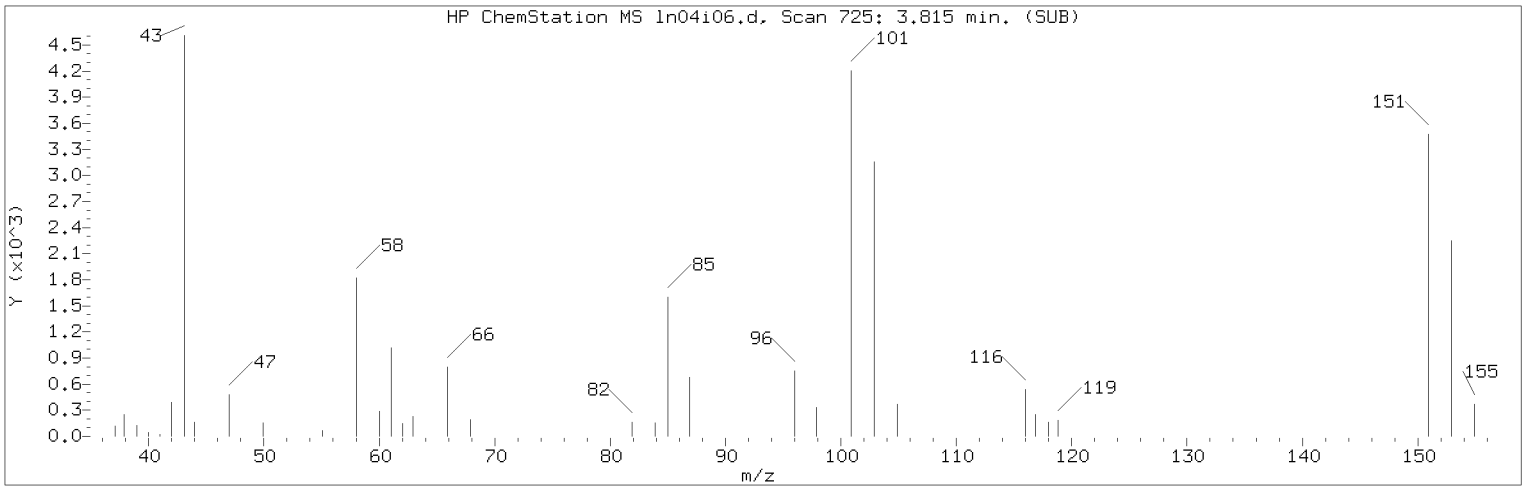
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

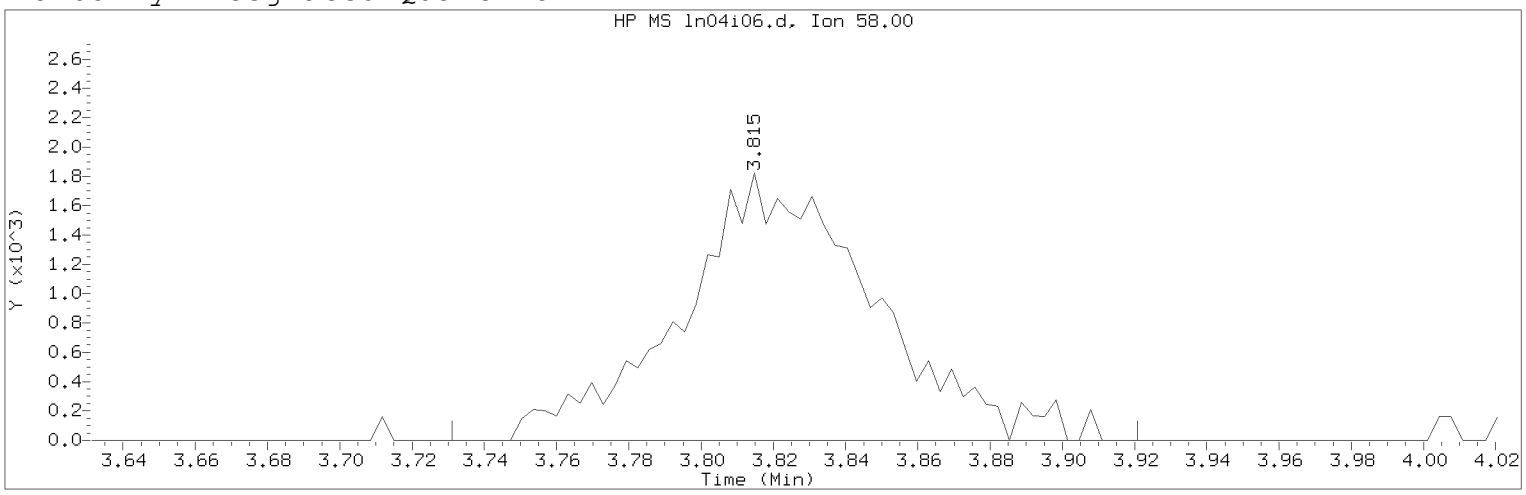
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 541
Retention Time (minutes): 3.223
Quant Ion : 43.00
Area : 40359
On-column Amount (ng) : 4.1550
Integration start scan : 505 Integration stop scan: 573
Y at integration start : 183 Y at integration end: 183

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

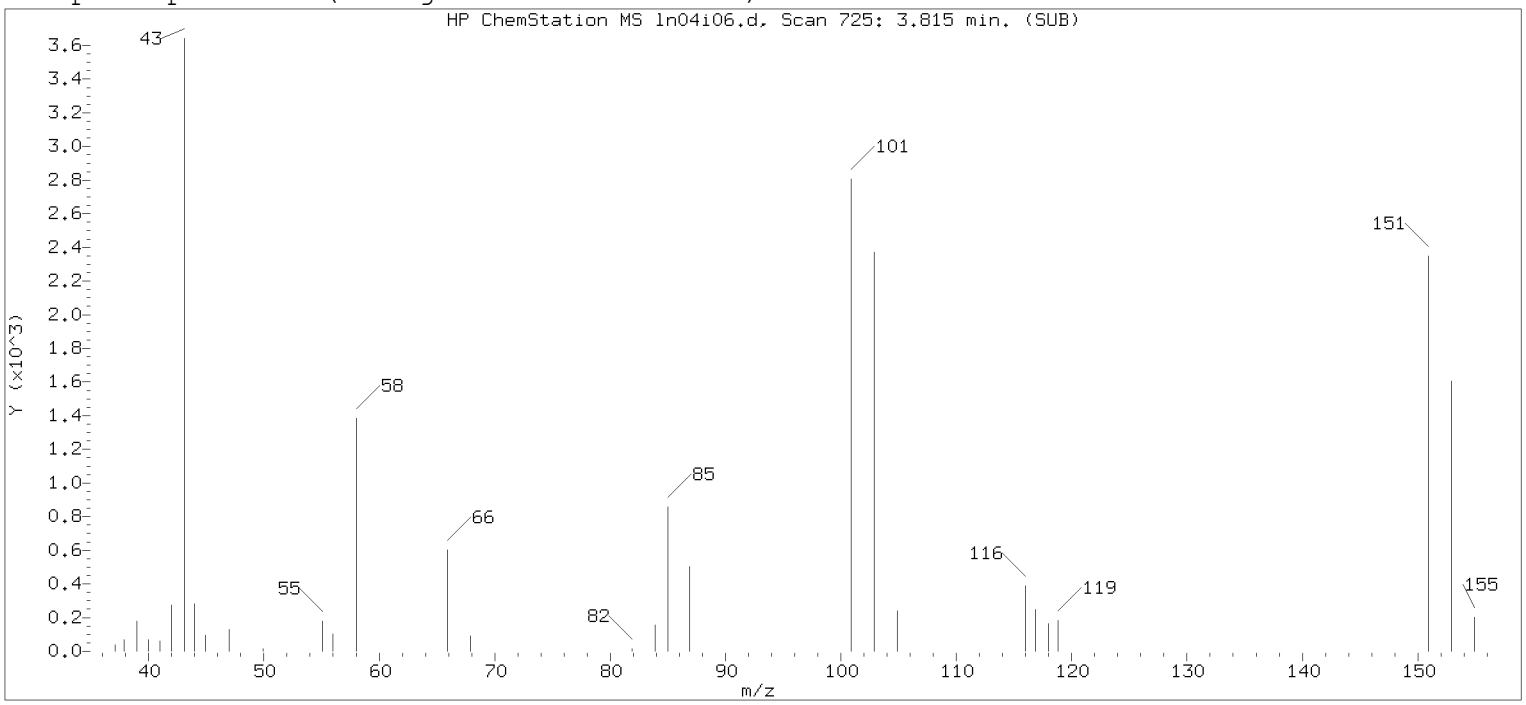
Compound Number : 18
Compound Name : Acetone
Scan Number : 725
Retention Time (minutes): 3.815
Quant Ion : 58.00
Area (flag) : 6763M
On-Column Amount (ng) : 7.6731
Integration start scan : 698 Integration stop scan: 757
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

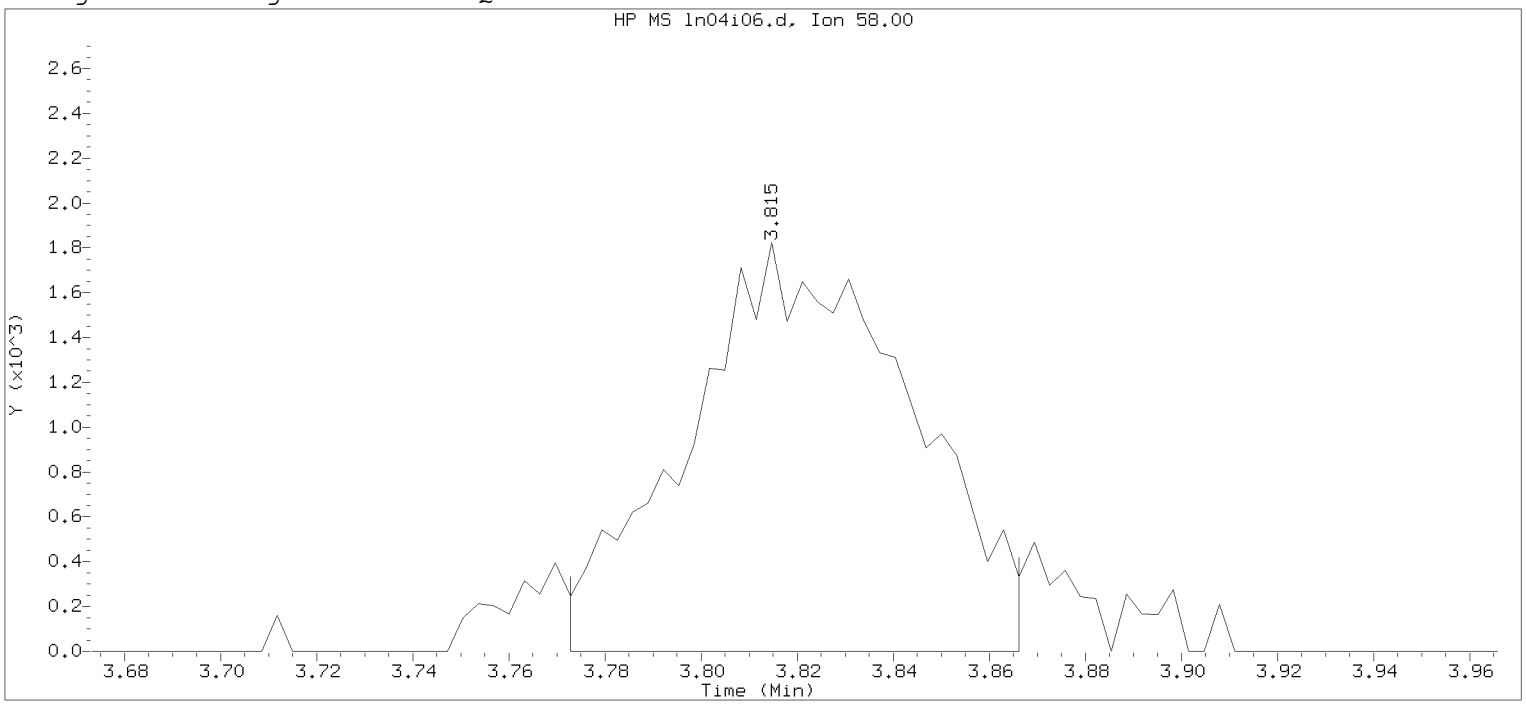
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

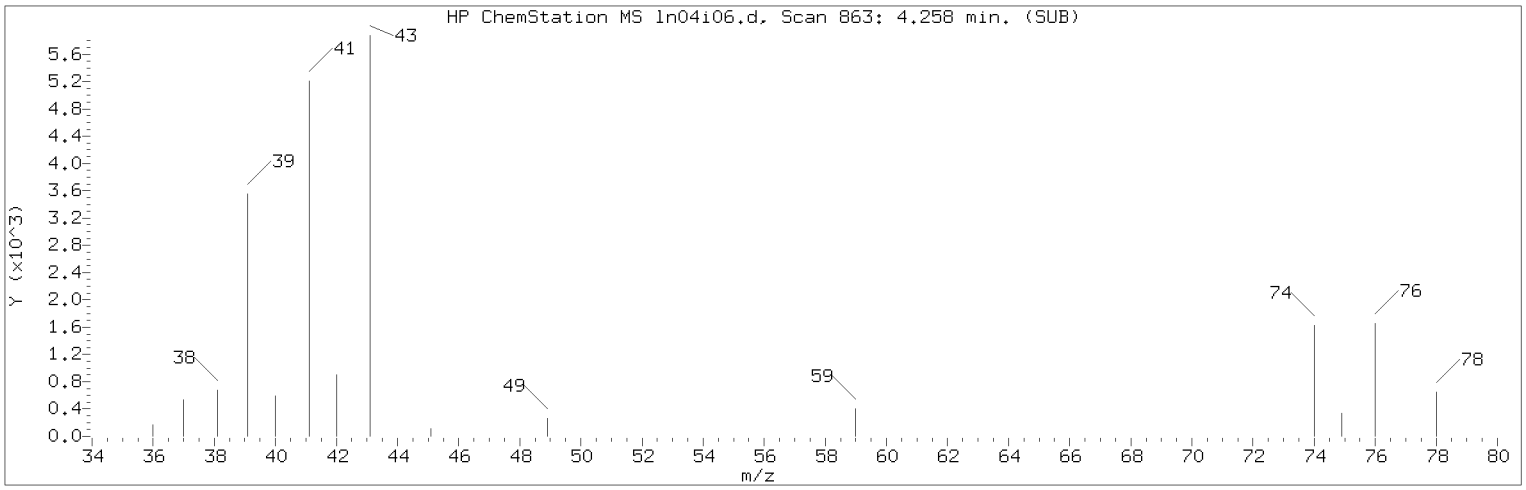
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

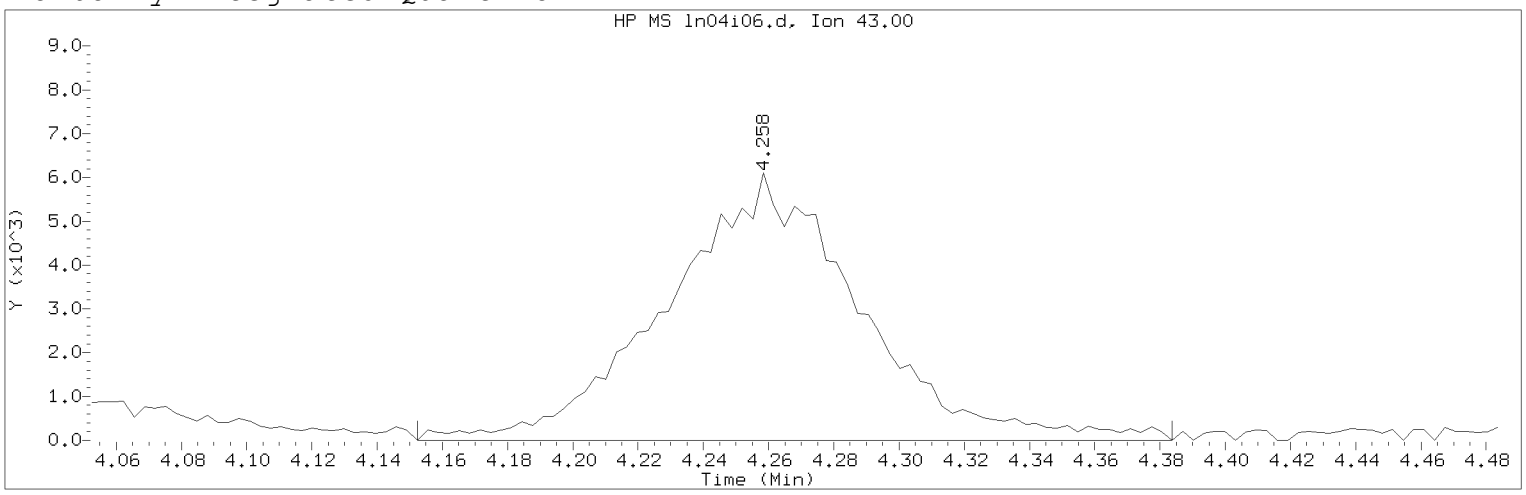
Compound Number	: 18		
Compound Name	: Acetone		
Scan Number	: 725		
Retention Time (minutes)	: 3.815		
Quant Ion	: 58.00		
Area	: 5862		
On-column Amount (ng)	: 7.7134		
Integration start scan	: 711	Integration stop scan:	740
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

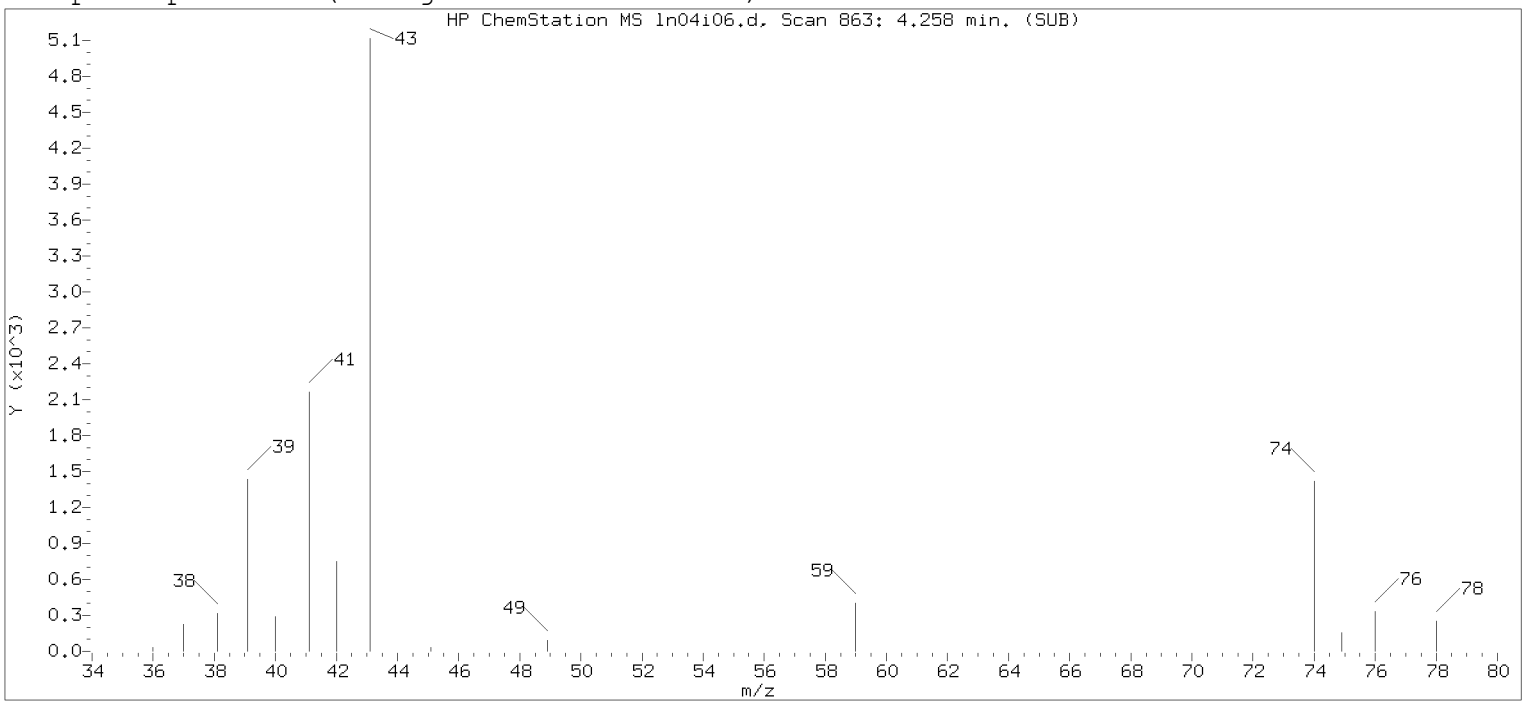
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 863
Retention Time (minutes): 4.258
Quant Ion : 43.00
Area (flag) : 24928M
On-Column Amount (ng) : 3.9757
Integration start scan : 829 Integration stop scan: 901
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

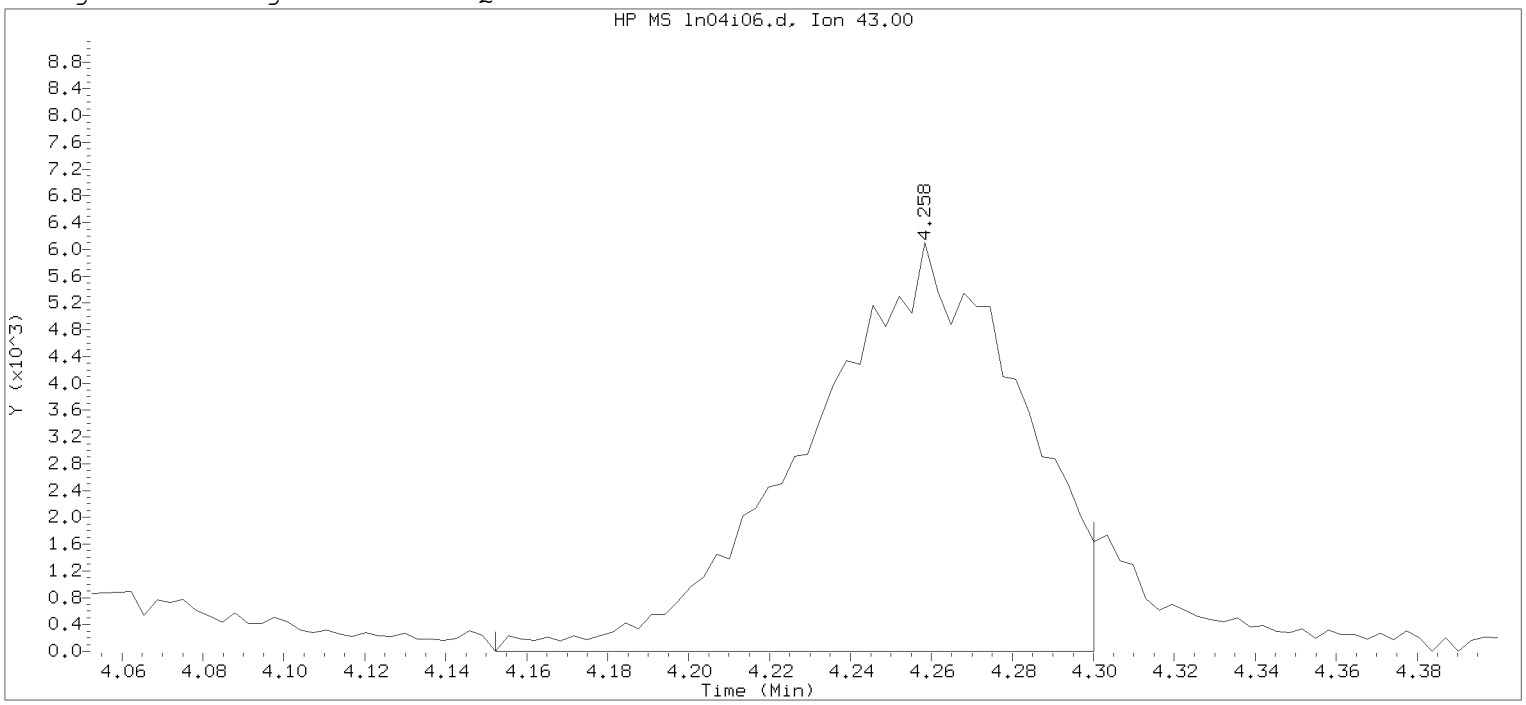
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

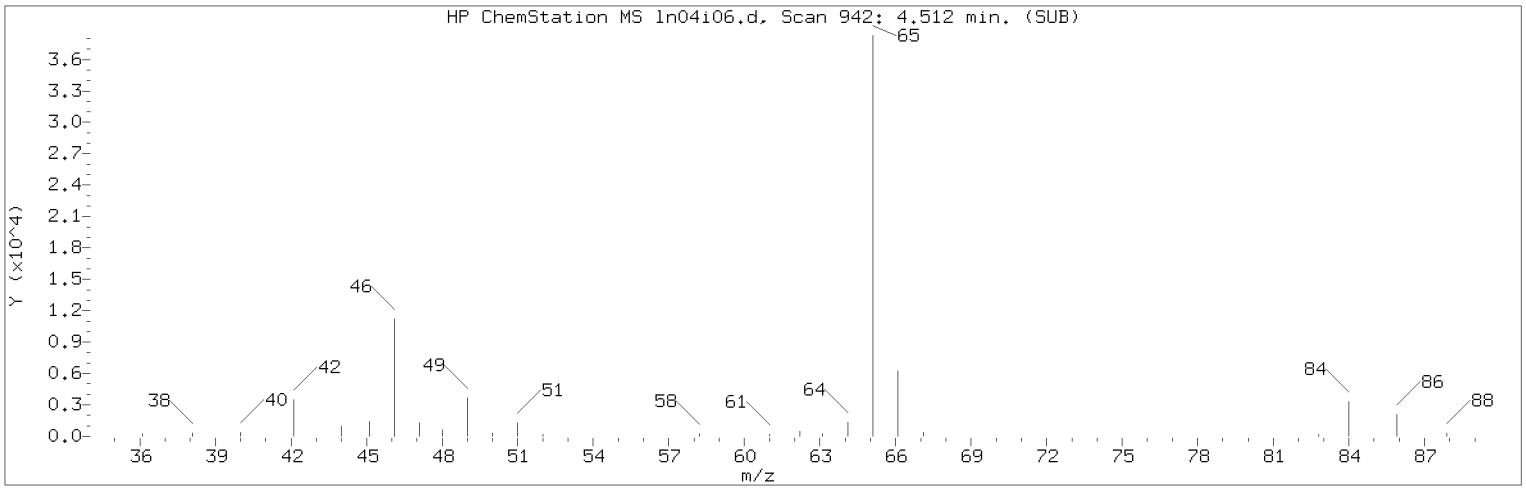
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

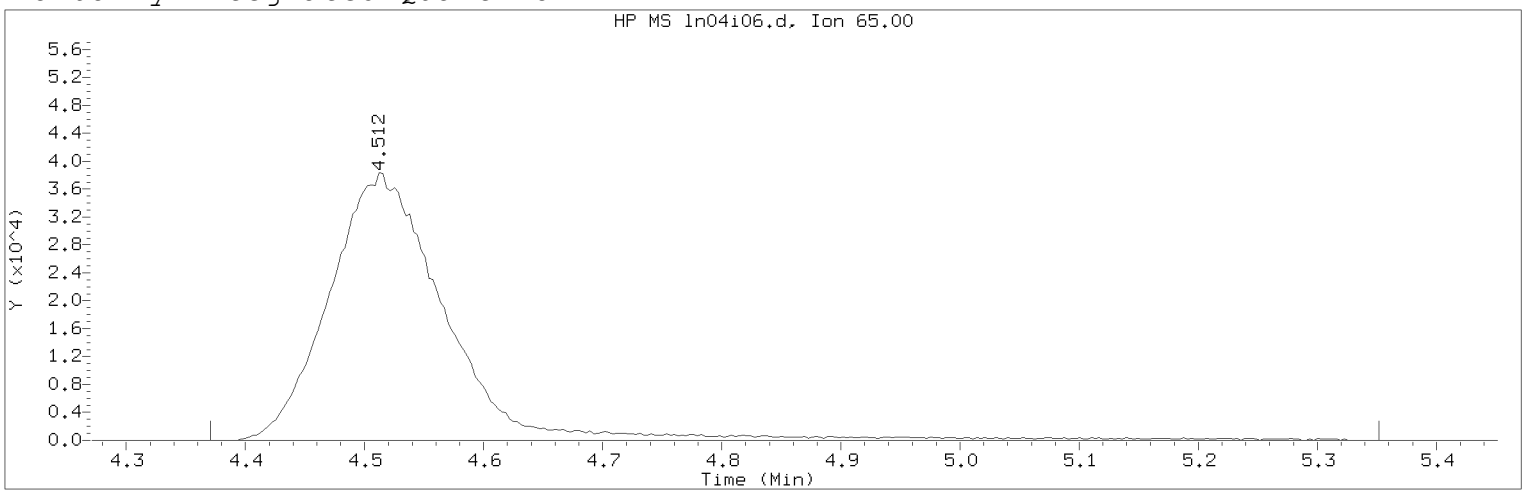
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 863
Retention Time (minutes): 4.258
Quant Ion : 43.00
Area : 22302
On-column Amount (ng) : 3.7243
Integration start scan : 829 Integration stop scan: 875
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

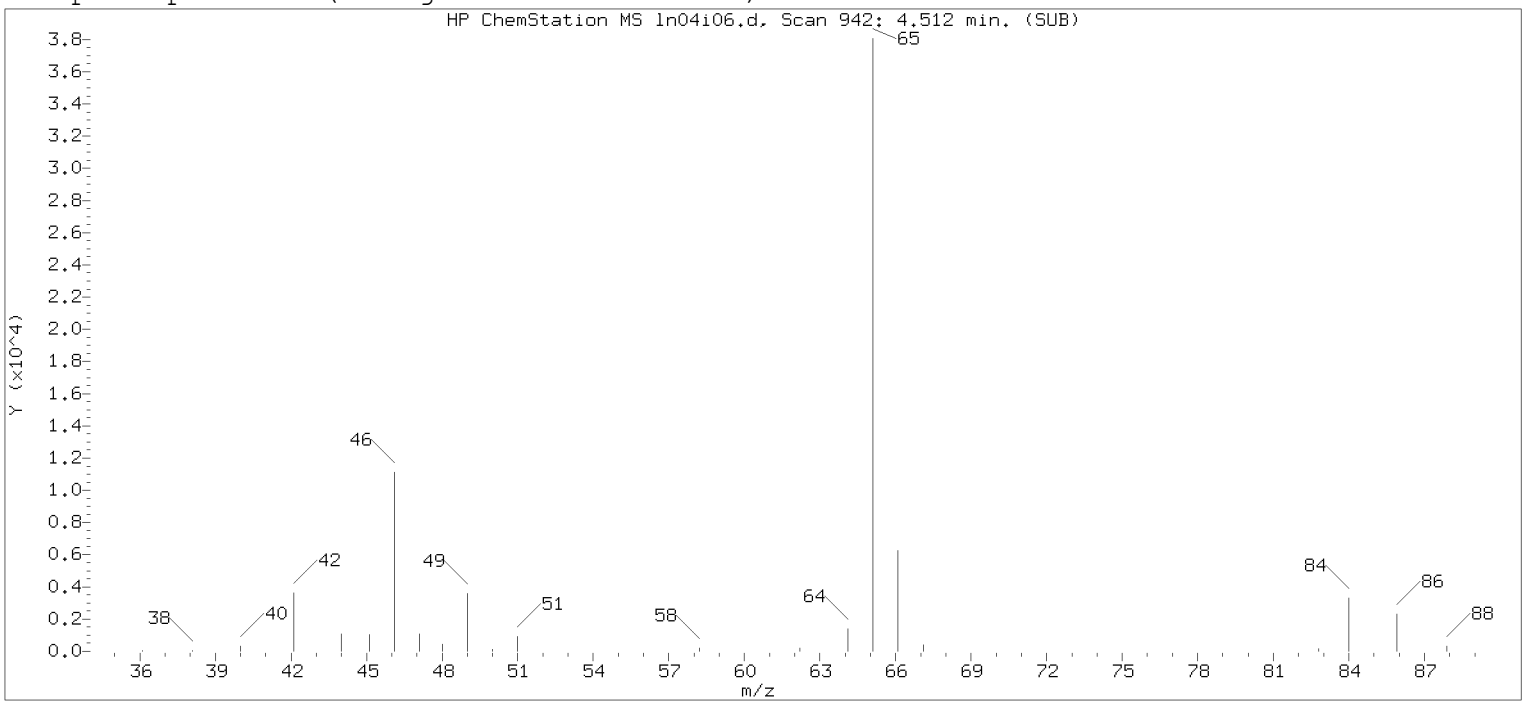
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area (flag) : 262044M
On-Column Amount (ng) : 250.0000
Integration start scan : 897 Integration stop scan: 1202
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

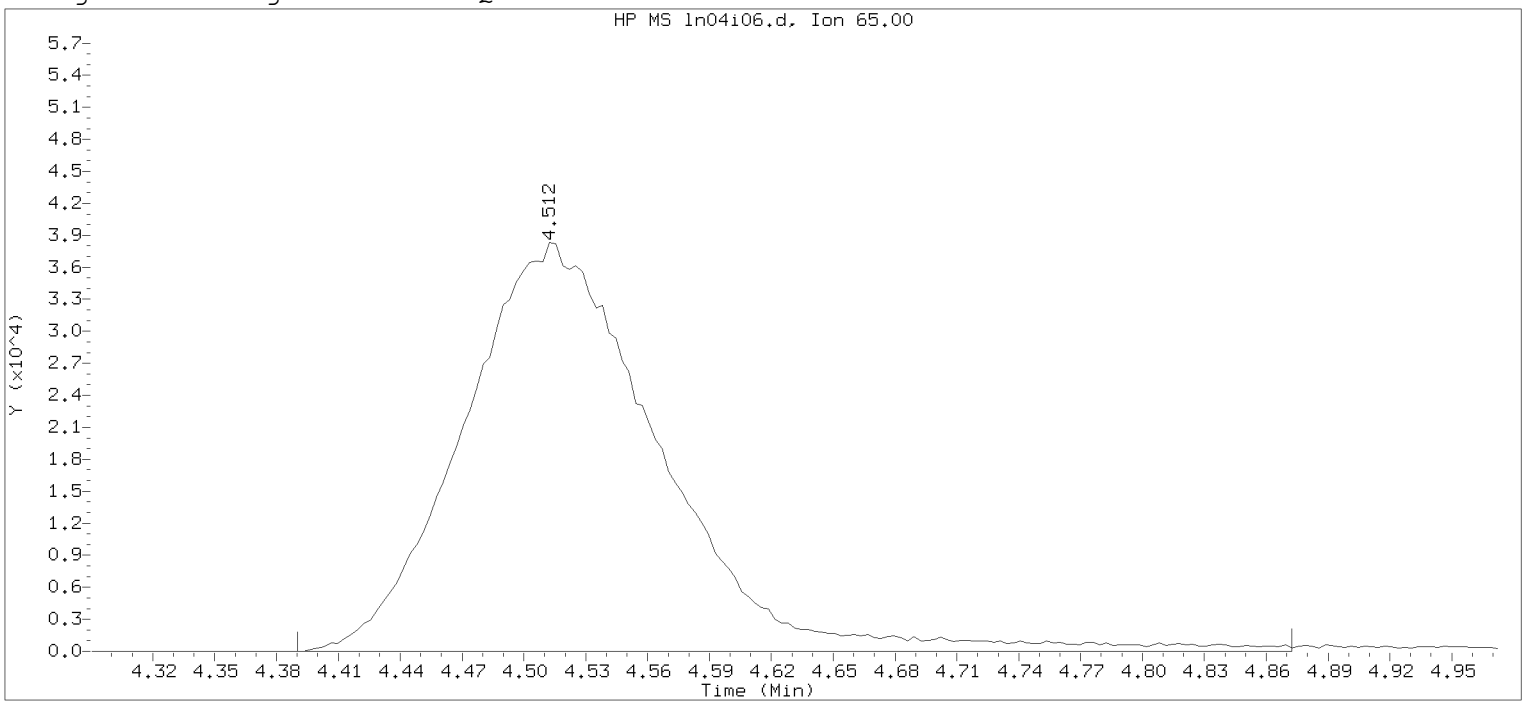
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

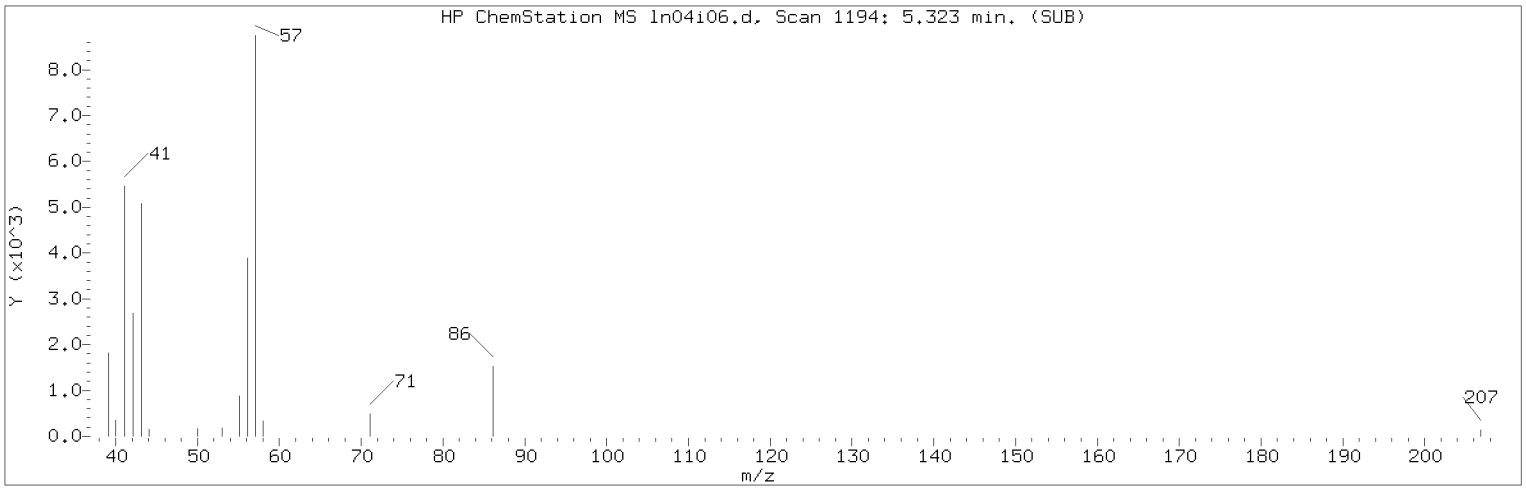
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

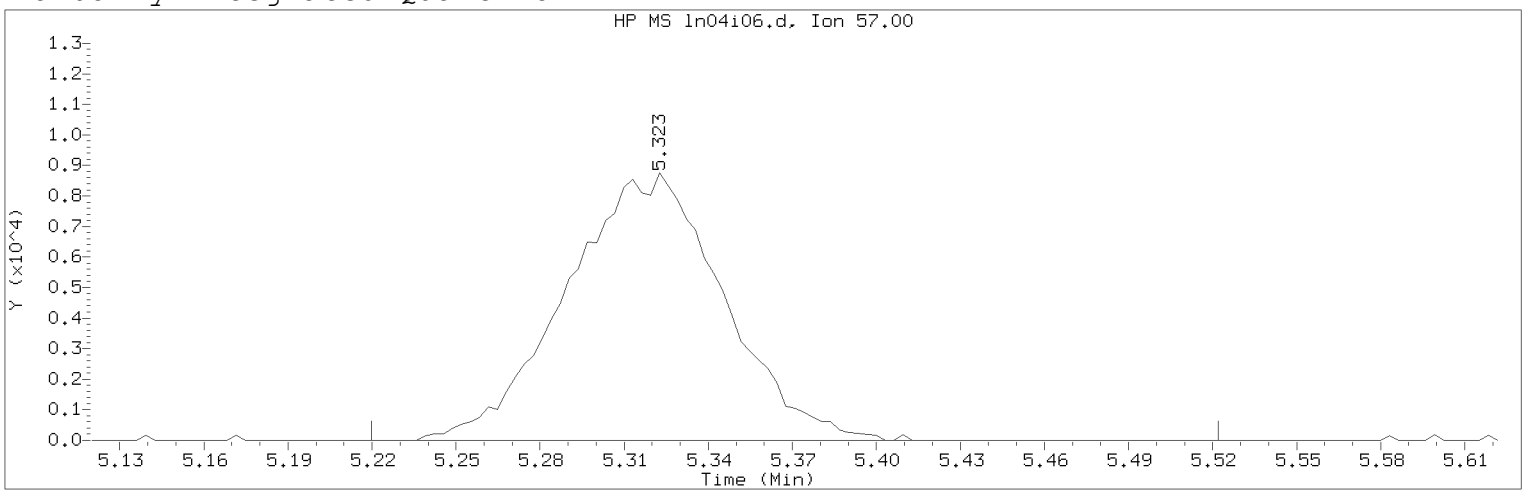
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 942
Retention Time (minutes): 4.512
Quant Ion : 65.00
Area : 254362
On-column Amount (ng) : 250.0000
Integration start scan : 903 Integration stop scan: 1053
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

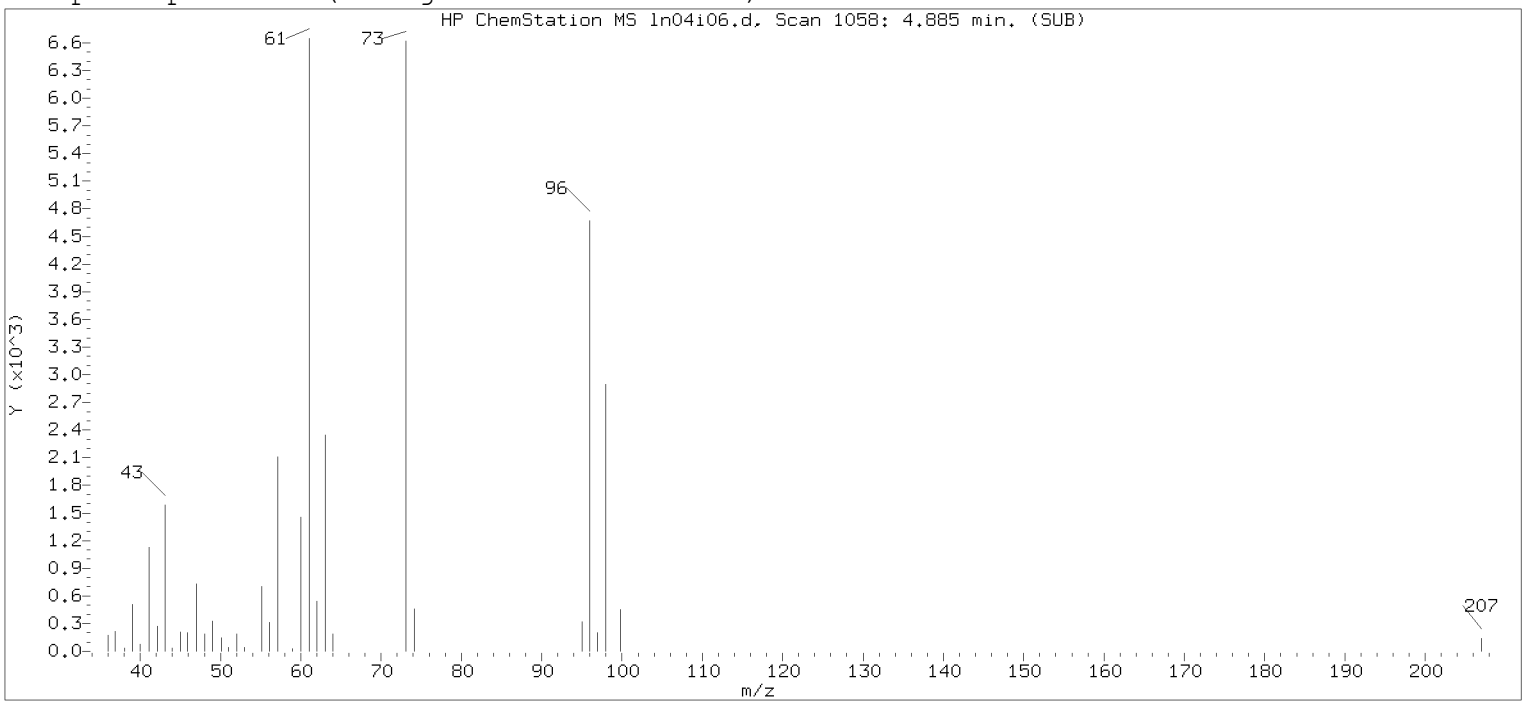
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1194
Retention Time (minutes): 5.323
Quant Ion : 57.00
Area (flag) : 33969M
On-Column Amount (ng) : 3.8769
Integration start scan : 1161 Integration stop scan: 1255
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

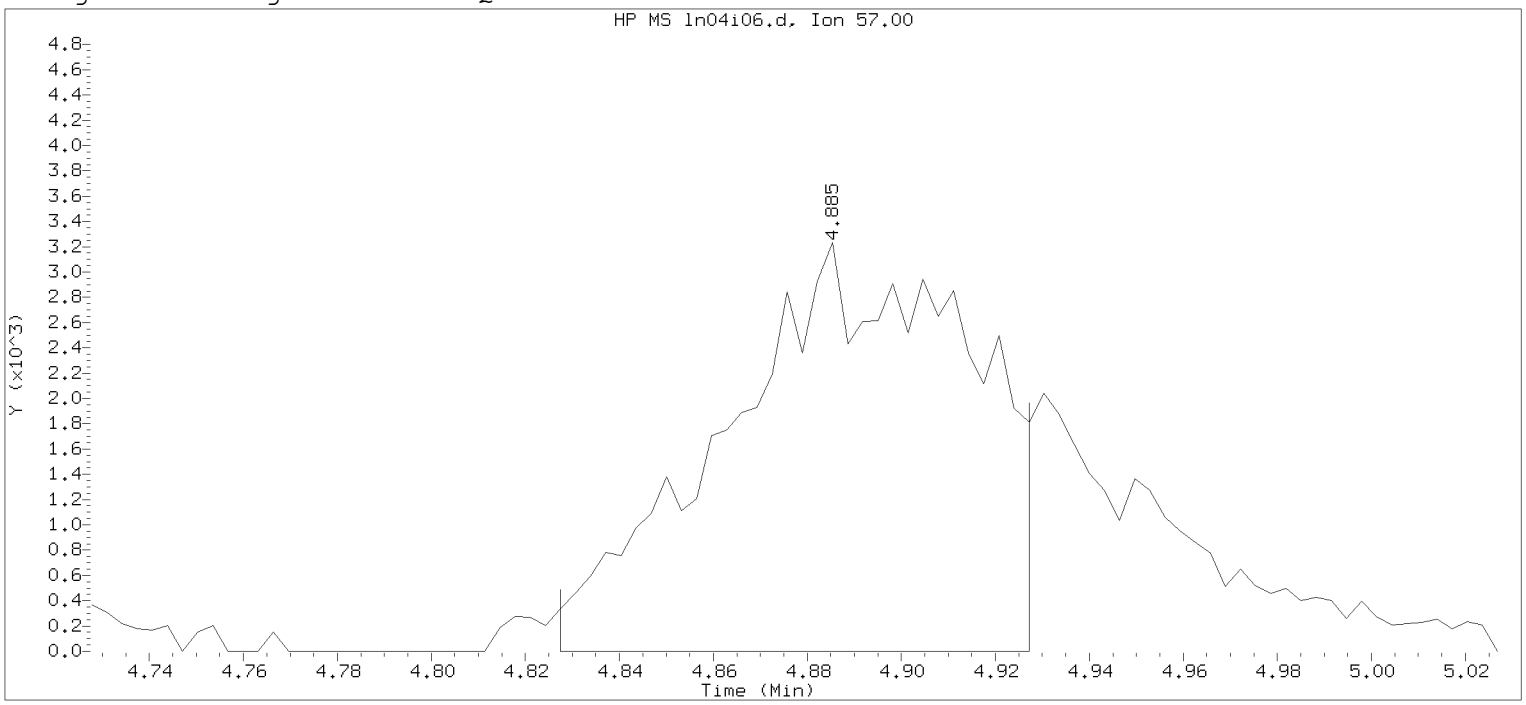
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

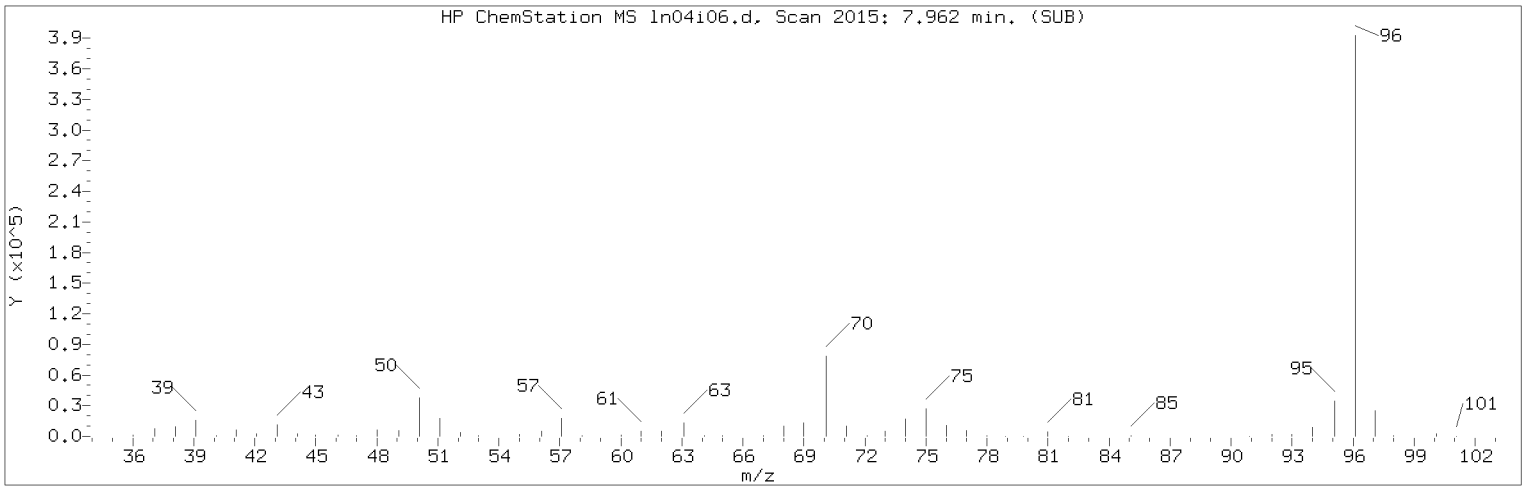
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

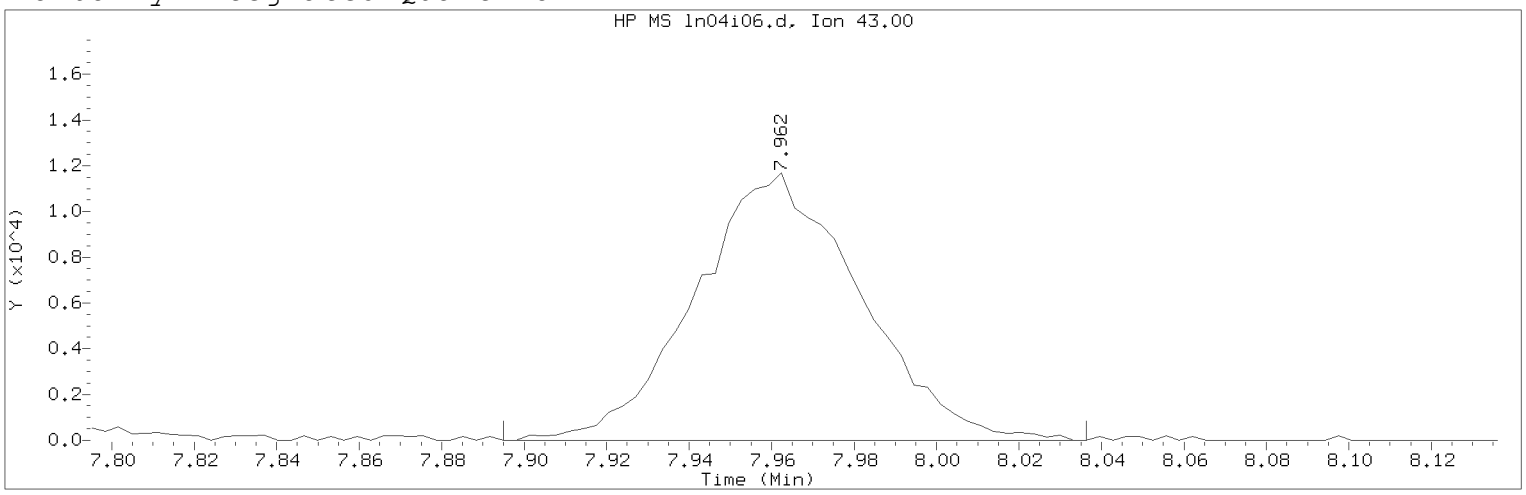
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1058
Retention Time (minutes): 4.885
Quant Ion : 57.00
Area : 11708
On-column Amount (ng) : 3.2297
Integration start scan : 1039 Integration stop scan: 1070
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

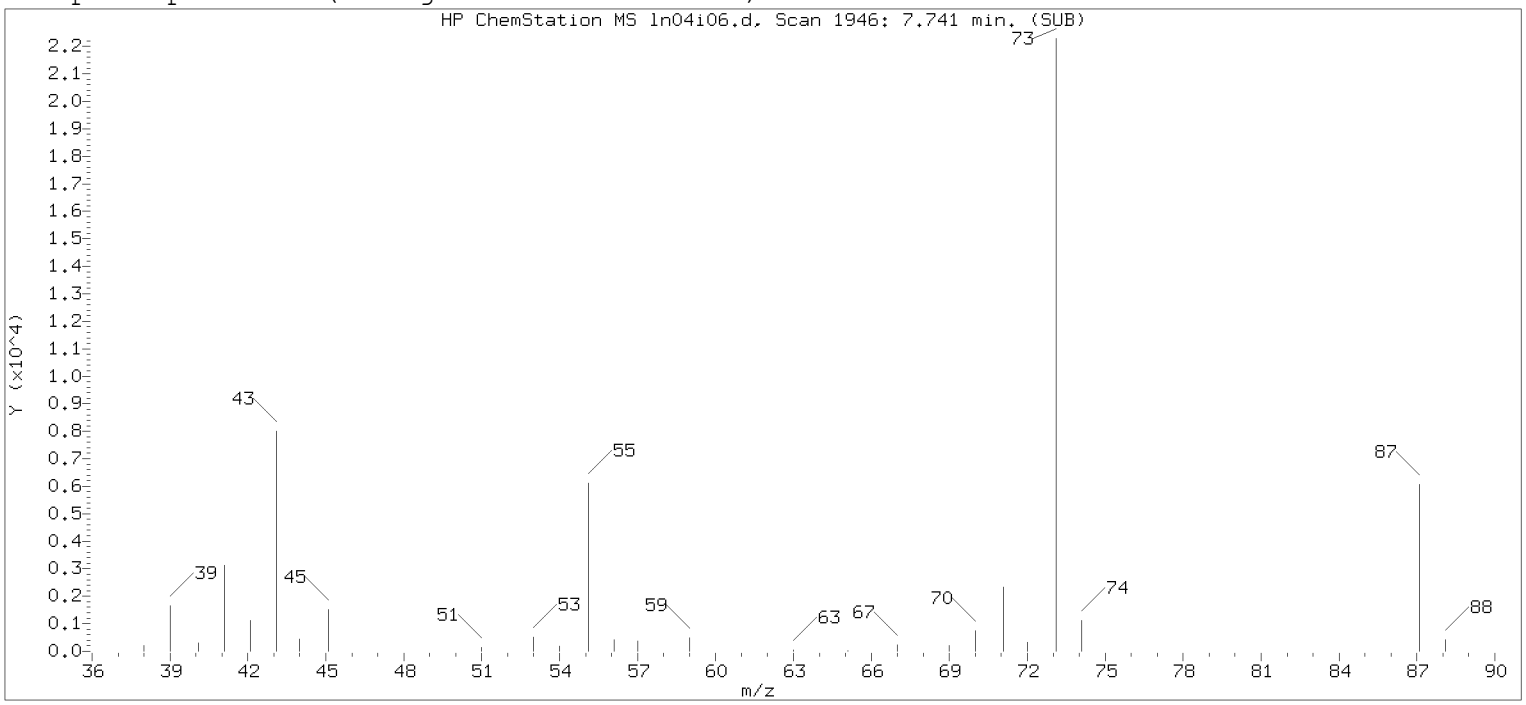
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2015
Retention Time (minutes): 7.962
Quant Ion : 43.00
Area (flag) : 32502MA
On-Column Amount (ng) : 3.9708
Integration start scan : 1993 Integration stop scan: 2037
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

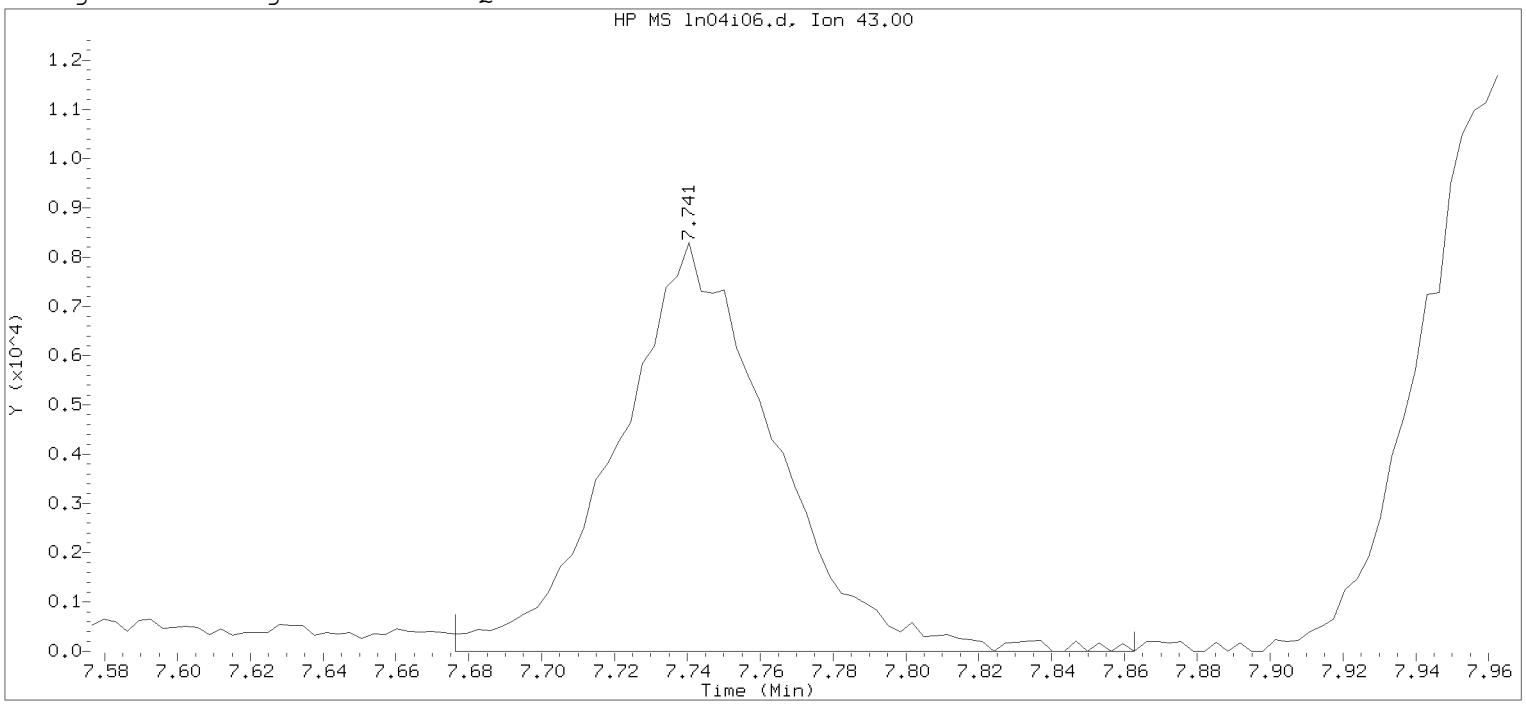
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

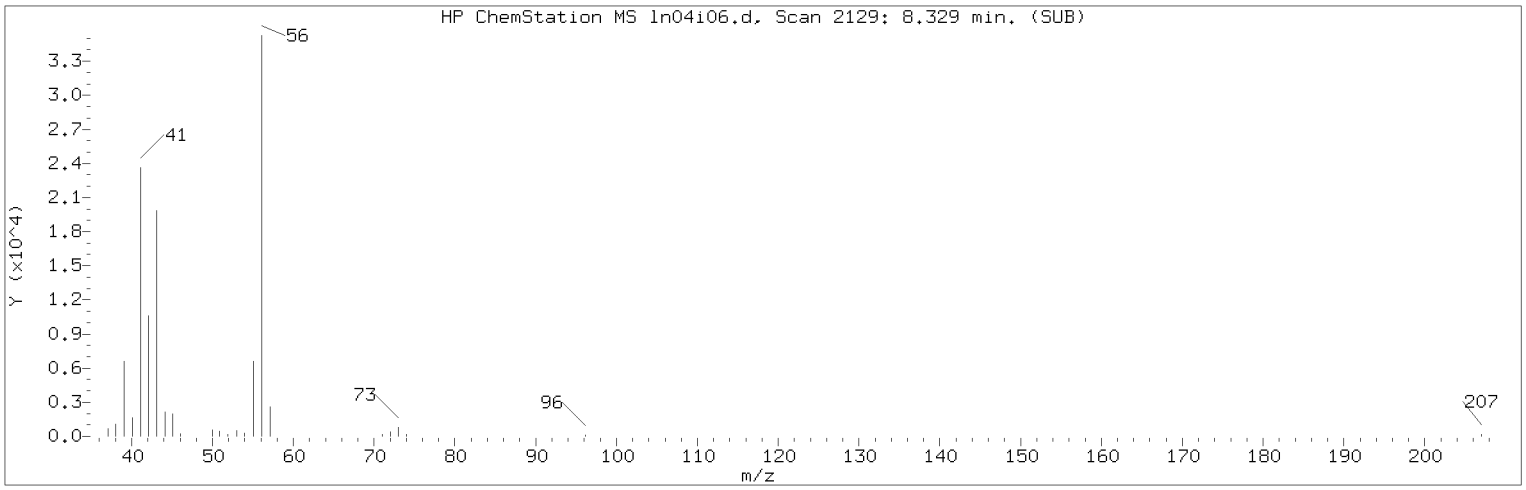
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

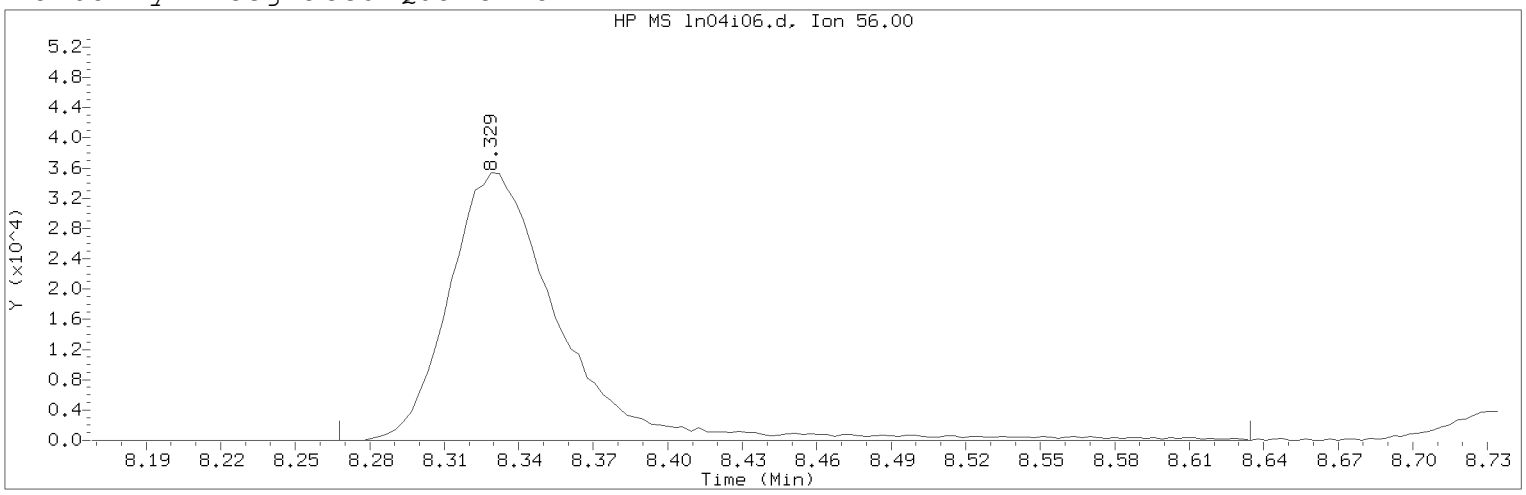
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.741
Quant Ion : 43.00
Area : 24793
On-column Amount (ng) : 4.0913
Integration start scan : 1925 Integration stop scan: 1983
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

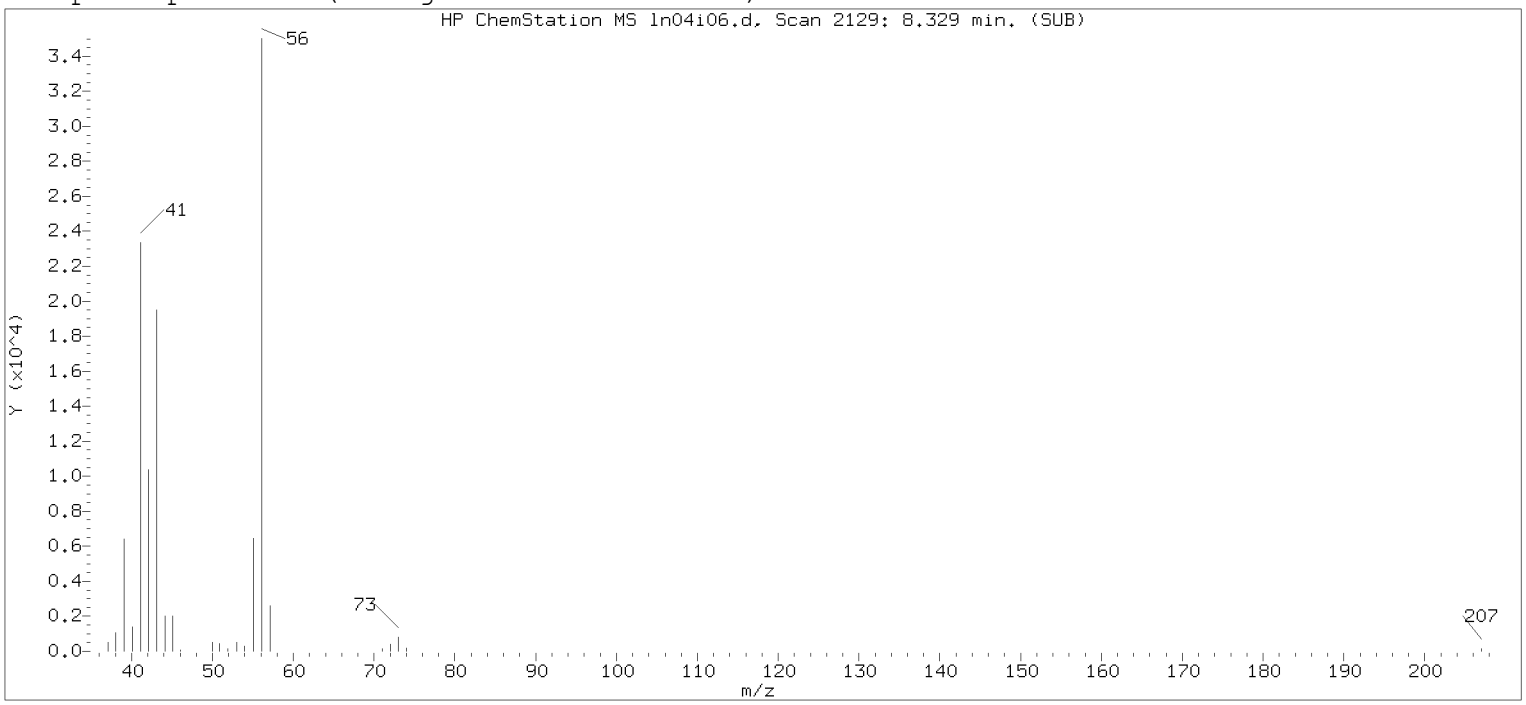
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area (flag) : 110027M
On-Column Amount (ng) : 344.3298
Integration start scan : 2109 Integration stop scan: 2223
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

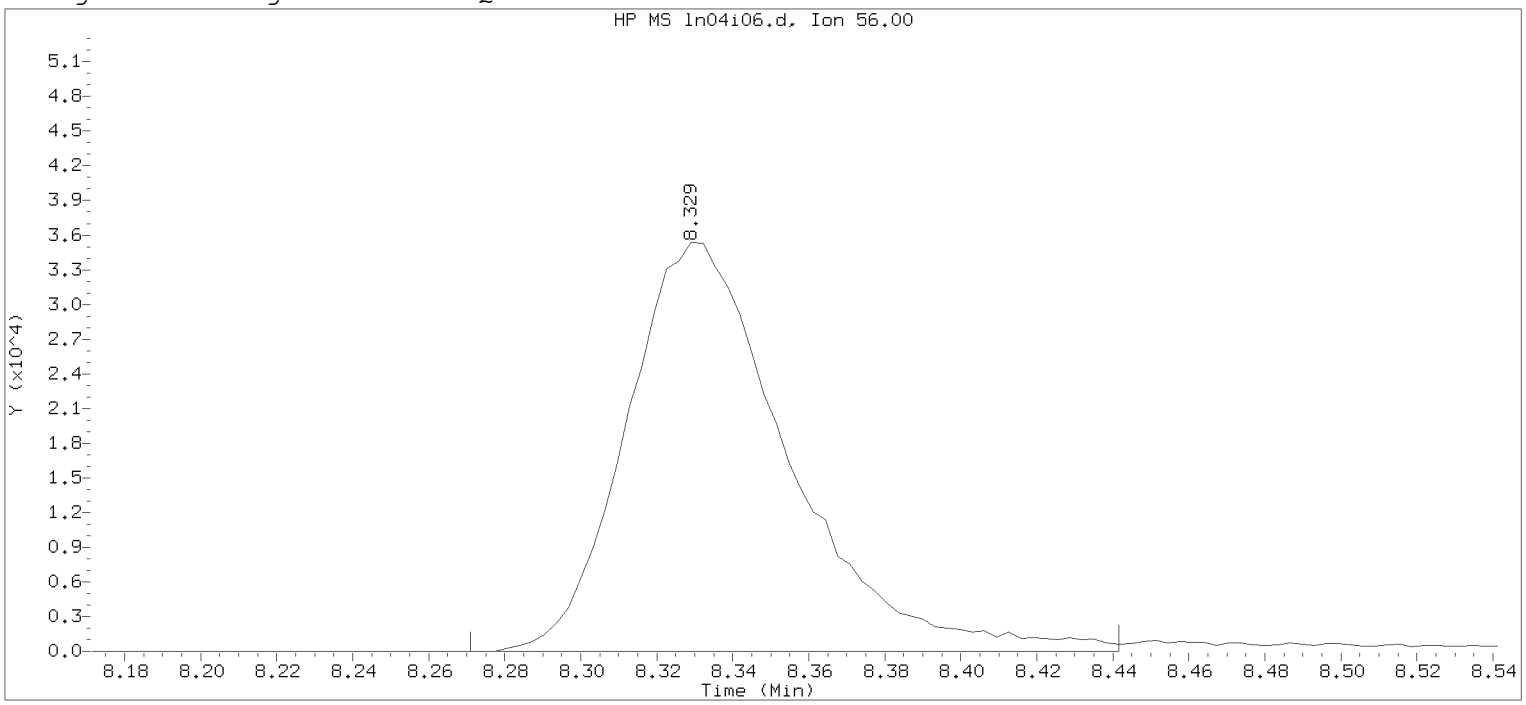
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

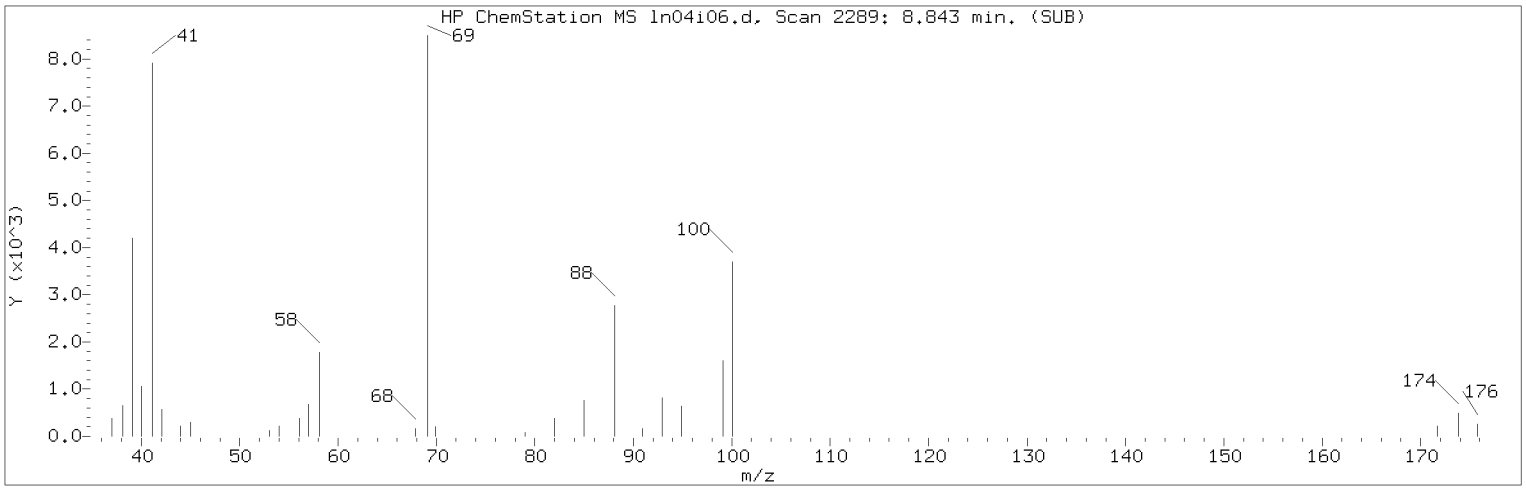
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

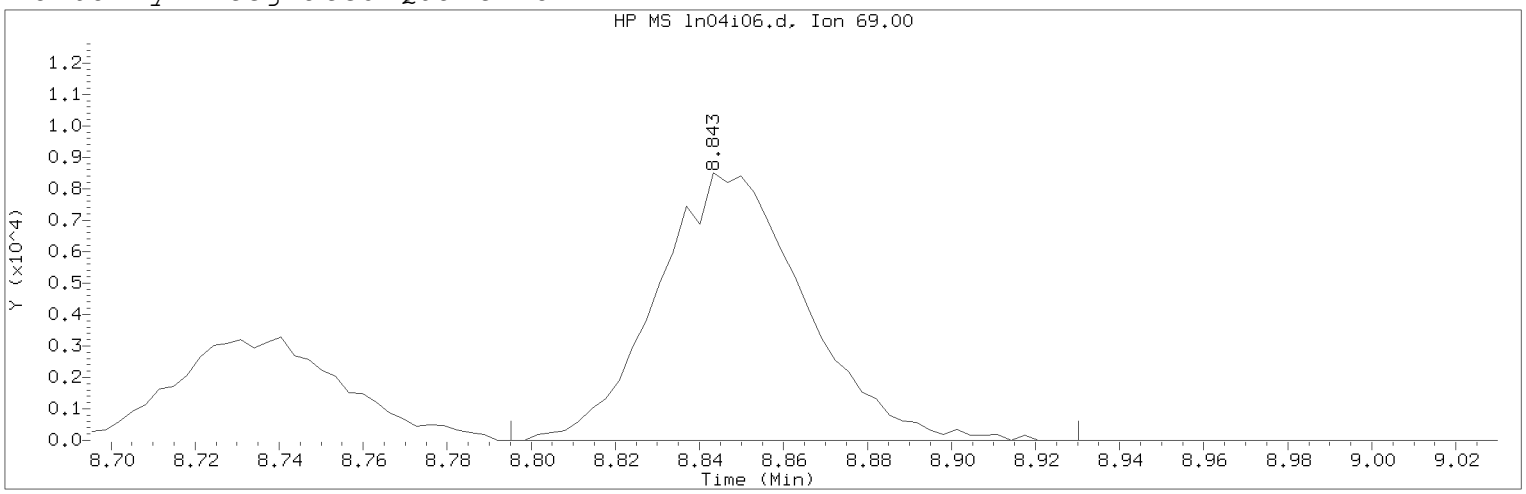
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2129
Retention Time (minutes): 8.329
Quant Ion : 56.00
Area : 104688
On-column Amount (ng) : 337.8676
Integration start scan : 2110 Integration stop scan: 2163
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

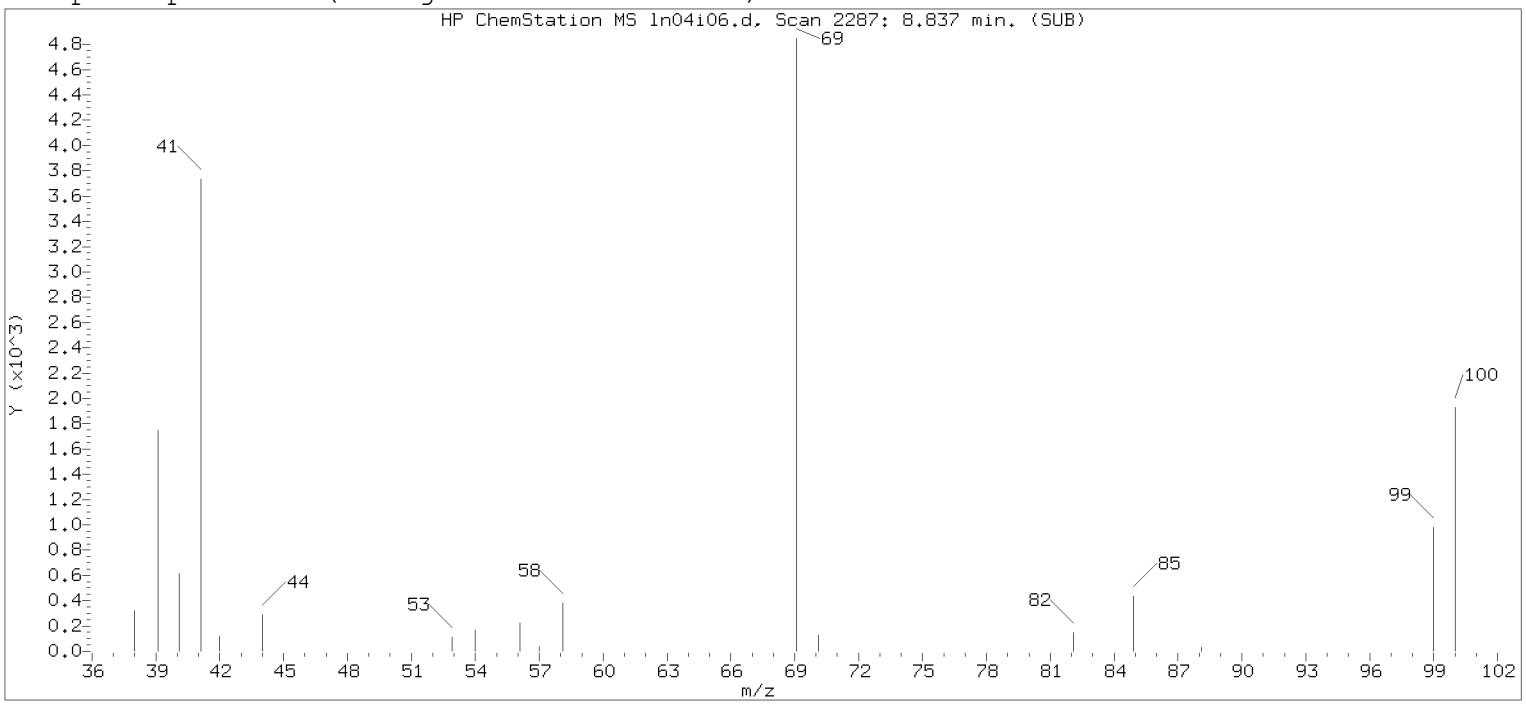
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2289
Retention Time (minutes): 8.843
Quant Ion : 69.00
Area (flag) : 20713M
On-Column Amount (ng) : 3.6110
Integration start scan : 2273 Integration stop scan: 2315
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

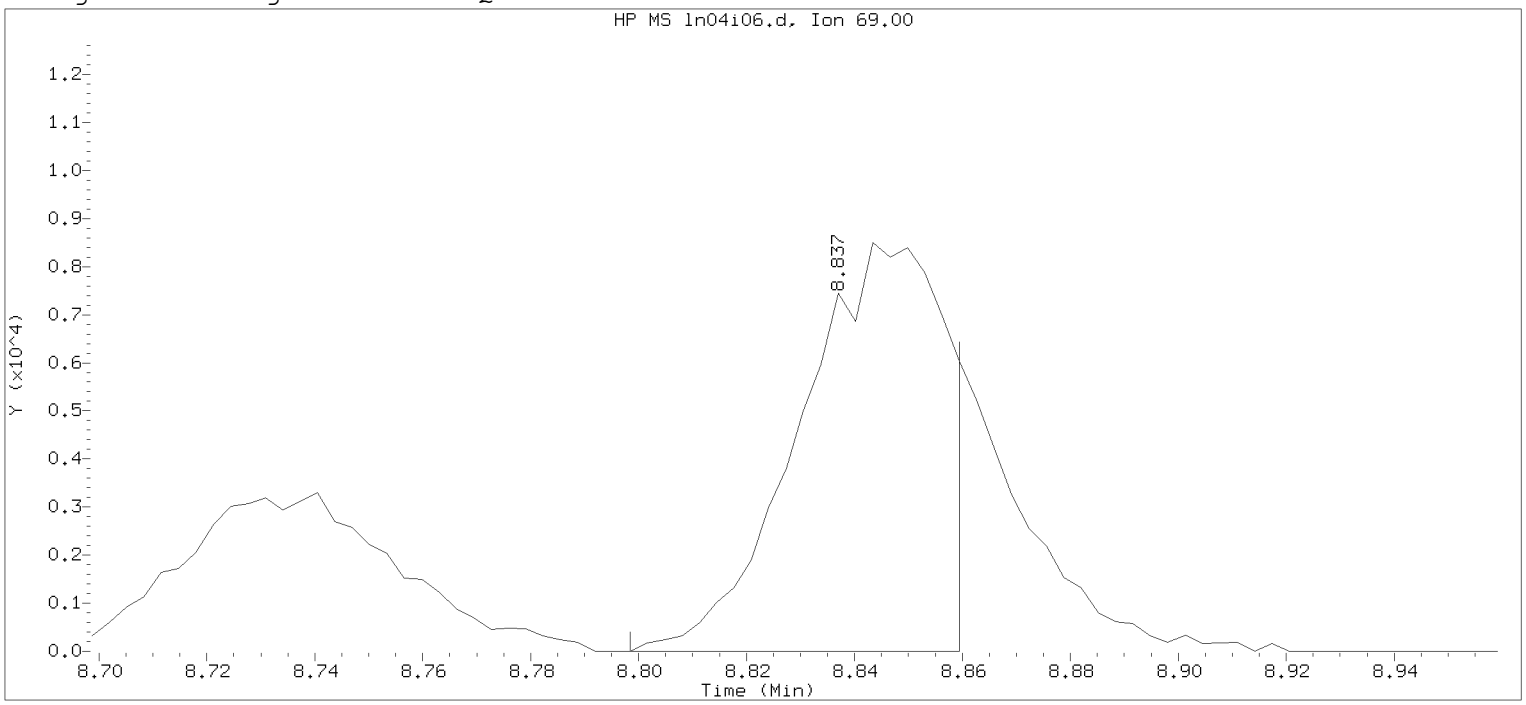
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

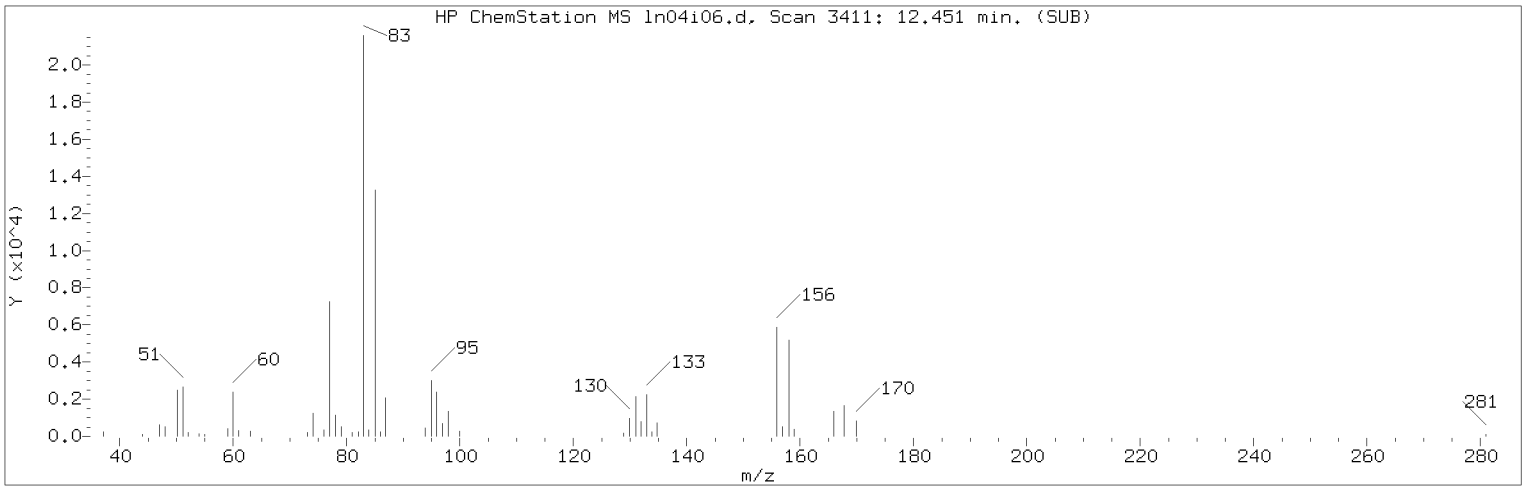
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

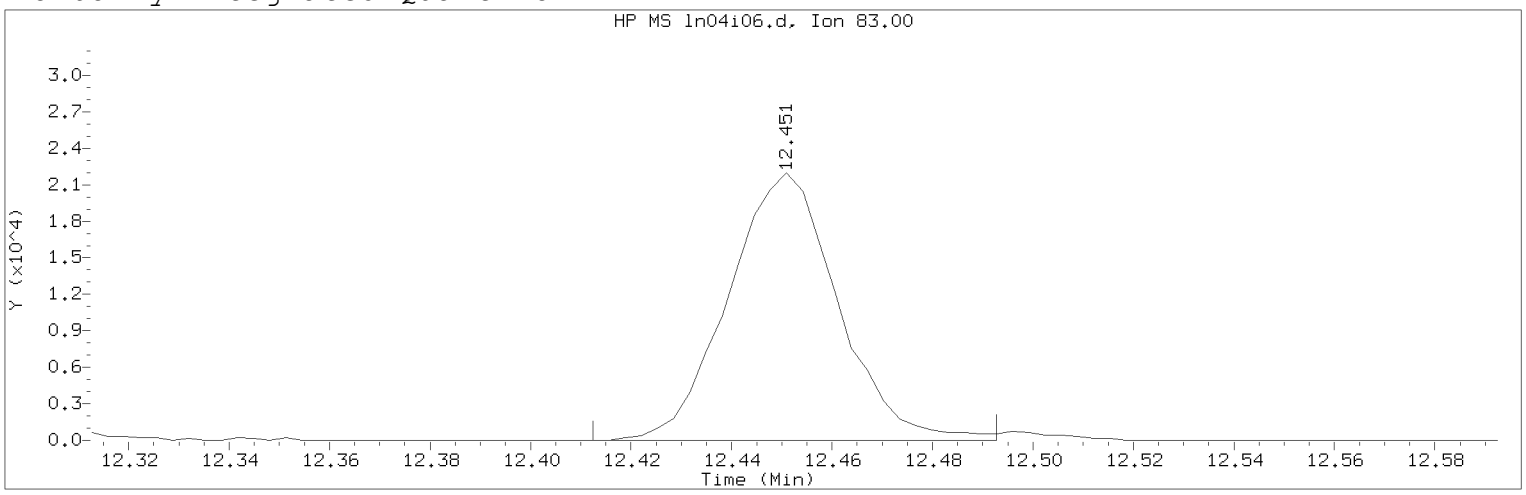
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2287
Retention Time (minutes): 8.837
Quant Ion : 69.00
Area : 15546
On-column Amount (ng) : 2.8548
Integration start scan : 2274 Integration stop scan: 2293
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

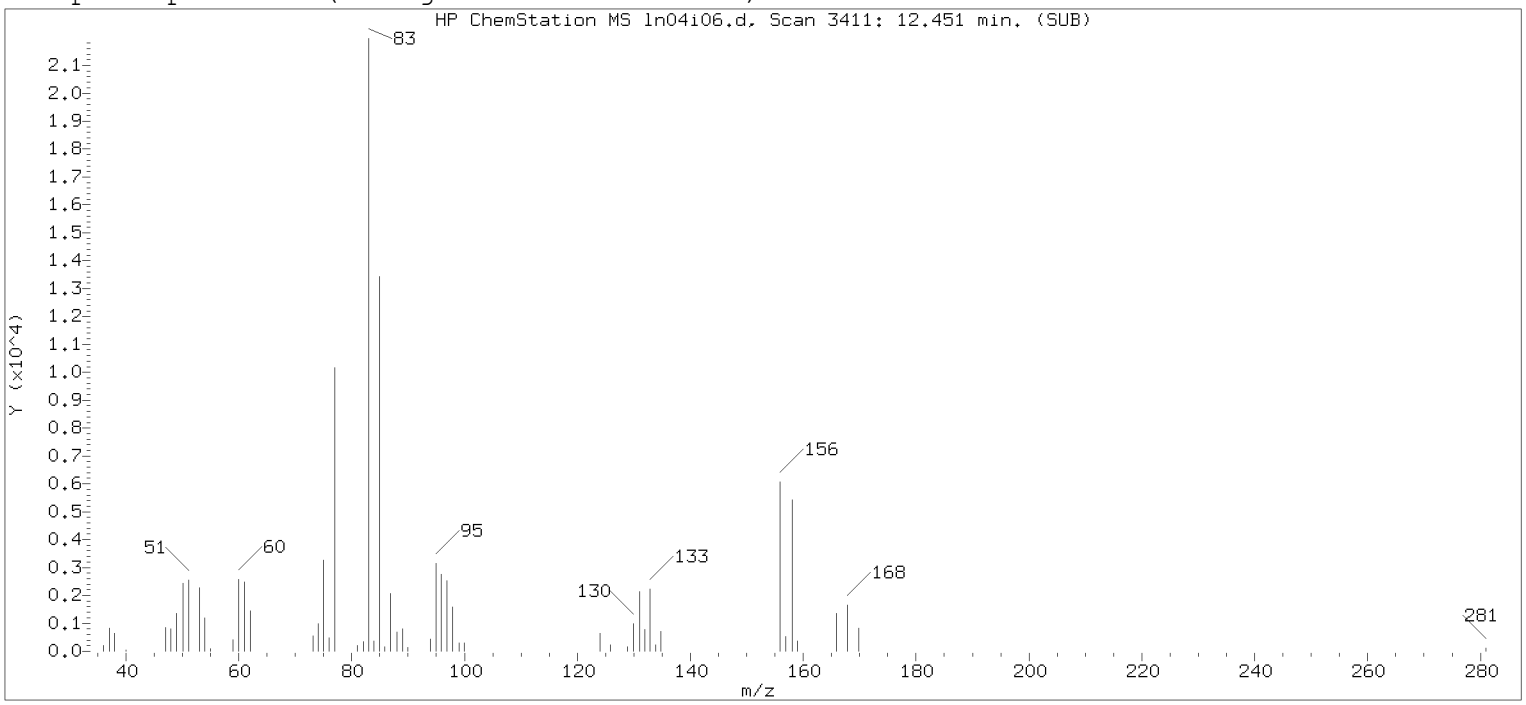
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 33170M
On-Column Amount (ng) : 3.6577
Integration start scan : 3398 Integration stop scan: 3423
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

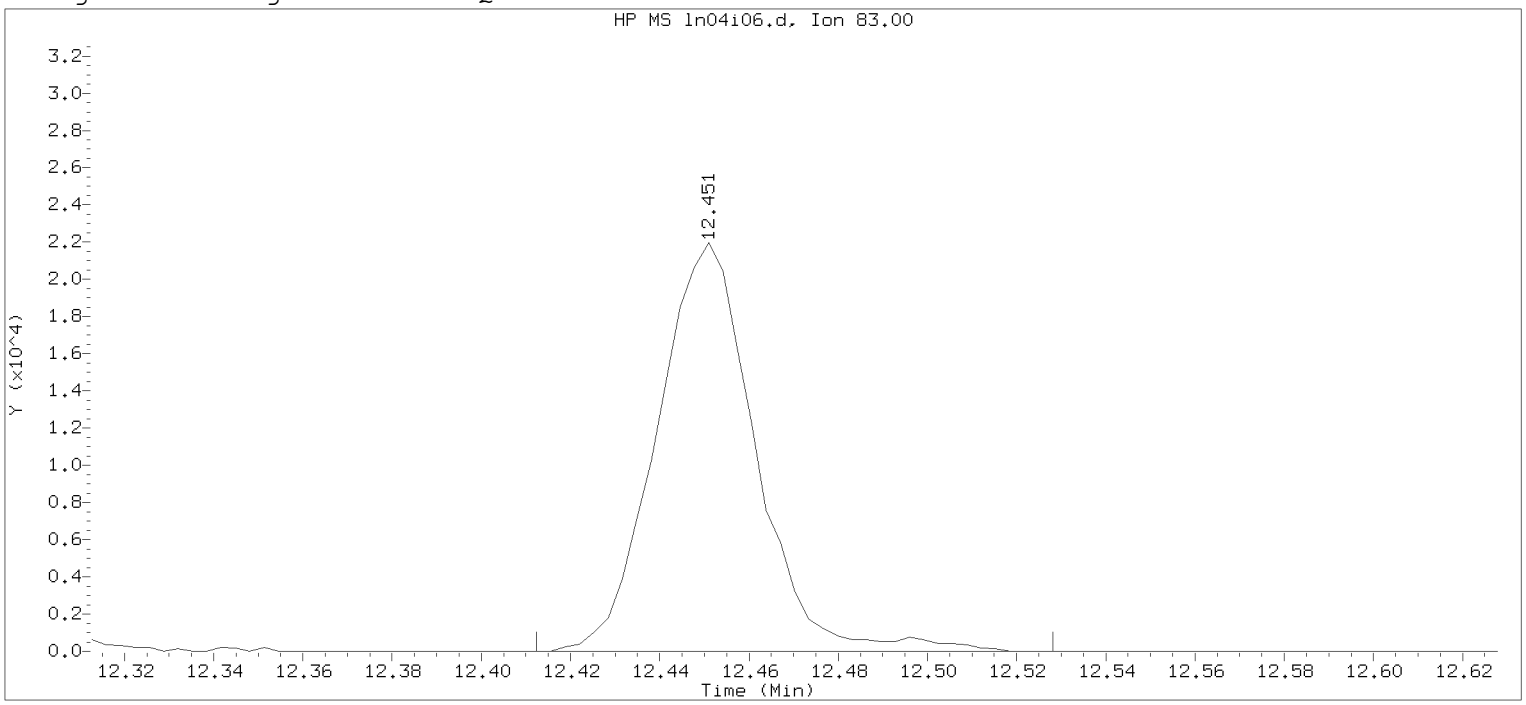
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

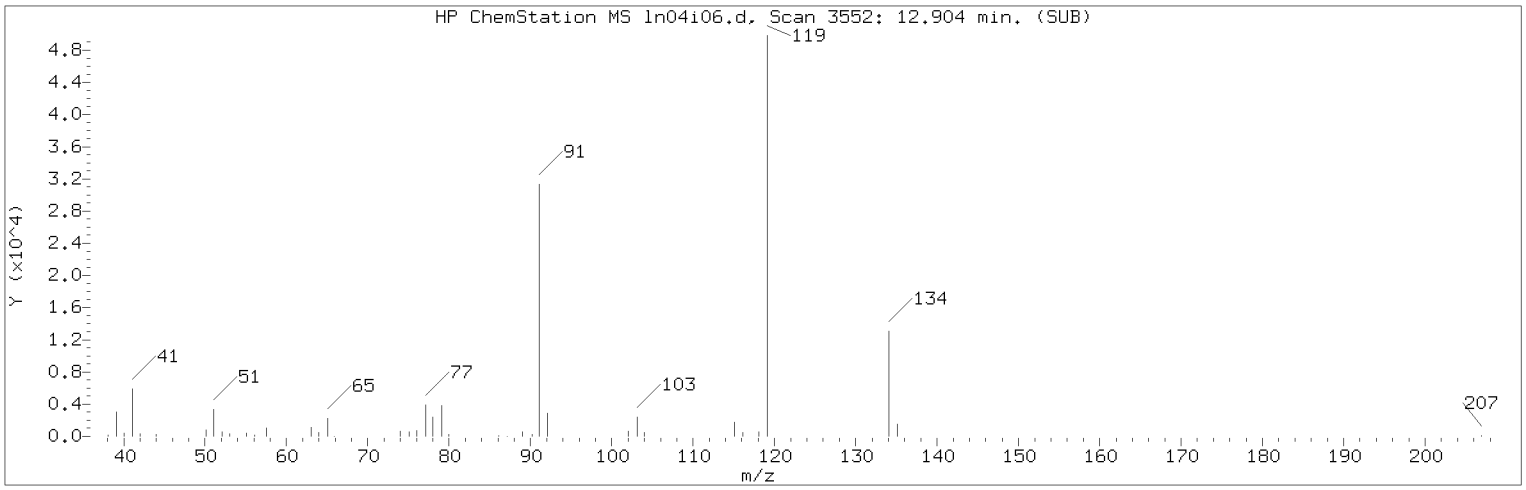
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

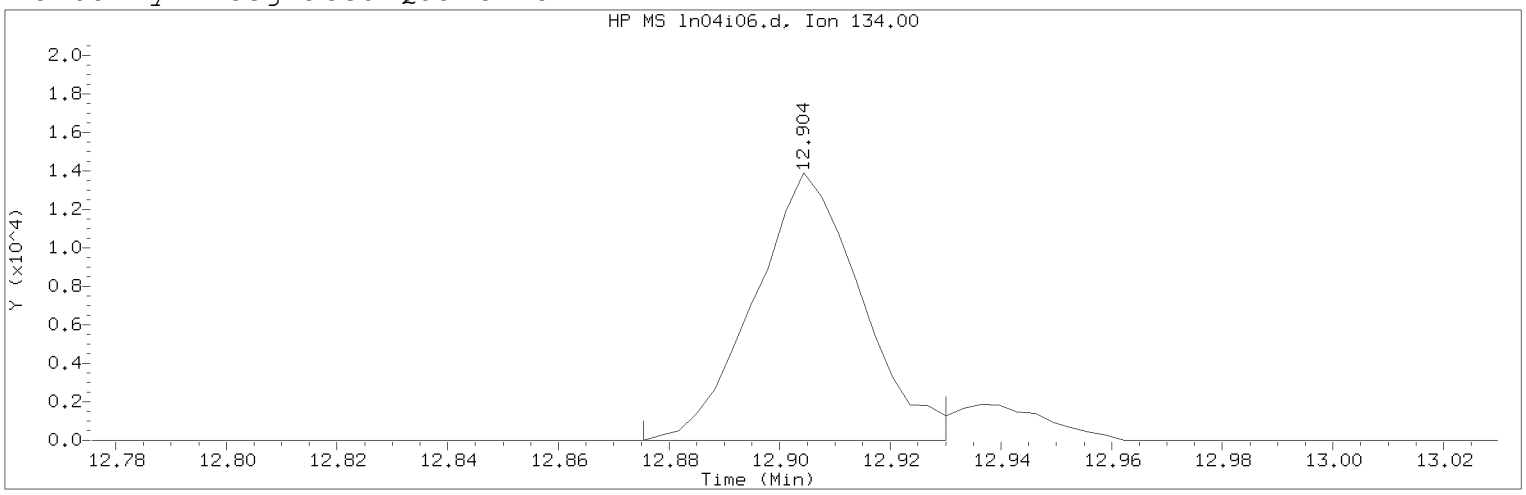
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 33718
On-column Amount (ng) : 3.6520
Integration start scan : 3398 Integration stop scan: 3434
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

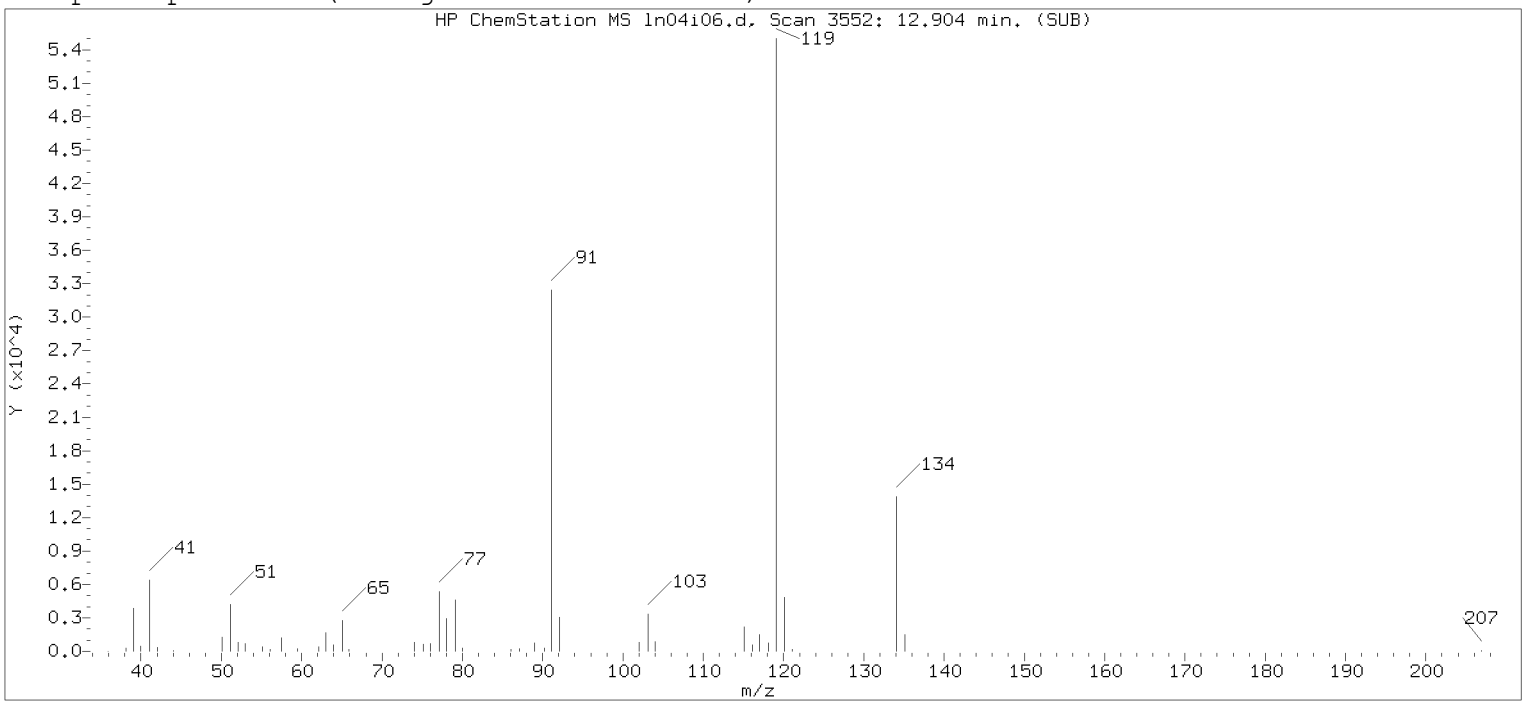
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 18608M
On-Column Amount (ng) : 3.9276
Integration start scan : 3542 Integration stop scan: 3559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

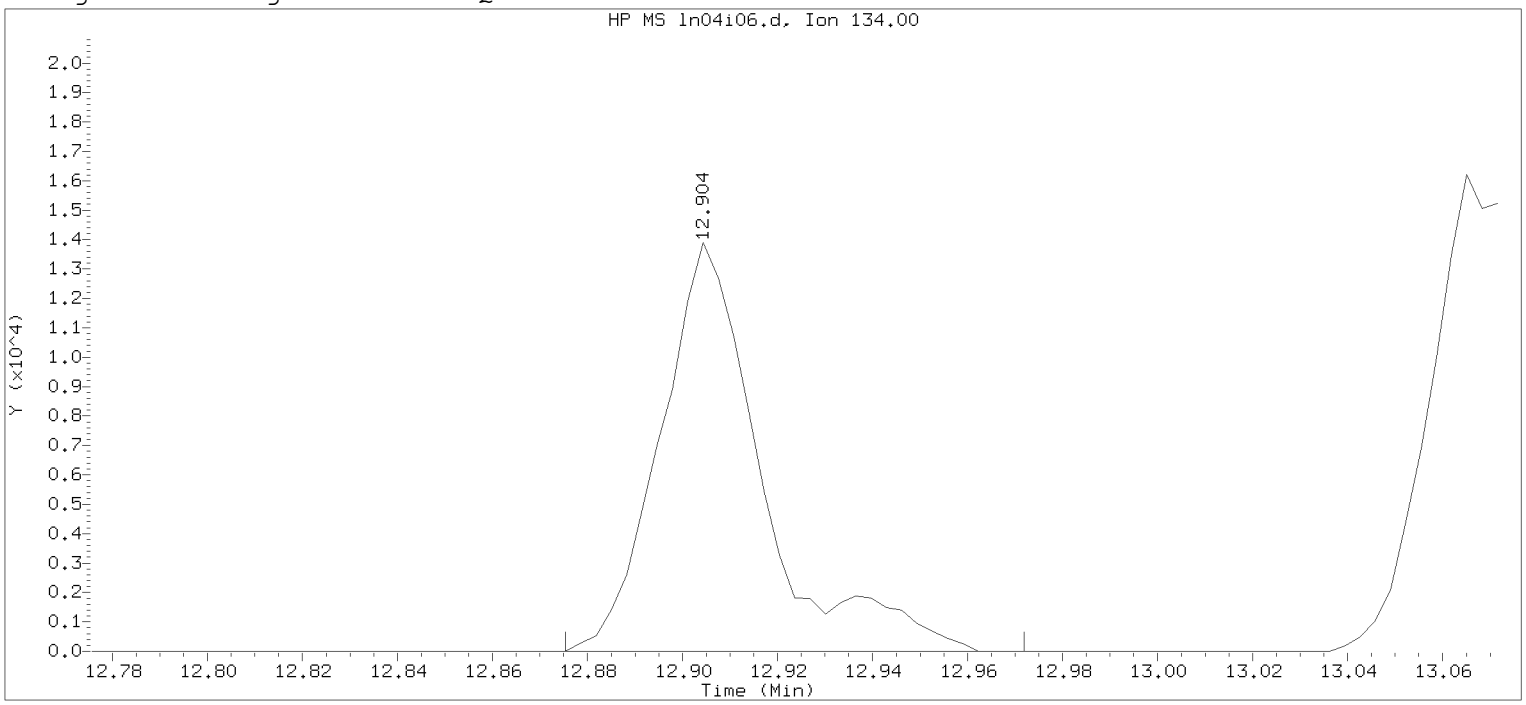
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:10.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



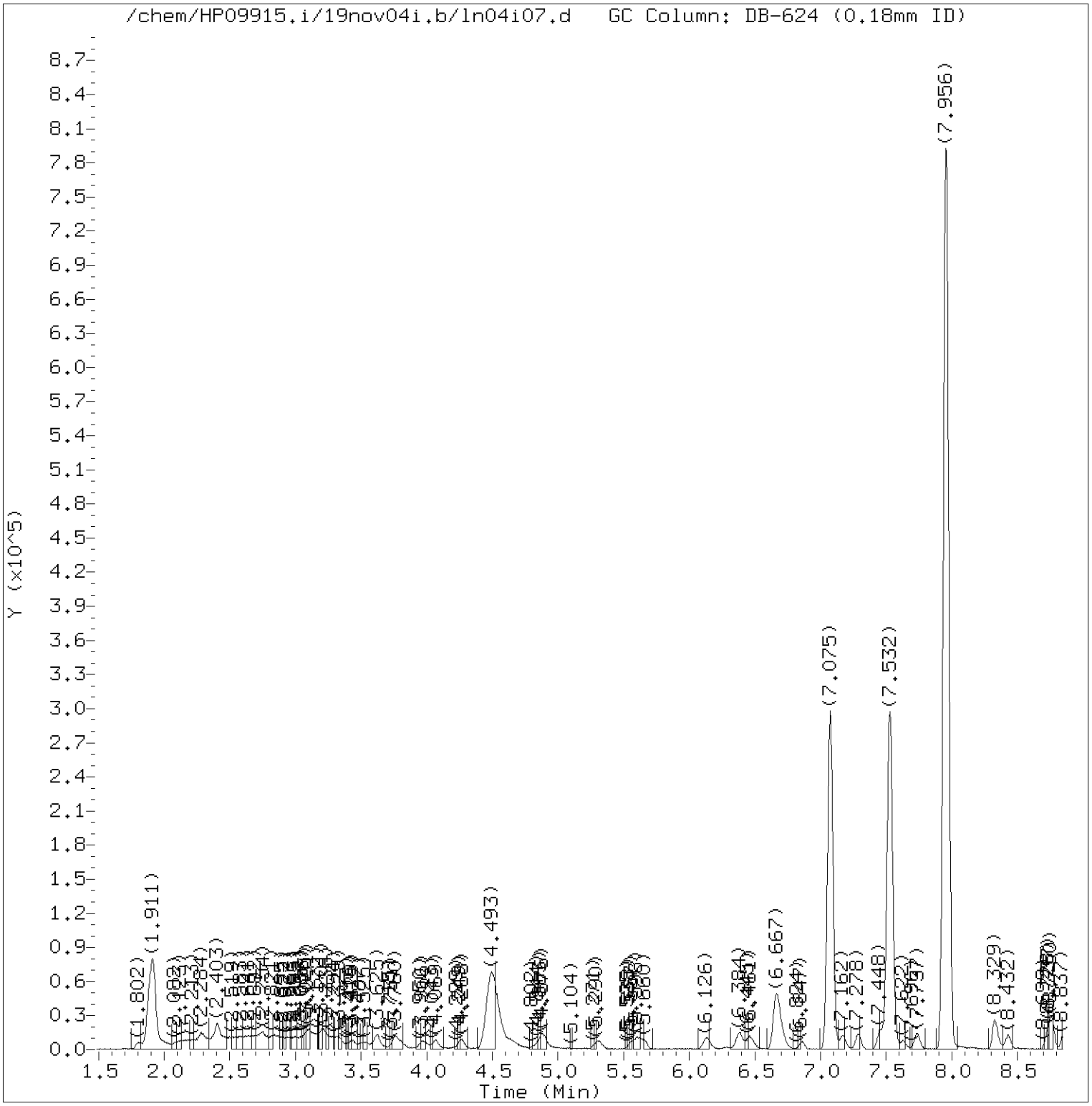
Data File: /chem/HP09915.i/19nov04i.b/ln04i06.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 16:41 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 20636
On-column Amount (ng) : 4.1808
Integration start scan : 3542 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mecampbell



Total Ion Chromatogram (TIC)

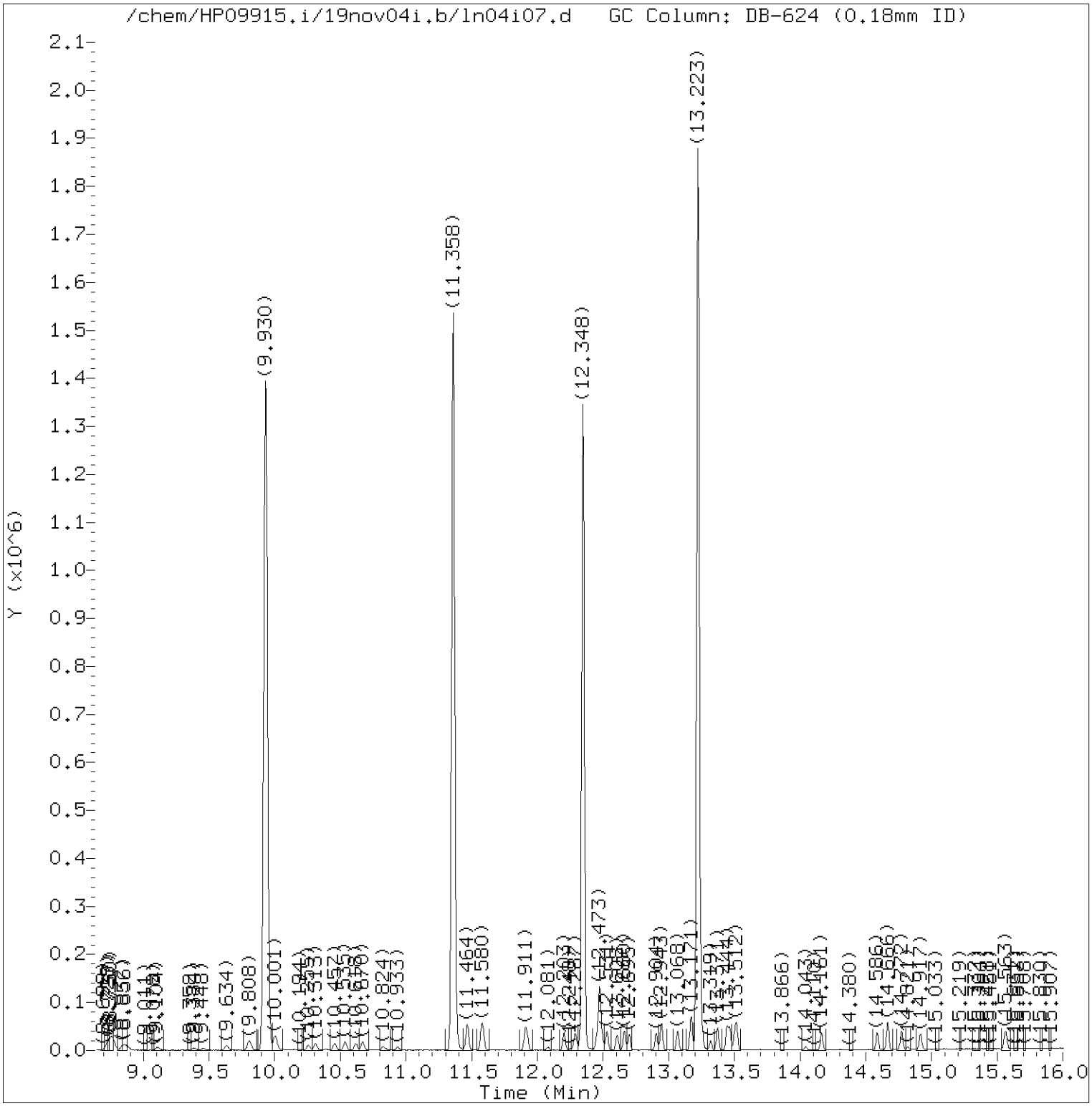
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.078	85	6299	0.794
4) Chloromethane	(2)	2.284	50	6896	0.902
5) 1,3-Butadiene	(2)	2.403	39	7255M	1.143
6) Vinyl Chloride	(2)	2.410	62	7160	0.939
8) Bromomethane	(2)	2.744	94	5605	1.025
9) Chloroethane	(2)	2.840	64	4160M	0.992
10) Dichlorofluoromethane	(2)	3.094	67	10094M	1.004
12) Trichlorofluoromethane	(2)	3.146	101	7129	0.868
11) n-Pentane	(2)	3.204	43	10269	1.058
14) Ethyl ether	(2)	3.429	59	4640M	0.874
15) Freon 123a	(2)	3.516	67	6210	0.940
16) Acrolein	(1)	3.622	56	17644	9.654
17) 1,1-Dichloroethene	(2)	3.750	96	4176	0.866
17) 1,1-Dichloroethene	(2)	3.754	63	2326	0.963
19) Freon 113	(2)	3.779	101	4754	0.864
18) Acetone	(1)	3.831	58	1588M	1.938
22) Methyl Iodide	(2)	3.966	142	8860	0.887
21) 2-Propanol	(1)	4.011	45	12063	20.480
23) Carbon Disulfide	(2)	4.075	76	15443	0.850
27) Methyl Acetate	(2)	4.255	43	6274M	1.011
25) Allyl Chloride	(2)	4.271	41	8168	0.945
28) Methylene Chloride	(2)	4.474	84	5404	0.942
29)*t-Butyl alcohol-d10	(1)	4.496	65	243591	250.000
30) t-Butyl alcohol	(1)	4.622	59	19461	18.976
31) Acrylonitrile	(2)	4.856	53	2960	0.886
33) Methyl Tertiary Butyl Ether	(2)	4.879	73	16848	0.920
32) trans-1,2-Dichloroethene	(2)	4.885	96	5035	0.903
34) n-Hexane	(2)	5.316	57	7475M	0.862
36) 1,1-Dichloroethane	(2)	5.548	63	8436	0.867
38) di-Isopropyl ether	(2)	5.606	45	16654	0.888
39) 2-Chloro-1,3-butadiene	(2)	5.663	53	7448	0.853
40) Ethyl t-butyl ether	(2)	6.126	59	16060	0.882
43) 1,2-Dichloroethene (Total)	(2)		96	10762	1.818
44) 2-Butanone	(2)	6.361	43	8098	1.889
42) cis-1,2-Dichloroethene	(2)	6.377	96	5727	0.915
45) 2,2-Dichloropropane	(2)	6.390	77	6419M	0.849
47) Propionitrile	(1)	6.461	54	24221	18.955
48) Methacrylonitrile	(2)	6.670	67	32346	8.977

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.715	128	2849	0.858
50) Tetrahydrofuran	(1)	6.728	71	2319	2.009
51) Chloroform	(2)	6.860	83	8108	0.871
52)$Dibromofluoromethane	(2)	7.075	113	273696	49.231
52)$Dibromofluoromethane	(2)	7.075	111	279412	49.293
53) 1,1,1-Trichloroethane	(2)	7.078	97	6588	0.830
54) Cyclohexane	(2)	7.171	56	8997	0.847
54) Cyclohexane	(2)	7.178	84	7859	0.852
54) Cyclohexane	(2)	7.178	69	2772	0.844
56) Carbon Tetrachloride	(2)	7.284	117	5549	0.824
55) 1,1-Dichloropropene	(2)	7.287	75	6611	0.860
58) Isobutyl Alcohol	(1)	7.458	41	16978	49.195
57)$1,2-Dichloroethane-d4	(2)	7.528	102	69641	49.151
57)$1,2-Dichloroethane-d4	(2)	7.528	65	311703	49.366
57)$1,2-Dichloroethane-d4	(2)	7.535	104	44286	48.935
60) Benzene	(2)	7.551	78	20445	0.884
61) 1,2-Dichloroethane	(2)	7.631	62	7810	1.050
61) 1,2-Dichloroethane	(2)	7.631	98	696	0.945
65) t-Amyl methyl ether	(2)	7.741	73	16286	0.891
67) n-Heptane	(2)	7.956	43	7535M	0.930
66)*Fluorobenzene	(2)	7.959	96	1137124	50.000
69) n-Butanol	(1)	8.329	56	24322	81.882
71) Trichloroethene	(2)	8.432	95	5231	0.898
72) Methylcyclohexane	(2)	8.737	83	9247	0.856
72) Methylcyclohexane	(2)	8.731	98	4032	0.825
73) 1,2-Dichloropropane	(2)	8.760	63	5229	0.890
76) Methyl Methacrylate	(2)	8.837	69	4607M	0.811
75) 1,4-Dioxane	(1)	8.856	88	3548M	43.457
74) Dibromomethane	(2)	8.866	93	3298	0.868
78) Bromodichloromethane	(2)	9.107	83	5648	0.828
79) 2-Nitropropane	(2)	9.384	41	3333	1.614
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	2007	0.796
81) cis-1,3-Dichloropropene	(2)	9.638	75	6973	0.770
82) 4-Methyl-2-pentanone	(2)	9.808	43	16006	1.769
83)$Toluene-d8	(3)	9.930	98	1156948	50.253
83)$Toluene-d8	(3)	9.930	100	746174	50.033
88) Toluene	(3)	10.007	92	12902	0.894
90) 1,3-Dichloropropene (total)	(3)		100	13101	1.518

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.255	75	6128	0.748
91) Ethyl Methacrylate	(3)	10.313	69	7873	0.791
92) 1,1,2-Trichloroethane	(3)	10.461	97	4897	0.895
93) Tetrachloroethene	(3)	10.538	166	5565	0.910
94) 1,3-Dichloropropane	(3)	10.618	76	8504	0.910
96) 2-Hexanone	(3)	10.670	43	11811	1.777
97) Dibromochloromethane	(3)	10.827	129	4109	0.733
99) 1,2-Dibromoethane	(3)	10.937	107	5163	0.869
100)*Chlorobenzene-d5	(3)	11.358	117	879875	50.000
101) 1-Chlorohexane	(3)	11.361	91	8103	1.045
102) Chlorobenzene	(3)	11.383	112	14367	0.880
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	4138	0.769
104) Ethylbenzene	(3)	11.464	91	24192	0.877
106) m+p-Xylene	(3)	11.583	106	18914	1.743
108) Xylene (Total)	(3)		106	28415	2.629
107) o-Xylene	(3)	11.908	106	9501	0.886
109) Styrene	(3)	11.917	104	14106	0.796
110) Bromoform	(3)	12.081	173	2729	0.652
111) Isopropylbenzene	(3)	12.203	105	22719	0.845
112) Cyclohexanone	(1)	12.287	55	15983	49.985
114)$4-Bromofluorobenzene	(3)	12.348	95	436282	50.046
114)$4-Bromofluorobenzene	(3)	12.348	174	360511	49.883
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	7596	0.849
115) Bromobenzene	(4)	12.461	156	6426	0.903
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	22650	8.211
117) 1,2,3-Trichloropropane	(4)	12.496	110	2425	0.884
119) n-Propylbenzene	(4)	12.528	91	27655	0.890
120) 2-Chlorotoluene	(4)	12.612	126	6138M	0.929
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	18836	0.834
121) 4-Chlorotoluene	(4)	12.702	126	6403M	0.931
124) tert-Butylbenzene	(4)	12.904	134	4060M	0.869
125) Pentachloroethane	(4)	12.940	167	2751	0.684
126) 1,2,4-Trimethylbenzene	(4)	12.943	105	20498	0.861
127) sec-Butylbenzene	(4)	13.065	105	24344	0.873
129) 1,3-Dichlorobenzene	(4)	13.165	146	12468	0.954
130) p-Isopropyltoluene	(4)	13.174	119	21126	0.876
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	473433	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	13174	0.972

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

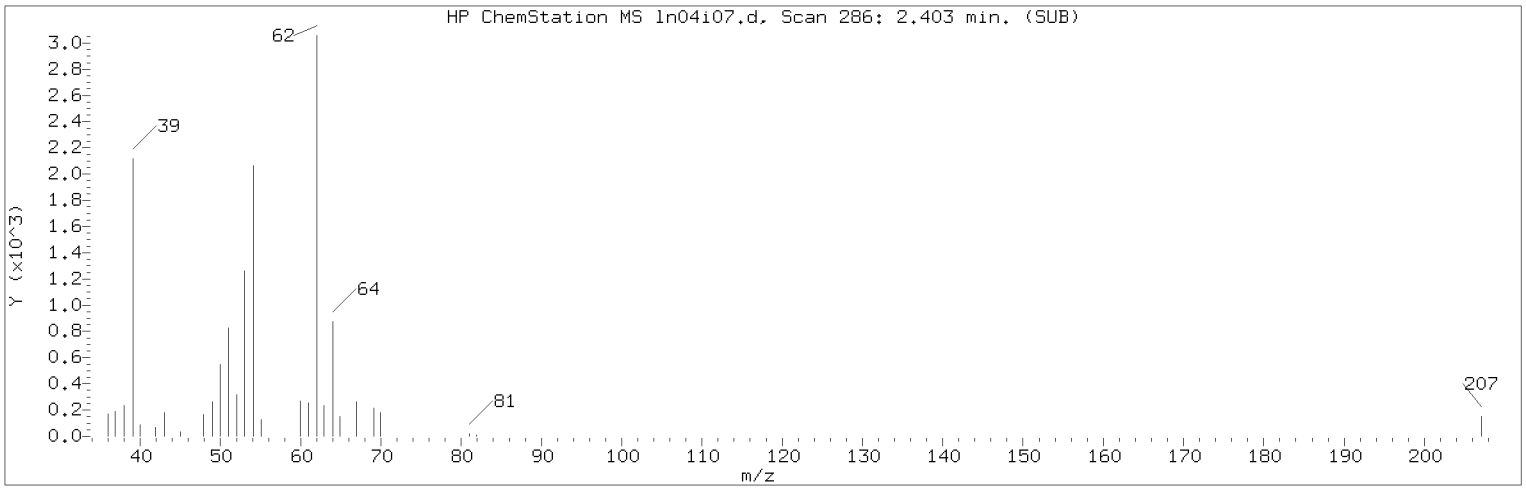
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	22457	0.890
135) Benzyl Chloride	(4)	13.319	91	11494	0.602
136) 1,3-Diethylbenzene	(4)	13.374	119	13985	0.891
141) Diethylbenzene (total)	(4)		100	41423	2.726
137) 1,4-Diethylbenzene	(4)	13.441	119	15446	0.929
139) n-Butylbenzene	(4)	13.464	92	11964M	0.970
138) 1,2-Dichlorobenzene	(4)	13.502	146	12171	0.943
140) 1,2-Diethylbenzene	(4)	13.515	119	11992	0.906
142) 1,2-Dibromo-3-chloropropane	(4)	14.046	75	1565	0.799
144) 1,3,5-Trichlorobenzene	(4)	14.161	180	10166	1.026
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	10347	1.074
147) Hexachlorobutadiene	(4)	14.666	225	9370	2.059
148) Naphthalene	(4)	14.772	128	28210	0.910
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	10052	1.072
150) 2-Methylnaphthalene	(4)	15.567	142	18783M	0.984

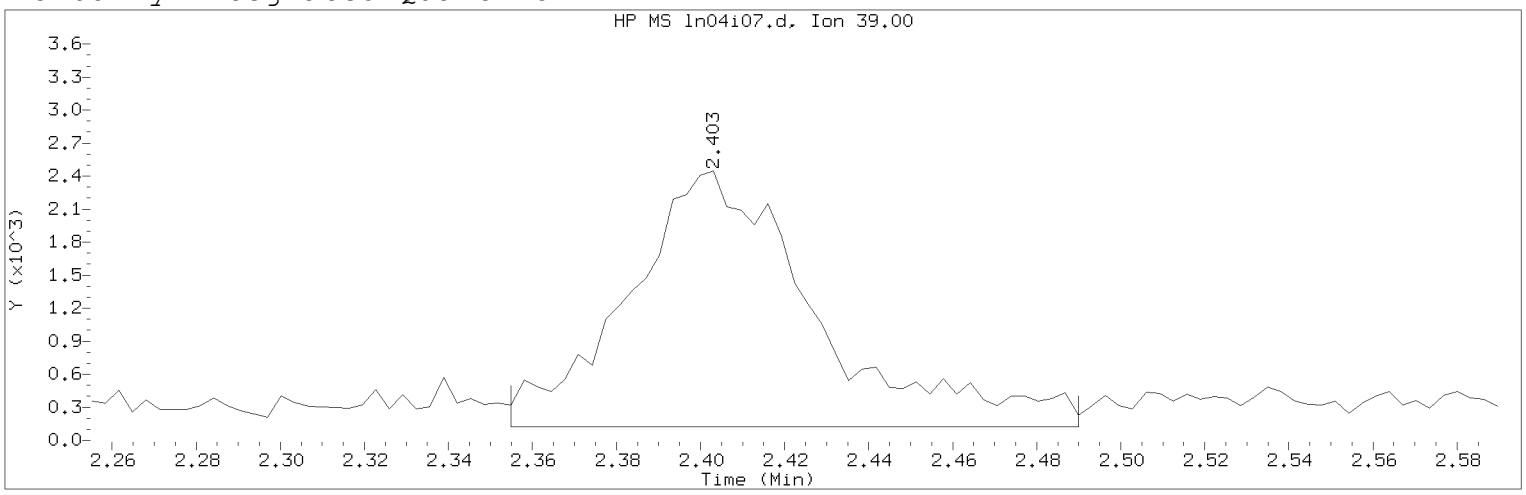
M = Compound was manually integrated.

Digitally signed by Miranda E. Campbell
on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

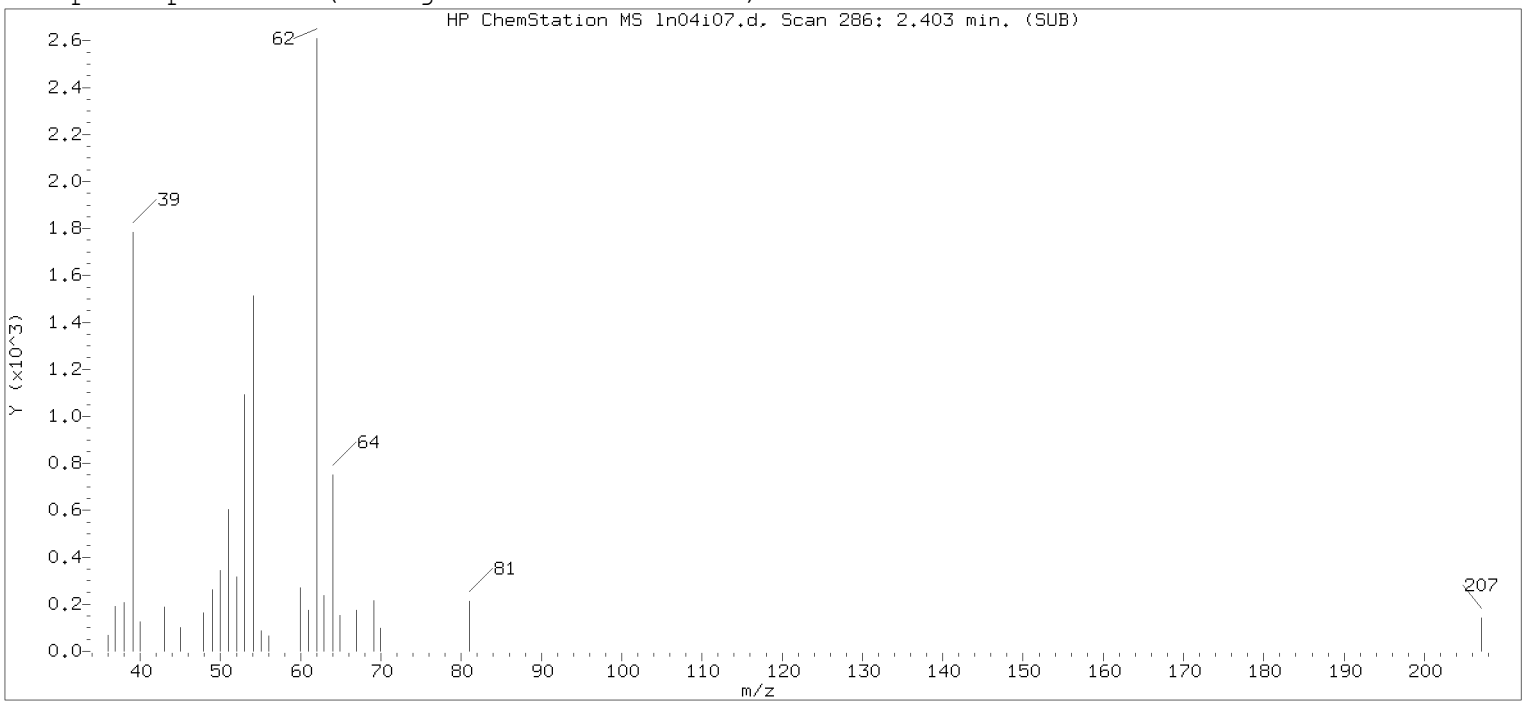
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 286
Retention Time (minutes): 2.403
Quant Ion : 39.00
Area (flag) : 7255M
On-Column Amount (ng) : 1.1432
Integration start scan : 270 Integration stop scan: 312
Y at integration start : 120 Y at integration end: 120

Reason for manual integration: improper integration

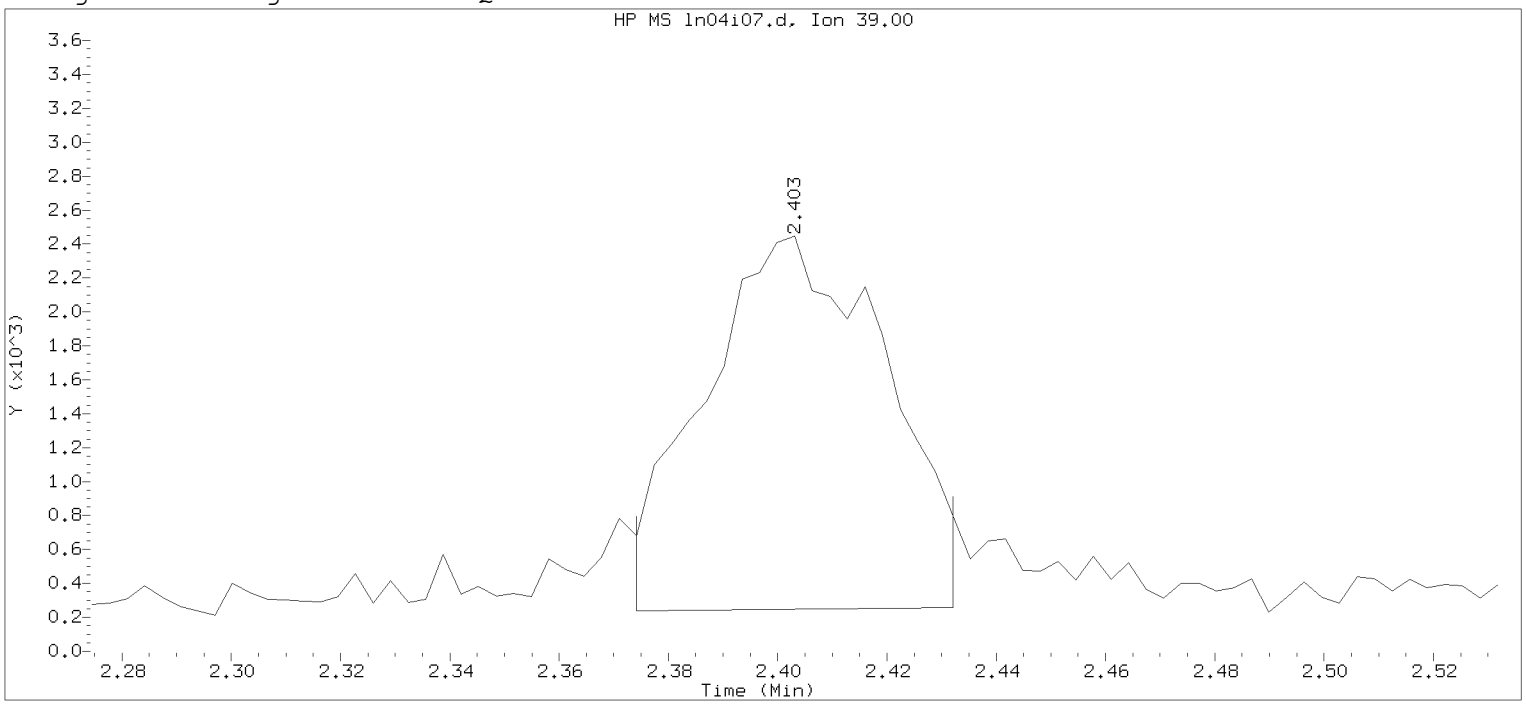
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

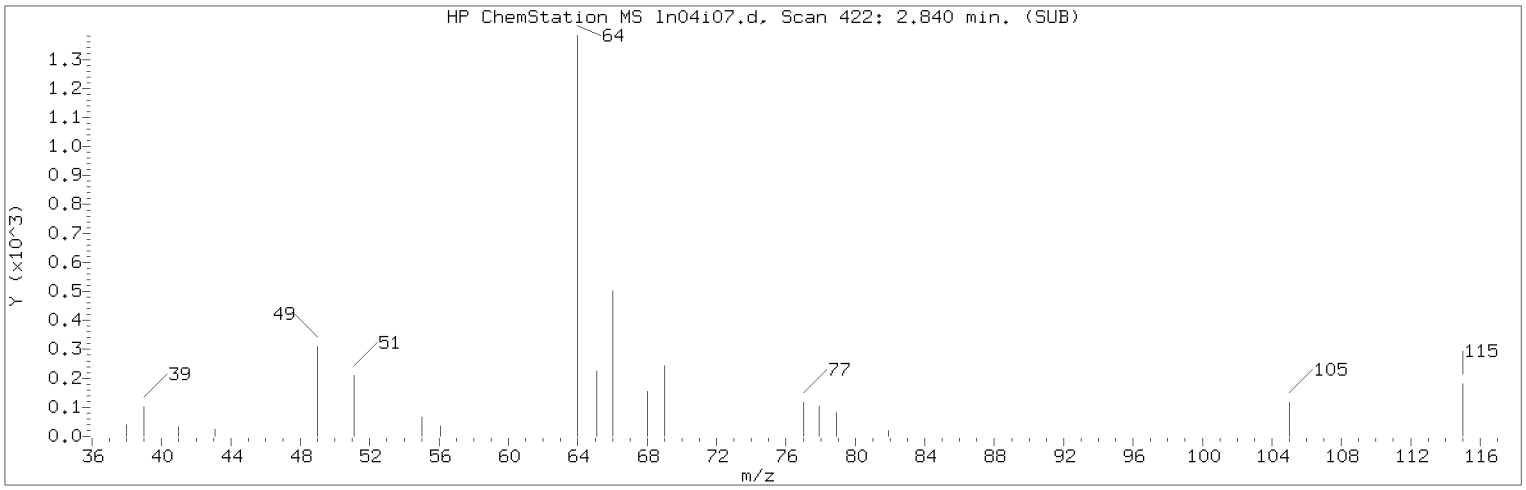
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

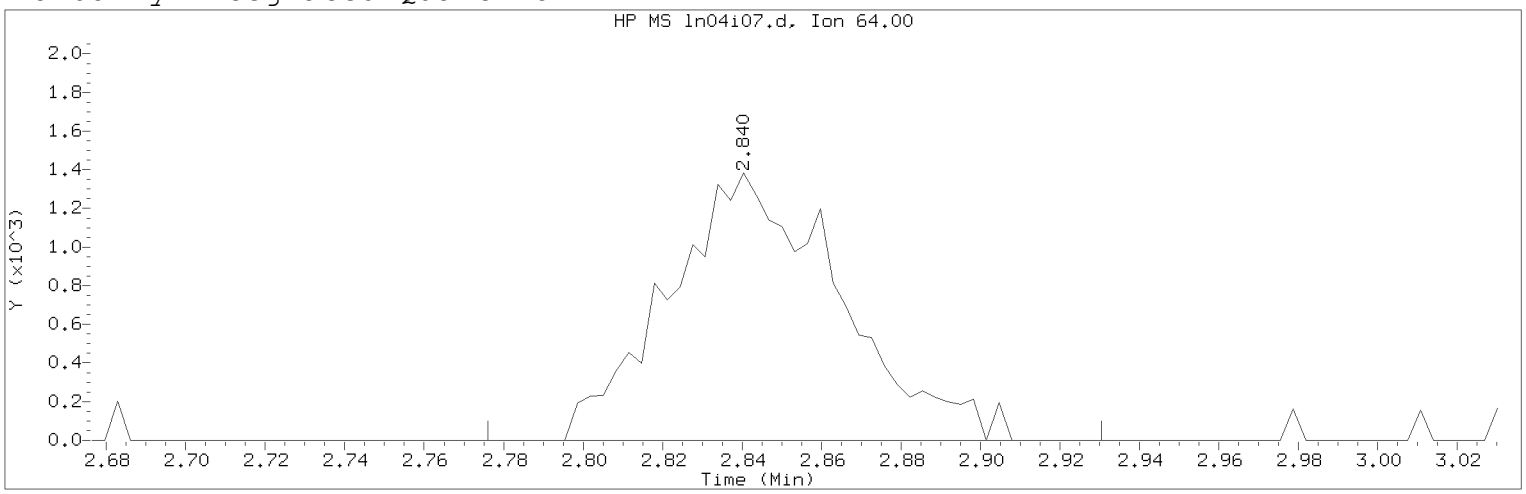
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 286
Retention Time (minutes): 2.403
Quant Ion : 39.00
Area : 5073
On-column Amount (ng) : 0.8493
Integration start scan : 276 Integration stop scan: 294
Y at integration start : 239 Y at integration end: 258

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

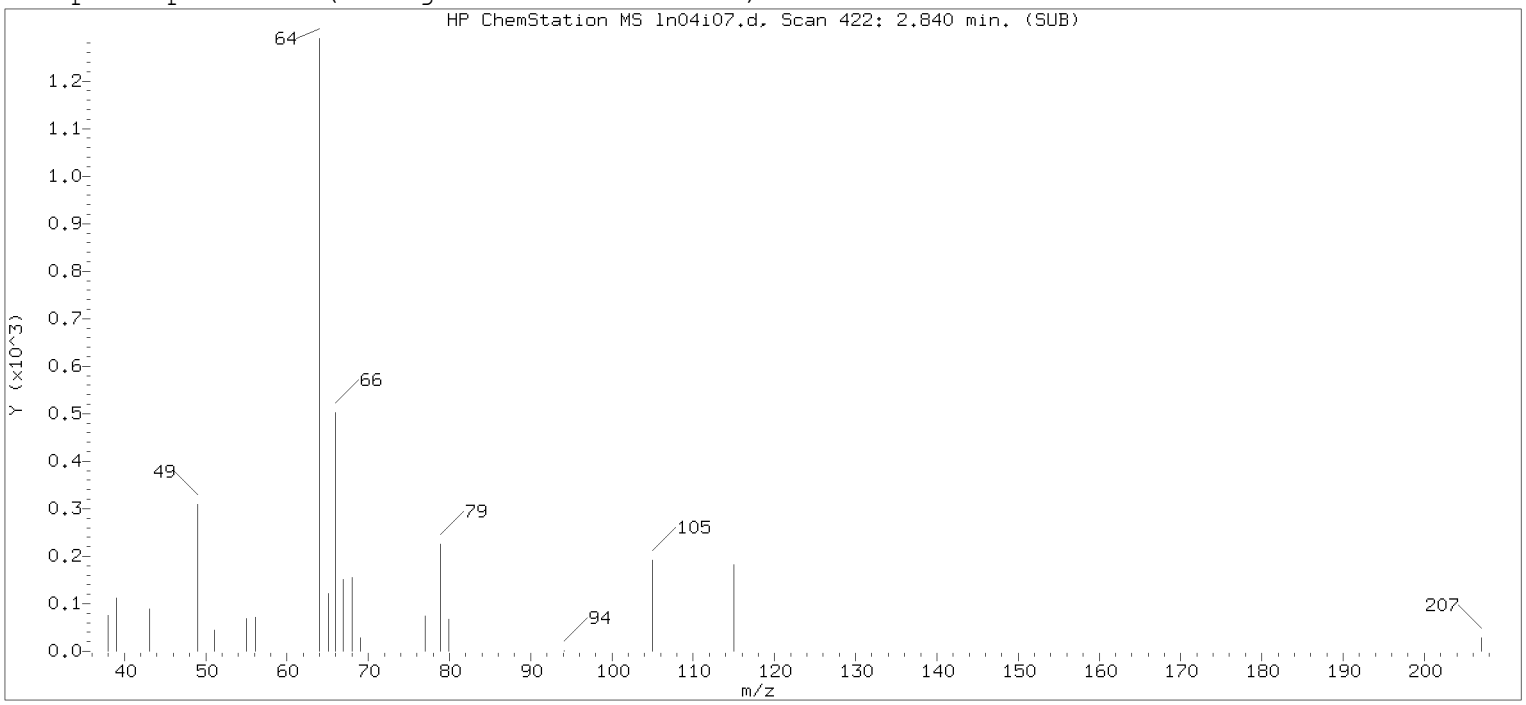
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 422
Retention Time (minutes): 2.840
Quant Ion : 64.00
Area (flag) : 4160M
On-Column Amount (ng) : 0.9924
Integration start scan : 401 Integration stop scan: 449
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

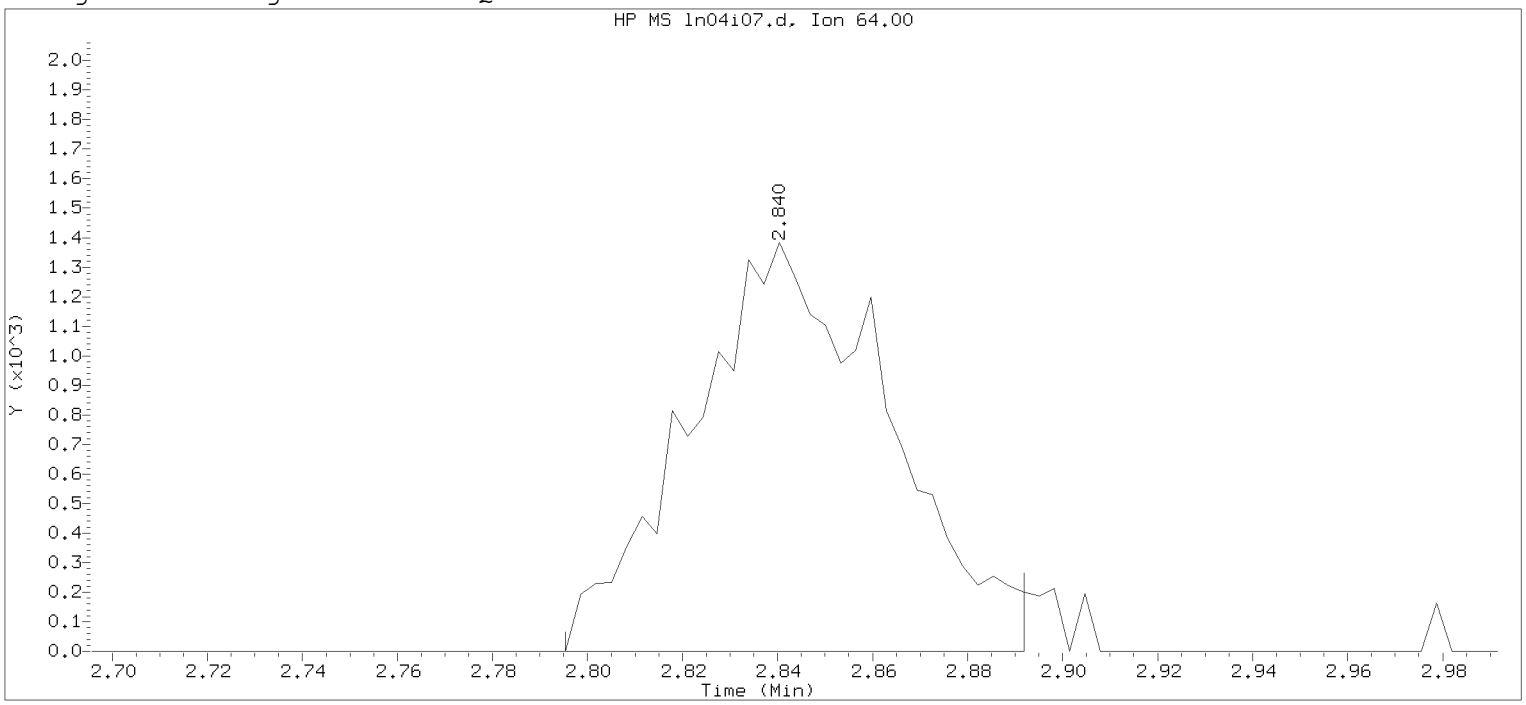
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

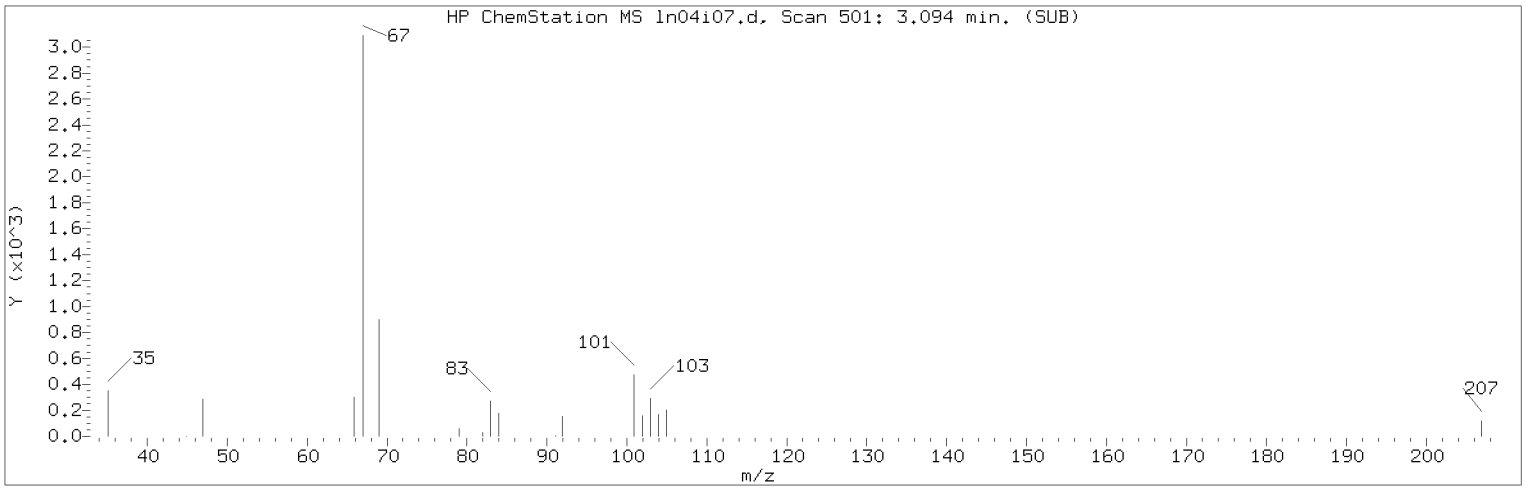
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

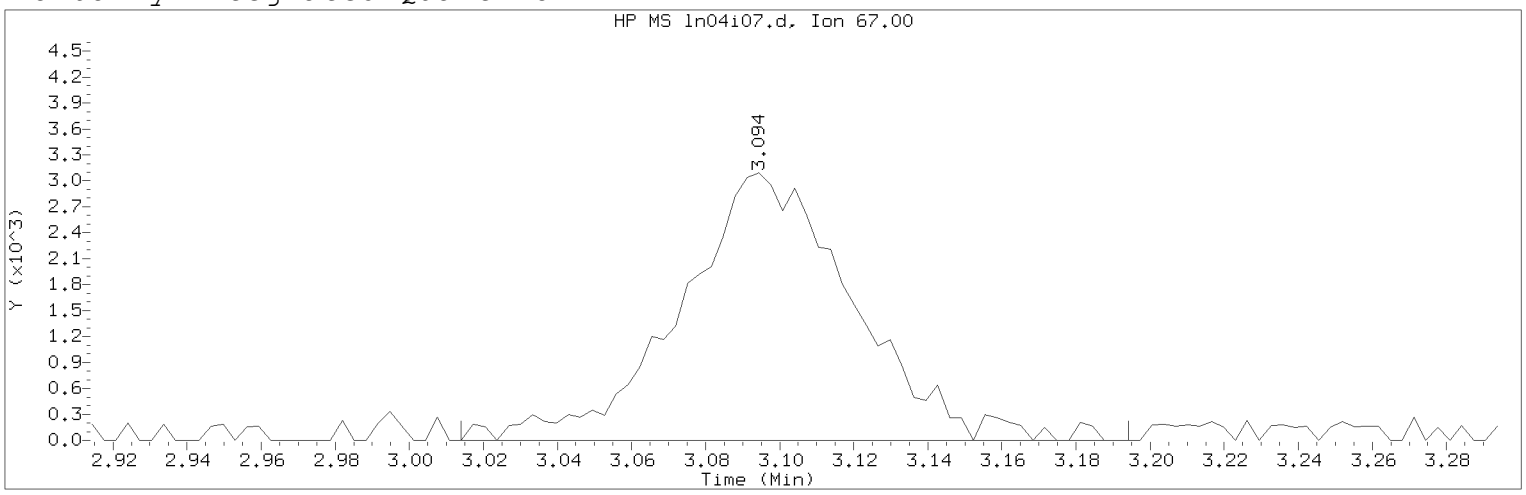
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 422
Retention Time (minutes): 2.840
Quant Ion : 64.00
Area : 4026
On-column Amount (ng) : 0.9650
Integration start scan : 407 Integration stop scan: 437
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

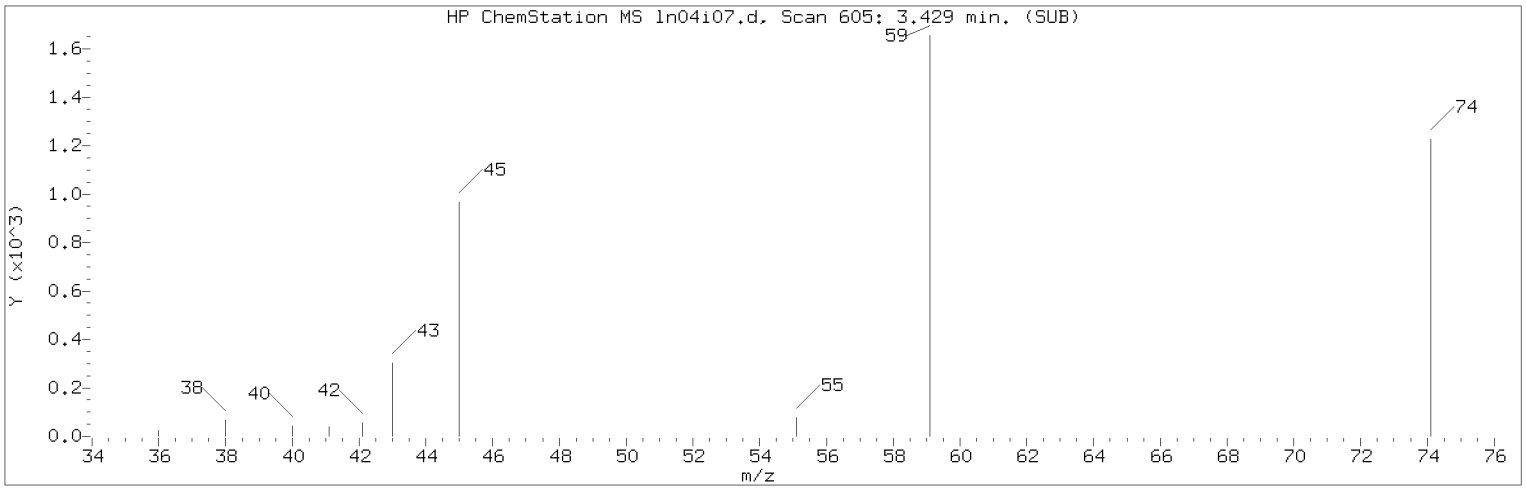
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 501
Retention Time (minutes): 3.094
Quant Ion : 67.00
Area (flag) : 10094M
On-Column Amount (ng) : 1.0040
Integration start scan : 475 Integration stop scan: 531
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

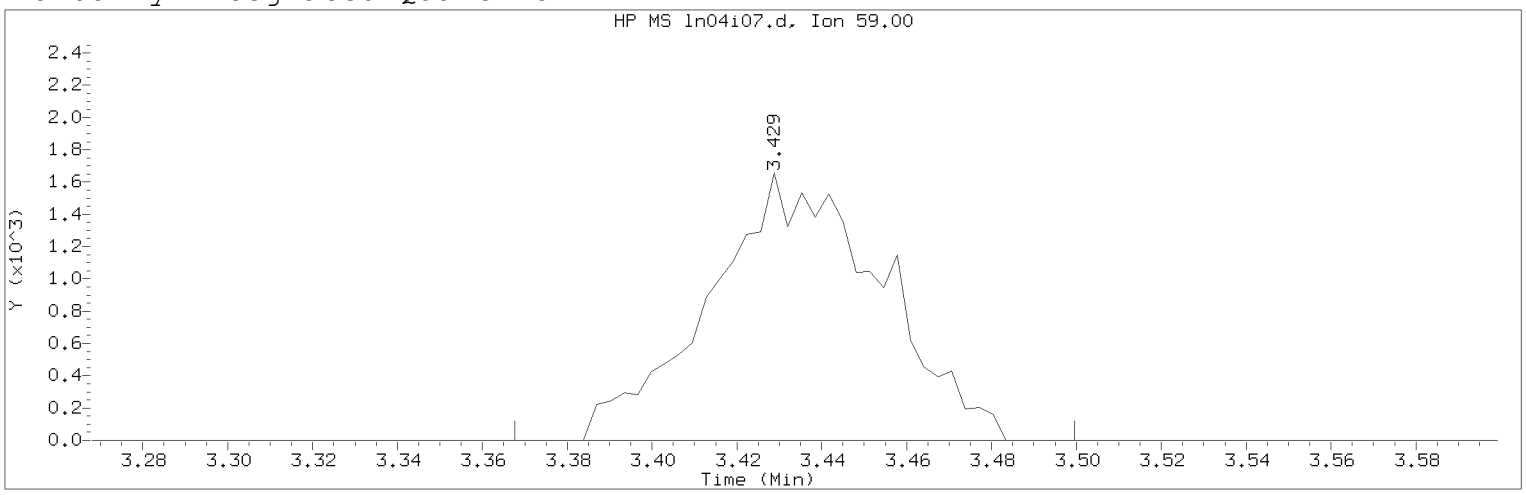
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

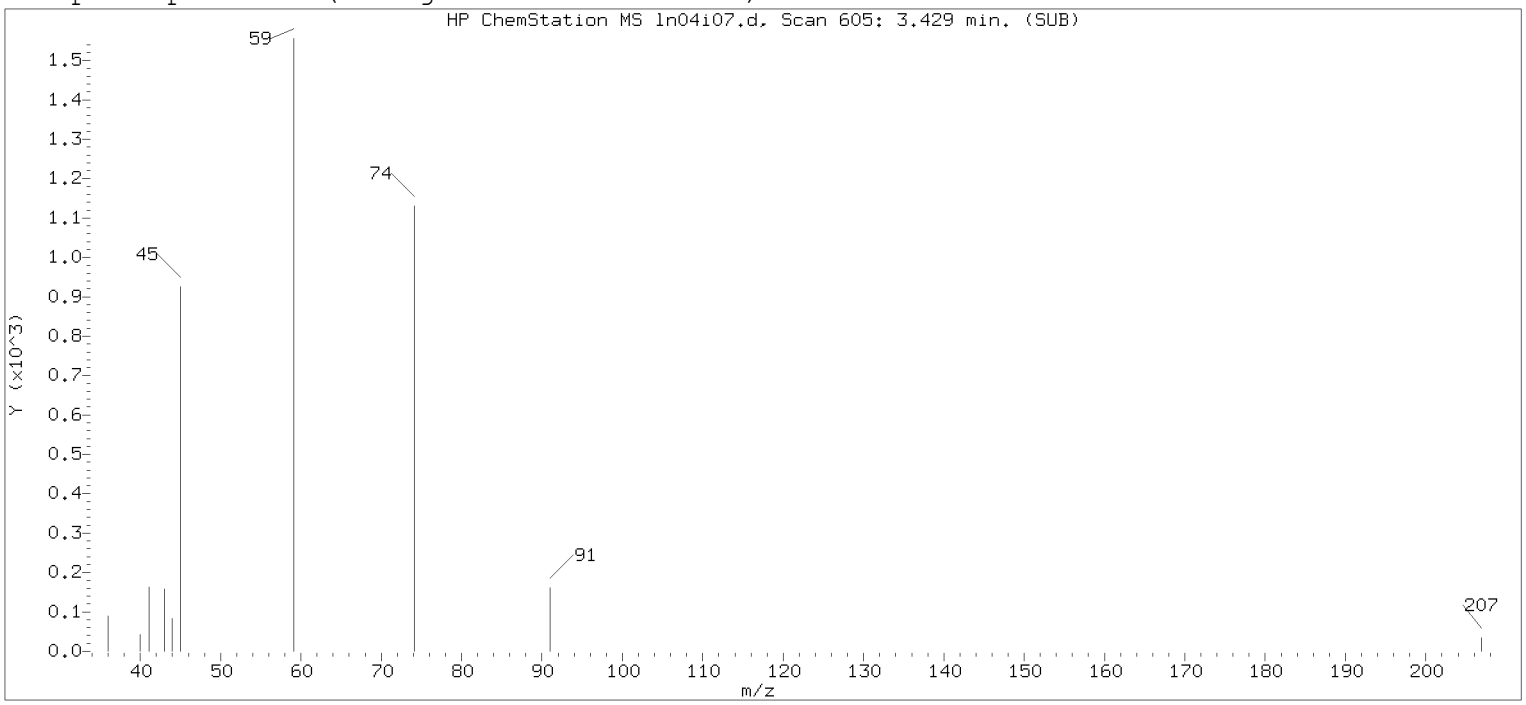
Compound Number : 14
Compound Name : Ethyl ether
Scan Number : 605
Retention Time (minutes): 3.429
Quant Ion : 59.00
Area (flag) : 4640M
On-Column Amount (ng) : 0.8744
Integration start scan : 585 Integration stop scan: 626
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

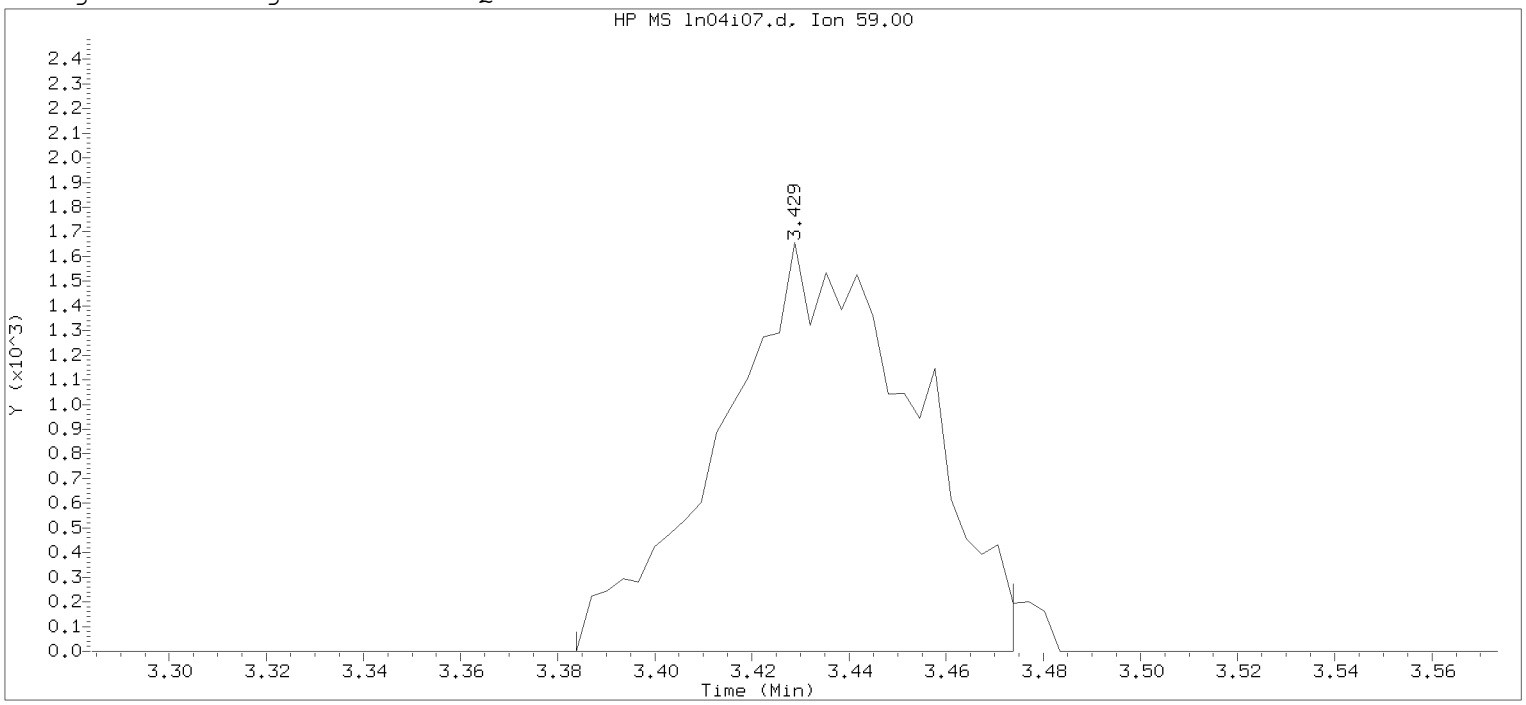
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

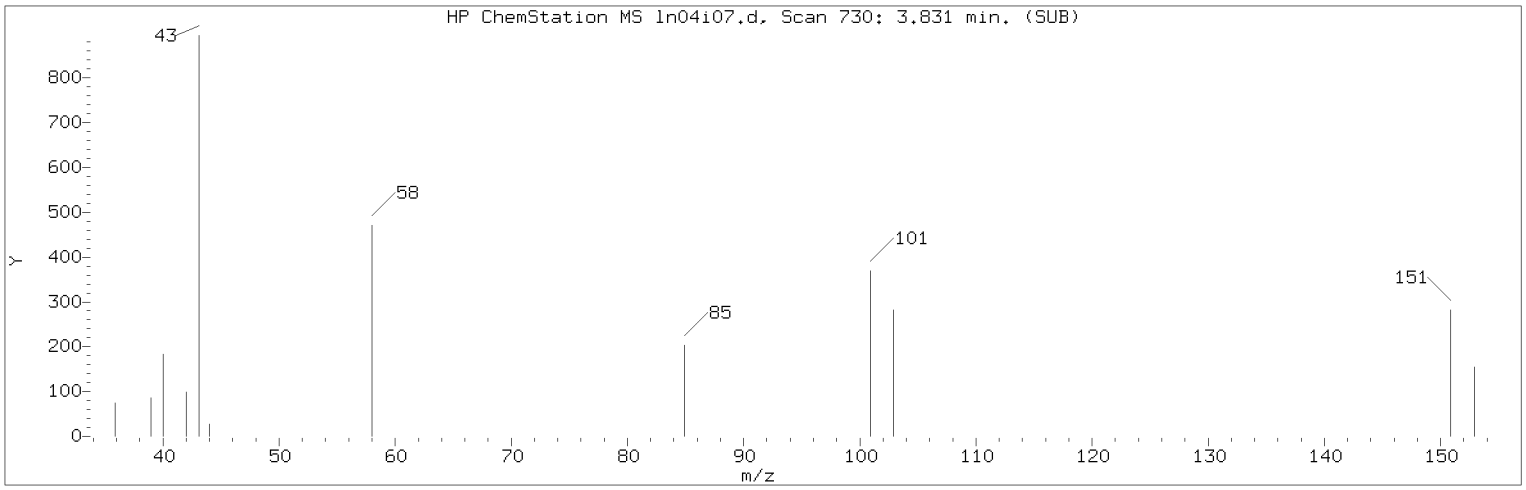
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

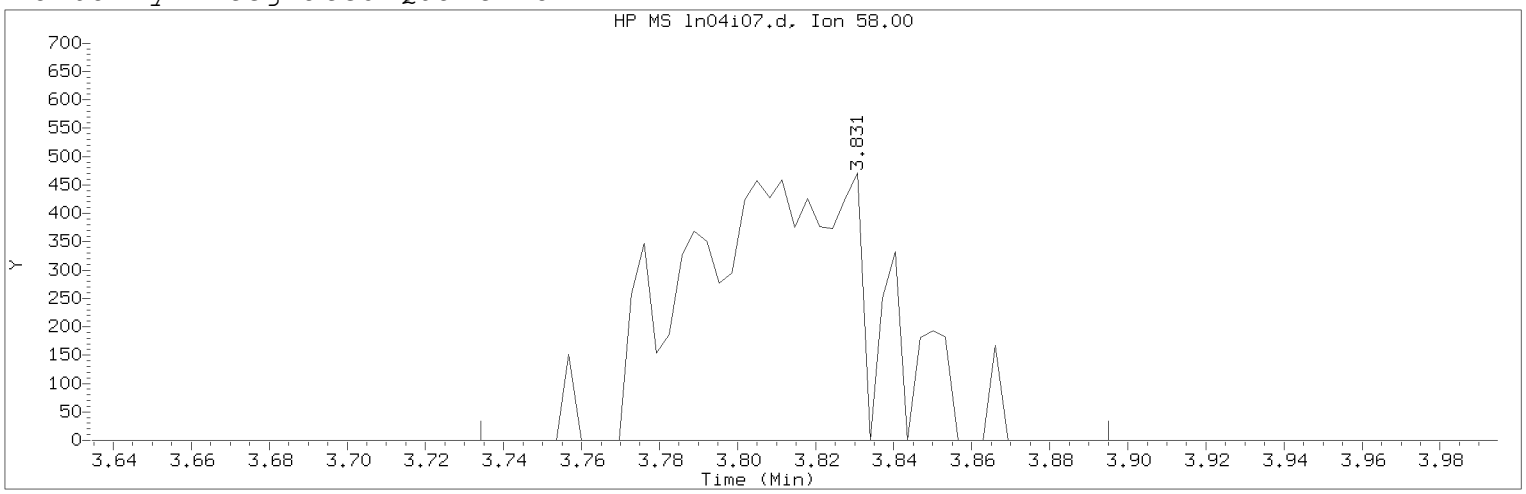
Compound Number : 14
Compound Name : Ethyl ether
Scan Number : 605
Retention Time (minutes): 3.429
Quant Ion : 59.00
Area : 4552
On-column Amount (ng) : 0.8599
Integration start scan : 590 Integration stop scan: 618
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

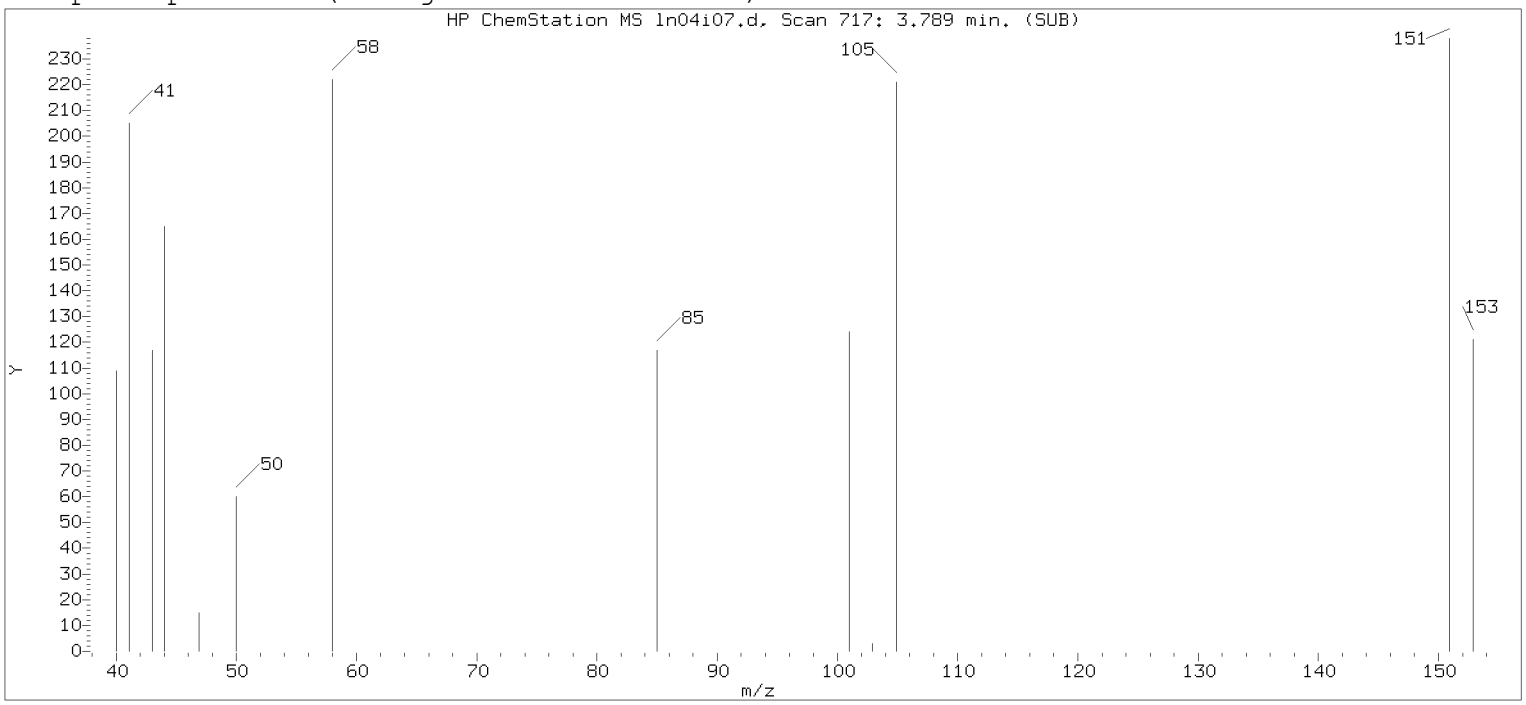
Compound Number : 18
Compound Name : Acetone
Scan Number : 730
Retention Time (minutes): 3.831
Quant Ion : 58.00
Area (flag) : 1588M
On-Column Amount (ng) : 1.9382
Integration start scan : 699 Integration stop scan: 749
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

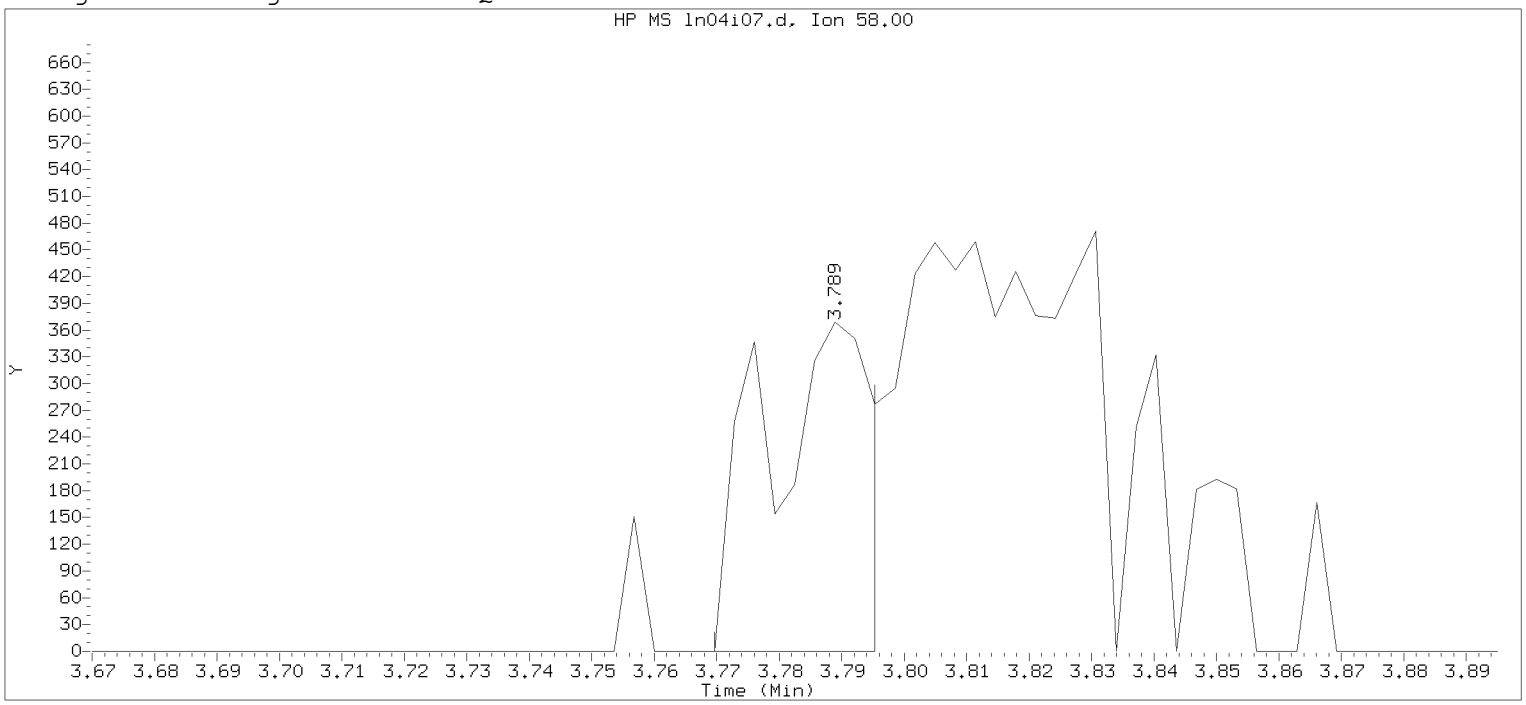
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

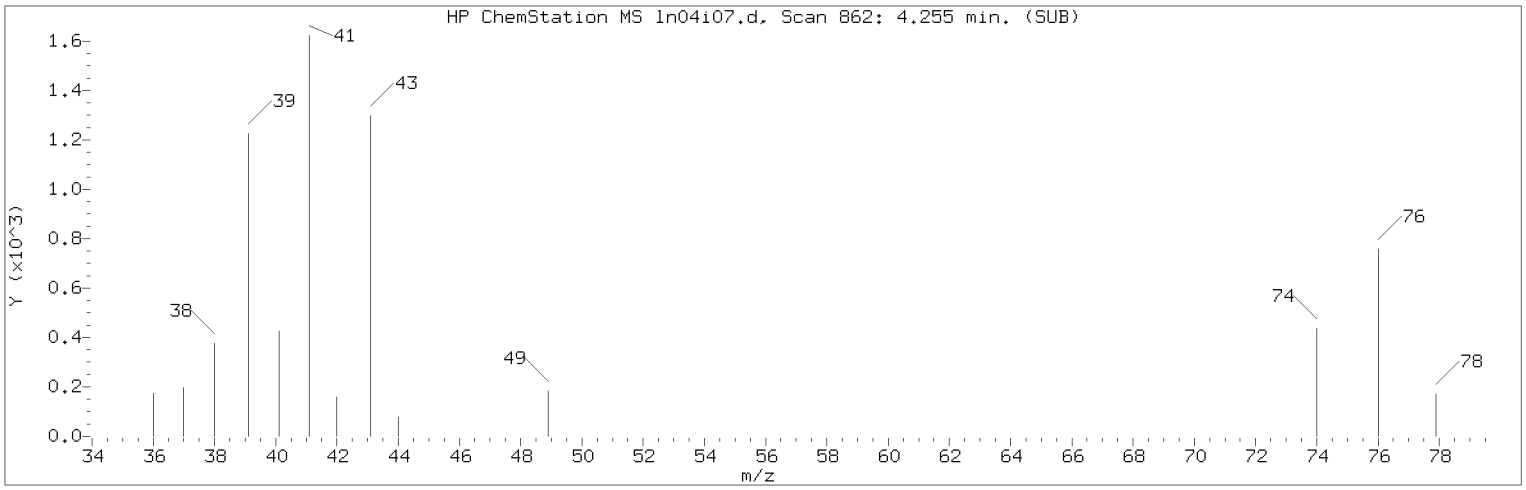
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

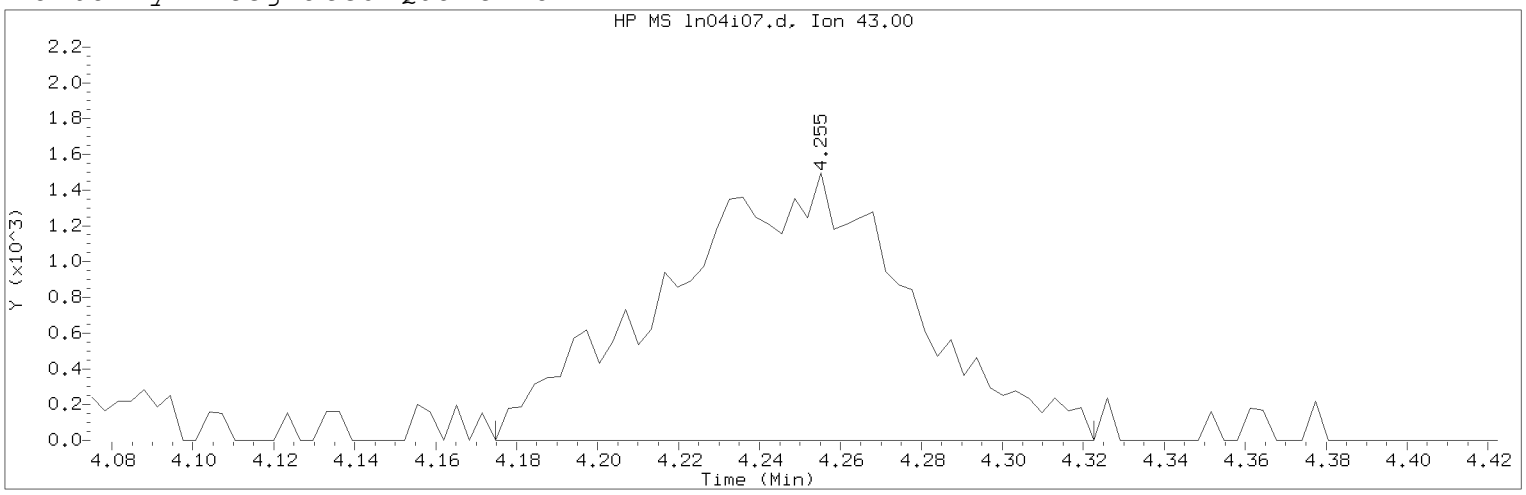
Compound Number : 18
Compound Name : Acetone
Scan Number : 717
Retention Time (minutes): 3.789
Quant Ion : 58.00
Area : 410
On-column Amount (ng) : 0.5644
Integration start scan : 710 Integration stop scan: 718
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

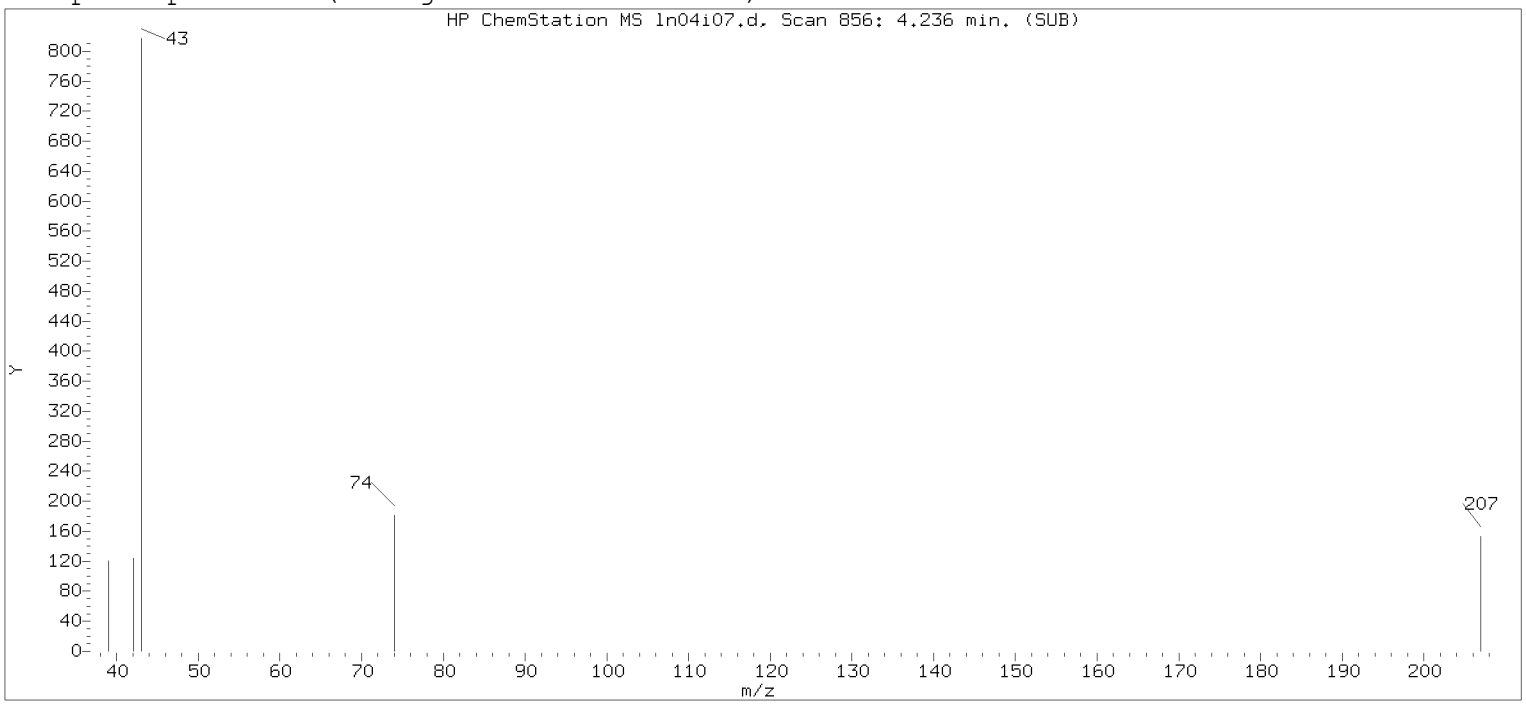
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 862
Retention Time (minutes): 4.255
Quant Ion : 43.00
Area (flag) : 6274M
On-Column Amount (ng) : 1.0106
Integration start scan : 836 Integration stop scan: 882
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

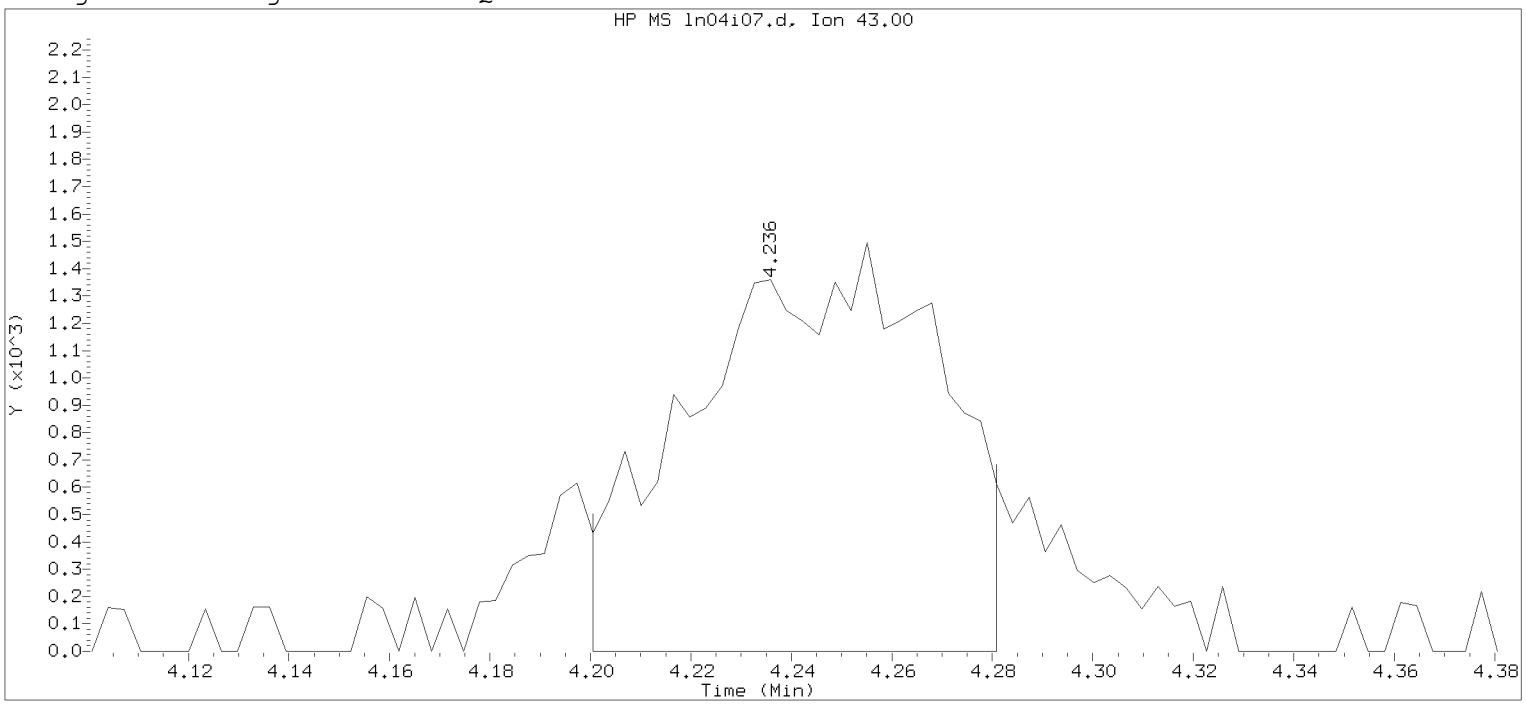
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

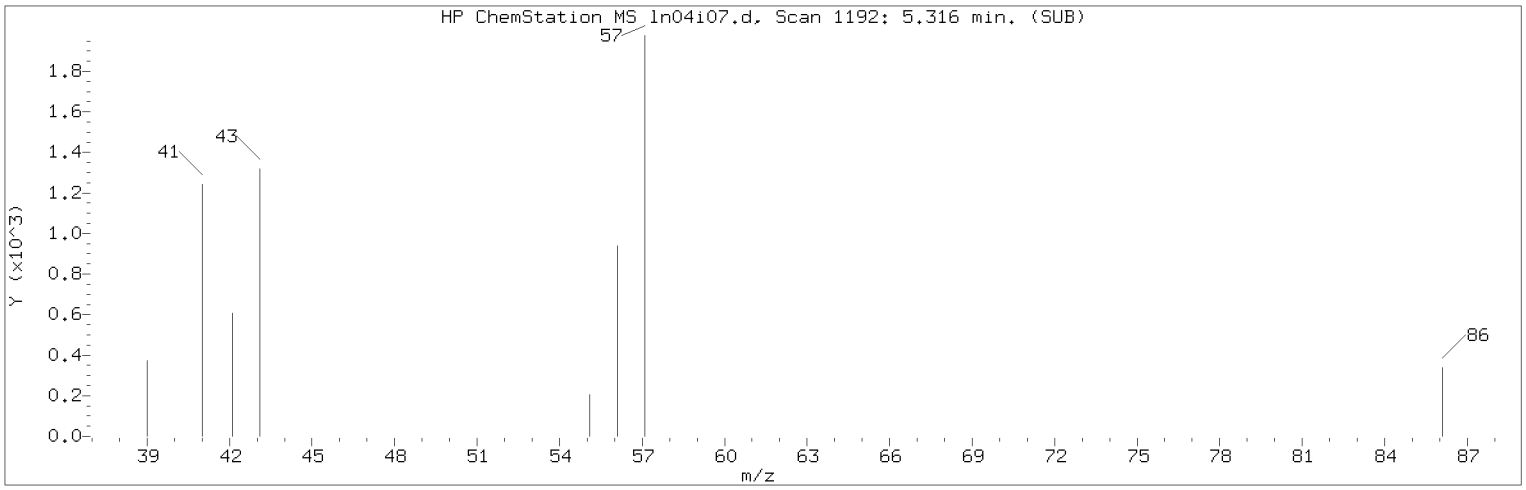
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

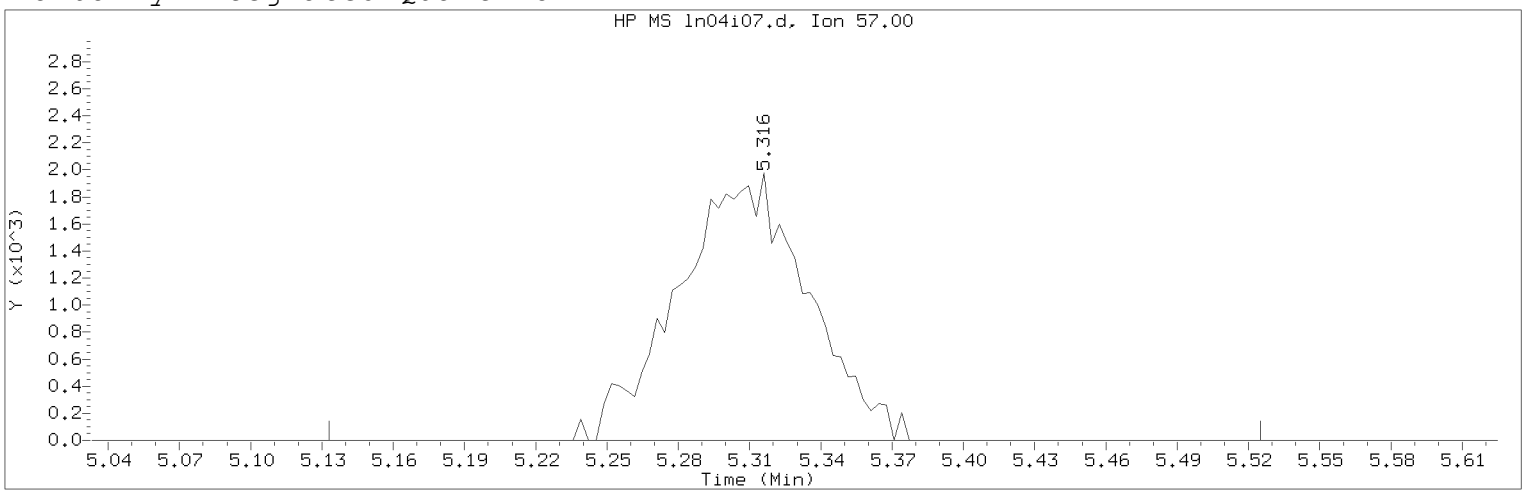
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 856
Retention Time (minutes): 4.236
Quant Ion : 43.00
Area : 4972
On-column Amount (ng) : 0.8386
Integration start scan : 844 Integration stop scan: 869
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

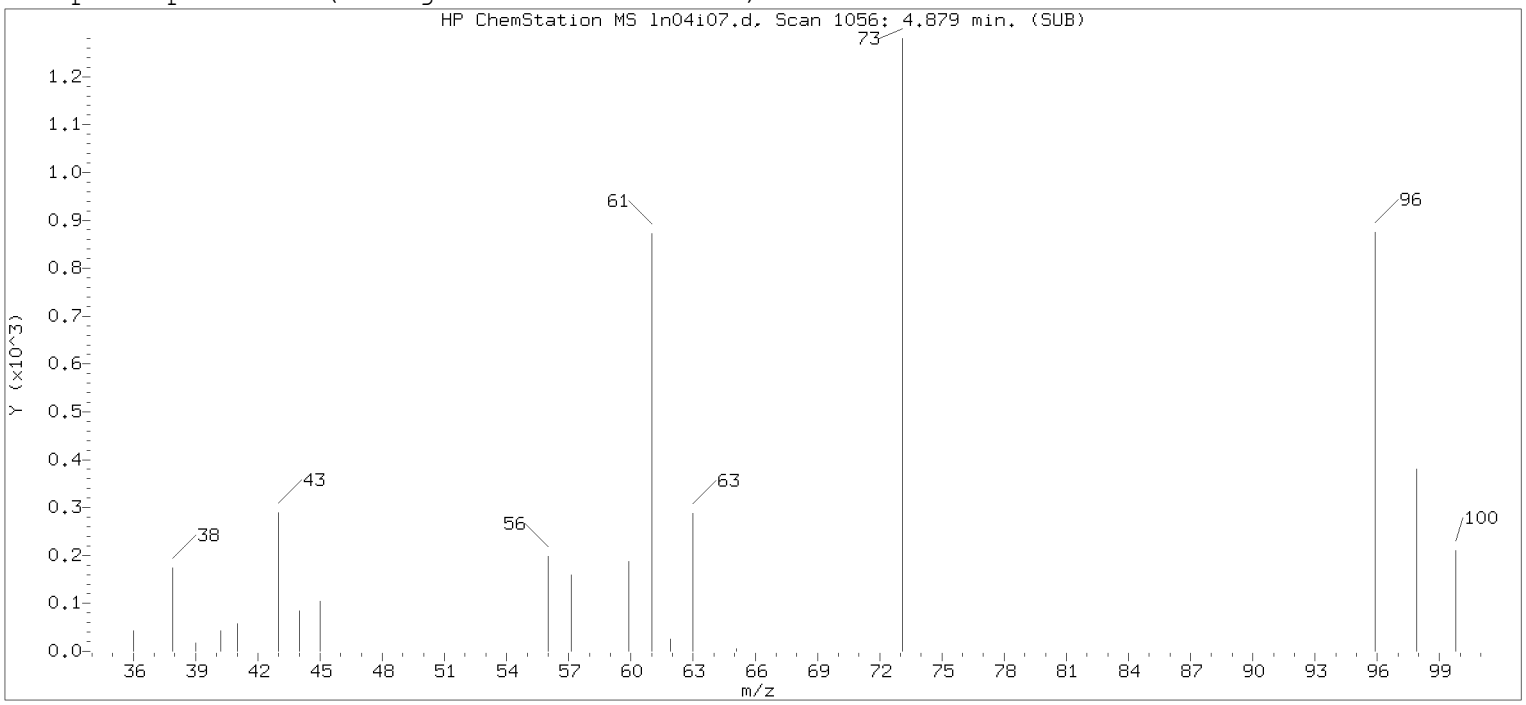
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1192
Retention Time (minutes): 5.316
Quant Ion : 57.00
Area (flag) : 7475M
On-Column Amount (ng) : 0.8616
Integration start scan : 1134 Integration stop scan: 1256
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

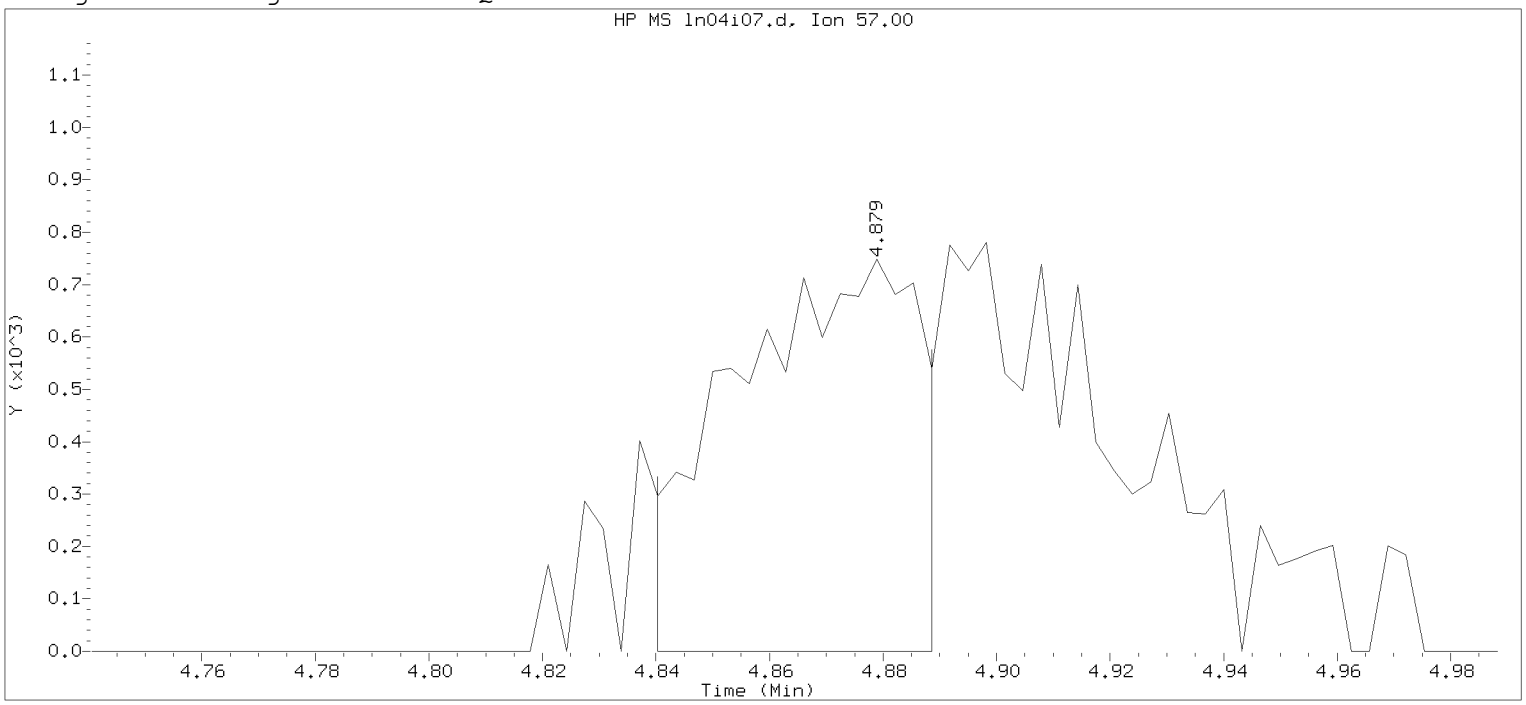
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

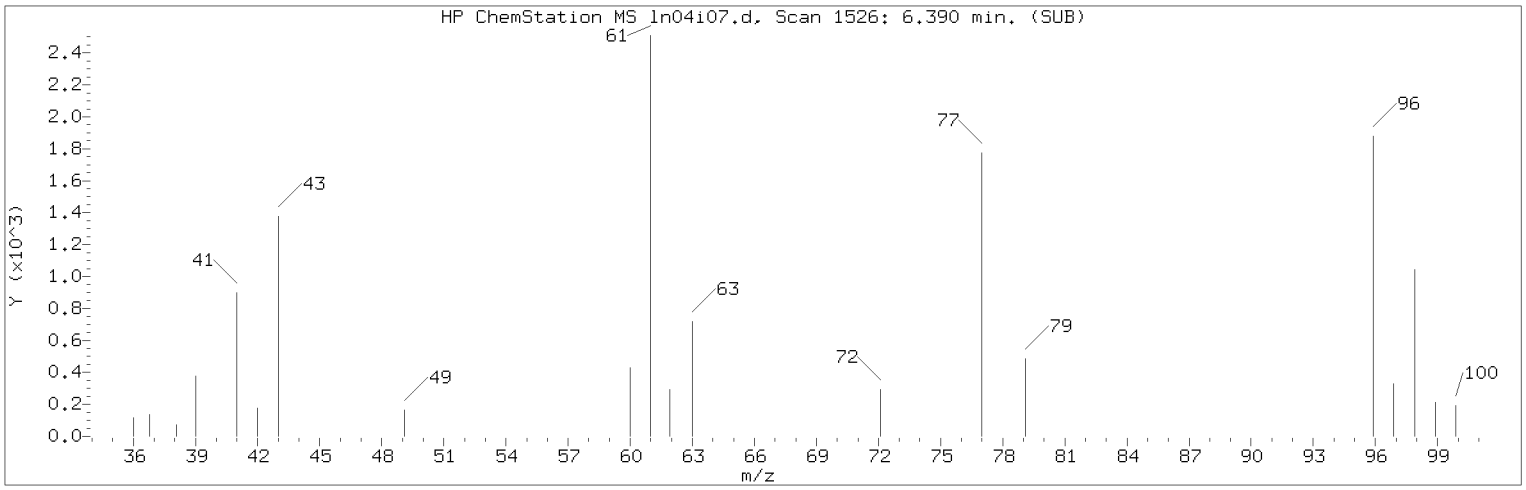
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

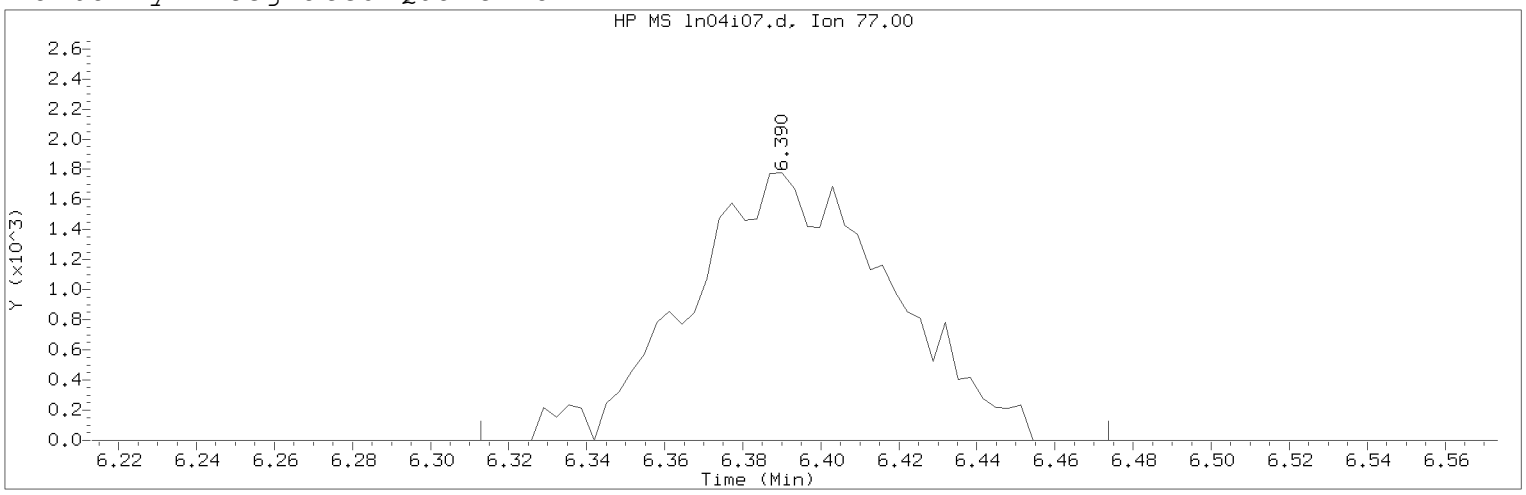
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1056		
Retention Time (minutes)	: 4.879		
Quant Ion	: 57.00		
Area	: 1663		
On-column Amount (ng)	: 0.4635		
Integration start scan	: 1043	Integration stop scan:	1058
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

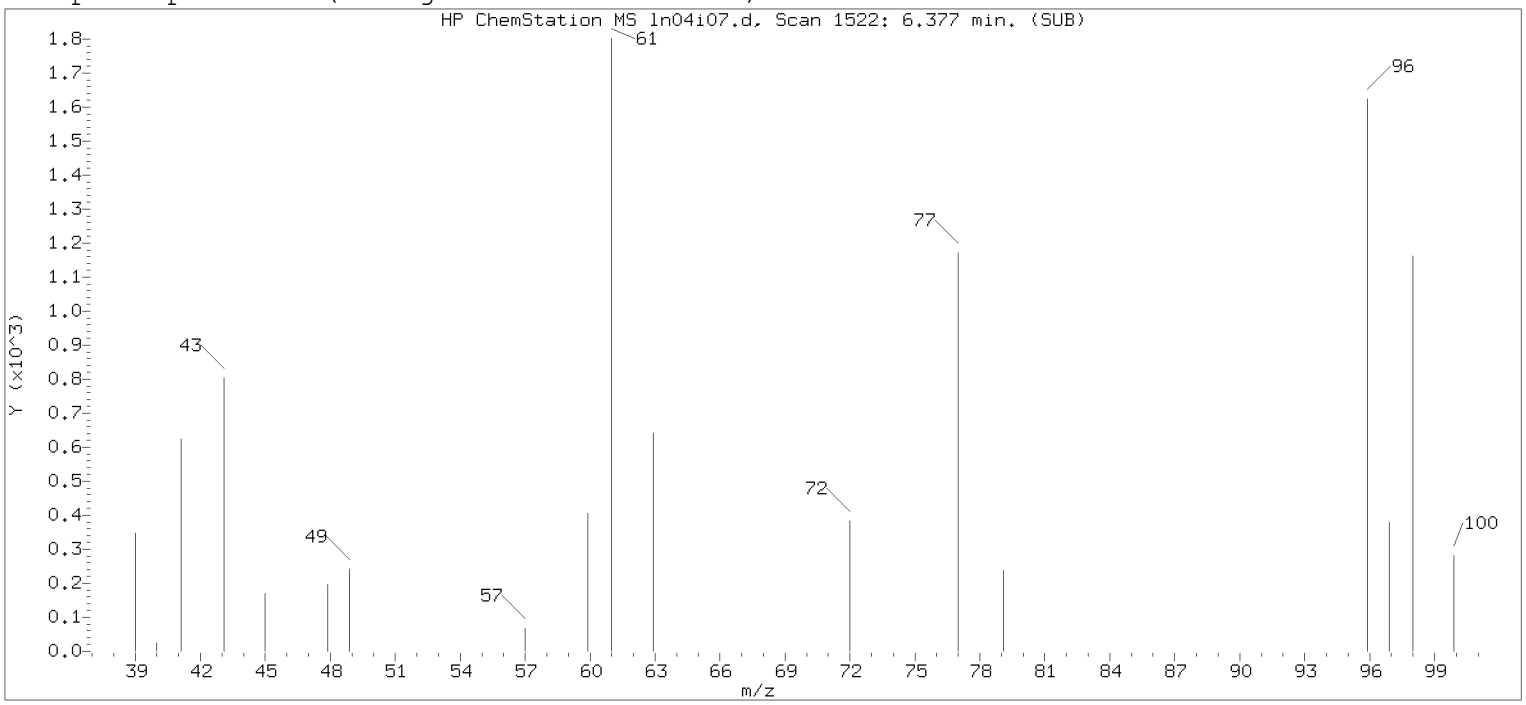
Compound Number : 45
Compound Name : 2,2-Dichloropropane
Scan Number : 1526
Retention Time (minutes): 6.390
Quant Ion : 77.00
Area (flag) : 6419M
On-Column Amount (ng) : 0.8488
Integration start scan : 1501 Integration stop scan: 1551
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

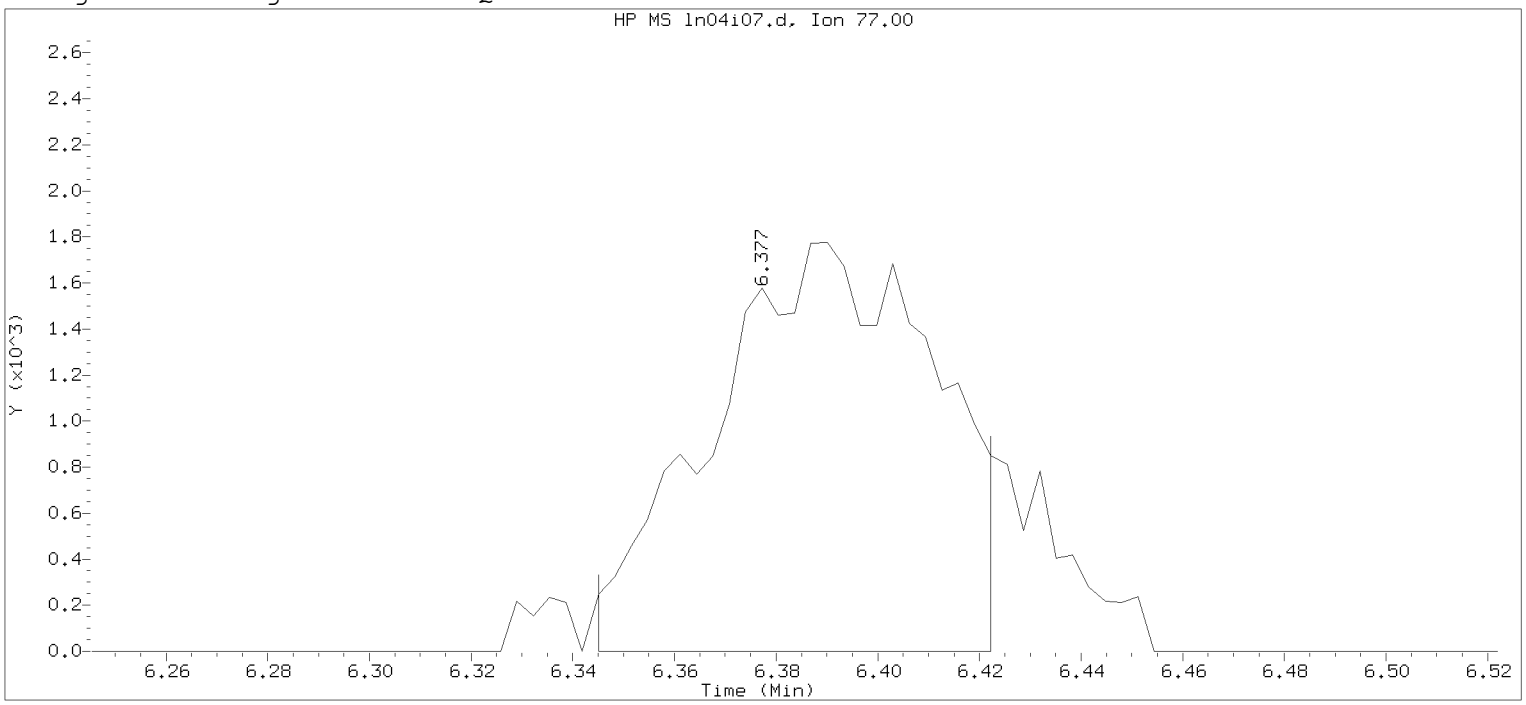
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

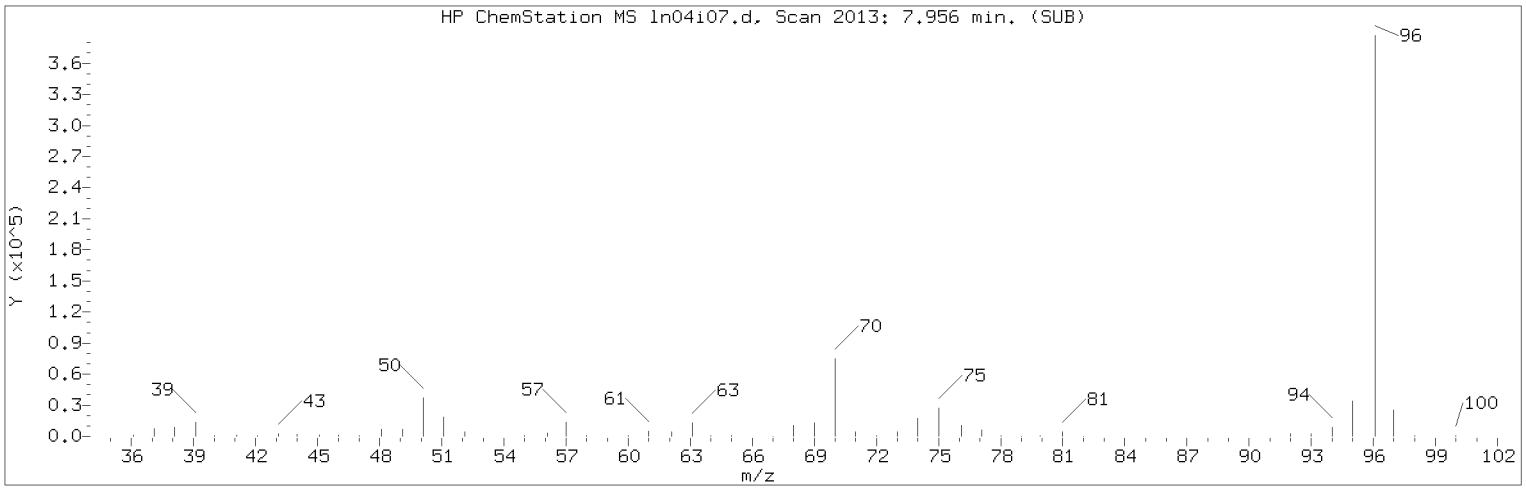
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

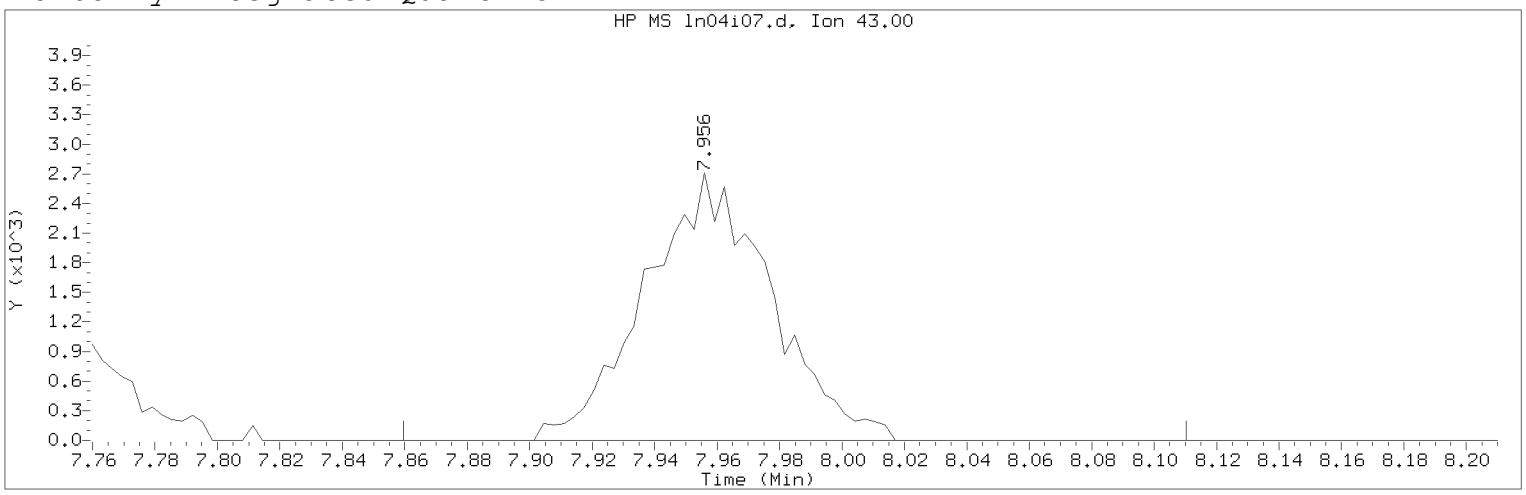
Compound Number : 45
Compound Name : 2,2-Dichloropropane
Scan Number : 1522
Retention Time (minutes): 6.377
Quant Ion : 77.00
Area : 5406
On-column Amount (ng) : 0.7289
Integration start scan : 1511 Integration stop scan: 1535
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

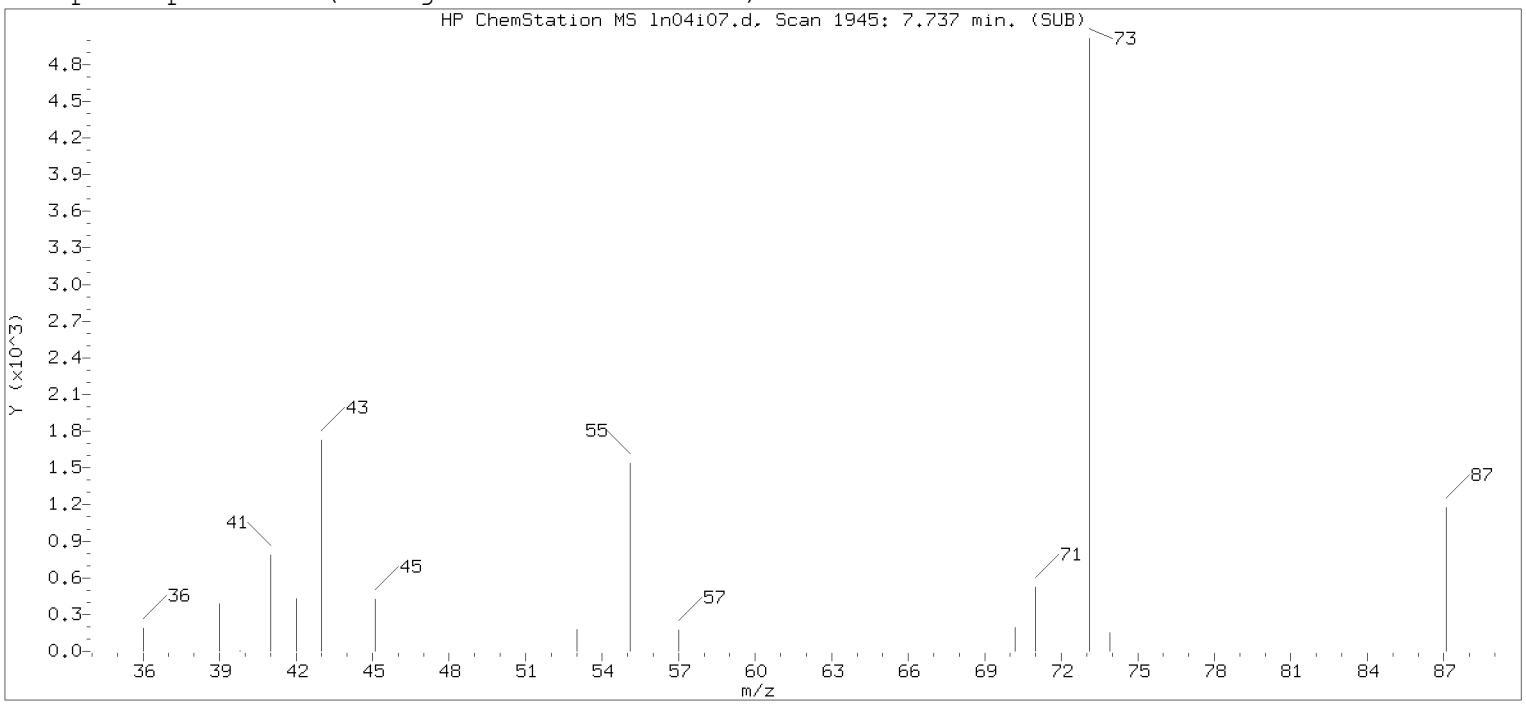
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2013
Retention Time (minutes): 7.956
Quant Ion : 43.00
Area (flag) : 7535M
On-Column Amount (ng) : 0.9297
Integration start scan : 1982 Integration stop scan: 2060
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

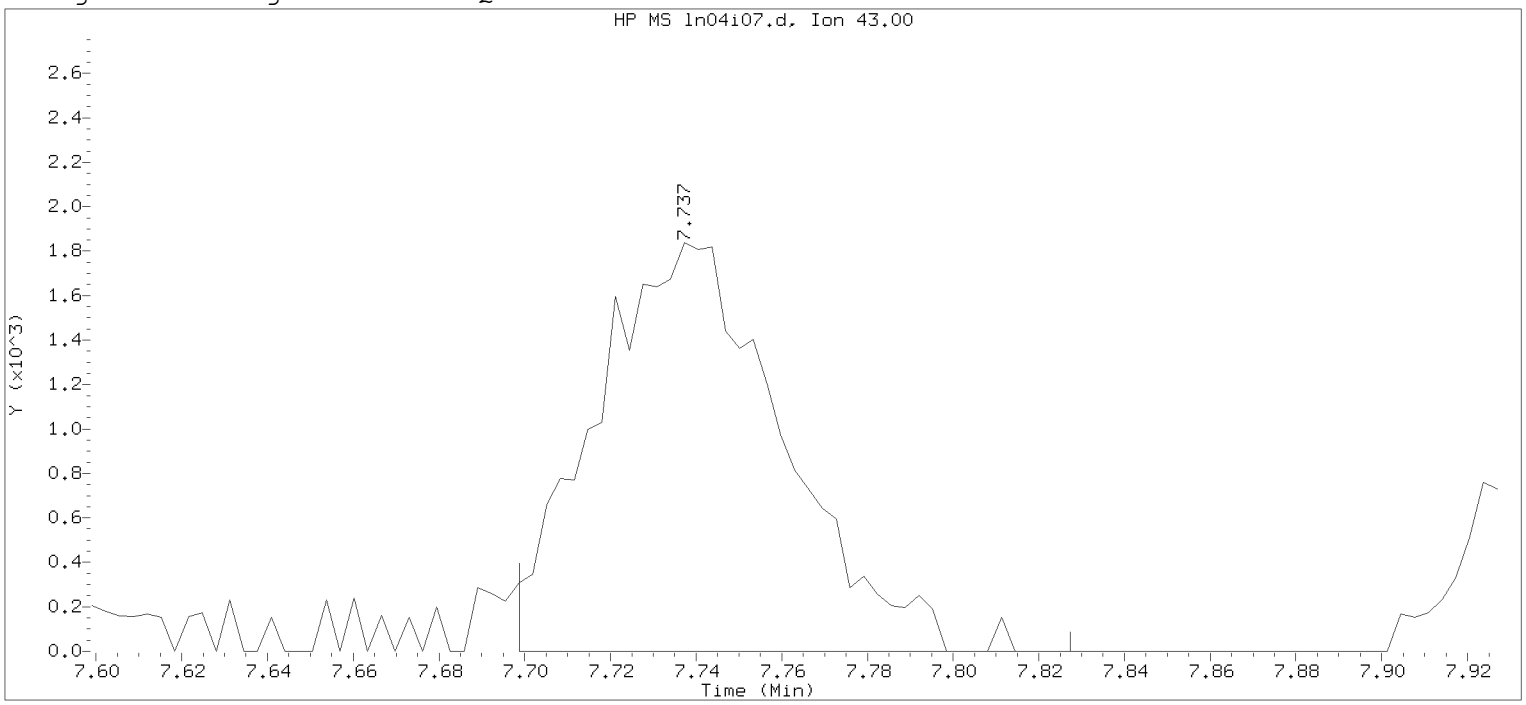
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

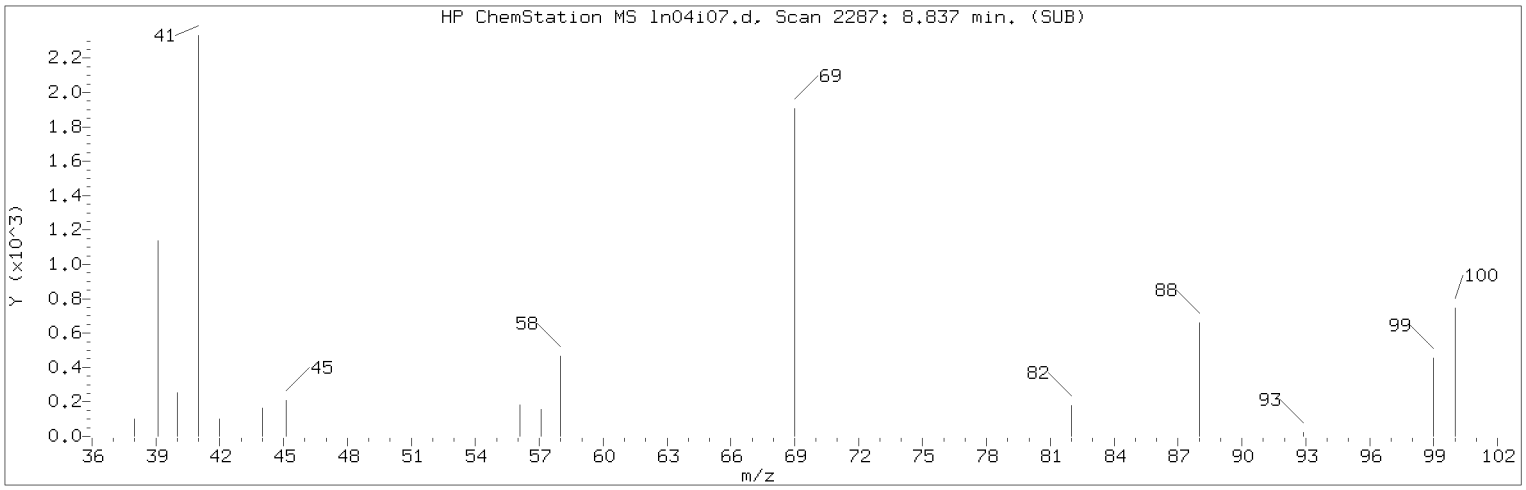
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

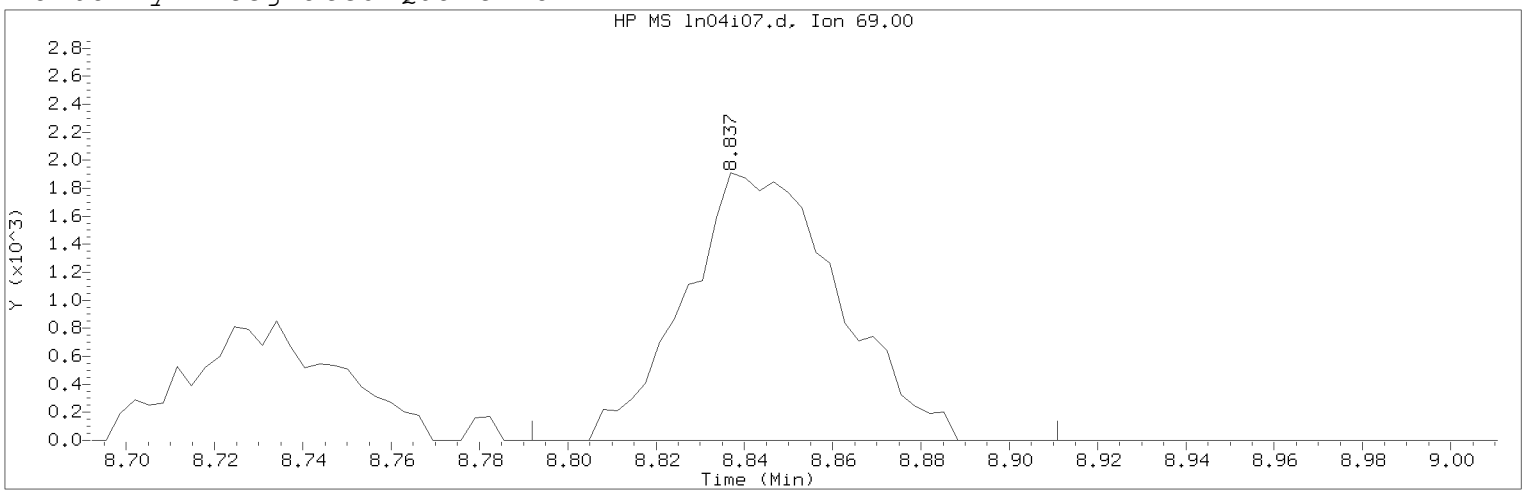
Compound Number	: 67		
Compound Name	: n-Heptane		
Scan Number	: 1945		
Retention Time (minutes)	: 7.737		
Quant Ion	: 43.00		
Area	: 5623		
On-column Amount (ng)	: 0.9372		
Integration start scan	: 1932	Integration stop scan:	1972
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

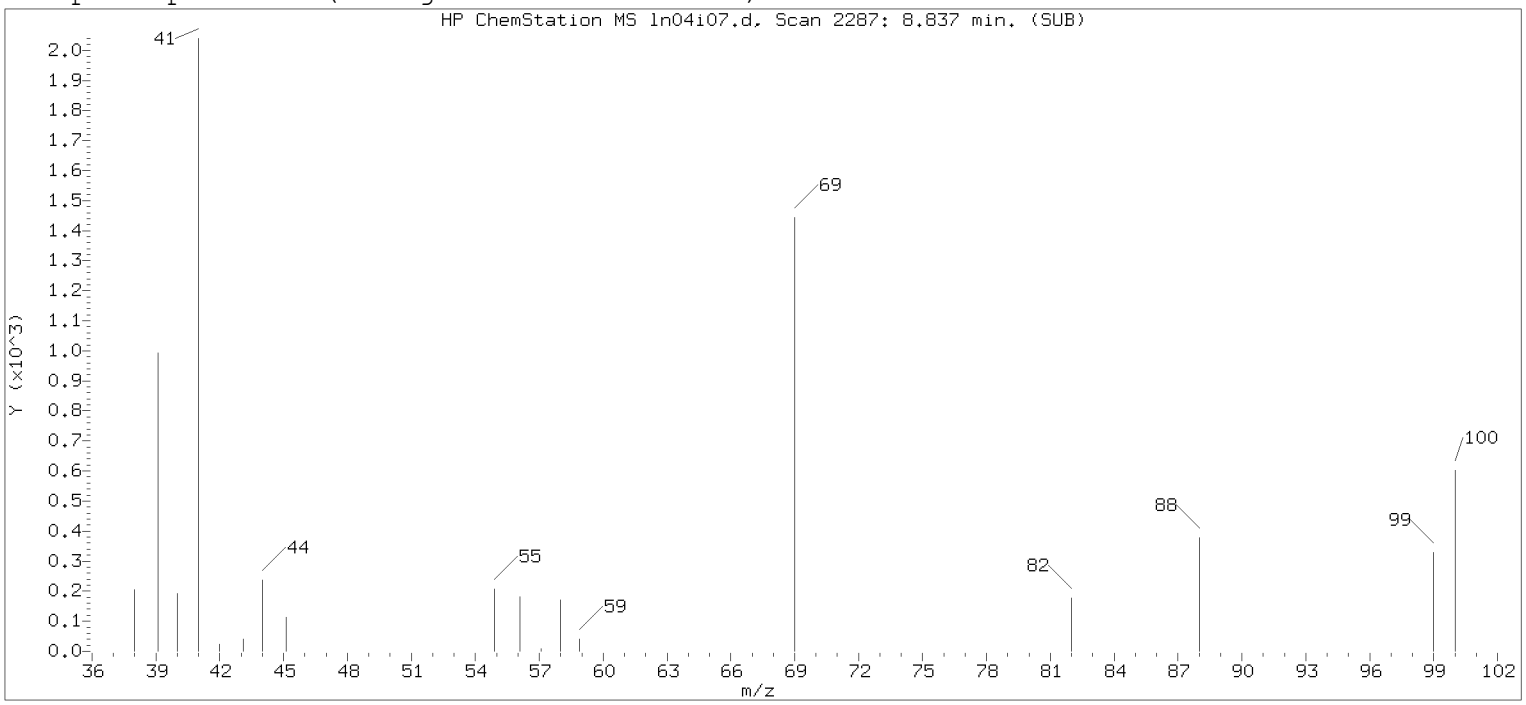
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2287
Retention Time (minutes): 8.837
Quant Ion : 69.00
Area (flag) : 4607M
On-Column Amount (ng) : 0.8112
Integration start scan : 2272 Integration stop scan: 2309
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

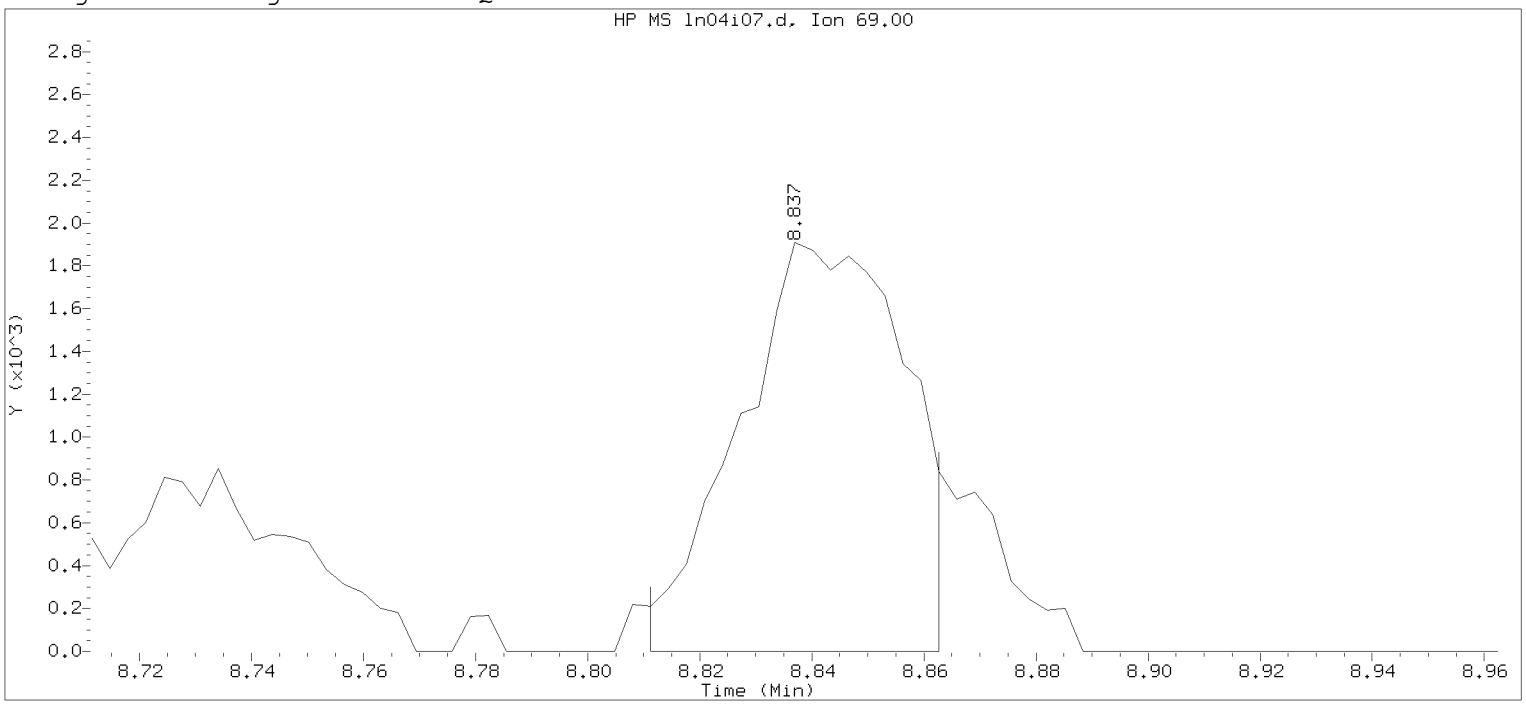
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

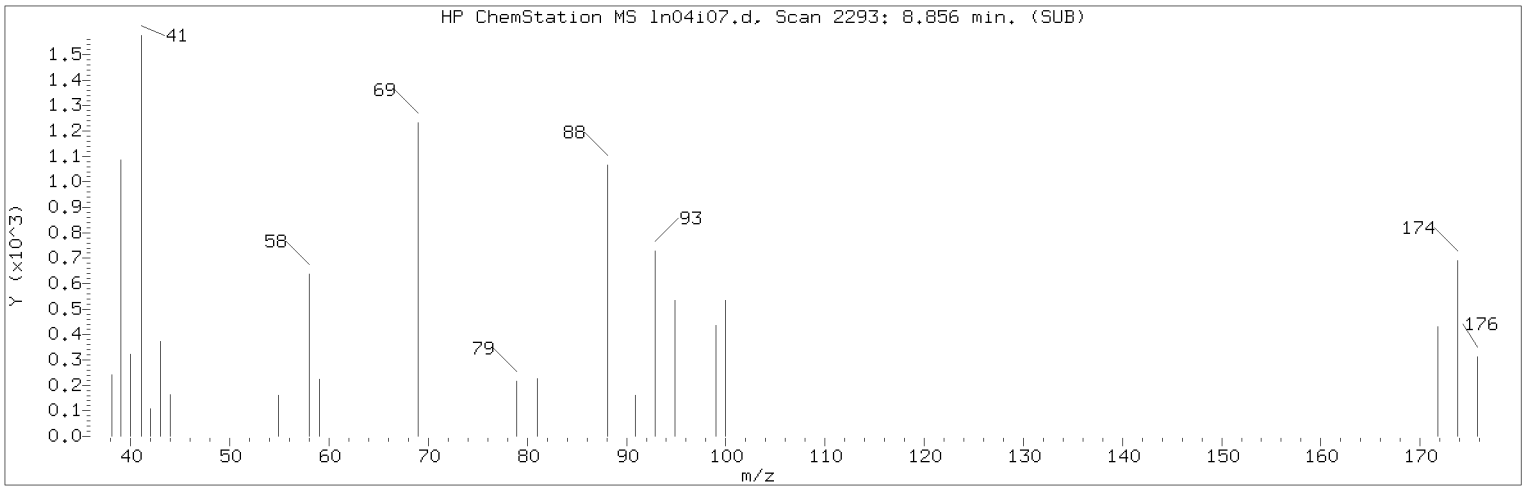
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

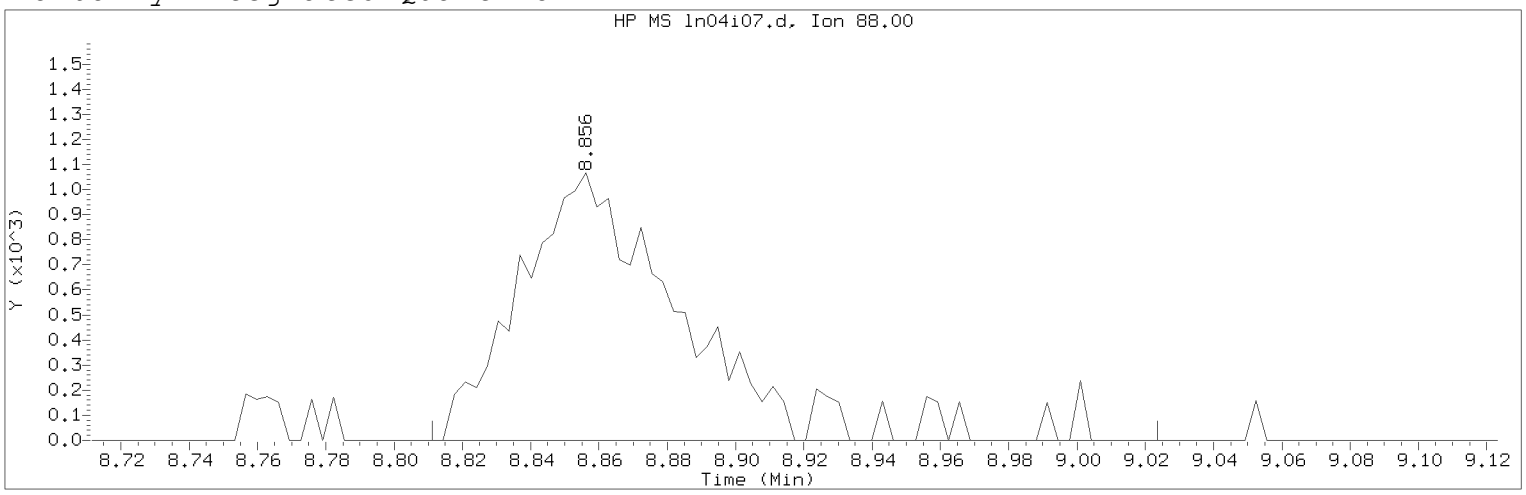
Compound Number	: 76		
Compound Name	: Methyl Methacrylate		
Scan Number	: 2287		
Retention Time (minutes)	: 8.837		
Quant Ion	: 69.00		
Area	: 3874		
On-column Amount (ng)	: 0.7186		
Integration start scan	: 2278	Integration stop scan:	2294
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

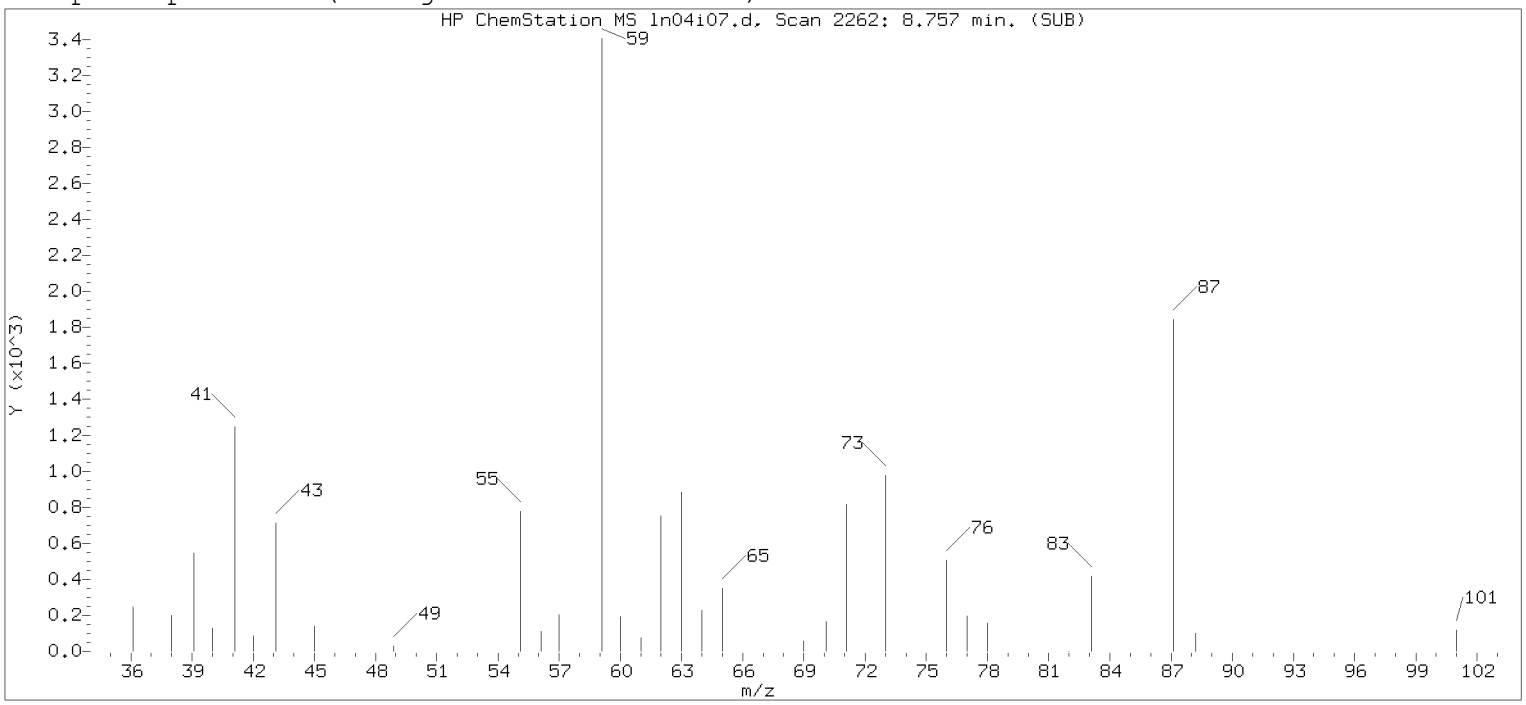
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 3548M
On-Column Amount (ng) : 43.4574
Integration start scan : 2278 Integration stop scan: 2344
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

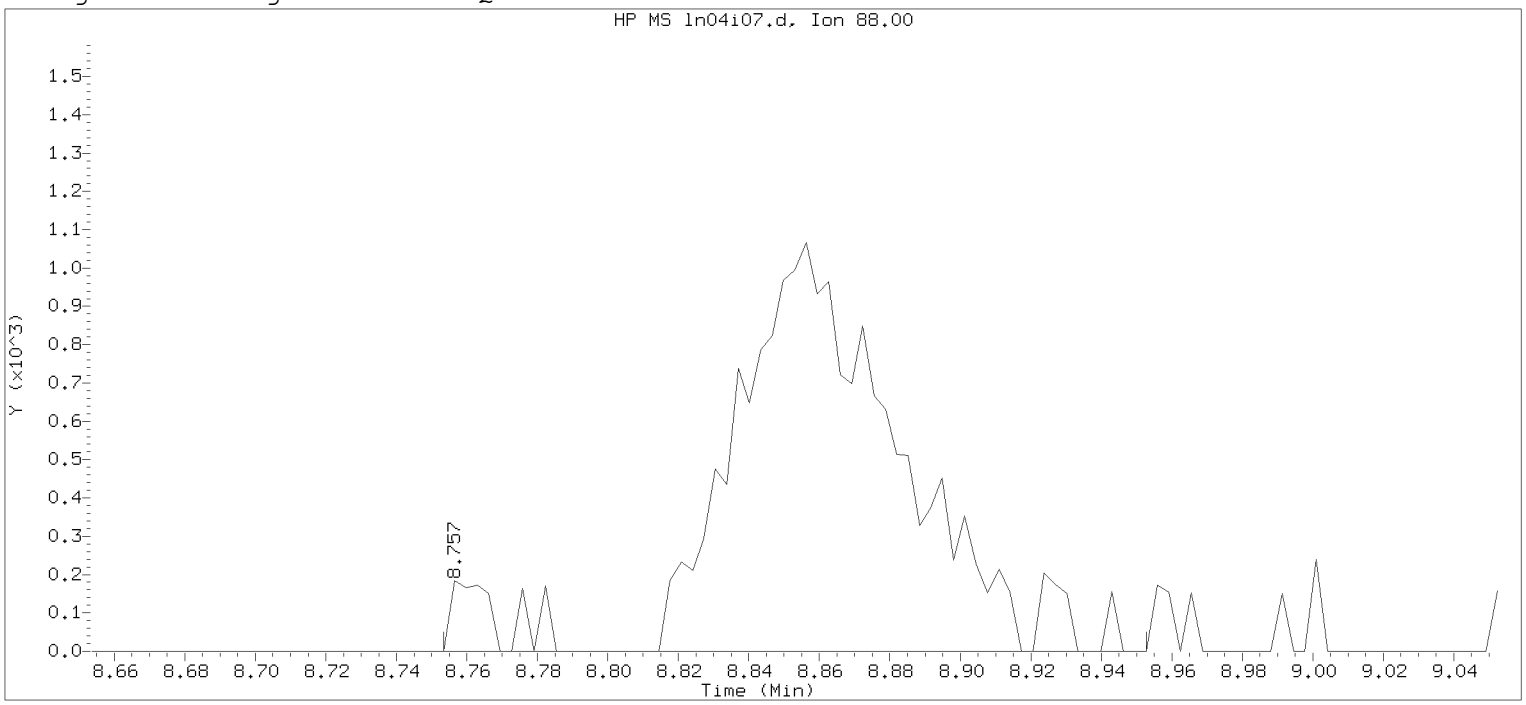
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

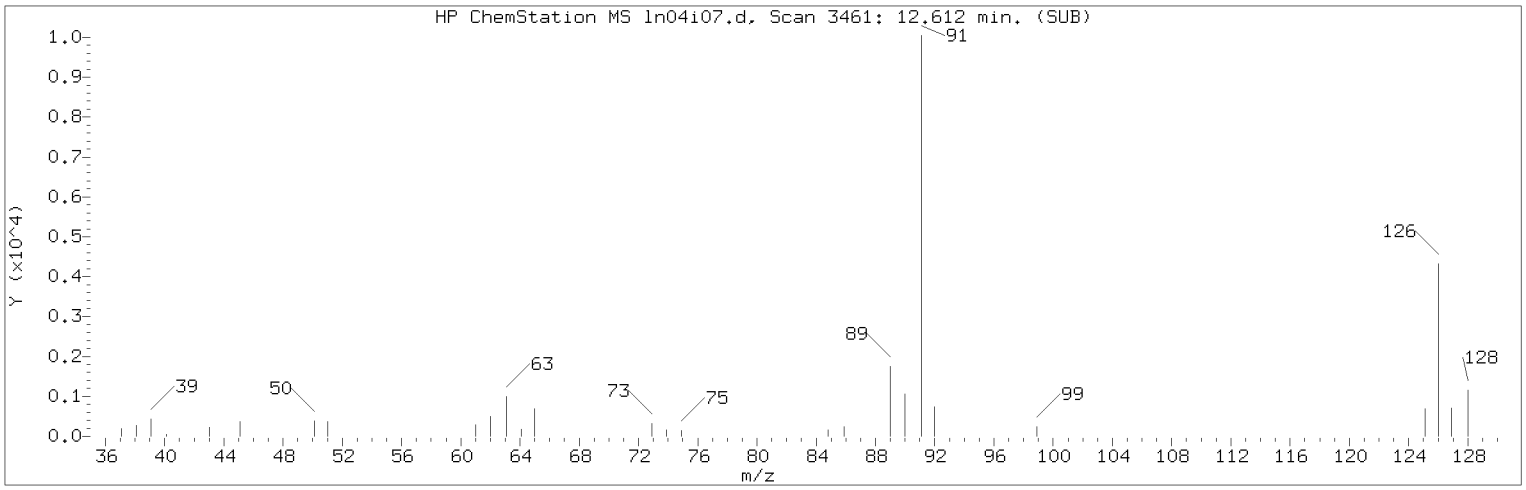
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

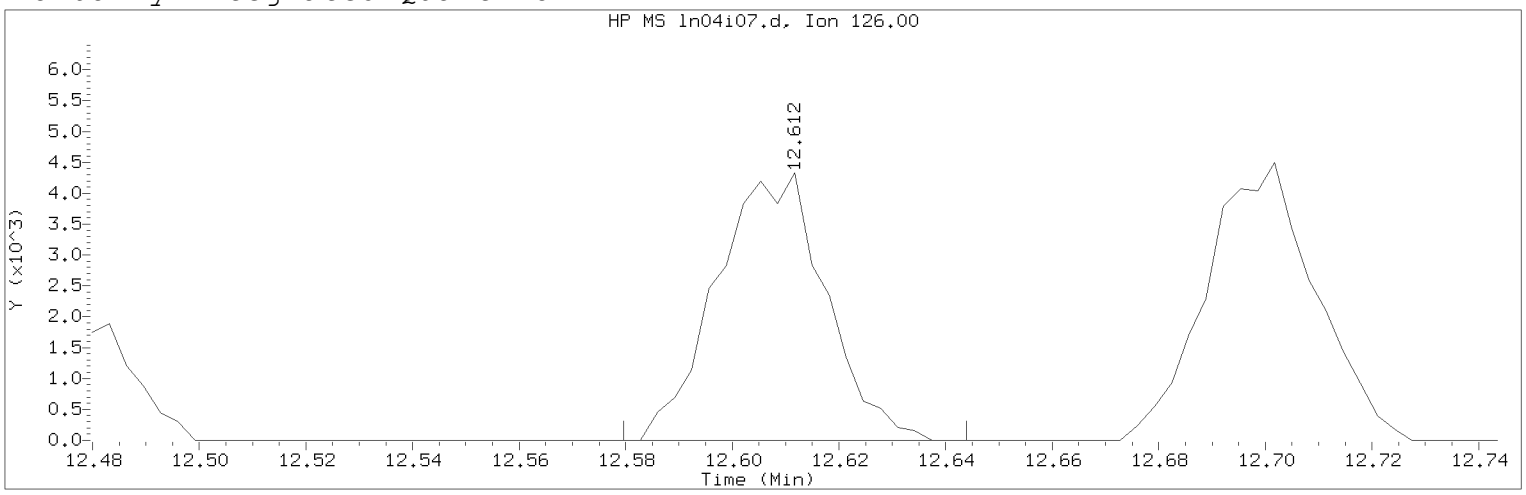
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2262
Retention Time (minutes): 8.757
Quant Ion : 88.00
Area : 3575
On-column Amount (ng) : 43.6406
Integration start scan : 2260 Integration stop scan: 2322
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

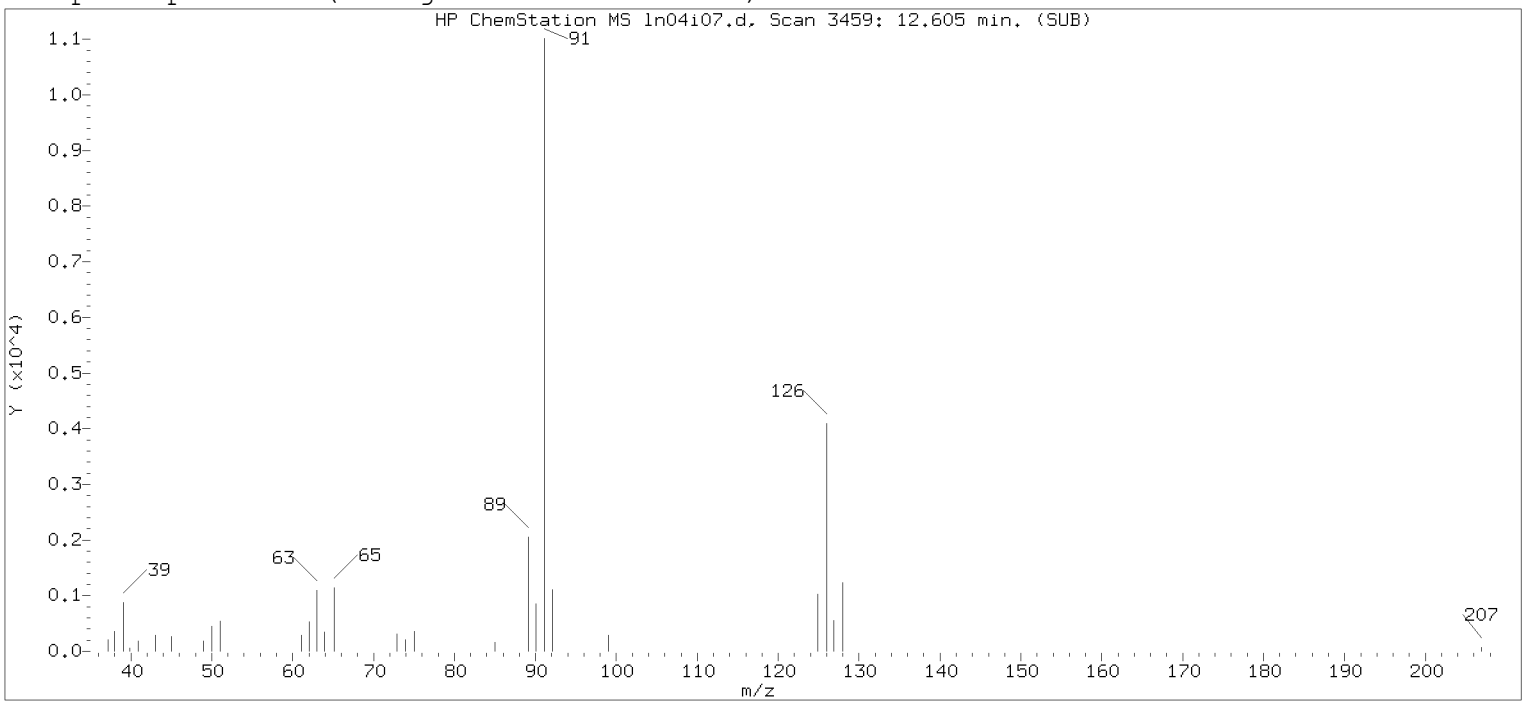
Compound Number : 120
Compound Name : 2-Chlorotoluene
Scan Number : 3461
Retention Time (minutes): 12.612
Quant Ion : 126.00
Area (flag) : 6138M
On-Column Amount (ng) : 0.9294
Integration start scan : 3450 Integration stop scan: 3470
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

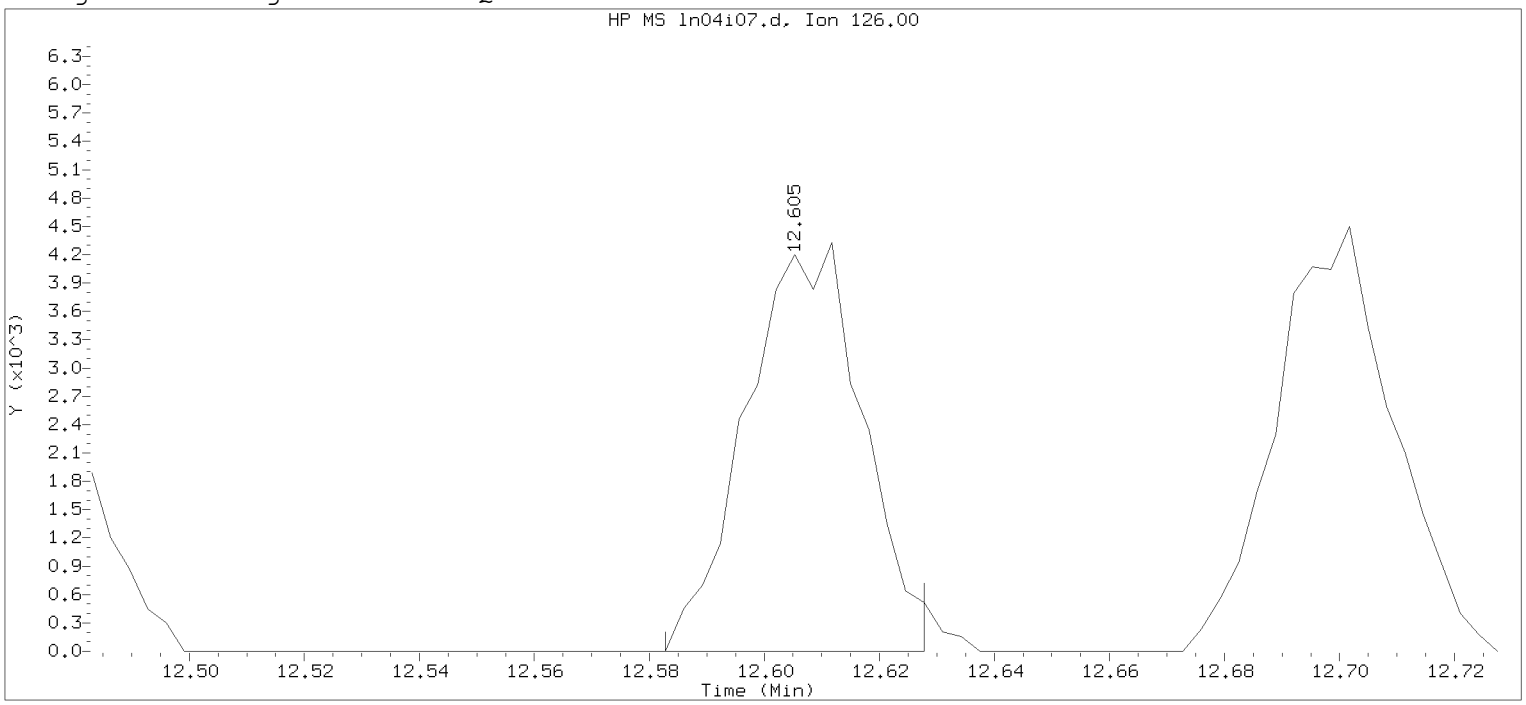
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

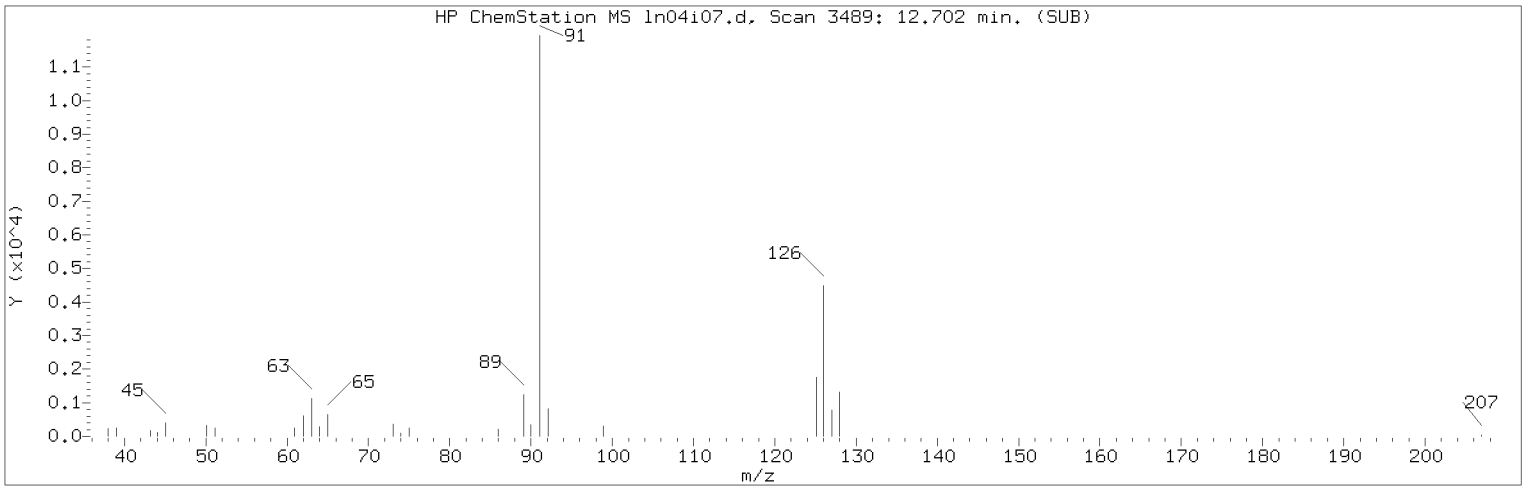
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

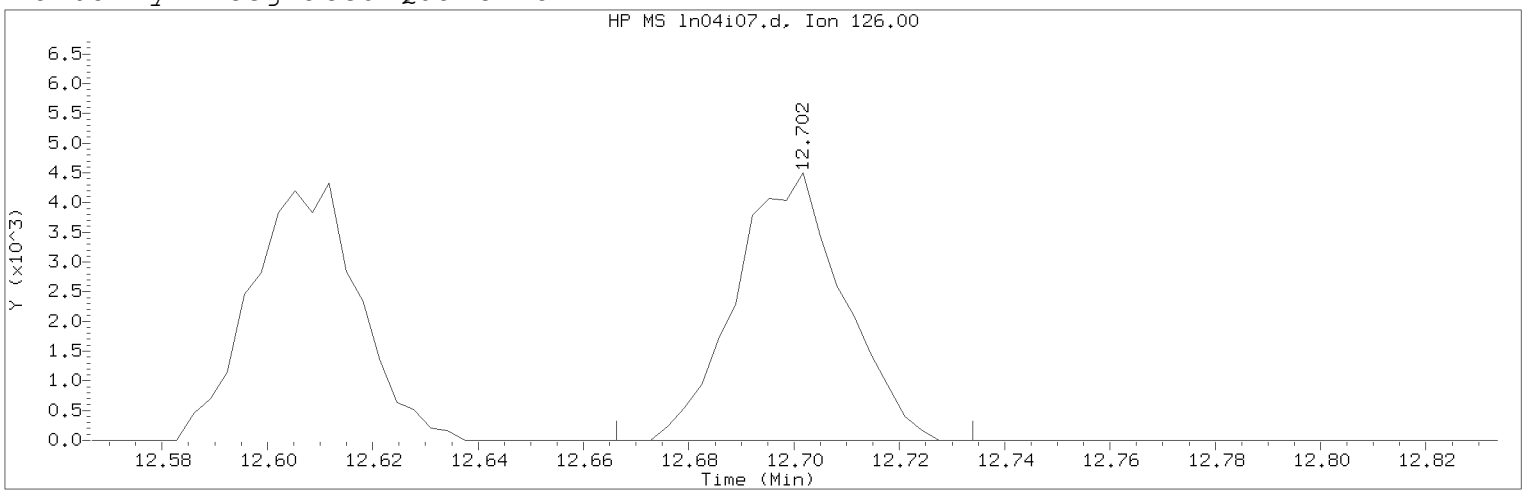
Compound Number : 120
Compound Name : 2-Chlorotoluene
Scan Number : 3459
Retention Time (minutes): 12.605
Quant Ion : 126.00
Area : 6018
On-column Amount (ng) : 0.9136
Integration start scan : 3451 Integration stop scan: 3465
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

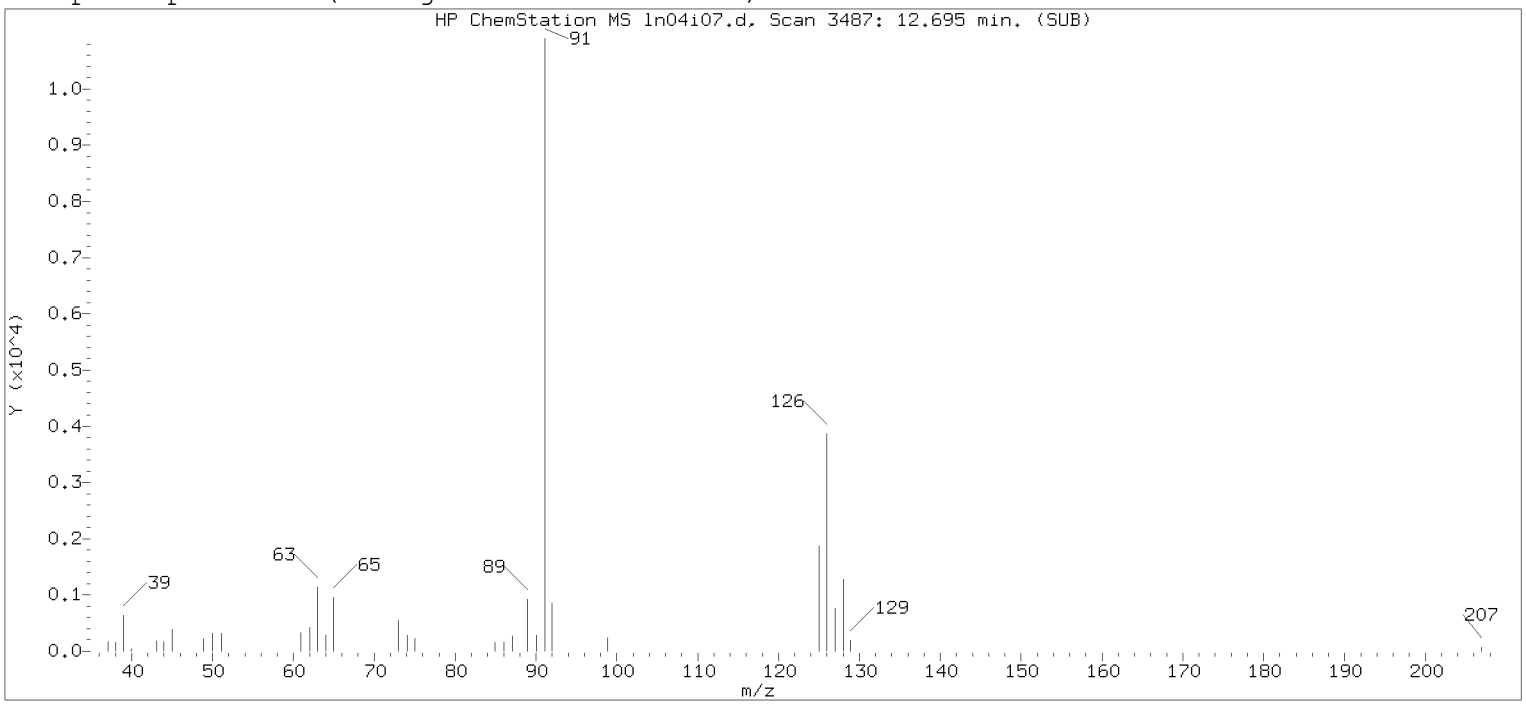
Compound Number : 121
Compound Name : 4-Chlorotoluene
Scan Number : 3489
Retention Time (minutes): 12.702
Quant Ion : 126.00
Area (flag) : 6403M
On-Column Amount (ng) : 0.9314
Integration start scan : 3477 Integration stop scan: 3498
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

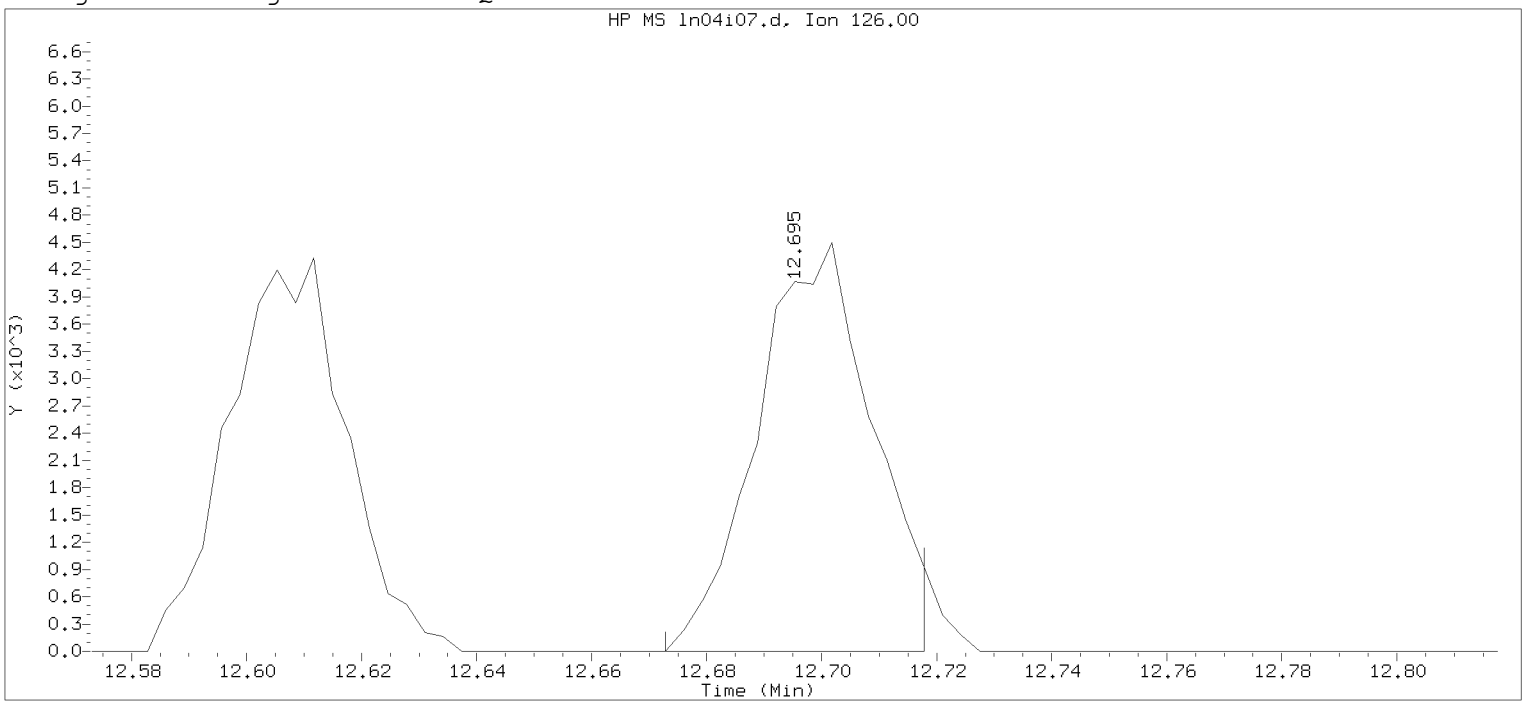
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

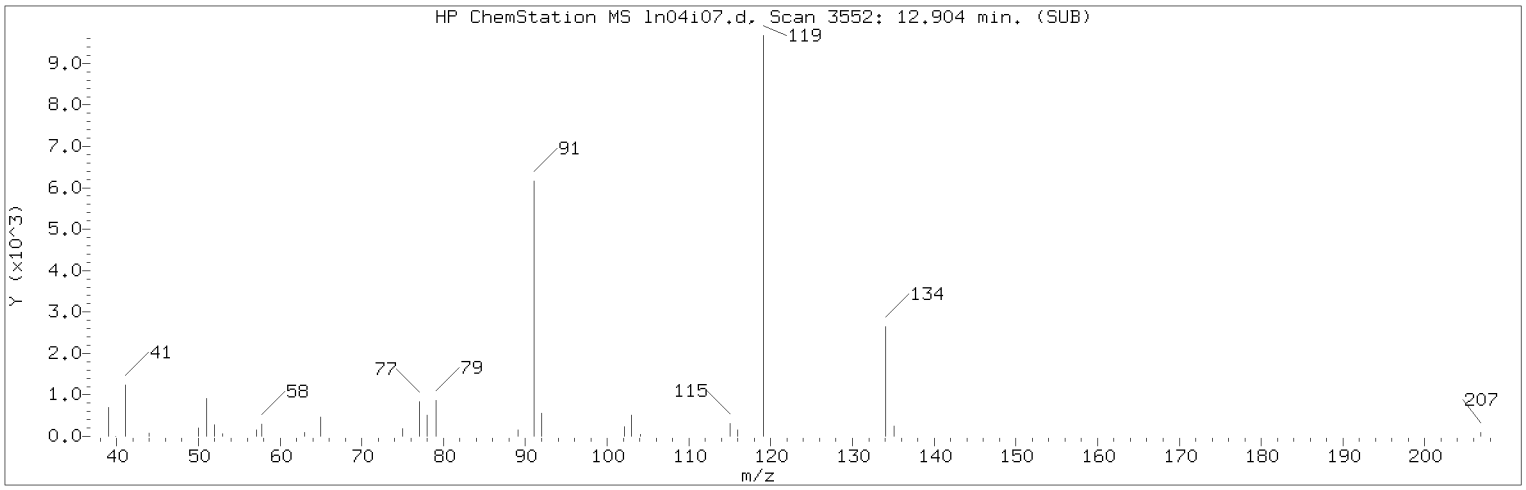
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

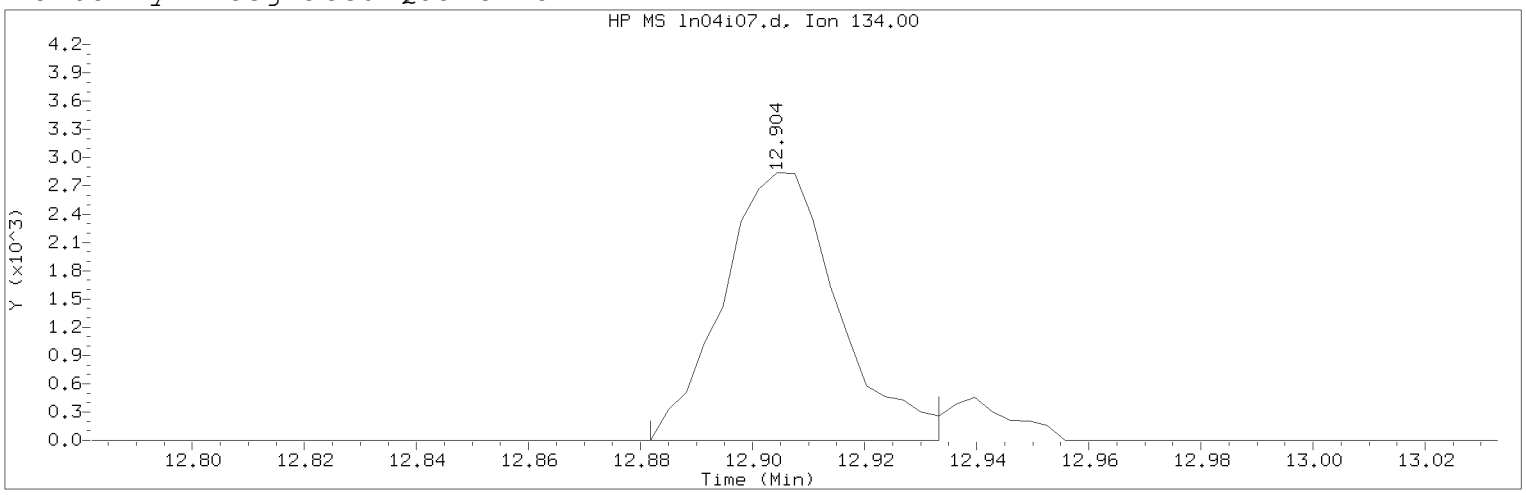
Compound Number : 121
Compound Name : 4-Chlorotoluene
Scan Number : 3487
Retention Time (minutes): 12.695
Quant Ion : 126.00
Area : 6203
On-column Amount (ng) : 0.9062
Integration start scan : 3479 Integration stop scan: 3493
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

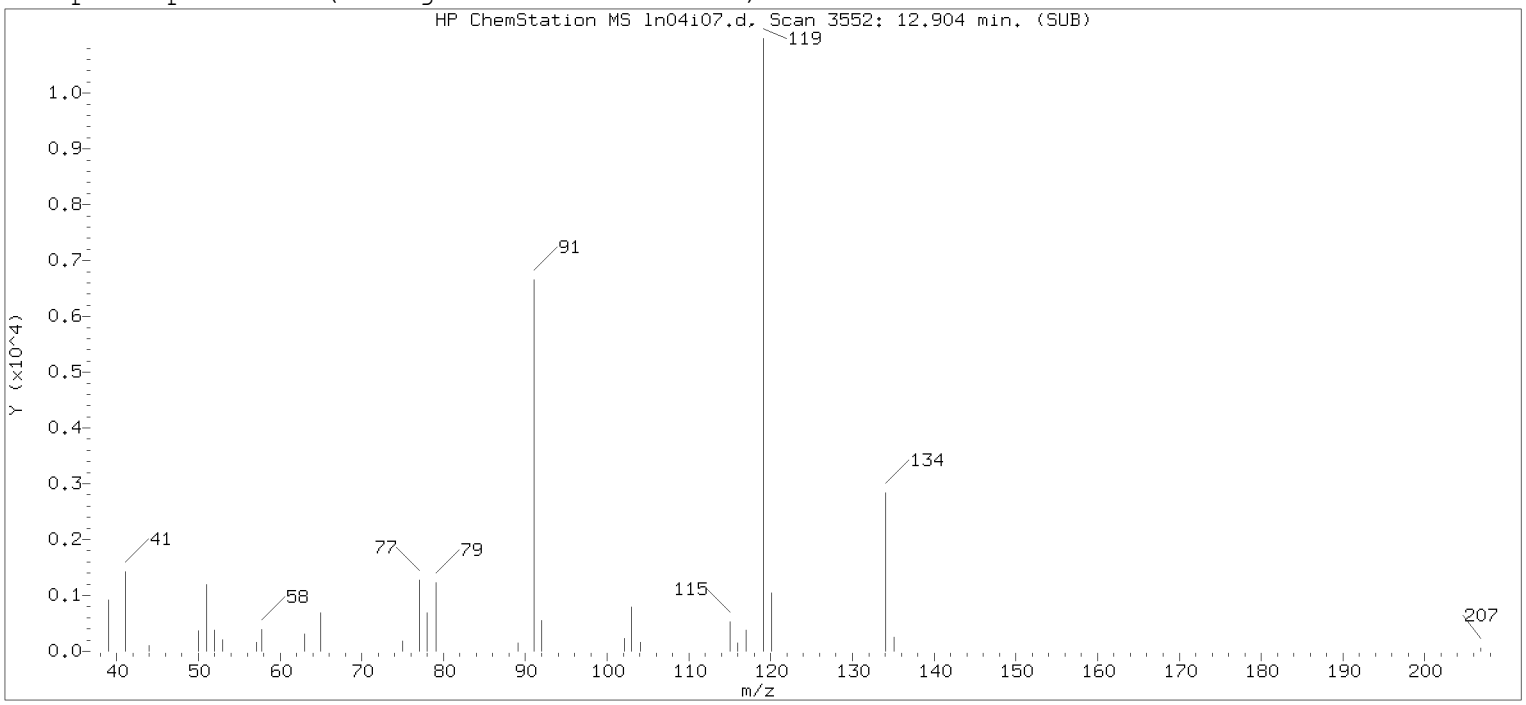
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 4060M
On-Column Amount (ng) : 0.8690
Integration start scan : 3544 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

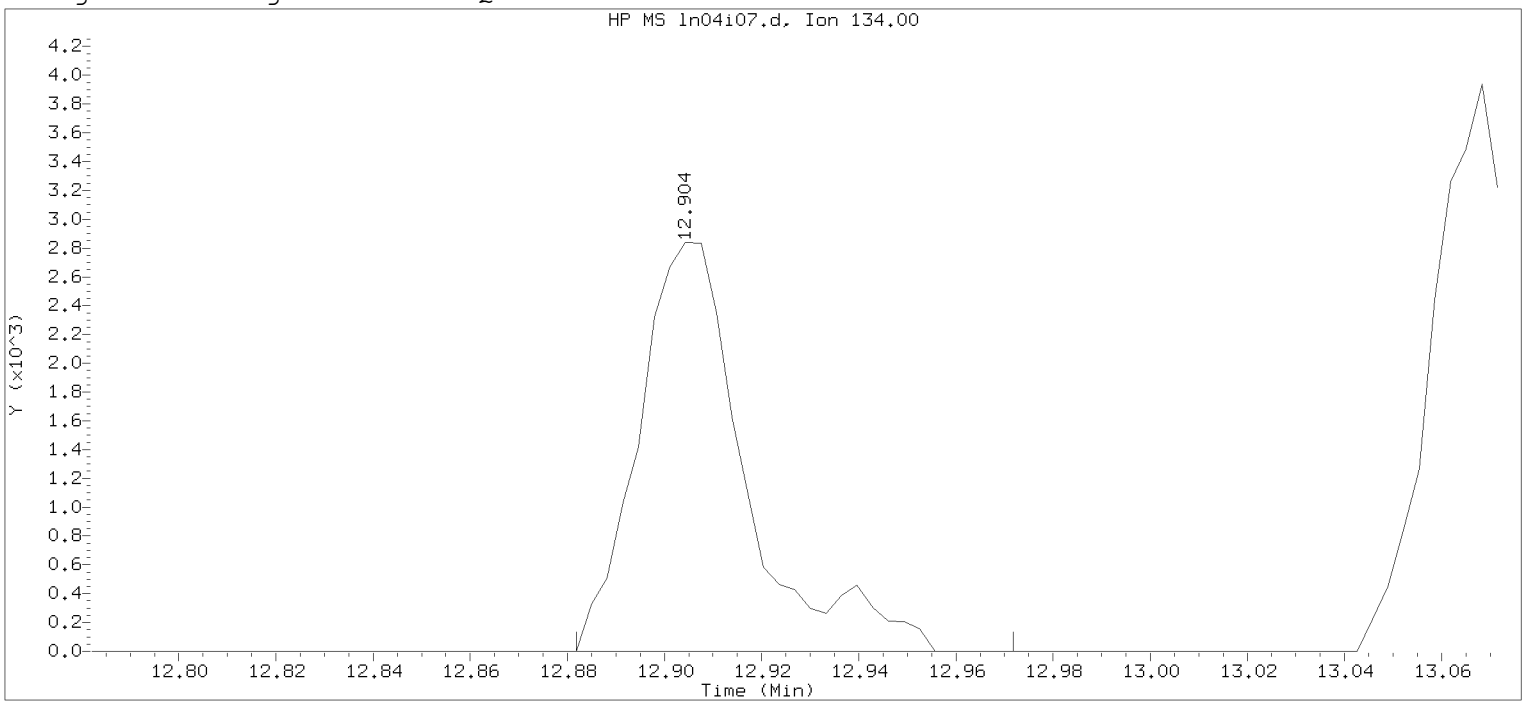
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

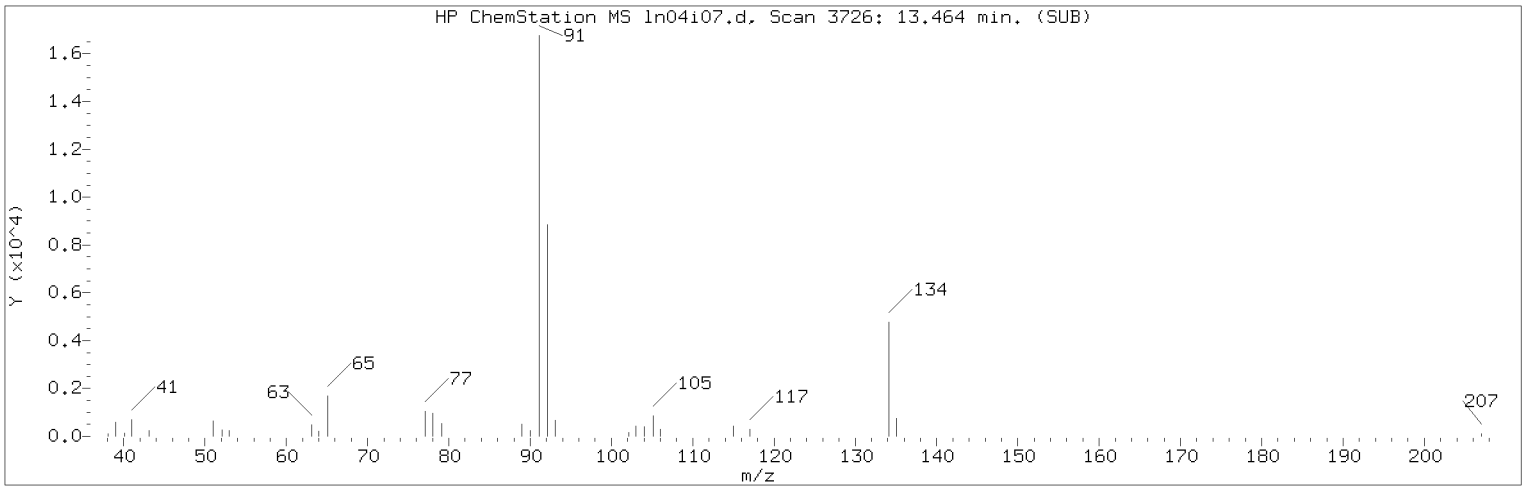
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

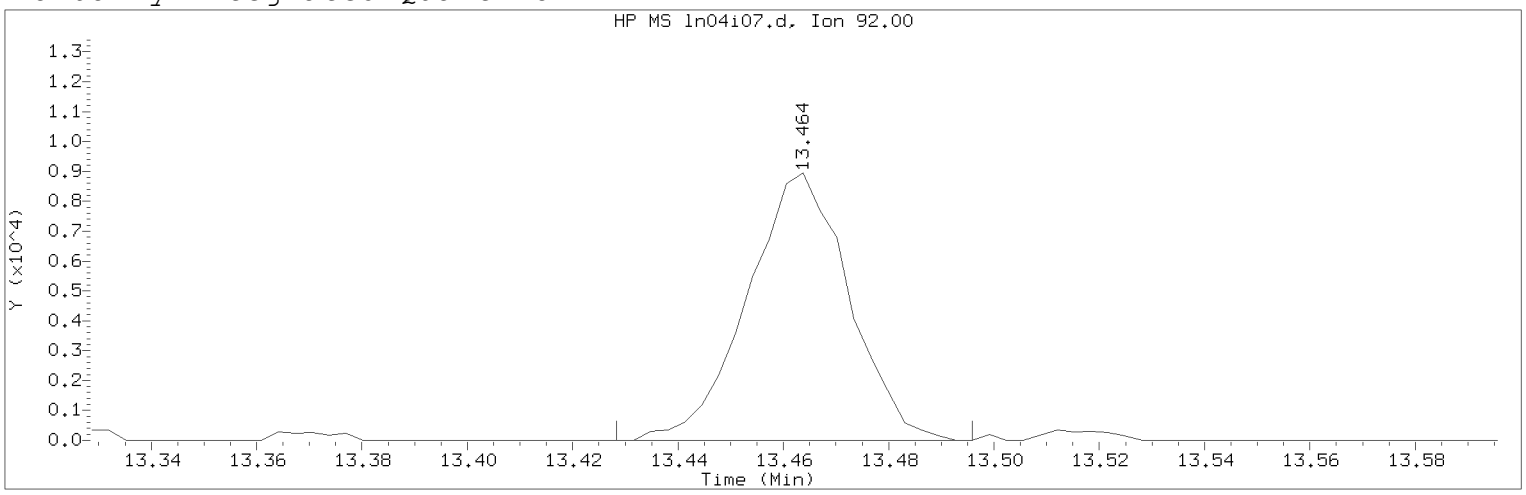
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 4392
On-column Amount (ng) : 0.9024
Integration start scan : 3544 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

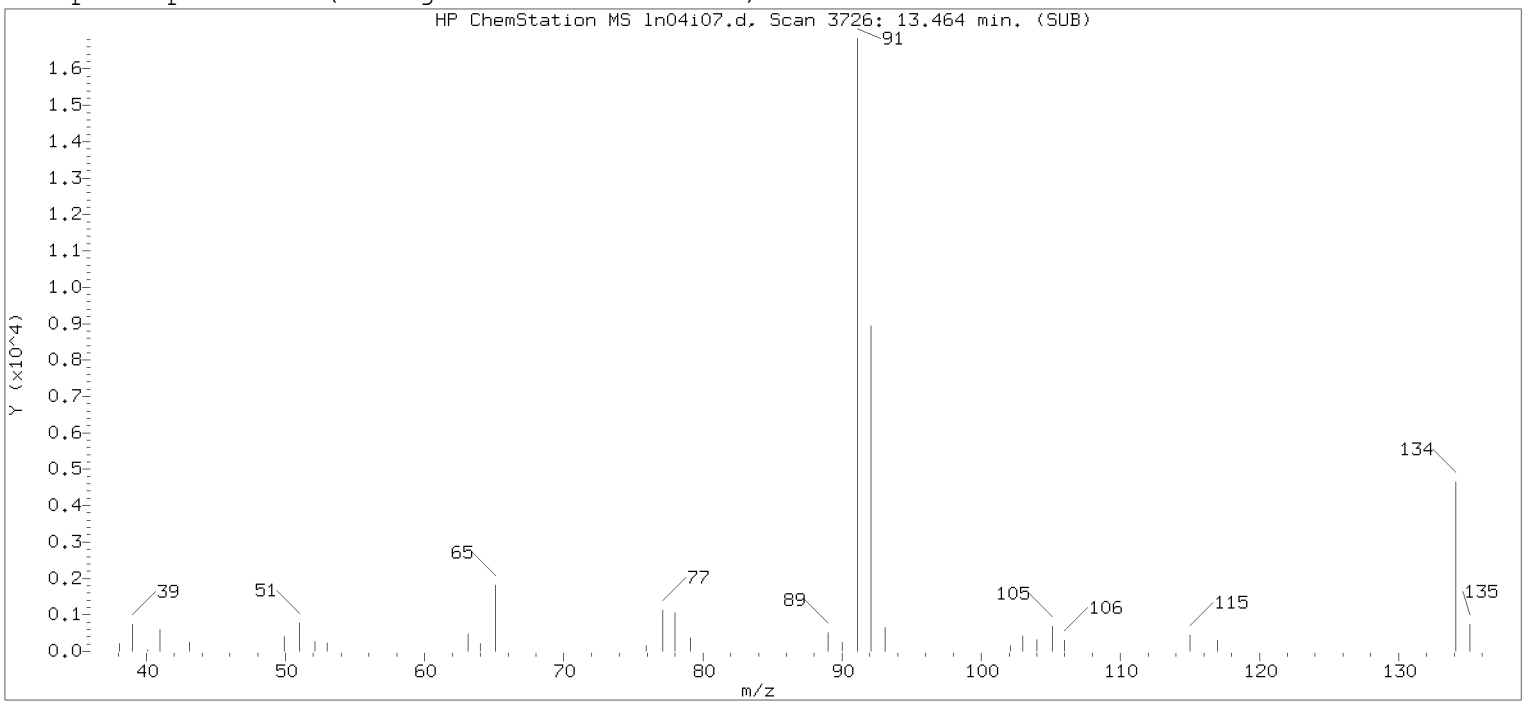
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 3726
Retention Time (minutes): 13.464
Quant Ion : 92.00
Area (flag) : 11964M
On-Column Amount (ng) : 0.9701
Integration start scan : 3714 Integration stop scan: 3735
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

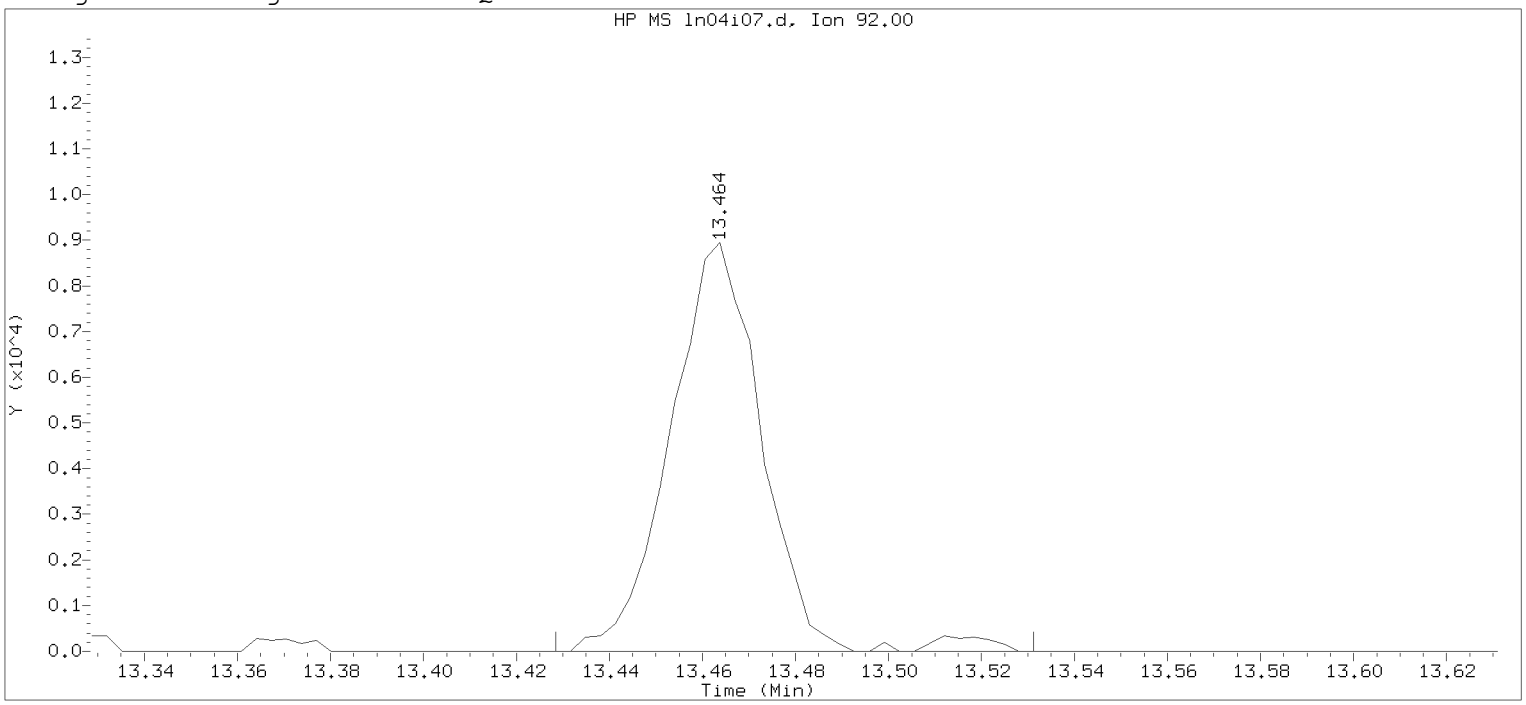
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

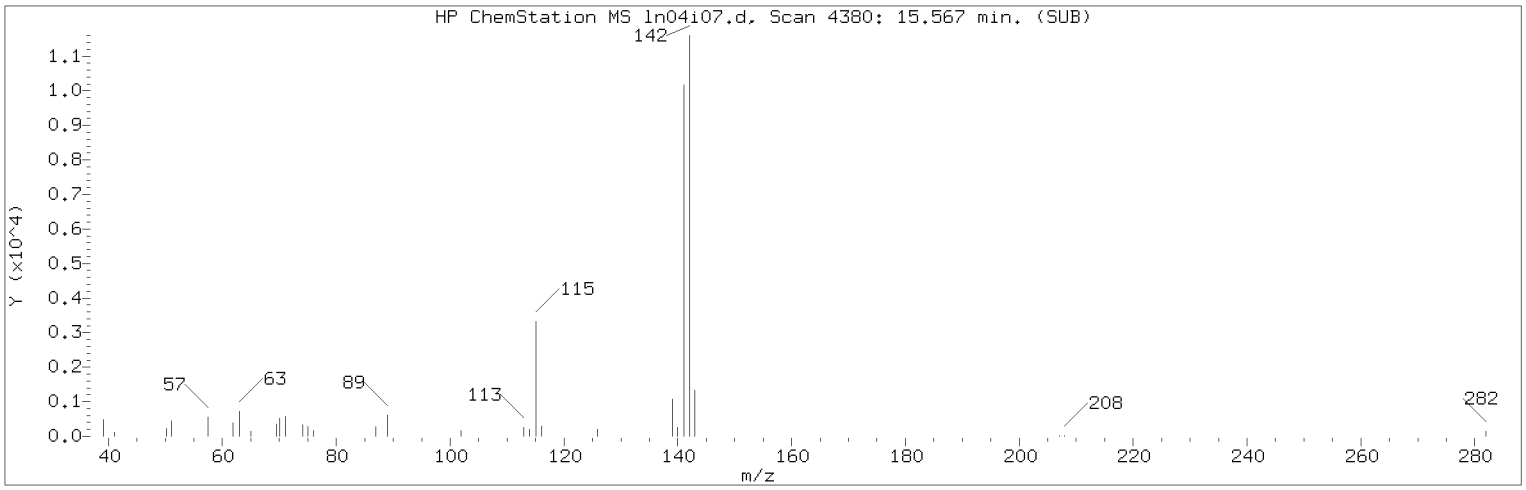
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

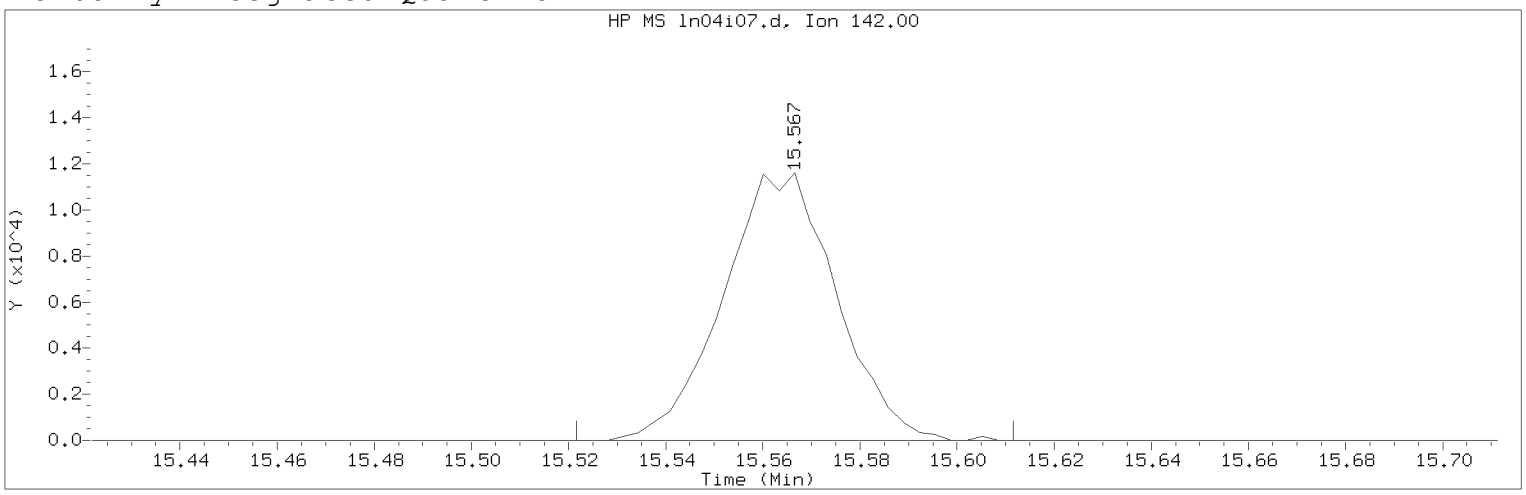
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 3726
Retention Time (minutes): 13.464
Quant Ion : 92.00
Area : 12291
On-column Amount (ng) : 0.9929
Integration start scan : 3714 Integration stop scan: 3746
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 05-NOV-2019 16:02
Date, time and analyst ID of latest file update: 05-Nov-2019 16:04 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

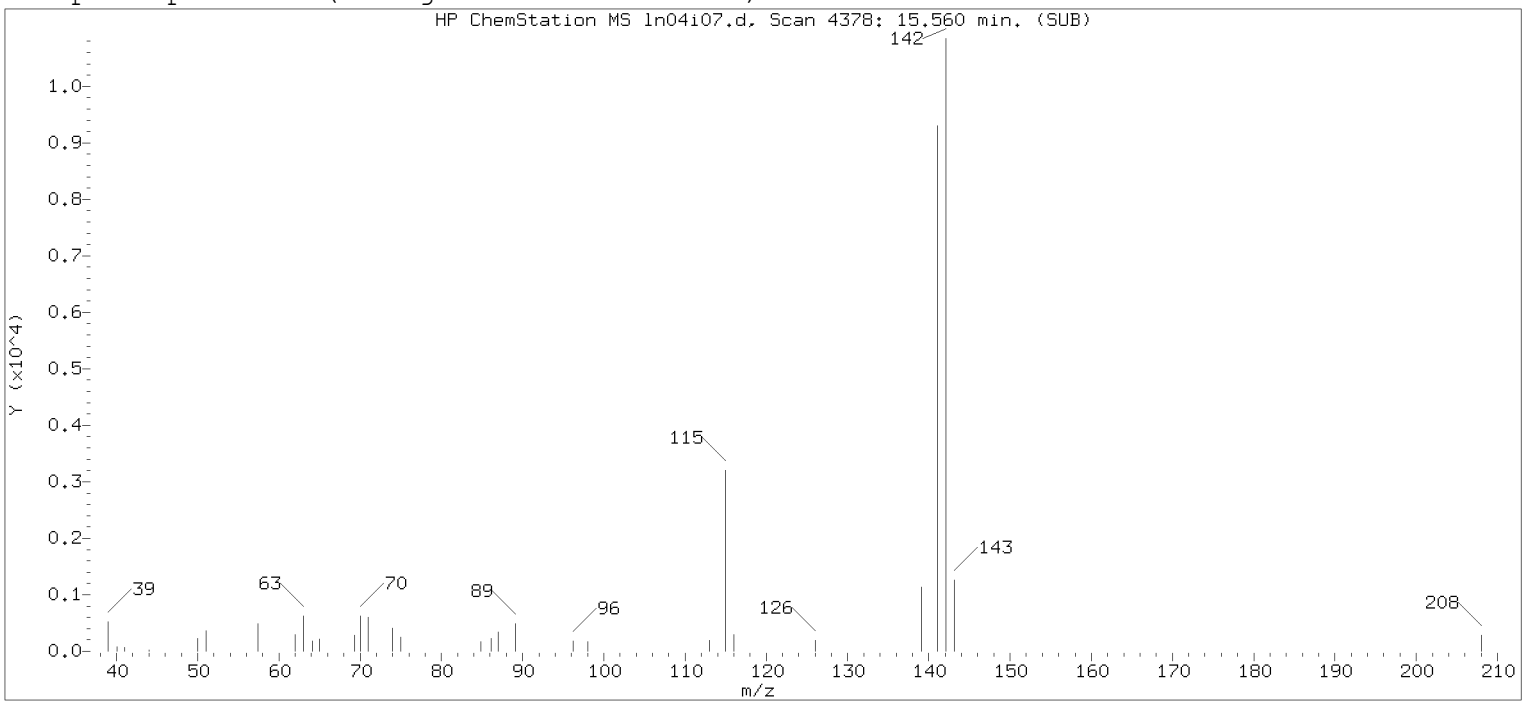
Compound Number : 150
Compound Name : 2-Methylnaphthalene
Scan Number : 4380
Retention Time (minutes): 15.567
Quant Ion : 142.00
Area (flag) : 18783M
On-Column Amount (ng) : 0.9844
Integration start scan : 4365 Integration stop scan: 4393
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

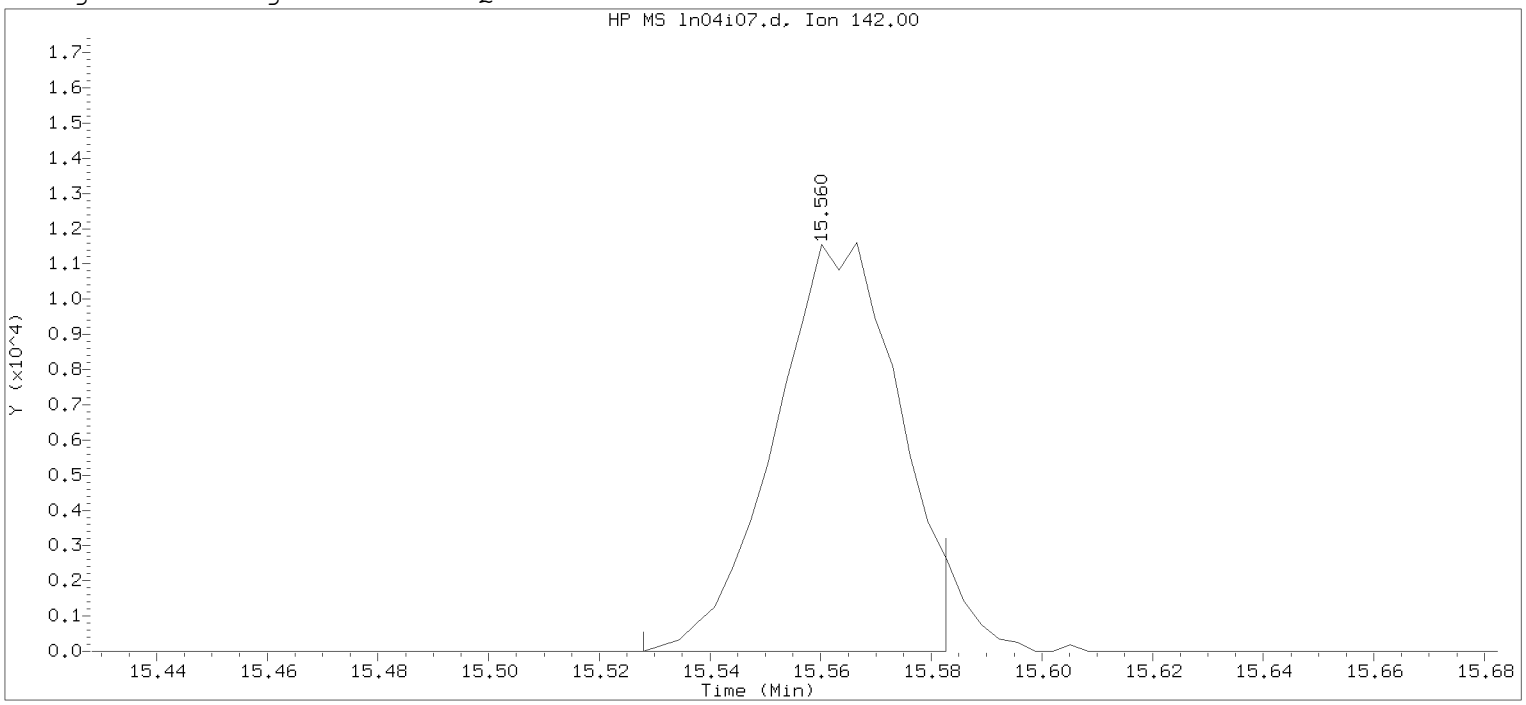
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 07:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



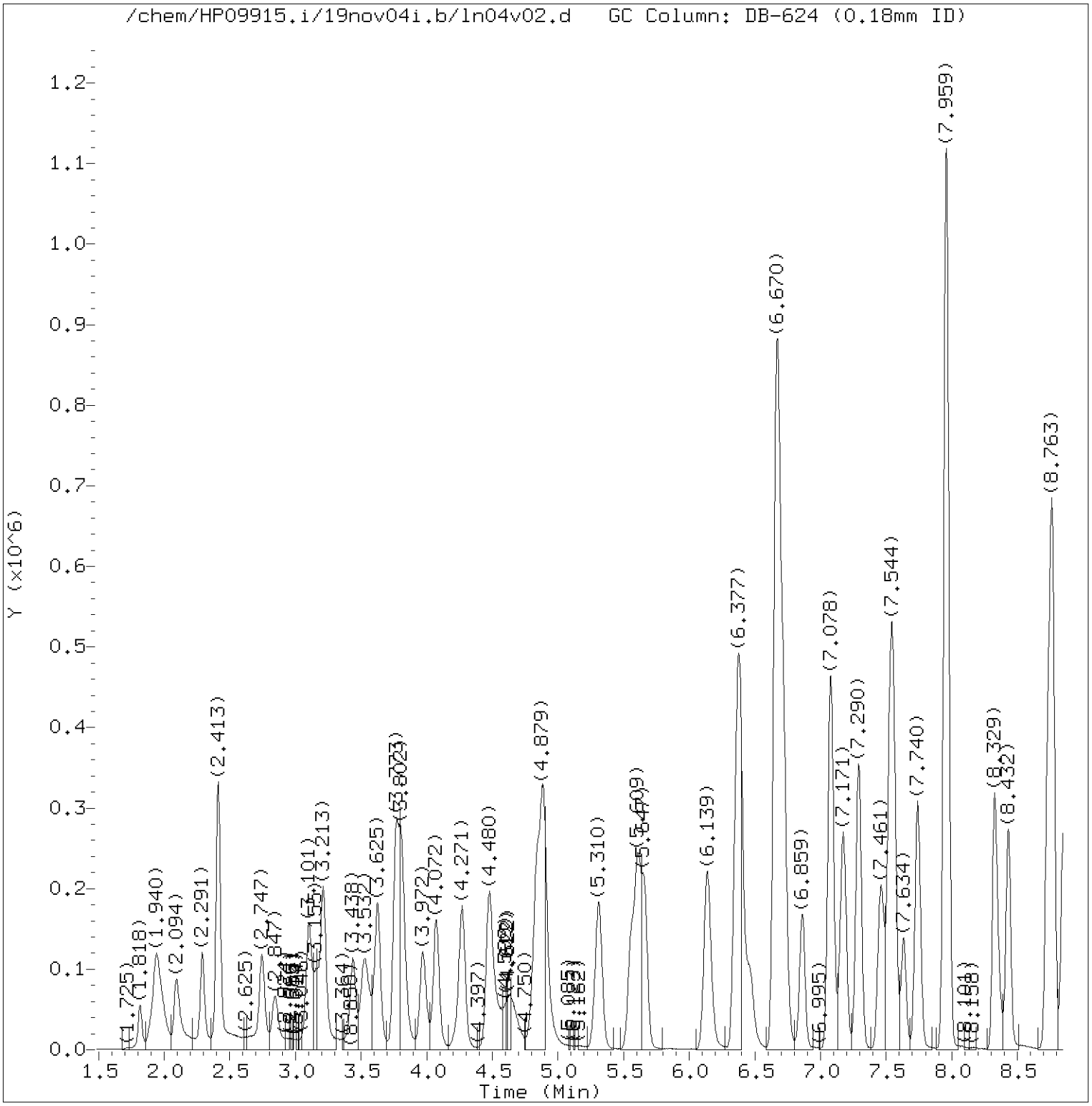
Data File: /chem/HP09915.i/19nov04i.b/ln04i07.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 17:03 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 17:53
Date, time and analyst ID of latest file update: 04-Nov-2019 17:53 mec29284

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 150
Compound Name : 2-Methylnaphthalene
Scan Number : 4378
Retention Time (minutes): 15.560
Quant Ion : 142.00
Area : 17962
On-column Amount (ng) : 0.9472
Integration start scan : 4367 Integration stop scan: 4384
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 11/05/2019 at 16:09.
Target 3.5 esignature user name: mec29284



Total Ion Chromatogram (TIC)

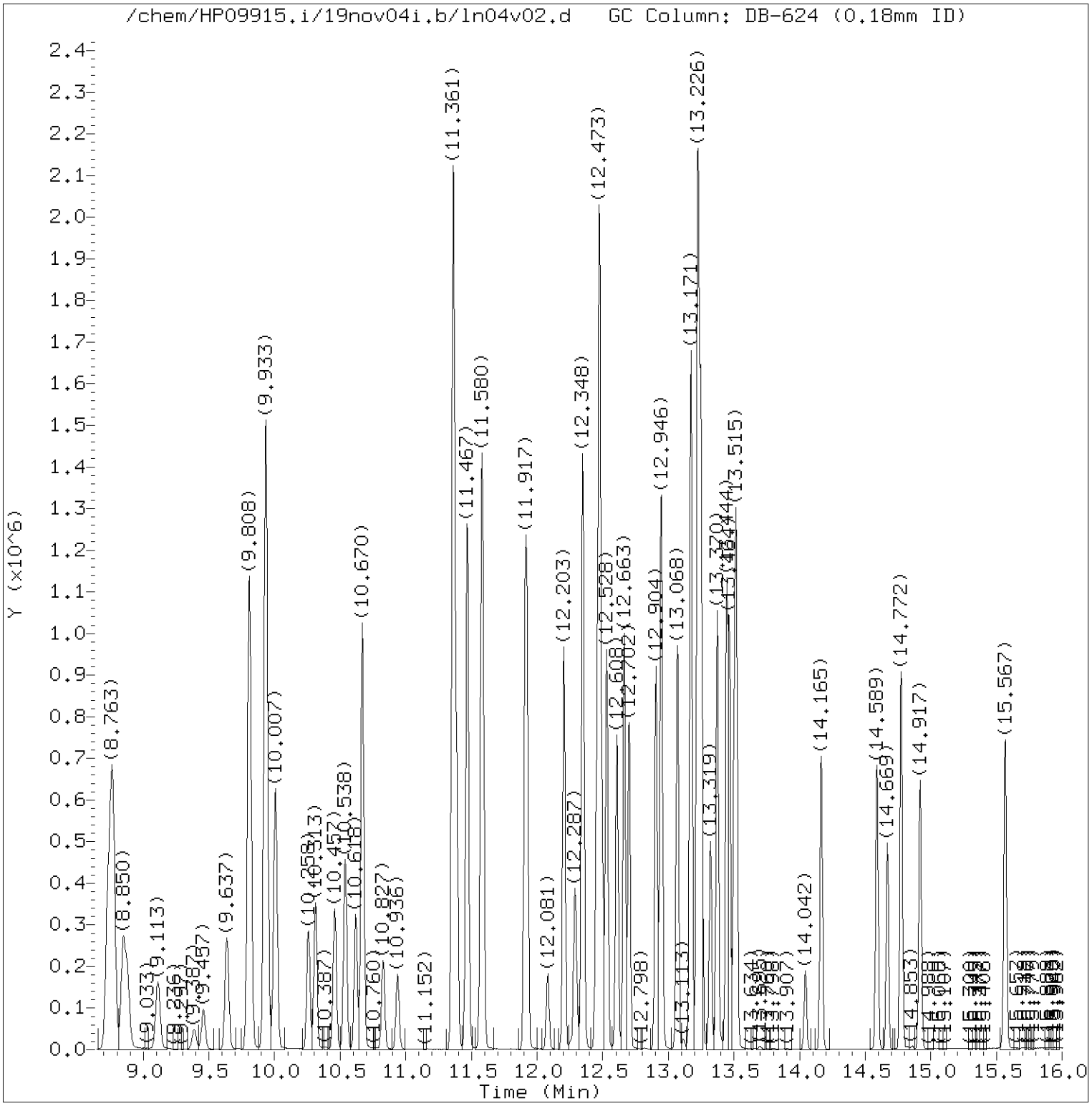
Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.094	85	158021M	18.732
4) Chloromethane	(2)	2.291	50	153886	18.927
5) 1,3-Butadiene	(2)	2.413	39	132622M	19.645
6) Vinyl Chloride	(2)	2.413	62	157013	19.349
8) Bromomethane	(2)	2.747	94	104324	17.935
9) Chloroethane	(2)	2.847	64	82467	18.493
10) Dichlorofluoromethane	(2)	3.101	67	174118M	16.224
12) Trichlorofluoromethane	(2)	3.159	101	181238	20.746
11) n-Pentane	(2)	3.213	43	196297	19.014
14) Ethyl ether	(2)	3.438	59	93832	16.622
15) Freon 123a	(2)	3.528	67	136689	19.450
16) Acrolein	(1)	3.625	56	286690	135.125
17) 1,1-Dichloroethene	(2)	3.766	96	107244	20.914
19) Freon 113	(2)	3.795	101	115842	19.801
18) Acetone	(1)	3.805	58	130076	136.752
22) Methyl Iodide	(2)	3.969	142	197263	18.564
21) 2-Propanol	(1)	4.008	45	98510	144.063
23) Carbon Disulfide	(2)	4.075	76	360582	18.660
27) Methyl Acetate	(2)	4.249	43	126109	19.095
25) Allyl Chloride	(2)	4.271	41	171048	18.595
28) Methylene Chloride	(2)	4.474	84	124367	20.377
29)*t-Butyl alcohol-d10	(1)	4.503	65	282794M	250.000
30) t-Butyl alcohol	(1)	4.641	59	227283	190.899
31) Acrylonitrile	(2)	4.834	53	337483	94.980
32) trans-1,2-Dichloroethene	(2)	4.888	96	118658	20.003
33) Methyl Tertiary Butyl Ether	(2)	4.892	73	367523	18.875
34) n-Hexane	(2)	5.310	57	185206M	20.067
36) 1,1-Dichloroethane	(2)	5.554	63	201428	19.465
38) di-Isopropyl ether	(2)	5.609	45	380712	19.075
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	177031	19.067
40) Ethyl t-butyl ether	(2)	6.139	59	369375	19.070
43) 1,2-Dichloroethene (Total)	(2)		96	258427	40.995
44) 2-Butanone	(2)	6.361	43	651073	142.743
42) cis-1,2-Dichloroethene	(2)	6.384	96	139769	20.992
45) 2,2-Dichloropropane	(2)	6.396	77	163413	20.314
47) Propionitrile	(1)	6.461	54	209265	141.065
48) Methacrylonitrile	(2)	6.670	67	556962	145.312
49) Bromochloromethane	(2)	6.712	128	66215	18.755

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.721	71	123960	92.508
51) Chloroform	(2)	6.866	83	199497	20.156
52)$Dibromofluoromethane	(2)	7.075	113	293558	49.637
53) 1,1,1-Trichloroethane	(2)	7.081	97	172182	20.382
54) Cyclohexane	(2)	7.171	56	214913	19.025
56) Carbon Tetrachloride	(2)	7.287	117	143405	20.016
55) 1,1-Dichloropropene	(2)	7.294	75	164177	20.065
58) Isobutyl Alcohol	(1)	7.461	41	180862	451.413
57)$1,2-Dichloroethane-d4	(2)	7.531	102	74610	49.500
60) Benzene	(2)	7.560	78	492012	19.996
61) 1,2-Dichloroethane	(2)	7.638	62	163231	20.625
65) t-Amyl methyl ether	(2)	7.740	73	369180	18.989
67) n-Heptane	(2)	7.956	43	163362M	18.948
66)*Fluorobenzene	(2)	7.959	96	1209671	50.000
69) n-Butanol	(1)	8.326	56	314470M	911.924
71) Trichloroethene	(2)	8.429	95	124893	20.159
72) Methylcyclohexane	(2)	8.731	83	222042	19.318
73) 1,2-Dichloropropane	(2)	8.769	63	127774	20.450
76) Methyl Methacrylate	(2)	8.847	69	115569	19.128
75) 1,4-Dioxane	(1)	8.853	88	47747M	503.753
74) Dibromomethane	(2)	8.879	93	80909	20.014
78) Bromodichloromethane	(2)	9.113	83	144408	19.907
79) 2-Nitropropane	(2)	9.383	41	35869	16.324
80) 2-Chloroethyl Vinyl Ether	(2)	9.457	63	51088	19.038
81) cis-1,3-Dichloropropene	(2)	9.637	75	191486	19.874
82) 4-Methyl-2-pentanone	(2)	9.808	43	893533	92.810
83)$Toluene-d8	(3)	9.933	98	1243931	50.214
88) Toluene	(3)	10.007	92	314091	20.224
90) 1,3-Dichloropropene (total)	(3)		100	360855	39.085
89) trans-1,3-Dichloropropene	(3)	10.258	75	169369	19.211
91) Ethyl Methacrylate	(3)	10.313	69	194593	18.162
92) 1,1,2-Trichloroethane	(3)	10.457	97	120085	20.394
93) Tetrachloroethene	(3)	10.538	166	145489	22.119
94) 1,3-Dichloropropane	(3)	10.618	76	197817	19.676
96) 2-Hexanone	(3)	10.670	43	659041	92.150
97) Dibromochloromethane	(3)	10.827	129	119169	19.757
99) 1,2-Dibromoethane	(3)	10.936	107	127100	19.878
100)*Chlorobenzene-d5	(3)	11.361	117	946755	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) 1-Chlorohexane	(3)	11.364	91	162531	19.480
102) Chlorobenzene	(3)	11.387	112	355167	20.223
103) 1,1,1,2-Tetrachloroethane	(3)	11.467	131	114709	19.823
104) Ethylbenzene	(3)	11.470	91	602093	20.283
106) m+p-Xylene	(3)	11.583	106	478306	40.959
108) Xylene (Total)	(3)		106	712690	61.279
107) o-Xylene	(3)	11.908	106	234384	20.320
109) Styrene	(3)	11.924	104	391950	20.563
110) Bromoform	(3)	12.081	173	80910	17.952
111) Isopropylbenzene	(3)	12.203	105	603598	20.864
112) Cyclohexanone	(1)	12.287	55	166810	449.364
114)$4-Bromofluorobenzene	(3)	12.348	95	469009	49.999
116) 1,1,2,2-Tetrachloroethane	(4)	12.451	83	188446M	19.576
115) Bromobenzene	(4)	12.467	156	151805	19.821
118) trans-1,4-Dichloro-2-butene	(4)	12.477	53	290498	97.834
117) 1,2,3-Trichloropropane	(4)	12.496	110	58902M	19.940
119) n-Propylbenzene	(4)	12.531	91	694916	20.768
120) 2-Chlorotoluene	(4)	12.608	126	143440	20.178
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	499772	20.552
121) 4-Chlorotoluene	(4)	12.702	126	148830	20.114
124) tert-Butylbenzene	(4)	12.907	134	103762M	20.632
125) Pentachloroethane	(4)	12.943	167	74538	17.213
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	511834	19.971
127) sec-Butylbenzene	(4)	13.068	105	616554	20.545
129) 1,3-Dichlorobenzene	(4)	13.168	146	282424	20.067
130) p-Isopropyltoluene	(4)	13.174	119	533278	20.541
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	509597	50.000
133) 1,4-Dichlorobenzene	(4)	13.242	146	298831	20.482
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	539562	19.874
135) Benzyl Chloride	(4)	13.319	91	329267	16.019
136) 1,3-Diethylbenzene	(4)	13.374	119	322622	19.095
141) Diethylbenzene (total)	(4)		100	935720	57.258
137) 1,4-Diethylbenzene	(4)	13.444	119	340230	19.006
139) n-Butylbenzene	(4)	13.464	92	258920	19.505
138) 1,2-Dichlorobenzene	(4)	13.502	146	282807	20.364
140) 1,2-Diethylbenzene	(4)	13.518	119	272868	19.158
142) 1,2-Dibromo-3-chloropropane	(4)	14.042	75	40654	19.292
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	203102	19.035

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

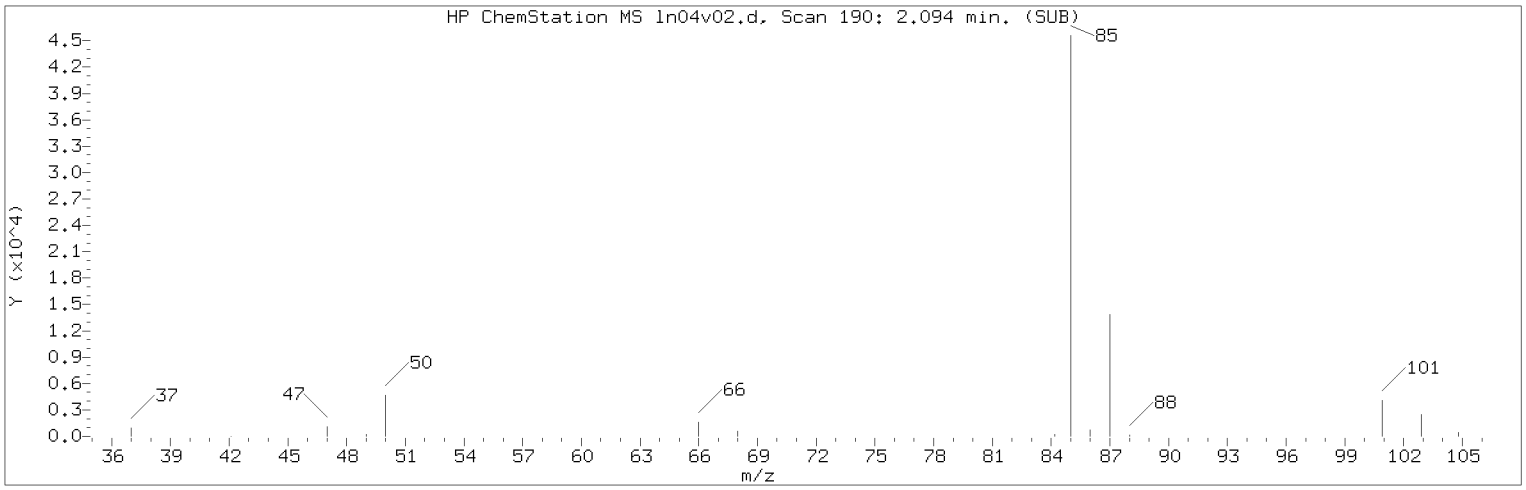
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

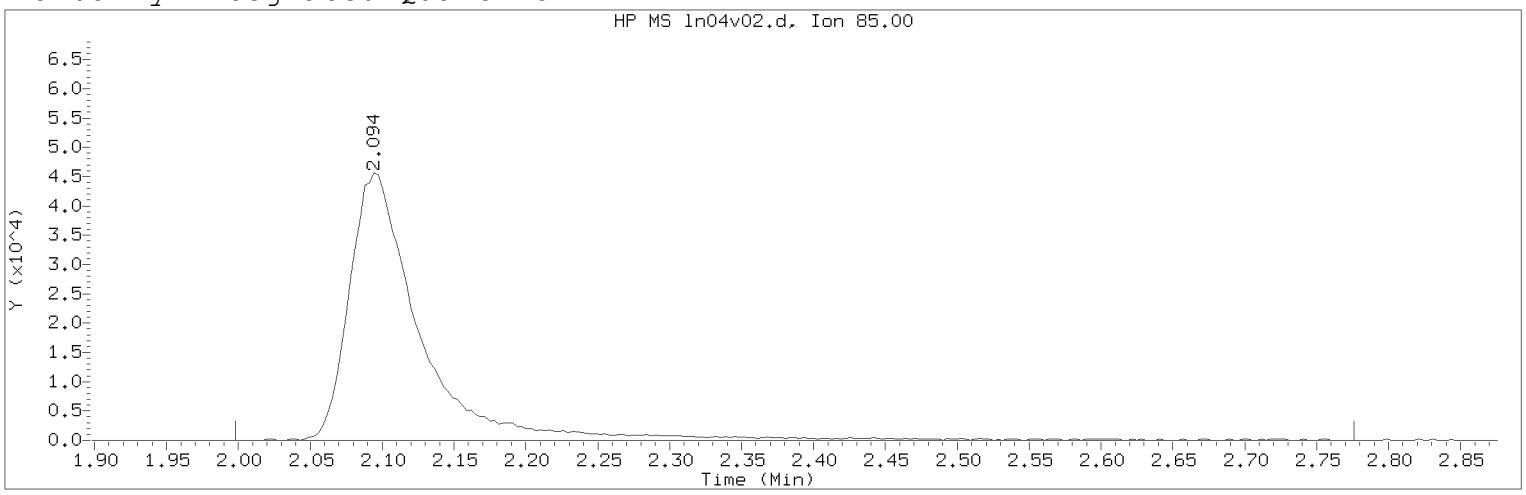
	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146)	1,2,4-Trichlorobenzene	(4)	14.589	180	199046	19.186
147)	Hexachlorobutadiene	(4)	14.666	225	82991	16.942
148)	Naphthalene	(4)	14.772	128	666056	19.970
149)	1,2,3-Trichlorobenzene	(4)	14.917	180	192487	19.067
150)	2-Methylnaphthalene	(4)	15.567	142	374385	18.228

Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

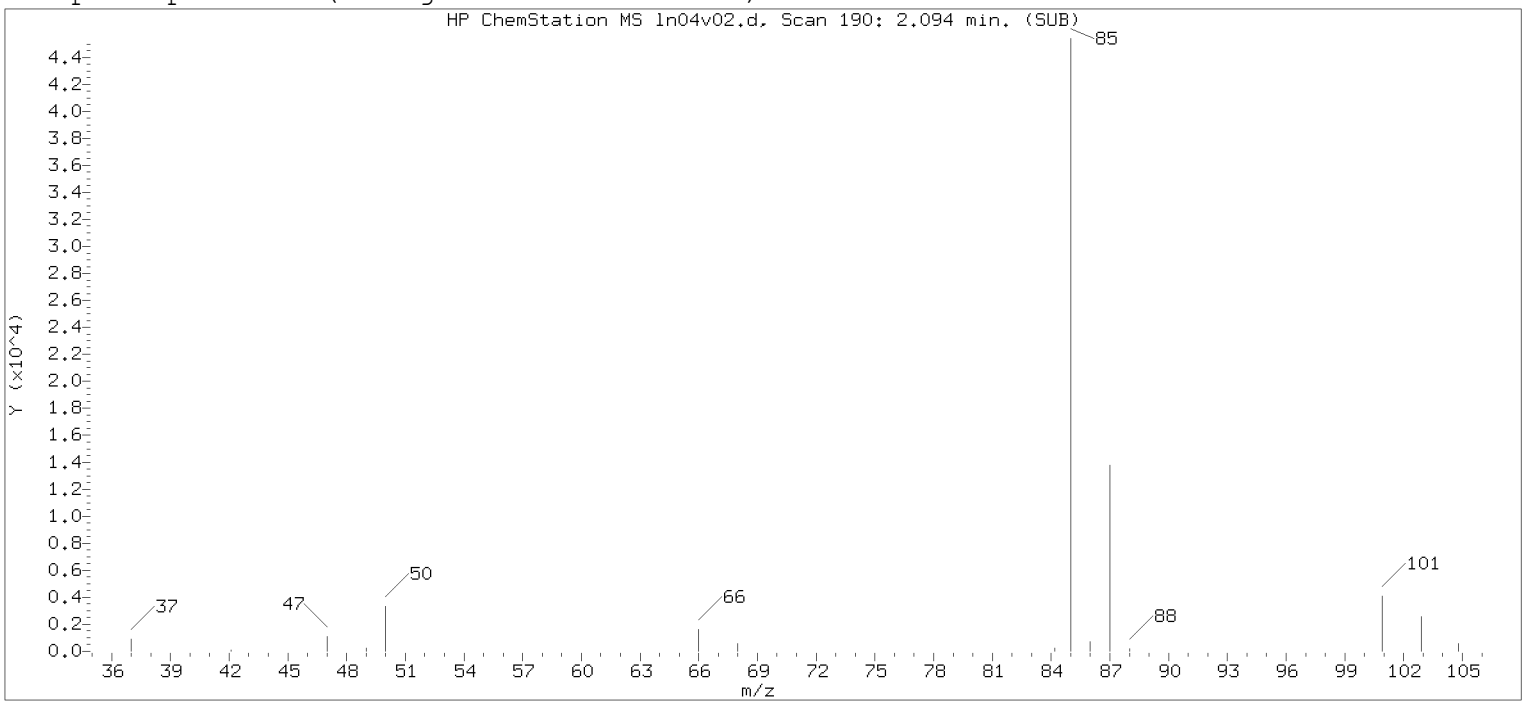
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area (flag) : 158021M
On-Column Amount (ng) : 18.7320
Integration start scan : 159 Integration stop scan: 401
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

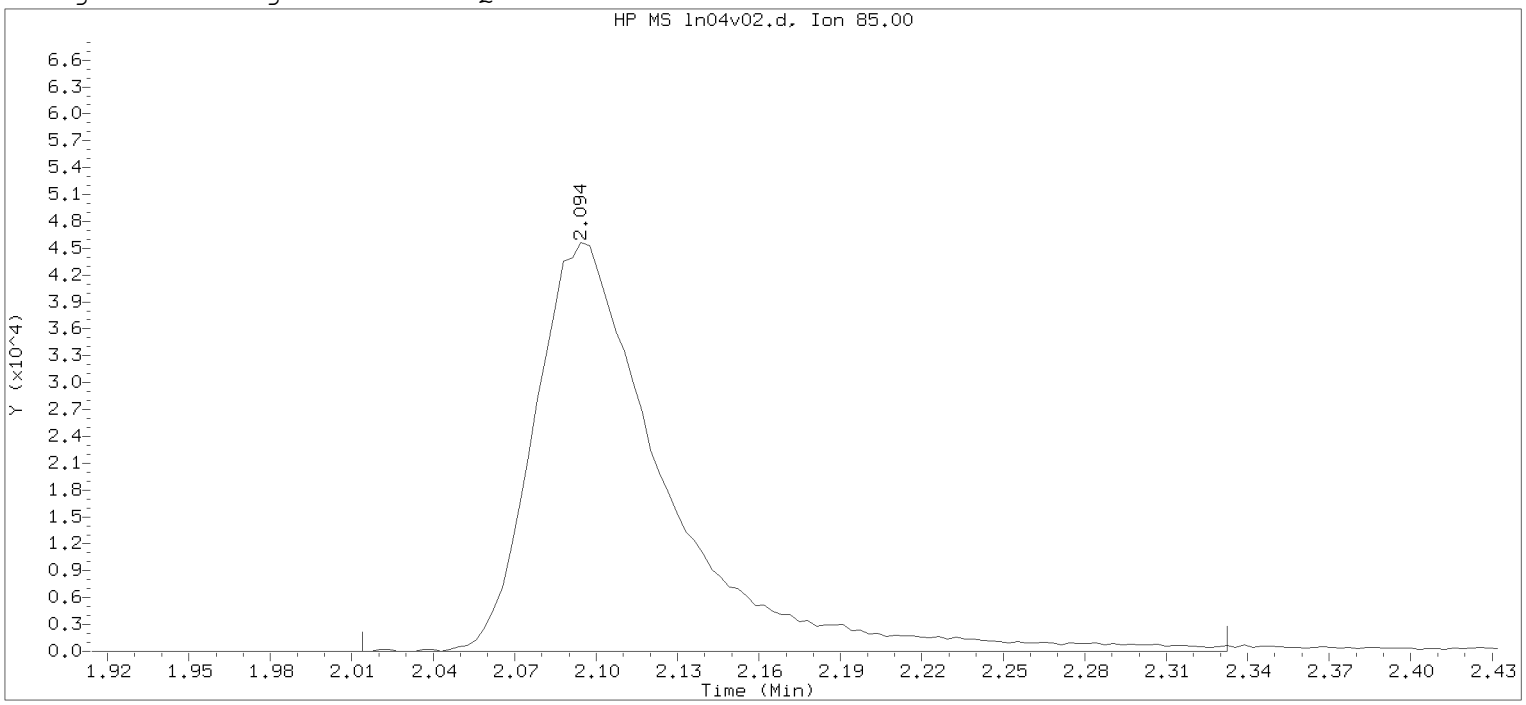
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

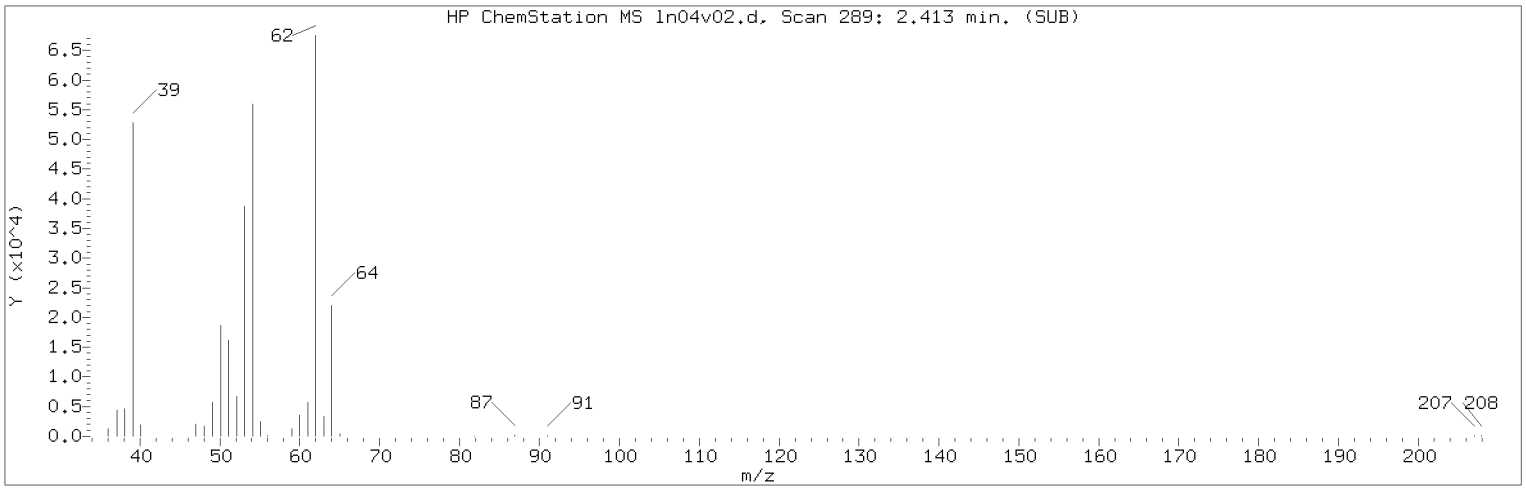
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

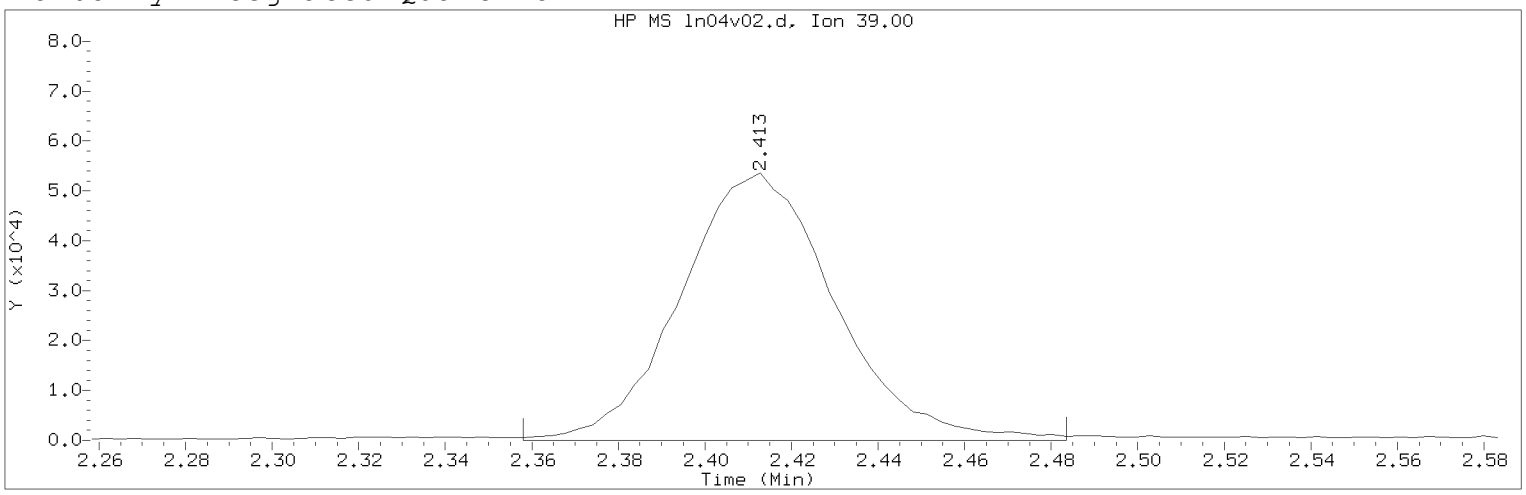
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 190
Retention Time (minutes): 2.094
Quant Ion : 85.00
Area : 152845
On-column Amount (ng) : 18.1184
Integration start scan : 164 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

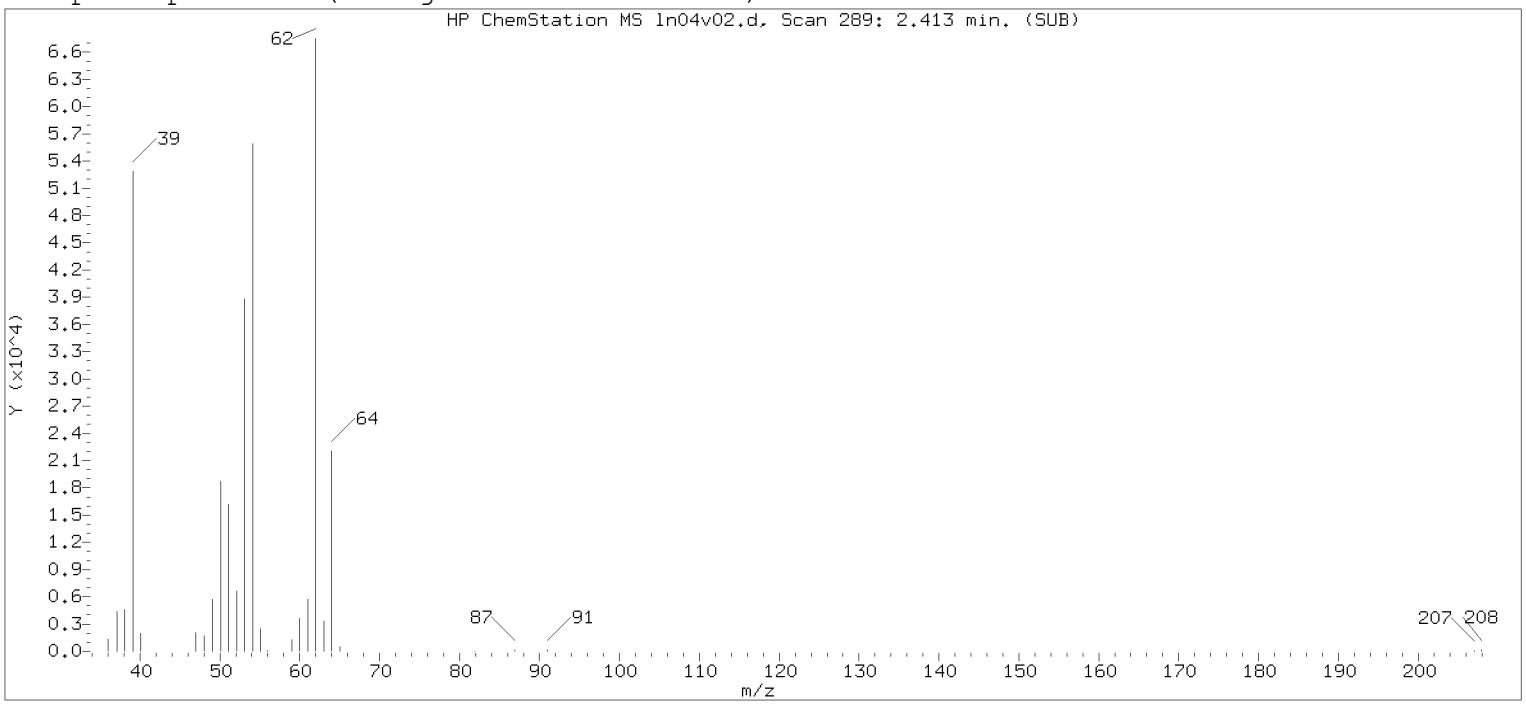
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area (flag) : 132622M
On-Column Amount (ng) : 19.6453
Integration start scan : 271 Integration stop scan: 310
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

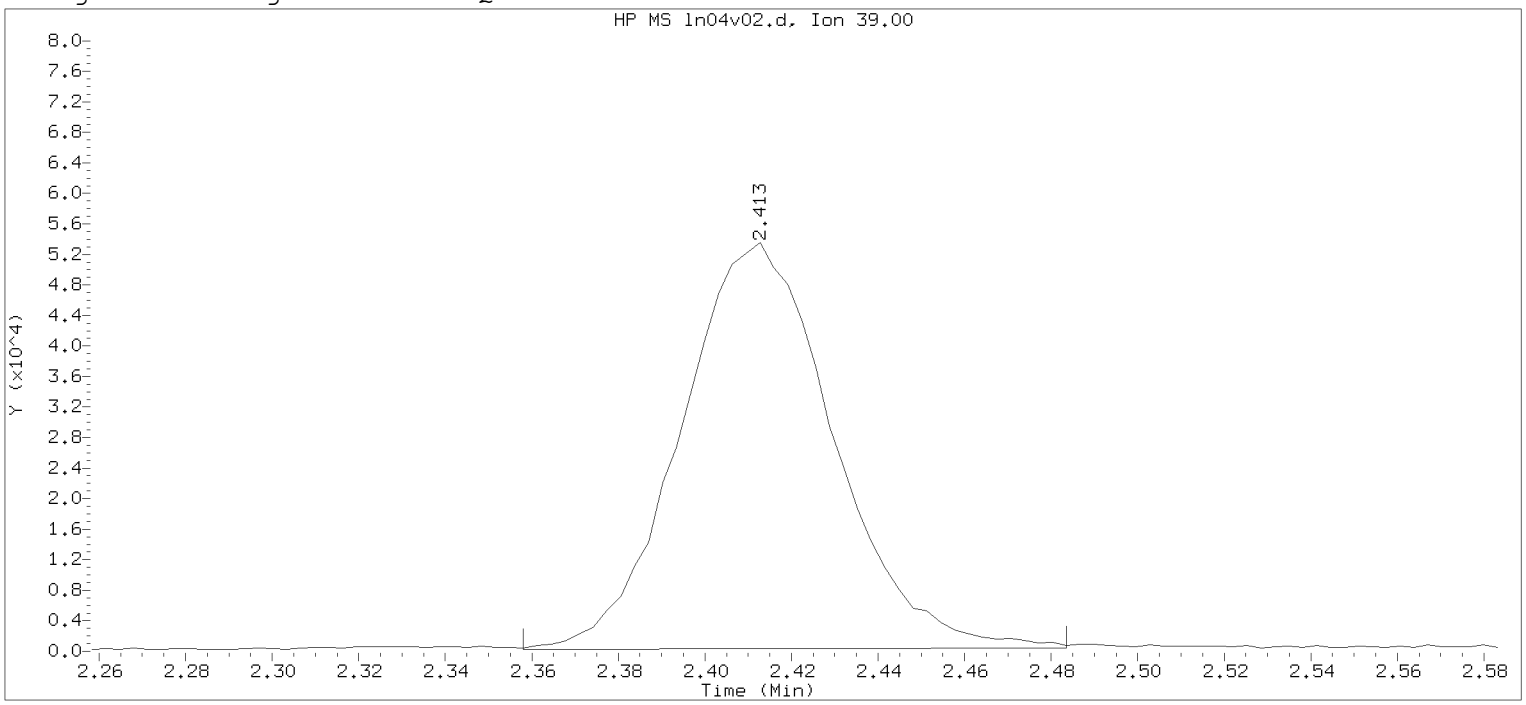
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

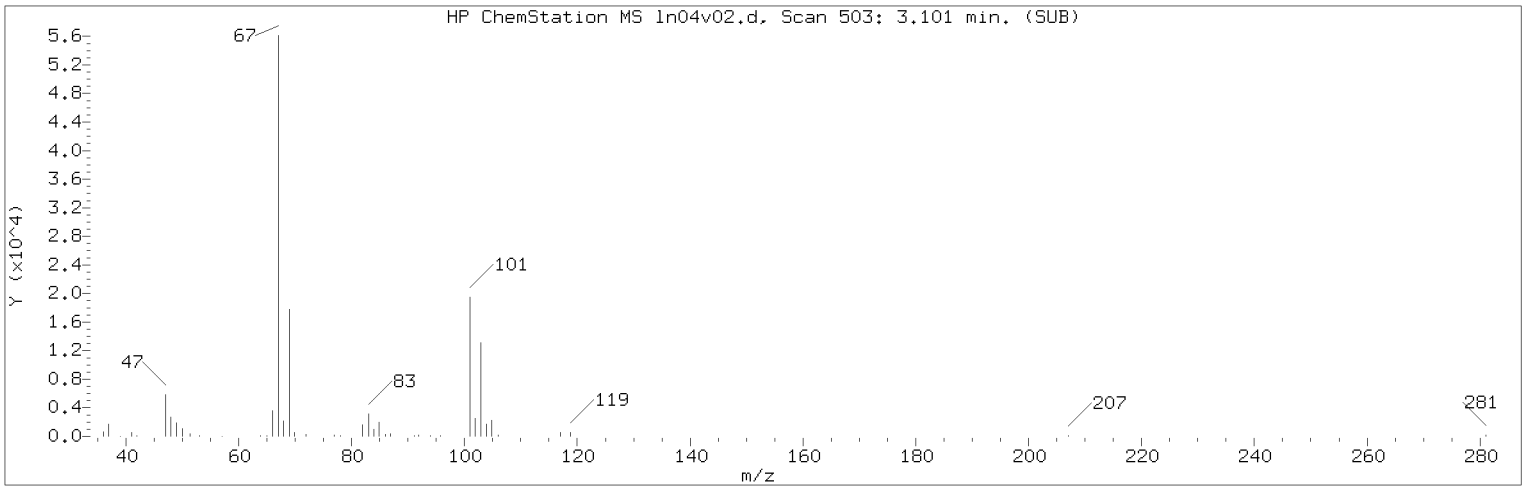
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

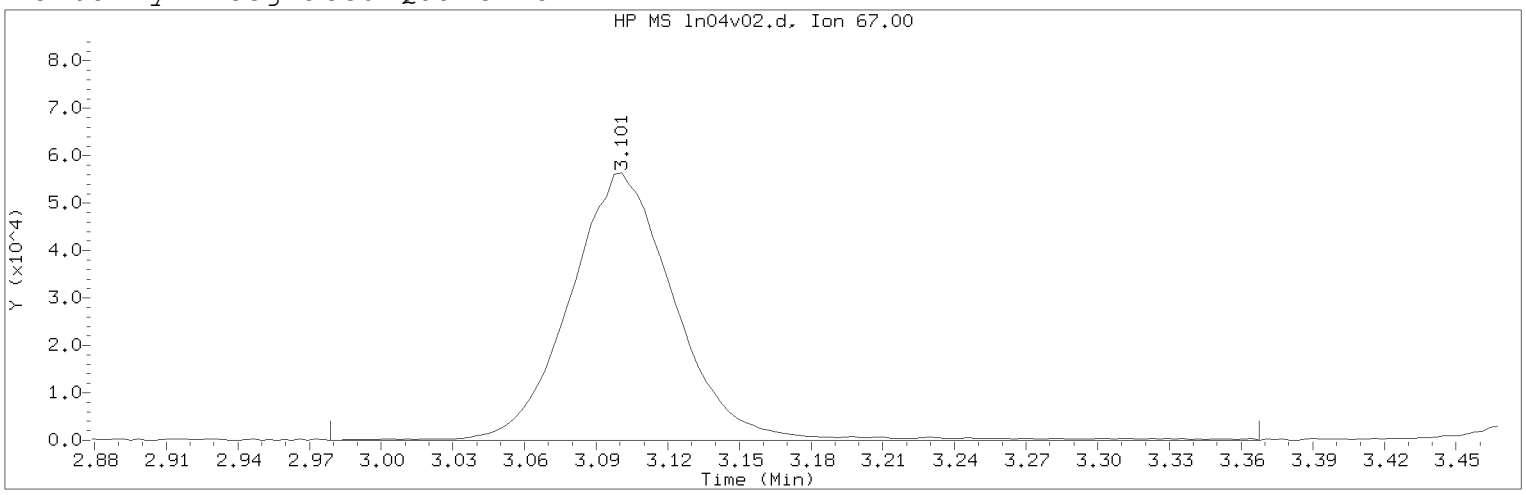
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 289
Retention Time (minutes): 2.413
Quant Ion : 39.00
Area : 129885
On-column Amount (ng) : 19.2400
Integration start scan : 271 Integration stop scan: 310
Y at integration start : 283 Y at integration end: 414

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

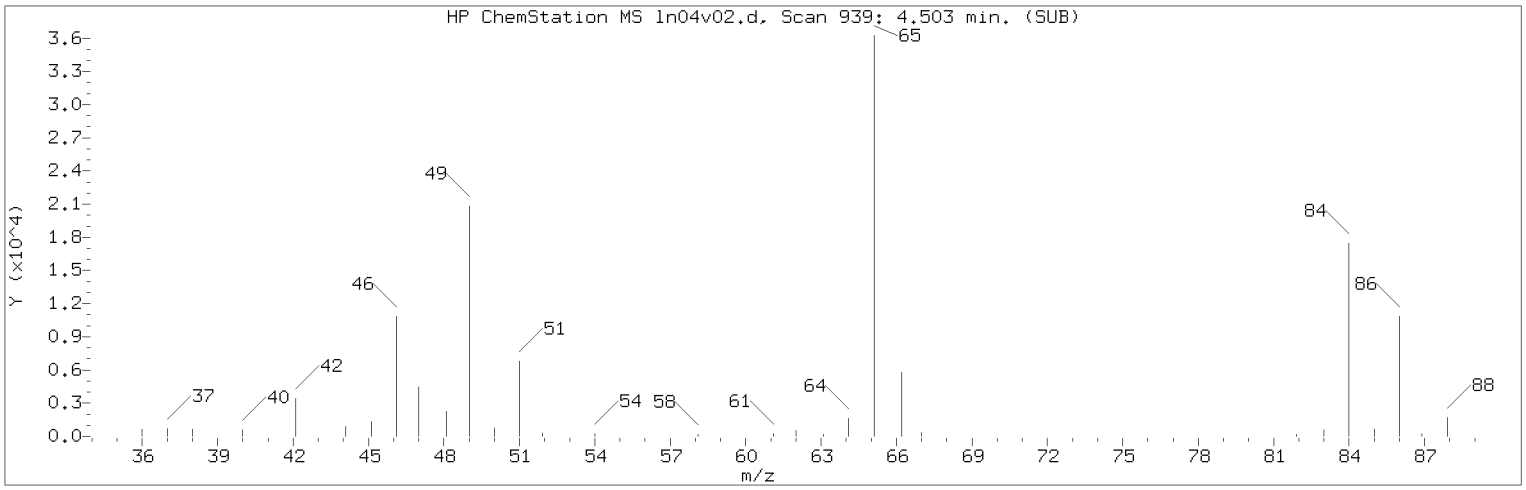
Compound Number : 10
Compound Name : Dichlorofluoromethane
Scan Number : 503
Retention Time (minutes): 3.101
Quant Ion : 67.00
Area (flag) : 174118M
On-Column Amount (ng) : 16.2240
Integration start scan : 464 Integration stop scan: 585
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

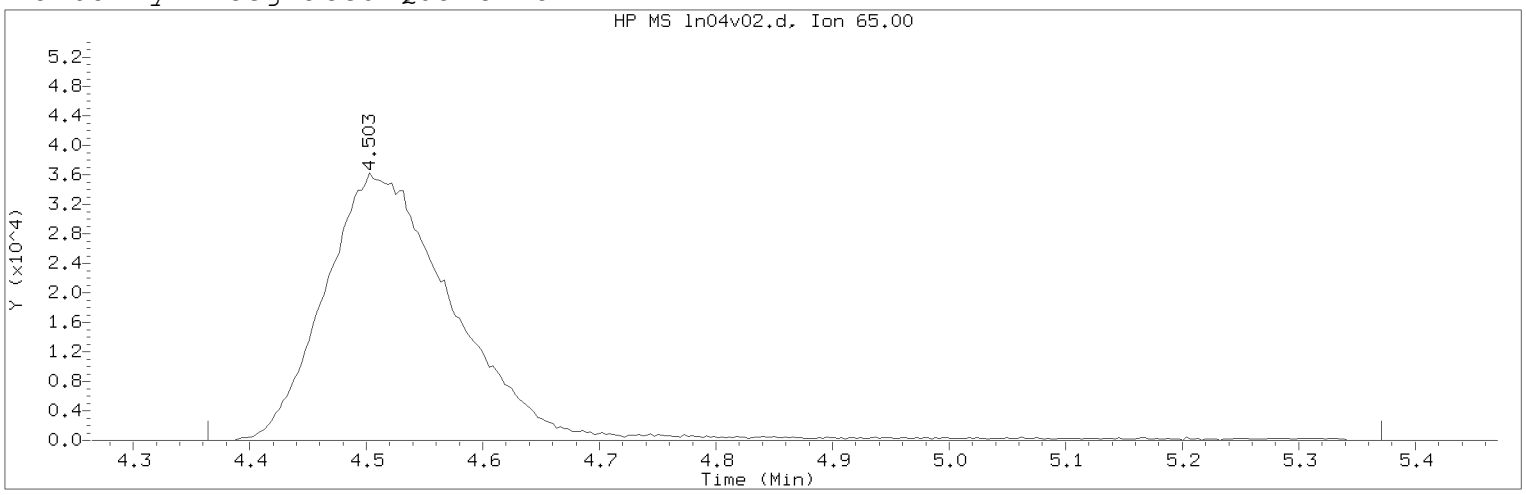
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

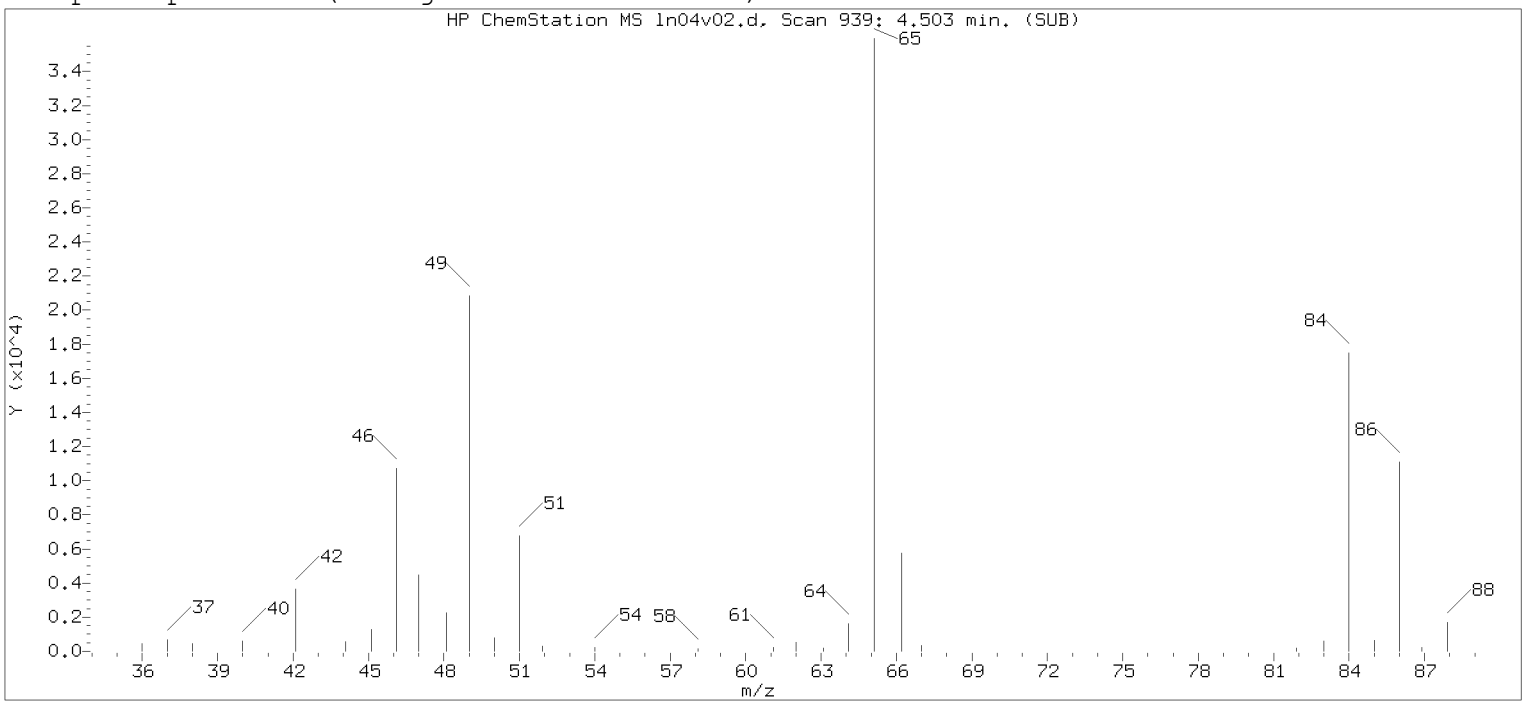
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area (flag) : 282794M
On-Column Amount (ng) : 250.0000
Integration start scan : 895 Integration stop scan: 1208
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

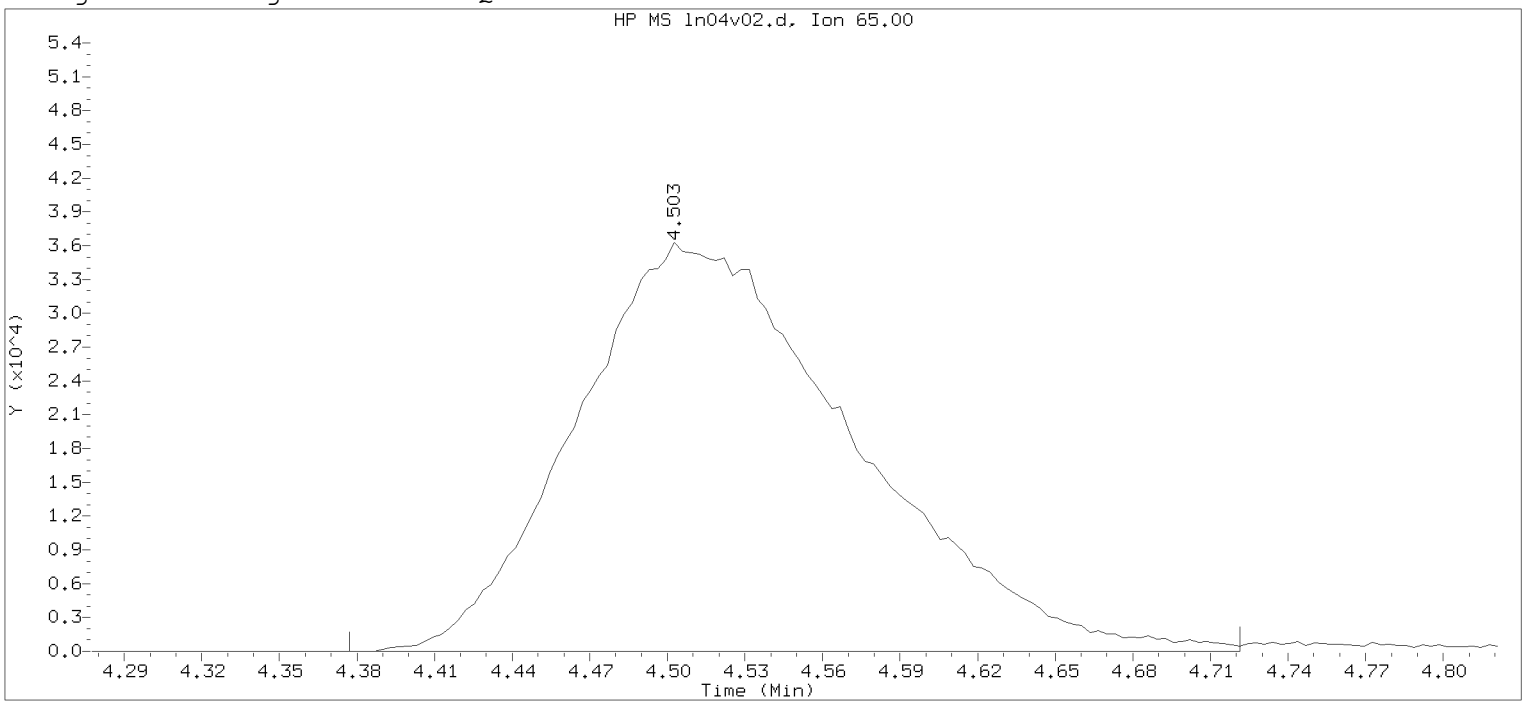
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

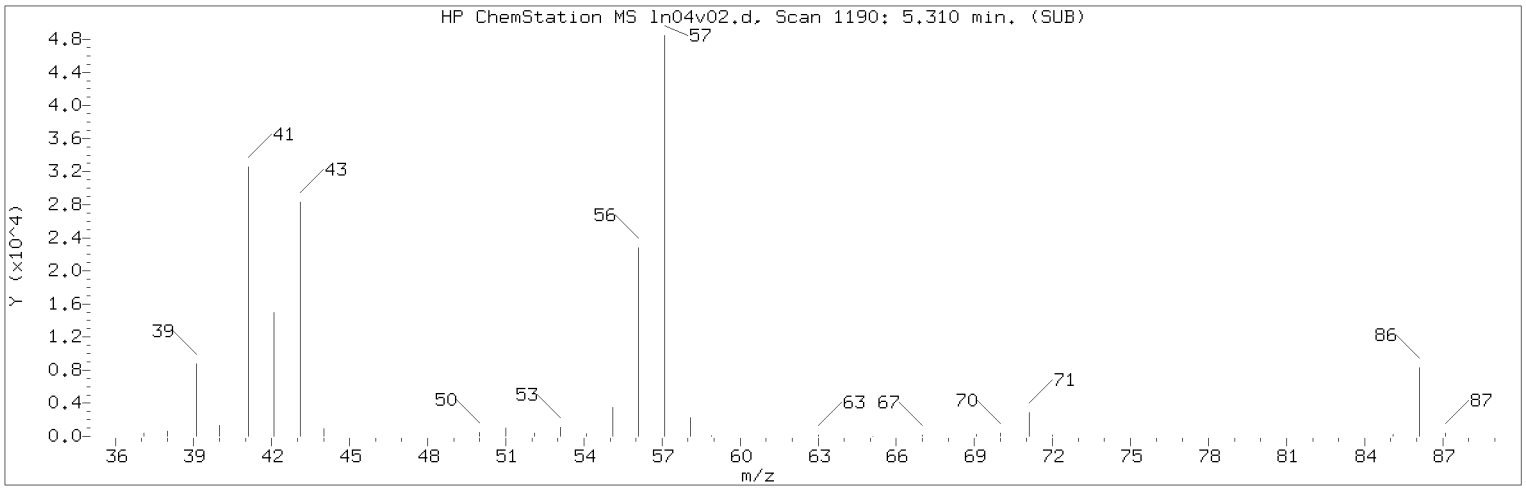
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

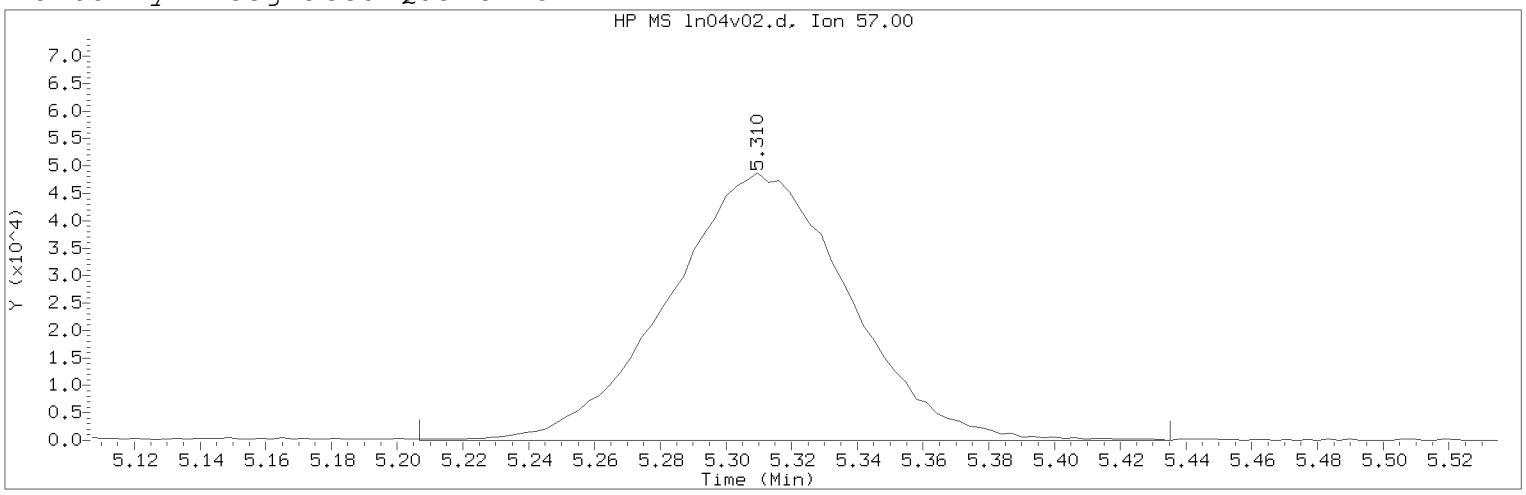
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 939
Retention Time (minutes): 4.503
Quant Ion : 65.00
Area : 270950
On-column Amount (ng) : 250.0000
Integration start scan : 899 Integration stop scan: 1006
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

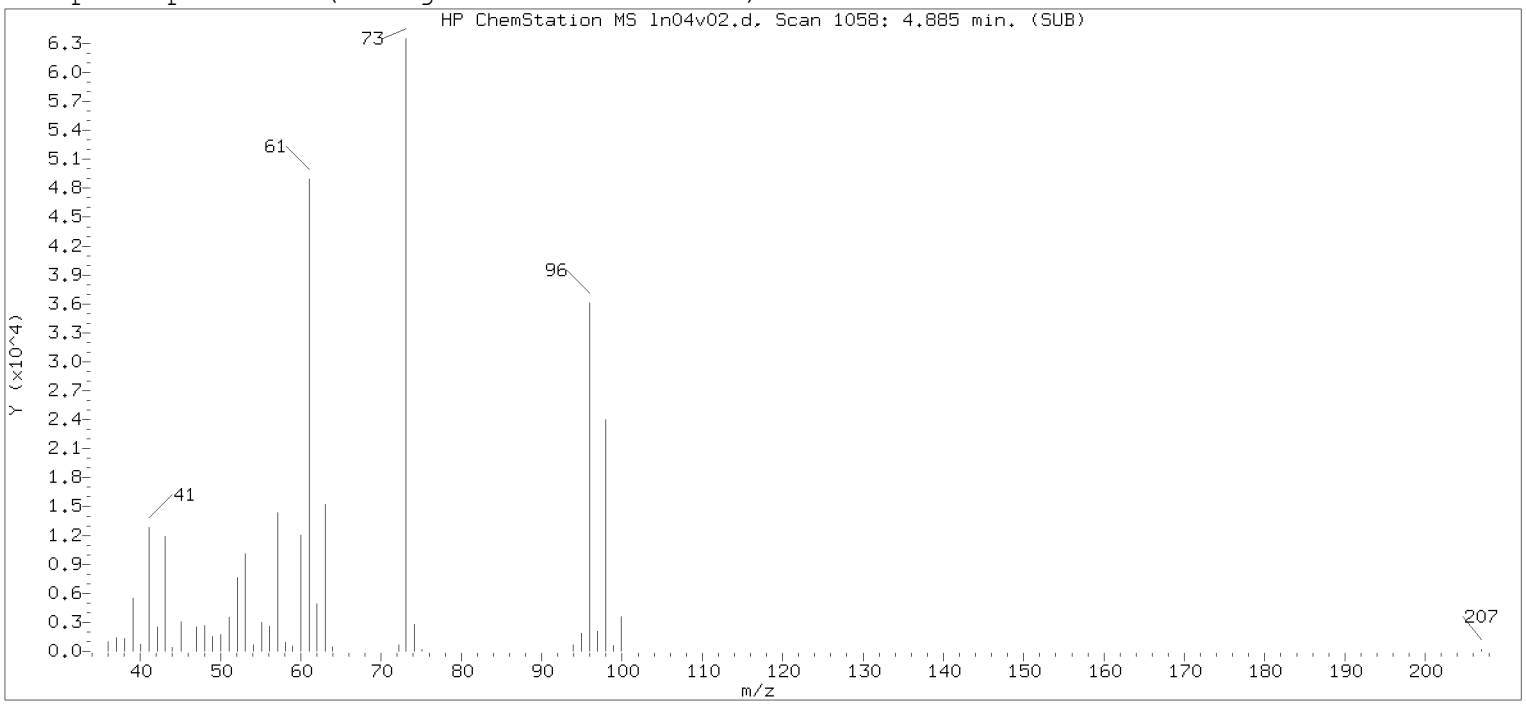
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1190
Retention Time (minutes): 5.310
Quant Ion : 57.00
Area (flag) : 185206M
On-Column Amount (ng) : 20.0675
Integration start scan : 1157 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

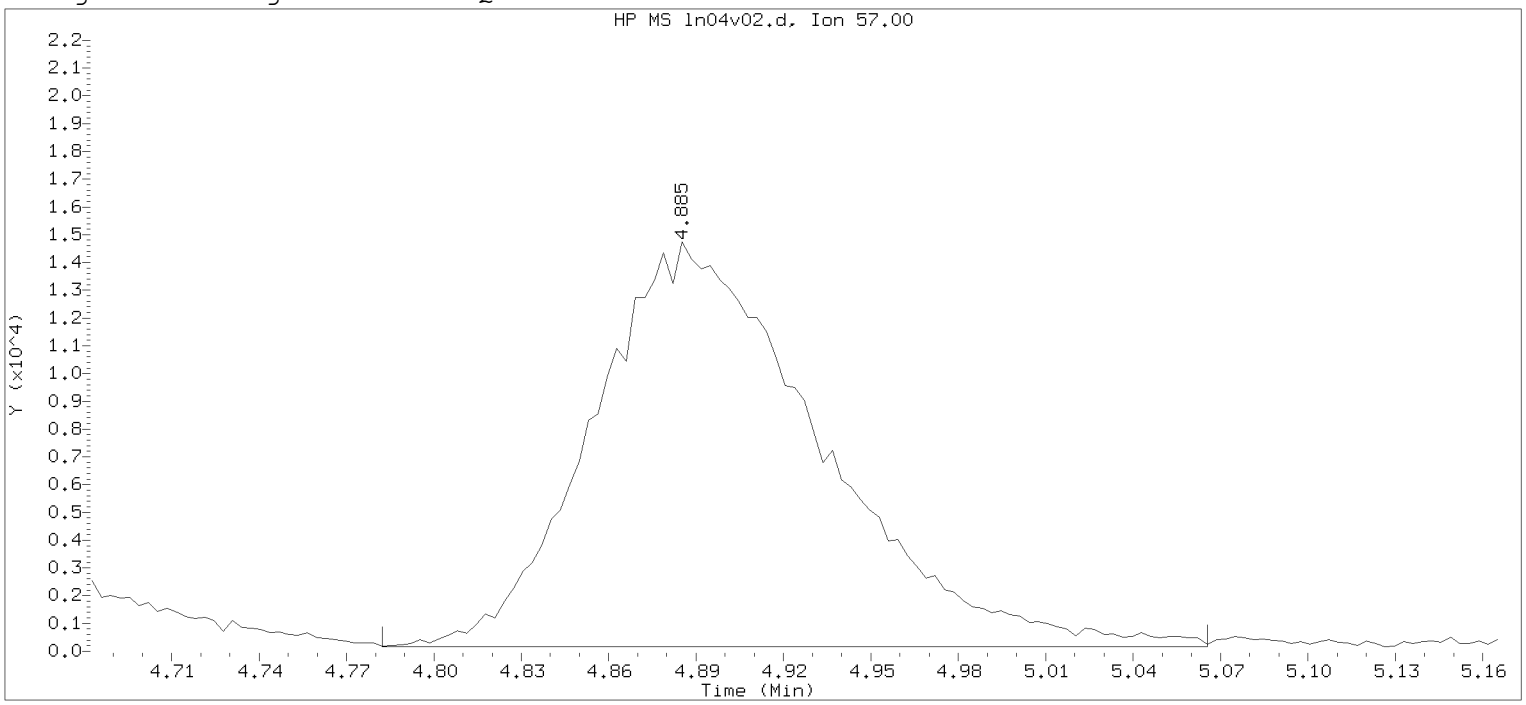
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

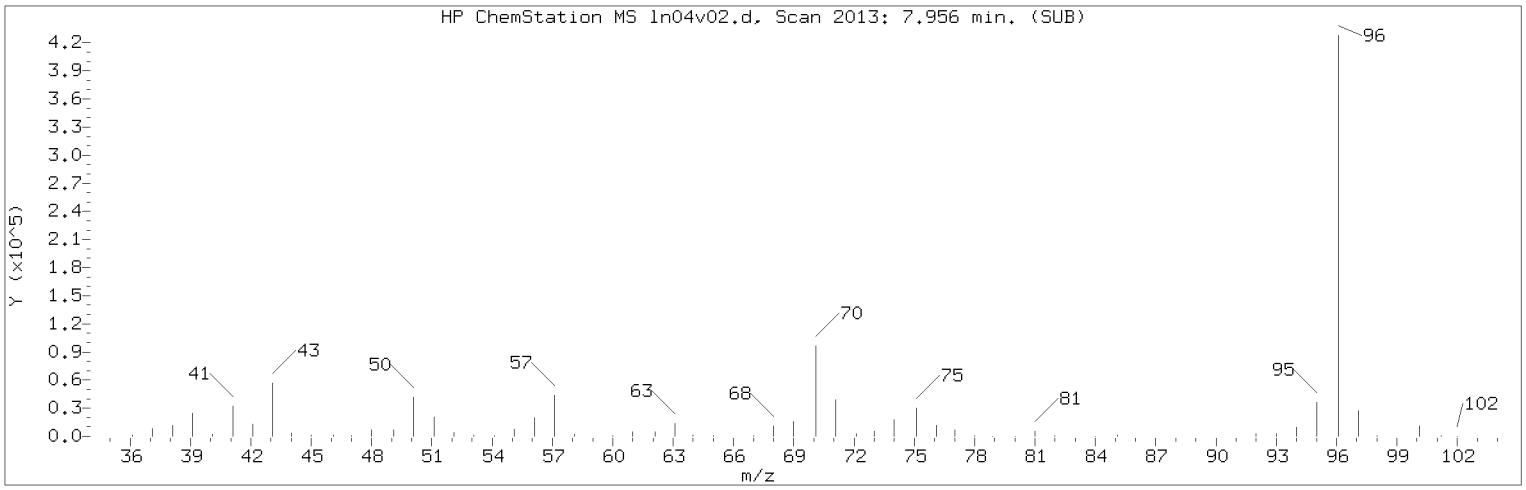
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

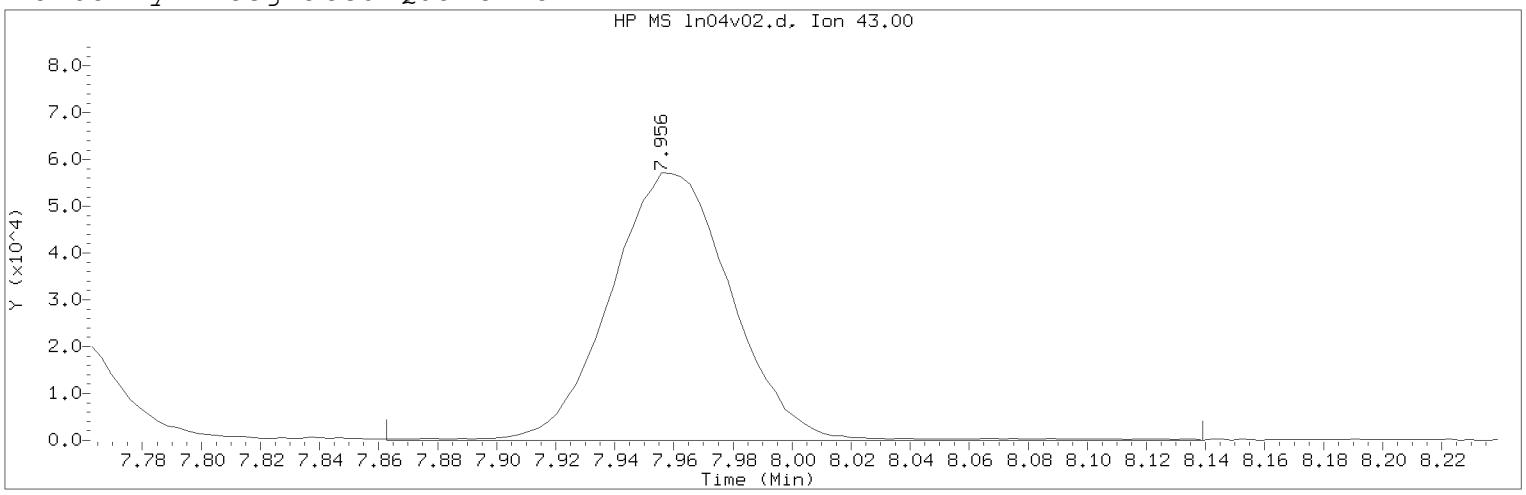
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1058
Retention Time (minutes): 4.885
Quant Ion : 57.00
Area : 79381
On-column Amount (ng) : 18.4374
Integration start scan : 1025 Integration stop scan: 1113
Y at integration start : 160 Y at integration end: 160

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

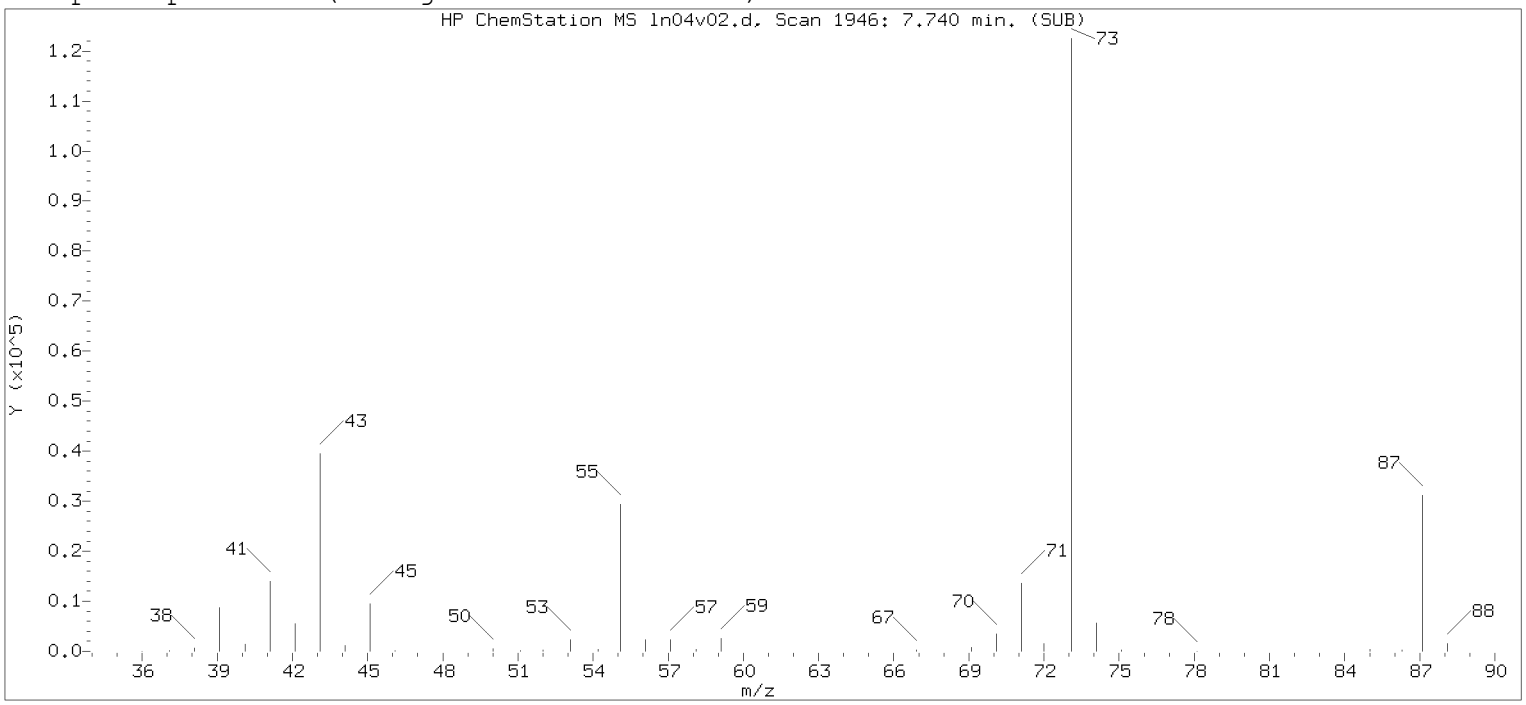
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 2013
Retention Time (minutes): 7.956
Quant Ion : 43.00
Area (flag) : 163362M
On-Column Amount (ng) : 18.9476
Integration start scan : 1983 Integration stop scan: 2069
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

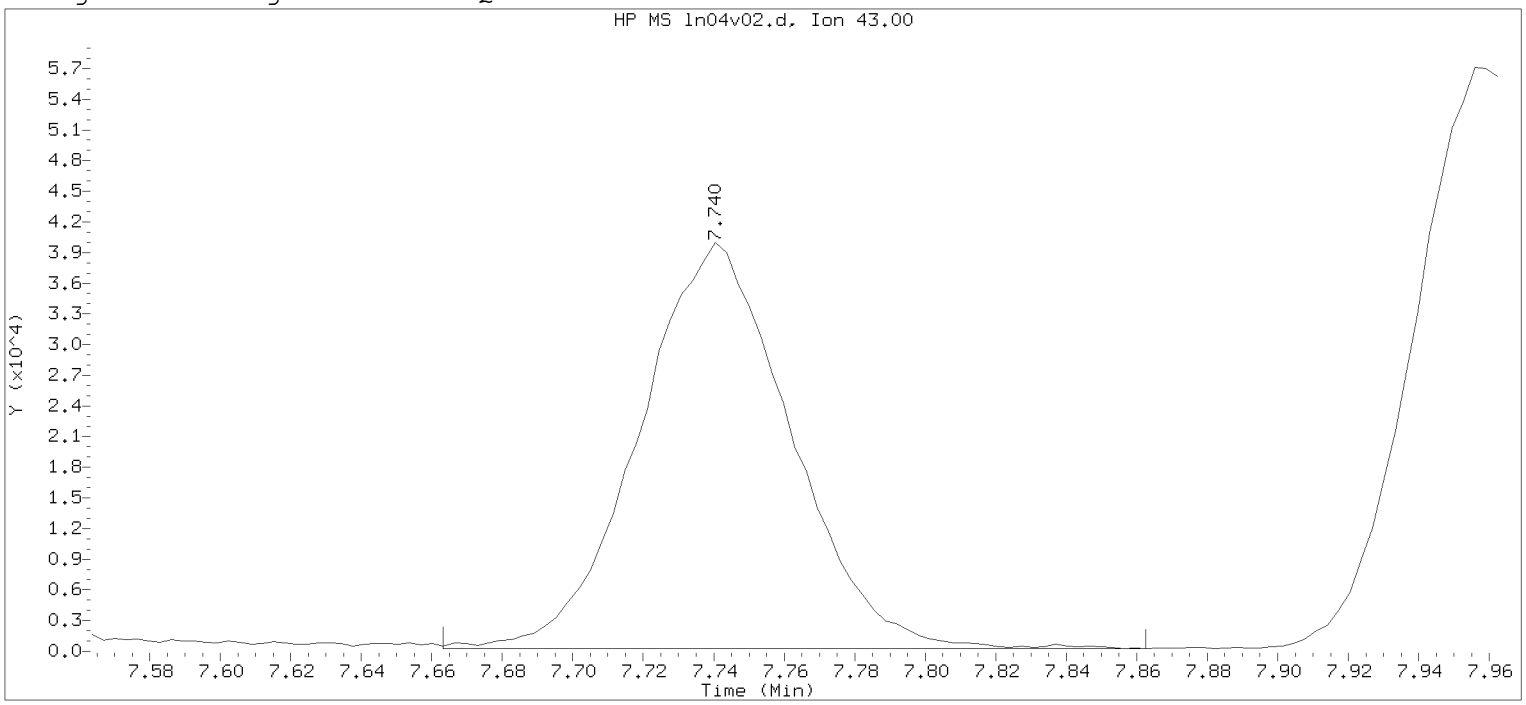
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

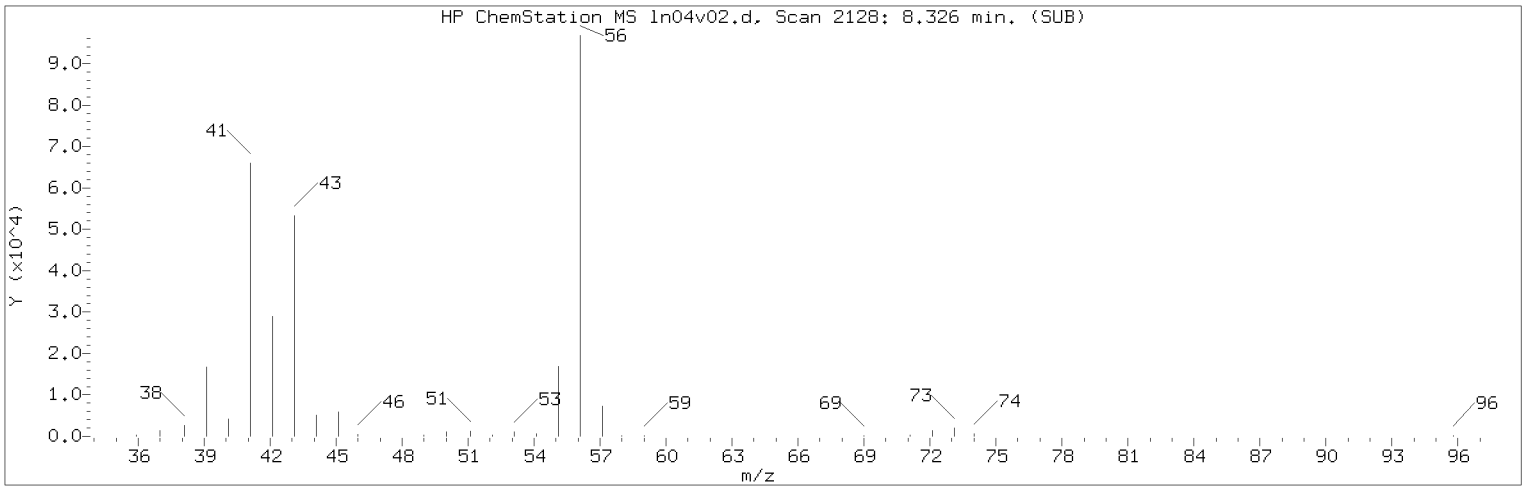
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

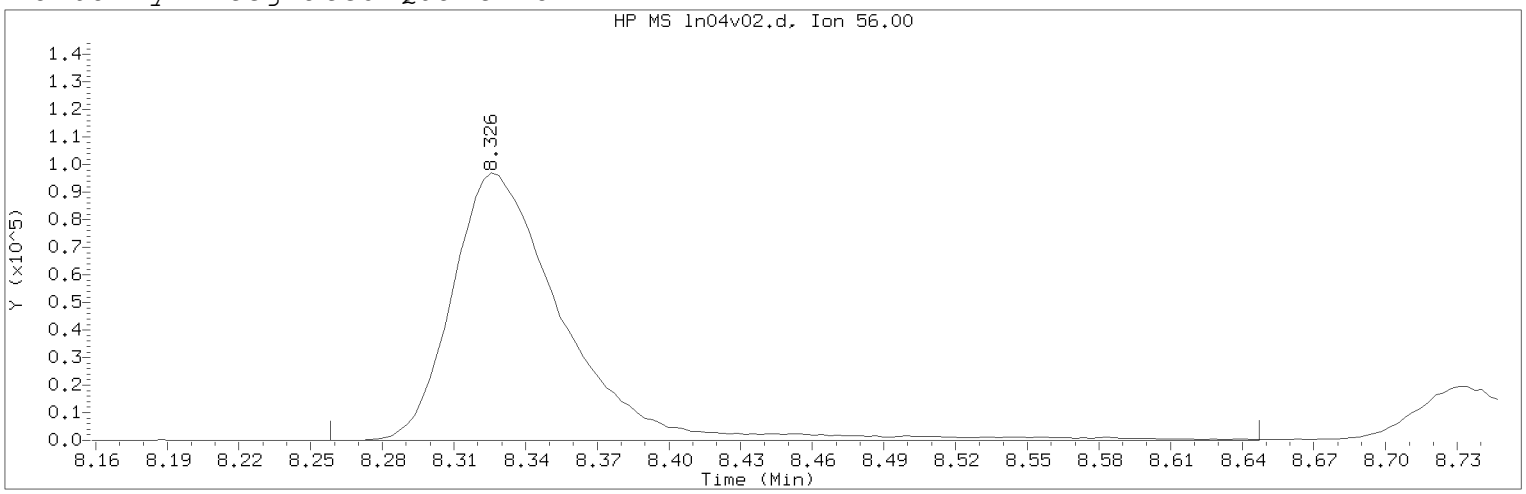
Compound Number : 67
Compound Name : n-Heptane
Scan Number : 1946
Retention Time (minutes): 7.740
Quant Ion : 43.00
Area : 118529
On-column Amount (ng) : 18.5036
Integration start scan : 1921 Integration stop scan: 1983
Y at integration start : 255 Y at integration end: 255

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

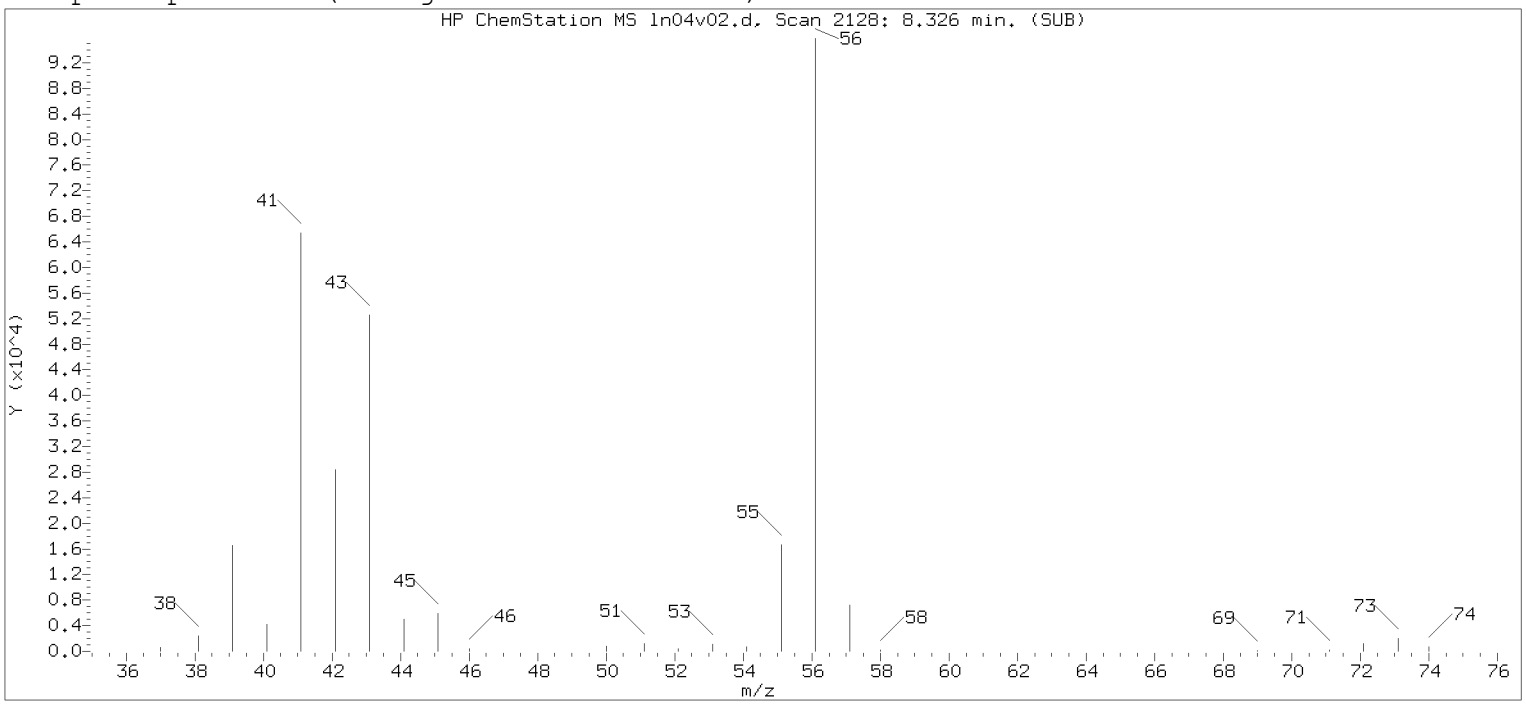
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area (flag) : 314470M
On-Column Amount (ng) : 911.9238
Integration start scan : 2106 Integration stop scan: 2227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

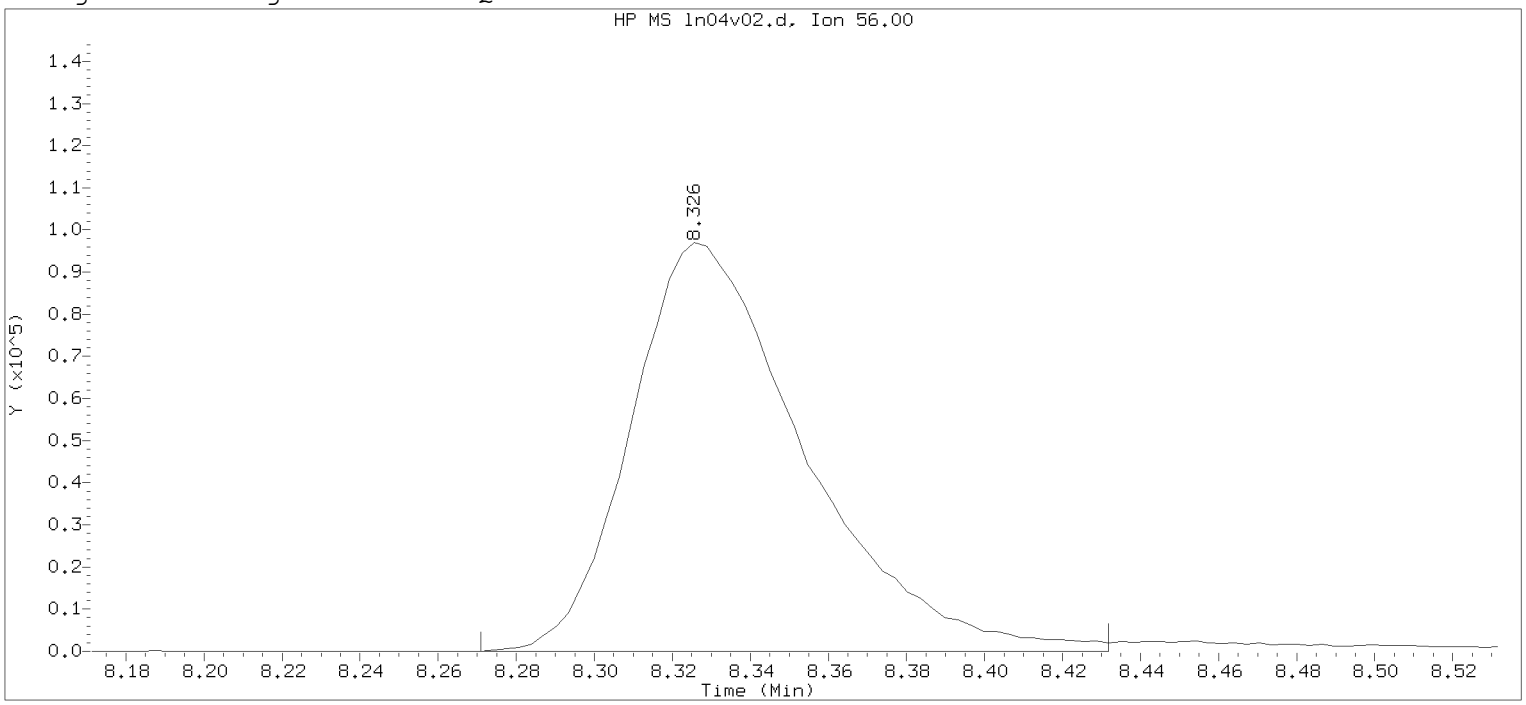
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

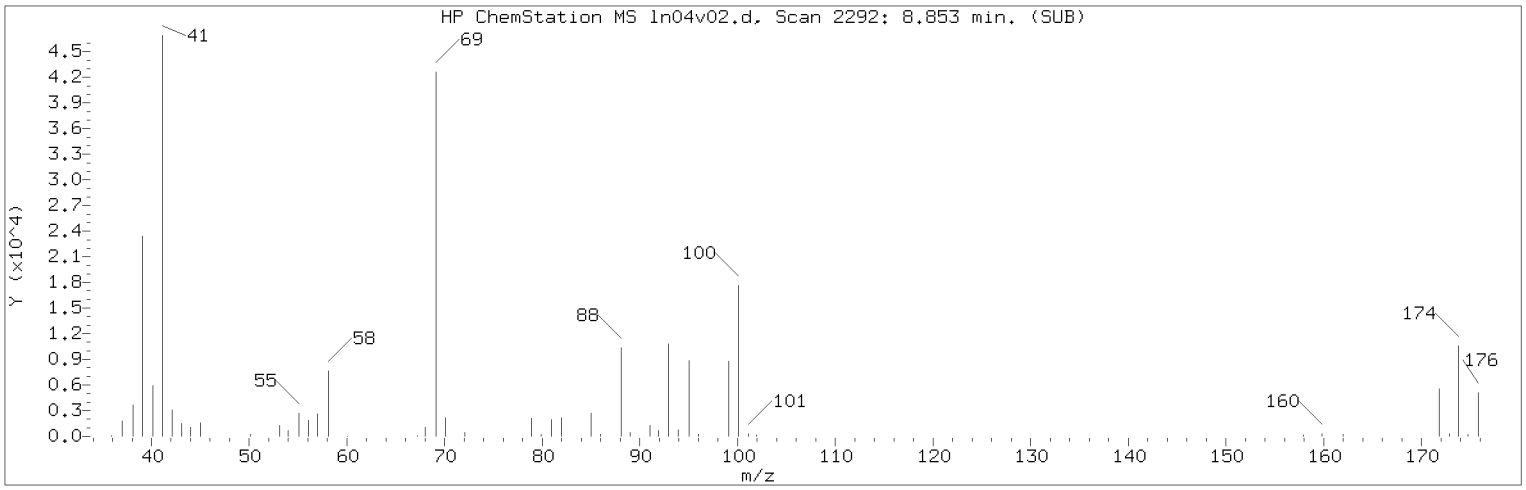
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

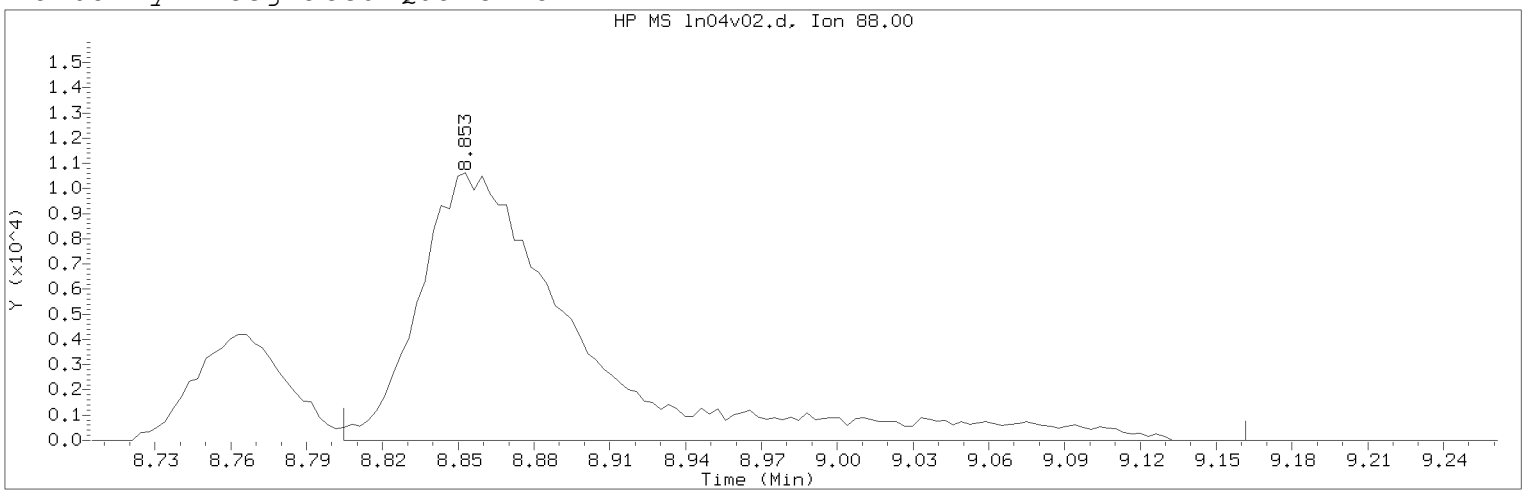
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 2128
Retention Time (minutes): 8.326
Quant Ion : 56.00
Area : 299611
On-column Amount (ng) : 906.8122
Integration start scan : 2110 Integration stop scan: 2160
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

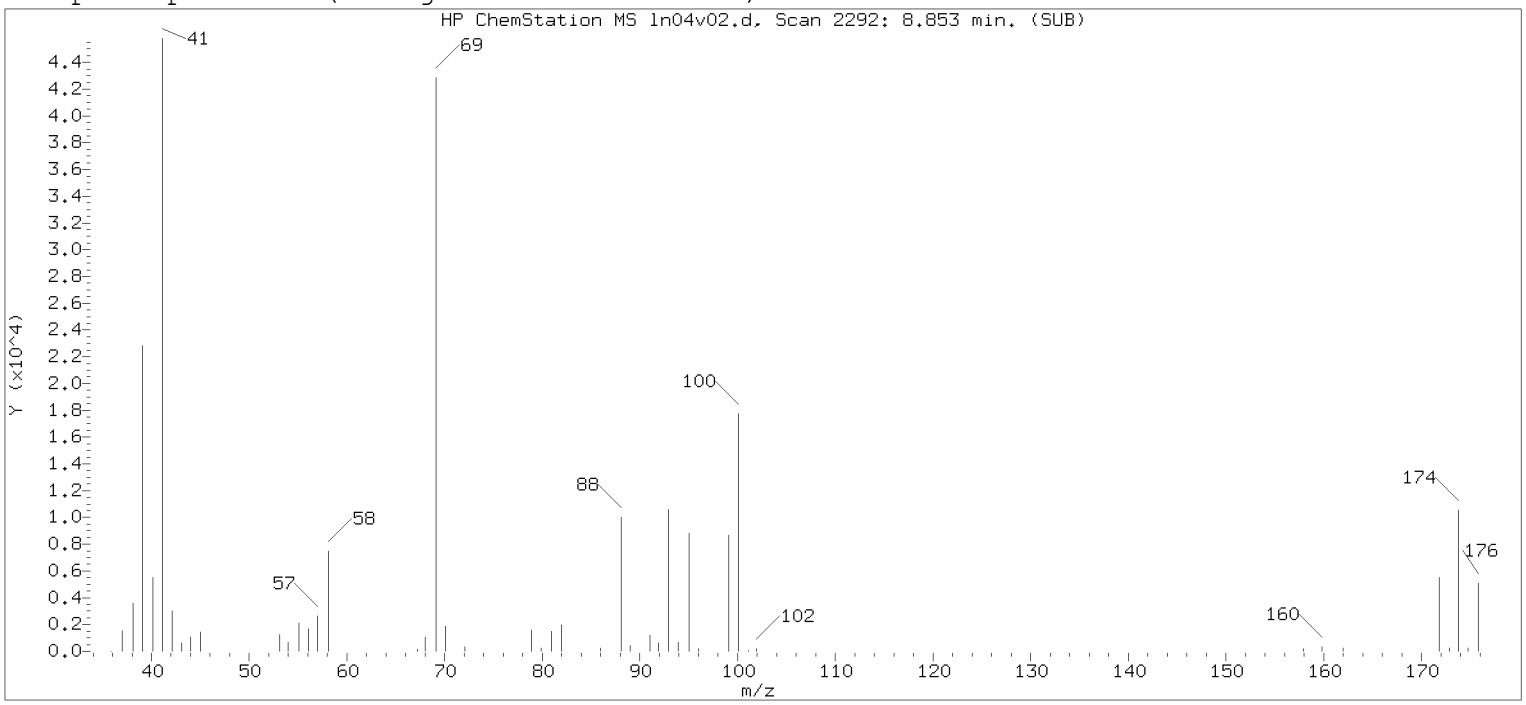
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area (flag) : 47747M
On-Column Amount (ng) : 503.7529
Integration start scan : 2276 Integration stop scan: 2387
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

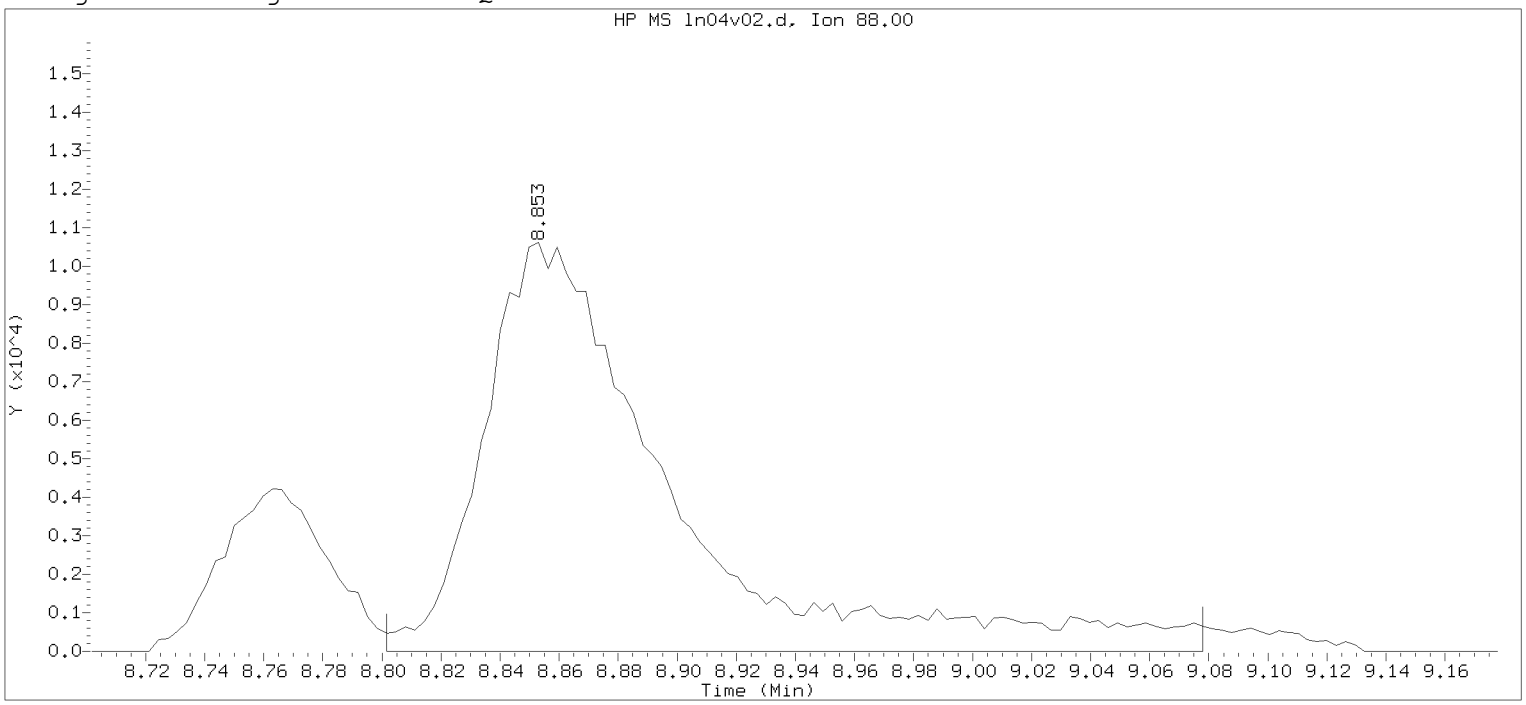
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

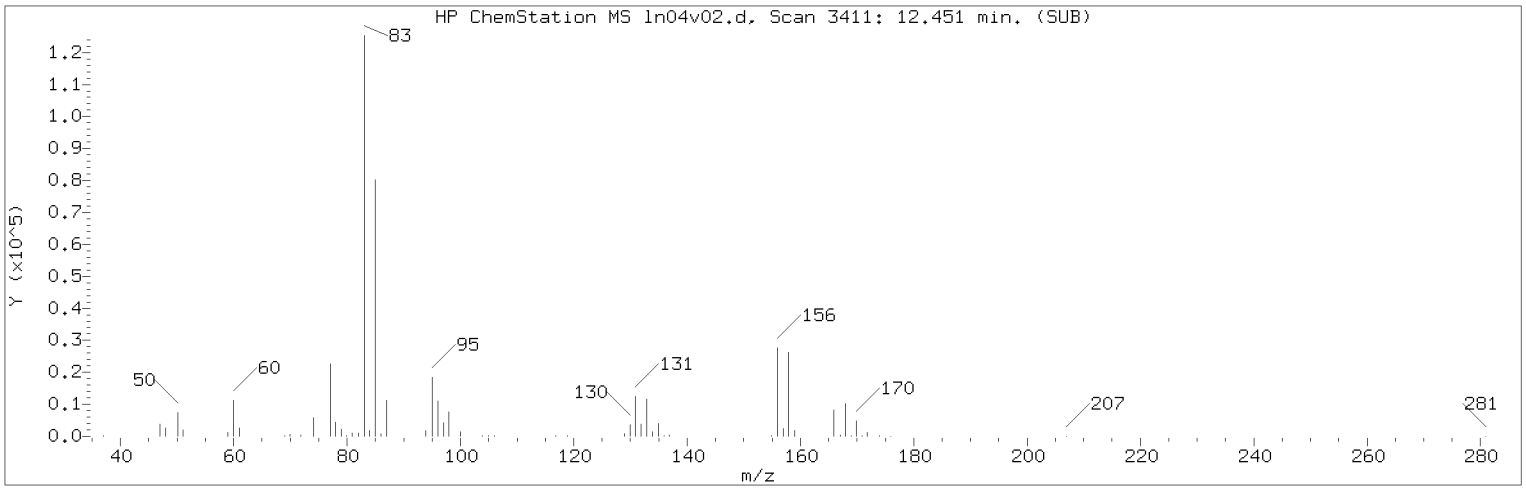
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

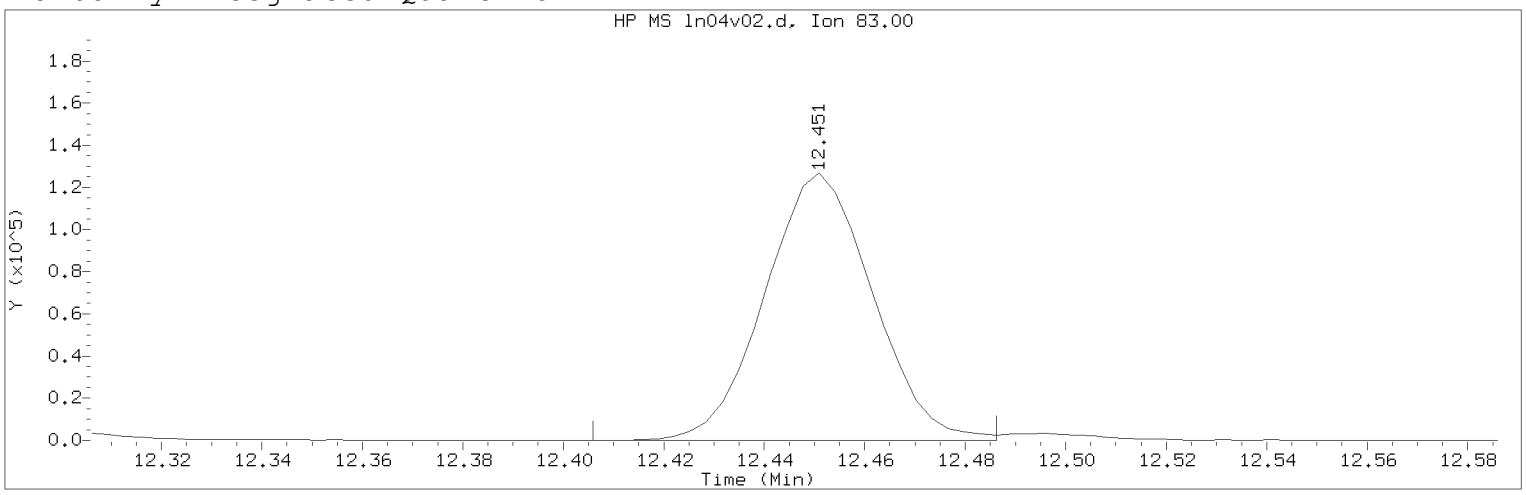
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area : 46453
On-column Amount (ng) : 511.5262
Integration start scan : 2275 Integration stop scan: 2361
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user: KASPOSITO

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

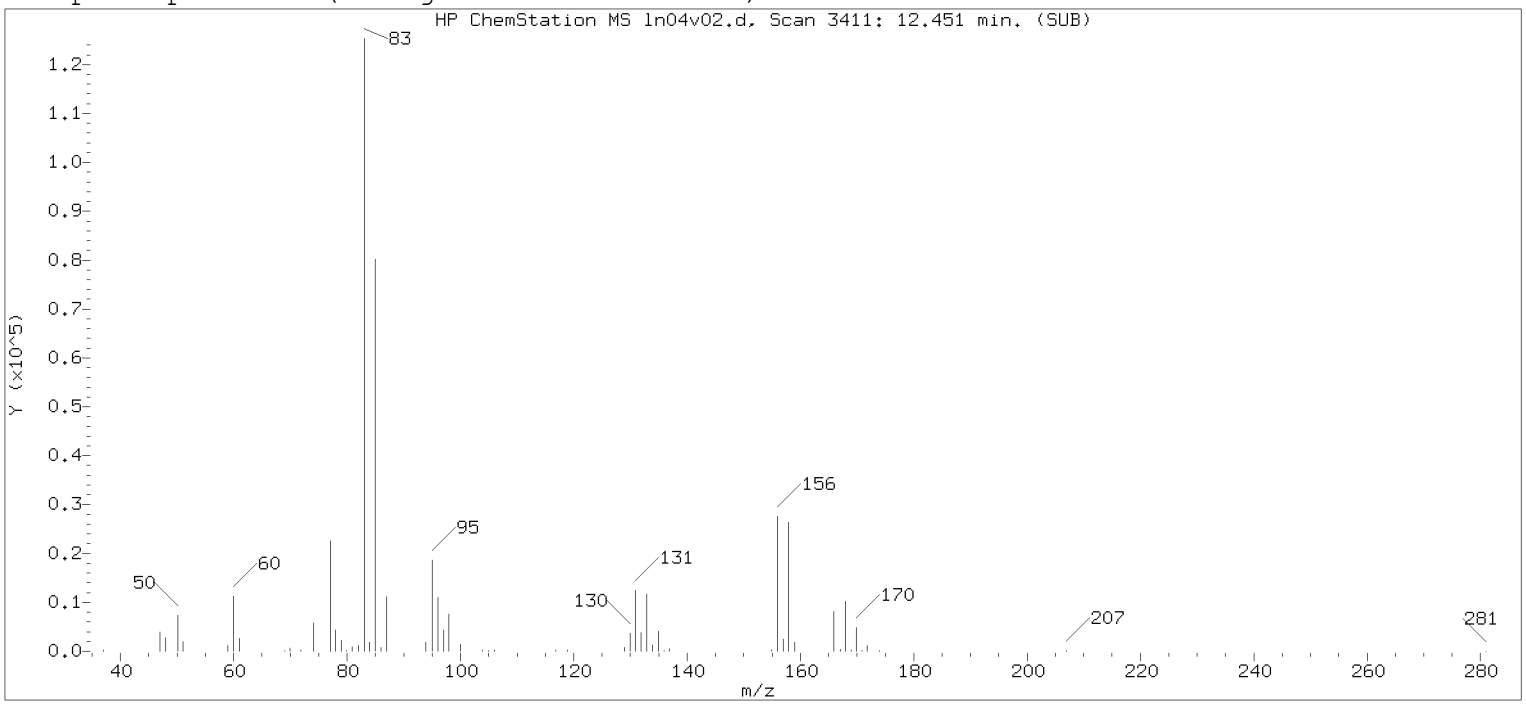
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area (flag) : 188446M
On-Column Amount (ng) : 19.5761
Integration start scan : 3396 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

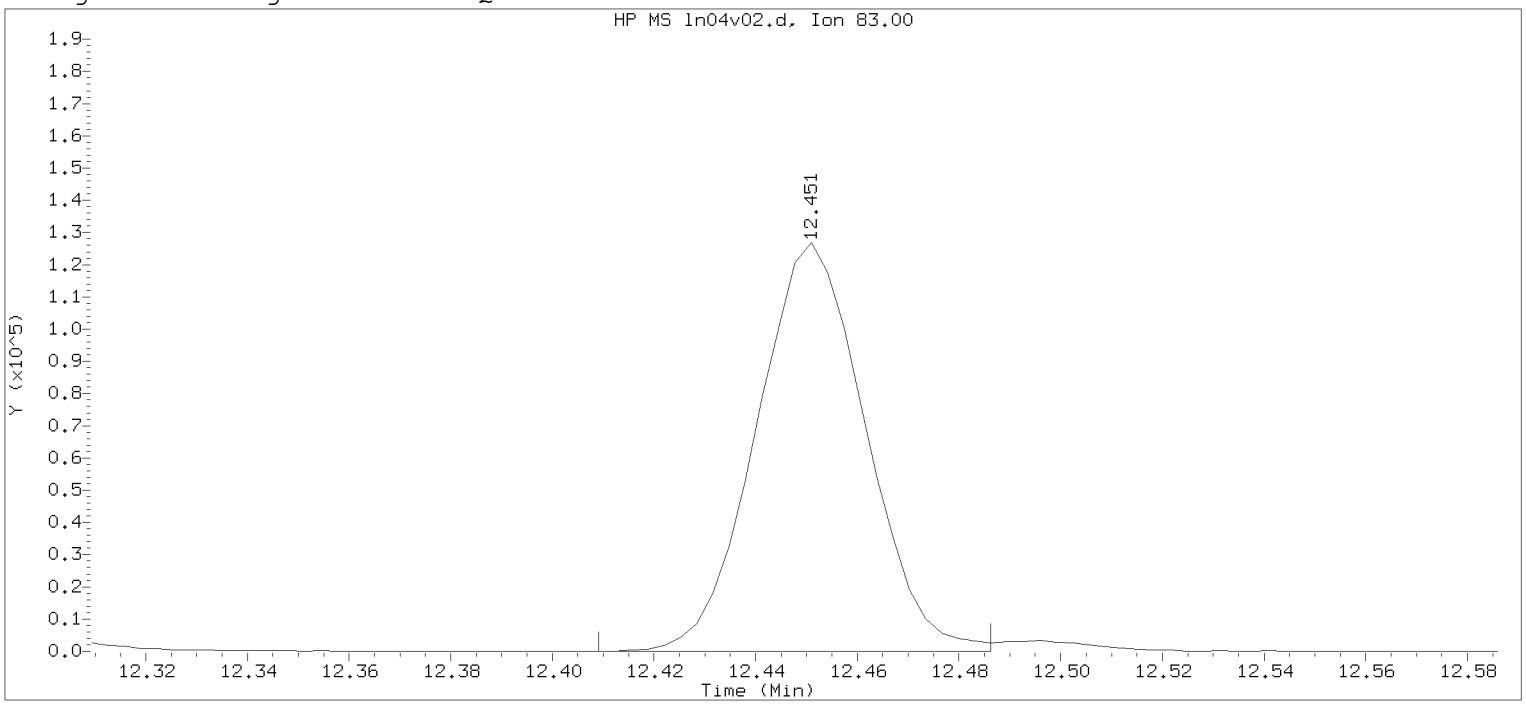
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

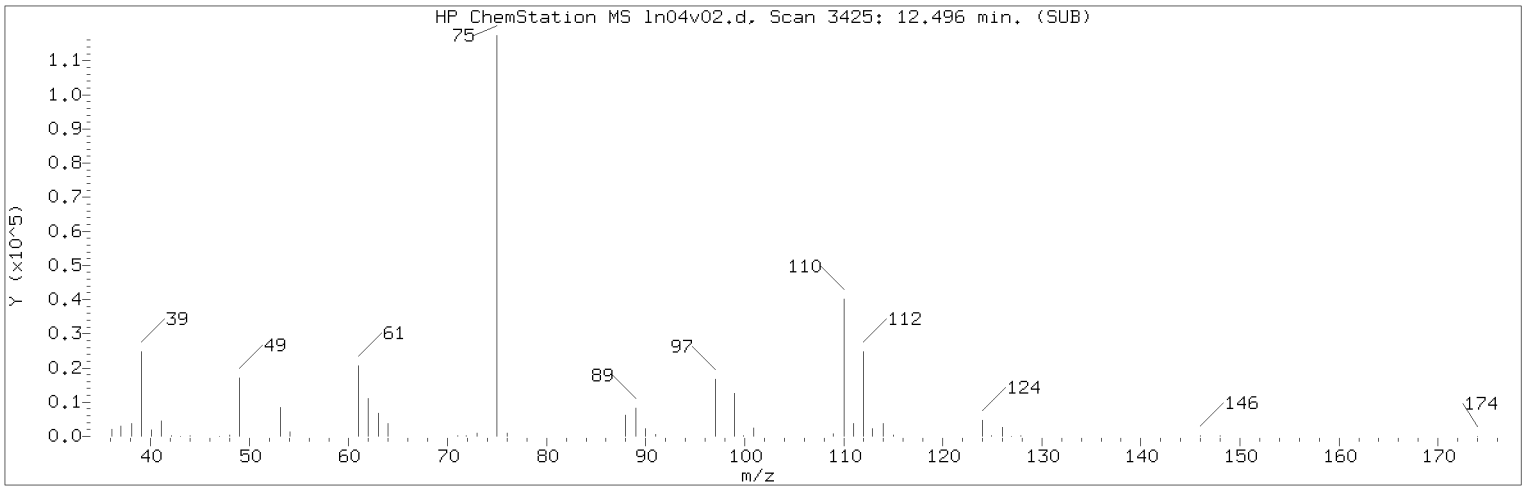
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

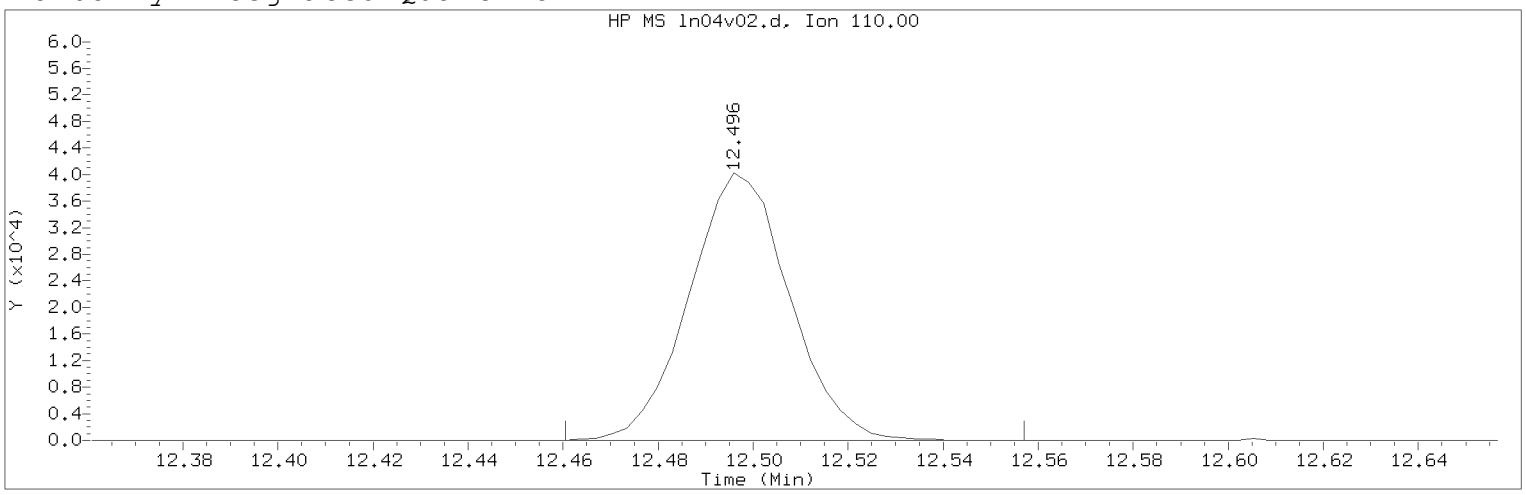
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3411
Retention Time (minutes): 12.451
Quant Ion : 83.00
Area : 188196
On-column Amount (ng) : 19.2022
Integration start scan : 3397 Integration stop scan: 3421
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

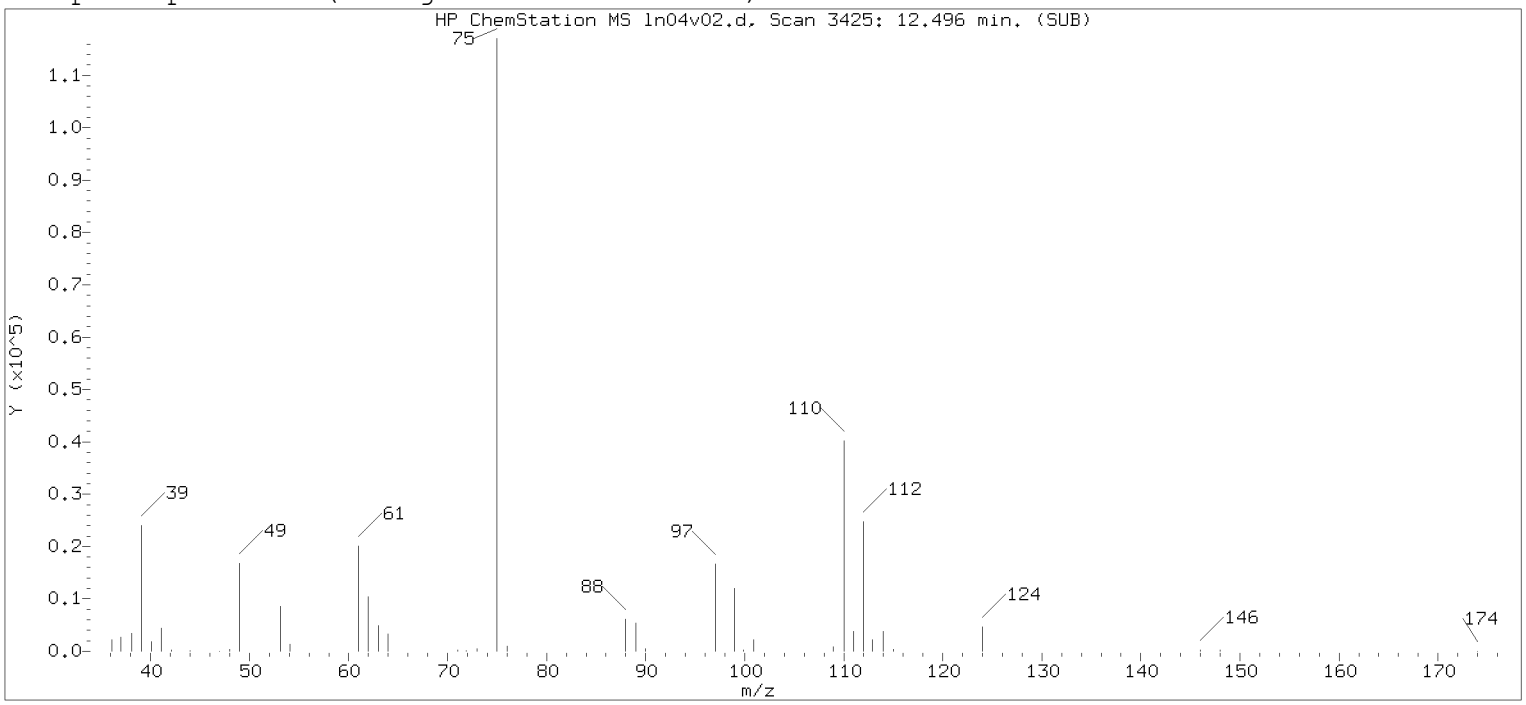
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 3425
Retention Time (minutes): 12.496
Quant Ion : 110.00
Area (flag) : 58902M
On-Column Amount (ng) : 19.9401
Integration start scan : 3413 Integration stop scan: 3443
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

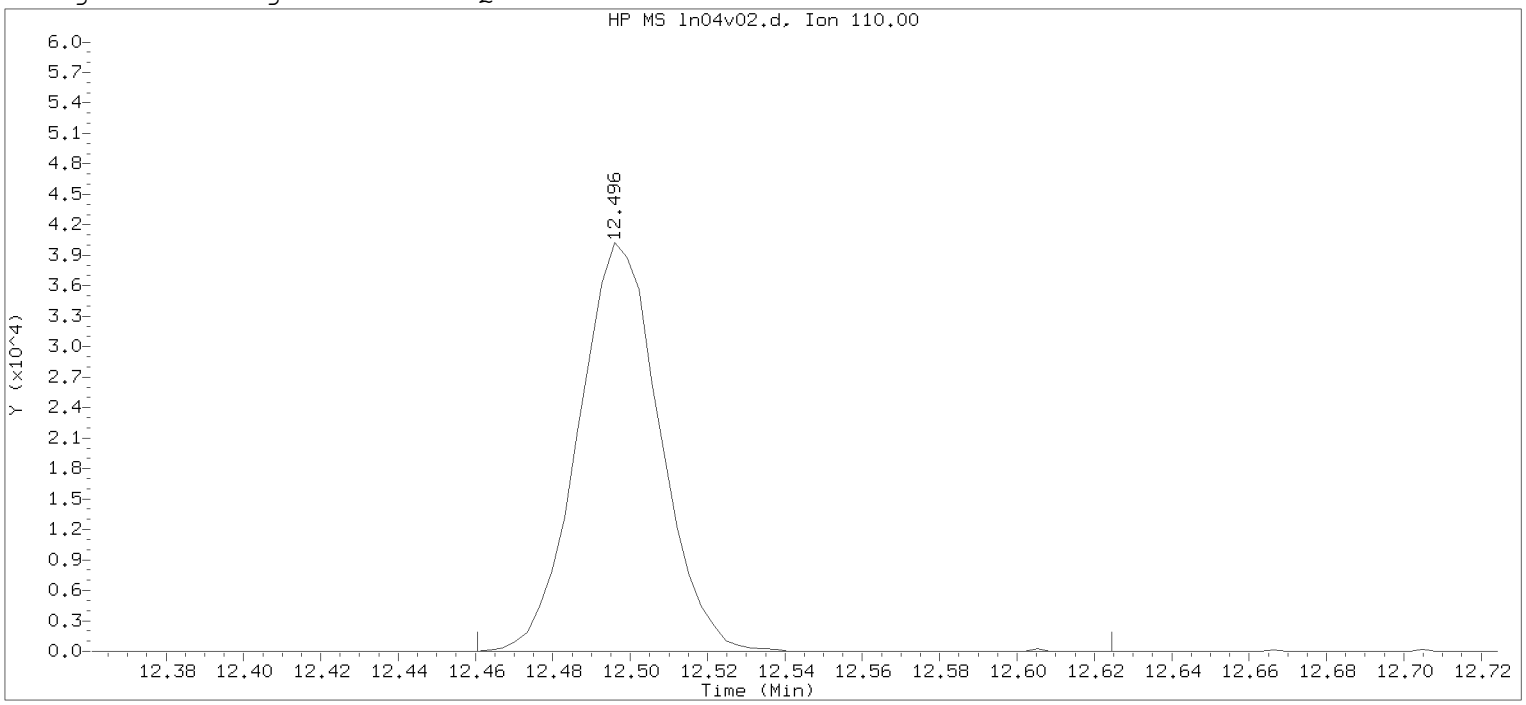
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

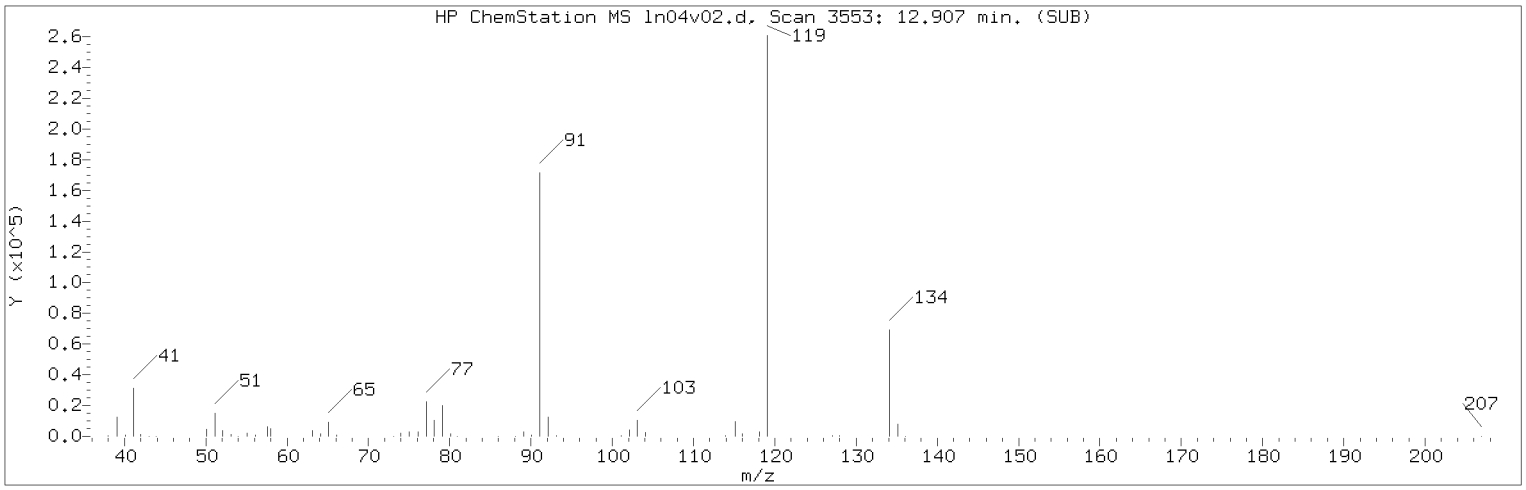
Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

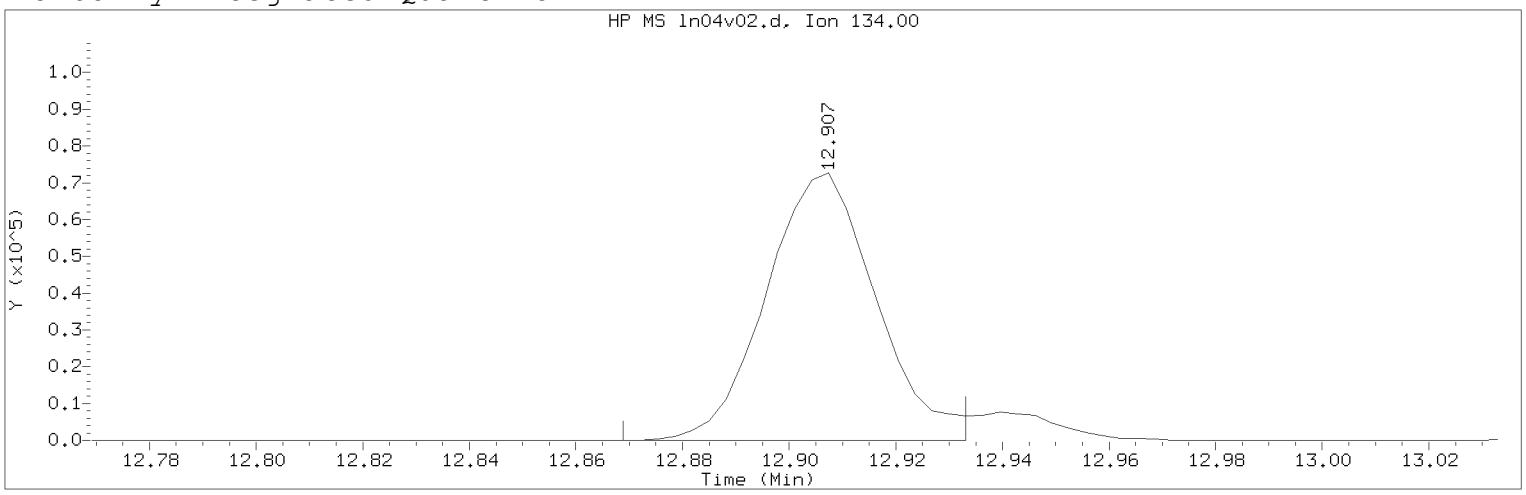
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 3425
Retention Time (minutes): 12.496
Quant Ion : 110.00
Area : 58948
On-column Amount (ng) : 19.9559
Integration start scan : 3413 Integration stop scan: 3464
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 06-NOV-2019 08:00
Date, time and analyst ID of latest file update: 06-Nov-2019 08:01 kek01027

Sample Name: ICVLLG Lab Sample ID: ICVLLG

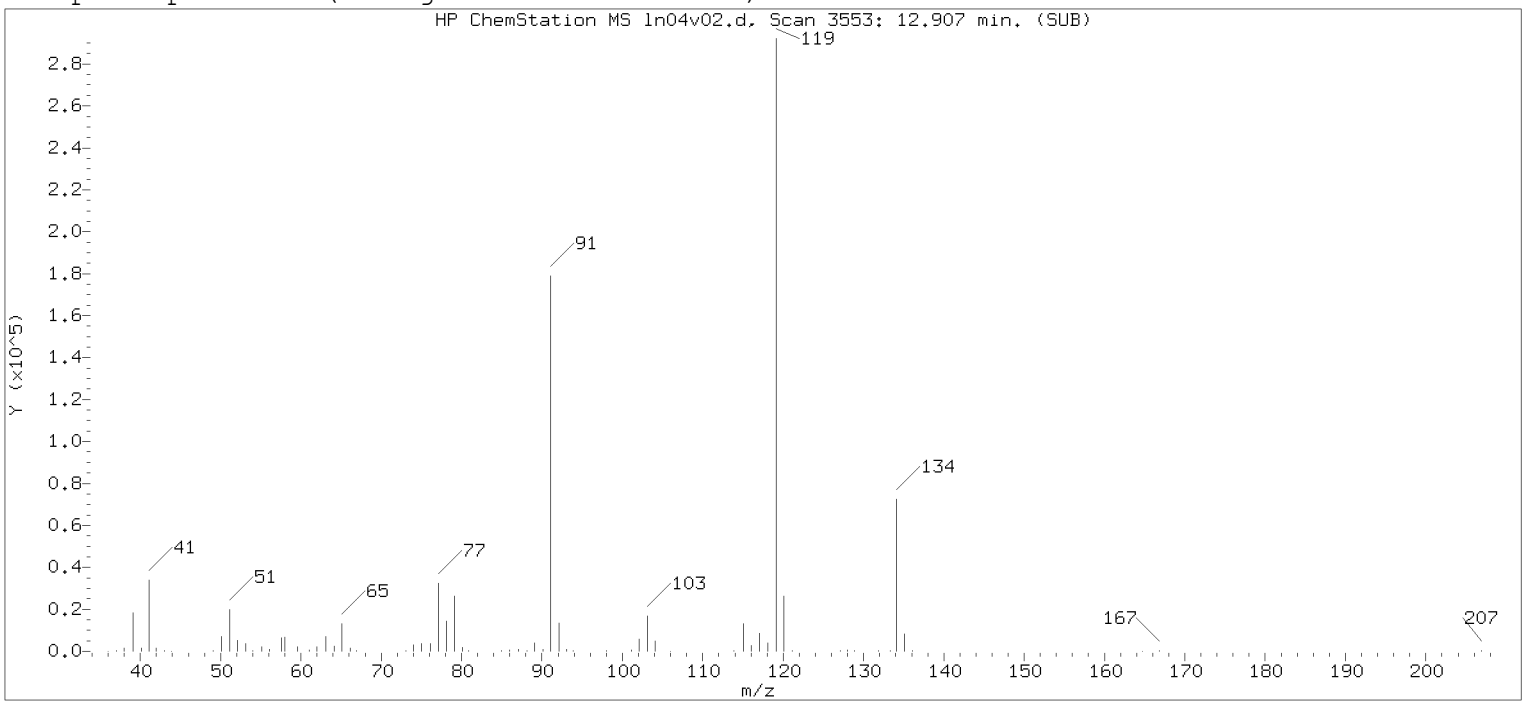
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area (flag) : 103762M
On-Column Amount (ng) : 20.6322
Integration start scan : 3540 Integration stop scan: 3560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

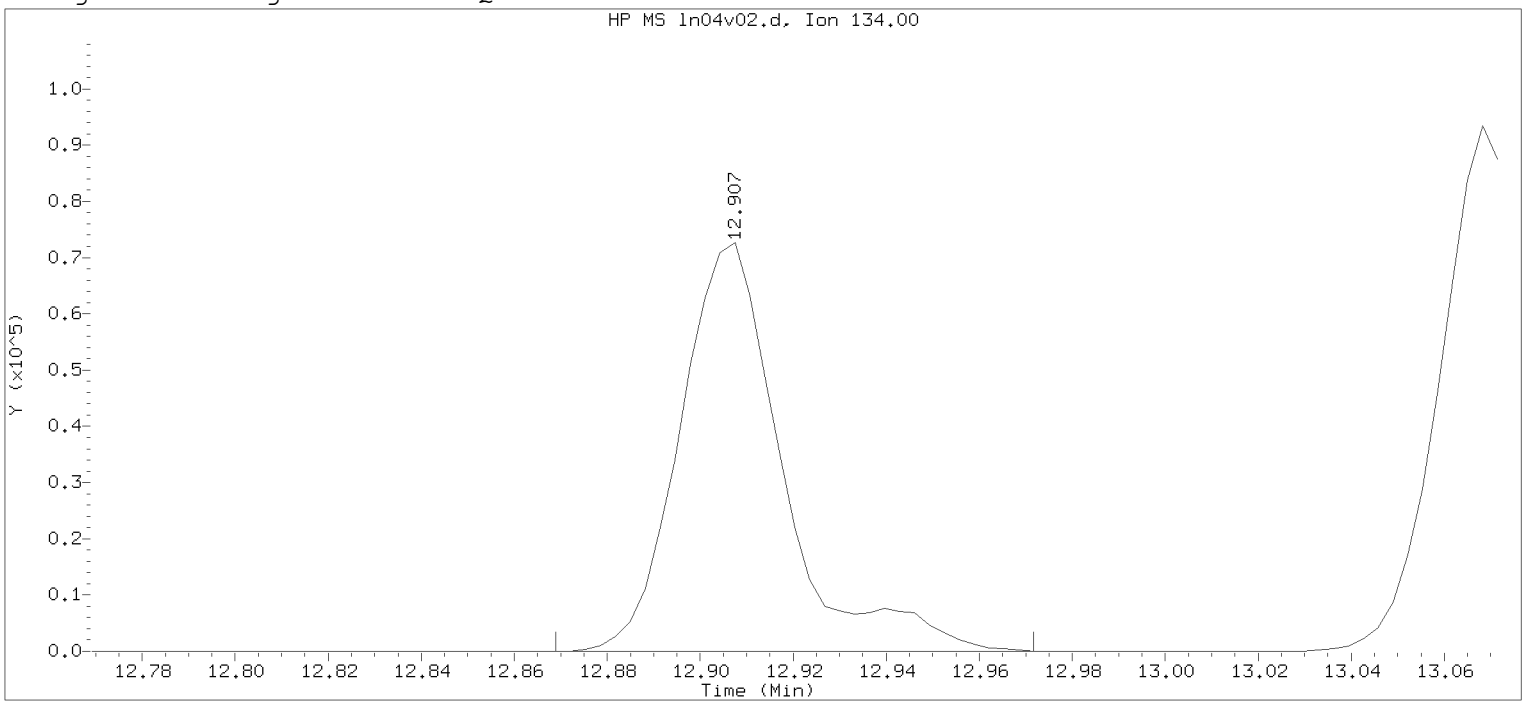
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 11/06/2019 at 08:20.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov04i.b/ln04v02.d Instrument ID: HP09915.i
Injection date and time: 04-NOV-2019 18:42 Analyst ID: KAS02648

Method used: /chem/HP09915.i/19nov04i.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 04-NOV-2019 18:19
Date, time and analyst ID of latest file update: 04-Nov-2019 19:09 mec29284

Sample Name: ICVLLG Lab Sample ID: ICVLLG

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3553
Retention Time (minutes): 12.907
Quant Ion : 134.00
Area : 111654
On-column Amount (ng) : 22.2016
Integration start scan : 3540 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 11/06/2019 at 08:18.
Target 3.5 esignature user ID: KAS02648

Data File: /chem/HP09915.i/19nov23a.b/ln23t02.d

Date : 23-NOV-2019 07:57

Client ID: aug-02-19

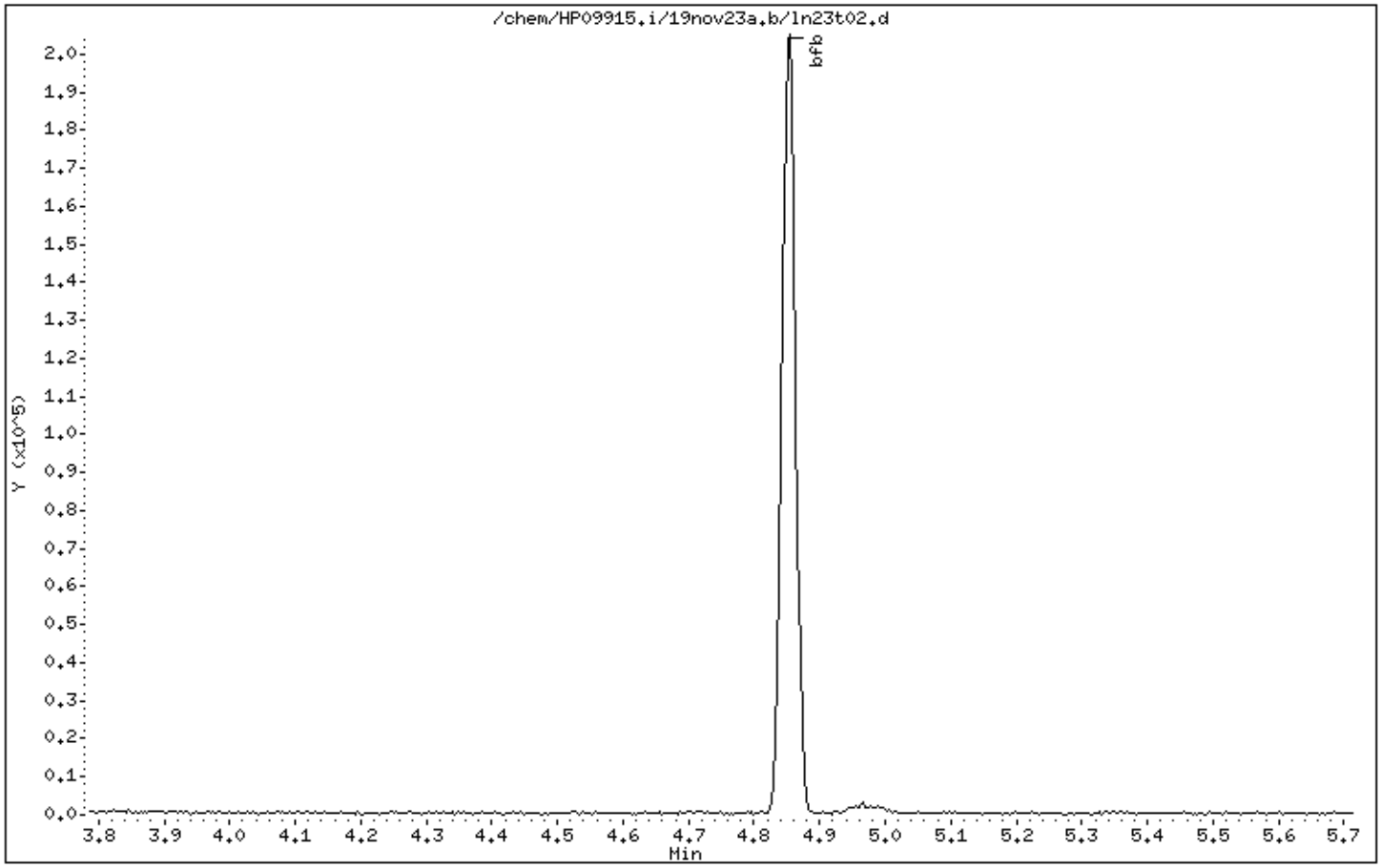
Instrument: HP09915.i

Sample Info: aug-02-19;50NGBFB;1;3;;;;;;

Operator: CLM27445

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem/HP09915.i/19nov23a.b/ln23t02.d

Date : 23-NOV-2019 07:57

Client ID: aug-02-19

Instrument: HP09915.i

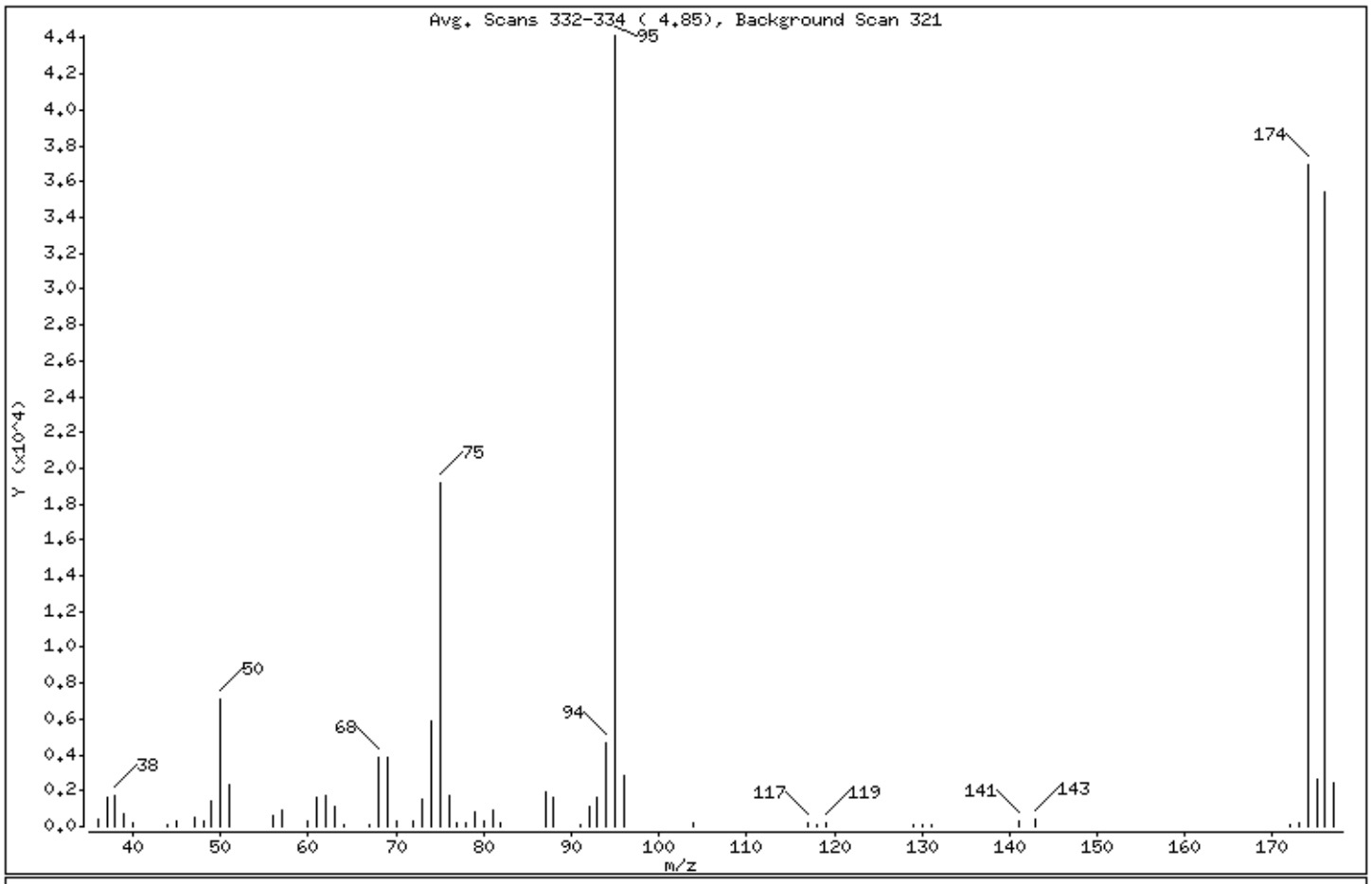
Sample Info: aug-02-19;50NGBFB;1;3;;;;;;

Operator: CLM27445

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.16
75	30.00 - 60.00% of mass 95	43.53
96	5.00 - 9.00% of mass 95	6.39
173	Less than 2.00% of mass 174	0.55 (0.66)
174	50.00 - 100.00% of mass 95	83.68
175	5.00 - 9.00% of mass 174	6.06 (7.25)
176	95.00 - 101.00% of mass 174	80.15 (95.78)
177	5.00 - 9.00% of mass 176	5.44 (6.78)

Date : 23-NOV-2019 07:57

Client ID: aug-02-19 Instrument: HP09915.i

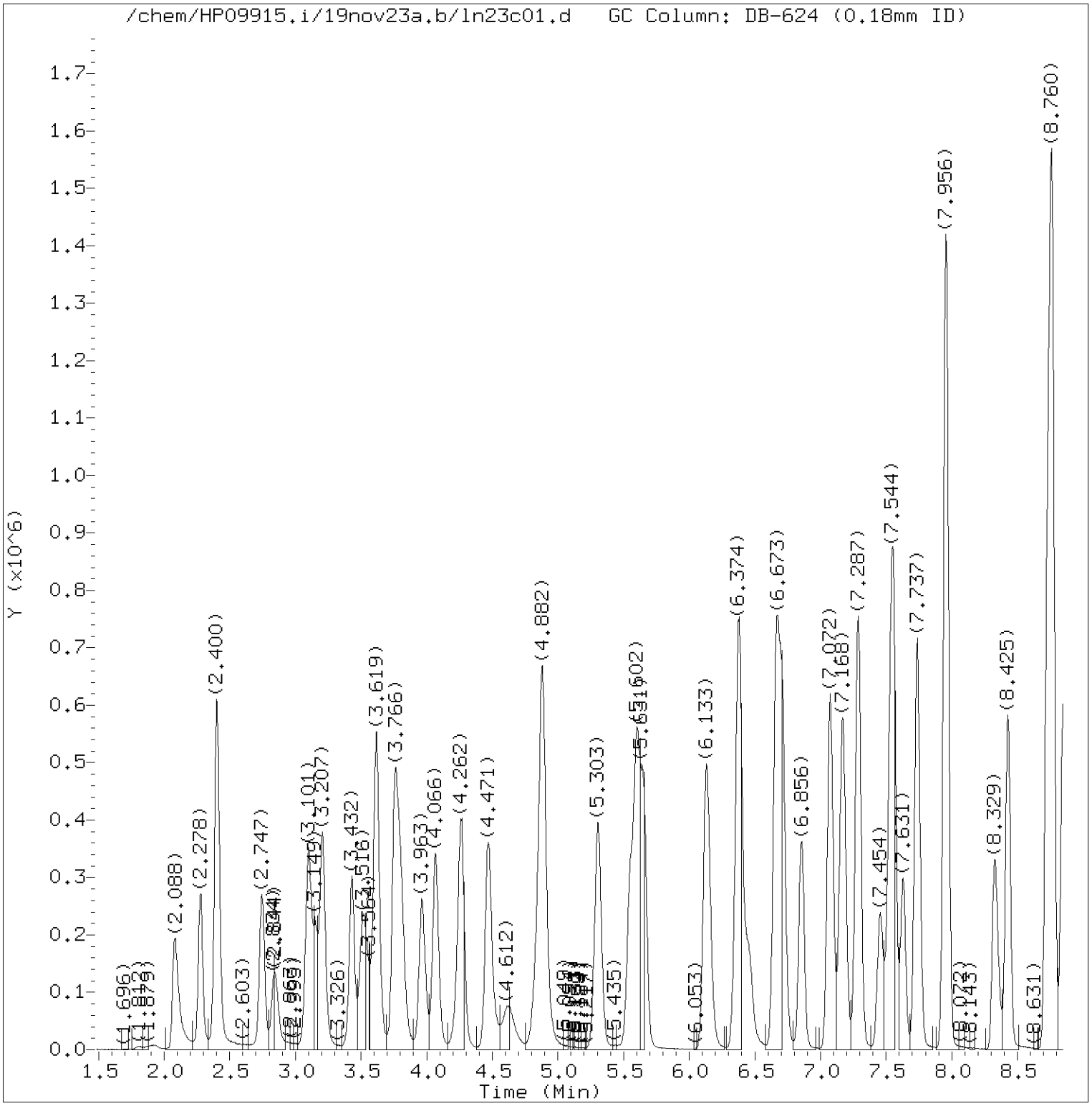
Sample Info: aug-02-19;50NGBFB;1;3;;;;;;

Operator: CLM27445

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: ln23t02.d
Spectrum: Avg. Scans 332-334 (4.85), Background Scan 321
Location of Maximum: 95.00
Number of points: 57

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	371	61.00	1626	79.00	835	119.00	198
37.00	1659	62.00	1729	80.00	340	129.00	55
38.00	1713	63.00	1142	81.00	937	130.00	83
39.00	697	64.00	132	82.00	206	131.00	58
40.00	168	67.00	144	87.00	1893	141.00	254
44.00	143	68.00	3907	88.00	1611	143.00	370
45.00	324	69.00	3810	91.00	54	172.00	143
47.00	460	70.00	306	92.00	1144	173.00	244
48.00	285	72.00	257	93.00	1645	174.00	36944
49.00	1402	73.00	1566	94.00	4717	175.00	2677
50.00	7136	74.00	5916	95.00	44152	176.00	35384
51.00	2379	75.00	19216	96.00	2820	177.00	2400
56.00	617	76.00	1741	104.00	191		
57.00	926	77.00	239	117.00	245		
60.00	342	78.00	218	118.00	59		



Total Ion Chromatogram (TIC)

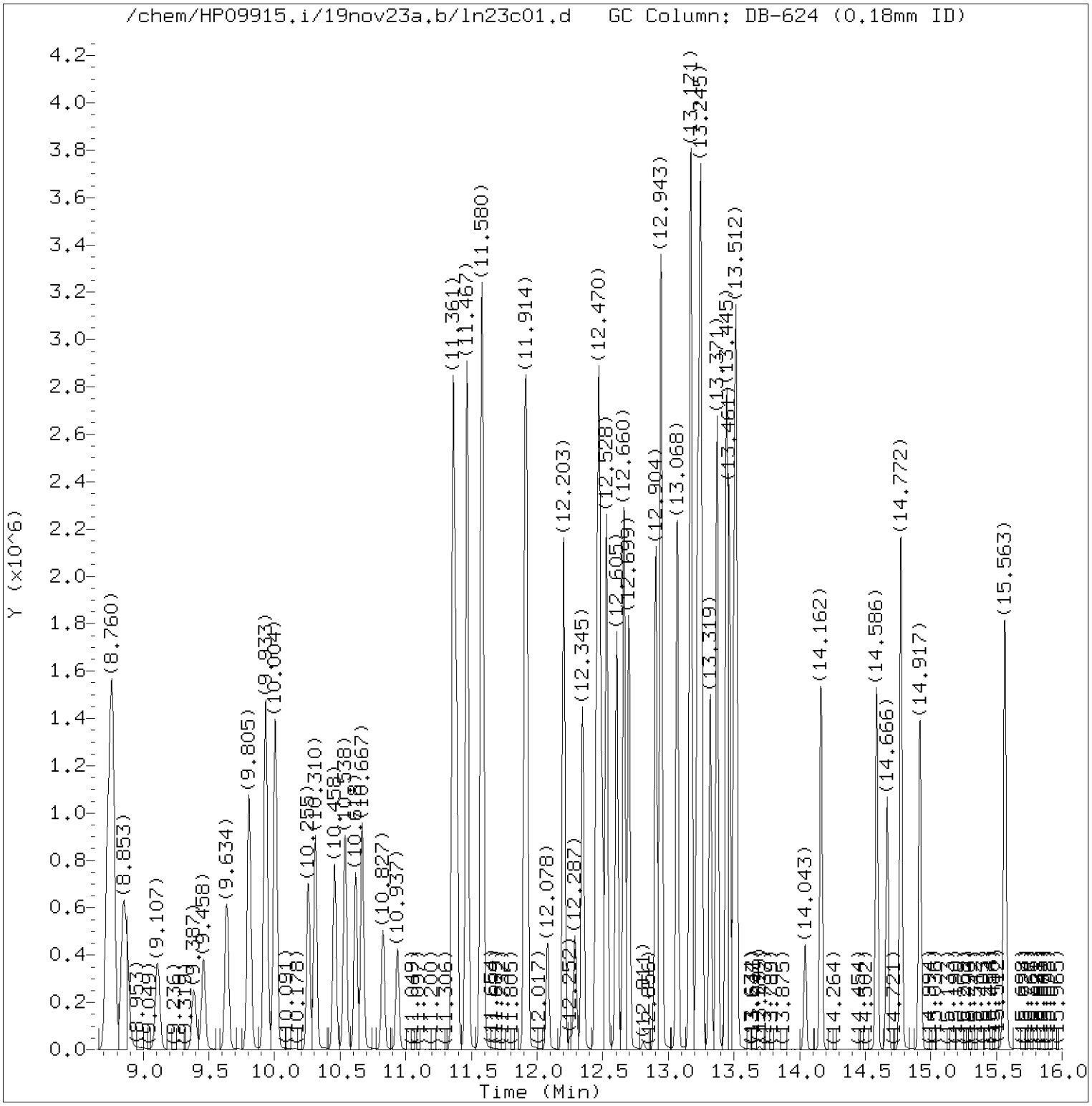
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.085	85	426647	54.170
4) Chloromethane	(2)	2.278	50	395979	52.166
6) Vinyl Chloride	(2)	2.400	62	390013	51.480
5) 1,3-Butadiene	(2)	2.406	39	259783	41.217
8) Bromomethane	(2)	2.741	94	276278	50.873
9) Chloroethane	(2)	2.844	64	209700	50.367
10) Dichlorofluoromethane	(2)	3.098	67	399390	39.860
12) Trichlorofluoromethane	(2)	3.149	101	448631	55.004
11) n-Pentane	(2)	3.204	43	360401	37.390
14) Ethyl ether	(2)	3.429	59	273084	51.813
15) Freon 123a	(2)	3.522	67	301358	45.931
16) Acrolein	(1)	3.615	56	841370	512.444
17) 1,1-Dichloroethene	(2)	3.754	96	215176	44.946
17) 1,1-Dichloroethene	(2)	3.754	63	105439	43.930
18) Acetone	(1)	3.795	58	77055	104.683
19) Freon 113	(2)	3.799	101	249953	45.761
22) Methyl Iodide	(2)	3.963	142	454457	45.809
21) 2-Propanol	(1)	3.985	45	132231	249.887
23) Carbon Disulfide	(2)	4.066	76	799496	44.315
27) Methyl Acetate	(2)	4.236	43	283759	46.019
25) Allyl Chloride	(2)	4.268	41	380893	44.350
28) Methylene Chloride	(2)	4.467	84	268162	47.062
29)*t-Butyl alcohol-d10	(1)	4.490	65	218843	250.000
30) t-Butyl alcohol	(1)	4.622	59	222936	241.966
31) Acrylonitrile	(2)	4.831	53	152489	45.967
33) Methyl Tertiary Butyl Ether	(2)	4.876	73	763776	42.014
32) trans-1,2-Dichloroethene	(2)	4.882	96	256465	46.307
34) n-Hexane	(2)	5.303	57	379461	44.038
36) 1,1-Dichloroethane	(2)	5.545	63	445094	46.069
38) di-Isopropyl ether	(2)	5.602	45	840159	45.088
39) 2-Chloro-1,3-butadiene	(2)	5.654	53	394866	45.553
40) Ethyl t-butyl ether	(2)	6.136	59	784651	43.390
43) 1,2-Dichloroethene (Total)	(2)		96	549419	93.434
44) 2-Butanone	(2)	6.361	43	374479	87.938
42) cis-1,2-Dichloroethene	(2)	6.377	96	292954	47.126
45) 2,2-Dichloropropane	(2)	6.390	77	342986	45.667
47) Propionitrile	(1)	6.451	54	325864	283.854
48) Methacrylonitrile	(2)	6.663	67	435635	121.737

* = Compound is an internal standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.702	128	166357	50.469
50) Tetrahydrofuran	(1)	6.718	71	109845	105.929
51) Chloroform	(2)	6.856	83	445256	48.184
52)$Dibromofluoromethane	(2)	7.072	113	275545	49.903
52)$Dibromofluoromethane	(2)	7.072	111	279116	49.578
53) 1,1,1-Trichloroethane	(2)	7.081	97	368717	46.750
54) Cyclohexane	(2)	7.168	56	471025	44.660
54) Cyclohexane	(2)	7.168	84	417552	45.576
54) Cyclohexane	(2)	7.175	69	147071	45.084
56) Carbon Tetrachloride	(2)	7.281	117	311124	46.511
55) 1,1-Dichloropropene	(2)	7.290	75	354863	46.453
58) Isobutyl Alcohol	(1)	7.454	41	199717	644.138
57)$1,2-Dichloroethane-d4	(2)	7.528	102	71008	50.460
57)$1,2-Dichloroethane-d4	(2)	7.528	65	321059	51.196
57)$1,2-Dichloroethane-d4	(2)	7.528	104	45768	50.919
60) Benzene	(2)	7.557	78	1092018	47.536
61) 1,2-Dichloroethane	(2)	7.631	62	354351	47.957
61) 1,2-Dichloroethane	(2)	7.628	98	35318	48.300
65) t-Amyl methyl ether	(2)	7.737	73	829046	45.675
66)*Fluorobenzene	(2)	7.956	96	1129387	50.000
67) n-Heptane	(2)	7.959	43	367404	45.643
69) n-Butanol	(1)	8.332	56	340740	1276.850
71) Trichloroethene	(2)	8.425	95	278257	48.106
72) Methylcyclohexane	(2)	8.728	83	505175	47.076
72) Methylcyclohexane	(2)	8.728	98	229307	47.222
73) 1,2-Dichloropropane	(2)	8.766	63	280113	48.019
76) Methyl Methacrylate	(2)	8.843	69	280393	49.707
75) 1,4-Dioxane	(1)	8.853	88	65102M	887.571
74) Dibromomethane	(2)	8.876	93	186925	49.526
78) Bromodichloromethane	(2)	9.107	83	331866	48.999
79) 2-Nitropropane	(2)	9.384	41	195731	95.412
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	213296	85.137
81) cis-1,3-Dichloropropene	(2)	9.634	75	449906	50.015
82) 4-Methyl-2-pentanone	(2)	9.805	43	820810	91.317
83)$Toluene-d8	(3)	9.933	98	1206568	48.944
83)$Toluene-d8	(3)	9.933	100	772586	48.381
88) Toluene	(3)	10.007	92	717271	46.410
90) 1,3-Dichloropropene (total)	(3)		100	872271	98.158

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.255	75	422365	48.142
91) Ethyl Methacrylate	(3)	10.310	69	501676	47.052
92) 1,1,2-Trichloroethane	(3)	10.458	97	279687	47.732
93) Tetrachloroethene	(3)	10.535	166	299047	45.688
94) 1,3-Dichloropropane	(3)	10.618	76	472234	47.202
96) 2-Hexanone	(3)	10.667	43	608236	85.463
97) Dibromochloromethane	(3)	10.827	129	287076	47.827
99) 1,2-Dibromoethane	(3)	10.937	107	305899	48.076
100)*Chlorobenzene-d5	(3)	11.358	117	942140	50.000
101) 1-Chlorohexane	(3)	11.364	91	357494	43.058
102) Chlorobenzene	(3)	11.387	112	823619	47.126
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	270952	47.053
104) Ethylbenzene	(3)	11.467	91	1388430	47.002
106) m+p-Xylene	(3)	11.580	106	1100827	94.730
108) Xylene (Total)	(3)		106	1640642	141.759
107) o-Xylene	(3)	11.908	106	539815	47.029
109) Styrene	(3)	11.920	104	921222	48.568
110) Bromoform	(3)	12.081	173	201677	44.966
111) Isopropylbenzene	(3)	12.203	105	1358883	47.200
112) Cyclohexanone	(1)	12.287	55	195406	680.224
114)$4-Bromofluorobenzene	(3)	12.345	95	475891	50.982
114)$4-Bromofluorobenzene	(3)	12.348	174	390248	50.429
116) 1,1,2,2-Tetrachloroethane	(4)	12.448	83	453102	45.942
115) Bromobenzene	(4)	12.464	156	353786	45.087
118) trans-1,4-Dichloro-2-butene	(4)	12.474	53	332260	109.220
117) 1,2,3-Trichloropropane	(4)	12.496	110	138812	45.867
119) n-Propylbenzene	(4)	12.528	91	1592058	46.440
120) 2-Chlorotoluene	(4)	12.609	126	331322	45.493
122) 1,3,5-Trimethylbenzene	(4)	12.663	105	1173871	47.117
121) 4-Chlorotoluene	(4)	12.699	126	345450	45.569
124) tert-Butylbenzene	(4)	12.904	134	230705M	44.776
125) Pentachloroethane	(4)	12.937	167	213232	48.061
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	1234172	47.002
127) sec-Butylbenzene	(4)	13.068	105	1409138	45.832
129) 1,3-Dichlorobenzene	(4)	13.168	146	656157	45.506
130) p-Isopropyltoluene	(4)	13.171	119	1218604	45.814
131)*1,4-Dichlorobenzene-d4	(4)	13.223	152	522095	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	675899	45.217

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

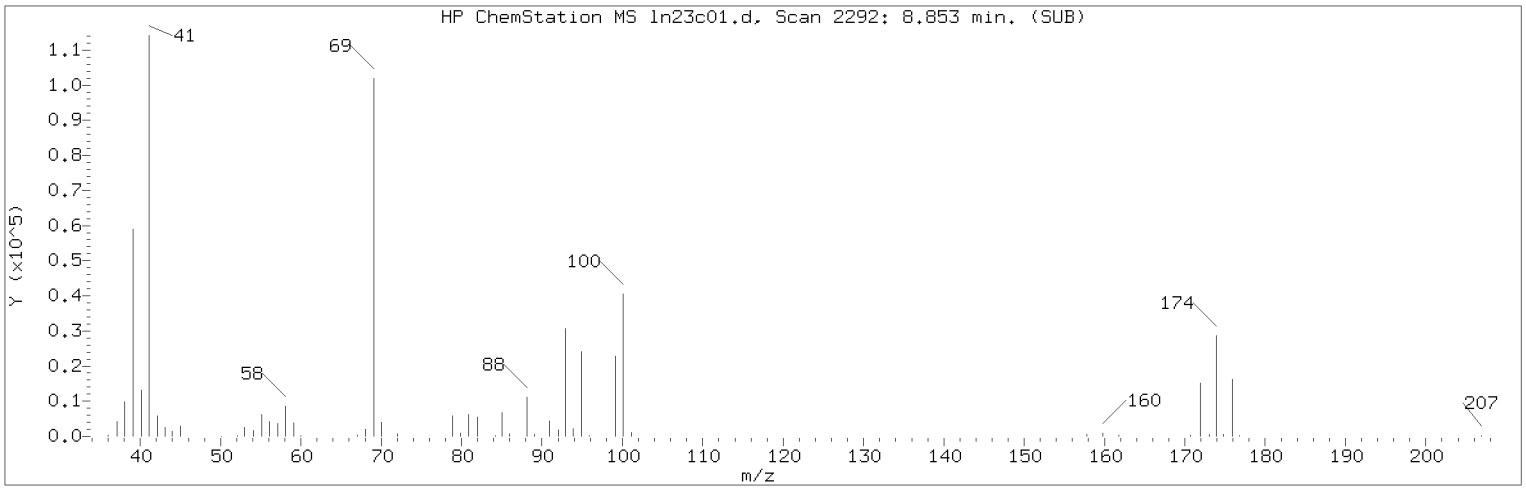
Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

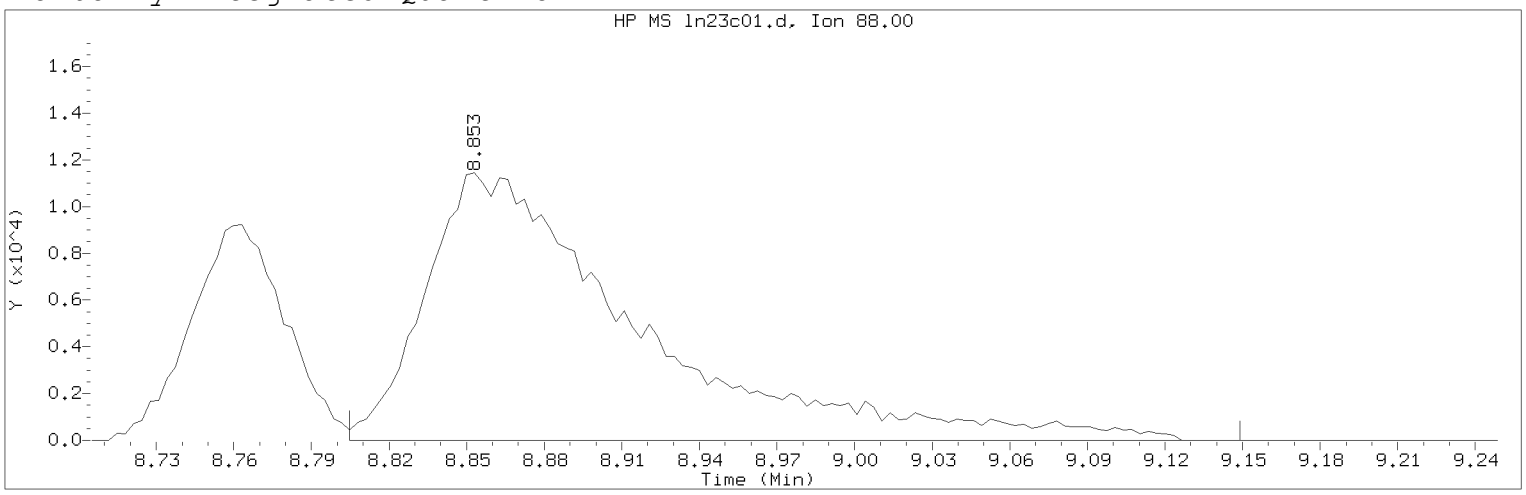
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	1347453	48.445
135) Benzyl Chloride	(4)	13.319	91	969998	46.061
136) 1,3-Diethylbenzene	(4)	13.371	119	799617	46.193
141) Diethylbenzene (total)	(4)		100	2318753	138.613
137) 1,4-Diethylbenzene	(4)	13.441	119	834323	45.492
139) n-Butylbenzene	(4)	13.464	92	599219	44.060
138) 1,2-Dichlorobenzene	(4)	13.502	146	651315	45.776
140) 1,2-Diethylbenzene	(4)	13.515	119	684813	46.929
142) 1,2-Dibromo-3-chloropropane	(4)	14.043	75	99289	45.989
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	452085	41.356
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	430638	40.515
147) Hexachlorobutadiene	(4)	14.666	225	175764	35.022
148) Naphthalene	(4)	14.772	128	1577744	46.172
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	424272	41.022
150) 2-Methylnaphthalene	(4)	15.563	142	908098	43.156

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

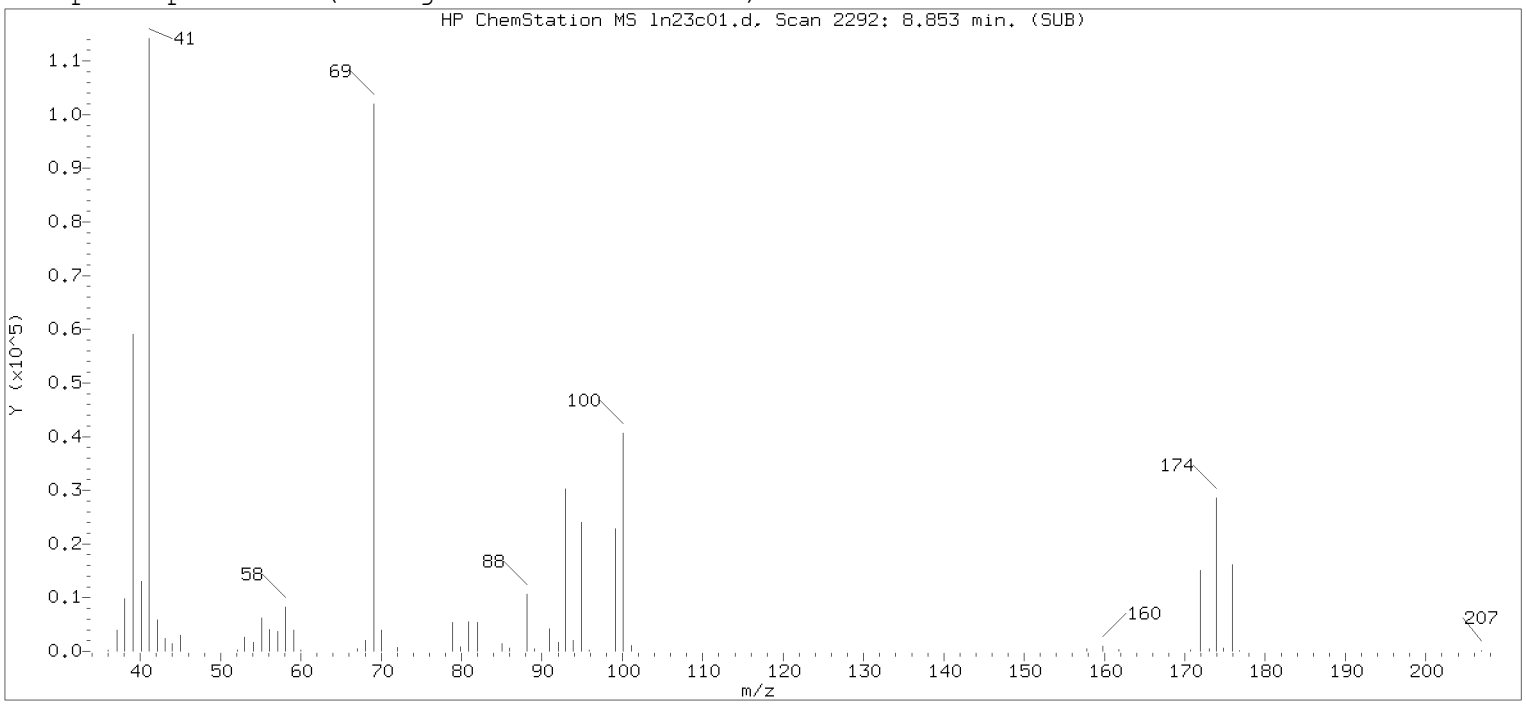
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area (flag) : 65102M
On-Column Amount (ng) : 887.5715
Integration start scan : 2276 Integration stop scan: 2383
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

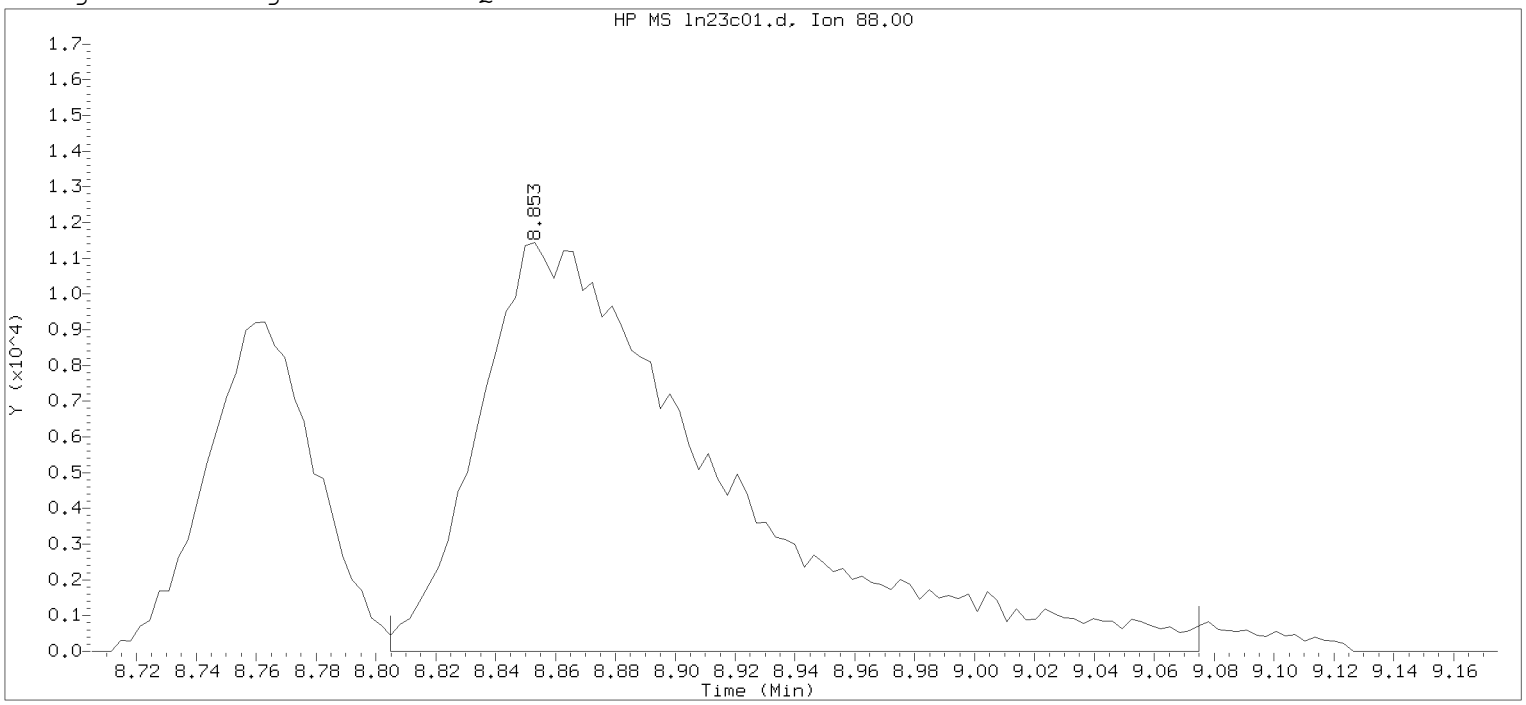
Analyst responsible for change: Digitally signed by Corie L. Mellinger on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:45.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

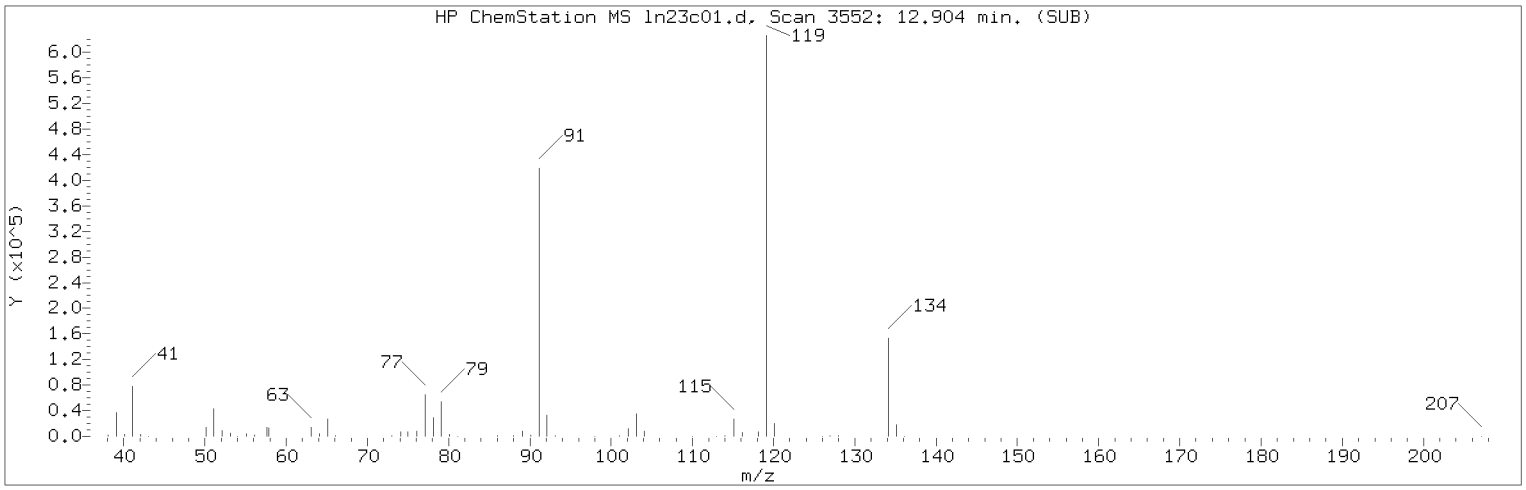
Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 08:59
Date, time and analyst ID of latest file update: 23-Nov-2019 08:59 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

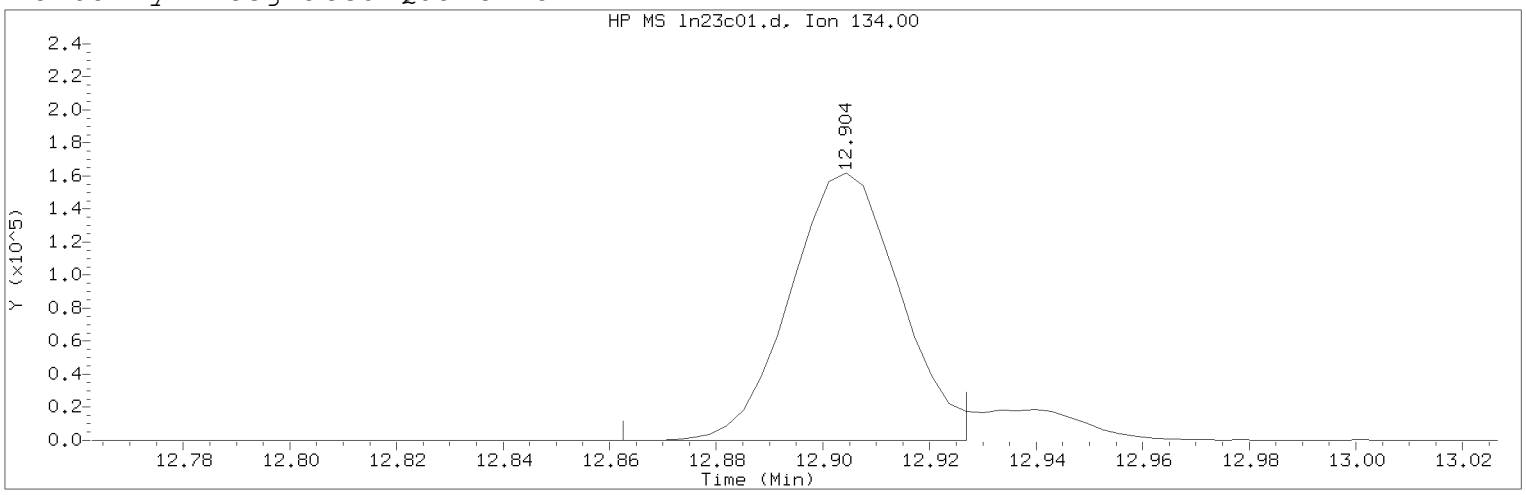
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2292
Retention Time (minutes): 8.853
Quant Ion : 88.00
Area : 63644
On-column Amount (ng) : 867.7000
Integration start scan : 2276 Integration stop scan: 2360
Y at integration start : 0 Y at integration end: 0

Digitally signed by Corie L. Mellinger on 11/23/2019 at 09:09.
Target 3.5 esignature user: CLM27445

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:07 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

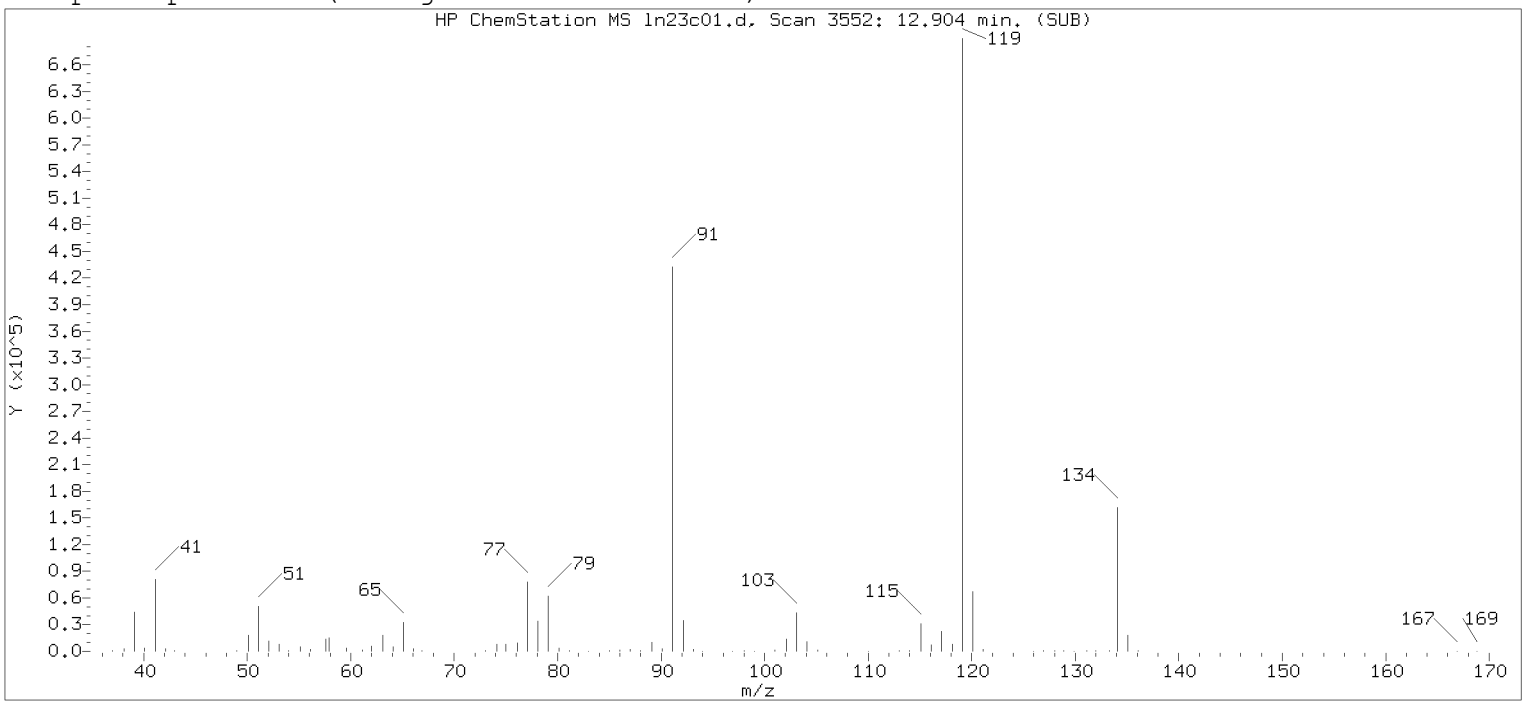
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area (flag) : 230705M
On-Column Amount (ng) : 44.7756
Integration start scan : 3538 Integration stop scan: 3558
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

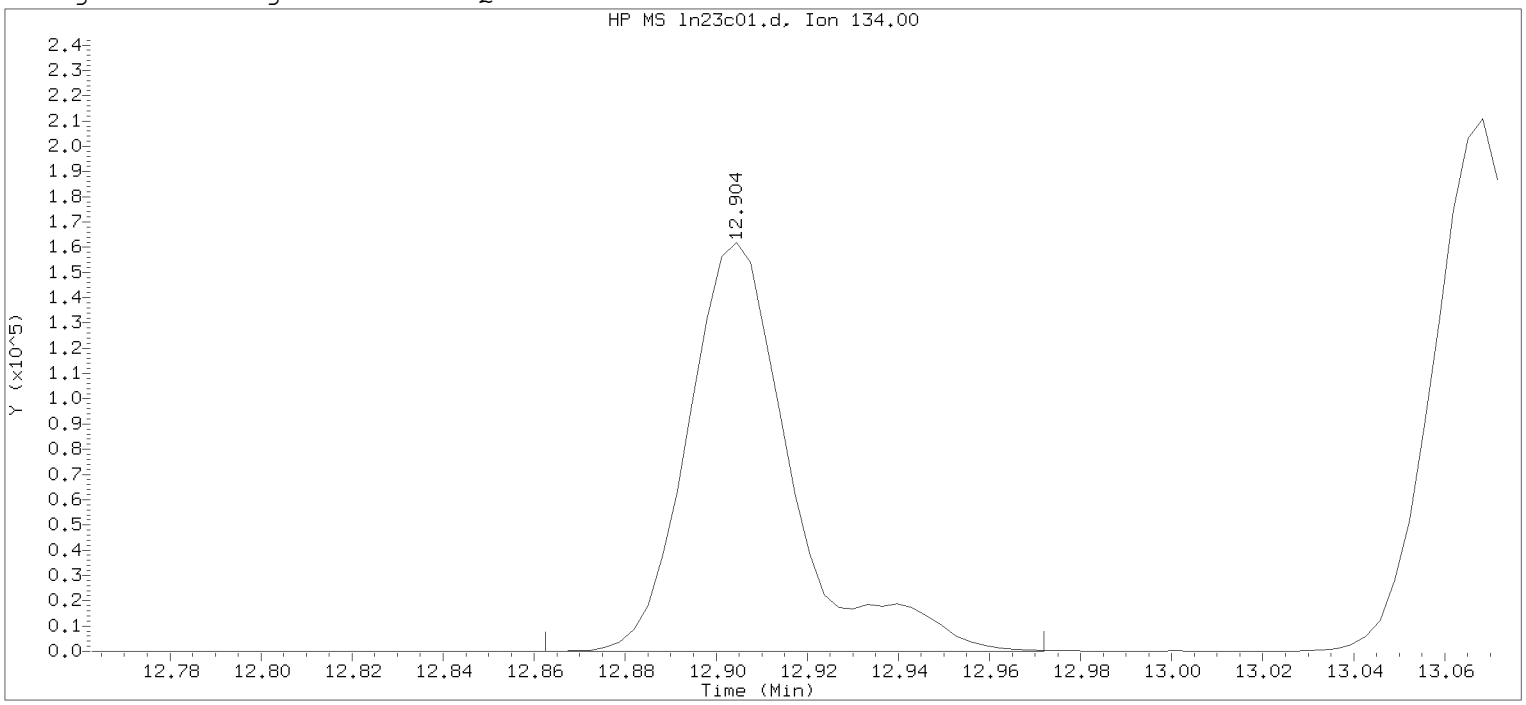
Analyst responsible for change: Digitally signed by Corie L. Mellinger
on 11/23/2019 at 09:09.
Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:45.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23c01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 08:42 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 23-NOV-2019 08:59
Date, time and analyst ID of latest file update: 23-Nov-2019 08:59 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3552
Retention Time (minutes): 12.904
Quant Ion : 134.00
Area : 255483
On-column Amount (ng) : 49.5846
Integration start scan : 3538 Integration stop scan: 3572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Corie L. Mellinger on 11/23/2019 at 09:09.
Target 3.5 esignature user: CLM27445

Data File: /chem/HP15648.i/19nov25i.b/en25t01.d

Date : 25-NOV-2019 14:06

Client ID: BFB aug02-19

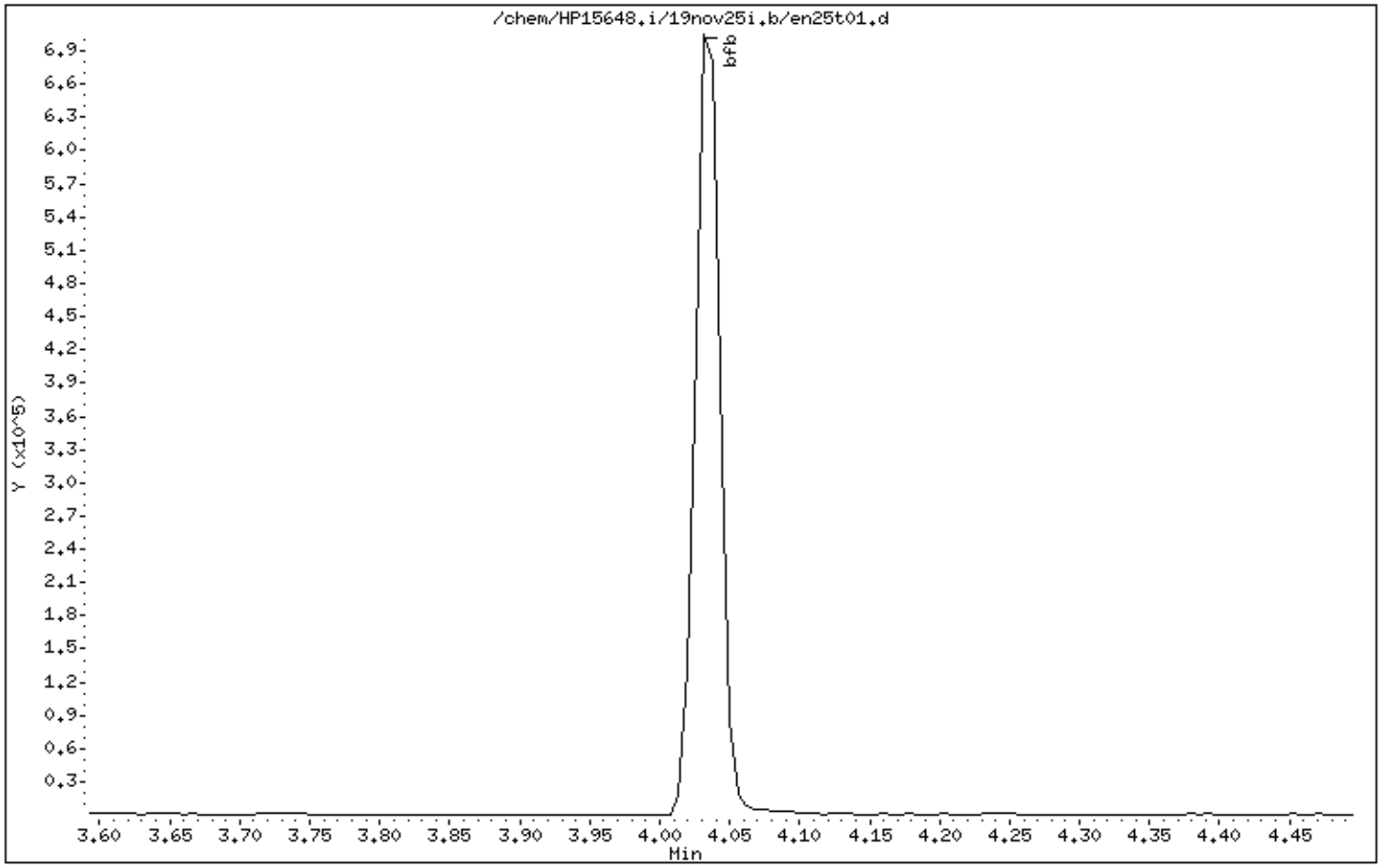
Instrument: HP15648.i

Sample Info: BFB aug02-19;50ng BFB;1;3;;;;;;

Operator: KAS02648

Column phase: DB-624

Column diameter: 0.18



Data File: /chem/HP15648.i/19nov25i.b/en25t01.d

Date : 25-NOV-2019 14:06

Client ID: BFB aug02-19

Instrument: HP15648.i

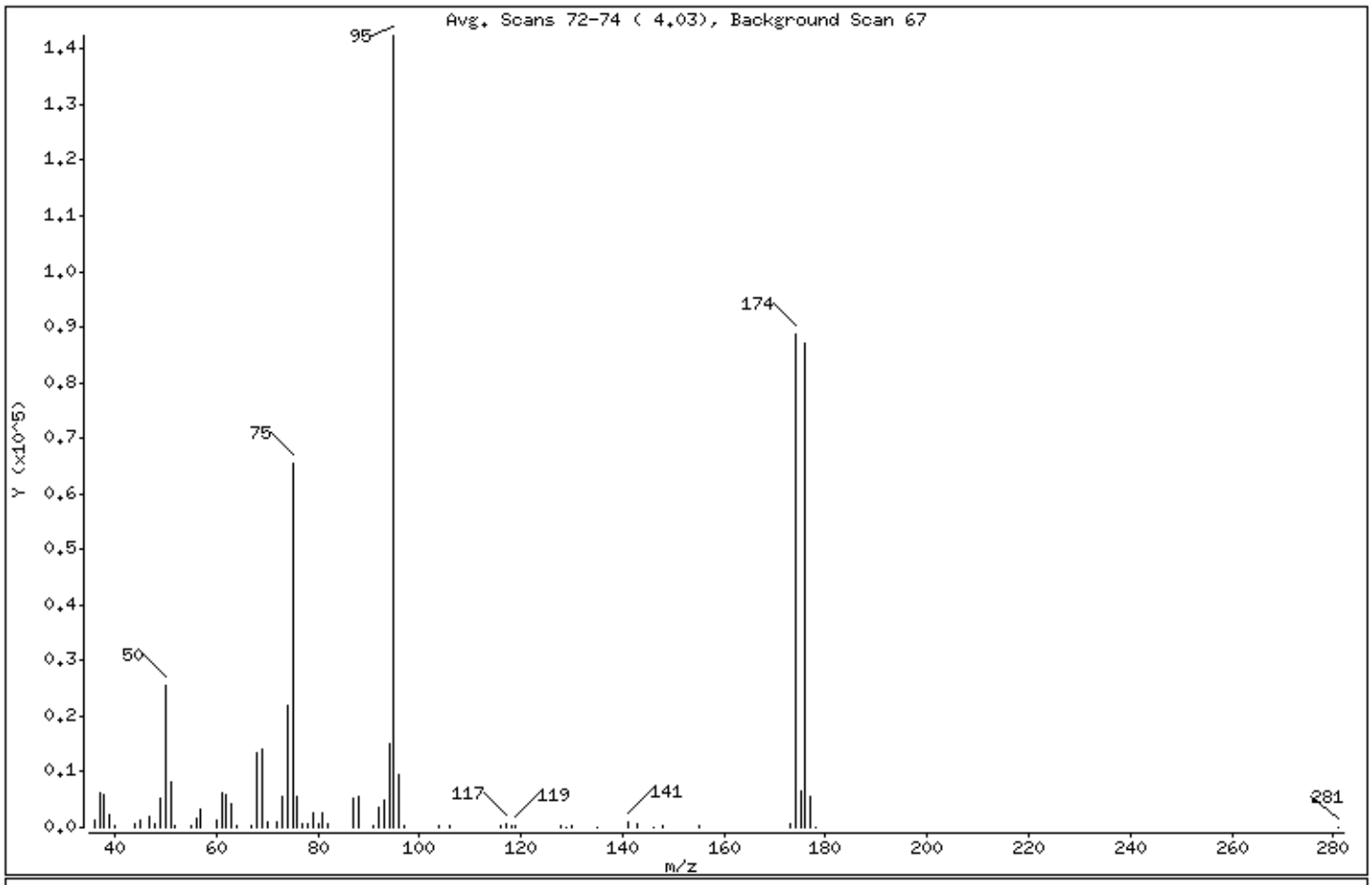
Sample Info: BFB aug02-19;50ng BFB;1;3;;;;;;

Operator: KAS02648

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.93
75	30.00 - 60.00% of mass 95	46.02
96	5.00 - 9.00% of mass 95	6.70
173	Less than 2.00% of mass 174	0.45 (0.72)
174	50.00 - 100.00% of mass 95	62.35
175	5.00 - 9.00% of mass 174	4.56 (7.32)
176	95.00 - 101.00% of mass 174	61.18 (98.12)
177	5.00 - 9.00% of mass 176	3.92 (6.41)

Date : 25-NOV-2019 14:06

Client ID: BFB aug02-19 Instrument: HP15648.i

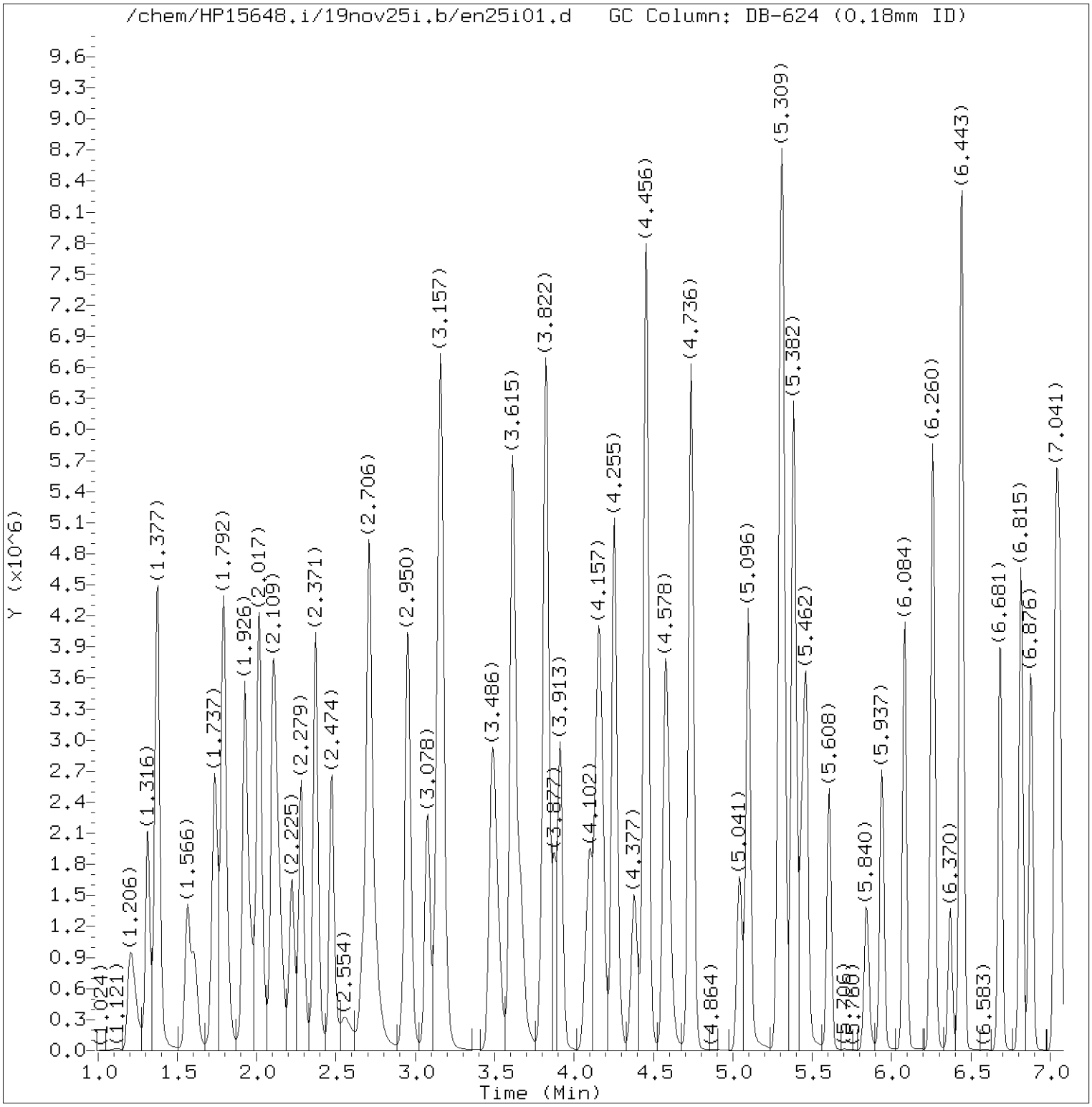
Sample Info: BFB aug02-19;50ng BFB;1;3;;;;;;

Operator: KAS02648

Column phase: DB-624 Column diameter: 0.18

Data File: en25t01.d
Spectrum: Avg. Scans 72-74 (4.03), Background Scan 67
Location of Maximum: 95.00
Number of points: 67

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1216	61.00	6126	81.00	2579	128.00	253
37.00	6367	62.00	5897	82.00	544	129.00	107
38.00	5866	63.00	4210	87.00	5386	130.00	343
39.00	2221	64.00	355	88.00	5474	135.00	90
40.00	191	67.00	308	91.00	378	141.00	930
44.00	578	68.00	13485	92.00	3705	143.00	750
45.00	1250	69.00	13913	93.00	4820	146.00	85
47.00	2080	70.00	994	94.00	15196	148.00	218
48.00	682	72.00	821	95.00	142400	155.00	338
49.00	5384	73.00	5715	96.00	9552	173.00	644
50.00	25544	74.00	21968	97.00	274	174.00	88824
51.00	8134	75.00	65560	104.00	398	175.00	6502
52.00	400	76.00	5707	106.00	385	176.00	87160
55.00	324	77.00	780	116.00	409	177.00	5588
56.00	1797	78.00	573	117.00	662	178.00	94
57.00	3330	79.00	2534	118.00	382	281.00	104
60.00	1226	80.00	790	119.00	387		



Total Ion Chromatogram (TIC)

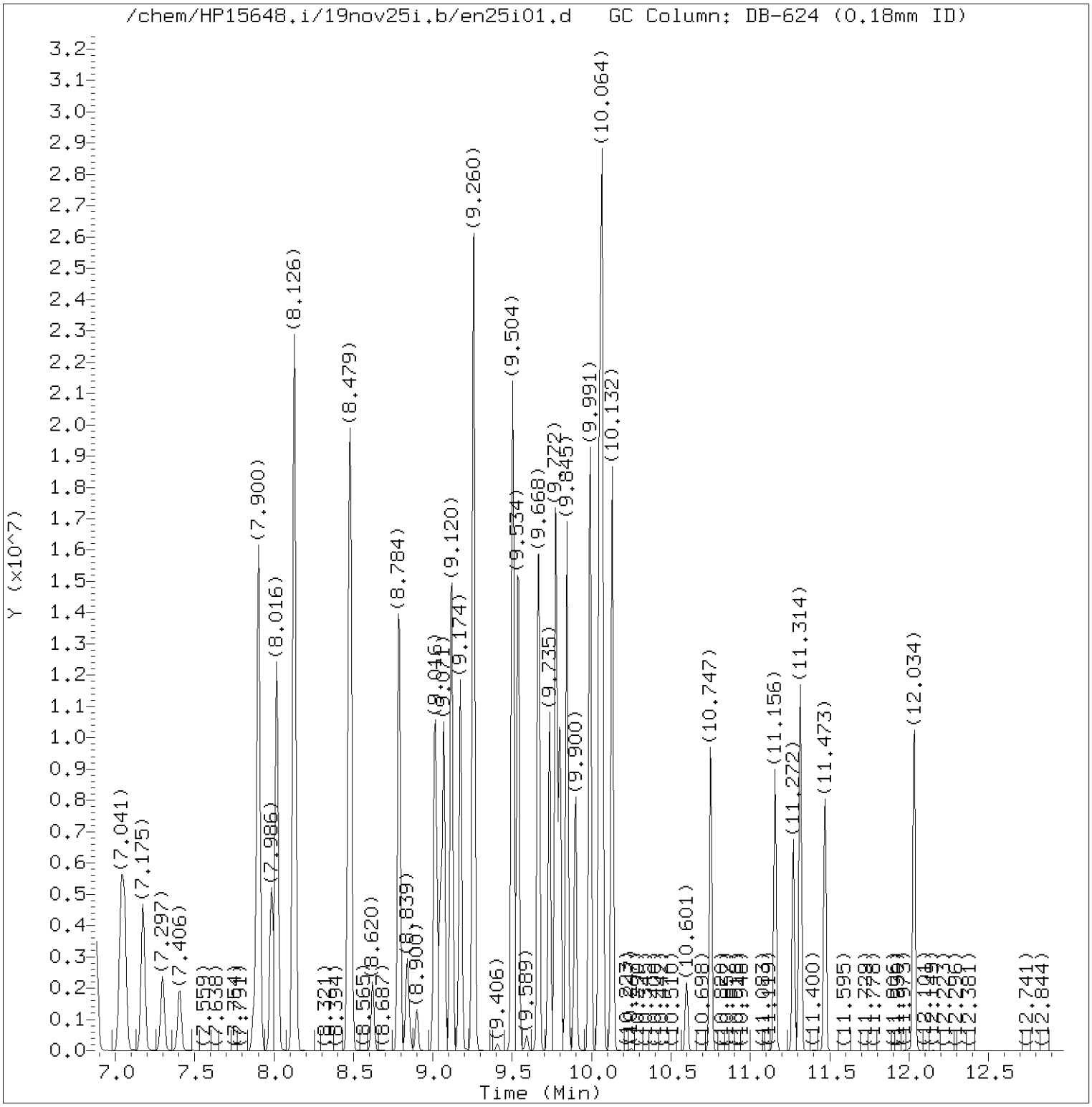
Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 14:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 14:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 14:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.206	85	2262120	300.000
4) Chloromethane	(2)	1.316	50	2637275	300.000
5) 1,3-Butadiene	(2)	1.371	39	1722530	300.000
6) Vinyl Chloride	(2)	1.377	62	2385924	300.000
8) Bromomethane	(2)	1.566	94	1168626	300.000
9) Chloroethane	(2)	1.609	64	1204427	300.000
10) Dichlorofluoromethane	(2)	1.737	67	2917350	300.000
12) Trichlorofluoromethane	(2)	1.786	101	2323277M	300.000
11) n-Pentane	(2)	1.792	43	2826813	300.000
14) Ethyl ether	(2)	1.926	59	1526683	300.000
15) Freon 123a	(2)	1.938	67	1758713	300.000
16) Acrolein	(1)	2.017	56	4786193	3000.000
17) 1,1-Dichloroethene	(2)	2.103	96	1133848	300.000
17) 1,1-Dichloroethene	(2)	2.103	63	640270	300.000
18) Acetone	(1)	2.121	58	413079	600.000
19) Freon 113	(2)	2.133	101	1316976	300.000
21) 2-Propanol	(1)	2.218	45	663125	1500.000
22) Methyl Iodide	(2)	2.225	142	2033187	300.000
23) Carbon Disulfide	(2)	2.279	76	4187248	300.000
25) Allyl Chloride	(2)	2.371	41	2617467	300.000
27) Methyl Acetate	(2)	2.377	43	1528323	300.000
28) Methylene Chloride	(2)	2.474	84	1396803	300.000
29)*t-Butyl alcohol-d10	(1)	2.493	65	180286	250.000
30) t-Butyl alcohol	(1)	2.560	59	961508M	1500.000
31) Acrylonitrile	(2)	2.670	53	888444	300.000
32) trans-1,2-Dichloroethene	(2)	2.706	96	1314046	300.000
33) Methyl Tertiary Butyl Ether	(2)	2.718	73	4473327	300.000
34) n-Hexane	(2)	2.950	57	2884243	300.000
36) 1,1-Dichloroethane	(2)	3.078	63	2818699	300.000
38) di-Isopropyl ether	(2)	3.151	45	5850797	300.000
39) 2-Chloro-1,3-butadiene	(2)	3.163	53	2695300	300.000
40) Ethyl t-butyl ether	(2)	3.493	59	5009770	300.000
42) cis-1,2-Dichloroethene	(2)	3.608	96	1514490	300.000
44) 2-Butanone	(2)	3.615	43	2278094	600.000
43) 1,2-Dichloroethene (Total)	(2)		96	2828536	600.000
45) 2,2-Dichloropropane	(2)	3.627	77	2032505	300.000
47) Propionitrile	(1)	3.669	54	1731566	1500.000
48) Methacrylonitrile	(2)	3.816	67	2238650	750.000

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 14:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.834	128	721265	300.000
50) Tetrahydrofuran	(1)	3.877	71	562559	600.000
51) Chloroform	(2)	3.913	83	2418027	300.000
52)$Dibromofluoromethane	(2)	4.066	113	211017	50.000
52)$Dibromofluoromethane	(2)	4.066	111	218875	50.000
53) 1,1,1-Trichloroethane	(2)	4.096	97	1964222	300.000
54) Cyclohexane	(2)	4.157	56	3379577	300.000
54) Cyclohexane	(2)	4.163	84	2610588	300.000
54) Cyclohexane	(2)	4.157	69	981584	300.000
55) 1,1-Dichloropropene	(2)	4.249	75	2144331	300.000
56) Carbon Tetrachloride	(2)	4.261	117	1532320	300.000
58) Isobutyl Alcohol	(1)	4.377	41	928580	3750.000
57)$1,2-Dichloroethane-d4	(2)	4.389	102	55970	50.000
57)$1,2-Dichloroethane-d4	(2)	4.389	65	282615	50.000
57)$1,2-Dichloroethane-d4	(2)	4.389	104	35829	50.000
60) Benzene	(2)	4.450	78	6345958	300.000
61) 1,2-Dichloroethane	(2)	4.462	62	1951923	300.000
61) 1,2-Dichloroethane	(2)	4.462	98	170980	300.000
65) t-Amyl methyl ether	(2)	4.578	73	4651935	300.000
66)*Fluorobenzene	(2)	4.730	96	987485	50.000
67) n-Heptane	(2)	4.736	43	3360683	300.000
69) n-Butanol	(1)	5.041	56	1670712	7500.000
71) Trichloroethene	(2)	5.096	95	1492924	300.000
73) Methylcyclohexane	(2)	5.303	83	3444260	300.000
73) Methylcyclohexane	(2)	5.303	98	1513258	300.000
74) 1,2-Dichloropropane	(2)	5.315	63	1715294	300.000
75) Dibromomethane	(2)	5.431	93	873172	300.000
77) Methyl Methacrylate	(2)	5.462	69	1457787	300.000
76) 1,4-Dioxane	(1)	5.462	88	268096M	3750.000
79) Bromodichloromethane	(2)	5.608	83	1800724	300.000
80) 2-Nitropropane	(2)	5.840	41	668532	600.000
81) 2-Chloroethyl Vinyl Ether	(2)	5.937	63	1329861	300.000
82) cis-1,3-Dichloropropene	(2)	6.084	75	2574376	300.000
83) 4-Methyl-2-pentanone	(2)	6.260	43	4716113	600.000
84)$Toluene-d8	(3)	6.370	98	996743	50.000
84)$Toluene-d8	(3)	6.370	100	640839	50.000
89) Toluene	(3)	6.443	92	3901635	300.000
90) trans-1,3-Dichloropropene	(3)	6.687	75	2324378	300.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 14:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropene (total)	(3)		100	4898754	600.000
92) Ethyl Methacrylate	(3)	6.815	69	2593865	300.000
93) 1,1,2-Trichloroethane	(3)	6.876	97	1282426	300.000
94) Tetrachloroethene	(3)	7.035	166	1373632	300.000
95) 1,3-Dichloropropane	(3)	7.059	76	2473078	300.000
97) 2-Hexanone	(3)	7.175	43	3327508	600.000
98) Dibromochloromethane	(3)	7.297	129	1250106	300.000
100) 1,2-Dibromoethane	(3)	7.400	107	1330467	300.000
101)*Chlorobenzene-d5	(3)	7.870	117	704278	50.000
103) Chlorobenzene	(3)	7.900	112	4060502	300.000
102) 1-Chlorohexane	(3)	7.906	91	2248900	300.000
104) 1,1,1,2-Tetrachloroethane	(3)	7.986	131	1283148	300.000
105) Ethylbenzene	(3)	8.016	91	7703118	300.000
107) m+p-Xylene	(3)	8.126	106	5718670	600.000
108) o-Xylene	(3)	8.473	106	2807950	300.000
109) Xylene (Total)	(3)		106	8526620	900.000
110) Styrene	(3)	8.486	104	4780258	300.000
111) Bromoform	(3)	8.620	173	796152	300.000
112) Isopropylbenzene	(3)	8.784	105	7673422	300.000
113) Cyclohexanone	(1)	8.839	55	1062867	3750.000
115)$4-Bromofluorobenzene	(3)	8.900	95	380016	50.000
115)$4-Bromofluorobenzene	(3)	8.900	174	250980	50.000
116) Bromobenzene	(4)	9.010	156	1546484	300.000
117) 1,1,2,2-Tetrachloroethane	(4)	9.022	83	2015826	300.000
118) 1,2,3-Trichloropropane	(4)	9.046	110	570330	300.000
119) trans-1,4-Dichloro-2-butene	(4)	9.071	53	1701517	750.000
120) n-Propylbenzene	(4)	9.120	91	9241850	300.000
121) 2-Chlorotoluene	(4)	9.174	126	1683344	300.000
123) 1,3,5-Trimethylbenzene	(4)	9.260	105	6543115	300.000
122) 4-Chlorotoluene	(4)	9.260	126	1691560	300.000
125) tert-Butylbenzene	(4)	9.504	134	1414309	300.000
126) Pentachloroethane	(4)	9.510	167	945039	300.000
127) 1,2,4-Trimethylbenzene	(4)	9.534	105	6806142	300.000
128) sec-Butylbenzene	(4)	9.668	105	8688654	300.000
130) 1,3-Dichlorobenzene	(4)	9.735	146	3094132	300.000
131) p-Isopropyltoluene	(4)	9.772	119	7216725	300.000
132)*1,4-Dichlorobenzene-d4	(4)	9.784	152	338973	50.000
134) 1,4-Dichlorobenzene	(4)	9.802	146	3073583	300.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 14:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135)	1,2,3-Trimethylbenzene	(4)	9.845	105	7190411	300.000
136)	Benzyl Chloride	(4)	9.900	91	4351089	300.000
137)	1,3-Diethylbenzene	(4)	9.991	119	4638619	300.000
138)	1,4-Diethylbenzene	(4)	10.052	119	4818321	300.000
139)	1,2-Dichlorobenzene	(4)	10.064	146	2831413	300.000
140)	n-Butylbenzene	(4)	10.064	92	3765641	300.000
141)	1,2-Diethylbenzene	(4)	10.132	119	3840479	300.000
142)	Diethylbenzene (total)	(4)		100	13297419	900.000
143)	1,2-Dibromo-3-chloropropane	(4)	10.595	75	447436	300.000
145)	1,3,5-Trichlorobenzene	(4)	10.753	180	2193672	300.000
147)	1,2,4-Trichlorobenzene	(4)	11.156	180	1913904	300.000
148)	Hexachlorobutadiene	(4)	11.272	225	828402	300.000
149)	Naphthalene	(4)	11.314	128	6386552	300.000
150)	1,2,3-Trichlorobenzene	(4)	11.473	180	1740257	300.000
151)	2-Methylnaphthalene	(4)	12.034	142	3625586	300.000

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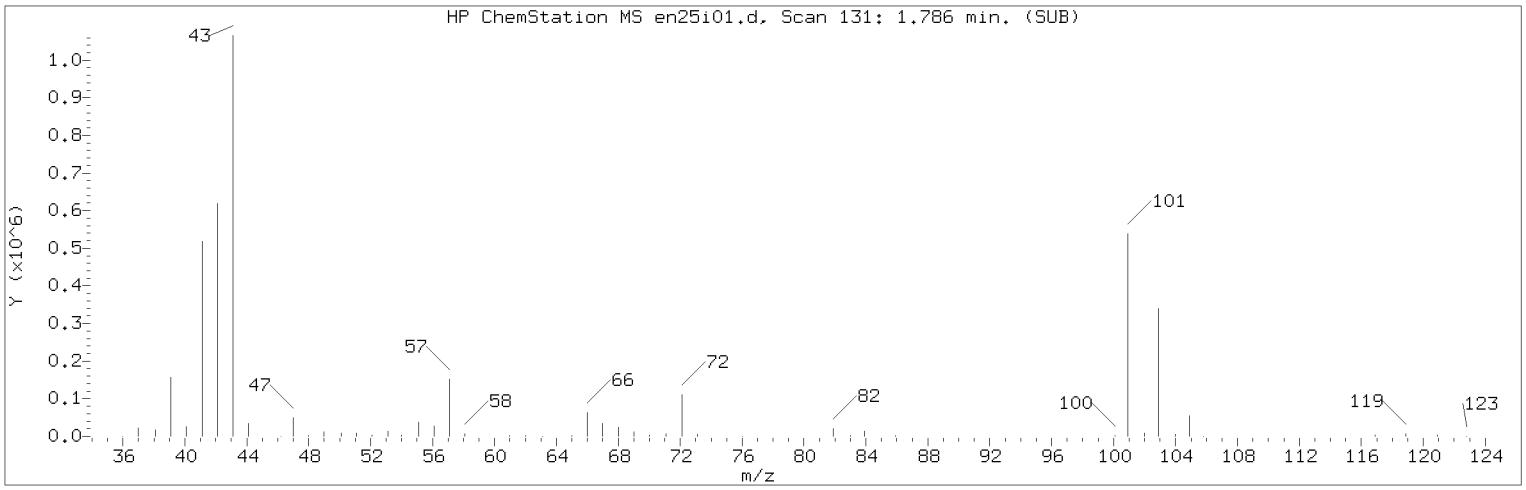
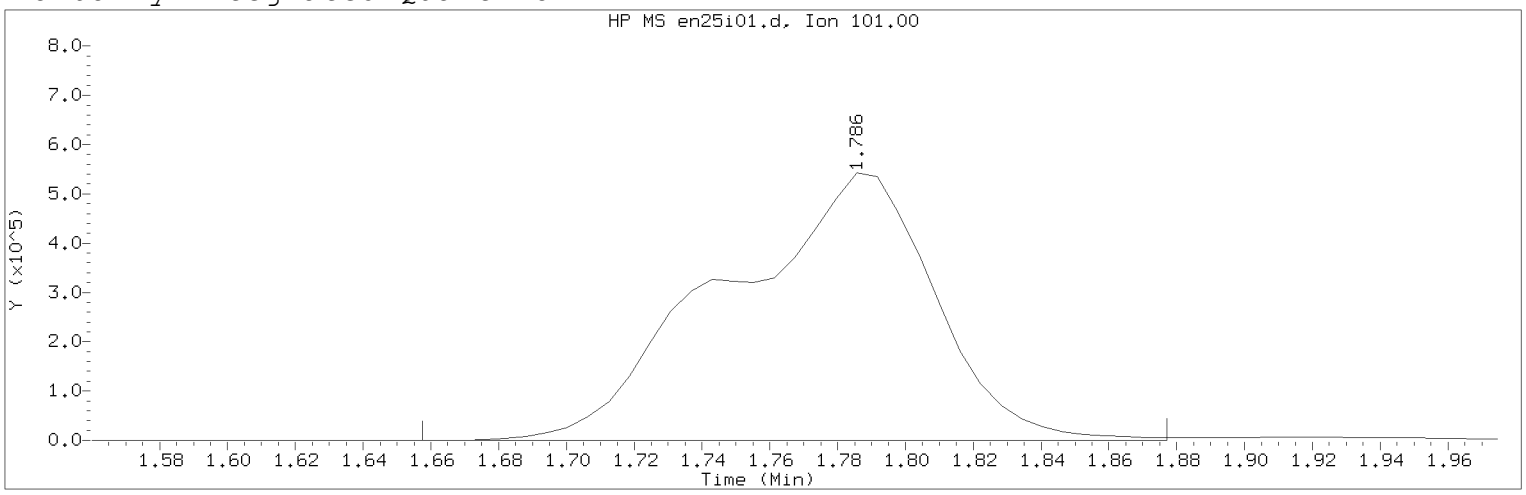
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 14:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

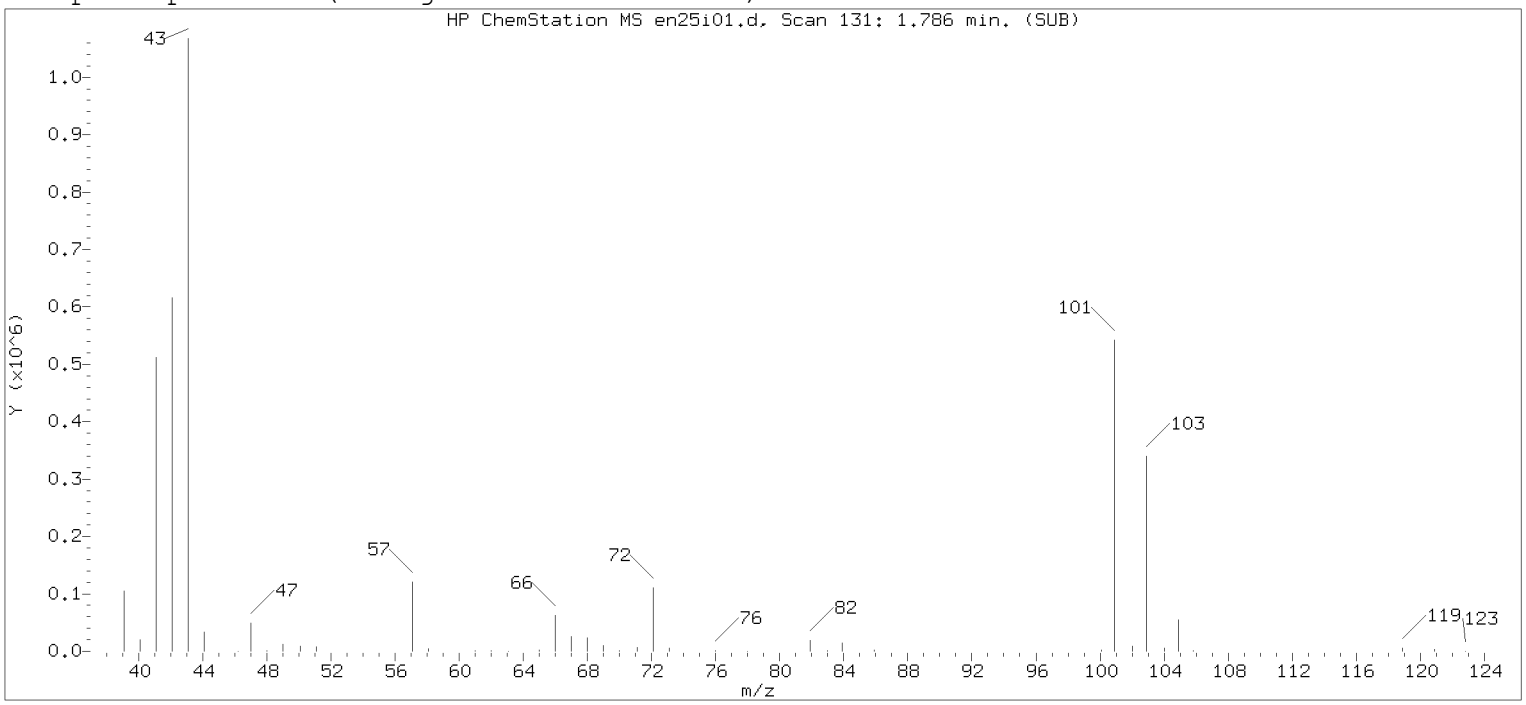
Compound Number : 12
Compound Name : Trichlorofluoromethane
Scan Number : 131
Retention Time (minutes): 1.786
Quant Ion : 101.00
Area (flag) : 2323277M
On-Column Amount (ng) : 300.0000
Integration start scan : 109 Integration stop scan: 145
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

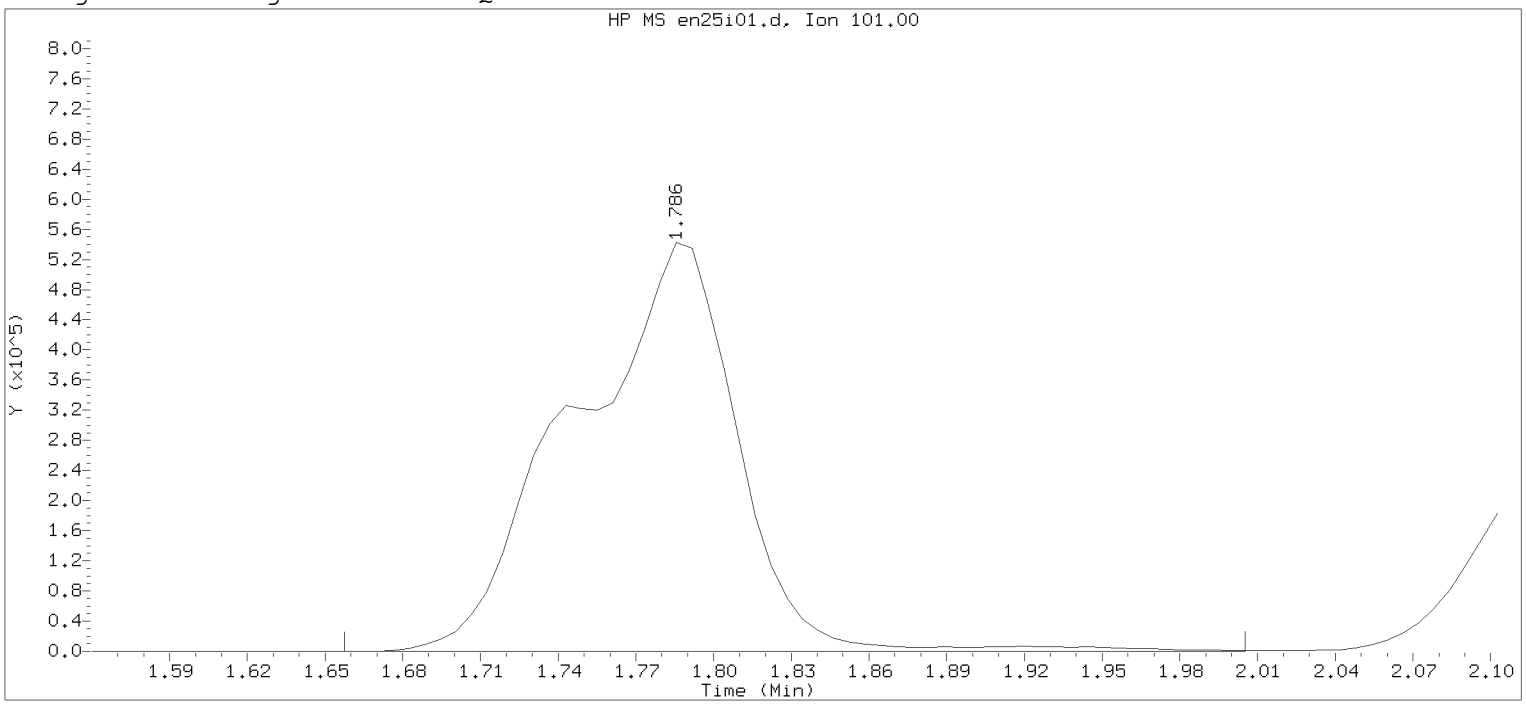
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:25.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 14:39 Analyst ID: KAS02648

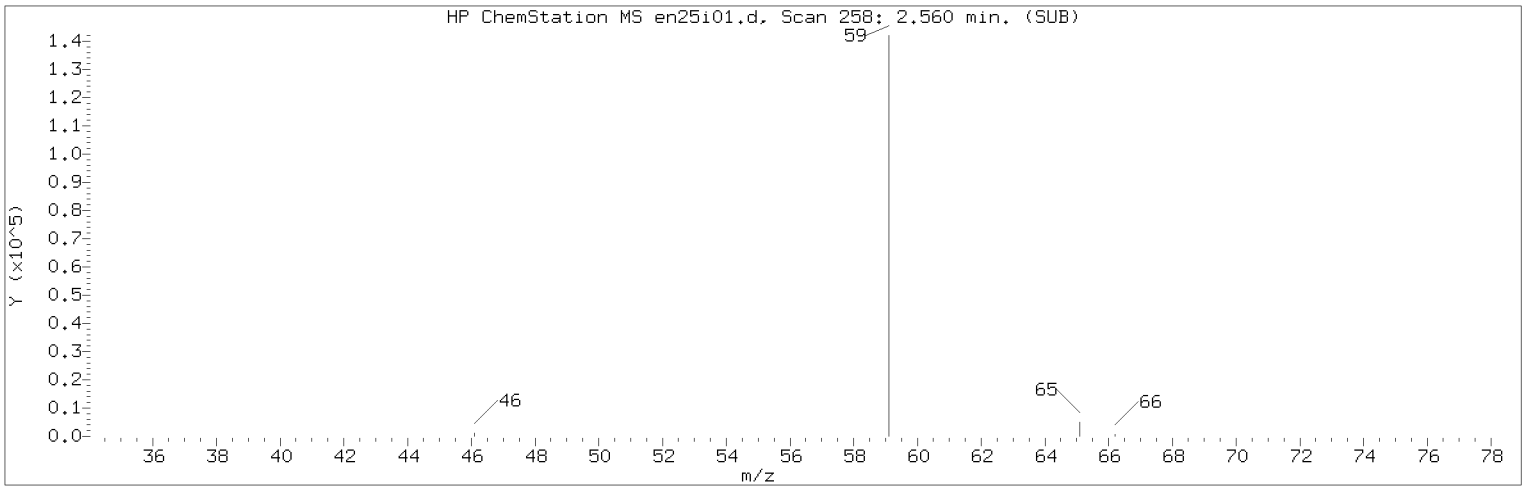
Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 14:55
Date, time and analyst ID of latest file update: 25-Nov-2019 14:55 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

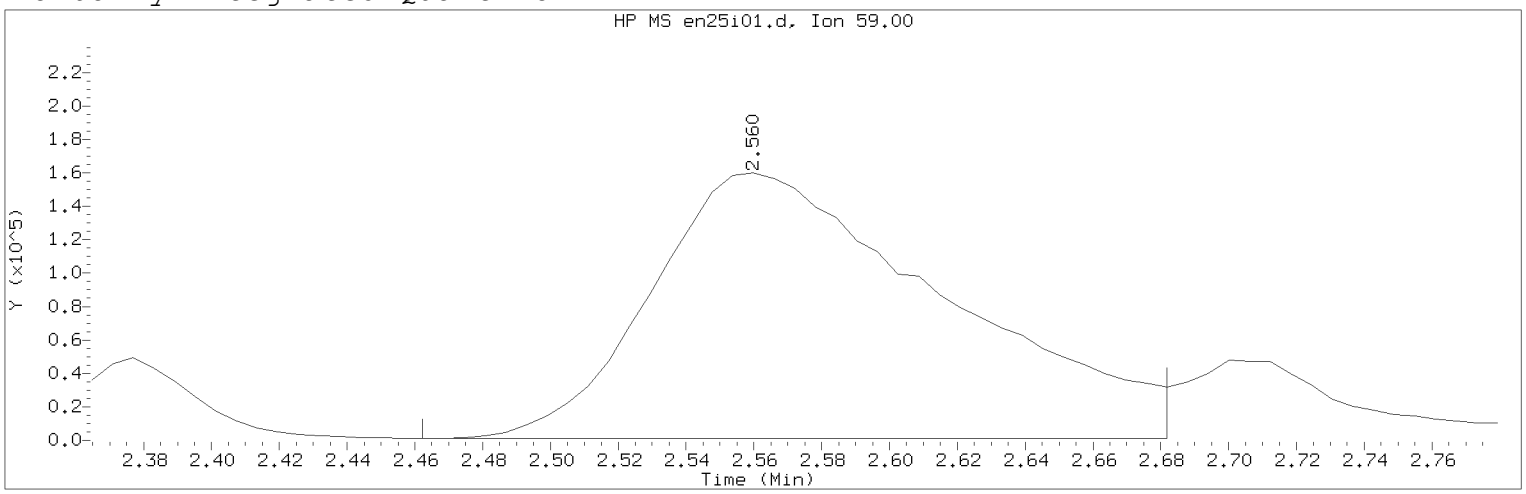
Compound Number : 12
Compound Name : Trichlorofluoromethane
Scan Number : 131
Retention Time (minutes): 1.786
Quant Ion : 101.00
Area : 2355659
On-column Amount (ng) : 316.1475
Integration start scan : 109 Integration stop scan: 166
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 10:24.
Target 3.5 esignature user: JMLong1678

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 14:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

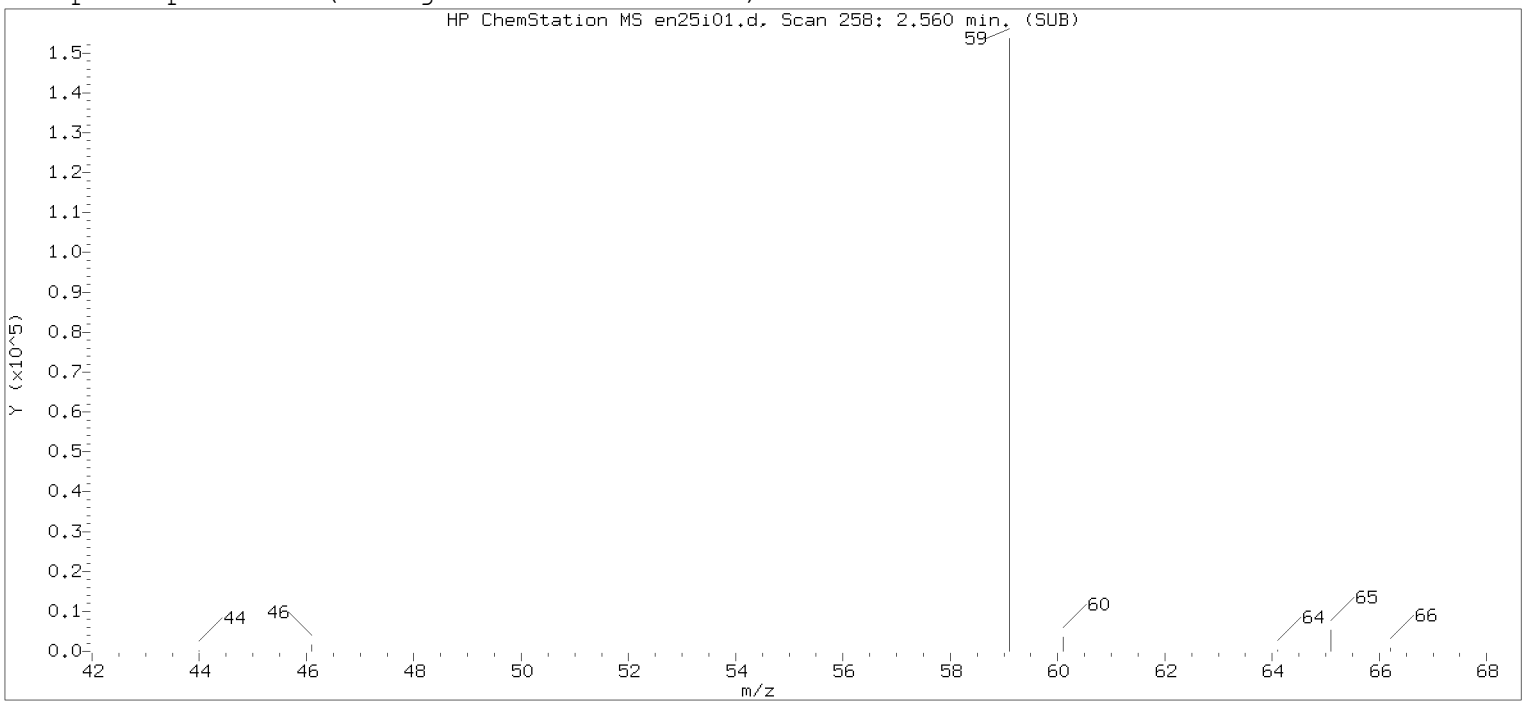
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 258
Retention Time (minutes): 2.560
Quant Ion : 59.00
Area (flag) : 961508M
On-Column Amount (ng) : 1500.0000
Integration start scan : 241 Integration stop scan: 277
Y at integration start : 1150 Y at integration end: 1150

Reason for manual integration: improper integration

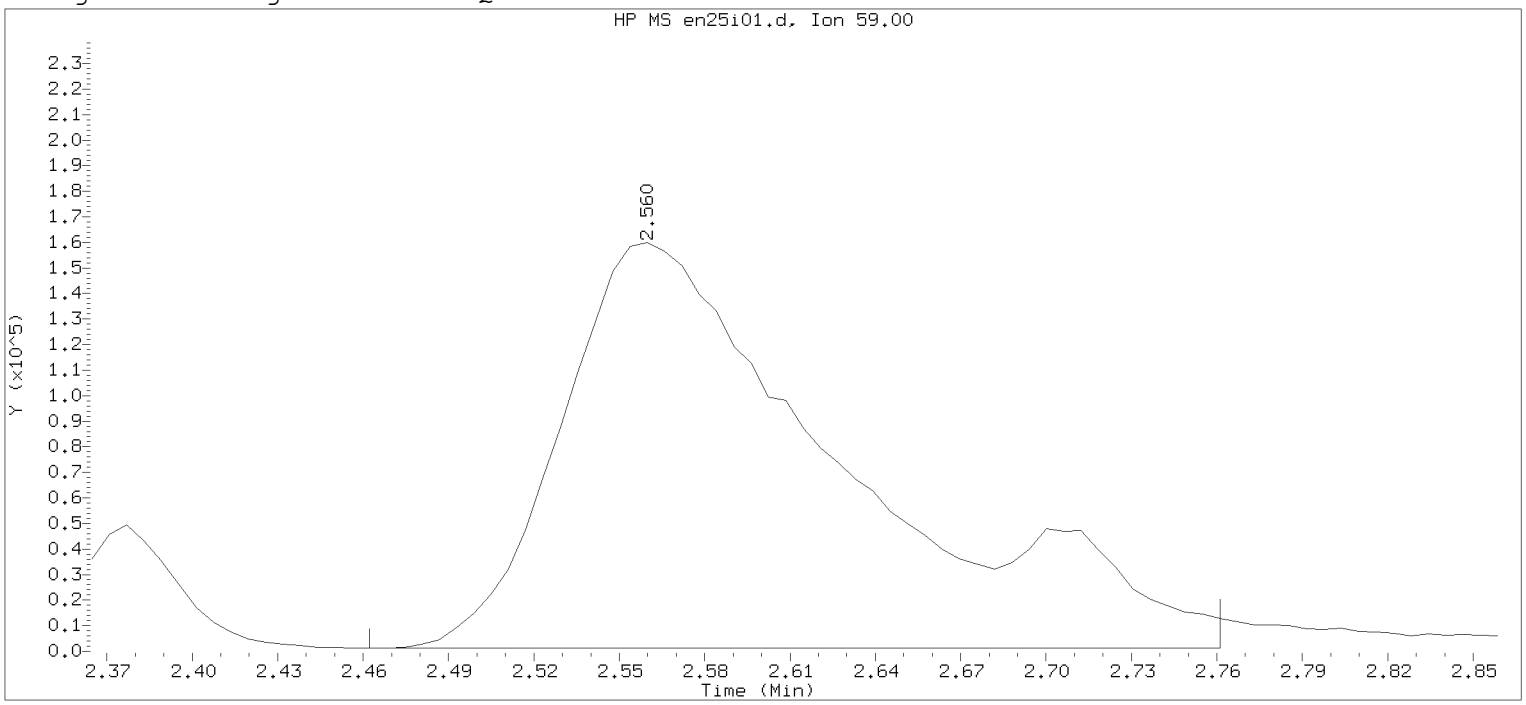
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:25.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 14:39 Analyst ID: KAS02648

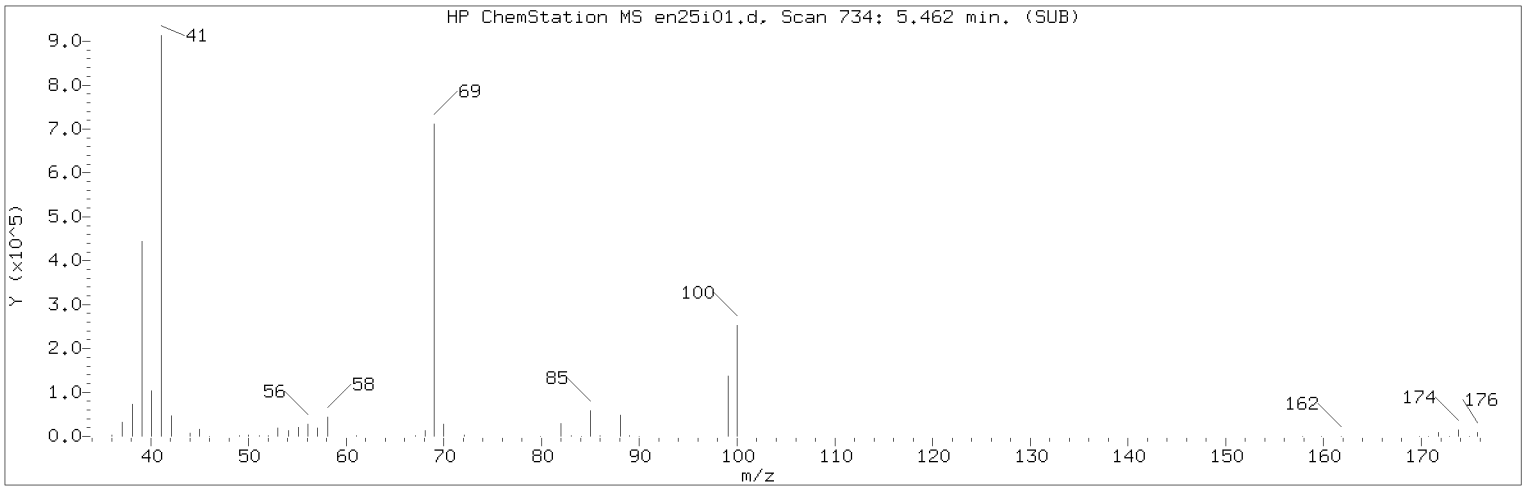
Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 14:55
Date, time and analyst ID of latest file update: 25-Nov-2019 14:55 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

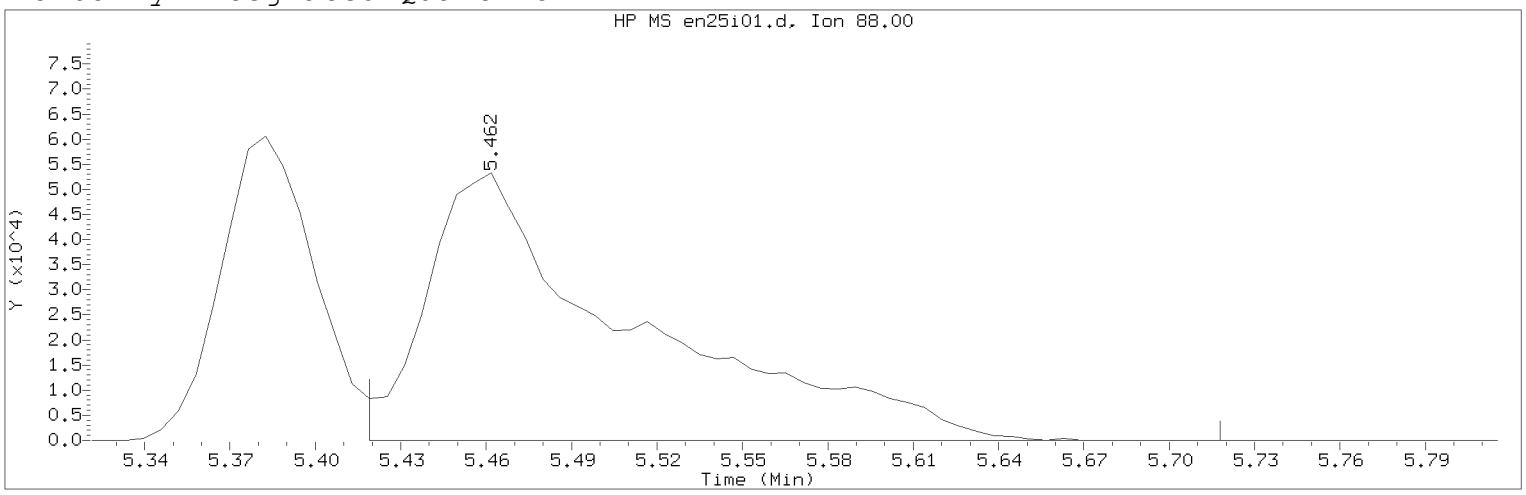
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 258
Retention Time (minutes): 2.560
Quant Ion : 59.00
Area : 1098436
On-column Amount (ng) : 1661.0719
Integration start scan : 241 Integration stop scan: 290
Y at integration start : 1150 Y at integration end: 1150

Digitally signed by Jason M. Long on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jmaa1652

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 14:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD300 Lab Sample ID: VSTD300

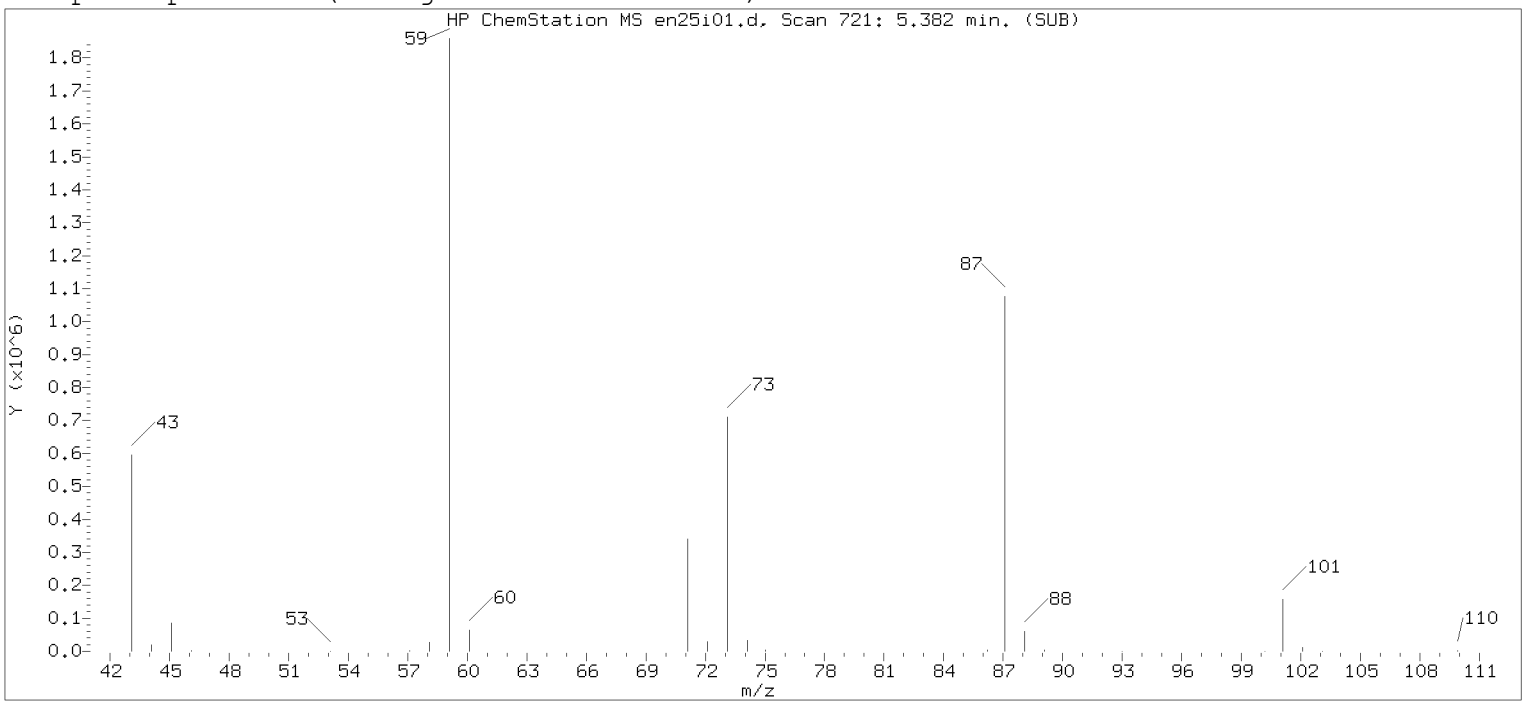
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 734
Retention Time (minutes): 5.462
Quant Ion : 88.00
Area (flag) : 268096M
On-Column Amount (ng) : 3750.0000
Integration start scan : 726 Integration stop scan: 775
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

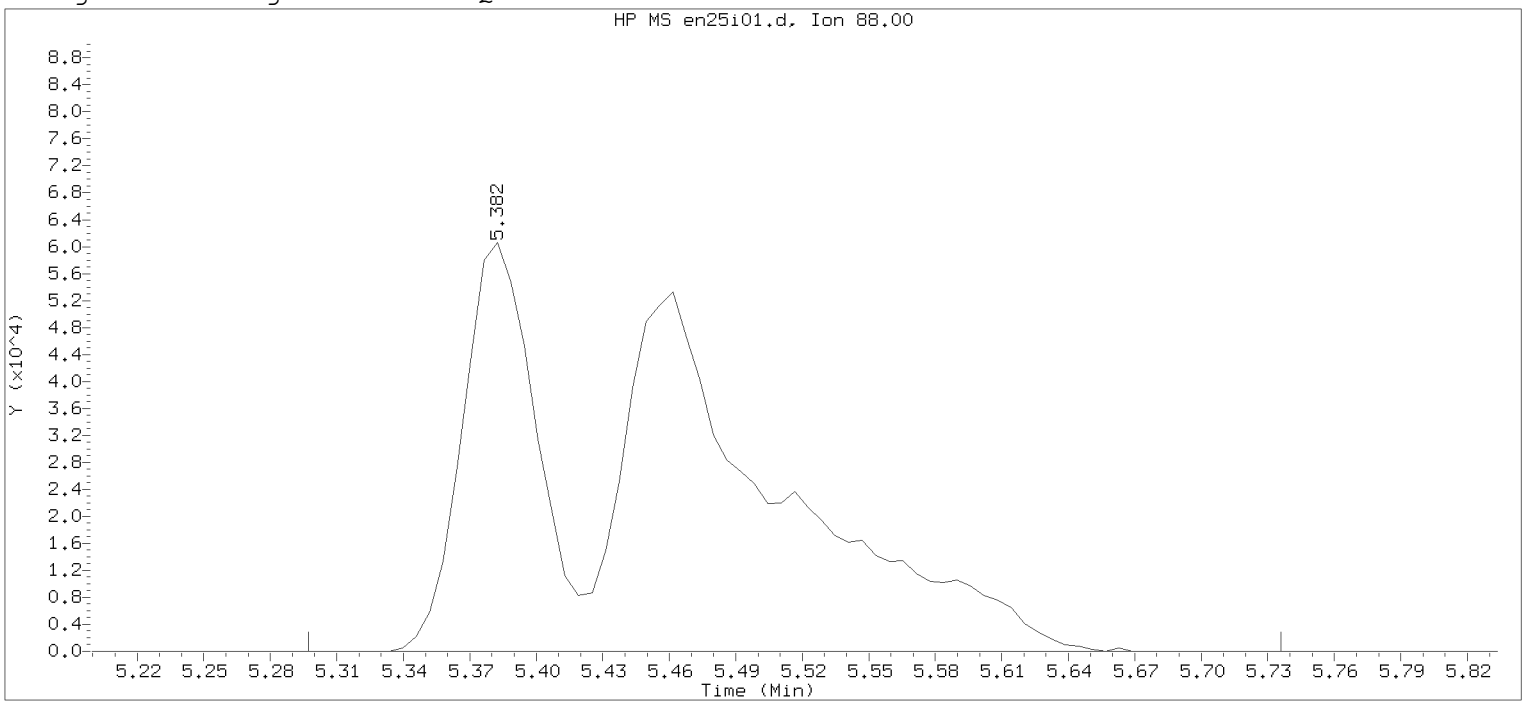
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:25.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



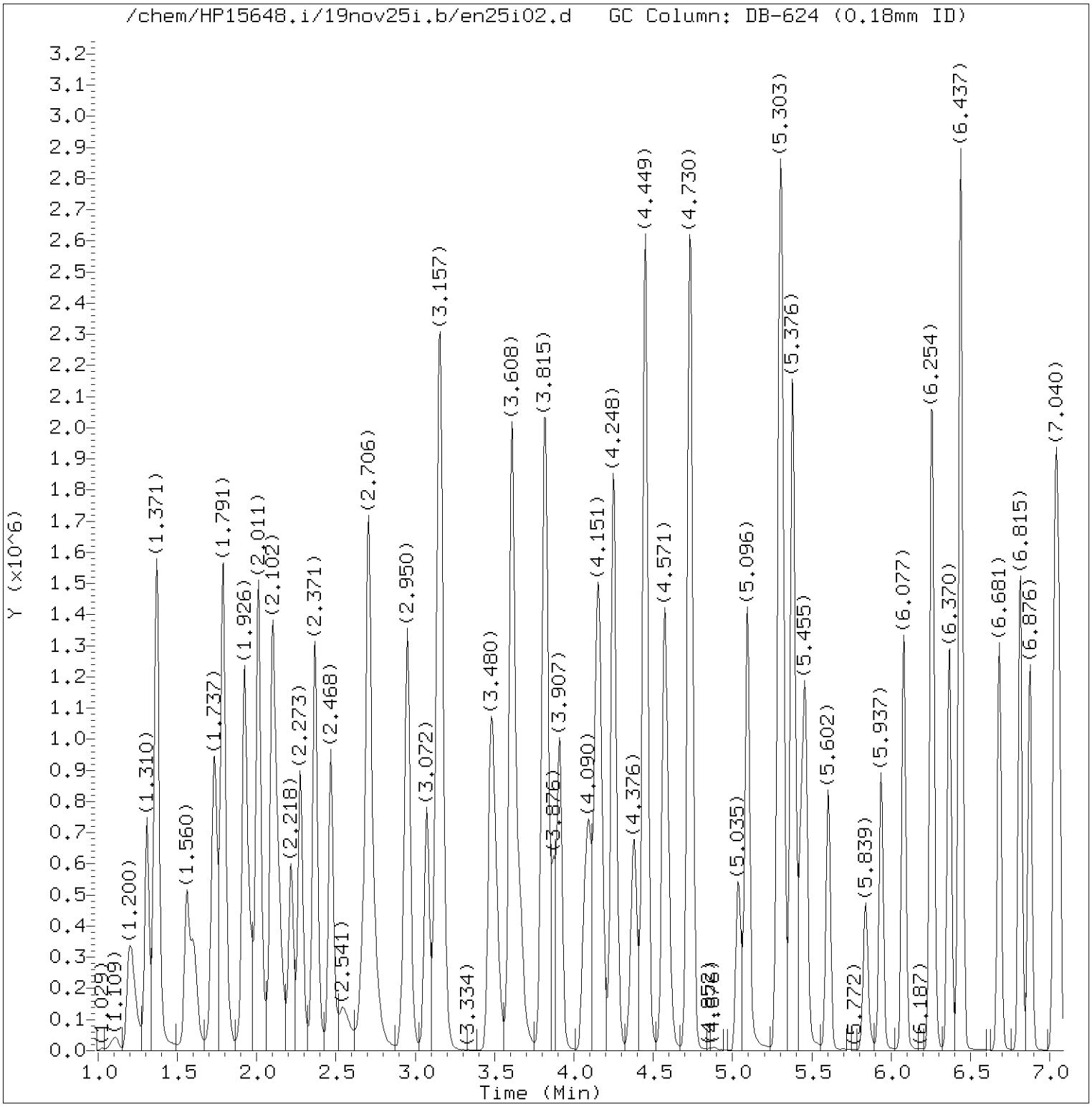
Data File: /chem/HP15648.i/19nov25i.b/en25i01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 14:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 14:55
Date, time and analyst ID of latest file update: 25-Nov-2019 14:55 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 721
Retention Time (minutes): 5.382
Quant Ion : 88.00
Area : 405115
On-column Amount (ng) : 5684.1473
Integration start scan : 706 Integration stop scan: 778
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jmlong



Total Ion Chromatogram (TIC)

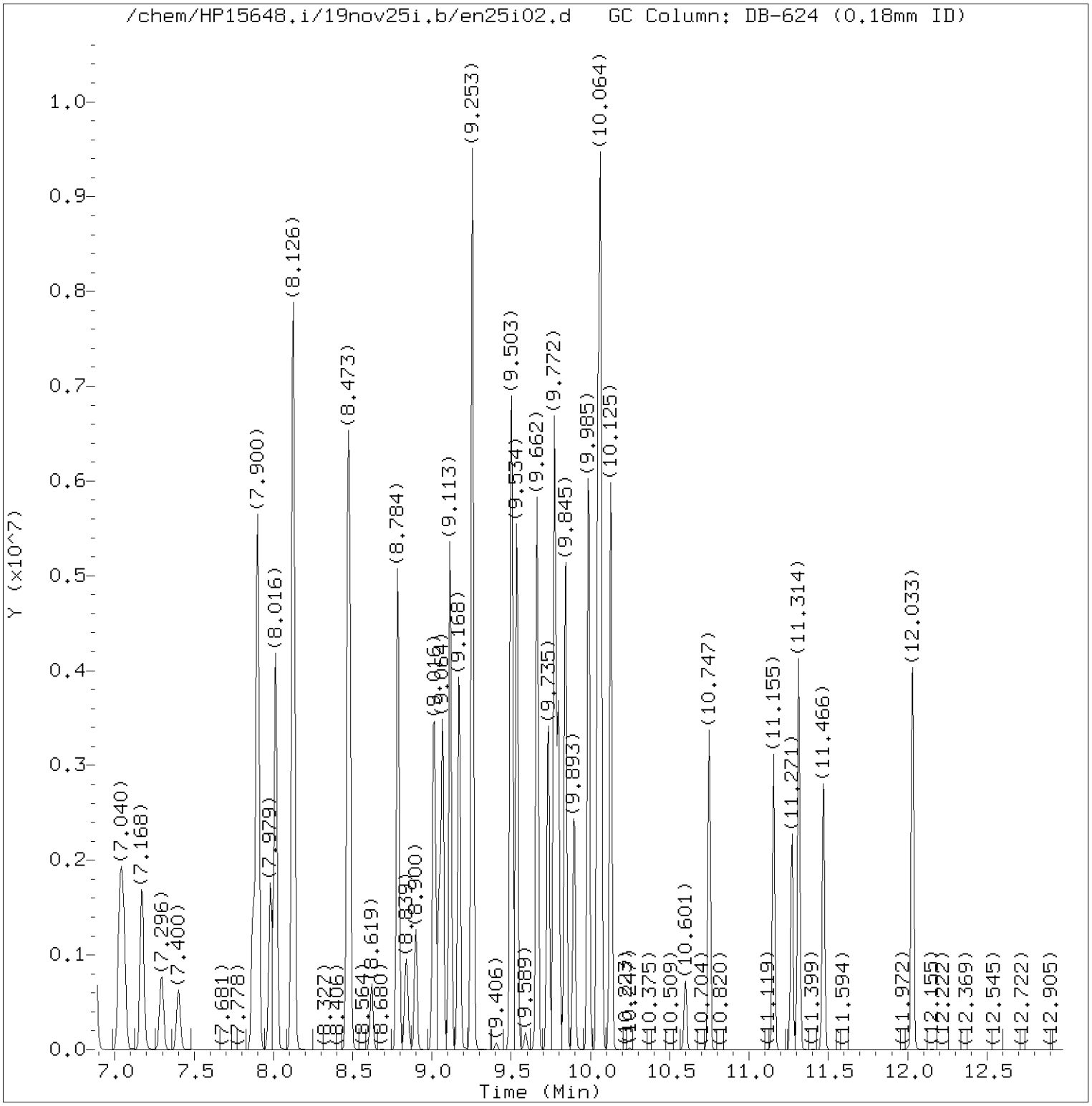
Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i02.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 14:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i02.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 14:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i02.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 14:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.200	85	772600	101.166
4) Chloromethane	(2)	1.310	50	875873	99.767
5) 1,3-Butadiene	(2)	1.365	39	592474	101.519
6) Vinyl Chloride	(2)	1.377	62	820253	101.494
8) Bromomethane	(2)	1.560	94	430062	104.894
9) Chloroethane	(2)	1.602	64	426060	102.921
10) Dichlorofluoromethane	(2)	1.730	67	1009297	101.810
12) Trichlorofluoromethane	(2)	1.785	101	808266M	102.089
11) n-Pentane	(2)	1.791	43	977560	101.789
14) Ethyl ether	(2)	1.919	59	512983	100.351
15) Freon 123a	(2)	1.932	67	614582	102.311
16) Acrolein	(1)	2.011	56	1670030	991.176
17) 1,1-Dichloroethene	(2)	2.102	96	395538	102.224
17) 1,1-Dichloroethene	(2)	2.096	63	221703	101.853
18) Acetone	(1)	2.121	58	146715	200.010
19) Freon 113	(2)	2.121	101	472128	103.587
21) 2-Propanol	(1)	2.212	45	244627	509.503
22) Methyl Iodide	(2)	2.218	142	689431	100.806
23) Carbon Disulfide	(2)	2.273	76	1433645	101.290
25) Allyl Chloride	(2)	2.364	41	871222	99.878
27) Methyl Acetate	(2)	2.371	43	492327	98.242
28) Methylene Chloride	(2)	2.468	84	471762	100.608
29)*t-Butyl alcohol-d10	(1)	2.474	65	192080	250.000
30) t-Butyl alcohol	(1)	2.547	59	356768	510.955
31) Acrylonitrile	(2)	2.663	53	303629	101.198
32) trans-1,2-Dichloroethene	(2)	2.706	96	454790	101.829
33) Methyl Tertiary Butyl Ether	(2)	2.712	73	1530199	101.244
34) n-Hexane	(2)	2.950	57	968132	100.299
36) 1,1-Dichloroethane	(2)	3.072	63	956743	100.856
38) di-Isopropyl ether	(2)	3.145	45	1974121	100.558
39) 2-Chloro-1,3-butadiene	(2)	3.157	53	928409	101.591
40) Ethyl t-butyl ether	(2)	3.480	59	1742904	102.089
42) cis-1,2-Dichloroethene	(2)	3.608	96	519883	101.419
44) 2-Butanone	(2)	3.614	43	777917	202.314
45) 2,2-Dichloropropane	(2)	3.620	77	738576	104.263
43) 1,2-Dichloroethene (Total)	(2)		96	974673	203.249
47) Propionitrile	(1)	3.663	54	563907	478.352
48) Methacrylonitrile	(2)	3.815	67	729329	247.015

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i02.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 14:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.828	128	237103	99.255
50) Tetrahydrofuran	(1)	3.876	71	191931	195.989
51) Chloroform	(2)	3.913	83	826488	101.205
52)$Dibromofluoromethane	(2)	4.059	113	208933	49.727
52)$Dibromofluoromethane	(2)	4.059	111	217071	49.768
53) 1,1,1-Trichloroethane	(2)	4.096	97	708535	103.896
54) Cyclohexane	(2)	4.151	56	1178646	102.211
54) Cyclohexane	(2)	4.157	84	910470	102.212
54) Cyclohexane	(2)	4.157	69	345794	102.714
55) 1,1-Dichloropropene	(2)	4.248	75	743769	101.938
56) Carbon Tetrachloride	(2)	4.254	117	571400	105.553
58) Isobutyl Alcohol	(1)	4.370	41	306970	1205.231
57)$1,2-Dichloroethane-d4	(2)	4.382	102	56004	49.990
57)$1,2-Dichloroethane-d4	(2)	4.382	65	277856	49.551
57)$1,2-Dichloroethane-d4	(2)	4.382	104	35819	49.968
60) Benzene	(2)	4.449	78	2168280	101.187
61) 1,2-Dichloroethane	(2)	4.456	62	650545	99.943
61) 1,2-Dichloroethane	(2)	4.456	98	56911	99.878
65) t-Amyl methyl ether	(2)	4.571	73	1619017	102.108
66)*Fluorobenzene	(2)	4.724	96	988465M	50.000
67) n-Heptane	(2)	4.736	43	1078040	98.031
69) n-Butanol	(1)	5.035	56	536704	2374.713
71) Trichloroethene	(2)	5.096	95	510630	101.239
73) Methylcyclohexane	(2)	5.297	83	1097229	97.685
73) Methylcyclohexane	(2)	5.297	98	485656	98.055
74) 1,2-Dichloropropane	(2)	5.315	63	575476	100.274
75) Dibromomethane	(2)	5.431	93	289332	99.653
76) 1,4-Dioxane	(1)	5.449	88	88242M	1202.512
77) Methyl Methacrylate	(2)	5.461	69	472958	98.598
79) Bromodichloromethane	(2)	5.602	83	608916	100.668
80) 2-Nitropropane	(2)	5.839	41	217713	197.571
81) 2-Chloroethyl Vinyl Ether	(2)	5.937	63	432108	98.673
82) cis-1,3-Dichloropropene	(2)	6.077	75	860796	100.106
83) 4-Methyl-2-pentanone	(2)	6.254	43	1674634	206.221
84)$Toluene-d8	(3)	6.370	98	977189	50.005
84)$Toluene-d8	(3)	6.370	100	628572	50.017
89) Toluene	(3)	6.437	92	1328218	102.052
90) trans-1,3-Dichloropropene	(3)	6.681	75	767506	100.528

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i02.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 14:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropene (total)	(3)		100	1628302	200.633
92) Ethyl Methacrylate	(3)	6.815	69	849469	100.116
93) 1,1,2-Trichloroethane	(3)	6.876	97	422538	100.419
94) Tetrachloroethene	(3)	7.034	166	475799	102.919
95) 1,3-Dichloropropane	(3)	7.059	76	808687	100.040
97) 2-Hexanone	(3)	7.168	43	1203770	210.176
98) Dibromochloromethane	(3)	7.296	129	412183	100.455
100) 1,2-Dibromoethane	(3)	7.400	107	436344	100.188
101)*Chlorobenzene-d5	(3)	7.870	117	690332	50.000
103) Chlorobenzene	(3)	7.900	112	1378185	101.903
102) 1-Chlorohexane	(3)	7.900	91	769799	102.327
104) 1,1,1,2-Tetrachloroethane	(3)	7.979	131	427479	100.972
105) Ethylbenzene	(3)	8.016	91	2622624	102.058
107) m+p-Xylene	(3)	8.126	106	1955542	204.554
108) o-Xylene	(3)	8.467	106	960114	102.272
110) Styrene	(3)	8.479	104	1605284	101.371
109) Xylene (Total)	(3)		106	2915656	306.826
111) Bromoform	(3)	8.619	173	255961	99.192
112) Isopropylbenzene	(3)	8.784	105	2625392	102.304
113) Cyclohexanone	(1)	8.839	55	340908	1186.388
115)$4-Bromofluorobenzene	(3)	8.900	95	363199	49.368
115)$4-Bromofluorobenzene	(3)	8.900	174	246713	50.071
116) Bromobenzene	(4)	9.010	156	512183	99.736
117) 1,1,2,2-Tetrachloroethane	(4)	9.022	83	657876	99.000
118) 1,2,3-Trichloropropane	(4)	9.046	110	182850	98.112
119) trans-1,4-Dichloro-2-butene	(4)	9.064	53	543725	244.869
120) n-Propylbenzene	(4)	9.113	91	3137747	100.977
121) 2-Chlorotoluene	(4)	9.174	126	567511	100.625
123) 1,3,5-Trimethylbenzene	(4)	9.253	105	2224519	101.045
122) 4-Chlorotoluene	(4)	9.253	126	580472	101.510
126) Pentachloroethane	(4)	9.503	167	291968	96.261
125) tert-Butylbenzene	(4)	9.503	134	476379	100.580
127) 1,2,4-Trimethylbenzene	(4)	9.534	105	2274562	100.187
128) sec-Butylbenzene	(4)	9.662	105	2950033	100.979
130) 1,3-Dichlorobenzene	(4)	9.735	146	1028263	99.907
131) p-Isopropyltoluene	(4)	9.772	119	2438310	100.734
132)*1,4-Dichlorobenzene-d4	(4)	9.784	152	338579	50.000
134) 1,4-Dichlorobenzene	(4)	9.796	146	1032039	100.423

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i02.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 14:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	9.845	105	2313400	98.287
136) Benzyl Chloride	(4)	9.893	91	1358826	96.800
137) 1,3-Diethylbenzene	(4)	9.985	119	1487709	98.130
138) 1,4-Diethylbenzene	(4)	10.046	119	1564022	98.731
139) 1,2-Dichlorobenzene	(4)	10.064	146	961483	100.986
140) n-Butylbenzene	(4)	10.064	92	1275058	100.842
141) 1,2-Diethylbenzene	(4)	10.125	119	1229858	98.054
142) Diethylbenzene (total)	(4)		100	4281589	294.915
143) 1,2-Dibromo-3-chloropropane	(4)	10.601	75	143844	98.249
145) 1,3,5-Trichlorobenzene	(4)	10.747	180	739983	100.654
147) 1,2,4-Trichlorobenzene	(4)	11.155	180	658073	101.609
148) Hexachlorobutadiene	(4)	11.271	225	283937	101.451
149) Naphthalene	(4)	11.314	128	2225648	102.281
150) 1,2,3-Trichlorobenzene	(4)	11.472	180	618392	103.254
151) 2-Methylnaphthalene	(4)	12.033	142	1423526	108.226

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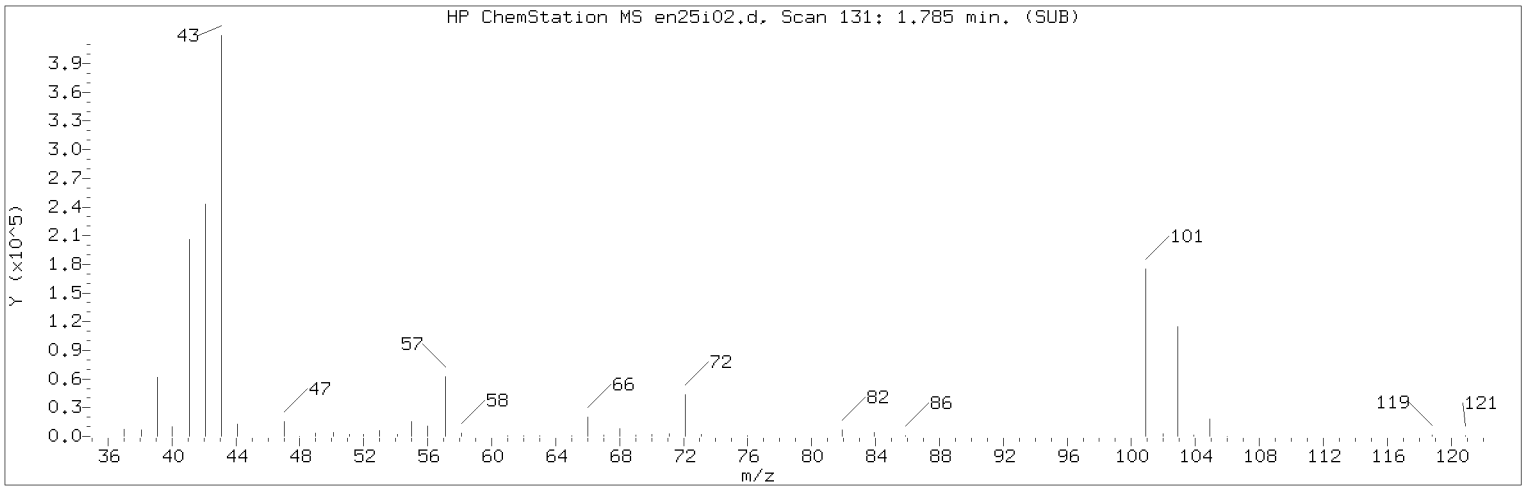
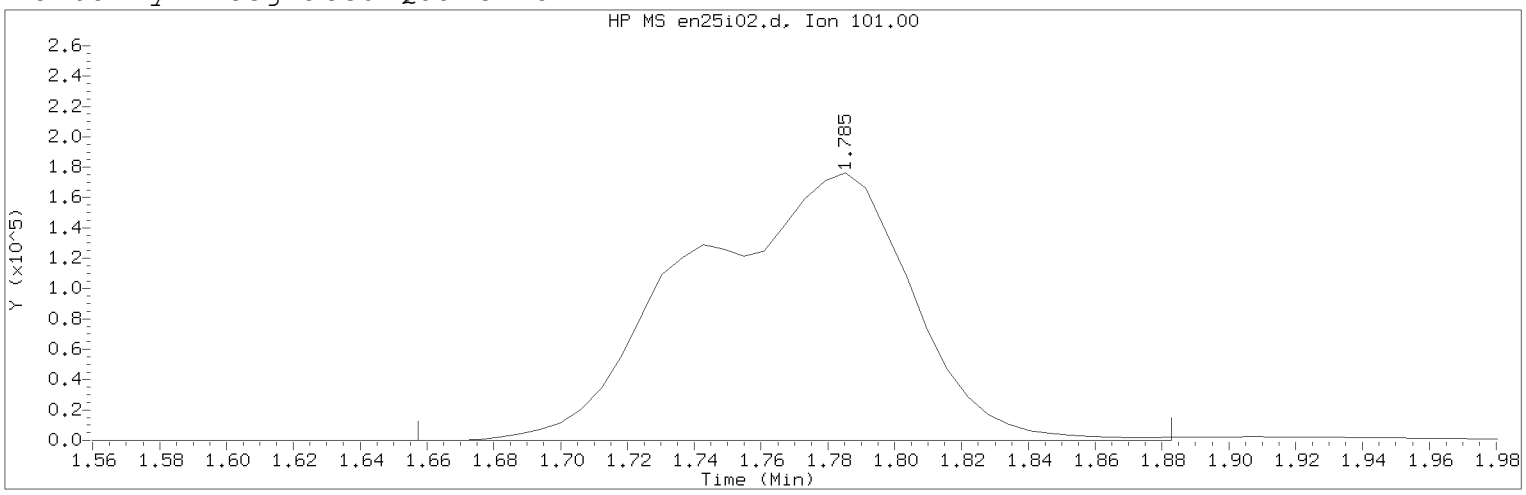
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i02.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 14:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

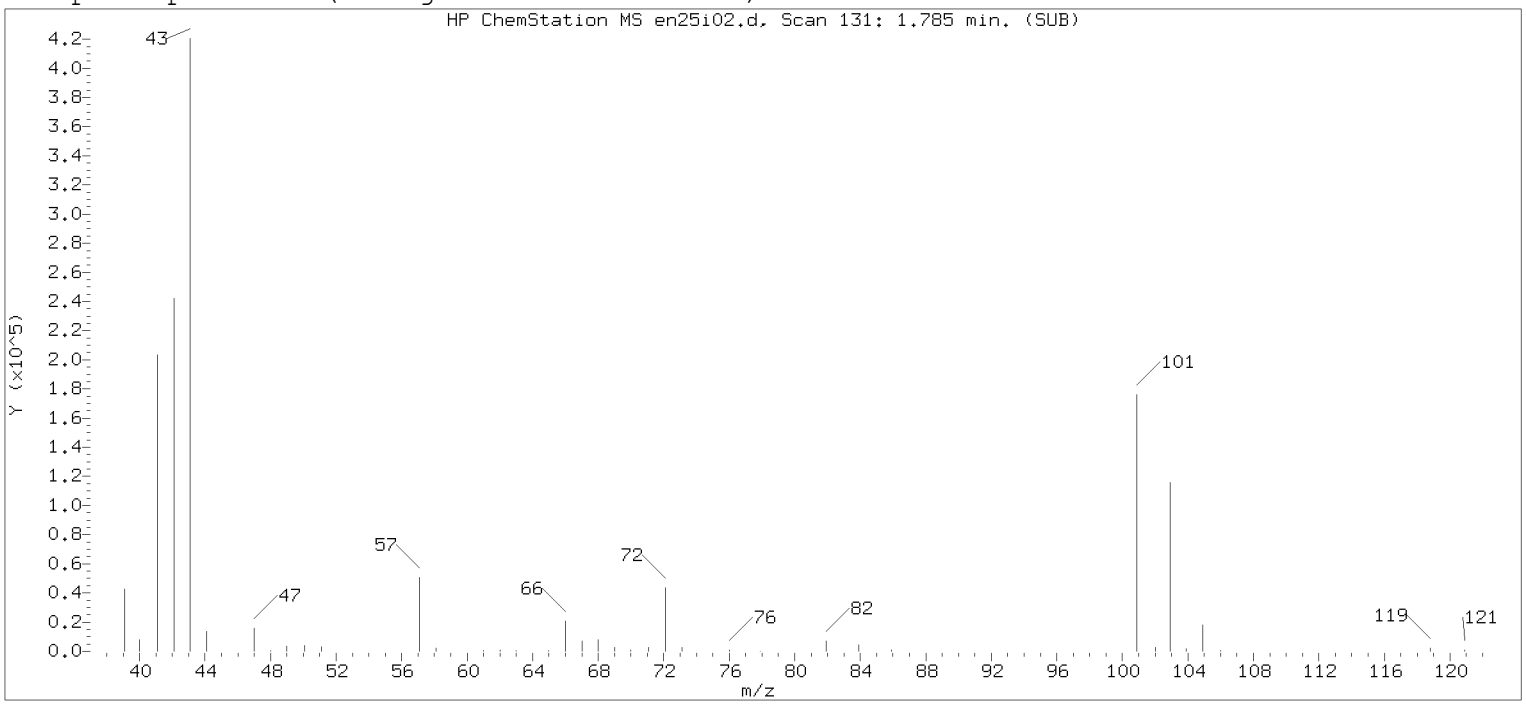
Compound Number : 12
Compound Name : Trichlorofluoromethane
Scan Number : 131
Retention Time (minutes): 1.785
Quant Ion : 101.00
Area (flag) : 808266M
On-Column Amount (ng) : 102.0886
Integration start scan : 109 Integration stop scan: 146
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

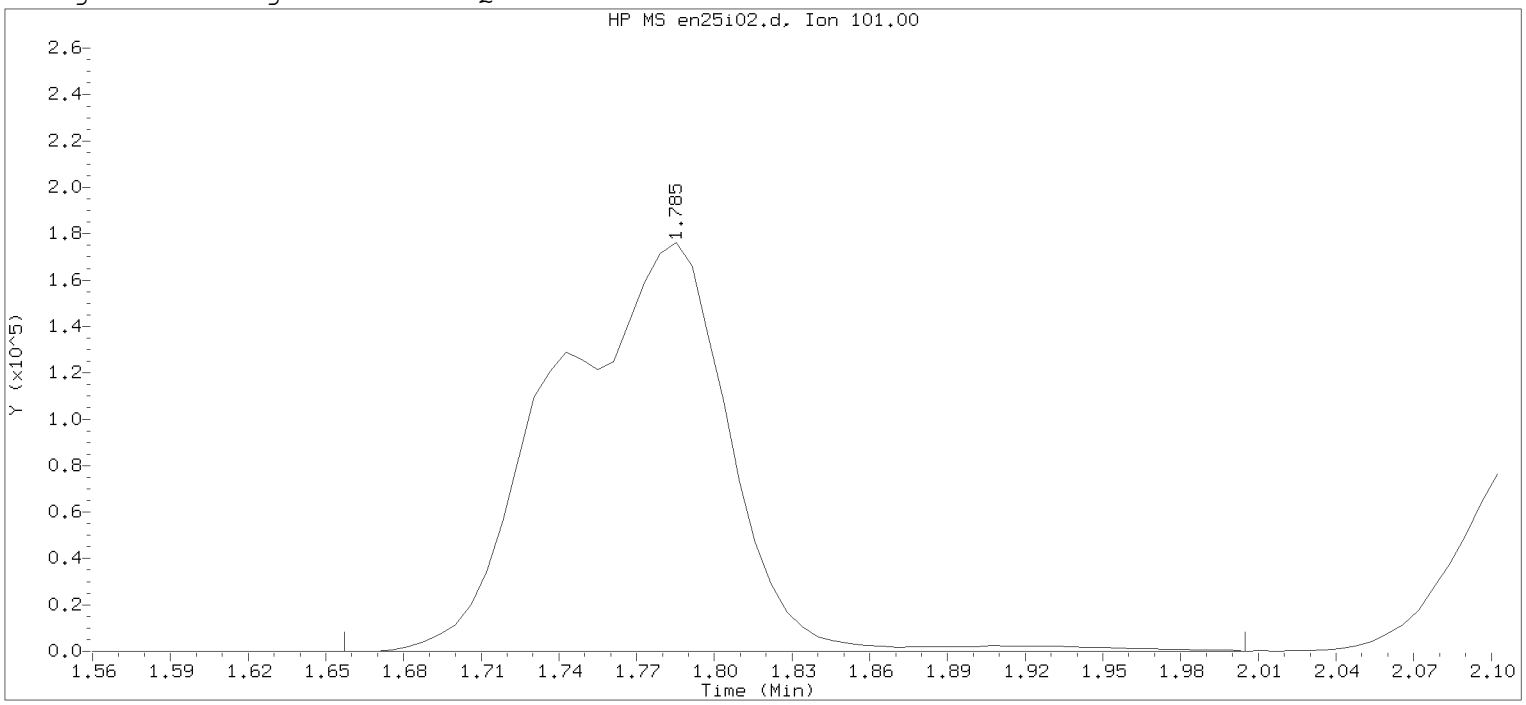
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:25.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i02.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 14:59 Analyst ID: KAS02648

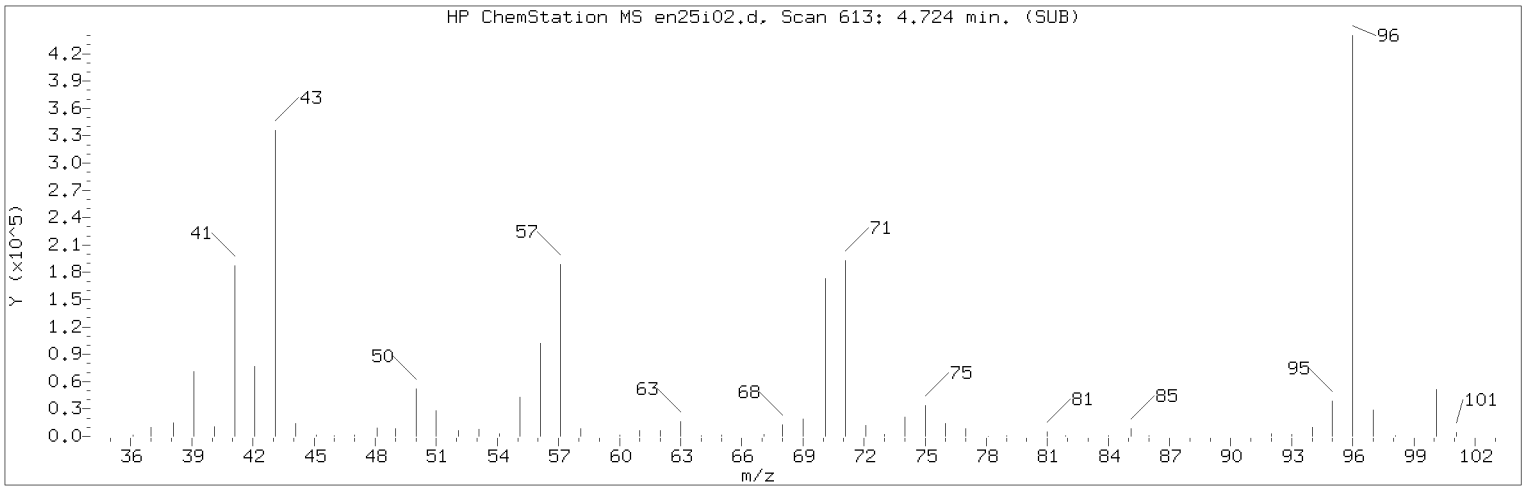
Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 15:17
Date, time and analyst ID of latest file update: 25-Nov-2019 15:17 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

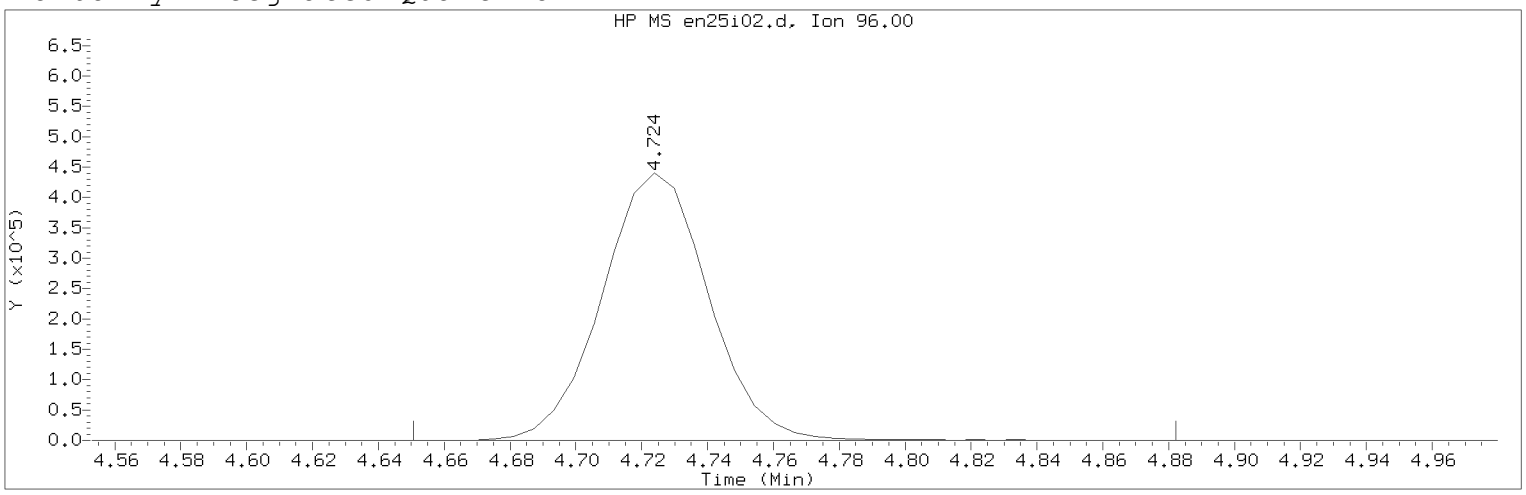
Compound Number : 12
Compound Name : Trichlorofluoromethane
Scan Number : 131
Retention Time (minutes): 1.785
Quant Ion : 101.00
Area : 818897
On-column Amount (ng) : 104.5205
Integration start scan : 109 Integration stop scan: 166
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jmaa1692

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i02.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 14:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

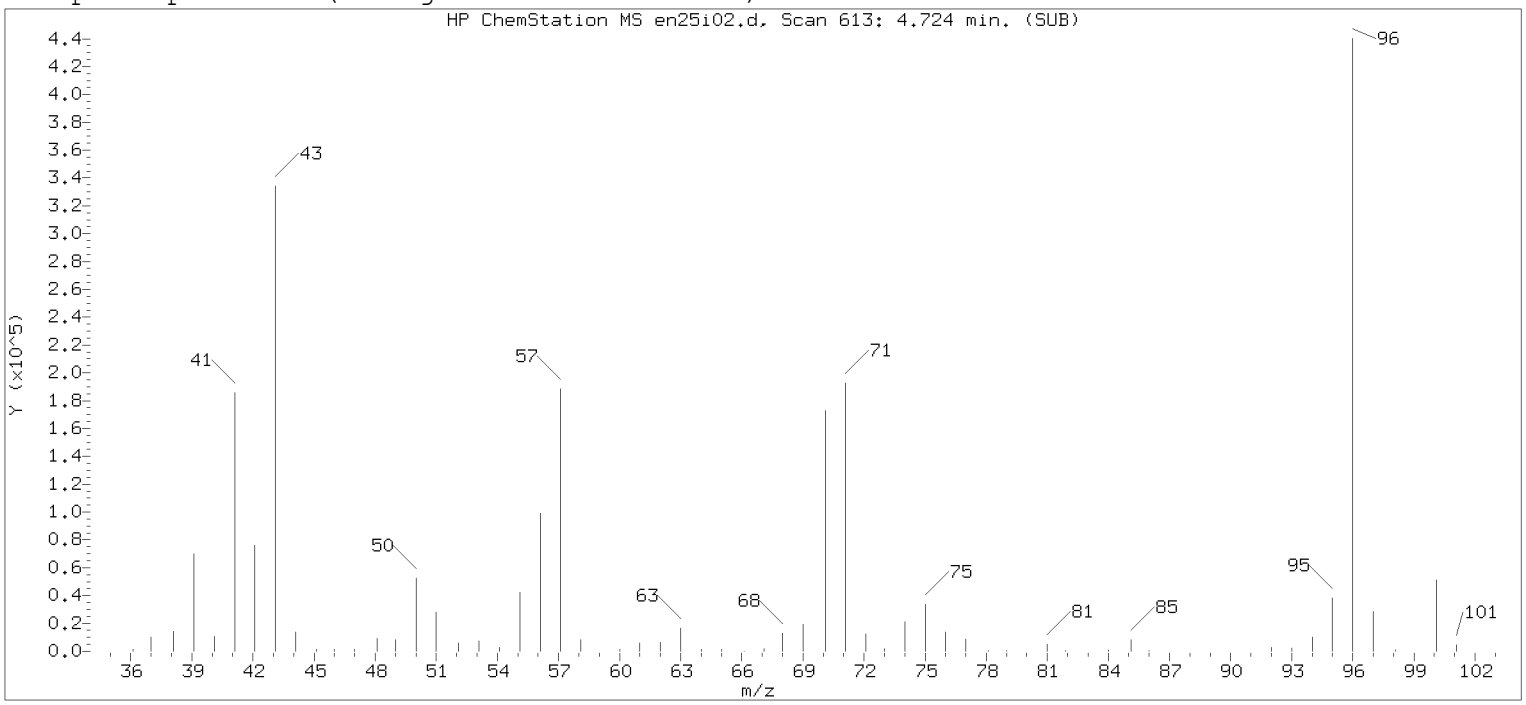
Compound Number : 66
Compound Name : Fluorobenzene
Scan Number : 613
Retention Time (minutes): 4.724
Quant Ion : 96.00
Area (flag) : 988465M
On-Column Amount (ng) : 50.0000
Integration start scan : 600 Integration stop scan: 638
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

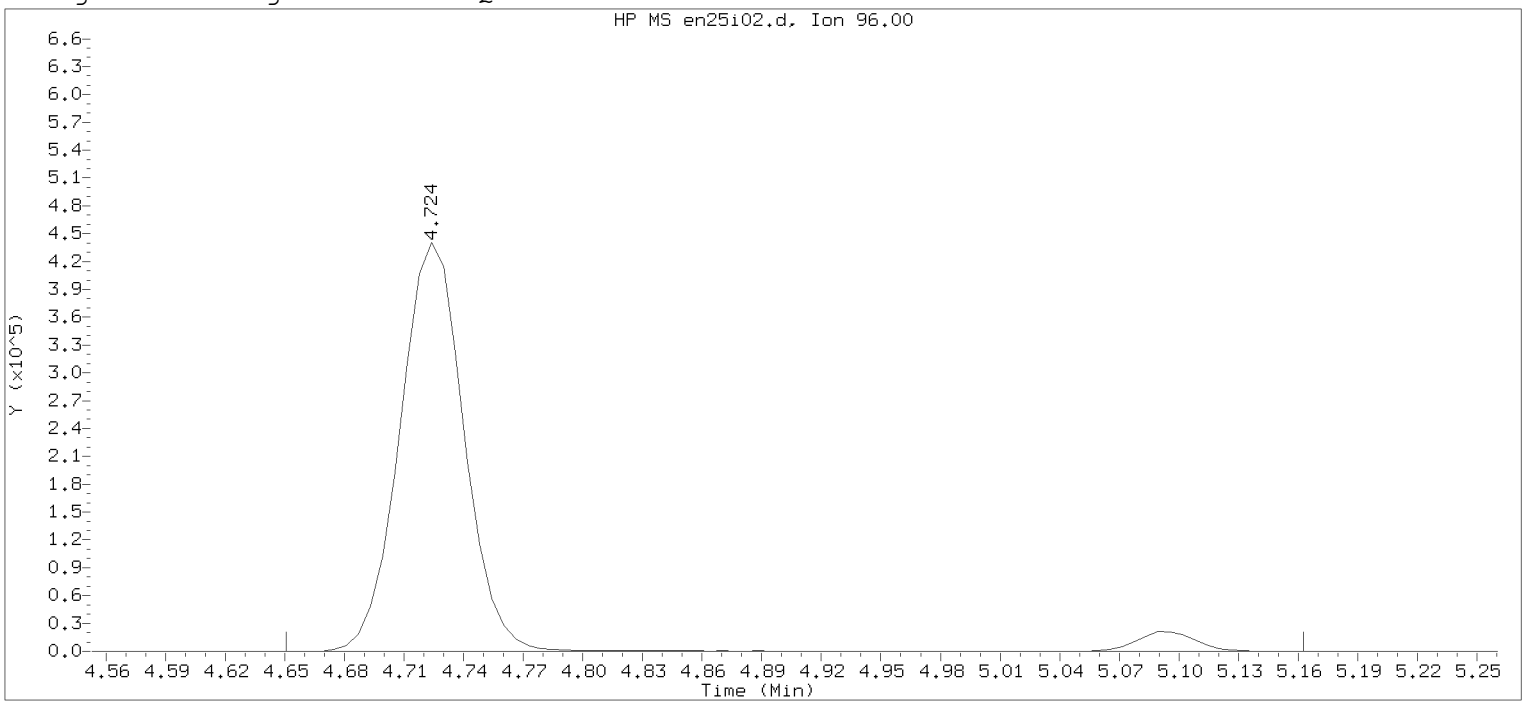
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:25.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i02.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 14:59 Analyst ID: KAS02648

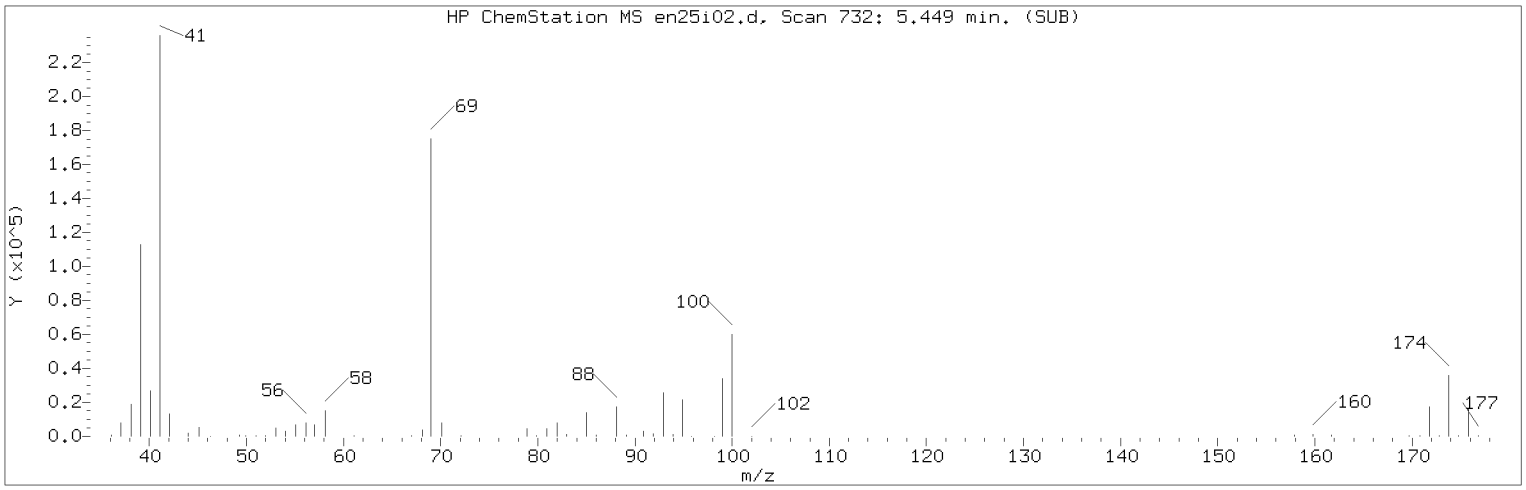
Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 15:17
Date, time and analyst ID of latest file update: 25-Nov-2019 15:17 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

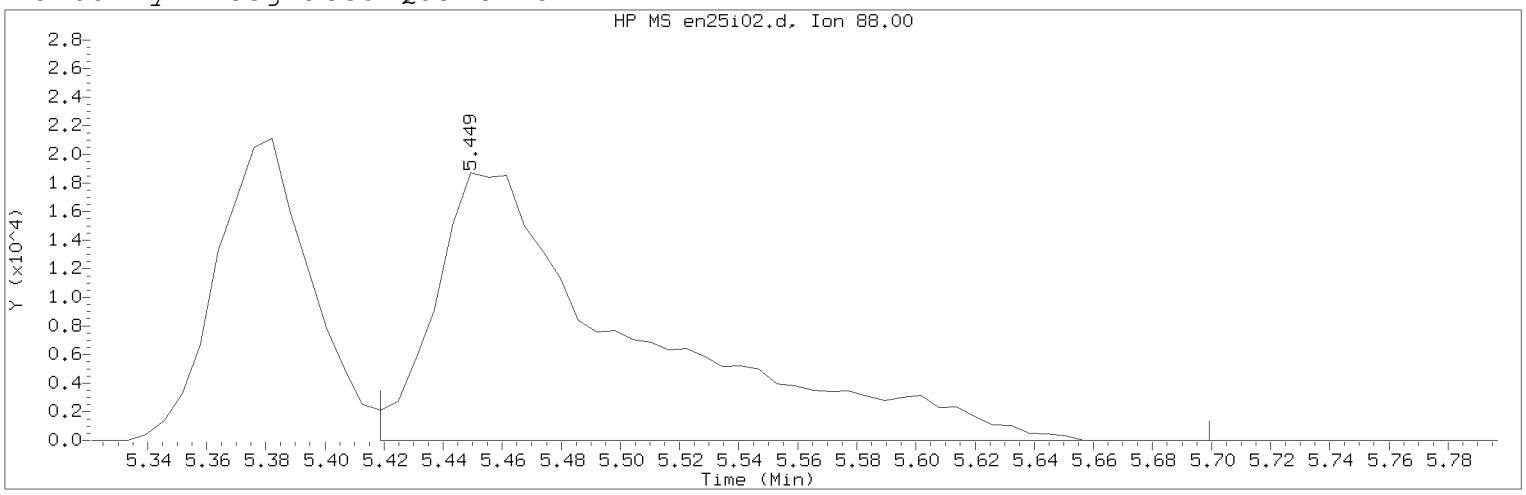
Compound Number : 66
Compound Name : Fluorobenzene
Scan Number : 613
Retention Time (minutes): 4.724
Quant Ion : 96.00
Area : 1032505
On-column Amount (ng) : 50.0000
Integration start scan : 600 Integration stop scan: 684
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 10:24.
Target 3.5 esignature user: JMLong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i02.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 14:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD100 Lab Sample ID: VSTD100

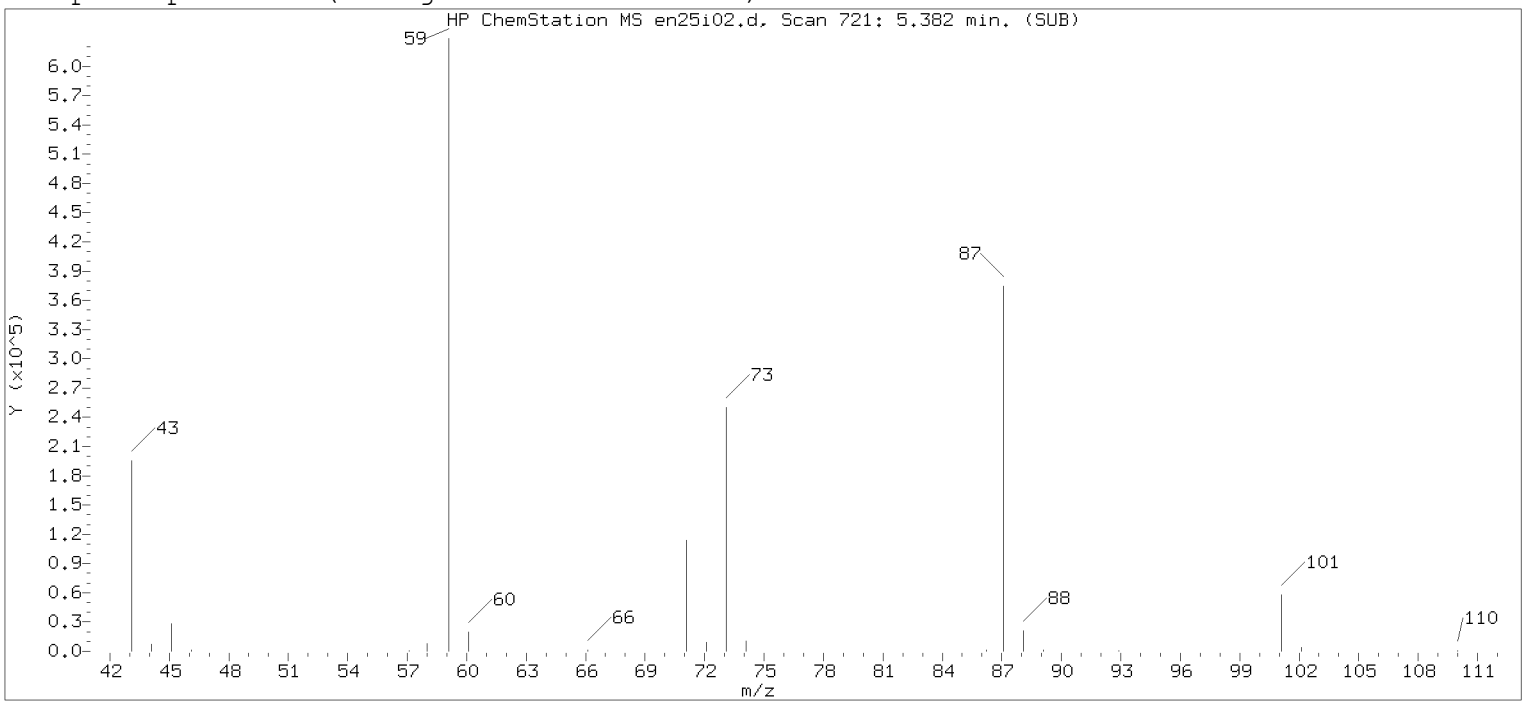
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 732
Retention Time (minutes): 5.449
Quant Ion : 88.00
Area (flag) : 88242M
On-Column Amount (ng) : 1202.5121
Integration start scan : 726 Integration stop scan: 772
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

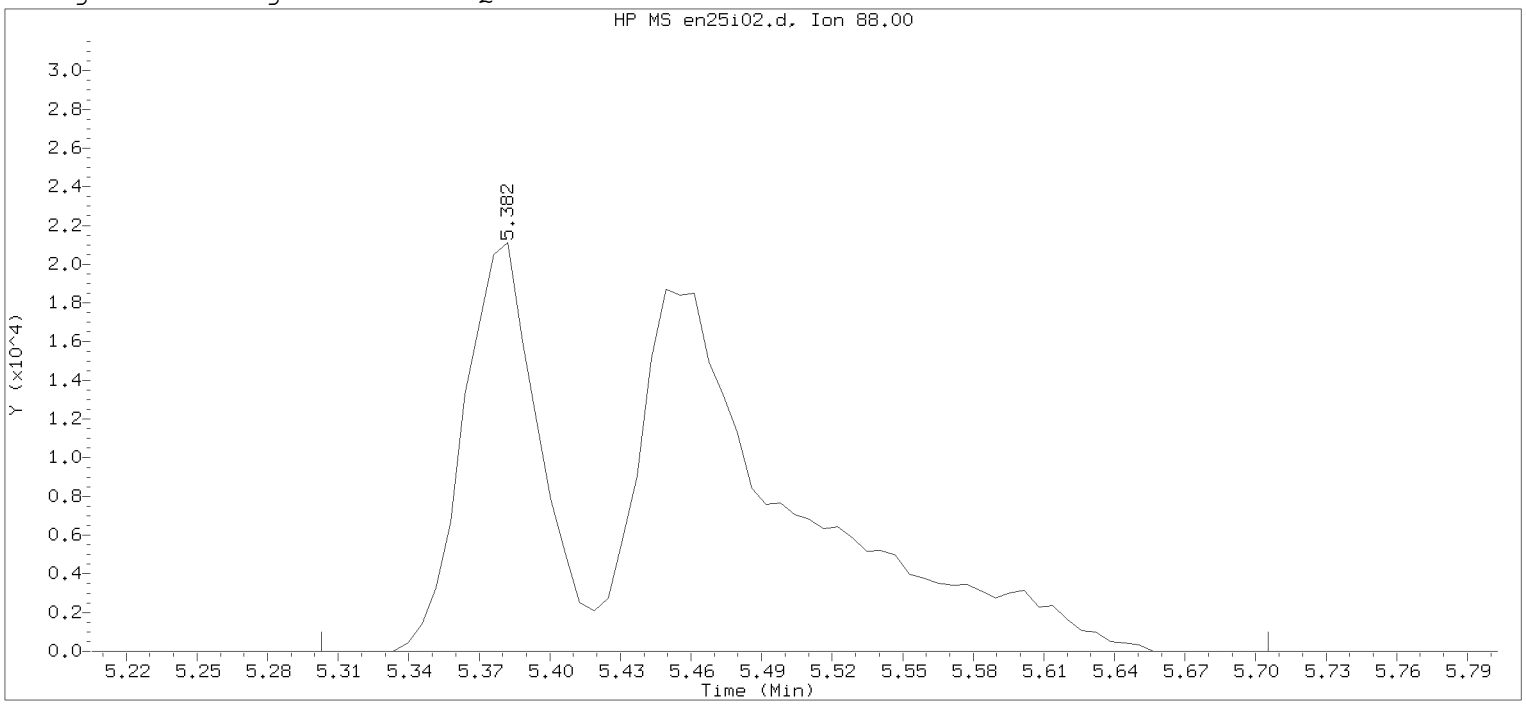
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:25.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



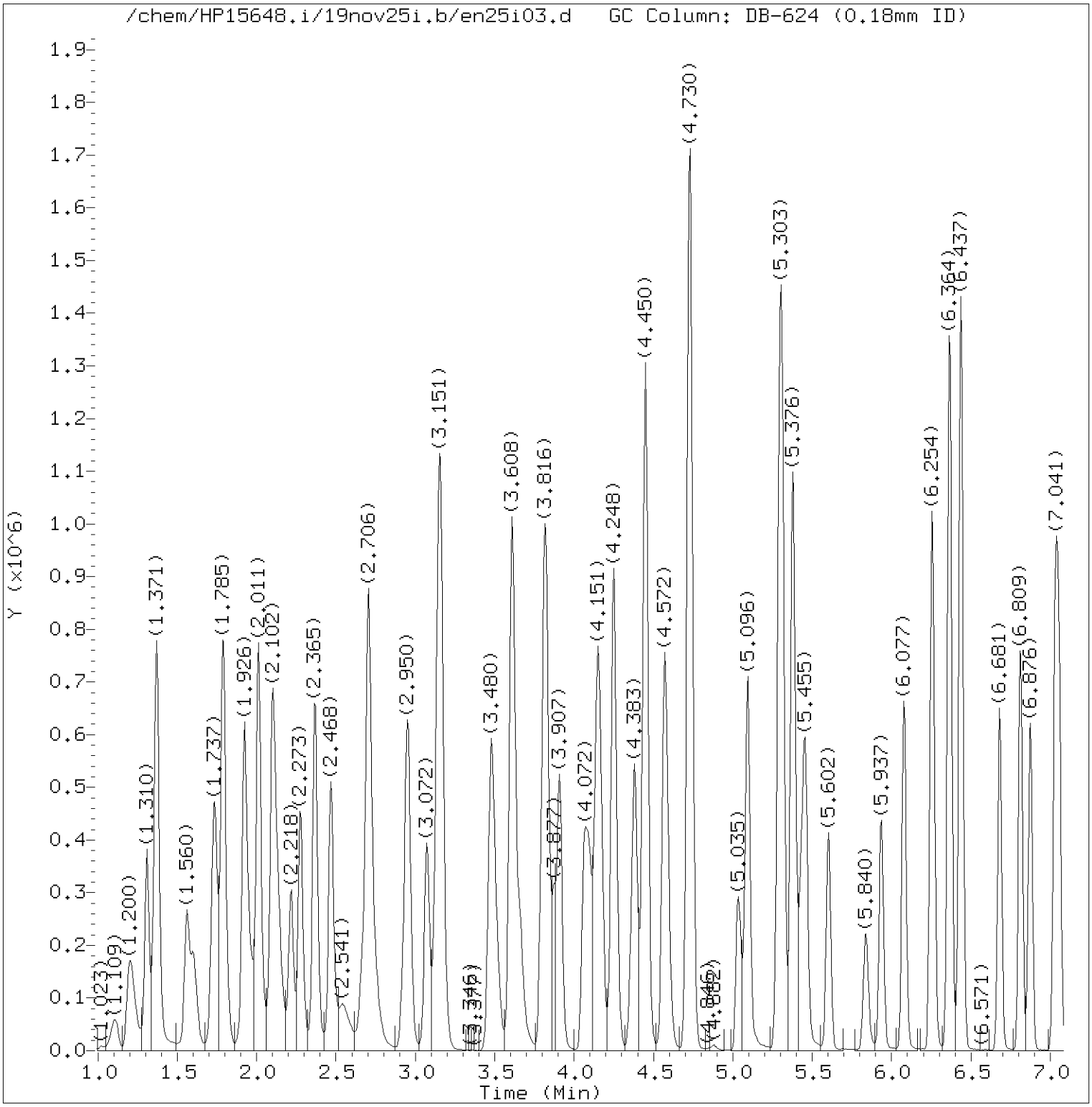
Data File: /chem/HP15648.i/19nov25i.b/en25i02.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 14:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 15:17
Date, time and analyst ID of latest file update: 25-Nov-2019 15:17 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 721
Retention Time (minutes): 5.382
Quant Ion : 88.00
Area : 134635
On-column Amount (ng) : 1672.4272
Integration start scan : 707 Integration stop scan: 773
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 10:24.
Target 3.5 esignature user: JMLong1676



Total Ion Chromatogram (TIC)

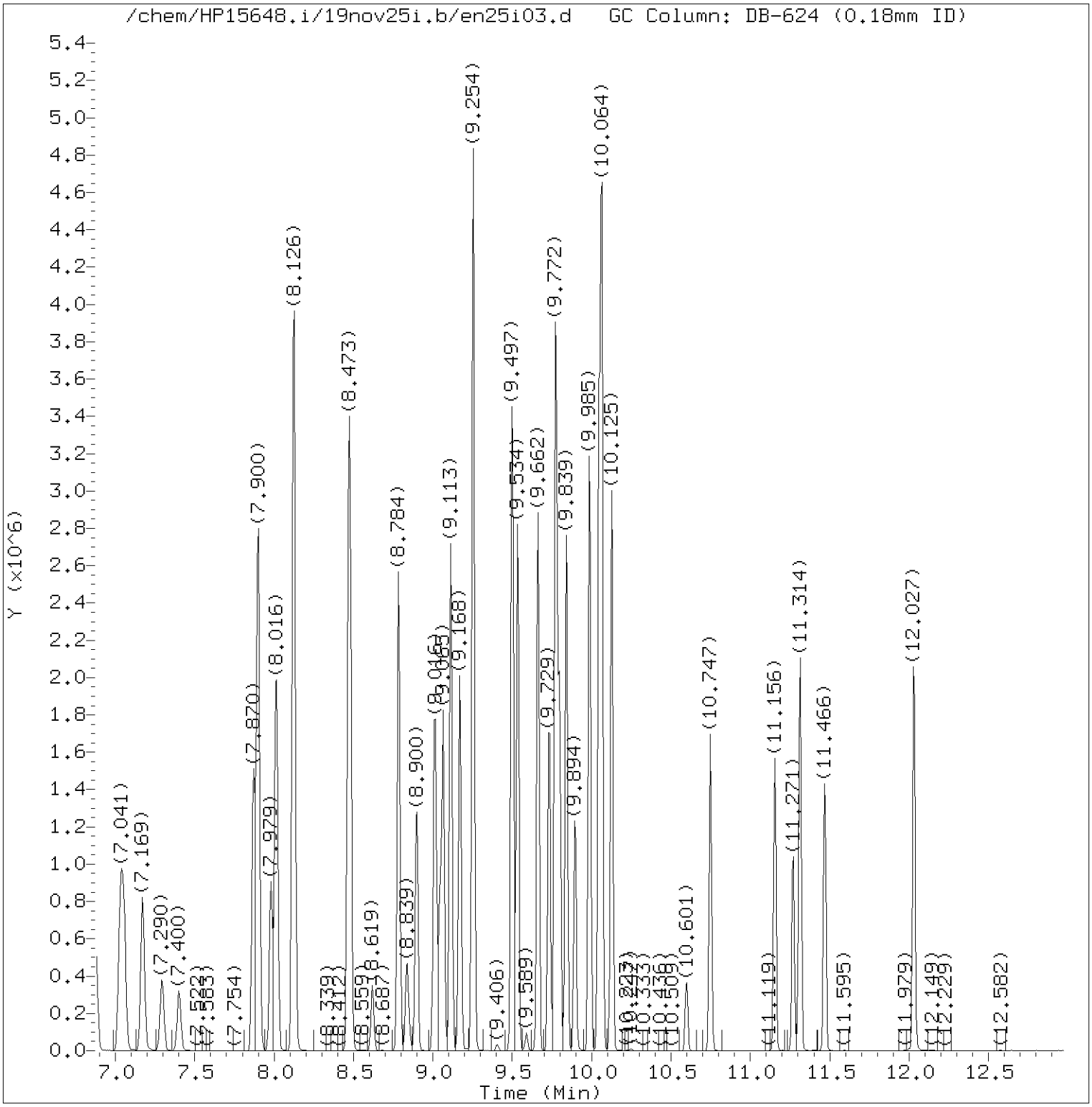
Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i03.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i03.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i03.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.206	85	375794	47.928
4) Chloromethane	(2)	1.310	50	441052	48.607
5) 1,3-Butadiene	(2)	1.365	39	301217	49.498
6) Vinyl Chloride	(2)	1.371	62	403548	48.407
8) Bromomethane	(2)	1.560	94	215421	50.092
9) Chloroethane	(2)	1.603	64	215285	49.750
10) Dichlorofluoromethane	(2)	1.731	67	519422	49.998
12) Trichlorofluoromethane	(2)	1.785	101	395237M	48.399
11) n-Pentane	(2)	1.792	43	484926	48.773
14) Ethyl ether	(2)	1.920	59	258478	48.819
15) Freon 123a	(2)	1.926	67	309752	49.467
16) Acrolein	(1)	2.011	56	845311	482.342
17) 1,1-Dichloroethene	(2)	2.096	96	198498	49.297
17) 1,1-Dichloroethene	(2)	2.096	63	112119	49.431
18) Acetone	(1)	2.115	58	74249	97.041
19) Freon 113	(2)	2.127	101	235064	49.473
21) 2-Propanol	(1)	2.212	45	131079	255.225
22) Methyl Iodide	(2)	2.218	142	349020	49.124
23) Carbon Disulfide	(2)	2.273	76	712075	48.653
25) Allyl Chloride	(2)	2.365	41	443756	49.020
27) Methyl Acetate	(2)	2.377	43	250656	48.462
28) Methylene Chloride	(2)	2.468	84	236960	48.800
29)*t-Butyl alcohol-d10	(1)	2.474	65	203316	250.000
30) t-Butyl alcohol	(1)	2.547	59	204677	267.334
31) Acrylonitrile	(2)	2.663	53	154430	49.406
32) trans-1,2-Dichloroethene	(2)	2.706	96	227964	49.130
33) Methyl Tertiary Butyl Ether	(2)	2.712	73	784987	49.706
34) n-Hexane	(2)	2.950	57	479257	48.221
36) 1,1-Dichloroethane	(2)	3.072	63	483510	49.083
38) di-Isopropyl ether	(2)	3.145	45	1005249	49.236
39) 2-Chloro-1,3-butadiene	(2)	3.157	53	462013	48.814
40) Ethyl t-butyl ether	(2)	3.480	59	898634	50.152
42) cis-1,2-Dichloroethene	(2)	3.608	96	261535	49.116
44) 2-Butanone	(2)	3.614	43	386351	97.215
45) 2,2-Dichloropropane	(2)	3.620	77	369529	49.852
43) 1,2-Dichloroethene (Total)	(2)		96	489499	98.246
47) Propionitrile	(1)	3.663	54	281625	233.254
48) Methacrylonitrile	(2)	3.809	67	365892	120.419

M = Compound was manually integrated.
* = Compound is an internal standard.

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Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i03.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.828	128	119208	48.387
50) Tetrahydrofuran	(1)	3.877	71	97294	95.822
51) Chloroform	(2)	3.907	83	419121	49.311
52)$Dibromofluoromethane	(2)	4.059	113	219722	49.934
52)$Dibromofluoromethane	(2)	4.059	111	225347	49.532
53) 1,1,1-Trichloroethane	(2)	4.096	97	356255	49.899
54) Cyclohexane	(2)	4.151	56	587464	49.067
54) Cyclohexane	(2)	4.151	84	455723	49.207
54) Cyclohexane	(2)	4.151	69	170075	48.790
55) 1,1-Dichloropropene	(2)	4.248	75	369293	48.852
56) Carbon Tetrachloride	(2)	4.254	117	279481	49.507
58) Isobutyl Alcohol	(1)	4.370	41	166531	620.117
57)$1,2-Dichloroethane-d4	(2)	4.383	102	59490	50.446
57)$1,2-Dichloroethane-d4	(2)	4.383	65	289876	49.550
57)$1,2-Dichloroethane-d4	(2)	4.383	104	37069	49.562
60) Benzene	(2)	4.450	78	1091738	49.069
61) 1,2-Dichloroethane	(2)	4.456	62	329380	48.845
61) 1,2-Dichloroethane	(2)	4.462	98	28977	49.008
65) t-Amyl methyl ether	(2)	4.572	73	840656	50.393
66)*Fluorobenzene	(2)	4.724	96	1035873	50.000
67) n-Heptane	(2)	4.736	43	521840	46.752
69) n-Butanol	(1)	5.035	56	294314	1236.772
71) Trichloroethene	(2)	5.096	95	254636	48.768
73) Methylcyclohexane	(2)	5.297	83	553827	47.994
73) Methylcyclohexane	(2)	5.297	98	245106	48.114
74) 1,2-Dichloropropane	(2)	5.315	63	290159	48.816
75) Dibromomethane	(2)	5.431	93	145957	48.628
76) 1,4-Dioxane	(1)	5.449	88	45811M	601.075
77) Methyl Methacrylate	(2)	5.455	69	235769	47.891
79) Bromodichloromethane	(2)	5.602	83	302333	48.439
80) 2-Nitropropane	(2)	5.833	41	107149	95.072
81) 2-Chloroethyl Vinyl Ether	(2)	5.937	63	217231	48.191
82) cis-1,3-Dichloropropene	(2)	6.077	75	426871	48.216
83) 4-Methyl-2-pentanone	(2)	6.254	43	828158	98.194
84)$Toluene-d8	(3)	6.364	98	1025748	50.057
84)$Toluene-d8	(3)	6.364	100	659688	50.059
89) Toluene	(3)	6.437	92	665377	49.182
90) trans-1,3-Dichloropropene	(3)	6.681	75	379994	48.300

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i03.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropene (total)	(3)		100	806865	96.516
92) Ethyl Methacrylate	(3)	6.809	69	427943	48.735
93) 1,1,2-Trichloroethane	(3)	6.876	97	214253	49.049
94) Tetrachloroethene	(3)	7.034	166	242615	50.051
95) 1,3-Dichloropropane	(3)	7.053	76	409903	48.912
97) 2-Hexanone	(3)	7.169	43	580166	97.747
98) Dibromochloromethane	(3)	7.290	129	207094	48.759
100) 1,2-Dibromoethane	(3)	7.400	107	221538	49.016
101)*Chlorobenzene-d5	(3)	7.870	117	723457	50.000
103) Chlorobenzene	(3)	7.894	112	693826	49.297
102) 1-Chlorohexane	(3)	7.900	91	385259	49.239
104) 1,1,1,2-Tetrachloroethane	(3)	7.979	131	213814	48.779
105) Ethylbenzene	(3)	8.016	91	1312195	49.143
107) m+p-Xylene	(3)	8.126	106	989958	99.204
108) o-Xylene	(3)	8.467	106	487949	49.731
110) Styrene	(3)	8.479	104	803324	48.926
109) Xylene (Total)	(3)		106	1477907	148.934
111) Bromoform	(3)	8.619	173	130032	48.706
112) Isopropylbenzene	(3)	8.784	105	1314465	49.245
113) Cyclohexanone	(1)	8.839	55	171710	583.351
115)$4-Bromofluorobenzene	(3)	8.894	95	385669	50.015
115)$4-Bromofluorobenzene	(3)	8.900	174	260851	50.343
116) Bromobenzene	(4)	9.010	156	259526	48.739
117) 1,1,2,2-Tetrachloroethane	(4)	9.016	83	347197	49.841
118) 1,2,3-Trichloropropane	(4)	9.046	110	97267	49.805
119) trans-1,4-Dichloro-2-butene	(4)	9.065	53	278840	121.349
120) n-Propylbenzene	(4)	9.113	91	1591005	49.170
121) 2-Chlorotoluene	(4)	9.168	126	289915	49.301
123) 1,3,5-Trimethylbenzene	(4)	9.254	105	1116976	48.869
122) 4-Chlorotoluene	(4)	9.254	126	294630	49.378
125) tert-Butylbenzene	(4)	9.497	134	237522	48.486
126) Pentachloroethane	(4)	9.503	167	138860	45.546
127) 1,2,4-Trimethylbenzene	(4)	9.534	105	1159424	49.085
128) sec-Butylbenzene	(4)	9.662	105	1463515	48.451
130) 1,3-Dichlorobenzene	(4)	9.735	146	528424	49.261
131) p-Isopropyltoluene	(4)	9.772	119	1208358	48.337
132)*1,4-Dichlorobenzene-d4	(4)	9.784	152	355491	50.000
134) 1,4-Dichlorobenzene	(4)	9.796	146	525189	49.107

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i03.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135)	1,2,3-Trimethylbenzene	(4)	9.839	105	1180173	48.481
136)	Benzyl Chloride	(4)	9.894	91	677261	47.226
137)	1,3-Diethylbenzene	(4)	9.985	119	752763	48.160
138)	1,4-Diethylbenzene	(4)	10.046	119	785744	48.126
139)	1,2-Dichlorobenzene	(4)	10.064	146	497418	49.839
140)	n-Butylbenzene	(4)	10.064	92	638787	48.729
141)	1,2-Diethylbenzene	(4)	10.125	119	619199	47.972
142)	Diethylbenzene (total)	(4)		100	2157706	144.259
143)	1,2-Dibromo-3-chloropropane	(4)	10.595	75	74908	49.146
145)	1,3,5-Trichlorobenzene	(4)	10.747	180	371426	48.730
147)	1,2,4-Trichlorobenzene	(4)	11.156	180	333439	49.353
148)	Hexachlorobutadiene	(4)	11.271	225	134221	47.032
149)	Naphthalene	(4)	11.314	128	1145780	50.100
150)	1,2,3-Trichlorobenzene	(4)	11.473	180	314285	49.987
151)	2-Methylnaphthalene	(4)	12.027	142	692026	50.073

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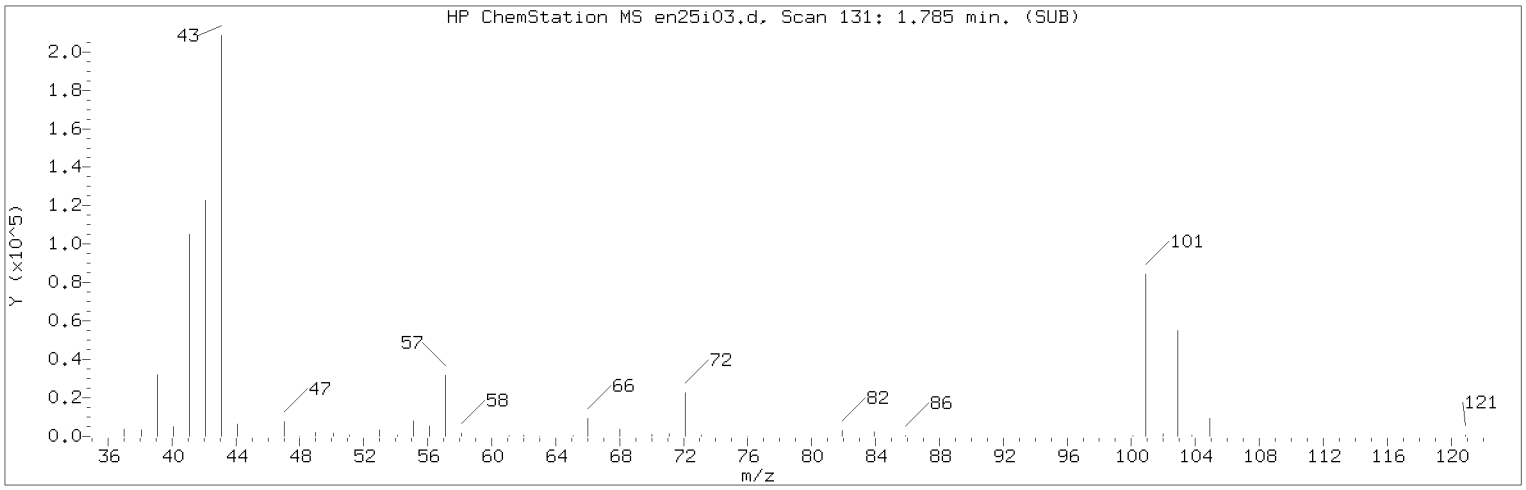
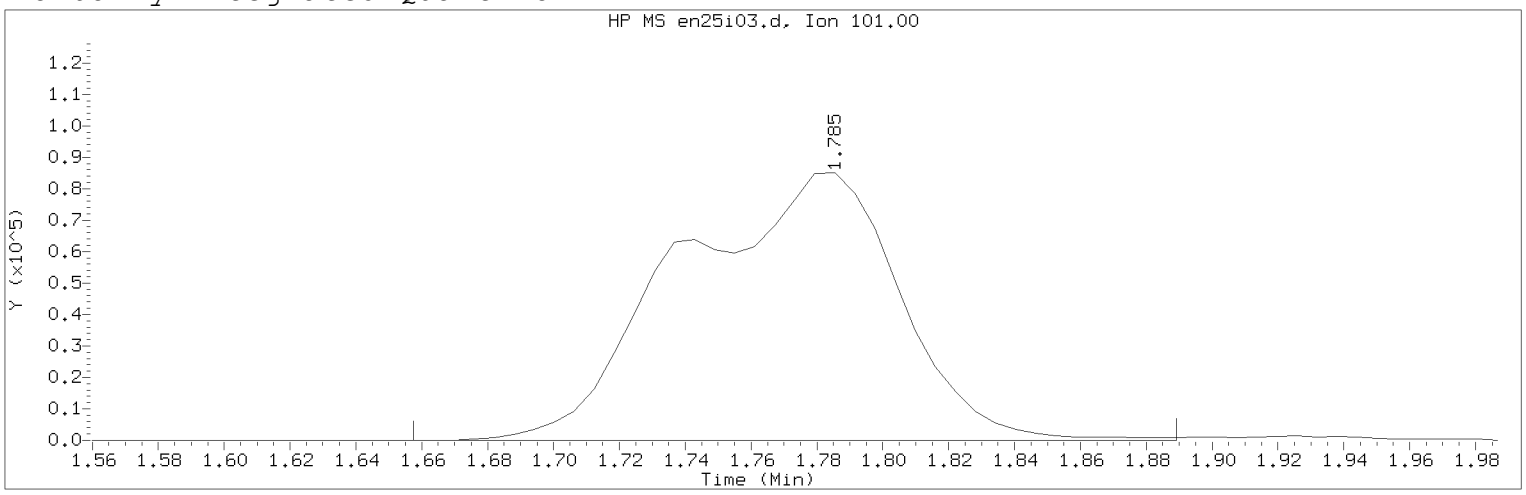
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i03.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

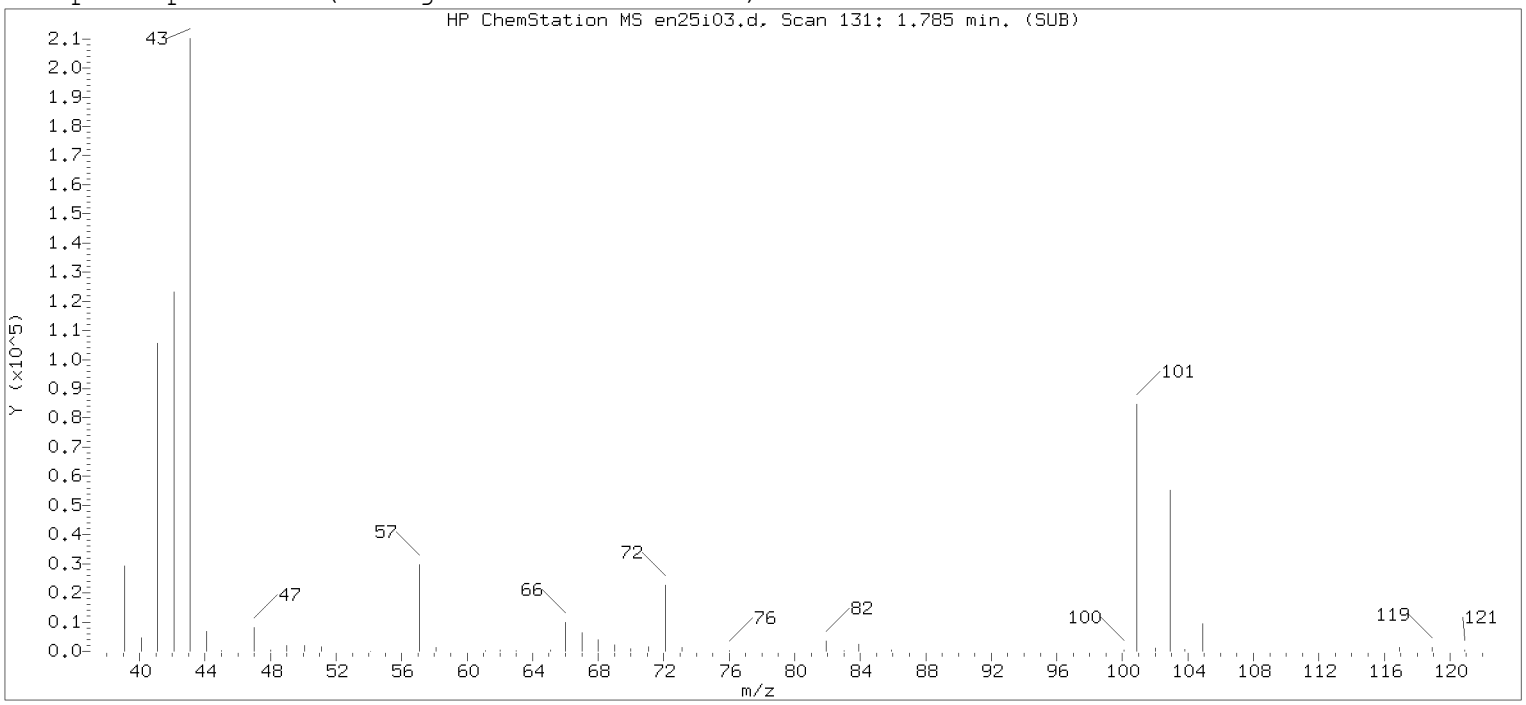
Compound Number : 12
Compound Name : Trichlorofluoromethane
Scan Number : 131
Retention Time (minutes): 1.785
Quant Ion : 101.00
Area (flag) : 395237M
On-Column Amount (ng) : 48.3988
Integration start scan : 109 Integration stop scan: 147
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

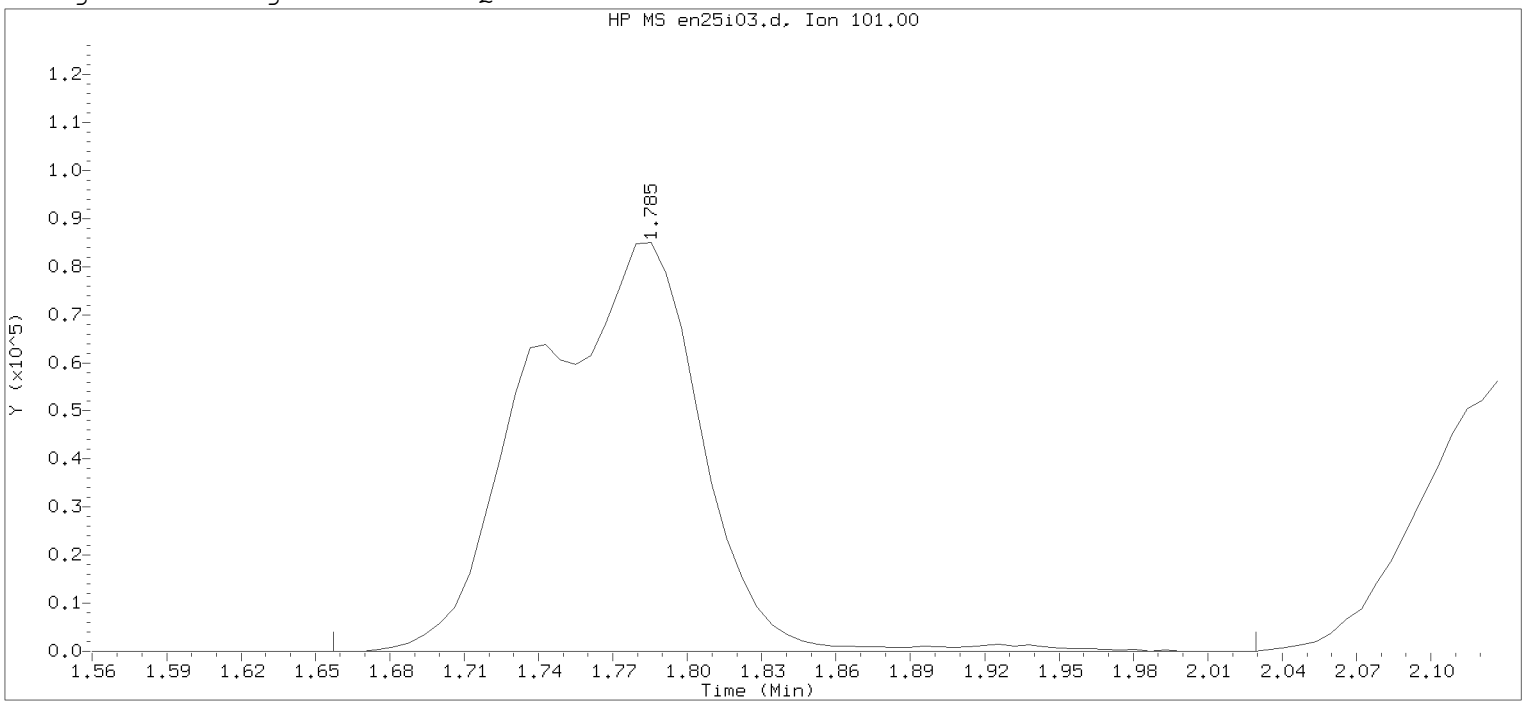
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:25.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i03.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:19 Analyst ID: KAS02648

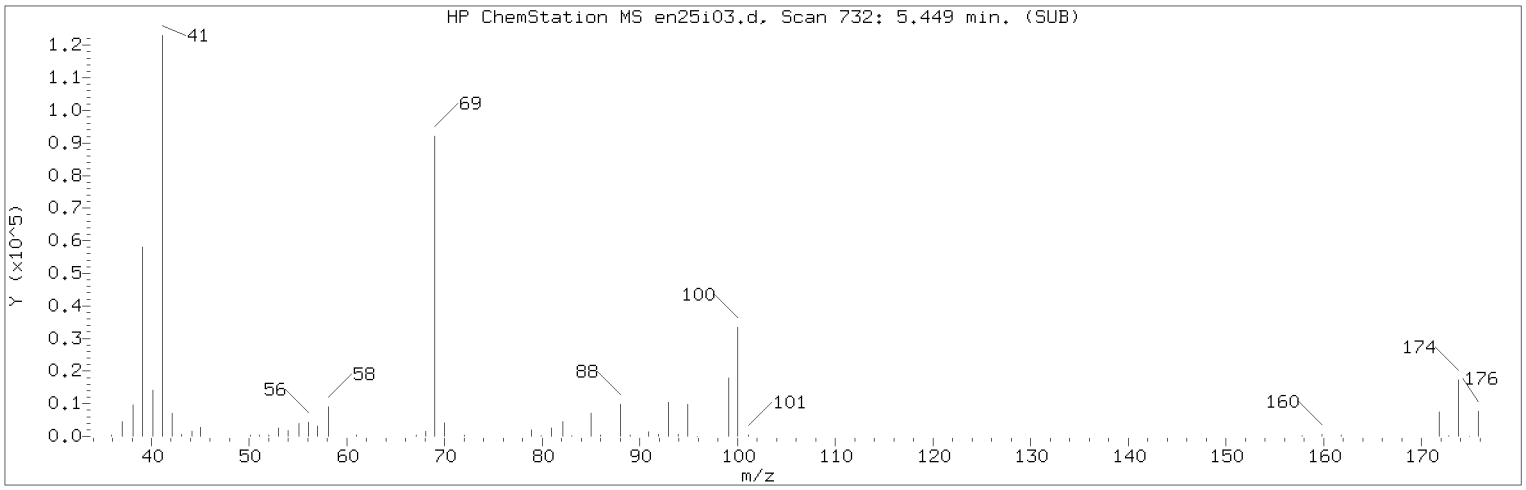
Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 15:36
Date, time and analyst ID of latest file update: 25-Nov-2019 15:36 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

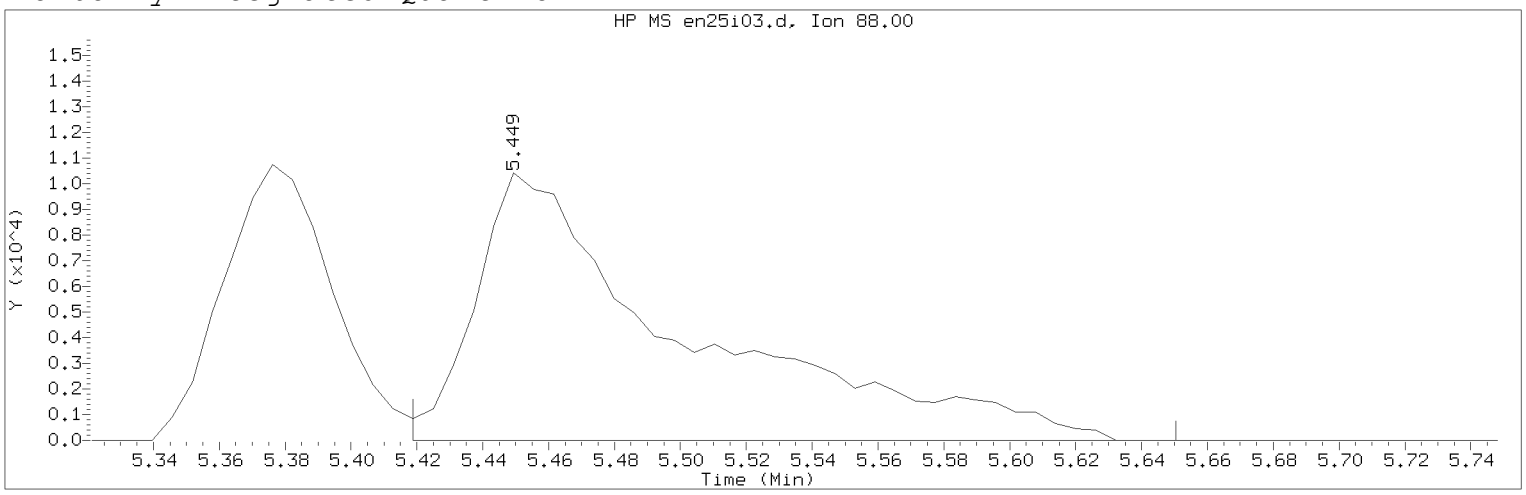
Compound Number : 12
Compound Name : Trichlorofluoromethane
Scan Number : 131
Retention Time (minutes): 1.785
Quant Ion : 101.00
Area : 399873
On-column Amount (ng) : 51.1175
Integration start scan : 109 Integration stop scan: 170
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jmaa0694

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i03.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

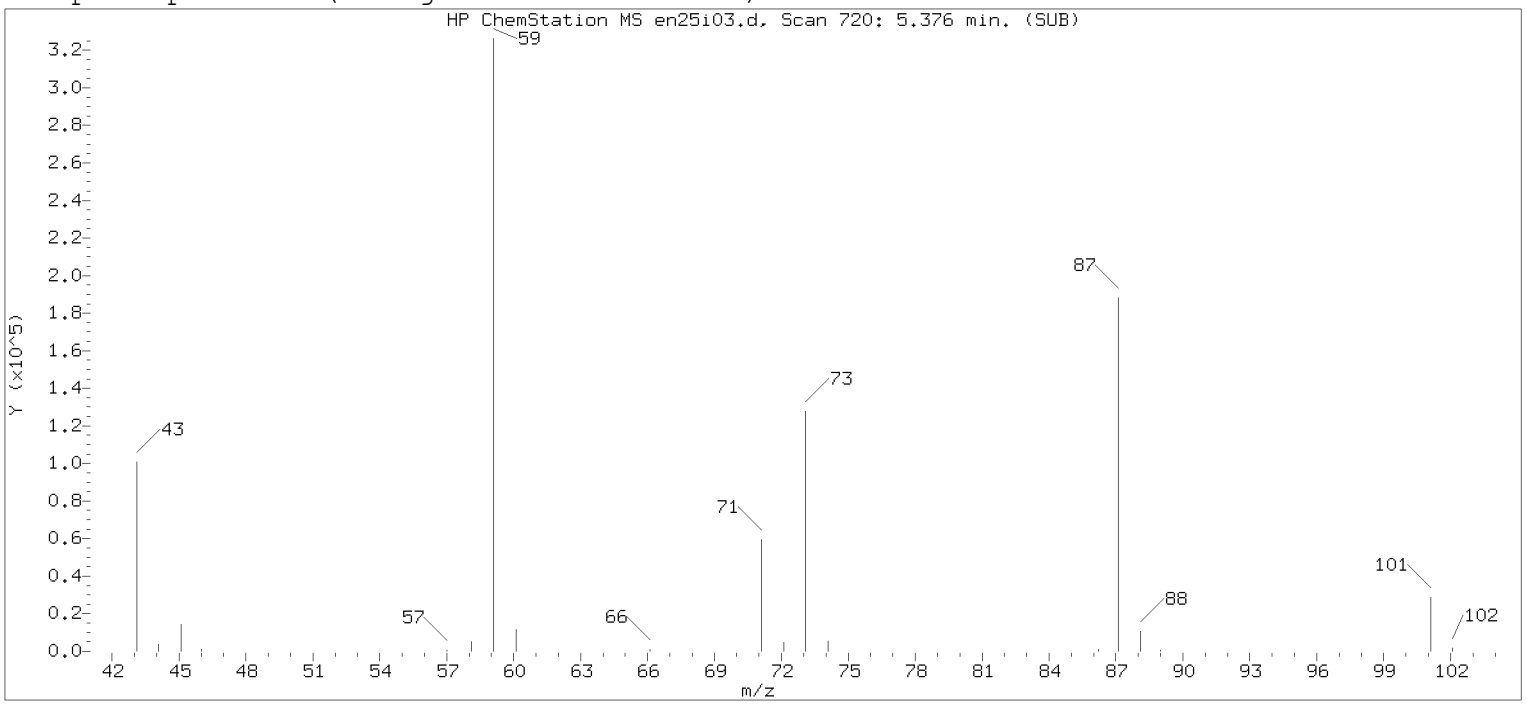
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 732
Retention Time (minutes): 5.449
Quant Ion : 88.00
Area (flag) : 45811M
On-Column Amount (ng) : 601.0747
Integration start scan : 726 Integration stop scan: 764
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

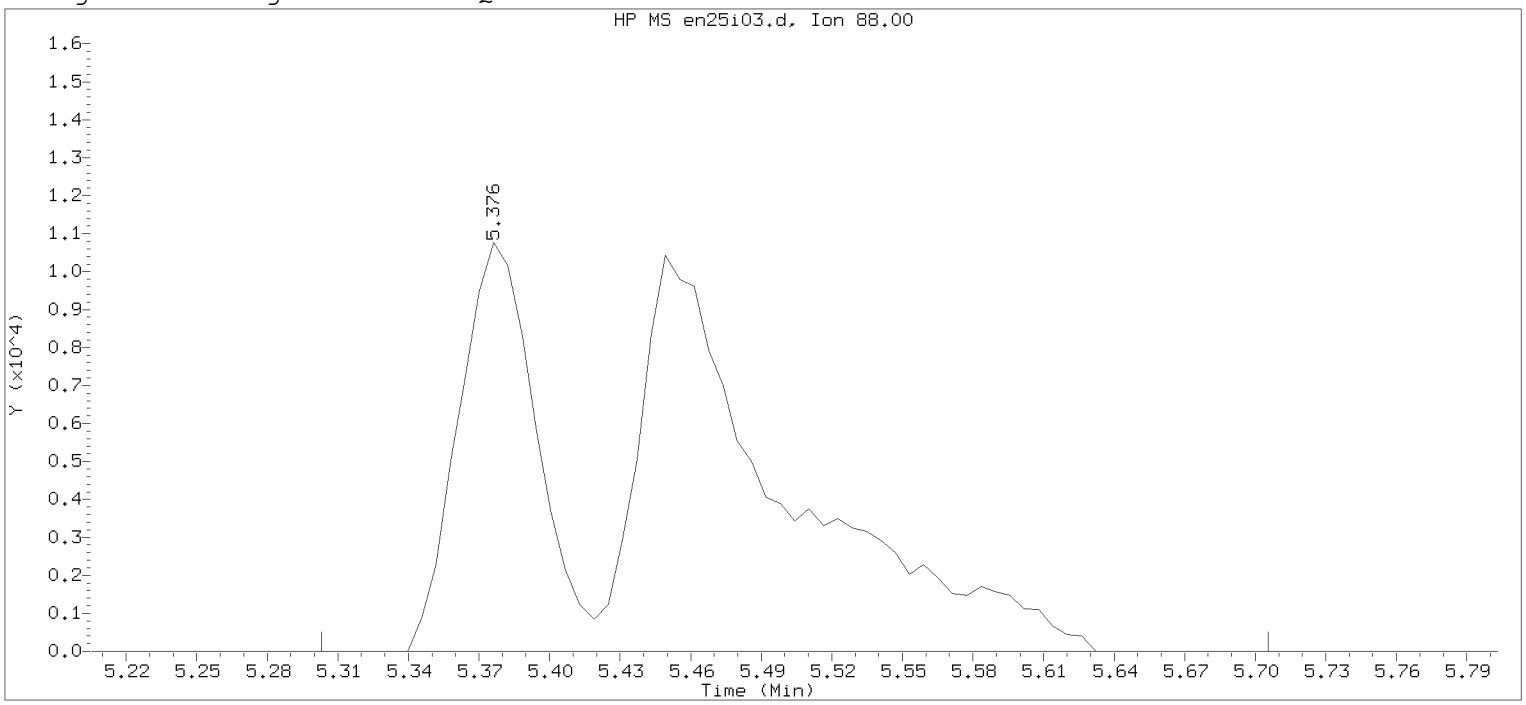
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:25.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



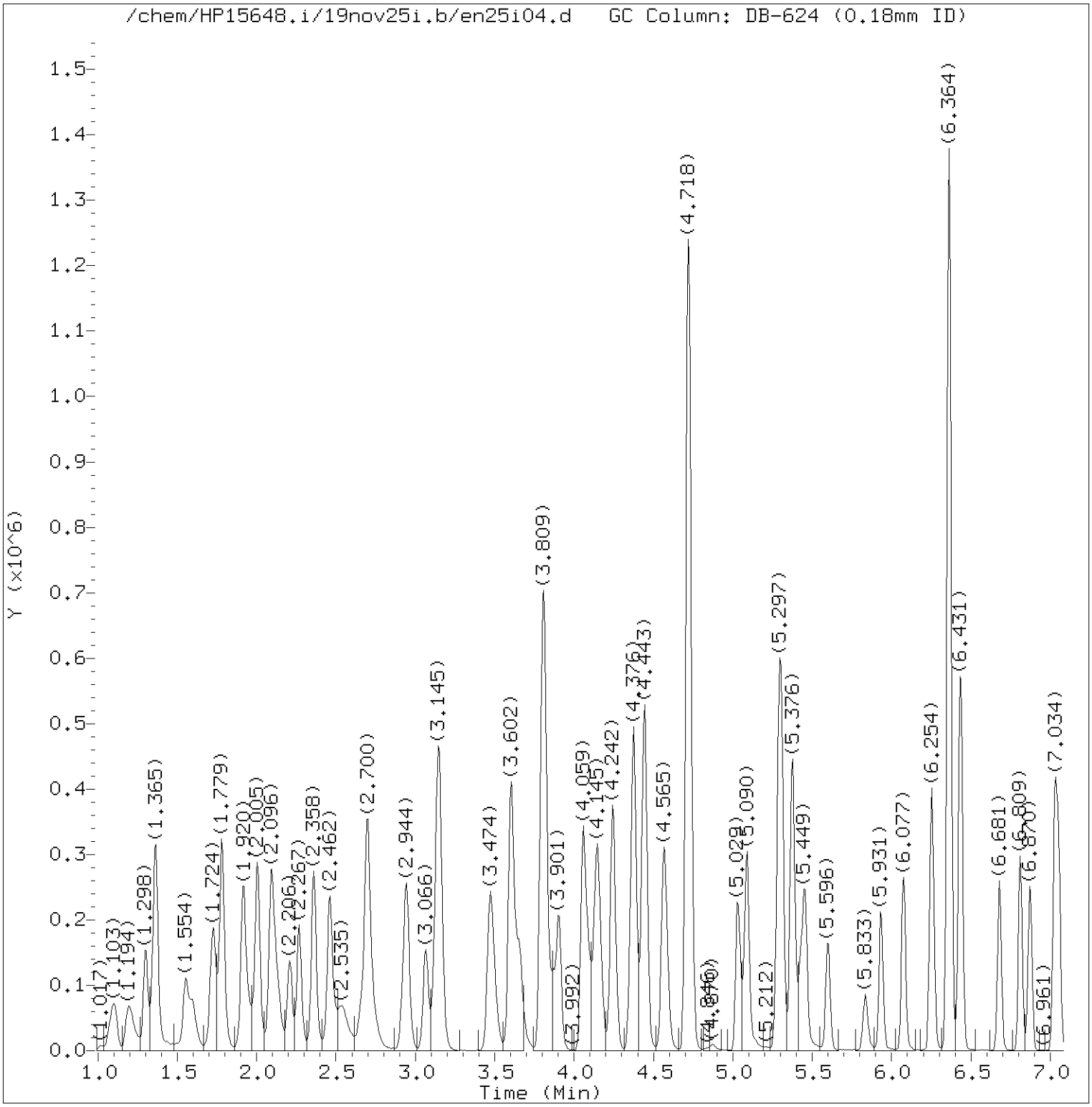
Data File: /chem/HP15648.i/19nov25i.b/en25i03.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:19 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 15:36
Date, time and analyst ID of latest file update: 25-Nov-2019 15:36 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 720
Retention Time (minutes): 5.376
Quant Ion : 88.00
Area : 70272
On-column Amount (ng) : 776.1352
Integration start scan : 707 Integration stop scan: 773
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 10:24.
Target 3.5 esignature user: JMLong



Total Ion Chromatogram (TIC)

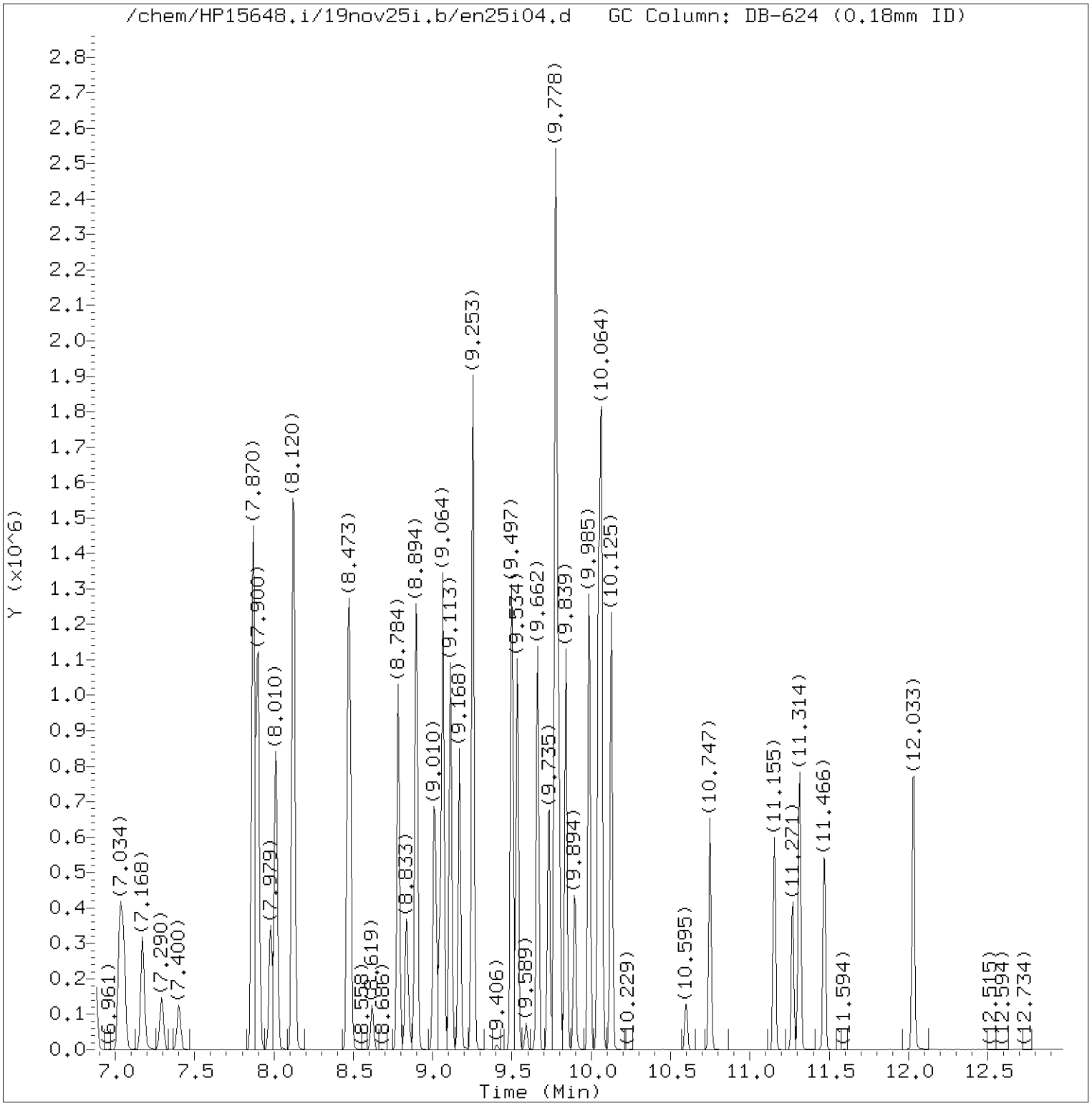
Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i04.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i04.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i04.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.194	85	142295	19.008
4) Chloromethane	(2)	1.298	50	177028	20.077
5) 1,3-Butadiene	(2)	1.359	39	130272	21.504
6) Vinyl Chloride	(2)	1.365	62	159323	19.768
8) Bromomethane	(2)	1.554	94	88225	20.842
9) Chloroethane	(2)	1.596	64	84301	20.054
10) Dichlorofluoromethane	(2)	1.724	67	202506	20.064
11) n-Pentane	(2)	1.779	43	198196	20.402
12) Trichlorofluoromethane	(2)	1.779	101	151895M	19.367
14) Ethyl ether	(2)	1.913	59	104399	20.237
15) Freon 123a	(2)	1.926	67	126392	20.593
16) Acrolein	(1)	2.005	56	325513	196.739
17) 1,1-Dichloroethene	(2)	2.090	96	81756	20.683
17) 1,1-Dichloroethene	(2)	2.090	63	46164	20.720
18) Acetone	(1)	2.115	58	28604	39.536
19) Freon 113	(2)	2.121	101	94416	20.354
21) 2-Propanol	(1)	2.206	45	95441	196.814
22) Methyl Iodide	(2)	2.206	142	139898	20.216
23) Carbon Disulfide	(2)	2.267	76	290747	20.350
25) Allyl Chloride	(2)	2.358	41	182120	20.542
27) Methyl Acetate	(2)	2.371	43	98202	19.671
28) Methylene Chloride	(2)	2.462	84	95662	20.224
29)*t-Butyl alcohol-d10	(1)	2.474	65	192993	250.000
30) t-Butyl alcohol	(1)	2.541	59	148365M	203.095
31) Acrylonitrile	(2)	2.663	53	58608M	19.486
33) Methyl Tertiary Butyl Ether	(2)	2.694	73	315441	20.433
32) trans-1,2-Dichloroethene	(2)	2.700	96	91855	20.297
34) n-Hexane	(2)	2.944	57	190409	19.805
36) 1,1-Dichloroethane	(2)	3.066	63	195279	20.318
38) di-Isopropyl ether	(2)	3.139	45	398648	20.089
39) 2-Chloro-1,3-butadiene	(2)	3.151	53	182754	19.922
40) Ethyl t-butyl ether	(2)	3.474	59	360043	20.523
44) 2-Butanone	(2)	3.602	43	147142	38.596
42) cis-1,2-Dichloroethene	(2)	3.602	96	104771	20.204
45) 2,2-Dichloropropane	(2)	3.614	77	147033	20.327
43) 1,2-Dichloroethene (Total)	(2)		96	196626	40.501
47) Propionitrile	(1)	3.657	54	223237	196.063
48) Methacrylonitrile	(2)	3.803	67	295523	100.161

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i04.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.822	128	48254	20.136
50) Tetrahydrofuran	(1)	3.870	71	37023	38.798
51) Chloroform	(2)	3.907	83	166839	20.169
52)$Dibromofluoromethane	(2)	4.053	113	214849	50.232
52)$Dibromofluoromethane	(2)	4.053	111	224006	50.548
53) 1,1,1-Trichloroethane	(2)	4.090	97	140681	20.227
54) Cyclohexane	(2)	4.145	56	235504	20.200
54) Cyclohexane	(2)	4.145	84	181555	20.149
54) Cyclohexane	(2)	4.151	69	67487	19.961
55) 1,1-Dichloropropene	(2)	4.242	75	149121	20.243
56) Carbon Tetrachloride	(2)	4.248	117	111075	20.205
58) Isobutyl Alcohol	(1)	4.364	41	120927	480.540
57)$1,2-Dichloroethane-d4	(2)	4.376	102	56765	49.697
57)$1,2-Dichloroethane-d4	(2)	4.376	65	284320	50.058
57)$1,2-Dichloroethane-d4	(2)	4.382	104	36101	49.800
60) Benzene	(2)	4.443	78	440816	20.309
61) 1,2-Dichloroethane	(2)	4.449	62	132351	20.167
61) 1,2-Dichloroethane	(2)	4.456	98	11401	19.901
65) t-Amyl methyl ether	(2)	4.565	73	333867	20.463
66)*Fluorobenzene	(2)	4.718	96	1005332M	50.000
67) n-Heptane	(2)	4.730	43	208933	19.461
69) n-Butanol	(1)	5.029	56	197826	903.844
71) Trichloroethene	(2)	5.090	95	104152	20.412
73) Methylcyclohexane	(2)	5.297	83	223904	19.995
73) Methylcyclohexane	(2)	5.297	98	99860	20.148
74) 1,2-Dichloropropane	(2)	5.309	63	116235	20.112
75) Dibromomethane	(2)	5.431	93	58722	20.119
77) Methyl Methacrylate	(2)	5.455	69	92035	19.442
76) 1,4-Dioxane	(1)	5.455	88	33677M	473.673
79) Bromodichloromethane	(2)	5.602	83	118418	19.660
80) 2-Nitropropane	(2)	5.833	41	40263	37.559
81) 2-Chloroethyl Vinyl Ether	(2)	5.931	63	97636	21.690
82) cis-1,3-Dichloropropene	(2)	6.077	75	166463	19.526
83) 4-Methyl-2-pentanone	(2)	6.254	43	309148	38.303
84)$Toluene-d8	(3)	6.364	98	997597	50.207
84)$Toluene-d8	(3)	6.364	100	635211	49.834
89) Toluene	(3)	6.431	92	268123	20.348
90) trans-1,3-Dichloropropene	(3)	6.681	75	147983	19.566

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$ = Compound is a surrogate standard.

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on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i04.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropene (total)	(3)		100	314446	39.092
92) Ethyl Methacrylate	(3)	6.809	69	161961	19.277
93) 1,1,2-Trichloroethane	(3)	6.870	97	83798	19.858
94) Tetrachloroethene	(3)	7.028	166	109472	22.393
95) 1,3-Dichloropropane	(3)	7.053	76	159972	19.784
97) 2-Hexanone	(3)	7.168	43	223020	39.096
98) Dibromochloromethane	(3)	7.290	129	76789	18.986
100) 1,2-Dibromoethane	(3)	7.400	107	86186	19.769
101)*Chlorobenzene-d5	(3)	7.870	117	700535	50.000
103) Chlorobenzene	(3)	7.894	112	276145	20.196
102) 1-Chlorohexane	(3)	7.900	91	153854	20.229
104) 1,1,1,2-Tetrachloroethane	(3)	7.979	131	82260	19.532
105) Ethylbenzene	(3)	8.010	91	523299	20.179
107) m+p-Xylene	(3)	8.120	106	392788	40.485
108) o-Xylene	(3)	8.467	106	190129	20.009
110) Styrene	(3)	8.479	104	311160	19.677
109) Xylene (Total)	(3)		106	582917	60.494
111) Bromoform	(3)	8.619	173	47227	18.673
112) Isopropylbenzene	(3)	8.784	105	519841	20.084
113) Cyclohexanone	(1)	8.833	55	131133	476.638
115)$4-Bromofluorobenzene	(3)	8.894	95	375937	50.261
115)$4-Bromofluorobenzene	(3)	8.900	174	250732	49.980
116) Bromobenzene	(4)	9.010	156	101811	19.751
117) 1,1,2,2-Tetrachloroethane	(4)	9.022	83	131520	19.564
118) 1,2,3-Trichloropropane	(4)	9.046	110	36919	19.582
119) trans-1,4-Dichloro-2-butene	(4)	9.064	53	212666	96.363
120) n-Propylbenzene	(4)	9.113	91	631594	20.060
121) 2-Chlorotoluene	(4)	9.168	126	112923	19.815
123) 1,3,5-Trimethylbenzene	(4)	9.253	105	434493	19.665
122) 4-Chlorotoluene	(4)	9.253	126	115135	19.887
125) tert-Butylbenzene	(4)	9.497	134	94627	19.903
126) Pentachloroethane	(4)	9.503	167	45575	16.321
127) 1,2,4-Trimethylbenzene	(4)	9.534	105	450780	19.723
128) sec-Butylbenzene	(4)	9.662	105	576929	19.735
130) 1,3-Dichlorobenzene	(4)	9.735	146	203816	19.658
131) p-Isopropyltoluene	(4)	9.772	119	472669	19.585
132)*1,4-Dichlorobenzene-d4	(4)	9.778	152	345565	50.000
134) 1,4-Dichlorobenzene	(4)	9.796	146	205444	19.821

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$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i04.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135)	1,2,3-Trimethylbenzene	(4)	9.839	105	473570	20.010
136)	Benzyl Chloride	(4)	9.894	91	241702	17.935
137)	1,3-Diethylbenzene	(4)	9.985	119	304748	20.043
138)	1,4-Diethylbenzene	(4)	10.046	119	319779	20.111
139)	1,2-Dichlorobenzene	(4)	10.064	146	191366	19.793
140)	n-Butylbenzene	(4)	10.064	92	249970	19.711
141)	1,2-Diethylbenzene	(4)	10.125	119	254075	20.187
142)	Diethylbenzene (total)	(4)		100	878602	60.341
143)	1,2-Dibromo-3-chloropropane	(4)	10.595	75	27214	18.750
145)	1,3,5-Trichlorobenzene	(4)	10.747	180	143426	19.514
147)	1,2,4-Trichlorobenzene	(4)	11.155	180	128403	19.661
148)	Hexachlorobutadiene	(4)	11.271	225	52553	19.197
149)	Naphthalene	(4)	11.314	128	439318	19.820
150)	1,2,3-Trichlorobenzene	(4)	11.473	180	121717	19.936
151)	2-Methylnaphthalene	(4)	12.033	142	284218	20.855

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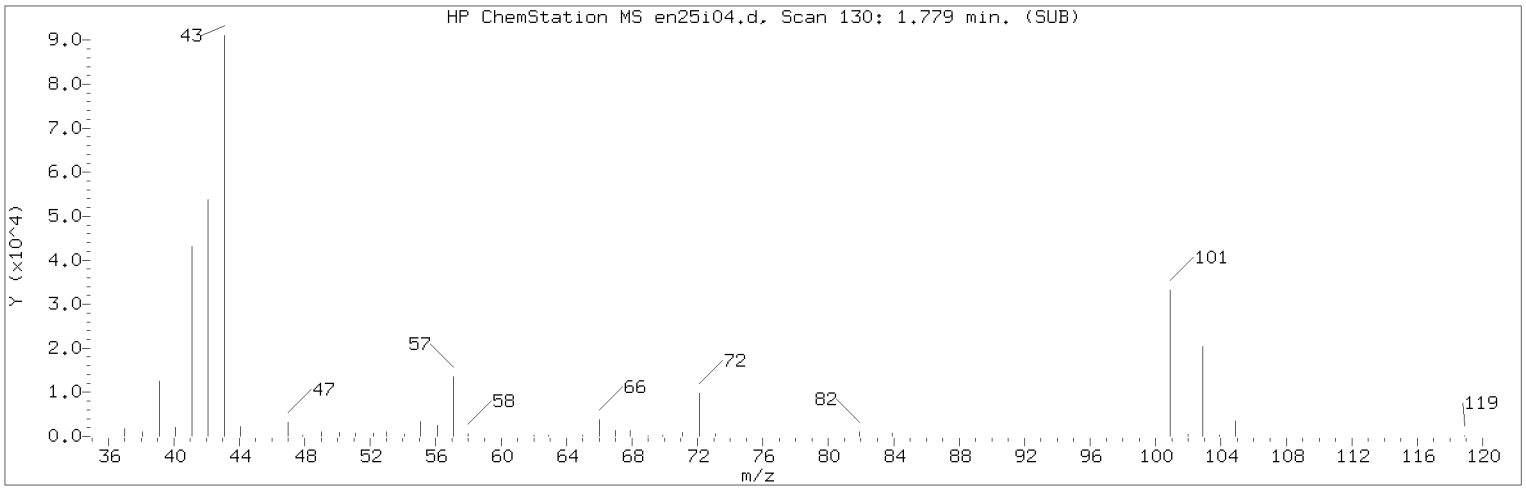
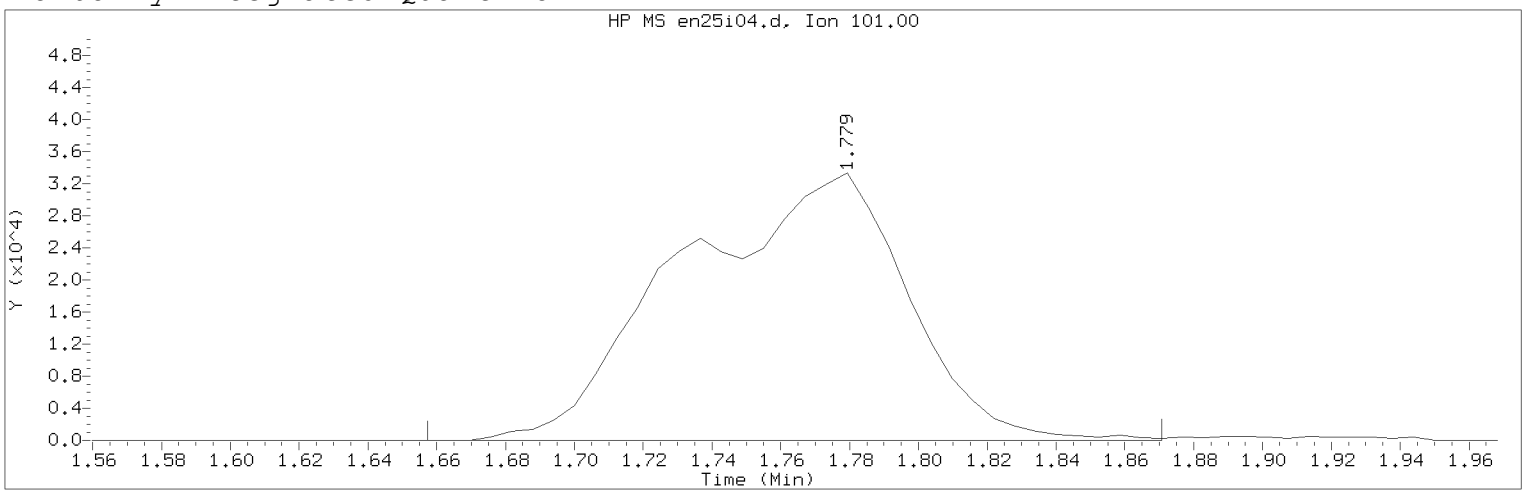
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i04.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

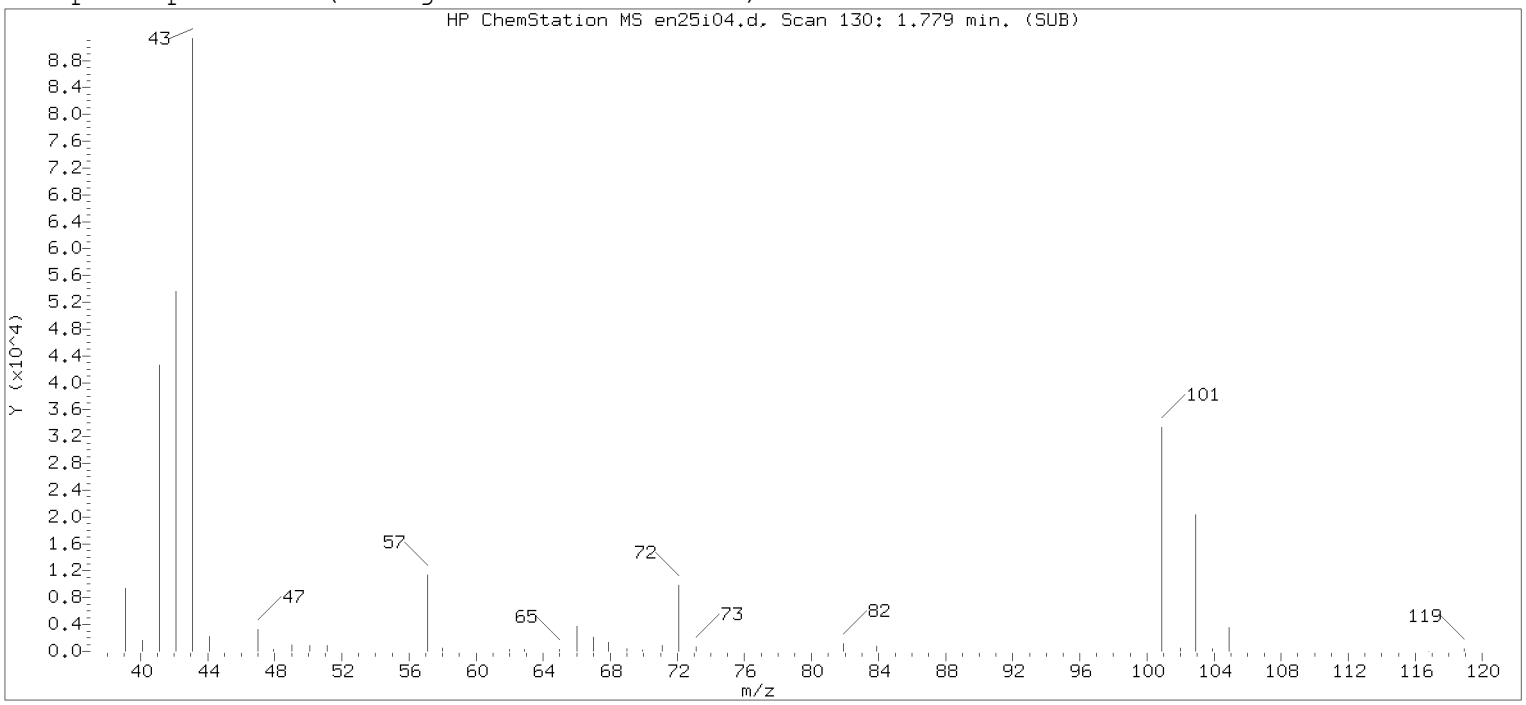
Compound Number : 12
Compound Name : Trichlorofluoromethane
Scan Number : 130
Retention Time (minutes): 1.779
Quant Ion : 101.00
Area (flag) : 151895M
On-Column Amount (ng) : 19.3674
Integration start scan : 109 Integration stop scan: 144
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

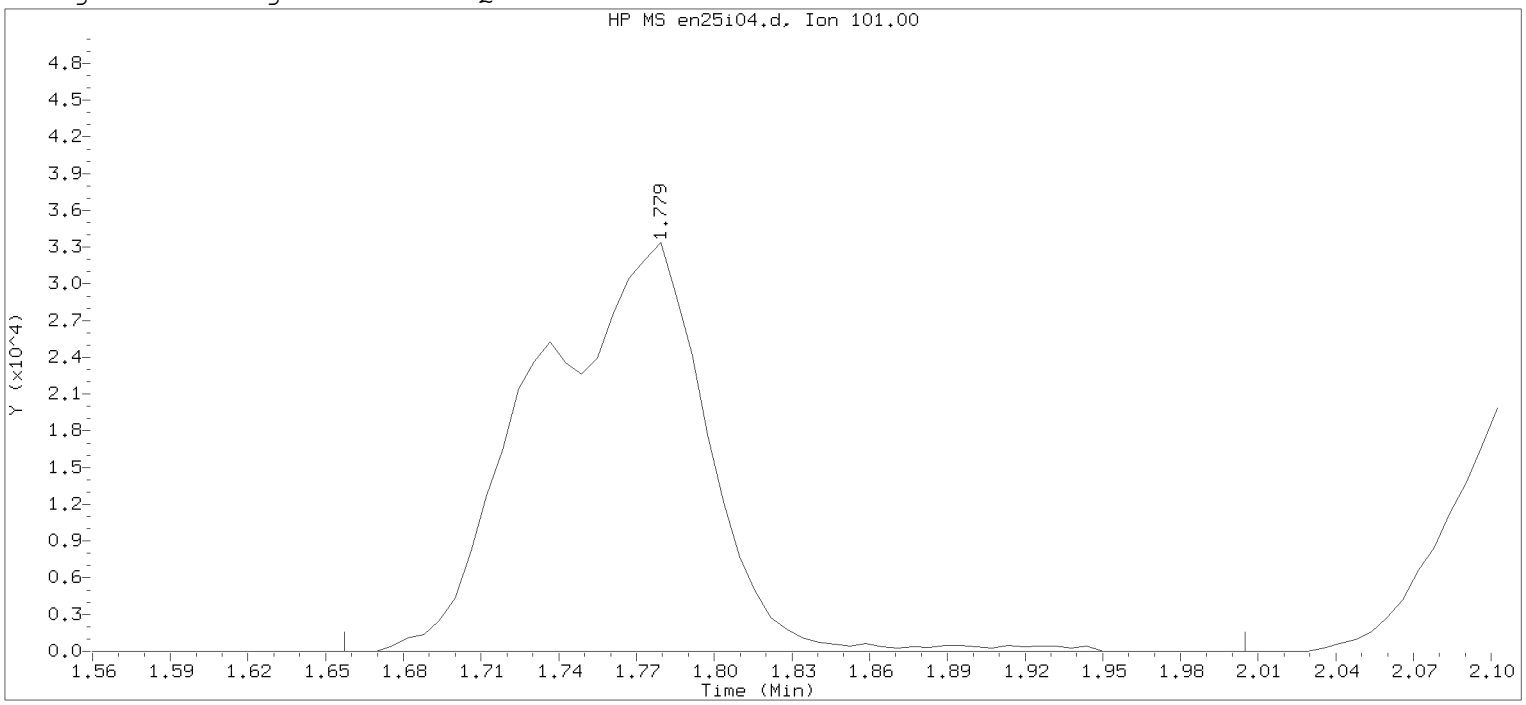
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:25.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i04.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:39 Analyst ID: KAS02648

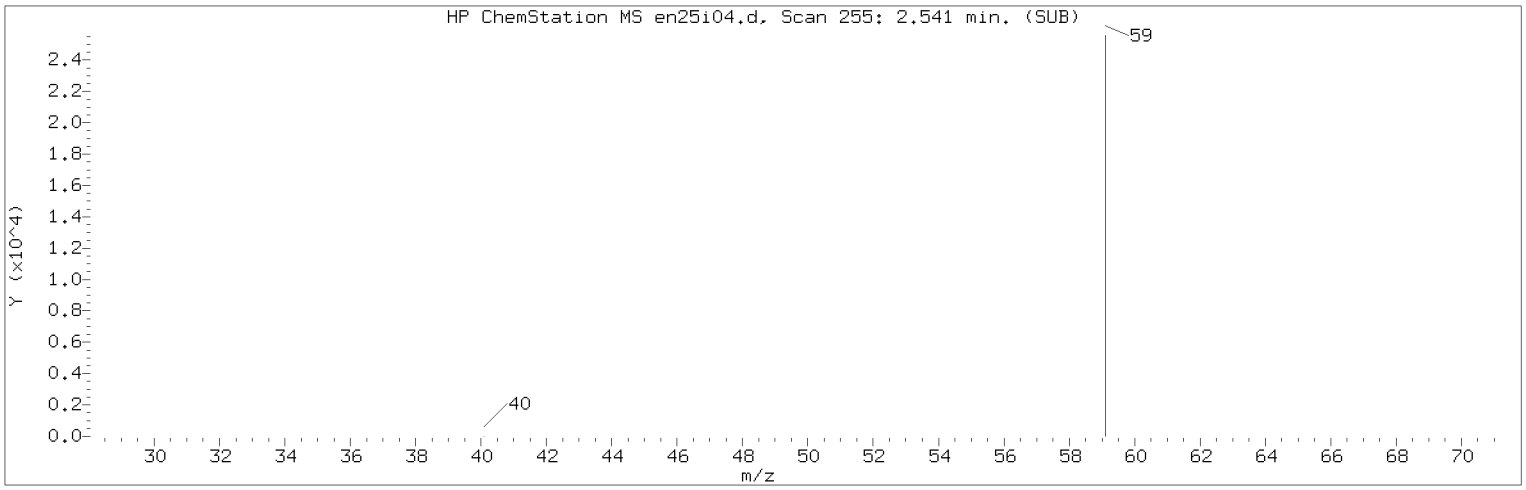
Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 15:56
Date, time and analyst ID of latest file update: 25-Nov-2019 15:56 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

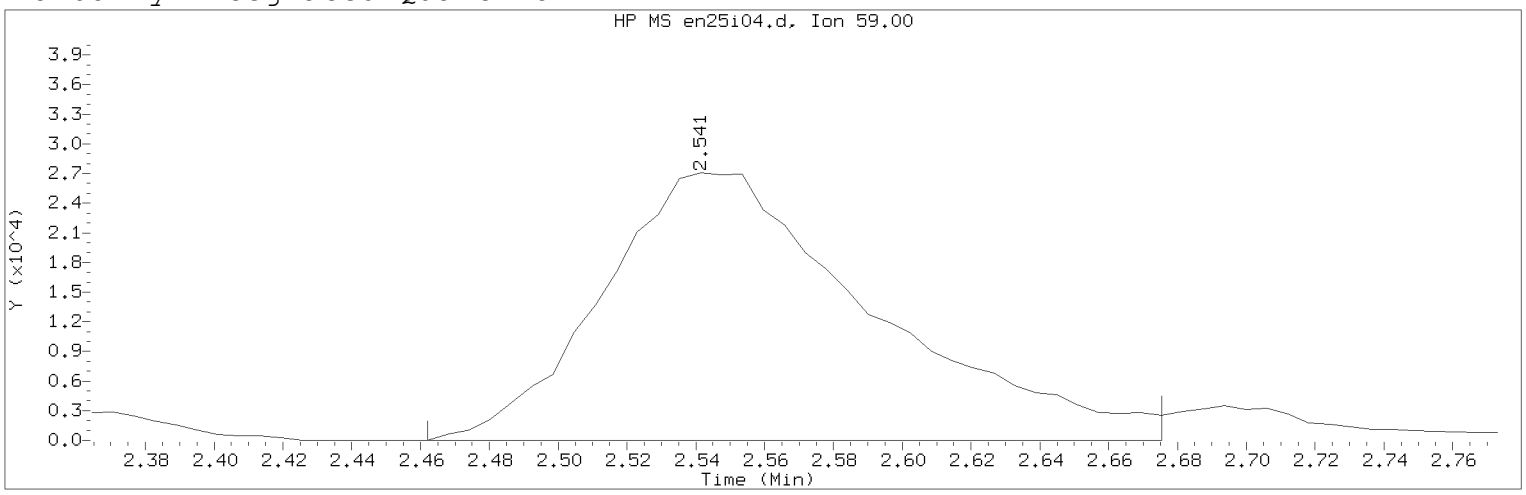
Compound Number : 12
Compound Name : Trichlorofluoromethane
Scan Number : 130
Retention Time (minutes): 1.779
Quant Ion : 101.00
Area : 153585
On-column Amount (ng) : 20.2636
Integration start scan : 109 Integration stop scan: 166
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jmaa0694

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i04.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

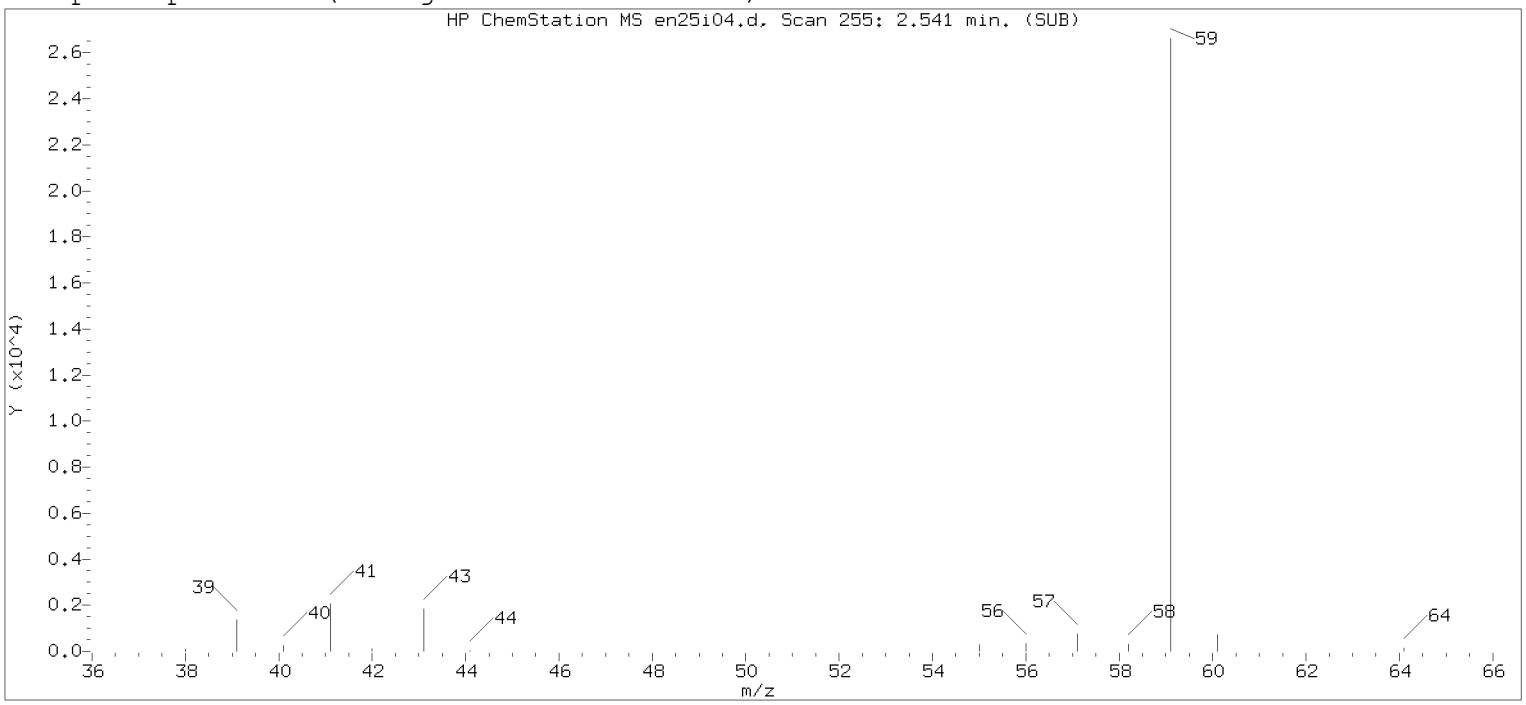
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 255
Retention Time (minutes): 2.541
Quant Ion : 59.00
Area (flag) : 148365M
On-Column Amount (ng) : 203.0953
Integration start scan : 241 Integration stop scan: 276
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

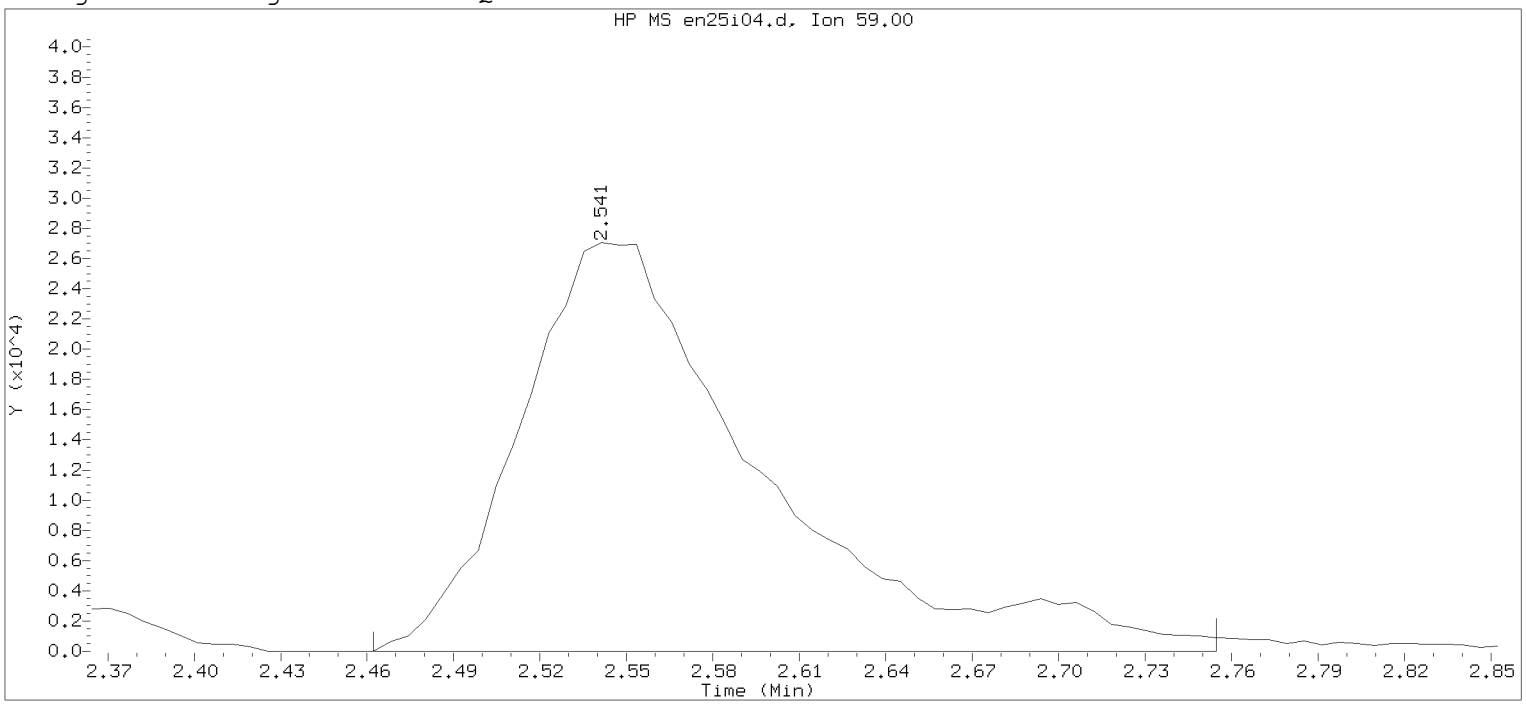
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:25.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i04.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:39 Analyst ID: KAS02648

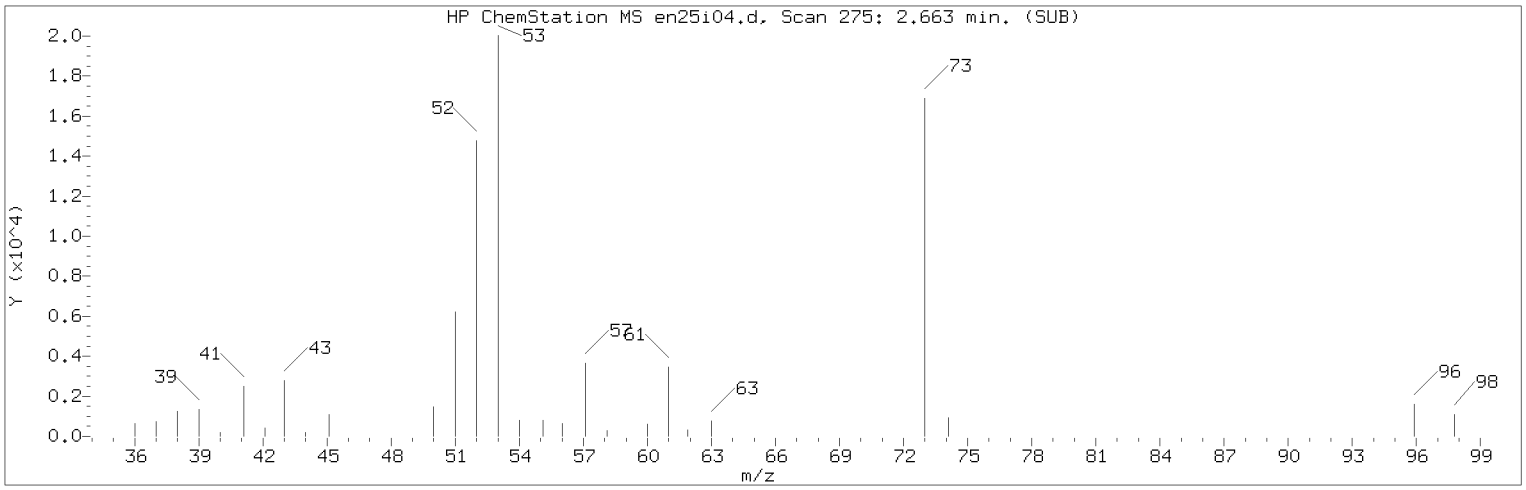
Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 15:56
Date, time and analyst ID of latest file update: 25-Nov-2019 15:56 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

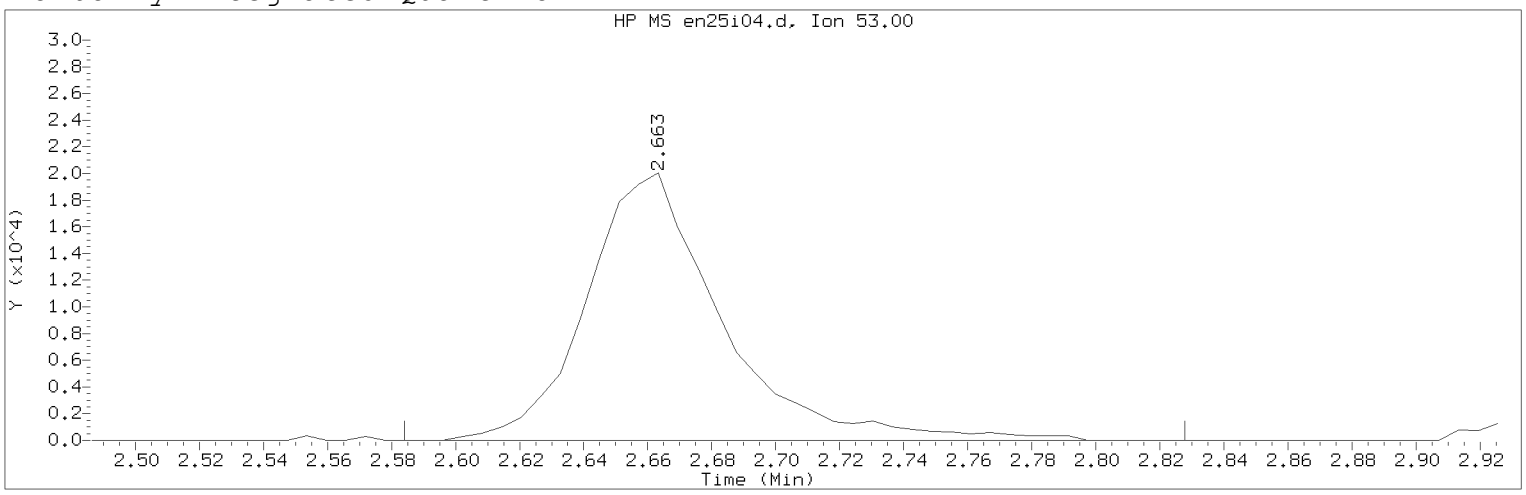
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 255
Retention Time (minutes): 2.541
Quant Ion : 59.00
Area : 158245
On-column Amount (ng) : 214.0792
Integration start scan : 241 Integration stop scan: 289
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 10:24.
Target 3.5 esignature user: JMLong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i04.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

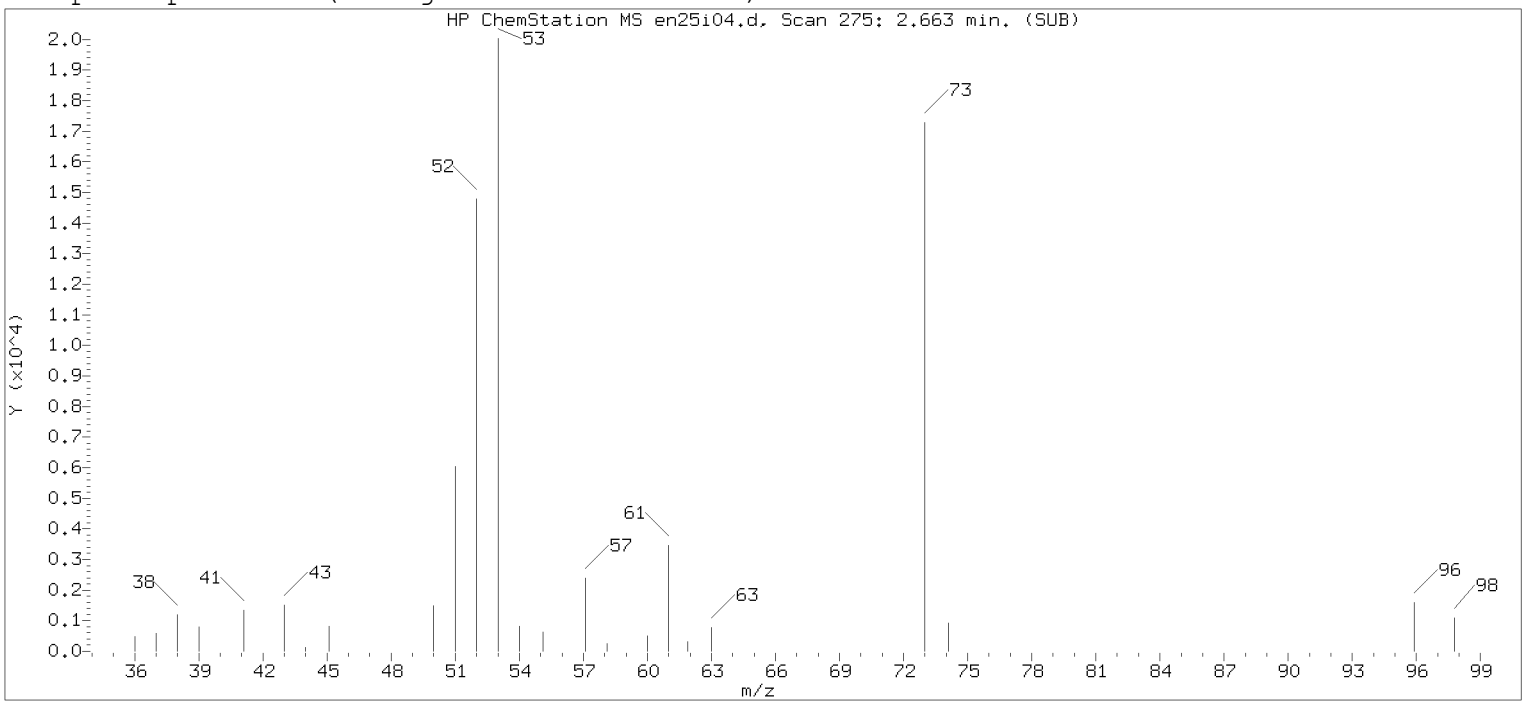
Compound Number : 31
Compound Name : Acrylonitrile
Scan Number : 275
Retention Time (minutes): 2.663
Quant Ion : 53.00
Area (flag) : 58608M
On-Column Amount (ng) : 19.4856
Integration start scan : 261 Integration stop scan: 301
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

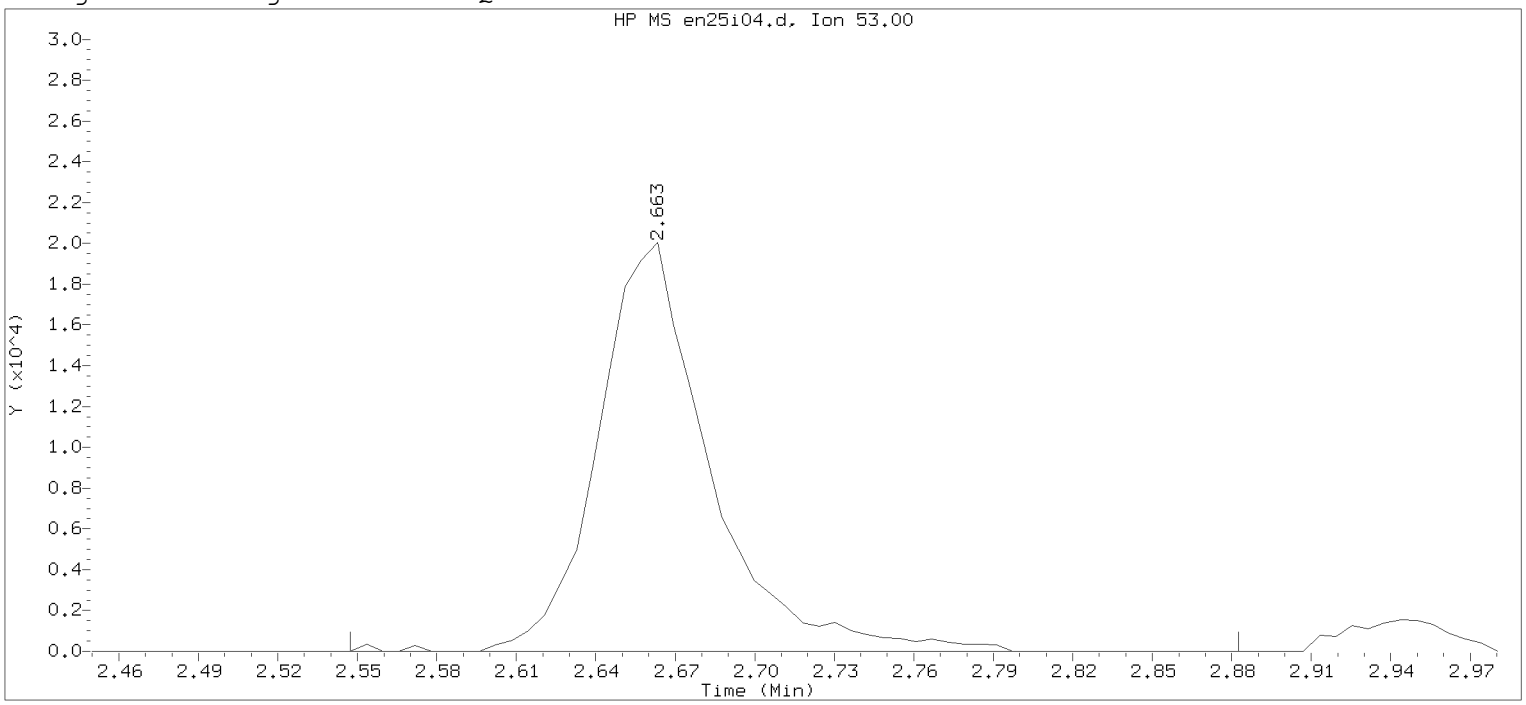
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:25.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i04.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:39 Analyst ID: KAS02648

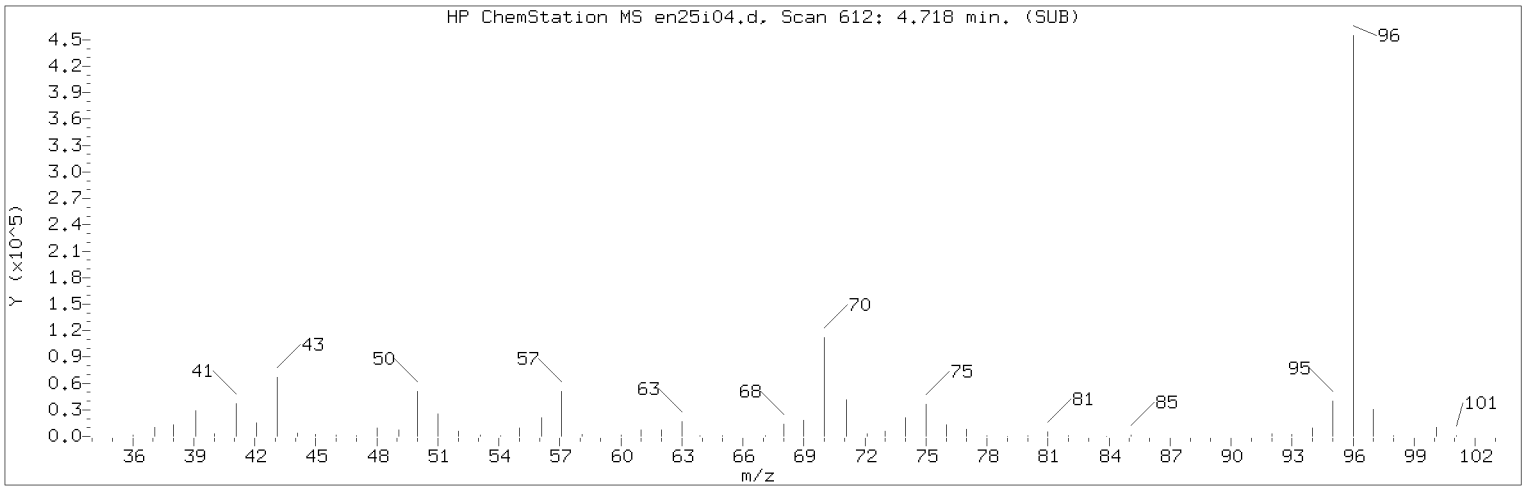
Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 15:56
Date, time and analyst ID of latest file update: 25-Nov-2019 15:56 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

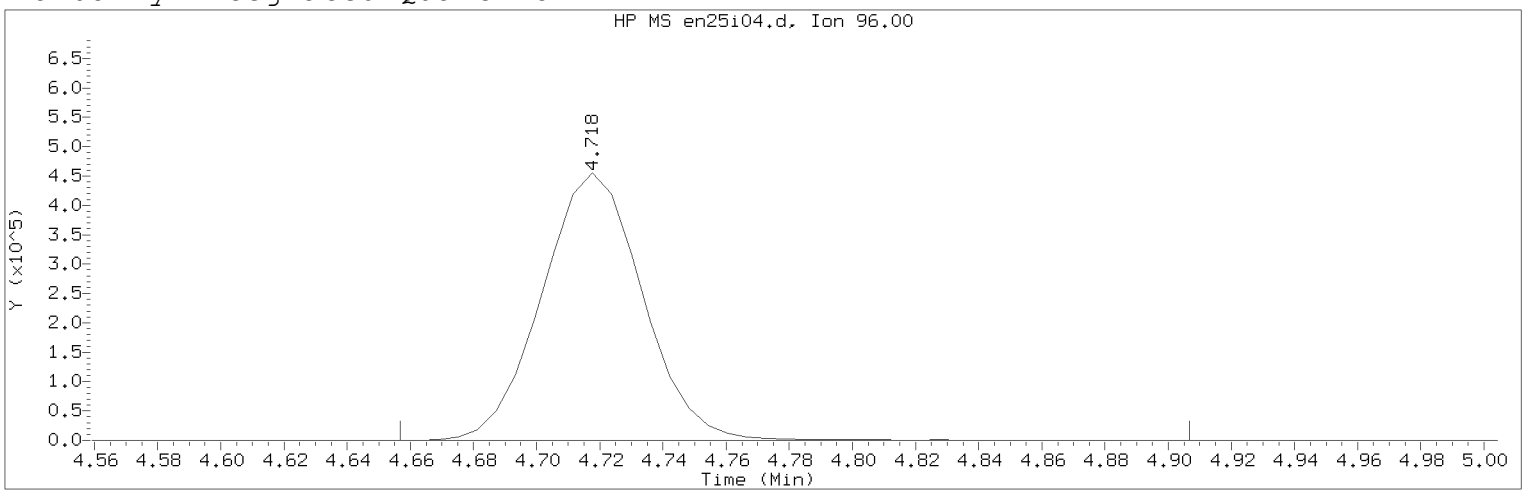
Compound Number : 31
Compound Name : Acrylonitrile
Scan Number : 275
Retention Time (minutes): 2.663
Quant Ion : 53.00
Area : 58835
On-column Amount (ng) : 21.3761
Integration start scan : 255 Integration stop scan: 310
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 10:24.
Target 3.5 esignature user: JMLong1678

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i04.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

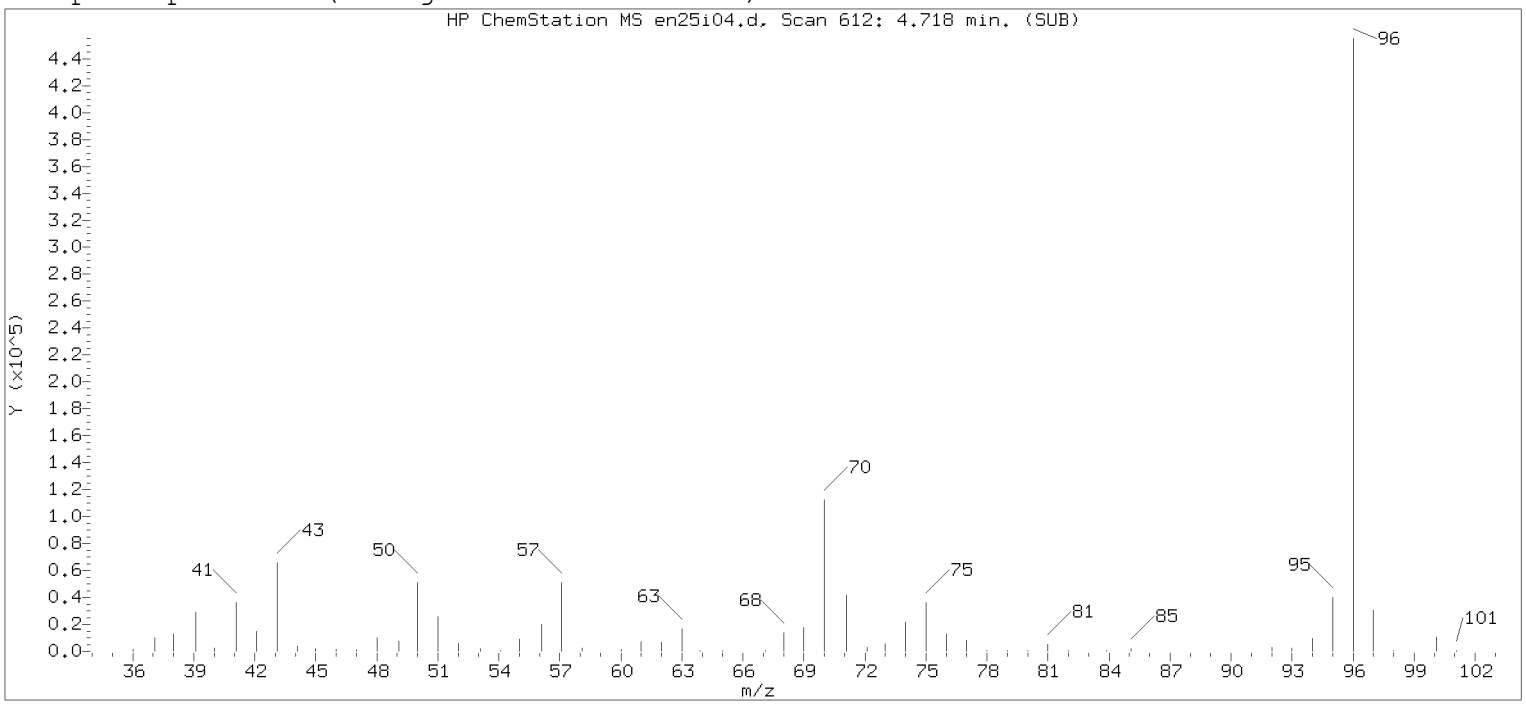
Compound Number : 66
Compound Name : Fluorobenzene
Scan Number : 612
Retention Time (minutes): 4.718
Quant Ion : 96.00
Area (flag) : 1005332M
On-Column Amount (ng) : 50.0000
Integration start scan : 601 Integration stop scan: 642
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

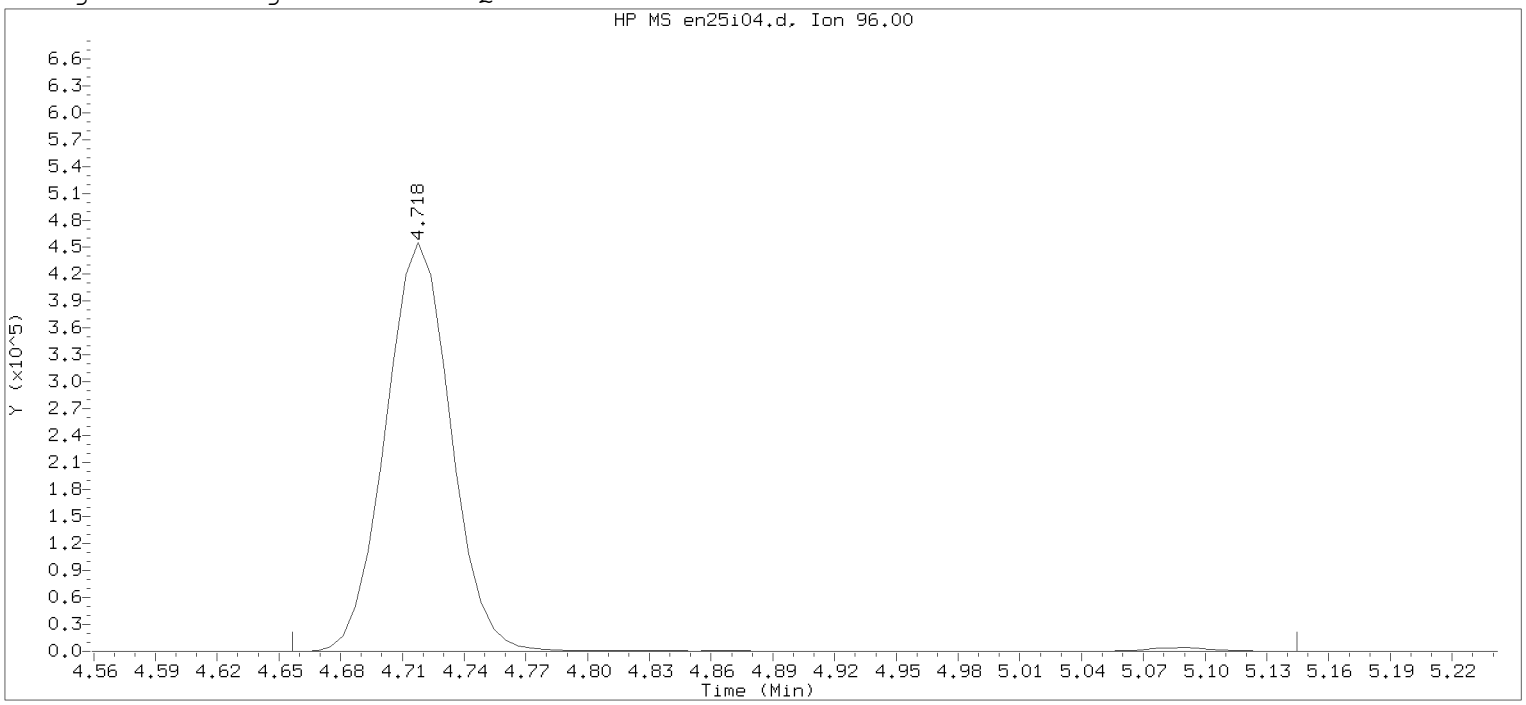
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:25.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i04.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:39 Analyst ID: KAS02648

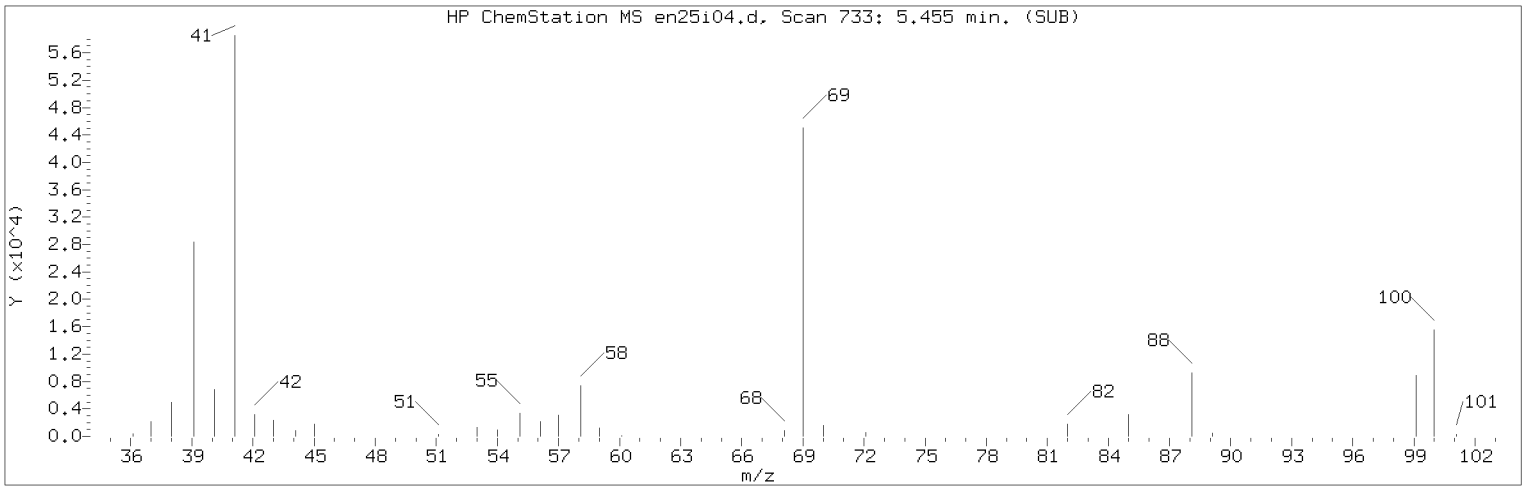
Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 15:56
Date, time and analyst ID of latest file update: 25-Nov-2019 15:56 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

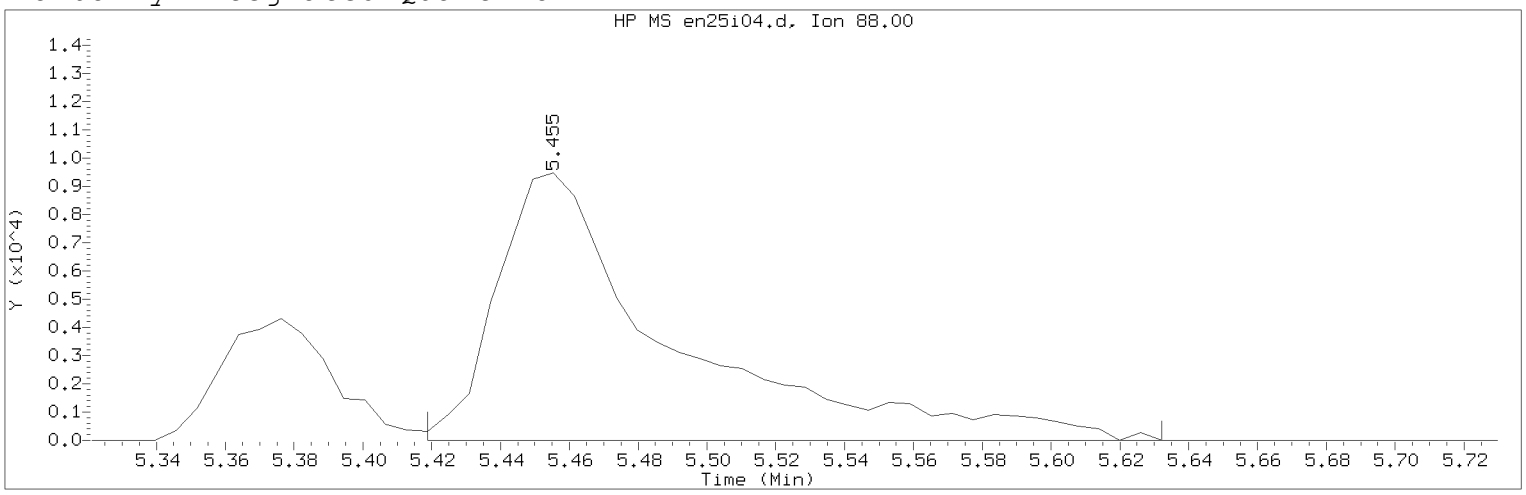
Compound Number : 66
Compound Name : Fluorobenzene
Scan Number : 612
Retention Time (minutes): 4.718
Quant Ion : 96.00
Area : 1014190
On-column Amount (ng) : 50.0000
Integration start scan : 601 Integration stop scan: 681
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 10:24.
Target 3.5 esignature user: JMLong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i04.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD020 Lab Sample ID: VSTD020

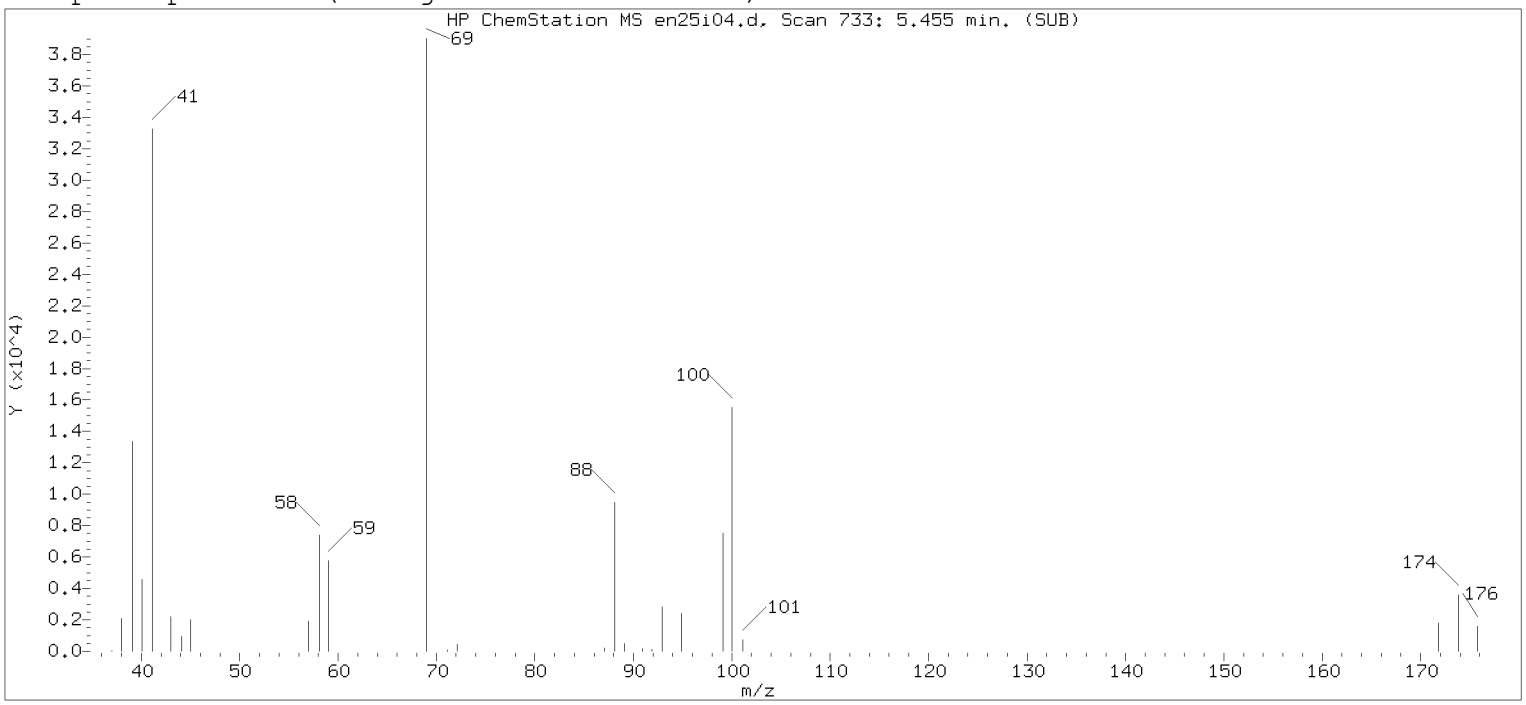
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 733
Retention Time (minutes): 5.455
Quant Ion : 88.00
Area (flag) : 33677M
On-Column Amount (ng) : 473.6728
Integration start scan : 726 Integration stop scan: 761
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

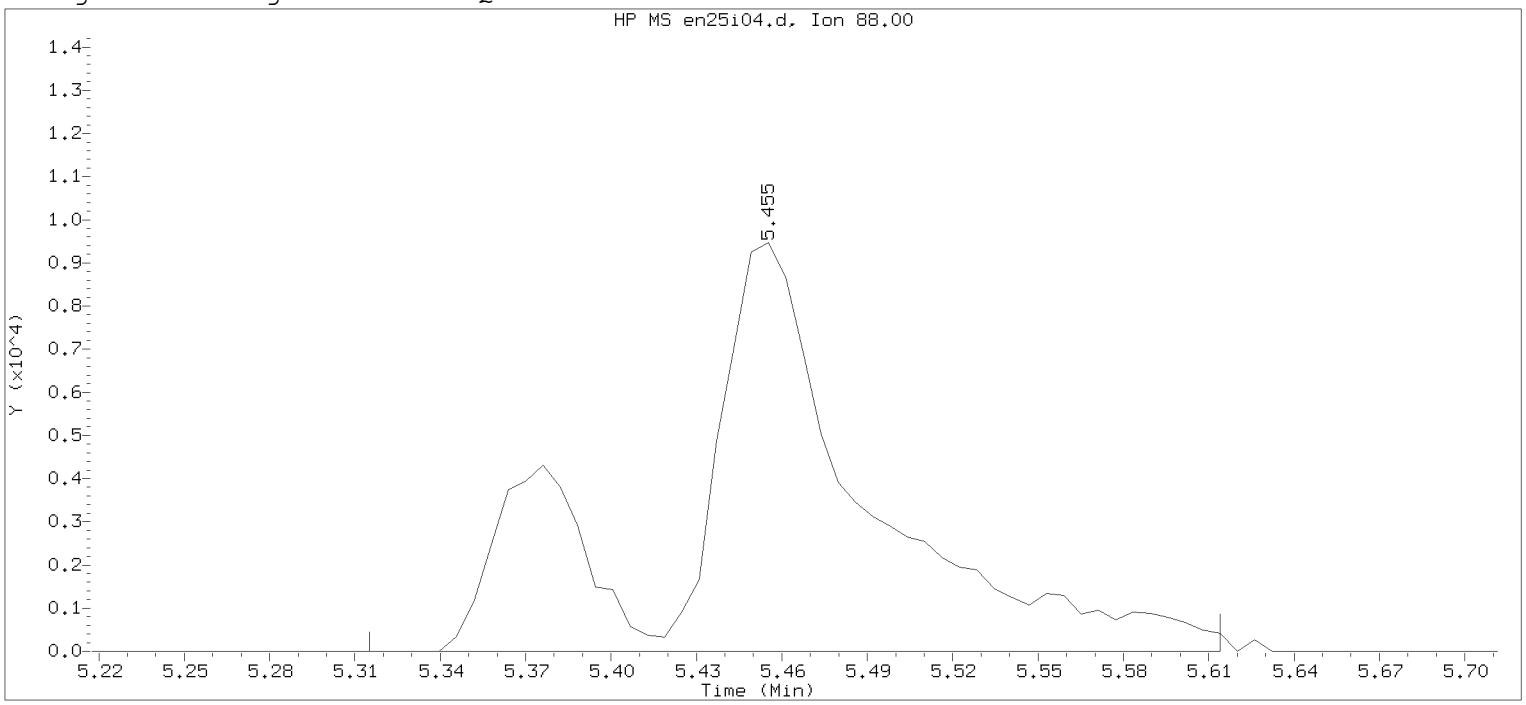
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:25.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



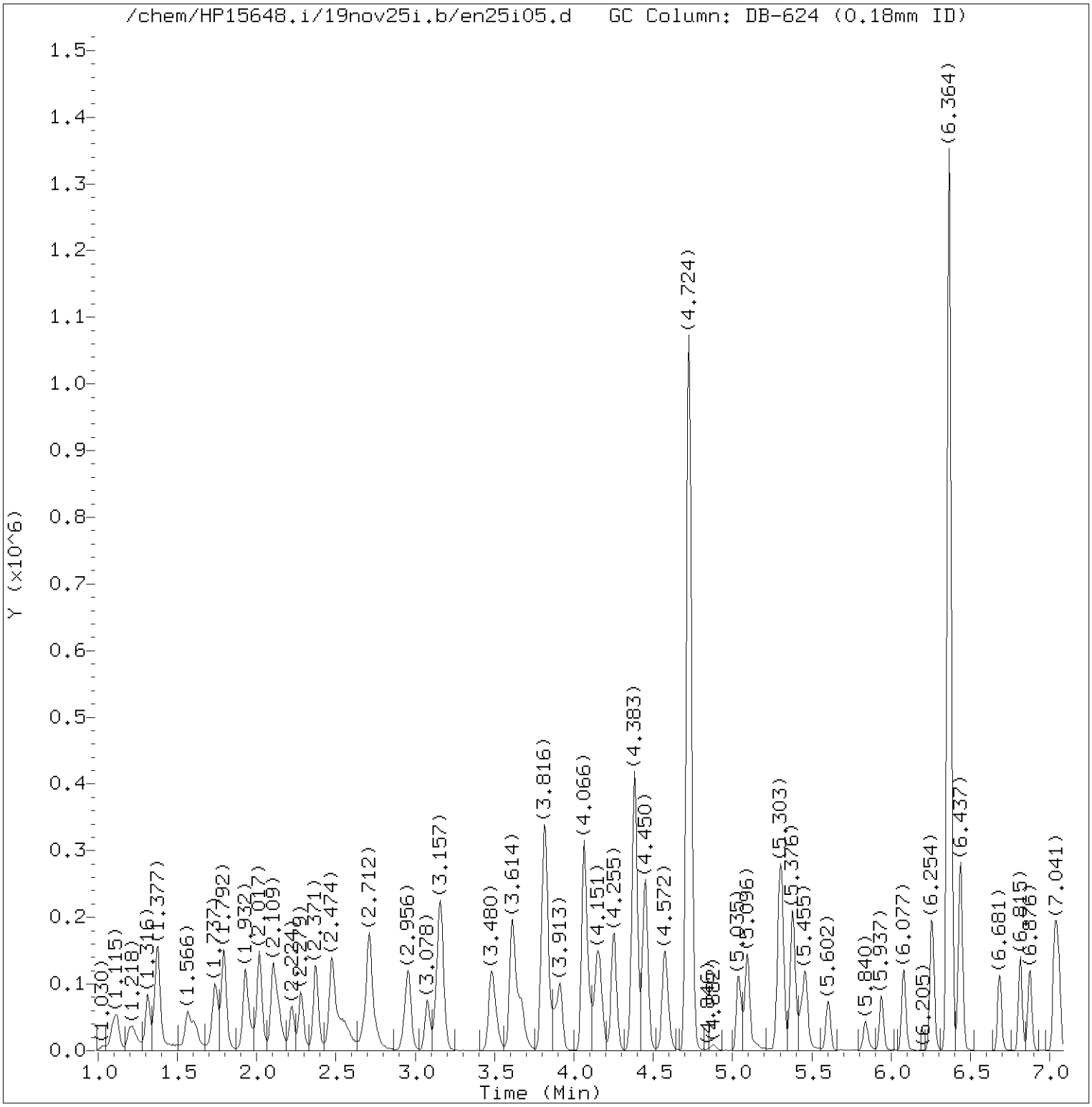
Data File: /chem/HP15648.i/19nov25i.b/en25i04.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:39 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 15:56
Date, time and analyst ID of latest file update: 25-Nov-2019 15:56 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 733
Retention Time (minutes): 5.455
Quant Ion : 88.00
Area : 43201
On-column Amount (ng) : 488.7117
Integration start scan : 709 Integration stop scan: 758
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 10:24.
Target 3.5 esignature user: JMLong



Total Ion Chromatogram (TIC)

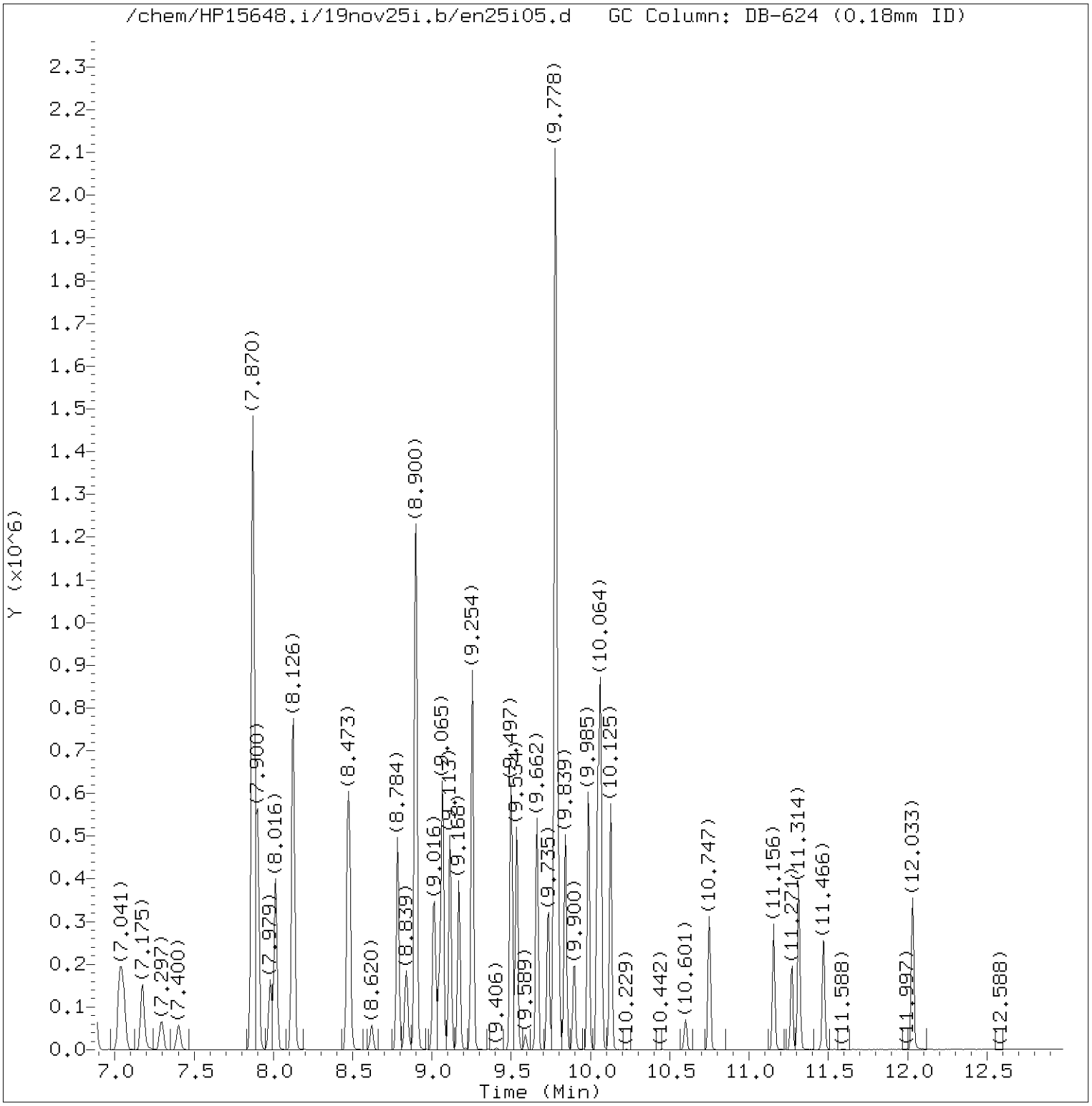
Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i05.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i05.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i05.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.212	85	73238	9.937
4) Chloromethane	(2)	1.316	50	91657	10.428
5) 1,3-Butadiene	(2)	1.371	39	62263	10.335
6) Vinyl Chloride	(2)	1.377	62	79694	10.022
8) Bromomethane	(2)	1.566	94	44113	10.449
9) Chloroethane	(2)	1.603	64	44108	10.506
10) Dichlorofluoromethane	(2)	1.737	67	105176	10.449
11) n-Pentane	(2)	1.792	43	95357	9.963
12) Trichlorofluoromethane	(2)	1.792	101	77887	10.057
14) Ethyl ether	(2)	1.926	59	50128	9.883
15) Freon 123a	(2)	1.932	67	61291	10.101
16) Acrolein	(1)	2.017	56	169562	101.877
17) 1,1-Dichloroethene	(2)	2.102	96	38453	9.892
17) 1,1-Dichloroethene	(2)	2.102	63	21642	9.880
18) Acetone	(1)	2.127	58	14744	20.282
19) Freon 113	(2)	2.133	101	45583	9.972
21) 2-Propanol	(1)	2.224	45	49506	101.565
22) Methyl Iodide	(2)	2.224	142	67602	9.925
23) Carbon Disulfide	(2)	2.279	76	136631	9.757
25) Allyl Chloride	(2)	2.371	41	87268	9.986
27) Methyl Acetate	(2)	2.383	43	47186	9.665
28) Methylene Chloride	(2)	2.474	84	46714	10.012
29)*t-Butyl alcohol-d10	(1)	2.487	65	193229	250.000
30) t-Butyl alcohol	(1)	2.554	59	77850M	105.085
31) Acrylonitrile	(2)	2.676	53	29693	10.009
32) trans-1,2-Dichloroethene	(2)	2.712	96	43614	9.817
33) Methyl Tertiary Butyl Ether	(2)	2.712	73	150981	9.934
34) n-Hexane	(2)	2.956	57	92027	9.764
36) 1,1-Dichloroethane	(2)	3.078	63	94666	9.991
38) di-Isopropyl ether	(2)	3.151	45	194723	9.960
39) 2-Chloro-1,3-butadiene	(2)	3.163	53	87684	9.753
40) Ethyl t-butyl ether	(2)	3.480	59	173883	10.041
42) cis-1,2-Dichloroethene	(2)	3.608	96	51497	10.057
45) 2,2-Dichloropropane	(2)	3.614	77	68999	9.737
44) 2-Butanone	(2)	3.620	43	76960	20.375
43) 1,2-Dichloroethene (Total)	(2)		96	95111	19.874
47) Propionitrile	(1)	3.669	54	109748	96.994
48) Methacrylonitrile	(2)	3.816	67	143317	49.405

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i05.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.834	128	22399	9.578
50) Tetrahydrofuran	(1)	3.889	71	19470	20.302
51) Chloroform	(2)	3.913	83	79729	9.818
52)$Dibromofluoromethane	(2)	4.066	113	211166	50.053
52)$Dibromofluoromethane	(2)	4.066	111	218723	50.041
53) 1,1,1-Trichloroethane	(2)	4.096	97	66844	9.796
54) Cyclohexane	(2)	4.157	56	113454	9.894
54) Cyclohexane	(2)	4.151	84	89638	10.070
54) Cyclohexane	(2)	4.151	69	32555	9.811
55) 1,1-Dichloropropene	(2)	4.248	75	73157	10.057
56) Carbon Tetrachloride	(2)	4.261	117	52556	9.754
58) Isobutyl Alcohol	(1)	4.376	41	59981	240.357
57)$1,2-Dichloroethane-d4	(2)	4.383	102	56275	49.970
57)$1,2-Dichloroethane-d4	(2)	4.383	65	282766	50.387
57)$1,2-Dichloroethane-d4	(2)	4.389	104	36006	50.294
60) Benzene	(2)	4.450	78	213091	9.965
61) 1,2-Dichloroethane	(2)	4.456	62	64045	9.917
61) 1,2-Dichloroethane	(2)	4.462	98	5394	9.635
65) t-Amyl methyl ether	(2)	4.572	73	160723	9.992
66)*Fluorobenzene	(2)	4.724	96	991370	50.000
67) n-Heptane	(2)	4.736	43	104061	9.863
69) n-Butanol	(1)	5.035	56	100334	465.706
71) Trichloroethene	(2)	5.096	95	49821	9.921
73) Methylcyclohexane	(2)	5.297	83	105651	9.651
73) Methylcyclohexane	(2)	5.303	98	46592	9.623
74) 1,2-Dichloropropane	(2)	5.315	63	55553	9.797
75) Dibromomethane	(2)	5.431	93	27554	9.656
77) Methyl Methacrylate	(2)	5.462	69	43511	9.449
76) 1,4-Dioxane	(1)	5.462	88	17388M	245.392
79) Bromodichloromethane	(2)	5.602	83	56443	9.598
80) 2-Nitropropane	(2)	5.833	41	20601	19.588
81) 2-Chloroethyl Vinyl Ether	(2)	5.937	63	38371	8.885
82) cis-1,3-Dichloropropene	(2)	6.083	75	76410	9.258
83) 4-Methyl-2-pentanone	(2)	6.254	43	155430	19.621
84)$Toluene-d8	(3)	6.364	98	977831	50.171
84)$Toluene-d8	(3)	6.364	100	630222	50.358
89) Toluene	(3)	6.437	92	128954	9.988
90) trans-1,3-Dichloropropene	(3)	6.681	75	68234	9.354

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i05.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropene (total)	(3)		100	144644	18.612
92) Ethyl Methacrylate	(3)	6.815	69	77790	9.553
93) 1,1,2-Trichloroethane	(3)	6.876	97	40178	9.771
94) Tetrachloroethene	(3)	7.034	166	51454	10.583
95) 1,3-Dichloropropane	(3)	7.053	76	78704	9.945
97) 2-Hexanone	(3)	7.175	43	111610	19.971
98) Dibromochloromethane	(3)	7.297	129	36666	9.391
100) 1,2-Dibromoethane	(3)	7.400	107	41322	9.735
101)*Chlorobenzene-d5	(3)	7.870	117	686567	50.000
103) Chlorobenzene	(3)	7.900	112	134783	10.046
102) 1-Chlorohexane	(3)	7.900	91	74878	10.036
104) 1,1,1,2-Tetrachloroethane	(3)	7.979	131	38924	9.539
105) Ethylbenzene	(3)	8.016	91	251316	9.910
107) m+p-Xylene	(3)	8.126	106	190240	20.006
108) o-Xylene	(3)	8.467	106	94042	10.078
110) Styrene	(3)	8.479	104	148912	9.684
109) Xylene (Total)	(3)		106	284282	30.084
111) Bromoform	(3)	8.620	173	21534	8.922
112) Isopropylbenzene	(3)	8.784	105	247043	9.790
113) Cyclohexanone	(1)	8.839	55	64013	235.709
115)$4-Bromofluorobenzene	(3)	8.900	95	369623	50.337
115)$4-Bromofluorobenzene	(3)	8.900	174	245919	50.015
116) Bromobenzene	(4)	9.010	156	49350	9.812
117) 1,1,2,2-Tetrachloroethane	(4)	9.022	83	66278	10.045
118) 1,2,3-Trichloropropane	(4)	9.046	110	18466	9.993
119) trans-1,4-Dichloro-2-butene	(4)	9.065	53	103155	48.127
120) n-Propylbenzene	(4)	9.113	91	302279	9.834
121) 2-Chlorotoluene	(4)	9.168	126	55559	9.956
123) 1,3,5-Trimethylbenzene	(4)	9.254	105	207317	9.654
122) 4-Chlorotoluene	(4)	9.254	126	57149	10.056
125) tert-Butylbenzene	(4)	9.497	134	44536	9.641
126) Pentachloroethane	(4)	9.503	167	20943	8.028
127) 1,2,4-Trimethylbenzene	(4)	9.534	105	215500	9.692
128) sec-Butylbenzene	(4)	9.662	105	275588	9.691
130) 1,3-Dichlorobenzene	(4)	9.735	146	99218	9.808
131) p-Isopropyltoluene	(4)	9.772	119	225693	9.628
132)*1,4-Dichlorobenzene-d4	(4)	9.784	152	338762	50.000
134) 1,4-Dichlorobenzene	(4)	9.796	146	101272	9.973

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i05.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:59 Analyst ID: KAS02648

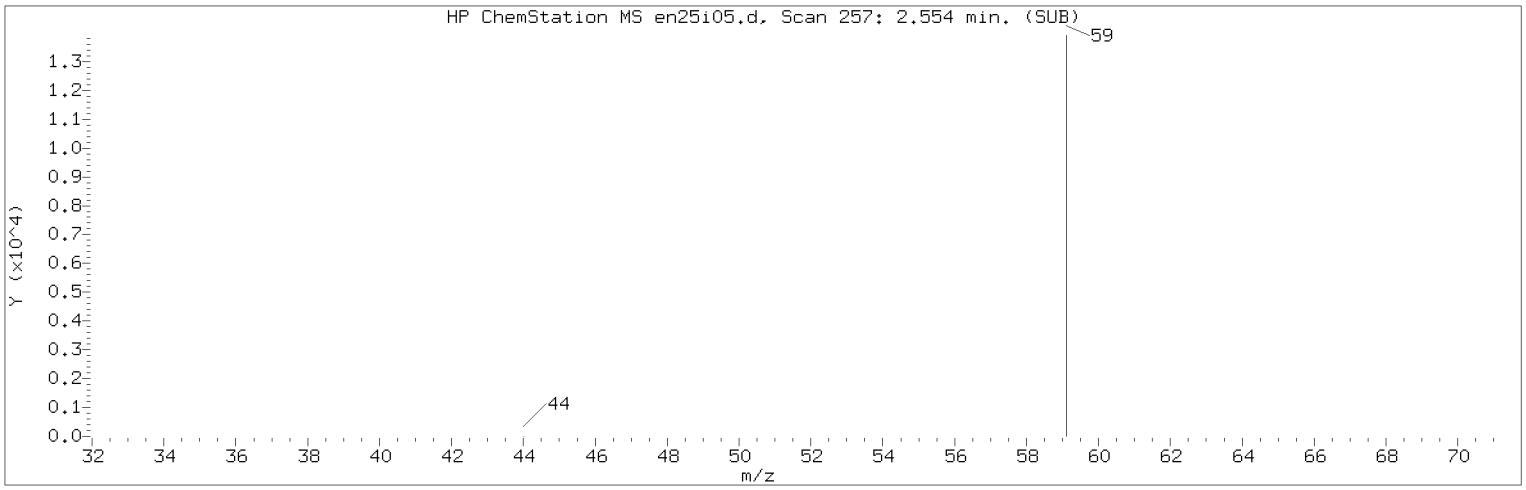
Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

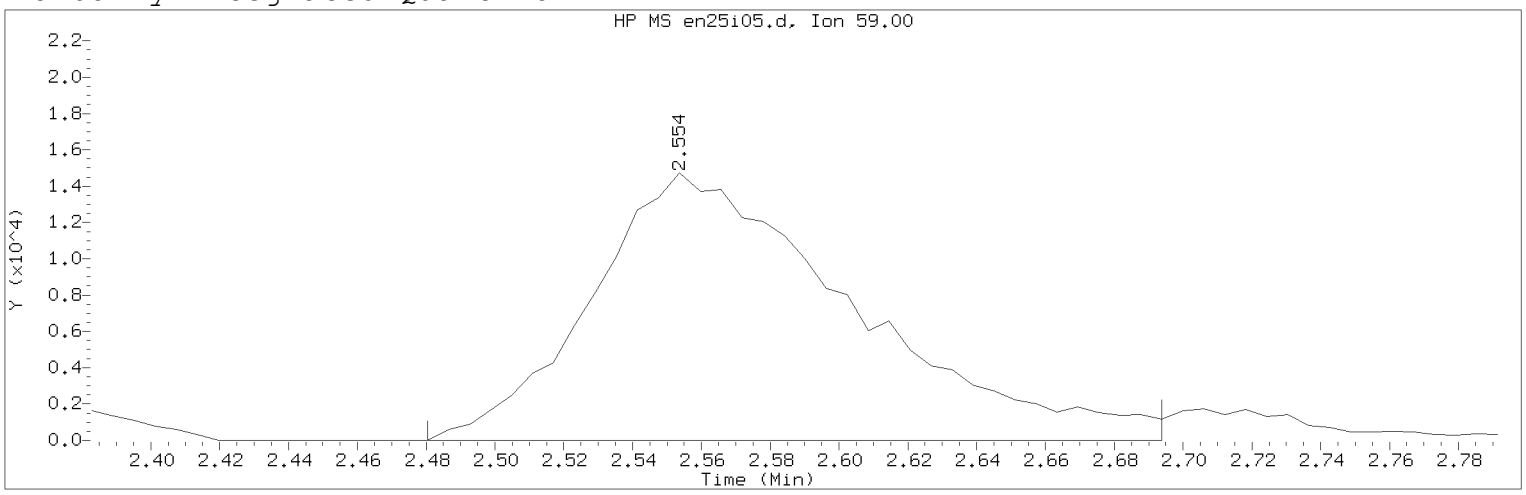
	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135)	1,2,3-Trimethylbenzene	(4)	9.839	105	218340	9.523
136)	Benzyl Chloride	(4)	9.900	91	115062	8.940
137)	1,3-Diethylbenzene	(4)	9.985	119	141636	9.598
138)	1,4-Diethylbenzene	(4)	10.046	119	146021	9.488
139)	1,2-Dichlorobenzene	(4)	10.064	146	94695	9.993
140)	n-Butylbenzene	(4)	10.064	92	119922	9.715
141)	1,2-Diethylbenzene	(4)	10.125	119	118593	9.687
142)	Diethylbenzene (total)	(4)		100	406250	28.773
143)	1,2-Dibromo-3-chloropropane	(4)	10.601	75	14310	10.046
145)	1,3,5-Trichlorobenzene	(4)	10.747	180	68164	9.564
147)	1,2,4-Trichlorobenzene	(4)	11.156	180	61102	9.632
148)	Hexachlorobutadiene	(4)	11.271	225	25138	9.487
149)	Naphthalene	(4)	11.314	128	214812	9.909
150)	1,2,3-Trichlorobenzene	(4)	11.473	180	58679	9.843
151)	2-Methylnaphthalene	(4)	12.033	142	127490	9.631

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i05.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

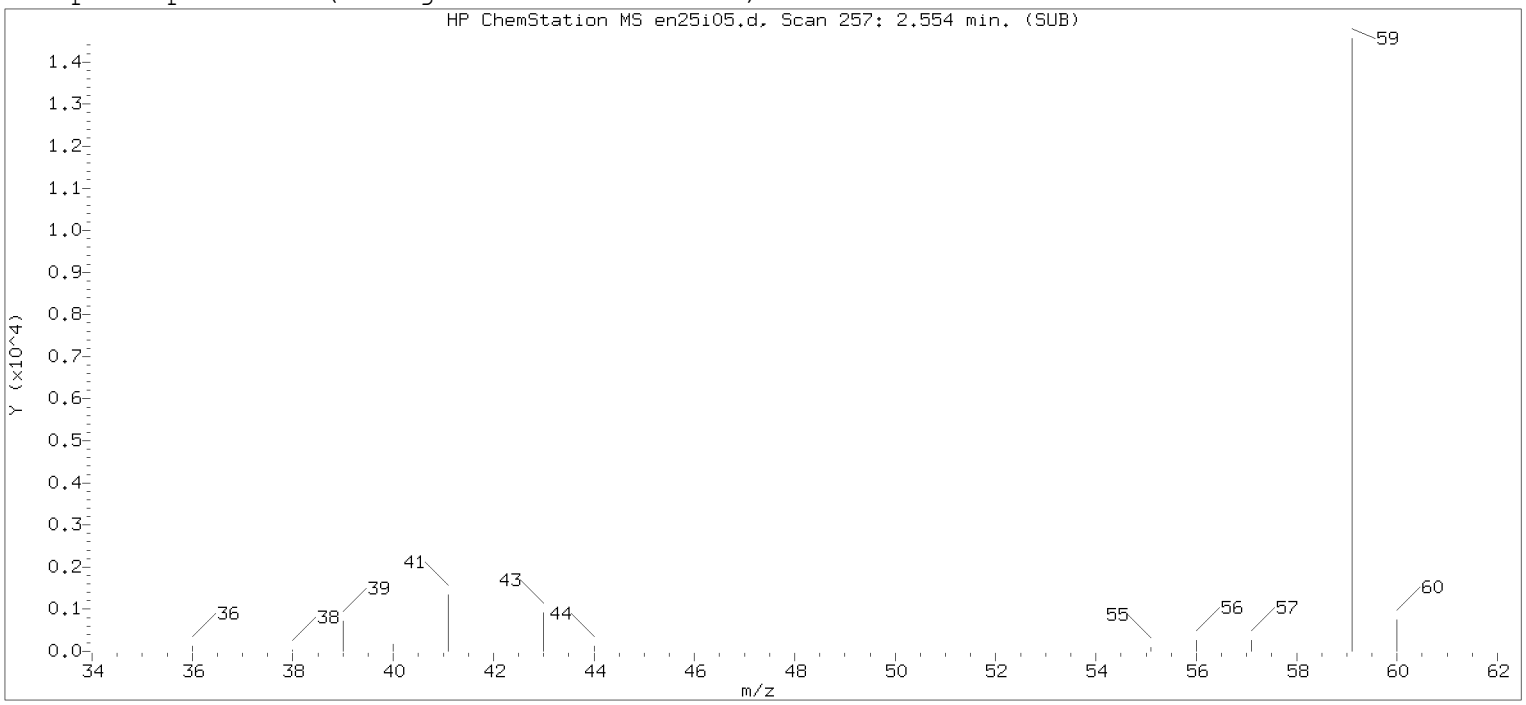
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 257
Retention Time (minutes): 2.554
Quant Ion : 59.00
Area (flag) : 77850M
On-Column Amount (ng) : 105.0848
Integration start scan : 244 Integration stop scan: 279
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

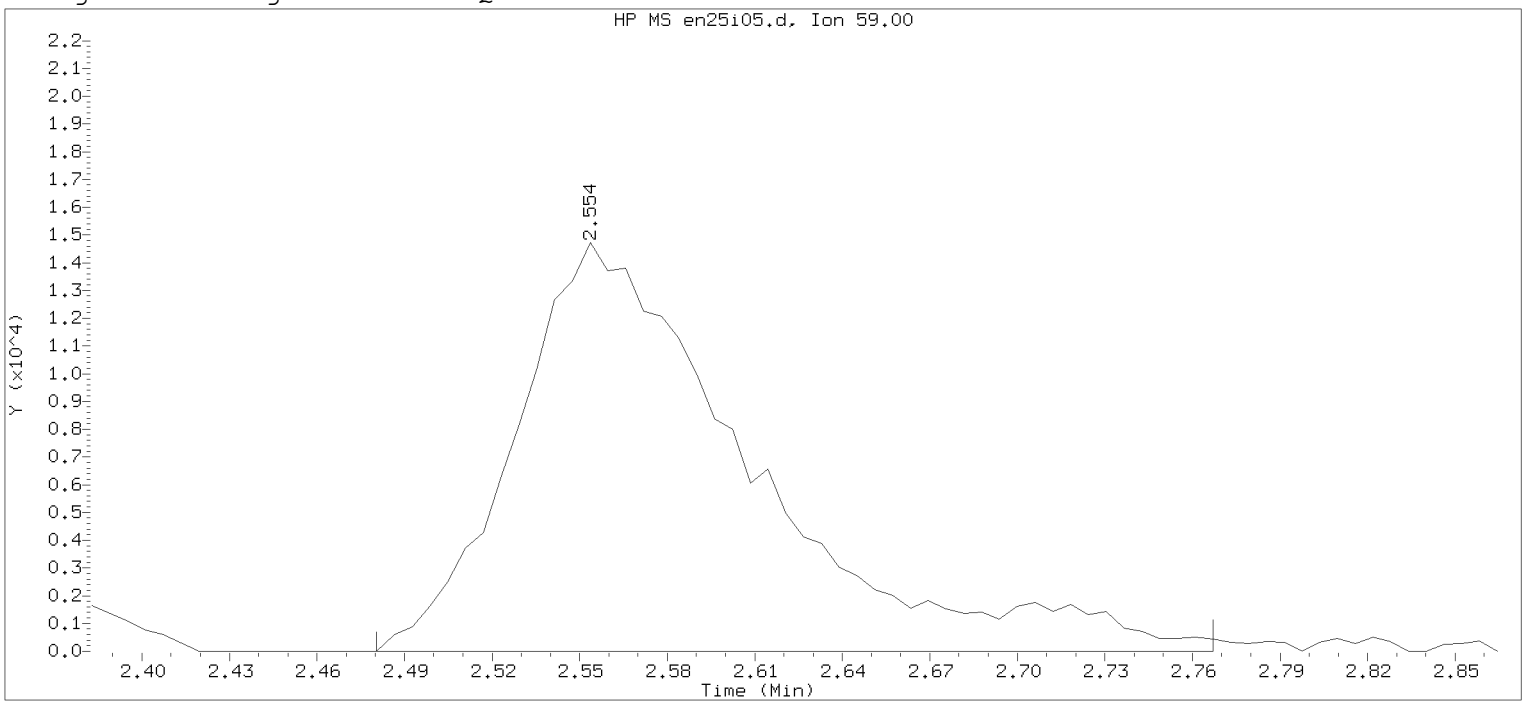
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:25.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i05.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:59 Analyst ID: KAS02648

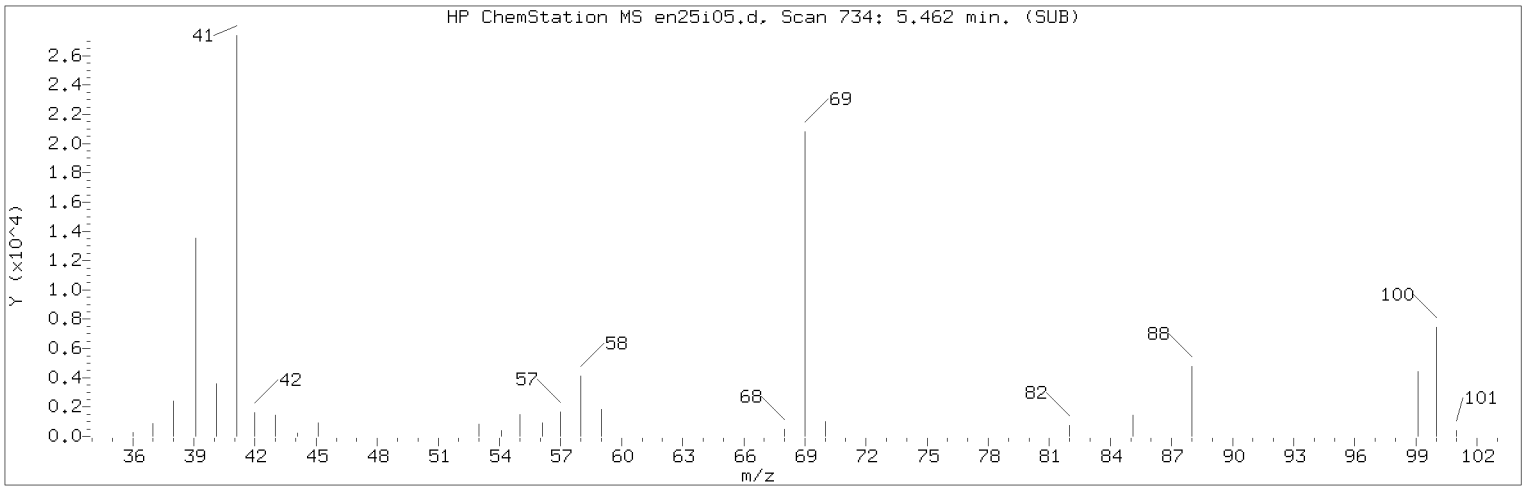
Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 16:18
Date, time and analyst ID of latest file update: 25-Nov-2019 16:18 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

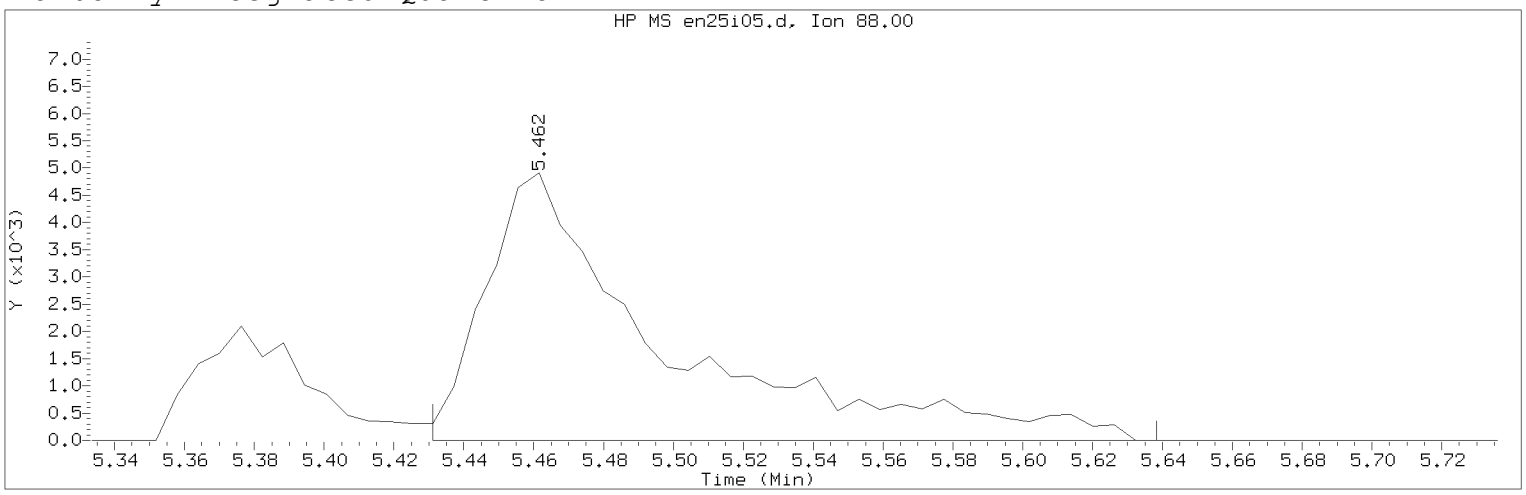
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 257
Retention Time (minutes): 2.554
Quant Ion : 59.00
Area : 82386
On-column Amount (ng) : 108.8884
Integration start scan : 244 Integration stop scan: 291
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 10:24.
Target 3.5 esignature user: JMLong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i05.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:22 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

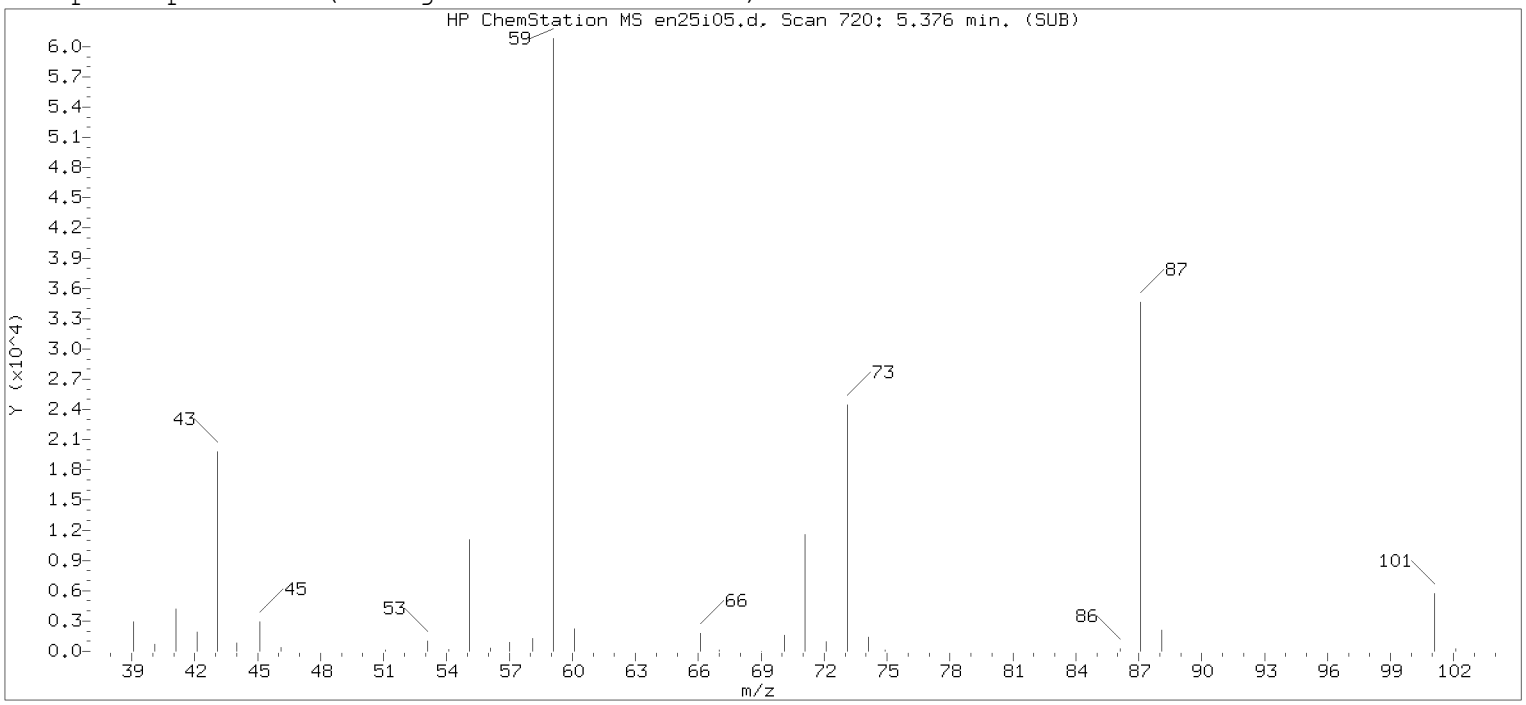
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 734
Retention Time (minutes): 5.462
Quant Ion : 88.00
Area (flag) : 17388M
On-Column Amount (ng) : 245.3921
Integration start scan : 728 Integration stop scan: 762
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

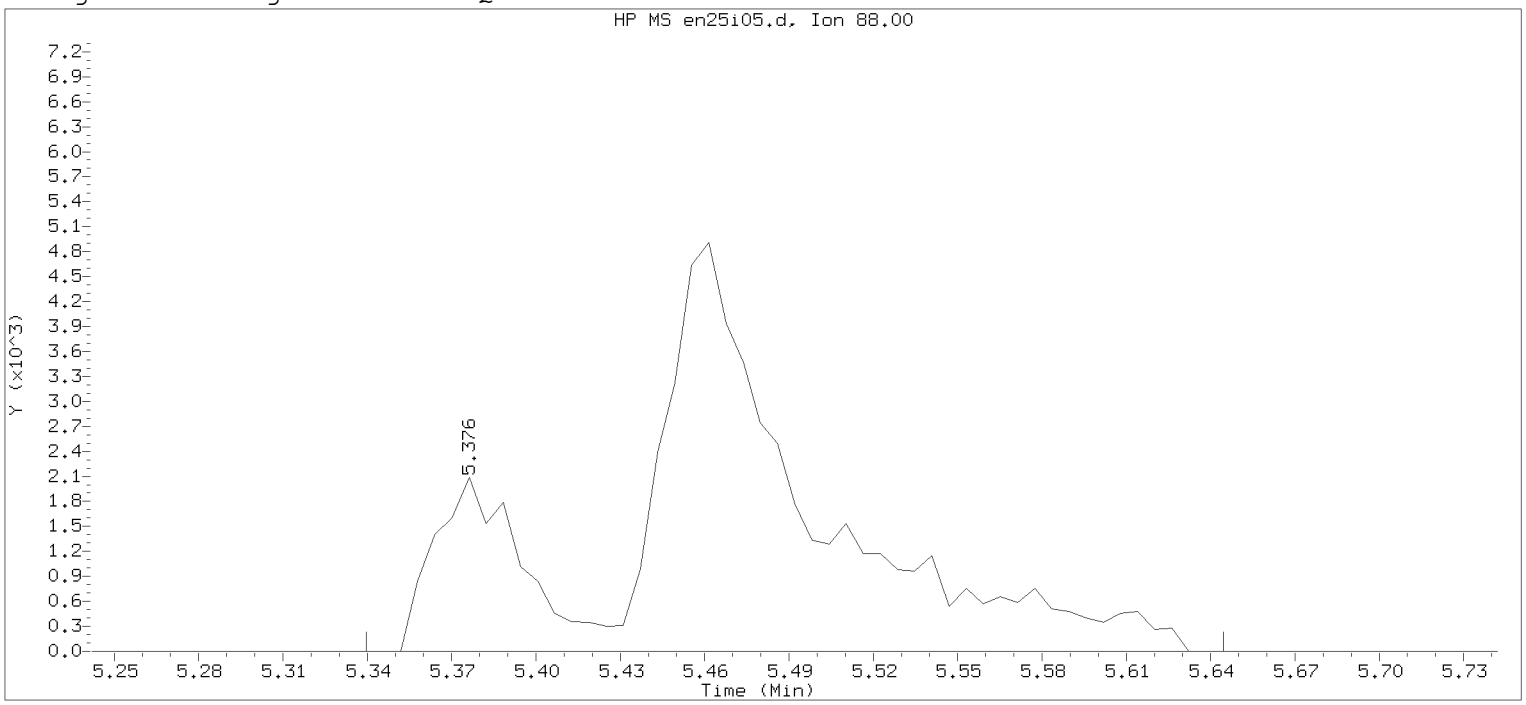
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:25.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



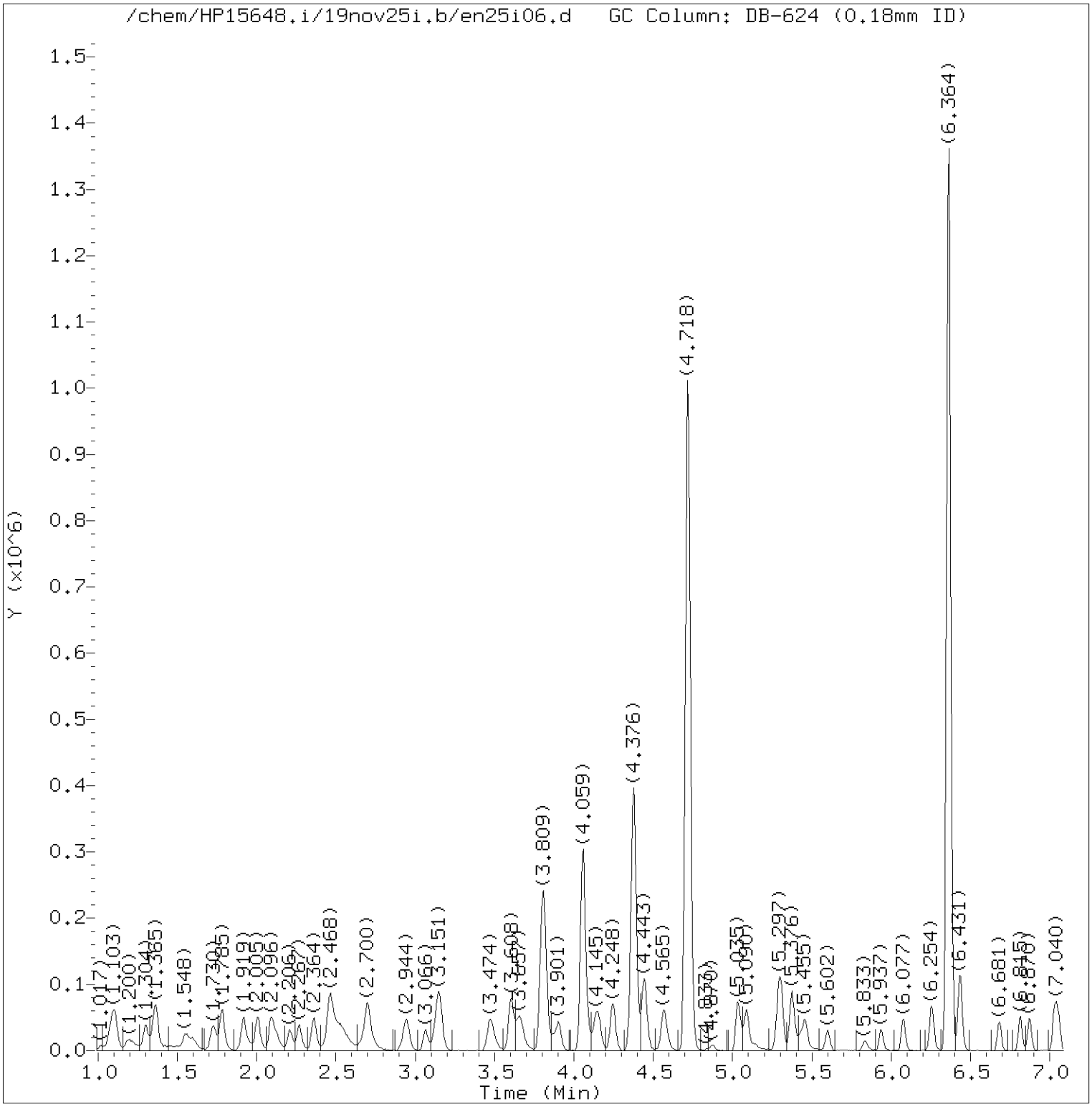
Data File: /chem/HP15648.i/19nov25i.b/en25i05.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 15:59 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 16:18
Date, time and analyst ID of latest file update: 25-Nov-2019 16:18 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 720		
Retention Time (minutes)	: 5.376		
Quant Ion	: 88.00		
Area	: 21986		
On-column Amount (ng)	: 243.2101		
Integration start scan	: 713	Integration stop scan:	763
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jason M. Long on 11/26/2019 at 10:24.
Target 3.5 esignature user: JMLong



Total Ion Chromatogram (TIC)

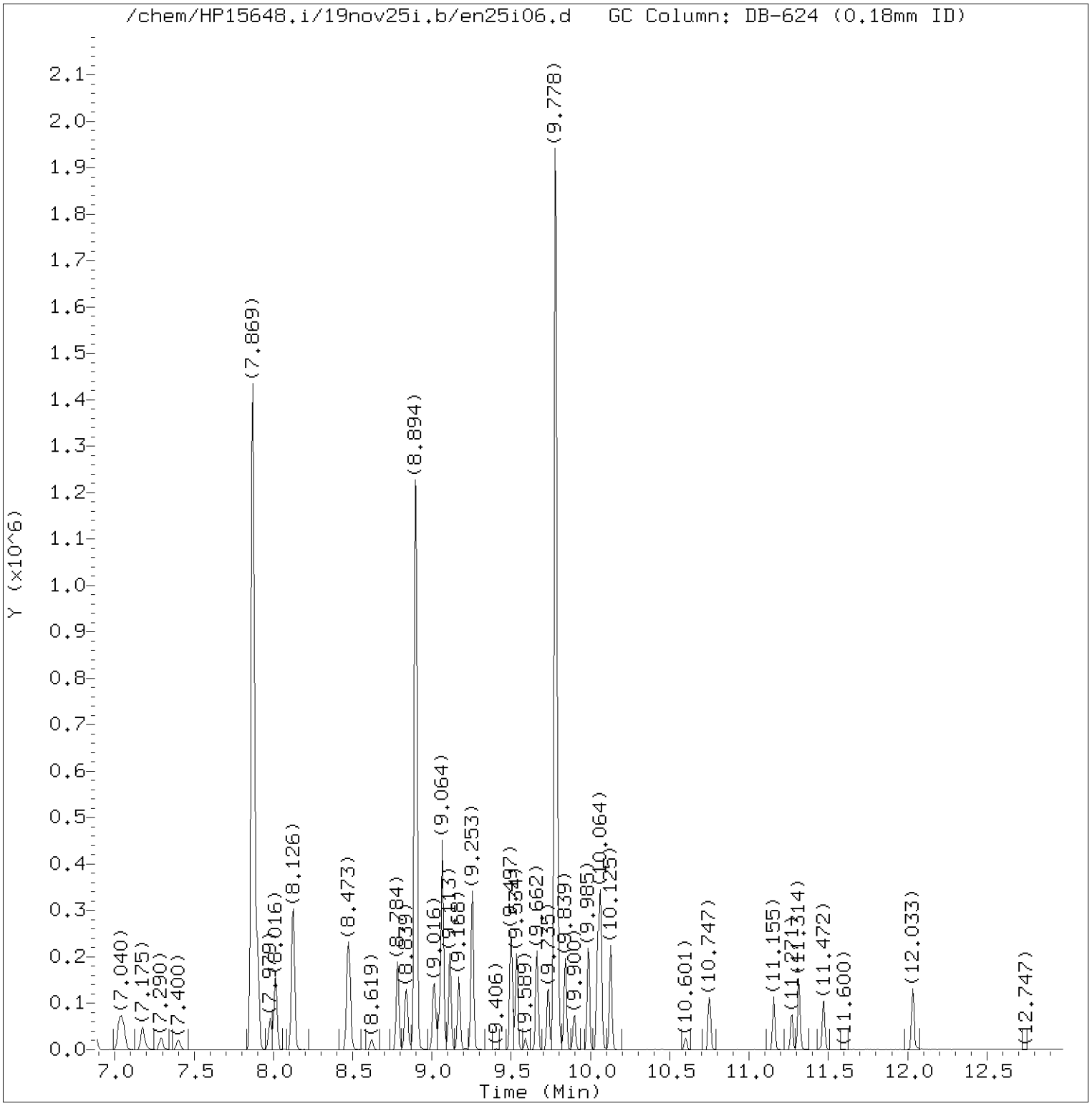
Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i06.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:20 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 09:35
Date, time and analyst ID of latest file update: 26-Nov-2019 09:35 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Jason M. Long
on 11/26/2019 at 09:53.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i06.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:20 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 09:35
Date, time and analyst ID of latest file update: 26-Nov-2019 09:35 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Jason M. Long
on 11/26/2019 at 09:53.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i06.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:20 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 09:35
Date, time and analyst ID of latest file update: 26-Nov-2019 09:35 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.194	85	28452	3.933
4) Chloromethane	(2)	1.304	50	34864	3.916
5) 1,3-Butadiene	(2)	1.352	39	28921	4.447
6) Vinyl Chloride	(2)	1.365	62	31743	3.996
8) Bromomethane	(2)	1.560	94	16741M	3.954
9) Chloroethane	(2)	1.602	64	17092	4.038
10) Dichlorofluoromethane	(2)	1.724	67	40063	3.957
12) Trichlorofluoromethane	(2)	1.779	101	30714	3.968
11) n-Pentane	(2)	1.785	43	38266	3.992
14) Ethyl ether	(2)	1.919	59	19908	3.942
15) Freon 123a	(2)	1.926	67	24359	3.985
16) Acrolein	(1)	2.005	56	59085	37.516
17) 1,1-Dichloroethene	(2)	2.090	96	15714	4.027
17) 1,1-Dichloroethene	(2)	2.090	63	8777	3.989
19) Freon 113	(2)	2.108	101	18470	4.084
18) Acetone	(1)	2.127	58	5183	7.840
21) 2-Propanol	(1)	2.206	45	34752	75.367
22) Methyl Iodide	(2)	2.206	142	27036	3.928
23) Carbon Disulfide	(2)	2.267	76	58387	4.081
25) Allyl Chloride	(2)	2.358	41	34560	3.904
27) Methyl Acetate	(2)	2.371	43	20445	4.061
28) Methylene Chloride	(2)	2.456	84	19020	4.005
29)*t-Butyl alcohol-d10	(1)	2.468	65	186523	250.000
30) t-Butyl alcohol	(1)	2.535	59	54799M	76.844
31) Acrylonitrile	(2)	2.657	53	10684	3.670
32) trans-1,2-Dichloroethene	(2)	2.700	96	17898	3.954
33) Methyl Tertiary Butyl Ether	(2)	2.700	73	60908	3.964
34) n-Hexane	(2)	2.944	57	36368	3.924
36) 1,1-Dichloroethane	(2)	3.066	63	38549	4.002
38) di-Isopropyl ether	(2)	3.139	45	79158	3.988
39) 2-Chloro-1,3-butadiene	(2)	3.151	53	36009	4.027
40) Ethyl t-butyl ether	(2)	3.474	59	70784	4.021
42) cis-1,2-Dichloroethene	(2)	3.602	96	20915	4.038
44) 2-Butanone	(2)	3.608	43	26835	7.261
45) 2,2-Dichloropropane	(2)	3.614	77	28970	4.067
43) 1,2-Dichloroethene (Total)	(2)		96	38813	7.993
47) Propionitrile	(1)	3.663	54	83356	77.632
48) Methacrylonitrile	(2)	3.809	67	110186	38.019

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jason M. Long
on 11/26/2019 at 09:53.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i06.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:20 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 09:35
Date, time and analyst ID of latest file update: 26-Nov-2019 09:35 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.821	128	9074	3.886
50) Tetrahydrofuran	(1)	3.870	71	6767	7.615
51) Chloroform	(2)	3.901	83	32824	3.987
52)$Dibromofluoromethane	(2)	4.059	113	216087	50.015
52)$Dibromofluoromethane	(2)	4.059	111	221517	49.558
53) 1,1,1-Trichloroethane	(2)	4.090	97	27954	4.065
54) Cyclohexane	(2)	4.151	56	45112	3.944
54) Cyclohexane	(2)	4.145	84	34621	3.901
54) Cyclohexane	(2)	4.145	69	13789	4.127
55) 1,1-Dichloropropene	(2)	4.242	75	28923	3.955
56) Carbon Tetrachloride	(2)	4.254	117	20940	3.928
58) Isobutyl Alcohol	(1)	4.364	41	42876	183.503
57)$1,2-Dichloroethane-d4	(2)	4.376	102	56047	48.670
57)$1,2-Dichloroethane-d4	(2)	4.376	65	289697	50.261
57)$1,2-Dichloroethane-d4	(2)	4.382	104	35889	49.144
60) Benzene	(2)	4.443	78	87689	4.048
61) 1,2-Dichloroethane	(2)	4.449	62	26376	3.910
61) 1,2-Dichloroethane	(2)	4.456	98	2262	3.976
65) t-Amyl methyl ether	(2)	4.565	73	64991	3.958
66)*Fluorobenzene	(2)	4.718	96	1015688	50.000
67) n-Heptane	(2)	4.730	43	40494	3.852
69) n-Butanol	(1)	5.035	56	67915	348.478
71) Trichloroethene	(2)	5.090	95	20469	4.062
73) Methylcyclohexane	(2)	5.291	83	41407	3.846
73) Methylcyclohexane	(2)	5.297	98	17978	3.814
74) 1,2-Dichloropropane	(2)	5.309	63	22577	3.985
75) Dibromomethane	(2)	5.431	93	10835	3.801
77) Methyl Methacrylate	(2)	5.455	69	16564	3.679
76) 1,4-Dioxane	(1)	5.455	88	11801M	184.708
79) Bromodichloromethane	(2)	5.602	83	22153	3.795
80) 2-Nitropropane	(2)	5.839	41	7555M	7.157
81) 2-Chloroethyl Vinyl Ether	(2)	5.937	63	15456	3.667
82) cis-1,3-Dichloropropene	(2)	6.077	75	31779	3.875
83) 4-Methyl-2-pentanone	(2)	6.254	43	56210	7.258
84)$Toluene-d8	(3)	6.364	98	1000661	50.206
84)$Toluene-d8	(3)	6.364	100	635618	49.672
89) Toluene	(3)	6.437	92	51995	3.989
90) trans-1,3-Dichloropropene	(3)	6.681	75	26134	3.628

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 11/26/2019 at 09:53.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i06.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:20 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 09:35
Date, time and analyst ID of latest file update: 26-Nov-2019 09:35 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropene (total)	(3)		100	57913	7.504
92) Ethyl Methacrylate	(3)	6.815	69	30152	3.789
93) 1,1,2-Trichloroethane	(3)	6.876	97	16371	3.984
94) Tetrachloroethene	(3)	7.028	166	19696	4.063
95) 1,3-Dichloropropane	(3)	7.053	76	30509	3.853
97) 2-Hexanone	(3)	7.175	43	37587	6.991
98) Dibromochloromethane	(3)	7.290	129	13980	3.682
100) 1,2-Dibromoethane	(3)	7.400	107	15929	3.757
101)*Chlorobenzene-d5	(3)	7.869	117	702042	50.000
103) Chlorobenzene	(3)	7.894	112	53876	3.969
102) 1-Chlorohexane	(3)	7.900	91	31475	4.096
104) 1,1,1,2-Tetrachloroethane	(3)	7.979	131	15339	3.856
105) Ethylbenzene	(3)	8.010	91	102208	4.012
107) m+p-Xylene	(3)	8.126	106	75491	7.902
108) o-Xylene	(3)	8.467	106	36779	3.963
110) Styrene	(3)	8.479	104	55997	3.727
109) Xylene (Total)	(3)		106	112270	11.866
111) Bromoform	(3)	8.619	173	8321	3.585
112) Isopropylbenzene	(3)	8.784	105	99673	3.957
113) Cyclohexanone	(1)	8.839	55	46503	184.418
115)$4-Bromofluorobenzene	(3)	8.894	95	374227	49.825
115)$4-Bromofluorobenzene	(3)	8.900	174	250865	50.008
116) Bromobenzene	(4)	9.009	156	19866	3.928
117) 1,1,2,2-Tetrachloroethane	(4)	9.016	83	27132	4.026
118) 1,2,3-Trichloropropane	(4)	9.046	110	7528	3.995
119) trans-1,4-Dichloro-2-butene	(4)	9.064	53	76562	36.483
120) n-Propylbenzene	(4)	9.113	91	121173	3.923
121) 2-Chlorotoluene	(4)	9.168	126	22267	3.974
123) 1,3,5-Trimethylbenzene	(4)	9.253	105	82756	3.842
122) 4-Chlorotoluene	(4)	9.259	126	22589	3.931
125) tert-Butylbenzene	(4)	9.497	134	17509	3.823
126) Pentachloroethane	(4)	9.503	167	9023	3.579
127) 1,2,4-Trimethylbenzene	(4)	9.534	105	86293	3.880
128) sec-Butylbenzene	(4)	9.662	105	109463	3.871
130) 1,3-Dichlorobenzene	(4)	9.735	146	40647	3.933
131) p-Isopropyltoluene	(4)	9.772	119	90721	3.883
132)*1,4-Dichlorobenzene-d4	(4)	9.784	152	350505	50.000
134) 1,4-Dichlorobenzene	(4)	9.802	146	40813	3.936

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 11/26/2019 at 09:53.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i06.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:20 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 09:35
Date, time and analyst ID of latest file update: 26-Nov-2019 09:35 jml01693

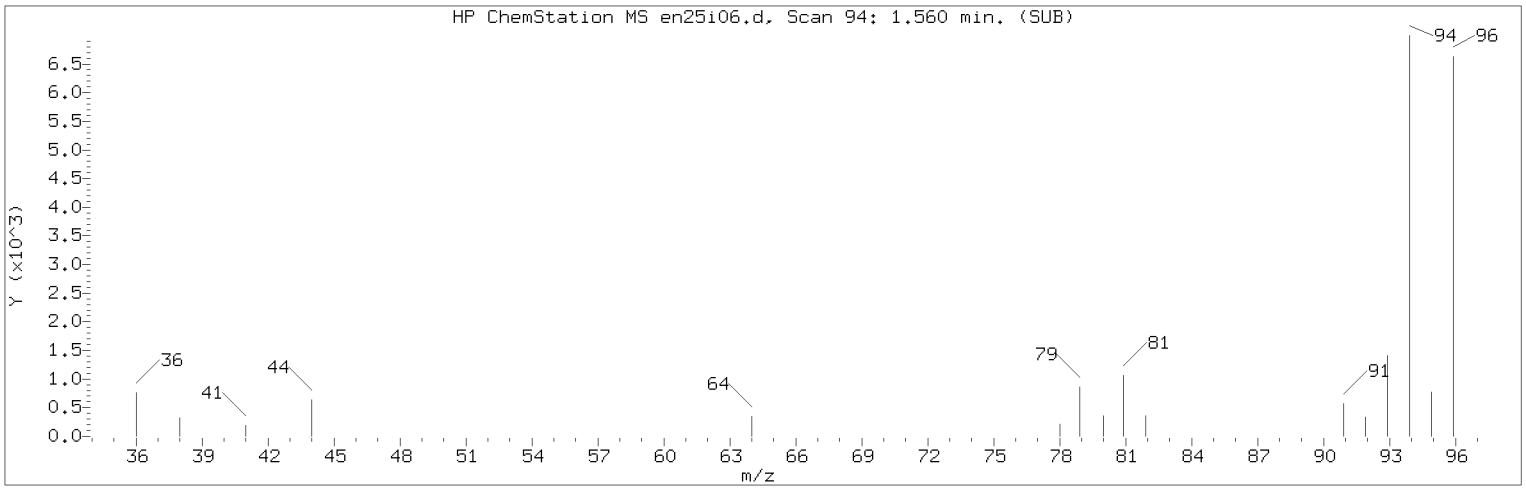
Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	9.839	105	86548	3.784
136) Benzyl Chloride	(4)	9.900	91	43547	3.489
137) 1,3-Diethylbenzene	(4)	9.985	119	54362	3.730
138) 1,4-Diethylbenzene	(4)	10.046	119	56407	3.704
139) 1,2-Dichlorobenzene	(4)	10.064	146	38281	3.962
140) n-Butylbenzene	(4)	10.064	92	47628	3.860
141) 1,2-Diethylbenzene	(4)	10.125	119	45236M	3.709
142) Diethylbenzene (total)	(4)		100	156005	11.143
143) 1,2-Dibromo-3-chloropropane	(4)	10.601	75	5171	3.685
145) 1,3,5-Trichlorobenzene	(4)	10.753	180	26921	3.743
147) 1,2,4-Trichlorobenzene	(4)	11.155	180	25211	3.919
148) Hexachlorobutadiene	(4)	11.271	225	10388	3.915
149) Naphthalene	(4)	11.314	128	86172	3.853
150) 1,2,3-Trichlorobenzene	(4)	11.472	180	23939	3.872
151) 2-Methylnaphthalene	(4)	12.033	142	49314	3.621

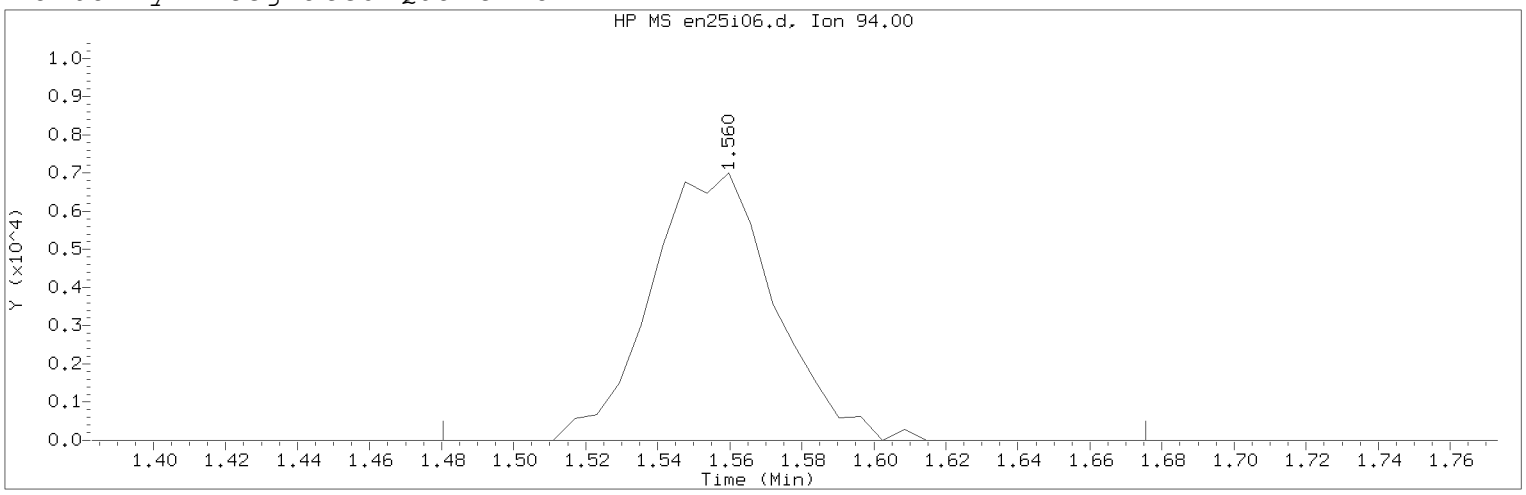
M = Compound was manually integrated.

Digitally signed by Jason M. Long
on 11/26/2019 at 09:53.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i06.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:20 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 09:35
Date, time and analyst ID of latest file update: 26-Nov-2019 09:35 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

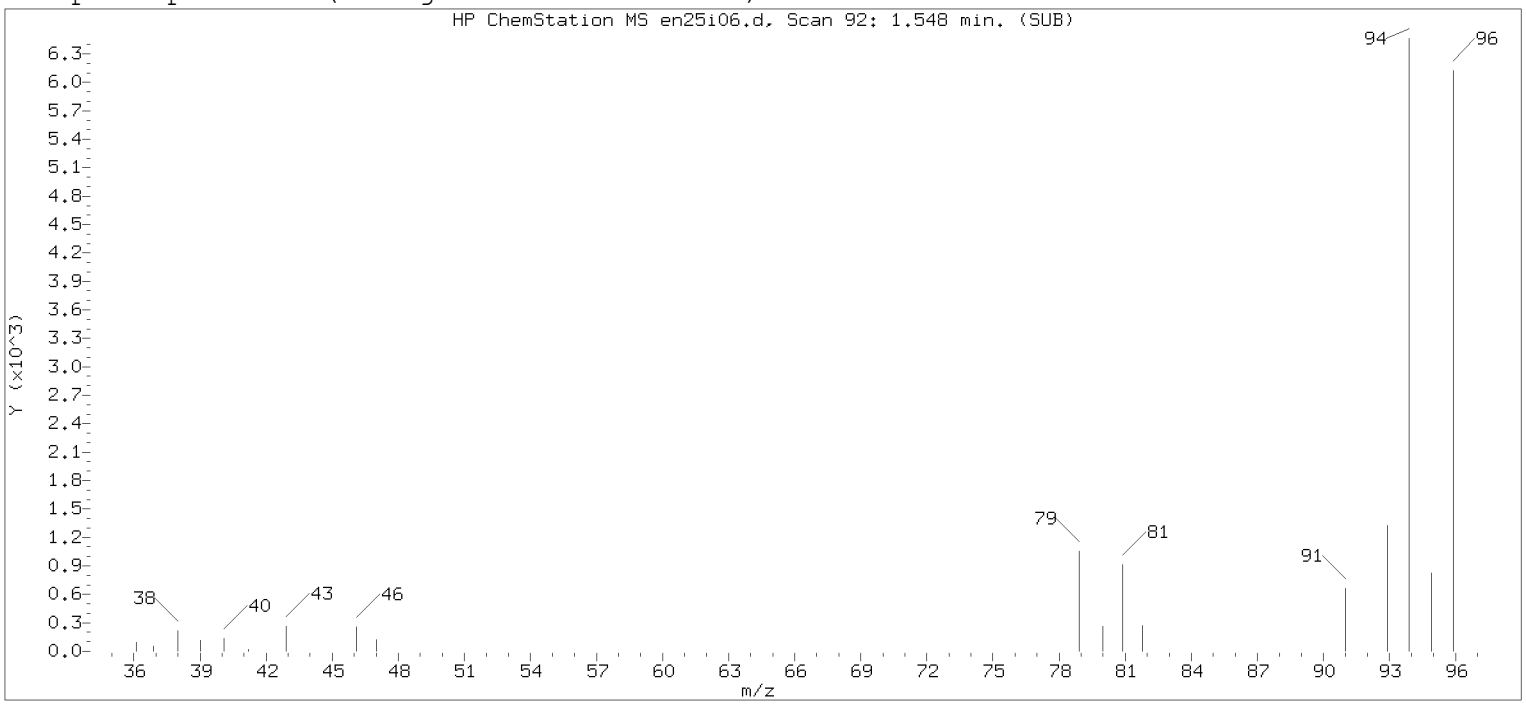
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 94
Retention Time (minutes): 1.560
Quant Ion : 94.00
Area (flag) : 16741M
On-Column Amount (ng) : 3.9538
Integration start scan : 80 Integration stop scan: 112
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

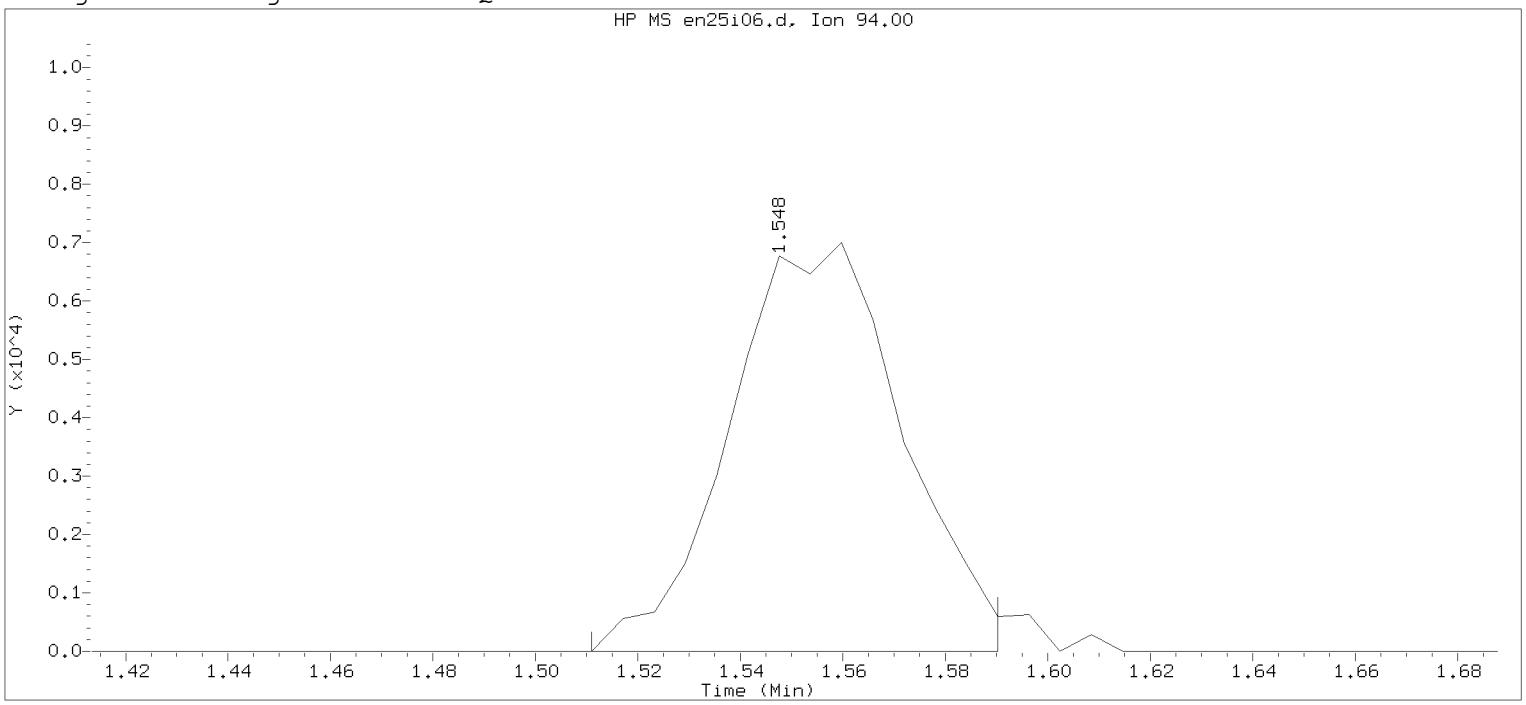
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 09:53.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:25.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i06.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:20 Analyst ID: KAS02648

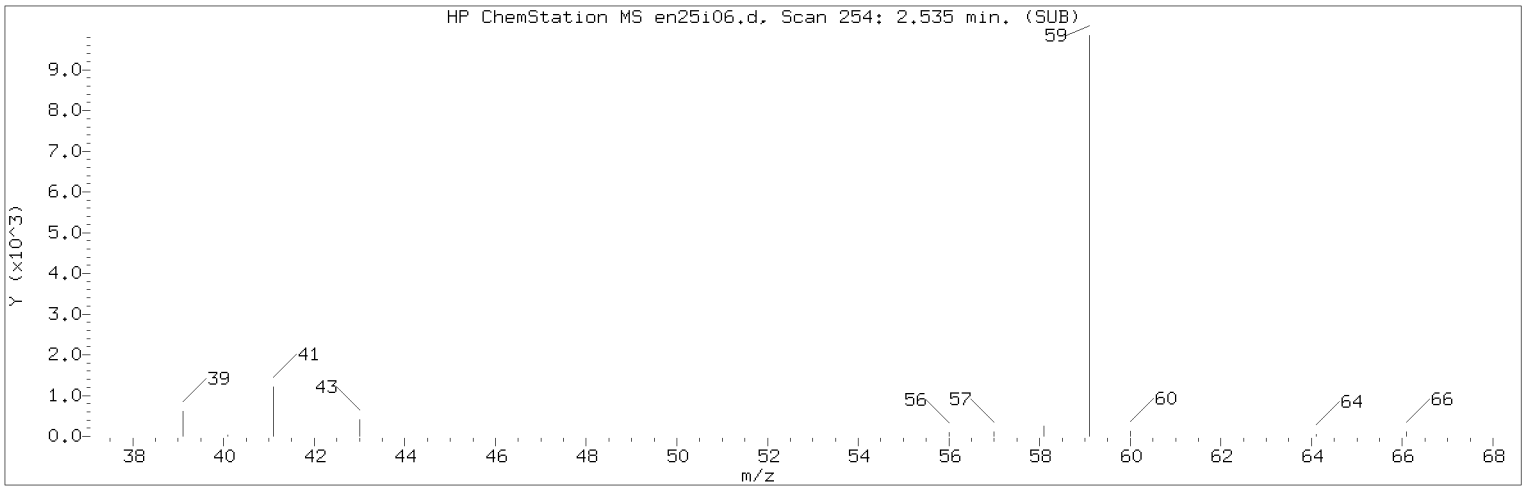
Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 16:36
Date, time and analyst ID of latest file update: 25-Nov-2019 16:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

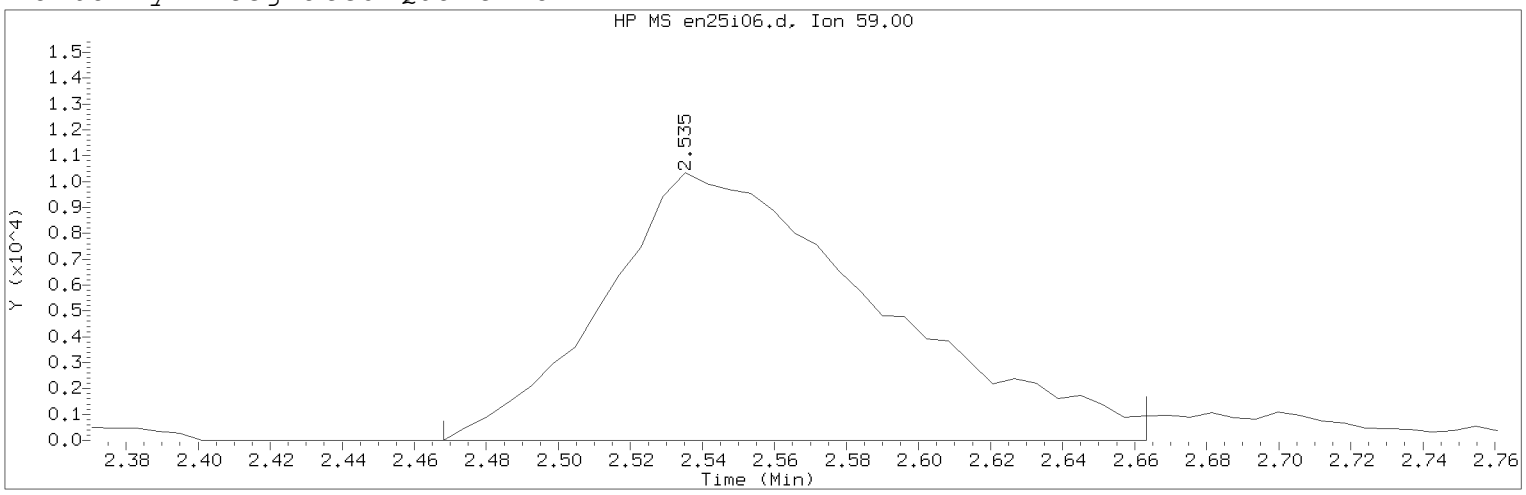
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 92
Retention Time (minutes): 1.548
Quant Ion : 94.00
Area : 16298
On-column Amount (ng) : 3.8501
Integration start scan : 85 Integration stop scan: 98
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 09:53.
Target 3.5 esignature user: JMLong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i06.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:20 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 09:35
Date, time and analyst ID of latest file update: 26-Nov-2019 09:35 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

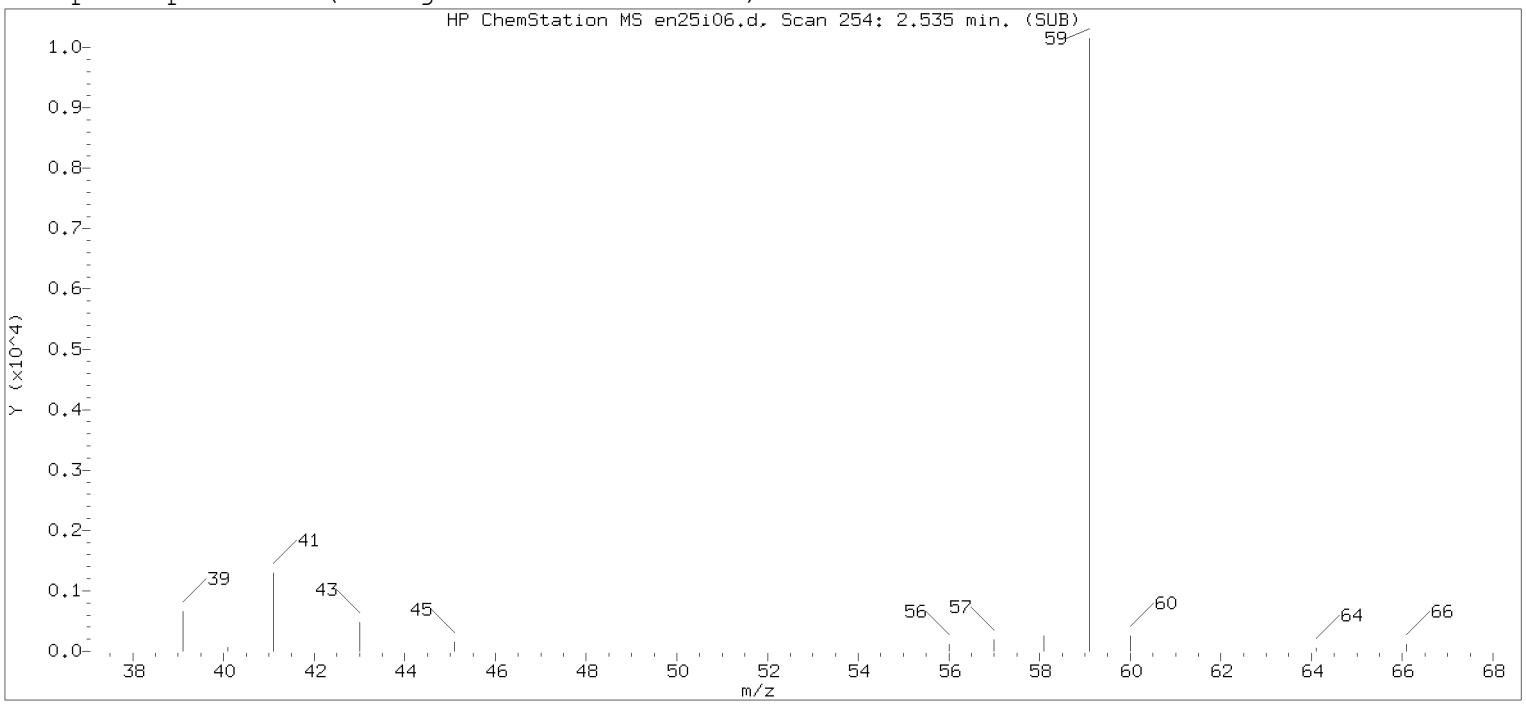
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 254
Retention Time (minutes): 2.535
Quant Ion : 59.00
Area (flag) : 54799M
On-Column Amount (ng) : 76.8440
Integration start scan : 242 Integration stop scan: 274
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

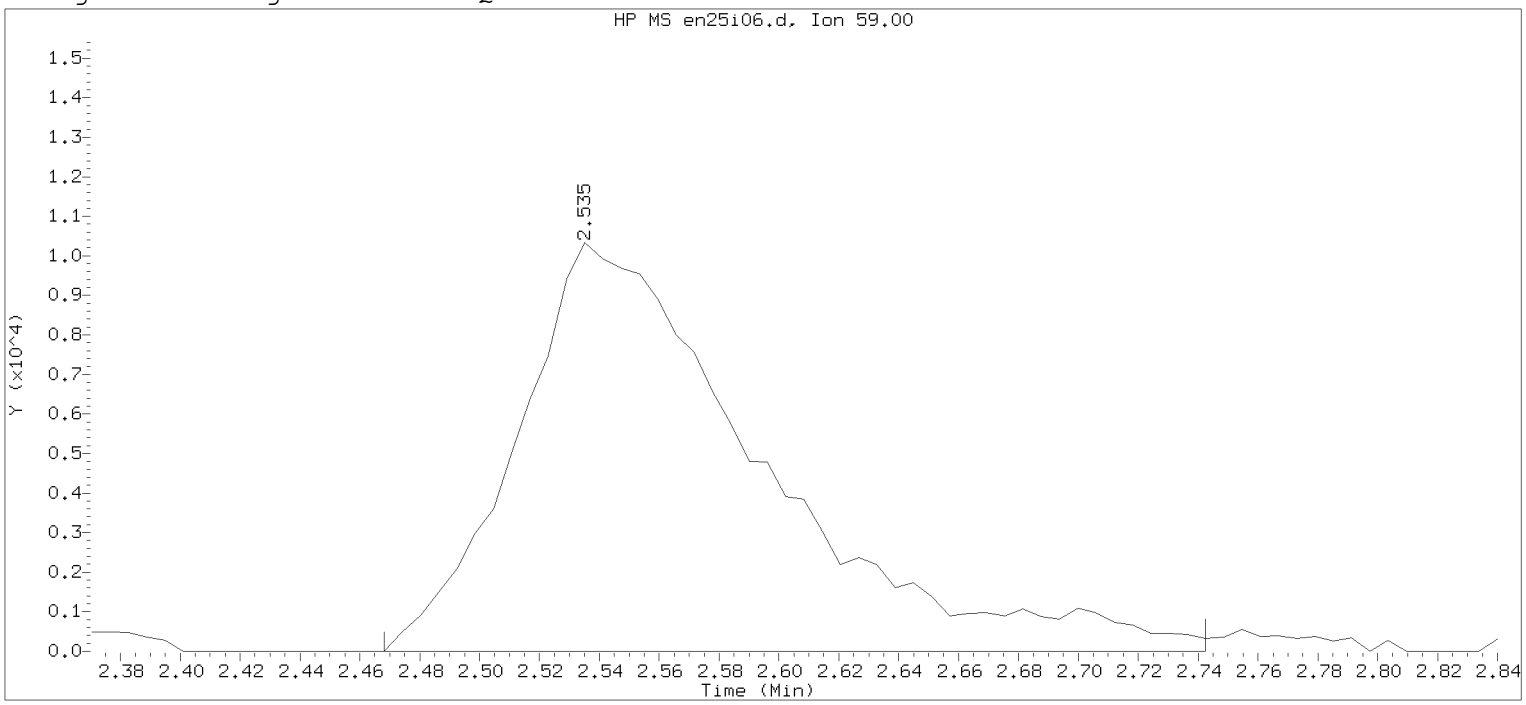
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 09:53.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:25.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i06.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:20 Analyst ID: KAS02648

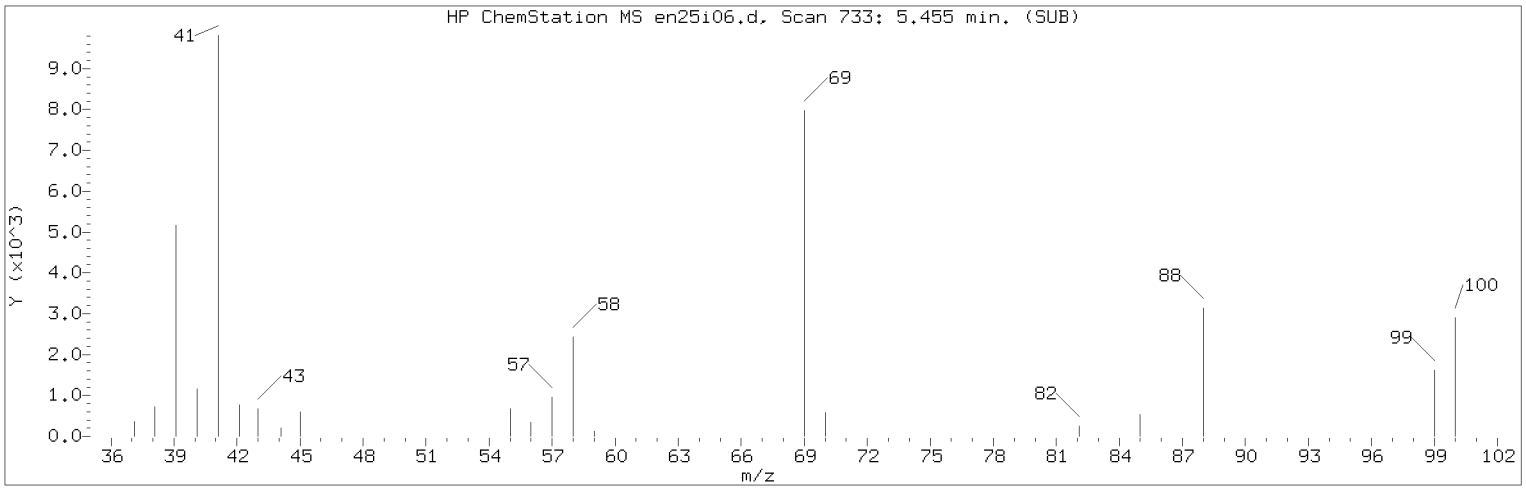
Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 16:36
Date, time and analyst ID of latest file update: 25-Nov-2019 16:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

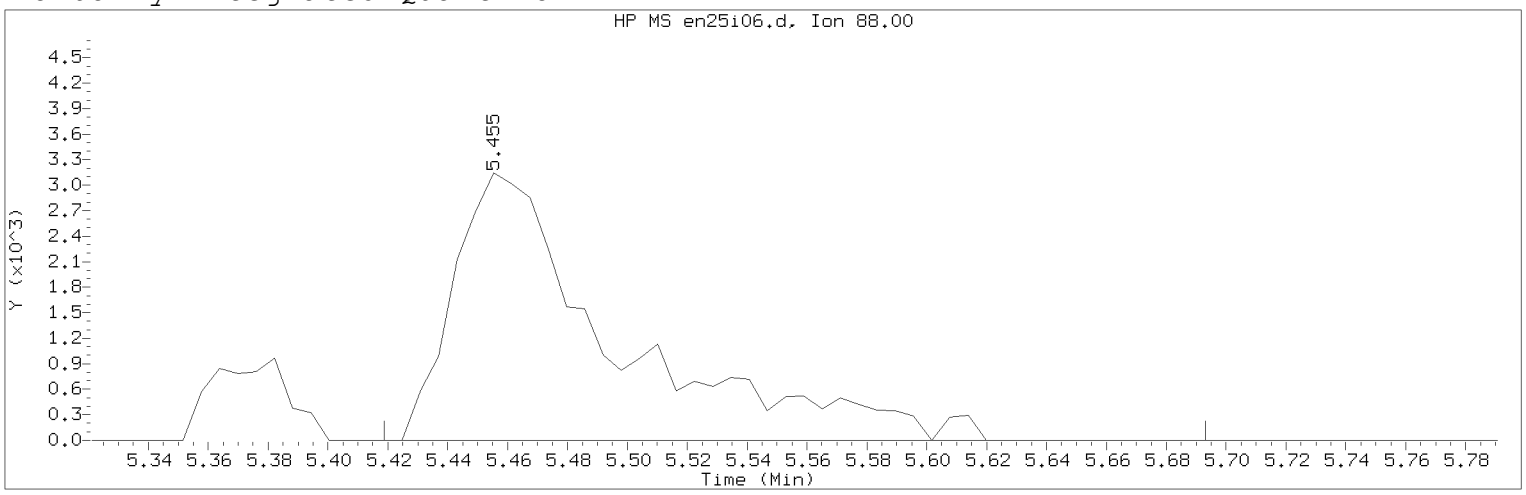
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 254
Retention Time (minutes): 2.535
Quant Ion : 59.00
Area : 58301
On-column Amount (ng) : 79.1748
Integration start scan : 242 Integration stop scan: 287
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 09:53.
Target 3.5 esignature user ID: jmaa0183

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i06.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:20 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 09:35
Date, time and analyst ID of latest file update: 26-Nov-2019 09:35 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

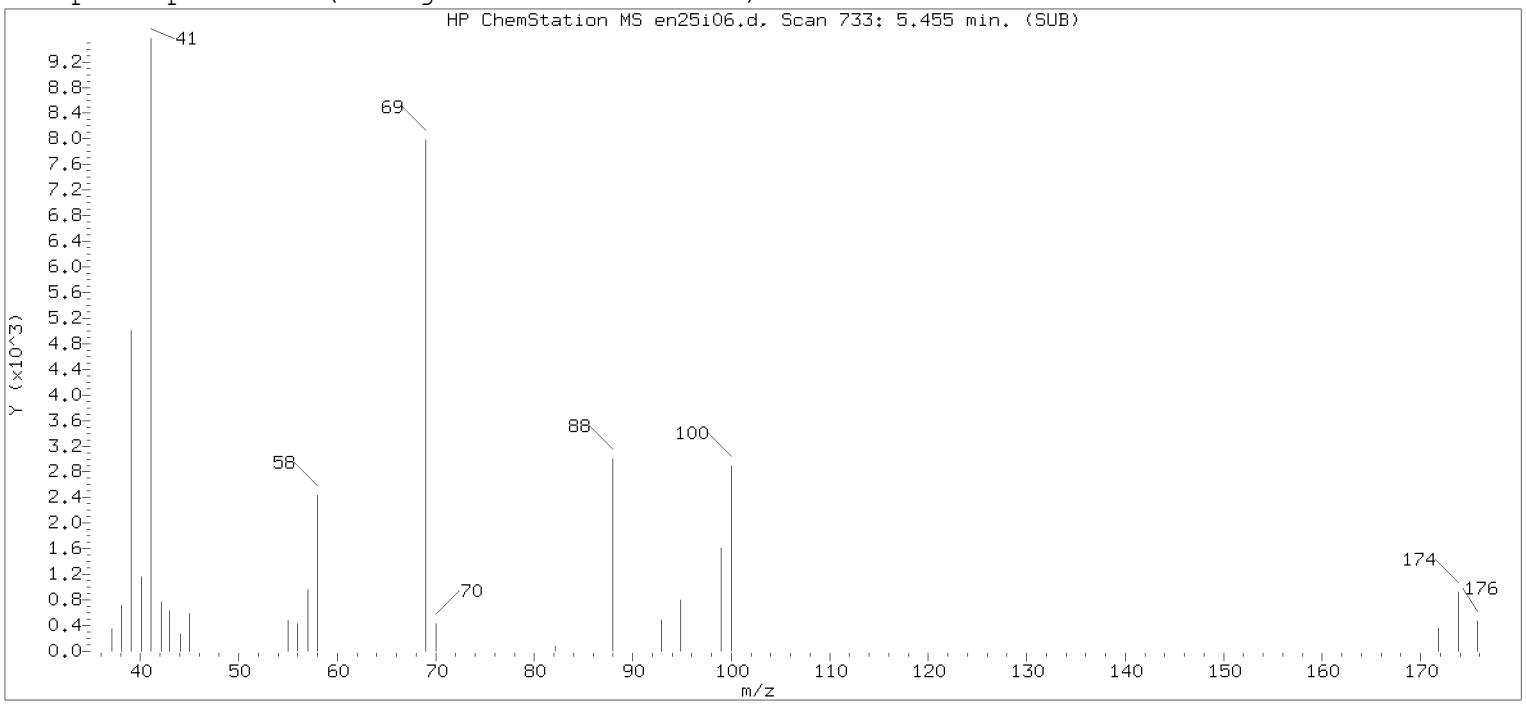
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 733
Retention Time (minutes): 5.455
Quant Ion : 88.00
Area (flag) : 11801M
On-Column Amount (ng) : 184.7078
Integration start scan : 726 Integration stop scan: 771
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

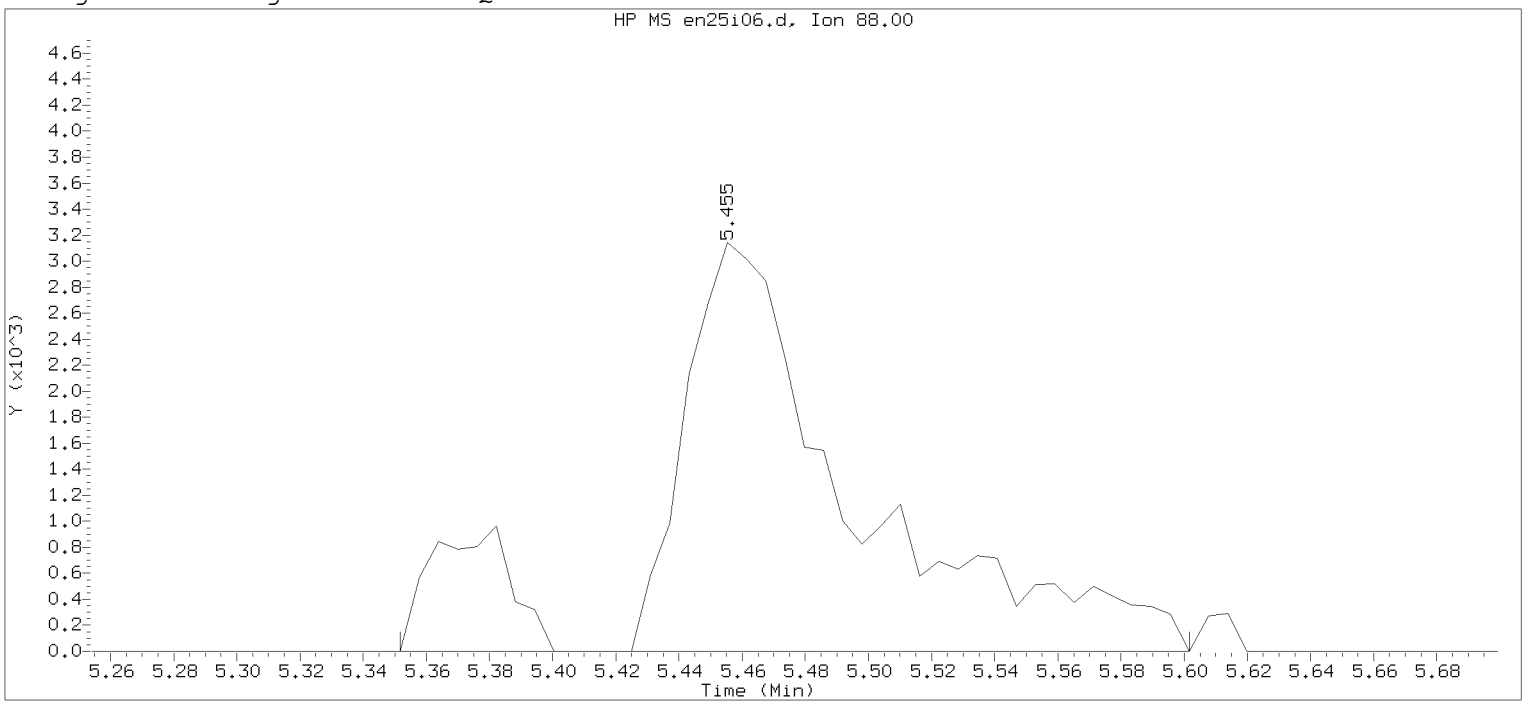
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 09:53.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:25.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i06.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:20 Analyst ID: KAS02648

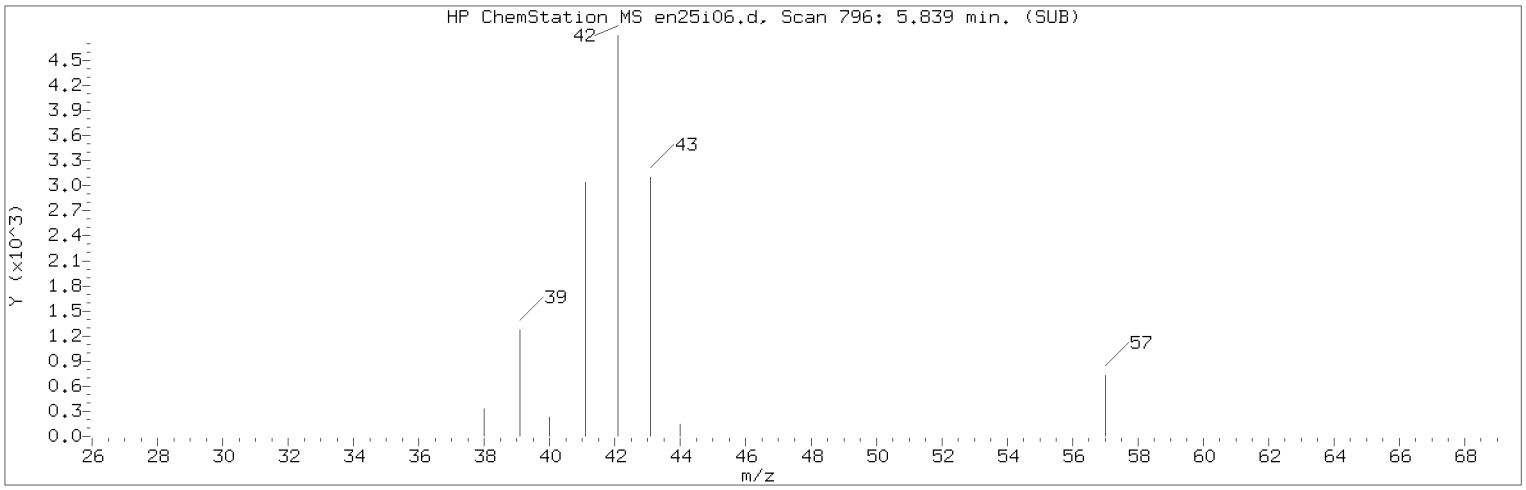
Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 16:36
Date, time and analyst ID of latest file update: 25-Nov-2019 16:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

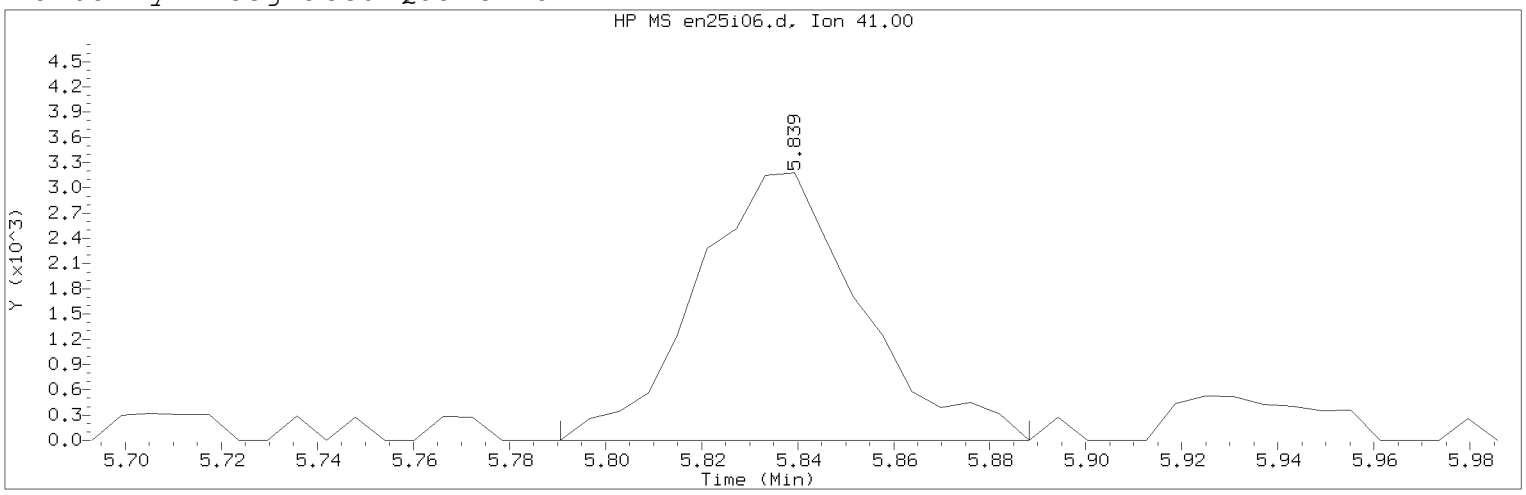
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 733
Retention Time (minutes): 5.455
Quant Ion : 88.00
Area : 13302
On-column Amount (ng) : 151.8018
Integration start scan : 715 Integration stop scan: 756
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 09:53.
Target 3.5 esignature user: JMLong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i06.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:20 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 09:35
Date, time and analyst ID of latest file update: 26-Nov-2019 09:35 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

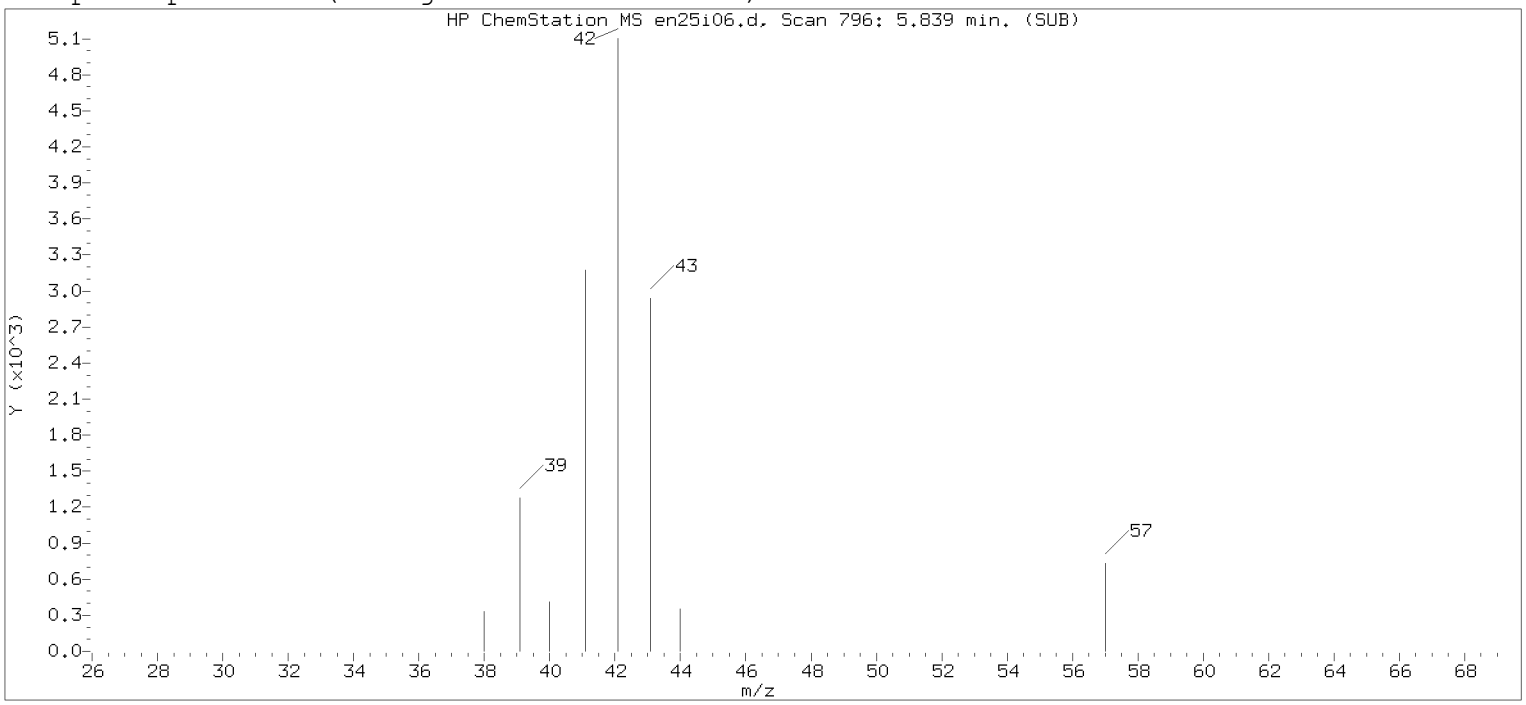
Compound Number : 80
Compound Name : 2-Nitropropane
Scan Number : 796
Retention Time (minutes): 5.839
Quant Ion : 41.00
Area (flag) : 7555M
On-Column Amount (ng) : 7.1570
Integration start scan : 787 Integration stop scan: 803
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

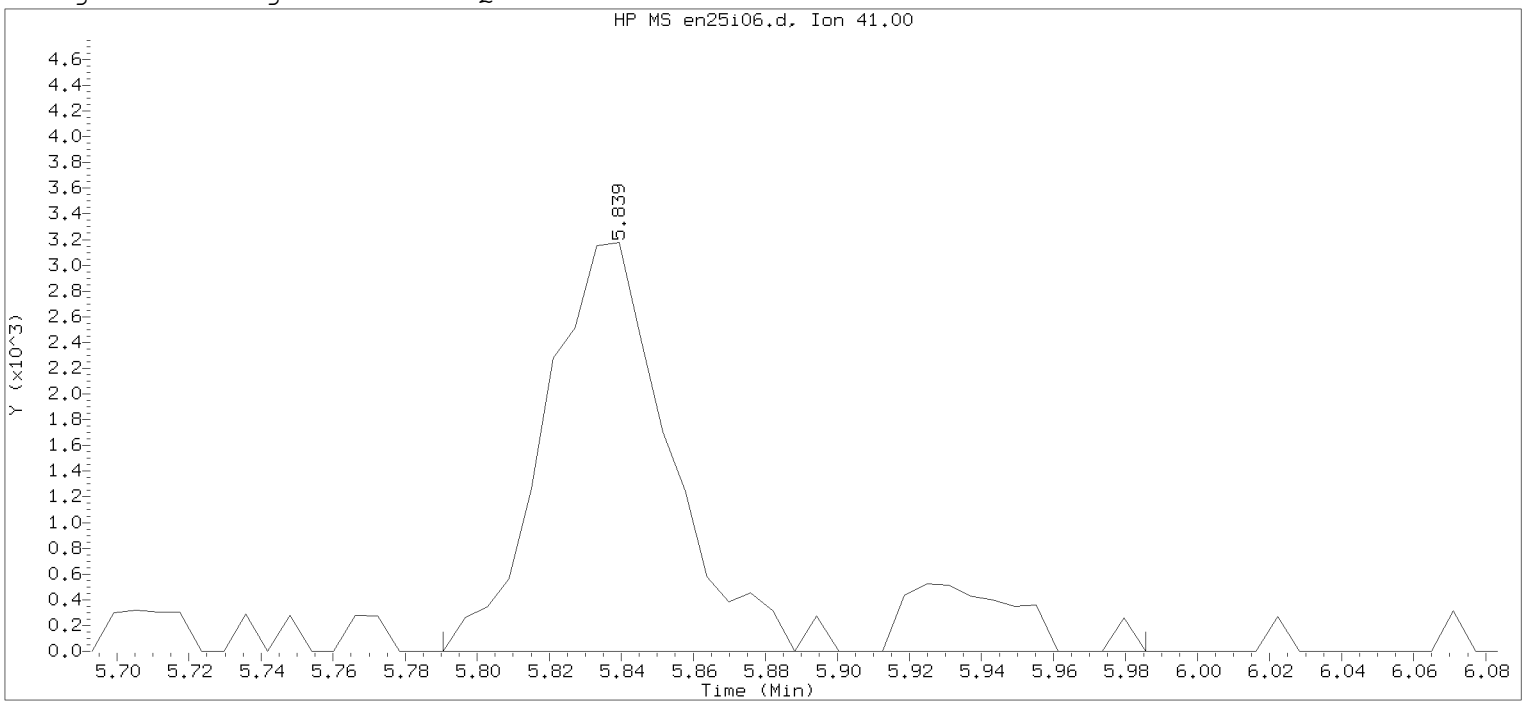
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 09:53.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:25.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i06.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:20 Analyst ID: KAS02648

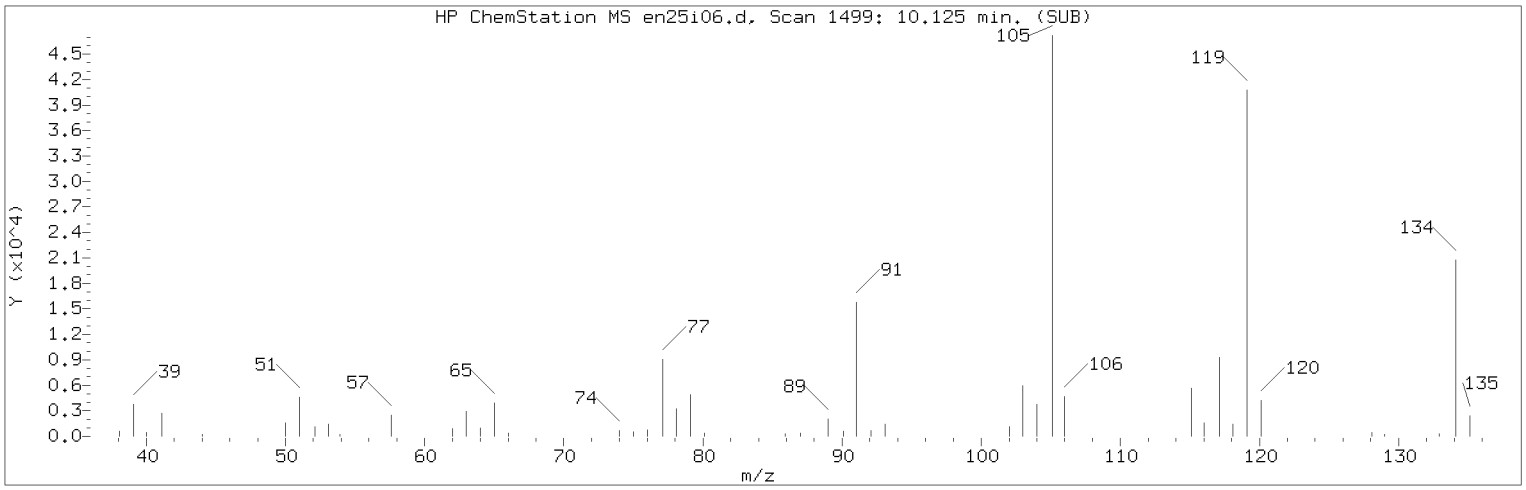
Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 16:36
Date, time and analyst ID of latest file update: 25-Nov-2019 16:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

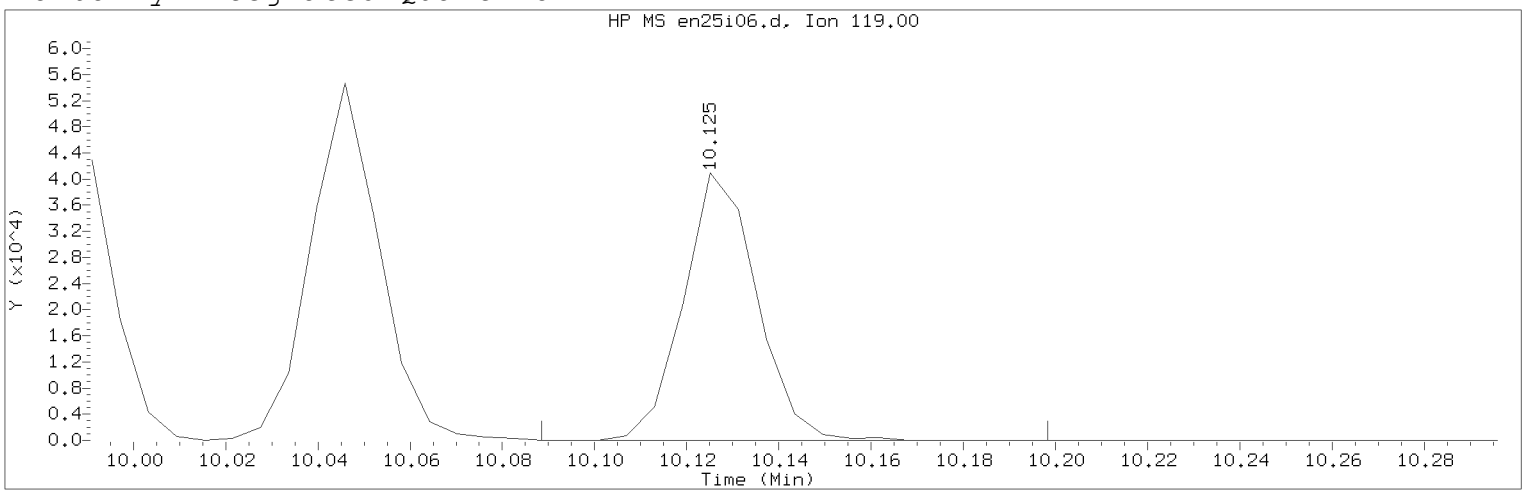
Compound Number : 80
Compound Name : 2-Nitropropane
Scan Number : 796
Retention Time (minutes): 5.839
Quant Ion : 41.00
Area : 8852
On-column Amount (ng) : 8.7785
Integration start scan : 787 Integration stop scan: 819
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 09:53.
Target 3.5 esignature user ID: jmaa0016

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i06.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:20 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 09:35
Date, time and analyst ID of latest file update: 26-Nov-2019 09:35 jml01693

Sample Name: VSTD004 Lab Sample ID: VSTD004

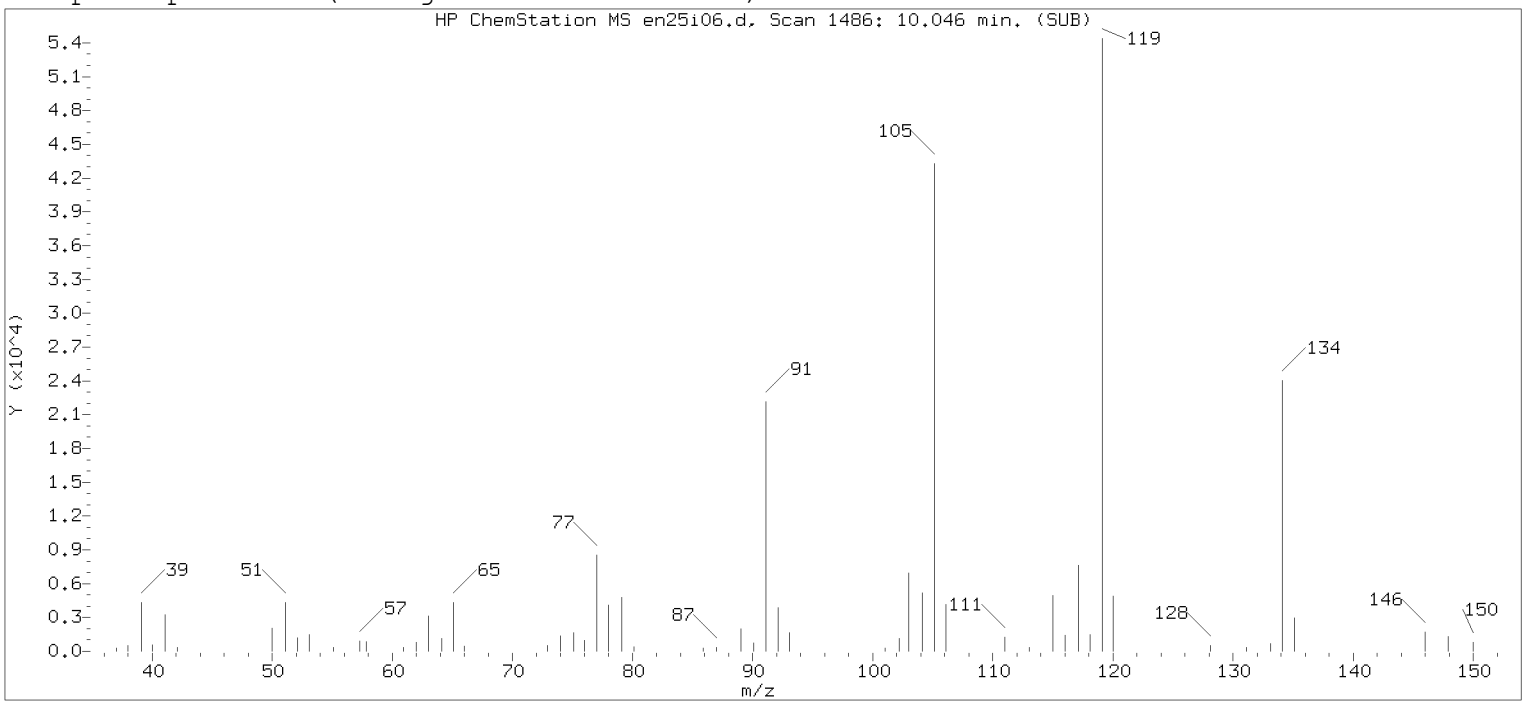
Compound Number : 141
Compound Name : 1,2-Diethylbenzene
Scan Number : 1499
Retention Time (minutes): 10.125
Quant Ion : 119.00
Area (flag) : 45236M
On-Column Amount (ng) : 3.7089
Integration start scan : 1492 Integration stop scan: 1510
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

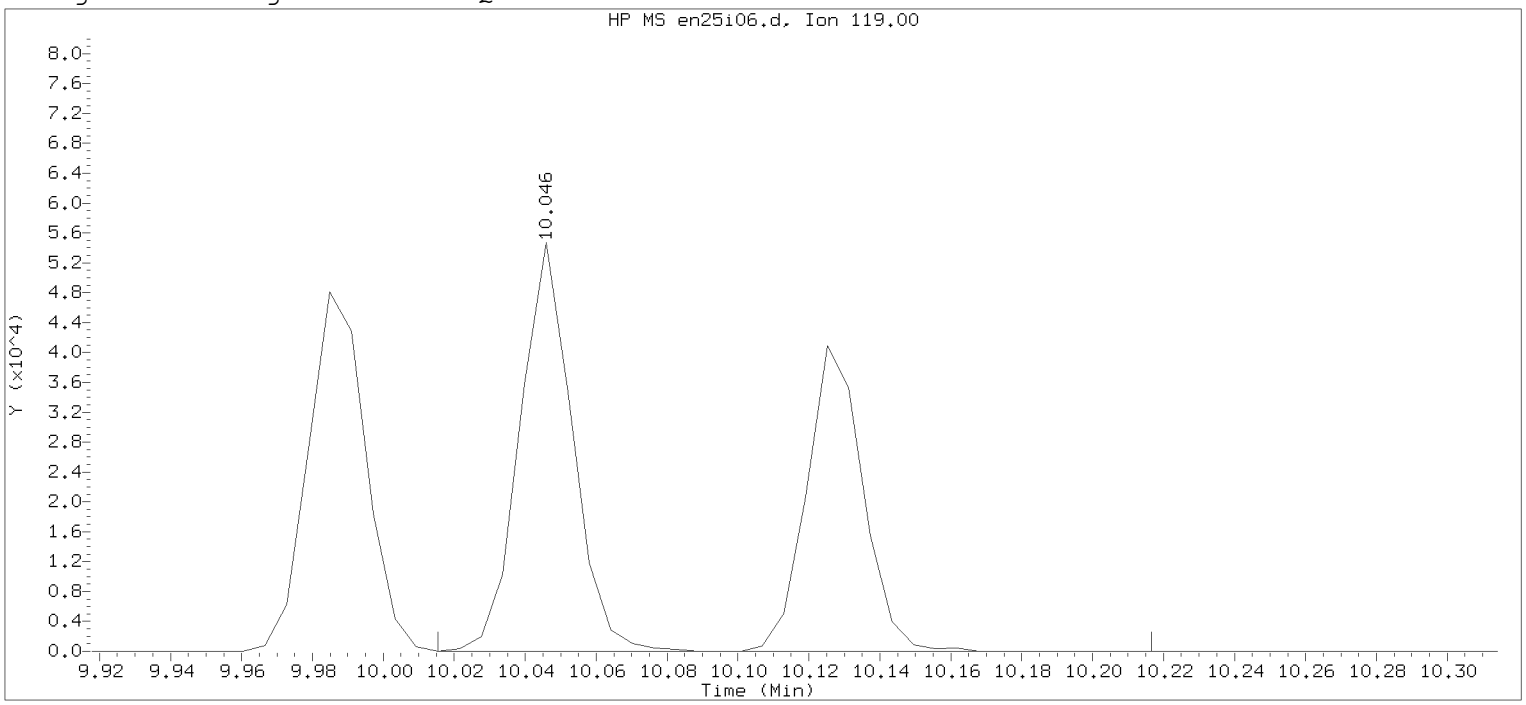
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 09:53.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:25.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



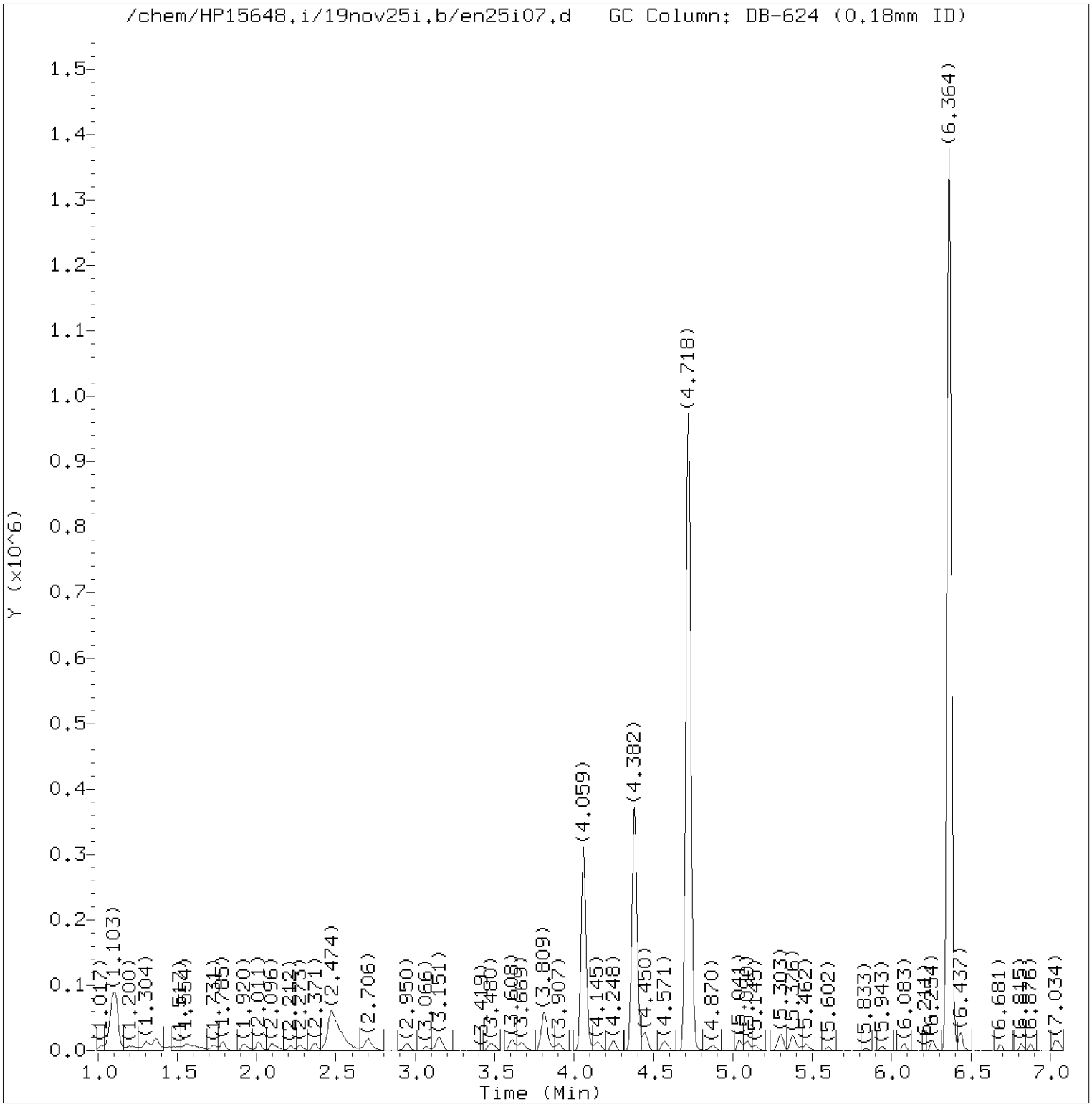
Data File: /chem/HP15648.i/19nov25i.b/en25i06.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:20 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 16:36
Date, time and analyst ID of latest file update: 25-Nov-2019 16:36 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 141
Compound Name : 1,2-Diethylbenzene
Scan Number : 1486
Retention Time (minutes): 10.046
Quant Ion : 119.00
Area : 101646
On-column Amount (ng) : 7.1926
Integration start scan : 1480 Integration stop scan: 1513
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 09:53.
Target 3.5 esignature user: JMLong



Total Ion Chromatogram (TIC)

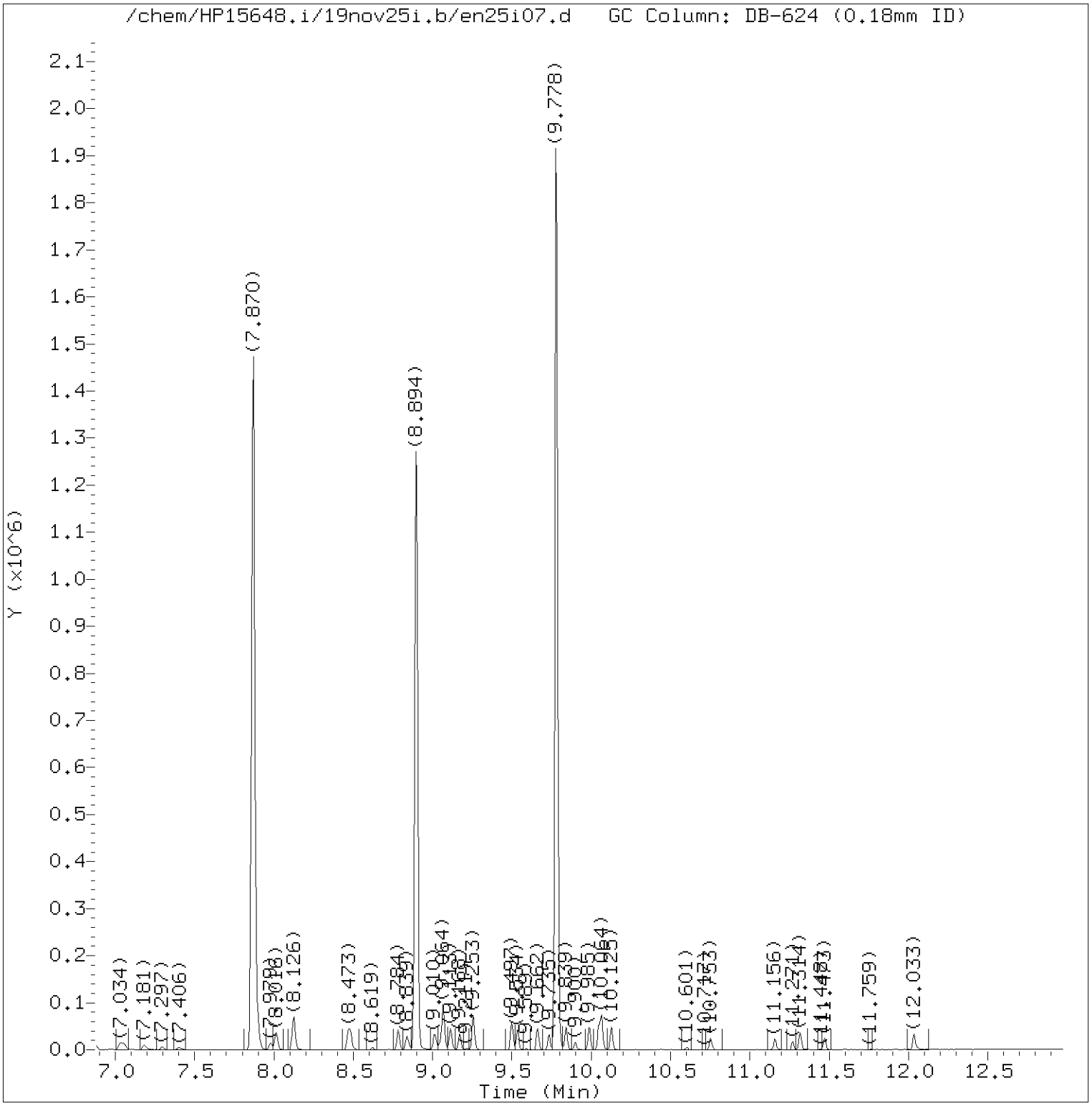
Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i07.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:23 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i07.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:23 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i07.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:23 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.200	85	5820	0.797
4) Chloromethane	(2)	1.304	50	8662	0.964
5) 1,3-Butadiene	(2)	1.353	39	7497M	1.142
6) Vinyl Chloride	(2)	1.371	62	6998	0.873
8) Bromomethane	(2)	1.560	94	3862M	0.904
9) Chloroethane	(2)	1.603	64	3884	0.909
10) Dichlorofluoromethane	(2)	1.731	67	9383	0.918
12) Trichlorofluoromethane	(2)	1.749	101	6893	0.882
11) n-Pentane	(2)	1.792	43	8591M	0.888
14) Ethyl ether	(2)	1.926	59	4435	0.870
15) Freon 123a	(2)	1.932	67	5665	0.918
16) Acrolein	(1)	2.011	56	15408	9.615
17) 1,1-Dichloroethene	(2)	2.096	96	3501	0.889
17) 1,1-Dichloroethene	(2)	2.090	63	2004	0.903
18) Acetone	(1)	2.127	58	959	1.426
19) Freon 113	(2)	2.133	101	3654	0.801
22) Methyl Iodide	(2)	2.212	142	6590	0.949
21) 2-Propanol	(1)	2.224	45	8969	19.117
23) Carbon Disulfide	(2)	2.273	76	13936	0.965
25) Allyl Chloride	(2)	2.358	41	8634	0.967
27) Methyl Acetate	(2)	2.377	43	5164	1.017
28) Methylene Chloride	(2)	2.468	84	4632	0.966
29)*t-Butyl alcohol-d10	(1)	2.480	65	189786	250.000
30) t-Butyl alcohol	(1)	2.541	59	14881	20.509
31) Acrylonitrile	(2)	2.675	53	2533	0.862
32) trans-1,2-Dichloroethene	(2)	2.700	96	4492	0.984
33) Methyl Tertiary Butyl Ether	(2)	2.706	73	14595	0.941
34) n-Hexane	(2)	2.950	57	7578	0.810
36) 1,1-Dichloroethane	(2)	3.066	63	9336	0.960
38) di-Isopropyl ether	(2)	3.139	45	19167	0.957
39) 2-Chloro-1,3-butadiene	(2)	3.157	53	7597	0.842
40) Ethyl t-butyl ether	(2)	3.474	59	16960	0.955
42) cis-1,2-Dichloroethene	(2)	3.608	96	4837	0.926
45) 2,2-Dichloropropane	(2)	3.608	77	6375	0.887
44) 2-Butanone	(2)	3.620	43	6392	1.714
43) 1,2-Dichloroethene (Total)	(2)		96	9329	1.909
47) Propionitrile	(1)	3.663	54	20615	18.869
48) Methacrylonitrile	(2)	3.809	67	26968	9.221

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i07.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:23 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.834	128	2115	0.898
50) Tetrahydrofuran	(1)	3.876	71	1517	1.678
51) Chloroform	(2)	3.907	83	7895	0.950
52)$Dibromofluoromethane	(2)	4.059	113	217446	49.876
52)$Dibromofluoromethane	(2)	4.059	111	225437	49.981
53) 1,1,1-Trichloroethane	(2)	4.096	97	6244	0.900
54) Cyclohexane	(2)	4.145	56	10140	0.879
54) Cyclohexane	(2)	4.145	84	7950	0.888
54) Cyclohexane	(2)	4.151	69	2972	0.881
55) 1,1-Dichloropropene	(2)	4.248	75	6761	0.916
56) Carbon Tetrachloride	(2)	4.248	117	4521M	0.840
58) Isobutyl Alcohol	(1)	4.370	41	11027	46.382
57)$1,2-Dichloroethane-d4	(2)	4.382	102	59086	50.847
57)$1,2-Dichloroethane-d4	(2)	4.382	65	292923	50.363
57)$1,2-Dichloroethane-d4	(2)	4.382	104	36676	49.769
60) Benzene	(2)	4.443	78	20357	0.931
61) 1,2-Dichloroethane	(2)	4.456	62	7606	1.117
61) 1,2-Dichloroethane	(2)	4.456	98	554	0.965
65) t-Amyl methyl ether	(2)	4.565	73	16444	0.992
66)*Fluorobenzene	(2)	4.718	96	1024915	50.000
67) n-Heptane	(2)	4.730	43	9500	0.896
69) n-Butanol	(1)	5.041	56	15731	79.329
71) Trichloroethene	(2)	5.090	95	4474	0.880
73) Methylcyclohexane	(2)	5.297	83	9019	0.830
73) Methylcyclohexane	(2)	5.303	98	3730	0.784
74) 1,2-Dichloropropane	(2)	5.303	63	5015	0.877
75) Dibromomethane	(2)	5.431	93	2649	0.921
76) 1,4-Dioxane	(1)	5.462	88	2352	36.180
77) Methyl Methacrylate	(2)	5.468	69	3823	0.841
79) Bromodichloromethane	(2)	5.602	83	5248	0.891
80) 2-Nitropropane	(2)	5.833	41	2134	2.003
81) 2-Chloroethyl Vinyl Ether	(2)	5.943	63	3553	0.835
82) cis-1,3-Dichloropropene	(2)	6.083	75	7242	0.875
83) 4-Methyl-2-pentanone	(2)	6.260	43	13331	1.706
84)$Toluene-d8	(3)	6.364	98	1009197	49.817
84)$Toluene-d8	(3)	6.364	100	654485	50.320
89) Toluene	(3)	6.437	92	12436	0.939
90) trans-1,3-Dichloropropene	(3)	6.681	75	6697	0.915

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i07.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:23 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropene (total)	(3)		100	13939	1.790
92) Ethyl Methacrylate	(3)	6.815	69	6645	0.821
93) 1,1,2-Trichloroethane	(3)	6.882	97	3706	0.887
94) Tetrachloroethene	(3)	7.028	166	4219	0.856
95) 1,3-Dichloropropane	(3)	7.053	76	7454	0.926
97) 2-Hexanone	(3)	7.181	43	8872	1.623
98) Dibromochloromethane	(3)	7.297	129	3176	0.823
100) 1,2-Dibromoethane	(3)	7.406	107	4062	0.943
101)*Chlorobenzene-d5	(3)	7.870	117	713562	50.000
103) Chlorobenzene	(3)	7.900	112	13161	0.954
102) 1-Chlorohexane	(3)	7.900	91	7908	1.012
104) 1,1,1,2-Tetrachloroethane	(3)	7.979	131	3200	0.791
105) Ethylbenzene	(3)	8.016	91	23494	0.907
107) m+p-Xylene	(3)	8.126	106	17923	1.846
108) o-Xylene	(3)	8.467	106	8190	0.868
109) Xylene (Total)	(3)		106	26113	2.714
110) Styrene	(3)	8.485	104	12769	0.836
111) Bromoform	(3)	8.619	173	1857	0.787
112) Isopropylbenzene	(3)	8.784	105	22764	0.889
113) Cyclohexanone	(1)	8.839	55	11287M	43.991
115)$4-Bromofluorobenzene	(3)	8.894	95	383645	50.254
115)$4-Bromofluorobenzene	(3)	8.900	174	252019	49.427
116) Bromobenzene	(4)	9.016	156	4458	0.873
117) 1,1,2,2-Tetrachloroethane	(4)	9.022	83	6323	0.929
118) 1,2,3-Trichloropropane	(4)	9.046	110	1768	0.929
119) trans-1,4-Dichloro-2-butene	(4)	9.064	53	17049	8.041
120) n-Propylbenzene	(4)	9.113	91	27200	0.872
121) 2-Chlorotoluene	(4)	9.174	126	4836	0.854
123) 1,3,5-Trimethylbenzene	(4)	9.253	105	19190	0.882
122) 4-Chlorotoluene	(4)	9.260	126	5231	0.901
125) tert-Butylbenzene	(4)	9.497	134	3826	0.827
126) Pentachloroethane	(4)	9.503	167	1916	0.752
127) 1,2,4-Trimethylbenzene	(4)	9.534	105	19285	0.858
128) sec-Butylbenzene	(4)	9.662	105	23703	0.830
130) 1,3-Dichlorobenzene	(4)	9.735	146	9951	0.953
131) p-Isopropyltoluene	(4)	9.772	119	19801	0.839
132)*1,4-Dichlorobenzene-d4	(4)	9.778	152	354105	50.000
134) 1,4-Dichlorobenzene	(4)	9.796	146	9944	0.949

M = Compound was manually integrated.
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on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25i07.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:23 jml01693

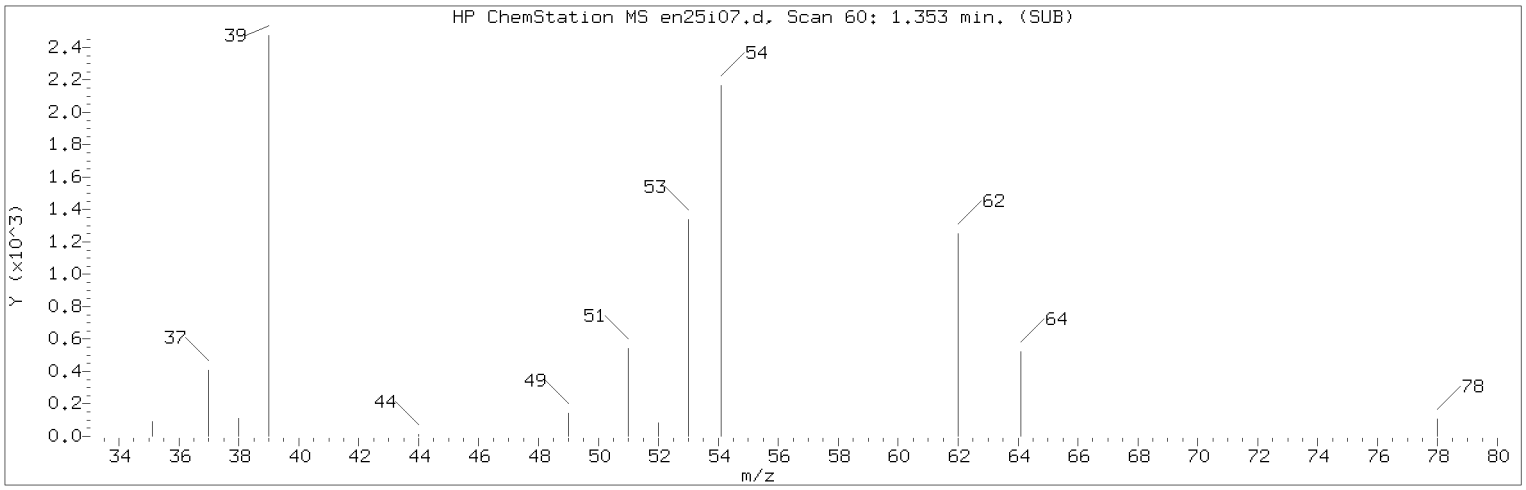
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	9.839	105	20068	0.868
136) Benzyl Chloride	(4)	9.900	91	9992	0.793
137) 1,3-Diethylbenzene	(4)	9.991	119	12221	0.830
138) 1,4-Diethylbenzene	(4)	10.046	119	13000	0.845
139) 1,2-Dichlorobenzene	(4)	10.064	146	9132	0.936
140) n-Butylbenzene	(4)	10.064	92	10713M	0.859
141) 1,2-Diethylbenzene	(4)	10.125	119	10843	0.880
142) Diethylbenzene (total)	(4)		100	36064	2.555
143) 1,2-Dibromo-3-chloropropane	(4)	10.601	75	1174	0.828
145) 1,3,5-Trichlorobenzene	(4)	10.753	180	6819	0.938
147) 1,2,4-Trichlorobenzene	(4)	11.156	180	5968	0.918
148) Hexachlorobutadiene	(4)	11.271	225	2291	0.855
149) Naphthalene	(4)	11.314	128	23090	1.022
150) 1,2,3-Trichlorobenzene	(4)	11.473	180	6514	1.043
151) 2-Methylnaphthalene	(4)	12.033	142	14665	1.066

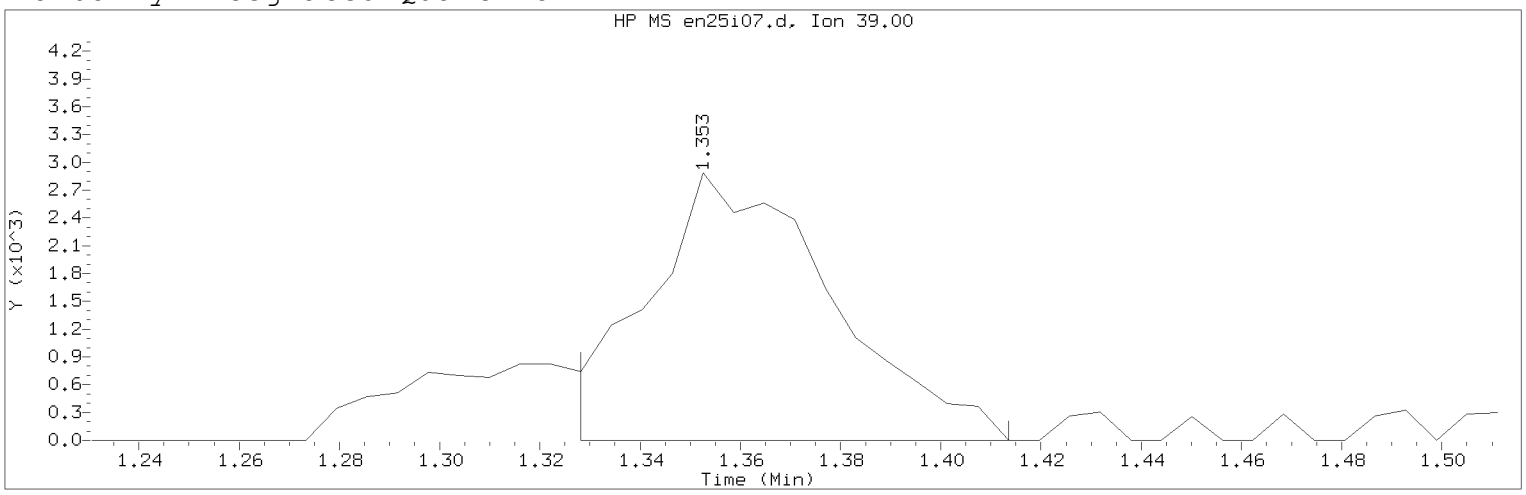
M = Compound was manually integrated.

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i07.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:23 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

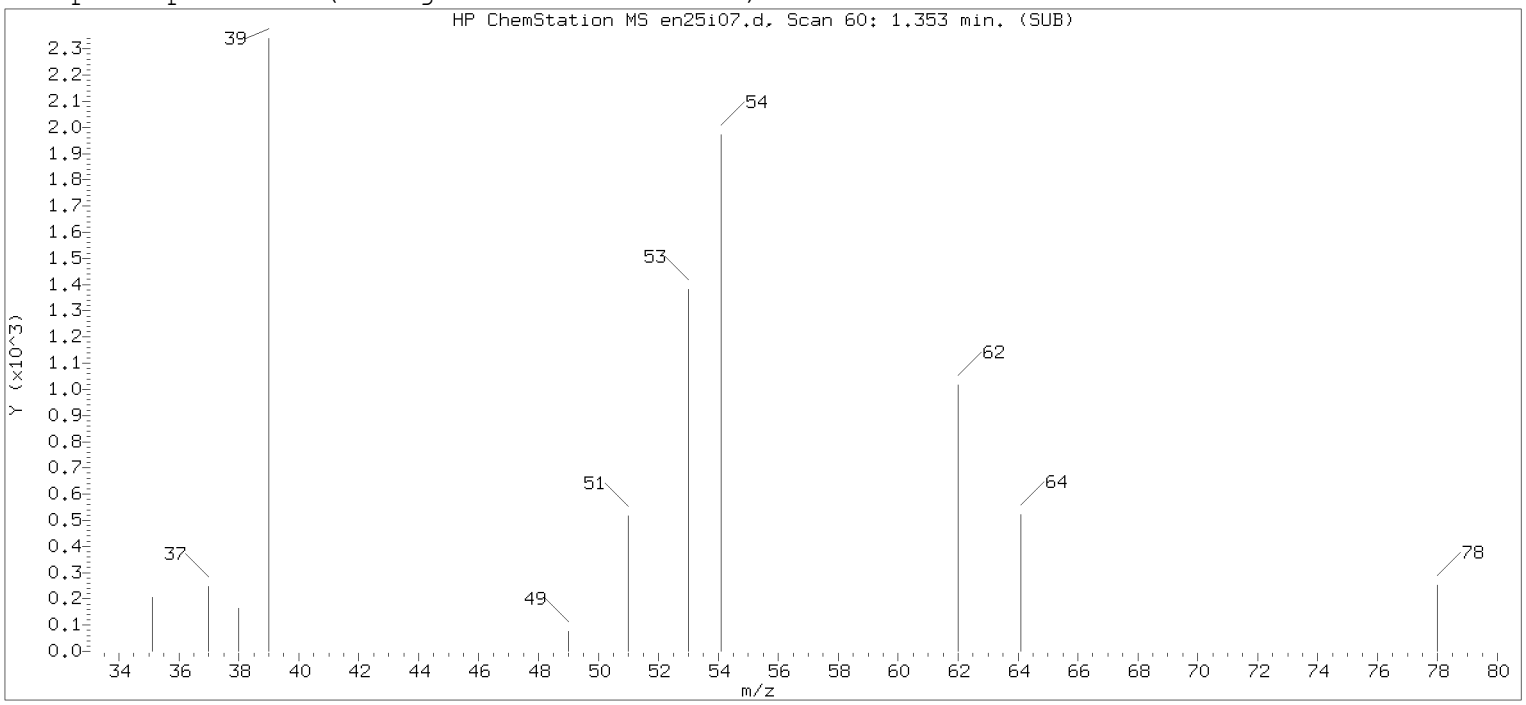
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 60
Retention Time (minutes): 1.353
Quant Ion : 39.00
Area (flag) : 7497M
On-Column Amount (ng) : 1.1425
Integration start scan : 55 Integration stop scan: 69
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

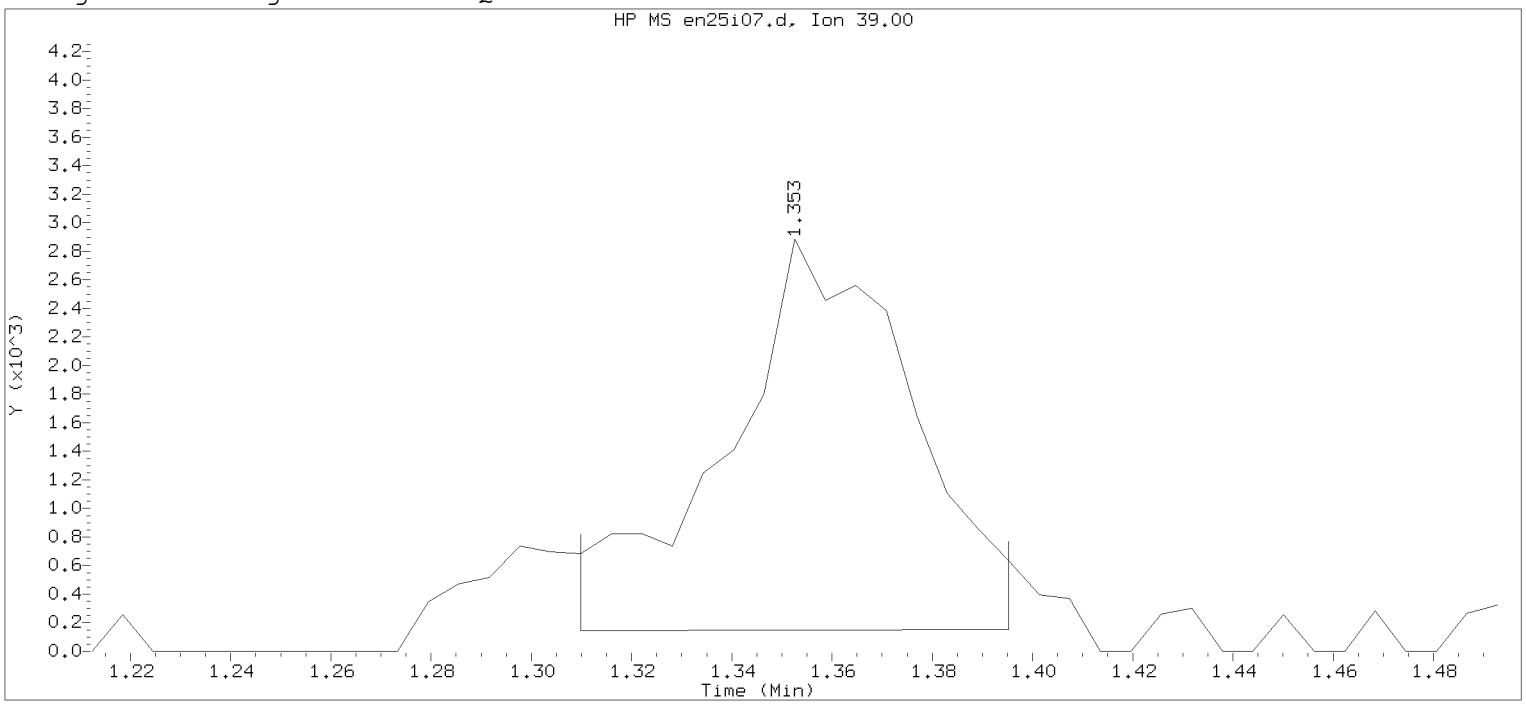
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:25.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i07.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:40 Analyst ID: KAS02648

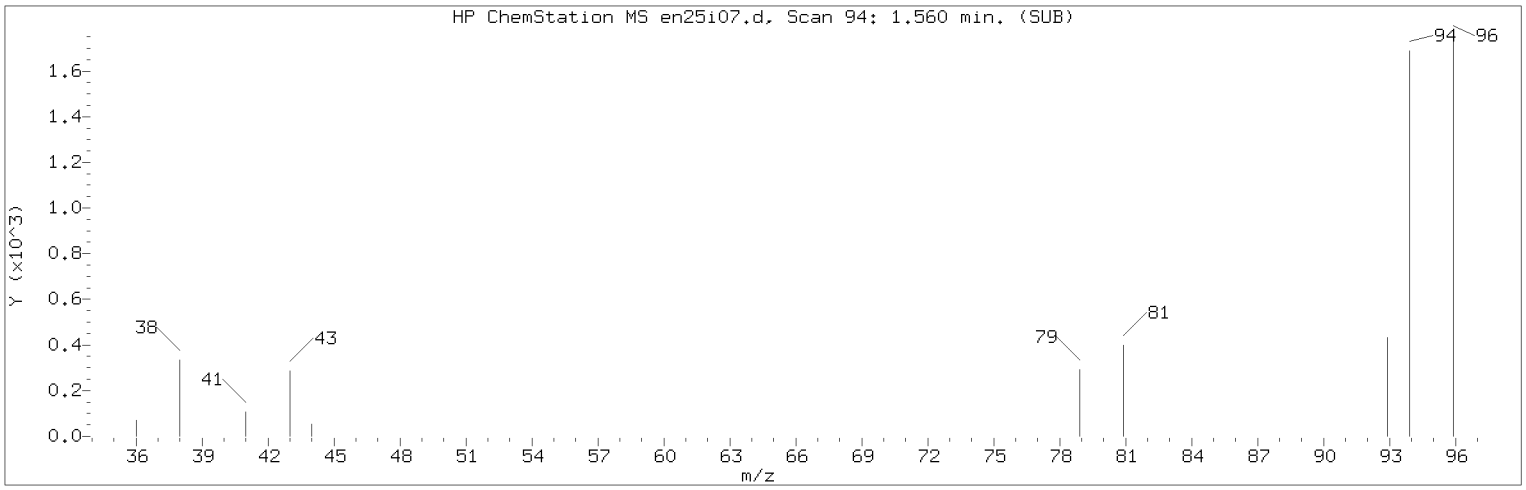
Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 16:57
Date, time and analyst ID of latest file update: 25-Nov-2019 16:57 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

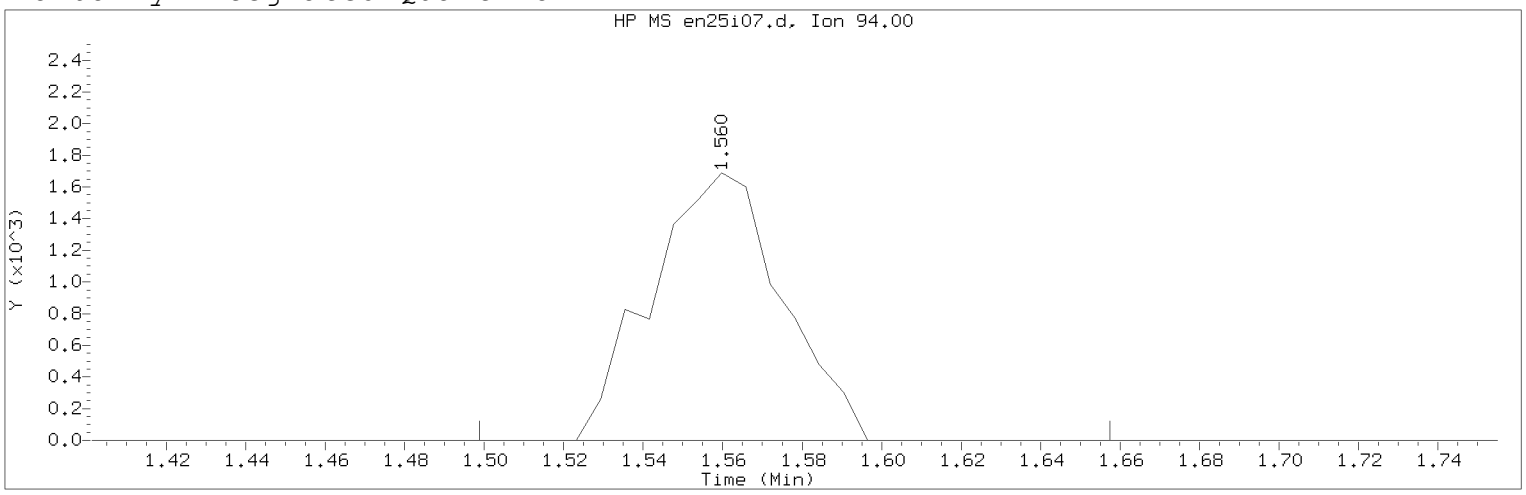
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 60
Retention Time (minutes): 1.353
Quant Ion : 39.00
Area : 7065
On-column Amount (ng) : 1.0947
Integration start scan : 52 Integration stop scan: 66
Y at integration start : 146 Y at integration end: 152

Digitally signed by Jason M. Long on 11/26/2019 at 10:24.
Target 3.5 esignature user: JMLong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i07.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:23 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

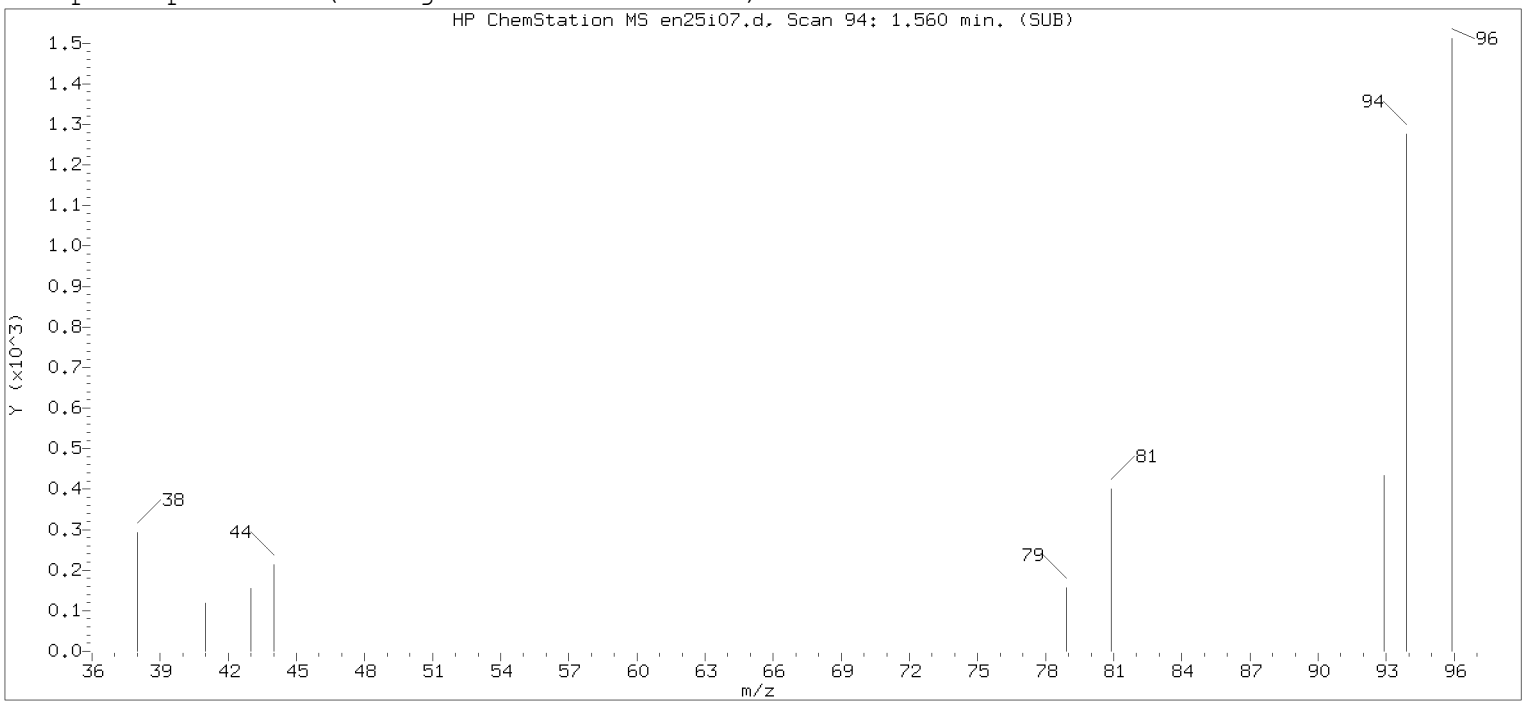
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 94
Retention Time (minutes): 1.560
Quant Ion : 94.00
Area (flag) : 3862M
On-Column Amount (ng) : 0.9039
Integration start scan : 83 Integration stop scan: 109
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

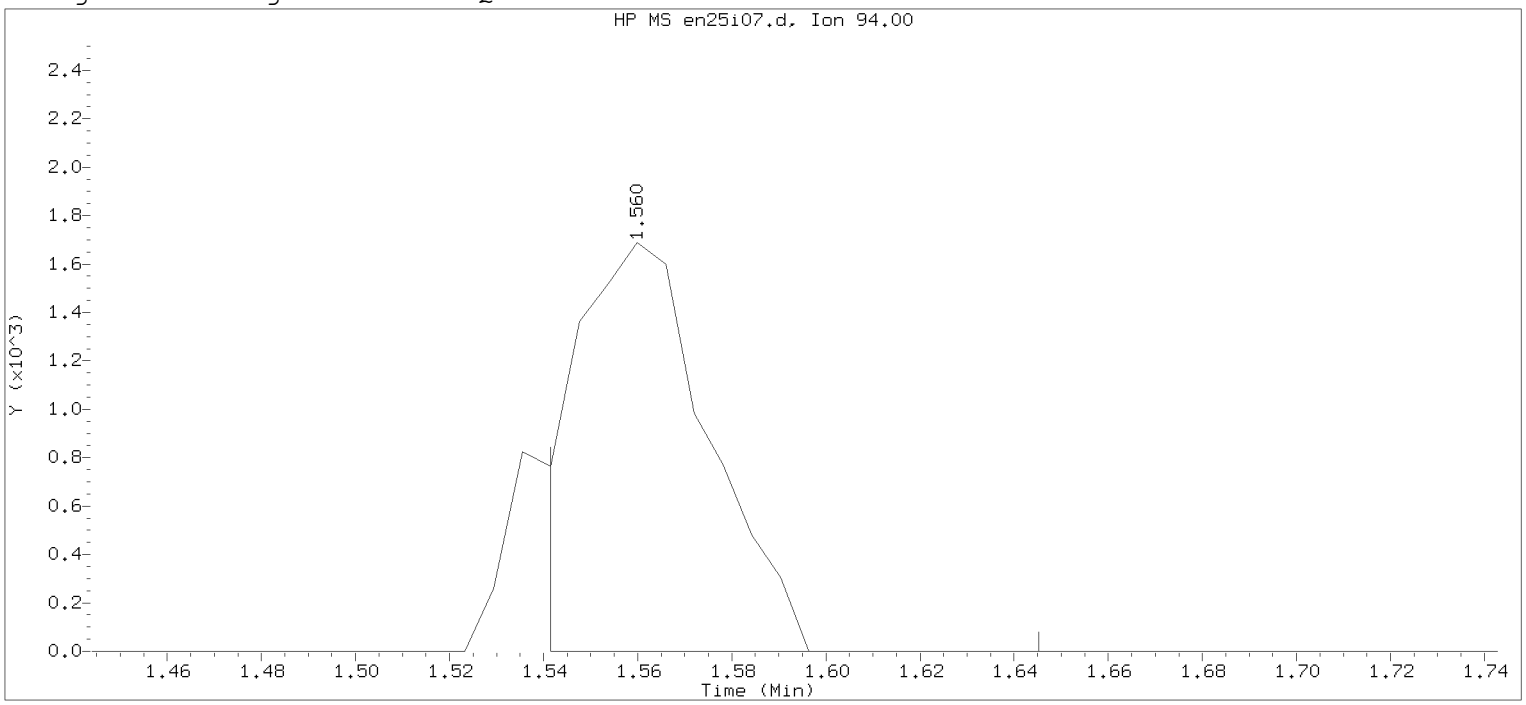
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:25.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i07.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 16:57
Date, time and analyst ID of latest file update: 25-Nov-2019 16:57 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 8
Compound Name : Bromomethane
Scan Number : 94
Retention Time (minutes): 1.560
Quant Ion : 94.00
Area : 3325
On-column Amount (ng) : 0.8019
Integration start scan : 90 Integration stop scan: 107
Y at integration start : 0 Y at integration end: 0

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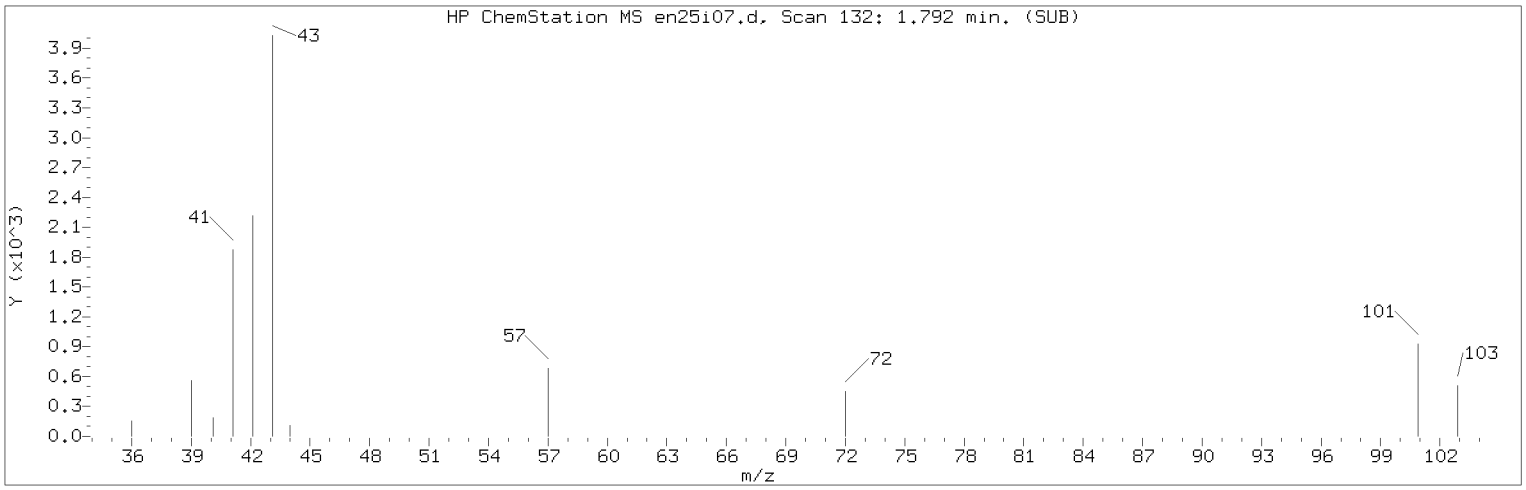
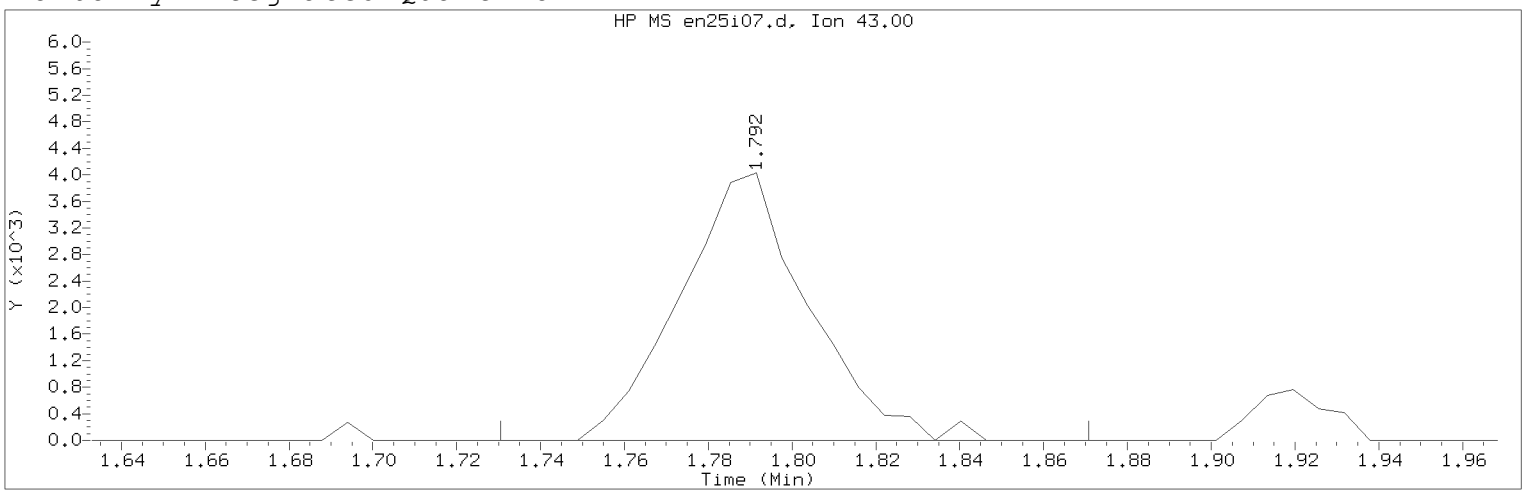
Target 3.5 esignature user: JMLong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i07.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:23 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

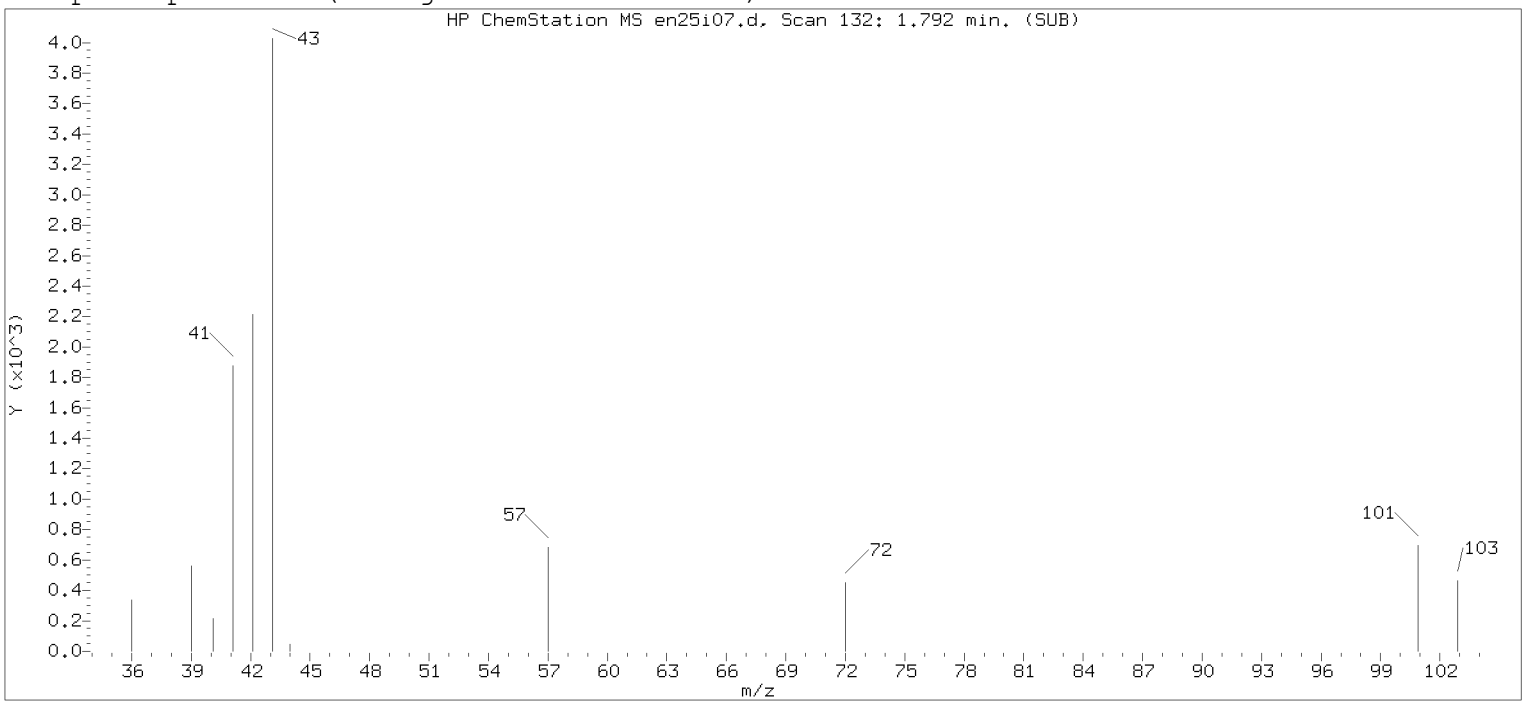
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 132
Retention Time (minutes): 1.792
Quant Ion : 43.00
Area (flag) : 8591M
On-Column Amount (ng) : 0.8881
Integration start scan : 121 Integration stop scan: 144
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

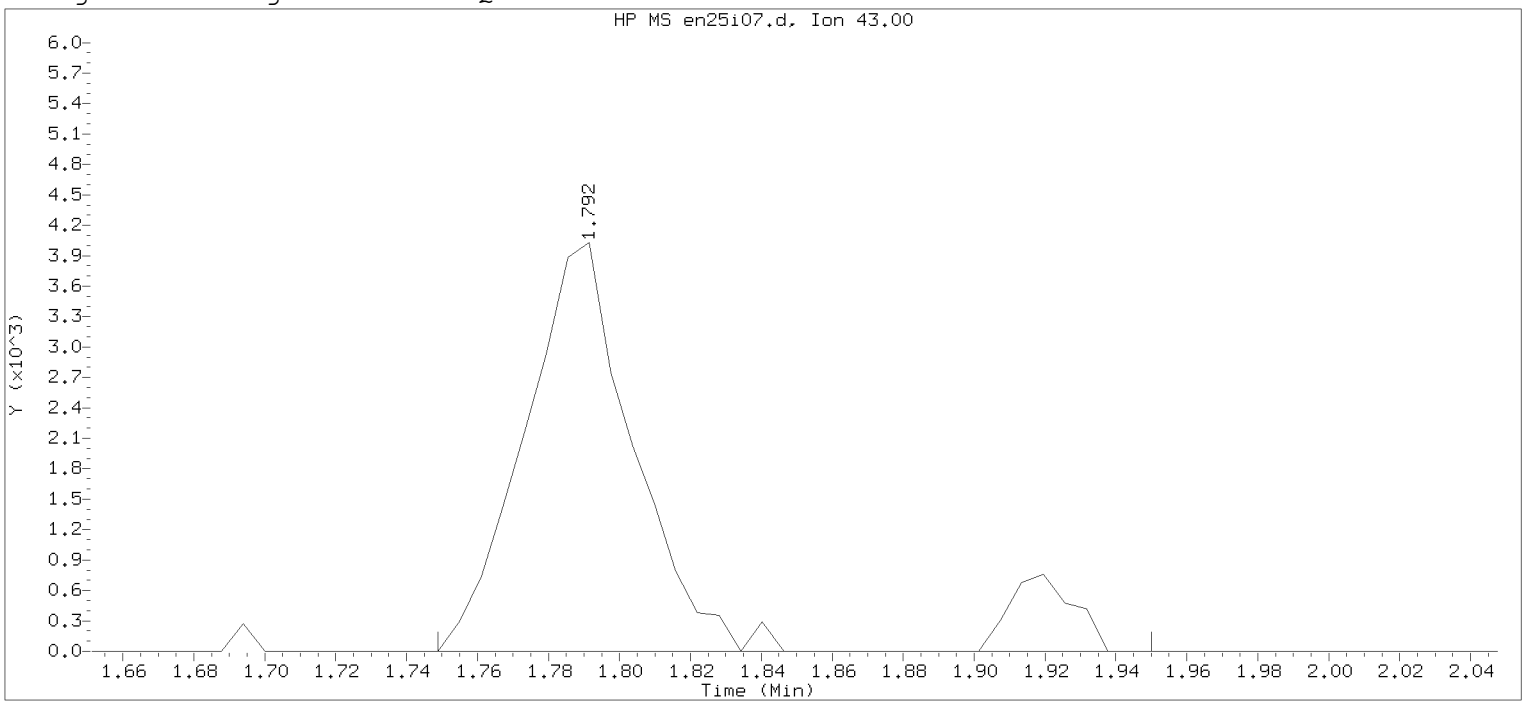
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:25.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i07.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 16:57
Date, time and analyst ID of latest file update: 25-Nov-2019 16:57 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 11
Compound Name : n-Pentane
Scan Number : 132
Retention Time (minutes): 1.792
Quant Ion : 43.00
Area : 9552
On-column Amount (ng) : 0.9811
Integration start scan : 124 Integration stop scan: 157
Y at integration start : 0 Y at integration end: 0

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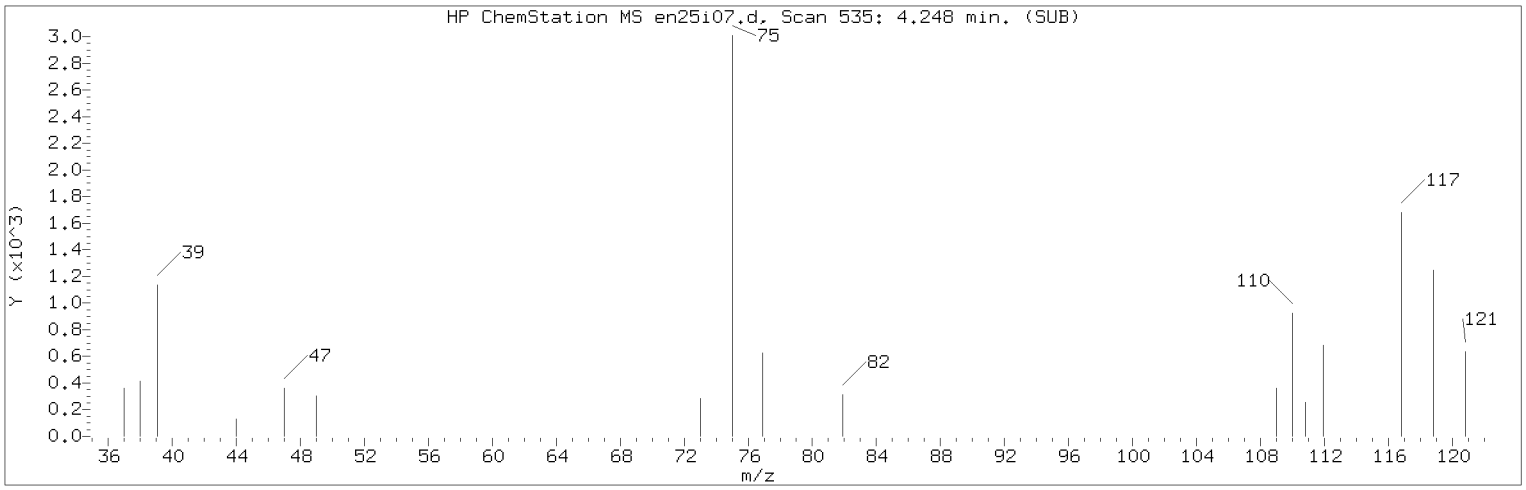
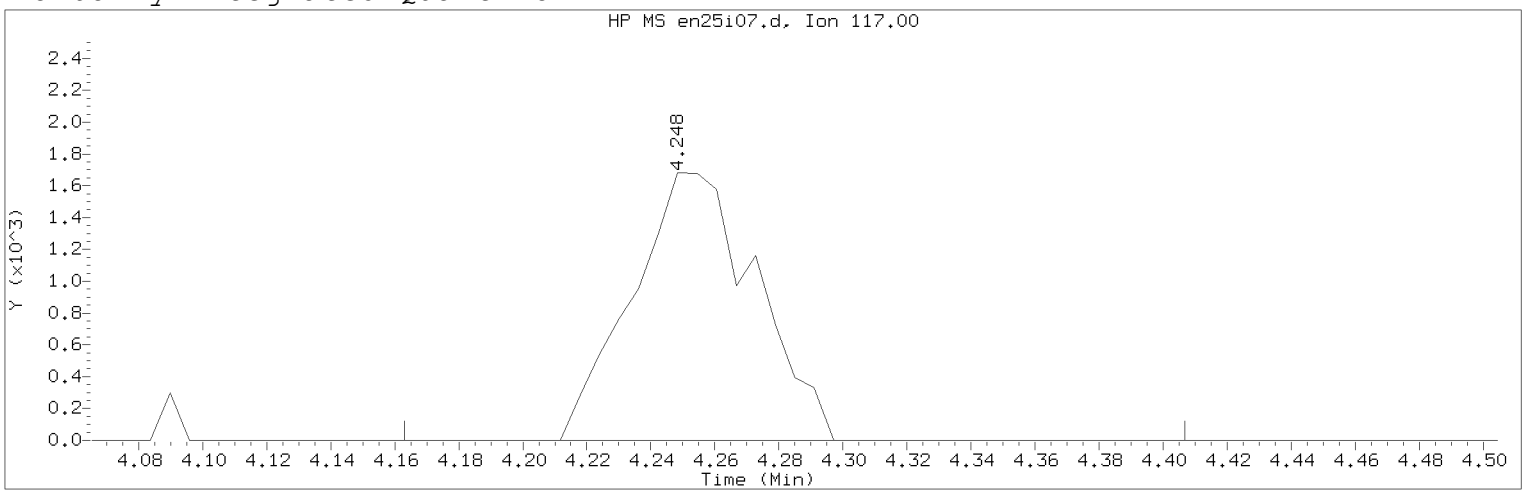
Target 3.5 esignature user: JMLong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i07.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:23 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

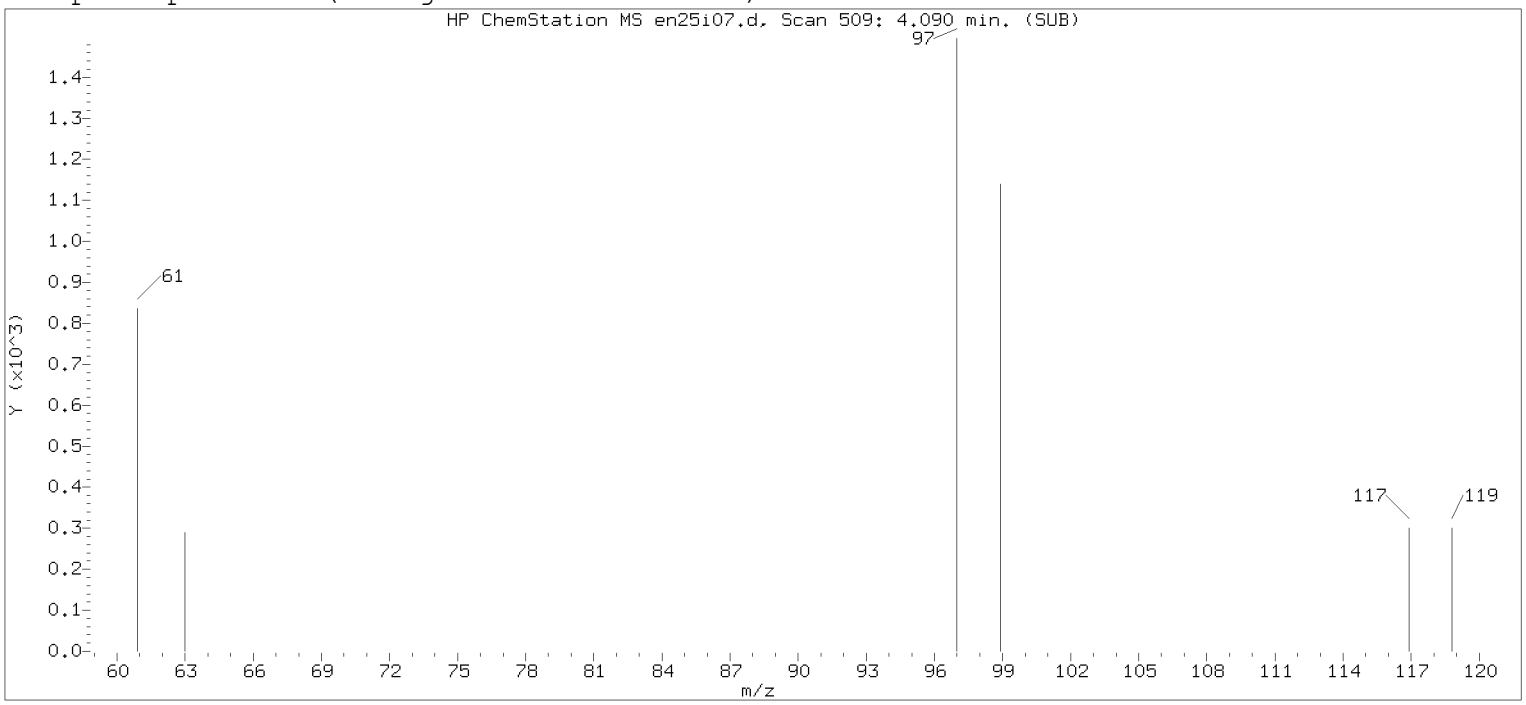
Compound Number : 56
Compound Name : Carbon Tetrachloride
Scan Number : 535
Retention Time (minutes): 4.248
Quant Ion : 117.00
Area (flag) : 4521M
On-Column Amount (ng) : 0.8404
Integration start scan : 520 Integration stop scan: 560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

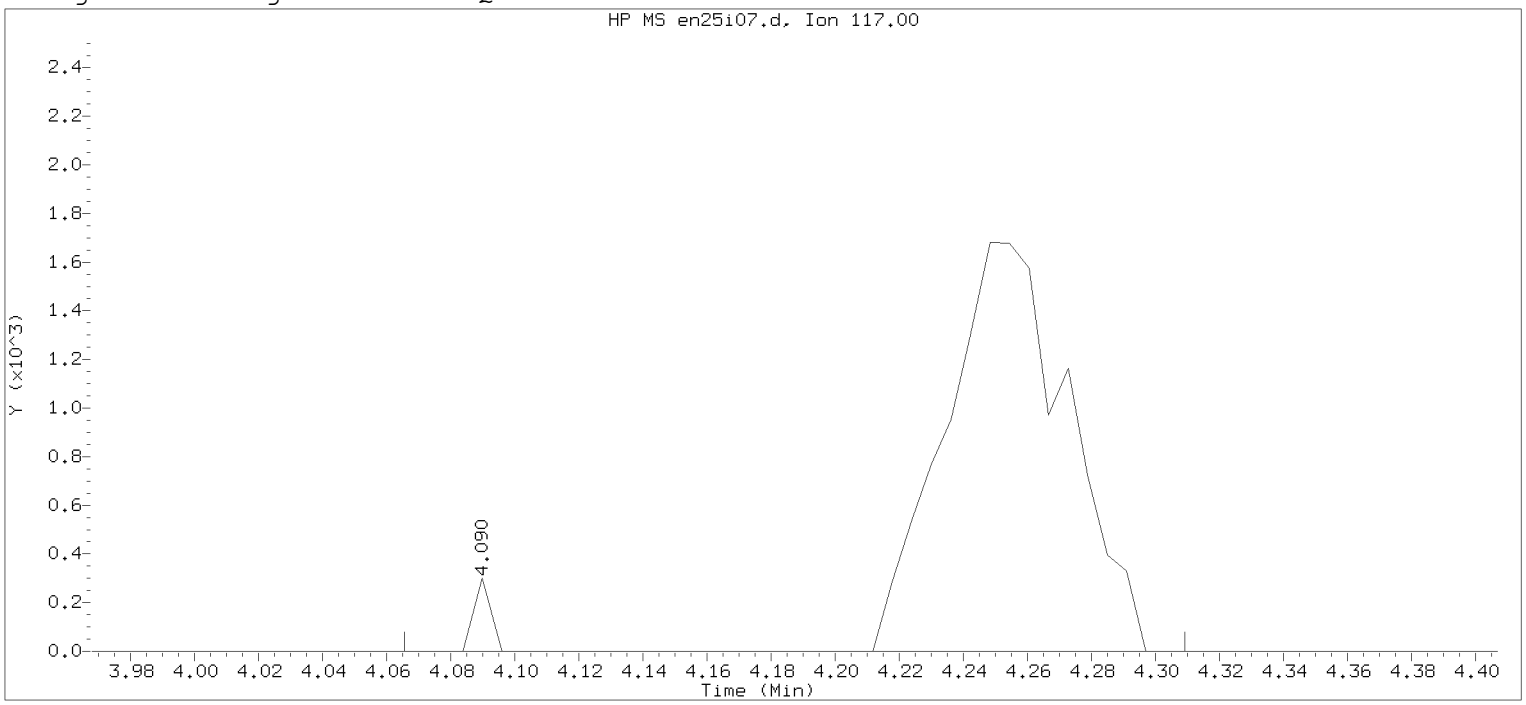
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:25.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i07.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:40 Analyst ID: KAS02648

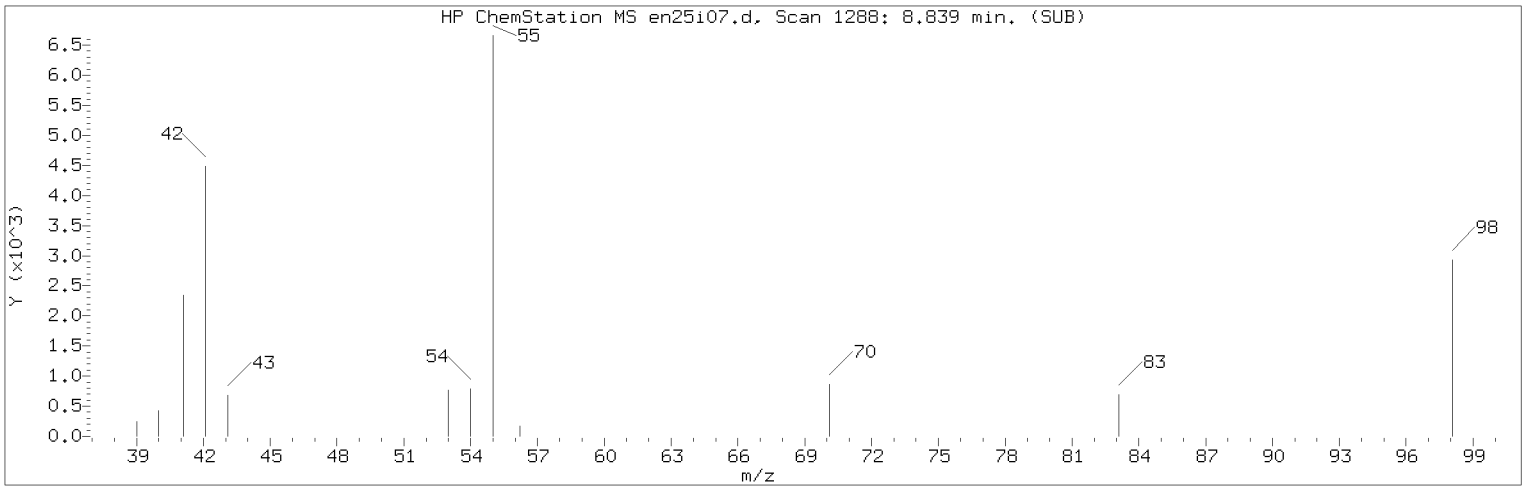
Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 16:57
Date, time and analyst ID of latest file update: 25-Nov-2019 16:57 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

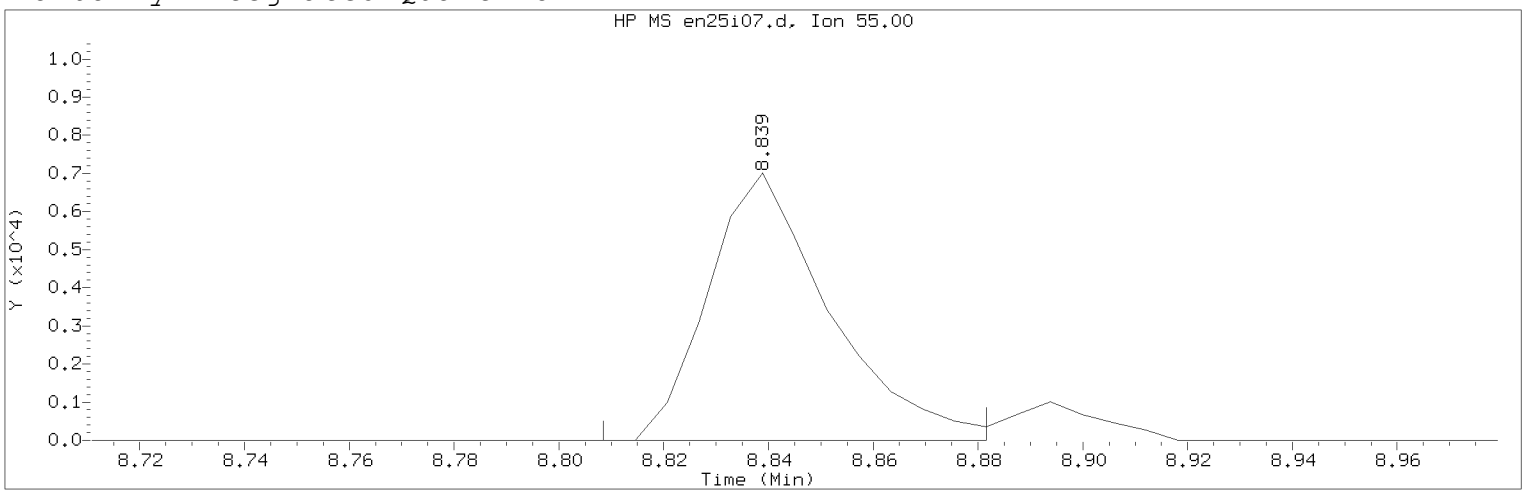
Compound Number : 56
Compound Name : Carbon Tetrachloride
Scan Number : 509
Retention Time (minutes): 4.090
Quant Ion : 117.00
Area : 4630
On-column Amount (ng) : 0.8653
Integration start scan : 504 Integration stop scan: 544
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 10:24.
Target 3.5 esignature user: JMLong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i07.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:23 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

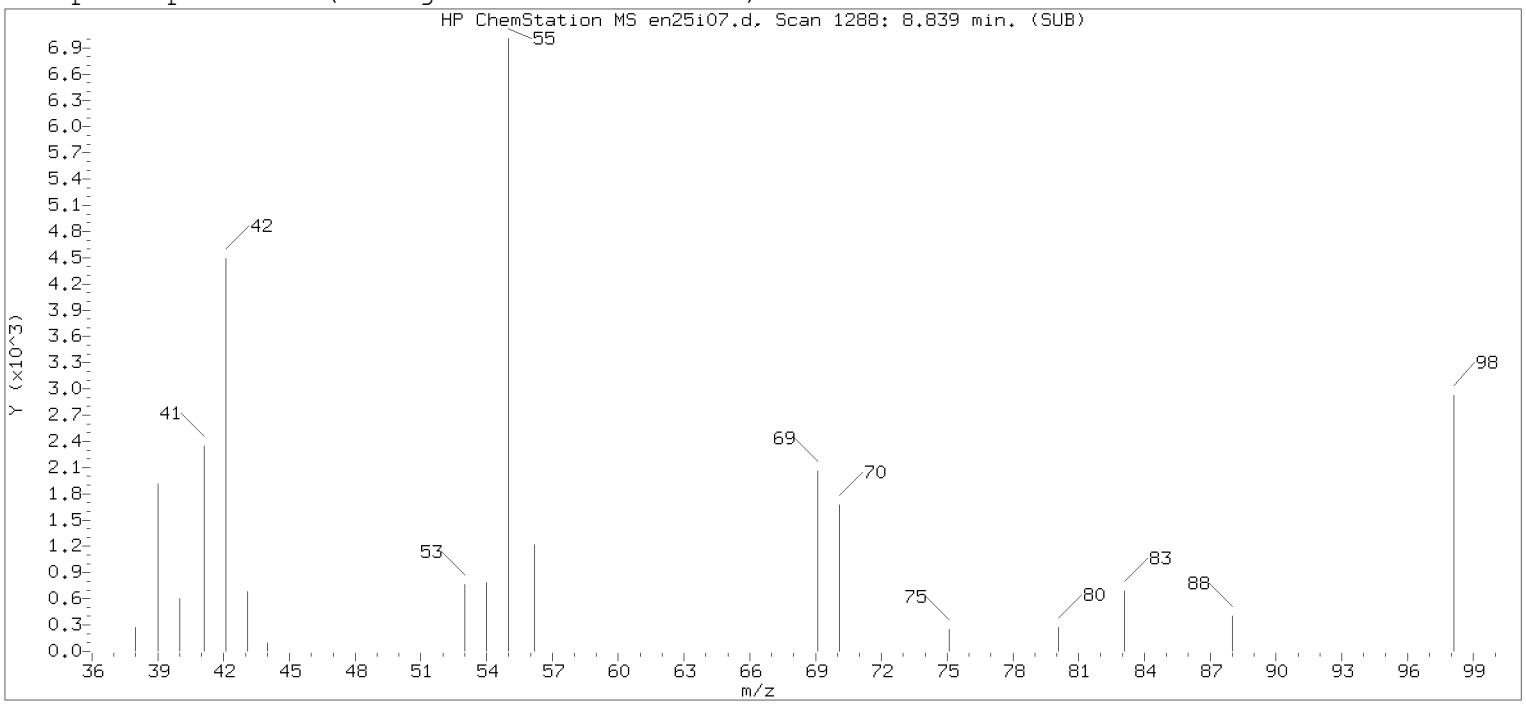
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1288
Retention Time (minutes): 8.839
Quant Ion : 55.00
Area (flag) : 11287M
On-Column Amount (ng) : 43.9914
Integration start scan : 1282 Integration stop scan: 1294
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

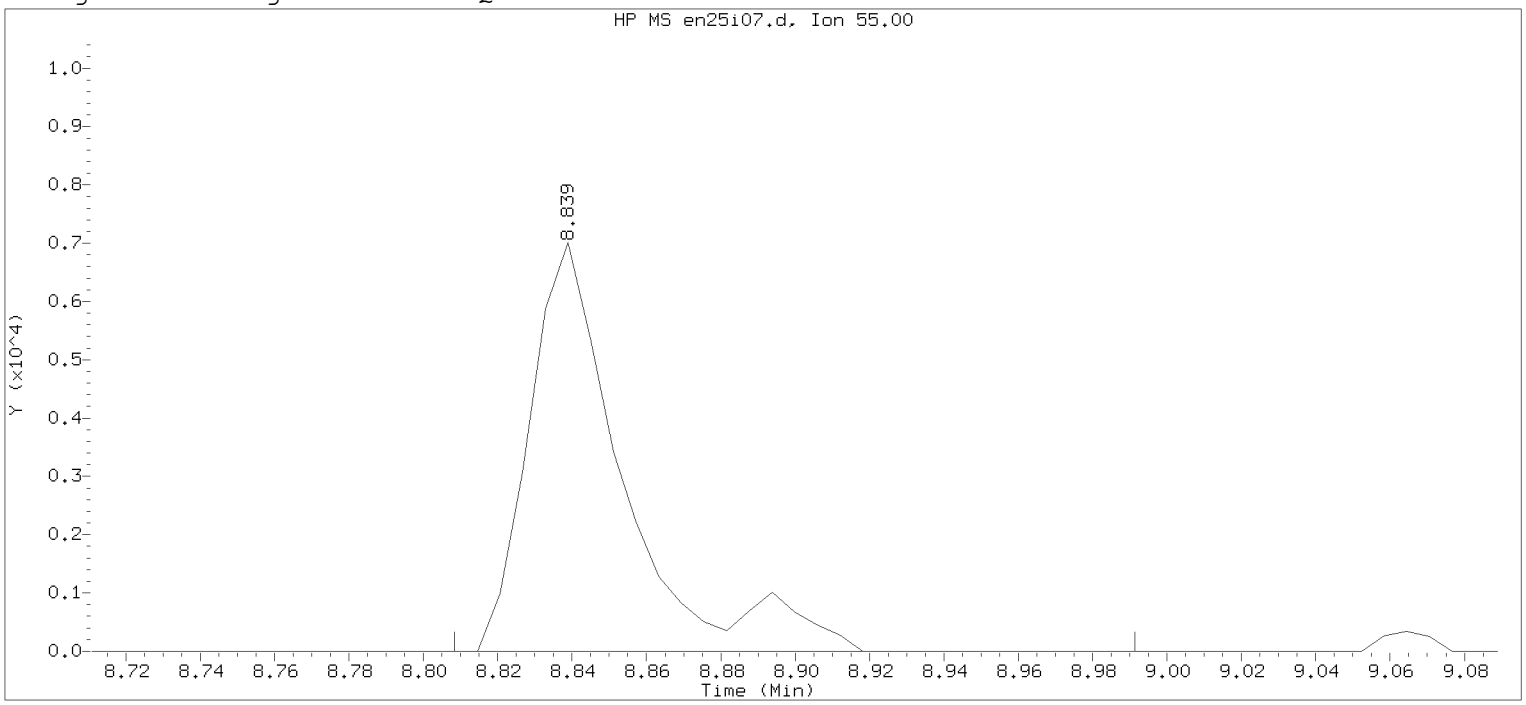
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:25.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i07.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:40 Analyst ID: KAS02648

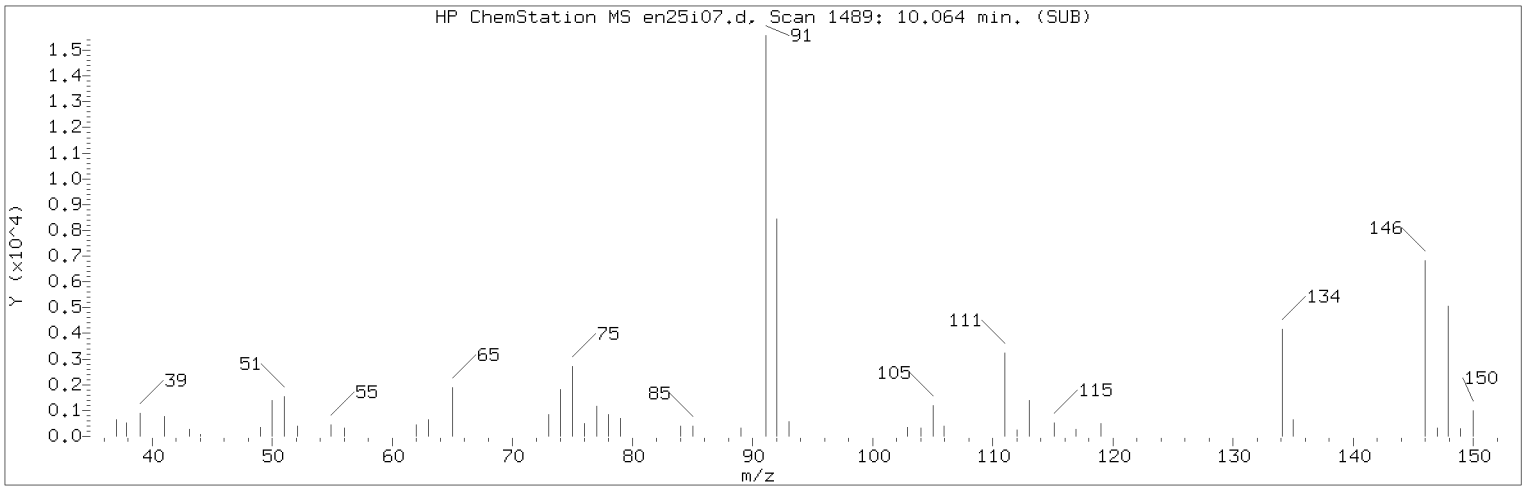
Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 16:57
Date, time and analyst ID of latest file update: 25-Nov-2019 16:57 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

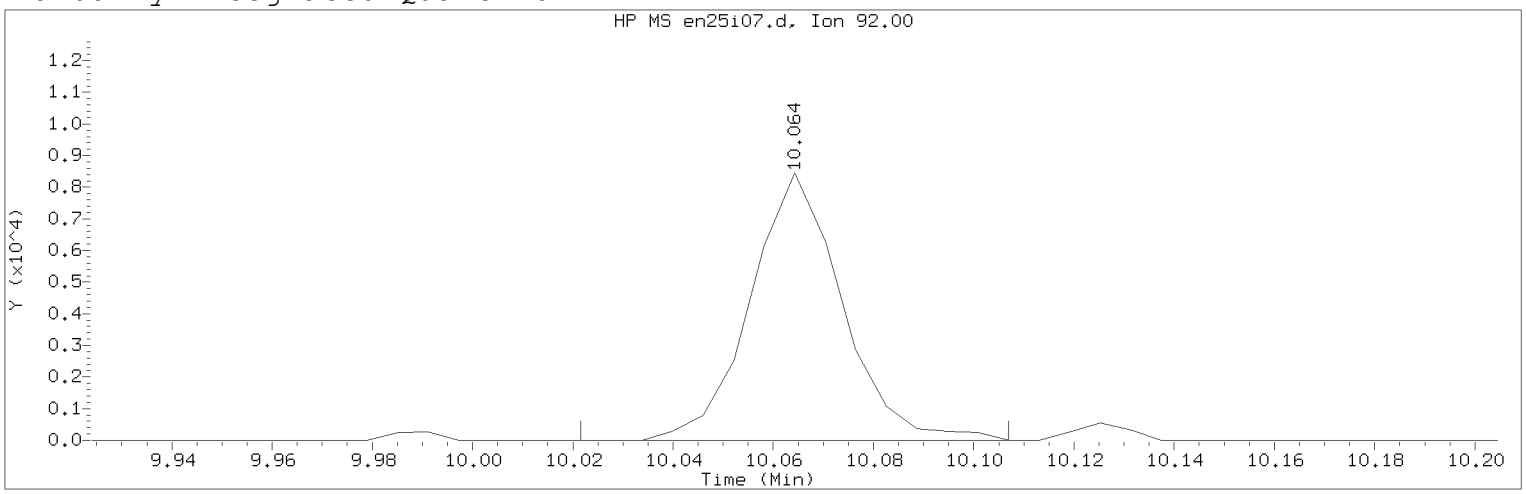
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1288
Retention Time (minutes): 8.839
Quant Ion : 55.00
Area : 12422
On-column Amount (ng) : 47.8116
Integration start scan : 1282 Integration stop scan: 1312
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 10:24.
Target 3.5 esignature user: JMLong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25i07.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:23 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

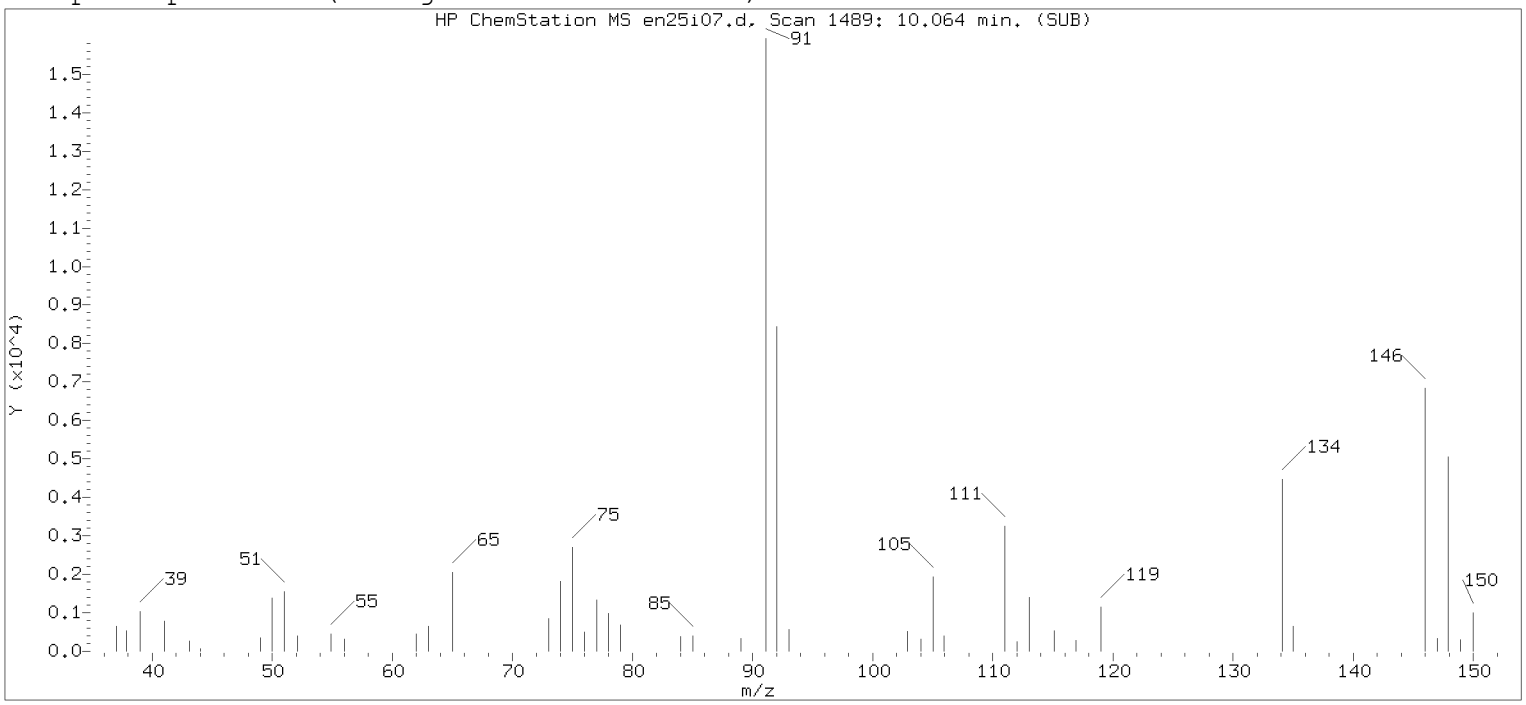
Compound Number : 140
Compound Name : n-Butylbenzene
Scan Number : 1489
Retention Time (minutes): 10.064
Quant Ion : 92.00
Area (flag) : 10713M
On-Column Amount (ng) : 0.8594
Integration start scan : 1481 Integration stop scan: 1495
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

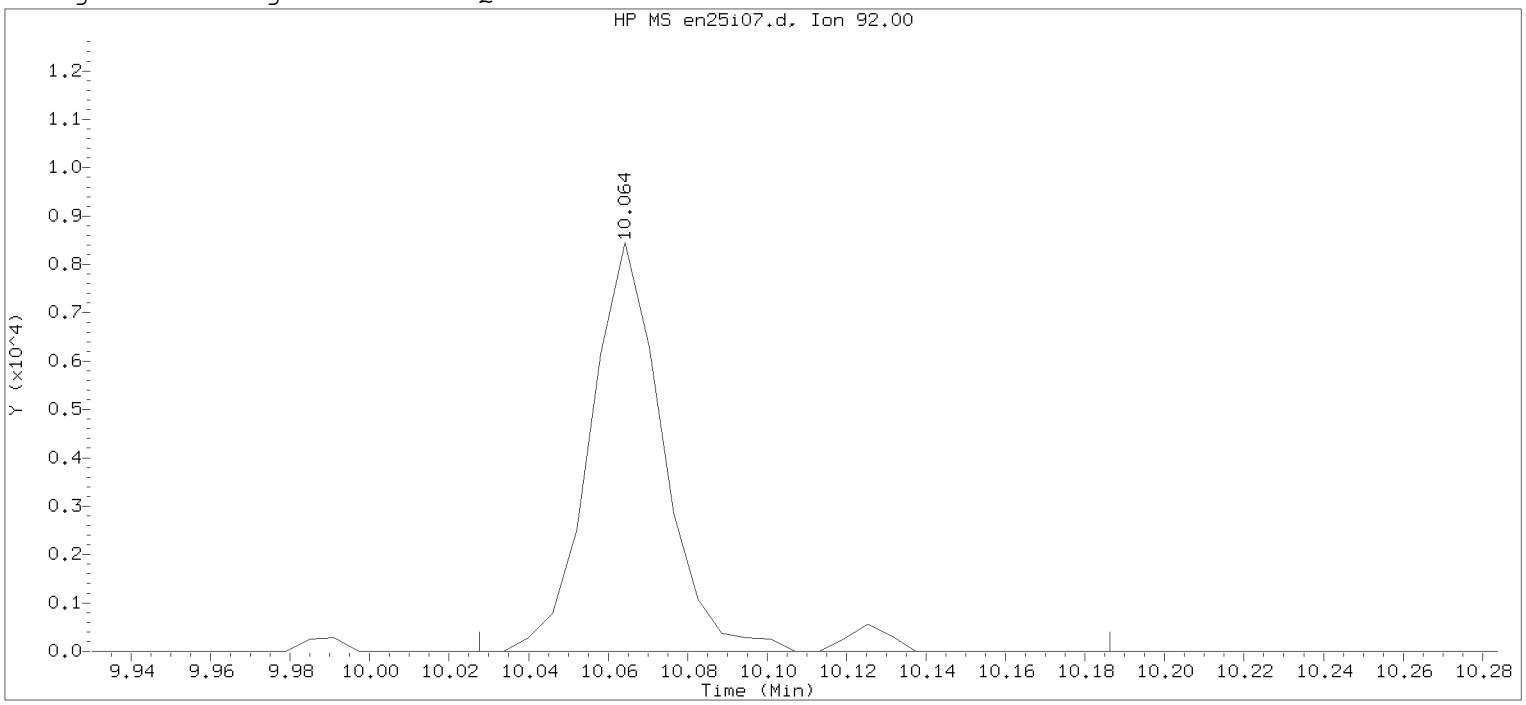
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:25.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



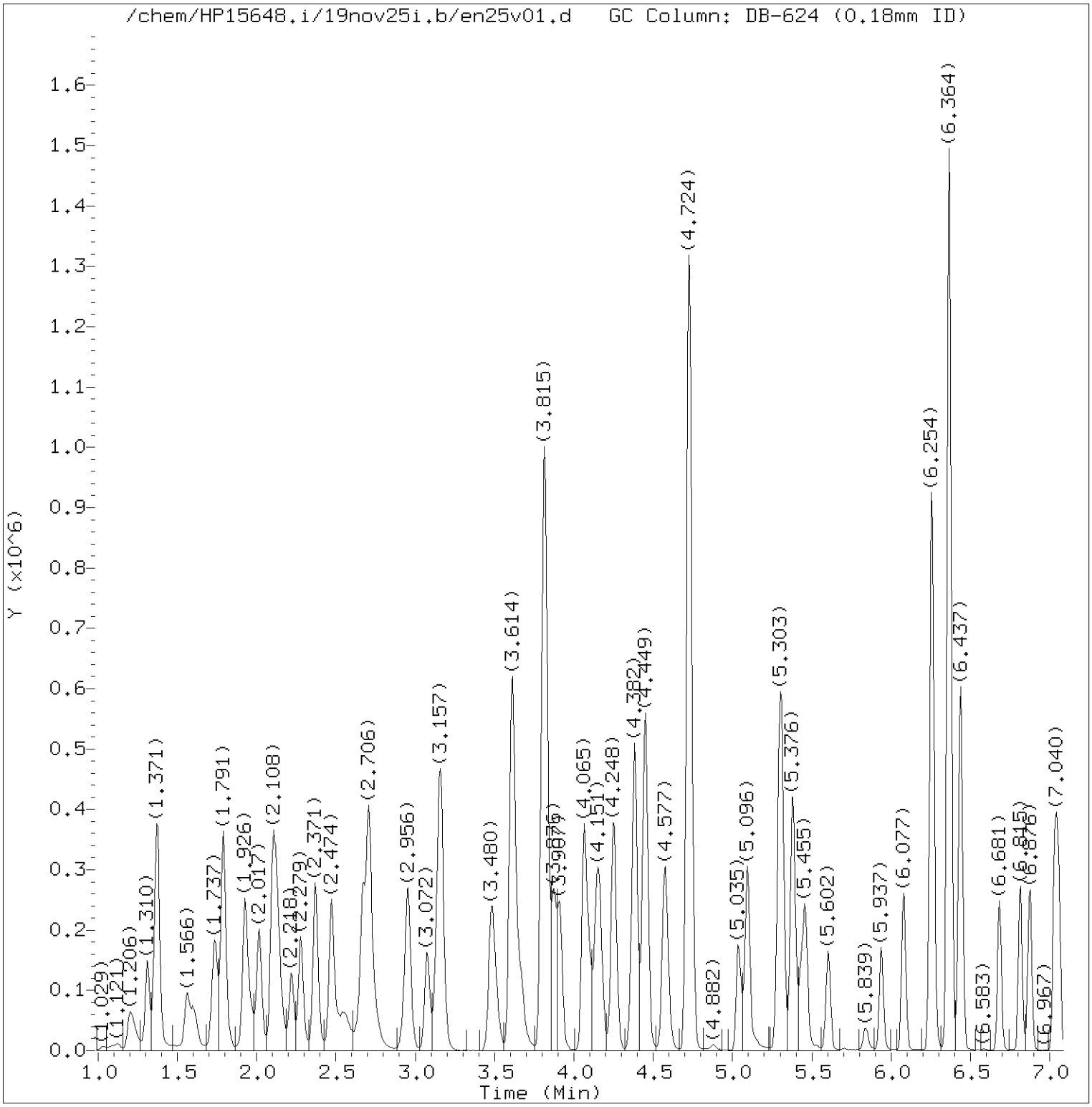
Data File: /chem/HP15648.i/19nov25i.b/en25i07.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 16:40 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 16:57
Date, time and analyst ID of latest file update: 25-Nov-2019 16:57 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 140
Compound Name : n-Butylbenzene
Scan Number : 1489
Retention Time (minutes): 10.064
Quant Ion : 92.00
Area : 11125
On-column Amount (ng) : 0.8883
Integration start scan : 1482 Integration stop scan: 1508
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 10:24.
Target 3.5 esignature user: JMLong



Total Ion Chromatogram (TIC)

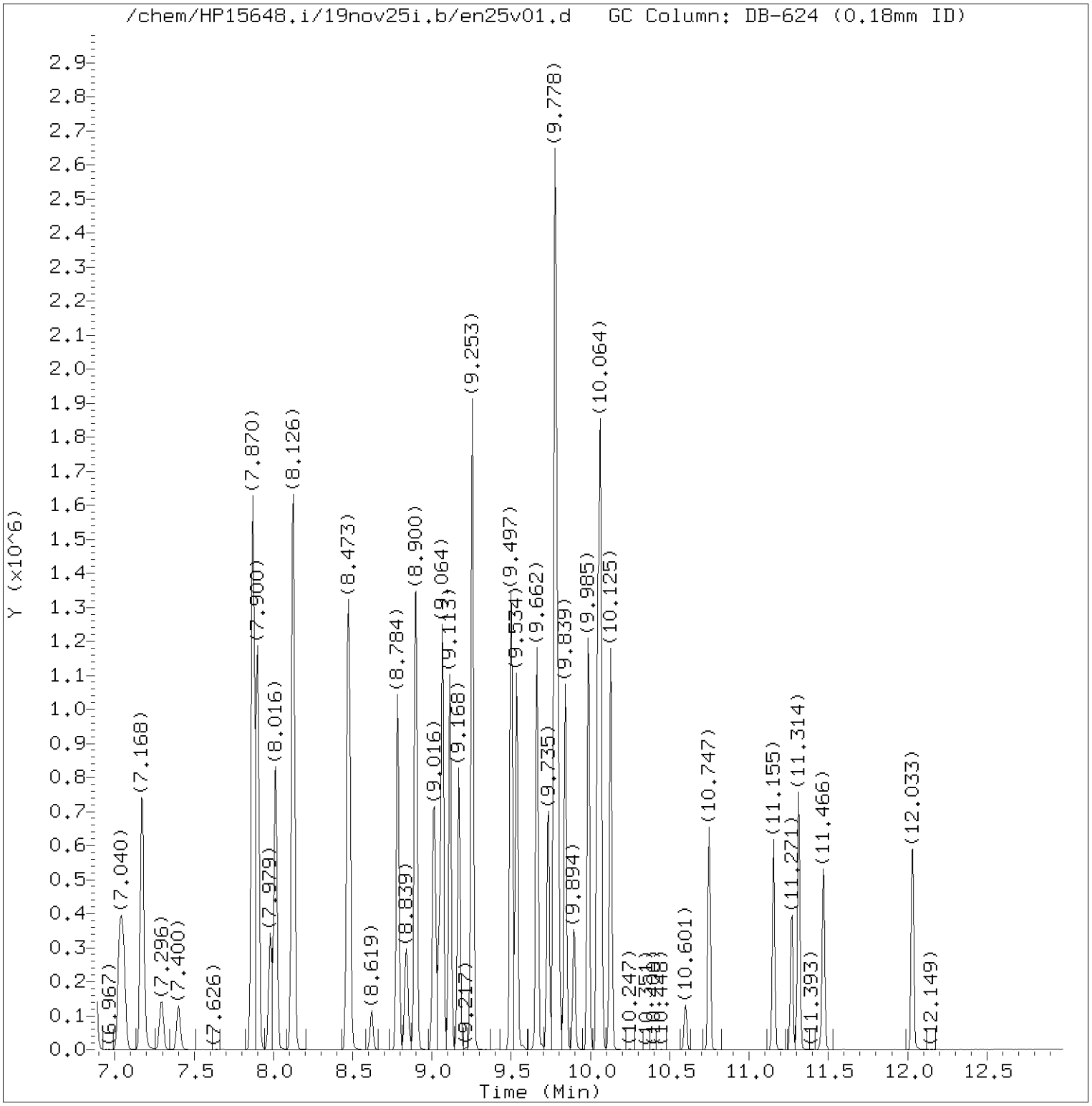
Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25v01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 17:21 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:23 jml01693

Sample Name: ICVELG Lab Sample ID: ICVELG

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25v01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 17:21 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:23 jml01693

Sample Name: ICVELG Lab Sample ID: ICVELG

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25v01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 17:21 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:23 jml01693

Sample Name: ICVELG Lab Sample ID: ICVELG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.206	85	140705	17.749
4) Chloromethane	(2)	1.310	50	169894	17.412
5) 1,3-Butadiene	(2)	1.371	39	166429	23.353
6) Vinyl Chloride	(2)	1.377	62	157882	18.136
8) Bromomethane	(2)	1.560	94	76885	16.569
9) Chloroethane	(2)	1.602	64	78891	17.007
10) Dichlorofluoromethane	(2)	1.737	67	189489	17.076
12) Trichlorofluoromethane	(2)	1.785	101	161771M	19.070
11) n-Pentane	(2)	1.791	43	230158	21.907
14) Ethyl ether	(2)	1.926	59	101009	18.248
15) Freon 123a	(2)	1.932	67	132398	19.765
16) Acrolein	(1)	2.017	56	226529	135.304
17) 1,1-Dichloroethene	(2)	2.102	96	90575	21.183
18) Acetone	(1)	2.121	58	100801	143.432
19) Freon 113	(2)	2.133	101	98819	19.940
22) Methyl Iodide	(2)	2.218	142	140665	18.648
21) 2-Propanol	(1)	2.224	45	61591	125.651
23) Carbon Disulfide	(2)	2.279	76	300852	19.189
25) Allyl Chloride	(2)	2.371	41	190866	19.675
27) Methyl Acetate	(2)	2.377	43	102105	18.508
28) Methylene Chloride	(2)	2.474	84	103016	19.791
29)*t-Butyl alcohol-d10	(1)	2.480	65	198283	250.000
30) t-Butyl alcohol	(1)	2.566	59	133698M	176.364
31) Acrylonitrile	(2)	2.669	53	275533	86.364
32) trans-1,2-Dichloroethene	(2)	2.706	96	97022	19.560
33) Methyl Tertiary Butyl Ether	(2)	2.718	73	305757	18.159
34) n-Hexane	(2)	2.950	57	199948	19.684
36) 1,1-Dichloroethane	(2)	3.072	63	202249	19.159
38) di-Isopropyl ether	(2)	3.151	45	398386	18.316
39) 2-Chloro-1,3-butadiene	(2)	3.163	53	185567	18.938
40) Ethyl t-butyl ether	(2)	3.486	59	345980	17.936
42) cis-1,2-Dichloroethene	(2)	3.608	96	114690	20.207
44) 2-Butanone	(2)	3.614	43	521262	128.699
45) 2,2-Dichloropropane	(2)	3.620	77	148961	19.083
43) 1,2-Dichloroethene (Total)	(2)		96	211712	39.766
47) Propionitrile	(1)	3.669	54	163233	143.008
48) Methacrylonitrile	(2)	3.815	67	431777	135.944
49) Bromochloromethane	(2)	3.834	128	47327	18.496

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25v01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 17:21 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:23 jml01693

Sample Name: ICVELG Lab Sample ID: ICVELG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	3.876	71	89696	94.956
51) Chloroform	(2)	3.913	83	175217	19.421
52)$Dibromofluoromethane	(2)	4.065	113	236305	49.908
53) 1,1,1-Trichloroethane	(2)	4.096	97	145985	19.373
54) Cyclohexane	(2)	4.157	56	231939	18.504
55) 1,1-Dichloropropene	(2)	4.248	75	155746	19.432
56) Carbon Tetrachloride	(2)	4.254	117	109852	18.803
58) Isobutyl Alcohol	(1)	4.370	41	106416	428.432
57)$1,2-Dichloroethane-d4	(2)	4.382	102	63301	50.159
60) Benzene	(2)	4.449	78	457544	19.272
61) 1,2-Dichloroethane	(2)	4.456	62	142848	19.325
65) t-Amyl methyl ether	(2)	4.577	73	325561	18.091
66)*Fluorobenzene	(2)	4.724	96	1113098M	50.000
67) n-Heptane	(2)	4.736	43	199489	17.316
69) n-Butanol	(1)	5.035	56	164200	792.555
71) Trichloroethene	(2)	5.096	95	105743	19.147
73) Methylcyclohexane	(2)	5.297	83	224130	18.995
74) 1,2-Dichloropropane	(2)	5.315	63	122364	19.706
75) Dibromomethane	(2)	5.431	93	59350	19.000
77) Methyl Methacrylate	(2)	5.455	69	90538	18.348
76) 1,4-Dioxane	(1)	5.455	88	27902M	410.817
79) Bromodichloromethane	(2)	5.602	83	120279	18.801
80) 2-Nitropropane	(2)	5.833	41	19591	16.935
81) 2-Chloroethyl Vinyl Ether	(2)	5.937	63	82897	17.944
82) cis-1,3-Dichloropropene	(2)	6.077	75	166748	18.555
83) 4-Methyl-2-pentanone	(2)	6.254	43	728325	85.815
84)$Toluene-d8	(3)	6.364	98	1096557	50.145
89) Toluene	(3)	6.437	92	276462	19.332
90) trans-1,3-Dichloropropene	(3)	6.681	75	143548	18.165
91) 1,3-Dichloropropene (total)	(3)		100	310296	36.720
92) Ethyl Methacrylate	(3)	6.815	69	150730	17.263
93) 1,1,2-Trichloroethane	(3)	6.876	97	89378	19.826
94) Tetrachloroethene	(3)	7.034	166	102128	19.202
95) 1,3-Dichloropropane	(3)	7.053	76	164692	18.959
97) 2-Hexanone	(3)	7.168	43	519702	88.102
98) Dibromochloromethane	(3)	7.296	129	76280	18.309
100) 1,2-Dibromoethane	(3)	7.400	107	88700	19.067
101)*Chlorobenzene-d5	(3)	7.870	117	770250	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25v01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 17:21 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:23 jml01693

Sample Name: ICVELG Lab Sample ID: ICVELG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
103) Chlorobenzene	(3)	7.900	112	283611	19.045
102) 1-Chlorohexane	(3)	7.900	91	155622	18.458
104) 1,1,1,2-Tetrachloroethane	(3)	7.979	131	79948	18.318
105) Ethylbenzene	(3)	8.016	91	535251	19.151
107) m+p-Xylene	(3)	8.126	106	403191	38.468
108) o-Xylene	(3)	8.467	106	194379	19.091
110) Styrene	(3)	8.479	104	318497	19.320
109) Xylene (Total)	(3)		106	597570	57.559
111) Bromoform	(3)	8.619	173	42523	16.698
112) Isopropylbenzene	(3)	8.784	105	532760	19.277
113) Cyclohexanone	(1)	8.839	55	114969M	428.893
115)$4-Bromofluorobenzene	(3)	8.894	95	410471	49.811
116) Bromobenzene	(4)	9.010	156	105416	19.257
117) 1,1,2,2-Tetrachloroethane	(4)	9.022	83	134986	18.503
118) 1,2,3-Trichloropropane	(4)	9.046	110	38754	18.997
119) trans-1,4-Dichloro-2-butene	(4)	9.064	53	198930	87.566
120) n-Propylbenzene	(4)	9.113	91	649755	19.431
121) 2-Chlorotoluene	(4)	9.168	126	115788	19.089
123) 1,3,5-Trimethylbenzene	(4)	9.253	105	450449	19.318
122) 4-Chlorotoluene	(4)	9.253	126	119495	19.209
125) tert-Butylbenzene	(4)	9.497	134	96136	19.389
126) Pentachloroethane	(4)	9.503	167	48195	17.658
127) 1,2,4-Trimethylbenzene	(4)	9.534	105	454271	18.868
128) sec-Butylbenzene	(4)	9.662	105	589142	19.246
130) 1,3-Dichlorobenzene	(4)	9.735	146	208782	18.662
131) p-Isopropyltoluene	(4)	9.772	119	492904	19.489
132)*1,4-Dichlorobenzene-d4	(4)	9.784	152	379430	50.000
134) 1,4-Dichlorobenzene	(4)	9.796	146	212591	18.941
135) 1,2,3-Trimethylbenzene	(4)	9.839	105	458113	18.501
136) Benzyl Chloride	(4)	9.894	91	197124	14.591
137) 1,3-Diethylbenzene	(4)	9.985	119	284672	18.042
138) 1,4-Diethylbenzene	(4)	10.046	119	302898	18.376
139) 1,2-Dichlorobenzene	(4)	10.064	146	198989	19.025
140) n-Butylbenzene	(4)	10.064	92	254010	19.017
141) 1,2-Diethylbenzene	(4)	10.125	119	241085	18.260
142) Diethylbenzene (total)	(4)		100	828655	54.677
143) 1,2-Dibromo-3-chloropropane	(4)	10.601	75	26983	17.761
145) 1,3,5-Trichlorobenzene	(4)	10.747	180	147034	18.883

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov25i.b/en25v01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 17:21 Analyst ID: KAS02648

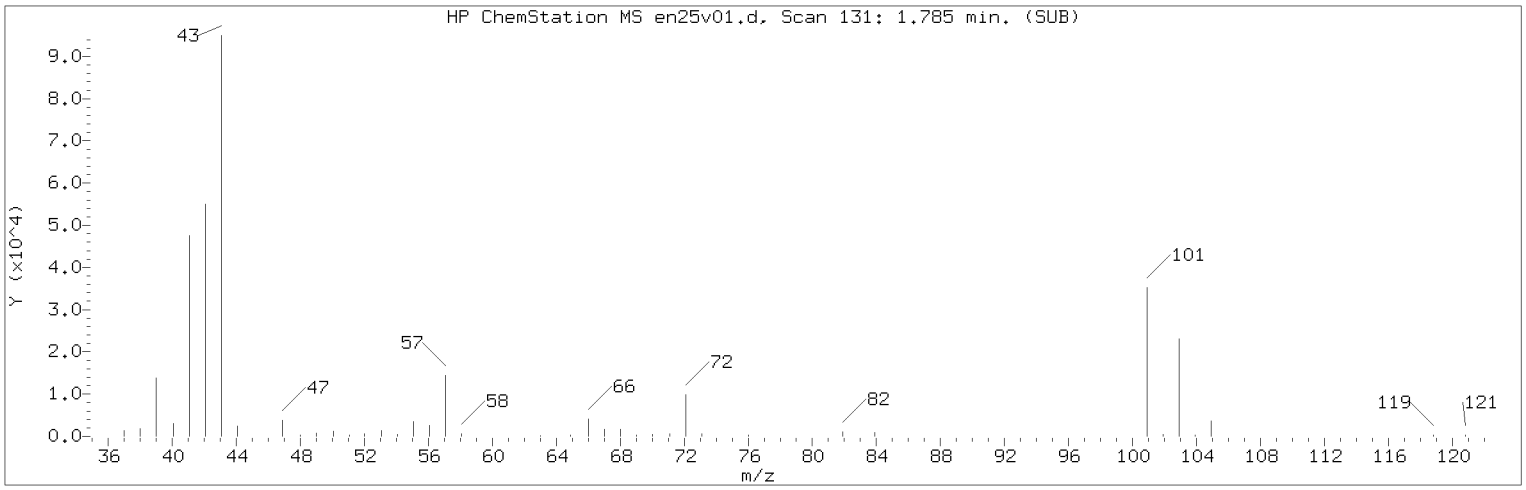
Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:23 jml01693

Sample Name: ICVELG Lab Sample ID: ICVELG

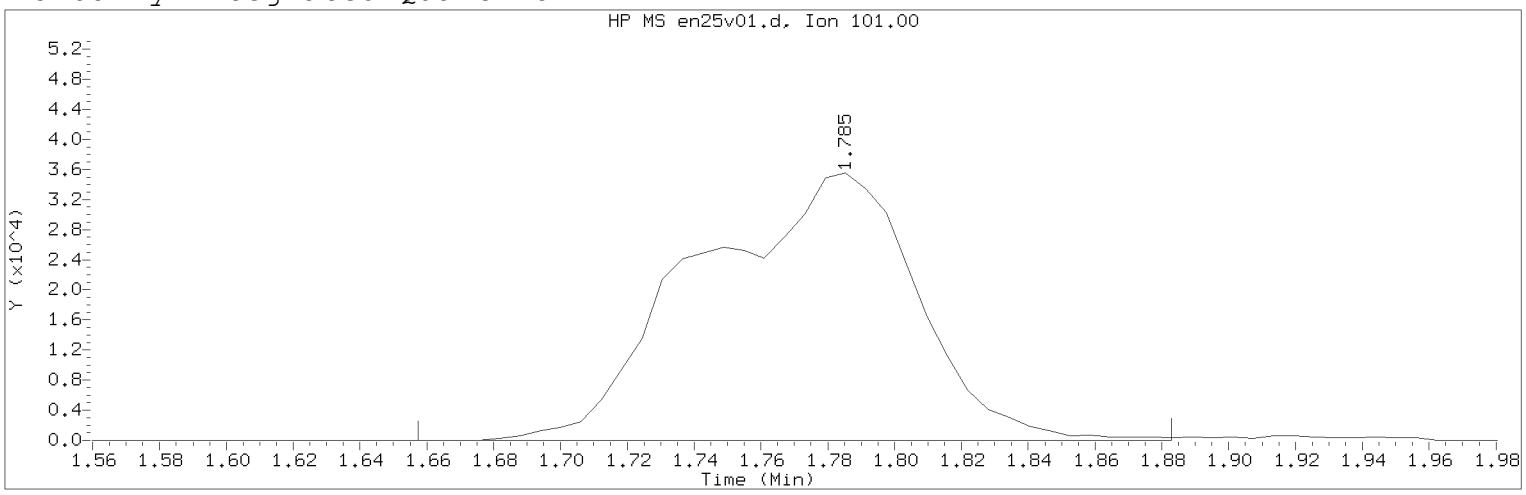
	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147)	1,2,4-Trichlorobenzene	(4)	11.155	180	128020	18.384
148)	Hexachlorobutadiene	(4)	11.271	225	51681	17.994
149)	Naphthalene	(4)	11.314	128	421754	17.421
150)	1,2,3-Trichlorobenzene	(4)	11.473	180	120925	18.070
151)	2-Methylnaphthalene	(4)	12.033	142	216405	14.679

Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25v01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 17:21 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:23 jml01693

Sample Name: ICVELG Lab Sample ID: ICVELG

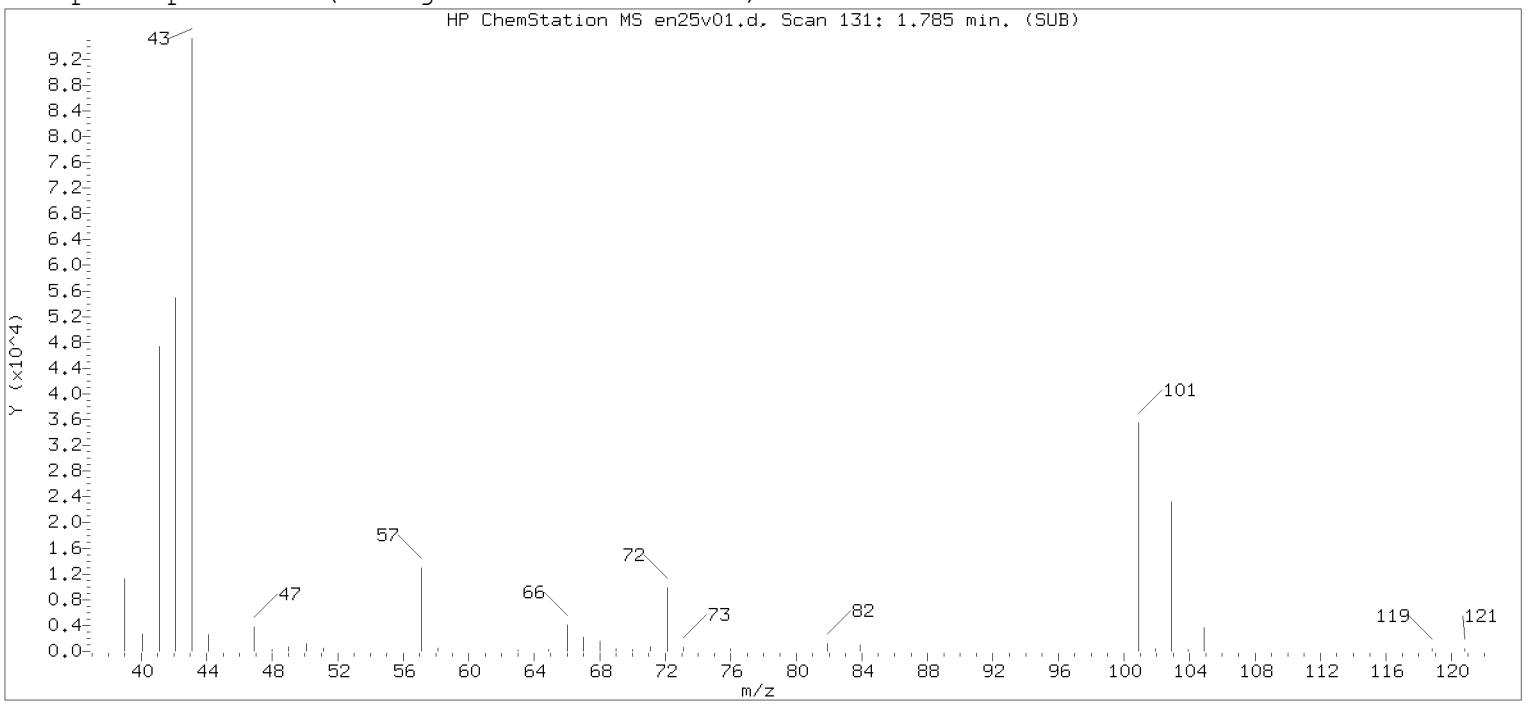
Compound Number : 12
Compound Name : Trichlorofluoromethane
Scan Number : 131
Retention Time (minutes): 1.785
Quant Ion : 101.00
Area (flag) : 161771M
On-Column Amount (ng) : 19.0703
Integration start scan : 109 Integration stop scan: 146
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

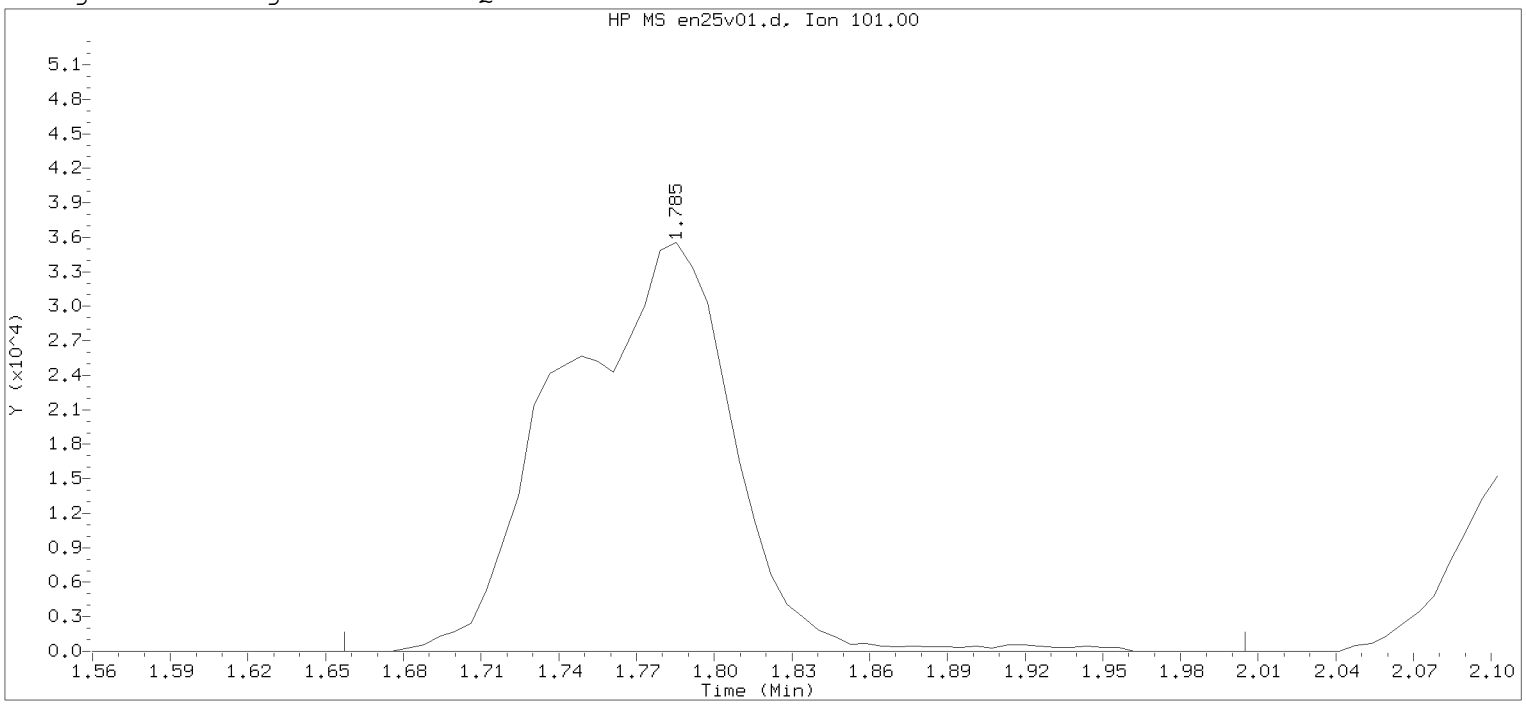
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:37.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25v01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 17:21 Analyst ID: KAS02648

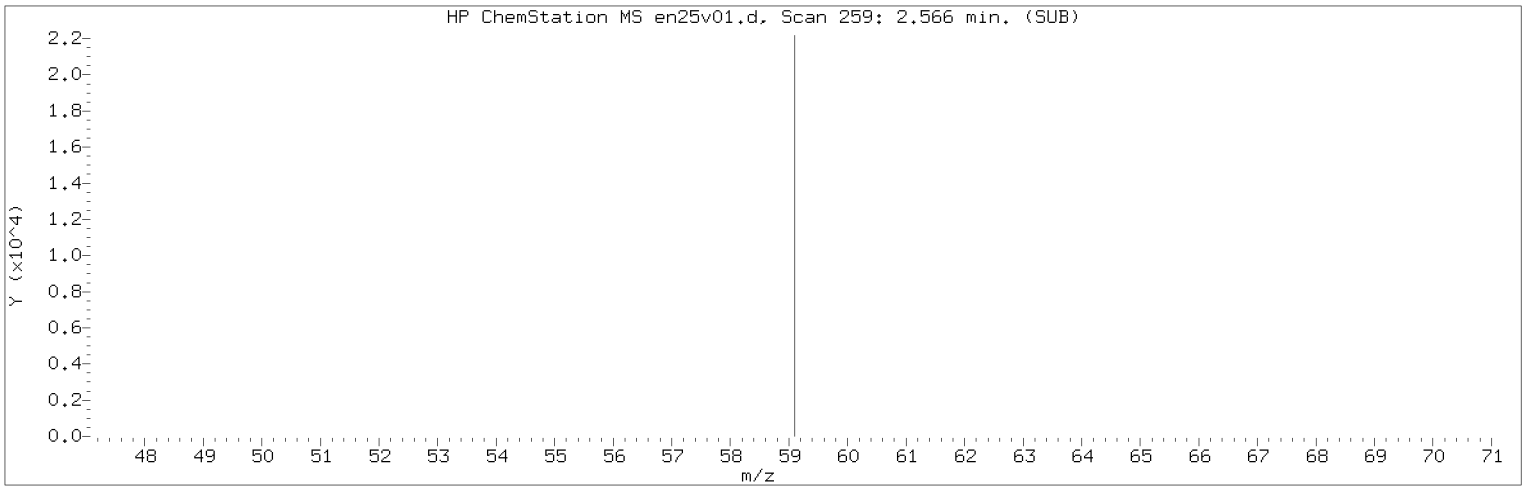
Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 16:59
Date, time and analyst ID of latest file update: 25-Nov-2019 17:37 Automation

Sample Name: ICVELG Lab Sample ID: ICVELG

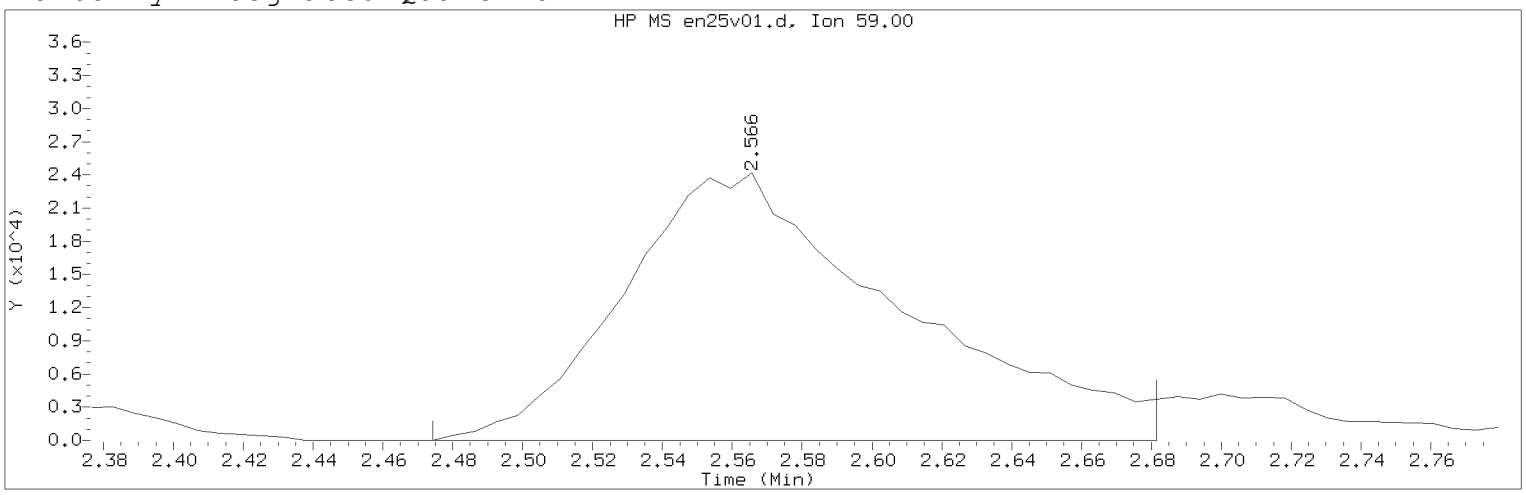
Compound Number : 12
Compound Name : Trichlorofluoromethane
Scan Number : 131
Retention Time (minutes): 1.785
Quant Ion : 101.00
Area : 163550
On-column Amount (ng) : 19.1329
Integration start scan : 109 Integration stop scan: 166
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jmlong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25v01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 17:21 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:23 jml01693

Sample Name: ICVELG Lab Sample ID: ICVELG

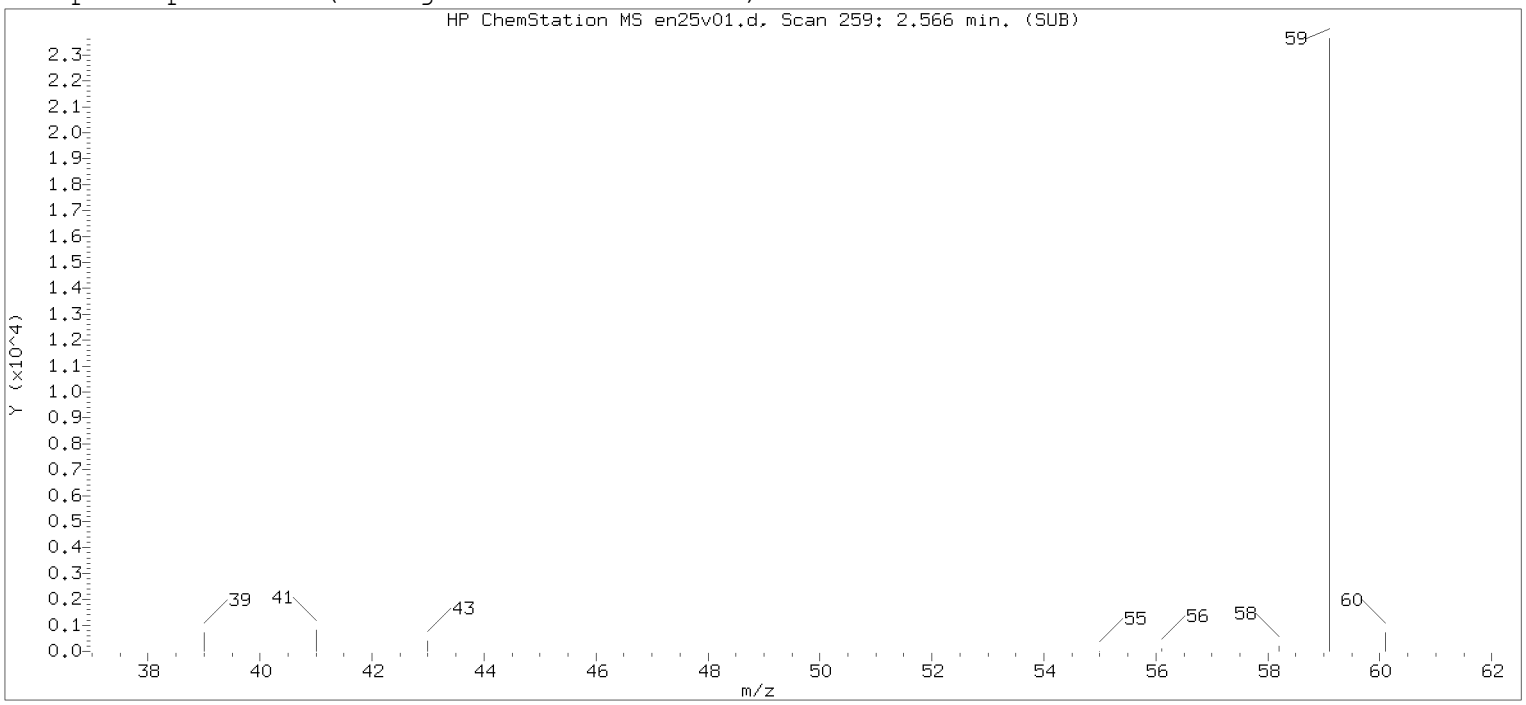
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 259
Retention Time (minutes): 2.566
Quant Ion : 59.00
Area (flag) : 133698M
On-Column Amount (ng) : 176.3636
Integration start scan : 243 Integration stop scan: 277
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

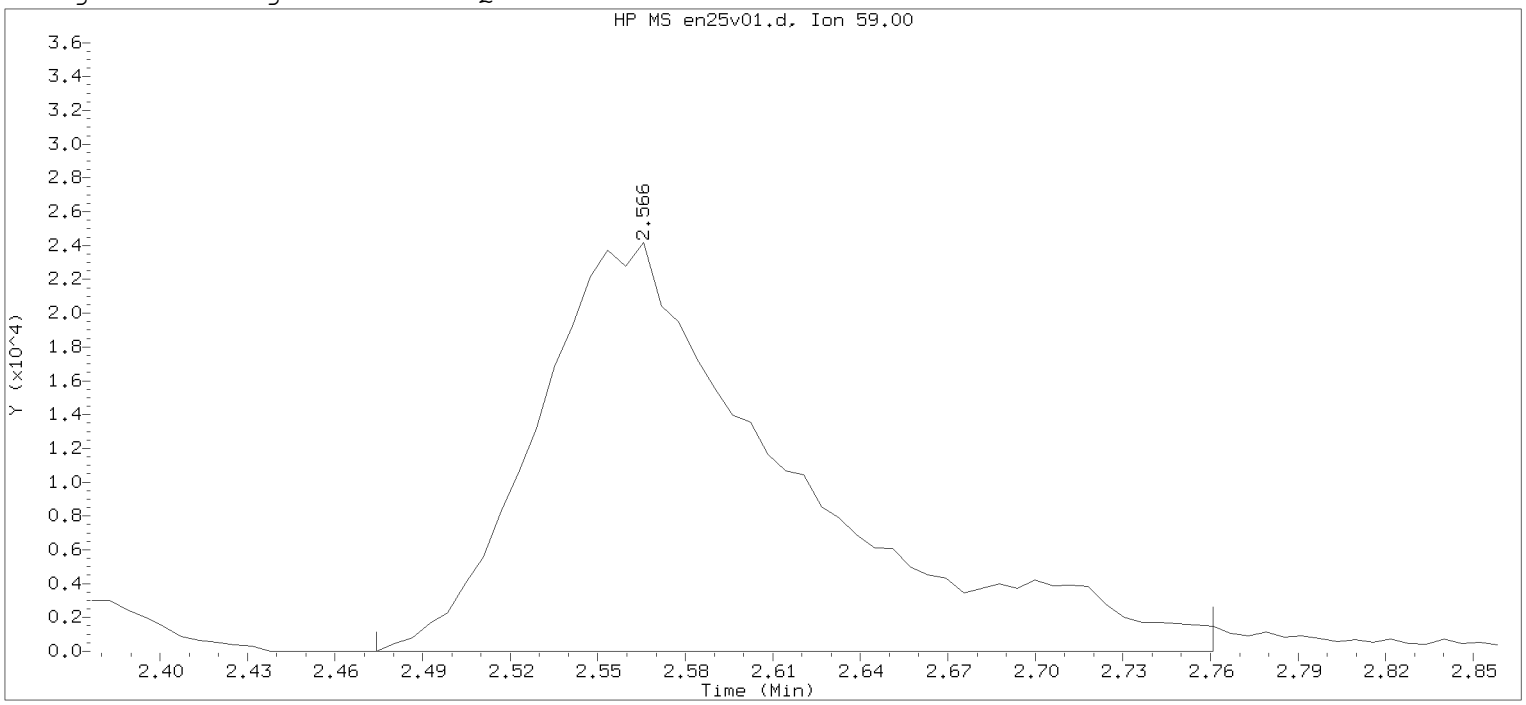
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:37.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25v01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 17:21 Analyst ID: KAS02648

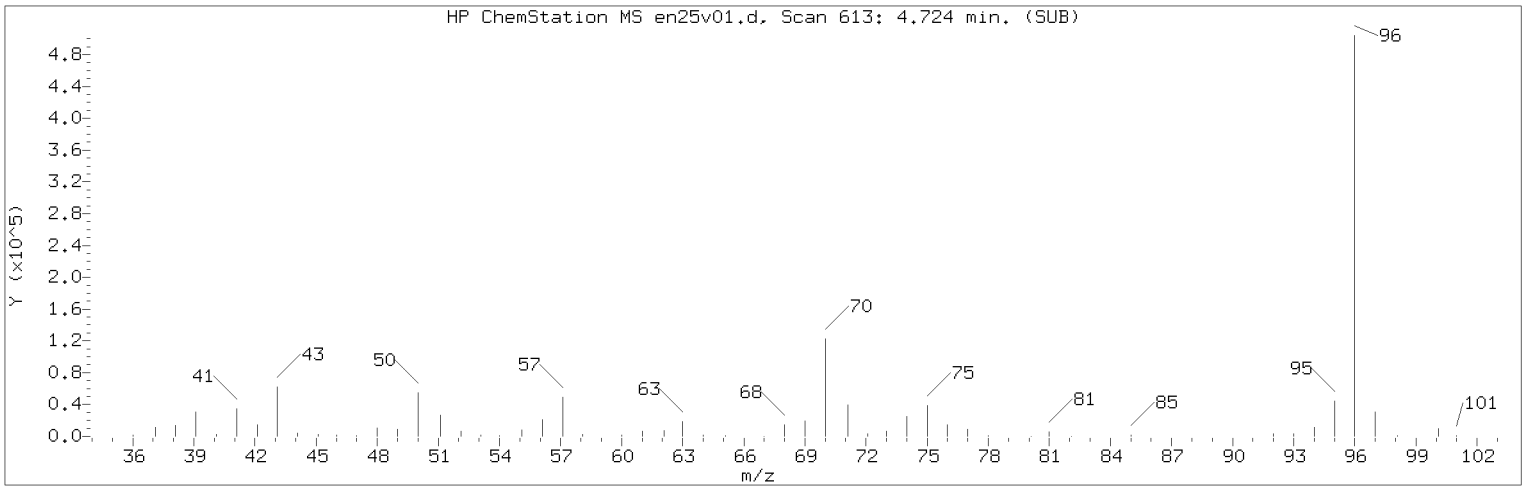
Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 16:59
Date, time and analyst ID of latest file update: 25-Nov-2019 17:37 Automation

Sample Name: ICVELG Lab Sample ID: ICVELG

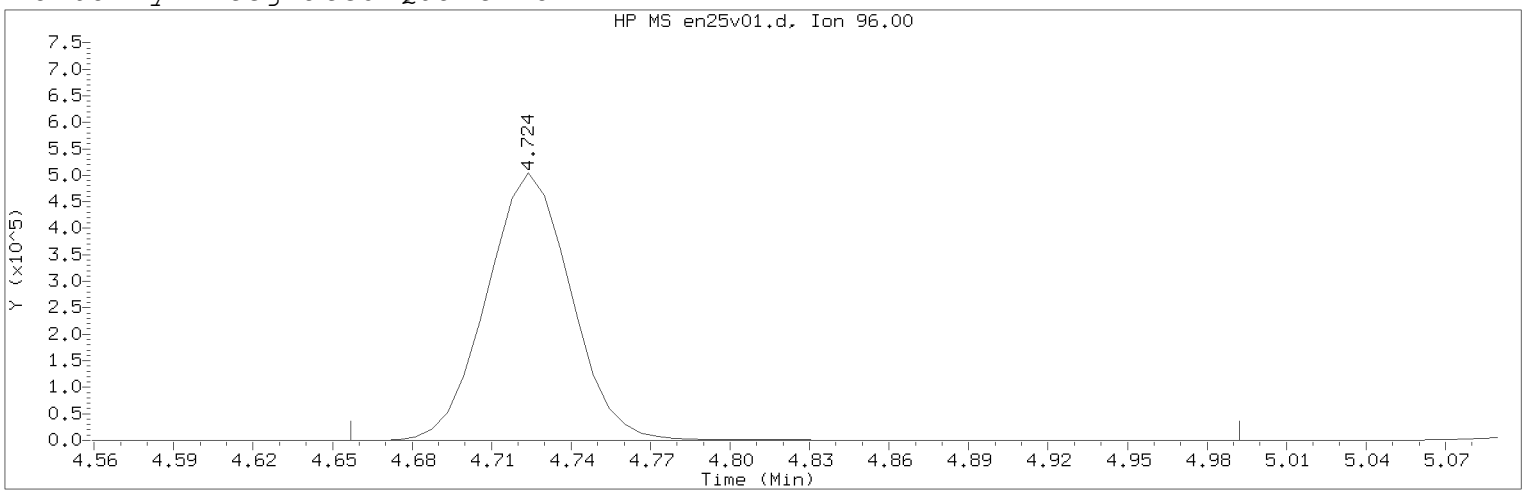
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 259
Retention Time (minutes): 2.566
Quant Ion : 59.00
Area : 146729
On-column Amount (ng) : 185.0366
Integration start scan : 243 Integration stop scan: 290
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 10:24.
Target 3.5 esignature user: JMLong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25v01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 17:21 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:23 jml01693

Sample Name: ICVELG Lab Sample ID: ICVELG

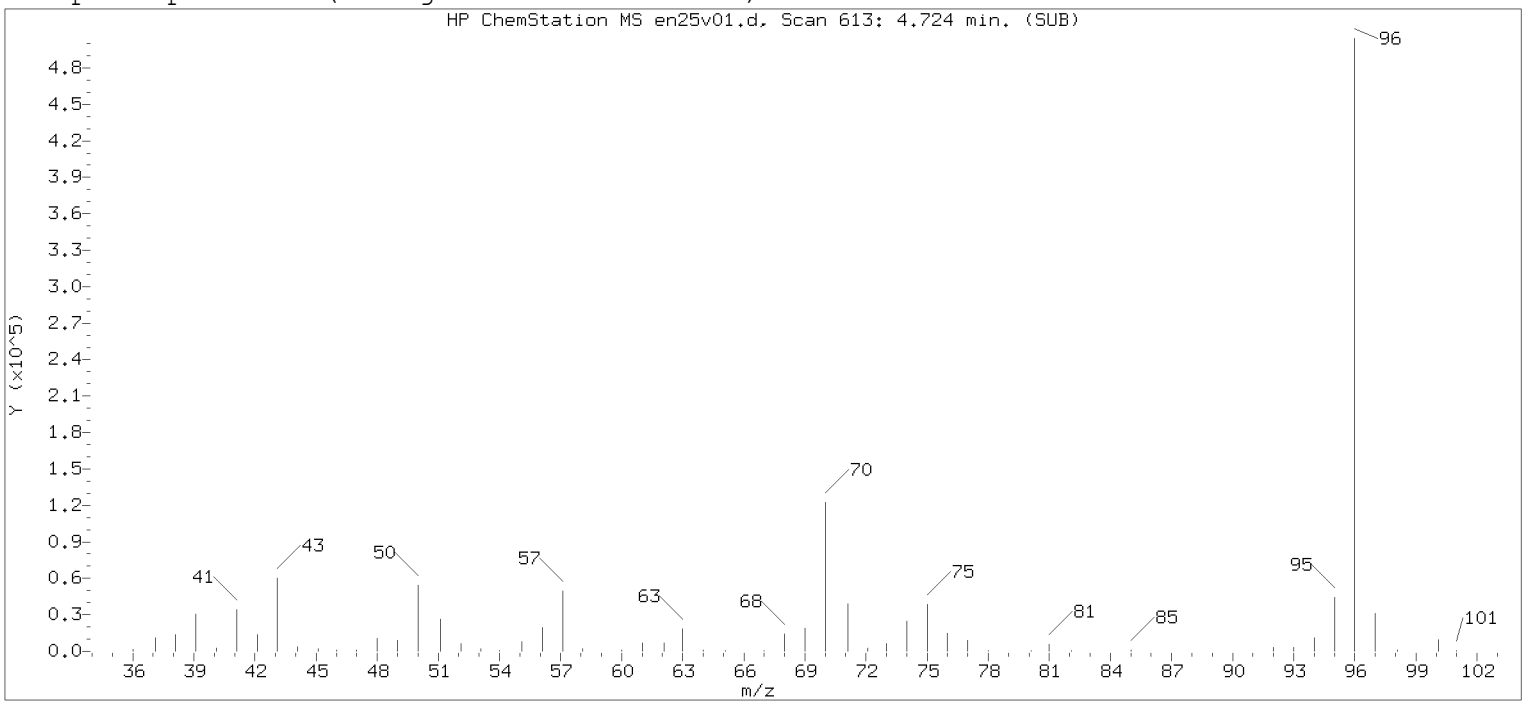
Compound Number : 66
Compound Name : Fluorobenzene
Scan Number : 613
Retention Time (minutes): 4.724
Quant Ion : 96.00
Area (flag) : 1113098M
On-Column Amount (ng) : 50.0000
Integration start scan : 601 Integration stop scan: 656
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

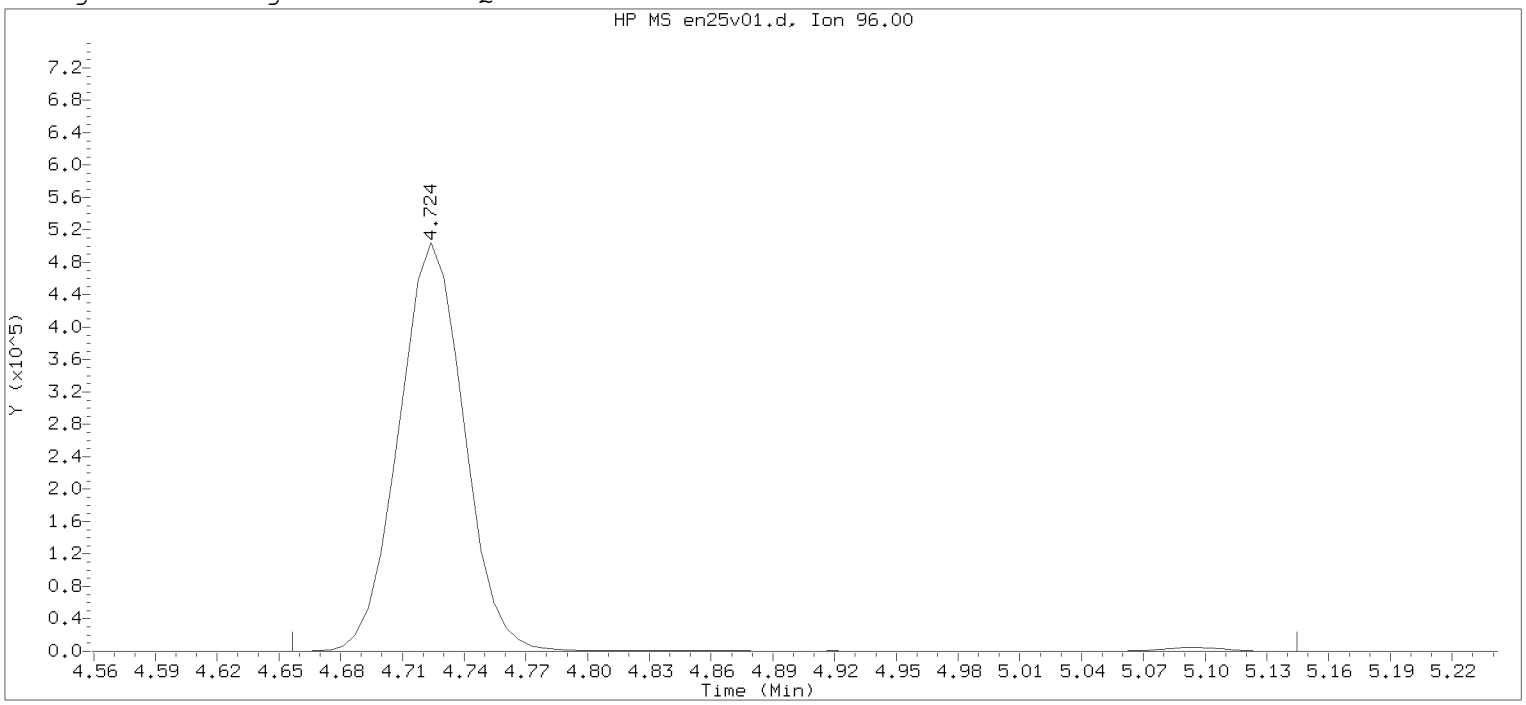
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:37.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25v01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 17:21 Analyst ID: KAS02648

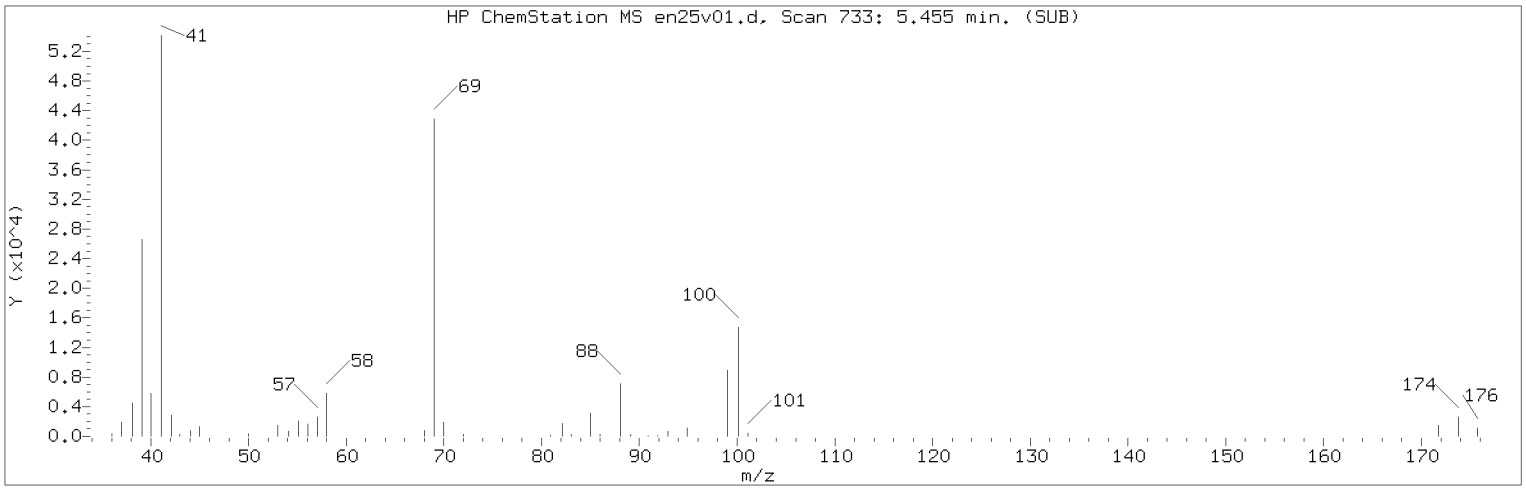
Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 16:59
Date, time and analyst ID of latest file update: 25-Nov-2019 17:37 Automation

Sample Name: ICVELG Lab Sample ID: ICVELG

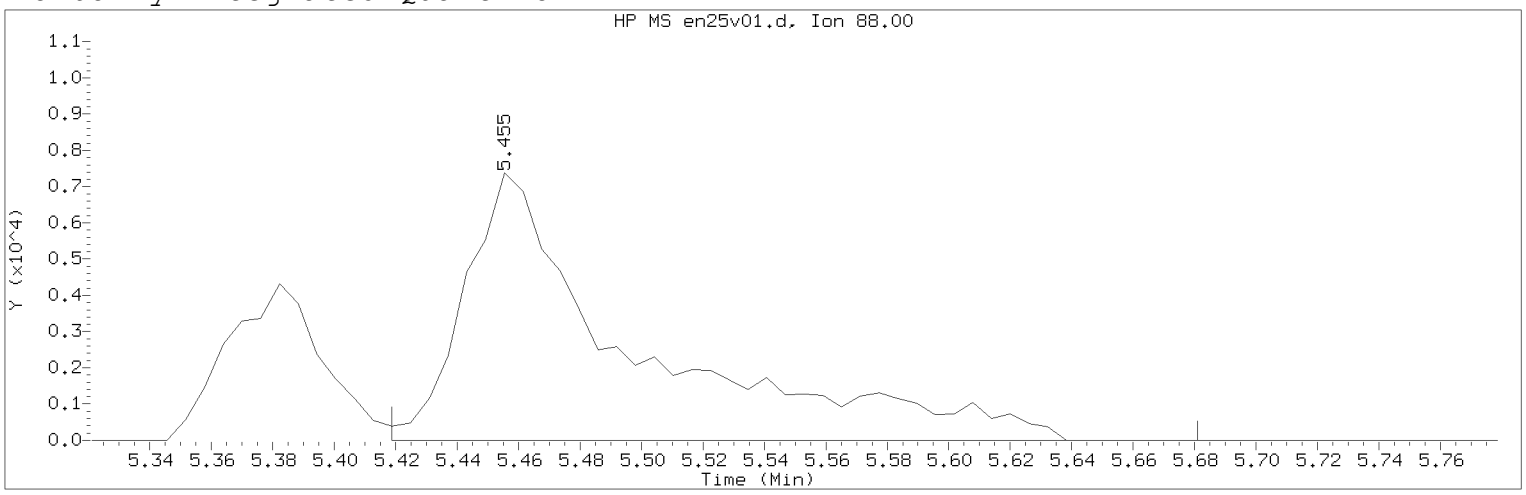
Compound Number : 66
Compound Name : Fluorobenzene
Scan Number : 613
Retention Time (minutes): 4.724
Quant Ion : 96.00
Area : 1122285
On-column Amount (ng) : 50.0000
Integration start scan : 601 Integration stop scan: 681
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 10:24.
Target 3.5 esignature user: JMLong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25v01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 17:21 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:23 jml01693

Sample Name: ICVELG Lab Sample ID: ICVELG

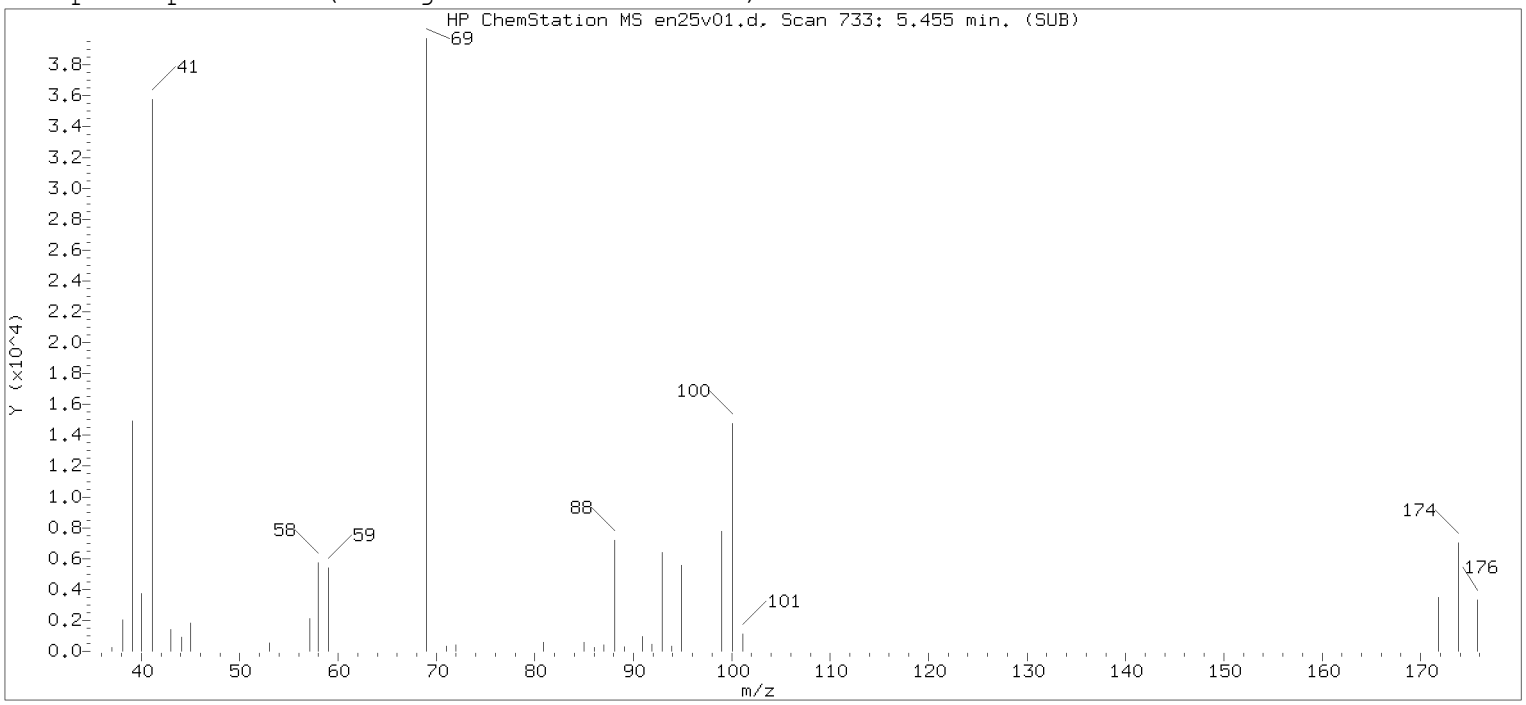
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 733
Retention Time (minutes): 5.455
Quant Ion : 88.00
Area (flag) : 27902M
On-Column Amount (ng) : 410.8172
Integration start scan : 726 Integration stop scan: 769
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

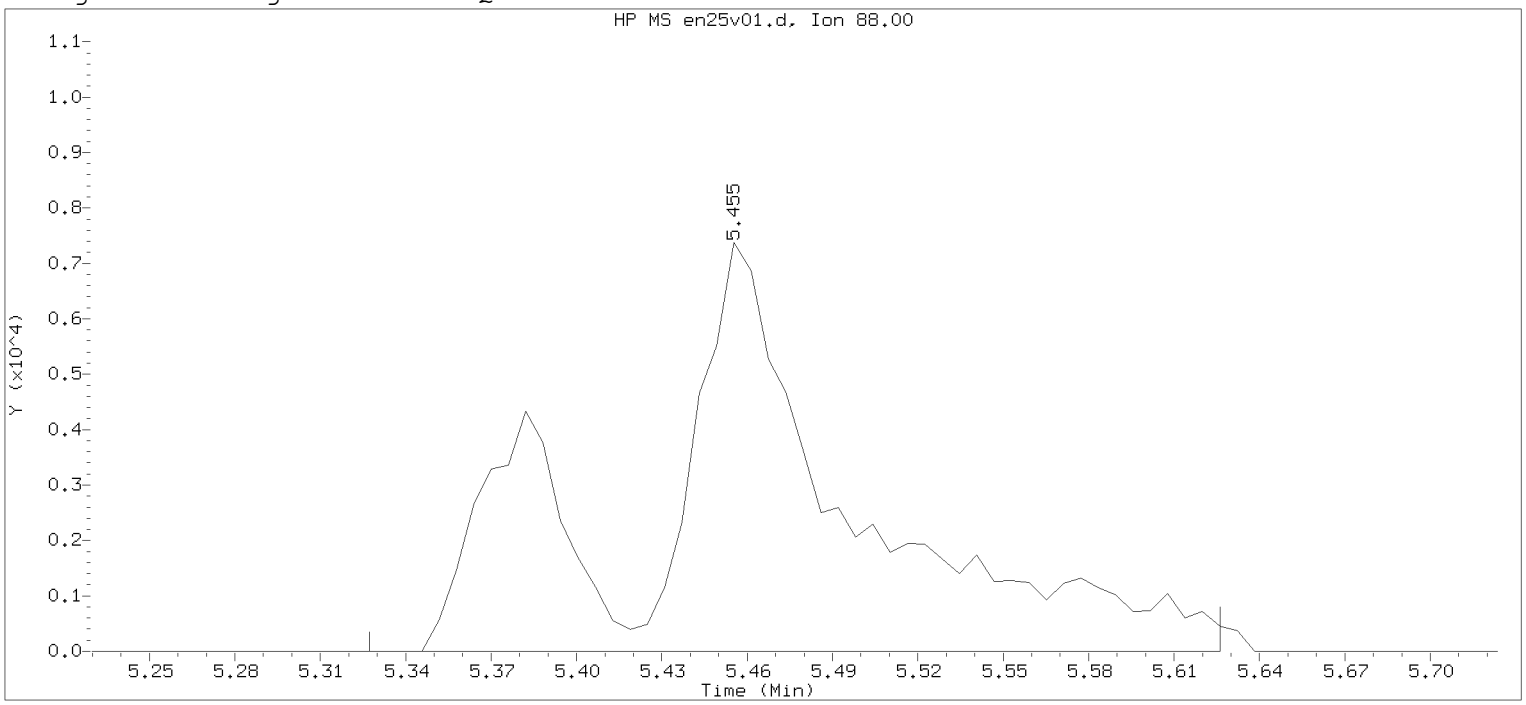
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:37.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25v01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 17:21 Analyst ID: KAS02648

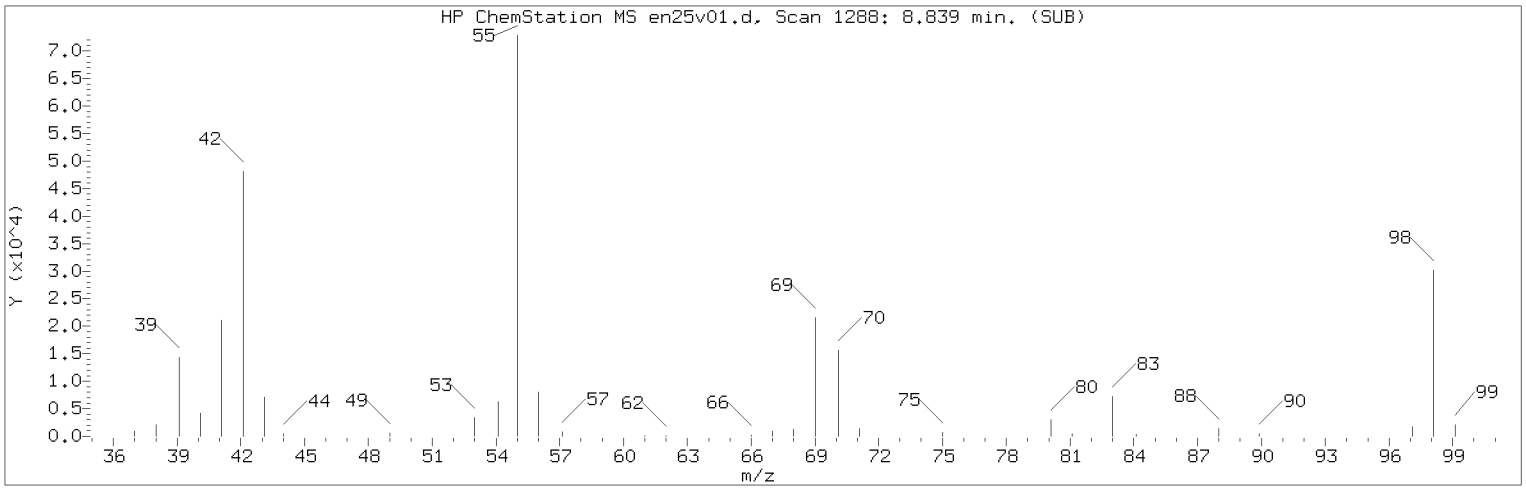
Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 16:59
Date, time and analyst ID of latest file update: 25-Nov-2019 17:37 Automation

Sample Name: ICVELG Lab Sample ID: ICVELG

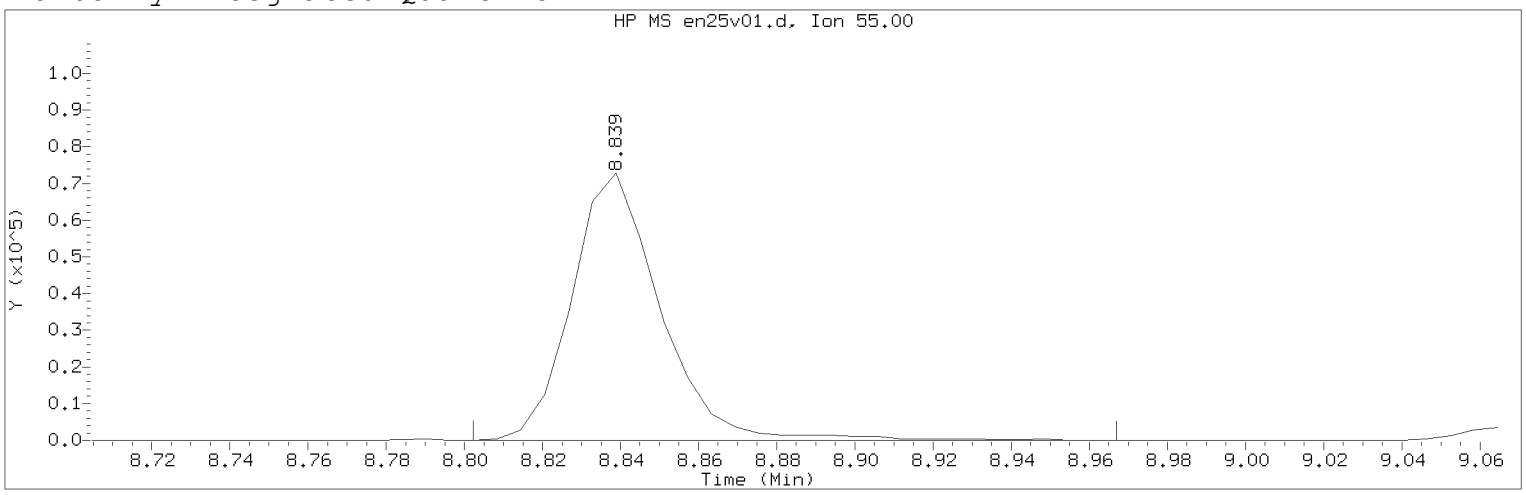
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 733
Retention Time (minutes): 5.455
Quant Ion : 88.00
Area : 36903
On-column Amount (ng) : 404.5732
Integration start scan : 711 Integration stop scan: 760
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 10:24.
Target 3.5 esignature user: JMLong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25v01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 17:21 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:22
Date, time and analyst ID of latest file update: 26-Nov-2019 10:23 jml01693

Sample Name: ICVELG Lab Sample ID: ICVELG

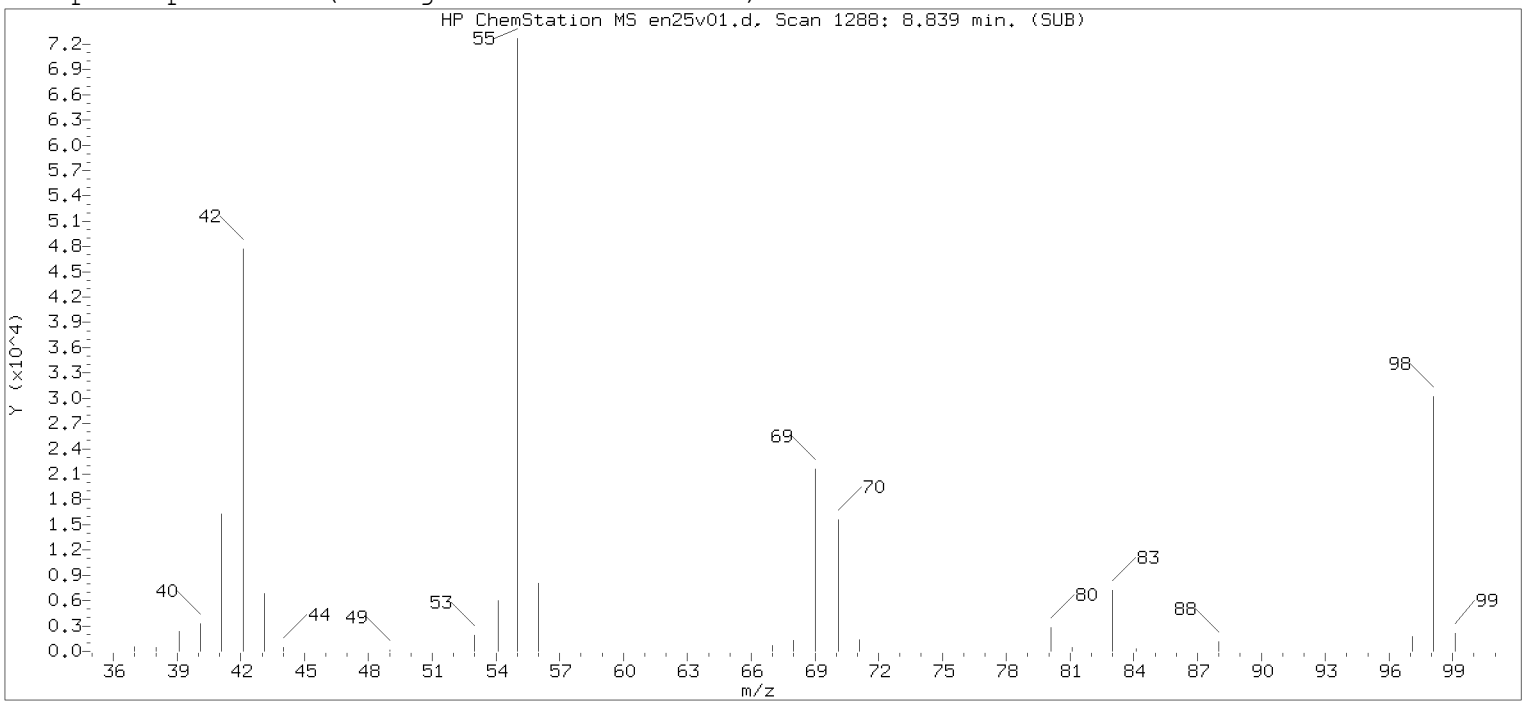
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1288
Retention Time (minutes): 8.839
Quant Ion : 55.00
Area (flag) : 114969M
On-Column Amount (ng) : 428.8930
Integration start scan : 1281 Integration stop scan: 1308
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

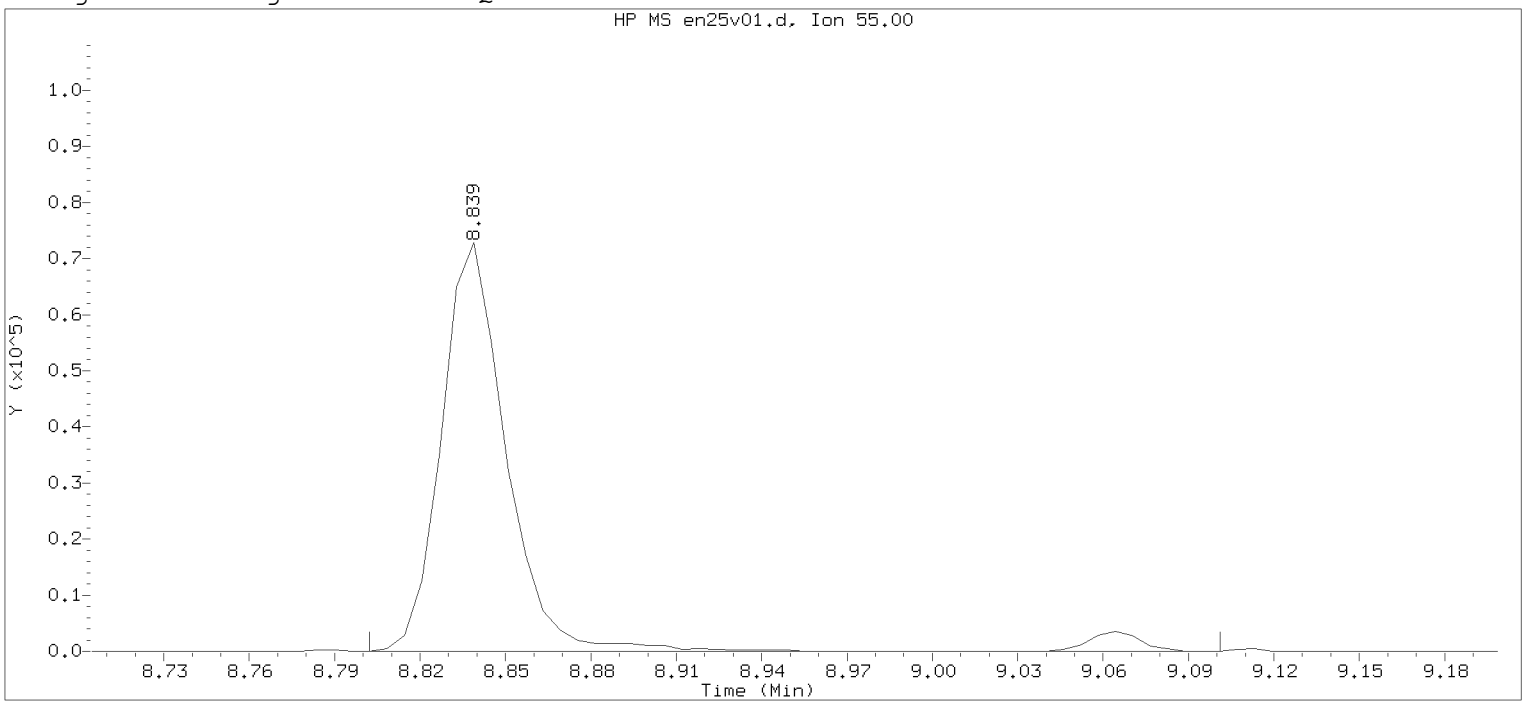
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 10:24.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 09:37.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov25i.b/en25v01.d Instrument ID: HP15648.i
Injection date and time: 25-NOV-2019 17:21 Analyst ID: KAS02648

Method used: /chem/HP15648.i/19nov25i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 25-NOV-2019 16:59
Date, time and analyst ID of latest file update: 25-Nov-2019 17:37 Automation

Sample Name: ICVELG Lab Sample ID: ICVELG

Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1288
Retention Time (minutes): 8.839
Quant Ion : 55.00
Area : 119366
On-column Amount (ng) : 439.7396
Integration start scan : 1281 Integration stop scan: 1330
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 10:24.
Target 3.5 esignature user: JMLong

Data File: /chem/HP15648.i/19nov26a.b/en26t01.d

Page 1

Date : 26-NOV-2019 09:39

Client ID: BFB aug02-19

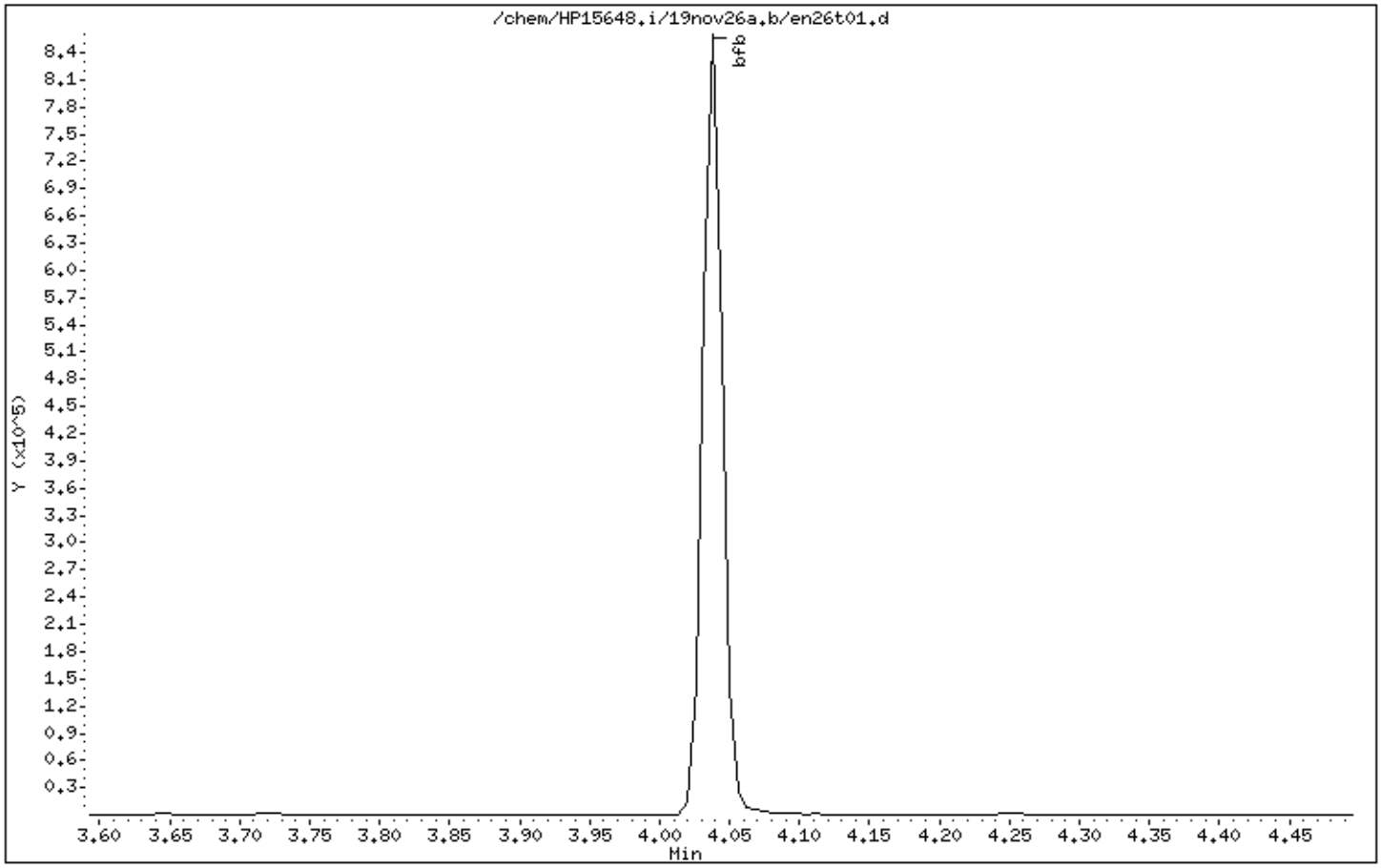
Instrument: HP15648.i

Sample Info: BFB aug02-19;50ng BFB;1;3;;;;;;

Operator: jml01693

Column phase: DB-624

Column diameter: 0.18



Data File: /chem/HP15648.i/19nov26a.b/en26t01.d

Date : 26-NOV-2019 09:39

Client ID: BFB aug02-19

Instrument: HP15648.i

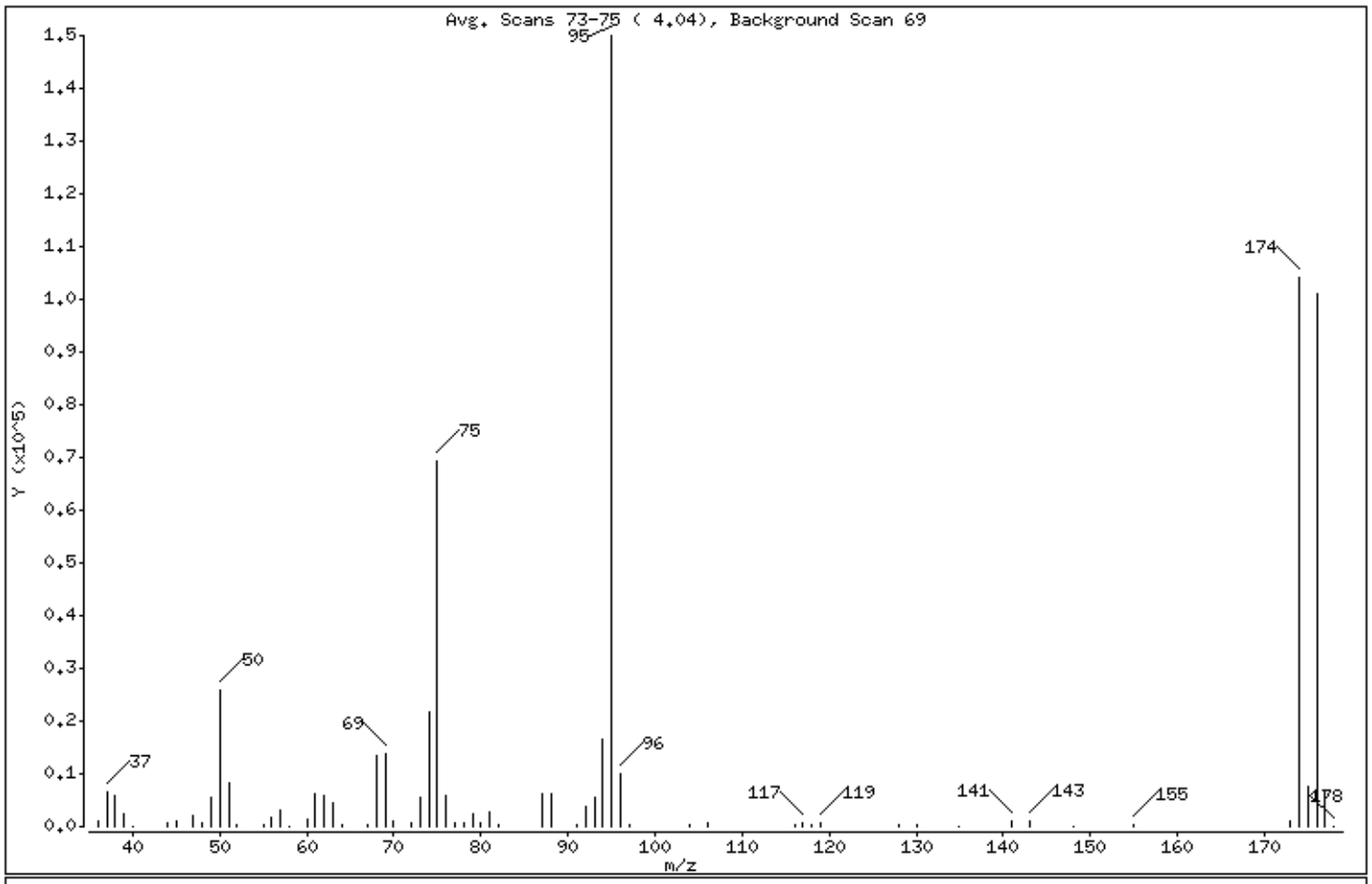
Sample Info: BFB aug02-19;50ng BFB;1;3;;;;;;

Operator: jml01693

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.32
75	30.00 - 60.00% of mass 95	46.30
96	5.00 - 9.00% of mass 95	6.72
173	Less than 2.00% of mass 174	0.59 (0.85)
174	50.00 - 100.00% of mass 95	69.40
175	5.00 - 9.00% of mass 174	4.95 (7.13)
176	95.00 - 101.00% of mass 174	67.41 (97.13)
177	5.00 - 9.00% of mass 176	4.42 (6.55)

Date : 26-NOV-2019 09:39

Client ID: BFB aug02-19 Instrument: HP15648.i

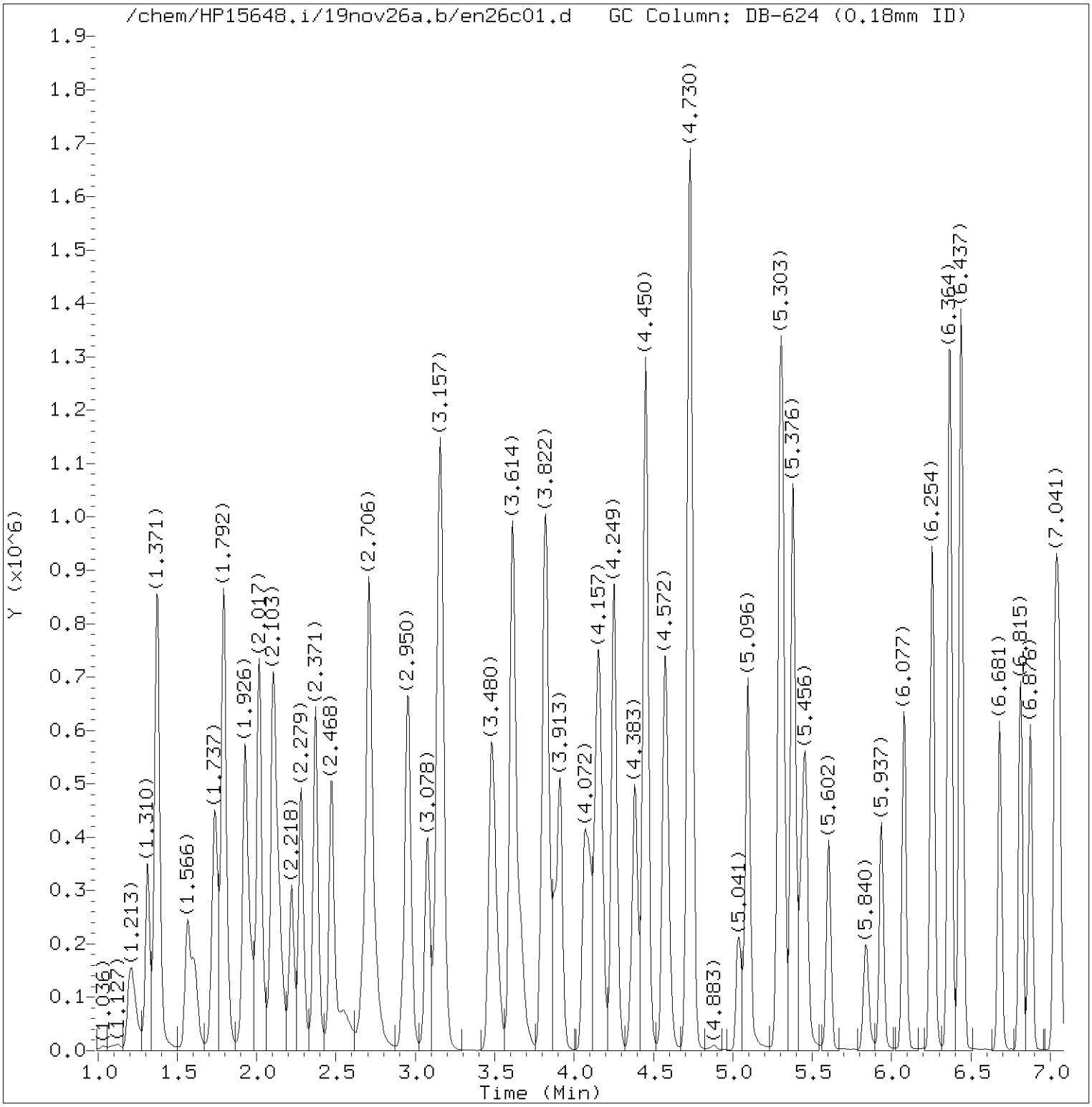
Sample Info: BFB aug02-19;50ng BFB;1;3;;;;;;

Operator: jml01693

Column phase: DB-624 Column diameter: 0.18

Data File: en26t01.d
Spectrum: Avg. Scans 73-75 (4.04), Background Scan 69
Location of Maximum: 95.00
Number of points: 65

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1173	60.00	1255	80.00	633	119.00	539
37.00	6612	61.00	6134	81.00	2734	128.00	402
38.00	5856	62.00	5829	82.00	513	130.00	284
39.00	2275	63.00	4432	87.00	6210	135.00	96
40.00	92	64.00	449	88.00	6222	141.00	1003
44.00	567	67.00	398	91.00	422	143.00	996
45.00	1170	68.00	13501	92.00	3709	148.00	136
47.00	1955	69.00	13873	93.00	5469	155.00	316
48.00	848	70.00	984	94.00	16408	173.00	889
49.00	5492	72.00	743	95.00	150080	174.00	104168
50.00	25992	73.00	5684	96.00	10081	175.00	7431
51.00	8199	74.00	21592	97.00	227	176.00	101176
52.00	317	75.00	69496	104.00	453	177.00	6628
55.00	325	76.00	5853	106.00	575	178.00	106
56.00	1881	77.00	800	116.00	461		
57.00	3253	78.00	595	117.00	688		
58.00	97	79.00	2337	118.00	330		



Total Ion Chromatogram (TIC)

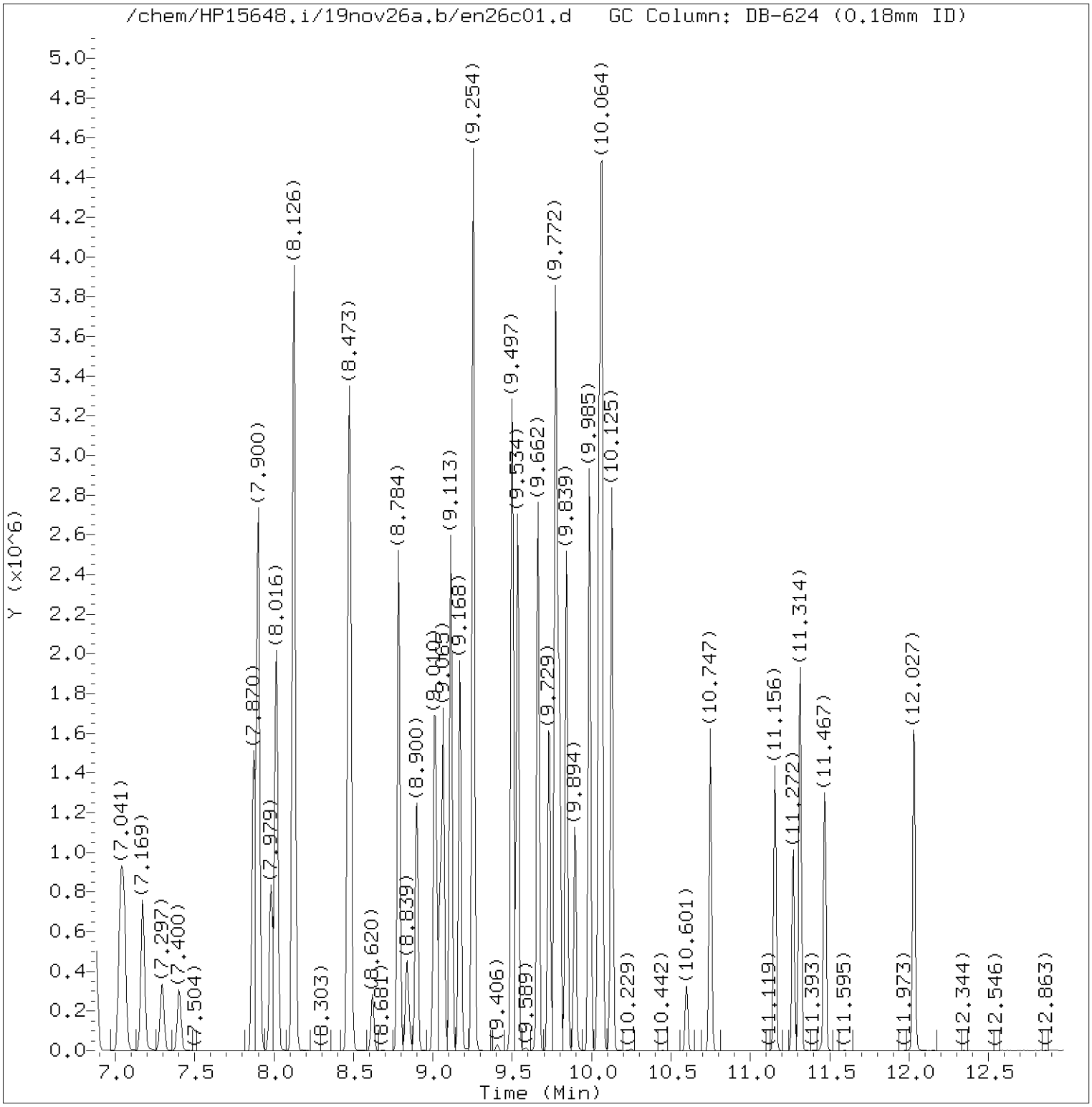
Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26c01.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 10:20 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:36
Date, time and analyst ID of latest file update: 26-Nov-2019 11:50 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Jason M. Long
on 11/26/2019 at 12:41.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26c01.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 10:20 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:36
Date, time and analyst ID of latest file update: 26-Nov-2019 11:50 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Jason M. Long
on 11/26/2019 at 12:41.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26c01.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 10:20 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:36
Date, time and analyst ID of latest file update: 26-Nov-2019 11:50 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.206	85	363496	50.580
4) Chloromethane	(2)	1.310	50	423486	47.876
5) 1,3-Butadiene	(2)	1.371	39	364764	56.461
6) Vinyl Chloride	(2)	1.377	62	393457	49.856
8) Bromomethane	(2)	1.566	94	208761	49.628
9) Chloroethane	(2)	1.609	64	210376	50.029
10) Dichlorofluoromethane	(2)	1.737	67	487246	48.436
12) Trichlorofluoromethane	(2)	1.786	101	379927M	49.405
11) n-Pentane	(2)	1.792	43	564089	59.226
14) Ethyl ether	(2)	1.926	59	228763	45.589
15) Freon 123a	(2)	1.932	67	313066	51.554
16) Acrolein	(1)	2.017	56	820949	512.964
17) 1,1-Dichloroethene	(2)	2.103	96	206894	53.375
17) 1,1-Dichloroethene	(2)	2.103	63	116664	53.372
18) Acetone	(1)	2.121	58	71288	106.117
19) Freon 113	(2)	2.127	101	241983	53.863
21) 2-Propanol	(1)	2.218	45	111230	237.387
22) Methyl Iodide	(2)	2.218	142	367374	53.723
23) Carbon Disulfide	(2)	2.279	76	781246	54.967
25) Allyl Chloride	(2)	2.371	41	420194	47.779
27) Methyl Acetate	(2)	2.377	43	244088	48.806
28) Methylene Chloride	(2)	2.474	84	243445	51.593
29)*t-Butyl alcohol-d10	(1)	2.481	65	189540	250.000
30) t-Butyl alcohol	(1)	2.554	59	164386	226.847
31) Acrylonitrile	(2)	2.670	53	147091	50.858
32) trans-1,2-Dichloroethene	(2)	2.706	96	231238	51.424
33) Methyl Tertiary Butyl Ether	(2)	2.712	73	784221	51.378
34) n-Hexane	(2)	2.950	57	498502	54.134
36) 1,1-Dichloroethane	(2)	3.078	63	490503	51.255
38) di-Isopropyl ether	(2)	3.151	45	1011140	51.281
39) 2-Chloro-1,3-butadiene	(2)	3.163	53	467384	52.617
40) Ethyl t-butyl ether	(2)	3.480	59	886299	50.683
42) cis-1,2-Dichloroethene	(2)	3.608	96	259865	50.505
44) 2-Butanone	(2)	3.614	43	379691	103.410
45) 2,2-Dichloropropane	(2)	3.621	77	355437	50.228
43) 1,2-Dichloroethene (Total)	(2)		96	491103	101.929
47) Propionitrile	(1)	3.669	54	288313	264.242
48) Methacrylonitrile	(2)	3.816	67	372194	129.266

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jason M. Long
on 11/26/2019 at 12:41.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26c01.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 10:20 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:36
Date, time and analyst ID of latest file update: 26-Nov-2019 11:50 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.834	128	114372	49.307
50) Tetrahydrofuran	(1)	3.871	71	91528	101.365
51) Chloroform	(2)	3.913	83	414276	50.652
52)$Dibromofluoromethane	(2)	4.066	113	213851	49.822
52)$Dibromofluoromethane	(2)	4.066	111	222100	50.014
53) 1,1,1-Trichloroethane	(2)	4.090	97	339778	49.739
54) Cyclohexane	(2)	4.157	56	592572	52.148
54) Cyclohexane	(2)	4.157	84	453363	51.413
54) Cyclohexane	(2)	4.157	69	172591	51.989
55) 1,1-Dichloropropene	(2)	4.249	75	368810	50.759
56) Carbon Tetrachloride	(2)	4.261	117	251604	47.507
58) Isobutyl Alcohol	(1)	4.377	41	131377	553.323
57)$1,2-Dichloroethane-d4	(2)	4.389	102	56809	49.655
57)$1,2-Dichloroethane-d4	(2)	4.383	65	285195	49.804
57)$1,2-Dichloroethane-d4	(2)	4.389	104	36216	49.917
60) Benzene	(2)	4.450	78	1091689	50.725
61) 1,2-Dichloroethane	(2)	4.456	62	325174	48.526
61) 1,2-Dichloroethane	(2)	4.462	98	28126	49.764
65) t-Amyl methyl ether	(2)	4.578	73	816009	50.019
66)*Fluorobenzene	(2)	4.724	96	1009065M	50.000
67) n-Heptane	(2)	4.736	43	522750	50.054
69) n-Butanol	(1)	5.041	56	225166	1136.956
71) Trichloroethene	(2)	5.096	95	253575	50.649
73) Methylcyclohexane	(2)	5.297	83	504015	47.119
73) Methylcyclohexane	(2)	5.297	98	221969	47.402
74) 1,2-Dichloropropane	(2)	5.315	63	288168	51.194
75) Dibromomethane	(2)	5.431	93	141986	50.141
77) Methyl Methacrylate	(2)	5.456	69	225186	50.341
76) 1,4-Dioxane	(1)	5.456	88	43595M	671.488
79) Bromodichloromethane	(2)	5.602	83	286156	49.341
80) 2-Nitropropane	(2)	5.834	41	91965	87.693
81) 2-Chloroethyl Vinyl Ether	(2)	5.937	63	206642	49.342
82) cis-1,3-Dichloropropene	(2)	6.077	75	404136	49.607
83) 4-Methyl-2-pentanone	(2)	6.254	43	772449	100.397
84)$Toluene-d8	(3)	6.364	98	997939	49.749
84)$Toluene-d8	(3)	6.370	100	642492	49.888
89) Toluene	(3)	6.437	92	651940	49.697
90) trans-1,3-Dichloropropene	(3)	6.681	75	358150	49.407

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 11/26/2019 at 12:41.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26c01.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 10:20 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:36
Date, time and analyst ID of latest file update: 26-Nov-2019 11:50 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropene (total)	(3)		100	762286	99.014
92) Ethyl Methacrylate	(3)	6.815	69	392970	49.062
93) 1,1,2-Trichloroethane	(3)	6.876	97	206491	49.932
94) Tetrachloroethene	(3)	7.035	166	227889	46.710
95) 1,3-Dichloropropane	(3)	7.053	76	402881	50.560
97) 2-Hexanone	(3)	7.169	43	539963	99.787
98) Dibromochloromethane	(3)	7.297	129	180885	47.330
100) 1,2-Dibromoethane	(3)	7.400	107	210974	49.439
101)*Chlorobenzene-d5	(3)	7.870	117	706562	50.000
103) Chlorobenzene	(3)	7.894	112	675275	49.434
102) 1-Chlorohexane	(3)	7.900	91	370677	47.927
104) 1,1,1,2-Tetrachloroethane	(3)	7.979	131	196097	48.981
105) Ethylbenzene	(3)	8.016	91	1279503	49.906
107) m+p-Xylene	(3)	8.126	106	960894	99.942
108) o-Xylene	(3)	8.467	106	469767	50.298
110) Styrene	(3)	8.479	104	776393	51.340
109) Xylene (Total)	(3)		106	1430661	150.239
111) Bromoform	(3)	8.620	173	105669	45.234
112) Isopropylbenzene	(3)	8.784	105	1282088	50.571
113) Cyclohexanone	(1)	8.839	55	169057	659.760
115)$4-Bromofluorobenzene	(3)	8.894	95	377956	49.999
115)$4-Bromofluorobenzene	(3)	8.900	174	250469	49.610
116) Bromobenzene	(4)	9.010	156	250276	50.571
117) 1,1,2,2-Tetrachloroethane	(4)	9.022	83	325606	49.369
118) 1,2,3-Trichloropropane	(4)	9.046	110	92882	50.362
119) trans-1,4-Dichloro-2-butene	(4)	9.065	53	264579	128.825
120) n-Propylbenzene	(4)	9.113	91	1528715	50.568
121) 2-Chlorotoluene	(4)	9.168	126	280234	51.104
123) 1,3,5-Trimethylbenzene	(4)	9.254	105	1076534	51.070
122) 4-Chlorotoluene	(4)	9.254	126	284737	50.629
125) tert-Butylbenzene	(4)	9.497	134	231956	51.748
126) Pentachloroethane	(4)	9.504	167	121468	49.229
127) 1,2,4-Trimethylbenzene	(4)	9.534	105	1119562	51.435
128) sec-Butylbenzene	(4)	9.662	105	1409720	50.939
130) 1,3-Dichlorobenzene	(4)	9.735	146	500564	49.491
131) p-Isopropyltoluene	(4)	9.772	119	1169552	51.150
132)*1,4-Dichlorobenzene-d4	(4)	9.778	152	343022	50.000
134) 1,4-Dichlorobenzene	(4)	9.796	146	495343	48.817

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 11/26/2019 at 12:41.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26c01.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 10:20 Analyst ID: jml01693

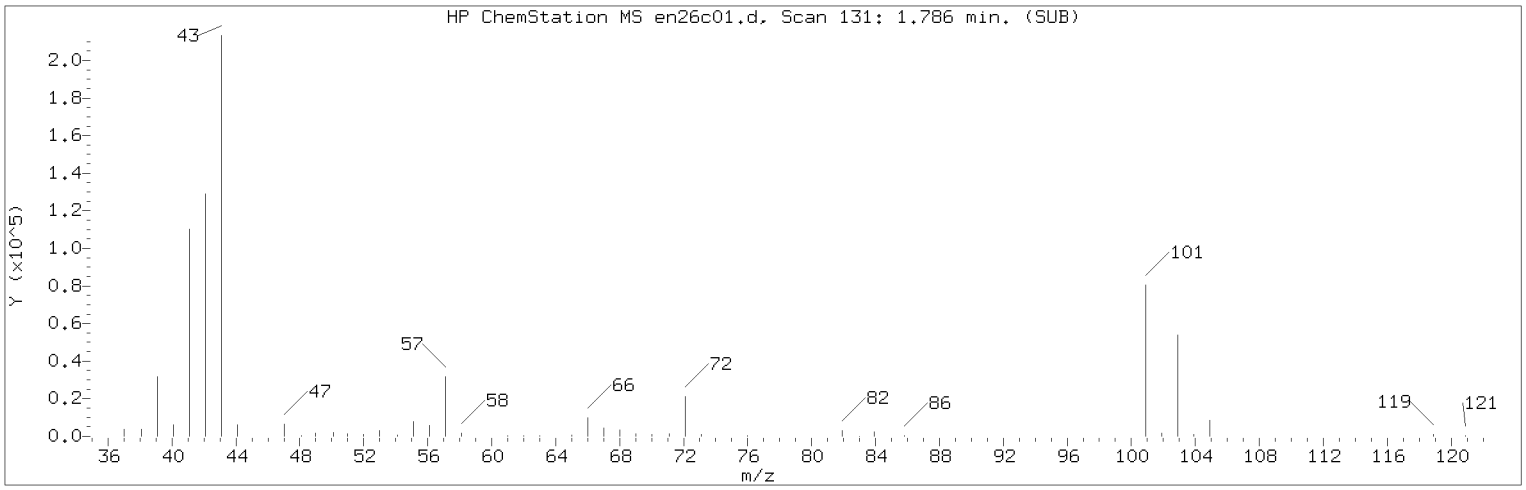
Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:36
Date, time and analyst ID of latest file update: 26-Nov-2019 11:50 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

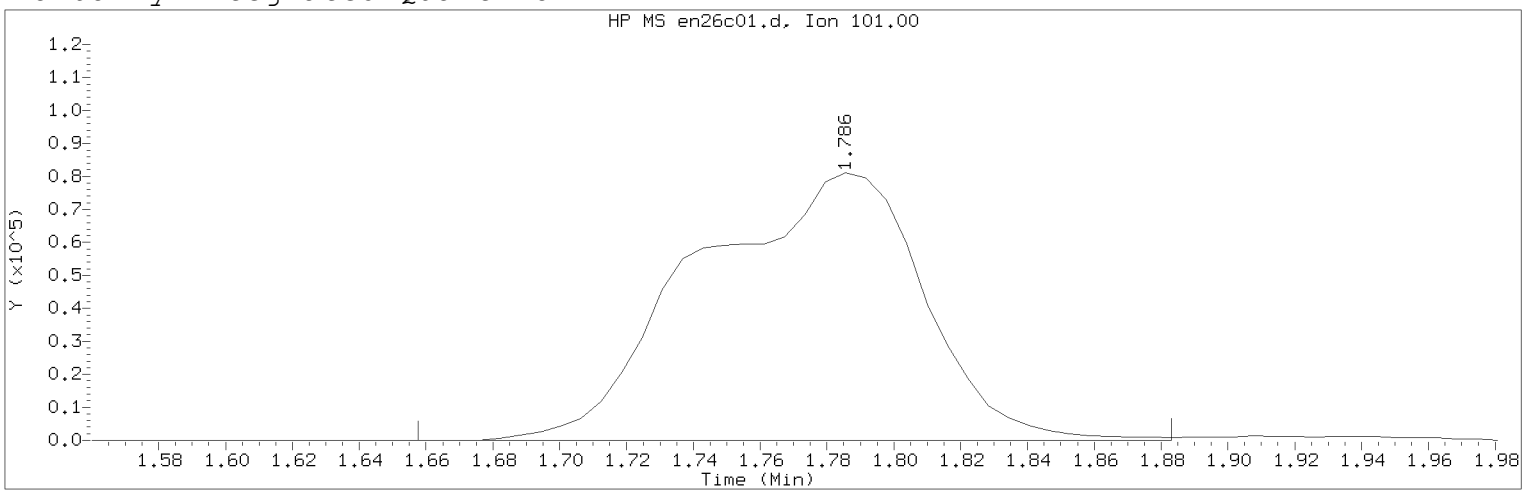
	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135)	1,2,3-Trimethylbenzene	(4)	9.839	105	1087241	48.570
136)	Benzyl Chloride	(4)	9.894	91	594893	48.708
137)	1,3-Diethylbenzene	(4)	9.985	119	698481	48.966
138)	1,4-Diethylbenzene	(4)	10.046	119	726761	48.770
139)	1,2-Dichlorobenzene	(4)	10.064	146	470830	49.793
140)	n-Butylbenzene	(4)	10.064	92	612069	50.687
141)	1,2-Diethylbenzene	(4)	10.125	119	580302	48.617
142)	Diethylbenzene (total)	(4)		100	2005544	146.353
143)	1,2-Dibromo-3-chloropropane	(4)	10.595	75	65399	47.616
145)	1,3,5-Trichlorobenzene	(4)	10.747	180	350498	49.789
147)	1,2,4-Trichlorobenzene	(4)	11.156	180	307054	48.775
148)	Hexachlorobutadiene	(4)	11.272	225	124474	47.938
149)	Naphthalene	(4)	11.314	128	1049264	47.940
150)	1,2,3-Trichlorobenzene	(4)	11.473	180	285311	47.159
151)	2-Methylnaphthalene	(4)	12.027	142	566472	42.503

Digitally signed by Jason M. Long
on 11/26/2019 at 12:41.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov26a.b/en26c01.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 10:20 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:36
Date, time and analyst ID of latest file update: 26-Nov-2019 11:50 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

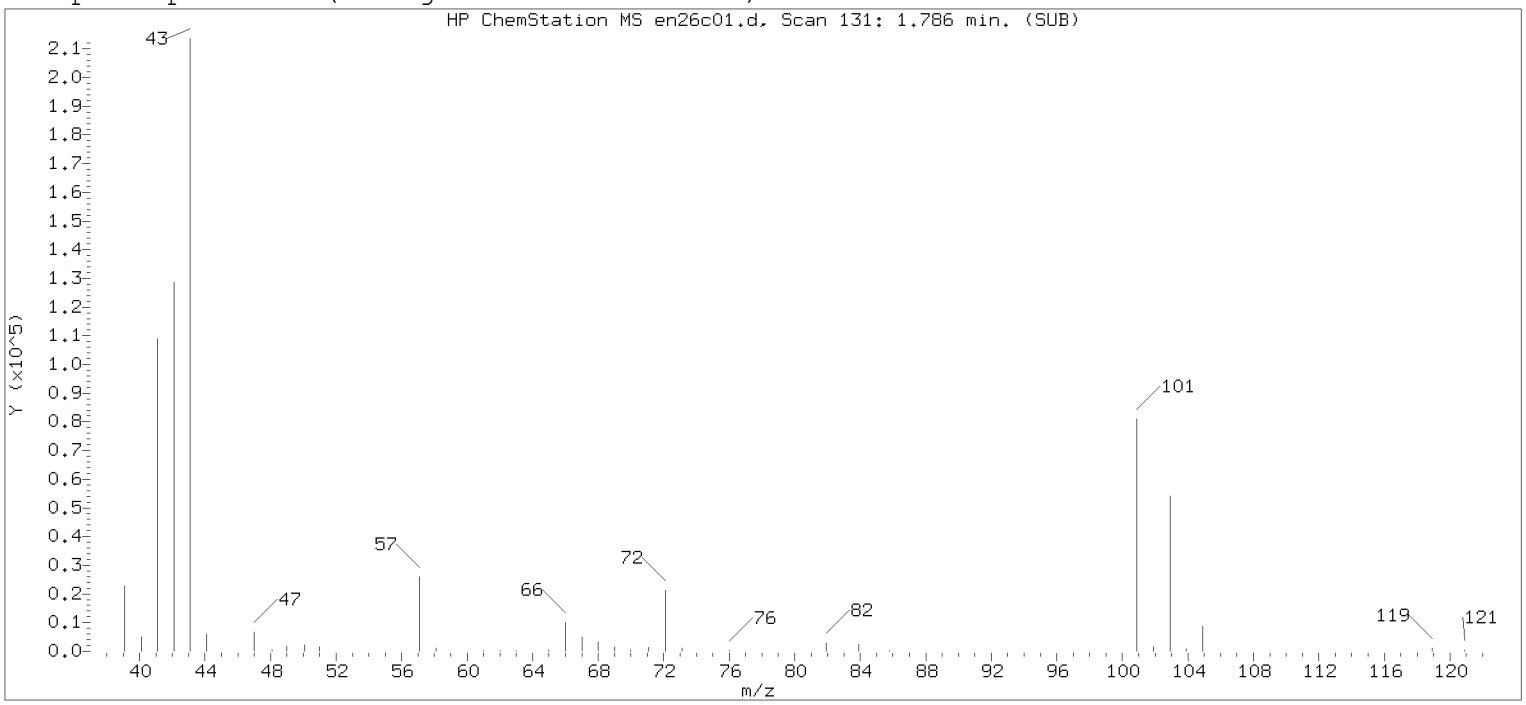
Compound Number : 12
Compound Name : Trichlorofluoromethane
Scan Number : 131
Retention Time (minutes): 1.786
Quant Ion : 101.00
Area (flag) : 379927M
On-Column Amount (ng) : 49.4051
Integration start scan : 109 Integration stop scan: 146
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

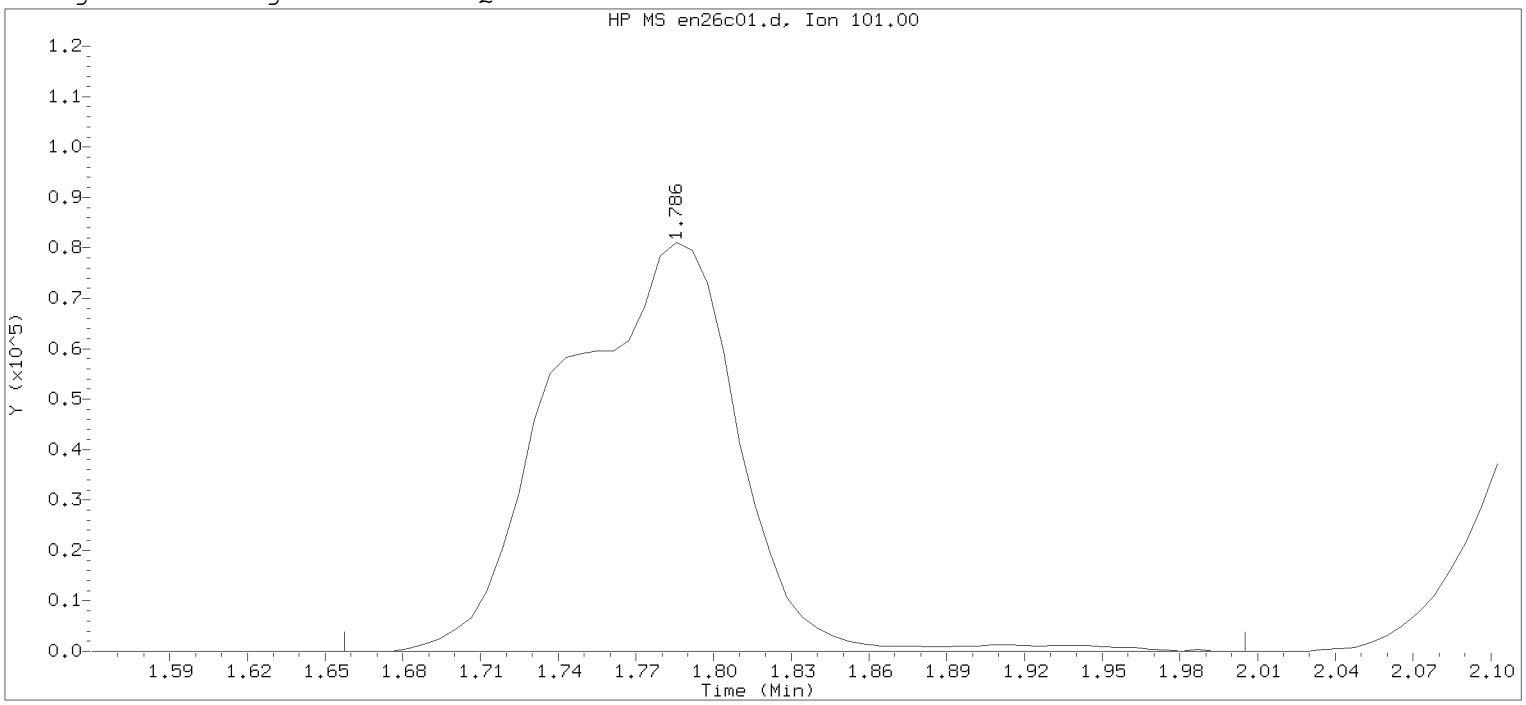
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 12:41.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 12:19.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov26a.b/en26c01.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 10:20 Analyst ID: jml01693

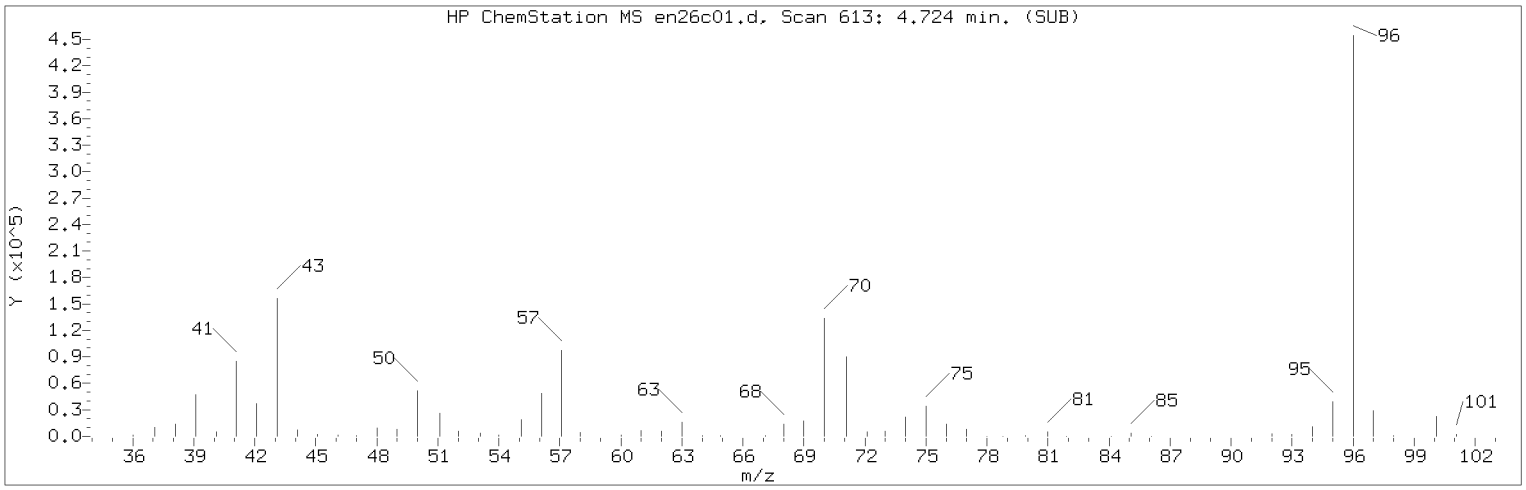
Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:36
Date, time and analyst ID of latest file update: 26-Nov-2019 10:36 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

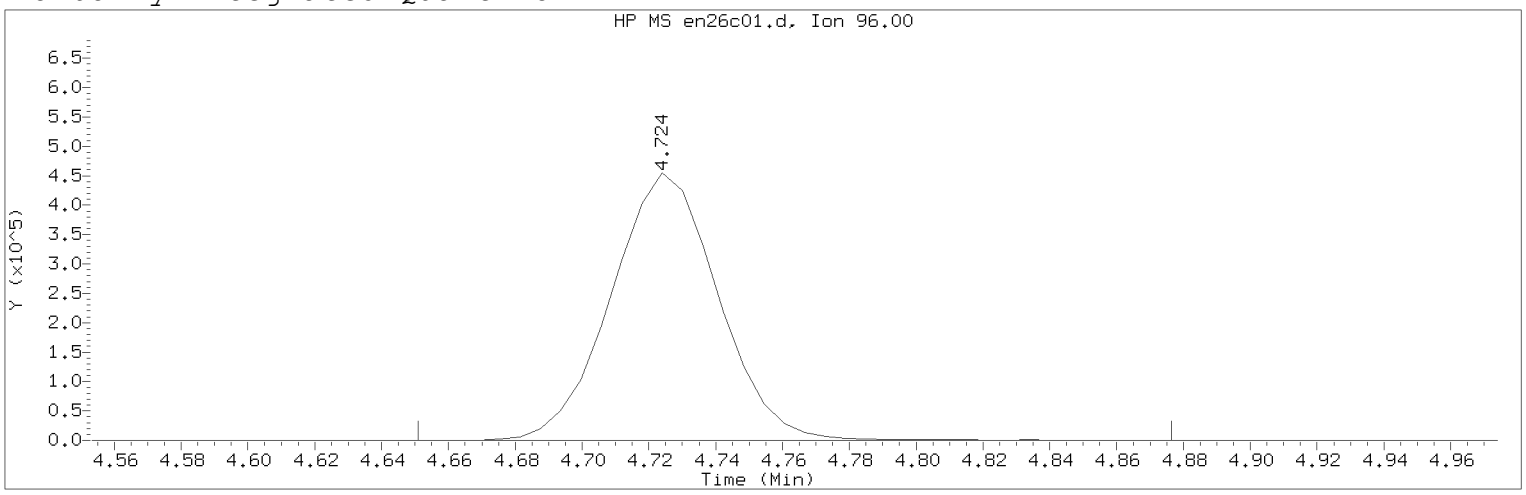
Compound Number : 12
Compound Name : Trichlorofluoromethane
Scan Number : 131
Retention Time (minutes): 1.786
Quant Ion : 101.00
Area : 385237
On-column Amount (ng) : 49.0475
Integration start scan : 109 Integration stop scan: 166
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 12:41.
Target 3.5 esignature user: JML01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov26a.b/en26c01.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 10:20 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:36
Date, time and analyst ID of latest file update: 26-Nov-2019 11:50 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

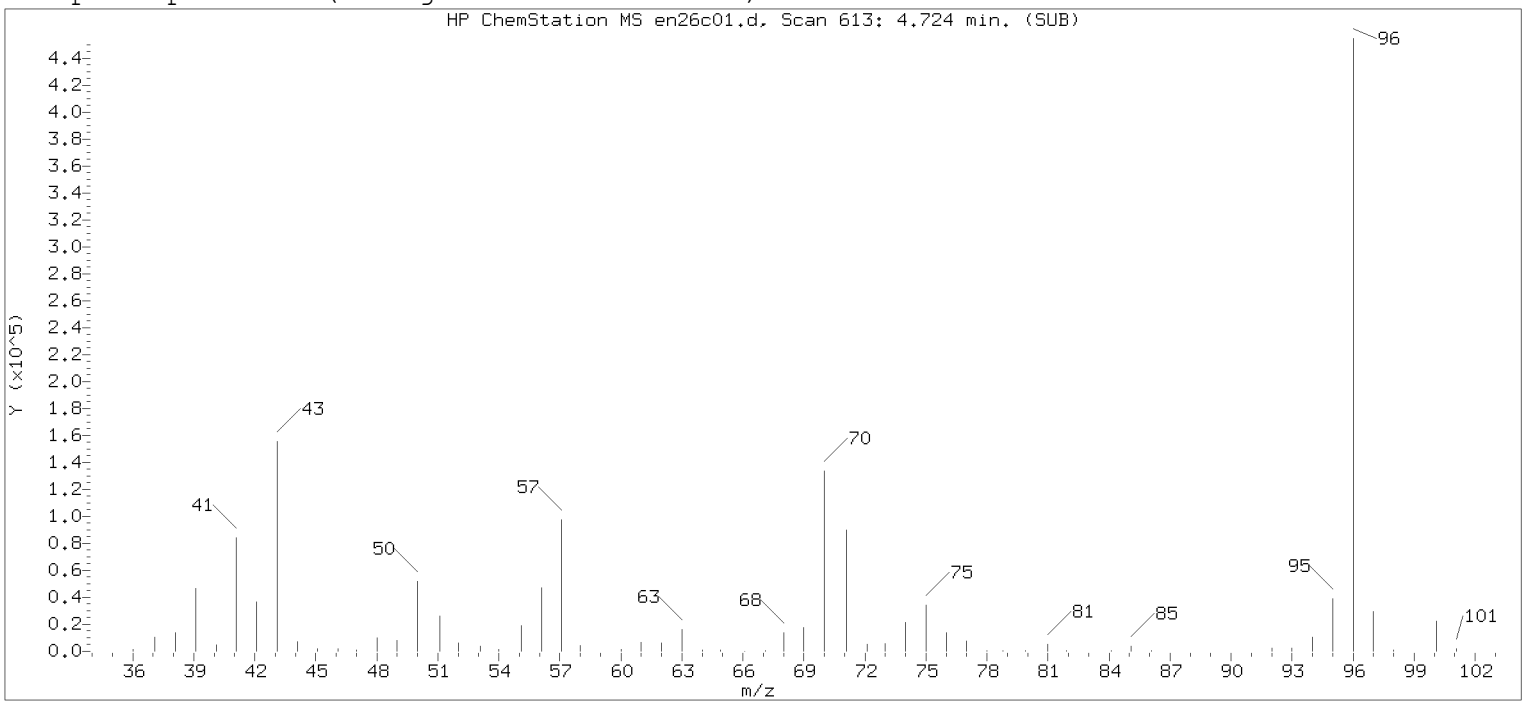
Compound Number : 66
Compound Name : Fluorobenzene
Scan Number : 613
Retention Time (minutes): 4.724
Quant Ion : 96.00
Area (flag) : 1009065M
On-Column Amount (ng) : 50.0000
Integration start scan : 600 Integration stop scan: 637
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

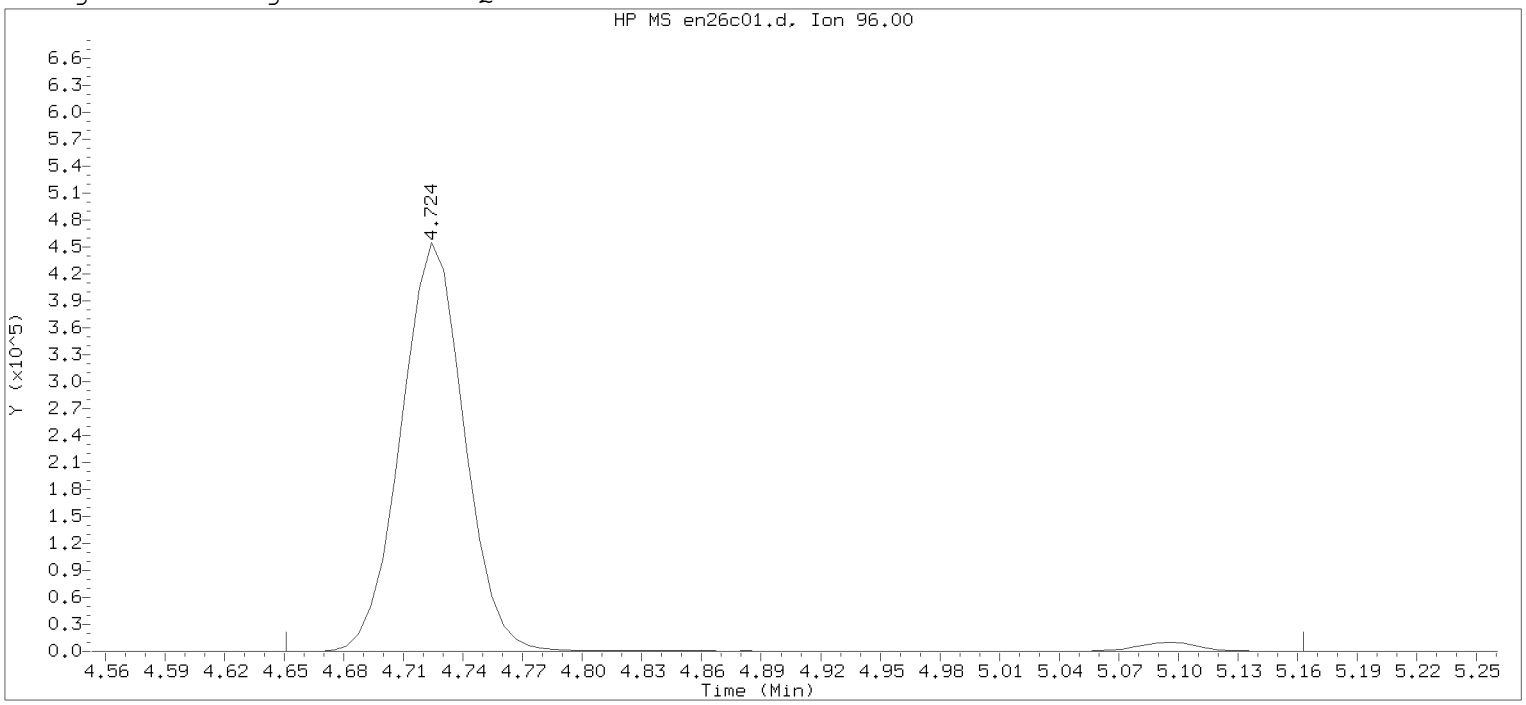
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 12:41.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 12:19.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov26a.b/en26c01.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 10:20 Analyst ID: jml01693

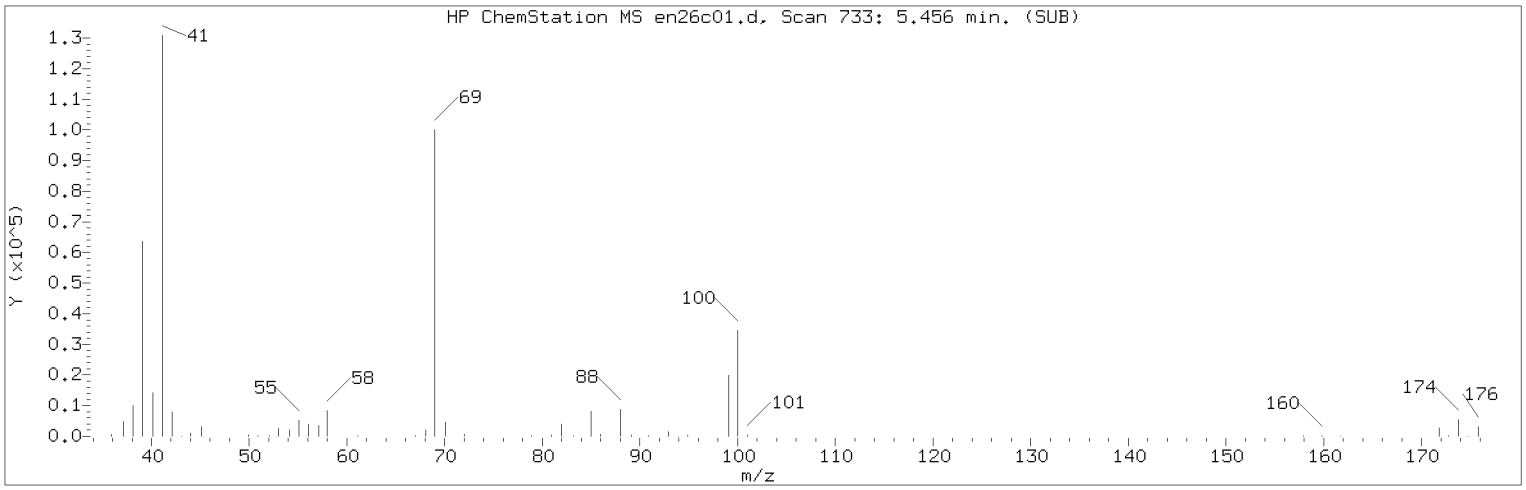
Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:36
Date, time and analyst ID of latest file update: 26-Nov-2019 10:36 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

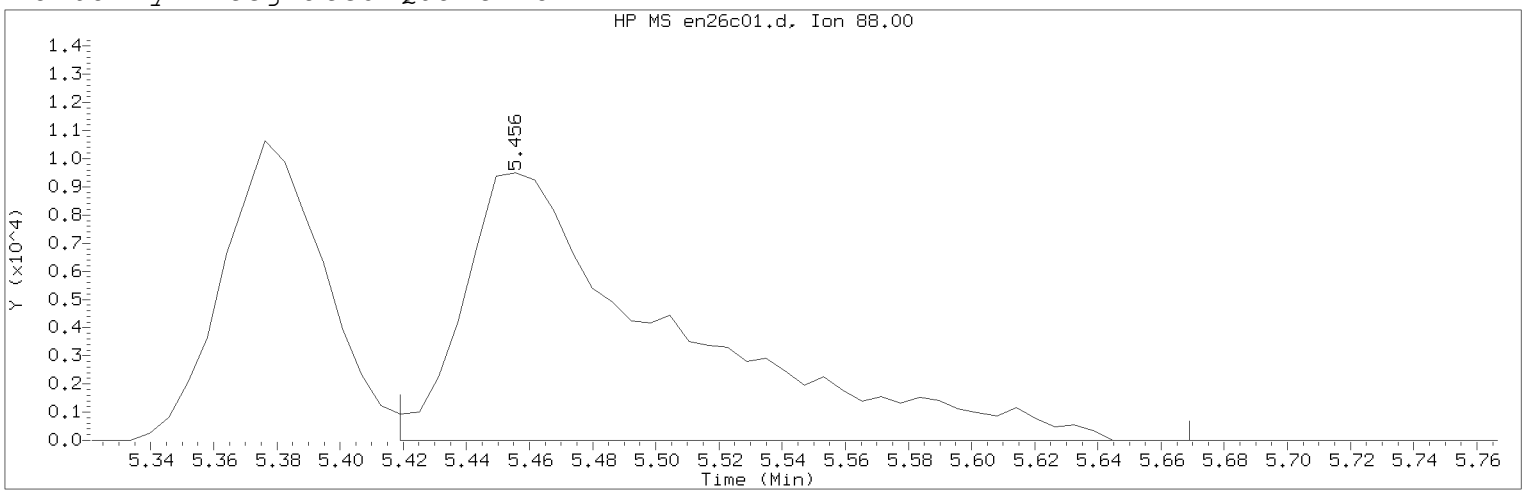
Compound Number : 66
Compound Name : Fluorobenzene
Scan Number : 613
Retention Time (minutes): 4.724
Quant Ion : 96.00
Area : 1030627
On-column Amount (ng) : 50.0000
Integration start scan : 600 Integration stop scan: 684
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 12:41.
Target 3.5 esignature user: JML01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov26a.b/en26c01.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 10:20 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:36
Date, time and analyst ID of latest file update: 26-Nov-2019 11:50 jml01693

Sample Name: VSTD050 Lab Sample ID: VSTD050

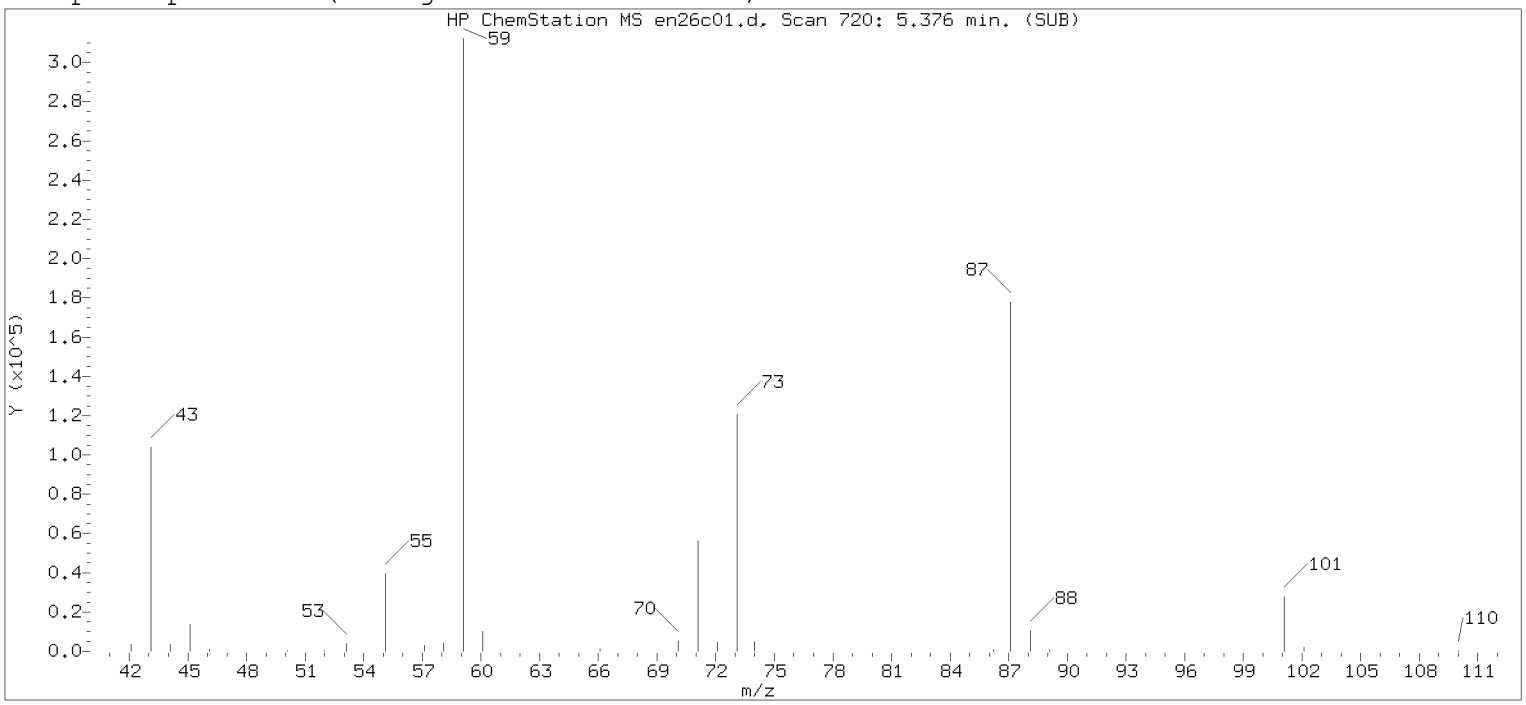
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 733
Retention Time (minutes): 5.456
Quant Ion : 88.00
Area (flag) : 43595M
On-Column Amount (ng) : 671.4882
Integration start scan : 726 Integration stop scan: 767
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

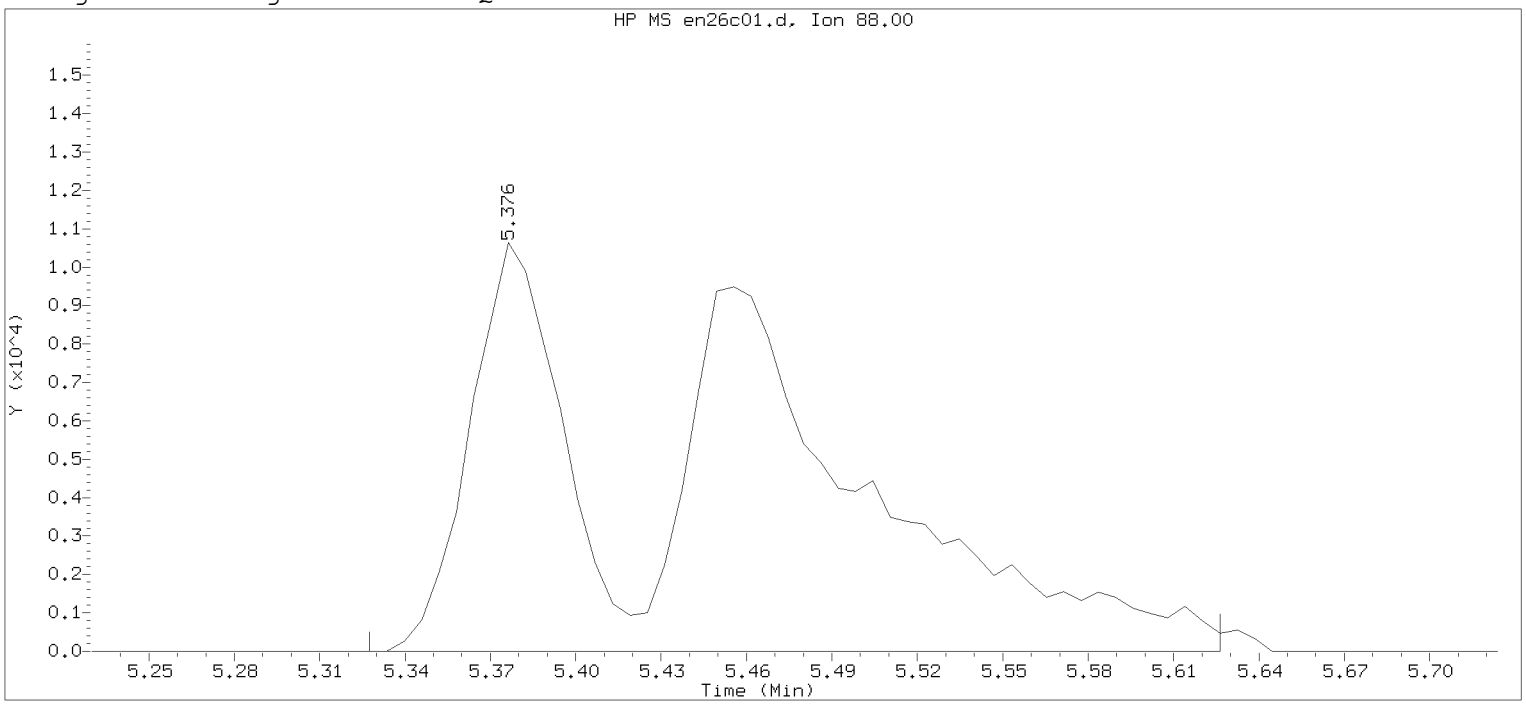
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 12:41.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 12:19.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov26a.b/en26c01.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 10:20 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:36
Date, time and analyst ID of latest file update: 26-Nov-2019 10:36 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 720
Retention Time (minutes): 5.376
Quant Ion : 88.00
Area : 66782
On-column Amount (ng) : 1028.6333
Integration start scan : 711 Integration stop scan: 760
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 12:41.
Target 3.5 esignature user: JML01693

Raw QC Data

Volatiles by GC/MS

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19nov26a.b/en26b01.d
Data file Sample Info. Line: VBLKE76;VBLKE76;1;3;;;;;;
Date, time and analyst ID of latest file update: 26-Nov-2019 12:02 jml01693

Injection date and time: **26-NOV-2019 11:41**
Instrument ID: **HP15648.i** Batch: **E193301AA**

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **8260W**
Calibration date and time (Last Method Edit): 26-NOV-2019 10:36
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.474	(0.006)	244	65	188217	(-1)	250.00	
66) Fluorobenzene	4.724	(0.000)	613	96	1013282	(0)	50.00	
101) Chlorobenzene-d5	7.870	(0.000)	1129	117	704121	(0)	50.00	
132) 1,4-Dichlorobenzene-d4	9.784	(-0.006)	1443	152	344772	(1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.059	(0.001)	113	213332	49.495	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.382	(0.001)	102	56597	49.264	99%		80 - 120
84) Toluene-d8	(3)	6.364	(0.000)	98	995419	49.795	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.894	(0.000)	95	373501	49.581	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
3) Dichlorodifluoromethane	(2)				Not Detected					0.2	1
4) Chloromethane	(2)				Not Detected					0.2	1
5) 1,3-Butadiene	(2)				Not Detected					1	3
6) Vinyl Chloride	(2)				Not Detected					0.2	1
8) Bromomethane	(2)				Not Detected					0.3	1
9) Chloroethane	(2)				Not Detected					0.2	1
10) Dichlorofluoromethane	(2)				Not Detected					0.9	3
11) n-Pentane	(2)				Not Detected					0.4	10
12) Trichlorofluoromethane	(2)				Not Detected					0.2	1
14) Ethyl ether	(2)				Not Detected					0.2	5
15) Freon 123a	(2)				Not Detected					0.4	5
16) Acrolein	(1)				Not Detected					2	100
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
21) 2-Propanol	(1)				Not Detected					18	100
22) Methyl Iodide	(2)				Not Detected					0.2	1
23) Carbon Disulfide	(2)				Not Detected					0.2	5
25) Allyl Chloride	(2)				Not Detected					0.3	5
27) Methyl Acetate	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
30) t-Butyl alcohol	(1)				Not Detected					12	50
31) Acrylonitrile	(2)				Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.2	1
34) n-Hexane	(2)				Not Detected					2	5
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
38) di-Isopropyl ether	(2)				Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)				Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1

Digitally signed by Jason M. Long on 11/26/2019 at 15:26. Target 3.5 esignature user ID: jml01693

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19nov26a.b/en26b01.d Injection date and time: **26-NOV-2019 11:41**
Data file Sample Info. Line: VBLKE76;VBLKE76;1;3;;;;;; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 12:02 jml01693

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **8260W**
Calibration date and time (Last Method Edit): 26-NOV-2019 10:36
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
43) 1,2-Dichloroethene (Total)	(2)				Not Detected					0.4	2
44) 2-Butanone	(2)				Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					1	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
73) Methylcyclohexane	(2)				Not Detected					0.5	5
74) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
75) Dibromomethane	(2)				Not Detected					0.2	1
76) 1,4-Dioxane	(1)				Not Detected					29	250
77) Methyl Methacrylate	(2)				Not Detected					0.2	5
79) Bromodichloromethane	(2)				Not Detected					0.2	1
80) 2-Nitropropane	(2)				Not Detected					0.8	10
81) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
82) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
83) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
89) Toluene	(3)				Not Detected					0.2	1
90) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
91) 1,3-Dichloropropene (total)	(3)				Not Detected					0.4	2
92) Ethyl Methacrylate	(3)				Not Detected					0.2	5
93) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
94) Tetrachloroethene	(3)				Not Detected					0.2	1
95) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
97) 2-Hexanone	(3)				Not Detected					0.3	10
98) Dibromochloromethane	(3)				Not Detected					0.2	1
100) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
102) 1-Chlorohexane	(3)				Not Detected					0.3	5
103) Chlorobenzene	(3)				Not Detected					0.2	1
104) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
105) Ethylbenzene	(3)				Not Detected					0.4	1
107) m+p-Xylene	(3)				Not Detected					1	5
108) o-Xylene	(3)				Not Detected					0.4	1
109) Xylene (Total)	(3)				Not Detected					1	6
110) Styrene	(3)				Not Detected					0.2	5
111) Bromoform	(3)				Not Detected					1	4
112) Isopropylbenzene	(3)				Not Detected					0.2	5
113) Cyclohexanone	(1)				Not Detected					25	100
116) Bromobenzene	(4)				Not Detected					0.2	5
117) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
118) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
119) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19nov26a.b/en26b01.d Injection date and time: **26-NOV-2019 11:41**
Data file Sample Info. Line: VBLKE76;VBLKE76;1;3;;;;;; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 12:02 jml01693

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **8260W**
Calibration date and time (Last Method Edit): 26-NOV-2019 10:36
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

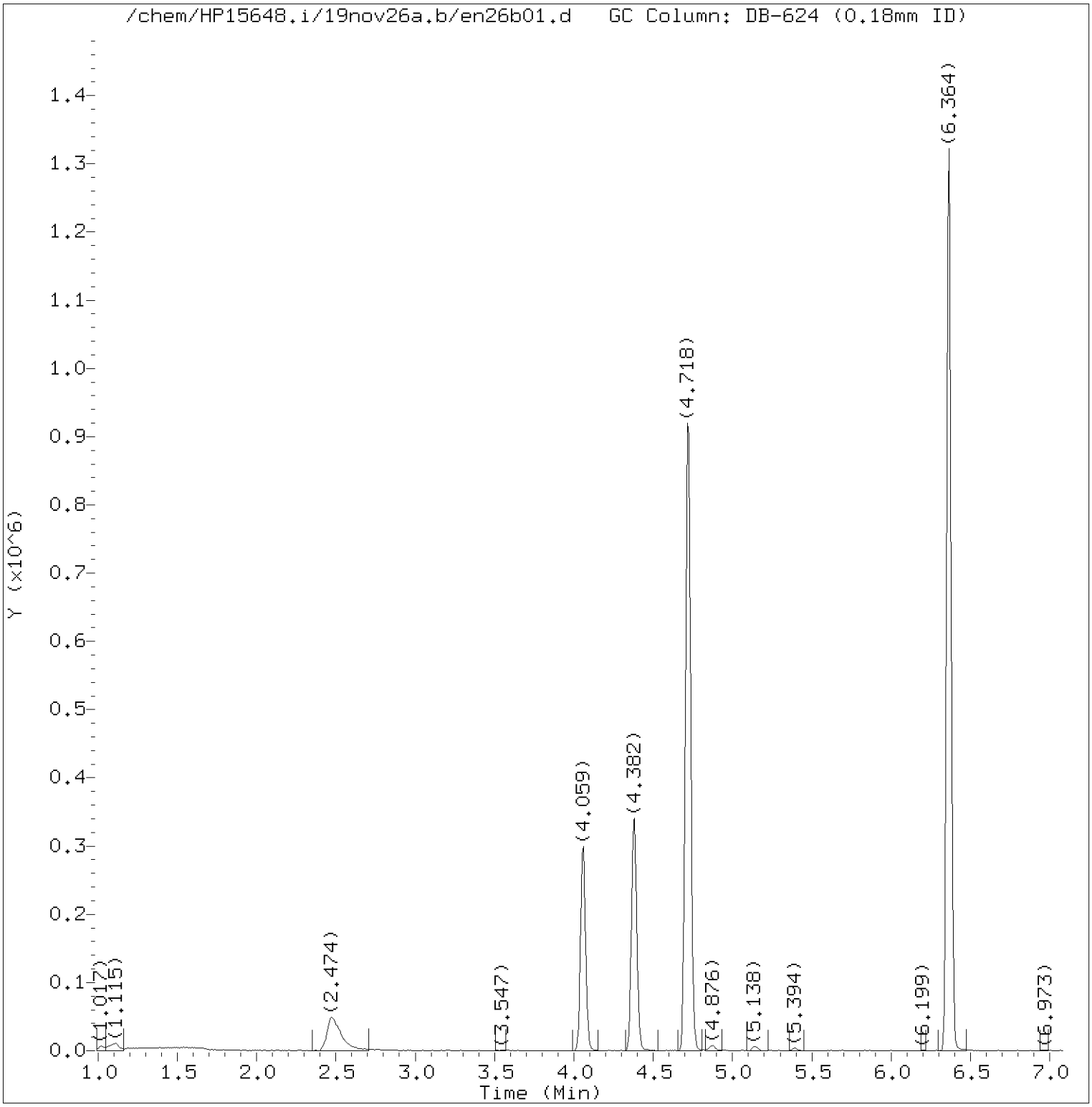
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) n-Propylbenzene	(4)				Not Detected					0.2	5
121) 2-Chlorotoluene	(4)				Not Detected					0.2	5
122) 4-Chlorotoluene	(4)				Not Detected					0.2	5
123) 1,3,5-Trimethylbenzene	(4)				Not Detected					0.3	5
125) tert-Butylbenzene	(4)				Not Detected					0.3	5
126) Pentachloroethane	(4)				Not Detected					0.2	5
127) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5
128) sec-Butylbenzene	(4)				Not Detected					0.2	5
130) 1,3-Dichlorobenzene	(4)				Not Detected					0.2	5
131) p-Isopropyltoluene	(4)				Not Detected					0.2	5
134) 1,4-Dichlorobenzene	(4)				Not Detected					0.2	5
135) 1,2,3-Trimethylbenzene	(4)				Not Detected					0.3	5
136) Benzyl Chloride	(4)				Not Detected					1	5
137) 1,3-Diethylbenzene	(4)				Not Detected					0.2	5
138) 1,4-Diethylbenzene	(4)				Not Detected					0.2	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
140) n-Butylbenzene	(4)				Not Detected					0.2	5
141) 1,2-Diethylbenzene	(4)				Not Detected					0.2	5
142) Diethylbenzene (total)	(4)				Not Detected					0.6	15
143) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.3	5
145) 1,3,5-Trichlorobenzene	(4)				Not Detected					0.2	5
147) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	5
148) Hexachlorobutadiene	(4)				Not Detected					2	5
149) Naphthalene	(4)				Not Detected					1	5
150) 1,2,3-Trichlorobenzene	(4)				Not Detected					0.4	5
151) 2-Methylnaphthalene	(4)				Not Detected					2	4

Total number of targets = 111

Digitally signed by Jason M. Long on 11/26/2019 at 15:26. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 12:19. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

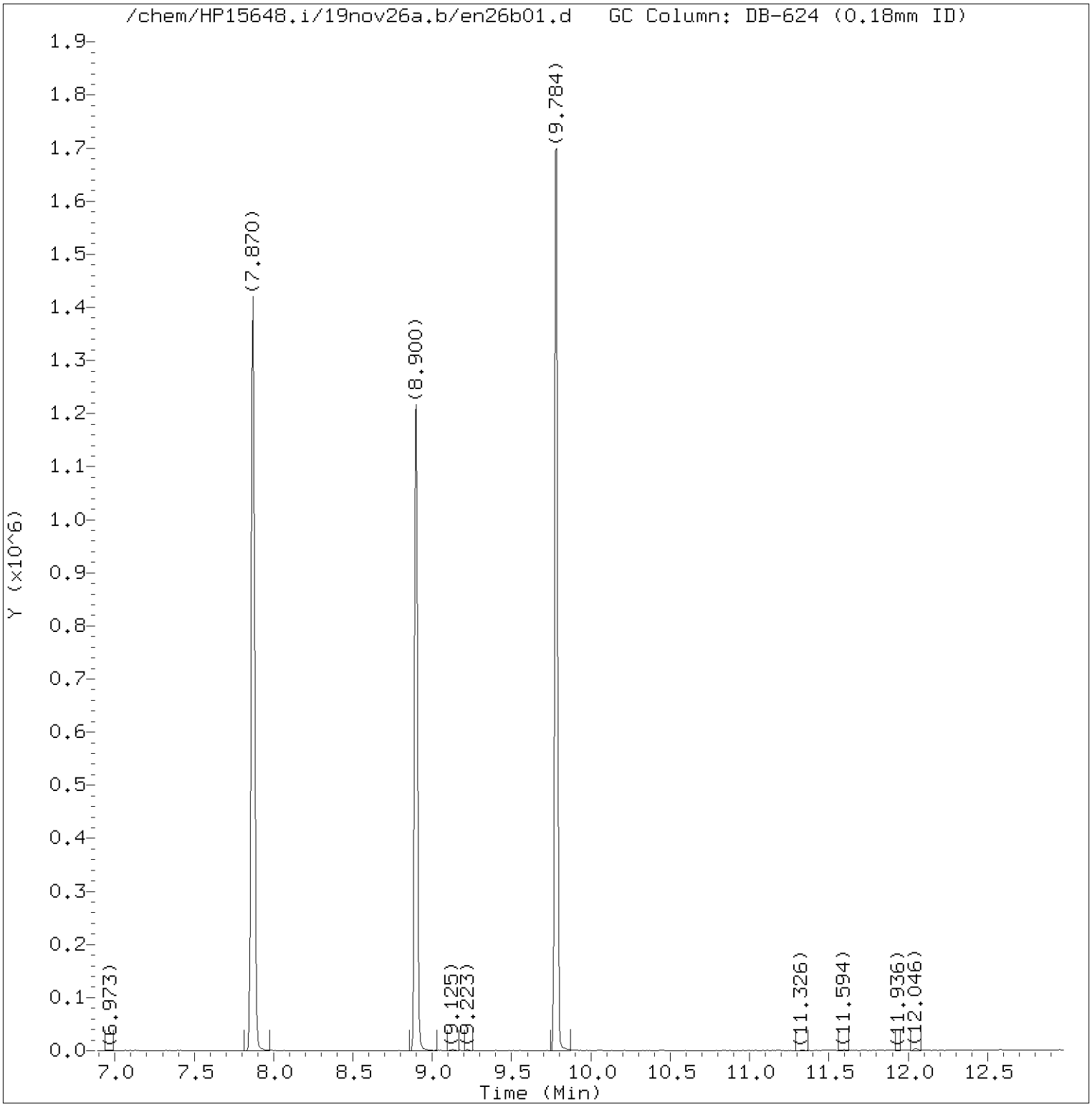
Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26b01.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 11:41 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:36
Date, time and analyst ID of latest file update: 26-Nov-2019 12:02 jml01693

Sample Name: VBLKE76 Lab Sample ID: VBLKE76

Digitally signed by Jason M. Long
on 11/26/2019 at 15:26.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26b01.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 11:41 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:36
Date, time and analyst ID of latest file update: 26-Nov-2019 12:02 jml01693

Sample Name: VBLKE76 Lab Sample ID: VBLKE76

Digitally signed by Jason M. Long
on 11/26/2019 at 15:26.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26b01.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 11:41 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:36
Date, time and analyst ID of latest file update: 26-Nov-2019 12:02 jml01693

Sample Name: VBLKE76 Lab Sample ID: VBLKE76

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.474	65	188217	250.000
52)$Dibromofluoromethane	(2)	4.059	113	213332	49.495
57)$1,2-Dichloroethane-d4	(2)	4.382	102	56597	49.264
66)*Fluorobenzene	(2)	4.724	96	1013282	50.000
84)$Toluene-d8	(3)	6.364	98	995419	49.795
101)*Chlorobenzene-d5	(3)	7.870	117	704121	50.000
115)$4-Bromofluorobenzene	(3)	8.894	95	373501	49.581
132)*1,4-Dichlorobenzene-d4	(4)	9.784	152	344772	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 11/26/2019 at 15:26.
Target 3.5 esignature user ID: jml01693

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23b01.d
Data file Sample Info. Line: VBLKL87;VBLKL87;1;3;;;;;;
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Injection date and time: **23-NOV-2019 09:48**
Instrument ID: **HP09915.i** Batch: **L193271AA**

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493	(-0.003)	936	65	224793	(3)	250.00	
66) Fluorobenzene	7.953	(0.003)	2012	96	1154568	(2)	50.00	
100) Chlorobenzene-d5	11.358	(0.000)	3071	117	947038	(1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.220	(0.003)	3650	152	506608	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.075	(-0.001)	113	273712	48.490	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	73640	51.189	102%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	1203589	48.571	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	460603	49.089	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)				Not Detected					0.2	1
4) Chloromethane	(2)				Not Detected					0.2	1
5) 1,3-Butadiene	(2)				Not Detected					1	3
6) Vinyl Chloride	(2)				Not Detected					0.2	1
8) Bromomethane	(2)				Not Detected					0.3	1
9) Chloroethane	(2)				Not Detected					0.2	1
11) n-Pentane	(2)				Not Detected					0.4	10
12) Trichlorofluoromethane	(2)				Not Detected					0.2	1
14) Ethyl ether	(2)				Not Detected					0.2	5
15) Freon 123a	(2)				Not Detected					0.4	5
16) Acrolein	(1)				Not Detected					2	100
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
21) 2-Propanol	(1)				Not Detected					18	100
22) Methyl Iodide	(2)				Not Detected					0.2	1
23) Carbon Disulfide	(2)				Not Detected					0.2	5
25) Allyl Chloride	(2)				Not Detected					0.3	5
27) Methyl Acetate	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
30) t-Butyl alcohol	(1)				Not Detected					12	50
31) Acrylonitrile	(2)				Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.2	1
34) n-Hexane	(2)				Not Detected					2	5
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
38) di-Isopropyl ether	(2)				Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)				Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)				Not Detected					0.4	2

Digitally signed by Linda C. Pape on 11/25/2019 at 13:55. Target 3.5 esignature user ID: lcp00895

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23b01.d Injection date and time: **23-NOV-2019 09:48**
Data file Sample Info. Line: VBLKL87;VBLKL87;1;3;;;;;; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)				Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					1	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
72) Methylcyclohexane	(2)				Not Detected					0.5	5
73) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
74) Dibromomethane	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
76) Methyl Methacrylate	(2)				Not Detected					0.2	5
78) Bromodichloromethane	(2)				Not Detected					0.2	1
79) 2-Nitropropane	(2)				Not Detected					0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
81) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
82) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
88) Toluene	(3)				Not Detected					0.2	1
89) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
90) 1,3-Dichloropropene (total)	(3)				Not Detected					0.4	2
91) Ethyl Methacrylate	(3)				Not Detected					0.2	5
92) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
94) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
96) 2-Hexanone	(3)				Not Detected					0.3	10
97) Dibromochloromethane	(3)				Not Detected					0.2	1
99) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
101) 1-Chlorohexane	(3)				Not Detected					0.3	5
102) Chlorobenzene	(3)				Not Detected					0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
109) Styrene	(3)				Not Detected					0.2	5
110) Bromoform	(3)				Not Detected					1	4
111) Isopropylbenzene	(3)				Not Detected					0.2	5
112) Cyclohexanone	(1)				Not Detected					25	100
115) Bromobenzene	(4)				Not Detected					0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
117) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
118) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50
119) n-Propylbenzene	(4)				Not Detected					0.2	5

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23b01.d Injection date and time: **23-NOV-2019 09:48**
Data file Sample Info. Line: VBLKL87;VBLKL87;1;3;;;;;; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)			Not Detected					0.2	5
121) 4-Chlorotoluene	(4)			Not Detected					0.2	5
122) 1,3,5-Trimethylbenzene	(4)			Not Detected					0.3	5
124) tert-Butylbenzene	(4)			Not Detected					0.3	5
125) Pentachloroethane	(4)			Not Detected					0.2	5
126) 1,2,4-Trimethylbenzene	(4)			Not Detected					1	5
127) sec-Butylbenzene	(4)			Not Detected					0.2	5
129) 1,3-Dichlorobenzene	(4)			Not Detected					0.2	5
130) p-Isopropyltoluene	(4)			Not Detected					0.2	5
133) 1,4-Dichlorobenzene	(4)			Not Detected					0.2	5
134) 1,2,3-Trimethylbenzene	(4)			Not Detected					0.3	5
135) Benzyl Chloride	(4)			Not Detected					1	5
136) 1,3-Diethylbenzene	(4)			Not Detected					0.2	5
137) 1,4-Diethylbenzene	(4)	13.441(-0.000)	119	3836	0.216	0.22		J	0.2	5
138) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
139) n-Butylbenzene	(4)	13.461(-0.000)	92	4540	0.344	0.34		J	0.2	5
140) 1,2-Diethylbenzene	(4)			Not Detected					0.2	5
141) Diethylbenzene (total)	(4)			Not Detected					0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)			Not Detected					0.3	5
144) 1,3,5-Trichlorobenzene	(4)	14.165(-0.000)	180	5851	0.552	0.55		J	0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.586(-0.000)	180	5468	0.530	0.53		J	0.3	5
147) Hexachlorobutadiene	(4)			Not Detected					2	5
148) Naphthalene	(4)			Not Detected					1	5
149) 1,2,3-Trichlorobenzene	(4)	14.914(-0.000)	180	5973	0.595	0.60		J	0.4	5
150) 2-Methylnaphthalene	(4)			Not Detected					2	4

Total number of targets = 110

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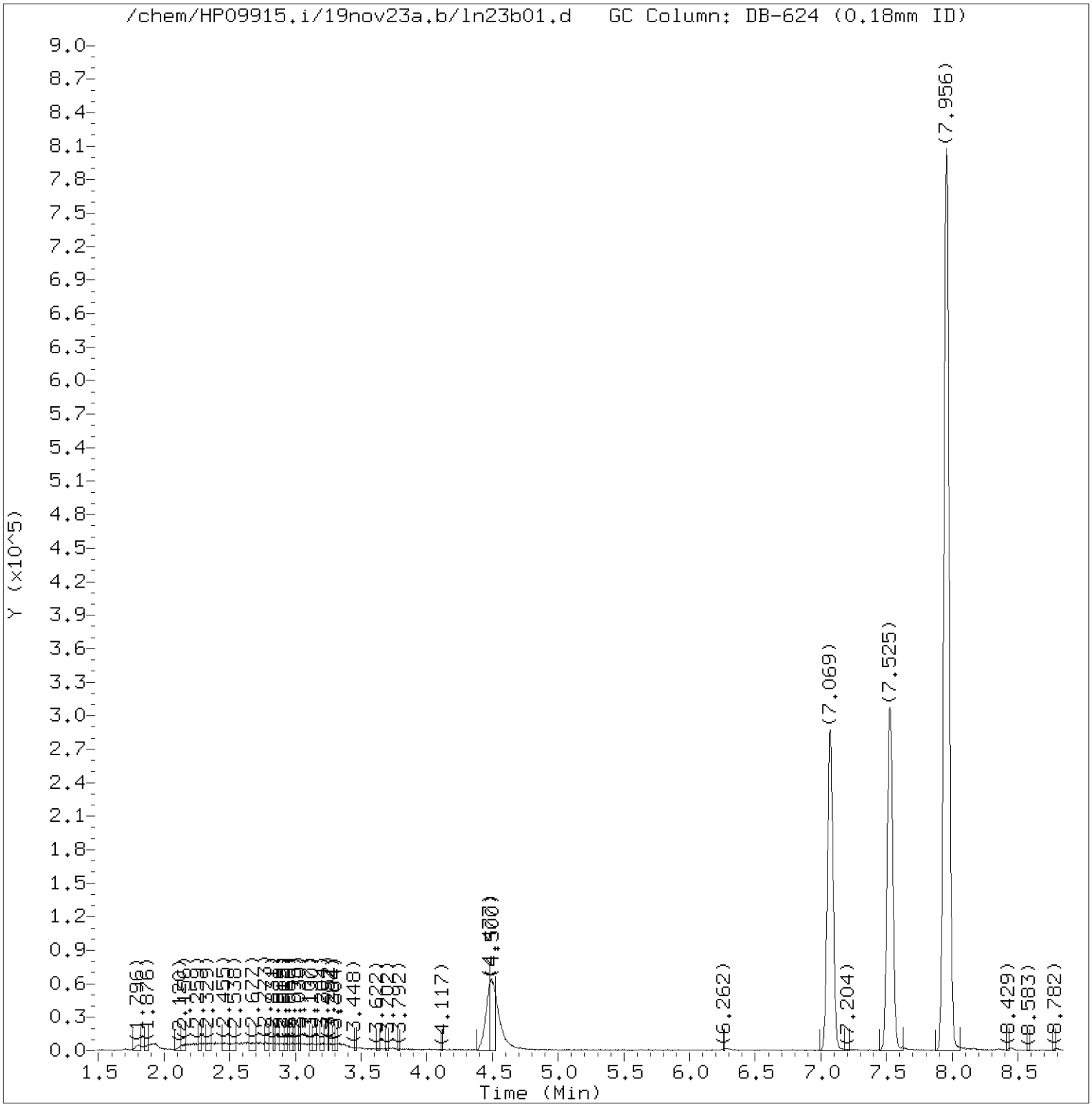
Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:45. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

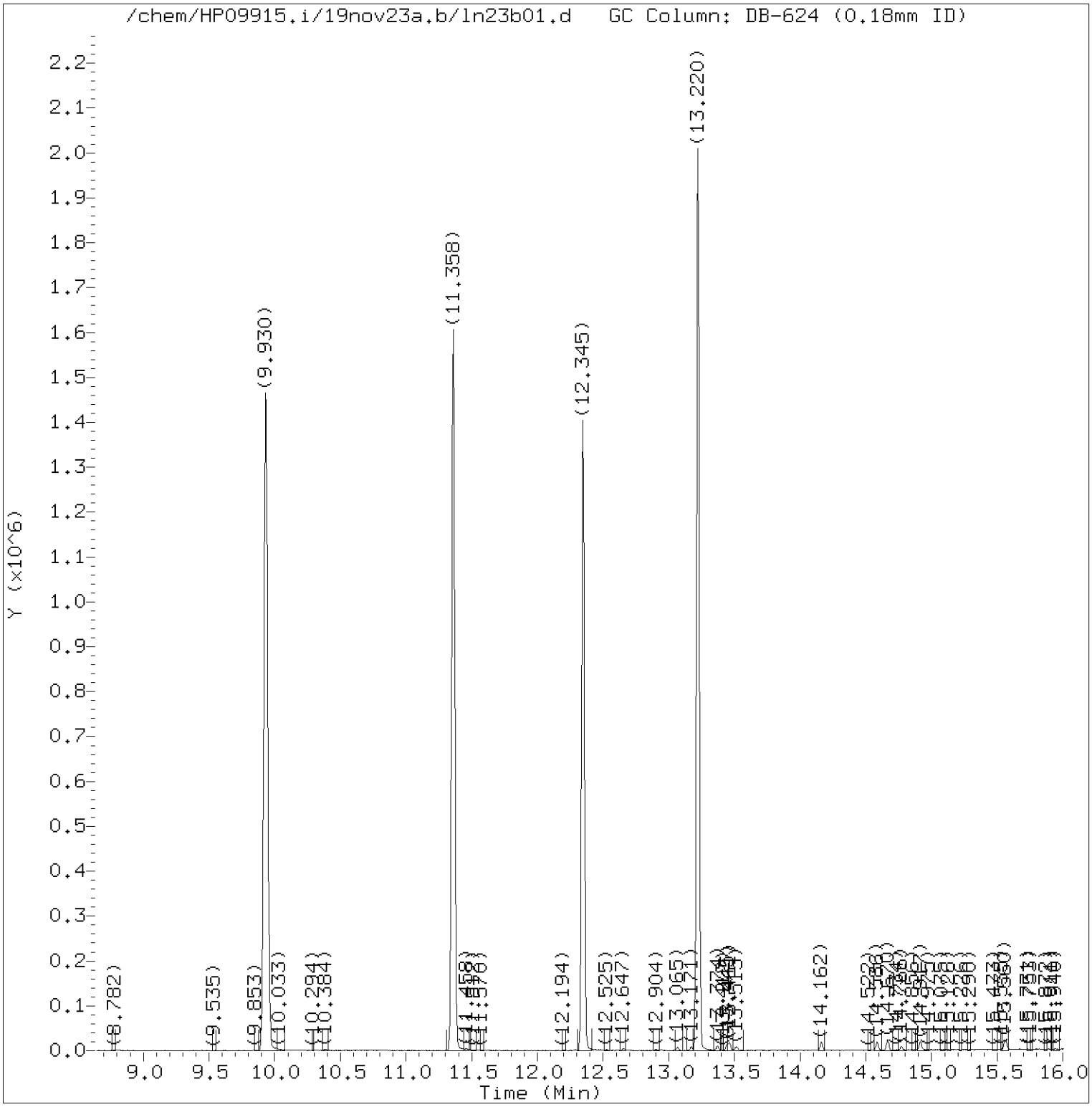
Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:55.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Digitally signed by Linda C. Pape
on 11/25/2019 at 13:55.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.493	65	224793	250.000
52)$Dibromofluoromethane	(2)	7.075	113	273712	48.490
57)$1,2-Dichloroethane-d4	(2)	7.525	102	73640	51.189
66)*Fluorobenzene	(2)	7.953	96	1154568	50.000
83)$Toluene-d8	(3)	9.930	98	1203589	48.571
100)*Chlorobenzene-d5	(3)	11.358	117	947038	50.000
114)$4-Bromofluorobenzene	(3)	12.345	95	460603	49.089
131)*1,4-Dichlorobenzene-d4	(4)	13.220	152	506608	50.000
137) 1,4-Diethylbenzene	(4)	13.441	119	3836	0.216
139) n-Butylbenzene	(4)	13.461	92	4540	0.344
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	5851	0.552
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	5468	0.530
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	5973	0.595

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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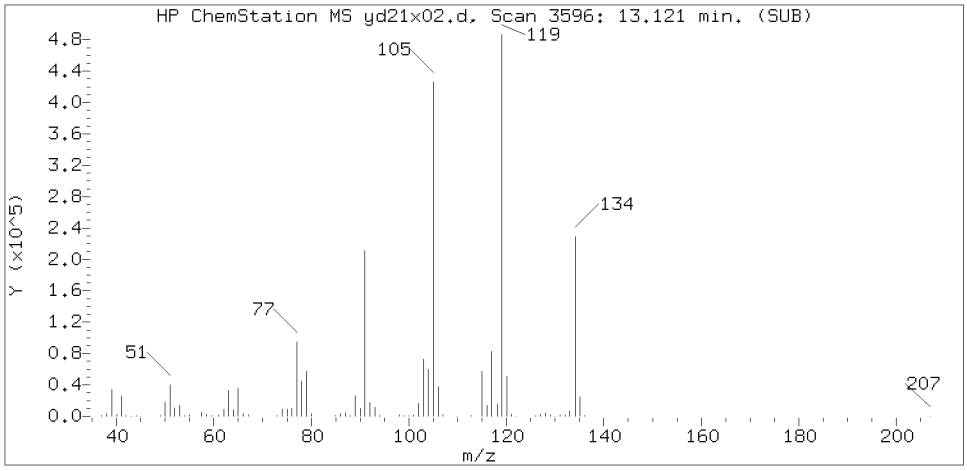
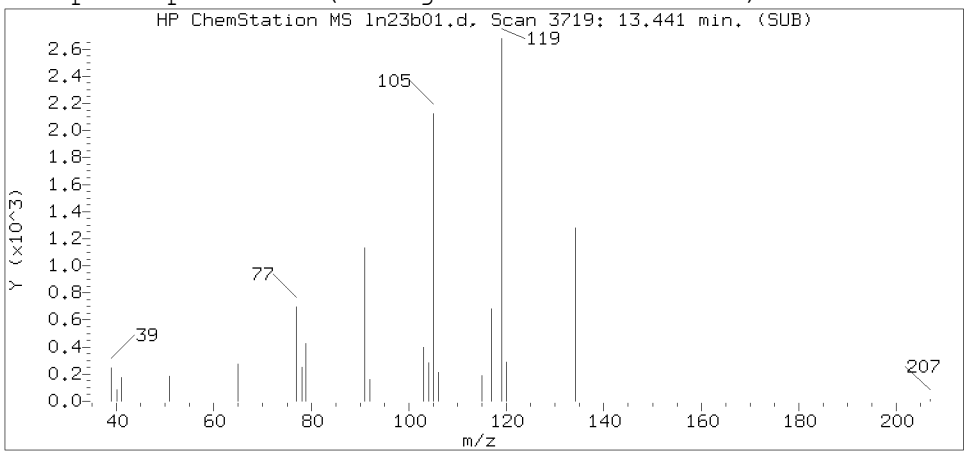
on 11/25/2019 at 13:55.
Target 3.5 esignature user ID: lcp00895

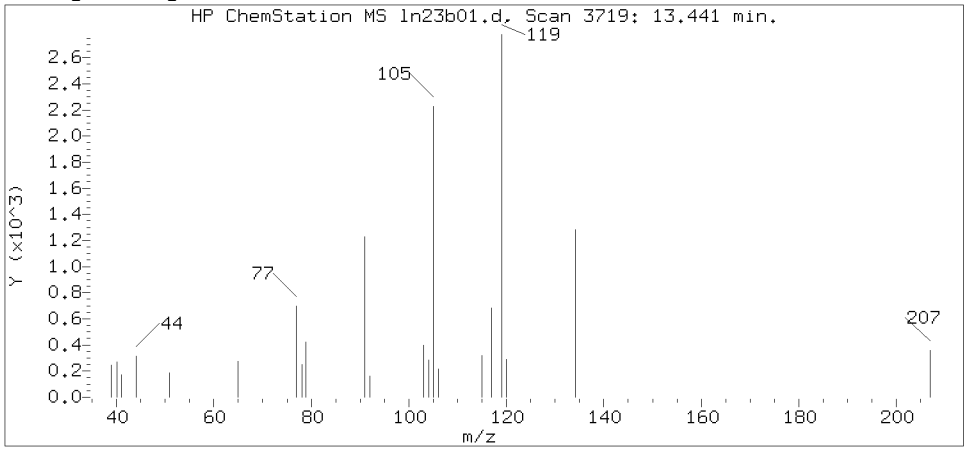
Reference Standard Spectrum for 1,4-Diethylbenzene

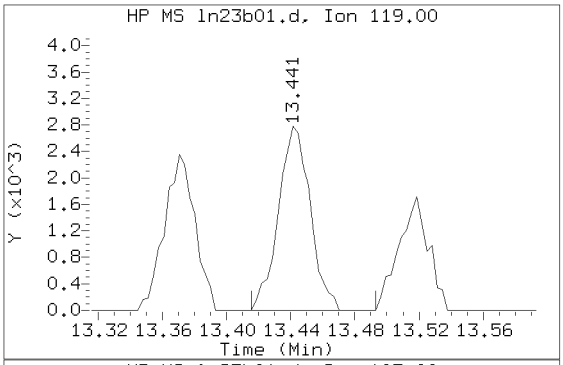


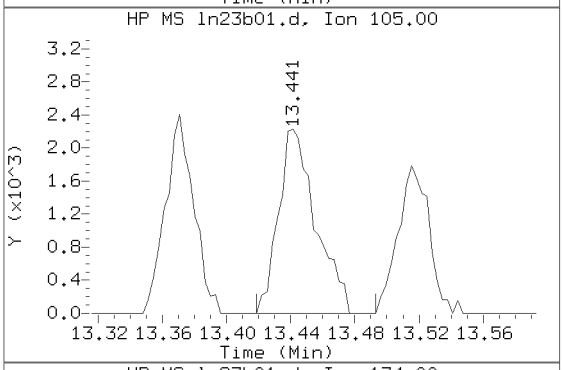
Sample Spectrum (Background Subtracted)

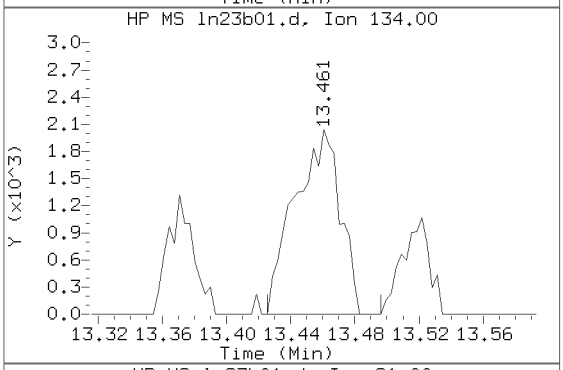


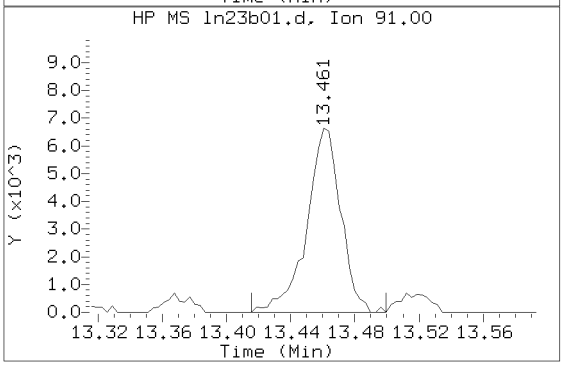
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compound Number : 137
Compound Name : 1,4-Diethylbenzene
Scan Number : 3719
Retention Time (minutes): 13.441
Relative Retention Time :-0.00025
Quant Ion : 119.00
Area (flag) : 3836
On-Column Amount (ng) : 0.2156

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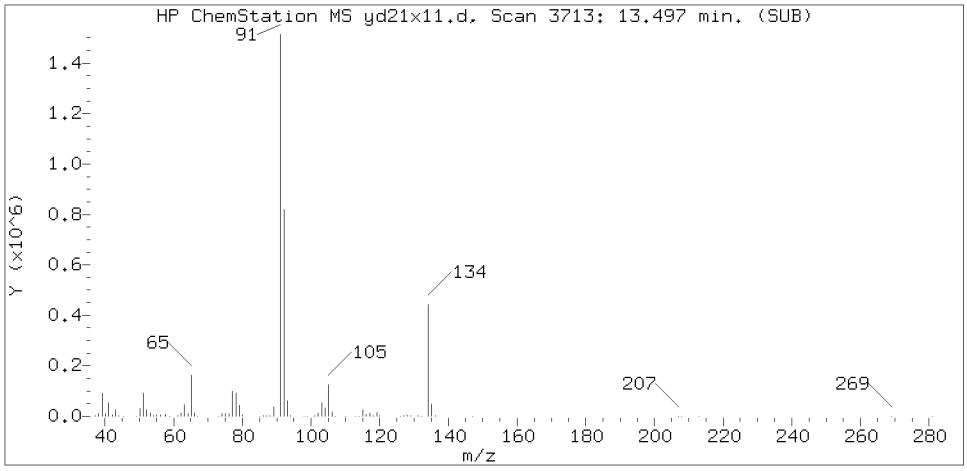
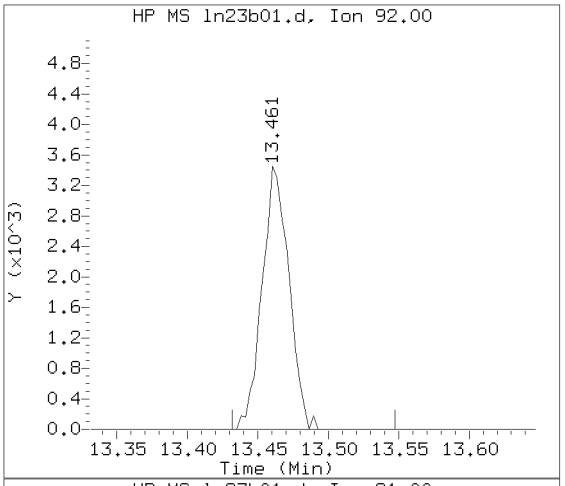
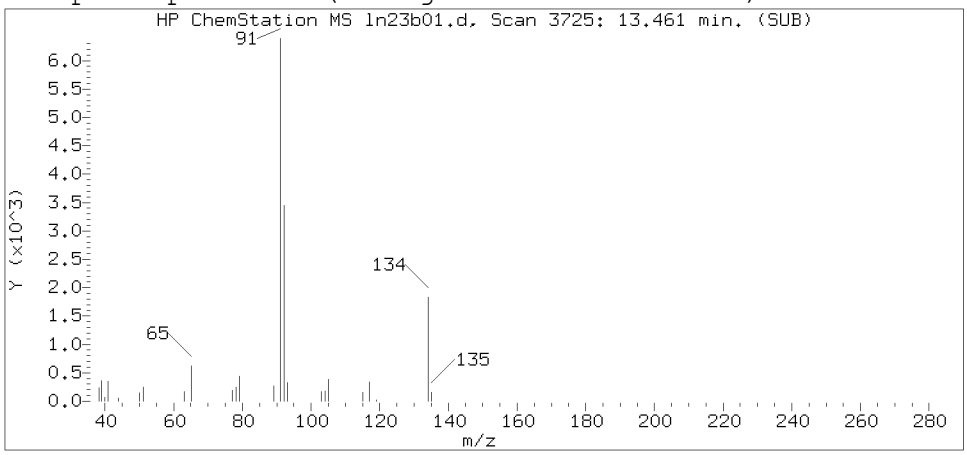
Target 3.5 esignature user ID: lcp00895

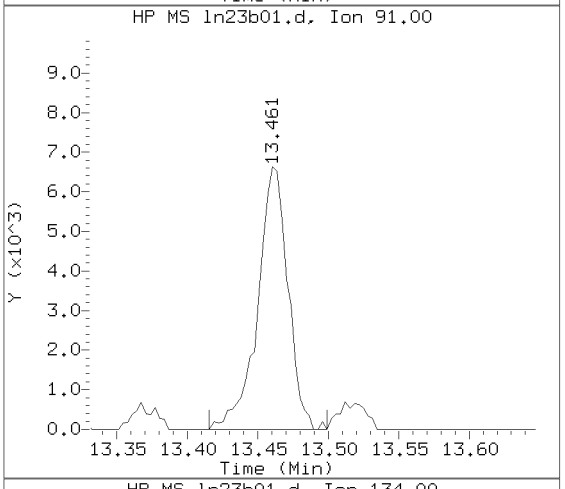
Reference Standard Spectrum for n-Butylbenzene



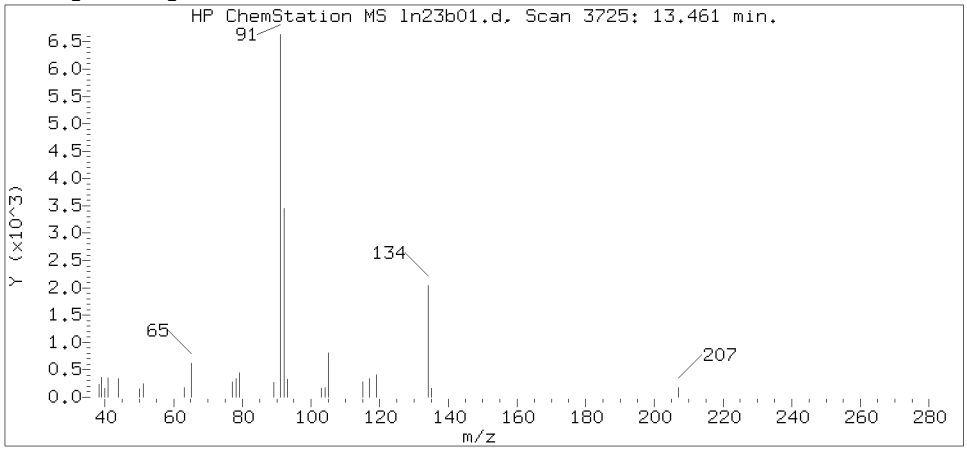


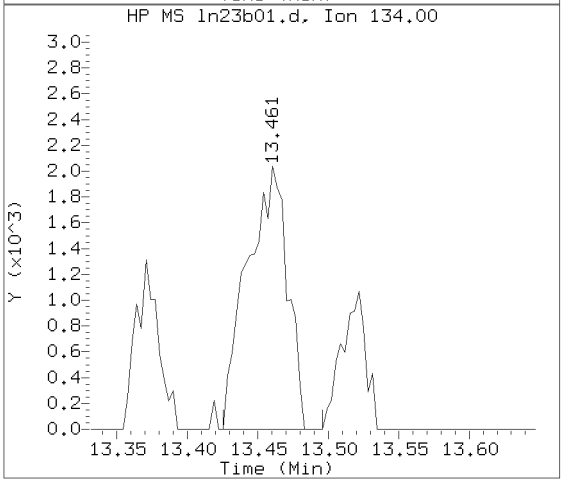
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 3725
Retention Time (minutes): 13.461
Relative Retention Time :-0.00000
Quant Ion : 92.00
Area (flag) : 4540
On-Column Amount (ng) : 0.3440

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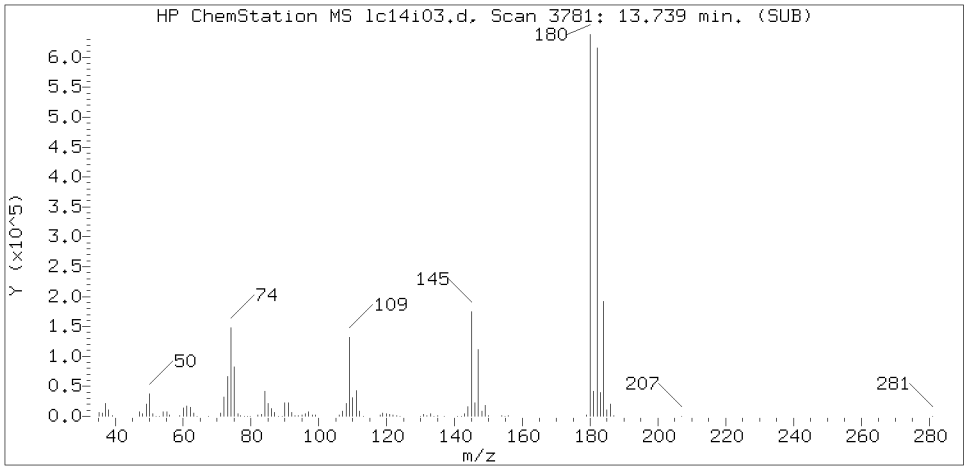
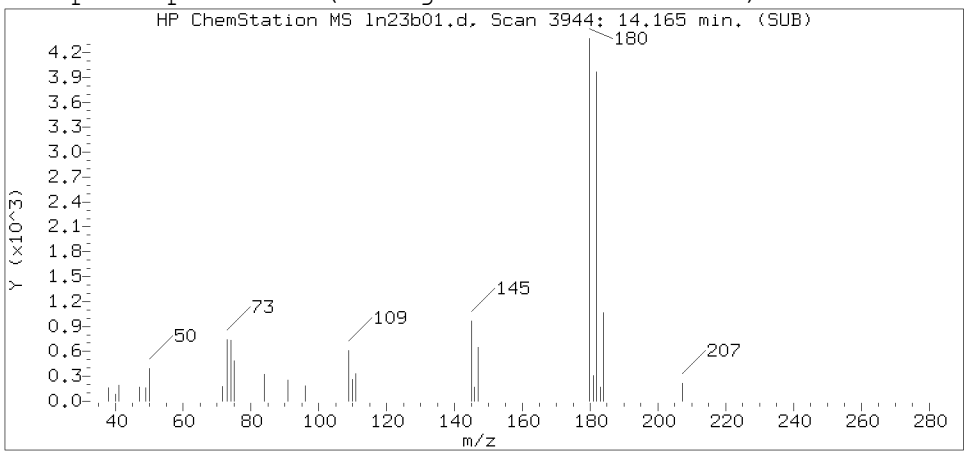
Target 3.5 esignature user ID: lcp00895

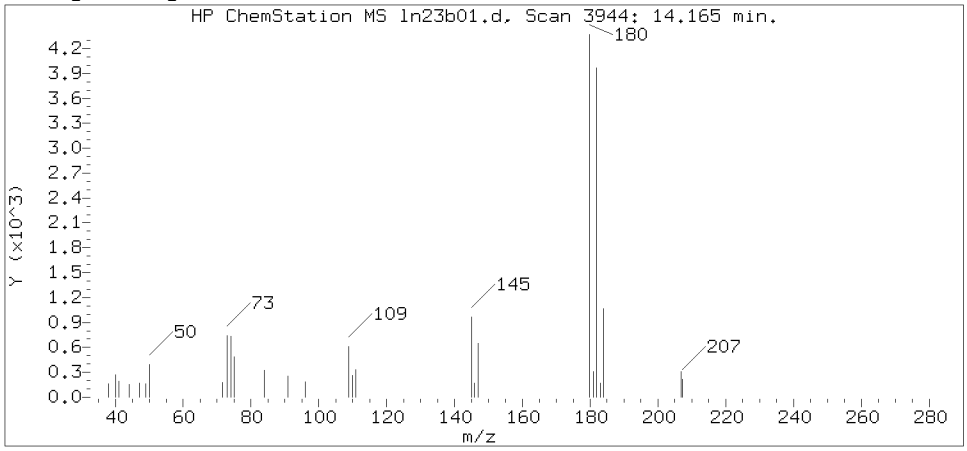
Reference Standard Spectrum for 1,3,5-Trichlorobenzene

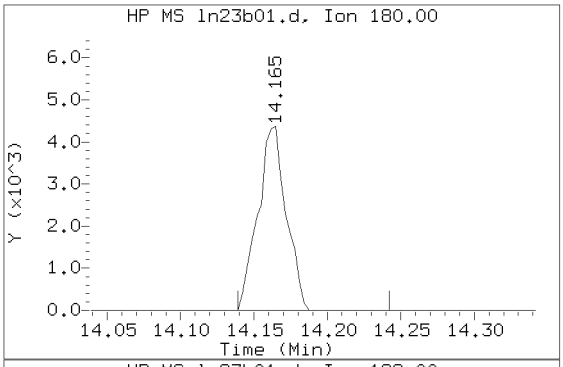


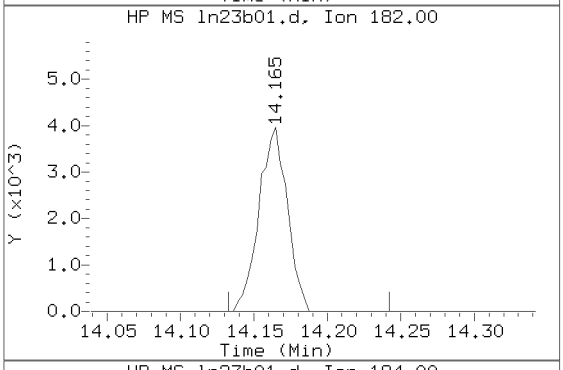
Sample Spectrum (Background Subtracted)

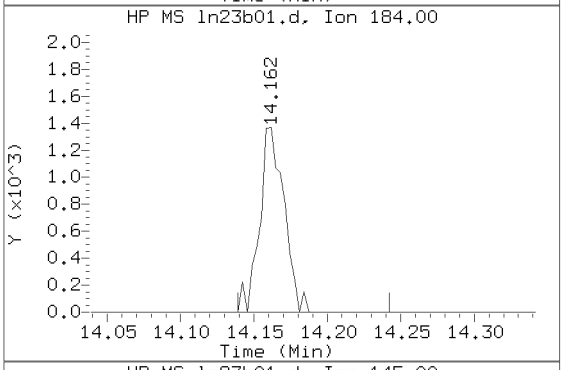


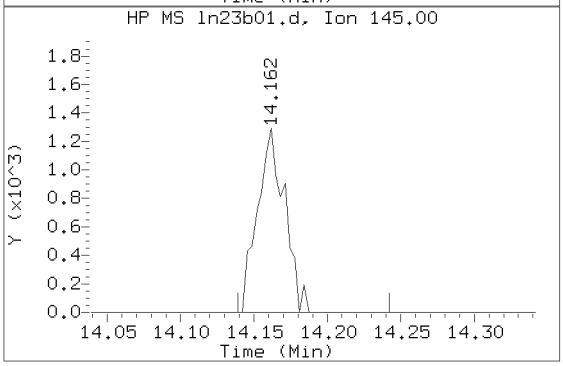
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compound Number : 144
Compound Name : 1,3,5-Trichlorobenzene
Scan Number : 3944
Retention Time (minutes): 14.165
Relative Retention Time :-0.00026
Quant Ion : 180.00
Area (flag) : 5851
On-Column Amount (ng) : 0.5516

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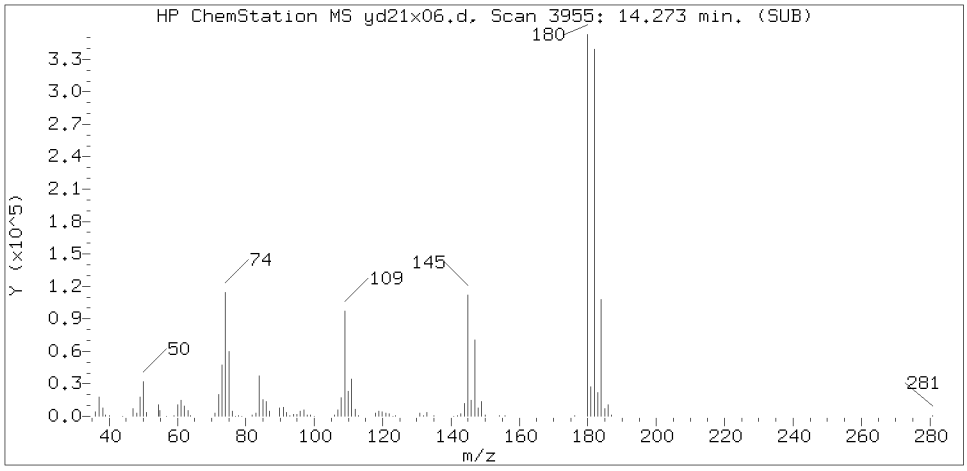
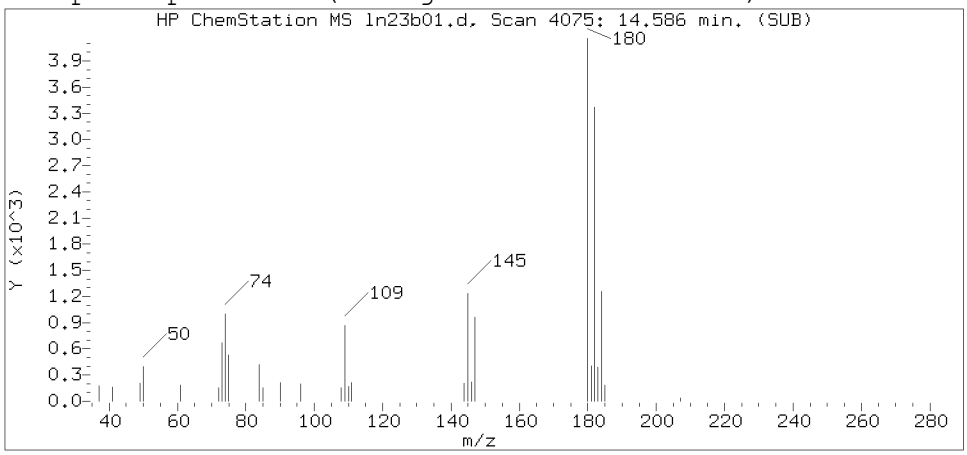
Target 3.5 esignature user ID: lcp00895

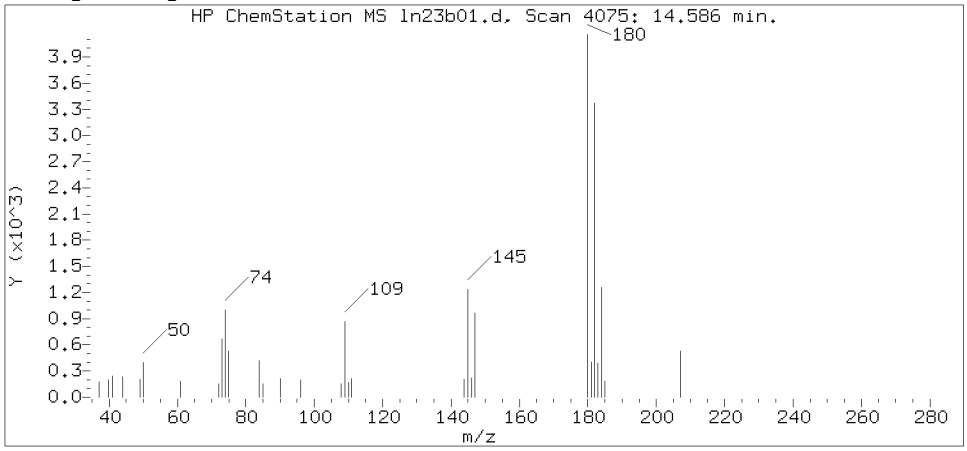
Reference Standard Spectrum for 1,2,4-Trichlorobenzene

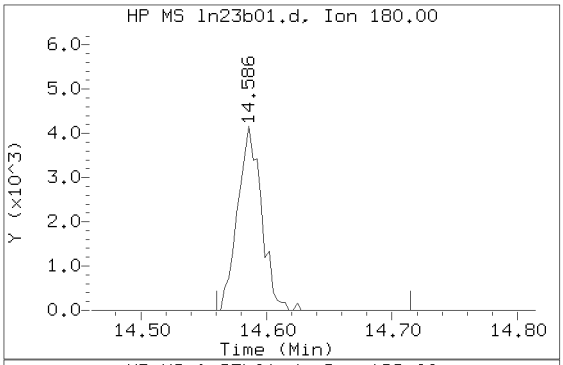


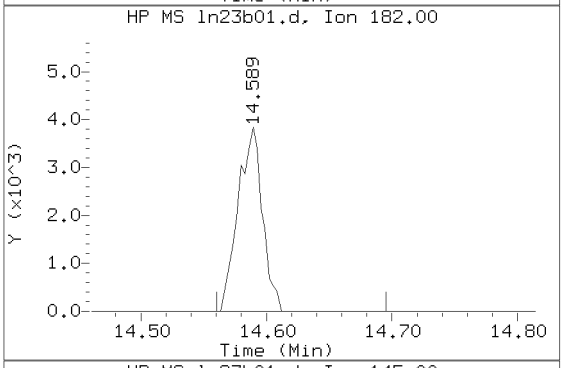
Sample Spectrum (Background Subtracted)

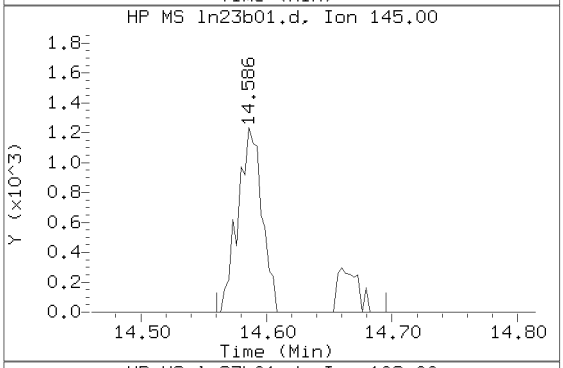


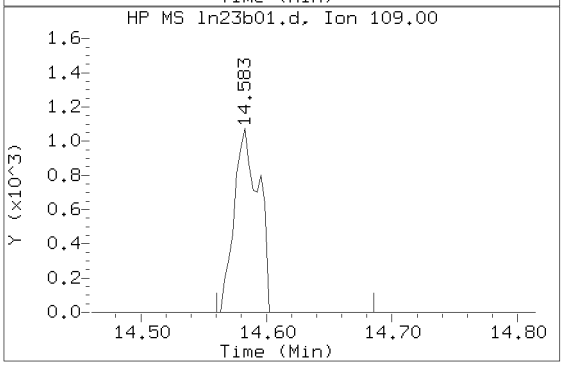
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

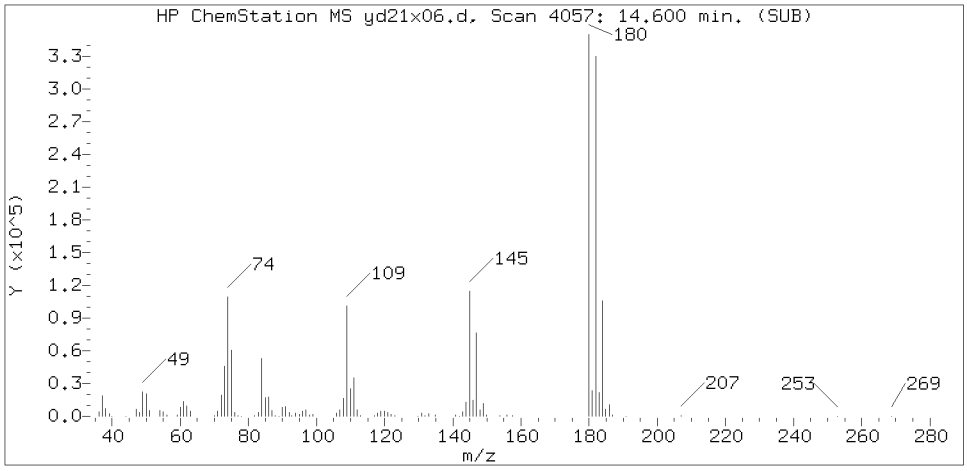
Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

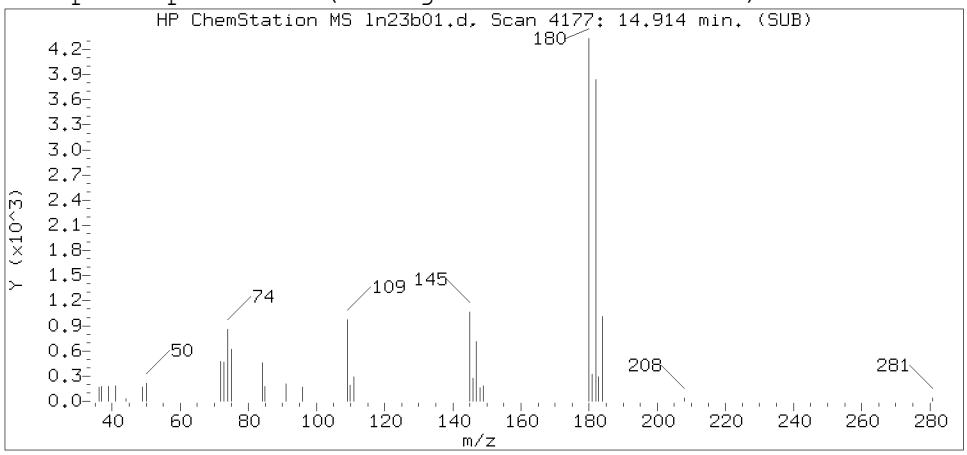
Compound Number : 146
Compound Name : 1,2,4-Trichlorobenzene
Scan Number : 4075
Retention Time (minutes): 14.586
Relative Retention Time :-0.00027
Quant Ion : 180.00
Area (flag) : 5468
On-Column Amount (ng) : 0.5302

Digitally signed by Linda C. Pape on 11/25/2019 at 13:55.
Target 3.5 esignature user ID: lcp00895

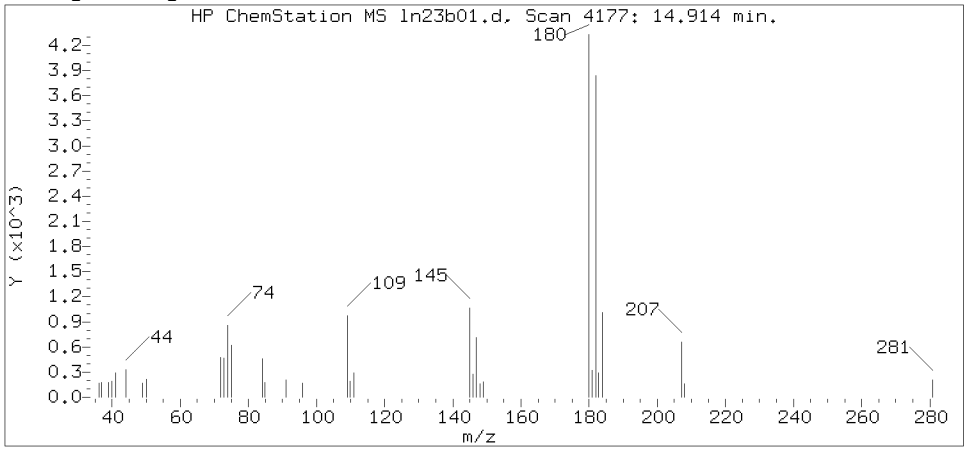
Reference Standard Spectrum for 1,2,3-Trichlorobenzene

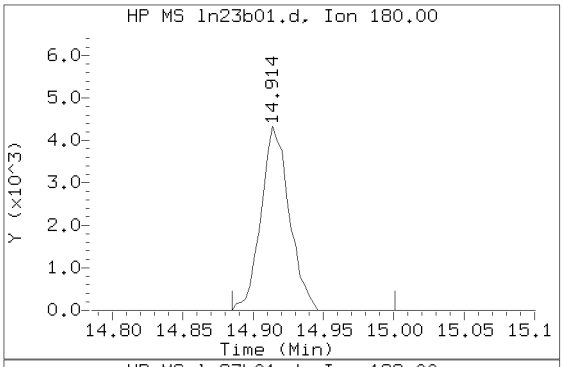


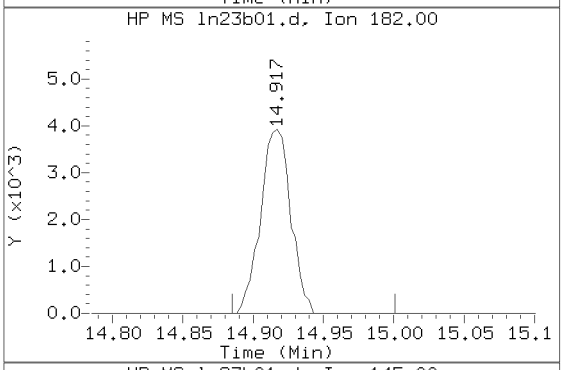
Sample Spectrum (Background Subtracted)

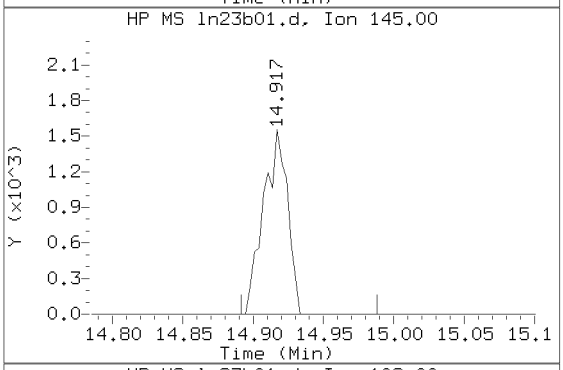


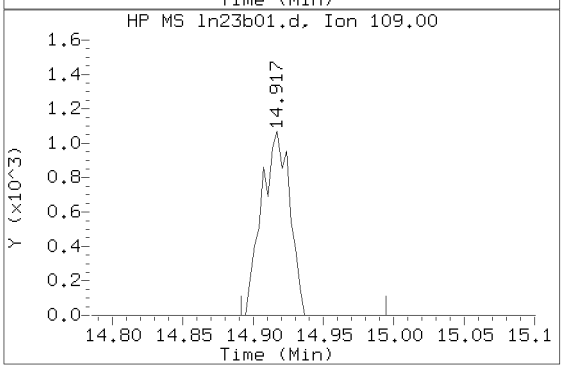
Sample Spectrum (Unaltered)











Data File: /chem/HP09915.i/19nov23a.b/ln23b01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:48 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: VBLKL87 Lab Sample ID: VBLKL87

Compound Number : 149
Compound Name : 1,2,3-Trichlorobenzene
Scan Number : 4177
Retention Time (minutes): 14.914
Relative Retention Time :-0.00003
Quant Ion : 180.00
Area (flag) : 5973
On-Column Amount (ng) : 0.5952

Digitally signed by Linda C. Pape on 11/25/2019 at 13:55.
Target 3.5 esignature user ID: lcp00895

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKY09

Data file: /chem2/HP09355.i/19nov27b.b/yn27b31.d
Injection date and time: **27-NOV-2019 21:12**
Data file Sample Info. Line: VBLKY09;VBLKY09;1;3;;;;;;
Instrument ID: **HP09355.i** Batch: **Y193312AA**
Date, time and analyst ID of latest file update: 27-Nov-2019 21:36 dvv10203

Blank Data file reference: **/chem2/HP09355.i/19nov27b.b/yn27b31.d**

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 27-NOV-2019 20:01
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19nov27b.b/yn27c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.349	(0.006)	455	65	295886	(-9)	250.00	
66) Fluorobenzene	7.866	(0.006)	1033	96	1003948	(-2)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	726737	(-3)	50.00	
131) 1,4-Dichlorobenzene-d4	13.183	(0.000)	1907	152	372875	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.971	(0.000)	113	214089	45.446	91%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434	(-0.001)	102	59461	48.281	97%		80 - 120
83) Toluene-d8	(3)	9.861	(0.001)	98	967974	49.228	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.301	(0.001)	95	355731	47.351	95%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)				Not Detected					0.2	1
4) Chloromethane	(2)				Not Detected					0.2	1
5) 1,3-Butadiene	(2)				Not Detected					1	3
6) Vinyl Chloride	(2)				Not Detected					0.2	1
8) Bromomethane	(2)				Not Detected					0.3	1
9) Chloroethane	(2)				Not Detected					0.2	1
11) n-Pentane	(2)				Not Detected					0.4	10
12) Trichlorofluoromethane	(2)				Not Detected					0.2	1
14) Ethyl ether	(2)				Not Detected					0.2	5
15) Freon 123a	(2)				Not Detected					0.4	5
16) Acrolein	(1)				Not Detected					2	100
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
21) 2-Propanol	(1)				Not Detected					18	100
22) Methyl Iodide	(2)				Not Detected					0.2	1
23) Carbon Disulfide	(2)				Not Detected					0.2	5
25) Allyl Chloride	(2)				Not Detected					0.3	5
27) Methyl Acetate	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
30) t-Butyl alcohol	(1)				Not Detected					12	50
31) Acrylonitrile	(2)				Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.2	1
34) n-Hexane	(2)				Not Detected					2	5
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
38) di-Isopropyl ether	(2)				Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)				Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)				Not Detected					0.4	2

Digitally signed by Don V. Viray on 11/27/2019 at 21:38. Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09355.i/19nov27b.b/yn27b31.d Injection date and time: **27-NOV-2019 21:12**
Data file Sample Info. Line: VBLKY09;VBLKY09;1;3;;;;;; Instrument ID: **HP09355.i** Batch: **Y193312AA**
Date, time and analyst ID of latest file update: 27-Nov-2019 21:36 dvv10203

Blank Data file reference: **/chem2/HP09355.i/19nov27b.b/yn27b31.d**

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 27-NOV-2019 20:01
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19nov27b.b/yn27c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)				Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					1	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
72) Methylcyclohexane	(2)				Not Detected					0.5	5
73) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
74) Dibromomethane	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
76) Methyl Methacrylate	(2)				Not Detected					0.2	5
78) Bromodichloromethane	(2)				Not Detected					0.2	1
79) 2-Nitropropane	(2)				Not Detected					0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
81) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
82) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
88) Toluene	(3)				Not Detected					0.2	1
89) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
90) 1,3-Dichloropropene (total)	(3)				Not Detected					0.4	2
91) Ethyl Methacrylate	(3)				Not Detected					0.2	5
92) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
94) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
96) 2-Hexanone	(3)				Not Detected					0.3	10
97) Dibromochloromethane	(3)				Not Detected					0.2	1
99) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
101) 1-Chlorohexane	(3)				Not Detected					0.3	5
102) Chlorobenzene	(3)				Not Detected					0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
109) Styrene	(3)				Not Detected					0.2	5
110) Bromoform	(3)				Not Detected					1	4
111) Isopropylbenzene	(3)				Not Detected					0.2	5
112) Cyclohexanone	(1)				Not Detected					25	100
115) Bromobenzene	(4)				Not Detected					0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
117) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
118) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50
119) n-Propylbenzene	(4)				Not Detected					0.2	5

Digitally signed by Don V. Viray on 11/27/2019 at 21:38. Target 3.5 esignature user ID: dvv10203

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKY09

Data file: /chem2/HP09355.i/19nov27b.b/yn27b31.d Injection date and time: **27-NOV-2019 21:12**
Data file Sample Info. Line: VBLKY09;VBLKY09;1;3;;;;;; Instrument ID: **HP09355.i** Batch: **Y193312AA**
Date, time and analyst ID of latest file update: 27-Nov-2019 21:36 dvv10203

Blank Data file reference: **/chem2/HP09355.i/19nov27b.b/yn27b31.d**

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 27-NOV-2019 20:01
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19nov27b.b/yn27c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

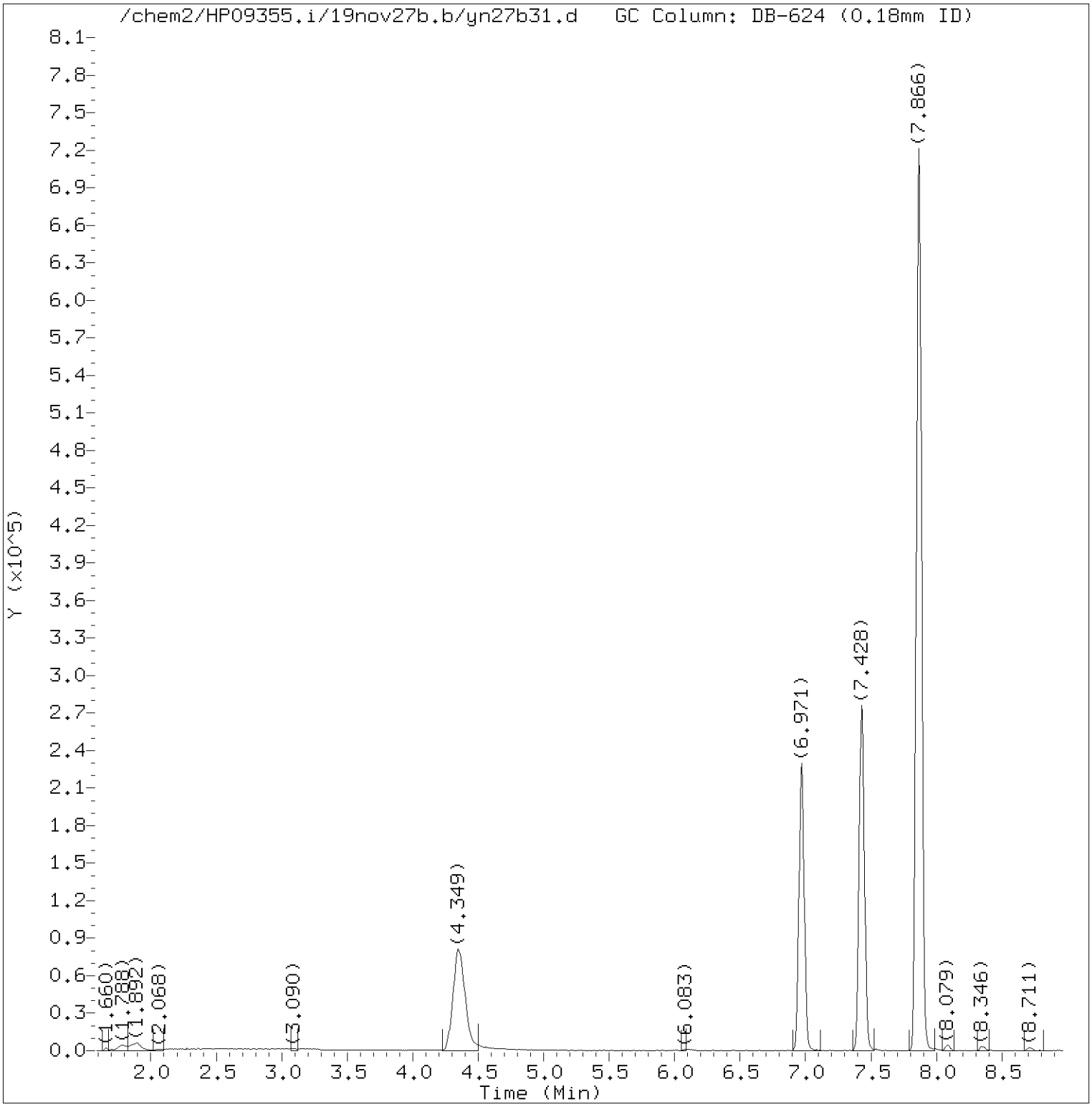
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)				Not Detected					0.2	5
121) 4-Chlorotoluene	(4)				Not Detected					0.2	5
122) 1,3,5-Trimethylbenzene	(4)				Not Detected					0.3	5
124) tert-Butylbenzene	(4)				Not Detected					0.3	5
125) Pentachloroethane	(4)				Not Detected					0.2	5
126) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5
127) sec-Butylbenzene	(4)				Not Detected					0.2	5
129) 1,3-Dichlorobenzene	(4)				Not Detected					0.2	5
130) p-Isopropyltoluene	(4)				Not Detected					0.2	5
133) 1,4-Dichlorobenzene	(4)				Not Detected					0.2	5
134) 1,2,3-Trimethylbenzene	(4)				Not Detected					0.3	5
135) Benzyl Chloride	(4)				Not Detected					1	5
136) 1,3-Diethylbenzene	(4)				Not Detected					0.2	5
137) 1,4-Diethylbenzene	(4)				Not Detected					0.2	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
139) n-Butylbenzene	(4)				Not Detected					0.2	5
140) 1,2-Diethylbenzene	(4)				Not Detected					0.2	5
141) Diethylbenzene (total)	(4)				Not Detected					0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.3	5
144) 1,3,5-Trichlorobenzene	(4)				Not Detected					0.2	5
146) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	5
147) Hexachlorobutadiene	(4)				Not Detected					2	5
148) Naphthalene	(4)				Not Detected					1	5
149) 1,2,3-Trichlorobenzene	(4)				Not Detected					0.4	5
150) 2-Methylnaphthalene	(4)				Not Detected					2	4

Total number of targets = 110

Digitally signed by Don V. Viray on 11/27/2019 at 21:38. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

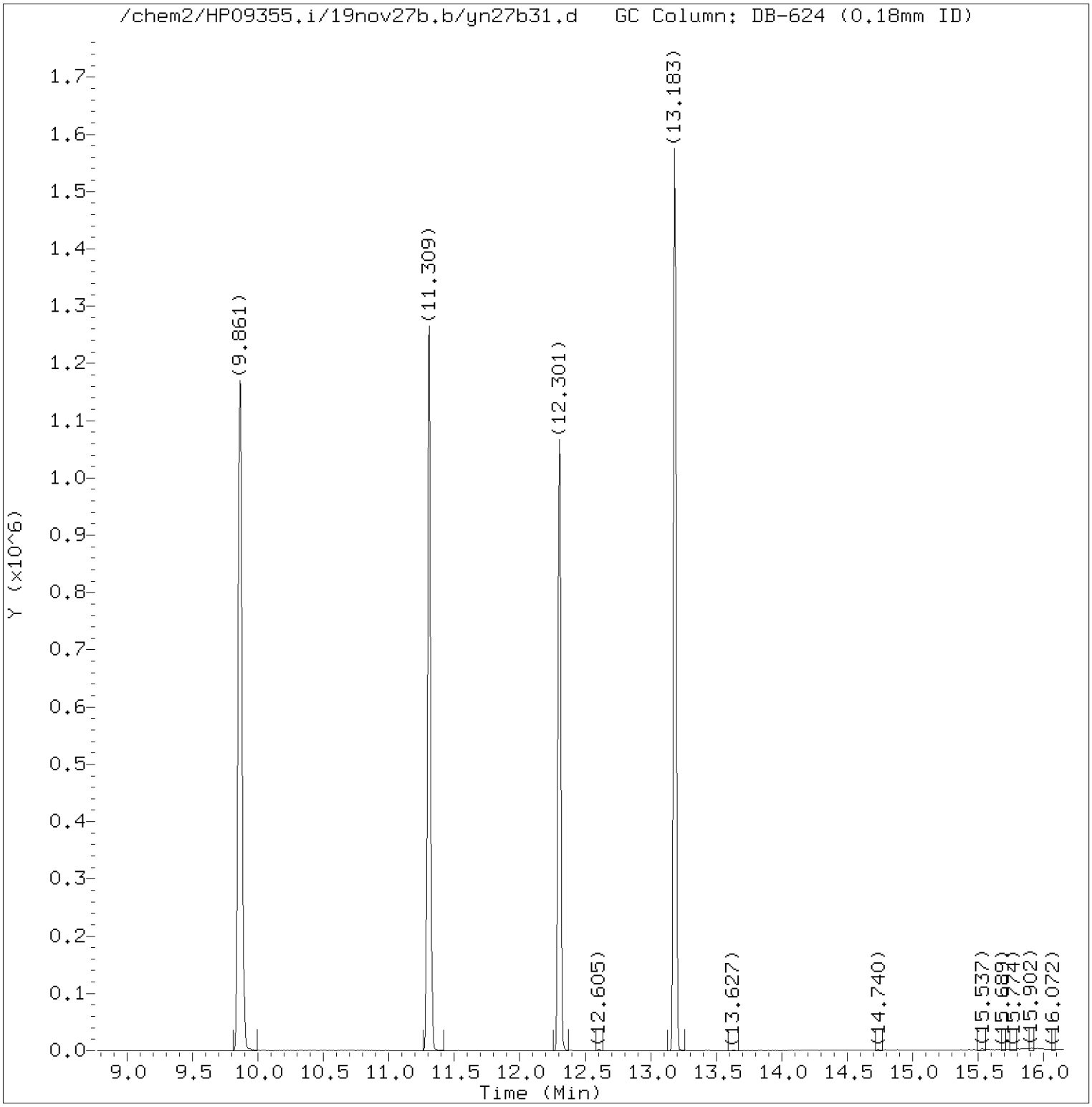
Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27b31.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 21:12 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:36 dvv10203

Sample Name: VBLKY09 Lab Sample ID: VBLKY09

Digitally signed by Don V. Viray
on 11/27/2019 at 21:38.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27b31.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 21:12 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:36 dvv10203

Sample Name: VBLKY09 Lab Sample ID: VBLKY09

Digitally signed by Don V. Viray
on 11/27/2019 at 21:38.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27b31.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 21:12 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:36 dvv10203

Sample Name: VBLKY09 Lab Sample ID: VBLKY09

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.349	65	295886	250.000
52)$Dibromofluoromethane	(2)	6.971	113	214089	45.446
57)$1,2-Dichloroethane-d4	(2)	7.434	102	59461	48.281
66)*Fluorobenzene	(2)	7.866	96	1003948	50.000
83)$Toluene-d8	(3)	9.861	98	967974	49.228
100)*Chlorobenzene-d5	(3)	11.309	117	726737	50.000
114)$4-Bromofluorobenzene	(3)	12.301	95	355731	47.351
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	372875	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/27/2019 at 21:38.
Target 3.5 esignature user ID: dvv10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSE76

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSE76

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19nov26a.b/en26s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/26/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	17	
74-87-3	Chloromethane	19	
106-99-0	1,3-Butadiene	20	
75-01-4	Vinyl Chloride	20	
74-83-9	Bromomethane	20	
75-00-3	Chloroethane	21	
75-43-4	Dichlorofluoromethane	21	
109-66-0	n-Pentane	19	
75-69-4	Trichlorofluoromethane	22	
60-29-7	Ethyl ether	17	
354-23-4	Freon 123a	20	
107-02-8	Acrolein	140	
75-35-4	1,1-Dichloroethene	22	
67-64-1	Acetone	180	
76-13-1	Freon 113	19	
67-63-0	2-Propanol	130	
74-88-4	Methyl Iodide	19	
75-15-0	Carbon Disulfide	19	
107-05-1	Allyl Chloride	23	
79-20-9	Methyl Acetate	23	
75-09-2	Methylene Chloride	21	
75-65-0	t-Butyl alcohol	190	
107-13-1	Acrylonitrile	96	
156-60-5	trans-1,2-Dichloroethene	21	
1634-04-4	Methyl Tertiary Butyl Ether	20	
110-54-3	n-Hexane	19	
75-34-3	1,1-Dichloroethane	21	
108-20-3	di-Isopropyl ether	20	
126-99-8	2-Chloro-1,3-butadiene	20	
637-92-3	Ethyl t-butyl ether	20	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSE76

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSE76

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19nov26a.b/en26s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/26/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
156-59-2	cis-1,2-Dichloroethene	22	
540-59-0	1,2-Dichloroethene (Total)	43	
78-93-3	2-Butanone	150	
594-20-7	2,2-Dichloropropane	21	
107-12-0	Propionitrile	150	
126-98-7	Methacrylonitrile	150	
74-97-5	Bromochloromethane	21	
109-99-9	Tetrahydrofuran	100	
67-66-3	Chloroform	21	
71-55-6	1,1,1-Trichloroethane	21	
110-82-7	Cyclohexane	18	
563-58-6	1,1-Dichloropropene	20	
56-23-5	Carbon Tetrachloride	20	
78-83-1	Isobutyl Alcohol	460	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	21	
994-05-8	t-Amyl methyl ether	19	
142-82-5	n-Heptane	17	
71-36-3	n-Butanol	880	
79-01-6	Trichloroethene	21	
108-87-2	Methylcyclohexane	20	
78-87-5	1,2-Dichloropropane	22	
74-95-3	Dibromomethane	21	
123-91-1	1,4-Dioxane	450	
80-62-6	Methyl Methacrylate	20	
75-27-4	Bromodichloromethane	21	
79-46-9	2-Nitropropane	17	
110-75-8	2-Chloroethyl Vinyl Ether	21	
10061-01-5	cis-1,3-Dichloropropene	20	
108-10-1	4-Methyl-2-pentanone	97	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSE76

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSE76

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19nov26a.b/en26s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/26/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-88-3	Toluene	21	
10061-02-6	trans-1,3-Dichloropropene	20	
542-75-6	1,3-Dichloropropene (total)	40	
97-63-2	Ethyl Methacrylate	19	
79-00-5	1,1,2-Trichloroethane	22	
127-18-4	Tetrachloroethene	20	
142-28-9	1,3-Dichloropropane	21	
591-78-6	2-Hexanone	100	
124-48-1	Dibromochloromethane	20	
106-93-4	1,2-Dibromoethane	21	
544-10-5	1-Chlorohexane	20	
108-90-7	Chlorobenzene	21	
630-20-6	1,1,1,2-Tetrachloroethane	21	
100-41-4	Ethylbenzene	21	
179601-23-1	m+p-Xylene	42	
95-47-6	o-Xylene	21	
1330-20-7	Xylene (Total)	63	
100-42-5	Styrene	21	
75-25-2	Bromoform	19	
98-82-8	Isopropylbenzene	21	
108-94-1	Cyclohexanone	490	
108-86-1	Bromobenzene	21	
79-34-5	1,1,2,2-Tetrachloroethane	21	
96-18-4	1,2,3-Trichloropropane	21	
110-57-6	trans-1,4-Dichloro-2-butene	100	
103-65-1	n-Propylbenzene	21	
95-49-8	2-Chlorotoluene	21	
106-43-4	4-Chlorotoluene	21	
108-67-8	1,3,5-Trimethylbenzene	21	
98-06-6	tert-Butylbenzene	21	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSE76

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSE76

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19nov26a.b/en26s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/26/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
76-01-7	Pentachloroethane	22	
95-63-6	1,2,4-Trimethylbenzene	21	
135-98-8	sec-Butylbenzene	21	
541-73-1	1,3-Dichlorobenzene	20	
99-87-6	p-Isopropyltoluene	21	
106-46-7	1,4-Dichlorobenzene	21	
526-73-8	1,2,3-Trimethylbenzene	22	
100-44-7	Benzyl Chloride	17	
141-93-5	1,3-Diethylbenzene	21	
105-05-5	1,4-Diethylbenzene	22	
95-50-1	1,2-Dichlorobenzene	21	
104-51-8	n-Butylbenzene	21	
135-01-3	1,2-Diethylbenzene	21	
25340-17-4	Diethylbenzene (total)	64	
96-12-8	1,2-Dibromo-3-chloropropane	21	
108-70-3	1,3,5-Trichlorobenzene	21	
120-82-1	1,2,4-Trichlorobenzene	21	
87-68-3	Hexachlorobutadiene	20	
91-20-3	Naphthalene	20	
87-61-6	1,2,3-Trichlorobenzene	20	
91-57-6	2-Methylnaphthalene	20	

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19nov26a.b/en26s01.d Injection date and time: **26-NOV-2019 10:40**
Data file Sample Info. Line: LCSE76;LCSE76;1;3;LCS;;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 12:17 jml01693

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **8260W**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.474	(0.006)	244	65	193919	(2)	250.00	
66) Fluorobenzene	4.724	(0.000)	613	96	1018786	(1)	50.00	
101) Chlorobenzene-d5	7.870	(0.000)	1129	117	705611	(0)	50.00	
132) 1,4-Dichlorobenzene-d4	9.784	(-0.006)	1443	152	347966	(1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.059	(0.001)	113	216565	49.973	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.383	(0.001)	102	57663	49.921	100%		80 - 120
84) Toluene-d8	(3)	6.364	(0.000)	98	1002182	50.028	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.894	(0.000)	95	376593	49.886	100%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	1.200	(0.001)	85	120357	16.588	16.59			0.2	1
4) Chloromethane	(2)	1.304	(0.001)	50	170489	19.090	19.09			0.2	1
5) 1,3-Butadiene	(2)	1.365	(0.001)	39	130862	20.063	20.06			1	3
6) Vinyl Chloride	(2)	1.371	(0.001)	62	162522	20.397	20.40			0.2	1
8) Bromomethane	(2)	1.560	(0.001)	94	85328	20.091	20.09			0.3	1
9) Chloroethane	(2)	1.602	(0.001)	64	87767	20.673	20.67			0.2	1
10) Dichlorofluoromethane	(2)	1.730	(0.001)	67	209193	20.597	20.60			0.9	3
11) n-Pentane	(2)	1.785	(0.001)	43	183948	19.129	19.13			0.4	10
12) Trichlorofluoromethane	(2)	1.779	(0.001)	101	167882M	21.623	21.62			0.2	1
14) Ethyl ether	(2)	1.920	(0.001)	59	87582	17.287	17.29			0.2	5
15) Freon 123a	(2)	1.932	(0.000)	67	122290	19.946	19.95			0.4	5
16) Acrolein	(1)	2.011	(0.000)	56	233565	142.646	142.65			2	100
17) 1,1-Dichloroethene	(2)	2.096	(0.001)	96	84548	21.604	21.60			0.2	1
18) Acetone	(1)	2.121	(-0.002)	58	121424	176.666	176.67			0.7	20
19) Freon 113	(2)	2.127	(0.000)	101	84477	18.624	18.62			0.2	10
21) 2-Propanol	(1)	2.218	(-0.002)	45	60157	125.488	125.49			18	100
22) Methyl Iodide	(2)	2.212	(0.001)	142	130400	18.887	18.89			0.2	1
23) Carbon Disulfide	(2)	2.273	(0.001)	76	279439	19.473	19.47			0.2	5
25) Allyl Chloride	(2)	2.365	(0.001)	41	201500	22.694	22.69			0.3	5
27) Methyl Acetate	(2)	2.377	(0.000)	43	114052	22.587	22.59			0.2	5
28) Methylene Chloride	(2)	2.468	(0.001)	84	100620	21.121	21.12			0.3	1
30) t-Butyl alcohol	(1)	2.554	(-0.002)	59	141170M	190.411	190.41			12	50
31) Acrylonitrile	(2)	2.663	(0.001)	53	280072	95.913	95.91			0.3	20
32) trans-1,2-Dichloroethene	(2)	2.700	(0.001)	96	95899	21.123	21.12			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	2.706	(0.001)	73	303722	19.708	19.71			0.2	1
34) n-Hexane	(2)	2.950	(0.000)	57	172253	18.527	18.53			2	5
36) 1,1-Dichloroethane	(2)	3.072	(0.001)	63	199284	20.625	20.63			0.2	1
38) di-Isopropyl ether	(2)	3.139	(0.002)	45	391602	19.671	19.67			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	3.157	(0.001)	53	177962	19.843	19.84			0.2	5
40) Ethyl t-butyl ether	(2)	3.474	(0.001)	59	345519	19.570	19.57			0.2	1
42) cis-1,2-Dichloroethene	(2)	3.608	(0.000)	96	115137	22.163	22.16			0.2	1

M = Compound was manually integrated.

Digitally signed by Jason M. Long on 11/26/2019 at 15:26. Target 3.5 esignature user ID: jml01693

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19nov26a.b/en26s01.d Injection date and time: **26-NOV-2019 10:40**
Data file Sample Info. Line: LCSE76;LCSE76;1;3;LCS;;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 12:17 jml01693

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **8260W**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
43) 1,2-Dichloroethene (Total)	(2)		96	211036	43.286	43.29			0.4	2
44) 2-Butanone	(2)	3.608(0.001)	43	568679	153.404	153.40			0.3	10
45) 2,2-Dichloropropane	(2)	3.614(0.001)	77	149039	20.860	20.86			0.3	1
47) Propionitrile	(1)	3.669(-0.003)	54	172320	154.367	154.37			14	100
48) Methacrylonitrile	(2)	3.809(0.001)	67	440010	151.360	151.36			6	50
49) Bromochloromethane	(2)	3.828(0.001)	128	49777	21.255	21.25			0.2	5
50) Tetrahydrofuran	(1)	3.870(-0.003)	71	92559	100.192	100.19			0.7	10
51) Chloroform	(2)	3.907(0.001)	83	173114	20.964	20.96			0.2	1
53) 1,1,1-Trichloroethane	(2)	4.090(0.000)	97	143075	20.744	20.74			0.3	1
54) Cyclohexane	(2)	4.151(0.001)	56	206412	17.991	17.99			1	5
55) 1,1-Dichloropropene	(2)	4.248(0.000)	75	149542	20.385	20.38			0.2	5
56) Carbon Tetrachloride	(2)	4.254(0.001)	117	106084	19.839	19.84			0.2	1
58) Isobutyl Alcohol	(1)	4.370(-0.001)	41	111308	458.212	458.21			36	250
60) Benzene	(2)	4.443(0.001)	78	446534	20.550	20.55			0.2	1
61) 1,2-Dichloroethane	(2)	4.456(-0.000)	62	140647	20.789	20.79			0.3	1
65) t-Amyl methyl ether	(2)	4.572(0.001)	73	320063	19.432	19.43			0.8	5
67) n-Heptane	(2)	4.736(-0.000)	43	176919	16.778	16.78			2	5
69) n-Butanol	(1)	5.035(-0.002)	56	177666	876.851	876.85			61	250
71) Trichloroethene	(2)	5.090(0.001)	95	105758	20.923	20.92			0.2	1
73) Methylcyclohexane	(2)	5.297(-0.000)	83	219520	20.326	20.33			0.5	5
74) 1,2-Dichloropropane	(2)	5.315(-0.000)	63	122429	21.542	21.54			0.2	1
75) Dibromomethane	(2)	5.431(-0.000)	93	59065	20.659	20.66			0.2	1
76) 1,4-Dioxane	(1)	5.455(-0.005)	88	29937M	450.699	450.70			29	250
77) Methyl Methacrylate	(2)	5.462(-0.001)	69	90253	19.984	19.98			0.2	5
79) Bromodichloromethane	(2)	5.602(-0.000)	83	121079	20.678	20.68			0.2	1
80) 2-Nitropropane	(2)	5.840(-0.001)	41	17527	16.553	16.55			0.8	10
81) 2-Chloroethyl Vinyl Ether	(2)	5.937(-0.000)	63	87205	20.624	20.62			0.2	10
82) cis-1,3-Dichloropropene	(2)	6.077(-0.000)	75	168482	20.484	20.48			0.2	1
83) 4-Methyl-2-pentanone	(2)	6.254(-0.000)	43	755256	97.226	97.23			0.5	10
89) Toluene	(3)	6.437(0.000)	92	272317	20.787	20.79			0.2	1
90) trans-1,3-Dichloropropene	(3)	6.681(0.000)	75	144259	19.927	19.93			0.2	1
91) 1,3-Dichloropropene (total)	(3)		100	312741	40.411	40.41			0.4	2
92) Ethyl Methacrylate	(3)	6.815(0.000)	69	148037	18.507	18.51			0.2	5
93) 1,1,2-Trichloroethane	(3)	6.876(0.000)	97	90570	21.931	21.93			0.2	1
94) Tetrachloroethene	(3)	7.034(0.000)	166	95793	19.661	19.66			0.2	1
95) 1,3-Dichloropropane	(3)	7.053(0.000)	76	166276	20.895	20.90			0.2	1
97) 2-Hexanone	(3)	7.168(0.000)	43	551602	102.076	102.08			0.3	10
98) Dibromochloromethane	(3)	7.296(0.000)	129	78073	20.456	20.46			0.2	1
100) 1,2-Dibromoethane	(3)	7.400(0.000)	107	87613	20.559	20.56			0.2	1
102) 1-Chlorohexane	(3)	7.900(-0.000)	91	152727	19.774	19.77			0.3	5
103) Chlorobenzene	(3)	7.900(-0.000)	112	284414	20.849	20.85			0.2	1
104) 1,1,1,2-Tetrachloroethane	(3)	7.979(0.000)	131	82156	20.548	20.55			0.2	1
105) Ethylbenzene	(3)	8.016(-0.000)	91	533864	20.851	20.85			0.4	1
107) m+p-Xylene	(3)	8.126(-0.000)	106	403593	42.034	42.03			1	5
108) o-Xylene	(3)	8.467(-0.000)	106	197714	21.198	21.20			0.4	1
109) Xylene (Total)	(3)		106	601307	63.232	63.23			1	6
110) Styrene	(3)	8.479(0.000)	104	321243	21.271	21.27			0.2	5
111) Bromoform	(3)	8.619(0.000)	173	43650	18.711	18.71			1	4
112) Isopropylbenzene	(3)	8.784(0.000)	105	535624	21.156	21.16			0.2	5
113) Cyclohexanone	(1)	8.839(-0.008)	55	127408	485.993	485.99			25	100
116) Bromobenzene	(4)	9.010(0.000)	156	106290	21.172	21.17			0.2	5
117) 1,1,2,2-Tetrachloroethane	(4)	9.022(0.000)	83	138529	20.706	20.71			0.2	1
118) 1,2,3-Trichloropropane	(4)	9.046(0.000)	110	39901	21.327	21.33			0.2	5
119) trans-1,4-Dichloro-2-butene	(4)	9.064(0.000)	53	209482	100.549	100.55			6	50

M = Compound was manually integrated.

Digitally signed by Jason M. Long on 11/26/2019 at 15:26. Target 3.5 esignature user ID: jml01693

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19nov26a.b/en26s01.d Injection date and time: **26-NOV-2019 10:40**
Data file Sample Info. Line: LCSE76;LCSE76;1;3;LCS;;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 12:17 jml01693

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **8260W**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

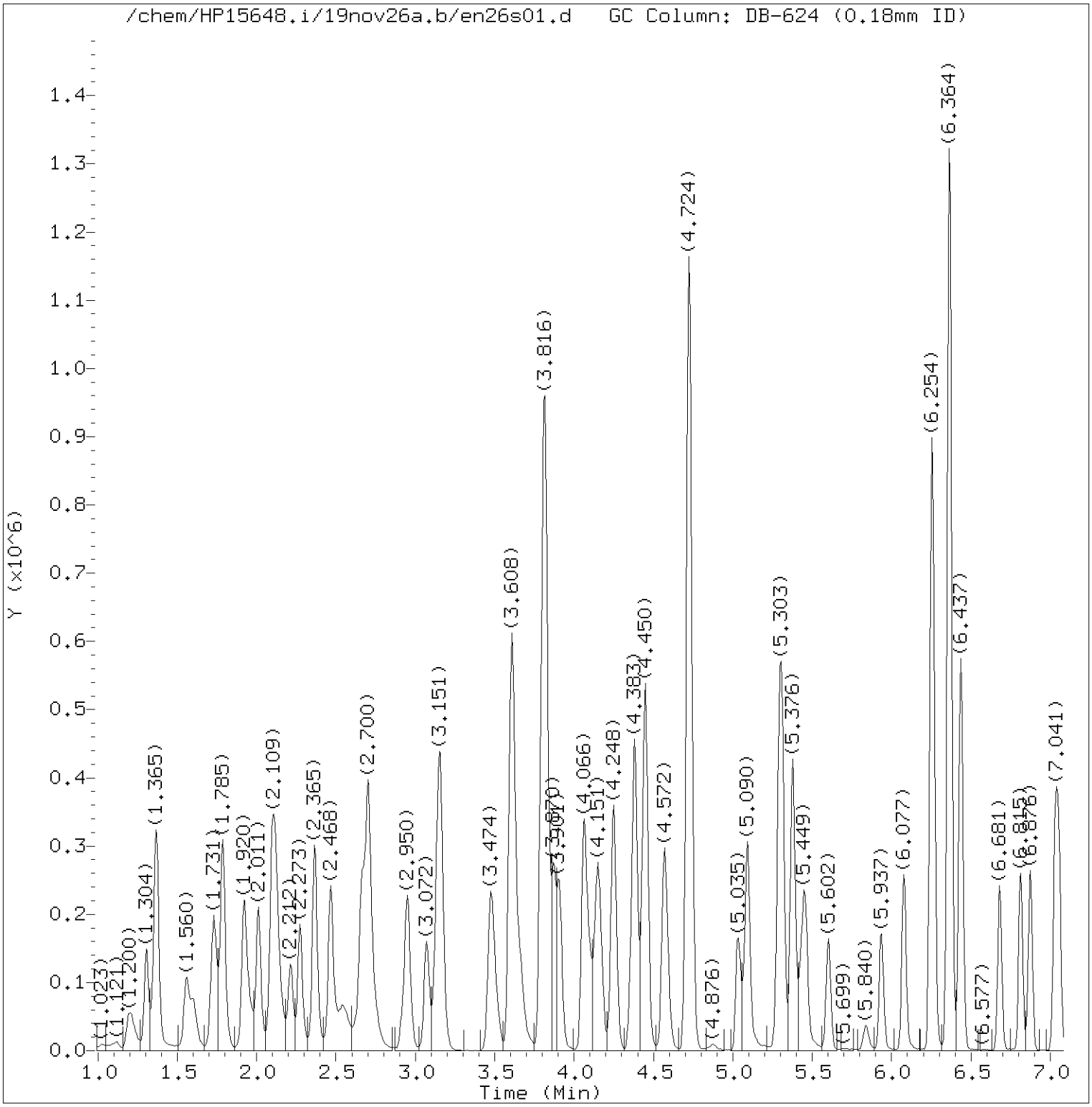
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) n-Propylbenzene	(4)	9.113(0.000)	91	653335	21.304	21.30			0.2	5
121) 2-Chlorotoluene	(4)	9.168(0.000)	126	118780	21.353	21.35			0.2	5
122) 4-Chlorotoluene	(4)	9.254(0.000)	126	118551	20.780	20.78			0.2	5
123) 1,3,5-Trimethylbenzene	(4)	9.254(0.000)	105	447995	20.950	20.95			0.3	5
125) tert-Butylbenzene	(4)	9.497(0.000)	134	96030	21.119	21.12			0.3	5
126) Pentachloroethane	(4)	9.503(0.000)	167	54046	21.593	21.59			0.2	5
127) 1,2,4-Trimethylbenzene	(4)	9.534(0.000)	105	454217	20.571	20.57			1	5
128) sec-Butylbenzene	(4)	9.662(0.000)	105	581039	20.697	20.70			0.2	5
130) 1,3-Dichlorobenzene	(4)	9.735(0.000)	146	209621	20.431	20.43			0.2	5
131) p-Isopropyltoluene	(4)	9.772(0.000)	119	485851	20.947	20.95			0.2	5
134) 1,4-Dichlorobenzene	(4)	9.796(0.000)	146	212864	20.680	20.68			0.2	5
135) 1,2,3-Trimethylbenzene	(4)	9.839(0.000)	105	495186	21.807	21.81			0.3	5
136) Benzyl Chloride	(4)	9.894(0.000)	91	211304	17.055	17.06			1	5
137) 1,3-Diethylbenzene	(4)	9.985(0.000)	119	310618	21.466	21.47			0.2	5
138) 1,4-Diethylbenzene	(4)	10.046(0.000)	119	326134	21.575	21.57			0.2	5
139) 1,2-Dichlorobenzene	(4)	10.064(0.000)	146	200164	20.868	20.87			0.2	5
140) n-Butylbenzene	(4)	10.064(0.000)	92	256203	20.916	20.92			0.2	5
141) 1,2-Diethylbenzene	(4)	10.125(0.000)	119	258049	21.312	21.31			0.2	5
142) Diethylbenzene (total)	(4)		100	894801	64.352	64.35			0.6	15
143) 1,2-Dibromo-3-chloropropane	(4)	10.595(0.000)	75	28612	20.536	20.54			0.3	5
145) 1,3,5-Trichlorobenzene	(4)	10.747(0.000)	180	146744	20.549	20.55			0.2	5
147) 1,2,4-Trichlorobenzene	(4)	11.156(0.000)	180	131216	20.547	20.55			0.3	5
148) Hexachlorobutadiene	(4)	11.271(0.000)	225	52105	19.782	19.78			2	5
149) Naphthalene	(4)	11.314(0.000)	128	448947	20.221	20.22			1	5
150) 1,2,3-Trichlorobenzene	(4)	11.472(0.000)	180	123712	20.158	20.16			0.4	5
151) 2-Methylnaphthalene	(4)	12.033(0.000)	142	274871	20.331	20.33			2	4

Total number of targets = 111

Digitally signed by Jason M. Long on 11/26/2019 at 15:26. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 12:19. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

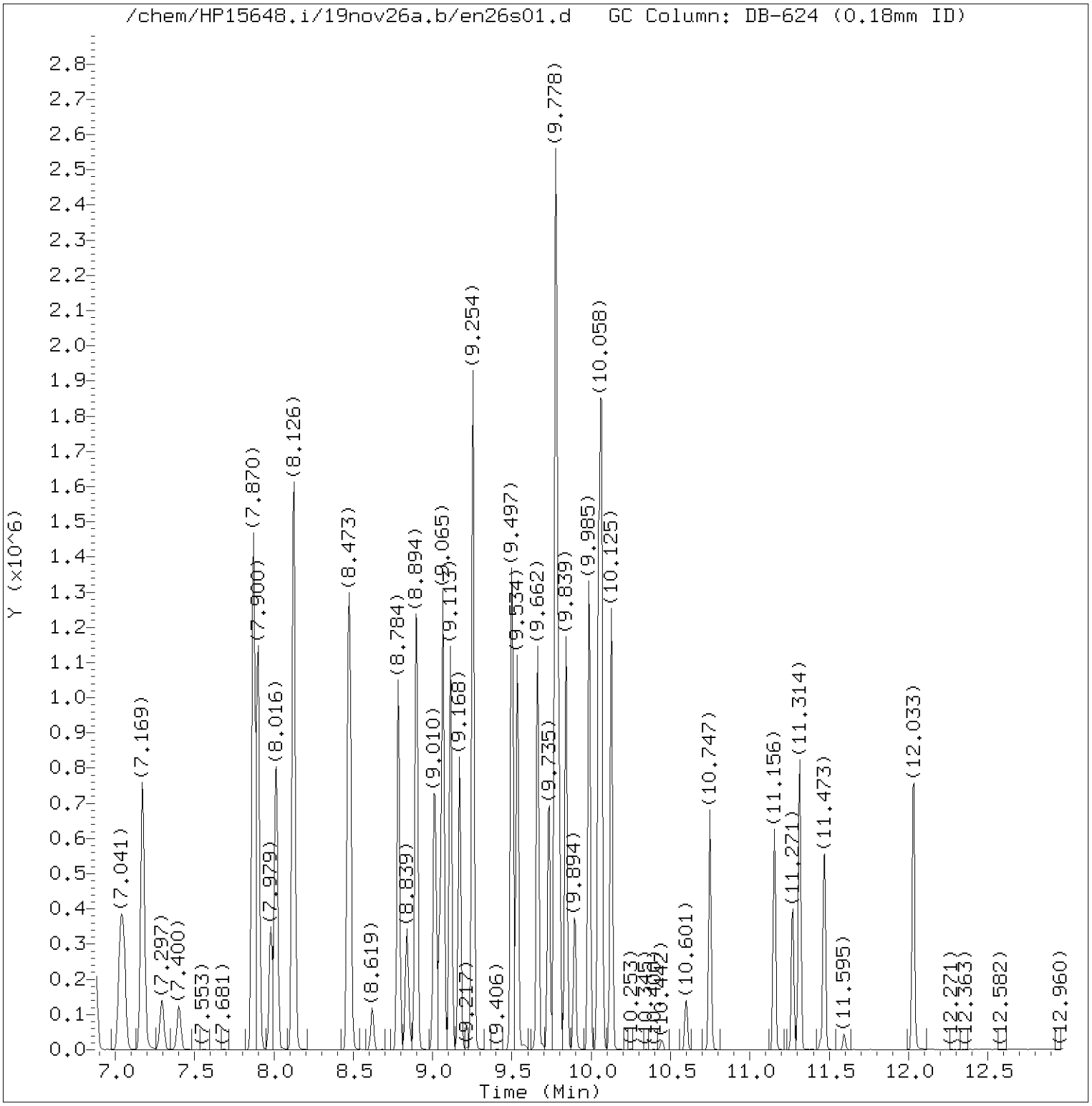
Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s01.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 10:40 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 12:17 jml01693

Sample Name: LCSE76 Lab Sample ID: LCSE76

Digitally signed by Jason M. Long
on 11/26/2019 at 15:26.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s01.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 10:40 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 12:17 jml01693

Sample Name: LCSE76 Lab Sample ID: LCSE76

Digitally signed by Jason M. Long
on 11/26/2019 at 15:26.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s01.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 10:40 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 12:17 jml01693

Sample Name: LCSE76 Lab Sample ID: LCSE76

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.200	85	120357	16.588
4) Chloromethane	(2)	1.304	50	170489	19.090
5) 1,3-Butadiene	(2)	1.365	39	130862	20.063
6) Vinyl Chloride	(2)	1.371	62	162522	20.397
8) Bromomethane	(2)	1.560	94	85328	20.091
9) Chloroethane	(2)	1.603	64	87767	20.673
10) Dichlorofluoromethane	(2)	1.731	67	209193	20.597
12) Trichlorofluoromethane	(2)	1.779	101	167882M	21.623
11) n-Pentane	(2)	1.785	43	183948	19.129
14) Ethyl ether	(2)	1.920	59	87582	17.287
15) Freon 123a	(2)	1.932	67	122290	19.946
16) Acrolein	(1)	2.011	56	233565	142.646
17) 1,1-Dichloroethene	(2)	2.096	96	84548	21.604
18) Acetone	(1)	2.121	58	121424	176.666
19) Freon 113	(2)	2.127	101	84477	18.624
22) Methyl Iodide	(2)	2.212	142	130400	18.887
21) 2-Propanol	(1)	2.218	45	60157	125.488
23) Carbon Disulfide	(2)	2.273	76	279439	19.473
25) Allyl Chloride	(2)	2.365	41	201500	22.694
27) Methyl Acetate	(2)	2.377	43	114052	22.587
28) Methylene Chloride	(2)	2.468	84	100620	21.121
29)*t-Butyl alcohol-d10	(1)	2.474	65	193919	250.000
30) t-Butyl alcohol	(1)	2.554	59	141170M	190.411
31) Acrylonitrile	(2)	2.663	53	280072	95.913
32) trans-1,2-Dichloroethene	(2)	2.700	96	95899	21.123
33) Methyl Tertiary Butyl Ether	(2)	2.706	73	303722	19.708
34) n-Hexane	(2)	2.950	57	172253	18.527
36) 1,1-Dichloroethane	(2)	3.072	63	199284	20.625
38) di-Isopropyl ether	(2)	3.139	45	391602	19.671
39) 2-Chloro-1,3-butadiene	(2)	3.157	53	177962	19.843
40) Ethyl t-butyl ether	(2)	3.474	59	345519	19.570
44) 2-Butanone	(2)	3.608	43	568679	153.404
42) cis-1,2-Dichloroethene	(2)	3.608	96	115137	22.163
45) 2,2-Dichloropropane	(2)	3.614	77	149039	20.860
43) 1,2-Dichloroethene (Total)	(2)		96	211036	43.286
47) Propionitrile	(1)	3.669	54	172320	154.367
48) Methacrylonitrile	(2)	3.809	67	440010	151.360
49) Bromochloromethane	(2)	3.828	128	49777	21.255

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 11/26/2019 at 15:26.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s01.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 10:40 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 12:17 jml01693

Sample Name: LCSE76 Lab Sample ID: LCSE76

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	3.870	71	92559	100.192
51) Chloroform	(2)	3.907	83	173114	20.964
52)$Dibromofluoromethane	(2)	4.059	113	216565	49.973
53) 1,1,1-Trichloroethane	(2)	4.090	97	143075	20.744
54) Cyclohexane	(2)	4.151	56	206412	17.991
55) 1,1-Dichloropropene	(2)	4.248	75	149542	20.385
56) Carbon Tetrachloride	(2)	4.254	117	106084	19.839
58) Isobutyl Alcohol	(1)	4.370	41	111308	458.212
57)$1,2-Dichloroethane-d4	(2)	4.383	102	57663	49.921
60) Benzene	(2)	4.443	78	446534	20.550
61) 1,2-Dichloroethane	(2)	4.456	62	140647	20.789
65) t-Amyl methyl ether	(2)	4.572	73	320063	19.432
66)*Fluorobenzene	(2)	4.724	96	1018786	50.000
67) n-Heptane	(2)	4.736	43	176919	16.778
69) n-Butanol	(1)	5.035	56	177666	876.851
71) Trichloroethene	(2)	5.090	95	105758	20.923
73) Methylcyclohexane	(2)	5.297	83	219520	20.326
74) 1,2-Dichloropropane	(2)	5.315	63	122429	21.542
75) Dibromomethane	(2)	5.431	93	59065	20.659
76) 1,4-Dioxane	(1)	5.455	88	29937M	450.699
77) Methyl Methacrylate	(2)	5.462	69	90253	19.984
79) Bromodichloromethane	(2)	5.602	83	121079	20.678
80) 2-Nitropropane	(2)	5.840	41	17527	16.553
81) 2-Chloroethyl Vinyl Ether	(2)	5.937	63	87205	20.624
82) cis-1,3-Dichloropropene	(2)	6.077	75	168482	20.484
83) 4-Methyl-2-pentanone	(2)	6.254	43	755256	97.226
84)$Toluene-d8	(3)	6.364	98	1002182	50.028
89) Toluene	(3)	6.437	92	272317	20.787
90) trans-1,3-Dichloropropene	(3)	6.681	75	144259	19.927
91) 1,3-Dichloropropene (total)	(3)		100	312741	40.411
92) Ethyl Methacrylate	(3)	6.815	69	148037	18.507
93) 1,1,2-Trichloroethane	(3)	6.876	97	90570	21.931
94) Tetrachloroethene	(3)	7.034	166	95793	19.661
95) 1,3-Dichloropropane	(3)	7.053	76	166276	20.895
97) 2-Hexanone	(3)	7.169	43	551602	102.076
98) Dibromochloromethane	(3)	7.297	129	78073	20.456
100) 1,2-Dibromoethane	(3)	7.400	107	87613	20.559
101)*Chlorobenzene-d5	(3)	7.870	117	705611	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 11/26/2019 at 15:26.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s01.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 10:40 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 12:17 jml01693

Sample Name: LCSE76 Lab Sample ID: LCSE76

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
103) Chlorobenzene	(3)	7.900	112	284414	20.849
102) 1-Chlorohexane	(3)	7.900	91	152727	19.774
104) 1,1,1,2-Tetrachloroethane	(3)	7.979	131	82156	20.548
105) Ethylbenzene	(3)	8.016	91	533864	20.851
107) m+p-Xylene	(3)	8.126	106	403593	42.034
108) o-Xylene	(3)	8.467	106	197714	21.198
110) Styrene	(3)	8.479	104	321243	21.271
109) Xylene (Total)	(3)		106	601307	63.232
111) Bromoform	(3)	8.619	173	43650	18.711
112) Isopropylbenzene	(3)	8.784	105	535624	21.156
113) Cyclohexanone	(1)	8.839	55	127408	485.993
115)$4-Bromofluorobenzene	(3)	8.894	95	376593	49.886
116) Bromobenzene	(4)	9.010	156	106290	21.172
117) 1,1,2,2-Tetrachloroethane	(4)	9.022	83	138529	20.706
118) 1,2,3-Trichloropropane	(4)	9.046	110	39901	21.327
119) trans-1,4-Dichloro-2-butene	(4)	9.065	53	209482	100.549
120) n-Propylbenzene	(4)	9.113	91	653335	21.304
121) 2-Chlorotoluene	(4)	9.168	126	118780	21.353
123) 1,3,5-Trimethylbenzene	(4)	9.254	105	447995	20.950
122) 4-Chlorotoluene	(4)	9.254	126	118551	20.780
125) tert-Butylbenzene	(4)	9.497	134	96030	21.119
126) Pentachloroethane	(4)	9.503	167	54046	21.593
127) 1,2,4-Trimethylbenzene	(4)	9.534	105	454217	20.571
128) sec-Butylbenzene	(4)	9.662	105	581039	20.697
130) 1,3-Dichlorobenzene	(4)	9.735	146	209621	20.431
131) p-Isopropyltoluene	(4)	9.772	119	485851	20.947
132)*1,4-Dichlorobenzene-d4	(4)	9.784	152	347966	50.000
134) 1,4-Dichlorobenzene	(4)	9.796	146	212864	20.680
135) 1,2,3-Trimethylbenzene	(4)	9.839	105	495186	21.807
136) Benzyl Chloride	(4)	9.894	91	211304	17.055
137) 1,3-Diethylbenzene	(4)	9.985	119	310618	21.466
138) 1,4-Diethylbenzene	(4)	10.046	119	326134	21.575
139) 1,2-Dichlorobenzene	(4)	10.064	146	200164	20.868
140) n-Butylbenzene	(4)	10.064	92	256203	20.916
141) 1,2-Diethylbenzene	(4)	10.125	119	258049	21.312
142) Diethylbenzene (total)	(4)		100	894801	64.352
143) 1,2-Dibromo-3-chloropropane	(4)	10.595	75	28612	20.536
145) 1,3,5-Trichlorobenzene	(4)	10.747	180	146744	20.549

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 11/26/2019 at 15:26.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s01.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 10:40 Analyst ID: jml01693

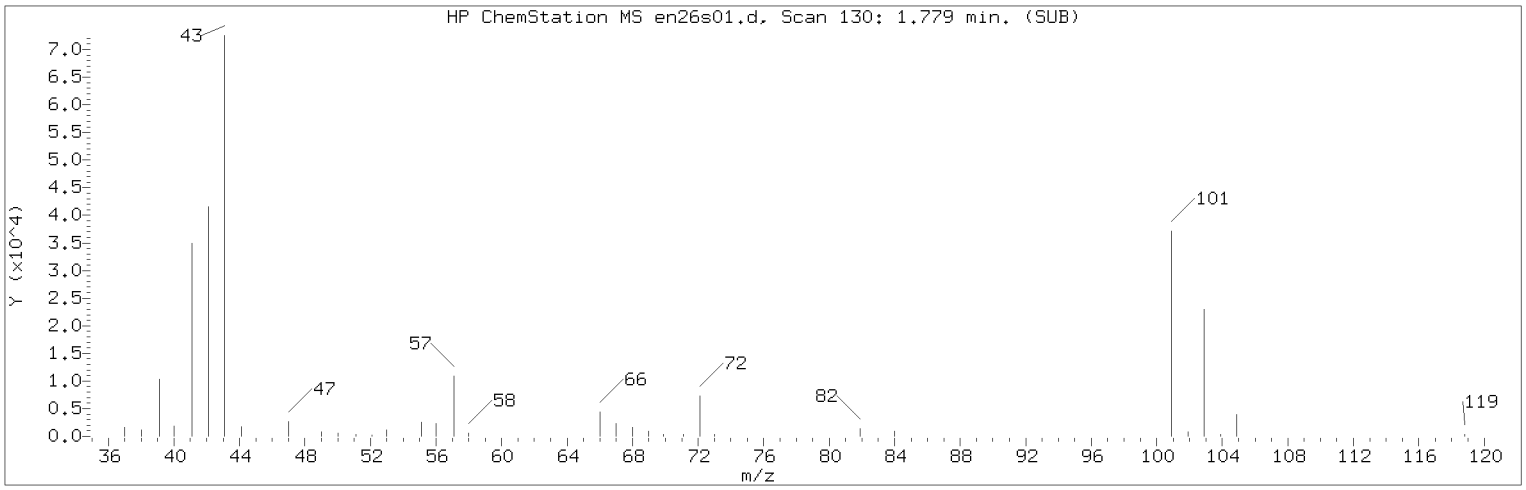
Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 12:17 jml01693

Sample Name: LCSE76 Lab Sample ID: LCSE76

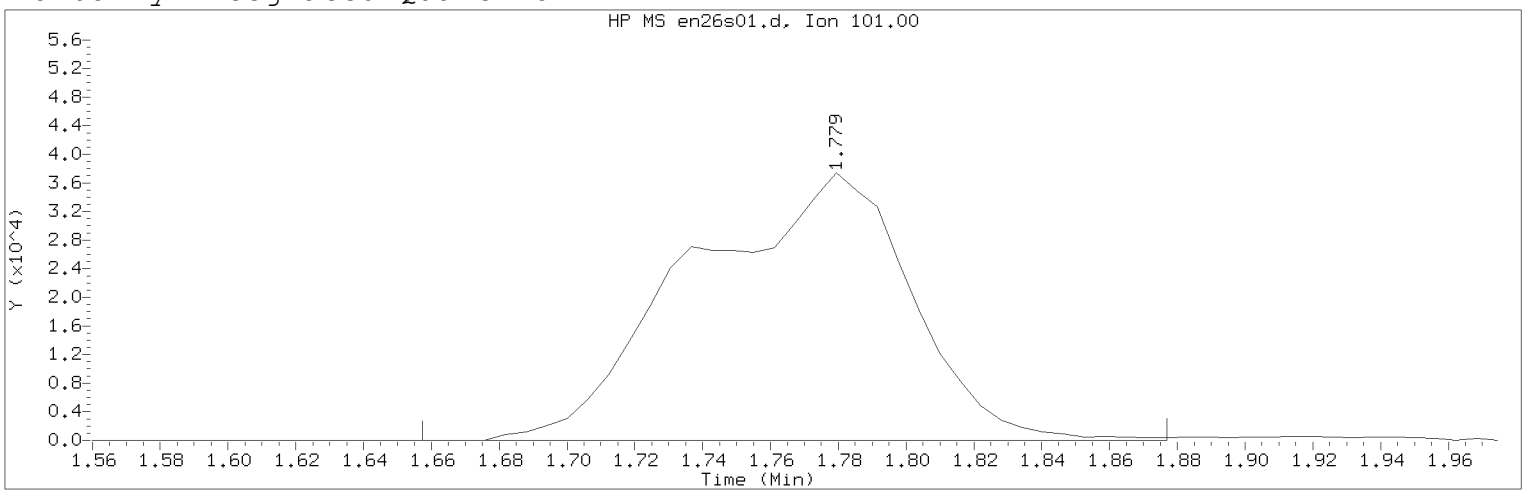
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) 1,2,4-Trichlorobenzene	(4)	11.156	180	131216	20.547
148) Hexachlorobutadiene	(4)	11.271	225	52105	19.782
149) Naphthalene	(4)	11.314	128	448947	20.221
150) 1,2,3-Trichlorobenzene	(4)	11.473	180	123712	20.158
151) 2-Methylnaphthalene	(4)	12.033	142	274871	20.331

Digitally signed by Jason M. Long
on 11/26/2019 at 15:26.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov26a.b/en26s01.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 10:40 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 12:17 jml01693

Sample Name: LCSE76 Lab Sample ID: LCSE76

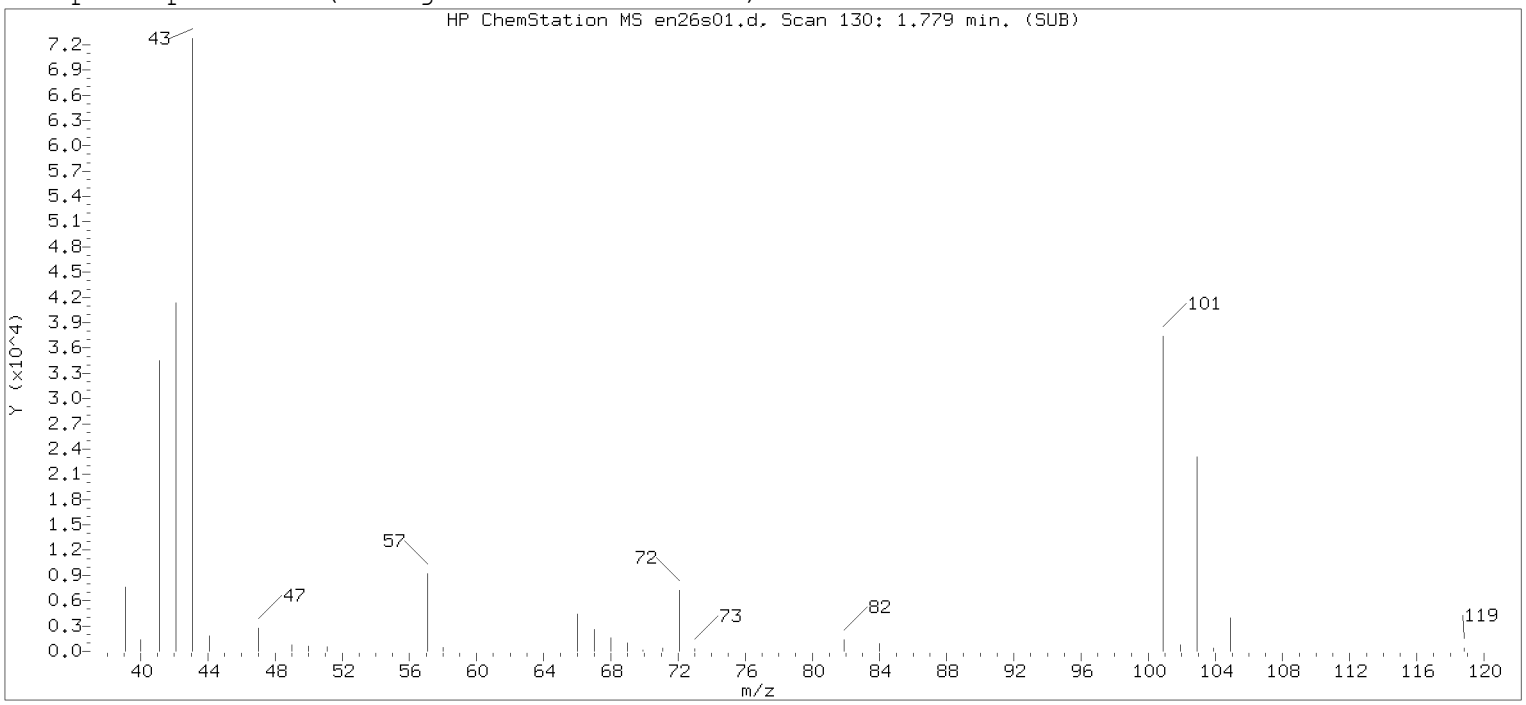
Compound Number : 12
Compound Name : Trichlorofluoromethane
Scan Number : 130
Retention Time (minutes): 1.779
Quant Ion : 101.00
Area (flag) : 167882M
On-Column Amount (ng) : 21.6228
Integration start scan : 109 Integration stop scan: 145
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

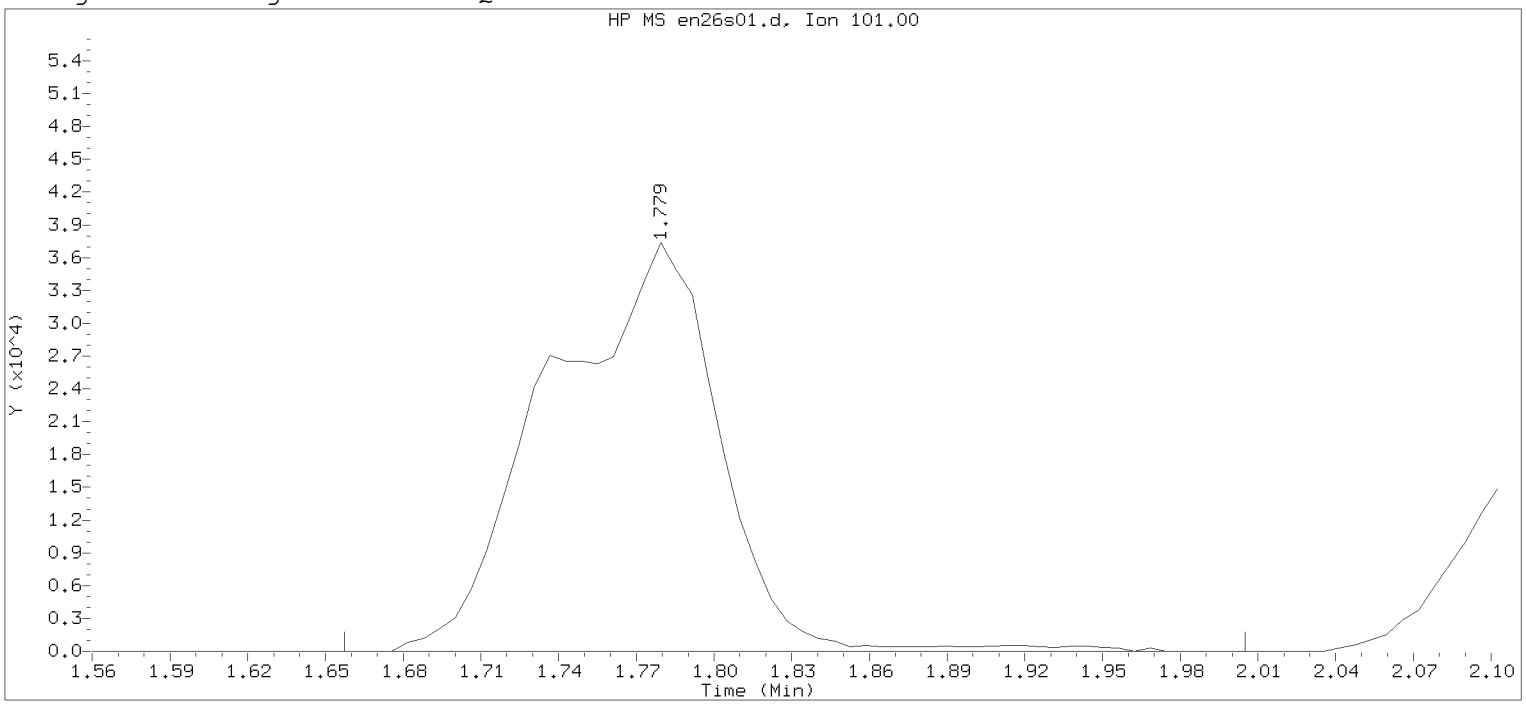
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 15:26.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 12:19.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov26a.b/en26s01.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 10:40 Analyst ID: jml01693

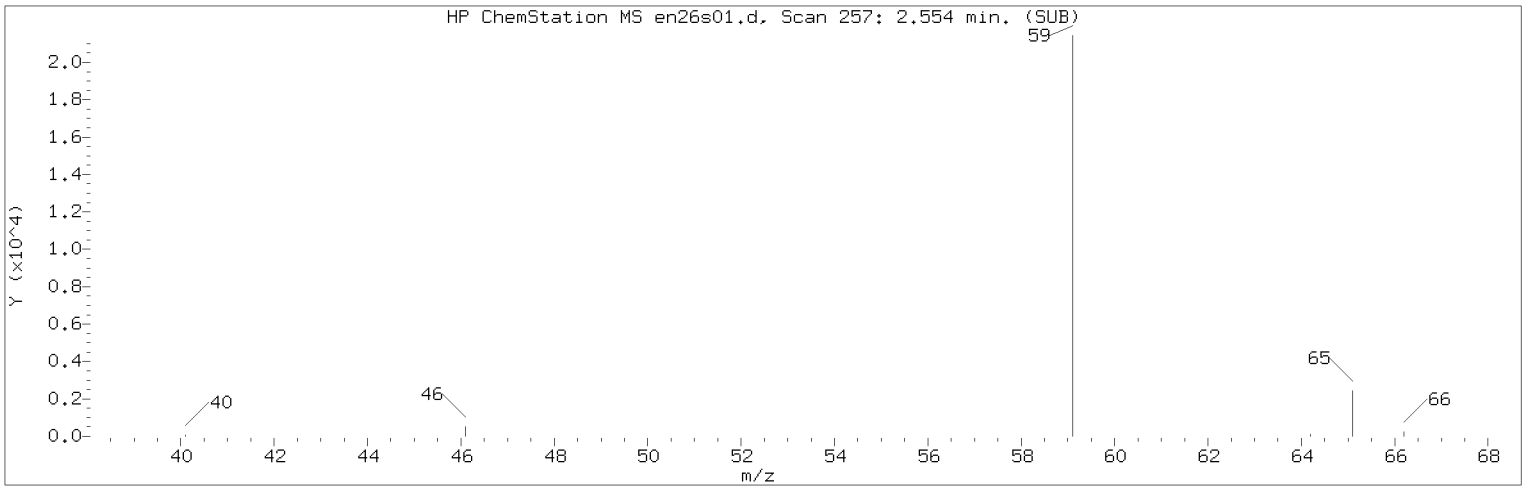
Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:36
Date, time and analyst ID of latest file update: 26-Nov-2019 10:57 Automation

Sample Name: LCSE76 Lab Sample ID: LCSE76

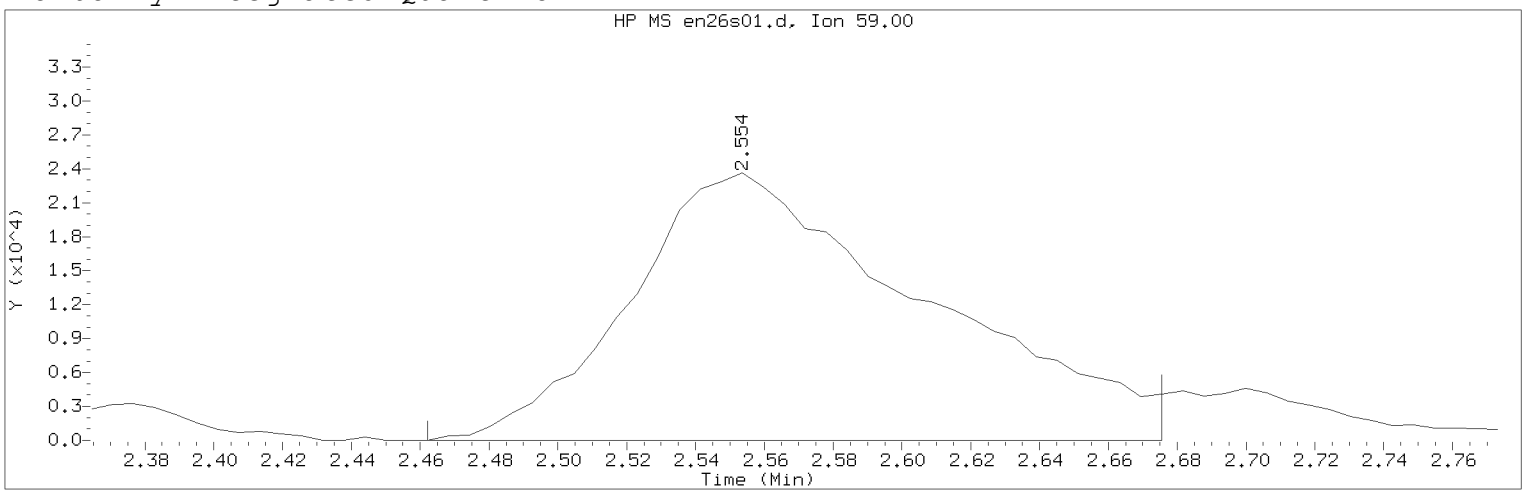
Compound Number : 12
Compound Name : Trichlorofluoromethane
Scan Number : 130
Retention Time (minutes): 1.779
Quant Ion : 101.00
Area : 170018
On-column Amount (ng) : 21.8980
Integration start scan : 109 Integration stop scan: 166
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 15:26.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov26a.b/en26s01.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 10:40 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 12:17 jml01693

Sample Name: LCSE76 Lab Sample ID: LCSE76

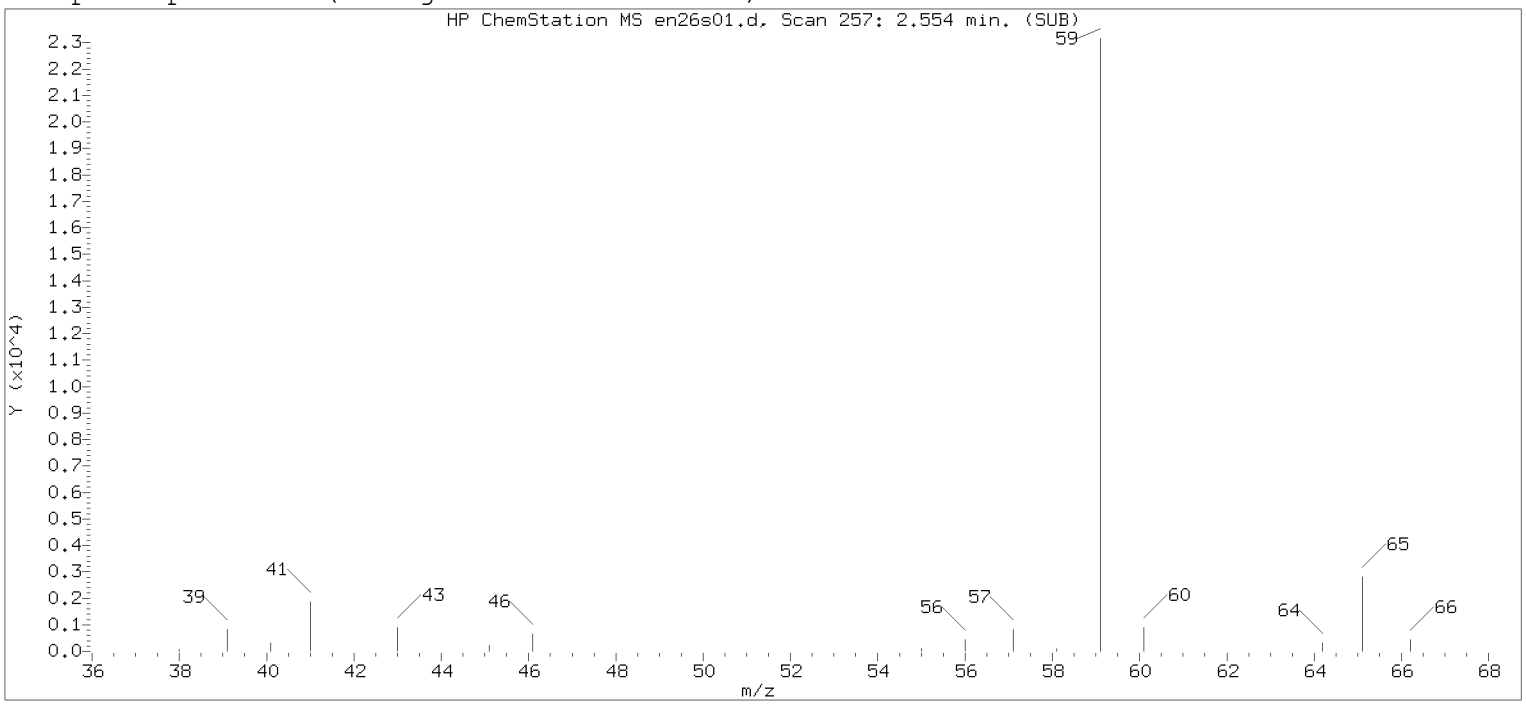
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 257
Retention Time (minutes): 2.554
Quant Ion : 59.00
Area (flag) : 141170M
On-Column Amount (ng) : 190.4108
Integration start scan : 241 Integration stop scan: 276
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

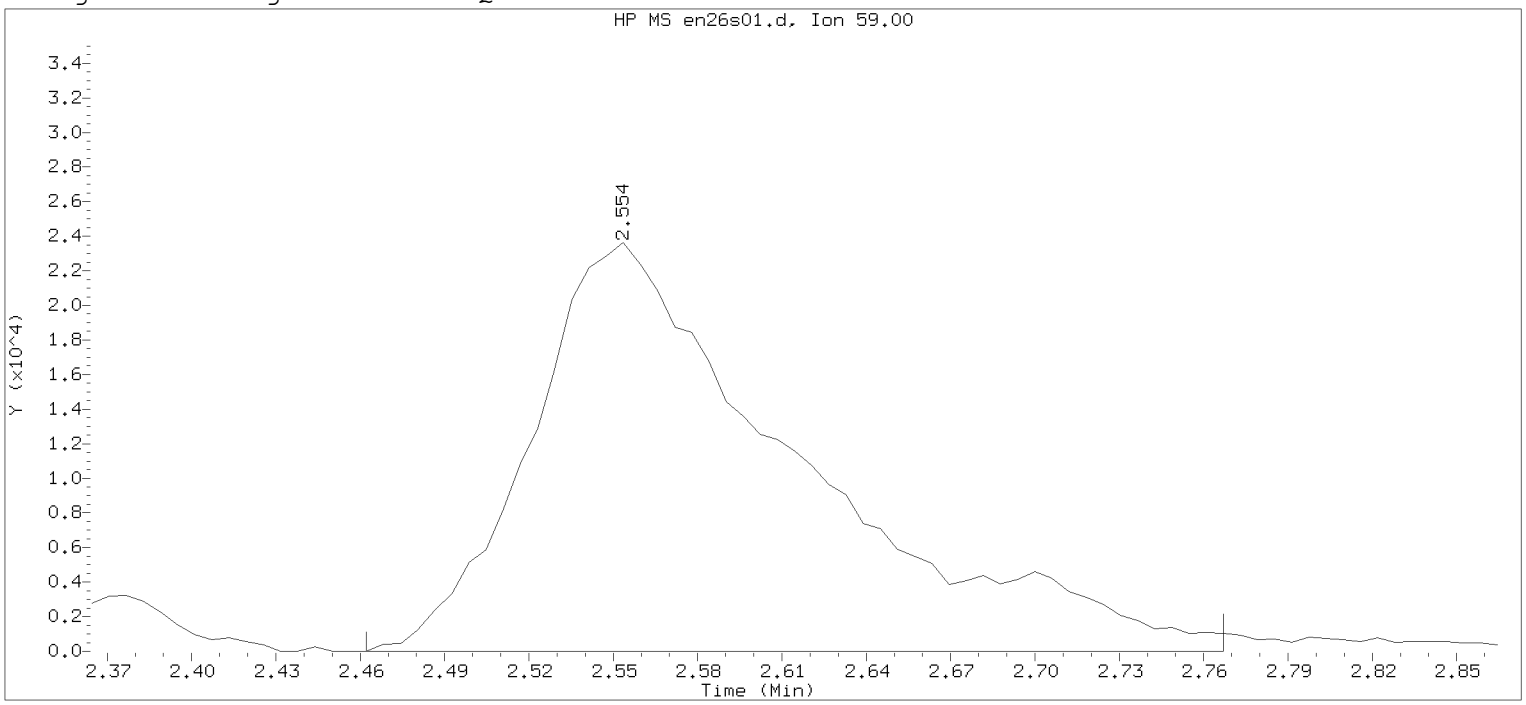
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 15:26.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 12:19.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov26a.b/en26s01.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 10:40 Analyst ID: jml01693

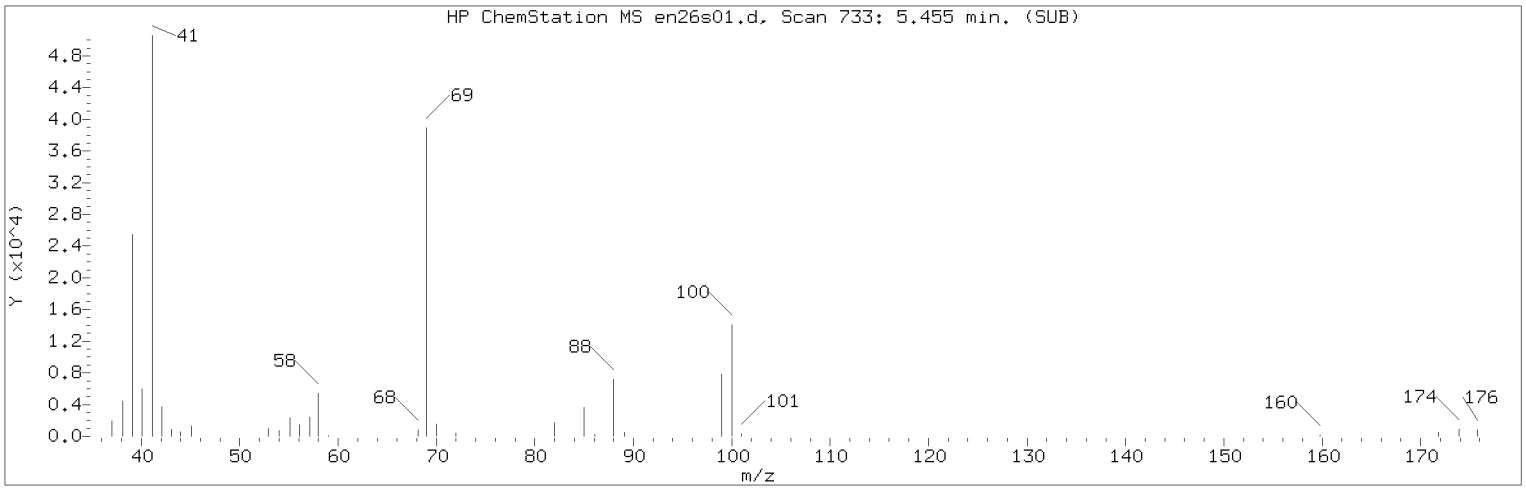
Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:36
Date, time and analyst ID of latest file update: 26-Nov-2019 10:57 Automation

Sample Name: LCSE76 Lab Sample ID: LCSE76

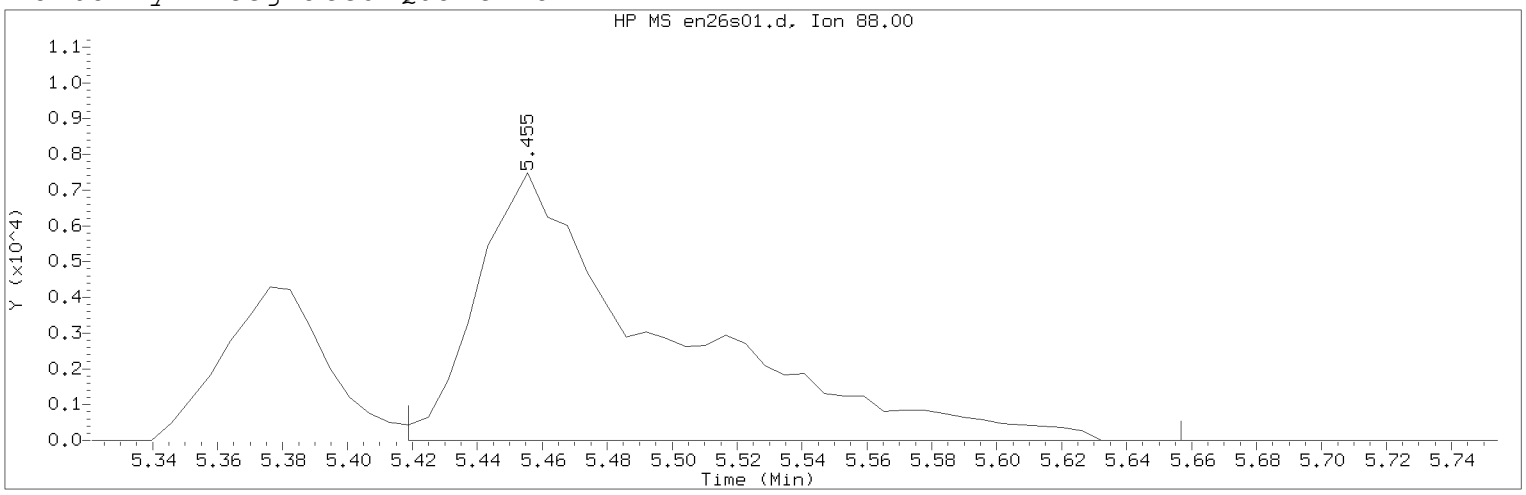
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 257
Retention Time (minutes): 2.554
Quant Ion : 59.00
Area : 155679
On-column Amount (ng) : 209.9797
Integration start scan : 241 Integration stop scan: 291
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 15:26.
Target 3.5 esignature user: JML01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov26a.b/en26s01.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 10:40 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 12:17 jml01693

Sample Name: LCSE76 Lab Sample ID: LCSE76

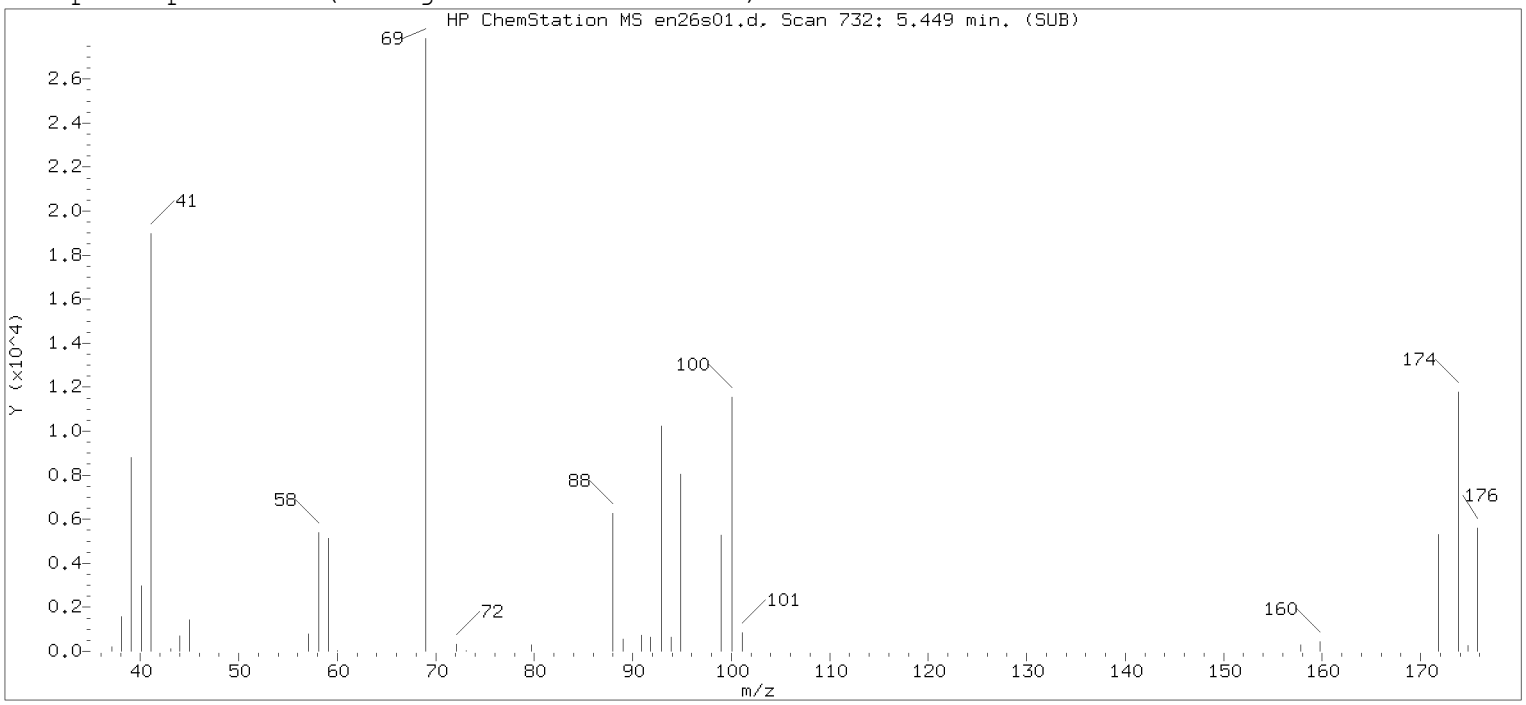
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 733
Retention Time (minutes): 5.455
Quant Ion : 88.00
Area (flag) : 29937M
On-Column Amount (ng) : 450.6991
Integration start scan : 726 Integration stop scan: 765
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

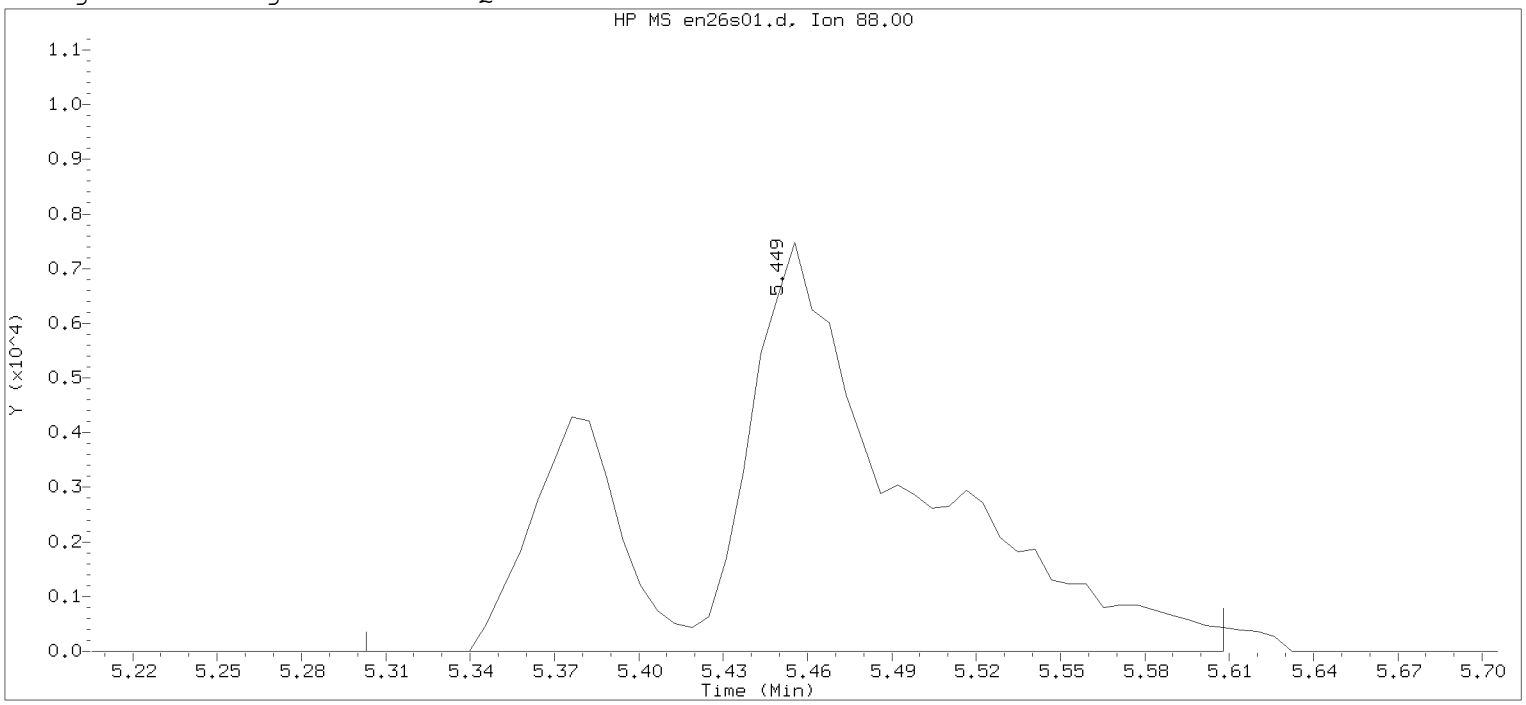
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 15:26.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 12:19.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov26a.b/en26s01.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 10:40 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:36
Date, time and analyst ID of latest file update: 26-Nov-2019 10:57 Automation

Sample Name: LCSE76 Lab Sample ID: LCSE76

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 732
Retention Time (minutes): 5.449
Quant Ion : 88.00
Area : 38973
On-column Amount (ng) : 586.7352
Integration start scan : 707 Integration stop scan: 757
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 15:26.
Target 3.5 esignature user: JML01693

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCDE76

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDE76

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19nov26a.b/en26s02.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/26/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	16	
74-87-3	Chloromethane	18	
106-99-0	1,3-Butadiene	19	
75-01-4	Vinyl Chloride	20	
74-83-9	Bromomethane	19	
75-00-3	Chloroethane	20	
75-43-4	Dichlorofluoromethane	20	
109-66-0	n-Pentane	18	
75-69-4	Trichlorofluoromethane	20	
60-29-7	Ethyl ether	17	
354-23-4	Freon 123a	19	
107-02-8	Acrolein	140	
75-35-4	1,1-Dichloroethene	21	
67-64-1	Acetone	190	
76-13-1	Freon 113	18	
67-63-0	2-Propanol	130	
74-88-4	Methyl Iodide	18	
75-15-0	Carbon Disulfide	18	
107-05-1	Allyl Chloride	22	
79-20-9	Methyl Acetate	21	
75-09-2	Methylene Chloride	20	
75-65-0	t-Butyl alcohol	180	
107-13-1	Acrylonitrile	91	
156-60-5	trans-1,2-Dichloroethene	20	
1634-04-4	Methyl Tertiary Butyl Ether	19	
110-54-3	n-Hexane	17	
75-34-3	1,1-Dichloroethane	20	
108-20-3	di-Isopropyl ether	19	
126-99-8	2-Chloro-1,3-butadiene	19	
637-92-3	Ethyl t-butyl ether	19	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCDE76

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDE76

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19nov26a.b/en26s02.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/26/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
156-59-2	cis-1,2-Dichloroethene	21	
540-59-0	1,2-Dichloroethene (Total)	41	
78-93-3	2-Butanone	150	
594-20-7	2,2-Dichloropropane	20	
107-12-0	Propionitrile	140	
126-98-7	Methacrylonitrile	140	
74-97-5	Bromochloromethane	21	
109-99-9	Tetrahydrofuran	94	
67-66-3	Chloroform	20	
71-55-6	1,1,1-Trichloroethane	20	
110-82-7	Cyclohexane	17	
563-58-6	1,1-Dichloropropene	19	
56-23-5	Carbon Tetrachloride	19	
78-83-1	Isobutyl Alcohol	430	
71-43-2	Benzene	20	
107-06-2	1,2-Dichloroethane	20	
994-05-8	t-Amyl methyl ether	19	
142-82-5	n-Heptane	16	
71-36-3	n-Butanol	840	
79-01-6	Trichloroethene	20	
108-87-2	Methylcyclohexane	19	
78-87-5	1,2-Dichloropropane	21	
74-95-3	Dibromomethane	20	
123-91-1	1,4-Dioxane	470	
80-62-6	Methyl Methacrylate	19	
75-27-4	Bromodichloromethane	20	
79-46-9	2-Nitropropane	16	
110-75-8	2-Chloroethyl Vinyl Ether	20	
10061-01-5	cis-1,3-Dichloropropene	20	
108-10-1	4-Methyl-2-pentanone	92	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCDE76

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDE76

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19nov26a.b/en26s02.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/26/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-88-3	Toluene	20	
10061-02-6	trans-1,3-Dichloropropene	19	
542-75-6	1,3-Dichloropropene (total)	39	
97-63-2	Ethyl Methacrylate	18	
79-00-5	1,1,2-Trichloroethane	21	
127-18-4	Tetrachloroethene	19	
142-28-9	1,3-Dichloropropane	20	
591-78-6	2-Hexanone	98	
124-48-1	Dibromochloromethane	19	
106-93-4	1,2-Dibromoethane	19	
544-10-5	1-Chlorohexane	19	
108-90-7	Chlorobenzene	20	
630-20-6	1,1,1,2-Tetrachloroethane	19	
100-41-4	Ethylbenzene	20	
179601-23-1	m+p-Xylene	40	
95-47-6	o-Xylene	20	
1330-20-7	Xylene (Total)	60	
100-42-5	Styrene	20	
75-25-2	Bromoform	18	
98-82-8	Isopropylbenzene	20	
108-94-1	Cyclohexanone	500	
108-86-1	Bromobenzene	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	
96-18-4	1,2,3-Trichloropropane	20	
110-57-6	trans-1,4-Dichloro-2-butene	97	
103-65-1	n-Propylbenzene	20	
95-49-8	2-Chlorotoluene	20	
106-43-4	4-Chlorotoluene	20	
108-67-8	1,3,5-Trimethylbenzene	20	
98-06-6	tert-Butylbenzene	20	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCDE76

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDE76

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP15648.i/19nov26a.b/en26s02.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/26/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
76-01-7	Pentachloroethane	21	
95-63-6	1,2,4-Trimethylbenzene	20	
135-98-8	sec-Butylbenzene	20	
541-73-1	1,3-Dichlorobenzene	20	
99-87-6	p-Isopropyltoluene	20	
106-46-7	1,4-Dichlorobenzene	20	
526-73-8	1,2,3-Trimethylbenzene	21	
100-44-7	Benzyl Chloride	16	
141-93-5	1,3-Diethylbenzene	20	
105-05-5	1,4-Diethylbenzene	20	
95-50-1	1,2-Dichlorobenzene	20	
104-51-8	n-Butylbenzene	19	
135-01-3	1,2-Diethylbenzene	20	
25340-17-4	Diethylbenzene (total)	60	
96-12-8	1,2-Dibromo-3-chloropropane	20	
108-70-3	1,3,5-Trichlorobenzene	19	
120-82-1	1,2,4-Trichlorobenzene	19	
87-68-3	Hexachlorobutadiene	19	
91-20-3	Naphthalene	19	
87-61-6	1,2,3-Trichlorobenzene	19	
91-57-6	2-Methylnaphthalene	18	

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19nov26a.b/en26s02.d Injection date and time: **26-NOV-2019 11:00**
Data file Sample Info. Line: LCDE76;LCDE76;1;3;LCSD;;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 12:18 jml01693

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **8260W**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.487(-0.006)	246	65	203775 (8)	250.00	
66) Fluorobenzene	4.724(0.000)	613	96	1068744 (6)	50.00	
101) Chlorobenzene-d5	7.870(0.000)	1129	117	746975 (6)	50.00	
132) 1,4-Dichlorobenzene-d4	9.784(-0.006)	1443	152	367863 (7)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.066(0.000)	113	227787	50.106	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.383(0.001)	102	60733	50.121	100%		80 - 120
84) Toluene-d8	(3)	6.364(0.000)	98	1050473	49.535	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	8.900(-0.001)	95	394106	49.315	99%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	1.200(0.001)	85	121911	16.017	16.02			0.2	1
4) Chloromethane	(2)	1.310(0.000)	50	172476	18.410	18.41			0.2	1
5) 1,3-Butadiene	(2)	1.371(0.000)	39	131967	19.286	19.29			1	3
6) Vinyl Chloride	(2)	1.377(-0.000)	62	166366	19.903	19.90			0.2	1
8) Bromomethane	(2)	1.566(0.000)	94	86514	19.418	19.42			0.3	1
9) Chloroethane	(2)	1.603(0.001)	64	89081	20.001	20.00			0.2	1
10) Dichlorofluoromethane	(2)	1.731(0.001)	67	209302	19.645	19.64			0.9	3
11) n-Pentane	(2)	1.792(-0.000)	43	184952	18.335	18.33			0.4	10
12) Trichlorofluoromethane	(2)	1.786(0.000)	101	165674M	20.341	20.34			0.2	1
14) Ethyl ether	(2)	1.926(0.000)	59	90385	17.007	17.01			0.2	5
15) Freon 123a	(2)	1.944(-0.002)	67	122819	19.096	19.10			0.4	5
16) Acrolein	(1)	2.017(0.001)	56	234660	136.383	136.38			2	100
17) 1,1-Dichloroethene	(2)	2.102(-0.000)	96	85003	20.705	20.70			0.2	1
18) Acetone	(1)	2.127(-0.000)	58	138049	191.139	191.14			0.7	20
19) Freon 113	(2)	2.127(0.000)	101	84876	17.838	17.84			0.2	10
21) 2-Propanol	(1)	2.224(-0.000)	45	65189	129.407	129.41			18	100
22) Methyl Iodide	(2)	2.218(-0.000)	142	133717	18.462	18.46			0.2	1
23) Carbon Disulfide	(2)	2.279(0.000)	76	277794	18.454	18.45			0.2	5
25) Allyl Chloride	(2)	2.371(0.000)	41	202149	21.702	21.70			0.3	5
27) Methyl Acetate	(2)	2.377(0.000)	43	110999	20.955	20.96			0.2	5
28) Methylene Chloride	(2)	2.468(0.001)	84	101523	20.314	20.31			0.3	1
30) t-Butyl alcohol	(1)	2.554(0.002)	59	140452M	180.280	180.28			12	50
31) Acrylonitrile	(2)	2.670(0.000)	53	277837	90.700	90.70			0.3	20
32) trans-1,2-Dichloroethene	(2)	2.706(0.000)	96	95488	20.049	20.05			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	2.712(0.000)	73	308303	19.070	19.07			0.2	1
34) n-Hexane	(2)	2.950(0.000)	57	170417	17.473	17.47			2	5
36) 1,1-Dichloroethane	(2)	3.072(0.001)	63	199044	19.637	19.64			0.2	1
38) di-Isopropyl ether	(2)	3.145(0.001)	45	390193	18.684	18.68			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	3.163(0.000)	53	178123	18.933	18.93			0.2	5
40) Ethyl t-butyl ether	(2)	3.480(0.000)	59	351024	18.952	18.95			0.2	1
42) cis-1,2-Dichloroethene	(2)	3.608(0.000)	96	116082	21.301	21.30			0.2	1

M = Compound was manually integrated.

Digitally signed by Jason M. Long on 11/26/2019 at 15:27. Target 3.5 esignature user ID: jml01693

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19nov26a.b/en26s02.d Injection date and time: **26-NOV-2019 11:00**
Data file Sample Info. Line: LCDE76;LCDE76;1;3;LCSD;;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 12:18 jml01693

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **8260W**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
43) 1,2-Dichloroethene (Total)	(2)		96	211570	41.350	41.35			0.4	2
44) 2-Butanone	(2)	3.614(-0.000)	43	597714	153.699	153.70			0.3	10
45) 2,2-Dichloropropane	(2)	3.614(0.001)	77	150021	20.016	20.02			0.3	1
47) Propionitrile	(1)	3.669(0.003)	54	168706	143.820	143.82			14	100
48) Methacrylonitrile	(2)	3.816(-0.000)	67	437629	143.504	143.50			6	50
49) Bromochloromethane	(2)	3.834(0.000)	128	50879	20.710	20.71			0.2	5
50) Tetrahydrofuran	(1)	3.877(0.001)	71	91443	94.196	94.20			0.7	10
51) Chloroform	(2)	3.913(0.000)	83	172626	19.928	19.93			0.2	1
53) 1,1,1-Trichloroethane	(2)	4.096(-0.001)	97	143635	19.852	19.85			0.3	1
54) Cyclohexane	(2)	4.157(0.000)	56	205342	17.062	17.06			1	5
55) 1,1-Dichloropropene	(2)	4.248(0.000)	75	149063	19.370	19.37			0.2	5
56) Carbon Tetrachloride	(2)	4.261(-0.000)	117	108058	19.264	19.26			0.2	1
58) Isobutyl Alcohol	(1)	4.376(0.004)	41	110224	431.803	431.80			36	250
60) Benzene	(2)	4.450(0.000)	78	451742	19.818	19.82			0.2	1
61) 1,2-Dichloroethane	(2)	4.462(-0.001)	62	140219	19.757	19.76			0.3	1
65) t-Amyl methyl ether	(2)	4.572(0.001)	73	325256	18.824	18.82			0.8	5
67) n-Heptane	(2)	4.736(-0.000)	43	174317	15.759	15.76			2	5
69) n-Butanol	(1)	5.035(0.007)	56	179504	843.073	843.07			61	250
71) Trichloroethene	(2)	5.096(-0.000)	95	104817	19.767	19.77			0.2	1
73) Methylcyclohexane	(2)	5.297(-0.000)	83	216922	19.147	19.15			0.5	5
74) 1,2-Dichloropropane	(2)	5.315(-0.000)	63	123537	20.721	20.72			0.2	1
75) Dibromomethane	(2)	5.431(-0.000)	93	59542	19.853	19.85			0.2	1
76) 1,4-Dioxane	(1)	5.462(0.002)	88	33073M	473.829	473.83			29	250
77) Methyl Methacrylate	(2)	5.456(-0.000)	69	89268	18.842	18.84			0.2	5
79) Bromodichloromethane	(2)	5.602(-0.000)	83	123131	20.046	20.05			0.2	1
80) 2-Nitropropane	(2)	5.834(-0.000)	41	17704	15.939	15.94			0.8	10
81) 2-Chloroethyl Vinyl Ether	(2)	5.937(-0.000)	63	86905	19.593	19.59			0.2	10
82) cis-1,3-Dichloropropene	(2)	6.077(-0.000)	75	169023	19.589	19.59			0.2	1
83) 4-Methyl-2-pentanone	(2)	6.260(-0.001)	43	747606	91.743	91.74			0.5	10
89) Toluene	(3)	6.437(0.000)	92	278432	20.076	20.08			0.2	1
90) trans-1,3-Dichloropropene	(3)	6.681(0.000)	75	146220	19.080	19.08			0.2	1
91) 1,3-Dichloropropene (total)	(3)		100	315243	38.669	38.67			0.4	2
92) Ethyl Methacrylate	(3)	6.815(0.000)	69	149619	17.669	17.67			0.2	5
93) 1,1,2-Trichloroethane	(3)	6.876(0.000)	97	91054	20.827	20.83			0.2	1
94) Tetrachloroethene	(3)	7.034(0.000)	166	97039	18.814	18.81			0.2	1
95) 1,3-Dichloropropane	(3)	7.053(0.000)	76	166571	19.773	19.77			0.2	1
97) 2-Hexanone	(3)	7.169(0.000)	43	560214	97.929	97.93			0.3	10
98) Dibromochloromethane	(3)	7.297(0.000)	129	78645	19.465	19.46			0.2	1
100) 1,2-Dibromoethane	(3)	7.400(0.000)	107	87039	19.293	19.29			0.2	1
102) 1-Chlorohexane	(3)	7.900(0.000)	91	152985	18.710	18.71			0.3	5
103) Chlorobenzene	(3)	7.894(0.000)	112	286691	19.852	19.85			0.2	1
104) 1,1,1,2-Tetrachloroethane	(3)	7.979(0.000)	131	81941	19.360	19.36			0.2	1
105) Ethylbenzene	(3)	8.016(0.000)	91	533741	19.692	19.69			0.4	1
107) m+p-Xylene	(3)	8.126(0.000)	106	407099	40.051	40.05			1	5
108) o-Xylene	(3)	8.467(0.000)	106	198182	20.071	20.07			0.4	1
109) Xylene (Total)	(3)		106	605281	60.122	60.12			1	6
110) Styrene	(3)	8.479(0.000)	104	322273	20.158	20.16			0.2	5
111) Bromoform	(3)	8.620(0.000)	173	44802	18.141	18.14			1	4
112) Isopropylbenzene	(3)	8.784(0.000)	105	540904	20.181	20.18			0.2	5
113) Cyclohexanone	(1)	8.839(0.008)	55	136407	495.153	495.15			25	100
116) Bromobenzene	(4)	9.010(0.000)	156	105060	19.795	19.79			0.2	5
117) 1,1,2,2-Tetrachloroethane	(4)	9.022(0.000)	83	140197	19.822	19.82			0.2	1
118) 1,2,3-Trichloropropane	(4)	9.046(0.000)	110	39666	20.055	20.06			0.2	5
119) trans-1,4-Dichloro-2-butene	(4)	9.065(0.000)	53	212788	96.611	96.61			6	50

M = Compound was manually integrated.

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP15648.i/19nov26a.b/en26s02.d Injection date and time: **26-NOV-2019 11:00**
Data file Sample Info. Line: LCDE76;LCDE76;1;3;LCSD;;;;en26b01; Instrument ID: **HP15648.i** Batch: **E193301AA**
Date, time and analyst ID of latest file update: 26-Nov-2019 12:18 jml01693

Blank Data file reference: **/chem/HP15648.i/19nov26a.b/en26b01.d**

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: **8260W**
Calibration date and time (Last Method Edit): 26-NOV-2019 12:17
Mid Level Daily Calibration Standard Reference: **/chem/HP15648.i/19nov26a.b/en26c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

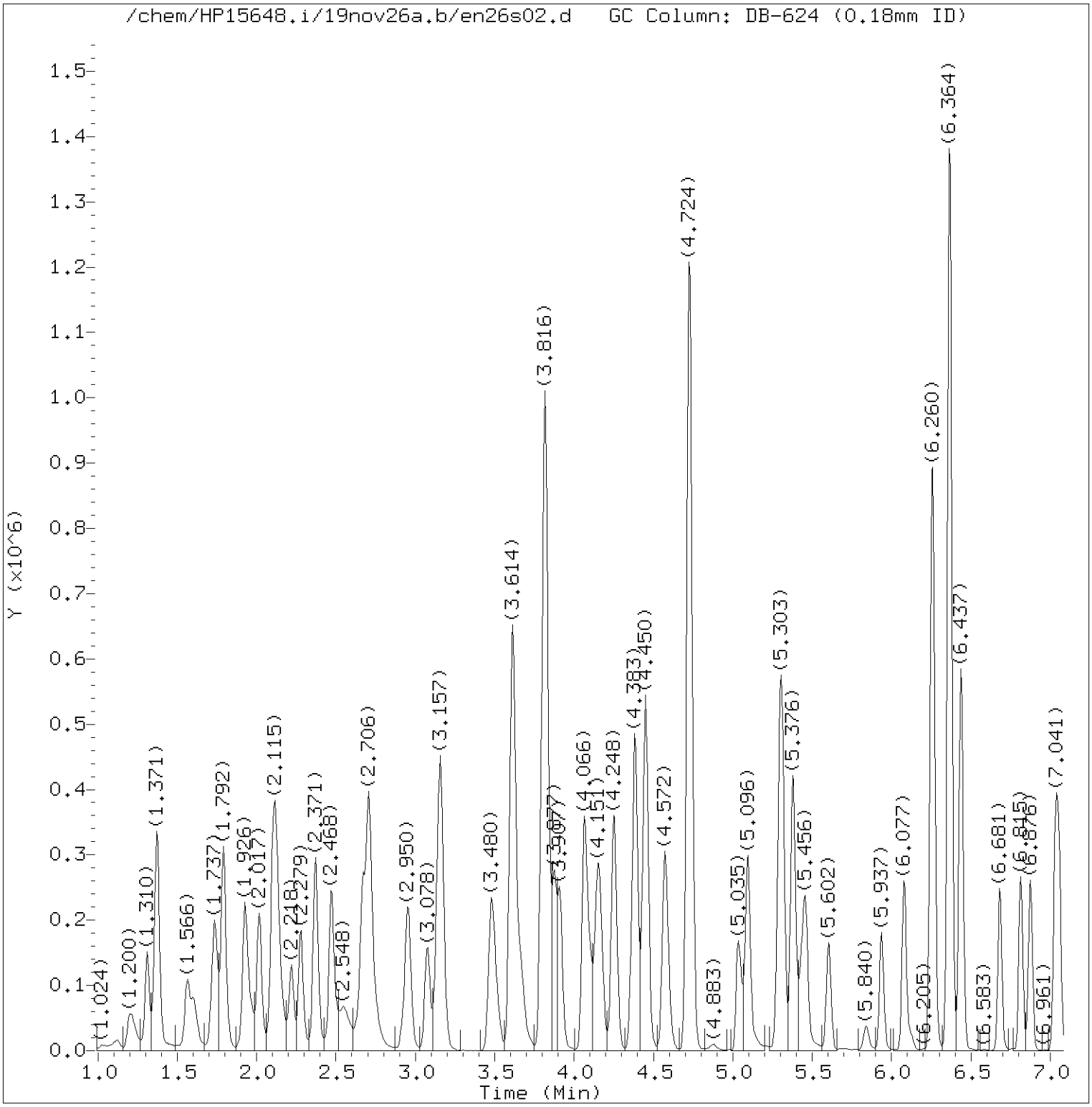
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) n-Propylbenzene	(4)	9.113(0.000)	91	646452	19.940	19.94			0.2	5
121) 2-Chlorotoluene	(4)	9.168(0.000)	126	116773	19.857	19.86			0.2	5
122) 4-Chlorotoluene	(4)	9.254(0.000)	126	119449	19.805	19.81			0.2	5
123) 1,3,5-Trimethylbenzene	(4)	9.254(0.000)	105	451447	19.970	19.97			0.3	5
125) tert-Butylbenzene	(4)	9.497(0.000)	134	94894	19.741	19.74			0.3	5
126) Pentachloroethane	(4)	9.504(0.000)	167	54621	20.642	20.64			0.2	5
127) 1,2,4-Trimethylbenzene	(4)	9.534(0.000)	105	455683	19.521	19.52			1	5
128) sec-Butylbenzene	(4)	9.662(0.000)	105	580081	19.545	19.55			0.2	5
130) 1,3-Dichlorobenzene	(4)	9.735(0.000)	146	211603	19.509	19.51			0.2	5
131) p-Isopropyltoluene	(4)	9.772(0.000)	119	486113	19.824	19.82			0.2	5
134) 1,4-Dichlorobenzene	(4)	9.796(0.000)	146	216649	19.909	19.91			0.2	5
135) 1,2,3-Trimethylbenzene	(4)	9.839(0.000)	105	497141	20.709	20.71			0.3	5
136) Benzyl Chloride	(4)	9.894(0.000)	91	210205	16.049	16.05			1	5
137) 1,3-Diethylbenzene	(4)	9.985(0.000)	119	307956	20.131	20.13			0.2	5
138) 1,4-Diethylbenzene	(4)	10.046(0.000)	119	324137	20.283	20.28			0.2	5
139) 1,2-Dichlorobenzene	(4)	10.064(0.000)	146	204511	20.168	20.17			0.2	5
140) n-Butylbenzene	(4)	10.064(0.000)	92	251420	19.415	19.41			0.2	5
141) 1,2-Diethylbenzene	(4)	10.125(0.000)	119	256657	20.050	20.05			0.2	5
142) Diethylbenzene (total)	(4)		100	888750	60.464	60.46			0.6	15
143) 1,2-Dibromo-3-chloropropane	(4)	10.601(0.000)	75	29309	19.898	19.90			0.3	5
145) 1,3,5-Trichlorobenzene	(4)	10.747(0.000)	180	146820	19.448	19.45			0.2	5
147) 1,2,4-Trichlorobenzene	(4)	11.156(0.000)	180	130374	19.311	19.31			0.3	5
148) Hexachlorobutadiene	(4)	11.272(0.000)	225	51517	18.501	18.50			2	5
149) Naphthalene	(4)	11.314(0.000)	128	447342	19.059	19.06			1	5
150) 1,2,3-Trichlorobenzene	(4)	11.473(0.000)	180	123931	19.101	19.10			0.4	5
151) 2-Methylnaphthalene	(4)	12.034(0.000)	142	262517	18.367	18.37			2	4

Total number of targets = 111

Digitally signed by Jason M. Long on 11/26/2019 at 15:27. Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 12:19. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

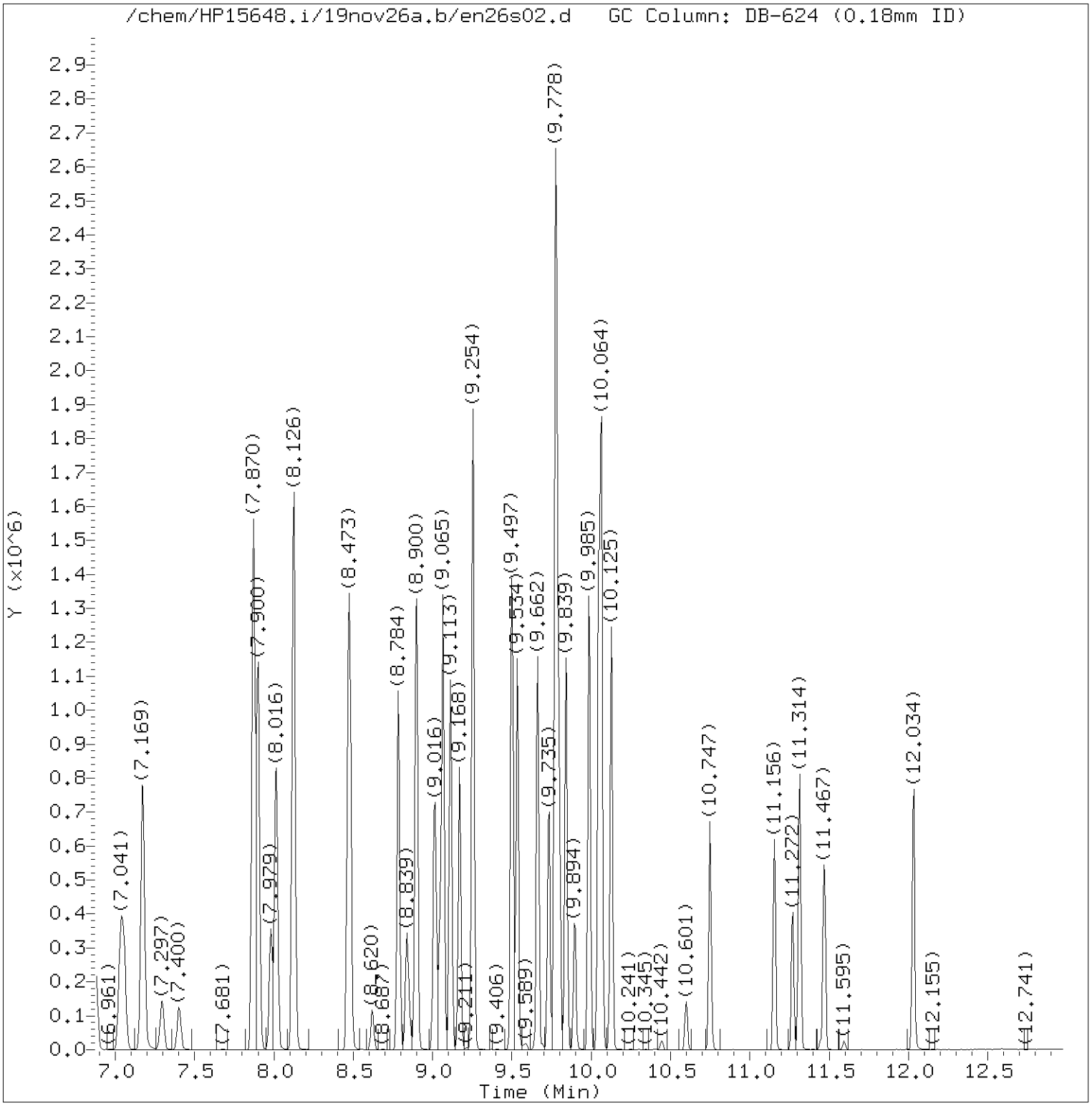
Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s02.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 11:00 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 12:18 jml01693

Sample Name: LCDE76 Lab Sample ID: LCDE76

Digitally signed by Jason M. Long
on 11/26/2019 at 15:27.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s02.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 11:00 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 12:18 jml01693

Sample Name: LCDE76 Lab Sample ID: LCDE76

Digitally signed by Jason M. Long
on 11/26/2019 at 15:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s02.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 11:00 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 12:18 jml01693

Sample Name: LCDE76 Lab Sample ID: LCDE76

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.200	85	121911	16.017
4) Chloromethane	(2)	1.310	50	172476	18.410
5) 1,3-Butadiene	(2)	1.371	39	131967	19.286
6) Vinyl Chloride	(2)	1.377	62	166366	19.903
8) Bromomethane	(2)	1.566	94	86514	19.418
9) Chloroethane	(2)	1.603	64	89081	20.001
10) Dichlorofluoromethane	(2)	1.731	67	209302	19.645
12) Trichlorofluoromethane	(2)	1.786	101	165674M	20.341
11) n-Pentane	(2)	1.792	43	184952	18.335
14) Ethyl ether	(2)	1.926	59	90385	17.007
15) Freon 123a	(2)	1.944	67	122819	19.096
16) Acrolein	(1)	2.017	56	234660	136.383
17) 1,1-Dichloroethene	(2)	2.103	96	85003	20.705
18) Acetone	(1)	2.127	58	138049	191.139
19) Freon 113	(2)	2.127	101	84876	17.838
22) Methyl Iodide	(2)	2.218	142	133717	18.462
21) 2-Propanol	(1)	2.224	45	65189	129.407
23) Carbon Disulfide	(2)	2.279	76	277794	18.454
25) Allyl Chloride	(2)	2.371	41	202149	21.702
27) Methyl Acetate	(2)	2.377	43	110999	20.955
28) Methylene Chloride	(2)	2.468	84	101523	20.314
29)*t-Butyl alcohol-d10	(1)	2.487	65	203775	250.000
30) t-Butyl alcohol	(1)	2.554	59	140452M	180.280
31) Acrylonitrile	(2)	2.670	53	277837	90.700
32) trans-1,2-Dichloroethene	(2)	2.706	96	95488	20.049
33) Methyl Tertiary Butyl Ether	(2)	2.712	73	308303	19.070
34) n-Hexane	(2)	2.950	57	170417	17.473
36) 1,1-Dichloroethane	(2)	3.072	63	199044	19.637
38) di-Isopropyl ether	(2)	3.145	45	390193	18.684
39) 2-Chloro-1,3-butadiene	(2)	3.163	53	178123	18.933
40) Ethyl t-butyl ether	(2)	3.480	59	351024	18.952
42) cis-1,2-Dichloroethene	(2)	3.608	96	116082	21.301
45) 2,2-Dichloropropane	(2)	3.614	77	150021	20.016
44) 2-Butanone	(2)	3.614	43	597714	153.699
43) 1,2-Dichloroethene (Total)	(2)		96	211570	41.350
47) Propionitrile	(1)	3.669	54	168706	143.820
48) Methacrylonitrile	(2)	3.816	67	437629	143.504
49) Bromochloromethane	(2)	3.834	128	50879	20.710

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jason M. Long
on 11/26/2019 at 15:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s02.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 11:00 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 12:18 jml01693

Sample Name: LCDE76 Lab Sample ID: LCDE76

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	3.877	71	91443	94.196
51) Chloroform	(2)	3.913	83	172626	19.928
52)$Dibromofluoromethane	(2)	4.066	113	227787	50.106
53) 1,1,1-Trichloroethane	(2)	4.096	97	143635	19.852
54) Cyclohexane	(2)	4.157	56	205342	17.062
55) 1,1-Dichloropropene	(2)	4.248	75	149063	19.370
56) Carbon Tetrachloride	(2)	4.261	117	108058	19.264
58) Isobutyl Alcohol	(1)	4.377	41	110224	431.803
57)$1,2-Dichloroethane-d4	(2)	4.383	102	60733	50.121
60) Benzene	(2)	4.450	78	451742	19.818
61) 1,2-Dichloroethane	(2)	4.462	62	140219	19.757
65) t-Amyl methyl ether	(2)	4.572	73	325256	18.824
66)*Fluorobenzene	(2)	4.724	96	1068744	50.000
67) n-Heptane	(2)	4.736	43	174317	15.759
69) n-Butanol	(1)	5.035	56	179504	843.073
71) Trichloroethene	(2)	5.096	95	104817	19.767
73) Methylcyclohexane	(2)	5.297	83	216922	19.147
74) 1,2-Dichloropropane	(2)	5.315	63	123537	20.721
75) Dibromomethane	(2)	5.431	93	59542	19.853
77) Methyl Methacrylate	(2)	5.456	69	89268	18.842
76) 1,4-Dioxane	(1)	5.462	88	33073M	473.829
79) Bromodichloromethane	(2)	5.602	83	123131	20.046
80) 2-Nitropropane	(2)	5.834	41	17704	15.939
81) 2-Chloroethyl Vinyl Ether	(2)	5.937	63	86905	19.593
82) cis-1,3-Dichloropropene	(2)	6.077	75	169023	19.589
83) 4-Methyl-2-pentanone	(2)	6.260	43	747606	91.743
84)$Toluene-d8	(3)	6.364	98	1050473	49.535
89) Toluene	(3)	6.437	92	278432	20.076
90) trans-1,3-Dichloropropene	(3)	6.681	75	146220	19.080
91) 1,3-Dichloropropene (total)	(3)		100	315243	38.669
92) Ethyl Methacrylate	(3)	6.815	69	149619	17.669
93) 1,1,2-Trichloroethane	(3)	6.876	97	91054	20.827
94) Tetrachloroethene	(3)	7.035	166	97039	18.814
95) 1,3-Dichloropropane	(3)	7.053	76	166571	19.773
97) 2-Hexanone	(3)	7.169	43	560214	97.929
98) Dibromochloromethane	(3)	7.297	129	78645	19.465
100) 1,2-Dibromoethane	(3)	7.400	107	87039	19.293
101)*Chlorobenzene-d5	(3)	7.870	117	746975	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 11/26/2019 at 15:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s02.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 11:00 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 12:18 jml01693

Sample Name: LCDE76 Lab Sample ID: LCDE76

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
103) Chlorobenzene	(3)	7.894	112	286691	19.852
102) 1-Chlorohexane	(3)	7.900	91	152985	18.710
104) 1,1,1,2-Tetrachloroethane	(3)	7.979	131	81941	19.360
105) Ethylbenzene	(3)	8.016	91	533741	19.692
107) m+p-Xylene	(3)	8.126	106	407099	40.051
108) o-Xylene	(3)	8.467	106	198182	20.071
110) Styrene	(3)	8.479	104	322273	20.158
109) Xylene (Total)	(3)		106	605281	60.122
111) Bromoform	(3)	8.620	173	44802	18.141
112) Isopropylbenzene	(3)	8.784	105	540904	20.181
113) Cyclohexanone	(1)	8.839	55	136407	495.153
115)$4-Bromofluorobenzene	(3)	8.900	95	394106	49.315
116) Bromobenzene	(4)	9.010	156	105060	19.795
117) 1,1,2,2-Tetrachloroethane	(4)	9.022	83	140197	19.822
118) 1,2,3-Trichloropropane	(4)	9.046	110	39666	20.055
119) trans-1,4-Dichloro-2-butene	(4)	9.065	53	212788	96.611
120) n-Propylbenzene	(4)	9.113	91	646452	19.940
121) 2-Chlorotoluene	(4)	9.168	126	116773	19.857
123) 1,3,5-Trimethylbenzene	(4)	9.254	105	451447	19.970
122) 4-Chlorotoluene	(4)	9.254	126	119449	19.805
125) tert-Butylbenzene	(4)	9.497	134	94894	19.741
126) Pentachloroethane	(4)	9.504	167	54621	20.642
127) 1,2,4-Trimethylbenzene	(4)	9.534	105	455683	19.521
128) sec-Butylbenzene	(4)	9.662	105	580081	19.545
130) 1,3-Dichlorobenzene	(4)	9.735	146	211603	19.509
131) p-Isopropyltoluene	(4)	9.772	119	486113	19.824
132)*1,4-Dichlorobenzene-d4	(4)	9.784	152	367863	50.000
134) 1,4-Dichlorobenzene	(4)	9.796	146	216649	19.909
135) 1,2,3-Trimethylbenzene	(4)	9.839	105	497141	20.709
136) Benzyl Chloride	(4)	9.894	91	210205	16.049
137) 1,3-Diethylbenzene	(4)	9.985	119	307956	20.131
138) 1,4-Diethylbenzene	(4)	10.046	119	324137	20.283
139) 1,2-Dichlorobenzene	(4)	10.064	146	204511	20.168
140) n-Butylbenzene	(4)	10.064	92	251420	19.415
141) 1,2-Diethylbenzene	(4)	10.125	119	256657	20.050
142) Diethylbenzene (total)	(4)		100	888750	60.464
143) 1,2-Dibromo-3-chloropropane	(4)	10.601	75	29309	19.898
145) 1,3,5-Trichlorobenzene	(4)	10.747	180	146820	19.448

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 11/26/2019 at 15:27.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/HP15648.i/19nov26a.b/en26s02.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 11:00 Analyst ID: jml01693

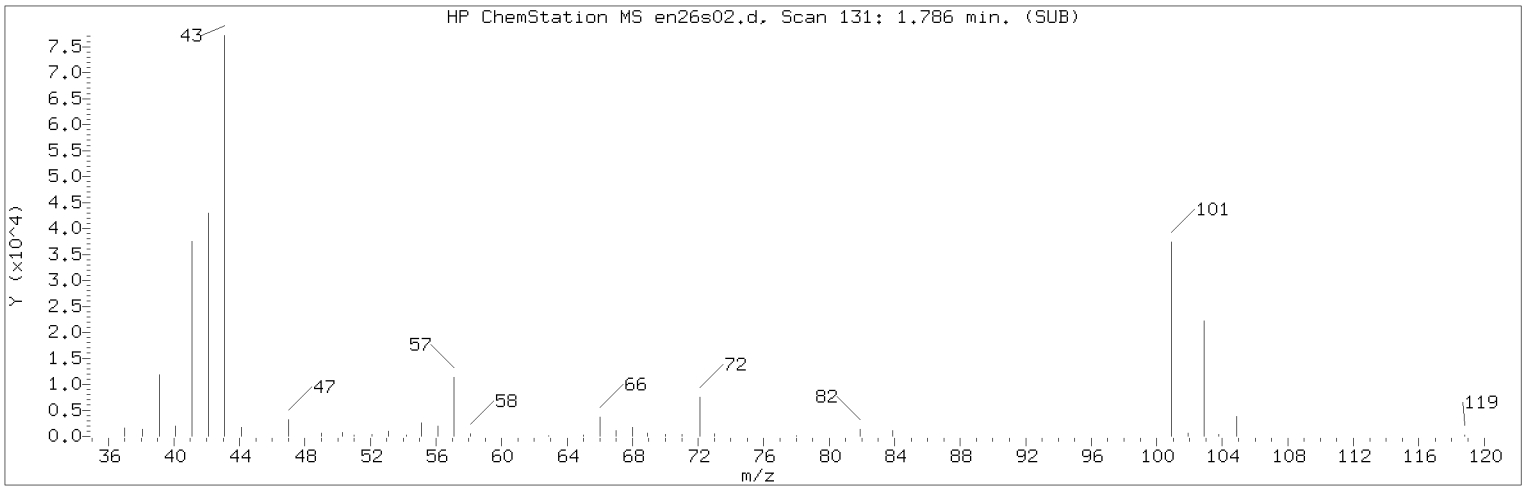
Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 12:18 jml01693

Sample Name: LCDE76 Lab Sample ID: LCDE76

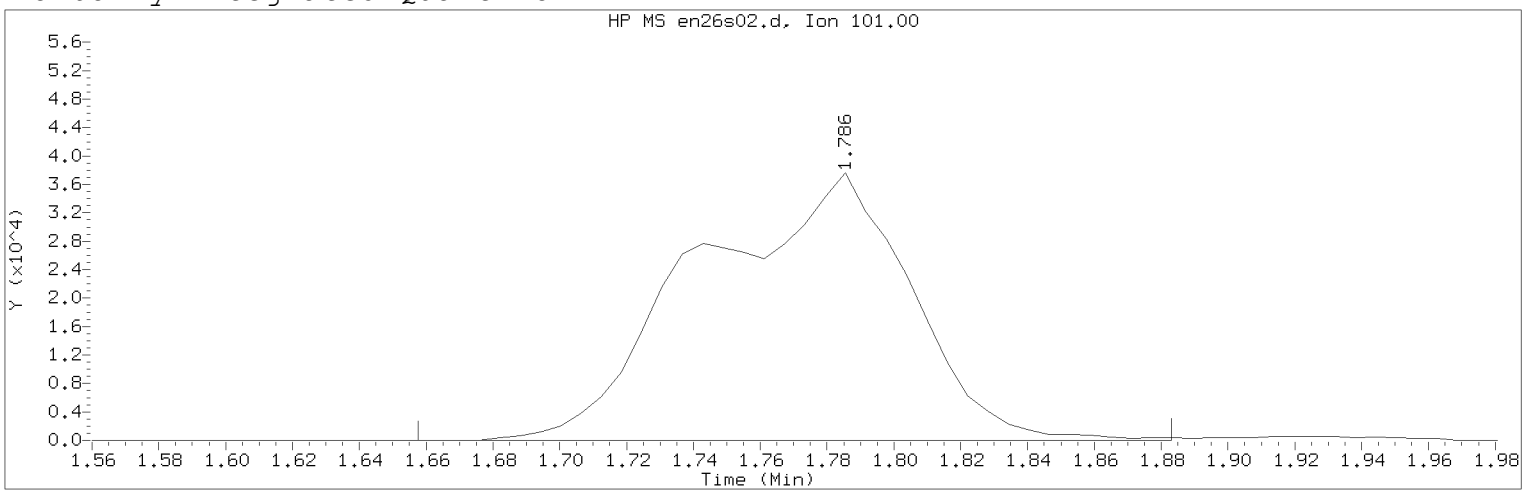
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) 1,2,4-Trichlorobenzene	(4)	11.156	180	130374	19.311
148) Hexachlorobutadiene	(4)	11.272	225	51517	18.501
149) Naphthalene	(4)	11.314	128	447342	19.059
150) 1,2,3-Trichlorobenzene	(4)	11.473	180	123931	19.101
151) 2-Methylnaphthalene	(4)	12.034	142	262517	18.367

Digitally signed by Jason M. Long
on 11/26/2019 at 15:27.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov26a.b/en26s02.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 11:00 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 12:18 jml01693

Sample Name: LCDE76 Lab Sample ID: LCDE76

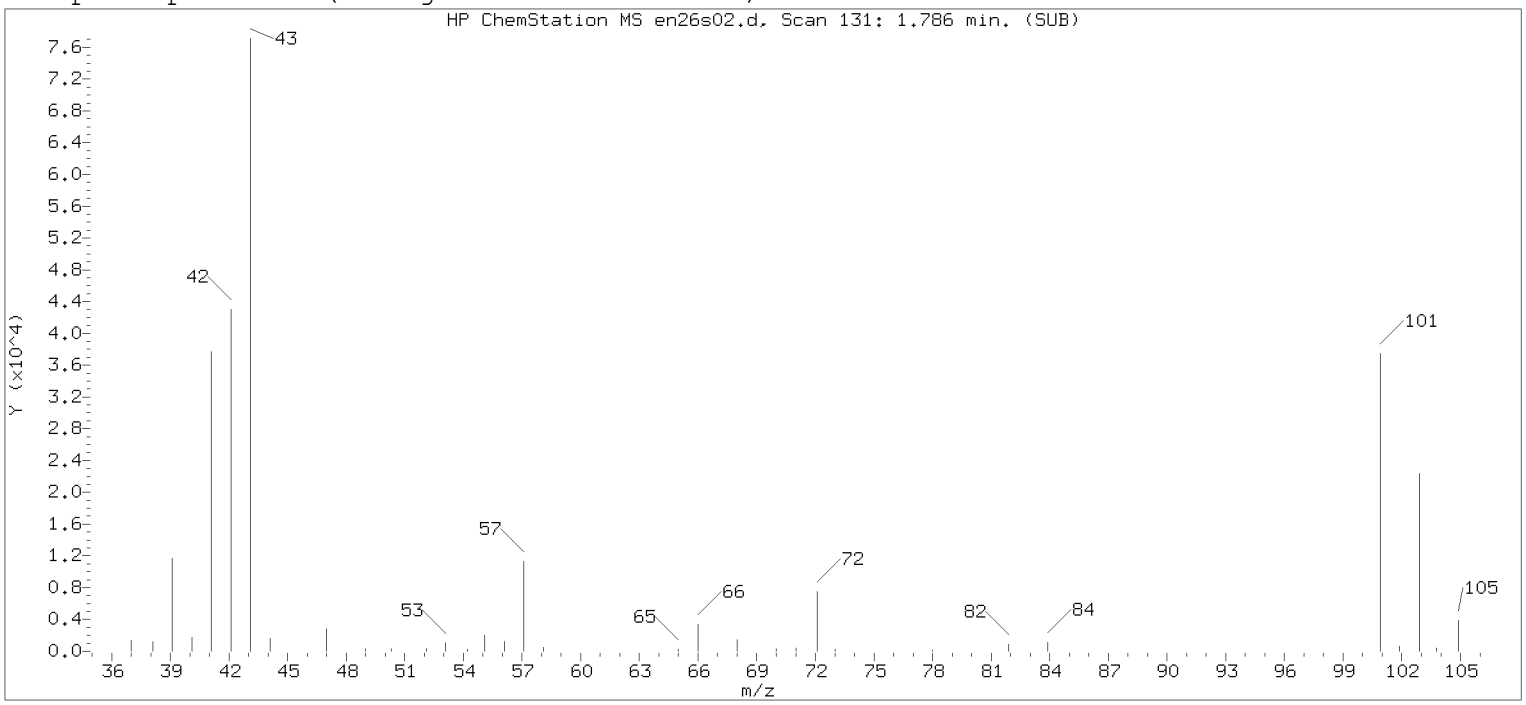
Compound Number : 12
Compound Name : Trichlorofluoromethane
Scan Number : 131
Retention Time (minutes): 1.786
Quant Ion : 101.00
Area (flag) : 165674M
On-Column Amount (ng) : 20.3410
Integration start scan : 109 Integration stop scan: 146
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

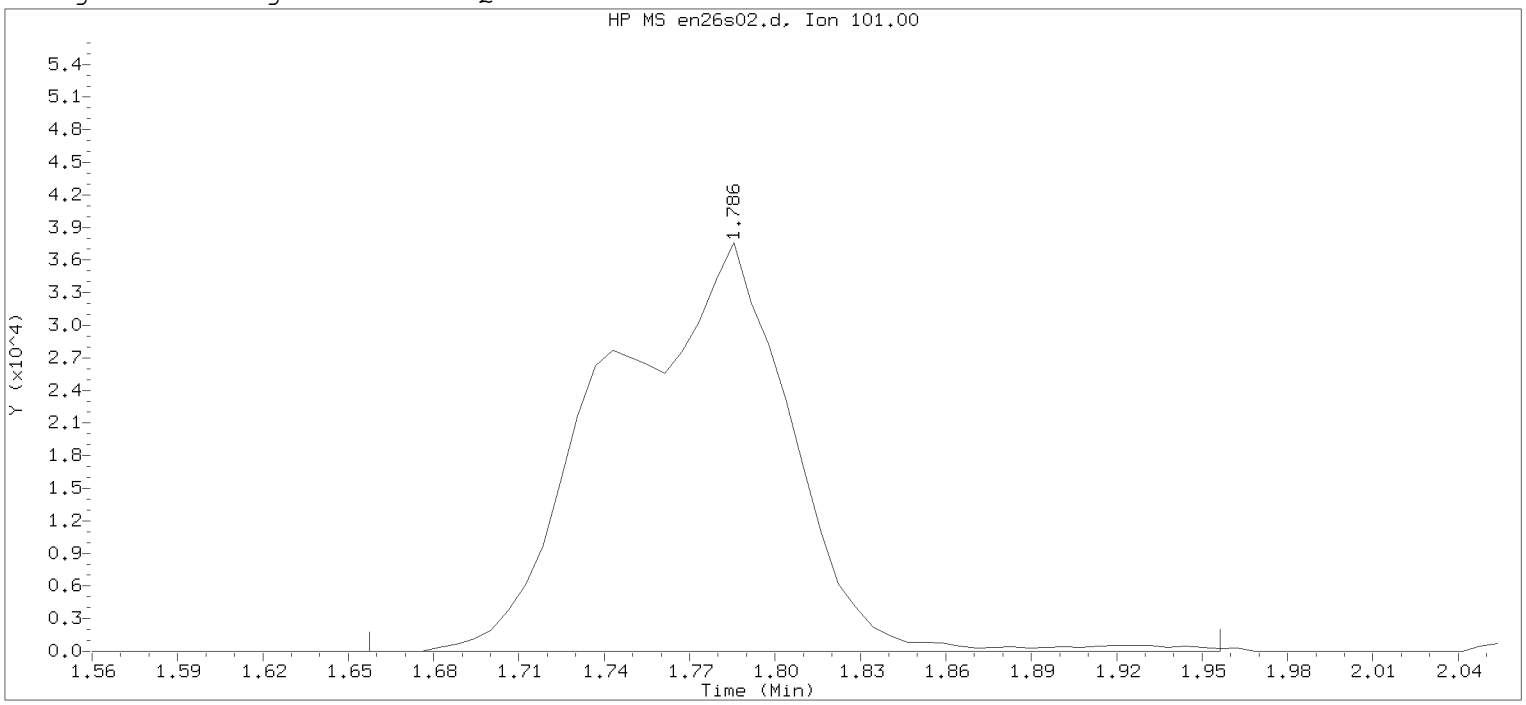
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 15:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 12:19.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov26a.b/en26s02.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 11:00 Analyst ID: jml01693

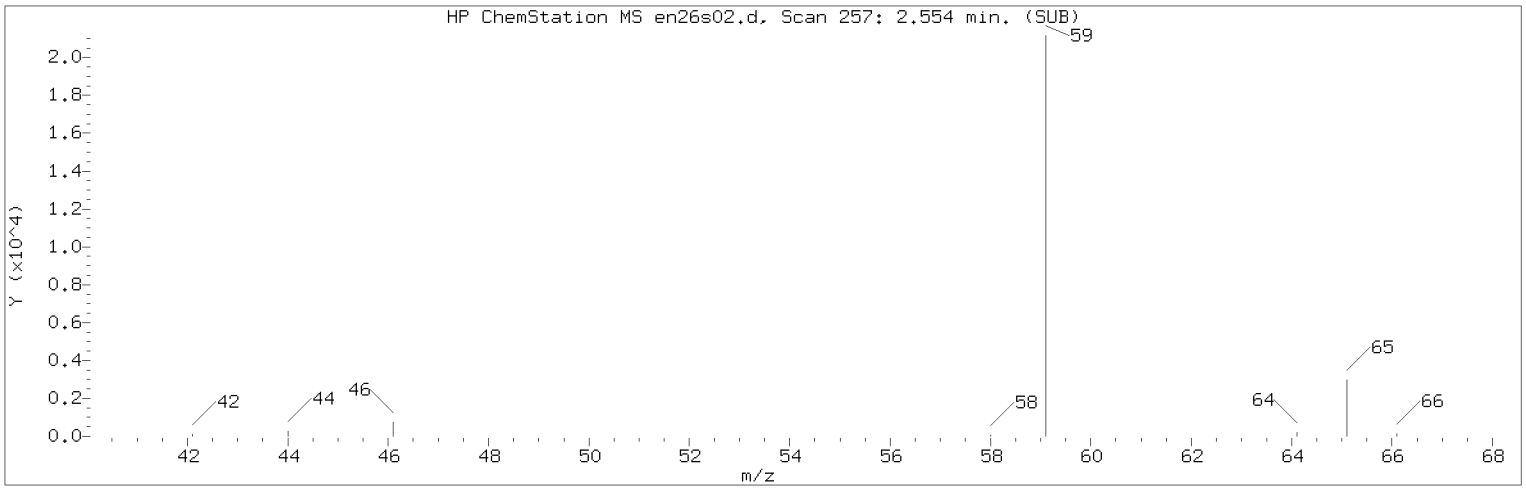
Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:36
Date, time and analyst ID of latest file update: 26-Nov-2019 11:18 Automation

Sample Name: LCDE76 Lab Sample ID: LCDE76

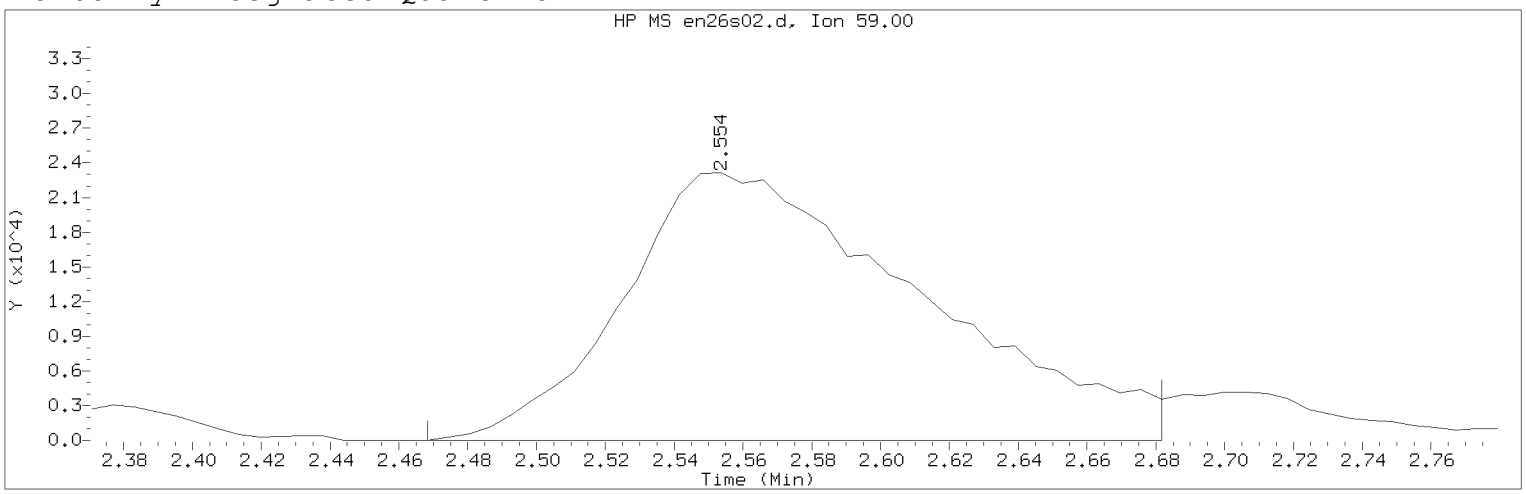
Compound Number : 12
Compound Name : Trichlorofluoromethane
Scan Number : 131
Retention Time (minutes): 1.786
Quant Ion : 101.00
Area : 167403
On-column Amount (ng) : 20.5532
Integration start scan : 109 Integration stop scan: 158
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 15:27.
Target 3.5 esignature user: JML01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov26a.b/en26s02.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 11:00 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 12:18 jml01693

Sample Name: LCDE76 Lab Sample ID: LCDE76

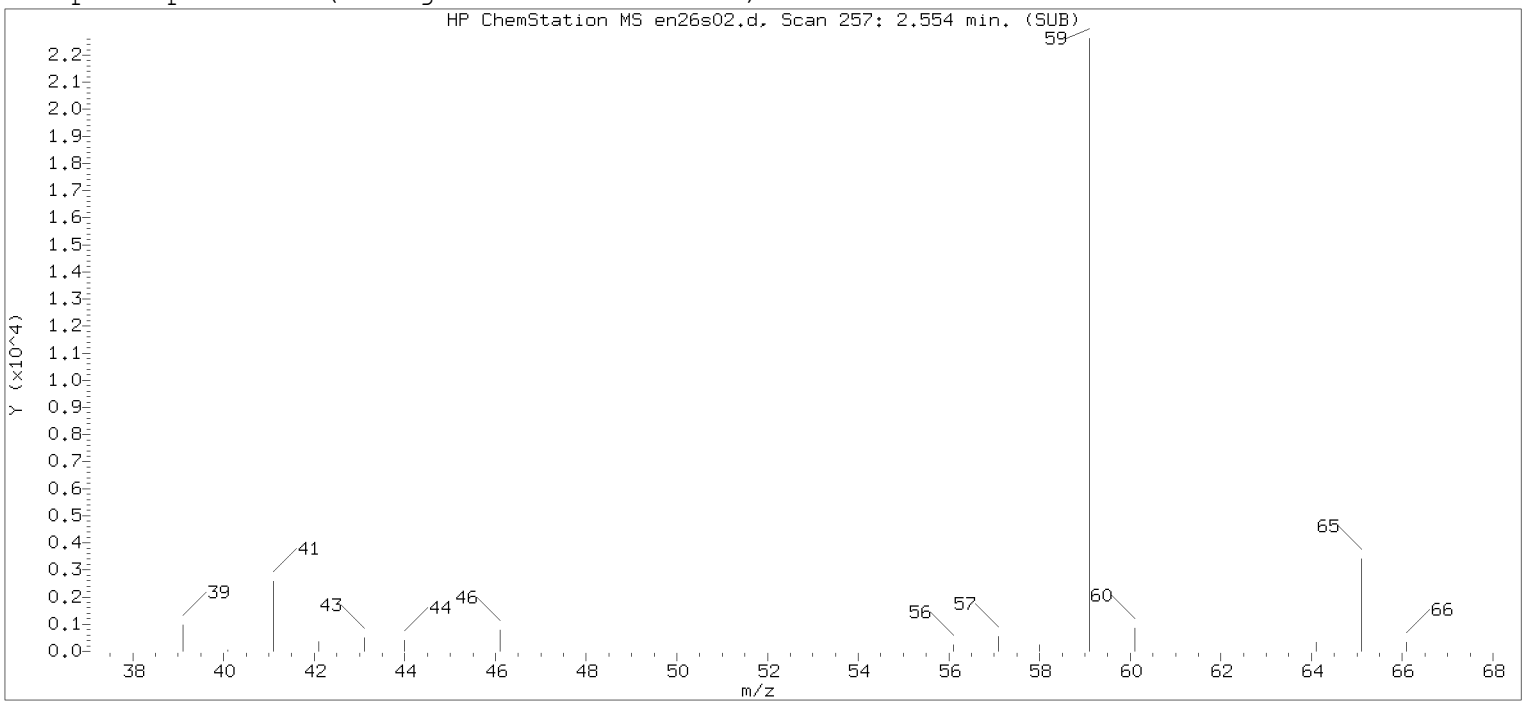
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 257
Retention Time (minutes): 2.554
Quant Ion : 59.00
Area (flag) : 140452M
On-Column Amount (ng) : 180.2796
Integration start scan : 242 Integration stop scan: 277
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

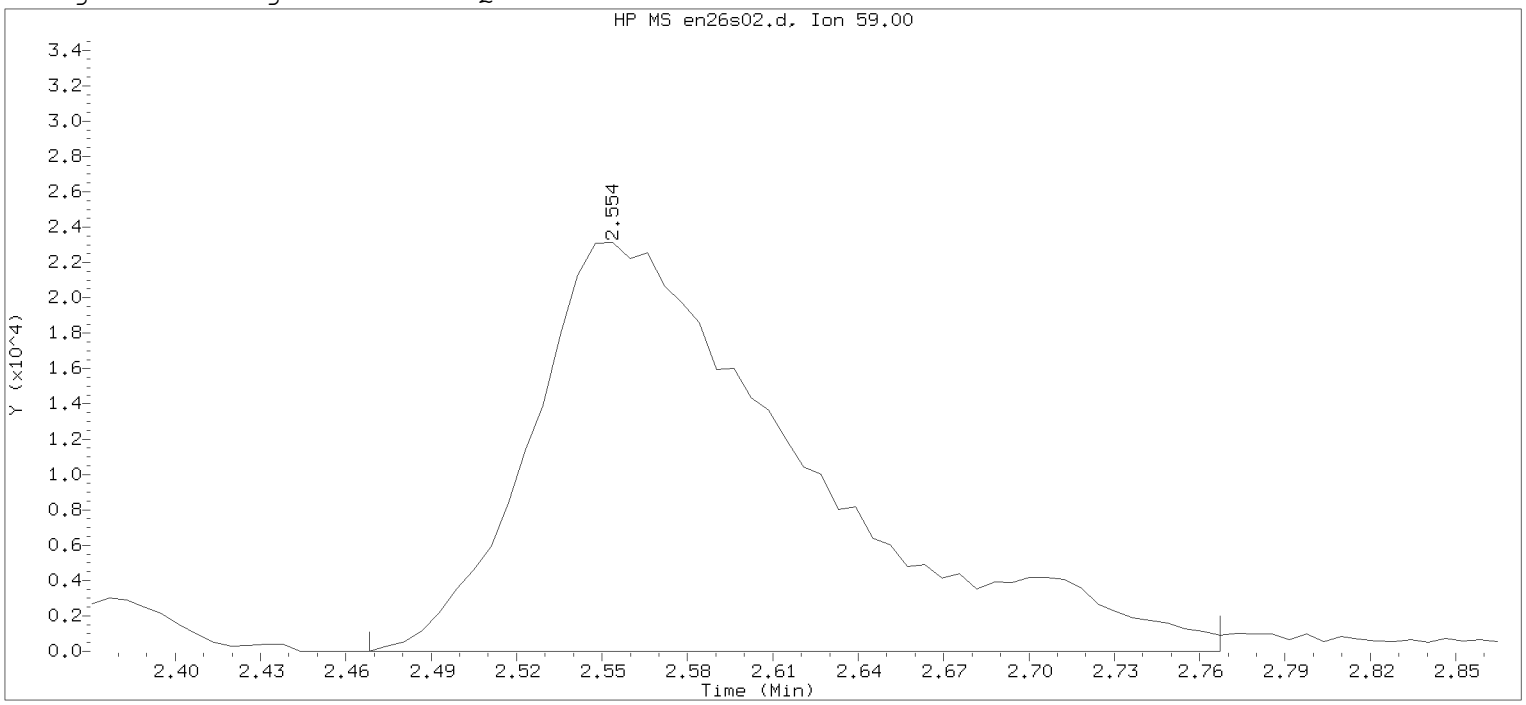
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 15:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 12:19.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov26a.b/en26s02.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 11:00 Analyst ID: jml01693

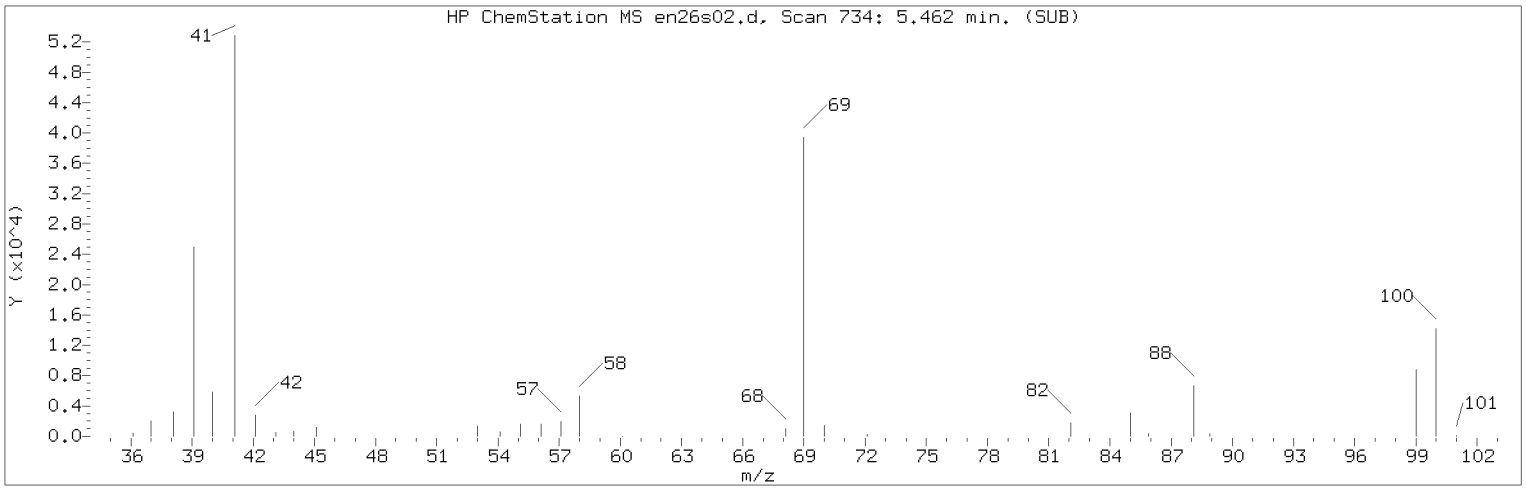
Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:36
Date, time and analyst ID of latest file update: 26-Nov-2019 11:18 Automation

Sample Name: LCDE76 Lab Sample ID: LCDE76

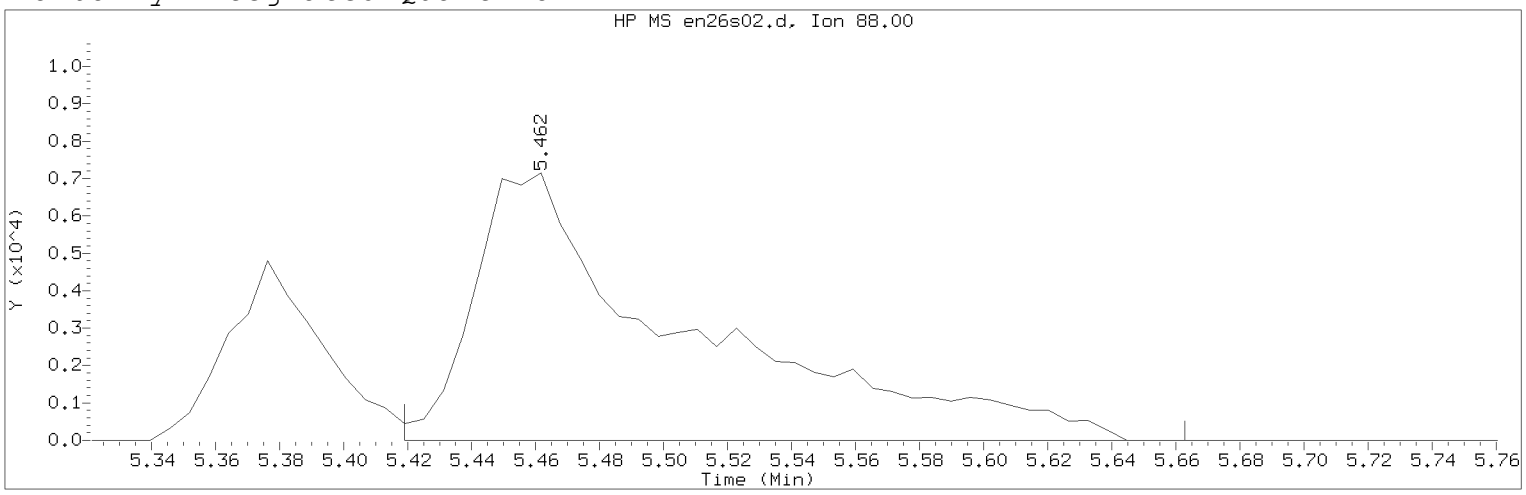
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 257
Retention Time (minutes): 2.554
Quant Ion : 59.00
Area : 153916
On-column Amount (ng) : 197.5620
Integration start scan : 242 Integration stop scan: 291
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 15:27.
Target 3.5 esignature user: JML01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP15648.i/19nov26a.b/en26s02.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 11:00 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 12:17
Date, time and analyst ID of latest file update: 26-Nov-2019 12:18 jml01693

Sample Name: LCDE76 Lab Sample ID: LCDE76

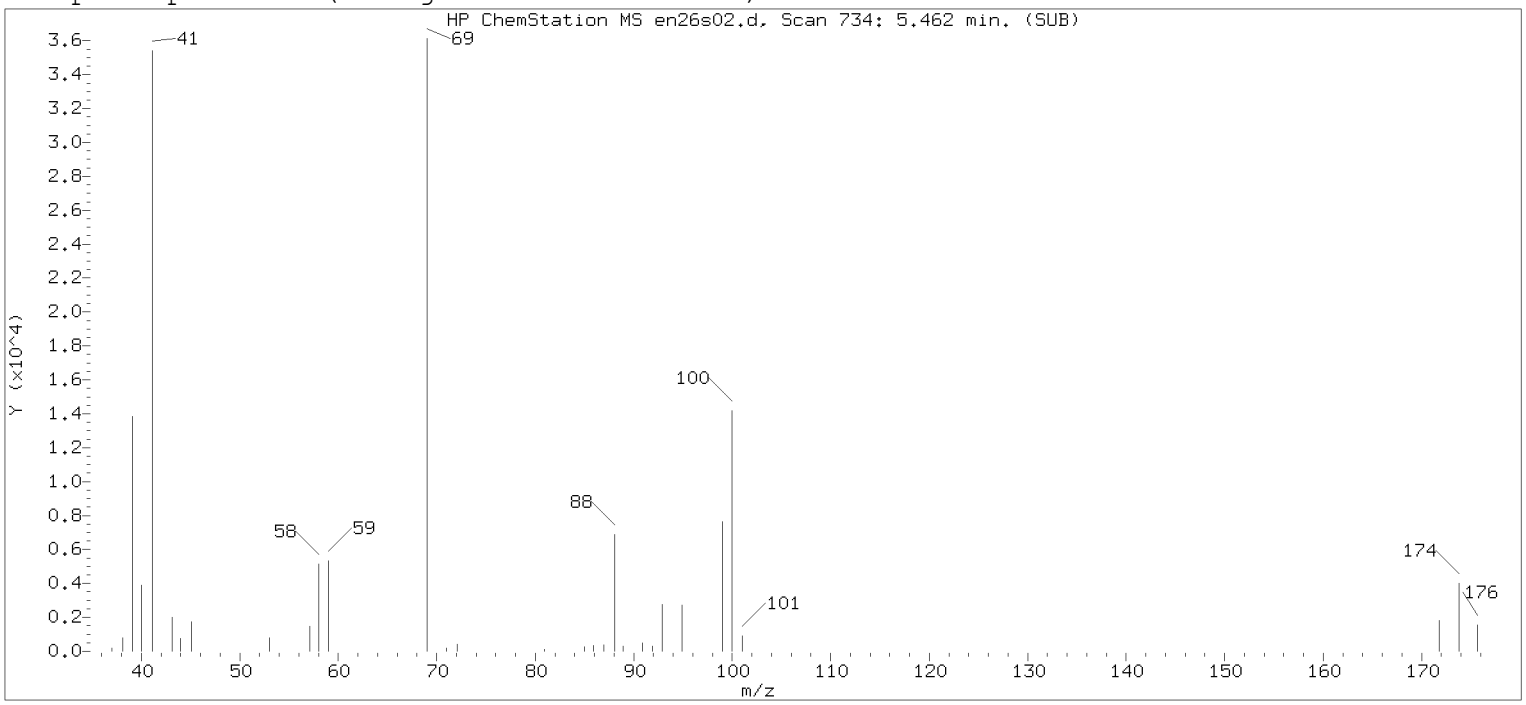
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 734
Retention Time (minutes): 5.462
Quant Ion : 88.00
Area (flag) : 33073M
On-Column Amount (ng) : 473.8288
Integration start scan : 726 Integration stop scan: 766
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

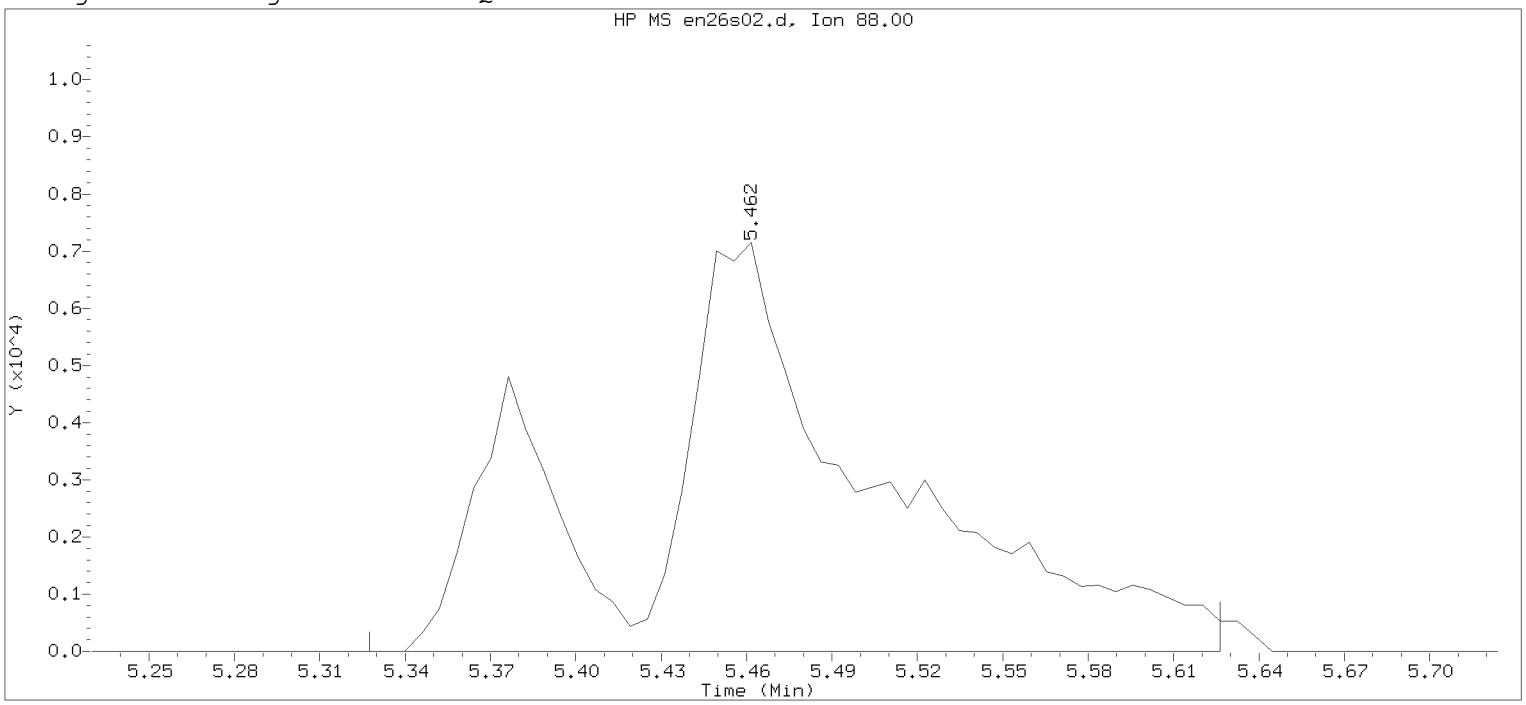
Analyst responsible for change: Digitally signed by Jason M. Long
on 11/26/2019 at 15:27.
Target 3.5 esignature user ID: jml01693

Secondary review performed and digitally signed by Kelly E. Keller on 12/03/2019 at 12:19.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP15648.i/19nov26a.b/en26s02.d Instrument ID: HP15648.i
Injection date and time: 26-NOV-2019 11:00 Analyst ID: jml01693

Method used: /chem/HP15648.i/19nov26a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 26-NOV-2019 10:36
Date, time and analyst ID of latest file update: 26-Nov-2019 11:18 Automation

Sample Name: LCDE76 Lab Sample ID: LCDE76

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 734
Retention Time (minutes): 5.462
Quant Ion : 88.00
Area : 42521
On-column Amount (ng) : 609.1977
Integration start scan : 711 Integration stop scan: 760
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 11/26/2019 at 15:27.
Target 3.5 esignature user: JML01693

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL87

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL87

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	17	
74-87-3	Chloromethane	18	
106-99-0	1,3-Butadiene	20	
75-01-4	Vinyl Chloride	18	
74-83-9	Bromomethane	18	
75-00-3	Chloroethane	18	
109-66-0	n-Pentane	15	
75-69-4	Trichlorofluoromethane	20	
60-29-7	Ethyl ether	20	
354-23-4	Freon 123a	20	
107-02-8	Acrolein	150	
75-35-4	1,1-Dichloroethene	20	
67-64-1	Acetone	170	
76-13-1	Freon 113	18	
67-63-0	2-Propanol	150	
74-88-4	Methyl Iodide	18	
75-15-0	Carbon Disulfide	17	
107-05-1	Allyl Chloride	18	
79-20-9	Methyl Acetate	19	
75-09-2	Methylene Chloride	21	
75-65-0	t-Butyl alcohol	200	
107-13-1	Acrylonitrile	94	
156-60-5	trans-1,2-Dichloroethene	20	
1634-04-4	Methyl Tertiary Butyl Ether	17	
110-54-3	n-Hexane	18	
75-34-3	1,1-Dichloroethane	20	
108-20-3	di-Isopropyl ether	18	
126-99-8	2-Chloro-1,3-butadiene	18	
637-92-3	Ethyl t-butyl ether	17	
156-59-2	cis-1,2-Dichloroethene	21	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL87

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL87

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	41	
78-93-3	2-Butanone	140	
594-20-7	2,2-Dichloropropane	19	
107-12-0	Propionitrile	170	
126-98-7	Methacrylonitrile	150	
74-97-5	Bromochloromethane	20	
109-99-9	Tetrahydrofuran	110	
67-66-3	Chloroform	21	
71-55-6	1,1,1-Trichloroethane	20	
110-82-7	Cyclohexane	17	
563-58-6	1,1-Dichloropropene	20	
56-23-5	Carbon Tetrachloride	19	
78-83-1	Isobutyl Alcohol	520	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	21	
994-05-8	t-Amyl methyl ether	18	
142-82-5	n-Heptane	17	
71-36-3	n-Butanol	960	
79-01-6	Trichloroethene	21	
108-87-2	Methylcyclohexane	19	
78-87-5	1,2-Dichloropropane	21	
74-95-3	Dibromomethane	21	
123-91-1	1,4-Dioxane	540	
80-62-6	Methyl Methacrylate	19	
75-27-4	Bromodichloromethane	20	
79-46-9	2-Nitropropane	15	
110-75-8	2-Chloroethyl Vinyl Ether	31	
10061-01-5	cis-1,3-Dichloropropene	20	
108-10-1	4-Methyl-2-pentanone	91	
108-88-3	Toluene	20	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL87

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL87

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	19	
542-75-6	1,3-Dichloropropene (total)	39	
97-63-2	Ethyl Methacrylate	17	
79-00-5	1,1,2-Trichloroethane	21	
127-18-4	Tetrachloroethene	20	
142-28-9	1,3-Dichloropropane	20	
591-78-6	2-Hexanone	87	
124-48-1	Dibromochloromethane	19	
106-93-4	1,2-Dibromoethane	20	
544-10-5	1-Chlorohexane	18	
108-90-7	Chlorobenzene	20	
630-20-6	1,1,1,2-Tetrachloroethane	19	
100-41-4	Ethylbenzene	20	
179601-23-1	m+p-Xylene	41	
95-47-6	o-Xylene	20	
1330-20-7	Xylene (Total)	61	
100-42-5	Styrene	20	
75-25-2	Bromoform	17	
98-82-8	Isopropylbenzene	20	
108-94-1	Cyclohexanone	480	
108-86-1	Bromobenzene	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	
96-18-4	1,2,3-Trichloropropane	20	
110-57-6	trans-1,4-Dichloro-2-butene	86	
103-65-1	n-Propylbenzene	20	
95-49-8	2-Chlorotoluene	20	
106-43-4	4-Chlorotoluene	20	
108-67-8	1,3,5-Trimethylbenzene	20	
98-06-6	tert-Butylbenzene	19	
76-01-7	Pentachloroethane	18	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSL87

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSL87

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09915.i/19nov23a.b/ln23s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/23/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
95-63-6	1,2,4-Trimethylbenzene	20	
135-98-8	sec-Butylbenzene	20	
541-73-1	1,3-Dichlorobenzene	20	
99-87-6	p-Isopropyltoluene	20	
106-46-7	1,4-Dichlorobenzene	20	
526-73-8	1,2,3-Trimethylbenzene	19	
100-44-7	Benzyl Chloride	16	
141-93-5	1,3-Diethylbenzene	18	
105-05-5	1,4-Diethylbenzene	18	B
95-50-1	1,2-Dichlorobenzene	20	
104-51-8	n-Butylbenzene	19	B
135-01-3	1,2-Diethylbenzene	18	
25340-17-4	Diethylbenzene (total)	54	
96-12-8	1,2-Dibromo-3-chloropropane	18	
108-70-3	1,3,5-Trichlorobenzene	18	B
120-82-1	1,2,4-Trichlorobenzene	17	B
87-68-3	Hexachlorobutadiene	15	
91-20-3	Naphthalene	18	
87-61-6	1,2,3-Trichlorobenzene	17	B
91-57-6	2-Methylnaphthalene	14	

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23s01.d Injection date and time: **23-NOV-2019 09:26**
Data file Sample Info. Line: LCSL87;LCSL87;1;3;LCS;;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493	(-0.003)	936	65	219124	(0)	250.00	
66) Fluorobenzene	7.956	(0.000)	2013	96	1149568	(2)	50.00	
100) Chlorobenzene-d5	11.358	(0.000)	3071	117	954034	(1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.219	(0.003)	3650	152	518331	(-1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.065	(0.001)	113	279543	49.739	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	73161	51.077	102%		80 - 120
83) Toluene-d8	(3)	9.930	(0.000)	98	1224920	49.069	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.345	(0.000)	95	482775	51.074	102%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	2.082	(0.000)	85	136297	17.002	17.00			0.2	1
4) Chloromethane	(2)	2.278	(0.000)	50	138166	17.882	17.88			0.2	1
5) 1,3-Butadiene	(2)	2.406	(0.000)	39	130178	20.291	20.29			1	3
6) Vinyl Chloride	(2)	2.397	(0.000)	62	137718	17.859	17.86			0.2	1
8) Bromomethane	(2)	2.741	(0.000)	94	97922	17.715	17.71			0.3	1
9) Chloroethane	(2)	2.837	(0.000)	64	75570	17.832	17.83			0.2	1
11) n-Pentane	(2)	3.200	(0.000)	43	151384	15.430	15.43			0.4	10
12) Trichlorofluoromethane	(2)	3.149	(0.000)	101	168712	20.322	20.32			0.2	1
14) Ethyl ether	(2)	3.432	(-0.000)	59	105121	19.595	19.59			0.2	5
15) Freon 123a	(2)	3.519	(0.000)	67	132374	19.821	19.82			0.4	5
16) Acrolein	(1)	3.612	(0.001)	56	249441	151.730	151.73			2	100
17) 1,1-Dichloroethene	(2)	3.750	(0.000)	96	98797	20.274	20.27			0.2	1
18) Acetone	(1)	3.798	(-0.000)	58	122187	165.784	165.78			0.7	20
19) Freon 113	(2)	3.795	(0.000)	101	101611	18.276	18.28			0.2	10
21) 2-Propanol	(1)	3.985	(0.000)	45	78385	147.940	147.94			18	100
22) Methyl Iodide	(2)	3.962	(0.000)	142	179282	17.754	17.75			0.2	1
23) Carbon Disulfide	(2)	4.065	(0.000)	76	308657	16.808	16.81			0.2	5
25) Allyl Chloride	(2)	4.265	(0.000)	41	157036	17.964	17.96			0.3	5
27) Methyl Acetate	(2)	4.242	(-0.000)	43	118037	18.807	18.81			0.2	5
28) Methylene Chloride	(2)	4.464	(0.000)	84	120393	20.758	20.76			0.3	1
30) t-Butyl alcohol	(1)	4.622	(0.000)	59	183342	198.737	198.74			12	50
31) Acrylonitrile	(2)	4.831	(0.000)	53	316407	93.704	93.70			0.3	20
32) trans-1,2-Dichloroethene	(2)	4.882	(0.000)	96	113295	20.097	20.10			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	4.872	(0.000)	73	315427	17.046	17.05			0.2	1
34) n-Hexane	(2)	5.306	(-0.000)	57	153781	17.534	17.53			2	5
36) 1,1-Dichloroethane	(2)	5.544	(0.000)	63	195838	19.914	19.91			0.2	1
38) di-Isopropyl ether	(2)	5.599	(0.000)	45	343897	18.131	18.13			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	5.657	(-0.000)	53	159972	18.131	18.13			0.2	5
40) Ethyl t-butyl ether	(2)	6.133	(0.000)	59	320696	17.423	17.42			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.374	(0.000)	96	134446	21.248	21.25			0.2	1
43) 1,2-Dichloroethene (Total)	(2)			96	247741	41.345	41.35			0.4	2

Digitally signed by Corie L. Mellinger on 11/23/2019 at 10:16. Target 3.5 esignature user ID: clm27445

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23s01.d Injection date and time: **23-NOV-2019 09:26**
Data file Sample Info. Line: LCSL87;LCSL87;1;3;LCS;;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	6.358(0.000)	43	596366	137.585	137.59			0.3	10
45) 2,2-Dichloropropane	(2)	6.387(0.000)	77	147462	19.289	19.29			0.3	1
47) Propionitrile	(1)	6.458(-0.000)	54	195546	170.118	170.12			14	100
48) Methacrylonitrile	(2)	6.666(-0.000)	67	536833	147.383	147.38			6	50
49) Bromochloromethane	(2)	6.708(-0.000)	128	65482	19.517	19.52			0.2	5
50) Tetrahydrofuran	(1)	6.718(0.001)	71	116538	112.239	112.24			0.7	10
51) Chloroform	(2)	6.856(0.000)	83	194950	20.726	20.73			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.078(0.000)	97	159852	19.912	19.91			0.3	1
54) Cyclohexane	(2)	7.165(0.000)	56	186666	17.388	17.39			1	5
55) 1,1-Dichloropropene	(2)	7.290(0.000)	75	153454	19.735	19.74			0.2	5
56) Carbon Tetrachloride	(2)	7.277(0.000)	117	131745	19.349	19.35			0.2	1
58) Isobutyl Alcohol	(1)	7.454(0.001)	41	160914	518.323	518.32			36	250
60) Benzene	(2)	7.551(0.000)	78	482008	20.614	20.61			0.2	1
61) 1,2-Dichloroethane	(2)	7.625(0.000)	62	157726	20.971	20.97			0.3	1
65) t-Amyl methyl ether	(2)	7.734(0.000)	73	332235	17.983	17.98			0.8	5
67) n-Heptane	(2)	7.959(0.000)	43	138196	16.867	16.87			2	5
69) n-Butanol	(1)	8.329(0.002)	56	256065	958.318	958.32			61	250
71) Trichloroethene	(2)	8.428(-0.000)	95	121790	20.686	20.69			0.2	1
72) Methylcyclohexane	(2)	8.728(-0.000)	83	204135	18.689	18.69			0.5	5
73) 1,2-Dichloropropane	(2)	8.763(0.000)	63	123397	20.782	20.78			0.2	1
74) Dibromomethane	(2)	8.875(0.000)	93	79710	20.748	20.75			0.2	1
75) 1,4-Dioxane	(1)	8.856(0.000)	88	39582M	538.951	538.95			29	250
76) Methyl Methacrylate	(2)	8.846(-0.000)	69	111030	19.337	19.34			0.2	5
78) Bromodichloromethane	(2)	9.110(-0.000)	83	140364	20.361	20.36			0.2	1
79) 2-Nitropropane	(2)	9.390(-0.000)	41	31840	15.248	15.25			0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)	9.461(-0.000)	63	78938	30.955	30.95			0.2	10
81) cis-1,3-Dichloropropene	(2)	9.634(-0.000)	75	185790	20.291	20.29			0.2	1
82) 4-Methyl-2-pentanone	(2)	9.805(-0.000)	43	832198	90.959	90.96			0.5	10
88) Toluene	(3)	10.007(0.000)	92	313711	20.045	20.05			0.2	1
89) trans-1,3-Dichloropropene	(3)	10.258(-0.000)	75	165350	18.612	18.61			0.2	1
90) 1,3-Dichloropropene (total)	(3)		100	351140	38.903	38.90			0.4	2
91) Ethyl Methacrylate	(3)	10.310(-0.000)	69	185379	17.170	17.17			0.2	5
92) 1,1,2-Trichloroethane	(3)	10.457(-0.000)	97	123325	20.784	20.78			0.2	1
93) Tetrachloroethene	(3)	10.538(-0.000)	166	129265	19.503	19.50			0.2	1
94) 1,3-Dichloropropane	(3)	10.618(-0.000)	76	201364	19.876	19.88			0.2	1
96) 2-Hexanone	(3)	10.666(-0.000)	43	627871	87.122	87.12			0.3	10
97) Dibromochloromethane	(3)	10.824(0.000)	129	115965	19.079	19.08			0.2	1
99) 1,2-Dibromoethane	(3)	10.933(0.000)	107	129008	20.022	20.02			0.2	1
101) 1-Chlorohexane	(3)	11.361(0.000)	91	154355	18.359	18.36			0.3	5
102) Chlorobenzene	(3)	11.383(0.000)	112	359998	20.341	20.34			0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)	11.464(-0.000)	131	112152	19.233	19.23			0.2	1
104) Ethylbenzene	(3)	11.467(-0.000)	91	597136	19.963	19.96			0.4	1
106) m+p-Xylene	(3)	11.580(-0.000)	106	479979	40.789	40.79			1	5
107) o-Xylene	(3)	11.908(-0.000)	106	229466	19.742	19.74			0.4	1
108) Xylene (Total)	(3)		106	709445	60.531	60.53			1	6
109) Styrene	(3)	11.920(-0.000)	104	386872	20.142	20.14			0.2	5
110) Bromoform	(3)	12.078(0.000)	173	75317	16.583	16.58			1	4
111) Isopropylbenzene	(3)	12.203(-0.000)	105	586751	20.127	20.13			0.2	5
112) Cyclohexanone	(1)	12.287(0.001)	55	136932	476.060	476.06			25	100
115) Bromobenzene	(4)	12.464(-0.000)	156	152936	19.632	19.63			0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	12.448(-0.000)	83	197038	20.124	20.12			0.2	1
117) 1,2,3-Trichloropropane	(4)	12.496(-0.000)	110	59005	19.638	19.64			0.2	5
118) trans-1,4-Dichloro-2-butene	(4)	12.473(-0.000)	53	259700	85.988	85.99			6	50
119) n-Propylbenzene	(4)	12.528(-0.000)	91	696154	20.454	20.45			0.2	5

M = Compound was manually integrated.

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Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/19nov23a.b/ln23s01.d Injection date and time: **23-NOV-2019 09:26**
Data file Sample Info. Line: LCSL87;LCSL87;1;3;LCS;;;;ln23b01; Instrument ID: **HP09915.i** Batch: **L193271AA**
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Blank Data file reference: **/chem/HP09915.i/19nov23a.b/ln23b01.d**

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 23-NOV-2019 09:07
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/19nov23a.b/ln23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)	12.605(0.000)	126	141098	19.514	19.51			0.2	5
121) 4-Chlorotoluene	(4)	12.698(-0.000)	126	147115	19.547	19.55			0.2	5
122) 1,3,5-Trimethylbenzene	(4)	12.660(0.000)	105	498236	20.144	20.14			0.3	5
124) tert-Butylbenzene	(4)	12.904(-0.000)	134	97397	19.040	19.04			0.3	5
125) Pentachloroethane	(4)	12.936(-0.000)	167	80055	18.175	18.18			0.2	5
126) 1,2,4-Trimethylbenzene	(4)	12.946(-0.000)	105	516617	19.818	19.82			1	5
127) sec-Butylbenzene	(4)	13.065(0.000)	105	596790	19.552	19.55			0.2	5
129) 1,3-Dichlorobenzene	(4)	13.168(-0.000)	146	284643	19.884	19.88			0.2	5
130) p-Isopropyltoluene	(4)	13.171(-0.000)	119	516072	19.543	19.54			0.2	5
133) 1,4-Dichlorobenzene	(4)	13.239(-0.000)	146	297218	20.028	20.03			0.2	5
134) 1,2,3-Trimethylbenzene	(4)	13.248(-0.000)	105	535390	19.388	19.39			0.3	5
135) Benzyl Chloride	(4)	13.319(-0.000)	91	324287	15.511	15.51			1	5
136) 1,3-Diethylbenzene	(4)	13.370(-0.000)	119	312049	18.158	18.16			0.2	5
137) 1,4-Diethylbenzene	(4)	13.441(-0.000)	119	327147	17.967	17.97	0.216	B	0.2	5
138) 1,2-Dichlorobenzene	(4)	13.499(-0.000)	146	283246	20.052	20.05			0.2	5
139) n-Butylbenzene	(4)	13.464(-0.000)	92	251889	18.656	18.66	0.344	B	0.2	5
140) 1,2-Diethylbenzene	(4)	13.515(-0.000)	119	265561	18.330	18.33			0.2	5
141) Diethylbenzene (total)	(4)		100	904757	54.455	54.46			0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)	14.039(-0.000)	75	39020	18.205	18.20			0.3	5
144) 1,3,5-Trichlorobenzene	(4)	14.161(-0.000)	180	191170	17.615	17.61	0.552	B	0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.586(-0.000)	180	179583	17.018	17.02	0.530	B	0.3	5
147) Hexachlorobutadiene	(4)	14.666(-0.000)	225	75520	15.157	15.16			2	5
148) Naphthalene	(4)	14.772(-0.000)	128	623142	18.368	18.37			1	5
149) 1,2,3-Trichlorobenzene	(4)	14.914(-0.000)	180	174866	17.030	17.03	0.595	B	0.4	5
150) 2-Methylnaphthalene	(4)	15.563(-0.000)	142	295754	14.157	14.16			2	4

B = Compound detected in referenced method blank.

Total number of targets = 110

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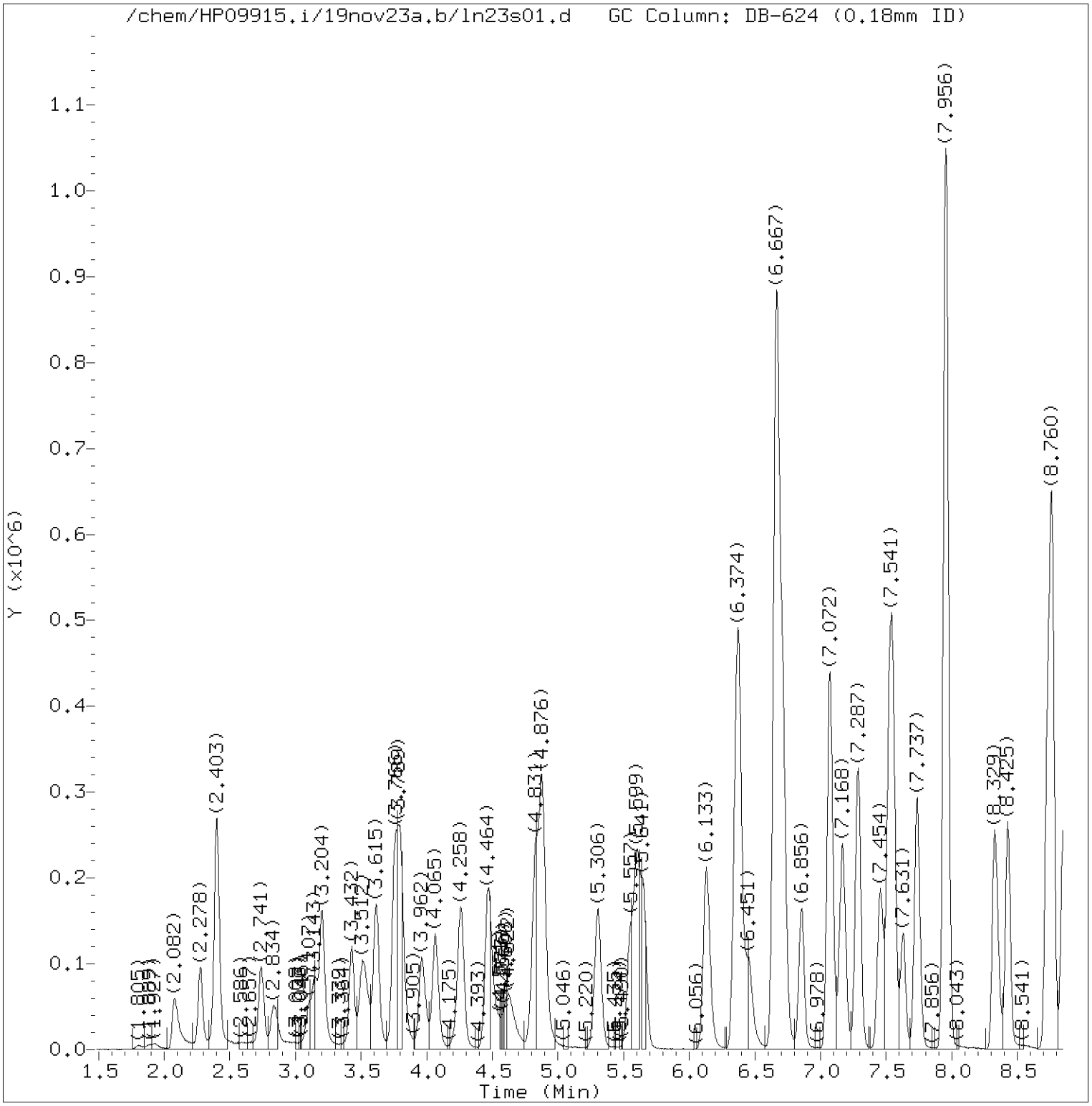
Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:45. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

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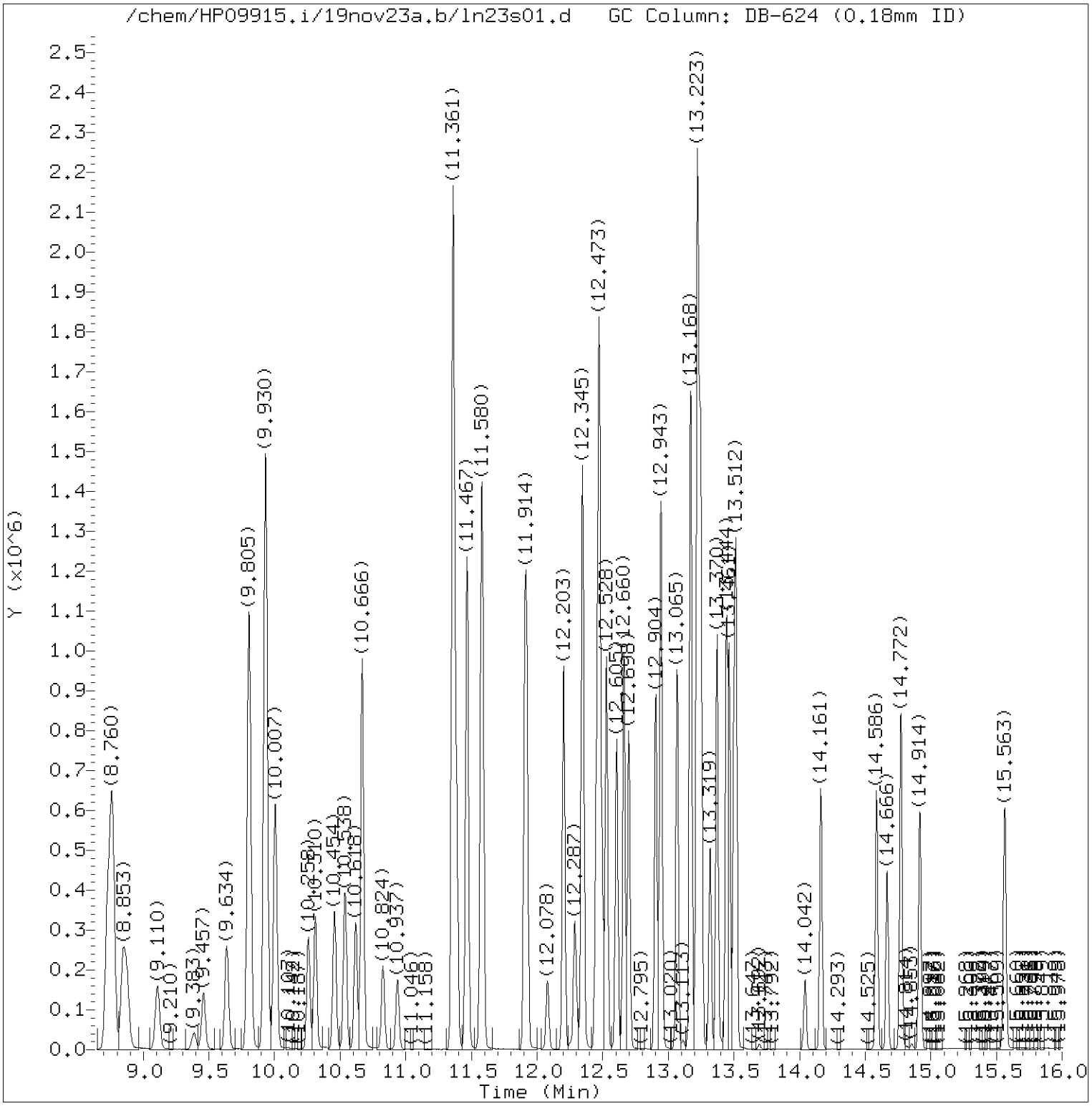
on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.082	85	136297	17.002
4) Chloromethane	(2)	2.278	50	138166	17.882
6) Vinyl Chloride	(2)	2.397	62	137718	17.859
5) 1,3-Butadiene	(2)	2.406	39	130178	20.291
8) Bromomethane	(2)	2.741	94	97922	17.715
9) Chloroethane	(2)	2.837	64	75570	17.832
12) Trichlorofluoromethane	(2)	3.149	101	168712	20.322
11) n-Pentane	(2)	3.200	43	151384	15.430
14) Ethyl ether	(2)	3.432	59	105121	19.595
15) Freon 123a	(2)	3.519	67	132374	19.821
16) Acrolein	(1)	3.612	56	249441	151.730
17) 1,1-Dichloroethene	(2)	3.750	96	98797	20.274
19) Freon 113	(2)	3.795	101	101611	18.276
18) Acetone	(1)	3.799	58	122187	165.784
22) Methyl Iodide	(2)	3.962	142	179282	17.754
21) 2-Propanol	(1)	3.985	45	78385	147.940
23) Carbon Disulfide	(2)	4.065	76	308657	16.808
27) Methyl Acetate	(2)	4.242	43	118037	18.807
25) Allyl Chloride	(2)	4.265	41	157036	17.964
28) Methylene Chloride	(2)	4.464	84	120393	20.758
29)*t-Butyl alcohol-d10	(1)	4.493	65	219124	250.000
30) t-Butyl alcohol	(1)	4.622	59	183342	198.737
31) Acrylonitrile	(2)	4.831	53	316407	93.704
33) Methyl Tertiary Butyl Ether	(2)	4.872	73	315427	17.046
32) trans-1,2-Dichloroethene	(2)	4.882	96	113295	20.097
34) n-Hexane	(2)	5.306	57	153781	17.534
36) 1,1-Dichloroethane	(2)	5.544	63	195838	19.914
38) di-Isopropyl ether	(2)	5.599	45	343897	18.131
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	159972	18.131
40) Ethyl t-butyl ether	(2)	6.133	59	320696	17.423
43) 1,2-Dichloroethene (Total)	(2)		96	247741	41.345
44) 2-Butanone	(2)	6.358	43	596366	137.585
42) cis-1,2-Dichloroethene	(2)	6.374	96	134446	21.248
45) 2,2-Dichloropropane	(2)	6.387	77	147462	19.289
47) Propionitrile	(1)	6.458	54	195546	170.118
48) Methacrylonitrile	(2)	6.667	67	536833	147.383
49) Bromochloromethane	(2)	6.708	128	65482	19.517
50) Tetrahydrofuran	(1)	6.718	71	116538	112.239

* = Compound is an internal standard.

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on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	6.856	83	194950	20.726
52)$Dibromofluoromethane	(2)	7.065	113	279543	49.739
53) 1,1,1-Trichloroethane	(2)	7.078	97	159852	19.912
54) Cyclohexane	(2)	7.165	56	186666	17.388
56) Carbon Tetrachloride	(2)	7.277	117	131745	19.349
55) 1,1-Dichloropropene	(2)	7.290	75	153454	19.735
58) Isobutyl Alcohol	(1)	7.454	41	160914	518.323
57)$1,2-Dichloroethane-d4	(2)	7.525	102	73161	51.077
60) Benzene	(2)	7.551	78	482008	20.614
61) 1,2-Dichloroethane	(2)	7.625	62	157726	20.971
65) t-Amyl methyl ether	(2)	7.734	73	332235	17.983
66)*Fluorobenzene	(2)	7.956	96	1149568	50.000
67) n-Heptane	(2)	7.959	43	138196	16.867
69) n-Butanol	(1)	8.329	56	256065	958.318
71) Trichloroethene	(2)	8.429	95	121790	20.686
72) Methylcyclohexane	(2)	8.728	83	204135	18.689
73) 1,2-Dichloropropane	(2)	8.763	63	123397	20.782
76) Methyl Methacrylate	(2)	8.847	69	111030	19.337
75) 1,4-Dioxane	(1)	8.856	88	39582M	538.951
74) Dibromomethane	(2)	8.875	93	79710	20.748
78) Bromodichloromethane	(2)	9.110	83	140364	20.361
79) 2-Nitropropane	(2)	9.390	41	31840	15.248
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	78938	30.955
81) cis-1,3-Dichloropropene	(2)	9.634	75	185790	20.291
82) 4-Methyl-2-pentanone	(2)	9.805	43	832198	90.959
83)$Toluene-d8	(3)	9.930	98	1224920	49.069
88) Toluene	(3)	10.007	92	313711	20.045
90) 1,3-Dichloropropene (total)	(3)		100	351140	38.903
89) trans-1,3-Dichloropropene	(3)	10.258	75	165350	18.612
91) Ethyl Methacrylate	(3)	10.310	69	185379	17.170
92) 1,1,2-Trichloroethane	(3)	10.457	97	123325	20.784
93) Tetrachloroethene	(3)	10.538	166	129265	19.503
94) 1,3-Dichloropropane	(3)	10.618	76	201364	19.876
96) 2-Hexanone	(3)	10.666	43	627871	87.122
97) Dibromochloromethane	(3)	10.824	129	115965	19.079
99) 1,2-Dibromoethane	(3)	10.933	107	129008	20.022
100)*Chlorobenzene-d5	(3)	11.358	117	954034	50.000
101) 1-Chlorohexane	(3)	11.361	91	154355	18.359

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
102) Chlorobenzene	(3)	11.383	112	359998	20.341
103) 1,1,1,2-Tetrachloroethane	(3)	11.464	131	112152	19.233
104) Ethylbenzene	(3)	11.467	91	597136	19.963
106) m+p-Xylene	(3)	11.580	106	479979	40.789
108) Xylene (Total)	(3)		106	709445	60.531
107) o-Xylene	(3)	11.908	106	229466	19.742
109) Styrene	(3)	11.920	104	386872	20.142
110) Bromoform	(3)	12.078	173	75317	16.583
111) Isopropylbenzene	(3)	12.203	105	586751	20.127
112) Cyclohexanone	(1)	12.287	55	136932	476.060
114)$4-Bromofluorobenzene	(3)	12.345	95	482775	51.074
116) 1,1,2,2-Tetrachloroethane	(4)	12.448	83	197038	20.124
115) Bromobenzene	(4)	12.464	156	152936	19.632
118) trans-1,4-Dichloro-2-butene	(4)	12.473	53	259700	85.988
117) 1,2,3-Trichloropropane	(4)	12.496	110	59005	19.638
119) n-Propylbenzene	(4)	12.528	91	696154	20.454
120) 2-Chlorotoluene	(4)	12.605	126	141098	19.514
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	498236	20.144
121) 4-Chlorotoluene	(4)	12.698	126	147115	19.547
124) tert-Butylbenzene	(4)	12.904	134	97397	19.040
125) Pentachloroethane	(4)	12.936	167	80055	18.175
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	516617	19.818
127) sec-Butylbenzene	(4)	13.065	105	596790	19.552
129) 1,3-Dichlorobenzene	(4)	13.168	146	284643	19.884
130) p-Isopropyltoluene	(4)	13.171	119	516072	19.543
131)*1,4-Dichlorobenzene-d4	(4)	13.219	152	518331	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	297218	20.028
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	535390	19.388
135) Benzyl Chloride	(4)	13.319	91	324287	15.511
136) 1,3-Diethylbenzene	(4)	13.370	119	312049	18.158
141) Diethylbenzene (total)	(4)		100	904757	54.455
137) 1,4-Diethylbenzene	(4)	13.441	119	327147	17.967
139) n-Butylbenzene	(4)	13.464	92	251889	18.656
138) 1,2-Dichlorobenzene	(4)	13.499	146	283246	20.052
140) 1,2-Diethylbenzene	(4)	13.515	119	265561	18.330
142) 1,2-Dibromo-3-chloropropane	(4)	14.039	75	39020	18.205
144) 1,3,5-Trichlorobenzene	(4)	14.161	180	191170	17.615
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	179583	17.018

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

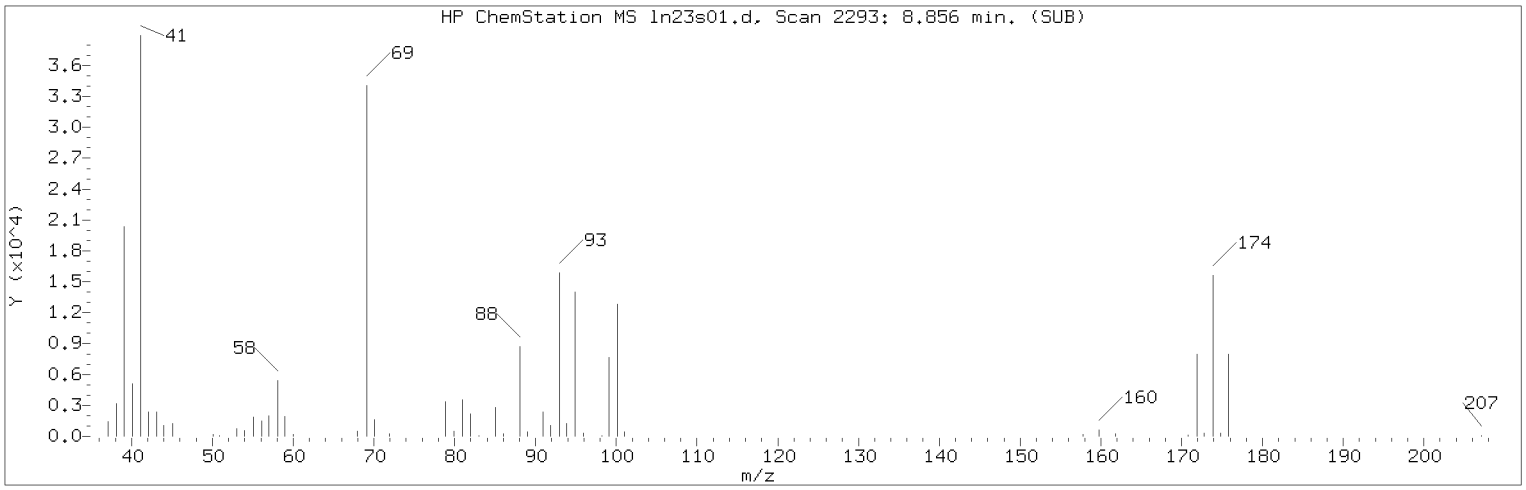
Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

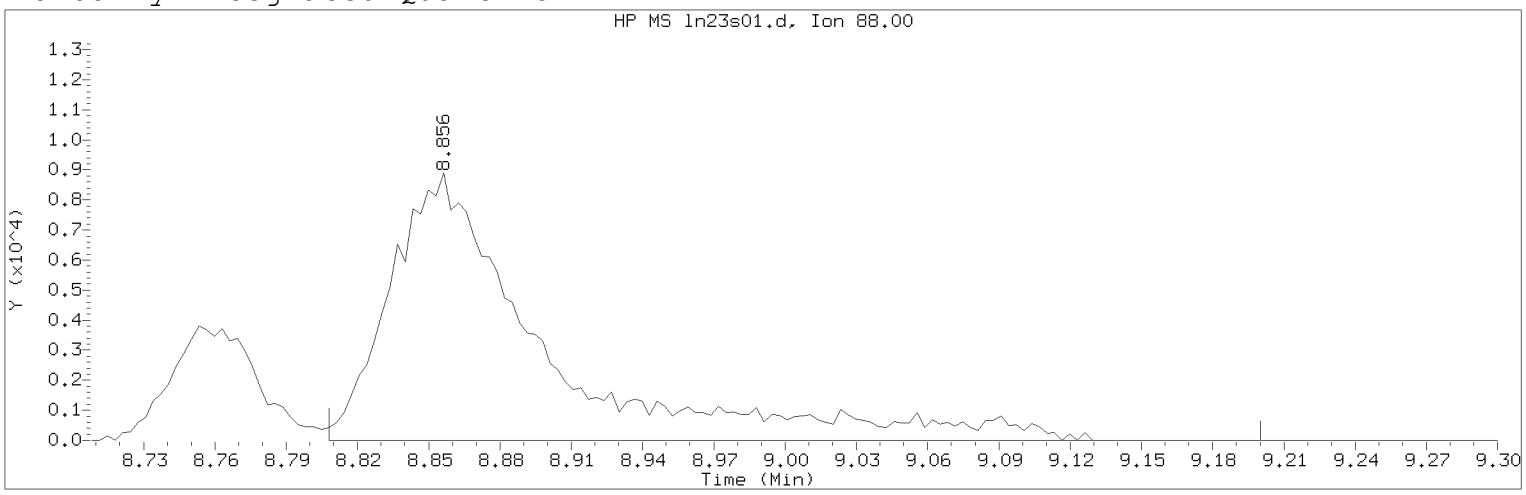
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Hexachlorobutadiene	(4)	14.666	225	75520	15.157
148) Naphthalene	(4)	14.772	128	623142	18.368
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	174866	17.030
150) 2-Methylnaphthalene	(4)	15.563	142	295754	14.157

Digitally signed by Corie L. Mellinger
on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 10:15 clm27445

Sample Name: LCSL87 Lab Sample ID: LCSL87

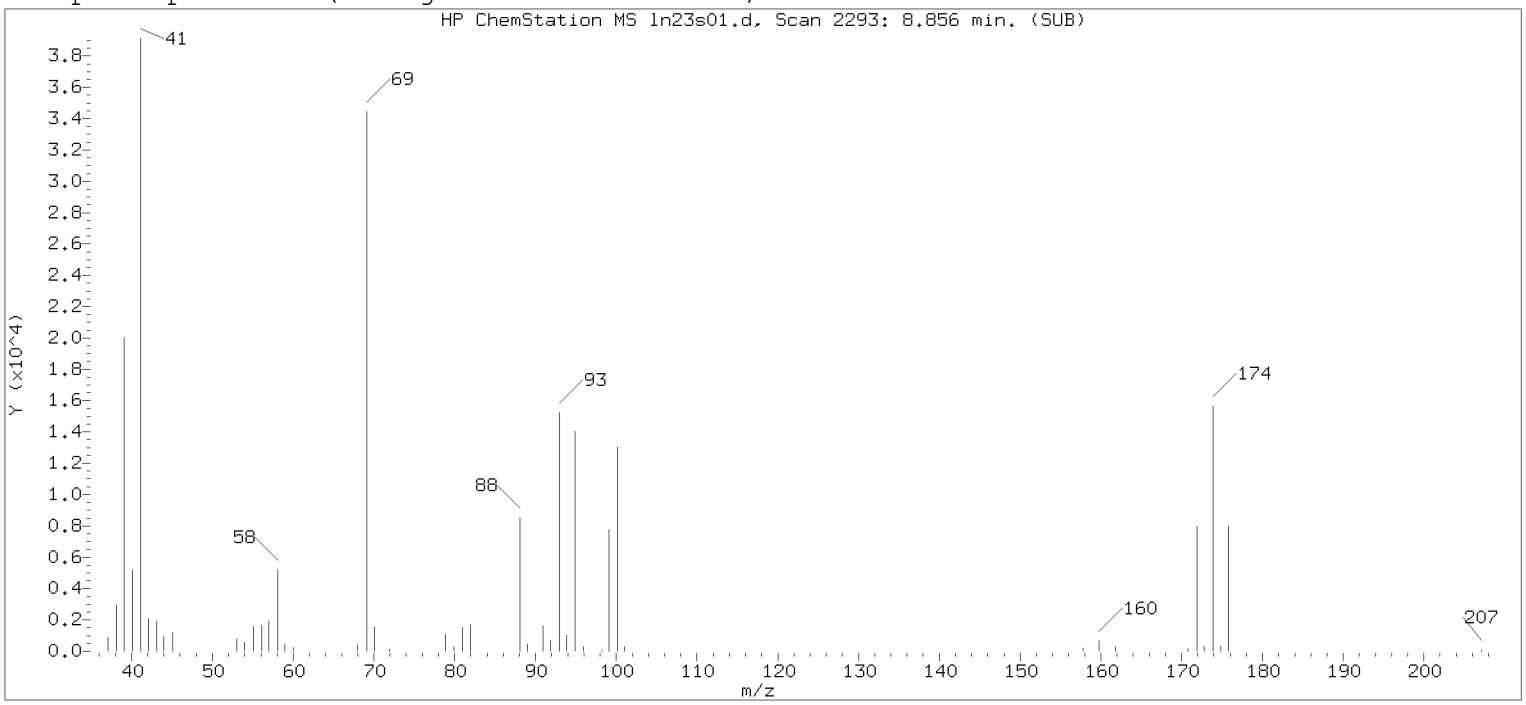
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2293
Retention Time (minutes): 8.856
Quant Ion : 88.00
Area (flag) : 39582M
On-Column Amount (ng) : 538.9512
Integration start scan : 2277 Integration stop scan: 2399
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

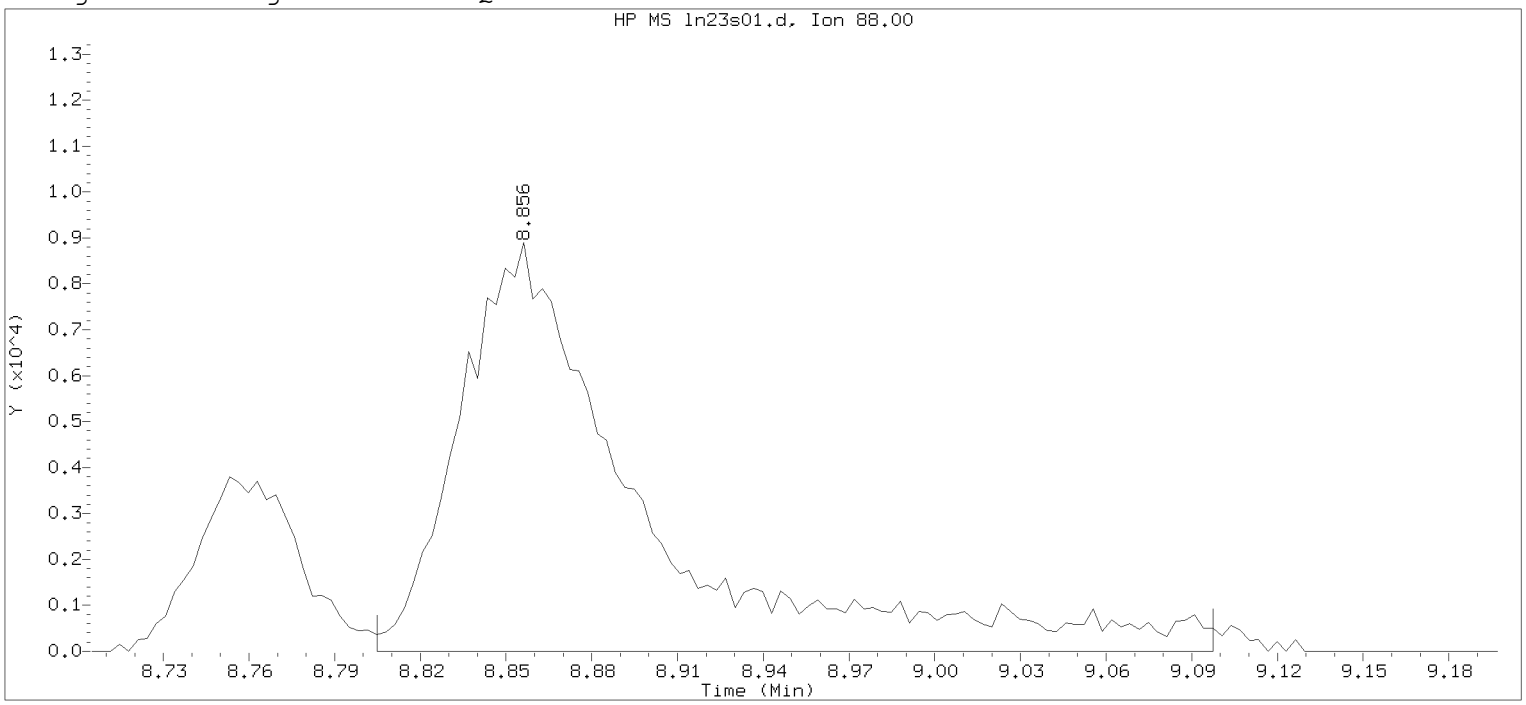
Analyst responsible for change: Digitally signed by Corie L. Mellinger on 11/23/2019 at 10:16.
Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 11/27/2019 at 19:45.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/19nov23a.b/ln23s01.d Instrument ID: HP09915.i
Injection date and time: 23-NOV-2019 09:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/19nov23a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 23-NOV-2019 09:07
Date, time and analyst ID of latest file update: 23-Nov-2019 09:43 Automation

Sample Name: LCSL87 Lab Sample ID: LCSL87

Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 2293		
Retention Time (minutes)	: 8.856		
Quant Ion	: 88.00		
Area	: 39126		
On-column Amount (ng)	: 532.7524		
Integration start scan	: 2276	Integration stop scan:	2367
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Corie L. Mellinger on 11/23/2019 at 10:16.
Target 3.5 esignature user: CLM27445

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSY09

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSY09

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09355.i/19nov27b.b/yn27s31.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/27/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	11	
74-87-3	Chloromethane	16	
106-99-0	1,3-Butadiene	25	
75-01-4	Vinyl Chloride	16	
74-83-9	Bromomethane	14	
75-00-3	Chloroethane	16	
109-66-0	n-Pentane	14	
75-69-4	Trichlorofluoromethane	14	
60-29-7	Ethyl ether	22	
354-23-4	Freon 123a	21	
107-02-8	Acrolein	140	
75-35-4	1,1-Dichloroethene	21	
67-64-1	Acetone	170	
76-13-1	Freon 113	17	
67-63-0	2-Propanol	180	
74-88-4	Methyl Iodide	18	
75-15-0	Carbon Disulfide	20	
107-05-1	Allyl Chloride	24	
79-20-9	Methyl Acetate	24	
75-09-2	Methylene Chloride	23	
75-65-0	t-Butyl alcohol	220	
107-13-1	Acrylonitrile	120	
156-60-5	trans-1,2-Dichloroethene	22	
1634-04-4	Methyl Tertiary Butyl Ether	19	
110-54-3	n-Hexane	20	
75-34-3	1,1-Dichloroethane	23	
108-20-3	di-Isopropyl ether	23	
126-99-8	2-Chloro-1,3-butadiene	21	
637-92-3	Ethyl t-butyl ether	20	
156-59-2	cis-1,2-Dichloroethene	23	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSY09

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSY09

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09355.i/19nov27b.b/yn27s31.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/27/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	45	
78-93-3	2-Butanone	170	
594-20-7	2,2-Dichloropropane	19	
107-12-0	Propionitrile	190	
126-98-7	Methacrylonitrile	160	
74-97-5	Bromochloromethane	20	
109-99-9	Tetrahydrofuran	100	
67-66-3	Chloroform	21	
71-55-6	1,1,1-Trichloroethane	20	
110-82-7	Cyclohexane	20	
563-58-6	1,1-Dichloropropene	21	
56-23-5	Carbon Tetrachloride	18	
78-83-1	Isobutyl Alcohol	580	
71-43-2	Benzene	23	
107-06-2	1,2-Dichloroethane	20	
994-05-8	t-Amyl methyl ether	19	
142-82-5	n-Heptane	21	
71-36-3	n-Butanol	1000	
79-01-6	Trichloroethene	21	
108-87-2	Methylcyclohexane	19	
78-87-5	1,2-Dichloropropane	24	
74-95-3	Dibromomethane	21	
123-91-1	1,4-Dioxane	560	
80-62-6	Methyl Methacrylate	21	
75-27-4	Bromodichloromethane	21	
79-46-9	2-Nitropropane	17	
110-75-8	2-Chloroethyl Vinyl Ether	22	
10061-01-5	cis-1,3-Dichloropropene	22	
108-10-1	4-Methyl-2-pentanone	110	
108-88-3	Toluene	23	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSY09

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSY09

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09355.i/19nov27b.b/yn27s31.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/27/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	21	
542-75-6	1,3-Dichloropropene (total)	43	
97-63-2	Ethyl Methacrylate	21	
79-00-5	1,1,2-Trichloroethane	23	
127-18-4	Tetrachloroethene	21	
142-28-9	1,3-Dichloropropane	23	
591-78-6	2-Hexanone	110	
124-48-1	Dibromochloromethane	20	
106-93-4	1,2-Dibromoethane	22	
544-10-5	1-Chlorohexane	22	
108-90-7	Chlorobenzene	22	
630-20-6	1,1,1,2-Tetrachloroethane	21	
100-41-4	Ethylbenzene	23	
179601-23-1	m+p-Xylene	45	
95-47-6	o-Xylene	22	
1330-20-7	Xylene (Total)	67	
100-42-5	Styrene	23	
75-25-2	Bromoform	19	
98-82-8	Isopropylbenzene	22	
108-94-1	Cyclohexanone	450	
108-86-1	Bromobenzene	23	
79-34-5	1,1,2,2-Tetrachloroethane	24	
96-18-4	1,2,3-Trichloropropane	22	
110-57-6	trans-1,4-Dichloro-2-butene	95	
103-65-1	n-Propylbenzene	25	
95-49-8	2-Chlorotoluene	23	
106-43-4	4-Chlorotoluene	23	
108-67-8	1,3,5-Trimethylbenzene	23	
98-06-6	tert-Butylbenzene	22	
76-01-7	Pentachloroethane	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSY09

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSY09

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09355.i/19nov27b.b/yn27s31.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/27/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
95-63-6	1,2,4-Trimethylbenzene	23	
135-98-8	sec-Butylbenzene	24	
541-73-1	1,3-Dichlorobenzene	23	
99-87-6	p-Isopropyltoluene	23	
106-46-7	1,4-Dichlorobenzene	23	
526-73-8	1,2,3-Trimethylbenzene	22	
100-44-7	Benzyl Chloride	20	
141-93-5	1,3-Diethylbenzene	22	
105-05-5	1,4-Diethylbenzene	22	
95-50-1	1,2-Dichlorobenzene	23	
104-51-8	n-Butylbenzene	24	
135-01-3	1,2-Diethylbenzene	21	
25340-17-4	Diethylbenzene (total)	64	
96-12-8	1,2-Dibromo-3-chloropropane	21	
108-70-3	1,3,5-Trichlorobenzene	22	
120-82-1	1,2,4-Trichlorobenzene	22	
87-68-3	Hexachlorobutadiene	22	
91-20-3	Naphthalene	22	
87-61-6	1,2,3-Trichlorobenzene	21	
91-57-6	2-Methylnaphthalene	18	

Data file: /chem2/HP09355.i/19nov27b.b/yn27s31.d Injection date and time: **27-NOV-2019 20:05**
Data file Sample Info. Line: LCSY09;LCSY09;1;3;LCS;;;;yn27b31; Instrument ID: **HP09355.i** Batch: **Y193312AA**
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Blank Data file reference: **/chem2/HP09355.i/19nov27b.b/yn27b31.d**

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 27-NOV-2019 20:01
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19nov27b.b/yn27c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.349(0.006)	455	65	302899M (-6)	250.00	
66) Fluorobenzene	7.866(0.006)	1033	96	1010184 (-1)	50.00	
100) Chlorobenzene-d5	11.309(0.000)	1599	117	736366 (-1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.183(0.000)	1907	152	378717 (-2)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.971(0.000)	113	216769	45.731	91%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434(-0.001)	102	59771	48.233	96%		80 - 120
83) Toluene-d8	(3)	9.867(0.000)	98	989551	49.667	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.301(0.001)	95	366864	48.194	96%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	2.044(0.000)	85	101053	10.907	10.91			0.2	1
4) Chloromethane	(2)	2.238(0.001)	50	129559	16.269	16.27			0.2	1
5) 1,3-Butadiene	(2)	2.360(0.001)	39	153303	24.740	24.74			1	3
6) Vinyl Chloride	(2)	2.354(0.001)	62	125156	16.008	16.01			0.2	1
8) Bromomethane	(2)	2.689(0.001)	94	83550	14.404	14.40			0.3	1
9) Chloroethane	(2)	2.786(0.000)	64	71660	15.794	15.79			0.2	1
11) n-Pentane	(2)	3.139(0.001)	43	138551	14.327	14.33			0.4	10
12) Trichlorofluoromethane	(2)	3.090(0.001)	101	134744	13.510	13.51			0.2	1
14) Ethyl ether	(2)	3.358(0.000)	59	113961	21.943	21.94			0.2	5
15) Freon 123a	(2)	3.425(0.001)	67	126443	20.997	21.00			0.4	5
16) Acrolein	(1)	3.522(0.001)	56	312325	135.765	135.77			2	100
17) 1,1-Dichloroethene	(2)	3.680(0.001)	96	92867	21.180	21.18			0.2	1
18) Acetone	(1)	3.692(0.000)	58	185372	171.245	171.25			0.7	20
19) Freon 113	(2)	3.704(0.001)	101	86323	17.294	17.29			0.2	10
21) 2-Propanol	(1)	3.863(-0.001)	45	119516	183.380	183.38			18	100
22) Methyl Iodide	(2)	3.887(0.001)	142	152951	17.765	17.76			0.2	1
23) Carbon Disulfide	(2)	4.009(0.001)	76	311546	19.657	19.66			0.2	5
25) Allyl Chloride	(2)	4.167(0.001)	41	183907	24.189	24.19			0.3	5
27) Methyl Acetate	(2)	4.130(0.001)	43	180794	23.588	23.59			0.2	5
28) Methylene Chloride	(2)	4.362(0.001)	84	119371	22.799	22.80			0.3	1
30) t-Butyl alcohol	(1)	4.477(-0.000)	59	294711	216.218	216.22			12	50
31) Acrylonitrile	(2)	4.684(0.000)	53	463139	115.371	115.37			0.3	20
32) trans-1,2-Dichloroethene	(2)	4.794(0.001)	96	110062	21.671	21.67			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	4.769(0.001)	73	323480	18.514	18.51			0.2	1
34) n-Hexane	(2)	5.219(0.000)	57	172171	19.995	19.99			2	5
36) 1,1-Dichloroethane	(2)	5.444(0.001)	63	207873	22.508	22.51			0.2	1
38) di-Isopropyl ether	(2)	5.499(0.000)	45	410034	23.243	23.24			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	5.560(0.000)	53	176621	21.100	21.10			0.2	5
40) Ethyl t-butyl ether	(2)	6.034(0.000)	59	339250	19.620	19.62			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.272(0.000)	96	133365	23.100	23.10			0.2	1

Digitally signed by Don V. Viray on 11/27/2019 at 21:39. Target 3.5 esignature user ID: dvv10203

Data file: /chem2/HP09355.i/19nov27b.b/yn27s31.d Injection date and time: **27-NOV-2019 20:05**
Data file Sample Info. Line: LCSY09;LCSY09;1;3;LCS;;;;yn27b31; Instrument ID: **HP09355.i** Batch: **Y193312AA**
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Blank Data file reference: **/chem2/HP09355.i/19nov27b.b/yn27b31.d**

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 27-NOV-2019 20:01
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19nov27b.b/yn27c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
43) 1,2-Dichloroethene (Total)	(2)		96	243427	44.771	44.77			0.4	2
44) 2-Butanone	(2)	6.229(0.000)	43	1008208	168.294	168.29			0.3	10
45) 2,2-Dichloropropane	(2)	6.290(0.000)	77	138010	19.466	19.47			0.3	1
47) Propionitrile	(1)	6.308(-0.002)	54	294456	187.830	187.83			14	100
48) Methacrylonitrile	(2)	6.533(-0.000)	67	701841	164.457	164.46			6	50
49) Bromochloromethane	(2)	6.612(0.000)	128	59075	19.612	19.61			0.2	5
50) Tetrahydrofuran	(1)	6.619(-0.000)	71	177227	104.213	104.21			0.7	10
51) Chloroform	(2)	6.752(0.000)	83	191471	21.411	21.41			0.2	1
53) 1,1,1-Trichloroethane	(2)	6.990(0.000)	97	151192	19.510	19.51			0.3	1
54) Cyclohexane	(2)	7.099(0.000)	56	198066	19.604	19.60			1	5
55) 1,1-Dichloropropene	(2)	7.203(0.000)	75	159106	21.269	21.27			0.2	5
56) Carbon Tetrachloride	(2)	7.209(0.000)	117	121844	18.440	18.44			0.2	1
58) Isobutyl Alcohol	(1)	7.312(-0.002)	41	273708	581.436	581.44			36	250
60) Benzene	(2)	7.464(0.000)	78	498369	22.788	22.79			0.2	1
61) 1,2-Dichloroethane	(2)	7.537(0.000)	62	156181	20.136	20.14			0.3	1
65) t-Amyl methyl ether	(2)	7.647(0.000)	73	332502	19.212	19.21			0.8	5
67) n-Heptane	(2)	7.878(0.000)	43	194302	21.349	21.35			2	5
69) n-Butanol	(1)	8.188(-0.001)	56	463238	1049.158	1049.16			61	250
71) Trichloroethene	(2)	8.352(-0.000)	95	120718	21.337	21.34			0.2	1
72) Methylcyclohexane	(2)	8.669(-0.000)	83	204622	19.064	19.06			0.5	5
73) 1,2-Dichloropropane	(2)	8.681(-0.000)	63	134952	24.208	24.21			0.2	1
74) Dibromomethane	(2)	8.796(-0.000)	93	77374	21.038	21.04			0.2	1
75) 1,4-Dioxane	(1)	8.760(-0.001)	88	53115M	564.114	564.11			29	250
76) Methyl Methacrylate	(2)	8.748(-0.000)	69	140610	21.490	21.49			0.2	5
78) Bromodichloromethane	(2)	9.022(-0.000)	83	135144	21.060	21.06			0.2	1
79) 2-Nitropropane	(2)	9.265(-0.000)	41	46733	17.090	17.09			0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)	9.368(-0.000)	63	105196M	22.329	22.33			0.2	10
81) cis-1,3-Dichloropropene	(2)	9.557(-0.000)	75	188836	21.813	21.81			0.2	1
82) 4-Methyl-2-pentanone	(2)	9.709(-0.000)	43	1258237	111.448	111.45			0.5	10
88) Toluene	(3)	9.940(0.000)	92	310963	22.801	22.80			0.2	1
89) trans-1,3-Dichloropropene	(3)	10.184(0.000)	75	168144	21.117	21.12			0.2	1
90) 1,3-Dichloropropene (total)	(3)		100	356980	42.929	42.93			0.4	2
91) Ethyl Methacrylate	(3)	10.238(-0.000)	69	215378	21.343	21.34			0.2	5
92) 1,1,2-Trichloroethane	(3)	10.390(-0.000)	97	122156	23.229	23.23			0.2	1
93) Tetrachloroethene	(3)	10.488(-0.000)	166	121206	21.002	21.00			0.2	1
94) 1,3-Dichloropropane	(3)	10.549(0.000)	76	205713	22.526	22.53			0.2	1
96) 2-Hexanone	(3)	10.585(-0.000)	43	1025465	113.852	113.85			0.3	10
97) Dibromochloromethane	(3)	10.768(0.000)	129	104471	20.419	20.42			0.2	1
99) 1,2-Dibromoethane	(3)	10.883(0.000)	107	126723	22.137	22.14			0.2	1
101) 1-Chlorohexane	(3)	11.309(0.000)	91	167635	21.872	21.87			0.3	5
102) Chlorobenzene	(3)	11.333(0.000)	112	337117	21.971	21.97			0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)	11.412(0.000)	131	103313	21.088	21.09			0.2	1
104) Ethylbenzene	(3)	11.418(0.000)	91	597220	22.867	22.87			0.4	1
106) m+p-Xylene	(3)	11.528(0.000)	106	464879	45.106	45.11			1	5
107) o-Xylene	(3)	11.856(0.000)	106	222603	22.175	22.17			0.4	1
108) Xylene (Total)	(3)		106	687482	67.281	67.28			1	6
109) Styrene	(3)	11.875(0.000)	104	378784	22.838	22.84			0.2	5
110) Bromoform	(3)	12.039(-0.000)	173	69695	18.914	18.91			1	4
111) Isopropylbenzene	(3)	12.155(0.000)	105	576149	22.210	22.21			0.2	5
112) Cyclohexanone	(1)	12.228(-0.003)	55	223555	447.136	447.14			25	100
115) Bromobenzene	(4)	12.422(-0.000)	156	142969	22.982	22.98			0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	12.392(-0.000)	83	212310	23.716	23.72			0.2	1
117) 1,2,3-Trichloropropane	(4)	12.441(0.000)	110	62180	21.868	21.87			0.2	5
118) trans-1,4-Dichloro-2-butene	(4)	12.416(-0.000)	53	293731	94.931	94.93			6	50

M = Compound was manually integrated.

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09355.i/19nov27b.b/yn27s31.d Injection date and time: **27-NOV-2019 20:05**
Data file Sample Info. Line: LCSY09;LCSY09;1;3;LCS;;;;yn27b31; Instrument ID: **HP09355.i** Batch: **Y193312AA**
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Blank Data file reference: **/chem2/HP09355.i/19nov27b.b/yn27b31.d**

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 27-NOV-2019 20:01
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19nov27b.b/yn27c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
119) n-Propylbenzene	(4)	12.483(-0.000)	91	723997	24.538	24.54			0.2	5
120) 2-Chlorotoluene	(4)	12.562(0.000)	126	137605	22.641	22.64			0.2	5
121) 4-Chlorotoluene	(4)	12.654(0.000)	126	143767	22.629	22.63			0.2	5
122) 1,3,5-Trimethylbenzene	(4)	12.617(0.000)	105	497700	22.802	22.80			0.3	5
124) tert-Butylbenzene	(4)	12.860(-0.000)	134	100095M	21.899	21.90			0.3	5
125) Pentachloroethane	(4)	12.897(-0.000)	167	76624	22.073	22.07			0.2	5
126) 1,2,4-Trimethylbenzene	(4)	12.903(-0.000)	105	516387	22.525	22.53			1	5
127) sec-Butylbenzene	(4)	13.025(0.000)	105	650123	23.517	23.52			0.2	5
129) 1,3-Dichlorobenzene	(4)	13.128(0.000)	146	276829	22.718	22.72			0.2	5
130) p-Isopropyltoluene	(4)	13.134(0.000)	119	548730	23.101	23.10			0.2	5
133) 1,4-Dichlorobenzene	(4)	13.201(0.000)	146	286104	22.989	22.99			0.2	5
134) 1,2,3-Trimethylbenzene	(4)	13.207(0.000)	105	531472	22.068	22.07			0.3	5
135) Benzyl Chloride	(4)	13.274(0.000)	91	343719	19.790	19.79			1	5
136) 1,3-Diethylbenzene	(4)	13.329(0.000)	119	335139	21.605	21.61			0.2	5
137) 1,4-Diethylbenzene	(4)	13.408(0.000)	119	353569	21.550	21.55			0.2	5
138) 1,2-Dichlorobenzene	(4)	13.463(0.000)	146	268492	22.531	22.53			0.2	5
139) n-Butylbenzene	(4)	13.426(0.000)	92	295904M	23.563	23.56			0.2	5
140) 1,2-Diethylbenzene	(4)	13.475(0.000)	119	276959A	21.221	21.22			0.2	5
141) Diethylbenzene (total)	(4)		100	965667	64.377	64.38			0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)	14.004(0.000)	75	47537	20.585	20.58			0.3	5
144) 1,3,5-Trichlorobenzene	(4)	14.132(0.000)	180	201245	21.968	21.97			0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.552(0.000)	180	188840	21.513	21.51			0.3	5
147) Hexachlorobutadiene	(4)	14.637(0.000)	225	85710	21.911	21.91			2	5
148) Naphthalene	(4)	14.734(0.000)	128	680591	21.869	21.87			1	5
149) 1,2,3-Trichlorobenzene	(4)	14.880(0.000)	180	179939	21.095	21.10			0.4	5
150) 2-Methylnaphthalene	(4)	15.531(0.000)	142	380496	18.495	18.49			2	4

M = Compound was manually integrated. A = User selected an alternate peak.

Total number of targets = 110

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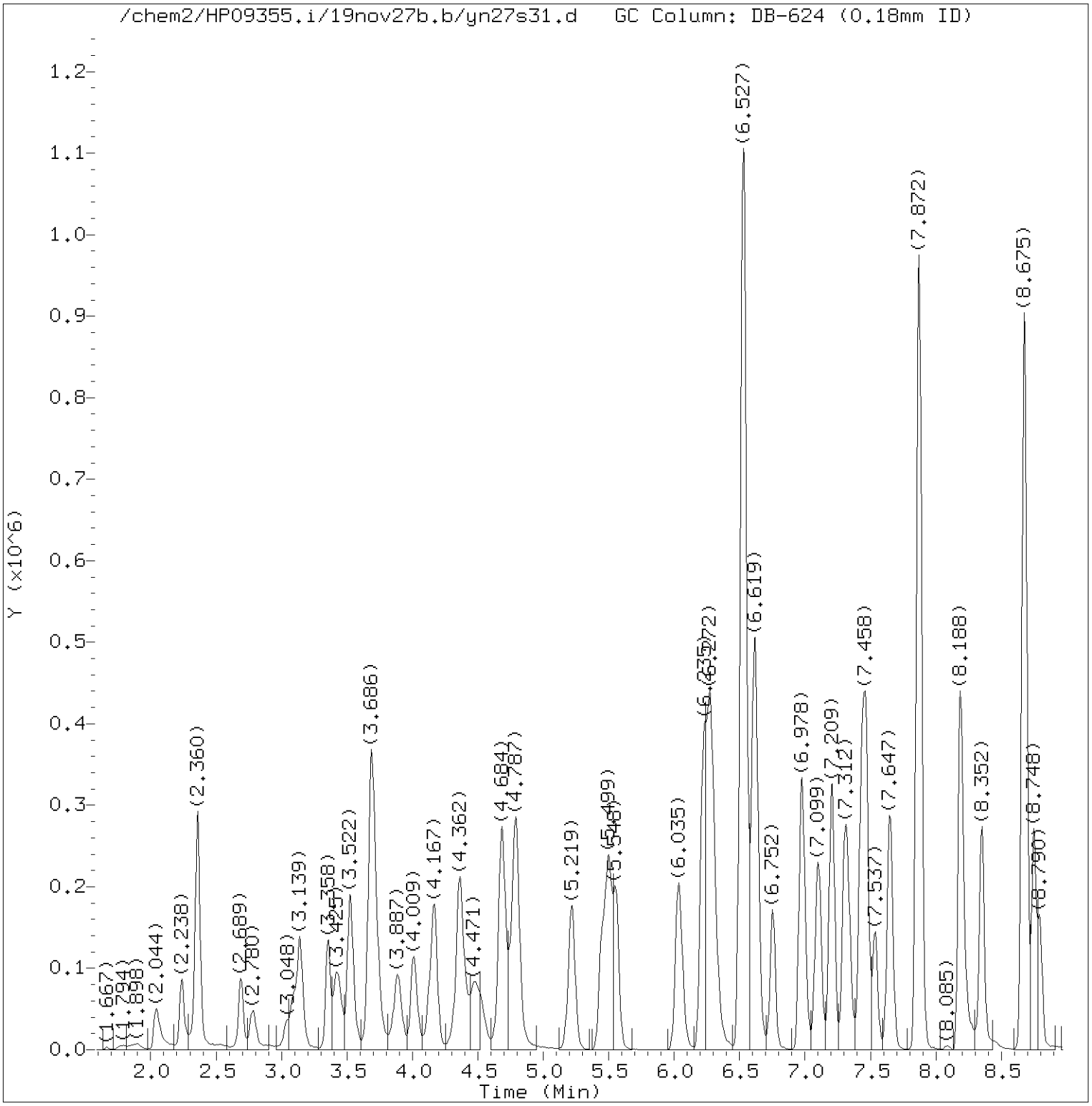
Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

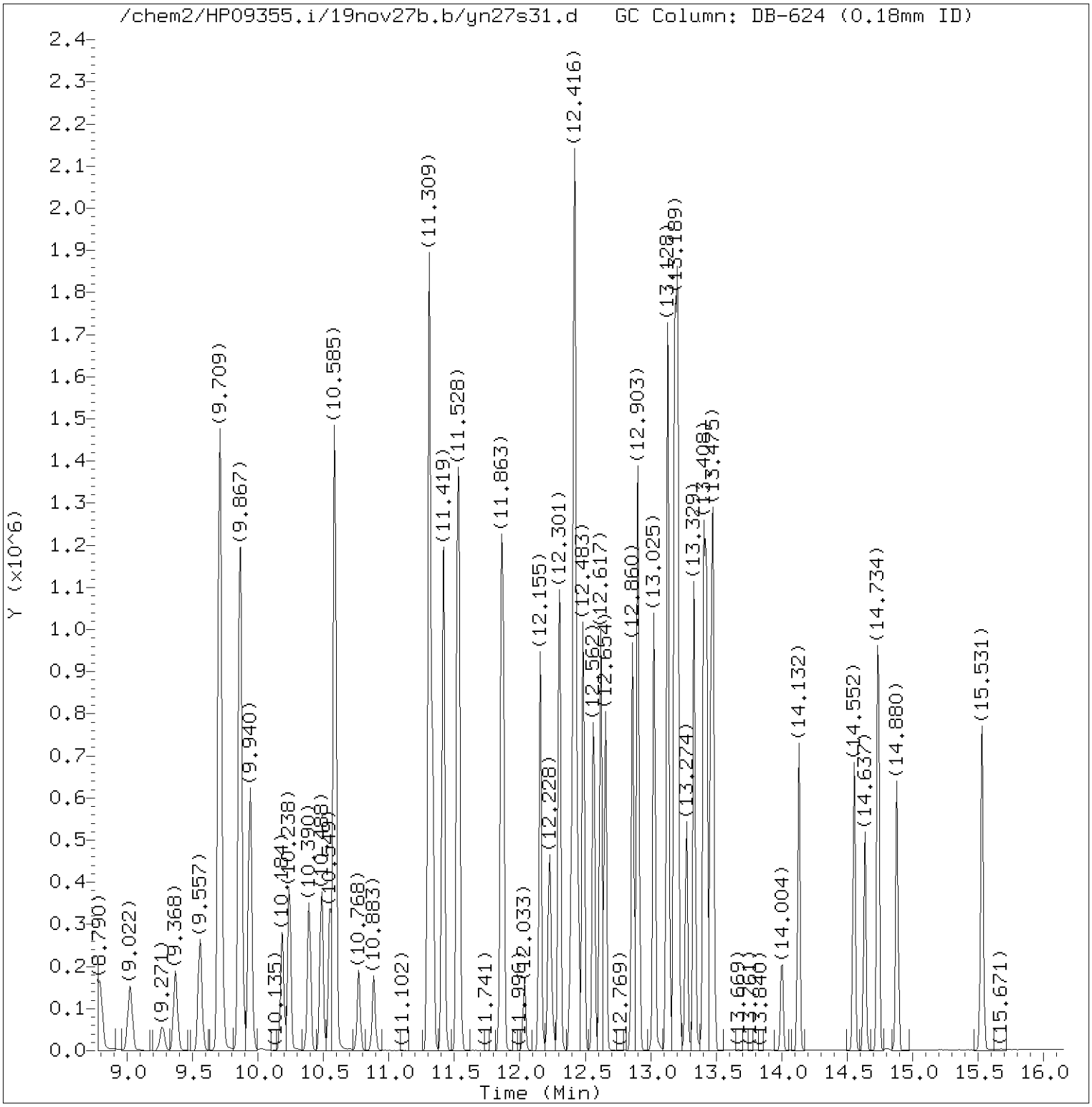
Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27s31.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:05 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: LCSY09 Lab Sample ID: LCSY09

Digitally signed by Don V. Viray
on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27s31.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:05 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: LCSY09 Lab Sample ID: LCSY09

Digitally signed by Don V. Viray
on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27s31.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:05 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: LCSY09 Lab Sample ID: LCSY09

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.044	85	101053	10.907
4) Chloromethane	(2)	2.238	50	129559	16.269
6) Vinyl Chloride	(2)	2.354	62	125156	16.008
5) 1,3-Butadiene	(2)	2.360	39	153303	24.740
8) Bromomethane	(2)	2.689	94	83550	14.404
9) Chloroethane	(2)	2.786	64	71660	15.794
12) Trichlorofluoromethane	(2)	3.090	101	134744	13.510
11) n-Pentane	(2)	3.139	43	138551	14.327
14) Ethyl ether	(2)	3.358	59	113961	21.943
15) Freon 123a	(2)	3.425	67	126443	20.997
16) Acrolein	(1)	3.522	56	312325	135.765
17) 1,1-Dichloroethene	(2)	3.680	96	92867	21.180
18) Acetone	(1)	3.692	58	185372	171.245
19) Freon 113	(2)	3.705	101	86323	17.294
21) 2-Propanol	(1)	3.863	45	119516	183.380
22) Methyl Iodide	(2)	3.887	142	152951	17.765
23) Carbon Disulfide	(2)	4.009	76	311546	19.657
27) Methyl Acetate	(2)	4.130	43	180794	23.588
25) Allyl Chloride	(2)	4.167	41	183907	24.189
29)*t-Butyl alcohol-d10	(1)	4.349	65	302899M	250.000
28) Methylene Chloride	(2)	4.362	84	119371	22.799
30) t-Butyl alcohol	(1)	4.477	59	294711	216.218
31) Acrylonitrile	(2)	4.684	53	463139	115.371
33) Methyl Tertiary Butyl Ether	(2)	4.769	73	323480	18.514
32) trans-1,2-Dichloroethene	(2)	4.794	96	110062	21.671
34) n-Hexane	(2)	5.219	57	172171	19.995
36) 1,1-Dichloroethane	(2)	5.444	63	207873	22.508
38) di-Isopropyl ether	(2)	5.499	45	410034	23.243
39) 2-Chloro-1,3-butadiene	(2)	5.560	53	176621	21.100
40) Ethyl t-butyl ether	(2)	6.035	59	339250	19.620
43) 1,2-Dichloroethene (Total)	(2)		96	243427	44.771
44) 2-Butanone	(2)	6.229	43	1008208	168.294
42) cis-1,2-Dichloroethene	(2)	6.272	96	133365	23.100
45) 2,2-Dichloropropane	(2)	6.290	77	138010	19.466
47) Propionitrile	(1)	6.308	54	294456	187.830
48) Methacrylonitrile	(2)	6.533	67	701841	164.457
49) Bromochloromethane	(2)	6.613	128	59075	19.612
50) Tetrahydrofuran	(1)	6.619	71	177227	104.213

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27s31.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:05 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: LCSY09 Lab Sample ID: LCSY09

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	6.752	83	191471	21.411
52)$Dibromofluoromethane	(2)	6.971	113	216769	45.731
53) 1,1,1-Trichloroethane	(2)	6.990	97	151192	19.510
54) Cyclohexane	(2)	7.099	56	198066	19.604
55) 1,1-Dichloropropene	(2)	7.203	75	159106	21.269
56) Carbon Tetrachloride	(2)	7.209	117	121844	18.440
58) Isobutyl Alcohol	(1)	7.312	41	273708	581.436
57)$1,2-Dichloroethane-d4	(2)	7.434	102	59771	48.233
60) Benzene	(2)	7.464	78	498369	22.788
61) 1,2-Dichloroethane	(2)	7.537	62	156181	20.136
65) t-Amyl methyl ether	(2)	7.647	73	332502	19.212
66)*Fluorobenzene	(2)	7.866	96	1010184	50.000
67) n-Heptane	(2)	7.878	43	194302	21.349
69) n-Butanol	(1)	8.188	56	463238	1049.158
71) Trichloroethene	(2)	8.352	95	120718	21.337
72) Methylcyclohexane	(2)	8.669	83	204622	19.064
73) 1,2-Dichloropropane	(2)	8.681	63	134952	24.208
76) Methyl Methacrylate	(2)	8.748	69	140610	21.490
75) 1,4-Dioxane	(1)	8.760	88	53115M	564.114
74) Dibromomethane	(2)	8.797	93	77374	21.038
78) Bromodichloromethane	(2)	9.022	83	135144	21.060
79) 2-Nitropropane	(2)	9.265	41	46733	17.090
80) 2-Chloroethyl Vinyl Ether	(2)	9.368	63	105196M	22.329
81) cis-1,3-Dichloropropene	(2)	9.557	75	188836	21.813
82) 4-Methyl-2-pentanone	(2)	9.709	43	1258237	111.448
83)$Toluene-d8	(3)	9.867	98	989551	49.667
88) Toluene	(3)	9.940	92	310963	22.801
90) 1,3-Dichloropropene (total)	(3)		100	356980	42.929
89) trans-1,3-Dichloropropene	(3)	10.184	75	168144	21.117
91) Ethyl Methacrylate	(3)	10.238	69	215378	21.343
92) 1,1,2-Trichloroethane	(3)	10.390	97	122156	23.229
93) Tetrachloroethene	(3)	10.488	166	121206	21.002
94) 1,3-Dichloropropane	(3)	10.549	76	205713	22.526
96) 2-Hexanone	(3)	10.585	43	1025465	113.852
97) Dibromochloromethane	(3)	10.768	129	104471	20.419
99) 1,2-Dibromoethane	(3)	10.883	107	126723	22.137
100)*Chlorobenzene-d5	(3)	11.309	117	736366	50.000
101) 1-Chlorohexane	(3)	11.309	91	167635	21.872

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27s31.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:05 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: LCSY09 Lab Sample ID: LCSY09

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
102) Chlorobenzene	(3)	11.333	112	337117	21.971
103) 1,1,1,2-Tetrachloroethane	(3)	11.412	131	103313	21.088
104) Ethylbenzene	(3)	11.419	91	597220	22.867
106) m+p-Xylene	(3)	11.528	106	464879	45.106
108) Xylene (Total)	(3)		106	687482	67.281
107) o-Xylene	(3)	11.857	106	222603	22.175
109) Styrene	(3)	11.875	104	378784	22.838
110) Bromoform	(3)	12.039	173	69695	18.914
111) Isopropylbenzene	(3)	12.155	105	576149	22.210
112) Cyclohexanone	(1)	12.228	55	223555	447.136
114)$4-Bromofluorobenzene	(3)	12.301	95	366864	48.194
116) 1,1,2,2-Tetrachloroethane	(4)	12.392	83	212310	23.716
118) trans-1,4-Dichloro-2-butene	(4)	12.416	53	293731	94.931
115) Bromobenzene	(4)	12.422	156	142969	22.982
117) 1,2,3-Trichloropropane	(4)	12.441	110	62180	21.868
119) n-Propylbenzene	(4)	12.483	91	723997	24.538
120) 2-Chlorotoluene	(4)	12.562	126	137605	22.641
122) 1,3,5-Trimethylbenzene	(4)	12.617	105	497700	22.802
121) 4-Chlorotoluene	(4)	12.654	126	143767	22.629
124) tert-Butylbenzene	(4)	12.860	134	100095M	21.899
125) Pentachloroethane	(4)	12.897	167	76624	22.073
126) 1,2,4-Trimethylbenzene	(4)	12.903	105	516387	22.525
127) sec-Butylbenzene	(4)	13.025	105	650123	23.517
129) 1,3-Dichlorobenzene	(4)	13.128	146	276829	22.718
130) p-Isopropyltoluene	(4)	13.134	119	548730	23.101
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	378717	50.000
133) 1,4-Dichlorobenzene	(4)	13.201	146	286104	22.989
134) 1,2,3-Trimethylbenzene	(4)	13.207	105	531472	22.068
135) Benzyl Chloride	(4)	13.274	91	343719	19.790
136) 1,3-Diethylbenzene	(4)	13.329	119	335139	21.605
141) Diethylbenzene (total)	(4)		100	965667	64.377
137) 1,4-Diethylbenzene	(4)	13.408	119	353569	21.550
139) n-Butylbenzene	(4)	13.426	92	295904M	23.563
138) 1,2-Dichlorobenzene	(4)	13.463	146	268492	22.531
140) 1,2-Diethylbenzene	(4)	13.475	119	276959A	21.221
142) 1,2-Dibromo-3-chloropropane	(4)	14.004	75	47537	20.585
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	201245	21.968
146) 1,2,4-Trichlorobenzene	(4)	14.552	180	188840	21.513

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27s31.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:05 Analyst ID: DVV10203

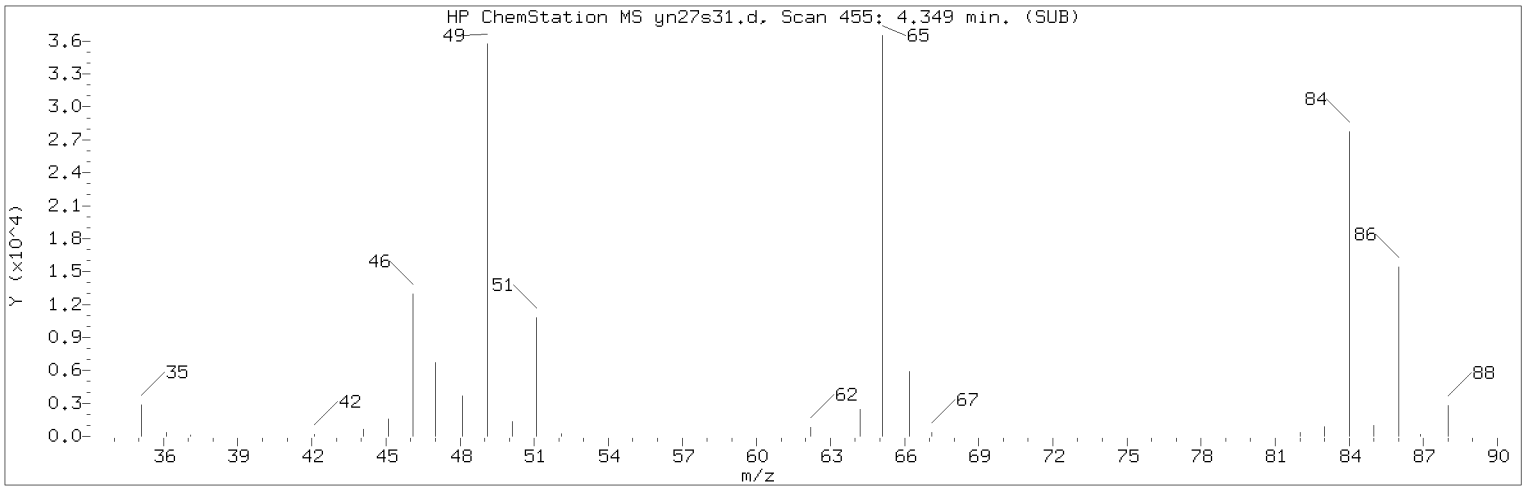
Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: LCSY09 Lab Sample ID: LCSY09

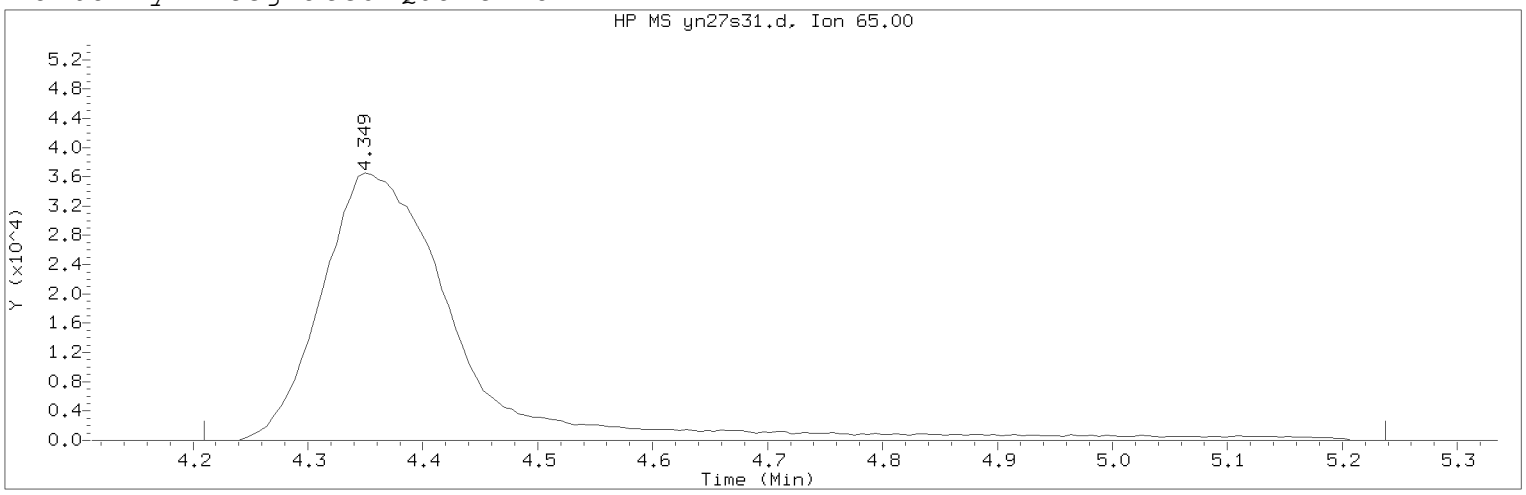
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Hexachlorobutadiene	(4)	14.637	225	85710	21.911
148) Naphthalene	(4)	14.734	128	680591	21.869
149) 1,2,3-Trichlorobenzene	(4)	14.880	180	179939	21.095
150) 2-Methylnaphthalene	(4)	15.531	142	380496	18.495

Digitally signed by Don V. Viray
on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27s31.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:05 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: LCSY09 Lab Sample ID: LCSY09

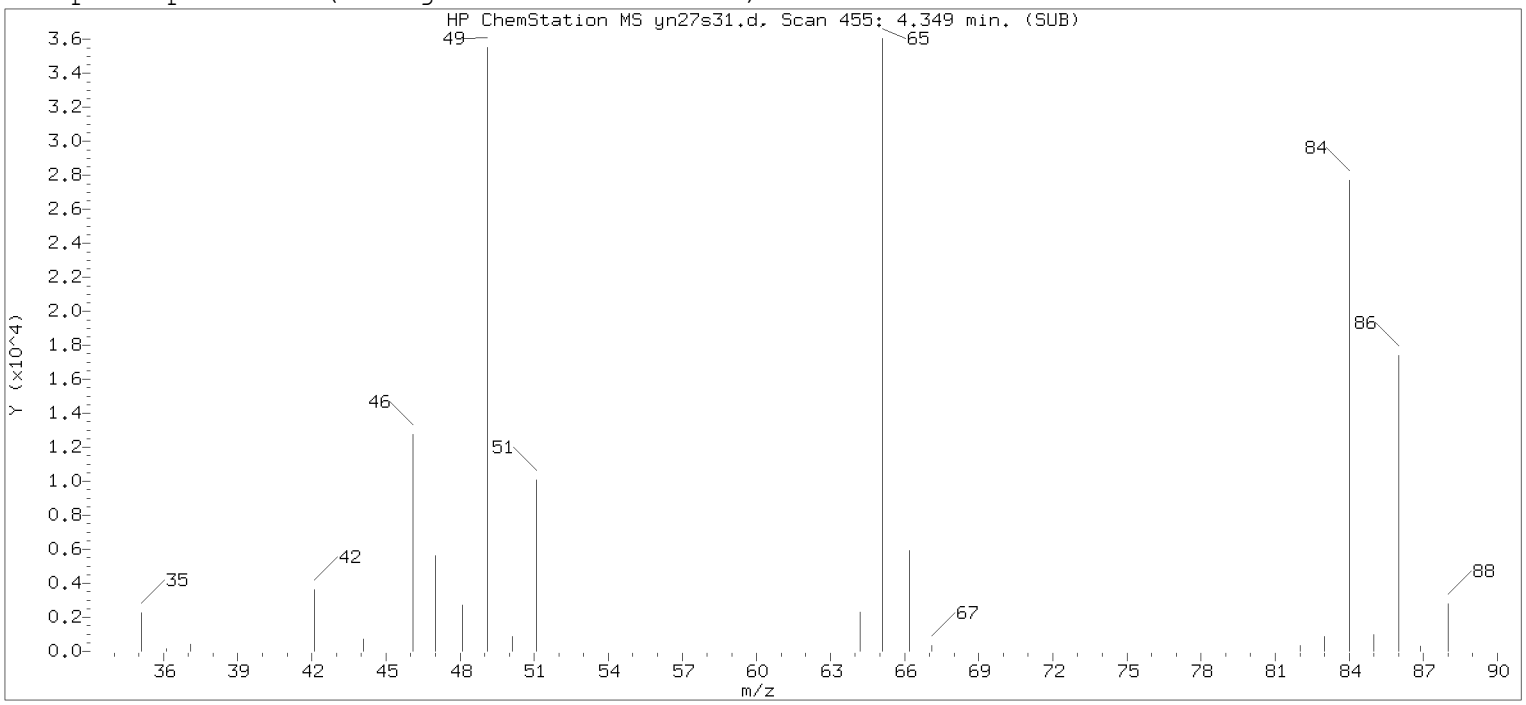
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 455
Retention Time (minutes): 4.349
Quant Ion : 65.00
Area (flag) : 302899M
On-Column Amount (ng) : 250.0000
Integration start scan : 431 Integration stop scan: 600
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

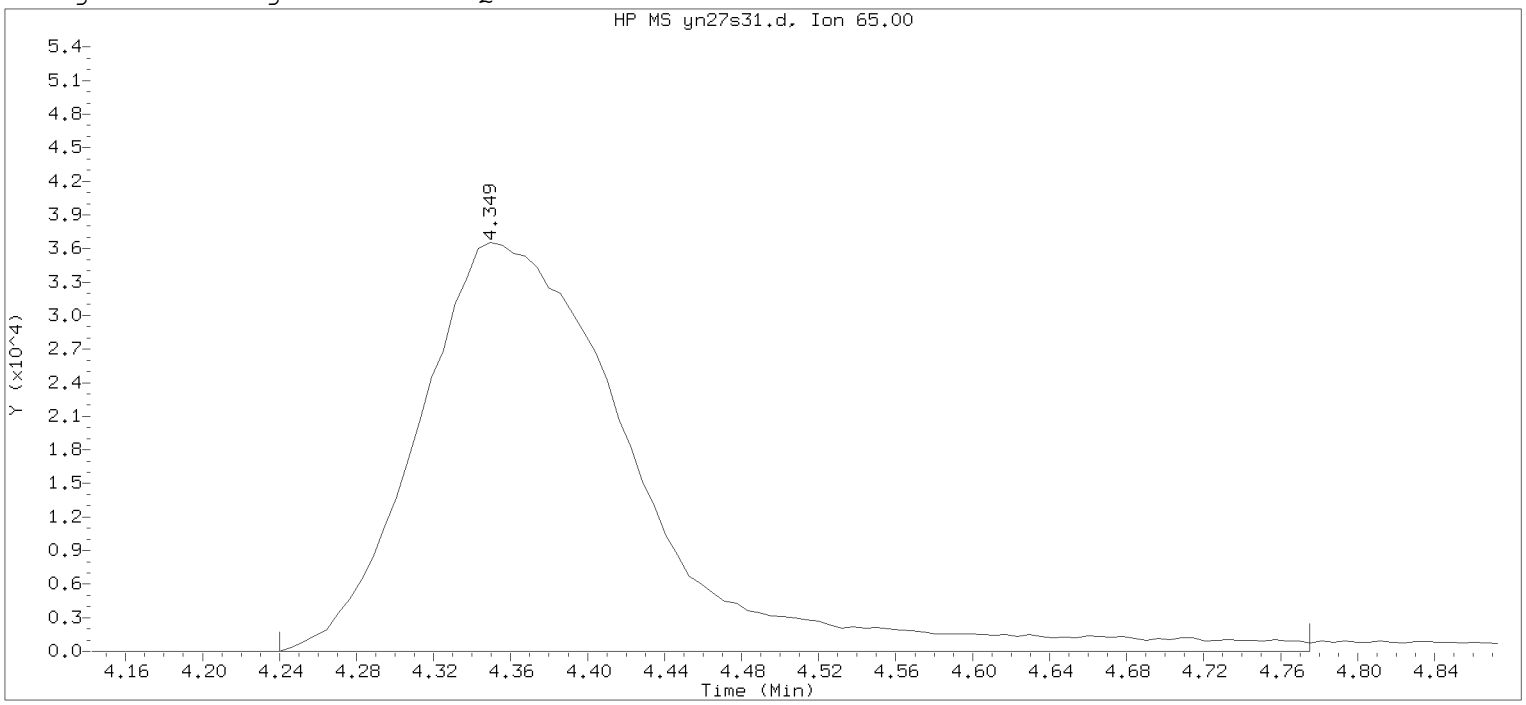
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27s31.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:05 Analyst ID: DVV10203

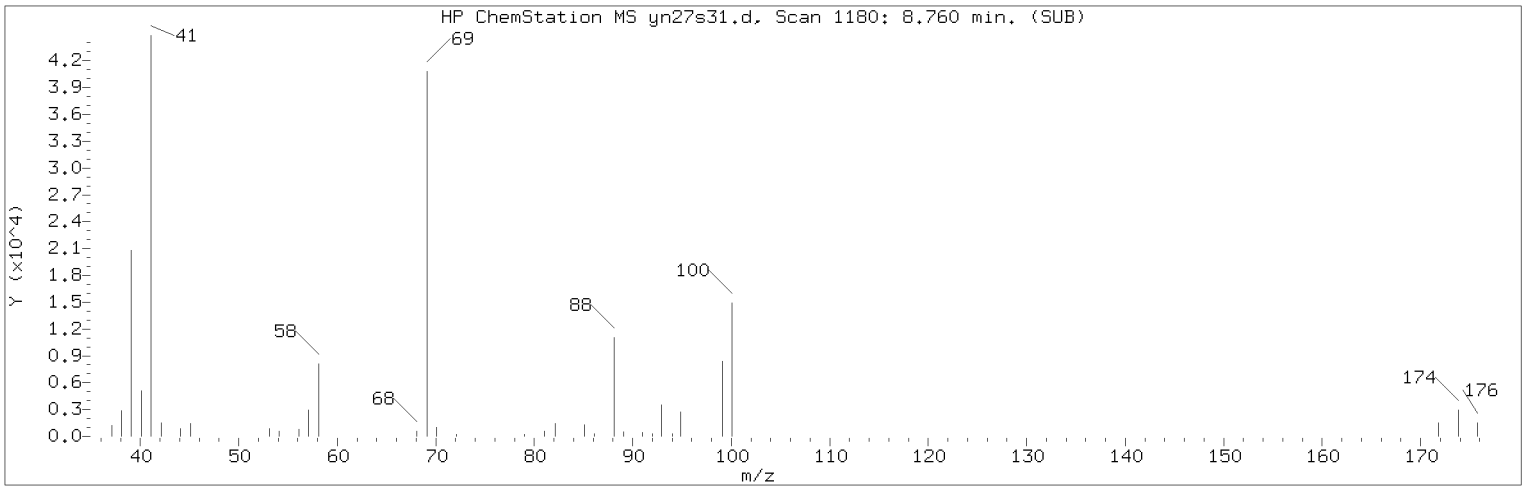
Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:23 Automation

Sample Name: LCSY09 Lab Sample ID: LCSY09

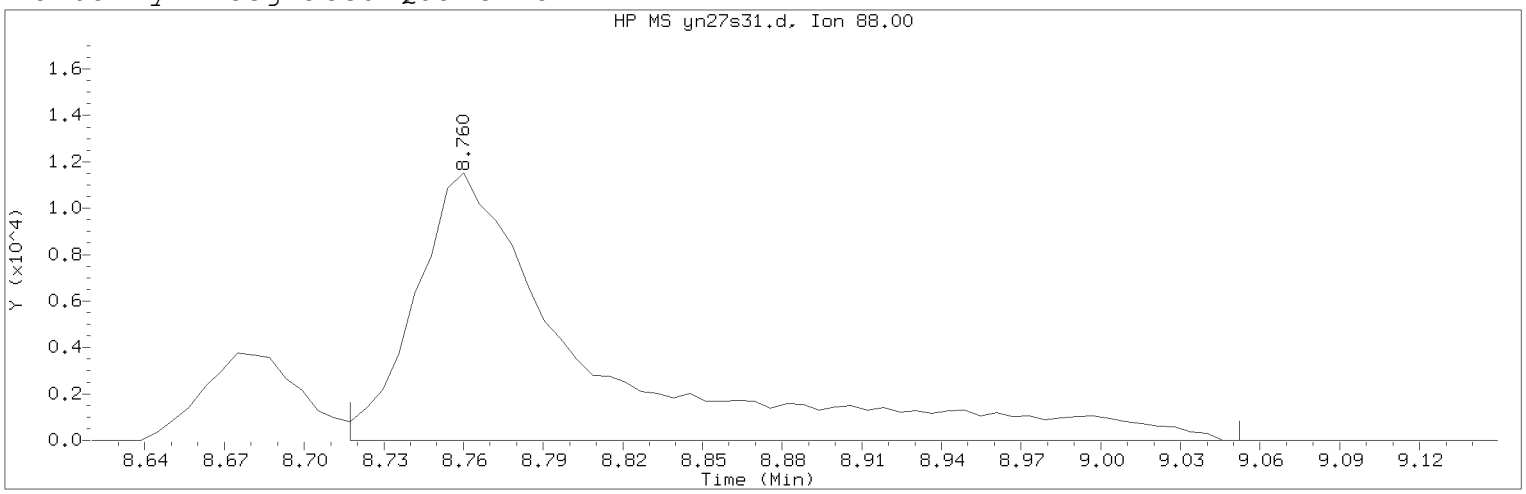
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 455
Retention Time (minutes): 4.349
Quant Ion : 65.00
Area : 286964
On-column Amount (ng) : 250.0000
Integration start scan : 436 Integration stop scan: 524
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/27/2019 at 21:39.
Target 3.5 esignature user id: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27s31.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:05 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: LCSY09 Lab Sample ID: LCSY09

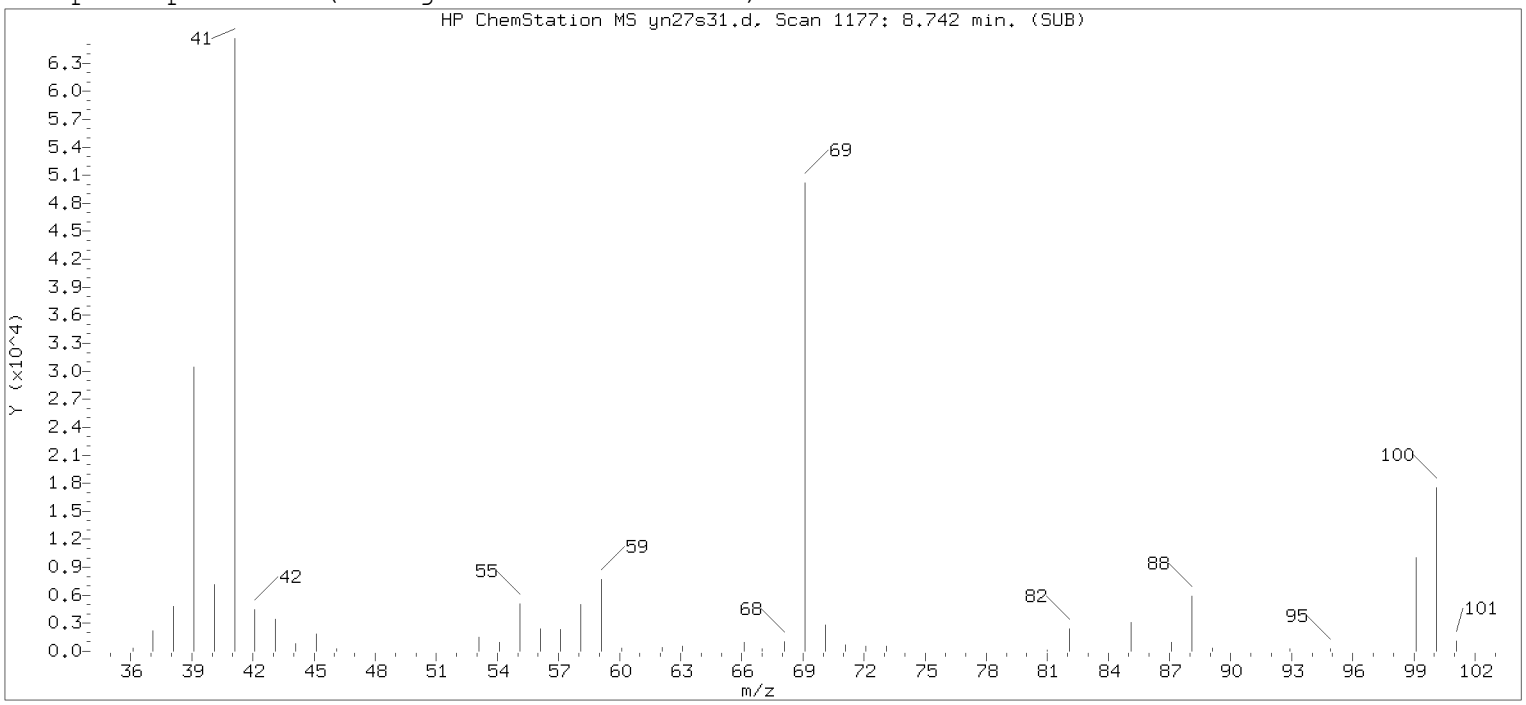
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1180
Retention Time (minutes): 8.760
Quant Ion : 88.00
Area (flag) : 53115M
On-Column Amount (ng) : 564.1136
Integration start scan : 1172 Integration stop scan: 1227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

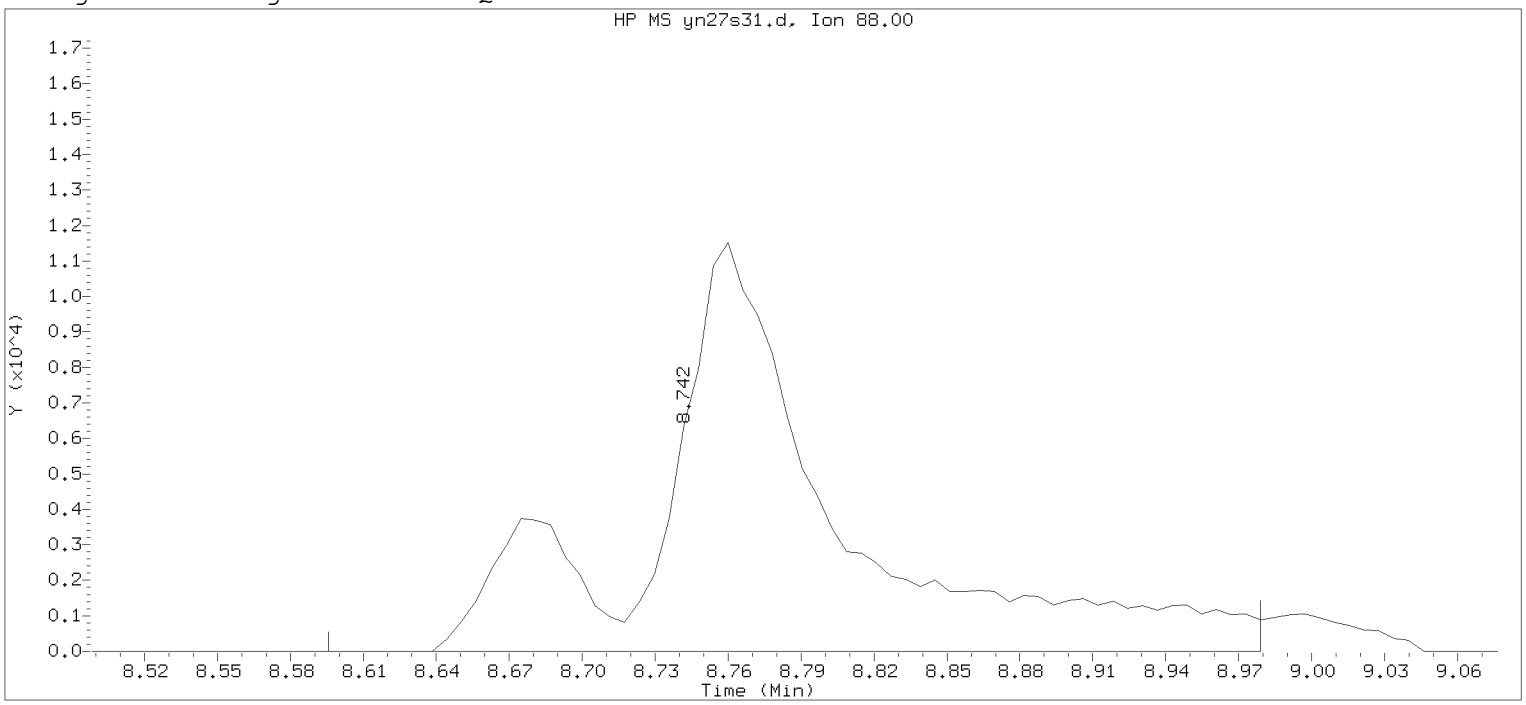
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27s31.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:05 Analyst ID: DVV10203

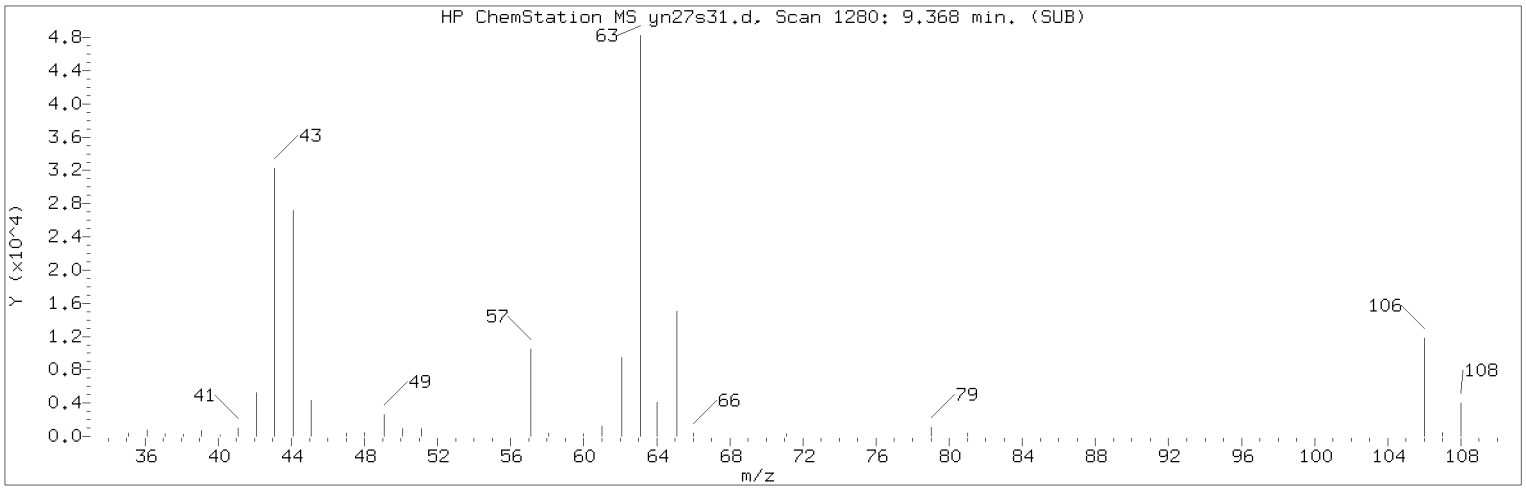
Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:23 Automation

Sample Name: LCSY09 Lab Sample ID: LCSY09

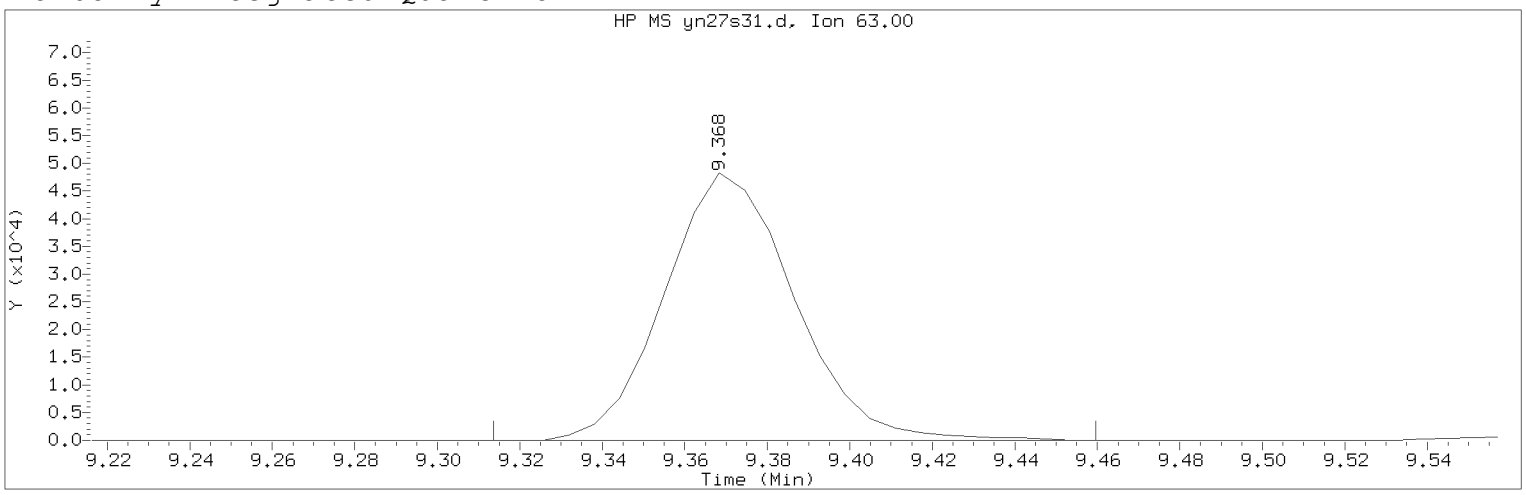
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1177		
Retention Time (minutes)	: 8.742		
Quant Ion	: 88.00		
Area	: 59755		
On-column Amount (ng)	: 669.8863		
Integration start scan	: 1152	Integration stop scan:	1215
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 11/27/2019 at 21:39.
Target 3.5 esignature user id: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27s31.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:05 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: LCSY09 Lab Sample ID: LCSY09

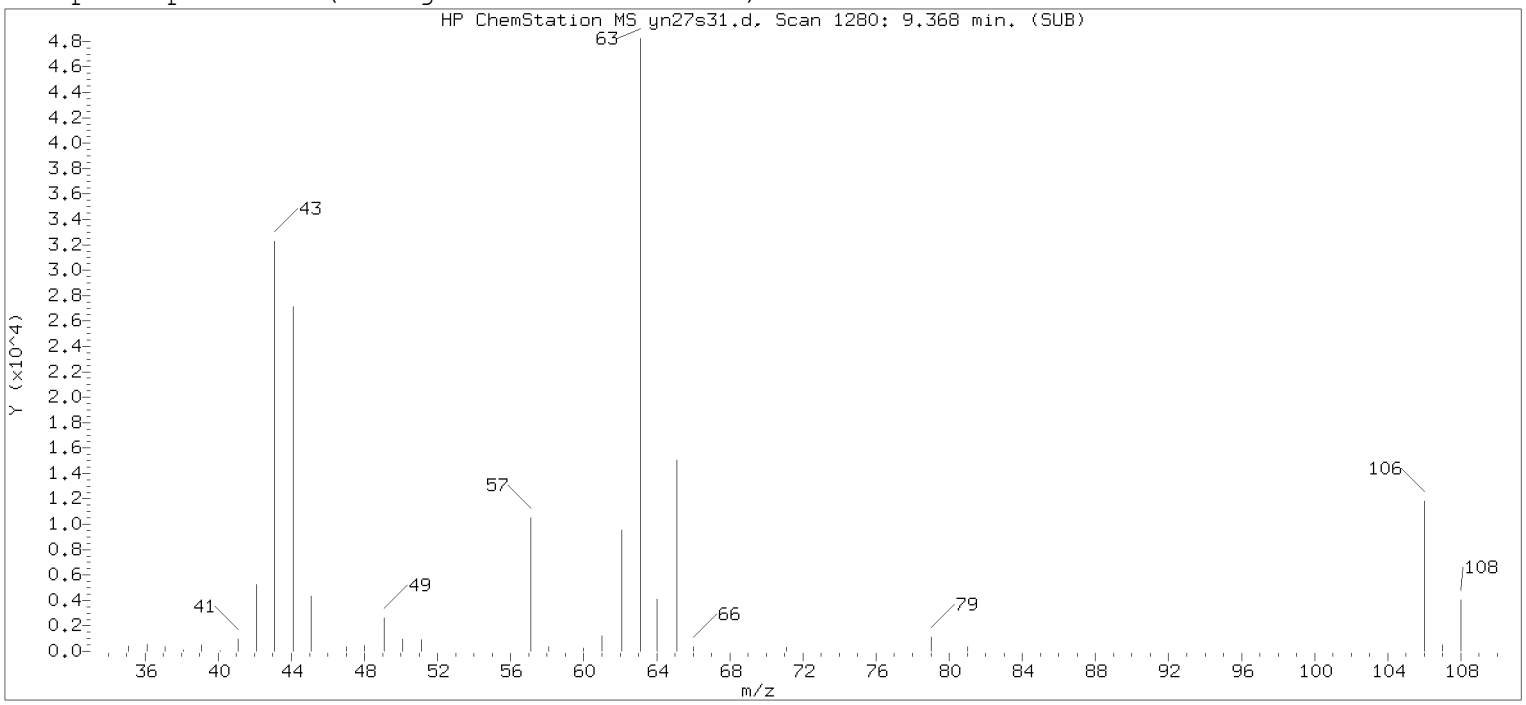
Compound Number : 80
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1280
Retention Time (minutes): 9.368
Quant Ion : 63.00
Area (flag) : 105196M
On-Column Amount (ng) : 22.3293
Integration start scan : 1270 Integration stop scan: 1294
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

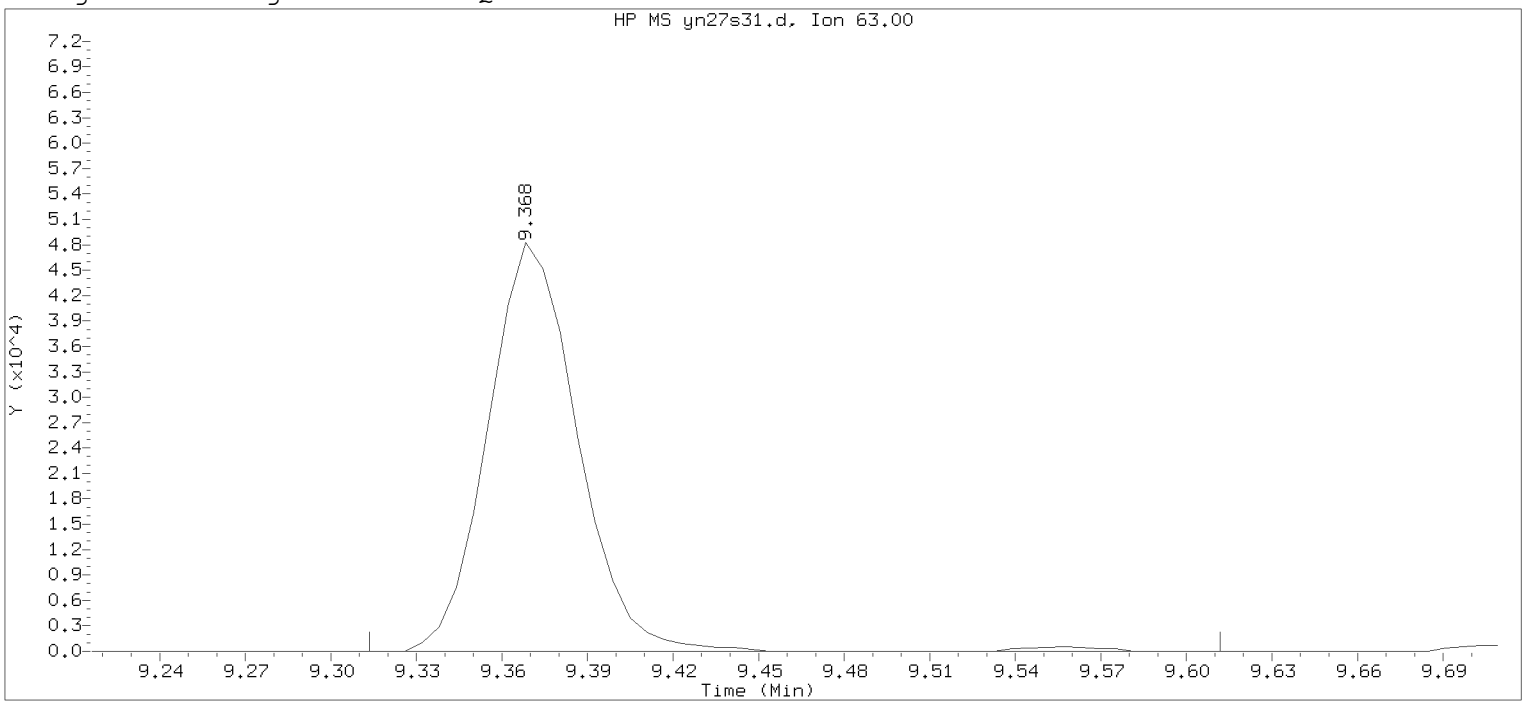
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27s31.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:05 Analyst ID: DVV10203

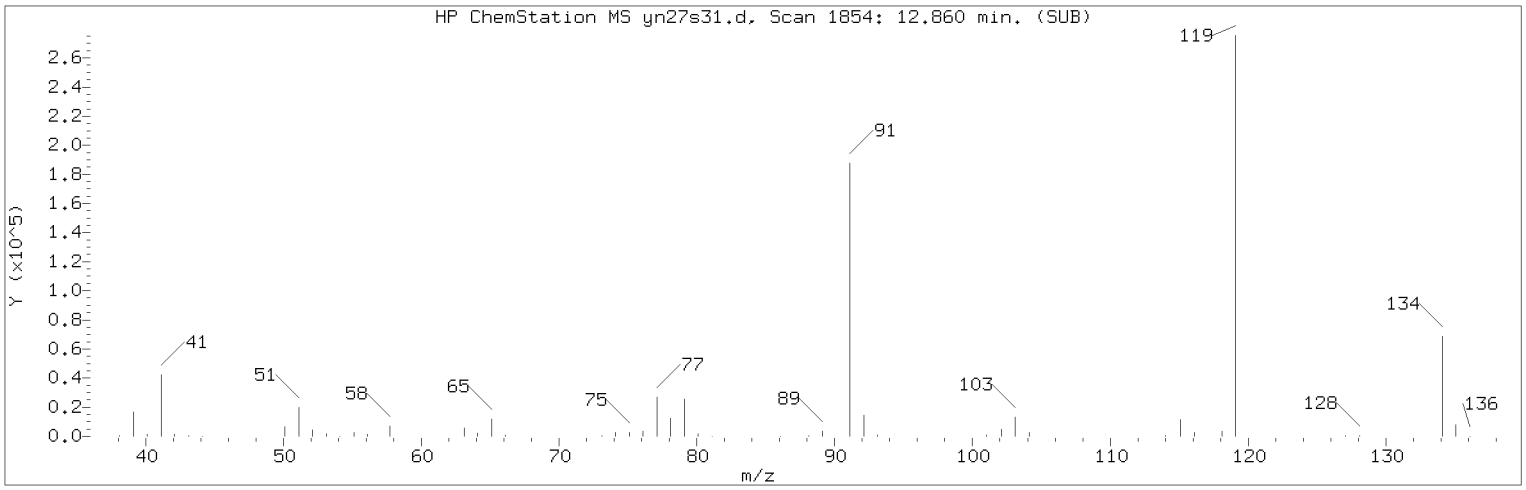
Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:23 Automation

Sample Name: LCSY09 Lab Sample ID: LCSY09

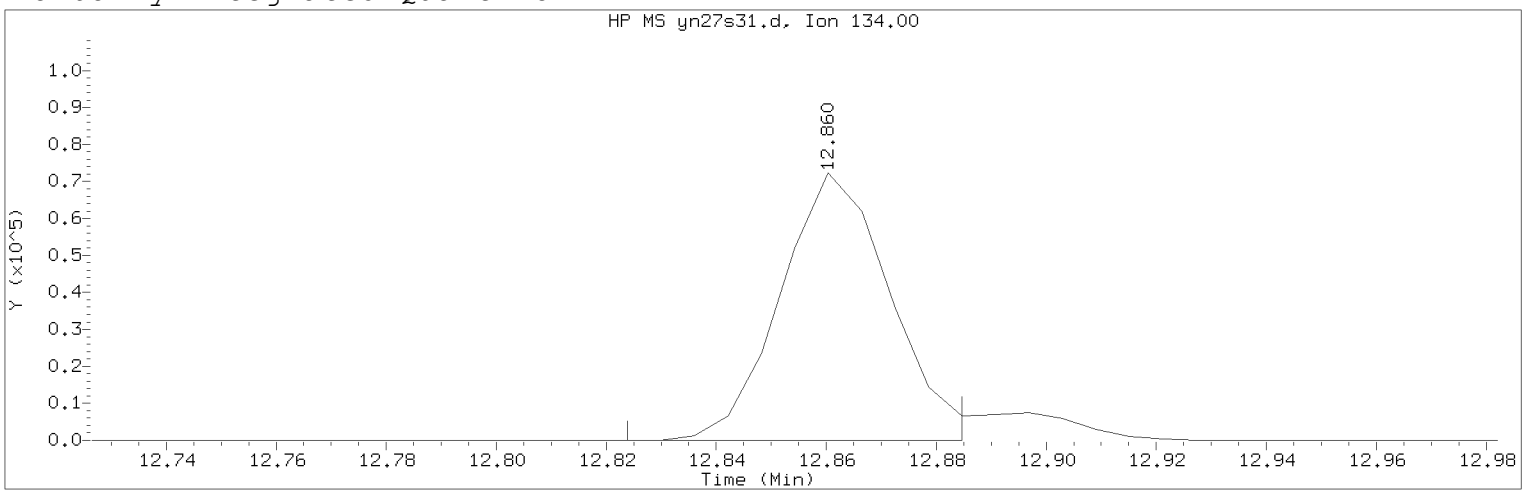
Compound Number : 80
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1280
Retention Time (minutes): 9.368
Quant Ion : 63.00
Area : 106179
On-column Amount (ng) : 22.5381
Integration start scan : 1270 Integration stop scan: 1319
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27s31.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:05 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: LCSY09 Lab Sample ID: LCSY09

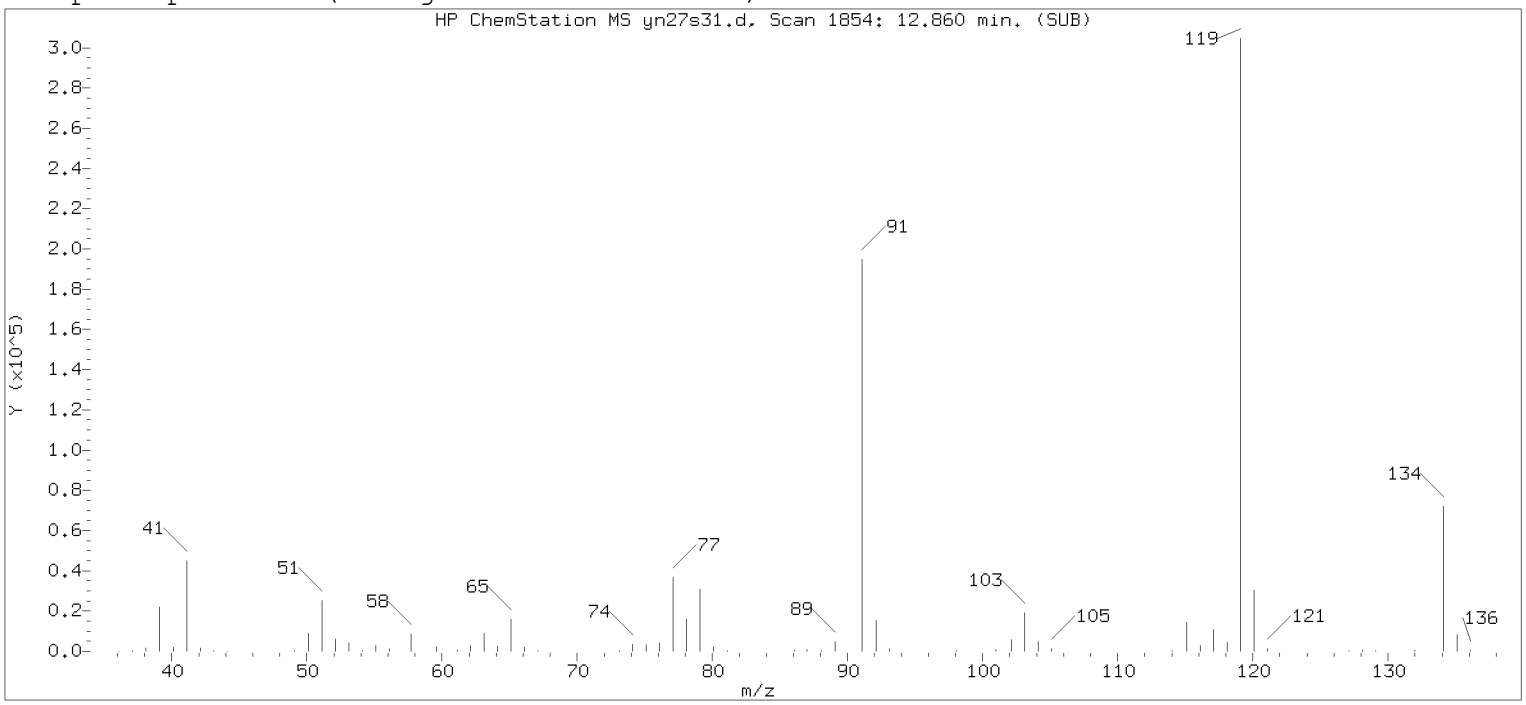
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area (flag) : 100095M
On-Column Amount (ng) : 21.8991
Integration start scan : 1847 Integration stop scan: 1857
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

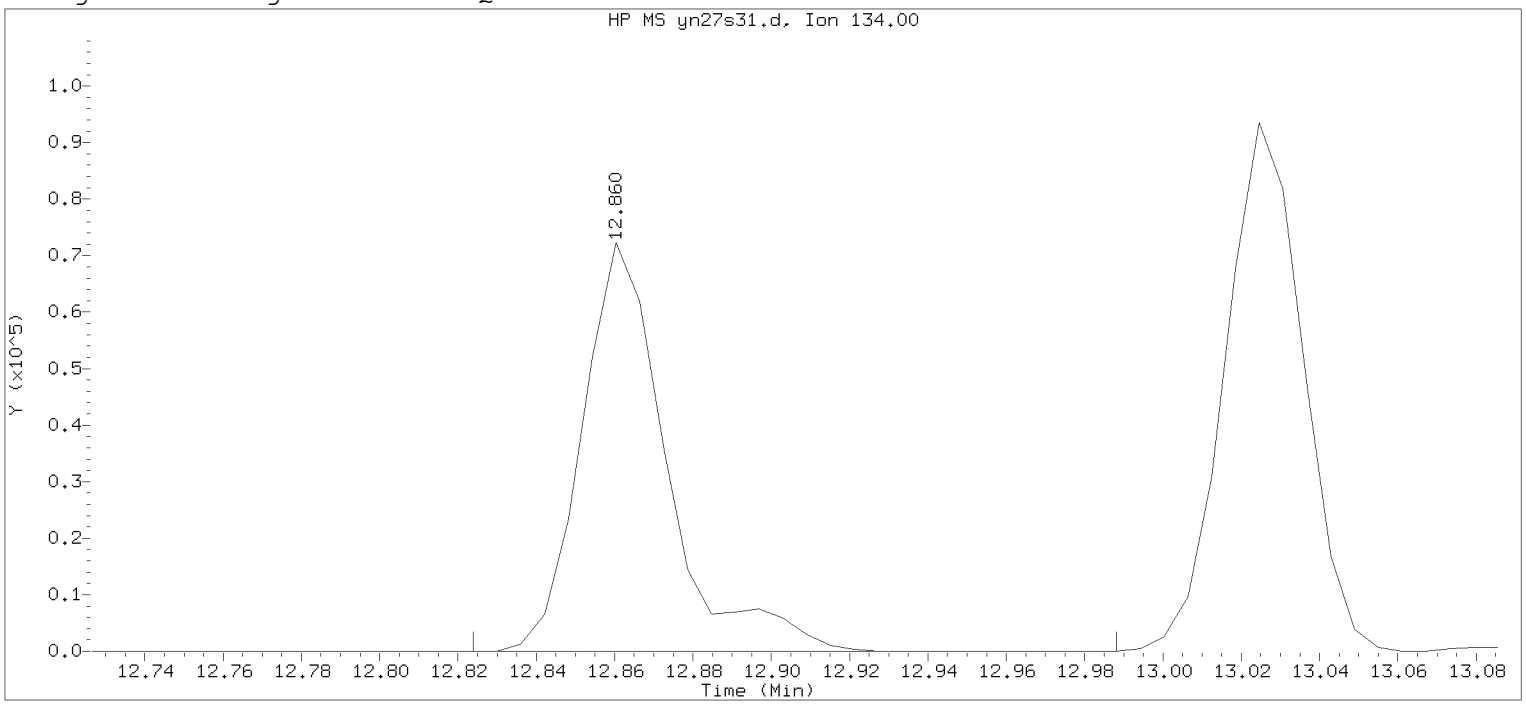
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27s31.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:05 Analyst ID: DVV10203

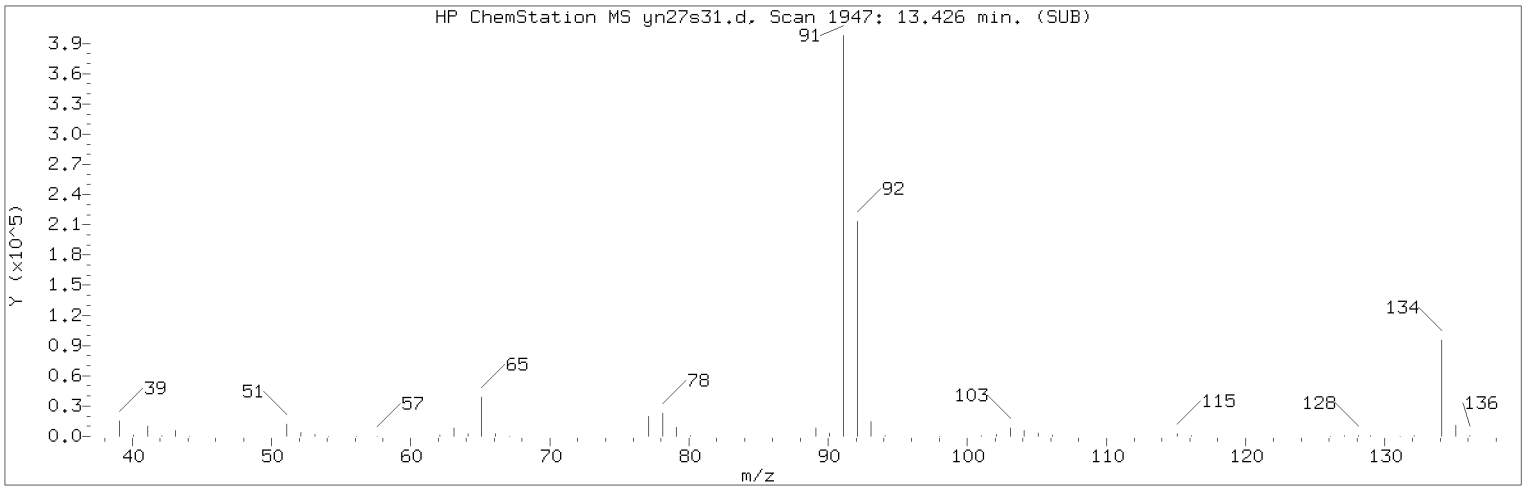
Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:23 Automation

Sample Name: LCSY09 Lab Sample ID: LCSY09

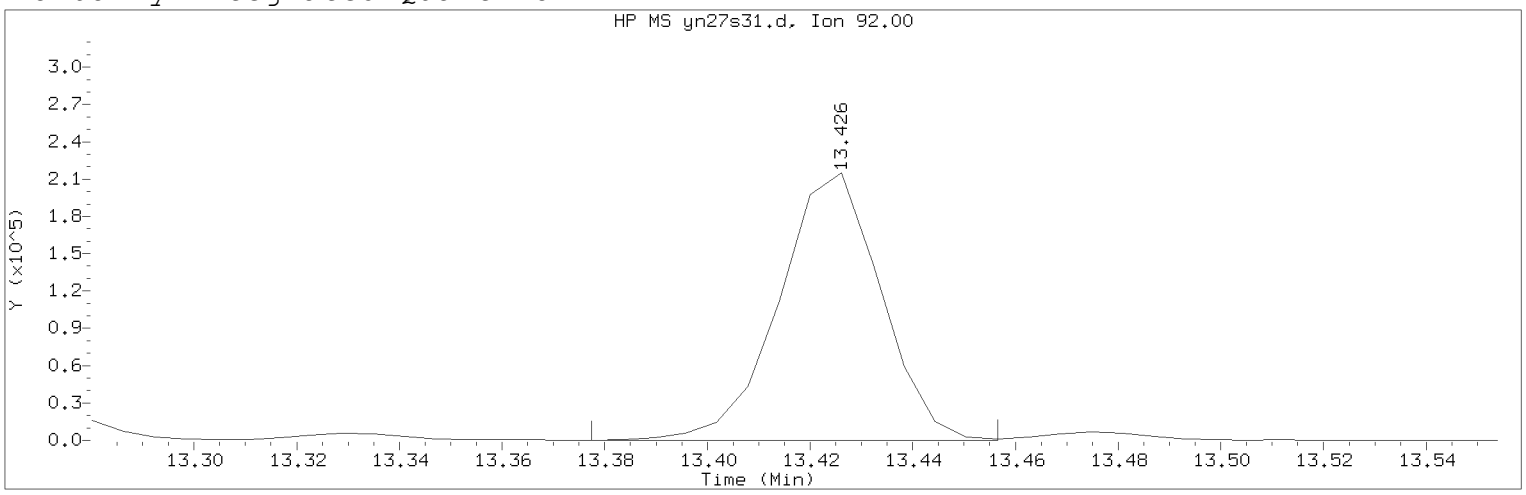
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area : 109134
On-column Amount (ng) : 23.8767
Integration start scan : 1847 Integration stop scan: 1874
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/27/2019 at 21:39.
Target 3.5 esignature user id: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27s31.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:05 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: LCSY09 Lab Sample ID: LCSY09

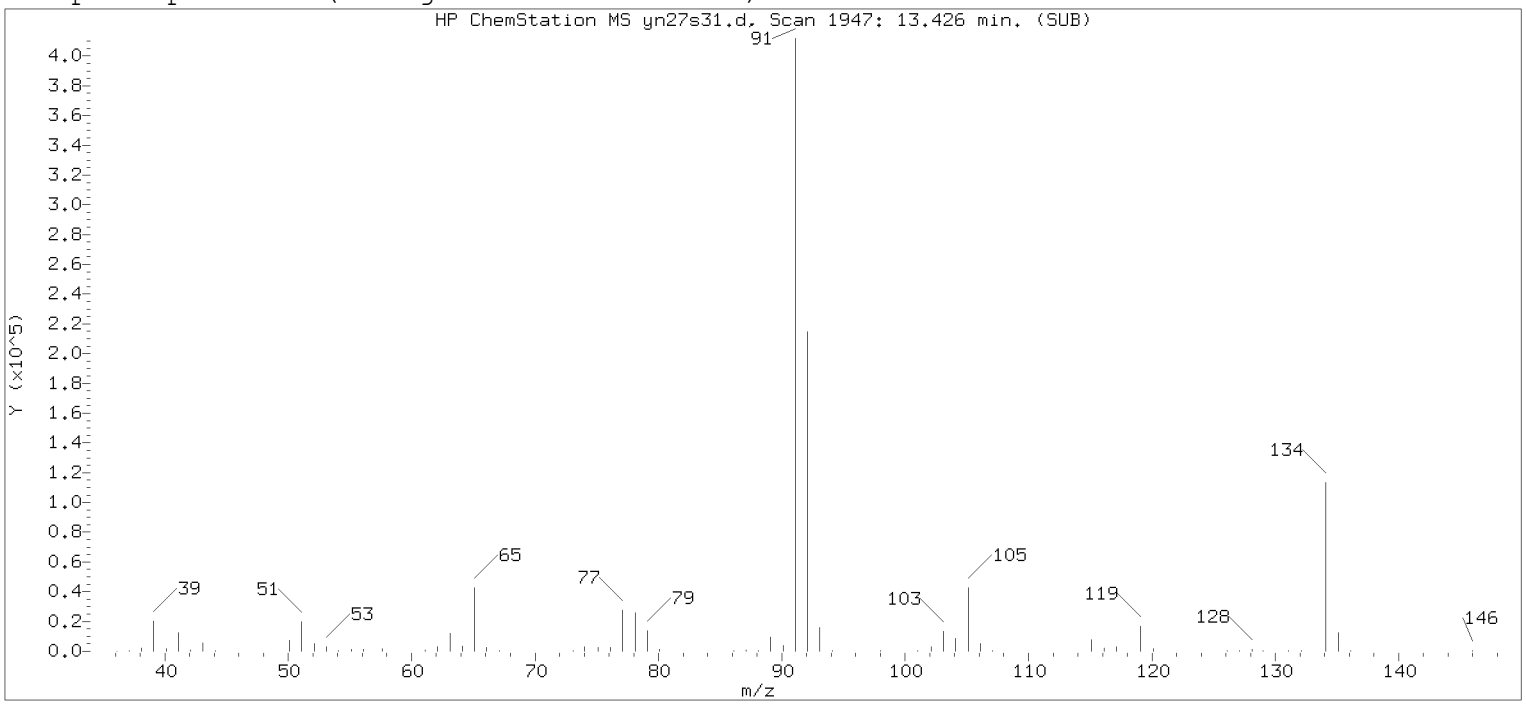
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1947
Retention Time (minutes): 13.426
Quant Ion : 92.00
Area (flag) : 295904M
On-Column Amount (ng) : 23.5630
Integration start scan : 1938 Integration stop scan: 1951
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

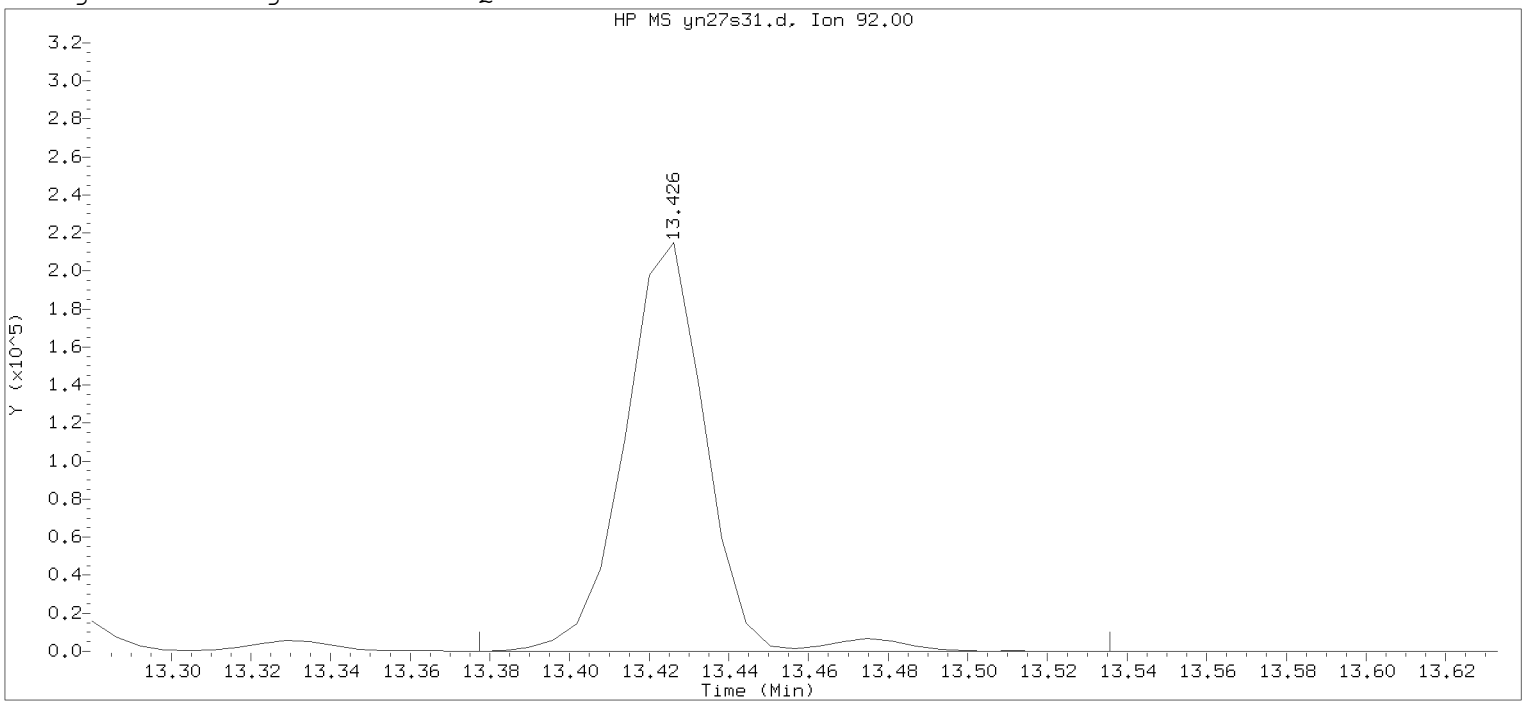
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27s31.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:05 Analyst ID: DVV10203

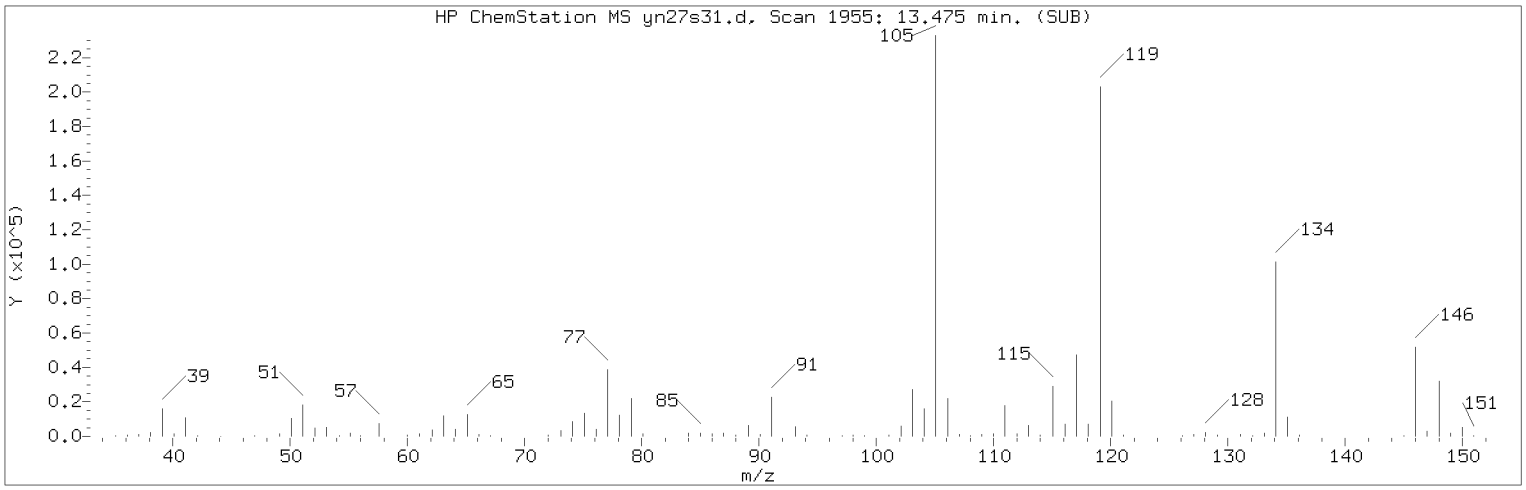
Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:23 Automation

Sample Name: LCSY09 Lab Sample ID: LCSY09

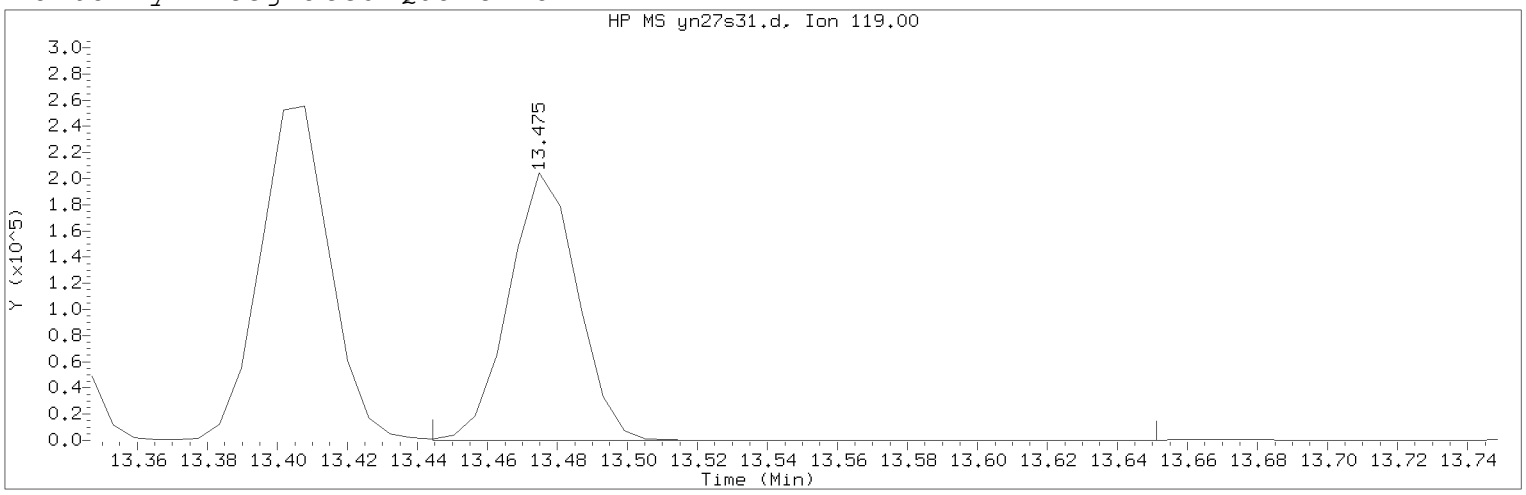
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1947
Retention Time (minutes): 13.426
Quant Ion : 92.00
Area : 304863
On-column Amount (ng) : 24.2765
Integration start scan : 1938 Integration stop scan: 1964
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/27/2019 at 21:39.
Target 3.5 esignature user id: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27s31.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:05 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: LCSY09 Lab Sample ID: LCSY09

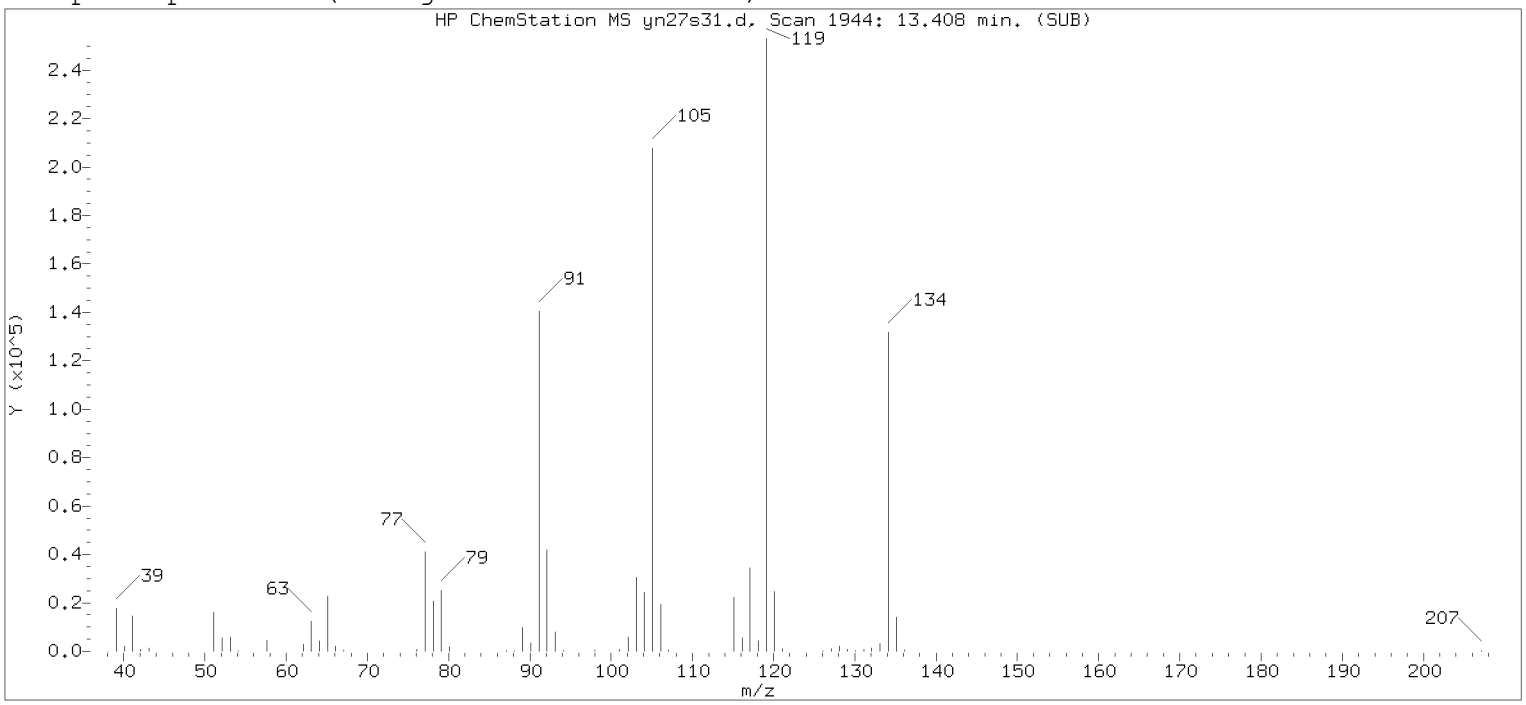
Compound Number : 140
Compound Name : 1,2-Diethylbenzene
Scan Number : 1955
Retention Time (minutes): 13.475
Quant Ion : 119.00
Area (flag) : 276959A
On-Column Amount (ng) : 21.2213
Integration start scan : 1949 Integration stop scan: 1983
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

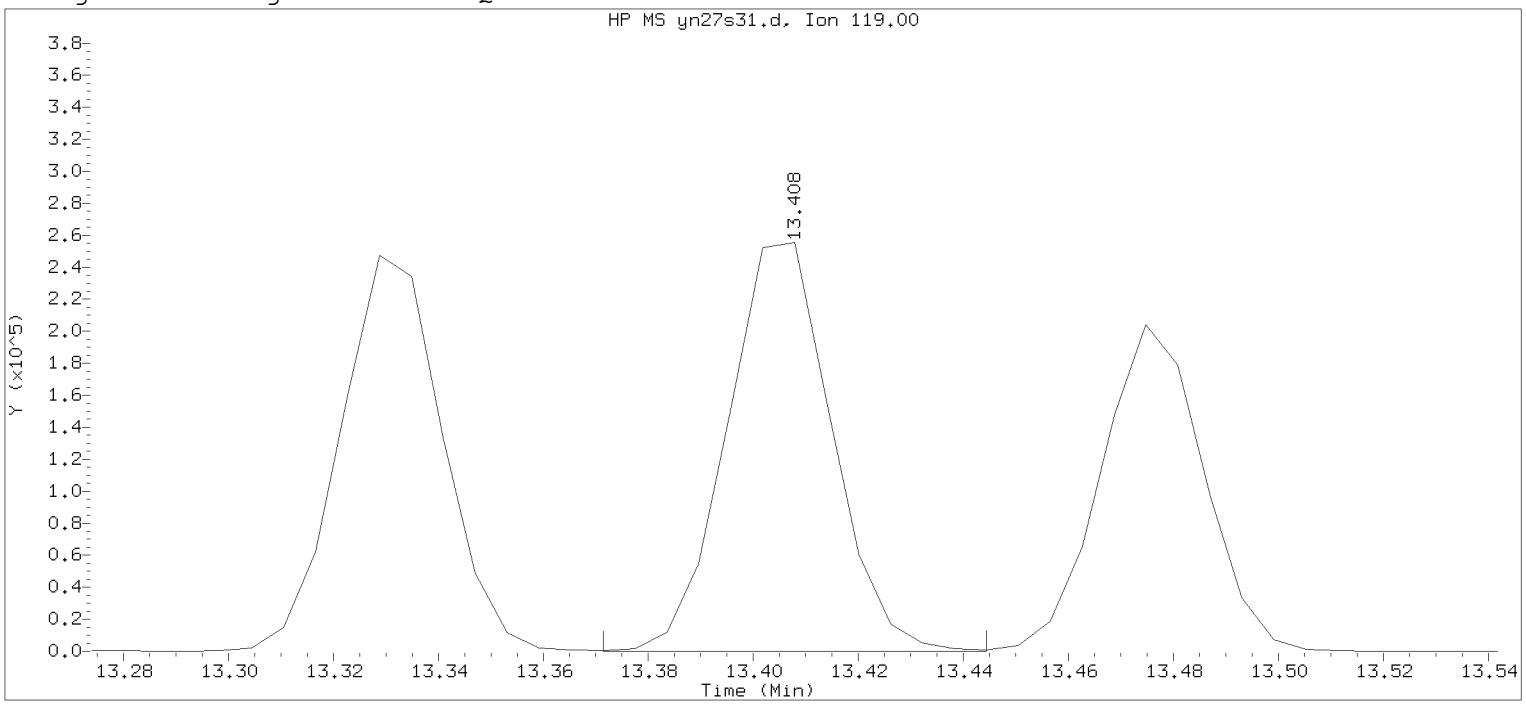
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27s31.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:05 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:23 Automation

Sample Name: LCSY09 Lab Sample ID: LCSY09

Compound Number : 140
Compound Name : 1,2-Diethylbenzene
Scan Number : 1944
Retention Time (minutes): 13.408
Quant Ion : 119.00
Area : 353569
On-column Amount (ng) : 27.0914
Integration start scan : 1937 Integration stop scan: 1949
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: DVV10203

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCDY09

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDY09

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09355.i/19nov27b.b/yn27s32.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/27/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	10	
74-87-3	Chloromethane	16	
106-99-0	1,3-Butadiene	24	
75-01-4	Vinyl Chloride	16	
74-83-9	Bromomethane	14	
75-00-3	Chloroethane	15	
109-66-0	n-Pentane	14	
75-69-4	Trichlorofluoromethane	13	
60-29-7	Ethyl ether	23	
354-23-4	Freon 123a	21	
107-02-8	Acrolein	140	
75-35-4	1,1-Dichloroethene	21	
67-64-1	Acetone	170	
76-13-1	Freon 113	17	
67-63-0	2-Propanol	180	
74-88-4	Methyl Iodide	18	
75-15-0	Carbon Disulfide	19	
107-05-1	Allyl Chloride	24	
79-20-9	Methyl Acetate	23	
75-09-2	Methylene Chloride	23	
75-65-0	t-Butyl alcohol	220	
107-13-1	Acrylonitrile	120	
156-60-5	trans-1,2-Dichloroethene	22	
1634-04-4	Methyl Tertiary Butyl Ether	19	
110-54-3	n-Hexane	19	
75-34-3	1,1-Dichloroethane	22	
108-20-3	di-Isopropyl ether	23	
126-99-8	2-Chloro-1,3-butadiene	21	
637-92-3	Ethyl t-butyl ether	20	
156-59-2	cis-1,2-Dichloroethene	23	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCDY09

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDY09

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09355.i/19nov27b.b/yn27s32.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/27/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	45	
78-93-3	2-Butanone	170	
594-20-7	2,2-Dichloropropane	19	
107-12-0	Propionitrile	190	
126-98-7	Methacrylonitrile	170	
74-97-5	Bromochloromethane	19	
109-99-9	Tetrahydrofuran	110	
67-66-3	Chloroform	21	
71-55-6	1,1,1-Trichloroethane	19	
110-82-7	Cyclohexane	19	
563-58-6	1,1-Dichloropropene	21	
56-23-5	Carbon Tetrachloride	18	
78-83-1	Isobutyl Alcohol	590	
71-43-2	Benzene	23	
107-06-2	1,2-Dichloroethane	20	
994-05-8	t-Amyl methyl ether	19	
142-82-5	n-Heptane	20	
71-36-3	n-Butanol	1100	
79-01-6	Trichloroethene	21	
108-87-2	Methylcyclohexane	18	
78-87-5	1,2-Dichloropropane	24	
74-95-3	Dibromomethane	21	
123-91-1	1,4-Dioxane	570	
80-62-6	Methyl Methacrylate	22	
75-27-4	Bromodichloromethane	21	
79-46-9	2-Nitropropane	18	
110-75-8	2-Chloroethyl Vinyl Ether	22	
10061-01-5	cis-1,3-Dichloropropene	22	
108-10-1	4-Methyl-2-pentanone	110	
108-88-3	Toluene	23	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCDY09

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDY09

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09355.i/19nov27b.b/yn27s32.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/27/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	21	
542-75-6	1,3-Dichloropropene (total)	43	
97-63-2	Ethyl Methacrylate	21	
79-00-5	1,1,2-Trichloroethane	23	
127-18-4	Tetrachloroethene	21	
142-28-9	1,3-Dichloropropane	23	
591-78-6	2-Hexanone	120	
124-48-1	Dibromochloromethane	21	
106-93-4	1,2-Dibromoethane	22	
544-10-5	1-Chlorohexane	21	
108-90-7	Chlorobenzene	22	
630-20-6	1,1,1,2-Tetrachloroethane	21	
100-41-4	Ethylbenzene	23	
179601-23-1	m+p-Xylene	45	
95-47-6	o-Xylene	22	
1330-20-7	Xylene (Total)	67	
100-42-5	Styrene	23	
75-25-2	Bromoform	19	
98-82-8	Isopropylbenzene	22	
108-94-1	Cyclohexanone	450	
108-86-1	Bromobenzene	23	
79-34-5	1,1,2,2-Tetrachloroethane	24	
96-18-4	1,2,3-Trichloropropane	22	
110-57-6	trans-1,4-Dichloro-2-butene	96	
103-65-1	n-Propylbenzene	24	
95-49-8	2-Chlorotoluene	22	
106-43-4	4-Chlorotoluene	22	
108-67-8	1,3,5-Trimethylbenzene	23	
98-06-6	tert-Butylbenzene	21	
76-01-7	Pentachloroethane	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCDY09

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCDY09

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09355.i/19nov27b.b/yn27s32.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 11/27/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
95-63-6	1,2,4-Trimethylbenzene	22	
135-98-8	sec-Butylbenzene	23	
541-73-1	1,3-Dichlorobenzene	22	
99-87-6	p-Isopropyltoluene	23	
106-46-7	1,4-Dichlorobenzene	23	
526-73-8	1,2,3-Trimethylbenzene	22	
100-44-7	Benzyl Chloride	20	
141-93-5	1,3-Diethylbenzene	21	
105-05-5	1,4-Diethylbenzene	21	
95-50-1	1,2-Dichlorobenzene	22	
104-51-8	n-Butylbenzene	23	
135-01-3	1,2-Diethylbenzene	21	
25340-17-4	Diethylbenzene (total)	63	
96-12-8	1,2-Dibromo-3-chloropropane	20	
108-70-3	1,3,5-Trichlorobenzene	22	
120-82-1	1,2,4-Trichlorobenzene	21	
87-68-3	Hexachlorobutadiene	21	
91-20-3	Naphthalene	22	
87-61-6	1,2,3-Trichlorobenzene	21	
91-57-6	2-Methylnaphthalene	18	

FORM I VOA

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09355.i/19nov27b.b/yn27s32.d Injection date and time: **27-NOV-2019 20:28**
Data file Sample Info. Line: LCDY09;LCDY09;1;3;LCSD;;;;yn27b31; Instrument ID: **HP09355.i** Batch: **Y193312AA**
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Blank Data file reference: **/chem2/HP09355.i/19nov27b.b/yn27b31.d**

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 27-NOV-2019 20:01
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19nov27b.b/yn27c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.355(0.000)	456	65	302179M (-7)	250.00	
66) Fluorobenzene	7.872(0.000)	1034	96	1013086 (-1)	50.00	
100) Chlorobenzene-d5	11.309(0.000)	1599	117	737455 (-1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.183(0.000)	1907	152	382214 (-1)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.977(0.000)	113	218082	45.876	92%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434(0.000)	102	60483M	48.668	97%		80 - 120
83) Toluene-d8	(3)	9.867(0.000)	98	991189	49.676	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.301(0.001)	95	367265	48.176	96%		80 - 120

M = Surrogate Standard was manually integrated.

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	2.044(0.000)	85	96976	10.437	10.44			0.2	1
4) Chloromethane	(2)	2.244(0.000)	50	126768	15.873	15.87			0.2	1
5) 1,3-Butadiene	(2)	2.366(0.000)	39	151391	24.362	24.36			1	3
6) Vinyl Chloride	(2)	2.360(0.000)	62	124423	15.869	15.87			0.2	1
8) Bromomethane	(2)	2.695(0.000)	94	83007	14.270	14.27			0.3	1
9) Chloroethane	(2)	2.786(0.000)	64	70501	15.494	15.49			0.2	1
11) n-Pentane	(2)	3.145(0.000)	43	136636	14.089	14.09			0.4	10
12) Trichlorofluoromethane	(2)	3.096(0.000)	101	133605	13.357	13.36			0.2	1
14) Ethyl ether	(2)	3.364(-0.000)	59	118628	22.777	22.78			0.2	5
15) Freon 123a	(2)	3.431(0.000)	67	128239	21.234	21.23			0.4	5
16) Acrolein	(1)	3.528(0.001)	56	325601	141.873	141.87			2	100
17) 1,1-Dichloroethene	(2)	3.686(0.000)	96	93210	21.197	21.20			0.2	1
18) Acetone	(1)	3.692(0.001)	58	186262	172.477	172.48			0.7	20
19) Freon 113	(2)	3.717(0.000)	101	83912	16.763	16.76			0.2	10
21) 2-Propanol	(1)	3.863(0.000)	45	117921	181.364	181.36			18	100
22) Methyl Iodide	(2)	3.893(0.000)	142	153338	17.758	17.76			0.2	1
23) Carbon Disulfide	(2)	4.015(0.000)	76	304822	19.178	19.18			0.2	5
25) Allyl Chloride	(2)	4.179(-0.000)	41	184224	24.161	24.16			0.3	5
27) Methyl Acetate	(2)	4.142(-0.000)	43	180446	23.475	23.47			0.2	5
28) Methylene Chloride	(2)	4.368(0.000)	84	118246	22.520	22.52			0.3	1
30) t-Butyl alcohol	(1)	4.489(-0.001)	59	294233	216.382	216.38			12	50
31) Acrylonitrile	(2)	4.690(0.000)	53	466558	115.890	115.89			0.3	20
32) trans-1,2-Dichloroethene	(2)	4.800(0.000)	96	111068	21.806	21.81			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	4.781(0.000)	73	325335	18.567	18.57			0.2	1
34) n-Hexane	(2)	5.225(0.000)	57	163878	18.977	18.98			2	5
36) 1,1-Dichloroethane	(2)	5.450(0.000)	63	206910	22.340	22.34			0.2	1
38) di-Isopropyl ether	(2)	5.505(0.000)	45	413782	23.388	23.39			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	5.566(0.000)	53	175720	20.932	20.93			0.2	5
40) Ethyl t-butyl ether	(2)	6.040(0.000)	59	344212	19.850	19.85			0.2	1

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09355.i/19nov27b.b/yn27s32.d Injection date and time: **27-NOV-2019 20:28**
Data file Sample Info. Line: LCDY09;LCDY09;1;3;LCSD;;;;yn27b31; Instrument ID: **HP09355.i** Batch: **Y193312AA**
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Blank Data file reference: **/chem2/HP09355.i/19nov27b.b/yn27b31.d**

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 27-NOV-2019 20:01
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19nov27b.b/yn27c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
42) cis-1,2-Dichloroethene	(2)	6.278(-0.000)	96	132707	22.920	22.92			0.2	1
43) 1,2-Dichloroethene (Total)	(2)		96	243775	44.727	44.73			0.4	2
44) 2-Butanone	(2)	6.229(0.000)	43	1021117	169.961	169.96			0.3	10
45) 2,2-Dichloropropane	(2)	6.296(0.000)	77	137450	19.331	19.33			0.3	1
47) Propionitrile	(1)	6.308(0.000)	54	297754	190.386	190.39			14	100
48) Methacrylonitrile	(2)	6.533(-0.000)	67	707358	165.275	165.28			6	50
49) Bromochloromethane	(2)	6.612(0.000)	128	58872	19.488	19.49			0.2	5
50) Tetrahydrofuran	(1)	6.625(-0.000)	71	178776	105.374	105.37			0.7	10
51) Chloroform	(2)	6.758(0.000)	83	191591	21.363	21.36			0.2	1
53) 1,1,1-Trichloroethane	(2)	6.996(-0.000)	97	150455	19.359	19.36			0.3	1
54) Cyclohexane	(2)	7.105(0.000)	56	195390	19.284	19.28			1	5
55) 1,1-Dichloropropene	(2)	7.209(0.000)	75	159919	21.317	21.32			0.2	5
56) Carbon Tetrachloride	(2)	7.209(0.000)	117	121111	18.277	18.28			0.2	1
58) Isobutyl Alcohol	(1)	7.312(0.000)	41	278050	592.067	592.07			36	250
60) Benzene	(2)	7.470(-0.000)	78	499038	22.753	22.75			0.2	1
61) 1,2-Dichloroethane	(2)	7.537(0.000)	62	157634	20.265	20.26			0.3	1
65) t-Amyl methyl ether	(2)	7.653(0.000)	73	336894	19.410	19.41			0.8	5
67) n-Heptane	(2)	7.884(0.000)	43	184104	20.170	20.17			2	5
69) n-Butanol	(1)	8.188(0.001)	56	472568	1072.839	1072.84			61	250
71) Trichloroethene	(2)	8.352(0.000)	95	120264	21.196	21.20			0.2	1
72) Methylcyclohexane	(2)	8.675(0.000)	83	198658	18.456	18.46			0.5	5
73) 1,2-Dichloropropane	(2)	8.687(0.000)	63	134634	24.081	24.08			0.2	1
74) Dibromomethane	(2)	8.796(0.000)	93	77234	20.940	20.94			0.2	1
75) 1,4-Dioxane	(1)	8.760(0.001)	88	53699M	571.675	571.67			29	250
76) Methyl Methacrylate	(2)	8.754(0.000)	69	143255	21.832	21.83			0.2	5
78) Bromodichloromethane	(2)	9.028(0.000)	83	134052	20.830	20.83			0.2	1
79) 2-Nitropropane	(2)	9.271(0.000)	41	48659	17.744	17.74			0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)	9.374(0.000)	63	105416M	22.312	22.31			0.2	10
81) cis-1,3-Dichloropropene	(2)	9.563(0.000)	75	189001	21.769	21.77			0.2	1
82) 4-Methyl-2-pentanone	(2)	9.709(0.000)	43	1280602	113.104	113.10			0.5	10
88) Toluene	(3)	9.940(0.000)	92	311705	22.822	22.82			0.2	1
89) trans-1,3-Dichloropropene	(3)	10.190(0.000)	75	168061	21.075	21.07			0.2	1
90) 1,3-Dichloropropene (total)	(3)		100	357062	42.844	42.84			0.4	2
91) Ethyl Methacrylate	(3)	10.238(0.000)	69	216639	21.437	21.44			0.2	5
92) 1,1,2-Trichloroethane	(3)	10.390(-0.000)	97	123530	23.456	23.46			0.2	1
93) Tetrachloroethene	(3)	10.488(0.000)	166	119421	20.662	20.66			0.2	1
94) 1,3-Dichloropropane	(3)	10.555(0.000)	76	206700	22.601	22.60			0.2	1
96) 2-Hexanone	(3)	10.585(0.000)	43	1041319	115.442	115.44			0.3	10
97) Dibromochloromethane	(3)	10.774(-0.000)	129	106394	20.764	20.76			0.2	1
99) 1,2-Dibromoethane	(3)	10.883(0.000)	107	127511	22.241	22.24			0.2	1
101) 1-Chlorohexane	(3)	11.309(0.000)	91	164406	21.419	21.42			0.3	5
102) Chlorobenzene	(3)	11.333(0.000)	112	339285	22.080	22.08			0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)	11.412(0.000)	131	102382	20.867	20.87			0.2	1
104) Ethylbenzene	(3)	11.418(0.000)	91	596831	22.819	22.82			0.4	1
106) m+p-Xylene	(3)	11.534(-0.000)	106	464069	44.961	44.96			1	5
107) o-Xylene	(3)	11.856(0.000)	106	222385	22.121	22.12			0.4	1
108) Xylene (Total)	(3)		106	686454	67.082	67.08			1	6
109) Styrene	(3)	11.875(0.000)	104	376967	22.695	22.70			0.2	5
110) Bromoform	(3)	12.039(-0.000)	173	70629	19.139	19.14			1	4
111) Isopropylbenzene	(3)	12.154(0.000)	105	575204	22.141	22.14			0.2	5
112) Cyclohexanone	(1)	12.228(0.000)	55	223899	448.891	448.89			25	100
115) Bromobenzene	(4)	12.422(-0.000)	156	142781	22.741	22.74			0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	12.392(-0.000)	83	213723	23.656	23.66			0.2	1
117) 1,2,3-Trichloropropane	(4)	12.440(0.000)	110	63272	22.049	22.05			0.2	5

M = Compound was manually integrated.

Digitally signed by Don V. Viray on 11/27/2019 at 21:39. Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09355.i/19nov27b.b/yn27s32.d Injection date and time: **27-NOV-2019 20:28**
Data file Sample Info. Line: LCDY09;LCDY09;1;3;LCSD;;;;yn27b31; Instrument ID: **HP09355.i** Batch: **Y193312AA**
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Blank Data file reference: **/chem2/HP09355.i/19nov27b.b/yn27b31.d**

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 27-NOV-2019 20:01
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19nov27b.b/yn27c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

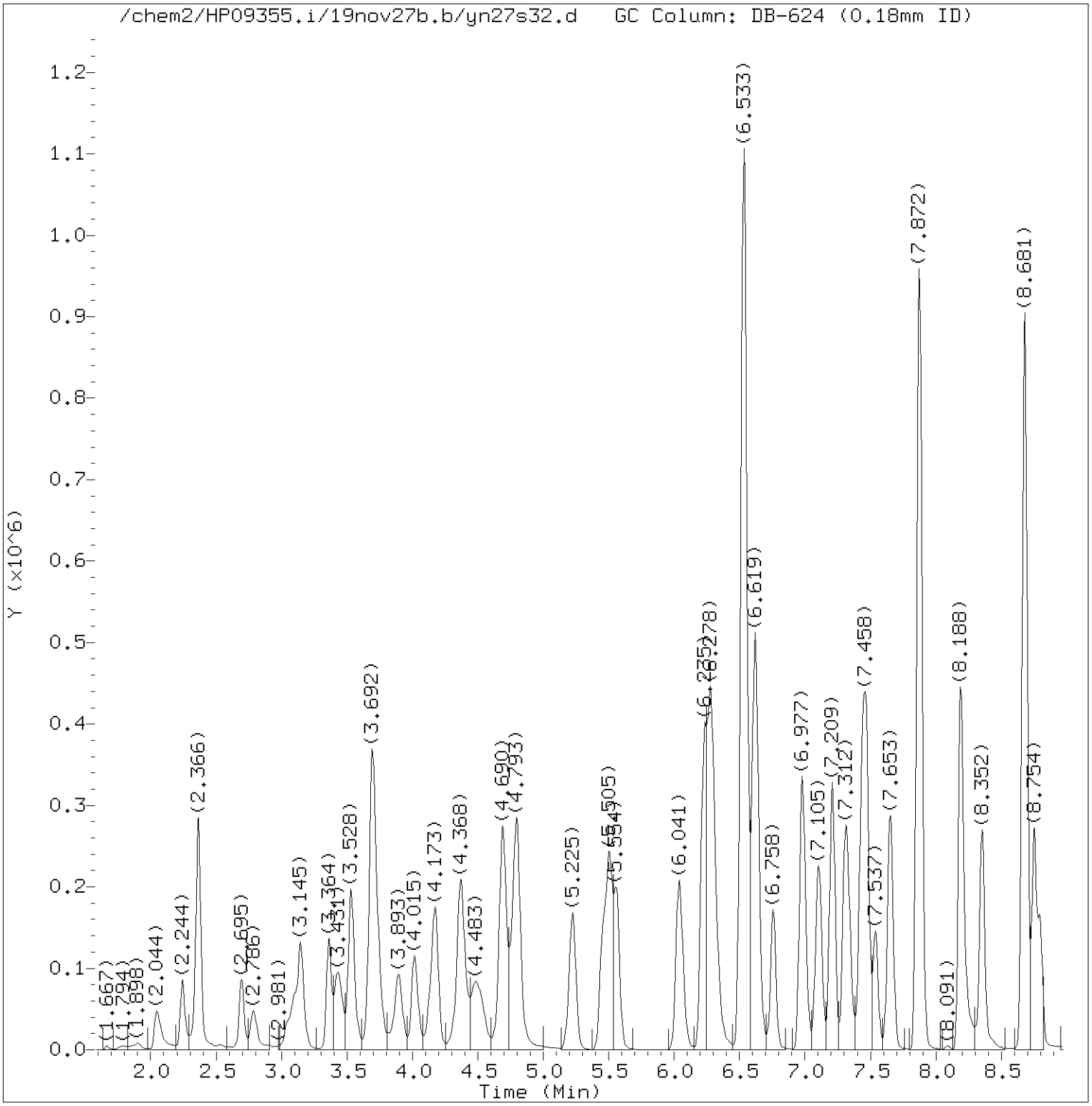
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
118) trans-1,4-Dichloro-2-butene	(4)	12.416(-0.000)	53	298389	95.554	95.55			6	50
119) n-Propylbenzene	(4)	12.483(-0.000)	91	721946	24.245	24.24			0.2	5
120) 2-Chlorotoluene	(4)	12.562(0.000)	126	135513	22.093	22.09			0.2	5
121) 4-Chlorotoluene	(4)	12.653(0.000)	126	142702	22.256	22.26			0.2	5
122) 1,3,5-Trimethylbenzene	(4)	12.617(0.000)	105	497195	22.570	22.57			0.3	5
124) tert-Butylbenzene	(4)	12.860(-0.000)	134	98636M	21.382	21.38			0.3	5
125) Pentachloroethane	(4)	12.897(-0.000)	167	76710	21.895	21.90			0.2	5
126) 1,2,4-Trimethylbenzene	(4)	12.903(-0.000)	105	513089	22.177	22.18			1	5
127) sec-Butylbenzene	(4)	13.024(0.000)	105	648337	23.238	23.24			0.2	5
129) 1,3-Dichlorobenzene	(4)	13.128(0.000)	146	276045	22.446	22.45			0.2	5
130) p-Isopropyltoluene	(4)	13.134(0.000)	119	543641	22.678	22.68			0.2	5
133) 1,4-Dichlorobenzene	(4)	13.201(0.000)	146	286043	22.773	22.77			0.2	5
134) 1,2,3-Trimethylbenzene	(4)	13.207(0.000)	105	529403	21.781	21.78			0.3	5
135) Benzyl Chloride	(4)	13.274(0.000)	91	342982	19.567	19.57			1	5
136) 1,3-Diethylbenzene	(4)	13.335(0.000)	119	332084	21.212	21.21			0.2	5
137) 1,4-Diethylbenzene	(4)	13.408(0.000)	119	350807	21.186	21.19			0.2	5
138) 1,2-Dichlorobenzene	(4)	13.462(0.000)	146	269311	22.393	22.39			0.2	5
139) n-Butylbenzene	(4)	13.426(0.000)	92	292302M	23.063	23.06			0.2	5
140) 1,2-Diethylbenzene	(4)	13.475(0.000)	119	276307M	20.978	20.98			0.2	5
141) Diethylbenzene (total)	(4)		100	959198	63.376	63.38			0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)	14.004(0.000)	75	47435	20.353	20.35			0.3	5
144) 1,3,5-Trichlorobenzene	(4)	14.132(0.000)	180	199918	21.623	21.62			0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.558(0.000)	180	187191	21.130	21.13			0.3	5
147) Hexachlorobutadiene	(4)	14.637(0.000)	225	82667	20.940	20.94			2	5
148) Naphthalene	(4)	14.734(0.000)	128	677613	21.574	21.57			1	5
149) 1,2,3-Trichlorobenzene	(4)	14.880(0.000)	180	180518	20.969	20.97			0.4	5
150) 2-Methylnaphthalene	(4)	15.531(0.000)	142	368961	17.770	17.77			2	4

M = Compound was manually integrated.

Total number of targets = 110

Digitally signed by Don V. Viray on 11/27/2019 at 21:39. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37. PARALLAX ID: kek01027



Total Ion Chromatogram (TIC)

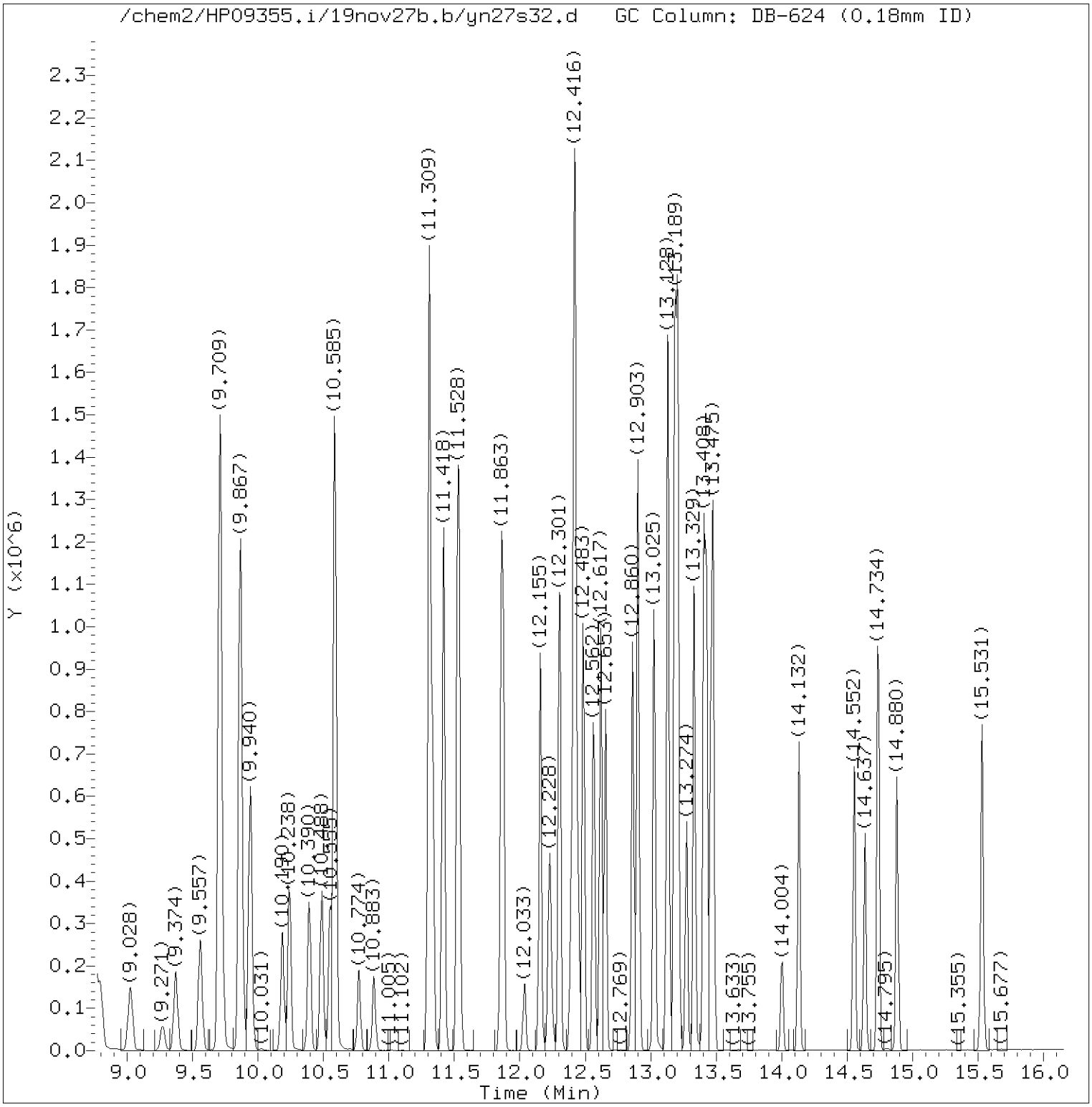
Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27s32.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:28 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: LCDY09 Lab Sample ID: LCDY09

Digitally signed by Don V. Viray
on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27s32.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:28 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: LCDY09 Lab Sample ID: LCDY09

Digitally signed by Don V. Viray
on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27s32.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:28 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: LCDY09 Lab Sample ID: LCDY09

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.044	85	96976	10.437
4) Chloromethane	(2)	2.244	50	126768	15.873
6) Vinyl Chloride	(2)	2.360	62	124423	15.869
5) 1,3-Butadiene	(2)	2.366	39	151391	24.362
8) Bromomethane	(2)	2.695	94	83007	14.270
9) Chloroethane	(2)	2.786	64	70501	15.494
12) Trichlorofluoromethane	(2)	3.096	101	133605	13.357
11) n-Pentane	(2)	3.145	43	136636	14.089
14) Ethyl ether	(2)	3.364	59	118628	22.777
15) Freon 123a	(2)	3.431	67	128239	21.234
16) Acrolein	(1)	3.528	56	325601	141.873
17) 1,1-Dichloroethene	(2)	3.686	96	93210	21.197
18) Acetone	(1)	3.692	58	186262	172.477
19) Freon 113	(2)	3.717	101	83912	16.763
21) 2-Propanol	(1)	3.863	45	117921	181.364
22) Methyl Iodide	(2)	3.893	142	153338	17.758
23) Carbon Disulfide	(2)	4.015	76	304822	19.178
27) Methyl Acetate	(2)	4.143	43	180446	23.475
25) Allyl Chloride	(2)	4.179	41	184224	24.161
29)*t-Butyl alcohol-d10	(1)	4.355	65	302179M	250.000
28) Methylene Chloride	(2)	4.368	84	118246	22.520
30) t-Butyl alcohol	(1)	4.489	59	294233	216.382
31) Acrylonitrile	(2)	4.690	53	466558	115.890
33) Methyl Tertiary Butyl Ether	(2)	4.781	73	325335	18.567
32) trans-1,2-Dichloroethene	(2)	4.800	96	111068	21.806
34) n-Hexane	(2)	5.225	57	163878	18.977
36) 1,1-Dichloroethane	(2)	5.450	63	206910	22.340
38) di-Isopropyl ether	(2)	5.505	45	413782	23.388
39) 2-Chloro-1,3-butadiene	(2)	5.566	53	175720	20.932
40) Ethyl t-butyl ether	(2)	6.041	59	344212	19.850
43) 1,2-Dichloroethene (Total)	(2)		96	243775	44.727
44) 2-Butanone	(2)	6.229	43	1021117	169.961
42) cis-1,2-Dichloroethene	(2)	6.278	96	132707	22.920
45) 2,2-Dichloropropane	(2)	6.296	77	137450	19.331
47) Propionitrile	(1)	6.308	54	297754	190.386
48) Methacrylonitrile	(2)	6.533	67	707358	165.275
49) Bromochloromethane	(2)	6.612	128	58872	19.488
50) Tetrahydrofuran	(1)	6.625	71	178776	105.374

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27s32.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:28 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: LCDY09 Lab Sample ID: LCDY09

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	6.758	83	191591	21.363
52)$Dibromofluoromethane	(2)	6.977	113	218082	45.876
53) 1,1,1-Trichloroethane	(2)	6.996	97	150455	19.359
54) Cyclohexane	(2)	7.105	56	195390	19.284
55) 1,1-Dichloropropene	(2)	7.209	75	159919	21.317
56) Carbon Tetrachloride	(2)	7.209	117	121111	18.277
58) Isobutyl Alcohol	(1)	7.312	41	278050	592.067
57)$1,2-Dichloroethane-d4	(2)	7.434	102	60483M	48.668
60) Benzene	(2)	7.470	78	499038	22.753
61) 1,2-Dichloroethane	(2)	7.537	62	157634	20.265
65) t-Amyl methyl ether	(2)	7.653	73	336894	19.410
66)*Fluorobenzene	(2)	7.872	96	1013086	50.000
67) n-Heptane	(2)	7.884	43	184104	20.170
69) n-Butanol	(1)	8.188	56	472568	1072.839
71) Trichloroethene	(2)	8.352	95	120264	21.196
72) Methylcyclohexane	(2)	8.675	83	198658	18.456
73) 1,2-Dichloropropane	(2)	8.687	63	134634	24.081
76) Methyl Methacrylate	(2)	8.754	69	143255	21.832
75) 1,4-Dioxane	(1)	8.760	88	53699M	571.675
74) Dibromomethane	(2)	8.796	93	77234	20.940
78) Bromodichloromethane	(2)	9.028	83	134052	20.830
79) 2-Nitropropane	(2)	9.271	41	48659	17.744
80) 2-Chloroethyl Vinyl Ether	(2)	9.374	63	105416M	22.312
81) cis-1,3-Dichloropropene	(2)	9.563	75	189001	21.769
82) 4-Methyl-2-pentanone	(2)	9.709	43	1280602	113.104
83)$Toluene-d8	(3)	9.867	98	991189	49.676
88) Toluene	(3)	9.940	92	311705	22.822
90) 1,3-Dichloropropene (total)	(3)		100	357062	42.844
89) trans-1,3-Dichloropropene	(3)	10.190	75	168061	21.075
91) Ethyl Methacrylate	(3)	10.238	69	216639	21.437
92) 1,1,2-Trichloroethane	(3)	10.390	97	123530	23.456
93) Tetrachloroethene	(3)	10.488	166	119421	20.662
94) 1,3-Dichloropropane	(3)	10.555	76	206700	22.601
96) 2-Hexanone	(3)	10.585	43	1041319	115.442
97) Dibromochloromethane	(3)	10.774	129	106394	20.764
99) 1,2-Dibromoethane	(3)	10.883	107	127511	22.241
100)*Chlorobenzene-d5	(3)	11.309	117	737455	50.000
101) 1-Chlorohexane	(3)	11.309	91	164406	21.419

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27s32.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:28 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: LCDY09 Lab Sample ID: LCDY09

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
102) Chlorobenzene	(3)	11.333	112	339285	22.080
103) 1,1,1,2-Tetrachloroethane	(3)	11.412	131	102382	20.867
104) Ethylbenzene	(3)	11.418	91	596831	22.819
106) m+p-Xylene	(3)	11.534	106	464069	44.961
108) Xylene (Total)	(3)		106	686454	67.082
107) o-Xylene	(3)	11.856	106	222385	22.121
109) Styrene	(3)	11.875	104	376967	22.695
110) Bromoform	(3)	12.039	173	70629	19.139
111) Isopropylbenzene	(3)	12.155	105	575204	22.141
112) Cyclohexanone	(1)	12.228	55	223899	448.891
114)$4-Bromofluorobenzene	(3)	12.301	95	367265	48.176
116) 1,1,2,2-Tetrachloroethane	(4)	12.392	83	213723	23.656
118) trans-1,4-Dichloro-2-butene	(4)	12.416	53	298389	95.554
115) Bromobenzene	(4)	12.422	156	142781	22.741
117) 1,2,3-Trichloropropane	(4)	12.441	110	63272	22.049
119) n-Propylbenzene	(4)	12.483	91	721946	24.245
120) 2-Chlorotoluene	(4)	12.562	126	135513	22.093
122) 1,3,5-Trimethylbenzene	(4)	12.617	105	497195	22.570
121) 4-Chlorotoluene	(4)	12.653	126	142702	22.256
124) tert-Butylbenzene	(4)	12.860	134	98636M	21.382
125) Pentachloroethane	(4)	12.897	167	76710	21.895
126) 1,2,4-Trimethylbenzene	(4)	12.903	105	513089	22.177
127) sec-Butylbenzene	(4)	13.025	105	648337	23.238
129) 1,3-Dichlorobenzene	(4)	13.128	146	276045	22.446
130) p-Isopropyltoluene	(4)	13.134	119	543641	22.678
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	382214	50.000
133) 1,4-Dichlorobenzene	(4)	13.201	146	286043	22.773
134) 1,2,3-Trimethylbenzene	(4)	13.207	105	529403	21.781
135) Benzyl Chloride	(4)	13.274	91	342982	19.567
136) 1,3-Diethylbenzene	(4)	13.335	119	332084	21.212
141) Diethylbenzene (total)	(4)		100	959198	63.376
137) 1,4-Diethylbenzene	(4)	13.408	119	350807	21.186
139) n-Butylbenzene	(4)	13.426	92	292302M	23.063
138) 1,2-Dichlorobenzene	(4)	13.463	146	269311	22.393
140) 1,2-Diethylbenzene	(4)	13.475	119	276307M	20.978
142) 1,2-Dibromo-3-chloropropane	(4)	14.004	75	47435	20.353
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	199918	21.623
146) 1,2,4-Trichlorobenzene	(4)	14.558	180	187191	21.130

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19nov27b.b/yn27s32.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:28 Analyst ID: DVV10203

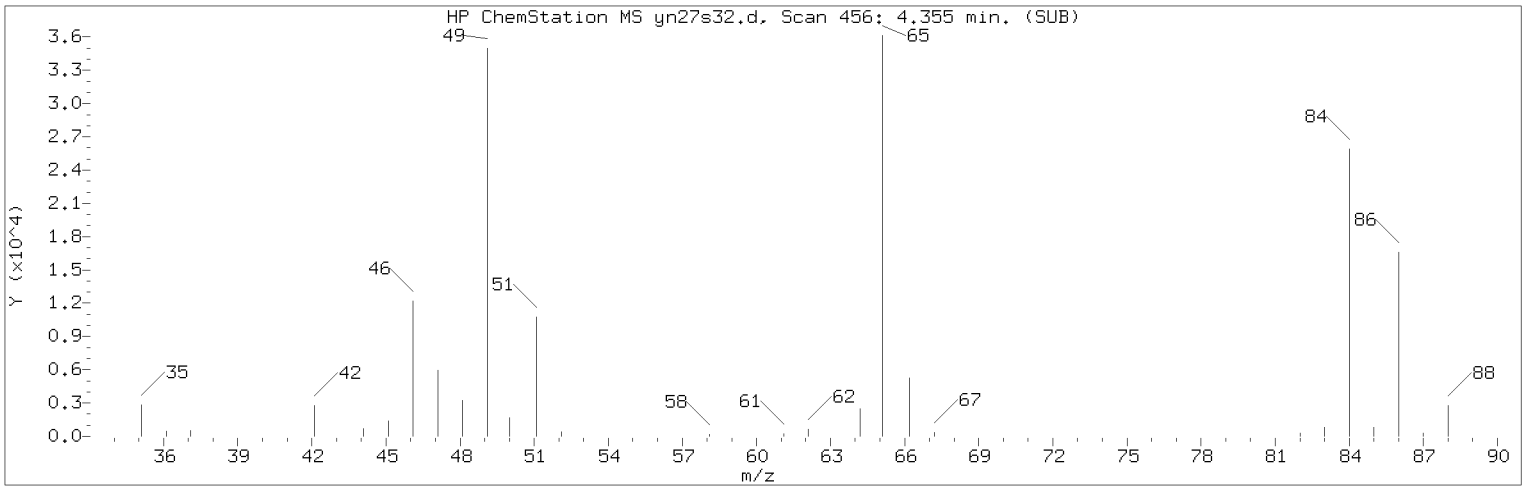
Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: LCDY09 Lab Sample ID: LCDY09

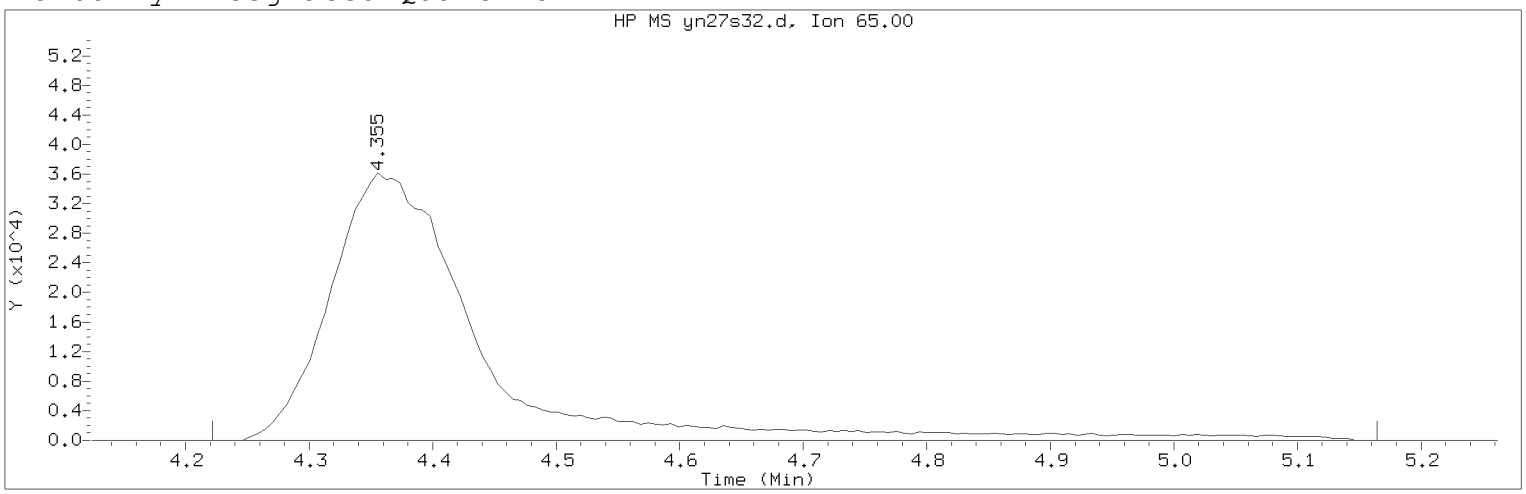
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Hexachlorobutadiene	(4)	14.637	225	82667	20.940
148) Naphthalene	(4)	14.734	128	677613	21.574
149) 1,2,3-Trichlorobenzene	(4)	14.880	180	180518	20.969
150) 2-Methylnaphthalene	(4)	15.531	142	368961	17.770

Digitally signed by Don V. Viray
on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27s32.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:28 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: LCDY09 Lab Sample ID: LCDY09

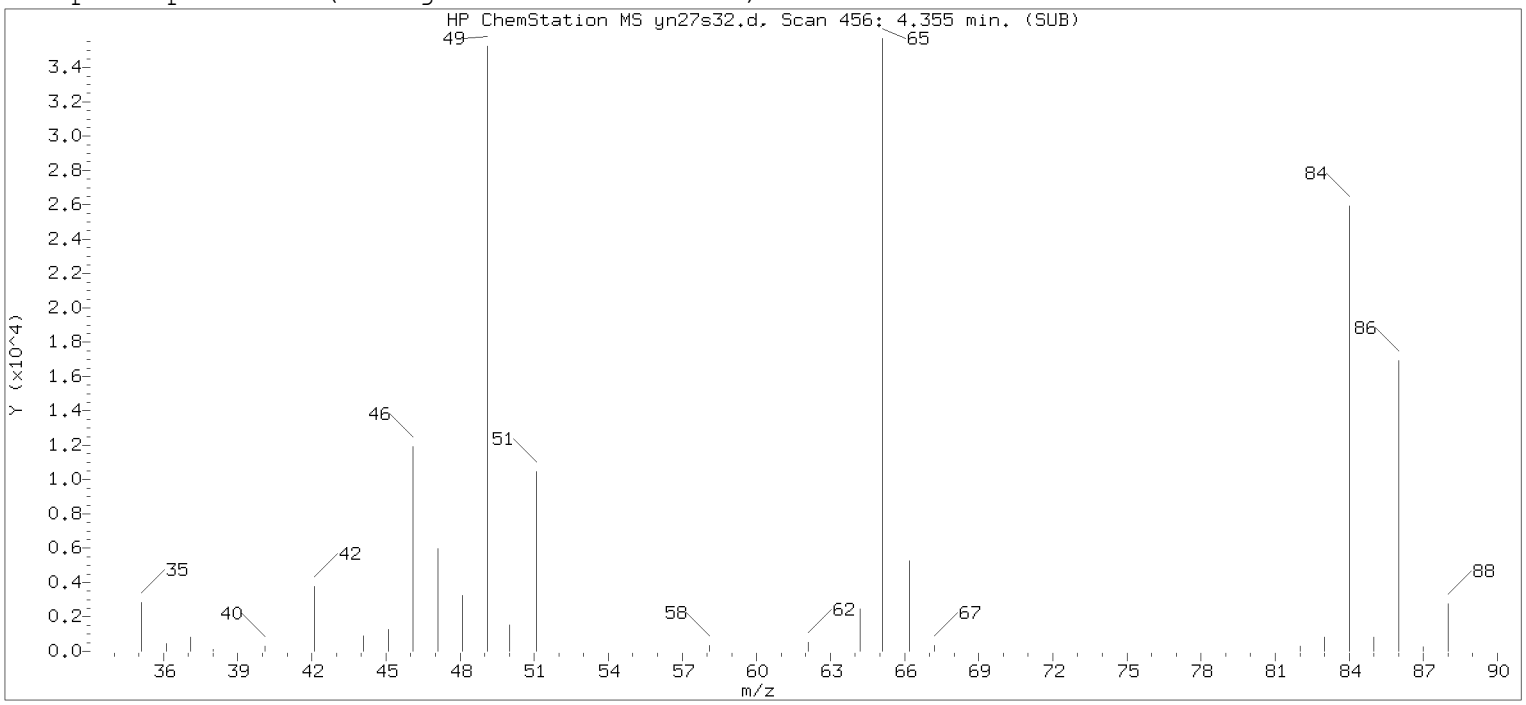
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 456
Retention Time (minutes): 4.355
Quant Ion : 65.00
Area (flag) : 302179M
On-Column Amount (ng) : 250.0000
Integration start scan : 433 Integration stop scan: 588
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

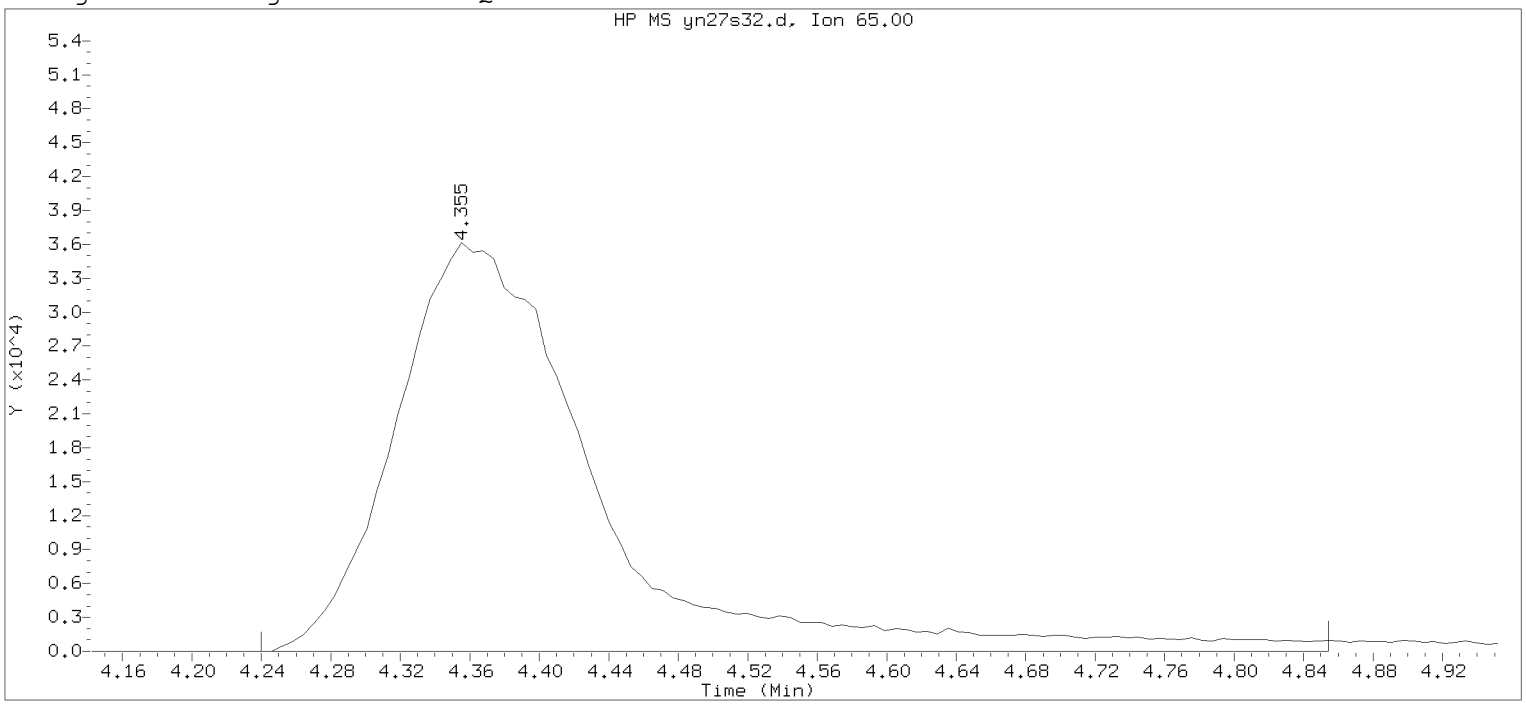
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27s32.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:28 Analyst ID: DVV10203

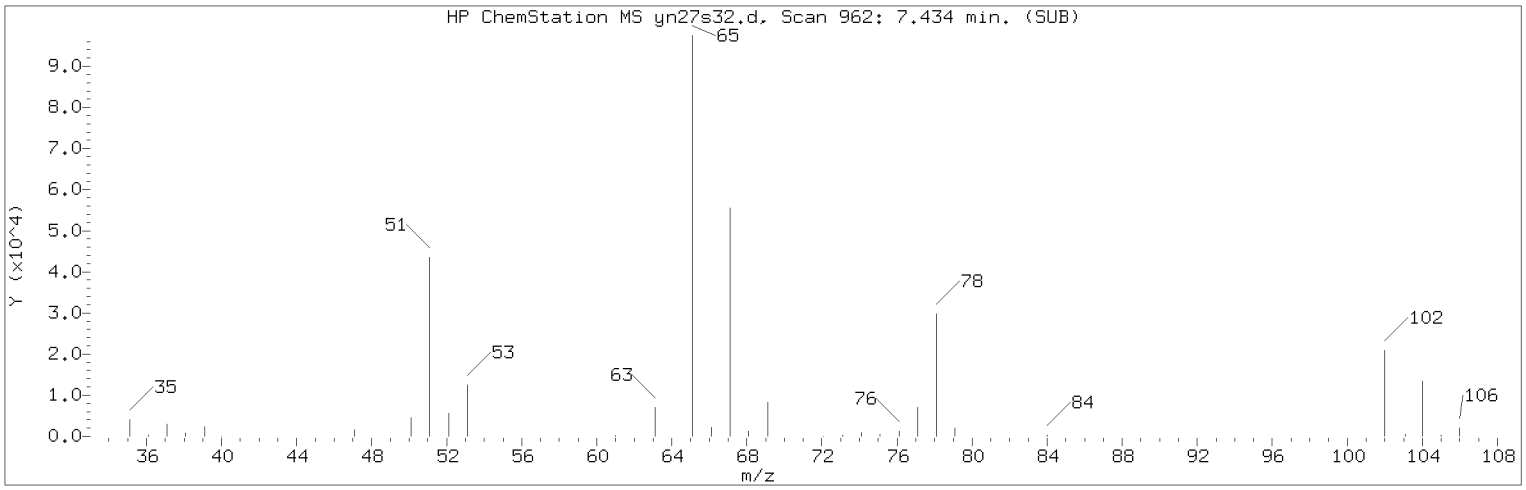
Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:45 Automation

Sample Name: LCDY09 Lab Sample ID: LCDY09

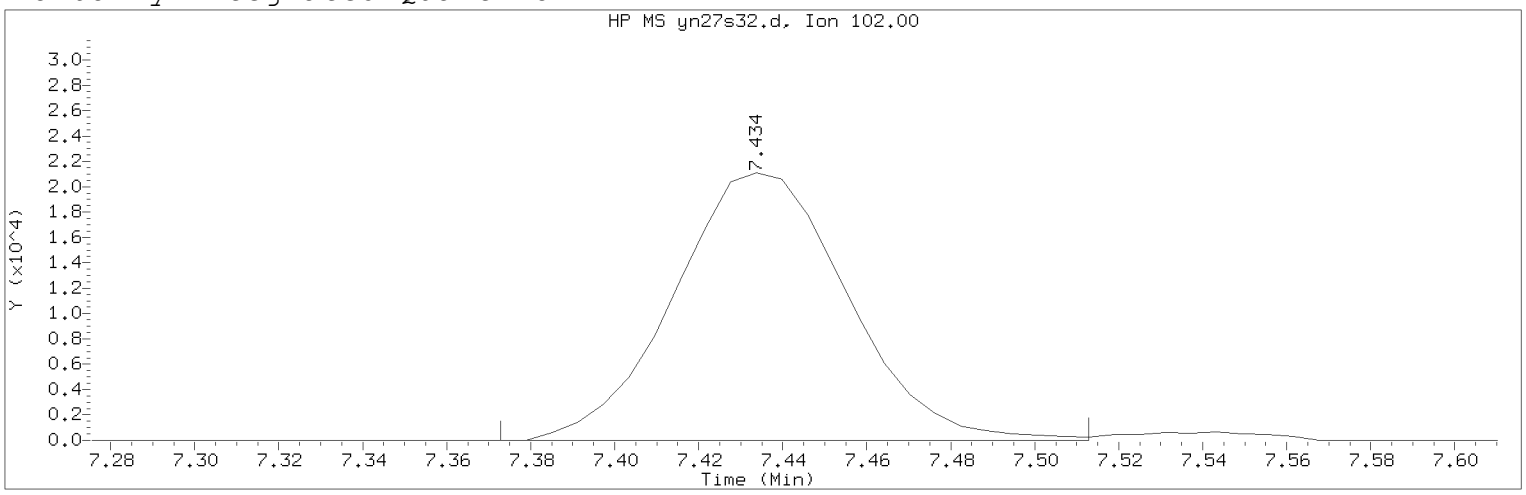
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 456
Retention Time (minutes): 4.355
Quant Ion : 65.00
Area : 290308
On-column Amount (ng) : 250.0000
Integration start scan : 436 Integration stop scan: 537
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/27/2019 at 21:39.
Target 3.5 esignature user id: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27s32.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:28 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: LCDY09 Lab Sample ID: LCDY09

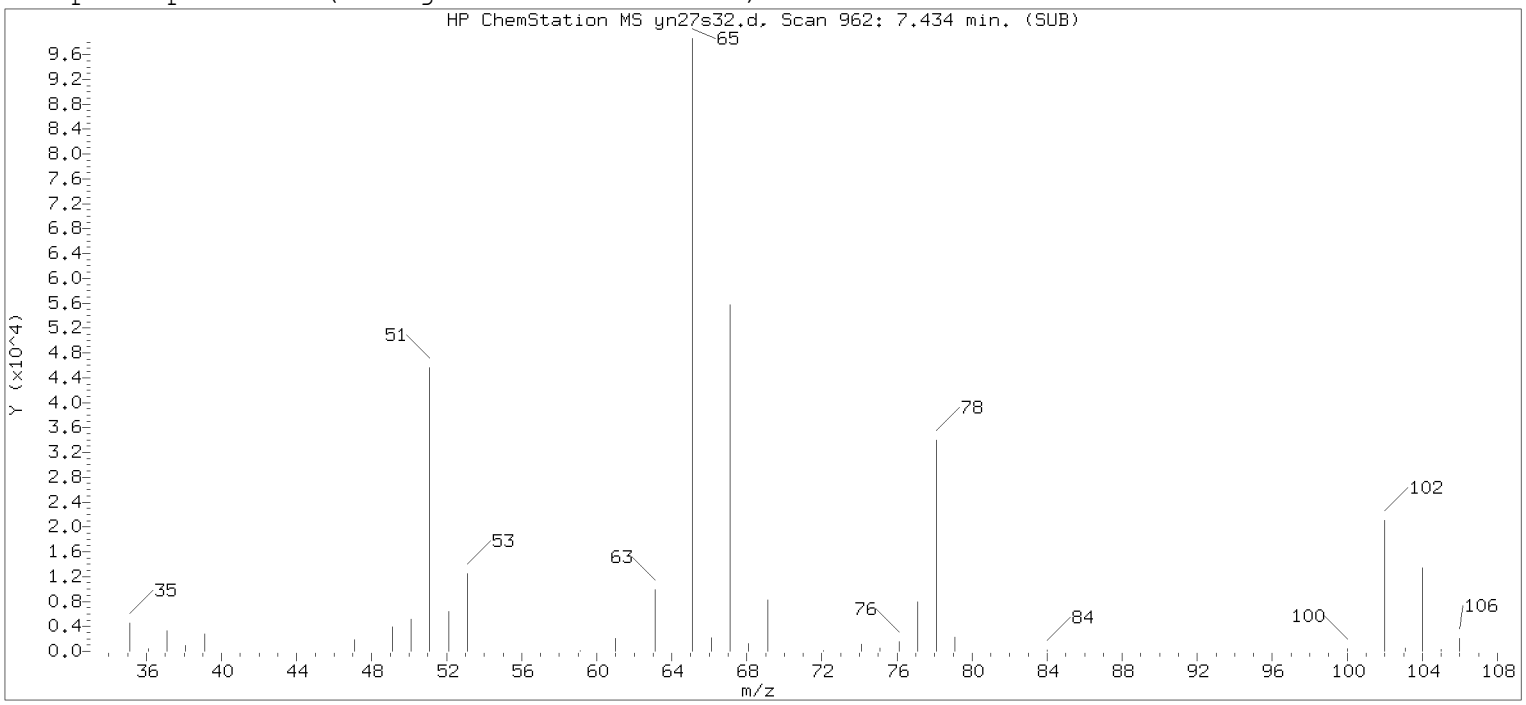
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 962
Retention Time (minutes): 7.434
Quant Ion : 102.00
Area (flag) : 60483M
On-Column Amount (ng) : 48.6677
Integration start scan : 951 Integration stop scan: 974
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

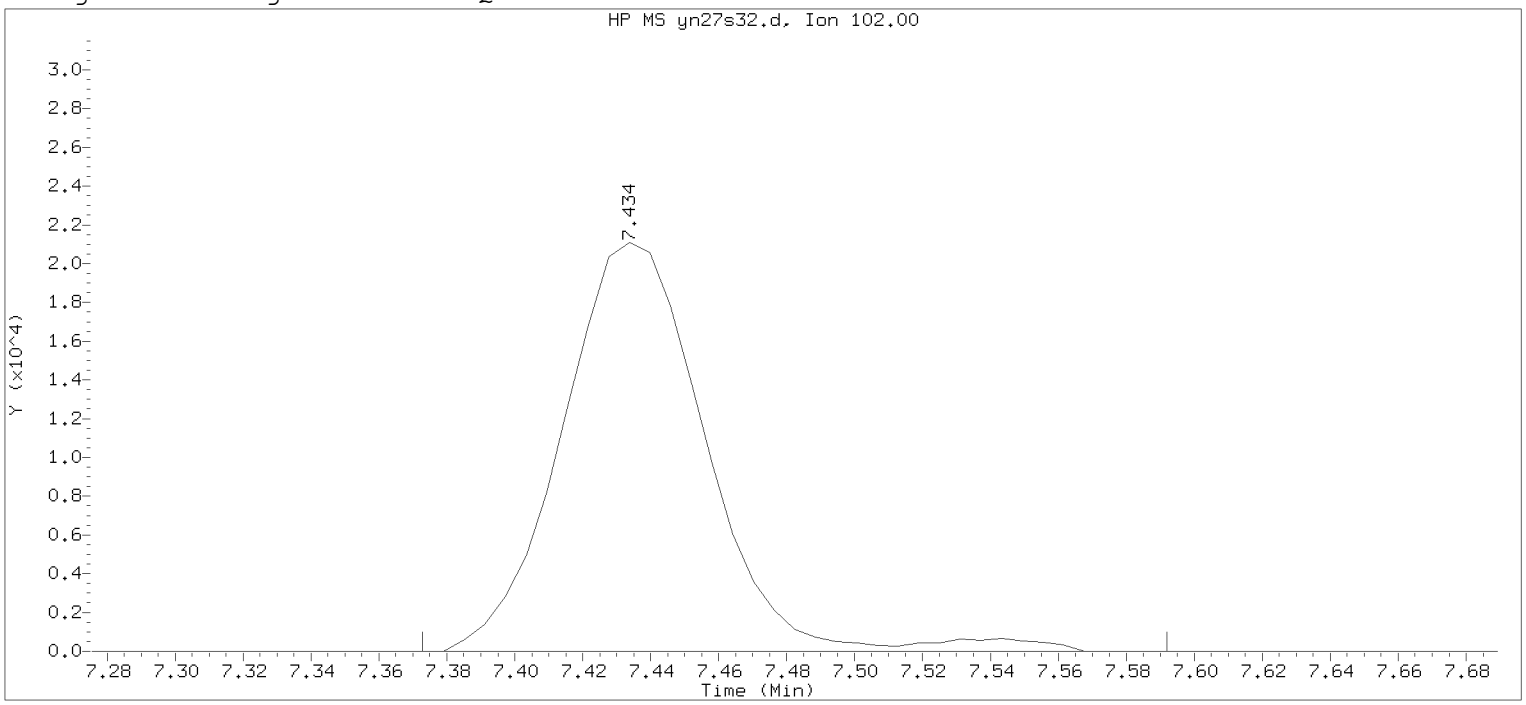
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



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Injection date and time: 27-NOV-2019 20:28 Analyst ID: DVV10203

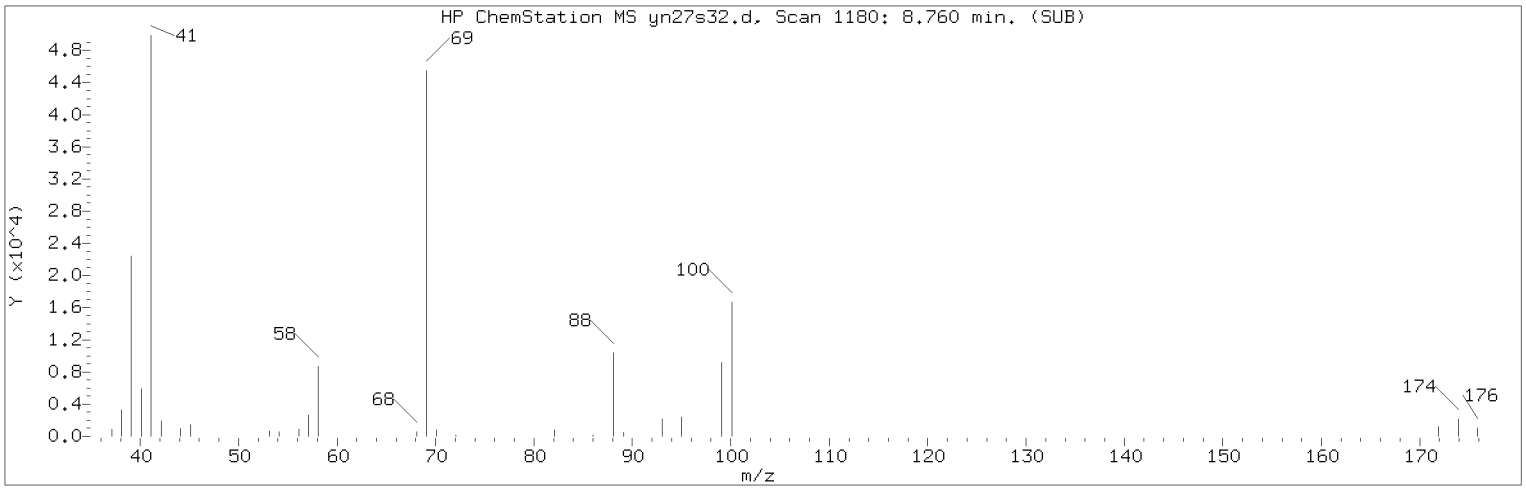
Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:45 Automation

Sample Name: LCDY09 Lab Sample ID: LCDY09

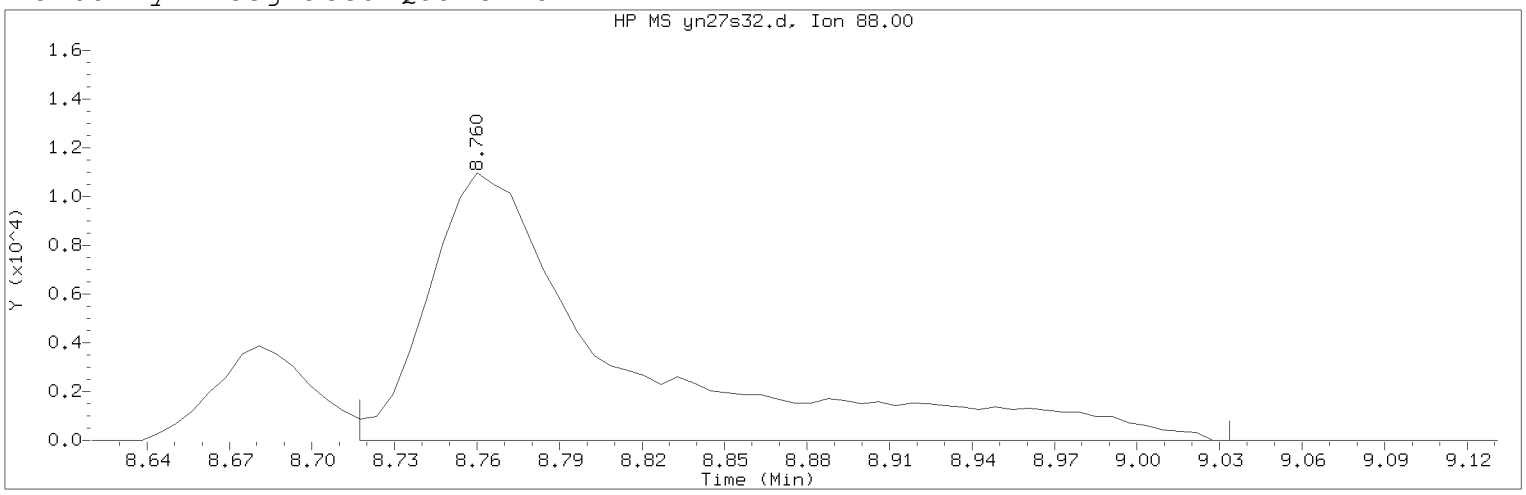
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 962
Retention Time (minutes): 7.434
Quant Ion : 102.00
Area : 61945
On-column Amount (ng) : 49.8445
Integration start scan : 951 Integration stop scan: 987
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/27/2019 at 21:39.
Target 3.5 esignature user id: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 27-NOV-2019 20:28 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: LCDY09 Lab Sample ID: LCDY09

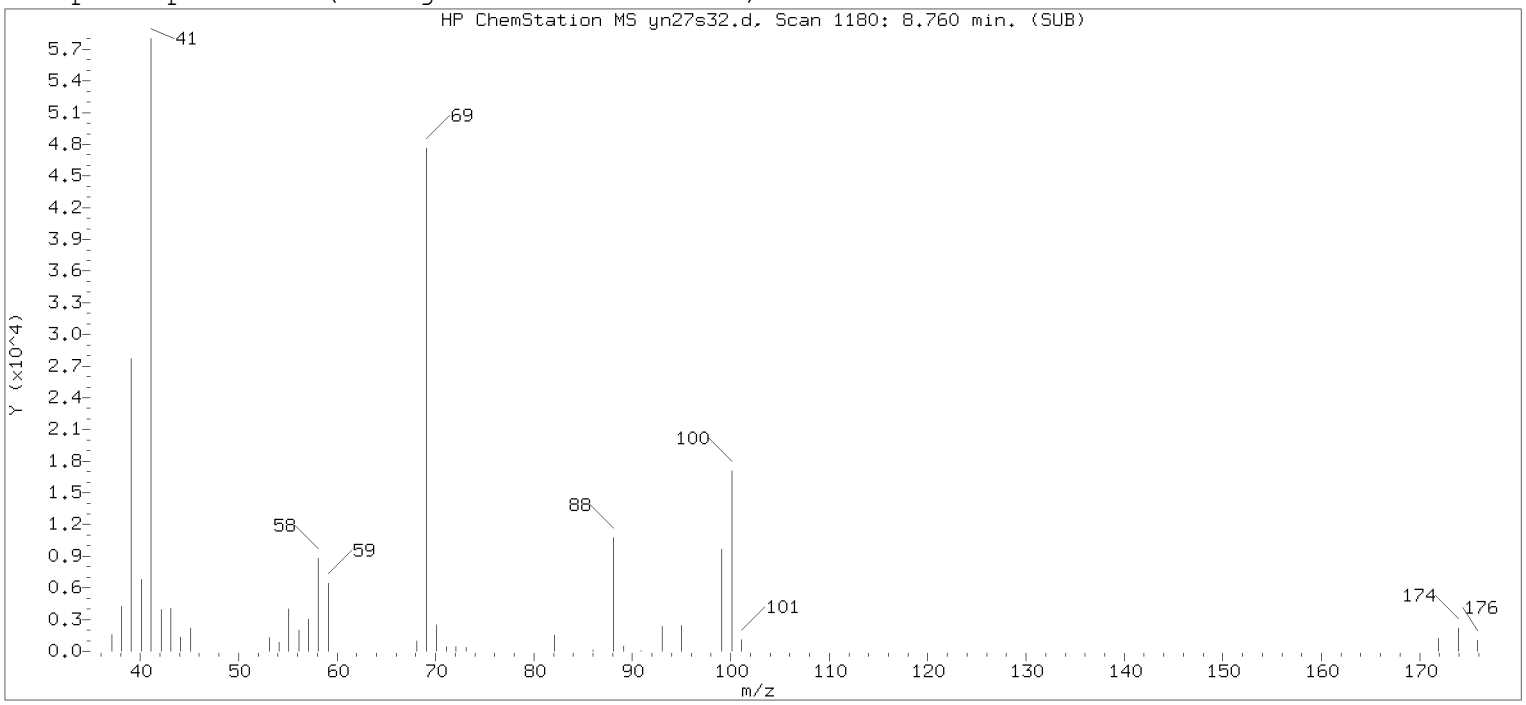
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1180
Retention Time (minutes): 8.760
Quant Ion : 88.00
Area (flag) : 53699M
On-Column Amount (ng) : 571.6750
Integration start scan : 1172 Integration stop scan: 1224
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

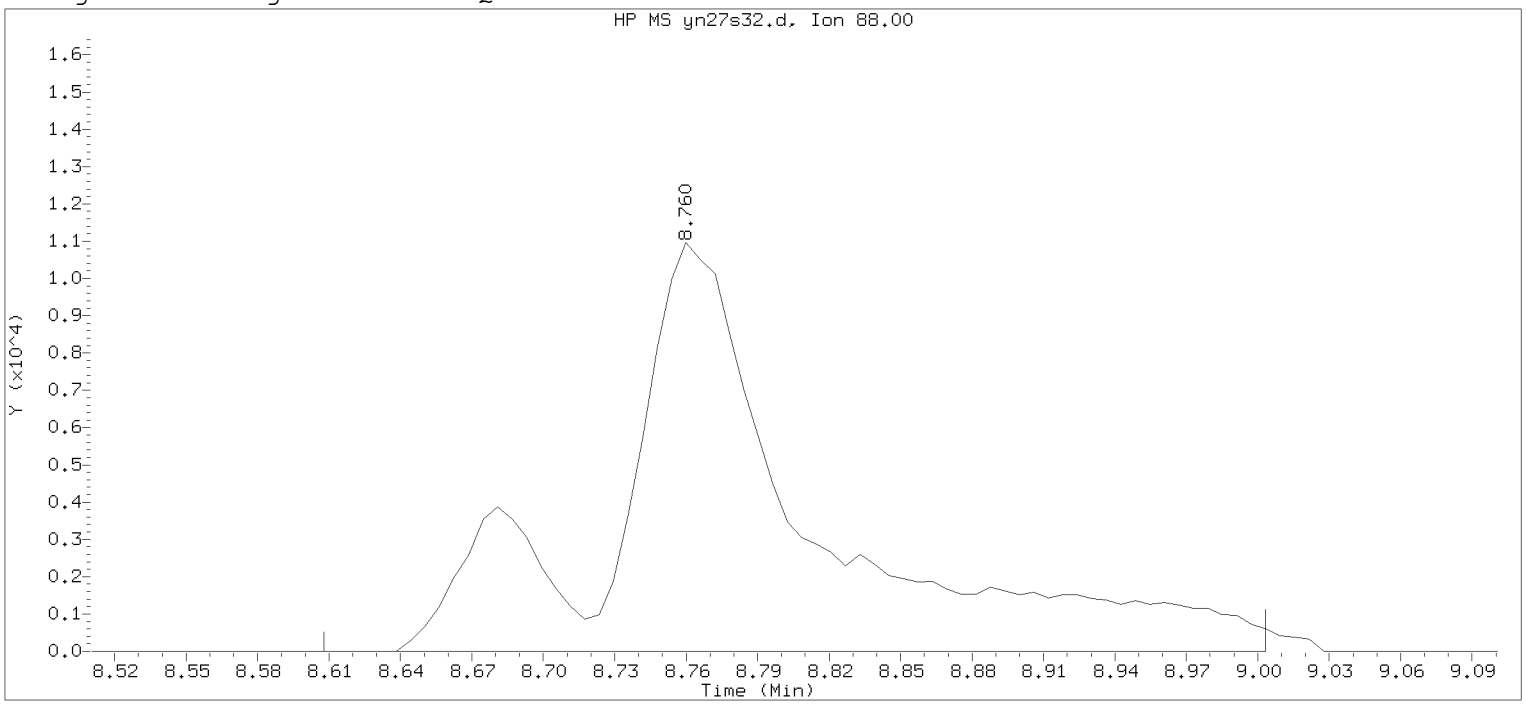
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27s32.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:28 Analyst ID: DVV10203

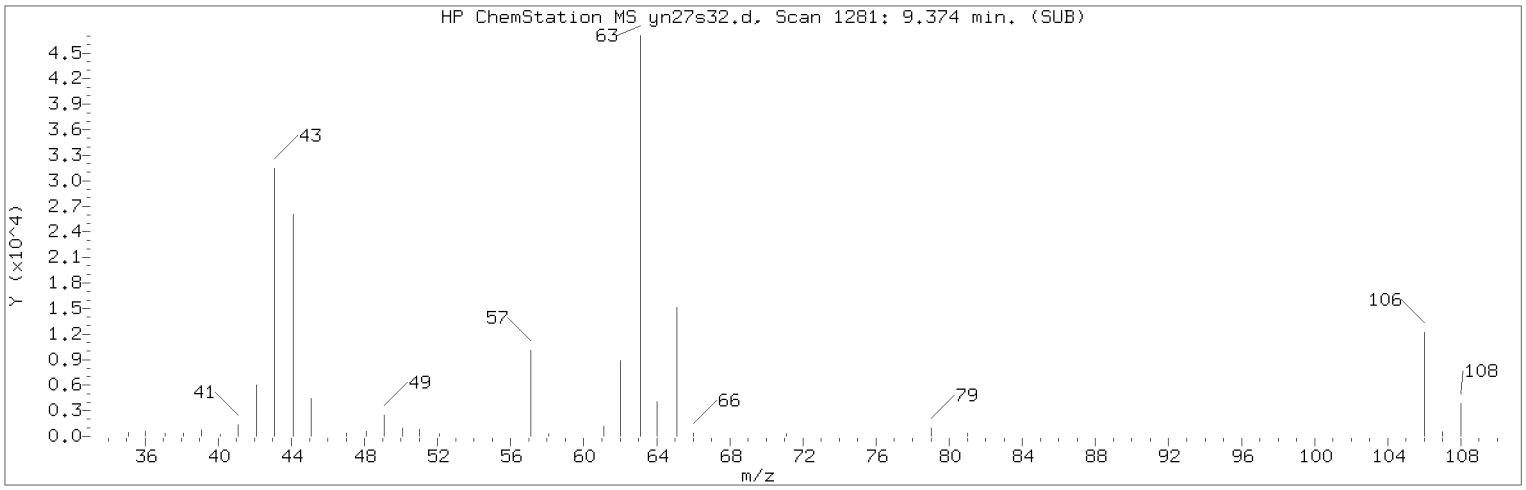
Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:45 Automation

Sample Name: LCDY09 Lab Sample ID: LCDY09

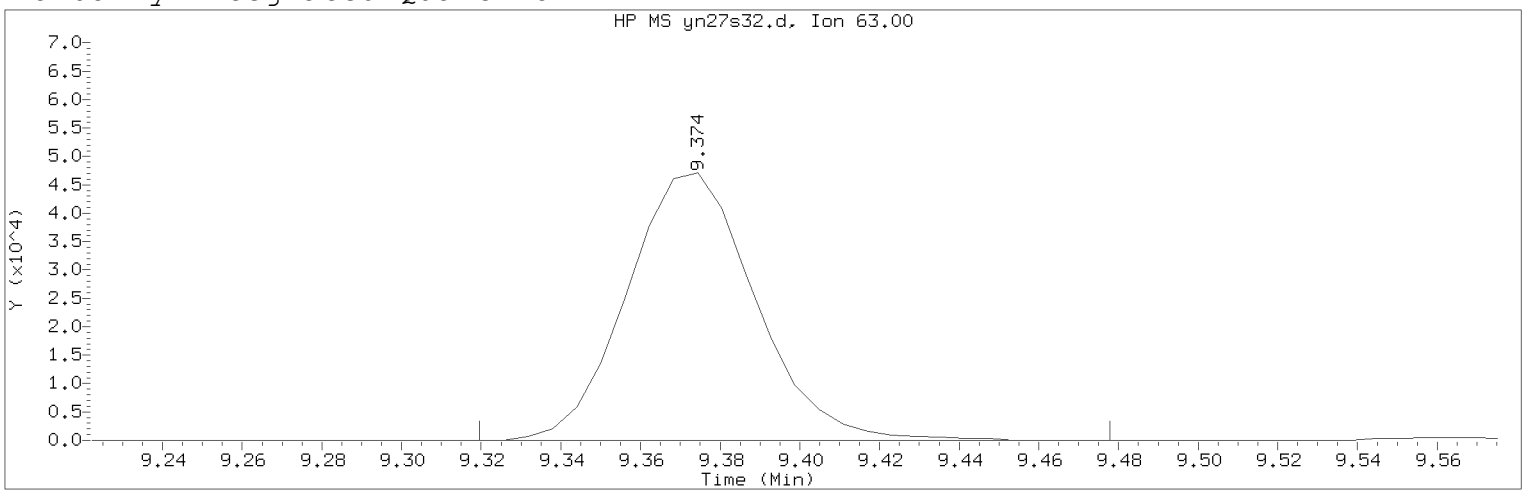
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1180
Retention Time (minutes): 8.760
Quant Ion : 88.00
Area : 62644
On-column Amount (ng) : 694.1736
Integration start scan : 1154 Integration stop scan: 1219
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/27/2019 at 21:39.
Target 3.5 esignature user id: dviray

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27s32.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:28 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: LCDY09 Lab Sample ID: LCDY09

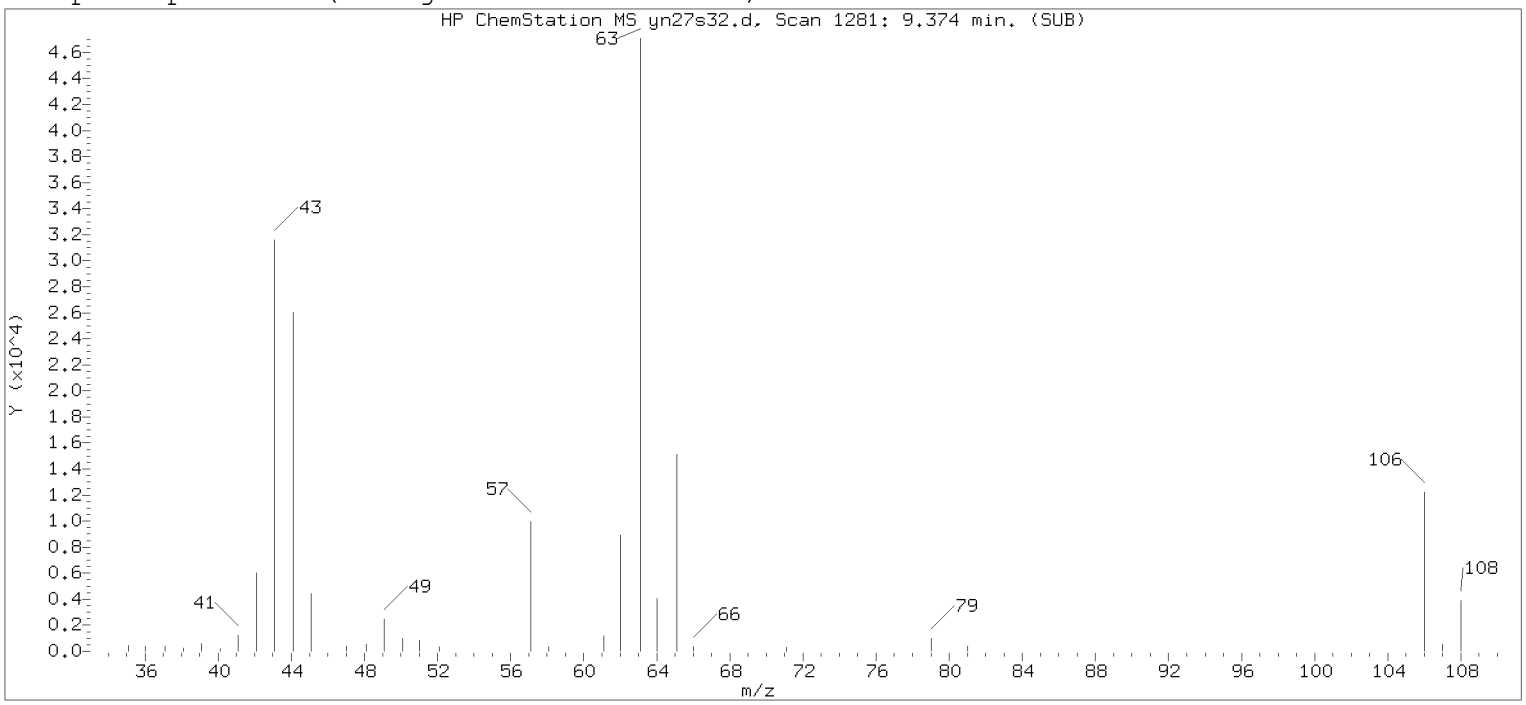
Compound Number : 80
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1281
Retention Time (minutes): 9.374
Quant Ion : 63.00
Area (flag) : 105416M
On-Column Amount (ng) : 22.3119
Integration start scan : 1271 Integration stop scan: 1297
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

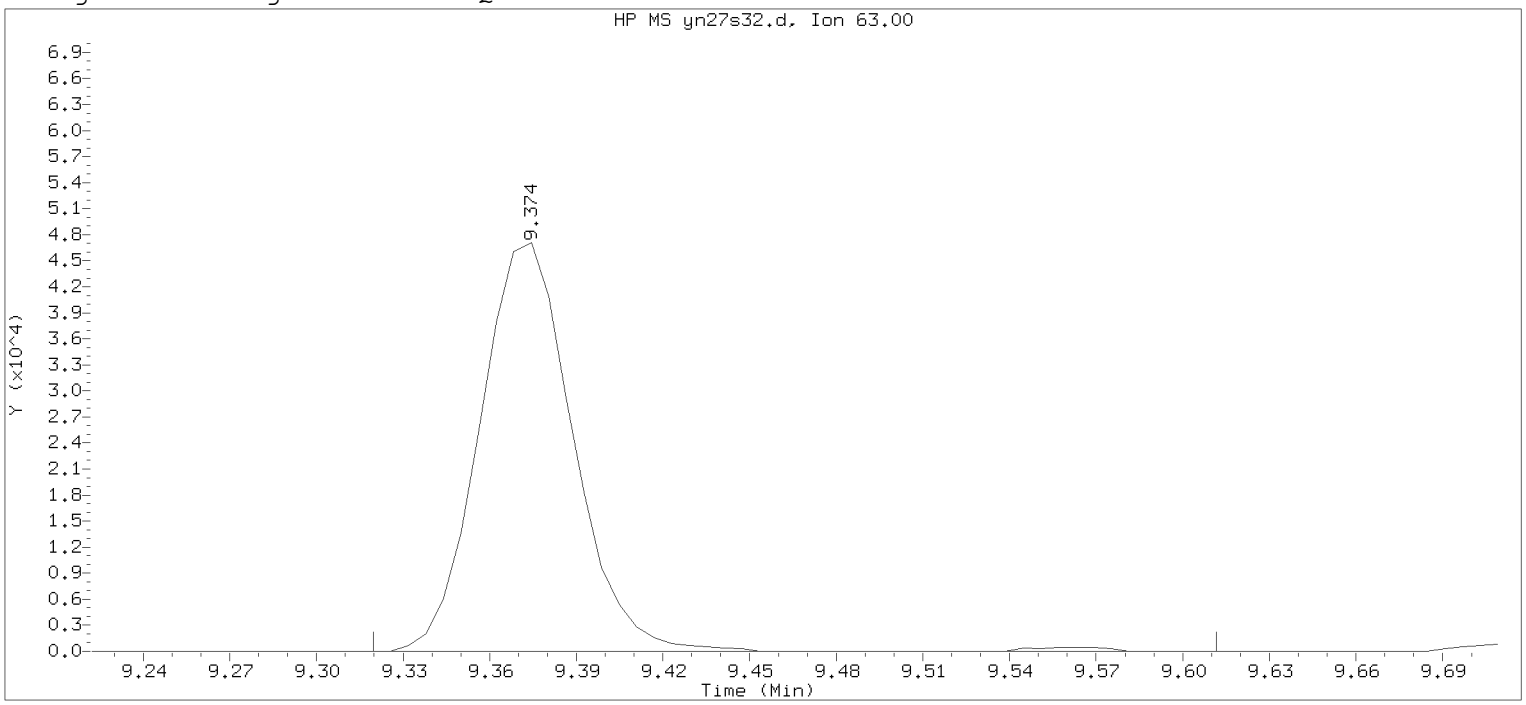
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27s32.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:28 Analyst ID: DVV10203

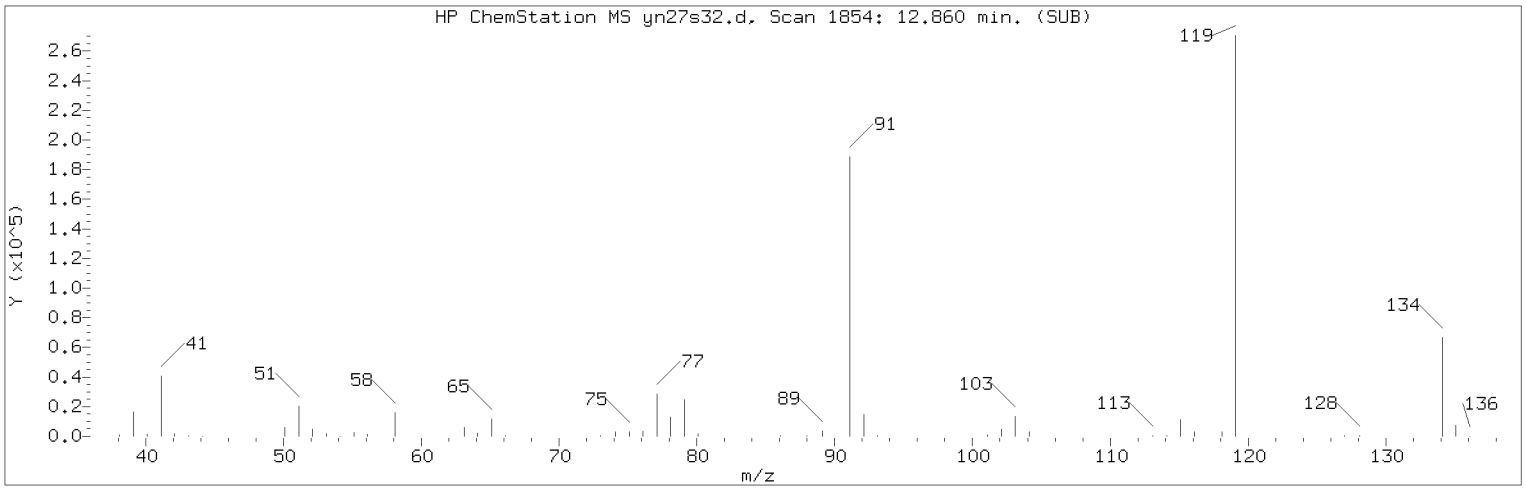
Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:45 Automation

Sample Name: LCDY09 Lab Sample ID: LCDY09

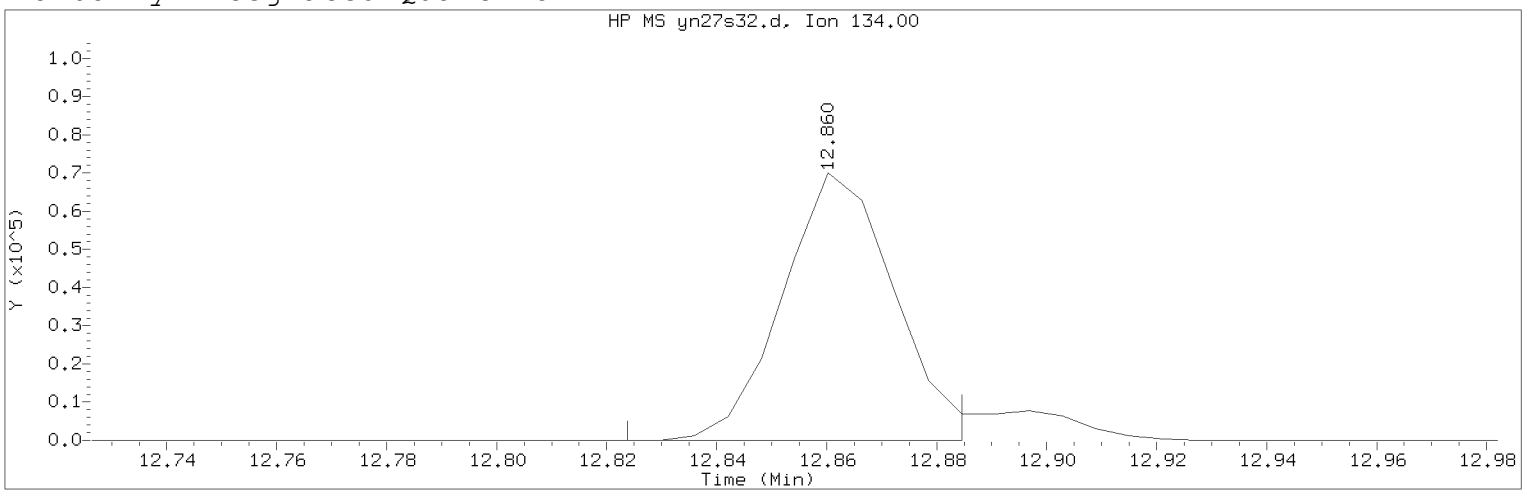
Compound Number : 80
Compound Name : 2-Chloroethyl Vinyl Ether
Scan Number : 1281
Retention Time (minutes): 9.374
Quant Ion : 63.00
Area : 106234
On-column Amount (ng) : 22.4851
Integration start scan : 1271 Integration stop scan: 1319
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/27/2019 at 21:39.
Target 3.5 esignature user id: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27s32.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:28 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: LCDY09 Lab Sample ID: LCDY09

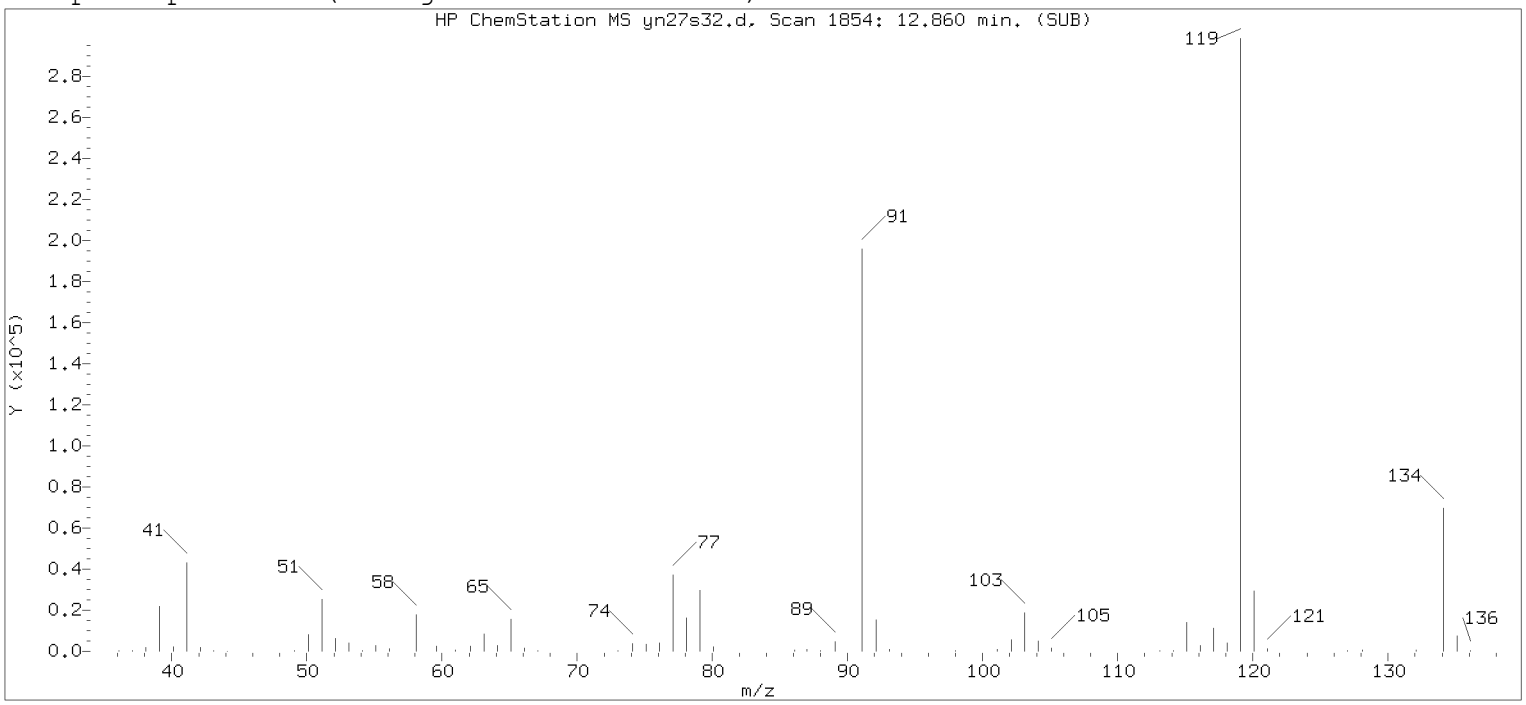
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area (flag) : 98636M
On-Column Amount (ng) : 21.3824
Integration start scan : 1847 Integration stop scan: 1857
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

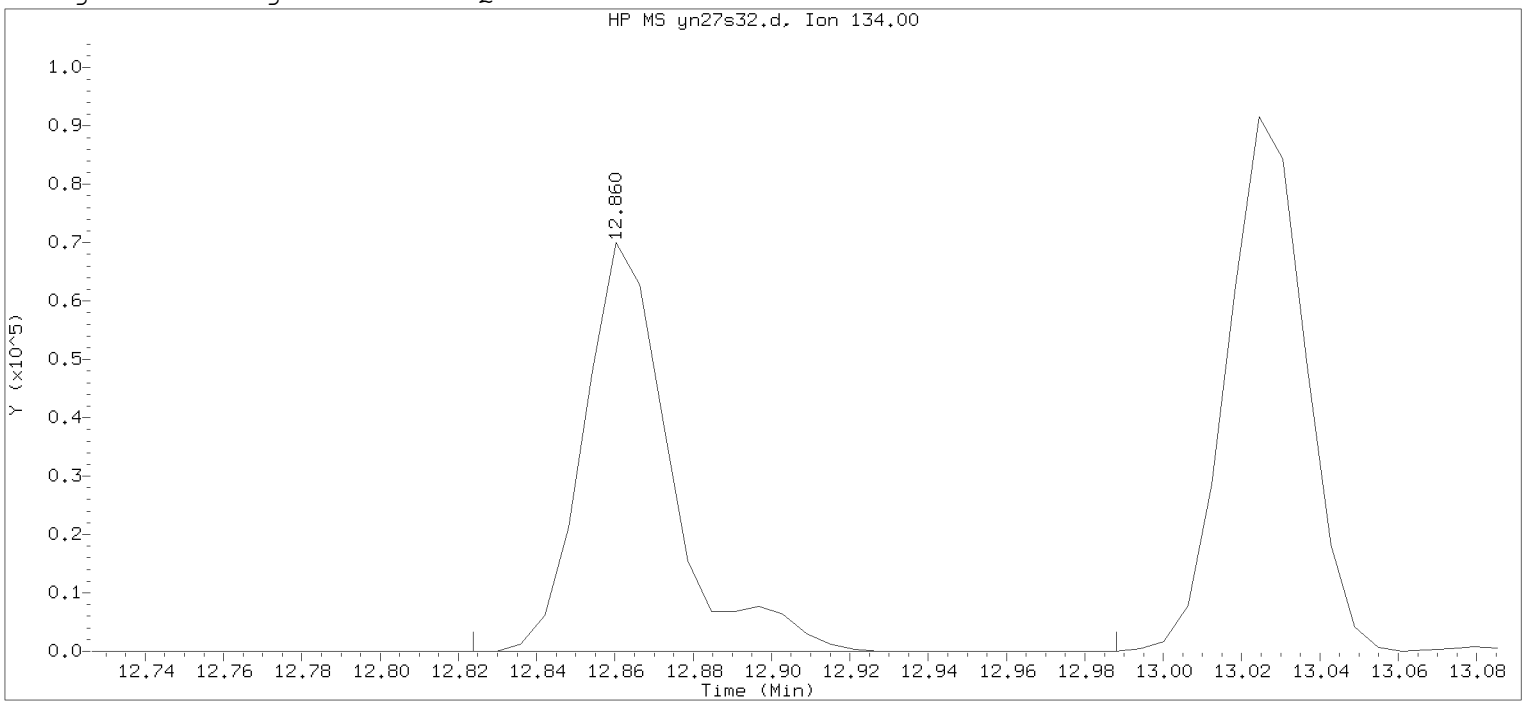
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



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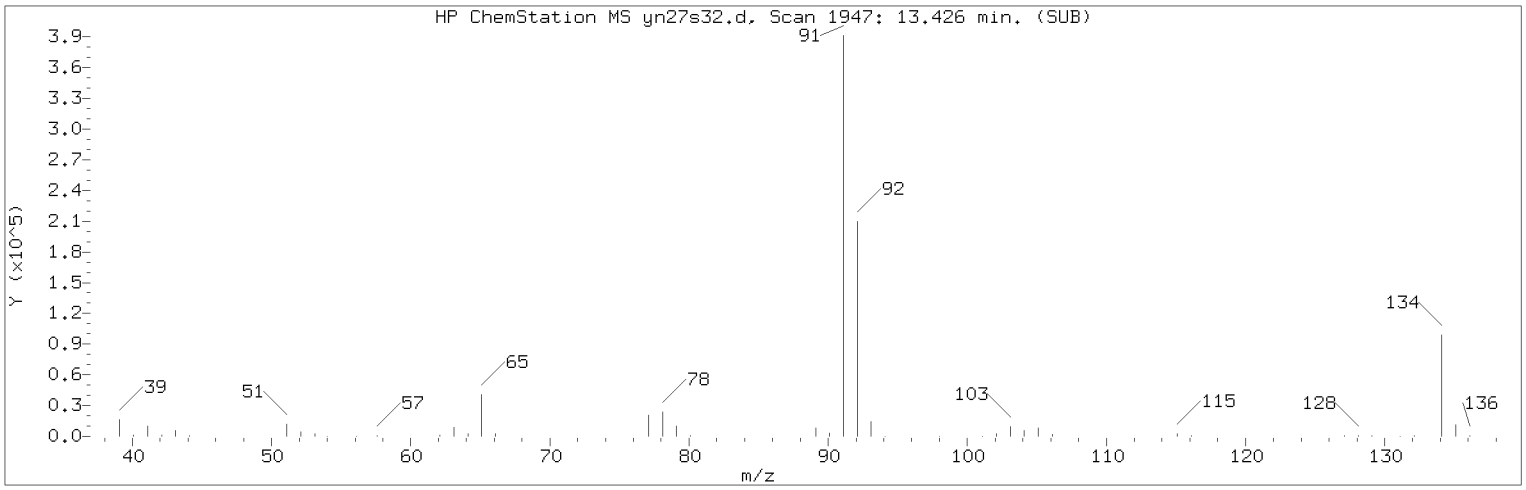
Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:45 Automation

Sample Name: LCDY09 Lab Sample ID: LCDY09

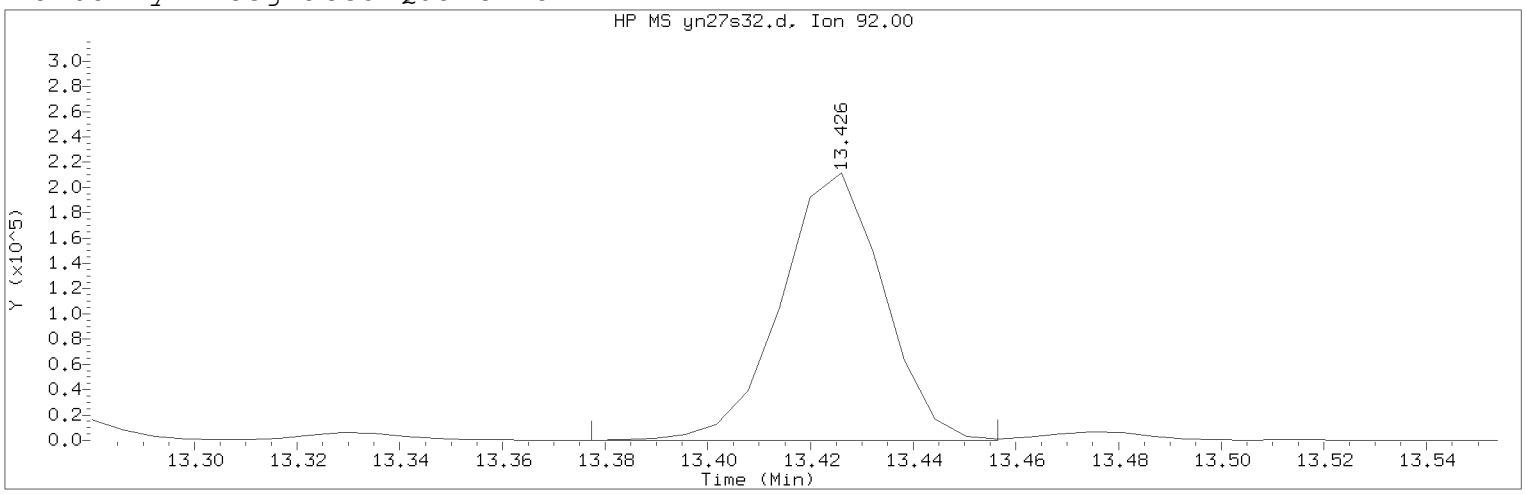
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area : 107923
On-column Amount (ng) : 23.3957
Integration start scan : 1847 Integration stop scan: 1874
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/27/2019 at 21:39.
Target 3.5 esignature user id: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27s32.d Instrument ID: HP09355.i
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Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: LCDY09 Lab Sample ID: LCDY09

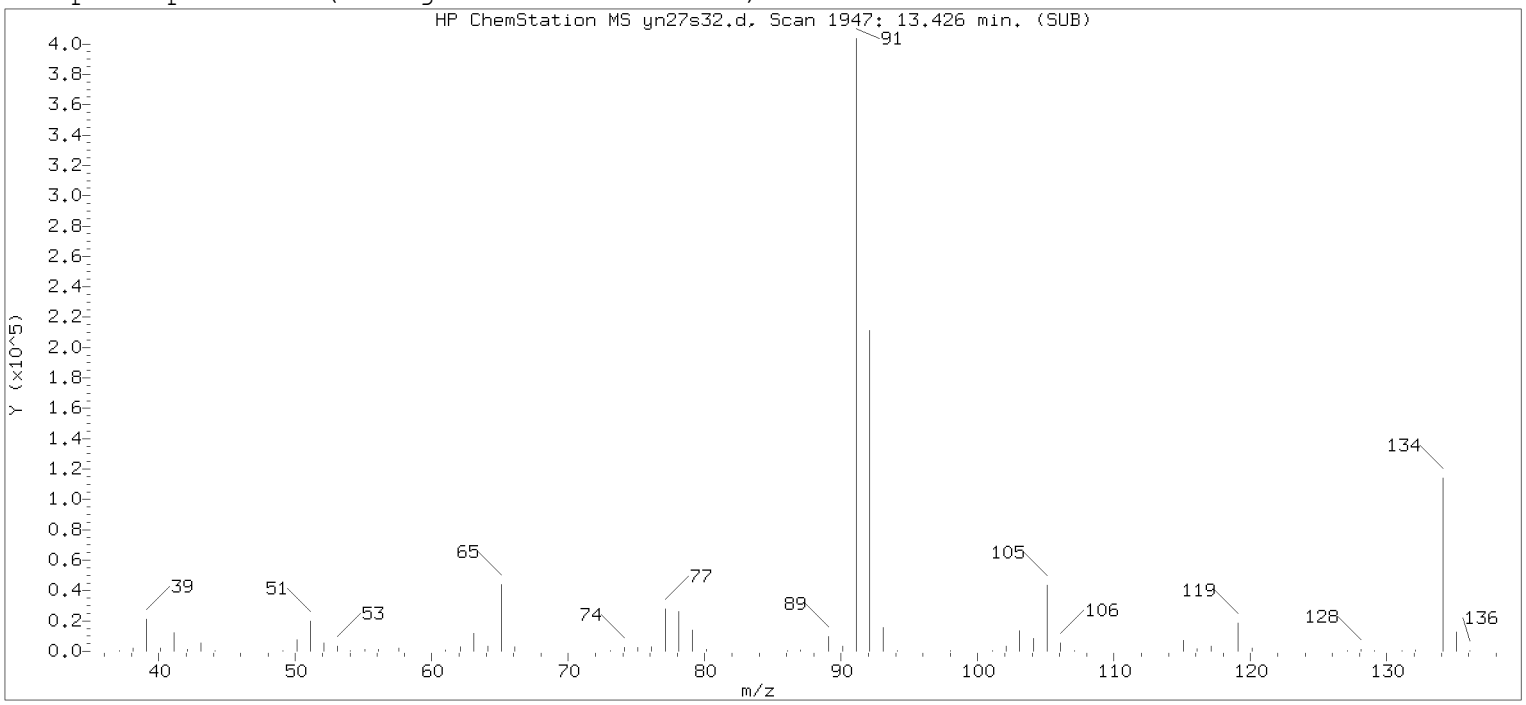
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1947
Retention Time (minutes): 13.426
Quant Ion : 92.00
Area (flag) : 292302M
On-Column Amount (ng) : 23.0633
Integration start scan : 1938 Integration stop scan: 1951
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

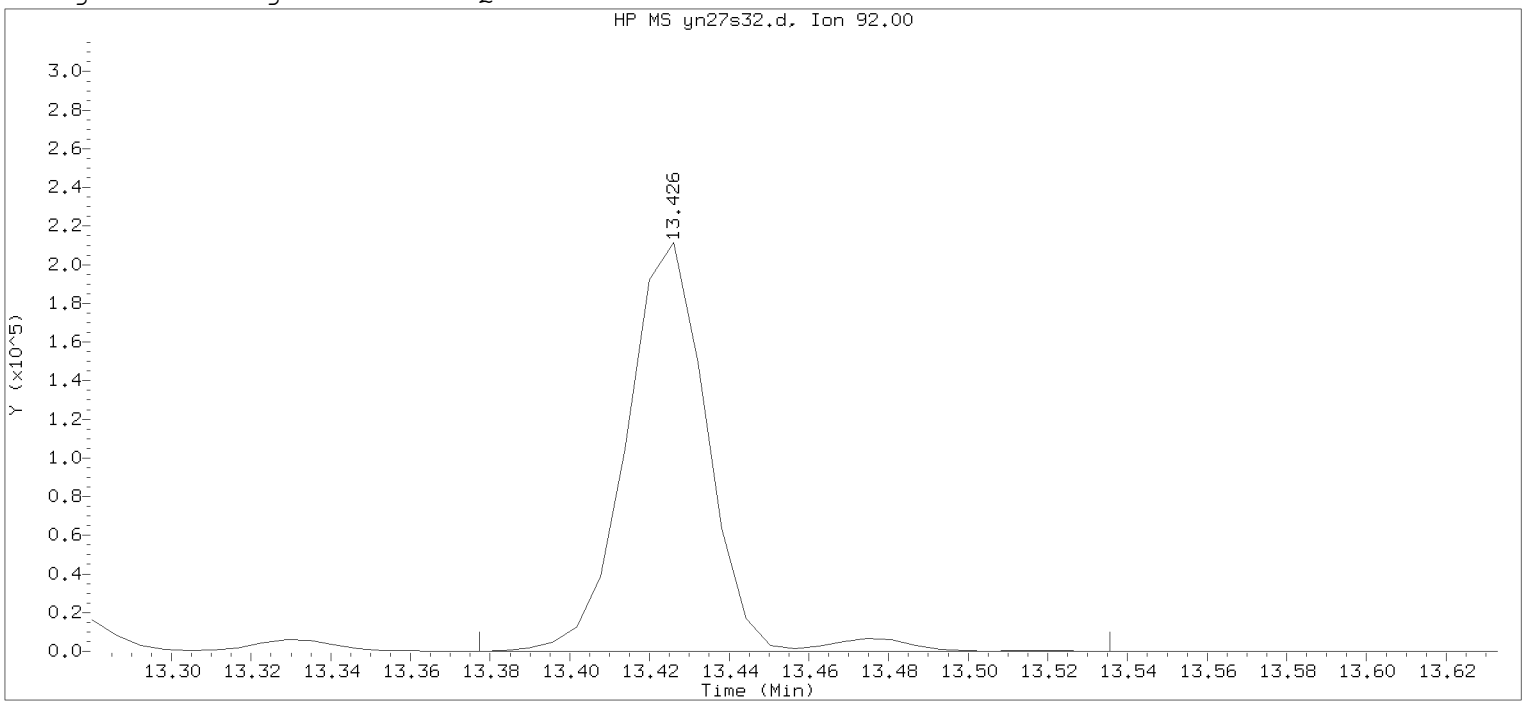
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



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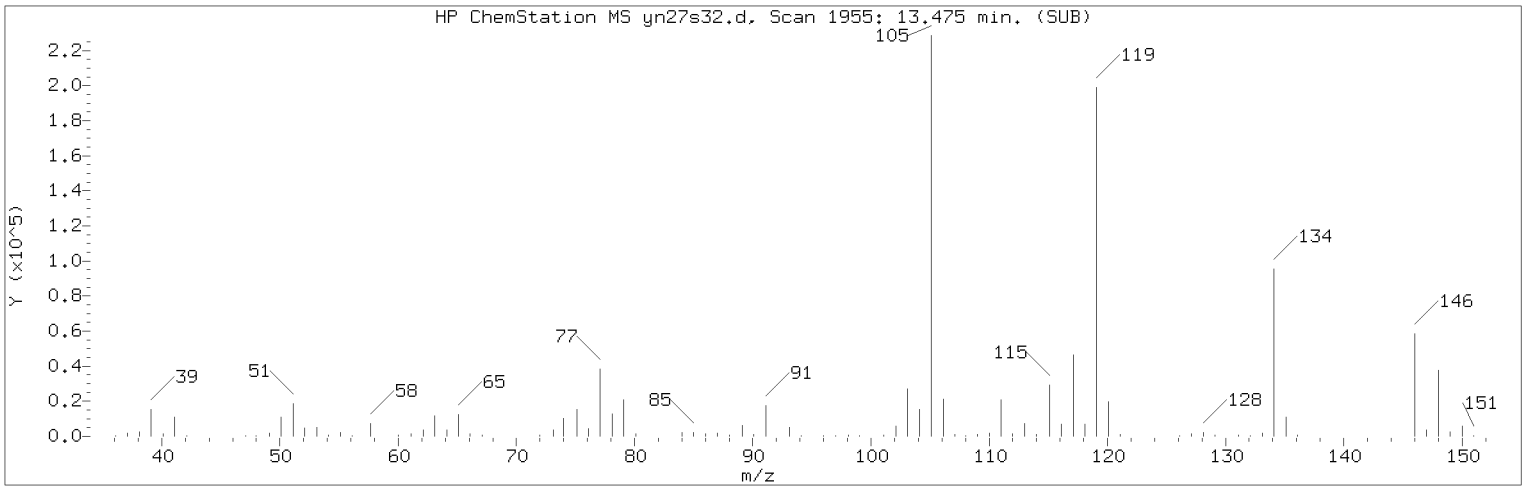
Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:45 Automation

Sample Name: LCDY09 Lab Sample ID: LCDY09

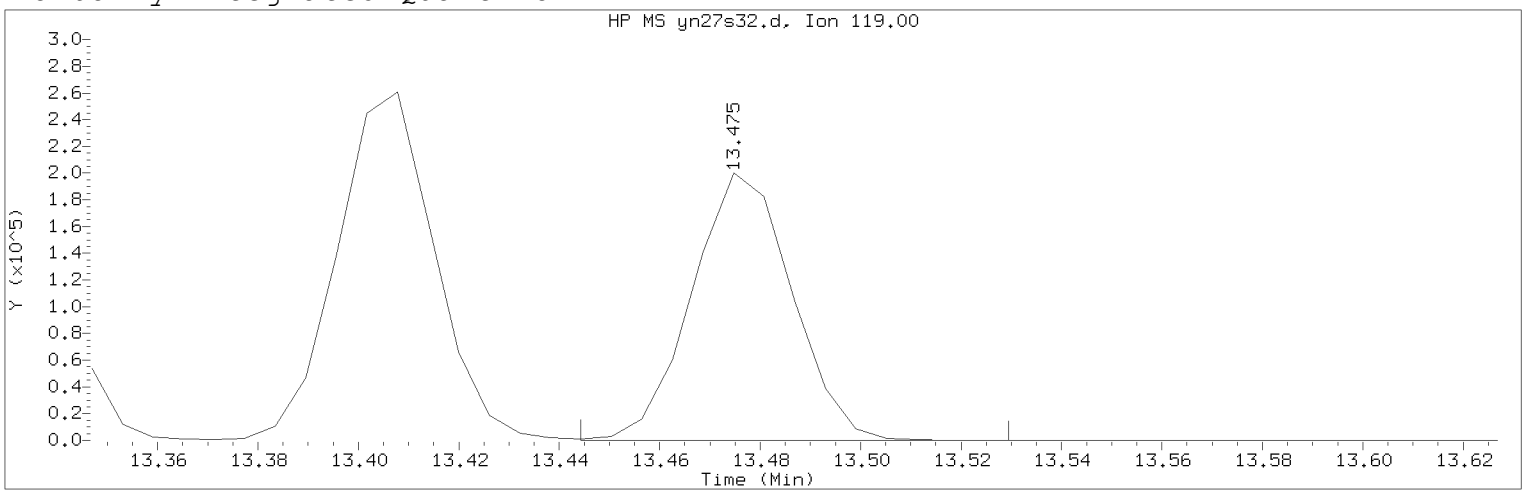
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1947
Retention Time (minutes): 13.426
Quant Ion : 92.00
Area : 301512
On-column Amount (ng) : 23.7900
Integration start scan : 1938 Integration stop scan: 1964
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/27/2019 at 21:39.
Target 3.5 esignature user id: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27s32.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:28 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 21:37 dvv10203

Sample Name: LCDY09 Lab Sample ID: LCDY09

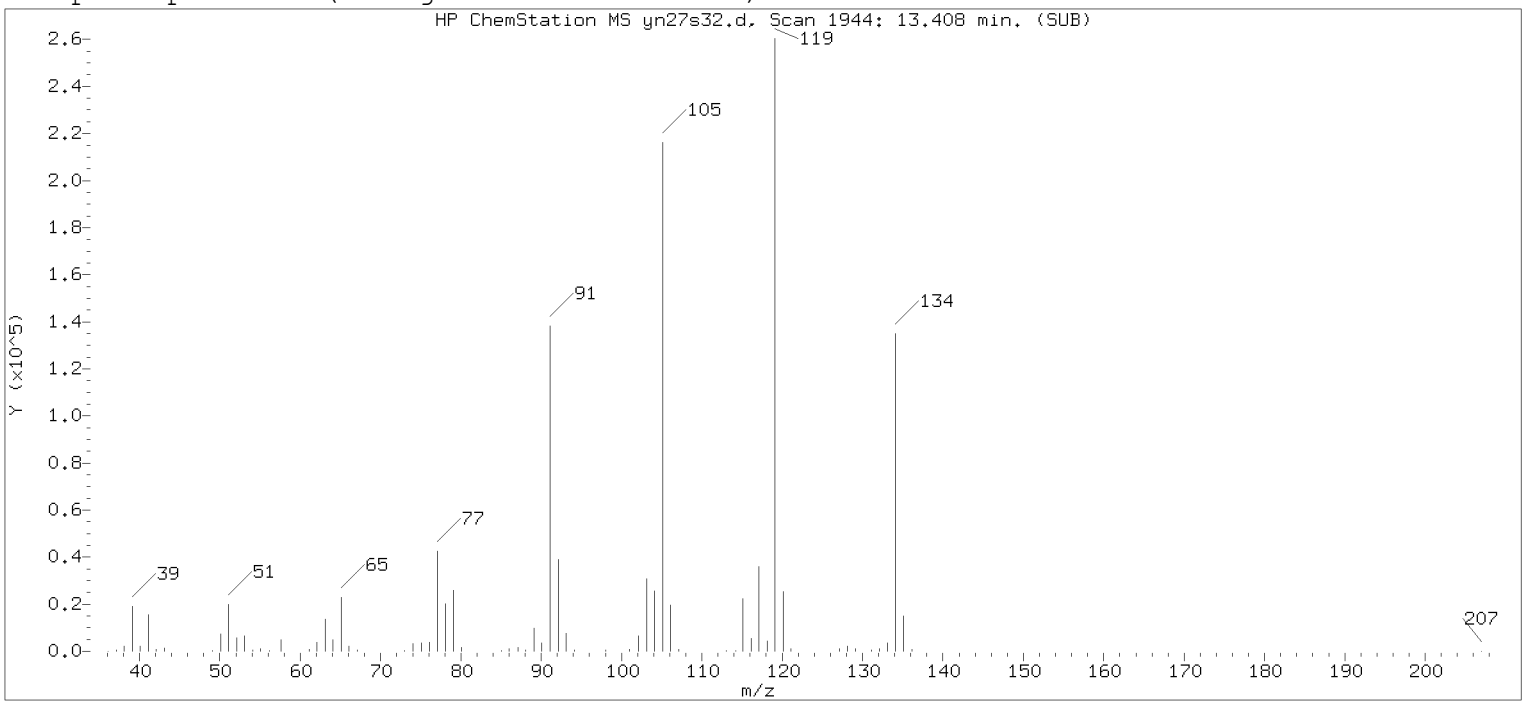
Compound Number : 140
Compound Name : 1,2-Diethylbenzene
Scan Number : 1955
Retention Time (minutes): 13.475
Quant Ion : 119.00
Area (flag) : 276307M
On-Column Amount (ng) : 20.9776
Integration start scan : 1949 Integration stop scan: 1963
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

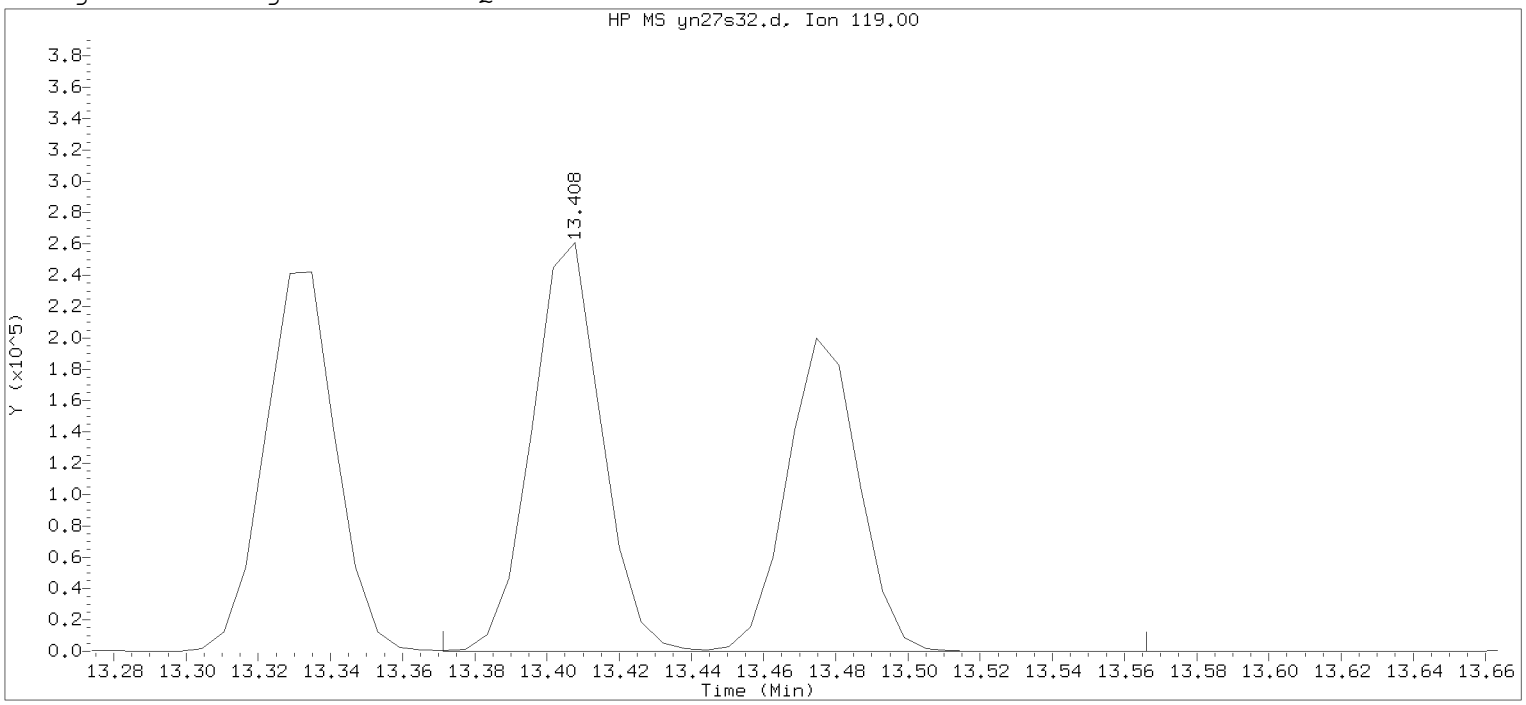
Analyst responsible for change: Digitally signed by Don V. Viray
on 11/27/2019 at 21:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Kelly E. Keller on 12/02/2019 at 12:37.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19nov27b.b/yn27s32.d Instrument ID: HP09355.i
Injection date and time: 27-NOV-2019 20:28 Analyst ID: DVV10203

Method used: /chem2/HP09355.i/19nov27b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 27-NOV-2019 20:01
Date, time and analyst ID of latest file update: 27-Nov-2019 20:45 Automation

Sample Name: LCDY09 Lab Sample ID: LCDY09

Compound Number : 140
Compound Name : 1,2-Diethylbenzene
Scan Number : 1944
Retention Time (minutes): 13.408
Quant Ion : 119.00
Area : 626945
On-column Amount (ng) : 47.5986
Integration start scan : 1937 Integration stop scan: 1969
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 11/27/2019 at 21:39.
Target 3.5 esignature user id: DVV10203

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2425 New Holland Pike, Lancaster, PA 17601 | 717-656-2300 | Fax: 717-656-2681 | www.LancasterLabs.com

NYSDEC ASP Category B Data Package

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Project: AD-New Windsor, NY
Groundwater and Water Samples
Collected on 11/26/19

SDG# JCW27

GROUP	SAMPLE NUMBERS
2076913	1212641-1212649

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-18-27
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M. Kauffman

Dana M. Kauffman
Manager

Date: **01/06/2020**

Any questions or concerns you might have regarding this data package should be directed to your client representative, Katherine Klinefelter at (717) 556-7256.

2425 New Holland Pike, Lancaster, PA 17601 | 717-656-2300 | Fax: 717-656-2681 | www.LancasterLabs.com

Table of Contents for SDG# JCW27

1. Sample Reference List 3
2. Preservation Data 4
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Sample Reference List for SDG Number JCW27
with a Data Package Type of NYSDEC B

06556 - The Johnson Company, Inc.

Project: AD-New Windsor, NY

Lab Sample Number	Client Sample ID	Collection Date	Date Received	Lab Sample Code
1212641	Diff-07	11/26/2019 08:00	11/27/2019 10:59	DIF01
1212642	Diff-06	11/26/2019 08:05	11/27/2019 10:59	DIF02
1212643	Diff-05	11/26/2019 08:30	11/27/2019 10:59	DIF03
1212644	Diff-03	11/26/2019 08:45	11/27/2019 10:59	DIF04
1212645	Diff-04	11/26/2019 08:55	11/27/2019 10:59	DIF05
1212646	Diff-02	11/26/2019 09:08	11/27/2019 10:59	DIF06
1212647	Diff-Dup	11/26/2019 08:40	11/27/2019 10:59	DIF07
1212648	Diff-01	11/26/2019 09:15	11/27/2019 10:59	DIF08
1212649	TB-AWR-112619	11/26/2019 00:00	11/27/2019 10:59	DIF09

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Sample pH Log

SDG: JCW27

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
1212641	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	12/6/2019 1:28:49PM	895
1212642	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	12/9/2019 12:32:11PM	895
1212643	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	12/9/2019 12:32:11PM	895
1212644	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	12/9/2019 12:32:11PM	895
1212645	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	12/9/2019 12:32:11PM	895
1212646	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	12/9/2019 12:32:11PM	895
1212647	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	12/9/2019 12:32:12PM	895
1212648	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	12/9/2019 12:32:12PM	895
1212649	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	12/6/2019 1:44:42PM	2648

*pH Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

**Chlorine Present Code Key
NA = Chlorine Not Checked
Y = Chlorine Present
N = Chlorine Not Present

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11997 VOCs- 5ml Water by 8260C/D

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

The Johnson Company, Inc.
Suite 600
100 State Street
Montpelier VT 05602

Report Date: December 09, 2019 21:21

Project: AD-New Windsor, NY

Account #: 06556
Group Number: 2076913
SDG: JCW27
PO Number: 1-0145-05
Release Number: 58300.00
State of Sample Origin: NY

Electronic Copy To	The Johnson Company, Inc.	Attn: Tristan Hardy
Electronic Copy To	The Johnson Company, Inc.	Attn: George Lester
Electronic Copy To	VHB	Attn: Quinn Ledak

Respectfully Submitted,

Katherine A. Klinefelter

Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
Diff-07 Grab Groundwater	11/26/2019 08:00	1212641
Diff-06 Grab Groundwater	11/26/2019 08:05	1212642
Diff-05 Grab Groundwater	11/26/2019 08:30	1212643
Diff-03 Grab Groundwater	11/26/2019 08:45	1212644
Diff-04 Grab Groundwater	11/26/2019 08:55	1212645
Diff-02 Grab Groundwater	11/26/2019 09:08	1212646
Diff-Dup Grab Groundwater	11/26/2019 08:40	1212647
Diff-01 Grab Groundwater	11/26/2019 09:15	1212648
TB-AWR-112619 Water	11/26/2019	1212649

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **Diff-07 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/27/2019 10:59
Collection Date/Time: 11/26/2019 08:00
SDG#: JCW27-01

The Johnson Company, Inc.
ELLE Sample #: GW 1212641
ELLE Group #: 2076913
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	2 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.4 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated:
Acetone.

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193391AA	12/05/2019 16:16	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193391AA	12/05/2019 16:15	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **Diff-06 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/27/2019 10:59
Collection Date/Time: 11/26/2019 08:05
SDG#: JCW27-02

The Johnson Company, Inc.
ELLE Sample #: GW 1212642
ELLE Group #: 2076913
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	3 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	0.3 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	3	0.3	1	1
11997	Trichloroethene	79-01-6	1	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193411AA	12/07/2019 18:41	Miranda Campbell	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193411AA	12/07/2019 18:40	Miranda Campbell	1

*=This limit was used in the evaluation of the final result

Sample Description: **Diff-05 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/27/2019 10:59
Collection Date/Time: 11/26/2019 08:30
SDG#: JCW27-03

The Johnson Company, Inc.
ELLE Sample #: GW 1212643
ELLE Group #: 2076913
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	2 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.7 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	0.4 J	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	5	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	2	0.3	1	1
11997	Trichloroethene	79-01-6	3	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193411AA	12/07/2019 19:03	Miranda Campbell	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193411AA	12/07/2019 19:02	Miranda Campbell	1

*=This limit was used in the evaluation of the final result

Sample Description: **Diff-03 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/27/2019 10:59
Collection Date/Time: 11/26/2019 08:45
SDG#: JCW27-04

The Johnson Company, Inc.
ELLE Sample #: GW 1212644
ELLE Group #: 2076913
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	2 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.6 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	0.3 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193411AA	12/07/2019 19:25	Miranda Campbell	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193411AA	12/07/2019 19:24	Miranda Campbell	1

*=This limit was used in the evaluation of the final result

Sample Description: **Diff-04 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/27/2019 10:59
Collection Date/Time: 11/26/2019 08:55
SDG#: JCW27-05

The Johnson Company, Inc.
ELLE Sample #: GW 1212645
ELLE Group #: 2076913
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	3 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	2	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	0.2 J	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193411AA	12/07/2019 19:46	Miranda Campbell	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193411AA	12/07/2019 19:45	Miranda Campbell	1

*=This limit was used in the evaluation of the final result

Sample Description: **Diff-02 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/27/2019 10:59
Collection Date/Time: 11/26/2019 09:08
SDG#: JCW27-06

The Johnson Company, Inc.
ELLE Sample #: GW 1212646
ELLE Group #: 2076913
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	3 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.8 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	0.2 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	0.7 J	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193411AA	12/07/2019 20:08	Miranda Campbell	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193411AA	12/07/2019 20:07	Miranda Campbell	1

*=This limit was used in the evaluation of the final result

Sample Description: **Diff-Dup Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/27/2019 10:59
Collection Date/Time: 11/26/2019 08:40
SDG#: JCW27-07FD

The Johnson Company, Inc.
ELLE Sample #: GW 1212647
ELLE Group #: 2076913
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	2 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	0.9 J	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193411AA	12/07/2019 20:30	Miranda Campbell	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193411AA	12/07/2019 20:29	Miranda Campbell	1

*=This limit was used in the evaluation of the final result

Sample Description: **Diff-01 Grab Groundwater**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/27/2019 10:59
Collection Date/Time: 11/26/2019 09:15
SDG#: JCW27-08

The Johnson Company, Inc.
ELLE Sample #: GW 1212648
ELLE Group #: 2076913
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	3 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	1	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	0.3 J	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193411AA	12/07/2019 20:52	Miranda Campbell	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193411AA	12/07/2019 20:51	Miranda Campbell	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB-AWR-112619 Water**
New Windsor, NY

Project Name: **AD-New Windsor, NY**

Submittal Date/Time: 11/27/2019 10:59
Collection Date/Time: 11/26/2019
SDG#: JCW27-09TB

The Johnson Company, Inc.
ELLE Sample #: GW 1212649
ELLE Group #: 2076913
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,4-Dioxane	123-91-1	N.D.	29	250	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Freon 113	76-13-1	N.D.	0.2	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Naphthalene	91-20-3	N.D.	1	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193411AA	12/07/2019 13:55	Miranda Campbell	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193411AA	12/07/2019 13:54	Miranda Campbell	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2076913
Reported: 12/09/2019 21:21

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: Y193391AA	Sample number(s): 1212641		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	6
Batch number: Y193411AA	Sample number(s): 1212642-1212649		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Chloroform	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
cis-1,2-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,4-Dioxane	N.D.	29	250
Ethylbenzene	N.D.	0.4	1
Freon 113	N.D.	0.2	10
Methylene Chloride	N.D.	0.3	1

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2076913
Reported: 12/09/2019 21:21

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Naphthalene	N.D.	1	5
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
Trichloroethene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	6

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: Y193391AA	Sample number(s): 1212641								
Acetone	150	165.97			111		54-157		
Benzene	20	22.41			112		80-120		
2-Butanone	150	170.53			114		59-135		
Carbon Disulfide	20	17.83			89		65-128		
Chloroform	20	21.21			106		80-120		
1,2-Dichlorobenzene	20	22.14			111		80-120		
1,1-Dichloroethane	20	21.98			110		80-120		
1,2-Dichloroethane	20	20.13			101		73-124		
1,1-Dichloroethene	20	20.81			104		80-131		
cis-1,2-Dichloroethene	20	22.65			113		80-125		
trans-1,2-Dichloroethene	20	21.35			107		80-126		
1,4-Dioxane	500	623.16			125		63-146		
Ethylbenzene	20	22.43			112		80-120		
Freon 113	20	18.09			90		73-139		
Methylene Chloride	20	22.31			112		80-120		
Naphthalene	20	21.65			108		53-124		
Tetrachloroethene	20	21.04			105		80-120		
Toluene	20	22.48			112		80-120		
1,1,1-Trichloroethane	20	19.28			96		67-126		
Trichloroethene	20	20.99			105		80-120		
Vinyl Chloride	20	17.61			88		56-120		
Xylene (Total)	60	66.17			110		80-120		
Batch number: Y193411AA	Sample number(s): 1212642-1212649								
Acetone	150	176.17			117		54-157		
Benzene	20	21.7			109		80-120		
2-Butanone	150	172.89			115		59-135		
Carbon Disulfide	20	15.8			79		65-128		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2076913
Reported: 12/09/2019 21:21

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Chloroform	20	20.7			103		80-120		
1,2-Dichlorobenzene	20	22.2			111		80-120		
1,1-Dichloroethane	20	21.1			105		80-120		
1,2-Dichloroethane	20	20.02			100		73-124		
1,1-Dichloroethene	20	19.2			96		80-131		
cis-1,2-Dichloroethene	20	22.07			110		80-125		
trans-1,2-Dichloroethene	20	20.38			102		80-126		
1,4-Dioxane	500	658.7			132		63-146		
Ethylbenzene	20	22.15			111		80-120		
Freon 113	20	17.09			85		73-139		
Methylene Chloride	20	21.54			108		80-120		
Naphthalene	20	21.94			110		53-124		
Tetrachloroethene	20	20.97			105		80-120		
Toluene	20	21.88			109		80-120		
1,1,1-Trichloroethane	20	18.56			93		67-126		
Trichloroethene	20	20.57			103		80-120		
Vinyl Chloride	20	16.3			82		56-120		
Xylene (Total)	60	65.34			109		80-120		

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: Y193391AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1212641	93	97	98	94
Blank	91	97	98	95
LCS	92	97	99	97
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: Y193411AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1212642	91	97	97	95
1212643	91	97	98	94
1212644	91	97	98	95
1212645	91	97	98	94
1212646	91	98	97	94

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: The Johnson Company, Inc. Group Number: 2076913
Reported: 12/09/2019 21:21

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: Y193411AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1212647	91	97	98	95
1212648	92	99	98	94
1212649	90	96	97	95
Blank	90	96	98	95
LCS	91	99	99	97
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 6556 Group # 2076913 Sample # 1212641-9

COC # 596353

Client Information

Client: VHB / The Johnson Company	Acct. #: 06556
Project Name/#: AD - New Windsor / 58300	PWSID #:
Project Manager: George Lester	P.O. #:
Sampler: Adam Robfoy	Quote #:
State where samples were collected: NY	For Compliance: Yes ☐ No ☑

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☑ NPDES ☐ Surface ☐ | Other: ____

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only

FSC: ____
SCR#: ____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	H	8260c - VOCs	Remarks
Diff-07	11/26/19	800	X		3	X	X	
Diff-06	11/26/19	805	X		3	X	X	
Diff-05	11/26/19	830	X		3	X	X	
Diff-03	11/26/19	845	X		3	X	X	
Diff-04	11/26/19	855	X		3	X	X	
Diff-02	11/26/19	908	X		3	X	X	
Diff-Dup	11/26/19	840	X		3	X	X	
Diff-01	11/26/19	915	X		3	X	X	
TB-AWR-112619	—	—	—		2	X		TRIP BLANK

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: ____

E-mail address: Glester@vhb.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP)
Type VI (Raw Data Only)
Type III (Reduced non-CLP)
NJ DKQP
TX TRRP-13
NYSDEC Category A or B
MA MCP
CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	11/26/19	1000			
				11/27/19	1057

EDD Required? Yes No
If yes, format: Excel

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx X Other ____

Temperature upon receipt 3.5 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 268041

Group Number(s): 2076913

Client: VHB

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	11/27/2019
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Tamara Lugardo

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192050133	3.5	IR	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17601-5925
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCW27

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
1212641	Diff-07	X		1	
1212642	Diff-06	X		1	
1212643	Diff-05	X		1	
1212644	Diff-03	X		1	
1212645	Diff-04	X		1	
1212646	Diff-02	X		1	
1212647	Diff-Dup	X		1	Field Duplicate Sample
1212648	Diff-01	X		1	
1212649	TB-AWR-112619	X		1	Trip Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

(Sample number(s): 1212641: Analysis: 11997)
The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated:
Acetone.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

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Case Narrative/Conformance Summary

CLIENT: The Johnson Company, Inc.
SDG: JCW27

GC/MS Volatiles

Fraction: Volatiles by GC/MS

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

1. Relative Response Factor (RRF)

$$RRF = \frac{AX}{Ais} \times \frac{Cis}{Cx}$$

Where:

Ax = Area of the characteristic ion for the compound to be measured
Ais = Area of the characteristic ion for the specific internal standard to be measured
Cis = Concentration of the internal standard
Cx = Concentration of the compound to be measured

2. % Relative Standard Deviation (%RSD)

$$\%RSD = \frac{standard\ deviation}{Mean} \times 100$$

3. % Difference

$$\%D = \frac{RRFc - RRFi}{RRFi} \times 100$$

Where:

RRFc = Relative response factor from the continuing calibration standard
RRFi = Mean relative response factor from the initial calibration

4. Concentration

$$Concentration\ (\mu g / L) = \frac{(Ax)(Is)(Df)}{(Ais)(RRF)}$$

Where:

Ax, Ais, and RRF are as given in 1. above
Is = Amount of internal standard added in parts per billion (µg/L)
Df = Dilution factor

5. % Recovery (% Rec)

$$\%Rec = \frac{SSR - SR}{SA} \times 100$$

Where:

SSR = Spiked sample result
SR = Sample result
SA = Spike added

6. Relative Percent Difference (RPD)

$$RPD = \frac{(MSR - MSRD)}{(1/2)(MSR + MSRD)} \times 100$$

Where:

MSR = Matrix spike recovery
MSRD = Matrix spike recovery duplicate

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: The Johnson Company, Inc.
SDG: JCW27

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
VOCs- 5ml Water by 8260C/D	Y193391AA	VBLKY15	12/05/2019 08:48
		LCSY15	12/05/2019 08:04
		1212641	12/05/2019 16:16
VOCs- 5ml Water by 8260C/D	Y193411AA	VBLKY17	12/07/2019 12:33
		LCSY17	12/07/2019 11:50
		1212642	12/07/2019 18:41
		1212643	12/07/2019 19:03
		1212644	12/07/2019 19:25
		1212645	12/07/2019 19:46
		1212646	12/07/2019 20:08
		1212647	12/07/2019 20:30
		1212648	12/07/2019 20:52
		1212649	12/07/2019 13:55

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: JCW27
Matrix: LIQUID

Fraction: Volatiles by GC/MS

Y193391AA / VBLKY15 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	12/05/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	12/05/19	N.D.	ug/l	0.2	1
Acetone	12/05/19	N.D.	ug/l	0.7	20
Freon 113	12/05/19	N.D.	ug/l	0.2	10
Carbon Disulfide	12/05/19	N.D.	ug/l	0.2	5
Methylene Chloride	12/05/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	12/05/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	12/05/19	N.D.	ug/l	0.2	1
2-Butanone	12/05/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	12/05/19	N.D.	ug/l	0.2	1
Chloroform	12/05/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	12/05/19	N.D.	ug/l	0.3	1
Benzene	12/05/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	12/05/19	N.D.	ug/l	0.3	1
Trichloroethene	12/05/19	N.D.	ug/l	0.2	1
1,4-Dioxane	12/05/19	N.D.	ug/l	29	250
Toluene	12/05/19	N.D.	ug/l	0.2	1
Tetrachloroethene	12/05/19	N.D.	ug/l	0.2	1
Ethylbenzene	12/05/19	N.D.	ug/l	0.4	1
Xylene (Total)	12/05/19	N.D.	ug/l	1	6
1,2-Dichlorobenzene	12/05/19	N.D.	ug/l	0.2	5
Naphthalene	12/05/19	N.D.	ug/l	1	5

Y193411AA / VBLKY17 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	12/07/19	N.D.	ug/l	0.2	1
1,1-Dichloroethene	12/07/19	N.D.	ug/l	0.2	1
Acetone	12/07/19	N.D.	ug/l	0.7	20
Freon 113	12/07/19	N.D.	ug/l	0.2	10
Carbon Disulfide	12/07/19	N.D.	ug/l	0.2	5
Methylene Chloride	12/07/19	N.D.	ug/l	0.3	1
trans-1,2-Dichloroethene	12/07/19	N.D.	ug/l	0.2	1
1,1-Dichloroethane	12/07/19	N.D.	ug/l	0.2	1
2-Butanone	12/07/19	N.D.	ug/l	0.3	10
cis-1,2-Dichloroethene	12/07/19	N.D.	ug/l	0.2	1
Chloroform	12/07/19	N.D.	ug/l	0.2	1
1,1,1-Trichloroethane	12/07/19	N.D.	ug/l	0.3	1
Benzene	12/07/19	N.D.	ug/l	0.2	1
1,2-Dichloroethane	12/07/19	N.D.	ug/l	0.3	1
Trichloroethene	12/07/19	N.D.	ug/l	0.2	1
1,4-Dioxane	12/07/19	N.D.	ug/l	29	250
Toluene	12/07/19	N.D.	ug/l	0.2	1
Tetrachloroethene	12/07/19	N.D.	ug/l	0.2	1
Ethylbenzene	12/07/19	N.D.	ug/l	0.4	1
Xylene (Total)	12/07/19	N.D.	ug/l	1	6

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: JCW27
Matrix: LIQUID

Fraction: Volatiles by GC/MS

Y193411AA / VBLKY17 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
1,2-Dichlorobenzene	12/07/19	N.D.	ug/l	0.2	5
Naphthalene	12/07/19	N.D.	ug/l	1	5

Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: JCW27
Matrix: LIQUID

Fraction: Volatiles by GC/MS

Y193391AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKY15	97	80 - 120	95	80 - 120	91	80 - 120	98	80 - 120
LCSY15	97	80 - 120	97	80 - 120	92	80 - 120	99	80 - 120
1212641	97	80 - 120	94	80 - 120	93	80 - 120	98	80 - 120

Y193411AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKY17	96	80 - 120	95	80 - 120	90	80 - 120	98	80 - 120
LCSY17	99	80 - 120	97	80 - 120	91	80 - 120	99	80 - 120
1212642	97	80 - 120	95	80 - 120	91	80 - 120	97	80 - 120
1212643	97	80 - 120	94	80 - 120	91	80 - 120	98	80 - 120
1212644	97	80 - 120	95	80 - 120	91	80 - 120	98	80 - 120
1212645	97	80 - 120	94	80 - 120	91	80 - 120	98	80 - 120
1212646	98	80 - 120	94	80 - 120	91	80 - 120	97	80 - 120
1212647	97	80 - 120	95	80 - 120	91	80 - 120	98	80 - 120
1212648	99	80 - 120	94	80 - 120	92	80 - 120	98	80 - 120
1212649	96	80 - 120	95	80 - 120	90	80 - 120	97	80 - 120

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: JCW27
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSY15	Batch: **Y193391AA** (Sample number(s): 1212641)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	17.61	NA	88	NA	56-120	NA	NA
1,1-Dichloroethene	20	20.81	NA	104	NA	80-131	NA	NA
Acetone	150	165.97	NA	111	NA	54-157	NA	NA
Freon 113	20	18.09	NA	90	NA	73-139	NA	NA
Carbon Disulfide	20	17.83	NA	89	NA	65-128	NA	NA
Methylene Chloride	20	22.31	NA	112	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	21.35	NA	107	NA	80-126	NA	NA
1,1-Dichloroethane	20	21.98	NA	110	NA	80-120	NA	NA
2-Butanone	150	170.53	NA	114	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	22.65	NA	113	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	19.28	NA	96	NA	67-126	NA	NA
Chloroform	20	21.21	NA	106	NA	80-120	NA	NA
1,2-Dichloroethane	20	20.13	NA	101	NA	73-124	NA	NA
Benzene	20	22.41	NA	112	NA	80-120	NA	NA
Trichloroethene	20	20.99	NA	105	NA	80-120	NA	NA
1,4-Dioxane	500	623.16	NA	125	NA	63-146	NA	NA
Toluene	20	22.48	NA	112	NA	80-120	NA	NA
Tetrachloroethene	20	21.04	NA	105	NA	80-120	NA	NA
Ethylbenzene	20	22.43	NA	112	NA	80-120	NA	NA
Xylene (Total)	60	66.17	NA	110	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	22.14	NA	111	NA	80-120	NA	NA
Naphthalene	20	21.65	NA	108	NA	53-124	NA	NA

LCS: LCSY17	Batch: **Y193411AA** (Sample number(s): 1212642-1212649)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	20	16.3	NA	82	NA	56-120	NA	NA
1,1-Dichloroethene	20	19.2	NA	96	NA	80-131	NA	NA
Acetone	150	176.17	NA	117	NA	54-157	NA	NA
Freon 113	20	17.09	NA	85	NA	73-139	NA	NA
Carbon Disulfide	20	15.8	NA	79	NA	65-128	NA	NA
Methylene Chloride	20	21.54	NA	108	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	20.38	NA	102	NA	80-126	NA	NA
1,1-Dichloroethane	20	21.1	NA	105	NA	80-120	NA	NA
2-Butanone	150	172.89	NA	115	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	22.07	NA	110	NA	80-125	NA	NA
1,1,1-Trichloroethane	20	18.56	NA	93	NA	67-126	NA	NA
Chloroform	20	20.7	NA	103	NA	80-120	NA	NA
1,2-Dichloroethane	20	20.02	NA	100	NA	73-124	NA	NA
Benzene	20	21.7	NA	109	NA	80-120	NA	NA
Trichloroethene	20	20.57	NA	103	NA	80-120	NA	NA

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: JCW27
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSY17	Batch: **Y193411AA** (Sample number(s): 1212642-1212649)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
1,4-Dioxane	500	658.7	NA	132	NA	63-146	NA	NA
Toluene	20	21.88	NA	109	NA	80-120	NA	NA
Tetrachloroethene	20	20.97	NA	105	NA	80-120	NA	NA
Ethylbenzene	20	22.15	NA	111	NA	80-120	NA	NA
Xylene (Total)	60	65.34	NA	109	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	22.2	NA	111	NA	80-120	NA	NA
Naphthalene	20	21.94	NA	110	NA	53-124	NA	NA

Fraction: Volatiles by GC/MS

11997: VOCs- 5ml Water by 8260C/D Analyte Name	Default MDL	Default LOQ	Units
Vinyl Chloride	0.2	1	ug/l
1,1-Dichloroethene	0.2	1	ug/l
Acetone	0.7	20	ug/l
Freon 113	0.2	10	ug/l
Carbon Disulfide	0.2	5	ug/l
Methylene Chloride	0.3	1	ug/l
trans-1,2-Dichloroethene	0.2	1	ug/l
1,1-Dichloroethane	0.2	1	ug/l
2-Butanone	0.3	10	ug/l
cis-1,2-Dichloroethene	0.2	1	ug/l
Chloroform	0.2	1	ug/l
1,1,1-Trichloroethane	0.3	1	ug/l
Benzene	0.2	1	ug/l
1,2-Dichloroethane	0.3	1	ug/l
Trichloroethene	0.2	1	ug/l
1,4-Dioxane	29	250	ug/l
Toluene	0.2	1	ug/l
Tetrachloroethene	0.2	1	ug/l
Ethylbenzene	0.4	1	ug/l
Xylene (Total)	1	6	ug/l
1,2-Dichlorobenzene	0.2	5	ug/l
Naphthalene	1	5	ug/l

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ys10t51.d BFB Injection Date: 09/10/19

Instrument ID: HP09355 BFB Injection Time: 12:17

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.02
75	30.0 - 60.0% of mass 95	46.48
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.79
173	Less than 2.0% of mass 174	0.17 (0.22)1
174	Greater than 50.0% of mass 95	79.43
175	5.0 - 9.0% of mass 174	5.80 (7.30)1
176	Greater than 95.0%, but less than 101.0% of mass 174	77.18 (97.17)1
177	5.0 - 9.0% of mass 176	4.97 (6.44)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	ys10i51.d	09/10/19	12:50
02	VSTD100	ys10i52.d	09/10/19	13:12
03	VSTD50	ys10i53.d	09/10/19	13:34
04	VSTD20	ys10i54.d	09/10/19	13:57
05	VSTD10	ys10i55.d	09/10/19	14:18
06	VSTD4	ys10i56.d	09/10/19	14:40
07	VSTD1	ys10i57.d	09/10/19	15:02
08	YLGICVC	ys10v51.d	09/10/19	16:58
09	VSTD300	ys10i61.d	09/10/19	17:44
10	VSTD100	ys10i62.d	09/10/19	18:06
11	VSTD50	ys10i63.d	09/10/19	18:28
12	VSTD20	ys10i64.d	09/10/19	18:50
13	VSTD10	ys10i65.d	09/10/19	19:12
14	VSTD4	ys10i66.d	09/10/19	19:34
15	SMCICV	ys10v61.d	09/10/19	19:56

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: yd05t01.d BFB Injection Date: 12/05/19

Instrument ID: HP09355 BFB Injection Time: 06:53

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.48
75	30.0 - 60.0% of mass 95	45.26
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.99
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	80.12
175	5.0 - 9.0% of mass 174	5.51 (6.87)1
176	Greater than 95.0%, but less than 101.0% of mass 174	78.10 (97.47)1
177	5.0 - 9.0% of mass 176	5.25 (6.72)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	yd05c01.d	12/05/19	07:42
02	LCSY15	yd05s01.d	12/05/19	08:04
03	RVLY15 - RLVY15	yd05r01.d	12/05/19	08:26
04	VBLKY15	yd05b01.d	12/05/19	08:48
05	1209809	yd05s02.d	12/05/19	09:18
06	1212678	yd05s03.d	12/05/19	09:40
07	1212687	yd05s04.d	12/05/19	10:02
08	1209812	yd05s05.d	12/05/19	10:24
09	1209813MS	yd05s06.d	12/05/19	10:46
10	1209814MSD	yd05s07.d	12/05/19	11:08
11	1209810	yd05s08.d	12/05/19	11:30
12	1209811	yd05s09.d	12/05/19	11:52
13	1209817	yd05s10.d	12/05/19	12:15
14	1209818	yd05s11.d	12/05/19	12:36
15	1209819	yd05s12.d	12/05/19	12:58
16	1212680	yd05s13.d	12/05/19	13:20
17	1212681	yd05s14.d	12/05/19	13:42
18	1212682	yd05s15.d	12/05/19	14:04
19	1212683	yd05s16.d	12/05/19	14:26
20	1212684	yd05s17.d	12/05/19	14:48
21	1212685	yd05s18.d	12/05/19	15:10
22	1212686	yd05s19.d	12/05/19	15:32

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: yd05t01.d BFB Injection Date: 12/05/19

Instrument ID: HP09355 BFB Injection Time: 06:53

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.48
75	30.0 - 60.0% of mass 95	45.26
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.99
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	80.12
175	5.0 - 9.0% of mass 174	5.51 (6.87)1
176	Greater than 95.0%, but less than 101.0% of mass 174	78.10 (97.47)1
177	5.0 - 9.0% of mass 176	5.25 (6.72)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1208898	yd05s20.d	12/05/19	15:54
24	1212641	yd05s21.d	12/05/19	16:16
25	1210802	yd05s22.d	12/05/19	16:38
26	1210822RE	yd05s23.d	12/05/19	17:00

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: yd07t01.d BFB Injection Date: 12/07/19

Instrument ID: HP09355 BFB Injection Time: 10:51

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.41
75	30.0 - 60.0% of mass 95	46.39
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.47
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	72.87
175	5.0 - 9.0% of mass 174	5.35 (7.34)1
176	Greater than 95.0%, but less than 101.0% of mass 174	69.76 (95.72)1
177	5.0 - 9.0% of mass 176	4.76 (6.82)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	yd07c01.d	12/07/19	11:27
02	LCSY17	yd07l01.d	12/07/19	11:50
03	RLVY17 - RLVY17	yd07r01.d	12/07/19	12:11
04	VBLKY17	yd07b01.d	12/07/19	12:33
05	1212524	yd07s02.d	12/07/19	13:11
06	1212526	yd07s03.d	12/07/19	13:33
07	1212649	yd07s04.d	12/07/19	13:55
08	1212692	yd07s05.d	12/07/19	14:17
09	1212694	yd07s06.d	12/07/19	14:39
10	1212695	yd07s07.d	12/07/19	15:01
11	1212696	yd07s08.d	12/07/19	15:23
12	1212697	yd07s09.d	12/07/19	15:45
13	1212699	yd07s10.d	12/07/19	16:07
14	1212515	yd07s11.d	12/07/19	16:29
15	1212516MS	yd07s12.d	12/07/19	16:51
16	1212517MSD	yd07s13.d	12/07/19	17:13
17	1212518	yd07s14.d	12/07/19	17:35
18	1212519	yd07s15.d	12/07/19	17:57
19	1212520	yd07s16.d	12/07/19	18:19
20	1212642	yd07s17.d	12/07/19	18:41
21	1212643	yd07s18.d	12/07/19	19:03
22	1212644	yd07s19.d	12/07/19	19:25

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: yd07t01.d BFB Injection Date: 12/07/19

Instrument ID: HP09355 BFB Injection Time: 10:51

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.41
75	30.0 - 60.0% of mass 95	46.39
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.47
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	72.87
175	5.0 - 9.0% of mass 174	5.35 (7.34)1
176	Greater than 95.0%, but less than 101.0% of mass 174	69.76 (95.72)1
177	5.0 - 9.0% of mass 176	4.76 (6.82)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1212645	yd07s20.d	12/07/19	19:46
24	1212646	yd07s21.d	12/07/19	20:08
25	1212647	yd07s22.d	12/07/19	20:30
26	1212648	yd07s23.d	12/07/19	20:52

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 Calibration Date(s): 09/10/19 09/10/19

Heated Purge: (Y/N) Y Calibration Times: 12:50 15:02

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ys10i57.d RRF 4 = ys10i56.d RRF 10= ys10i55.d
RRF 20= ys10i54.d RRF 50= ys10i53.d RRF100= ys10i52.d RRF300= ys10i51.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
Dichlorodifluoromethane	#0.3606	0.4714	0.5014	0.4609	0.4661	0.4843	0.4654	0.4586	10	AVG	#
Chloromethane	#0.3646	0.3985	0.4263	0.4017	0.4004	0.3987	0.3689	0.3942	5	AVG	#
1,3-Butadiene	0.3388	0.3337	0.2913	0.3136	0.2915	0.2964	0.2815	0.3067	7	AVG	
Vinyl Chloride	#0.3401	0.3921	0.4154	0.3896	0.3970	0.4022	0.3724	0.3870	6	AVG	#
Bromomethane	#0.2656	0.2936	0.3104	0.2960	0.2946	0.2909	0.2586	0.2871	6	AVG	#
Chloroethane	#0.2102	0.2324	0.2386	0.2272	0.2271	0.2292	0.2072	0.2246	5	AVG	#
Dichlorofluoromethane	0.4472	0.4868	0.5034	0.4786	0.4841	0.4680	0.4440	0.4732	5	AVG	
n-Pentane	0.5357	0.5085	0.4551	0.4845	0.4616	0.4639	0.4411	0.4786	7	AVG	
Trichlorofluoromethane	#0.4307	0.5015	0.5265	0.4906	0.5107	0.5111	0.4844	0.4936	6	AVG	#
Ethyl ether	0.2378	0.2584	0.2477	0.2718	0.2612	0.2608	0.2616	0.2571	4	AVG	
Freon 123a	0.2652	0.3075	0.2959	0.3177	0.2998	0.3042	0.2962	0.2981	5	AVG	
Acrolein	1.8108	1.7859	1.9644	1.8816	2.0562	1.9391	1.8531	1.8987	5	AVG	
1,1-Dichloroethene	#0.1798	0.2196	0.2148	0.2298	0.2230	0.2255	0.2265	0.2170	8	AVG	#
1,1-Dichloroethene(2)	#0.0960	0.1131	0.1092	0.1197	0.1143	0.1155	0.1138	0.1117	7	AVG	#
Acetone	#0.7861	0.8708	0.9497	0.9038	0.9422	0.9177	0.8837	0.8934	6	AVG	#
Freon 113	#0.1939	0.2537	0.2397	0.2635	0.2581	0.2605	0.2601	0.2471	10	AVG	#
2-Propanol	0.5287	0.5164	0.5442	0.5293	0.5465	0.5566	0.5438	0.5379	3	AVG	
Methyl Iodide	0.3846	0.4295	0.4220	0.4477	0.4352	0.4362	0.4279	0.4261	5	AVG	
Carbon Disulfide	#0.6717	0.7635	0.7565	0.8294	0.8150	0.8312	0.8239	0.7844	7	AVG	#
Allyl Chloride	0.3239	0.3792	0.3783	0.3916	0.3922	0.3888	0.3801	0.3763	6	AVG	
Methyl Acetate	#0.3816	0.3956	0.3647	0.3797	0.3822	0.3798	0.3721	0.3794	3	AVG	#
Methylene Chloride	#0.2312	0.2618	0.2575	0.2717	0.2648	0.2661	0.2609	0.2591	5	AVG	#
t-Butyl alcohol	1.1189	1.1151	1.1513	1.1341	1.1312	1.1167	1.1075	1.1250	1	AVG	
Acrylonitrile	0.1504	0.1915	0.2105	0.2078	0.2143	0.2141	0.2022	0.1987	11	AVG	
trans-1,2-Dichloroethene	#0.2181	0.2559	0.2478	0.2625	0.2573	0.2594	0.2586	0.2514	6	AVG	#
Methyl Tertiary Butyl Ether	#0.8156	0.8622	0.8647	0.8981	0.8937	0.8784	0.8407	0.8648	3	AVG	#
n-Hexane	0.3602	0.4302	0.3995	0.4645	0.4386	0.4476	0.4428	0.4262	8	AVG	
1,1-Dichloroethane	#0.4094	0.4525	0.4561	0.4849	0.4692	0.4698	0.4579	0.4571	5	AVG	#
di-Isopropyl ether	0.8033	0.8719	0.8673	0.9222	0.9014	0.8968	0.8493	0.8732	4	AVG	
2-Chloro-1,3-butadiene	0.3364	0.4092	0.4041	0.4439	0.4357	0.4394	0.4314	0.4143	9	AVG	
Ethyl t-butyl ether	0.8030	0.8594	0.8584	0.9048	0.8828	0.8675	0.8149	0.8558	4	AVG	
cis-1,2-Dichloroethene	#0.2553	0.2865	0.2816	0.2997	0.2928	0.2930	0.2914	0.2858	5	AVG	#
2-Butanone	#0.2793	0.2858	0.3131	0.2990	0.3178	0.3016	0.2790	0.2965	5	AVG	#
2,2-Dichloropropane	0.2859	0.3489	0.3437	0.3726	0.3694	0.3722	0.3638	0.3509	9	AVG	
Propionitrile	1.2492	1.2600	1.3044	1.2877	1.3387	1.2973	1.3199	1.2939	2	AVG	
Methacrylonitrile	0.1924	0.2032	0.2100	0.2183	0.2179	0.2201	0.2167	0.2112	5	AVG	
Bromochloromethane	0.1305	0.1461	0.1486	0.1562	0.1546	0.1544	0.1532	0.1491	6	AVG	
Tetrahydrofuran	1.3702	1.3214	1.4428	1.3660	1.4954	1.4169	1.4126	1.4036	4	AVG	
Chloroform	#0.3945	0.4415	0.4372	0.4680	0.4550	0.4550	0.4471	0.4426	5	AVG	#
1,1,1-Trichloroethane	#0.3328	0.3841	0.3707	0.4057	0.3958	0.3985	0.3974	0.3836	7	AVG	#
Cyclohexane	#0.4405	0.5104	0.4755	0.5336	0.5142	0.5173	0.5089	0.5001	6	AVG	#
Cyclohexane(2)	#0.3789	0.4396	0.4118	0.4600	0.4461	0.4459	0.4414	0.4320	6	AVG	#
Cyclohexane(3)	#0.1273	0.1603	0.1475	0.1684	0.1630	0.1639	0.1633	0.1563	9	AVG	#
1,1-Dichloropropene	0.3238	0.3771	0.3649	0.3918	0.3779	0.3801	0.3763	0.3702	6	AVG	
Carbon Tetrachloride	#0.2637	0.3126	0.3103	0.3459	0.3456	0.3537	0.3575	0.3270	10	AVG	#
Isobutyl Alcohol	0.3988	0.3883	0.4061	0.3979	0.3810	0.3777	0.3700	0.3885	3	AVG	
Benzene	#0.9964	1.1088	1.0780	1.1409	1.0982	1.0951	1.0599	1.0825	4	AVG	#
1,2-Dichloroethane	#0.4160	0.3854	0.3720	0.3891	0.3798	0.3783	0.3668	0.3839	4	AVG	#
1,2-Dichloroethane(2)	#0.0139	0.0314	0.0321	0.0352	0.0340	0.0345	0.0343	0.0308	25	AVG	#<-
t-Amyl methyl ether	0.8088	0.8620	0.8719	0.9138	0.8851	0.8601	0.7946	0.8566	5	AVG	
n-Heptane	0.4116	0.4538	0.4158	0.4836	0.4666	0.4671	0.4548	0.4505	6	AVG	
n-Butanol	0.3325	0.3541	0.3823	0.3903	0.3798	0.3695	0.3425	0.3644	6	AVG	

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

FORM VI VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 Calibration Date(s): 09/10/19 09/10/19

Heated Purge: (Y/N) Y Calibration Times: 12:50 15:02

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ys10i57.d RRF 4 = ys10i56.d RRF 10= ys10i55.d
RRF 20= ys10i54.d RRF 50= ys10i53.d RRF100= ys10i52.d RRF300= ys10i51.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Trichloroethene	#0.2513	0.2852	0.2764	0.2941	0.2829	0.2852	0.2852	0.2800	5	AVG #
Methylcyclohexane	#0.4669	0.5223	0.5338	0.5608	0.5466	0.5439	0.5445	0.5313	6	AVG #
Methylcyclohexane(2)	#0.1939	0.2309	0.2333	0.2475	0.2433	0.2426	0.2453	0.2338	8	AVG #
1,2-Dichloropropane	#0.2474	0.2688	0.2732	0.2905	0.2859	0.2855	0.2802	0.2759	5	AVG #
Dibromomethane	0.1677	0.1766	0.1779	0.1888	0.1877	0.1880	0.1874	0.1820	4	AVG
1,4-Dioxane	0.0544	0.0769	0.0809	0.0848	0.0810	0.0845	0.0816	0.0777	14	AVG
Methyl Methacrylate	0.2753	0.3067	0.3208	0.3388	0.3379	0.3435	0.3440	0.3239	8	AVG
Bromodichloromethane	#0.2616	0.2861	0.3027	0.3341	0.3377	0.3495	0.3516	0.3176	11	AVG #
2-Nitropropane	0.0989	0.1128	0.1332	0.1411	0.1597	0.1547	0.1469	0.1353	16	AVG
2-Chloroethyl Vinyl Ether	0.1927	0.2182	0.2321	0.2514	0.2477	0.2387	0.2515	0.2332	9	AVG
cis-1,3-Dichloropropene	#0.3401	0.3946	0.4135	0.4572	0.4612	0.4692	0.4636	0.4285	11	AVG #
4-Methyl-2-pentanone	#0.4956	0.5222	0.5738	0.5933	0.6344	0.5751	0.5173	0.5588	9	AVG #
Toluene	#0.8421	0.9488	0.9146	0.9843	0.9529	0.9366	0.9028	0.9260	5	AVG #
trans-1,3-Dichloropropene	#0.4211	0.4773	0.5187	0.5781	0.5931	0.6028	0.5936	0.5407	13	AVG #
Ethyl Methacrylate	0.5442	0.6300	0.6765	0.7418	0.7392	0.7409	0.7238	0.6852	11	AVG
1,1,2-Trichloroethane	#0.3275	0.3548	0.3527	0.3755	0.3680	0.3641	0.3569	0.3571	4	AVG #
Tetrachloroethene	#0.3547	0.4099	0.3902	0.4133	0.3966	0.3989	0.3795	0.3919	5	AVG #
1,3-Dichloropropane	0.5792	0.6122	0.6170	0.6552	0.6375	0.6303	0.6091	0.6201	4	AVG
2-Hexanone	#0.5291	0.5672	0.6300	0.6579	0.7194	0.6271	0.5503	0.6116	11	AVG #
Dibromochloromethane	#0.2511	0.3036	0.3243	0.3717	0.3862	0.3969	0.3981	0.3474	16	AVG #
1,2-Dibromoethane	#0.3352	0.3703	0.3852	0.4115	0.4094	0.4085	0.4008	0.3887	7	AVG #
1-Chlorohexane	0.5270	0.5361	0.4826	0.5412	0.5196	0.5210	0.5156	0.5204	4	AVG
Chlorobenzene	#0.9955	1.0586	1.0254	1.1073	1.0613	1.0481	0.9969	1.0419	4	AVG #
1,1,1,2-Tetrachloroethane	0.2760	0.3119	0.3202	0.3582	0.3574	0.3600	0.3449	0.3327	9	AVG
Ethylbenzene	#1.6203	1.8230	1.7448	1.9068	1.8440	1.8121	1.6625	1.7734	6	AVG #
m+p-Xylene	#0.6530	0.7160	0.6865	0.7536	0.7251	0.7115	0.6528	0.6998	5	AVG #
o-Xylene	#0.6064	0.6915	0.6685	0.7347	0.7114	0.7010	0.6578	0.6816	6	AVG #
Styrene	#0.9164	1.0864	1.1041	1.2354	1.2159	1.2065	1.1185	1.1262	10	AVG #
Bromoform	#0.1747	0.1991	0.2275	0.2678	0.2814	0.2963	0.3046	0.2502	20	AVG #
Isopropylbenzene	#1.6077	1.8315	1.7198	1.9066	1.8436	1.7958	1.6246	1.7614	6	AVG #
Cyclohexanone	0.3834	0.4053	0.4133	0.4294	0.4218	0.4319	0.4035	0.4126	4	AVG
Bromobenzene	0.7551	0.8295	0.8043	0.8789	0.8472	0.8536	0.7808	0.8213	5	AVG
1,1,2,2-Tetrachloroethane	#1.0731	1.1801	1.1837	1.2641	1.1992	1.1980	1.1752	1.1819	5	AVG #
1,2,3-Trichloropropane	0.3515	0.3728	0.3748	0.3966	0.3789	0.3785	0.3747	0.3754	4	AVG
trans-1,4-Dichloro-2-butene	0.3458	0.3877	0.4102	0.4456	0.4385	0.4407	0.3911	0.4085	9	AVG
n-Propylbenzene	3.6477	4.0878	3.8003	4.2362	4.0400	3.9594	3.4963	3.8954	7	AVG
2-Chlorotoluene	0.7311	0.8086	0.7780	0.8544	0.8236	0.8163	0.8048	0.8024	5	AVG
4-Chlorotoluene	0.7585	0.8517	0.8105	0.9024	0.8558	0.8531	0.8395	0.8388	5	AVG
1,3,5-Trimethylbenzene	2.6173	2.9301	2.7721	3.1341	2.9977	2.9638	2.7571	2.8818	6	AVG
tert-Butylbenzene	0.5453	0.6090	0.5605	0.6499	0.6242	0.6234	0.6118	0.6035	6	AVG
Pentachloroethane	0.3530	0.3974	0.4336	0.4903	0.5118	0.5069	0.5152	0.4583	14	AVG
1,2,4-Trimethylbenzene	2.7984	3.0527	2.9047	3.2847	3.1692	3.1377	2.8392	3.0266	6	AVG
sec-Butylbenzene	3.3235	3.8094	3.5043	4.0022	3.8292	3.7604	3.3192	3.6497	7	AVG
1,3-Dichlorobenzene	#1.5794	1.6507	1.5601	1.7307	1.6444	1.6290	1.4671	1.6088	5	AVG #
p-Isopropyltoluene	2.7618	3.2442	3.0185	3.4758	3.3288	3.2840	2.8391	3.1360	9	AVG
1,4-Dichlorobenzene	#1.6157	1.6816	1.6012	1.7611	1.6797	1.6538	1.5087	1.6431	5	AVG #
1,2,3-Trimethylbenzene	2.9494	3.2043	3.2453	3.3874	3.3339	3.2507	2.8859	3.1796	6	AVG
Benzyl Chloride	1.5799	1.9160	2.1478	2.5550	2.5846	2.6810	2.5871	2.2931	18	AVG
1,3-Diethylbenzene	1.7801	2.0671	2.0864	2.2027	2.1448	2.0904	1.9644	2.0480	7	AVG
1,4-Diethylbenzene	1.9087	2.1946	2.2073	2.3288	2.2747	2.2116	2.0369	2.1661	7	AVG
1,2-Dichlorobenzene	#1.5367	1.6186	1.5309	1.6771	1.5932	1.5784	1.4779	1.5733	4	AVG #
n-Butylbenzene	1.4762	1.7199	1.5714	1.8009	1.7252	1.7093	1.6028	1.6580	7	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 Calibration Date(s): 09/10/19 09/10/19

Heated Purge: (Y/N) Y Calibration Times: 12:50 15:02

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = ys10i57.d RRF 4 = ys10i56.d RRF 10= ys10i55.d
RRF 20= ys10i54.d RRF 50= ys10i53.d RRF100= ys10i52.d RRF300= ys10i51.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
1,2-Diethylbenzene	1.5190	1.7476	1.7575	1.8382	1.7985	1.7621	1.6384	1.7230	6	AVG	
1,2-Dibromo-3-chloropropane	#0.2462	0.2761	0.2908	0.3328	0.3181	0.3342	0.3361	0.3049	11	AVG	#
1,3,5-Trichlorobenzene	1.1707	1.2601	1.1475	1.3051	1.2239	1.2093	1.1497	1.2095	5	AVG	
1,2,4-Trichlorobenzene	#1.1824	1.1750	1.0875	1.2423	1.1716	1.1607	1.0928	1.1589	5	AVG	#
Hexachlorobutadiene	0.4948	0.5329	0.4649	0.5495	0.5315	0.5347	0.5068	0.5164	6	AVG	
Naphthalene	4.0783	4.1391	4.0781	4.5247	4.2327	4.1725	3.5361	4.1088	7	AVG	
1,2,3-Trichlorobenzene	1.1417	1.1542	1.0788	1.2031	1.1298	1.1201	1.0554	1.1262	4	AVG	
2-Methylnaphthalene	2.5994	2.5802	2.7009	2.9649	2.8702	2.8272	2.4706	2.7162	7	AVG	
Dibromofluoromethane	0.2322	0.2338	0.2342	0.2346	0.2350	0.2372	0.2352	0.2346	1	AVG	
Dibromofluoromethane(2)	0.2376	0.2388	0.2403	0.2405	0.2415	0.2417	0.2409	0.2402	1	AVG	
1,2-Dichloroethane-d4	0.0616	0.0614	0.0623	0.0613	0.0615	0.0607	0.0605	0.0613	1	AVG	
1,2-Dichloroethane-d4(2)	0.2999	0.2987	0.3001	0.2945	0.2949	0.2929	0.2902	0.2959	1	AVG	
1,2-Dichloroethane-d4(3)	0.0390	0.0394	0.0395	0.0386	0.0392	0.0387	0.0381	0.0389	1	AVG	
Toluene-d8	1.3532	1.3585	1.3576	1.3563	1.3616	1.3510	1.3316	1.3528	1	AVG	
Toluene-d8(2)	0.8705	0.8709	0.8747	0.8741	0.8779	0.8725	0.8651	0.8723	0	AVG	
4-Bromofluorobenzene	0.5158	0.5174	0.5176	0.5186	0.5192	0.5171	0.5125	0.5169	0	AVG	
4-Bromofluorobenzene(2)	0.3943	0.3956	0.3937	0.3926	0.3937	0.3912	0.3861	0.3925	1	AVG	

Average %RSD 7

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

FORM VI VOA

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP09355.i/19sep10c.b/ys10i51.d	VSTD300
/chem2/HP09355.i/19sep10c.b/ys10i52.d	VSTD100
/chem2/HP09355.i/19sep10c.b/ys10i53.d	VSTD050
/chem2/HP09355.i/19sep10c.b/ys10i54.d	VSTD020
/chem2/HP09355.i/19sep10c.b/ys10i55.d	VSTD010
/chem2/HP09355.i/19sep10c.b/ys10i56.d	VSTD004
/chem2/HP09355.i/19sep10c.b/ys10i57.d	VSTD001

Area Summary

File ID:

Internal Standard Name	ys10i51.d	ys10i52.d	ys10i53.d	ys10i54.d	ys10i55.d	ys10i56.d	ys10i57.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	354941	371904	357387	372209	356814	363057	350956	361038	2	Yes
Fluorobenzene	1182603	1184522	1177736	1181643	1173038	1170589	1150977	1174444	1	Yes
Chlorobenzene-d5	893298	887141	875116	880146	875099	871706	862765	877896	1	Yes
1,4-Dichlorobenzene-d4	467308	472377	470034	471052	470858	469299	465037	469424	1	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	ys10i51.d	ys10i52.d	ys10i53.d	ys10i54.d	ys10i55.d	ys10i56.d	ys10i57.d	Avg. RT
t-Butyl alcohol-d10	4.374	4.367	4.355	4.368	4.349	4.368	4.355	4.362
Fluorobenzene	7.878	7.872	7.872	7.872	7.866	7.872	7.872	7.872
Chlorobenzene-d5	11.309	11.309	11.309	11.309	11.309	11.309	11.309	11.309
1,4-Dichlorobenzene-d4	13.189	13.189	13.189	13.183	13.183	13.183	13.183	13.185

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 09/13/2019 at 14:33.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 ICV Date: 09/10/19 Time: 16:58

Lab File ID: ys10v51.d Init. Calib. Date(s): 09/10/19 09/10/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.4586	0.3819	16.66	20	-17	#
# Chloromethane	0.3942	0.3675	18.65	20	-7	#
1,3-Butadiene	0.3067	0.2883	18.80	20	-6	
# Vinyl Chloride	0.3870	0.3742	19.34	20	-3	#
# Bromomethane	0.2871	0.2074	14.45	20	-28	#
# Chloroethane	0.2246	0.1863	16.59	20	-17	#
Dichlorofluoromethane	0.4732	0.4494	19.00	20	-5	
n-Pentane	0.4786	0.4230	17.67	20	-12	
# Trichlorofluoromethane	0.4936	0.4264	17.28	20	-14	#
Ethyl ether	0.2571	0.2580	20.08	20	0	
Freon 123a	0.2981	0.3092	20.75	20	4	
Acrolein	1.8987	1.8020	142.36	150	-5	
# 1,1-Dichloroethene	0.2170	0.2349	21.64	20	8	#
# Acetone	0.8934	1.1419	191.72	150	28	#
# Freon 113	0.2471	0.2447	19.81	20	-1	#
2-Propanol	0.5379	0.5150	143.61	150	-4	
Methyl Iodide	0.4261	0.4057	19.04	20	-5	
# Carbon Disulfide	0.7844	0.7080	18.05	20	-10	#
Allyl Chloride	0.3763	0.3475	18.47	20	-8	
# Methyl Acetate	0.3794	0.3713	19.58	20	-2	#
# Methylene Chloride	0.2591	0.2793	21.55	20	8	#
t-Butyl alcohol	1.1250	1.0964	194.92	200	-3	
Acrylonitrile	0.1987	0.1957	98.51	100	-1	
# trans-1,2-Dichloroethene	0.2514	0.2664	21.20	20	6	#
# Methyl Tertiary Butyl Ether	0.8648	0.8469	19.59	20	-2	#
n-Hexane	0.4262	0.4349	20.41	20	2	
# 1,1-Dichloroethane	0.4571	0.4791	20.96	20	5	#
di-Isopropyl ether	0.8732	0.8726	19.99	20	0	
2-Chloro-1,3-butadiene	0.4143	0.4226	20.40	20	2	
Ethyl t-butyl ether	0.8558	0.8417	19.67	20	-2	
# cis-1,2-Dichloroethene	0.2858	0.3154	22.08	20	10	#
# 2-Butanone	0.2965	0.3191	161.42	150	8	#
2,2-Dichloropropane	0.3509	0.3770	21.49	20	7	
Propionitrile	1.2939	1.3416	155.53	150	4	
Methacrylonitrile	0.2112	0.2150	152.65	150	2	
Bromochloromethane	0.1491	0.1480	19.85	20	-1	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 ICV Date: 09/10/19 Time: 16:58

Lab File ID: ys10v51.d Init. Calib. Date(s): 09/10/19 09/10/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Tetrahydrofuran	1.4036	1.4279	101.73	100	2	
#	Chloroform	0.4426	0.4690	21.19	20	6	#
#	1,1,1-Trichloroethane	0.3836	0.4059	21.16	20	6	#
#	Cyclohexane	0.5001	0.4834	19.33	20	-3	#
	1,1-Dichloropropene	0.3702	0.3918	21.16	20	6	
#	Carbon Tetrachloride	0.3270	0.3410	20.85	20	4	#
	Isobutyl Alcohol	0.3885	0.3796	488.48	500	-2	
#	Benzene	1.0825	1.1425	21.11	20	6	#
#	1,2-Dichloroethane	0.3839	0.4086	21.29	20	6	#
	t-Amyl methyl ether	0.8566	0.8504	19.85	20	-1	
	n-Heptane	0.4505	0.4348	19.30	20	-3	
	n-Butanol	0.3644	0.3657	1003.59	1000	0	
#	Trichloroethene	0.2800	0.2949	21.06	20	5	#
#	Methylcyclohexane	0.5313	0.5080	19.12	20	-4	#
#	1,2-Dichloropropane	0.2759	0.2985	21.63	20	8	#
	Dibromomethane	0.1820	0.1926	21.16	20	6	
	1,4-Dioxane	0.0777	0.0867	558.02	500	12	
	Methyl Methacrylate	0.3239	0.3206	19.80	20	-1	
#	Bromodichloromethane	0.3176	0.3374	21.24	20	6	#
	2-Nitropropane	0.1353	0.1162	17.18	20	-14	
	2-Chloroethyl Vinyl Ether	0.2332	0.2391	20.51	20	3	
#	cis-1,3-Dichloropropene	0.4285	0.4540	21.19	20	6	#
#	4-Methyl-2-pentanone	0.5588	0.5325	95.30	100	-5	#
#	Toluene	0.9260	0.9937	21.46	20	7	#
#	trans-1,3-Dichloropropene	0.5407	0.5591	20.68	20	3	#
	Ethyl Methacrylate	0.6852	0.6814	19.89	20	-1	
#	1,1,2-Trichloroethane	0.3571	0.3924	21.98	20	10	#
#	Tetrachloroethene	0.3919	0.4113	20.99	20	5	#
	1,3-Dichloropropane	0.6201	0.6572	21.20	20	6	
#	2-Hexanone	0.6116	0.6184	101.12	100	1	#
#	Dibromochloromethane	0.3474	0.3699	21.29	20	6	#
#	1,2-Dibromoethane	0.3887	0.4151	21.36	20	7	#
	1-Chlorohexane	0.5204	0.5331	20.49	20	2	
#	Chlorobenzene	1.0419	1.1191	21.48	20	7	#
	1,1,1,2-Tetrachloroethane	0.3327	0.3511	21.11	20	6	
#	Ethylbenzene	1.7734	1.9105	21.55	20	8	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 ICV Date: 09/10/19 Time: 16:58

Lab File ID: ys10v51.d Init. Calib. Date(s): 09/10/19 09/10/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# m+p-Xylene	0.6998	0.7601	43.45	40	9	#
# o-Xylene	0.6816	0.7388	21.68	20	8	#
# Styrene	1.1262	1.2392	22.01	20	10	#
# Bromoform	0.2502	0.2494	19.93	20	0	#
# Isopropylbenzene	1.7614	1.9349	21.97	20	10	#
Cyclohexanone	0.4126	0.3626	439.35	500	-12	
Bromobenzene	0.8213	0.8823	21.48	20	7	
# 1,1,2,2-Tetrachloroethane	1.1819	1.2423	21.02	20	5	#
1,2,3-Trichloropropane	0.3754	0.3958	21.09	20	5	
trans-1,4-Dichloro-2-butene	0.4085	0.4287	104.95	100	5	
n-Propylbenzene	3.8954	4.2848	22.00	20	10	
2-Chlorotoluene	0.8024	0.8629	21.51	20	8	
4-Chlorotoluene	0.8388	0.8976	21.40	20	7	
1,3,5-Trimethylbenzene	2.8818	3.1115	21.59	20	8	
tert-Butylbenzene	0.6035	0.6449	21.37	20	7	
Pentachloroethane	0.4583	0.4863	21.22	20	6	
1,2,4-Trimethylbenzene	3.0266	3.2248	21.31	20	7	
sec-Butylbenzene	3.6497	3.9988	21.91	20	10	
# 1,3-Dichlorobenzene	1.6088	1.7333	21.55	20	8	#
p-Isopropyltoluene	3.1360	3.4576	22.05	20	10	
# 1,4-Dichlorobenzene	1.6431	1.7848	21.72	20	9	#
1,2,3-Trimethylbenzene	3.1796	3.3709	21.20	20	6	
Benzyl Chloride	2.2931	2.2363	19.50	20	-2	
1,3-Diethylbenzene	2.0480	2.1188	20.69	20	3	
1,4-Diethylbenzene	2.1661	2.2485	20.76	20	4	
# 1,2-Dichlorobenzene	1.5733	1.6903	21.49	20	7	#
n-Butylbenzene	1.6580	1.7772	21.44	20	7	
1,2-Diethylbenzene	1.7230	1.7647	20.48	20	2	
# 1,2-Dibromo-3-chloropropane	0.3049	0.3081	20.21	20	1	#
1,3,5-Trichlorobenzene	1.2095	1.2789	21.15	20	6	
# 1,2,4-Trichlorobenzene	1.1589	1.2269	21.17	20	6	#
Hexachlorobutadiene	0.5164	0.5456	21.13	20	6	
Naphthalene	4.1088	4.3229	21.04	20	5	
1,2,3-Trichlorobenzene	1.1262	1.1792	20.94	20	5	
2-Methylnaphthalene	2.7162	2.5956	19.11	20	-4	
			Average %Drift		6	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

page 3 of 3 FORM VII VOA

^

Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP09355.i/19sep10c.b/ys10i57.d
/chem2/HP09355.i/19sep10c.b/ys10i56.d
/chem2/HP09355.i/19sep10c.b/ys10i55.d
/chem2/HP09355.i/19sep10c.b/ys10i54.d
/chem2/HP09355.i/19sep10c.b/ys10i53.d
/chem2/HP09355.i/19sep10c.b/ys10i52.d
/chem2/HP09355.i/19sep10c.b/ys10i51.d

File /chem2/HP09355.i/19sep10c.b/ys10i53.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP09355.i/19dec05a.b/yd05c01.d

RT Summary

Internal Standard Name	File ID: yd05c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	4.349	4.355	Yes
Fluorobenzene	7.866	7.872	Yes
Chlorobenzene-d5	11.309	11.309	Yes
1,4-Dichlorobenzene-d4	13.183	13.189	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: yd05c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	298478	357387	178694	714774	Yes
Fluorobenzene	1010335	1177736	588868	2355472	Yes
Chlorobenzene-d5	736197	875116	437558	1750232	Yes
1,4-Dichlorobenzene-d4	383342	470034	235017	940068	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 Calibration Date: 12/05/19 Time: 07:42

Lab File ID: yd05c01.d Init. Calib. Date(s): 09/10/19 09/10/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.4586	0.3347	36.49	50	-27	#<-
# Chloromethane	0.3942	0.3605	45.73	50	-9	#
1,3-Butadiene	0.3067	0.2743	44.72	50	-11	
# Vinyl Chloride	0.3870	0.3436	44.40	50	-11	#
# Bromomethane	0.2871	0.2358	41.06	50	-18	#
# Chloroethane	0.2246	0.2001	44.56	50	-11	#
n-Pentane	0.4786	0.4290	44.81	50	-10	
# Trichlorofluoromethane	0.4936	0.3616	36.63	50	-27	#<-
Ethyl ether	0.2571	0.2617	50.90	50	2	
Freon 123a	0.2981	0.3188	53.48	50	7	
Acrolein	1.8987	2.3096	608.20	500	22	<-
# 1,1-Dichloroethene	0.2170	0.2243	51.67	50	3	#
# 1,1-Dichloroethene(2)	0.1117	0.1138	50.96	50	2	#
# Acetone	0.8934	1.0871	121.67	100	22	#<-
# Freon 113	0.2471	0.2439	49.36	50	-1	#
2-Propanol	0.5379	0.6939	322.48	250	29	<-
Methyl Iodide	0.4261	0.4128	48.44	50	-3	
# Carbon Disulfide	0.7844	0.8486	54.09	50	8	#
Allyl Chloride	0.3763	0.4622	61.41	50	23	<-
# Methyl Acetate	0.3794	0.4443	58.55	50	17	#
# Methylene Chloride	0.2591	0.2766	53.36	50	7	#
t-Butyl alcohol	1.1250	1.2516	278.13	250	11	
Acrylonitrile	0.1987	0.2454	61.75	50	24	<-
# trans-1,2-Dichloroethene	0.2514	0.2621	52.14	50	4	#
# Methyl Tertiary Butyl Ether	0.8648	0.8347	48.26	50	-3	#
n-Hexane	0.4262	0.4919	57.71	50	15	
# 1,1-Dichloroethane	0.4571	0.4952	54.17	50	8	#
di-Isopropyl ether	0.8732	1.0230	58.58	50	17	
2-Chloro-1,3-butadiene	0.4143	0.4529	54.66	50	9	
Ethyl t-butyl ether	0.8558	0.8571	50.07	50	0	
# cis-1,2-Dichloroethene	0.2858	0.2990	52.32	50	5	#
# 2-Butanone	0.2965	0.3639	122.74	100	23	#<-
2,2-Dichloropropane	0.3509	0.3315	47.24	50	-6	
Propionitrile	1.2939	1.7245	333.21	250	33	<-
Methacrylonitrile	0.2112	0.2331	137.92	125	10	
Bromochloromethane	0.1491	0.1508	50.59	50	1	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 Calibration Date: 12/05/19 Time: 07:42

Lab File ID: yd05c01.d Init. Calib. Date(s): 09/10/19 09/10/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
Tetrahydrofuran	1.4036	1.5730	112.07	100	12	
# Chloroform	0.4426	0.4529	51.16	50	2	#
# 1,1,1-Trichloroethane	0.3836	0.3593	46.84	50	-6	#
# Cyclohexane	0.5001	0.5525	55.24	50	10	#
# Cyclohexane(2)	0.4320	0.4302	49.80	50	0	#
# Cyclohexane(3)	0.1563	0.1632	52.21	50	4	#
1,1-Dichloropropene	0.3702	0.3774	50.97	50	2	
# Carbon Tetrachloride	0.3270	0.3049	46.61	50	-7	#
Isobutyl Alcohol	0.3885	0.4838	778.26	625	25	<-
# Benzene	1.0825	1.1683	53.96	50	8	#
# 1,2-Dichloroethane	0.3839	0.3583	46.67	50	-7	#
# 1,2-Dichloroethane(2)	0.0308	0.0346	56.16	50	12	#<-
t-Amyl methyl ether	0.8566	0.8322	48.57	50	-3	
n-Heptane	0.4505	0.5703	63.29	50	27	<-
n-Butanol	0.3644	0.4126	1415.28	1250	13	
# Trichloroethene	0.2800	0.2824	50.42	50	1	#
# Methylcyclohexane	0.5313	0.5441	51.21	50	2	#
# Methylcyclohexane(2)	0.2338	0.2359	50.45	50	1	#
# 1,2-Dichloropropane	0.2759	0.3120	56.54	50	13	#
Dibromomethane	0.1820	0.1850	50.82	50	2	
1,4-Dioxane	0.0777	0.0995	800.52	625	28	<-
Methyl Methacrylate	0.3239	0.3550	54.80	50	10	
# Bromodichloromethane	0.3176	0.3314	52.17	50	4	#
2-Nitropropane	0.1353	0.1586	117.16	100	17	
2-Chloroethyl Vinyl Ether	0.2332	0.2803	60.10	50	20	
# cis-1,3-Dichloropropene	0.4285	0.4634	54.08	50	8	#
# 4-Methyl-2-pentanone	0.5588	0.7726	138.25	100	38	#<-
# Toluene	0.9260	0.9919	53.56	50	7	#
# trans-1,3-Dichloropropene	0.5407	0.5913	54.68	50	9	#
Ethyl Methacrylate	0.6852	0.7865	57.39	50	15	
# 1,1,2-Trichloroethane	0.3571	0.3842	53.79	50	8	#
# Tetrachloroethene	0.3919	0.3995	50.97	50	2	#
1,3-Dichloropropane	0.6201	0.6669	53.77	50	8	
# 2-Hexanone	0.6116	0.8936	146.12	100	46	#<-
# Dibromochloromethane	0.3474	0.3700	53.26	50	7	#
# 1,2-Dibromoethane	0.3887	0.4181	53.78	50	8	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 Calibration Date: 12/05/19 Time: 07:42

Lab File ID: yd05c01.d Init. Calib. Date(s): 09/10/19 09/10/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
1-Chlorohexane	0.5204	0.5516	52.99	50	6	
Chlorobenzene	1.0419	1.0750	51.59	50	3	#
1,1,1,2-Tetrachloroethane	0.3327	0.3417	51.35	50	3	
Ethylbenzene	1.7734	1.9202	54.14	50	8	#
m+p-Xylene	0.6998	0.7420	106.03	100	6	#
o-Xylene	0.6816	0.7188	52.72	50	5	#
Styrene	1.1262	1.2449	55.27	50	11	#
Bromoform	0.2502	0.2703	54.02	50	8	#
Isopropylbenzene	1.7614	1.8564	52.70	50	5	#
Cyclohexanone	0.4126	0.4090	619.51	625	-1	
Bromobenzene	0.8213	0.8883	54.08	50	8	
1,1,2,2-Tetrachloroethane	1.1819	1.3246	56.04	50	12	#
1,2,3-Trichloropropane	0.3754	0.3878	51.66	50	3	
trans-1,4-Dichloro-2-butene	0.4085	0.4468	136.70	125	9	
n-Propylbenzene	3.8954	4.3851	56.29	50	13	
2-Chlorotoluene	0.8024	0.8407	52.39	50	5	
4-Chlorotoluene	0.8388	0.8831	52.64	50	5	
1,3,5-Trimethylbenzene	2.8818	3.0867	53.56	50	7	
tert-Butylbenzene	0.6035	0.6321	52.38	50	5	
Pentachloroethane	0.4583	0.5032	54.89	50	10	
1,2,4-Trimethylbenzene	3.0266	3.2563	53.79	50	8	
sec-Butylbenzene	3.6497	4.0741	55.81	50	12	
1,3-Dichlorobenzene	1.6088	1.7237	53.57	50	7	#
p-Isopropyltoluene	3.1360	3.4461	54.94	50	10	
1,4-Dichlorobenzene	1.6431	1.7685	53.82	50	8	#
1,2,3-Trimethylbenzene	3.1796	3.3292	52.35	50	5	
Benzyl Chloride	2.2931	2.6907	58.67	50	17	
1,3-Diethylbenzene	2.0480	2.1372	52.18	50	4	
1,4-Diethylbenzene	2.1661	2.2569	52.10	50	4	
1,2-Dichlorobenzene	1.5733	1.6361	52.00	50	4	#
n-Butylbenzene	1.6580	1.8689	56.36	50	13	
1,2-Diethylbenzene	1.7230	1.7917	51.99	50	4	
1,2-Dibromo-3-chloropropane	0.3049	0.3127	51.28	50	3	#
1,3,5-Trichlorobenzene	1.2095	1.2679	52.42	50	5	
1,2,4-Trichlorobenzene	1.1589	1.1656	50.29	50	1	#
Hexachlorobutadiene	0.5164	0.5418	52.45	50	5	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 Calibration Date: 12/05/19 Time: 07:42

Lab File ID: yd05c01.d Init. Calib. Date(s): 09/10/19 09/10/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Naphthalene	4.1088	4.2907	52.21	50	4
1,2,3-Trichlorobenzene	1.1262	1.1164	49.57	50	-1
2-Methylnaphthalene	2.7162	2.5484	46.91	50	-6
Dibromofluoromethane	0.2346	0.2175	46.34	50	-7
Dibromofluoromethane(2)	0.2402	0.2232	46.45	50	-7
1,2-Dichloroethane-d4	0.0613	0.0597	48.70	50	-3
1,2-Dichloroethane-d4(2)	0.2959	0.2771	46.83	50	-6
1,2-Dichloroethane-d4(3)	0.0389	0.0373	47.89	50	-4
Toluene-d8	1.3528	1.3295	49.14	50	-2
Toluene-d8(2)	0.8723	0.8466	48.53	50	-3
4-Bromofluorobenzene	0.5169	0.4979	48.17	50	-4
4-Bromofluorobenzene(2)	0.3925	0.3847	49.01	50	-2

Average %Drift 9

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP09355.i/19sep10c.b/ys10i57.d
/chem2/HP09355.i/19sep10c.b/ys10i56.d
/chem2/HP09355.i/19sep10c.b/ys10i55.d
/chem2/HP09355.i/19sep10c.b/ys10i54.d
/chem2/HP09355.i/19sep10c.b/ys10i53.d
/chem2/HP09355.i/19sep10c.b/ys10i52.d
/chem2/HP09355.i/19sep10c.b/ys10i51.d

File /chem2/HP09355.i/19sep10c.b/ys10i53.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP09355.i/19dec07a.b/yd07c01.d

RT Summary

File ID:

Internal Standard Name	yd07c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	4.349	4.355	Yes
Fluorobenzene	7.866	7.872	Yes
Chlorobenzene-d5	11.309	11.309	Yes
1,4-Dichlorobenzene-d4	13.183	13.189	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

File ID:

Internal Standard Name	yd07c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	358528	357387	178694	714774	Yes
Fluorobenzene	1164624	1177736	588868	2355472	Yes
Chlorobenzene-d5	860109	875116	437558	1750232	Yes
1,4-Dichlorobenzene-d4	447012	470034	235017	940068	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 12/07/2019 at 11:46

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 Calibration Date: 12/07/19 Time: 11:27

Lab File ID: yd07c01.d Init. Calib. Date(s): 09/10/19 09/10/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.4586	0.3147	34.32	50	-31	#<-
# Chloromethane	0.3942	0.3355	42.55	50	-15	#
1,3-Butadiene	0.3067	0.3416	55.69	50	11	
# Vinyl Chloride	0.3870	0.3220	41.60	50	-17	#
# Bromomethane	0.2871	0.2200	38.31	50	-23	#<-
# Chloroethane	0.2246	0.1868	41.58	50	-17	#
n-Pentane	0.4786	0.4315	45.08	50	-10	
# Trichlorofluoromethane	0.4936	0.3420	34.64	50	-31	#<-
Ethyl ether	0.2571	0.2352	45.75	50	-8	
Freon 123a	0.2981	0.3050	51.16	50	2	
Acrolein	1.8987	1.8253	480.66	500	-4	
# 1,1-Dichloroethene	0.2170	0.2208	50.86	50	2	#
# 1,1-Dichloroethene(2)	0.1117	0.1106	49.53	50	-1	#
# Acetone	0.8934	0.9722	108.82	100	9	#
# Freon 113	0.2471	0.2418	48.94	50	-2	#
2-Propanol	0.5379	0.6912	321.25	250	29	<-
Methyl Iodide	0.4261	0.4040	47.40	50	-5	
# Carbon Disulfide	0.7844	0.8495	54.14	50	8	#
Allyl Chloride	0.3763	0.4191	55.68	50	11	
# Methyl Acetate	0.3794	0.4278	56.38	50	13	#
# Methylene Chloride	0.2591	0.2680	51.71	50	3	#
t-Butyl alcohol	1.1250	1.2321	273.82	250	10	
Acrylonitrile	0.1987	0.2188	55.06	50	10	
# trans-1,2-Dichloroethene	0.2514	0.2542	50.57	50	1	#
# Methyl Tertiary Butyl Ether	0.8648	0.8144	47.09	50	-6	#
n-Hexane	0.4262	0.4802	56.34	50	13	
# 1,1-Dichloroethane	0.4571	0.4745	51.90	50	4	#
di-Isopropyl ether	0.8732	0.9851	56.41	50	13	
2-Chloro-1,3-butadiene	0.4143	0.4344	52.42	50	5	
Ethyl t-butyl ether	0.8558	0.8338	48.71	50	-3	
# cis-1,2-Dichloroethene	0.2858	0.2861	50.06	50	0	#
# 2-Butanone	0.2965	0.3099	104.51	100	5	#
2,2-Dichloropropane	0.3509	0.3099	44.15	50	-12	
Propionitrile	1.2939	1.6047	310.06	250	24	<-
Methacrylonitrile	0.2112	0.2283	135.11	125	8	
Bromochloromethane	0.1491	0.1434	48.10	50	-4	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 Calibration Date: 12/07/19 Time: 11:27

Lab File ID: yd07c01.d Init. Calib. Date(s): 09/10/19 09/10/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
Tetrahydrofuran	1.4036	1.3197	94.02	100	-6	
# Chloroform	0.4426	0.4314	48.73	50	-3	#
# 1,1,1-Trichloroethane	0.3836	0.3419	44.57	50	-11	#
# Cyclohexane	0.5001	0.5356	53.56	50	7	#
# Cyclohexane(2)	0.4320	0.4214	48.78	50	-2	#
# Cyclohexane(3)	0.1563	0.1602	51.26	50	3	#
1,1-Dichloropropene	0.3702	0.3623	48.93	50	-2	
# Carbon Tetrachloride	0.3270	0.2873	43.92	50	-12	#
Isobutyl Alcohol	0.3885	0.4548	731.66	625	17	
# Benzene	1.0825	1.1209	51.78	50	4	#
# 1,2-Dichloroethane	0.3839	0.3470	45.19	50	-10	#
# 1,2-Dichloroethane(2)	0.0308	0.0332	53.95	50	8	#<-
t-Amyl methyl ether	0.8566	0.8021	46.82	50	-6	
n-Heptane	0.4505	0.5346	59.34	50	19	
n-Butanol	0.3644	0.3967	1360.86	1250	9	
# Trichloroethene	0.2800	0.2711	48.40	50	-3	#
# Methylcyclohexane	0.5313	0.5266	49.56	50	-1	#
# Methylcyclohexane(2)	0.2338	0.2259	48.31	50	-3	#
# 1,2-Dichloropropane	0.2759	0.2971	53.83	50	8	#
Dibromomethane	0.1820	0.1770	48.62	50	-3	
1,4-Dioxane	0.0777	0.0954	767.54	625	23	<-
Methyl Methacrylate	0.3239	0.3527	54.45	50	9	
# Bromodichloromethane	0.3176	0.3194	50.27	50	1	#
2-Nitropropane	0.1353	0.1251	92.44	100	-8	
2-Chloroethyl Vinyl Ether	0.2332	0.2623	56.25	50	13	
# cis-1,3-Dichloropropene	0.4285	0.4457	52.01	50	4	#
# 4-Methyl-2-pentanone	0.5588	0.5774	103.32	100	3	#
# Toluene	0.9260	0.9349	50.48	50	1	#
# trans-1,3-Dichloropropene	0.5407	0.5644	52.20	50	4	#
Ethyl Methacrylate	0.6852	0.7621	55.61	50	11	
# 1,1,2-Trichloroethane	0.3571	0.3637	50.93	50	2	#
# Tetrachloroethene	0.3919	0.3768	48.08	50	-4	#
1,3-Dichloropropane	0.6201	0.6430	51.84	50	4	
# 2-Hexanone	0.6116	0.6321	103.36	100	3	#
# Dibromochloromethane	0.3474	0.3512	50.54	50	1	#
# 1,2-Dibromoethane	0.3887	0.4002	51.47	50	3	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 Calibration Date: 12/07/19 Time: 11:27

Lab File ID: yd07c01.d Init. Calib. Date(s): 09/10/19 09/10/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	1-Chlorohexane	0.5204	0.5195	49.91	50	0	
#	Chlorobenzene	1.0419	1.0106	48.50	50	-3	#
	1,1,1,2-Tetrachloroethane	0.3327	0.3219	48.38	50	-3	
#	Ethylbenzene	1.7734	1.8086	50.99	50	2	#
#	m+p-Xylene	0.6998	0.6951	99.32	100	-1	#
#	o-Xylene	0.6816	0.6733	49.39	50	-1	#
#	Styrene	1.1262	1.1815	52.45	50	5	#
#	Bromoform	0.2502	0.2598	51.92	50	4	#
#	Isopropylbenzene	1.7614	1.7340	49.22	50	-2	#
	Cyclohexanone	0.4126	0.3761	569.68	625	-9	
	Bromobenzene	0.8213	0.8412	51.21	50	2	
#	1,1,2,2-Tetrachloroethane	1.1819	1.2695	53.71	50	7	#
	1,2,3-Trichloropropane	0.3754	0.3719	49.53	50	-1	
	trans-1,4-Dichloro-2-butene	0.4085	0.3629	111.03	125	-11	
	n-Propylbenzene	3.8954	4.0957	52.57	50	5	
	2-Chlorotoluene	0.8024	0.7892	49.17	50	-2	
	4-Chlorotoluene	0.8388	0.8272	49.31	50	-1	
	1,3,5-Trimethylbenzene	2.8818	2.8979	50.28	50	1	
	tert-Butylbenzene	0.6035	0.5873	48.66	50	-3	
	Pentachloroethane	0.4583	0.4811	52.49	50	5	
	1,2,4-Trimethylbenzene	3.0266	3.0711	50.73	50	1	
	sec-Butylbenzene	3.6497	3.7959	52.00	50	4	
#	1,3-Dichlorobenzene	1.6088	1.6197	50.34	50	1	#
	p-Isopropyltoluene	3.1360	3.2113	51.20	50	2	
#	1,4-Dichlorobenzene	1.6431	1.6497	50.20	50	0	#
	1,2,3-Trimethylbenzene	3.1796	3.1934	50.22	50	0	
	Benzyl Chloride	2.2931	2.5349	55.27	50	11	
	1,3-Diethylbenzene	2.0480	2.0590	50.27	50	1	
	1,4-Diethylbenzene	2.1661	2.1769	50.25	50	0	
#	1,2-Dichlorobenzene	1.5733	1.5543	49.40	50	-1	#
	n-Butylbenzene	1.6580	1.7411	52.51	50	5	
	1,2-Diethylbenzene	1.7230	1.7021	49.39	50	-1	
#	1,2-Dibromo-3-chloropropane	0.3049	0.3010	49.36	50	-1	#
	1,3,5-Trichlorobenzene	1.2095	1.1961	49.45	50	-1	
#	1,2,4-Trichlorobenzene	1.1589	1.1197	48.31	50	-3	#
	Hexachlorobutadiene	0.5164	0.5043	48.82	50	-2	

Compounds with required minimum RRF.

All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 Calibration Date: 12/07/19 Time: 11:27

Lab File ID: yd07c01.d Init. Calib. Date(s): 09/10/19 09/10/19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Naphthalene	4.1088	4.0918	49.79	50	0
1,2,3-Trichlorobenzene	1.1262	1.0643	47.26	50	-5
2-Methylnaphthalene	2.7162	2.4454	45.01	50	-10
Dibromofluoromethane	0.2346	0.2174	46.32	50	-7
Dibromofluoromethane(2)	0.2402	0.2246	46.76	50	-6
1,2-Dichloroethane-d4	0.0613	0.0597	48.66	50	-3
1,2-Dichloroethane-d4(2)	0.2959	0.2787	47.10	50	-6
1,2-Dichloroethane-d4(3)	0.0389	0.0377	48.36	50	-3
Toluene-d8	1.3528	1.3227	48.88	50	-2
Toluene-d8(2)	0.8723	0.8436	48.36	50	-3
4-Bromofluorobenzene	0.5169	0.5022	48.58	50	-3
4-Bromofluorobenzene(2)	0.3925	0.3891	49.58	50	-1

Average %Drift 6

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): yd05c01.d Date Analyzed: 12/05/19

Instrument ID: HP09355 Time Analyzed: 07:42

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	298478	4.349	1010335	7.866	736197	11.309	383342	13.183
UPPER LIMIT	596956	4.849	2020670	8.366	1472394	11.809	766684	13.683
LOWER LIMIT	149239	3.849	505168	7.366	368098	10.809	191671	12.683
LAB SAMPLE ID								
01 LCSY15	314958	4.343	995303	7.866	727112	11.309	378108	13.183
02 RVLY15 - RL	268974	4.349	975210	7.872	703981	11.309	366265	13.183
03 VBLKY15	288968	4.368	966647	7.872	696628	11.309	359600	13.183
04 1209809	283118	4.355	966752	7.872	699587	11.309	360758	13.183
05 1212678	265923	4.343	965717	7.866	697029	11.303	358356	13.183
06 1212687	265777	4.355	955442	7.872	687323	11.309	353365	13.182
07 1209812	264917	4.355	954212	7.866	689158	11.309	354940	13.183
08 1209813MS	295762	4.349	968858	7.866	703863	11.309	367423	13.183
09 1209814MSD	306595	4.355	970838	7.866	704477	11.309	364098	13.183
10 1209810	285284	4.355	951186	7.866	685617	11.309	352141	13.183
11 1209811	278513	4.362	940245	7.872	688136	11.309	349546	13.183
12 1209817	262072	4.361	932317	7.872	673677	11.309	347674	13.183
13 1209818	274270	4.362	942722	7.872	680299	11.309	350483	13.183
14 1209819	277225	4.349	939916	7.866	674698	11.309	348136	13.183
15 1212680	279636	4.355	932480	7.872	672291	11.309	346891	13.183
16 1212681	274998	4.349	928471	7.866	676107	11.303	346716	13.183
17 1212682	272465	4.355	923324	7.866	668578	11.309	347465	13.183
18 1212683	274379	4.343	918521	7.866	668063	11.309	344649	13.183
19 1212684	269897	4.361	913458	7.872	660999	11.309	341092	13.182
20 1212685	278115	4.349	916957	7.866	663793	11.309	342841	13.183
21 1212686	264484	4.343	905866	7.866	658088	11.303	341776	13.183
22 1208898	267912	4.361	903791	7.872	653013	11.309	339606	13.183

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): yd05c01.d Date Analyzed: 12/05/19

Instrument ID: HP09355 Time Analyzed: 07:42

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	298478	4.349	1010335	7.866	736197	11.309	383342	13.183
UPPER LIMIT	596956	4.849	2020670	8.366	1472394	11.809	766684	13.683
LOWER LIMIT	149239	3.849	505168	7.366	368098	10.809	191671	12.683
LAB SAMPLE ID								
23 1212641	257121	4.361	903515	7.872	653777	11.309	340849	13.183
24 1210802	254680	4.355	901123	7.872	652718	11.309	336924	13.182
25 1210822RE	251749	4.349	904492	7.865	653251	11.309	343827	13.182

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

^

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): yd07c01.d Date Analyzed: 12/07/19

Instrument ID: HP09355 Time Analyzed: 11:27

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	358528	4.349	1164624	7.866	860109	11.309	447012	13.182
UPPER LIMIT	717056	4.849	2329248	8.366	1720218	11.809	894024	13.682
LOWER LIMIT	179264	3.849	582312	7.366	430054	10.809	223506	12.682
LAB SAMPLE ID								
01 LCSY17	365155	4.355	1150552	7.866	842221	11.309	434044	13.183
02 RLVY17 - RL	351069	4.362	1152397	7.866	835472	11.309	434086	13.183
03 VBLKY17	352727	4.349	1152497	7.866	834599	11.303	429668	13.183
04 1212524	355696	4.355	1157341	7.866	838999	11.309	432379	13.183
05 1212526	337044	4.343	1145561	7.866	831919	11.309	429046	13.183
06 1212649	298491	4.349	1115777	7.866	809759	11.303	414714	13.183
07 1212692	325971	4.349	1111518	7.866	803835	11.309	415203	13.182
08 1212694	329172	4.356	1120008	7.866	809026	11.309	416927	13.183
09 1212695	314812	4.355	1107948	7.866	801002	11.303	413638	13.183
10 1212696	338166	4.349	1124986	7.866	819928	11.303	419713	13.182
11 1212697	353650	4.349	1118549	7.866	815050	11.303	417173	13.183
12 1212699	312796	4.349	1089203	7.866	791649	11.303	407255	13.183
13 1212515	322212	4.343	1109593	7.866	807610	11.303	415885	13.183
14 1212516MS	327700	4.367	1108627	7.865	806229	11.309	413887	13.182
15 1212517MSD	342833	4.355	1116769	7.866	809649	11.309	420832	13.183
16 1212518	305638	4.356	1089319	7.866	792371	11.303	407989	13.183
17 1212519	302757	4.355	1093434	7.866	791112	11.309	407536	13.182
18 1212520	319656	4.349	1088624	7.866	789192	11.303	407265	13.183
19 1212642	307969	4.361	1084742	7.866	786369	11.309	402152	13.182
20 1212643	300684	4.349	1090412	7.866	790961	11.303	405052	13.183
21 1212644	316016	4.355	1083187	7.866	782290	11.303	403577	13.183
22 1212645	308223	4.349	1071853	7.866	774741	11.303	400367	13.182

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): yd07c01.d Date Analyzed: 12/07/19

Instrument ID: HP09355 Time Analyzed: 11:27

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA) AREA #	RT #	IS2(FBZ) AREA #	RT #	IS3(CBZ) AREA #	RT #	IS4(DCB) AREA #	RT #
12 HOUR STD	358528	4.349	1164624	7.866	860109	11.309	447012	13.182
UPPER LIMIT	717056	4.849	2329248	8.366	1720218	11.809	894024	13.682
LOWER LIMIT	179264	3.849	582312	7.366	430054	10.809	223506	12.682
LAB SAMPLE ID								
23 1212646	286960	4.349	1063963	7.865	771002	11.303	396131	13.182
24 1212647	305489	4.349	1087865	7.866	788009	11.303	408498	13.182
25 1212648	286409	4.362	1047574	7.866	759107	11.303	391023	13.183

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

^

Sample Data

Volatiles by GC/MS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DIF01

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1212641

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09355.i/19dec05a.b/yd05s21.d

Level: (low/med) LOW Date Received: 11/27/19

Moisture: not dec. _____ Date Analyzed: 12/05/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.4	J
156-59-2	cis-1,2-Dichloroethene	1	U
71-55-6	1,1,1-Trichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
127-18-4	Tetrachloroethene	1	U
1330-20-7	Xylene (Total)	6	U

FORM I VOA

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DIF01 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1212641

Data file: /chem2/HP09355.i/19dec05a.b/yd05s21.d Injection date and time: **05-DEC-2019 16:16**
Data file Sample Info. Line: DIF01;1212641;1;0;;JCW27;;;yd05b01; Instrument ID: **HP09355.i** Batch: **Y193391AA**
Date, time and analyst ID of latest file update: 09-Dec-2019 12:17 lcp00895

Blank Data file reference: **/chem2/HP09355.i/19dec05a.b/yd05b01.d**

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 05-DEC-2019 09:37
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec05a.b/yd05c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.362(-0.012)	457	65	257121 (-14)	250.00	
66) Fluorobenzene	7.872(-0.006)	1034	96	903515 (-11)	50.00	
100) Chlorobenzene-d5	11.309(0.000)	1599	117	653777 (-11)	50.00	
131) 1,4-Dichlorobenzene-d4	13.183(0.000)	1907	152	340849 (-11)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.971(0.000)	113	197861	46.670	93%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434(0.000)	102	53756	48.501	97%		80 - 120
83) Toluene-d8	(3)	9.861(0.000)	98	866694	48.996	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.301(0.000)	95	316453	46.823	94%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)	3.710(-0.001)	58	2017	2.196	2.20		J	0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.456(-0.001)	63	3304	0.400	0.40		J	0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)			Not Detected					0.2	1
75) 1,4-Dioxane	(1)			Not Detected					29	250
88) Toluene	(3)			Not Detected					0.2	1
93) Tetrachloroethene	(3)			Not Detected					0.2	1
104) Ethylbenzene	(3)			Not Detected					0.4	1
106) m+p-Xylene	(3)			Not Detected					1	5
107) o-Xylene	(3)			Not Detected					0.4	1
108) Xylene (Total)	(3)			Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
148) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Linda C. Pape on 12/09/2019 at 12:18. Target 3.5 esignature user ID: lcp00895

DIF01 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1212641

Data file: /chem2/HP09355.i/19dec05a.b/yd05s21.d Injection date and time: **05-DEC-2019 16:16**
Data file Sample Info. Line: DIF01;1212641;1;0;;JCW27;;;yd05b01; Instrument ID: **HP09355.i** Batch: **Y193391AA**
Date, time and analyst ID of latest file update: 09-Dec-2019 12:17 lcp00895

Blank Data file reference: **/chem2/HP09355.i/19dec05a.b/yd05b01.d**

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 05-DEC-2019 09:37
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec05a.b/yd05c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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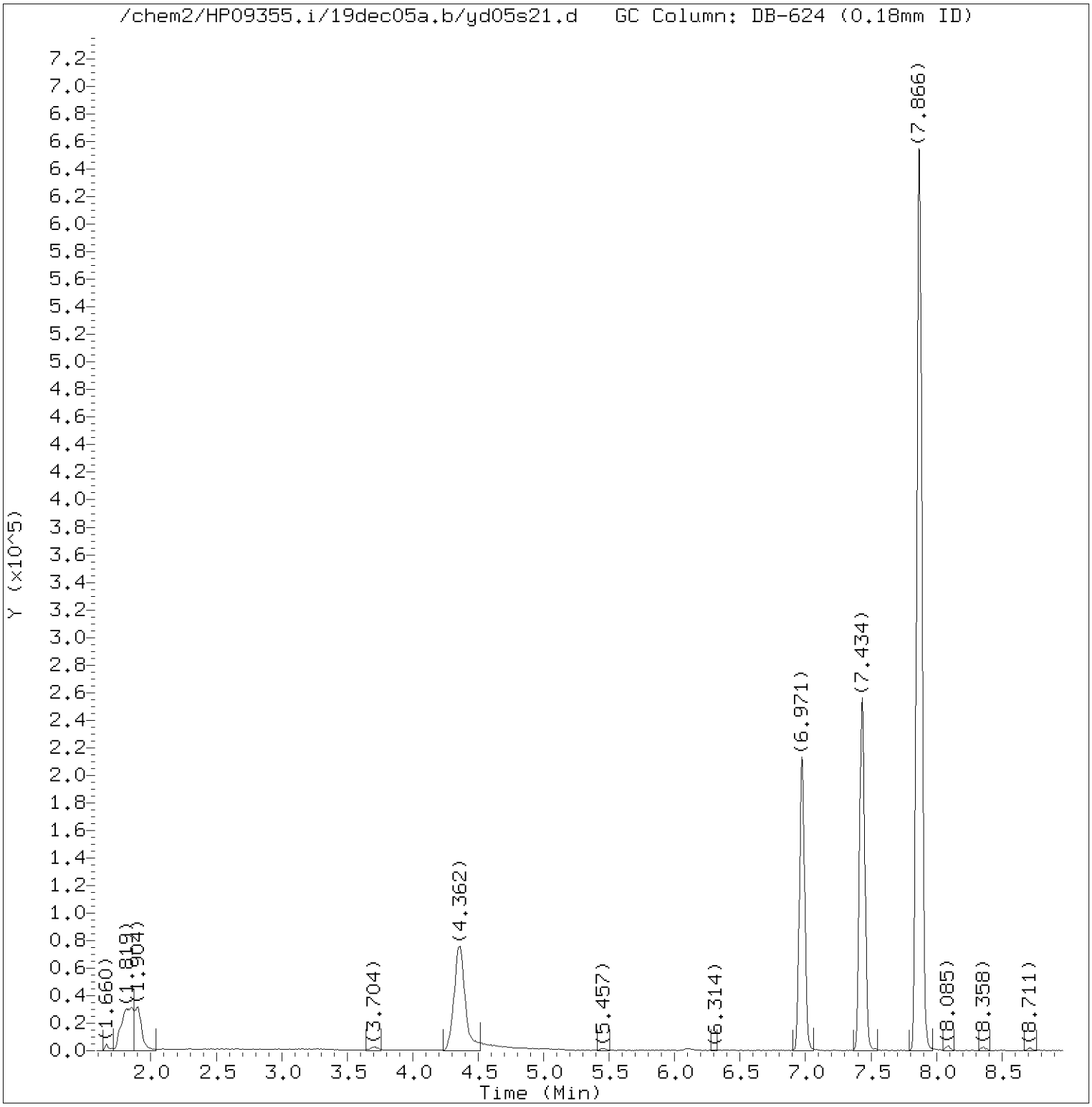
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Linda C. Pape on 12/09/2019 at 12:18. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 12/09/2019 at 13:57. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

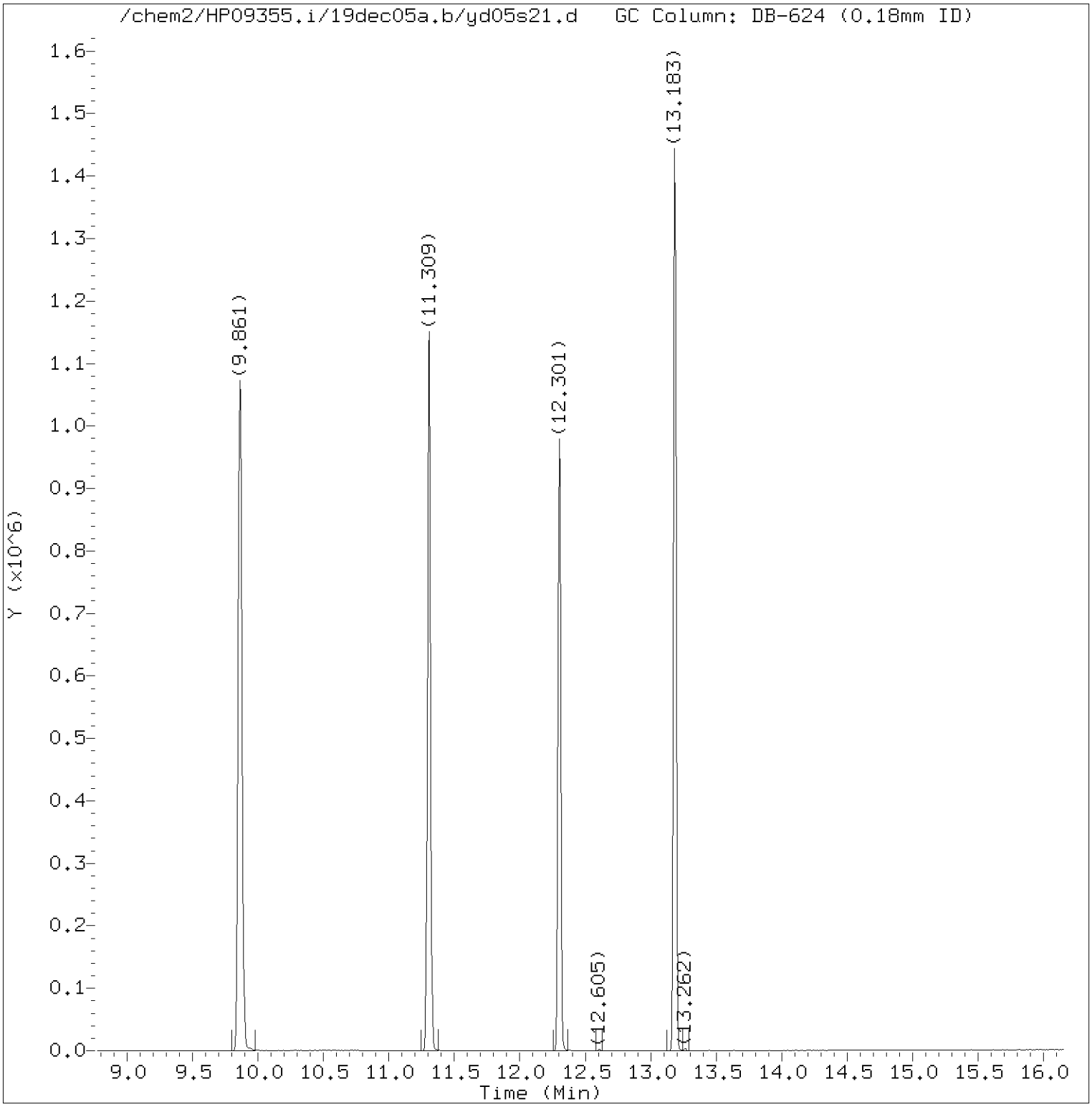
Target Revision 3.5

Data File: /chem2/HP09355.i/19dec05a.b/yd05s21.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 16:16 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 05-DEC-2019 09:37
Date, time and analyst ID of latest file update: 09-Dec-2019 12:17 lcp00895

Sample Name: DIF01 Lab Sample ID: 1212641

Digitally signed by Linda C. Pape
on 12/09/2019 at 12:18.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec05a.b/yd05s21.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 16:16 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 05-DEC-2019 09:37
Date, time and analyst ID of latest file update: 09-Dec-2019 12:17 lcp00895

Sample Name: DIF01 Lab Sample ID: 1212641

Digitally signed by Linda C. Pape
on 12/09/2019 at 12:18.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec05a.b/yd05s21.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 16:16 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 05-DEC-2019 09:37
Date, time and analyst ID of latest file update: 09-Dec-2019 12:17 lcp00895

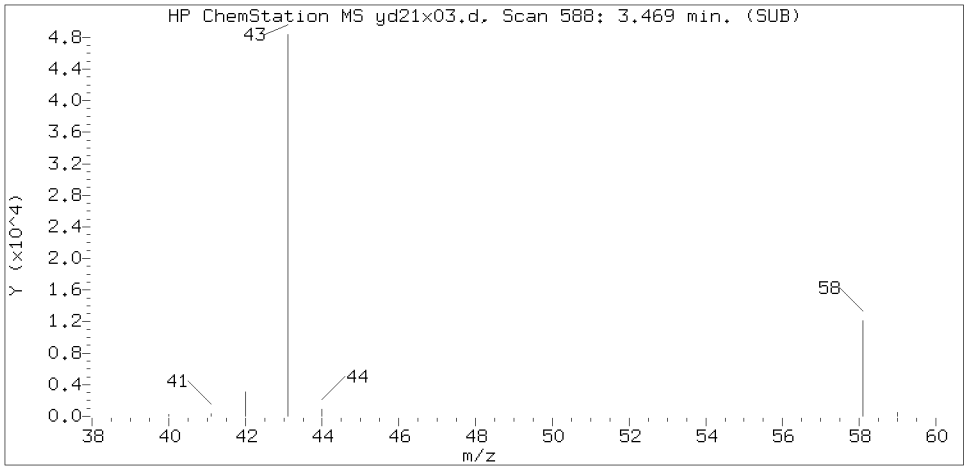
Sample Name: DIF01 Lab Sample ID: 1212641

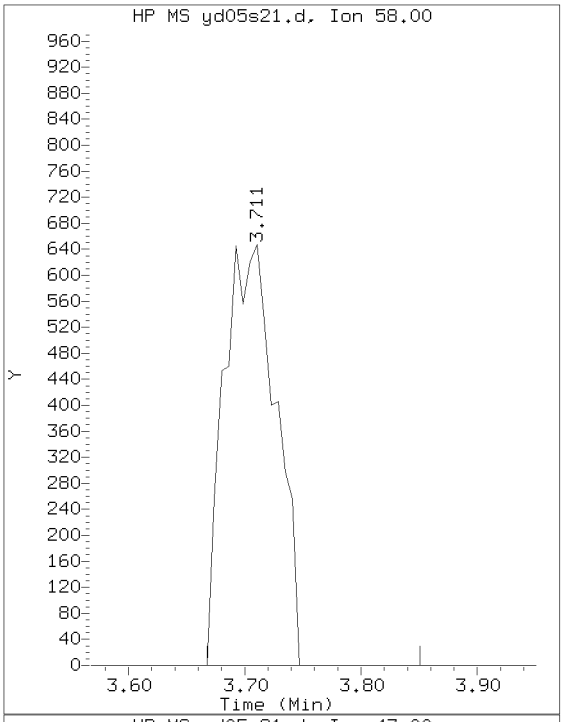
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
18) Acetone	(1)	3.711	58	2017	2.196
29)*t-Butyl alcohol-d10	(1)	4.362	65	257121	250.000
36) 1,1-Dichloroethane	(2)	5.457	63	3304	0.400
52)$Dibromofluoromethane	(2)	6.971	113	197861	46.670
57)$1,2-Dichloroethane-d4	(2)	7.434	102	53756	48.501
66)*Fluorobenzene	(2)	7.872	96	903515	50.000
83)$Toluene-d8	(3)	9.861	98	866694	48.996
100)*Chlorobenzene-d5	(3)	11.309	117	653777	50.000
114)$4-Bromofluorobenzene	(3)	12.301	95	316453	46.823
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	340849	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

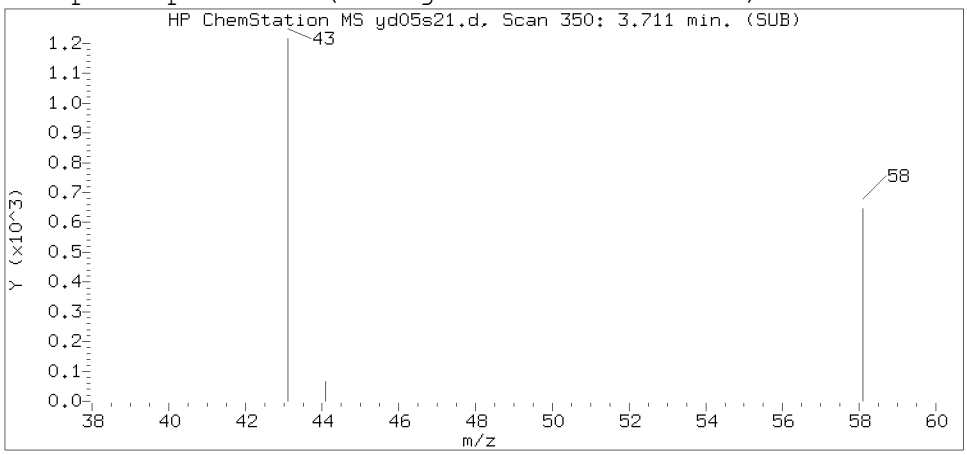
Digitally signed by Linda C. Pape
on 12/09/2019 at 12:18.
Target 3.5 esignature user ID: lcp00895

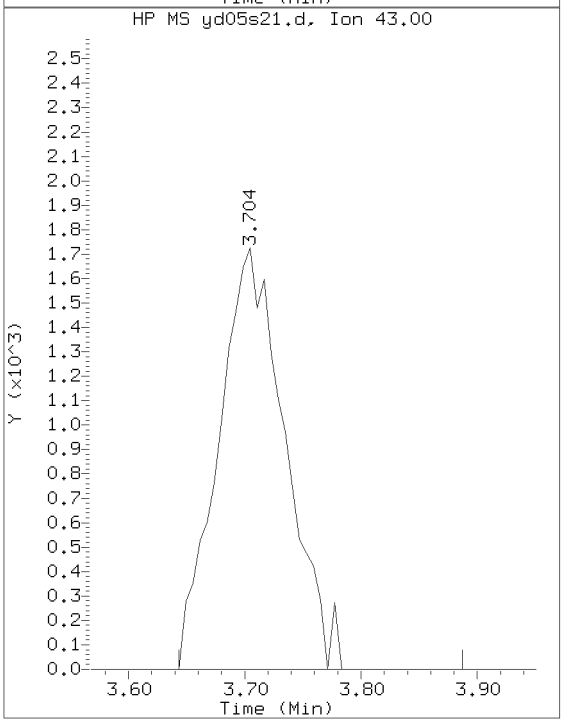
Reference Standard Spectrum for Acetone



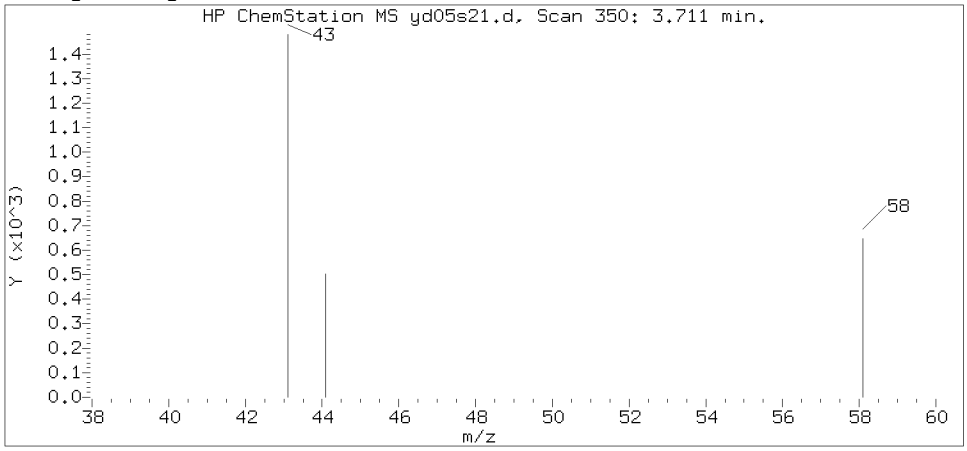


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09355.i/19dec05a.b/yd05s21.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 16:16 Analyst ID: LCP00895

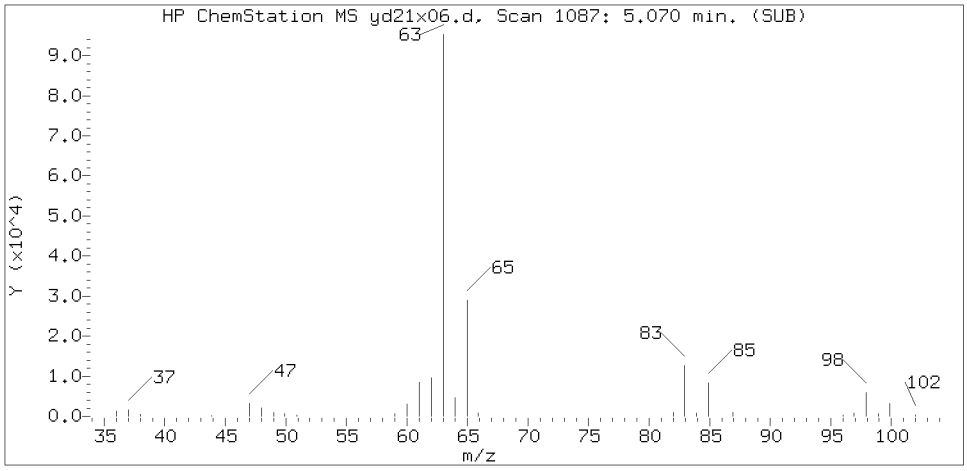
Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 05-DEC-2019 09:37
Date, time and analyst ID of latest file update: 09-Dec-2019 12:17 lcp00895

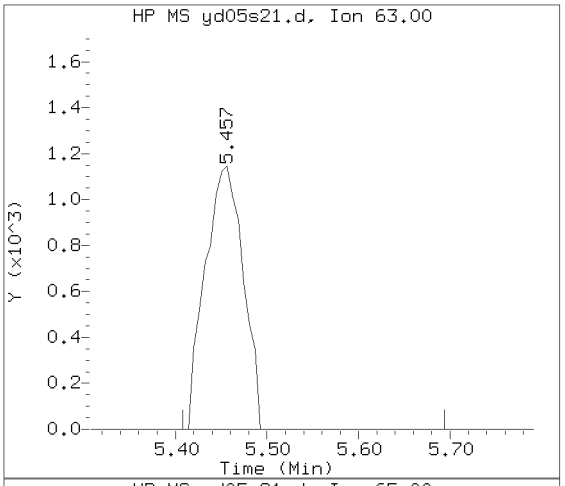
Sample Name: DIF01 Lab Sample ID: 1212641

Compound Number : 18
Compound Name : Acetone
Scan Number : 350
Retention Time (minutes): 3.711
Relative Retention Time :-0.00181
Quant Ion : 58.00
Area (flag) : 2017
On-Column Amount (ng) : 2.1959

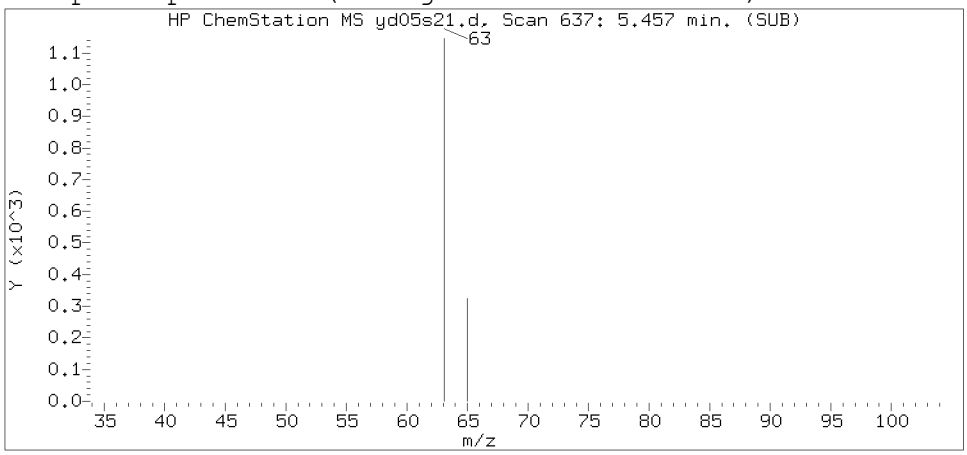
Digitally signed by Linda C. Pape on 12/09/2019 at 12:18.
Target 3.5 esignature user ID: lcp00895

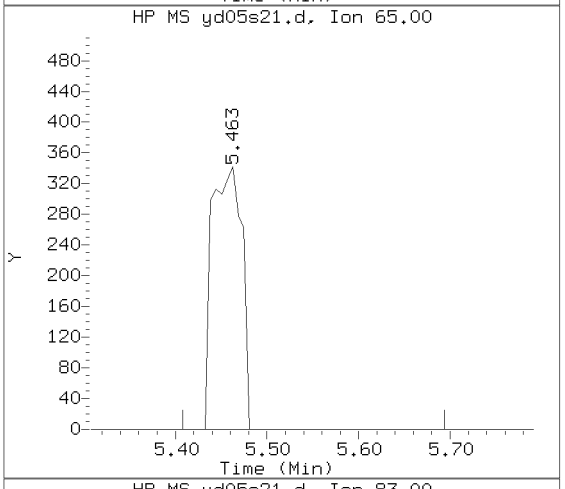
Reference Standard Spectrum for 1,1-Dichloroethane



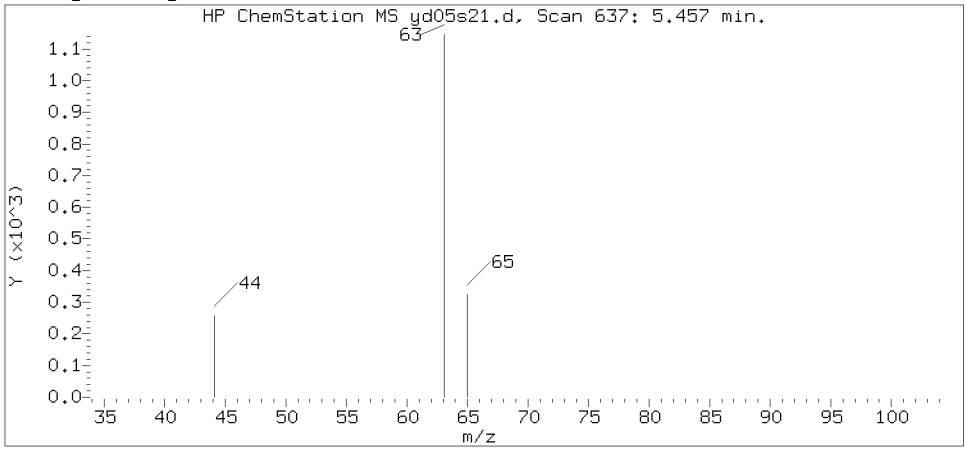


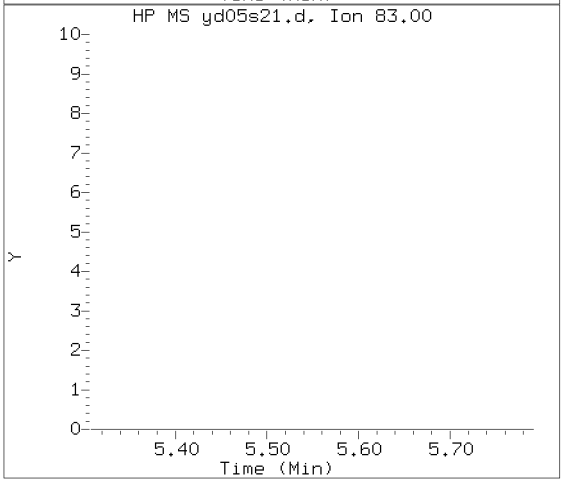
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP09355.i/19dec05a.b/yd05s21.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 16:16 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 05-DEC-2019 09:37
Date, time and analyst ID of latest file update: 09-Dec-2019 12:17 lcp00895

Sample Name: DIF01 Lab Sample ID: 1212641

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 637
Retention Time (minutes): 5.457
Relative Retention Time :-0.00101
Quant Ion : 63.00
Area (flag) : 3304
On-Column Amount (ng) : 0.4000

Digitally signed by Linda C. Pape on 12/09/2019 at 12:18.
Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DIF02

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1212642

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09355.i/19dec07a.b/yd07s17.d

Level: (low/med) LOW Date Received: 11/27/19

Moisture: not dec. _____ Date Analyzed: 12/07/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	3	J
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	0.3	J
71-55-6	1,1,1-Trichloroethane	3	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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DIF02 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1212642

Data file: /chem2/HP09355.i/19dec07a.b/yd07s17.d Injection date and time: **07-DEC-2019 18:41**
Data file Sample Info. Line: DIF02;1212642;1;0;;JCW27;;;yd07b01; Instrument ID: **HP09355.i** Batch: **Y193411AA**
Date, time and analyst ID of latest file update: 07-Dec-2019 18:58 Automation

Blank Data file reference: **/chem2/HP09355.i/19dec07a.b/yd07b01.d**

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 07-DEC-2019 11:45
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec07a.b/yd07c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.361(-0.012)	457	65	307969 (-14)	250.00	
66) Fluorobenzene	7.866(0.000)	1033	96	1084742 (-7)	50.00	
100) Chlorobenzene-d5	11.309(0.000)	1599	117	786369 (-9)	50.00	
131) 1,4-Dichlorobenzene-d4	13.183(0.000)	1907	152	402152 (-10)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.971(-0.001)	113	232067	45.593	91%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434(-0.001)	102	64448	48.433	97%		80 - 120
83) Toluene-d8	(3)	9.861(0.000)	98	1034241	48.609	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.300(0.000)	95	384311	47.276	95%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)	3.710(-0.003)	58	2968	2.697	2.70		J	0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)	6.758(-0.001)	83	3235	0.337	0.34		J	0.2	1
53) 1,1,1-Trichloroethane	(2)	6.996(-0.001)	97	25157	3.023	3.02			0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)	8.352(-0.000)	95	6692	1.102	1.10			0.2	1
75) 1,4-Dioxane	(1)			Not Detected					29	250
88) Toluene	(3)			Not Detected					0.2	1
93) Tetrachloroethene	(3)			Not Detected					0.2	1
104) Ethylbenzene	(3)			Not Detected					0.4	1
106) m+p-Xylene	(3)			Not Detected					1	5
107) o-Xylene	(3)			Not Detected					0.4	1
108) Xylene (Total)	(3)			Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
148) Naphthalene	(4)			Not Detected					1	5

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DIF02 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1212642

Data file: /chem2/HP09355.i/19dec07a.b/yd07s17.d Injection date and time: **07-DEC-2019 18:41**
Data file Sample Info. Line: DIF02;1212642;1;0;;JCW27;;;yd07b01; Instrument ID: **HP09355.i** Batch: **Y193411AA**
Date, time and analyst ID of latest file update: 07-Dec-2019 18:58 Automation

Blank Data file reference: **/chem2/HP09355.i/19dec07a.b/yd07b01.d**

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 07-DEC-2019 11:45
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec07a.b/yd07c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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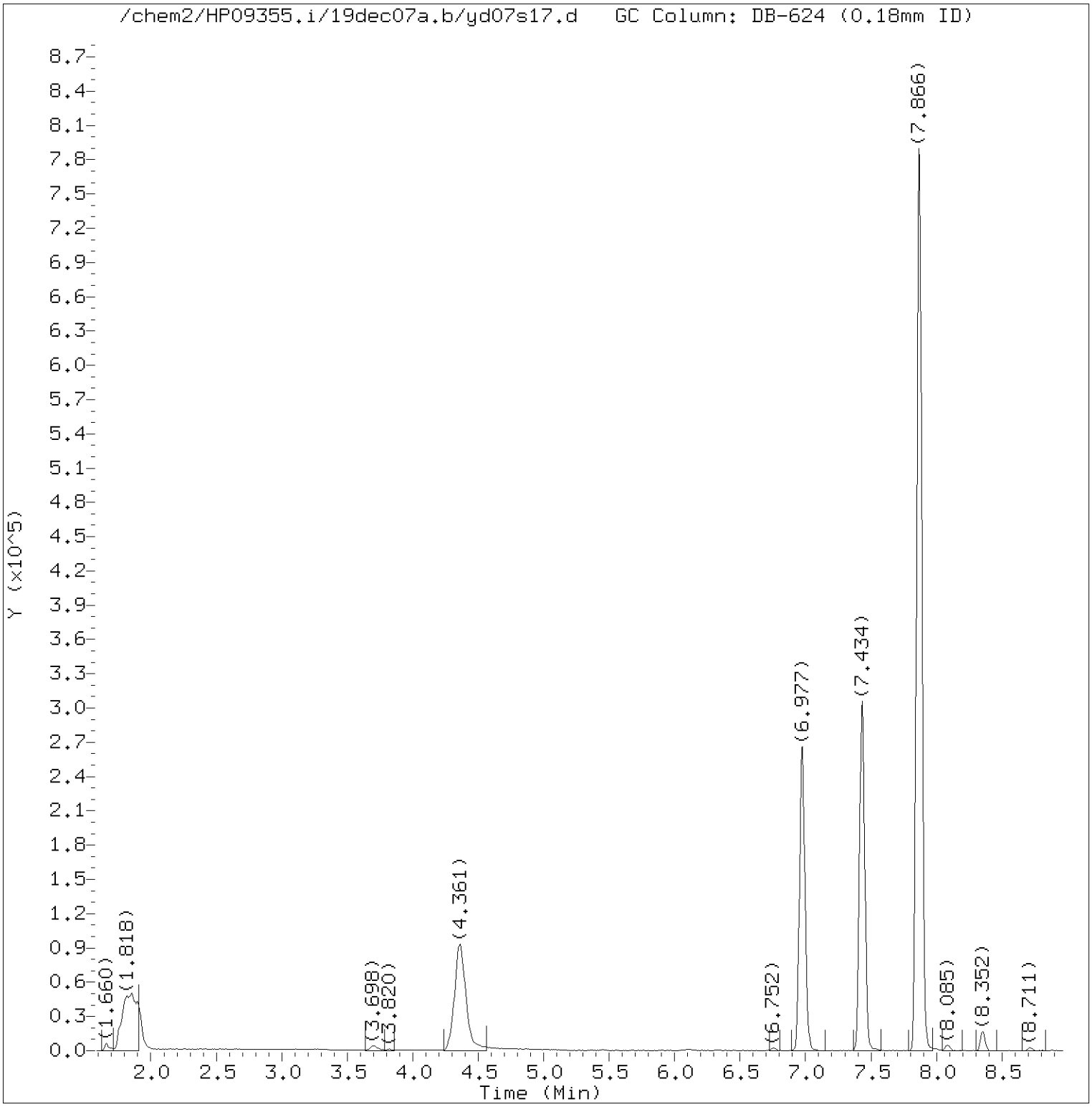
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Linda C. Pape on 12/09/2019 at 12:01. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 12/09/2019 at 19:29. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

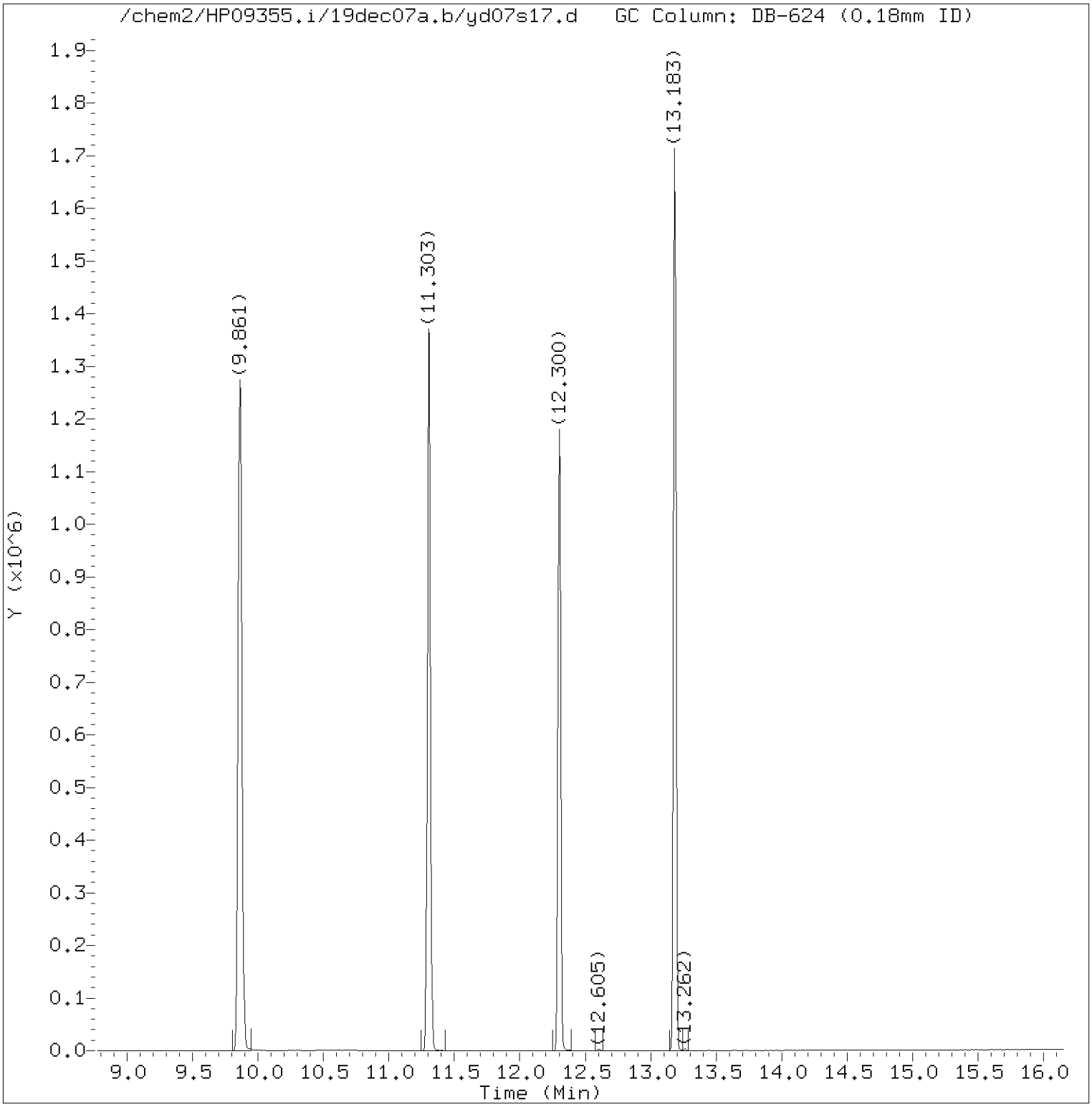
Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07s17.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 18:41 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 18:58 Automation

Sample Name: DIF02 Lab Sample ID: 1212642

Digitally signed by Linda C. Pape
on 12/09/2019 at 12:01.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07s17.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 18:41 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 18:58 Automation

Sample Name: DIF02 Lab Sample ID: 1212642

Digitally signed by Linda C. Pape
on 12/09/2019 at 12:01.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07s17.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 18:41 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 18:58 Automation

Sample Name: DIF02 Lab Sample ID: 1212642

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
18) Acetone	(1)	3.710	58	2968	2.697
29)*t-Butyl alcohol-d10	(1)	4.361	65	307969	250.000
51) Chloroform	(2)	6.758	83	3235	0.337
52)$Dibromofluoromethane	(2)	6.971	113	232067	45.593
53) 1,1,1-Trichloroethane	(2)	6.996	97	25157	3.023
57)$1,2-Dichloroethane-d4	(2)	7.434	102	64448	48.433
66)*Fluorobenzene	(2)	7.866	96	1084742	50.000
71) Trichloroethene	(2)	8.352	95	6692	1.102
83)$Toluene-d8	(3)	9.861	98	1034241	48.609
100)*Chlorobenzene-d5	(3)	11.309	117	786369	50.000
114)$4-Bromofluorobenzene	(3)	12.300	95	384311	47.276
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	402152	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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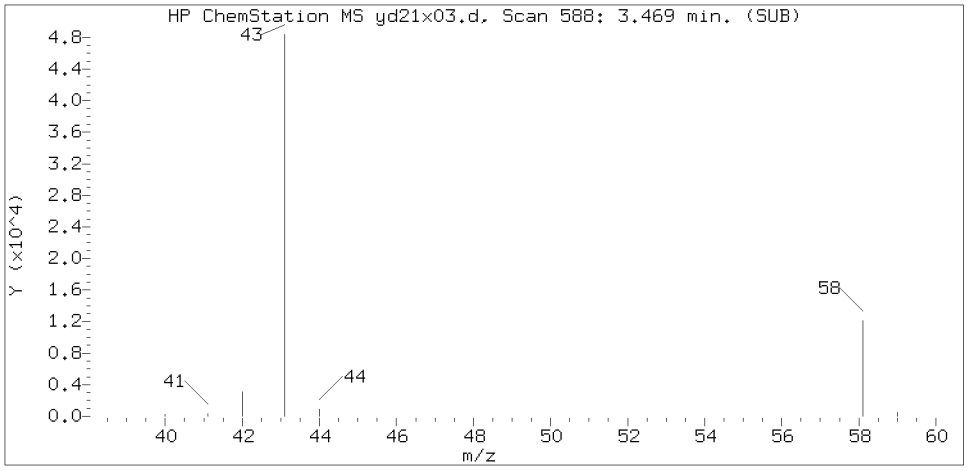
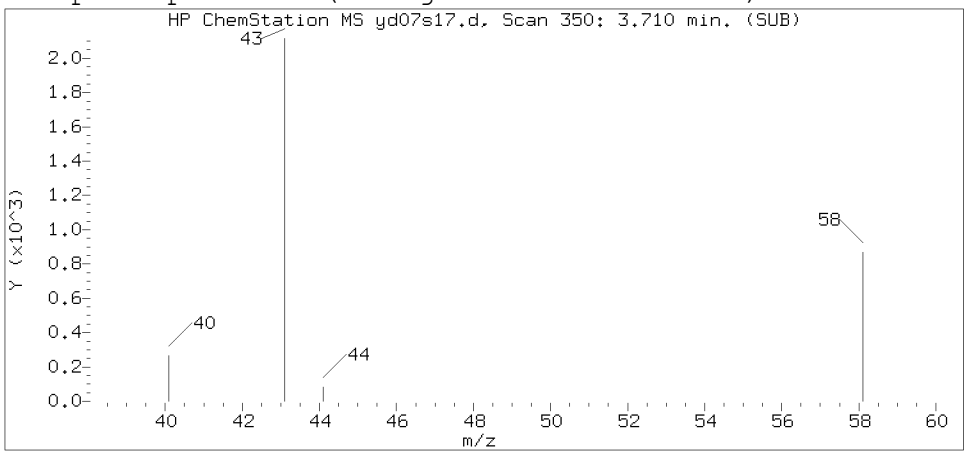
on 12/09/2019 at 12:01.
Target 3.5 esignature user ID: lcp00895

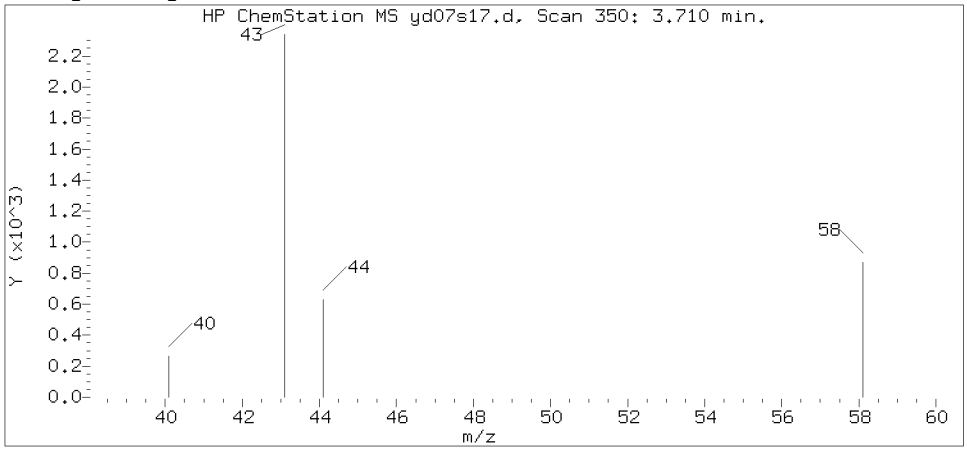
Reference Standard Spectrum for Acetone

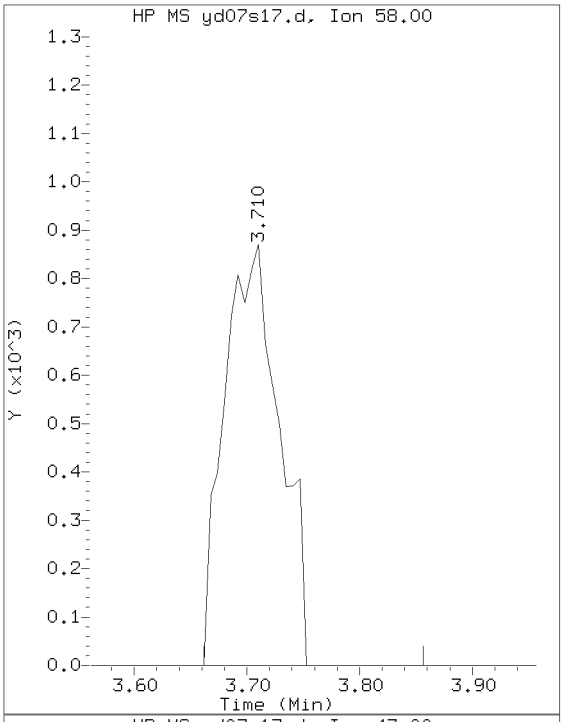


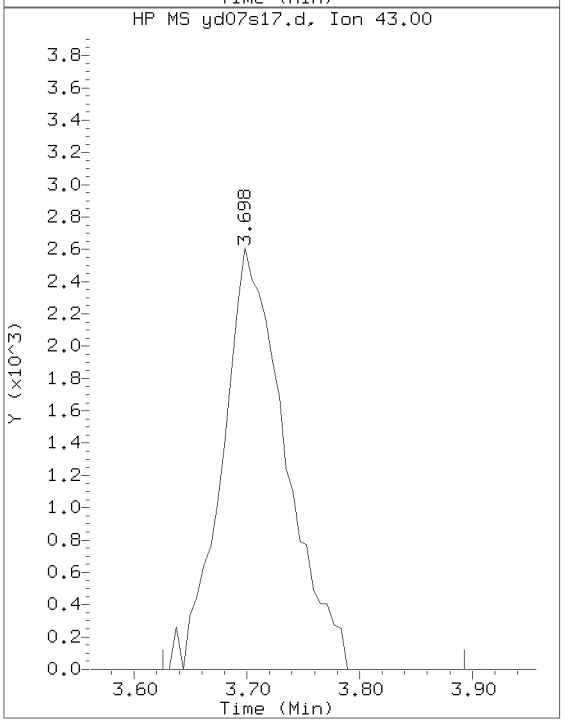
Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)







Data File: /chem2/HP09355.i/19dec07a.b/yd07s17.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 18:41 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 18:58 Automation

Sample Name: DIF02 Lab Sample ID: 1212642

Compound Number : 18
Compound Name : Acetone
Scan Number : 350
Retention Time (minutes): 3.710
Relative Retention Time :-0.00321
Quant Ion : 58.00
Area (flag) : 2968
On-Column Amount (ng) : 2.6969

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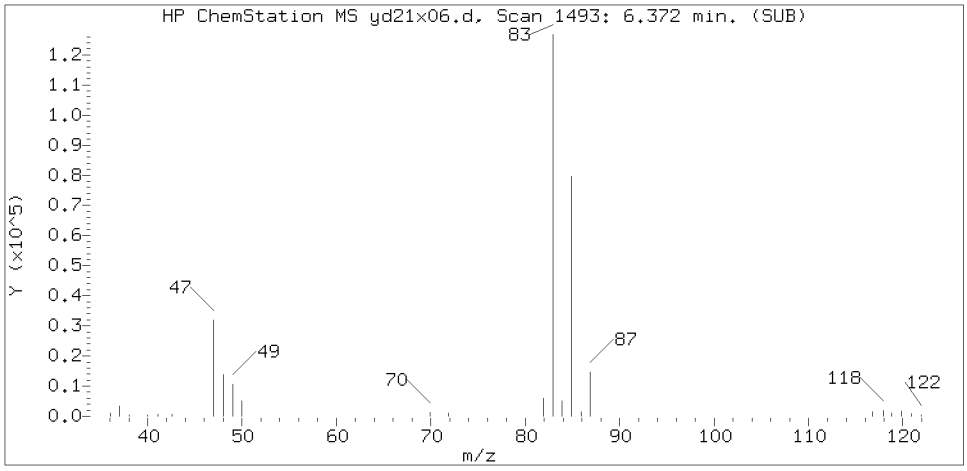
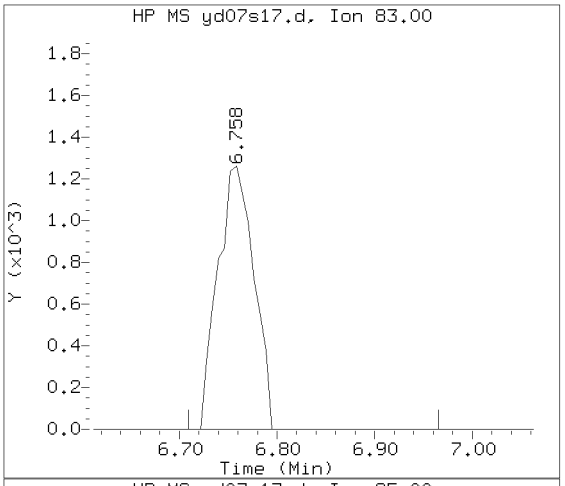
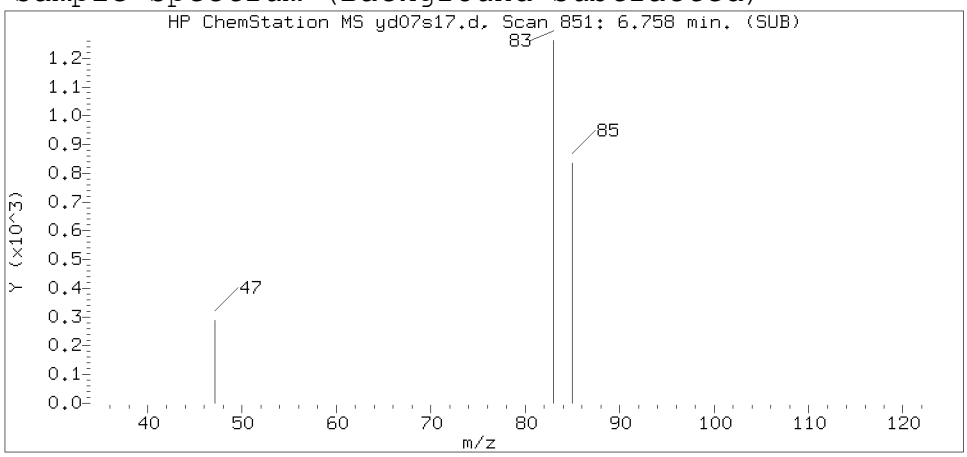
Target 3.5 esignature user ID: lcp00805

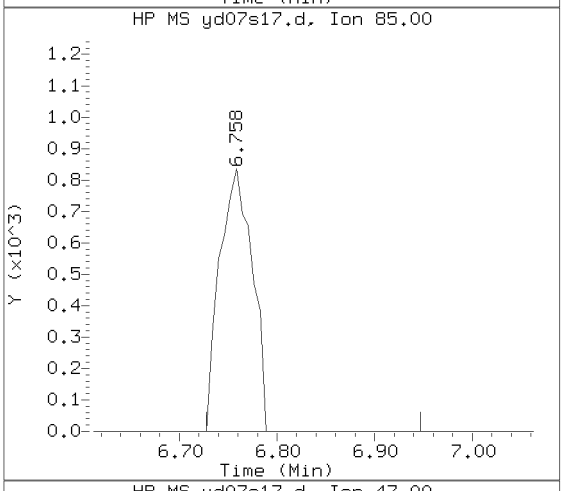
Reference Standard Spectrum for Chloroform



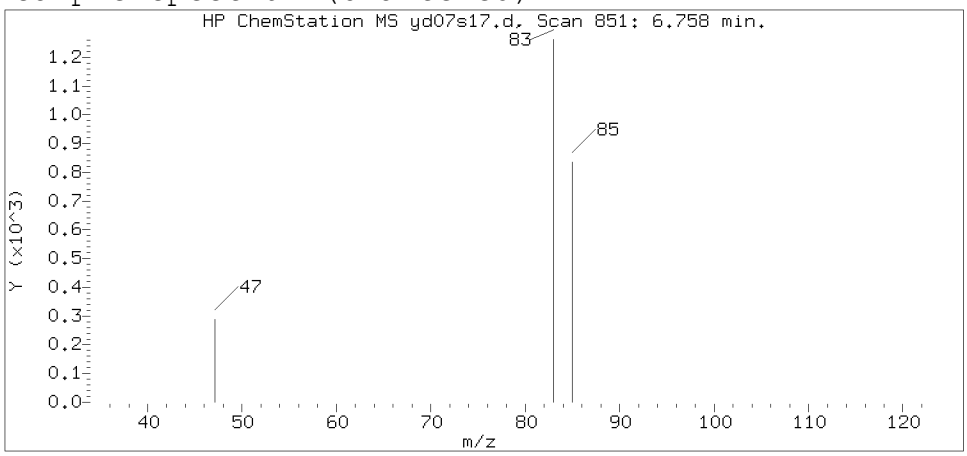


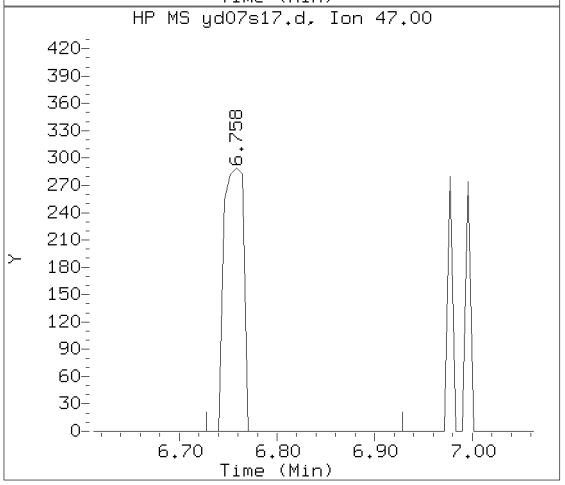
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP09355.i/19dec07a.b/yd07s17.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 18:41 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 18:58 Automation

Sample Name: DIF02 Lab Sample ID: 1212642

Compound Number : 51
Compound Name : Chloroform
Scan Number : 851
Retention Time (minutes): 6.758
Relative Retention Time :-0.00155
Quant Ion : 83.00
Area (flag) : 3235
On-Column Amount (ng) : 0.3369

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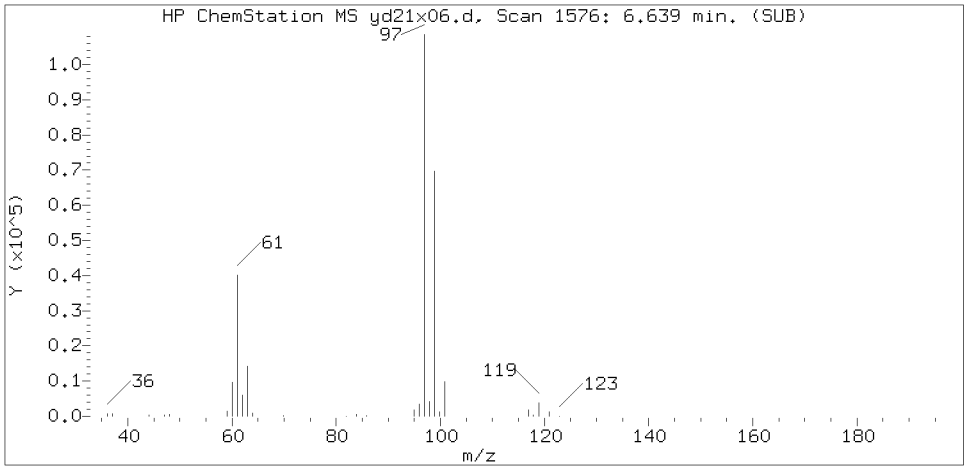
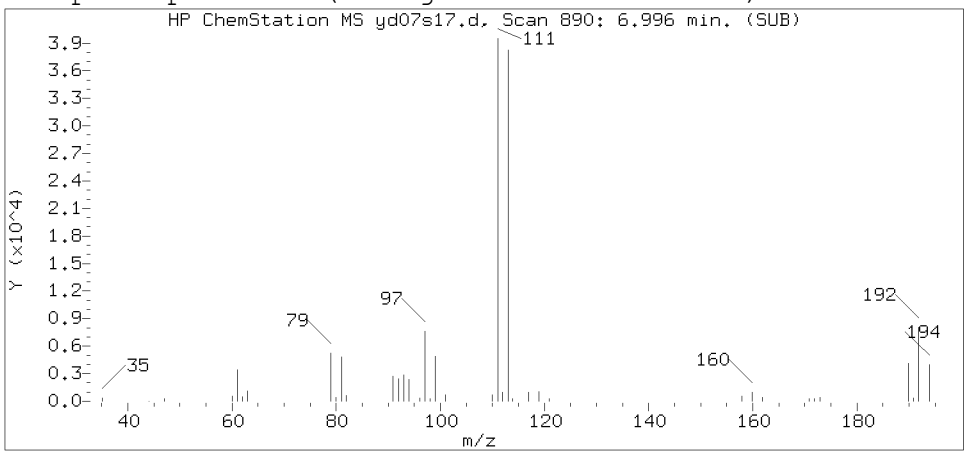
Target 3.5 esignature user ID: lcp00805

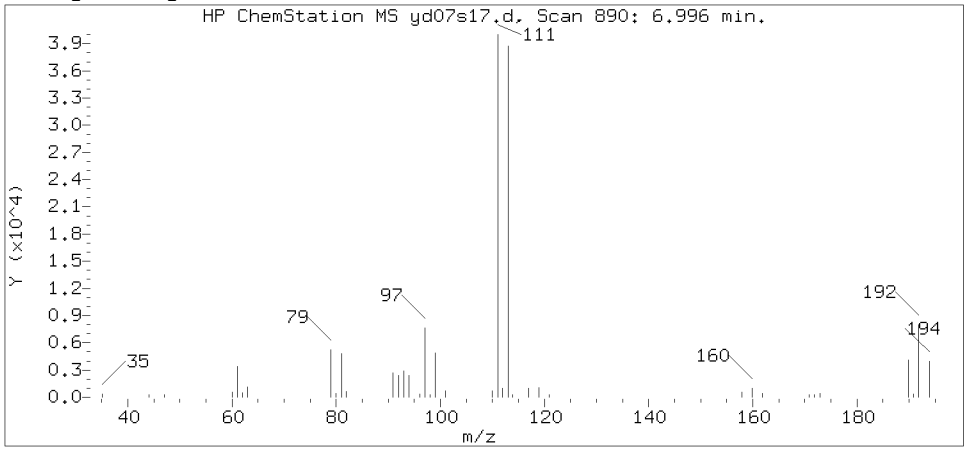
Reference Standard Spectrum for 1,1,1-Trichloroethane

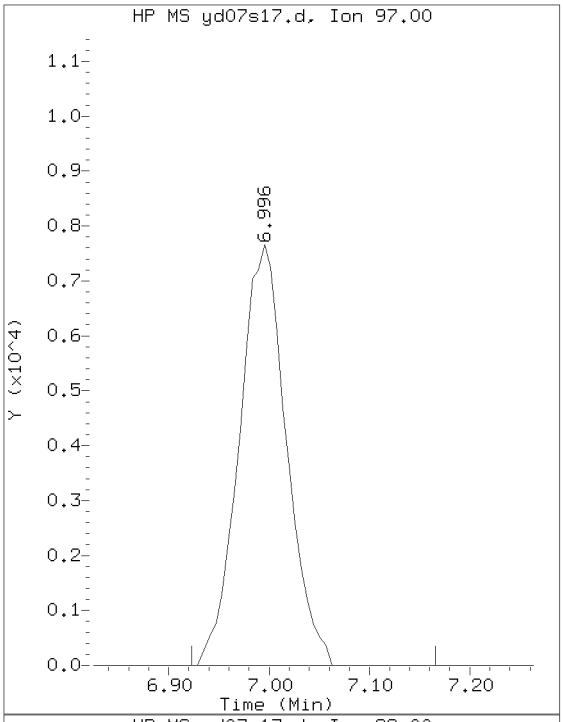


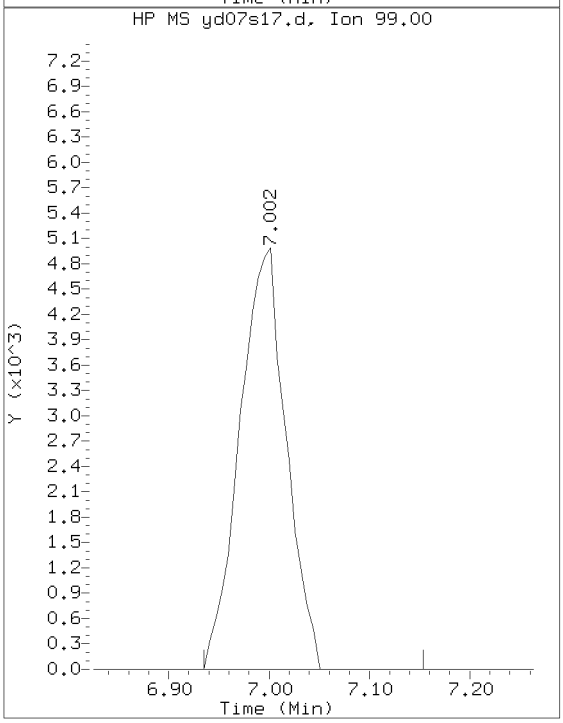
Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)







Data File: /chem2/HP09355.i/19dec07a.b/yd07s17.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 18:41 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 18:58 Automation

Sample Name: DIF02 Lab Sample ID: 1212642

Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 890
Retention Time (minutes): 6.996
Relative Retention Time :-0.00155
Quant Ion : 97.00
Area (flag) : 25157
On-Column Amount (ng) : 3.0232

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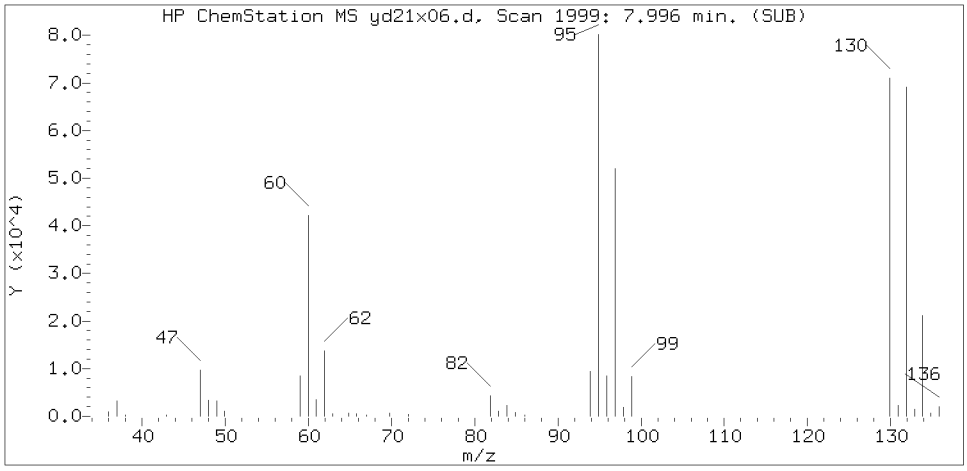
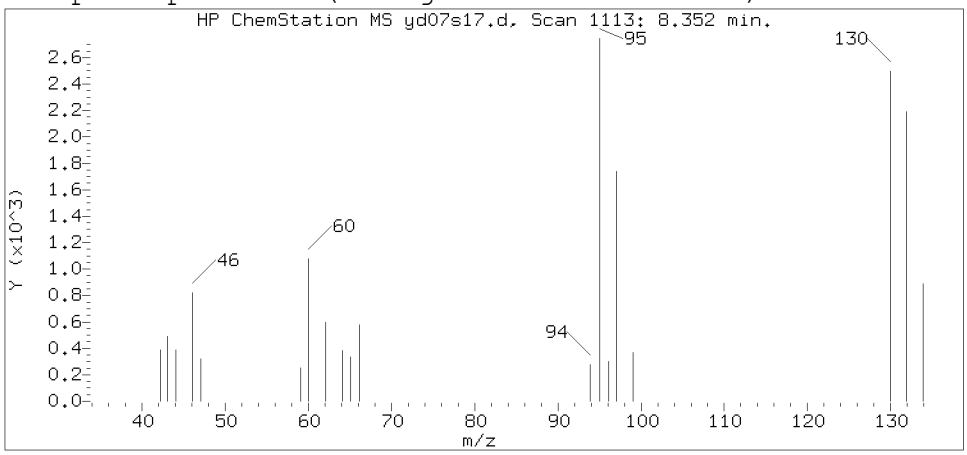
Target 3.5 esignature user ID: lcp00805

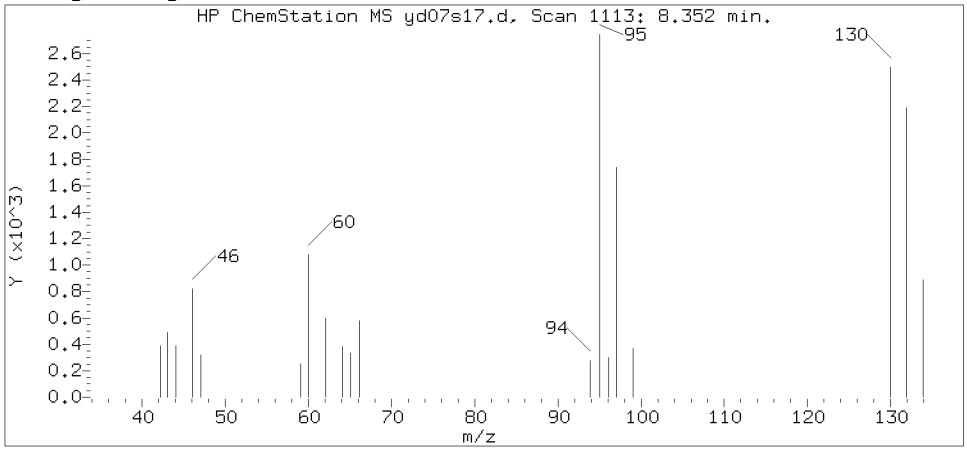
Reference Standard Spectrum for Trichloroethene

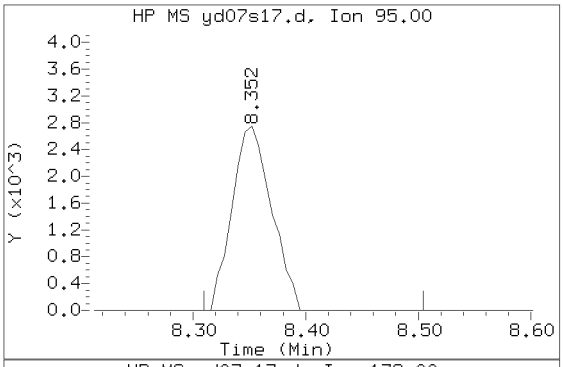


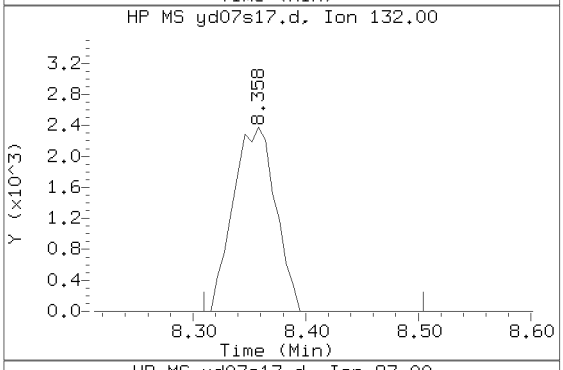
Sample Spectrum (Background Subtracted)

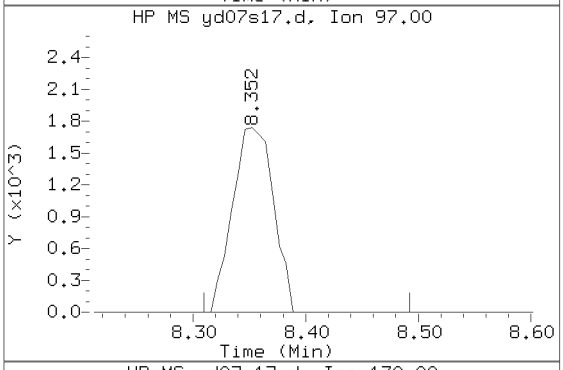


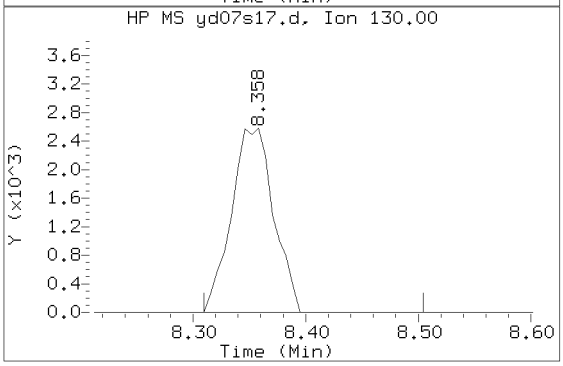
Sample Spectrum (Unaltered)











Data File: /chem2/HP09355.i/19dec07a.b/yd07s17.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 18:41 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 18:58 Automation

Sample Name: DIF02 Lab Sample ID: 1212642

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 1113
Retention Time (minutes): 8.352
Relative Retention Time :-0.00077
Quant Ion : 95.00
Area (flag) : 6692
On-Column Amount (ng) : 1.1016

Digitally signed by Linda C. Pape on 12/09/2019 at 12:01.
Target 3.5 esignature user ID: lcp00805

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DIF03

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1212643

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09355.i/19dec07a.b/yd07s18.d

Level: (low/med) LOW Date Received: 11/27/19

Moisture: not dec. _____ Date Analyzed: 12/07/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L		Q
75-01-4	Vinyl Chloride		1	U
75-35-4	1,1-Dichloroethene		0.4	J
67-64-1	Acetone		2	J
76-13-1	Freon 113		10	U
75-15-0	Carbon Disulfide		5	U
75-09-2	Methylene Chloride		1	U
156-60-5	trans-1,2-Dichloroethene		1	U
75-34-3	1,1-Dichloroethane		0.7	J
156-59-2	cis-1,2-Dichloroethene		5	
78-93-3	2-Butanone		10	U
67-66-3	Chloroform		1	U
71-55-6	1,1,1-Trichloroethane		2	
71-43-2	Benzene		1	U
107-06-2	1,2-Dichloroethane		1	U
79-01-6	Trichloroethene		3	
123-91-1	1,4-Dioxane		250	U
108-88-3	Toluene		1	U
127-18-4	Tetrachloroethene		1	U
100-41-4	Ethylbenzene		1	U
1330-20-7	Xylene (Total)		6	U
95-50-1	1,2-Dichlorobenzene		5	U
91-20-3	Naphthalene		5	U

FORM I VOA

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DIF03 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1212643

Data file: /chem2/HP09355.i/19dec07a.b/yd07s18.d Injection date and time: **07-DEC-2019 19:03**
Data file Sample Info. Line: DIF03;1212643;1;0;;JCW27;;;yd07b01; Instrument ID: **HP09355.i** Batch: **Y193411AA**
Date, time and analyst ID of latest file update: 07-Dec-2019 19:20 Automation

Blank Data file reference: **/chem2/HP09355.i/19dec07a.b/yd07b01.d**

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 07-DEC-2019 11:45
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec07a.b/yd07c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.349	(0.000)	455	65	300684	(-16)	250.00	
66) Fluorobenzene	7.866	(0.000)	1033	96	1090412	(-6)	50.00	
100) Chlorobenzene-d5	11.303	(0.006)	1598	117	790961	(-8)	50.00	
131) 1,4-Dichlorobenzene-d4	13.183	(0.000)	1907	152	405052	(-9)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.965	(0.000)	113	233329	45.602	91%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.428	(0.000)	102	64987	48.584	97%		80 - 120
83) Toluene-d8	(3)	9.861	(0.000)	98	1046128	48.883	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.301	(-0.001)	95	385260	47.117	94%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)	3.674	(-0.000)	96	1816	0.384	0.38		J	0.2	1
18) Acetone	(1)	3.704	(-0.004)	58	2558	2.380	2.38		J	0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.438	(-0.000)	63	7153	0.718	0.72		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	6.272	(-0.000)	96	30314	4.864	4.86			0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)	6.984	(0.000)	97	19917	2.381	2.38			0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.346	(0.000)	95	20009	3.277	3.28			0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

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DIF03 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1212643

Data file: /chem2/HP09355.i/19dec07a.b/yd07s18.d Injection date and time: **07-DEC-2019 19:03**
Data file Sample Info. Line: DIF03;1212643;1;0;;JCW27;;;yd07b01; Instrument ID: **HP09355.i** Batch: **Y193411AA**
Date, time and analyst ID of latest file update: 07-Dec-2019 19:20 Automation

Blank Data file reference: **/chem2/HP09355.i/19dec07a.b/yd07b01.d**

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 07-DEC-2019 11:45
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec07a.b/yd07c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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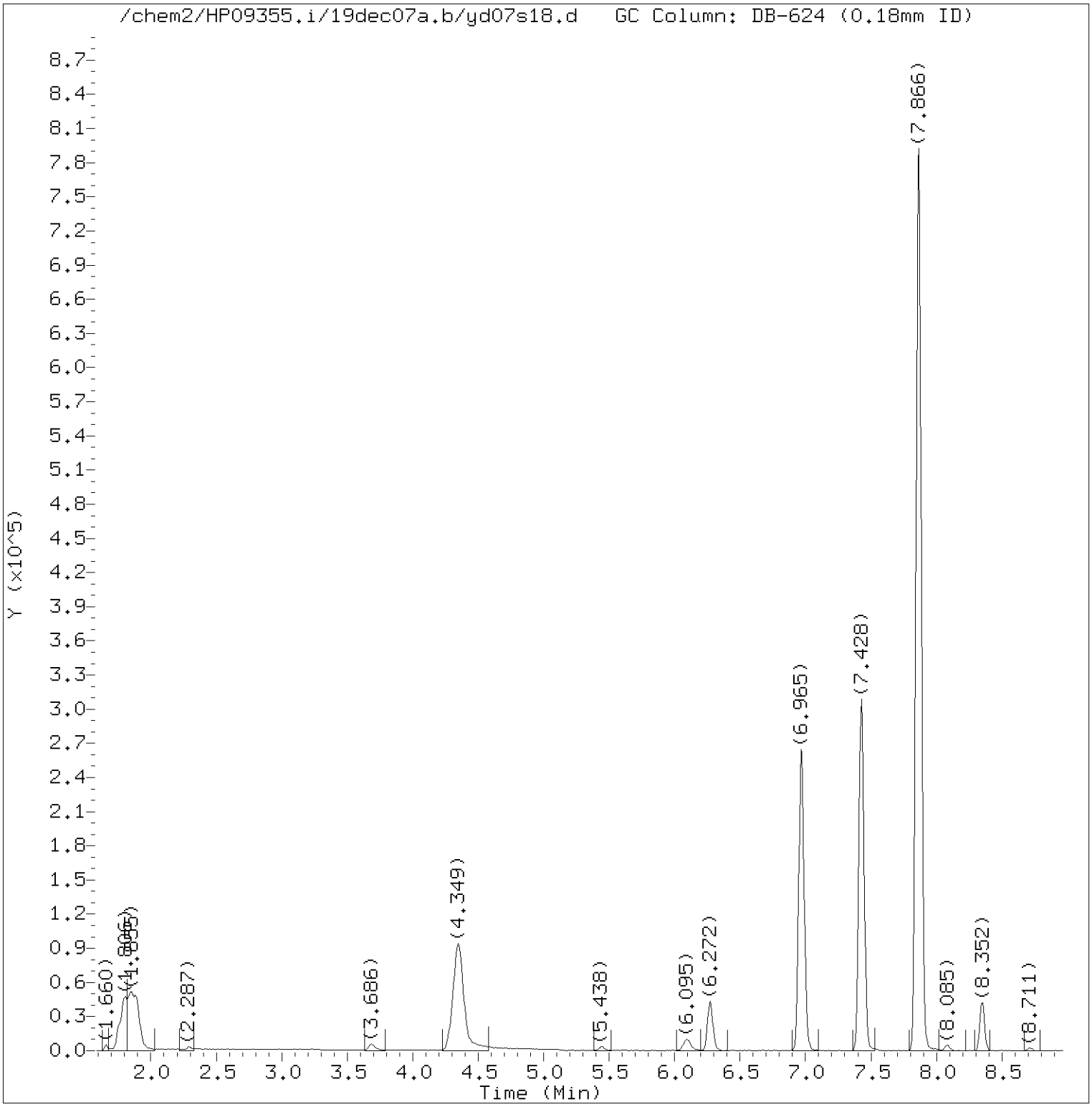
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Linda C. Pape on 12/09/2019 at 12:02. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 12/09/2019 at 19:29. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

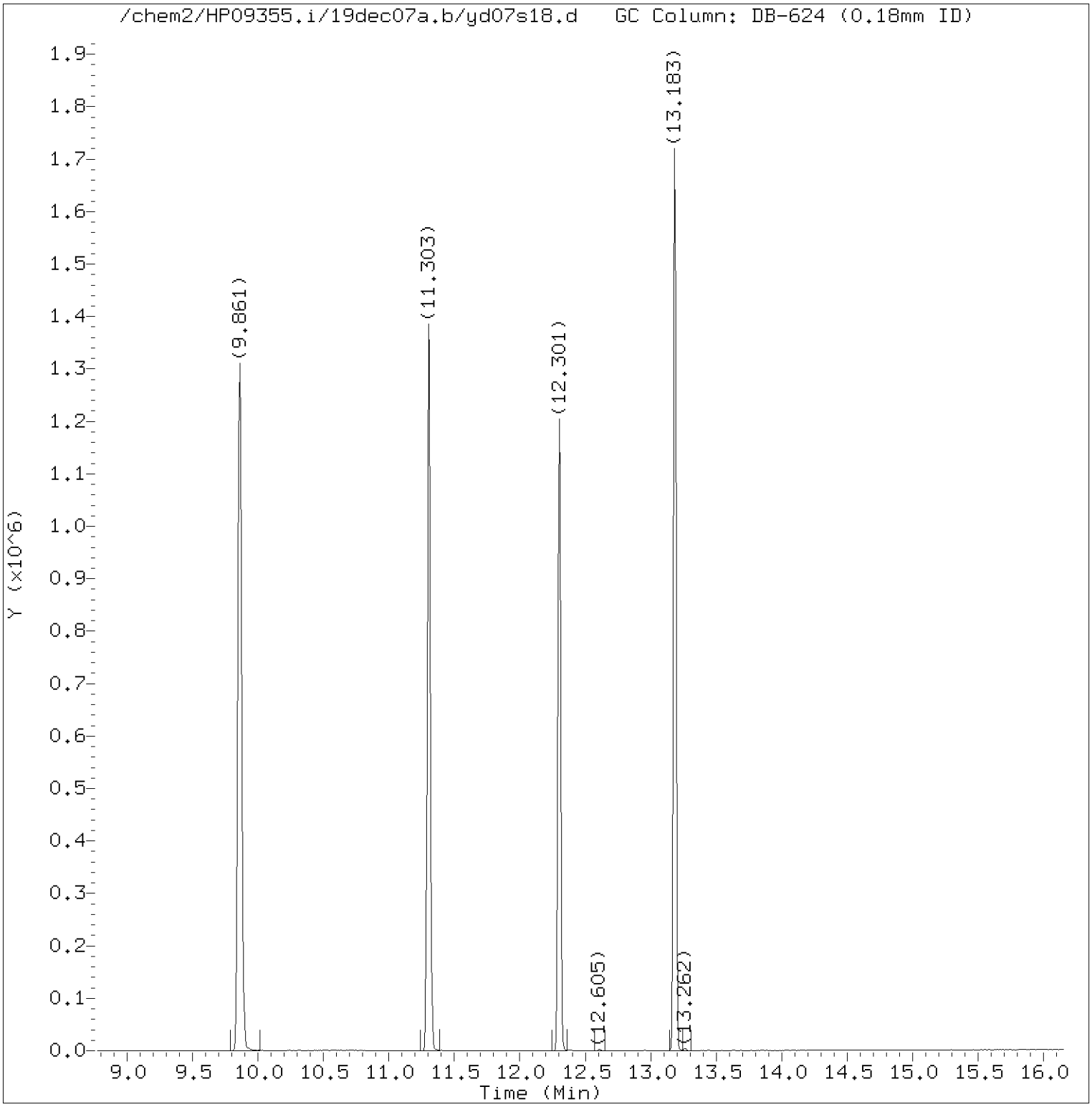
Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07s18.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 19:03 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 19:20 Automation

Sample Name: DIF03 Lab Sample ID: 1212643

Digitally signed by Linda C. Pape
on 12/09/2019 at 12:02.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07s18.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 19:03 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 19:20 Automation

Sample Name: DIF03 Lab Sample ID: 1212643

Digitally signed by Linda C. Pape
on 12/09/2019 at 12:02.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07s18.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 19:03 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 19:20 Automation

Sample Name: DIF03 Lab Sample ID: 1212643

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	3.674	96	1816	0.384
18) Acetone	(1)	3.704	58	2558	2.380
29)*t-Butyl alcohol-d10	(1)	4.349	65	300684	250.000
36) 1,1-Dichloroethane	(2)	5.438	63	7153	0.718
42) cis-1,2-Dichloroethene	(2)	6.272	96	30314	4.864
52)$Dibromofluoromethane	(2)	6.965	113	233329	45.602
53) 1,1,1-Trichloroethane	(2)	6.984	97	19917	2.381
57)$1,2-Dichloroethane-d4	(2)	7.428	102	64987	48.584
66)*Fluorobenzene	(2)	7.866	96	1090412	50.000
71) Trichloroethene	(2)	8.346	95	20009	3.277
83)$Toluene-d8	(3)	9.861	98	1046128	48.883
100)*Chlorobenzene-d5	(3)	11.303	117	790961	50.000
114)$4-Bromofluorobenzene	(3)	12.301	95	385260	47.117
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	405052	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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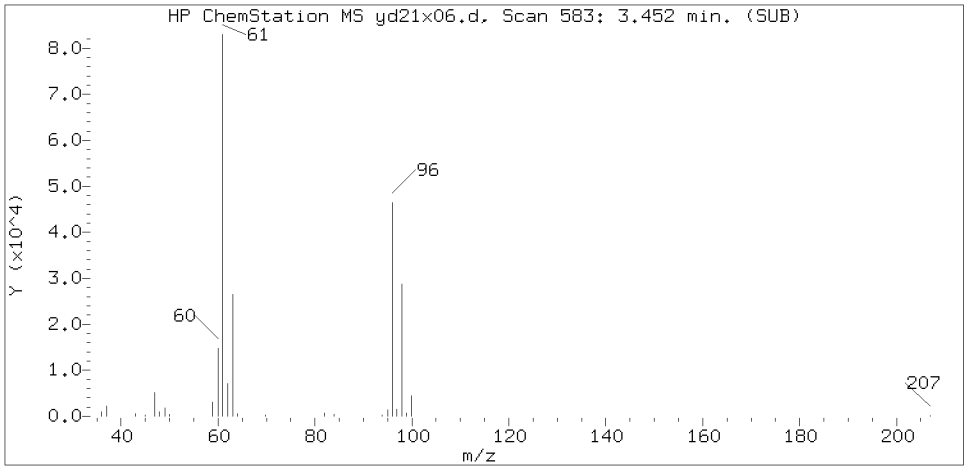
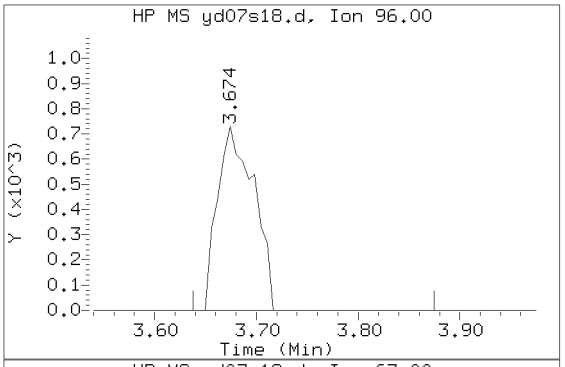
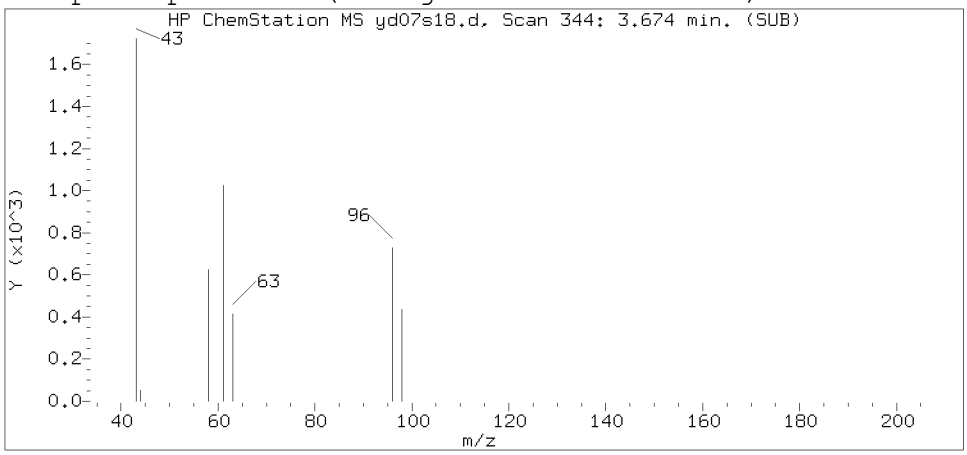
on 12/09/2019 at 12:02.
Target 3.5 esignature user ID: lcp00895

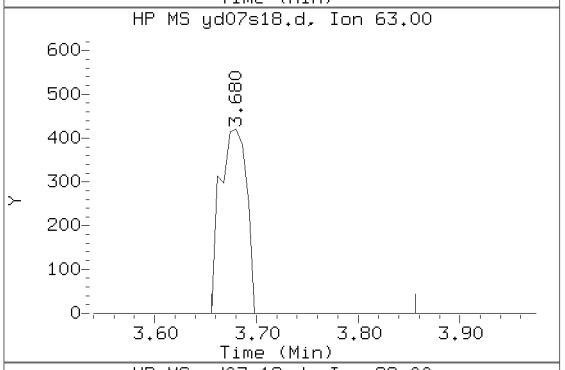
Reference Standard Spectrum for 1,1-Dichloroethene

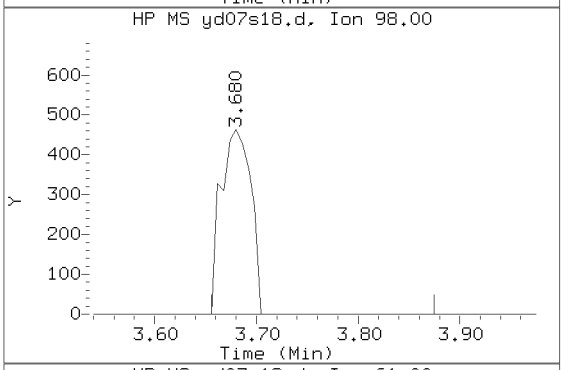




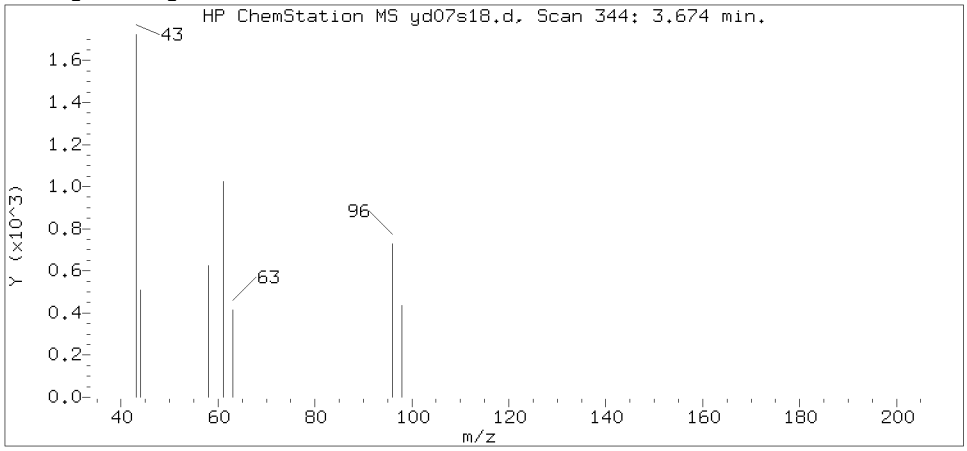
Sample Spectrum (Background Subtracted)

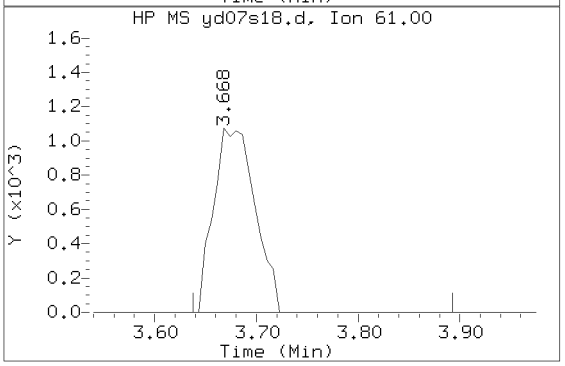






Sample Spectrum (Unaltered)





Data File: /chem2/HP09355.i/19dec07a.b/yd07s18.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 19:03 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 19:20 Automation

Sample Name: DIF03 Lab Sample ID: 1212643

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 344
Retention Time (minutes): 3.674
Relative Retention Time :-0.00001
Quant Ion : 96.00
Area (flag) : 1816
On-Column Amount (ng) : 0.3838

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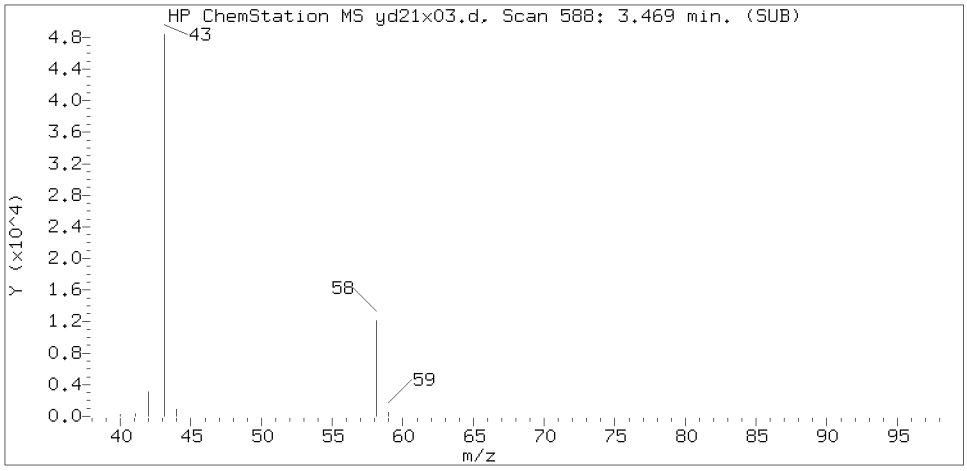
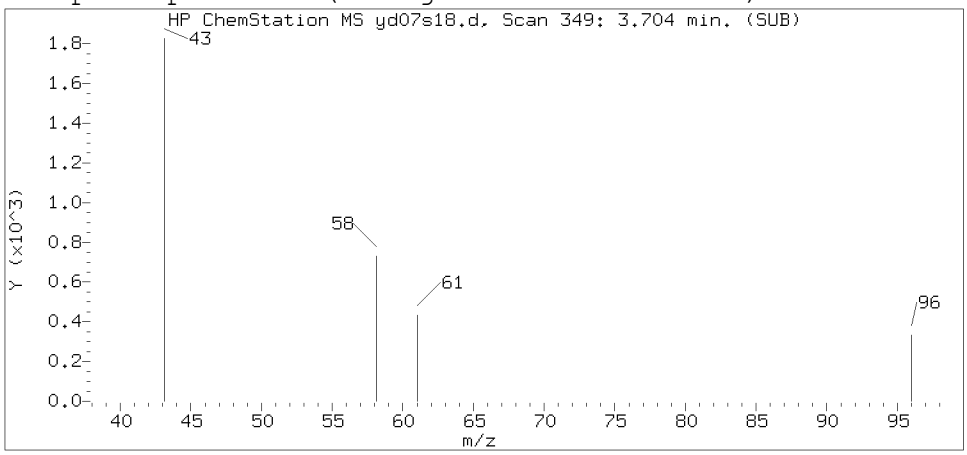
Target 3.5 esignature user ID: lcp00805

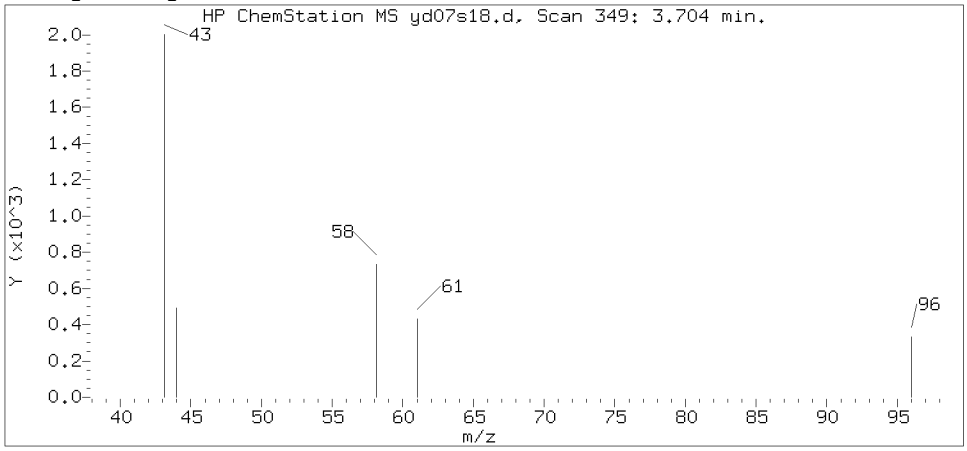
Reference Standard Spectrum for Acetone

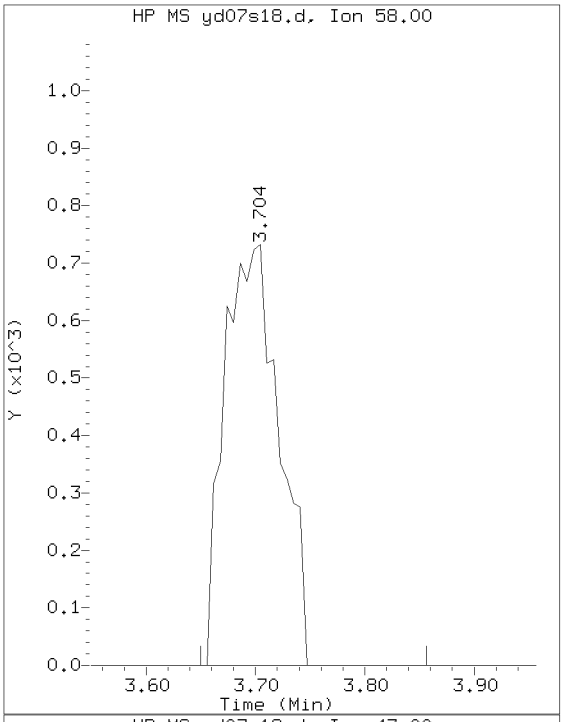


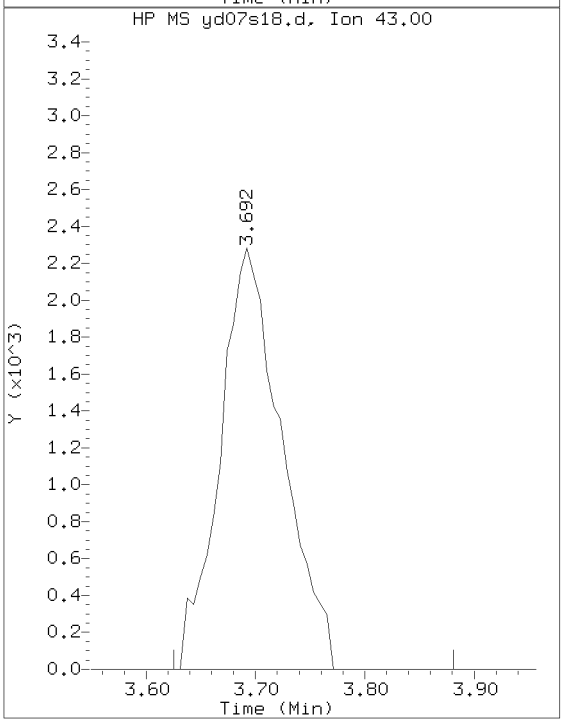
Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)







Data File: /chem2/HP09355.i/19dec07a.b/yd07s18.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 19:03 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 19:20 Automation

Sample Name: DIF03 Lab Sample ID: 1212643

Compound Number : 18
Compound Name : Acetone
Scan Number : 349
Retention Time (minutes): 3.704
Relative Retention Time :-0.00420
Quant Ion : 58.00
Area (flag) : 2558
On-Column Amount (ng) : 2.3805

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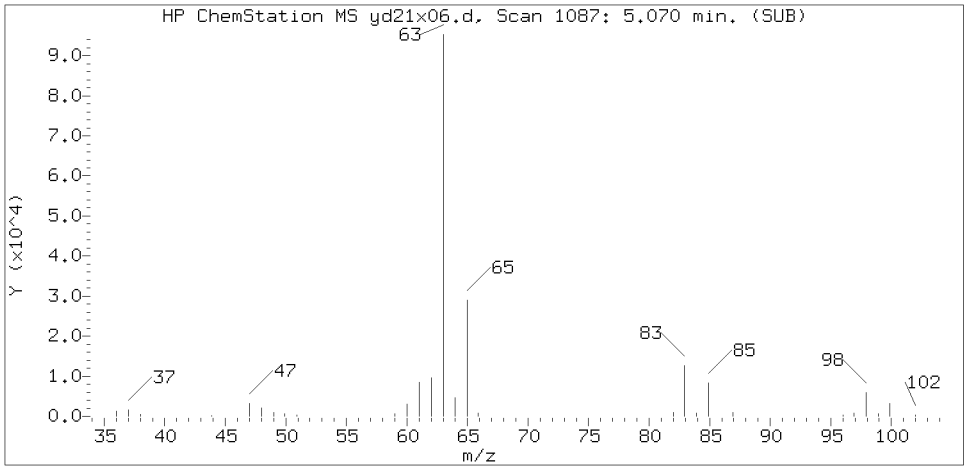
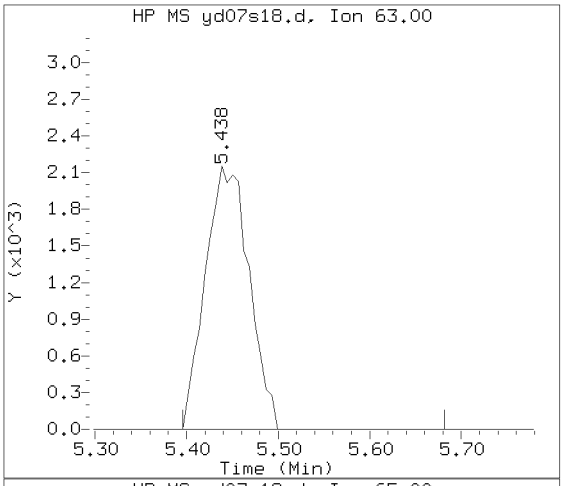
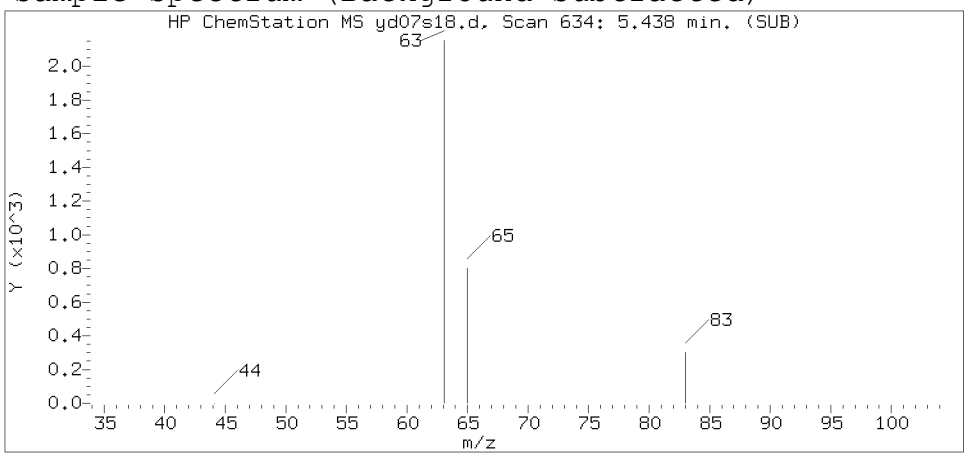
Target 3.5 esignature user ID: lcp00805

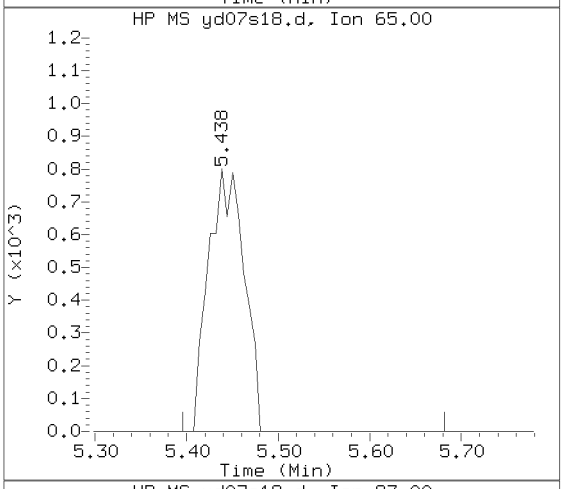
Reference Standard Spectrum for 1,1-Dichloroethane



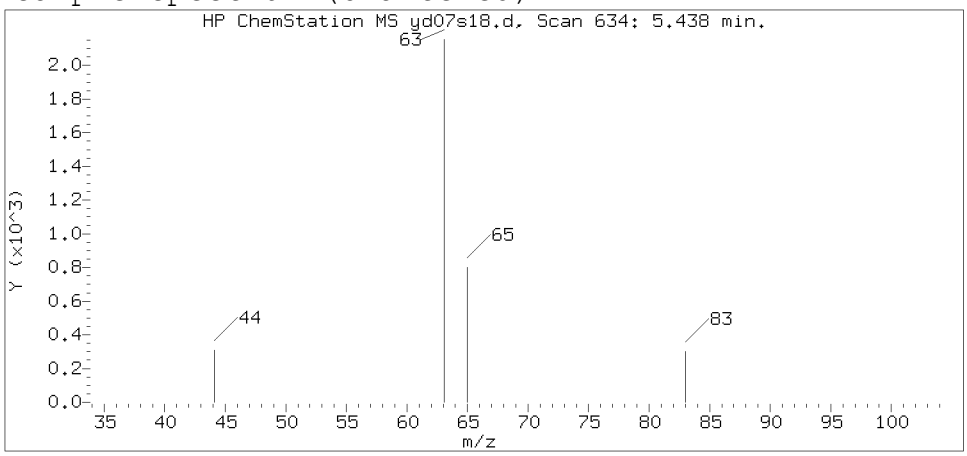


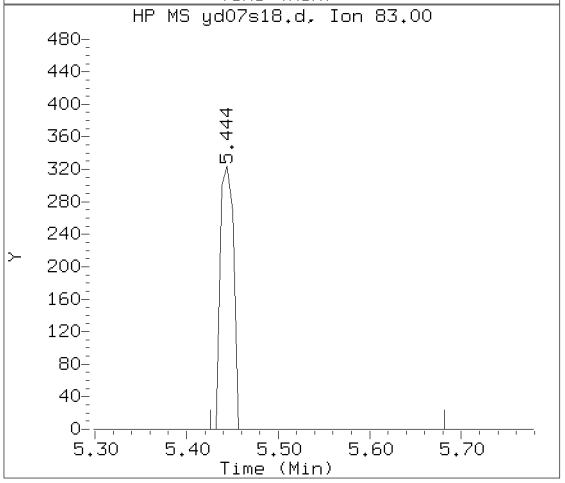
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP09355.i/19dec07a.b/yd07s18.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 19:03 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 19:20 Automation

Sample Name: DIF03 Lab Sample ID: 1212643

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 634
Retention Time (minutes): 5.438
Relative Retention Time :-0.00000
Quant Ion : 63.00
Area (flag) : 7153
On-Column Amount (ng) : 0.7176

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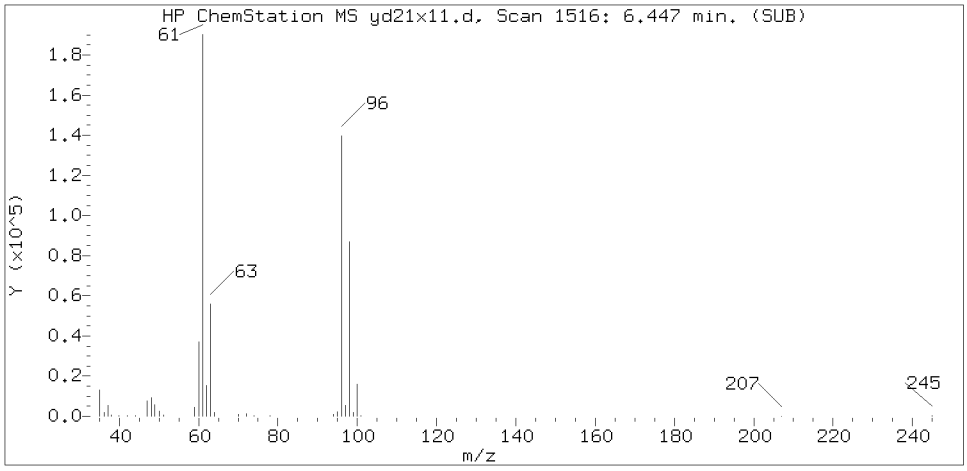
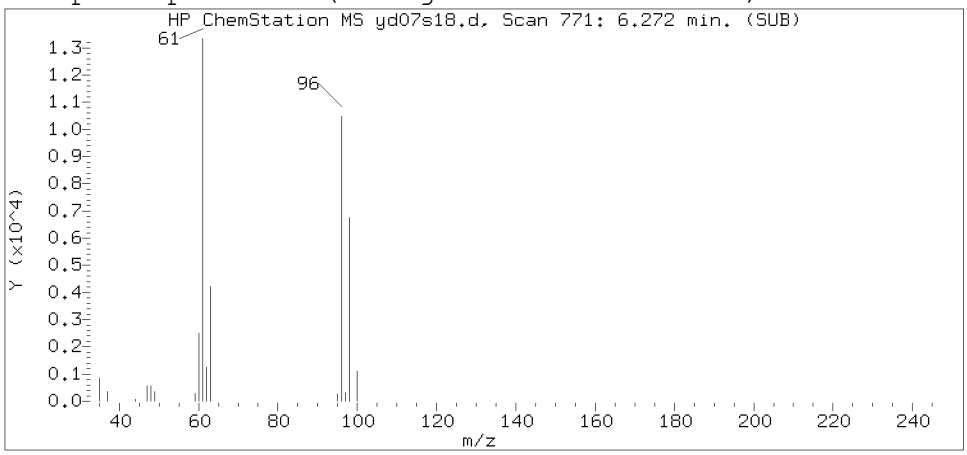
Target 3.5 esignature user ID: lcp00805

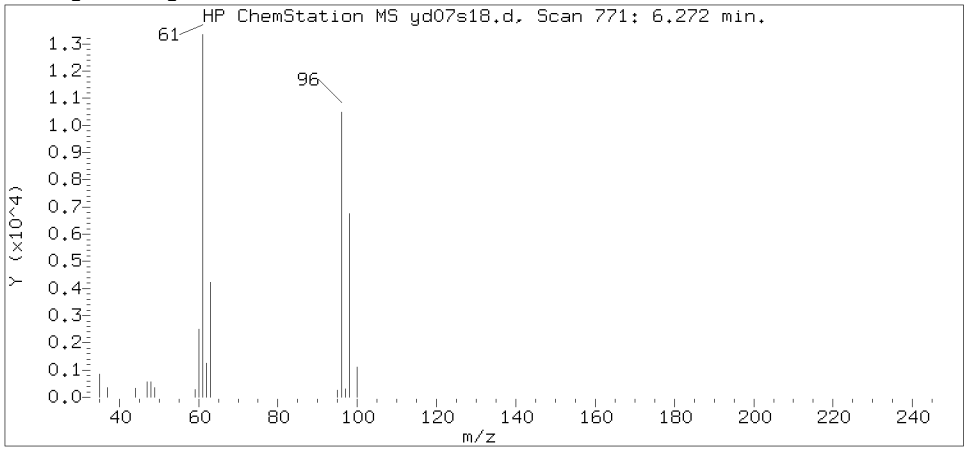
Reference Standard Spectrum for cis-1,2-Dichloroethene

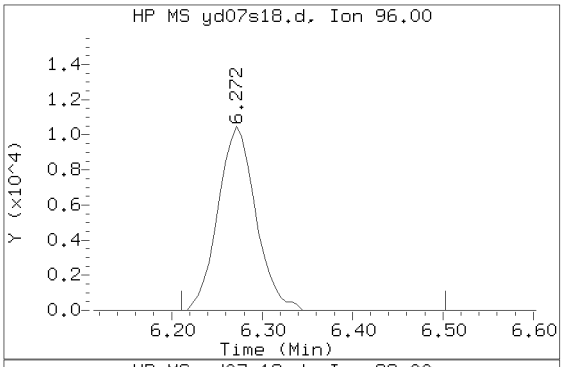


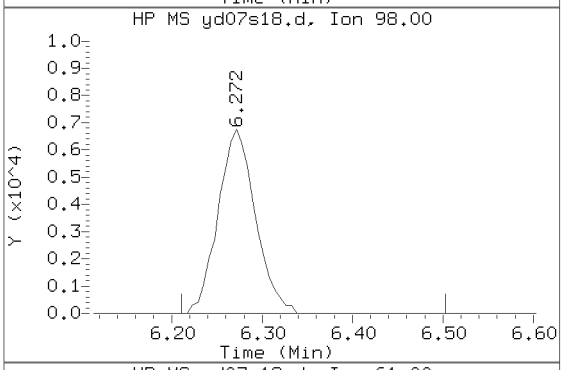
Sample Spectrum (Background Subtracted)

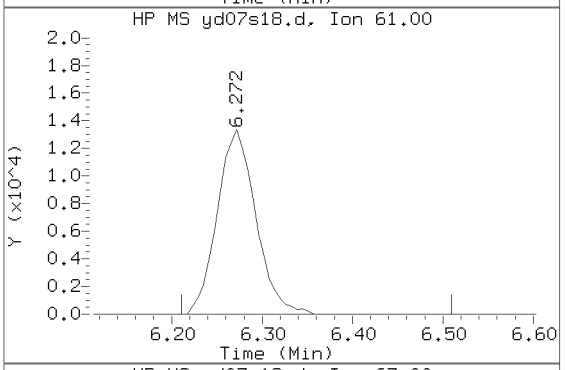


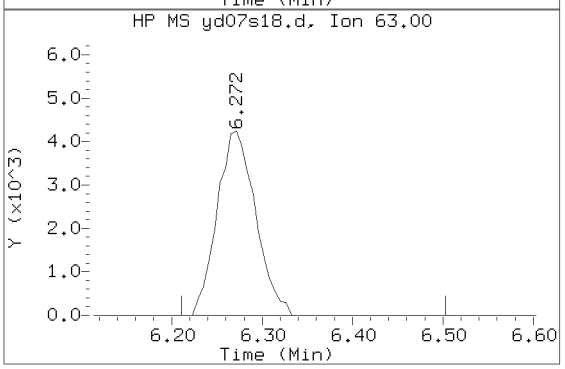
Sample Spectrum (Unaltered)











Data File: /chem2/HP09355.i/19dec07a.b/yd07s18.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 19:03 Analyst ID: MEC29284

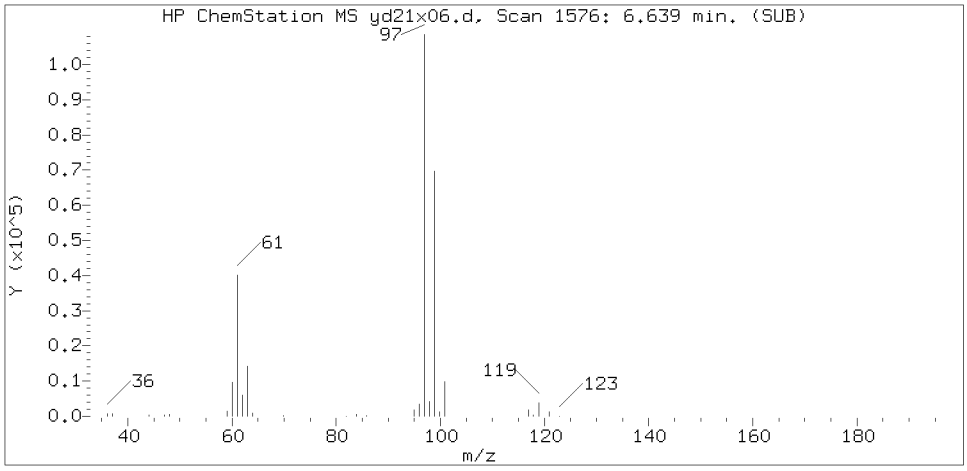
Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 19:20 Automation

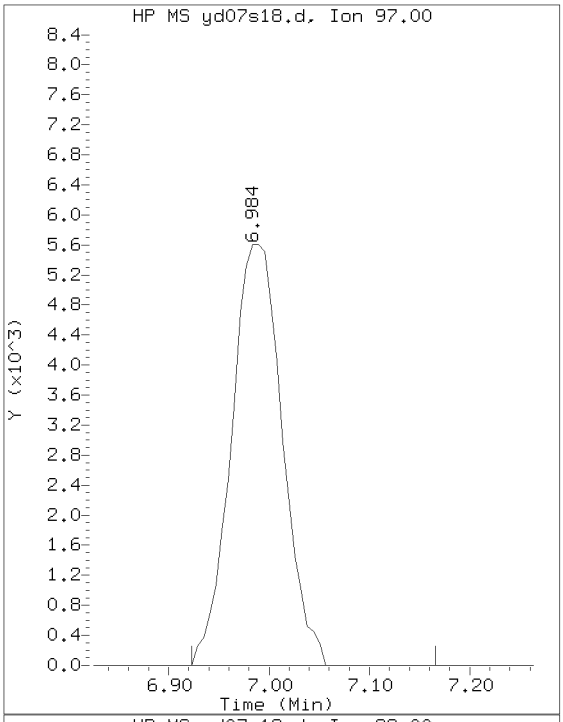
Sample Name: DIF03 Lab Sample ID: 1212643

Compound Number	: 42
Compound Name	: cis-1,2-Dichloroethene
Scan Number	: 771
Retention Time (minutes)	: 6.272
Relative Retention Time	:-0.00077
Quant Ion	: 96.00
Area (flag)	: 30314
On-Column Amount (ng)	: 4.8644

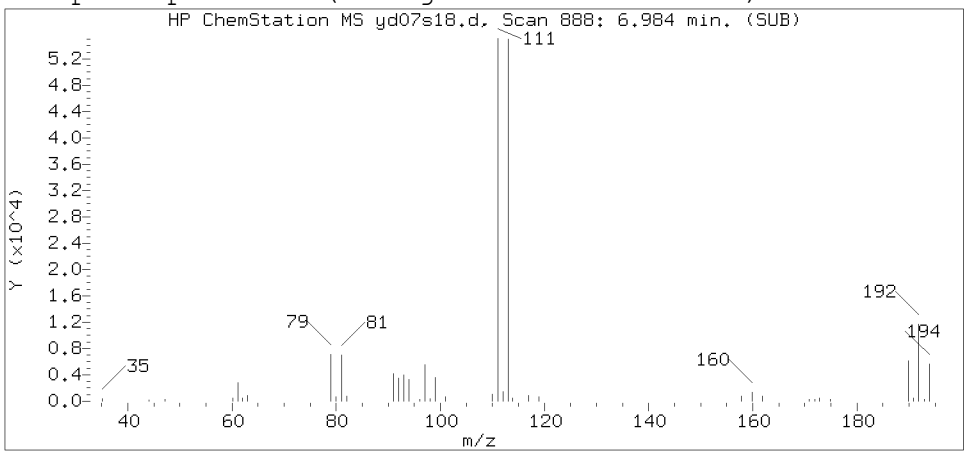
Digitally signed by Linda C. Pape on 12/09/2019 at 12:02.
Target 3.5 esignature user ID: lcp00805

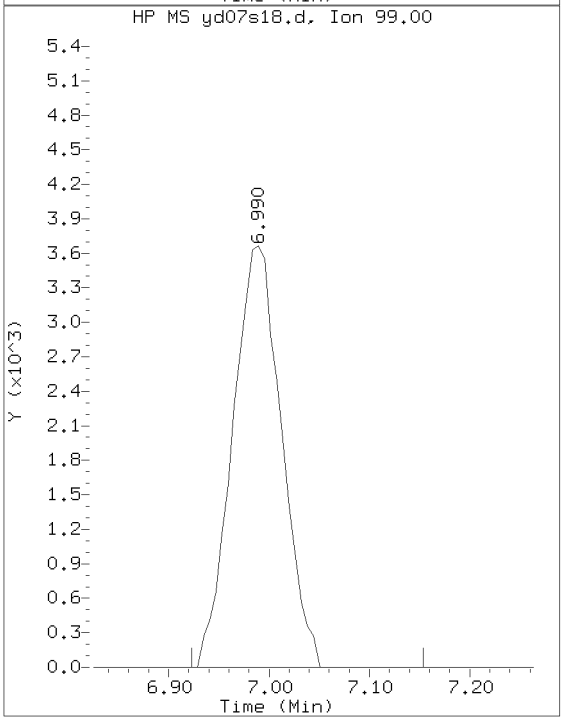
Reference Standard Spectrum for 1,1,1-Trichloroethane



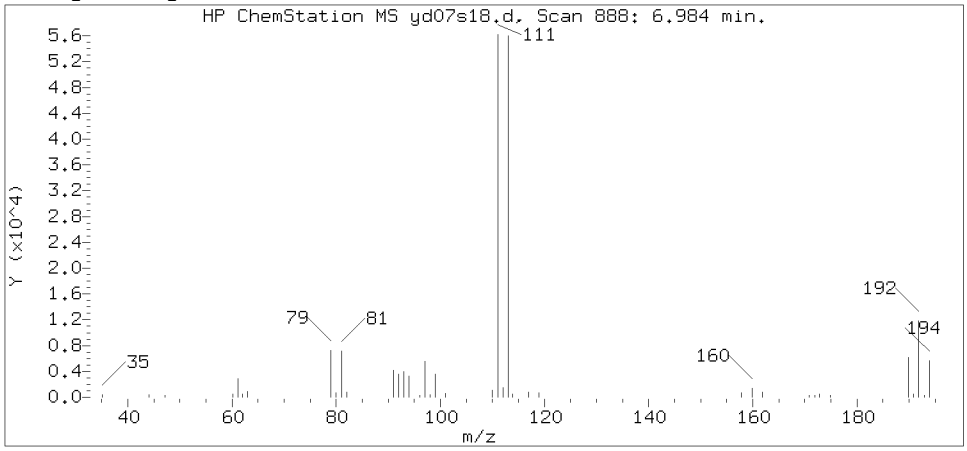


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09355.i/19dec07a.b/yd07s18.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 19:03 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 19:20 Automation

Sample Name: DIF03 Lab Sample ID: 1212643

Compound Number	: 53
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 888
Retention Time (minutes)	: 6.984
Relative Retention Time	: 0.00000
Quant Ion	: 97.00
Area (flag)	: 19917
On-Column Amount (ng)	: 2.3810

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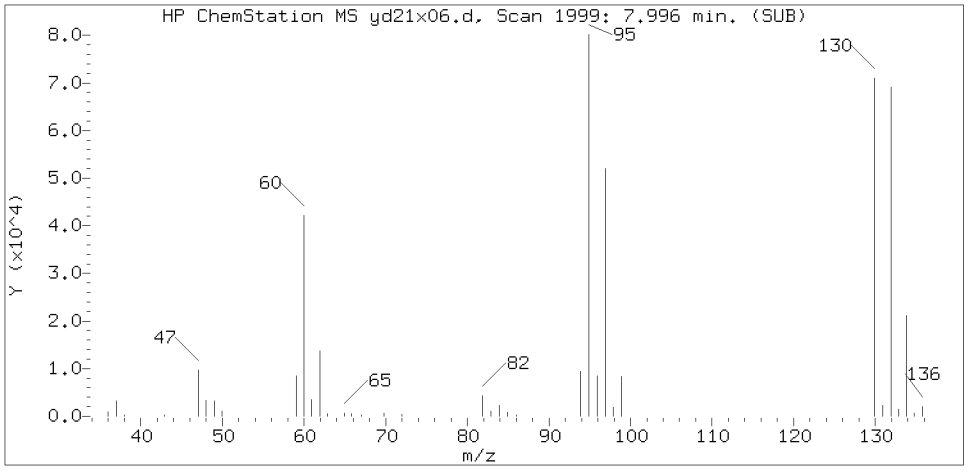
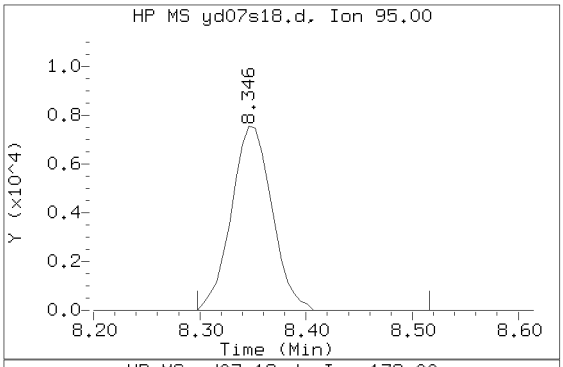
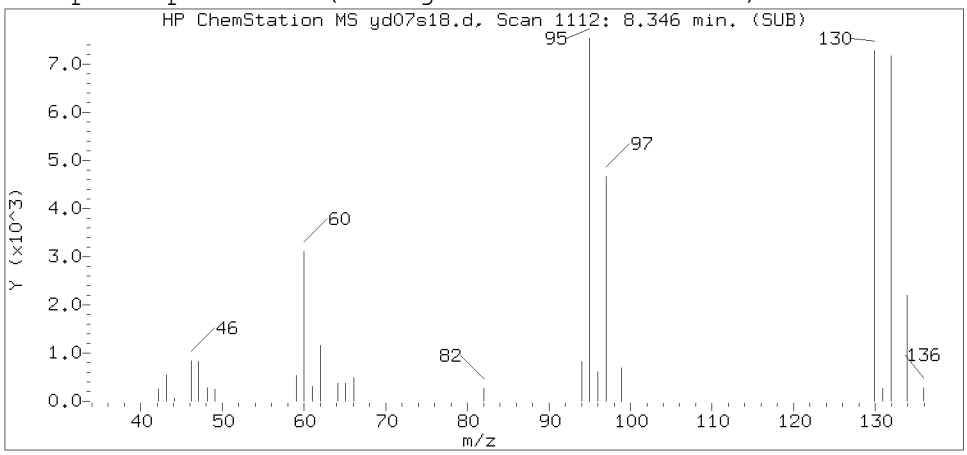
Target 3.5 esignature user ID: lcp00805

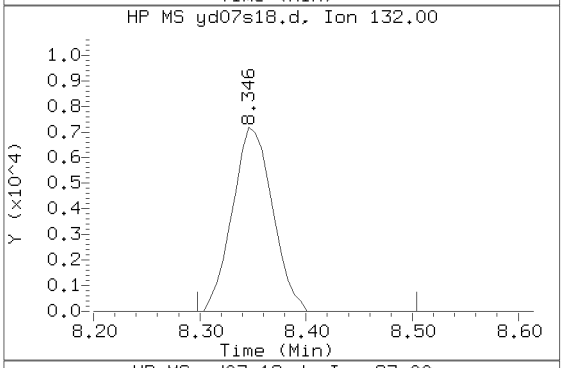
Reference Standard Spectrum for Trichloroethene

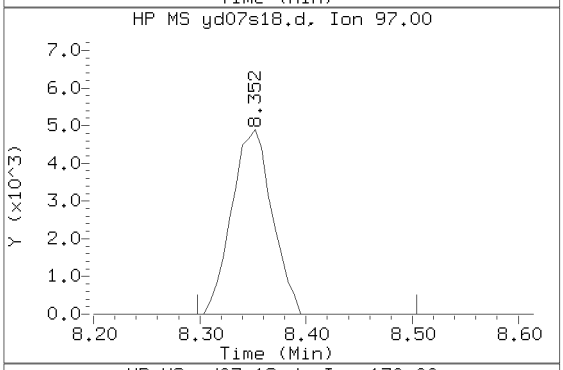




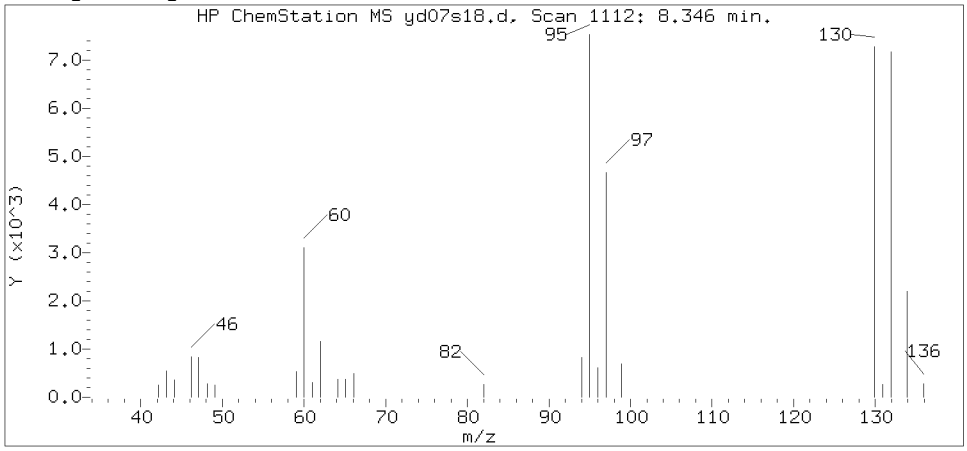
Sample Spectrum (Background Subtracted)

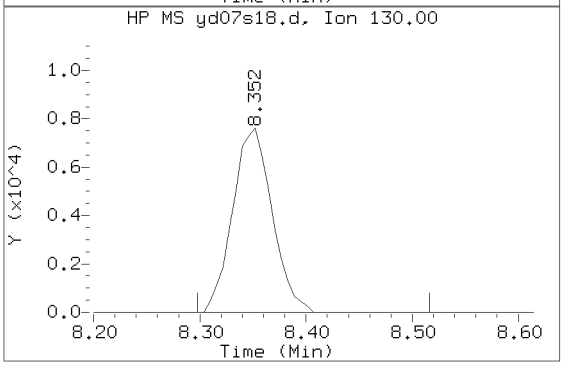






Sample Spectrum (Unaltered)





Data File: /chem2/HP09355.i/19dec07a.b/yd07s18.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 19:03 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 19:20 Automation

Sample Name: DIF03 Lab Sample ID: 1212643

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 1112
Retention Time (minutes)	: 8.346
Relative Retention Time	: 0.00000
Quant Ion	: 95.00
Area (flag)	: 20009
On-Column Amount (ng)	: 3.2766

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Target 3.5 esignature user ID: lcp00805

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DIF04

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1212644

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09355.i/19dec07a.b/yd07s19.d

Level: (low/med) LOW Date Received: 11/27/19

Moisture: not dec. _____ Date Analyzed: 12/07/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	2	J
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.6	J
156-59-2	cis-1,2-Dichloroethene	0.3	J
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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DIF04 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1212644

Data file: /chem2/HP09355.i/19dec07a.b/yd07s19.d Injection date and time: **07-DEC-2019 19:25**
Data file Sample Info. Line: DIF04;1212644;1;0;;JCW27;;;yd07b01; Instrument ID: **HP09355.i** Batch: **Y193411AA**
Date, time and analyst ID of latest file update: 07-Dec-2019 19:42 Automation

Blank Data file reference: **/chem2/HP09355.i/19dec07a.b/yd07b01.d**

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 07-DEC-2019 11:45
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec07a.b/yd07c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.355	(-0.006)	456	65	316016	(-12)	250.00	
66) Fluorobenzene	7.866	(0.000)	1033	96	1083187	(-7)	50.00	
100) Chlorobenzene-d5	11.303	(0.006)	1598	117	782290	(-9)	50.00	
131) 1,4-Dichlorobenzene-d4	13.183	(0.000)	1907	152	403577	(-10)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.971	(-0.001)	113	230530	45.356	91%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.428	(0.000)	102	64418	48.479	97%		80 - 120
83) Toluene-d8	(3)	9.861	(0.000)	98	1034421	48.871	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.301	(-0.001)	95	383381	47.407	95%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)	3.698	(-0.001)	58	2633	2.332	2.33		J	0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.456	(-0.002)	63	5681	0.574	0.57		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	6.278	(-0.001)	96	2021	0.327	0.33		J	0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

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DIF04 Lancaster Laboratories 1212644
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09355.i/19dec07a.b/yd07s19.d Injection date and time: **07-DEC-2019 19:25**
Data file Sample Info. Line: DIF04;1212644;1;0;;JCW27;;;yd07b01; Instrument ID: **HP09355.i** Batch: **Y193411AA**
Date, time and analyst ID of latest file update: 07-Dec-2019 19:42 Automation

Blank Data file reference: **/chem2/HP09355.i/19dec07a.b/yd07b01.d**

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 07-DEC-2019 11:45
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec07a.b/yd07c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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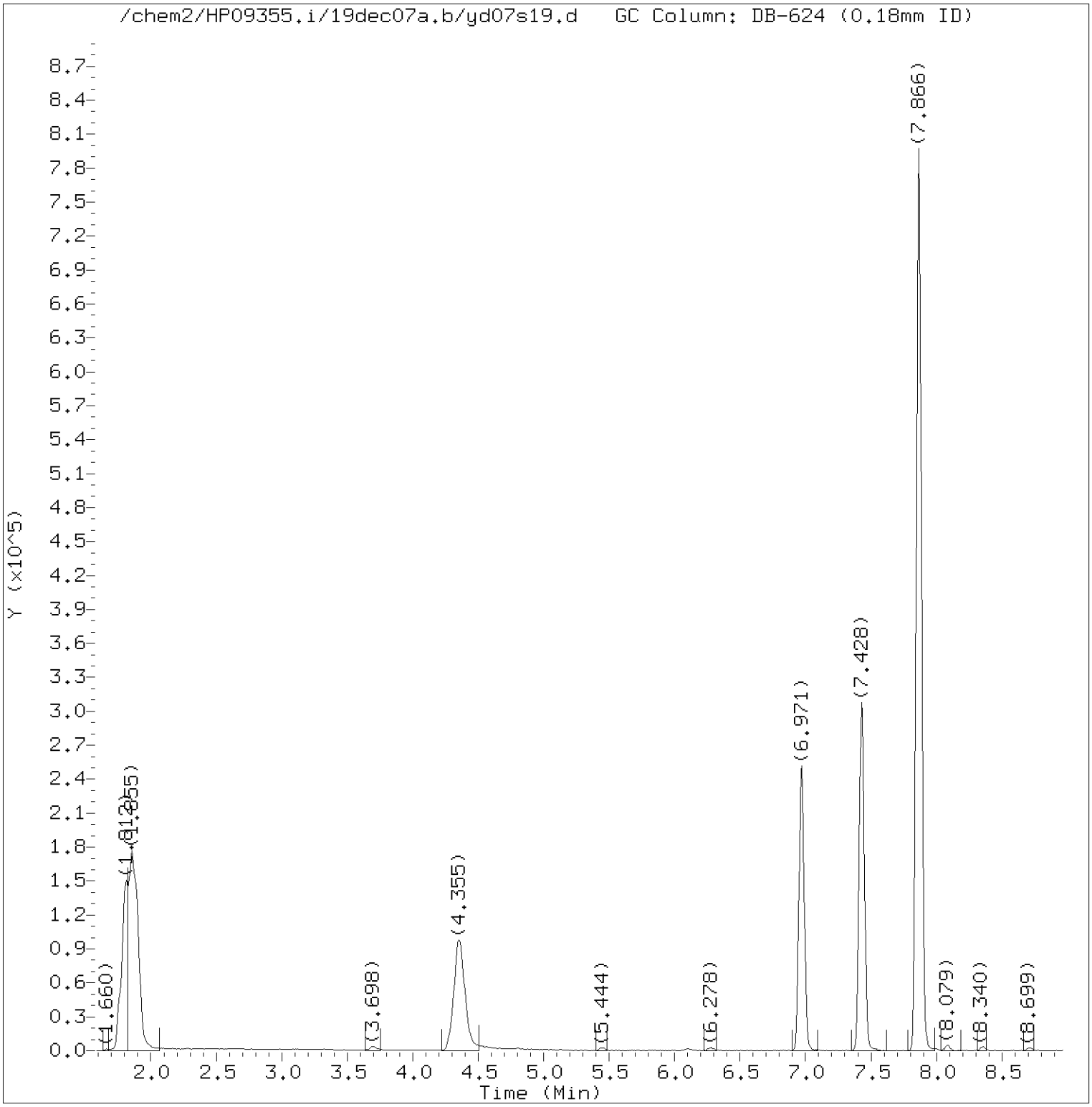
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Linda C. Pape on 12/09/2019 at 12:03. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 12/09/2019 at 19:29. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

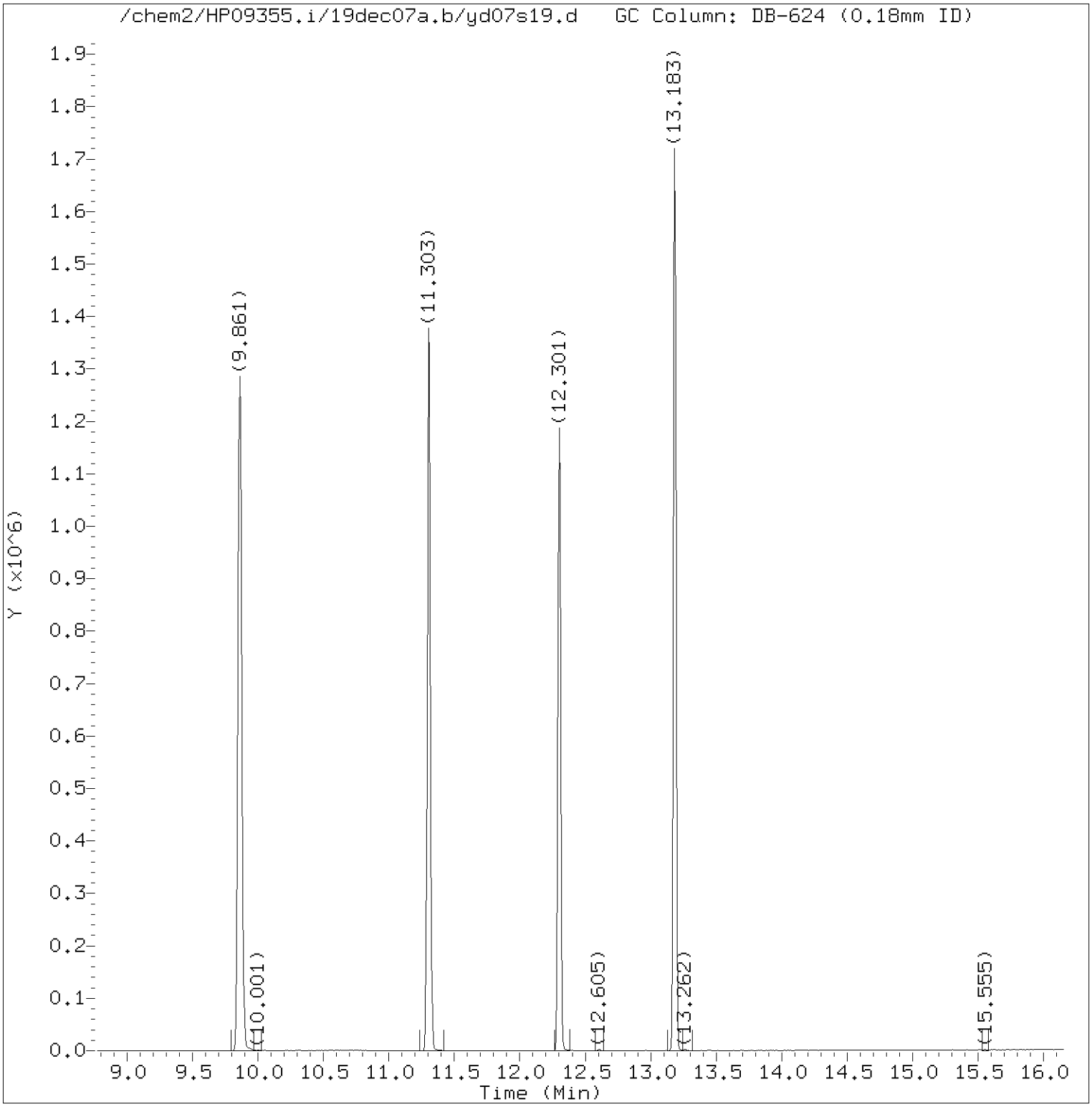
Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07s19.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 19:25 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 19:42 Automation

Sample Name: DIF04 Lab Sample ID: 1212644

Digitally signed by Linda C. Pape
on 12/09/2019 at 12:03.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07s19.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 19:25 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 19:42 Automation

Sample Name: DIF04 Lab Sample ID: 1212644

Digitally signed by Linda C. Pape
on 12/09/2019 at 12:03.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07s19.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 19:25 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 19:42 Automation

Sample Name: DIF04 Lab Sample ID: 1212644

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
18) Acetone	(1)	3.698	58	2633	2.332
29)*t-Butyl alcohol-d10	(1)	4.355	65	316016	250.000
36) 1,1-Dichloroethane	(2)	5.456	63	5681	0.574
42) cis-1,2-Dichloroethene	(2)	6.278	96	2021	0.327
52)$Dibromofluoromethane	(2)	6.971	113	230530	45.356
57)$1,2-Dichloroethane-d4	(2)	7.428	102	64418	48.479
66)*Fluorobenzene	(2)	7.866	96	1083187	50.000
83)$Toluene-d8	(3)	9.861	98	1034421	48.871
100)*Chlorobenzene-d5	(3)	11.303	117	782290	50.000
114)$4-Bromofluorobenzene	(3)	12.301	95	383381	47.407
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	403577	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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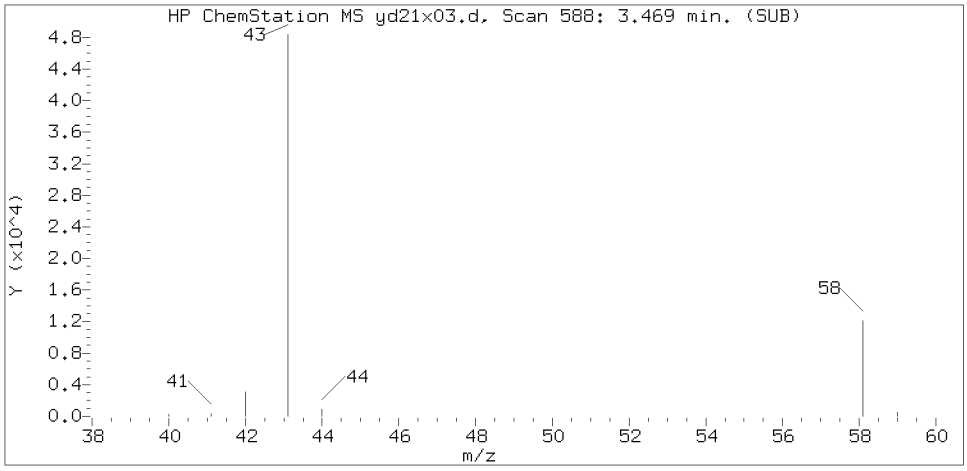
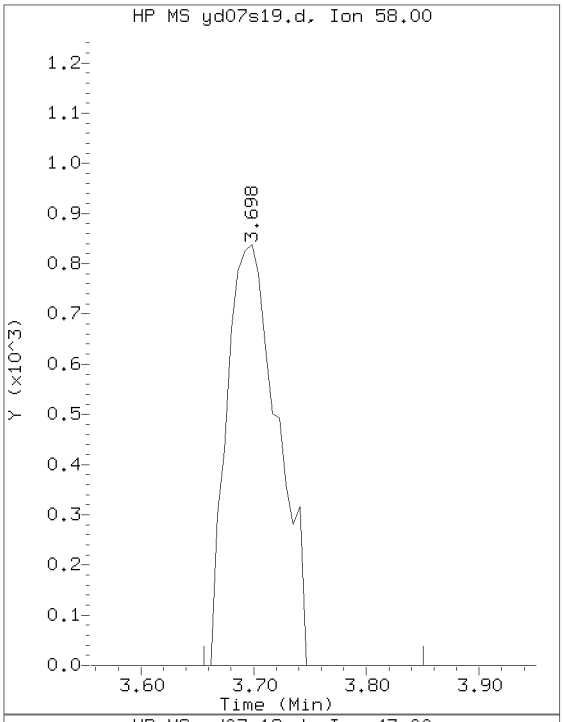
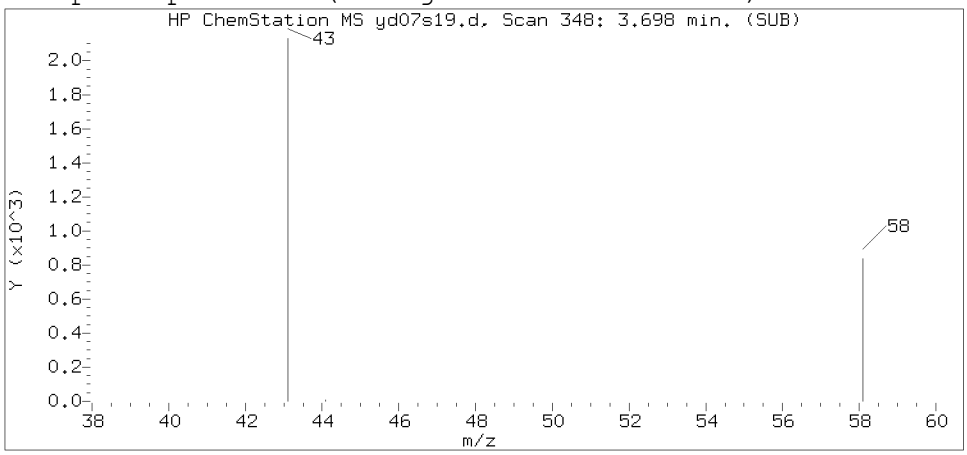
on 12/09/2019 at 12:03.
Target 3.5 esignature user ID: lcp00895

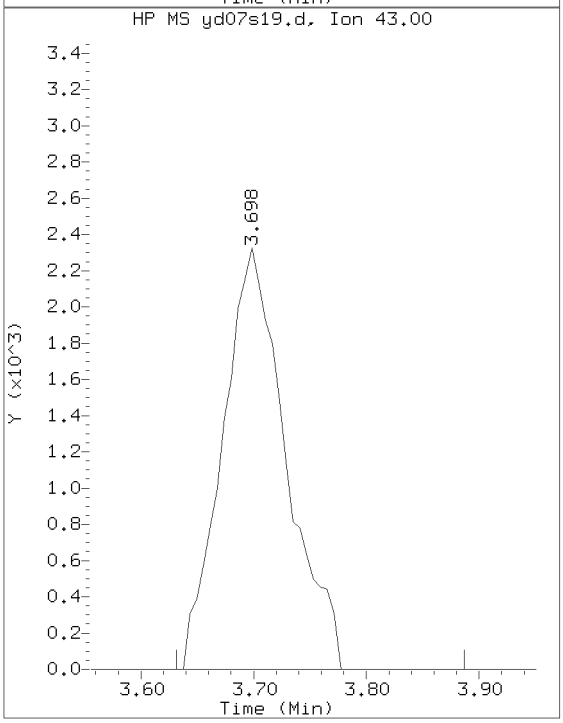
Reference Standard Spectrum for Acetone



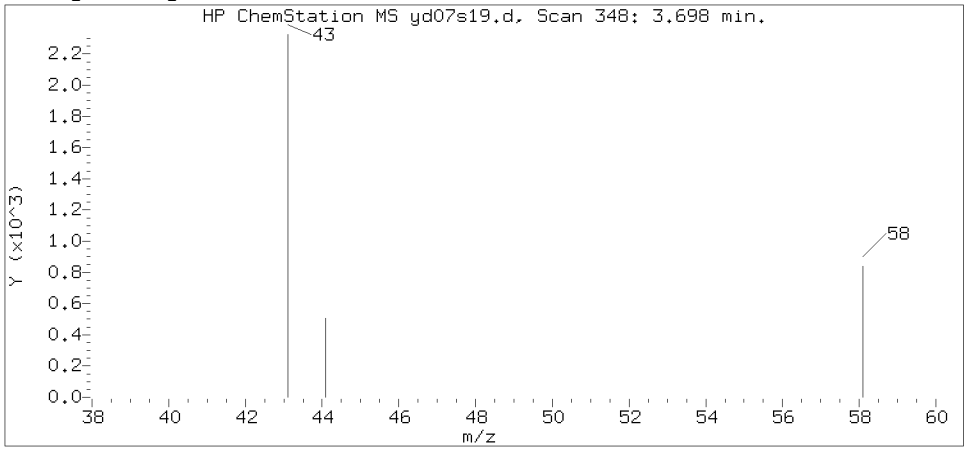


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09355.i/19dec07a.b/yd07s19.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 19:25 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 19:42 Automation

Sample Name: DIF04 Lab Sample ID: 1212644

Compound Number	: 18
Compound Name	: Acetone
Scan Number	: 348
Retention Time (minutes)	: 3.698
Relative Retention Time	:-0.00161
Quant Ion	: 58.00
Area (flag)	: 2633
On-Column Amount (ng)	: 2.3316

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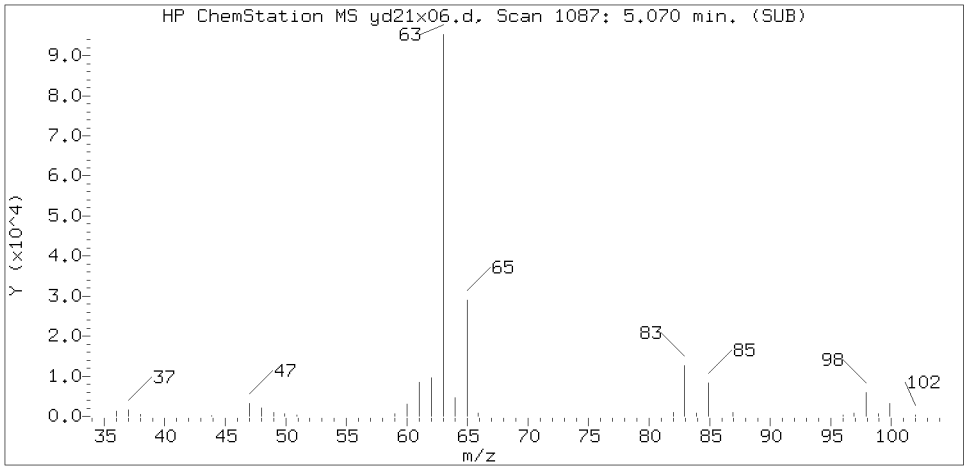
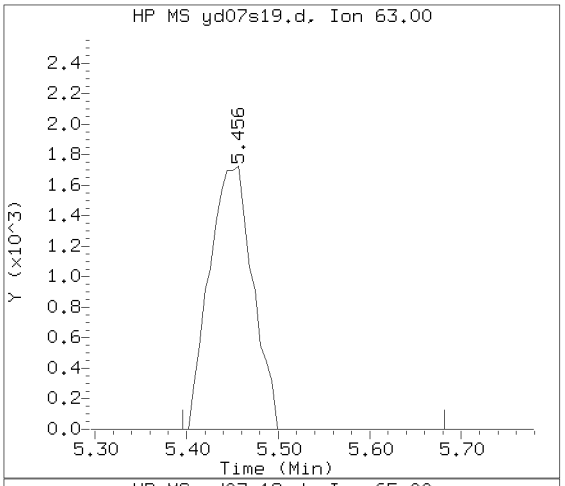
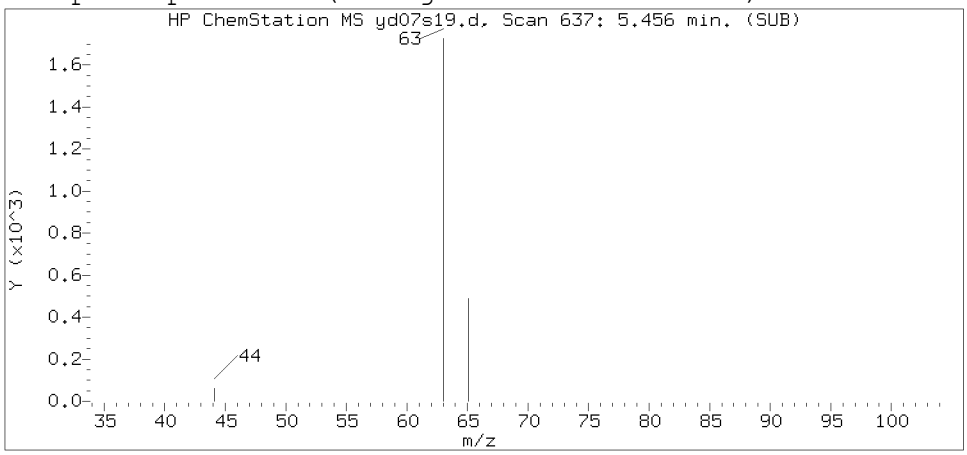
Target 3.5 esignature user ID: lcp00895

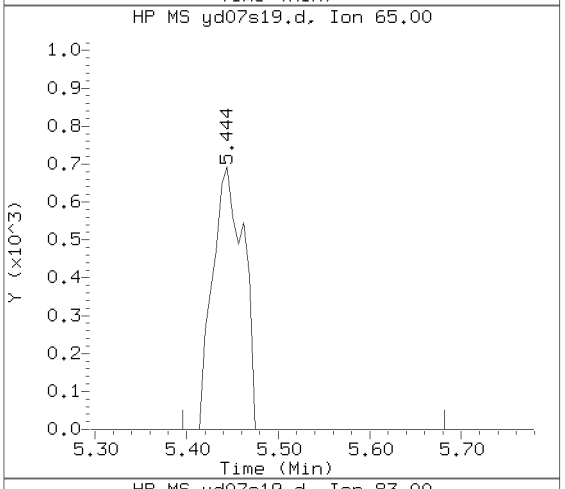
Reference Standard Spectrum for 1,1-Dichloroethane



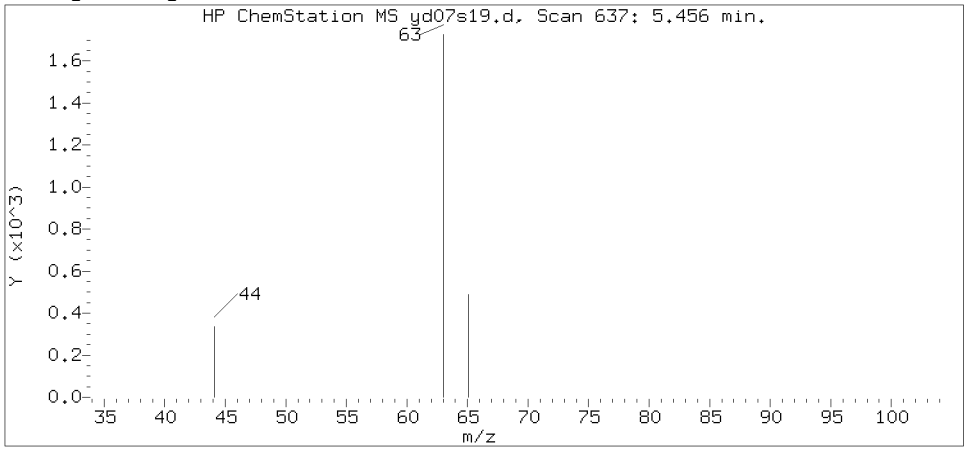


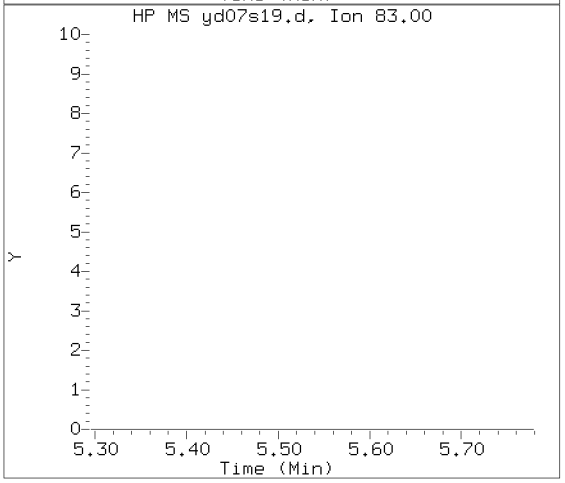
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP09355.i/19dec07a.b/yd07s19.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 19:25 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 19:42 Automation

Sample Name: DIF04 Lab Sample ID: 1212644

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 637
Retention Time (minutes): 5.456
Relative Retention Time :-0.00232
Quant Ion : 63.00
Area (flag) : 5681
On-Column Amount (ng) : 0.5737

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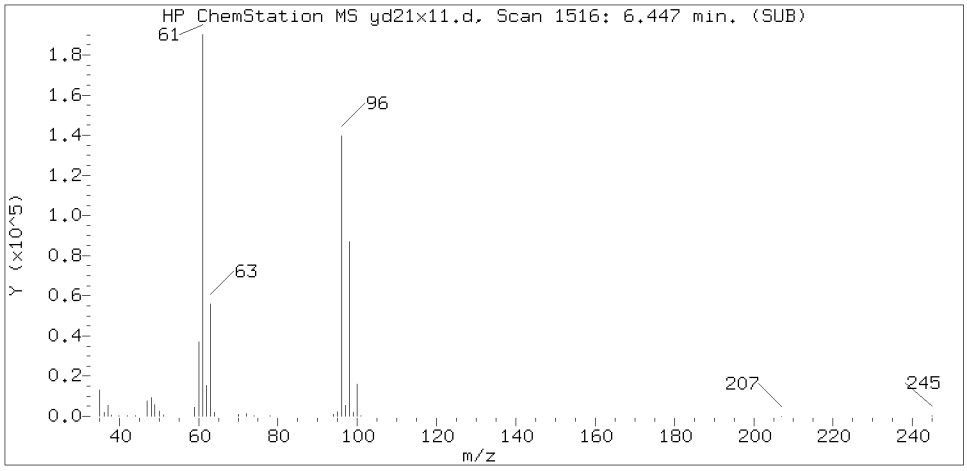
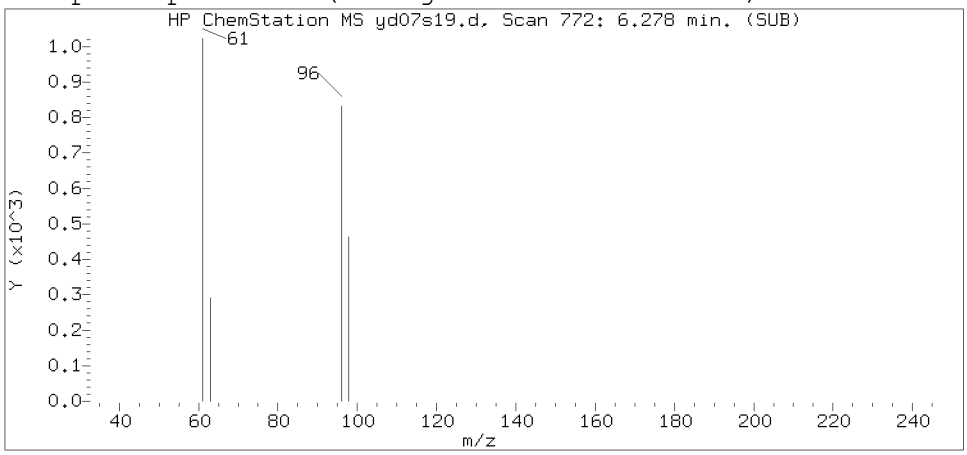
Target 3.5 esignature user ID: lcp00895

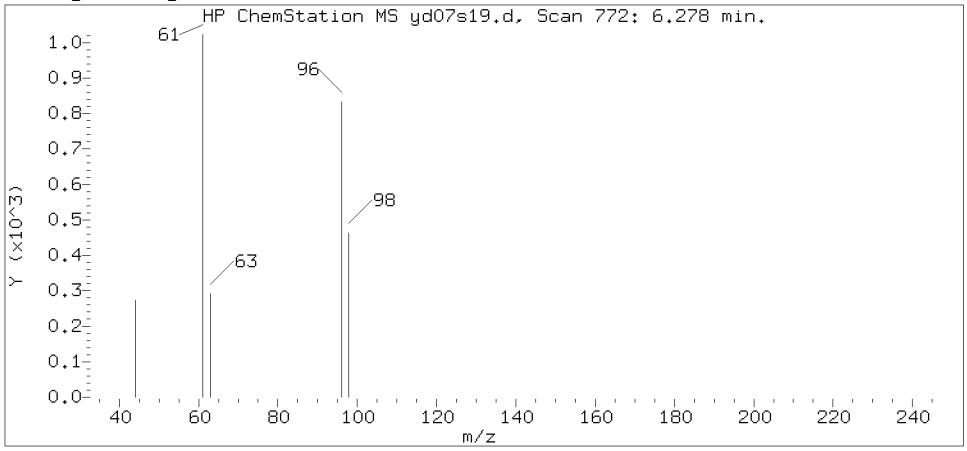
Reference Standard Spectrum for cis-1,2-Dichloroethene

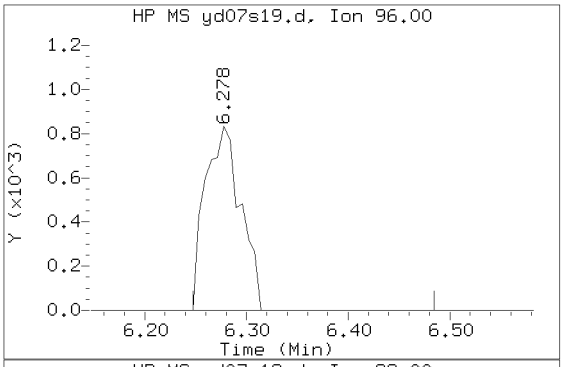


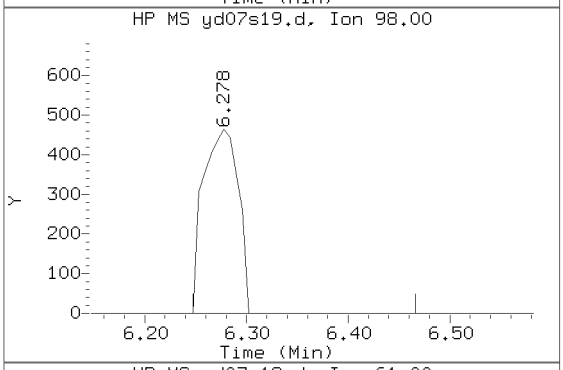
Sample Spectrum (Background Subtracted)

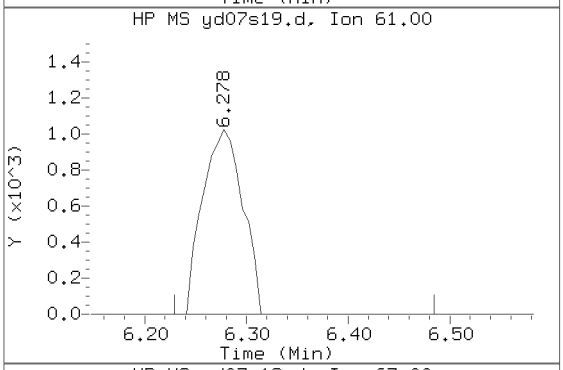


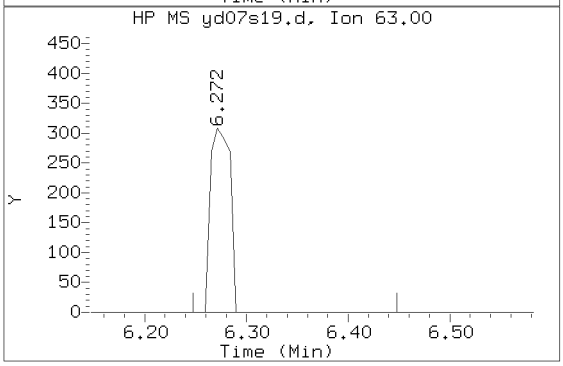
Sample Spectrum (Unaltered)











Data File: /chem2/HP09355.i/19dec07a.b/yd07s19.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 19:25 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 19:42 Automation

Sample Name: DIF04 Lab Sample ID: 1212644

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 772
Retention Time (minutes): 6.278
Relative Retention Time :-0.00155
Quant Ion : 96.00
Area (flag) : 2021
On-Column Amount (ng) : 0.3265

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Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DIF05

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1212645

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09355.i/19dec07a.b/yd07s20.d

Level: (low/med) LOW Date Received: 11/27/19

Moisture: not dec. _____ Date Analyzed: 12/07/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	3	J
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	2	
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	0.2	J
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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DIF05 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1212645

Data file: /chem2/HP09355.i/19dec07a.b/yd07s20.d Injection date and time: **07-DEC-2019 19:46**
Data file Sample Info. Line: DIF05;1212645;1;0;;JCW27;;;yd07b01; Instrument ID: **HP09355.i** Batch: **Y193411AA**
Date, time and analyst ID of latest file update: 07-Dec-2019 20:04 Automation

Blank Data file reference: **/chem2/HP09355.i/19dec07a.b/yd07b01.d**

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 07-DEC-2019 11:45
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec07a.b/yd07c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.349	(0.000)	455	65	308223	(-14)	250.00	
66) Fluorobenzene	7.866	(0.000)	1033	96	1071853	(-8)	50.00	
100) Chlorobenzene-d5	11.303	(0.006)	1598	117	774741	(-10)	50.00	
131) 1,4-Dichlorobenzene-d4	13.183	(0.000)	1907	152	400367	(-10)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.965	(0.000)	113	228400	45.412	91%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.428	(0.000)	102	63891	48.592	97%		80 - 120
83) Toluene-d8	(3)	9.861	(0.000)	98	1024403	48.870	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.300	(-0.001)	95	377295	47.109	94%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)	3.686	(-0.000)	58	2896	2.629	2.63		J	0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.444	(-0.000)	63	24368	2.487	2.49			0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)	8.358	(-0.001)	95	1432	0.239	0.24		J	0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

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DIF05 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1212645

Data file: /chem2/HP09355.i/19dec07a.b/yd07s20.d Injection date and time: **07-DEC-2019 19:46**
Data file Sample Info. Line: DIF05;1212645;1;0;;JCW27;;;yd07b01; Instrument ID: **HP09355.i** Batch: **Y193411AA**
Date, time and analyst ID of latest file update: 07-Dec-2019 20:04 Automation

Blank Data file reference: **/chem2/HP09355.i/19dec07a.b/yd07b01.d**

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 07-DEC-2019 11:45
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec07a.b/yd07c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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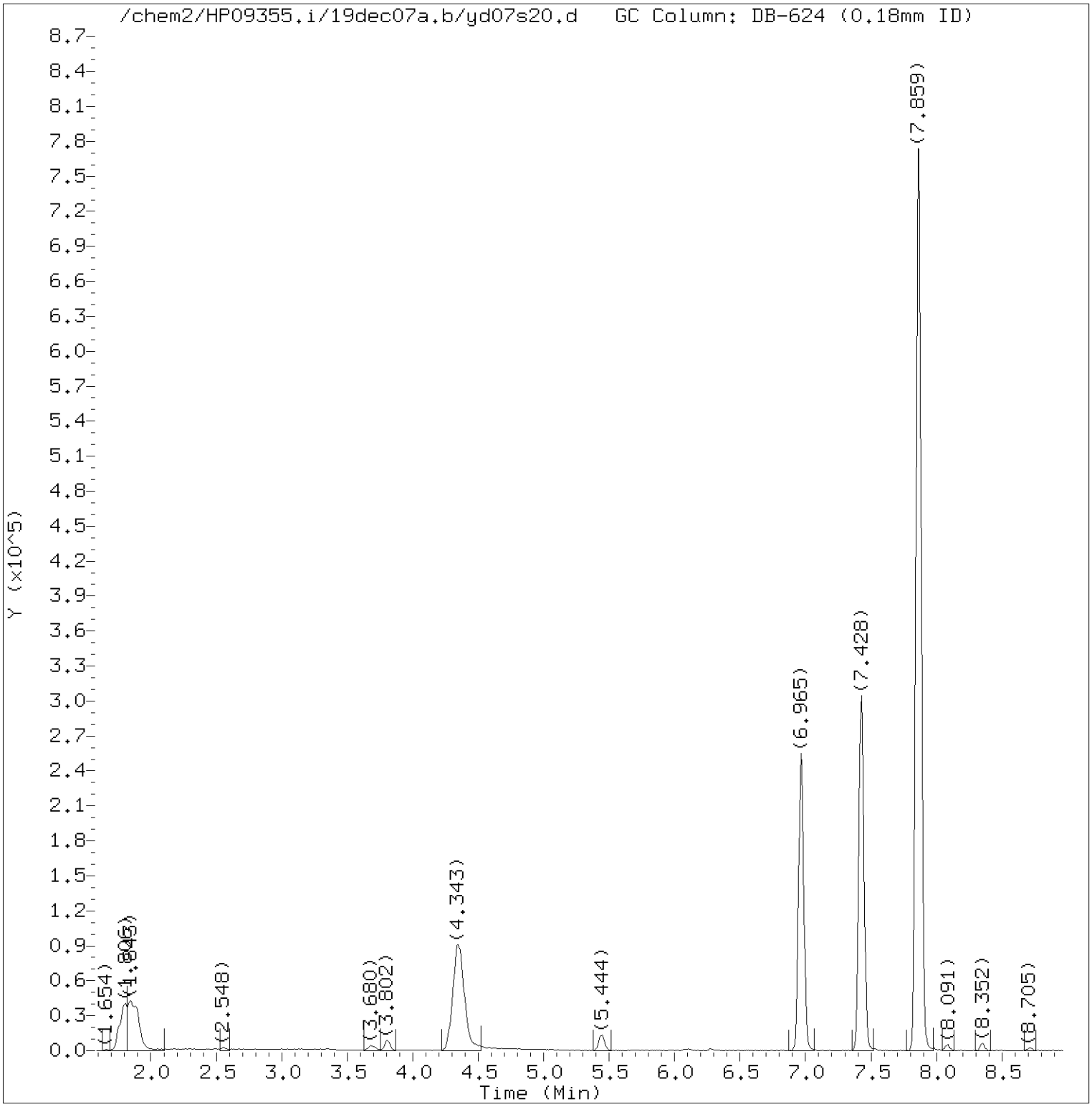
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Linda C. Pape on 12/09/2019 at 12:03. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 12/09/2019 at 19:29. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

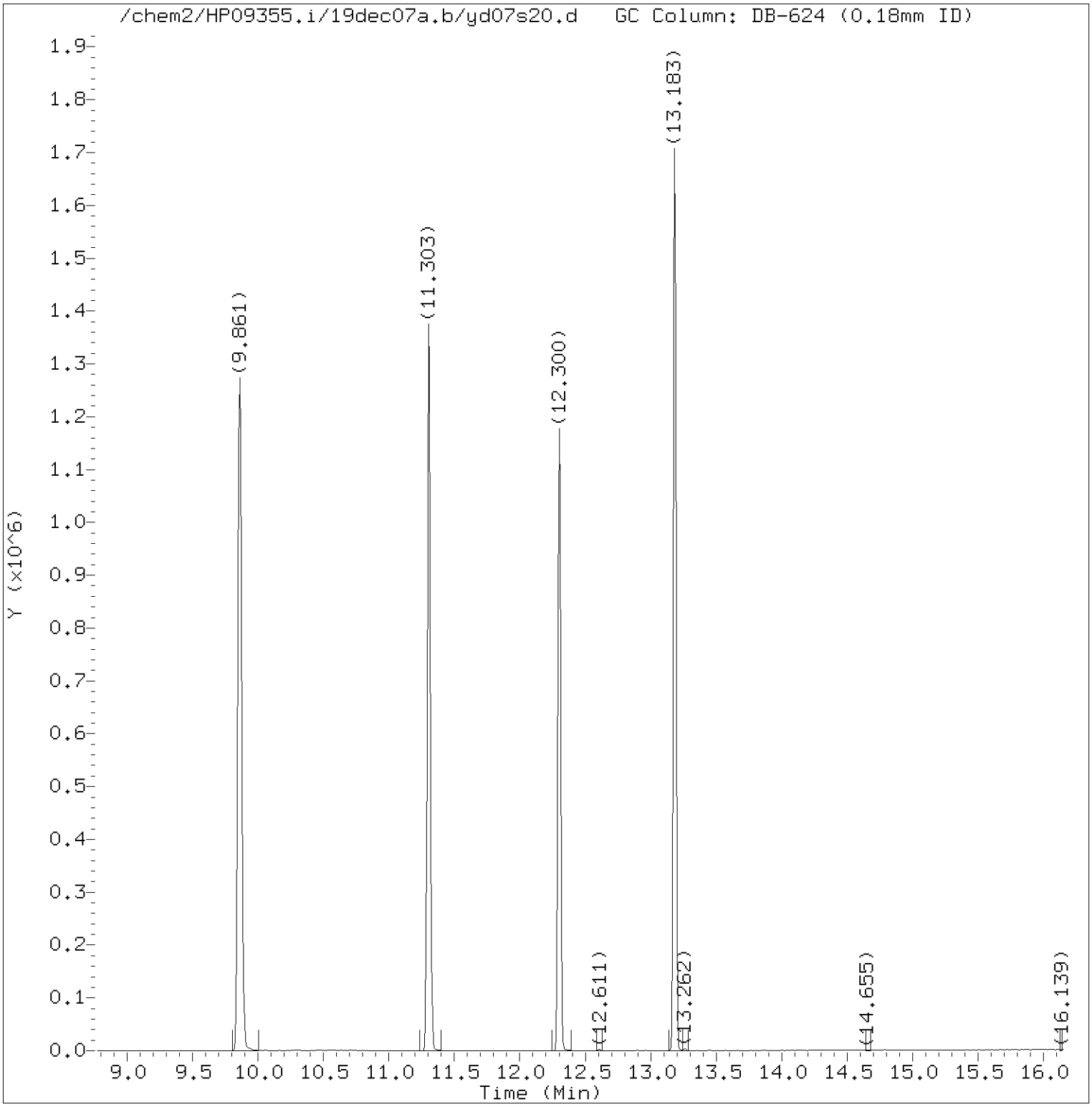
Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07s20.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 19:46 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 20:04 Automation

Sample Name: DIF05 Lab Sample ID: 1212645

Digitally signed by Linda C. Pape
on 12/09/2019 at 12:03.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07s20.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 19:46 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 20:04 Automation

Sample Name: DIF05 Lab Sample ID: 1212645

Digitally signed by Linda C. Pape
on 12/09/2019 at 12:03.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07s20.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 19:46 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 20:04 Automation

Sample Name: DIF05 Lab Sample ID: 1212645

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
18) Acetone	(1)	3.686	58	2896	2.629
29)*t-Butyl alcohol-d10	(1)	4.349	65	308223	250.000
36) 1,1-Dichloroethane	(2)	5.444	63	24368	2.487
52)$Dibromofluoromethane	(2)	6.965	113	228400	45.412
57)$1,2-Dichloroethane-d4	(2)	7.428	102	63891	48.592
66)*Fluorobenzene	(2)	7.866	96	1071853	50.000
71) Trichloroethene	(2)	8.358	95	1432	0.239
83)$Toluene-d8	(3)	9.861	98	1024403	48.870
100)*Chlorobenzene-d5	(3)	11.303	117	774741	50.000
114)$4-Bromofluorobenzene	(3)	12.300	95	377295	47.109
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	400367	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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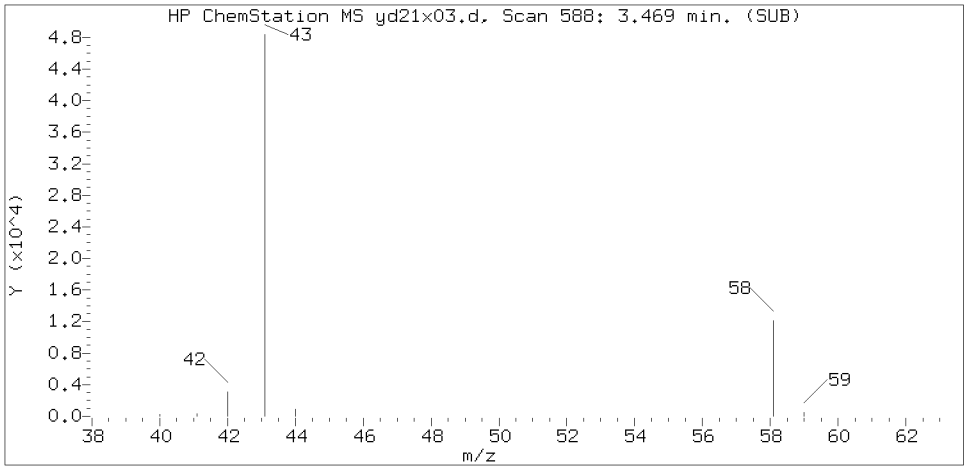
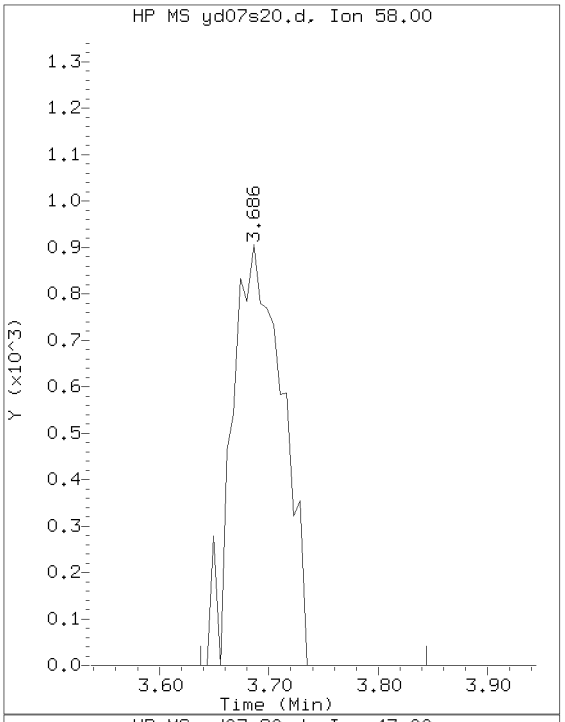
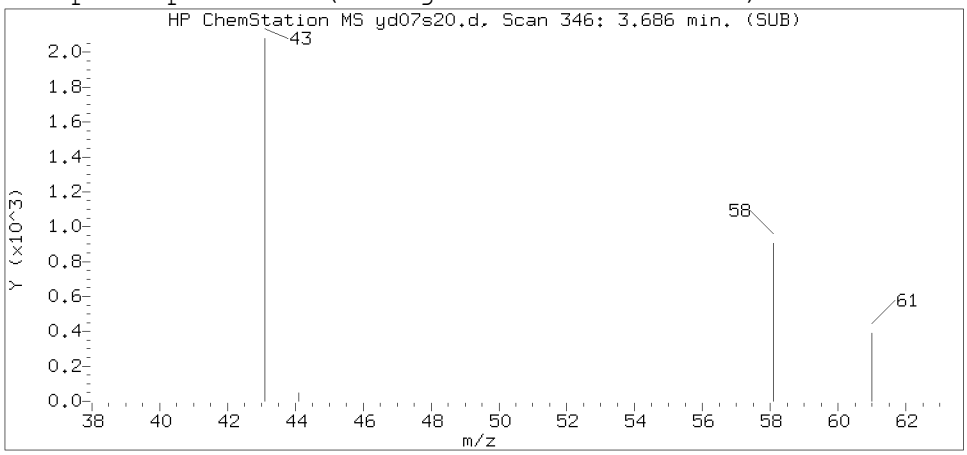
on 12/09/2019 at 12:03.
Target 3.5 esignature user ID: lcp00895

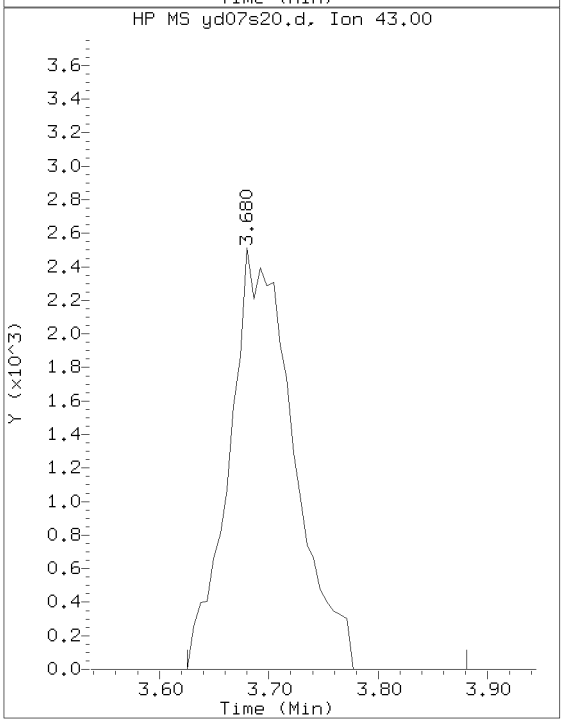
Reference Standard Spectrum for Acetone



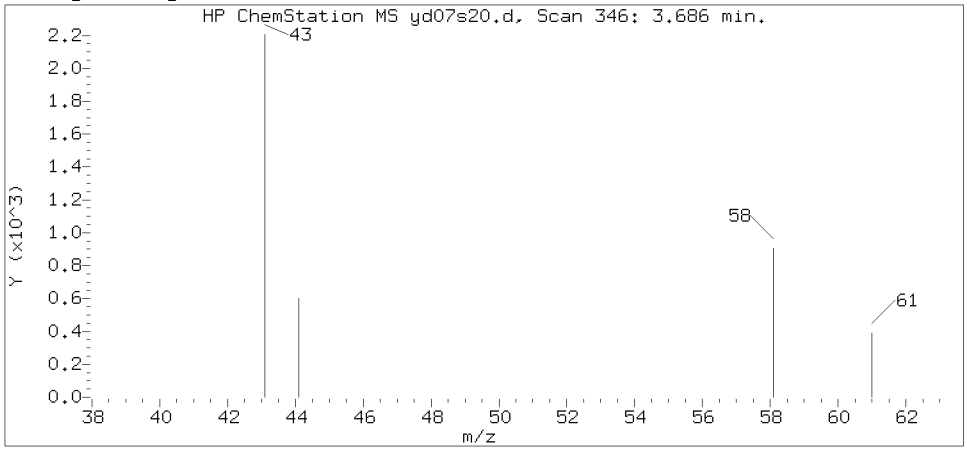


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09355.i/19dec07a.b/yd07s20.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 19:46 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 20:04 Automation

Sample Name: DIF05 Lab Sample ID: 1212645

Compound Number	: 18
Compound Name	: Acetone
Scan Number	: 346
Retention Time (minutes)	: 3.686
Relative Retention Time	:-0.00000
Quant Ion	: 58.00
Area (flag)	: 2896
On-Column Amount (ng)	: 2.6291

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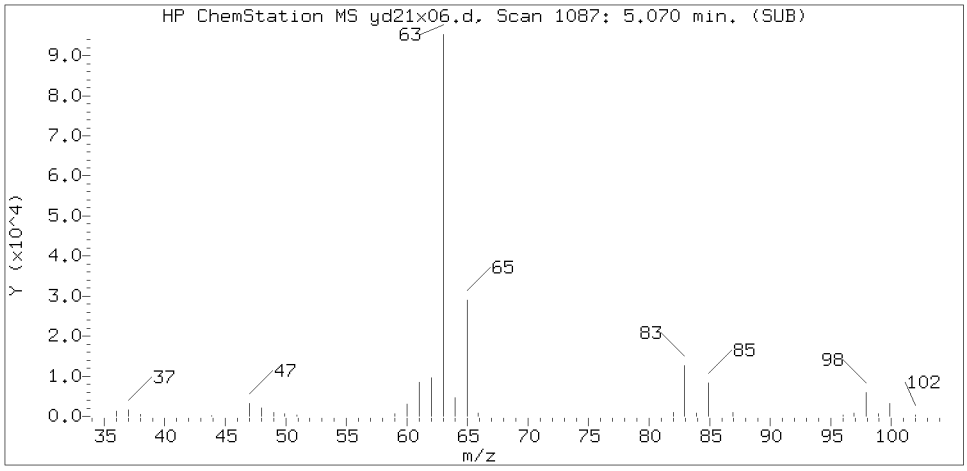
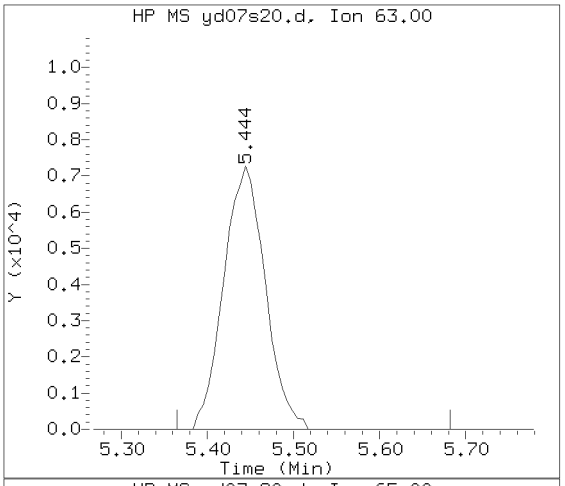
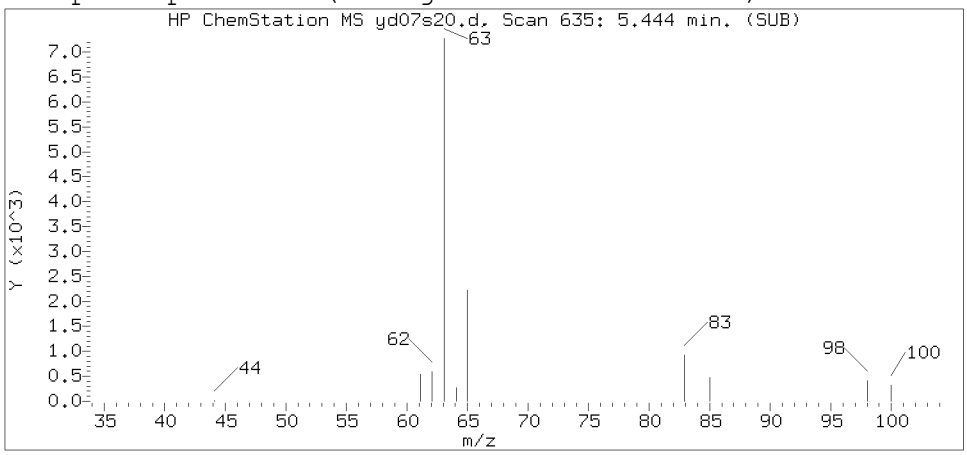
Target 3.5 esignature user ID: lcp00895

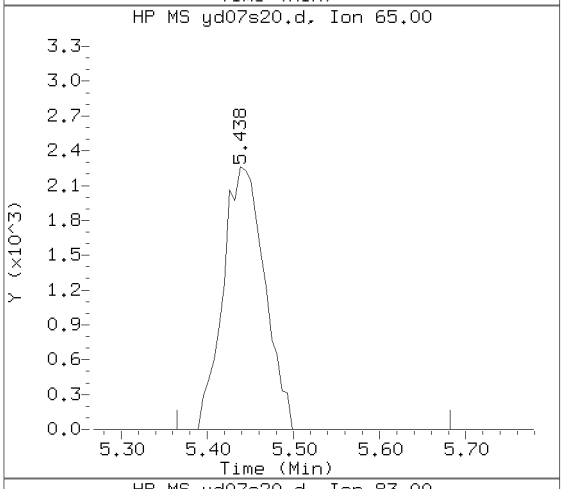
Reference Standard Spectrum for 1,1-Dichloroethane



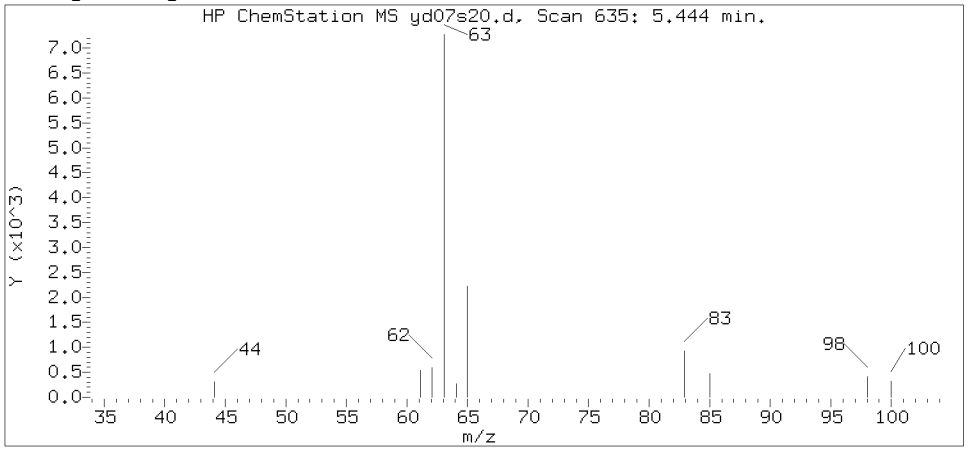


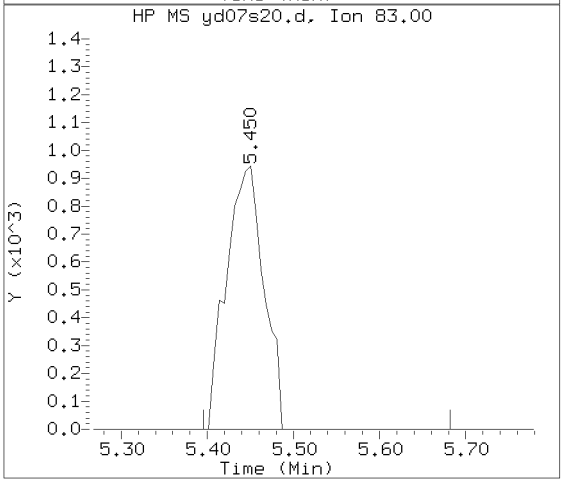
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP09355.i/19dec07a.b/yd07s20.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 19:46 Analyst ID: MEC29284

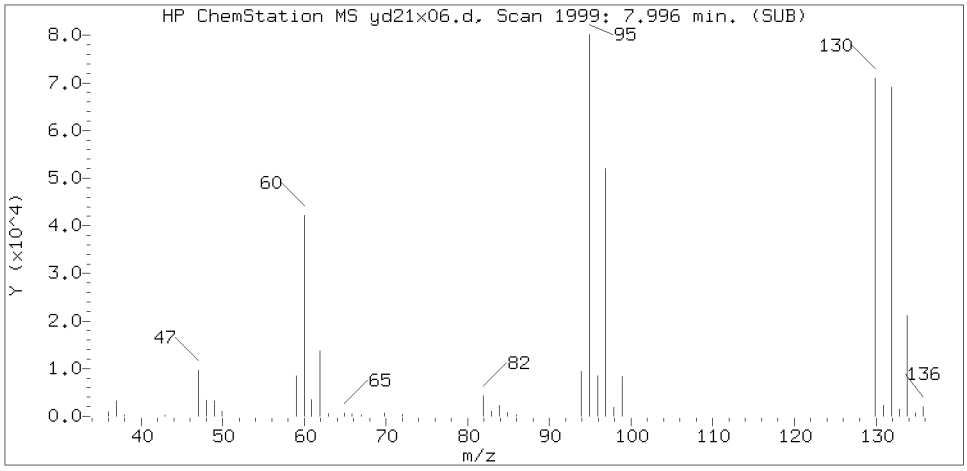
Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 20:04 Automation

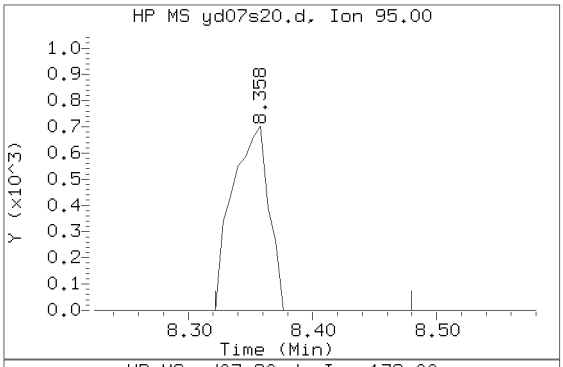
Sample Name: DIF05 Lab Sample ID: 1212645

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 635
Retention Time (minutes): 5.444
Relative Retention Time :-0.00077
Quant Ion : 63.00
Area (flag) : 24368
On-Column Amount (ng) : 2.4868

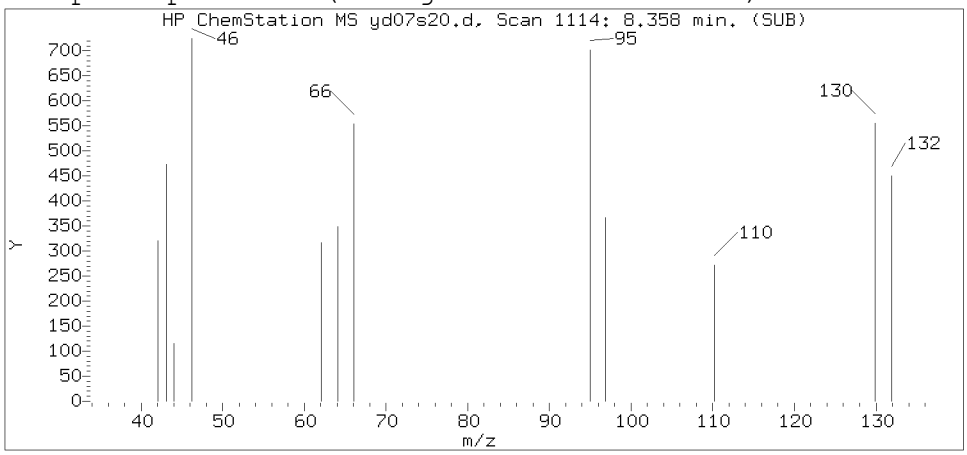
Digitally signed by Linda C. Pape on 12/09/2019 at 12:03.
Target 3.5 esignature user ID: lcp00895

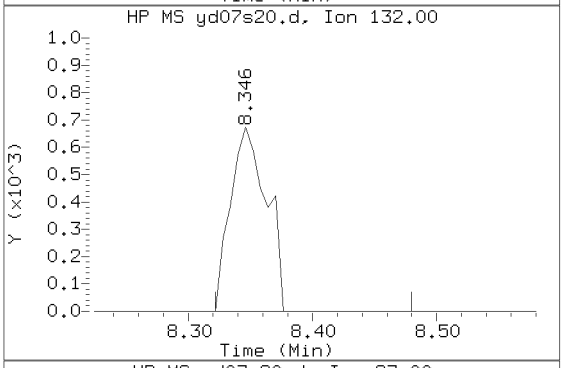
Reference Standard Spectrum for Trichloroethene

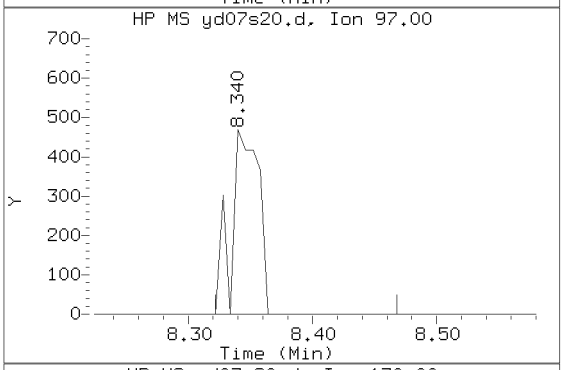




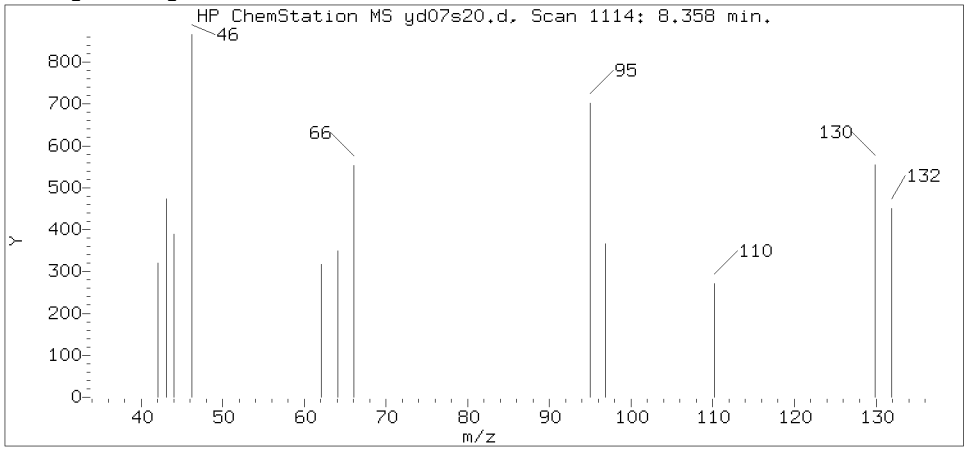
Sample Spectrum (Background Subtracted)

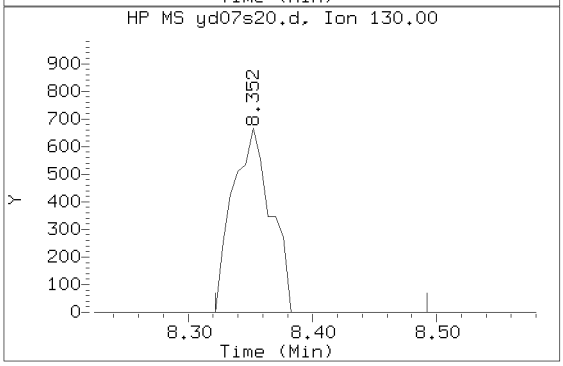






Sample Spectrum (Unaltered)





Data File: /chem2/HP09355.i/19dec07a.b/yd07s20.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 19:46 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 20:04 Automation

Sample Name: DIF05 Lab Sample ID: 1212645

Compound Number	: 71
Compound Name	: Trichloroethene
Scan Number	: 1114
Retention Time (minutes)	: 8.358
Relative Retention Time	:-0.00154
Quant Ion	: 95.00
Area (flag)	: 1432
On-Column Amount (ng)	: 0.2386

Digitally signed by Linda C. Pape on 12/09/2019 at 12:03.
Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DIF06

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1212646

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09355.i/19dec07a.b/yd07s21.d

Level: (low/med) LOW Date Received: 11/27/19

Moisture: not dec. _____ Date Analyzed: 12/07/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	3	J
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	0.7	J
75-34-3	1,1-Dichloroethane	0.8	J
156-59-2	cis-1,2-Dichloroethene	0.2	J
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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DIF06 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1212646

Data file: /chem2/HP09355.i/19dec07a.b/yd07s21.d Injection date and time: **07-DEC-2019 20:08**
Data file Sample Info. Line: DIF06;1212646;1;0;;JCW27;;;yd07b01; Instrument ID: **HP09355.i** Batch: **Y193411AA**
Date, time and analyst ID of latest file update: 07-Dec-2019 20:25 Automation

Blank Data file reference: **/chem2/HP09355.i/19dec07a.b/yd07b01.d**

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 07-DEC-2019 11:45
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec07a.b/yd07c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.349	(0.000)	455	65	286960	(-20)	250.00	
66) Fluorobenzene	7.865	(0.000)	1033	96	1063963	(-9)	50.00	
100) Chlorobenzene-d5	11.303	(0.006)	1598	117	771002	(-10)	50.00	
131) 1,4-Dichlorobenzene-d4	13.183	(0.000)	1907	152	396131	(-11)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.965	(0.000)	113	227800	45.629	91%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.427	(0.000)	102	63788	48.873	98%		80 - 120
83) Toluene-d8	(3)	9.861	(0.000)	98	1013422	48.580	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.300	(-0.001)	95	374589	46.998	94%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)	3.704	(-0.004)	58	2795	2.726	2.73		J	0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)	4.793	(-0.000)	96	3670	0.686	0.69		J	0.2	1
36) 1,1-Dichloroethane	(2)	5.444	(-0.000)	63	7491	0.770	0.77		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	6.266	(0.000)	96	1417	0.233	0.23		J	0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

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DIF06 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1212646

Data file: /chem2/HP09355.i/19dec07a.b/yd07s21.d Injection date and time: **07-DEC-2019 20:08**
Data file Sample Info. Line: DIF06;1212646;1;0;;JCW27;;;yd07b01; Instrument ID: **HP09355.i** Batch: **Y193411AA**
Date, time and analyst ID of latest file update: 07-Dec-2019 20:25 Automation

Blank Data file reference: **/chem2/HP09355.i/19dec07a.b/yd07b01.d**

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 07-DEC-2019 11:45
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec07a.b/yd07c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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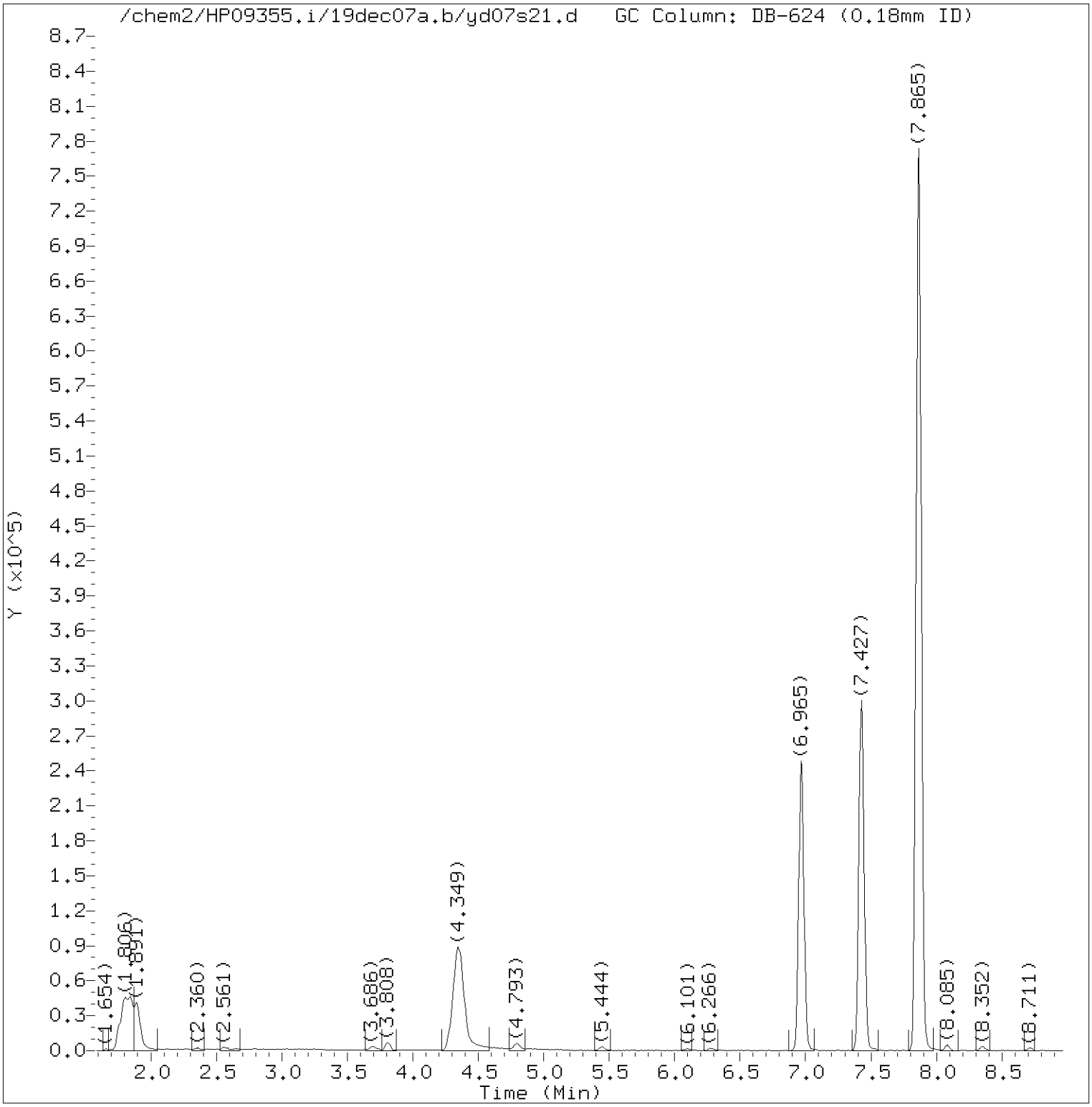
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Linda C. Pape on 12/09/2019 at 12:04. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 12/09/2019 at 19:29. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

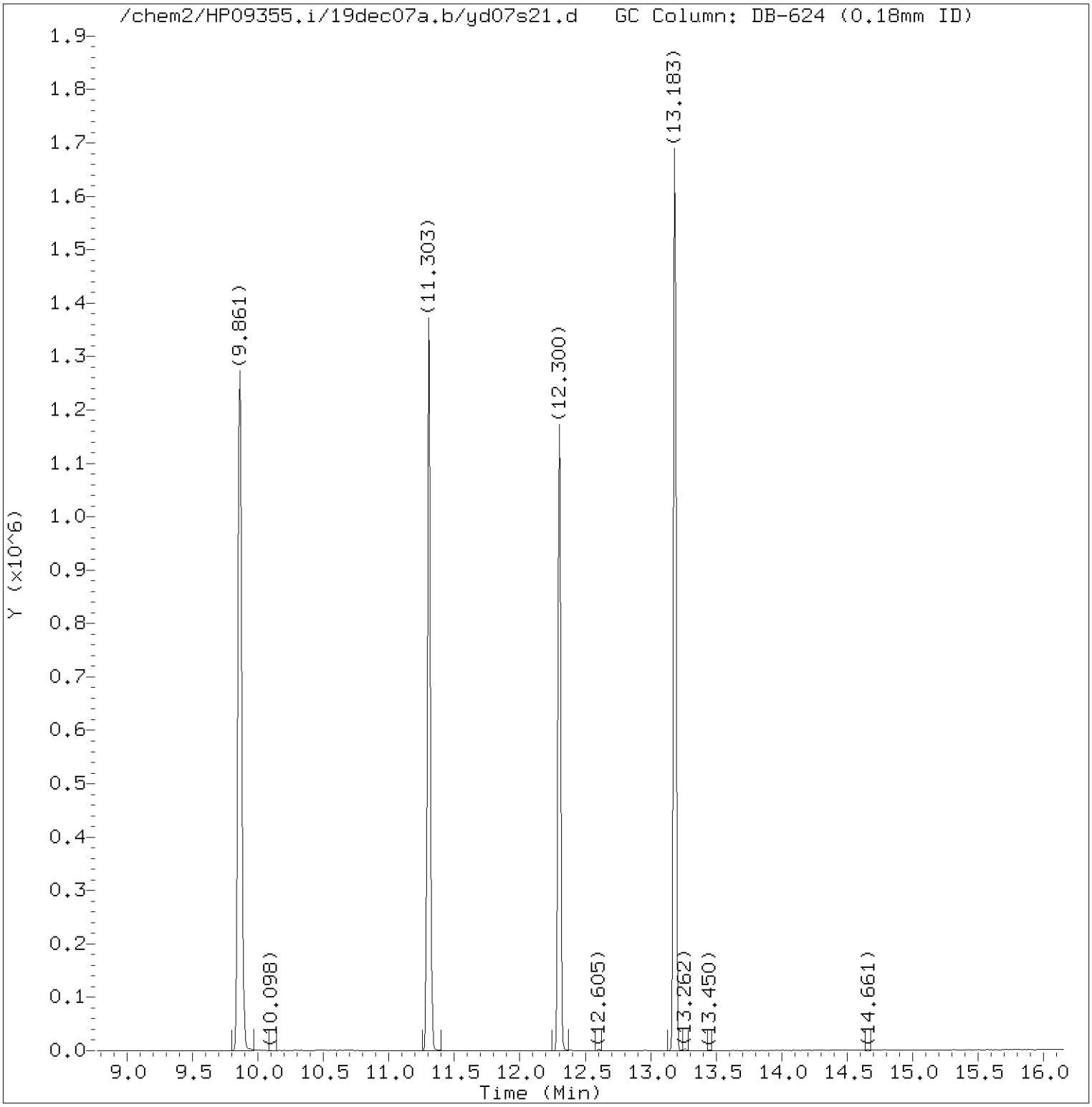
Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07s21.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 20:08 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 20:25 Automation

Sample Name: DIF06 Lab Sample ID: 1212646

Digitally signed by Linda C. Pape
on 12/09/2019 at 12:04.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07s21.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 20:08 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 20:25 Automation

Sample Name: DIF06 Lab Sample ID: 1212646

Digitally signed by Linda C. Pape
on 12/09/2019 at 12:04.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07s21.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 20:08 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 20:25 Automation

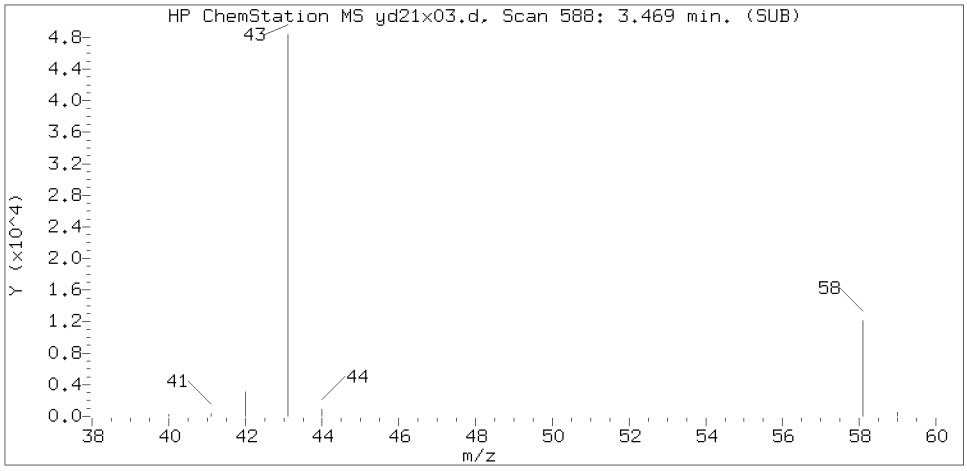
Sample Name: DIF06 Lab Sample ID: 1212646

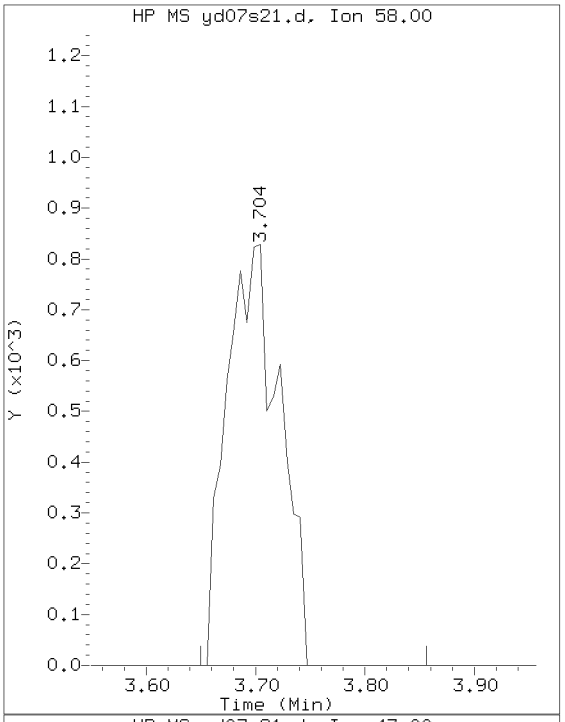
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
18) Acetone	(1)	3.704	58	2795	2.726
29)*t-Butyl alcohol-d10	(1)	4.349	65	286960	250.000
32) trans-1,2-Dichloroethene	(2)	4.793	96	3670	0.686
36) 1,1-Dichloroethane	(2)	5.444	63	7491	0.770
42) cis-1,2-Dichloroethene	(2)	6.266	96	1417	0.233
52)$Dibromofluoromethane	(2)	6.965	113	227800	45.629
57)$1,2-Dichloroethane-d4	(2)	7.427	102	63788	48.873
66)*Fluorobenzene	(2)	7.865	96	1063963	50.000
83)$Toluene-d8	(3)	9.861	98	1013422	48.580
100)*Chlorobenzene-d5	(3)	11.303	117	771002	50.000
114)$4-Bromofluorobenzene	(3)	12.300	95	374589	46.998
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	396131	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

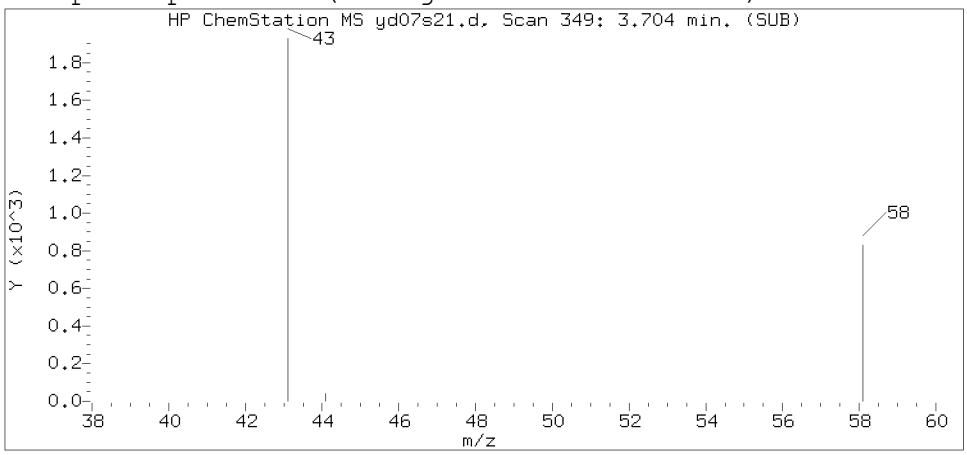
Digitally signed by Linda C. Pape
on 12/09/2019 at 12:04.
Target 3.5 esignature user ID: lcp00895

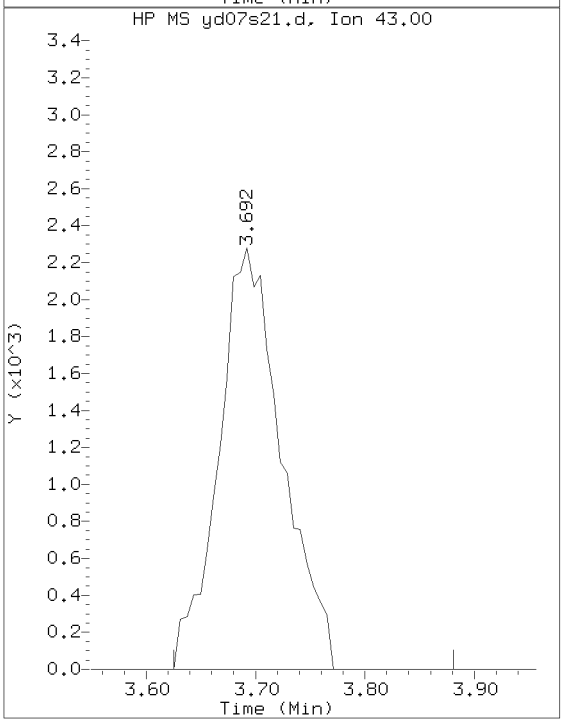
Reference Standard Spectrum for Acetone



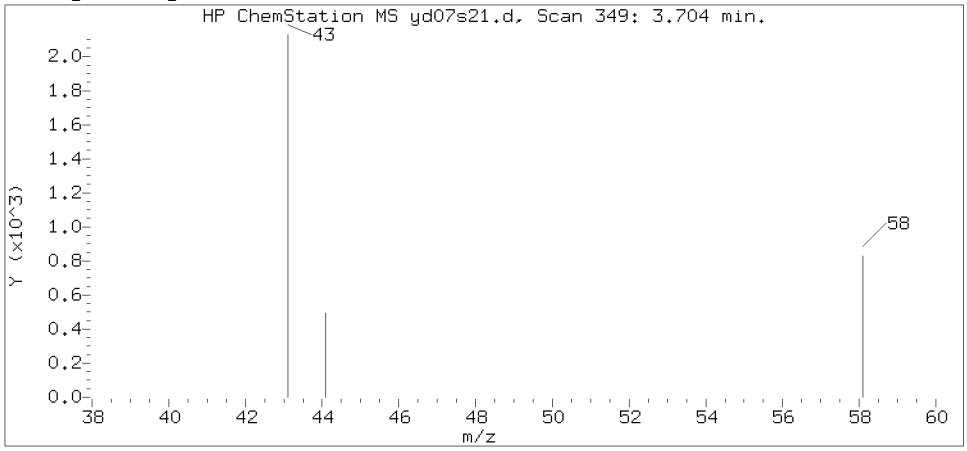


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09355.i/19dec07a.b/yd07s21.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 20:08 Analyst ID: MEC29284

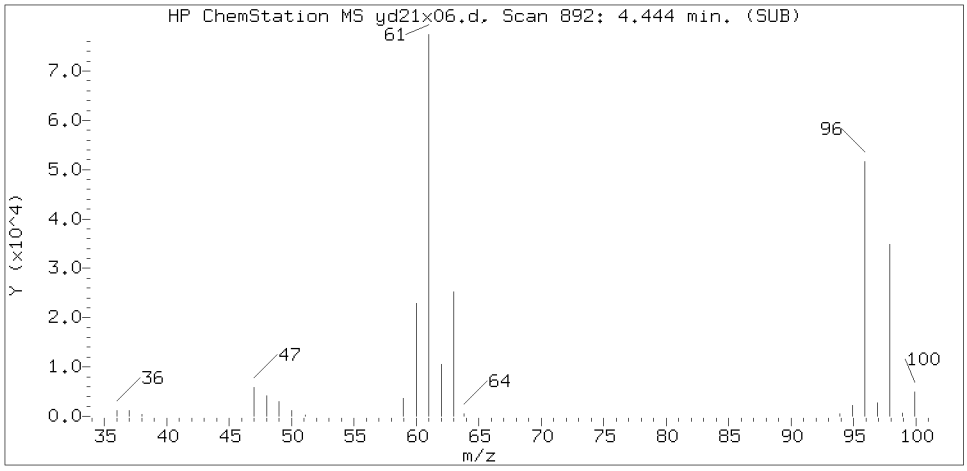
Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 20:25 Automation

Sample Name: DIF06 Lab Sample ID: 1212646

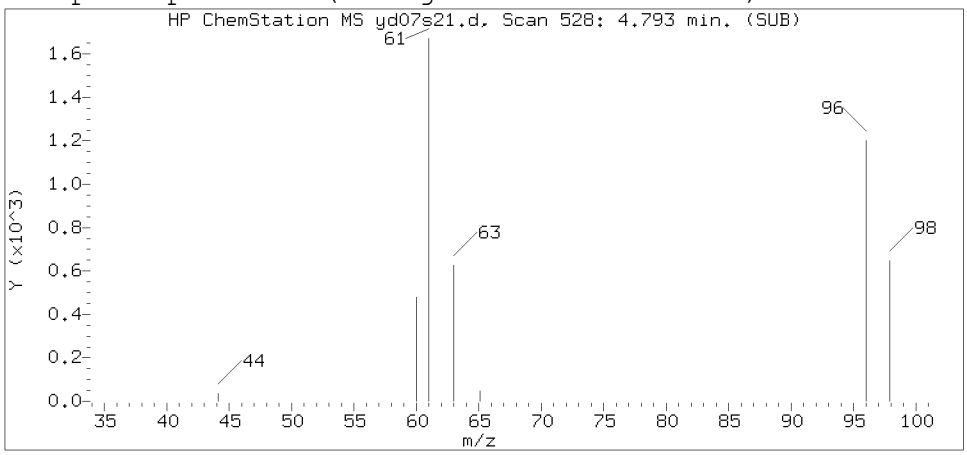
Compound Number : 18
Compound Name : Acetone
Scan Number : 349
Retention Time (minutes): 3.704
Relative Retention Time :-0.00420
Quant Ion : 58.00
Area (flag) : 2795
On-Column Amount (ng) : 2.7264

Digitally signed by Linda C. Pape on 12/09/2019 at 12:04.
Target 3.5 esignature user ID: lcp00895

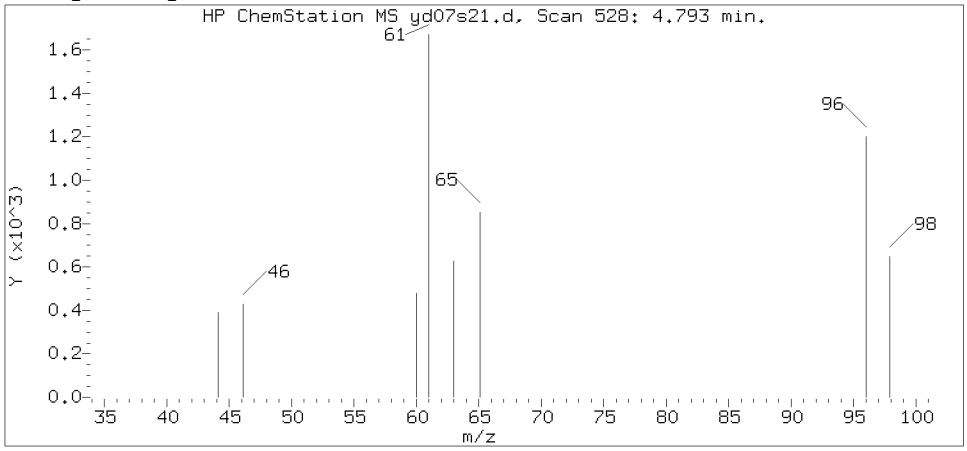
Reference Standard Spectrum for trans-1,2-Dichloroethene

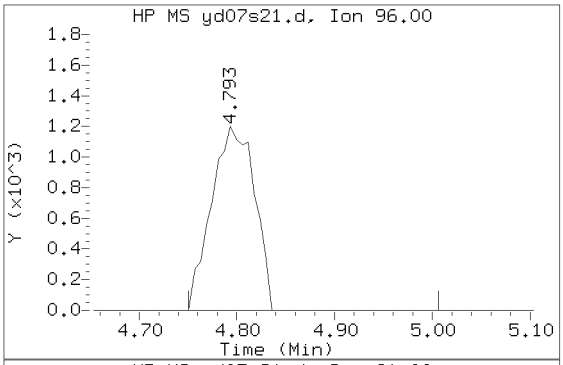


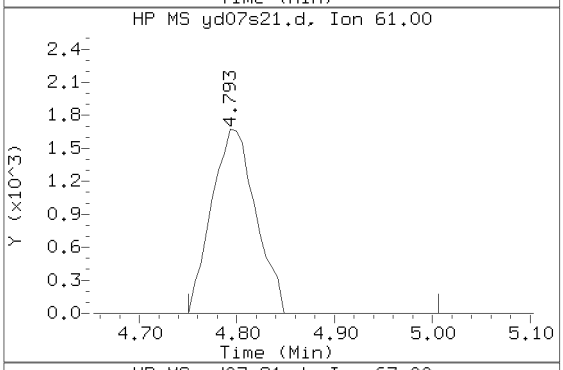
Sample Spectrum (Background Subtracted)

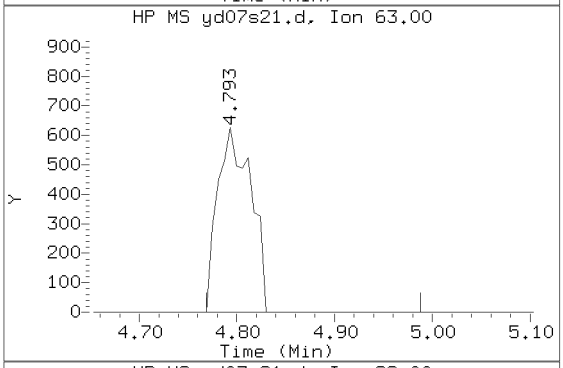


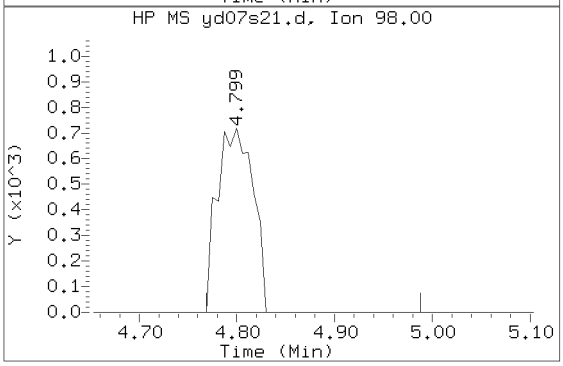
Sample Spectrum (Unaltered)











Data File: /chem2/HP09355.i/19dec07a.b/yd07s21.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 20:08 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 20:25 Automation

Sample Name: DIF06 Lab Sample ID: 1212646

Compound Number	: 32
Compound Name	: trans-1,2-Dichloroethene
Scan Number	: 528
Retention Time (minutes)	: 4.793
Relative Retention Time	:-0.00077
Quant Ion	: 96.00
Area (flag)	: 3670
On-Column Amount (ng)	: 0.6862

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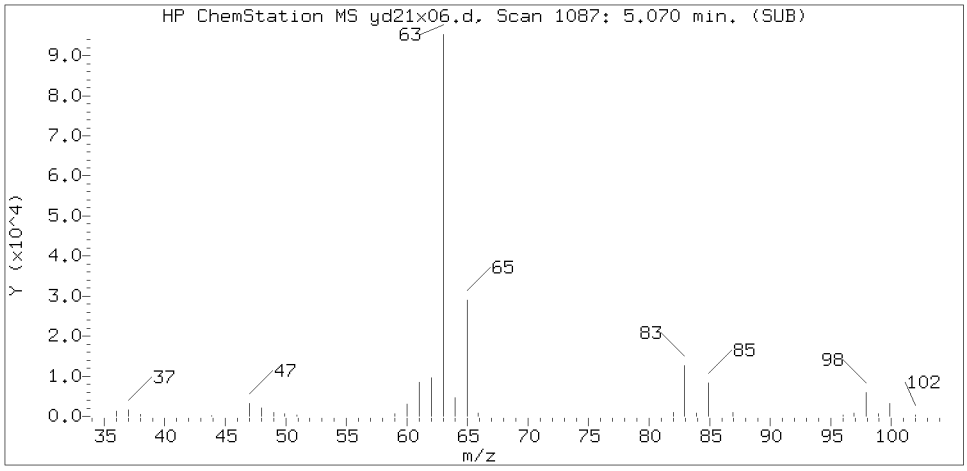
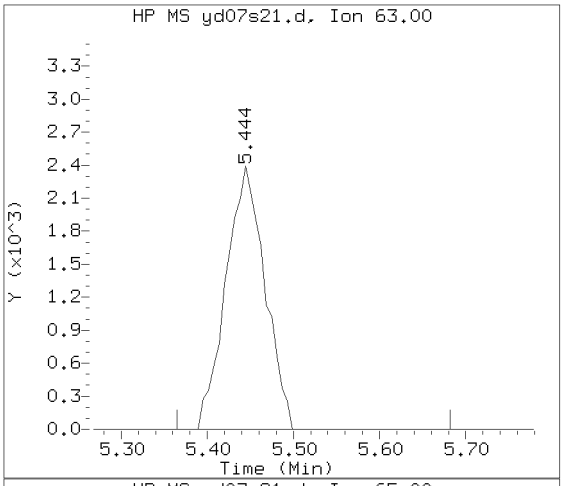
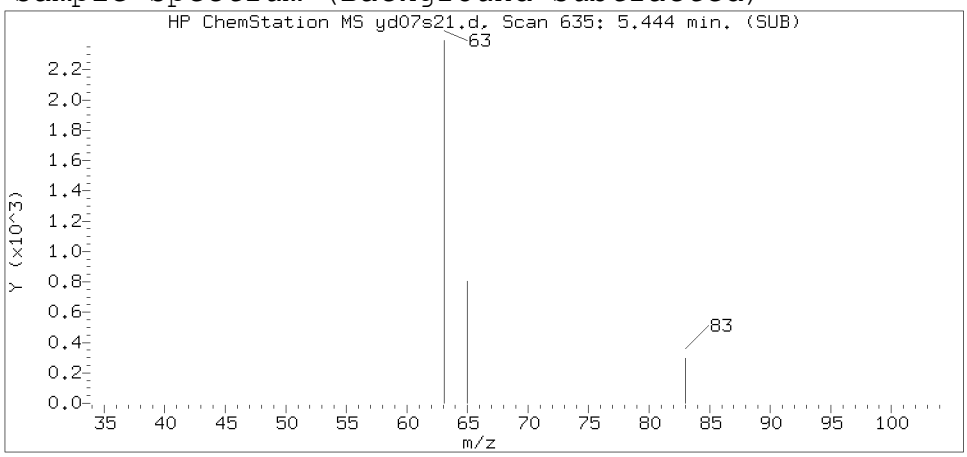
Target 3.5 esignature user ID: lcp00895

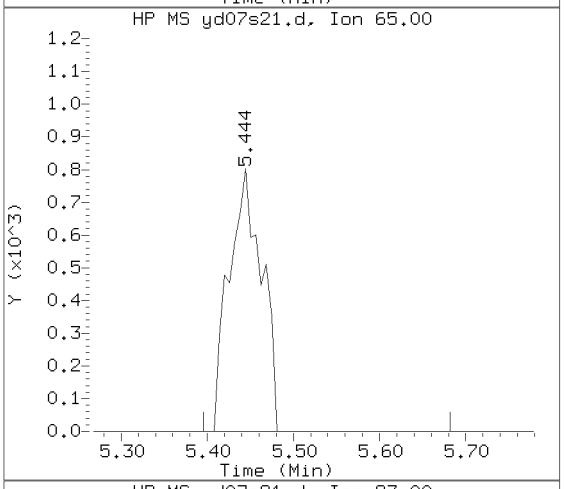
Reference Standard Spectrum for 1,1-Dichloroethane



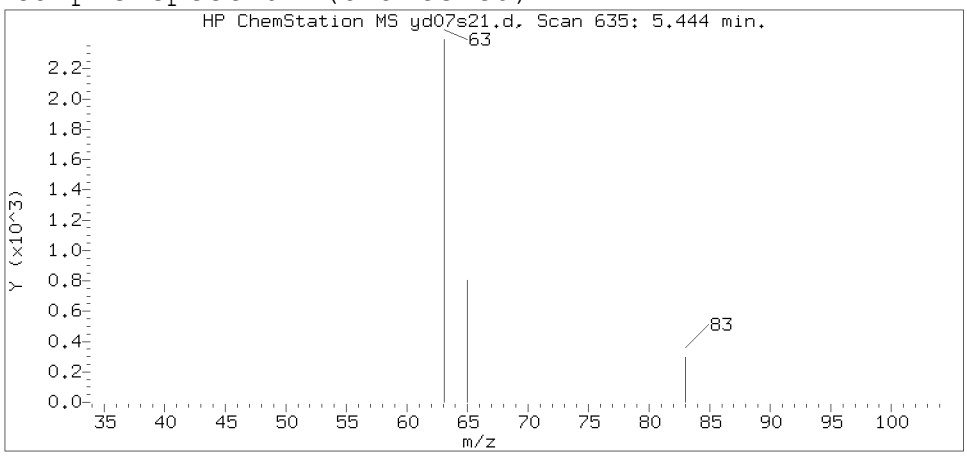


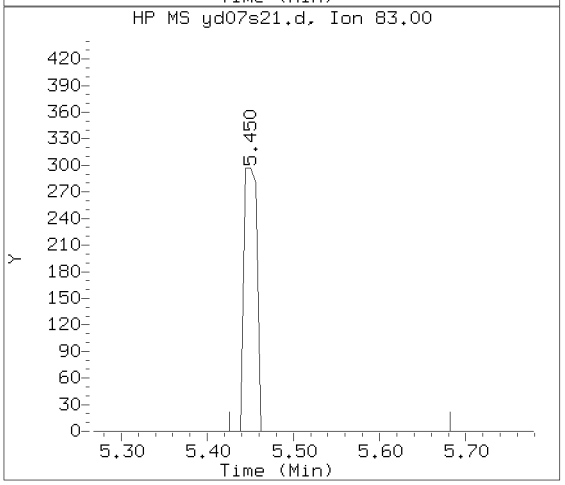
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP09355.i/19dec07a.b/yd07s21.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 20:08 Analyst ID: MEC29284

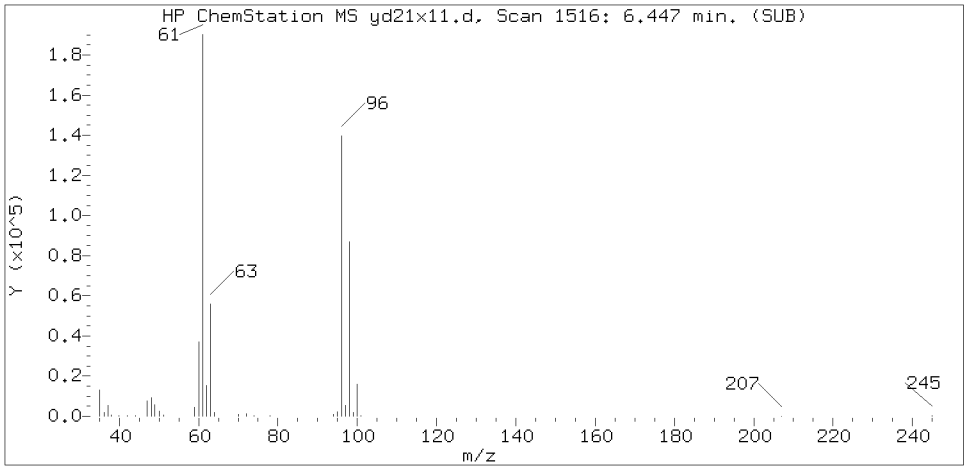
Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 20:25 Automation

Sample Name: DIF06 Lab Sample ID: 1212646

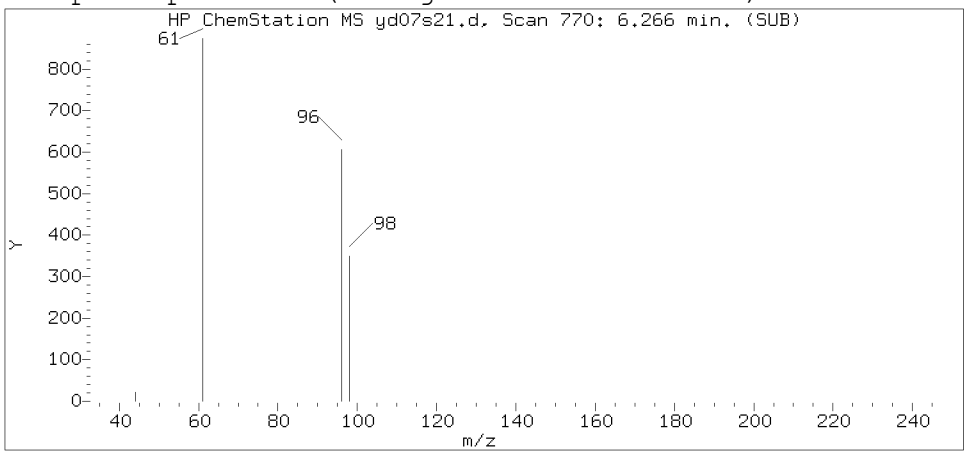
Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 635
Retention Time (minutes): 5.444
Relative Retention Time :-0.00077
Quant Ion : 63.00
Area (flag) : 7491
On-Column Amount (ng) : 0.7702

Digitally signed by Linda C. Pape on 12/09/2019 at 12:04.
Target 3.5 esignature user ID: lcp00895

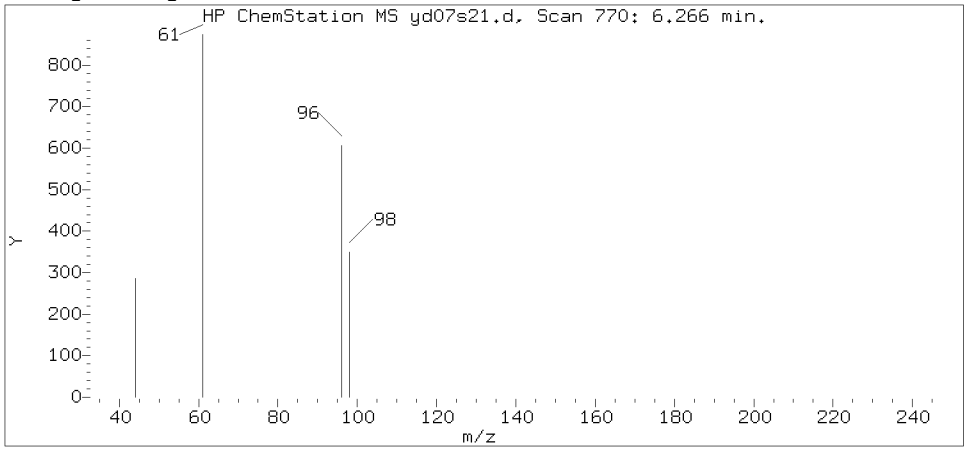
Reference Standard Spectrum for cis-1,2-Dichloroethene

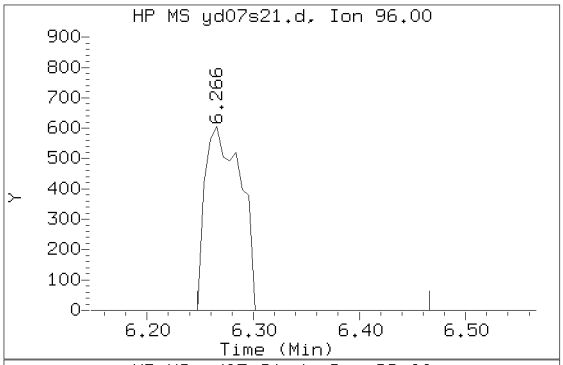


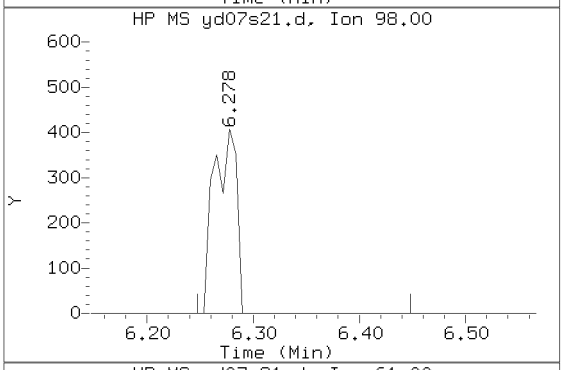
Sample Spectrum (Background Subtracted)

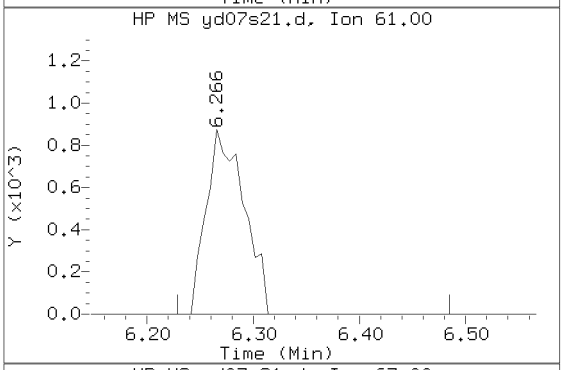


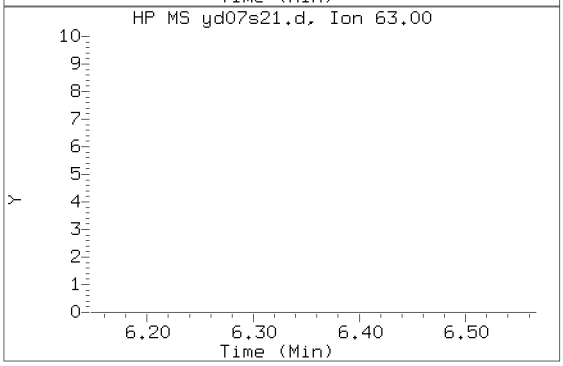
Sample Spectrum (Unaltered)











Data File: /chem2/HP09355.i/19dec07a.b/yd07s21.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 20:08 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 20:25 Automation

Sample Name: DIF06 Lab Sample ID: 1212646

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 770
Retention Time (minutes): 6.266
Relative Retention Time : 0.00000
Quant Ion : 96.00
Area (flag) : 1417
On-Column Amount (ng) : 0.2331

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Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DIF07

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1212647

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09355.i/19dec07a.b/yd07s22.d

Level: (low/med) LOW Date Received: 11/27/19

Moisture: not dec. _____ Date Analyzed: 12/07/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	2	J
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.9	J
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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DIF07 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1212647

Data file: /chem2/HP09355.i/19dec07a.b/yd07s22.d Injection date and time: **07-DEC-2019 20:30**
Data file Sample Info. Line: DIF07;1212647;1;0;;JCW27;;;yd07b01; Instrument ID: **HP09355.i** Batch: **Y193411AA**
Date, time and analyst ID of latest file update: 07-Dec-2019 20:47 Automation

Blank Data file reference: **/chem2/HP09355.i/19dec07a.b/yd07b01.d**

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 07-DEC-2019 11:45
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec07a.b/yd07c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.349	(0.000)	455	65	305489	(-15)	250.00	
66) Fluorobenzene	7.866	(0.000)	1033	96	1087865	(-7)	50.00	
100) Chlorobenzene-d5	11.303	(0.006)	1598	117	788009	(-8)	50.00	
131) 1,4-Dichlorobenzene-d4	13.183	(0.000)	1907	152	408498	(-9)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.965	(0.000)	113	232198	45.488	91%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.428	(0.000)	102	64544	48.366	97%		80 - 120
83) Toluene-d8	(3)	9.861	(0.000)	98	1043485	48.942	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.300	(-0.001)	95	385435	47.315	95%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)	3.704	(-0.004)	58	2201	2.016	2.02		J	0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.450	(-0.001)	63	8707	0.876	0.88		J	0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Linda C. Pape on 12/09/2019 at 12:25. Target 3.5 esignature user ID: lcp00895

DIF07 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1212647

Data file: /chem2/HP09355.i/19dec07a.b/yd07s22.d Injection date and time: **07-DEC-2019 20:30**
Data file Sample Info. Line: DIF07;1212647;1;0;;JCW27;;;yd07b01; Instrument ID: **HP09355.i** Batch: **Y193411AA**
Date, time and analyst ID of latest file update: 07-Dec-2019 20:47 Automation

Blank Data file reference: **/chem2/HP09355.i/19dec07a.b/yd07b01.d**

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 07-DEC-2019 11:45
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec07a.b/yd07c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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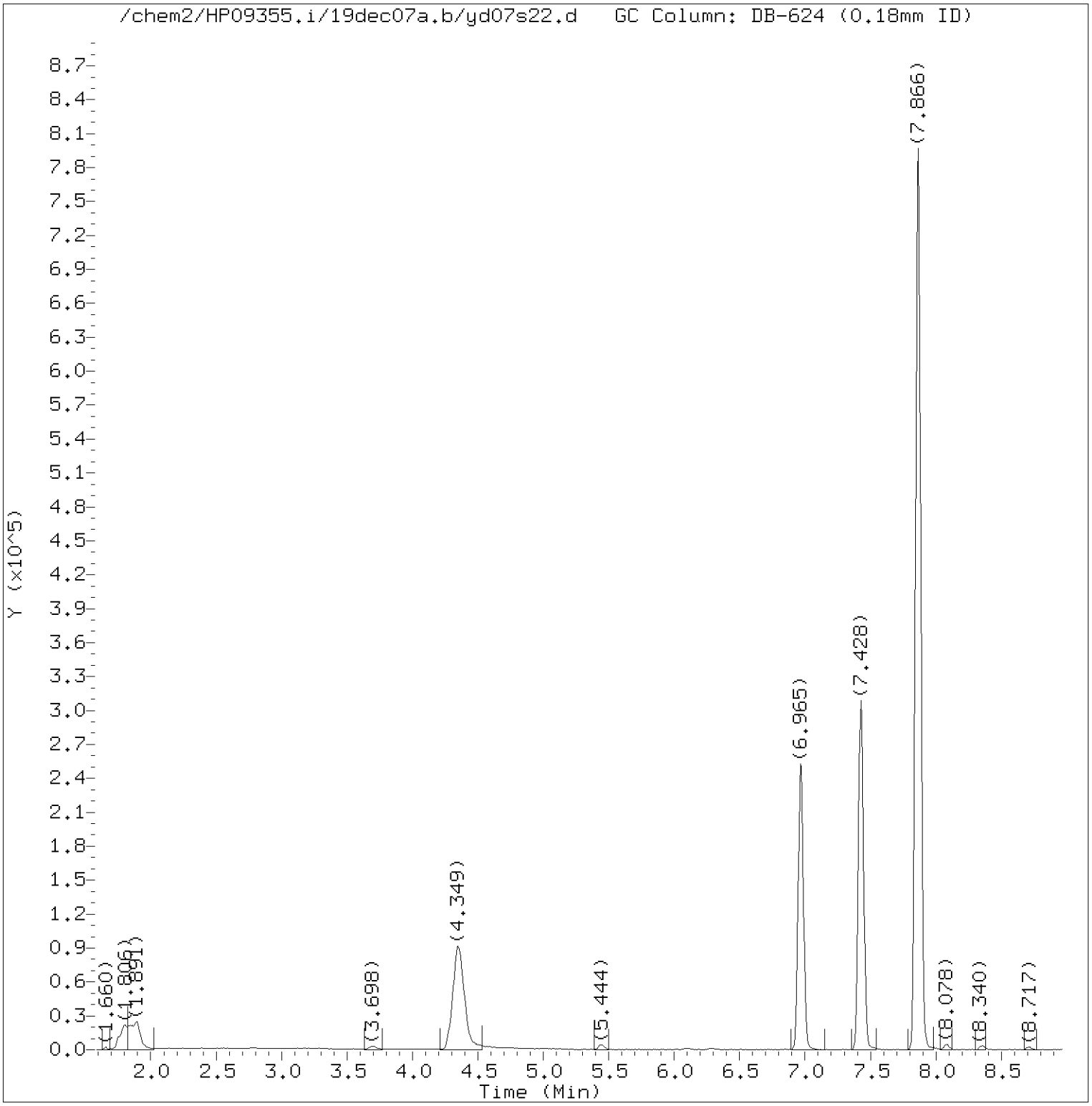
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Linda C. Pape on 12/09/2019 at 12:25. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 12/09/2019 at 19:29. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

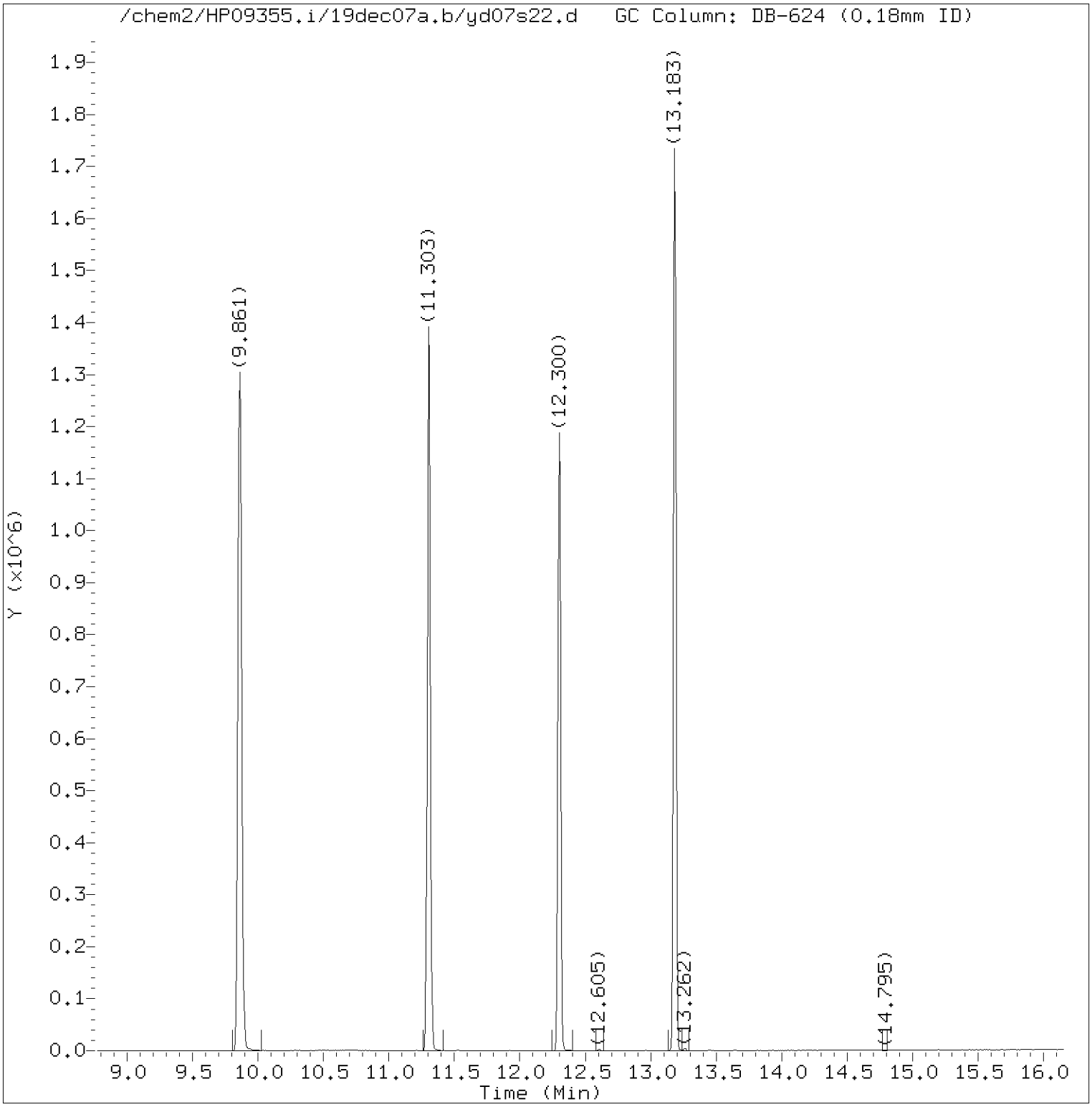
Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07s22.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 20:30 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 20:47 Automation

Sample Name: DIF07 Lab Sample ID: 1212647

Digitally signed by Linda C. Pape
on 12/09/2019 at 12:25.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07s22.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 20:30 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 20:47 Automation

Sample Name: DIF07 Lab Sample ID: 1212647

Digitally signed by Linda C. Pape
on 12/09/2019 at 12:25.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07s22.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 20:30 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 20:47 Automation

Sample Name: DIF07 Lab Sample ID: 1212647

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
18) Acetone	(1)	3.704	58	2201	2.016
29)*t-Butyl alcohol-d10	(1)	4.349	65	305489	250.000
36) 1,1-Dichloroethane	(2)	5.450	63	8707	0.876
52)$Dibromofluoromethane	(2)	6.965	113	232198	45.488
57)$1,2-Dichloroethane-d4	(2)	7.428	102	64544	48.366
66)*Fluorobenzene	(2)	7.866	96	1087865	50.000
83)$Toluene-d8	(3)	9.861	98	1043485	48.942
100)*Chlorobenzene-d5	(3)	11.303	117	788009	50.000
114)$4-Bromofluorobenzene	(3)	12.300	95	385435	47.315
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	408498	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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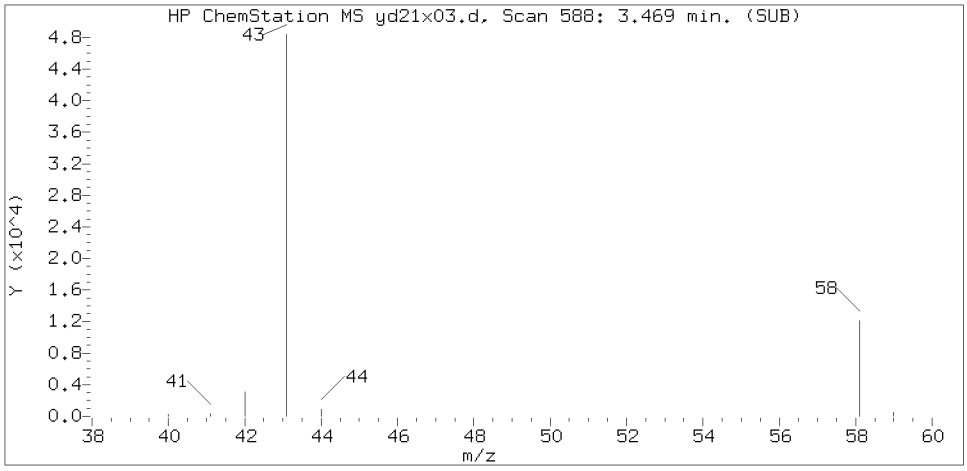
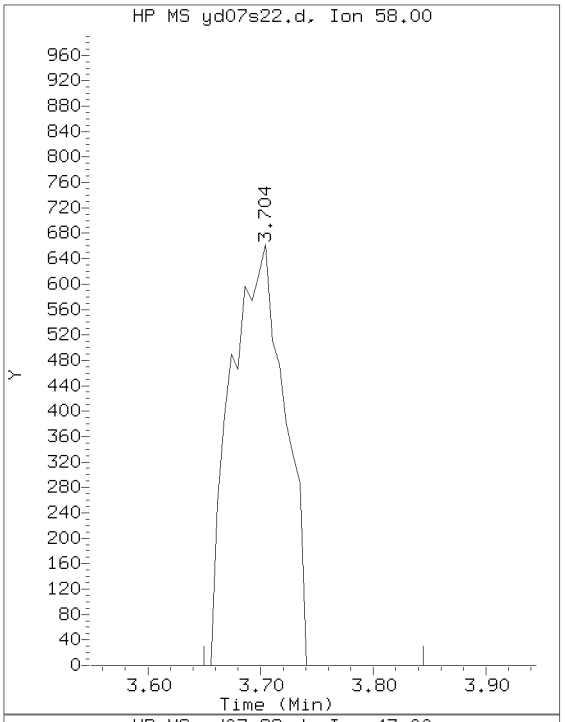
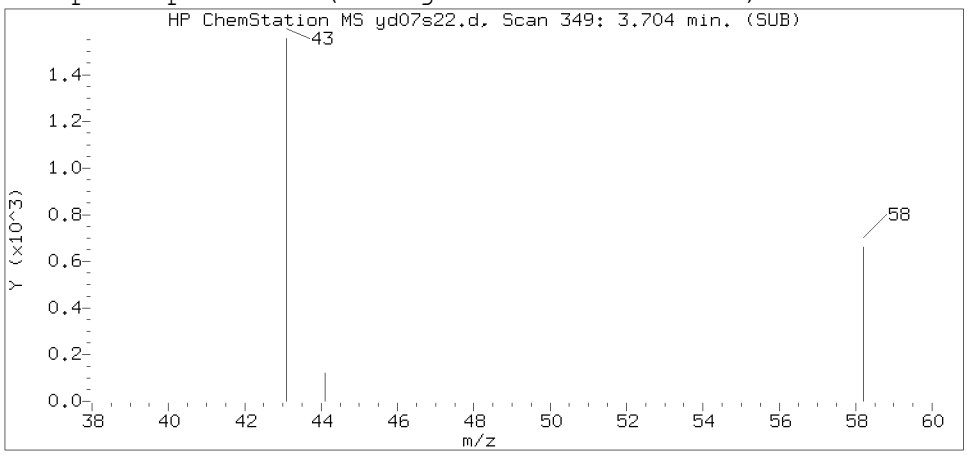
on 12/09/2019 at 12:25.
Target 3.5 esignature user ID: lcp00895

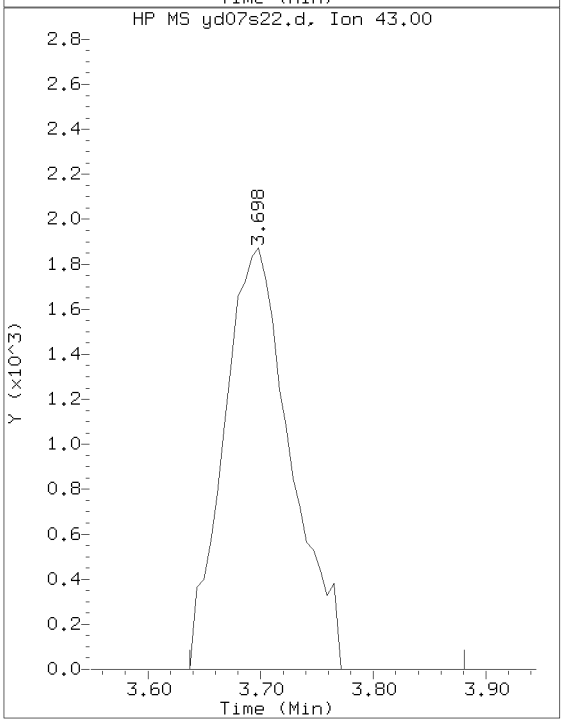
Reference Standard Spectrum for Acetone



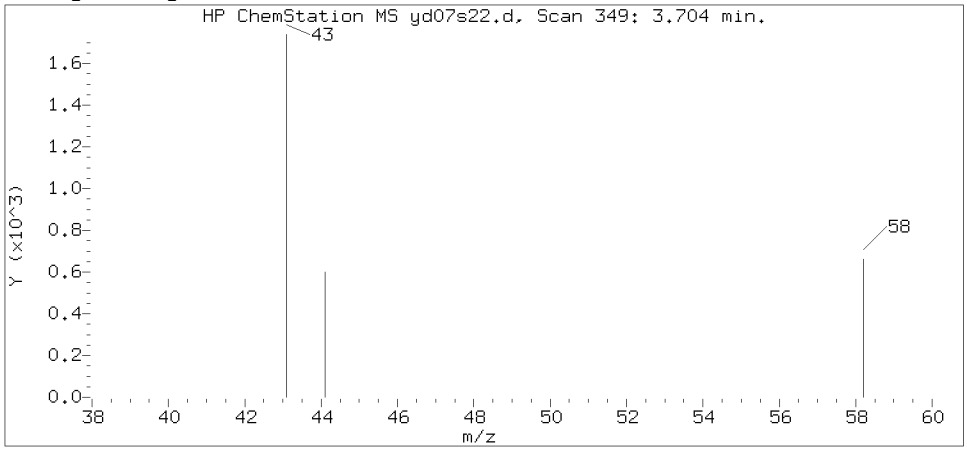


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09355.i/19dec07a.b/yd07s22.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 20:30 Analyst ID: MEC29284

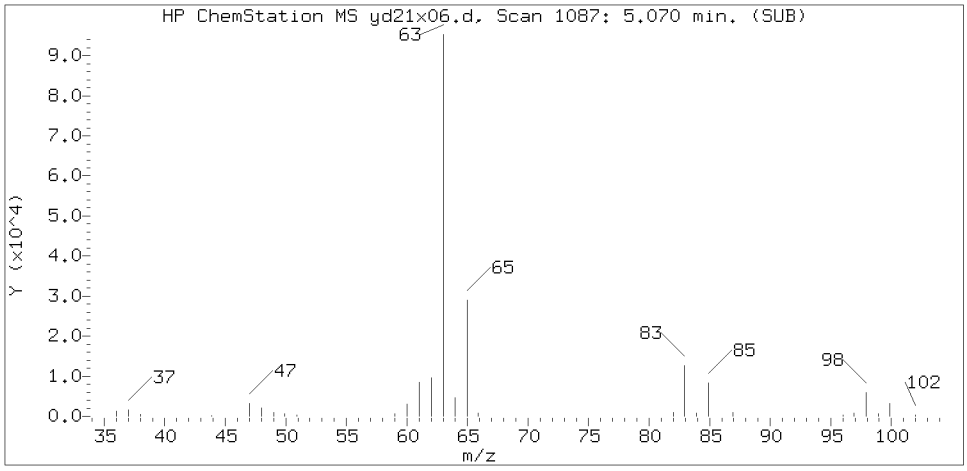
Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 20:47 Automation

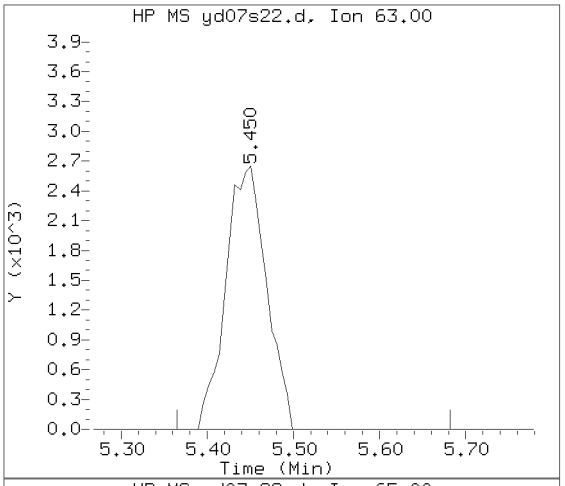
Sample Name: DIF07 Lab Sample ID: 1212647

Compound Number	: 18
Compound Name	: Acetone
Scan Number	: 349
Retention Time (minutes)	: 3.704
Relative Retention Time	:-0.00420
Quant Ion	: 58.00
Area (flag)	: 2201
On-Column Amount (ng)	: 2.0164

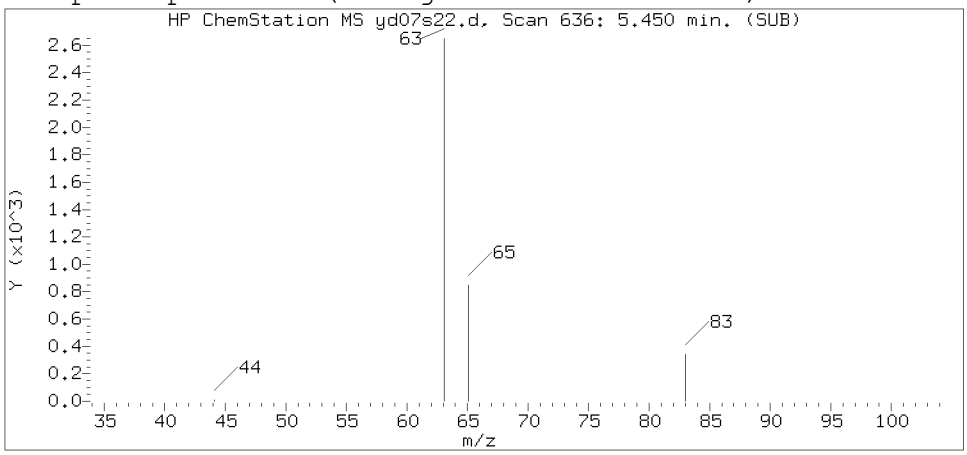
Digitally signed by Linda C. Pape on 12/09/2019 at 12:25.
Target 3.5 esignature user ID: lcp00895

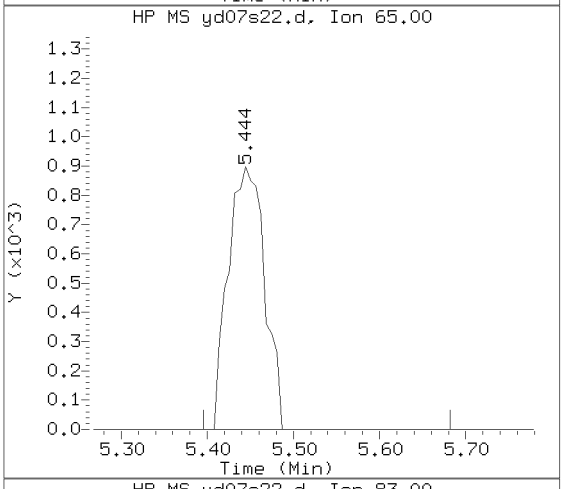
Reference Standard Spectrum for 1,1-Dichloroethane



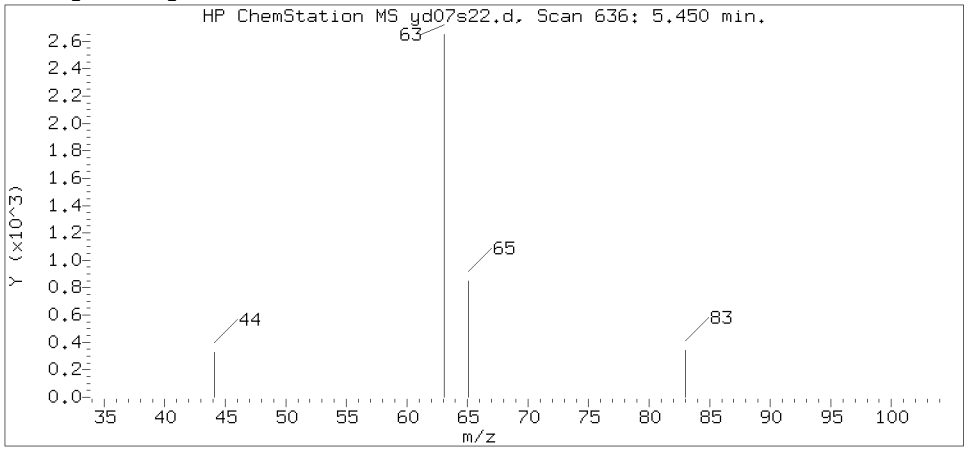


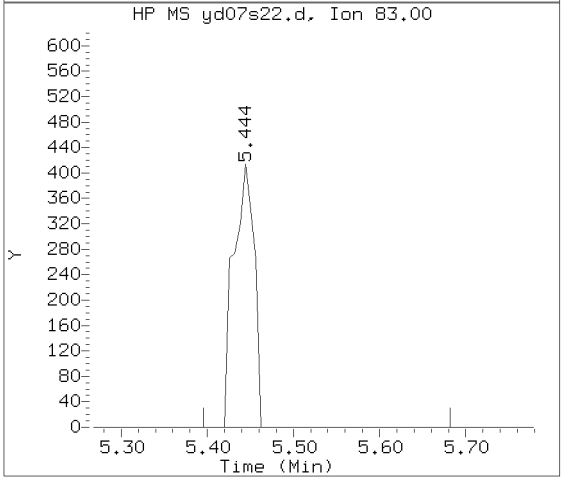
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP09355.i/19dec07a.b/yd07s22.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 20:30 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 20:47 Automation

Sample Name: DIF07 Lab Sample ID: 1212647

Compound Number : 36
Compound Name : 1,1-Dichloroethane
Scan Number : 636
Retention Time (minutes): 5.450
Relative Retention Time :-0.00155
Quant Ion : 63.00
Area (flag) : 8707
On-Column Amount (ng) : 0.8755

Digitally signed by Linda C. Pape on 12/09/2019 at 12:25.
Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DIF08

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1212648

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09355.i/19dec07a.b/yd07s23.d

Level: (low/med) LOW Date Received: 11/27/19

Moisture: not dec. _____ Date Analyzed: 12/07/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	3	J
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	
156-59-2	cis-1,2-Dichloroethene	0.3	J
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

DIF08 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1212648

Data file: /chem2/HP09355.i/19dec07a.b/yd07s23.d Injection date and time: **07-DEC-2019 20:52**
Data file Sample Info. Line: DIF08;1212648;1;0;;JCW27;;;yd07b01; Instrument ID: **HP09355.i** Batch: **Y193411AA**
Date, time and analyst ID of latest file update: 09-Dec-2019 12:06 lcp00895

Blank Data file reference: **/chem2/HP09355.i/19dec07a.b/yd07b01.d**

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 07-DEC-2019 11:45
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec07a.b/yd07c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.362(-0.012)	457	65	286409 (-20)	250.00	
66) Fluorobenzene	7.866(0.000)	1033	96	1047574 (-10)	50.00	
100) Chlorobenzene-d5	11.303(0.006)	1598	117	759107 (-12)	50.00	
131) 1,4-Dichlorobenzene-d4	13.183(0.000)	1907	152	391023 (-13)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.971(-0.001)	113	226747	46.128	92%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434(-0.001)	102	63491	49.406	99%		80 - 120
83) Toluene-d8	(3)	9.861(0.000)	98	1005001	48.931	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.301(-0.001)	95	369632	47.103	94%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)	3.698(-0.000)	58	2767	2.703	2.70		J	0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)	5.450(-0.001)	63	11669	1.218	1.22			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.278(-0.001)	96	1548	0.259	0.26		J	0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)			Not Detected					0.2	1
75) 1,4-Dioxane	(1)			Not Detected					29	250
88) Toluene	(3)			Not Detected					0.2	1
93) Tetrachloroethene	(3)			Not Detected					0.2	1
104) Ethylbenzene	(3)			Not Detected					0.4	1
106) m+p-Xylene	(3)			Not Detected					1	5
107) o-Xylene	(3)			Not Detected					0.4	1
108) Xylene (Total)	(3)			Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
148) Naphthalene	(4)			Not Detected					1	5

Digitally signed by Linda C. Pape on 12/09/2019 at 12:06. Target 3.5 esignature user ID: lcp00895

DIF08 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1212648

Data file: /chem2/HP09355.i/19dec07a.b/yd07s23.d Injection date and time: **07-DEC-2019 20:52**
Data file Sample Info. Line: DIF08;1212648;1;0;;JCW27;;;yd07b01; Instrument ID: **HP09355.i** Batch: **Y193411AA**
Date, time and analyst ID of latest file update: 09-Dec-2019 12:06 lcp00895

Blank Data file reference: **/chem2/HP09355.i/19dec07a.b/yd07b01.d**

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 07-DEC-2019 11:45
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec07a.b/yd07c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

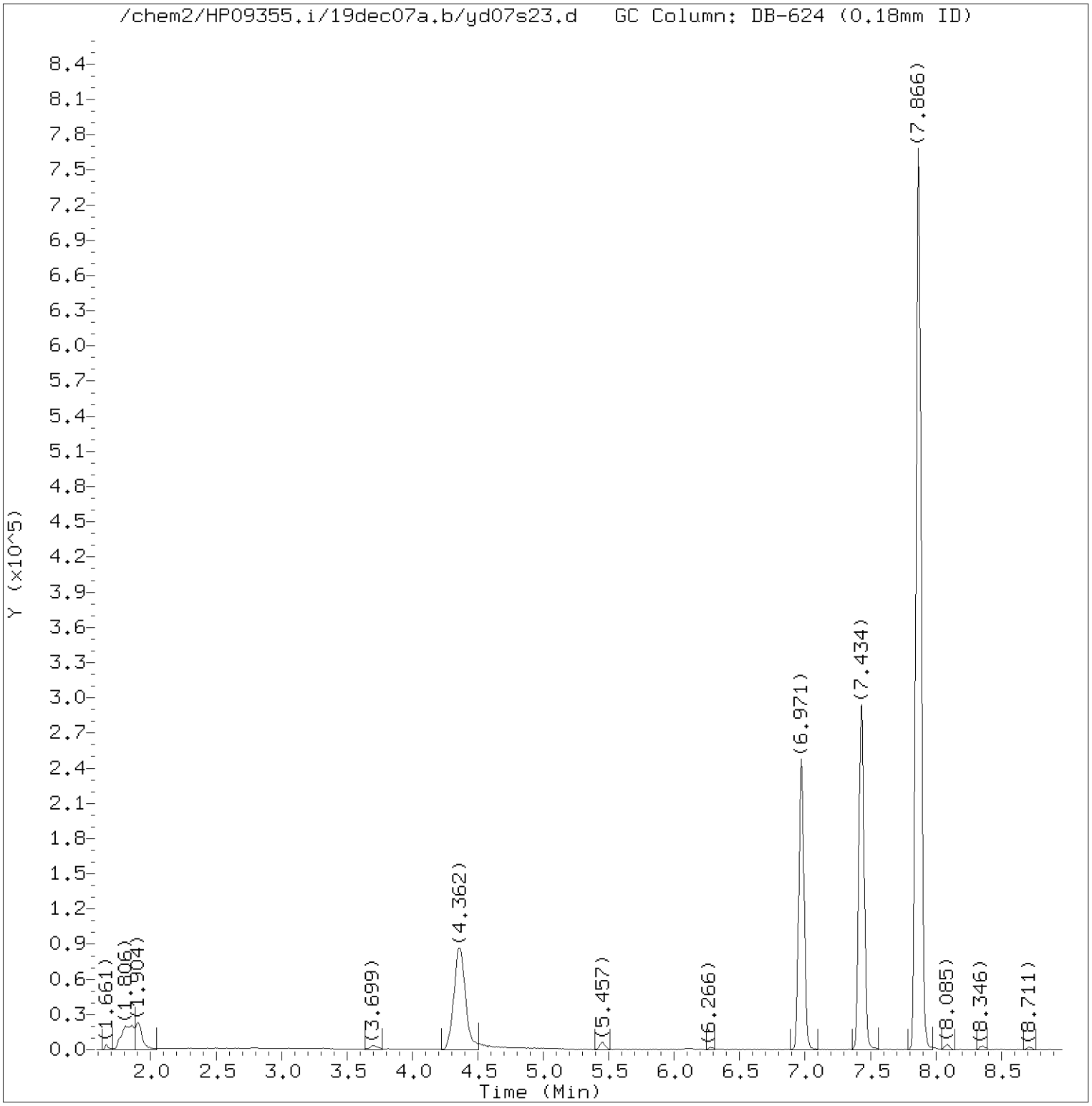
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Linda C. Pape on 12/09/2019 at 12:06. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 12/09/2019 at 19:29. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

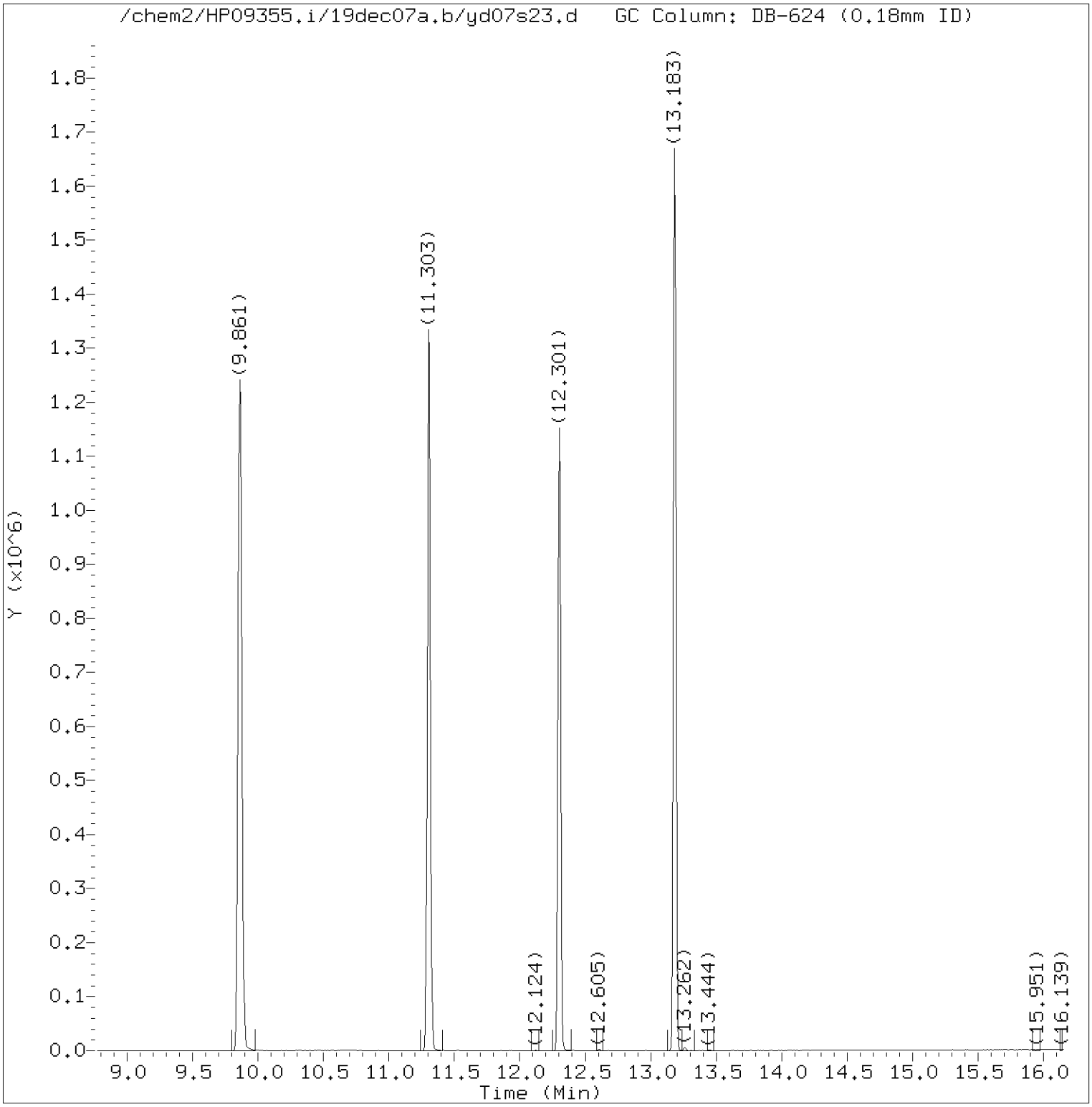
Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07s23.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 20:52 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 09-Dec-2019 12:06 lcp00895

Sample Name: DIF08 Lab Sample ID: 1212648

Digitally signed by Linda C. Pape
on 12/09/2019 at 12:06.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07s23.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 20:52 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 09-Dec-2019 12:06 lcp00895

Sample Name: DIF08 Lab Sample ID: 1212648

Digitally signed by Linda C. Pape
on 12/09/2019 at 12:06.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07s23.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 20:52 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 09-Dec-2019 12:06 lcp00895

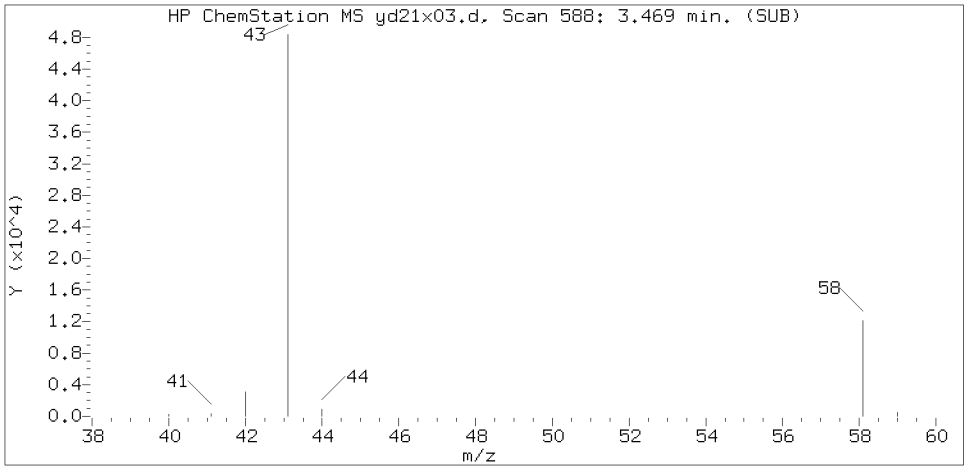
Sample Name: DIF08 Lab Sample ID: 1212648

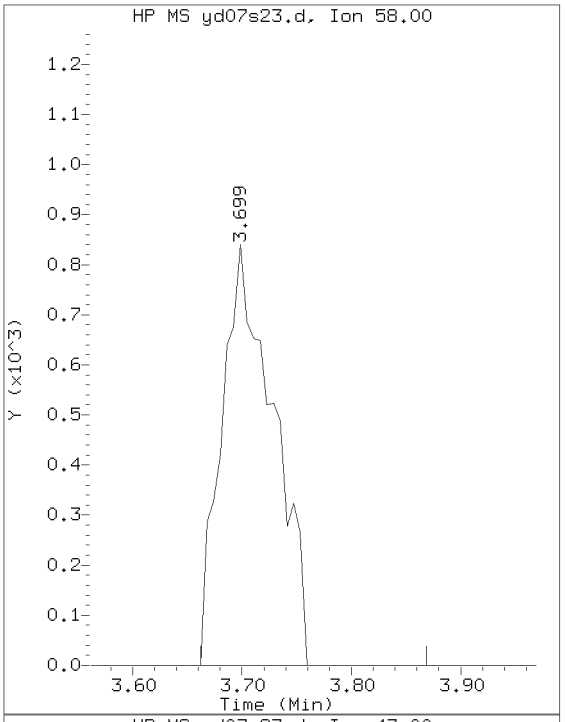
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
18) Acetone	(1)	3.699	58	2767	2.703
29)*t-Butyl alcohol-d10	(1)	4.362	65	286409	250.000
36) 1,1-Dichloroethane	(2)	5.451	63	11669	1.218
42) cis-1,2-Dichloroethene	(2)	6.278	96	1548	0.259
52)$Dibromofluoromethane	(2)	6.971	113	226747	46.128
57)$1,2-Dichloroethane-d4	(2)	7.434	102	63491	49.406
66)*Fluorobenzene	(2)	7.866	96	1047574	50.000
83)$Toluene-d8	(3)	9.861	98	1005001	48.931
100)*Chlorobenzene-d5	(3)	11.303	117	759107	50.000
114)$4-Bromofluorobenzene	(3)	12.301	95	369632	47.103
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	391023	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

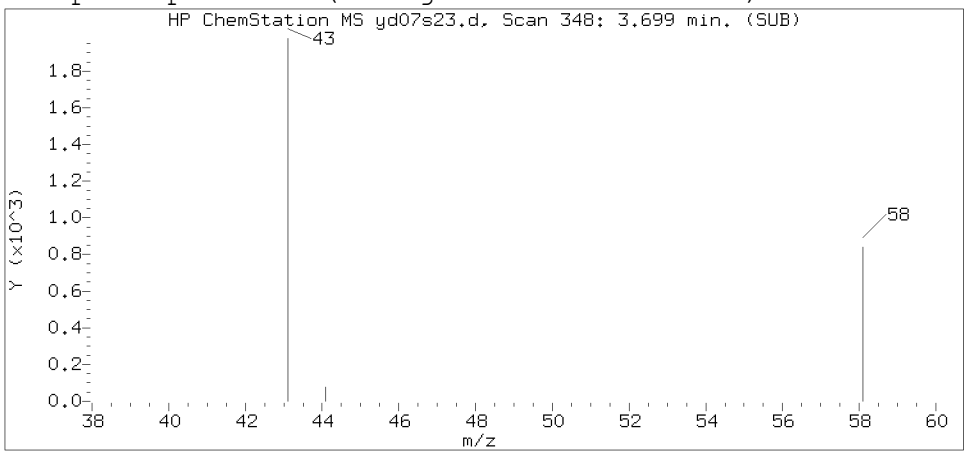
Digitally signed by Linda C. Pape
on 12/09/2019 at 12:06.
Target 3.5 esignature user ID: lcp00895

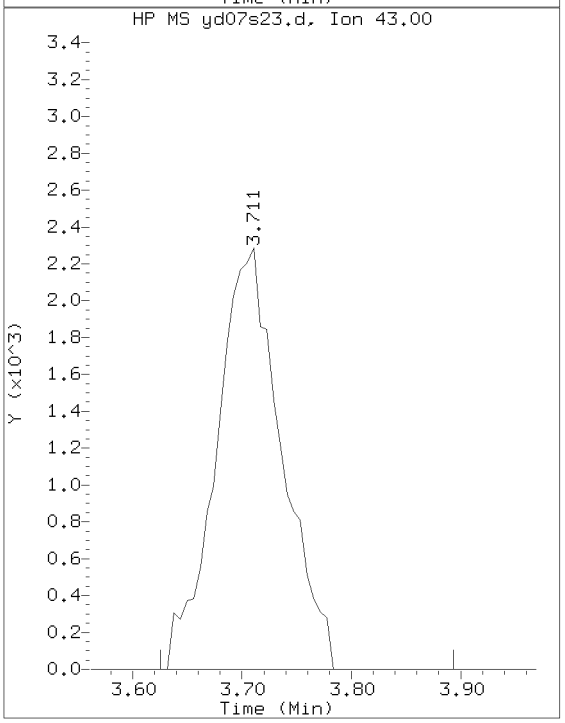
Reference Standard Spectrum for Acetone



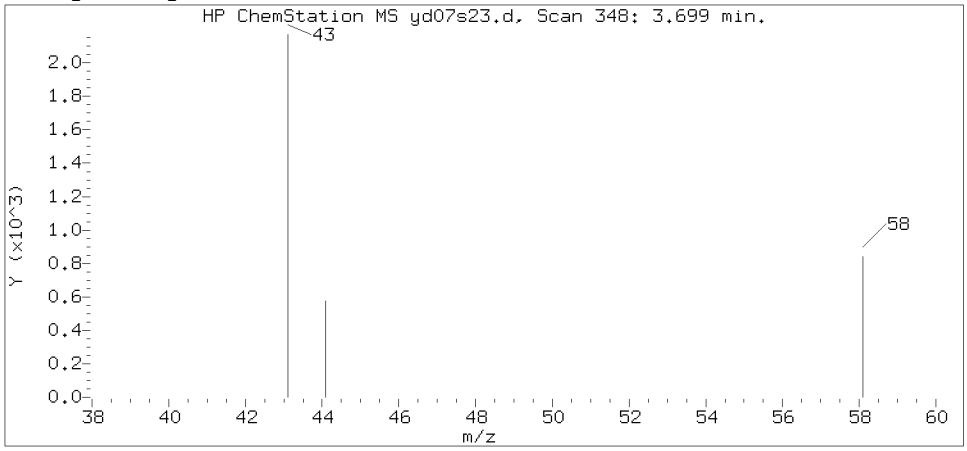


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09355.i/19dec07a.b/yd07s23.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 20:52 Analyst ID: MEC29284

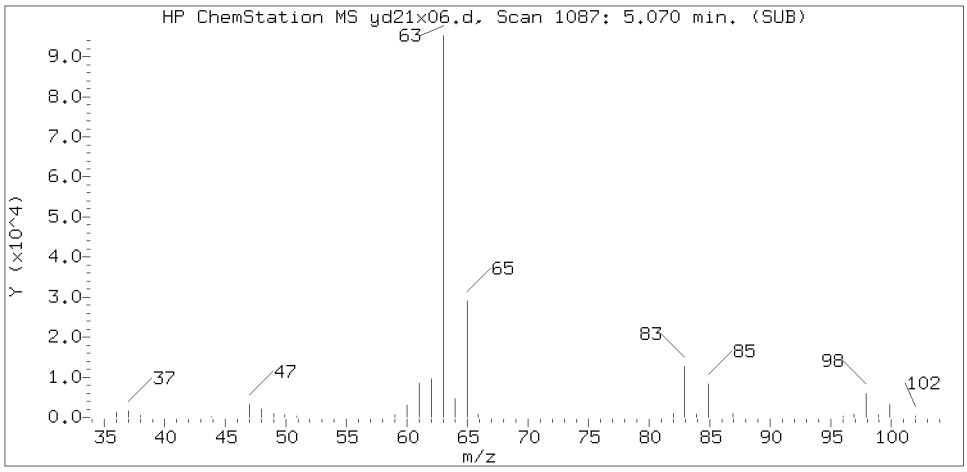
Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 09-Dec-2019 12:06 lcp00895

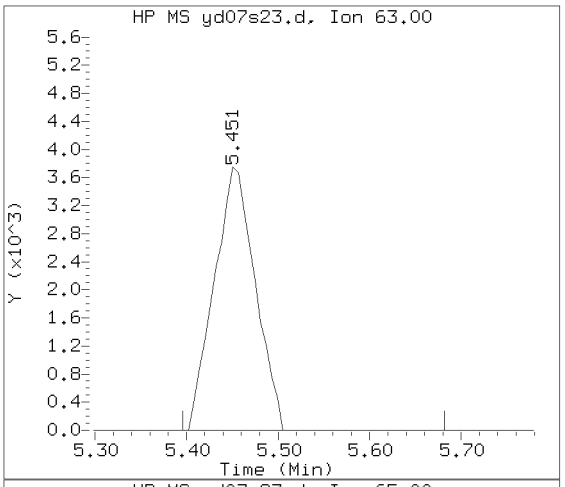
Sample Name: DIF08 Lab Sample ID: 1212648

Compound Number : 18
Compound Name : Acetone
Scan Number : 348
Retention Time (minutes): 3.699
Relative Retention Time :-0.00044
Quant Ion : 58.00
Area (flag) : 2767
On-Column Amount (ng) : 2.7033

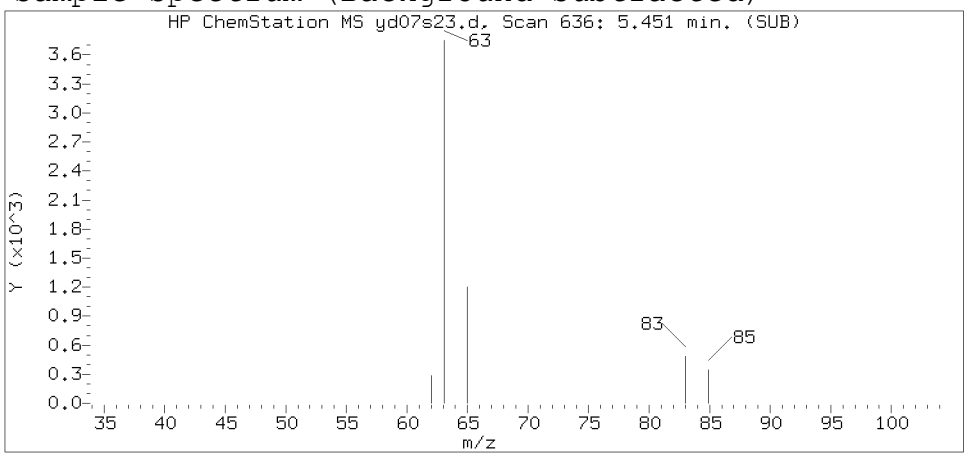
Digitally signed by Linda C. Pape on 12/09/2019 at 12:06.
Target 3.5 esignature user ID: lcp00895

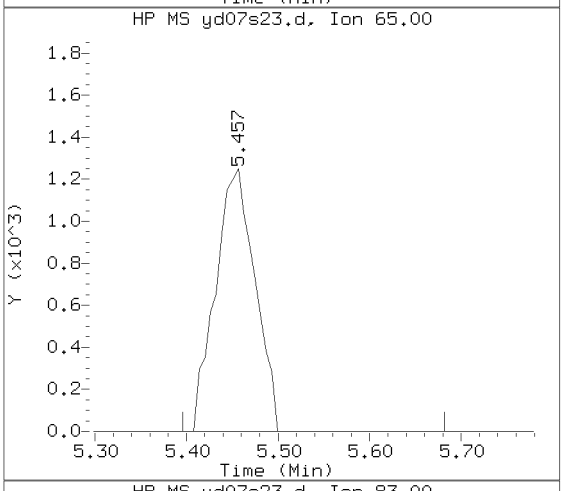
Reference Standard Spectrum for 1,1-Dichloroethane



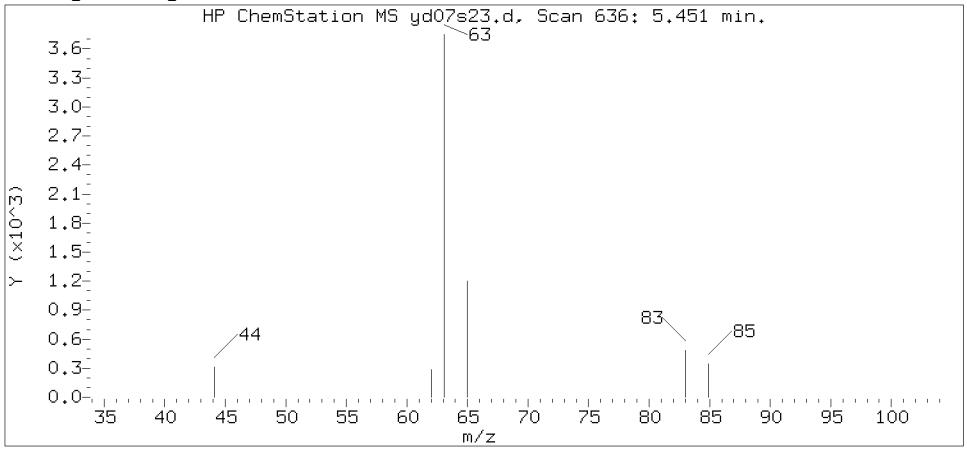


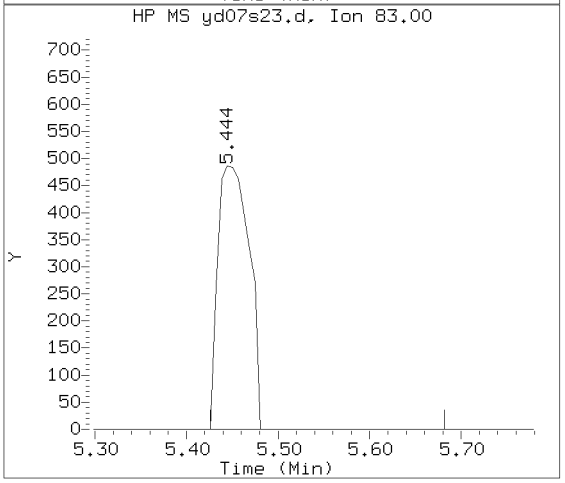
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP09355.i/19dec07a.b/yd07s23.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 20:52 Analyst ID: MEC29284

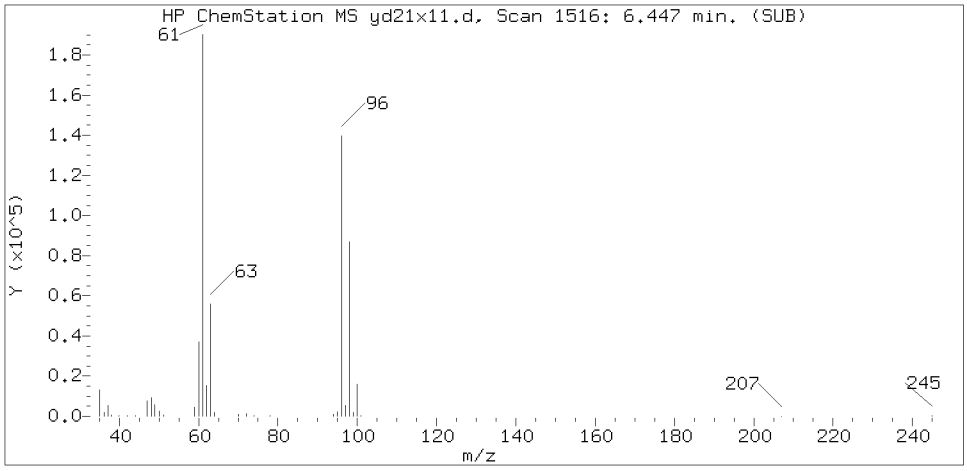
Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 09-Dec-2019 12:06 lcp00895

Sample Name: DIF08 Lab Sample ID: 1212648

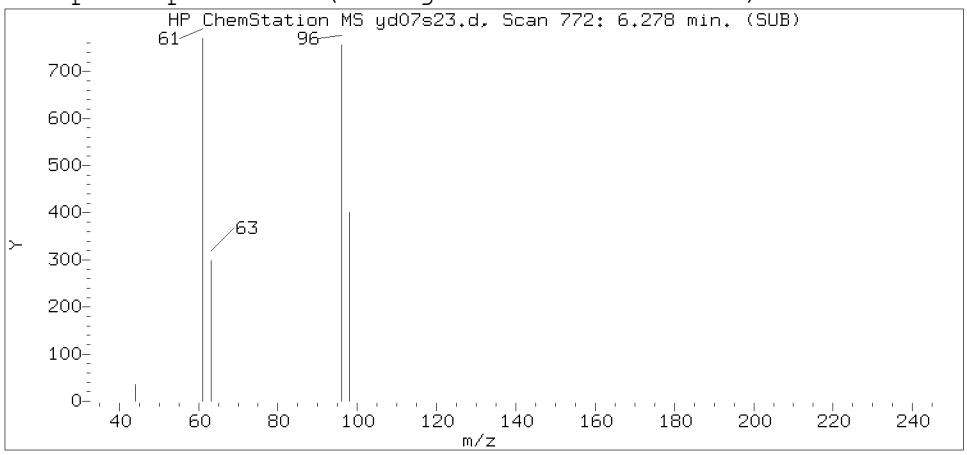
Compound Number	: 36
Compound Name	: 1,1-Dichloroethane
Scan Number	: 636
Retention Time (minutes)	: 5.451
Relative Retention Time	:-0.00155
Quant Ion	: 63.00
Area (flag)	: 11669
On-Column Amount (ng)	: 1.2184

Digitally signed by Linda C. Pape on 12/09/2019 at 12:06.
Target 3.5 esignature user ID: lcp00895

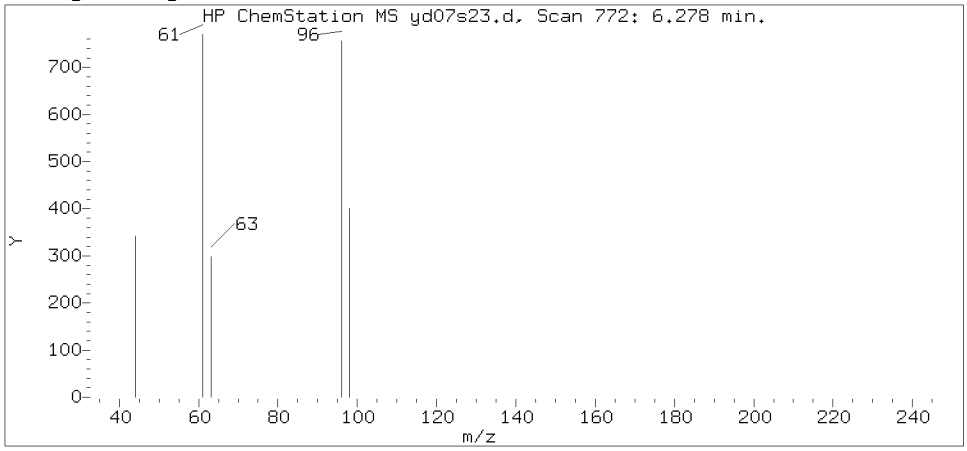
Reference Standard Spectrum for cis-1,2-Dichloroethene

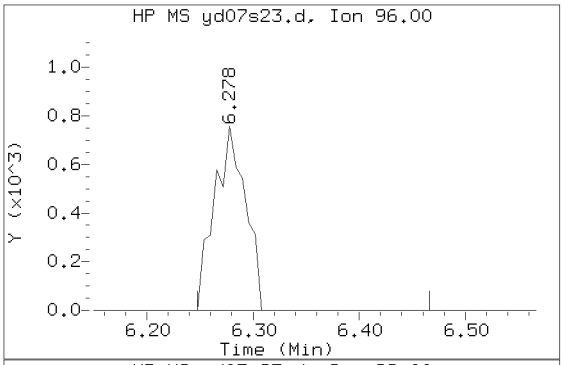


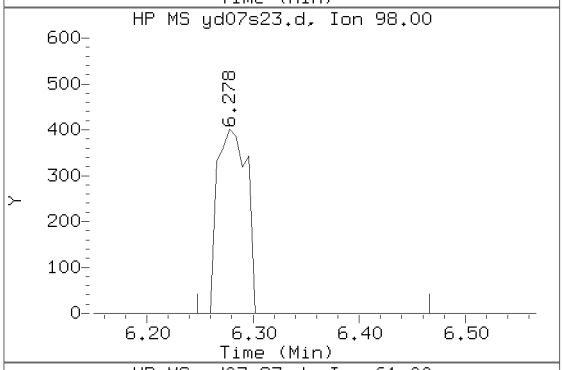
Sample Spectrum (Background Subtracted)

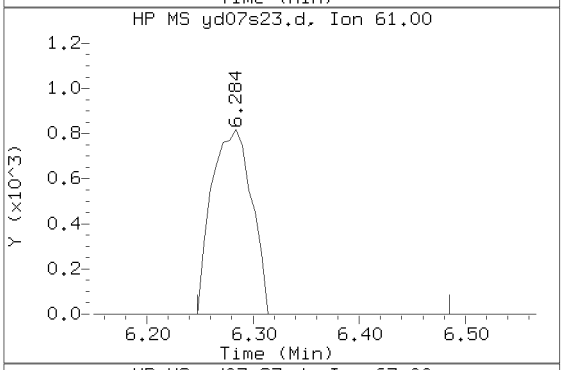


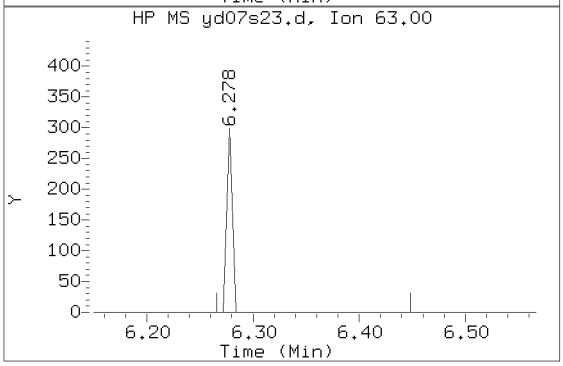
Sample Spectrum (Unaltered)











Data File: /chem2/HP09355.i/19dec07a.b/yd07s23.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 20:52 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 09-Dec-2019 12:06 lcp00895

Sample Name: DIF08 Lab Sample ID: 1212648

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 772
Retention Time (minutes): 6.278
Relative Retention Time :-0.00155
Quant Ion : 96.00
Area (flag) : 1548
On-Column Amount (ng) : 0.2586

Digitally signed by Linda C. Pape on 12/09/2019 at 12:06.
Target 3.5 esignature user ID: lcp00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DIF09

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 1212649

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09355.i/19dec07a.b/yd07s04.d

Level: (low/med) LOW Date Received: 11/27/19

Moisture: not dec. _____ Date Analyzed: 12/07/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	20	U
76-13-1	Freon 113	10	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
123-91-1	1,4-Dioxane	250	U
108-88-3	Toluene	1	U
127-18-4	Tetrachloroethene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (Total)	6	U
95-50-1	1,2-Dichlorobenzene	5	U
91-20-3	Naphthalene	5	U

FORM I VOA

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DIF09 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1212649

Data file: /chem2/HP09355.i/19dec07a.b/yd07s04.d Injection date and time: **07-DEC-2019 13:55**
Data file Sample Info. Line: DIF09;1212649;1;0;;JCW27;;;yd07b01; Instrument ID: **HP09355.i** Batch: **Y193411AA**
Date, time and analyst ID of latest file update: 07-Dec-2019 14:12 Automation

Blank Data file reference: **/chem2/HP09355.i/19dec07a.b/yd07b01.d**

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 07-DEC-2019 11:45
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec07a.b/yd07c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.349	(0.000)	455	65	298491	(-17)	250.00	
66) Fluorobenzene	7.866	(0.000)	1033	96	1115777	(-4)	50.00	
100) Chlorobenzene-d5	11.303	(0.006)	1598	117	809759	(-6)	50.00	
131) 1,4-Dichlorobenzene-d4	13.183	(0.000)	1907	152	414714	(-7)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.971	(-0.001)	113	236547	45.181	90%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434	(-0.001)	102	66035	48.245	96%		80 - 120
83) Toluene-d8	(3)	9.861	(0.000)	98	1064361	48.580	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.301	(-0.001)	95	396154	47.325	95%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)				Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
23) Carbon Disulfide	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
44) 2-Butanone	(2)				Not Detected					0.3	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
71) Trichloroethene	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
88) Toluene	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
148) Naphthalene	(4)				Not Detected					1	5

Digitally signed by Linda C. Pape on 12/09/2019 at 11:49. Target 3.5 esignature user ID: lcp00895

DIF09 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1212649

Data file: /chem2/HP09355.i/19dec07a.b/yd07s04.d Injection date and time: **07-DEC-2019 13:55**
Data file Sample Info. Line: DIF09;1212649;1;0;;JCW27;;;yd07b01; Instrument ID: **HP09355.i** Batch: **Y193411AA**
Date, time and analyst ID of latest file update: 07-Dec-2019 14:12 Automation

Blank Data file reference: **/chem2/HP09355.i/19dec07a.b/yd07b01.d**

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: **27374**
Calibration date and time (Last Method Edit): 07-DEC-2019 11:45
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec07a.b/yd07c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

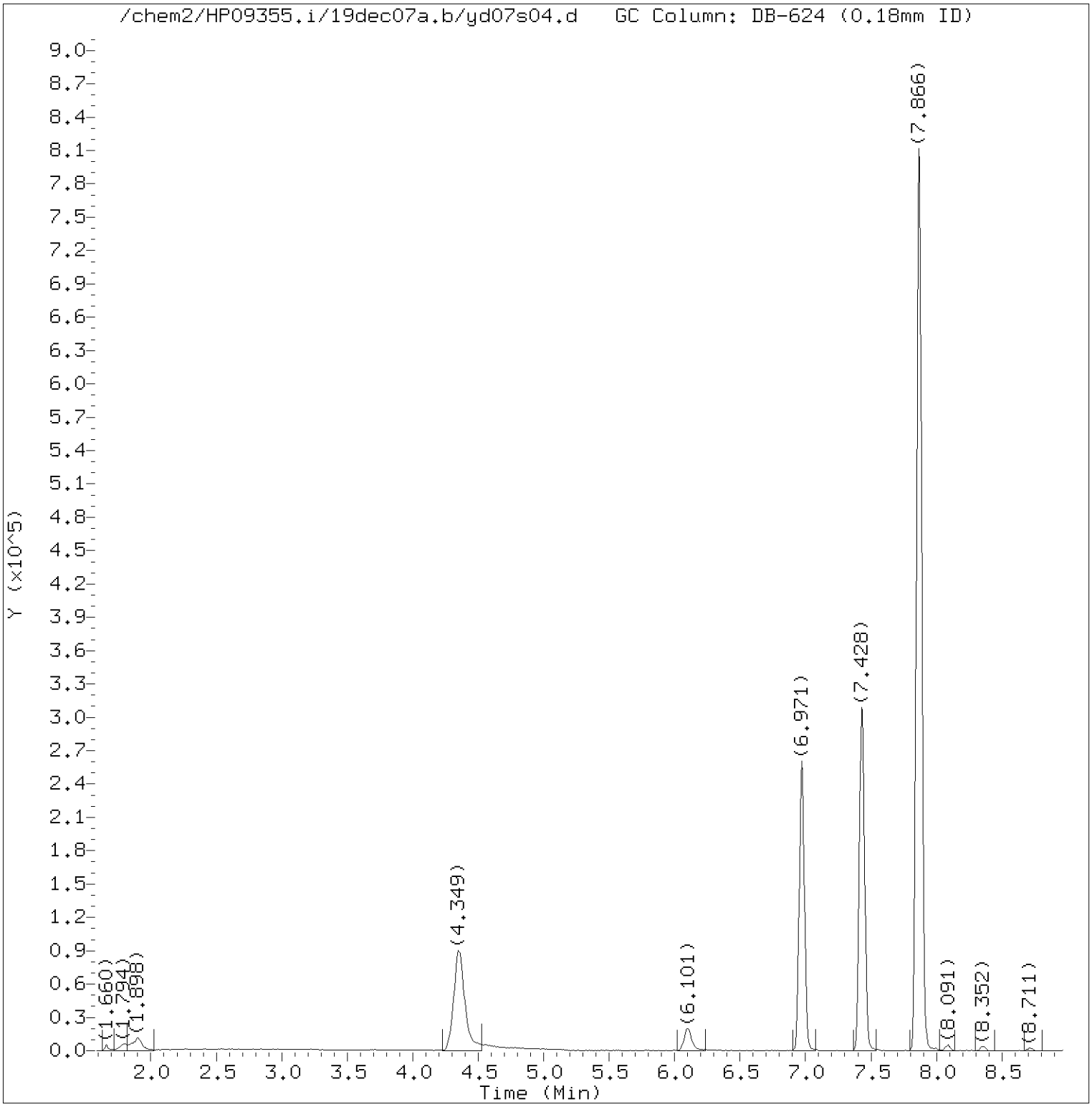
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 24

Digitally signed by Linda C. Pape on 12/09/2019 at 11:49. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 12/09/2019 at 19:18. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

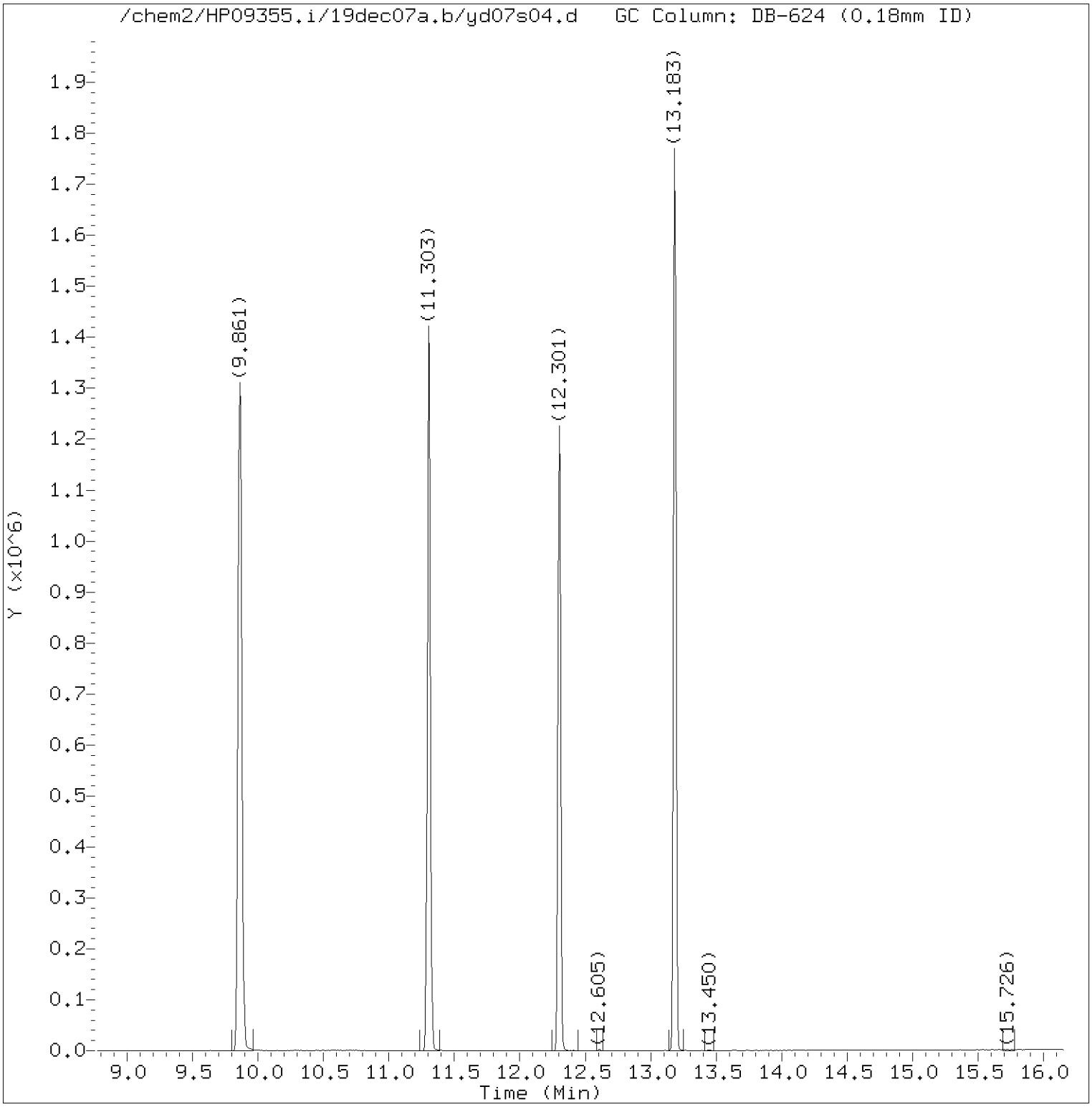
Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07s04.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 13:55 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 14:12 Automation

Sample Name: DIF09 Lab Sample ID: 1212649

Digitally signed by Linda C. Pape
on 12/09/2019 at 11:49.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07s04.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 13:55 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 14:12 Automation

Sample Name: DIF09 Lab Sample ID: 1212649

Digitally signed by Linda C. Pape
on 12/09/2019 at 11:49.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07s04.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 13:55 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 27374
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 14:12 Automation

Sample Name: DIF09 Lab Sample ID: 1212649

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.349	65	298491	250.000
52)$Dibromofluoromethane	(2)	6.971	113	236547	45.181
57)$1,2-Dichloroethane-d4	(2)	7.434	102	66035	48.245
66)*Fluorobenzene	(2)	7.866	96	1115777	50.000
83)$Toluene-d8	(3)	9.861	98	1064361	48.580
100)*Chlorobenzene-d5	(3)	11.303	117	809759	50.000
114)$4-Bromofluorobenzene	(3)	12.301	95	396154	47.325
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	414714	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 12/09/2019 at 11:49.
Target 3.5 esignature user ID: lcp00895

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09355 **HP #20**

Data Directory Path is - C:\MSDCHEM\1\DATA\19SEP10C\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
KAS02648	YS10T51.D	50NGBFB	09/10/2019	12:17		
KAS02648	YS10X01.D	BLANK	09/10/2019	12:28		
KAS02648	YS10I51.D	VSTD300	09/10/2019	12:50		
KAS02648	YS10I52.D	VSTD100	09/10/2019	13:12		
KAS02648	YS10I53.D	VSTD050	09/10/2019	13:34		
KAS02648	YS10I54.D	VSTD020	09/10/2019	13:57		
KAS02648	YS10I55.D	VSTD010	09/10/2019	14:18		
KAS02648	YS10I56.D	VSTD004	09/10/2019	14:40		
KAS02648	YS10I57.D	VSTD001	09/10/2019	15:02		
KAS02648	YS10X11.D	BLANK	09/10/2019	16:35		
KAS02648	YS10V51.D	YLGICV	09/10/2019	16:58		
KAS02648	YS10X12.D	BLANK	09/10/2019	17:22		
KAS02648	YS10I61.D	VSTD300	09/10/2019	17:44		
KAS02648	YS10I62.D	VSTD100	09/10/2019	18:06		
KAS02648	YS10I63.D	VSTD050	09/10/2019	18:28		
KAS02648	YS10I64.D	VSTD020	09/10/2019	18:50		
KAS02648	YS10I65.D	VSTD010	09/10/2019	19:12		
KAS02648	YS10I66.D	VSTD004	09/10/2019	19:34		
KAS02648	YS10V61.D	SMGICV	09/10/2019	19:56		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09355 **HP #20**

Data Directory Path is - C:\MSDCHEM\1\DATA\19DEC05A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
LCP00895	YD05T01.D	50NGBFB	12/05/2019	06:53		
LCP00895	YD05X00.D	CBLK	12/05/2019	07:20	Y193391AA	
LCP00895	YD05C01.D	VSTD050	12/05/2019	07:42	Y193391AA	
LCP00895	YD05S01.D	LCSY15	12/05/2019	08:04	Y193391AA	
LCP00895	YD05R01.D	RVLY15	12/05/2019	08:26	Y193391AA	
LCP00895	YD05B01.D	VBLKY15	12/05/2019	08:48	Y193391AA	
LCP00895	YD05S02.D	1209809	12/05/2019	09:18	Y193391AA	
LCP00895	YD05S03.D	1212678	12/05/2019	09:40	Y193391AA	
LCP00895	YD05S04.D	1212687	12/05/2019	10:02	Y193391AA	
LCP00895	YD05S05.D	1209812	12/05/2019	10:24	Y193391AA	
LCP00895	YD05S06.D	1209813MS	12/05/2019	10:46	Y193391AA	
LCP00895	YD05S07.D	1209814MSD	12/05/2019	11:08	Y193391AA	
LCP00895	YD05S08.D	1209810	12/05/2019	11:30	Y193391AA	
LCP00895	YD05S09.D	1209811	12/05/2019	11:52	Y193391AA	
LCP00895	YD05S10.D	1209817	12/05/2019	12:15	Y193391AA	
LCP00895	YD05S11.D	1209818	12/05/2019	12:36	Y193391AA	
LCP00895	YD05S12.D	1209819	12/05/2019	12:58	Y193391AA	
LCP00895	YD05S13.D	1212680	12/05/2019	13:20	Y193391AA	
LCP00895	YD05S14.D	1212681	12/05/2019	13:42	Y193391AA	
LCP00895	YD05S15.D	1212682	12/05/2019	14:04	Y193391AA	
LCP00895	YD05S16.D	1212683	12/05/2019	14:26	Y193391AA	
LCP00895	YD05S17.D	1212684	12/05/2019	14:48	Y193391AA	
LCP00895	YD05S18.D	1212685	12/05/2019	15:10	Y193391AA	
LCP00895	YD05S19.D	1212686	12/05/2019	15:32	Y193391AA	
LCP00895	YD05S20.D	1208898	12/05/2019	15:54	Y193391AA	
LCP00895	YD05S21.D	1212641	12/05/2019	16:16	Y193391AA	
LCP00895	YD05S22.D	1210802	12/05/2019	16:38	Y193391AA	
LCP00895	YD05S23.D	1210822RE	12/05/2019	17:00	Y193391AA	

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09355 **HP #20**

Data Directory Path is - C:\MSDCHEM\1\DATA\19DEC07A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
MEC29284	YD07T01.D	50NGBFB	12/07/2019	10:51		
MEC29284	YD07X00.D	BLK	12/07/2019	11:05	Y193411AA	
MEC29284	YD07C01.D	VSTD050	12/07/2019	11:27	Y193411AA	
MEC29284	YD07L01.D	LCSY17	12/07/2019	11:50	Y193411AA	
MEC29284	YD07R01.D	RLVY17	12/07/2019	12:11	Y193411AA	
MEC29284	YD07B01.D	VBLKY17	12/07/2019	12:33	Y193411AA	
MEC29284	YD07S02.D	1212524	12/07/2019	13:11	Y193411AA	
MEC29284	YD07S03.D	1212526	12/07/2019	13:33	Y193411AA	
MEC29284	YD07S04.D	1212649	12/07/2019	13:55	Y193411AA	
MEC29284	YD07S05.D	1212692	12/07/2019	14:17	Y193411AA	
MEC29284	YD07S06.D	1212694	12/07/2019	14:39	Y193411AA	
MEC29284	YD07S07.D	1212695	12/07/2019	15:01	Y193411AA	
MEC29284	YD07S08.D	1212696	12/07/2019	15:23	Y193411AA	
MEC29284	YD07S09.D	1212697	12/07/2019	15:45	Y193411AA	
MEC29284	YD07S10.D	1212699	12/07/2019	16:07	Y193411AA	
MEC29284	YD07S11.D	1212515	12/07/2019	16:29	Y193411AA	
MEC29284	YD07S12.D	1212516MS	12/07/2019	16:51	Y193411AA	
MEC29284	YD07S13.D	1212517MSD	12/07/2019	17:13	Y193411AA	
MEC29284	YD07S14.D	1212518	12/07/2019	17:35	Y193411AA	
MEC29284	YD07S15.D	1212519	12/07/2019	17:57	Y193411AA	
MEC29284	YD07S16.D	1212520	12/07/2019	18:19	Y193411AA	
MEC29284	YD07S17.D	1212642	12/07/2019	18:41	Y193411AA	
MEC29284	YD07S18.D	1212643	12/07/2019	19:03	Y193411AA	
MEC29284	YD07S19.D	1212644	12/07/2019	19:25	Y193411AA	
MEC29284	YD07S20.D	1212645	12/07/2019	19:46	Y193411AA	
MEC29284	YD07S21.D	1212646	12/07/2019	20:08	Y193411AA	
MEC29284	YD07S22.D	1212647	12/07/2019	20:30	Y193411AA	
MEC29284	YD07S23.D	1212648	12/07/2019	20:52	Y193411AA	

Data File: /chem2/HP09355.i/19sep10c.b/ys10t51.d

Date : 10-SEP-2019 12:17

Client ID: BFB Aug02-19

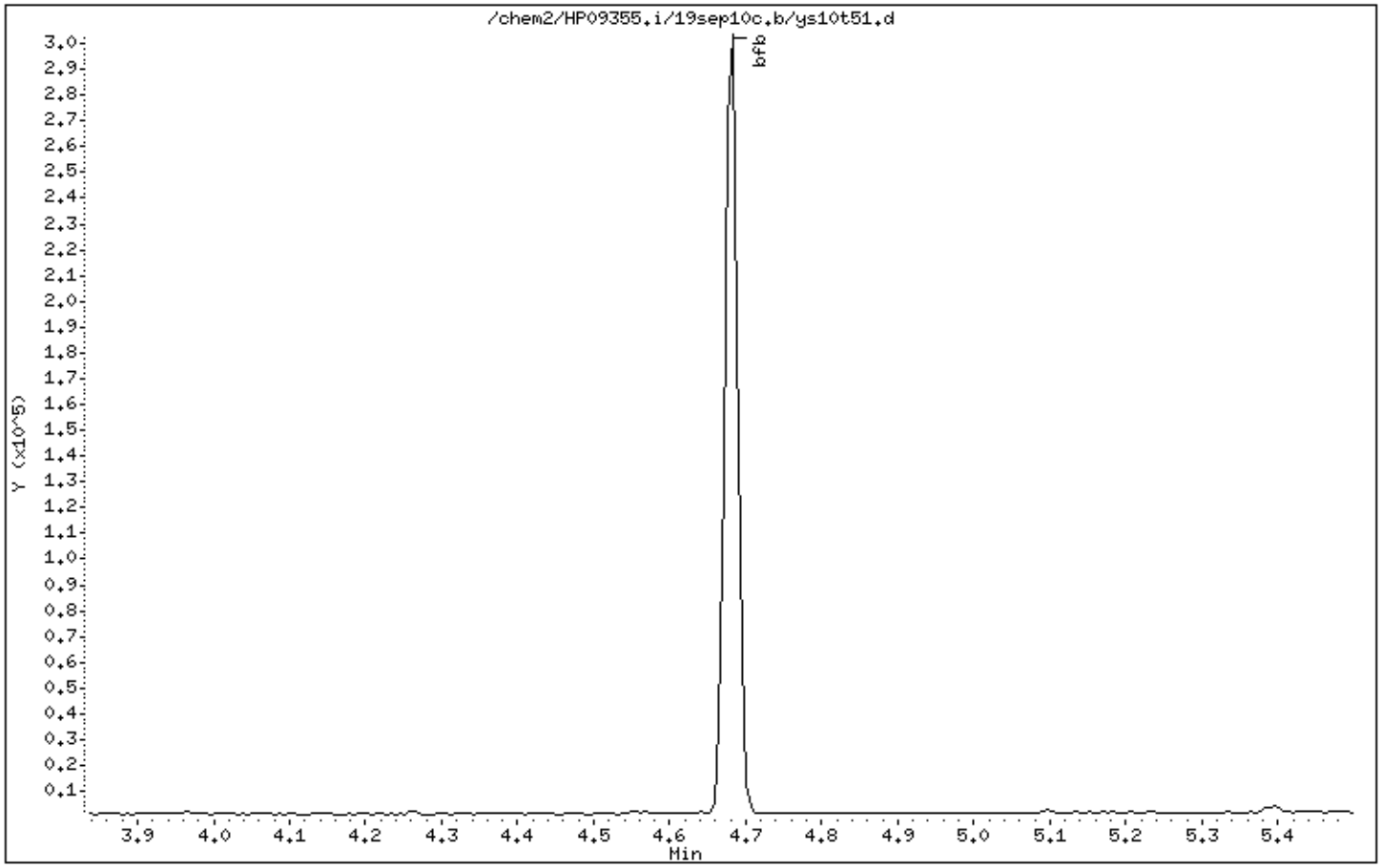
Instrument: HP09355.i

Sample Info: BFB Aug02-19;50NGBFB;1;2;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem2/HP09355.i/19sep10c.b/ys10t51.d

Date : 10-SEP-2019 12:17

Client ID: BFB Aug02-19

Instrument: HP09355.i

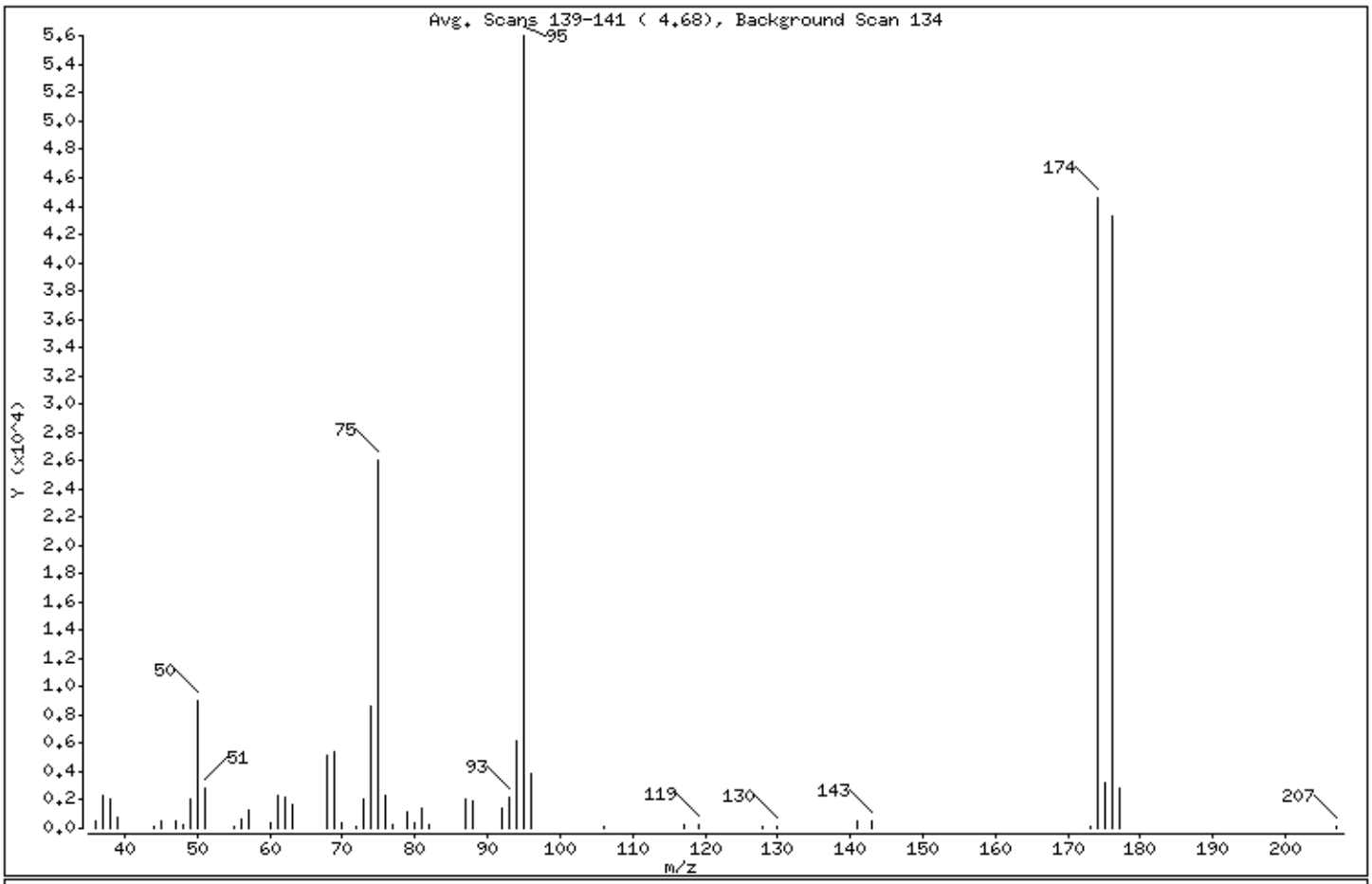
Sample Info: BFB Aug02-19;50NGBFB;1;2;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.02
75	30.00 - 60.00% of mass 95	46.48
96	5.00 - 9.00% of mass 95	6.79
173	Less than 2.00% of mass 174	0.17 (0.22)
174	50.00 - 100.00% of mass 95	79.43
175	5.00 - 9.00% of mass 174	5.80 (7.30)
176	95.00 - 101.00% of mass 174	77.18 (97.17)
177	5.00 - 9.00% of mass 176	4.97 (6.44)

Date : 10-SEP-2019 12:17

Client ID: BFB Aug02-19 Instrument: HP09355.i

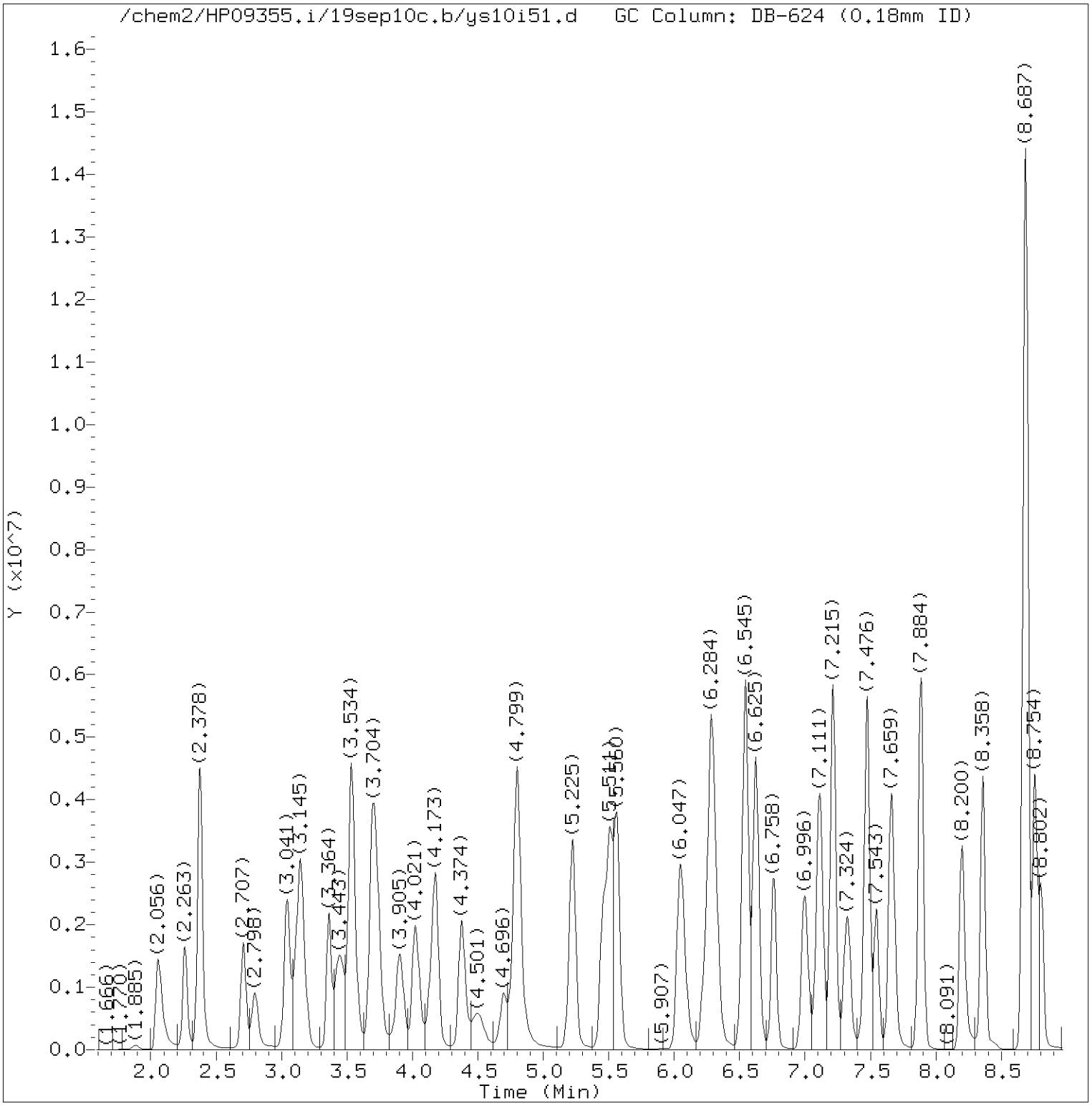
Sample Info: BFB Aug02-19;50NGBFB;1;2;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: ys10t51.d
Spectrum: Avg. Scans 139-141 (4.68), Background Scan 134
Location of Maximum: 95.00
Number of points: 51

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	485	57.00	1308	77.00	270	117.00	221
37.00	2322	60.00	341	79.00	1137	119.00	234
38.00	2095	61.00	2274	80.00	394	128.00	86
39.00	752	62.00	2207	81.00	1358	130.00	96
44.00	166	63.00	1619	82.00	243	141.00	481
45.00	473	68.00	5121	87.00	2078	143.00	512
47.00	568	69.00	5362	88.00	1893	173.00	98
48.00	215	70.00	405	92.00	1443	174.00	44520
49.00	2028	72.00	108	93.00	2186	175.00	3251
50.00	8977	73.00	2114	94.00	6230	176.00	43256
51.00	2865	74.00	8645	95.00	56048	177.00	2784
55.00	85	75.00	26048	96.00	3807	207.00	100
56.00	687	76.00	2266	106.00	87		



Total Ion Chromatogram (TIC)

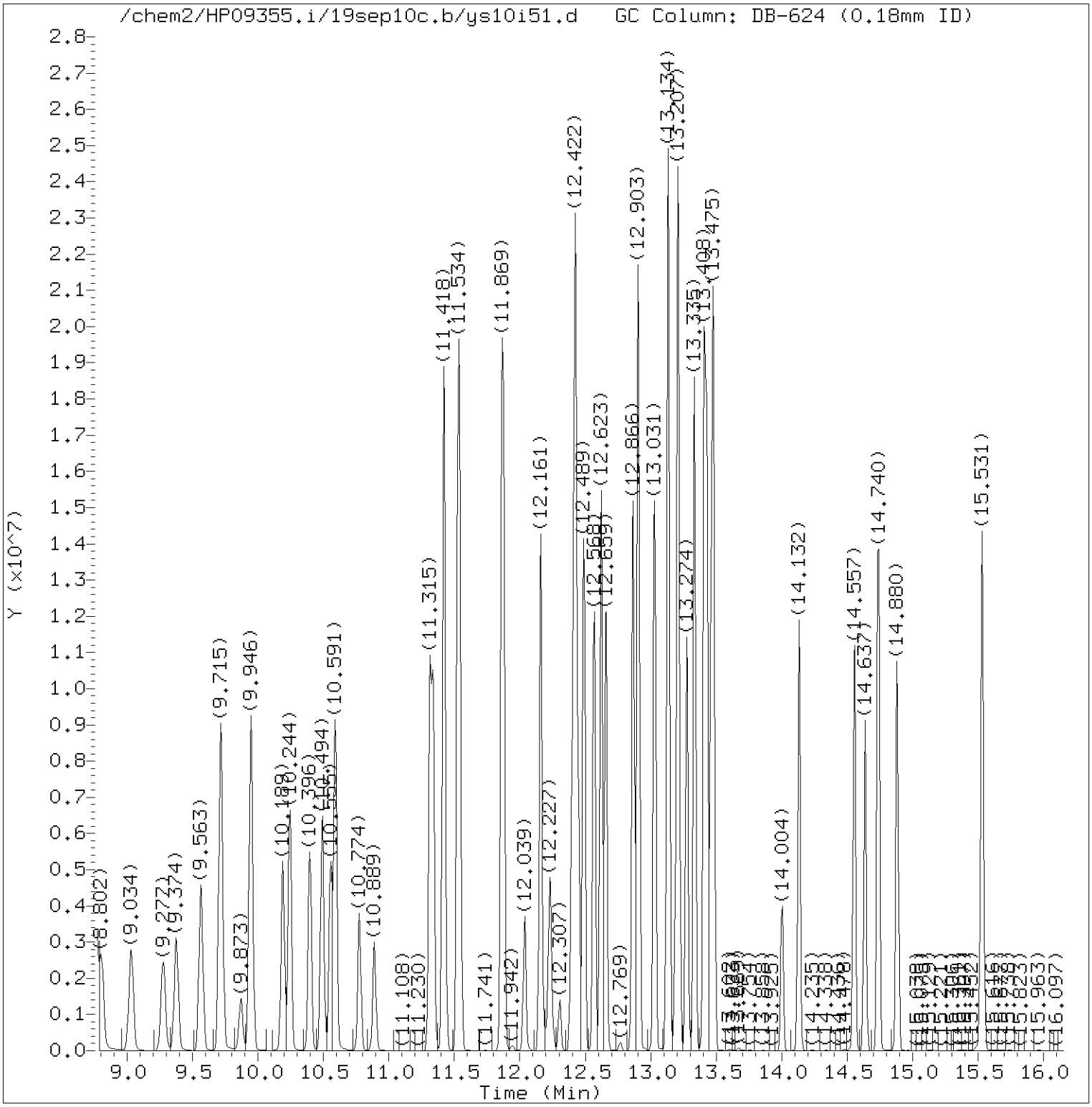
Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 12:50 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:43
Date, time and analyst ID of latest file update: 24-Sep-2019 13:43 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 12:50 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:43
Date, time and analyst ID of latest file update: 24-Sep-2019 13:43 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 12:50 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:43
Date, time and analyst ID of latest file update: 24-Sep-2019 13:43 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.056	85	3302621	300.000
4) Chloromethane	(2)	2.263	50	2617525	300.000
5) 1,3-Butadiene	(2)	2.372	39	1997488	300.000
6) Vinyl Chloride	(2)	2.378	62	2642450	300.000
8) Bromomethane	(2)	2.707	94	1835037	300.000
9) Chloroethane	(2)	2.798	64	1470002	300.000
10) Dichlorofluoromethane	(2)	3.041	67	3150461	300.000
12) Trichlorofluoromethane	(2)	3.114	101	3437421	300.000
11) n-Pentane	(2)	3.151	43	3129940	300.000
14) Ethyl ether	(2)	3.358	59	1856477	300.000
15) Freon 123a	(2)	3.437	67	2101728	300.000
16) Acrolein	(1)	3.534	56	7892985	3000.000
17) 1,1-Dichloroethene	(2)	3.692	96	1607504	300.000
17) 1,1-Dichloroethene	(2)	3.692	63	807772	300.000
18) Acetone	(1)	3.704	58	752807	600.000
19) Freon 113	(2)	3.729	101	1845927	300.000
21) 2-Propanol	(1)	3.875	45	1158028	1500.000
22) Methyl Iodide	(2)	3.905	142	3036220	300.000
23) Carbon Disulfide	(2)	4.021	76	5845742	300.000
27) Methyl Acetate	(2)	4.142	43	2640375	300.000
25) Allyl Chloride	(2)	4.179	41	2696712	300.000
28) Methylene Chloride	(2)	4.374	84	1851316	300.000
29)*t-Butyl alcohol-d10	(1)	4.374	65	354941M	250.000
30) t-Butyl alcohol	(1)	4.501	59	2358571	1500.000
31) Acrylonitrile	(2)	4.696	53	1434818	300.000
33) Methyl Tertiary Butyl Ether	(2)	4.787	73	5964951	300.000
32) trans-1,2-Dichloroethene	(2)	4.806	96	1834987	300.000
34) n-Hexane	(2)	5.225	57	3141643	300.000
36) 1,1-Dichloroethane	(2)	5.456	63	3249176	300.000
38) di-Isopropyl ether	(2)	5.511	45	6026359	300.000
39) 2-Chloro-1,3-butadiene	(2)	5.566	53	3061390	300.000
40) Ethyl t-butyl ether	(2)	6.047	59	5782407	300.000
43) 1,2-Dichloroethene (Total)	(2)		96	3902304	600.000
44) 2-Butanone	(2)	6.241	43	3959459	600.000
42) cis-1,2-Dichloroethene	(2)	6.278	96	2067317	300.000
45) 2,2-Dichloropropane	(2)	6.302	77	2581114	300.000
47) Propionitrile	(1)	6.320	54	2811001	1500.000
48) Methacrylonitrile	(2)	6.545	67	3843252	750.000

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 12:50 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:43
Date, time and analyst ID of latest file update: 24-Sep-2019 13:43 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.618	128	1086773	300.000
50) Tetrahydrofuran	(1)	6.631	71	1203361	600.000
51) Chloroform	(2)	6.758	83	3172682	300.000
52)$Dibromofluoromethane	(2)	6.977	113	278159	50.000
52)$Dibromofluoromethane	(2)	6.977	111	284864	50.000
53) 1,1,1-Trichloroethane	(2)	7.002	97	2819927	300.000
54) Cyclohexane	(2)	7.111	56	3611221	300.000
54) Cyclohexane	(2)	7.111	84	3132183	300.000
54) Cyclohexane	(2)	7.111	69	1158609	300.000
55) 1,1-Dichloropropene	(2)	7.215	75	2670224	300.000
56) Carbon Tetrachloride	(2)	7.221	117	2536383	300.000
58) Isobutyl Alcohol	(1)	7.324	41	1969759	3750.000
57)$1,2-Dichloroethane-d4	(2)	7.440	102	71576	50.000
57)$1,2-Dichloroethane-d4	(2)	7.440	65	343154	50.000
57)$1,2-Dichloroethane-d4	(2)	7.440	104	45089	50.000
60) Benzene	(2)	7.476	78	7520831	300.000
61) 1,2-Dichloroethane	(2)	7.543	62	2602523	300.000
61) 1,2-Dichloroethane	(2)	7.549	98	243333	300.000
65) t-Amyl methyl ether	(2)	7.659	73	5638185	300.000
66)*Fluorobenzene	(2)	7.878	96	1182603	50.000
67) n-Heptane	(2)	7.890	43	3227137	300.000
69) n-Butanol	(1)	8.200	56	3646668	7500.000
71) Trichloroethene	(2)	8.358	95	2023721	300.000
72) Methylcyclohexane	(2)	8.675	83	3863837	300.000
72) Methylcyclohexane	(2)	8.675	98	1740597	300.000
73) 1,2-Dichloropropane	(2)	8.687	63	1987963	300.000
76) Methyl Methacrylate	(2)	8.754	69	2440613	300.000
75) 1,4-Dioxane	(1)	8.766	88	434577M	3750.000
74) Dibromomethane	(2)	8.802	93	1330042	300.000
78) Bromodichloromethane	(2)	9.034	83	2495067	300.000
79) 2-Nitropropane	(2)	9.277	41	2084046	600.000
80) 2-Chloroethyl Vinyl Ether	(2)	9.374	63	1784409	300.000
81) cis-1,3-Dichloropropene	(2)	9.563	75	3289680	300.000
82) 4-Methyl-2-pentanone	(2)	9.715	43	7340766	600.000
83)$Toluene-d8	(3)	9.873	98	1189557	50.000
83)$Toluene-d8	(3)	9.873	100	772827	50.000
88) Toluene	(3)	9.946	92	4839053	300.000
90) 1,3-Dichloropropene (total)	(3)		100	6471219	600.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 12:50 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:43
Date, time and analyst ID of latest file update: 24-Sep-2019 13:43 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.189	75	3181539	300.000
91) Ethyl Methacrylate	(3)	10.244	69	3879288	300.000
92) 1,1,2-Trichloroethane	(3)	10.396	97	1913131	300.000
93) Tetrachloroethene	(3)	10.494	166	2033936	300.000
94) 1,3-Dichloropropane	(3)	10.555	76	3264800	300.000
96) 2-Hexanone	(3)	10.591	43	5899218	600.000
97) Dibromochloromethane	(3)	10.774	129	2133659	300.000
99) 1,2-Dibromoethane	(3)	10.889	107	2148102	300.000
100)*Chlorobenzene-d5	(3)	11.309	117	893298	50.000
101) 1-Chlorohexane	(3)	11.315	91	2763517	300.000
102) Chlorobenzene	(3)	11.339	112	5343244	300.000
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	1848362	300.000
104) Ethylbenzene	(3)	11.418	91	8910456	300.000
106) m+p-Xylene	(3)	11.534	106	6997723	600.000
108) Xylene (Total)	(3)		106	10523531	900.000
107) o-Xylene	(3)	11.862	106	3525808	300.000
109) Styrene	(3)	11.875	104	5994793	300.000
110) Bromoform	(3)	12.039	173	1632569	300.000
111) Isopropylbenzene	(3)	12.161	105	8707428	300.000
112) Cyclohexanone	(1)	12.227	55	2148202	3750.000
114)$4-Bromofluorobenzene	(3)	12.307	95	457840	50.000
114)$4-Bromofluorobenzene	(3)	12.307	174	344892	50.000
116) 1,1,2,2-Tetrachloroethane	(4)	12.398	83	3295026	300.000
118) trans-1,4-Dichloro-2-butene	(4)	12.422	53	2741228	750.000
115) Bromobenzene	(4)	12.422	156	2189293	300.000
117) 1,2,3-Trichloropropane	(4)	12.446	110	1050528	300.000
119) n-Propylbenzene	(4)	12.489	91	9803232	300.000
120) 2-Chlorotoluene	(4)	12.568	126	2256418	300.000
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	7730551	300.000
121) 4-Chlorotoluene	(4)	12.659	126	2353742	300.000
124) tert-Butylbenzene	(4)	12.866	134	1715287M	300.000
125) Pentachloroethane	(4)	12.897	167	1444541	300.000
126) 1,2,4-Trimethylbenzene	(4)	12.909	105	7960604	300.000
127) sec-Butylbenzene	(4)	13.031	105	9306402	300.000
129) 1,3-Dichlorobenzene	(4)	13.128	146	4113515	300.000
130) p-Isopropyltoluene	(4)	13.134	119	7960519	300.000
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	467308	50.000
133) 1,4-Dichlorobenzene	(4)	13.201	146	4230102	300.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 12:50 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:43
Date, time and analyst ID of latest file update: 24-Sep-2019 13:43 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134)	1,2,3-Trimethylbenzene	(4)	13.213	105	8091657	300.000
135)	Benzyl Chloride	(4)	13.274	91	7253849	300.000
136)	1,3-Diethylbenzene	(4)	13.335	119	5507761	300.000
141)	Diethylbenzene (total)	(4)		100	15812635	900.000
137)	1,4-Diethylbenzene	(4)	13.408	119	5711083	300.000
139)	n-Butylbenzene	(4)	13.426	92	4494025	300.000
138)	1,2-Dichlorobenzene	(4)	13.462	146	4143710	300.000
140)	1,2-Diethylbenzene	(4)	13.481	119	4593791	300.000
142)	1,2-Dibromo-3-chloropropane	(4)	14.004	75	942506	300.000
144)	1,3,5-Trichlorobenzene	(4)	14.132	180	3223555	300.000
146)	1,2,4-Trichlorobenzene	(4)	14.557	180	3064182	300.000
147)	Hexachlorobutadiene	(4)	14.637	225	1420951	300.000
148)	Naphthalene	(4)	14.740	128	9914649	300.000
149)	1,2,3-Trichlorobenzene	(4)	14.880	180	2959221	300.000
150)	2-Methylnaphthalene	(4)	15.531	142	6927204	300.000

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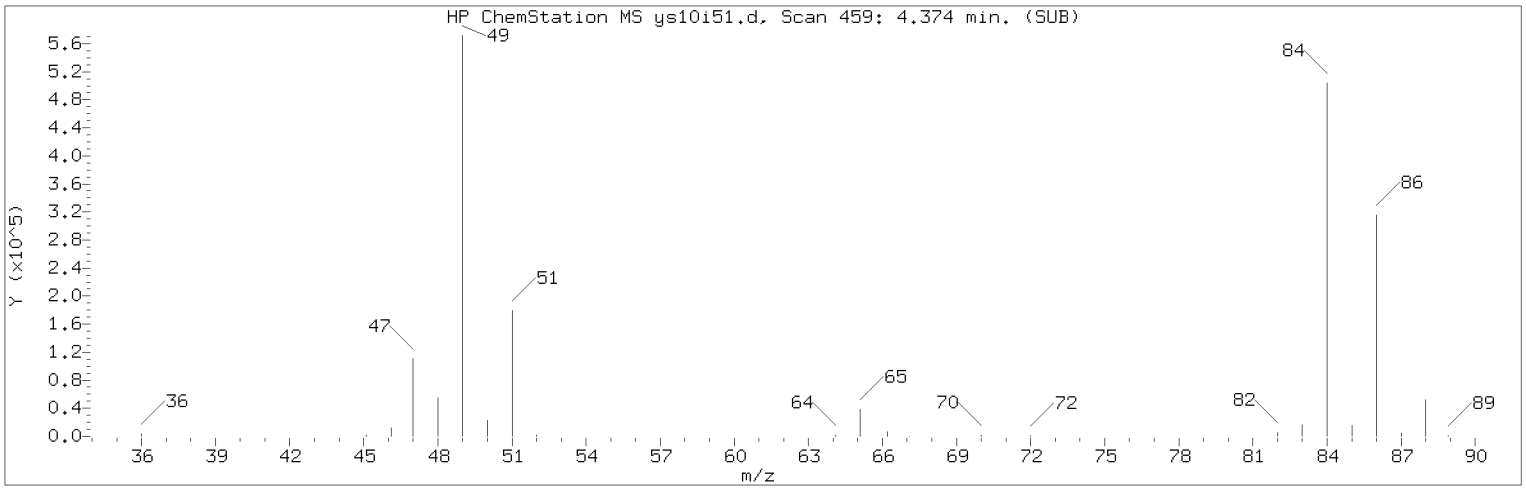
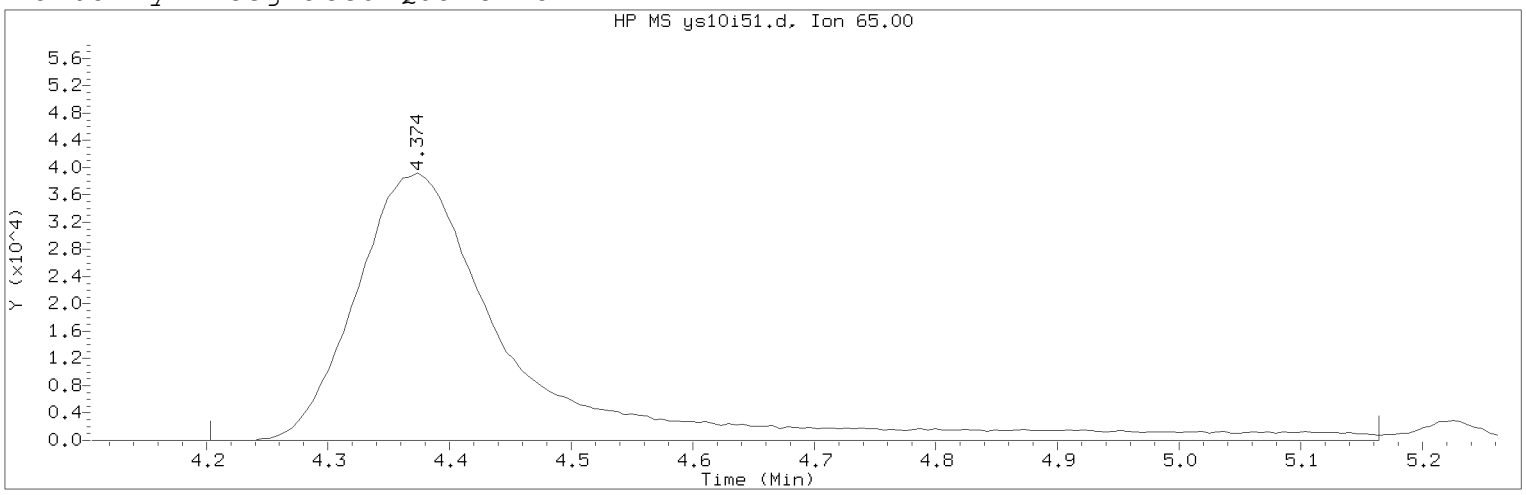
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 12:50 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:43
Date, time and analyst ID of latest file update: 24-Sep-2019 13:43 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

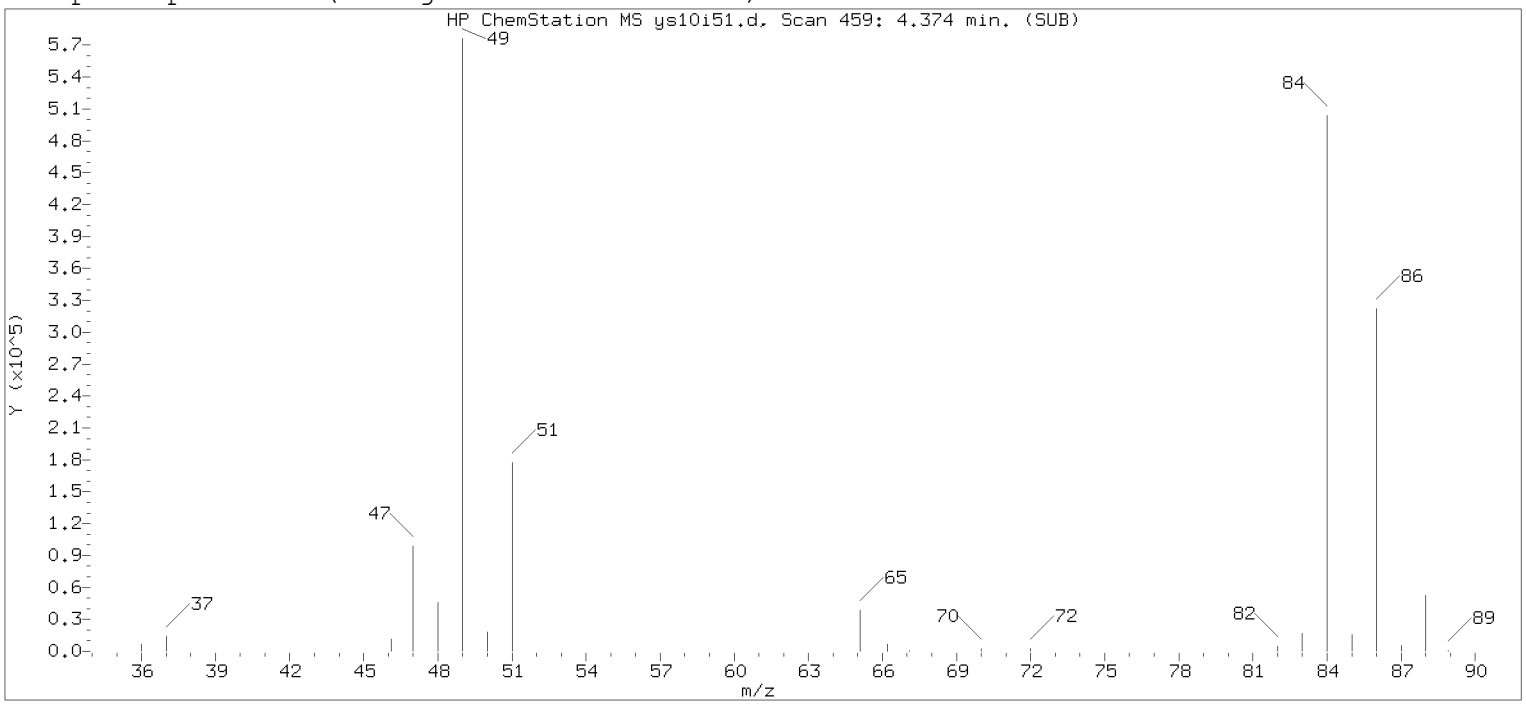
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 459
Retention Time (minutes): 4.374
Quant Ion : 65.00
Area (flag) : 354941M
On-Column Amount (ng) : 250.0000
Integration start scan : 430 Integration stop scan: 588
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

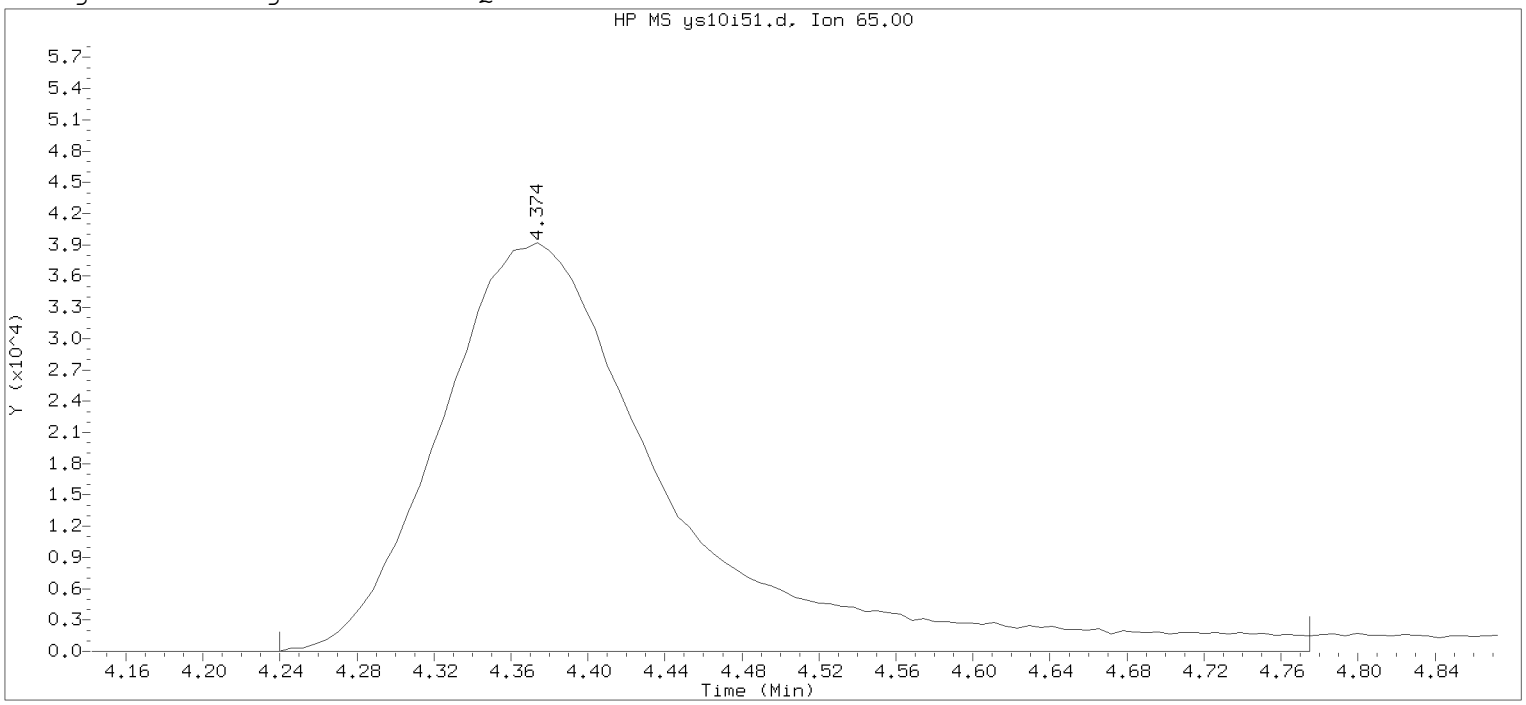
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 12:50 Analyst ID: KAS02648

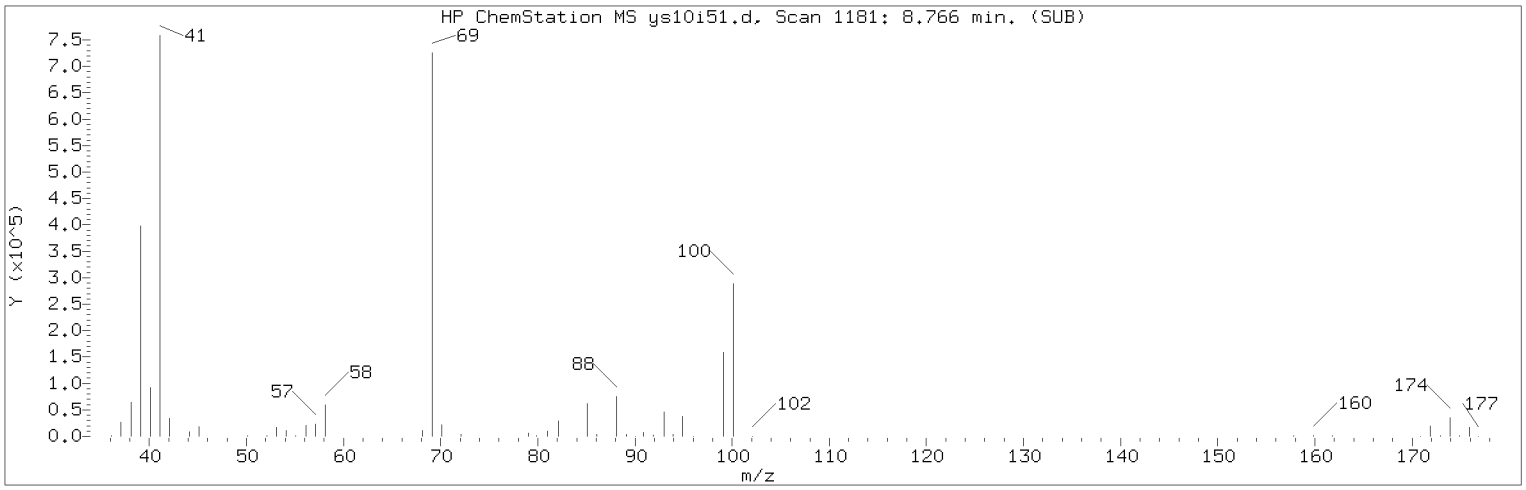
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

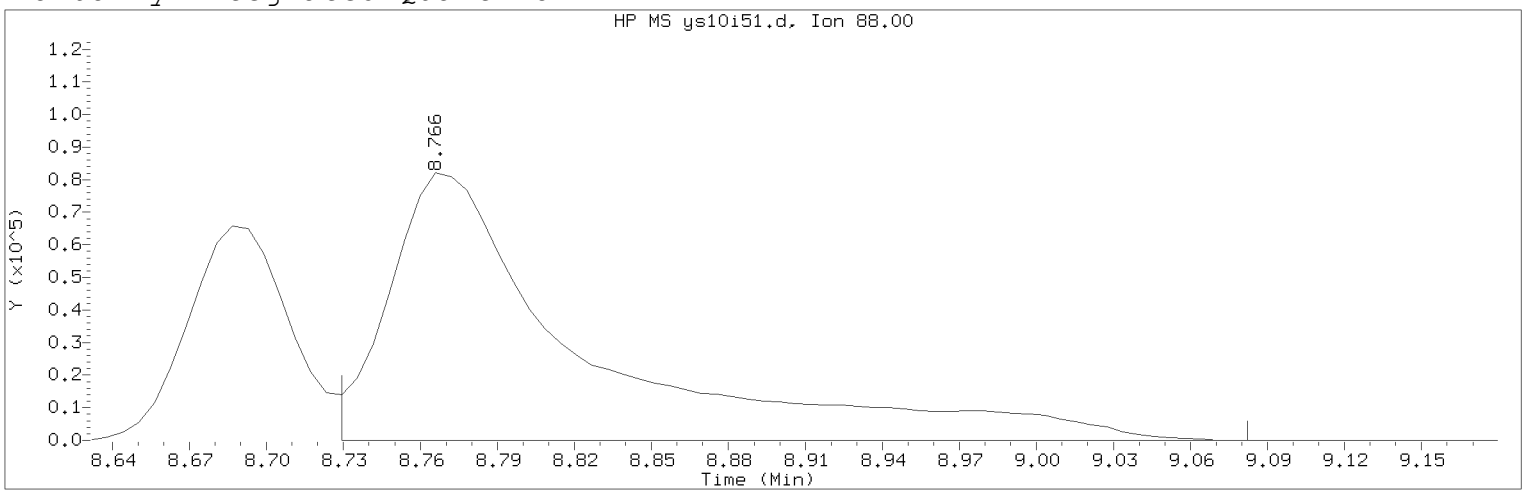
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 459
Retention Time (minutes): 4.374
Quant Ion : 65.00
Area : 324619
On-column Amount (ng) : 250.0000
Integration start scan : 436 Integration stop scan: 524
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 12:50 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:43
Date, time and analyst ID of latest file update: 24-Sep-2019 13:43 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

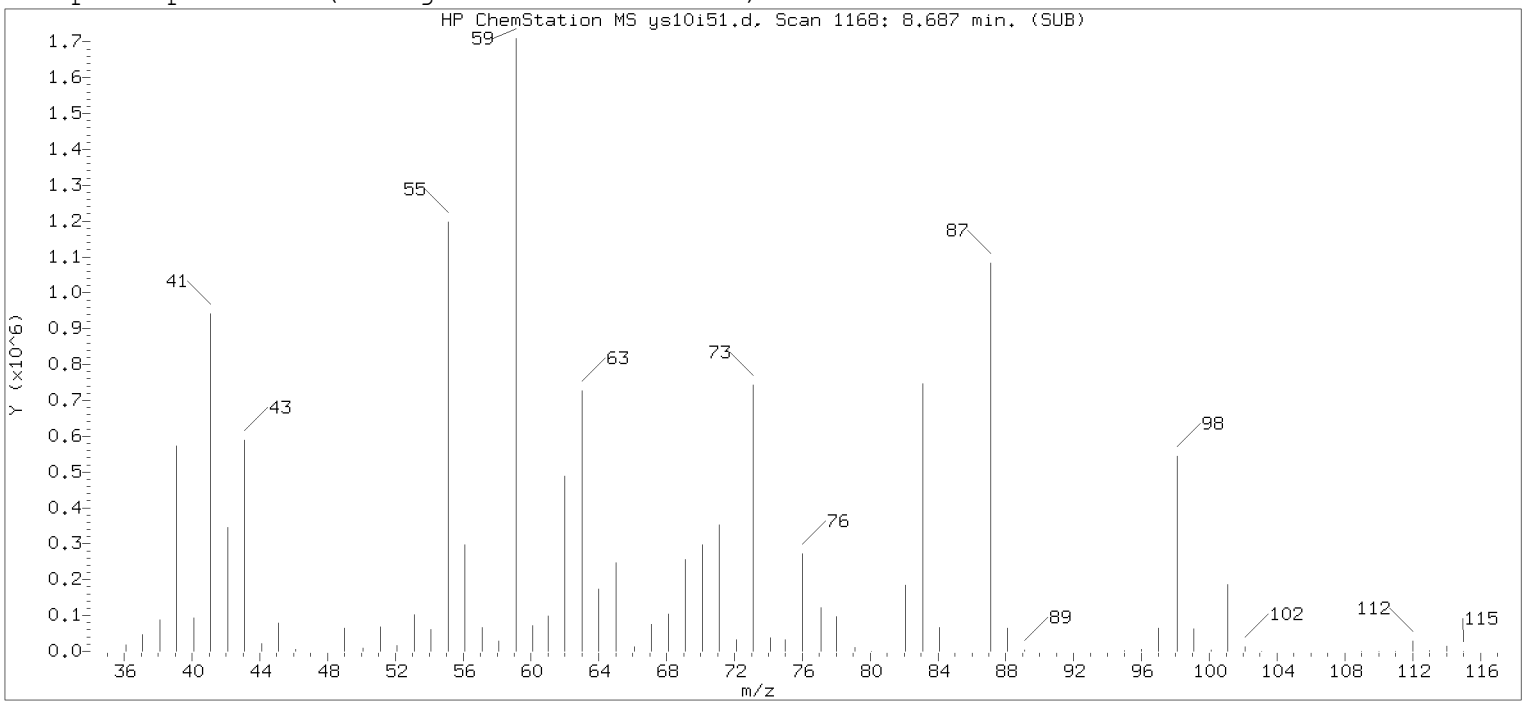
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1181
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area (flag) : 434577M
On-Column Amount (ng) : 3750.0000
Integration start scan : 1174 Integration stop scan: 1232
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

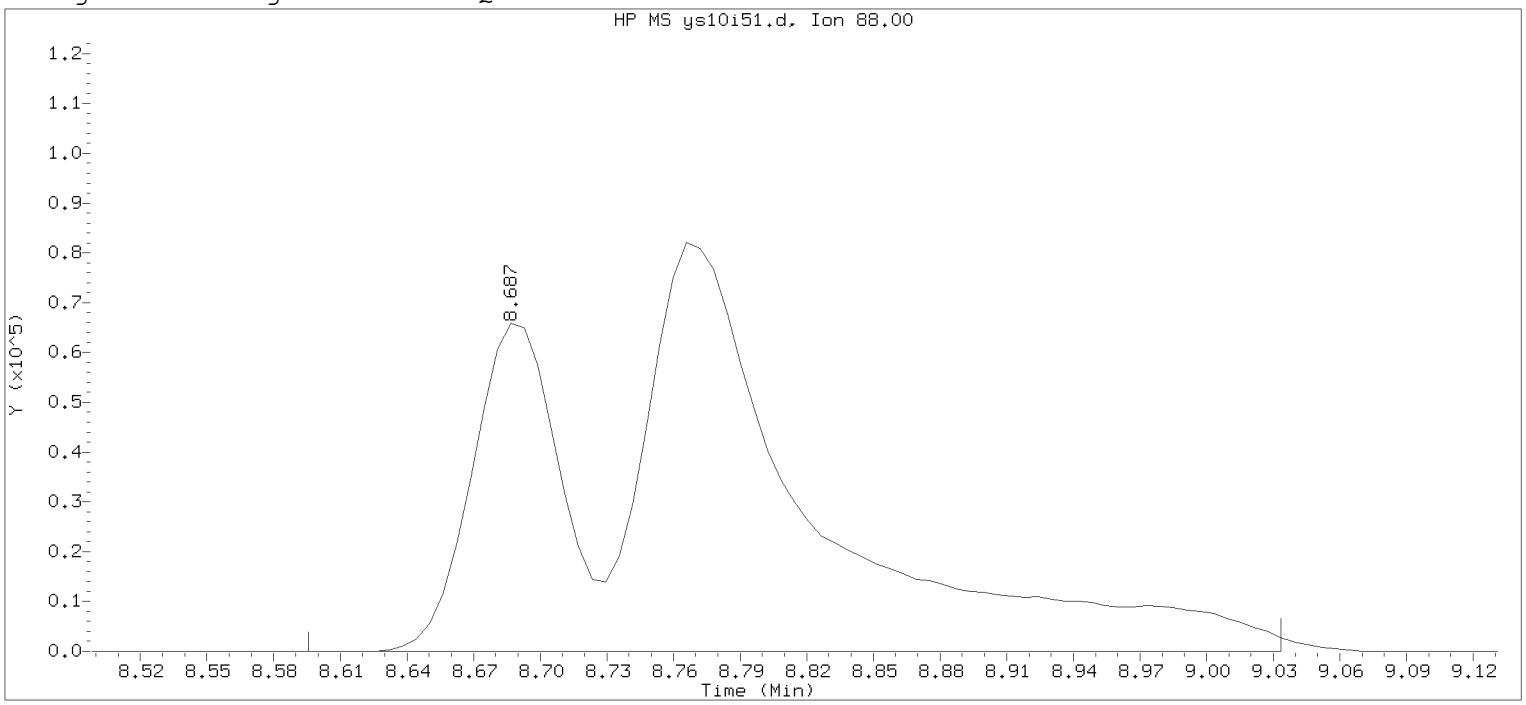
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 12:50 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1168
Retention Time (minutes): 8.687
Quant Ion : 88.00
Area : 610000
On-column Amount (ng) : 4554.9510
Integration start scan : 1152 Integration stop scan: 1224
Y at integration start : 0 Y at integration end: 0

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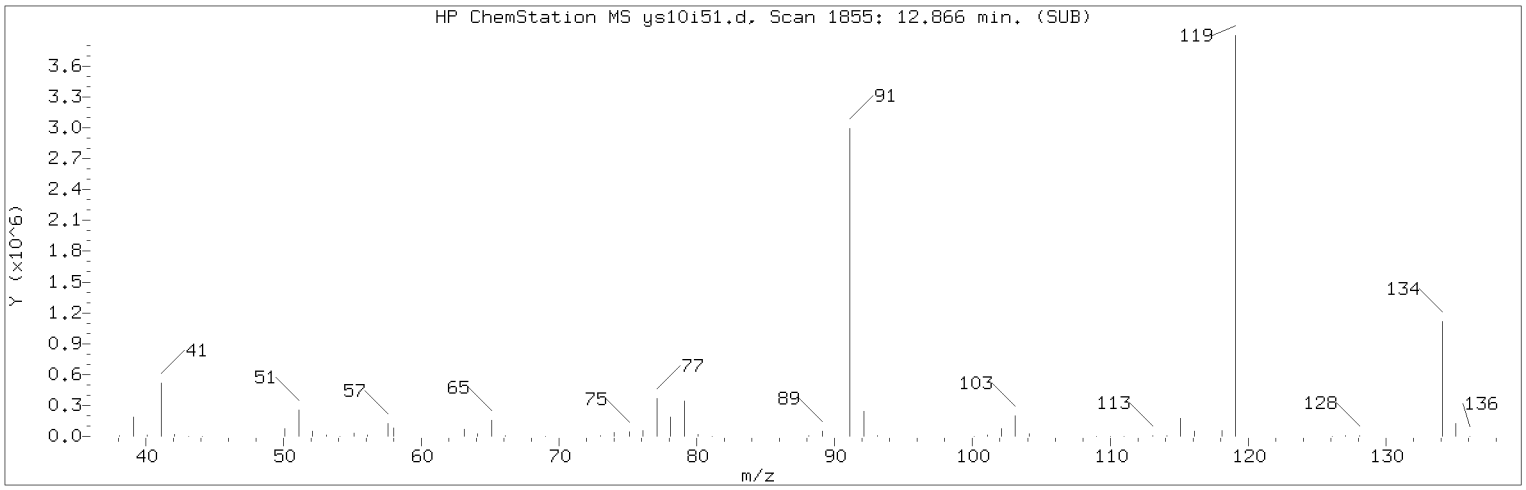
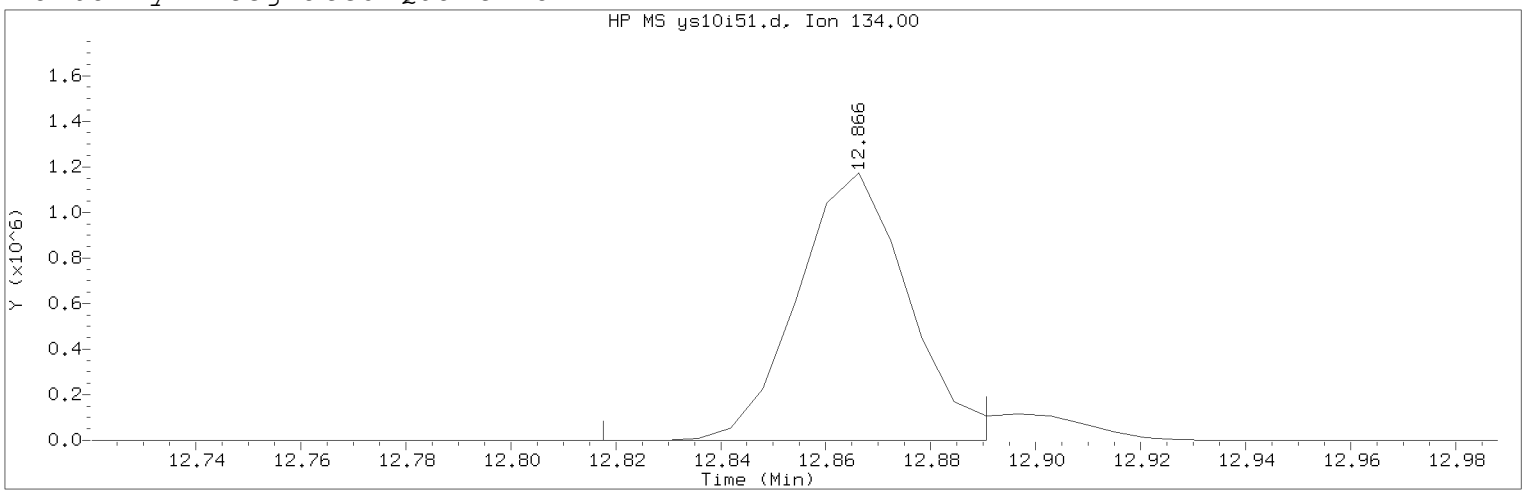
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 10-SEP-2019 12:50 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:43
Date, time and analyst ID of latest file update: 24-Sep-2019 13:43 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

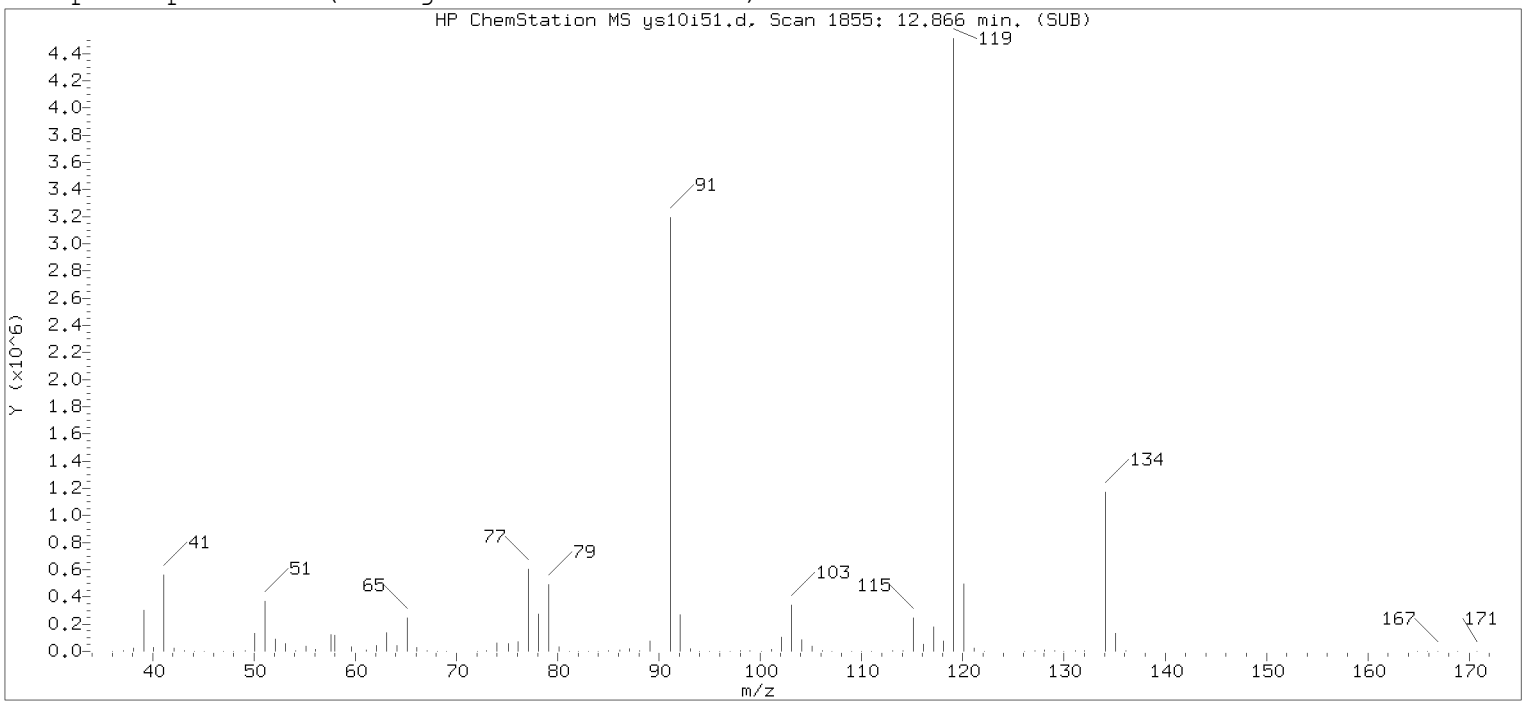
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area (flag) : 1715287M
On-Column Amount (ng) : 300.0000
Integration start scan : 1846 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

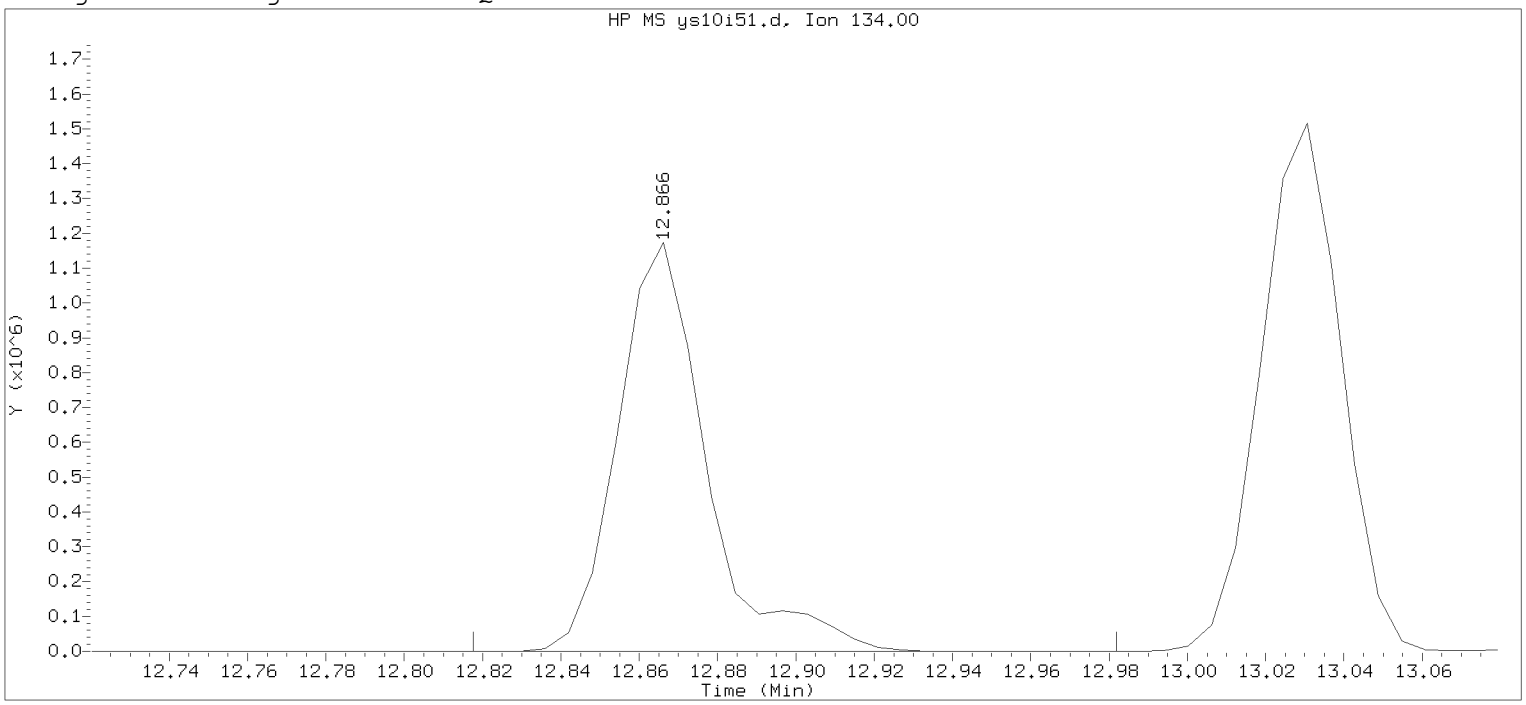
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



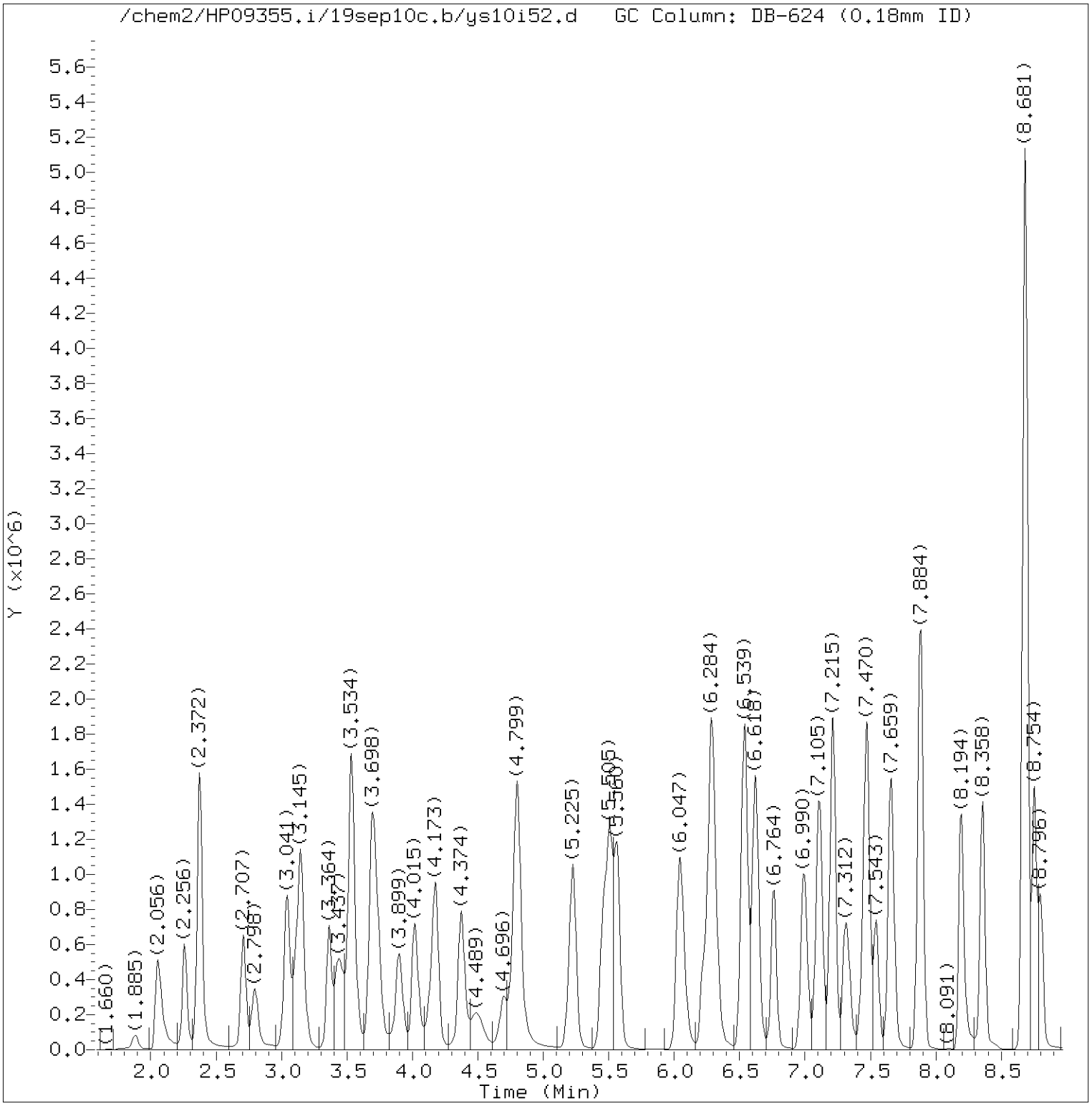
Data File: /chem2/HP09355.i/19sep10c.b/ys10i51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 12:50 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area : 1841356
On-column Amount (ng) : 307.6112
Integration start scan : 1846 Integration stop scan: 1873
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648



Total Ion Chromatogram (TIC)

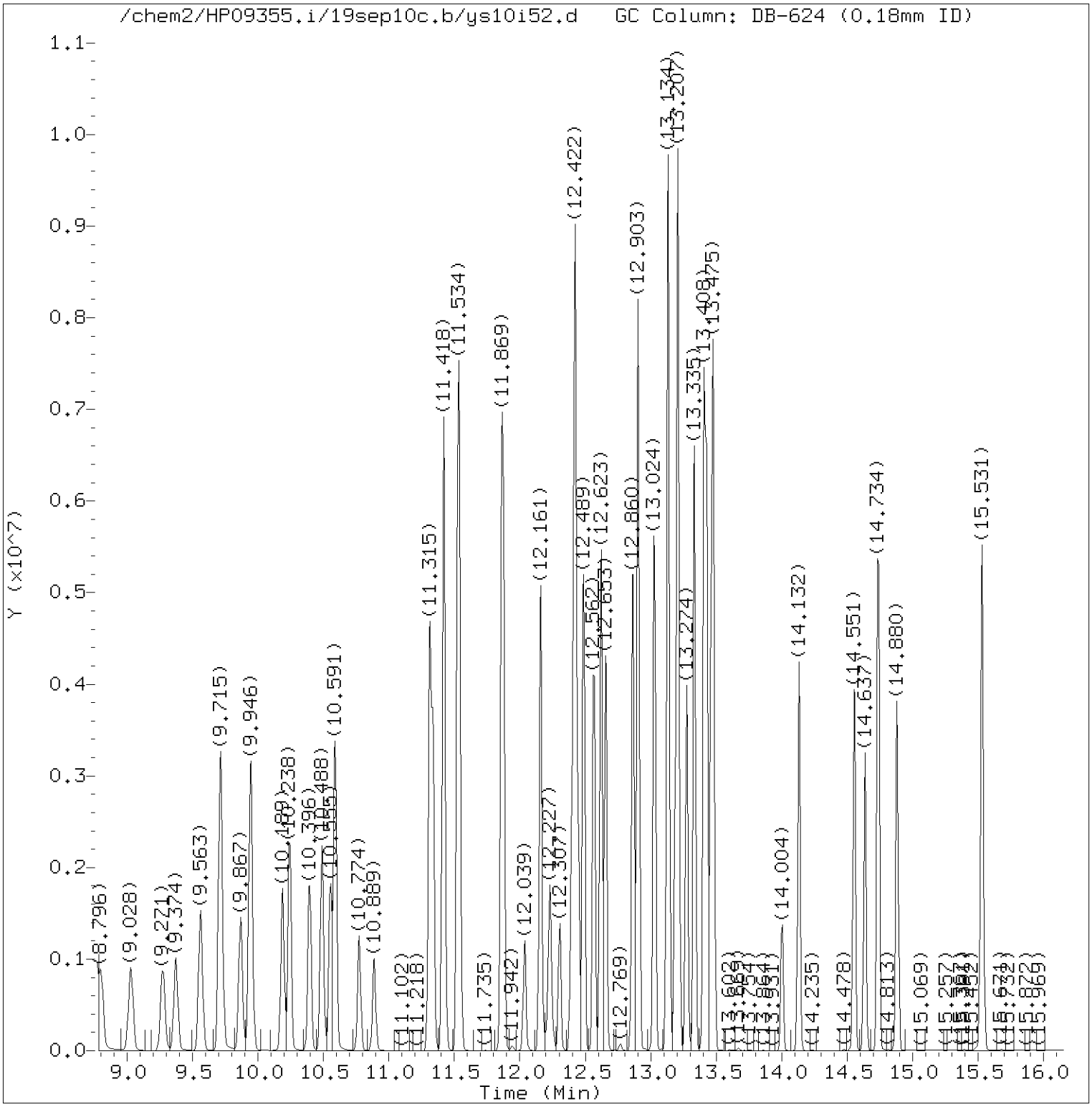
Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.056	85	1147359	101.987
4) Chloromethane	(2)	2.256	50	944564	103.885
5) 1,3-Butadiene	(2)	2.372	39	702236	102.580
6) Vinyl Chloride	(2)	2.378	62	952831	103.846
8) Bromomethane	(2)	2.707	94	689143	105.874
9) Chloroethane	(2)	2.798	64	543101	105.059
10) Dichlorofluoromethane	(2)	3.041	67	1108619	102.627
12) Trichlorofluoromethane	(2)	3.108	101	1210855	102.679
11) n-Pentane	(2)	3.151	43	1099102	102.523
14) Ethyl ether	(2)	3.364	59	617910	99.845
15) Freon 123a	(2)	3.437	67	720737M	101.337
16) Acrolein	(1)	3.534	56	2884658	1022.676
17) 1,1-Dichloroethene	(2)	3.686	96	534280	99.774
17) 1,1-Dichloroethene	(2)	3.686	63	273699	100.737
18) Acetone	(1)	3.698	58	273051	203.777
19) Freon 113	(2)	3.723	101	617061	100.061
21) 2-Propanol	(1)	3.869	45	413976	505.815
22) Methyl Iodide	(2)	3.899	142	1033371	100.960
23) Carbon Disulfide	(2)	4.015	76	1969048	100.441
27) Methyl Acetate	(2)	4.142	43	899672	101.017
25) Allyl Chloride	(2)	4.179	41	921129	101.140
29)*t-Butyl alcohol-d10	(1)	4.367	65	371904M	250.000
28) Methylene Chloride	(2)	4.374	84	630499	100.992
30) t-Butyl alcohol	(1)	4.489	59	830589	502.063
31) Acrylonitrile	(2)	4.696	53	507268	102.861
33) Methyl Tertiary Butyl Ether	(2)	4.787	73	2081087	102.199
32) trans-1,2-Dichloroethene	(2)	4.806	96	614593	100.158
34) n-Hexane	(2)	5.225	57	1060397	100.544
36) 1,1-Dichloroethane	(2)	5.456	63	1112882	101.277
38) di-Isopropyl ether	(2)	5.505	45	2124571	102.720
39) 2-Chloro-1,3-butadiene	(2)	5.566	53	1041021M	100.916
40) Ethyl t-butyl ether	(2)	6.047	59	2055230	103.127
43) 1,2-Dichloroethene (Total)	(2)		96	1308720	200.440
44) 2-Butanone	(2)	6.235	43	1429165	207.793
42) cis-1,2-Dichloroethene	(2)	6.278	96	694127	100.282
45) 2,2-Dichloropropane	(2)	6.302	77	881771	101.147
47) Propionitrile	(1)	6.308	54	964959	495.680
48) Methacrylonitrile	(2)	6.539	67	1303653	251.980

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.618	128	365798	100.405
50) Tetrahydrofuran	(1)	6.631	71	421571	200.304
51) Chloroform	(2)	6.764	83	1078014	100.877
52)$Dibromofluoromethane	(2)	6.977	113	281011	50.214
52)$Dibromofluoromethane	(2)	6.977	111	286329	50.088
53) 1,1,1-Trichloroethane	(2)	6.996	97	944073	100.136
54) Cyclohexane	(2)	7.105	56	1225519	100.815
54) Cyclohexane	(2)	7.111	84	1056451	100.509
54) Cyclohexane	(2)	7.111	69	388311	100.191
55) 1,1-Dichloropropene	(2)	7.209	75	900522	100.502
56) Carbon Tetrachloride	(2)	7.215	117	837940	99.472
58) Isobutyl Alcohol	(1)	7.318	41	702321	1262.907
57)$1,2-Dichloroethane-d4	(2)	7.440	102	71951	50.090
57)$1,2-Dichloroethane-d4	(2)	7.440	65	346940	50.234
57)$1,2-Dichloroethane-d4	(2)	7.440	104	45822	50.363
60) Benzene	(2)	7.476	78	2594248	101.630
61) 1,2-Dichloroethane	(2)	7.543	62	896168	101.544
61) 1,2-Dichloroethane	(2)	7.543	98	81740	100.305
65) t-Amyl methyl ether	(2)	7.659	73	2037697	103.960
66)*Fluorobenzene	(2)	7.872	96	1184522	50.000
67) n-Heptane	(2)	7.884	43	1106685	101.338
69) n-Butanol	(1)	8.194	56	1374199	2594.936
71) Trichloroethene	(2)	8.358	95	675631	99.997
72) Methylcyclohexane	(2)	8.675	83	1288405	99.937
72) Methylcyclohexane	(2)	8.675	98	574772	99.449
73) 1,2-Dichloropropane	(2)	8.687	63	676427	100.947
76) Methyl Methacrylate	(2)	8.754	69	813764	99.933
75) 1,4-Dioxane	(1)	8.766	88	157044M	1271.299
74) Dibromomethane	(2)	8.802	93	445464	100.157
78) Bromodichloromethane	(2)	9.028	83	828036	99.699
79) 2-Nitropropane	(2)	9.271	41	733145	205.226
80) 2-Chloroethyl Vinyl Ether	(2)	9.374	63	565474	97.391
81) cis-1,3-Dichloropropene	(2)	9.563	75	1111602	100.600
82) 4-Methyl-2-pentanone	(2)	9.715	43	2724684	210.580
83)$Toluene-d8	(3)	9.867	98	1198512	50.360
83)$Toluene-d8	(3)	9.867	100	774060	50.213
88) Toluene	(3)	9.946	92	1661853	101.837
90) 1,3-Dichloropropene (total)	(3)		100	2181104	201.368

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on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.189	75	1069502	100.768
91) Ethyl Methacrylate	(3)	10.244	69	1314551	101.169
92) 1,1,2-Trichloroethane	(3)	10.396	97	645930	100.986
93) Tetrachloroethene	(3)	10.488	166	707822	102.499
94) 1,3-Dichloropropane	(3)	10.555	76	1118302	101.707
96) 2-Hexanone	(3)	10.591	43	2225376	213.045
97) Dibromochloromethane	(3)	10.774	129	704152	99.846
99) 1,2-Dibromoethane	(3)	10.889	107	724883	100.960
100)*Chlorobenzene-d5	(3)	11.309	117	887141	50.000
101) 1-Chlorohexane	(3)	11.315	91	924388	100.520
102) Chlorobenzene	(3)	11.339	112	1859545	102.501
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	638681	102.144
104) Ethylbenzene	(3)	11.418	91	3215249	104.308
106) m+p-Xylene	(3)	11.534	106	2524900	208.609
108) Xylene (Total)	(3)		106	3768618	311.784
107) o-Xylene	(3)	11.862	106	1243718	103.175
109) Styrene	(3)	11.875	104	2140719	103.787
110) Bromoform	(3)	12.039	173	525774	98.625
111) Isopropylbenzene	(3)	12.161	105	3186335	105.007
112) Cyclohexanone	(1)	12.227	55	803216	1292.587
114)$4-Bromofluorobenzene	(3)	12.307	95	458744	50.222
114)$4-Bromofluorobenzene	(3)	12.307	174	347038	50.328
116) 1,1,2,2-Tetrachloroethane	(4)	12.398	83	1131821	100.962
118) trans-1,4-Dichloro-2-butene	(4)	12.422	53	1040841	264.913
115) Bromobenzene	(4)	12.422	156	806401	104.451
117) 1,2,3-Trichloropropane	(4)	12.446	110	357637	100.515
119) n-Propylbenzene	(4)	12.489	91	3740682	106.211
120) 2-Chlorotoluene	(4)	12.568	126	771206	100.712
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	2800105	103.613
121) 4-Chlorotoluene	(4)	12.659	126	805927	100.803
124) tert-Butylbenzene	(4)	12.866	134	588973M	100.943
125) Pentachloroethane	(4)	12.897	167	478922	99.191
126) 1,2,4-Trimethylbenzene	(4)	12.903	105	2964362	104.995
127) sec-Butylbenzene	(4)	13.024	105	3552695	106.233
129) 1,3-Dichlorobenzene	(4)	13.128	146	1538997	105.229
130) p-Isopropyltoluene	(4)	13.134	119	3102536	107.265
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	472377	50.000
133) 1,4-Dichlorobenzene	(4)	13.207	146	1562410	104.588

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on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.207	105	3071118	105.945
135) Benzyl Chloride	(4)	13.274	91	2532840	101.781
136) 1,3-Diethylbenzene	(4)	13.335	119	1974888	103.108
141) Diethylbenzene (total)	(4)		100	5729065	310.859
137) 1,4-Diethylbenzene	(4)	13.408	119	2089382	104.112
139) n-Butylbenzene	(4)	13.426	92	1614874M	103.215
138) 1,2-Dichlorobenzene	(4)	13.462	146	1491233	103.291
140) 1,2-Diethylbenzene	(4)	13.481	119	1664795	103.639
142) 1,2-Dibromo-3-chloropropane	(4)	14.004	75	315738	99.710
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	1142462	102.526
146) 1,2,4-Trichlorobenzene	(4)	14.557	180	1096553	103.010
147) Hexachlorobutadiene	(4)	14.637	225	505131	102.677
148) Naphthalene	(4)	14.740	128	3942009	108.256
149) 1,2,3-Trichlorobenzene	(4)	14.880	180	1058199	102.972
150) 2-Methylnaphthalene	(4)	15.531	142	2670961	106.730

M = Compound was manually integrated.

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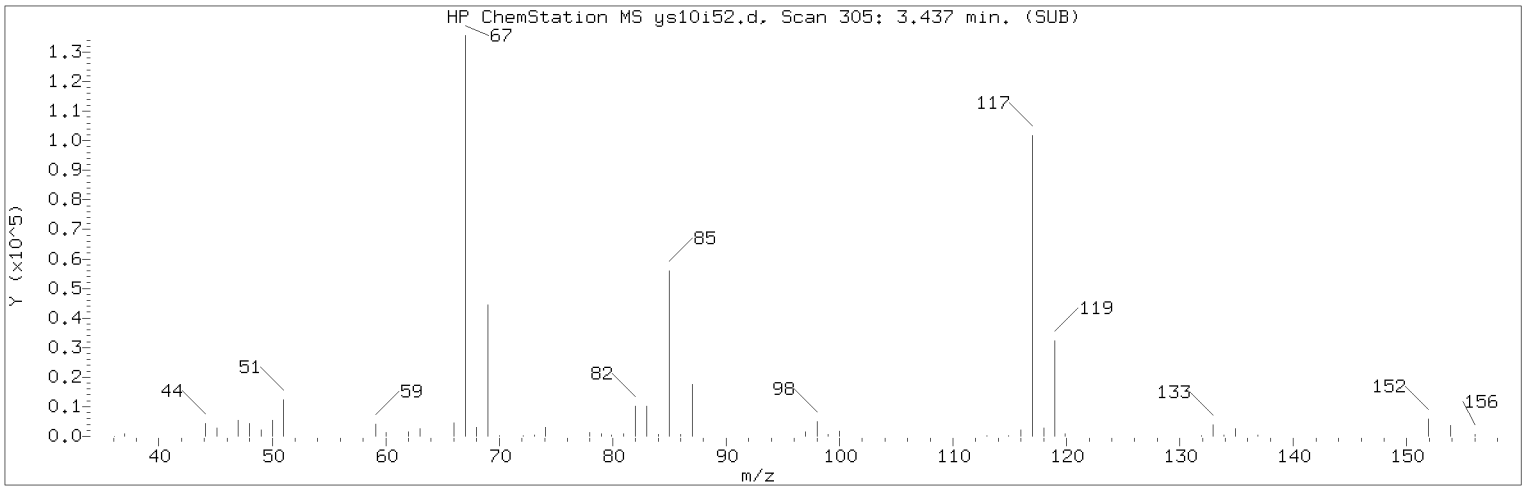
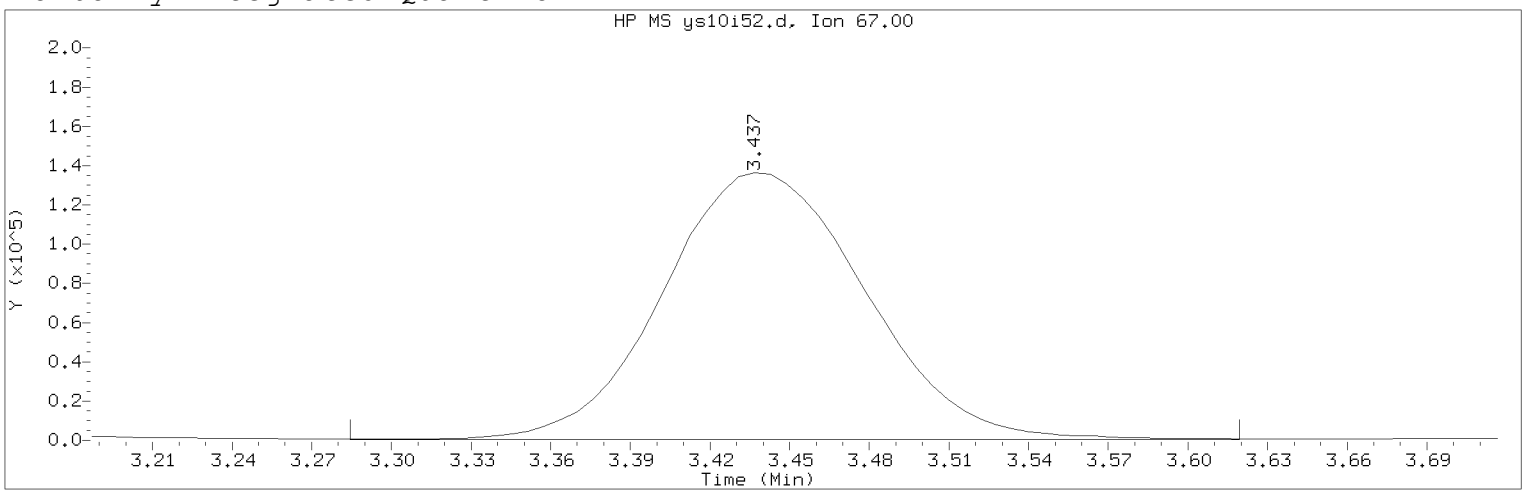
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

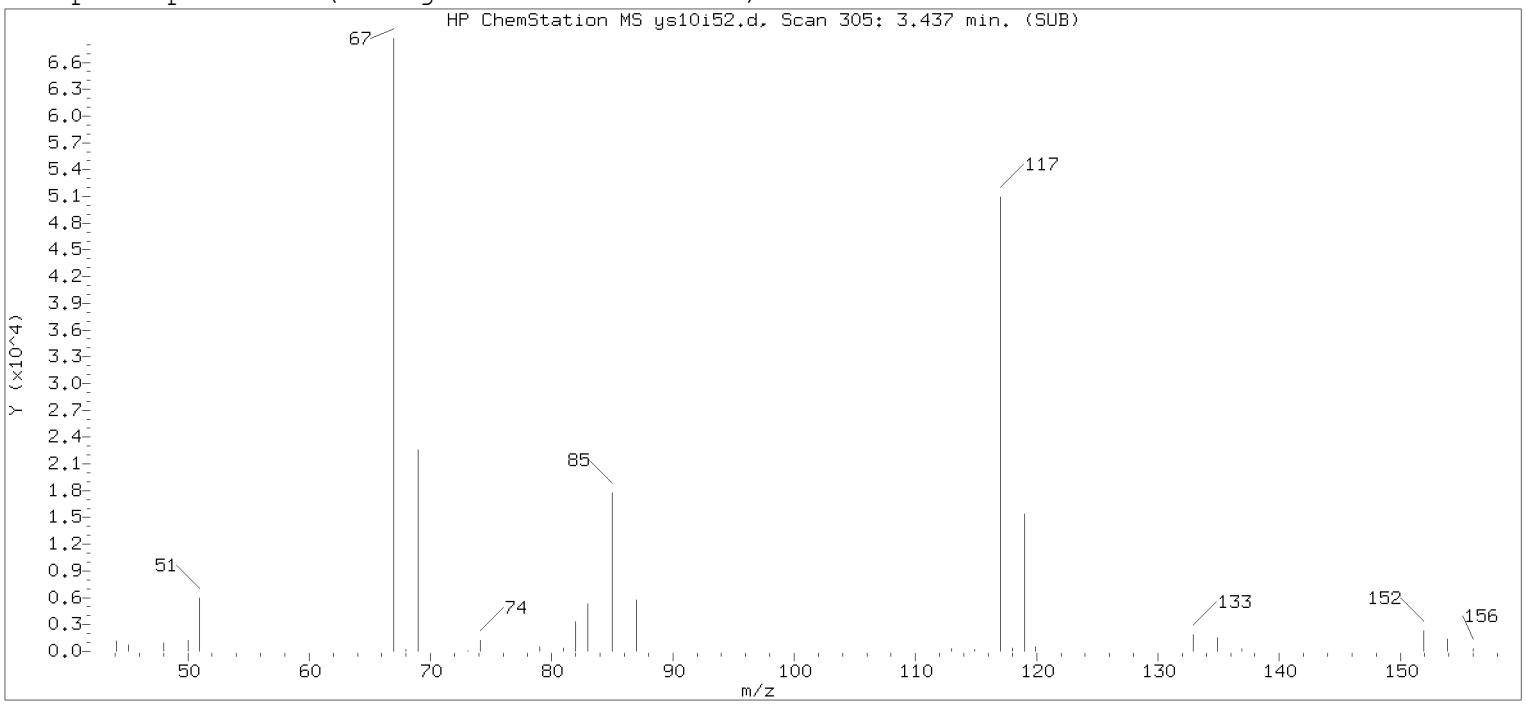
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 305
Retention Time (minutes): 3.437
Quant Ion : 67.00
Area (flag) : 720737M
On-Column Amount (ng) : 101.3374
Integration start scan : 279 Integration stop scan: 334
Y at integration start : 415 Y at integration end: 415

Reason for manual integration: improper integration

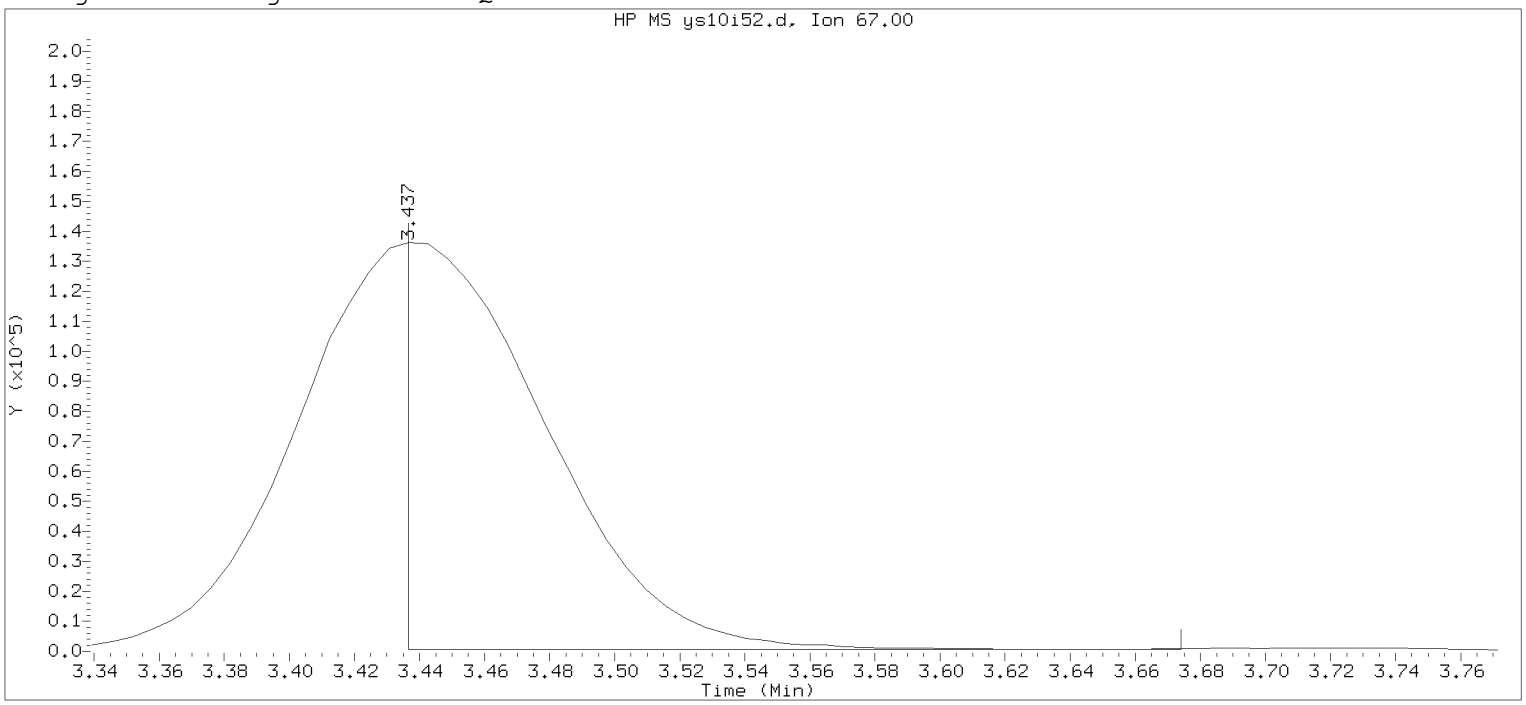
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

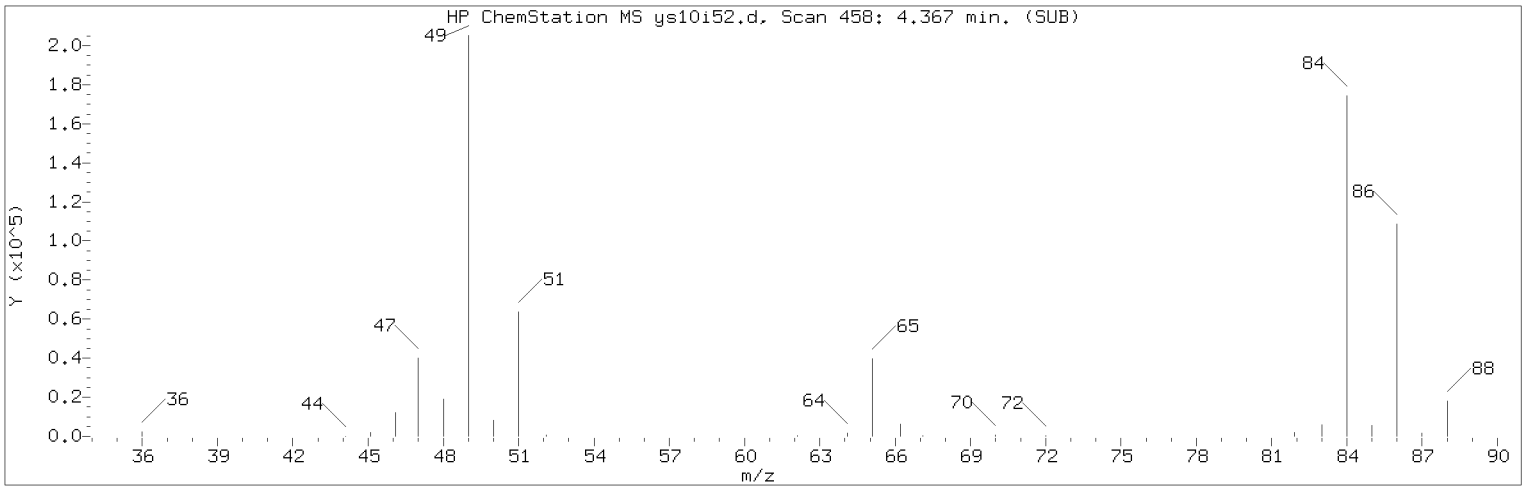
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

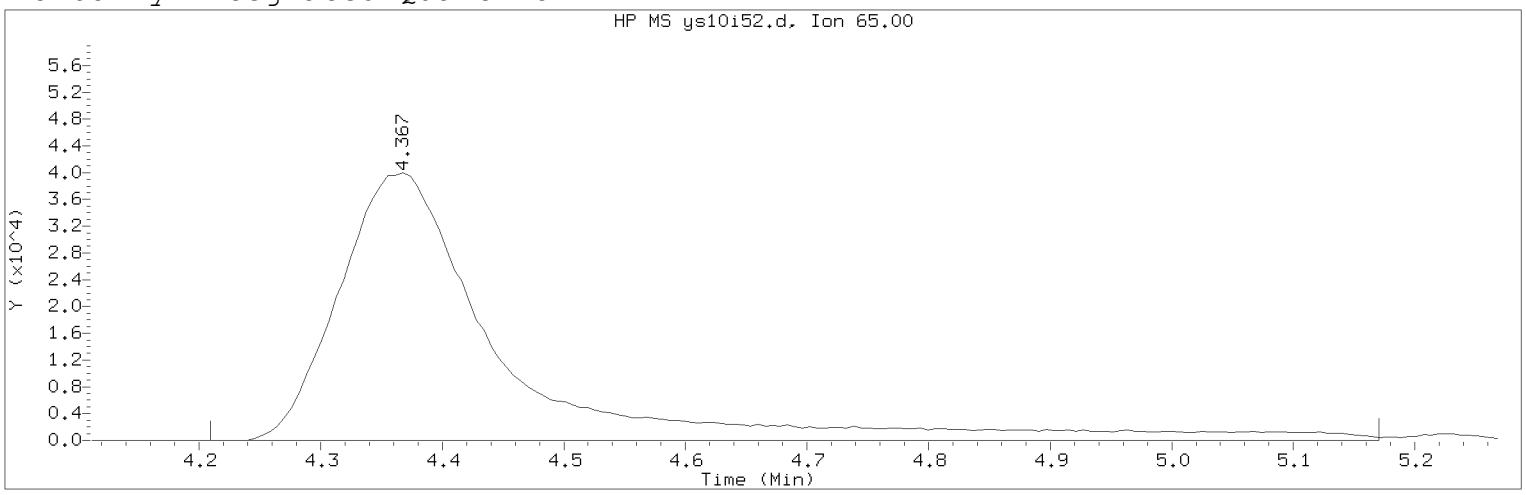
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 305
Retention Time (minutes): 3.437
Quant Ion : 67.00
Area : 393782
On-column Amount (ng) : 65.4221
Integration start scan : 304 Integration stop scan: 343
Y at integration start : 552 Y at integration end: 666

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

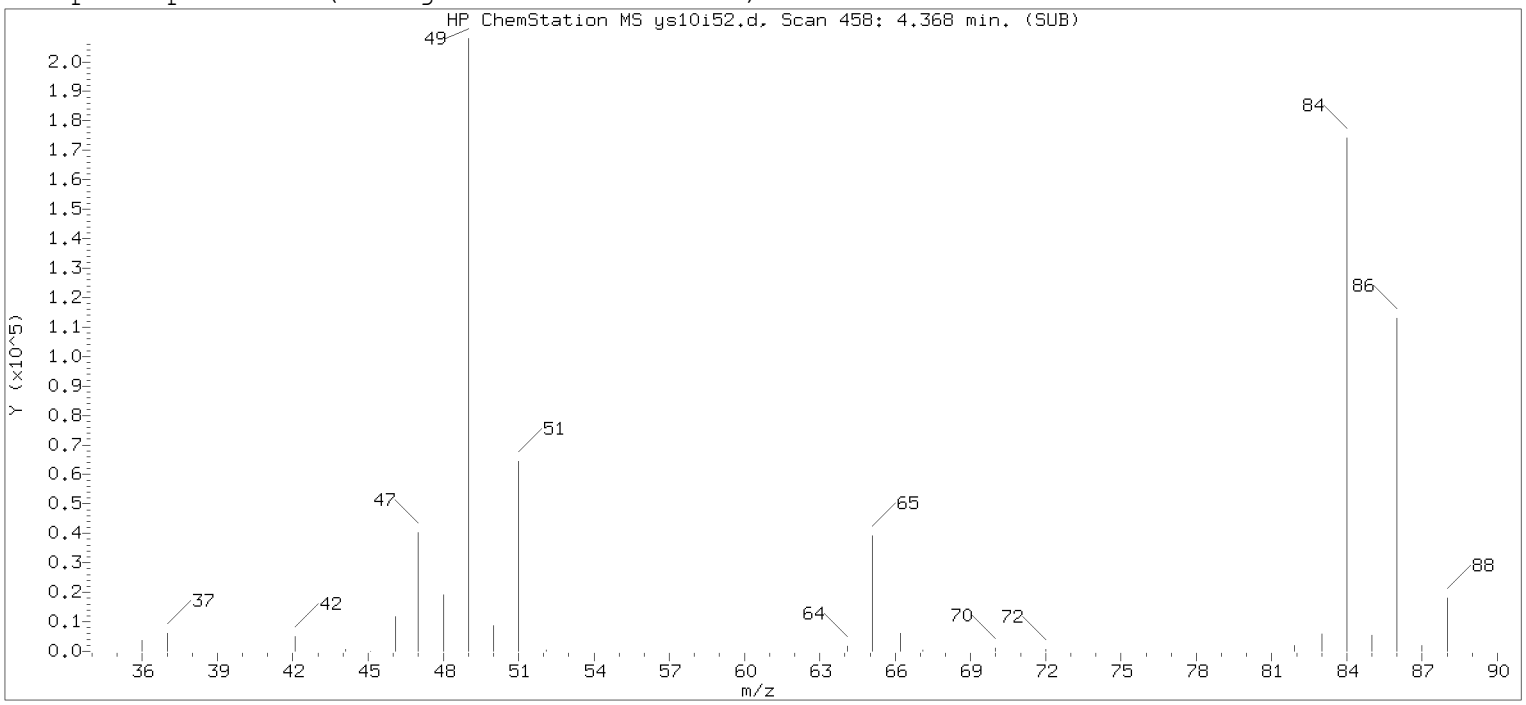
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 458
Retention Time (minutes): 4.367
Quant Ion : 65.00
Area (flag) : 371904M
On-Column Amount (ng) : 250.0000
Integration start scan : 431 Integration stop scan: 589
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

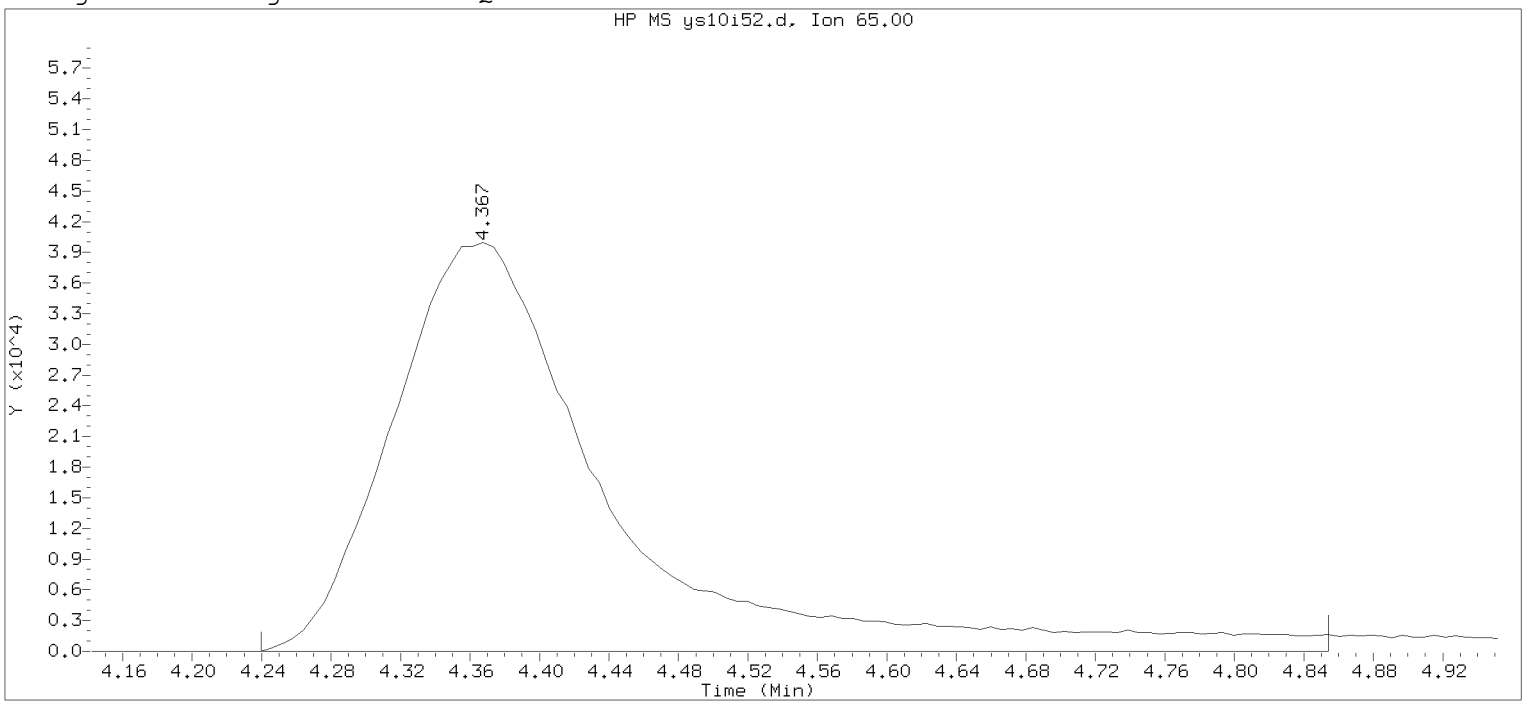
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

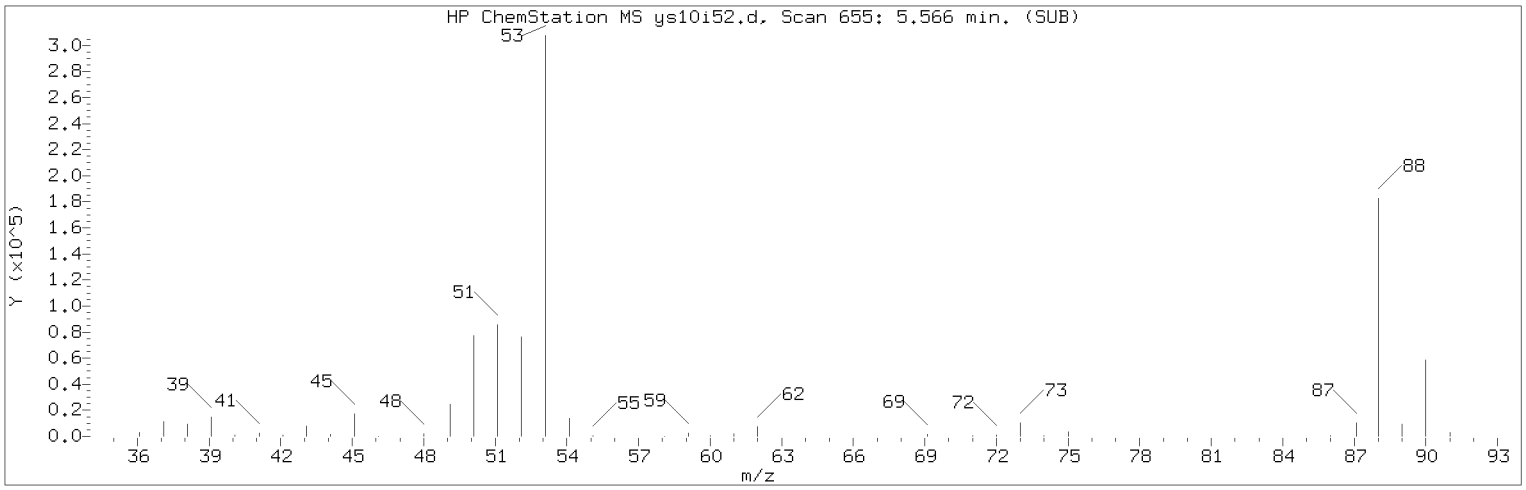
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

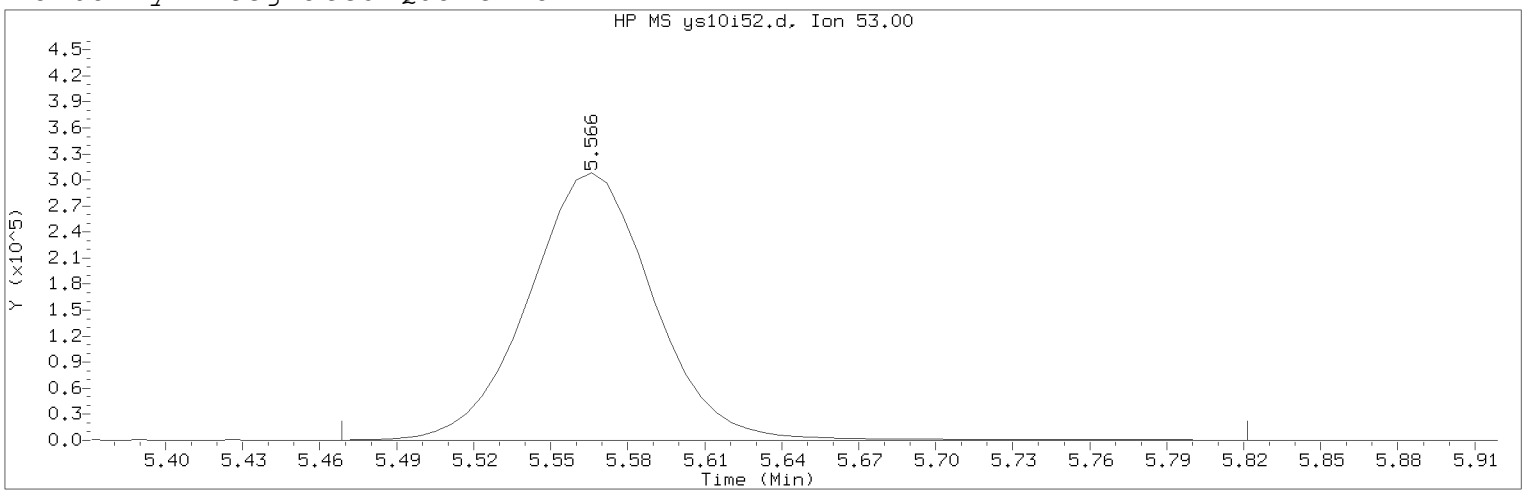
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 458
Retention Time (minutes): 4.367
Quant Ion : 65.00
Area : 347960
On-column Amount (ng) : 250.0000
Integration start scan : 436 Integration stop scan: 537
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

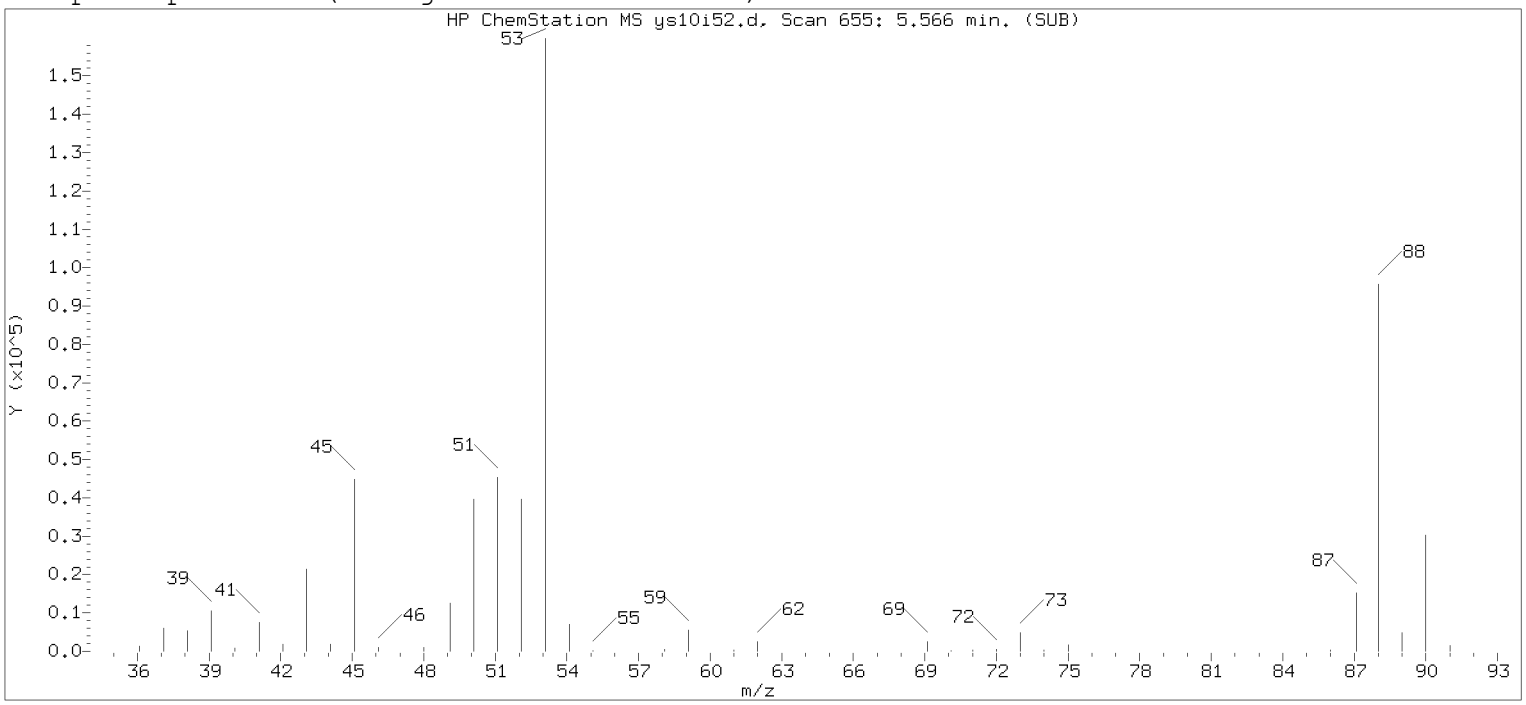
Compound Number : 39
Compound Name : 2-Chloro-1,3-butadiene
Scan Number : 655
Retention Time (minutes): 5.566
Quant Ion : 53.00
Area (flag) : 1041021M
On-Column Amount (ng) : 100.9162
Integration start scan : 638 Integration stop scan: 696
Y at integration start : 234 Y at integration end: 234

Reason for manual integration: improper integration

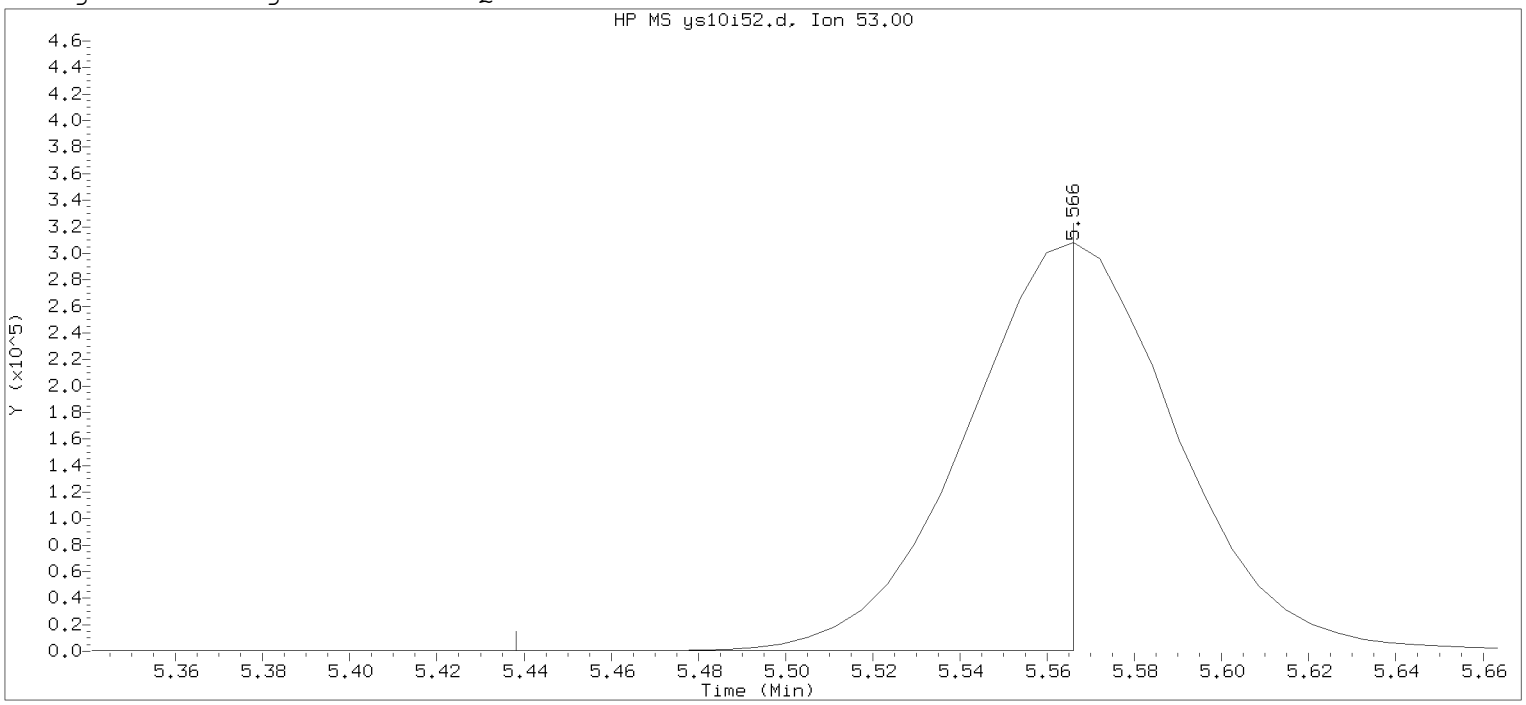
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

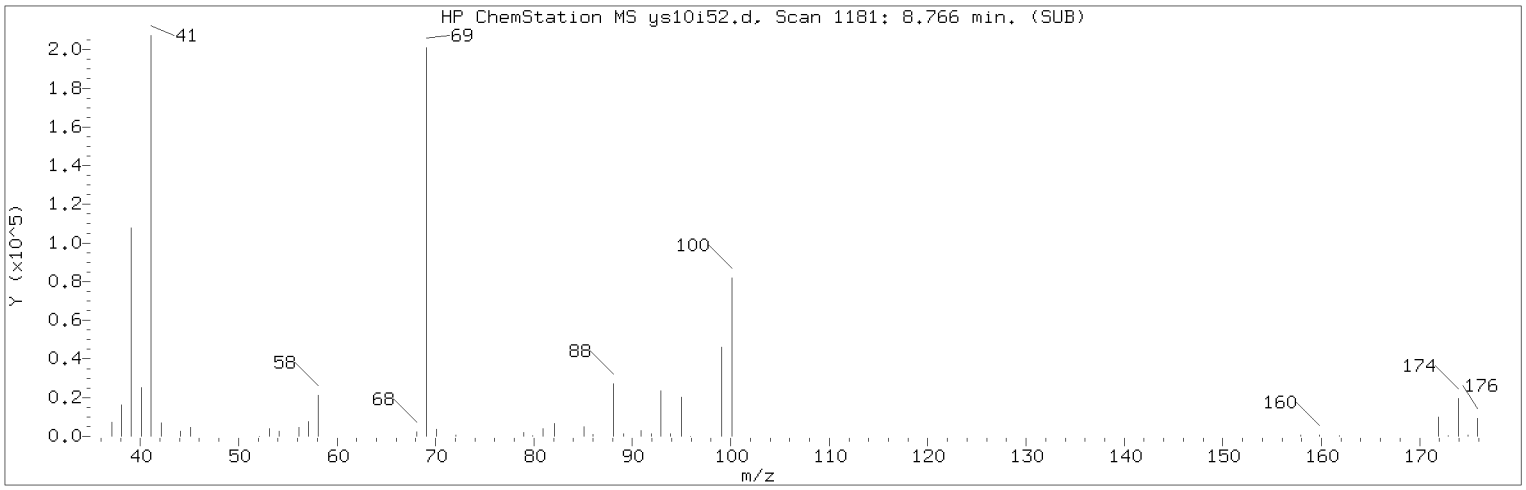
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

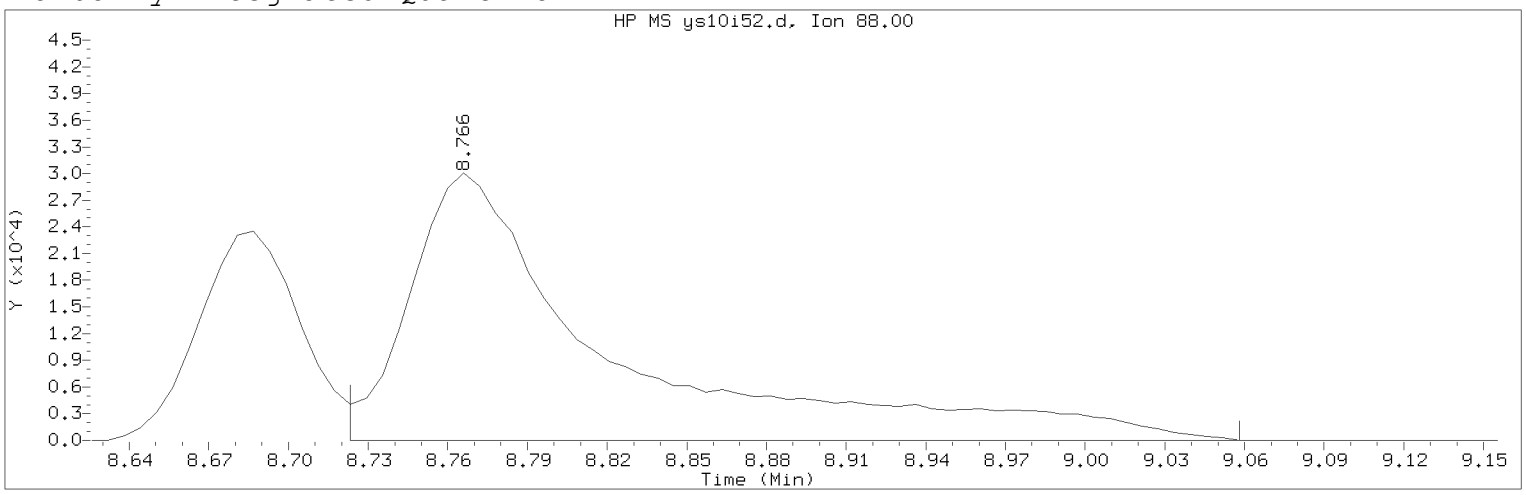
Compound Number : 39
Compound Name : 2-Chloro-1,3-butadiene
Scan Number : 655
Retention Time (minutes): 5.566
Quant Ion : 53.00
Area : 519100
On-column Amount (ng) : 60.5155
Integration start scan : 633 Integration stop scan: 654
Y at integration start : 274 Y at integration end: 274

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

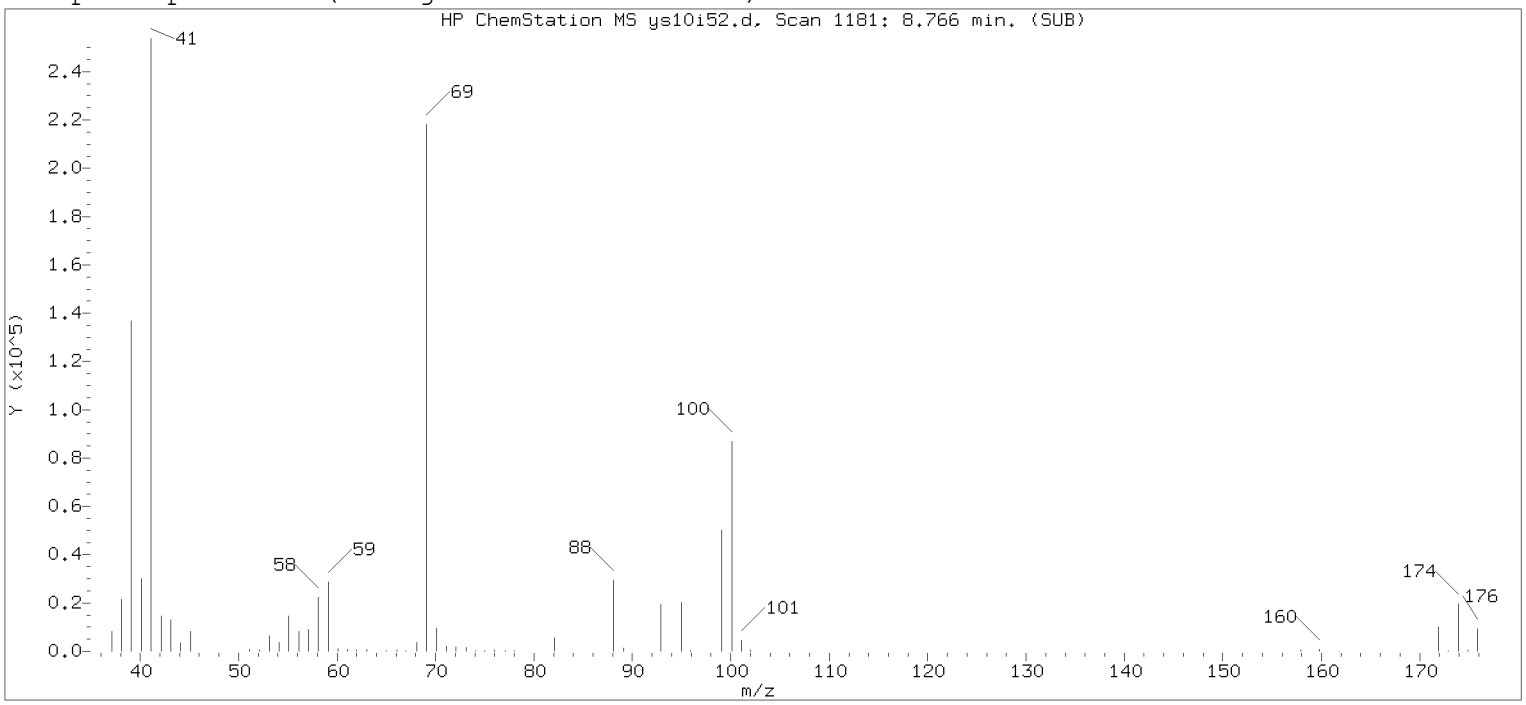
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1181
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area (flag) : 157044M
On-Column Amount (ng) : 1271.2986
Integration start scan : 1173 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

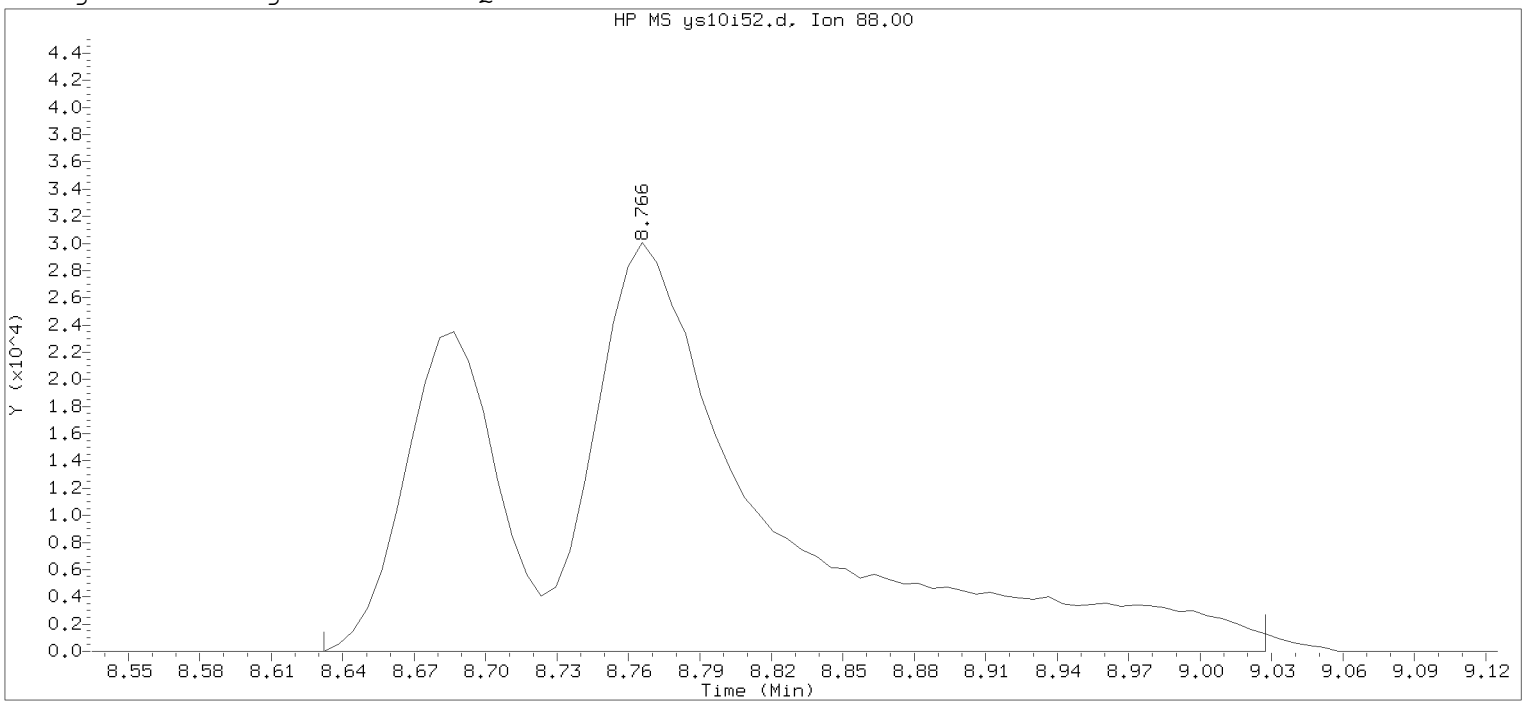
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

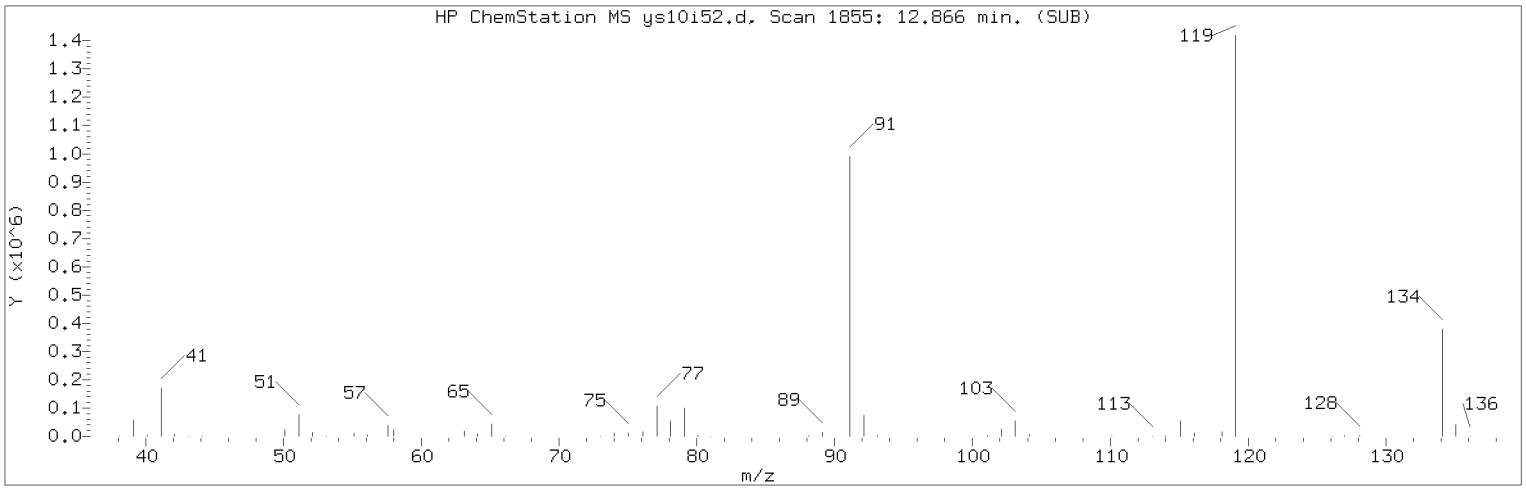
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

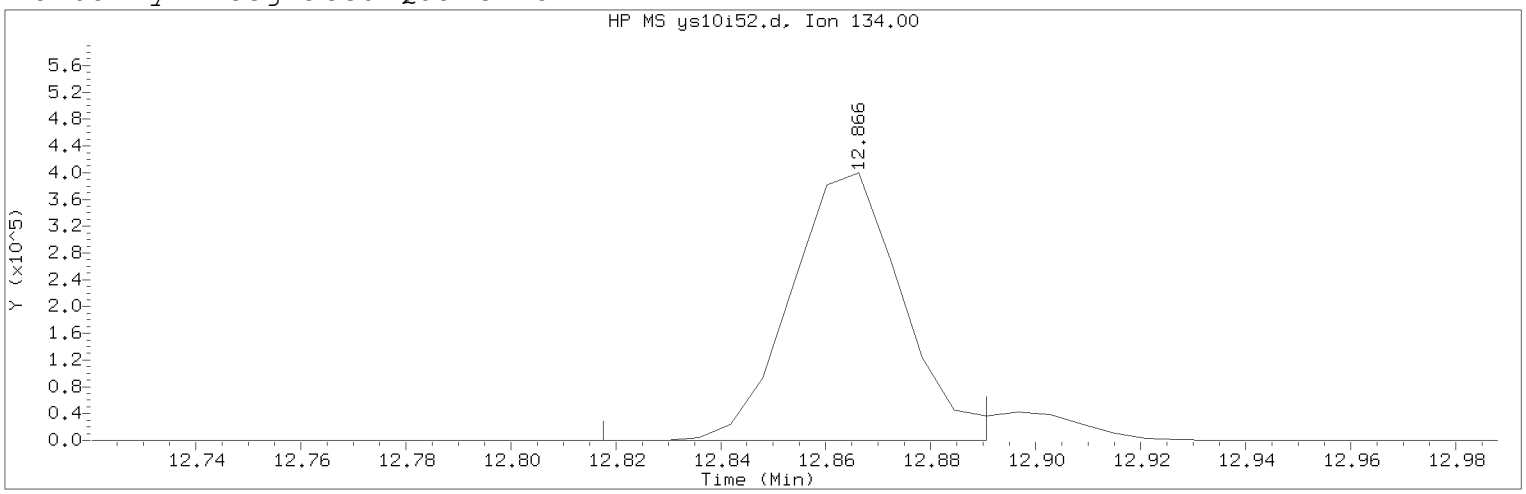
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1181
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area : 217495
On-column Amount (ng) : 1415.0788
Integration start scan : 1158 Integration stop scan: 1223
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

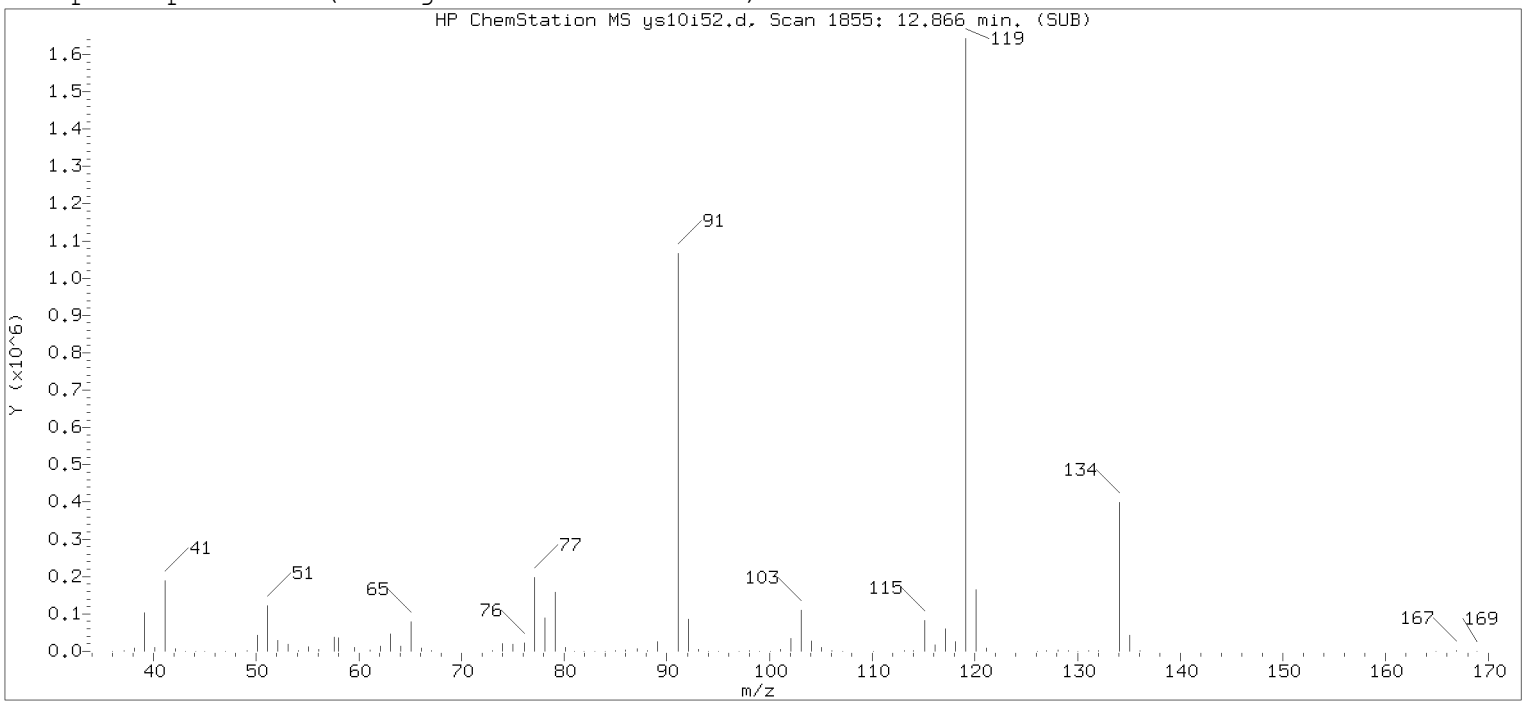
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area (flag) : 588973M
On-Column Amount (ng) : 100.9434
Integration start scan : 1846 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

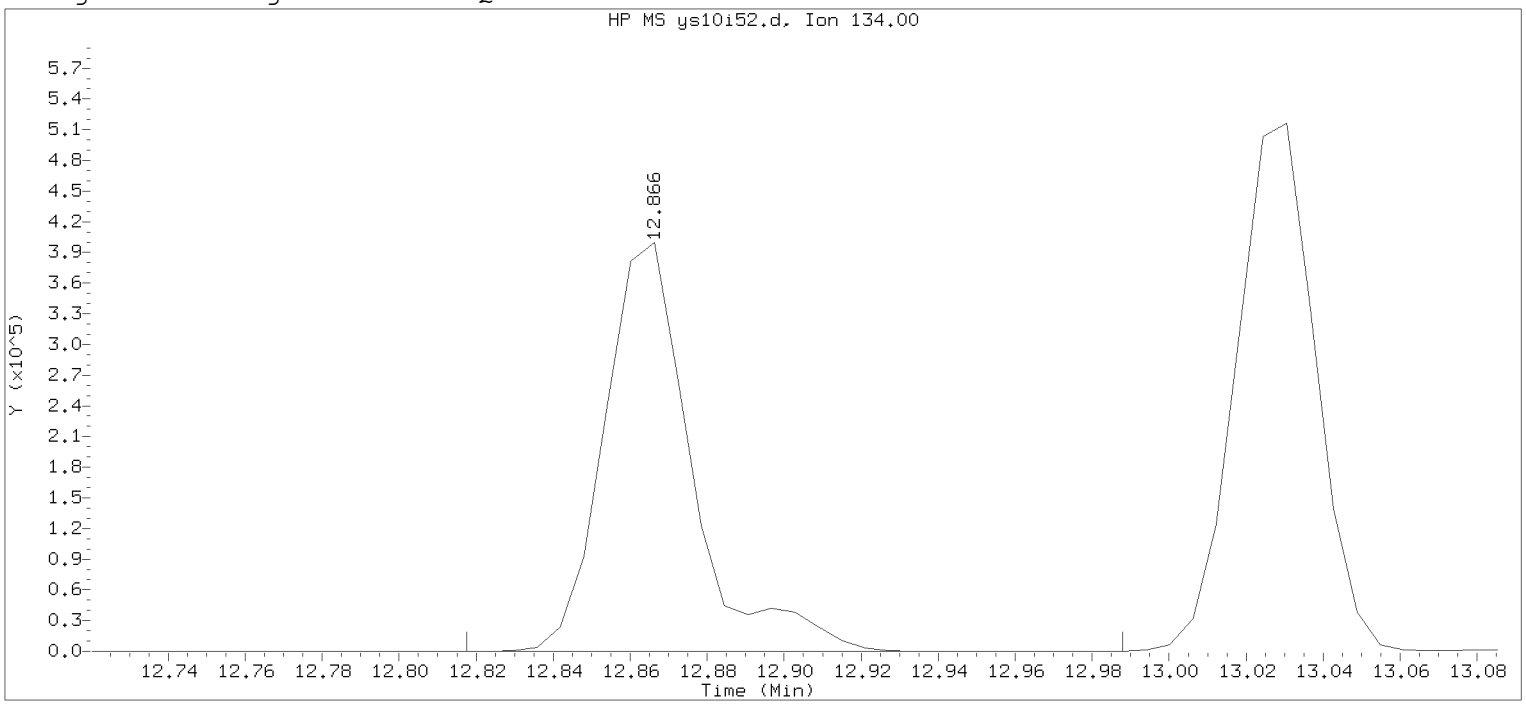
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

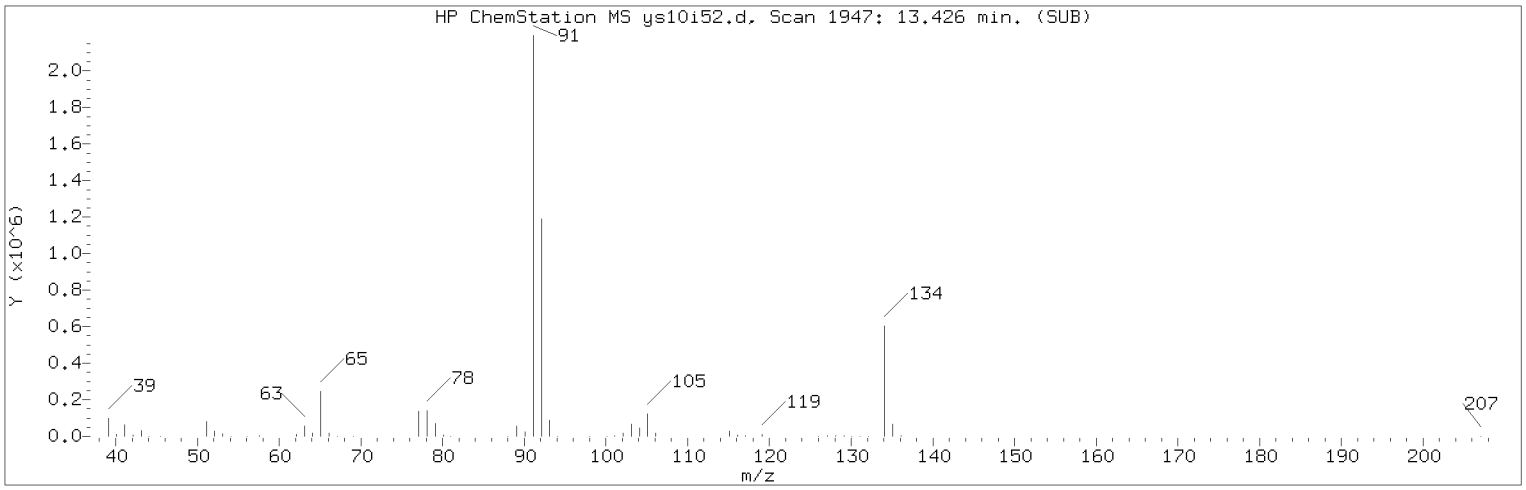
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

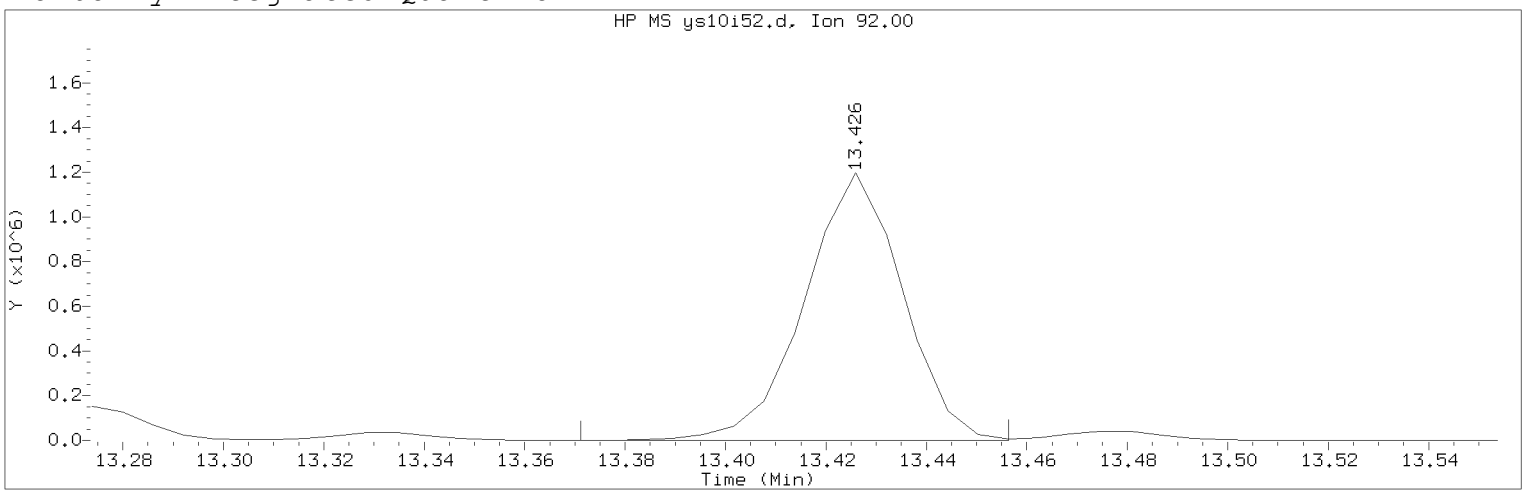
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area : 632288
On-column Amount (ng) : 102.9522
Integration start scan : 1846 Integration stop scan: 1874
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

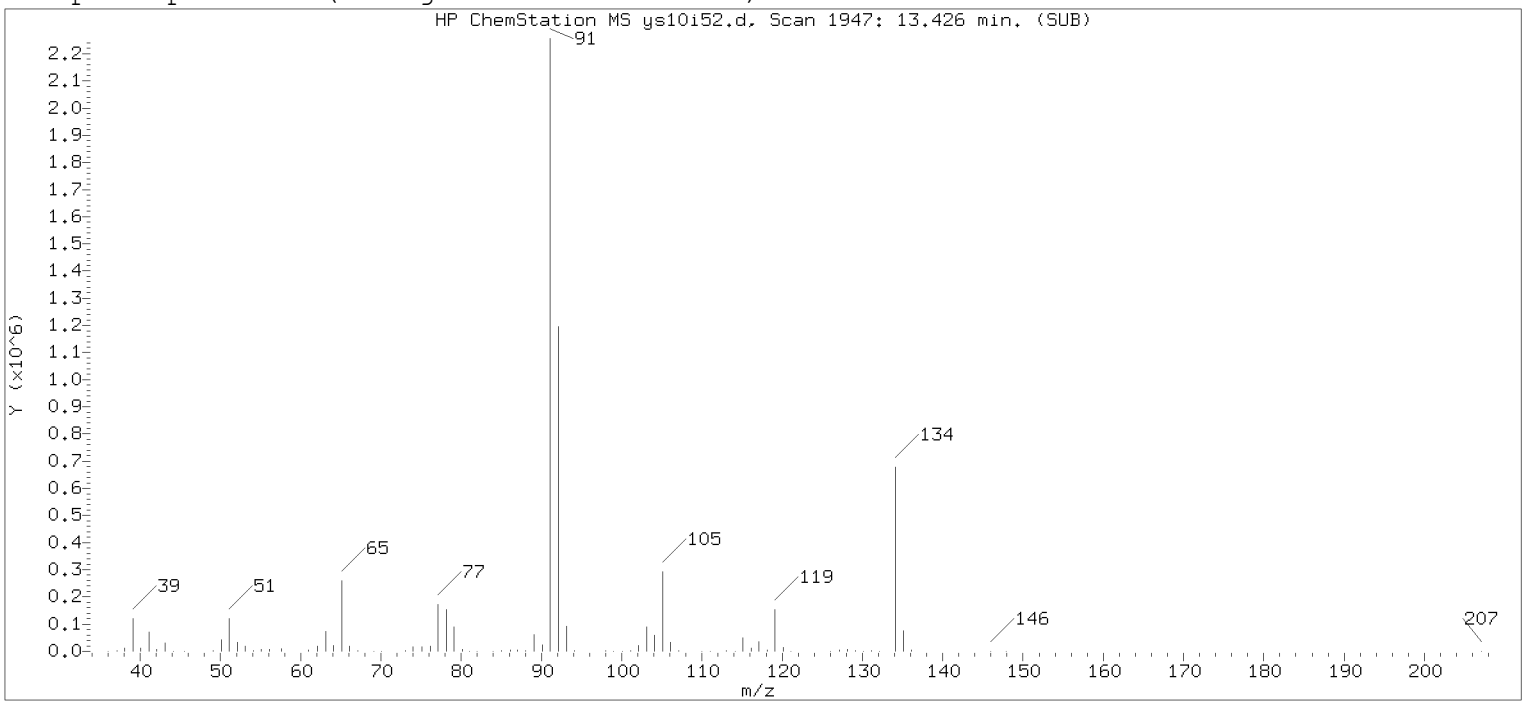
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1947
Retention Time (minutes): 13.426
Quant Ion : 92.00
Area (flag) : 1614874M
On-Column Amount (ng) : 103.2155
Integration start scan : 1937 Integration stop scan: 1951
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

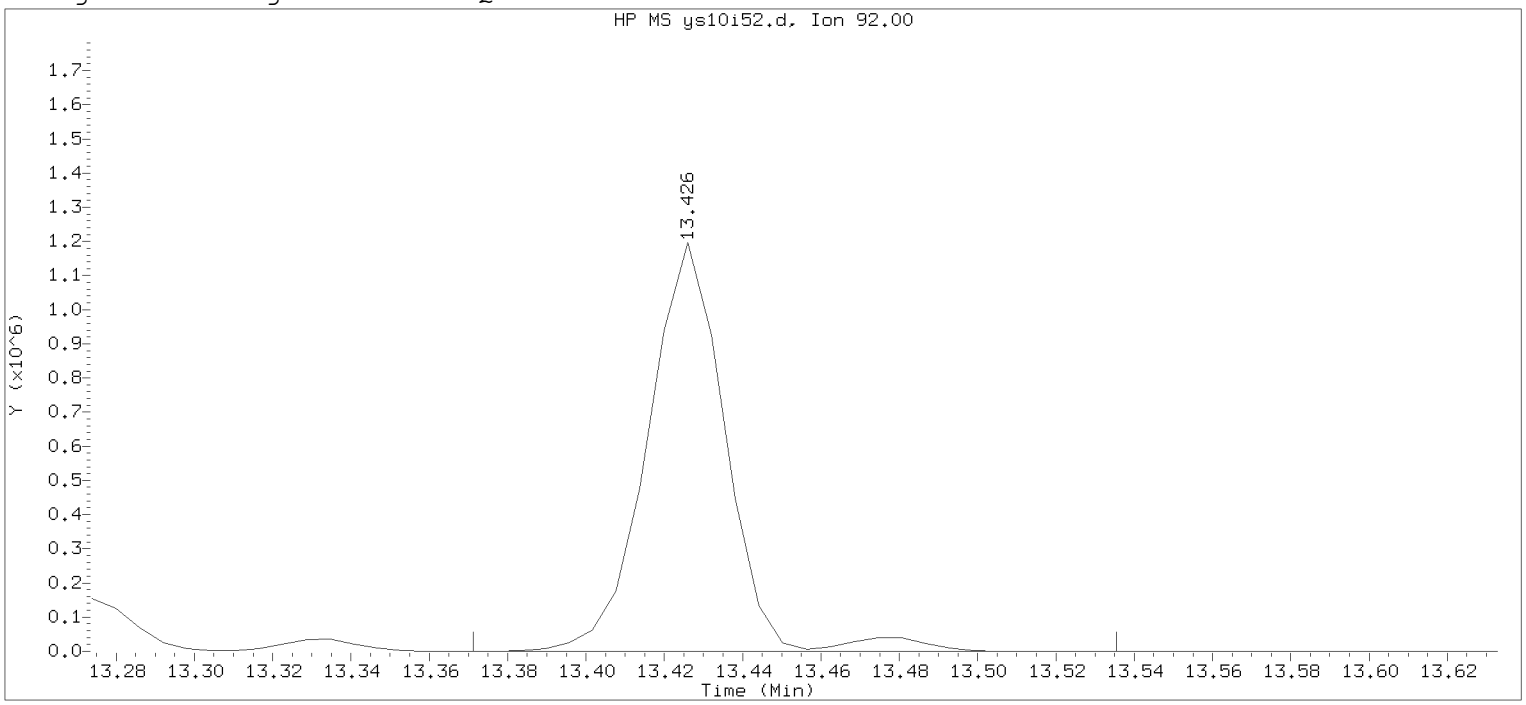
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



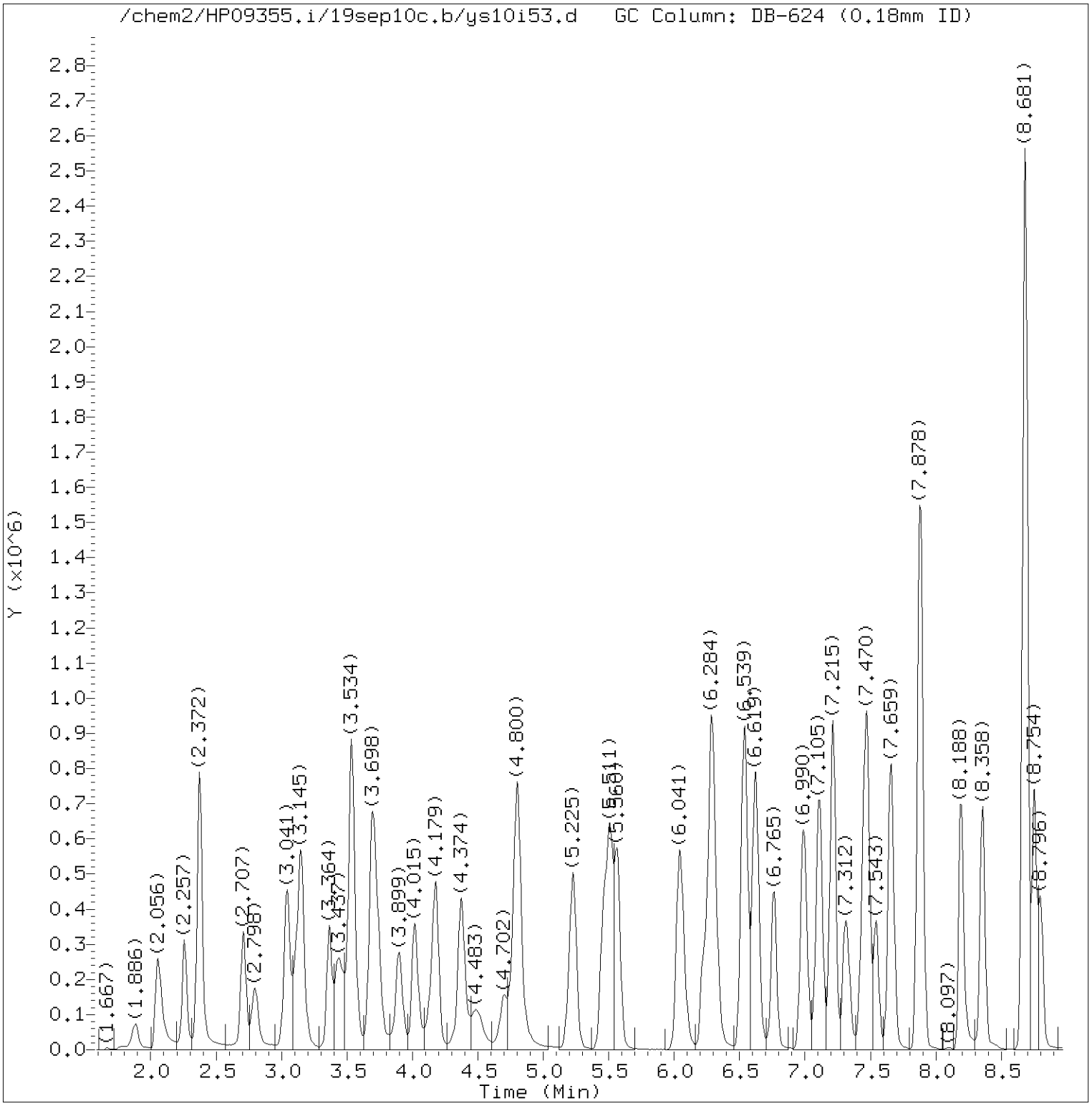
Data File: /chem2/HP09355.i/19sep10c.b/ys10i52.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:12 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1947
Retention Time (minutes): 13.426
Quant Ion : 92.00
Area : 1671023
On-column Amount (ng) : 104.1091
Integration start scan : 1937 Integration stop scan: 1964
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648



Total Ion Chromatogram (TIC)

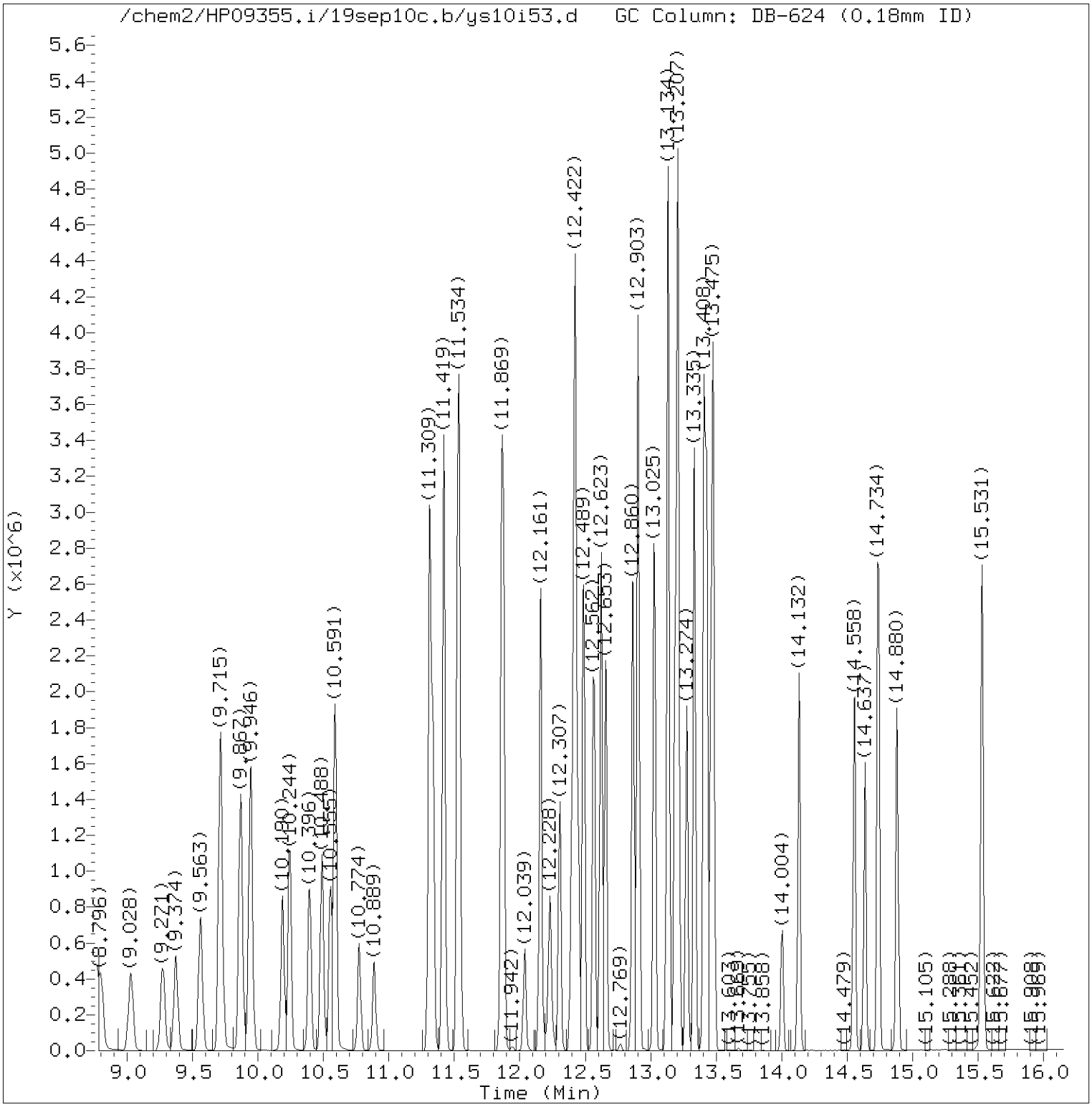
Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.056	85	548911	49.378
4) Chloromethane	(2)	2.257	50	471565	51.421
5) 1,3-Butadiene	(2)	2.372	39	343252MA	50.286
6) Vinyl Chloride	(2)	2.378	62	467617	50.832
8) Bromomethane	(2)	2.707	94	346907	52.346
9) Chloroethane	(2)	2.798	64	267511	51.346
10) Dichlorofluoromethane	(2)	3.041	67	570147	52.014
12) Trichlorofluoromethane	(2)	3.114	101	601473	50.858
11) n-Pentane	(2)	3.151	43	543651A	50.664
14) Ethyl ether	(2)	3.364	59	307605	49.994
15) Freon 123a	(2)	3.437	67	353083	49.954
16) Acrolein	(1)	3.534	56	1469695	527.366
17) 1,1-Dichloroethene	(2)	3.686	96	262667	49.554
17) 1,1-Dichloroethene	(2)	3.686	63	134595	49.883
18) Acetone	(1)	3.705	58	134692	103.023
19) Freon 113	(2)	3.729	101	303960	49.715
21) 2-Propanol	(1)	3.875	45	195294	248.872
22) Methyl Iodide	(2)	3.899	142	512547	50.242
23) Carbon Disulfide	(2)	4.015	76	959848	49.493
27) Methyl Acetate	(2)	4.143	43	450114	50.551
25) Allyl Chloride	(2)	4.179	41	461949	50.672
29)*t-Butyl alcohol-d10	(1)	4.355	65	357387M	250.000
28) Methylene Chloride	(2)	4.374	84	311910	50.166
30) t-Butyl alcohol	(1)	4.489	59	404287	252.853
31) Acrylonitrile	(2)	4.696	53	252369	50.970
33) Methyl Tertiary Butyl Ether	(2)	4.787	73	1052596M	51.309
32) trans-1,2-Dichloroethene	(2)	4.806	96	303051	49.781
34) n-Hexane	(2)	5.225	57	516552	49.505
36) 1,1-Dichloroethane	(2)	5.457	63	552643	50.387
38) di-Isopropyl ether	(2)	5.511	45	1061584	51.070
39) 2-Chloro-1,3-butadiene	(2)	5.566	53	513129	50.019
40) Ethyl t-butyl ether	(2)	6.041	59	1039665	51.619
43) 1,2-Dichloroethene (Total)	(2)		96	647894	99.852
44) 2-Butanone	(2)	6.229	43	748452	106.106
42) cis-1,2-Dichloroethene	(2)	6.284	96	344843	50.071
45) 2,2-Dichloropropane	(2)	6.302	77	435056	50.128
47) Propionitrile	(1)	6.308	54	478448	253.805
48) Methacrylonitrile	(2)	6.539	67	641651	124.825

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.619	128	182131	50.186
50) Tetrahydrofuran	(1)	6.625	71	213773	103.727
51) Chloroform	(2)	6.765	83	535849	50.287
52)$Dibromofluoromethane	(2)	6.978	113	276761	49.826
52)$Dibromofluoromethane	(2)	6.978	111	284472	50.033
53) 1,1,1-Trichloroethane	(2)	6.996	97	466185	49.821
54) Cyclohexane	(2)	7.105	56	605613	50.071
54) Cyclohexane	(2)	7.111	84	525401	50.182
54) Cyclohexane	(2)	7.105	69	192024	49.887
55) 1,1-Dichloropropene	(2)	7.209	75	445031	49.969
56) Carbon Tetrachloride	(2)	7.215	117	407064	49.059
58) Isobutyl Alcohol	(1)	7.312	41	340427	632.961
57)$1,2-Dichloroethane-d4	(2)	7.440	102	72384	50.453
57)$1,2-Dichloroethane-d4	(2)	7.440	65	347363	50.388
57)$1,2-Dichloroethane-d4	(2)	7.440	104	46138	50.664
60) Benzene	(2)	7.476	78	1293384	50.636
61) 1,2-Dichloroethane	(2)	7.543	62	447310	50.647
61) 1,2-Dichloroethane	(2)	7.543	98	39994	49.572
65) t-Amyl methyl ether	(2)	7.659	73	1042425	52.273
66)*Fluorobenzene	(2)	7.872	96	1177736	50.000
67) n-Heptane	(2)	7.884	43	549548	50.406
69) n-Butanol	(1)	8.194	56	678692	1304.550
71) Trichloroethene	(2)	8.358	95	333170	49.729
72) Methylcyclohexane	(2)	8.675	83	643765	50.148
72) Methylcyclohexane	(2)	8.675	98	286528	49.908
73) 1,2-Dichloropropane	(2)	8.687	63	336720	50.359
76) Methyl Methacrylate	(2)	8.754	69	397917	49.428
75) 1,4-Dioxane	(1)	8.766	88	72369	614.673
74) Dibromomethane	(2)	8.803	93	221074	49.995
78) Bromodichloromethane	(2)	9.028	83	397768	48.764
79) 2-Nitropropane	(2)	9.271	41	376265	103.879
80) 2-Chloroethyl Vinyl Ether	(2)	9.374	63	291679	50.349
81) cis-1,3-Dichloropropene	(2)	9.563	75	543178	49.626
82) 4-Methyl-2-pentanone	(2)	9.715	43	1494354	110.222
83)$Toluene-d8	(3)	9.867	98	1191537	50.501
83)$Toluene-d8	(3)	9.867	100	768233	50.345
88) Toluene	(3)	9.946	92	833881	51.187
90) 1,3-Dichloropropene (total)	(3)		100	1062219	99.342

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.190	75	519041	49.716
91) Ethyl Methacrylate	(3)	10.244	69	646860	50.310
92) 1,1,2-Trichloroethane	(3)	10.396	97	322082	50.693
93) Tetrachloroethene	(3)	10.488	166	347045	50.627
94) 1,3-Dichloropropane	(3)	10.555	76	557865	50.947
96) 2-Hexanone	(3)	10.591	43	1259178	113.782
97) Dibromochloromethane	(3)	10.774	129	337968	49.045
99) 1,2-Dibromoethane	(3)	10.889	107	358270	50.388
100)*Chlorobenzene-d5	(3)	11.309	117	875116	50.000
101) 1-Chlorohexane	(3)	11.315	91	454668	50.081
102) Chlorobenzene	(3)	11.339	112	928739	51.249
103) 1,1,1,2-Tetrachloroethane	(3)	11.419	131	312774	50.470
104) Ethylbenzene	(3)	11.419	91	1613728	52.006
106) m+p-Xylene	(3)	11.534	106	1269166	104.114
108) Xylene (Total)	(3)		106	1891753	155.661
107) o-Xylene	(3)	11.863	106	622587	51.547
109) Styrene	(3)	11.875	104	1064041	51.508
110) Bromoform	(3)	12.039	173	246220	47.834
111) Isopropylbenzene	(3)	12.161	105	1613388	52.534
112) Cyclohexanone	(1)	12.228	55	376842MA	629.035
114)$4-Bromofluorobenzene	(3)	12.307	95	454387	50.285
114)$4-Bromofluorobenzene	(3)	12.307	174	344525	50.432
116) 1,1,2,2-Tetrachloroethane	(4)	12.398	83	563651	50.352
118) trans-1,4-Dichloro-2-butene	(4)	12.422	53	515257	129.450
115) Bromobenzene	(4)	12.422	156	398191	51.208
117) 1,2,3-Trichloropropane	(4)	12.447	110	178080	50.199
119) n-Propylbenzene	(4)	12.489	91	1898944	52.715
120) 2-Chlorotoluene	(4)	12.568	126	387139	50.536
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	1409037	51.574
121) 4-Chlorotoluene	(4)	12.660	126	402237	50.373
124) tert-Butylbenzene	(4)	12.866	134	293407M	50.357
125) Pentachloroethane	(4)	12.897	167	240581	50.050
126) 1,2,4-Trimethylbenzene	(4)	12.903	105	1489642	51.977
127) sec-Butylbenzene	(4)	13.025	105	1799844	52.653
129) 1,3-Dichlorobenzene	(4)	13.128	146	772938	52.033
130) p-Isopropyltoluene	(4)	13.134	119	1564631	52.827
131)*1,4-Dichlorobenzene-d4	(4)	13.189	152	470034	50.000
133) 1,4-Dichlorobenzene	(4)	13.207	146	789508	52.033

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134)	1,2,3-Trimethylbenzene	(4)	13.207	105	1567062	52.805
135)	Benzyl Chloride	(4)	13.274	91	1214867	49.371
136)	1,3-Diethylbenzene	(4)	13.335	119	1008122	51.894
141)	Diethylbenzene (total)	(4)		100	2922665	156.090
137)	1,4-Diethylbenzene	(4)	13.408	119	1069173	52.306
139)	n-Butylbenzene	(4)	13.426	92	810919	51.373
138)	1,2-Dichlorobenzene	(4)	13.463	146	748864	51.399
140)	1,2-Diethylbenzene	(4)	13.481	119	845370	51.890
142)	1,2-Dibromo-3-chloropropane	(4)	14.004	75	149511	48.271
144)	1,3,5-Trichlorobenzene	(4)	14.132	180	575253	51.239
146)	1,2,4-Trichlorobenzene	(4)	14.558	180	550714	51.310
147)	Hexachlorobutadiene	(4)	14.637	225	249819	50.684
148)	Naphthalene	(4)	14.740	128	1989492	53.168
149)	1,2,3-Trichlorobenzene	(4)	14.880	180	531024	51.271
150)	2-Methylnaphthalene	(4)	15.531	142	1349074	52.709

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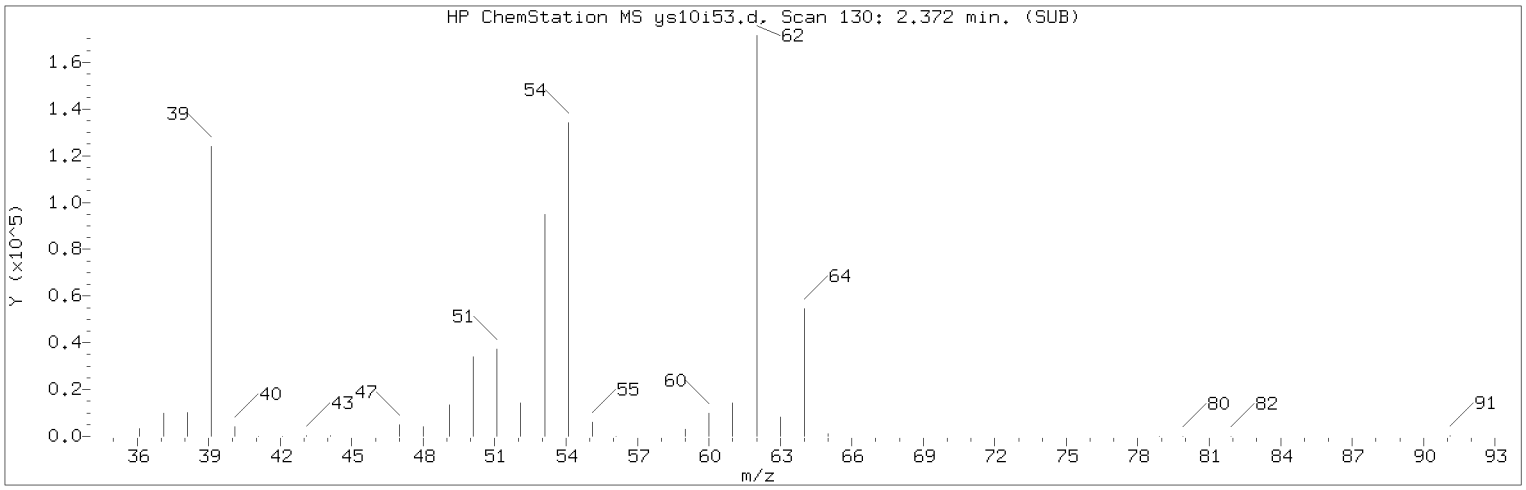
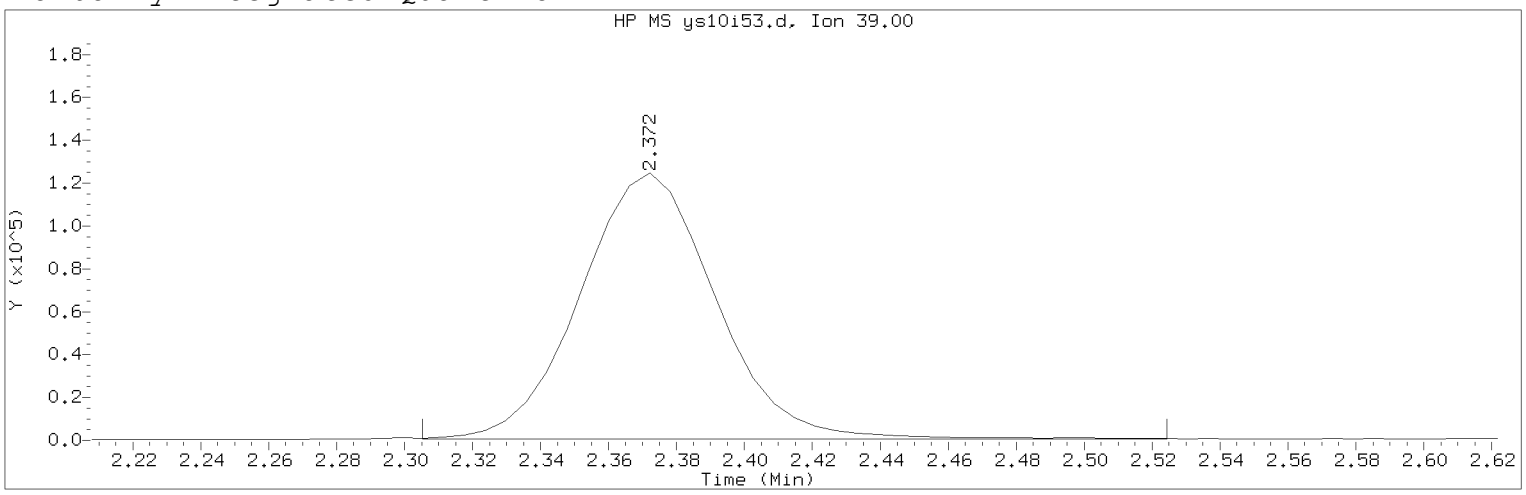
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

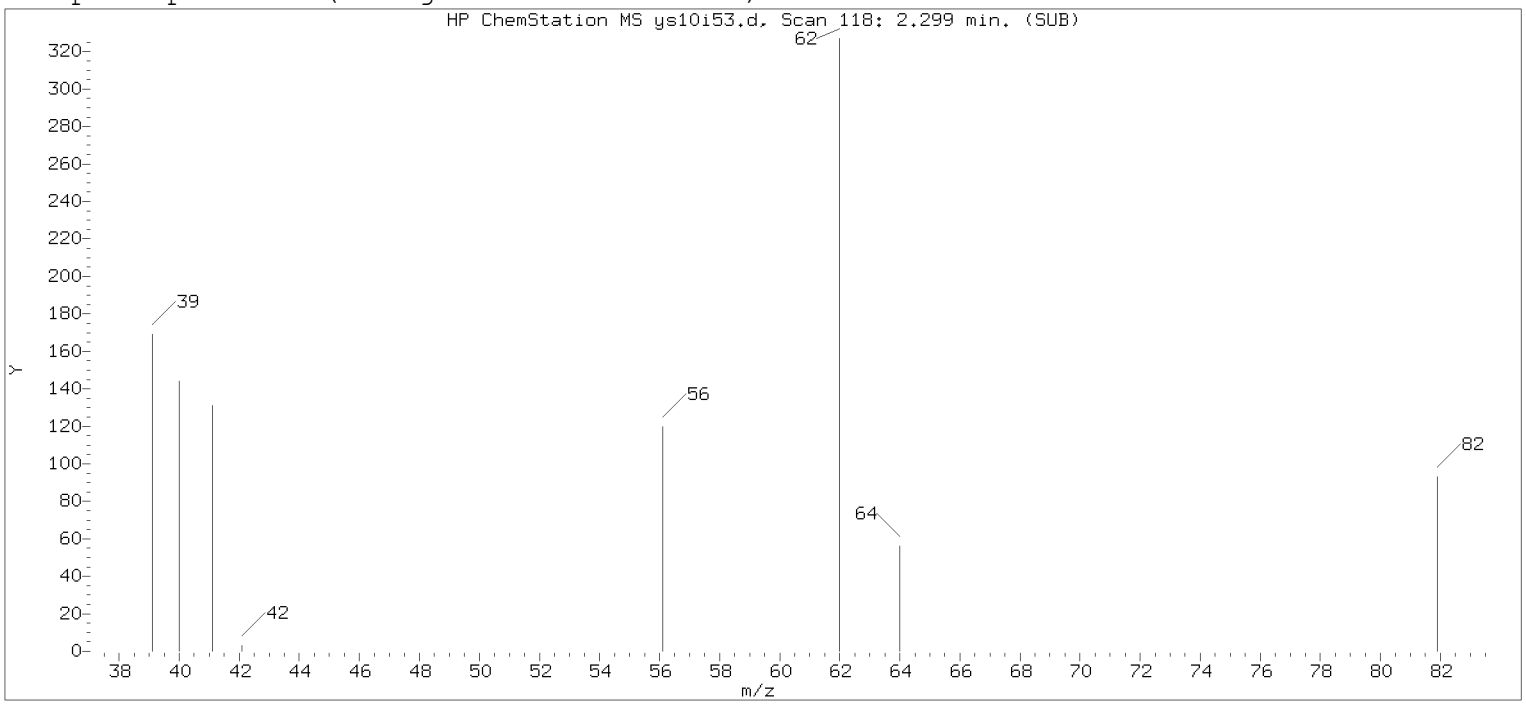
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 130
Retention Time (minutes): 2.372
Quant Ion : 39.00
Area (flag) : 343252MA
On-Column Amount (ng) : 50.2858
Integration start scan : 118 Integration stop scan: 154
Y at integration start : 636 Y at integration end: 636

Reason for manual integration: improper integration

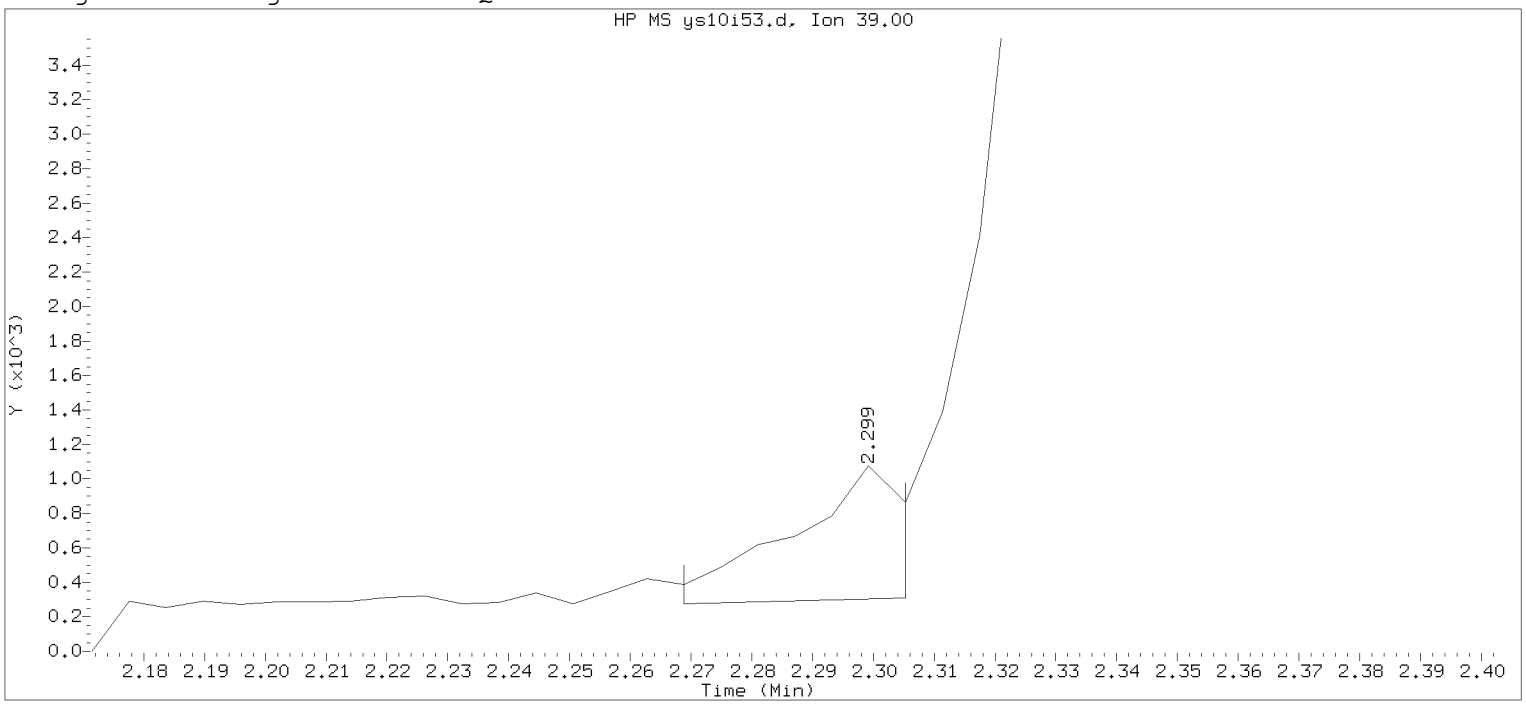
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

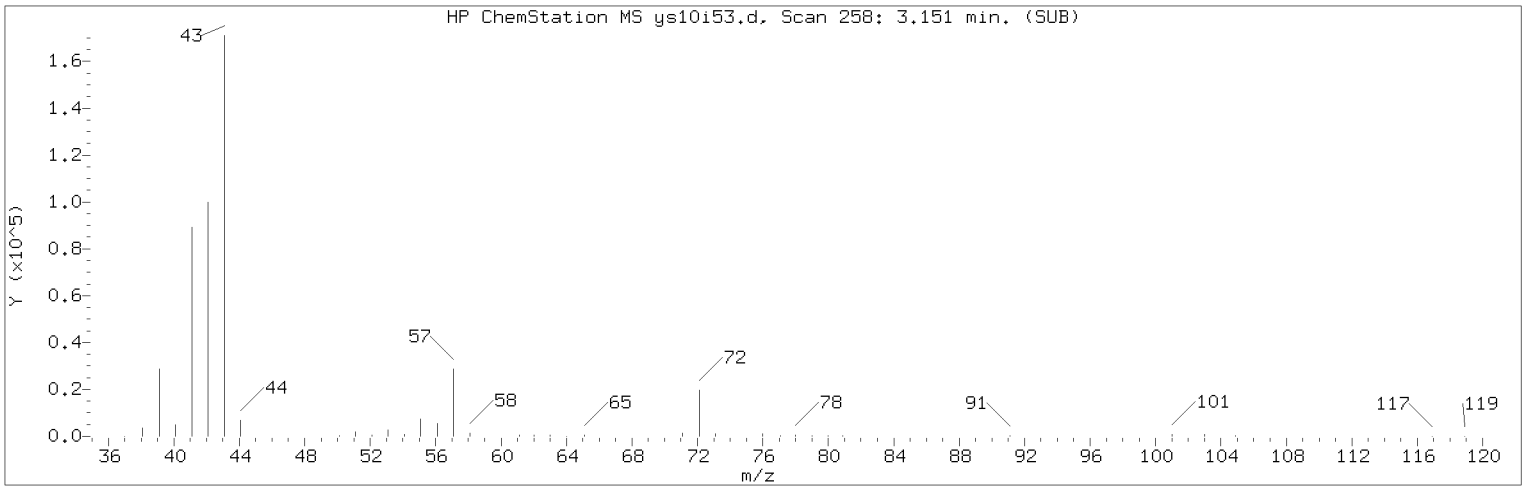
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:17
Date, time and analyst ID of latest file update: 13-Sep-2019 14:17 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

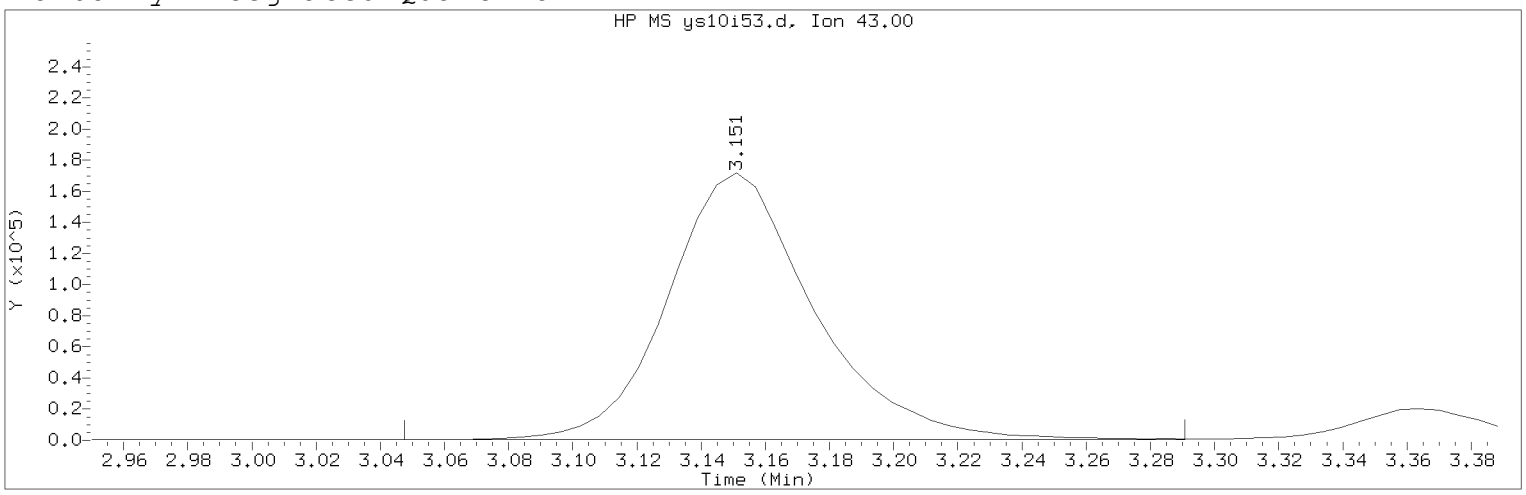
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 118
Retention Time (minutes): 2.299
Quant Ion : 39.00
Area : 916
On-column Amount (ng) : 50.0000
Integration start scan : 112 Integration stop scan: 118
Y at integration start : 274 Y at integration end: 309

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

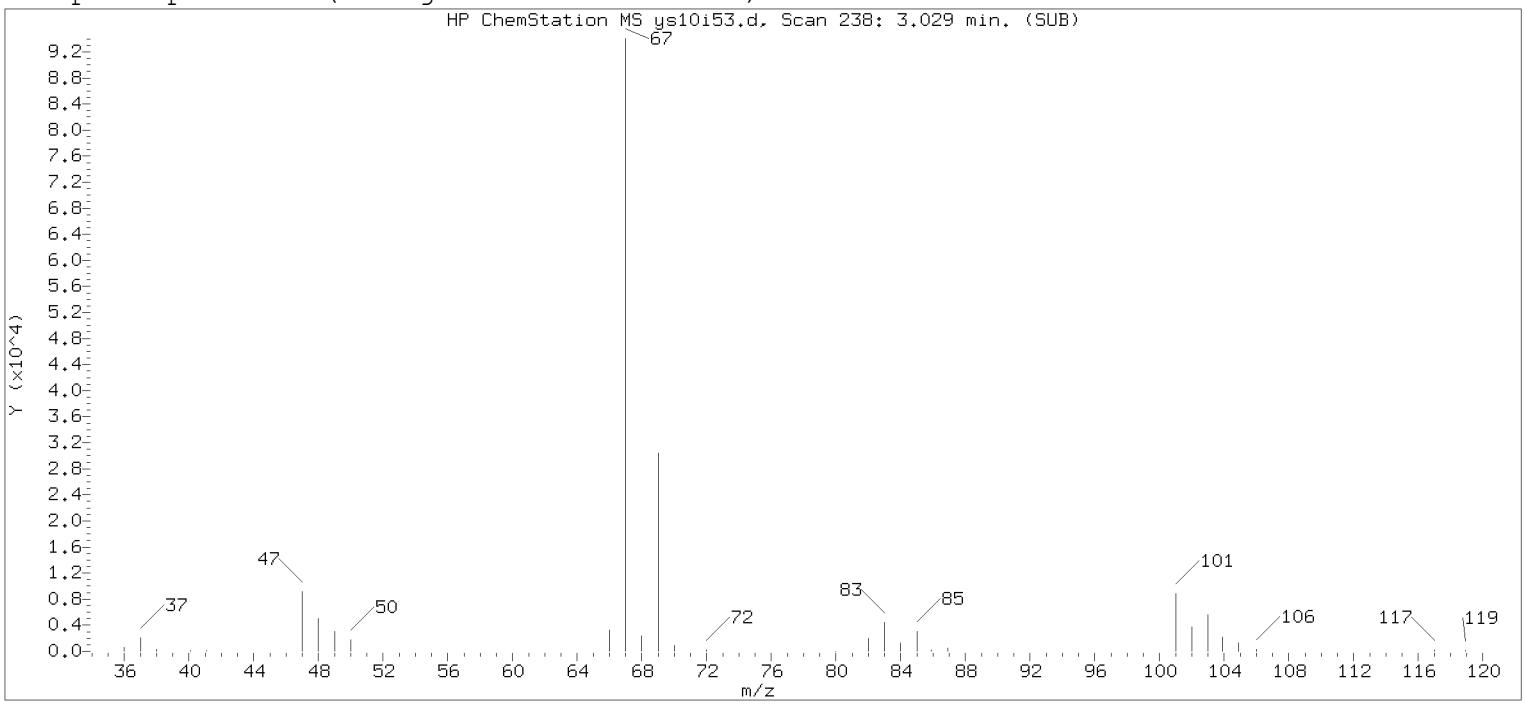
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 258
Retention Time (minutes): 3.151
Quant Ion : 43.00
Area (flag) : 543651A
On-Column Amount (ng) : 50.6645
Integration start scan : 240 Integration stop scan: 280
Y at integration start : 313 Y at integration end: 313

Reason for manual integration: improper integration

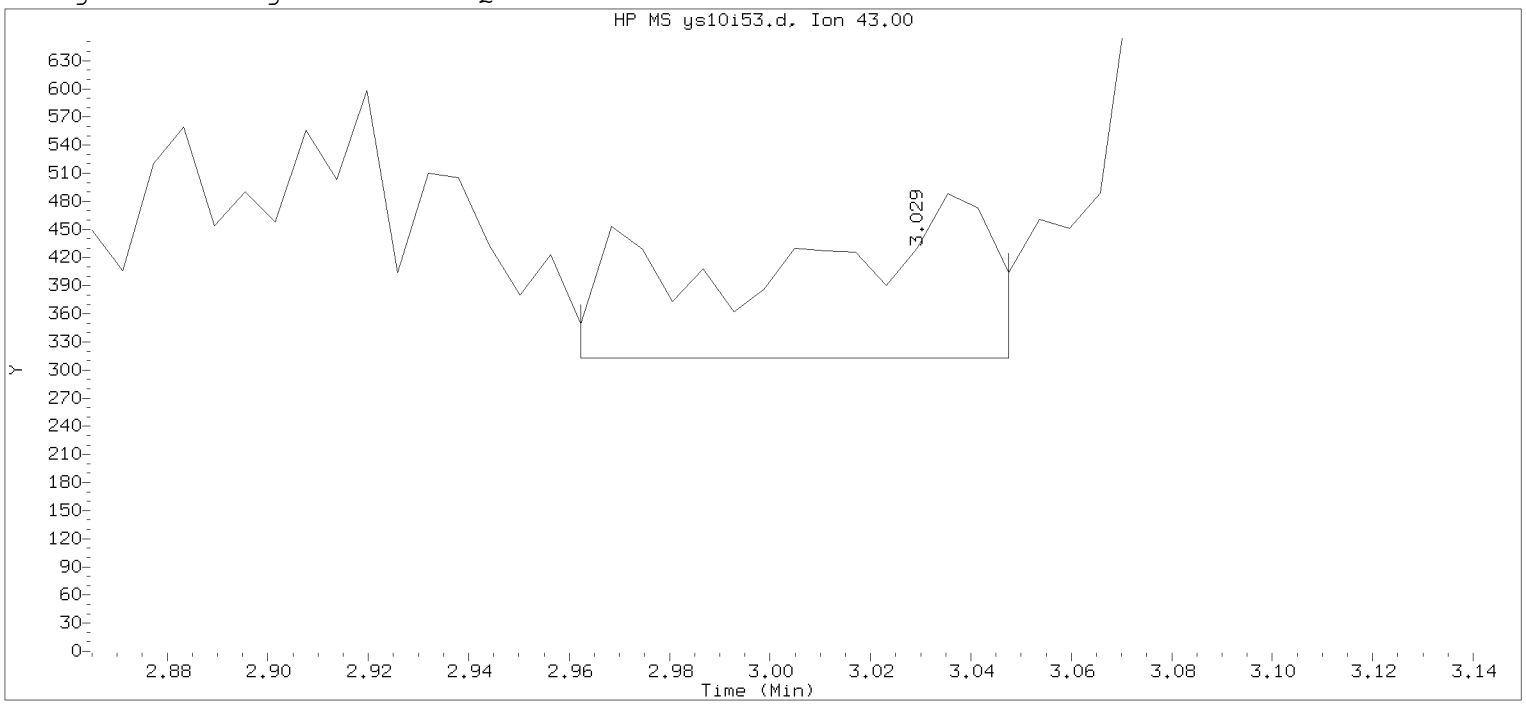
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:17
Date, time and analyst ID of latest file update: 13-Sep-2019 14:17 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number	: 11		
Compound Name	: n-Pentane		
Scan Number	: 238		
Retention Time (minutes)	: 3.029		
Quant Ion	: 43.00		
Area	: 536		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 226	Integration stop scan:	240
Y at integration start	: 313	Y at integration end:	313

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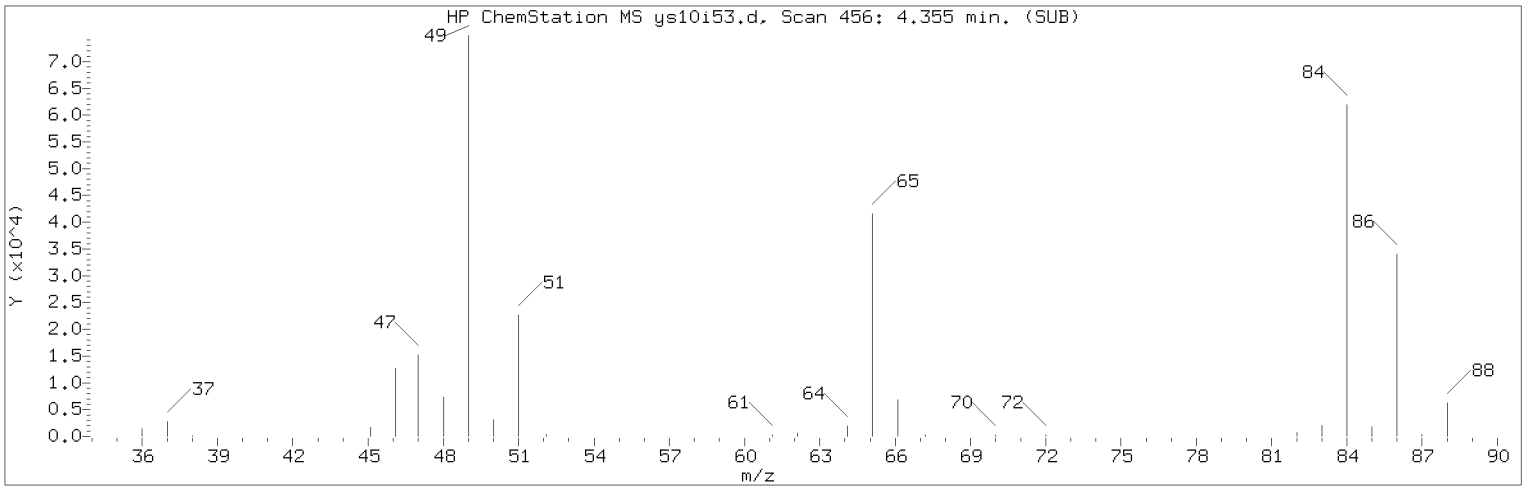
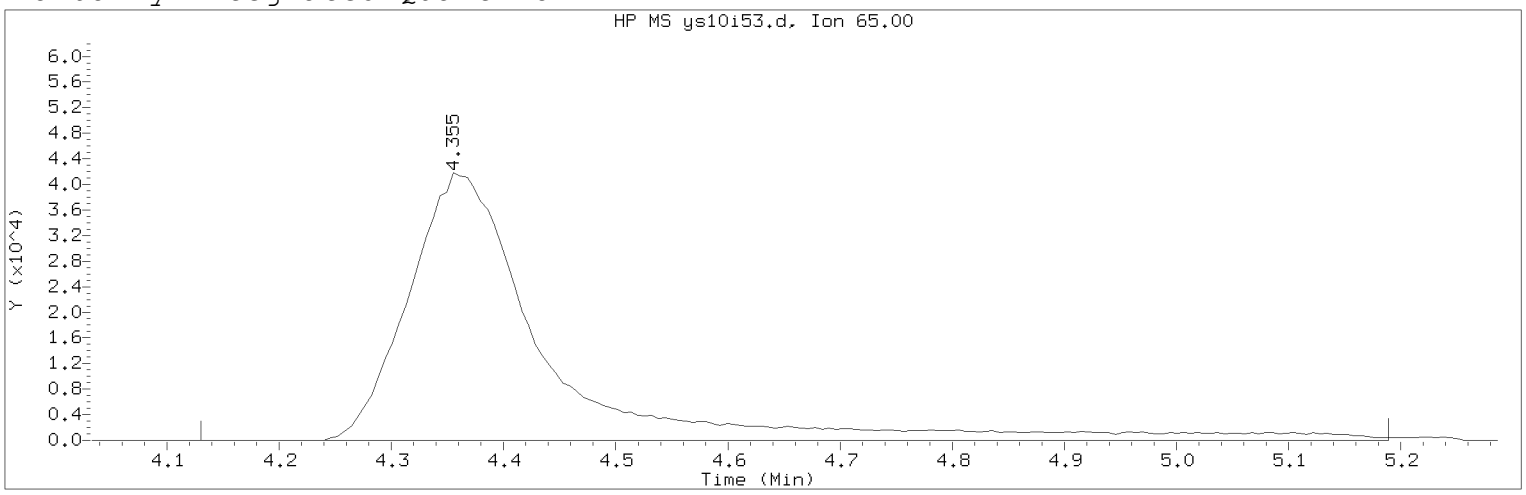
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

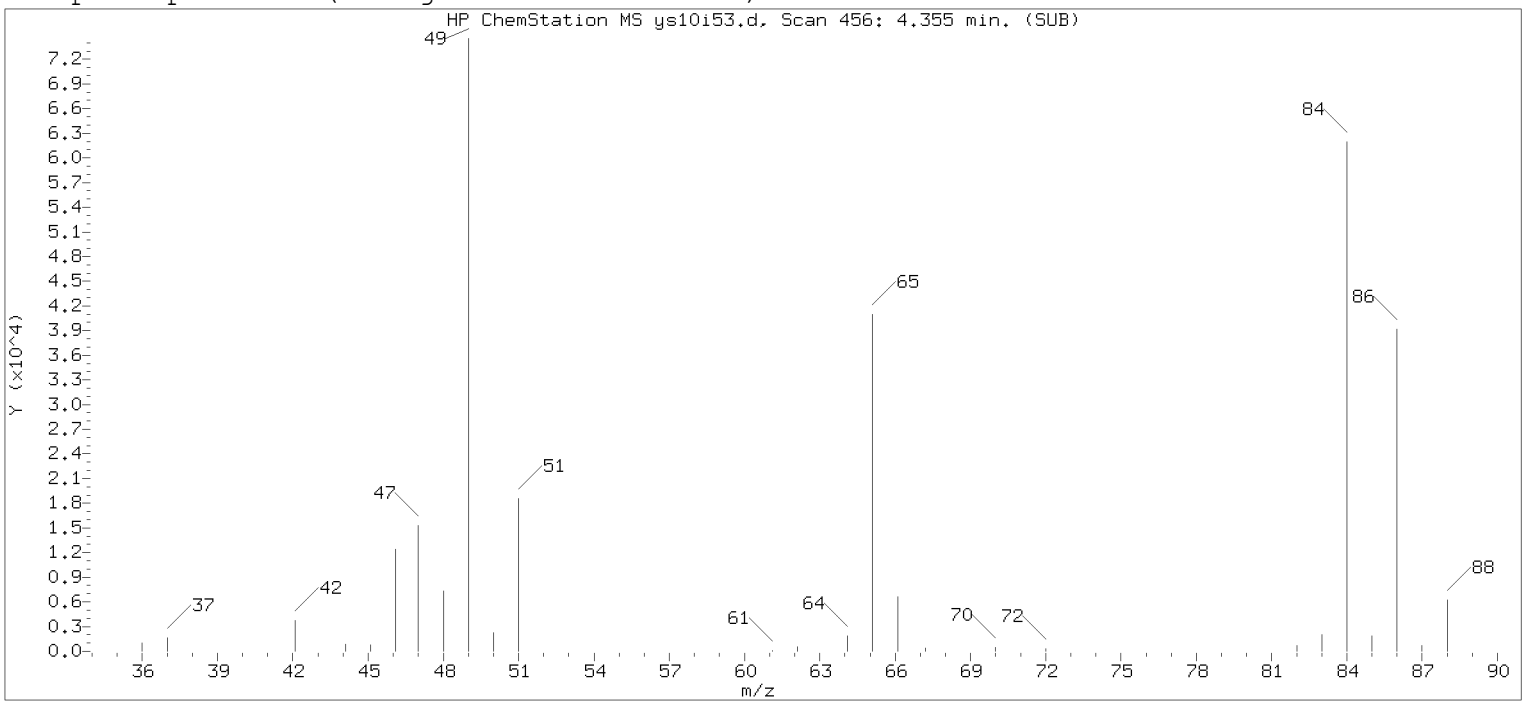
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 456
Retention Time (minutes): 4.355
Quant Ion : 65.00
Area (flag) : 357387M
On-Column Amount (ng) : 250.0000
Integration start scan : 418 Integration stop scan: 592
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

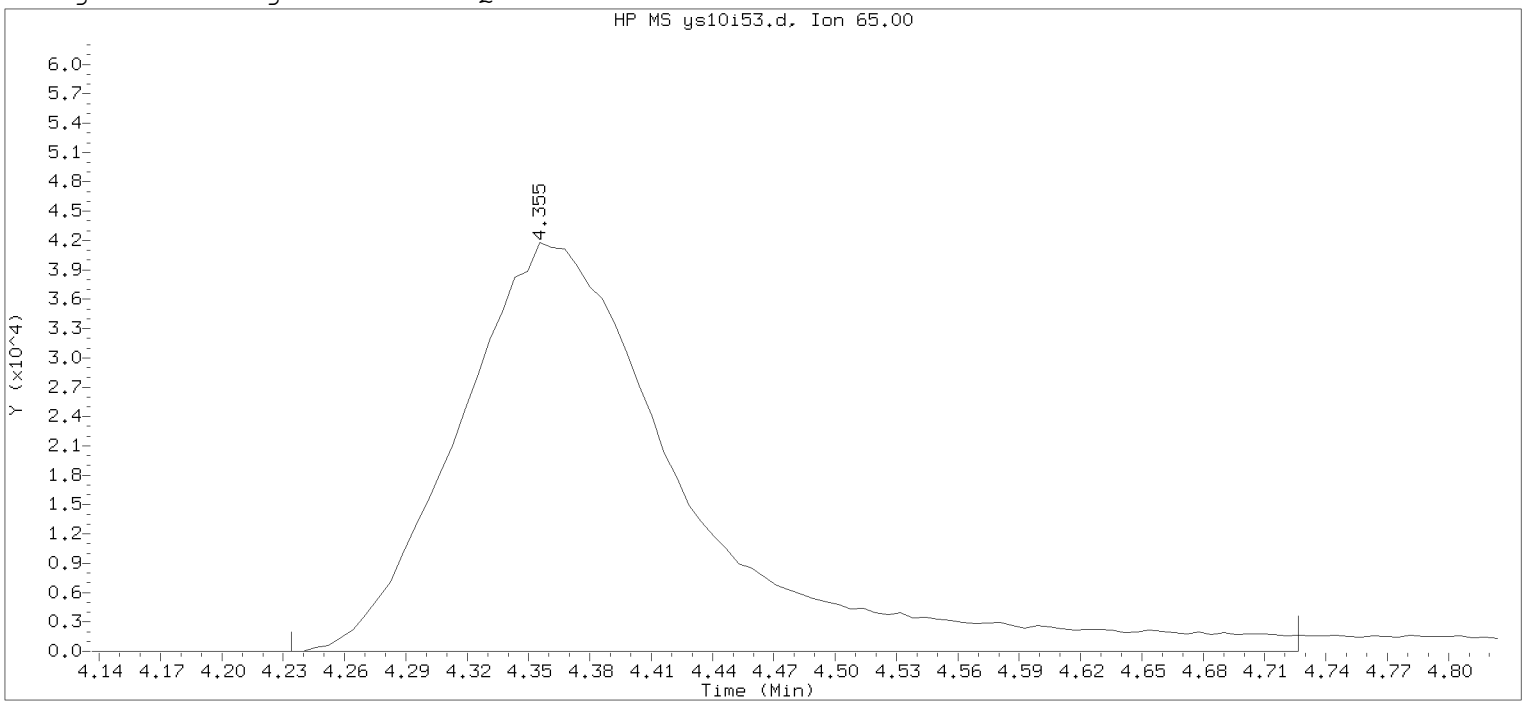
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:17
Date, time and analyst ID of latest file update: 13-Sep-2019 14:17 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 456
Retention Time (minutes): 4.355
Quant Ion : 65.00
Area : 324168
On-column Amount (ng) : 250.0000
Integration start scan : 435 Integration stop scan: 516
Y at integration start : 0 Y at integration end: 0

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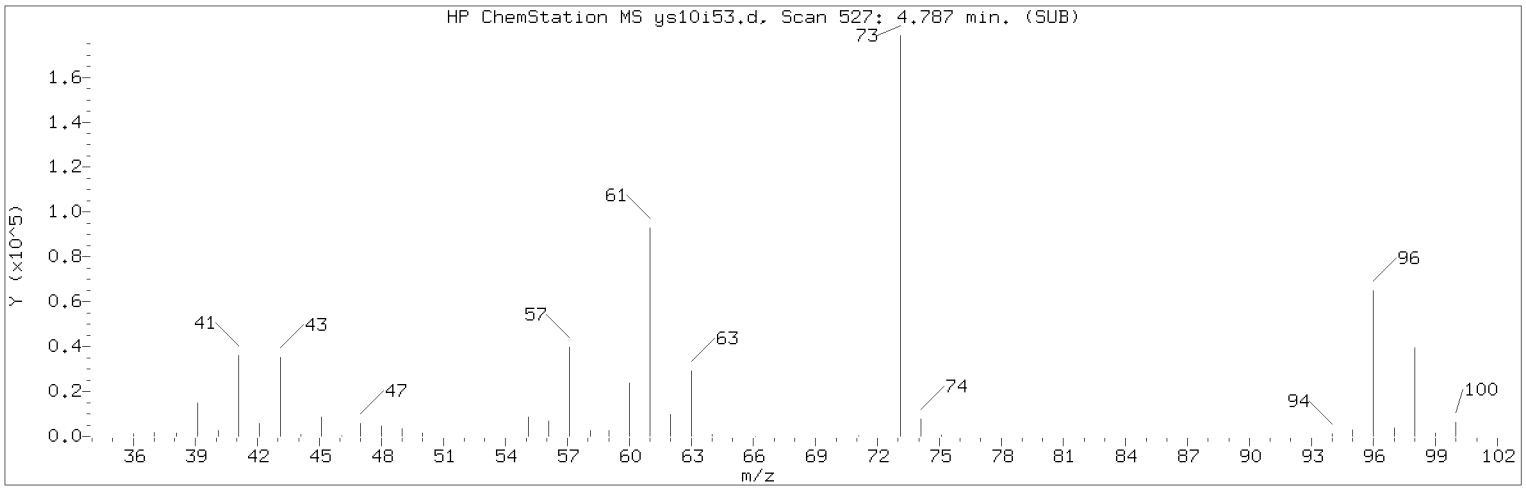
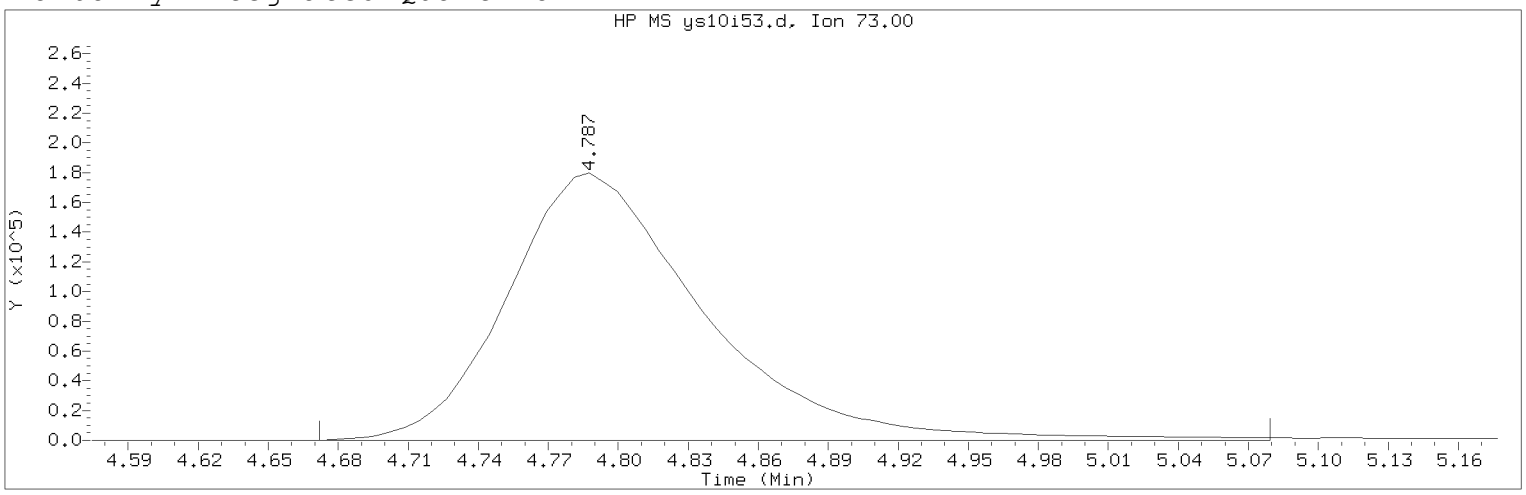
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

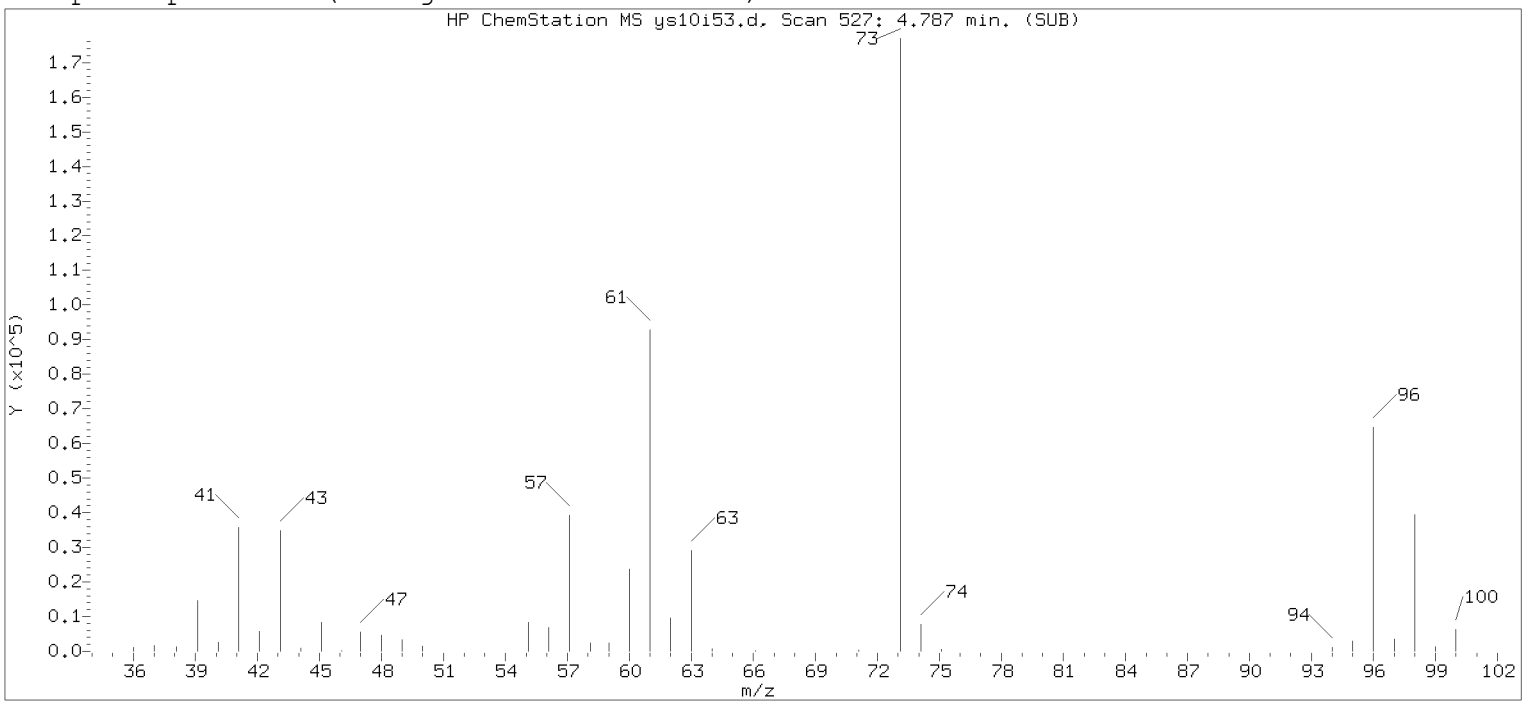
Compound Number : 33
Compound Name : Methyl Tertiary Butyl Ether
Scan Number : 527
Retention Time (minutes): 4.787
Quant Ion : 73.00
Area (flag) : 1052596M
On-Column Amount (ng) : 51.3087
Integration start scan : 507 Integration stop scan: 574
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

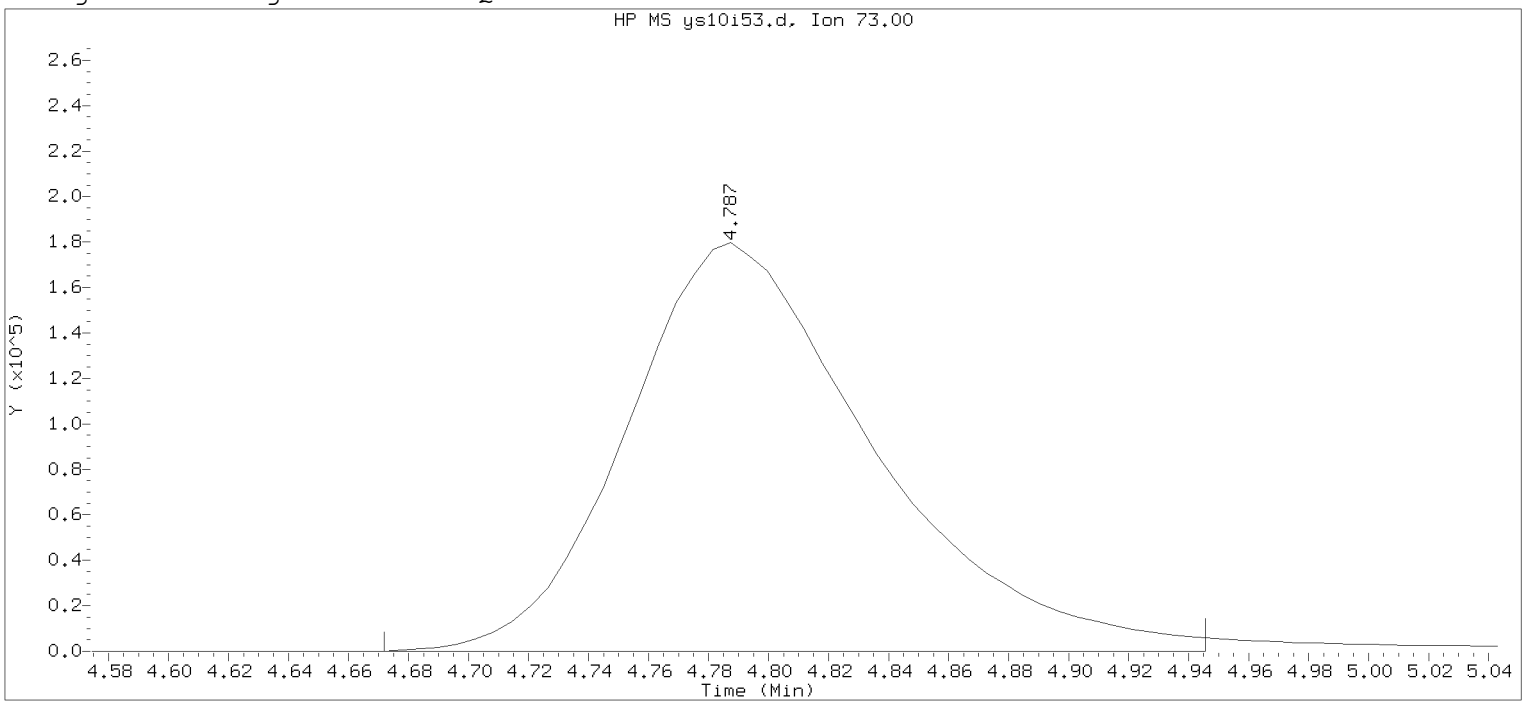
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

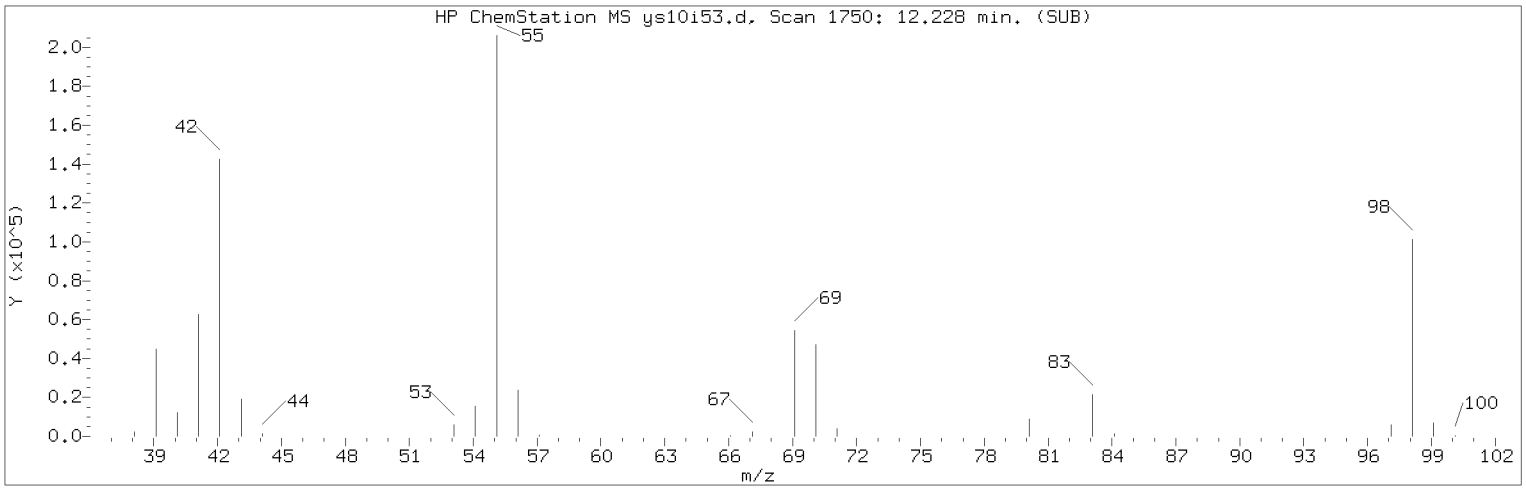
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:17
Date, time and analyst ID of latest file update: 13-Sep-2019 14:17 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

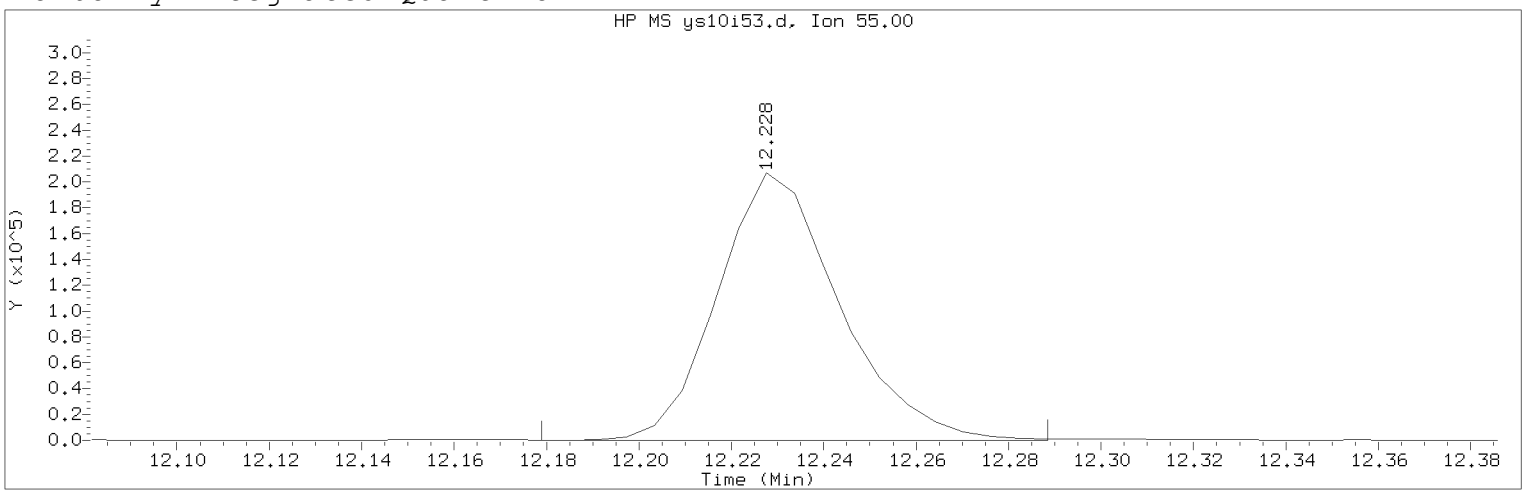
Compound Number : 33
Compound Name : Methyl Tertiary Butyl Ether
Scan Number : 527
Retention Time (minutes): 4.787
Quant Ion : 73.00
Area : 1027801
On-column Amount (ng) : 50.0000
Integration start scan : 507 Integration stop scan: 552
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

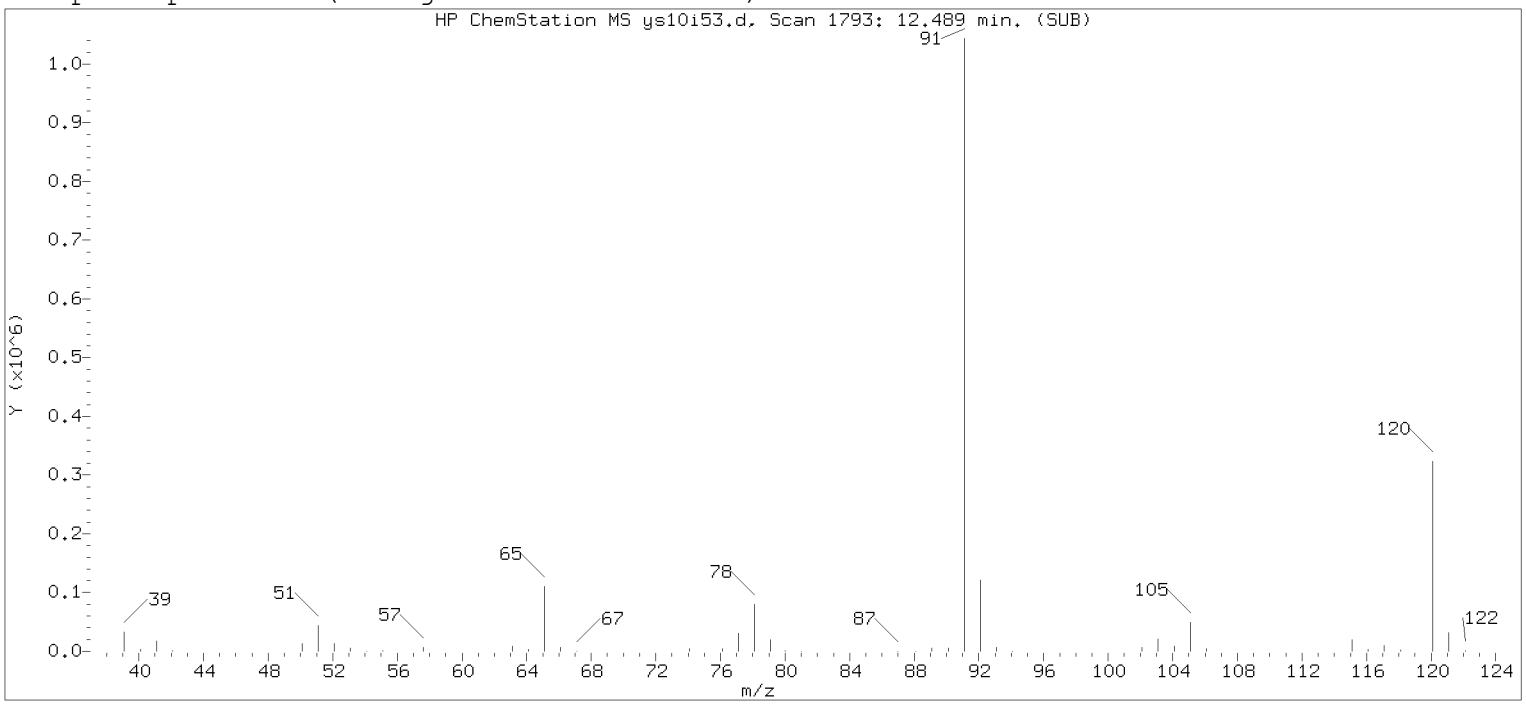
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1750
Retention Time (minutes): 12.228
Quant Ion : 55.00
Area (flag) : 376842MA
On-Column Amount (ng) : 629.0348
Integration start scan : 1741 Integration stop scan: 1759
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

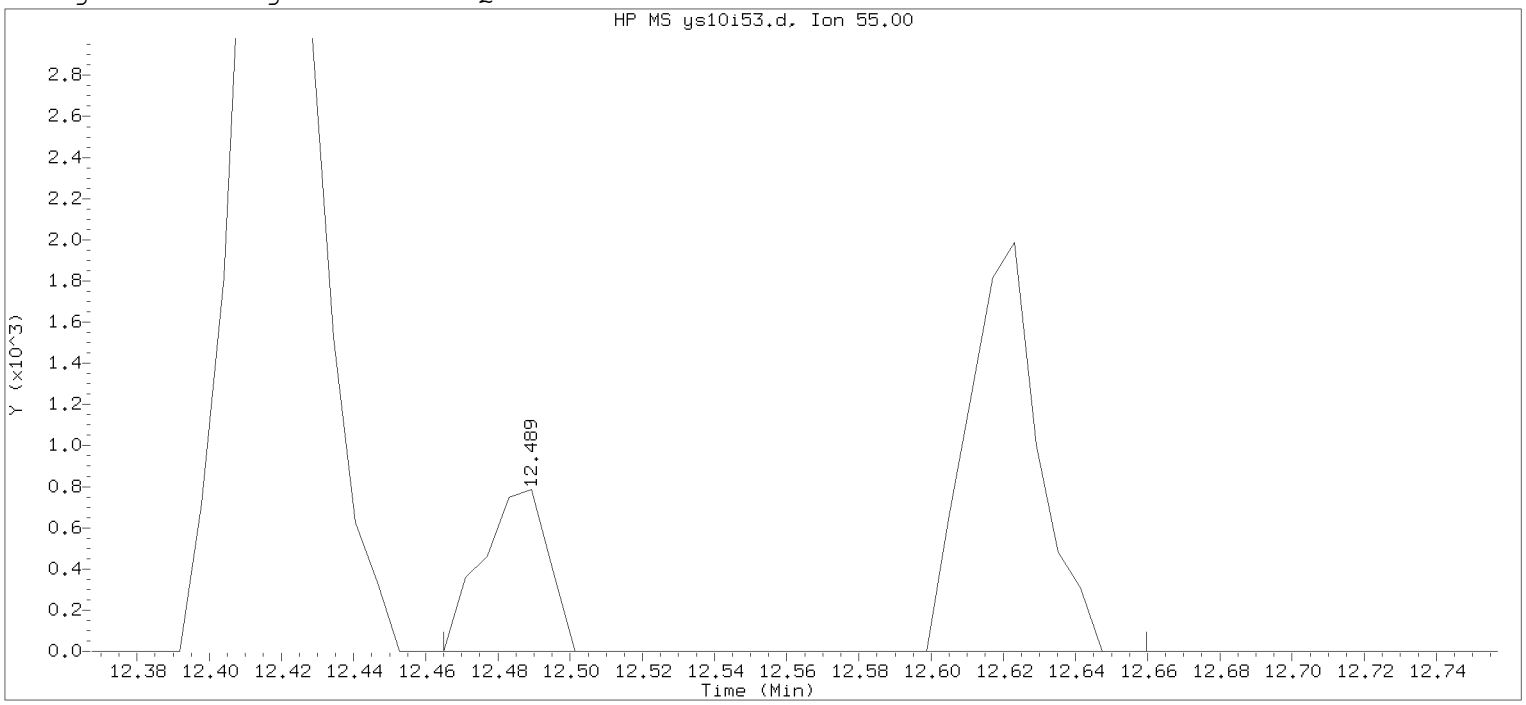
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

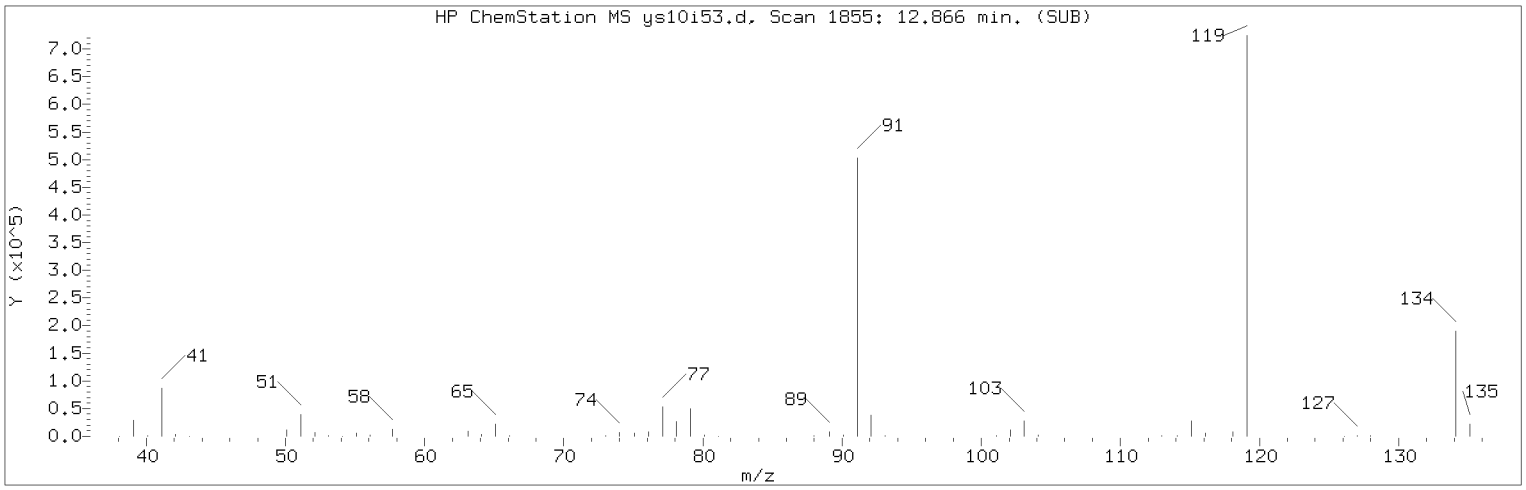
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:17
Date, time and analyst ID of latest file update: 13-Sep-2019 14:17 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

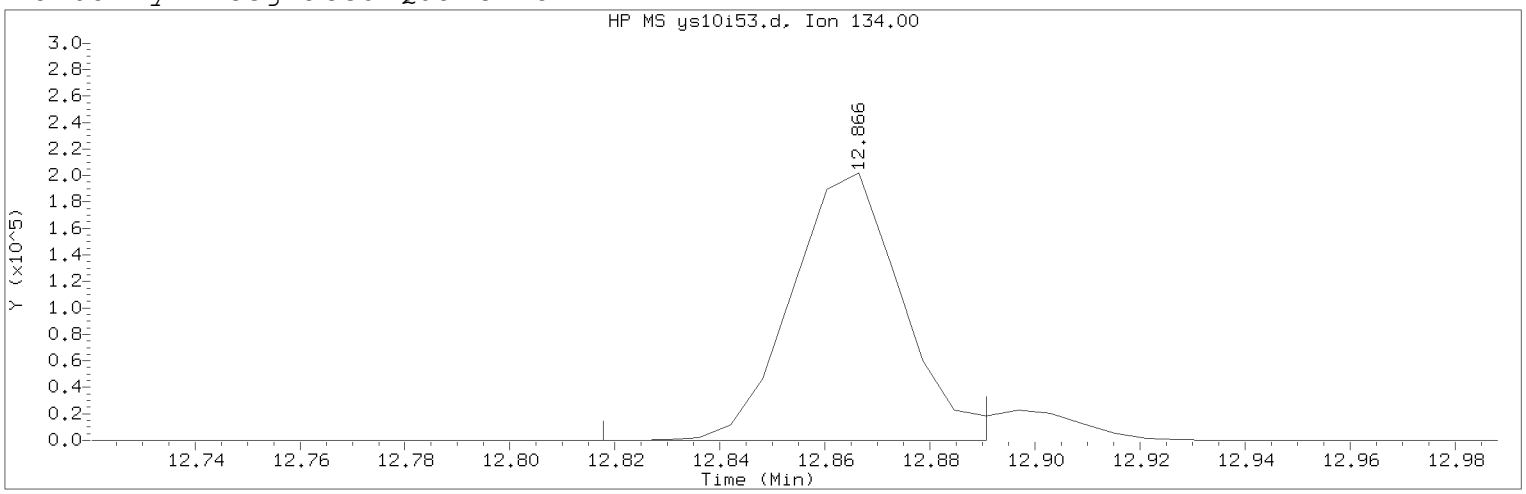
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1793
Retention Time (minutes): 12.489
Quant Ion : 55.00
Area : 3722
On-column Amount (ng) : 625.0000
Integration start scan : 1788 Integration stop scan: 1820
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

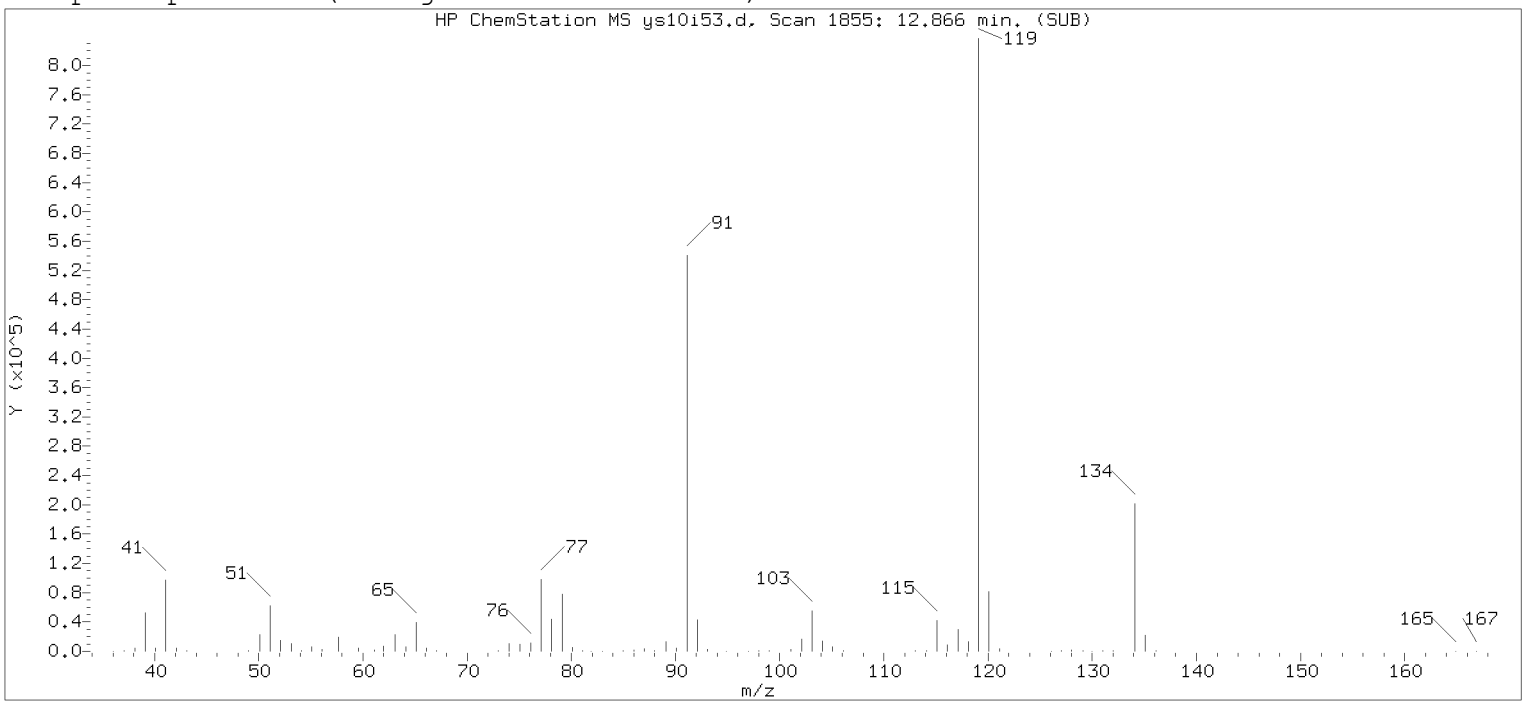
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area (flag) : 293407M
On-Column Amount (ng) : 50.3569
Integration start scan : 1846 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

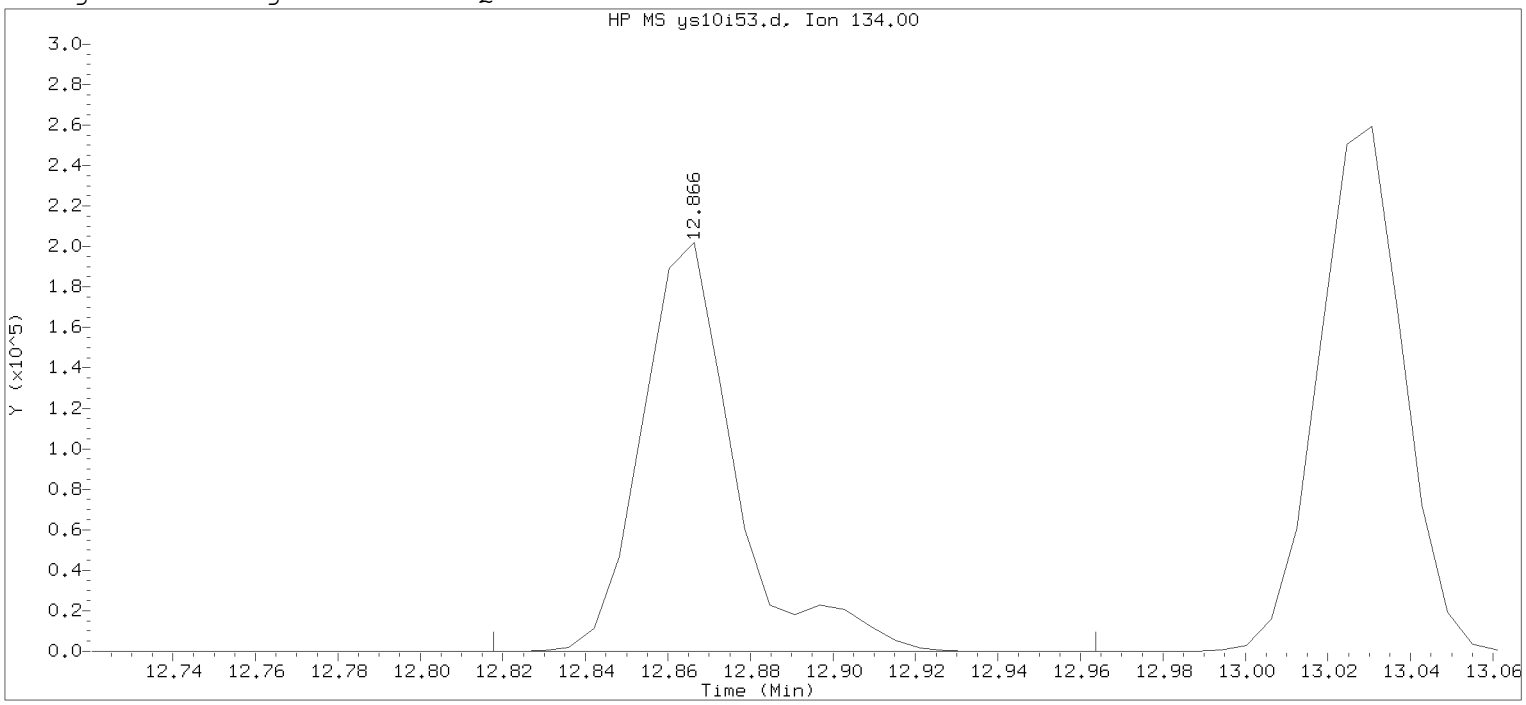
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i53.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:34 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:17
Date, time and analyst ID of latest file update: 13-Sep-2019 14:17 kas02648

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area : 316439
On-column Amount (ng) : 50.0000
Integration start scan : 1846 Integration stop scan: 1870
Y at integration start : 0 Y at integration end: 0

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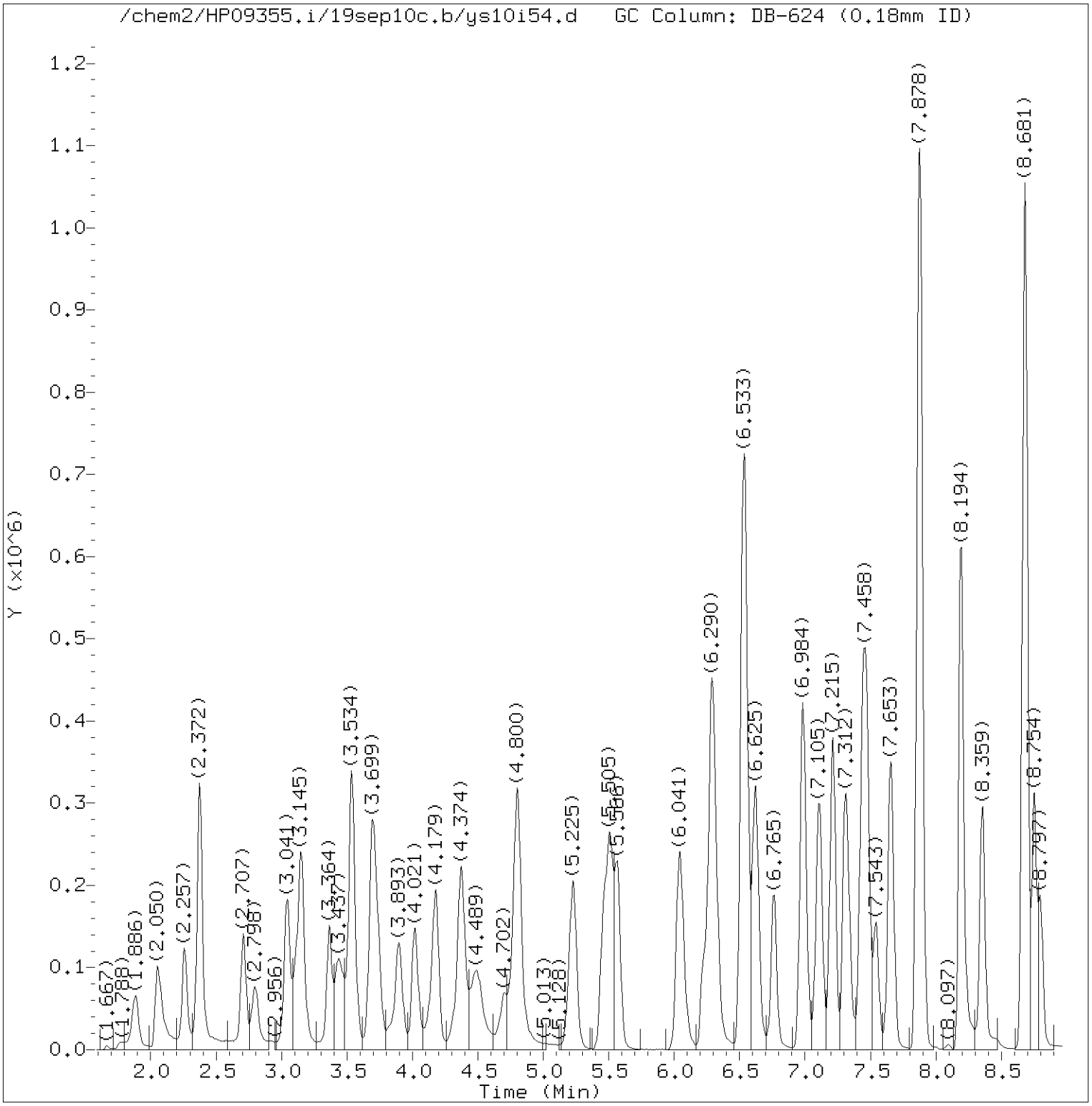
Target 3.5 esignature user: KAS02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

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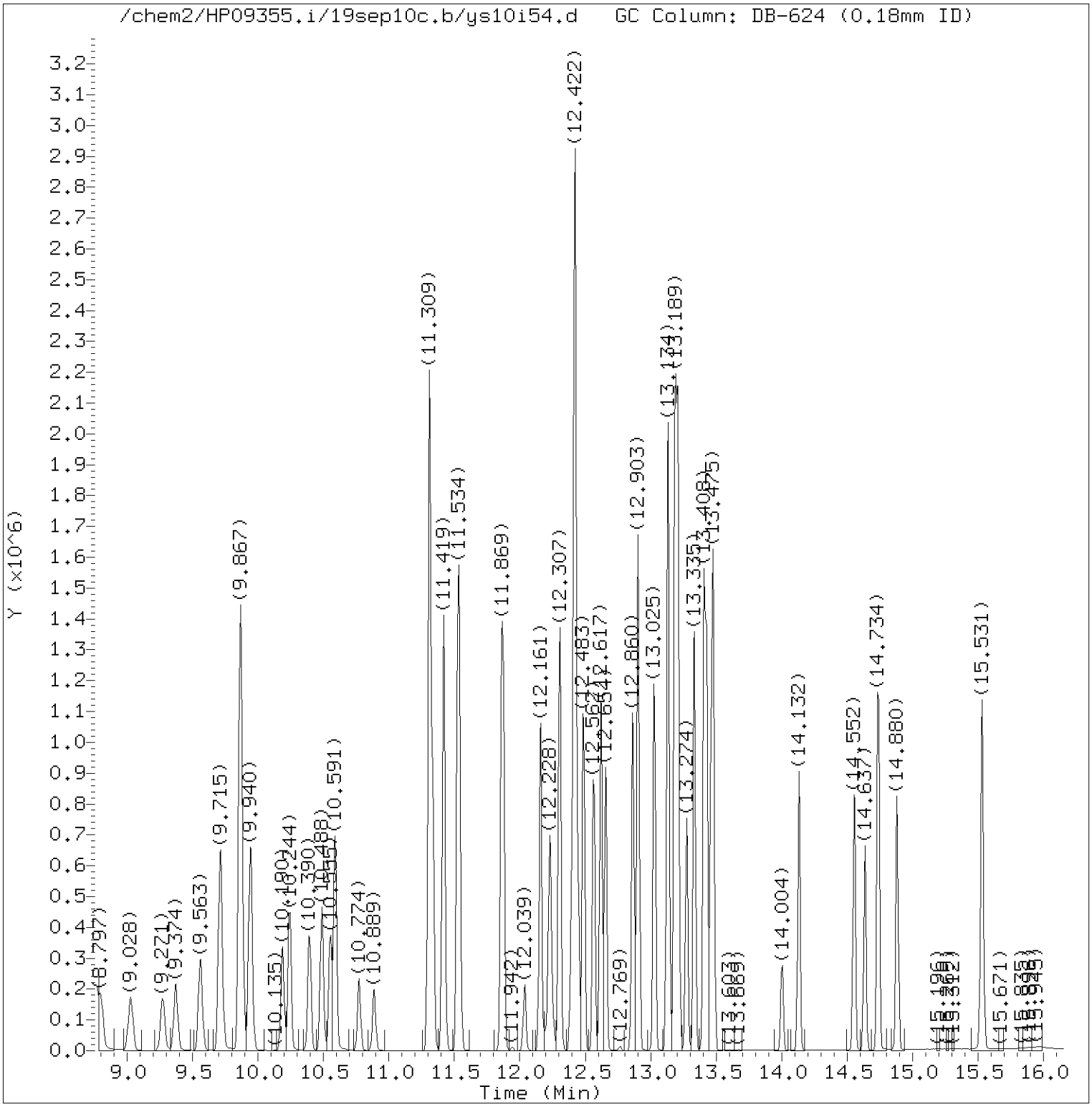
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.050	85	217866	19.648
4) Chloromethane	(2)	2.257	50	189878	20.474
5) 1,3-Butadiene	(2)	2.372	39	148242	21.209
6) Vinyl Chloride	(2)	2.378	62	184149	19.964
8) Bromomethane	(2)	2.707	94	139888	20.769
9) Chloroethane	(2)	2.798	64	107396	20.406
10) Dichlorofluoromethane	(2)	3.041	67	226206	20.423
12) Trichlorofluoromethane	(2)	3.114	101	231885	19.655
11) n-Pentane	(2)	3.151	43	229009	20.939
14) Ethyl ether	(2)	3.364	59	128459	20.601
15) Freon 123a	(2)	3.443	67	150143	20.866
16) Acrolein	(1)	3.534	56	560274	194.731
17) 1,1-Dichloroethene	(2)	3.692	96	108639	20.319
17) 1,1-Dichloroethene	(2)	3.692	63	56575	20.666
18) Acetone	(1)	3.705	58	53827	39.648
19) Freon 113	(2)	3.723	101	124526	20.224
21) 2-Propanol	(1)	3.875	45	157606	194.587
22) Methyl Iodide	(2)	3.899	142	211623	20.503
23) Carbon Disulfide	(2)	4.021	76	392002	20.110
27) Methyl Acetate	(2)	4.143	43	179450	20.065
25) Allyl Chloride	(2)	4.179	41	185102	20.177
29)*t-Butyl alcohol-d10	(1)	4.368	65	372209M	250.000
28) Methylene Chloride	(2)	4.374	84	128439	20.439
30) t-Butyl alcohol	(1)	4.489	59	337706	202.093
31) Acrylonitrile	(2)	4.696	53	98232	19.830
33) Methyl Tertiary Butyl Ether	(2)	4.787	73	424506	20.464
32) trans-1,2-Dichloroethene	(2)	4.806	96	124066	20.233
34) n-Hexane	(2)	5.232	57	219572	20.721
36) 1,1-Dichloroethane	(2)	5.457	63	229181	20.613
38) di-Isopropyl ether	(2)	5.511	45	435904	20.668
39) 2-Chloro-1,3-butadiene	(2)	5.566	53	209796	20.286
40) Ethyl t-butyl ether	(2)	6.041	59	427655	20.860
43) 1,2-Dichloroethene (Total)	(2)		96	265741	40.608
44) 2-Butanone	(2)	6.229	43	282635	39.952
42) cis-1,2-Dichloroethene	(2)	6.284	96	141675	20.375
45) 2,2-Dichloropropane	(2)	6.302	77	176120	20.169
47) Propionitrile	(1)	6.308	54	383426	196.453
48) Methacrylonitrile	(2)	6.533	67	515989	100.035

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.625	128	73828	20.206
50) Tetrahydrofuran	(1)	6.625	71	81350	38.405
51) Chloroform	(2)	6.765	83	221184	20.512
52)$Dibromofluoromethane	(2)	6.978	113	277264	49.814
52)$Dibromofluoromethane	(2)	6.978	111	284149	49.858
53) 1,1,1-Trichloroethane	(2)	6.996	97	191769	20.318
54) Cyclohexane	(2)	7.105	56	252208	20.582
54) Cyclohexane	(2)	7.105	84	217405	20.518
54) Cyclohexane	(2)	7.105	69	79580	20.451
55) 1,1-Dichloropropene	(2)	7.209	75	185169	20.537
56) Carbon Tetrachloride	(2)	7.215	117	163487	19.727
58) Isobutyl Alcohol	(1)	7.306	41	296170	521.253
57)$1,2-Dichloroethane-d4	(2)	7.440	102	72422	50.234
57)$1,2-Dichloroethane-d4	(2)	7.440	65	347972	50.232
57)$1,2-Dichloroethane-d4	(2)	7.440	104	45634	49.958
60) Benzene	(2)	7.470	78	539255	20.772
61) 1,2-Dichloroethane	(2)	7.543	62	183928	20.562
61) 1,2-Dichloroethane	(2)	7.537	98	16658	20.431
65) t-Amyl methyl ether	(2)	7.653	73	431918	21.167
66)*Fluorobenzene	(2)	7.872	96	1181643	50.000
67) n-Heptane	(2)	7.884	43	228564	20.664
69) n-Butanol	(1)	8.188	56	581079	1053.367
71) Trichloroethene	(2)	8.359	95	138999	20.505
72) Methylcyclohexane	(2)	8.675	83	265064	20.432
72) Methylcyclohexane	(2)	8.675	98	116975	20.230
73) 1,2-Dichloropropane	(2)	8.687	63	137317	20.350
76) Methyl Methacrylate	(2)	8.748	69	160150	19.870
75) 1,4-Dioxane	(1)	8.766	88	63132M	511.066
74) Dibromomethane	(2)	8.797	93	89261	20.089
78) Bromodichloromethane	(2)	9.028	83	157912	19.467
79) 2-Nitropropane	(2)	9.271	41	133405	37.479
80) 2-Chloroethyl Vinyl Ether	(2)	9.374	63	118846	20.333
81) cis-1,3-Dichloropropene	(2)	9.563	75	216122	19.759
82) 4-Methyl-2-pentanone	(2)	9.715	43	560831	40.915
83)$Toluene-d8	(3)	9.867	98	1193727	50.228
83)$Toluene-d8	(3)	9.867	100	769374	50.099
88) Toluene	(3)	9.940	92	346541	20.851
90) 1,3-Dichloropropene (total)	(3)		100	419656	39.294

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$ = Compound is a surrogate standard.

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on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.190	75	203534	19.534
91) Ethyl Methacrylate	(3)	10.244	69	261169	20.147
92) 1,1,2-Trichloroethane	(3)	10.390	97	132182	20.510
93) Tetrachloroethene	(3)	10.488	166	145490	20.816
94) 1,3-Dichloropropane	(3)	10.555	76	230676	20.701
96) 2-Hexanone	(3)	10.591	43	463247	41.203
97) Dibromochloromethane	(3)	10.774	129	130867	19.150
99) 1,2-Dibromoethane	(3)	10.889	107	144863	20.193
100)*Chlorobenzene-d5	(3)	11.309	117	880146	50.000
101) 1-Chlorohexane	(3)	11.315	91	190533	20.643
102) Chlorobenzene	(3)	11.333	112	389826	21.023
103) 1,1,1,2-Tetrachloroethane	(3)	11.419	131	126103	20.174
104) Ethylbenzene	(3)	11.419	91	671288	21.112
106) m+p-Xylene	(3)	11.534	106	530622	42.411
108) Xylene (Total)	(3)		106	789263	63.364
107) o-Xylene	(3)	11.863	106	258641	20.954
109) Styrene	(3)	11.875	104	434947	20.693
110) Bromoform	(3)	12.039	173	94297	18.631
111) Isopropylbenzene	(3)	12.161	105	671252	21.272
112) Cyclohexanone	(1)	12.228	55	319629	509.159
114)$4-Bromofluorobenzene	(3)	12.307	95	456423	50.166
114)$4-Bromofluorobenzene	(3)	12.307	174	345557	50.220
116) 1,1,2,2-Tetrachloroethane	(4)	12.392	83	238175	20.909
118) trans-1,4-Dichloro-2-butene	(4)	12.422	53	419845	103.887
115) Bromobenzene	(4)	12.422	156	165604	20.924
117) 1,2,3-Trichloropropane	(4)	12.447	110	74732	20.756
119) n-Propylbenzene	(4)	12.483	91	798188	21.542
120) 2-Chlorotoluene	(4)	12.562	126	160986	20.718
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	590521	21.153
121) 4-Chlorotoluene	(4)	12.654	126	170023	20.920
124) tert-Butylbenzene	(4)	12.866	134	122448M	20.719
125) Pentachloroethane	(4)	12.897	167	92377	19.376
126) 1,2,4-Trimethylbenzene	(4)	12.903	105	618915	21.139
127) sec-Butylbenzene	(4)	13.025	105	754106	21.473
129) 1,3-Dichlorobenzene	(4)	13.128	146	326108	21.396
130) p-Isopropyltoluene	(4)	13.134	119	654905	21.509
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	471052	50.000
133) 1,4-Dichlorobenzene	(4)	13.207	146	331826	21.336

M = Compound was manually integrated.
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on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

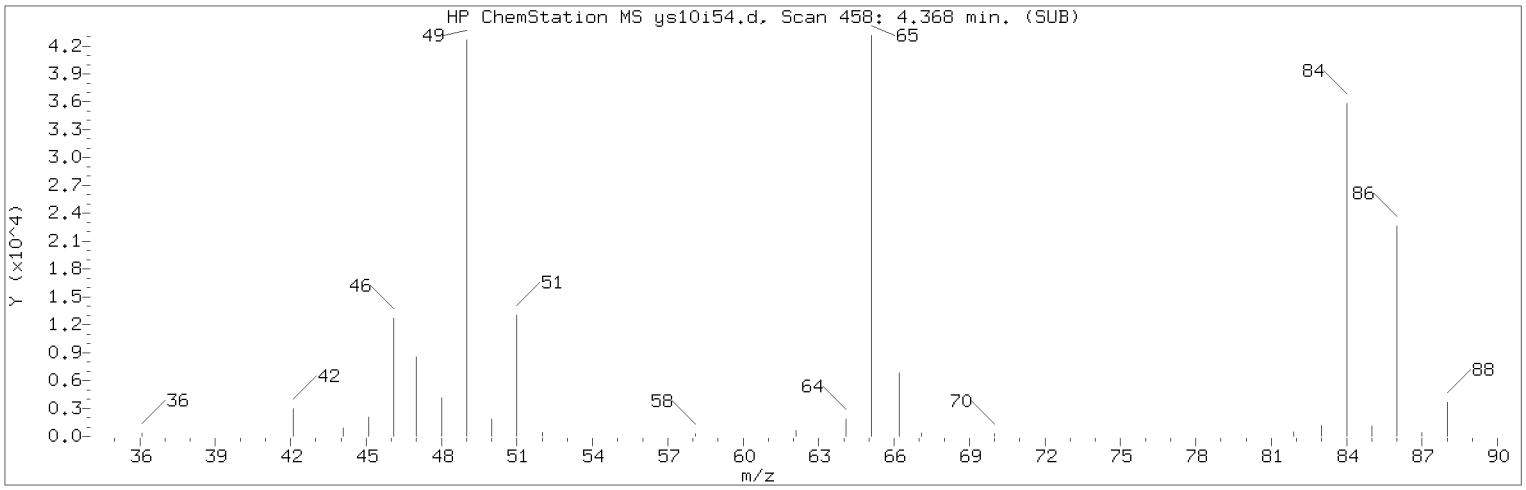
Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.207	105	638257	21.076
135) Benzyl Chloride	(4)	13.274	91	481419	19.639
136) 1,3-Diethylbenzene	(4)	13.335	119	415027	20.972
141) Diethylbenzene (total)	(4)		100	1200185	62.916
137) 1,4-Diethylbenzene	(4)	13.408	119	438802	21.047
139) n-Butylbenzene	(4)	13.426	92	339326	21.069
138) 1,2-Dichlorobenzene	(4)	13.463	146	316008	21.207
140) 1,2-Diethylbenzene	(4)	13.475	119	346356M	20.897
142) 1,2-Dibromo-3-chloropropane	(4)	14.004	75	62698	20.149
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	245906	21.360
146) 1,2,4-Trichlorobenzene	(4)	14.558	180	234073	21.293
147) Hexachlorobutadiene	(4)	14.637	225	103538	20.712
148) Naphthalene	(4)	14.740	128	852551	21.983
149) 1,2,3-Trichlorobenzene	(4)	14.880	180	226684	21.348
150) 2-Methylnaphthalene	(4)	15.531	142	558654	21.306

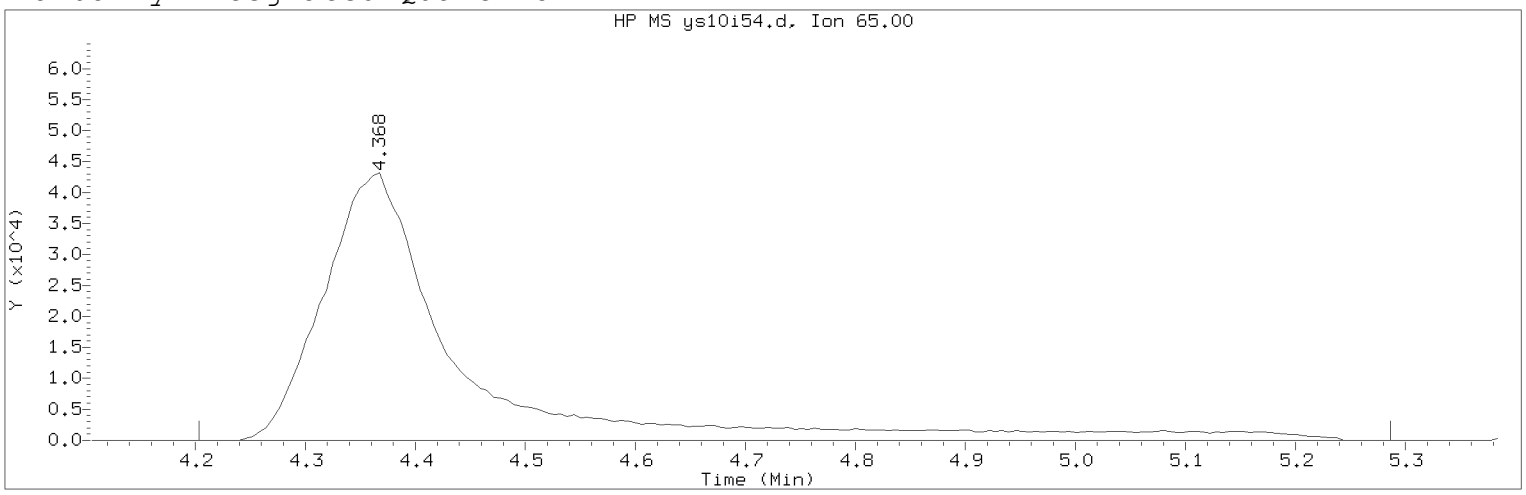
M = Compound was manually integrated.

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

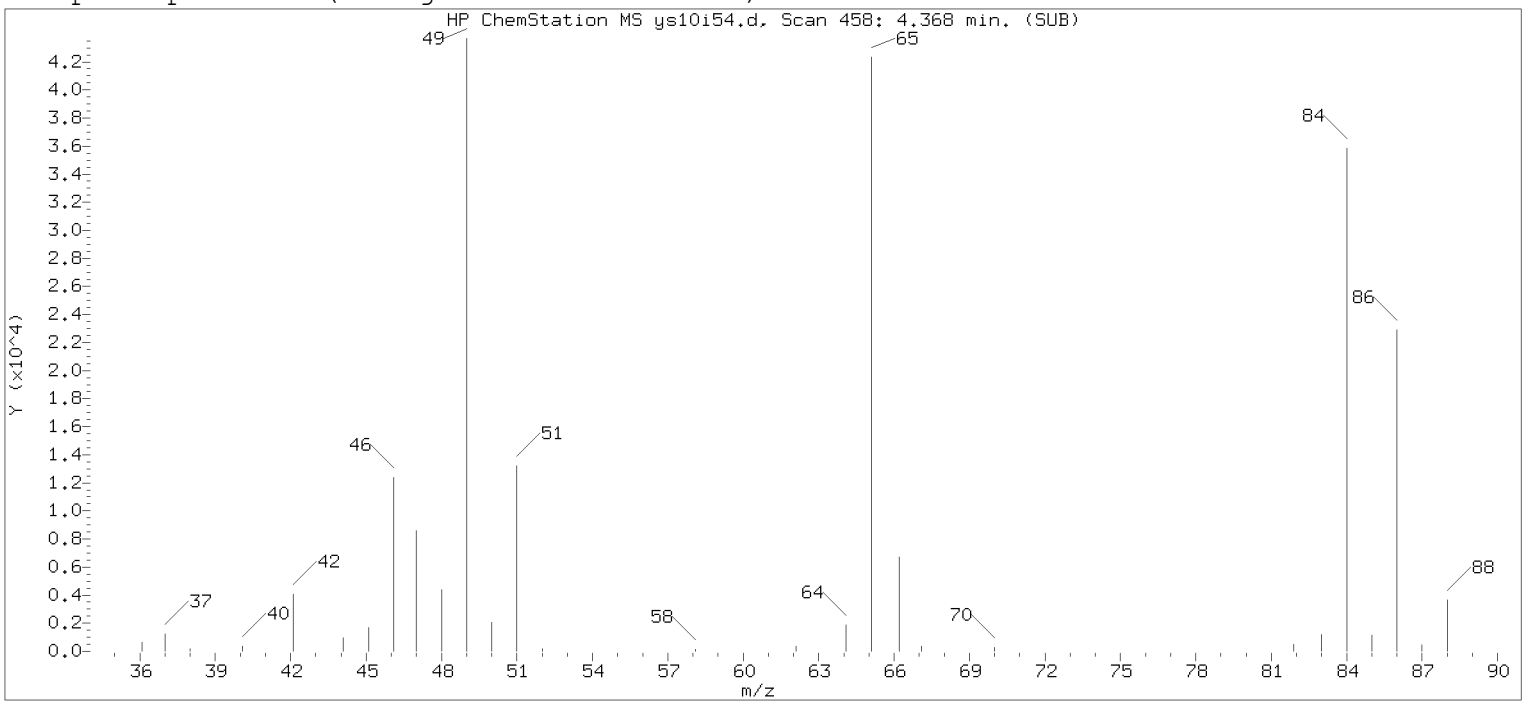
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 458
Retention Time (minutes): 4.368
Quant Ion : 65.00
Area (flag) : 372209M
On-Column Amount (ng) : 250.0000
Integration start scan : 430 Integration stop scan: 608
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

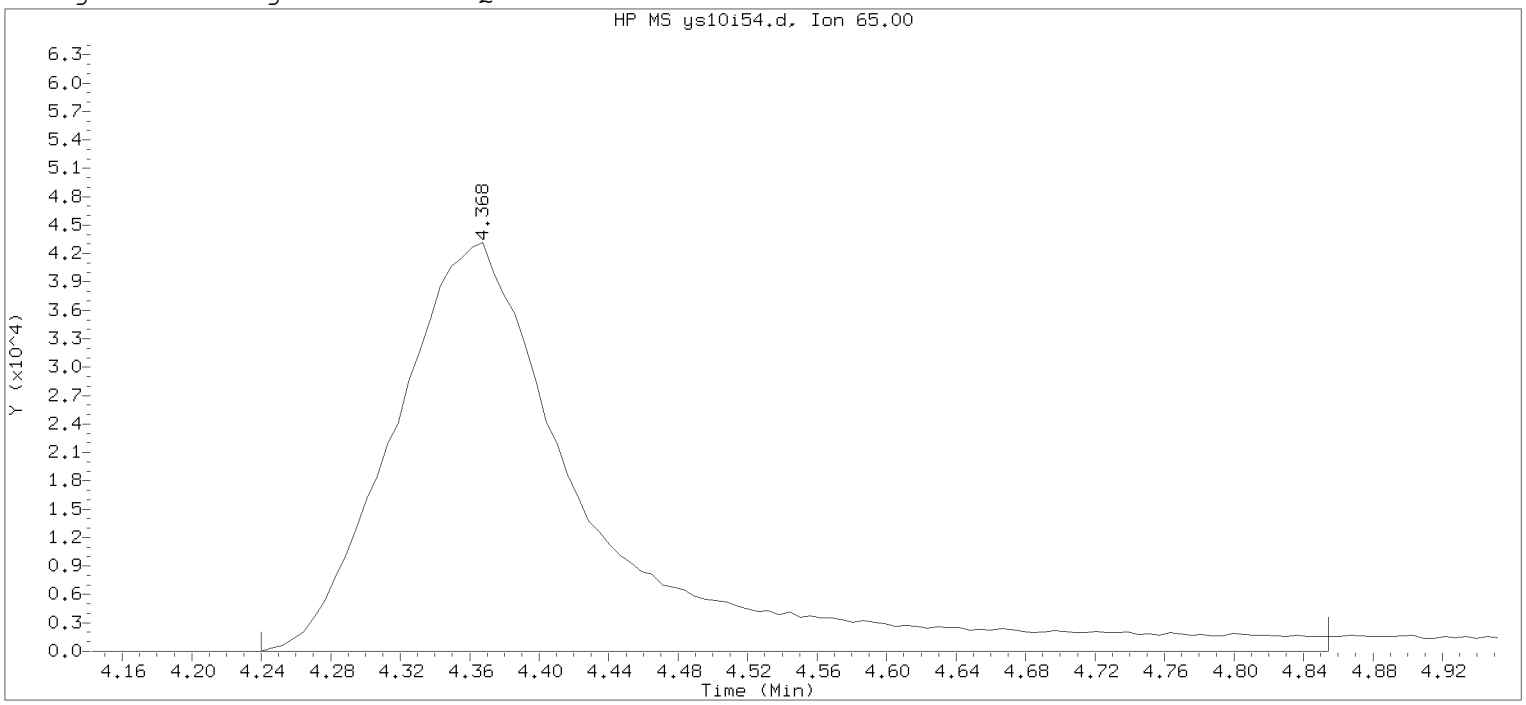
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

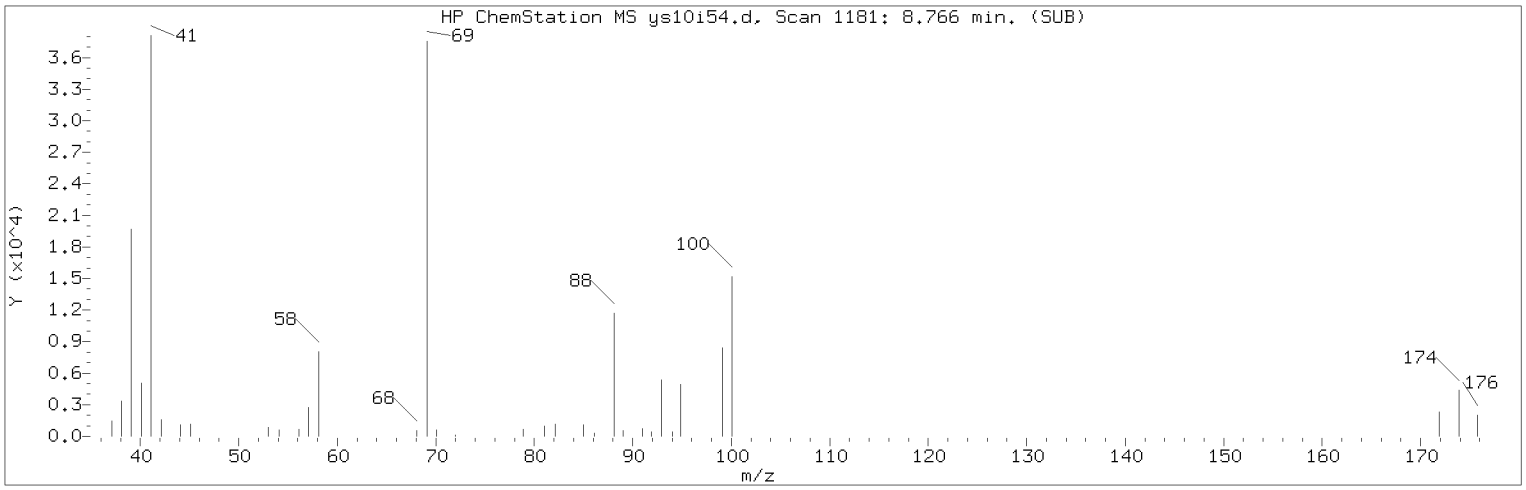
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

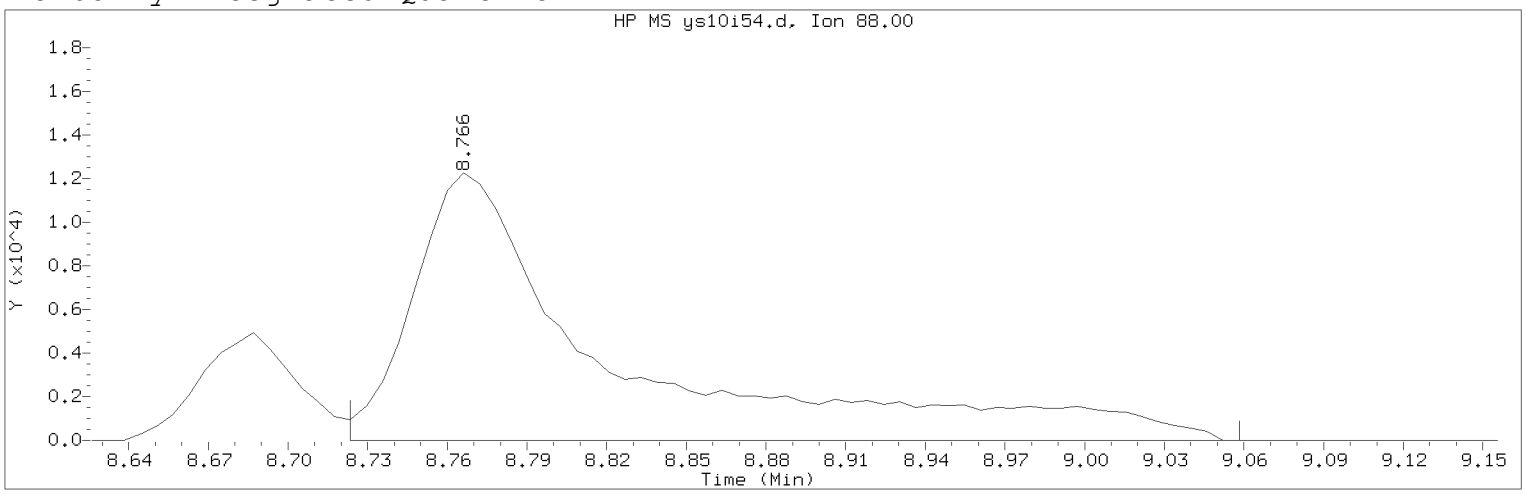
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 458
Retention Time (minutes): 4.368
Quant Ion : 65.00
Area : 341876
On-column Amount (ng) : 250.0000
Integration start scan : 436 Integration stop scan: 537
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

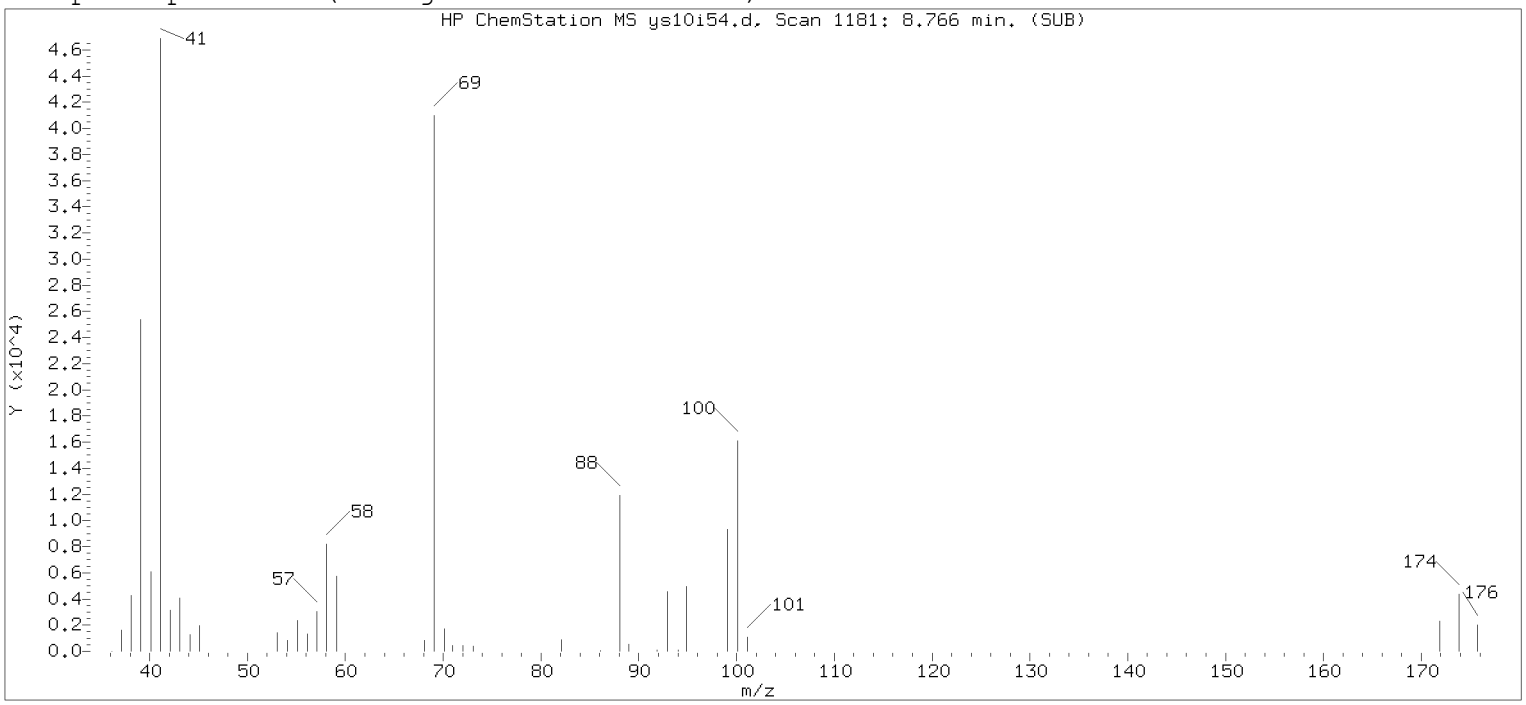
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1181
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area (flag) : 63132M
On-Column Amount (ng) : 511.0661
Integration start scan : 1173 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

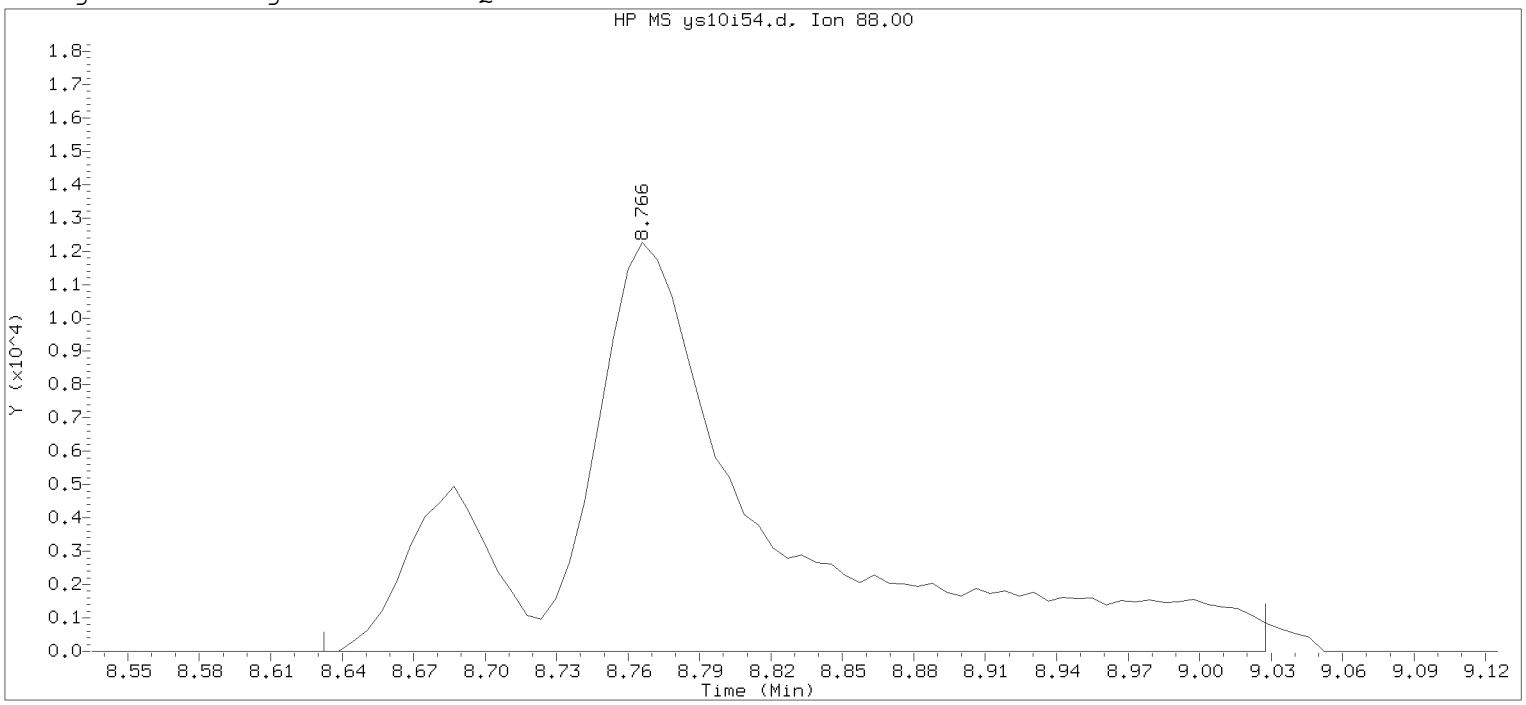
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

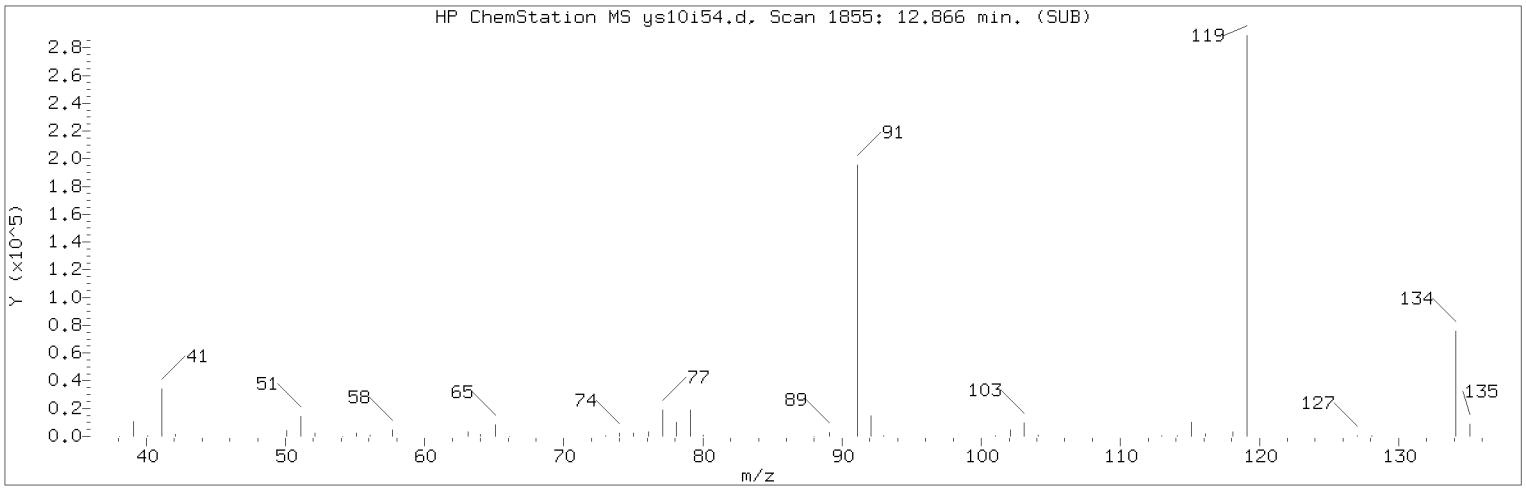
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

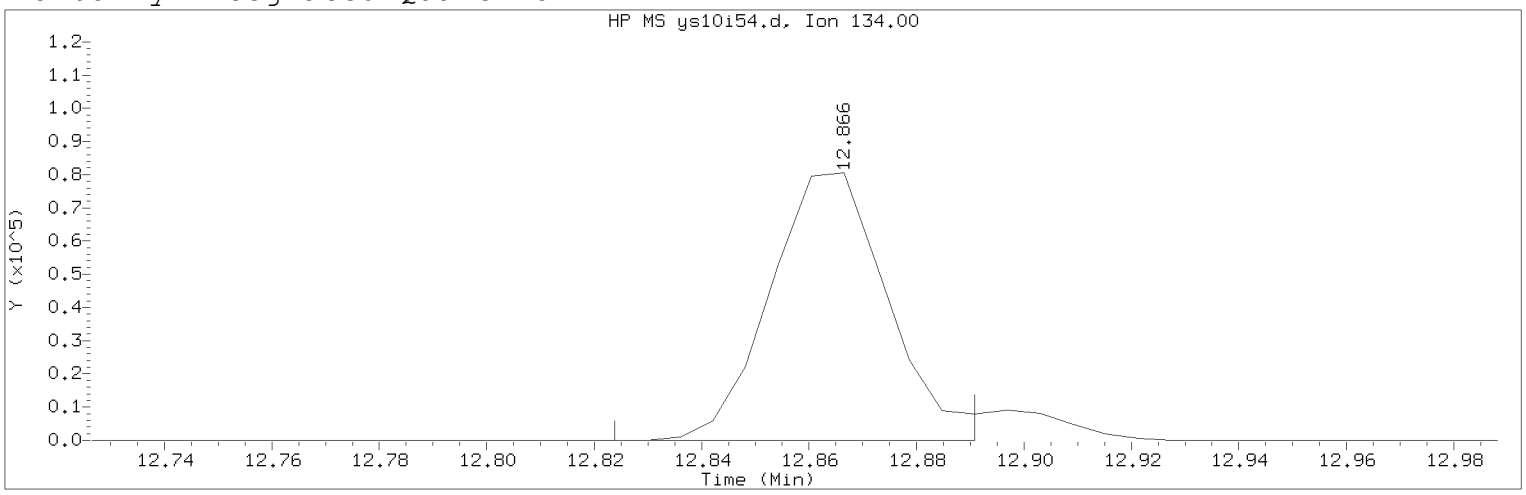
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1181		
Retention Time (minutes)	: 8.766		
Quant Ion	: 88.00		
Area	: 74645		
On-column Amount (ng)	: 495.7177		
Integration start scan	: 1158	Integration stop scan:	1223
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

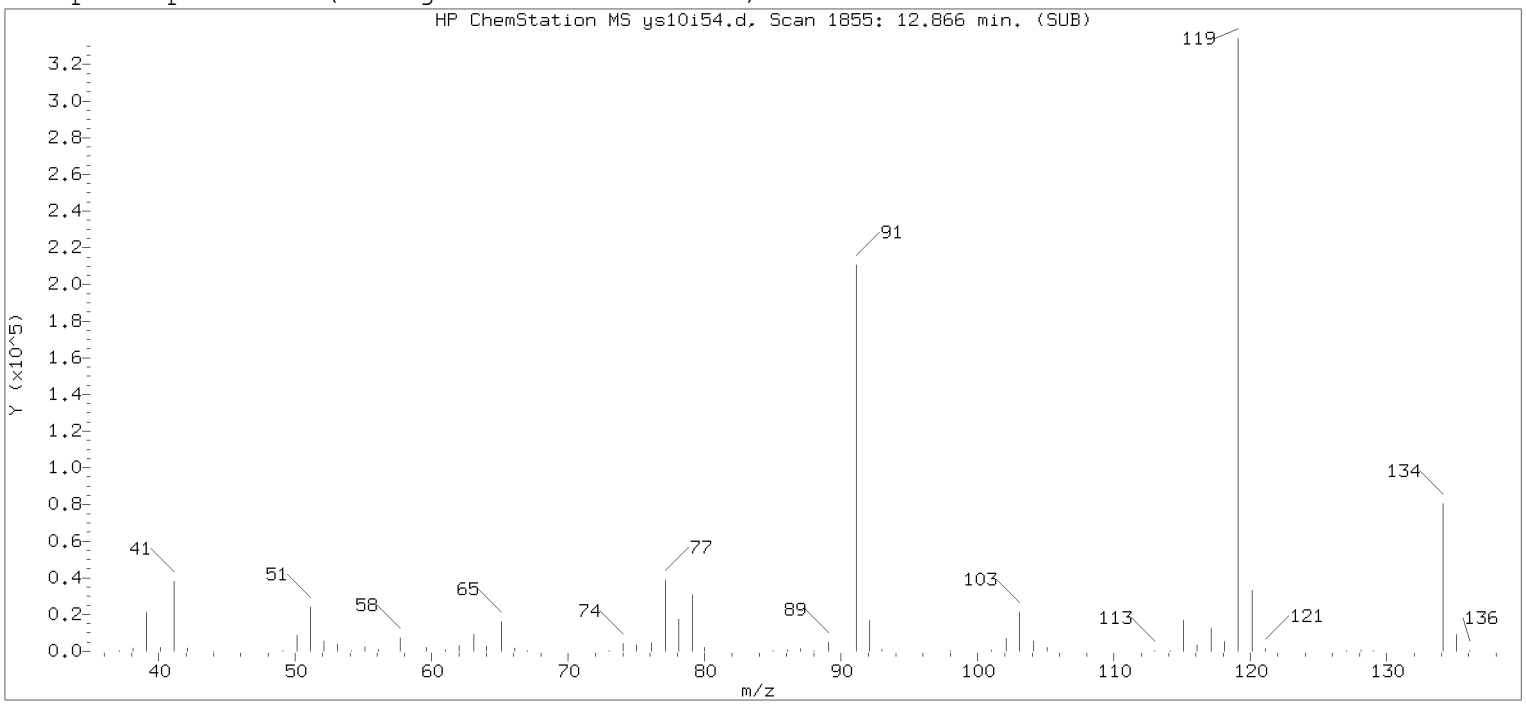
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area (flag) : 122448M
On-Column Amount (ng) : 20.7189
Integration start scan : 1847 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

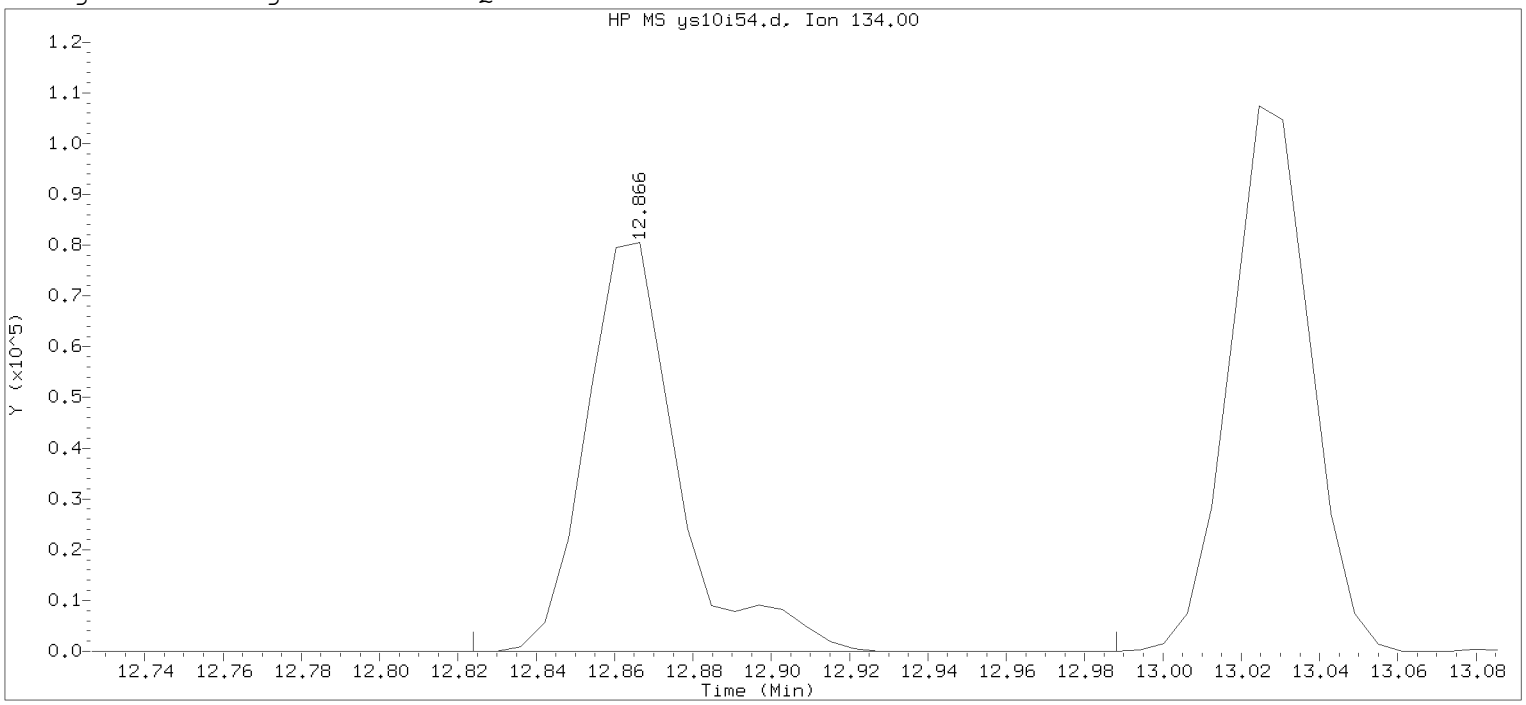
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

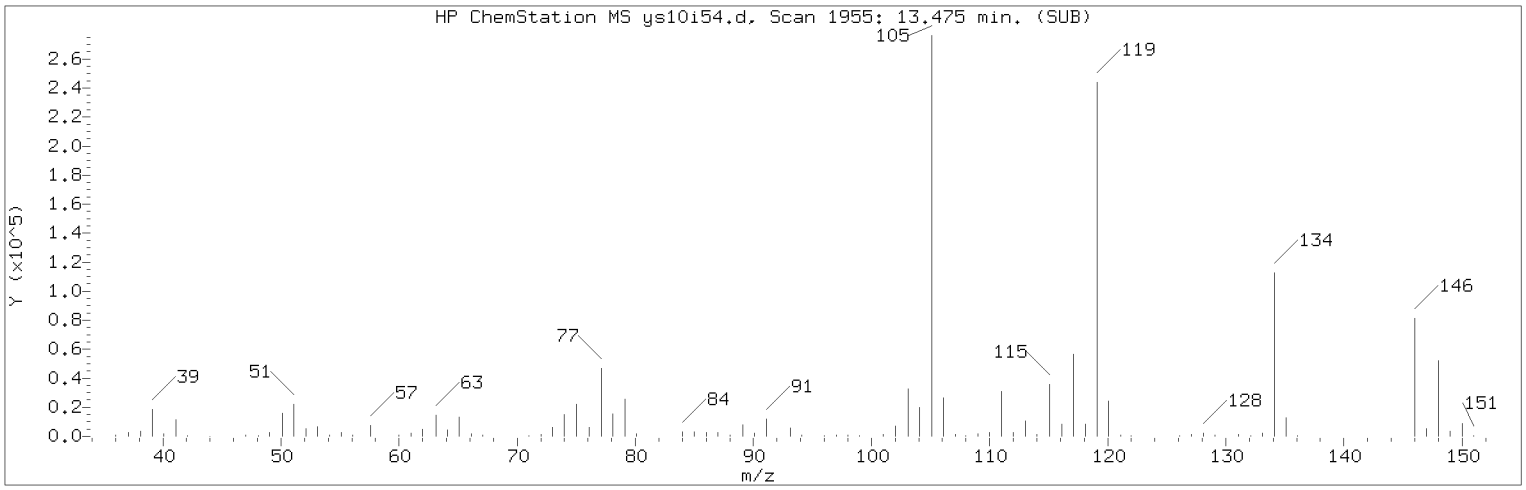
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

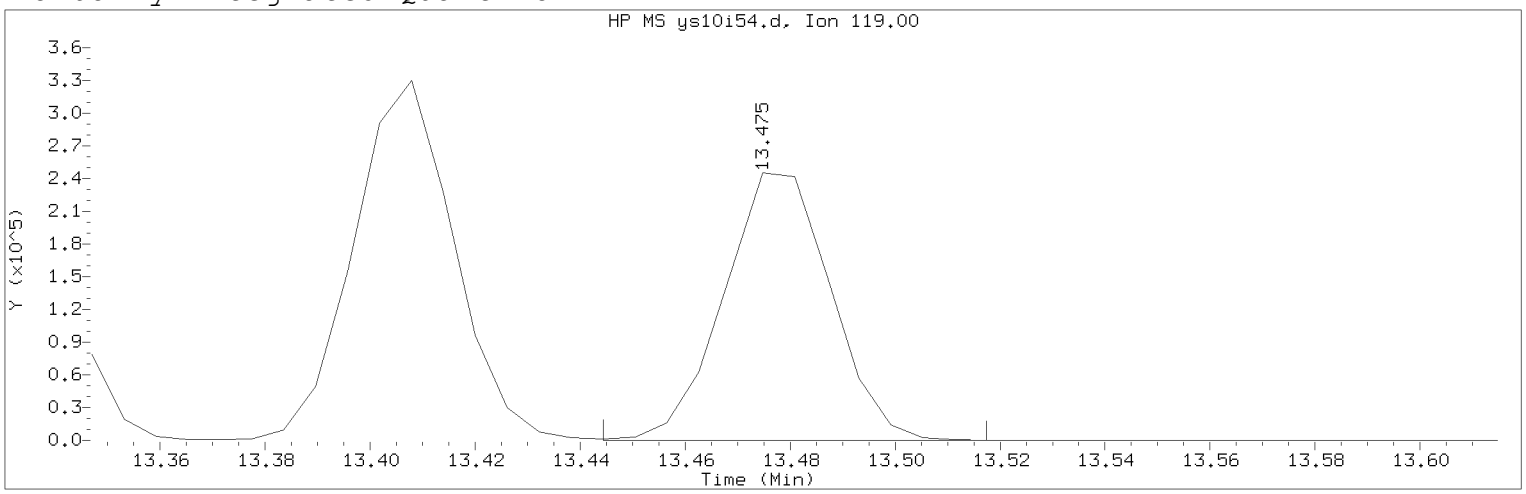
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1855
Retention Time (minutes): 12.866
Quant Ion : 134.00
Area : 131437
On-column Amount (ng) : 21.0765
Integration start scan : 1847 Integration stop scan: 1874
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

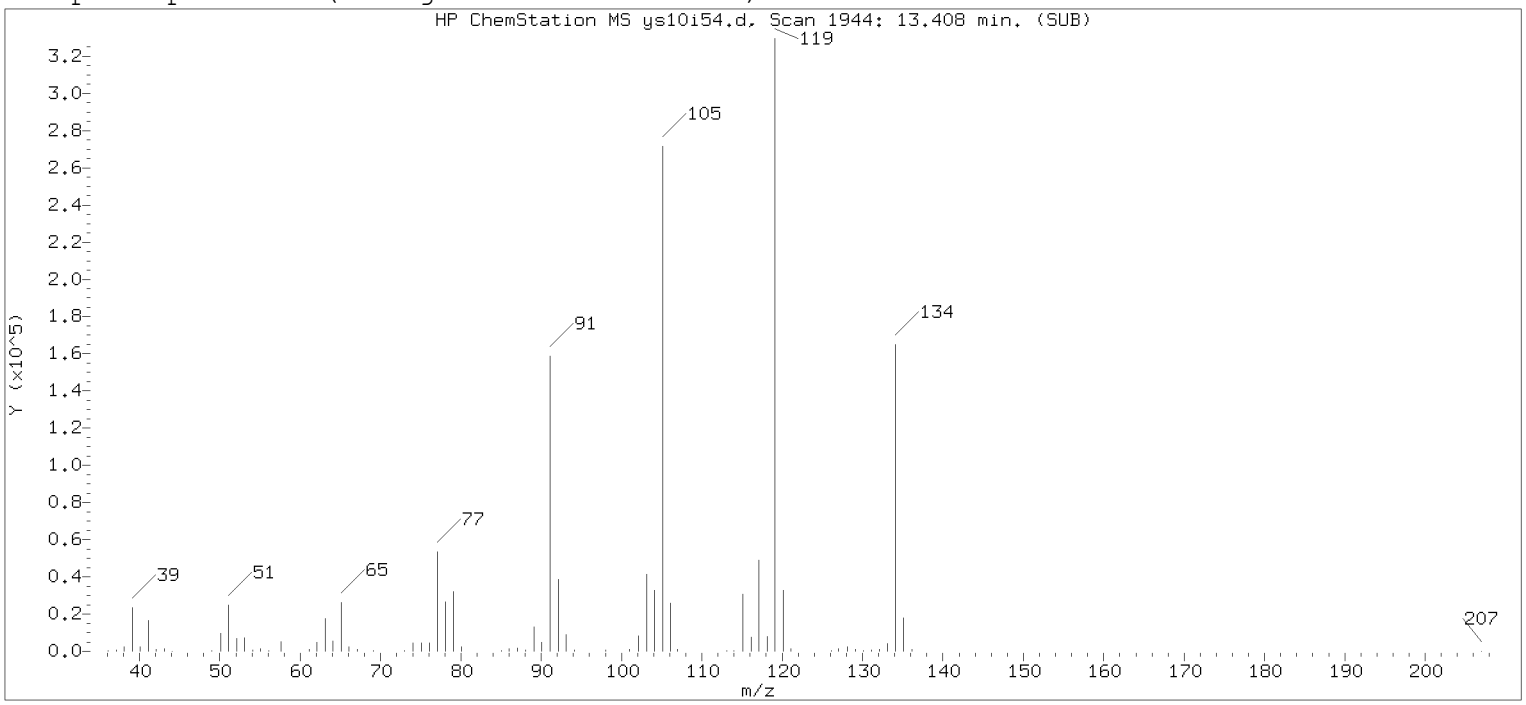
Compound Number : 140
Compound Name : 1,2-Diethylbenzene
Scan Number : 1955
Retention Time (minutes): 13.475
Quant Ion : 119.00
Area (flag) : 346356M
On-Column Amount (ng) : 20.8968
Integration start scan : 1949 Integration stop scan: 1961
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

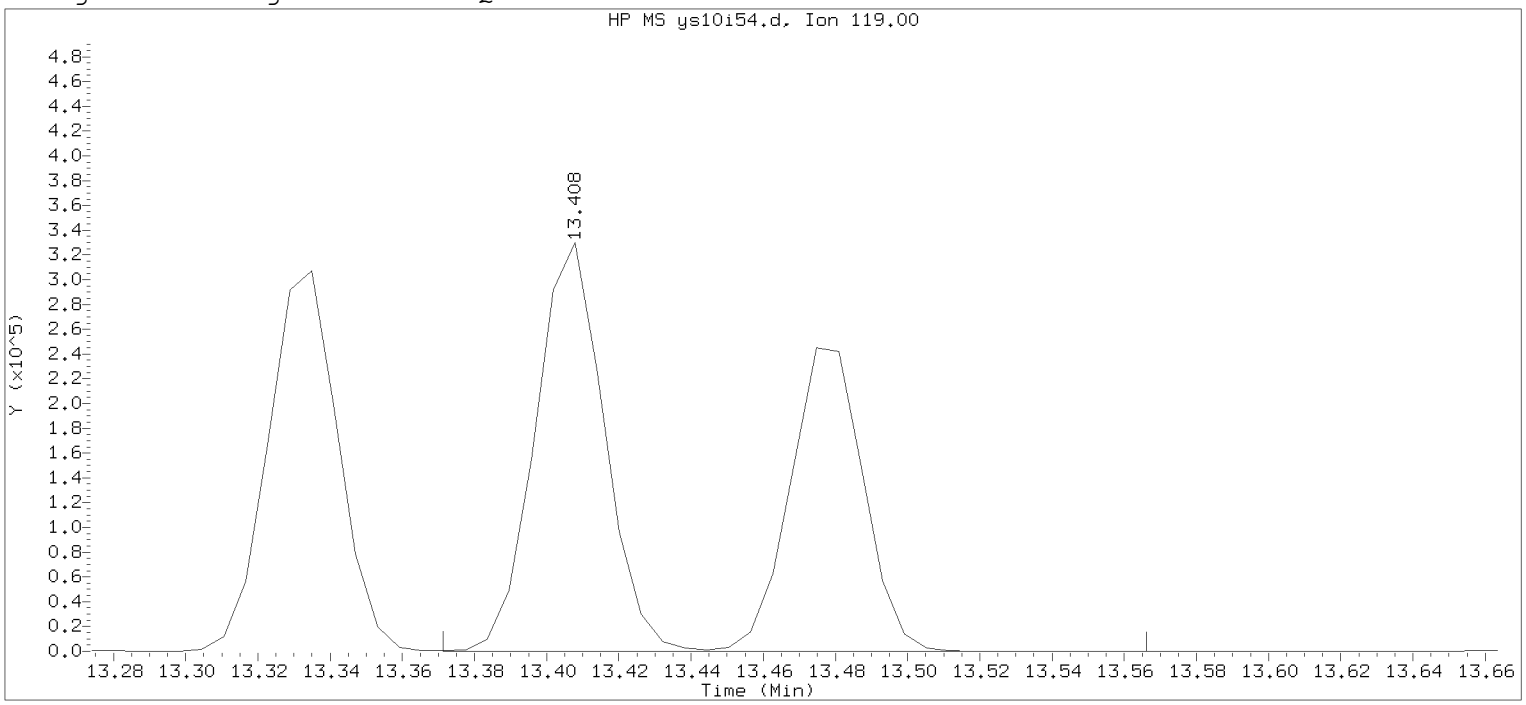
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



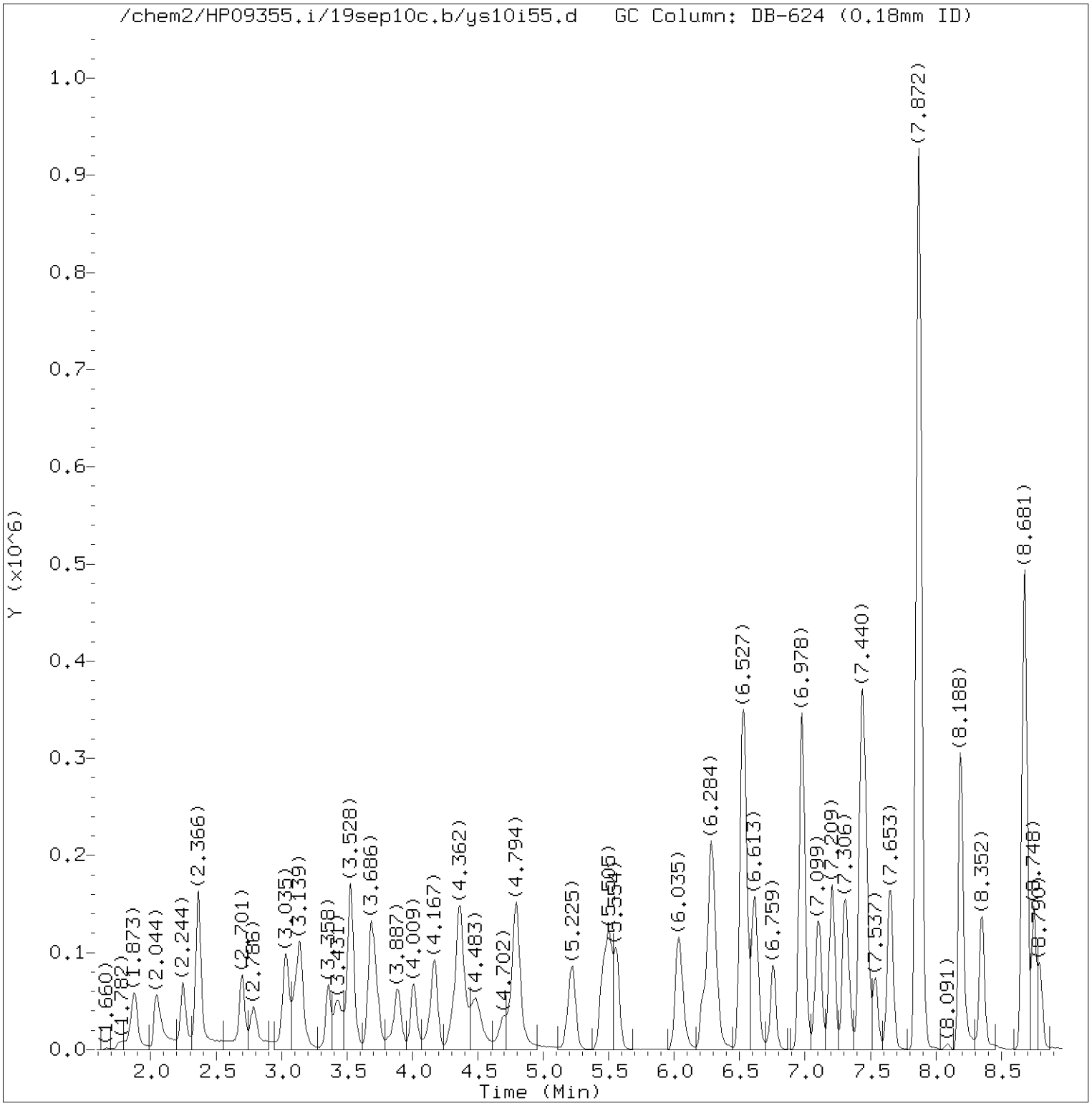
Data File: /chem2/HP09355.i/19sep10c.b/ys10i54.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 13:57 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number : 140
Compound Name : 1,2-Diethylbenzene
Scan Number : 1944
Retention Time (minutes): 13.408
Quant Ion : 119.00
Area : 784934
On-column Amount (ng) : 35.5869
Integration start scan : 1937 Integration stop scan: 1969
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648



Total Ion Chromatogram (TIC)

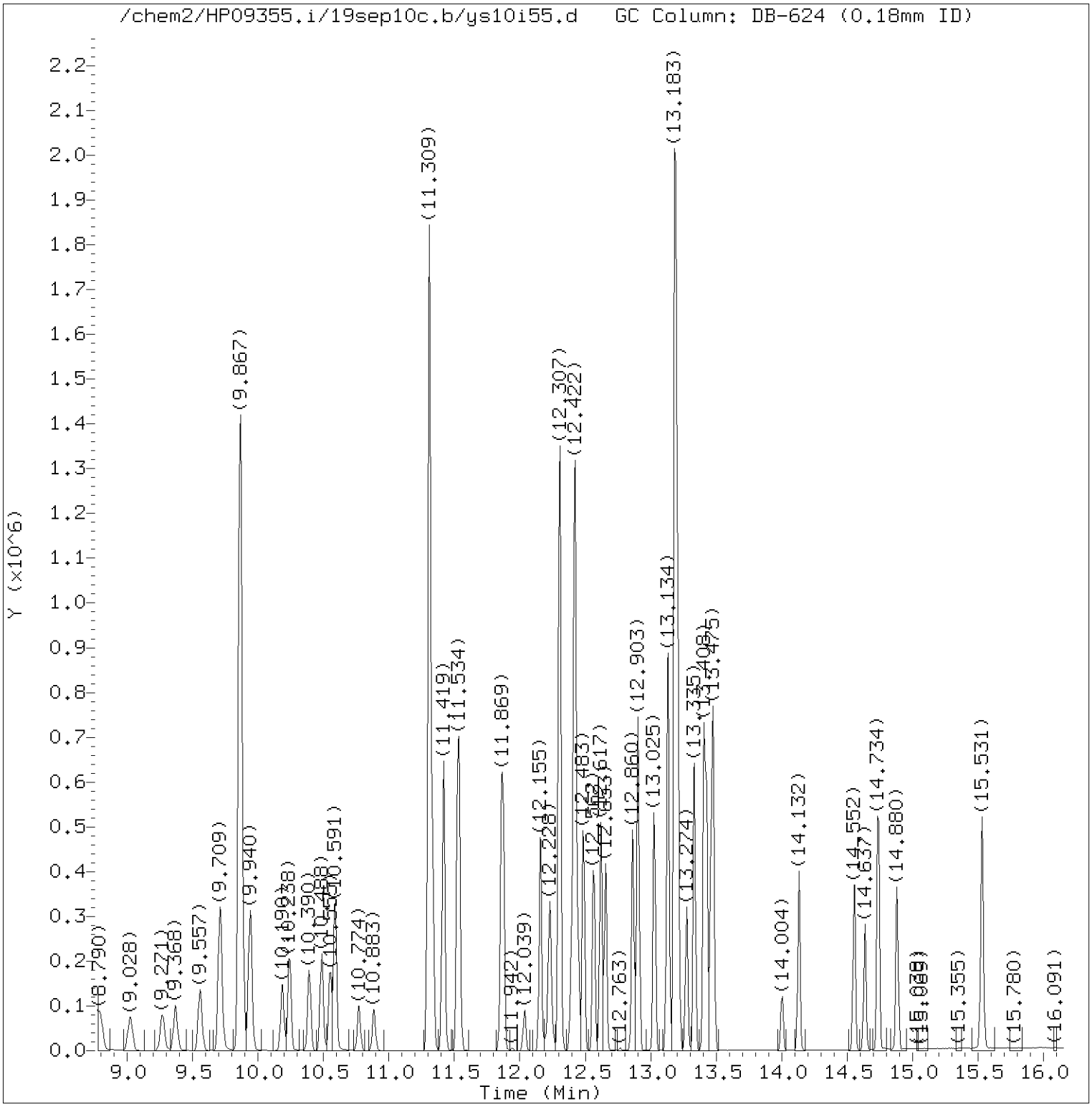
Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.044	85	117626	10.541
4) Chloromethane	(2)	2.244	50	100023	10.680
5) 1,3-Butadiene	(2)	2.360	39	68344	9.879
6) Vinyl Chloride	(2)	2.366	62	97457	10.508
8) Bromomethane	(2)	2.701	94	72833	10.702
9) Chloroethane	(2)	2.786	64	55970	10.562
10) Dichlorofluoromethane	(2)	3.029	67	118113	10.585
12) Trichlorofluoromethane	(2)	3.102	101	123527	10.433
11) n-Pentane	(2)	3.145	43	106768	9.866
14) Ethyl ether	(2)	3.358	59	58119	9.505
15) Freon 123a	(2)	3.431	67	69409	9.772
16) Acrolein	(1)	3.528	56	280370	101.316
17) 1,1-Dichloroethene	(2)	3.680	96	50385	9.590
17) 1,1-Dichloroethene	(2)	3.680	63	25617	9.536
18) Acetone	(1)	3.692	58	27110	20.659
19) Freon 113	(2)	3.717	101	56228	9.349
21) 2-Propanol	(1)	3.863	45	77672	100.028
22) Methyl Iodide	(2)	3.893	142	98998	9.727
23) Carbon Disulfide	(2)	4.009	76	177488	9.326
27) Methyl Acetate	(2)	4.143	43	85550	9.707
25) Allyl Chloride	(2)	4.173	41	88751	9.795
29)*t-Butyl alcohol-d10	(1)	4.349	65	356814M	250.000
28) Methylene Chloride	(2)	4.368	84	60400	9.744
30) t-Butyl alcohol	(1)	4.483	59	164326	102.054
31) Acrylonitrile	(2)	4.696	53	49394	10.035
33) Methyl Tertiary Butyl Ether	(2)	4.781	73	202854	9.880
32) trans-1,2-Dichloroethene	(2)	4.800	96	58139	9.638
34) n-Hexane	(2)	5.213	57	93733	9.109
36) 1,1-Dichloroethane	(2)	5.451	63	107010	9.755
38) di-Isopropyl ether	(2)	5.505	45	203464	9.773
39) 2-Chloro-1,3-butadiene	(2)	5.560	53	94813	9.379
40) Ethyl t-butyl ether	(2)	6.035	59	201382	9.916
43) 1,2-Dichloroethene (Total)	(2)		96	124206	19.292
44) 2-Butanone	(2)	6.223	43	146910	20.728
42) cis-1,2-Dichloroethene	(2)	6.278	96	66067	9.654
45) 2,2-Dichloropropane	(2)	6.296	77	80624	9.433
47) Propionitrile	(1)	6.302	54	186170	99.601
48) Methacrylonitrile	(2)	6.527	67	246317	48.472

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.619	128	34871	9.689
50) Tetrahydrofuran	(1)	6.625	71	41186	20.225
51) Chloroform	(2)	6.759	83	102576	9.663
52)$Dibromofluoromethane	(2)	6.971	113	274694	49.771
52)$Dibromofluoromethane	(2)	6.971	111	281939	49.866
53) 1,1,1-Trichloroethane	(2)	6.996	97	86974	9.418
54) Cyclohexane	(2)	7.105	56	111564	9.326
54) Cyclohexane	(2)	7.105	84	96622	9.338
54) Cyclohexane	(2)	7.111	69	34610	9.150
55) 1,1-Dichloropropene	(2)	7.209	75	85598	9.648
56) Carbon Tetrachloride	(2)	7.209	117	72801	9.058
58) Isobutyl Alcohol	(1)	7.306	41	144901	262.658
57)$1,2-Dichloroethane-d4	(2)	7.434	102	73131	50.874
57)$1,2-Dichloroethane-d4	(2)	7.434	65	352011	50.946
57)$1,2-Dichloroethane-d4	(2)	7.428	104	46326	50.867
60) Benzene	(2)	7.470	78	252915	9.850
61) 1,2-Dichloroethane	(2)	7.537	62	87271	9.862
61) 1,2-Dichloroethane	(2)	7.537	98	7542	9.447
65) t-Amyl methyl ether	(2)	7.647	73	204559	10.079
66)*Fluorobenzene	(2)	7.866	96	1173038	50.000
67) n-Heptane	(2)	7.878	43	97552	9.087
69) n-Butanol	(1)	8.188	56	272808	512.622
71) Trichloroethene	(2)	8.352	95	64834	9.705
72) Methylcyclohexane	(2)	8.669	83	125230	9.778
72) Methylcyclohexane	(2)	8.675	98	54736	9.625
73) 1,2-Dichloropropane	(2)	8.681	63	64096	9.652
76) Methyl Methacrylate	(2)	8.748	69	75254	9.519
75) 1,4-Dioxane	(1)	8.760	88	28854M	244.900
74) Dibromomethane	(2)	8.797	93	41735	9.565
78) Bromodichloromethane	(2)	9.028	83	71006	9.031
79) 2-Nitropropane	(2)	9.271	41	62518	18.111
80) 2-Chloroethyl Vinyl Ether	(2)	9.368	63	54444	9.500
81) cis-1,3-Dichloropropene	(2)	9.557	75	97013	9.129
82) 4-Methyl-2-pentanone	(2)	9.709	43	269216	19.827
83)$Toluene-d8	(3)	9.867	98	1188069	50.222
83)$Toluene-d8	(3)	9.867	100	765429	50.103
88) Toluene	(3)	9.940	92	160069	9.748
90) 1,3-Dichloropropene (total)	(3)		100	187800	18.115

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$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.184	75	90787	8.986
91) Ethyl Methacrylate	(3)	10.238	69	118403	9.338
92) 1,1,2-Trichloroethane	(3)	10.390	97	61734	9.705
93) Tetrachloroethene	(3)	10.488	166	68292	9.861
94) 1,3-Dichloropropane	(3)	10.555	76	107996	9.797
96) 2-Hexanone	(3)	10.591	43	220523	19.781
97) Dibromochloromethane	(3)	10.774	129	56766	8.639
99) 1,2-Dibromoethane	(3)	10.883	107	67421	9.557
100)*Chlorobenzene-d5	(3)	11.309	117	875099	50.000
101) 1-Chlorohexane	(3)	11.309	91	84457	9.352
102) Chlorobenzene	(3)	11.333	112	179459	9.786
104) Ethylbenzene	(3)	11.419	91	305369	9.725
103) 1,1,1,2-Tetrachloroethane	(3)	11.419	131	56046	9.198
106) m+p-Xylene	(3)	11.534	106	240305	19.450
108) Xylene (Total)	(3)		106	357307	29.073
107) o-Xylene	(3)	11.857	106	117002	9.623
109) Styrene	(3)	11.875	104	193242	9.388
110) Bromoform	(3)	12.039	173	39821	8.258
111) Isopropylbenzene	(3)	12.161	105	301000	9.672
112) Cyclohexanone	(1)	12.228	55	147464M	246.017
114)$4-Bromofluorobenzene	(3)	12.307	95	452914	50.054
114)$4-Bromofluorobenzene	(3)	12.307	174	344562	50.291
116) 1,1,2,2-Tetrachloroethane	(4)	12.392	83	111471	9.831
118) trans-1,4-Dichloro-2-butene	(4)	12.416	53	193145	48.234
115) Bromobenzene	(4)	12.422	156	75740	9.656
117) 1,2,3-Trichloropropane	(4)	12.447	110	35297	9.845
119) n-Propylbenzene	(4)	12.483	91	357877	9.728
120) 2-Chlorotoluene	(4)	12.562	126	73265	9.541
122) 1,3,5-Trimethylbenzene	(4)	12.617	105	261050	9.477
121) 4-Chlorotoluene	(4)	12.653	126	76325	9.510
124) tert-Butylbenzene	(4)	12.860	134	52784M	9.129
125) Pentachloroethane	(4)	12.897	167	40837	8.822
126) 1,2,4-Trimethylbenzene	(4)	12.903	105	273538	9.470
127) sec-Butylbenzene	(4)	13.025	105	330003	9.515
129) 1,3-Dichlorobenzene	(4)	13.128	146	146914	9.712
130) p-Isopropyltoluene	(4)	13.134	119	284257	9.465
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	470858	50.000
133) 1,4-Dichlorobenzene	(4)	13.201	146	150792	9.758

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on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.207	105	305611	10.076
135) Benzyl Chloride	(4)	13.274	91	202264	8.553
136) 1,3-Diethylbenzene	(4)	13.335	119	196483	9.946
141) Diethylbenzene (total)	(4)		100	569857	29.917
137) 1,4-Diethylbenzene	(4)	13.408	119	207865	9.979
139) n-Butylbenzene	(4)	13.426	92	147980	9.343
138) 1,2-Dichlorobenzene	(4)	13.463	146	144172	9.742
140) 1,2-Diethylbenzene	(4)	13.475	119	165509M	9.992
142) 1,2-Dibromo-3-chloropropane	(4)	14.004	75	27382	9.019
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	108066	9.507
146) 1,2,4-Trichlorobenzene	(4)	14.558	180	102410	9.448
147) Hexachlorobutadiene	(4)	14.637	225	43782	8.984
148) Naphthalene	(4)	14.734	128	384045	9.925
149) 1,2,3-Trichlorobenzene	(4)	14.880	180	101596	9.655
150) 2-Methylnaphthalene	(4)	15.531	142	254347	9.762

M = Compound was manually integrated.

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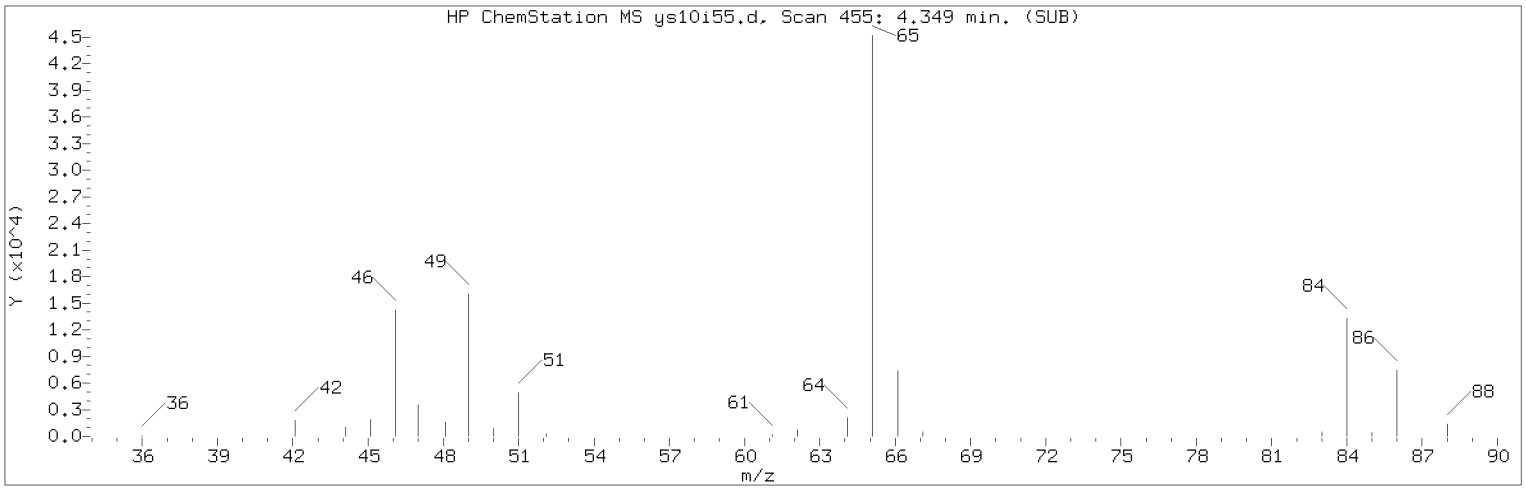
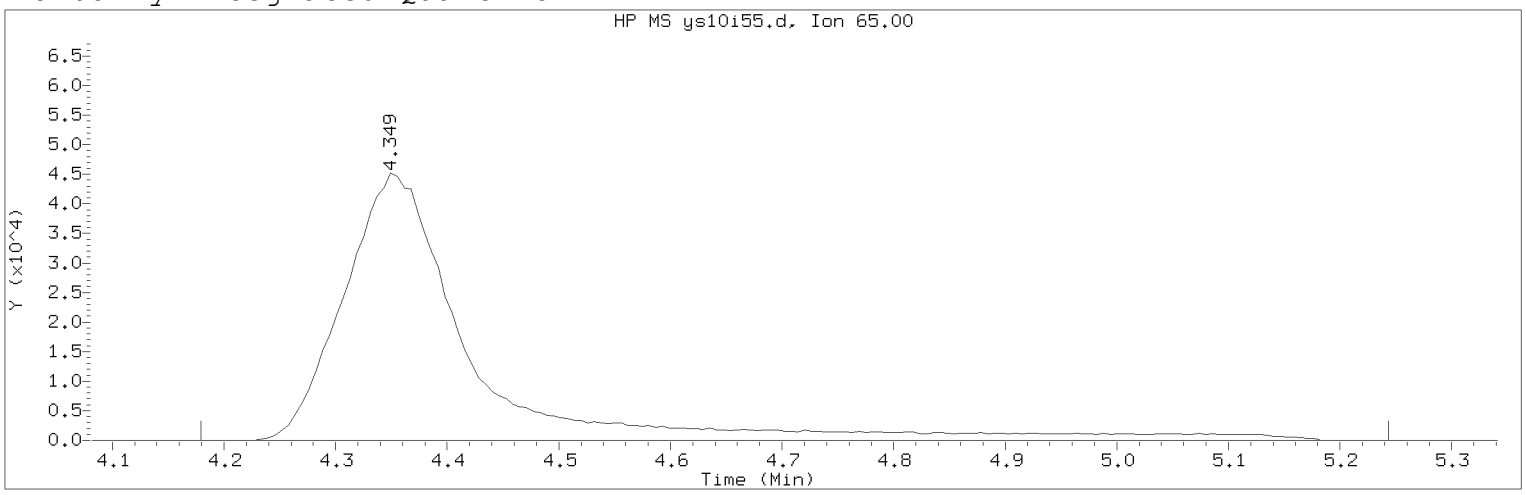
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

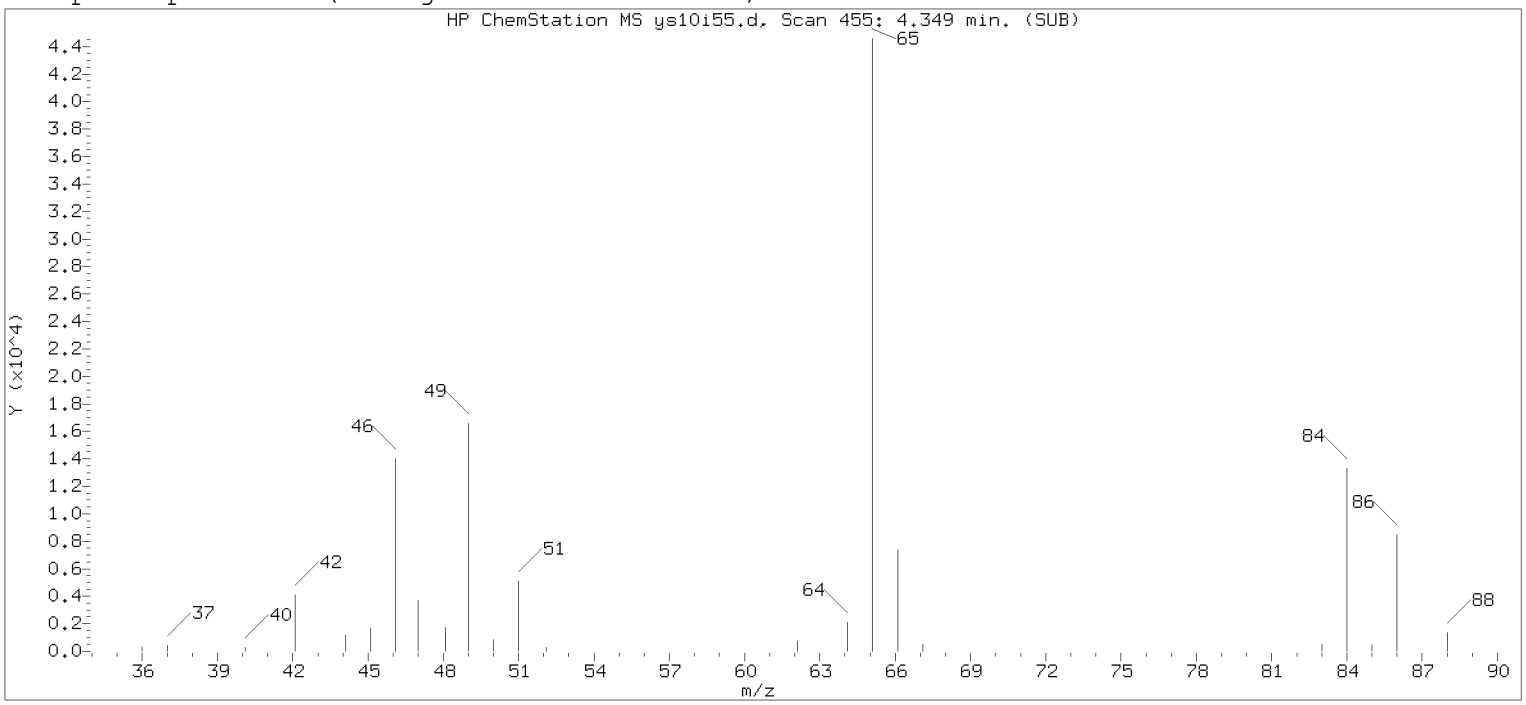
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 455
Retention Time (minutes): 4.349
Quant Ion : 65.00
Area (flag) : 356814M
On-Column Amount (ng) : 250.0000
Integration start scan : 426 Integration stop scan: 601
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

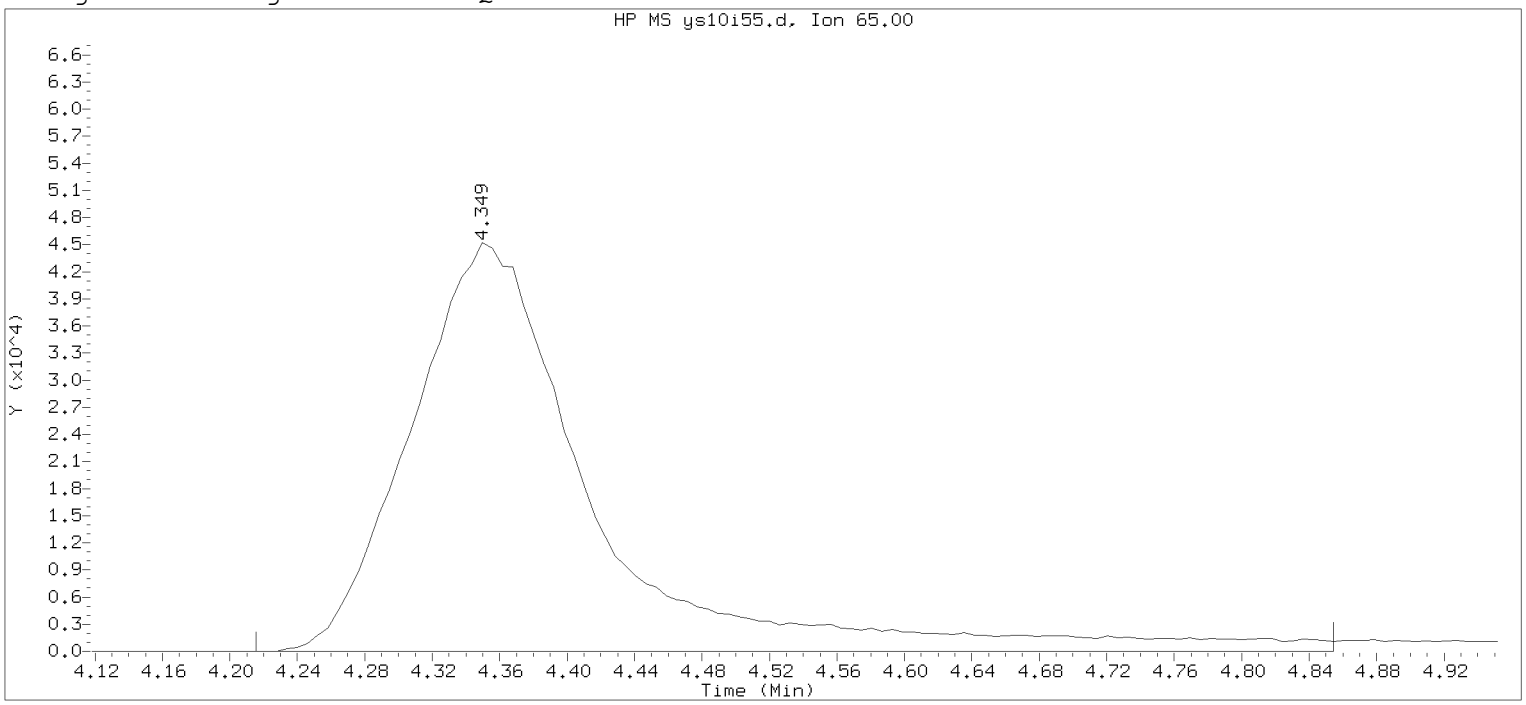
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

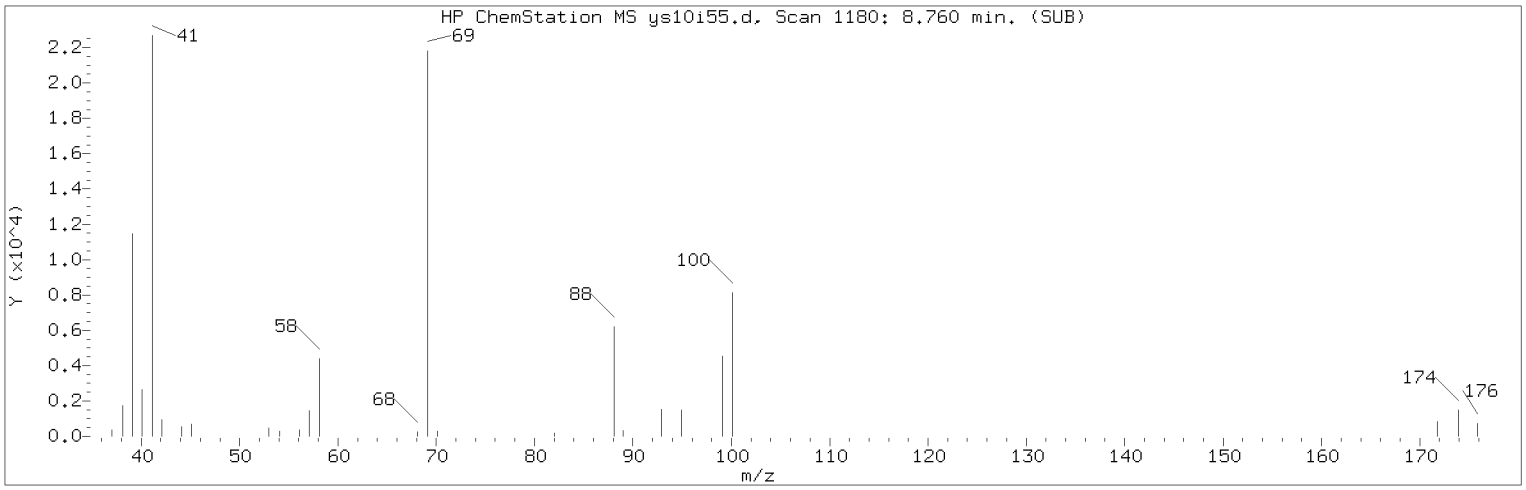
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

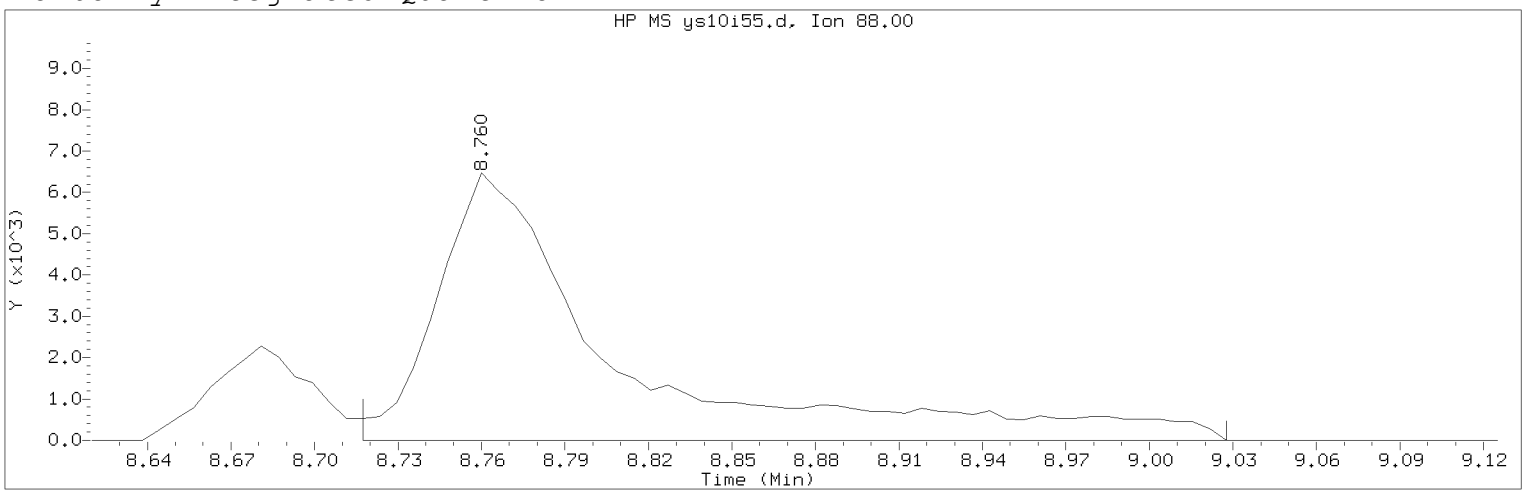
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 455
Retention Time (minutes): 4.349
Quant Ion : 65.00
Area : 337341
On-column Amount (ng) : 250.0000
Integration start scan : 432 Integration stop scan: 537
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

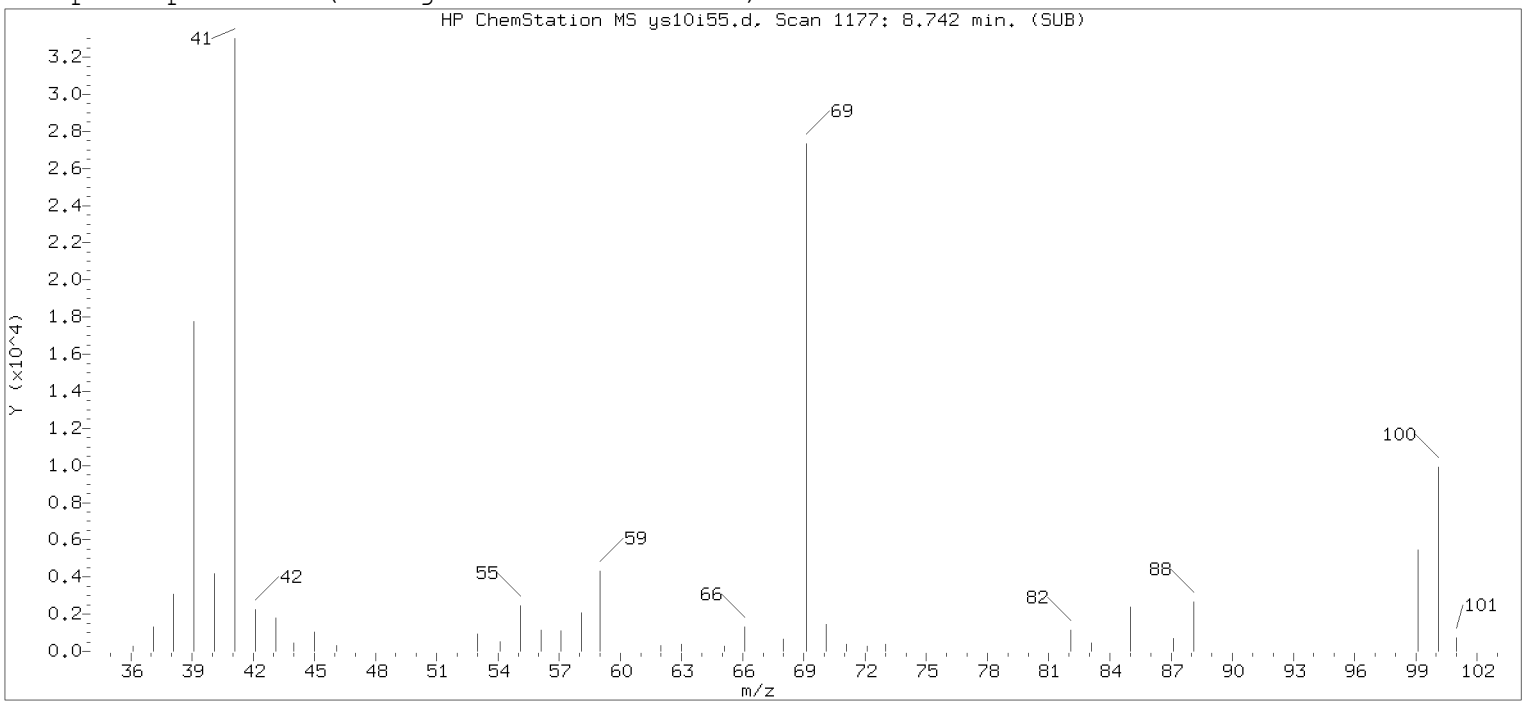
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1180
Retention Time (minutes): 8.760
Quant Ion : 88.00
Area (flag) : 28854M
On-Column Amount (ng) : 244.8996
Integration start scan : 1172 Integration stop scan: 1223
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

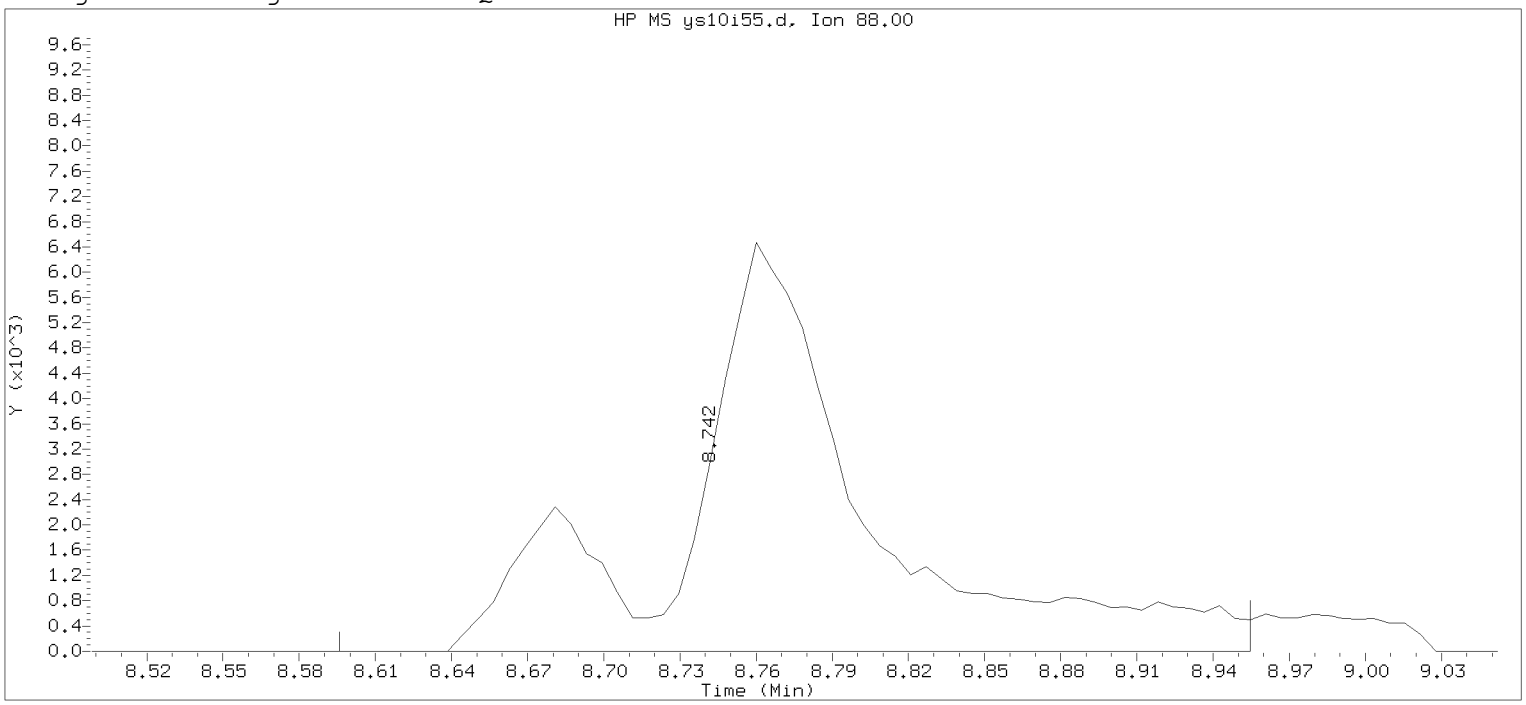
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

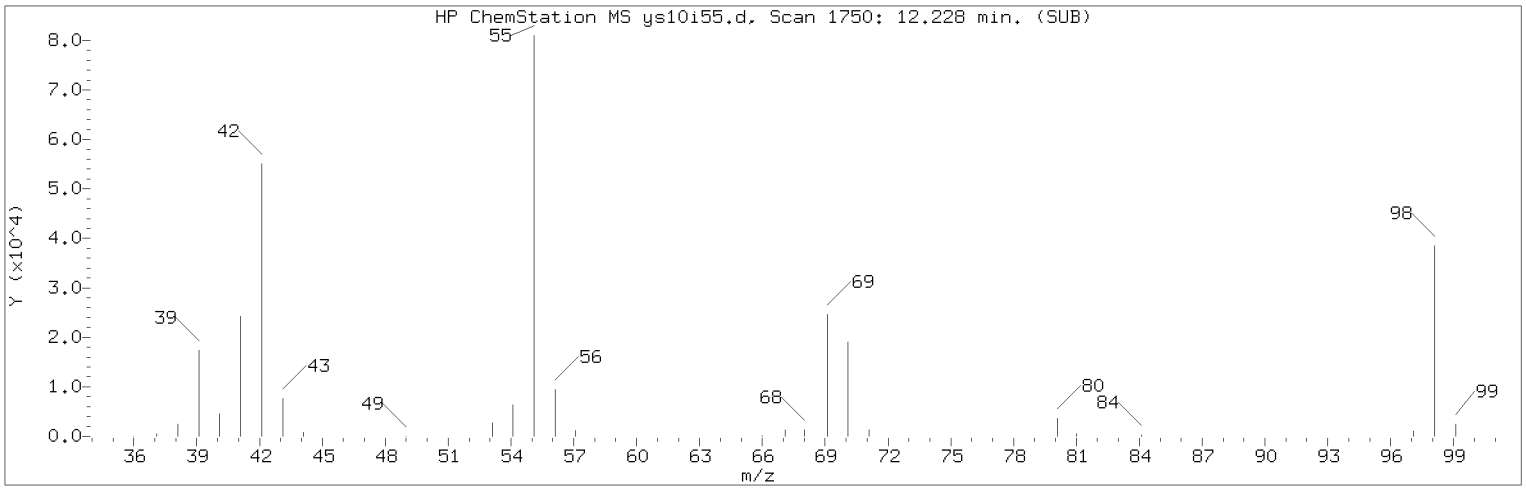
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

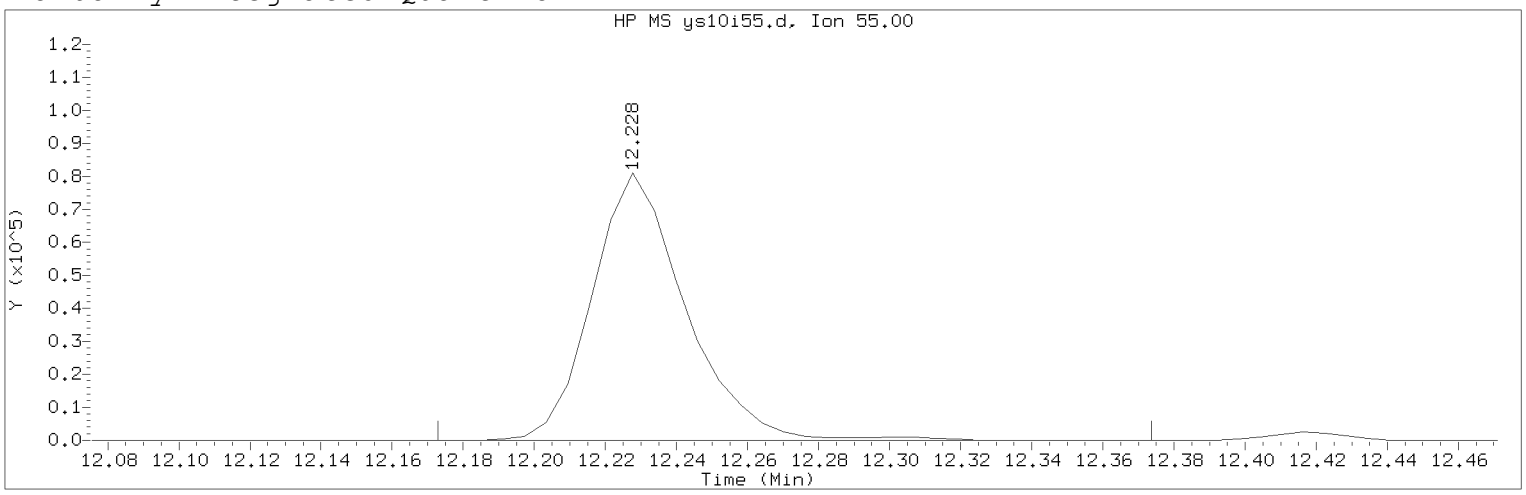
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1177		
Retention Time (minutes)	: 8.742		
Quant Ion	: 88.00		
Area	: 32298		
On-column Amount (ng)	: 223.2004		
Integration start scan	: 1152	Integration stop scan:	1211
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

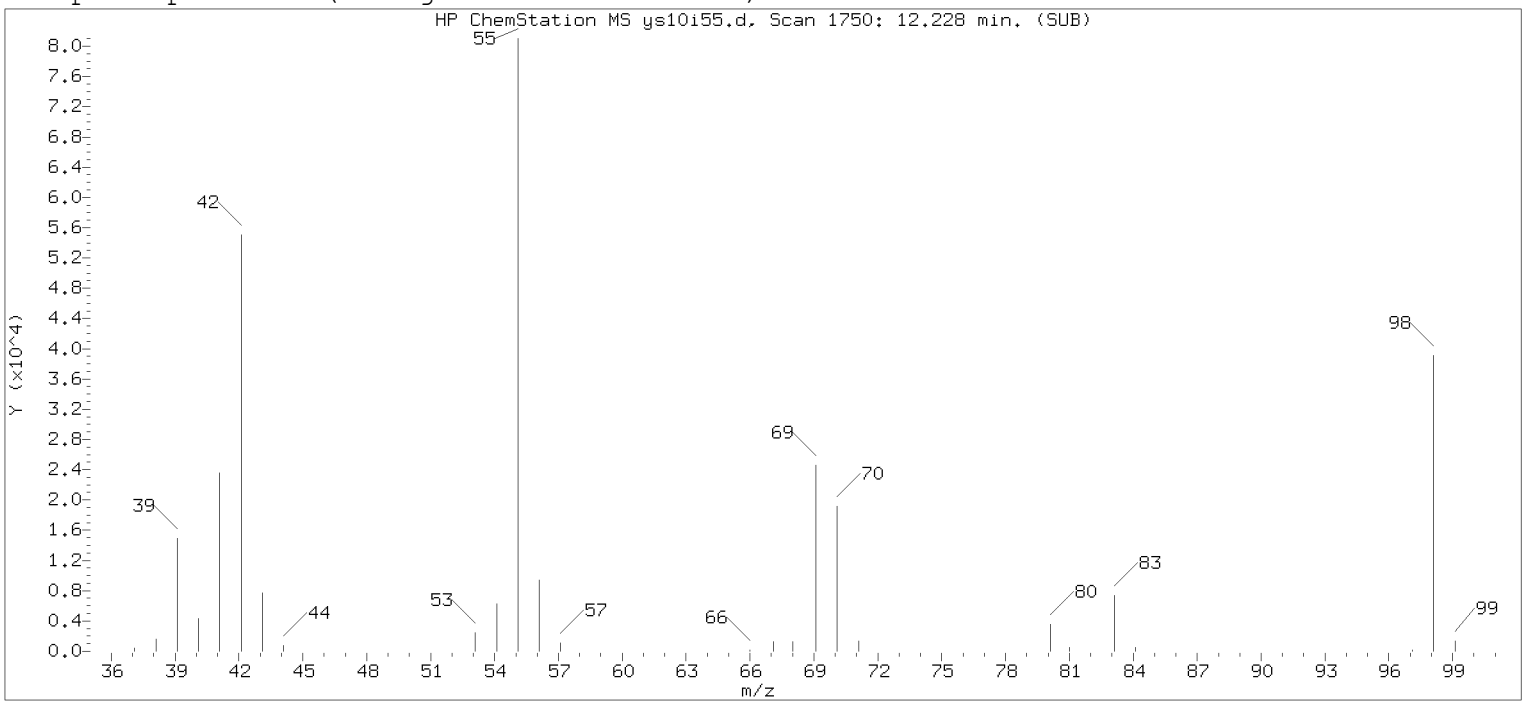
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1750
Retention Time (minutes): 12.228
Quant Ion : 55.00
Area (flag) : 147464M
On-Column Amount (ng) : 246.0168
Integration start scan : 1740 Integration stop scan: 1773
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

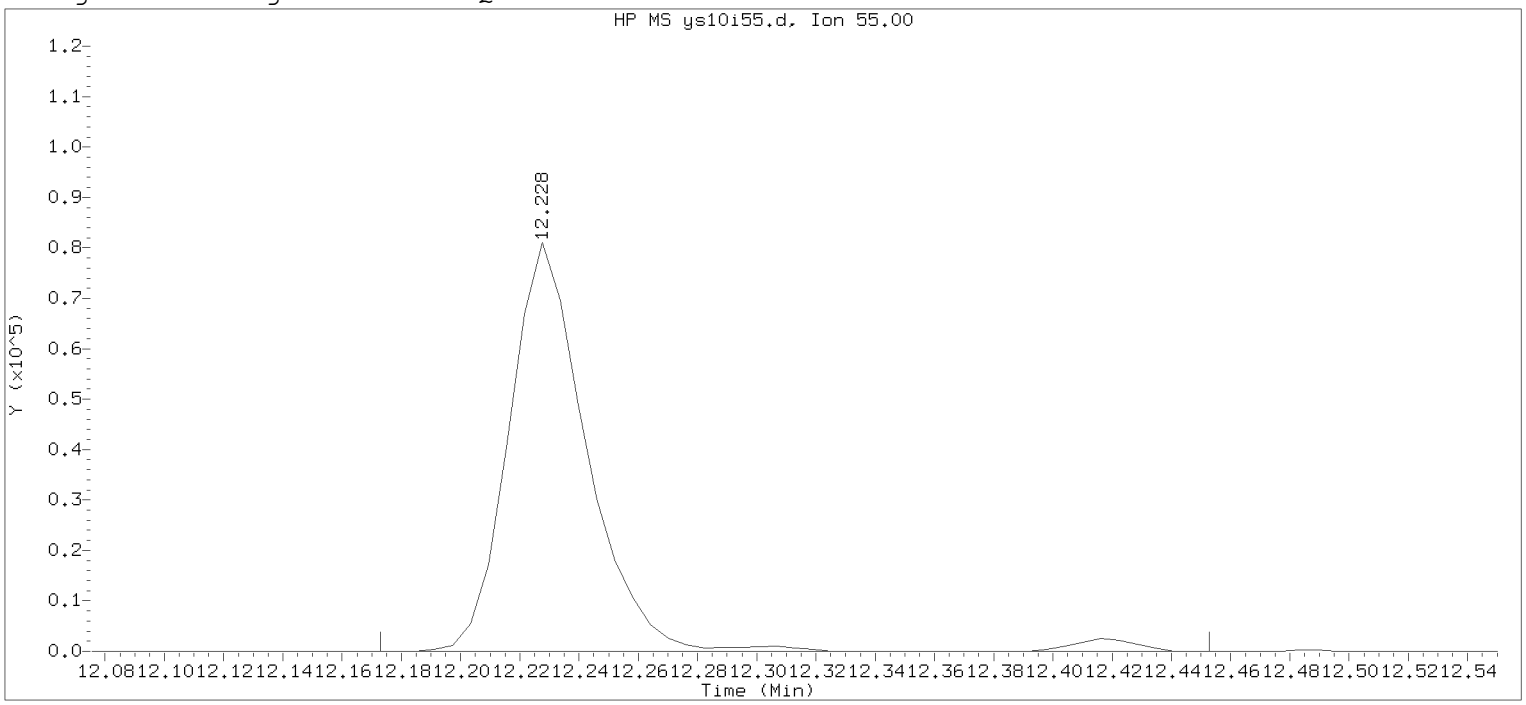
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

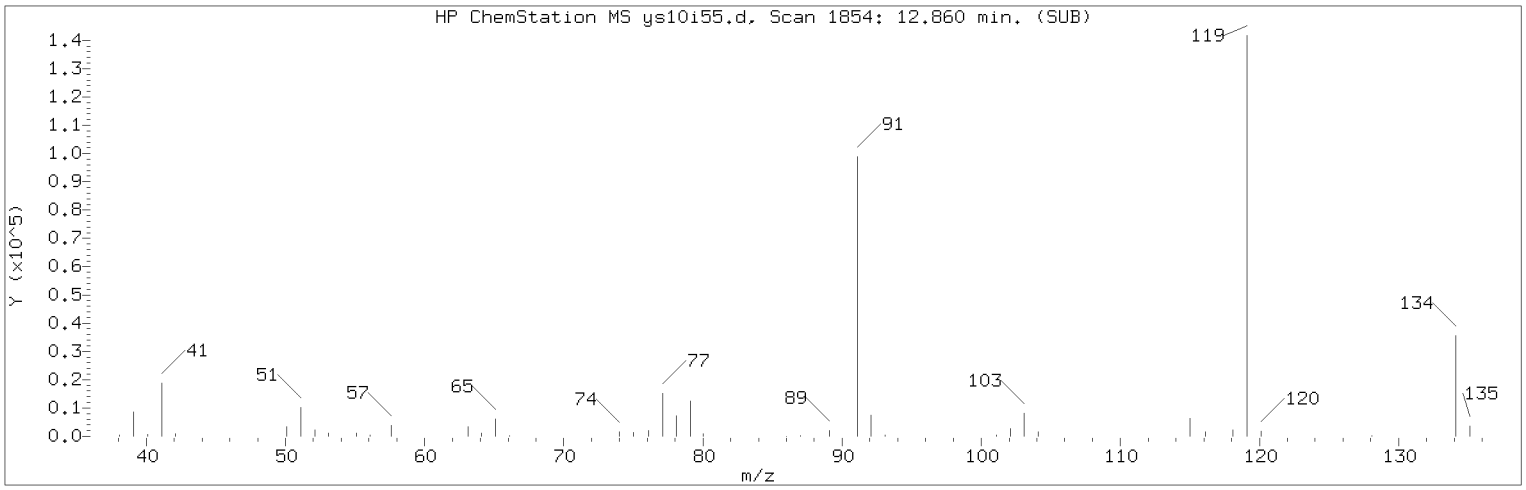
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

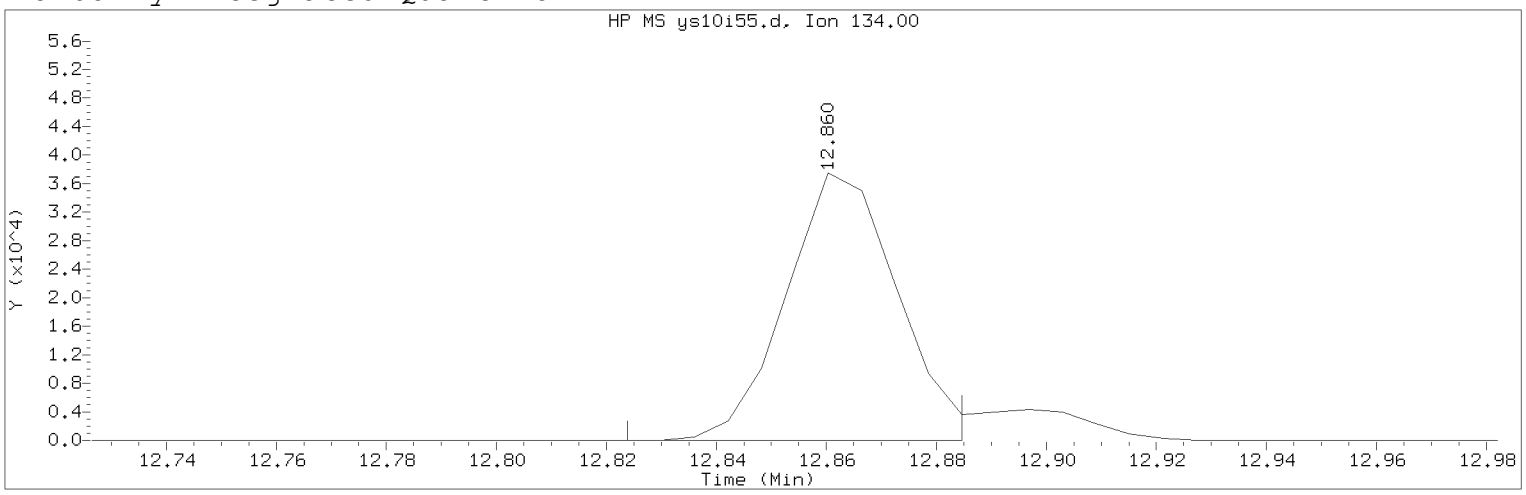
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1750
Retention Time (minutes): 12.228
Quant Ion : 55.00
Area : 151043
On-column Amount (ng) : 249.8776
Integration start scan : 1740 Integration stop scan: 1786
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

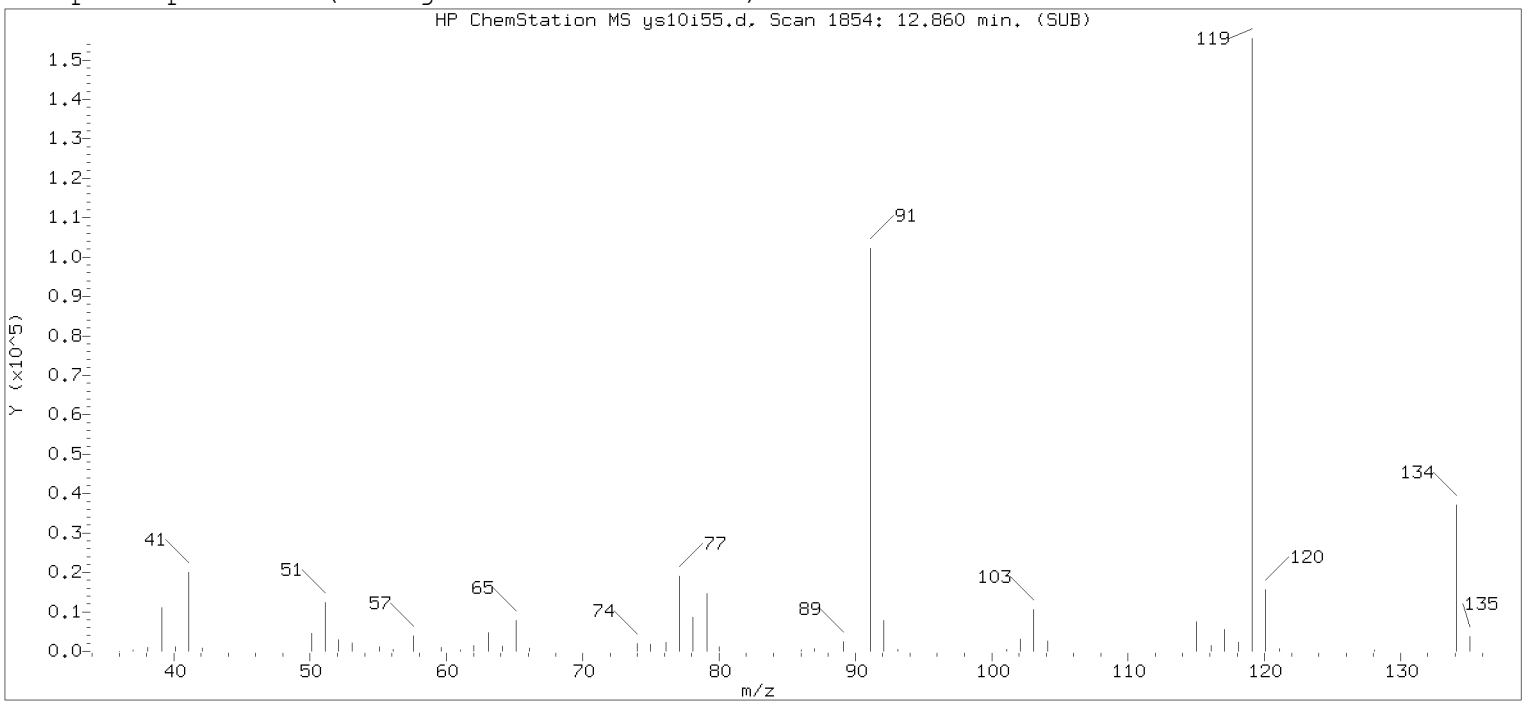
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area (flag) : 52784M
On-Column Amount (ng) : 9.1295
Integration start scan : 1847 Integration stop scan: 1857
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

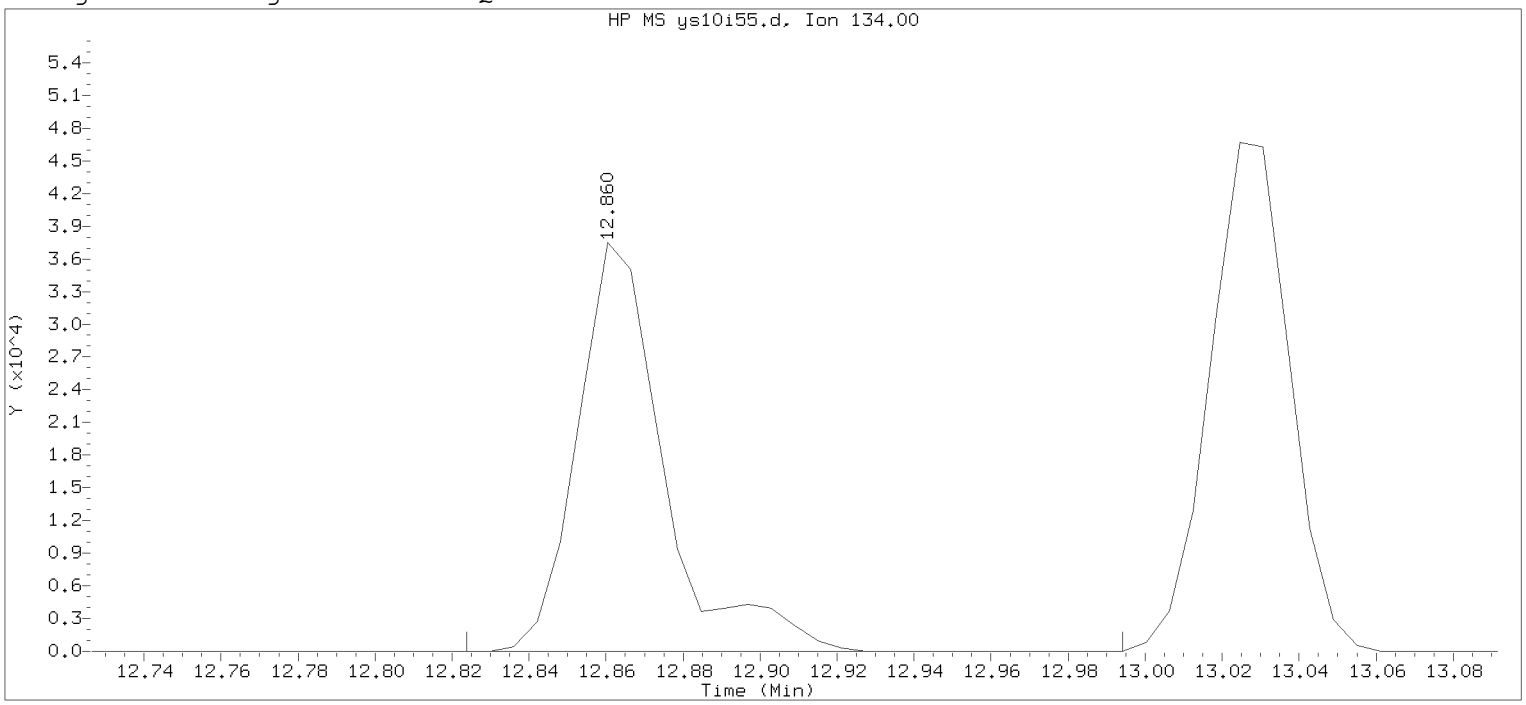
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

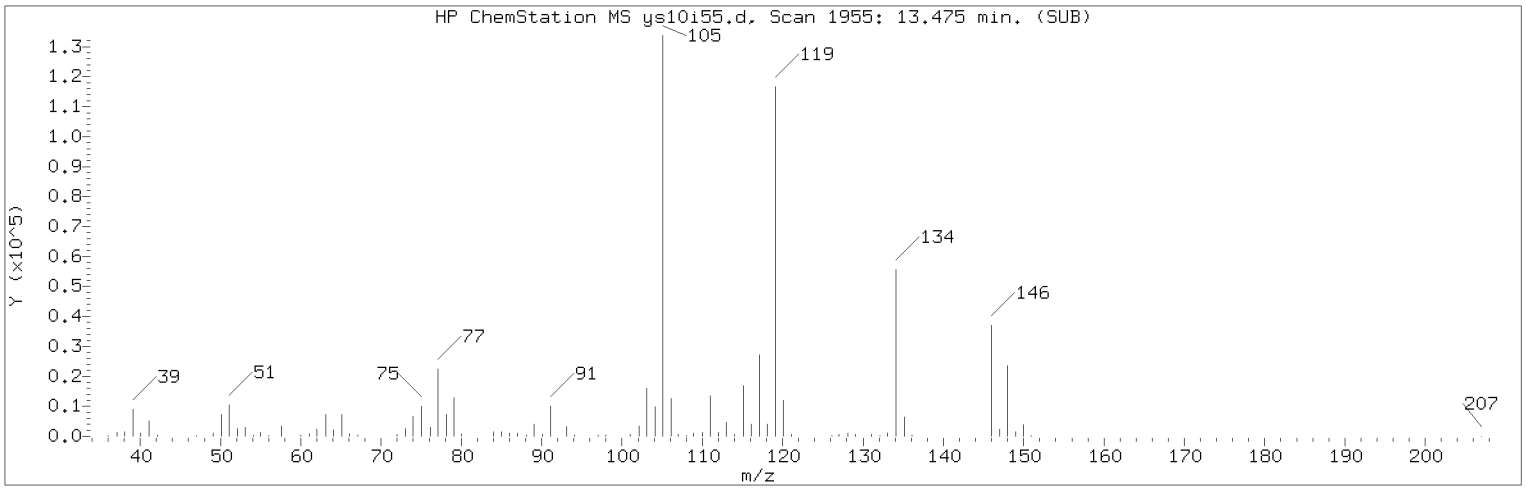
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

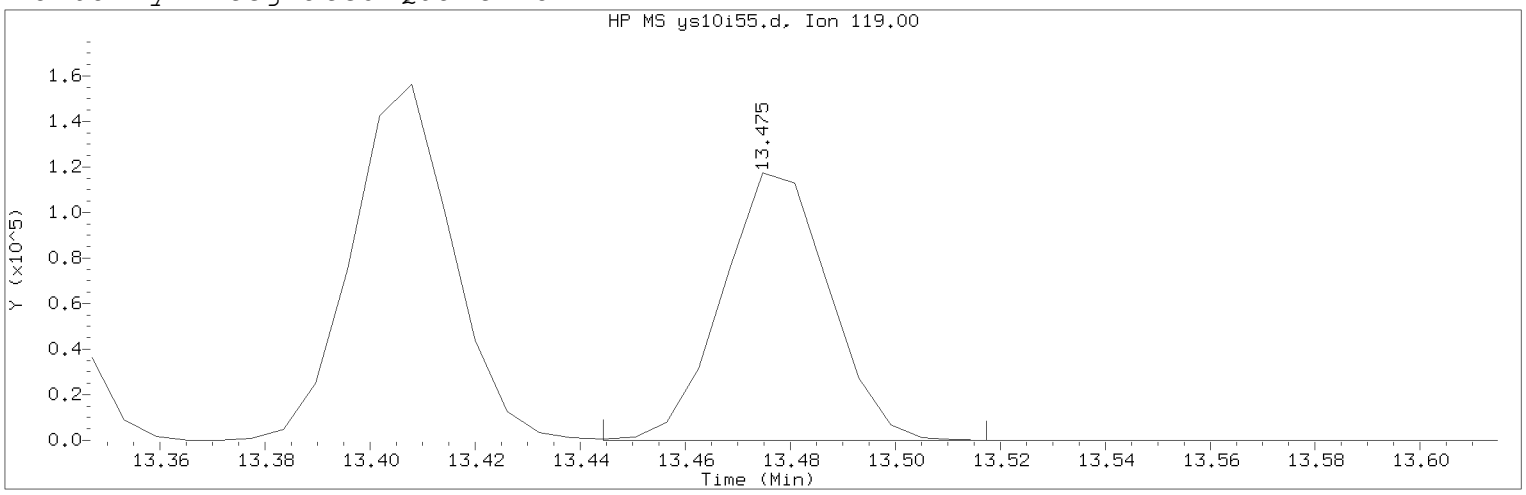
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area : 58516
On-column Amount (ng) : 9.5037
Integration start scan : 1847 Integration stop scan: 1875
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

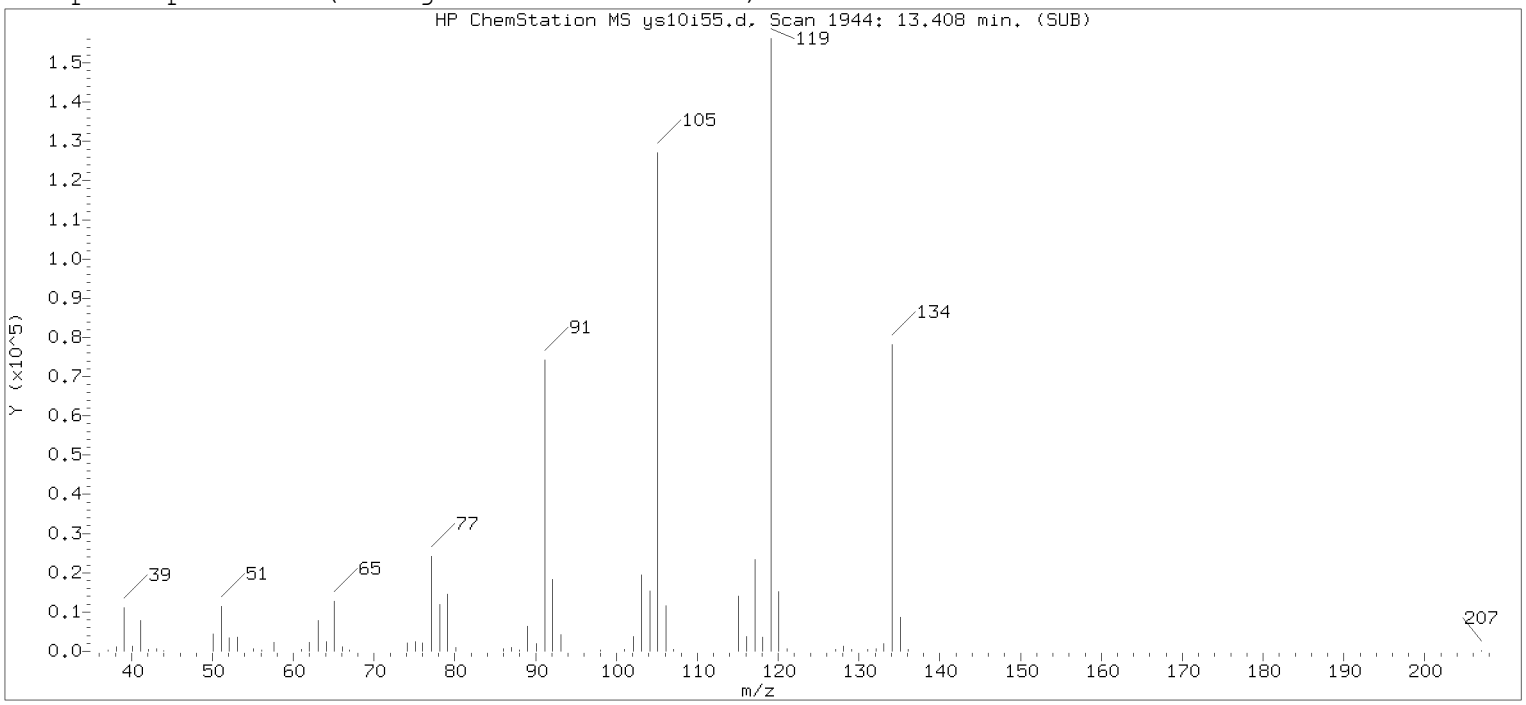
Compound Number : 140
Compound Name : 1,2-Diethylbenzene
Scan Number : 1955
Retention Time (minutes): 13.475
Quant Ion : 119.00
Area (flag) : 165509M
On-Column Amount (ng) : 9.9919
Integration start scan : 1949 Integration stop scan: 1961
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

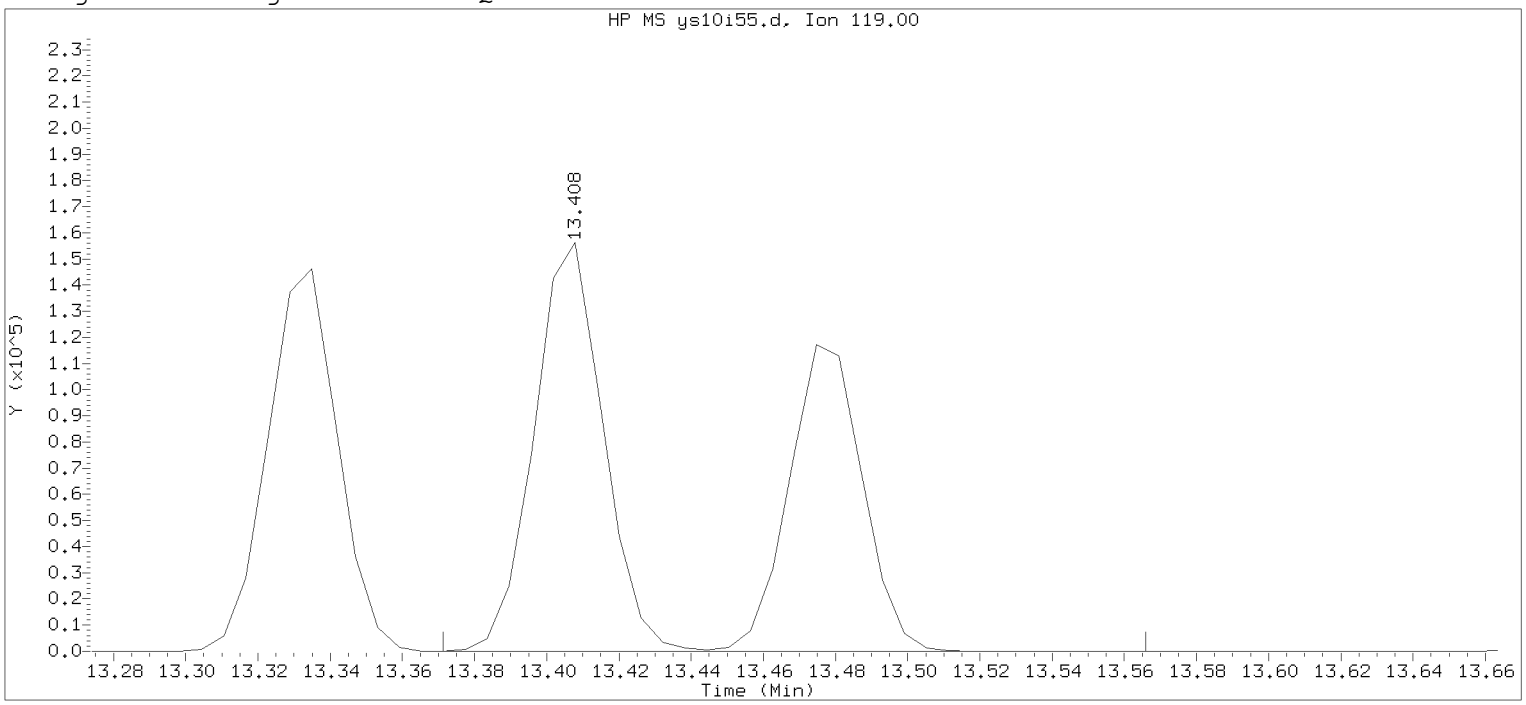
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



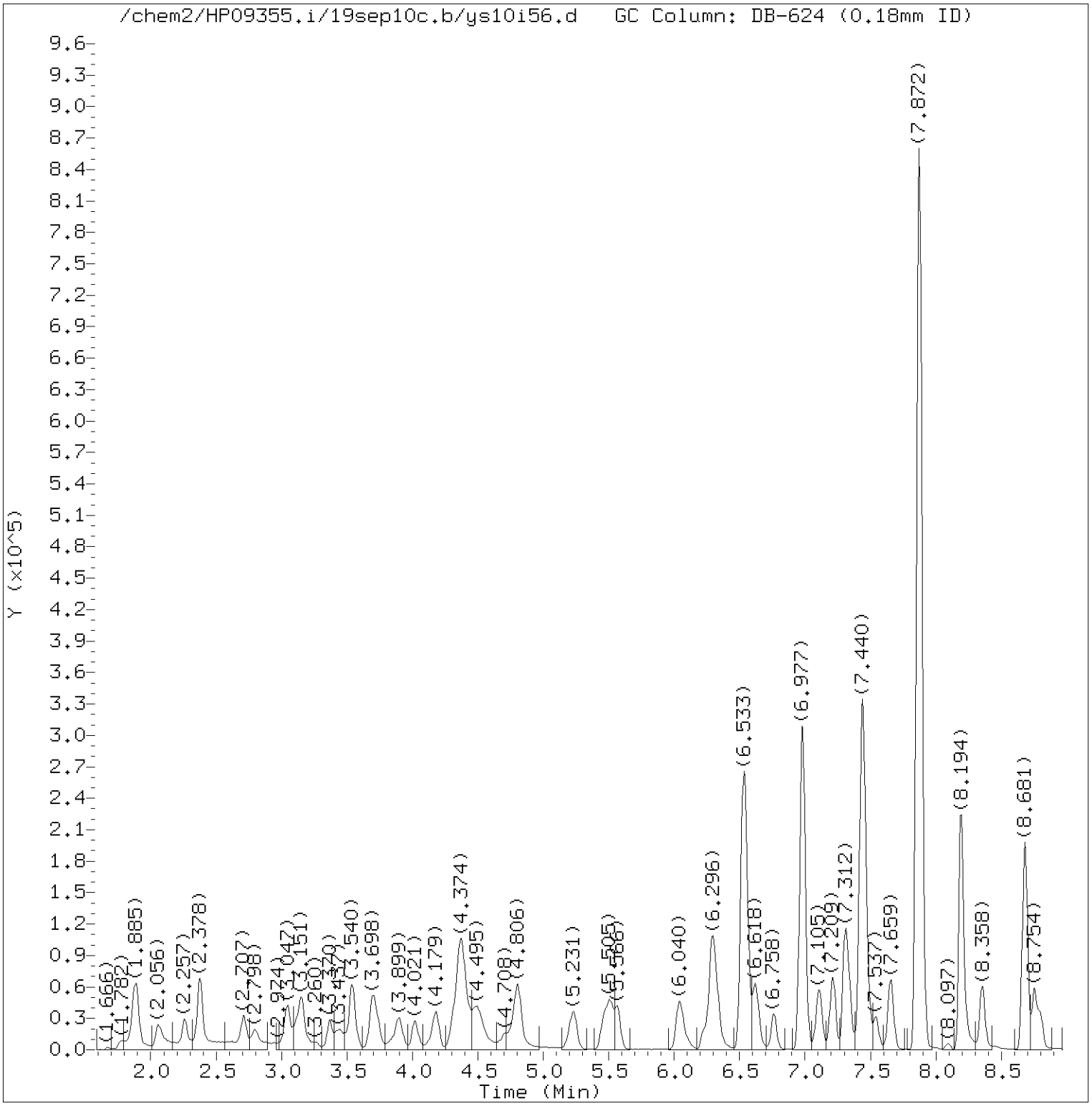
Data File: /chem2/HP09355.i/19sep10c.b/ys10i55.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:18 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 140
Compound Name : 1,2-Diethylbenzene
Scan Number : 1944
Retention Time (minutes): 13.408
Quant Ion : 119.00
Area : 373260
On-column Amount (ng) : 14.8689
Integration start scan : 1937 Integration stop scan: 1969
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648



Total Ion Chromatogram (TIC)

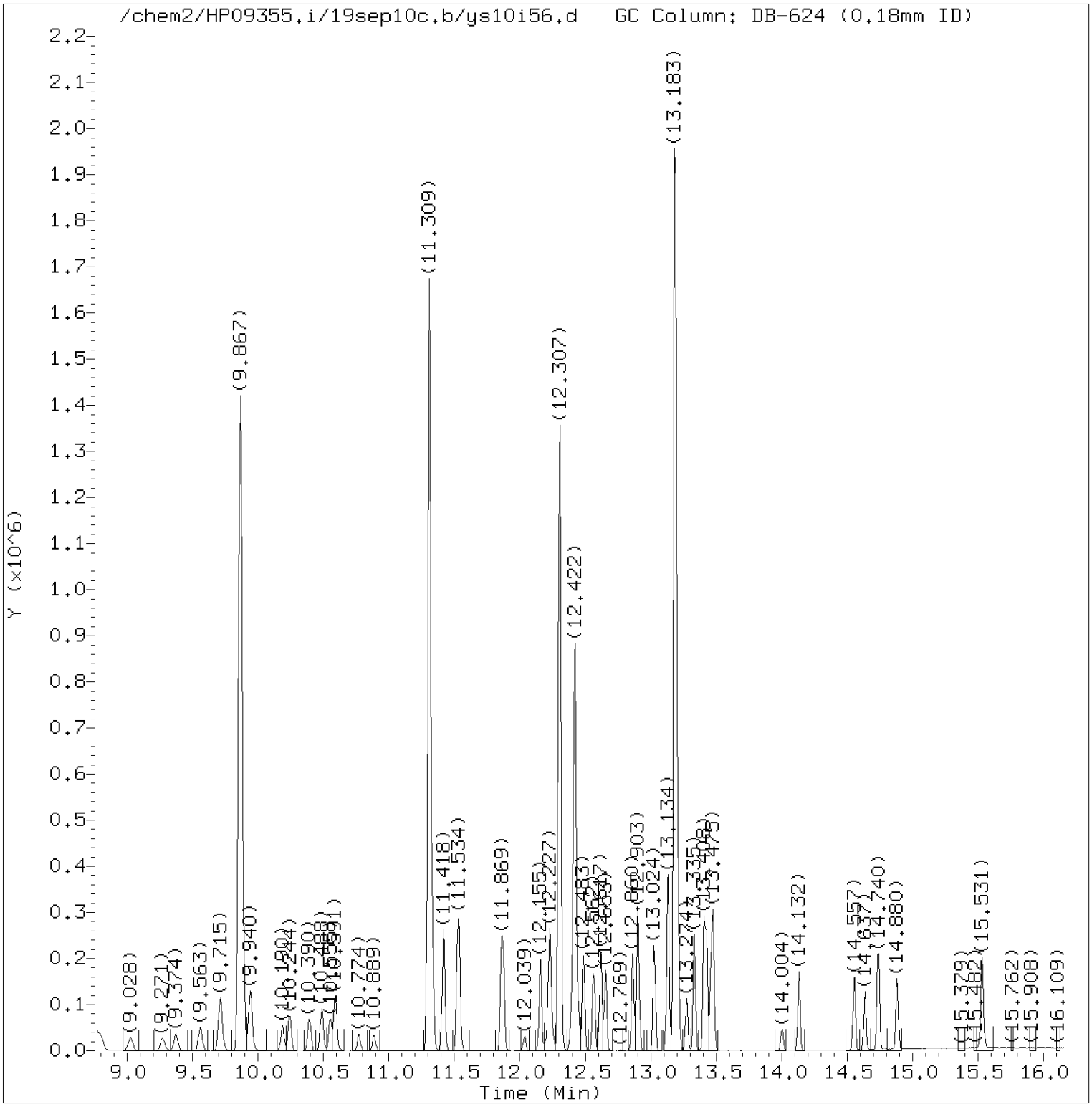
Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i56.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i56.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i56.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.056	85	44143	3.970
4) Chloromethane	(2)	2.263	50	37315	3.994
5) 1,3-Butadiene	(2)	2.372	39	31253	4.430
6) Vinyl Chloride	(2)	2.378	62	36716	3.972
8) Bromomethane	(2)	2.707	94	27497	4.040
9) Chloroethane	(2)	2.798	64	21765	4.096
10) Dichlorofluoromethane	(2)	3.041	67	45587	4.078
12) Trichlorofluoromethane	(2)	3.114	101	46961	3.979
11) n-Pentane	(2)	3.151	43	47620	4.336
14) Ethyl ether	(2)	3.370	59	24200	3.972
15) Freon 123a	(2)	3.449	67	28798	4.052
16) Acrolein	(1)	3.540	56	103740	37.335
17) 1,1-Dichloroethene	(2)	3.686	96	20565	3.935
17) 1,1-Dichloroethene	(2)	3.686	63	10591	3.959
18) Acetone	(1)	3.710	58	10117	7.644
19) Freon 113	(2)	3.723	101	23754	3.965
21) 2-Propanol	(1)	3.875	45	60000	76.588
22) Methyl Iodide	(2)	3.899	142	40218	3.967
23) Carbon Disulfide	(2)	4.021	76	71504	3.802
27) Methyl Acetate	(2)	4.149	43	37047	4.175
25) Allyl Chloride	(2)	4.179	41	35513	3.940
29)*t-Butyl alcohol-d10	(1)	4.368	65	363057M	250.000
28) Methylene Chloride	(2)	4.374	84	24513	3.969
30) t-Butyl alcohol	(1)	4.495	59	129551	79.226
31) Acrylonitrile	(2)	4.708	53	17931	3.705
33) Methyl Tertiary Butyl Ether	(2)	4.787	73	80745	3.951
32) trans-1,2-Dichloroethene	(2)	4.806	96	23966	3.984
34) n-Hexane	(2)	5.237	57	40285	3.936
36) 1,1-Dichloroethane	(2)	5.456	63	42374	3.892
38) di-Isopropyl ether	(2)	5.505	45	81655	3.942
39) 2-Chloro-1,3-butadiene	(2)	5.566	53	38324	3.831
40) Ethyl t-butyl ether	(2)	6.040	59	80480	3.976
43) 1,2-Dichloroethene (Total)	(2)		96	50795	7.925
44) 2-Butanone	(2)	6.229	43	53533	7.638
42) cis-1,2-Dichloroethene	(2)	6.284	96	26829	3.940
45) 2,2-Dichloropropane	(2)	6.302	77	32672	3.858
47) Propionitrile	(1)	6.308	54	146382	77.457
48) Methacrylonitrile	(2)	6.533	67	190321	37.921

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i56.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.625	128	13679	3.839
50) Tetrahydrofuran	(1)	6.631	71	15352	7.502
51) Chloroform	(2)	6.758	83	41349	3.919
52)$Dibromofluoromethane	(2)	6.977	113	273732	49.750
52)$Dibromofluoromethane	(2)	6.977	111	279562	49.624
53) 1,1,1-Trichloroethane	(2)	6.996	97	35967	3.919
54) Cyclohexane	(2)	7.105	56	47800	4.003
54) Cyclohexane	(2)	7.105	84	41166	3.989
54) Cyclohexane	(2)	7.111	69	15016	3.982
55) 1,1-Dichloropropene	(2)	7.209	75	35314	3.990
56) Carbon Tetrachloride	(2)	7.221	117	29275	3.704
58) Isobutyl Alcohol	(1)	7.312	41	112777	200.760
57)$1,2-Dichloroethane-d4	(2)	7.440	102	71863	50.081
57)$1,2-Dichloroethane-d4	(2)	7.440	65	349677	50.593
57)$1,2-Dichloroethane-d4	(2)	7.440	104	46102	50.604
60) Benzene	(2)	7.476	78	103834	4.044
61) 1,2-Dichloroethane	(2)	7.543	62	36093	4.072
61) 1,2-Dichloroethane	(2)	7.537	98	2936	3.734
65) t-Amyl methyl ether	(2)	7.659	73	80727	3.988
66)*Fluorobenzene	(2)	7.872	96	1170589	50.000
67) n-Heptane	(2)	7.878	43	42499	3.973
69) n-Butanol	(1)	8.194	56	205677	383.052
71) Trichloroethene	(2)	8.352	95	26708	4.005
72) Methylcyclohexane	(2)	8.675	83	48913	3.855
72) Methylcyclohexane	(2)	8.669	98	21626	3.841
73) 1,2-Dichloropropane	(2)	8.687	63	25175	3.831
76) Methyl Methacrylate	(2)	8.754	69	28723	3.696
75) 1,4-Dioxane	(1)	8.766	88	22328M	188.410
74) Dibromomethane	(2)	8.796	93	16541	3.831
78) Bromodichloromethane	(2)	9.028	83	26793	3.500
79) 2-Nitropropane	(2)	9.271	41	21124	6.380
80) 2-Chloroethyl Vinyl Ether	(2)	9.374	63	20432	3.638
81) cis-1,3-Dichloropropene	(2)	9.557	75	36954	3.561
82) 4-Methyl-2-pentanone	(2)	9.715	43	97805	7.338
83)$Toluene-d8	(3)	9.867	98	1184240	50.213
83)$Toluene-d8	(3)	9.867	100	759194	49.907
88) Toluene	(3)	9.940	92	66167	4.037
90) 1,3-Dichloropropene (total)	(3)		100	70238	6.967

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i56.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.190	75	33284	3.405
91) Ethyl Methacrylate	(3)	10.238	69	43932	3.556
92) 1,1,2-Trichloroethane	(3)	10.390	97	24744	3.921
93) Tetrachloroethene	(3)	10.488	166	28588	4.119
94) 1,3-Dichloropropane	(3)	10.555	76	42694	3.906
96) 2-Hexanone	(3)	10.591	43	79112	7.257
97) Dibromochloromethane	(3)	10.774	129	21171	3.341
99) 1,2-Dibromoethane	(3)	10.883	107	25824	3.725
100)*Chlorobenzene-d5	(3)	11.309	117	871706	50.000
101) 1-Chlorohexane	(3)	11.315	91	37388	4.129
102) Chlorobenzene	(3)	11.333	112	73824	4.034
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	21753	3.647
104) Ethylbenzene	(3)	11.418	91	127132	4.054
106) m+p-Xylene	(3)	11.534	106	99869	8.095
108) Xylene (Total)	(3)		106	148095	12.080
107) o-Xylene	(3)	11.862	106	48226	3.985
109) Styrene	(3)	11.875	104	75761	3.742
110) Bromoform	(3)	12.039	173	13882	3.030
111) Isopropylbenzene	(3)	12.161	105	127722	4.100
112) Cyclohexanone	(1)	12.227	55	117714	194.139
114)$4-Bromofluorobenzene	(3)	12.307	95	450978	50.028
114)$4-Bromofluorobenzene	(3)	12.307	174	344824	50.437
116) 1,1,2,2-Tetrachloroethane	(4)	12.398	83	44304	3.933
118) trans-1,4-Dichloro-2-butene	(4)	12.416	53	145544	37.012
115) Bromobenzene	(4)	12.422	156	31142	3.986
117) 1,2,3-Trichloropropane	(4)	12.447	110	13995	3.930
119) n-Propylbenzene	(4)	12.483	91	153472	4.154
120) 2-Chlorotoluene	(4)	12.562	126	30359	3.972
122) 1,3,5-Trimethylbenzene	(4)	12.617	105	110008	4.006
121) 4-Chlorotoluene	(4)	12.653	126	31976	3.998
124) tert-Butylbenzene	(4)	12.860	134	22866M	3.973
125) Pentachloroethane	(4)	12.897	167	14919	3.340
126) 1,2,4-Trimethylbenzene	(4)	12.903	105	114609	3.984
127) sec-Butylbenzene	(4)	13.024	105	143021	4.114
129) 1,3-Dichlorobenzene	(4)	13.128	146	61972	4.092
130) p-Isopropyltoluene	(4)	13.134	119	121799	4.057
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	469299	50.000
133) 1,4-Dichlorobenzene	(4)	13.201	146	63133	4.082

M = Compound was manually integrated.
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on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i56.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.207	105	120301	3.983
135) Benzyl Chloride	(4)	13.274	91	71934	3.178
136) 1,3-Diethylbenzene	(4)	13.335	119	77606	3.951
141) Diethylbenzene (total)	(4)		100	225610	11.904
137) 1,4-Diethylbenzene	(4)	13.408	119	82394	3.974
139) n-Butylbenzene	(4)	13.426	92	64571	4.075
138) 1,2-Dichlorobenzene	(4)	13.462	146	60770	4.099
140) 1,2-Diethylbenzene	(4)	13.475	119	65610M	3.978
142) 1,2-Dibromo-3-chloropropane	(4)	14.004	75	10364	3.509
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	47309	4.145
146) 1,2,4-Trichlorobenzene	(4)	14.557	180	44115	4.069
147) Hexachlorobutadiene	(4)	14.637	225	20007	4.099
148) Naphthalene	(4)	14.740	128	155397	4.025
149) 1,2,3-Trichlorobenzene	(4)	14.880	180	43333	4.109
150) 2-Methylnaphthalene	(4)	15.531	142	96869	3.773

M = Compound was manually integrated.

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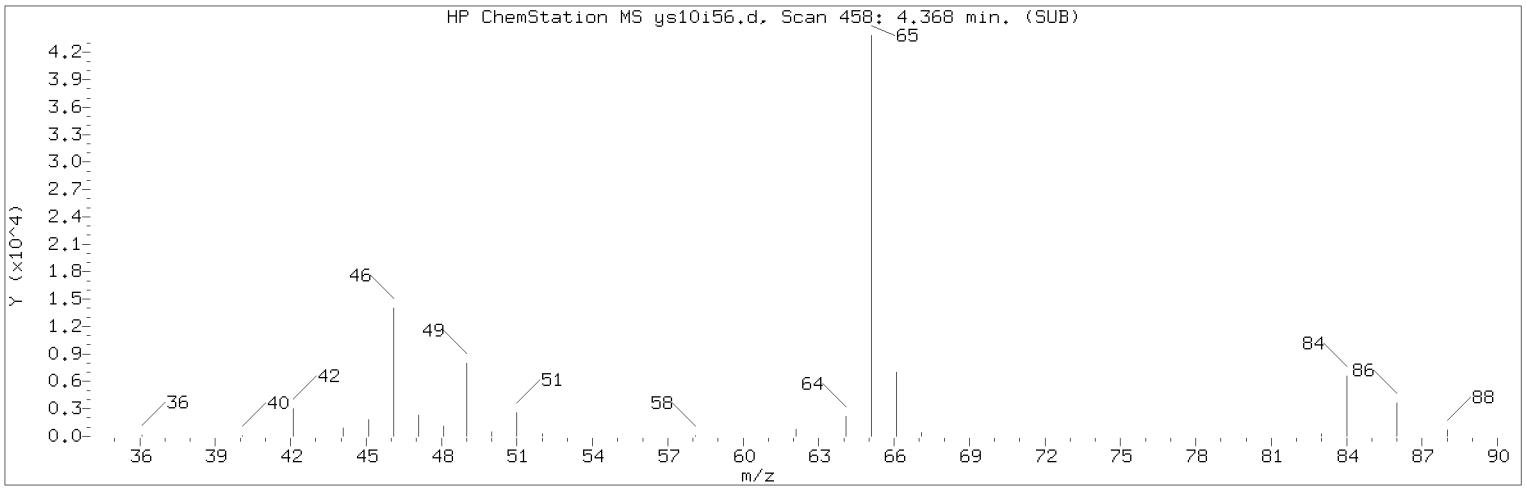
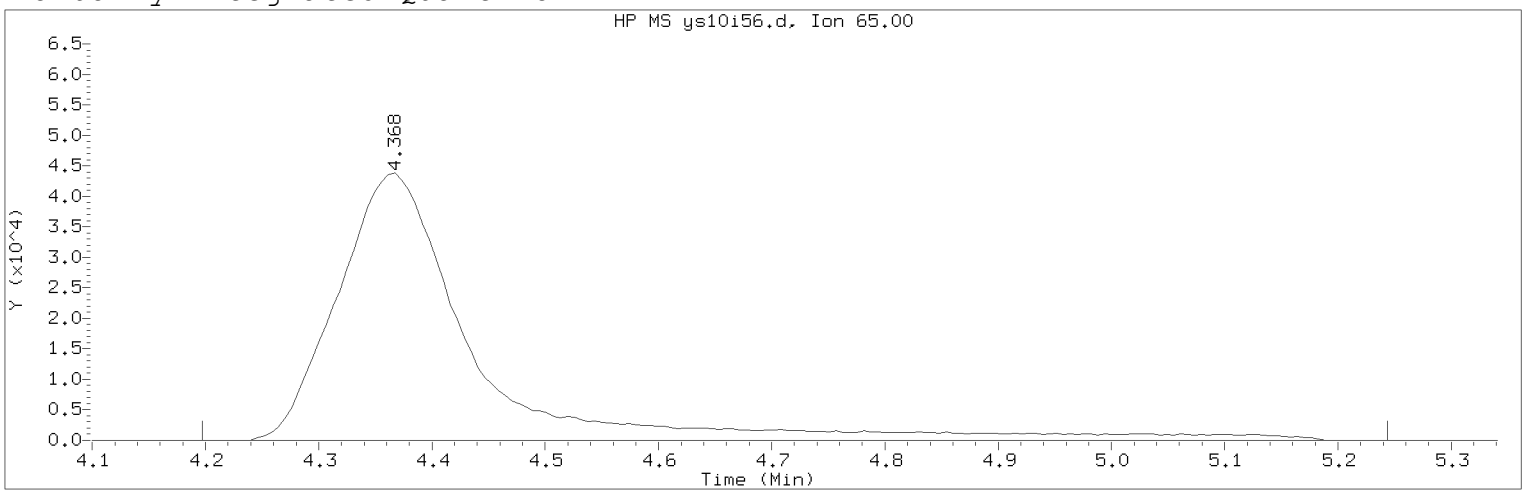
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i56.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

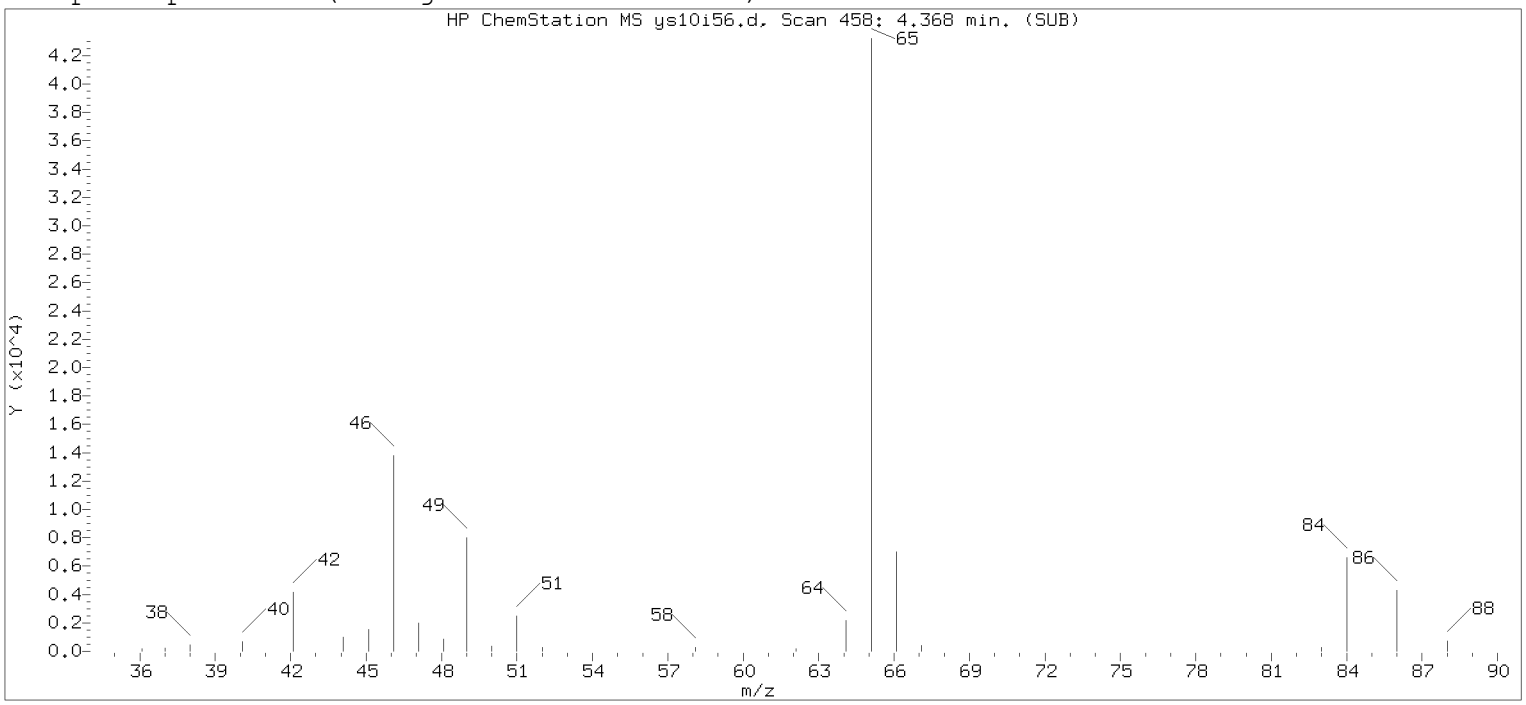
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 458
Retention Time (minutes): 4.368
Quant Ion : 65.00
Area (flag) : 363057M
On-Column Amount (ng) : 250.0000
Integration start scan : 429 Integration stop scan: 601
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

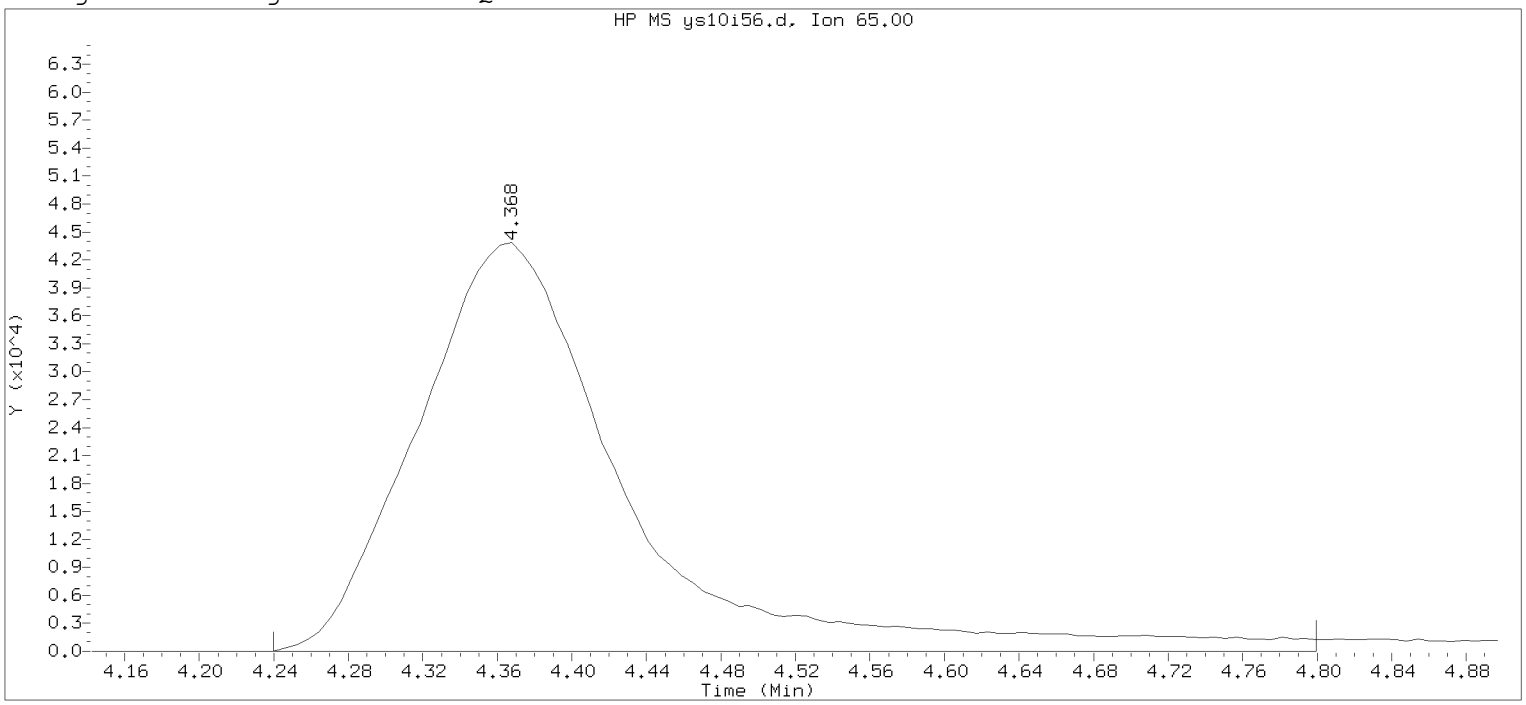
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i56.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

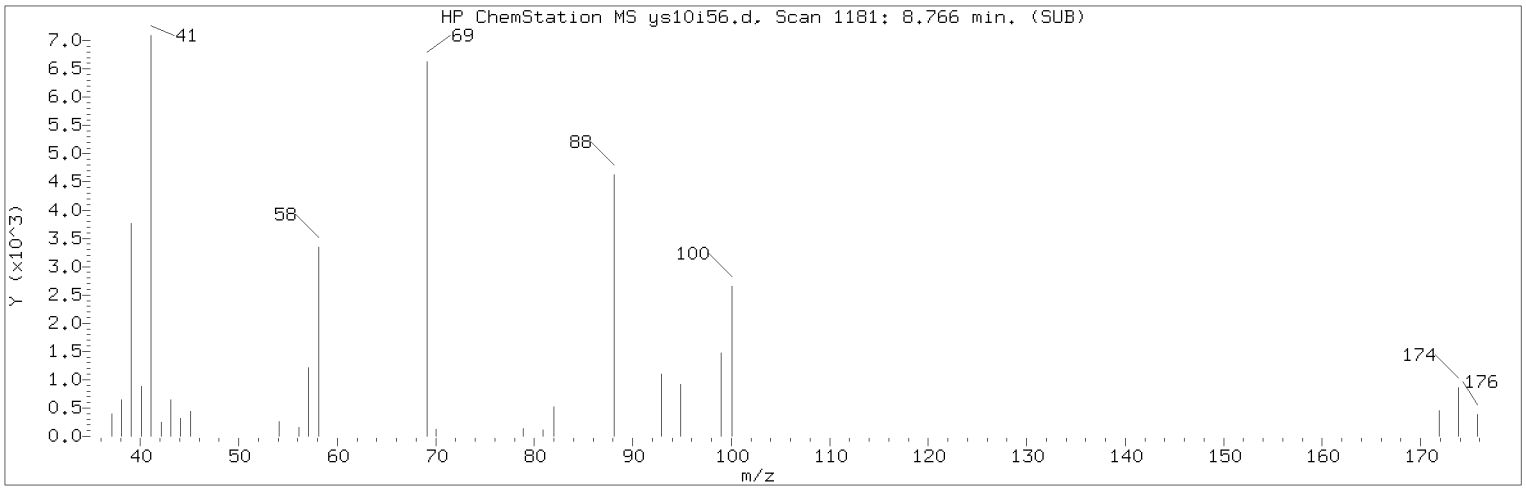
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

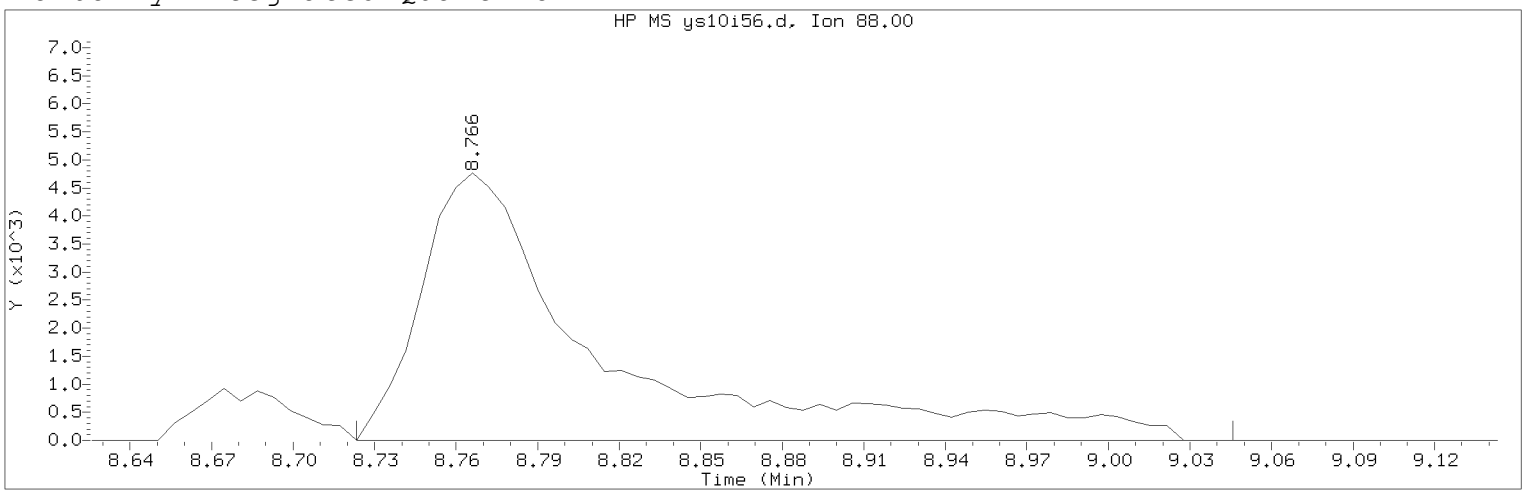
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 458
Retention Time (minutes): 4.368
Quant Ion : 65.00
Area : 340201
On-column Amount (ng) : 250.0000
Integration start scan : 436 Integration stop scan: 528
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i56.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

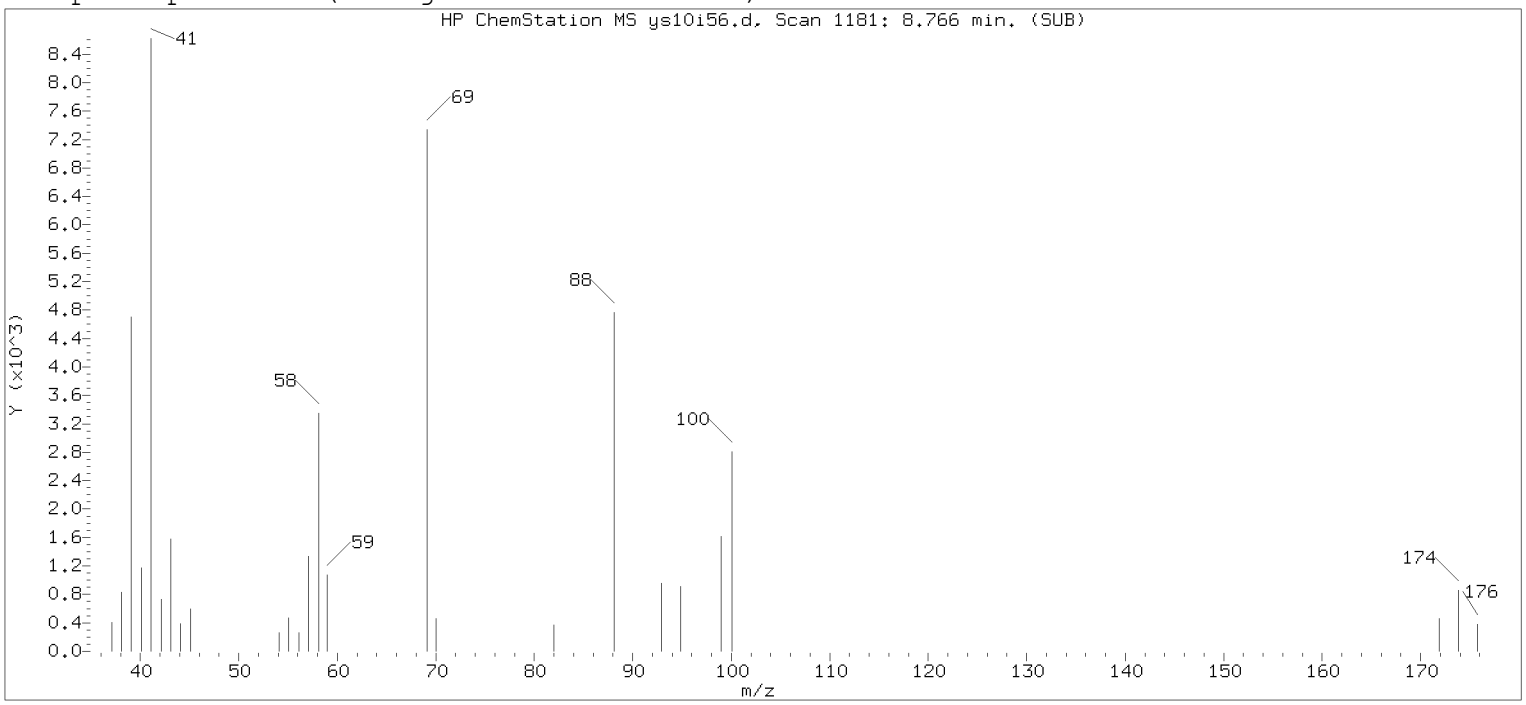
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1181
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area (flag) : 22328M
On-Column Amount (ng) : 188.4098
Integration start scan : 1173 Integration stop scan: 1226
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

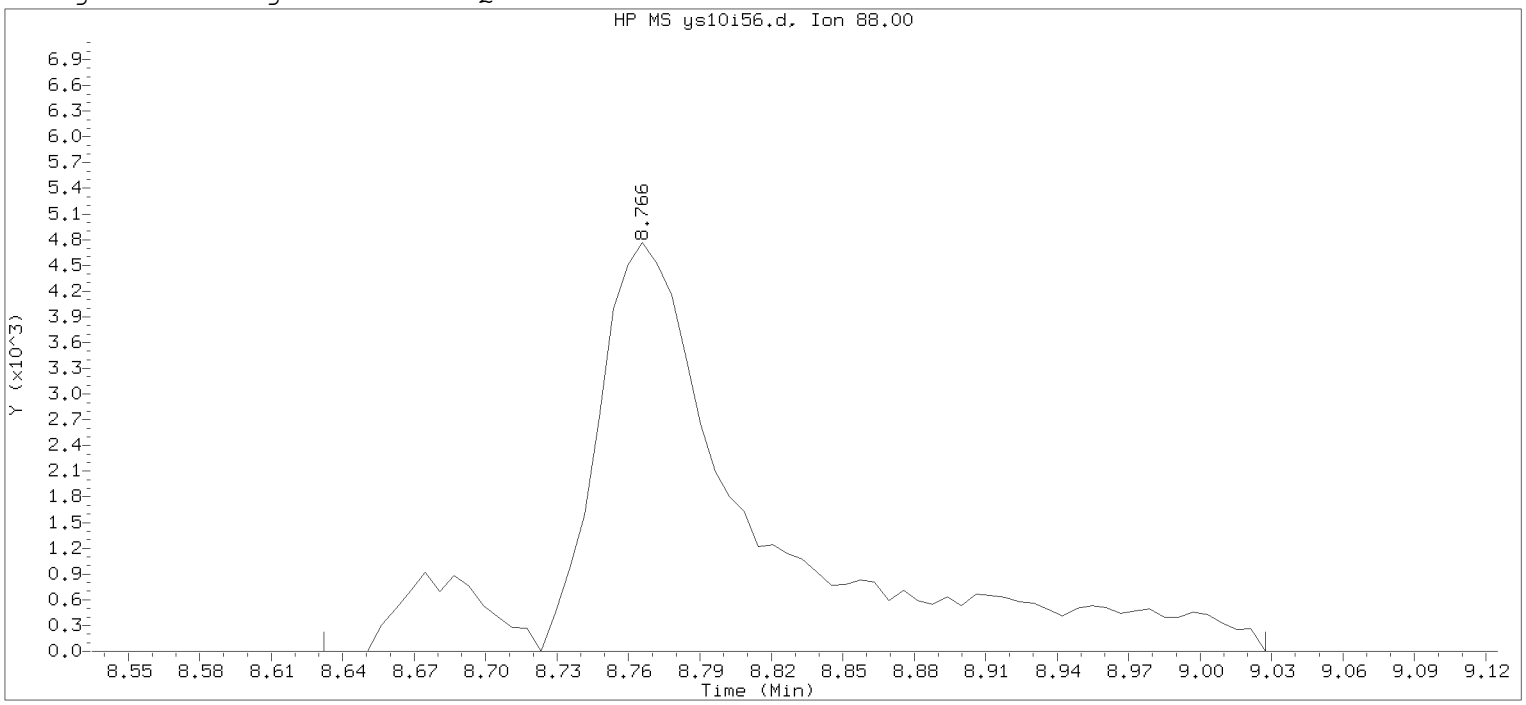
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i56.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1181		
Retention Time (minutes)	: 8.766		
Quant Ion	: 88.00		
Area	: 24615		
On-column Amount (ng)	: 173.1998		
Integration start scan	: 1158	Integration stop scan:	1223
Y at integration start	: 0	Y at integration end:	0

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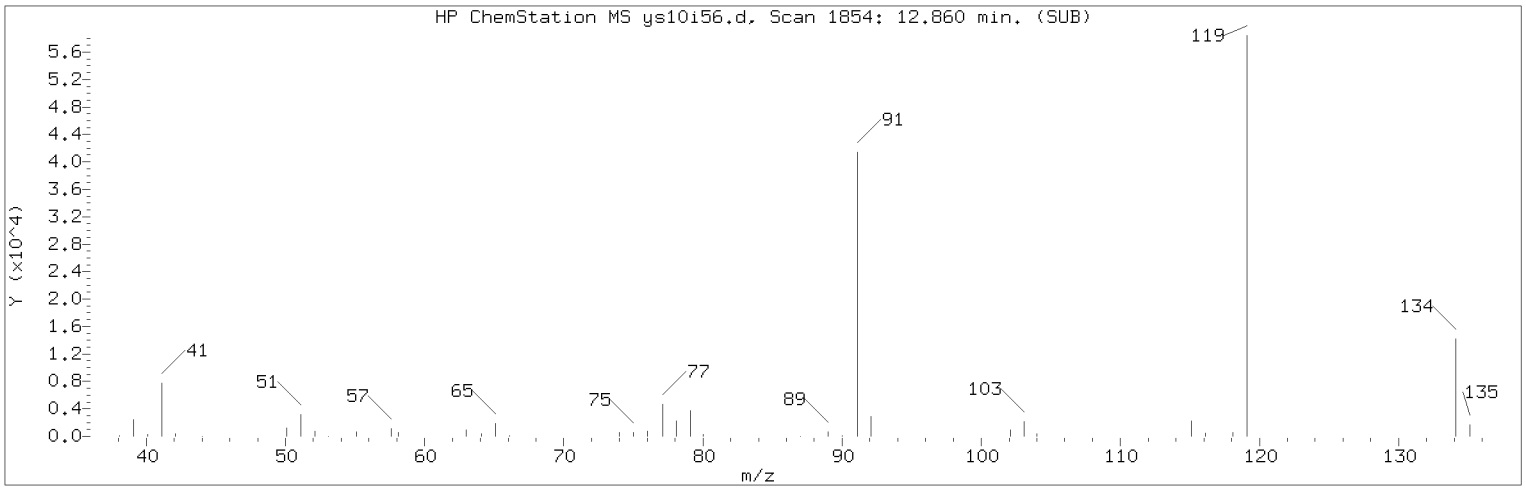
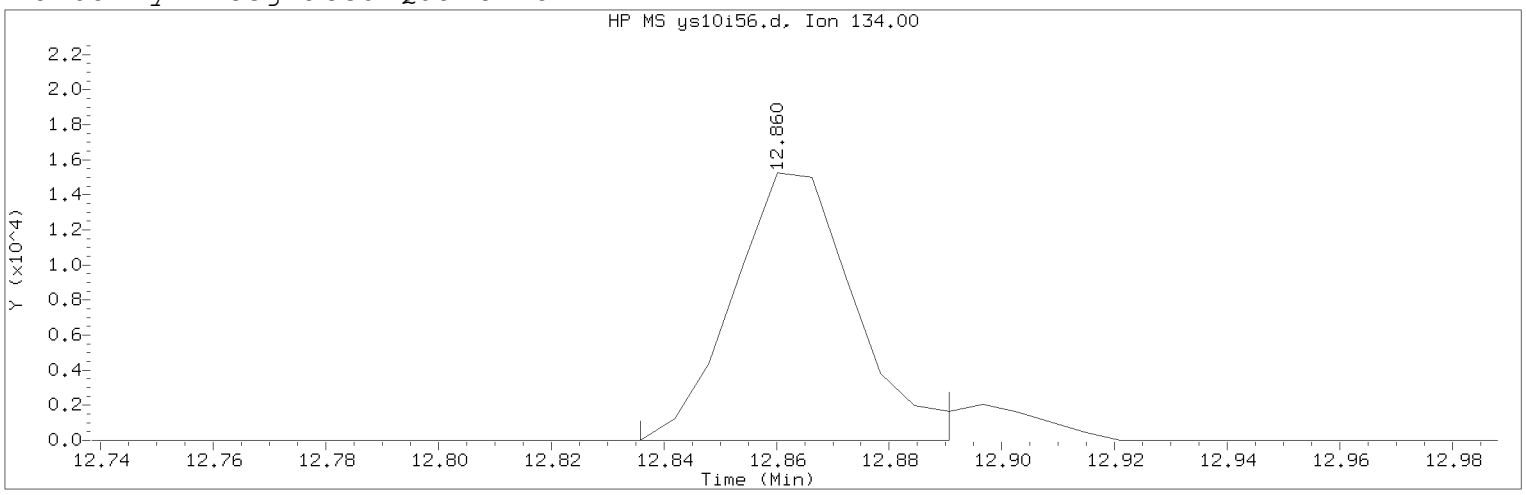
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

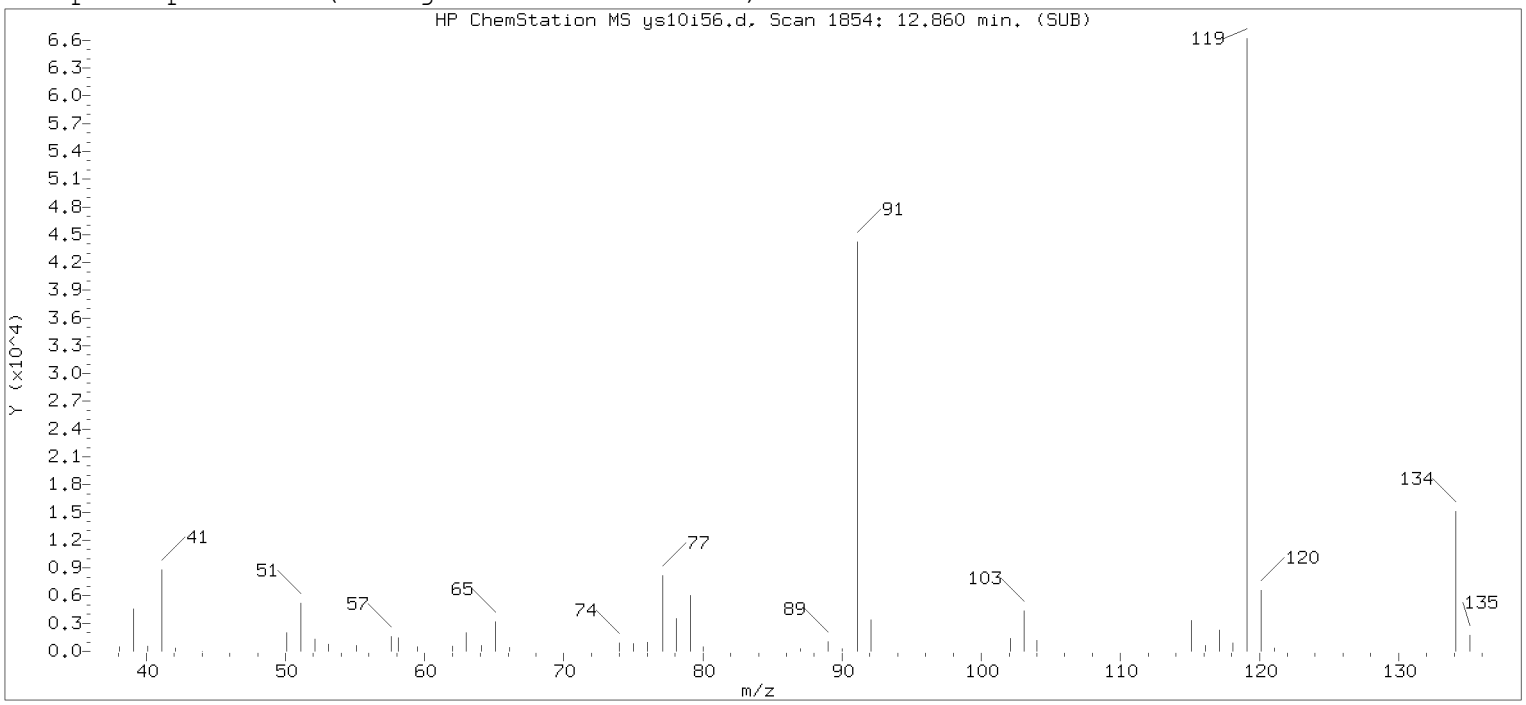
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area (flag) : 22866M
On-Column Amount (ng) : 3.9733
Integration start scan : 1849 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

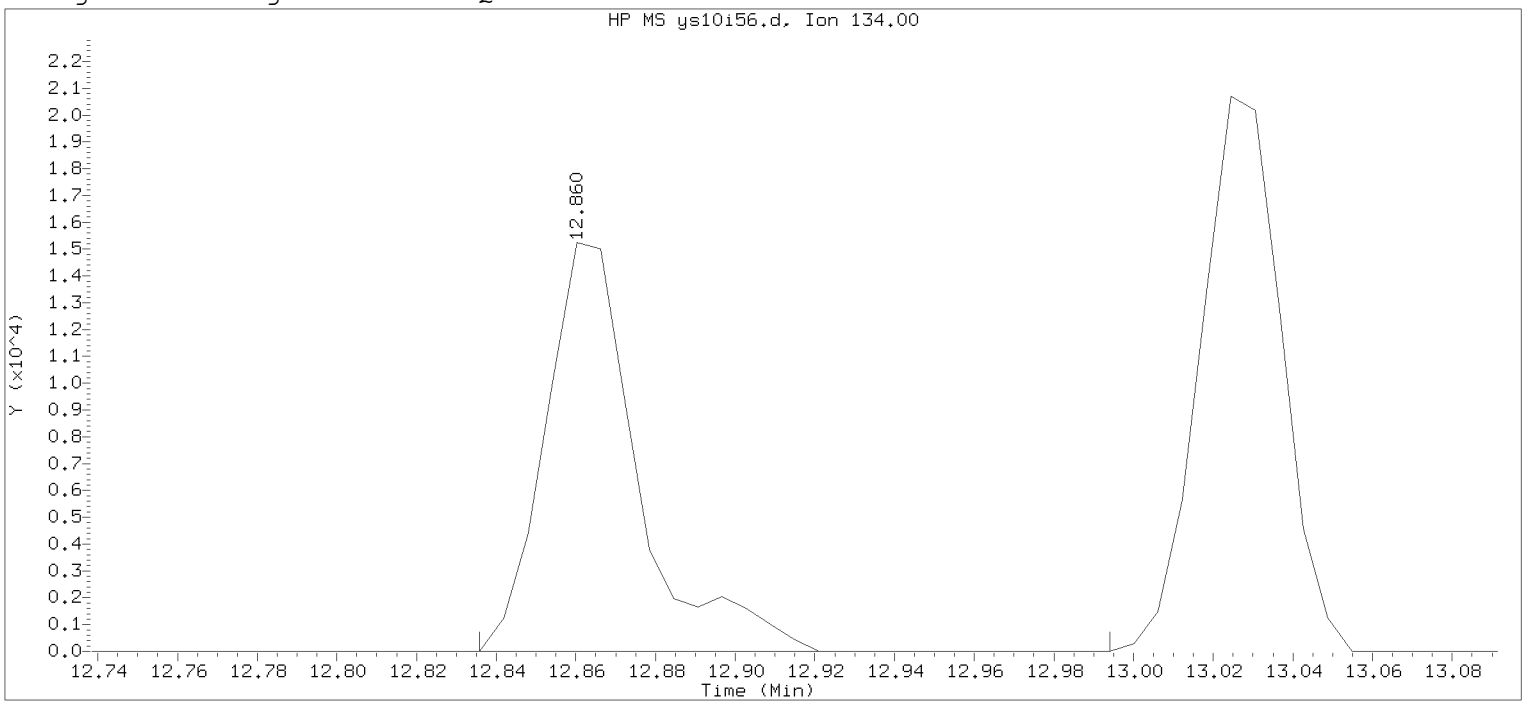
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i56.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

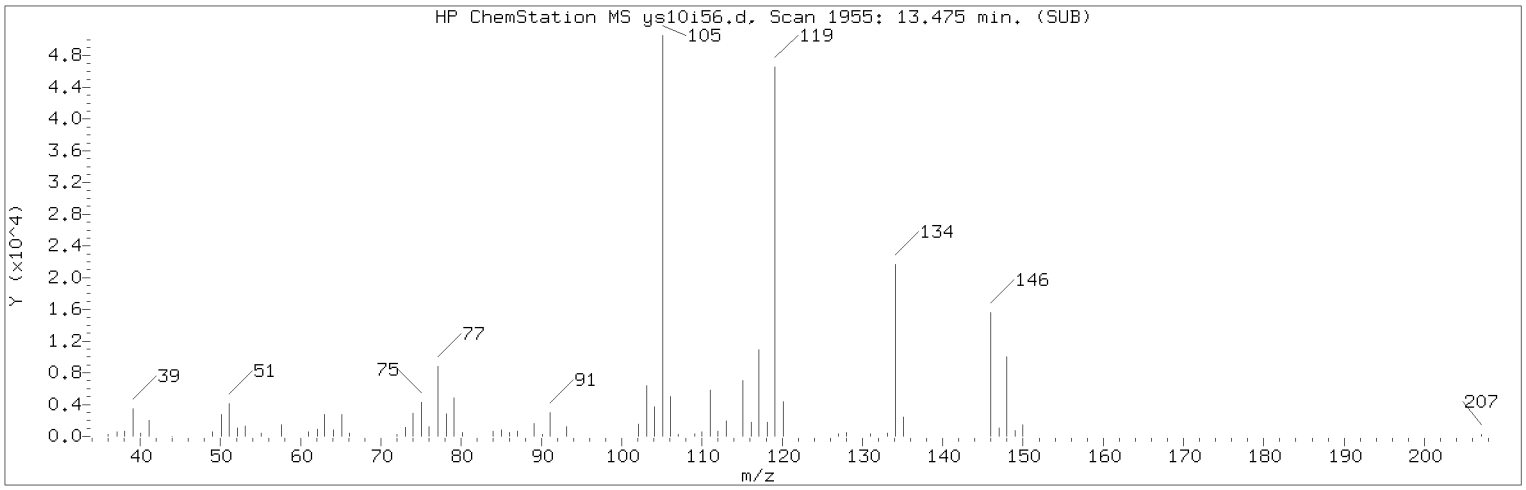
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

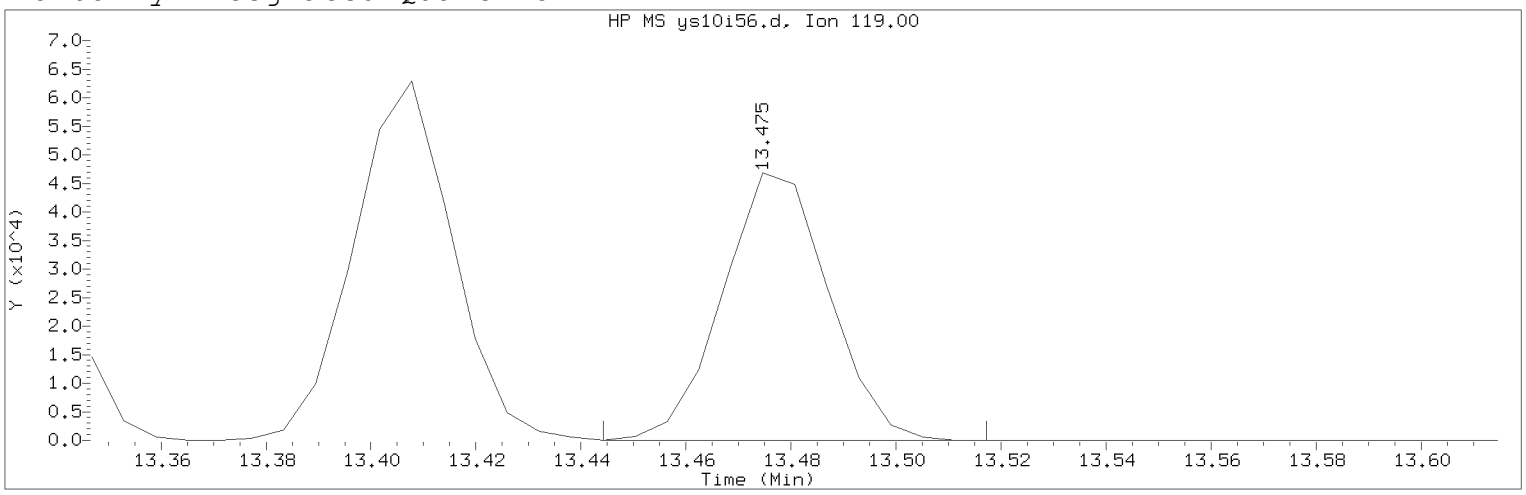
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area : 24722
On-column Amount (ng) : 4.0237
Integration start scan : 1849 Integration stop scan: 1875
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i56.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

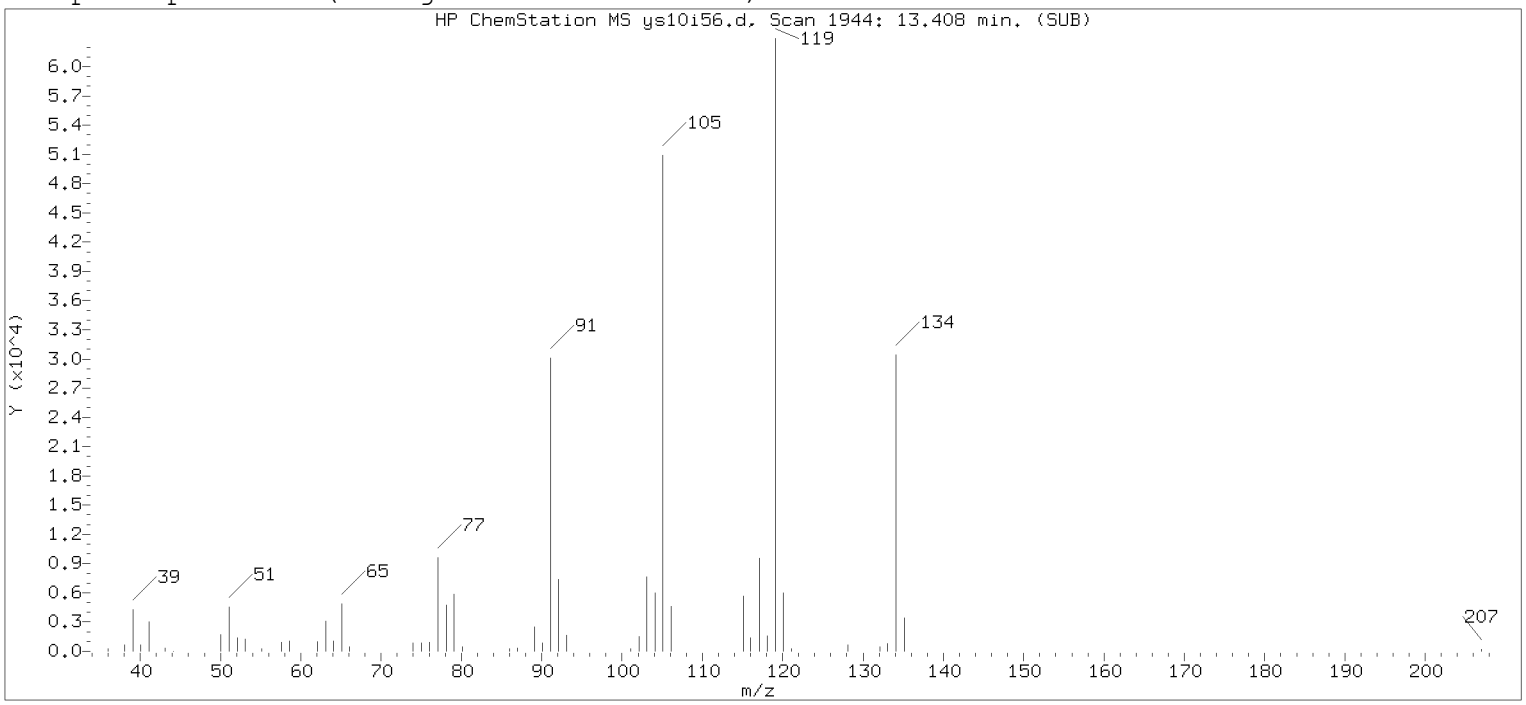
Compound Number : 140
Compound Name : 1,2-Diethylbenzene
Scan Number : 1955
Retention Time (minutes): 13.475
Quant Ion : 119.00
Area (flag) : 65610M
On-Column Amount (ng) : 3.9784
Integration start scan : 1949 Integration stop scan: 1961
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

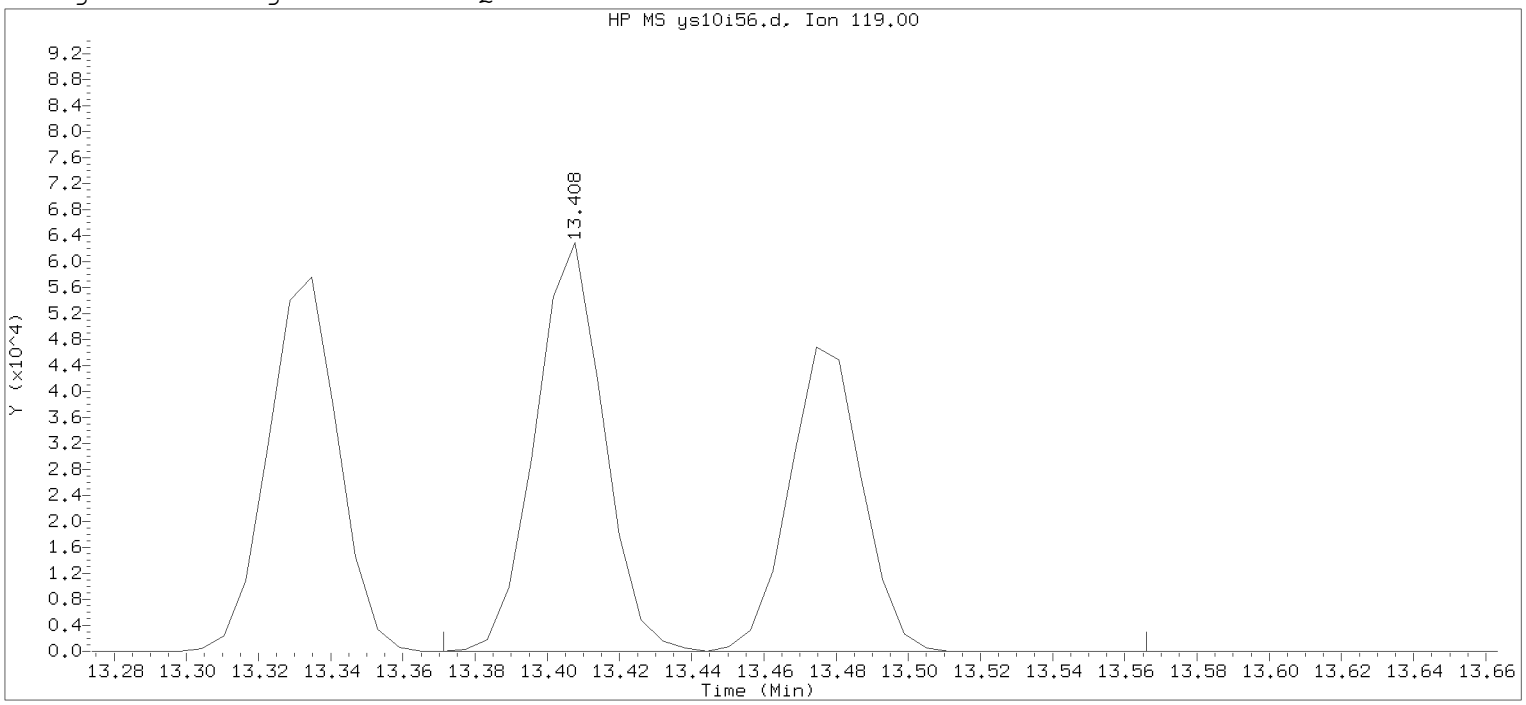
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



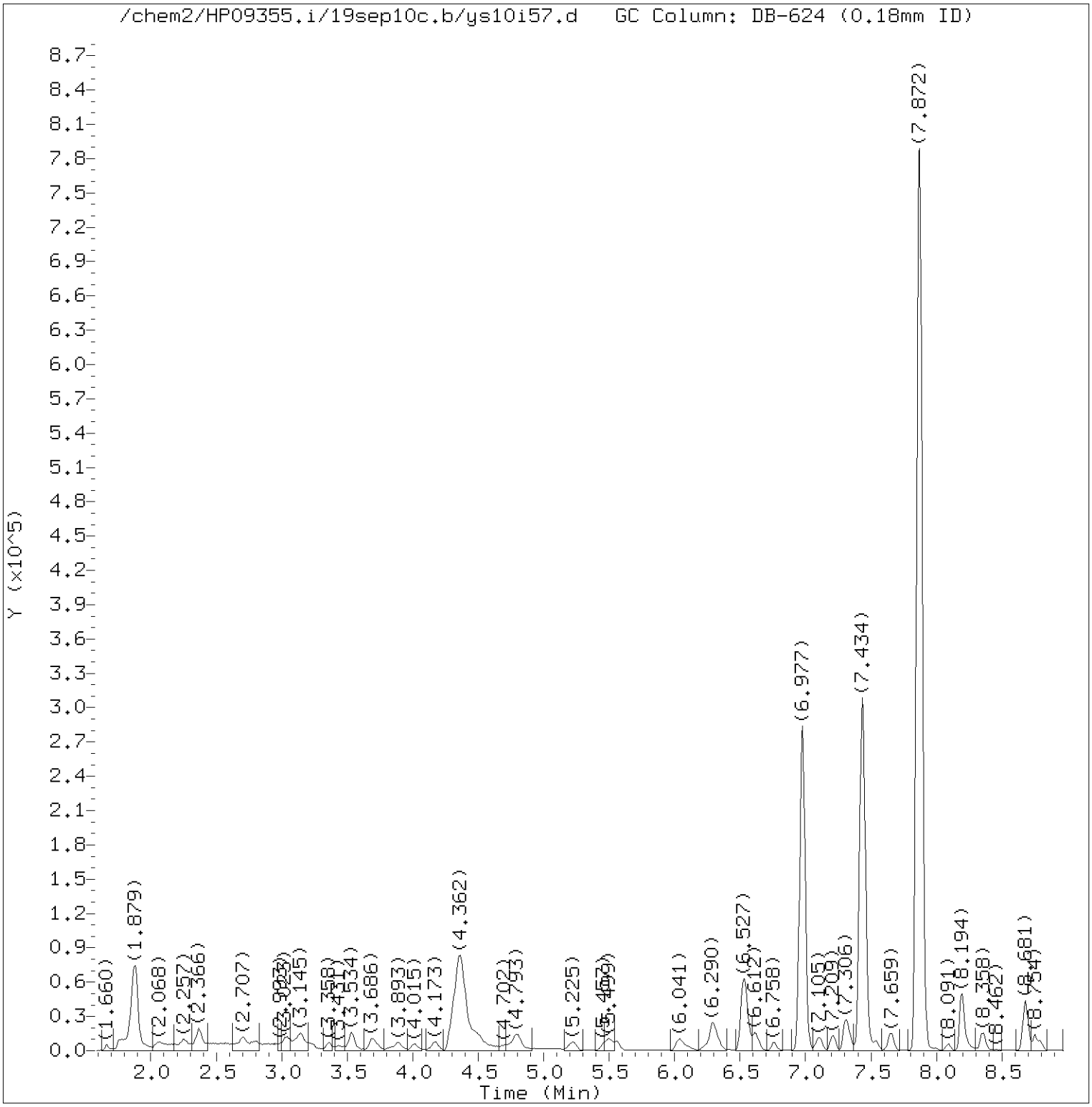
Data File: /chem2/HP09355.i/19sep10c.b/ys10i56.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 14:40 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 140
Compound Name : 1,2-Diethylbenzene
Scan Number : 1944
Retention Time (minutes): 13.408
Quant Ion : 119.00
Area : 148004
On-column Amount (ng) : 5.4782
Integration start scan : 1937 Integration stop scan: 1969
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648



Total Ion Chromatogram (TIC)

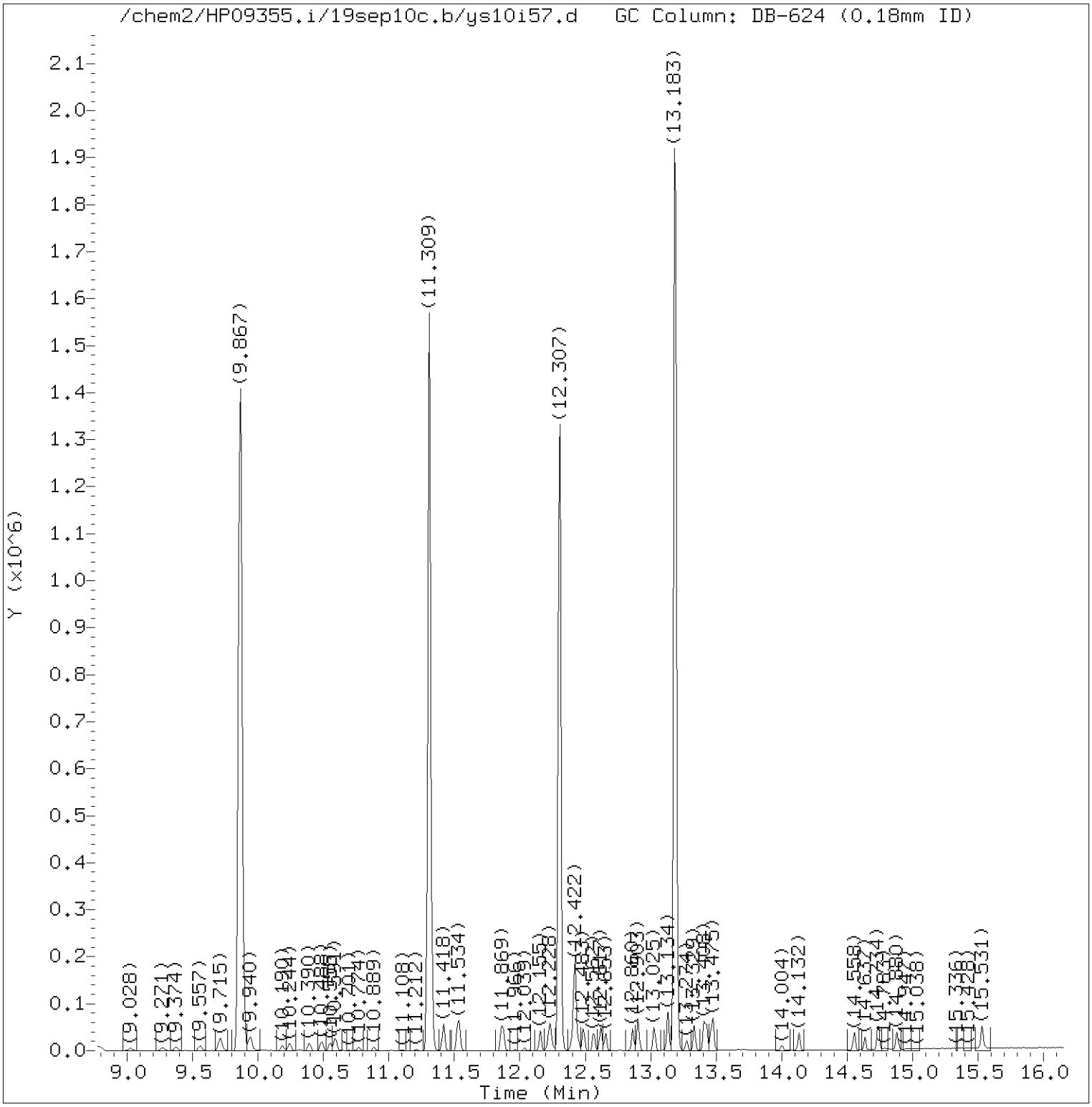
Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.056	85	8301	0.786
4) Chloromethane	(2)	2.251	50	8394	0.925
5) 1,3-Butadiene	(2)	2.360	39	7800	1.105
6) Vinyl Chloride	(2)	2.366	62	7828	0.879
8) Bromomethane	(2)	2.707	94	6113	0.925
9) Chloroethane	(2)	2.792	64	4839	0.936
10) Dichlorofluoromethane	(2)	3.035	67	10294	0.945
12) Trichlorofluoromethane	(2)	3.102	101	9915	0.873
11) n-Pentane	(2)	3.145	43	12332	1.119
14) Ethyl ether	(2)	3.364	59	5474	0.925
15) Freon 123a	(2)	3.431	67	6104	0.890
16) Acrolein	(1)	3.534	56	25420	9.537
17) 1,1-Dichloroethene	(2)	3.686	96	4140	0.829
17) 1,1-Dichloroethene	(2)	3.680	63	2210	0.860
18) Acetone	(1)	3.698	58	2207	1.760
19) Freon 113	(2)	3.717	101	4464	0.785
21) 2-Propanol	(1)	3.875	45	14844	19.657
22) Methyl Iodide	(2)	3.893	142	8854	0.903
23) Carbon Disulfide	(2)	4.015	76	15463	0.856
27) Methyl Acetate	(2)	4.149	43	8785M	1.006
25) Allyl Chloride	(2)	4.185	41	7457	0.861
29)*t-Butyl alcohol-d10	(1)	4.355	65	350956M	250.000
28) Methylene Chloride	(2)	4.374	84	5322	0.892
30) t-Butyl alcohol	(1)	4.483	59	31415	19.892
31) Acrylonitrile	(2)	4.702	53	3462	0.757
33) Methyl Tertiary Butyl Ether	(2)	4.781	73	18775	0.943
32) trans-1,2-Dichloroethene	(2)	4.812	96	5020	0.868
34) n-Hexane	(2)	5.219	57	8292	0.845
36) 1,1-Dichloroethane	(2)	5.457	63	9425	0.896
38) di-Isopropyl ether	(2)	5.505	45	18491	0.920
39) 2-Chloro-1,3-butadiene	(2)	5.566	53	7743	0.812
40) Ethyl t-butyl ether	(2)	6.041	59	18485	0.938
43) 1,2-Dichloroethene (Total)	(2)		96	10897	1.761
44) 2-Butanone	(2)	6.235	43	12860	1.884
42) cis-1,2-Dichloroethene	(2)	6.284	96	5877	0.893
45) 2,2-Dichloropropane	(2)	6.290	77	6581	0.815
47) Propionitrile	(1)	6.302	54	35073	19.309
48) Methacrylonitrile	(2)	6.527	67	44281	9.107

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.619	71	3847	1.952
49) Bromochloromethane	(2)	6.625	128	3005	0.876
51) Chloroform	(2)	6.752	83	9081	0.891
52)$Dibromofluoromethane	(2)	6.977	113	267287	49.490
52)$Dibromofluoromethane	(2)	6.977	111	273450	49.456
53) 1,1,1-Trichloroethane	(2)	7.002	97	7660	0.868
54) Cyclohexane	(2)	7.117	56	10139	0.881
54) Cyclohexane	(2)	7.105	84	8722	0.877
54) Cyclohexane	(2)	7.111	69	2931	0.815
55) 1,1-Dichloropropene	(2)	7.209	75	7453	0.874
56) Carbon Tetrachloride	(2)	7.215	117	6070	0.806
58) Isobutyl Alcohol	(1)	7.312	41	27993	51.323
57)$1,2-Dichloroethane-d4	(2)	7.434	102	70903	50.217
57)$1,2-Dichloroethane-d4	(2)	7.434	65	345122	50.672
57)$1,2-Dichloroethane-d4	(2)	7.434	104	44897	50.104
60) Benzene	(2)	7.464	78	22937	0.920
61) 1,2-Dichloroethane	(2)	7.537	62	9576	1.084
61) 1,2-Dichloroethane	(2)	7.543	98	319	0.450
65) t-Amyl methyl ether	(2)	7.653	73	18619	0.944
66)*Fluorobenzene	(2)	7.872	96	1150977	50.000
67) n-Heptane	(2)	7.878	43	9474	0.914
69) n-Butanol	(1)	8.194	56	46682	91.250
71) Trichloroethene	(2)	8.352	95	5784	0.897
72) Methylcyclohexane	(2)	8.675	83	10747	0.879
72) Methylcyclohexane	(2)	8.675	98	4464	0.829
73) 1,2-Dichloropropane	(2)	8.687	63	5694	0.896
76) Methyl Methacrylate	(2)	8.754	69	6338	0.850
75) 1,4-Dioxane	(1)	8.766	88	3816	34.979
74) Dibromomethane	(2)	8.796	93	3860	0.921
78) Bromodichloromethane	(2)	9.028	83	6022	0.824
79) 2-Nitropropane	(2)	9.265	41	4555	1.462
80) 2-Chloroethyl Vinyl Ether	(2)	9.374	63	4437	0.827
81) cis-1,3-Dichloropropene	(2)	9.557	75	7828	0.794
82) 4-Methyl-2-pentanone	(2)	9.709	43	22819	1.774
83)$Toluene-d8	(3)	9.867	98	1167495	50.013
83)$Toluene-d8	(3)	9.867	100	751014	49.898
88) Toluene	(3)	9.940	92	14531	0.909
90) 1,3-Dichloropropene (total)	(3)		100	15094	1.572

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$ = Compound is a surrogate standard.

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on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
89) trans-1,3-Dichloropropene	(3)	10.190	75	7266	0.779
91) Ethyl Methacrylate	(3)	10.244	69	9391	0.794
92) 1,1,2-Trichloroethane	(3)	10.390	97	5651	0.917
93) Tetrachloroethene	(3)	10.488	166	6121	0.905
94) 1,3-Dichloropropane	(3)	10.555	76	9994	0.934
96) 2-Hexanone	(3)	10.591	43	18259	1.730
97) Dibromochloromethane	(3)	10.774	129	4332	0.723
99) 1,2-Dibromoethane	(3)	10.889	107	5784	0.862
100)*Chlorobenzene-d5	(3)	11.309	117	862765	50.000
101) 1-Chlorohexane	(3)	11.309	91	9093	1.013
102) Chlorobenzene	(3)	11.333	112	17178	0.956
104) Ethylbenzene	(3)	11.418	91	27959	0.914
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	4763	0.830
106) m+p-Xylene	(3)	11.534	106	22536	1.866
108) Xylene (Total)	(3)		106	33000	2.756
107) o-Xylene	(3)	11.856	106	10464	0.890
109) Styrene	(3)	11.875	104	15813	0.814
110) Bromoform	(3)	12.039	173	3015	0.698
111) Isopropylbenzene	(3)	12.155	105	27741	0.913
112) Cyclohexanone	(1)	12.228	55	26914M	46.460
114)$4-Bromofluorobenzene	(3)	12.307	95	445011	49.895
114)$4-Bromofluorobenzene	(3)	12.307	174	340194	50.236
116) 1,1,2,2-Tetrachloroethane	(4)	12.392	83	9981	0.908
118) trans-1,4-Dichloro-2-butene	(4)	12.416	53	32162	8.465
115) Bromobenzene	(4)	12.422	156	7023	0.919
117) 1,2,3-Trichloropropane	(4)	12.447	110	3269	0.936
119) n-Propylbenzene	(4)	12.483	91	33926	0.936
120) 2-Chlorotoluene	(4)	12.562	126	6800	0.911
122) 1,3,5-Trimethylbenzene	(4)	12.623	105	24343	0.908
121) 4-Chlorotoluene	(4)	12.653	126	7055	0.904
124) tert-Butylbenzene	(4)	12.860	134	5072M	0.904
125) Pentachloroethane	(4)	12.897	167	3283	0.770
126) 1,2,4-Trimethylbenzene	(4)	12.903	105	26027	0.925
127) sec-Butylbenzene	(4)	13.025	105	30911	0.911
129) 1,3-Dichlorobenzene	(4)	13.128	146	14690	0.982
130) p-Isopropyltoluene	(4)	13.134	119	25687	0.881
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	465037	50.000
133) 1,4-Dichlorobenzene	(4)	13.201	146	15027	0.983

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* = Compound is an internal standard.
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on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	13.207	105	27432	0.928
135) Benzyl Chloride	(4)	13.274	91	14694	0.689
136) 1,3-Diethylbenzene	(4)	13.335	119	16556	0.869
141) Diethylbenzene (total)	(4)		100	48436	2.632
137) 1,4-Diethylbenzene	(4)	13.408	119	17752	0.881
139) n-Butylbenzene	(4)	13.426	92	13730	0.890
138) 1,2-Dichlorobenzene	(4)	13.463	146	14292	0.977
140) 1,2-Diethylbenzene	(4)	13.475	119	14128M	0.882
142) 1,2-Dibromo-3-chloropropane	(4)	13.998	75	2290	0.808
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	10888	0.968
146) 1,2,4-Trichlorobenzene	(4)	14.558	180	10997	1.020
147) Hexachlorobutadiene	(4)	14.637	225	4602	0.958
148) Naphthalene	(4)	14.740	128	37931	0.993
149) 1,2,3-Trichlorobenzene	(4)	14.880	180	10619	1.014
150) 2-Methylnaphthalene	(4)	15.531	142	24176	0.957

M = Compound was manually integrated.

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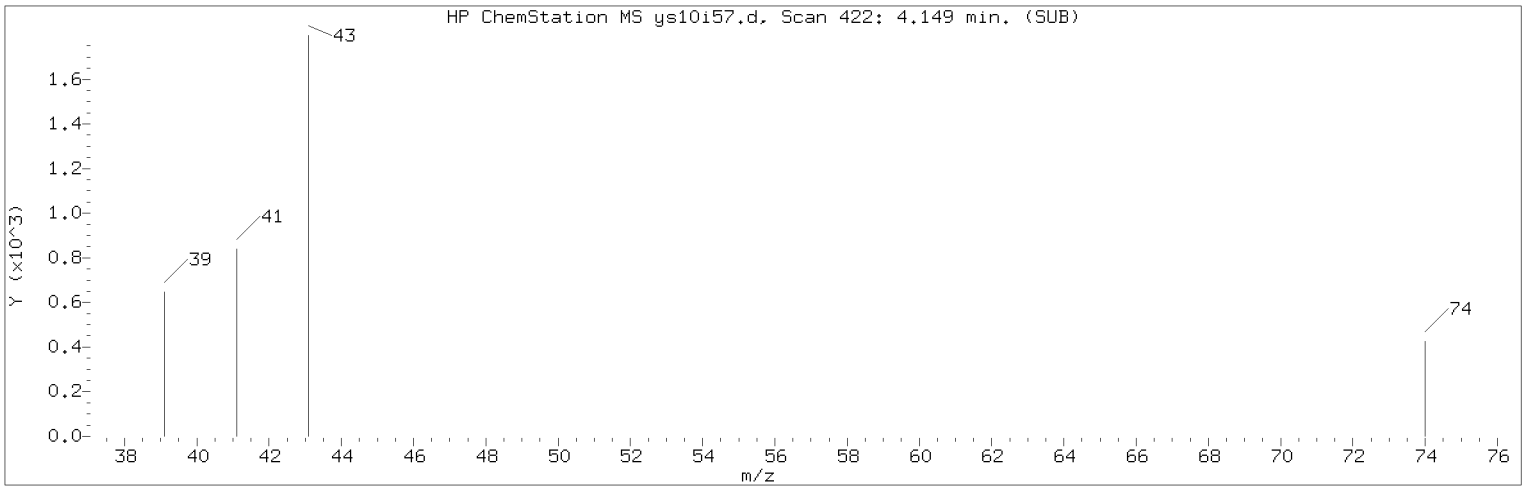
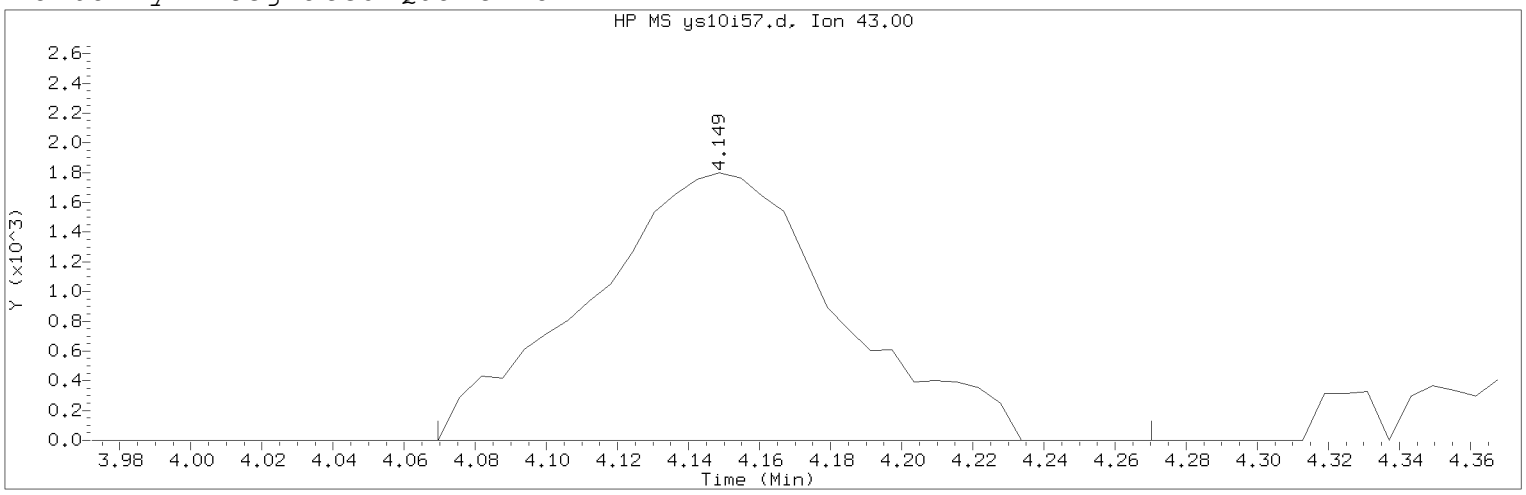
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

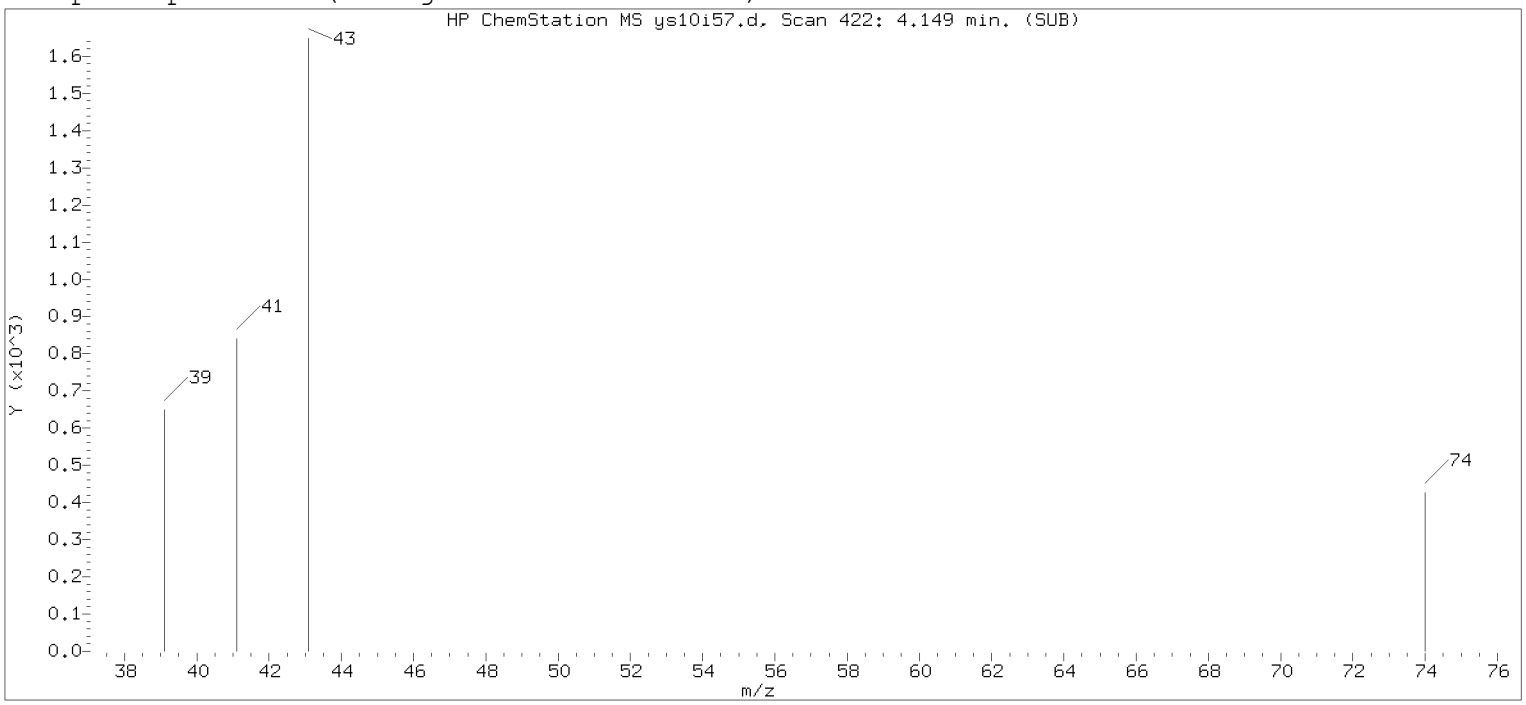
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 422
Retention Time (minutes): 4.149
Quant Ion : 43.00
Area (flag) : 8785M
On-Column Amount (ng) : 1.0060
Integration start scan : 408 Integration stop scan: 441
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

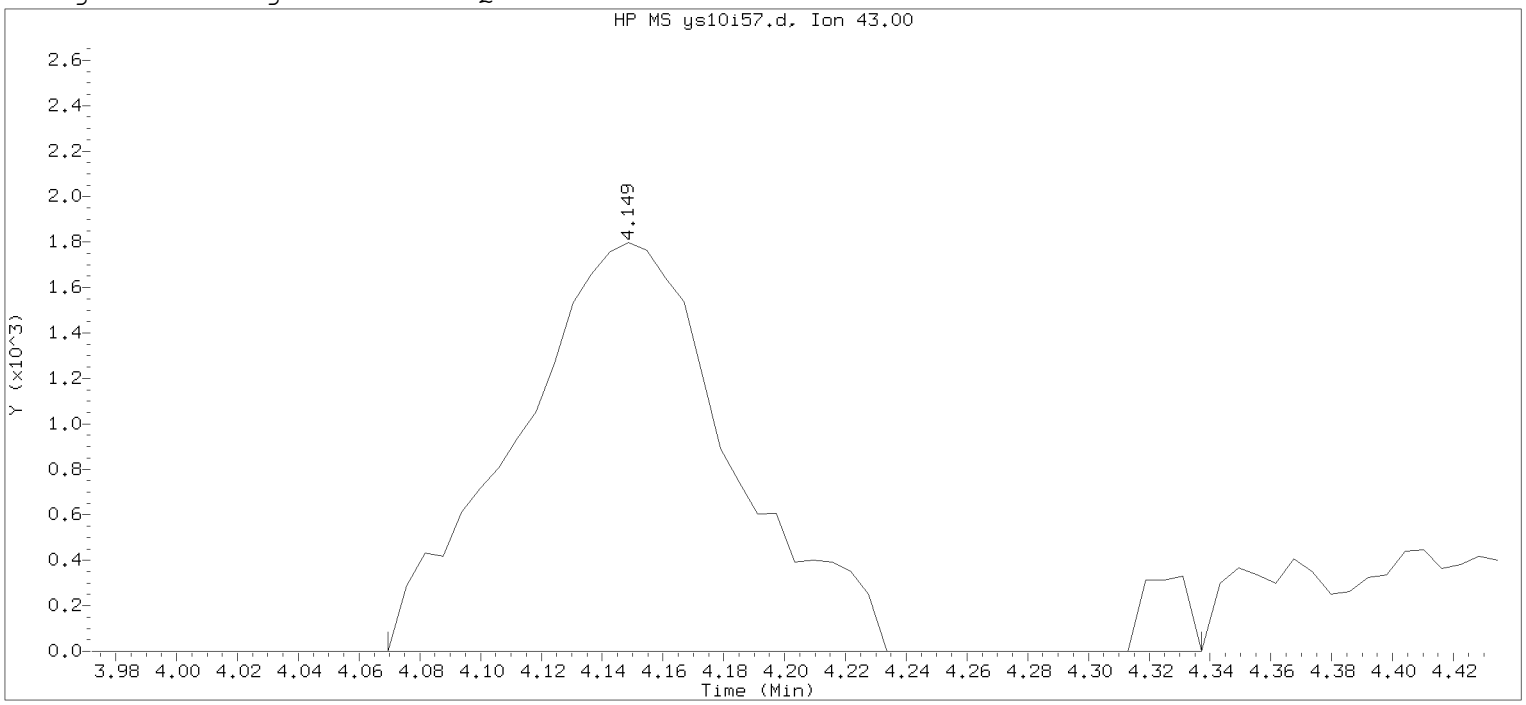
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

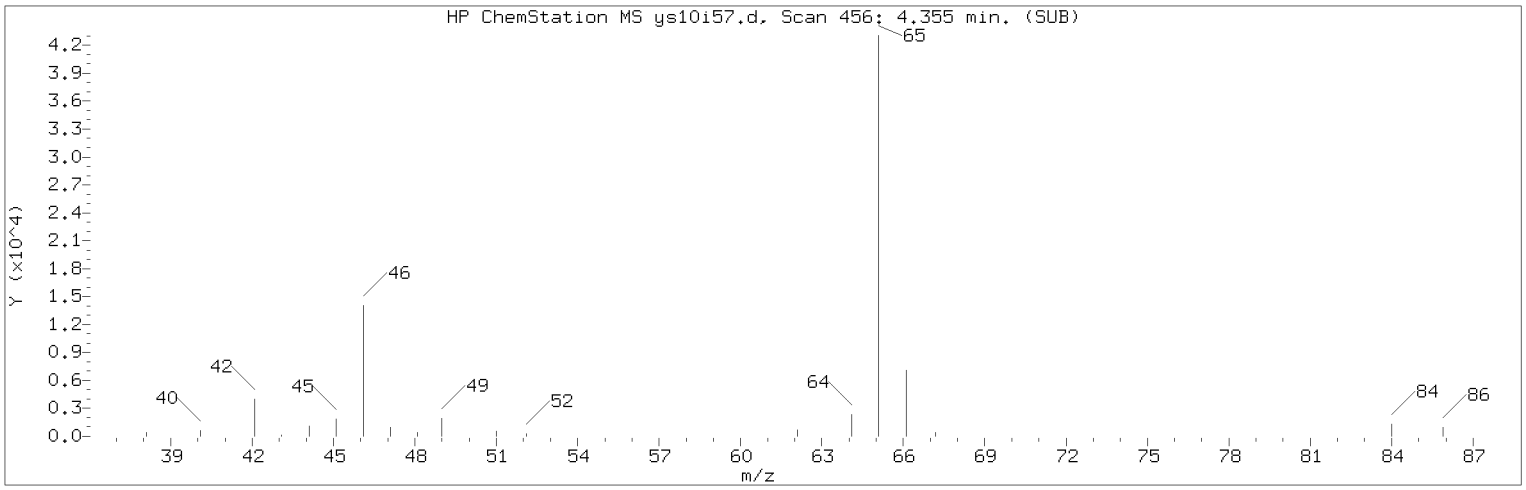
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

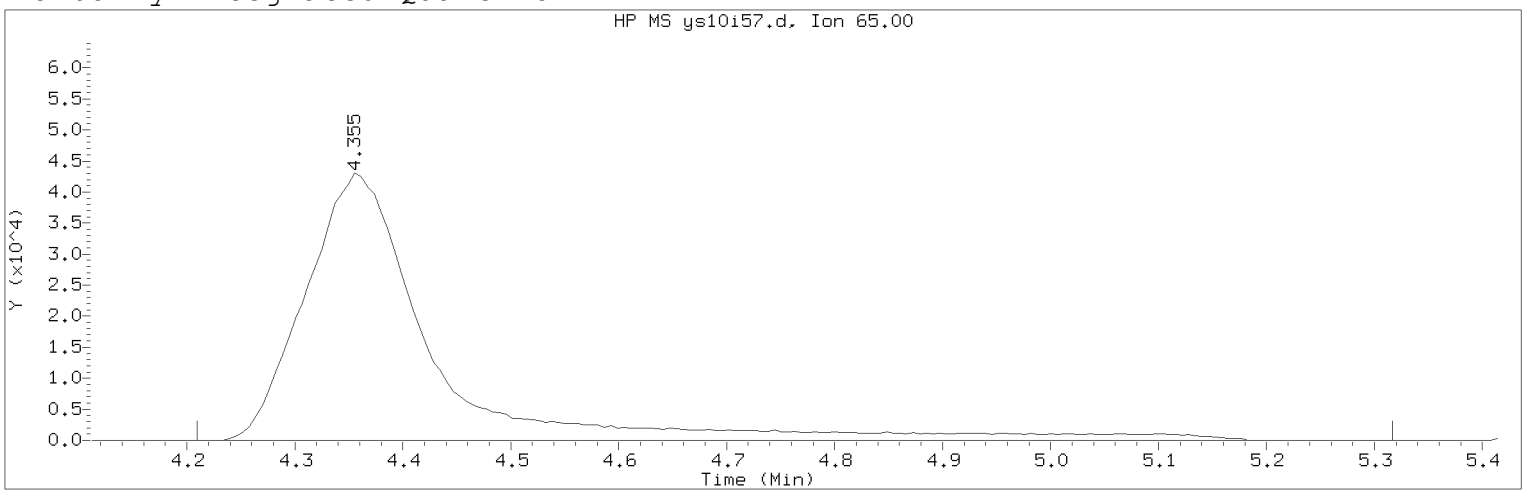
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 422
Retention Time (minutes): 4.149
Quant Ion : 43.00
Area : 9135
On-column Amount (ng) : 1.0401
Integration start scan : 408 Integration stop scan: 452
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

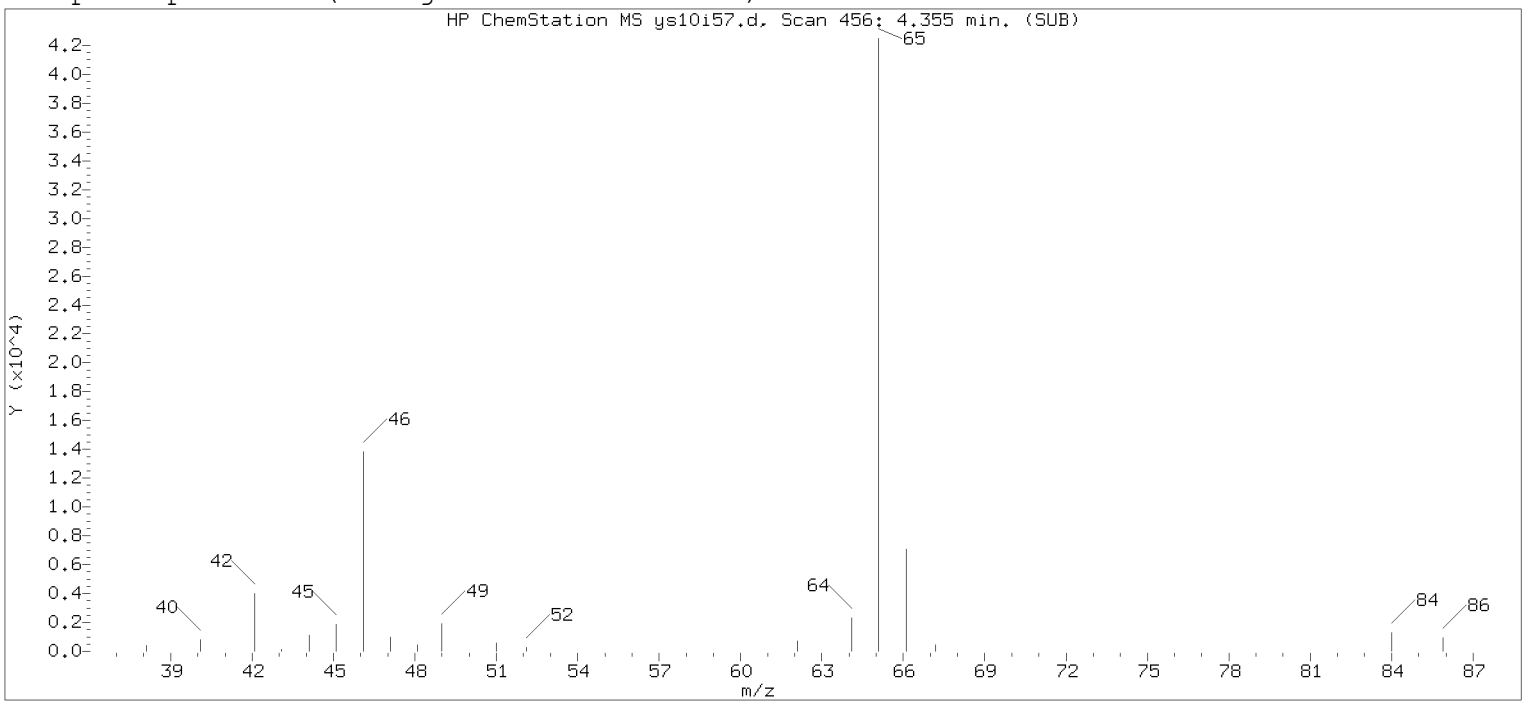
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 456
Retention Time (minutes): 4.355
Quant Ion : 65.00
Area (flag) : 350956M
On-Column Amount (ng) : 250.0000
Integration start scan : 431 Integration stop scan: 613
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

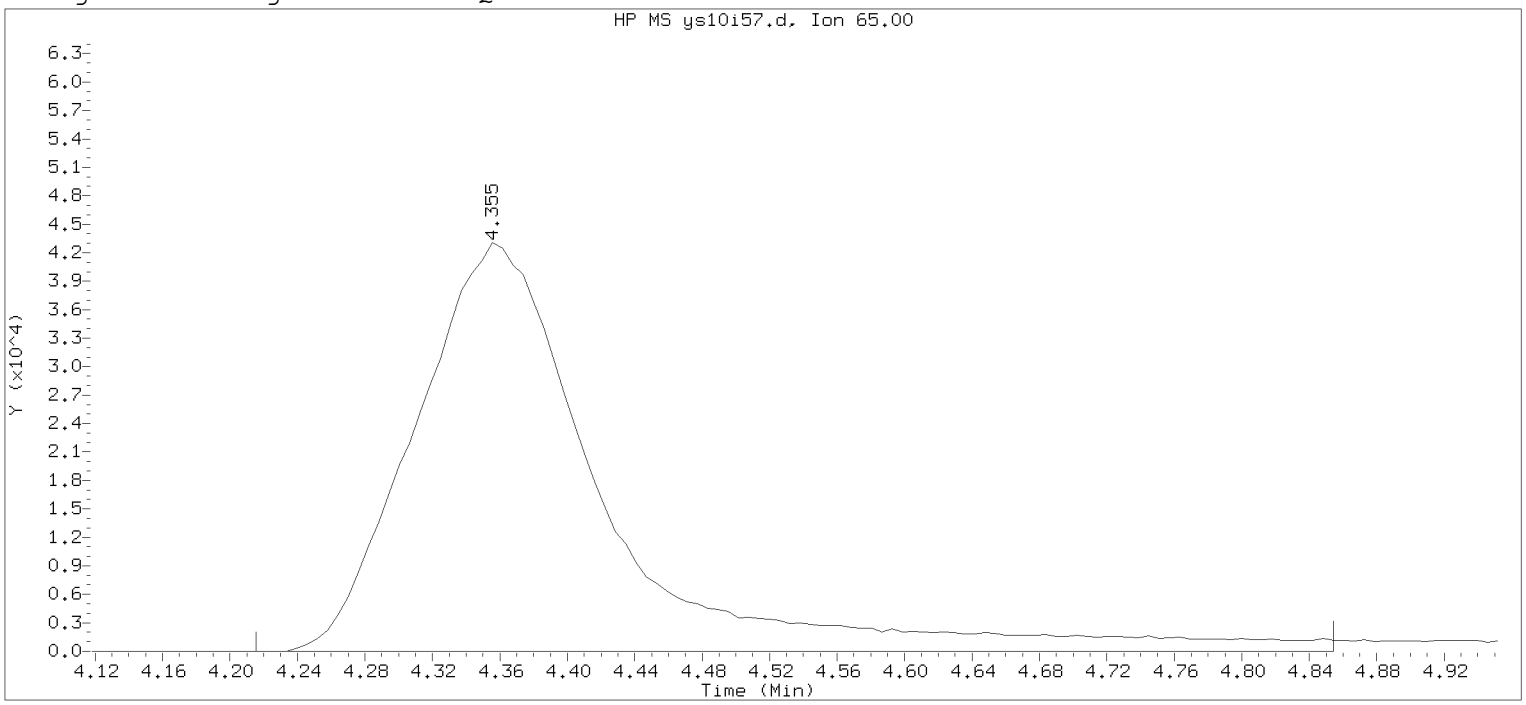
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

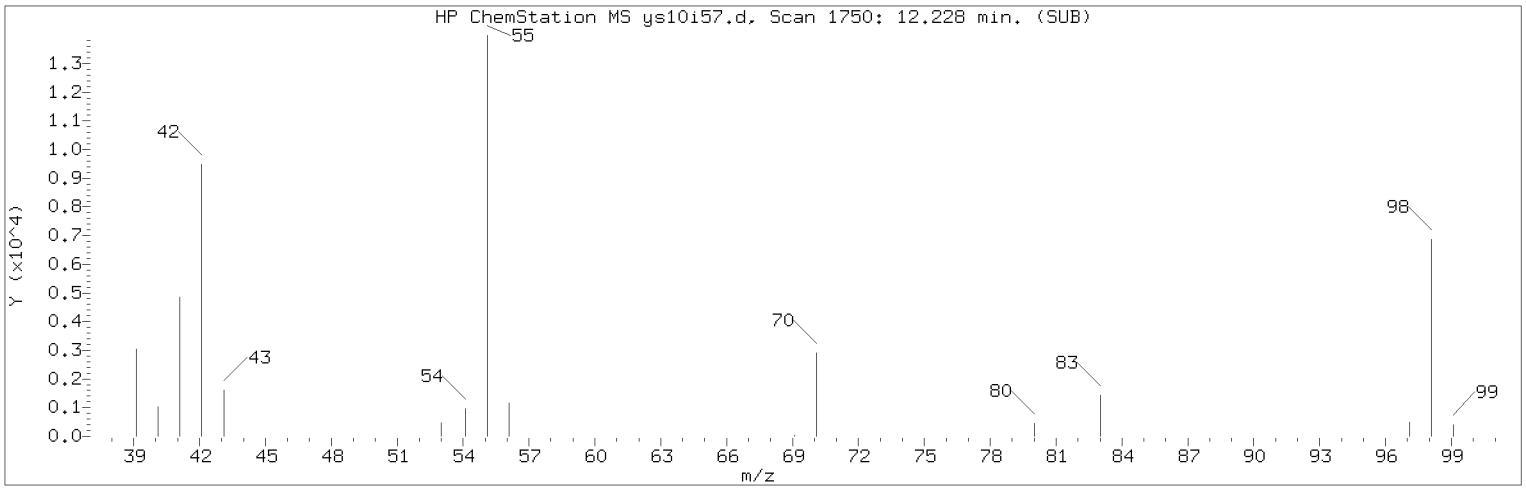
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

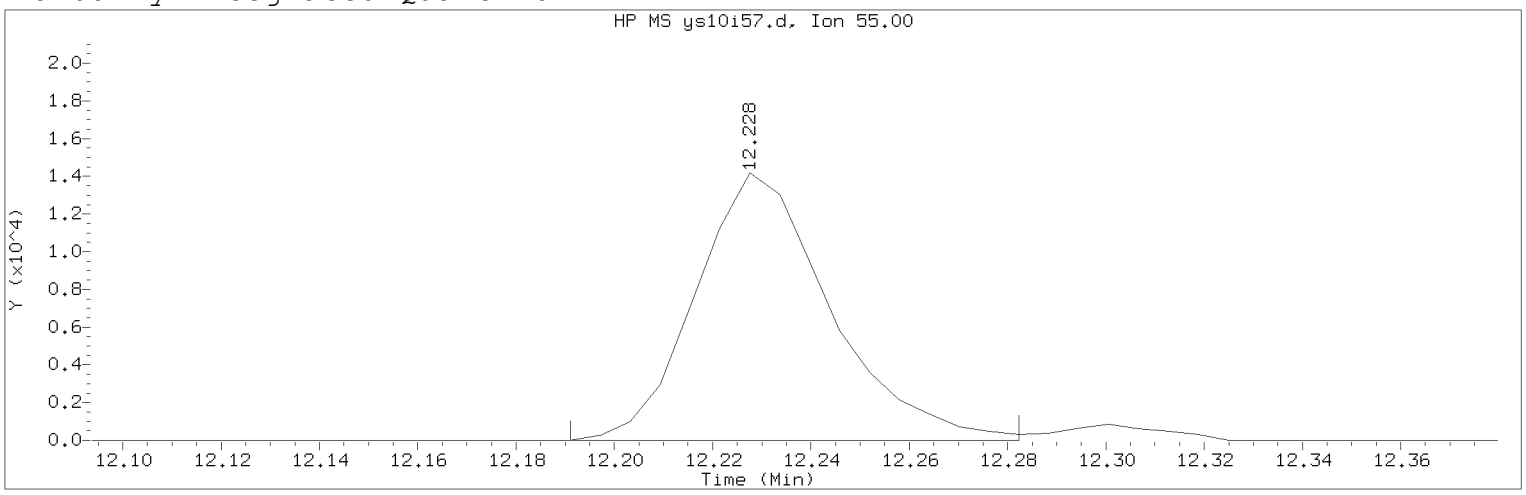
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 456
Retention Time (minutes): 4.355
Quant Ion : 65.00
Area : 332707
On-column Amount (ng) : 250.0000
Integration start scan : 432 Integration stop scan: 537
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

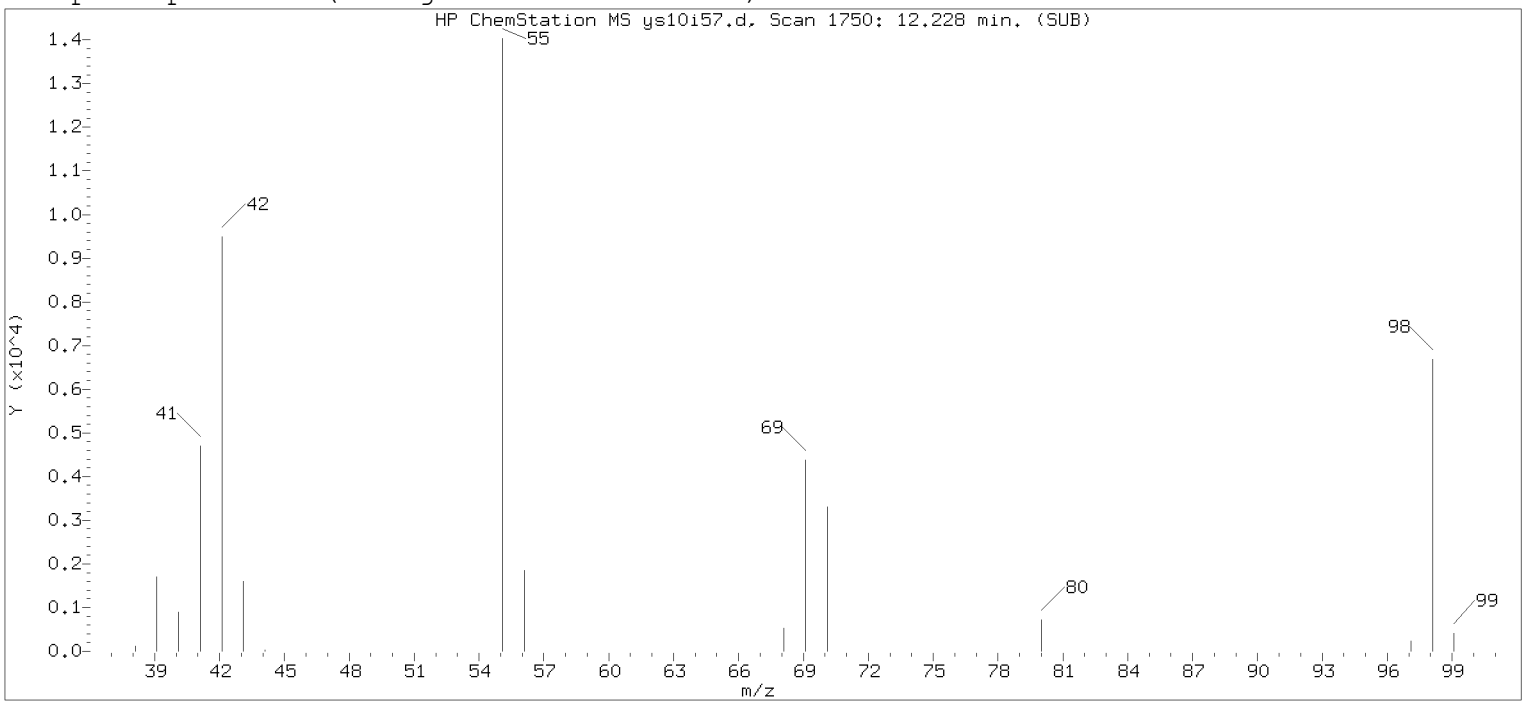
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1750
Retention Time (minutes): 12.228
Quant Ion : 55.00
Area (flag) : 26914M
On-Column Amount (ng) : 46.4600
Integration start scan : 1743 Integration stop scan: 1758
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

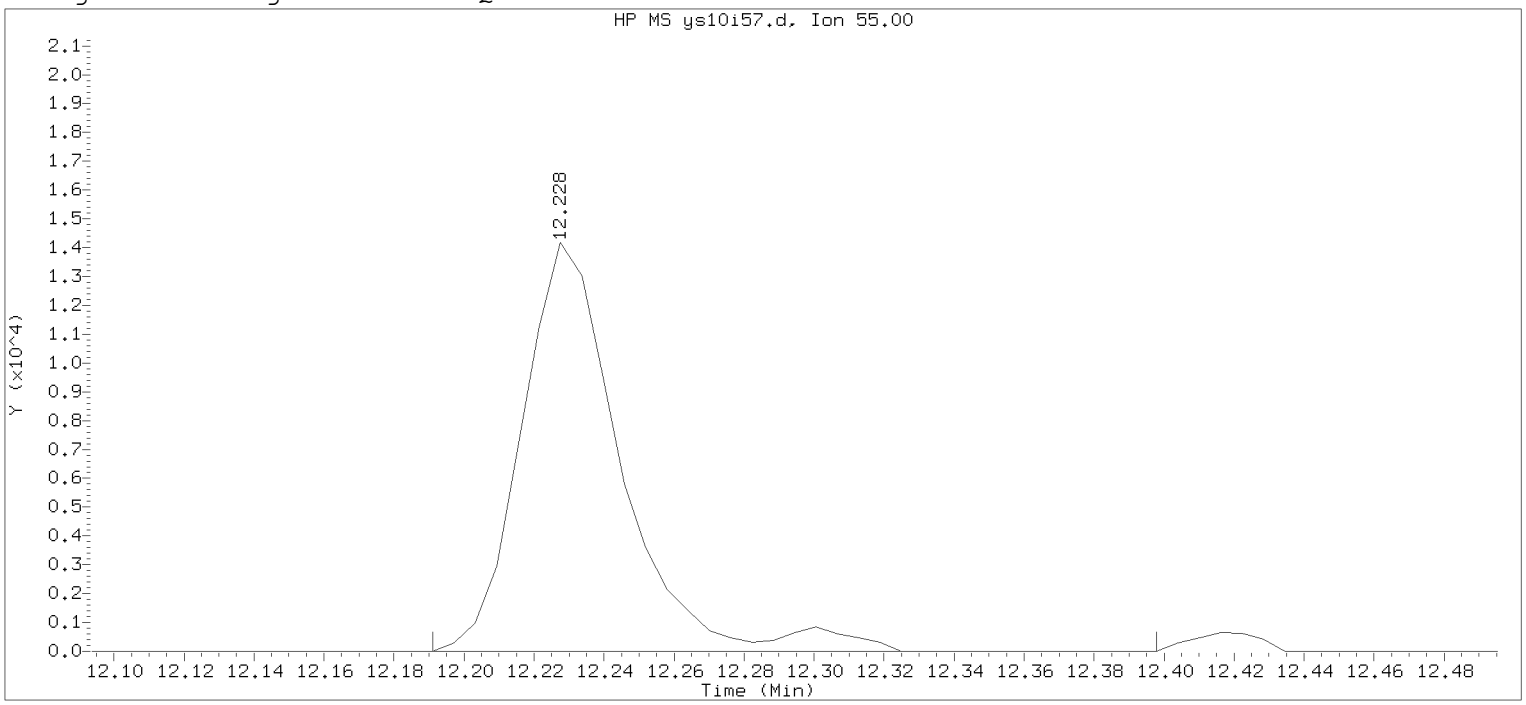
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1750
Retention Time (minutes): 12.228
Quant Ion : 55.00
Area : 28105
On-column Amount (ng) : 47.7685
Integration start scan : 1743 Integration stop scan: 1777
Y at integration start : 0 Y at integration end: 0

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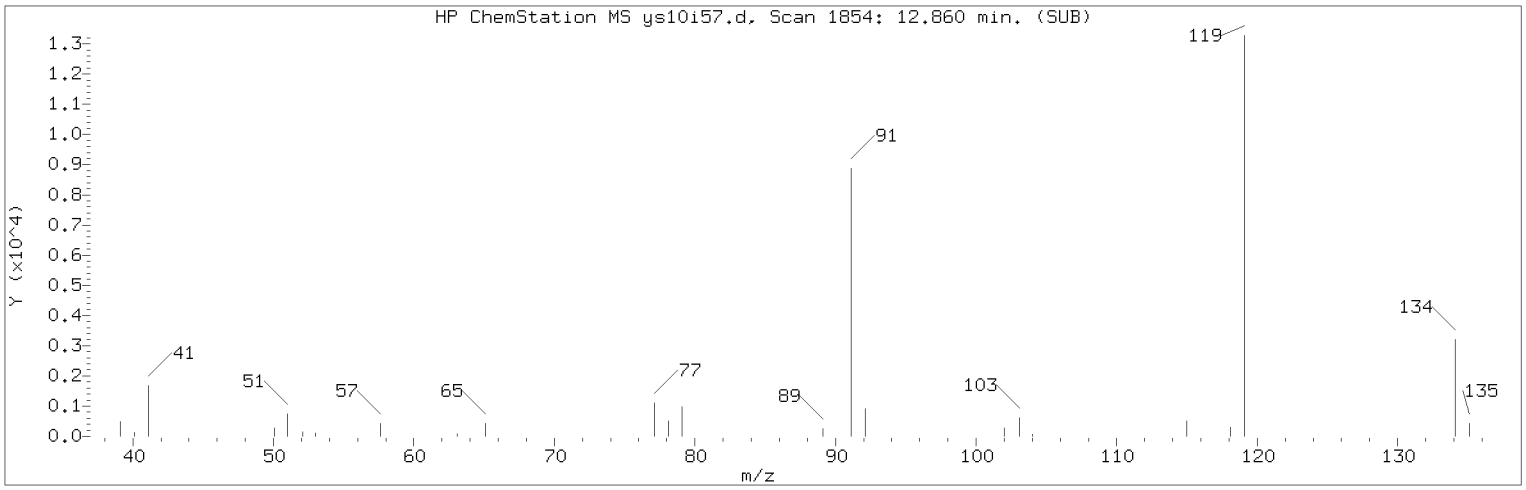
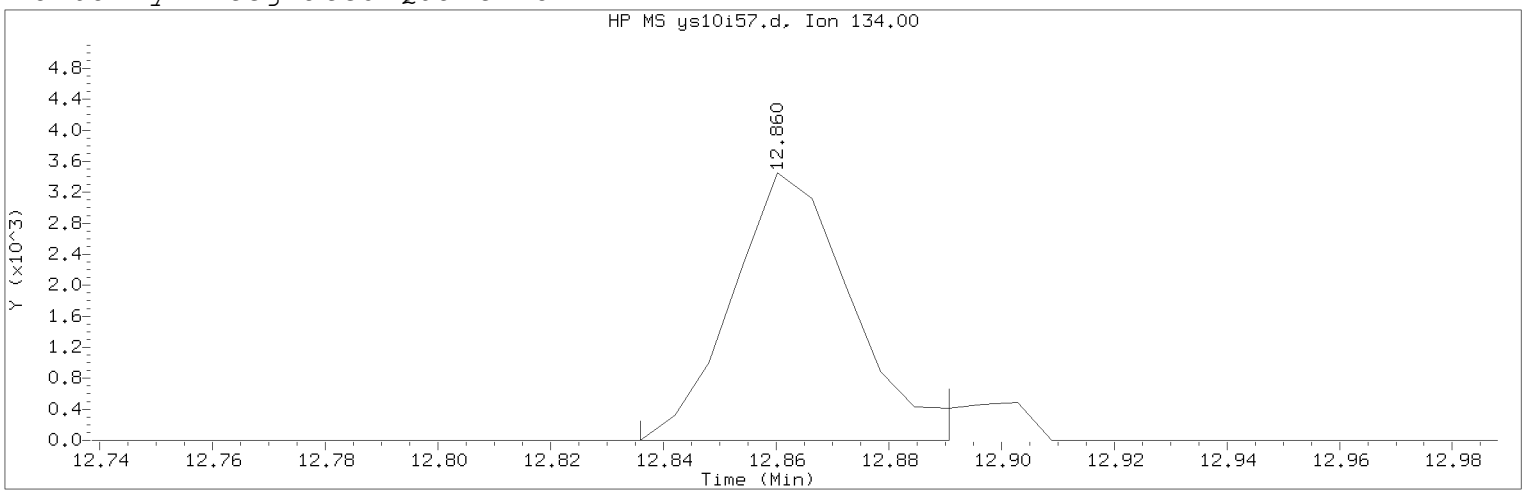
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

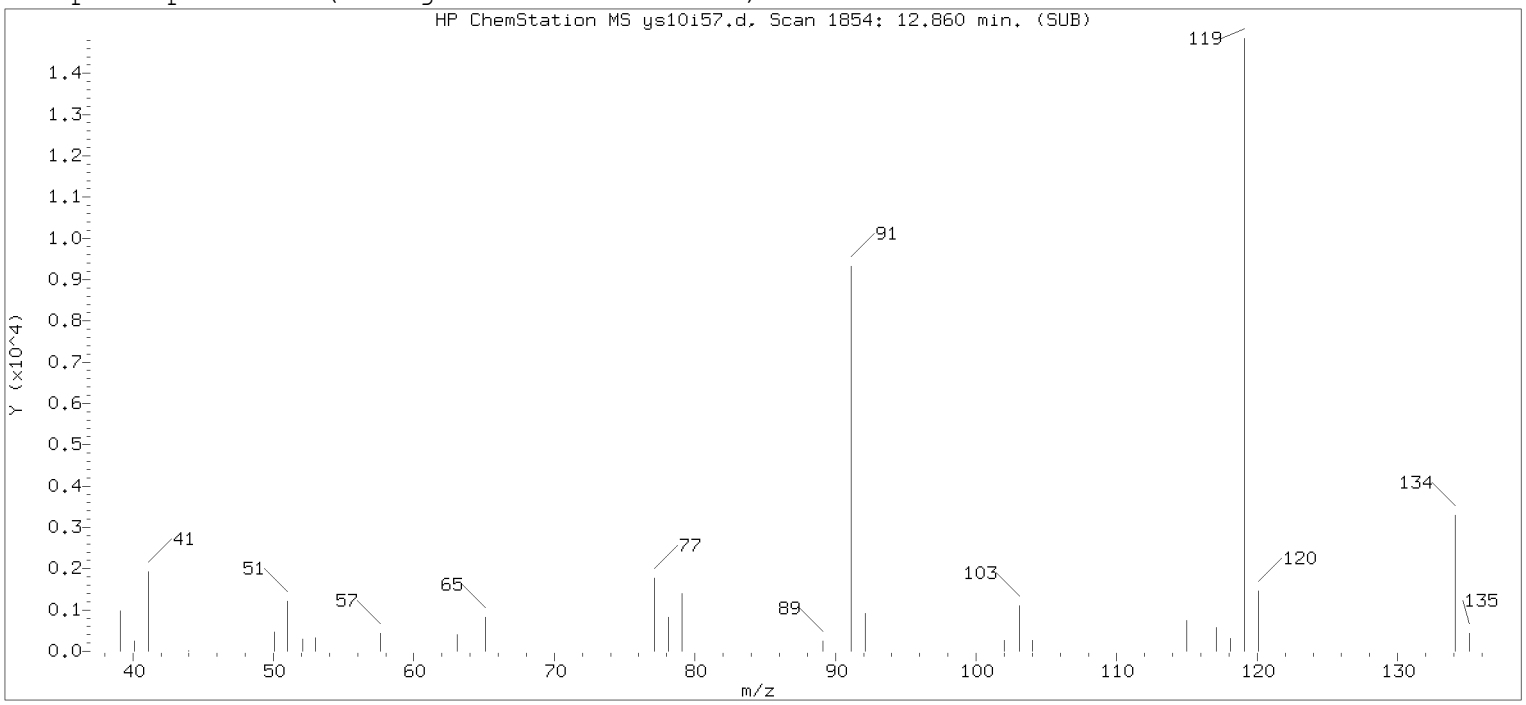
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area (flag) : 5072M
On-Column Amount (ng) : 0.9037
Integration start scan : 1849 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

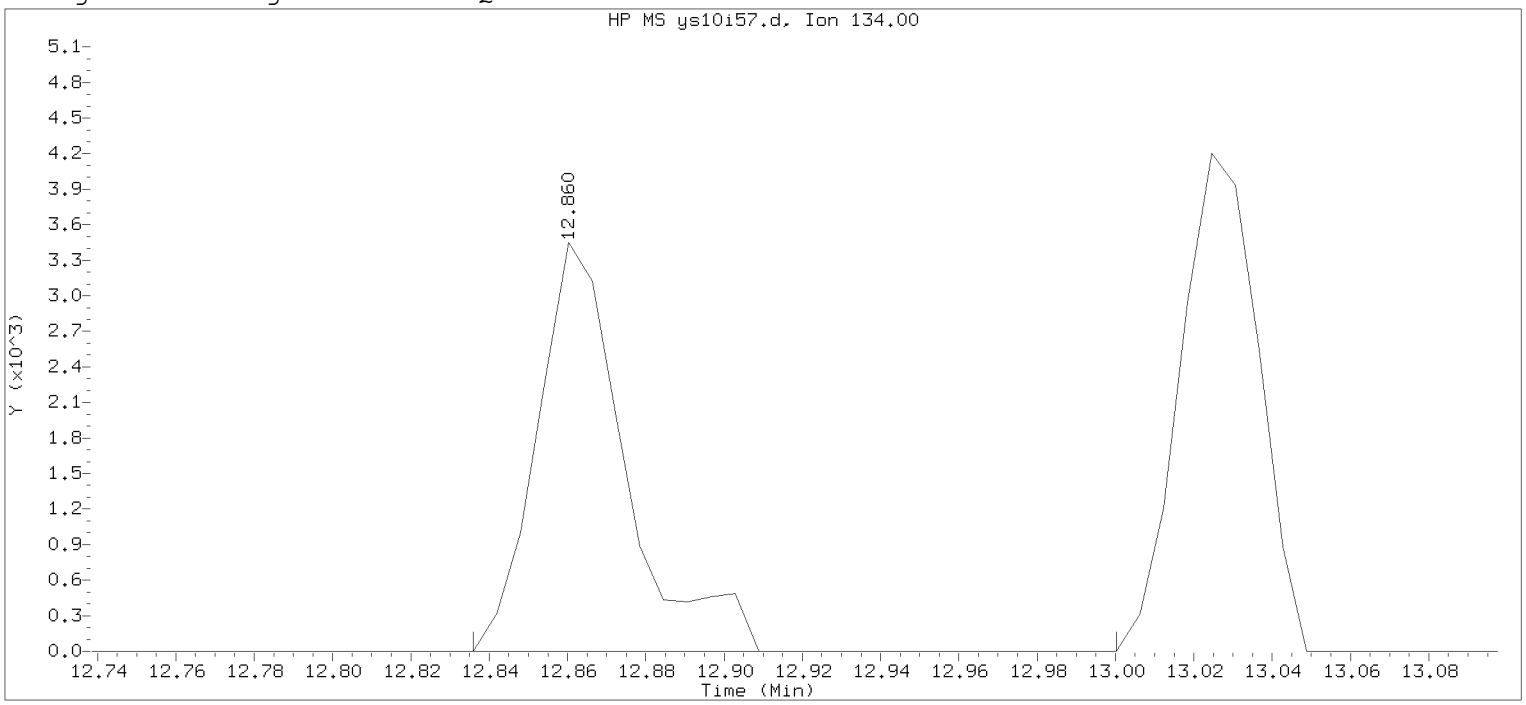
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area : 5419
On-column Amount (ng) : 0.9043
Integration start scan : 1849 Integration stop scan: 1876
Y at integration start : 0 Y at integration end: 0

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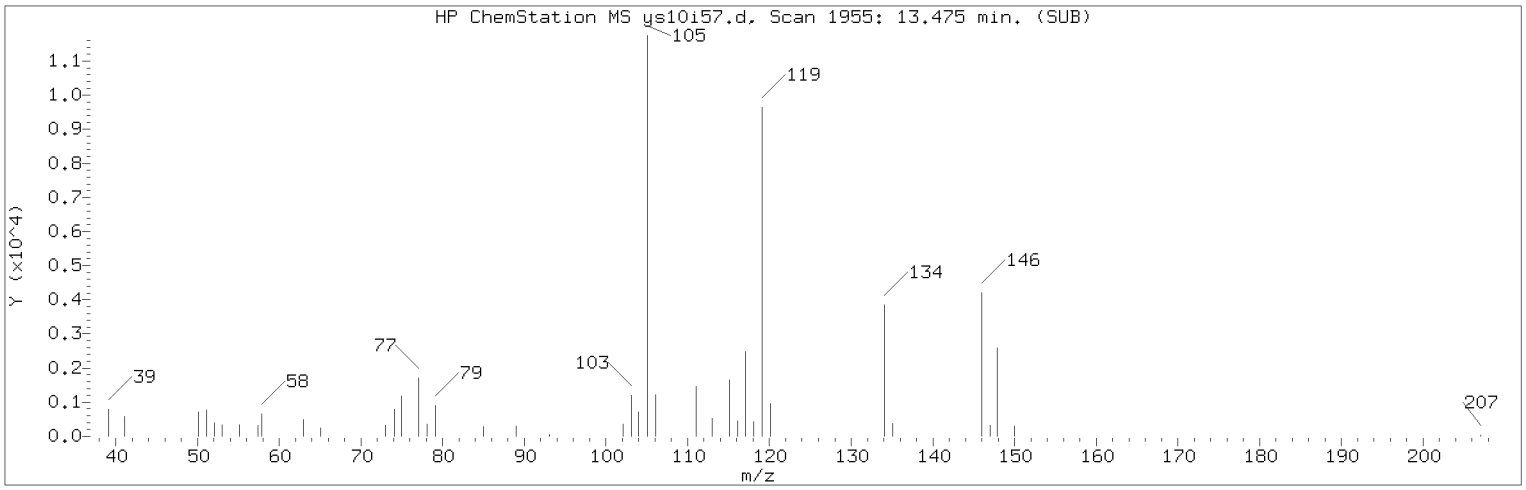
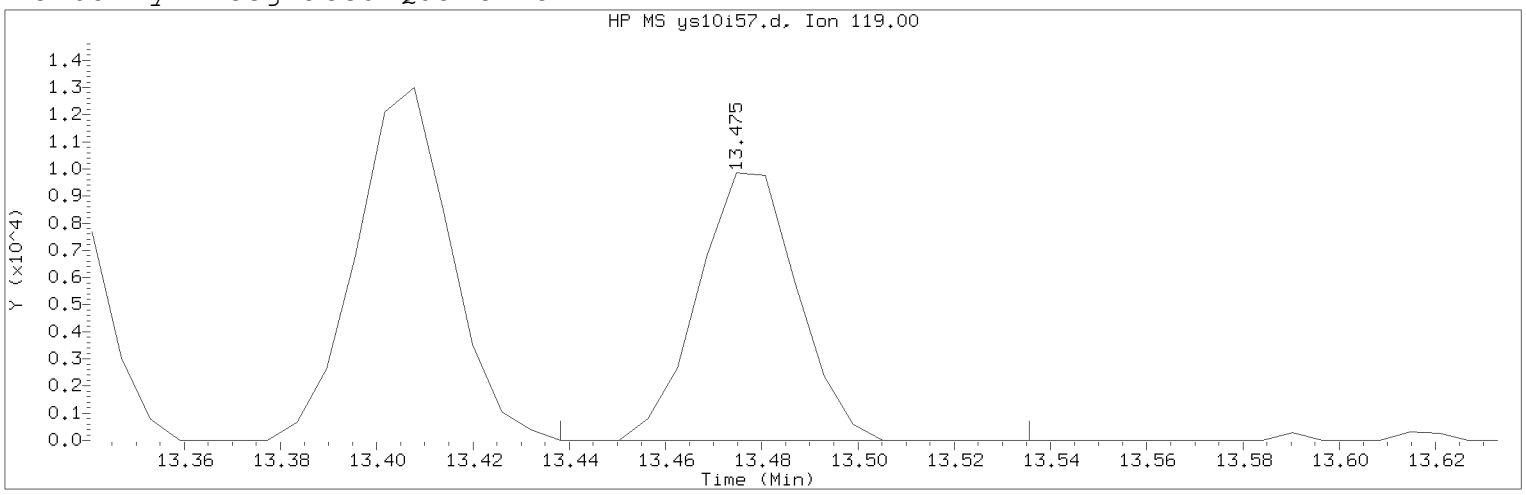
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

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Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 13:44 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

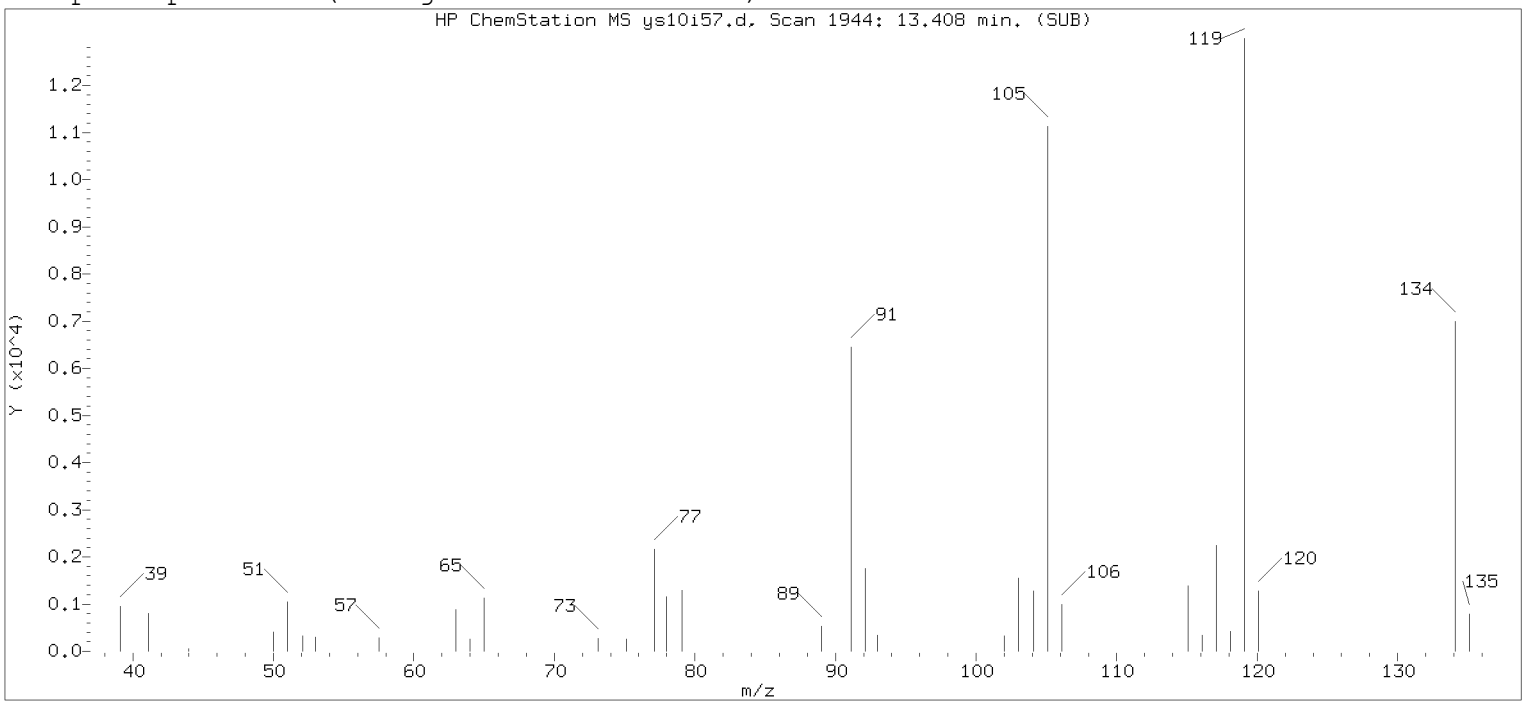
Compound Number : 140
Compound Name : 1,2-Diethylbenzene
Scan Number : 1955
Retention Time (minutes): 13.475
Quant Ion : 119.00
Area (flag) : 14128M
On-Column Amount (ng) : 0.8816
Integration start scan : 1948 Integration stop scan: 1964
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

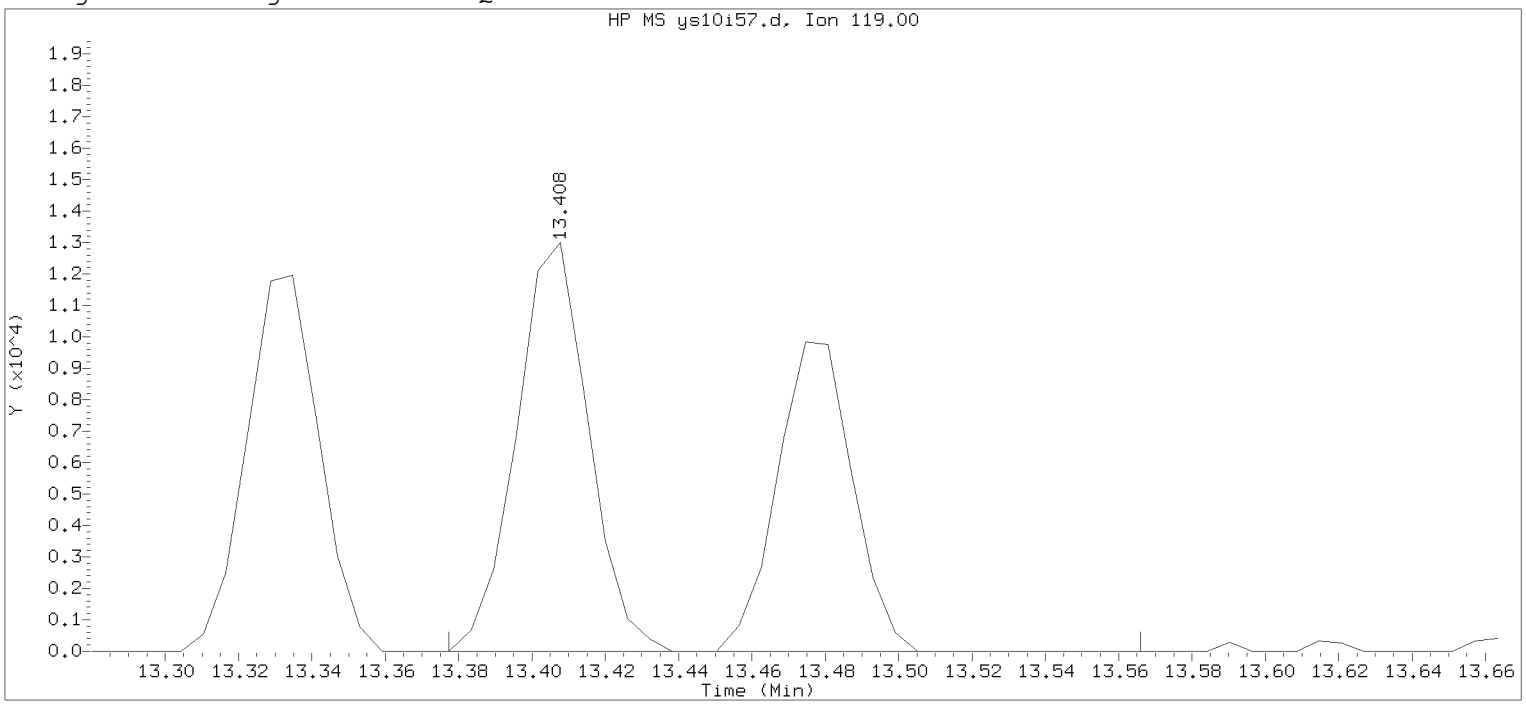
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/24/2019 at 13:45.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:58.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10i57.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 15:02 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:20 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 140
Compound Name : 1,2-Diethylbenzene
Scan Number : 1944
Retention Time (minutes): 13.408
Quant Ion : 119.00
Area : 31880
On-column Amount (ng) : 1.1592
Integration start scan : 1938 Integration stop scan: 1969
Y at integration start : 0 Y at integration end: 0

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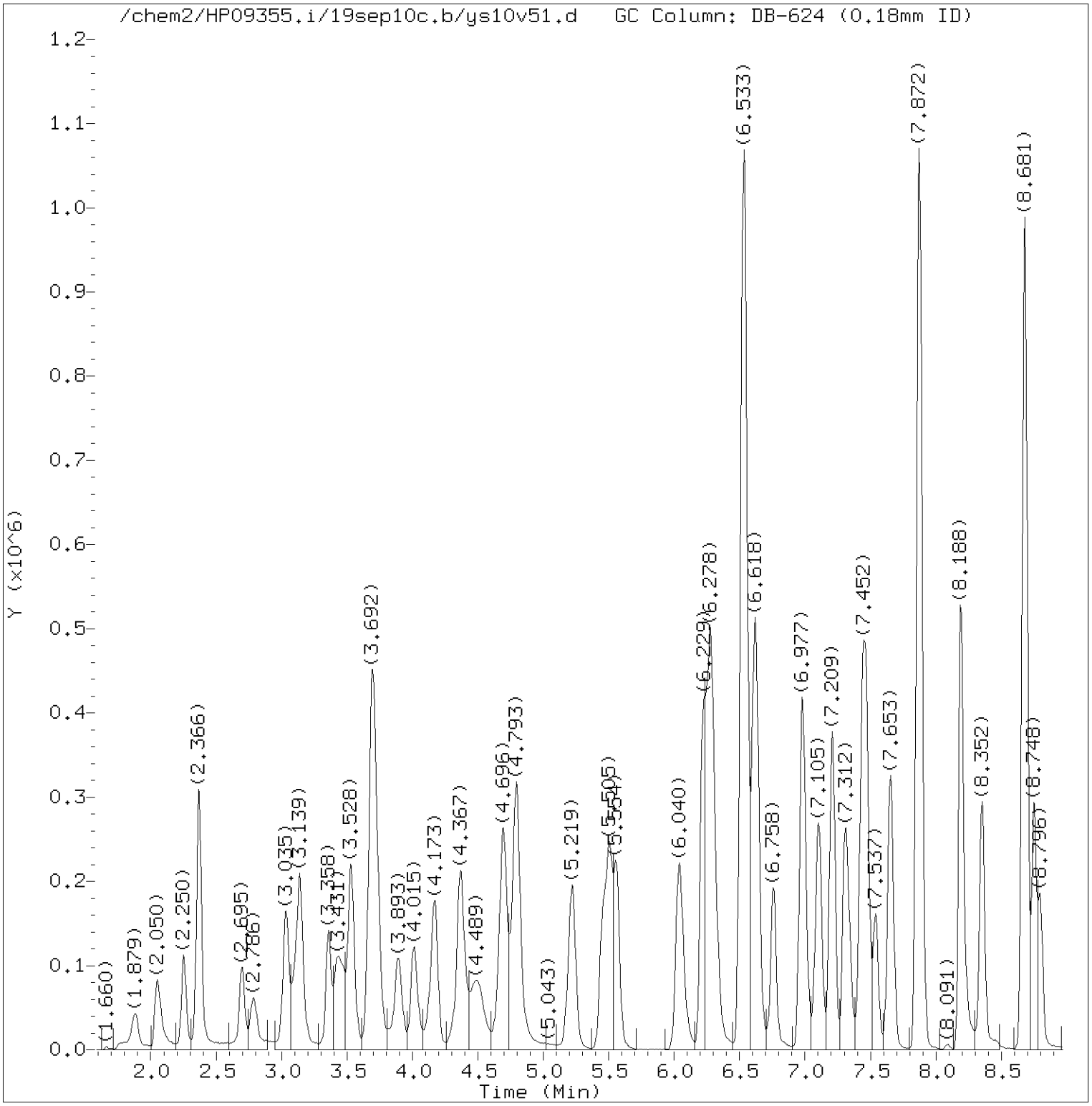
Target 3.5 esignature user: KAS02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 14:36 kek01027

Sample Name: YLGICVC Lab Sample ID: YLGICVC

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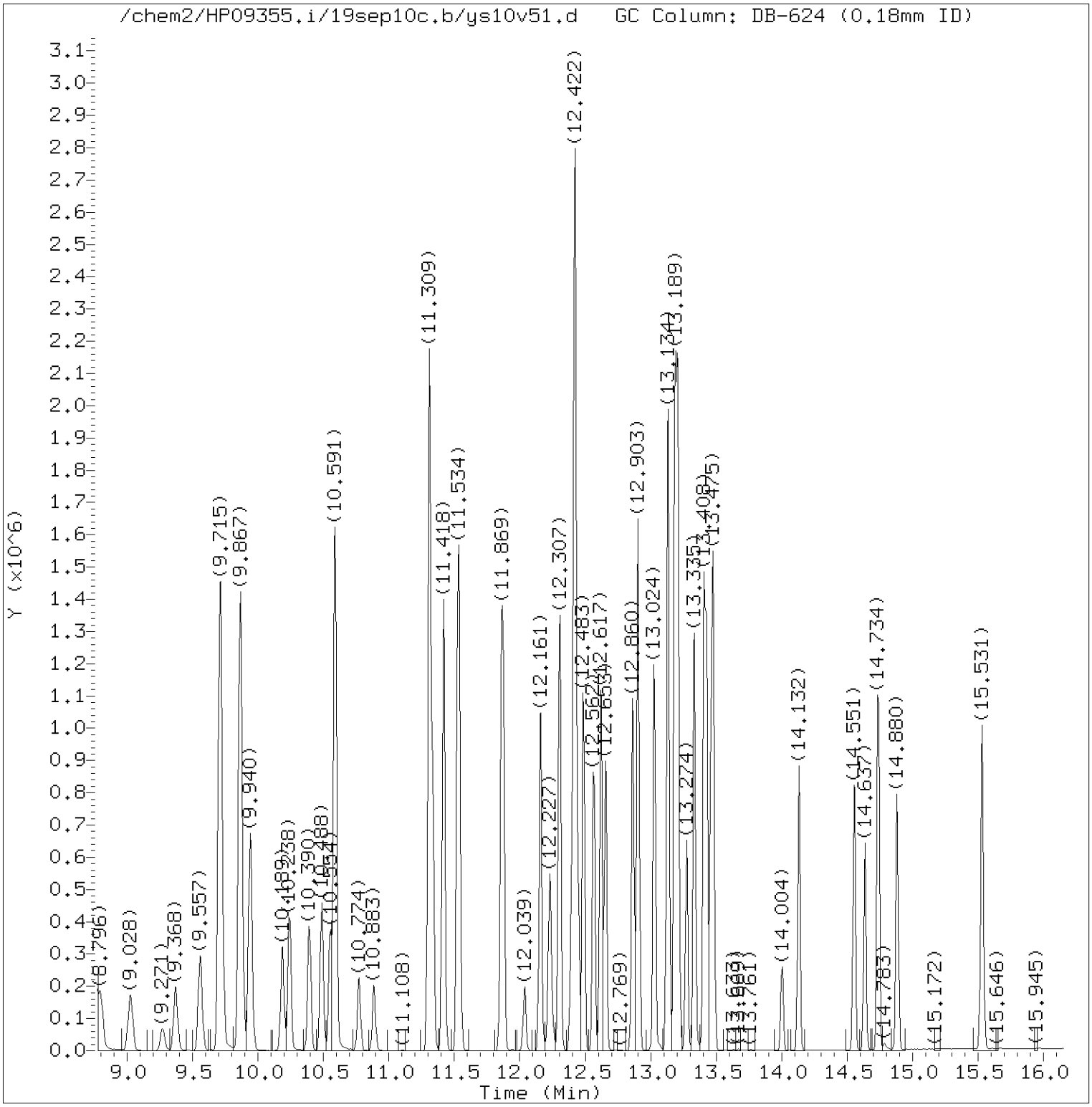
on 09/25/2019 at 07:38.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
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Date, time and analyst ID of latest file update: 24-Sep-2019 14:36 kek01027

Sample Name: YLGICVC Lab Sample ID: YLGICVC

Digitally signed by Kevin A. Sposito
on 09/25/2019 at 07:38.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 14:36 kek01027

Sample Name: YLGICVC Lab Sample ID: YLGICVC

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.050	85	178125	16.657
4) Chloromethane	(2)	2.250	50	171396	18.647
5) 1,3-Butadiene	(2)	2.366	39	134447	18.799
6) Vinyl Chloride	(2)	2.372	62	174495	19.338
8) Bromomethane	(2)	2.701	94	96705	14.445
9) Chloroethane	(2)	2.786	64	86862	16.587
10) Dichlorofluoromethane	(2)	3.029	67	209607	18.998
12) Trichlorofluoromethane	(2)	3.102	101	198877	17.277
11) n-Pentane	(2)	3.139	43	197257	17.673
14) Ethyl ether	(2)	3.358	59	120346	20.077
15) Freon 123a	(2)	3.431	67	144203	20.748
16) Acrolein	(1)	3.528	56	367294	142.359
17) 1,1-Dichloroethene	(2)	3.680	96	109537	21.645
18) Acetone	(1)	3.698	58	232755M	191.718
19) Freon 113	(2)	3.717	101	114143	19.813
21) 2-Propanol	(1)	3.875	45	104971	143.611
22) Methyl Iodide	(2)	3.893	142	189211	19.040
23) Carbon Disulfide	(2)	4.015	76	330188	18.051
27) Methyl Acetate	(2)	4.142	43	173170	19.575
25) Allyl Chloride	(2)	4.173	41	162072	18.470
29)*t-Butyl alcohol-d10	(1)	4.361	65	339709M	250.000
28) Methylene Chloride	(2)	4.374	84	130254	21.555
30) t-Butyl alcohol	(1)	4.495	59	297967	194.919
31) Acrylonitrile	(2)	4.690	53	456442	98.514
33) Methyl Tertiary Butyl Ether	(2)	4.781	73	394972	19.587
32) trans-1,2-Dichloroethene	(2)	4.799	96	124259	21.198
34) n-Hexane	(2)	5.219	57	202809	20.406
36) 1,1-Dichloroethane	(2)	5.450	63	223427	20.961
38) di-Isopropyl ether	(2)	5.505	45	406936	19.986
39) 2-Chloro-1,3-butadiene	(2)	5.566	53	197070	20.398
40) Ethyl t-butyl ether	(2)	6.040	59	392563	19.671
43) 1,2-Dichloroethene (Total)	(2)		96	271370	43.275
44) 2-Butanone	(2)	6.229	43	1116129	161.421
42) cis-1,2-Dichloroethene	(2)	6.278	96	147111	22.077
45) 2,2-Dichloropropane	(2)	6.296	77	175839	21.489
47) Propionitrile	(1)	6.308	54	273445	155.527
48) Methacrylonitrile	(2)	6.533	67	751916	152.655
49) Bromochloromethane	(2)	6.612	128	69024	19.853

M = Compound was manually integrated.
* = Compound is an internal standard.

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Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 14:36 kek01027

Sample Name: YLGICVC Lab Sample ID: YLGICVC

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.625	71	194031	101.731
51) Chloroform	(2)	6.758	83	218740	21.193
52)$Dibromofluoromethane	(2)	6.977	113	270982	49.531
53) 1,1,1-Trichloroethane	(2)	6.996	97	189289	21.163
54) Cyclohexane	(2)	7.105	56	225436	19.333
55) 1,1-Dichloropropene	(2)	7.209	75	182734	21.165
56) Carbon Tetrachloride	(2)	7.215	117	159024	20.852
58) Isobutyl Alcohol	(1)	7.312	41	257894	488.480
57)$1,2-Dichloroethane-d4	(2)	7.440	102	71246	49.813
60) Benzene	(2)	7.470	78	532811	21.108
61) 1,2-Dichloroethane	(2)	7.537	62	190563	21.286
65) t-Amyl methyl ether	(2)	7.653	73	396612	19.855
66)*Fluorobenzene	(2)	7.872	96	1165932	50.000
67) n-Heptane	(2)	7.884	43	202764	19.303
69) n-Butanol	(1)	8.188	56	496969	1003.591
71) Trichloroethene	(2)	8.352	95	137513	21.059
72) Methylcyclohexane	(2)	8.675	83	236903	19.124
73) 1,2-Dichloropropane	(2)	8.681	63	139205	21.635
76) Methyl Methacrylate	(2)	8.748	69	149519	19.799
75) 1,4-Dioxane	(1)	8.766	88	58926M	558.017
74) Dibromomethane	(2)	8.796	93	89806	21.157
78) Bromodichloromethane	(2)	9.028	83	157350	21.245
79) 2-Nitropropane	(2)	9.271	41	54214	17.178
80) 2-Chloroethyl Vinyl Ether	(2)	9.368	63	111525	20.510
81) cis-1,3-Dichloropropene	(2)	9.557	75	211724	21.189
82) 4-Methyl-2-pentanone	(2)	9.715	43	1241772	95.297
83)$Toluene-d8	(3)	9.867	98	1184150	50.322
88) Toluene	(3)	9.940	92	345677	21.461
90) 1,3-Dichloropropene (total)	(3)		100	406209	41.869
89) trans-1,3-Dichloropropene	(3)	10.189	75	194485	20.680
91) Ethyl Methacrylate	(3)	10.238	69	237062	19.890
92) 1,1,2-Trichloroethane	(3)	10.390	97	136513	21.979
93) Tetrachloroethene	(3)	10.488	166	143069	20.989
94) 1,3-Dichloropropane	(3)	10.554	76	228615	21.196
96) 2-Hexanone	(3)	10.591	43	1075695	101.118
97) Dibromochloromethane	(3)	10.774	129	128680	21.295
99) 1,2-Dibromoethane	(3)	10.883	107	144422	21.360
100)*Chlorobenzene-d5	(3)	11.309	117	869710	50.000

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 09/25/2019 at 07:38.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 14:36 kek01027

Sample Name: YLGICVC Lab Sample ID: YLGICVC

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) 1-Chlorohexane	(3)	11.309	91	185469	20.488
102) Chlorobenzene	(3)	11.333	112	389301	21.482
104) Ethylbenzene	(3)	11.418	91	664641	21.547
103) 1,1,1,2-Tetrachloroethane	(3)	11.418	131	122137	21.108
106) m+p-Xylene	(3)	11.534	106	528842	43.445
108) Xylene (Total)	(3)		106	785859	65.123
107) o-Xylene	(3)	11.862	106	257017	21.678
109) Styrene	(3)	11.875	104	431106	22.008
110) Bromoform	(3)	12.039	173	86756	19.934
111) Isopropylbenzene	(3)	12.161	105	673137	21.971
112) Cyclohexanone	(1)	12.227	55	246358	439.352
114)$4-Bromofluorobenzene	(3)	12.307	95	451835	50.256
116) 1,1,2,2-Tetrachloroethane	(4)	12.392	83	231301	21.022
118) trans-1,4-Dichloro-2-butene	(4)	12.416	53	399138	104.952
115) Bromobenzene	(4)	12.422	156	164279	21.485
117) 1,2,3-Trichloropropane	(4)	12.446	110	73690	21.086
119) n-Propylbenzene	(4)	12.483	91	797792	21.999
120) 2-Chlorotoluene	(4)	12.562	126	160657	21.507
122) 1,3,5-Trimethylbenzene	(4)	12.617	105	579346	21.595
121) 4-Chlorotoluene	(4)	12.653	126	167125	21.403
124) tert-Butylbenzene	(4)	12.860	134	120074M	21.373
125) Pentachloroethane	(4)	12.897	167	90552	21.223
126) 1,2,4-Trimethylbenzene	(4)	12.903	105	600436	21.309
127) sec-Butylbenzene	(4)	13.024	105	744545	21.913
129) 1,3-Dichlorobenzene	(4)	13.128	146	322723	21.548
130) p-Isopropyltoluene	(4)	13.134	119	643779	22.051
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	465481	50.000
133) 1,4-Dichlorobenzene	(4)	13.201	146	332315	21.725
134) 1,2,3-Trimethylbenzene	(4)	13.207	105	627629	21.203
135) Benzyl Chloride	(4)	13.274	91	416380	19.505
136) 1,3-Diethylbenzene	(4)	13.335	119	394509	20.692
141) Diethylbenzene (total)	(4)		100	1141728	61.936
137) 1,4-Diethylbenzene	(4)	13.408	119	418647	20.761
139) n-Butylbenzene	(4)	13.426	92	330902	21.438
138) 1,2-Dichlorobenzene	(4)	13.462	146	314712	21.487
140) 1,2-Diethylbenzene	(4)	13.475	119	328572M	20.483
142) 1,2-Dibromo-3-chloropropane	(4)	14.004	75	57362	20.209
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	238123	21.148

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on 09/25/2019 at 07:38.
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Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
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Date, time and analyst ID of latest file update: 24-Sep-2019 14:36 kek01027

Sample Name: YLGICVC Lab Sample ID: YLGICVC

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) 1,2,4-Trichlorobenzene	(4)	14.557	180	228434	21.173
147) Hexachlorobutadiene	(4)	14.637	225	101580	21.128
148) Naphthalene	(4)	14.740	128	804894	21.042
149) 1,2,3-Trichlorobenzene	(4)	14.880	180	219567	20.943
150) 2-Methylnaphthalene	(4)	15.531	142	483280	19.112

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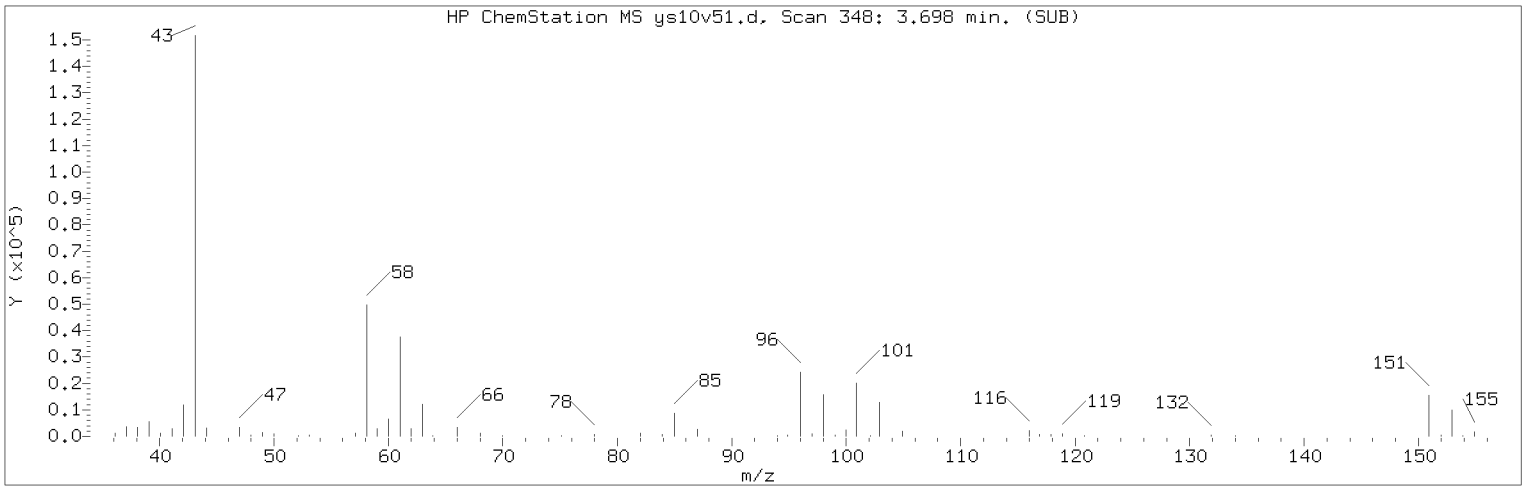
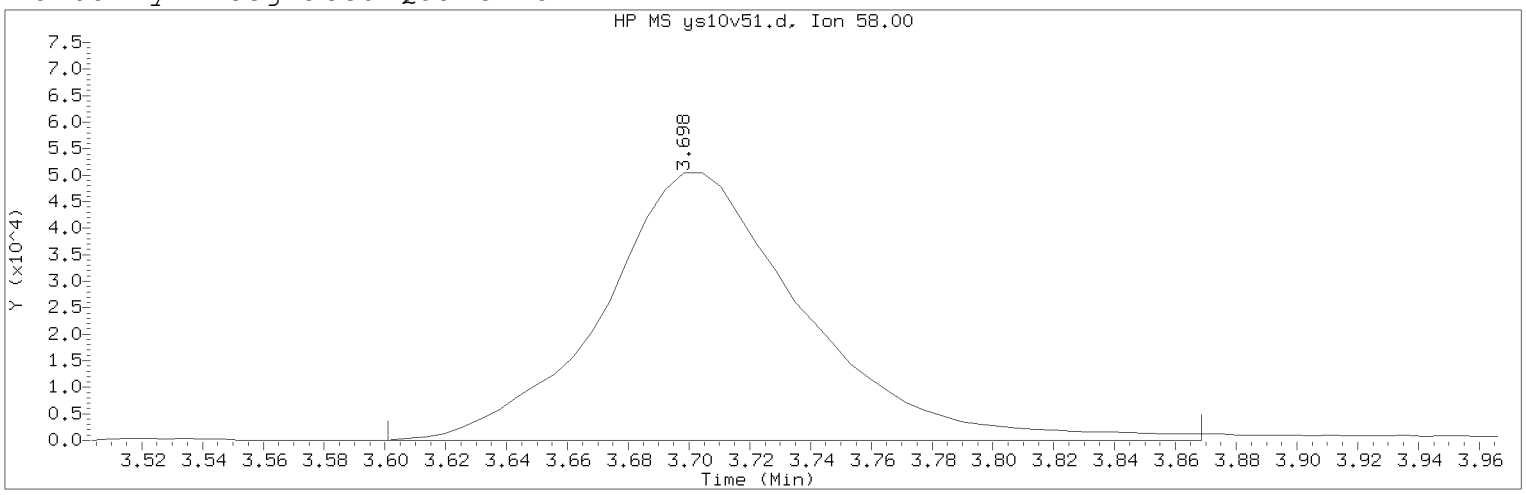
on 09/25/2019 at 07:38.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 14:36 kek01027

Sample Name: YLGICVC Lab Sample ID: YLGICVC

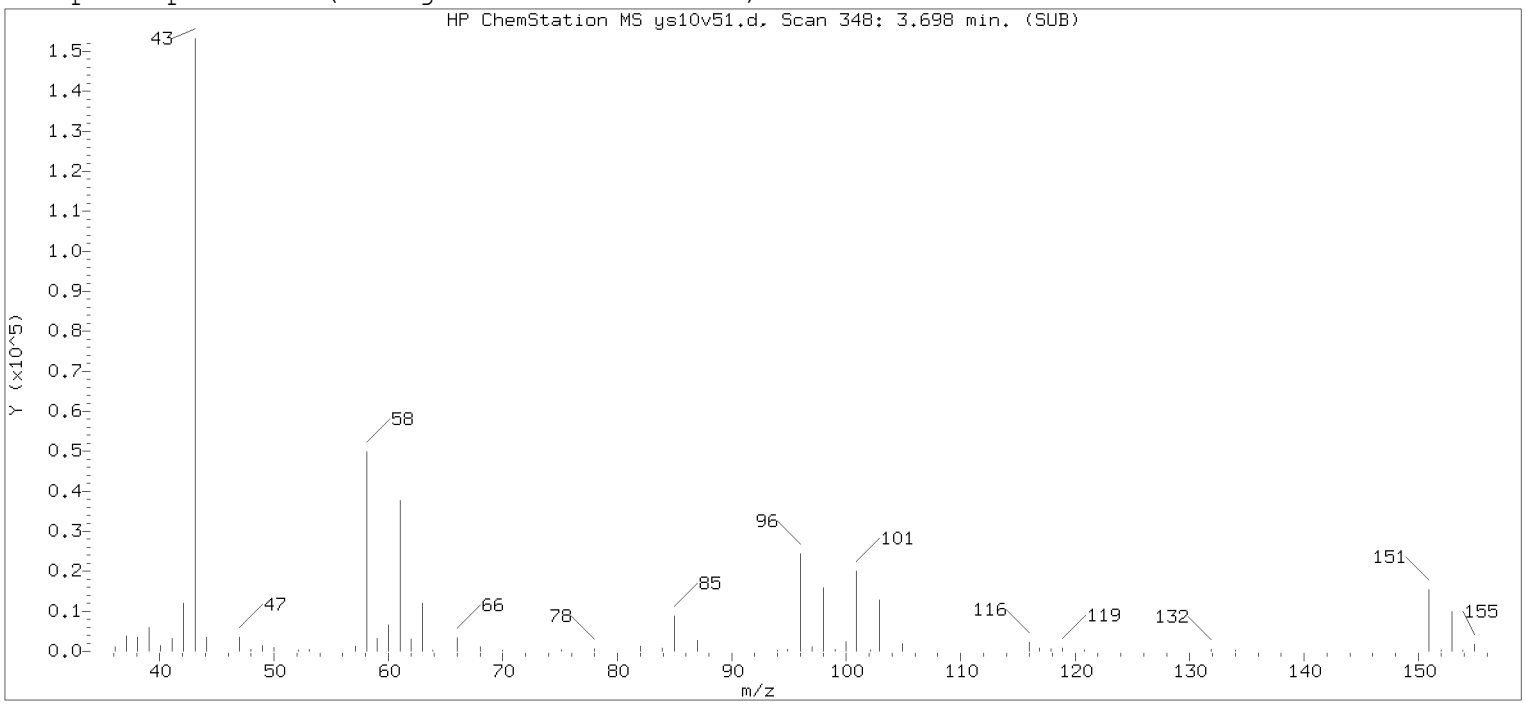
Compound Number : 18
Compound Name : Acetone
Scan Number : 348
Retention Time (minutes): 3.698
Quant Ion : 58.00
Area (flag) : 232755M
On-Column Amount (ng) : 191.7183
Integration start scan : 331 Integration stop scan: 375
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

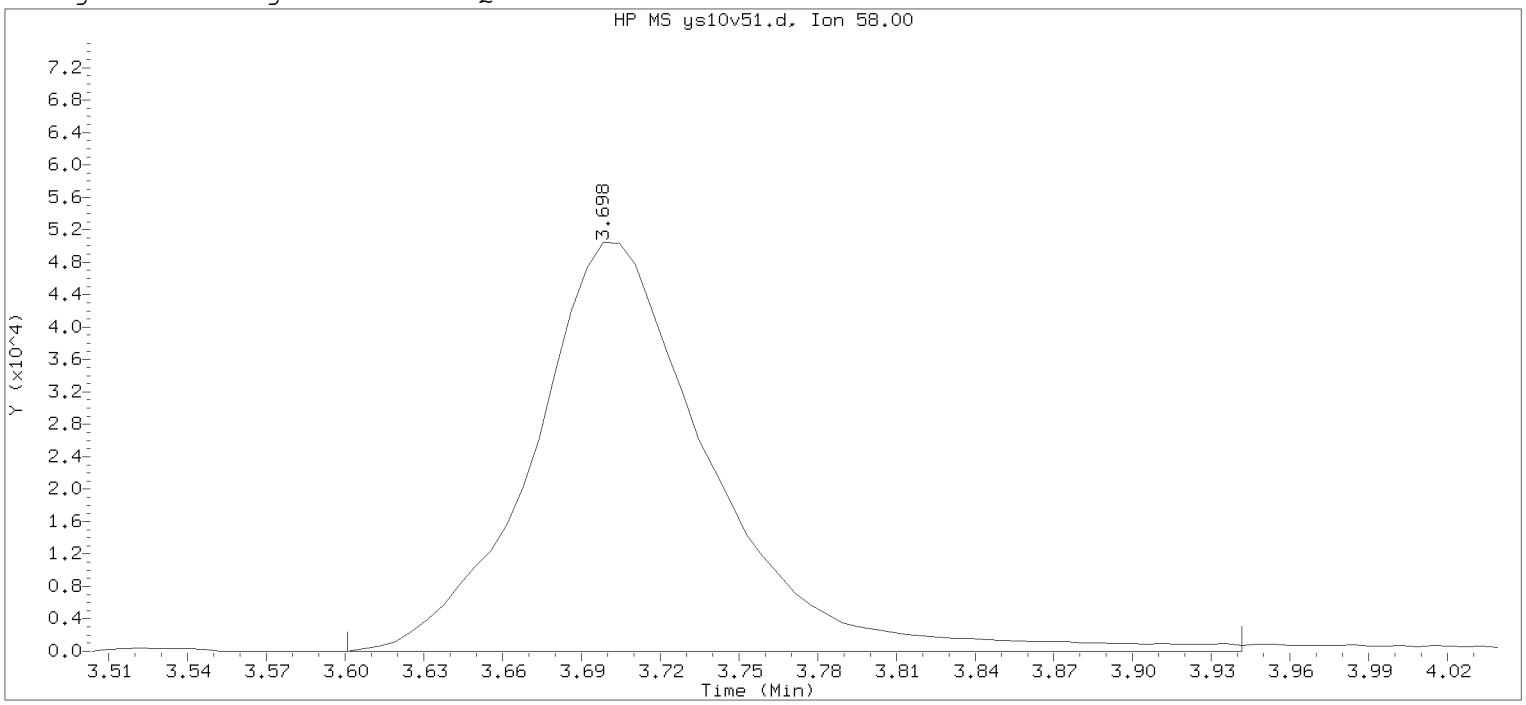
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/25/2019 at 07:38.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:59.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

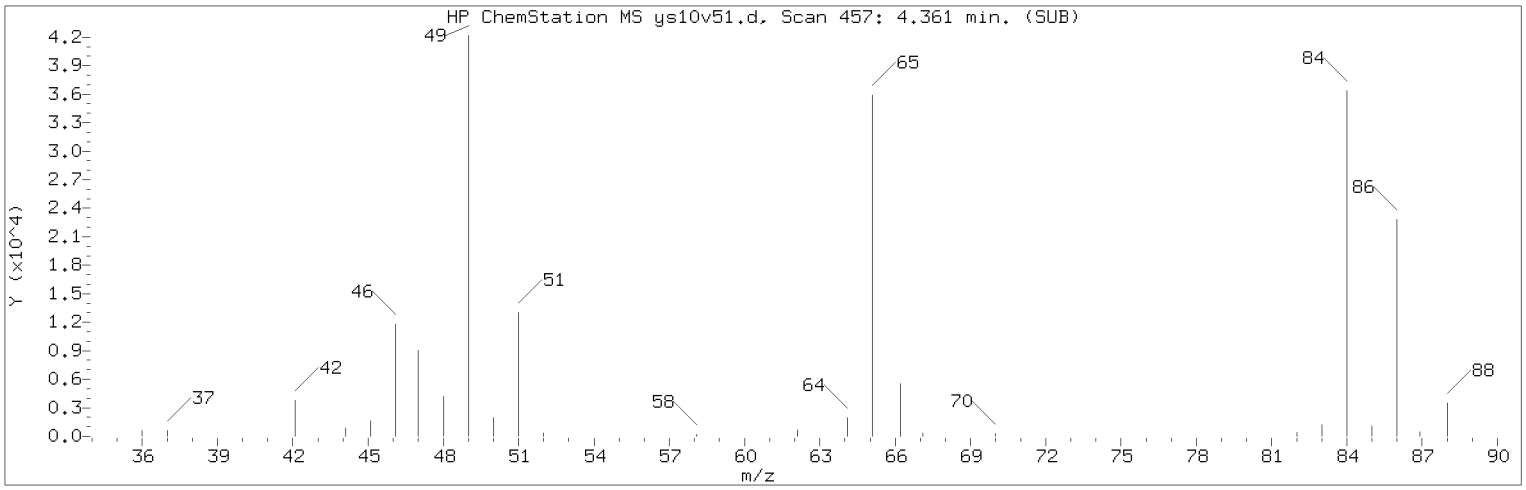
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:35 kas02648

Sample Name: YLGICVC Lab Sample ID: YLGICVC

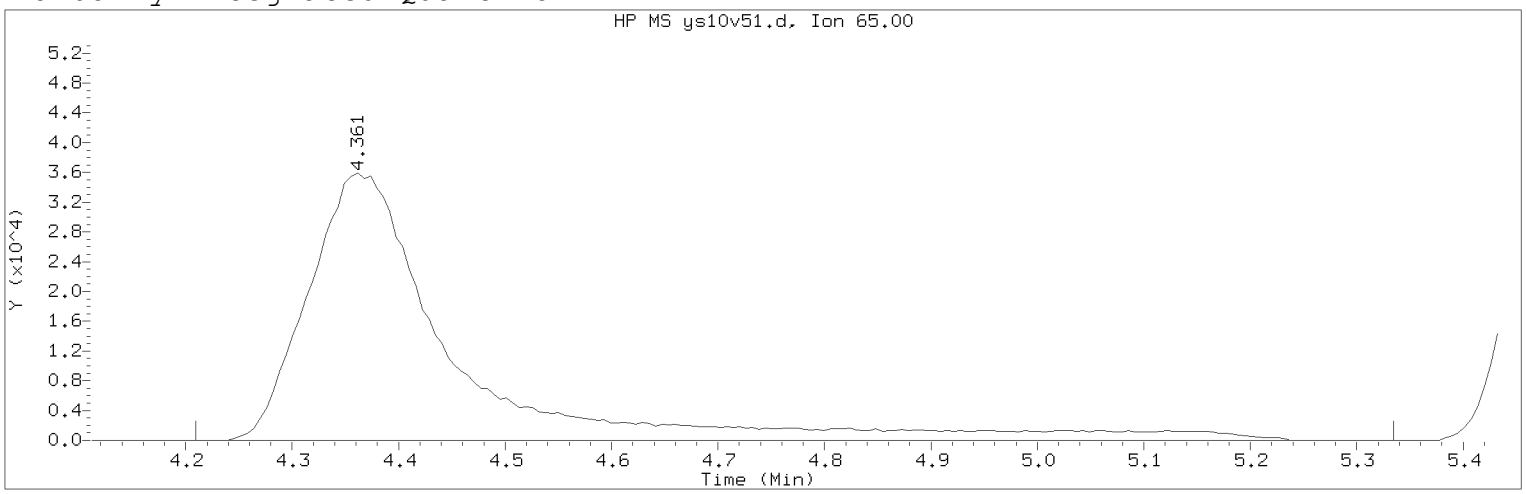
Compound Number : 18
Compound Name : Acetone
Scan Number : 348
Retention Time (minutes): 3.698
Quant Ion : 58.00
Area : 236719
On-column Amount (ng) : 214.0386
Integration start scan : 331 Integration stop scan: 387
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/25/2019 at 07:38.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 14:36 kek01027

Sample Name: YLGICVC Lab Sample ID: YLGICVC

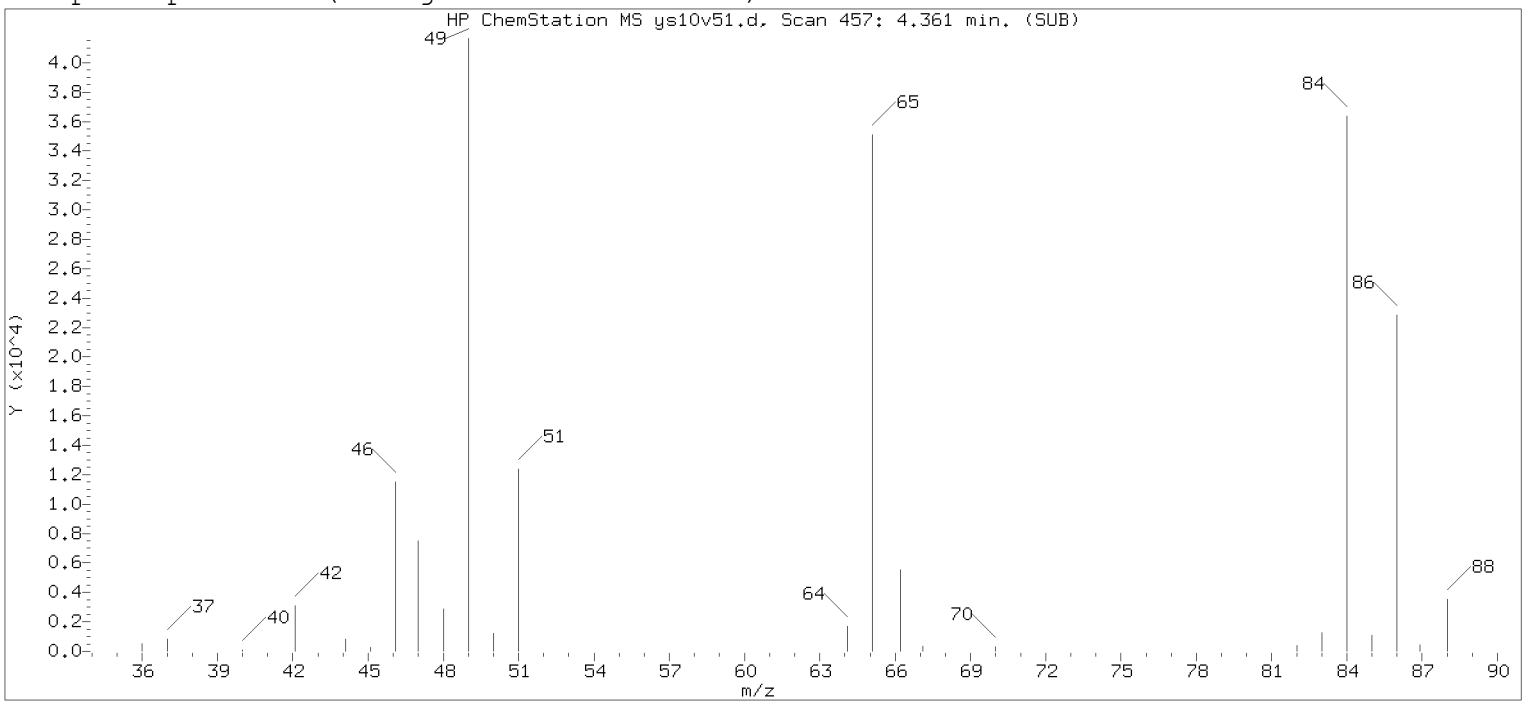
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 457
Retention Time (minutes): 4.361
Quant Ion : 65.00
Area (flag) : 339709M
On-Column Amount (ng) : 250.0000
Integration start scan : 431 Integration stop scan: 616
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

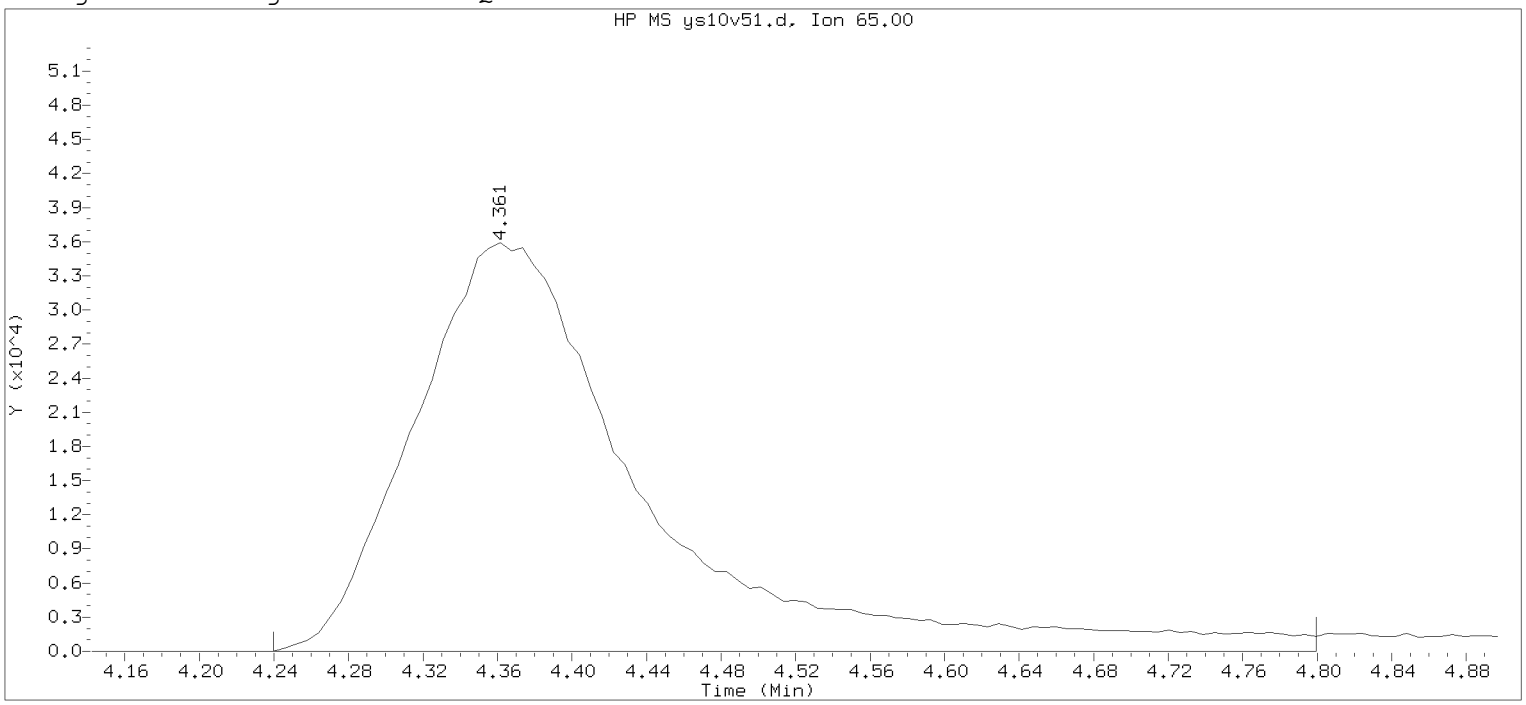
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/25/2019 at 07:38.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:59.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

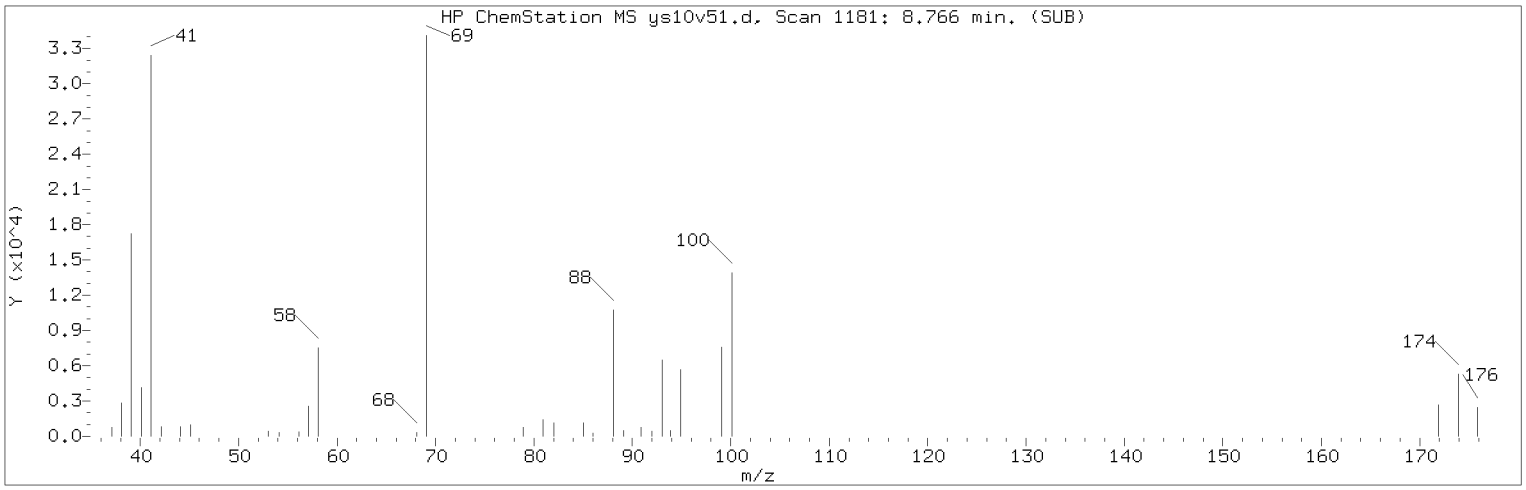
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:35 kas02648

Sample Name: YLGICVC Lab Sample ID: YLGICVC

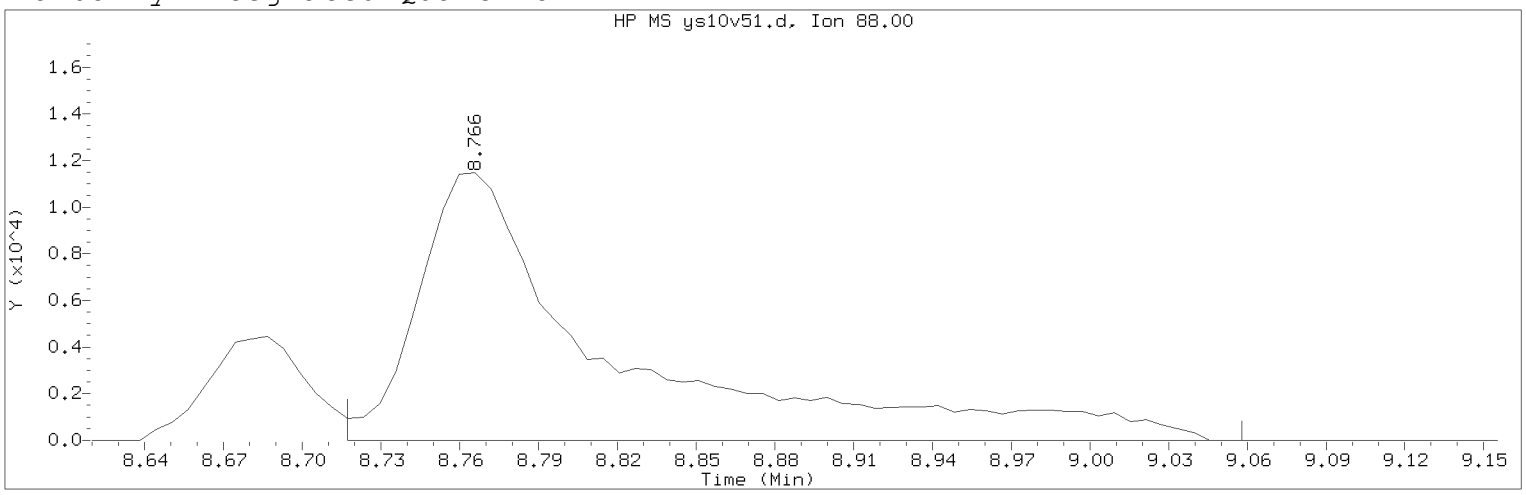
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 457
Retention Time (minutes): 4.361
Quant Ion : 65.00
Area : 309465
On-column Amount (ng) : 250.0000
Integration start scan : 436 Integration stop scan: 528
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/25/2019 at 07:38.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 14:36 kek01027

Sample Name: YLGICVC Lab Sample ID: YLGICVC

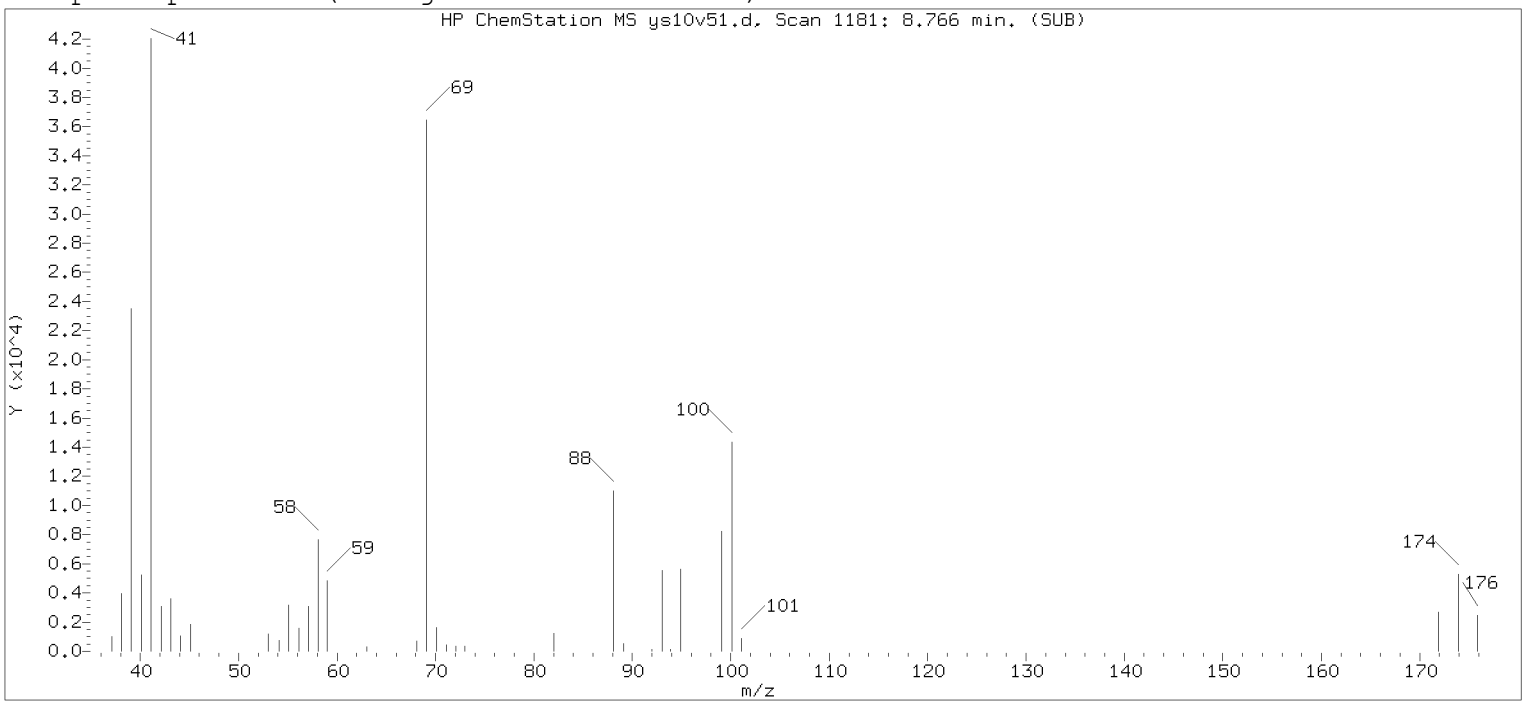
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1181
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area (flag) : 58926M
On-Column Amount (ng) : 558.0166
Integration start scan : 1172 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

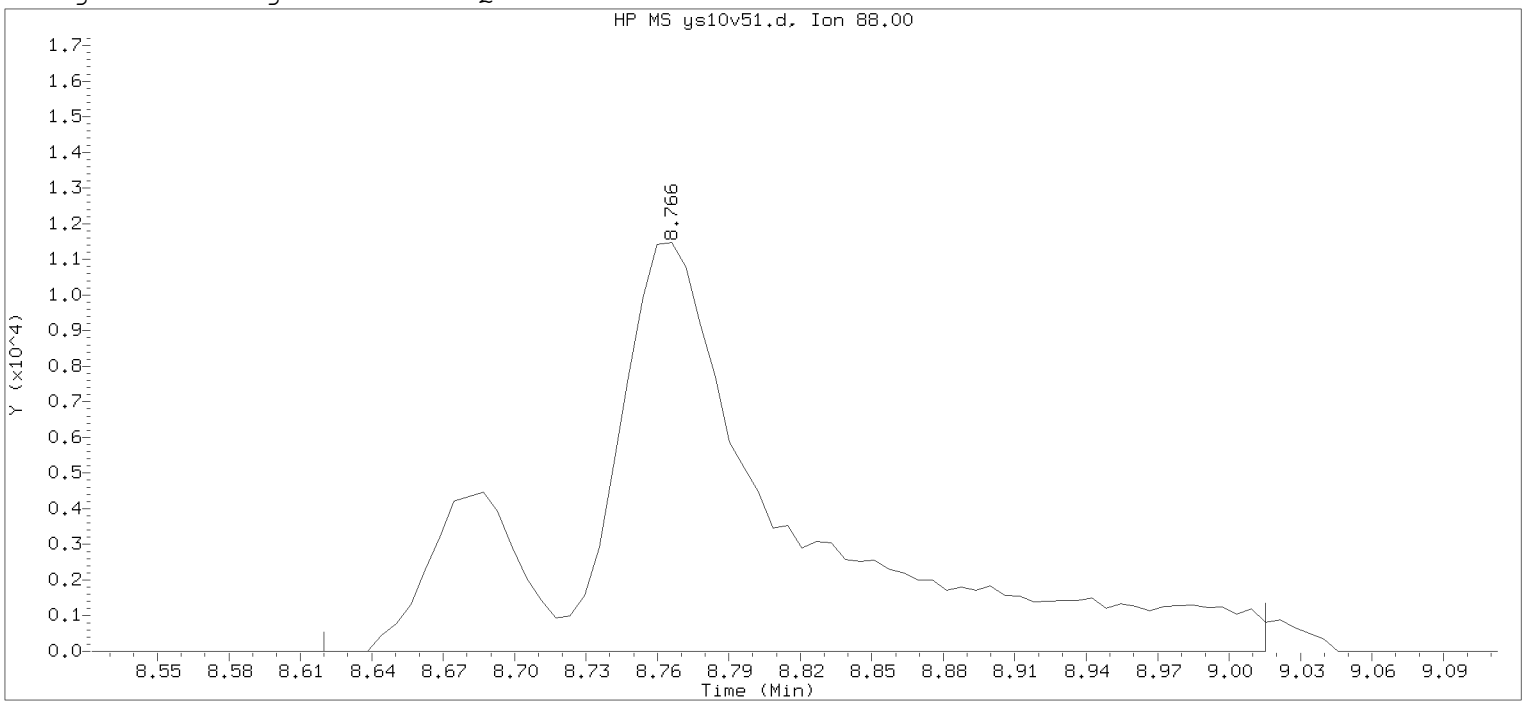
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/25/2019 at 07:38.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:59.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

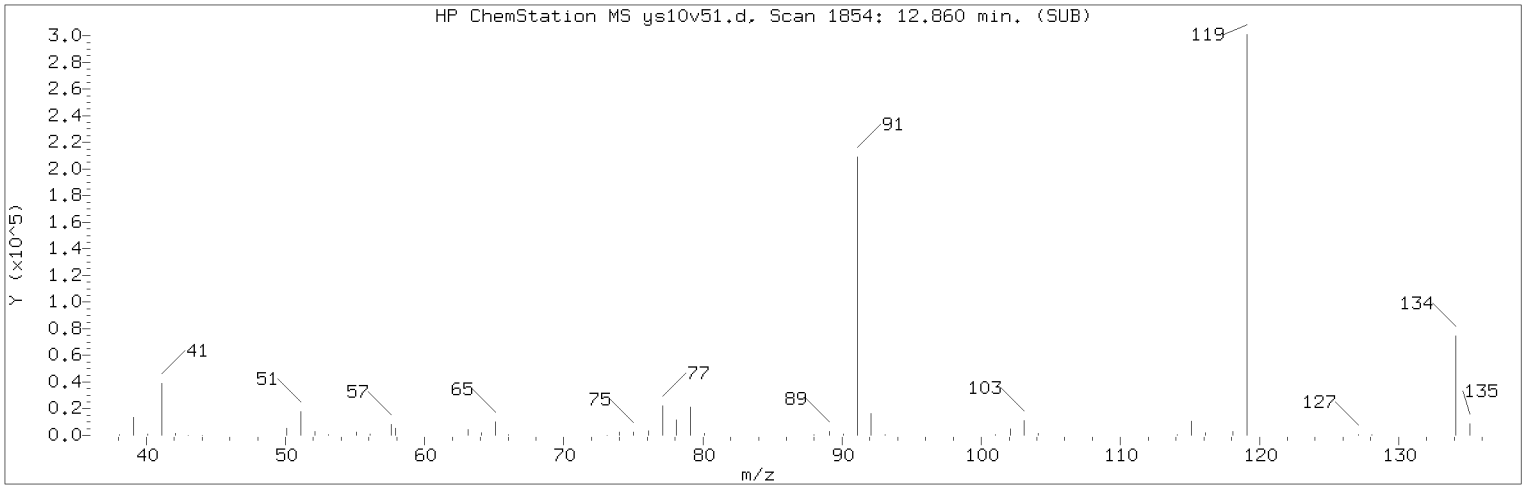
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:35 kas02648

Sample Name: YLGICVC Lab Sample ID: YLGICVC

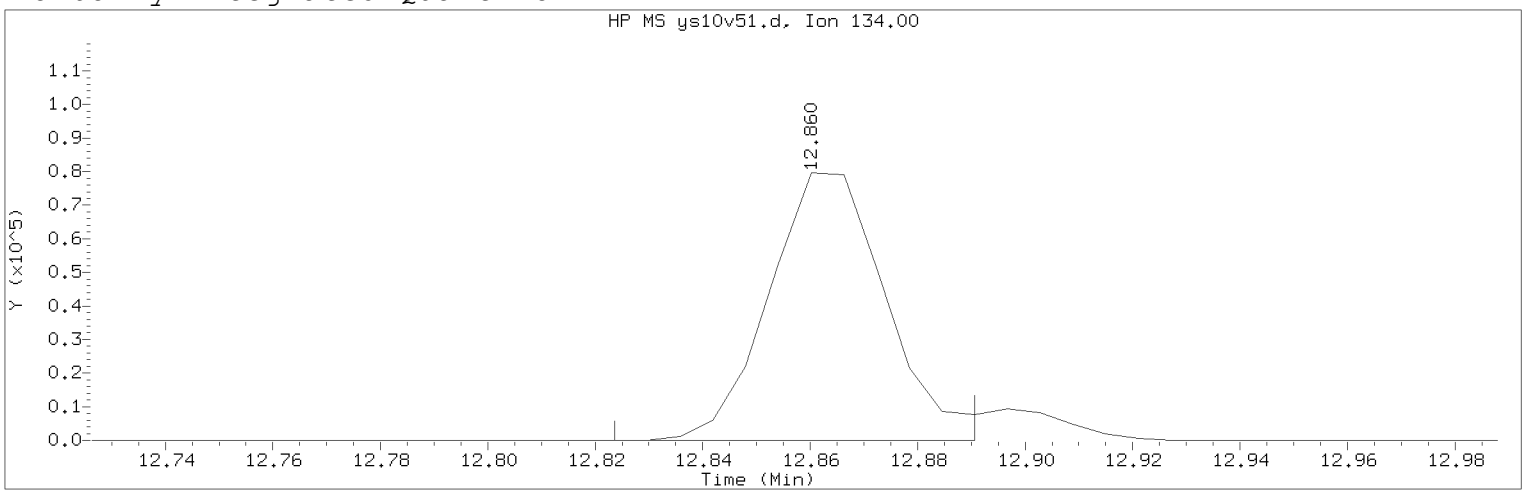
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1181		
Retention Time (minutes)	: 8.766		
Quant Ion	: 88.00		
Area	: 69351		
On-column Amount (ng)	: 720.9255		
Integration start scan	: 1156	Integration stop scan:	1221
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 09/25/2019 at 07:38.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 14:36 kek01027

Sample Name: YLGICVC Lab Sample ID: YLGICVC

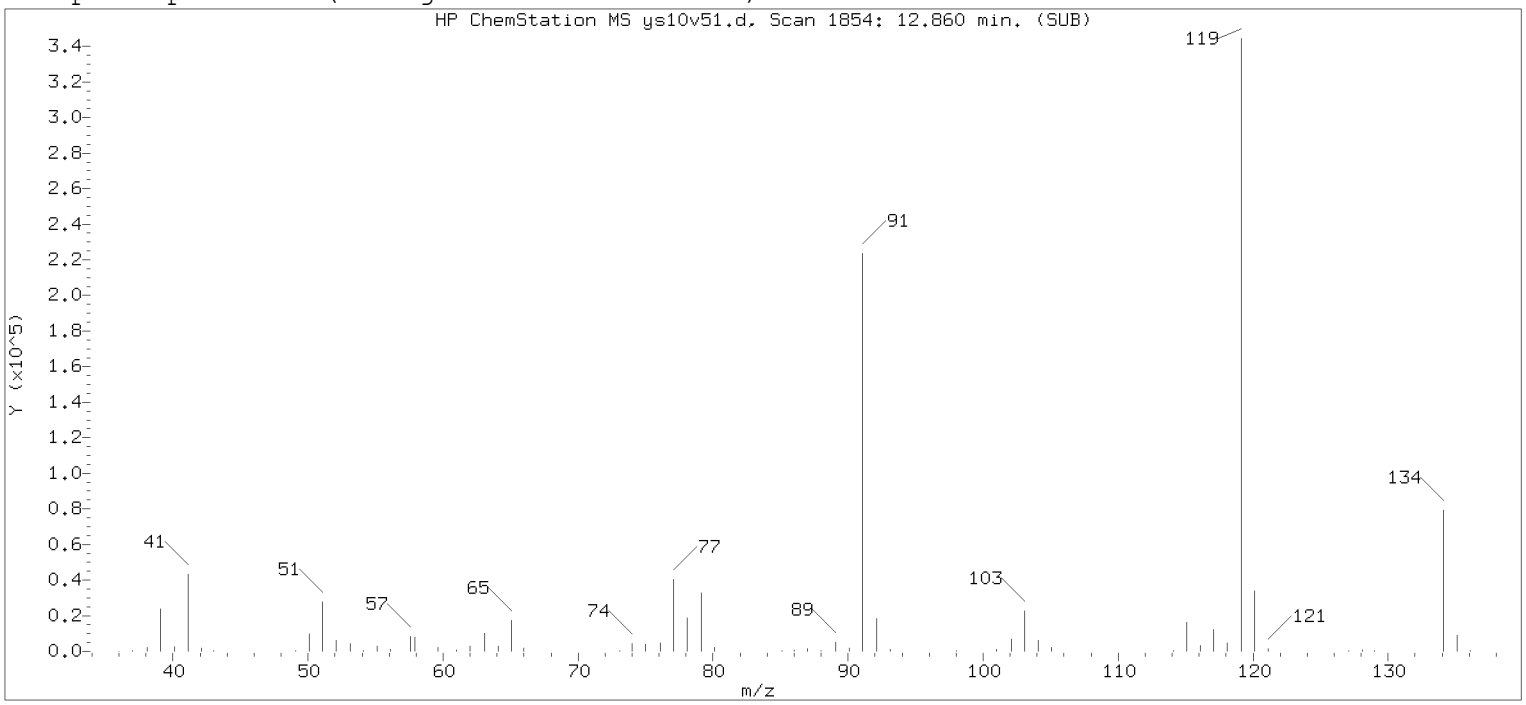
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area (flag) : 120074M
On-Column Amount (ng) : 21.3735
Integration start scan : 1847 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

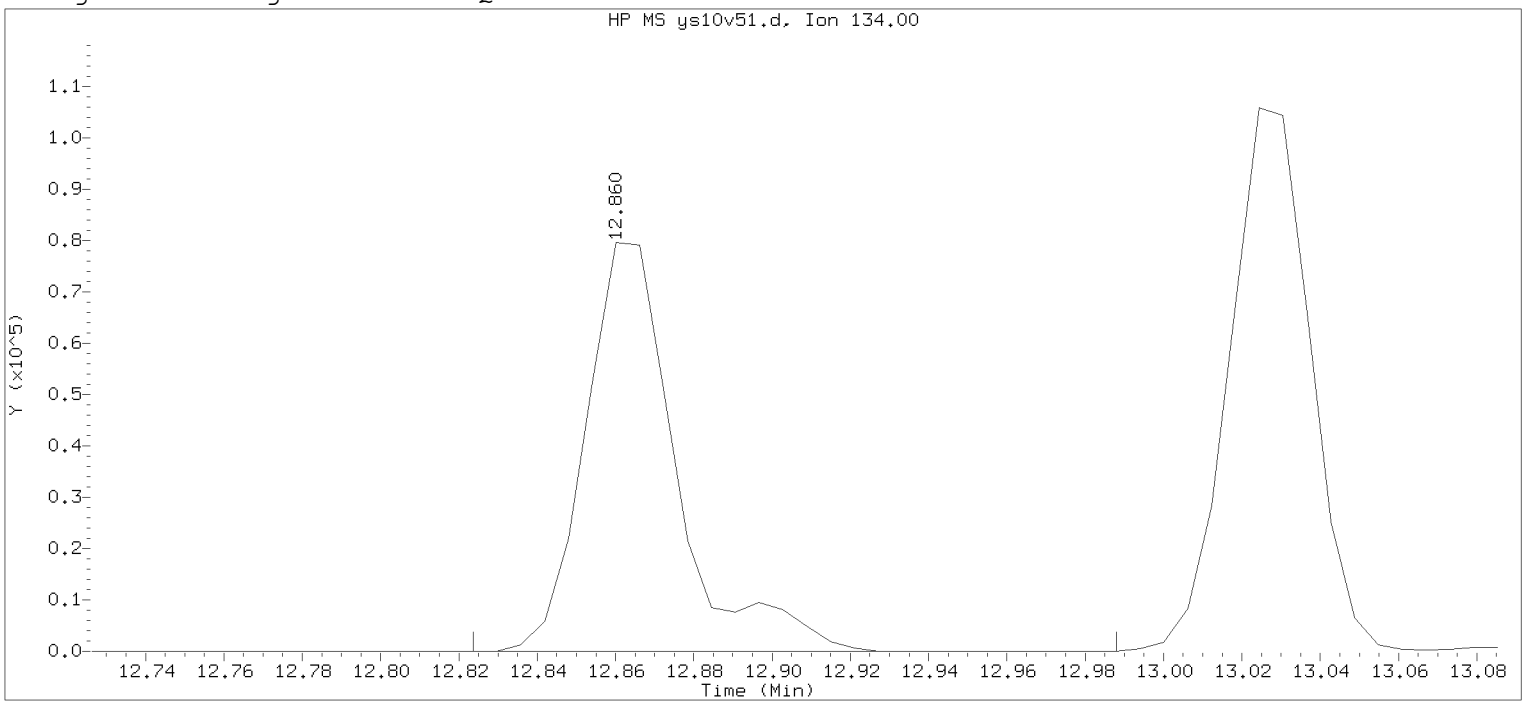
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/25/2019 at 07:38.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:59.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

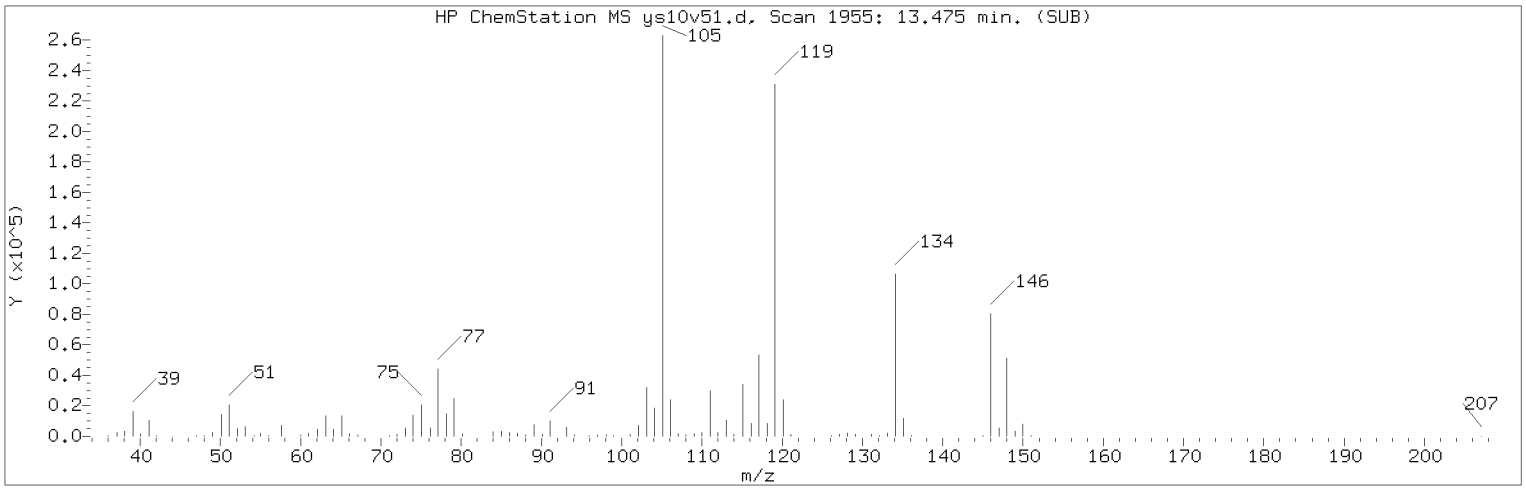
Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:35 kas02648

Sample Name: YLGICVC Lab Sample ID: YLGICVC

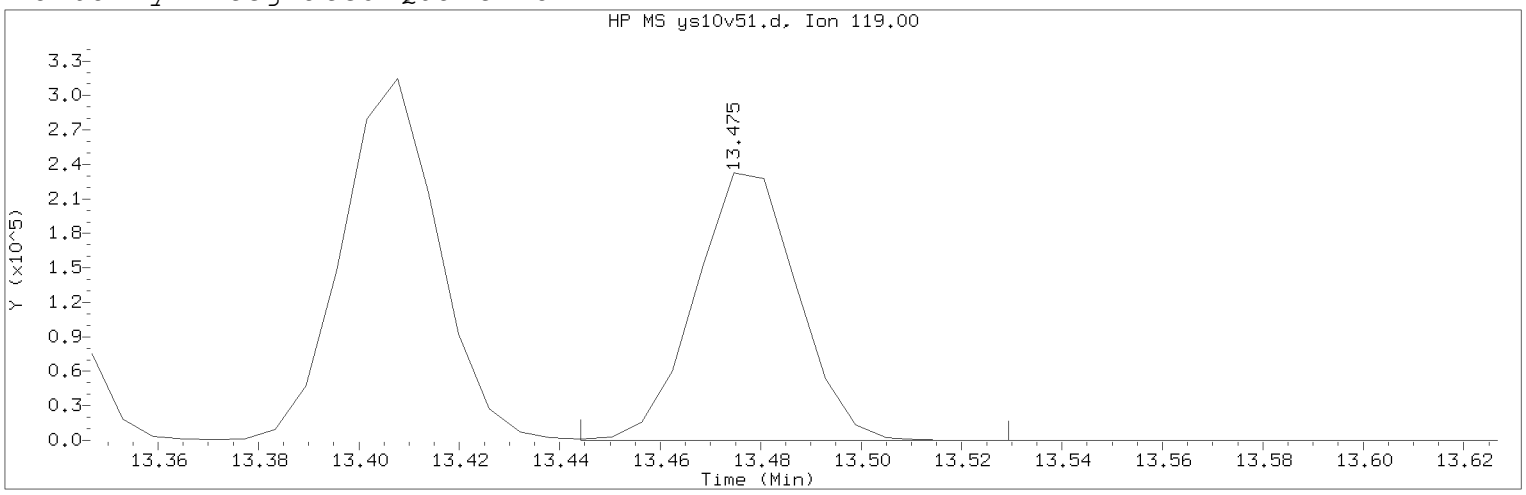
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area : 129219
On-column Amount (ng) : 23.0013
Integration start scan : 1847 Integration stop scan: 1874
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/25/2019 at 07:38.
Target 3.5 esignature user: KAS02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 24-SEP-2019 13:44
Date, time and analyst ID of latest file update: 24-Sep-2019 14:36 kek01027

Sample Name: YLGICVC Lab Sample ID: YLGICVC

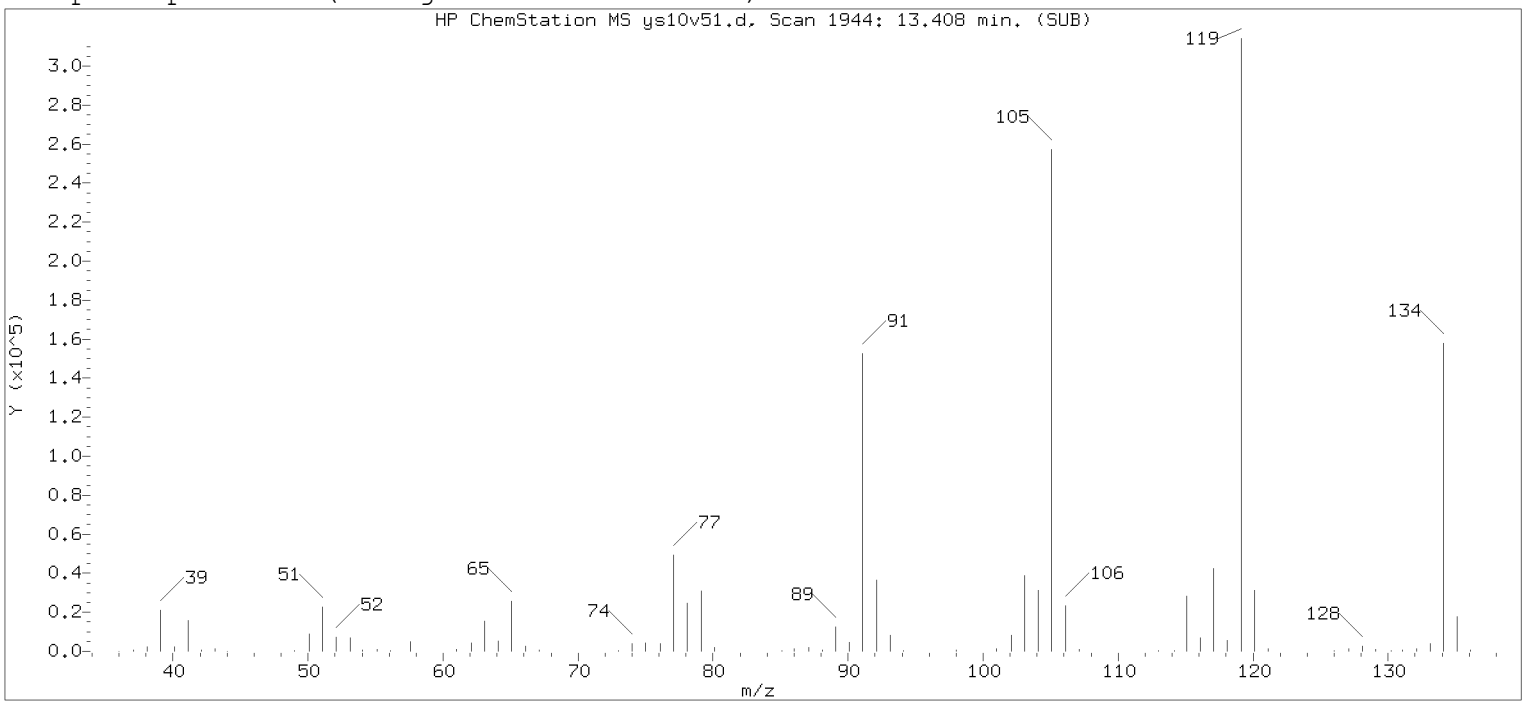
Compound Number : 140
Compound Name : 1,2-Diethylbenzene
Scan Number : 1955
Retention Time (minutes): 13.475
Quant Ion : 119.00
Area (flag) : 328572M
On-Column Amount (ng) : 20.4833
Integration start scan : 1949 Integration stop scan: 1963
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

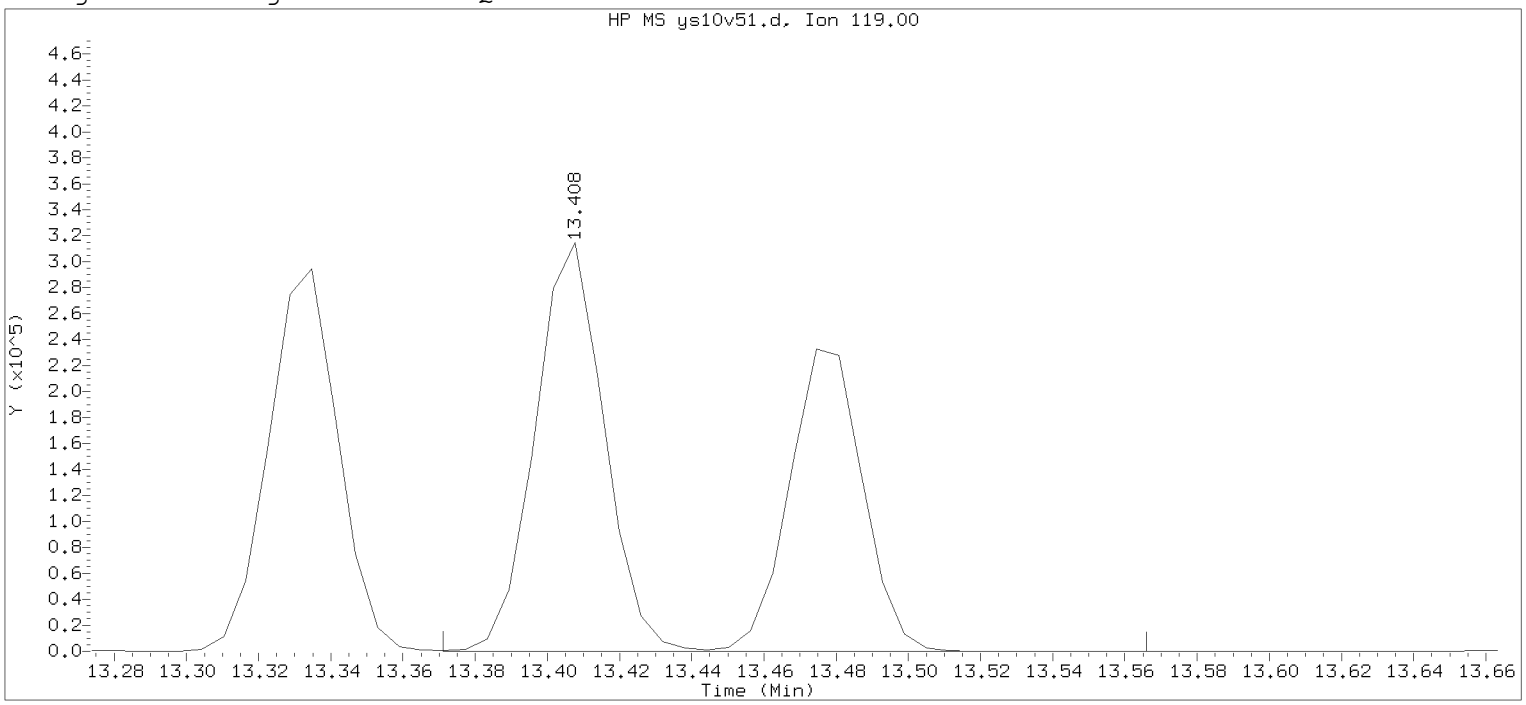
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 09/25/2019 at 07:38.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kelly E. Keller on 09/25/2019 at 07:59.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19sep10c.b/ys10v51.d Instrument ID: HP09355.i
Injection date and time: 10-SEP-2019 16:58 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/19sep10c.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 13-SEP-2019 14:20
Date, time and analyst ID of latest file update: 13-Sep-2019 14:35 kas02648

Sample Name: YLGICVC Lab Sample ID: YLGICVC

Compound Number : 140
Compound Name : 1,2-Diethylbenzene
Scan Number : 1944
Retention Time (minutes): 13.408
Quant Ion : 119.00
Area : 747027
On-column Amount (ng) : 46.5699
Integration start scan : 1937 Integration stop scan: 1969
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 09/25/2019 at 07:38.
Target 3.5 esignature user: KAS02648

Data File: /chem2/HP09355.i/19dec05a.b/yd05t01.d

Page 1

Date : 05-DEC-2019 06:53

Client ID: BFB Aug02-19

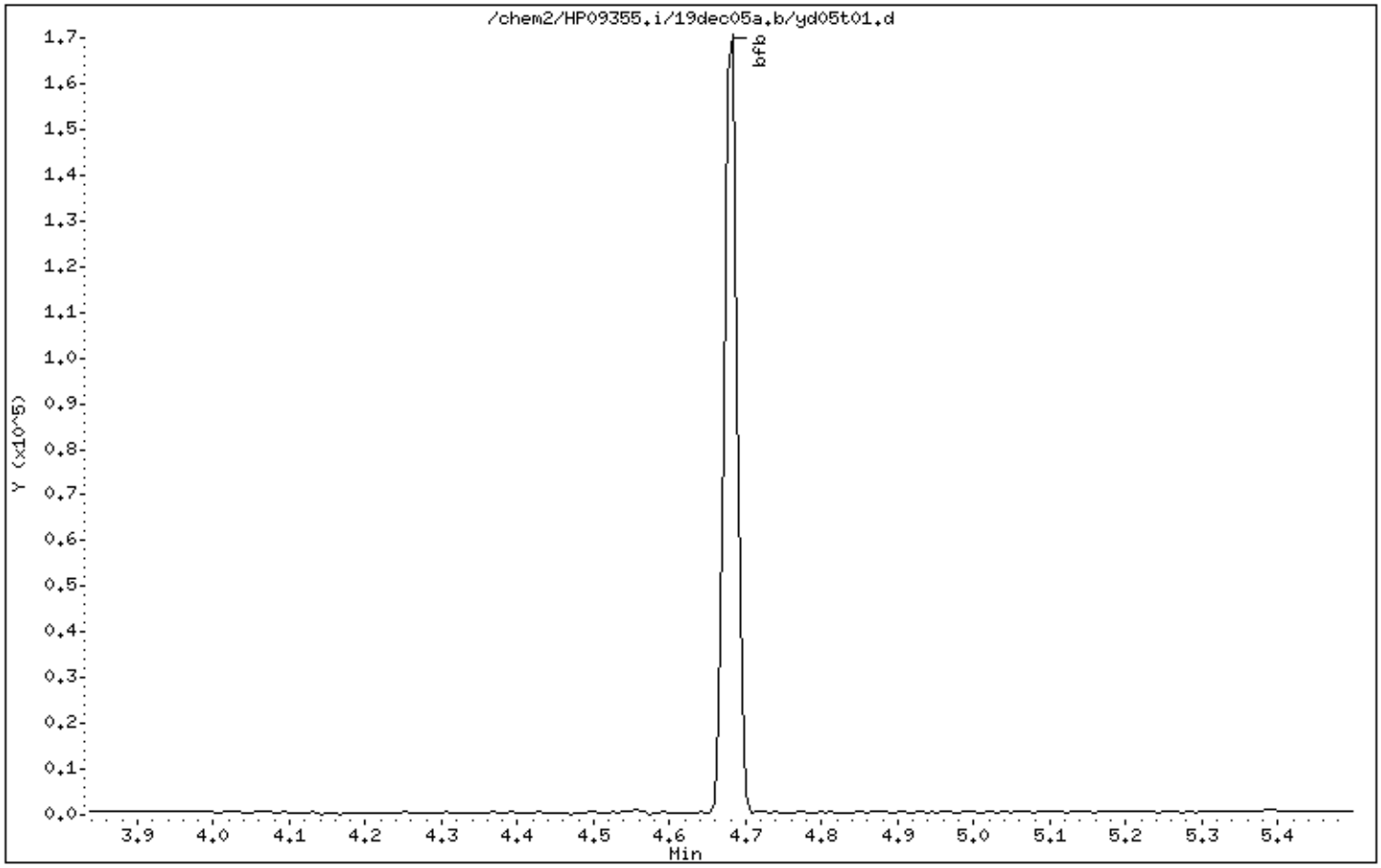
Instrument: HP09355.i

Sample Info: BFB Aug02-19;50NGBFB;1;2;;;;;;

Operator: LCP00895

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem2/HP09355.i/19dec05a.b/yd05t01.d

Date : 05-DEC-2019 06:53

Client ID: BFB Aug02-19

Instrument: HP09355.i

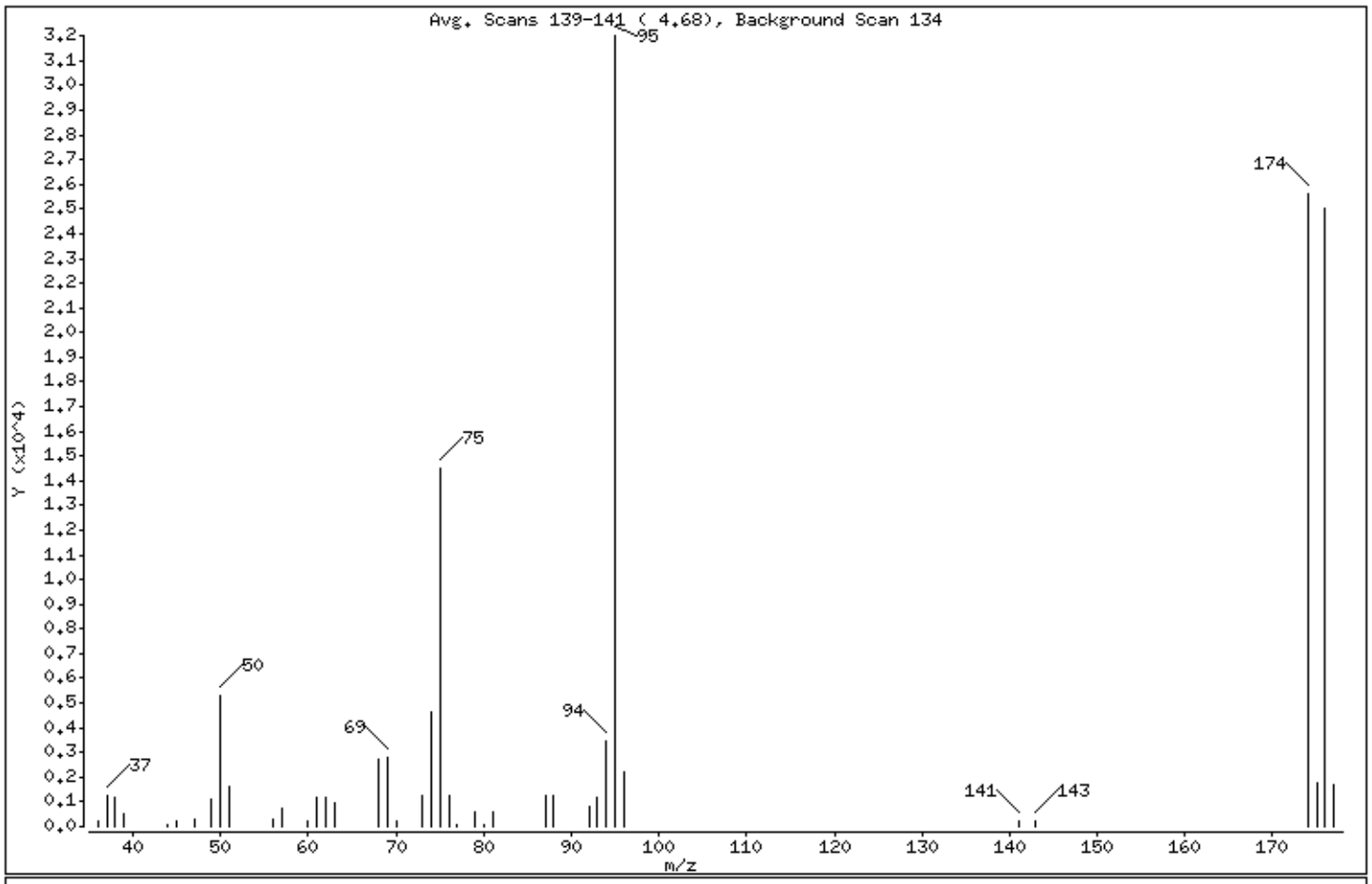
Sample Info: BFB Aug02-19;50NGBFB;1;2;;;;;;

Operator: LCP00895

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.48
75	30.00 - 60.00% of mass 95	45.26
96	5.00 - 9.00% of mass 95	6.99
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	80.12
175	5.00 - 9.00% of mass 174	5.51 (6.87)
176	95.00 - 101.00% of mass 174	78.10 (97.47)
177	5.00 - 9.00% of mass 176	5.25 (6.72)

Data File: /chem2/HP09355.i/19dec05a.b/yd05t01.d

Date : 05-DEC-2019 06:53

Client ID: BFB Aug02-19 Instrument: HP09355.i

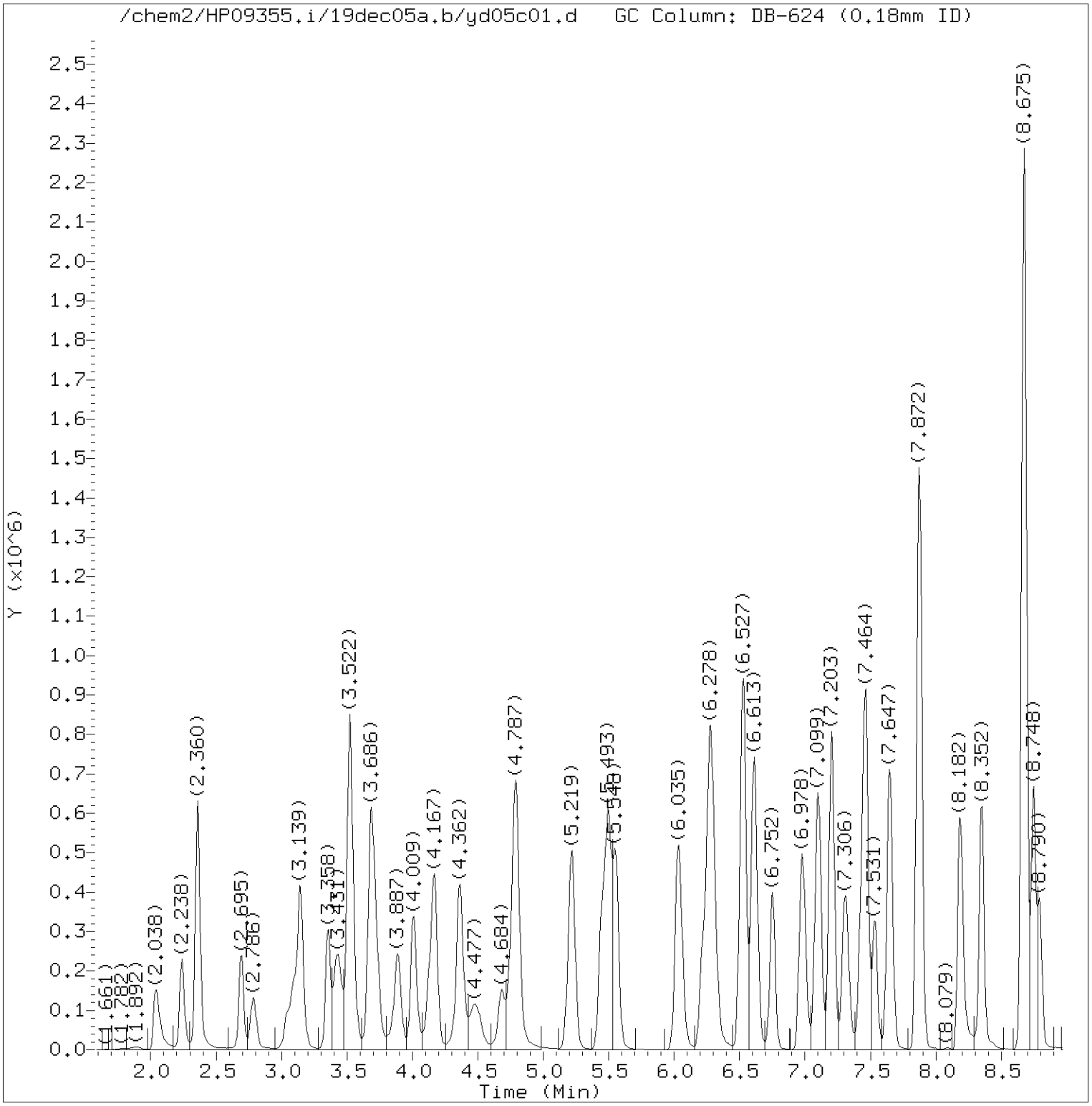
Sample Info: BFB Aug02-19;50NGBFB;1;2;;;;;;

Operator: LCP00895

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: yd05t01.d
Spectrum: Avg. Scans 139-141 (4.68), Background Scan 134
Location of Maximum: 95.00
Number of points: 40

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	235	57.00	731	76.00	1243	96.00	2238
37.00	1268	60.00	185	77.00	88	141.00	211
38.00	1213	61.00	1206	79.00	616	143.00	196
39.00	525	62.00	1213	80.00	87	174.00	25648
44.00	100	63.00	944	81.00	615	175.00	1763
45.00	201	68.00	2718	87.00	1269	176.00	25000
47.00	296	69.00	2819	88.00	1280	177.00	1680
49.00	1136	70.00	206	92.00	825		
50.00	5278	73.00	1217	93.00	1199		
51.00	1611	74.00	4662	94.00	3471		
56.00	314	75.00	14490	95.00	32016		



Total Ion Chromatogram (TIC)

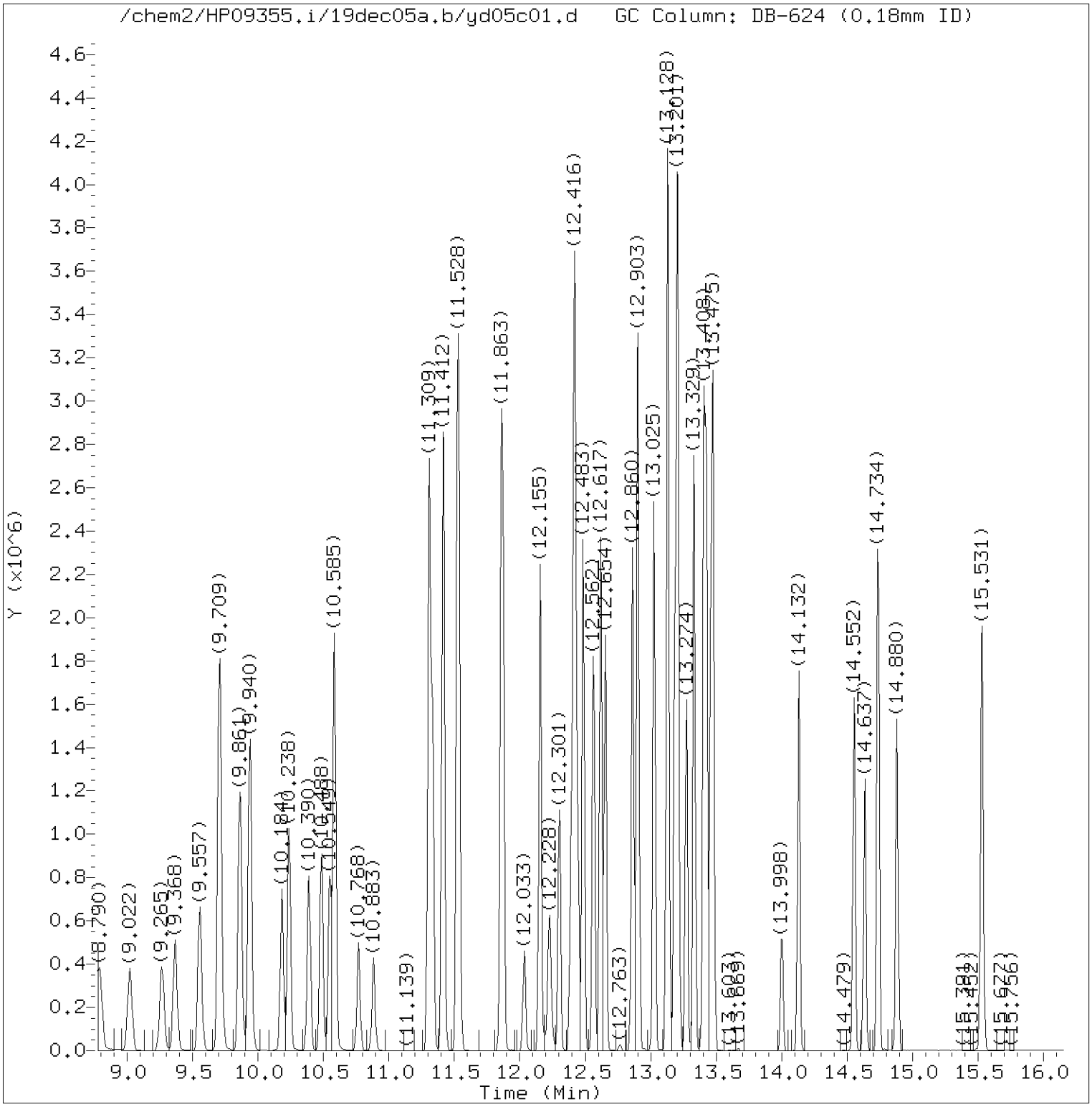
Target Revision 3.5

Data File: /chem2/HP09355.i/19dec05a.b/yd05c01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 07:42 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 08:07
Date, time and analyst ID of latest file update: 05-Dec-2019 08:08 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Linda C. Pape
on 12/05/2019 at 08:09.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec05a.b/yd05c01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 07:42 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 08:07
Date, time and analyst ID of latest file update: 05-Dec-2019 08:08 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Linda C. Pape
on 12/05/2019 at 08:09.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec05a.b/yd05c01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 07:42 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 08:07
Date, time and analyst ID of latest file update: 05-Dec-2019 08:08 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.038	85	338120	36.488
4) Chloromethane	(2)	2.238	50	364252	45.732
6) Vinyl Chloride	(2)	2.354	62	347190	44.401
5) 1,3-Butadiene	(2)	2.360	39	277156	44.721
8) Bromomethane	(2)	2.695	94	238205	41.061
9) Chloroethane	(2)	2.786	64	202191	44.558
12) Trichlorofluoromethane	(2)	3.090	101	365347	36.626
11) n-Pentane	(2)	3.145	43	433404	44.811
14) Ethyl ether	(2)	3.352	59	264394	50.902
15) Freon 123a	(2)	3.425	67	322072M	53.475
16) Acrolein	(1)	3.522	56	1378739	608.203
17) 1,1-Dichloroethene	(2)	3.680	96	226595	51.671
17) 1,1-Dichloroethene	(2)	3.680	63	114976	50.957
18) Acetone	(1)	3.692	58	129786	121.672
19) Freon 113	(2)	3.711	101	246426	49.362
21) 2-Propanol	(1)	3.857	45	207105	322.481
22) Methyl Iodide	(2)	3.887	142	417110	48.438
23) Carbon Disulfide	(2)	4.009	76	857342	54.087
27) Methyl Acetate	(2)	4.130	43	448856	58.553
25) Allyl Chloride	(2)	4.167	41	466953	61.409
29)*t-Butyl alcohol-d10	(1)	4.349	65	298478	250.000
28) Methylene Chloride	(2)	4.362	84	279410	53.358
30) t-Butyl alcohol	(1)	4.483	59	373567	278.132
31) Acrylonitrile	(2)	4.678	53	247930	61.752
33) Methyl Tertiary Butyl Ether	(2)	4.775	73	843328	48.261
32) trans-1,2-Dichloroethene	(2)	4.794	96	264851	52.141
34) n-Hexane	(2)	5.219	57	496997	57.709
36) 1,1-Dichloroethane	(2)	5.444	63	500342	54.168
38) di-Isopropyl ether	(2)	5.493	45	1033606	58.581
39) 2-Chloro-1,3-butadiene	(2)	5.554	53	457620	54.662
40) Ethyl t-butyl ether	(2)	6.035	59	865959	50.074
43) 1,2-Dichloroethene (Total)	(2)		96	566931	104.457
44) 2-Butanone	(2)	6.223	43	735401	122.738
42) cis-1,2-Dichloroethene	(2)	6.272	96	302080	52.316
45) 2,2-Dichloropropane	(2)	6.290	77	334954	47.238
47) Propionitrile	(1)	6.302	54	514736	333.208
48) Methacrylonitrile	(2)	6.527	67	588682	137.921
49) Bromochloromethane	(2)	6.606	128	152408	50.589

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Linda C. Pape
on 12/05/2019 at 08:09.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec05a.b/yd05c01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 07:42 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 08:07
Date, time and analyst ID of latest file update: 05-Dec-2019 08:08 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.619	71	187802	112.067
51) Chloroform	(2)	6.752	83	457607	51.164
52)$Dibromofluoromethane	(2)	6.965	113	219700	46.342
52)$Dibromofluoromethane	(2)	6.971	111	225469	46.454
53) 1,1,1-Trichloroethane	(2)	6.990	97	363057	46.841
54) Cyclohexane	(2)	7.099	56	558206	55.242
54) Cyclohexane	(2)	7.099	84	434689	49.800
54) Cyclohexane	(2)	7.099	69	164857	52.212
55) 1,1-Dichloropropene	(2)	7.203	75	381335	50.969
56) Carbon Tetrachloride	(2)	7.209	117	308029	46.611
58) Isobutyl Alcohol	(1)	7.306	41	361016	778.265
57)$1,2-Dichloroethane-d4	(2)	7.428	102	60358	48.700
57)$1,2-Dichloroethane-d4	(2)	7.428	65	279976	46.829
57)$1,2-Dichloroethane-d4	(2)	7.428	104	37666	47.887
60) Benzene	(2)	7.464	78	1180366	53.964
61) 1,2-Dichloroethane	(2)	7.537	62	362050	46.670
61) 1,2-Dichloroethane	(2)	7.531	98	34913	56.162
65) t-Amyl methyl ether	(2)	7.647	73	840773	48.572
66)*Fluorobenzene	(2)	7.866	96	1010335	50.000
67) n-Heptane	(2)	7.878	43	576148	63.295
69) n-Butanol	(1)	8.182	56	615772	1415.280
71) Trichloroethene	(2)	8.352	95	285321	50.424
72) Methylcyclohexane	(2)	8.669	83	549742	51.211
72) Methylcyclohexane	(2)	8.669	98	238381	50.450
73) 1,2-Dichloropropane	(2)	8.681	63	315220	56.535
76) Methyl Methacrylate	(2)	8.748	69	358629	54.803
75) 1,4-Dioxane	(1)	8.760	88	74274M	800.522
74) Dibromomethane	(2)	8.790	93	186931	50.819
78) Bromodichloromethane	(2)	9.022	83	334818	52.168
79) 2-Nitropropane	(2)	9.265	41	320423	117.162
80) 2-Chloroethyl Vinyl Ether	(2)	9.368	63	283199	60.104
81) cis-1,3-Dichloropropene	(2)	9.557	75	468212	54.075
82) 4-Methyl-2-pentanone	(2)	9.709	43	1561099	138.253
83)$Toluene-d8	(3)	9.861	98	978793	49.138
83)$Toluene-d8	(3)	9.861	100	623247	48.528
88) Toluene	(3)	9.940	92	730252	53.558
90) 1,3-Dichloropropene (total)	(3)		100	903541	108.759
89) trans-1,3-Dichloropropene	(3)	10.184	75	435328	54.684

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Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec05a.b/yd05c01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 07:42 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 08:07
Date, time and analyst ID of latest file update: 05-Dec-2019 08:08 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	10.238	69	579039	57.394
92) 1,1,2-Trichloroethane	(3)	10.390	97	282824	53.794
93) Tetrachloroethene	(3)	10.488	166	294100	50.971
94) 1,3-Dichloropropane	(3)	10.549	76	490935	53.772
96) 2-Hexanone	(3)	10.585	43	1315783	146.118
97) Dibromochloromethane	(3)	10.768	129	272417	53.256
99) 1,2-Dibromoethane	(3)	10.883	107	307785	53.778
100)*Chlorobenzene-d5	(3)	11.309	117	736197	50.000
101) 1-Chlorohexane	(3)	11.309	91	406058	52.991
102) Chlorobenzene	(3)	11.333	112	791437	51.592
103) 1,1,1,2-Tetrachloroethane	(3)	11.412	131	251527	51.353
104) Ethylbenzene	(3)	11.419	91	1413667	54.141
106) m+p-Xylene	(3)	11.528	106	1092538	106.032
108) Xylene (Total)	(3)		106	1621682	158.755
107) o-Xylene	(3)	11.857	106	529143	52.724
109) Styrene	(3)	11.875	104	916509	55.272
110) Bromoform	(3)	12.033	173	199016	54.021
111) Isopropylbenzene	(3)	12.155	105	1366703	52.698
112) Cyclohexanone	(1)	12.228	55	305215	619.508
114)$4-Bromofluorobenzene	(3)	12.301	95	366580	48.168
114)$4-Bromofluorobenzene	(3)	12.301	174	283192	49.008
116) 1,1,2,2-Tetrachloroethane	(4)	12.392	83	507781	56.037
118) trans-1,4-Dichloro-2-butene	(4)	12.416	53	428146	136.703
115) Bromobenzene	(4)	12.422	156	340514	54.076
117) 1,2,3-Trichloropropane	(4)	12.441	110	148675	51.658
119) n-Propylbenzene	(4)	12.483	91	1681002	56.286
120) 2-Chlorotoluene	(4)	12.562	126	322293	52.389
122) 1,3,5-Trimethylbenzene	(4)	12.617	105	1183260	53.556
121) 4-Chlorotoluene	(4)	12.654	126	338512	52.640
124) tert-Butylbenzene	(4)	12.860	134	242325M	52.377
125) Pentachloroethane	(4)	12.897	167	192889	54.894
126) 1,2,4-Trimethylbenzene	(4)	12.903	105	1248274	53.794
127) sec-Butylbenzene	(4)	13.025	105	1561764	55.813
129) 1,3-Dichlorobenzene	(4)	13.128	146	660765	53.572
130) p-Isopropyltoluene	(4)	13.134	119	1321027	54.944
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	383342	50.000
133) 1,4-Dichlorobenzene	(4)	13.201	146	677945	53.816
134) 1,2,3-Trimethylbenzene	(4)	13.207	105	1276206	52.352

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on 12/05/2019 at 08:09.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec05a.b/yd05c01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 07:42 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 08:07
Date, time and analyst ID of latest file update: 05-Dec-2019 08:08 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.274	91	1031442	58.670
136) 1,3-Diethylbenzene	(4)	13.329	119	819272	52.178
141) Diethylbenzene (total)	(4)		100	2371288	156.268
137) 1,4-Diethylbenzene	(4)	13.402	119	865177	52.097
139) n-Butylbenzene	(4)	13.426	92	716430M	56.362
138) 1,2-Dichlorobenzene	(4)	13.463	146	627180	51.996
140) 1,2-Diethylbenzene	(4)	13.475	119	686838	51.992
142) 1,2-Dibromo-3-chloropropane	(4)	13.998	75	119874	51.282
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	486050	52.417
146) 1,2,4-Trichlorobenzene	(4)	14.552	180	446817	50.288
147) Hexachlorobutadiene	(4)	14.637	225	207676	52.451
148) Naphthalene	(4)	14.734	128	1644805	52.214
149) 1,2,3-Trichlorobenzene	(4)	14.880	180	427971	49.568
150) 2-Methylnaphthalene	(4)	15.531	142	976925	46.912

M = Compound was manually integrated.

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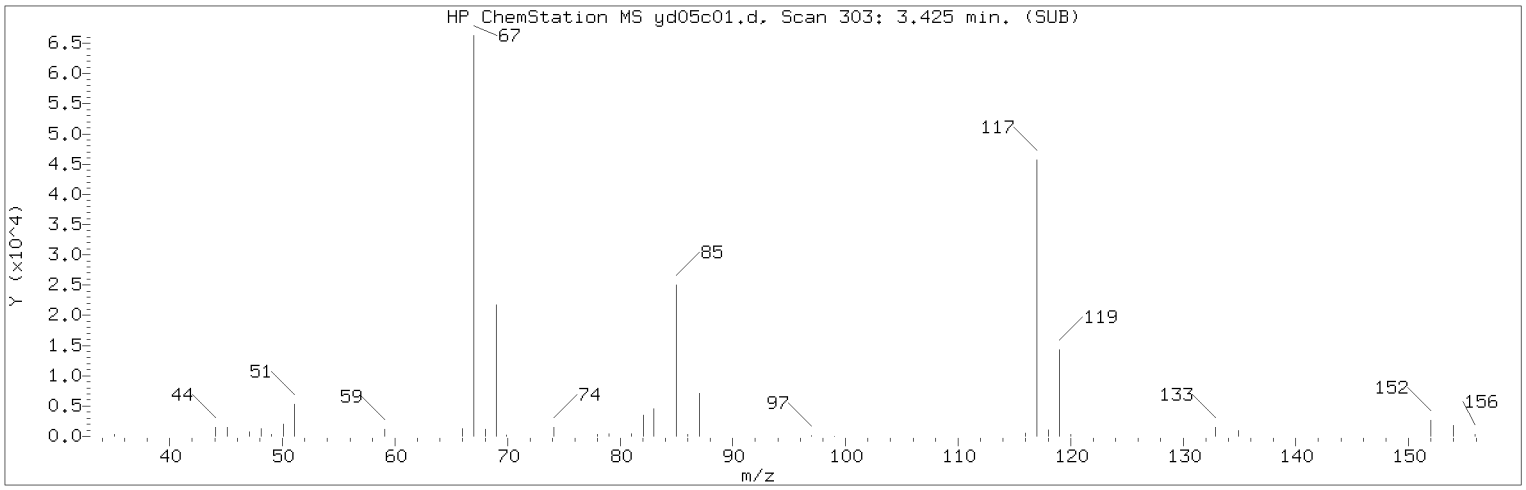
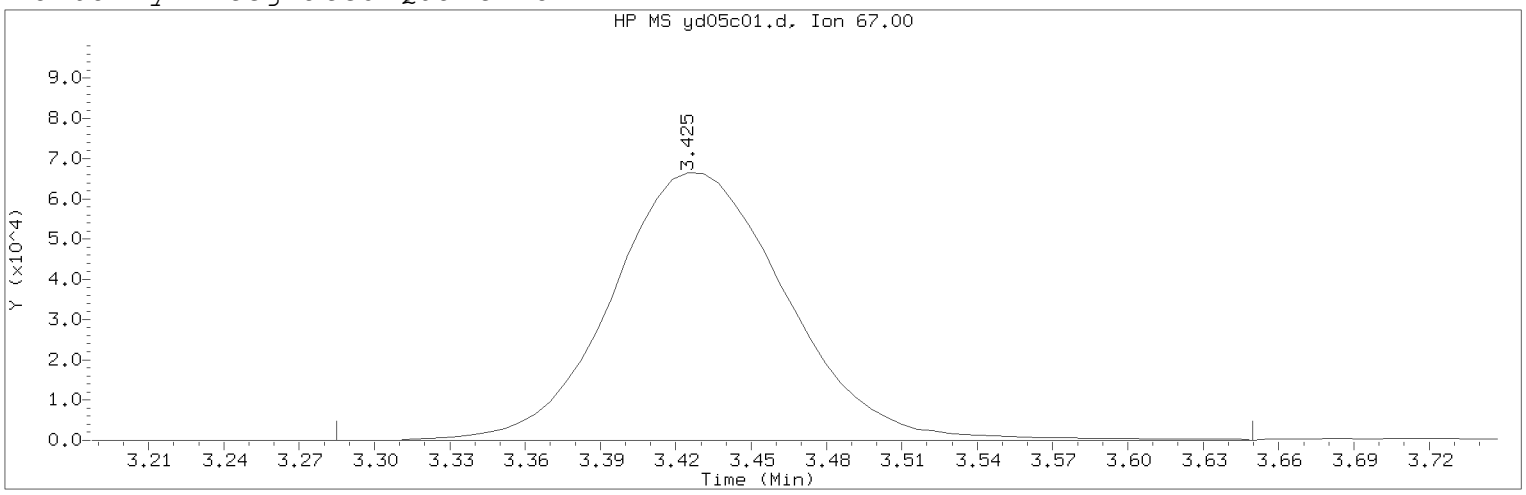
on 12/05/2019 at 08:09.
Target 3.5 esignature user ID: lcp00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 05-DEC-2019 07:42 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 08:07
Date, time and analyst ID of latest file update: 05-Dec-2019 08:08 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

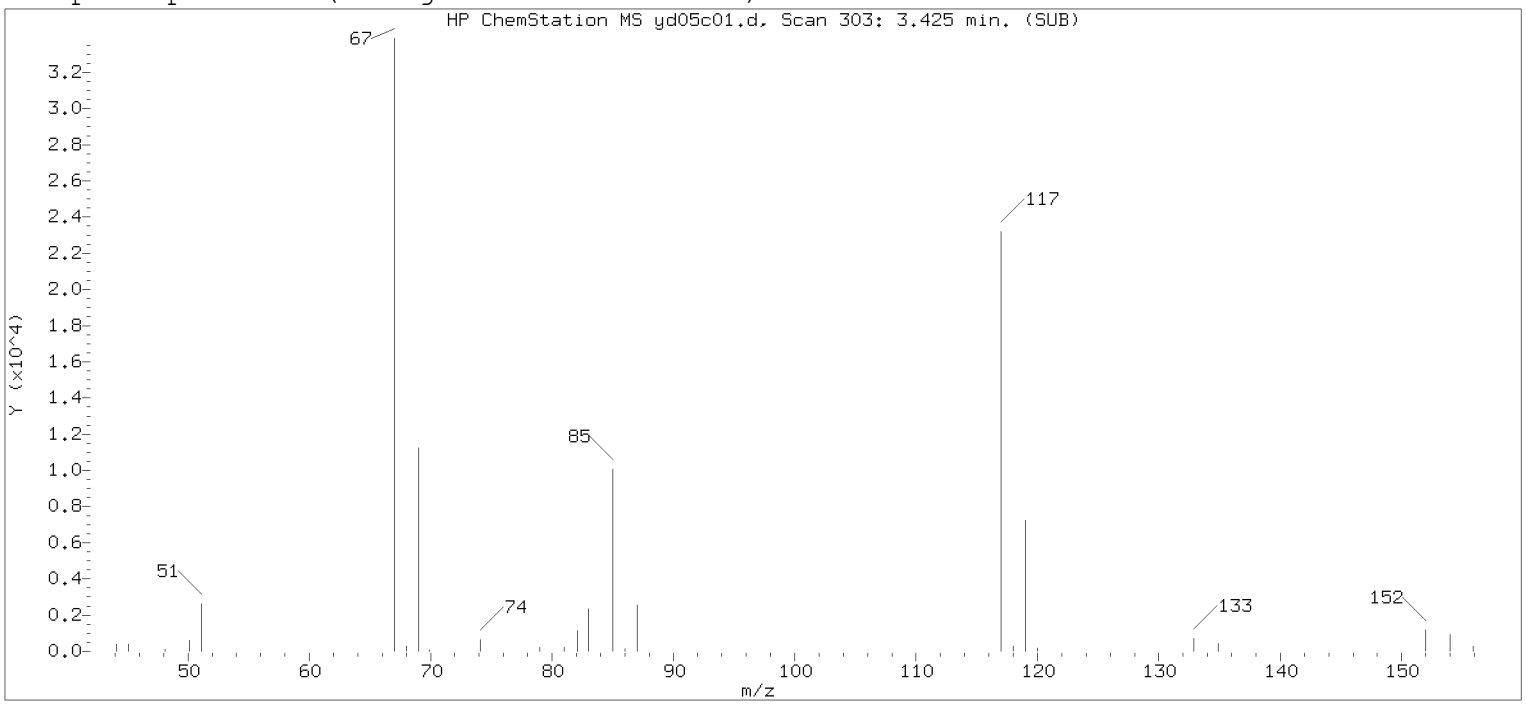
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 303
Retention Time (minutes): 3.425
Quant Ion : 67.00
Area (flag) : 322072M
On-Column Amount (ng) : 53.4754
Integration start scan : 279 Integration stop scan: 339
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

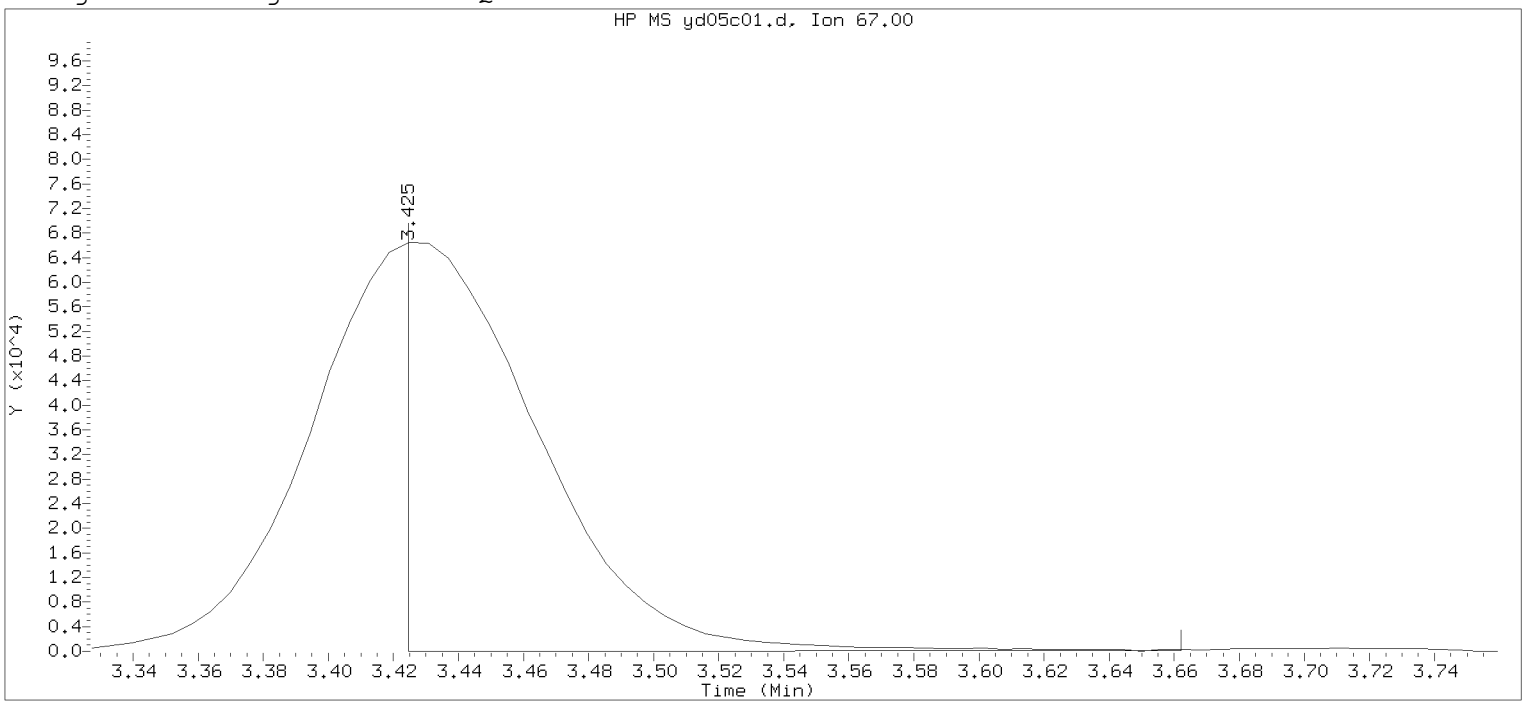
Analyst responsible for change: Digitally signed by Linda C. Pape
on 12/05/2019 at 08:09.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 12/06/2019 at 20:45.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19dec05a.b/yd05c01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 07:42 Analyst ID: LCP00895

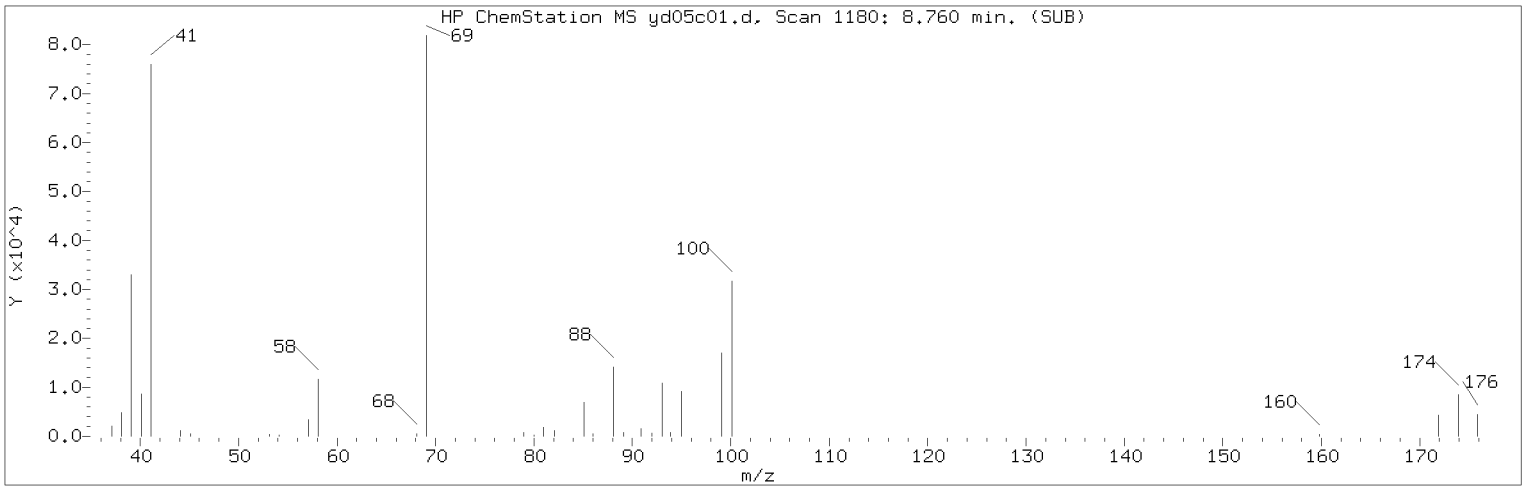
Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 07:59
Date, time and analyst ID of latest file update: 05-Dec-2019 07:59 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

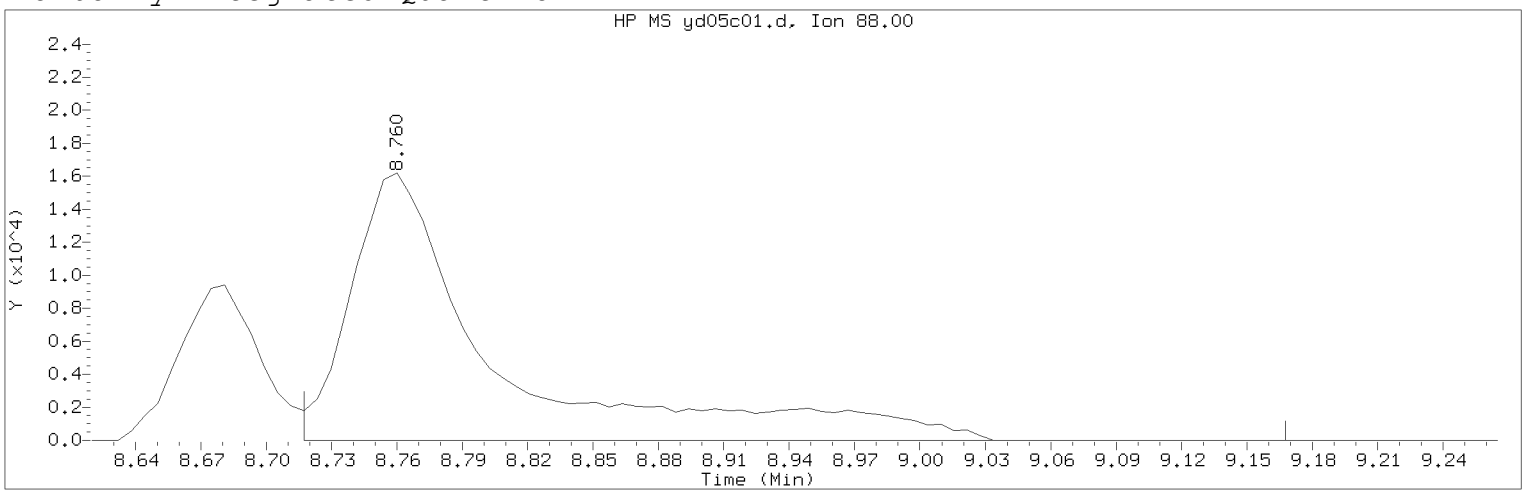
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 303
Retention Time (minutes): 3.425
Quant Ion : 67.00
Area : 181557
On-column Amount (ng) : 30.1449
Integration start scan : 302 Integration stop scan: 341
Y at integration start : 0 Y at integration end: 138

Digitally signed by Linda C. Pape on 12/05/2019 at 08:09.
Target 3.5 esignature user: LCP00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19dec05a.b/yd05c01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 07:42 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 08:07
Date, time and analyst ID of latest file update: 05-Dec-2019 08:08 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

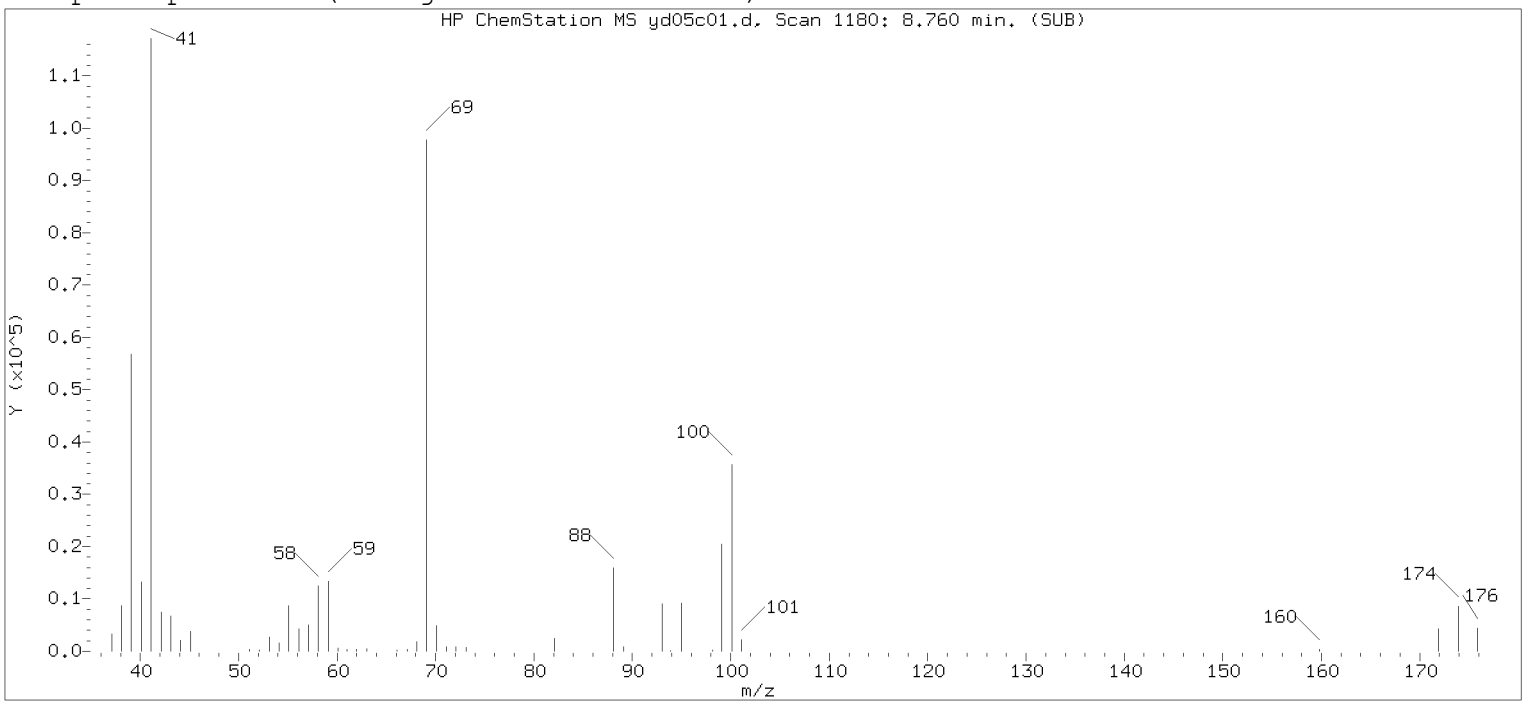
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1180
Retention Time (minutes): 8.760
Quant Ion : 88.00
Area (flag) : 74274M
On-Column Amount (ng) : 800.5225
Integration start scan : 1172 Integration stop scan: 1246
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

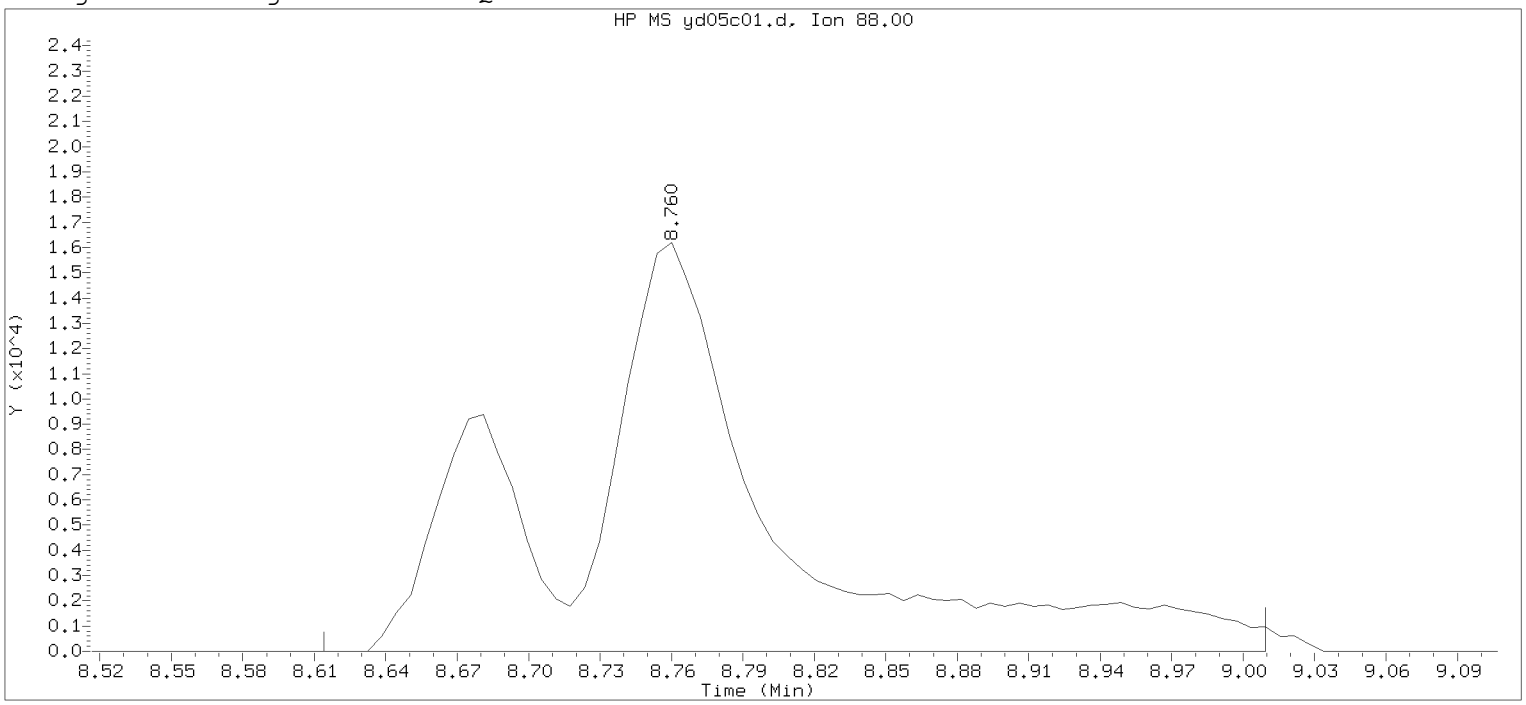
Analyst responsible for change: Digitally signed by Linda C. Pape
on 12/05/2019 at 08:09.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 12/06/2019 at 20:45.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19dec05a.b/yd05c01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 07:42 Analyst ID: LCP00895

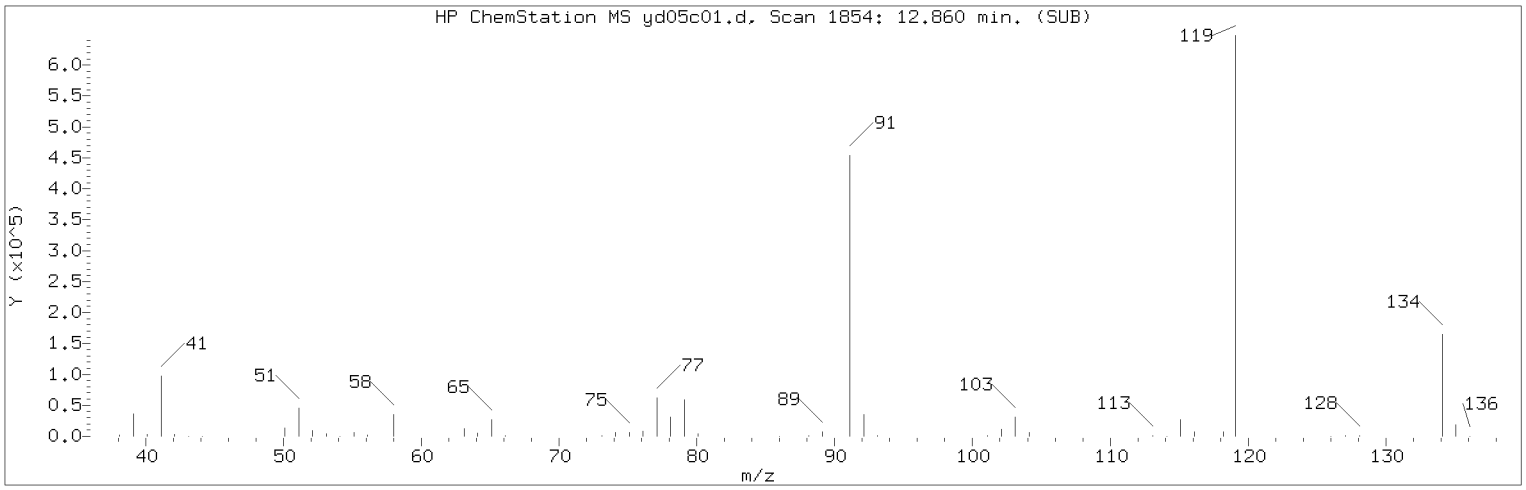
Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 07:59
Date, time and analyst ID of latest file update: 05-Dec-2019 07:59 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

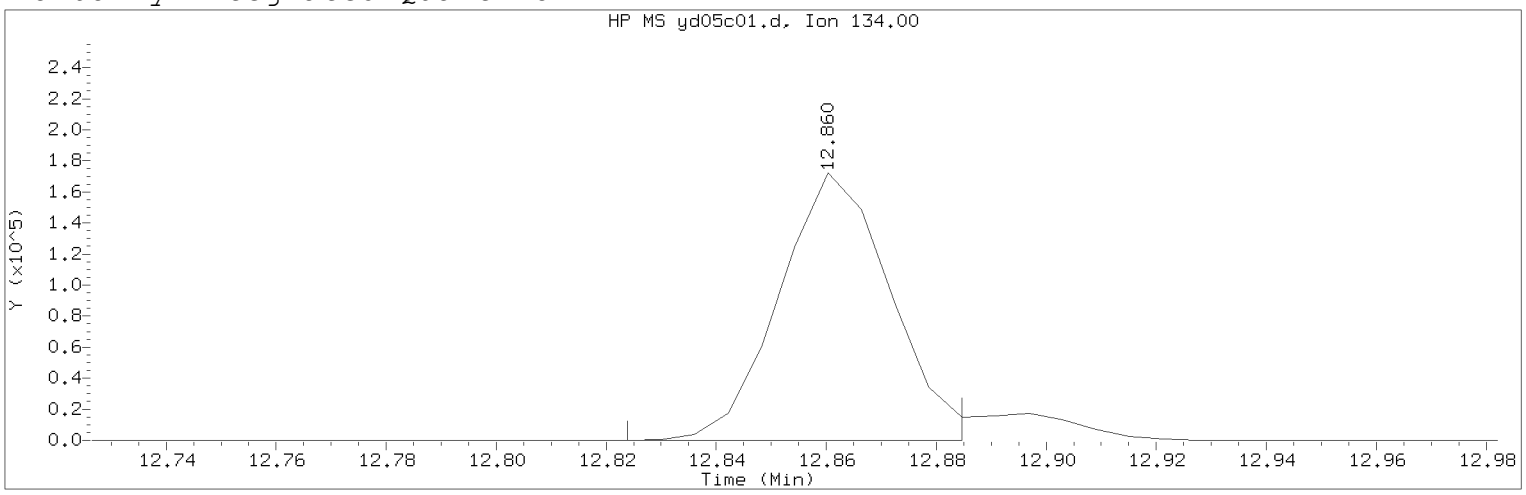
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1180
Retention Time (minutes): 8.760
Quant Ion : 88.00
Area : 97269
On-column Amount (ng) : 1049.6566
Integration start scan : 1155 Integration stop scan: 1220
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 12/05/2019 at 08:09.
Target 3.5 esignature user: LCP00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19dec05a.b/yd05c01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 07:42 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 08:07
Date, time and analyst ID of latest file update: 05-Dec-2019 08:08 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

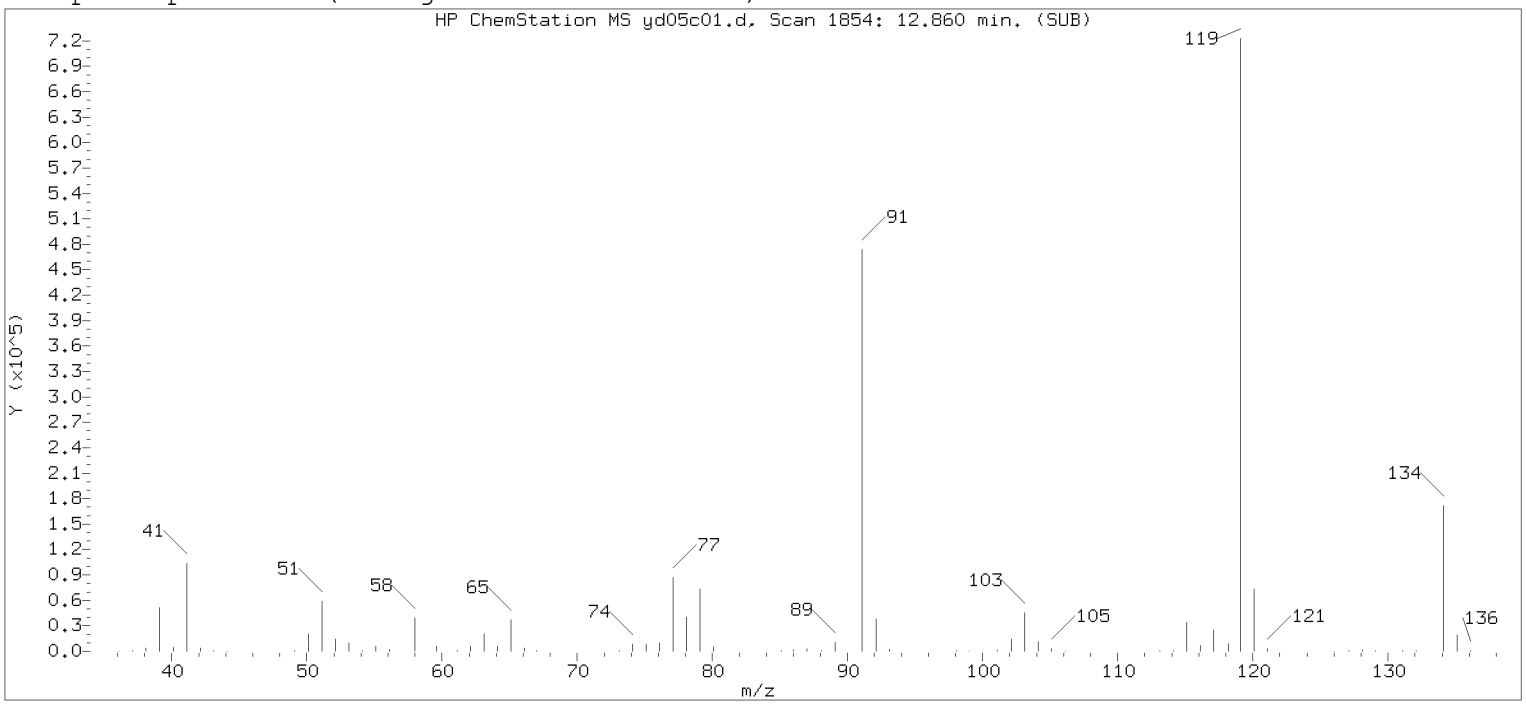
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area (flag) : 242325M
On-Column Amount (ng) : 52.3771
Integration start scan : 1847 Integration stop scan: 1857
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

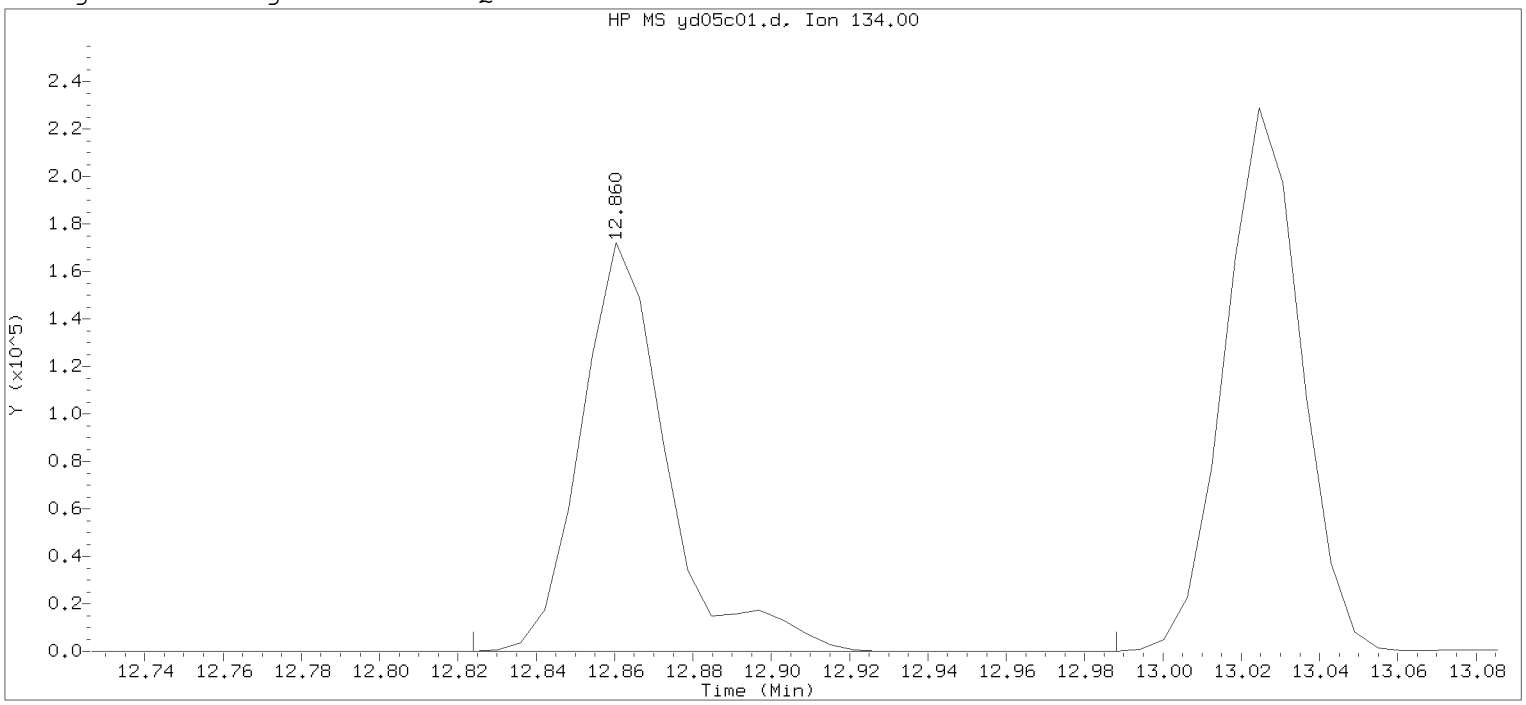
Analyst responsible for change: Digitally signed by Linda C. Pape
on 12/05/2019 at 08:09.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 12/06/2019 at 20:45.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19dec05a.b/yd05c01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 07:42 Analyst ID: LCP00895

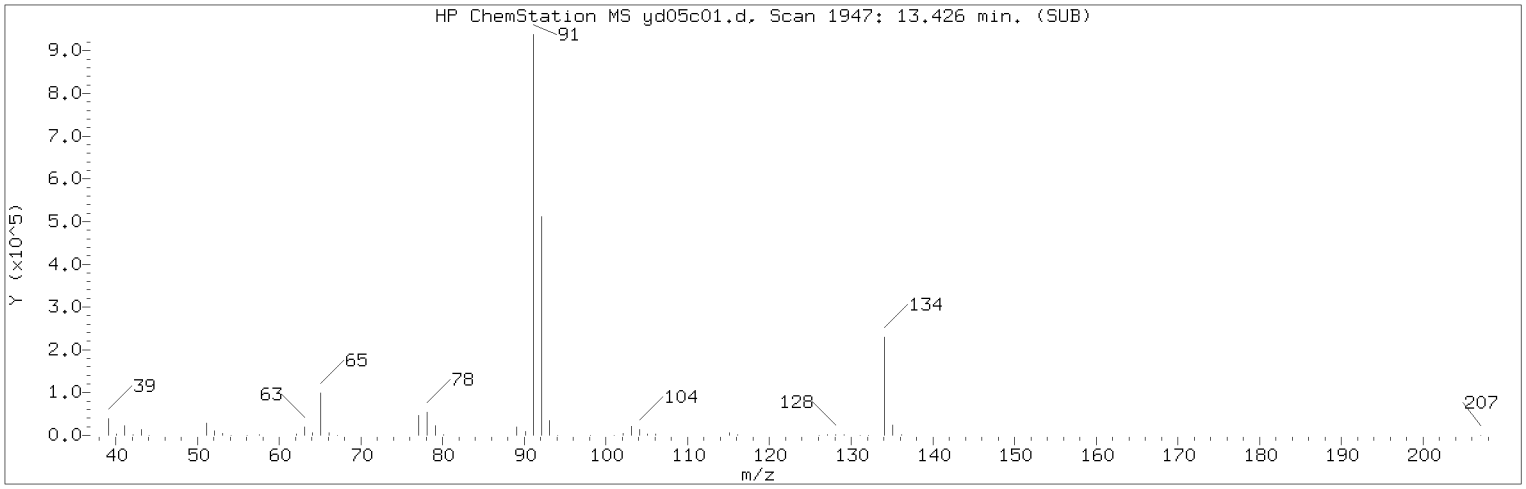
Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 07:59
Date, time and analyst ID of latest file update: 05-Dec-2019 07:59 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

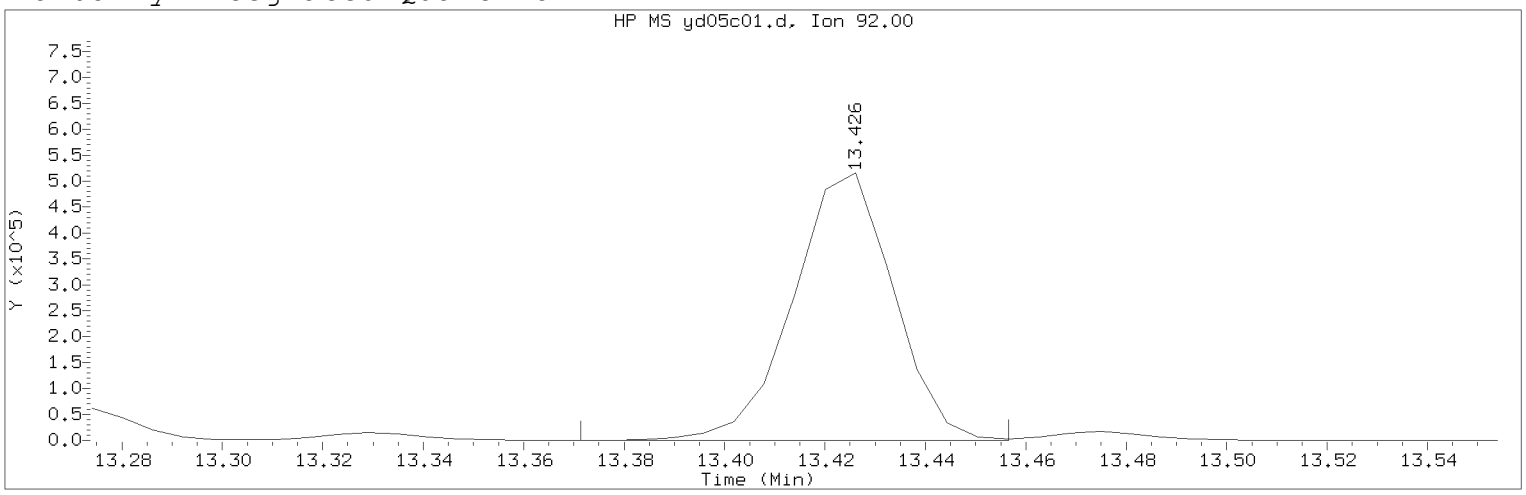
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area : 263005
On-column Amount (ng) : 56.8468
Integration start scan : 1847 Integration stop scan: 1874
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 12/05/2019 at 08:09.
Target 3.5 esignature user: LCP00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19dec05a.b/yd05c01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 07:42 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 08:07
Date, time and analyst ID of latest file update: 05-Dec-2019 08:08 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

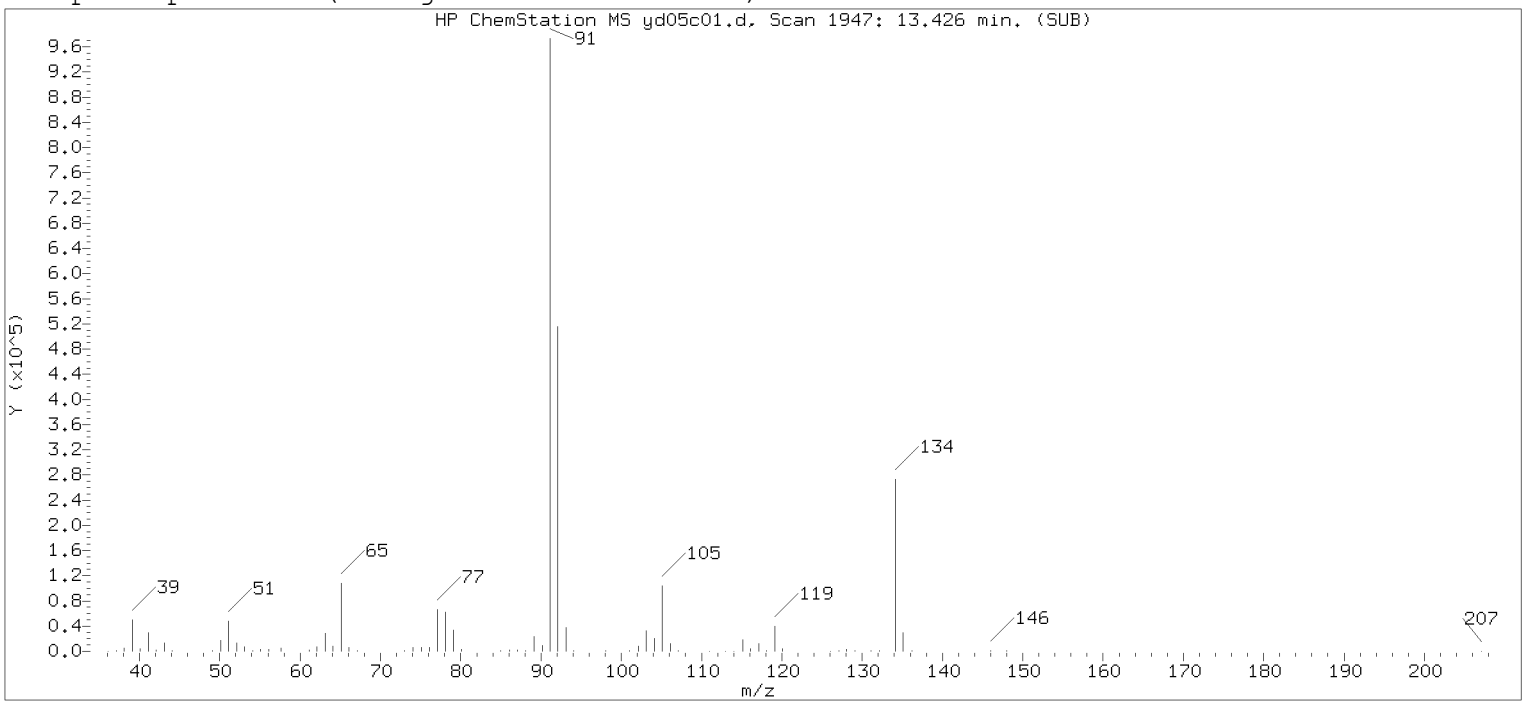
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1947
Retention Time (minutes): 13.426
Quant Ion : 92.00
Area (flag) : 716430M
On-Column Amount (ng) : 56.3616
Integration start scan : 1937 Integration stop scan: 1951
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

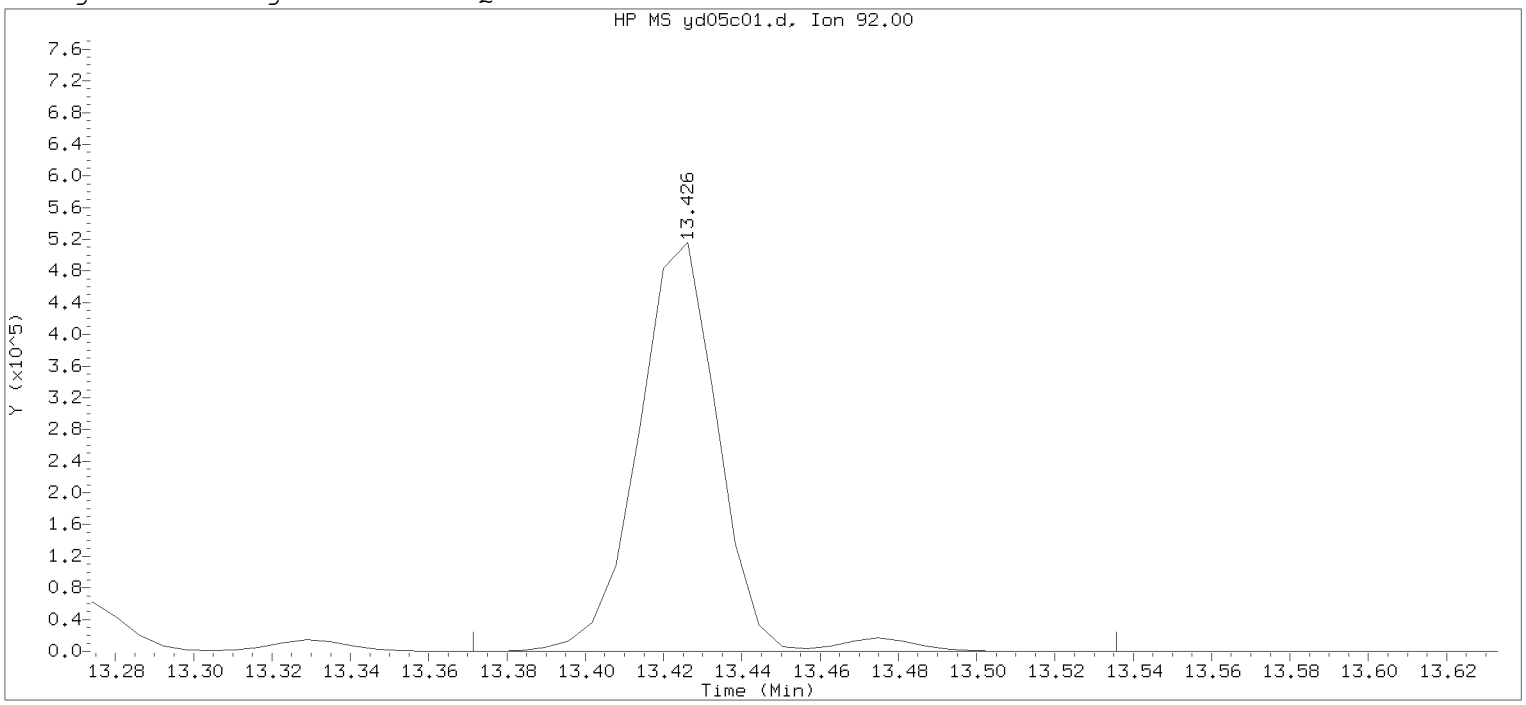
Analyst responsible for change: Digitally signed by Linda C. Pape
on 12/05/2019 at 08:09.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 12/06/2019 at 20:45.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19dec05a.b/yd05c01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 07:42 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 07:59
Date, time and analyst ID of latest file update: 05-Dec-2019 07:59 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1947
Retention Time (minutes): 13.426
Quant Ion : 92.00
Area : 738326
On-column Amount (ng) : 58.0841
Integration start scan : 1937 Integration stop scan: 1964
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 12/05/2019 at 08:09.
Target 3.5 esignature user: LCP00895

Data File: /chem2/HP09355.i/19dec07a.b/yd07t01.d

Date : 07-DEC-2019 10:51

Client ID: BFB Aug02-19

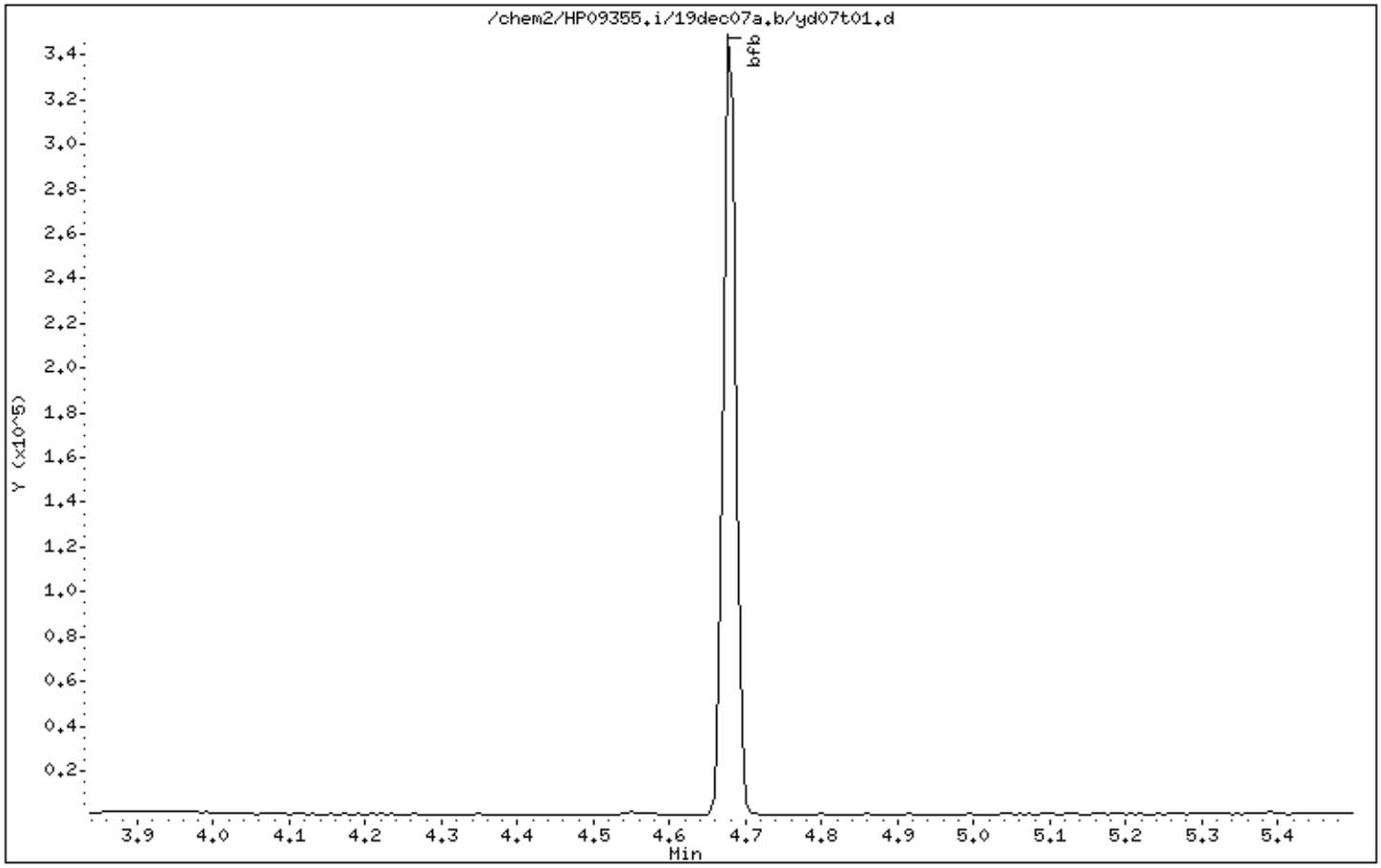
Instrument: HP09355.i

Sample Info: BFB Aug02-19;50NGBFB;1;2;;;;;;

Operator: MEC29284

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem2/HP09355.i/19dec07a.b/yd07t01.d

Date : 07-DEC-2019 10:51

Client ID: BFB Aug02-19

Instrument: HP09355.i

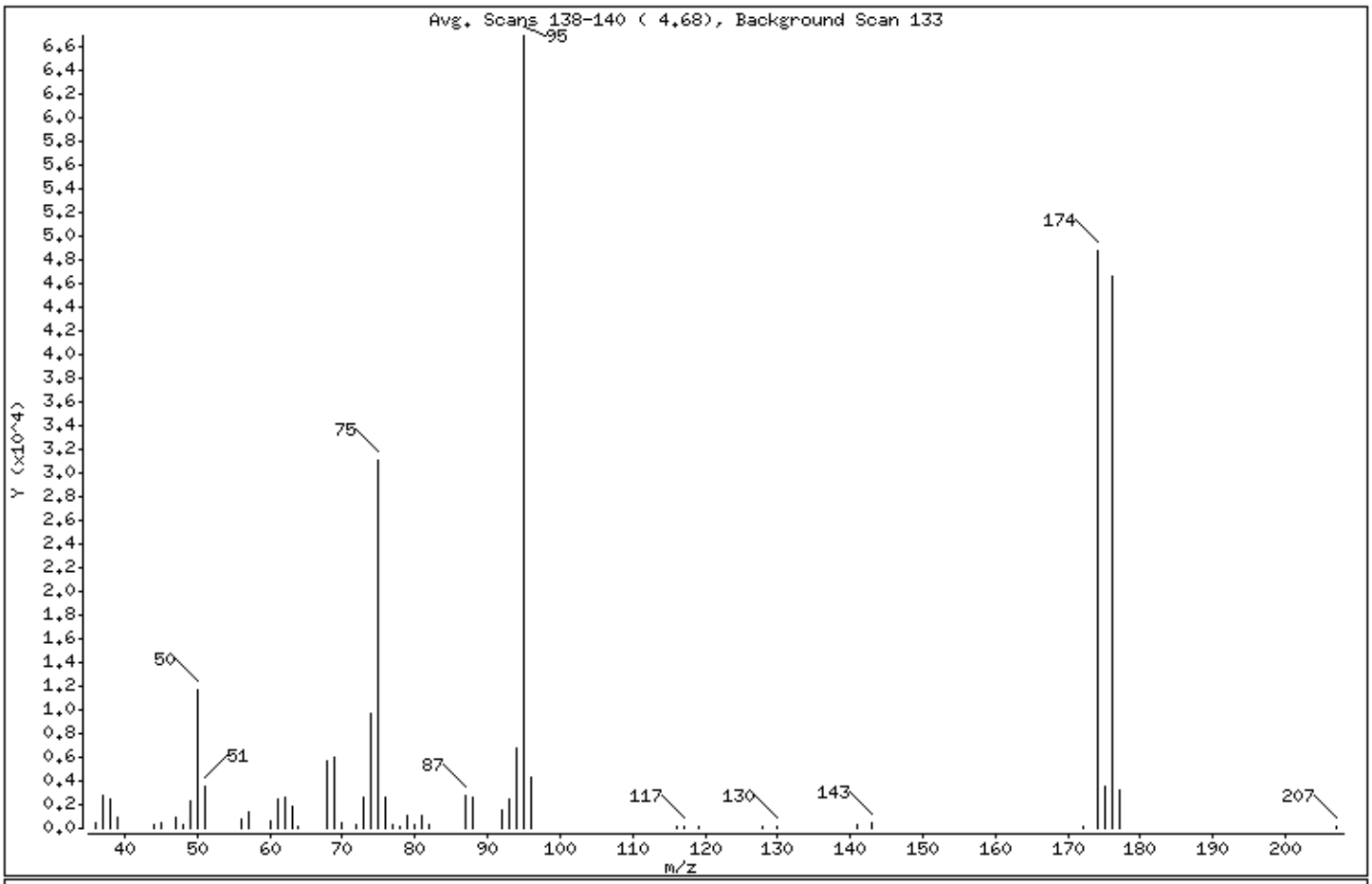
Sample Info: BFB Aug02-19;50NGBFB;1;2;;;;;;

Operator: MEC29284

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.41
75	30.00 - 60.00% of mass 95	46.39
96	5.00 - 9.00% of mass 95	6.47
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	72.87
175	5.00 - 9.00% of mass 174	5.35 (7.34)
176	95.00 - 101.00% of mass 174	69.76 (95.72)
177	5.00 - 9.00% of mass 176	4.76 (6.82)

Data File: /chem2/HP09355.i/19dec07a.b/yd07t01.d

Date : 07-DEC-2019 10:51

Client ID: BFB Aug02-19

Instrument: HP09355.i

Sample Info: BFB Aug02-19;50NGBFB;1;2;;;;;;

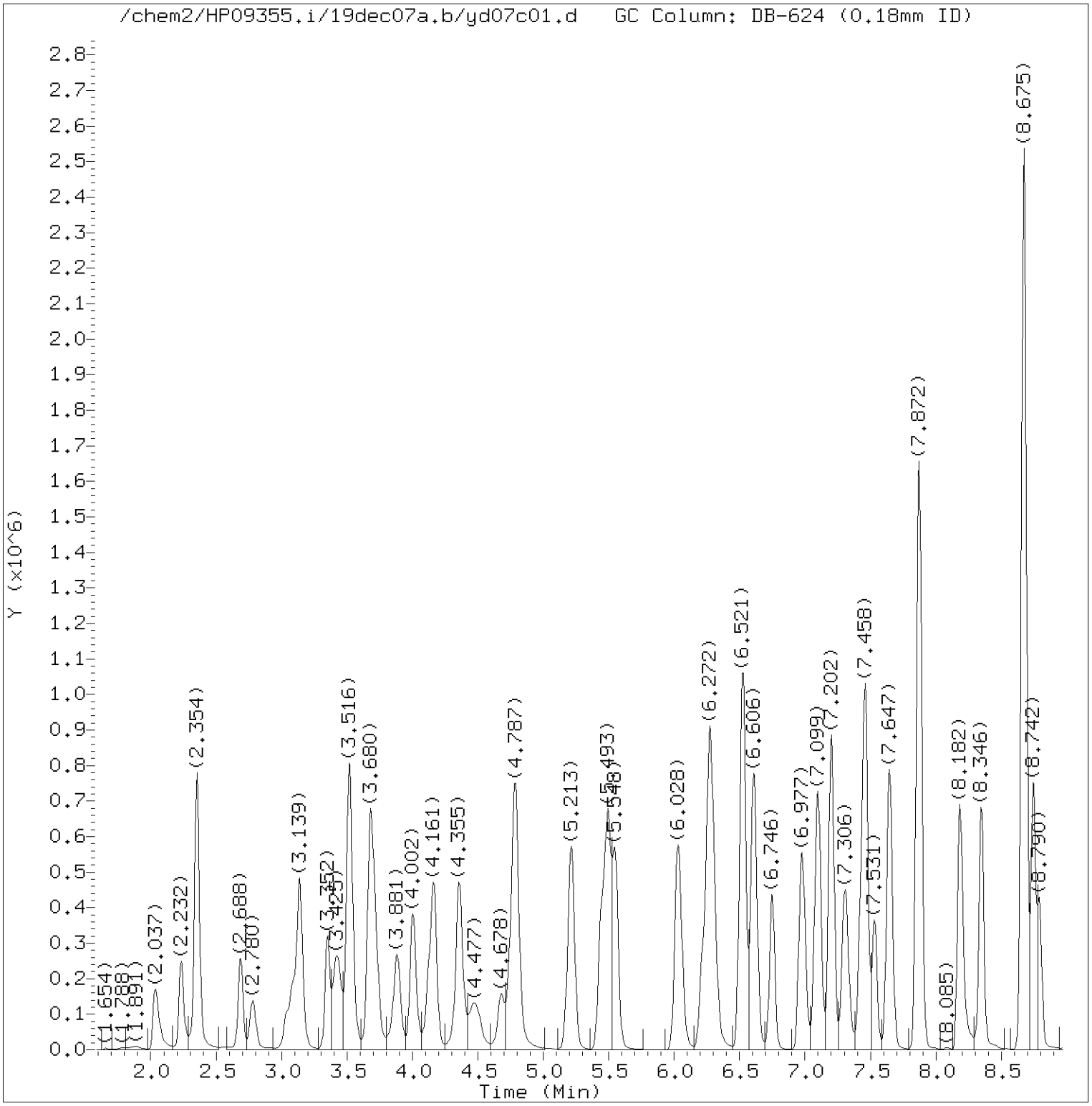
Operator: MEC29284

Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: yd07t01.d
Spectrum: Avg. Scans 138-140 (4.68), Background Scan 133
Location of Maximum: 95.00
Number of points: 52

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	530	61.00	2421	79.00	1089	128.00	89
37.00	2778	62.00	2693	80.00	292	130.00	189
38.00	2481	63.00	1879	81.00	1145	141.00	365
39.00	977	64.00	84	82.00	237	143.00	464
44.00	277	68.00	5651	87.00	2826	172.00	97
45.00	518	69.00	6020	88.00	2684	174.00	48784
47.00	935	70.00	394	92.00	1464	175.00	3579
48.00	331	72.00	334	93.00	2395	176.00	46696
49.00	2349	73.00	2559	94.00	6740	177.00	3186
50.00	11652	74.00	9647	95.00	66944	207.00	204
51.00	3614	75.00	31056	96.00	4334		
56.00	768	76.00	2612	116.00	89		
57.00	1455	77.00	367	117.00	220		
60.00	548	78.00	196	119.00	182		



Total Ion Chromatogram (TIC)

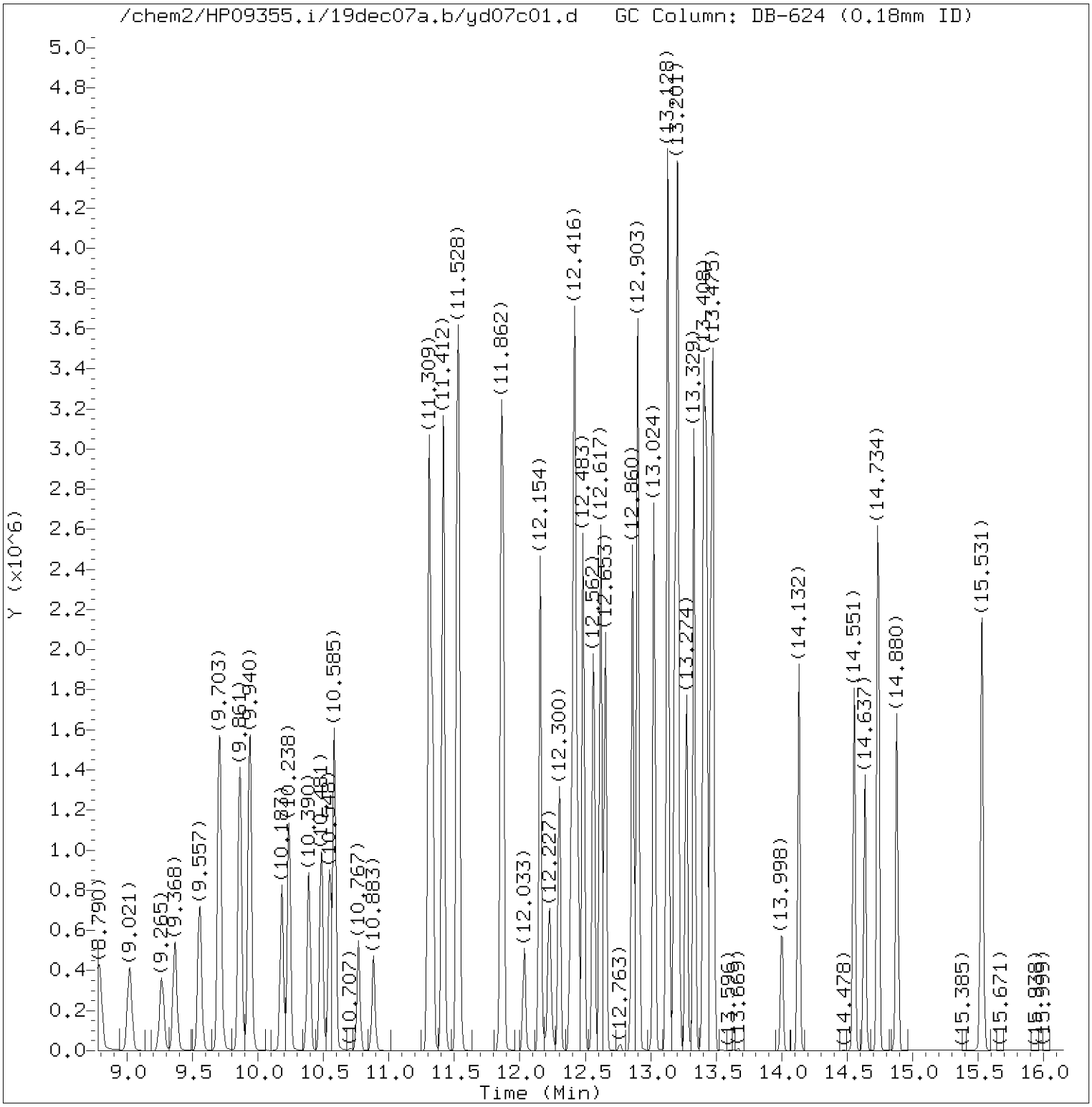
Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07c01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 11:27 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 11:46 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Miranda E. Campbell
on 12/07/2019 at 12:58.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07c01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 11:27 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 11:46 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Miranda E. Campbell
on 12/07/2019 at 12:58.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07c01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 11:27 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 11:46 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.037	85	366554	34.316
4) Chloromethane	(2)	2.232	50	390690	42.553
5) 1,3-Butadiene	(2)	2.354	39	397818M	55.687
6) Vinyl Chloride	(2)	2.354	62	374983	41.602
8) Bromomethane	(2)	2.688	94	256178	38.309
9) Chloroethane	(2)	2.780	64	217519	41.585
12) Trichlorofluoromethane	(2)	3.090	101	398349	34.644
11) n-Pentane	(2)	3.139	43	502581	45.080
14) Ethyl ether	(2)	3.352	59	273943	45.753
15) Freon 123a	(2)	3.425	67	355206	51.164
16) Acrolein	(1)	3.522	56	1308834	480.663
17) 1,1-Dichloroethene	(2)	3.674	96	257114	50.863
17) 1,1-Dichloroethene	(2)	3.674	63	128832	49.533
18) Acetone	(1)	3.686	58	139426	108.816
19) Freon 113	(2)	3.704	101	281616	48.937
21) 2-Propanol	(1)	3.850	45	247825	321.252
22) Methyl Iodide	(2)	3.881	142	470464	47.396
23) Carbon Disulfide	(2)	4.002	76	989314	54.144
27) Methyl Acetate	(2)	4.124	43	498179	56.377
25) Allyl Chloride	(2)	4.167	41	488053	55.680
29)*t-Butyl alcohol-d10	(1)	4.349	65	358528	250.000
28) Methylene Chloride	(2)	4.355	84	312135	51.711
30) t-Butyl alcohol	(1)	4.477	59	441760	273.815
31) Acrylonitrile	(2)	4.672	53	254825	55.061
33) Methyl Tertiary Butyl Ether	(2)	4.769	73	948460	47.087
32) trans-1,2-Dichloroethene	(2)	4.787	96	296077	50.566
34) n-Hexane	(2)	5.213	57	559285	56.338
36) 1,1-Dichloroethane	(2)	5.438	63	552652	51.905
38) di-Isopropyl ether	(2)	5.493	45	1147317	56.412
39) 2-Chloro-1,3-butadiene	(2)	5.554	53	505903	52.424
40) Ethyl t-butyl ether	(2)	6.028	59	971047	48.712
43) 1,2-Dichloroethene (Total)	(2)		96	629283	100.628
44) 2-Butanone	(2)	6.223	43	721836	104.513
42) cis-1,2-Dichloroethene	(2)	6.266	96	333206	50.061
45) 2,2-Dichloropropane	(2)	6.290	77	360867	44.150
47) Propionitrile	(1)	6.302	54	575339	310.058
48) Methacrylonitrile	(2)	6.527	67	664731	135.106
49) Bromochloromethane	(2)	6.606	128	167048	48.102

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 12/07/2019 at 12:58.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07c01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 11:27 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 11:46 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.618	71	189256	94.019
51) Chloroform	(2)	6.746	83	502422	48.732
52)$Dibromofluoromethane	(2)	6.965	113	253150	46.324
52)$Dibromofluoromethane	(2)	6.965	111	261631	46.764
53) 1,1,1-Trichloroethane	(2)	6.983	97	398179	44.567
54) Cyclohexane	(2)	7.099	56	623807	53.556
54) Cyclohexane	(2)	7.099	84	490794	48.779
54) Cyclohexane	(2)	7.099	69	186567	51.260
55) 1,1-Dichloropropene	(2)	7.196	75	421964	48.928
56) Carbon Tetrachloride	(2)	7.202	117	334557	43.919
58) Isobutyl Alcohol	(1)	7.306	41	407683	731.665
57)$1,2-Dichloroethane-d4	(2)	7.428	102	69522	48.662
57)$1,2-Dichloroethane-d4	(2)	7.428	65	324583	47.098
57)$1,2-Dichloroethane-d4	(2)	7.428	104	43852	48.364
60) Benzene	(2)	7.464	78	1305479	51.777
61) 1,2-Dichloroethane	(2)	7.531	62	404126	45.193
61) 1,2-Dichloroethane	(2)	7.531	98	38659	53.948
65) t-Amyl methyl ether	(2)	7.647	73	934202	46.820
66)*Fluorobenzene	(2)	7.866	96	1164624	50.000
67) n-Heptane	(2)	7.878	43	622632	59.340
69) n-Butanol	(1)	8.182	56	711217	1360.861
71) Trichloroethene	(2)	8.346	95	315703	48.402
72) Methylcyclohexane	(2)	8.669	83	613323	49.565
72) Methylcyclohexane	(2)	8.669	98	263104	48.306
73) 1,2-Dichloropropane	(2)	8.681	63	345998	53.834
76) Methyl Methacrylate	(2)	8.742	69	410735	54.450
75) 1,4-Dioxane	(1)	8.760	88	85540M	767.535
74) Dibromomethane	(2)	8.790	93	206135	48.616
78) Bromodichloromethane	(2)	9.021	83	371933	50.273
79) 2-Nitropropane	(2)	9.265	41	291411	92.438
80) 2-Chloroethyl Vinyl Ether	(2)	9.368	63	305536	56.254
81) cis-1,3-Dichloropropene	(2)	9.557	75	519130	52.013
82) 4-Methyl-2-pentanone	(2)	9.703	43	1344823	103.321
83)$Toluene-d8	(3)	9.861	98	1137630	48.885
83)$Toluene-d8	(3)	9.861	100	725597	48.358
88) Toluene	(3)	9.940	92	804130	50.480
90) 1,3-Dichloropropene (total)	(3)		100	1004600	104.210
89) trans-1,3-Dichloropropene	(3)	10.183	75	485470	52.197

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 12/07/2019 at 12:58.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07c01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 11:27 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 11:46 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	10.238	69	655524	55.615
92) 1,1,2-Trichloroethane	(3)	10.390	97	312861	50.934
93) Tetrachloroethene	(3)	10.488	166	324101	48.079
94) 1,3-Dichloropropane	(3)	10.548	76	553016	51.845
96) 2-Hexanone	(3)	10.585	43	1087409	103.360
97) Dibromochloromethane	(3)	10.767	129	302045	50.542
99) 1,2-Dibromoethane	(3)	10.883	107	344182	51.474
100)*Chlorobenzene-d5	(3)	11.309	117	860109	50.000
101) 1-Chlorohexane	(3)	11.309	91	446808	49.909
102) Chlorobenzene	(3)	11.333	112	869211	48.499
103) 1,1,1,2-Tetrachloroethane	(3)	11.412	131	276855	48.381
104) Ethylbenzene	(3)	11.418	91	1555609	50.994
106) m+p-Xylene	(3)	11.528	106	1195677	99.324
108) Xylene (Total)	(3)		106	1774789	148.713
107) o-Xylene	(3)	11.856	106	579112	49.390
109) Styrene	(3)	11.869	104	1016190	52.455
110) Bromoform	(3)	12.033	173	223448	51.915
111) Isopropylbenzene	(3)	12.154	105	1491422	49.222
112) Cyclohexanone	(1)	12.227	55	337132	569.679
114)$4-Bromofluorobenzene	(3)	12.300	95	431964	48.582
114)$4-Bromofluorobenzene	(3)	12.300	174	334702	49.577
116) 1,1,2,2-Tetrachloroethane	(4)	12.392	83	567484	53.706
118) trans-1,4-Dichloro-2-butene	(4)	12.416	53	405504	111.032
115) Bromobenzene	(4)	12.422	156	376005	51.207
117) 1,2,3-Trichloropropane	(4)	12.440	110	166232	49.531
119) n-Propylbenzene	(4)	12.483	91	1830806	52.571
120) 2-Chlorotoluene	(4)	12.562	126	352760	49.174
122) 1,3,5-Trimethylbenzene	(4)	12.617	105	1295404	50.281
121) 4-Chlorotoluene	(4)	12.653	126	369749	49.308
124) tert-Butylbenzene	(4)	12.860	134	262520M	48.660
125) Pentachloroethane	(4)	12.897	167	215057	52.485
126) 1,2,4-Trimethylbenzene	(4)	12.903	105	1372829	50.735
127) sec-Butylbenzene	(4)	13.024	105	1696805	52.002
129) 1,3-Dichlorobenzene	(4)	13.128	146	724028	50.340
130) p-Isopropyltoluene	(4)	13.134	119	1435499	51.201
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	447012	50.000
133) 1,4-Dichlorobenzene	(4)	13.201	146	737440	50.201
134) 1,2,3-Trimethylbenzene	(4)	13.207	105	1427468	50.217

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Digitally signed by Miranda E. Campbell
on 12/07/2019 at 12:58.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07c01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 11:27 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 11:46 mec29284

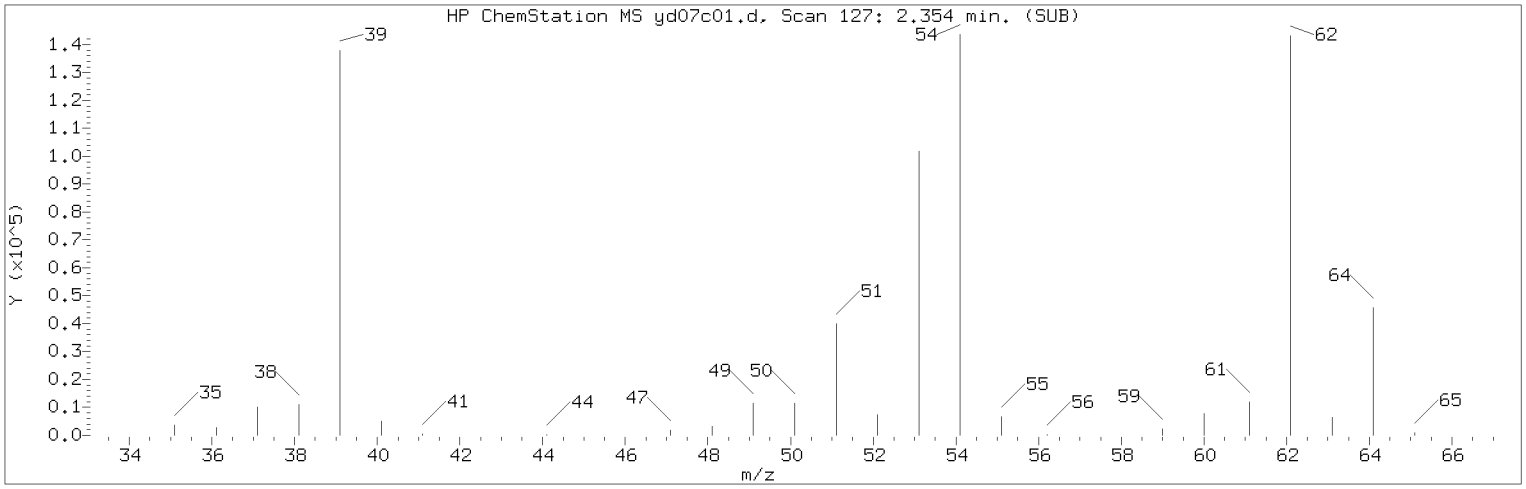
Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	13.274	91	1133131	55.273
136) 1,3-Diethylbenzene	(4)	13.329	119	920403	50.270
141) Diethylbenzene (total)	(4)		100	2654357	149.911
137) 1,4-Diethylbenzene	(4)	13.402	119	973093	50.250
139) n-Butylbenzene	(4)	13.426	92	778313M	52.509
138) 1,2-Dichlorobenzene	(4)	13.462	146	694783	49.397
140) 1,2-Diethylbenzene	(4)	13.475	119	760861	49.392
142) 1,2-Dibromo-3-chloropropane	(4)	13.998	75	134532	49.355
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	534685	49.449
146) 1,2,4-Trichlorobenzene	(4)	14.551	180	500541	48.311
147) Hexachlorobutadiene	(4)	14.637	225	225423	48.824
148) Naphthalene	(4)	14.734	128	1829089	49.793
149) 1,2,3-Trichlorobenzene	(4)	14.880	180	475771	47.255
150) 2-Methylnaphthalene	(4)	15.531	142	1093112	45.015

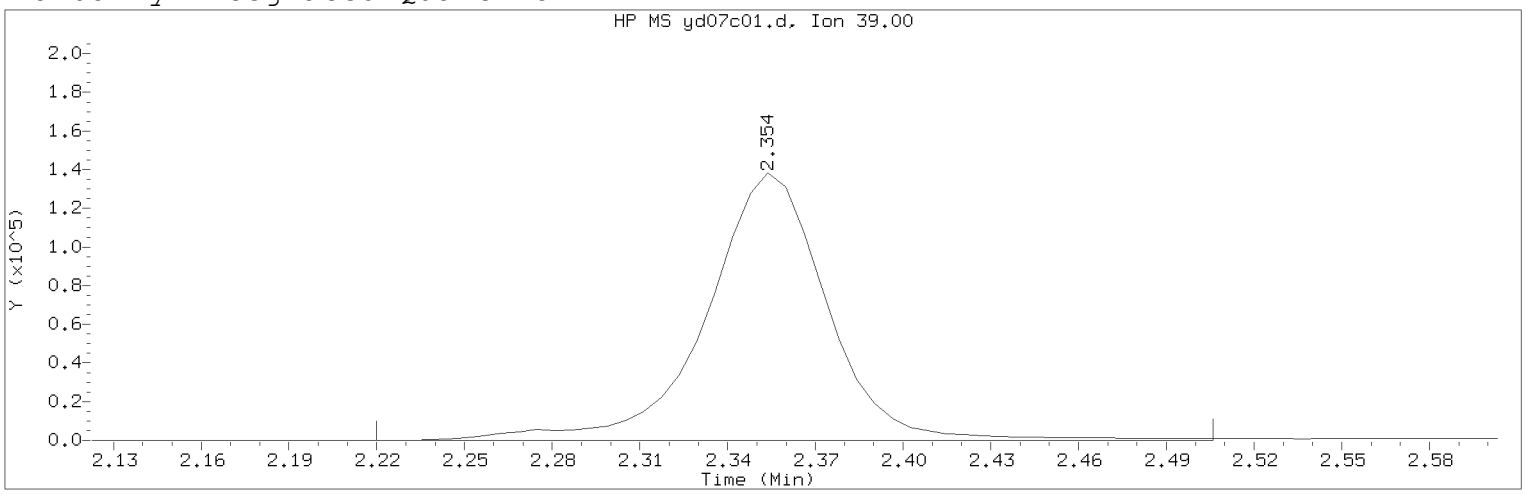
M = Compound was manually integrated.

Digitally signed by Miranda E. Campbell
on 12/07/2019 at 12:58.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 07-DEC-2019 11:27 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 11:46 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

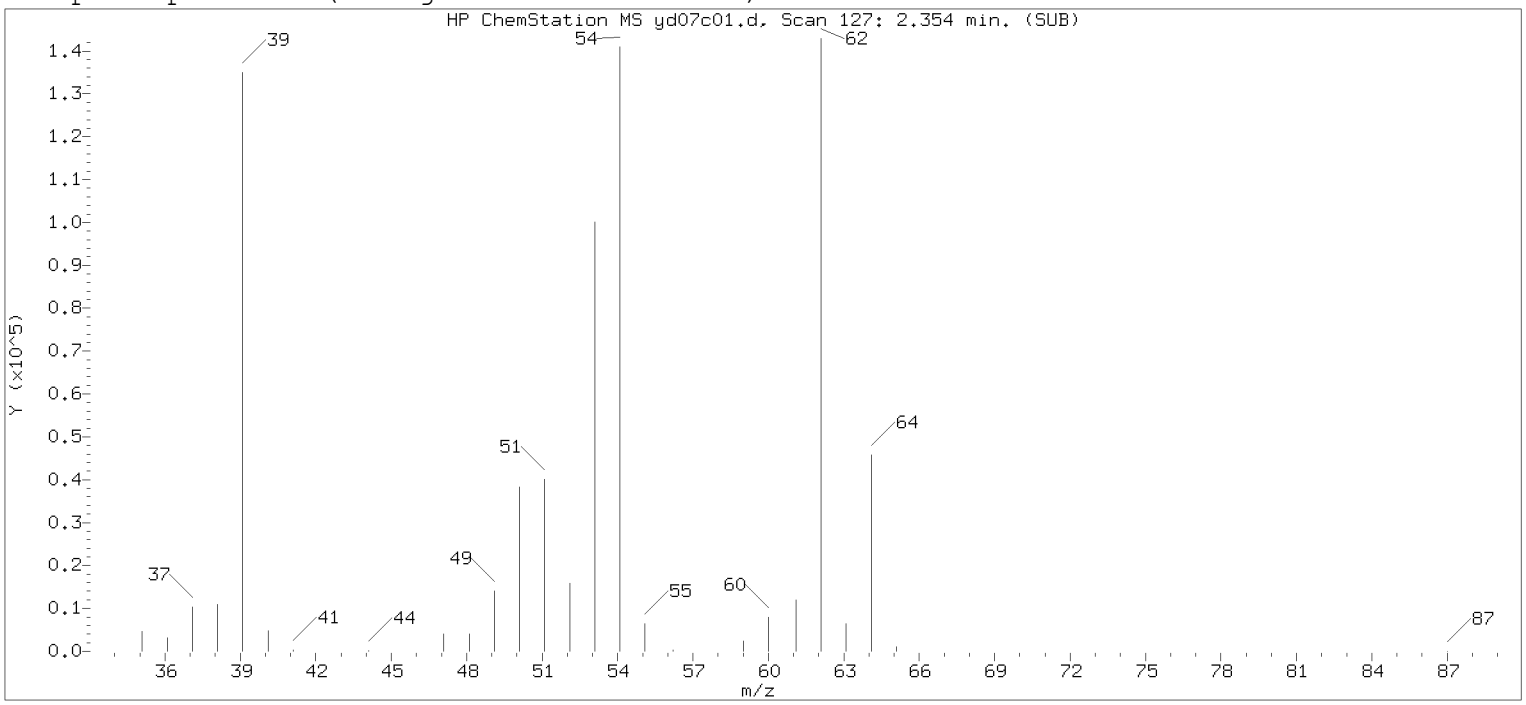
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 127
Retention Time (minutes): 2.354
Quant Ion : 39.00
Area (flag) : 397818M
On-Column Amount (ng) : 55.6871
Integration start scan : 104 Integration stop scan: 151
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

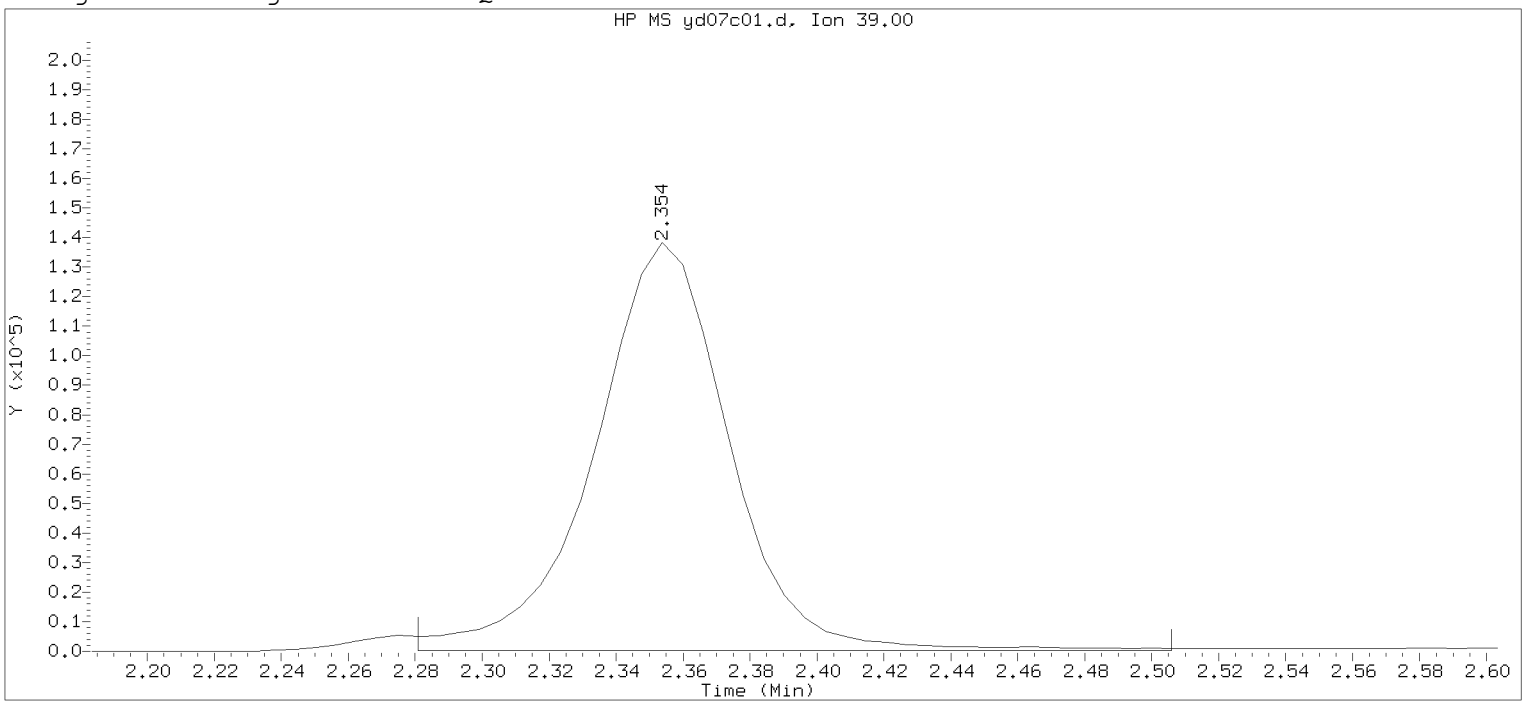
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 12/07/2019 at 12:58.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kari Becker on 12/09/2019 at 19:18.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19dec07a.b/yd07c01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 11:27 Analyst ID: MEC29284

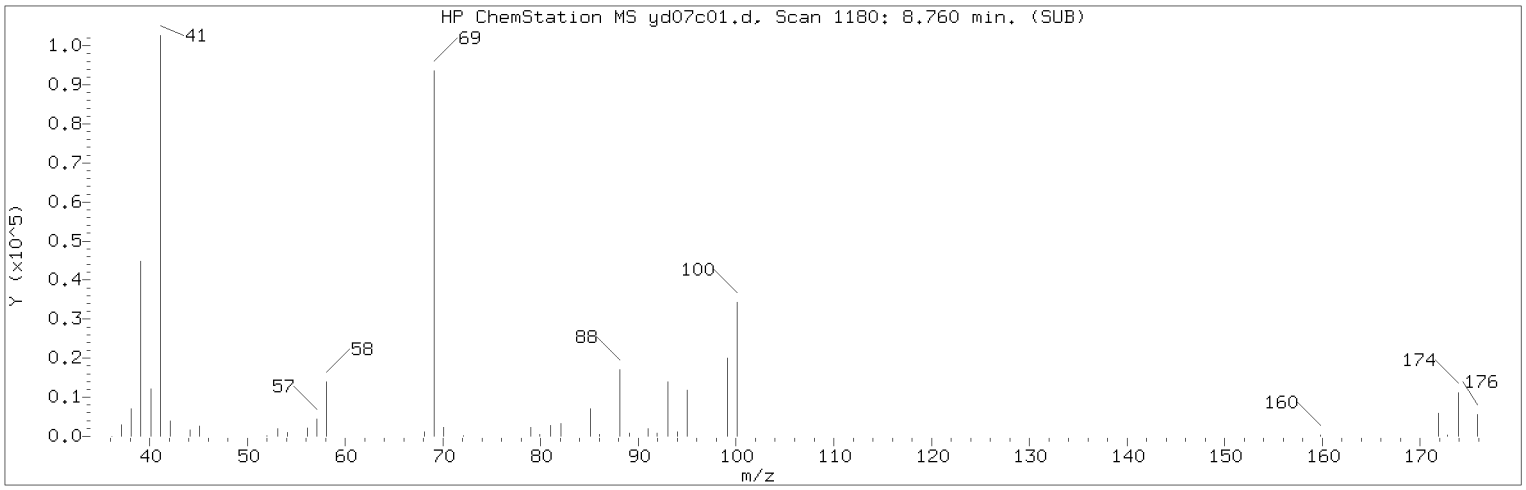
Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 11:45 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

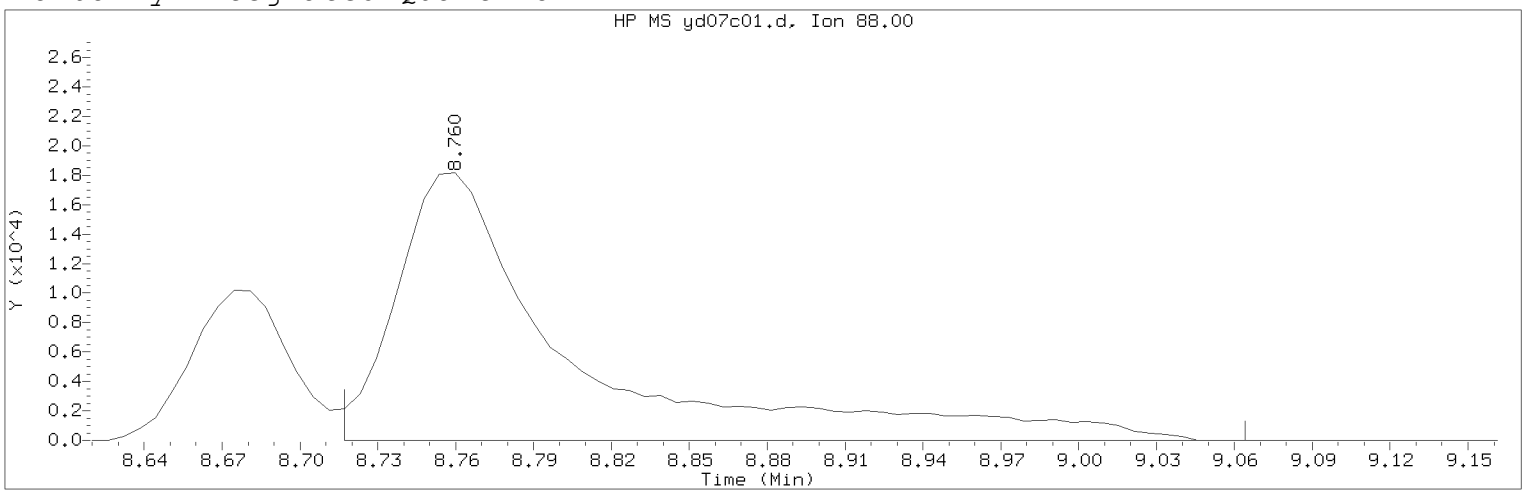
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 127
Retention Time (minutes): 2.354
Quant Ion : 39.00
Area : 387429
On-column Amount (ng) : 54.2328
Integration start scan : 114 Integration stop scan: 151
Y at integration start : 115 Y at integration end: 288

Digitally signed by Miranda E. Campbell on 12/07/2019 at 12:58.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19dec07a.b/yd07c01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 11:27 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 11:46 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

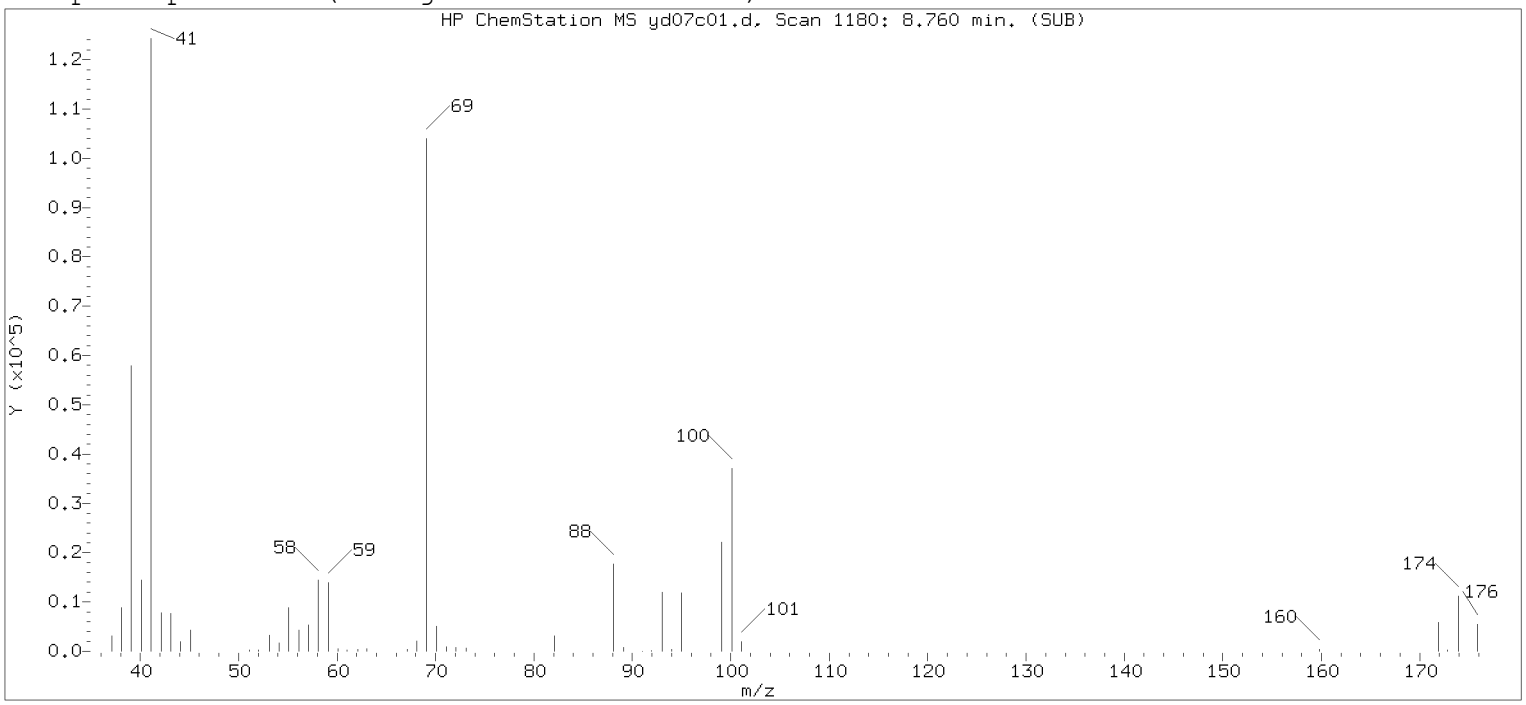
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1180
Retention Time (minutes): 8.760
Quant Ion : 88.00
Area (flag) : 85540M
On-Column Amount (ng) : 767.5353
Integration start scan : 1172 Integration stop scan: 1229
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

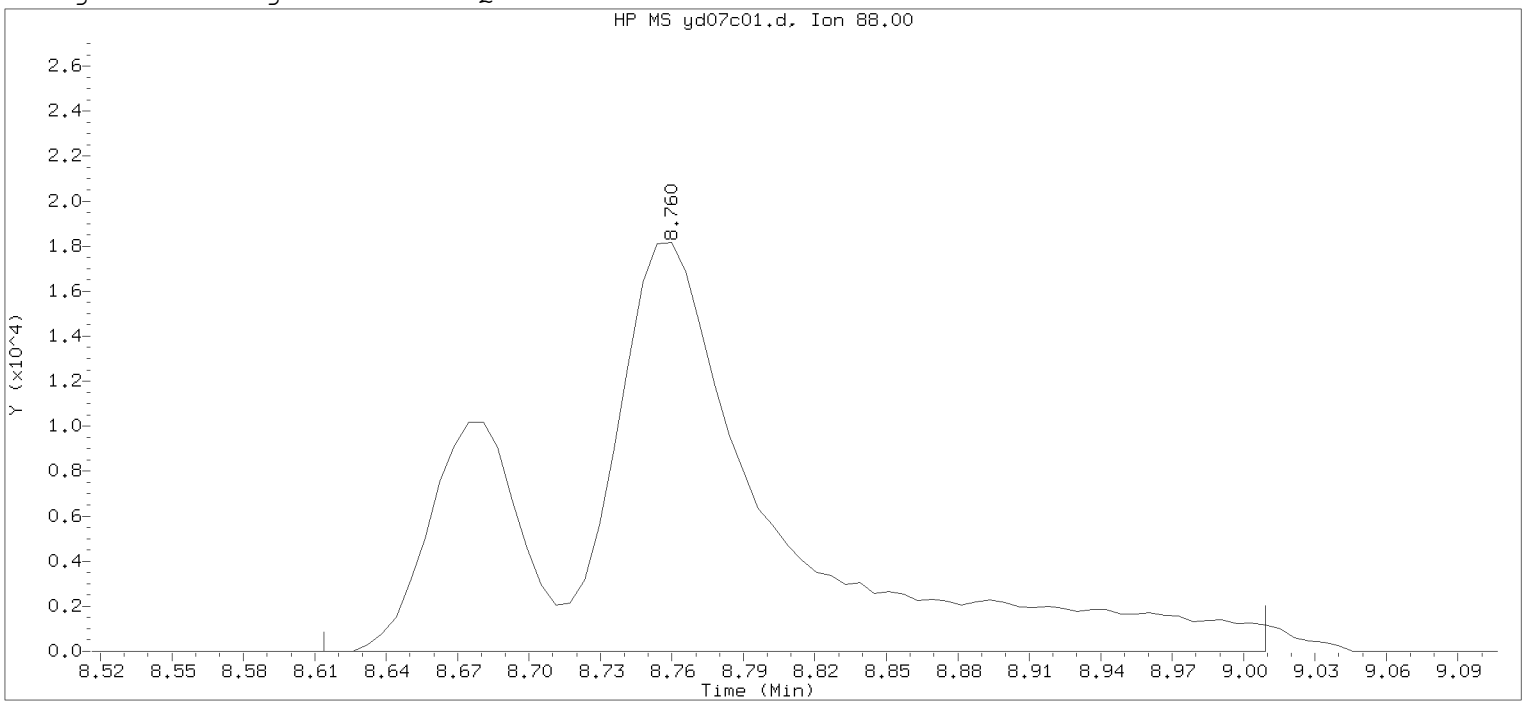
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 12/07/2019 at 12:58.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kari Becker on 12/09/2019 at 19:18.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19dec07a.b/yd07c01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 11:27 Analyst ID: MEC29284

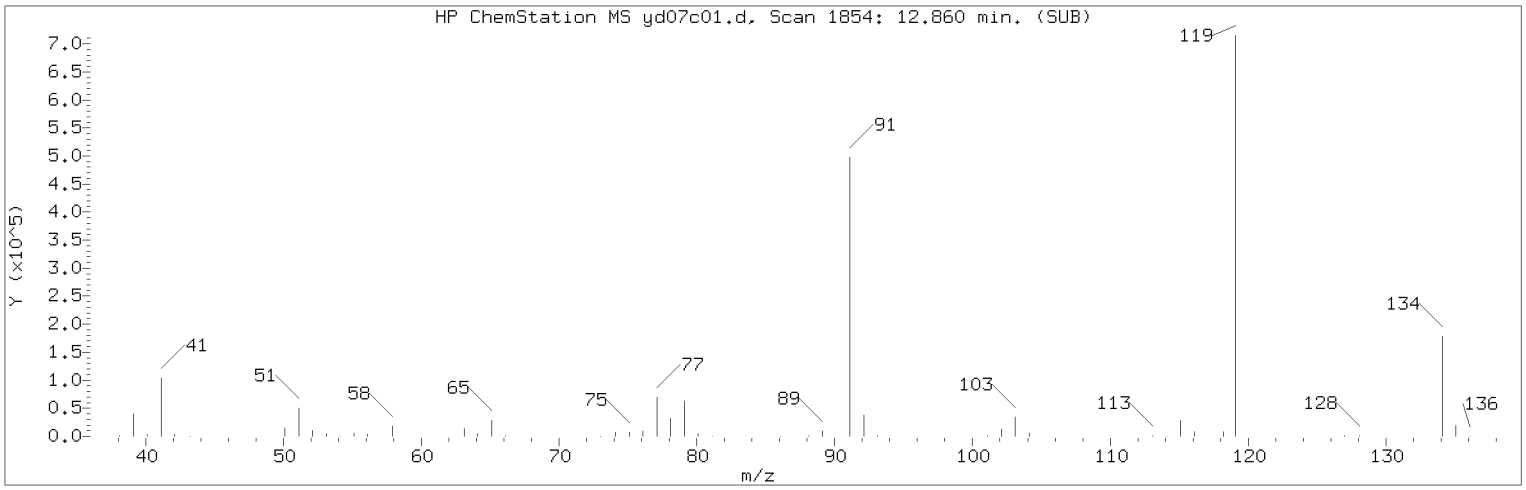
Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 11:45 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

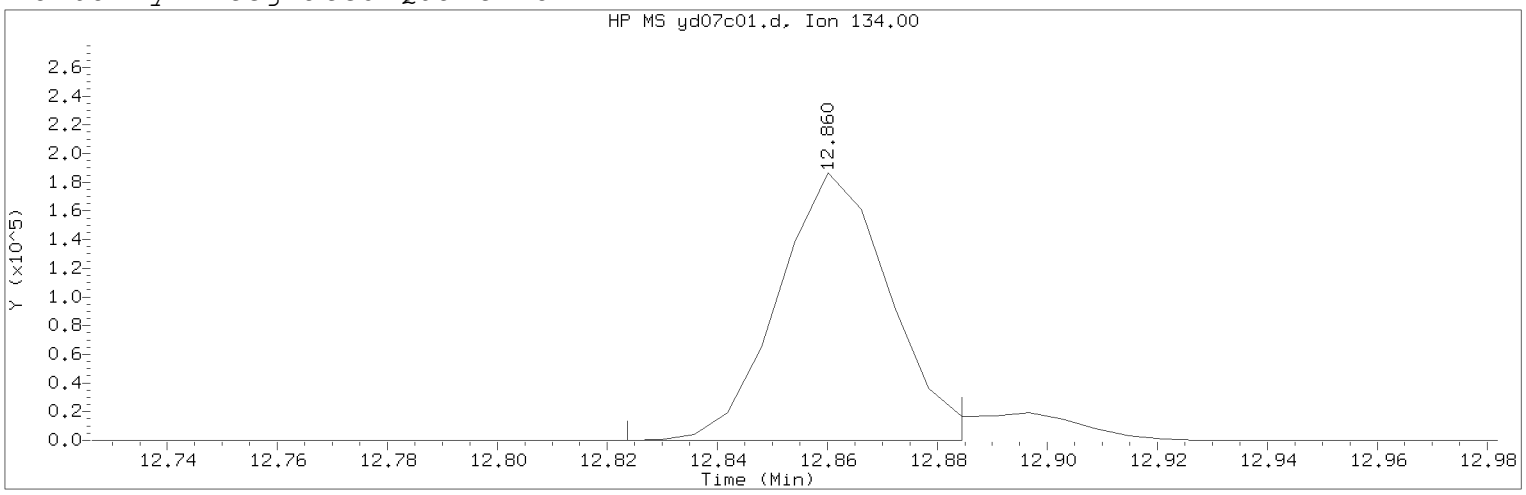
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1180
Retention Time (minutes): 8.760
Quant Ion : 88.00
Area : 111028
On-column Amount (ng) : 996.2237
Integration start scan : 1155 Integration stop scan: 1220
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 12/07/2019 at 12:58.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19dec07a.b/yd07c01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 11:27 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 11:46 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

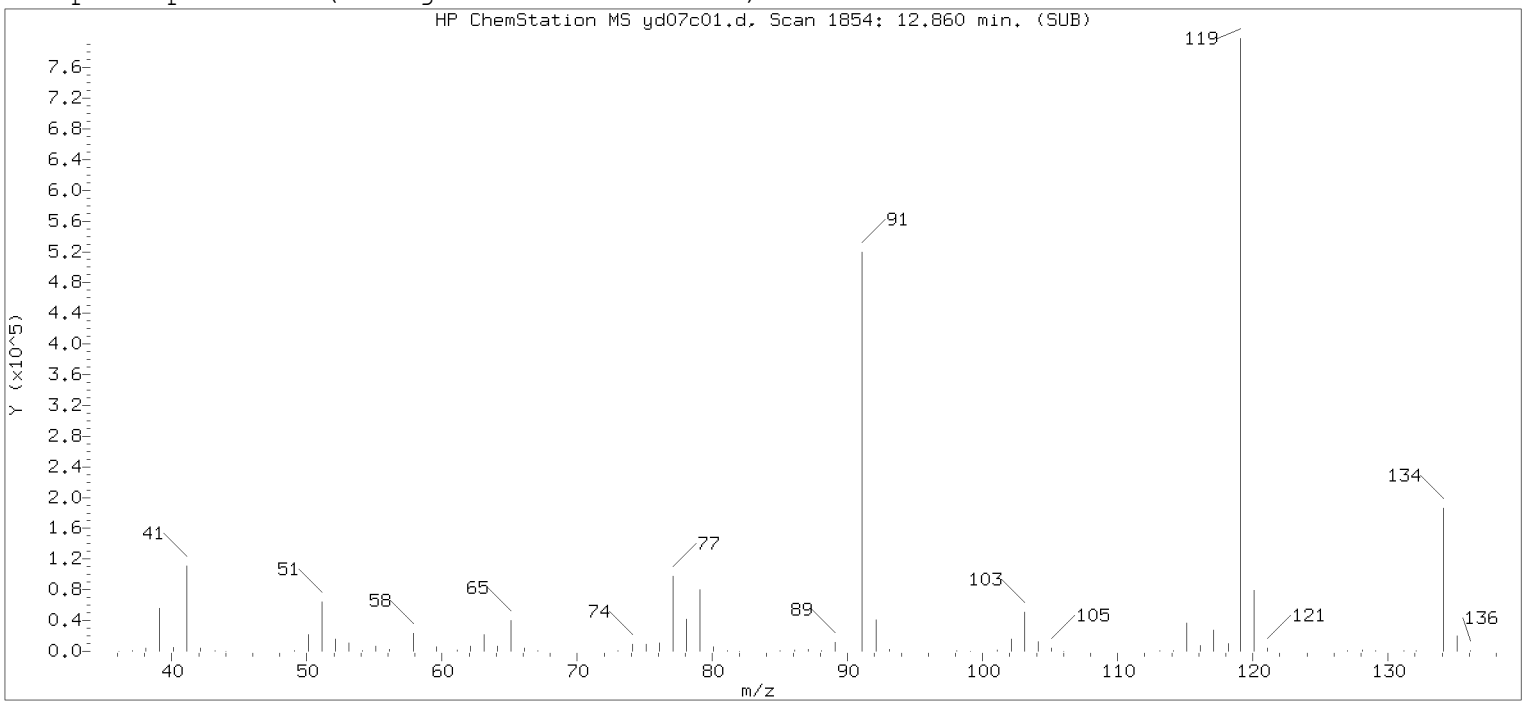
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area (flag) : 262520M
On-Column Amount (ng) : 48.6600
Integration start scan : 1847 Integration stop scan: 1857
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

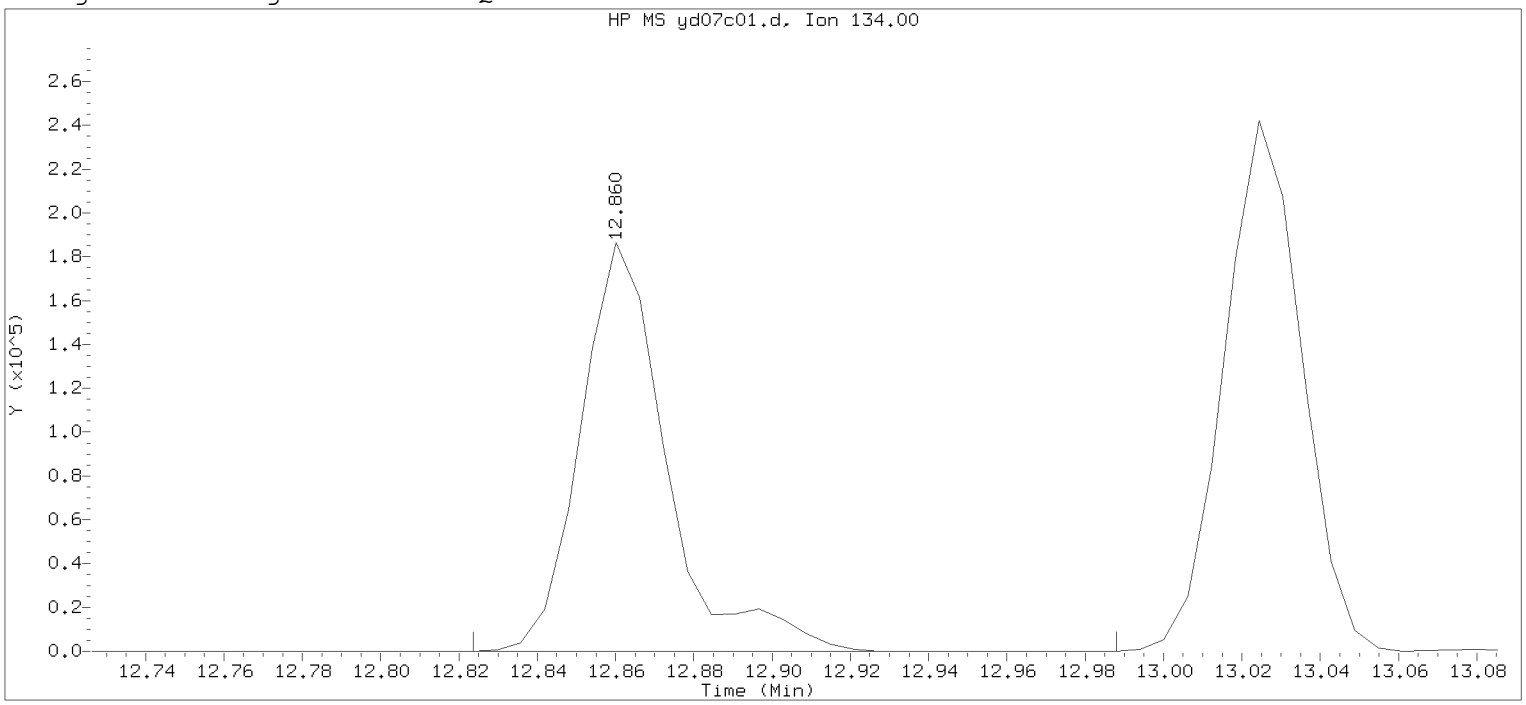
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 12/07/2019 at 12:58.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kari Becker on 12/09/2019 at 19:18.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19dec07a.b/yd07c01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 11:27 Analyst ID: MEC29284

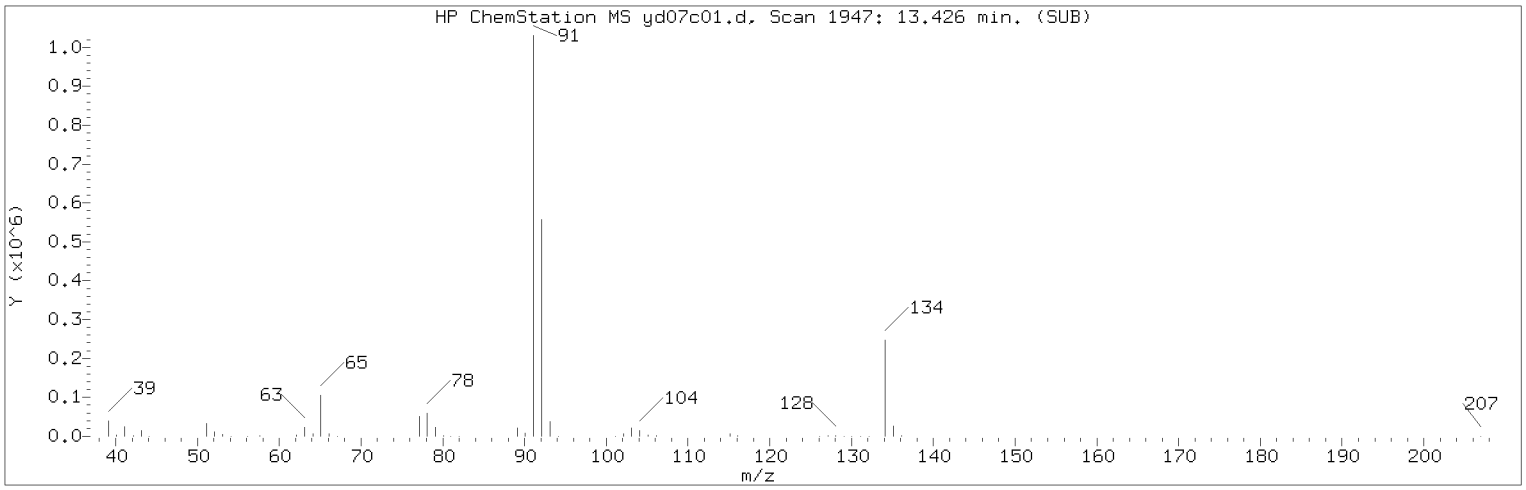
Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 11:45 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

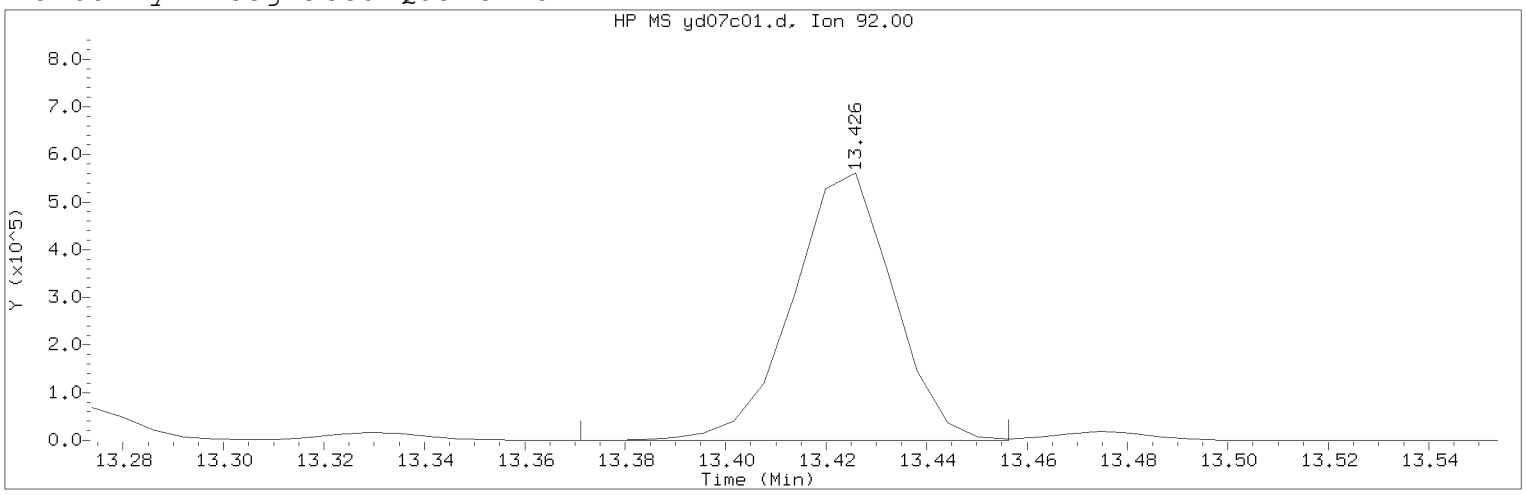
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area : 285536
On-column Amount (ng) : 52.9262
Integration start scan : 1847 Integration stop scan: 1874
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 12/07/2019 at 12:58.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19dec07a.b/yd07c01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 11:27 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 11:46 mec29284

Sample Name: VSTD050 Lab Sample ID: VSTD050

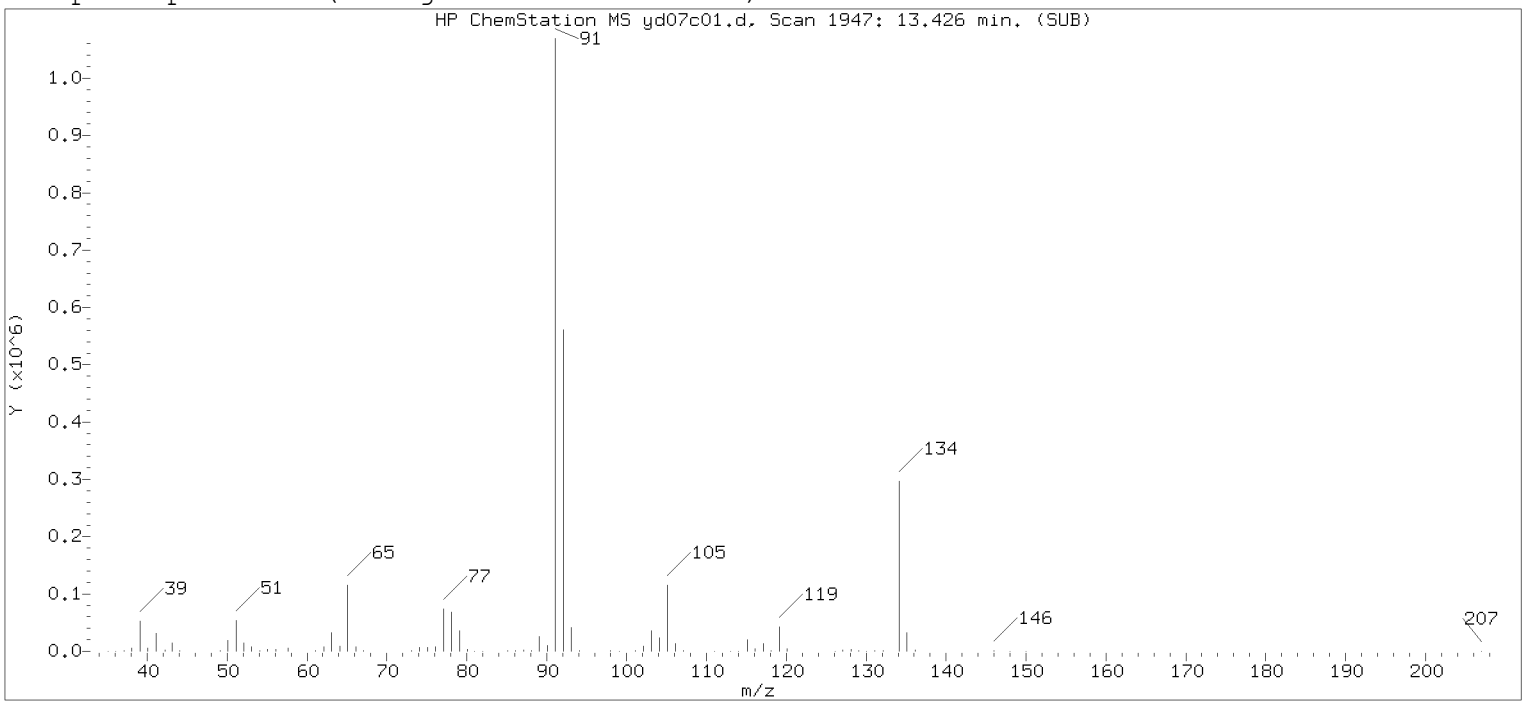
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1947
Retention Time (minutes): 13.426
Quant Ion : 92.00
Area (flag) : 778313M
On-Column Amount (ng) : 52.5087
Integration start scan : 1937 Integration stop scan: 1951
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

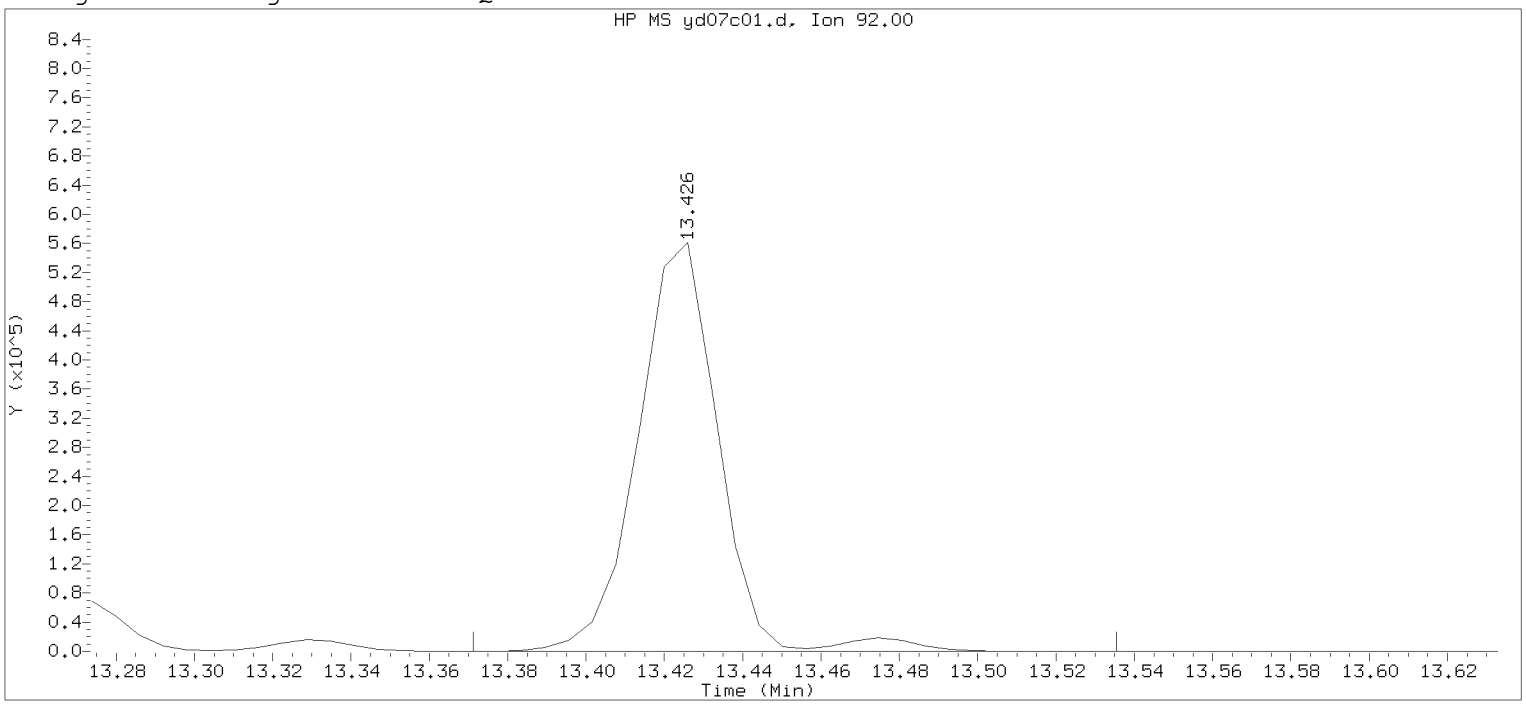
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 12/07/2019 at 12:58.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kari Becker on 12/09/2019 at 19:18.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19dec07a.b/yd07c01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 11:27 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 11:45 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1947
Retention Time (minutes): 13.426
Quant Ion : 92.00
Area : 801952
On-column Amount (ng) : 54.1034
Integration start scan : 1937 Integration stop scan: 1964
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 12/07/2019 at 12:58.
Target 3.5 esignature user name: mcampbell

RLVY15 Lancaster Laboratories Analysis Summary for GC/MS Volatiles RVLY15

Data file: /chem2/HP09355.i/19dec05a.b/yd05r01.d Injection date and time: **05-DEC-2019 08:26**
Data file Sample Info. Line: RLVY15;RVLY15;1;3;MDL/LOQ;;;;yd05b01; Instrument ID: **HP09355.i** Batch: **Y193391AA**
Date, time and analyst ID of latest file update: 05-Dec-2019 09:37 lcp00895

Blank Data file reference: **/chem2/HP09355.i/19dec05a.b/yd05b01.d**

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: **MDLY339**
Calibration date and time (Last Method Edit): 05-DEC-2019 09:37
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec05a.b/yd05c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.349(0.000)	455	65	268974 (-10)	250.00	
66) Fluorobenzene	7.872(-0.006)	1034	96	975210 (-3)	50.00	
100) Chlorobenzene-d5	11.309(0.000)	1599	117	703981 (-4)	50.00	
131) 1,4-Dichlorobenzene-d4	13.183(0.000)	1907	152	366265 (-4)	50.00	

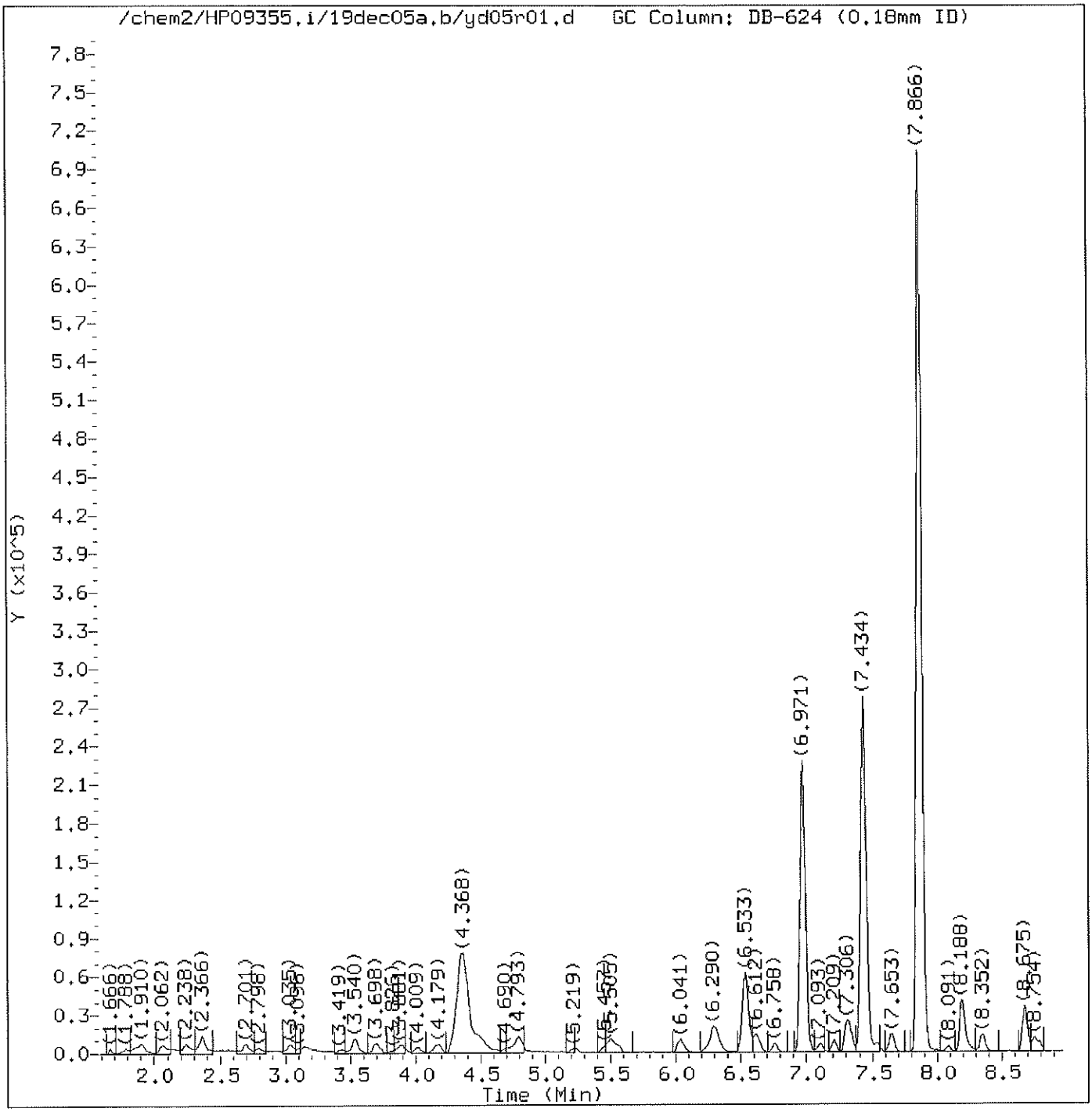
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.971(0.000)	113	208230	45.505	91%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.428(0.001)	102	57923	48.418	97%		80 - 120
83) Toluene-d8	(3)	9.861(0.000)	98	946408	49.687	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.301(0.000)	95	355054	48.788	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit LOQ (in sample)	
3) Dichlorodifluoromethane	(2)	2.044(-0.000)	85	4001	0.447	0.45		J	0.2	1
12) Trichlorofluoromethane	(2)	3.096(-0.000)	101	5269	0.547	0.55		J	0.2	1

Total number of targets = 2

Digitally signed by Linda C. Pape on 12/05/2019 at 09:47. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 12/06/2019 at 20:45. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

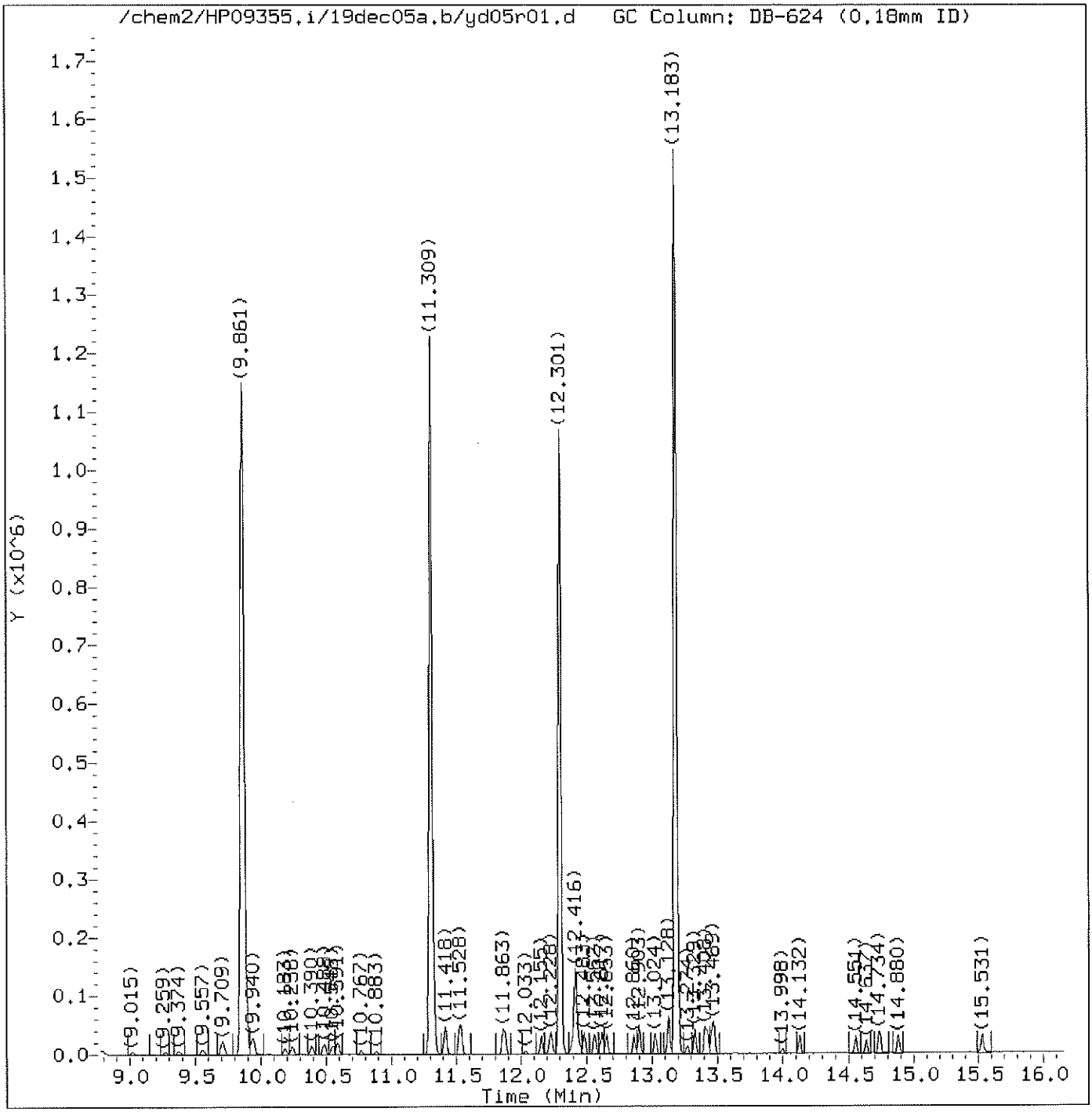
Target Revision 3.5

Data File: /chem2/HP09355.i/19dec05a.b/yd05r01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 08:26 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: MDLY339
Calibration date and time: 05-DEC-2019 09:37
Date, time and analyst ID of latest file update: 05-Dec-2019 09:37 lcp00895

Sample Name: RLVY15 Lab Sample ID: RVLY15

Digitally signed by Linda C. Pape
on 12/05/2019 at 09:47.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec05a.b/yd05r01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 08:26 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: MDLY339
Calibration date and time: 05-DEC-2019 09:37
Date, time and analyst ID of latest file update: 05-Dec-2019 09:37 lcp00895

Sample Name: RLVY15 Lab Sample ID: RVLY15

Digitally signed by Linda C. Pape
on 12/05/2019 at 09:47.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec05a.b/yd05r01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 08:26 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: MDLY339
Calibration date and time: 05-DEC-2019 09:37
Date, time and analyst ID of latest file update: 05-Dec-2019 09:37 lcp00895

Sample Name: RLVY15 Lab Sample ID: RVLY15

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.044	85	4001	0.447
12) Trichlorofluoromethane	(2)	3.096	101	5269	0.547
29)*t-Butyl alcohol-d10	(1)	4.349	65	268974	250.000
52)$Dibromofluoromethane	(2)	6.971	113	208230	45.505
57)$1,2-Dichloroethane-d4	(2)	7.428	102	57923	48.418
66)*Fluorobenzene	(2)	7.872	96	975210	50.000
83)$Toluene-d8	(3)	9.861	98	946408	49.687
100)*Chlorobenzene-d5	(3)	11.309	117	703981	50.000
114)$4-Bromofluorobenzene	(3)	12.301	95	355054	48.788
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	366265	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 12/05/2019 at 09:47.
Target 3.5 esignature user ID: lcp00895

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

RLVY17

Data file: /chem2/HP09355.i/19dec07a.b/yd07r01.d Injection date and time: **07-DEC-2019 12:11**
Data file Sample Info. Line: RLVY17;RLVY17;1;3;MDL/LOQ;;;;yd07b01; Instrument ID: **HP09355.i** Batch: **Y193411AA**
Date, time and analyst ID of latest file update: 07-Dec-2019 12:55 mec29284

Blank Data file reference: **/chem2/HP09355.i/19dec07a.b/yd07b01.d**

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 07-DEC-2019 11:45
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec07a.b/yd07c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.362	(-0.012)	457	65	351069	(-2)	250.00	
66) Fluorobenzene	7.866	(0.000)	1033	96	1152397	(-1)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	835472	(-3)	50.00	
131) 1,4-Dichlorobenzene-d4	13.183	(0.000)	1907	152	434086	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.971	(-0.001)	113	245335	45.370	91%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434	(-0.001)	102	67732	47.912	96%		80 - 120
83) Toluene-d8	(3)	9.861	(0.000)	98	1114482	49.302	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.301	(0.000)	95	419372	48.557	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Lim (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	2.050	(-0.001)	85	5255	0.497	0.50		J	0.2	1
4) Chloromethane	(2)	2.244	(-0.001)	50	7544	0.830	0.83		J	0.2	1
5) 1,3-Butadiene	(2)	2.366	(-0.001)	39	8360	1.183	1.18		J	1	3
6) Vinyl Chloride	(2)	2.360	(-0.000)	62	6322	0.709	0.71		J	0.2	1
8) Bromomethane	(2)	2.707	(-0.002)	94	4739	0.716	0.72		J	0.3	1
9) Chloroethane	(2)	2.798	(-0.002)	64	4292	0.829	0.83		J	0.2	1
11) n-Pentane	(2)	3.157	(-0.002)	43	7887	0.715	0.71		J	0.4	10
12) Trichlorofluoromethane	(2)	3.102	(-0.001)	101	6213	0.546	0.55		J	0.2	1
14) Ethyl ether	(2)	3.364	(-0.001)	59	4389	0.741	0.74		J	0.2	5
15) Freon 123a	(2)	3.437	(-0.001)	67	6010	0.875	0.87		J	0.4	5
16) Acrolein	(1)	3.534	(-0.000)	56	27436	10.290	10.29		J	2	100
17) 1,1-Dichloroethene	(2)	3.692	(-0.002)	96	3905	0.781	0.78		J	0.2	1
18) Acetone	(1)	3.704	(-0.001)	58	2639	2.103	2.10		J	0.7	20
19) Freon 113	(2)	3.717	(-0.001)	101	4084	0.717	0.72		J	0.2	10
21) 2-Propanol	(1)	3.869	(-0.001)	45	4919	6.512	6.51		J	18	100
22) Methyl Iodide	(2)	3.899	(-0.002)	142	8194	0.834	0.83		J	0.2	1
23) Carbon Disulfide	(2)	4.021	(-0.002)	76	15427	0.853	0.85		J	0.2	5
25) Allyl Chloride	(2)	4.179	(-0.001)	41	7726	0.891	0.89		J	0.3	5
27) Methyl Acetate	(2)	4.149	(-0.003)	43	9573	1.095	1.09		J	0.2	5
28) Methylene Chloride	(2)	4.368	(-0.001)	84	6540	1.095	1.09			0.3	1
30) t-Butyl alcohol	(1)	4.483	(0.001)	59	10081	6.381	6.38		J	12	50
31) Acrylonitrile	(2)	4.708	(-0.004)	53	4530	0.989	0.99		J	0.3	20
32) trans-1,2-Dichloroethene	(2)	4.812	(-0.003)	96	5116	0.883	0.88		J	0.2	1
33) Methyl Tertiary Butyl Ether	(2)	4.781	(-0.001)	73	20075	1.007	1.01			0.2	1
34) n-Hexane	(2)	5.225	(-0.001)	57	6954	0.708	0.71		J	2	5
36) 1,1-Dichloroethane	(2)	5.450	(-0.001)	63	9650	0.916	0.92		J	0.2	1
38) di-Isopropyl ether	(2)	5.505	(-0.001)	45	22346	1.110	1.11			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	5.560	(-0.000)	53	7249	0.759	0.76		J	0.2	5
40) Ethyl t-butyl ether	(2)	6.034	(-0.000)	59	19087	0.968	0.97		J	0.2	1
42) cis-1,2-Dichloroethene	(2)	6.278	(-0.001)	96	5832	0.886	0.89		J	0.2	1
43) 1,2-Dichloroethene (Total)	(2)			96	10948	1.769	1.77	0 B	J	0.4	2

B = Compound detected in referenced method blank.

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Data file: /chem2/HP09355.i/19dec07a.b/yd07r01.d Injection date and time: **07-DEC-2019 12:11**
Data file Sample Info. Line: RLVY17;RLVY17;1;3;MDL/LOQ;;;;yd07b01; Instrument ID: **HP09355.i** Batch: **Y193411AA**
Date, time and analyst ID of latest file update: 07-Dec-2019 12:55 mec29284

Blank Data file reference: **/chem2/HP09355.i/19dec07a.b/yd07b01.d**

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 07-DEC-2019 11:45
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec07a.b/yd07c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	6.247(-0.003)	43	14239	2.084	2.08		J	0.3	10
45) 2,2-Dichloropropane	(2)	6.284(0.000)	77	5224	0.646	0.65		J	0.3	1
47) Propionitrile	(1)	6.314(0.001)	54	10344	5.693	5.69		J	14	100
48) Methacrylonitrile	(2)	6.539(-0.001)	67	11507	2.364	2.36		J	6	50
49) Bromochloromethane	(2)	6.618(-0.001)	128	2833	0.824	0.82		J	0.2	5
50) Tetrahydrofuran	(1)	6.625(0.002)	71	3569	1.811	1.81		J	0.7	10
51) Chloroform	(2)	6.758(-0.001)	83	9017	0.884	0.88		J	0.2	1
53) 1,1,1-Trichloroethane	(2)	6.996(-0.001)	97	6462	0.731	0.73		J	0.3	1
54) Cyclohexane	(2)	7.111(-0.001)	56	9459	0.821	0.82		J	1	5
55) 1,1-Dichloropropene	(2)	7.209(-0.001)	75	6724	0.788	0.79		J	0.2	5
56) Carbon Tetrachloride	(2)	7.215(-0.001)	117	5043	0.669	0.67		J	0.2	1
58) Isobutyl Alcohol	(1)	7.318(0.001)	41	8224	15.073	15.07		J	36	250
60) Benzene	(2)	7.470(-0.000)	78	27576	1.105	1.11			0.2	1
61) 1,2-Dichloroethane	(2)	7.537(-0.000)	62	9861	1.114	1.11			0.3	1
65) t-Amyl methyl ether	(2)	7.653(-0.000)	73	18366	0.930	0.93	0.638	B J	0.8	5
67) n-Heptane	(2)	7.884(-0.000)	43	8035	0.774	0.77		J	2	5
69) n-Butanol	(1)	8.194(0.002)	56	11832	23.121	23.12		J	61	250
71) Trichloroethene	(2)	8.346(0.000)	95	5445	0.844	0.84		J	0.2	1
72) Methylcyclohexane	(2)	8.669(0.000)	83	8641	0.706	0.71		J	0.5	5
73) 1,2-Dichloropropane	(2)	8.681(0.000)	63	6328	0.995	1.00		J	0.2	1
74) Dibromomethane	(2)	8.796(-0.000)	93	3664	0.873	0.87		J	0.2	1
75) 1,4-Dioxane	(1)	8.766(0.004)	88	1311	12.013	12.01		J	29	250
76) Methyl Methacrylate	(2)	8.754(-0.001)	69	5806	0.778	0.78		J	0.2	5
78) Bromodichloromethane	(2)	9.022(0.000)	83	5747	0.785	0.79		J	0.2	1
79) 2-Nitropropane	(2)	9.271(-0.000)	41	4590	1.471	1.47		J	0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)	9.374(-0.000)	63	4465	0.831	0.83		J	0.2	10
81) cis-1,3-Dichloropropene	(2)	9.557(0.000)	75	7170	0.726	0.73		J	0.2	1
82) 4-Methyl-2-pentanone	(2)	9.709(-0.000)	43	23988	1.863	1.86	0.317	B J	0.5	10
88) Toluene	(3)	9.940(-0.000)	92	17479	1.130	1.13	0.025	B	0.2	1
89) trans-1,3-Dichloropropene	(3)	10.184(-0.000)	75	6844	0.758	0.76		J	0.2	1
90) 1,3-Dichloropropene (total)	(3)		100	14014	1.484	1.48	0	B J	0.4	2
91) Ethyl Methacrylate	(3)	10.238(-0.000)	69	8903	0.778	0.78		J	0.2	5
92) 1,1,2-Trichloroethane	(3)	10.390(-0.000)	97	5879	0.985	0.99		J	0.2	1
93) Tetrachloroethene	(3)	10.488(-0.000)	166	6246	0.954	0.95		J	0.2	1
94) 1,3-Dichloropropane	(3)	10.548(-0.000)	76	10454	1.009	1.01			0.2	1
96) 2-Hexanone	(3)	10.585(-0.000)	43	18526	1.813	1.81		J	0.3	10
97) Dibromochloromethane	(3)	10.768(-0.000)	129	4098	0.706	0.71		J	0.2	1
99) 1,2-Dibromoethane	(3)	10.883(-0.000)	107	6584	1.014	1.01			0.2	1
101) 1-Chlorohexane	(3)	11.309(0.000)	91	8251	0.949	0.95	0.189	B J	0.3	5
102) Chlorobenzene	(3)	11.333(0.000)	112	16760	0.963	0.96		J	0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)	11.412(-0.000)	131	4394	0.790	0.79		J	0.2	1
104) Ethylbenzene	(3)	11.418(-0.000)	91	30201	1.019	1.02	0.056	B	0.4	1
106) m+p-Xylene	(3)	11.528(-0.000)	106	22420	1.917	1.92		J	1	5
107) o-Xylene	(3)	11.856(-0.000)	106	10724	0.942	0.94		J	0.4	1
108) Xylene (Total)	(3)		106	33144	2.859	2.86	0	B J	1	6
109) Styrene	(3)	11.875(-0.000)	104	14574	0.774	0.77		J	0.2	5
110) Bromoform	(3)	12.033(-0.000)	173	2686	0.642	0.64		J	1	4
111) Isopropylbenzene	(3)	12.155(0.000)	105	26445	0.899	0.90		J	0.2	5
112) Cyclohexanone	(1)	12.228(0.007)	55	6873	11.861	11.86	1.238	B J	25	100
115) Bromobenzene	(4)	12.422(-0.000)	156	7151	1.003	1.00		J	0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	12.392(-0.000)	83	10021	0.977	0.98		J	0.2	1
117) 1,2,3-Trichloropropane	(4)	12.440(-0.000)	110	3251	0.998	1.00		J	0.2	5
118) trans-1,4-Dichloro-2-butene	(4)	12.416(-0.000)	53	4814	1.357	1.36		J	6	50
119) n-Propylbenzene	(4)	12.483(0.000)	91	30802	0.911	0.91	0.026	B J	0.2	5

B = Compound detected in referenced method blank.

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Data file: /chem2/HP09355.i/19dec07a.b/yd07r01.d Injection date and time: **07-DEC-2019 12:11**
Data file Sample Info. Line: RLVY17;RLVY17;1;3;MDL/LOQ;;;;yd07b01; Instrument ID: **HP09355.i** Batch: **Y193411AA**
Date, time and analyst ID of latest file update: 07-Dec-2019 12:55 mec29284

Blank Data file reference: **/chem2/HP09355.i/19dec07a.b/yd07b01.d**

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 07-DEC-2019 11:45
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec07a.b/yd07c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample) LOQ
120) 2-Chlorotoluene	(4)	12.562(0.000)	126	6166	0.885	0.89		J	0.2 5
121) 4-Chlorotoluene	(4)	12.653(-0.000)	126	6505	0.893	0.89		J	0.2 5
122) 1,3,5-Trimethylbenzene	(4)	12.617(0.000)	105	22834	0.913	0.91		J	0.3 5
124) tert-Butylbenzene	(4)	12.860(-0.000)	134	4810	0.918	0.92		J	0.3 5
125) Pentachloroethane	(4)	12.897(0.000)	167	2727	0.685	0.69		J	0.2 5
126) 1,2,4-Trimethylbenzene	(4)	12.903(0.000)	105	23807	0.906	0.91		J	1 5
127) sec-Butylbenzene	(4)	13.024(0.000)	105	27013	0.853	0.85		J	0.2 5
129) 1,3-Dichlorobenzene	(4)	13.128(-0.000)	146	13535	0.969	0.97		J	0.2 5
130) p-Isopropyltoluene	(4)	13.134(-0.000)	119	21491	0.789	0.79		J	0.2 5
133) 1,4-Dichlorobenzene	(4)	13.201(0.000)	146	14578	1.022	1.02		J	0.2 5
134) 1,2,3-Trimethylbenzene	(4)	13.207(0.000)	105	25084	0.909	0.91		J	0.3 5
135) Benzyl Chloride	(4)	13.274(0.000)	91	10830	0.544	0.54	0.051	B J	1 5
136) 1,3-Diethylbenzene	(4)	13.329(0.000)	119	13759	0.774	0.77		J	0.2 5
137) 1,4-Diethylbenzene	(4)	13.402(0.000)	119	14301	0.760	0.76		J	0.2 5
138) 1,2-Dichlorobenzene	(4)	13.456(0.000)	146	13360	0.978	0.98		J	0.2 5
139) n-Butylbenzene	(4)	13.426(0.000)	92	12605	0.876	0.88		J	0.2 5
140) 1,2-Diethylbenzene	(4)	13.475(0.000)	119	12609	0.843	0.84		J	0.2 5
141) Diethylbenzene (total)	(4)		100	40669	2.377	2.38	0	B J	0.6 15
142) 1,2-Dibromo-3-chloropropane	(4)	14.004(-0.000)	75	2153	0.813	0.81		J	0.3 5
144) 1,3,5-Trichlorobenzene	(4)	14.132(0.000)	180	9542	0.909	0.91		J	0.2 5
146) 1,2,4-Trichlorobenzene	(4)	14.552(0.000)	180	9499	0.944	0.94	0.038	B J	0.3 5
147) Hexachlorobutadiene	(4)	14.637(0.000)	225	4939	1.102	1.10	0.046	B J	2 5
148) Naphthalene	(4)	14.734(0.000)	128	35178	0.986	0.99	0.037	B J	1 5
149) 1,2,3-Trichlorobenzene	(4)	14.880(0.000)	180	10092	1.032	1.03	0.036	B J	0.4 5
150) 2-Methylnaphthalene	(4)	15.531(0.000)	142	20172	0.855	0.86	0.086	B J	2 4

B = Compound detected in referenced method blank.

Total number of targets = 110

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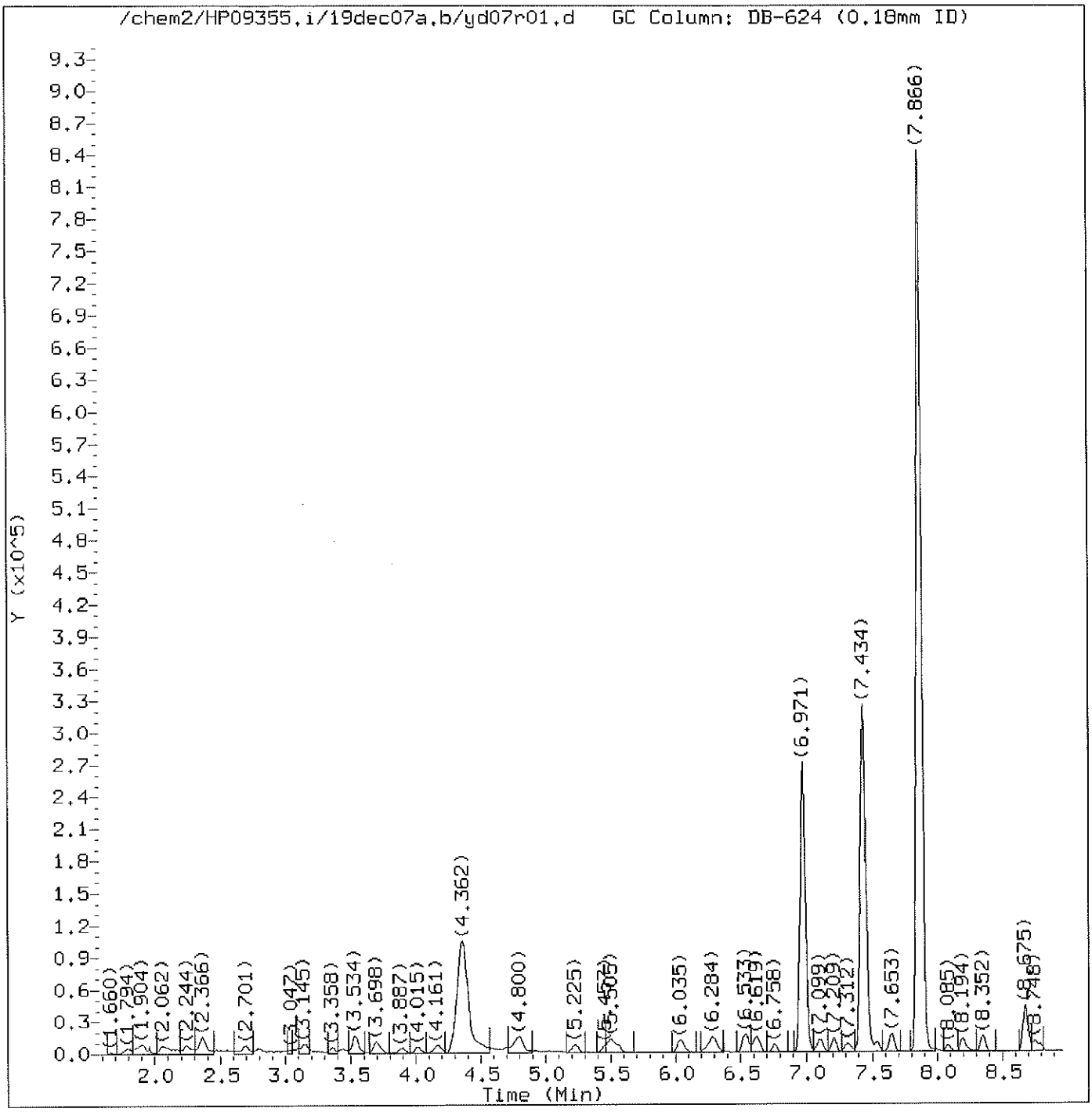
Secondary review performed and digitally signed by Kari Becker on 12/09/2019 at 19:18. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07r01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 12:11 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 12:55 mec29284

Sample Name: RLVY17 Lab Sample ID: RLVY17

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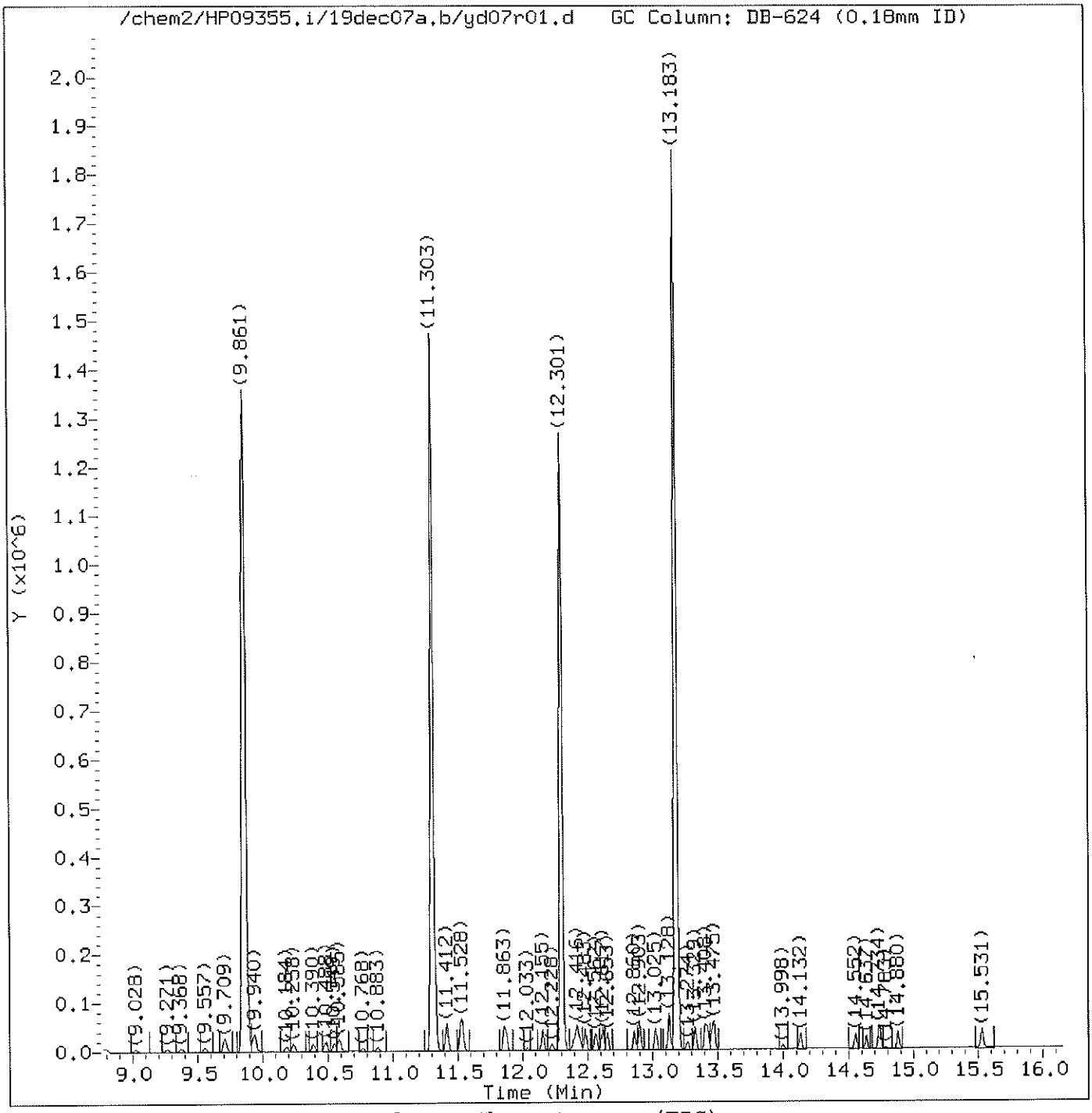
on 12/07/2019 at 12:59.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07r01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 12:11 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 12:55 mec29284

Sample Name: RLVY17 Lab Sample ID: RLVY17

Digitally signed by Miranda E. Campbell
on 12/07/2019 at 12:59.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07r01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 12:11 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 12:55 mec29284

Sample Name: RLVY17 Lab Sample ID: RLVY17

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.050	85	5255	0.497
4) Chloromethane	(2)	2.244	50	7544	0.830
6) Vinyl Chloride	(2)	2.360	62	6322	0.709
5) 1,3-Butadiene	(2)	2.366	39	8360	1.183
8) Bromomethane	(2)	2.707	94	4739	0.716
9) Chloroethane	(2)	2.798	64	4292	0.829
12) Trichlorofluoromethane	(2)	3.102	101	6213	0.546
11) n-Pentane	(2)	3.157	43	7887	0.715
14) Ethyl ether	(2)	3.364	59	4389	0.741
15) Freon 123a	(2)	3.437	67	6010	0.875
16) Acrolein	(1)	3.534	56	27436	10.290
17) 1,1-Dichloroethene	(2)	3.692	96	3905	0.781
18) Acetone	(1)	3.705	58	2639	2.103
19) Freon 113	(2)	3.717	101	4084	0.717
21) 2-Propanol	(1)	3.869	45	4919	6.512
22) Methyl Iodide	(2)	3.899	142	8194	0.834
23) Carbon Disulfide	(2)	4.021	76	15427	0.853
27) Methyl Acetate	(2)	4.149	43	9573	1.095
25) Allyl Chloride	(2)	4.179	41	7726	0.891
29)*t-Butyl alcohol-d10	(1)	4.362	65	351069	250.000
28) Methylene Chloride	(2)	4.368	84	6540	1.095
30) t-Butyl alcohol	(1)	4.483	59	10081	6.381
31) Acrylonitrile	(2)	4.708	53	4530	0.989
33) Methyl Tertiary Butyl Ether	(2)	4.781	73	20075	1.007
32) trans-1,2-Dichloroethene	(2)	4.812	96	5116	0.883
34) n-Hexane	(2)	5.225	57	6954	0.708
36) 1,1-Dichloroethane	(2)	5.450	63	9650	0.916
38) di-Isopropyl ether	(2)	5.505	45	22346	1.110
39) 2-Chloro-1,3-butadiene	(2)	5.560	53	7249	0.759
40) Ethyl t-butyl ether	(2)	6.035	59	19087	0.968
43) 1,2-Dichloroethene (Total)	(2)		96	10948	1.769
44) 2-Butanone	(2)	6.247	43	14239	2.084
42) cis-1,2-Dichloroethene	(2)	6.278	96	5832	0.886
45) 2,2-Dichloropropane	(2)	6.284	77	5224	0.646
47) Propionitrile	(1)	6.314	54	10344	5.693
48) Methacrylonitrile	(2)	6.539	67	11507	2.364
49) Bromochloromethane	(2)	6.619	128	2833	0.824
50) Tetrahydrofuran	(1)	6.625	71	3569	1.811

* = Compound is an internal standard.

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on 12/07/2019 at 12:59.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07r01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 12:11 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 12:55 mec29284

Sample Name: RLVY17 Lab Sample ID: RLVY17

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	6.758	83	9017	0.884
52)$Dibromofluoromethane	(2)	6.971	113	245335	45.370
53) 1,1,1-Trichloroethane	(2)	6.996	97	6462	0.731
54) Cyclohexane	(2)	7.111	56	9459	0.821
55) 1,1-Dichloropropene	(2)	7.209	75	6724	0.788
56) Carbon Tetrachloride	(2)	7.215	117	5043	0.669
58) Isobutyl Alcohol	(1)	7.318	41	8224	15.073
57)$1,2-Dichloroethane-d4	(2)	7.434	102	67732	47.912
60) Benzene	(2)	7.470	78	27576	1.105
61) 1,2-Dichloroethane	(2)	7.537	62	9861	1.114
65) t-Amyl methyl ether	(2)	7.653	73	18366	0.930
66)*Fluorobenzene	(2)	7.866	96	1152397	50.000
67) n-Heptane	(2)	7.884	43	8035	0.774
69) n-Butanol	(1)	8.194	56	11832	23.121
71) Trichloroethene	(2)	8.346	95	5445	0.844
72) Methylcyclohexane	(2)	8.669	83	8641	0.706
73) 1,2-Dichloropropane	(2)	8.681	63	6328	0.995
76) Methyl Methacrylate	(2)	8.754	69	5806	0.778
75) 1,4-Dioxane	(1)	8.766	88	1311	12.013
74) Dibromomethane	(2)	8.796	93	3664	0.873
78) Bromodichloromethane	(2)	9.022	83	5747	0.785
79) 2-Nitropropane	(2)	9.271	41	4590	1.471
80) 2-Chloroethyl Vinyl Ether	(2)	9.374	63	4465	0.831
81) cis-1,3-Dichloropropene	(2)	9.557	75	7170	0.726
82) 4-Methyl-2-pentanone	(2)	9.709	43	23988	1.863
83)$Toluene-d8	(3)	9.861	98	1114482	49.302
88) Toluene	(3)	9.940	92	17479	1.130
90) 1,3-Dichloropropene (total)	(3)		100	14014	1.484
89) trans-1,3-Dichloropropene	(3)	10.184	75	6844	0.758
91) Ethyl Methacrylate	(3)	10.238	69	8903	0.778
92) 1,1,2-Trichloroethane	(3)	10.390	97	5879	0.985
93) Tetrachloroethene	(3)	10.488	166	6246	0.954
94) 1,3-Dichloropropane	(3)	10.549	76	10454	1.009
96) 2-Hexanone	(3)	10.585	43	18526	1.813
97) Dibromochloromethane	(3)	10.768	129	4098	0.706
99) 1,2-Dibromoethane	(3)	10.883	107	6584	1.014
100)*Chlorobenzene-d5	(3)	11.309	117	835472	50.000
101) 1-Chlorohexane	(3)	11.309	91	8251	0.949

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 12/07/2019 at 12:59.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07r01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 12:11 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 12:55 mec29284

Sample Name: RLVY17 Lab Sample ID: RLVY17

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
102) Chlorobenzene	(3)	11.333	112	16760	0.963
103) 1,1,1,2-Tetrachloroethane	(3)	11.412	131	4394	0.790
104) Ethylbenzene	(3)	11.418	91	30201	1.019
106) m+p-Xylene	(3)	11.528	106	22420	1.917
108) Xylene (Total)	(3)		106	33144	2.859
107) o-Xylene	(3)	11.857	106	10724	0.942
109) Styrene	(3)	11.875	104	14574	0.774
110) Bromoform	(3)	12.033	173	2686	0.642
111) Isopropylbenzene	(3)	12.155	105	26445	0.899
112) Cyclohexanone	(1)	12.228	55	6873	11.861
114)$4-Bromofluorobenzene	(3)	12.301	95	419372	48.557
116) 1,1,2,2-Tetrachloroethane	(4)	12.392	83	10021	0.977
118) trans-1,4-Dichloro-2-butene	(4)	12.416	53	4814	1.357
115) Bromobenzene	(4)	12.422	156	7151	1.003
117) 1,2,3-Trichloropropane	(4)	12.441	110	3251	0.998
119) n-Propylbenzene	(4)	12.483	91	30802	0.911
120) 2-Chlorotoluene	(4)	12.562	126	6166	0.885
122) 1,3,5-Trimethylbenzene	(4)	12.617	105	22834	0.913
121) 4-Chlorotoluene	(4)	12.653	126	6505	0.893
124) tert-Butylbenzene	(4)	12.860	134	4810	0.918
125) Pentachloroethane	(4)	12.897	167	2727	0.685
126) 1,2,4-Trimethylbenzene	(4)	12.903	105	23807	0.906
127) sec-Butylbenzene	(4)	13.025	105	27013	0.853
129) 1,3-Dichlorobenzene	(4)	13.128	146	13535	0.969
130) p-Isopropyltoluene	(4)	13.134	119	21491	0.789
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	434086	50.000
133) 1,4-Dichlorobenzene	(4)	13.201	146	14578	1.022
134) 1,2,3-Trimethylbenzene	(4)	13.207	105	25084	0.909
135) Benzyl Chloride	(4)	13.274	91	10830	0.544
136) 1,3-Diethylbenzene	(4)	13.329	119	13759	0.774
141) Diethylbenzene (total)	(4)		100	40669	2.377
137) 1,4-Diethylbenzene	(4)	13.402	119	14301	0.760
139) n-Butylbenzene	(4)	13.426	92	12605	0.876
138) 1,2-Dichlorobenzene	(4)	13.456	146	13360	0.978
140) 1,2-Diethylbenzene	(4)	13.475	119	12609	0.843
142) 1,2-Dibromo-3-chloropropane	(4)	14.004	75	2153	0.813
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	9542	0.909
146) 1,2,4-Trichlorobenzene	(4)	14.552	180	9499	0.944

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 12/07/2019 at 12:59.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07r01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 12:11 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 12:55 mec29284

Sample Name: RLVY17 Lab Sample ID: RLVY17

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Hexachlorobutadiene	(4)	14.637	225	4939	1.102
148) Naphthalene	(4)	14.734	128	35178	0.986
149) 1,2,3-Trichlorobenzene	(4)	14.880	180	10092	1.032
150) 2-Methylnaphthalene	(4)	15.531	142	20172	0.855

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on 12/07/2019 at 12:59.
Target 3.5 esignature user ID: mec29284

Raw QC Data

Volatiles by GC/MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKY15

Data file: /chem2/HP09355.i/19dec05a.b/yd05b01.d
Injection date and time: **05-DEC-2019 08:48**
Data file Sample Info. Line: VBLKY15;VBLKY15;1;3;;;;;;
Instrument ID: **HP09355.i** Batch: **Y193391AA**
Date, time and analyst ID of latest file update: 05-Dec-2019 09:05 Automation

Blank Data file reference: **/chem2/HP09355.i/19dec05a.b/yd05b01.d**

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 05-DEC-2019 08:09
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec05a.b/yd05c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.368	(-0.018)	458	65	288968	(-3)	250.00	
66) Fluorobenzene	7.872	(-0.006)	1034	96	966647	(-4)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	696628	(-5)	50.00	
131) 1,4-Dichlorobenzene-d4	13.183	(0.000)	1907	152	359600	(-6)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.978	(-0.001)	113	206540	45.535	91%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434	(0.000)	102	57719	48.675	97%		80 - 120
83) Toluene-d8	(3)	9.861	(0.000)	98	926911	49.177	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.301	(0.000)	95	341073	47.362	95%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)				Not Detected					0.2	1
4) Chloromethane	(2)				Not Detected					0.2	1
5) 1,3-Butadiene	(2)				Not Detected					1	3
6) Vinyl Chloride	(2)				Not Detected					0.2	1
8) Bromomethane	(2)				Not Detected					0.3	1
9) Chloroethane	(2)				Not Detected					0.2	1
11) n-Pentane	(2)				Not Detected					0.4	10
12) Trichlorofluoromethane	(2)				Not Detected					0.2	1
14) Ethyl ether	(2)				Not Detected					0.2	5
15) Freon 123a	(2)				Not Detected					0.4	5
16) Acrolein	(1)				Not Detected					2	100
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
21) 2-Propanol	(1)				Not Detected					18	100
22) Methyl Iodide	(2)				Not Detected					0.2	1
23) Carbon Disulfide	(2)				Not Detected					0.2	5
25) Allyl Chloride	(2)				Not Detected					0.3	5
27) Methyl Acetate	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
30) t-Butyl alcohol	(1)				Not Detected					12	50
31) Acrylonitrile	(2)				Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.2	1
34) n-Hexane	(2)				Not Detected					2	5
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
38) di-Isopropyl ether	(2)				Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)				Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)				Not Detected					0.4	2

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09355.i/19dec05a.b/yd05b01.d Injection date and time: **05-DEC-2019 08:48**
Data file Sample Info. Line: VBLKY15;VBLKY15;1;3;;;;;; Instrument ID: **HP09355.i** Batch: **Y193391AA**
Date, time and analyst ID of latest file update: 05-Dec-2019 09:05 Automation

Blank Data file reference: **/chem2/HP09355.i/19dec05a.b/yd05b01.d**

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 05-DEC-2019 08:09
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec05a.b/yd05c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)				Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					1	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
72) Methylcyclohexane	(2)				Not Detected					0.5	5
73) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
74) Dibromomethane	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
76) Methyl Methacrylate	(2)				Not Detected					0.2	5
78) Bromodichloromethane	(2)				Not Detected					0.2	1
79) 2-Nitropropane	(2)				Not Detected					0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
81) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
82) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
88) Toluene	(3)				Not Detected					0.2	1
89) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
90) 1,3-Dichloropropene (total)	(3)				Not Detected					0.4	2
91) Ethyl Methacrylate	(3)				Not Detected					0.2	5
92) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
94) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
96) 2-Hexanone	(3)				Not Detected					0.3	10
97) Dibromochloromethane	(3)				Not Detected					0.2	1
99) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
101) 1-Chlorohexane	(3)				Not Detected					0.3	5
102) Chlorobenzene	(3)				Not Detected					0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
109) Styrene	(3)				Not Detected					0.2	5
110) Bromoform	(3)				Not Detected					1	4
111) Isopropylbenzene	(3)				Not Detected					0.2	5
112) Cyclohexanone	(1)				Not Detected					25	100
115) Bromobenzene	(4)				Not Detected					0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
117) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
118) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50
119) n-Propylbenzene	(4)				Not Detected					0.2	5

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09355.i/19dec05a.b/yd05b01.d Injection date and time: **05-DEC-2019 08:48**
Data file Sample Info. Line: VBLKY15;VBLKY15;1;3;;;;;; Instrument ID: **HP09355.i** Batch: **Y193391AA**
Date, time and analyst ID of latest file update: 05-Dec-2019 09:05 Automation

Blank Data file reference: **/chem2/HP09355.i/19dec05a.b/yd05b01.d**

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 05-DEC-2019 08:09
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec05a.b/yd05c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)				Not Detected					0.2	5
121) 4-Chlorotoluene	(4)				Not Detected					0.2	5
122) 1,3,5-Trimethylbenzene	(4)				Not Detected					0.3	5
124) tert-Butylbenzene	(4)				Not Detected					0.3	5
125) Pentachloroethane	(4)				Not Detected					0.2	5
126) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5
127) sec-Butylbenzene	(4)				Not Detected					0.2	5
129) 1,3-Dichlorobenzene	(4)				Not Detected					0.2	5
130) p-Isopropyltoluene	(4)				Not Detected					0.2	5
133) 1,4-Dichlorobenzene	(4)				Not Detected					0.2	5
134) 1,2,3-Trimethylbenzene	(4)				Not Detected					0.3	5
135) Benzyl Chloride	(4)				Not Detected					1	5
136) 1,3-Diethylbenzene	(4)				Not Detected					0.2	5
137) 1,4-Diethylbenzene	(4)				Not Detected					0.2	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
139) n-Butylbenzene	(4)				Not Detected					0.2	5
140) 1,2-Diethylbenzene	(4)				Not Detected					0.2	5
141) Diethylbenzene (total)	(4)				Not Detected					0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.3	5
144) 1,3,5-Trichlorobenzene	(4)				Not Detected					0.2	5
146) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	5
147) Hexachlorobutadiene	(4)				Not Detected					2	5
148) Naphthalene	(4)				Not Detected					1	5
149) 1,2,3-Trichlorobenzene	(4)				Not Detected					0.4	5
150) 2-Methylnaphthalene	(4)				Not Detected					2	4

Total number of targets = 110

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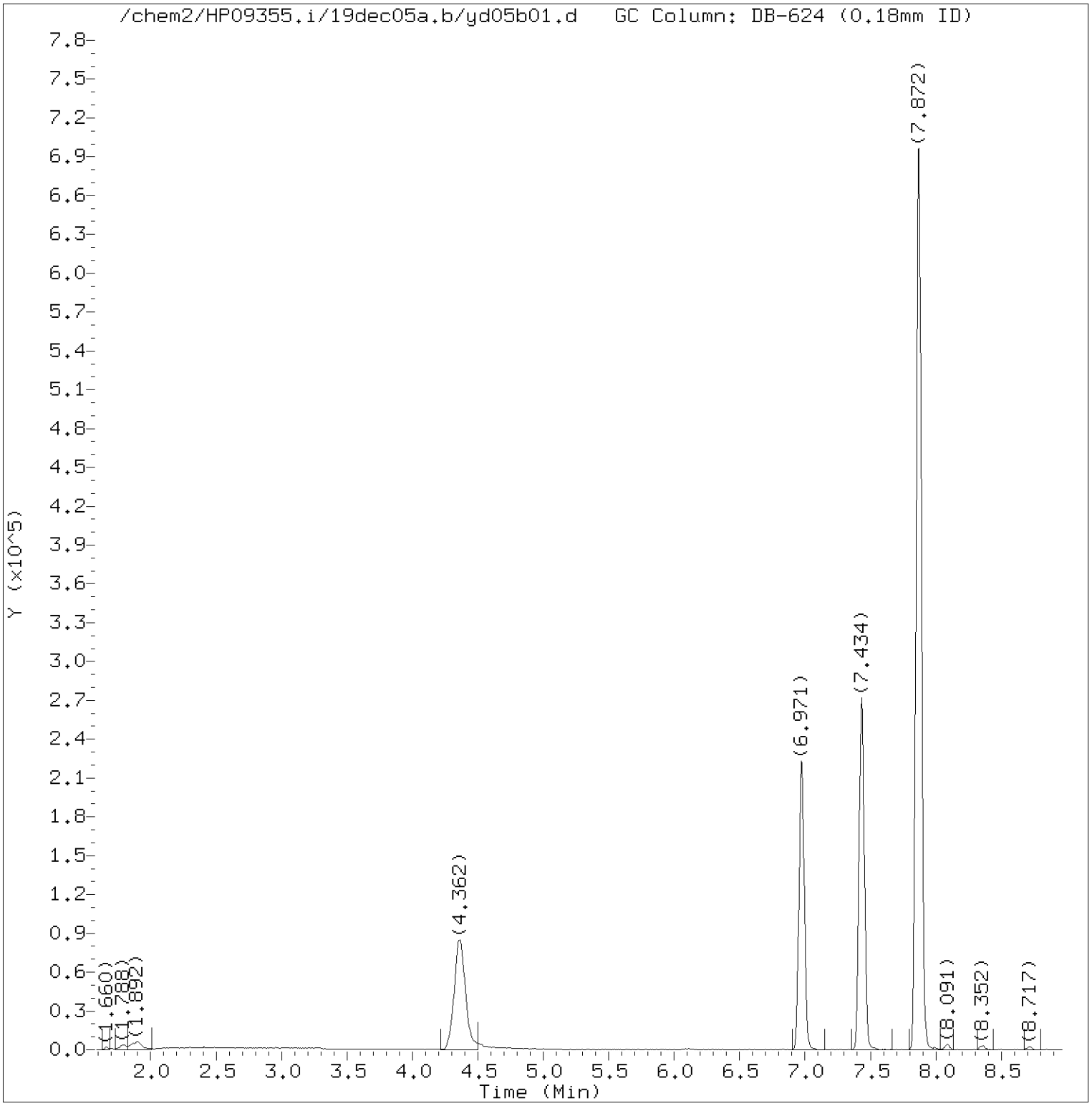
Secondary review performed and digitally signed by Kari Becker on 12/06/2019 at 20:45. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

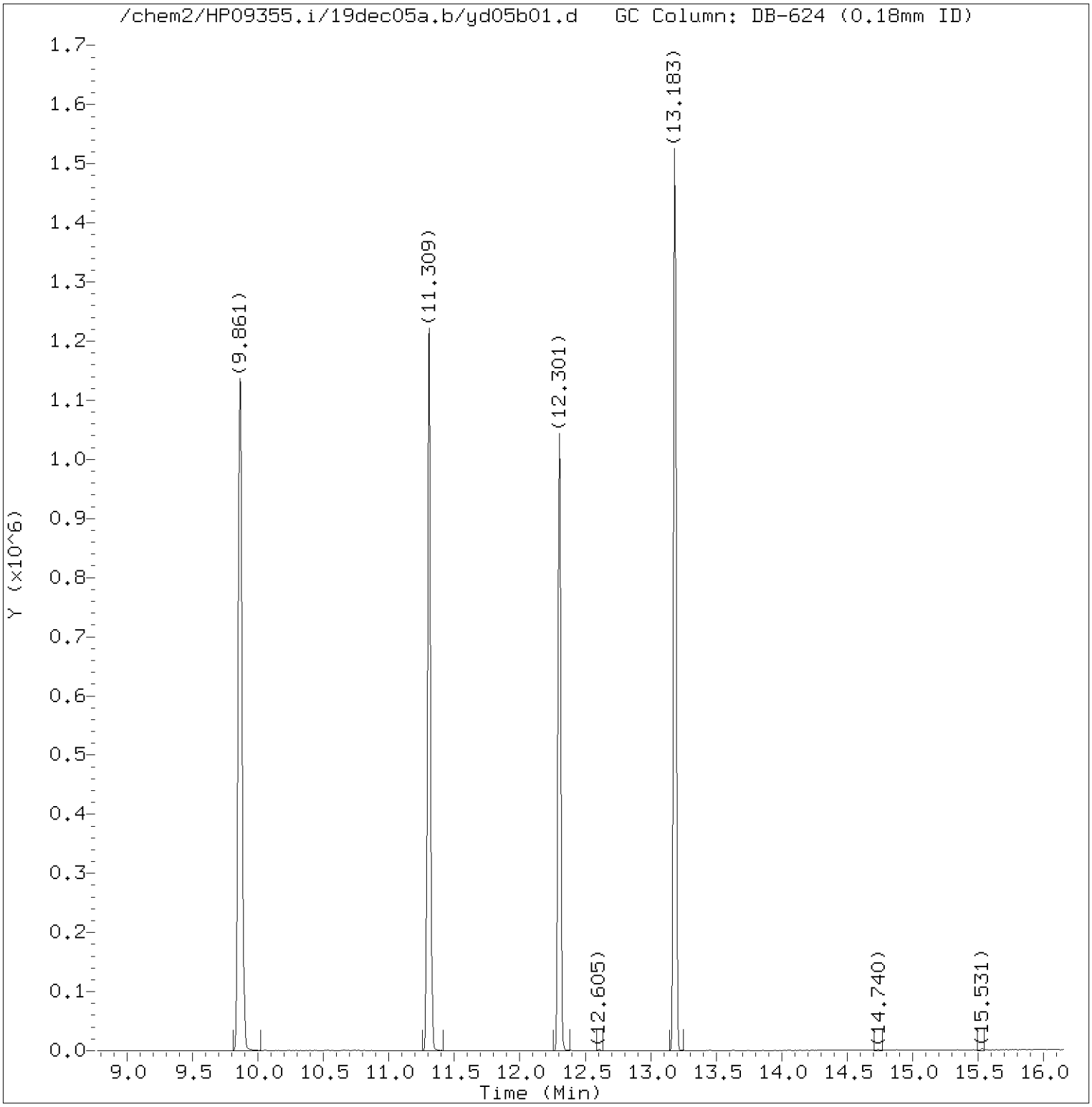
Target Revision 3.5

Data File: /chem2/HP09355.i/19dec05a.b/yd05b01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 08:48 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 08:09
Date, time and analyst ID of latest file update: 05-Dec-2019 09:05 Automation

Sample Name: VBLKY15 Lab Sample ID: VBLKY15

Digitally signed by Linda C. Pape
on 12/05/2019 at 09:47.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec05a.b/yd05b01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 08:48 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 08:09
Date, time and analyst ID of latest file update: 05-Dec-2019 09:05 Automation

Sample Name: VBLKY15 Lab Sample ID: VBLKY15

Digitally signed by Linda C. Pape
on 12/05/2019 at 09:47.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec05a.b/yd05b01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 08:48 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 08:09
Date, time and analyst ID of latest file update: 05-Dec-2019 09:05 Automation

Sample Name: VBLKY15 Lab Sample ID: VBLKY15

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.368	65	288968	250.000
52)$Dibromofluoromethane	(2)	6.978	113	206540	45.535
57)$1,2-Dichloroethane-d4	(2)	7.434	102	57719	48.675
66)*Fluorobenzene	(2)	7.872	96	966647	50.000
83)$Toluene-d8	(3)	9.861	98	926911	49.177
100)*Chlorobenzene-d5	(3)	11.309	117	696628	50.000
114)$4-Bromofluorobenzene	(3)	12.301	95	341073	47.362
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	359600	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 12/05/2019 at 09:47.
Target 3.5 esignature user ID: lcp00895

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKY17

Data file: /chem2/HP09355.i/19dec07a.b/yd07b01.d
Data file Sample Info. Line: VBLKY17;VBLKY17;1;3;;;;;;
Date, time and analyst ID of latest file update: 07-Dec-2019 12:50 Automation

Injection date and time: **07-DEC-2019 12:33**
Instrument ID: **HP09355.i** Batch: **Y193411AA**

Blank Data file reference: **/chem2/HP09355.i/19dec07a.b/yd07b01.d**

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 07-DEC-2019 11:45
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec07a.b/yd07c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.349	(0.000)	455	65	352727	(-2)	250.00	
66) Fluorobenzene	7.866	(0.000)	1033	96	1152497	(-1)	50.00	
100) Chlorobenzene-d5	11.303	(0.006)	1598	117	834599	(-3)	50.00	
131) 1,4-Dichlorobenzene-d4	13.183	(0.000)	1907	152	429668	(-4)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.971	(-0.001)	113	244706	45.250	90%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.428	(0.000)	102	67683	47.874	96%		80 - 120
83) Toluene-d8	(3)	9.861	(0.000)	98	1105169	48.941	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.301	(-0.001)	95	411335	47.676	95%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
3) Dichlorodifluoromethane	(2)				Not Detected					0.2	1
4) Chloromethane	(2)				Not Detected					0.2	1
5) 1,3-Butadiene	(2)				Not Detected					1	3
6) Vinyl Chloride	(2)				Not Detected					0.2	1
8) Bromomethane	(2)				Not Detected					0.3	1
9) Chloroethane	(2)				Not Detected					0.2	1
11) n-Pentane	(2)				Not Detected					0.4	10
12) Trichlorofluoromethane	(2)				Not Detected					0.2	1
14) Ethyl ether	(2)				Not Detected					0.2	5
15) Freon 123a	(2)				Not Detected					0.4	5
16) Acrolein	(1)				Not Detected					2	100
17) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
18) Acetone	(1)				Not Detected					0.7	20
19) Freon 113	(2)				Not Detected					0.2	10
21) 2-Propanol	(1)				Not Detected					18	100
22) Methyl Iodide	(2)				Not Detected					0.2	1
23) Carbon Disulfide	(2)				Not Detected					0.2	5
25) Allyl Chloride	(2)				Not Detected					0.3	5
27) Methyl Acetate	(2)				Not Detected					0.2	5
28) Methylene Chloride	(2)				Not Detected					0.3	1
30) t-Butyl alcohol	(1)				Not Detected					12	50
31) Acrylonitrile	(2)				Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.2	1
34) n-Hexane	(2)				Not Detected					2	5
36) 1,1-Dichloroethane	(2)				Not Detected					0.2	1
38) di-Isopropyl ether	(2)				Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)				Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)				Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)				Not Detected					0.4	2

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09355.i/19dec07a.b/yd07b01.d Injection date and time: **07-DEC-2019 12:33**
Data file Sample Info. Line: VBLKY17;VBLKY17;1;3;;;;;; Instrument ID: **HP09355.i** Batch: **Y193411AA**
Date, time and analyst ID of latest file update: 07-Dec-2019 12:50 Automation

Blank Data file reference: **/chem2/HP09355.i/19dec07a.b/yd07b01.d**

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 07-DEC-2019 11:45
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec07a.b/yd07c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)				Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)				Not Detected					0.3	1
47) Propionitrile	(1)				Not Detected					14	100
48) Methacrylonitrile	(2)				Not Detected					6	50
49) Bromochloromethane	(2)				Not Detected					0.2	5
50) Tetrahydrofuran	(1)				Not Detected					0.7	10
51) Chloroform	(2)				Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	1
54) Cyclohexane	(2)				Not Detected					1	5
55) 1,1-Dichloropropene	(2)				Not Detected					0.2	5
56) Carbon Tetrachloride	(2)				Not Detected					0.2	1
58) Isobutyl Alcohol	(1)				Not Detected					36	250
60) Benzene	(2)				Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.3	1
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					2	5
69) n-Butanol	(1)				Not Detected					61	250
71) Trichloroethene	(2)				Not Detected					0.2	1
72) Methylcyclohexane	(2)				Not Detected					0.5	5
73) 1,2-Dichloropropane	(2)				Not Detected					0.2	1
74) Dibromomethane	(2)				Not Detected					0.2	1
75) 1,4-Dioxane	(1)				Not Detected					29	250
76) Methyl Methacrylate	(2)				Not Detected					0.2	5
78) Bromodichloromethane	(2)				Not Detected					0.2	1
79) 2-Nitropropane	(2)				Not Detected					0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					0.2	10
81) cis-1,3-Dichloropropene	(2)				Not Detected					0.2	1
82) 4-Methyl-2-pentanone	(2)				Not Detected					0.5	10
88) Toluene	(3)				Not Detected					0.2	1
89) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	1
90) 1,3-Dichloropropene (total)	(3)				Not Detected					0.4	2
91) Ethyl Methacrylate	(3)				Not Detected					0.2	5
92) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
94) 1,3-Dichloropropane	(3)				Not Detected					0.2	1
96) 2-Hexanone	(3)				Not Detected					0.3	10
97) Dibromochloromethane	(3)				Not Detected					0.2	1
99) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
101) 1-Chlorohexane	(3)				Not Detected					0.3	5
102) Chlorobenzene	(3)				Not Detected					0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
109) Styrene	(3)				Not Detected					0.2	5
110) Bromoform	(3)				Not Detected					1	4
111) Isopropylbenzene	(3)				Not Detected					0.2	5
112) Cyclohexanone	(1)				Not Detected					25	100
115) Bromobenzene	(4)				Not Detected					0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
117) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	5
118) trans-1,4-Dichloro-2-butene	(4)				Not Detected					6	50
119) n-Propylbenzene	(4)				Not Detected					0.2	5

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09355.i/19dec07a.b/yd07b01.d Injection date and time: **07-DEC-2019 12:33**
Data file Sample Info. Line: VBLKY17;VBLKY17;1;3;;;;;; Instrument ID: **HP09355.i** Batch: **Y193411AA**
Date, time and analyst ID of latest file update: 07-Dec-2019 12:50 Automation

Blank Data file reference: **/chem2/HP09355.i/19dec07a.b/yd07b01.d**

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 07-DEC-2019 11:45
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec07a.b/yd07c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)				Not Detected					0.2	5
121) 4-Chlorotoluene	(4)				Not Detected					0.2	5
122) 1,3,5-Trimethylbenzene	(4)				Not Detected					0.3	5
124) tert-Butylbenzene	(4)				Not Detected					0.3	5
125) Pentachloroethane	(4)				Not Detected					0.2	5
126) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5
127) sec-Butylbenzene	(4)				Not Detected					0.2	5
129) 1,3-Dichlorobenzene	(4)				Not Detected					0.2	5
130) p-Isopropyltoluene	(4)				Not Detected					0.2	5
133) 1,4-Dichlorobenzene	(4)				Not Detected					0.2	5
134) 1,2,3-Trimethylbenzene	(4)				Not Detected					0.3	5
135) Benzyl Chloride	(4)				Not Detected					1	5
136) 1,3-Diethylbenzene	(4)				Not Detected					0.2	5
137) 1,4-Diethylbenzene	(4)				Not Detected					0.2	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
139) n-Butylbenzene	(4)				Not Detected					0.2	5
140) 1,2-Diethylbenzene	(4)				Not Detected					0.2	5
141) Diethylbenzene (total)	(4)				Not Detected					0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.3	5
144) 1,3,5-Trichlorobenzene	(4)				Not Detected					0.2	5
146) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	5
147) Hexachlorobutadiene	(4)				Not Detected					2	5
148) Naphthalene	(4)				Not Detected					1	5
149) 1,2,3-Trichlorobenzene	(4)				Not Detected					0.4	5
150) 2-Methylnaphthalene	(4)				Not Detected					2	4

Total number of targets = 110

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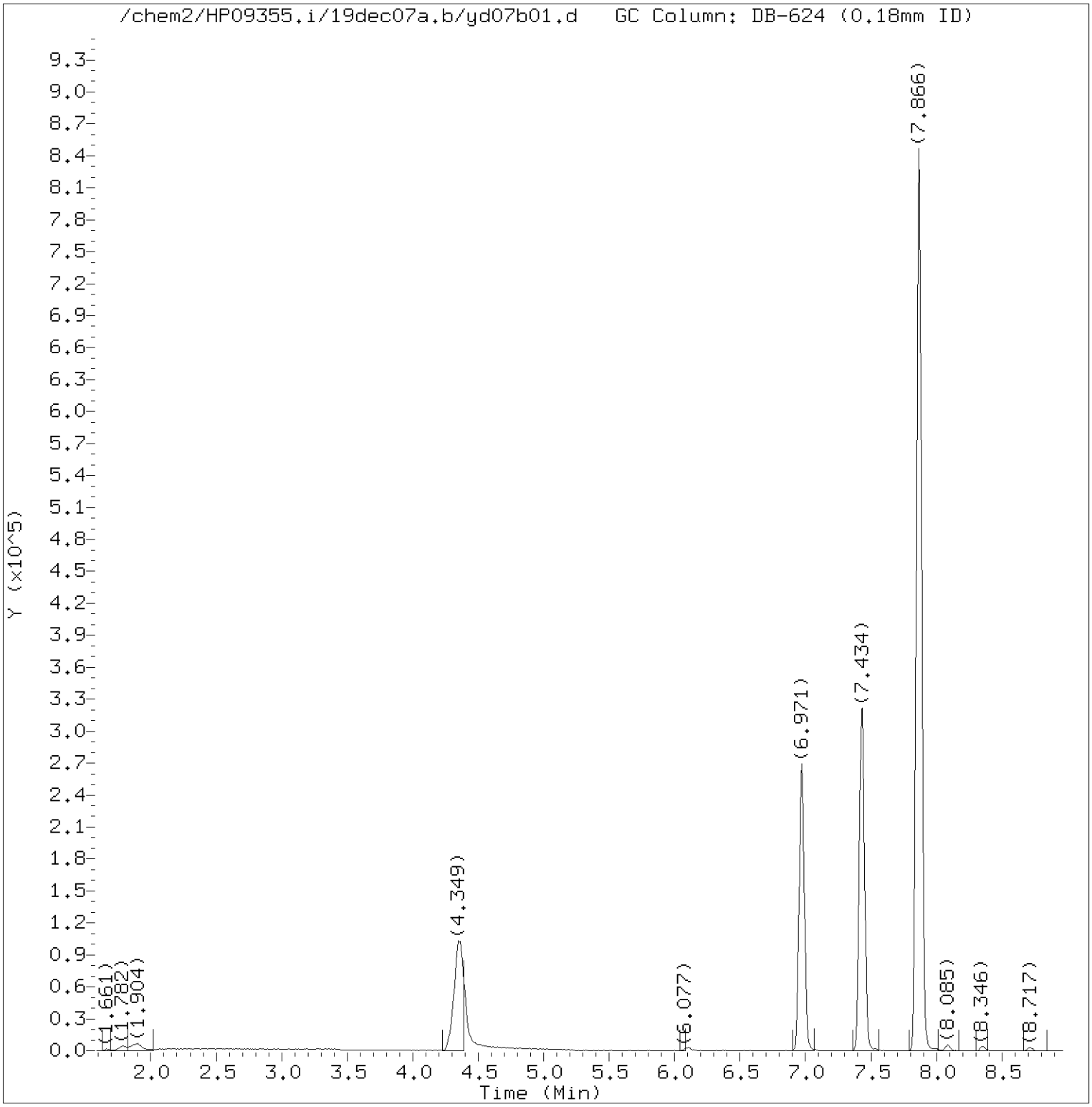
Secondary review performed and digitally signed by Kari Becker on 12/09/2019 at 19:18. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07b01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 12:33 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 12:50 Automation

Sample Name: VBLKY17 Lab Sample ID: VBLKY17

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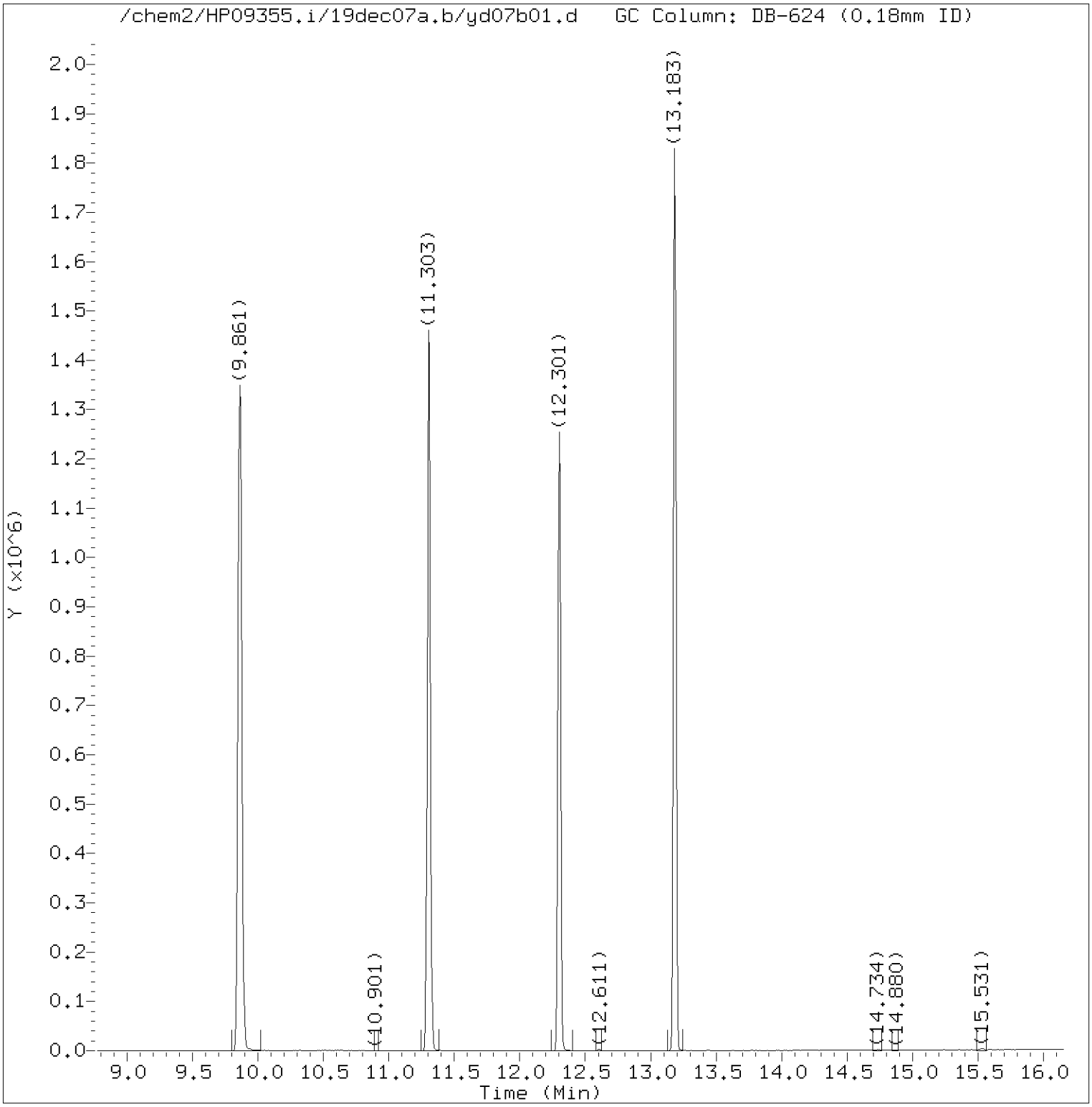
on 12/07/2019 at 12:58.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07b01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 12:33 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 12:50 Automation

Sample Name: VBLKY17 Lab Sample ID: VBLKY17

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on 12/07/2019 at 12:58.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07b01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 12:33 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 12:50 Automation

Sample Name: VBLKY17 Lab Sample ID: VBLKY17

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.349	65	352727	250.000
52)$Dibromofluoromethane	(2)	6.971	113	244706	45.250
57)$1,2-Dichloroethane-d4	(2)	7.428	102	67683	47.874
66)*Fluorobenzene	(2)	7.866	96	1152497	50.000
83)$Toluene-d8	(3)	9.861	98	1105169	48.941
100)*Chlorobenzene-d5	(3)	11.303	117	834599	50.000
114)$4-Bromofluorobenzene	(3)	12.301	95	411335	47.676
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	429668	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 12/07/2019 at 12:58.
Target 3.5 esignature user ID: mec29284

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSY15

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSY15

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09355.i/19dec05a.b/yd05s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 12/05/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	13	
74-87-3	Chloromethane	18	
106-99-0	1,3-Butadiene	18	
75-01-4	Vinyl Chloride	18	
74-83-9	Bromomethane	16	
75-00-3	Chloroethane	17	
109-66-0	n-Pentane	15	
75-69-4	Trichlorofluoromethane	16	
60-29-7	Ethyl ether	19	
354-23-4	Freon 123a	21	
107-02-8	Acrolein	150	
75-35-4	1,1-Dichloroethene	21	
67-64-1	Acetone	170	
76-13-1	Freon 113	18	
67-63-0	2-Propanol	190	
74-88-4	Methyl Iodide	17	
75-15-0	Carbon Disulfide	18	
107-05-1	Allyl Chloride	24	
79-20-9	Methyl Acetate	24	
75-09-2	Methylene Chloride	22	
75-65-0	t-Butyl alcohol	220	
107-13-1	Acrylonitrile	120	
156-60-5	trans-1,2-Dichloroethene	21	
1634-04-4	Methyl Tertiary Butyl Ether	19	
110-54-3	n-Hexane	21	
75-34-3	1,1-Dichloroethane	22	
108-20-3	di-Isopropyl ether	23	
126-99-8	2-Chloro-1,3-butadiene	21	
637-92-3	Ethyl t-butyl ether	19	
156-59-2	cis-1,2-Dichloroethene	23	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSY15

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSY15

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09355.i/19dec05a.b/yd05s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 12/05/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	44	
78-93-3	2-Butanone	170	
594-20-7	2,2-Dichloropropane	19	
107-12-0	Propionitrile	190	
126-98-7	Methacrylonitrile	170	
74-97-5	Bromochloromethane	19	
109-99-9	Tetrahydrofuran	98	
67-66-3	Chloroform	21	
71-55-6	1,1,1-Trichloroethane	19	
110-82-7	Cyclohexane	20	
563-58-6	1,1-Dichloropropene	21	
56-23-5	Carbon Tetrachloride	18	
78-83-1	Isobutyl Alcohol	610	
71-43-2	Benzene	22	
107-06-2	1,2-Dichloroethane	20	
994-05-8	t-Amyl methyl ether	19	
142-82-5	n-Heptane	23	
71-36-3	n-Butanol	1100	
79-01-6	Trichloroethene	21	
108-87-2	Methylcyclohexane	20	
78-87-5	1,2-Dichloropropane	24	
74-95-3	Dibromomethane	21	
123-91-1	1,4-Dioxane	620	
80-62-6	Methyl Methacrylate	21	
75-27-4	Bromodichloromethane	21	
79-46-9	2-Nitropropane	17	
110-75-8	2-Chloroethyl Vinyl Ether	23	
10061-01-5	cis-1,3-Dichloropropene	22	
108-10-1	4-Methyl-2-pentanone	110	
108-88-3	Toluene	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSY15

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSY15

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09355.i/19dec05a.b/yd05s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 12/05/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	21	
542-75-6	1,3-Dichloropropene (total)	43	
97-63-2	Ethyl Methacrylate	21	
79-00-5	1,1,2-Trichloroethane	23	
127-18-4	Tetrachloroethene	21	
142-28-9	1,3-Dichloropropane	22	
591-78-6	2-Hexanone	110	
124-48-1	Dibromochloromethane	20	
106-93-4	1,2-Dibromoethane	22	
544-10-5	1-Chlorohexane	22	
108-90-7	Chlorobenzene	22	
630-20-6	1,1,1,2-Tetrachloroethane	21	
100-41-4	Ethylbenzene	22	
179601-23-1	m+p-Xylene	44	
95-47-6	o-Xylene	22	
1330-20-7	Xylene (Total)	66	
100-42-5	Styrene	23	
75-25-2	Bromoform	19	
98-82-8	Isopropylbenzene	22	
108-94-1	Cyclohexanone	480	
108-86-1	Bromobenzene	23	
79-34-5	1,1,2,2-Tetrachloroethane	23	
96-18-4	1,2,3-Trichloropropane	22	
110-57-6	trans-1,4-Dichloro-2-butene	110	
103-65-1	n-Propylbenzene	24	
95-49-8	2-Chlorotoluene	22	
106-43-4	4-Chlorotoluene	22	
108-67-8	1,3,5-Trimethylbenzene	22	
98-06-6	tert-Butylbenzene	21	
76-01-7	Pentachloroethane	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSY15

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSY15

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09355.i/19dec05a.b/yd05s01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 12/05/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
95-63-6	1,2,4-Trimethylbenzene	22	
135-98-8	sec-Butylbenzene	23	
541-73-1	1,3-Dichlorobenzene	22	
99-87-6	p-Isopropyltoluene	23	
106-46-7	1,4-Dichlorobenzene	23	
526-73-8	1,2,3-Trimethylbenzene	22	
100-44-7	Benzyl Chloride	20	
141-93-5	1,3-Diethylbenzene	21	
105-05-5	1,4-Diethylbenzene	21	
95-50-1	1,2-Dichlorobenzene	22	
104-51-8	n-Butylbenzene	23	
135-01-3	1,2-Diethylbenzene	21	
25340-17-4	Diethylbenzene (total)	64	
96-12-8	1,2-Dibromo-3-chloropropane	20	
108-70-3	1,3,5-Trichlorobenzene	22	
120-82-1	1,2,4-Trichlorobenzene	21	
87-68-3	Hexachlorobutadiene	22	
91-20-3	Naphthalene	22	
87-61-6	1,2,3-Trichlorobenzene	21	
91-57-6	2-Methylnaphthalene	19	

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09355.i/19dec05a.b/yd05s01.d Injection date and time: **05-DEC-2019 08:04**
Data file Sample Info. Line: LCSY15;LCSY15;1;3;LCS;;;;yd05b01; Instrument ID: **HP09355.i** Batch: **Y193391AA**
Date, time and analyst ID of latest file update: 05-Dec-2019 09:39 lcp00895

Blank Data file reference: **/chem2/HP09355.i/19dec05a.b/yd05b01.d**

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 05-DEC-2019 09:37
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec05a.b/yd05c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.343	(0.006)	454	65	314958	(6)	250.00	
66) Fluorobenzene	7.866	(0.000)	1033	96	995303	(-1)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	727112	(-1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.183	(0.000)	1907	152	378108	(-1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.971	(-0.001)	113	214085	45.840	92%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434	(-0.001)	102	59508	48.739	97%		80 - 120
83) Toluene-d8	(3)	9.861	(0.000)	98	971068	49.360	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.301	(0.000)	95	363229	48.324	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
3) Dichlorodifluoromethane	(2)	2.044	(-0.000)	85	115953	12.702	12.70			0.2	1
4) Chloromethane	(2)	2.238	(0.000)	50	141942	18.090	18.09			0.2	1
5) 1,3-Butadiene	(2)	2.360	(0.000)	39	109788	17.983	17.98			1	3
6) Vinyl Chloride	(2)	2.354	(0.000)	62	135675	17.613	17.61			0.2	1
8) Bromomethane	(2)	2.689	(0.000)	94	89984	15.746	15.75			0.3	1
9) Chloroethane	(2)	2.786	(0.000)	64	76610	17.138	17.14			0.2	1
11) n-Pentane	(2)	3.139	(0.000)	43	144374	15.153	15.15			0.4	10
12) Trichlorofluoromethane	(2)	3.090	(0.000)	101	154266	15.699	15.70			0.2	1
14) Ethyl ether	(2)	3.358	(-0.000)	59	94725	18.512	18.51			0.2	5
15) Freon 123a	(2)	3.425	(0.000)	67	124610	21.002	21.00			0.4	5
16) Acrolein	(1)	3.522	(-0.001)	56	347917	145.446	145.45			2	100
17) 1,1-Dichloroethene	(2)	3.680	(0.000)	96	89910	20.812	20.81			0.2	1
18) Acetone	(1)	3.692	(-0.001)	58	186814	165.970	165.97			0.7	20
19) Freon 113	(2)	3.711	(0.000)	101	88945	18.086	18.09			0.2	10
21) 2-Propanol	(1)	3.857	(-0.001)	45	130859	193.097	193.10			18	100
22) Methyl Iodide	(2)	3.887	(0.000)	142	146659	17.288	17.29			0.2	1
23) Carbon Disulfide	(2)	4.009	(0.000)	76	278421	17.830	17.83			0.2	5
25) Allyl Chloride	(2)	4.173	(-0.000)	41	178625	23.846	23.85			0.3	5
27) Methyl Acetate	(2)	4.130	(0.000)	43	177949	23.564	23.56			0.2	5
28) Methylene Chloride	(2)	4.368	(-0.000)	84	115084	22.309	22.31			0.3	1
30) t-Butyl alcohol	(1)	4.477	(-0.000)	59	317200	223.808	223.81			12	50
31) Acrylonitrile	(2)	4.684	(-0.000)	53	458274	115.866	115.87			0.3	20
32) trans-1,2-Dichloroethene	(2)	4.794	(0.000)	96	106852	21.354	21.35			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	4.775	(0.000)	73	322155	18.714	18.71			0.2	1
34) n-Hexane	(2)	5.219	(0.000)	57	180578	21.284	21.28			2	5
36) 1,1-Dichloroethane	(2)	5.444	(0.000)	63	199993	21.979	21.98			0.2	1
38) di-Isopropyl ether	(2)	5.499	(-0.000)	45	394962	22.723	22.72			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	5.554	(0.000)	53	170281	20.647	20.65			0.2	5
40) Ethyl t-butyl ether	(2)	6.034	(0.000)	59	331026	19.431	19.43			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.272	(0.000)	96	128829	22.648	22.65			0.2	1
43) 1,2-Dichloroethene (Total)	(2)			96	235681	44.002	44.00			0.4	2

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09355.i/19dec05a.b/yd05s01.d Injection date and time: **05-DEC-2019 08:04**
Data file Sample Info. Line: LCSY15;LCSY15;1;3;LCS;;;;yd05b01; Instrument ID: **HP09355.i** Batch: **Y193391AA**
Date, time and analyst ID of latest file update: 05-Dec-2019 09:39 lcp00895

Blank Data file reference: **/chem2/HP09355.i/19dec05a.b/yd05b01.d**

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 05-DEC-2019 09:37
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec05a.b/yd05c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	6.223(0.000)	43	1006535	170.527	170.53			0.3	10
45) 2,2-Dichloropropane	(2)	6.290(0.000)	77	136167	19.493	19.49			0.3	1
47) Propionitrile	(1)	6.302(-0.002)	54	307719	188.775	188.77			14	100
48) Methacrylonitrile	(2)	6.527(0.000)	67	696266	165.590	165.59			6	50
49) Bromochloromethane	(2)	6.612(-0.000)	128	57121	19.246	19.25			0.2	5
50) Tetrahydrofuran	(1)	6.619(-0.002)	71	173984	98.389	98.39			0.7	10
51) Chloroform	(2)	6.752(0.000)	83	186884	21.211	21.21			0.2	1
53) 1,1,1-Trichloroethane	(2)	6.990(0.000)	97	147237	19.283	19.28			0.3	1
54) Cyclohexane	(2)	7.099(0.000)	56	203123	20.405	20.41			1	5
55) 1,1-Dichloropropene	(2)	7.203(0.000)	75	156620	21.250	21.25			0.2	5
56) Carbon Tetrachloride	(2)	7.209(0.000)	117	119225	18.314	18.31			0.2	1
58) Isobutyl Alcohol	(1)	7.312(-0.003)	41	297124	607.013	607.01			36	250
60) Benzene	(2)	7.464(0.000)	78	482919	22.412	22.41			0.2	1
61) 1,2-Dichloroethane	(2)	7.537(0.000)	62	153818	20.127	20.13			0.3	1
65) t-Amyl methyl ether	(2)	7.647(0.000)	73	322380	18.905	18.91			0.8	5
67) n-Heptane	(2)	7.878(-0.000)	43	205401	22.906	22.91			2	5
69) n-Butanol	(1)	8.188(-0.004)	56	497443	1083.491	1083.49			61	250
71) Trichloroethene	(2)	8.352(-0.000)	95	117024	20.994	20.99			0.2	1
72) Methylcyclohexane	(2)	8.669(-0.000)	83	213416	20.181	20.18			0.5	5
73) 1,2-Dichloropropane	(2)	8.681(-0.000)	63	131494	23.940	23.94			0.2	1
74) Dibromomethane	(2)	8.796(-0.000)	93	76058	20.990	20.99			0.2	1
75) 1,4-Dioxane	(1)	8.760(-0.002)	88	61010M	623.154	623.15			29	250
76) Methyl Methacrylate	(2)	8.748(-0.000)	69	137046	21.259	21.26			0.2	5
78) Bromodichloromethane	(2)	9.022(0.000)	83	131020	20.722	20.72			0.2	1
79) 2-Nitropropane	(2)	9.265(-0.000)	41	45831	17.011	17.01			0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)	9.368(0.000)	63	106032	22.843	22.84			0.2	10
81) cis-1,3-Dichloropropene	(2)	9.557(-0.000)	75	184353	21.613	21.61			0.2	1
82) 4-Methyl-2-pentanone	(2)	9.709(-0.000)	43	1235427	111.064	111.06			0.5	10
88) Toluene	(3)	9.940(0.000)	92	302757	22.482	22.48			0.2	1
89) trans-1,3-Dichloropropene	(3)	10.184(0.000)	75	164250	20.890	20.89			0.2	1
90) 1,3-Dichloropropene (total)	(3)		100	348603	42.503	42.50			0.4	2
91) Ethyl Methacrylate	(3)	10.238(0.000)	69	205656	20.639	20.64			0.2	5
92) 1,1,2-Trichloroethane	(3)	10.390(0.000)	97	119335	22.981	22.98			0.2	1
93) Tetrachloroethene	(3)	10.488(0.000)	166	119924	21.044	21.04			0.2	1
94) 1,3-Dichloropropane	(3)	10.548(0.000)	76	201927	22.393	22.39			0.2	1
96) 2-Hexanone	(3)	10.585(0.000)	43	1012477	113.841	113.84			0.3	10
97) Dibromochloromethane	(3)	10.768(0.000)	129	102941	20.376	20.38			0.2	1
99) 1,2-Dibromoethane	(3)	10.883(0.000)	107	124244	21.980	21.98			0.2	1
101) 1-Chlorohexane	(3)	11.309(0.000)	91	163594	21.616	21.62			0.3	5
102) Chlorobenzene	(3)	11.333(-0.000)	112	328569	21.686	21.69			0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)	11.412(0.000)	131	99413	20.550	20.55			0.2	1
104) Ethylbenzene	(3)	11.418(0.000)	91	578396	22.428	22.43			0.4	1
106) m+p-Xylene	(3)	11.528(-0.000)	106	452311	44.446	44.45			1	5
107) o-Xylene	(3)	11.856(0.000)	106	215313	21.722	21.72			0.4	1
108) Xylene (Total)	(3)		106	667624	66.167	66.17			1	6
109) Styrene	(3)	11.875(0.000)	104	370205	22.605	22.60			0.2	5
110) Bromoform	(3)	12.033(-0.000)	173	70088	19.263	19.26			1	4
111) Isopropylbenzene	(3)	12.155(-0.000)	105	559804	21.855	21.85			0.2	5
112) Cyclohexanone	(1)	12.228(-0.003)	55	249605	480.125	480.12			25	100
115) Bromobenzene	(4)	12.422(0.000)	156	139803	22.509	22.51			0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	12.392(0.000)	83	208970	23.381	23.38			0.2	1
117) 1,2,3-Trichloropropane	(4)	12.440(0.000)	110	61720	21.742	21.74			0.2	5
118) trans-1,4-Dichloro-2-butene	(4)	12.416(0.000)	53	340375	110.183	110.18			6	50
119) n-Propylbenzene	(4)	12.483(0.000)	91	701368	23.809	23.81			0.2	5

M = Compound was manually integrated.

Digitally signed by Linda C. Pape on 12/05/2019 at 09:47. Target 3.5 esignature user ID: lcp00895

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09355.i/19dec05a.b/yd05s01.d Injection date and time: **05-DEC-2019 08:04**
Data file Sample Info. Line: LCSY15;LCSY15;1;3;LCS;;;;yd05b01; Instrument ID: **HP09355.i** Batch: **Y193391AA**
Date, time and analyst ID of latest file update: 05-Dec-2019 09:39 lcp00895

Blank Data file reference: **/chem2/HP09355.i/19dec05a.b/yd05b01.d**

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 05-DEC-2019 09:37
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec05a.b/yd05c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

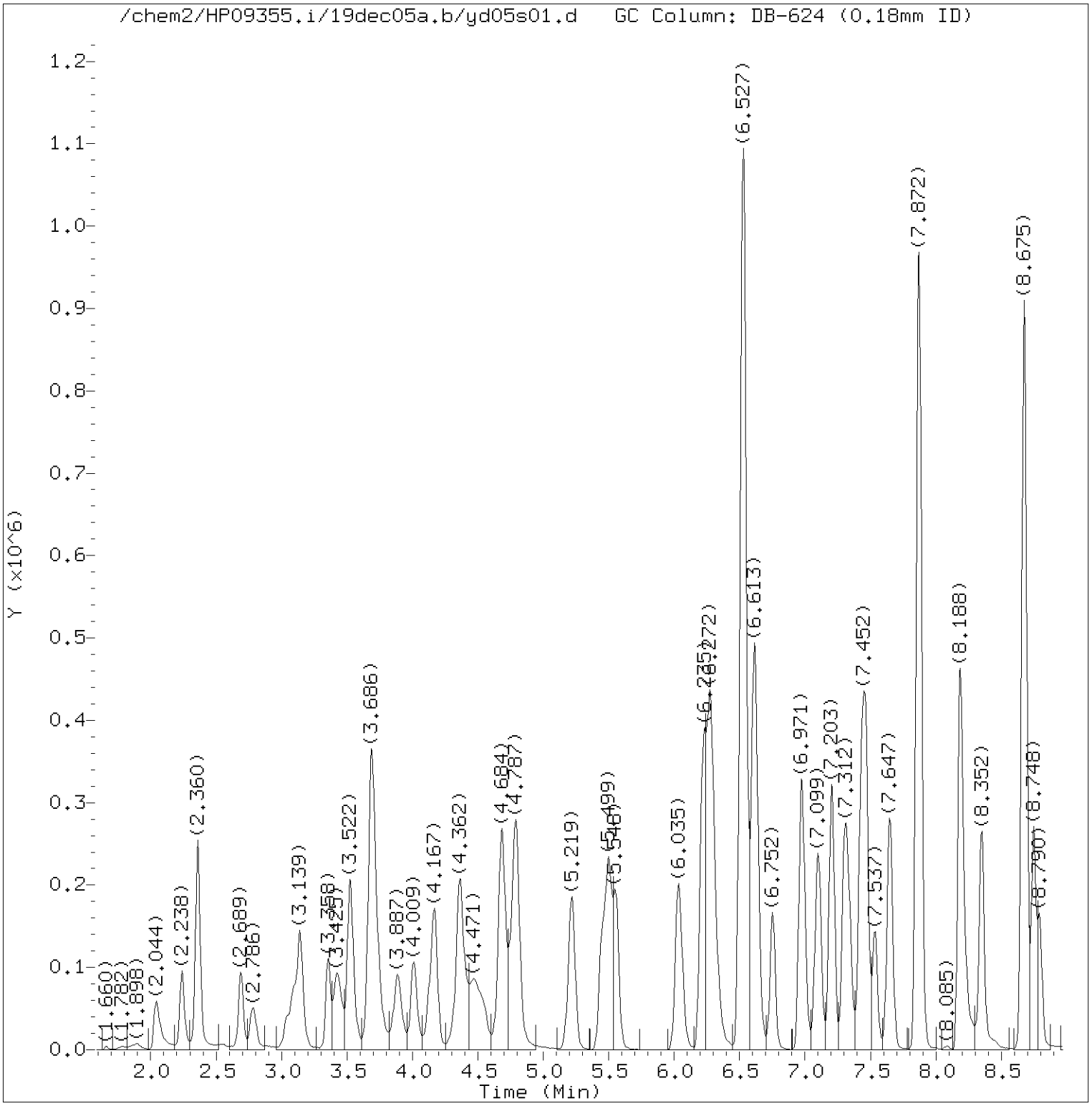
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)	12.562(0.000)	126	133300	21.968	21.97			0.2	5
121) 4-Chlorotoluene	(4)	12.654(0.000)	126	139483	21.990	21.99			0.2	5
122) 1,3,5-Trimethylbenzene	(4)	12.617(0.000)	105	483556	22.189	22.19			0.3	5
124) tert-Butylbenzene	(4)	12.860(0.000)	134	97411M	21.346	21.35			0.3	5
125) Pentachloroethane	(4)	12.897(0.000)	167	75094	21.667	21.67			0.2	5
126) 1,2,4-Trimethylbenzene	(4)	12.903(0.000)	105	502139	21.939	21.94			1	5
127) sec-Butylbenzene	(4)	13.025(0.000)	105	635398	23.022	23.02			0.2	5
129) 1,3-Dichlorobenzene	(4)	13.128(0.000)	146	273286	22.463	22.46			0.2	5
130) p-Isopropyltoluene	(4)	13.134(0.000)	119	533676	22.504	22.50			0.2	5
133) 1,4-Dichlorobenzene	(4)	13.201(-0.000)	146	282606	22.744	22.74			0.2	5
134) 1,2,3-Trimethylbenzene	(4)	13.207(-0.000)	105	523979	21.792	21.79			0.3	5
135) Benzyl Chloride	(4)	13.274(-0.000)	91	340216	19.620	19.62			1	5
136) 1,3-Diethylbenzene	(4)	13.329(-0.000)	119	327947	21.176	21.18			0.2	5
137) 1,4-Diethylbenzene	(4)	13.402(-0.000)	119	351701	21.471	21.47			0.2	5
138) 1,2-Dichlorobenzene	(4)	13.456(0.000)	146	263427	22.142	22.14			0.2	5
139) n-Butylbenzene	(4)	13.426(-0.000)	92	288024M	22.972	22.97			0.2	5
140) 1,2-Diethylbenzene	(4)	13.475(0.000)	119	273869	21.018	21.02			0.2	5
141) Diethylbenzene (total)	(4)		100	953517	63.665	63.67			0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)	13.998(0.000)	75	47163	20.456	20.46			0.3	5
144) 1,3,5-Trichlorobenzene	(4)	14.132(-0.000)	180	198514	21.705	21.70			0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.552(-0.000)	180	187040	21.342	21.34			0.3	5
147) Hexachlorobutadiene	(4)	14.637(-0.000)	225	84592	21.660	21.66			2	5
148) Naphthalene	(4)	14.734(0.000)	128	672595	21.647	21.65			1	5
149) 1,2,3-Trichlorobenzene	(4)	14.880(-0.000)	180	179773	21.110	21.11			0.4	5
150) 2-Methylnaphthalene	(4)	15.531(-0.000)	142	389607	18.968	18.97			2	4

M = Compound was manually integrated.

Total number of targets = 110

Digitally signed by Linda C. Pape on 12/05/2019 at 09:47. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 12/06/2019 at 20:45. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

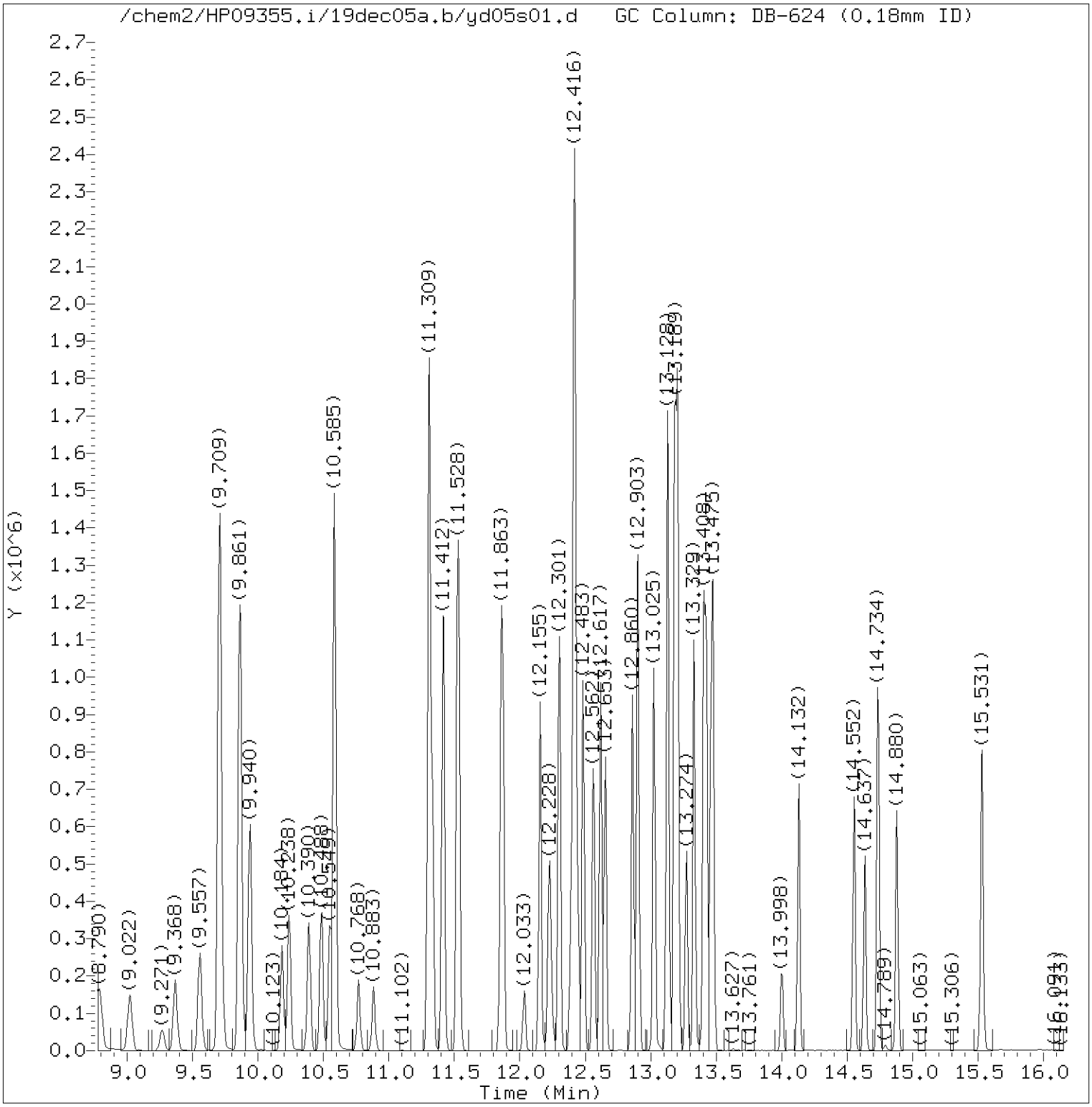
Target Revision 3.5

Data File: /chem2/HP09355.i/19dec05a.b/yd05s01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 08:04 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 09:37
Date, time and analyst ID of latest file update: 05-Dec-2019 09:39 lcp00895

Sample Name: LCSY15 Lab Sample ID: LCSY15

Digitally signed by Linda C. Pape
on 12/05/2019 at 09:47.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec05a.b/yd05s01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 08:04 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 09:37
Date, time and analyst ID of latest file update: 05-Dec-2019 09:39 lcp00895

Sample Name: LCSY15 Lab Sample ID: LCSY15

Digitally signed by Linda C. Pape
on 12/05/2019 at 09:47.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec05a.b/yd05s01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 08:04 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 09:37
Date, time and analyst ID of latest file update: 05-Dec-2019 09:39 lcp00895

Sample Name: LCSY15 Lab Sample ID: LCSY15

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.044	85	115953	12.702
4) Chloromethane	(2)	2.238	50	141942	18.090
6) Vinyl Chloride	(2)	2.354	62	135675	17.613
5) 1,3-Butadiene	(2)	2.360	39	109788	17.983
8) Bromomethane	(2)	2.689	94	89984	15.746
9) Chloroethane	(2)	2.786	64	76610	17.138
12) Trichlorofluoromethane	(2)	3.090	101	154266	15.699
11) n-Pentane	(2)	3.139	43	144374	15.153
14) Ethyl ether	(2)	3.358	59	94725	18.512
15) Freon 123a	(2)	3.425	67	124610	21.002
16) Acrolein	(1)	3.522	56	347917	145.446
17) 1,1-Dichloroethene	(2)	3.680	96	89910	20.812
18) Acetone	(1)	3.692	58	186814	165.970
19) Freon 113	(2)	3.711	101	88945	18.086
21) 2-Propanol	(1)	3.857	45	130859	193.097
22) Methyl Iodide	(2)	3.887	142	146659	17.288
23) Carbon Disulfide	(2)	4.009	76	278421	17.830
27) Methyl Acetate	(2)	4.130	43	177949	23.564
25) Allyl Chloride	(2)	4.173	41	178625	23.846
29)*t-Butyl alcohol-d10	(1)	4.343	65	314958	250.000
28) Methylene Chloride	(2)	4.368	84	115084	22.309
30) t-Butyl alcohol	(1)	4.477	59	317200	223.808
31) Acrylonitrile	(2)	4.684	53	458274	115.866
33) Methyl Tertiary Butyl Ether	(2)	4.775	73	322155	18.714
32) trans-1,2-Dichloroethene	(2)	4.794	96	106852	21.354
34) n-Hexane	(2)	5.219	57	180578	21.284
36) 1,1-Dichloroethane	(2)	5.444	63	199993	21.979
38) di-Isopropyl ether	(2)	5.499	45	394962	22.723
39) 2-Chloro-1,3-butadiene	(2)	5.554	53	170281	20.647
40) Ethyl t-butyl ether	(2)	6.035	59	331026	19.431
43) 1,2-Dichloroethene (Total)	(2)		96	235681	44.002
44) 2-Butanone	(2)	6.223	43	1006535	170.527
42) cis-1,2-Dichloroethene	(2)	6.272	96	128829	22.648
45) 2,2-Dichloropropane	(2)	6.290	77	136167	19.493
47) Propionitrile	(1)	6.302	54	307719	188.775
48) Methacrylonitrile	(2)	6.527	67	696266	165.590
49) Bromochloromethane	(2)	6.613	128	57121	19.246
50) Tetrahydrofuran	(1)	6.619	71	173984	98.389

* = Compound is an internal standard.

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Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec05a.b/yd05s01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 08:04 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 09:37
Date, time and analyst ID of latest file update: 05-Dec-2019 09:39 lcp00895

Sample Name: LCSY15 Lab Sample ID: LCSY15

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	6.752	83	186884	21.211
52)$Dibromofluoromethane	(2)	6.971	113	214085	45.840
53) 1,1,1-Trichloroethane	(2)	6.990	97	147237	19.283
54) Cyclohexane	(2)	7.099	56	203123	20.405
55) 1,1-Dichloropropene	(2)	7.203	75	156620	21.250
56) Carbon Tetrachloride	(2)	7.209	117	119225	18.314
58) Isobutyl Alcohol	(1)	7.312	41	297124	607.013
57)$1,2-Dichloroethane-d4	(2)	7.434	102	59508	48.739
60) Benzene	(2)	7.464	78	482919	22.412
61) 1,2-Dichloroethane	(2)	7.537	62	153818	20.127
65) t-Amyl methyl ether	(2)	7.647	73	322380	18.905
66)*Fluorobenzene	(2)	7.866	96	995303	50.000
67) n-Heptane	(2)	7.878	43	205401	22.906
69) n-Butanol	(1)	8.188	56	497443	1083.491
71) Trichloroethene	(2)	8.352	95	117024	20.994
72) Methylcyclohexane	(2)	8.669	83	213416	20.181
73) 1,2-Dichloropropane	(2)	8.681	63	131494	23.940
76) Methyl Methacrylate	(2)	8.748	69	137046	21.259
75) 1,4-Dioxane	(1)	8.760	88	61010M	623.154
74) Dibromomethane	(2)	8.797	93	76058	20.990
78) Bromodichloromethane	(2)	9.022	83	131020	20.722
79) 2-Nitropropane	(2)	9.265	41	45831	17.011
80) 2-Chloroethyl Vinyl Ether	(2)	9.368	63	106032	22.843
81) cis-1,3-Dichloropropene	(2)	9.557	75	184353	21.613
82) 4-Methyl-2-pentanone	(2)	9.709	43	1235427	111.064
83)$Toluene-d8	(3)	9.861	98	971068	49.360
88) Toluene	(3)	9.940	92	302757	22.482
90) 1,3-Dichloropropene (total)	(3)		100	348603	42.503
89) trans-1,3-Dichloropropene	(3)	10.184	75	164250	20.890
91) Ethyl Methacrylate	(3)	10.238	69	205656	20.639
92) 1,1,2-Trichloroethane	(3)	10.390	97	119335	22.981
93) Tetrachloroethene	(3)	10.488	166	119924	21.044
94) 1,3-Dichloropropane	(3)	10.549	76	201927	22.393
96) 2-Hexanone	(3)	10.585	43	1012477	113.841
97) Dibromochloromethane	(3)	10.768	129	102941	20.376
99) 1,2-Dibromoethane	(3)	10.883	107	124244	21.980
100)*Chlorobenzene-d5	(3)	11.309	117	727112	50.000
101) 1-Chlorohexane	(3)	11.309	91	163594	21.616

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 12/05/2019 at 09:47.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec05a.b/yd05s01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 08:04 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 09:37
Date, time and analyst ID of latest file update: 05-Dec-2019 09:39 lcp00895

Sample Name: LCSY15 Lab Sample ID: LCSY15

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
102) Chlorobenzene	(3)	11.333	112	328569	21.686
103) 1,1,1,2-Tetrachloroethane	(3)	11.412	131	99413	20.550
104) Ethylbenzene	(3)	11.419	91	578396	22.428
106) m+p-Xylene	(3)	11.528	106	452311	44.446
108) Xylene (Total)	(3)		106	667624	66.167
107) o-Xylene	(3)	11.857	106	215313	21.722
109) Styrene	(3)	11.875	104	370205	22.605
110) Bromoform	(3)	12.033	173	70088	19.263
111) Isopropylbenzene	(3)	12.155	105	559804	21.855
112) Cyclohexanone	(1)	12.228	55	249605	480.125
114)$4-Bromofluorobenzene	(3)	12.301	95	363229	48.324
116) 1,1,2,2-Tetrachloroethane	(4)	12.392	83	208970	23.381
118) trans-1,4-Dichloro-2-butene	(4)	12.416	53	340375	110.183
115) Bromobenzene	(4)	12.422	156	139803	22.509
117) 1,2,3-Trichloropropane	(4)	12.441	110	61720	21.742
119) n-Propylbenzene	(4)	12.483	91	701368	23.809
120) 2-Chlorotoluene	(4)	12.562	126	133300	21.968
122) 1,3,5-Trimethylbenzene	(4)	12.617	105	483556	22.189
121) 4-Chlorotoluene	(4)	12.653	126	139483	21.990
124) tert-Butylbenzene	(4)	12.860	134	97411M	21.346
125) Pentachloroethane	(4)	12.897	167	75094	21.667
126) 1,2,4-Trimethylbenzene	(4)	12.903	105	502139	21.939
127) sec-Butylbenzene	(4)	13.025	105	635398	23.022
129) 1,3-Dichlorobenzene	(4)	13.128	146	273286	22.463
130) p-Isopropyltoluene	(4)	13.134	119	533676	22.504
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	378108	50.000
133) 1,4-Dichlorobenzene	(4)	13.201	146	282606	22.744
134) 1,2,3-Trimethylbenzene	(4)	13.207	105	523979	21.792
135) Benzyl Chloride	(4)	13.274	91	340216	19.620
136) 1,3-Diethylbenzene	(4)	13.329	119	327947	21.176
141) Diethylbenzene (total)	(4)		100	953517	63.665
137) 1,4-Diethylbenzene	(4)	13.402	119	351701	21.471
139) n-Butylbenzene	(4)	13.426	92	288024M	22.972
138) 1,2-Dichlorobenzene	(4)	13.457	146	263427	22.142
140) 1,2-Diethylbenzene	(4)	13.475	119	273869	21.018
142) 1,2-Dibromo-3-chloropropane	(4)	13.998	75	47163	20.456
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	198514	21.705
146) 1,2,4-Trichlorobenzene	(4)	14.552	180	187040	21.342

M = Compound was manually integrated.
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on 12/05/2019 at 09:47.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec05a.b/yd05s01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 08:04 Analyst ID: LCP00895

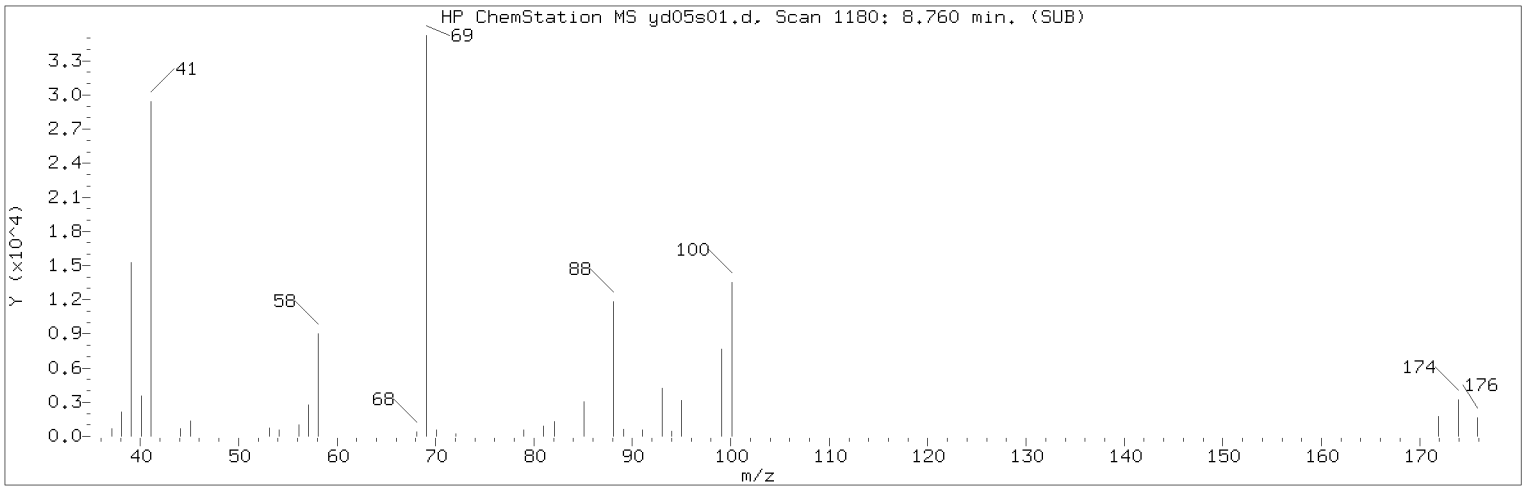
Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 09:37
Date, time and analyst ID of latest file update: 05-Dec-2019 09:39 lcp00895

Sample Name: LCSY15 Lab Sample ID: LCSY15

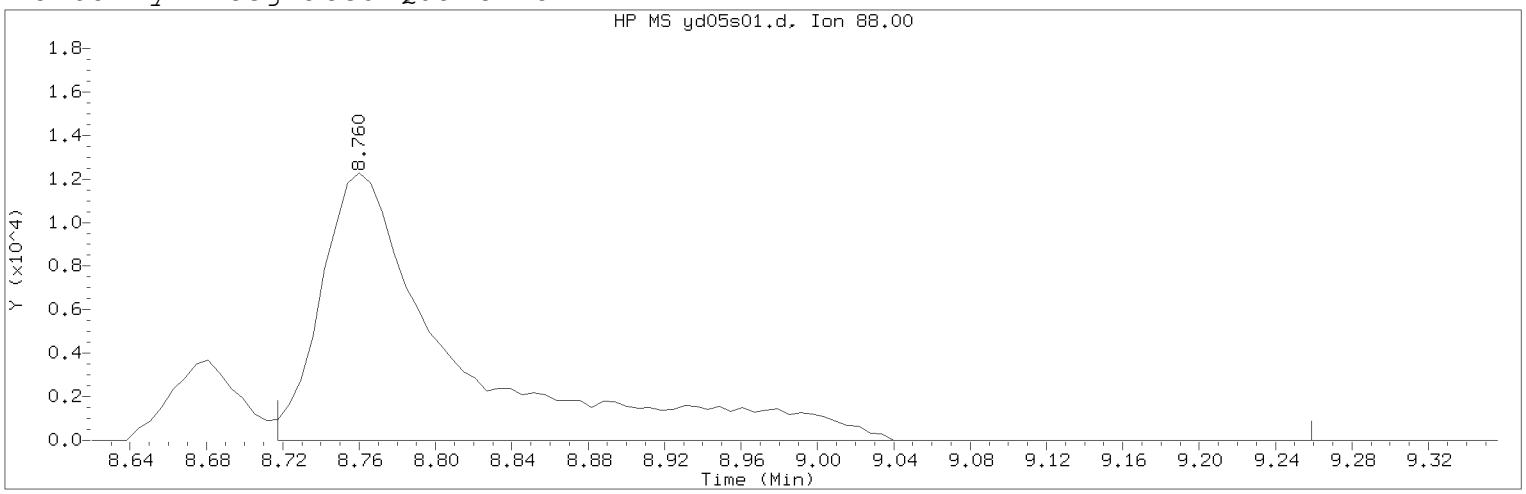
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Hexachlorobutadiene	(4)	14.637	225	84592	21.660
148) Naphthalene	(4)	14.734	128	672595	21.647
149) 1,2,3-Trichlorobenzene	(4)	14.880	180	179773	21.110
150) 2-Methylnaphthalene	(4)	15.531	142	389607	18.968

Digitally signed by Linda C. Pape
on 12/05/2019 at 09:47.
Target 3.5 esignature user ID: lcp00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19dec05a.b/yd05s01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 08:04 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 09:37
Date, time and analyst ID of latest file update: 05-Dec-2019 09:39 lcp00895

Sample Name: LCSY15 Lab Sample ID: LCSY15

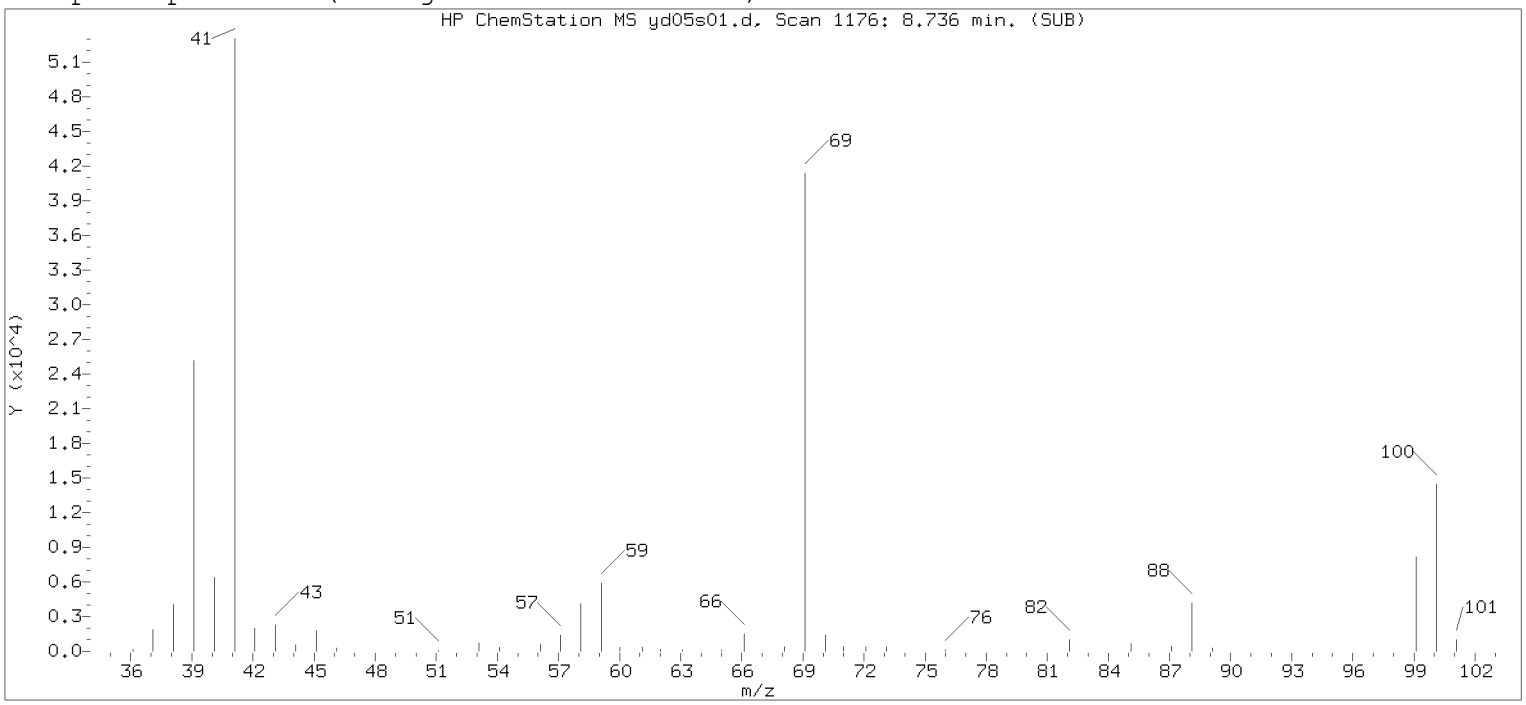
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1180
Retention Time (minutes): 8.760
Quant Ion : 88.00
Area (flag) : 61010M
On-Column Amount (ng) : 623.1543
Integration start scan : 1172 Integration stop scan: 1261
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

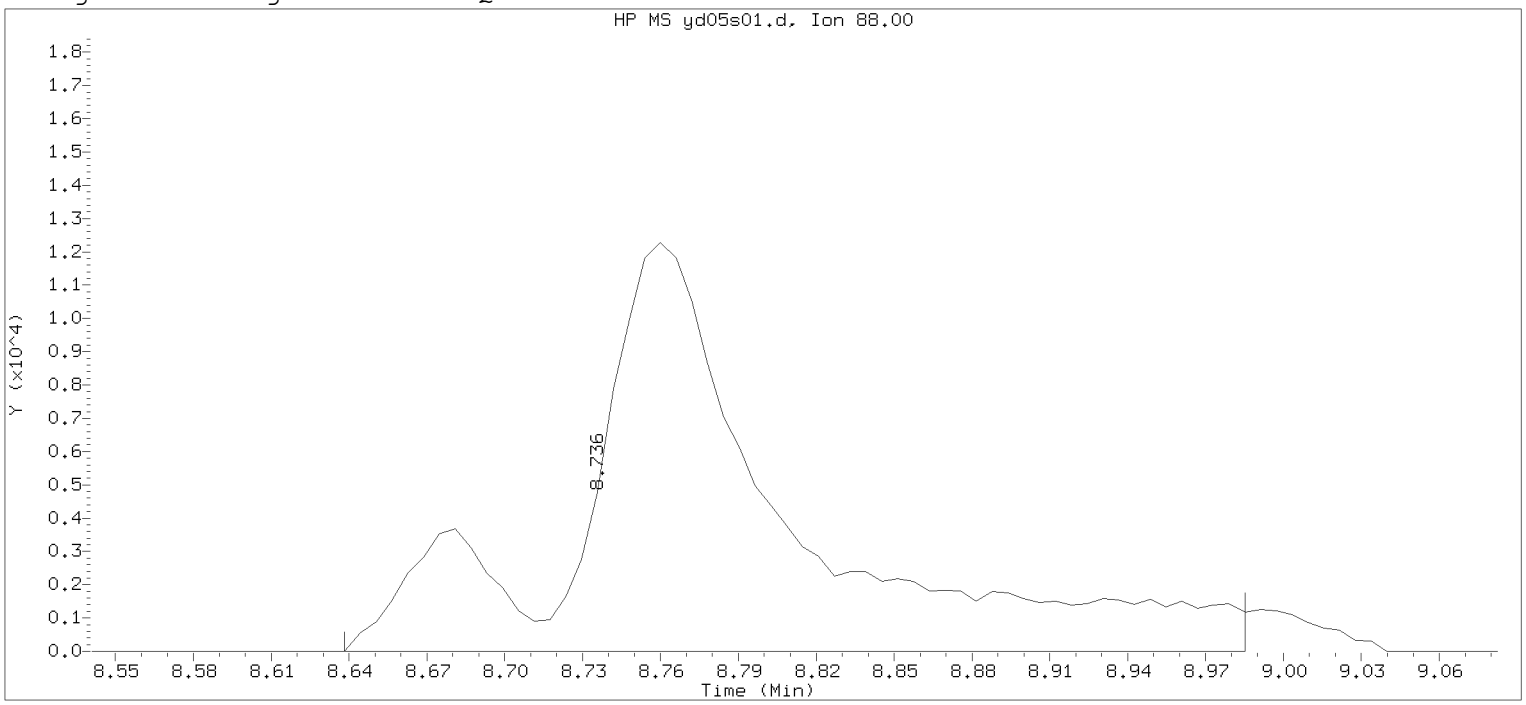
Analyst responsible for change: Digitally signed by Linda C. Pape
on 12/05/2019 at 09:47.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 12/06/2019 at 20:45.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19dec05a.b/yd05s01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 08:04 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 08:09
Date, time and analyst ID of latest file update: 05-Dec-2019 08:22 Automation

Sample Name: LCSY15 Lab Sample ID: LCSY15

Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1176		
Retention Time (minutes)	: 8.736		
Quant Ion	: 88.00		
Area	: 67543		
On-column Amount (ng)	: 689.8889		
Integration start scan	: 1159	Integration stop scan:	1216
Y at integration start	: 0	Y at integration end:	0

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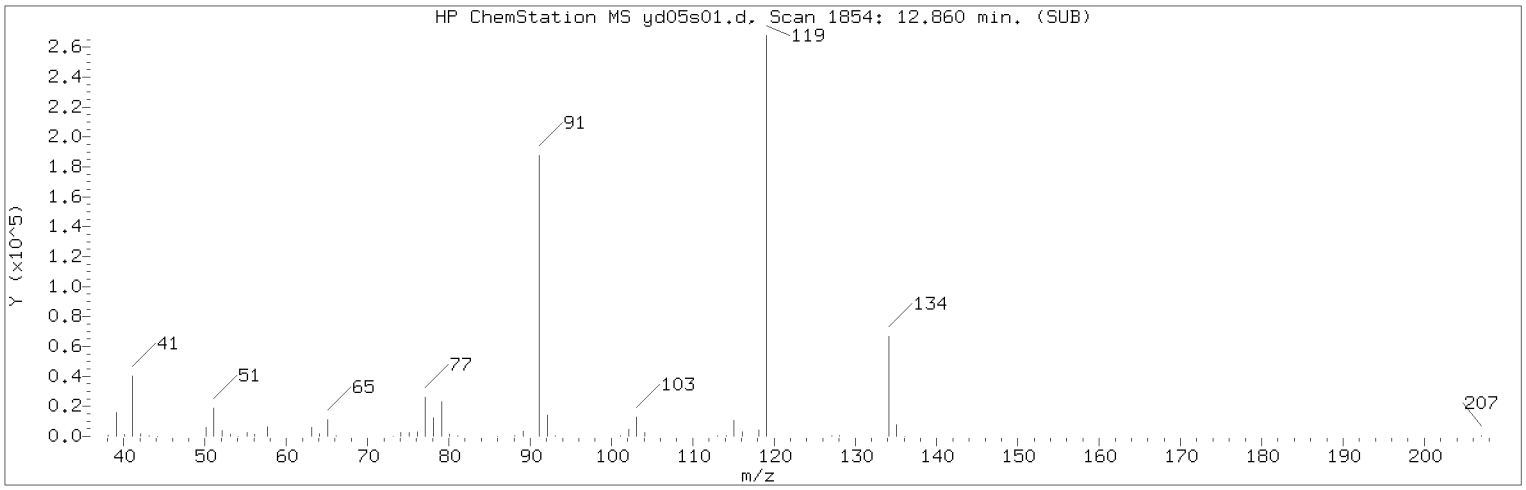
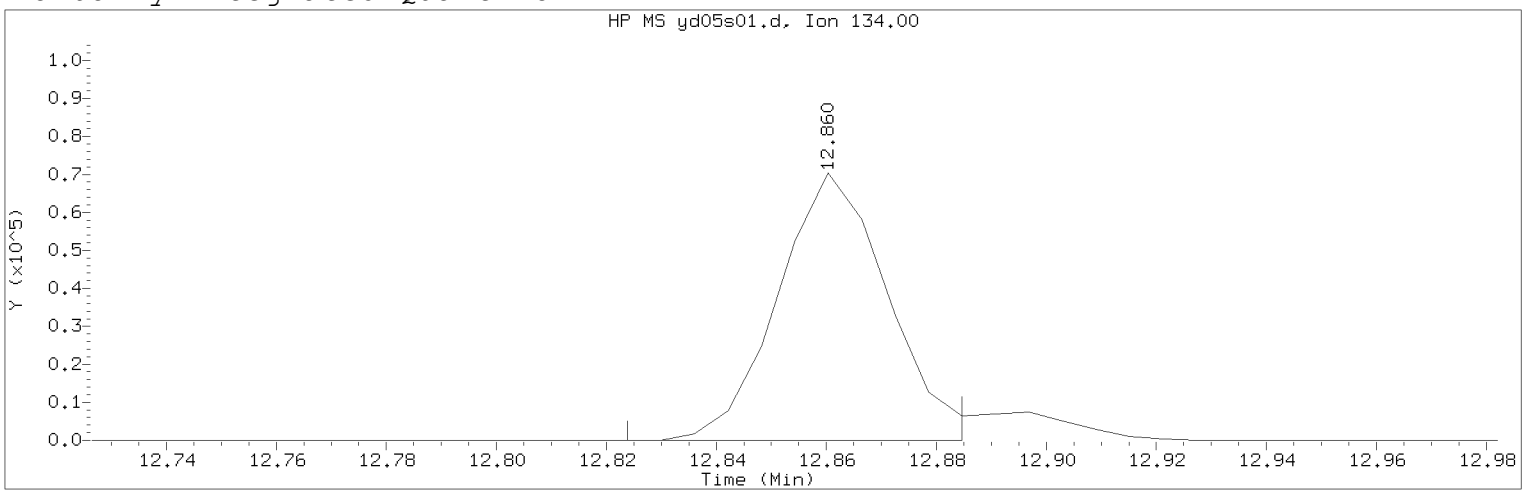
Target 3.5 esignature user ID: LCP00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19dec05a.b/yd05s01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 08:04 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 09:37
Date, time and analyst ID of latest file update: 05-Dec-2019 09:39 lcp00895

Sample Name: LCSY15 Lab Sample ID: LCSY15

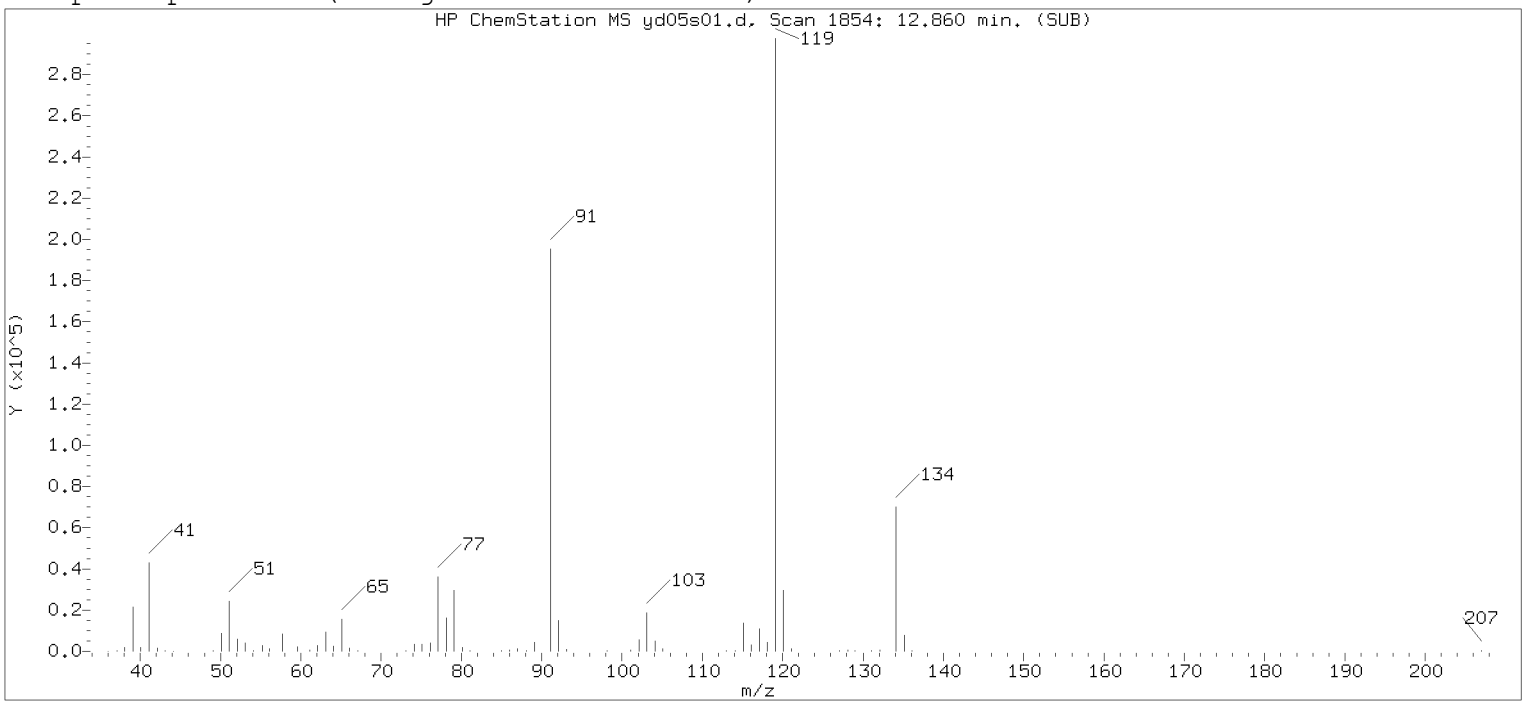
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area (flag) : 97411M
On-Column Amount (ng) : 21.3462
Integration start scan : 1847 Integration stop scan: 1857
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

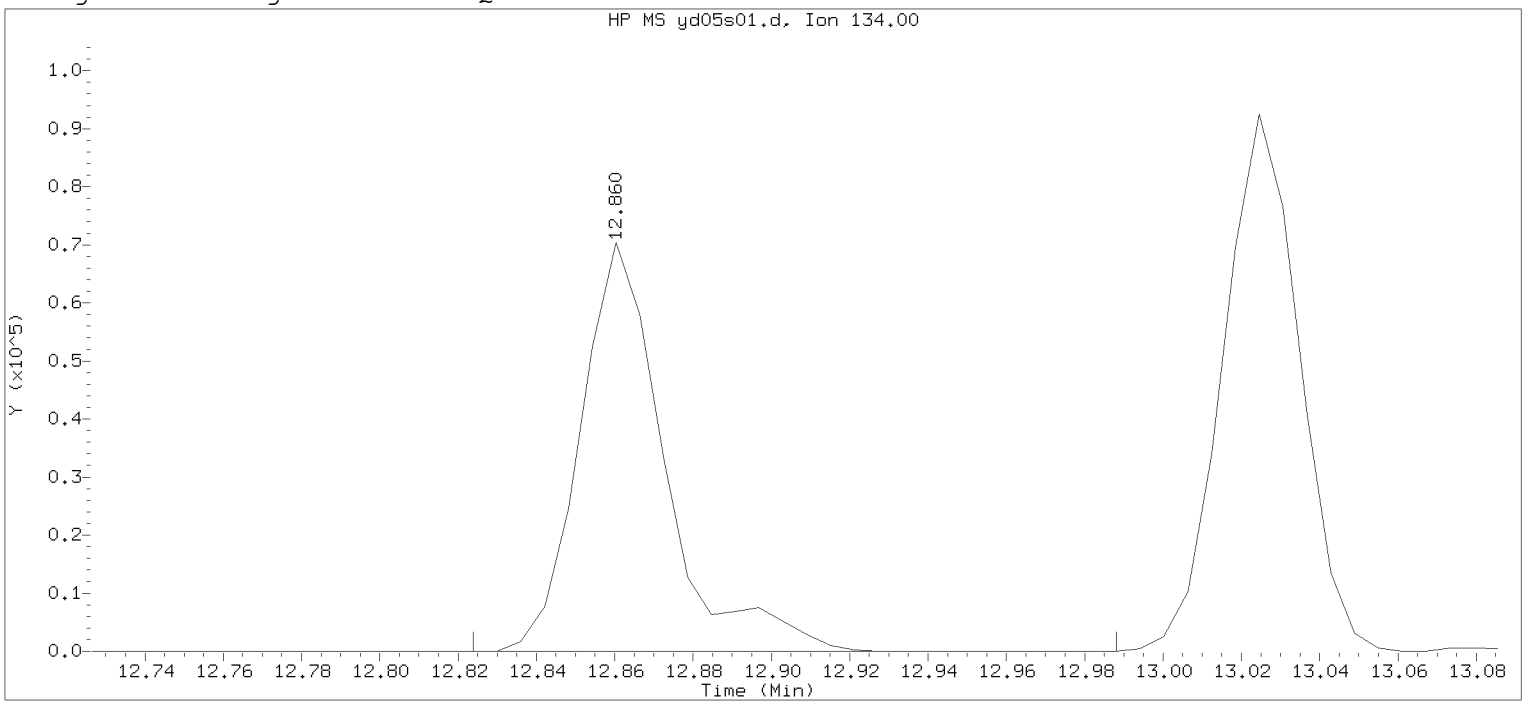
Analyst responsible for change: Digitally signed by Linda C. Pape
on 12/05/2019 at 09:47.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 12/06/2019 at 20:45.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19dec05a.b/yd05s01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 08:04 Analyst ID: LCP00895

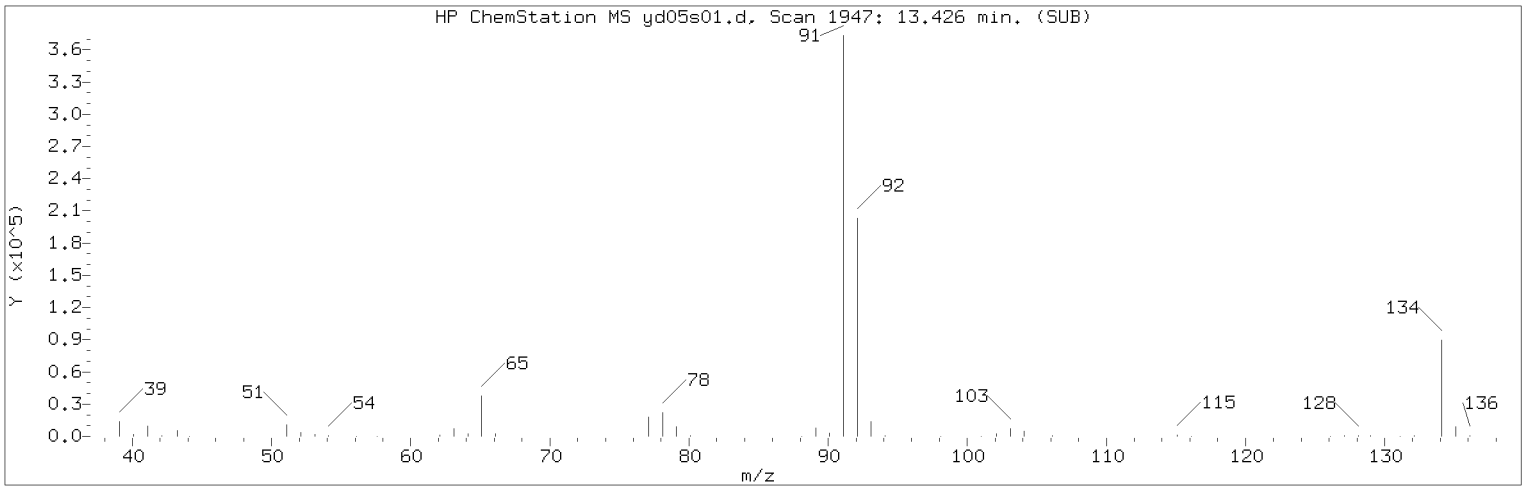
Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 08:09
Date, time and analyst ID of latest file update: 05-Dec-2019 08:22 Automation

Sample Name: LCSY15 Lab Sample ID: LCSY15

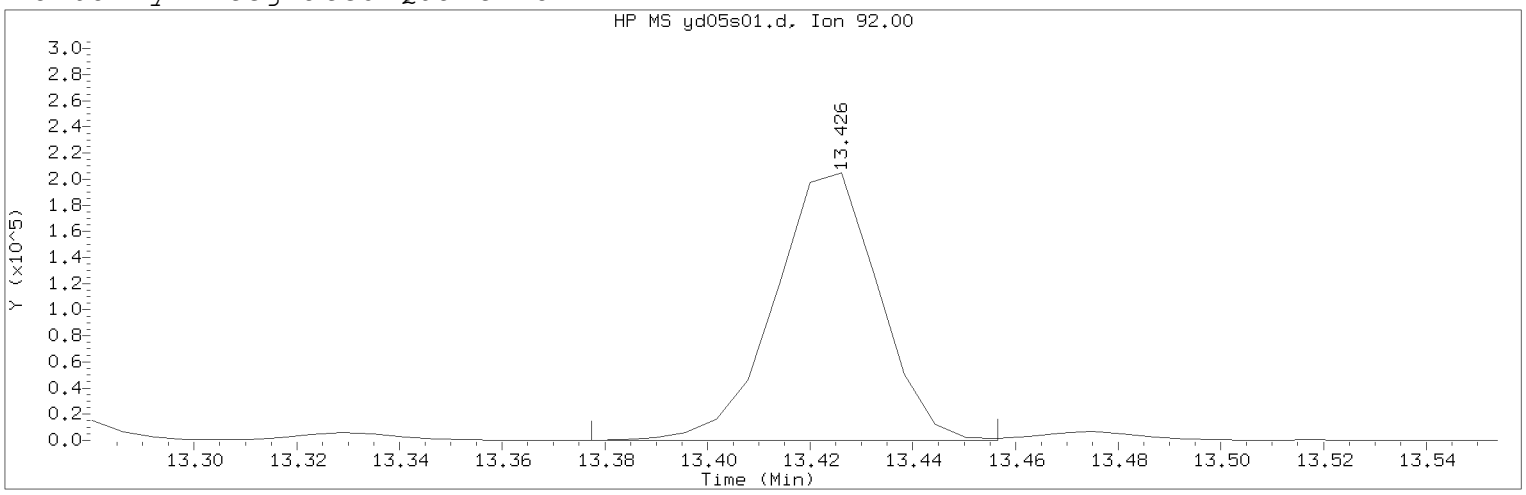
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area : 106065
On-column Amount (ng) : 23.2427
Integration start scan : 1847 Integration stop scan: 1874
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 12/05/2019 at 09:47.
Target 3.5 esignature user name: LCP00857

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19dec05a.b/yd05s01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 08:04 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 09:37
Date, time and analyst ID of latest file update: 05-Dec-2019 09:39 lcp00895

Sample Name: LCSY15 Lab Sample ID: LCSY15

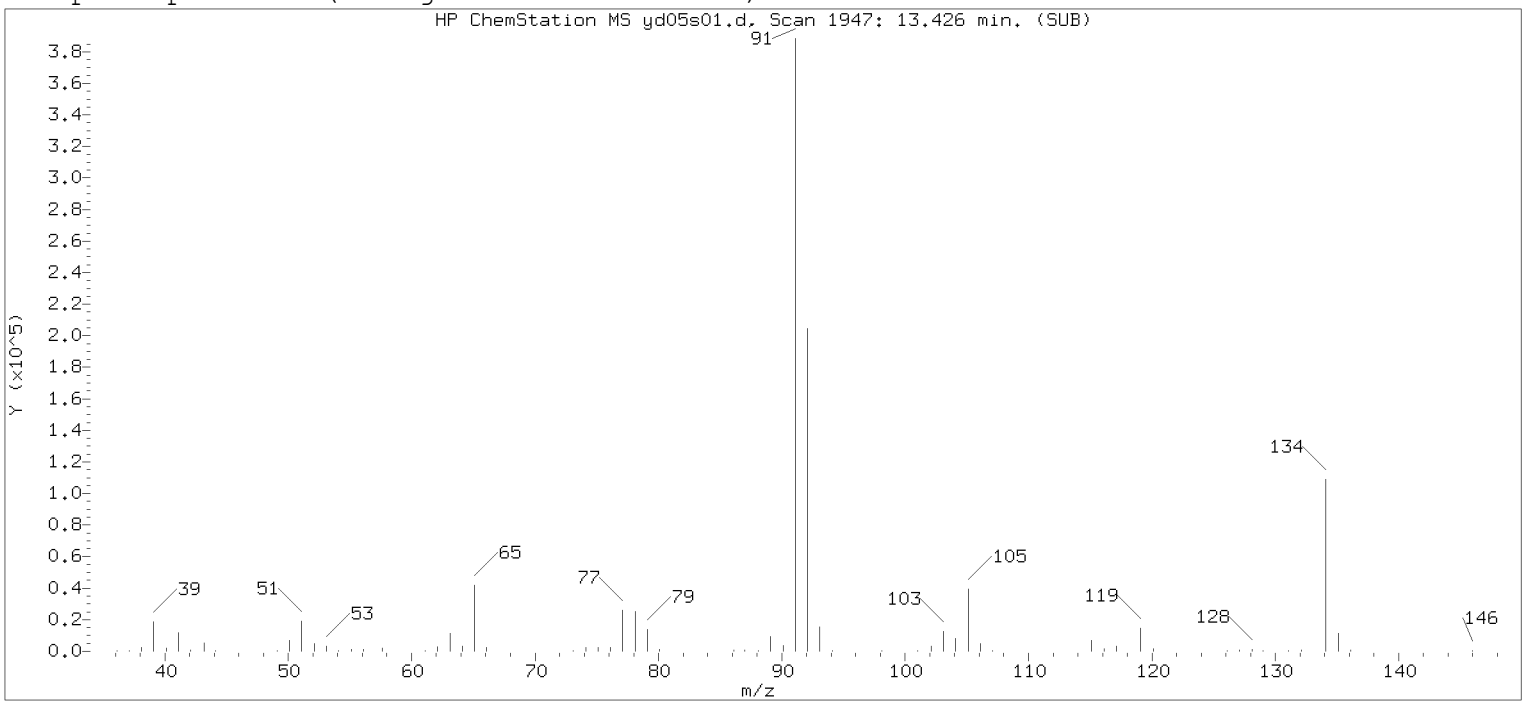
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1947
Retention Time (minutes): 13.426
Quant Ion : 92.00
Area (flag) : 288024M
On-Column Amount (ng) : 22.9725
Integration start scan : 1938 Integration stop scan: 1951
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

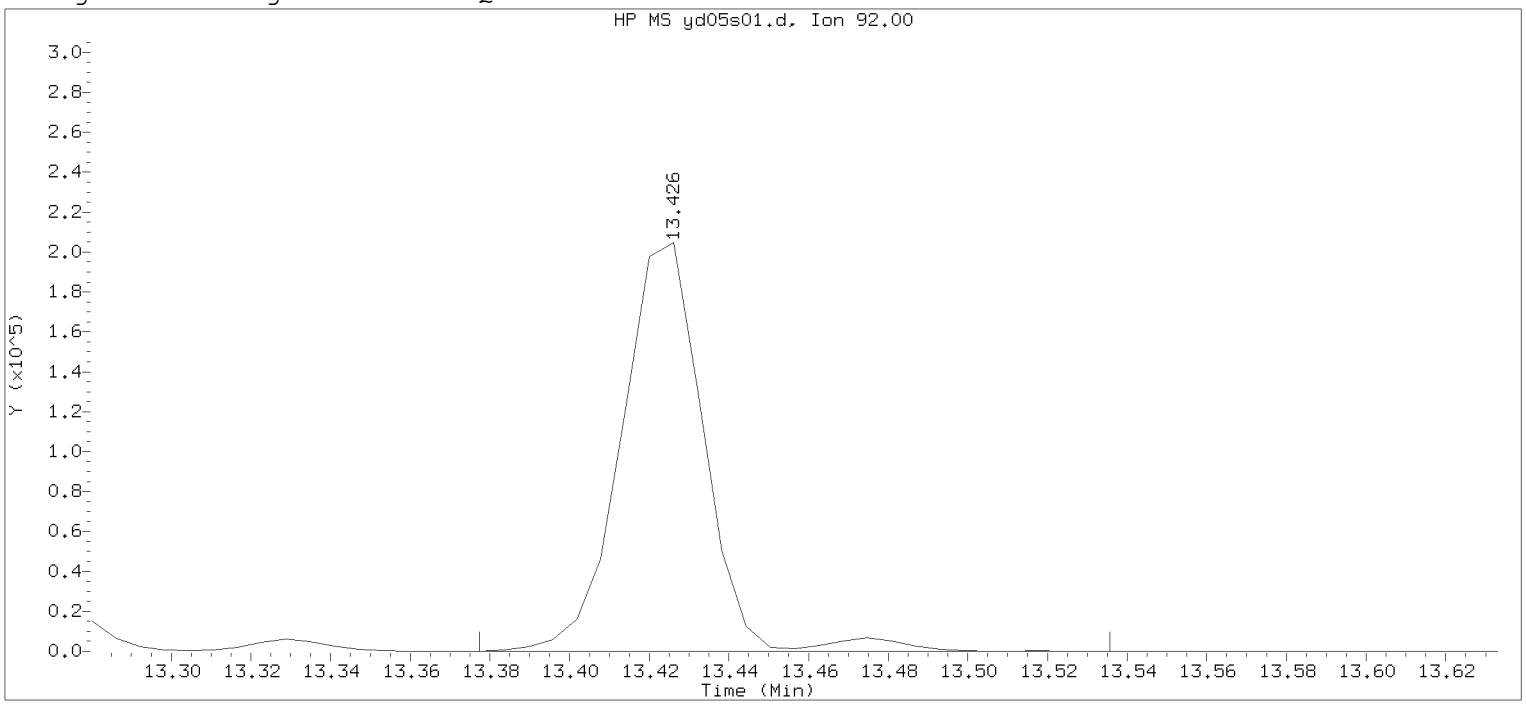
Analyst responsible for change: Digitally signed by Linda C. Pape
on 12/05/2019 at 09:47.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 12/06/2019 at 20:45.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19dec05a.b/yd05s01.d Instrument ID: HP09355.i
Injection date and time: 05-DEC-2019 08:04 Analyst ID: LCP00895

Method used: /chem2/HP09355.i/19dec05a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 05-DEC-2019 08:09
Date, time and analyst ID of latest file update: 05-Dec-2019 08:22 Automation

Sample Name: LCSY15 Lab Sample ID: LCSY15

Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1947
Retention Time (minutes): 13.426
Quant Ion : 92.00
Area : 296899
On-column Amount (ng) : 23.6803
Integration start scan : 1938 Integration stop scan: 1964
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 12/05/2019 at 09:47.
Target 3.5 esignature user: LCP00895

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSY17

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSY17

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09355.i/19dec07a.b/yd07l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 12/07/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	12	
74-87-3	Chloromethane	17	
106-99-0	1,3-Butadiene	21	
75-01-4	Vinyl Chloride	16	
74-83-9	Bromomethane	14	
75-00-3	Chloroethane	15	
109-66-0	n-Pentane	13	
75-69-4	Trichlorofluoromethane	14	
60-29-7	Ethyl ether	23	
354-23-4	Freon 123a	20	
107-02-8	Acrolein	140	
75-35-4	1,1-Dichloroethene	19	
67-64-1	Acetone	180	
76-13-1	Freon 113	17	
67-63-0	2-Propanol	190	
74-88-4	Methyl Iodide	16	
75-15-0	Carbon Disulfide	16	
107-05-1	Allyl Chloride	22	
79-20-9	Methyl Acetate	23	
75-09-2	Methylene Chloride	22	
75-65-0	t-Butyl alcohol	230	
107-13-1	Acrylonitrile	120	
156-60-5	trans-1,2-Dichloroethene	20	
1634-04-4	Methyl Tertiary Butyl Ether	19	
110-54-3	n-Hexane	19	
75-34-3	1,1-Dichloroethane	21	
108-20-3	di-Isopropyl ether	22	
126-99-8	2-Chloro-1,3-butadiene	20	
637-92-3	Ethyl t-butyl ether	20	
156-59-2	cis-1,2-Dichloroethene	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSY17

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSY17

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09355.i/19dec07a.b/yd07l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 12/07/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
540-59-0	1,2-Dichloroethene (Total)	42	
78-93-3	2-Butanone	170	
594-20-7	2,2-Dichloropropane	18	
107-12-0	Propionitrile	190	
126-98-7	Methacrylonitrile	170	
74-97-5	Bromochloromethane	19	
109-99-9	Tetrahydrofuran	100	
67-66-3	Chloroform	21	
71-55-6	1,1,1-Trichloroethane	19	
110-82-7	Cyclohexane	19	
563-58-6	1,1-Dichloropropene	20	
56-23-5	Carbon Tetrachloride	18	
78-83-1	Isobutyl Alcohol	610	
71-43-2	Benzene	22	
107-06-2	1,2-Dichloroethane	20	
994-05-8	t-Amyl methyl ether	19	
142-82-5	n-Heptane	21	
71-36-3	n-Butanol	1100	
79-01-6	Trichloroethene	21	
108-87-2	Methylcyclohexane	20	
78-87-5	1,2-Dichloropropane	24	
74-95-3	Dibromomethane	21	
123-91-1	1,4-Dioxane	660	
80-62-6	Methyl Methacrylate	22	
75-27-4	Bromodichloromethane	21	
79-46-9	2-Nitropropane	18	
110-75-8	2-Chloroethyl Vinyl Ether	23	
10061-01-5	cis-1,3-Dichloropropene	21	
108-10-1	4-Methyl-2-pentanone	110	
108-88-3	Toluene	22	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSY17

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSY17

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09355.i/19dec07a.b/yd07l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 12/07/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
10061-02-6	trans-1,3-Dichloropropene	21	
542-75-6	1,3-Dichloropropene (total)	42	
97-63-2	Ethyl Methacrylate	21	
79-00-5	1,1,2-Trichloroethane	23	
127-18-4	Tetrachloroethene	21	
142-28-9	1,3-Dichloropropane	22	
591-78-6	2-Hexanone	120	
124-48-1	Dibromochloromethane	20	
106-93-4	1,2-Dibromoethane	22	
544-10-5	1-Chlorohexane	21	
108-90-7	Chlorobenzene	21	
630-20-6	1,1,1,2-Tetrachloroethane	20	
100-41-4	Ethylbenzene	22	
179601-23-1	m+p-Xylene	44	
95-47-6	o-Xylene	22	
1330-20-7	Xylene (Total)	65	
100-42-5	Styrene	23	
75-25-2	Bromoform	20	
98-82-8	Isopropylbenzene	22	
108-94-1	Cyclohexanone	510	
108-86-1	Bromobenzene	23	
79-34-5	1,1,2,2-Tetrachloroethane	24	
96-18-4	1,2,3-Trichloropropane	22	
110-57-6	trans-1,4-Dichloro-2-butene	97	
103-65-1	n-Propylbenzene	24	
95-49-8	2-Chlorotoluene	22	
106-43-4	4-Chlorotoluene	22	
108-67-8	1,3,5-Trimethylbenzene	22	
98-06-6	tert-Butylbenzene	21	
76-01-7	Pentachloroethane	21	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSY17

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: LCSY17

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP09355.i/19dec07a.b/yd07l01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 12/07/19

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
95-63-6	1,2,4-Trimethylbenzene	22	
135-98-8	sec-Butylbenzene	23	
541-73-1	1,3-Dichlorobenzene	22	
99-87-6	p-Isopropyltoluene	22	
106-46-7	1,4-Dichlorobenzene	23	
526-73-8	1,2,3-Trimethylbenzene	21	
100-44-7	Benzyl Chloride	19	
141-93-5	1,3-Diethylbenzene	21	
105-05-5	1,4-Diethylbenzene	21	
95-50-1	1,2-Dichlorobenzene	22	
104-51-8	n-Butylbenzene	23	
135-01-3	1,2-Diethylbenzene	21	
25340-17-4	Diethylbenzene (total)	62	
96-12-8	1,2-Dibromo-3-chloropropane	21	
108-70-3	1,3,5-Trichlorobenzene	22	
120-82-1	1,2,4-Trichlorobenzene	21	
87-68-3	Hexachlorobutadiene	22	
91-20-3	Naphthalene	22	
87-61-6	1,2,3-Trichlorobenzene	21	
91-57-6	2-Methylnaphthalene	19	

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09355.i/19dec07a.b/yd07l01.d Injection date and time: **07-DEC-2019 11:50**
Data file Sample Info. Line: LCSY17;LCSY17;1;3;LCS;;;;yd07b01; Instrument ID: **HP09355.i** Batch: **Y193411AA**
Date, time and analyst ID of latest file update: 07-Dec-2019 12:55 mec29284

Blank Data file reference: **/chem2/HP09355.i/19dec07a.b/yd07b01.d**

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 07-DEC-2019 11:45
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec07a.b/yd07c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.355	(-0.006)	456	65	365155	(2)	250.00	
66) Fluorobenzene	7.866	(0.000)	1033	96	1150552	(-1)	50.00	
100) Chlorobenzene-d5	11.309	(0.000)	1599	117	842221	(-2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.183	(0.000)	1907	152	434044	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.971	(-0.001)	113	246174	45.598	91%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.434	(-0.001)	102	70199	49.737	99%		80 - 120
83) Toluene-d8	(3)	9.861	(0.000)	98	1123023	49.282	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.301	(0.000)	95	422508	48.528	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	2.044	(-0.000)	85	131213	12.434	12.43			0.2	1
4) Chloromethane	(2)	2.244	(-0.001)	50	150278	16.568	16.57			0.2	1
5) 1,3-Butadiene	(2)	2.366	(-0.001)	39	146785M	20.798	20.80			1	3
6) Vinyl Chloride	(2)	2.360	(-0.000)	62	145155	16.301	16.30			0.2	1
8) Bromomethane	(2)	2.695	(-0.000)	94	90807	13.745	13.75			0.3	1
9) Chloroethane	(2)	2.786	(-0.000)	64	77365	14.971	14.97			0.2	1
11) n-Pentane	(2)	3.145	(-0.000)	43	139038	12.624	12.62			0.4	10
12) Trichlorofluoromethane	(2)	3.096	(-0.000)	101	160430	14.123	14.12			0.2	1
14) Ethyl ether	(2)	3.358	(-0.000)	59	134189	22.686	22.69			0.2	5
15) Freon 123a	(2)	3.431	(-0.000)	67	139711	20.370	20.37			0.4	5
16) Acrolein	(1)	3.528	(-0.000)	56	393515	141.894	141.89			2	100
17) 1,1-Dichloroethene	(2)	3.680	(-0.000)	96	95898	19.203	19.20			0.2	1
18) Acetone	(1)	3.698	(-0.001)	58	229893	176.165	176.17			0.7	20
19) Freon 113	(2)	3.717	(-0.001)	101	97147	17.088	17.09			0.2	10
21) 2-Propanol	(1)	3.863	(-0.001)	45	152086	193.569	193.57			18	100
22) Methyl Iodide	(2)	3.893	(-0.001)	142	155107	15.817	15.82			0.2	1
23) Carbon Disulfide	(2)	4.015	(-0.001)	76	285118	15.795	15.80			0.2	5
25) Allyl Chloride	(2)	4.173	(-0.000)	41	190665	22.018	22.02			0.3	5
27) Methyl Acetate	(2)	4.136	(-0.001)	43	203122	23.268	23.27			0.2	5
28) Methylene Chloride	(2)	4.368	(-0.001)	84	128471	21.544	21.54			0.3	1
30) t-Butyl alcohol	(1)	4.477	(0.001)	59	380245	231.409	231.41			12	50
31) Acrylonitrile	(2)	4.690	(-0.002)	53	532516	116.470	116.47			0.3	20
32) trans-1,2-Dichloroethene	(2)	4.800	(-0.001)	96	117888	20.380	20.38			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	4.781	(-0.001)	73	373319	18.760	18.76			0.2	1
34) n-Hexane	(2)	5.219	(-0.000)	57	189796	19.352	19.35			2	5
36) 1,1-Dichloroethane	(2)	5.450	(-0.001)	63	221943	21.100	21.10			0.2	1
38) di-Isopropyl ether	(2)	5.505	(-0.001)	45	451285	22.460	22.46			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	5.560	(-0.000)	53	191332	20.069	20.07			0.2	5
40) Ethyl t-butyl ether	(2)	6.040	(-0.001)	59	384709	19.535	19.53			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.272	(-0.000)	96	145134	22.072	22.07			0.2	1
43) 1,2-Dichloroethene (Total)	(2)			96	263022	42.452	42.45			0.4	2

M = Compound was manually integrated.

Digitally signed by Miranda E. Campbell on 12/07/2019 at 12:58. Target 3.5 esignature user ID: mec29284

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09355.i/19dec07a.b/yd07101.d Injection date and time: **07-DEC-2019 11:50**
Data file Sample Info. Line: LCSY17;LCSY17;1;3;LCS;;;;yd07b01; Instrument ID: **HP09355.i** Batch: **Y193411AA**
Date, time and analyst ID of latest file update: 07-Dec-2019 12:55 mec29284

Blank Data file reference: **/chem2/HP09355.i/19dec07a.b/yd07b01.d**

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 07-DEC-2019 11:45
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec07a.b/yd07c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	6.229(-0.000)	43	1179683	172.893	172.89			0.3	10
45) 2,2-Dichloropropane	(2)	6.296(-0.000)	77	149029	18.456	18.46			0.3	1
47) Propionitrile	(1)	6.308(0.000)	54	357630	189.234	189.23			14	100
48) Methacrylonitrile	(2)	6.533(-0.000)	67	807767	166.186	166.19			6	50
49) Bromochloromethane	(2)	6.612(-0.000)	128	64608	18.832	18.83			0.2	5
50) Tetrahydrofuran	(1)	6.625(0.000)	71	205242	100.110	100.11			0.7	10
51) Chloroform	(2)	6.752(-0.000)	83	210792	20.696	20.70			0.2	1
53) 1,1,1-Trichloroethane	(2)	6.990(-0.000)	97	163833	18.562	18.56			0.3	1
54) Cyclohexane	(2)	7.105(-0.000)	56	222063	19.298	19.30			1	5
55) 1,1-Dichloropropene	(2)	7.202(-0.000)	75	173869	20.407	20.41			0.2	5
56) Carbon Tetrachloride	(2)	7.209(-0.000)	117	133205	17.700	17.70			0.2	1
58) Isobutyl Alcohol	(1)	7.312(0.000)	41	346610	610.768	610.77			36	250
60) Benzene	(2)	7.464(-0.000)	78	540618	21.704	21.70			0.2	1
61) 1,2-Dichloroethane	(2)	7.537(-0.000)	62	176894	20.024	20.02			0.3	1
65) t-Amyl methyl ether	(2)	7.653(-0.000)	73	374323	18.990	18.99			0.8	5
67) n-Heptane	(2)	7.878(0.000)	43	221906	21.407	21.41			2	5
69) n-Butanol	(1)	8.188(0.001)	56	596712	1121.043	1121.04			61	250
71) Trichloroethene	(2)	8.352(-0.000)	95	132578	20.575	20.57			0.2	1
72) Methylcyclohexane	(2)	8.669(0.000)	83	244994	20.041	20.04			0.5	5
73) 1,2-Dichloropropane	(2)	8.681(0.000)	63	149407	23.531	23.53			0.2	1
74) Dibromomethane	(2)	8.796(-0.000)	93	87333	20.849	20.85			0.2	1
75) 1,4-Dioxane	(1)	8.760(0.002)	88	74767M	658.688	658.69			29	250
76) Methyl Methacrylate	(2)	8.748(-0.000)	69	161338	21.650	21.65			0.2	5
78) Bromodichloromethane	(2)	9.022(0.000)	83	150560	20.600	20.60			0.2	1
79) 2-Nitropropane	(2)	9.265(0.000)	41	54708	17.566	17.57			0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)	9.368(0.000)	63	124071	23.123	23.12			0.2	10
81) cis-1,3-Dichloropropene	(2)	9.557(0.000)	75	211161	21.416	21.42			0.2	1
82) 4-Methyl-2-pentanone	(2)	9.709(-0.000)	43	1440105	111.995	111.99			0.5	10
88) Toluene	(3)	9.940(-0.000)	92	341290	21.880	21.88			0.2	1
89) trans-1,3-Dichloropropene	(3)	10.183(-0.000)	75	190939	20.965	20.97			0.2	1
90) 1,3-Dichloropropene (total)	(3)		100	402100	42.381	42.38			0.4	2
91) Ethyl Methacrylate	(3)	10.238(-0.000)	69	242070	20.973	20.97			0.2	5
92) 1,1,2-Trichloroethane	(3)	10.390(-0.000)	97	138231	22.982	22.98			0.2	1
93) Tetrachloroethene	(3)	10.488(-0.000)	166	138439	20.973	20.97			0.2	1
94) 1,3-Dichloropropane	(3)	10.548(-0.000)	76	233765	22.381	22.38			0.2	1
96) 2-Hexanone	(3)	10.585(-0.000)	43	1191252	115.636	115.64			0.3	10
97) Dibromochloromethane	(3)	10.768(-0.000)	129	118591	20.265	20.27			0.2	1
99) 1,2-Dibromoethane	(3)	10.883(-0.000)	107	144490	22.068	22.07			0.2	1
101) 1-Chlorohexane	(3)	11.309(0.000)	91	187841	21.428	21.43			0.3	5
102) Chlorobenzene	(3)	11.333(0.000)	112	373323	21.273	21.27			0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)	11.412(0.000)	131	112505	20.078	20.08			0.2	1
104) Ethylbenzene	(3)	11.418(0.000)	91	661532	22.146	22.15			0.4	1
106) m+p-Xylene	(3)	11.528(0.000)	106	515926	43.768	43.77			1	5
107) o-Xylene	(3)	11.856(0.000)	106	247717	21.575	21.58			0.4	1
108) Xylene (Total)	(3)		106	763643	65.343	65.34			1	6
109) Styrene	(3)	11.875(-0.000)	104	427752	22.549	22.55			0.2	5
110) Bromoform	(3)	12.033(-0.000)	173	83451	19.801	19.80			1	4
111) Isopropylbenzene	(3)	12.154(0.000)	105	642766	21.664	21.66			0.2	5
112) Cyclohexanone	(1)	12.228(0.003)	55	305024	506.070	506.07			25	100
115) Bromobenzene	(4)	12.422(-0.000)	156	161119	22.598	22.60			0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	12.392(-0.000)	83	243669	23.750	23.75			0.2	1
117) 1,2,3-Trichloropropane	(4)	12.440(-0.000)	110	71069	21.809	21.81			0.2	5
118) trans-1,4-Dichloro-2-butene	(4)	12.416(-0.000)	53	344419	97.124	97.12			6	50
119) n-Propylbenzene	(4)	12.483(-0.000)	91	801940	23.715	23.72			0.2	5

M = Compound was manually integrated.

Digitally signed by Miranda E. Campbell on 12/07/2019 at 12:58. Target 3.5 esignature user ID: mec29284

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09355.i/19dec07a.b/yd07101.d Injection date and time: **07-DEC-2019 11:50**
Data file Sample Info. Line: LCSY17;LCSY17;1;3;LCS;;;;yd07b01; Instrument ID: **HP09355.i** Batch: **Y193411AA**
Date, time and analyst ID of latest file update: 07-Dec-2019 12:55 mec29284

Blank Data file reference: **/chem2/HP09355.i/19dec07a.b/yd07b01.d**

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: **8260W-D**
Calibration date and time (Last Method Edit): 07-DEC-2019 11:45
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/19dec07a.b/yd07c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

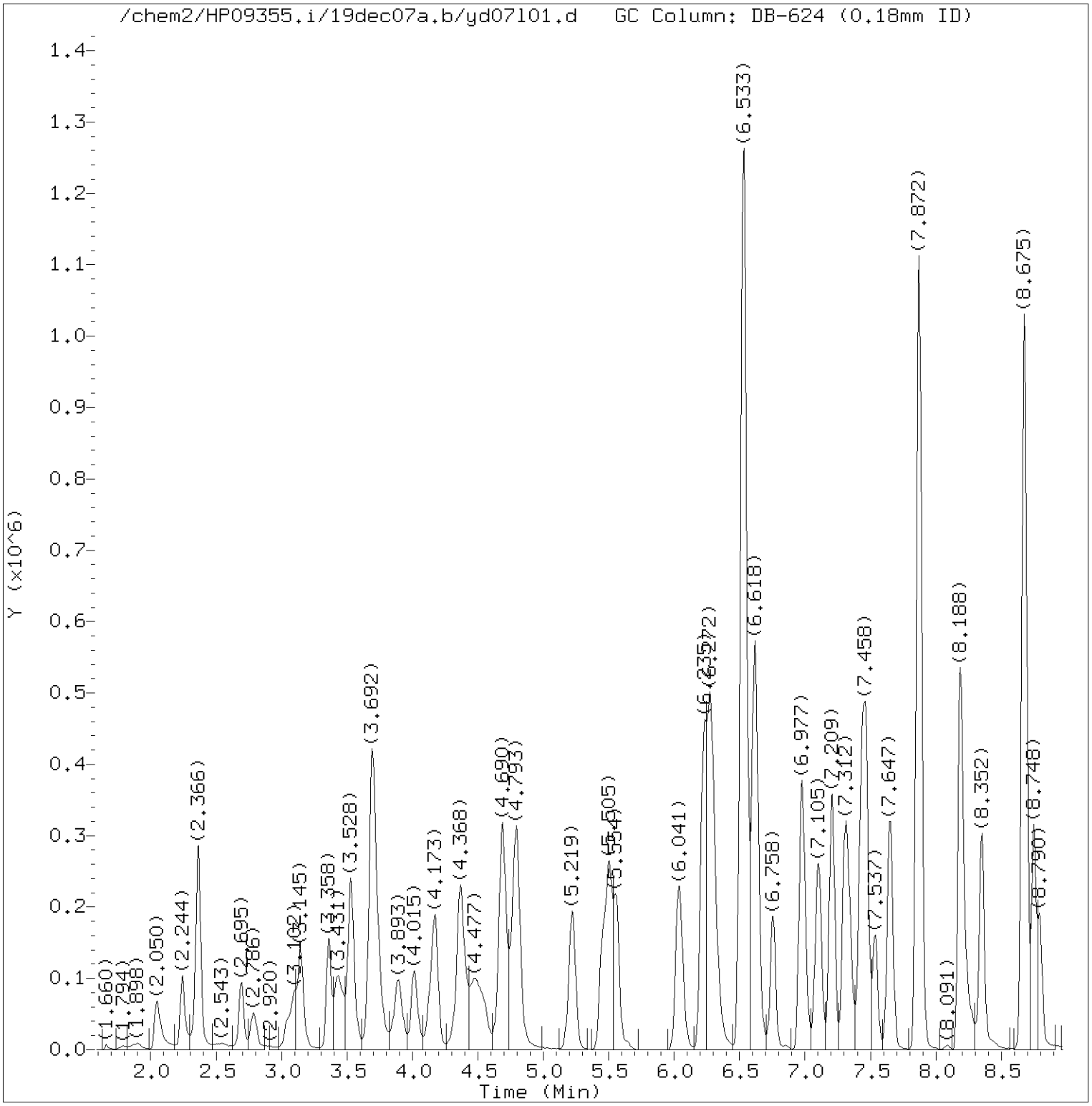
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)	12.562(-0.000)	126	150556	21.614	21.61			0.2	5
121) 4-Chlorotoluene	(4)	12.653(-0.000)	126	158445	21.761	21.76			0.2	5
122) 1,3,5-Trimethylbenzene	(4)	12.617(-0.000)	105	555370	22.200	22.20			0.3	5
124) tert-Butylbenzene	(4)	12.860(-0.000)	134	110524M	21.098	21.10			0.3	5
125) Pentachloroethane	(4)	12.897(-0.000)	167	82814	20.815	20.81			0.2	5
126) 1,2,4-Trimethylbenzene	(4)	12.903(-0.000)	105	574412	21.862	21.86			1	5
127) sec-Butylbenzene	(4)	13.024(-0.000)	105	726110	22.918	22.92			0.2	5
129) 1,3-Dichlorobenzene	(4)	13.128(-0.000)	146	309831	22.185	22.19			0.2	5
130) p-Isopropyltoluene	(4)	13.134(-0.000)	119	610637	22.431	22.43			0.2	5
133) 1,4-Dichlorobenzene	(4)	13.201(0.000)	146	321261	22.523	22.52			0.2	5
134) 1,2,3-Trimethylbenzene	(4)	13.207(0.000)	105	592701	21.474	21.47			0.3	5
135) Benzyl Chloride	(4)	13.274(-0.000)	91	387625	19.473	19.47			1	5
136) 1,3-Diethylbenzene	(4)	13.329(0.000)	119	369308	20.773	20.77			0.2	5
137) 1,4-Diethylbenzene	(4)	13.402(0.000)	119	392435	20.870	20.87			0.2	5
138) 1,2-Dichlorobenzene	(4)	13.456(0.000)	146	303260	22.205	22.20			0.2	5
139) n-Butylbenzene	(4)	13.426(0.000)	92	327482M	22.754	22.75			0.2	5
140) 1,2-Diethylbenzene	(4)	13.475(0.000)	119	308282	20.610	20.61			0.2	5
141) Diethylbenzene (total)	(4)		100	1070025	62.254	62.25			0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)	13.998(0.000)	75	55665	21.032	21.03			0.3	5
144) 1,3,5-Trichlorobenzene	(4)	14.132(0.000)	180	227619	21.680	21.68			0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.552(0.000)	180	213953	21.267	21.27			0.3	5
147) Hexachlorobutadiene	(4)	14.637(0.000)	225	96494	21.524	21.52			2	5
148) Naphthalene	(4)	14.734(0.000)	128	782455	21.937	21.94			1	5
149) 1,2,3-Trichlorobenzene	(4)	14.880(0.000)	180	205448	21.015	21.02			0.4	5
150) 2-Methylnaphthalene	(4)	15.531(0.000)	142	441236	18.713	18.71			2	4

M = Compound was manually integrated.

Total number of targets = 110

Digitally signed by Miranda E. Campbell on 12/07/2019 at 12:58. Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kari Becker on 12/09/2019 at 19:18. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

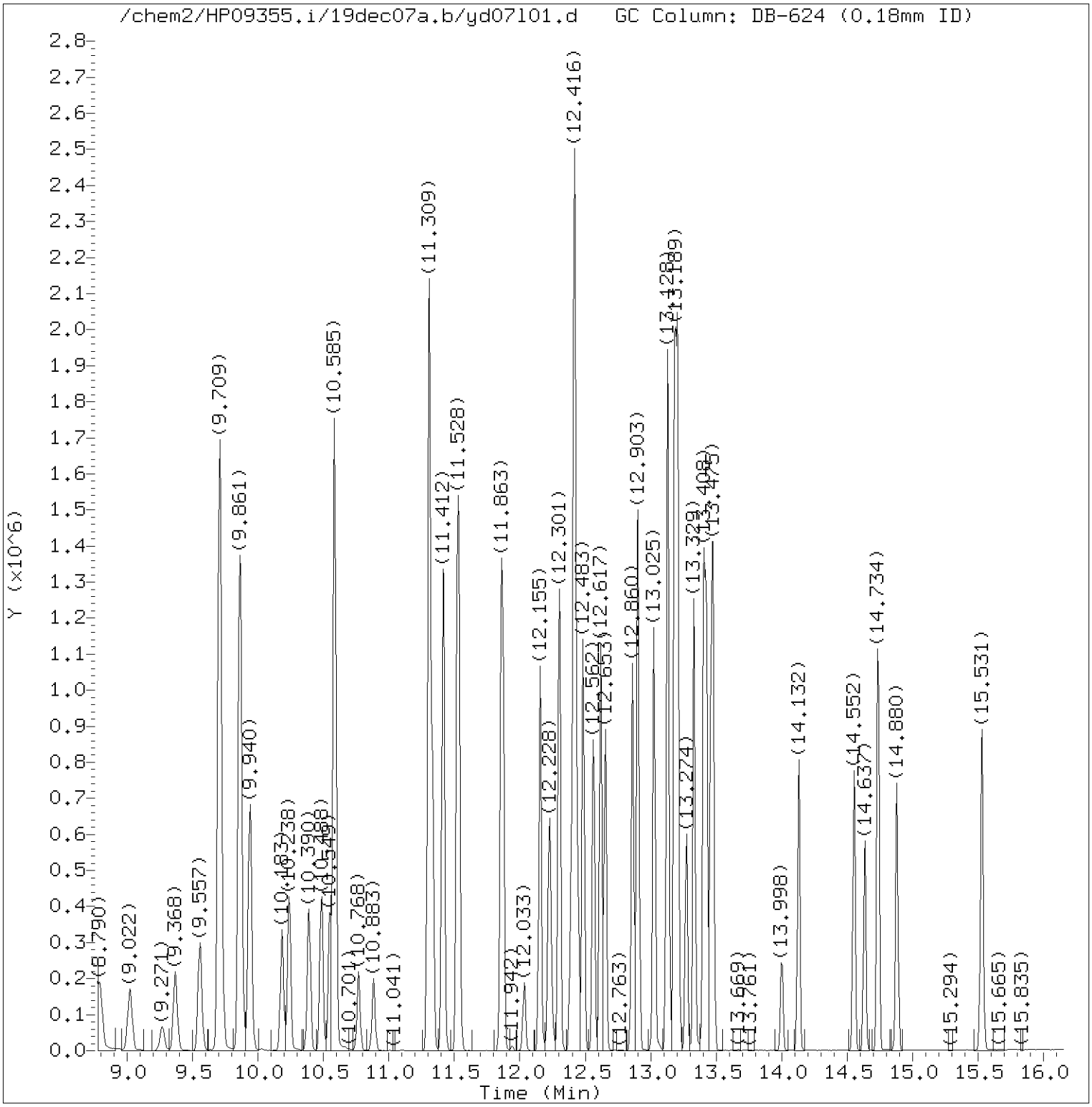
Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07l01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 11:50 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 12:55 mec29284

Sample Name: LCSY17 Lab Sample ID: LCSY17

Digitally signed by Miranda E. Campbell
on 12/07/2019 at 12:58.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07l01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 11:50 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 12:55 mec29284

Sample Name: LCSY17 Lab Sample ID: LCSY17

Digitally signed by Miranda E. Campbell
on 12/07/2019 at 12:58.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07l01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 11:50 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 12:55 mec29284

Sample Name: LCSY17 Lab Sample ID: LCSY17

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	2.044	85	131213	12.434
4) Chloromethane	(2)	2.244	50	150278	16.568
6) Vinyl Chloride	(2)	2.360	62	145155	16.301
5) 1,3-Butadiene	(2)	2.366	39	146785M	20.798
8) Bromomethane	(2)	2.695	94	90807	13.745
9) Chloroethane	(2)	2.786	64	77365	14.971
12) Trichlorofluoromethane	(2)	3.096	101	160430	14.123
11) n-Pentane	(2)	3.145	43	139038	12.624
14) Ethyl ether	(2)	3.358	59	134189	22.686
15) Freon 123a	(2)	3.431	67	139711	20.370
16) Acrolein	(1)	3.528	56	393515	141.894
17) 1,1-Dichloroethene	(2)	3.680	96	95898	19.203
18) Acetone	(1)	3.698	58	229893	176.165
19) Freon 113	(2)	3.717	101	97147	17.088
21) 2-Propanol	(1)	3.863	45	152086	193.569
22) Methyl Iodide	(2)	3.893	142	155107	15.817
23) Carbon Disulfide	(2)	4.015	76	285118	15.795
27) Methyl Acetate	(2)	4.136	43	203122	23.268
25) Allyl Chloride	(2)	4.173	41	190665	22.018
29)*t-Butyl alcohol-d10	(1)	4.355	65	365155	250.000
28) Methylene Chloride	(2)	4.368	84	128471	21.544
30) t-Butyl alcohol	(1)	4.477	59	380245	231.409
31) Acrylonitrile	(2)	4.690	53	532516	116.470
33) Methyl Tertiary Butyl Ether	(2)	4.781	73	373319	18.760
32) trans-1,2-Dichloroethene	(2)	4.800	96	117888	20.380
34) n-Hexane	(2)	5.219	57	189796	19.352
36) 1,1-Dichloroethane	(2)	5.450	63	221943	21.100
38) di-Isopropyl ether	(2)	5.505	45	451285	22.460
39) 2-Chloro-1,3-butadiene	(2)	5.560	53	191332	20.069
40) Ethyl t-butyl ether	(2)	6.041	59	384709	19.535
43) 1,2-Dichloroethene (Total)	(2)		96	263022	42.452
44) 2-Butanone	(2)	6.229	43	1179683	172.893
42) cis-1,2-Dichloroethene	(2)	6.272	96	145134	22.072
45) 2,2-Dichloropropane	(2)	6.296	77	149029	18.456
47) Propionitrile	(1)	6.308	54	357630	189.234
48) Methacrylonitrile	(2)	6.533	67	807767	166.186
49) Bromochloromethane	(2)	6.612	128	64608	18.832
50) Tetrahydrofuran	(1)	6.625	71	205242	100.110

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Miranda E. Campbell
on 12/07/2019 at 12:58.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07l01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 11:50 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 12:55 mec29284

Sample Name: LCSY17 Lab Sample ID: LCSY17

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	6.752	83	210792	20.696
52)$Dibromofluoromethane	(2)	6.971	113	246174	45.598
53) 1,1,1-Trichloroethane	(2)	6.990	97	163833	18.562
54) Cyclohexane	(2)	7.105	56	222063	19.298
55) 1,1-Dichloropropene	(2)	7.203	75	173869	20.407
56) Carbon Tetrachloride	(2)	7.209	117	133205	17.700
58) Isobutyl Alcohol	(1)	7.312	41	346610	610.768
57)$1,2-Dichloroethane-d4	(2)	7.434	102	70199	49.737
60) Benzene	(2)	7.464	78	540618	21.704
61) 1,2-Dichloroethane	(2)	7.537	62	176894	20.024
65) t-Amyl methyl ether	(2)	7.653	73	374323	18.990
66)*Fluorobenzene	(2)	7.866	96	1150552	50.000
67) n-Heptane	(2)	7.878	43	221906	21.407
69) n-Butanol	(1)	8.188	56	596712	1121.043
71) Trichloroethene	(2)	8.352	95	132578	20.575
72) Methylcyclohexane	(2)	8.669	83	244994	20.041
73) 1,2-Dichloropropane	(2)	8.681	63	149407	23.531
76) Methyl Methacrylate	(2)	8.748	69	161338	21.650
75) 1,4-Dioxane	(1)	8.760	88	74767M	658.688
74) Dibromomethane	(2)	8.796	93	87333	20.849
78) Bromodichloromethane	(2)	9.022	83	150560	20.600
79) 2-Nitropropane	(2)	9.265	41	54708	17.566
80) 2-Chloroethyl Vinyl Ether	(2)	9.368	63	124071	23.123
81) cis-1,3-Dichloropropene	(2)	9.557	75	211161	21.416
82) 4-Methyl-2-pentanone	(2)	9.709	43	1440105	111.995
83)$Toluene-d8	(3)	9.861	98	1123023	49.282
88) Toluene	(3)	9.940	92	341290	21.880
90) 1,3-Dichloropropene (total)	(3)		100	402100	42.381
89) trans-1,3-Dichloropropene	(3)	10.183	75	190939	20.965
91) Ethyl Methacrylate	(3)	10.238	69	242070	20.973
92) 1,1,2-Trichloroethane	(3)	10.390	97	138231	22.982
93) Tetrachloroethene	(3)	10.488	166	138439	20.973
94) 1,3-Dichloropropane	(3)	10.549	76	233765	22.381
96) 2-Hexanone	(3)	10.585	43	1191252	115.636
97) Dibromochloromethane	(3)	10.768	129	118591	20.265
99) 1,2-Dibromoethane	(3)	10.883	107	144490	22.068
100)*Chlorobenzene-d5	(3)	11.309	117	842221	50.000
101) 1-Chlorohexane	(3)	11.309	91	187841	21.428

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 12/07/2019 at 12:58.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07l01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 11:50 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 12:55 mec29284

Sample Name: LCSY17 Lab Sample ID: LCSY17

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
102) Chlorobenzene	(3)	11.333	112	373323	21.273
103) 1,1,1,2-Tetrachloroethane	(3)	11.412	131	112505	20.078
104) Ethylbenzene	(3)	11.418	91	661532	22.146
106) m+p-Xylene	(3)	11.528	106	515926	43.768
108) Xylene (Total)	(3)		106	763643	65.343
107) o-Xylene	(3)	11.856	106	247717	21.575
109) Styrene	(3)	11.875	104	427752	22.549
110) Bromoform	(3)	12.033	173	83451	19.801
111) Isopropylbenzene	(3)	12.155	105	642766	21.664
112) Cyclohexanone	(1)	12.228	55	305024	506.070
114)$4-Bromofluorobenzene	(3)	12.301	95	422508	48.528
116) 1,1,2,2-Tetrachloroethane	(4)	12.392	83	243669	23.750
118) trans-1,4-Dichloro-2-butene	(4)	12.416	53	344419	97.124
115) Bromobenzene	(4)	12.422	156	161119	22.598
117) 1,2,3-Trichloropropane	(4)	12.441	110	71069	21.809
119) n-Propylbenzene	(4)	12.483	91	801940	23.715
120) 2-Chlorotoluene	(4)	12.562	126	150556	21.614
122) 1,3,5-Trimethylbenzene	(4)	12.617	105	555370	22.200
121) 4-Chlorotoluene	(4)	12.653	126	158445	21.761
124) tert-Butylbenzene	(4)	12.860	134	110524M	21.098
125) Pentachloroethane	(4)	12.897	167	82814	20.815
126) 1,2,4-Trimethylbenzene	(4)	12.903	105	574412	21.862
127) sec-Butylbenzene	(4)	13.025	105	726110	22.918
129) 1,3-Dichlorobenzene	(4)	13.128	146	309831	22.185
130) p-Isopropyltoluene	(4)	13.134	119	610637	22.431
131)*1,4-Dichlorobenzene-d4	(4)	13.183	152	434044	50.000
133) 1,4-Dichlorobenzene	(4)	13.201	146	321261	22.523
134) 1,2,3-Trimethylbenzene	(4)	13.207	105	592701	21.474
135) Benzyl Chloride	(4)	13.274	91	387625	19.473
136) 1,3-Diethylbenzene	(4)	13.329	119	369308	20.773
141) Diethylbenzene (total)	(4)		100	1070025	62.254
137) 1,4-Diethylbenzene	(4)	13.402	119	392435	20.870
139) n-Butylbenzene	(4)	13.426	92	327482M	22.754
138) 1,2-Dichlorobenzene	(4)	13.456	146	303260	22.205
140) 1,2-Diethylbenzene	(4)	13.475	119	308282	20.610
142) 1,2-Dibromo-3-chloropropane	(4)	13.998	75	55665	21.032
144) 1,3,5-Trichlorobenzene	(4)	14.132	180	227619	21.680
146) 1,2,4-Trichlorobenzene	(4)	14.552	180	213953	21.267

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 12/07/2019 at 12:58.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/19dec07a.b/yd07l01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 11:50 Analyst ID: MEC29284

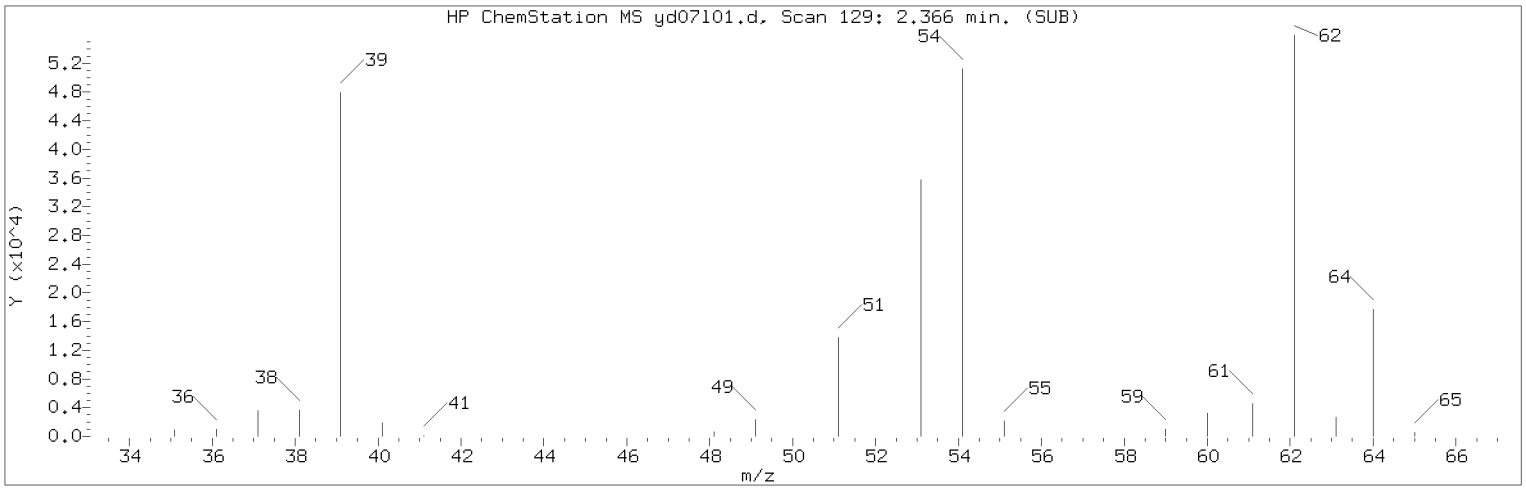
Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 12:55 mec29284

Sample Name: LCSY17 Lab Sample ID: LCSY17

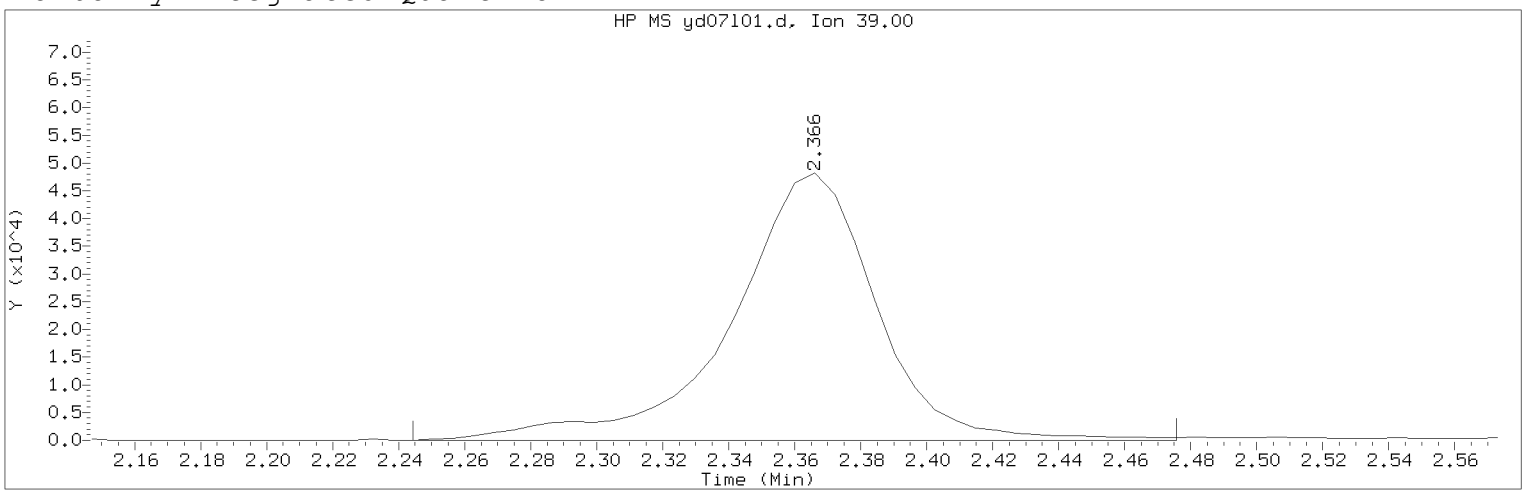
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Hexachlorobutadiene	(4)	14.637	225	96494	21.524
148) Naphthalene	(4)	14.734	128	782455	21.937
149) 1,2,3-Trichlorobenzene	(4)	14.880	180	205448	21.015
150) 2-Methylnaphthalene	(4)	15.531	142	441236	18.713

Digitally signed by Miranda E. Campbell
on 12/07/2019 at 12:58.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19dec07a.b/yd07l01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 11:50 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 12:55 mec29284

Sample Name: LCSY17 Lab Sample ID: LCSY17

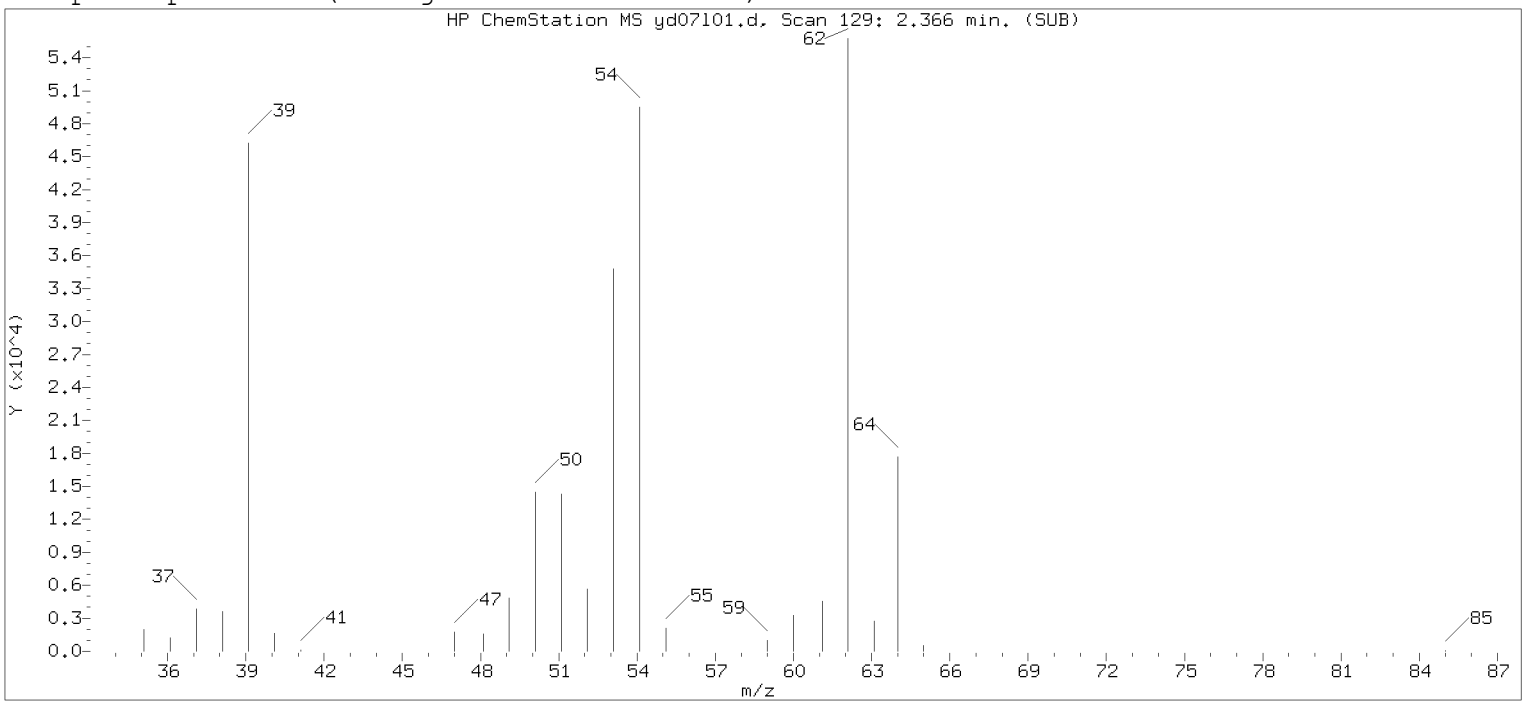
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 129
Retention Time (minutes): 2.366
Quant Ion : 39.00
Area (flag) : 146785M
On-Column Amount (ng) : 20.7984
Integration start scan : 108 Integration stop scan: 146
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

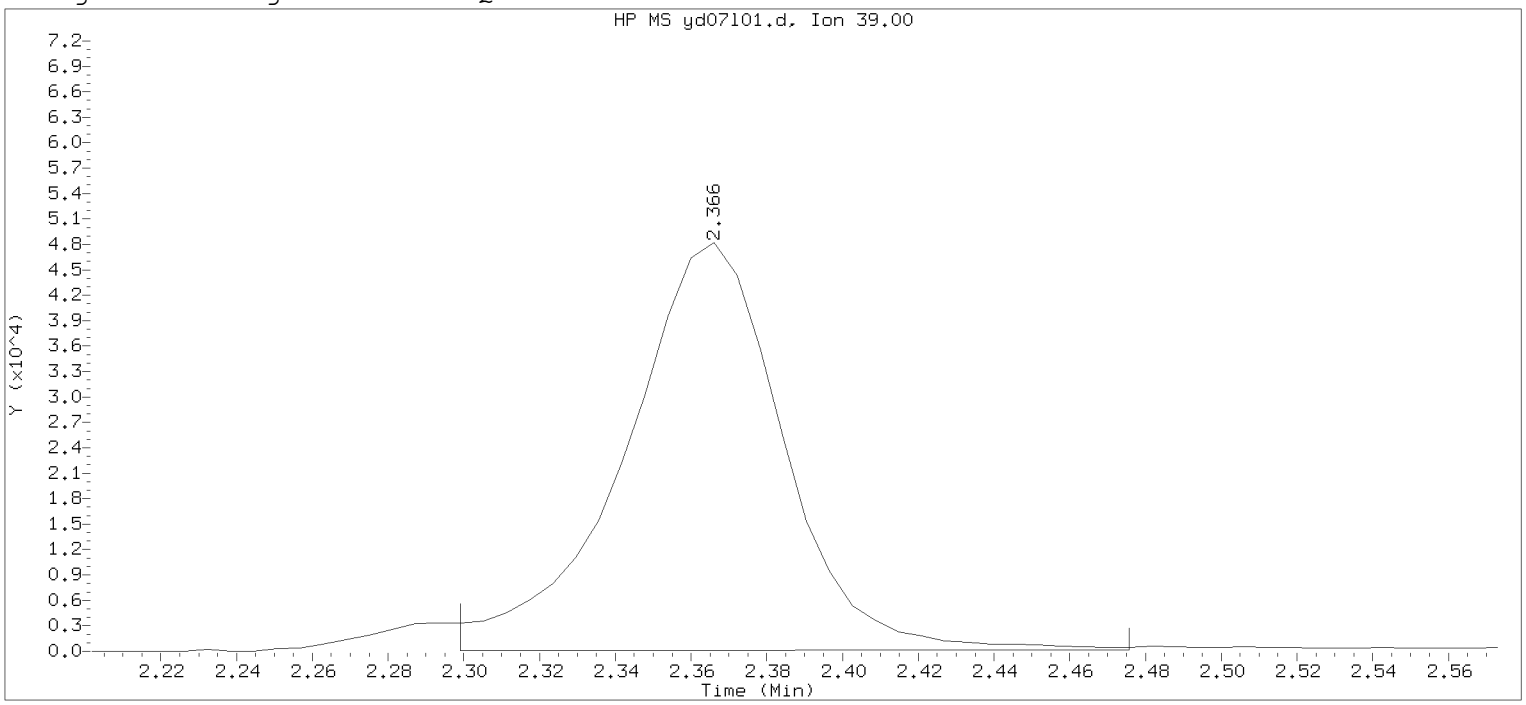
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 12/07/2019 at 12:58.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kari Becker on 12/09/2019 at 19:18.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19dec07a.b/yd07101.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 11:50 Analyst ID: MEC29284

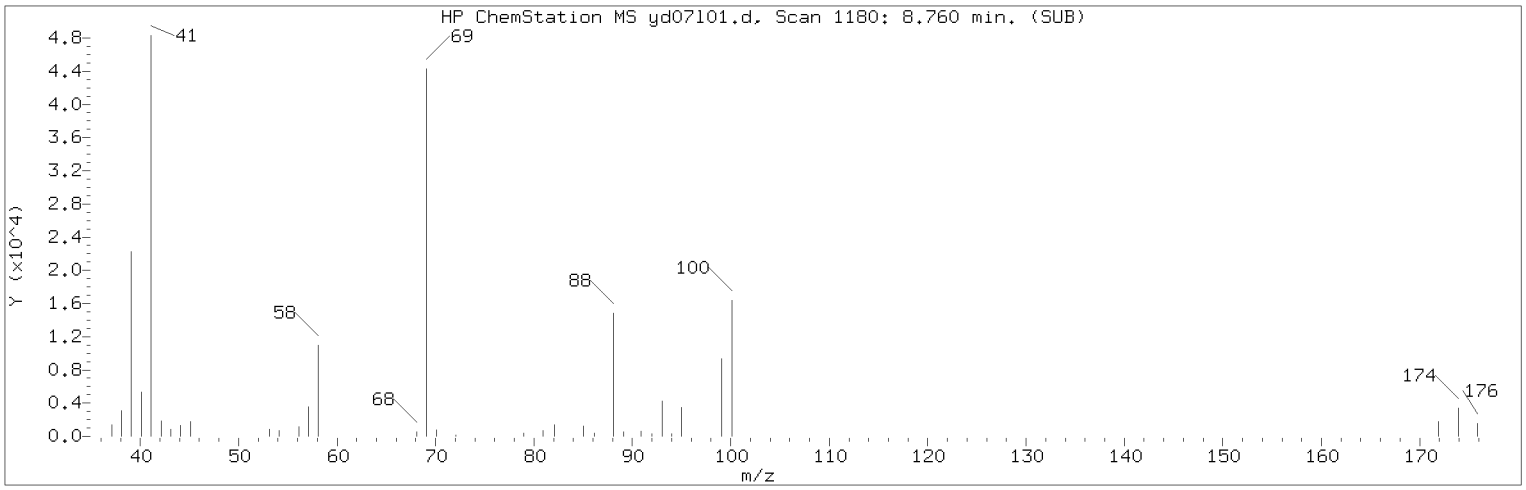
Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 12:07 Automation

Sample Name: LCSY17 Lab Sample ID: LCSY17

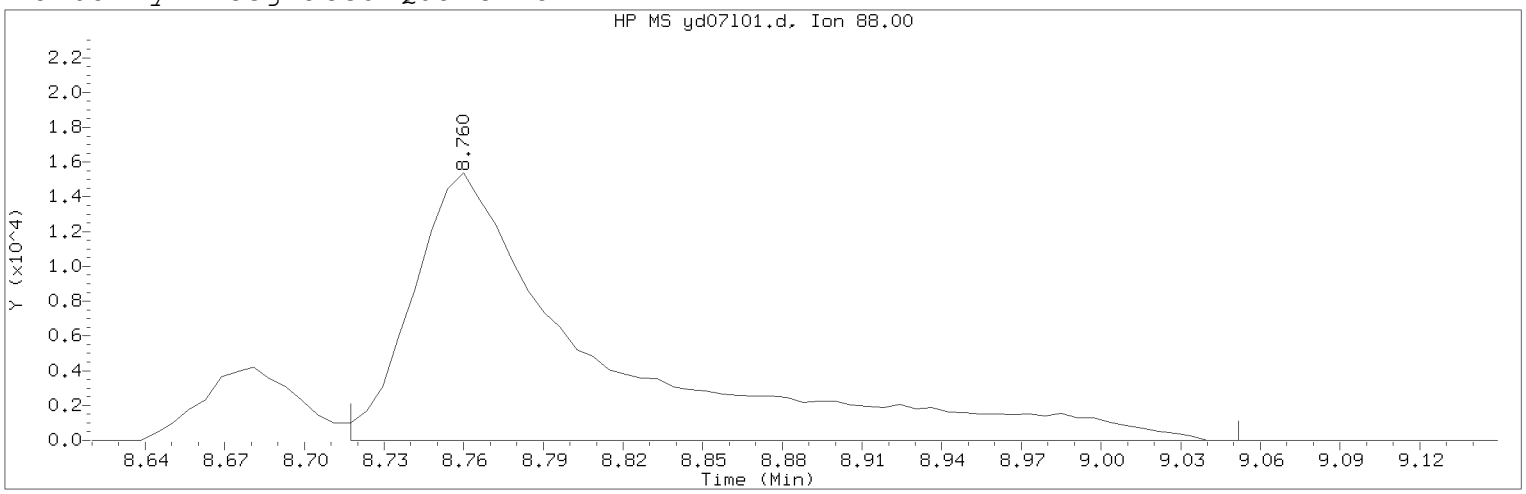
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 129
Retention Time (minutes): 2.366
Quant Ion : 39.00
Area : 140083
On-column Amount (ng) : 19.8489
Integration start scan : 117 Integration stop scan: 146
Y at integration start : 54 Y at integration end: 128

Digitally signed by Miranda E. Campbell on 12/07/2019 at 12:58.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19dec07a.b/yd07101.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 11:50 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 12:55 mec29284

Sample Name: LCSY17 Lab Sample ID: LCSY17

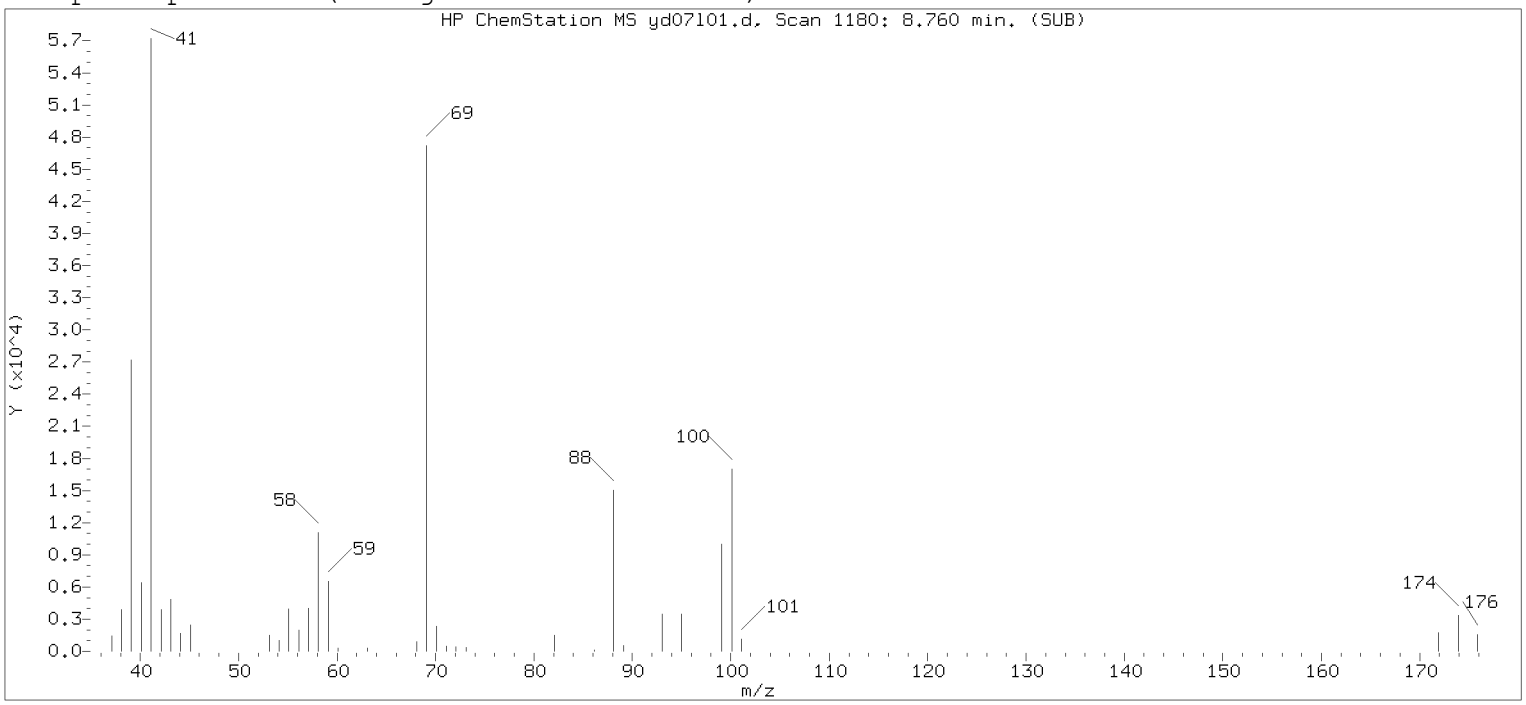
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1180
Retention Time (minutes): 8.760
Quant Ion : 88.00
Area (flag) : 74767M
On-Column Amount (ng) : 658.6883
Integration start scan : 1172 Integration stop scan: 1227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

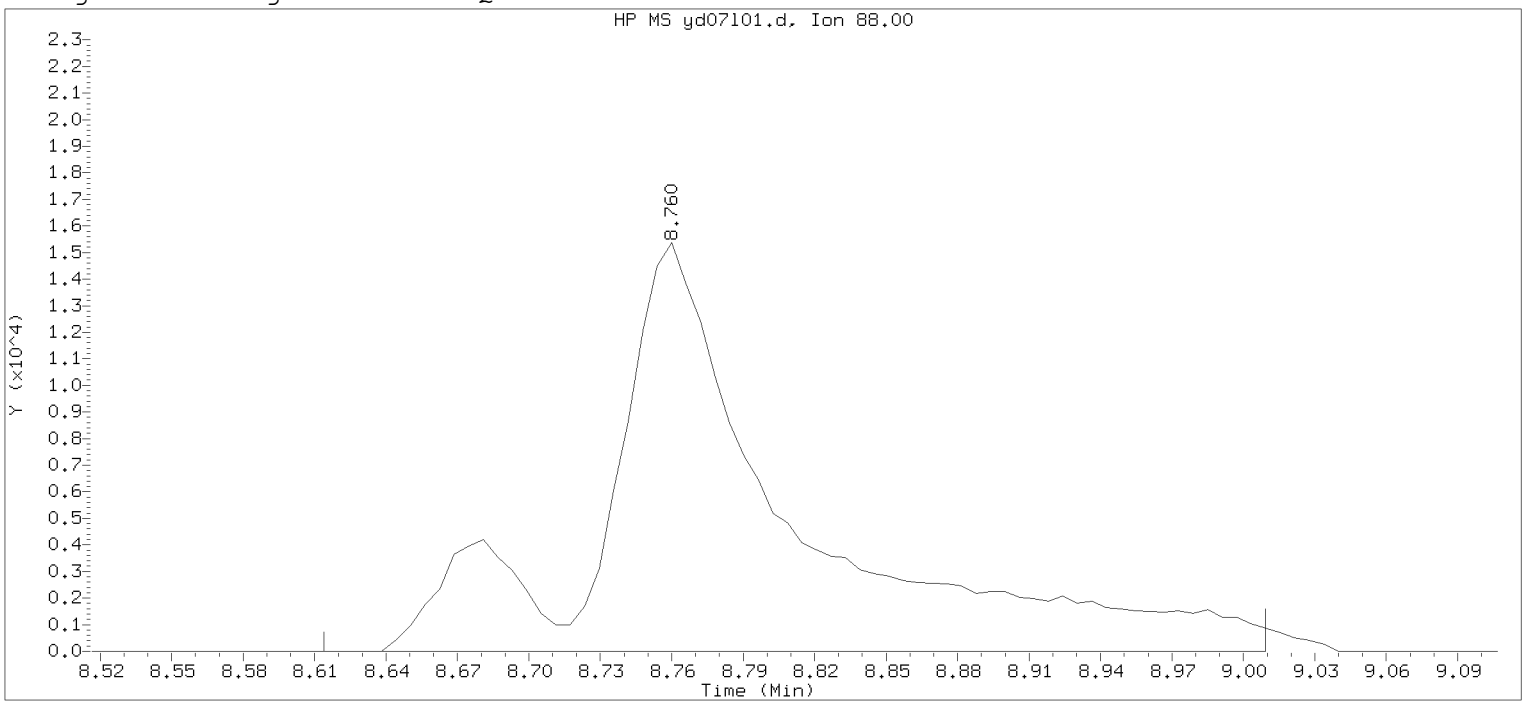
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 12/07/2019 at 12:58.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kari Becker on 12/09/2019 at 19:18.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19dec07a.b/yd07101.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 11:50 Analyst ID: MEC29284

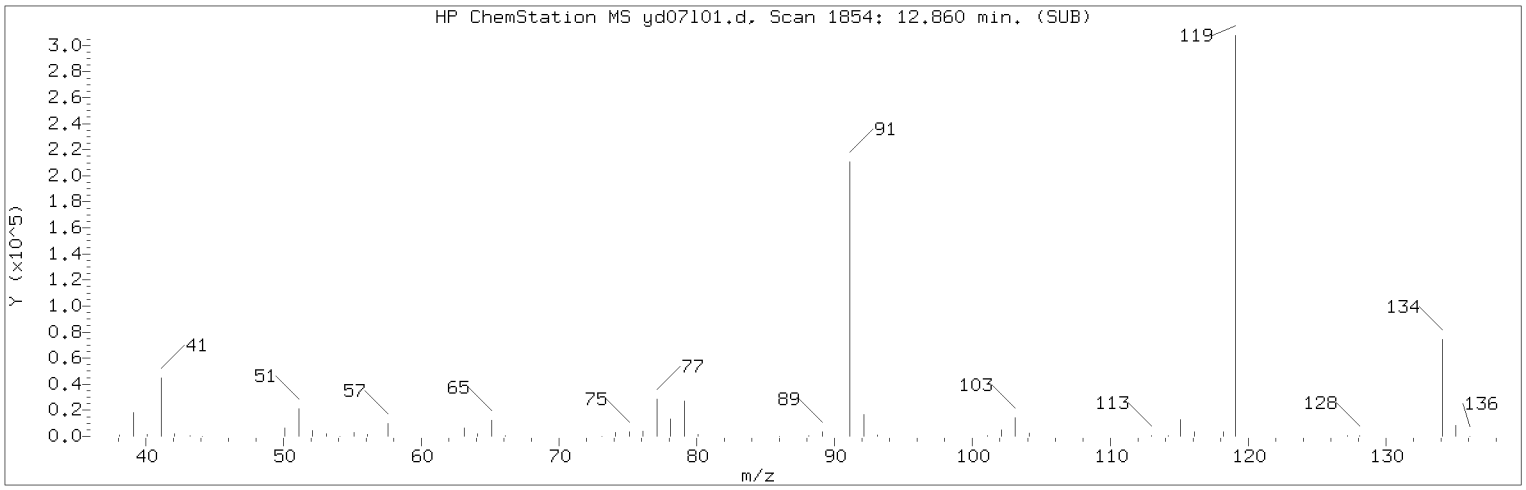
Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 12:07 Automation

Sample Name: LCSY17 Lab Sample ID: LCSY17

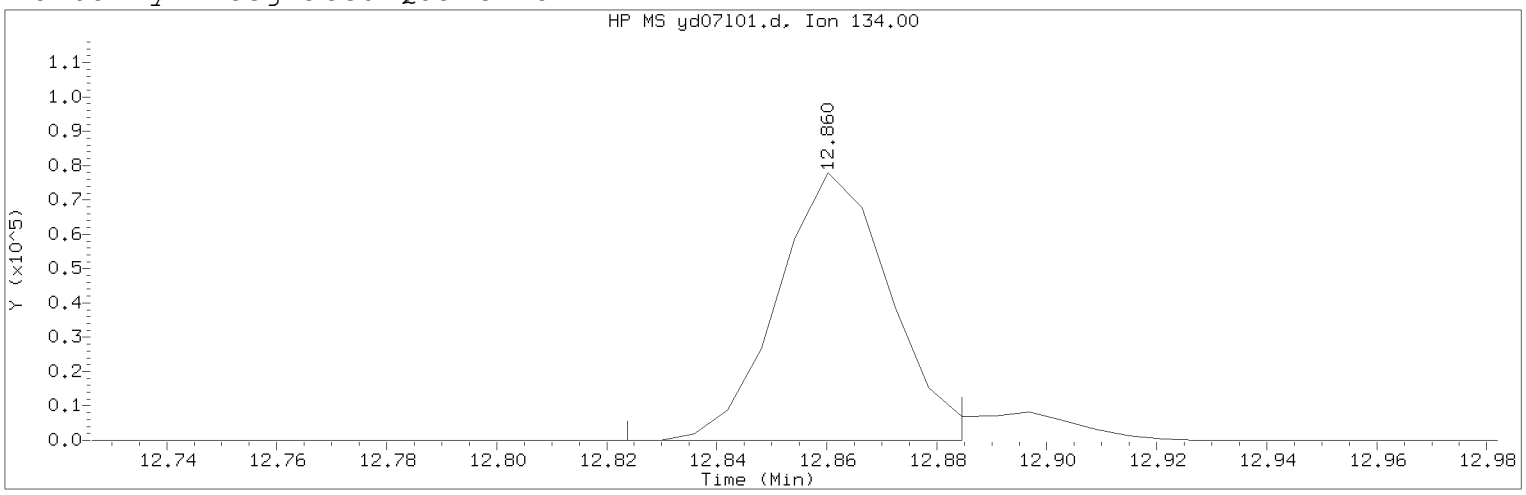
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1180
Retention Time (minutes): 8.760
Quant Ion : 88.00
Area : 84376
On-column Amount (ng) : 743.3470
Integration start scan : 1155 Integration stop scan: 1220
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 12/07/2019 at 12:58.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19dec07a.b/yd07101.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 11:50 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 12:55 mec29284

Sample Name: LCSY17 Lab Sample ID: LCSY17

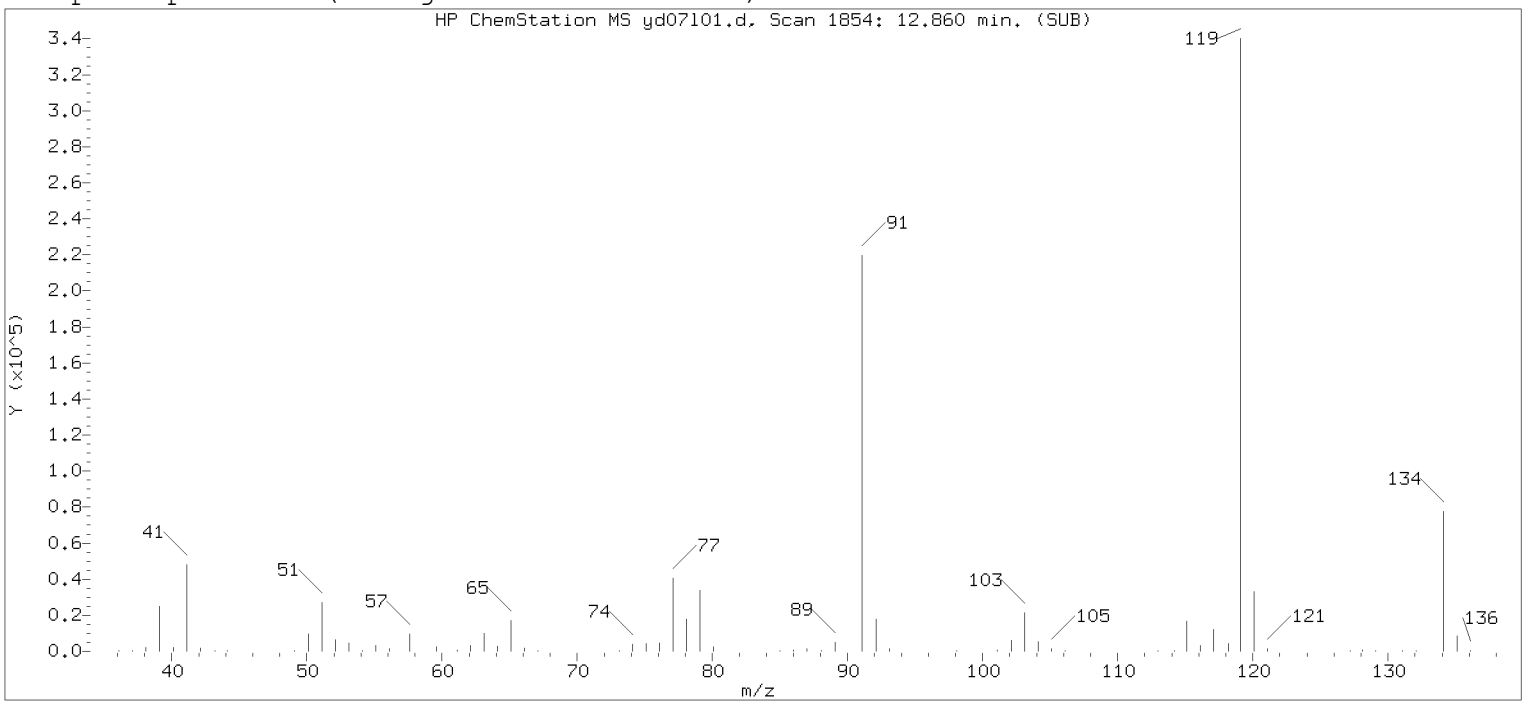
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area (flag) : 110524M
On-Column Amount (ng) : 21.0985
Integration start scan : 1847 Integration stop scan: 1857
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

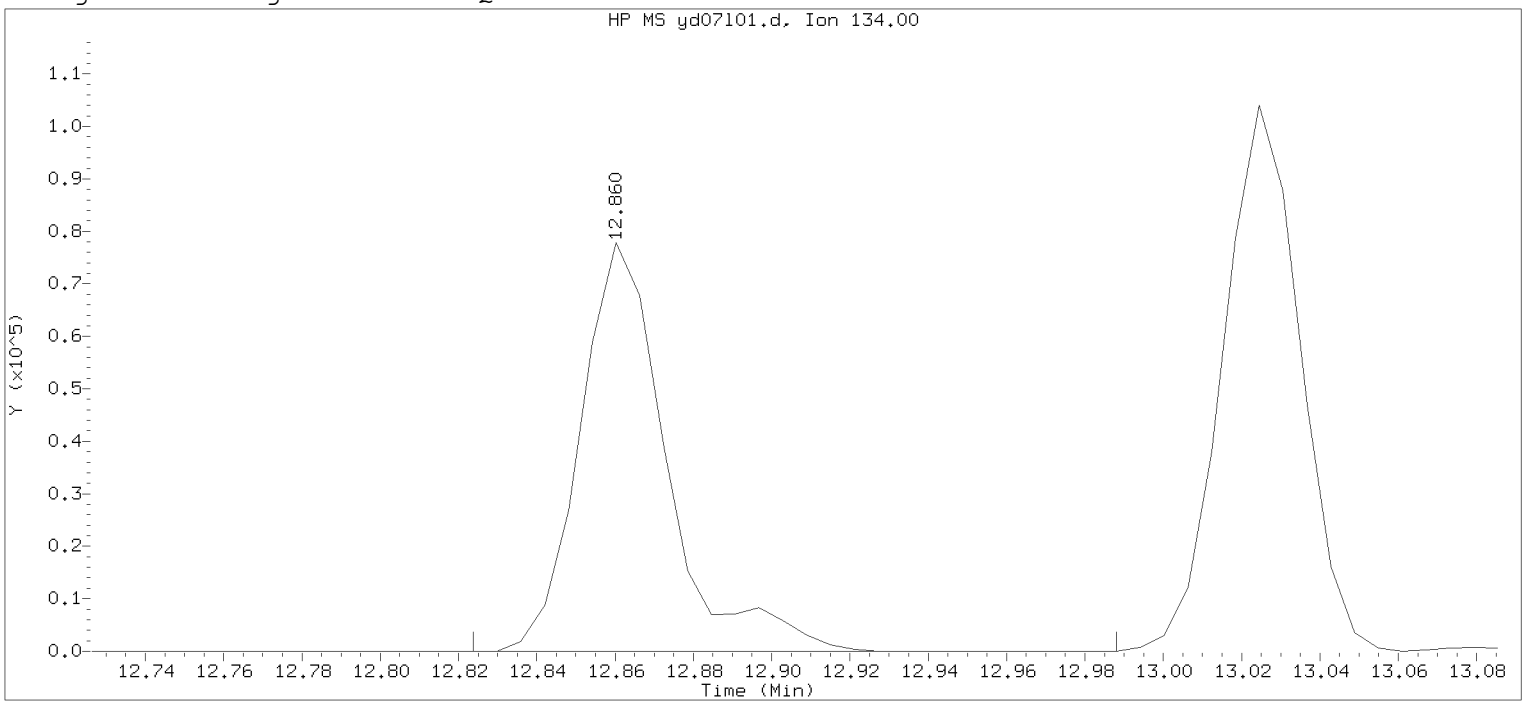
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 12/07/2019 at 12:58.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kari Becker on 12/09/2019 at 19:18.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19dec07a.b/yd07l01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 11:50 Analyst ID: MEC29284

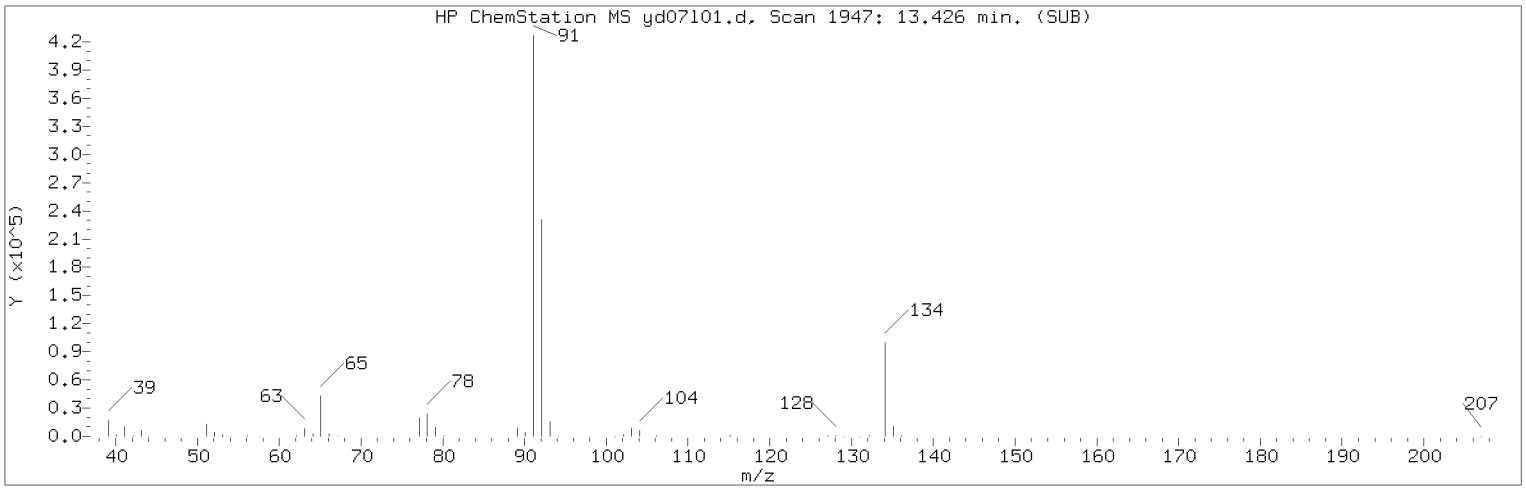
Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 12:07 Automation

Sample Name: LCSY17 Lab Sample ID: LCSY17

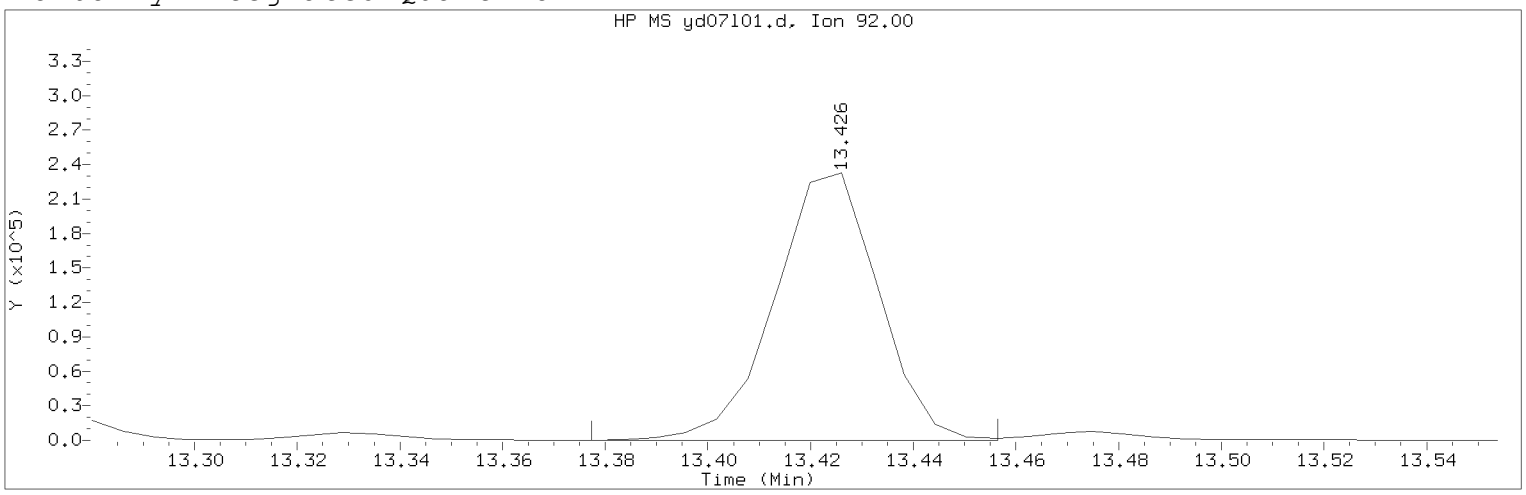
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area : 119997
On-column Amount (ng) : 22.9069
Integration start scan : 1847 Integration stop scan: 1874
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 12/07/2019 at 12:58.
Target 3.5 esignature user name: mcampbell

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/19dec07a.b/yd07l01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 11:50 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 12:55 mec29284

Sample Name: LCSY17 Lab Sample ID: LCSY17

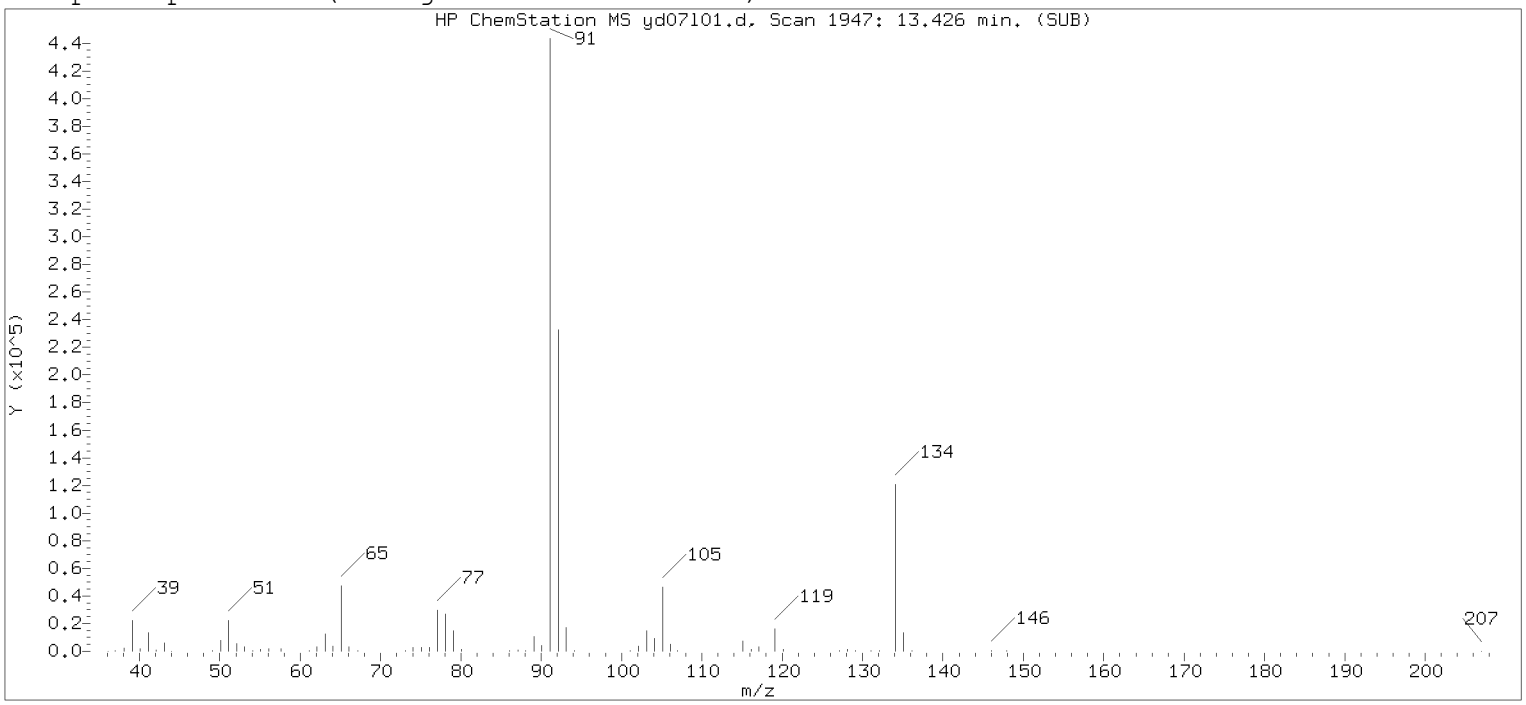
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1947
Retention Time (minutes): 13.426
Quant Ion : 92.00
Area (flag) : 327482M
On-Column Amount (ng) : 22.7535
Integration start scan : 1938 Integration stop scan: 1951
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

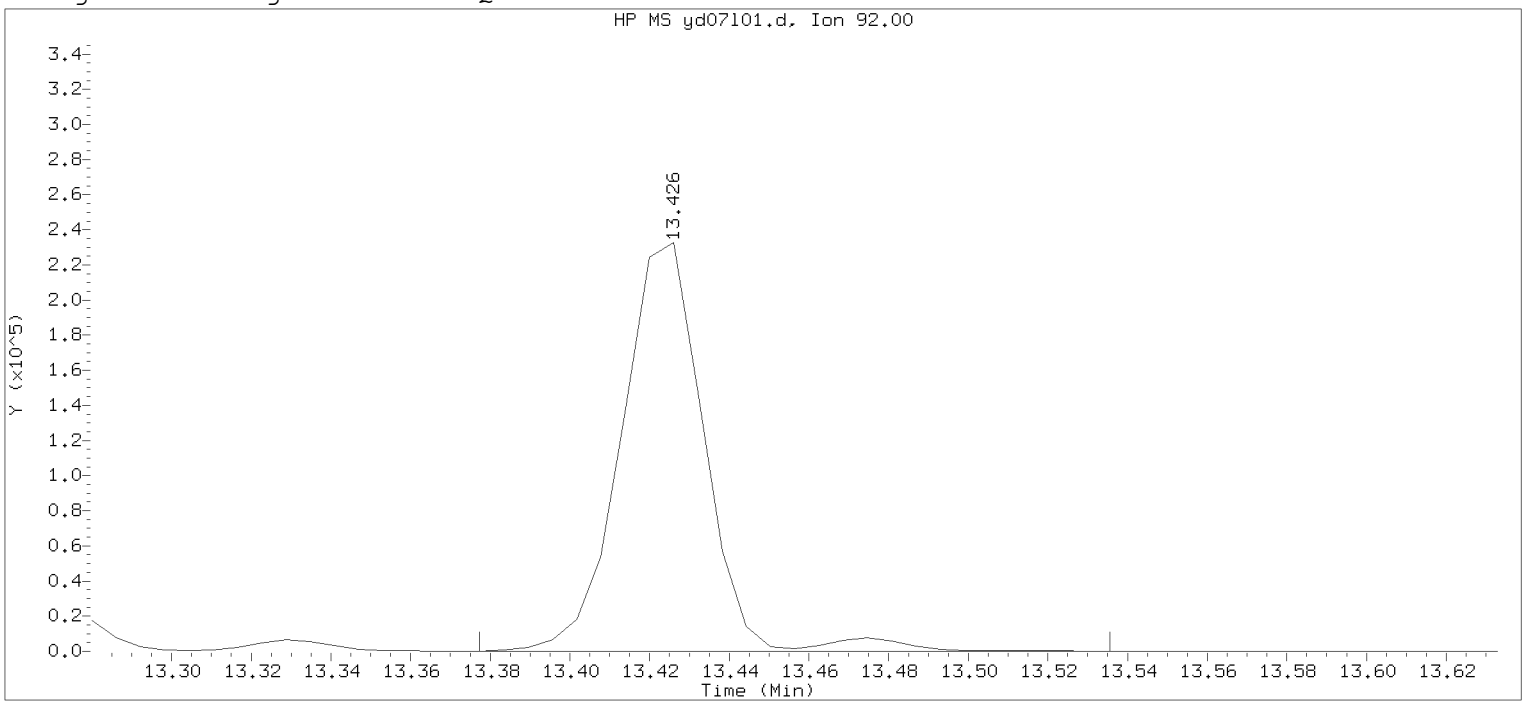
Analyst responsible for change: Digitally signed by Miranda E. Campbell on 12/07/2019 at 12:58.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kari Becker on 12/09/2019 at 19:18.
PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/19dec07a.b/yd07l01.d Instrument ID: HP09355.i
Injection date and time: 07-DEC-2019 11:50 Analyst ID: MEC29284

Method used: /chem2/HP09355.i/19dec07a.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 07-DEC-2019 11:45
Date, time and analyst ID of latest file update: 07-Dec-2019 12:07 Automation

Sample Name: LCSY17 Lab Sample ID: LCSY17

Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1947
Retention Time (minutes): 13.426
Quant Ion : 92.00
Area : 337892
On-column Amount (ng) : 23.4768
Integration start scan : 1938 Integration stop scan: 1964
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 12/07/2019 at 12:58.
Target 3.5 esignature user name: MECampbell